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**NBS TECHNICAL NOTE 715**

**Tabulation of  
Published Data on  
Electron Devices  
of the U.S.S.R.**

**Through December 1971**

U.S.  
PARTMENT  
OF  
COMMERCE

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NATIONAL BUREAU OF STANDARDS • Lawrence M. Kushner, Acting Director



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**Tabulation of Published Data on  
Electron Devices of the U.S.S.R.  
Through December 1971**

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(Supersedes Technical Note 526)

NBS Technical Notes are designed to supplement the Bureau's regular publications program. They provide a means for making available scientific data that are of transient or limited interest. Technical Notes may be listed or referred to in the open literature.



## **FOREWORD**

This tabulation of published data on electron devices of the U.S.S.R. has been prepared as part of the National Bureau of Standards Electron Devices Data Service. Established in 1948 to provide technical data on radio tubes to members of the Bureau staff, the service has since been extended to other scientists and engineers in government and industry. In the course of the program, a large volume of information on tubes, transistors, diodes, and other electron devices has been accumulated. To make this information more readily available, a system has been worked out for automatically tabulating the data in handbook form. Previous tabulations include *Tabulation of Data on Microwave Tubes*, NBS Handbook 104 (1967); *Tabulation of Data on Receiving Tubes*, NBS Handbook 103 (1967); and *Tabulation of Data on Semiconductor Amplifiers and Oscillators at Microwave Frequencies*, NBS Technical Note 597 (1972).

The present tabulation, updating Technical Note 526, is the result of compilation efforts extending over the past 10 years. All the included information was taken from published specifications, and every effort has been made to ensure accuracy and completeness. However, the Bureau cannot assume responsibility for omissions nor for results obtained with these data.

LAWRENCE M. KUSHNER, *Acting Director*

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## Comments on Tabulations of Electron Devices of the U.S.S.R.

This revision is actually the seventh revision in the series of Tabulations of Electron Devices of the U.S.S.R. published over the past 11 years. These publications document the growth of the U.S.S.R. electron device industry in that a concerted attempt has been made to include all published data on their devices. Of course, no attempt has been made to penetrate their classified data, and we have no knowledge of the time lag between pilot or serial production and data publication.

The growth of published device data is detailed in table 1 which shows the increase in the number of device types in the various groups. Generally this increase, in the receiving tube area, has been in subminiature types and more germanium transistor devices are still being produced than silicon devices. Germanium transistor devices have always outnumbered silicon devices by a large factor as is evidenced in the bottom listing of table 1.

There is no U.S.S.R. equivalent of the complete data sheet, with characteristic curves, as published by the European, Japanese, and U.S. device manufacturers; and while Soviet national (GOST) device specifications are quite complete, they appear to be delayed in publication. Furthermore, the published data is not consistent in different publications. For this reason, considerable effort has been expended intercomparing Soviet data in the available publications and selecting the most probably correct data values for this tabulation.

The sources for this tabulation are books published by the institutes, export brochures, and data contained in magazines and journals.

New prefix letters for transistors have been introduced during the past 2 or 3 years. The letters "G" and "K" designate germanium and silicon, respectively. These are followed by the letters "D" or "T" for diodes or transistors. This type of letter prefix has replaced the "1T" and "2T" designations initiated 3 years ago, although a few have been retained in this tabulation as no equivalent "G" or "K" types have replaced them.

The prefix letter "M" was used for the first time about 3 years ago and is now quite common preceding the "P number" to indicate that the transistor enclosure is a cold weld between the copper cap and the alloy header.

The new Group X-A covering integrated circuits introduced at the Paris fair in the Spring of 1969 is included. These devices range from a simple assembly of diodes to 30 transistors both in bipolar and MOS structures; the tabulation contains data for 314 devices. While the data on these devices is limited, the tabulation is arranged to include all the information available.

Note that a new group, X-B (Metal-Oxide-Silicon transistors, or MOS transistors), has been included and that two-terminal n-p-n-p devices are separated from three-terminal n-p-n devices in new group XII-B, Silicon Controlled Rectifiers.

In previous editions, the asterisk following the type number indicated "obsolete type." Determination of obsolescence was usually subjective, based on old or nonstandardized type numbers or limited data. For this revision, an **ASTERISK FOLLOWING THE TYPE NUMBER** indicates that the device is "**CURRENT**"; that is, that the device in question has been used in electronic equipment or circuits noted in the past 2 years or has been first noted in that time.

TABLE I. *Number of devices in the various tabulations of U.S.S.R. devices*

Group		NBS 6637 1/60	NBS 7481 4/62	TN186 6/63	TN265 10/65	TN441 10/67	TN526 12/69	TN715 4/72
		642	1,362	1,631	2,360	2,373	3,020	3,200
I	Numerical listing.....							
II	Receiving tubes .....	262	316	328	383	443	461	482
III	Power tubes.....	89	147	176	176	179	188	187
IV	Rectifying tubes.....		53	68	80	80	86	89
V	Voltage regulator tubes .....		23	30	33	38	38	36
VI	Current regulator tubes .....		8	9	9	9	9	9
VII	Thyatron.....	26	42	69	54	60	79	77
VIII	Cathode ray tubes .....	59	87	100	109	115	157	154
IX	Microwave tubes .....	13	17	20	27	101	101	106
X	Transistors.....	77	125	160	265	296	438	418
X-A	Integrated circuits .....						317	317
X-B	MOS transistors.....							11
XI	Rectifier diodes.....	84	108	108	200	200	238	246
XI-A	Switching diodes .....				16	16	16	16
XI-B	Tunnel diodes.....				8	26	26	30
XI-C	Control rectifiers .....				10	10	10	10
XI-D	Varactors.....				6	7	7	20
XI-E	Miscellaneous.....						26	30
XII	Power rectifiers .....			29	29	29	29	29
XII-A	Silicon Controlled Devices .....				40	56	68	40
XII-B	Silicon controlled rectifiers.....							26
XIII	Regulator diodes .....		8	8	41	89	103	107
XIV	Mixer and detector diodes.....		37	37	33	44	50	50
XV	Photoconductive diodes.....		4	23	29	29	45	50
XVI	Photodiodes and multipliers .....		25	63	73	72	93	102
XVII	Flash tubes .....			12				
XVIII	Thermocouples .....			15	15	15	15	15
XIX	Thermistors .....	31	19	23	23	35	58	58
XX	Strobatrons .....		12	23	23	23	23	23
XXI	Counter tubes.....		41	41	68	68	81	82
XXII	Discharge diodes .....			20	25	25	31	31
XXIII	Decatrons .....			4	4	8	9	7
XXIII-A	Numerical indicators.....							8
XXIV	Light amplifiers .....			2	2	2	2	2
XXV	Tube base connections .....		164	162	173	212	225	235
Total Devices .....		641	1,087	1,368	1,781	2,075	2,804	2,868
Transistors germanium.....		73	119	140	224	248	329	312
Transistors silicon .....		4	6	20	41	48	102	106

# TABULATION OF PUBLISHED DATA ON ELECTRON DEVICES OF THE U.S.S.R. THROUGH DECEMBER 1971

Charles P. Marsden

This tabulation includes data on U.S.S.R. electron devices as collected from publications, mostly handbooks, published by the various ministries and institutes of the U.S.S.R. Information is given on all active devices ranging from receiving to microwave devices, semiconductor devices, and miscellaneous devices such as photographic flash tubes and thermistors.

Keywords: Electron devices; electron tubes; semiconductors; U.S.S.R.

## 1. Introduction

The increased circulation of published literature and the importation of equipment from the U.S.S.R. has created a need for factual information about Russian electron devices. To satisfy this need, the National Bureau of Standards Electron Devices Data Service has prepared the present publication in a format that has been reproduced directly from punched cards.

This publication is the seventh revision and is an expansion of Technical Note 526 published in October 1970.

The sources of the data are the various publications produced in the U.S.S.R. and include books published by the various ministries and technical magazines. To ensure that the device values selected for use in this tabulation are the probably correct values, considerable effort has been taken to intercompare data from available publications. Because data for any one device may be derived from a number of intercompared sources, no references are given.

## 2. Description of the Tabulation

Within each group the type numbers are arranged in alphanumerical order; the first numerical part of the type number is used as the prime sorting means. Alphabetical prefixes are secondary sorting means and alphabetical postfixes are tertiary means. In the listing, those types without alphabetical prefix follow those with prefix. For example, in the numerical list-

ing, these type numbers will be found in the following order:

VI-0.1/40	SG2S
VT1	TO-2
1A2P	2A1

Alphabetical sorting is performed according to the English alphabet rather than the Russian which was transliterated according to the recommended practice of the Library of Congress as shown below:

A	A	O	O
Б	Б	П	Р
В	В	Р	Р
Г	Г	С	С
Д	Д	Т	Т
Е	Ye	У	У
Ж	Zh	Ф	Ф
И	I	Х	Kh
К	K	Ц	Ts
Л	L	Ш	Sh
М	M	З	E
Н	N	Я	JA

## 3. Organization of the Tabulation

Data in the 35 groups of the tabulation are presented with columnar headings appropriate to each group.

Group I is a numerical listing of all type numbers in the complete tabulation and also includes discontinued and obsolete type numbers. All these types

are defined by a three-letter code to indicate the kind and type of device. Furthermore, under the heading "Group No.," Roman numerals are used to show the group number under which the data for a type will be found. The last column contains the GOST (U.S.S.R. State National Standard) Specification Number (followed by the year of publication of the specification). These specifications include the information in, and follow the format of, the U.S. military specifications.

Group I also constitutes an interchangeability list and known similar types are so identified. The following symbol code indicates the geographic area of manufacture and identifies obsolete or inactive devices.

- \$ Domestic manufacture
- = European manufacture
- + Russian manufacture
- \* Current

These symbol explanations apply only to Group I. Because the card punch limits the number of available symbols, the asterisk is used in tabulations for other groups with different meanings as noted in the columnar headings.

Titles of Groups II-XXIV describe the particular class of device listed under each group. Individual type numbers are arranged in alphanumerical order as described on page vii under the heading: "2. Description of the Tabulation."

Under each columnar heading, the device characteristic is expressed in the most commonly used units. For example, under the heading of Maximum Plate Current ( $I_p$ ), the unit in the heading is mA (milliamperes). However, where the data are in amperes, the value will be tabulated with the number followed by the letter "A," e.g., 15A. All such letters used to indicate a unit change are included in the list of alphabetic symbols under "4.4 Code" on page ix.

A blank in any column indicates that no value was given in the available data.

Group XXV, "Tube Base Connections," lists the base connections for the particular "Base No." of the previous groups by a system compatible with punched-card coding.

Instead of the usual base diagram or line drawing, the number of each base pin is given in the column whose heading is the appropriate electrode symbol. This system was developed because many of the Soviet types have base connections which do not conform to the standard base designations of the

Electronic Industries Association. In those instances where an electrode is connected to more than one base pin, only the lowest numbered pin is shown in the tabulation.

Outline drawings are shown for semiconductor diodes, transistors, and integrated circuits.

## 4. Terminology Used in the Tabulation

### 4.1 Column Headings

Headings used in the various formats are either the standard symbols as defined by the Institute of Electrical and Electronics Engineers or words descriptive of the given device characteristic. Headings are not further defined due either to the difficulties of translation or lack of definite information.

### 4.2 Bulb Size

This column heading, which is used in the Receiving, Power, Rectifier, etc. groups, uses a special code to describe the bulb shape and size. The numerical part of the code indicates the diameter of the glass bulb or metal anode (power tubes) in eighths of an inch according to the Standard of the Electronic Industries Association. The alphabetical part of the code is explained as follows:

#### Prefix

- A — Air-cooled anode
- B — Bell-shape
- C — Ceramic construction
- G — Globe-shaped bulb
- F — Flat top of Soviet design
- M — Metal tube
- P — Spiral
- R — Ring-shaped
- S — ST design, i.e., the domed conical shaped glass bulb
- T — Cylindrical Shape
- U — U-shape flash tube
- V — Vapor-cooled anode
- W — Water-cooled anode

#### Postfix

- B — Button glass stem
- F — Flat press glass stem

For example, a "T3F" would be a cylindrical bulb with a flat press having a diameter of 3/8 inch.

### 4.3 Special Symbols

Receiving tubes (Group II) have postfixed letters with the following meaning:

“V” – Ruggedized tubes with 500-hour life

“K” – Vibration tested

“Ye” – 3,000- to 10,000-hour long-life tubes

“I” – Intended for pulse use

Rectifier Diodes (Group XI) with postfixed letter “P” are available in reverse polarity.

### 4.4 Code

Due to the limitations of available columns in the punched card, one- to three-letter codes have been developed and used in the tabulation. These have been so chosen as to be readily understood. The following table lists code meanings alphabetically by code.

A	Change of unit to amperes
AAB	Alpha and beta radiation
ACO	Acorn tube
ADR	And/or logic
AF	{ Audio frequency Forced air cooling
AHE	Argon-helium gas-filled
AHN	Argon-helium-neon gas-filled
AKN	Argon-krypton gas-filled
AL	Aluminum cathode; countertube
ALP	Alpha radiation
AMK	Aluminum-magnesium alloy with potassium surface
AMP	Amplifier
AN	Natural air cooling
AND	And logic
ANR	And/nor logic
AR	Argon gas-filled
ARC	Arc rectifier-mercury pool
BA	Barium (metal) cathode
BAG	Beta and gamma radiation
BAL	Ballast or current regulator
BAO	Barium oxide cathode
BEA	Beam pentode
BET	Beta radiation
BIS	Bismuth sulphide
BL	Blue luminescence
BWD	Backward diode
BWT	Backward wave tube
C	{ Circular dynode arrangement Common collector operation Cold cathode Continuous wave operation
CAM	Copper-aluminum-magnesium
CDS	Cadmium sulphide
CDSE	Cadmium selenide
CH	Charactron
CN	Converter
CO	Coax connector
COM	{ Commutator tube Temperature compensation
CON	{ Control switch Temperature control
COU	Counter tube
CP	Cap, external, in tabulation of bases
CSB	Cesium antimony photo surface
CU	Copper cathode; counter tube
CYL	Cylindrical shape (thermistors)
DBA	Double anode beam pentode
DEC	Decatron
DET	Detector operation
DIO	{ Diode With diode, e.g., triode-diode
DSC	Disc shape
DT	Dark trace CR tube
DTL	Diode-transistor Logic
DUO	Double, e.g., double diode with separate cathodes
DWD	{ Duo diode (single cathode) With duodiode, e.g., triode-duodiode
E	Common emitter operation
EL	Electrometer tube
ELM	Electromagnetic focus or deflection
ELS	Electrostatic focus or deflection
END	End-view indicator
EXP	Expander
F	Filamentary type cathode
FE	Iron cathode; counter tube
FIL	Filter circuit
FLP	Fli-flop
G	Giga ( $10^9$ )
GAM	Gamma radiation
GAN	Germanium alloy, n-type
GAP	Germanium alloy, p-type
GAS	Gallium arsenide
GDN	Germanium diffused junction, n-type
GDP	Germanium diffused junction, p-type
GE	Germanium
GEA	Germanium alloy junction
GEM	Germanium mesa structure
GEP	Germanium point-contact
GPN	Germanium, planar, n-type
GPP	Germanium point-contact, p-type
GR	{ Green luminescence Graphite cathode; counter tube
GS	Gas-filled
GSP	Germanium surface-barrier, p-type
GTB	Gated beam pentode
H	Heater type cathode
h	Hecto ( $10^2$ )
HE	Helium gas-filled
HEX	Hexode
HG	Mercury vapor-filled
HK	Hydrogen-krypton gas-filled
HPT	Heptode
HY	Hydrogen gas-filled
IC	Iconoscope
ID	Indicator tube
IGN	Ignitron tube
IM	Image orthicon
INV	Inverter
k	Kilo ( $10^3$ )
K	Potassium
KLA	Klystron amplifier
KLO	Klystron oscillator
KX	Krypton-xenon gas-filled
L	{ Linear dynode arrangement Liters per minute – cooling rate
LAM	Light amplifier
LD	Lead cathode; counter tube
LIM	Limiter
LIT	Lighthouse

LO	Long persistence screen	SAN	Silicon alloy, n-type
M	{Mega ( $10^6$ )	SAP	Silicon alloy, p-type
m	{Meters per second—Cooling rate Milli ( $10^{-3}$ )	SCC	Scintillation counters
MAG	Magnetron	SCG	Space-charge grid (with)
MCR	Metal-ceramic tube	SCH	Schmitt trigger
MD	Medium persistence screen	SCR	Silicon controlled-rectifier
MEA	Temperature measurement	SDN	Silicon diffused junction, n-type
MG	Magnesium cathode	SEN	Silicon planar epitaxial-npn
MIX	Mixer	SH	Short persistence screen
MJF	MOS junction FET transistor	SI	Silicon
MMP	MOS amplifier	SIA	Silicon alloy junction
MND	MOS-Nand logic	SID	Silicon diffused junction
MNR	MOS-Nor logic	SIDE	Side-View indicator
MO	Moly cathode	SIM	Silicon mesa
MOR	MOS—or Logic	SIN	Single e.g., single triode
MOS	Metal—oxide semiconductor	SIP	Silicon, point contact
MUL	Multiplier	SI4	Silicon, 4-layer rectifier
MVB	Multivibrator	SM	Secondary emission pentode
N	n-type construction S/C	SN	Tin cathode; counter tube
n	Nano ( $10^{-9}$ )	SPN	Silicon planar n-type
NA	Neon—argon gas-filled	SQ	Self-quenching type of counter
NDR	Nand/nor logic	SS	Stainless steel; counter tube
NE	Neon gas-filled	ST	Storage tube
NEH	Neon-helium gas-filled	SWI	Switching diode or mode
NEU	Neutron	T	Thoriated tungsten cathode
NI	Nickel cathode	TET	Tetrode
NK	Neon-krypton gas-filled	THM	Thermocouple tube
NND	Nand logic	TMS	Thermistor
NO } NOI }	Noise generator	TRD	With triple diode
NOR	Nor logic	TRI	{Triode
NSP	Nuclear spectrometry		{With triode e.g., pentode-triode
NUV	Nuvistor	TTL	Transistor logic
OD	Double beam oscilloscope tube	TUN	Tunnel diode
OG	Orange-green luminescence	TV	{Television tube
ONR	Or/nor logic		{Television circuits
OR	Or logic	TWN	Twin with same cathode e.g., twin triode
ORD	Or/and logic	TWT	Traveling-wave tube
OS	Oscilloscope tube	$\mu$	Micro ( $10^{-6}$ )
OSC	Oscillator	UF	Ultra high frequency
P	{Pulse operation	UV	Ultra violet radiation
PA	p-type construction	V	Venetian-blind dynode
PA	Power amplifier	VAR	Varactor
PB	Purple-blue luminescence	VB	Violet-blue luminescence
PBS	Lead sulphide	VC	Vacuum
PEN	Pencil tube	VI	Vidicon
PHM	Photomultiplier	VID	Video detector
PHO	Phototube	VR	Voltage regulator
PIN	Pin type diode	W	{Change of units to watts
PM	Permanent magnet		{Tungsten cathode
PND	{Pentode		{Water-cooled
	{With pentode e.g., triode-pentode	WG	Wave guide coupling
POW	Power rectifier	WH	White luminescence
PR	Projection kinescope	XE	Xenon gas-filled
PT	Phototelegraph reproduction	YG	Yellow-green luminescence
PTG	Pentagrid	YO	Yellow-orange luminescence
R	Rectangular-diagonal dimension	IDA	Single diode array
RA	Radar	2DA	Double diode array
RD	Red luminescence	3C	Three color screen for television
RDL	Resistor-diode logic	3DA	Triple diode array
REG	Regulator (voltage)	4DA	Four diode array
RF	Radio frequency	5O	Oscilloscope tube, 5 beam
RTL	Resistor-transistor Logic	8DA	Eight diode array
S1-S7	Spectral sensitivity of photo surface	*	Meaning of symbols indicated in column heading
S	Max. dimension of cathode ray tube face	#	
		<	Less than (before digits)
		*	Current type

**Group I—NUMERICAL**

Type No.	Kind	Type	Group No.	Similar types	COST spec. No.	Type No.	Kind	Type	Group No.	Similar types	COST spec. No.
144		XA				GUZH-1	PND SIN <sup>1</sup>			G411+	
FS-AG	PHG	XV				I-1-25/0.8		IV		5550\$	
FS-A0	PHG	XV				I-1-50/20		IV			
FS-AV	PHG	XV				I-1-70/0.8	TRI IGN	IV		5551A\$	
FS-DO	PHG	XV				I-1-100/1.5	TRI IGN	IV			
FS-KG	PHG	XV				I-1-140/0.8	TRI IGN	IV		5552A\$	
FS-KO	PHG	XV				I-1-350/0.8	TRI IGN	IV		7673\$	
FS-KV	PHG	XV				IN-1	* DEG	XXIIIA			
TOS-M	TMS CON	XIX				KF-1	TET TWN			GU-29+, 829B\$	
0.24812-18	8AL SIN	VI			7162-70	KMT-1	* TMS	XIX			10688-63
0.3B17-35	BAL SIN	VI			7162-70	KZH1	PND SIN			G411*	
0.3865-135	BAL SIN	VI			7162-70	LD1	TRI SIN			12S3S+	
0.425855-12	BAL SIN	VI			7162-70	LG-1	DWD SIN			12KH3S+	
0.6P2B *	PND SIN	II	GK505AX			LI-1	IG	VIII			
0.6S57A *	TRI SIN	II				MMT-1	* TMS	XIX			10688-63
0.6ZH68	PND SIN	II				MS1	TRI SIN			GM-60+	
0.85855-12	8AL SIN	VI			7162-70	OG-1	DEG	XXIIII			
GR-0.8/1.6	DWD SIN					P1A		X			
GRI-0.25/1.5	DWD SIN	IV		GR1-0.25/1.5+		P1B		X			
TG-0.3/0.3	TRI THY			TG1-0.1/0.3+, 884\$		P1D		X			
TG-0.5/1.3	TET THY			TG1-0.1/1.3+, 2050\$		P1G		X			
VGO251500	DIO SIN			GR1-0.25/1.5+		P1I		X			
AS-1	GOU	XXI				P1V		X			
D1A	REC	XI				P1YE		X			
D1B	REG	XI				P1ZH		X			
D1D	REG	XI				R-1		XXII			
D1G	REG	XI				R8-1		XXII			
D1V	REG	XI				S1A		X			
D1YE	REC	XI				S1B		X			
D1ZH	REG	XI				S1D		X			
DG-S1	MIX	XIV				S1G		X			
DG-TS1	REG	XI	D2G+			S1V		X			
DK-I1M	* MIX	XIV				S1YE		X			
DK-S1M	* MIX	XIV				SBS-1	GOU	XXI			
DK-V1	* DET	XIV				SFK-1	GOU UV	XXI			
DL-S1	MIX	XIV				SG18	DIO SIN		0A2\$		
F-1	* PHO	XVI				SG1P	DIO SIN V		0A2\$	13282-67	
FD-1	PHG	XV				SG1P-V	REG		SG1P+		
FDK-1	PHC	XV				SG1P-YE	REG		SG1P+		
FEU-1	* PHM	XVI				SI-1BG	GOU	XXI			
FEU-18	PHM	XVI				SI-1G	COU		STS-1+		
FEU-181V	PHM	XVI				SK1-5.6/1000	REG				
FEU-182V	PHM	XVI				SK1-6.8/1000	REG				
FEU-1S	PHM	XVI				SK1-8.2/1000	REG				
FEU-1V	PHM	XVI				SK1-10/500	REG				
FS-A1	* PHG	XV				SK1-12/500	REG				
FS-D1	PHG	XV				SK1-15/500	REG				
FS-K1	PHG	XV				SK1-18/500	REG				
FSA-G1		XV				SK1-22/150	REG				
FSD-G1		XV				SK1-24/150	REG				
FSK-G1		XV				SK1-28/150	REG				
FSK-P1		XV				SK1-30/150	REG				
FT-1	PHG	XV				SK1-36/150	REG				
FTG-1	PHG	XV				SK1-43/150	REG				
GE-1	TET SIN	III	GKE-100*			SK1-51/150	REG				
GG-1-0.3/8	DIO SIN	IV				SK1-62/50	REG				
GG1-0.5/5	DIO SIN	IV			VG1.5/5000+	SK1-75/50	REG				
GG-1-0.5/20	DIO SIN	IV				SK1-95/50	REG				
GG-1-1/22	DIO SIN	IV				SK1-110/50	REG				
GG-1-2/5	DIO SIN	IV				SK1-120/50	REG				
GG-1-2/16	DIO SIN	IV				SK1-150/50	REG				
GG-1.5/15	DIO SIN	IV	GG1-0.5/5+			SK1-180/50	REG				
GK1A	TRI SIN	III				SK1-220/25	REG				
GM1A	TRI SIN	III				SK1-270/25	REG				
GM1P	TRI SIN	III				SK1-300/25	REG				
GMI-18	TRI SIN	III				ST1-17	TMS MEA	XIX			
GR1-02/15	DIO SIN	IV				ST1-18		XIX			
GR1-1-0.3/8.5	DIO SIN	IV				ST1-19	TMS MEA	XIX			
GR1-25/15	DWD SIN	IV				ST1-21	TMS	XIX			
GS-18	TRI SIN	III				ST1-30	TMS	XIX			

**Group I—NUMERICAL.—Continued**

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
STS-1	COU	XXI				V1-3/70	DIO	SIN	IV		
T-1B	TRI	THY		TG-18+		V1-4/40	DIO	SIN	IV		
TG1B	TRI	THY	VII			V1-15/55	DIO	SIN	IV		
TG18-V	TRI	THY		TG18+		VD1	DIO	SIN		V1-1/40+	
TG1P			VII			VDI-1D	DIO	SIN		VI-1-100/50+	
TG1-.02/0.5	TET	THY	VII			VG1/8500	DIO	SIN	IV		
TG1-0.1/0.3	TRI	THY	VII	884\$		VG1.5/5000	DIO	SIN		GG2-0.5/5+	
TG1-0.1/1.3	TET	THY	VII	2050\$	7843-55	VI-1-5/20	DIO	SIN	IV		
TG1-0.5/12	TRI	THY	VII			VI-1-5/30	DIO	SIN	IV		
TG1-1.0/0.8	TET	THY	VII			VI-1-18/32	DIO	SIN	IV		
TG1-1.5/2	TRI	THY	VII			VI-1-27/35	DIO	SIN	IV		
TG1-1.6/1.3	TRI	THY	VII			VI-1-30/25	DIO	SIN	IV		
TG1-2/8			VII			VI-1-70/32	DIO	SIN	IV		
TG1-2.5/4	TRI	THY	VII	TG8/3, TG1-2.5/3*+	7952-68	VI-1-100/50	DIO	SIN	IV		
TG1-2.5/10			VII			VO-1	DIO	SIN	IV		
TG1-3.2/1.3	TRI	THY	VII			VSTS-1	PHO			F-3+	
TG1-5/3	TRI	THY	VII			VT-1	TRI	THY		TG-2.5/5+	
TG1-6.4/1.3	TRI	THY	VII		7953-56	1A1P	PTG	SIN	II	1R5\$, DK91, DK192	7708-66
TG1-12.5/1.3	TRI	THY	VII			1A2P *	PTG	SIN	II	DK96=, 1R5\$	9836-66
TGI-1B	TRI	THY	VII			1A501A			XI-E		
TGI-1-3/1	TET	THY	VII			1A501G			XI-E		
TGI-1-5/1.1	TRI	THY	VII			1A501I			XI-E		
TGI-1-10/1	TRI	THY	VII			1A504A			XI-E		
TGI-1-35/3	TRI	THY	VII	3C45\$		1A504B			XI-E		
TGI-1-50/5	TRI	THY	VII			1B1P	PND	DIO	II	1S5\$, DAF91=, DAF191	8006-56
TGI-1-90/8	TRI	THY	VII	MTI-4*+		182P *	PND	DIO	II	DAF96=, 1S5\$	9837-66
TGI-1-130/8	TRI	THY	VII			185-9	BAL	SIN	VI		7162-70
TGI-1-130/10	TRI	THY	VII			1810-17	BAL	SIN	VI		7162-70
TGI-1-260/12			VII			1DA191			XA		
TGI-1-325/16	TRI	THY	VII	MTI-5+, TGI-325/16+		1E1P *	TET	SIN	II		
TGI-1-400/3.5	TRI	THY	VII			1E3P	TRI	SIN	II	EM-4+	
TGI-1-400/16	TRI	THY	VII			1F2B	PND	TRI	II		
TGI-1-500/16			VII			1GF191			XA		
TGI-1-500/20			VII			1GF192			XA		
TGI-1-700/25	TRI	THY	VII			1GF193			XA		
TGI-1-1000/25			VII			1I2P	PND	TRI	II		
TGII-2000/35			VII			1I-302A	TUN	GAS	XI-B		
TGII-2500/35			VII			1I-302B	TUN	GAS	XI-B		
TKI-1	TMS	MEA	XIX			1I-302G	TUN	GAS	XI-8		
TKH1	TRI	THY	VII	313C		1I-302V	TUN	GAS	XI-8		
TKH1B	TRI	THY	VII			1IE201			XA		
TKH1-1G	PND		VII			1IL131A			XA		
TM-1	TRI	SIN	VII	6S5D+, 2C40\$		1IL131B			XA		
TNI-1.5	DEC		XXIII			1IL131V			XA		
TO-1	PND	SIN		10ZH12S+		1IL141A			XA		
TR1-2.5/3			VII								
TR1-5/2	TRI	THY	VII	VT-3	7954-69	1IL141B			XA		
TR1-6/3			VII			1IR141A			XA		
TR1-6/15	TRI	THY	VII		7955-68	1IR141B			XA		
TR1-15/3			VII			1IR201		MOS	XA		
TR1-15/15	TRI	THY	VII			1IR202		MOS	XA		
TR1-15/20			VII			1IR451		MOS	XA		
TR1-40/15	TRI	THY	VII			1JAM351		MOS	XA		
TR1-85/15	TRI	THY	VII		7956-69	1K1P	PND	SIN	II	1T4\$, DF91=	7707-55
TR1-130/15	TRI	THY	VII			1K2P *	PND	SIN	II	DF96=, 1T4\$	9946-66
						1K12B	PND	SIN	II		
TSG-1	PHO		XVI			1KP191			XA		
TSH-1	TMS	MEA	XIX			1KT011A			XA		
TST-1A	TMS	REG	XIX			1KT011B			XA		
TSV-1	PHO		XVI			1KT011G			XA		
TVB-1	THM		XVIII			1KT011V			XA		
V1-00313	DIO	SIN	IV	V13/30+, 3B26							
V1-02/20	DIO	SIN	IV			1KT491			XA		
V1-03/13	DIO	SIN	IV			1L8041		NND	XA		
V1-05/70	DIO	SIN	IV			1LB042		NND	XA		
V1-06/30	DIO	SIN	IV			1LB043		NND	XA		
V1-1/2.5	DIO	SIN	IV			1LB044		NND	XA		
V1-1/30	DIO	SIN	IV			1LB061		NDR	XA		
V1-1/40	DIO	SIN	IV			1LB062		NDR	XA		
V1-2/40	DIO	SIN	IV			1LB063		NDR	XA		
V1-3/16	DIO	SIN	IV			1LB064		NDR	XA		
						1LB065		NDR	XA		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
1LB066	NDR	XA				1LP064	OR	XA			
1LB067	NDR	XA				1LP065	OR	XA			
1LB068	NDR	XA				1LP066	OR	XA			
1LB069	NDR	XA				1LP067	OR	XA			
1LB091A	NDR	XA				1LP068	OR	XA			
1LB091B	NDR	XA				1LP091			XA		
1LB091G	NDR	XA				1LP141	OR	XA			
1LB091V	NDR	XA				1LP142	OR	XA			
1LB092A	NDR	XA				1LP201	MOS	XA			
1LB092B	NDR	XA				1LP211			XA		
1LB111	NOR	XA				1LP251	MOS	XA			
1LB112	NOR	XA				1LP331	OR	XA			
1LB113	NOR	XA				1LP371			XA		
1LB131A	NOR	XA				1LP391			XA		
1LB131B	NOR	XA				1LP421	MOS	XA			
1LB131V	NOR	XA				1LP471	MOS	XA			
1LB132A	NOR	XA				1LR061	ADR	XA			
1LB132B	NOR	XA				1LR062	ADR	XA			
1LB132V	NOR	XA				1LR063	ADR	XA			
1LB133A	NOR	XA				1LR064	ADR	XA			
1LB133B	NOR	XA				1LR271	ADR	XA			
1LB133V	NOR	XA				1LR331A	ADR	XA			
1LB134A	NOR	XA				1LR331B	ADR	XA			
1LB134B	NOR	XA				1LR341	ADR	XA			
1LB134V	NOR	XA				1LR342	ADR	XA			
1LB135A	NOR	XA				1LR421	MOS	XA			
1LB135B	NOR	XA				1LS271	ADR	XA			
1LB135V	NOR	XA				1MA191			XA		
1LB141A	NOR	XA				1N1	TRI TWN		1N3S=		
1LB141B	NOR	XA				1N1	*		XXIIIA		
1LB142A	NOR	XA				1N3S	*	TRI TWN	II	1N1+, 1G6-GT\$	
1LB142B	NOR	XA				1ND041			XA		
1LB143A	NOR	XA				1ND042			XA		
1LB143B	NOR	XA				1ND043			XA		
1LB144A	NOR	XA				1ND044			XA		
1LB144B	NOR	XA				1P2B	*	PND SIN	II	CK507AX	
1LB145A	NOR	XA				1P3B	PND SIN	II			
1LB145B	NOR	XA				1P4B	*	PND SIN	II		
1LB146A	NOR	XA				1P5B	*	PND SIN	II		
1LB146B	NOR	XA				1P22B	*	PND SIN	II		
1LB211A	NDR	XA				1P24B	*	PND SIN	II		
1LB211B	NDR	XA				1P32B	*	PND SIN	II		
1LB211G	NDR	XA				1PP191			XA		
1LB211V	NDR	XA				1S12P	TRI SIN	II	DC96=		
1LB212A	NDR	XA				1S38A	*	TRI SIN	II		
1LB212B	NDR	XA				1SV191	AMP		XA		
1LB251	MND	XA				1T303A			X		
1LB331A	NN	XA				1T303B			X		
1LB331B	NN	XA				1T303D			X		
1LB332A	NN	XA				1T303G			X		
1LB332B	NN	XA				1T303V			X		
1LB341	NOR	XA				1T303YE			X		
1LB342	NOR	XA				1T308A			GT308A+		
1LB371		XA				1T308B			GT308B+		
1LB372	ONR	XA				1T308V			GT308V+		
1LB381	ONR	XA				1T403A			GT403A+		
1LB391	ONR	XA				1T403B			GT403B+		
1LB392	ONR	XA				1T403D			GT403D+		
1LB471	MNR	XA				1T403G			GT403G+		
1LB472	MNR	XA				1T403I			GT403I+		
1LB0610	NDR	XA				1T403V			GT403V+		
1LI041	AND	XA				1T403YE			GT403YE+		
1LI042	AND	XA				1T403ZH			GT403ZH+		
1LI043	AND	XA				1TK191			XA		
1LI044	AND	XA				1TK251	MOS		XA		
1LI045	AND	XA				1TK471	MOS		XA		
1LL201	MOR	XA				1TR061	ADR		XA		
1LP061	OR	XA				1TR062	ADR		XA		
1LP062	OR	XA				1TR063	ADR		XA		
1LP063	OR	XA				1TR064	ADR		XA		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
1TR131A	NOR	XA				DL-S2	MIX				
1TR131B	NOR	XA				DSH2-10	DIO SIN			2D2S+	
1TR131V	NOR	XA				F-2	*	PHO	XVI		
1TR141A	NOR	XA				FD-2		PHC	XV		
1TR1418	NOR	XA				FEU-2	*	PHM	XVI		
1TR421	MOS	XA				FEU-2B		PHM	XVI		
1TS1	DIO SIN			1TS1S+, 1VD1+		FEU-2B1V		PHM	XVI		
1TS1S *	DIO SIN	II		1TS1+, 1VD1+, 1Z1\$		FEU-2M		PHM	XVI		
1TS7S *	DIO SIN	II		DY30=, 1B3/8016\$	8359-66	FEU-2V		PHM	XVI		
1TS11P*	DIO SIN	II				FS-2A		PHC	XV		
ITS208	DIO SIN	II				FS-82		PHC	XV		
1TS21P*	DIO SIN	II		1S2\$, DY86=, DYB7=	13849-68	FS-K2		PHC	XV		
1TSH191	SCH	XA				FSA-G2			XV		
1UB191	AMP	XA				FSK-G2			XV		
1UI461	AMP	XA				GE-2		TET SIN	III	GKE-150=	
1UI462	AMP	XA				GMI-2B		TET SIN	III		
1US191	AMP	XA				GS-2B		TRI SIN	III		
1US192	AMP	XA				GU-2		BEA SIN	II		
1US221A	AMP	XA				GUZH-2		BEA SIN		G807+, 807\$	
1US221B	AMP	XA				GZH2		PND SIN		G413+	
1US221V	AMP	XA				I-2-50/1.5	TRI IGN	IV			
1US222A	AMP	XA				I2-70/0.8	*	TRI IGN	IV		15480-7
1US222B	AMP	XA				I2-140/0.8	*	TRI IGN	IV		15481-7
1US222V	AMP	XA				I2-200/1.5	*	TET IGN	IV		16282-7
1US481	AMP	XA				I2-350/0.8	*	TRI IGN	IV		15482-7
1UT191	AMP	XA				IN-2	*		XXIII-A		
1UT221A	AMP	XA				KF-2		SEA TWN		GU-32+, 832-A\$	
1UT221B	AMP	XA				KS-2		TRI SIN		GU-4+	
1UT221G	AMP	XA				KZH-2		BEA SIN		G-807+, 807\$	
1UT221V	AMP	XA				MTI-2		TRI THY		TG-200+	
1UT321	AMP	XA				OG-2		DEC	XXIII		
1UT401	AMP	XA				P2A			X		
1UYE191	AMP	XA				P2B			X	OC821=	
1UYE201	MMP					PT-2		TRI THY		TG-213*	
1V3/8016	DIO SIN			1TS7S+, 183/8016\$		R-2			XXIII		
1VD1	DIG SIN			1TS1, 1TS1S+		R-2M			X		
1VD2	DIO SIN			1TS7S+, 183/8016\$		RB-2			XV		
1YE4A	TRI SIN	II				S2A			X		
1ZH1ZH	PND SIN	II				S2B			X		
1ZH2	PND SIN			1ZH2M+		S2G			X		
1ZH2M	PND SIN	II		1ZH2*		S2V			X		
1ZH17B*	PND SIN	II				SF2-1			XV		
1ZH18B*	PND SIN	II				SF-2-2			XV		
1ZH24B*	PND SIN	II				SF-2-4			XV		
1ZH26A	PND SIN	II				SF-2-5	*	CDS	XV		
1ZH29B*	PND SIN	II				SF-2-8	*	CDS	XV		
1ZH30B	PND SIN	II				SF-2-9			XV		
1ZH368*	PND SIN	II				SF-2-12			XV		
1ZH37B*	PND SIN	II				SF-2-16	*	CDS	XV		
1ZH42A*	PND SIN	II				SG2P		DIO SIN	V	OB2\$	13283-67
AS-2	COU	XXI				SG2S		DIO SIN	V	0A3\$	
D2A	REC	XI		DG-TS9*+		SI-2B		COU	XXI		
D2B	REC	XI		DG-TS10*+		SI-2BG		COU	XXI		
D2D	REC	XI		DG-TS2*+		SK2-5.6/2000		REG	XIII		
D2G	REC	XI		DG-TS1*+		SK2-6.8/2000		REG	XIII		
D2I *	REC	XI				SK2-8.2/2000		REG	XIII		
D2K	REC	XI		DG-TS6*+		SK2-10/1000		REG	XIII		
D2M	REC	XI		DG-TS7*+		SK2-12/1000		REG	XIII		
D2N	REC	XI		DG-TS15*+		SK2-15/1000		REG	XIII		
D2P	REC	XI		DG-TS16*+		SK2-18/700		REG	XIII		
D2R	REC	XI				SK2-22/300		REG	XIII		
D2V	REC	XI		DG-TS8+		SK2-24/300		REG	XIII		
D2YE	REC	XI		DG-TS4*+		SK2-28/300		REG	XIII		
D2ZH	REC	XI		DG-TS5*+		SK2-30/300		REG	XIII		
DG-S2	MIX	XIV				SK2-36/300		REG	XIII		
DG-TS2	REC	XI		D2D+		SK2-43/300		REG	XIII		
DI-2-10	DIO SIN	XI		2D1S+		SK2-51/200		REG	XIII		
DK-I2M	*	MIX	XIV			SK2-62/200		REG	XIII		
DK-S2M	*	MIX	XIV			SK2-75/100		REG	XIII		
DK-V2	*	DET	XIV			SK2-91/100		REG	XIII		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
SK2-110/100	REG	XIII				2K1	PND	II		2K1M+	
SK2-120/100	REG	XIII				2K1M	PND	SIN	II	2K1*, SB241*	
SK2-150/100	REG	XIII				2K2	PND	SIN		2K2M*	
SK2-180/100	REG	XIII				2K2M	PND	SIN	II	1E5G\$, 2K2*, S0241*	
SK2-220/50	REG	XIII				2KD281	SWI	XA			
SK2-270/50	REG	XIII				2KD2B2	SWI	XA			
SK2-300/50	REG	XIII				2KH1	DWD	SIN		2KH1L+	
ST-2-26		XIX				2KH1L	*	DWD	SIN	II	2KH1*
ST2S	BAL	TWN	VI		7162-70	2KH2	DIO	SIN		2VDBA+, 2TS2S+, 2X2\$	
STS-2	COU	XXI				2KT2B1	SWI	XA			
STSV-2A	PHO		F-2+			2LB011	NND	XA			
TG2-01/01	TRI	THY	VII	1050\$		2LB012	NOR	XA			
TG2-0.5/12	TRI	THY	VII			2LB013	NOR	XA			
TG-2.5/5	TRI	THY	VII	VT-1		2LB014	NND	XA			
TGI-2.5/3	TRI	THY		TG1-2.5/4*+		2LB015	NND	XA			
TGI-2.5/10	TET					2LB016	NOR	XA			
TGI-2-260/12	TRI	THY	VII			2LB017	NOR	XA			
TGI-2-32516	TRI	THY	VII			2LB041	NDR	XA			
TGI-2-40035	TRI	THY	VII			2LB042	NND	XA			
TKH-2	TRI	THY	VII			2LB051	NOR	XA			
TKI-2	TMS	MEA	XIX			2LB052	NOR	XA			
TO-2	PND	SIN		10P12S+		2LB053	NOR	XA			
TP-2/0.5	REG	XIX				2LB071	NOR	XA			
TP-2/2	REG	XIX				2LB072	NOR	XA			
TSH-2	TMS	MEA	XIX			2LB073	NOR	XA			
TV-2	THM	XVIII				2LB074	NOR	XA			
TVB-2	THM	XVIII				2LB075	NOR	XA			
VD2	DIO	SIN		V1-2/40+		2LB076	NOR	XA			
VI-2-27/35	DIO	SIN	IV			2LB111	NND	XA			
VI-2-70/32	DIO	SIN	IV			2LB112	NND	XA			
VI-2-100/50	DIO	SIN	IV			2LB113	NND	XA			
2A1	PTG	SIN	II	S0242*+, 2A1M		2LB114	NND	XA			
2A1M	PTG	SIN		S0242*+		2LB115	NND	XA			
2A3	TRI	SIN		2S4S+, 2A3\$		2LB116	NND	XA			
2A201A			XIV			2LB117	NND	XA			
2A202A			XIV			2LB118	NND	XA			
2D1L	DWD	SIN	II			2LB119	NND	XA			
2D1S *	DIO	SIN	II	DI-2-10+		2LB171	NND	XA			
2D2S *	DIO	SIN	II	DSH2-10+		2LB172	NND	XA			
2D3B *	DIO	SIN	II			2LB173	NND	XA			
2D3S	DIO	SIN	II			2LB1B1			XA		
2D7S *	DIO	SIN	II			2LB211			XA		
2D9S *	DIO	SIN	II			2LB231	ORD		XA		
2D21	TET	THY		TG3-0.1/1.3+, 2D21\$		2LB1110	NOR		XA		
2D503A	SI		KD503A+			2LB1111	NOR		XA		
2D503B	SI		KD503A+			2LB1112	NOR		XA		
2DA1B1	DET		XA			2LI041			XA		
2DS191	LIM		XA			2LL231			XA		
2E1	TET	SIN	II			2LN021	NND		XA		
2E2	TET	SIN	II	UB155+		2LN022	NND		XA		
2E2P *	TET	TWN	II			2LN051	NND		XA		
2F2M	TRI	SIN				2LN052	NND		XA		
2FP201	FIL		XA			2LN111	NND		XA		
2GF181	MVB		XA			2LN112	NND		XA		
2GF182	MVB		XA			2LN113	NND		XA		
2GF201	MVB		XA			2LN114	NND		XA		
2GS191	OSC		XA			2LN115	NND		XA		
2GS192	OSC		XA			2LN116	NND		XA		
2GS193	OSC		XA			2LN151	NND		XA		
2ID231			XA			2LN1B1	INV		XA		
2IE111			XA			2LN1B2	INV		XA		
2IE112			XA			2LN183	INV		XA		
2IE231			XA			2LN211	NOR		XA		
2IL071			XA			2LP171	EXP		XA		
2IL072			XA			2LP172	EXP		XA		
2IL073			XA			2LP173	EXP		XA		
2IL231			XA			2LR171	ANR		XA		
2IR111			XA			2LR221	ANR		XA		
2IR112			XA			2LS011	ADR		XA		
2J55	MAG		IX			2LS021	ADR		XA		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
2LS022	ADR	XA				2TM-20	TRI	TWN	III		
2LS023	ADR	XA				2TM-100	TRI	TWN	III		
2LS024	ADR	XA				2TR071			XA		
2LS025	ADR	XA				2TR072			XA		
2LS026	ADR	XA				2TR073			XA		
2LS027	ADR	XA				2TR111		NOR	XA		
2LS028	ADR	XA				2TR112		NOR	XA		
2LS151	ADR	XA				2TR113		NOR	XA		
2LS152	ADR	XA				2TR114		NOR	XA		
2LS211		XA				2TR115		NOR	XA		
2MS191		XA				2TR116		NOR	XA		
2MS192		XA				2TR171			XA		
2ND021		XA				2TR172			XA		
2ND022		XA				2TR211		FLP	XA		
2NE281		XA				2TR231			XA		
2NK041		XA				2TS2S	*	DIO	SIN	II	2X2\$
2NK051		XA				2U-101A	SCR				KU101A+
2NK281		XA				2U-1018	SCR				KU1018+
2NS191A		XA				2U-101D	SCR				
2NS191B		XA				2U-101G	SCR				KU101G+
2NT011		XA				2U-101V	SCR				
2NT012		XA				2U-101YE	SCR				KU101YE+
2NT013		XA				2UI021		AMP		XA	
2NT171		XA				2UI071		AMP		XA	
2NT172		XA				2UI111		AMP		XA	
2NT173		XA				2UI151		AMP		XA	
2NT191		XA				2UI181		AMP		XA	
2N1	TRI	DUO	II	1J6GT\$, 2N1M*, SB243, S0243		2UI182		AMP		XA	
2N1M	TRI	DUO		2N1+, SB243+, S0243+		2UI183		AMP		XA	
2P1	BEA	SIN	II	SB244+, S0244+		2US181		AMP		XA	
2P1M	BEA	SIN		2P1P+, S8244		2US191A		AMP		XA	
2P1P	8EA	SIN	II	DL94=, 2P1M, 3S4\$	8005-66	2US191B		AMP		XA	
2P2	8EA	SIN	II	3S4\$		2US192		AMP		XA	
2P2P	*	8EA	SIN	II	DL92=, 3S4\$	9947-66	2US193		AMP		XA
2P3	8EA	SIN	II	S8258+, S0258+, 2P2M+		2US194		AMP		XA	
2P58	*	PND	SIN	II		2US201		AMP		XA	
2P9	BEA	SIN		2P9M+, 2P9S		2US202				XA	
2P9M	8EA	SIN	II	2P9+, 2P9S, 6AK7		2US281		AMP		XA	
2P9S	8EA	SIN		2P9M+, 2P9		2US282		AMP		XA	
2P19B	PND	SIN	II			2US283		AMP		XA	
2P21S	BEA	SIN				2US284		AMP		XA	
2P29	PND	SIN		2P29L+		2US285		AMP		XA	
2P29L	*	PND	SIN	II		2UYE181		AMP		XA	
2P29P	PND	SIN	II			2V6	DIO	ARC	IV		
2S1	TRI	SIN	II	UB152+		2V12	DIO	ARC	IV		
2S2	TRI	SIN	II	UB240+		2V20	DIO	ARC	IV		
2S3	TRI	SIN		2S4S+, 2A3\$		2VD8	DIO	SIN	II		
2S3A	*	TRI	SIN	II		2VN12	DIO	ARC	IV		
2S3M	TRI	SIN		2S2+		2VN20	DIO	ARC	IV		
2S4S	*	TRI	SIN	II	2A3\$	2ZH1M	PND	SIN	II		S8245+
2S14B	*	TRI	SIN	II		2ZH2B	PND	SIN			
2S22	TRI	SIN		6S8S+, 2C22\$		2ZH2M	PND	SIN	II		
2S49D	*	TRI	SIN	II		2ZH4	PND	SIN	II		S0257+
2S-156A	REG	SI	XIII			2ZH148*	PND	SIN	II		
2S-168A	REG	SI	XIII			2ZH158*	PND	SIN	II		
2S920A(P)	REG	SI	XIII			2ZH27	PND	SIN			2ZH27L+
2S930A(P)	REG	SI	XIII			2ZH27L*	PND	SIN	II		2ZH27+
2S950A(P)	REG	SI	XIII			2ZH27P*	PND	SIN	II		
2S980A(P)	REG	SI	XIII			2ZH28L	PND	SIN	II		
2T301				KT301+		D3A	DET		XIV		
2T301A				KT301A+		D38	DET		XIV		
2T301B				KT301B+		DG-S3	MIX		XIV		
2T301D				KT301D+		DG-TS3	REC		XI		
2T301G				KT301G+		DK-S3	MIX		XIV		
2T301V				KT301V+		DK-V3	* DET		XIV		
2T301YE				KT301YE+		DL-S3	MIX				
2T301ZH				KT301ZH+		EM-3	TET SIN	II			
2TK041		XA				F-3	*	PHO	XVI		
2TK171		XA				FD-3	PHC		XV		
2TK181		XA				FEU-38	PHM		XVI		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
FEU-3M	PHM	XVI				3I-301V	TUN			AI301V	
FEU-R3	PHM	XVI				3J21	MAG	IX			
FS-3A	PHC	XV				3LK1B *	TV	VIII			
FS-K3	PHC	XV				3L01-I*		VIII			
GI-3	TRI SIN	III	2C26A\$			3S1	TRI SIN	II		T0-141+	
GI-3/100	TRI SIN		GI-3+			3S2	TRI SIN	II		T0-142+	
GK3A	TRI SIN	III				3S6B-V*	TRI SIN	II			
GM3P	TRI SIN	111				3S7B-V*	TRI SIN	II			
GMI-3	TET SIN	III				3S9	TRI SIN	II			
GS-3B	TET SIN	III				3T16S*	DIO	II	3A3\$, 3B2\$		
GU-3	BEA SIN	III				3T18P*	DIO SIN	II			10372-67
GUZH-3	BEA SIN		G1625+, 1625\$			3T22S*	DIO SIN	II			
KF-3	BEA SIN		GU-13+, 813\$			3V30	DIO ARC	IV			
KZH-3	BEA SIN		G-1625+, 1625\$			3VN30	DIO ARC	IV			
LI-3	IC	VIII				3VN60	DIO ARC	IV			
LIM-3	LAM	XXIV				3VN100	DIO ARC	IV			
MD3	*	XI				3VP1	OS		8L029+, 3BP1A\$		
MS3	TRI SIN		GM57+, UB180=, M457+			3ZH1BV*	PND SIN	II			
OG-3	*	DEC	XXIII			3ZH2BV*	PND SIN	II			
P3A		X				DG-S4	MIX	XIV			
P3B		X				DG-TS4	REC	XI	D2YE*+		
P3V		X				DK-S4	MIX	XIV			
PIM-3	IC	VIII				DK-V4	* DET	XIV			
PT-3	TRI THY		TG-235*+			DL-S4	MIX				
R-3		XXII				EM-4	* TRI SIN	II	1E3P+		
RB-3		XXII			15630-70	F-4	* PHO	XVI			
S3A		X				FEU-4	* PHM	XVI			
S3B		X				FS-A4	PHC	XV			
S3D		X				FS-K4	PHC	XV			
S3G		X				GI-4A	TRI SIN	III			
S3V		X				GKV-4	TRI SIN		GU-4+		
S3YE		X				GMI-4B	TET SIN	III			
SBT-3	COU	XXI				GS-4	TRI SIN	III			
SF3-1		XV				GS-4	COU	XXI			
SF-3-5	*	CDS	XV			GS-4B	TRI SIN		G431A+		
SF-3-8	*		XV			GS4D	TRI SIN	III			
SG3P	REG	V				GU4	TRI SIN	III			
SG3S	DIO SIN	V	OC3\$			GU4A	TRI SIN	III			
SI-3B	COU		MST-18+			IN-4	*	XXXII-A			
SI-3BG	COU	XXI				KMT-4	* TMS	XIX		10688-63	
SNM-3	COU	XXI				KS-4	TRI SIN		GU-150+		
ST3P	DIO SIN	VI				LIM-4	LAM	XXIV			
ST3-17	TMS MEA	X1X				LN-4	* ST	VIII			
ST3-18		XIX				LP-4	* COM	VII			
ST3-19	TMS MEA	XIX				MMT-4	* TMS	XIX		10688-63	
ST-3-21		X1X				MS-4	COU	XXI			
ST-3-22		XIX				MSTR-4	COU	XXI			
ST3-23	TMS COM	XIX				MTI-4	TRI THY		TGI-1-90/8+		
ST-3-24		X1X				OG-4	DEC	XXIII			
ST3-25	TMS MEA	XIX				P4			2N68\$		
ST-3-26		X1X				P4AE	*	X			
STS-3	COU	XXI				P4BE	*	X			
STSV-3	*	PHO	XVI			P4DE	*	X			
TG3-0.1/1.3	TET THY	VII		2D21\$	13875-68	P4GE	*	X			
TG3-2.5/10	TRI THY	VII				P4L		X			
TKH3B	TET THY	VII				P4VE	*	X			
TK1-3	TMS MEA	XIX				PIM-4	IC	VIII			
T0-3	PND SIN			7ZH12S+		R-4		XXII			
TSG-3	*	PHO	XVI			S 4A		X			
TSV-3	PHO	XVI				S4B		X			
TVB-3	THM	XVIII				S4G		X			
VDI-3D	DIO SIN		VI-1-30/25+			S4V		X			
VT-3	TRI THY		TR1-5/2*+			SBS-4	COU	XXI			
3A4S	PND SIN	II				SF-4-1	PHC	XV			
3B4S	BEA SIN	II				SG4S	DIO SIN	V	OD3\$		
3D6A-V*	DIO SIN	II				SI-4BG	COU	XXI			
3E29	BEA TWN		GI-30+, 3E29\$			SI-4G	COU		VS-9T+		
3I-301A	TUN		AI301A			ST-4-15	TMS	XIX			
3I-301B	TUN		AI301B			STSV-4	*	PHO	XVI		
3I-301G	TUN		AI301G			TGI-4	TRI THY		TGI-1-130/10+		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
TKH-48	TET	THY	VII			P5YE			X		
T0-4	PND	SIN	VII	7P12S+		R-5	*		XXII		15632-70
TSG-4 *	PHO		XVI			R8-5	*		XXII		15631-70
TSV-4	PHO		XVI			R8-5A			XXII		
TV-4	THM		XVIII			SBS-5	COU		XXI		
TVB-4	THM		XVIII			SG58	DIO	SIN	V		
VDI-4D	DIO	SIN		VI-1-70/32+		SG58-V	REG			SG5B+	
VS-4	COU		XXI			SGS-5	COU		XXI		
4D2	DIO	SIN		4TS6S+		SNM-5	COU		XXI		
4D5S	DIO	SIN	II			STS-5	COU		XXI		
4D17P	DIO	SIN	II			TKH-5A	TRI	THY	VII		
4E1	TET	SIN	II			TKH-58	TRI	THY	VII		
4E2	TET	SIN	II			TV-5	THM		XVIII		
4E3	TET	SIN	II			TVB-5	THM		XVIII		
4F6S	8EA	SIN	II			UV-5	TWT		IX		
4J26-30	MAG		IX			VG-5	POW		XII		
4J45	MAG		IX			5L01B	OS			5L038+, 2AP1\$	
4J50	MAG		IX			5L038I*	OS		VIII	2AP1\$	
4N1	TRI DUO	II		SB259+, S0259+		5SR1	OS			5CP1A\$	
4P1	PND	SIN	II			5SR7	OS			5CP7A\$	
4P1L *	PND	SIN	II			5TS3S	* DWD	SIN	-II	5U4C\$	8360-66
4P2	PND	SIN				5TS4	DIO	DUO		5TS4S+, 5Z4C\$	
4P6L	PND	SIN				5TS4M	* DIO	DUO	II	5Z4\$	
4P10S	PND	SIN	II			5TS4S	* DIO	DUO	II	5Z4\$	8079-67
4S1	TRI	SIN	II	UB107+		5TS8S	* DWD	SIN	II		8361-66
4S2	TRI	SIN	II	U8110+		5TS9S	* DWD	SIN	II	1502+	8362-66
4S3	TRI	SIN	II			5TS9SE	DWD	SIN	II		
4S3S	TRI	SIN	II			5TS12P*	DIO	SIN	II		
4S4	TRI	SIN	II			5VKH1	DWD	SIN		5Z4C\$	
4S5	TRI	SIN	II	S0-185+		5VKH2	DWD	SIN	II	5U4C\$	
4TS1M	DIO	SIN		4TS6S+		5VKH3	DWD	SIN	II	5Y3C\$	
4TS6S *	DIO	SIN	II			D6	REG		XIII		
4TS14S *	DIO	SIN	II			DG-TS6	REC		XI	D2K+	
4VD1	DIO	SIN	II			DK-V6	DET		XIV		
4VKH1	DIO	TWN	II	VO-188*+		EM-6	* TET	DBA	11		
4VKH2	DIO	SIN	II	VO-188*+		F-6	PHO		XVI		
4ZH1L *	PND	SIN	II			FS-A6	PHC		XV		
4ZH1P	PND	SIN	II			FS-D6	PHC		XV		
4ZH4	PND	SIN				FS-K6	PHC		XV		
4ZH5	TET	SIN	II	4ZH5S+		GI-6B	TRI	SIN	III	LD6	
4ZH5S	PND	SIN	II			GK6A	TRI	SIN			
DG-TS5	REC		XI	D2ZH*+		GMI-6	8EA	TWN	III		
DK-S5	MIX		XIV			GS6	TRI	SIN	III		
DK-V5M *	DET		XIV			GS-6	COU		XXI		
EM-5 *	TET	DBA	11			GSH-6	NOI		IX		
F-5 *	PHO		XVI			LD-6	TRI	SIN		GI-68+	
FEU-5 *	PHM		XVI			LI-6	IC		VIII		
FEU-R5	PHM		XVI			LP-6	* COM		V11		
FS-K5	PHC		XV			MMT-6	TMS		XIX		
G-5	TRI	SIN		M39+		MS-6	COU		XXI		
G-5A	TRI	SIN				P6A			X		
G-5RA	TRI	SIN				P6B			X	OC821=	
GI-5B	TRI	SIN	III			P6D			X	OC812=	
GK5A	TRI	SIN	III			P6G			X		
GMI-5	TET	SIN	III			P6V			X	OC814=	
GP-5 *	TRI	SIN	II			R6			XXII		
GS-5B	TRI	SIN		G433A+		SGS6			II		
GSH-5	NOI		IX			SGS-6	COU		XXI		
GU5A	TRI	SIN	III			STS-6	COU		XXI		
GU58	TRI	SIN	III			STS-6	PHO		XVI	F-4+	
GUO-5	TRI	SIN		G120+		TKH-6G	HEX		VII		
LP-5 *	COM		VII			TP-6/2	REG		XIX		
MMT-5	TMS	MEA	XIX			TSV-6	PHO		XVI	F-5+	
MTI-5	TRI	THY		TGI-1-32516+		TVB-6	THM		XVIII		
OG-5	DEC		XXXXII			UV-6	TWT		IX		
P5A		X				VS-6	COU		XXI		
P5B		X		2N107\$		6A1B	PTG	SIN		6SA7\$	
P5D		X		CK727\$		6A2P	* PTG	SIN	II	6BE6\$, EK90=	
P5G		X		2N65\$		6A3P	* GTB	SIN	II	6BN6\$	
P5V		X				6A4P	* PTG	D8A	II		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
6A58	PTG	SIN		6L7\$		6K9S	PND	SIN	II	6K7C\$, 6SK7\$	
6A6A	DIO					6K118-K	PND	SIN	II	6K18+	
6A7 *	PTG	SIN	II	6SA7\$	8086-67	6K12	PND	SIN		6EH7\$	
6A8	PTG	SIN	II	6A88+, 6A8\$	8367-67	6K13P *	PND	SIN	II	6EH7\$, EF183-	
6A8B	PTG	SIN		6A8\$		6K148	PND	SIN	II		
6A8M	PTG	SIN		6A8S*+		6K148-V	PND	SIN	II		
6A10S	PTG	SIN	II	6SA7\$	8087-56	6K158	PND	SIN		6AB7\$	
6A158	PTG	SIN		6SA7\$		6K178	PND	SIN		6SK7\$	
6AG7	SEA	SIN		6P9+, 6AG7\$		6K198	PND	SIN		9003\$	
6AZH5	PND	SIN		6AC5\$ EF96=		6K19P	PND	SIN		6K1P+, 9003\$	
6B1P *	PND	DIO	II			6KH1ZH	DIO	SIN		6D4ZH+, 9004\$	
6B2P *	PND	DIO	II	L100*+		6KH2P *	DIO	TWN	II	EAA91=, 6AL5\$	8348-66
6B4	TRI	SIN		6A3\$		6KH4P	DWD	SIN		6TS4P+	
6B8	PND	DWD	II			6KH5	DWD	SIN		6VKH1+, 6X5GT\$	
6B8M	PND	DWD		688S+, 6B8G\$		6KH5S	DWD	SIN		6VKH1+, 6X5GT\$	
6B8S	PND	DWD	II	6B8G\$, 6B8M*	8369-57	6KH6	DIO	TWN		6KH6B+, 6H6\$	
6BKH1	DIO	DUO		6KH5S+		6KH6B	DIO	TWN	II	6H6-G\$	
6D1A	DIO	SIN		6D6A*, 5704\$		6KH6M	DIO	TWN		6KH6S+, 6H6G\$	
6D1ZH	DIO	SIN		6D4ZH*, 9004\$		6KH6S *	DIO	TWN	II	6H6-G\$	8080-67
6D3D *	DIO	SIN	II	559\$		6KH78 *	DIO	TWN	II		
6D4ZH *	DIO	SIN	II	9004\$		6L1P *	HPT	SIN	II		
6D6A *	DIO	SIN	II	5704\$, *6D1A+		6L7	PTG	SIN	II	6L7\$	
6D8D *	DIO	SIN	II			6LK1A	ELM	VIII			
6D10D *	DIO	SIN	II			6LK18 *	ELM	VIII			
6D13D *	DIO	SIN	II			6L01I *	ELS	VIII			
6D14P *	DIO	SIN	II			6N1P *	TRI	TWN	II	68K7\$	8355-66
6D15D	DIO	SIN	II			6N2P *	TRI	TWN	II	ECC83=, 6AX7\$	8356-66
6D16D	DIO	SIN	II			6N3P *	TRI	TWN	II	ECH42=, 2C51\$	8357-66
6D20P *	DIO	SIN	II	EY88=, 6AL3\$	13848-68	6N4P	TRI	TWN	II	12AY7\$	
6D22S	DIO	SIN	II			6N5P *	TRI	TWN	II		13892-6
6E5P *	TET	SIN	II			6N5S *	TRI	TWN	II	6AS7G\$	
6E6P *	TET	SIN	II			6N6	DIO	TWN		6KH6B+, 6H6\$	
6E6P-YE*	BEA	SIN	II	E7119+	14206-69	6N6P *	TRI	TWN	II		
6E7P *	TET	SIN	II			6N7	TRI	TWN	II	6N7\$, 6N7S+	
6E12N *	TET	SIN	II	7587\$		6N7S *	TRI	TWN	II	6N7-GT\$	8374-66
6E13N *	TET	SIN	II			6N8	TRI	TWN		6N8S+, 6SN7GT\$	
6E14N *	TET	SIN	II			6N8M	TRI	TWN		6N8S+, 6SN7GT\$	
6F1P *	PND	TRI	II	EF80=, 6U., 8L8\$	12399-66	6N8S *	TRI	TWN	II	6SN7-GT\$	
6F3P *	TRI	PND	II	6BM8\$	13394-67	6N9	TRI	TWN		6N9S+, 6SL7GT\$	
6F4P *	PND	TRI	II	6DX8\$	14608-69	6N9M	TRI	TWN		6N9S+, 6SL7GT\$	
6F5	TRI	SIN		6S48+, 6F5\$		6N9S *	TRI	TWN	II	6SL7GT\$	
6F5B	TRI	SIN		6S48+, 6F5\$		6N10	TRI	TWN		6N10S+, 6SC7GT\$	
6F5M	TRI	SIN	II	6F5GT\$, 6S4+		6N10M	TRI	TWN		6N10S+, 6SC7GT\$	
6F5P *	TRI	PND	II	6GV8\$		6N10S	TRI	TWN	II	6SC7GT\$	
6F5S	TRI	SIN	II			6N11	TRI	TWN		6N5S+, 6AS7G\$	
6F6	PND	SIN		6P68+, 6F6\$		6N12S *	TRI	TWN	II	6DN7\$, 5687\$	
6F6M1	PND	SIN	II			6N13S *	TRI	TWN	II	6080\$, 6AS7\$	8378-66
6F6S	PND	SIN	II	6F6-GT\$	8082-67	6N14P *	TRI	TWN	II	ECC84=, 6CW7\$	10880-66
6F7	PND	TRI	II			6N15	TRI	TWN	II	6J6\$, 6N15P+	
6F9P *	PND	TRI	II			6N15P *	TRI	TWN	II	6J6\$, ECC91=	
6F12P	PND	TRI	II			6N168 *	TRI	TWN	II		
6G1 *	TRI	DWD	II	6SR7\$		6N17B *	TRI	TWN	II		
6G3P	TRD	TRI	II			6N188 *	TRI	TWN	II		
6G3S	TRI	DWD		6AK5\$		6N19P *	TTR	DWD	II		
6G7 *	TRI	DWD	II	6Q7=	8371-65	6N21B *	TRI	TWN	II		
6I1P *	PTG	TRI	II	ECH81=, 6AJ8\$	9948-66	6N23P *	TRI	TWN	II	ECC88=, 6DJ8\$	15078-69
6I3P	PTG	TRI	II			6N24P *	TRI	DUO	II	ECC89=, 6FC7\$	15531-70
6I4P	PTG	TRI	II	6V9\$. ECH200=		6N25G *	TET	TWN	II		
6I14P	PTG	TRI	II	ECH81=, 6I1P+		6N26P *	TRI	TWN	II		
6K1B *	PND	SIN	II	5702\$		6N27P *	TRI	TWN	II	ECC86=, 6GM8\$	
6K1L	PND	SIN	II			6N288	TRI	TWN	II		
6K1P *	PND	SIN	II	9003\$		6N28B-V	TRI	TWN	II		
6K1ZH *	PND	SIN	II	956\$		6P1P *	BEA	SIN	II	EL90=, 6AQ5\$	8358-66
6K2P	PND	SIN		6K4P+		6P2	SEA	SIN		6P6S+, 6V6GT\$	
6K3 *	PND	SIN	II	6SK7\$	8084-67	6P2P	PND	SIN	II		
6K4 *	PND	SIN	II	6SG7\$	8083-67	6P3	SEA	SIN		6P3S+, 6L6G\$	
6K4P *	PND	SIN	II	EF93=, 68A6\$	8352-66	6P3B	BEA	SIN		6P3S+, 6L6G\$	
6K6A *	PND	SIN	II			6P3S *	SEA	SIN	II	6L6G\$	8376-66
6K7	PND	SIN	II	6K7S*, 6K7G\$, 6K9S+	8363-66	6P3S-YE	SEA	SIN	II	6P3S, E7121+	
6K7S	PND	SIN		6K9S+, 6K7G\$, 6K7		6P4	PND	SIN	II	6G6C\$	
6K88	PND	SIN	II								
6K8P	PND	SIN	II	6ES6\$							//

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
6P6	SEA	SIN		6P6S+, 6V6GT\$		6S26B	*	TRI	SIN	II	6S68+
6P68	PND	SIN	II	6F6\$		6S278	*	TRI	SIN	II	6S78+
6P6P	SEA	SIN				6S28B-V*	TRI	SIN	II		
6P6S *	SEA	SIN	II	6V6-GT\$	8375-66	6S298-V*	TRI	SIN	II		
6P7	SEA	SIN		6P7S*, 68G6GA\$		6S308		TRI	SIN	II	
6P7S *	BEA	SIN	II	6P7*+, 68G6GA\$		6S31B	*	TRI	SIN	II	
6P8P	TRI	SIN		6S1P+, 9002\$		6S32B	*	TRI	SIN	II	
6P8S	PND	SIN	II	6G6C\$		6S33B	*	TRI	SIN	II	
6P9 *	SEA	SIN	II	6AG7\$	8377-66	6S33S	*	TRI	SIN	II	
6P9E	SEA	SIN	II	6AK7\$		6S34A-V*	TRI	SIN	II		
6P13S *	SEA	SIN	II			6S35A-V*	TRI	SIN	II		
6P14P *	SEA	SIN	II	EL84=, 6BQ5\$	10066-66	6S36K	*	TRI	SIN	II	
+ 6P15P *	SEA	SIN	II	EL83=, 6CK6\$	10879-66	6S37B	*	TRI	SIN	II	
6P17S	BEA	SIN	II	6DY5\$		6S39S		TRI	SIN	II	
6P18P *	BEA	SIN	II	68Q6\$, EL82		6S40P	*	TRI	SIN	II	
6P20S *	SEA	SIN	II	6CB5\$, 6CD6\$		6S41S	*	TRI	SIN	II	
6P21S *	BEA	SIN	II			6S44D	*	TRI	SIN	II	
6P23S *	BEA	SIN	II			6S45K		TRI	SIN	II	
6P25B *	PND	SIN	II			6S45P-YETRI	SIN	II			
6P27S *	BEA	SIN	II	6CA7\$		6S46G	*	TRI	SIN	II	
6P30B *	PND	SIN	II			6S47S	*	TRI	SIN	II	
6P31S *	BEA	SIN	II	EL36=, 6CM5		6S48D		TRI	SIN	II	
6P33P *	PND	SIN	II	6CW5\$, EL86		6S50D	*	TRI	SIN	II	
6P34S *	PND	SIN	II			6S51N	*	TRI	SIN	II	7586\$
6P35GV*	PND	SIN	II			6S52N	*	TRI	SIN	II	7895\$.6CW4\$
6P36S *	BEA	SIN	II	6GB5\$	13883-68	6S53N	*	TRI	SIN	II	8058\$
6P37N *	PND	SIN	II			6S56P	*	TRI	SIN	II	
6P38P *	PND	SIN	II			6S58P	*	TRI	SIN	II	
6P39S *	PND	SIN	II	E55L=.8233\$		6S59P	*	TRI	SIN	II	
6P41S *	SEA	SIN	II			6S62N	*	TRI	SIN	II	
6P42S *	BEA	SIN	II			6SK7		PND	TRI	II	
6R18	TRI	DWD		6G1+, 6SR7\$		6TS4P	*	DWD	SIN	II	6X4\$
6R2P	SEA	DUO	II			6TS4S		DIO	SIN	II	
6R3S	SEA	DUO	II			6TS5S	*	DWD	SIN	II	6X5GT\$
6R7	TRI	DWD		6G7+, 6Q7\$		6TS10P*		DIO	SIN	II	683\$
6R7B	TRI	DWD		6G7+, 6Q7\$		6TS13P*		DIO	SIN	II	
6R17B	TRI	DWD		6G2+, 6SQ7\$		6TS15S		DIO	TWN	II	
6S1B	TRI	SIN		6S6B+, 5703\$		6TS17S*		DIO	SIN	II	68L4\$.6X5\$.6AU4\$
6S1P *	TRI	SIN	II	9002\$		6TS19P*		DIO	SIN	II	
6S1ZH *	TRI	SIN	II	4671\$, 955\$		6V1P	*	PND	SIN	II	
6S2	TRI	SIN		6J5-GT\$		6V2P	*	PND	SIN	II	
6S2B *	TRI	SIN	II	6S78+, 5744\$		6V3S		PND	SIN	II	
6S2P *	TRI	SIN	II	6J4\$	8353-67	6VKH1		DWD	SIN	II	
6S2S *	TRI	SIN	II	6J5-GT\$	8081-67	6YE1P	*	TRI	SIN	II	EM80=, 68R5\$
6S38 *	TRI	SIN	II	6K4A\$		6YE2P		TRI	SIN	II	
6S3P *	TRI	SIN	II			6YE3P		TRI	SIN	II	EM84=, 6FG6\$
6S4	TRI	SIN		6F5\$		6YE5		TRI	SIN	II	6YE5S+
6S4B	TRI	SIN	II	6F5\$		6YE5S	*	TRI	SIN	II	6YE5*. 6E5\$
6S4P *	TRI	SIN	II	6B4\$		6ZH18	*	PND	SIN	II	8379-66
6S4S *	TRI	SIN	II	6B4-C\$	8373-66	6ZH1L		PND	SIN	II	5702\$
6S5	TRI	SIN	II	6S5S+, 6C5GT\$, 6J5GT\$		6ZH1P	*	PND	SIN	II	
6S5B	TRI	SIN		6C5-GT\$		6ZH1P-E		PND	SIN	II	6AK5\$, EF95=
6S5D *	TRI	SIN	II	TM1+*, 2C40\$		6ZH12H*		PND	SIN	II	6Z1H1P, E7112+, 5654\$
6S5S *	TRI	SIN	II	6C5-GT\$, 6J5GT		6ZH28	*	PND	SIN	II	954\$
6S6B *	TRI	SIN	II	6S5\$ 8368-57		6ZH2M		PND	SIN	II	5784\$, 5639\$
6S7B *	TRI	SIN	II	5744\$		6ZH2P	*	PND	SIN	II	1851\$
6S8P *	TRI	SIN	II	6S1P+, 9002\$		6ZH2P-E		E7113+, 6AS6\$11317-65			
6S8S *	TRI	SIN	II	2C22\$		6ZH2P-E		PND	SIN	II	6Z1H2P, E7113+, 5725\$
6S9D *	TRI	SIN	II			6ZH3	*	PND	SIN	II	6SH7\$
6S10D	TRI	SIN	II			6ZH3M		PND	SIN	II	6A87/1853\$
6S11D	TRI	SIN	II			6ZH3P	*	PND	SIN	II	6AG5\$. EF96=
6S13D *	TRI	SIN	II			6ZH4	*	PND	SIN	II	6AC7\$, 6A87\$
6S15P *	TRI	SIN	II			6ZH48		PND	SIN	II	6AG7\$
6S16D *	TRI	SIN	II			6ZH4E		PND	SIN	II	6A87\$. 6AC7\$
6S17K *	TRI	SIN	II			6ZH4P	*	PND	SIN	II	6AU6\$, EF94=
6S18S *	TRI	SIN	II			6ZH5		TRI	SIN	II	12398-66
6S19P *	TRI	SIN	II			6ZH5A		PND	SIN	II	6J5\$
6S20S *	TRI	SIN	II		12841-67	6ZH5B	*	PND	SIN	II	
6S21D *	TRI	SIN	II			6ZH5P	*	BEA	SIN	II	6AH6\$
6S258	TRI	SIN	II			6ZH6M		PND	SIN	II	8351-66
						6ZH6P		PND	SIN	II	6J7\$
											6J7\$

**Group I—NUMERICAL.—Continued**

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
6ZH6S *	PND	SIN	II	Z62=		SAT-7		COU	XXI		
6ZH7 *	PND	SIN	II	6J7	8365-66	SBM-7		COU	XXI		
6ZH78	PND	SIN		6W7G\$		S8T-7		COU	XXI		
6ZH8 *	PND	SIN	II	6SJ7\$	8366-67	SG7S	DIO	SIN V			
6ZH8S	PND	SIN	II			SNM-7	COU		XXI		
6ZH98	PND	SIN	II			TKH-7G			VII		
6ZH9G *	PND	SIN	II			TV8-7	THM		XVIII		
6ZH9P *	PND	SIN	II	E180F=, 6688\$	11702-66	UV-7	TWT		IX		
6ZH9P-E	PND	SIN	II	6ZH9P, E7114+		7L01M * OS			VIII		
6ZH108*	PND	SIN	II			7L055I* OS			VIII	3MP1\$	
6ZH10P*	PND	SIN	II		12842-67	7P12S * PND	SIN II		329A		
6ZH11B	PND	SIN		6SH7\$		7ZH12S* PND	SIN II		328A\$		
6ZH11P*	PND	SIN	II	68Q5\$		D8	REG		XIII		
6ZH11P-E	PND	SIN		6ZH11P+, E7115+		DG-TS8	REC		XI	D2V+	
6ZH128	PND	SIN		6SG7\$		DK-V8	VID SI		XIV		
6ZH13	PND	SIN		6ZH13L+		EM-8	* PND SIN	II			
6ZH13L*	PND	SIN	II	6ZH13		F-8	* PHO		XVI		
6ZH20P*	SEA	DIO	II			FS-K8	PHC		XV		
6ZH21P*	SEA	DIO	II			GI-8	PND SIN	III			
6ZH22P*	DIO	SEA	II			GS-8	COU		XXI		
6ZH23P*	PND		II			GS-88	TET SIN	III			
6ZH318K*	PND	SIN	II		EF95=	GU8	TRI SIN	III			7711-55
6ZH328*	PND	SIN	II			IN-8	*		XXIII-A		
6ZH32P*	PND	SIN	II		EF96=, 6267\$	14072-68	IN-8-2	*	XXIII-A		
6ZH33AV*	PND	SIN	II			KMT-8	* TMS		XIX		10688-63
6ZH358V*	PND	SIN	II			LN-8	* ST		V111		
6ZH38P*	PND	SIN	II		EF184=, 6EJ7\$	14207-69	MMT-8	* TMS	XIX		10688-63
6ZH39G-V	PND	SIN	II			MS-8	COU		XXI		
6ZH40P	PND	SIN	II		6ET6\$	P8			X		
6ZH43P	PND	SIN	II			P8A			P8+		
6ZH44P	PND	SCG	II			R-8			XXII		
6ZH458V	PND	SIN	II			SAT-8	COU		XXI		
6ZH468YE	PND	SIN	II			SBM-8	COU		XXI		
6ZH49P	PND	SIN	II			S8T-8	COU		XXI		
6ZH50P*	PND	SIN	II			SG8S	DIO SIN V				
6ZH51P*	PND	SIN	II			SNN-8	COU		XXI		
6ZH52P*	PND	SIN	II			STS-8	COU		XXI		
6ZH53P*	PND	SIN	II			T8D	TMS		XIX		
D7	REG		XIII			T8E	TMS		XIX		
D7A *	REC		XI	DG-TS21*+		T8M	TMS		XIX		
D78	*	REC	XI	DG-TS22*+		T8R	TMS		XIX		
D7D	*	REC	XI	DG-TS25*+		T8S1	TMS		XIX		
D7G	*	REC	XI	DG-TS24*+		T8S1M	TMS		XIX		
D7V	*	REC	XI	DG-TS23*+		T8S2	TMS		XIX		
D7YE	*	REC	XI	DGTS26		T8S2M	TMS		XIX		
D7ZH	*	REC	XI	DG-TS27*+		T8S3	TMS		XIX		
DG-TS7	REC	XI	D2M+		T8S3M	TMS		XIX			
DK-S7	MIX		XIV		TG8/3	TRI THY			TG1-2.5/4+		
DK-S7M	*	MIX	XIV		TKH-8G	HEX		VII			
DK-V7M	*	DET	XIV		TV8-8	THM		XVIII			
EM-7	*	TRI SIN	II			VS-8	COU		XXI		
F-7	*	PHO	XV1			8LK28 * TV			V111		
FS-K7	PHC		XV			8LM3V * OS			VIII		
FSK-7A	PHC		XV			8L02B OS			VIII	38P1\$	
FSK-78	PHC		XV			8L03I * OS			V111	8L029+, 38P1\$	
FSK-G7	PHC		XV			8L04I * OS			V111		
GI-78	TRI SIN	III		LD7		8L029I * OS			VIII		
GMI-7	TET SIN	III				8L029M				8L029I+	
GS-7	COU		XXI			8L030I * OS			VIII	3DP1\$	
GS-7	TRI SIN			GK-3000+		8L030M				8L030I+	
GS-7A	TRI SIN	III				8L039V * OS			VIII	3JP7\$	
GS-78	TRI SIN	III				D9A	REC		XI		
KS-7	TRI SIN			G-811+, 811-A\$		D98	* REC		XI		14342-69
LD-7	TRI SIN			GI-78+		D9D	* REC		XI		14342-69
LI-7	*	IC	VIII			D9G	* REC		XI		14342-69
LN-7	*	ST	V111			D9I	* REC		XI		14342-69
LP-7	COM		V11			D9K	* REC		XI		14342-69
MS-7	COU		XXI			D9L	* REC		XI		14342-69
P7			X			D9M	GEP		XI		
R-7			XXII			D9V	* REC		XI		14342-69

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
D9YE	*	REC	XI		14342-69	VKU-10-2.0	SCR	SI4	XII-A		
D9ZH	*	REC	XI		14342-69	VKU-10-2.5	SCR	SI4	XII-A		
DG-TS9		REC	XI	D2A+		VKU-10-3.0	SCR	SI4	XII-A		
F-9	*	PHO	XV1			10LK2B	* PR		VIII		
G-9		TRI SIN		GU65+		10LK38	* TV		VIII		
GK9P		TRI SIN	III			10L02I	* OD		VIII		
GS-9		COU	XXI			10L043I	* OD		VIII		
GS9B		TRI SIN	III			10P12S	* PND SIN	II		312A	
LD-9		TRI SIN		GS-9B+		10ZH1L	* PND SIN	II		10ZH3L+	
MMT-9	*	TMS	XIX		10688-63	10ZH3L	* PND SIN	II		10ZH1L+	
MS-9		COU	XXI			10ZH3P	PND SIN				
P9		X		2N35\$		10ZH12S	* PND SIN	II		310A\$	
P9A		X				D11	* REC	XI			
R-9		XXII				DK-V11	VID SI	XIV			
SBT-9		COU	XXI			FEU-11	* PHM	XVI			
SG9S		DIO SIN	V			GI-11B	TRI SIN	III		LD-11	
SI-9BG		COU	XXI			GS-11	COU	XXI			
SNM-9		COU	XXI			GSH-11	NOI	IX			
T9		TMS	XIX			GU11A	TRI SIN	III			
TKH-9G			VII			GU11B	TRI SIN	III			
TVB-9		THM	XVIII			KMT-11	TMS	XIX			
VS-9		COU	XXI			LD11	TRI SIN			GI-11B+	
VS-9T		COU	XXI			MS-11	COU	XXI			
SL01I	*	OD	VIII			P11	X			2N94\$	
D10	*	REC	XI			P11A	GAP	X			
D10A	*	REC	XI			R-11		XXII			
D10B	*	REC	XI			SI-118G	COU	XXI			
DCTS10		REC	XI	D2B+		TKH-11G	TET	VII			
F-10	*	PHO	XV1			VS-11	COU	XXI			
G10		TRI SIN	III			11LK1B	*	VIII			
G-10A		TRI SIN		GU-10A+		11LM2G	* DT	VIII			
G-10RA		TRI SIN		GU-10B+		11LM3G	* DT	VIII			
GK10P		TRI SIN	III			D12	* REC	XI			
GKO-10		TRI SIN	III	GK-2000+		D12A	* REC	XI			
GS-10		COU	XXI			DGTS12	REC	XI			
GSH-10		NOI	IX			FEU-12	PHM	XVI			
GT-10		TRI SIN		G46+		FEU-12A	* PHM	XVI			
GU10A		TRI SIN	III		12843-67	GI-12B	TRI SIN	III		LD-12	
GU10B		TRI SIN	III			GS-12	COU	XXI			
ISK10			XX			GU12A	TRI SIN	III		880\$	
ISP10			XX			IN-12A	*	XXIII-A			
IST10			XX			IN-12B	*	XXIII-A			
KMT-10		TMS	XIX			K-12	KLO	IX			
MO-10		TRI SIN	III			KIU12	KLA	IX			
P10		X		2N35\$		KMT-12	TMS	XIX			
P10A		GAP	X			LD12	TRI SIN			GI-12B\$	
P108		GAP	X			MI-12	MAG	IX			
R-10		XXII				MMT-12	TMS	XIX			
SBT-10		COU	XXI			MS-12	COU	XXI			
SG10S		REG	V			OS12/500	* PND SIN			G837=	
SI-10BG		COU	XXI			P12	X			2N112\$	
TO-10		PND SIN		10P12S		P12A	GAP	X			
VG-10		POW	XII			R-12		XXII			
6G2	*	TRI DWD	II	6SQ7\$	8370-65	SI-12BG	COU	XXI			
6G2P-K		TRI DWD	II			TKH-12G		VII			
6G2S		TRI DWD		6SQ7G\$		12B1M	PND DWD	II			
VG-10-30		POW	XII			12B2M	PND DWD	II			
VG-10-45		POW	XII			12G1	TRI DWD	II		12SR7\$	
VG-10-55		POW	XII			12G2	TRI DWD	II		12SQ7\$	
VG-10-80		POW	XII			12K1M	PND SIN	II			
VG-10-110		POW	XII			12K3	PND SIN	II		12SK7\$	
VG-10-150		POW	XII			12K4	PND SIN			12SG7\$	
VK-10		POW	XII			12KL2B	PND SIN			12SG7\$	
VKU-10-0.25		SCR SI4	XII-A			12K17B	PND SIN			12SK7\$	
VKU-10-0.5		SCR SI4	XII-A			12KH3S	* DWD SIN	II		LG1	
VKU-10-0.75		SCR SI4	XII-A			12M1M	PND TRI	II			
VKU-10-1.0		SCR SI4	XII-A			12N1	TRI TWN			12N11S+, 12AH7GT\$	
VKU-10-1.5		SCR SI4	XII-A			12N4P	TRI TWN	II		12AY7\$	
						12N10	TRI TWN			12N10S+, 12SC7GT\$	
						12N10M	TRI TWN			12N10S+, 12SC7GT\$	

**Group I—NUMERICAL.—Continued**

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
12N10S	TRI	DUO	II	12SC7\$		13L054M	OS				
12N11S	TRI	TWN	II	12AH7CT\$		13L054V	OS				
12P4S	PND	SIN	II	12A6\$		13L0101M*		VIII			
12P14S	BEA	SIN	II			13L0102M*		VIII			
12P17L *	PND	SIN	II			13L0104A*	TV	VIII			
12R1B	TRI	DWD		12G1+, 12SR7\$		13P1	BEA	SIN		13P1M+, 13P1S+	
12R17B	TRI	DWD		12C2+, 12SQ7\$		13P1M	8EA	SIN		13P1+, 13P1S+	
12S2	TRI	SIN	II			13P1S	8EA	SIN	II	13P1+, 13P1M+	
12S3S *	TRI	SIN	II	LD1+		13ZH41S*	PND	SIN	II		
12S42S *	TRI	SIN	II			D14	*	REC	XI		
12ZH1	PND	SIN		12ZH1L+		D14A	*	REC	XI		
12ZH1L *	PND	SIN	II	12ZH1		DCTS14	REC	XI			
12ZH1M	PND	SIN	II			FEU-14	PHM	XVI			
12ZH3L *	PND	SIN	II			FEU-14A	*	PHM	XVI		
12ZH8 *	PND	SIN	II	12SJ7\$		CI-14B	TRI	SIN	III	LD-14	
12ZH88	PND	SIN		12SJ7\$		IN-14	*			XXIIII-A	
12ZH17B	PND	SIN		12SJ7\$		KMT-14	TMS			XIX	
D13 *	REC	XI				LI-14	IM			VIII	
DCTS13	REC	XI				MI-14	MAG			IX	
FEU-13 *	PHM	XVI				MP148	*			X	
C-13	TRI	SIN	III			MS-14	COU			XXI	
CI-13	TRI	SIN	III			P14				X	2N65\$
CI-13B	TRI	SIN	III			P14A				X	
CM13	TET	SIN	III			SC14P	REG AH			V	
CU13	BEA	SIN	III	813\$		TV-14	THM			XVIII	
LI-13 *	IM	VIII				UV-14	TWT			IX	
MMT-13 *	TMS	X1X				VS-14	COU			XXI	
MS-13	COU	XXI				D15	REC			XI	
P13	X			2N43\$		DCTS15	REC			XI	D2N+
P13A	X			2N34\$		FEU-15	*	PHM		XVI	
P13B	X					G-15A	TRI	SIN			CU-11A+
SG13P	DIO	SIN	V	0A2\$		C-15RA	TRI	SIN			CU-16B+
SI-13C	COU	XXI				CDO-15	TRI	SIN			C-61+
TKH-13						CS-15B	TET	SIN	III		
UV-13	TWT	IX				CU15	SEA	SIN	III		
V13/30	DIO	SIN				IFK15-1				XX	
VS-13	COU	XXI		V0-1		ISSH15				XX	
13LK18 *	TV	VIII		5FP4\$		K-15	KLO			IX	
13LK2B *	TV	VIII				KIU15	KLA			IX	
13LK38 *	TV	V111				LI-15	IM			VIII	
13LK68 *	TV	V111				MI-15	MAC			IX	
13LK7B *	TV	V111				P15				X	2N43\$, OC604=
13LK8A *	PT	V111				P15A	CAP			X	
13LM4V *	OS	VIII				SG15P	DIO	SIN	V		
13LM6V *	RA	V111				SG15P1	DIO	SIN	V		SC15P+
13LM7V *	RA	V111				SC15P2	*	REG	V		14783-6
13LM31M*	OS	VIII		5FP7\$		TC-15/3	TRI	THY			TC1-5/3+
13LM31V	OS			13LM31M+		TR-15/2	TRI	THY			TR-1-5/2+
13LM56I*	OS	VIII		5FP1\$		TV-15	THM			XVIII	
13LM57 *	OS	VIII		5FP7\$		VC15/5000	DIO	SIN			CC1-0.5/5+
13LM57D	OS			13LM57+		15A6S	PND	SIN	II		
13LM58K*	OS	VIII				D16	REC	XI			
13LN2 *	ST	V111				D16A	REC	XI			
13LO1B						DCTS16	REC	XI			D2P+
13LO28		VIII				FEU-16	*	PHM			
13LO31I *	OS	VIII		5CP1-A*\$		GI-16B	TET	SIN	III		
13LO41I	OS	VIII				CU16B	TRI	SIN	III		
13LO5P						LC-16	DIO	SIN			2D2S+
13LO6I		VIII		5CP7-A\$		MI-16	MAC	IX			
13LO7V *	OD	V111		5FP7-A\$		MS-16	COU			XXI	
13LO9I *	OS	V111				P16	*			X	2N55\$, OC604=
13LO36	OS			5FP7\$, L0736+, 13L036V+		P16A				X	
13LO36V*	OS	VIII				P16B				X	
13LO37A*	OS	VIII		5CP7\$		SC16P	DIO	SIN	V		OC2\$
13LO37I	OS			5CP1\$, L0737+		TV-16	THM			XVIII	
13LO37M	OS					VS-16	COU			XXI	
13LO48V*	OD	VIII		L0748+		16LK1B				VIII	
13LO48I	OD			5SP1\$		16LM1C	*	RA		V111	
13LO48M	OD					16L02I	*	OD		V111	
13LO54A*	OS	VIII		L0754		16L03I	*	OS		V111	

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
D17	REC	XI				SG20G	DIO	SIN	V		
DGTS17	REC	XI				SI-20G	COU		XXI		
FEU-17	PHM	XVI				QV20-P18	TET	SIN		GMI-83=	
FEU-17A	* PHM	XVI				T-20BFL	COU		XXI		
G-17B	TRI SIN	III				TKP-20		TMS	POW	XIX	
GI-17	TRI SIN	III	G480*			TR-20/15	TRI	THY		TR-1-6/15+	
GU-17	BEA TWN	III	6360\$			V20/20	DIO	SIN		V1-0.02/20+	
KMT-17	* TMS	XIX				VKU-20-0.25	SCR	SI4	XII-A		
LI-17	* IM	VIII				VKU-20-0.5	SCR	SI4	XII-A		
MST-17	COU	XXI				VKU-20-0.75	SCR	SI4	XII-A		
P17		X				VKU-20-1.0	SCR	SI4	XII-A		
P17A		X				VKU-20-1.5	SCR	SI4	XII-A		
P17B		X				VKU-20-2.0	SCR	SI4	XII-A		
SG17S	DIO SIN	V				VKU-20-2.5	SCR	SI4	XII-A		
D18	* GEP	XI				VKU-20-3.0	SCR	SI4	XII-A		
FEU-18	PHM	XVI				20LM1YE*			VIII		
FEU-18A	* PHM	XVI				D21	REC		XI	D7A+	
GI-18B	TRI SIN	III				DGTS21	TRI SIN	III			
GS-18	TRI SIN		GK-2000+			GI-21B	TRI SIN	III			
GU-18	BEA TWN	III				GU21B	TRI SIN	III			
LI-18	VI	VIII				P21			X		
MST-18	COU	XXI				P21A			X		
P18		X				P21B			X		
P18A		X				P21D	*		X		14073-68
P18B		X				P21G	*		X		14073-68
R-18		XXII				P21V	*		X		14073-68
SG18S	DIO SIN	V				P21YE	*		X		14073-68
18LK1B	TV	VIII				R-21			XX11		
18LK2B	TV	VIII	7QP4\$			SI-21G	COU		XXI		
18LK3V		VIII				STI-21	* TMS		XIX		
18LK4B	TV	VIII				DGTS22	REC		XI	D7B+	
18LK5B	* TV	VIII				FEU-22	PHM		XVI		
18LK7B	TV	VIII				GI-22	TRI SIN	III			
18LK9A	* PT	V111				GU22A	TRI SIN	III			10030-62
18LK11B	* TV	V111				LI-22	* IM		V111		
18LK12B	* TV	V111				P22			X		
18LK13L	* TV	V111				SI-22G	COU		XXI		
18LK14T	* ELS	VIII				22L01A	* OS		V111		
18LK15	TV	VIII				DGTS23	REC		XI	D7V+	
18LK17L	ELM ELM	VIII				FEU-23	PHM		XVI		
18LM3S	* RA	V111				GU23A	TRI SIN	III			10031-68
18LM35	OS		7BP7A\$, 18LM35V+			GU-23B	TRI SIN	III			
18LM35V	* OS	VIII	7BP7\$			LI-23	*		VIII		
18L01A		VIII				P23			X		
18L01P			7BP7A\$			P23A					
18L040B	TV	VIII	7JP4\$, LK740+			23LK1B	TV		VIII	9CP4\$	
18L047A	* OD	VIII				23LK2B	TV		VIII		
18L047V	OD		18L047A+			23LK5B	* TV		V111		
D19	GEP	XI				23LK6I	* PT		V111		
D19A	GEP	XI				23LK7B	* TV		VIII		
D19B	GEP	XI				23LK8B	* TV		VIII		
FEU-19A	* PHM	XVI				23LK9B	* ELS		VIII		
GI-19B	TRI SIN	III				23LK41I	* TV		V111		
GU-19	BEA TWN	III				23LM3S	* RA		V111		
P19	X					23LM34	OS			9GP7\$, 23LM34V+	
SG19S	DIO SIN	V				23LM34V	* OS		VIII		
SI-19BG	* COU	XXI				23L01P	OS			9GP7\$	
SI-19G	COU	XXI				23L051A	* OS		VIII		
19LK4B	TV	VIII				DGTS24	REC		XI	D7G+	
D20	* GEP	XI				FEU-24	* PHM		XVI		
FEU-20	* PHM	XVI				GI-24A	TRI SIN	III			
GK20	TRI SIN	III				GU24.			III		
I-20/1.5	TRI IGN	IV				R-24			XX11		
I-20/1500	DIO IGN	IV				DGTS25	REC		XI	D7D+	
IFK20	XX					EVU-25/1.0	IGN HG	1V			
M-20/35	TRI SIN		GM-1A+			FEU-25	* PHM		XVI		
MO20	TRI SIN	III				GI-25	TRI SIN	III			
MP20	*	X				GU25B	TRI SIN	III			
MP20A	*	X				ISK25			XX		
MP20B	*	X				MP25	*		X		14830-69
					14073-68						
					14073-68						

**Group I—NUMERICAL.—Continued**

Type No.	Kind	Type	Group No.	Similar types	COST spec. No.	Type No.	Kind	Type	Group No.	Similar types	COST spec. No.
MP25A	*	X			14830-69	FEU-33	*	PHM	XVI		
MP25B	*	X			14830-69	GU33B	TET	SIN	III		16095-70
T-25BFL	COU	XXI				K-33	KLO		IX		
VK-25	POW	XII				FEU-34	PHM		XVI		
25LM1V	*	RA	V111			GU34B	TET	SIN	III		16096-70
25P1	BEA	SIN	II	25L6\$		K-34	KLO		IX		
25P1S	BEA	SIN	II	25L6\$		FEU-35	*	PHM	XVI		
DGTS26	REC	XI		D7E+		GU-35B	TET	SIN	III		
FEU-26	*	PHM	XVI			K-35	KLO		IX		
GU26A		TRI	SIN	III		MP35	*		X		14831-69
GU26B		TRI	SIN	III		35LK1B	*	ELS	ELM	VIII	
K-26		KLO		IX		35LK2B	*	TV		VIII	8B15-5B
MP26	*		X		14830-69	35LK4B	*	TV		V111	
MP26A	*		X		14830-69	FEU-36	*	PHM	XVI		
MP26B	*		X		14830-69	G36	TRI	SIN	III		
DGTS27		REC	XI	D7ZH+		GK36	TRI	SIN		GK-20+	
FEU-27	*	PHM	XVI			GU-36B	TET	SIN	III		
GU27A		TET	SIN	III	14626-69	MP36A	*		X		14B31-69
GU27B		TET	SIN	III	827-R\$	FEU-37	*	PHM	XVI		
P27	*		X			GU-37B	*	TRI	SIN	III	
P27A	*		X			MP37	*		X		14B31-69
FEU-28	*	PHM	XV1			MP37A	*		X		14B31-69
GSH-28		NOI	IX			MP37B	*		X		14B31-69
GU2BA		TET	SIN	III		P37A				MP37A+	
GU2BB		TET	SIN	III		P37B				MP27B+	
M28		TRI	SIN	III		FEU-38	*	PHM	XVI		
P28	*		X			MP38	*		X		14B31-69
FEU-29	*	PHM	XVI			MP38A	*		X		14B31-69
G29		TRI	SIN	III		FEU-39A	*	PHM	XVI		
GSH-29		NOI	IX			GU-39A	TET	SIN	III		10746-67
GU29	*	BEA	TWN	III	829-B\$	GU-39B	TET	SIN	III		11260-65
K-29		KLO		IX		GU39P	TET	SIN	111		
P29	*		X			M39	TRI	SIN	III		
P29A	*		X			MP39	*		X		1494B-69
FEU-30	*	PHM	XV1			MP39B	*		X		14948-69
GDO-30		TRI	SIN		GS-3B+	FEU-40	NSP		XVI		
GI-30		BEA	TWN	III	3E29\$	GU-40B	TET	SIN	III		
GMT-30		TRI	SIN	III	6C21\$	MP40	*		X		14948-69
GS-30		COU		XXI		MP40A	*		X		14948-69
GU30A		TRI	SIN	III		P40B					
K-30		KLO		IX		T-40BFL	COU		XXI		
M-30/450		TRI	SIN		GMI-30+	V40/100	DIO	SIN		V1-0, 1/40+	
P30	*		X			40LK1B	*	TV	VIII	16AP4\$	
T-30BFL		COU		XXI		K-41	KLO		IX		
VG-30		POW		XII		MP41	*		X		1494B-69
30LK1B		TV		VIII	31LK1B+	MP41A	*		X		1494B-69
30P1		BEA	SIN		30P1S+	FEU-42	NSP		XVI		
30P1M		BEA	SIN		30P1S+	K-42	KLO		IX		
30PLS	*	BEA	SIN	II	30P1M	MP42	*		X		14947-69
30TS1M		DIO	SIN	II	30VKH1+, 30TS6S+	MP42A	*		X		14947-69
30TS6S	*	DIO	TWN	II	30VKH1+, 30TS14*	B078-67	MP42B	*		X	14947-69
30VD1		DIO	SIN	II	30TS1M+		42LM2YE*				
30VKH1		DIO	SIN	II	30TS6S+	FEU-43	NSP		XVI		
FEU-31	*	PHM		XVI		GU43B	TET	SIN	III		
GU31		TET	SIN	III		43LK2B	*	TV	VIII		
K-31		KLO		IX		43LK3B	*	TV		VIII	
P31			X			43LK6B	TV			VIII	
P31A			X			43LK7B	TV			VIII	
31LK1B		TV		VIII		43LK8B	*	TV		VIII	
31LK2B	*	TV		VIII	12LP4\$	43LK9B	*	TV		VIII	
31LM32	OS				12DP7A\$, 31LM32V+	FEU-44	NSP		XVI		
31LM32V*	OS					FEU-45	NSP		XVI		
31L01P					12DP7\$	45LM1B	*		VIII		
31L033	OS				12GP7\$, 31L033V+	45LM2U	*	RA	V111		
31L033V*	OS					45LM3N	*	RA	V111		
FEU-32	*	PHM		XVI		FEU-46	NSP		XVI		
G32		TRI	SIN	III		G46	TRI	SIN	III		
GU32		BEA	TWN	III	B32\$	FEU-47	NSP		XVI		
K-32		KLO		IX		G47	TRI	SIN	III		
P32			X			SB-47	PND	SIN	II		

**Group I – NUMERICAL – Continued**

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
47LK1B	TV	VIII				M62	MAG	IX			
47LK28 *	ELS	VIII			14854-69	FEU-63	*	PHM	XVI		
FEU-48	NSP	XVI				FEU-64	*	PHM	XVI		
GU48				833A\$		G-64	TRI SIN			GS-3B+	
K-48	KLO	IX				FEU-65	*	PHM	XVI		
FEU-49 *	PHM	XVI				G65	TRI SIN	III			
G-49	TRI SIN			GS-4+		65LK1B				VIII	
EVU-50/1.0	IGN HG	IV				GU66P	TRI SIN	111			
FEU-50 *	PHM	XVI				FEU-67	*	PHM	XVI		
GD-50	TRI SIN			G-46+		FEU-68	*	PHM	XVI		
GU50 *	PND SIN	III		LS50=	12407-66	G68	TRI SIN	III			
I-50/1.5	TRI IGN	IV				GI-70B	TRI SIN	III		LD-70	
I-50/1500	DIO IGN	IV				FEU-70	*		XVI		
IFK50		XX				GM-70	TRI SIN	III			
LS50	PND SIN			GU50=		GM70B	TRI SIN	III			
M50	TRI SIN	III				ISP70			XX		
T-50BFL	COU	XXI				LD70	TRI SIN			GI-70B+	
TKP-50A	TMS POW	XIX				V70/1000	DIO SIN			V1-0.3/70+	
TKP-50B	TMS POW	XIX				GK71	PND SIN	III		G471+, 471A*	
VG-50	POW	XII				GU72	PND SIN	III			
VK-50	POW	XII				FEU-74	*	PHM	XVI		
VKU-50-0.25	SCR SI4	XII-A				M74	TRI SIN	III			
VKU-50-0.5	SCR SI4	XII-A				FEU-75	*	PHM	XVI		
VKU-50-0.75	SCR SI4	XII-A				7555-30	DIO SIN			SG2S+, 0A3\$	
VKU-50-1.0	SCR SI4	XII-A				GI-76B	TRI SIN	III			
VKU-50-1.5	SCR SI4	XII-A				FEU-77	*	PHM	XVI		
VKU-50-2.0	SCR SI4	XII-A				FEU-80	*	PHM	XVI		
VKU-50-2.5	SCR SI4	XII-A				GU80	PND SIN	III		OS450=, P800*+	12404-66
VKU-50-3.0	SCR SI4	XII-A				M80	TRI SIN	III			
FEU-51 *	PHM	XVI				T-80BFL	COU	XXI			
GM51A	TRI SIN	III				FEU-81	*		XVI		
MI-51	MAG	IX				GU81	PND SIN	III			13048-67
S8-51	PND SIN	II				FEU-82	*		XVI		
STSV51 *	PHO	XVI				GMI-83	TET SIN	III		QV20-P18=.5D21\$	
51LS1 *	CH	V111				G88	TRI SIN	III			
FEU-52 *	PHM	XVI				VO-88	DIO TWN			4VKH1+	
MI-52	MAG	IX				GMI-89	TET SIN	III		G-489*+	
FEU-53 *	PHM	XVI				GU89A	TRI SIN	III		889A\$	
M53	TRI SIN	III				GU89B	TRI SIN	III		889R-A\$	
MI-53	MAG	IX				M89	TRI SIN	III			
53LK2B *	TV	VIII				GMI-90	TET SIN	III		G-490*+	
53LK3B	TV	VIII				GS90B	TRI SIN	III		LD-90	
53LK4TS*	TV	VIII				LD-90	TRI SIN			GS-90B+	
53LK5B	TV	VIII				MTKH90	TRI THY	VII			
53LK6B	TV	VIII				RB-90				XXII	
FEU-54 *	PHM	XVI			GS-6+	TGI-90/8	TRI THY			TGI-1-90/8+	
G-54	TRI SIN					G91	TRI SIN	III			
MT-54	MAG	IX				G-92	TRI SIN			GK-2000+	
R-54		XXXII				K-92A	KLO	IX			
FEU-55 *	PHM	XVI				K-92B	KLO	IX			
FEU-56 *	PHM	XVI				K-92G	KLO	IX			
G-56	TRI SIN				G29+	K-92V	KLO	IX			
CM57	TRI SIN	III			MS50*+, M457+, UB180=	MI-95	MAG	IX			
M57	TRI SIN	III				L-99	PTG SIN			6A2P+ 6BE6\$	
SO-57	PND SIN	II				EVU-100/1.0	IGN HG	IV			
FEU-58 *	PHM	XVI				G-100	TRI SIN			G-29+	
G-58	TRI SIN				GK-3000+	G-100A	TRI SIN			GK-3A+	
FEU-59 *	PHM	XVI				GD-100	TRI SIN			G-47+	
59LK1B	TV	VIII				GKE100	TET SIN	III		GE-1=	
59LK2B	ELS	VIII				GM100	TRI SIN	III			
FEU-60	PHM	XVI			14855-69	I-100/1.0	TRI IGN	IV			
GM60	TRI SIN	III				I-100/5.0	TRI IGN	IV			
GS-60	COU	XXI				I-100/1000	DIO IGN	IV			
T-608FL	COU	XXI				I-100/5000	DIO IGN	IV			
G61	TRI SIN	III				ISSH100-1				XX	
GU61P	TET SIN	III				ISSH100-3				XX	
61LK1B *	ELM ELM	VIII				L100	PND DIO			6B2P*	
FEU-62 *	PHM	XVI				VG-100	POW	XII			
G62	TRI SIN	III				VK-100	POW	XII			
GU62P	TRI SIN	111				VKU100-0.25	SCR SI4	XII-A			

**Group I—NUMERICAL.—Continued**

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
VKU100-0.5	SCR	SI4	XII-A			P104				X	
VKU100-0.75	SCR	SI4	XII-A			D105	*	REC		XI	
VKU100-1.0	SCR	SI4	XII-A			D105A	*	REC		XI	
VKU100-1.5	SCR	SI4	XII-A			KD105A				XI	
VKU100-2.0	SCR	SI4	XII-A			KD105B				XI	
VKU100-2.5	SCR	SI4	XII-A			KD105V				XI	
VKU100-3.0	SCR	SI4	XII-A			KV105A	*	VAR SI		XI-D	
VKUV-100-0.25	SCR	SI4	XII-A			KV105B	*	VAR SI		XI-D	
VKUV-100-0.5	SCR	SI4	XII-A			P105			X		
VKUV-100-0.75	SCR	SI4	XII-A			105S5-30	DIO SIN			SG3S+, OC3\$	
VKUV-100-1.0	SCR	SI4	XII-A			D106	*	REC		XI	
VKUV-100-1.5	SCR	SI4	XII-A			D106A	*	REC		XI	
VKUV-100-2.0	SCR	SI4	XII-A			P106			X		
VKUV-100-2.5	SCR	SI4	XII-A			S-106	TET SIN			GKE-150+	
VKUV-100-3.0	SCR	SI4	XII-A			D107	REC SIP	XI			
A101	DEC		XX111			D107A	REC SIP	XI			
AI-101A	*	TUN	XI-B			P107					
AI-101B	*	TUN	XI-B			UB107	TRI SIN			4S1+	
AI-101D	*	TUN	XI-B			D108	REC SIP	XI			
AI-101G	*	TUN	XI-B			GT108A	*		X		15141-69
AI-101I	*	TUN	XI-B			GT108B	*		X		15141-69
AI-101V	*	TUN	XI-B			GT108G	*		X		15141-69
AI-101YE	*	TUN	XI-B			GT108V	*		X		15141-69
AI-101ZH	*	TUN	XI-B			P108			X		
D101	*	REC	XI			P108A			X		
D101A	*	REC	XI			D109	REC SIP	XI			
KU101A	*	SCR	TRI	XII-B		GT109A	*		X		15142-69
KU101B	*	SCR	TRI	XII-B		GT1098	*		X		15142-69
KU101G	*	SCR	TRI	XII-B		GT109D	*		X		15142-69
KU101YE	*	SCR	TRI	XII-B		GT109G	*		X		15142-69
LI-101	IC		VIII			GT109I	*		X		15142-69
P101			X			GT109V	*		X		15142-69
P101A			X			GT109YE	*		X		15142-69
P101B			X			GT109ZH	*		X		15142-69
D102	*	REC	XI			P109			X		
D102A	*	REC	XI			S-109	TET SIN			GKE-300+	
KD102A	*		XI			P110			X		
KP102I	*	MJF	X-B			UB110	TRI SIN			4S2+	
KP102K	*	MJF	X-B			MP111	*		X		14949-69
KP102L	*	MJF	X-B			MP111A	*		X		14949-69
KP102YE	*	MJF	X-B			MP111B	*		X		14949-69
KP102ZH	*	MJF	X-B			VU-111D	DIO SIN	IV			
KV102A	*	VAR SI	XI-D			MP112	*		X		14949-69
KV102B	*	VAR SI	XI-D			S8-112	PND SIN	II		4E1+	
KV102D	*	VAR SI	XI-D			MP113	*		X		14949-69
KV102G	*	VAR SI	XI-D			MP113A	*		X		14949-69
KV102V	*	VAR SI	XI-D			MP114	*		X		14874-69
P102			X			MP115	*		X		14874-69
D103	*	REC	XI			MP116	*		X		14874-69
D103A	*	REC	XI			SO-118	TRI SIN			4S5+	
KD103A	*		XI			G120	TRI SIN	III			
KD103B	*		XI			IFK120			XX		
KP103I	*	MJF	X-B			MI-120	MAG		IX		
KP103K	*	MJF	X-B			TR-120/15	TRI THY			TR-1-40/15+	
KP103L	*	MJF	X-B			SO-122	PND SIN			4P1+	
KP103M	*	MJF	X-B			SO-124	PND SIN	II		4ZH5+	
KP103YE	*	MJF	X-B			VO-125	DIO SIN	IV			
KP103ZH	*	MJF	X-B			SK-127			XXII		
P103			X			VG-129	DIO SIN	IV			
P103A			X			U8-132	TRI SIN	II		4S3+	
S-103	TET SIN			GKE-1000+		KS133A	*	REG SI	X111		
D104	*	REC	XI			P135			X		
D104A	*	REC	XI			MI-137	MAG		IX		
KV104A	*	VAR SI	XI-D			KS139A	*	REG SI	X111		
KV104B	*	VAR SI	XI-D			TO-141	TRI SIN	II		3S1+	
KV104D	*	VAR SI	XI-D			TO-142	TRI SIN	II		3S2+, 3S9+	
KV104G	*	VAR SI	XI-D			KS147A	*	REG SI	X111		
KV104V	*	VAR SI	XI-D			SB-147	TET SIN			4E2+	
KV104YE	*	VAR SI	XI-D			SO-148	PND SIN	II		4E3+	
L-104	PND SIN			6K4P+, 6BA6\$		GI-150	TRI SIN	III			

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
GKE150	TET	SIN	III	GE-2=		SG201S	DIO	SIN	V	OB3\$	
GU150	TRI	SIN	III		7712-55	D202	*	REC	XI		
I-150/1.0	TRI	IGN	IV			KD202A	*		XI		
M150	TRI	SIN	III			KD202B	*	REC	XI		
150S5-30	DIO	SIN		SG4S+, OD3\$		KD202D	*	REC	XI		
SB-152	TRI	SIN	II			KD202G	*	REC	XI		
UB-152	TRI	SIN	II	2S1+		KD202I	*	REC	XI		
UB-153	TRI	SIN	II			KD202K	*	REC	XI		
SB-154	PND	SIN	II	2E1+		KD202L	*	REC	XI		
SB-155	BEA	SIN		2P2+		KD202M	*	REC	XI		
UB-155	BEA	SIN	II	2E2+		KS202N	*	REC	XI		
KS156A	*	REG	SI	X111		KD202R	*	REC	XI		
VG-161	DIO	SIN	IV			KD202S	*	REC	XI		
VG-163			IV			KD202V	*	REC	XI		
KS16BA	*	REG	SI	X111		KD202YE	*	REC	XI		
VG-176	DIO	SIN	IV			KD202ZH	*	REC	XI		
UB-17B	TRI	SIN	II			KU-202A	*	SCR	TRI	XII-B	
SO-182	PND	SIN	II			KU-202B	*	SCR	TRI	XII-B	
UB-182	TRI	SIN	II			KU-202D	*	SCR	TRI	XII-B	
SO-185	TRI	SIN		4S5+		KU-202G	*	SCR	TRI	XII-B	
U01B6	TRI	SIN	II	4S4+		KU-202I	*	SCR	TRI	XII-B	
US-186	TRI	SIN		4S4+		KU-202K	*	SCR	TRI	XII-B	
VO-1BB	DWD	SIN	IV	4VKH1*		KU-202L	*	SCR	TRI	XII-B	
SB-190	PND	SIN	II			KU-202M	*	SCR	TRI	XII-B	
191P	TET	SIN	II			KU-202N	*	SCR	TRI	XII-B	
KS194A	REG		XIII			KU-202V	*	SCR	TRI	XII-B	
KS194B	REG		XIII			KU-202YE	*	SCR	TRI	XII-B	
KS194G	REG		XIII			KU-202ZH	*	SCR	TRI	XII-B	
KS194V	REG		XIII			LI-202	*	IM	V111		
VO-196	DIO	SIN	IV			P202E	*		X	2N68\$	
VO-197	DWD	SIN	IV			SG202B	DIO	SIN	V		
GD-200	TRI	SIN		GS-4+		VO-202	DWD	SIN	IV		
I-200/1.5	TRI	IGN	IV			D203	*	REC	XI		
IFP200			XX			LI-203	*		VIII		
IVS200/2		IGN	IV			P203E	*		X	2N68\$	
TGI-200	TRI	THY	VII	MT		SG203K	DIO	SIN	V		
VGV200	POW		XII			D204	*	REC	XI		
VK-200	POW		XII			UV-204		TWT	IX		
VKV200	POW		XII			D205	*	REC	XI		
AI-201A	*	TUN	XI-B			UV-205		TWT	IX		
AI-201B	*	TUN	XI-B			D206	*	REC	XI		
AI-201D	*	TUN	XI-B			D207	*	REC	XI		
AI-201G	*	TUN	XI-B			LI-207	*	IM	V111		
AI-201I	*	TUN	XI-B			P207		X			
AI-201K	*	TUN	XI-B			P207A		X			
AI-201L	*	TUN	XI-B			D208	*	REC	XI		
AI-201V	*	TUN	XI-B			P20B		X			
AI-201YE	*	TUN	XI-B			P208A		X			
AI-201ZH	*	TUN	XI-B			D209	*	REC	XI		
D201A	REC		XI			P209		GAP	X		
D201B	REC		XI			P209A		GAP	X		
D201D	REC		XI			D210	*	REC	XI		
D201G	REC		XI			P210		GAP	X		
D201TS	REC		XI			P210A	*	GAP	X		
D201V	REC		XI			P210B	*	GAP	X		
D201YE	REC		XI			P210V	*	GAP	X		14B75-69
D201ZH	REC		XI			D211	*	REC	XI		
KU-201A	*	SCR	XII-B			KS211B	REG	SI	XIII		
KU-201B	*	SCR	XII-B			KS211D	REG	SI	XIII		
KU-201D	*	SCR	XII-B			KS211G	REG	SI	XIII		
KU-201G	*	SCR	XII-B			KS211V	REG	SI	XIII		
KU-201I	*	SCR	XII-B			P211		X			
KU-201K	*	SCR	XII-B			LI-212	*	IM	VIII		
KU-201L	*	SCR	XII-B			P212		X			
KU-201V	*	SCR	XII-B			P212A		X			
KU-201YE	*	SCR	XII-B			TG212M	TRI	THY	VII		
KU-201ZH	*	SCR	XII-B			P213	*	X			
LI-201	*	IM	VIII			P213A	*		X		
P201E	*		X			P213B	*		X		
P201AE	*		X			TG-213	TRI	THY	VII	PT-2*	

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
D214	REC	SIA	XI			D229V			XI		
D214A	REC	SIA	XI			D230A	SIA		XI		
D214B	REC		XI			D230B	SIA		XI		
P214	*		X			V0-230	DIO SIN		IV		
P214A	*		X			D231(P)	REC SIA		XI		
P214B	*		X			D231A(P)	REC SIA		XI		
P214G	*		X			D231B(P)	REC SIA				
P214V	*		X			D232(P)	REC SIA		XI		
D215	REC	SIA	XI			D232A(P)	REC SIA		XI		
D215A	REC	SIA	XI			D232B(P)	REC SIA		XI		
D215B	REC	SIA	XI			D233(P)	SIA		XI		
P215	*		X			D233A	REC SIA		XI		
P216	*		X			D233B(P)	REC SIA		XI		
P216A	*		X			D234B(P)	REC SIA		XI		
P216B	*		X			D235A	CON SI		XI-C		
P216D	*		X			D235B	CON SI		XI-C		
P216C	*		X			D235C	CON SI		XI-C		
P216V	*		X			D235V	CON SI		XI-C		
D217	*	REC	SIA	XI		TC-235	TRI THY	VII		PT-3**+	
P217	*	REC	SIA	XI		VG-236			IV		
P217A	*		X			VC-237	DIO SIN		IV		
P217B	*		X			D238A	CON SI		XI-C		
P217C	*		X			D238B	CON SI		XI-C		
P217V	*		X			D238D	CON SI		XI-C		
D218	*	REC	SIA	XI		D238C	CON SI		XI-C		
D219A	*	REC	SIA	XI		D238V	CON SI		XI-C		
D219S	*		XI			D238YE	CON SI		XI-C		
D220	*	REC	SIA	XI		V0-239	DIO SIN		IV		
D220A	*	REC	SIA	XI		UB-240	TRI SIN	II		2S2+	
D220B	*	REC	SIA	XI		SB241	PND SIN			2K1*, 2K1M+, S0241*	
SK-220			XXII			SO241	PND SIN			2K1*, 2K1M+, S0241*	
D221	REC	SIA	XI			D242	*	REC	XI		14758-69
D222	REC	SIA	XI			D242A	*	REC	XI		14758-69
D223	*	REC	SIA	XI	14343-69	D242B	*	REC	XI		14758-69
D223A	*	REC	SIA	XI	14343-69	SB-242	PTC SIN			2A1+	
D223B	*	REC	SIA	XI	14343-69	SO-242	PTC SIN	II		SB242, 2A1, 2A1M	
D224	REC	SIA	XI			D243	*	REC	XI		14758-69
D224A	REC	SIA	XI			D243A	*	REC	XI		14758-69
D224B	REC	SIA	XI			D243B	*	REC	XI		14758-69
D225	REC	SIA	XI			SB243	TRI DUO			2N1*, 2N1M*, S0243*	
D226	REC	SIA	XI			SO-243	TRI TWN	II		2N1+	
D226A	REC	SIA	XI			D244	*	REC	XI		
D226B	*		XI			D244A	*	REC	XI		
D226D	*	SIA	XI			D244B	*	REC	XI		
D226C	*	SIA	XI			SB244	BEA SIN			2P1+, S0244+	
D226V	*	SIA	XI			SO-244	PND SIN	II		2P1+	
D226YE	SIA		XI			D245	*	REC	XI		14758-69
SC226	DIO SIN	V				D245A	*	REC	XI		14758-69
D227-A	SWI	SI4	XI-A			D245B	*	REC	XI		14758-69
D227-B	SWI	SI4	XI-A			SB245	PND SIN			2ZH1M+	
D227-D	SWI	SI4	XI-A			D246	*	REC	XI		14758-69
D227-C	SWI	SI4	XI-A			D246A	*	REC	XI		14758-69
D227-I	SWI	SI4	XI-A			D246B	*	REC	XI		14758-69
D227-V	SWI	SI4	XI-A			D247	*	REC	XI		14758-69
D227YE	SWI	SI4	XI-A			D247B	*	REC	XI		14758-69
D227-ZH	SWI	SI4	XI-A			L0-247	*	OS	VIII		
SC227	DIO SIN	V				D248B	*	REC	XI		
D228-A	SWI	SI4	XI-A			L0-248	OS		VIII		
D228-B	SWI	SI4	XI-A			L0-249	OS		VIII		
D228-D	SWI	SI4	XI-A			CK0-250	TRI SIN			CK-1A+	
D228-G	SWI	SI4	XI-A			VC-252	DIO SIN	IV			
D228-I	SWI	SI4	XI-A			C256	TRI SIN	III			
D228-V	SWI	SI4	XI-A			S0257	PND SIN	II		2ZH4+	
D228YE	SWI	SI4	XI-A			SB258	BEA SIN			2P3+, 2P2M+, S0258+	
D228-ZH	SWI	SI4	XI-A			S0-258	PND SIN	II		2P3+	
D229A	SIA		XI			SB259	TRI DUO			4N1+	
D229B	SIA		XI			S0259	TRI DUO			4N1+	
D229D			XI			RB-280				XXII	
D229E			XI			C-300	TRI SIN			C68	
D229C			XI			CI-300	TRI SIN			GI-18B+	

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
GK-300	TRI	SIN		GU-8+		SG309K			V		
GKE300	TET	SIN	III			D310	*	GEA	XI		
IFB300			XX			GT310A	*		X		
TKP-300	TMS	POW	XIX			GT310B	*		X		
AI-301A	*	TUN	GE	XI-B	15606-70	GT310D	*		X		
AI-301B	*	TUN	GE	XI-B	15606-70	GT310G	*		X		
AI-301G	*	TUN	GE	XI-B	15606-70	GT310V	*		X		
AI-301V	*	TUN	GE	XI-B	15606-70	GT310YE	*		X		
KT301	*		X			KU310A	KLA		IX		
KT301A	*		X			KU310B	KLA		IX		
KT301B	*		X			D311	*	REC	X1		
KT301D	*		X			D311A	*	REC	X1		
KT301G	*		X			D311B	*	REC	X1		
KT301V	*		X			GT311A	*		X		
KT301YE	*		X			GT311B	*		X		
KT301ZH	*		X			GT311D			X		
SG301S		DIO	SIN	V		GT311G			X		
D302	*	REC		XI		GT311I			X		
D302A	*			XI		GT311V			X		
P302	*		X			GT311YE			X		
SG302S		DIO	SIN	V		GT311ZH			X		
D303	*	REC		XI		SG311S	REG		V		
D303A	*			XI		D312	*	REC	X1		
P303	*		X			D312A	*	REC	X1		
P303A	*		X			D312B	*	REC	X1		
SG303S		DIO	SIN	V		KT312A	*		X		
D304	*	REC		XI		KT312B	*		X		
GI304A	*	TUN	GE	XI-B		KT312G			X		
GI304B	*	TUN	GE	XI-B		KT312V	*		X		
KU304		KLA		IX		GT313A	*		X		
KU304A		KLA		IX		GT313B	*		X		
P304	*		X			P314A			X		
SG304S		DIO	SIN	V		P314B			X		
D305	*	REC		XI		P314S			X		
GI305A	*	TUN	GE	XI-B		KT315A	*		X		
GI305B	*	TUN	GE	XI-B		KT315B	*		X		
SG305K		REG		V		KT315G	*		X		
KT306A	*		X			KT315V	*		X		
KT306B	*		X			KT316A	*		X		
KT306D	*		X			KT316B	*		X		
KT306G	*		X			KT316D	*		X		
KT306V	*		X			KT316G	*		X		
P306	*		X			KT316V	*		X		
P306A	*		X			KT319A			X		
SG306K	REG		V			KT319B			X		
KT307A	*		X			KT319V			X		
KT307B	*		X			GT320A	*		X		
KT307G	*		X			GT320B	*		X		
KT307V	*		X			GT320V	*		X		
P307			X			GT321A	*		X		
P307A			X			GT321B	*		X		
P307B			X			GT321D	*		X		
P307G			X			GT321G	*		X		
P307V			X			GT321V	*		X		
SG307K			V			GT321YE	*		X		
GT308A	*		X			GT322A	*		X		
GT308B	*		X			GT322B	*		X		
GT308V	*		X			GT322D	*		X		
K-308		KLO		IX		GT322G	*		X		
KU308		KLA		IX		GT322V	*		X		
P308			X			GT322YE	*		X		
SG308K			V			P322			X		
GT309A	*		X			KT325A			X		
GT309B	*		X			KT325B			X		
GT309D	*		X			KT325D			X		
GT309G	*		X			KT325G			X		
GT309V	*		X			KT325V			X		
GT309YE	*		X			TGI-325/16	TRI THY			MTI5+, TGI-1-325/16+	
KU309		KLA		IX		KT326A			X		
P309			X			KT326B			X		

## Group I—NUMERICAL—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
GT328		X				LI-409	*	VI	V111		
GT329A		X				P409		X			
GT329B		X				T-409	DIO	IGM IV			
GT329V		X				G410	TRI	SIN III			
GT330A		X				LI-410	*	VI	V111		
GT330B		X				P410	*	X			
R-350		XXII			15633-70	P410A	*	X			
RB-350		XXII				T-410	DIO	IGM IV			
K-351	KLO	IX				410R	KLO				
K-352	KLO	IX				G411	PND	SIN III	KZH1*+		
VO-360	DIO	SIN IV				P411	*	X	AF114=		
GD-400	TRI	SIN GS-6+				P411A	*	X	AF114=		
M400	TRI	SIN III				T-411	DIO	IGM IV			
TG-400/15	TRI	THY	TRI-130/15+			G412	PND	SIN III			
TGI400/3.5	TRI	THY	TGI-2-400/3.5+			LI-412	*	VI	V111		
D401	MIX	XIV				G413	PND	SIN III	GZH2*+		
GI401A	*	XI-E				G414	PND	SIN III			
GI401B	*	XI-E				P414		X			
KD401A	*	REC XI				P414A		X			
KD401B	*	REC XI				P414B		X			
KTS401A	*	REC XI				P415		X			
KTS401B	*	REC XI			14914-69	P415A		X			
KTS401V	*	REC XI				P415B		X			
LI-401		VIII				P416	*	X		14876-69	
M401	TRI	SIN III				P416A	*	X		14876-69	
P401	*	X	2N112\$			P416B	*	X		14876-69	
AI402B	*	BWD GAS XI-E				P416V					
AI402G	*	BWD GAS XI-E				G417	TRI	SIN III			
AI402I	*	BWD GAS XI-E				P417	*	X			
AI402YE	*	BWD GAS XI-E				P417A	*	X			
D402	MIX SI XIV					G418	PND	SIN III			
GD402A	*	REC X1				P418		X			
GD402B	*	REC X1				P418A		X			
GT402						P418B		X			
GT402A	*	X				P418G		X			
GT402B	*	X				P418M		X			
P402	*	X	SB-100\$			P418V		X			
D403A	MIX XIV					P420		X			
D403B	MIX XIV					P421		X			
D403V	MIX XIV					UV-421	TWT	IX			
GD403A	*	REC XI				G422	PND	SIN III			
GD403B	*	REC XI				P422	*	X			
GD403V	*	REC XI				P422A		X			
GT403A	*	X				UV-422	TWT	IX			
GT403B	*	X				P423	*	X			
GT403D	*	X				P423A		X			
GT403G	*	X				G424	PND	SIN III			
GT403I	*	X				G425	PND	SIN III			
GT403V	*	X				G430	TRI	SIN III			
GT403YE	*	X				RB-430		XXII			
GT403ZH	*	X				G431	TRI	SIN III	G431A+		
P403	*	X	OC614=			G431A	TRI	SIN III	G431		
P403A	*	X	OC614=			G-431R	TRI	SIN	GS-4D+		
D404	MIX SI XIV					G433	TRI	SIN III	G433A+		
P404	X					G433A	TRI	SIN III	G433		
P404A	X					M435	TRI	SIN III			
D405	DET XIV					UV-438	TWT	IX			
D405A	DET XIV					UV-440	TWT	IX			
D405AP	DET XIV					G441	TRI	SIN III			
D405B	DET XIV		1N23D\$			G-450	TRI	SIN III			
D405BP	DET XIV					OS450	PND	SIN	GU80, P800+*		
P405	X					R-450		XXII			
P405A	X					M-451	TRI	SIN	GM-51A+		
D406	MIX SI XIV					G-452	TRI	SIN III	G-431A+		
P406	X	GT-60=, 2N113\$				G-454	TRI	SIN III	GS-3B+		
LI-407	*	VI V111				M457	TRI	SIN II	MS3*+, UB180=, GM57+		
P407	X	2N114\$				M-470	TRI	SIN	GM-70+		
D408	MIX SI XIV					G471	PND	SIN	GK71+		
LI-408	*	VI VIII				G472	TRI	SIN III			
P408	X					G480	TRI	SIN	GI-17*+		

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
G-483	TET	SIN		GMI-83+		P607	*		X		14883-69
G484	TRI	SIN	III			P607A	*		X		14883-69
G-489	TET	SIN		GMI-89+		D608	*		XIV		
G-490	TET	SIN		GMI-90*+		P608	*		X		14883-69
IFK500			XX			P608A	*		X		14883-69
IFP500			XX			P608B			X		
ISSH500			XX			D609			XIV		
VGV500		POW	XII			P609	*		X		14883-69
D501	*		XIV			P609A	*		X		14883-69
P501			X			P609B			X		
P501A			X			OV-612		BWT	IX		
P502			X			OV-613		BWT	IX		
P502A			X			OV-614		BWT	IX		
P502B			X			KS620A	*	REG SI	X111		
P502V			X			OV-621		BWT	IX		
KD503A	*	REC	X1			OV-622		BWT	IX		
KD503B	*	REC	X1			KS630A	*	REG SI	X111		
P503			X			KS650A	*	REG SI	X111		
P503A			X			KS680A	*	REG SI	X111		
KD504A	*	REC	X1			700AD		MAG	IX		
P504			X			GT701A	*		X		
P504A			X			P701	*		X		
P505			X			P701A	*		X		
P505A			X			P7018	*		X		
GD507A	*	REC	X1			P702	*		X		
KD512A	*	SI	XI			P702A	*		X		
KD513A	*	SI	XI			706AU		MAG	IX		
M-532		MAG	IX			707A/B		KLO	IX		
M571		MAG	IX			LO-709A		OS	VIII		
MI-588		MAG	IX			714AU		MAG	IX		
MI-589A		MAG	IX			LK-715		TV		18LK15+	
MI-589B		MAG	IX			720AYE		MAG	IX		
MI-589V		MAG	IX			723A/8		KLO	IX		
M600		TRI SIN		GM60+		725A		MAG	IX		
KT601			X			LK-726		TV		18LK38+	
KT601A	*		X			726		KLO	IX		
LI-601	*	IM	V111			LO-729		OS		8L029+, 38P1A\$	
P601			X			LO-730		OS		8L030+	
P601A			X			LO-731		OS		13LM31+	
P601AI	*		X			LO-732		OS		31LM32+	
P6018			X			LO-733		OS		31L033+	
P601BI	*		X			LO-734		OS		23LM34+	
P601I	*		X			LO-735		OS		18LM35+	
D602A		VID	XIV			LO-736		OS		13L036+	
D602B		VID	XIV			LO-737		OS		13L037+	
D602V		DET	XIV			LO-738		OS		5L038+, 2AP1\$	
KT602A	*		X			LO-739		OS		8L039+	
KT602B	*		X			LK-740		TV		18L0408+, 7JP4\$	
KT602G	*		X			K-743		KLO	IX		
KT602V	*		X			LO-743		OD		10L043+	
P602			X			K-744		KLO	IX		
P602A			X			K-745		KLO	IX		
P602AI	*		X			K-746		KLO	IX		
P602I	*		X			K-747		KLO	IX		
D603	*	VID	XIV			LO-747		OD		18L047+	
D604	*	VID SI	XIV			LO-748		OD		13L048+	
KT604A			X			LO-749		OS		13L049+	
KT604B			X			GK750		TRI SIN	III		
P604		GAP	X			L0751		OS		23L051+	
P604A		GAP	X			LO-754		OS		13L054+	
P6048		GAP	X			K-765		KLO	IX		
D605		MIX SI	XIV			K-766		KLO	IX		
KT605A			X			K-767		KLO	IX		
KT605B			X			K-768		KLO	IX		
P605	*	GDP	X			K-769		KLO	IX		
P605A	*	GDP	X			K-770		KLO	IX		
P606	*	GDP	X			K-771		KLO	IX		
P606A	*	GDP	X			M800		TRI SIN	III		
D607	*		XIV			P800		PND SIN		GU80*+, OS450=	
D607A	*		XIV			K-801		KLO	IX		

## Group I—NUMERICAL—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
KT801A	*	X				KD902D	*	XI-E			
KT801B	*	X				KD902I	*	XI-E			
K-802	KLO	IX				KD902YE	*	XI-E			
KT802A	*	X				KD902ZH	*	XI-E			
K-803	KLO	IX				KT902A		X			
KT803A	*	X				KD903A	*	XI-E			
GT804A	*	X				KD903B	*	XI-E			
GT804B		X				KT903A		X			
GT804V		X				KT903B	*	X			
K-804	KLO	IX				KT904A	*	XI-E			
K-805	KLO	IX				KD904B	*	XI-E			
KT805A	*	X				KD904D	*	XI-E			
KT805B	*	X				KD904G	*	XI-E			
K-806	KLO	IX				KD904V	*	XI-E			
G807	SEA SIN	III	807\$		8380-65	KD904YE	*	XI-E			
K-807	KLO	IX				KD906	*	XI-E			
D808	*	REG	XIII			KD907	*	XI-E			
D809	*	REG	XIII			KD909	*	XI-E			
D810	*	REG	XIII		15953-70	GD1000	TRI SIN		G-29+		
D811	*	REG	XIII	811-A\$		GKE1000	TET SIN	III			
G811	TRI SIN	III				M-1000	TRI SIN		GM-100+		
D813	*	REG	XIII			VGV1000	POW	XII			
G-813	BEA SIN			GU-13+, 813\$		VKV1000	POW	XII			
D814-A	*	REG SI	XIII			D1001	REC	XI			
D814-B	*	REG SI	XIII			D1001A	REC	XI			
D814-D	*	REG SI	XIII		14913-69	UV1001	* TWT	IX			
D814-G	*	REG SI	XIII		14913-69	D1002	REC	XI			
D814-V	*	REG SI	XIII		14913-69	D1002A	REC	XI			
D815A(P)	*	REG SI	XIII			UV1002	* TWT	IX			
D815B(P)	*	REG SI	XIII			D1003A	REC	XI			
D815D(P)	*	REG SI	XIII			UV1003	* TWT	IX			
D815G(P)	*	REG SI	XIII			D1004	* SIA	XI		14912-69	
D815I	*	REG SI	XIII			UV1004	* TWT	IX			
D815V(P)	*	REG SI	XIII			D1005A	* SIA	XI		14912-69	
D815YE(P)	*	REG SI	XIII			D1005B	* SIA	XI		14912-69	
D815ZH(P)	*	REG SI	XIII			UV1005	* TWT	IX			
D816A(P)	*	REG SI	XIII			D1006	* SIA	XI		14912-69	
D816B(P)	*	REG SI	XIII			UV1006	* TWT	IX			
D816C(P)	*	REG SI	XIII			D1007	* SIA	XI		14912-69	
D816D(P)	*	REG SI	XIII			D1008	* SIA	XI		14912-69	
D816G(P)	*	REG SI	XIII			D1009	* SIA	XI			
D816V(P)	*	REG SI	XIII			D1009A	* SIA	XI			
D817A(P)	*	REG SI	XIII			D1010	* SIA	XI			
D817B(P)	*	REG SI	XIII			D1010A	* SIA	XI			
D817C(P)	*	REG SI	XIII			D1011A	* SIA	XI			
D817V(P)	*	REG SI	XIII			TG1050	TRI THY		TG2-0.1/0.1+		
D818A	*	REG SI	XIII			IFPP1500					
D818B	*	REG SI	XIII			1502	DIO SIN	IV			
D818D	*	REG SI	XIII			1504	TRI SIN	II		5TS9S	
D818G	*	REG SI	XIII			1506	BEA TWN	II			
D818V	*	REG SI	XIII			1509	BEA TWN	II			
D818YE	*	REG SI	XIII			1511	PND SIN	II			
G-827	TET SIN			GU-27B+, 827R\$		1512	PND SIN	II			
G-829	TET TWN			GU-29+, 829-B\$		1514	PND SIN	II	6AG7\$		
G-832	BEA TWN			GU-32+, 832A\$		1515	SEA SIN	II			
G837	PND SIN	III		OS12/500-, 837\$		1536	DIO TWN	II			
G-880	TRI TWN			GU-12A+, 880\$		1538	BEA SIN	II			
TG-884	TRI THY			TG1-0.1/0.3+, 884*		1539	TRI SIN	II			
G889	TRI SIN	III		889-A\$		1540	SEA SIN	II			
G891	TRI SIN	III		891\$		1550	DWD SIN	II			
D901A	*	VAR SI	XI-D		16359-70	D1602A	REC	XI			
D901B	*	VAR SI	XI-D		16359-70	D1602B	REC	XI			
D901D	*	VAR SI	XI-D		16359-70	D1602V	REC	XI			
D901G	*	VAR SI	XI-D		16359-70	G1625	BEA SIN	III	1625\$		
D901V	*	VAR SI	XI-D		16359-70	GK2000	TRI SIN	III			
D901YE	*	VAR SI	XI-D		16359-70	IFK2000		XX			
D9018	*	VAR SI	XI-D			TG2050	TET THY				
D901D	*	VAR SI	XI-D			GK3000	TRI SIN	III		TG1-0.1/1.3+, 2050\$	
D901G	*	VAR SI	XI-D			M-3000	TRI SIN				7710-55
KD901V	*	3DA SI	XI-E			PI-3000	PND SIN			GMI-18+	
D902	*	VAR SI	XI-D							GI-8*	

## Group I—NUMERICAL.—Continued

Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.	Type No.	Kind	Type	Group No.	Similar types	GOST spec. No.
GI-3100		TRI SIN	III			IFP15000			XX		
IFP4000			XX			IFK20000			XX		
4378D			XXII			G40011	TRI SIN	III			
4671		TRI SIN		6S1ZH+		IFK80000			XX		
G-5000		TRI TWN		GS							

## Group II—RECEIVING TUBES

Type No.	Kind	Type	Bulb	Use	Cathode	E <sub>f</sub> V	I <sub>f</sub> mA	Maximum			Typical							Capacity		f <sub>max</sub> MHz	Base No.		
								E <sub>b</sub> V	I <sub>b</sub> mA	P <sub>p</sub> W	E <sub>b</sub> V	E <sub>g2</sub> V	E <sub>x1</sub> V	I <sub>b</sub> mA	I <sub>x2</sub> mA	S <sub>m</sub> mmho	μ	R <sub>p</sub> Ω	In pF	Out pF			
06P2B *	PND	SIN	T3F	AF	F	0.6	30	35	350μ	<0.1	30	30	0	90μ	<0.1	.1	1M				5CL		
06S57A*	TRI	SIN			F	0.6	38				12	<2	<1		<0.2	10	55k	0.7	1.7		T29		
06ZH6B	PND	SIN	T3F	AF	F	0.6	20	35	350μ	8M	30	30	0	150μ	0.1	.1	900k	5.0	3.0		5CL		
1A1P	PTG	SIN	T6		F	1.2	60	100		0.3	90	45	0	<1	1.7	.3	500k	7.0	7.0		TAT		
1A2P *	PTG	SIN	T6		F	1.2	30	90	3	0.3	60	45	0	<1	1.1	.2		5.1	6.3		TAT		
1B1P	PND	DIO	T6		F	1.2	60	100	4	0.2	67	67	0	2	0.3	.6	1M	2.2	2.4		6AU		
1B2P *	PND	DIO	T6		F	1.2	30	90	2	0.1	60	45	0	900μ	0.2	.5	1M	1.8	2.1		6AU		
1E1P *	TET	SIN	T5	EL	F	1.0	46				6	4	3	100μ	0.4	<.1	1		3.5			TE2	
1E3P	TRI	SIN				1.3	24				8		3	300μ		<.1	2		3.5				
1F2B	TRI	PND			F	1.2	60				45		0	1		0.4		2.5	1.5				
1F2B	PND	TRI			F	1.2	60				45	45	0	<1	0.2	0.3	600k	4.0	3.5				
1I2P	TRI	HEX			F	1.2	60	90	2	0.2	60		0	1		1.0	25	25k	0.7	3.0		PT1	
1I2P	HEX	TRI			F	1.2	60	90	2	0.2	60	45	0	1	0.3	.2	650k	3.5	4.7		PT1		
1K1P	PND	SIN	T6		F	1.2	60	100		0.6	90	67	0	3	1.2	.9	1M	3.5	7.5		6AR		
1K2P *	PND	SIN	T6		F	1.2	30	90	3	0.3	60	45	0	1	0.3	.7	1M	3.0	4.9		6AR		
1K12B	PND	SIN	T3B		F	1.2	60	12	0	5	0.6	60	40	0	2	0.7	1.0	30k	3.7	2.8			
1N3S *	TRI	DUO	T10		F	1.2	120	150			1.0	120		5	<3		1.8	11	14k			7AB	
1P2B *	PND	SIN	T3F	AF	F	1.3	50	50			45	45	2	1	0.5	.4	50k	3.0	6.0		5CL		
1P3B *	PND	SIN	T3F	AF	F	1.3	28	50			45	45	2	1	0.3	.3	50k	3.0	6.0		5CL		
1P4B *	PND	SIN	T3F	AF	F	1.3	20	50	<2	5.0	45	45	2	1	0.3	.3	200k	3.0	6.0		5CL		
1P5B *	PND	SIN	T3B		F	1.2	120	150	18	1.7	90	90	<5	12	1.0	1.9	60k	3.9	2.6	100			
1P22B *	PND	SIN	T3B		F	1.2	115	180	17	2.0	90	90	<5	13	1.0	2.8	60k	6.9	4.7	100			
1P24B *	PND	SIN	T3B		F	1.2	250	300	25	2.5	150	125	14	17	3.0	2.8		7.1	4.0	60			
1P32B *	PND	SIN	T3B		F	1.2	215	200	20	3.0	150	150	14	12	1.5	2.3		6.3	5.8	60			
1S12P	TRI	SIN			F	1.2	30	90	<3	0.2	60		1	1		.9	16	19k	0.8	0.7	300	TS1	
1S38A *	TRI	SIN			F	0.9	85				70		0	2		0.9	24		0.9	1.2			
1TS1S *	DIO	SIN	T10		F	0.7	185	15k	5	0.5				<1				2.0				8HC	
1TS7S *	DIO	SIN	T10		F	1.3	200	30k	2			100			4			1.3	3hk	8HC			
1TS11P*	DIO	SIN	T6		F	1.2	200	20k	2					300μ				1.0				DS3	
1TS20B	DIO	SIN	T3B		F	1.0	250	10k	300μ					135μ				0.8					
1TS21P*	DIO	SIN	T7		H	1.4	690	25k	40			100			600μ				3.0				DS5
1YE4A	TRI	SIN	T2B		F	1.2	25	200	1	0.2	150			<1	900μ			1.3	1.0			T10	
1ZH1ZB	PND	SIN	ACO		F	1.2	50	145			135	68	3	<2	0.4	.6	800k	1.8	2.5				
1ZH2M	PND	SIN			F	1.2	30				70	70	0	1	0.6	<.5							
1ZH17B*	PND	SIN	T3B		F	1.2	60	90	5	0.5	60	40	0	2	0.1	1.0		25k	3.7	2.7			
1ZH18B*	PND	SIN	T3B		F	1.2	60	90	5	0.3	60	40	0	1	0.3	1.0	60k	3.7	2.7				
1ZH24B*	PND	SIN	T3B		F	1.2	13	120	<2	0.1	60	45	0	1	0.2	0.9	40k	3.6	2.4				
1ZH26A	PND	SIN			F	1.4	130				135	70	<1	4	0.5	1.2							
1ZH29B*	PND	SIN	T3B		F	1.2	60	150	8	1.2	60	45	0	5	0.5	2.5	35k	5.0	3.0				
1ZH30B	PND	SIN	T3B		F	1.2	15	200	1		12	12	0	1		.8	600	8.5	3.5				
1ZH36B*	PND	SIN	T3B		F	1.3	75	200			150	45	1	3	0.4	1.5			2.2	3.0			
1ZH37B*	PND	SIN	T3B		F	1.2	60	100	<5		45	45	0	2	0.4	1.0	30k	2.2	2.6				
1ZH42A*	PND	SIN	T2B		F	1.2	15	20	1		6	6	0	<1	0.2	0.5	100k	10.0	3.5				
GU-2	BEA	SIN	S18		H	6.3	900	750	120	30.0	250	250				10.0				60			
	2A1	PTG	SIN	CN	H	2.0	160	160		0.7	120	70	4	2		0.4	150k	9.6	11.4		8A		
2D1L	DWD	SIN	F10		H	2.2	130				50				2							DW3	
2D1S *	DIO	SIN	LIT		H	2.3	400	100	2	<0.1		5			<1							3G D12	
2D2S *	DIO	SIN	F27	NO	T	1.5	1500	200	40	5.0	125											3G	
2D3B *	DIO	SIN	T3F	NO	W	2.2	110		110		150			5					2.4				
2D3S	DIO	SIN	T3F		H	2.2	110				150												
2D7S *	DIO	SIN	PEN	NO	W	1.4	212	350			6.0	300			3								
2D9S *	DIO	SIN	T10		W	3.7	550	500	1														
2E1	TET	SIN			F	2.0	110	160			1.0	100	40	0	1	0.5	.9	1M	9.0	9.0		TE5	
2E2	TET	SIN			F	1.8	320				1.5	160	80	2	7	4.0	1.8	300k	8.3	9.0		TE6	
2E2P *	TET	DUO	T8	EL	F	2.0	55				6	3	4	45		22	1		4.0			TE3	
2K1	PND					2.0	120	120			120	70	1	<4	1.2	1.6		750k					
2K1M	PND	SIN			F	2.0	120				150	70	1	3	1.1	1.4		1M				5Y	
2K2M	PND	SIN	T9		F	2.0	60	160	0.5	120	70	<1	2	0.5	.9		1M	5.4	8.1		5Y		
2KH1L *	DWD	SIN	F10		H	2.2	130				50			2					2.2				
2N1	TRI	DUO			F	2.0	240	160			1.5	120		0	3		2.1	32			2.8		
2P1	BEA	SIN			F	2.0	185				0.2	120	120	2	4	0.7	1.8	150k				6X	
2P1P *	BEA	SIN	T5		F	1.2	120	90	15	0.8	90	90	4	10	2.2	2.0	100k	5.5	4.0		7AV		
2P2	BEA	SIN			F	2.0	220				0.3	120	100	4	10	1.8	2.2		90k				
2P2P *	BEA	SIN	T5		F	1.2	60	90	7	0.4	60	60	4	3	0.8	1.1	120k	3.7	3.8		7BA		
2P3	BEA	SIN			F	2.0	230				0.5	160	120	6	10	1.7	2.0	80k				6X	

## Group II—RECEIVING TUBES—Continued

Type No.	Kind	Type	Bulb	Use	Cathode	E <sub>r</sub> V	I <sub>r</sub> mA	Maximum			Typical							Capacity			f <sub>max</sub> MHz	Base No.
								E <sub>b</sub> V	I <sub>b</sub> mA	P <sub>p</sub> W	E <sub>b</sub> V	E <sub>u<sub>2</sub></sub> V	E <sub>e<sub>2</sub></sub> V	I <sub>b</sub> mA	I <sub>u<sub>2</sub></sub> mA	Sm mmho	μ	R <sub>p</sub> Ω	In pF	Out pF		
2P5B *	PND	SIN	T3B		F	2.4	90	180	25	2.3	90	90	4	12	1.2	3.3		7.1	4.7	100		
2P9M	BEA	SIN	T10		F	2.0	1000	300		8.0	250	150	5	35	1.5	2.5	40 k	8.5	8.5	6X		
2P19B *	PND	SIN	T3B		F	2.2	70	200	15	1.0	120	90	5	8	3.5	1.7		4.5	7.0	PS6		
2P29L *	PND	SIN	T9		F	2.2	120	200	20	2.0	160	120	6	10	2.0	1.9	50 k	4.3	5.5	PS2		
2P29P *	PND	SIN	T5		F	2.2	110	200	5	1.0	120	45	0	<2	0.4	1.2	100 k	4.9	2.0	120	PS8	
2S1	TRI	SIN			F	2.0	110	120		2.0	80		0	<6		1.5	14	9 k	3.6	3.0		
2S2	TRI	SIN	T8		F	2.0	120	160		0.6	120			1		1.3	22	17 k	2.8	2.7	5S	
2S3A *	TRI	SIN			F	2.4	120			1.8	65		2	10		2.7	<8	28 h	1.6	3.1	T30	
2S4S *	TRI	SIN		PA	F	2.5	2500	360		15.0	300		62	40		4.0	4	800 k	7.5	5.5	4D	
2S14B *	TRI	SIN	T3F		F	2.2	60	250	5	0.7	90		3	<4		1.8	15	8400	2.8	2.1	300	TS2
2S49D *	TRI	SIN	LIT		H	2.4	480	300	50	4.0	250		1	15		6.0	62	500M	3.3	0.1		
2TS2S *	DIO	SIN	S12		H	2.5	1750	12 k	65			4 k		7							4AC	
2VD8	DIO	SIN				2.5	1750	12 k	100													
2ZH1M	PND	SIN			F	2.0	320			0.5	160	80	2	7	1.5	1.8					PS8	
2ZH2M	PND	SIN	T9		F	2.0	60	160		0.5	120	70	<1	2	0.5	.9	1M	5.4	8.1	5Y		
2ZH4	PND	SIN			F	2.0	275			1.2	200	100	7	14	2.4	1.8	110 k				PS8	
2ZH14B *	PND	SIN	T3B		F	2.2	30	90	5	0.5	90	45	0	2	0.8	1.2		4.5	6.0	PS6		
2ZH15B *	PND	SIN	T3B		F	2.2	14	200	5	1.0	60	45	0	1	0.7	0.7		4.0	5.0	P4S		
2ZH27L *	PND	SIN	F10		F	2.2	57	200	5	1.0	120	45	0	2	0.5	1.2	700 k	5.3	4.9	PS3		
2ZH27P *	PND	SIN	T5		F	2.2	57	200	5	1.0	120	45	0	1	0.5	1.0	<2M	4.5	2.0	PS4		
2ZH28L	PND	SIN			F	2.2	28			1.0	120	45	0	2	0.5	1.2	<2M	5.4	4.8	PS3		
EM-3	TET	SIN	T16		F	3.0	120			6	4	3	70 μ	0.4	0.1	1			5.0			
	3A4S	PND	SIN		F	3.2	100			150	90	0	13	2.2	1.9						P7S	
3B4S	BEA	SIN	T5		F	3.2	150			180	150	20	30	2.5	2.4						P8S	
3D6A-V*	DIO	SIN			H	3.2	32	450	10	0.2	165		35						3.8		D15	
3S1	TRI	SIN			F	2.5	1A			220		4	8		2.2	22	10 k					
3S2	TRI	SIN			F	2.5	1A			220		10	15		2.4	11	4 k					
3S6B-V*	TRI	SIN			H	3.2	480			1.4	120		9		5.3	26	5 k	3.4	3.4	T31		
3S7B-V*	TRI	SIN			H	3.2	440			1.4	250		<5		4.2	70	17 k	3.3	3.4	T31		
3S9	TRI	SIN			F	2.5	1000			6.0	220		10	17		2.4	11	5.0	2.5	4F		
3TS16S*	DIO	SIN	T10		H	3.2	220	35 k	80		120		1						1.9		4AC	
3TS18P*	DIO	SIN	T6		H	3.2	210	25 k	15		100		8						1.5		DS3	
3TS22S*	DIO	SIN	T10	TV	H	3.1	400	36 k	80		30 k		2						2.5		D7	
3ZH1BV*	PND	SIN			H	3.2	400			1.2	120	120	<8	<.4	4.8			4.8	4.3			
3ZH2BV*	PND	SIN			H	3.2	400			0.9	120	120	<6	<.6	3.8			4.9	4.1	PS5		
EM4 *	TRI	SIN	T6	EL	F	1.3	24	10	500 μ		8		3	300 μ		<.1	2		3.5			
4D5S	DIO	SIN	T4		H	4.0	240			10			5								D12	
4D17P	DIO	SIN			F	4.0	1750	200	16	1.0	60		7								D10	
4E1	TET	SIN			F	4.0	75	200		2.0	160	80	0	3		.8	350		8.0	6.3	TE5	
4E2	TET	SIN			F	4.0	150	200		2.0	160	80	0	<8		1.8	400		10.5	8.0	TE5	
4E3	TET	SIN			H	4.0	1000	250		160	60	1	8	1.5	3.0	200 k	6.5	4.5				
4FG6S	BEA	SIN		PA	H	4.0	1100			10.0	250		16	34	6.0	2.5	200	80 k				
4N1	TRI	DUO			F	4.0	2A			6.0	120		0	30	3.2							
4P1	PND	SIN				4.0	1A			240	140	11	22	6.0	2.1							
4P1L *	PND	SIN	T10		F	4.2	325	250	50	7.5	200	150	20	50	10.0	6.0		30 k	8.5	9.4	100	PS2
4P10S	PND	SIN				4.0	1750			315	210	7	63	1.4	8.5							
4S1	TRI	SIN			F	4.0	70			120		0	8		1.3	11	8 k					
4S2	TRI	SIN			F	4.0	70			160		0	4		1.3	25	18 k					
4S3	TRI	SIN			F	4.0	155	200		3.0	160		6	15		2.1	9		3.8	2.4		
4S3S	TRI	SIN	F9		H	4.4	330	300	30	5.0	100		4	27		3.0	12	4200	1.5	0.6	1 k	TS3
4S4	TRI	SIN			F	4.0	1A			15.0	250		37	57		3.2	4	1 k				
4S5	TRI	SIN			H	4.0	1A			240		3	6		1.7	32	20 k					
4TS6S *	DIO	SIN	S10		W	4.0	1750			1.0	50		7								DS4	
4TS14S *	DIO	SIN	T11		W	4.0	1750	60	20	1.2	60		7								DS4	
4VD1	DIO	SIN			F	4.0	700			350			50									
4VKH1	DIO	TWN			F	4.0	2300	1 k		560												
4VKH2	DIO	SIN				4.0	2000	<2 k		1200												
4ZH1L *	PND	SIN	F10		H	4.2	225	250	11	0.5	150	75	0	7	1.5	1.5		1M	4.0	4.2	200	PS1
4ZH1P	PND	SIN	F10		H	4.2	225	250	11	2.0	150	75	0	7								
4ZH5	TET	SIN			H	4.0	1000	250			120	40	1	<3	1.7	1.3		770 k	14.0	4.5		
4ZH5S	PND	SIN		RF	H	4.0	1000			160	60		5	3.5	2.0				11.0	4.5		
EM-5 *	TET	DBA	T7	EL	H	3.1	115	5		5			3	85 μ	<0.1	1		1.6				T2E
GP-5 *	TRI	SIN	T15	TV	H	6.3	210	30 k	2				7	<2		0.6			1.5	4.0		T4S
5TS3S *	DWD	SIN	S16	F	5.0	3000	17 h		750		500			125								DW1
5TS4M *	DIO	DUO	T11	H	5.0	2000	15 h		415		400			133								DW4

**Group II—RECEIVING TUBES—Continued**

Type No.	Kind	Type	Bulb	Use	Cathode	E <sub>f</sub> V	I <sub>f</sub> mA	Maximum			Typical						Capacity		f <sub>max</sub> MHz	Base No.
								E <sub>b</sub> V	I <sub>b</sub> mA	P <sub>p</sub> W	E <sub>b</sub> V	E <sub>k<sub>2</sub></sub> V	E <sub>k<sub>1</sub></sub> V	I <sub>b</sub> mA	I <sub>k<sub>2</sub></sub> mA	S <sub>m</sub> mmho	μ	R <sub>p</sub> Ω	In pF	Out pF
5TS4S *	DIO	DUO S14	H	5.0	2000	13h	375		500											DW4
5TS8S *	DWD	SIN T17	H	5.0	5000	17h	1200	30.0	500											DW2
5TS9S *	DWD	SIN F13	H	5.0	3000	17h	600	12.0	500											DW2
5TS9SE	DWD	SIN F13	H	5.0	3000	<2k	600	12.0	500											DW2
5TS12P*	DIO	SIN T7	H	5.0	870	5k	350	5.0	2k											DS1
5VKH2	DWD	SIN		5.0	2000	14h	375													
5VKH3	DWD	SIN		5.0	3000	15h	675													
EM-6	*	TET DBA T6	EL H	4.5	75	5		5		3	70μ			<0.1	1		1.8			T2E
SG6S	REG	TRI T12		6.3	825	25k	300μ		20k	150	100μ									D8
6A2P *	PTG	SIN T5	CN H	6.3	300	330	14	1.1	250	100	<2	3	1.0	.3		100k				7CH
6A3P *	GTA	SIN T6	CN H	6.3	300	150	20	1.2	75	75	4	<5	7.0	1.2			4.7	4.0		7DF
6A4P *	PTG	DBA T7	CN H	6.3	440	250	20	2.0	200	100		34	26.0	16.0			10.5	2.8		P35
6A7 *	PTG	SIN M8	CN H	6.3	300	300	15	1.1	250	100	0	4	8.5	.4		500k	9.5	12.0		8R
6A8	PTG	SIN M11	CN H	6.3	300	330	15	1.0	250	100	0	4	2.7	.5		360k	12.5	12.5		8A
6A10S	PTG	SIN M11	CN H	6.3	300	330	15	1.1	250	100	0	4	9.0	.4		1M	9.0	10.0		8R
6B1P *	DIO	PND T7	H	6.3	400			150				15					9.0	4.0		PS5
6B1P *	PND	DIO T7	H	6.3	400			1.1	250	250	2	26	2.7	29.0			9.0	4.0		PS5
6B2P *	PND	DIO T7	RF H	6.3	300			2.1	250	100	1	6	1.6	2.7		700k	4.2	4.1		PS5
6B8 *	PND	DWD M10	H	6.3	300	275			250	125	3	10	2.4	1.6		750k	5.7	7.5		8E
6B8S	PND	DWD S12	RF H	6.3	300	275		2.5	250	125	3	10	2.4	1.3		600k	4.0	9.0		8E
6D3D *	DIO	SIN LIT	H	6.3	770	200	150		7			27								3G DS2
6D4ZH *	DIO	SIN ACO	H	6.3	150	365	30		165			5					0.9			4G
6D6A *	DIO	SIN T2F	H	6.3	150	450	70	0.2	165			8					3.0			700
6D8D *	DIO	SIN PEN	H	6.3	450	450	<0.1	150			<4									5G
6D10D *	DIO	SIN PEN	H	6.3	750	100	30	0.5	100			10					3.5			
6D13D *	DIO	SIN PEN	H	6.3	210	450		1.0	150		150μ						0.8			48h
6D14P *	DIO	SIN T22	H	6.3	1100	56h	600	4.5	20		175						10.0			9CB
6D15D	DIO	SIN LIT	H	6.3	330	200	750	0.5									1.2			
6D16D	DIO	SIN LIT	H	6.3	240	450	2000	1.0	100			14					2.0			3G DS9
6D20P *	DIO	SIN T7	H	6.3	1800	6k	600	5.0			220						9.0			9BD
6D22S	DIO	SIN T10 TV	H	6.3	1900	6k	1000	8.0		300							12.0			D9
6E5P *	TET	SIN T6	H	6.3	600	150	70	8.3	150	150	2	45	14.0	30.5		8k	15.0	2.6		TE1
6E6P *	TET	SIN	CN H	6.3	600			8.4	150	150		44	10.0	30.5		15k	15.0	5.8		9EQ
6E6P-YE	TET	SIN T7	H	6.3	600	150	70	8.3	150	150	2	44	10.0	29.5		15k	15.0	2.7		TIE
6E7P *	TET	SIN T7	CN H	6.3	750	5k	10	10.0	5k	25	2	2	0.1	1.6	2k		5.6	1.1		TE9
6E12N *	TET	SIN NUV	CN H	6.3	130	250	20	2.2	125	50		10	3.6	10.0			7.1	1.6		TE8
6E13N *	TET	SIN	H	6.3	140			2.0	27	27		7	3.6	8.5			7.0	1.9		T3E
6E14N *	TET	SIN	H	6.3	140			2.2	27	27		7	3.6	10.0		100k	7.0	1.5		T3E
6F1P *	TRI	PND T7	H	6.3	430	250	14	1.5	100		2	13		5.0	20	4k	2.5	0.3		9AE
6F1P *	PND	TRI T7	H	6.3	430	250	14	2.5	250	170	2	10	4.0	6.2		400k	5.5	3.4		9AE
6F3P *	TRI	PND T7	H	6.3	850	250	15	1.0	170		1	2		2.5	75	28k	2.2	0.4		PT5
6F3P *	PND	TRI T7	H	6.3	850	275	60	8.0	170	170	11	41	14.0	7.0		15k	9.3	8.5		PT5
6F4P *	PND	TRI T6	H	6.3	720	250	40	4.0	170	170	2	18	7.0	11.0		100k	9.5	4.0		PT4
6F4P *	TRI	PND T6	H	6.3	720	250	12	1.0	200		2	3		4.0	65	16k	4.0	0.6		PT4
6F5M	TRI	SIN T10	H	6.3	300	350		4.0	250		2	1		2.0	100					5M
6F5P *	TRI	PND T7	H	6.3	900	250	15	0.5	100		5			7.0	70	10k	3.5	0.3		PT6
6F5P *	PND	TRI T7	H	6.3	900	300		9.0	185	185	41	2.7		7.5		23k	11.7	8.8		PT6
6F5S	TRI	SIN T5	H	6.3	325			1.3	250		2	<2		2.0						
6F6M1	PND	SIN T11	H	6.3	700				250	250	<17	46		2.9						7S
6F6S	PND	SIN S14 PA	H	6.3	700	375		11.0	250	250	16	34	6.5	2.5			7.5	11.0		7S
6F7	TRI	PND M11	H	6.3	300	110		0.5	100		3	3		.5	70					PT2
6F7	PND	TRI M11	H	6.3	300	275		2.2	250	100	3	7	1.6	1.1						PT2
6F9P *	TRI	PND	H	6.3	410				150			9		14.0			3.5	1.8	250	PT8
6F9P *	PND	TRI	H	6.3	410				150	120		<11	2.9	13.5			5.7	3.4	250	PT8
6F12P	TRI	PND T7	H	6.3	360	250	22	3.5	150		13	20					3.6	0.8		PT7
6F12P	PND	TRI T7	H	6.3	360	300	22	5.0	150	150		13	2.2	20			5.7	1.7		PT7
6G1	*	TRI	DWD M10	H	6.3	300	275		2.7	250	9	9		1.9	16	8500	3.6	2.8		8Q
6G2	*	TRI	DWD M10	H	6.3	300	330	0.9	250		2	1		1.1	100	91k	3.2	3.0		8Q
6G2P-K	TRI	DWD T6	H	6.3	300				250		2	.1		1.8	100					
6G3P	TRD	TRI T6	H	6.3	450	350	75					10								TT1
6G3P	TRI	TRD T6	H	6.3	450	300		1.0	250		3	1		1.3	63	48k	2.0	1.2		TT1
6G7	*	TRI	DWD M10	H	6.3	300	330	1	1.0	250	3	1		1.3	70	54k	5.0	3.8		TD3
6I1P *	PTG	TRI T60	H	6.3	300	300	12	1.7	250	100	2	38	6.5	.8		1M	5.1	7.4		9CA
6I1P *	TRI	PTG T60	H	6.3	300	250	6	0.8	100		2	7		2.2	23	6k	2.6	2.0		9CA
6I3P	TRI	PTG T6	H	6.3	300	250	10	1.0	100		2	<7		2.7	20		2.6	2.0		9CA









## Group II—RECEIVING TUBES—Continued

Type No.	Kind	Type	Bulb	Use	Cathode	E <sub>r</sub> V	I <sub>r</sub> mA	Maximum			Typical							Capacity		f <sub>max</sub> MHz	Base No.	
								E <sub>p</sub> V	I <sub>b</sub> mA	P <sub>p</sub> W	E <sub>b</sub> V	E <sub>e2</sub> V	E <sub>e1</sub> V	I <sub>b</sub> mA	I <sub>e2</sub> mA	Sm mmho	μ	R <sub>p</sub> Ω	In pF	Out pF		
UB-152	TRI SIN		F	2.0	120			120			4	6		3.0	14		5k					
UB-153	TRI SIN		F	2.0	200			100			6	8		2.5	10		4k					
SB-154	PND SIN		F	2.0	90			160	60	1	3	0.4	1.2				290k					
UB-155	BEA SIN		F	2.0	230			0.2	100	60	2	6	1.5	2.1			100k					
UB-178	TRI SIN		F	2.0	120			100			<1	2		1.1	33		30k					
S0-182	PND SIN		H	4.0	1100			240	100	1	7	2.0	2.5				800k					
UB-182	TRI SIN		F	4.0	150			3.0	240	6	12		2.4	9			4k					
U0186	TRI SIN S16		F	4.0	1000			15.0	250	37	57		3.2	4			1k				4F	
SB-190	PND SIN		F	2.0	100					160	120	1	1	0.4	1.2			420k				5Y
191P	TET SIN T6	EL H	1.0	46					6	3	4	100					50.0				TE2	
UB-240	TRI SIN		F	2.0	120			0.6	120			3		1.5	22	14k	2.8	2.8			5S	
S0-242	PTG SIN S9	CN H	2.0	160	300	14		1.0	120	70	0	3	.2	.1			7.0	8.6			7Z	
S0-243	TRI TWN		F	2.0	240			1.5	120			3		2.1	32	16k	2.8	3.4			7AB	
S0-244	PND SIN		F	2.0	185			1.5	120			4		1.8	270	150k	55.0	7.0			6X	
S0-257	PND SIN S10		F	2.0	300				200	100	7	18		1.3							P19	
S0-258	PND SIN		F	1.8	320			1.3	160	120	6	2		2.0	160	80k	5.4	7.5			6X	
M-457	TRI SIN		F	4.0	2100			50.0	1k		72	70		7.0	8	1k						
1504	TRI SIN L1T	H	6.3	770	300	25		6.5	250			25		4.7	42	9k	2.3	0.5	36			
1506	BEA TWN T19	H	12.6	1120	500			15.0	400			110									7BP	
1509	BEA TWN T19	H	12.6	800	500			15.0	500			72									7BP	
1511	PND SIN M10	H	6.3	450	330			3.3	300	150	0	10	2.2	9.0			900k				8N	
1512	PND SIN M10	H	6.3	650	330			9.0	300	150	3	30	5.7	11.7			80k				8Y	
1514	PND SIN M10	H	6.3	300	330			2.8	250	100	3	3	0.8	1.7			2M				8Y	
1515	BEA SIN M10	H	6.3	450	350			13.2	250	250	12	45	7.5	4.3			52k	9.5	9.5			
1536	DIO TWN T9	H	6.3	300	450	90	0.5	150				10									6BT	
1538	BEA SIN T6	H	6.3	350	330			2.5	250	150		7	2.0	5.0			500k	6.5	2.4		6CC	
1539	TRI T9	H	6.3	600	300			2.5	250			7		4.2	33	7900	3.3	1.7			9AJ	
1540	BEA SIN T13	H	6.3	900	400			27.5	250	250	14	72	8.0	6.0				11.0	6.7			
1550	DWD SIN	H	6.3	600	1k	300			350			37									DW6	

**Group III—POWER TUBES**

Type No.	Kind	Type	Bulb	Use	Cathode	E <sub>f</sub> V	I <sub>f</sub> mA	Maximum			Typical						Capacity		f <sub>max</sub> MHz	Base No.			
								E <sub>b</sub> V	I <sub>b</sub> mA	P <sub>p</sub> W	E <sub>b</sub> V	E <sub>g2</sub> V	E <sub>g1</sub> V	I <sub>h</sub> mA	I <sub>g2</sub> mA	Sm mmho	μ	R <sub>p</sub> Ω	In pF	Out pF			
GE-1	TET	SIN	F	11.0	2A			80.0	15h	250				100		2.5			15.5	10.0	20		
GK1A	TRI	SIN W46	W	31.5	580A	10k	30A	2h.k	8k					8A		80.0	45		2h	1h	22		
GM1A	TRI	SIN W22	T	10.5	195A	6k	100A	30.k	3k					8A		20.0	5						
GM1P	TRI	SIN V																					
GMI-1B	TRI	SIN		9.0	26A			h3.2	22k							5.0							
GS-1B	TRI	SIN A	H	12.6	3200	2k		1.k	2k		1	250			30.0								
GE-2	TET	SIN	F	11.0	6300			1.h	3k	500						2.0			17.0	11.0	20		
GMI-2B	TET	SIN A70	H	25.0	7500	32k	90A	h9.0						140								TE7	
GS-2B	TRI	SIN W22	H	12.6	3200	2k		1.k	2k		1	250			30.0								
2TM-20	TRI	TWN		20.0	450	750		20.0								4.0	30						
2TM-100	TRI	TWN		20.0	2200	1k		70.0								2.5	28						
GI-3	TRI	SIN T11	H	6.3	1100	25h	15A	10.0	400		15	16			2.2	16			2.6	1.1	300	4BB	
GK3A	TRI	SIN W43	W	17.0	430A	12k	50A	1h.k	5k			6A			35.0	40			1h	65.0	25		
GMI-3	TET	SIN T32	H	26.0	4750	28k	4500	80.0															
GS-3B	TET	SIN A30	H	1H	865	2k		2.k	2k	500					40.0								
GU-3	BEA	SIN S18	H	12.6	450	750	120	30.0	250	250					10.0							60	
GI-4A	TRI	SIN W	T	10.0	215A	35k	220A	20.k	3k			4A			38.0							150	
GMI-4B	TET	SIN A	H	6.3	14A	18k	15A	1.h															
GS-4	TRI	SIN C8	H	6.3	610	250		15.0	200		1	30			18.0	60						600	
GS4D	TRI	SIN		22.0	105A			10.k	15k						12.0	50							
GU4	TRI	SIN		7.0	1800			107	35.0	700		55			1.4	12						85	
GU4A	TRI	SIN W25	T	8.3	145A	6k	30A	20.k	3k			4A			30.0	50			40.0	35.0	100		
GI-5B	TRI	SIN PA	T	6.3	425	27k	250A	5.k	1k			1A			25.0							200	
GK5A	TRI	SIN W44	T	17.0	580A	10k	300A	h2.5							14.0	40			2h	40.0	25		
GMI-5	TET	SIN	H	26.0	1750	20k	12A																
GU5A	TRI	SIN W14	T	12.6	23A	5k	7A	3.k	3k			600			15.0	80			19.0	16.0	110		
GU5B	TRI	SIN A14	T	12.6	23A	5k	7A	2.k	3k			600			15.0	80			19.0	16.0	110		
GI-6B	TRI	SIN C11	H	12.6	2100	9k	20A	h3.5	1k			150			22.0				11.4	4.8	<2G		
GMI-6	BEA	TWN T16	H	6.3	2200	4k	8A	15.0															
GS6	TRI	SIN		17.0	8500			5.h	3k						3.5	95							
GI-7B	TRI	SIN C11	H	12.6	2100	9k	20A	h3.5	1k			150			22.0				11.4	4.8	2G		
GMI-7	TET	SIN T40	H	26.0	6300	22k	52A	h1.2															
GS-7A	TRI	SIN W22	H	12.6	3100	<3k		2.k	2k		1	400			30.5								
GS-7B	TRI	SIN A22	H	12.6	3100	<3k		h1.5	2k		1	400			30.0								
GI-8	PND	SIN T35	T	12.6	10A	8k	4A	h2.0	1k	600			200		5.5			30.0	25.0	P11			
GS-8B	TET	SIN C12	H	6.3	2000			60.0	1k	250			210		16.0			8.0	5.0	2k			
GU8	TRI	SIN		5.0	6500				3k						5.5			3.0	2.0				
GK9P	TRI	SIN V						30.k															
GS9B	TRI	SIN C11	H	12.6	1100	1k	4A	3.h	1k			120			19.5			8.4	31.5	2G			
G10	TRI	SIN		4.1	900			20.0	400			25			.6	19	35k						
GK10P	TRI	SIN V						2h.k														2	
GU10A	TRI	SIN W21	T	7.0	75A	8k	15A	10.k	2k			3A			20.0	50			40.0	34.0	25		
GU10B	TRI	SIN A21	T	7.0	75A	6k	15A	7.k	2k			2500			20.0	50			40.0	34.0	25		
MO-10	TRI	SIN		16.5	52A			10A	10.k	10k					7.0	18							
GI-11B	TRI	SIN C8	H	12.6	815	2k	1A	8.0	400			15			10.0			11.0	2.6	3G			
GU11A	TRI	SIN W27	W	12.7	240A	10k	20A	20.k	5k			3A			20.0	55			55.0	45.0	25		
GU11B	TRI	SIN C8	H	12.6	815	2k	1A	80.0	400			15			10.0			11.0	2.6	<3G			
GI-12B	TRI	SIN C8	H	12.6	815	2k	1A	80.0	400			15			10.0			11.0	2.6	3G			
GU12A	TRI	SIN W25	W	12.6	315A	10k	30A	20.k	4k			3A			23.0	20			35.0	24.0	50		
G-13	TRI	SIN T11	H	6.3	1100	2k		1.0				16			2.2	16			2.6	1.1	4BB		
GI-13	TRI	SIN C9	H	12.6	650	800	<4A	80.0															
GI-13B	TRI	SIN C8	H	12.6	650	800		80.0															
GM13	TET	SIN T34	H	26.0	4750	28k	45A	80.0	28k														
GU13	BEA	SIN T20	T	10.0	5A	2k		1.h	2k	400	35	70			4.0			16.2	14.0	30	P13		
GI-14B	TRI	SIN		12.6	3400	21k		5.h	2k			250			35.0								
GS-15B	TET	SIN C12	H	6.3	2300			h1.6	13h	300		240			16.0			7.0	2.0	3G			
GU15	BEA	SIN F12	F	4.4	680	400	85	15.0	220	200	14	50	7.5	4.7				10.5	12.5	60	P5S		
GI-16B	TET	SIN A60	W	8.3	115A	8k		h8.0															
GU16B	TRI	SIN A23	W	13.5	200A	8k	15A	10.k	5k			1500			25.0	47			55.0	42.0	25		
G-17B	TRI	SIN C11	H	12.6	2A	9k		3.0	1k			150			22.0			11.3	4.8				
GI-17	TRI	SIN A16	H	6.3	750	8k		1.h	2k			10A			45.0	15		11.0	8.0	500			
GU-17	BEA	TWN T7	H	6.3	800	400	100	6.0	300	200	16	20	6.0	2.8				6.5	2.7	250	PD7		
GI-18B	TRI	SIN A50	T	12.5	190A	16k	150A	6.k	10k			1A			25.0	45			75.0	50.0	<1		
GU-18	TET	TWN T13	H	6.3	1200	600	130	20.0	250	200		35	6.0	1.5				7.0	2.6	600	PD8		

## Group III - POWER TUBES - Continued

Type No.	Kind	Type	Bulb	Use	Cathode	E <sub>f</sub> V	I <sub>r</sub> mA	Maximum			Typical							Capacity		f <sub>max</sub> MHz	Base No.	
								E <sub>b</sub> V	I <sub>b</sub> mA	P <sub>p</sub> W	E <sub>b</sub> V	E <sub>k<sub>2</sub></sub> V	E <sub>k<sub>1</sub></sub> V	I <sub>b</sub> mA	I <sub>k<sub>2</sub></sub> mA	Sm mmho	μ	R <sub>p</sub> Ω	I <sub>n</sub> pF	Out pF		
GI-19B	TRI	SIN	W33	H	7.3	20A	14k	100A	1.k	1k				500		20.0			50.0	12.0	150	
GU-19	BEA	TWN	T16	H	6.3	2000	750	280	40.0	350	250	17	40	8.0	4.5				10.0	3.5	500	
GK20	TRI	SIN			5.6	850		200	20.0	750						1.7	53				PD8	
M020	TRI	SIN			22.0	61A		10A	20.k	10k						7.0	13					
GI-21B	TRI	SIN	C8	H	12.6	900	800	<4A	h1.1	600				75		26.0					3G	
GU21B	TRI	SIN	A30	T	8.3	150A	9k	30A	10.k	9k				3700		30.0	48		55.0	45.0	26	
GI-22	TRI	SIN	C8	H	6.3	640		<2A	10.0	200				30		18.0					6G	
GU22A	TRI	SIN	W25	T	8.3	150A	10k	30A	20.k	10k				2730		27.0	48		55.0	45.0	26	
GU23A	TRI	SIN	W44	T	12.0	210A	11k	60A	60.k	5k				7900		49.5	49		h1.0	65.0	26	
GU-23B	TRI	SIN	A	W	12.0	210A	11k		50.k						42.0	55					26	
GI-24A	TRI	SIN	W30	W	6.3	425A	27k	250A	25.k	4k				150A		40.0					200	
GU24A					3.3	<2kA	6k		25.k												273	
GI-25	TRI	SIN	C8	H	6.3	1145	<2k		12.0	250						24.0					5G	
GU25B	TRI	SIN	W30	T	8.3	150A	12k		12.k						30.0	48					26	
GU26A	TRI	SIN	W	H	30.0	17A	6k		10.k						20.0						330	
GU26B	TRI	SIN		T	12.0	210A	12k	60A	50.k													
GU27A	TET	SIN	W13	T	7.5	25A	4k	5A	2.k	2k	1k			300		6.0	16		25.0	17.0	110	
GU27B	TET	SIN	A24	T	7.5	25A	3k	5A	8.h	3k	1k			300		6.0	16		21.0	13.0	110	
GU-28A	TET	SIN	W20	T	6.3	98A	10k	98A	8.k	3k	850					16.0	9				24	
GU28B	TET	SIN	A	T	6.3	98A	10k		10.k	3k	2k					16.0					30	
M28	TRI	SIN			11.0	6400			h1.5	1k				375		2.4	11	<5k				
G29	TRI	SIN			16.0	10A		1200	4.h	10k				1200		3.2	250					
GU29	*	BEA	TWN	T16	H	6.3	2250	750	250	40.0	600	200	70	150	30.0	8.0		15.0	7.0	200	7BP	
GI-30	BEA	TWN	T16	H	6.3	2250	5k	9A	15.0	250				58		8.0			15.0	7.0	7BP	
GMI-30	TRI	SIN	G44	T	8.2	17A	27k	15A	3.h	2k				100		5.8		9.5	2.0			
GU30A	TRI	SIN	W	T	10.5	220A	7k	50A	60.k						38.0	28				100		
GU31	TET	SIN			6.3				450	200												
G32	TRI	SIN			3.2	3500			15.0	800				60		.8	18	22k		2.4		
GU32	BEA	TWN	T14	H	6.3	1600	750		15.0	250	130	10	30	5.5	3.5			7.8	3.8	200	BT7	
GU33B	TET	SIN		H	6.3	5A	1k		h1.5	15h	400				20.0					500		
GU34B	TET	SIN	T20	H	12.6	4A	4k		5.h	2k	600					28.0					250	
GU-35B	TET	SIN	A	W	6.3	65A	5k		k3.5	5k	800				200		24.0	20				250
G36	TRI	SIN			5.6	860			20.0	600				200		1.8	60	35k				
GU-36B	TET	SIN	A	W	8.3	100A	6k		14.k	6k	1k					80.0					250	
GU-37B	TRI	SIN	A	W	3.4	110A	3k		k3.5							25.0	35				330	
GU-39A	TET	SIN	W	W	6.3	98A	10k		8.k		2k					22.0					100	
GU-39B	TET	SIN	A	W	6.3	98A	10k		6.k		2k					22.0					100	
GU39P	TET	SIN	V						15.k												30	
M39	TRI	SIN			11.0	3500			30.0	1k				200		1.4	10	7k				
GU-40B	TET	SIN	A	T	6.3	33A	45h		2.k	2k	900					18.0					250	
GU43B	TET	SIN		H	12.6	6600	33h	3200	1.k	1k	350	25	1000		45			85	14	100		
G46	TRI	SIN			11.0	4100			250	80.0	1k					2.0	55				250	
G47	TRI	SIN			11.5	3800			215	h1.5	3k					1.4	70					
GU50	*	PND	SIN	F12	H	12.6	655	1k	230	40.0	1k	300	80	120	10.0	5.0		14.0	9.2	120	P9S	
M50	TRI	SIN			11.0	6300			270	50.0	1k					1.4	10					
GM51A	TRI	SIN	W19	W	22.0	102A	12k	10A	15.k	5k				2A	10.0	.7					12	
M53	TRI	SIN			11.0	6300			h1.5	3k				375		1.4	11	7k				
GM57	TRI	SIN			4.0	2100				750						5.0	9		8.5	3.5		
M57	TRI	SIN			16.0	10A			4.h	10k				1200		2.9	52	18k				
GM60	TRI	SIN	T32	W	17.0	8A	10k	550	6.h	1k				100	2.2	1.6						
G61	TRI	SIN			16.5	52A			11A	10.k							47					
GU61P	TET	SIN	V							30.k											70	
G62	TRI	SIN			16.5	51A			10.k					10A		7.0	47	7k			85	
GU62P	TRI	SIN	V							60.k												
G65	TRI	SIN			5.2	1300			12.0					60		1.0	60	60k				
GU66P	TRI	SIN	V							1h.k											30	
G68	TRI	SIN			17.0	18A			1.k	10k				2A		5.0	180	36k				
GI-70B	TRI	SIN	C11	H	12.6	2100	9k	20A		1k				150		22.0			11.4	4.9	3G	
GM-70	TRI	SIN	T21	T	20.0	3A	1k	800	1.h	600				200		6.0	7		8.0	12.0		
GM-70B	TRI	SIN	T21	T	20.0	3A	1k	800	1.h	600				200		6.0	7		8.0	12.0	IF	
GK71	PND	SIN	T21	T	20.0	3A	1k		h1.2	600	400			200	62.0	4.2			18.0	17.0	20 P12	
GU72	PND	SIN	T25	T	20.0	3A	1k	900	h1.5	750	400			150		4.2			18.0	17.0	40 P14	
M74	TRI	SIN								450						.1	63					
GI-76B	TRI	SIN	C		12.6	2100	9k			1k				150		22.0			11.3		3G	
GU80	PND	SIN	T30	T	12.6	10A	3k		4.h	2k	600	140		200		5.5			28.5	22.5	50 P6S	

## Group III—POWER TUBES—Continued

Type No.	Kind	Type	Bulb	Use	Cathode	E <sub>t</sub> V	I <sub>t</sub> mA	Maximum			Typical						Capacity		f <sub>max</sub> MHz	Base No.		
								E <sub>b</sub> V	I <sub>b</sub> mA	P <sub>p</sub> W	E <sub>b</sub> V	E <sub>g<sub>2</sub></sub> V	E <sub>g<sub>1</sub></sub> V	I <sub>b</sub> mA	I <sub>g<sub>2</sub></sub> mA	S <sub>m</sub> mmho	μ	R <sub>p</sub> Ω	In pF	Out pF		
M80	TRI SIN				F	11.0	3500	260	80.0	1k						1.4	10					
GU81	PND SIN	T38			H	12.6	10A	3k	h4.5	2k	600					5.5			50			
GMI-83	TET SIN	T20			H	25.0	2000	20k	15A	65.0	15k	1k						50.0	5.0			
G88	TRI SIN					6.0	4A			600						.9	15	17k	TS55			
GMI-89	TET SIN	T32			H	25.0	4000	25k	20A	1.h	25k	1k				22.0		60.0	12.0			
GU89A	TRI SIN	W24			W	11.0	124A	8k	9A	5.k	1k					3A	10.0	20	23.3	17.5 100		
GU89B	TRI SIN	A24			W	11.0	124A	8k	9A	5.k	1k					3A	10.0	20	23.3	17.5 100		
M89	TRI SIN					11.0	6300			h4.5	1k					5.0	9	1800				
GMI-90	TE <sup>1</sup> SIN	T46			H	25.0	7800	33k	40A	1.h	33k					4.0		1h	16.0			
GS90B	TRI SIN	C12			H	12.6	1100	2k	4500	15.0	1k					175	19.5		3G			
G91	TRI SIN					11.0	6200			600						400	.9	10	5k	P10		
GKE100	TET SIN	T20			H	11.0	2A	<2k	500	1.h	15k	250	2	500	6.5	2.8	225		15.5	20	TE4	
GM100	TRI SIN	T60			W	17.0	18A	5k	1600	1.k	1k					600	6.5	18		IF		
G120	TRI SIN					16.5	52A			11A	5.k	4k				700		14				
GI-150	TRI SIN	C8			H	12.6	815	800	<5A	20.0	400					15	10.0			4G		
GKE150	TET SIN				H	11.0	6300			420	1.h	3k	500				2.0	350			TE4	
GU150	TRI SIN					11.0	10A			710	h1.5	2k					2.2	17			85	
M150	TRI SIN					11.0	6300			420	h1.5	3k					1.4	11				
G256	TRI SIN									30.0	450									500		
GKE300	TET SIN				H	17.0	10A			750	4.h	3k	500				3.9	400				
M400	TRI SIN					17.0	18A			2300	4.h	1k					6.0	10				
M401	TRI SIN					16.0	10A			1200	4.h	10k					2.9	52				
G410	TRI SIN					10.0	450				10.0	400					4.0	23	2.9	2.7		
G411	PND SIN					10.0	600	400		20.0	400	200	55	112	5.0	5.5		11.0	7.0			
G412	PND SIN					20.0	220	750		20.0	750	250	40	57	11.0	3.0		6.5	6.0		P10	
G413	PND SIN					20.0	500	750		40.0	750	250	55	90	15.0	4.5		11.0	10.5		P10	
G414	PND SIN					20.0	1400	1k		1.h	1k	250	50	65	10.0	6.0		21.0	19.0		P15	
G417	TRI SIN					5.0	1150			20.0	400					1.0	19	1.9	1.0	TS9		
G418	PND SIN				F	5.0	900	400		20.0	400	225	50	85	20.0	4.0		12.5	10.0			
G422	PND SIN					20.0	3250	1k		1.h	750	300	60	180	40.0	3.0		15.5	15.5			
G424	PND SIN					20.0	4600	1k		2.h	1k	400	140	300	80.0	5.0		27.0	33.0			
G425	PND SIN					20.0	22A	4k		h7.5	4k	1k	100	350	70.0	4.0			21.0	18.0		
G430	TRI SIN					22.0	51A	12k		10.k							45					
G431	TRI SIN	W16			W	22.0	102A	15k		20.k	5k					3A	12.0	50		25.0	1.5 25	
G431A	TRI SIN	W				22.0	102A	15k		12A	20.k	5k					3A	12.0	50		25.0	1.5 25
G433	TRI SIN	T46			W	33.0	210A	15k		60.k	6k					5A	32.0	45		80.0	67.0 20	
G433A	TRI SIN					33.0	210A	15k		50A	60.k	6k					5A	32.0	45		80.0	6.0 20
M435	TRI SIN					20.0	24A			1.k	5k						6.0	9				
G441	TRI SIN					11.0	51A			k2.5	7k						40					
G-450	TRI SIN	W38			W	16.0	51A	10k		10.k	5k					4A	7.0	44			20	
G-452	TRI SIN	W40				22.0	102A	15k		20.k	5k					4A	12.5	40			25	
G-454	TRI SIN	W38				22.5	71A	10k		20.k	5k					4A	10.0	45			20	
G472	TRI SIN					2.5	14A			1.h	k	18k					2.5	140				
G484	TRI SIN	A30			W	22.0	60A	9k		5.k	3k		A				9			23.0	320	
GK750	TRI SIN					5.0	10A			h2.5	3k						6.6	37	5.8	2.9	40	
M800	TRI SIN					17.0	8A			800	8.h	10k					2.2	16				
G807	BEA SIN	S16			H	6.3	900	750		120	30.0	600	275	90	100	6.5	6.0		12.0	7.0	60 5AW	
G811	TRI SIN					6.3	400				50.0	1k						160		5.6	5.5 100 T1S	
G837	PND SIN					12.6	700			200	500	200	85				30.0	3.4		16.0	10.0	
G889	TRI SIN					11.0	125A				5.k	7k						21		23.3	3.0 100	
G891	TRI SIN					11.0	60A			k3.5	8k							8				
GKE1000	TET SIN					17.0	18A			h7.5	4k	500					3.0	150		22.0	0.2	
G1625	BEA SIN					12.6	450			25.0	600						6.0		11.0	7.0		
GK2000	TRI SIN					16.0	51A			1A	10.k	8k					7.0					
GK3000	TRI SIN					17.0	18A			1600	1.k	10k					5.2	200				
GI-3100	TRI SIN					6.3	1100			10.0	2k						2.2	16		2.6	1.1 300	
G40011	TRI SIN					15.0	70A			3.h	4k						4.0	150		5.3	1.2	

**Group IV – RECTIFIER TUBES**

Type No.	Kind	Type	Bulb	Gas	Cathode	E <sub>f</sub> V	I <sub>f</sub> mA	Maximum		Typical	
								E <sub>b</sub> V	I <sub>b</sub> mA	E <sub>b</sub> V	I <sub>b</sub> mA
EVU-25/1.0	IGN	T1H	HG	C				12h	400A		
EVU-50/1.0	TRI	IGN	T33	HG	C			12h	900A	50A	
EVU-100/1.0	IGN	T2H	HG	C				12h	2kA		
GG-1-0.3/8	DIO	SIN	T14	AR	H	6.3	4A	8k	1A	30	<1
GG1-0.5/5	DIO	SIN	S21	KX	F	2.5	8500	5k	1500	500	
GG-1-0.5/20	DIO	SIN	T21	AR	H	6.3	5A	20k	3500	30	<1
GG-1-1/22	DIO	SIN	T30	GS	H	6.3	14A	22k	1A	30	1
GG-1-2/5	DIO	SIN	T22	XE	H	6.3	6500	9k	6500	16	2
GG-1-2/16	DIO	SIN	T30	AR	H	6.3	16A	16k	7A	30	2
GR1-02/15	DIO	SIN	S16	HG	F	5.0	3300	<2k	800	235	
GR-1-0.3/8.5	DIO	SIN	S21	AR	F	6.3	4A	8k	1A	30	<1
GR-1-25/15	DWD	SIN		GS	F	5.0	3A	<2k	800	500	125
GRI-0.25/1.5	DWD	SIN	S17		F	5.0	3300	16h	800	235	
I-1/25/0.8	TRI	IGN	T19	HG	C			800	25A	10A	
I-1-50/20	TRI	IGN	T47	HG	C			20k		50A	
I-1-70/0.8	TRI	IGN	W48	HG	C			800		70A	
I-1-100/1.5	TRI	IGN	W52	HG	C			15h	3hA	1hA	
I-1-140/0.8	TRI	IGN	W56	HG	C			800		1hA	
I-1-350/0.8	TRI	IGN	W70	HG	C			800		3hA	
I-2-50/1.5	TRI	IGN	W52	HG	C			15h	1hA	50A	
I2-70/0.8	*	TRI	IGN	W78	HG	C		800	10hA	220	70A
I2-140/0.8	*	TRI	IGN	W1h	HG	C		800	16hA	220	140A
I2-200/1.5	*	TET	IGN	W1h	HG	C		15h	10kA		200A
I2-350/0.8	*	TRI	IGN	W1h	HG	C		800	32hA	220	350A
I-20/1.5	TRI	IGN	W25	HG	C			15h	60A		20A
I-20/1500	DIO	IGN	W19	HG	C			15h	1kA		20A
I-50/1.5	TRI	IGN	W35	HG	C			15h	1hA		50A
I-50/1500	DIO	IGN	W26	HG	C			15h	2kA		50A
I-100/1.0	TRI	IGN	W70	HG	C			1k	6hA		1hA
I-100/5.0	TRI	IGN	123	HG	C			5k	3hA		1hA
I-100/1000	DIO	IGN	W33	HG	C			1k	2kA		100A
I-100/5000	DIO	IGN	W33	HG	C			5k	300A		100A
I-150/1.0	TRI	IGN	W52	HG	C			1k	1hA		1hA
I-200/1.5	TRI	IGN	W65	HG	C			15h	6hA		2hA
IWS200/2		IGN	W	HG	C			<3k	450A	16	150
T-409	DIO	IGN	G14	HG	C			3k	200A		
T-410	DIO	IGN	G17	HG	C			14k	20A		
T-411	DIO	IGN	G17	HG	C			19k	100A		
V1-00313	DIO	SIN	T10	F		2.5	4600	13k	3000	30	
V1-02/20	DIO	SIN	T13	VC	F	2.5	3200	20k	100	20	
V1-03/13	DIO	SIN	T9	VC	F	2.5	4650	13k	3A	30	
V1-05/70	DIO	SIN	T32	VC	F	5.0	32A	70k	8A	50	
V1-06/30	DIO	SIN						30k		60	
V1-1/2.5	DIO	SIN	W12	VC	F	15.0	12A	25h	1000		
V1-1/30	DIO	SIN	T18	VC	F	5.0	5A	30k	600	100	
V1-1/40	DIO	SIN	T17	VC	F	5.0	6A	40k	750	100	
V1-2/40	DIO	SIN						40k		200	
V1-3/16	DIO	SIN	A27	VC	H	6.3	10A	16k	1500	300	
V1-3/70	DIO	SIN						70k		300	
V1-4/40	DIO	SIN	G70	VC		7.5	48A	44k	2A	450	
V1-15/55	DIO	SIN	T31	VC	F	6.3	7500	55k	700	180	
VG1/8500	DIO	SIN		GS	F	2.5	5500	8k	1A	6k	300
VG-129	DIO	SIN	S20	HG	F	2.5	9A	7k	1500	500	
VG-161	DIO	SIN		HG	F	2.5	6A	<3k	1A	<2k	300
VG-163	DIO	SIN	G70	HG	F	5.0	32A	15k	50A	16A	

**Group IV – RECTIFIER TUBES – Continued**

Type No.	Kind	Type	Bulb	Gas	Cathode	E <sub>f</sub> V	I <sub>f</sub> mA	Maximum		Typical	
								E <sub>b</sub> V	I <sub>b</sub> mA	E <sub>b</sub> V	I <sub>b</sub> mA
VG-176	DIO	SIN	G16	M		2.5	11A	150	9A	20	
VG-236	DIO	SIN	G38	HG F		2.5	20A	7k	4A	1300	
VG-237	DIO	SIN	G32	F		5.0	22A	10k	10A	3500	
VG-252	DIO	SIN				2.5		300	30A	15	
VI-1-5/20	DIO	SIN	T16	VC H		6.3	29A	20k	5000		
VI-1-5/30	DIO	SIN	A16	VC W		6.3	95A	30k	2000		
VI-1-18/32	DIO	SIN	A23	VC H		17.0	3700	40k	20A	500	
VI-1-27/35	DIO	SIN	A40	VC H		9.0	145A	35k	70A		
VI-1-30/25	DIO	SIN				10.0	6A	25k	30A	30	
VI-1-70/32	DIO	SIN					32k	70A			
VI-1-10050	DIO	SIN						50k	100A		
VI-2-27/35	DIO	SIN	W20	VC H		9.0	145A	35k	70A		
VI-2-70/32	DIO	SIN	A21	VC H		12.6	5300	32k	70A	70	
VI-2-100/50	DIO	SIN	A30	VC H		12.6	36A	50k	100A		
VO-1	DIO	SIN			H	4.0	3200			850	40
VO-125	DIO	SIN			F	4.0	700			250	60
VO-188	DWD	SIN			F	4.0	2A			500	155
VO-196	DIO	SIN			H	4.0	3A			750	250
VO-197	DWD	SIN			F	4.0	5A			250	300
VO-202	DWD	SIN			F	4.0	700			250	60
VO-230	DIO	SIN			F	4.0	700			350	50
VO-239	DIO	SIN			F	4.0	2A			850	180
VO-360	DIO	SIN			F	4.0	1A			500	100
VU-111D	DIO	SIN	S		F	4.0	1500	12k	400	160	80
2V6	DIO	ARC		HG C			400		6A		
2V12	DIO	ARC		HG C				1k	1A		
2V20	DIO	ARC		HG C				750	20A		
2VN12	DIO	ARC		HG C				450	12A		

### Group V – VOLTAGE REGULATOR TUBES

Type No.	Kind	Gas		Cath Mat'l	Volt. range		Cur. range		Dimen		Base No.
		Kind	Pres mm		Max V	Min V	Max mA	Min mA	Dia mm	Lth mm	
SG1P	* REG AHE				190	145	30	5	22	65	
SG2P	REG AKN				150	104	30	5	22	65	
SG2S	REG NA	30			110	70	40	5	32	75	
SG3P	REG AHE				170	144	40	5	22	65	
SG3S	REG AHN	30			133	105	40	5	32	75	
SG4S	REG AHE	30	NI		180	145	30	5	32	75	
SG5B	REG AHE				190	142	10	5	10	36	
SG7S	REG				480	390	0.1	0.003			
SG8S	REG				970	880	0.1	0.003	10		
SG9S	REG				13h	12h	0.1	0.01	10		
SG10S	REG NK				150	86	15	4	32	40	
SG13P	REG AHN	55	NI		180	143	30	5	19	55	
SG14P	REG AHN				125	115	40	20	22	75	
SG15P	REG AHN	54	MO		150	104	30	5	19	55	
SG15P1	REG				160	103	30	5	19	60	
SG15P2	* REG				160	102	30	5	19	65	
SG16P	REG AHE	40	MO		130	80	30	5	19	55	
SG17S	REG NEH				1350	850	60	10	38	189	
SG18S	REG NEH				1500	950	60	10	38	189	
SG19S	REG NEH				1650	1050	60	10	38	189	
SG20G	REG				135	85	15	4	10	45	
SG201S	REG NK	50	MO		150	86	15	4	32	40	
SG202B	REG NA	35	MO		140	81	5	1.5	10	40	
SG203K	REG				150	79	10	1	12	20	
SG226	REG NE				95	70	40	8	50	130	
SG227	REG NE				95	70	60	10	65	135	
SG301S	REG HY	16	NI		439	380	0.1	0.003	12	55	
SG302S	REG HY	82	NI		970	880	0.1	0.003	12	55	
SG303S	REG HY	143	NI		1350	1220	0.1	0.01	12	55	
SG304S	REG HY				4200	3800	1	0.05	25	129	
SG305K	REG				10k	9k	1.5	0.05	33	180	
SG306K	REG				26k	24k	1.5	0.05	48	245	
SG307K	REG HY				157h	142h	1.5	0.05	33	181	
SG308K	REG HY				21k	19k	1.0	0.05	33	181	
SG309K	REG HY				315h	285h	1.5	0.05	49	251	
SG311S	REG				430	400	1	0.05		86	

### Group VI – CURRENT REGULATOR TUBES

Type No.	Kind	Type	Bulb	Volt range		Cur. range		Base No.
				Max V	Min V	Max mA	Min mA	
024B12-18	BAL SIN	T10		18	12	264	248	
03B17-35	BAL SIN	T14		35	17	325	275	8ES
03B65-135	BAL SIN	T14		135	65	325	275	8ES
0425B55-12	BAL SIN			12	<6	460	390	8ES
085B55-12	BAL SIN	T9		12	<6	920	780	8ES
1B5-9	BAL SIN	T14		9	5	1080	960	DS7
1B10-17	BAL SIN	T14		17	10	1040	960	DS7
ST2S	BAL TWN			17	6	2100	2000	DS6
ST3P	BAL SIN	T6		6	4	880	720	8ES

## Group VII—THYRATRONS

Type No.	Kind	Bulb			Gas	Cathode			Maximum anode				Avg	Maximum grid					Base No.		
		Shape	Lth	Diam		Kind	E <sub>F</sub>	I <sub>f</sub>	Warm-up min	PIV	E <sub>F</sub>	Firing	Tube drop	Pulse	I <sub>b</sub>	I <sub>b</sub>	Bias	Input res kΩ	Pulse		
		mm	mm	mm	V	mA	s	V	V	V	V	V	V	mA	mA	V	V	Ign V	Time μs	t <sub>r</sub> ns	pps 10 <sup>3</sup>
TG1B	TRI T	36	10	KX H	6.3	225	10	240	240	30	20	120	20	100	1M	100	30	10			
TG1P	TRI T	67	19	HE H	6.3	1200		4k		80	34										
TG1-0.2/0.5	TET T	38	19	XE H	6.3	165	10	500	500	30	16	120	20	15	10M	15				8T1	
TG1-0.1/0.3	TRI T	97	35	AR H	6.3	660	30	300	300		20	300	75	80	500	80				20	8T3
TG1-0.1/1.3	TET T	105	33	KX H	6.3	600	10	1300	650	25	11	500	100	100	10M	100	5	60	10	8T2	
TG1-0.5/12	TRI T	225	62	AR H	6.3	5A	120	12k		500	27	3A	500	70	100						
TG1-1.0/0.8	TET T	130	61	KX H	6.3	300	60	800	420	50	15	6A	1A	15	1M	15				10T	
TG1-1.5/2	TRI T	160	68	XE H	6.3	7500		2k			16	5A	15h	15							
TG1-1.6/1.3	TRI T	201	66	XE H	5.0	6A	90	1300	1k		20	10A	<2A	100	100	100					
TG1-2/8	TRI T	180	70	XE H	5.0	12A				140	20	8A									
TG1-2.5/4	TRI S	255	85	KX F	5.0	12A	60	4000	3k	140	20	8A	<3A	100	100	100				4T2	
TG1-2.5/10	TET T	285	90	XE H	5.0	15A		10k			16	8A	25h	50							
TG1-3.2/1.3	TRI	222	66	XE H	5.0	8A	90	1300	1k		20	20A	3A	100	100	100					
TG1-5-3	TRI T	350	110	KX F	5.0	21A		3k			22	15A	5A	20							
TG1-6.4/1.3	TRI	242	66	XE H	5.0	13A	120	1300	1k		20	40A	6A	100	100	100					
TG1-12.5/1.3	TRI T	292	90	XE H	5.0	16A		13h			20	80A	12A	20							
TGI-1B	TRI T	40	10	XE H	3.1	1500		500		30		20A		6	1M						
TGI-1-3/1	TET T	67	19	AR H	6.3	1100	90	1000	1k		35	3A	6	40		12	300	5	T22		
TGI-1-5/1.1	TRI T	67	19	HY H	6.3	2000		1100		70		5A	10	100					15	T23	
TGI-1-10/1	TRI T	80	32	HY H	6.3	2600	60	1000	2k		20A	50	100	15		6	150	40			
TGI-1-35/3	TRI T	135	38	HY H	6.3	2500	180	1500	3k		140	35A	45	100		6	500				
TGI-1-50/5	TRI T	160	45	HY H	6.3	3600	180	5k	5k		160	50A	50			<1		4			
TGI-1-90/8	TRI T		60	HY H	6.3	7000		8k				90A	100			<1		2			
TGI-1-130/8	TRI T	180	64	HY H	6.3	500		3k				1hA	150			<1		2			
TGI-1-130/10	TRI T	205	62	HY H	6.3	5A	240	10k	10k		150	1hA	250						4		
TGI-1/260/12	TRI T	285	90	HY H	6.3	12A	180	12k				3hA	400		200			<5			
TGI-1-325/16	TRI T	230	66	HY H	6.3	8500		16k			150	3hA	200		200	<1		1			
TGI-1-400/3.5	TRI S	280	85	HY H	5.0	18A	180	3500	1k			4hA	300		2		20				
TGI-1-400/16	TRI T	268	78	HY H	6.3	10A		16k			170	4hA	500		200			<1			
TGI-1/500/16	TRI T	138	70	HY H	6.3	15A	300	16k				5hA	500		400	10		1			
TGI-1/500/20	TRI T	300	110	H	6.3	19A	300	20k				5hA	51A		400	10		5			
TGI-1-700/25	TRI T	450	135	HY H	6.3	20A		20k			200	7hA	1A		700	<1		<1			
TGII-1000/25	TRI T	154	110	H	6.3	20A	300	25k			150	1hA	51A		500	50		<1			
TGII-2000/35	TRI T	420	172	H	6.3	55A	300	35k				2kA	3A		1k	10		<1			
TGII-2500/35	TRI T	600	215	H	6.3	55A	720	35k				2kA	25h		1k	10		<1			
TKH-1	TRI	85	34	NE C						150		60	100	30							
TKH1B	TRI			C						160		85	30	10	10M	85					
TKHI-1G	PND T	45	13	AR C						275	205		60A	25A	100						
TR1-2.5/3	TRI T	120	66	HG H	5.0	7A	300	3k			15	15A	25h								
TR1-5/2	TRI T	275	90	HG H	5.0	15A		2k			15	15A	500	24							
TR1-6/3	TRI T	160	66	HG H	5.0	13A	300	3k			15	40A	6A								
TR1-6/15	TRI T	350	90	HG H	5.0	23A	900	15k			18	20A	6A	100	5						
TR1-15/3	TRI T	250	90	HG H	5.0	22A	480	3k			15	90A	15A	100							
TR1-15/15	TRI T	490	95	HG H	5.0	40A		15k			20	47A	15A	100							
TR1-15/20	TRI T	440	108	HG H	5.0	20A	900	20k			18	45A	15A	150	5						
TR1-40/15	TRI G	700	245	HG H	5.0	68A	3k	15k			20	1hA	40A	100	5						
TR1-85/15	TRI T	760	270	HG H	5.0	130A		15k			20	3hA	85A	100							
TR1-130/15	TRI T		220	HG H	5.0	130A		15k				3hA	85A								
TG2-0.1/0.1	TRI T	105	40	XE H	6.3	600	10	100	100		11	300	100	2	5M						
TG2-0.5/12	TRI T	225	62	HY H	6.3	7A		12k			70	<4A	500	100							
TG2.5/5	TRI			F	5.0	13A		3k				8A	2A	18							
TGI-2-260/12	TRI T	285	90	HY H	6.3	12A		12k				400			200			<5			
TGI-2-325/16	TRI			HY F	6.3	8500		16k				3hA	200								
TGI-2-400/35	TRI			HY F	5.0	18A		3500				4hA	300								
TKH-2	TRI	57	19	HE C						2800	350	80	100	12	8M			1	T24		
TG3-0.1/1.3	TET T	57	19	KX H	6.3	600		1300	650	30	11	500	100	100	10M	100	10	60	10	7EM	
TG3-2.5/10	TRI T	290	90	KX H	5.0	20A		10k		25	8A	<3A	30								
TKH3B	TET T	40	10	NA C						190	110		10	2	85	20M	67	15	1hμ	1	
LP-4	* COM	29	40	H	4.0	270		150				1		70							
TKH4B	TET	40	10	NA C						225	180	115	7	3	99M	92	10				

## Group VII—THYRATRONS—Continued

Type No.	Kind	Bulb			Gas	Cathode			Maximum anode				Avg	Maximum grid				Base No.		
		Shape	Lth mm	Diam mm		Kind	E <sub>t</sub> V	I <sub>t</sub> mA	Warm-up min s	PIV V	E <sub>F</sub> V	Firing V	Tube drop V	Pulse I <sub>b</sub> mA	I <sub>b</sub> mA	Bias V	Input res kΩ	Pulse		
																Ign V	Time μs	t <sub>r</sub> ns	pps 10 <sup>3</sup>	
LP-5	* COM	29	40	H	4.0	270			100					1	4	40				
TKH-5A	TRI	25	7	NA C						270		110	<1	<1						
TKH-5B	TRI T	25	7	NE C						270	225		<2	<1	150					
LP-6	* COM	108	58	H	6.3	1600			275					1	8	350				
TKH-6G	HEX T	50	13	C						285	130			1			100	20		
LP-7	* COM	62	35	H	4.0	270			25						<1	13				
TKH-7G	PND T	50	13	C					285					2	1	80	200			
TKH-8G	HEX T	40	13	C						285	130			1		80	10			
TKH-9G	HPT T	50	13	C					285					2	1	40	200			
TKH-11G	TET T	60	13	C						215					10	35	7			
TKH-12G	HPT T	50	13	C					275					1K	10	50				
TKH-13	PND T	50	13	C					220					5	1	100	5			
MTKH90	TRI	30	12	NE C						160		50	20			20M	85			
TGI-200	TRI S	280	85	KX F	5.0	15A	60	3500			20	2MA			18	200				
TG212M	TRI T	105	35	AR H	4.0	950	30	300	300			27	500	125	7	100				
TG-213	TRI			F	2.5	9A								1A	500	15				
TG-235	TRI			F	5.0	12A								6A	1A	16				

## Group VIII—CATHODE RAY TUBES

Type No.	Meth of		Dimensions		Use	Cathode	Typical						Maximum		Screen		Defl angle deg	Base No.		
	Focus	Defl	Diam cm	Lth cm			Heater		E <sub>FOC</sub>	E <sub>A<sub>1</sub></sub>	E <sub>A<sub>2</sub></sub>	E <sub>A<sub>3</sub></sub>	E <sub>A<sub>4</sub></sub>	E <sub>C<sub>1</sub></sub>	I <sub>K</sub>	Defl sens	Col	Pers		
							V	m.A	V	kV	kV	kV	kV	V	μA	mm/V				
LI-1			4	17	IC H	6.3 510	400	1.2							50				F8	
LI-3	ELM	ELM	1		IC H	12.6	300	650	1.0						50	250			A4	
LN-4	*	ELS ELS	17	49	ST H	6.3 550			1.5	0.2					100	6				
LI-6	ELM	ELM	2	32	IC H	12.6	300	850	1.3						50	250			A4	
LI-7	*	ELM ELM	13	32	IC H	12.6	300	850	1.3						50	250			A4	
LN-7	*	ELM ELM	9	26	ST H	12.6	300		0.6						65					
LN-8	*	ELS ELS	9	36	ST H	6.3	550		0.2	1.5					70					
LI-13	*	ELM ELM	8	39	IM H	6.3	600	285	0.4	1.5					70	150				
LI-14	ELM	ELM	3	39	IM H			270	0.6	0.9					35	150			C14	
LI-15	ELM	ELM	3	39	IM H	6.3	600	285	0.6	0.9					35	150			C14	
LI-17	*	ELM ELM	8	39	IM H	6.3	600	285	0.4	1.5					95	150				
LI-18	ELM	ELM	<2	16	VI H	6.3	450	600							80	1			B9	
LI-22	*	ELM ELM	9	30	IM H	6.3	550		1.1						120	250				
LI-23	*	ELM ELM	3	16	VI H	6.3	600		0.3	0.3					125					
LI-101	*	ELM ELM	15	31	IC H	6.3	300	800	1.2						5	350				
LI-201	*	ELM ELM	8	39	IM H	6.3	600		0.4	1.5					150					
LI-202	*	ELM ELM	8	39	IM H	6.3	600	450	0.4	1.5					150	25				
LI-203	*	ELM ELM	8	39	IM H	6.3	600		0.5						150					
LI-207	*	ELM ELM	8	39	IM H	6.3	600		0.4	1.5					10					
LI-212	*	ELM ELM	4	23	IM H	6.3	260		0.3	1.8					200					
LO-247	*	ELS ELS	11	OS	4.0	700	112	0.8							16	160	0.2	GR MD		
LO-248	ELS	ELS	11	OS	4.0	700	600	3.0							50			GR MD		
LO-249	ELS	ELS	11	OS	4.0	700	600	3.0							50			GR MD		
LI-401	ELM	ELM	34	16		6.3	450								150					
LI-407	*	ELM ELM	2	11	VI H	6.3	80								150	50	n			
LI-408	*	ELM ELM	3	13	VI H	6.3	90								130					
LI-409	*	ELM ELM	3	13	VI H	6.3	80		0.3						125	50	n			
LI-410	*	ELM ELM	4	22	VI H	6.3	630		0.7	0.4					300	160	n			
LI-412	*	ELM ELM	3	13	VI H	6.3	90		0.3	0.3					60	100	n			
LI-601	*	ELM ELM	5	20	IM					1.6					370	5	m			
LO-709A	ELS	ELS	11	OS	2.5	21	450	2.0							50			GR MD		
PIM-3			6	IC				18.0										VB		
PIM-4			13	IC				18.0										VB		
3LK1B	*	ELM ELM	3	19	TV H	6.3	500	2.0							40			WH MD		
3L01-I	*	ELS ELS	3	12	OS H	6.3	600	100	0.5						60	300	0.18	GR MD		
5L038I	*	ELS ELS	5	19	OS H	6.3	600	300	1.0						60	1m	0.11	GR MD	11L	
6LK1A	*	ELM ELM	6	27	PR H	6.3	600		25.0						65	100		BL MD		
6LK1B	*	ELM ELM	6	27	PR H	6.3	600		25.0						65	100		WH SH		
6L01I	*	ELS ELS	5	14	OS H	6.3	600	170	1.2						60	300	0.15	GR MD	14A	
7L01M	*	ELS ELS	7	19	RA H	6.3	600	167	1.4	2.8					76		0.13	PB SH	A12	
7L055I	*	ELS ELS	7	19	OS H	6.3	600	180	1.1	2.0					76	500	0.12	GR MD	A12	
8LK2B	*	ELM ELM	8	26	TV H	6.3	500		3.0						45	60		WH MD		
8LM3V	*	ELS ELM	8	21	RA H	6.3	600	300	0.4	4.0					50			WH LO	A7	
8L03I	*	ELS ELS	8	30	OS H	6.3	600	300	0.8	2.3					85		1.0	GR MD		
8L04I	*	ELS ELS	8	35	OS H	6.3	300		0.7	3.7					75	300	1.5	GR MD		
8L029I	*	ELS ELS	8	26	OS H	6.3	600	350	1.5						45	1000	0.17	GR MD	14G	
8L030I	*	ELS ELS	8	27	OS H	6.3	600	400	1.5						45	1000	0.17	GR MD	14J	
8L039V	*	ELS ELS	8	27	OS H	6.3	600	400	2.0	4.0					60		0.17	Y0 LO	14J	
9L01I	*	ELS ELS	9	35	OD H	6.3	600		1.0	2.8					60		0.45	GR MD		
10LK2B	ELM	ELM	8	32	PR H	1.5	25	h	20.0						120	200		WH MD	G8	
10LK3B	*	ELM ELM	10	30	PR H	6.3	500		25.0						50	200		WH MD		
10L02I	*	ELS ELS	10	36	OD H	6.3	350		2.0	4.0					120		0.25	GR MD		
10L043I	*	ELS ELS	10	41	OD H	6.3	600	550	2.0						60		0.20	GR MD	A25	
11LK1B	ELS	ELM	10	17	TV H	1.4	28	h	450	9.0					35	45				
11LM2G	*	ELM ELM	11	29	DT H	6.3	600		20.0						80					
11LM3G	*	ELM ELM	11	36	DT H	6.3	600		20.0						95					
13LK1B	*	ELM ELM	14	37	TV H	6.3	550		6.0						76	100		WH MD	D8	
13LK2B	*	ELM ELM	S13	31	TV H	6.3	500		4.0						55	50		WH MD	A9	
13LK3B	*	ELM ELM	13	31	TV H	6.3	500		10.0						90	40		WH MD		
13LK6B	*	ELM ELM	13	38	PR H	6.3	880		1.2	45.0					150	550		WH MD		

## Group VIII—CATHODE RAY TUBES—Continued.

Type No.	Meth of		Dimensions		Cathode	Typical						Maximum		Screen	Defl angle deg	Base No.			
	Focus	Defl	Diam	Lth		Heater		E <sub>FOC</sub>	E <sub>A1</sub>	E <sub>A2</sub>	E <sub>A3</sub>	E <sub>A4</sub>	E <sub>C1</sub>	I <sub>K</sub>	Defl sens	Col	Pers		
						cm	cm	V	mA	V	kV	kV	kV	V	μA	mm/V	deg		
13LK7B	ELM	ELM	13	39	TV H	6.3	880		1.2	45.0				150	550	WH MD			
13LK8A	*	ELS	ELM	13	43	PT H	6.3	600	500	14.0				60		BL SH			
13LM4V	*	ELM	ELM	13	29	OS H	6.3	600		0.4	12.0			50	350	YO LO		A8	
13LM6V	*	ELS	ELM	13	21	RA H	6.3	600	425		14.0			50		YO LO			
13LM7V	*	ELM	ELM	13	27	RA H	6.3	600		0.2	12.0			70		YO LO			
13LM31M	ELM	ELM	11	28	OS H	6.3	600	250	6.0					70		YO LO		A8	
13LM56I	*	ELM	ELM	13	29	RA H	6.3	600		0.2	4.0			50	350	GR MD		A8	
13LM57	ELM	ELM	11	28	OS H	6.3	600	250		6.0				71		GR LO		A8	
13LM58K	ELS	ELM	13	29	OS H	6.3	600		0.7	4.0				50		RD LO		A8	
13LN2	*	ELS	ELS	13	45	ST H	6.3	550		0.2	3.0								
13L01B	ELS	ELS	13			2.5	2A	425	2.0					40		GR MD			
13L02B	ELS	ELS	13			6.3	600	500	1.8	3.0				50		GR MD		14J	
13L03I	*	ELS	ELS	14	43	OS H	6.3	600	410	1.5	3.0			50	1000	0.45	GR MD		A14
13L04I	ELS	ELS	14	43	OS H	6.3	600	425	1.5	1.5	5.0	8.0	50		0.25	GR MD		A14	
13L05P	ELS	ELS	13			6.3	600	500	1.8	3.0				50		YO LO		14J	
13L06I	*	ELS	ELS	13	34	OS H	6.3	600	400	1.5				45		0.38	GR MD		A8
13L07V	*	ELS	ELS	14	45	OD H	6.3	600	600	2.0	4.0	8.0		80		0.30	WH LO		
13L09I	*	ELS	ELS	14	45	OS H	6.3	600	300	1.2	4.8			40		1.0	GR MD		
13L036V	*	ELS	ELS	14	43	OS H	6.3	600	525		2.0	4.0		60	1000	0.29	WH LO		14J
13L037A	*	ELS	ELS	14	43	OS H	6.3	600	400	1.5	3.0			50	1000	0.43	BL SH		14J
13L048V	*	ELS	ELS	14	41	OD H	6.3	600	550	2.0				60		0.17	BL LO		A14
13L054A	*	ELS	ELS	14	43	OS H	6.3	600	300	1.5	3.5	6.0	8.0	60	750	0.20	BL LO		B14
13L0101M*				13	32	OS H	6.3	550	11h	3.0	6.0			140		0.15	BL SH		
13L0102M*	ELS	ELS	13	61	OS H	6.3	750	1k	4.0	15.0	40.0			300		0.15	BL MD		
13L0104A*	ELS	ELS	13	54	OS H	6.3	600	700	.4	4.0	8.0	12.0	100		0.13	BL SH		D14	
16LK1B	ELS	ELM	16	19	TV H	1.4	28h	450	9.0					40	60				
16LM1G	*	ELM	ELM	13	31	RA H	6.3	600		20.0				90				50	
16L02I	*	ELS	ELS	13	45	OD H	6.3	600	500		2.0	3.5		70		0.28	GR MD		
16L03I	*	ELS	ELS	16	35	OS H	6.3	600	450		1.5			45		0.48	GR MD		
18LK1B	ELM	ELM	17	35	TV H	2.5	21h		3.5					35		WH		D8	
18LK2B	ELM	ELM	14	42	TV H	6.3	550			15.0				60	100	WH SH		D8	
18LK3V	ELM	ELM	18			2.5	2A		3.5					60		GR MD			
18LK4B	ELM	ELM	17	34	TV H	6.3	600			6.0				60	150	WH SH		B8	
18LK5B	*	ELM	ELM	17	35	TV H	6.3	520		4.0				30	100	WH MD		B8	
18LK7B	ELM	ELM	17	35	TV H	6.3	560			4.0				35	100	WH SH		B8	
18LK9A	*	ELM	ELM	19	48	PT H	6.3	550		25.0				125	250	BL SH			
18LK11B	*	ELM	ELM	17	35	TV H	6.3	550		8.0				75	100	WH MD			
18LK12B	*	ELM	ELM	17	42	TV H	6.3	550		15.0				100	100	WH MD			
18LK13L	*	ELM	ELM	17	42	TV H	6.3	550		25.0				140	200	BL SH			
18LK14T	*	ELM	ELM	17	42	TV H	6.3	550		25.0				140	500	GR SH	40		
18LK15	ELM	ELM	17	34	TV H	6.3	550		5.0					38	100	WH MD		B8	
18LK17L*	ELM	ELM	17	42	H	6.3	550		25.0					60		BL SH			
18LM3S	*	ELS	ELM	18	29	RA H	6.3	600	425	0.4	14.0			50		YO LO			
18LM35V	*	ELM	ELM	18	35	RA H	6.3	600		0.2	4.0			50	350	WH LO		A8	
18L01A	*	ELS	ELS	18	47	OD H	6.3	600	1k	4.0	8.0			130		0.23	BL SH	A8	
18L040B	ELS	ELS	18	36	TV H	6.3	600		2.0					120		WH MD		14G	
18L047A	*	ELS	ELS	18	45	OD H	6.3	600	1k	2.0	6.0			100		0.15	BL SH	A25	
19LK4B	ELM	ELM	17			TV H	6.3	600		6.0				60					
20LM1YE	*	ELS	ELM	20	46	OD H	6.3	12h		0.3	4.0	8.0		60	60	GR LO			
22L01A	*	ELS	ELS	15	48	50 H	6.3	600	500		2.0	4.0		70		0.23	BL SH		
23LK1B	ELM	ELM	19	38	TV H	6.3	550		8.0					50		WH MD		D8	
23LK2B	ELM	ELM	22	47	TV H	6.3	550			10.0				18	100	WH SH		D8	
23LK5B	*	ELM	ELM	24	42	TV H	6.3	550		12.0				80	100	WH MD			
23LK6I	*	ELM	ELM	24	49	PT H	6.3	550		25.0				100	150	GR MD			
23LK7B	*	ELM	ELM	R23	42	TV H	6.3	550		8.0				55	100	WH MD		D8	
23LK8B	*	ELM	ELM	S23	49	TV H	6.3	550		15.0				60	100	WH MD		D8	
23LK9B	*	ELS	ELM	R21	18	TV H	12.0	65	250	9.0				25	150	WH MD	90		
23LK41I	*	ELM	ELM	24	42	TV H	6.3	550		8.0				65	200	YG MD			
23LM3S	*	ELS	ELM	23	34	RA H	6.3	600	425	0.4	14.0			50		YO LO			
23LM34V	*	ELM	ELM	23	43	RA H	6.3	600		0.2	4.0			50	350	YO LO		A8	

## Group VIII—CATHODE RAY TUBES—Continued

Type No.	Meth of Focus	Defl	Dimensions		Use	Cathode	Typical						Maximum		Screen	Defl angle deg	Base No.
			Diam	Lth			Heater	E <sub>FOC</sub>	E <sub>A<sub>1</sub></sub>	E <sub>A<sub>2</sub></sub>	E <sub>A<sub>3</sub></sub>	E <sub>A<sub>4</sub></sub>	E <sub>C<sub>1</sub></sub>	I <sub>K</sub>	Defl sens		
			cm	cm			E V	I mA	V	kV	kV	kV	V	μA	mm/V	Col	Pers
23L051A *	ELS ELS		23	57	OS H	6.3 600	55 <sup>h</sup>	6.0	20.0					200	0.03	BL SH	A20
25LM1V *	ELM ELM		23	35	RA H	6.3 550		10.0						60		Y0 LO	
30LK1B			30	45	TV H	6.3 600		10.0						75			D8
31LK1B	ELM ELM		31		TV H	6.3 550		10.0						52	150	WH MD	D8
31LK2B *	ELM ELM		30	48	TV H	6.3 600		10.0						55	150	WH MD	B8
31LM32V *	ELM ELM		31	54	RA H	6.3 600		0.2	4.0					50	350	Y0 LO	A8
31L01P	ELM ELM		31				250		1.8					50		GR MD	A8
31L033V *	ELS ELS		31	57	OS H	6.3 600		1.1	4.3	5.5				140		Y0 LO	14J
35LK1B	ELS ELM		32	38	TV H	6.3 600	425	12.0						90	150		
35LK2B *	ELS ELM	R32	46	TV H	6.3 600	425	0.3	12.0						60	150	WH SH	C8
35LK4B *	ELS ELM	R33	44	TV H	6.3 520	250	14.0							60	100	WH MD	70
40LK1B *	ELM ELM	40	49	TV H	6.3 500		12.0							70	150	WH MD	70
42LM2YE *	ELS ELM	42	59	RA H	6.3 12 <sup>h</sup>	4k	4.5	11.5	20.0					60	50	OG LO	
43LK2B *	ELS ELM	R37	50	TV H	6.3 600	300	0.3	14.0						60	100	WH MD	70
43LK3B *	ELS ELM	R43	51	TV H	6.3 600	300	0.5	14.0						60	150	WH MD	B12
43LK6B	ELS ELM	S45	30	TV H	6.3 600		0.3	0.5	14.0					25		WH SH	A7
43LK7B	ELS ELM	S45	50	TV H	6.3 600		0.3	0.3	14.0					60	35	WH SH	B12
43LK8B *	ELS ELM	S45	50	TV H	6.3 600		0.3	0.5	14.0					50	100	WH SH	B7
43LK9B *	ELS ELM	R37	33	TV H	6.3 600	425	0.3	14.0						60	30	WH MD	110
45LM1B *	ELM ELM	45	56	RA H	6.3 600		0.5	12.0						60	350	Y0 LO	A8
45LM2U *	ELM ELM	44	51	RA H	6.3 600		0.5	14.0						60		GR SH	
45LM3N *	ELM ELM	44	54	RA H	6.3 550		14.0							60		YG LO	
47LK1B	ELS ELM	S47	31	TV H	6.3 300	400	0.4	16.0						55	120	WH SH	110
47LK2B *	ELS ELS	R44	30	TV H	6.3 300	400	0.4	16.0						80	300	WH MD	110
51LS1 *	ELS ELS	51	104	CH H	6.3 600	500	3.5	7.0						90		YG MD	
53LK2B *	ELS ELM	R48	61	TV H	6.3 600	300	0.3	16.0						60	150	WH MD	B12
53LK3B		S50	58	TV H	6.3 600	300	0.4	16.0						140			B7
53LK4TS *	ELS ELM	R47	65	TV H	6.3 18 <sup>h</sup>	3k	20.0							70	500	3C MD	
53LK5B	ELS ELM	S45	38	TV H	6.3 600	300	0.5	16.0						25	100	WH SH	110
53LK6B	ELS ELM	S48	385	TV H	6.3 600	425	0.3	0.5	16.0					90	30	WH SH	A7
59LK1B	ELS ELM	S59	37	TV H	6.3 300	425	0.4	16.0						55		WH SH	C8
59LK2B	ELS ELM	S59		TV	6.3	400	0.4	16.0						80	300	WH MD	110
61LK1B *	ELM ELM	R60	36	H	6.3 300	400	20.0							44	350		110
65LK1B	ELS ELM	38	62	TV H	6.3 300	400	20.0							80	300		

## Group IX—MICROWAVE TUBES

Type No.	Kind	Freq		Duty cyl %	Cathode		Maximum									Coupling	Dimen		Wt g	
		Min GH <sub>z</sub>	Max GH <sub>z</sub>		E <sub>t</sub> V	I <sub>t</sub> mA	E <sub>b</sub> V	I <sub>b</sub> mA	P <sub>o</sub> mW	Col V	E <sub>g</sub> V	Helix V	Gain dB	NF dB	VSWR	Band width MHz	Mag field gauss			
2J55	MAG	13.3	1 P		12 k	12A	53W											33 h		
3J21	MAG	24.5	P		15 k	15	60W													
4J26-30	MAG	1.2	1 P		27 k	46A	700W											14 h		
4J45	MAG	2.8	1 P		23 k	45	650W													
4J50	MAG	12.1	1 P		22 k	27A	28W											69 h		
GSH-5	NOI	10.0	26.0	6.3		70														
UV-5	TWT	3.4	4.4	3.0	900	180	1	<1	600	12	500	18	8	1.6		WG	388	17	83	
GSH-6	NOI	25.4	52.0	6.3		60														
UV-6	TWT	3.4	4.4	4.0	950	500	4	30	1300	30	11 h	30		1.6		WG	388	17	95	
UV-7	TWT	3.4	4.4	6.3	850	1400	35	3W	1500	80		26		1.6		WG	397	17	100	
GSH-10	NOI	2.6	8.4	6.3		150											18			
GSH-11	NOI	8.4	11.6	6.3		150											18			
K-12	KLO	2.5	3.6	C	6.3	250	40	100										77	30	
KIU12	KLA	2.8		P	9.5	280 k		20MW									14	800	WG	13 h 300 50k
MI-12	MAG	3.0	3.1	P		15 k	18A	1 h kW									18 h			
UV-13	TWT	3.4	4.4		2.4	600	350μ	5									600			
MI-14	MAG	2.9	3.0	P		15 k	18A	1 h kW									18 h			
UV-14	TWT	3.4	4.4		4.5	1300	5	100									PM			
K-15	KLO	3.1	5.6	C	6.3	250	50	50										68	25	
KIU15	KLA	1.8		P	12.0	280 k		30MW									18	700	WG	15 h 400 75k
MI-15	MAG	2.9	2.9	P		15 k	18A	1 h kW									18			
MI-16	MAG	2.8	2.8	P		15 k	18A	1 h kW									18 h			
K-26	KLO	0.5	0.7	C	6.3	250	60	100										140	33	
GSH-28	NOI	64.0	76.0	6.3		100											17			
GSH-29	NOI	52.0	65.0	6.3		100											17			
K-29	KLO	8.8	10.3	C	6.3	320	45	15										150	58	
K-30	KLO	7.7	9.1	C	6.3	320	50	15										150	58	
K-31	KLO	7.0	8.1	C	6.3	320	50	20										141	46	
K-32	KLO	5.6	7.1	C	6.3	320	50	20										141	56	
K-33	KLO	14.3	16.7	C	6.3	400	45	10										150	58	
K-34	KLO	12.0	14.4	C	6.3	400	45	10										150	58	
K-35	KLO	10.0	12.1	C	6.3	350	45	10										150	58	
K-41	KLO	1.4	2.5	C	6.3	250	60	80										85	30	
K-42	KLO	0.9	1.5	C	6.3	250	60	80										85	30	
K-48	KLO	3.4	4.4	C	6.3	180	70	100										70	25	
MI-51	MAG	9.5	9.5	P		13 k	16A	65 kW									48 h			
MI-52	MAG	9.4	9.5	P		13 k	16A	65 kW									48 h			
MI-53	MAG	9.3	9.4	P		13 k	16A	65 kW									48 h			
MI-54	MAG	9.3	9.3	P		13 k	16A	65 kW									48 h			
M62	MAG	2.4	2.4	C		2300	150	150W									18 h	200	140	700
K-92A	KLO	3.4	3.6	C	6.3	850	90	1W	600									160	140	2k
K-92B	KLO	3.5	3.7	C	6.3	850	90	1W	600									160	140	2k
K-92G	KLO	4.0	4.3	C	6.3	850	90	1W	600									160	140	2k
K-92V	KLO	3.7	4.0	C	6.3	850	90	1W	600									160	140	2k
MI-95	MAG	9.2	9.3	P		13 k	16A	65W									48 h			
MI-120	MAG	2.8	2.8	P		5 k	7A	10 kW									13 h			
MI-137	MAG	1.8	1.8	P		23 k	25A	25 kW									16 h			
UV-204	TWT	3.4	3.9		13.2	2800	75	20W										500		
UV-205	TWT	3.4	4.4		6.3	1400	55	4W										750		
KU304	KLA	0.8	0.9	C	6.5	16 k		10 kW									6	250	CO	12 h 400 60k
KU304A	KLA	0.8	0.8	C	6.5	15 k		10 kW									10	350	CO	10 h 400 65k
K-308	KLO	3.4	4.0	C	6.3	220	130	500										73	25	
KU308	KLA	0.8	1.0	C	10.0	10 k		4 kW												
KU309	KLA	0.5	0.6	C	4.0	9 k		3 kW									40		300 CO 10 h 250 50k	
KU310A	KLA	0.5	0.6	C	5.0	15 k		15 kW									35		8 500 CO 12 h 250 85k	
KU310B	KLA	0.6	0.6	C	5.0	15 k		15 kW									35		8 500 CO 14 h 250 85k	
K-351	KLO	2.7	3.3	C	6.3	250	40	80										80	29	
K-352	KLO	3.2	7.5	C	6.3	250	40	10										68	25	
UV-421	TWT	0.9	1.2		2.8	200	300μ	5									18 <9		360	
UV-422	TWT	0.6	1.0		2.8	450	700μ	5									15 8		420	

## Group IX—MICROWAVE TUBES—Continued

Type No.	Kind	Freq		Duty cyl %	Cathode		Maximum								Coupling	Dimen		Wt g	
		Min	Max		E <sub>r</sub>	I <sub>r</sub>	E <sub>b</sub>	I <sub>b</sub>	P <sub>o</sub>	Col	E <sub>k</sub>	Helix	Gain	NF	VSWR	Band width	Mag field gauss		
		GHz	GHz		V	mA	V	mA	mW	V	V	V	dB	dB	MHz	MHz	gauss		
UV-438	TWT	3.5	5.3		3.0		560	400 $\mu$	5			25	11			600			
UV-440	TWT	1.5	2.4			2.5		400	700 $\mu$	10			25	10			500		
M-532	MAG	2.3	3.6	C			5000	200	100W							22h	273	70	25h
M571	MAG	2.4	2.4	C			3600	1150	25hW							12h	210	160	15h
MI-588	MAG	36.4	37.1	P			15k	12A	28 kW							PM			
MI-589A	MAG	9.4	9.5	P			135h	20A	95 kW							PM			
MI-589B	MAG	9.3	9.4	P			135h	20A	95 kW							PM			
MI-589V	MAG	9.3	9.3	P			135h	20A	95 kW							PM			
OV-612	BWT	37.5	53.6	C	5.0		1500	50	200	400			10				200	130	5k
OV-613	BWT	52.6	81.0	C	5.0		1500	50	80	400			10				200	130	5k
OV-614	BWT	79.0	h1.2	C	6.3		2500	50	50	400			10				200	130	5k
OV-621	BWT	h1.8	h2.0	C	6.3		3000	50	15	500			13				240	140	95h
OV-622	BWT	h1.2	h1.8	C	6.3		4000	50	50	500			13				240	140	95h
700AD	MAG	0.6	20	P			12k	10A	40W							650			
706AU	MAG	3.1		P			22k	20	200W										
707A/B	KLO	2.4	3.5	C	6.3	250				100	275					20			
714AU	MAG	3.3	1	P			19k	20A	165W							22h			
720AYE	MAG	2.8	<1	P			27k	65A	1 kW							29h			
723A/B	KLO	8.5	9.6	C	6.3	300	20	30	300							70			
725A	MAG	9.3	3	P			12k	10	44W										
726	KLO	2.9	3.2	C	6.3	300	20	170	300							30			
K-743	KLO	33.3	36.6	C			1800	15	10										
K-744	KLO	27.3	33.3	C			1800	15	10										
K-745	KLO	23.0	27.3	C			1500	15	15										
K-746	KLO	20.0	23.0	C			1200	15	15										
K-747	KLO	16.7	20.0	C			1200	15	15										
K-765	KLO	75.0	79.0	C			2400	15	15										
K-766	KLO	70.0	75.0	C			2400	15	15										
K-767	KLO	64.0	70.0	C			2400	15	20										
K-768	KLO	57.6	66.4	C			2400	15	20										
K-769	KLO	52.7	57.6	C			2400	15	20										
K-770	KLO	43.0	52.7	C			2000	15	20										
K-771	KLO	36.2	43.0	C			2000	15	20										
K-801	KLO	2.4	6.1	C	6.3		250	150	100							82	29		
K-802	KLO	2.4	6.1	C	6.3		250	150	100							82	29		
K-803	KLO	2.4	6.1	C	6.3		250	150	100							82	29		
K-804	KLO	2.4	6.1	C	6.3		250	150	100							82	29		
K-805	KLO	2.4	6.1	C	6.3		250	150	100							82	29		
K-806	KLO	2.4	6.1	C	6.3		250	150	100							82	29		
K-807	KLO	2.4	6.1	C	6.3		250	150	100							82	29		
UV1001	* TWT	5.0	10.3		3.0		800	400 $\mu$	5			25	10			900	WG		
UV1002	* TWT	5.0	10.3		3.0		800	400 $\mu$	5			25	10			900	WG		
UV1003	* TWT	0.9	5.0		2.8		560	700 $\mu$	5			25	10			600	WG		
UV1004	* TWT	0.9	5.0		2.8		560	700 $\mu$	5			25	10			600	WG		
UV1005	* TWT	0.9	5.0		2.8		560	700 $\mu$	5			25	10			600	WG		
UV1006	* TWT	0.9	5.0		2.8		560	700 $\mu$	5			25	10			600	WG		

# Group X – TRANSISTORS

Type No.	Kind	Maximum								Typical		Maximum			Minimum		Type NF	Min K <sub>M</sub>	Max C <sub>ob</sub>	C <sub>b'</sub> /C <sub>c</sub>	Fig No.
		V <sub>CBO</sub> V V	V <sub>EBO</sub> V V	V <sub>CEO</sub> V V	I <sub>C</sub> mA	I <sub>E</sub> mA	I <sub>CBO</sub> μA	P <sub>c</sub> mW	K <sub>θ</sub> mW/ °C	T <sub>A</sub> °C	Common V <sub>C</sub> V	I mA	h <sub>11</sub> Ω	h <sub>12</sub> 10 <sup>-5</sup>	h <sub>22</sub> μmho	h <sub>21</sub>	*f <sub>T</sub> max MHz				
P1A	GAP	20		5 5	30	50	10	70	E	10	1		3.3	0.90	0.1	30				1	
P1B	GAP	20		5 5	30	50	10	70	E	10	1		2.0	0.93	0.1	35 33				400 1	
P1D	GAP	20		5 5	15	50	10	70	E	10	1		2.0	0.94	0.1	18 33				600 1	
P1G	GAP	20		5 5	30	50	10	70	E	10	1		2.0	0.96	0.1	37				600 1	
P1I	GAP	20		5 5	20	50	10	70	E	10	1		2.0	0.96	1.6	35			40	1	
P1V	GAP	20		5 5	15	50	10	70	E	10	1		1.0	0.93	0.1	35 37				400 1	
P1YE	GAP	20		5 5	30	50	10	70	E	10	1		2.0	0.95	0.5	35 30	60	1k	1		
P1ZH	GAP	20		5 5	20	50	10	70	E	10	1		3.3	0.95	0.1	35 35	45	1k	1		
1T303A	GDN	12 2 10 15		8	100	3	70	E	5	5			15					10	*1k	13	
1T303B	GDN	12 2 10 15		8	100	3	70	E	5	5			30					10	*1k	13	
1T303D	GDN	12 2 10 15		8	100	3	70	E	5	5			30					10	*1k	13	
1T303G	GDN	12 2 10 15		8	100	3	70	E	5	5			15					10	*1k	13	
1T303V	GDN	12 2 10 15		8	100	3	70	E	5	5			60					10	*1k	13	
1T303YE	GDN	12 2 10 15		8	100	3	70	E	5	5			60					10	*1k	13	
P2A	GAP	100		10 10	200	250	10	60	C	50	5		0.90			17				1	
P2B	GAP	50		25 25	200	250	10	60	C	25	10		0.90			17				1	
P3A	GAP	50 150		500	3W	100	50	C	10	150			2.0	0.1		17				2	
P3B	GAP	50 250		250	3W	100	50	C	10	150			2.0	0.1		20				2	
P3V	GAP	50 450		250	3W	100	50	C	10	150			2.0	0.1		25				2	
P4AE	* GAP	60	50 5A	500	2W	500	90	C	10	2A			5.0	5.0	0.1	20				150 22	
P4BE	* GAP	70	60 5A	400	3W	500	90	C	10	2A			15	15	0.1	23				150 22	
P4DE	* GAP	60	50 5A	400	3W	500	90	C	10	2A			50	30	0.1	30				150 22	
P4GE	* GAP	60	50 5A	400	3W	500	90	C	10	2A			15	15	0.1	27				150 22	
P4L	GAP	50	2A	500	3W	500	50	C	10	2			20		0.1	30				150 22	
P4VE	* GAP	40	35 5A	400	3W	500	90	C	10	2A			10	10	0.1	23				150 22	
P5A	GAP	10 20 10 10 10		30	25	1	75	E	2	1	36 500	3.3	15	0.3	12	80				4	
P5B	GAP	10 20 10 10 10		15	25	1	75	E	2	1	36 500	2.6	20	0.3	12	80				4	
P5D	GAP	10 20 10 10 10		15	25	1	75	E	2	1	36 500	2.6	20	0.3	7	80				4	
P5G	GAP	10 20 10 10 10		15	25	1	75	E	2	1	36 500	2.6	30	0.3	10	80				4	
P5V	GAP	10 20 10 10 10		15	25	1	75	E	2	1	36 500	2.6	30	0.3	15	80				4	
P5YE	GAP	10 20 10 10 10		15	25	1	75	E	2	1	36 500	2.6	20	0.3	18	80				4	
P6A	GAP	30 30 10 10 10		10	150	2	100	E	5	1	32 500	3.3	10	0.1	30 30	50				10	
P6B	GAP	30 30 10 10 10		5	150	2	100	E	5	1	32 60	2.0	10	0.5	30 34	50				10	
P6D	GAP	30 30 10 10 10		5	150	2	100	E	5	1	32 60	2.0	10	0.5	12 34	50				10	
P6G	GAP	30 30 10 10 10		5	150	2	100	E	5	1	32 60	3.3	30	1.0	30 37	50				10	
P6V	GAP	30 30 10 10 10		5	150	2	100	E	5	1	32 60	2.0	10	0.5	30 34	50				10	
P7	GAP	13 6 45		5 45	50	50	50	E	2	1			30							4	
P8	GAN	15 15 25 20 10		30	150	5	85	E	5	1	34 500	2.5	10	1.0	15 32	65 150	10			10	
P9	GAN	20 20 20 15 20 10		15	150	2	100	E	5	1	32 60	2.0	10	0.5	12 32	60				10	
P9A	GAN	15 15 15 20		15	150	5	85	E	5	1	32 60	2.5	15	1.0	5 32	60 150	10			10	
P10	GAN	15 15 15 20 10		15	150	5	85	E	5	1	32 60	2.5	15	1.0	5 32	60 150	10			10	
P10A	GAN	30 30 30 20		15	150	5	85	E	5	1			2.5	15		1.0		60	150	10	
P10B	GAN	30 30 30 20		15	150	5	85	E	5	1			2.5	25		1.0		60	150	10	
P11	GAN	15 15 15 20 10		15	150	5	85	E	5	1	32 60	2.5	25	2.0	5 32	60				10	
P11A	GAN	15 15 15 20		15	150	5	85	E	5	1			2.5	45		2.0		60	150	10	
P12	GAP	6 5 5		6	30	2	85	E	6	1			2.0	20		5.0				20 150 17	
P12A	GAP	6 6 5 5		6	30	1	70	E	6	1			2.0	20		5.0				20 150 17	
P13	GAP	15 15 15 20 10		15	150	3	100	E	5	1	500	3.3	12	0.5	33	50				10	
P13A	GAP	30 20 10 15 15		15	150	2	100	E	5	1	60	2.0	20	0.5	33	50				10	
P13B	GAP	15 15 15 20 10		15	150	3	100	E	5	1	60	3.3	20	0.5	12	50				10	
MP14B	* GAP	30 30 30 20 20		15	150	3	85	E	5	1	32 500	3.3	30	1.0		50	150	10			
P14	GAP	15 15 15 20 10		15	150	3	100	E	5	1	500	3.3	20	1.0	33	50	150	10			
P14A	GAP	30 30 30 20 20		15	150	3	85	E	5	1	32 700	3.3	20	1.0		50	150	10			
P15	GAP	15 15 15 20 10		15	150	3	100	E	5	1	500	3.3	30	2.0	33	50	150	10			
P15A	* GAP	15 15 15 20		15	150	3	85	E	5	1	32 500	3.3	50	2.0		50	150	10			
P16	* GAP	30 15 15 50 50		25	200	5	100						20		1.0		50			10	
P16A	GAP	30 15 15 50 50		25	200	5	100						30		1.0		50			10	
P16B	GAP	30 15 15 50 50		25	200	5	100						45		1.0		50			10	
P17	GAP	40 400		200	150								9	0.2		20				8	
P17A	GAP	40 400		200	150								16	0.2		20				8	
P17B	GAP	40 400		200	150								32	0.2		20				8	
P18	GAP	70 400		200	150								9	0.2		20				8	
P18A	GAP	70 400		200	150								16	0.2		20				8	
P18B	GAP	70 400		200	150								32	0.2		20				8	
P19	GAP	20 20 6 30 5		6	30	1	90	E	5	1	33		2.0	20	5.0	5	20	150	3		

**Group X – TRANSISTORS – Continued**

Type No.	Kind	Maximum							Typical		Maximum			Minimum		Typ NF	Min K <sub>M</sub>	C <sub>ob</sub>	r <sub>b</sub>	Maximum	Fig No.
		V <sub>CBO</sub> V	V <sub>EBO</sub> V	V <sub>CEO</sub> V	I <sub>C</sub> mA	I <sub>E</sub> mA	I <sub>CBO</sub> μA	P <sub>c</sub> mW	K <sub>θ</sub> mW/ <sup>°</sup> C	T <sub>A</sub> °C	Common V	V <sub>c</sub> V	I mA	h <sub>11</sub> Ω	h <sub>12</sub> 10 <sup>-5</sup> μmho	h <sub>22</sub> μmho	*f <sub>T</sub> MHz				
MP20	* GAP	50	20	300	1	50	150		C		25			50		1.0	20		10		
MP20A	* GAP	30	20	300		50	150		85 E	5	25			50		2.0			17		
MP20B	* GAP	30	20	300		50	150		85 E	5	25			60		1.5			17		
P21	GAP	50		30	1	50	150	3	85 C	5	5			20		1.0			10		
P21A	GAP	30	20	500	1	50	150	3	85 C	5	25			20		1.0	20		10		
P21B	GAP	30	20	500		50	150	3	85 C	5	25			20		1.0	20		10		
P21D	* GAP	50	30	300		50	150		85 E	5	25			60		1.0			17		
P21G	* GAP	40	30	300		50	150		85 E	5	25			20		1.0			17		
P21V	* GAP	60	35	300		50	150		85 E	5	25			20		1.5			17		
P21YE	* GAP	70	35	300		50	150		85 E	5	25			30		0.7			17		
P22	GAP	40	20	10		25	100		85					3.3	5	1.0	20		10		
P23	GAP	35	30	10		25	100		85					3.3	5	2.0	18		10		
MP25	* GAP	40	40	40	300	6	75	200	5	60 E	20	<3			3.5	13	0.2	20	50	500	17
MP25A	* GAP	40	40	40	400	6	75	200	5	60 E	20	<3			3.5	20	0.2	20	50	500	17
MP25B	* GAP	40	40	40	400	6	75	200	5	60 E	20	<3			3.5	30	0.5	20	50	500	17
MP26	* GAP	70	70	70	300	6	75	200	5	60 E	35	<3			3.5	13	0.2	20	50	500	17
MP26A	* GAP	70	70	70	400	6	75	200	5	60 E	35	<3			3.5	20	0.2	20	50	500	17
MP26B	* GAP	70	70	70	400	6	75	200	5	60 E	35	<3			3.5	30	0.5	20	50	500	17
P27	* GAP	5	5	6		3	30	1	60	5	<1			2.0	20	1.0	10	50	*6k	17	
P27A	* GAP	5	5	6		3	30	1	60 E	5	<3			1.0	20	1.0	5	50	*6k	17	
P28	* GAP	5	5	6		3	30	1	60 E	5	<3			1.0	20	5.0	5	50	*6k	17	
P29	* GAP	12	12	10	100		4	30	1	70	<1	20			20		5.0		20		17
P29A	* GAP	12	12	10	100		4	30	1	70	<1	20			40		5.0		20		17
P30	* GAP	12	12	10	100		4	30	1	70 E	<1	20			80		10.0		20		17
P31	GAP		12	100		5	30							25		4.5		50		17	
P31A	GAP		12	100		5	30							45		4.5		60		17	
P32	GAP		12	100		5	30							45		9.0		20		17	
MP35	* GAN	15	15	20		30	150		75 E	5	1			3.3	10	0.5	60			17	
MP36A	* GAN	15	15	20		30	150		60 E	5	1			3.3	15	1.0	60			17	
MP37	* GAN	15	15	20		30	150		60 E	5	1			3.3	15	1.0	60			17	
MP37A	* GAN	30	30	20		30	150	5	60 E	5	1			3.3	15	1.0	60			17	
MP37B	* GAN	30	30	20		30	150	5	60 E	5	1			3.3	25	1.0	60			17	
MP38	* GAN	15	15	20		30	150		60 E	5	1			3.3	25	2.0	60			17	
MP38A	* GAN	15	15	20		30	150	5	60 E	5	1			3.3	45	2.0	60			17	
MP39	* GAP	10	5	10	150		15	150	5	60 E	5	1			3.3	20	0.5	12	60	220	17
MP40	* GAP	10	5	10	150		15	150	5	85 E	5	1			3.3	20	1.0		60	220	17
MP40A	* GAP	30	5	30	150		15	150	5	85 E	5	1			3.3	20	1.0		60	220	17
P40B	GAP		30	20		15	150							30		1.0		60		10	
MP41	* GAP	10	5	10	150		15	150	5	85 E	5	1			3.3	30	1.0		60	220	17
MP41A	* GAP	10	5	10	150		15	150	5	85 E	5	1			3.3	50	1.0		60	220	17
MP42	* GAP	15	15	150		25	200		70 E	1	10			20		1.0				17	
MP42A	* GAP	15	15	150		25	200	5	70 E	1	10			30		1.0				17	
MP42B	* GAP	15	15	150		25	200	5	70 E	1	10			45		1.0				17	
P101	SAN	20	10	20	20	1	150	2	120 E	5	1	100	300	3.3	10	0.2	15	25	150	10	
P101A	SAN	10	10	10	20	1	150	2	120 E	5	1	100	300	3.3	10	0.2	18		150	10	
P101B	SAN	20	20	20	20	1	150	2	150 E	5	1	100	300	3.3	15	0.2	15		150	10	
P102	SAN	10	10	10	20	20	1	150	2	120 E	5	1	100	300	2.0	18	0.5	15		150	10
P103	SAN	10	10	10	20	20	1	150	2	120 E	5	1	100	300	3.3	30	1.0	15		150	10
P103A	GAN		10	20		3	150							30		1.0		100		10	
P104	SAP	60	45	60	10	10	1	150	2	150 E	5	1	140		3.3	9.0	0.1	B0	1k	10	
P105	SAP	30	45	30	10	10	1	150	2	150 E	5	1	140		3.3	9.0	0.1	80	1k	10	
P106	SAP	15	45	15	10	10	1	50	2	150 E	5	1	80		2.0	13.5	0.5	80	<2k	10	
GT108A	* GAP	10			50		10	75	1	E	5	1			3.3	20	0.5			9A	
GT108B	* GAP	10			50		10	75	1	E	5	1			3.3	35	1.0			30	
GT108C	* GAP	10			50		10	75	1	E	5	1			3.3	h1.1	1.0			9A	
GT108V	* GAP	10			50		10	75	1	E	5	1			3.3	60	1.0			30	
P108	GAN		10	20		<1	150							20		*1.0		50		10	
P108A	GAN		10	20		<1	150							13		1.0		50		10	
GT109A	* GAP	10		6	20		5	30	<1	80 E	5	1			3.3	20	1.0		30	*3k	29
GT109B	* GAP	10		6	20		5	30	<1	80 E	5	1			3.3	35	1.0		30	*3k	29
GT109D	* GAP	10		6	20		2	30	<1	80 E	5	1			3.3	20	3.0		40	*3k	29
GT109G	* GAP	10		6	20		5	30	<1	80 E	5	1			3.3	h1.1	1.0		30	*3k	29
GT109I	* GAP	10		6	20		5	30	<1	80 E	5	1			3.3	20	1.0		30	*3k	29
GT109V	* GAP	10		6	20		5	30	<1	80 E	5	1			3.3	60	1.0		30	*3k	29



## Group X—TRANSISTORS—Continued

Type No.	Kind	Maximum								Typical		Maximum			Minimum		Typ NF	Min K <sub>M</sub>	C <sub>ob</sub>	Maximum r <sub>b</sub> *r' <sub>C<sub>e</sub></sub>	Fig. No.
		V <sub>CBO</sub> V	V <sub>EBO</sub> V	V <sub>CEO</sub> V	I <sub>c</sub> mA	I <sub>E</sub> mA	I <sub>CBO</sub> μA	P <sub>C</sub> mW	K <sub>θ</sub> mW/ °C	T <sub>A</sub> °C	Common	V <sub>c</sub> V	I mA	h <sub>11</sub> Ω	h <sub>12</sub> 10 <sup>-5</sup> μmho	h <sub>22</sub> h <sub>21</sub>	*f <sub>T</sub> max MHz				
KT306D	SPN	15	4	10	30	30	500μ	150	100	E	1	10	30		30	100				*5h	34
KT306G	* SPN	15	4	10	30	30	500μ	150	100	E	1	10	30		40	100				5 *5h	34
KT306V	* SPN	15	4	10	30	30	500μ	150	100	E	1	10	30		20	100				5 *5h	34
P306	* SAN	60	6	60	400	1h	100	1000	100	130	E	10	100		7	<0.1				20	
P306A	* SAN	80	4	80	400	50	100	1000	100	130	E	10	100		5	<0.1				20	
KT307A	* SPN	10	4	10	20		500μ	15	<1						20	100				6	35
KT307B	* SPN	10	4	10	20		500μ	15	<1						40	100				6	35
KT307G	* SPN	10	4	10	20		500μ	15	<1						80	100				6	35
KT307V	* SPN	10	4	10	20		500μ	15	<1						40	100				6	35
P307	SDN	80	3	80	30			20	250						16	20				38	
P307A	SDN	80	3	80	30			20	250						30	20				38	
P307B	SDN	80	3	80	15			20	250						50	20				38	
P307G	SDN	80	3	80	15			20	250						16	20				38	
P307V	SDN	60	3	60	30			20	250						50	20				38	
GT308A	* GAP	20	3	12	50		2	150	4	85	E	1	10		20	90	8	8 *4h	12		
GT308B	* GAP	20	3	12	50		2	150	4	85	E	1	10		50	120	8	8 *5h	12		
GT308V	* GAP	20	3	12	50		2	150	4	85	E	1	10		80	120	8	8 *5h	12		
P308	SDN	120	3	120	15		20	250							30	20				38	
GT309A	* GDP	15	6	10	10		5	50	1	70	E	5	1	38	. 5.0	20	120		10 *5h	9	
GT309B	* GDP	15	6	10	10		5	50	1	70	E	5	1	38	5.0	60	120		10 *5h	9	
GT309D	* GDP	15	6	10	10		5	50	1	70	E	5	1	38	5.0	20	40		10 *1k	9	
GT309G	* GDP	15	6	10	10		5	50	1	70	E	5	1	38	5.0	60	80		10 *1k	9	
GT309V	* GDP	15	6	10	10		5	50	1	70	E	5	1	38	5.0	20	80		10 *1k	9	
GT309YE	* GDP	15	6	10	10		5	50	1	70	E	5	1	38	5.0	60	40		10 *1k	9	
P309	SDN	120	3	120	30		20	250							16					38	
GT310A	* GAP	12		10	10		5	20	<1	75	E	5	1	38	3.0	20	160	3	4 *3h	29	
GT310B	* GAP	12		10	10		5	20	<1	75	E	5	1	38	3.0	60	160	3	4 *3h	29	
GT310D	* GAP	12		10	10		5	20	<1	75	E	5	1	38	3.0	20	80	4	5 *3h	29	
GT310G	* GAP	12		10	10		5	20	<1	75	E	5	1	38	3.0	60	120	4	5 *3h	29	
GT310V	* GAP	12		10	10		5	20	<1	75	E	5	1	38	3.0	20	120	4	5 *5h	29	
GT310YE	* GAP	12		10	10		5	20	<1	75	E	5	1	38	3.0	60	80	4	5 *5h	29	
GT311A	* GEM	15	2	12	10		3	100		55	E	5	5	30		20			2	50	12
GT311B	* GEM	15	2	12	10		3	100		55	E	5	5	30		20	*45.h	7	2	100	12
GT311D		12	2	12			5	150		E	3	15			60				2	75	12
GT311G		12	2	12			5	150		E	3	15			30				2	75	12
GT311I	GDP	10	2	10	50		10	150	3	70					1H		45.0		<3 *1h	12	
GT311V		12	2	12			5	150		E	3	15			15				2	75	12
GT311YE	GDP	12	2	12	50		10	150	3	70					50		25.0		<3 *75	12	
GT311ZH	G P	12	2	12	50		10	150	3	70					15		30.0		<3 *1h	12	
KT-312A	* SPN	15	4	15	30		10	225	<3	85	E	2	20		10	h8.0			5 *5h	34	
KT-312B	* SPN	30	4	30	30		10	225	<3	85	E	2	20		25	h12			5 *5h	34	
KT312G	SPN	15		15	30			225		150										34	
KT-312V	* SPN	15	4	15	30		10	225	<3	85	E	2	20		50	h12			5 *5h	34	
GT313A	* GAP	15		12	10		3	100		85	E	5	5	30		20	300		<3 *75	12	
GT313B	* GAP	15		12	10		3	100		85	E	5	5	30		20	450	7	2 *40	12	
P314A	GAP	10		1			10	100		85					0.94	30			15		
P314B	GAP	10		1			5	100		85					0.94	60			10		
P314S	GAP	10		1			5	100		85					0.94	120			6		
KT315A	* SEN		25	100			1	150		120					20	250			7 *3h	30	
KT315B	* SEN		20	100			1	150		120					70	250			7 *5h	30	
KT315G	* SEN		35	100			1	150		120					70	250			7 *5h	30	
KT315V	* SEN		40	100			1	150		120					20	250			7 *5h	30	
KT316A	* SEN	10	4	10	30	30	500μ	150	100						20	100			3 *2h	34	
KT316B	* SEN	10	4	10	30	30	500μ	150	100						40	100			3 *2h	34	
KT316D	* SEN	10	4	10	30	30	500μ	150	100						60	100			3 *2h	34	
KT316G	* SEN	10	4	10	30	30	500μ	150	100						20	100			3 *2h	34	
KT316V	* SEN	10	4	10	30	30	500μ	150	100						40	100			3 *2h	34	
KT319A	SPN	5	<4	5	15		1	100		80					15	100			11	35	
KT319B	SPN	5	<4	5	15		1	100		80					25	100			11	35	
KT319V	SPN	5	<4	5	15		1	100		80					40				11	35	
GT320A	* GAP	20	3	12	150		10	200	4	70	E	1	10		20	80			8 *5h	16	
GT320B	* GAP	20	3	12	150		10	200	4	70	E	1	10		50	120			8 *5h	16	
GT320V	* GAP	20	3	9	150		10	200	4	70	E	1	10		80	160			8 *6h	16	
GT321A	* G P	60	4	40	2A		500	160	60	E	3	500			20	60			80 *6h	13	
GT321B	* G P	60	4	40	2A		500	160	60	E	3	500			40	60			80 *6h	13	

## Group X—TRANSISTORS—Continued

Type No.	Kind	Maximum								Typical			Maximum			Minimum			Typ NF	Min K <sub>M</sub>	Maximum		Fig No.
		V <sub>CBO</sub> V	V <sub>EBO</sub> V	V <sub>CEO</sub> V	I <sub>C</sub> mA	I <sub>E</sub> mA	I <sub>CBO</sub> μA	P <sub>C</sub> mW	K <sub>θ</sub> mW/ °C	T <sub>A</sub> °C	Common V <sub>c</sub> V	I mA	h <sub>11</sub> Ω	h <sub>12</sub> 10 <sup>-5</sup>	h <sub>22</sub> μmho	h <sub>21</sub>	*f <sub>T</sub> max MHz	dB	pF	r <sub>b</sub> ' C <sub>c</sub>			
GT321D	* G P	45	2	30	2A	500	160	60	E	3	500				40	60		80	*6h	13			
GT321G	* G P	45	2	30	2A	500	160	60	E	3	500				20	60		80	*6h	13			
GT321V	* G P	60	4	40	2A	500	160	60	E	3	500				80	60		80	*6h	13			
GT321YE	* G P	45	2	30	2A	500	160	60	E	3	500				80	60		80	*6h	13			
GT322A	* GAP	15	15	5		4	50	62	E	5	1	34		1	20	80	7	<2	*2h	31			
GT322B	* GAP	15	15	5		4	50	59	E	5	1	34		1	50	80	4	<2	*2h	31			
GT322D	* GAP	15	15	5		4	50	62	E	5	1	34		1	20	50	4	<2	*2h	31			
GT322G	* GAP	15	15	5		4	50	59	E	5	1	34		1	50	50	4	<3	*2h	31			
GT322V	* GAP	15	15	5		4	50	62	E	5	1	34		1	20	50	4	<3	*2h	31			
GT322YE	* GAP	15	15	5		4	50	59	E	5	1	34		1	50	50	4	<2	*2h	31			
P322	GDP	8		15		2	50	85						5.0	0.97	400		4					
KT325A	SEN	15	4	10	30	30	<1	225		120					20	100		<3	*1h	36			
KT325B	SEN	15	4	10	30	30	<1	225		120					20	100		<3		36			
KT325D	SEN	15	4	10	30	30	<1	225		120					60	100		<3		36			
KT325G	SEN	15	4	10	30	30	<1	225		120					50	100		<3		36			
KT325V	SEN	15	4	10	30	30	<1	225		120					50	100		<3		36			
KT326A	SPN	20	4	15	50		<1	250							20	400		5	*5h	31			
KT326B	SPN	20	4	15	50		<1	250							45	400		5	*5h	31			
GT328	GEP	15			10		10	45							10	*2k		<2	*10	13			
GT329A	GPN	10	<1		15		5	20							15		4	2	*15	37			
GT329B	GPN	10	<1		15		5	20							15		5	3	*20	37			
GT329V	GPN	10	<1		15		5	20							15		5	<4	*30	37			
GT330A	GPN	10	<1		20		5	50							15		5	2	*30	37			
GT330B	GPN	10	<1		20		5	50							15		5	2	*50	37			
P401	* GDP	20	<1	10	20	10	10	100	2	85	E	5	5		5.0	16	30	15	*4k	13			
GT402A	* GAP		<1	25	500		25	600	10	85	E	1	3			30	<0.1			32			
GT402B	* GAP		<1	25	500		25	600	10	85	E	1	3			60	<0.1			32			
P402	* GDP	20	1	10	20	10	5	100	2	85	E	5	5		5.0	16	60		10	*1k	13		
GT403A	* GAP	45	20	30	12h		50	500	6	85	E	5	<1			20	<0.1			28			
GT403B	* GAP	45	20	30	12h		50	500	6	85	E	5	<1			50	<0.1			28			
GT403D	* GAP	60	30	45	12h		50	500	6	85	E	5	<1			50	<0.1			28			
GT403G	* GAP	60	20	45	12h		50	500	6	85	E	5	<1			50	<0.1			28			
GT403I	* GAP	80	20	60	12h		70	500	6	85	E	5	<1			50	<0.1			28			
GT403V	* GAP	60	20	45	12h		50	500	6	85	E	5	<1			20	<0.1			28			
GT403YE	* GAP	60	20	45	12h		50	500	6	85	E	5	<1			30	<0.1			28			
GT403ZH	* GAP	80	20	60	12h		70	500	6	85	E	5	<1			20	<0.1			28			
P403	* GDP	10	1	10	20	10	5	100	2	85	E	5	5		5.0	30	*h1.2		10	*5h	13		
P403A	* GDP	10	1	10	20	10	5	100	2	85	E	5	5		5.0	16	*h1.2		10	*5h	13		
P404	GSP	5	5	<5	5		5	10	<1	85	E	3	<1		7.0	15	10		25	5			
P404A	GSP	5	5	<5	5		2	10	<1	85	E	3	<1		7.0	15	10		25	5			
P405	GSP	5	5	<5	5		5	10	<1	85	E	3	<1		7.0	20	30		15	5			
P405A	GSP	5	5	<5	5		2	10	<1	85	E	3	<1		7.0	20	30		15	5			
P406	GAP	6	6	6	5	5	6	30	2	85		6	1		2.0	20	10		20	150	17		
P407	GAP	6	6	6	5	5	6	30	2	85		6	1		2.0	20	20		20	150	17		
P408	G P	20	20	6	5	5	6	30	1	90	E	5	1	33	2.0	20	10	5	20	150	3		
P409	G P	20	20	6	5	5	6	30	1	90	E	5	1	33	2.0	20	5		20	150	3		
P410	* GDP	6	8	6	20	20	2	100	2	85	E	5	5	10	120	10.0	30	*h2.0	5	4	*3h	6	
P410A	* GDP	6	8	6	20	20	2	100	2	85	E	5	5	10	120	10.0	1h	*h2.0	5	4	*3h	6	
P411	* GDP	6	8	6	20	20	2	100	2	85	E	5	5	10	120	10.0	30	*h4.0	4	4	*2h	6	
P411A	* GDP	6	8	6	20	20	2	100	2	85	E	5	5	10	120	10.0	1h	*h4.0	4	4	*2h	6	
P414	GDP	10	1	10	10		5	100	2	75					5.0	25	60		10	*1k	16		
P414A	GDP	10	1	10	10		5	100	2	75					5.0	60	60		10	*1k	16		
P414B	GDP	10	1	10	10		5	100	2	75					5.0	1h	60		10	*1k	16		
P415	GDP	10	1	10	10		5	100	2	75					5.0	25	h1.2		10	*5h	16		
P415A	GDP	10	1	10	10		5	100	2	75					5.0	60	h1.2		10	*5h	16		
P415B	GDP	10	1	10	10		5	100	2	75					5.0	1h	h1.2		10	*5h	16		
P416	* GDP	3	20	120	50		3	100	2	70	E	5	5		5.0	20	40		8	*5h	13		
P416A	* GDP	3	20	120			3	100	2	70	E	5	5		5.0	60	60		8	*5h	13		
P416B	* GDP	3	20	120			3	100	2	70	E	5	5		5.0	1h	80		8	*5h	13		
P417	* G P	<1	10	10	5		3	50	2	85	E	5	5			24	200		5	*4h	19		
P417A	* G P	<1	10	10	5		3	50	2	85	E	5	5			65	200		5	*4h	19		
P418	P		10	5	3	50	2	C	5	5					24	400							
P418A	P		10	5	3	50	2	C	5	5					65	400							
P418B	P		10	10	3	50	2	C	6	10					24	700							
P418G	GDP	10	8	3	50		85								8	400		200		6			

## Group X – TRANSISTORS – Continued

Type No.	Kind	Maximum								Typical		Maximum				Minimum		Typ NF	Min K <sub>M</sub>	C <sub>ob</sub>	Maximum r <sub>b</sub> *r' <sub>b</sub> 'C <sub>e</sub>	Fig No.
		V <sub>CBO</sub> V	V <sub>EBO</sub> V	V <sub>CEO</sub> V	I <sub>C</sub> mA	I <sub>E</sub> mA	I <sub>CBO</sub> μA	P <sub>C</sub> mW	K <sub>θ</sub> mW/ °C	T <sub>A</sub> °C	Common	V <sub>C</sub> V	I mA	h <sub>11</sub> Ω	h <sub>12</sub> 10 <sup>-5</sup>	h <sub>22</sub> μmho	h <sub>21</sub>	*f <sub>T</sub> max MHz				
P418M	GDP	10	8		3	50	85									8	400		200		6	
P418V	P		10	10	3	50	2		C	6	10					65	700					
P420	GDP	40	12	25		100										6.0	12	*30	20	*5k	10	
P421	GDP	40	12	25		100										5.0	15	*30	15	*3k	10	
P422	* GDP	40	10	10	5	50	70	E	5	5					5.0	30	*60	10	*1k	16		
P422A	GDP	40	12	25	5	100									5.0	15	*60	10	*1k	16		
P423	* GDP	40	10	10	5	50	70	E	5	5					5.0	30	h1.2 10	10	*5h	16		
P423A	GDP	40	12	25	5	100									5.0	15	*h1.2		*5h	16		
P501	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	10	10	10		19		
P501A	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	15	10	10		19		
P502	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	20	30	10		19		
P502A	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	20	30	10		19		
P502B	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	20	30	10		19		
P502V	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	20	30	10		19		
P503	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	30	60	10		19		
P503A	SDN	20	1	20	10	3	50	150	1	150	E	10	3		3.0	30	60	10		19		
P504	SDN	30	2	30	10		2	150	2	120	E	10	5		2.0	10		7		14		
P504A	SDN	30	2	30	10		2	150	2	120	E	10	5		2.0	25		7		14		
P505	SDN	20	2	20	10		2	150	2	120	E	10	5		2.0	40		7	*1k	14		
P505A	SDN	20	2	20	10		2	150	2	120	E	10	5		2.0	20		7	*1k	14		
KT601	SDN	100	2	100	30		500	150							16			15	*6h	11		
KT601A	* SPN	100	2	100	30		50	500	150	E	20	<1			16	*40		15	*6h	11		
P601	GDP	25	<1	25	1A	200	1W	500	C	10	500				20	20	10	200	*5h	20		
P601A	GDP	30	<1	30	1A	100	1W	500	C	10	500				40	20	10	200	*5h	20		
P601AI	* GDP	30	<1	25	15h	100	500	65	85	E	3	<1			40	20		150	*7h	18		
P601B	GDP	30	<1	25	1A	130	1W	500	85	C	10	500			80	20	10	200	*5h	20		
P601BI	* GDP	30	<1	30	15h	130	500	65	85	E	3	<1			80	20		250	*7h	18		
P601I	* GDP	25	<1	20	15h	200	500	65	85	E	3	<1			20	*13		150	*7h	18		
KT602A	* SDN	120	5	100	75	80	70	850	200	120	E	10	10		20	150		4	*3h	33		
KT602B	* SDN	120	5	100	75	80	70	850	200	120	E	10	10		50	150		4	*3h	33		
KT602G	\$ SDN	80	5	100	75	80	70	850	200	120	E	10	10		50	150		4	*3h	33		
KT602V	* SDN	80	5	100	75	80	70	850	200	120	E	10	10		15	150		4	*3h	33		
P602	GDP	30	<1	30	1A	100	1W	500	85	C	10	500			40	20	10	200	*5h	20		
P602A	GDP	25	<1	25	1A	130	1W	500	85	C	10	500			80	20	10	200	*5h	20		
P602AI	* GDP	25	<1	25	15h	130	500	65	85	E	3	<1			80	6		150	*7h	18		
P602I	* GDP	30	<1	30	15h	100	500	65	85	E	3	<1			40	6		150	*7h	18		
KT604A	SPN	300	5	250	200		3000	25	100						10	*80				13		
KT604B	SPN	300	5	250	200		3000	25	100						30	*80				13		
P604	GAP	45	15	45	200		400	70							10					15		
P604A	GAP	45	15	45	200		400	70							20					15		
P604B	GAP	45	15	45	200		400	70							40					15		
KT605A	SEN	300	8	250	200		50	400	3	150	E	40	20		10			7		13		
KT605B	SEN	300	8	250	200		50	400	3	150	E	40	20		30			7		13		
P605	* GDP	45	1	35	500		2m	500	65	85	E	3	500		20	20	10	130	*5h	26		
P605A	* GDP	45	1	35	500		2m	500	65	85	E	3	500		40	40	10	130	*5h	26		
P606	* GDP	35	<1	20	500		2m	500	65	85	E	3	500		20	20	10	130	*5h	26		
P606A	* GDP	35	<1	20	500		2m	500	65	85	E	3	500		40	40	10	130	*5h	26		
P607	* GDP	30	<2	25	200		300	1500	85	E	10	100			20	*60		50	*2h	18		
P607A	* GDP	30	<2	25	200		300	1500	85	E	10	100			60	*60		50	*2h	18		
P608	* GDP	30	<2	25	200		300	1500	85	E	10	100			40	90		50	*2h	18		
P608A	* GDP	30	<2	25	200		300	1500	85	E	10	100			80	90		50	*2h	18		
P608B	GDP	50	15	200		300	1500	85	E	10	100			80	70		50	*2h	26			
P609	* GDP	30	<2	25	200		300	1500	85	E	10	100			40	120		50	*2h	18		
P609A	* GDP	30	<2	25	200		300	1500	85	E	10	100			80	120		50	*2h	18		
P609B	GDP	50	15	40	200		300	1500	85	E	10	100			80	100		50	*2h	26		
GT701A	* GDP	15	55	12A		5000	P50W	400	85	C	20	100			10	<0.1				23		
P701	* SDN	40	2	40	500	7h	100	1000	100	150	E	10	500		10	12.5				20		
P701A	\$ SDN	60	2	60	500	7h	100	1000	100	150	E	10	200		15	12.5				20		
P701B	* SDN	35	<3	35	500	7h	100	1000	100	150	E	10	200		30	20				20		
P702	* SDN	70	3	60	2A	5000	4000	400	120	E	10	1A			25	4.0				21		
P702A	* SDN	70	3	60	2A	2500	4000	400	120	E	10	1A			10	4.0				21		
KT801A	* SDN	<3	80	2A		P5W	50	150	E	5	1A				13	*10				33		
KT801B	* SDN	<3	80	2A		P5W	50	150	E	5	1A				20	*10				33		
KT802A	* SPN	150	3	130	5A	60m	P50W	400	150	C	10	2A			15	*10				21		
KT803A	* SPN	4	60	10A		5m	P60W	100							10	*20				21		

## Group X – TRANSISTORS – Continued

Type No.	Kind	Maximum								Typical		Maximum			Minimum			Typ NF	Min K <sub>M</sub>	Max C <sub>ob</sub>	Max r <sub>b</sub> 'C <sub>c</sub>	Fig No.
		V <sub>CBO</sub> V	V <sub>EBO</sub> V	V <sub>CEO</sub> V	I <sub>C</sub> mA	I <sub>E</sub> mA	I <sub>CBO</sub> μA	P <sub>C</sub> mW	K <sub>θ</sub> mW/ °C	T <sub>A</sub> °C	Common V <sub>C</sub> V	I mA	h <sub>11</sub> Ω	h <sub>12</sub> 10 <sup>-5</sup>	h <sub>22</sub> μmho	h <sub>21</sub>	*f <sub>T</sub> <sub>max</sub> MHz					
GT804A	* GDN		45	10A		10m	P15W		65							20	10				18	
GT804B	GDN		55	10A		10m	P15W		65							20	10				18	
GT804V	GDN		75	10A		10m	P15W		65							20	10				18	
KT805A	* SDN	5	160	5A	100m	P30W	300	150	C	10	2A					15	20				21	
KT805B	* SDN	5	135	5A	100m	P30W	300	150	C	10	2A					15	20				21	
KT902A	SDN	65	5	110	5A	10m	P30W		120							15	*35				21	
KT903A	SPN	60	4	60	3A	10m	P30W	300	85							15			180		21	
KT903B	* SPN	60	4	60	3A	10m	P30W	300	85							40			180		21	
S1A	GPP	40		10	10		100			E	20	<1				1.0	0.5	19			7	
S1B	GPP	40		6	10		50			E	20	<1				1.2	0.5	22			7	
S1D	GPP	40		6	10		50			E	20	<1				1.2	5.0	22			7	
S1G	GPP	40		6	10		50			E	20	<1				1.2	1.5	22			7	
S1V	GPP	40		10	10		100			E	20	<1				1.2	1.5	19			7	
S1YE	GPP	40		6	10		50			E	20	<1				1.2		15			7	
S2A	GPP	30		10	10		100			E	10	<1				1.2	0.5				7	
S2B	GPP	20		6	10		50			E	10	<1				1.5	1.5				7	
S2G	GPP	20		6	10		50			E	10	<1				1.5					7	
S2V	GPP	20		6	10		50			E	10	<1				1.5	5.0				7	
S3A	GPP	40		10	10		100			E	20	<1				1.0	0.5	19			8	
S3B	GPP	40		6	10		50			E	20	<1				1.2	0.5	22			8	
S3D	GPP	40		6	10		50			E	20	<1				1.2	5.0	22			8	
S3G	GPP	40		6	10		50			E	20	<1				1.2	1.5	22			8	
S3V	GPP	40		10	10		100			E	20	<1				1.2	1.5	19			8	
S3YE	GPP	40		6	10		50			E	20	<1				1.2	10.0	15			8	
S4A	GPP	30		6	10		100			E	10	<1				1.2	0.5				8	
S4B	GPP	20		6	10		50			E	10	<1				1.5	1.5				8	
S4G	GPP	20		6	10		50			E	10	<1				1.5	10.0				8	
S4V	GPP	20		6	10		50			E	10	<1				1.5	5.0				8	

## Group X-A—INTEGRATED CIRCUITS

Type No.	Series	Kind	No.	Logic	Voltage		Current		Frequency			Input res ohms	Max gain	Fan		Max time	Dwg No.		
			Diodes		Supply V	In V	In mA	Out mA	Max P mW	Min Hz	Max Hz			No. Exp	dB	In	Out		
	144				5.0	0.3	2.5									45	64		
1DA191	119		2		6.3	3.0		1				5 40K					51		
1GF191	119		3		6.3	3.5	4.0	3				1 3					51		
1GF192	119	MVB	4	2	3.0		1.1	8				39 2				30 $\mu$	51		
1GF193	119	MVB	2	2	3.0	5.0	1.2	4				1 3				2 $\mu$	51		
1IE201	120		30		12.6	4.0			15						10		51		
1IL131A	113		8		4.0	0.2	0.78		1h	2					4 400		51		
1IL131B	113		8		4.0	0.2	0.78		2h	2					4 400		51		
1IL131V	113		8		4.0	0.2	0.78		3h	2					4 400		51		
1IL141A	114		10		4.0	0.15	0.95		32	2					4 500		58		
1IL141B	114		10		4.0	0.15	0.95		46	2					4 500		58		
1IR141A	114		16		4.0	0.15	0.78		1h	2					4 500		58		
1IR141B	114		16		4.0	0.15	0.78		2h	2					4 500		58		
1IR201	120	MOS	31		12.6	4.0			15						10		51		
1IR202	120	MOS	19		12.6	4.0			12						10		51		
1IR451	145	MOS	12		12.6				40			10 9					51		
1JAM351	135	MOS	8		27.0				2								51		
1KP191	119		1 RTL		3.0			<4	70								51		
1KT011A	101		2 RTL		3.5		6.5	10				1 2					54		
1KT011B	101		2 RTL		3.5		6.5	10				1 2					54		
1KT011G	101		2 RTL		3.5		3.5	10				1 2					54		
1KT011V	101		2 RTL		3.5		3.5	10				1 2					54		
1KT491	149		4 RTL		5.0				2h	100		h KK				50		51	
1LB041	104	NND	3	1 DTL	6.3					18					5	50		51	
1LB042	104	NND	4	1 DTL	6.3	0.5	2.6			18					3	5	50		51
1LB043	104	NND	5	1 DTL	6.3	0.5	2.6			18					3	5	50		51
1LB044	104	NND	6	1 DTL	6.3	0.5	2.6			18					3	5	50		51
1LB061	106	NDR	10	TTL	5.0	0.3	2.3			18					3	10	40		51
1LB0610	106	NDR	6	TTL	5.0	0.25	2.3			7					4	10	110		51
1LB062	106	NDR	10	TTL	5.0	0.25	2.3			7					3	10	100		51
1LB063	106	NDR	10	TTL	5.0	0.3	2.3			18					2	10	40		51
1LB064	106	NDR	10	TTL	5.0	0.25	2.3			7					2	10	100		51
1LB065	106	NDR	6	TTL	5.0	0.3	2.3			18					8	10	45		51
1LB066	106	NDR	6	TTL	5.0	0.25	2.3			7					8	10	110		51
1LB067	106	NDR	6	TTL	5.0	0.3	2.3			18					6	10	45		51
1LB068	106	NDR	6	TTL	5.0	0.25	2.3			7					6	10	110		51
1LB069	106	NDR	6	TTL	5.0	0.3	2.3			18					4	10	45		51
1LB091A	109	NDR	5	2 DTL	5.0	0.35	2.5			12					6	12	35		51
1LB091B	109	NDR	5	2 DTL	5.0	0.35	2.5			12					6	10	35		51
1LB091G	109	NDR	5	2 DTL	5.0	0.35	2.5			12					6	5	35		51
1LB091V	109	NDR	5	2 DTL	5.0	0.35	2.5			12					6	8	35		51
1LB092A	109	NDR	4	4 DTL	5.0	0.4	2.5			19					6	20	50		51
1LB092B	109	NDR	4	4 DTL	5.0	0.4	2.5			19					6	16	50		51
1LB111	111	NOR	2 RTL		4.0	0.2	0.95		1h	<1						4	400		62
1LB112	111	NOR	2 RTL		4.0	0.2	0.95		2h	<1						4	400		62
1LB113	111	NOR	2 RTL		4.0	0.2	0.95		3h	<1						4	100		62
1LB131A	113	NOR	8 RTL		4.0	0.2	0.95		1h	2						4	400		51
1LB131B	113	NOR	8 RTL		4.0	0.2	0.95		2h	2						4	400		51
1LB131V	113	NOR	8 RTL		4.0	0.2	0.95		3h	2						4	400		51
1LB132A	113	NOR	8 RTL		4.0	0.2	0.95		1h	2						4	400		51
1LB132B	113	NOR	8 RTL		4.0	0.12	0.95		2h	2						4	400		51
1LBX32V	113	NOR	8 RTL		4.0	0.2	0.95		3h	2						4	400		51
1LB133A	113	NOR	8 TTL		4.0	0.5			1h	2						50	400		51
1LB133B	113	NOR	8 TTL		4.0	0.5			2h	2						50	400		51
1LB133V	113	NOR	8 TTL		4.0	0.5			3h	2						50	400		51

## Group X-A—INTEGRATED CIRCUITS—Continued

Type No.	Series	Kind	No.		Voltage			Current		Frequency			Input		Fan		Max time	Dwg No.
			Diodes	Transistors	Logic	Supply V	In V	Out V	In mA	Out mA	Max P mW	Min Hz	Max Hz	No.	Exp.	Max gain dB	In ns	
1LB134A	113	NOR	6	TTL	4.0	0.5			1h	2						50	400	51
1LB134B	113	NOR	6	TTL	4.0	0.5			2h	2						50	400	51
1LB134V	113	NOR	6	TTL	4.0	0.5			3h	2						50	400	51
1LB135A	113	NOR	8	RTL	4.0	0.2	0.95		1h	2						4	400	51
1LB135B	113	NOR	8	RTL	4.0	0.2	0.95		2h	2						4	400	51
1LB135V	113	NOR	8	RTL	4.0	0.2	0.95		3h	2						4	400	51
1LB141A	114	NOR	8	RTL													500	58
1LB141B	114	NOR	8	RTL													500	58
1LB142A	114	NOR	8	RTL	4.0	0.15	0.95				2					4	500	58
1LB142B	114	NOR	8	RTL	4.0	0.15	0.95				2					4	500	58
1LB143A	114	NOR	8	RTL	4.0	0.15	0.95				2					4	500	58
1LB143B	114	NOR	8	RTL	4.0	0.15	0.95				2					4	500	58
1LB144A	114	NOR	8	RTL	4.0	0.15	0.95				2					4	500	58
1LB144B	114	NOR	8	RTL	4.0	0.15	0.95				2					4	500	58
1LB145A	114	NOR	8	RTL	4.0	0.15	0.95				2					10	500	58
1LB145B	114	NOR	8	RTL	4.0	0.15	0.95				2					10	500	58
1LB146A	114	NOR	10	RTL	4.0	0.15	0.95				2					50	500	58
1LB146B	114	NOR	10	RTL	4.0	0.15	0.95				2					50	500	58
1LB211A	121	NDR	5	2	DTL	5.0	0.35	2.5			12					6	12	35 53
1LB211B	121	NDR	5	2	DTL	5.0	0.35	2.5			12					6	10	35 53
1LB211G	121	NDR	5	2	DTL	5.0	0.35	2.5			12					6	5	35 53
1LB211V	121	NDR	5	2	DTL	5.0	0.35	2.5			12					6	8	35 53
1LB212A	121	NDR	4	4	DTL	5.0	0.4	2.5			19					6	20	50 53
1LB212B	121	NDR	4	4	DTL	5.0	0.4	2.5			19					6	16	50 53
1LB251	125	MND	6	16	DTL	27.0			15		17			10 7		5	10	4k 51
1LB331A	133	NN	2	8	TTL	5.0	0.4	2.4			20					4	10	22 51
1LB331B	133	NN	2	8	TTL	5.0	0.4	2.4			20					4	10	35 51
1LB332A	133	NN	1	4	TTL	5.0	0.4	2.4			20					8	10	25 51
1LB332B	133	NN	1	4	TTL	5.0	0.4	2.4			20					8	10	35 51
1LB341	134	NOR			TTL	5.0					2					10	100	51
1LB342	134	NOR			TTL	5.0					2					10	100	51
1LB371	137		6	TTL	5.0					110					10	15	4 51	
1LB372	137	ONR	6	TTL	5.0					110					10	15	4 51	
1LB381	138	ONR	10	TTL	5.0					110						15	3 63	
1LB391	139	ONR	6	TTL	5.0					40					9	15	10 51	
1LB392	139	ONR	6	RTL	5.0					40					9	15	10 51	
1LB471	147	MNR	6	16	DTL	12.6	2.0	13.9			25					10		51
1LB472	147	MNR	8	15	DTL	12.6	2.0	14			45			10 6		10	1μ	51
1LI041	104	AND	3			6.3				6								51
1LI042	104	AND	4			6.3				6								51
1LI043	104	AND	5			6.3				6								51
1LI044	104	AND	8			6.3				6								51
1LI045	104	AND	10			6.3				6								51
1LL201	120	MOR	14	TTL	12.6	4.0	13			8					10	800	51	
1LP061	106	OR	3	TTL	5.0										8	6	51	
1LP062	106	OR	3	TTL	5.0										8	10	51	
1LP063	106	OR	3	TTL	5.0										6	6	51	
1LP064	106	OR	3	TTL	5.0										6	10	51	
1LP065	106	OR	4	TTL	5.0										4	6	51	
1LP066	106	OR	4	TTL	5.0										4	10	51	
1LP067	106	OR	4	TTL	5.0										3	6	51	
1LP068	106	OR	4	TTL	5.0										3	10	51	
1LP091	109		6			25				<2							51	
1LP141	114	OR	8													500	58	
1LP142	114	OR	8			4.0	0.15	0.95			2					4	500	58

## Group X-A - INTEGRATED CIRCUITS - Continued

Type No.	Series	Kind	No.	Logic	Voltage			Current		Frequency			Input res ohms	Fan		Max time	Dwg No.
			Diodes		Xistors	Sup- ply V	In V	In mA	Out mA	Max P mW	Min Hz	Max Hz		No. Exp	Max In dB	Max Out dB	
1LP201	120	MOS	8														51
1LP211	121		6			25					<2						5 53
1LP251	125	MOS	8	8		27											6 $\mu$ 51
1LP331	133	OR		4	TTL	5.0											4 5 51
1LP371	137					6											6 51
1LP391	139		6													6	51
1LP421	142	MOS	10								2					15	51
1LP471	147	MOS	8	18	TTL	12.6	2.0	14			25			10 6		10 1 $\mu$	51
1LR061	106	ADR		7	TTL	5.0	0.3	2.3			24					8 10	45 51
1LR062	106	ADR		7	TTL	5.0	0.25	2.3			10					8 10	110 51
1LR063	106	ADR		7	TTL	5.0	0.3	2.3			24					4 10	45 51
1LR064	106	ADR		7	TTL	5.0	0.25	2.3			10					4 10	110 51
1LR271	127	ADR	7	1	DTL	3.0					30		12M			4 6	30 51
1LR331A	133	ADR	2	12	DTL	5.0	0.4	2.4			20					10	28 51
1LR331B	133	ADR	2	12	DTL	5.0	0.4	2.4			20					4 10	40 51
1LR341	134	ADR			DTL	5.0					2					10	100 51
1LR342	134	ADR			DTL	5.0					2					10	100 51
1LR421	142	MOS		15	TTL	12.6	3.0	10			36					15 30	500 51
1LS271	127	ADR	7	2	DTL	3.0					30		12M			4 6	30 51
1MA191	119			4	TTL	6.3								2hk	27 2		51
1ND041	104		3			4.5	0.85										51
1ND042	104		4			4.5	0.85										51
1ND043	104		6			4.5	0.85										51
1ND044	104		8			4.5	0.85										51
1PP191	119			4	TTL	10.0				10 10			20	2M	15 2		51
1SV191	119	AMP	2	2		6.3				3							51
1TK191	119		3	2	DTL	6.3				8			1M			500	51
1TK251	125	MOS	6	18	TTL	27.0	2.0	15			17			1 7		5 10	4 $\mu$ 51
1TK471	147	MOS	8	22	TTL	12.6	2.0	14			15			7			51
1TR061	106	ADR		10	TTL	5.0	0.3	2.3			36					3 10	40 51
1TR062	106	ADR		10	TTL	5.0	0.3	2.3			14					3 10	100 51
1TR063	106	ADR		10	TTL	5.0	0.3	2.3			36					2 10	40 51
1TR064	106	ADR		10	TTL	5.0	0.3	2.3			14					2 10	100 51
1TR131A	113	NOR		8	RTL	4.0	0.2	0.78		1h	2					4 400	51
1TR131B	113	NOR		8	RTL	4.0	0.2	0.78		2h	2					4 400	51
1TR131V	113	NOR		8	RTL	4.0	0.2	0.78		3h	2					4 400	51
1TR141A	114	NOR		8	RTL	4.0	0.15	0.78		1h	2					4 500	58
1TR141B	114	NOR		8	RTL	4.0	0.15	0.78		2h	2					4 500	58
1TR421	142	MOS		22	TTL	12.6	3.0	10			40					500	51
1TSH191	119	SCH	4			3.0				4				6 2			51
1UB191	119	AMP	2			6.3				7				1 3			51
1UI461	146	AMP	10			10.0					100						57
1UI462	146	AMP	2	4		20.0				3h						200	57
1US191	119	AMP	1			6.3				<2			5 40k	4 3 <3			51
1US192	119	AMP	2			6.3				3			5 2hk	8			51
1US221A	122	AMP	2			6.0							0 7hk	2h			52
1US221B	122	AMP	2			9.0							0 7hk	4h			52
1US221V	122	AMP	2			12.6							0 7hk	5h			52
1US222A	122	AMP	3			4.0							0 8M	40			52
1US222B	122	AMP	3			6.3							0 8M	50			52
1US222V	122	AMP	3			6.3							0 8M	80			52
1US481	148	AMP	5			3.0					50			50M			53
1UT191	119	AMP	2			6.3				2			5 2hk	35 2 3			51
1UT221A	122	AMP	4			4.0							0 2M	15			53
1UT221B	122	AMP	4			4.0							0 2M	22			53

## Group X-A - INTEGRATED CIRCUITS - Continued

Type No.	Series	Kind	No.	Logic	Voltage		Current		Max P	Frequency		Input res ohms	Fan		Max time	Dwg No.		
					Diodes	Xistors	Sup-ply V	In V	Out V	In mA	Out mA	Max gain dB	In ns					
1UT221G	122	AMP	4		6.3					0	2M		22			53		
1UT221V	122	AMP	4		6.3					0	2M				15	53		
1UT231	132	AMP	24		12.6					120	0	2M	15	4		53		
1UT401	140	AMP	19		12.6					150	0	5M	10	3		1k	53	
1UYE191	120	AMP	4		3.0				< 2			20	5h k	40	3		51	
1UYE201	120	MMP	26		12.6	4.0	13			70					10	800	51	
2DA181	218	DET	1	1	6.3					14		10k				4μ	57	
2DS191	219	LIM	4		5.0						500	1M					55	
2FP201	220	FIL															55	
2GF181	218	MVB	6	2	6.3						83	50	1M				57	
2GF182	218	MVB	6	2	6.3						76		2h k				300	57
2GF201	220	MVB	2		7.5				2								55	
2GS191	219	OSC	1		5.0						2		70M				55	
2GS192	219	OSC	1		5.0						2		15M				55	
2GS193	219	OSC	1		5.0						2		15M				55	
2ID231	223		25		4.0	1.45	0.85			171				4	10	15	64	
2IE111	211		15		3.0	0.35	0.8			30				3	300	56		
2IE112	211		15		3.0	0.35	0.8			30				5	300	56		
2IE231	223		29		4.0	1.45	0.85			185				10	50	64		
2IL071	207		16		3.0	0.35	0.65			18				3	200	60		
2IL072	207		16		3.0	0.35	0.65			18				4	200	60		
2IL073	207		16		3.0	0.35	0.65			18				5	200	60		
2IL231	223		30		4.0	1.45	0.85			250				10	35	64		
2IR111	211	12 TTL	3	TTL	3.0	0.35	0.8			35				4	400	56		
2IR112	211	12 TTL	3	TTL	3.0	0.35	0.8			35				6	400	56		
2KD281	228	SWI	14	RDL	6.3		1.25 <3									20	56	
2KD282	228	SWI	14	RDL	6.3		1.25 <3									20	56	
2KT281	228	SWI	8	2 DTL	6.3	0.5	2.5									20	57	
2LB011	201	NND	4	RTL	4.0	1.3	0.3			15				6	2	100	58	
2LB012	201	NOR	4	RTL	4.0	1.3	0.3			30				6	1	100	58	
2LB013	201	NOR	4	RTL	4.0	1.3	0.3			30				6	1	100	58	
2LB014	201	NND	6	RTL	4.0	1.3	0.3			25				6	2	100	58	
2LB015	201	NND	5	RTL	4.0	1.3	0.3			20				6	2	100	58	
2LB016	201	NOR	5	RTL	4.0	1.3	0.3			38				6	1	100	58	
2LB017	201	NOR	5	RTL	4.0	1.3	0.3			38				6	1	100	58	
2LB041	204	NDR	2	8 TTL	4.0	2.4	0.3			68				10	6	100	61	
2LB042	204	NND	2	6 TTL	4.0	2.4	0.3			50				5	10	100	61	
2LB052	205	NOR	4	RTL	4.0	0.3	1.4			25				2	250	61		
2LB053	205	NOR	4	RTL	4.0	0.3	1.4			25				3	250	61		
2LB071	207	NOR	12	RTL	3.0	0.35	0.65			18				6	3	200	60	
2LB072	207	NOR	12	RTL	3.0	0.35	0.65			18				6	4	200	60	
2LB073	207	NOR	12	RTL	3.0	0.35	0.65			18				6	5	200	60	
2LB074	207	NOR	16	RTL	3.0	0.35	0.65			19				6	3	200	60	
2LB075	207	NOR	16	RTL	3.0	0.35	0.65			19				6	4	200	60	
2LB076	207	NOR	16	RTL	3.0	0.35	0.65			19				6	5	200	60	
2LB111	211	NND	16	RTL	3.0	0.35	0.8							10	3	400	56	
2LB112	211	NND	16	RTL	3.0	0.35	0.8			19				10	4	400	56	
2LB113	211	NND	16	RTL	3.0	0.35	0.8			19				10	6	400	56	
2LB114	211	NND	10	RTL	3.0	0.35	0.8			25				10	3	400	56	
2LB115	211	NND	10	RTL	3.0	0.35	0.8			25				10	4	400	56	
2LB116	211	NND	10	RTL	3.0	0.35	0.8			25				10	6	400	56	
2LB117	211	NND	9	RTL	3.0	0.35	0.8			40				10	3	400	56	
2LB118	211	NND	9	RTL	3.0	0.35	0.8			40				10	4	400	56	
2LB119	211	NND	9	RTL	3.0	0.35	0.8			40				10	6	400	56	

## Group X-A—INTEGRATED CIRCUITS—Continued

Type No.	Series	Kind	No.	Logic	Voltage		Current		Max P	Frequency		Input res ohms	Max gain	Fan		Max time	Dwg No.		
			Diodes		Xistors	Sup-ply V	In V	Out V		In mA	Out mA			No.	Exp	In dB	Out dB		
2LB171	217	NND	10	1	DTL	6.0	0.3	2.6			12					8	4	25	59
2LB172	217	NND	10	2	DTL	6.0	0.3	2.6			24					3	4	25	59
2LB173	217	NND	8	3	DTL	6.0	0.3	2.6			18					8	8	25	59
2LB181	218		3	1	DTL	6.3	6.0	3.0			41	600	1M						57
2LB211	221		10	1		4.0				7	15								57
2LB231	223	ORD	21	TTL		4.0	1.45	0.85			128					3	10	15	64
2LB1110	211	NOR	8	RTL		3.0	0.35	0.8			35					10	3	250	56
2LB1111	211	NOR	8	RTL		3.0	0.35	0.8			35					10	4	250	56
2LB1112	211	NOR	8	RTL		3.0	0.35	0.8			35					10	6	250	56
2LI041	204			4	RTL			1.4			18					4	1	10	61
2LL231	223		20	TTL		4.0	1.45	0.85			112					4	10	15	64
2LN021	202	NND	2	5	DTL	4.0	0.3	1.4			35						3	70	58
2LN022	202	NND	2	5	DTL	4.0	0.3	1.4			35						5	70	58
2LN051	205	NND	4	4	DTL	4.0	0.4	1.4			8						4	250	61
2LN052	205	NND		8	RTL	4.0	0.3	1.4			25						2	250	61
2LN111	211	NND		5	RTL	3.0	0.35	0.8			35					10	3	500	56
2LN112	211	NND		5	RTL	3.0	0.35	0.8			35					10	4	500	56
2LN113	211	NND		5	RTL	3.0	0.35	0.8			35					10	6	500	56
2LN114	211	NND		5	RTL	3.0	0.35	0.8			40					10	3	250	61
2LN115	211	NND		5	RTL	3.0	0.35	0.8			40					10	4	250	61
2LN116	211	NND		5	RTL	3.0	0.35	0.8			40					10	6	250	61
2LN151	215	NND		5	RTL	4.0	0.33	1.5			35						5	30	58
2LN181	218	INV	3			6.3		4.0			<1						3		57
2LN182	218	INV	2	3		6.3		3.5			24						3		57
2LN183	218	INV	1	3		6.3		3.5			28						3		57
2LN211	221	NOR	6			4.0	0.3	2.5			50					4			57
2LP171	217	EXP	10	2	DTL	6.0					24								59
2LP172	217	EXP	9	1	DTL	6.0					9							4	59
2LP173	217	EXP	8						1									59	
2LR171	217	ANR	8	4	DTL	6.0	0.3	2.6			30					8	10	100	59
2LR221	222	ANR	8	3	DTL	4.0	0.3	2.3			25					10	10	250	57
2LS011	201	ADR	6	RTL		4.0	1.3	0.3			30					6	8	100	58
2LS021	202	ADR	6	2	DTL	4.0	0.35	1.35			22					8	3	70	58
2LS022	202	ADR	6	2	DTL	4.0	0.35	1.35			22					8	5	70	58
2LS023	202	ADR	6	4	DTL	4.0	0.33	1.35			30					8	3	70	58
2LS024	202	ADR	6	4	DTL	4.0	0.33	1.35			30					8	5	70	58
2LS025	202	ADR	9			4.0			3		23							58	
2LS026	202	ADR	8			4.0			3		16							58	
2LS027	202	ADR	8	2	DTL	4.0	0.33	1.35			21					8	3	50	58
2LS028	202	ADR	8	2	DTL	4.0	0.33	1.35			21					8	5	50	58
2LS151	215	ADR	6	2	DTL	4.0	0.33	1.5			29					8	5	30	58
2LS152	215	ADR	6	1	DTL	4.0	0.33	1.5			30					10	5	25	58
2LS211	221		8			10.0			2									57	
2MS191	219		2			5.0			<2		300	34h							55
2MS192	219		3			5.0			<3		300	34h							55
2ND021	202		6			10.0				3								58	
2ND022	202		9			10.0				3								58	
2NE281	228					15.0												57	
2NK041	204		4				1.4									4	1	10	61
2NK051	205		4				1.2	5										61	
2NK281	228		4															57	
2NS191A	219		4			5.0			<3			14M						55	
2NS191B	219		4			5.0			<3			14M						55	
2NT011	201		4			5.0			15		15					25		58	
2NT012	201		4			5.0					15					45		58	

## Group X-A - INTEGRATED CIRCUITS - Continued

Type No.	Series	Kind	No.		Logic	Voltage			Current		Max P mW	Frequency		Input res ohms No. E <sub>sp</sub>	Fan		Max time ns	Dwg No.	
			Diodes	Xistors		Supply V	In V	Out V	In mA	Out mA		Min H <sub>z</sub>	Max H <sub>z</sub>		In dB	Out dB			
2NT013	201		4			5.0			15		15				35			58	
2NT171	217		4			10.0			15						70			59	
2NT172	217		4			10.0			15						150			59	
2NT173	217		4			10.0			15						280			59	
2NT191	217		5			5.0												55	
2TK041	204		4	5		4.0	2.4	0.3			37					100	61		
2TK171	217		16	2	DTL	6.0	0.3	2.6			60			5M		4	59		
2TK181	218		3	6	DTL	6.3	0.25	4.0			24			1M			300	57	
2TR071	207		16			3.0	0.35	0.65			10					3	200	60	
2TR072	207		16			3.0	0.35	0.65			10					4	200	60	
2TR073	207		16			3.0	0.35	0.65			10					5	200	60	
2TR111	211	NOR	12	RTL		3.0	0.35	0.8			35					3	500	56	
2TR112	211	NOR	12	RTL		3.0	0.35	0.8			35					4	500	56	
2TR113	211	NOR	12	RTL		3.0	0.35	0.8			35					6	500	56	
2TR114	211	NOR	8	RTL		3.0	0.35	0.8			20					2	400	56	
2TR115	211	NOR	8	RTL		3.0	0.35	0.8			20					3	400	56	
2TR116	211	NOR	8	RTL		3.0	0.35	0.8			20					5	400	56	
2TR171	217		14	2	DTL	3.0	0.3	2.6			40			6M		3	59		
2TR172	217		14	2	DTL	3.0	0.3	2.6			40			6M		5	59		
2TR211	221	FLP	6	3		4.0		2.7			25						1μ	57	
2TR231	223		25	TTL		4.0	1.45	0.85			128					10	35	64	
2UI021	202	AMP	1	5	DTL	4.0	0.3	1.4			48					15	70	58	
2UI071	207	AMP	12	TTL		3.0	0.35	0.65			14					1	20	60	
2UI111	211	AMP	10	TTL		3.0	0.35	0.85			30						300	56	
2UI151	215	AMP	5	RTL		4.0	0.33	1.5			48					5	25	58	
2UI181	218	AMP	1	RTL		6.3					20	60	1hk	6	2	3		57	
2UI182	218	AMP	2	TTL		6.3					40	250	4hk	6	2			57	
2UI183	218	AMP	2			6.3					48			5	2	3		57	
2US181	218	AMP	2			6.3					69	22M	37M	3				57	
2US191A	219	AMP	2			5.0			<3			44M	50M		35			55	
2US191B	219	AMP	2			5.0			<3			44M	50M		70			55	
2US192	219	AMP	3			5.0			<2			5hk	1M		6h			55	
2US193	219	AMP	2			5.0			<2			300	34h		2h			55	
2US194	219	AMP	2			5.0			<2			300	34h					55	
2US201	220	AMP	6			7.5			4			500	3k	7	3	1k		55	
2US202	220		1	1		7.5			<2			40k	1hk					55	
2US281	228	AMP	1			6.3					70			2	2			57	
2US282	228	AMP	3			6.3			3					4	2			57	
2US283	228	AMP	2			6.3					70			2	2			57	
2US284	228	AMP	2			6.3					80			2	3			57	
2US285	228	AMP	6	3		6.3			4			65						57	
2UYE181	218	AMP	1			6.3						8	200	3hk	3	3			57

**Group X-B—MOS TRANSISTORS**

Type No.	Kind	I <sub>DS</sub>		S (gain)		V <sub>GS</sub>		V <sub>DG</sub>		I <sub>GR</sub> nA	Max noise μV *dB	C <sub>IN</sub> pF	C <sub>SD</sub> pF	Fig No.
		Min mA	Max mA	Min mA/V	Max mA/V	Min V	Max V	Min V	Max V					
KP102I	*MJF 0.7	1.8	0.35	1.0		5.5	20	30	15	10	5	0.2	30	
KP102K	*MJF 1.3	3.0	0.45	1.2		7.5	20	30	15	10	5	0.2	30	
KP102L	*MJF 2.4	6.0	0.65	1.3		10.0	20	30	15	10	5	0.2	30	
KP102YE	*MJF 0.18	0.55	0.25	0.7		2.8	20	30	15	10	5	0.2	30	
KP102ZH	*MJF 0.4	1.0	0.3	0.9		4.0	20	30	15	10	5	0.2	30	
KP103I	*MJF 1.0	2.1	0.8	2.6	0.8	3.0	15	20	20	*3	17	8.0	30	
KP103K	*MJF 1.7	3.8	1.4	3.5	1.4	4.0	15	20	20	*3	17	8.0	30	
KP103L	*MJF 3.0	6.6	1.8	3.8	2.0	6.0	15	20	20	*3	17	8.0	30	
KP103M	*MJF 5.4	12.0	2.0	4.4	2.8	7.0	15	20	20	*3	17	8.0	30	
KP103YE	*MJF 0.3	0.7	0.4	1.8	0.4	1.5	15	20	20	*3	17	8.0	30	
KP103ZH	*MJF 0.55	1.2	0.7	2.1	0.5	2.2	15	20	20	*3	17	8.0	30	

## Group XI—DIODES—RECTIFIERS

Type No.	Type	Maximum			Maximum @ 25 °C			Maximum			Recovery			$f_{\text{Max}}$ MHz	Fig No.	
		$I_F$ @ 25 mA	$T_{\text{opr}}$ °C	$I_S$ @ 25 °C mA	PIV	*Min V	$E_F$ @ mA	$I_F$	$I_R$ @ μA	$E_r$ @ V	T °C	$\tau$ @ μs	$I_F$ mA	$E_R$ V		
D1A	GEP	16	70		20	1.0		2	250	10	20				150M	1
D1B	GEP	16	70		30	1.0		1	250	25	20				150M	1
D1D	GEP	16	70		75	1.0		2	250	75	20				150M	1
D1G	GEP	16	70		50	1.0		5	250	50	20				150M	1
D1V	GEP	25	70		30	1.0		8	250	25	20				150M	1
D1YE	GEP	12	70		100	1.0		1	250	100	20				150M	1
D1ZH	GEP	12	70		100	1.0		5	250	100	20				150M	1
D2A	GEP	50	70		7	1.0		50	250	7	20				150M	6
D2B	* GEP	16	70	50	30	1.0		5	100	30	25				250M	6
D2D	* GEP	16	70	50	75	1.0		15	250	75	25				150M	6
D2G	* GEP	16	70	50	75	1.0		2	250	75	25				150M	6
D2I	* GEP	16	70	50	100	*1.0		2	250	100	25				150M	4
D2K	GEP	16	70		100	1.0		5	800	100	20				4	
D2M	GEP	16	70		100	1.0		5	250	100	20				4	
D2N	GEP	16	70		150	1.0		5	800	150	20				4	
D2P	GEP	16	70		150	1.0		5	250	150	20				4	
D2R	GEP	16	70		200	1.0		5	250	200	20				4	
D2V	* GEP	25	70	78	40	1.0		9	250	40	20				150M	4
D2YE	* GEP	16	70	50	100	1.0		<5	250	100	25				150M	4
D2ZH	* GEP	8	70	50	150	1.0		8	250	150	25				150M	4
MD3	* GEA	12	70	50	15	1.0		5	100	15	25	0.1	20	10		1
D7A	* GEA	300	70	25	50	0.5		300	100	50	20					11
D7B	* GEA	300	70	25	100	0.5		300	100	100	20				50k	11
D7D	* GEA	300	70	25	300	0.5		300	100	300	20				50k	11
D7G	* GEA	300	70	25	200	0.5		300	100	200	20				50k	11
D7V	* GEA	300	70	25	150	0.5		300	100	150	20				50k	11
D7YE	* GEA	300	70	25	350	0.5		300	100	350	20				50k	11
D7ZH	* GEA	300	70	25	400	0.5		300	100	400	20				50k	11
D9A	GEP	25	70		10	1.0		10	250	10	20				40M	1
D9B	* GEP	40	70		10	1.0		90	250	10	20				40M	1
D9D	* GEP	30	70		30	1.0		60	250	30	20				40M	1
D9G	* GEP	30	70		30	1.0		30	250	30	20				40M	1
D9I	* GEP	30	70		30	1.0		30	120	30	20				40M	1
D9K	* GEP	30	70		30	1.0		60	60	30	20				40M	1
D9L	* GEP	15	70		100	1.0		30	250	100	25				40M	1
D9M	GEP	30	70		30	1.0		60	250	50	20					1
D9V	* GEP	20	70		30	1.0		10	250	30	25				40M	1
D9YE	* GEP	20	70		50	1.0		30	250	50	25				40M	1
D9ZH	* GEP	15	70		100	1.0		10	250	100	20				40M	1
D10	* GEP	50	70		10	1.5		3	100	10	20				100M	4
D10A	* GEP	50	70		10	1.5		5	200	10	20				100M	4
D10B	* GEP	50	70		10	1.5		8	200	10	20				100M	4
D11	* GEP	20	70		30	1.0		100	250	30	20				50M	4
D12	* GEP	20	70		50	1.0		50	250	50	20				50M	4
D12A	* GEP	20	70		50	1.0		100	250	50	20				50M	4
D13	* GEP	20	70		75	1.0		100	250	75	20				50M	4
D14	* GEP	20	70		100	1.0		30	250	100	20				50M	4
D14A	* GEP	20	70		100	1.0		100	250	100	20				50M	4
D15	GEP				30	1.0		15	300	30					300M	
D16	GEP				50	1.0		5	500	50					500M	
D16A	GEP				50	1.0		10	500	50					300M	
D17	GEP				100	1.0		4	400	100					300M	
D18	* GEP	16	60	50	20	1.0		20	10	20	25	0.1	50	10	40M	2
D19	GEP	45	70		40	1.0		45	100	40	50				1	
D19A	GEP	60	70		20	1.0		60	100	20	50				1	

## Group XI—DIODES—RECTIFIERS—Continued

Type No.	Type	Maximum			Maximum @ 25 °C			Maximum			Recovery			$f_{Max}$ MHz	Fig No.
		$I_F$ @ 25 mA	$T_{opr}$ °C	$I_S$ @ 25 °C mA	PIV V	$E_F$ @ *Min V	$E_F$ @ V	$I_F$ mA	$I_R$ @ $\mu A$	$E_r$ @ T °C	$\tau$ @ $\mu s$	$I_F$ mA	$E_R$ V		
D19B	GEP	45	70		20	1.0		45	100	20	50				1
D20	* GEP	16	70		10	1.0		20	100	10	25			40M	2
D21	GEP	16	70		150	1.0		5	250	100	20			150M	4
D101	* SIP	30	150	100	75	2.0		2	10	75	125			600M	4
D101A	* SIP	30	150	100	75	1.0		1	10	75	125			600M	4
D102	* SIP	30	150	100	50	2.0		2	10	50	125			600M	4
D102A	* SIP	30	150	100	50	1.0		1	10	50	125			600M	4
KD102A	* SI	100	120	2A	250	1.2		50	100n	250	25				1A
D103	* SIP	30	150	100	30	2.0		2	30	30	125			100M	4
D103A	* SIP	30	150	100	30	1.0		1	30	30	125			100M	4
KD103A	* SIA	100	100	2A	50	1.0		50	50	50	100	4.0	50	20	1A
KD103B	* SIA	100	100	2A	50	1.2		50	50	50	100	4.0	50	20	1A
D104	* SIP	30	150	100	100	2.0		2	150	100	100			100M	2
D104A	* SIP	30	150	100	100	1.0		1	150	100	100			100M	2
D105	* SIP	30	150	100	75	2.0		2	100	75	100			100M	2
D105A	* SIP	30	150	100	75	1.0		1	100	75	100			100M	2
KD105A	SIA	300			200	1.0		300	300	150	85			7A	
KD105B	SIA	300			400	1.0		300	300	300	85			7A	
KD105V	SIA	300			600	1.0		300	300	450	85			7A	
D106	* SIP	30	150	100	30	2.0		2	30	30	25			100M	2
D106A	* SIP	30	150	100	30	1.0		1	30	30	25			100M	2
D107	SIP	10	125		10	1.0		10	<1	10	50				2
D107A	SIP	10	125		10	1.0		10	10	10	125				2
D108	SIP	10	125		30	1.0		10	35	30	25				2
D109	SIP	10	125		50	1.0		10	20	30	25				2
D201A	SI	200	125		25	1.5		500	25					100k	13
D201B	SI	200	125		50	1.5		500	50					100k	13
D201D	SI	400	125		100	2.0		500	100					100k	13
D201G	SI	200	125		100	1.5		500	100					100k	13
D201TS	SI	400	125		200	2.0		500	200					100k	13
D201V	SI	400	125		50	2.0		500	50					100k	13
D201YE	SI	200	125		200	2.0		500	200					100k	13
D201ZH	SI	400	125		200	2.0		400	500	200				100k	13
D202	* SIA	400	125		100	1.0		400	500	100	85			100k	13
KD202A	* SID	3A	130		50	1.0		3A	1000	50	120				13
KD202B	* SID	1A	130		50	1.0		1A	1000	50	120				13
KD202D	* SID	3A	120		200	1.0		3000	1000	200	120			100k	13
KD202G	* SID	1A	120		100	1.0		1000	1000	100	120			100k	13
KD202I	* SID	1A	120		300	1.0		1000	1000	300	120			100k	13
KD202K	* SID	3A	120		400	1.0		3000	1000	400	120			100k	13
KD202L	* SID	1A	120		400	1.0		1000	1000	400	120			100k	13
KD202M	* SID	3A	120		500	1.0		3000	1000	500	120			100k	13
KD202N	* SID	1A	120		500	1.0		1000	1000	500	120			100k	13
KD202R	* SID	3A	120		600	1.0		3000	1000	600	120			100k	13
KD202S	* SID	1A	120		600	1.0		1000	1000	600	120			100k	13
KD202V	* SID	3A	120		100	1.0		3000	1000	100	120			100k	13
KD202YE	* SID	1A	120		200	1.0		1000	1000	200	120			100k	13
KD202ZH	* SID	3A	120		300	1.0		3000	1000	300	120			100k	13
D203	* SIA	400	125		200	1.0		400	500	200	85			100k	13
D204	* SIA	400	125		300	1.0		400	500	300	85			100k	13
D205	* SIA	400	125		400	1.0		400	500	400	85			100k	13
D206	* SIA	100	100		100	1.0		100	100	100	100			100k	10
D207	* SIA	100	100		200	1.0		100	100	200	100			100k	10
D208	* SIA	100	100		300	1.0		100	100	300	100			100k	10
D209	* SIA	100	100		400	1.0		100	100	400	100			100k	10

## Group XI—DIODES—RECTIFIERS—Continued

Type No.	Type	Maximum			Maximum @ 25 °C			Maximum			Recovery			$f_{\text{Max}}$ MHz	Fig No.
		$I_F$ @ 25 mA	$T_{\text{opr}}$ °C	$I_S$ @ 25 °C mA	PIV V	*Min $E_F$ V	@ $I_F$ mA	$I_R$ @ $E_r$ mA	$E_r$ V	°C	$\tau$ @ $I_F$ μs	$I_F$ mA	$E_R$ V		
D210	* SIA 100 100	500	1.0	100	100	500	100							100 k	10
D211	* SIA 100 100	600	1.0	100	100	600	100							100 k	10
D214	SIA 5A 125	100	1.0	5A	3000	100	125								14
D214A	SIA 10A 125	100	1.0	10A	3000	100	125								14
D214B	SIA 2A 125	100	1.0	2000	3000	100	20							1 k	14
D215	SIA 5A 125	200	1.0	5A	3000	200	125								14
D215A	SIA 10A 125	200	1.0	10A	3000	200	125								14
D215B	SIA 2A 125	200	1.0	2000	3000	200	20							1 k	14
D217	* SIA 100 100	800	1.0	100	50	800	20							1 k	9
D218	* SIA 100 100	1000	1.0	100	50	1000	20							1 k	9
D219A	* SIA 50 100 500	70	1.0	50	30	70	100	0.5	30	30					2
D219S	* SI 50 120 500		1.0	50	1										2
D220	* SIA 50 100 500	50	1.5	50	20	50	100	0.5	30	30					2
D220A	* SIA 50 100 500	70	1.5	50	30	70	100	0.5	30	30					2
D220B	* SIA 50 100 500	100	1.5	50	40	100	100	0.5	30	30					2
D221	SIA 400 125	400	1.0	400	500	400	125							3 k	13
D222	SIA 400 125	600	1.0	400	500	600	125							3 k	13
D223	* SIA 50 125 500	50	1.0	50	50	50	100							30 k	2
D223A	* SIA 50 125 500	100	1.0	50	50	100	100							20 k	2
D223B	* SIA 50 125 500	150	1.0	50	50	150	100							20 k	2
D224	SIA 5A 125	50	1.0	5000	3000	50	20								14
D224A	SIA 10A 125	50	1.0	10A	3000	50	20								14
D224B	SIA 2A 125	50	1.0	2000	3000	50	20								14
D225	SIA 30 125	5	1.0	30		5	20								8
D226	SIA 300 125	400	1.0	300	30	400	20								9
D226A	SIA 300 125	300	1.0	300	30	300	20								9
D226B	* SIA 300 80	400	1.0	300	300	400	80								9
D226D	* SIA 300 80	100	1.0	300	300	100	80								9
D226G	* SIA 300 80	200	1.0	300	300	200	80								9
D226V	* SIA 300 80	300	1.0	300	300	300	80								9
D226YE	SIA 300 125	400	1.0	300	300	400	80								9
D229A	SIA 400 125	200	1.0	400	50	200	20								3
D229B	SIA 400 125	400	1.0	400	50	400	20								3
D229D	SIA 400 85	300	1.0	400	500	300	85								13
D229E	SIA 400 85	400	1.0	400	500	400	85								13
D229G	SIA 400 85	200	1.0	400	500	200	85								13
D229V	SIA 400 85	100	1.0	400	500	100	85								13
D230A	SIA 300 125	200	1.0	300	50	200	20								9
D230B	SIA 300 125	400	1.0	300	50	400	20								9
D231,P	SIA 10A 130	300	1.0	10A	3000	300	130								14
D231A,P	SIA 10A 130	300	1.0	10A	3000	300	130								14
D232,P	SIA 10A 130	400	1.0	10A	3000	400	130								14
D232A,P	SIA 10A 130	400	1.0	10A	3000	400	130								14
D232B,P	SIA 10A 130	400	1.0	10A	3000	400	130								14
D233,P	SIA 10A 130	500	1.0	10A	3000	500	130								14
D233A	SIA 10A 125	500	1.5	10A	3000	500	20								14
D233B,P	SIA 10A 130	500	1.0	10A	3000	500	130								14
D234B,P	SIA 10A 130	600	1.0	10A	3000	600	130								14
D242,P	* SI 10A 130	100	1.25	10A	3m	100	120							1 k	14
D242A,P	* SI 10A 130	100	1.0	10A	3m	100	120							1 k	14
D242B,P	* SI 5A 130	100	1.5	5A	3m	100	120							1 k	14
D243,P	* SI 10A 130	200	1.25	10A	3m	200	120							1 k	14
D243A,P	* SI 10A 130	200	1.0	10A	3m	200	120							1 k	14
D243B,P	* SI 5A 130	200	1.5	5A	3m	200	120							1 k	14
D244,P	* SI 10A 130	50	1.25	10A	3m	50	120							1 k	14

## Group XI—DIODES—RECTIFIERS—Continued

Type No.	Type	Maximum			Maximum @ 25°C			Maximum			Recovery			$f_{Max}$	Fig No.	
		$I_F$ @ 25 mA	$T_{opr}$ °C	$I_S$ @ 25 °C mA	PIV	$E_F$ *Min V	$E_F$ @ mA	$I_F$	$I_R$ @ μA	$E_r$ @ V	T °C	$\tau$ @ μs	$I_F$ mA	$E_R$ V		
D244A, P*	SI	10A	130		50	1.0		10A	3m	50	120				1k	14
D244B, P*	SI	5A	130		50	1.5		5A	3m	50	120				1k	14
D245	*	SI	10A	130	300	1.25		10A	3m	300	120				1k	14
D245A	*	SI	10A	130	300	1.0		10A	3m	300	120				1k	14
D245B	*	SI	5A	130	300	1.5		5A	3m	300	120				1k	14
D246	*	SI	10A	130	400	1.25		10A	3m	400	120				1k	14
D246A	*	SI	10A	130	400	1.0		10A	3m	400	120				1k	14
D246B	*	SI	5A	130	400	1.5		5A	3m	400	120				1k	14
D247	*	SI	10A	130	500	1.25		10A	3m	500	120				1k	14
D247B	*	SI	5A	130	500	1.5		5A	3m	500	120				1k	14
D248B	*	SI	5A	130	600	1.5		5A	3m	600	120				1k	14
D302	*	GEA	1A	70	200	0.3		1A	800	200	20				50k	16
D302A	*	GEA	1A	55	200	0.3		1A	1200	200	20				50k	16
D303	*	GEA	3A	70	150	0.35		3A	1000	150	20				50k	16
D303A	*	GEA	3A		150	0.35		3A	1200	150	20				16	
D304	*	GEA	5A	70	100	0.3		5A	2000	100	20				50k	16
D305	*	GEA	10A	70	50	0.35		10A	2500	50	20				50k	16
D310	*	GEA	500	70 800	20	0.5		500	100	20	70 0.3	500	20		7	
D311	*	GE	40	70 500	30	0.4		10	100	30	25 0.05	50	10		2	
D311A	*	GE	80	70 600	30	0.4		10	100	30	25 0.05	50	10		2	
D311B	*	GE	20	60 250	30	0.5		10	100	30	25 0.05	50	10		2	
D312	*	GEM	50	70 500	100	0.5		10	100	100	20 0.5	50	10		2	
D312A	*	GEM	50	70 500	75	0.5		10	100	75	20 0.5	50	10		2	
D312B	*	GEM	50	70 500	100	0.5		10	100	100	25 0.7	50	10		2	
KD401A	*	SI	92	100	75										2	
KD401B	*	SI	92	100	75										2	
KTS401A	*	SI	500	70	5A	500	2.5	400	100	500	25				21	
KTS401B	*	SI	500	70	5A	500	2.5	400	100	500	25				22	
KTS401V	*	SI	500	60		400	2.5	500	100	400	25				22A	
GD402A	*	GE	25	60		15	0.5	25	100	15	25				100M	2
GD402B	*	GE	25	60		15	0.5	25	100	15	25				100M	2
GD403A	*	GE	5	55		5									2	
GD403B	*	GE	5	55		5									2	
GD403V	*	GE	5	55		5									2	
KD503A	*	SIM	20	100	200	30	1.0	10	4	30	30 0.01	10	10		1	
KD503B	*	SIM	20	100	200	30	1.2	10	4	30	30 0.01	10	10		1	
KD504A	*	SI	80	100		40									2	
GD507A	*	GE	16	60	100	20	0.5	16	50	20	25 0.1	20	10		2	
KD512A	*	SI	20	100	200	15	1.0	10	100	15	100 1.0	10	10		1	
KD513A	*	SI	100	85	15H	50	1.1	100	100	50	85 4.0	10	10		33A	
D1001	GE	100	80		2000	6.5		100	150	2000					100k	17
D1001A	GE	100	80		1000	3.5		100	150	1000					100k	17
D1002	GE	300	80		2000	7.5		300	300	2000					100k	17
D1002A	GE	300	80		1000	4.0		300	300	1000					100k	17
D1003A	GE	300	80		500	2.0		300	300	500					100k	17
D1004	*	SIA	100	100		2000	6.0	100	100	2000	20				20A	
D1005A	*	SIA	50	100		4000	6.0	100	100	4000	20				20A	
D1005B	*	SIA	100	100		4000	11.0	100	100	4000	20				20B	
D1006	*	SIA	100	100		6000	11.0	100	100	6000	20				20B	
D1007	*	SIA	75	100		8000	11.0	100	100	8000	20				20B	
D1008	*	SIA	50	100		10k	11.0	100	100	10k	20				20B	
D1009	*	SIA	100	125		2000	4.2	100	100	2000	20				18A	
D1009A	*	SIA	100	125		1000	3.0	100	100	1000	20				19A	
D1010	*	SIA	300	125		2000	8.0	100	100	2000	20				18B	
D1010A	*	SIA	300	125		1000	5.0	100	100	1000	20				19C	

## Group XI—DIODES—RECTIFIERS—Continued

Type No.	Type	Maximum			Maximum @ 25 °C			Maximum			Recovery			$f_{Max}$ MHz	Fig No.
		$I_F$ @ 25 mA	$T_{opr}$ °C	$I_S$ @ 25 °C mA	PIV V	*Min E <sub>F</sub> V	@ E <sub>F</sub> V	$I_F$ mA	$I_R$ @ E <sub>r</sub> μA	@ T °C	$\tau$ @ I <sub>F</sub> μs	$E_R$ mA	V		
D1011A	*	SIA	300	125	500	2.5		100	100	500	20				19B
D1602A	GE	300	70		200	1.0		300	1	200					
D1602B	GE	300	70		300	1.0		300	1	300					
D1602V	GE	300	70		400	1.0		300	1	400					
DG-TS1	GEP	16	70	100	50	*1.0		2	1000	50	20				6
DG-TS2	GEP	16	70	100	75	*1.0		4	500	50	20				6
DG-TS3	GEP	25			50	1.0		2	100	50	20				6
DG-TS4	GEP	16	70	100	100	*1.0		2	800	75	20				6
DG-TS5	GEP	16	70	100	100	*1.0		1	250	75	20				6
DG-TS6	GEP	16	70	100	125	*1.0		1	800	100	20				6
DG-TS7	GEP	16	70	100	125	*1.0		1	250	100	20				6
DG-TS8	GEP	25	70	100	50	*1.0		10	500	30	20				6
DG-TS9	GEP	50	70	100	45	*1.0		10	100	10	20				6
DGTS10	GEP	50	70	100	45	*1.0		5	60	10	20	150			6
DGTS12	GEP	16	70		30	1.0						150			6
DGTS13	GEP	16	70		30	1.0									6
DGTS14	GEP	16	70		50	1.0									6
DGTS15	GEP	50	70		150	1.0		1	800	150	20				6
DGTS16	GEP	50	70		150	1.0		1	250	150	20				6
DGTS17	GEP	50	70		200	*1.0		1	800	200	20				6
DGTS21	GEA	300	70		50	0.5		300	300	50	20			50 k	3
DGTS22	GEA	300	70		100	0.5		300	300	100	20			50 k	3
DGTS23	GEA	300	70		150	0.5		300	300	150	20			50 k	3
DGTS24	GEA	300	70		200	0.5		300	300	200	20			50 k	3
DGTS25	GEA	100	70		300	0.3		100	300	300	20			50 k	3
DGTS26	GEA	100	70		350	0.3		100	300	350	20			50 k	3
DGTS27	GEA	100	70		400	0.3		100	300	400	20			50 k	3

## Group XI-A—DIODES—SWITCHING

Type No.	Kind	Type	Switch range		Maximum current			Switch time		Capa- city	Fig No.		
			Min V	Max V	Switch		$I_F$ mA	Leak- age μA	Off μs	On μs			
					Off mA	On mA							
D227-A	SWI	SI4	10	20	15	5	200	100	10	0.5	100	13	
D227-B	SWI	SI4	14	28	15	5	200	100	10	0.5	100	13	
D227-D	SWI	SI4	40	80	15	5	200	100	10	0.5	100	13	
D227-G	SWI	SI4	28	56	15	5	200	100	10	0.5	100	13	
D227-I	SWI	SI4	100	200	15	5	200	100	10	0.5	100	13	
D227-V	SWI	SI4	20	40	15	5	200	100	10	0.5	100	13	
D227YE	SWI	SI4	56	112	15	5	200	100	10	0.5	100	13	
D227-ZH	SWI	SI4	80	160	15	5	200	100	10	0.5	100	13	
D228-A	SWI	SI4	10	20	15	1	50	60	5	0.1	80	9	
D228-B	SWI	SI4	14	28	15	1	50	60	5	0.1	80	9	
D228-D	SWI	SI4	40	80	15	1	50	60	5	0.1	80	9	
D228-G	SWI	SI4	28	56	15	1	50	60	5	0.1	80	9	
D228-I	SWI	SI4	100	200	15	1	50	60	5	0.1	80	9	
D228-V	SWI	SI4	20	40	15	1	50	60	5	0.1	80	9	
D228YE	SWI	SI4	56	112	15	1	50	60	5	0.1	80	9	
D228-ZH	SWI	SI4	80	160	15	1	50	60	5	0.1	80	9	

### Group XI-B - DIODES - TUNNEL

Type No.	Kind	Type	Maximum		Min	V <sub>FM</sub>		Cap	Fig No.
			I <sub>p</sub> mA	I <sub>p</sub> /I <sub>v</sub>		V <sub>p</sub> mV	Min mV		
AI-101A	*	TUN GAS	1	5	160			4	23B
AI-101B	*	TUN GAS	1	5	160			6	23B
AI-101D	*	TUN GAS	2	6	160			6	23B
AI-101G	*	TUN GAS	2	6	160			4	23B
AI-101I	*	TUN GAS	5	6	180			10	23B
AI-101V	*	TUN GAS	2	6	160			5	23B
AI-101YE	*	TUN GAS	5	6	180			8	23B
AI-101ZH	*	TUN GAS	5	6	180			6	23B
AI-201A	*	TUN GAS	10	10	200			4	23B
AI-201B	*	TUN GAS	10	10	180			6	23B
AI-201D	*	TUN GAS	20	10	200			7	23B
AI-201G	*	TUN GAS	20	10	210			10	23B
AI-201I	*	TUN GAS	50	10	260			30	23B
AI-201K	*	TUN GAS	H1	10	330			20	23B
AI-201L	*	TUN GAS	H1	10	330			50	23B
AI-201V	*	TUN GAS	10	10	180			15	23B
AI-201YE	*	TUN GAS	20	10	200			20	23B
AI-201ZH	*	TUN GAS	50	10	260			15	23B
II-302A	TUN GE	2.3	4.5	60		400	80	23A	
II-302B	TUN GE	5.8	4.5	60		400	150	23A	
II-302G	TUN GE	17	4.5	60		400	200	23A	
II-302V	TUN GE	11.5	4.5	60		400	180	23A	
AI-301A	*	TUN GAS	2	8	180	650		12	23B
AI-301B	*	TUN GAS	5	8	180	850	1150	25	23B
AI-301G	*	TUN GAS	10	8	180	800		50	23B
AI-301V	*	TUN GAS	5	8	180	1000	1300	25	23B
GI304A	*	TUN GE	4.8	5	75	440		20	23A
GI304B	*	TUN GE	5.2	5	75	440		20	23A
GI305A	*	TUN GE	9.6	5	85	450		30	23A
GI305B	*	TUN GE	10.4	5	85	450		30	23A

### Group XI-C - DIODES - SWITCH CONTROL

Type No.	Kind	Type	Voltage		Maximum currents			Power		Time max		Temp		Fig No.	
			Switch max V	Res min V	Cont max mA	Switch off mA	On A	Leak mA	Max W	K <sub>θ</sub> mW/°C	Off μs	On μs	Min (-)°C	Max (+)°C	
D235A	CON SI	40	2	20	100		2	1	4	120	5	35	60	125	15
D235B	CON SI	100	2	20	100		2	1	4	120	5	35	60	125	15
D235G	CON SI	100	2	20	100		2	1	4	120	5	35	60	125	15
D235V	CON SI	40	2	20	100		2	1	4	120	5	35	60	125	15
D238A	CON SI	50	2			10			20	330	10	35	50	100	33
D238B	CON SI	100	2			10			20	330	10	35	50	100	33
D238D	CON SI	100	2			10			20	330	10	35	50	100	33
D238G	CON SI	50	2			10			20	330	10	35	50	100	33
D238V	CON SI	150	2			10			20	330	10	35	50	100	33
D238YE	CON SI	150	2			10			20	330	10	35	50	100	33

### Group XI-D—DIODES—VARACTORS

Type No.	Kind	Type	Maximum		Capacity @ 4V				Q	Power max mW	Temp		Fig No.
			Volts V	I <sub>R</sub> μA	Min pF	Max pF	TC	Exp (-)			Min (-)°C	Max (+)°C	
KV102A	*	VAR SI	45	1	14	23	3	4	40	90	40	85	1A
KV102B	*	VAR SI	45	1	19	30	3	4	40	90	40	85	1A
KV102D	*	VAR SI	80	1	19	30	4	4	40	90	40	85	1A
KV102G	*	VAR SI	45	1	19	30	3	4	100	90	40	85	1A
KV102V	*	VAR SI	45	1	25	40	3	4	40	90	40	85	1A
KV104A	*	VAR SI	45	5	90	120	3	4	100	100	40	85	1A
KV104B	*	VAR SI	45	5	106	144	3	4	100	100	40	85	1A
KV104D	*	VAR SI	80	5	128	192	4	4	100	100	40	85	1A
KV104G	*	VAR SI	80	5	95	143	4	4	100	100	40	85	1A
KV104V	*	VAR SI	45	5	128	192	3	4	100	100	40	85	1A
KV104YE	*	VAR SI	45	5	95	143	3	4	150	100	40	85	1A
KV105A	*	VAR SI	90	50	400	600	4	4	500	150	55	100	9
KV105B	*	VAR SI	50	50	400	600	3	4	500	150	55	100	9
D901A	*	VAR SI	80	1	22	32	4	4	25	250	55	85	7
D901B	*	VAR SI	45	1	22	32	3	4	30	250	55	85	7
D901D	*	VAR SI	80	1	34	44	4	4	25	250	55	85	7
D901G	*	VAR SI	45	1	28	38	3	4	30	250	55	85	7
D901V	*	VAR SI	80	1	28	38	4	4	25	250	55	85	7
D901YE	*	VAR SI	45	1	34	44	3	4	30	250	55	85	7
D902	*	VAR SI	25	10	6	12			30	250	100	2	

### Group XI-E—MISCELLANEOUS DIODES

Type No.	Kind	Type	Current			Voltage		Max cap pF	Switching			Power mW	Fig No.
			I <sub>F</sub> mA	I <sub>S</sub> mA	I <sub>R</sub> μA	V <sub>F</sub> V	V <sub>R</sub> V		Ratio	Damp dB	t <sub>rr</sub> ns		
GI401A	*	BWD GE	0.3		40h	0.33	<0.1	2.5					23C
GI401B	*	BWD GE	0.5		56h	0.33	<0.1	5.0					23C
AI402B	*	BWD GAS	0.1		10h	0.6	<0.3	4					23B
AI402G	*	BWD GAS	0.1		10h	0.6	<0.3	8					23B
AI402I	*	BWD GAS	0.4		40h	0.6	<0.3	10					23B
AI402YE	*	BWD GAS	0.2		20h	0.6	<0.3	8					23B
IA501A	PIN				0.5			0.1	150	0.8		100	
IA501G	PIN				0.5			0.16	150	0.8		100	
IA501I	PIN				0.5			0.07	150	0.8		100	
IA504A	PIN				100			0.9	500	0.5		25h	
IA504B	PIN				100			0.9	200	0.8		25h	
KD901A	*	1DA SI	10			0.2	0.7		4.0				36
KD901B	*	2DA SI	10			0.2	0.7		4.0				36
KD901G	*	4DA SI	10			0.2	0.7		4.0				36
KD901V	*	3DA SI	10			0.2	0.7		4.0				36
KD902D	*	1DA SI	1.0			0.2	0.85		2.0				36
KD902I	*	4DA SI	1.0			0.2	0.85		2.0				36
KD902YE	*	2DA SI	1.0			0.2	0.85		2.0				36
KD902ZH	*	3DA SI	1.0			0.2	0.85		2.0				36
KD903A	*	8DA SI	1.0	350		0.5	1.2		10.0		150		35
KD903B	*	8DA SI	75	350		0.5	1.2		10.0		150		35
KD904A	*	1DA SI	1.0			0.2	0.8		2.5				36
KD904B	*	2DA SI	1.0			0.2	0.8		2.5				36
KD904D	*	3DA SI	1.0			0.2	0.8		2.5				36
KD904G	*	4DA SI	1.0			0.2	0.8		2.5				36
KD904V	*	3DA SI	1.0			0.2	0.8		2.5				36
KD904YE	*	4DA SI	1.0			0.2	0.8		2.5				36
KD906	*	4DA SI	50			1.0	1.0	75					34
KD907	*	DA SI	50			6.0	1.0			6.0		6	37
KD909	*	8DA SI	200	800				40	5.0		50		38

**Group XII—DIODES—POWER RECTIFIERS**

Type No.	Kind	Type	Maximum				Maximum E <sub>R</sub> in volts available for following subclasses												Cooling		Kind	Rate	Radiator				
			Opr temp °C	I <sub>f</sub> Amp	E <sub>f</sub> V	I <sub>r</sub> mA	15	30	45	50	55	70	80	100	110	150	2N	3N	4N	5N	6N	7N	8N				
VG-5	POW	GE	75	5	0.5		X	X		X	X		X	X	X									AN			
VG-5	POW	GE	75	10	0.5		X	X		X	X		X											AF	10M		
VG-10	POW	GE	75	10	0.5			X																	AN		
VG-10-30	POW	GE	75	20	0.5	10		X																	AF	10M	
VG-10-45	POW	GE	75	20	0.5	8			X																AF	10M	
VG-10-55	POW	GE	75	20	0.5	6			X																AF	10M	
VG-10-80	POW	GE	75	20	0.5	5				X															AF	10M	
VG-10-110	POW	GE	75	20	0.5	4					X														AF	10M	
VG-10-150	POW	GE	75	20	0.5	3						X													AF	10M	
VG-30	POW	GE	75	30	0.5		X	X		X	X		X	X	X										AF	10M	
VG-50	POW	GE	75	50	0.5	40	X	X																	AF	10M	
VG-50	POW	GE	75	50	0.5	30		X	X																AF	10M	
VG-50	POW	GE	75	50	0.5	20			X			X		X	X										AF	10M	
VG-100	POW	GE	75	100	0.5		X	X		X	X		X	X	X										AF	10M	
VGV200	POW	GE	75	200	0.6	100	X	X	X	X	X		X	X										W	4L		
VGV500	POW	GE	75	500	0.6		X	X		X	X														W	4L	
VGV1000	POW	GE	75	1000	0.8		X	X		X	X														W	4L	
VK-10	POW	SI	200	10	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AN			
VK-10	POW	SI	200	20	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AF	15M		
VK-25	POW	SI	200	25	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AF	5M		
VK-25	POW	SI	200	50	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AF	15M	X	
VK-50	POW	SI	200	50	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AF	5M		
VK-50	POW	SI	200	100	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AF	15M	X	
VK-100	POW	SI	200	100	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AF	10M		
VK-100	POW	SI	200	150	0.9			X			X		X	X	X	X	X	X	X	X	X	X	X	AF	15M	X	
VK-200	POW	SI	200	200	0.9			X			X		X	X	X	X	X							AF	15M	X	
VKV200	POW	SI	200	200	0.9			X			X		X	X	X	X	X							W	4L	X	
VKV200	POW	SI	200	500	0.9			X			X		X	X	X	X	X							W	4L	X	
VKV1000	POW	SI	200	1000	0.9			X			X		X	X	X	X	X							W	4L	X	

## Group XII-A—SILICON CONTROLLED DIODES

Type No.	Kind	Type	Max forward current				PIV	Maximum				$I_R$	Fig No.		
			None	Air-cool		Water-cool 2L/m <sup>2</sup> L/m		Power		Gate pulse					
				With rad	Forced air rad			V	W	Gate W	V	A	Width $\mu s$		
VKU-10-0.25	SCR	SI4	1	5	10		50	20	1.25	20	1.0	20	20	24	
VKU-10-0.5	SCR	SI4	1	5	10		100	20	1.25	20	1.0	20	20	24	
VKU-10-0.75	SCR	SI4	1	5	10		150	20	1.25	20	1.0	20	20	24	
VKU-10-1.0	SCR	SI4	1	5	10		200	20	1.25	20	1.0	20	20	24	
VKU-10-1.5	SCR	SI4	1	5	10		250	20	1.25	20	1.0	20	20	24	
VKU-10-2.0	SCR	SI4	1	5	10		400	20	1.25	20	1.0	20	20	24	
VKU-10-2.5	SCR	SI4	1	5	10		500	20	1.25	20	1.0	20	20	24	
VKU-10-3.0	SCR	SI4	1	5	10		600	20	1.25	20	1.0	20	20	24	
VKU-20-0.25	SCR	SI4	3	10	20		50	20	1.25	20	1.0	20	20	25	
VKU-20-0.5	SCR	SI4	3	10	20		100	20	1.25	20	1.0	20	20	25	
VKU-20-0.75	SCR	SI4	3	10	20		150	20	1.25	20	1.0	20	20	25	
VKU-20-1.0	SCR	SI4	3	10	20		200	20	1.25	20	1.0	20	20	25	
VKU-20-1.5	SCR	SI4	3	10	20		250	20	1.25	20	1.0	20	20	25	
VKU-20-2.0	SCR	SI4	3	10	20		400	20	1.25	20	1.0	20	20	25	
VKU-20-2.5	SCR	SI4	3	10	20		500	20	1.25	20	1.0	20	20	25	
VKU-20-3.0	SCR	SI4	3	10	20		600	20	1.25	20	1.0	20	20	25	
VKU-50-0.25	SCR	SI4	15	32	50		50	30	1.87	20	1.5	20	20	25	
VKU-50-0.5	SCR	SI4	15	32	50		100	30	1.87	20	1.5	20	20	25	
VKU-50-0.75	SCR	SI4	15	32	50		150	30	1.87	20	1.5	20	20	25	
VKU-50-1.0	SCR	SI4	15	32	50		200	30	1.87	20	1.5	20	20	25	
VKU-50-1.5	SCR	SI4	15	32	50		250	30	1.87	20	1.5	20	20	25	
VKU-50-2.0	SCR	SI4	15	32	50		400	30	1.87	20	1.5	20	20	25	
VKU-50-2.5	SCR	SI4	15	32	50		500	30	1.87	20	1.5	20	20	25	
VKU-50-3.0	SCR	SI4	15	32	50		600	30	1.87	20	1.5	20	20	25	
VKU100-0.25	SCR	SI4		22	100			50	40	2.5	20	2.0	20	20	26
VKU100-0.5	SCR	SI4		22	100		100	40	2.5	20	2.0	20	20	26	
VKU100-0.75	SCR	SI4		22	100		150	40	2.5	20	2.0	20	20	26	
VKU100-1.0	SCR	SI4		22	100		200	40	2.5	20	2.0	20	20	26	
VKU100-1.5	SCR	SI4		22	100		250	40	2.5	20	2.0	20	20	26	
VKU100-2.0	SCR	SI4		22	100		400	40	2.5	20	2.0	20	20	26	
VKU100-2.5	SCR	SI4		22	100		500	40	2.5	20	2.0	20	20	26	
VKU100-3.0	SCR	SI4		22	100		600	40	2.5	20	2.0	20	20	26	
VKUV-100-0.25	SCR	SI4	15			60	100	50	40	2.5	20	2.0	20	20	27
VKUV-100-0.5	SCR	SI4	15			60	100	100	40	2.5	20	2.0	20	20	27
VKUV-100-0.75	SCR	SI4	15			60	100	150	40	2.5	20	2.0	20	20	27
VKUV-100-1.0	SCR	SI4	15			60	100	200	40	2.5	20	2.0	20	20	27
VKUV-100-1.5	SCR	SI4	15			60	100	250	40	2.5	20	2.0	20	20	27
VKUV-100-2.0	SCR	SI4	15			60	100	400	40	2.5	20	2.0	20	20	27
VKUV-100-2.5	SCR	SI4	15			60	100	500	40	2.5	20	2.0	20	20	27
VKUV-100-3.0	SCR	SI4	15			60	100	600	40	2.5	20	2.0	20	20	27

## Group XII-B - SILICON CONTROLLED RECTIFIERS

Type No.	Kind	Type	Forward				Reverse			Gate				Switching time			Fig No.		
			E <sub>F</sub> V	I <sub>F</sub> mA	I <sub>F</sub> sat. mA	I <sub>S</sub> A	I <sub>P</sub> A	E <sub>R</sub> V	I <sub>R</sub> mA	P mW	I <sub>GF</sub> max mA	I <sub>GF</sub> typ mA	V <sub>GT</sub> max V	P mW	I <sub>GR</sub> mA	On μs	Off μs	t <sub>rr</sub> μs	
KU101A	*SCR	TRI	50	75	<1	1		10		150	15	<8	10	500		2	35	13	
KU101B	*SCR	TRI	50	75	<1	1		50		150	15	<8	10	500		2	35	13	
KU101G	*SCR	TRI	80	75	<1	1		80		150	15	<8	10	500		2	35	13	
KU101YE	*SCR	TRI	150	75	<1	1		150		150	15	<8	10	500		2	35	13	
KU201A	*SCR	TRI	25	2A	5	10	30			5	4W	200			1W	5	10	35	15
KU201B	*SCR	TRI	25	2A	5	10	30	25		5	4W	200			1W	5	10	35	15
KU201D	*SCR	TRI	100	2A	5	10	30			5	4W	200			1W	5	10	35	15
KU201G	*SCR	TRI	50	2A	5	10	30	50		5	4W	200			1W	5	10	35	15
KU201I	*SCR	TRI	200	2A	5	10	30	200		5	4W	200			1W	5	10	35	15
KU201K	*SCR	TRI	300	2A	5	10	30			5	4W	200			1W	5	10	35	15
KU201L	*SCR	TRI	300	2A	5	10	30	300		5	4W	200			1W	5	10	35	15
KU201V	*SCR	TRI	50	2A	5	10	30			5	4W	200			1W	5	10	35	15
KU201YE	*SCR	TRI	100	2A	5	10	30	100		5	4W	200			1W	5	10	35	15
KU201ZH	*SCR	TRI	200	2A	5	10	30			5	4W	200			1W	5	10	35	15
KU202A	*SCR	TRI	25	10A	10	30	50			20W	300	100	5	15h	5				15
KU202B	*SCR	TRI	25	10A	10	30	50	25		20W	300	100	5	15h	5				15
KU202D	*SCR	TRI	100	10A	10	30	50			20W	300	100	5	15h	5				15
KU202G	*SCR	TRI	50	10A	10	30	50	50		20W	300	100	5	15h	5				15
KU202I	*SCR	TRI	200	10A	10	30	50	200		20W	300	100	5	15h	5				15
KU202K	*SCR	TRI	300	10A	10	30	50			20W	300	100	5	15h	5				15
KU202L	*SCR	TRI	300	10A	10	30	50	300		20W	300	100	5	15h	5				15
KU202M	*SCR	TRI	400	10A	10	30	50			20W	300	100	5	15h	5				15
KU202N	*SCR	TRI	400	10A	10	30	50	400		20W	300	100	5	15h	5				15
KU202V	*SCR	TRI	50	10A	10	30	50			20W	300	100	5	15h	5				15
KU202YE	*SCR	TRI	100	10A	10	30	50	100		20W	300	100	5	15h	5				15
KU202ZH	*SCR	TRI	200	10A	10	30	50			20W	300	100	5	15h	5				15

## Group XIII—DIODES—REGULATORS

Type No.	Kind	Type	Maximum			Typical			Max Z Ω	TC %/°C	K <sub>θ</sub> mW/°C	Fig No.
			I <sub>Z</sub> mA	T <sub>Op</sub> C	P <sub>Z</sub> mW	E <sub>Z</sub> V	ΔE <sub>Z</sub> %	I <sub>Z</sub> mA				
D6	REG	SI	18	150	125	6.5		5.0	10	.03		
D7	REG	SI	18	150	125	7.5		5.0	10	.06		
D8	REG	SI	14	150	125	8.5		5.0	10	.07		
KS133A	*	REG SI	81	100	300	3.3	10	10.0	65	.1	12	
KS139A	*	REG SI	70	100	300	3.9	10	10.0	60	.1	12	
KS147A	*	REG SI	58	100	300	4.7	10	10.0	56	.08	12	
KS156A	*	REG SI	55	100	300	5.6	10	10.0	46	.05	12	
KS168A	*	REG SI	45	100	300	6.8	10	10.0	28	.06	12	
KS194A	REG	SI		60		9.4	5		18	.005		
KS194B	REG	SI		60		9.4	5		18	.003		
KS194G	REG	SI		60		9.4	5		18	.001		
KS194V	REG	SI		60		9.4	5		18	.001		
KS211B	REG	SI	33	120	280	11.0	20	10.0	15	.02	33	
KS211D	REG	SI	33	120	280	11.0	15	10.0	15	.005	33	
KS211G	REG	SI	33	120	280	11.0	15	10.0	15	.01	33	
KS211V	REG	SI	33	120	280	11.0	20	10.0	15	.02	33	
KS620A	*	REG SI	42	100	5W	120	10	50	150	.2	33	
KS630A	*	REG SI	38	100	5W	130	10	50	180	.2	33	
KS650A	*	REG SI	33	100	5W	150	10	25	255	.2	33	
KS680A	*	REG SI	28	100	5W	180	10	25	330	.2	33	
D808	*	REG SI	33	125	280	7.7	10	5.0	6	.07	3	8
D809	*	REG SI	29	125	280	8.7	10	5.0	10	.08	3	8
D810	*	REG SI	26	125	280	9.7	10	5.0	12	.09	3	8
D811	*	REG SI	23	125	280	11.0	10	5.0	15	.095	3	8
D813	*	REG SI	20	125	280	12.7	10	5.0	18	.095	3	8
D814-A	*	REG SI	40	125	340	7.8	10	5.0	6	.07	8	
D814-B	*	REG SI	36	125	340	8.8	10	5.0	10	.08	8	
D814-D	*	REG SI	24	125	340	12.8	10	5.0	18	.095	8	
D814-G	*	REG SI	29	125	340	11.0	10	5.0	15	.095	8	
D814-V	*	REG SI	32	125	340	9.8	10	5.0	12	.09	8	
D815A, P	*	REG SI	14H	125	8W	5.6	10	50.0	<1	.056	13	
D815B, P	*	REG SI	11H	125	8W	6.8	10	50.0	<1	.062	13	
D815D, P	*	REG SI	650	125	8W	12.0	10	50.0	2	.11	13	
D815G, P	*	REG SI	800	125	8W	10.0	10	50.0	2	.10	13	
D815I	*	REG SI	14H	125	8W	4.7	10	50	<1	.056	13	
D815V, P	*	REG SI	950	125	8W	8.2	10	50.0	1	.08	13	
D815YE, P	*	REG SI	550	125	8W	15.0	10	50.0	3	.13	13	
D815ZH, P	*	REG SI	450	125	8W	18.0	10	50.0	3	.14	13	
D816A, P	*	REG SI	230	125	5W	22	10	10.0	7	.12	13	
D816B, P	*	REG SI	180	125	5W	27	10	10.0	8	.12	13	
D816D, P	*	REG SI	110	125	5W	.47	10	10.0	15	.12	13	
D816G, P	*	REG SI	130	125	5W	.39	10	10.0	12	.12	13	
D816V, P	*	REG SI	150	125	5W	.33	10	10.0	10	.12	13	
D817A, P	*	REG SI	90	125	5W	.56	10	5.0	35	.14	13	
D817B, P	*	REG SI	75	125	5W	.68	10	5.0	40	.14	13	
D817G, P	*	REG SI	50	125	5W	100	10	5.0	50	.14	13	
D817V, P	*	REG SI	60	125	5W	82	10	5.0	45	.14	13	
D818A	*	REG SI	33	120	300	10.1	10	11.0	25	.02	70	8
D818B	*	REG SI	33	120	300	7.9	15	11.0	25	.02	70	8
D818D	*	REG SI	33	120	300	9.0		11.0	25	.002	70	8
D818G	*	REG SI	33	120	300	9.0		11.0	25	.005	70	8
D818V	*	REG SI	33	120	300	9.0		11.0	25	.01	70	8
D818YE	*	REG SI	33	120	300	9.0		11.0	25	.001	70	8
SK1-5.6/1000	REG	SI		65	10W	5.6		1A	<1	.045	24	
SK1-6.8/1000	REG	SI		65	10W	6.8		1A	1	.05	24	

## Group XIII—DIODES—REGULATORS—Continued

Type No.	Kind	Type	Maximum			Typical		Max Z Ω	TC %/°C	K <sub>θ</sub> mW/°C	Fig No.
			I <sub>Z</sub> mA	T <sub>opr</sub> C	P <sub>Z</sub> mW	E <sub>Z</sub> V	ΔE <sub>Z</sub> %				
SK1-8.2/1000	REG	SI	65	10W	8.2	1A	2	.07	24		
SK1-10/500	REG	SI	65	10W	10.0	500	2	.08	24		
SK1-12/500	REG	SI	65	10W	12.0	500	3	.09	24		
SK1-15/500	REG	SI	65	10W	15.0	500	4	.10	24		
SK1-18/500	REG	SI	65	10W	18.0	500	4	.11	24		
SK1-22/150	REG	SI	65	10W	22.0	150	7	.11	24		
SK1-24/150	REG	SI	65	10W	24.0	150	8	.12	24		
SK1-28/150	REG	SI	65	10W	28.0	150	12	.12	24		
SK1-30/150	REG	SI	65	10W	30.0	150	30	.12	24		
SK1-36/150	REG	SI	65	10W	36.0	150	45	.12	24		
SK1-43/150	REG	SI	65	10W	43.0	150	60	.12	24		
SK1-51/150	REG	SI	65	10W	51.0	150	70	.12	24		
SK1-62/50	REG	SI	65	10W	62.0	50	80	.14	24		
SK1-75/50	REG	SI	65	10W	75.0	50	100	.14	24		
SK1-95/50	REG	SI	65	10W	91.0	50	100	.14	24		
SK1-110/50	REG	SI	65	10W	110.0	50	110	.14	24		
SK1-120/50	REG	SI	65	10W	120.0	50	112	.14	24		
SK1-150/50	REG	SI	65	10W	150.0	50	150	.15	24		
SK1-180/50	REG	SI	65	10W	180.0	50	150	.15	24		
SK1-220/25	REG	SI	65	10W	220.0	25	300	.15	24		
SK1-270/25	REG	SI	65	10W	270.0	25	400	.15	24		
SK1-300/25	REG	SI	65	10W	300.0	25	500	.15	24		
SK2-5.6/2000	REG	SI	65	15W	5.6	2A	<1	.04	25		
SK2-6.8/2000	REG	SI	65	15W	6.8	2A	1	.05	25		
SK2-8.2/2000	REG	SI	65	15W	8.2	2A	2	.7	25		
SK2-10/1000	REG	SI	65	15W	10.0	2A	2	.08	25		
SK2-12/1000	REG	SI	65	15W	12.0	1A	2	.09	25		
SK2-15/1000	REG	SI	65	15W	15.0	1A	3	.10	25		
SK2-18/700	REG	SI	65	15W	18.0	700	4	.11	25		
SK2-22/300	REG	SI	65	15W	22.0	300	5	.12	25		
SK2-24/300	REG	SI	65	15W	24.0	300	6	.12	25		
SK2-28/300	REG	SI	65	15W	28.0	300	8	.12	25		
SK2-30/300	REG	SI	65	15W	30.0	300	25	.12	25		
SK2-36/300	REG	SI	65	15W	36.0	300	30	.12	25		
SK2-43/300	REG	SI	65	15W	43.0	300	35	.12	25		
SK2-51/200	REG	SI	65	15W	51.0	200	45	.12	25		
SK2-62/200	REG	SI	65	15W	62.0	200	60	.14	25		
SK2-75/100	REG	SI	65	15W	75.0	100	80	.14	25		
SK2-91/100	REG	SI	65	15W	91.0	100	90	.14	25		
SK2-110/100	REG	SI	65	15W	110.0	100	100	.14	25		
SK2-120/100	REG	SI	65	15W	120.0	100	100	.14	25		
SK2-150/100	REG	SI	65	15W	150.0	100	120	.14	25		
SK2-180/100	REG	SI	65	15W	180.0	100	200	.15	25		
SK2-220/50	REG	SI	65	15W	220.0	50	300	.15	25		
SK2-270/50	REG	SI	65	15W	270.0	50	350	.15	25		
SK2-300/50	REG	SI	65	15W	300.0	50	450	.15	25		
2S-156A	REG	SI	55	120	300	5.6	10	10	46	.05	12
2S-168A	REG	SI	45	120	300	6.8	10	10	28	.06	12
2S920A,P	REG	SI	42	130	5W	120		5	100	.16	13
2S930A,P	REG	SI	38	130	5W	130		5	120	.16	13
2S950A,P	REG	SI	33	130	5W	150		2.5	170	.16	13
2S980A,P	REG	SI	28	130	5W	180			220	.16	13

## Group XIV - DIODES - MIXERS AND DETECTORS

Type No.	Kind	Type	Typical wavelength cm	Maximum								Min cur sens	Opr temp		Fig No.		
				Res Ω	Lc dB	NF <sub>o</sub> dB	vSWR	Pulse pwr		Pulse energy			A/W	Min (-°C)	Max (+°C)		
								Cont mW	Peak mW	Cont erg	Peak erg						
2A201A			1 k					20				5.5					
2A202A			1 k					20				2.5					
D3A	VID	SI	3.2	950				2.5	50	300			60	70	20		
D3B	VID	SI	9.8	950				2.5	50	300			60	70	20		
D401	MIX	GE	8.5	1 k	13.0			15					5	50	29		
D402	MIX	SI		650	10.0	2.5	3.0	10		0.02			60	85			
D403A	MIX	GE	9.8	700	9.0	3.0	3.0		150	0.15			60	100	20		
D403B	MIX	GE	9.8	600	8.5	3.0	3.5		150	0.15			60	100	20		
D403V	MIX	GE	9.8	600	9.0		2.8		150	0.15			60	100	20		
D404	MIX	SI		520	8.5	2.5	2.5	10	80	0.02	1.5		60	85			
D405	MIX	SI		400	7.0		2.0		80	0.6	1.5		60	100	31		
D405A	MIX	SI		350	6.0		1.7		80	1.0	1.5		60	100	31		
D405AP	MIX	SI		350	6.0		1.7		80	1.0	1.5		60	100	31		
D405B	MIX	SI		330	8.0		1.4		80	1.0	1.5		60	100	31		
D405BP	MIX	SI		330	8.0		1.4		80	1.0	1.5		60	100	31		
D406	MIX	SI					40	300	0.1				60	100	30		
D408	MIX	SI	9.8	390	6.0		1.3	100	500		0.5		60	125	30		
D501	* MUL	SI	h.2					100					60	100	30		
D602A	VID	GE	3.2	600			3.2		50			1.5	60	85	28		
D602B	VID	GE	3.2	900			3.2		50			1.5	60	85	28		
D602V	VID	GE	3.2	900			3.2		50			4.0	60	85	28		
D603	* VID	SI	9.8	900		10.0	2.0		200			4.0	60	100	30		
D604	* VID	SI	3.2	900		8.0	2.0	10	300			2.5	60	100	30		
D605	MIX	SI	3.2					600	2 k				60	85	30		
D607			12 h						5			4.0					
D607A			12 h						5			3.5					
D608			12 h									4.0					
D609			2 k						2			4.0					
DG-S1	MIX	GE	9.8	400	8.5	3.0	3.0	80	250	0.1	3.0		60	70	28		
DG-S2	MIX	GE	9.8	400	6.5	3.0	3.0	80	250	0.1	3.0		60	70	28		
DG-S3	MIX	GE	3.2	400	8.5	3.0	3.5	80	250	0.1	3.0		60	70	28		
DG-S4	MIX	GE	3.2	400	6.5	3.0	3.0	50	250	0.1	3.0		60	70	28		
DK-I1M	* DET	SI	9.8					200			0.5		60	100	30		
DK-I2M	* DET	SI	3.2					200			0.2		60	100	30		
DK-S1M	* DET	SI	9.8	400	8.5	2.7	3.5	80	300	0.3	2.0		60	100	30		
DK-S2M	* DET	SI	9.8	400	6.5	2.0	3.0	50	300	0.36	2.0		60	100	30		
DK-S3	MIX	SI	3.2	400	8.5	2.7	3.0	50	200	0.06	0.6		60	70	30		
DK-S4	MIX	SI	3.2	400	6.5	2.7	2.5	30	100	0.06	0.3		60	70	30		
DK-S5	MIX	SI	2.0	400	8.0	2.5	3.0	30	200	0.06	0.2		60	70	28		
DK-S7	MIX	SI	3.2	900	7.0	2.0	2.0	50		0.15			60	80	28		
DK-S7M	* MIX	SI	3.0	700	7.5	2.0		100		0.3			60	80	29		
DK-V1	* DET	SI	9.8	15 k				50	200			0.8	50	70	29		
DK-V2	* DET	SI	9.8	10 k				50	100			1.2	50	70	29		
DK-V3	* DET	SI	3.2	15 k				50	200			0.4	50	70	29		
DK-V4	* DET	SI	3.2	10 k				50	100			0.8	50	70	29		
DK-V5M	* VID	SI	9.8	10 k				50	200			0.8	60	100	30		
DK-V6	VID	SI	9.8	25 k				50	200			0.8	50	70	30		
DK-V7M	* VID	SI	3.2	10 k				50	200			0.4	60	100	30		
DK-V8	VID	SI	3.2	15 h			3.0	50		0.3			60	70	28		
DK-V11	VID	SI		10 k			2.5	50			1.5		50	70	28		

## Group XV - DIODES - PHOTOCOndUCTIVE DEVICES

Type No.	Kind	Maximum			Dark		Sensitivity			T.C.	Time constant μs	Temp		Weight gm	K area mm²
		Volts V	Cur μA	Power mW	Resist- ance MΩ	Current μA	μA/ lmV	Max μ	Cut off μ	%/°C		(-)°C	(+)°C		
FS-AG	PBS	15		0.04		500	2.1	2.7	1.5		60	60		24	
FS-A0	PBS	15		0.04		500	2.1	2.7	1.5		60	60		24	
FS-AV	PBS	100		0.01		500	2.1	2.7	1.5		60	60		96	
FS-D0	CDSE	200		20.0		20m	0.75	1.2	2.0		60	40		25	
FS-KG	CDS			3.3		6000	0.64	0.9	0.2		60	80		25	
FS-K0	CDS	300		3.3		1200	0.52	0.9	0.12		60	80		25	
FS-KV	CDS	200		1.6		6000	0.64	0.9	0.2		60	80		50	
FD-1	GE	15	800	15		30	20	1.4	1.7		10	0	40	1.0	20
FDK-1	SI	20				3	3	0.9	1.3		10	0	40	0.02	
FS-A1	PBS	15		0.04		500	2.1	2.7	1.5		60	60		24	
FS-D1	CDSE	20	15h	50	2.0	20m	0.75	1.2	2.0		60	40		25	
FS-K1	CDS	400		3.3		6000	0.64	0.9	0.2		60	80		25	
FSA-G1	PBS	75		0.05		500	2.1	2.7	1.5		40	60	60	19.5	30
FSD-G1	CDSE	20	2k	50	20.0	1		0.75	1.2						
FSK-G1	CDS	50	15h	120	0.5	10	1200	0.64	0.9						
FSK-P1	CDS	100	2k	100	10k	<1		0.64	0.9						25
FT-1	GE	3		50		30	500	1.4	1.7		200	60	50	0.9	
FTG-1	GE	15		50		1000	20	1.4	1.7		40	40	1.2	1	
FD-2	GE	30		15		25	20	1.4	1.7		10	0	40	0.85	14
FS-2A	PBS	17		0.3				0.7	3.5		60	40		9	
FS-B2	BIS	50		0.2		250	0.7	0.9			60	60		121	
FS-K2	CDS	300		3.3		1200	0.52	0.9	0.12		60	80		25	
FSA-G2	PBS	75		0.05		500	2.1	2.7	1.5		40	60	60	19.5	96
FSK-G2	CDS	50	4k	200	0.5	10	2400	0.64	0.9						64
SF2-1	CDS	15	500	10	15			0.64	0.9						<1
SF-2-2	CDS	10	15h	50	4.0	<1		0.64	0.9						60
SF-2-4	* CDS	15	750	10	15.0	1		0.64	0.9	0.3	100				<1
SF-2-5	* CDS	6	1k	25	1.0			0.54	0.9	0.2	20	60	70		8
SF-2-8	* CDS	150	1k	125	1h			0.54	0.9	0.3	25	60	70		12
SF-2-9	* CDS	100	900	125	3.3			0.64	0.9	0.4	50				20
SF-2-12	* CDS	15	12h	10	15.0			0.64	0.9	0.2	25	60	70		<1
SF-2-16	* CDS	15		10	3.3			0.54	0.9	0.9	100	60	70		<1
FD-3	GE	10	250			10	20	1.4	1.7		10	0	40	0.02	9
FS-3A	PBS	10		2.0				0.7	3.5		60	40		52	
FS-K3	CDS	300		3.3		1200	0.52	0.9	0.12		60	80		25	
SF3-1	CDSE	15	750	10	30			0.72	1.2						<1
SF-3-5	* CDSE	6		50	2.0			0.74	1.1	1.5	10				8
SF-3-8	* CDSE	50	750	50	20	<1		0.74	1.2	1.5	10				<2
FS-A4	PBS	15		0.04		500	2.1	2.7	1.5		60	60		24	
FS-K4	CDS	300		2.0		6000	0.64	0.9	0.2		60	80		24	
SF-4-1		200		25	0.01	15					60	40			
FS-K5	CDS	300			10.0		3000	0.64	0.9	0.2	60	80		7	
FS-A6	PBS	30	20	10	0.05		500	2.1	2.7	1.5	60	60		115	
FS-D6	BIS	200			20.0		20m	0.75	1.2	2.0	60	40		115	
FS-K6	CDS	300			3.3		3000	0.64	0.9	0.2	60	80		115	
FS-K7	CDS	100		0.05		3500	0.64	0.9	0.2		60	80		200	
FSK-7A	CDS	50	350	350	1.0	50		0.64	0.9						
FSK-7B	CDS	50	800	350	1.0	50	1200	0.64	0.9						
FSK-G7	CDS	50	2k	350	0.5	10	700	0.64	0.9						85
FS-K8	CDS	300			10.0		1600	0.64	0.9	0.2	60	80		15	

## Group XVI—PHOTO AND PHOTOMULTIPLIER TUBES

Type No.	Kind'	Type-	Bulb dimen			Cathode			Maximum			Output sens		Dynodes		Application
			Shape	Diam mm	Lth mm	Area cm <sup>2</sup>	Surf	Sens μA/ lm	E <sub>b</sub> V	I <sub>k</sub> μA	Dark I Amp(-) Exp	Min Amp/ L	Opr E <sub>b</sub> V	Design	Mat'l No.	
F-1	*PHO	VC T	39	93	<3	S4	100	300		1	14					
F-2	*PHO	VC T	20	67		S4	30	300		1	8	1				
F-3	*PHO	VC G	92	140		S10	70	50		1	9					
F-4	*PHO	VC T	39	93		S4	70	300		5	11					
F-5	*PHO	VC T	42	93		S1		300		8	11					
F-6	*PHO	VC G	33	76		S10	50	300		1	11					
F-7	*PHO	VC T	44	97		MG		300		1	11					
F-8	*PHO	VC G	27	62		S4	80	300		1	8					
F-9	*PHO	VC G	40	88		S20	100	300		1	13					
F-10	*PHO	VC T	60	100		S20	80	300		1	12					
FEU-1	*PHO	G	40	124		S4	400	650		1	7	1	220			
FEU-1B	PHM	B	80	285	44	S13	90	2000	300	1	7	3		L AMK	11	6
FEU-1B1V	PHM	T	80	225	44	S13	90	2500	1m	1	7	30		C AMK	10	7
FEU-1B2V	PHM	T	80	225	44	S13	30	2500		1	7	300		C AMK	12	7
FEU-1S	PHM	T	48	205	12	S13	90	1950	300	1	7	3		L AMK	11	6
FEU-1V	PHM	T	48	166	12	S13	90	2500	1m	1	7	30		C AMK	10	7
FEU-2	*PHM	G	31	71		S4	600	250		1	7	1	220			1
FEU-2B	PHM		150	295	155	S13	90	2000	300	1	7	3		L AMK	11	6
FEU-2B1V	PHM	B	80	225	44	S13	90	2500		1	7			C	12	7
FEU-2M	PHM	T	34	130	5	S13	90	1600	300	1	7	3		L AMK	13	5
FEU-2V	PHM	T	50	170	12	S10	90	2500	1m	1	7	300		C AMK	12	7
FEU-3B	PHM	B	200	295	227	S13	90	2000	300	1	7	3		L AMK	11	6
FEU-3M	PHM	T	19	75	<2	S13	90	1500	100	5	8	1		L AMK	8	5
FEU-4	*PHM	G	38	110	2	S20	600	240		1	14					1
FEU-5	*PHM	T	34	100	2	S5	400	240		1	14					1
FEU-11	*PHM	T	52	179	16	S4	80	2500	25m	8	7	5 1700 V CAM	12	7		
FEU-12	PHM	T	52	179	16	S10	80	2500		8	7	5		V CAM	12	7
FEU-12A	PHM	T	52	179	20	S10	50	1700	25	8	7	5 1700 V		12		
FEU-13	*PHM	T	52	129	17	S5	50	2200	5m	4	7	6 2200 V CAM	12			
FEU-14	PHM	T	52	129	17	S10	60	2200	5m	4	7	6 2200 V CAM	12			
FEU-14A	PHM	T	52	129	20	S10	60	1700		5	4	7	6 1700 V		12	
FEU-15	*SCC	T	31	115	3	S10	25	2200	5m	4	7	6 1700 V CAM	12			
FEU-16	*SCC	T	31	115	2	S4	25	2200	5m	4	7	6 1700 V CAM	12			
FEU-17	PHM	T	48	181	<1	S2	20	1400	100	3	7	10 900 L	13			
FEU-17A	*PHM	T	48	181	<1	S4	20	1400	100	3	7	10 900 L	13			
FEU-18	PHM	T	48	181	<1	S5	20	1400	100	3	7	10 900 L	13			
FEU-18A	*PHM	T	48	181	<1	S5	20	1400	100	3	7	10 900 L	13			
FEU-19A	*PHM	T	48	195	9	S4	15	2600	200	1	6	1000 1700 L	13	7		
FEU-20	*PHM	T	34	95	<2	S4	20	900	100	8	9	1 900 L	8			
FEU-22	PHM	T	48	181	<1	S1	25	2000	300	2	8	1 1400 L	13			
FEU-23	PHM		305	450	700	S10	20	2400	10			10		L AMK	11	5
FEU-24	*PHM	T	80	230	12	S4	35	2000	200	3	7	10 1600 L	13	6		
FEU-25	*PHM	T	34	109	8	S4	20	1700	100	5	8	1 1250 L		9	6	
FEU-26	*PHM	T	22	70	<1	S4	20	900	75	5	8	11 900			7	
FEU-27	*PHM	T	30	108	8	S10	30	2000		5	9	100 2000			11	
FEU-28	*PHM	T	34	122	5	S1	20	1800	100	2	6	10 1800			11	
FEU-29	*PHM	T	48	195	5	S4	45	2300	200	3	8	10 1000 L CAM	13	7		
FEU-30	*PHM	T	67	210	20	S4	40	3500		1	4	10k 3500			14	
FEU-31	*PHM	T	22	79	10	S4	20	1400	75	5	7	10 1300 L			8	
FEU-32	*PHM	T	34	123	5	S10	25	1800	200	1	8	1 1250 L AMK	11	6		
FEU-33	*SCC	T	48	195	9	S4	30	2900		1	6	100 2100 L	13	7		
FEU-34	PHM				9	S13	30	2700		1	5	1000 L			13	
FEU-35	*SCC	T	31	113	5	S4	40	1750	50	4	9	10 1100 L			8	
FEU-36	*PHM	T	48	195	9	S4	30	2900	200	2	5	1000 2900 L	13			
FEU-37	*PHM	T	48	193	11	S4	30	2000	200	5	6	1000 2000 L	11			

## Group XVI—PHOTO AND PHOTOMULTIPLIER TUBES—Continued

Type No.	Kind	Type	Bulb dimen			Cathode			Maximum			Output sens		Dynodes		Application
			Shape	Diam mm	Lth mm	Area cm <sup>2</sup>	Surf	Sens μA/ lm	E <sub>b</sub> V	I <sub>k</sub> μA	Dark I	Amp (-)	Amp/ Exp	Min Amp/ L	Opr E <sub>b</sub> V	Design
FEU-38	*PHM	T	48	200	9	S20	90	2050	200	1	7	100	2050	L	13	
FEU-39A	*PHM	T	48	178	9	S4	25	1800	10	1	6	1000	1800	L	11	
FEU-40	NSP	T	20	91		S13	30	1900		5	7	1			8	
FEU-42	NSP	T	48	205		S13	30	2200		1	7	1	1800		11	
FEU-43	NSP	T	80	290		S13	30	2200		1	7		1800		11	
FEU-44	NSP	B	150	310		S13	30	2200		1	7	1	1800		11	
FEU-45	NSP	B	200	340		S13	30	2200		1	7	1	1800		11	
FEU-46	NSP	T	48	130		S13	30	1800		1	10	1	1800		10	
FEU-47	NSP	T	48	169		S13	30	2500		1	7	1	2300		10	
FEU-48	NSP	T	80	230		S13	30	2500		1	7	1	2300		10	
FEU-49	*PHM	B	170	220	700	S20	50	3500	10m	1	8	5	1800	V	12	
FEU-50	*PHM	T	89	360	23	S4	20					1000			13	
FEU-51	*PHM	T	34	110	5	S20	60		100	3	7	100	2300		11	
FEU-52	*PHM	B	80	125	38	S20	50	3000	10m	5	8	10	1700	V CAM	12	7
FEU-53	*PHM	T	51	110	16	S4	25	2500	10m	1	7	2000	2500	V CAM	14	7
FEU-54	*PHM	T	22	90	2	S4	20		500	8	7	25		V	14	
FEU-55	*PHM	T	22	90	2	S10	20		500	8	7	25		V	14	
FEU-56	*PHM	B	80	120	38	S4	30		10m	1	7	15		V	12	
FEU-58	*PHM	T	22	90	2	S4	15		500	4	7	25		V	14	
FEU-59	*PHM	T	51	107	15	S4	20		10m	2	5	20		V	14	
FEU-60	*PHM	T	15	59	<1	S4	20	1600	50	3	8	30	1600		10	
FEU-62	*PHM	T	34	86	<1	S1	15	1800	100	6	7	10	1500		11	
FEU-63	*PHM				78	S20	60					1000				
FEU-64	*PHM	T	48	170	<1	S4	25	1250	100	5	8	1000	1500		11	
FEU-65	*PHM				176	S5	40					1000				
FEU-67	*PHM	T	22	76	<1	S2	20	1250		5	9	3	1250		8	
FEU-68	*PHM		15	70			100			4	10	1	1200			
FEU-70	*PHM	T	34	125		SI0	50	1800		6	9	100	1800			
FEU-74	*PHM															
FEU-75	*PHM		15	70			60			4	10	1	1200			
FEU-77	*PHM					S20										
FEU-80	*PHM															
FEU-81	*PHM	T	52	122		SI0	50	1800		8	8	100	1800			
FEU-82	*PHM	T	80	152		SI0	50	1800		2	7	100	1800			
FEU-R3	PHM	T	47	109	2	S13	90	1400		1	10			C	10	
FEU-R5	PHM	T	47	109	2	S13	90	1400		1	7	1		C	10	
STSV-3	*PHO	VC G	27	62		S4	80	240		1	8	1				
STSV-4	*PHO	VC G	39	129		S4	100	240		1	7	1				
STSV-6	PHO	VC T	27	104		S1	30			5	11					
STSV51	*PHO	VC G	30	63		S4	100	240		1	8					
TSG-1	PHO	GS G	56	131		S1	75	240		1	7	1				
TSG-3	*PHO	GS G	27	62		S1	100	300		1	7	1				
TSG-4	*PHO	GS G	39	129		S1	100	300		1	7	1				
TSV-1	PHM	VC G	56	131		S1	20	240		1	7	1				
TSV-3	PHO	VC G	27	62		S1	20	240		1	7	1				
TSV-4	PHO	VC G	39	129		S1	20	240		1	7	1				
TSV-6	PHO	VC T	27	104		S1		30		5	11					

**Group XVIII—THERMOCOUPLE**

Type No.	Kind	Dimen-		Typical			Response	$f_{\max}$
		Diam mm	Lth mm	I <sub>H</sub> mA	Thermo elec mV	s		
TV-2	THM	13	23	100	30	35	5	
TV-4	THM	13	23	50	30	35	5	
TV-5	THM	13	23	75	30	35	5	
TV-14	THM	13	23	250	30	15	5	
TV-15	THM	15	20	500	30	35	5	
TV-16	THM	15	20	1000	30	35	5	
TVB-1	THM	20	30	1	<3	40	200	
TVB-2	THM	20	30	3	5	40	200	
TVB-3	THM	20	30	5	10	40	200	
TVB-4	THM	20	30	10	12	40	200	
TVB-5	THM	20	30	30	12	40	200	
TVB-6	THM	20	30	30	12	40	200	
TVB-7	THM	20	30	100	12	40	200	
TVB-8	THM	20	30	300	12	40	200	
TVB-9	THM	20	30	500	12	40	200	

**Group XIX – THERMISTORS**

Type No.	Kind	Use	Dimen		Shape	Resistance			Temp		Power		Sens
			Lth mm	Diam mm		Min Ω	Max Ω	T.C. %	Min (-)°C	Max (+)°C	Min mW	Max mW	
TOS-M	TMS	CON	6	3	DSC	6 k	3.0		180		50		
KMT-1	TMS	MEA	13	4	CYL	20k	1M	5.1	20	180	8 h		
MMT-1	TMS	MEA	13	4	CYL	1	200	2.9	70	120	4 h		
ST1-17	TMS	MEA				300	22 k	7.0	60	100	5 h		
ST1-18				1		<2	2200	5.0	60	300	45		
ST1-19	TMS	MEA				3	2200	4.0	60	300	60		
ST-1-21	TMS		48	12	CYL	33	100		60	85	60		
ST-1-30	TMS		60	6	CYL	200	33 k		60	85			
TKI-1	TMS	MEA	5	5	CYL	5	40	0.4	40	70			
TSH-1	TMS	MEA				125	3.4				7.0	11	
TST-1A	TMS	REG	6	18		4	20	1.4			40		
ST-2-26	TMS					1k	100 k	3.0	60	125			
TKI-2	TMS	MEA	5	5	CYL	10	1000	2.6	40	70			
TP-2/0.5	REG	TMS				1	3	0.2	2.0	<1	1		
TP-2/2	REG	TMS				1	3	0.4	6.0	<1	1		
TSH-2	TMS	MEA				150	3.4				13.5	18	
ST3-17	TMS	MEA				33	340	4.5	60	100	5 h		
ST3-18				<1		<1	3	4.1	90	125	15		
ST3-19	TMS	MEA				2	15	4.5	90	125	45		
ST-3-21	TMS					680	15 k		60	85	60		
ST-3-22	TMS			40	CYL	1k	3.5		60	85	6.0	12	
ST3-23	TMS	COM				2	5	3.7	0	125	5 h		
ST-3-24	TMS		<1		DSC	680	33 h	3.0	60	85			
ST-3-25	TMS		<1		DSC	15h	33 h	3.3	100	125	0.1	8	
ST-3-26	TMS					100	680	3.0	60	125			
TKI-3	TMS	MEA	5	5	CYL	10	20 k	2.8	40	70			
KMT-4	TMS	MEA	24	7	CYL	20k	1M	5.1	20	180	8 h		
MMT-4	TMS	MEA	24	7	CYL	1	200	2.9	70	120			
ST-4-15	TMS	MEA	<2	10		1500	1800	3.6	60	180	10		
MMT-5	TMS	MEA	5	14	CYL	1k	200 k	2.9	70	120	4 h		
MMT-6	TMS					10	1000	2.9	70	120	50		
TP-6/2	REG	TMS				4	8	0.4	6.0	<1	1		
KMT-8	TMS					100	10 k	4.6	40	60			
MMT-8	TMS	COM	22	23	DSC	1	1000	2.9	40	60	10		
T8D	TMS		8	3	CYL	150					10	15	20
T8E	TMS		8	3	CYL	150					7	10	30
T8M	TMS		8	3	CYL	200					9	11	66
T8R	TMS		8	3	CYL	125					7	12	10
T8S1	TMS		8	3	CYL	120					9.5	24	10
T8S1M	TMS		8	3	CYL	120					9.5	24	10
T8S2	TMS		8	3	CYL	150					8	19	12
T8S2M	TMS		8	3	CYL	150					8	19	12
T8S3	TMS		8	3	CYL	150					7	23	10
T8S3M	TMS		8	3	CYL	150					7	23	10
MMT-9	TMS	COM	<3	19	DSC	10	5000	2.9	60	120	10		
T9	TMS		8	3	CYL	125					7	19	10
KMT10	TMS	CON	30	6	CYL	100 k	3M	5.1	0	120	2 h		
KMT-11	TMS	CON	<4	<1	CYL	100 k	3M	5.1	0	120	2 h		
KMT-12	TMS					100	10 k	4.6	40	120			
MMT-12	TMS					5	5 k	2.9	40	120	3		

**Group XIX – THERMISTORS – Continued**

Type No.	Kind	Use	Dimen		Shape	Resistance			Temp		Power		Sens
			Lth mm	Diam mm		Min Ω	Max Ω	T.C. %	Min (-)°C	Max (+)°C	Min mW	Max mW	
MMT-13	TMS	9	DSC	10	2200	2.9	60	125	0.3				
KMT-14	TMS MEA	4	80 CYL	510	7500	4.5		300					1h
KMT-17	TMS	5	DSC	300	20k	4.2	60	155	0.1	5h			
TKP-20	TMS POW	33	68		500	2.0							2h
STI-21	TMS			10k	100k		60	85			60		
TKP-50A	TMS POW	33	68		2000	2.3							2h
TKP-50B	TMS POW	33	68		750	2.3							2h
TKP-300	TMS POW	33	68		10k	3.5					20		

## Group XX—STROBOTRONS

Type No.	Dimensions			Voltage			Power		Inter res $\Omega$	Flash conditions				Light output			Life	
	Shape	Diam mm	Lth mm	Min drop . V	Oper V	Firing V	Avg W	Peak kW		Dischg cap pF	Time $\mu$ s	Flash freq pps	Energy j	Flash cd/s	Avg cd	Peak cd	No. of flsh	Hrs
IFB300	R	8	85	240	300	1500	40	36	2.5	65h	8k	0.13	300	500	60k	10k		
IFK15-1	T	29	60		300		3	90	1.5	800	400	0.1	36	36	9k	2k		
IFK20	T	4	10	100	130	700	2	100	1.6	25h	200	0.1	20	20	100k	10k		
IFK50	T	4	20	140	200	1k	5	125	0.3	25h	400	0.1	50	70	180k	10k		
IFK120	U	5	30	180	300	1k	12	120	0.8	25h	1k	0.1	120	250	250k	10k		
IFK500	P	30	45	400	500	3500	30	65	4.0	4k	8k	0.05	500	1000	130k	10k		
IFK2000	U	9	70	250	320	2k	300	200	4.5	8k	2k	0.7	400	1200	600k	40k		
IFK20000	G	85		2k	6k	20k	55h	10M	3.5	550	11h	0.55	10k	34k	30M	7k		
IFK80000	G	1h		3k	6k	20k	18k	13M	2.5	39h	5k	0.25	70k	240k	36M	5k		
IFP200	T	5	200	450	500	2k	27	140	2.0	16h	16h	0.13	200	400	250k	10k		
IFP500	T	5	350	450	500	3k	65	70	3.5	4k	7k	0.13	500	1000	140k	10k		
IFP1500	T	5	600	900	1k	4k	100	160	6.0	3k	9k	0.06	15h	4000	450k	10k		
IFP4000	T	6	800	1300	1400	5k	270	250	8.0	4k	16k	0.06	4k	12k	750k	10k		
IFP15000	T	9	600	1600	2400	5k	1250	3300	1.8	5k	45h	0.08	15k	50k	11M	10k		
ISK10	U	5	30	180	300	1000	10	3	0.8	1.0	15	200	<0.1	7 $\mu$	15	500	50	
ISK25	U	5	20	250	300	1000	20	130	0.4	450	150	1	20	40	30k	30		
ISP10	T	1	62	700	1000	3000	10	6	30	0.2	18	100	0.1	50 $\mu$	5	3k	500	
ISP70	T	0.5	70	900	1200	3000	70	10	1h	0.2	18	400	0.2	100 $\mu$	40	6k	100	
IS-SH15	T	1	2	250	1000	1200	1	20		20	15		10	5	300k	1	5k	
IS-SH100-1	T	0.7	2	2200	3000	3500		4000		11	15		50	50	3M	1	2	
IS-SH100-3	T	2	5	2500	3500	6k	150	1000		0.5	2	50	3	2	100	600k	5	
IS-SH500	T	1.2	8	5k	9k	15k	500	1000		0.12	6	100	5	5	500	1M	1	1
IST10	U	5	30	180	300	1000	10	50	0.8	220	200	1	10	8	40k	50		

## Group XXI—COUNTERS

Type No.	Kind	Radiation	Quenching	Cathode	Dimensions		Plateau		Maximum			Temp		Cap	Min R <sub>1</sub>	
					Lth mm	Diam mm	Min V	Max V	Rate 10 <sup>3</sup> min	Plateau V	Width %V	Scope %	Min (-)°C	Max (+)°C		
AS-1	COU	BAG			132	18	830	940		80	0.2	0	35			
SFK-1	COU	UV	CU	AL	177	32	1100	1350	3	200		10	40			
AS-2	COU	BAG	AL	160	25	750	860		100	0.15	0		35			
GS-4	COU	GAM	SQ GR	180	23	1250	1450		200	0.1			25	8		
GS-6	COU	GAM	SQ GR	266	23	1250	1450		200	0.1			25	8		
GS-7	COU	GAM	SQ GR	145	16	1200	1300		150	0.1			25	30		
GS-8	COU	GAM	SQ GR	185	16	1200	1300		150	0.1			25	30		
GS-9	COU	GAM	SQ GR	367	33	1250	1450		250	0.1			25	8		
GS-10	COU	GAM	SQ GR	225	16	1250	1450		150	0.1			25	30		
GS-11	COU	GAM	SQ GR	185	33	1250	1450		200	0.1			25	8		
GS-12	COU	GAM	SQ GR	145	16	1200	1300		150	0.1			25	30		
GS-30	COU	GAM	SQ GR	662	33	1250	1450		150	0.1			25	8		
GS-60	COU	GAM	SQ GR	667	63	1250	1450		150	0.1			25	8		
MS-4	COU	GAM	SQ CU	180	23	820	880	65	200	0.1	40		50	25	8	
MS-6	COU	GAM	SQ CU	266	23	820	880	20	200	0.1	40		50	25	8	
MS-7	COU	GAM	SQ CU	145	16	800	860	28	100	0.15	25		50	25	30	
MS-8	COU	GAM	SQ CU	185	16	800	860	55	100	0.15	25		50	25	30	
MS-9	COU	GAM	SQ CU	367	33	870	930	280	250	0.10	40		50	25	8	
MS-11	COU	GAM	SQ CU	185	33	870	930	105	200	0.10	40		50	25	8	
MS-12	COU	GAM	SQ CU	145	16	790	850	15	100	0.15	25		50	25	30	
MS-13	COU	GAM	SQ CU	100	23	870	930	30	200	0.15	40		50	25	8	
MS-14	COU	GAM	SQ CU	160	23	870	930	70	200	0.15	40		50	25	8	
MS-16	COU	GAM	SQ CU	250	23	870	930	120	200	0.10	40		50	25	8	
MST-17	COU	BET	SQ CU	100	40	1600			10	150	0.05	30		50	10	7
MST-18	COU	BET	SQ CU	90	40	1650			10	150	0.03	20		40	10	7
MSTR-4	COU	BET	SQ CU	180	40	1350			25	200	0.05	5		35	25	8
SAT-7	COU	ALP	NI	70	44	330	400			60	0.12	40		50		
SAT-8	COU	AAB		48	15	500	1000			300	0.03	40		50		
SBM-7.	COU	BET	SQ SS	335	26	800	2400			200	0.05			50		
SBM-8	COU	BET	SQ SS	335	26	800	2400			200	0.05			50		
SBS-1	COU	BAG	SQ SN	125	14	800	1200		2	150	0.03	50		50		
SBS-4	COU	BET	SQ GR	362	23	800	1200	2	150	0.03	50		50			
SBS-5	COU	BET	SQ GR	255	23	800	1200	2	150	0.03	50		50			
SBT-3	COU	AAB		93	50	1800	2100			150	0.05	30		50		
SBT-7	COU	BET	SS	72	20	320	420			80	0.12	40		50		
SBT-8	COU	AAB	CU	75	20	1100	1700			150	0.03	30		30		
SBT-9	COU	BET	SQ SS	72	11	320	420			80		30		50		
SBT-10	COU	AAB	LD	88	51	340	460			80		30		50		
SGS-5	COU	GAM	SQ SS	60	8	320	440	2k	60	0.25	50		50			
SGS-6	COU	GAM	SQ SS	90	8	340	440			80	0.15	40		80		
SI-1BG	COU	BAG	SQ NI	60	15	375	410			35		40		50	5 <1	
SI-2B	COU	BET	SQ NI	90	70	1350	1750	8	150	0.05	30		50	10	7	
SI-2BG	COU	BAG	SQ NI	60	15	375	410			35		40		50	5	3
SI-3BG	COU	BAG	SQ	60	10	380	460			80	0.25	40		50		
SI-4BG	COU	BAG	SQ NI	60	14	380	460			80	0.25	40		50		
SI-9BG	COU	BAG	SQ FE	25	10					60	0.15	40		50		
SI-10BG	COU	BAG	SQ NI	76	17	375	400			80	0.25	40		50		
SI-11BG	COU	BAG	SQ NI	75	17	375	400			80	0.25	40		50		
SI-12BG	COU	BAG	SQ FE	73	12		900			80	0.2	50		100		
SI-13G	COU	GAM	SQ NI	66	10	290	330			80	0.25	50		60		
SI-19BG	*	COU	BET	18	9		390			80	0.3					
SI-19G	COU	GAM	SQ FE	94	11	280	320			100	0.13	40		50		
SI-20G	COU	GAM	SQ FE	180	19	285	335			100	0.13	40		50		
SI-21G	COU	GAM	SQ FE	265	19	285	335			100	0.13	40		50		
SI-22G	COU	GAM	SQ FE	220	19	285	335			100	0.13	40		50		

## Group XXI—COUNTERS—Continued

Type No.	Kind	Radiation	Quenching	Cathode	Dimensions		Plateau		Maximum			Temp		Cap	Min R <sub>1</sub>		
					Lth	Diam	Min	Max	Rate	10 <sup>3</sup> /min	Width	Scope	Plateau	Min	Max		
					mm	mm	V	V			V	%V	(-)°C	(+)°C	pF	MΩ	
SNM-3	COU	NEU	SQ	SS	135	18	700	1000		100	0.05	0	30				
SNM-5	COU	NEU	SQ	SS	300	35	1200	1800		100	0.05	20	30				
SNM-7	COU	NEU	SQ	SS	650	35	1800	2500		100	0.05	0	30				
SNM-8	COU	NEU	SQ	SS	10 <sup>h</sup>	35	1700	2000		150	0.05	0	30				
SNM-9	COU	NEU	SQ	SS	133	20	1000	1600		400	0.05	0	50				
STS-1	COU	GAM	SQ	FE	94	16	280	320	60	80	0.12	40	50	10	5		
STS-2	COU	GAM	SQ	FE	180	24	285	335	40	80	0.12	40	50	10	5		
STS-3	COU	GAM	SQ	FE	265	23	285	335	30	80	0.12	40	50	10	5		
STS-5	COU	BET	SQ	FE	113	12	285	335	200	80	0.12	40	50	10	5		
STS-6	COU	BET	SQ	FE	200	22	285	335	60	80	0.12	40	50	10	5		
STS-8	COU	GAM	SQ	FE	220	23	285	335	40	80	0.12	40	50	10	5		
T20BFL	COU	AAB			7	20	1200	1300		300	0.01	20	40				
T25BFL	COU	AAB			7	25	1300	1400		300	0.01	20	40				
T30BFL	COU	AAB			7	30	1400	1500		300	0.01	20	40				
T40BFL	COU	AAB			7	40	1500	1600		300	0.01	20	40				
T50BFL	COU	AAB			7	50	1500	1600		300	0.01	20	40				
T60BFL	COU	AAB			7	60	1900	2000		300	0.01	20	40				
T80BFL	COU	AAB			80	90	2000	2100		300	0.01	20	40				
VS-4	COU	GAM	SQ	W	180	23	720	800	25	200	0.07	40	50	25	8		
VS-6	COU	GAM	SQ	W	266	23	720	800	25	200	0.07	40	50	25	8		
VS-8	COU	GAM	SQ	W	185	16	720	800	25	150	0.07	40	50	25	30		
VS-9	COU	GAM	SQ	W	367	33	720	800	25	250	0.07	40	50	25	8		
VS-9T	COU	GAM	SQ	W	367	33	720	800	25	200	0.1	40	150	25	8		
VS-11	COU	GAM	SQ	W	185	33	720	800	25	200	0.07	40	50	25	8		
VS-13	COU	GAM	SQ	W	100	23	720	800	25	150	0.07	40	50	25	8		
VS-14	COU	GAM	SQ	W	160	23	720	800	25	200	0.07	40	50	25	8		
VS-16	COU	GAM	SQ	W	250	23	720	800	25	200	0.07	40	50	25	8		
R-1	16	24	C				2k			10				60	100		
R-2	17	16.5	C		1300		2k			600		20		50	80		
R2M	12	16	C				2k			10				60	200		
R-3	70	21.5	C BAO				600	140	12μ	300		100	1	60	70		
R-4			C BAO				75										

## Group XXII—DISCHARGE DIODES

Type No.	Dimen		Gas	Cath		Firing		Pulse			Min inter res	Max cap	Amb temp		
	Lth	Diam		Type	Kind	Min	Max	I-amp	J-joule	Time	Operating frequency		Min (-)°C	Max (+)°C	
	mm	mm		V	V					s					
R-5	41	22	C	BAO		160	250					100			
R-6	110	55				800					200M	100			
R-7	45	18	HK	C	BAO	270	330				2	20	10	60	100
R-8	50	20	HK	C	BAO	450	550				2	20	10	60	100
R-9	55	20	HK	C	BAO	900	1100				2	20	10	60	100
R-10	55	20	HK	C	BAO	1375	1725				2	20	40	60	100
R-11	132	35	C	NI		2250	2750	2 hμ							
R-12	30	12	AR	C	K	145	175	20	1 μ			1000			
R-18	36	14	AR	C	K			3 kJ					60	70	
R-21	100	20				1100	2000	500	30 μ						
R-24	100	20				2000	6000	300	1 hμ						
R-54						7200	9800								
R-350	62	20	AR	C	BA	310	390	3	2	0.002	5 k	10	50	50	
R-450	62	20	AR	C	BA	440	480	3	2	0.002	5 k	10	50	50	
RB-1	52	19		C	BA	150	190				400				
RB-2	25	19	C	BA		220	50	15 μ		50	100	<1	60	70	
RB-3	41	22	C	BA		220	235	30	1 hμ	7	100		60	70	
RB-5	60	16	C	BA		340	460	10 J		1	200		60	70	
RB-5A	60	16	C	BA		370	510	<1 J		8			60	50	
RB-90	62	17.5	NA	C	BA	80	100	30 m	2	0.005	100	100	60	70	
RB-280	210	95	AR	C	BA	250	310	30	10	0.002	40	20	60	70	
RB-350	210	95	AR	C	BA	310	390	30	10	0.002	40	20	60	70	
RB-430	210	95	AR	C	BA	390	470	30	10	0.002	40	20	60	70	
SK-127	37	20	NA	MG			72	1	20	1					
SK-220	37	20	HE				140	<1	20	1					
4378D	62	17	C	BA		100						100	60	70	

## Group XXIII—DECATRONS

Type No.	Kind	Voltages						Typ I <sub>b</sub>	Pulse		Dimen		
		Maximum			Typical				Typ	Max	Lth	Dia	
		E <sub>b</sub> V	Firing V	Bias V	Drp V	Oper V	K <sub>1</sub> , K <sub>2</sub> V		mA	Time μs	Rate KHz	mm	mm
OG-1	DEC	450	300	150	15	150	50	1.3	40	8	77	34	
TNI-1.5	DEC	160				90		1.5			35	10	
OG-2	DEC	450	300	150	15	150	50	1.3	60	3	77	34	
OG-3	*	DEC	460	420	120	15	190	40	0.7	18	20	83	30
OG-4		DEC	450	375	200	15	125	35	0.5	160		76	30
OG-5	DEC	400	350	120	20	175	60	1.3	35	10	74	34	
A101	DEC	450	375	150		125	40	0.5	200		75	34	

**Group XXIII-A—NUMERICAL  
INDICATORS**

Type No.	Charac height mm	Viewing	Voltage		Typ I mA	Switching s	Max temp °C	
			Supply V	Arc V				
IN-1	*	18	END	200	130	2.8	1.0	100
IN-2	*	9	END	200	130	1.8	1.0	100
IN-4	*	18	END	200	160	2.8	1.0	100
IN-8	*	18	SIDE	200	140	3.0	0.5	70
IN-8-2	*	18	SIDE	200	140	3.0	0.5	70
IN-12A	*	18	END	200	170	2.8	1.0	70
IN-12B	*	18	END	200	170	2.8	1.0	70
IN-14	*	18	SIDE	200	170	2.8	1.0	70

**Group XXIV—LIGHT AMPLIFIERS**

Type No.	Kind	K	Scrn color	Max dimen			Amp $\mu$	Typ $E_b$	Resol
				K	Screen	mm			
LIM-3	LAM	CSB	VB	15	65	20	2	18	8 70
LIM-4	LAM	CSB	VB	15	135	40	4	18	9 70

## Group XXV—BASES

Base No.	Section 1										Section 2							A <sub>3</sub>	Sec 4	A <sub>5</sub>	Deflection 1				Deflection 2					
	H	H	K	g <sub>1</sub>	g <sub>2</sub>	g <sub>3</sub>	g <sub>4</sub>	g <sub>5</sub>	A	Sh	H	H	K	g <sub>1</sub>	g <sub>2</sub>	g <sub>3</sub>	A	K	A	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>			
A4	2	4	3	1							CP																			
A7	1	7	6	5							2								3	CP										
A8	2	8	7	5							3									CP										
A9	2	7	6	4							CP																			
A12	1	12	2	3							8								4			6	9	10	7					
A14	1	14	2	3							9								5	CP										
A20	1	20	3	5	16						11								CP			CP	CP	CP	CP					
A25	1	25	2	24	6						23	13	14		12				11			20	5	4	21	17	9	8	18	
B7	3	4	2	5	7						6								CP											
BT7	1	7	4	2	3						CP								6	CP										
B8	1	8	3	6							CP																			
B9	3	9	1	8							6																			
B12	1	12	11	2	10						6								CP											
B14	1	14	2	3							9								5	CP		CP	CP	10	7	8	11			
C8	1	8	7	2	6						4								CP											
C14	1	14	13	12	CP						CP																			
D7	1	3	1								CP																			
D8	2	8	6	4							CP																			
D9	4	5	CP								1																			
D10	1	5									2																			
D12	1	3	2								CP																			
D13		2									6																			
D14	1	14	2	3	4						5								CP	CP		CP	CP	CP	CP	CP	CP	CP		
D15	2	3	4								1																			
DS1	4	5	5								CP																			
DS2	2	7	2								CP																			
DS3	1	5	5								CP																			
DS4	2	7									4																			
DS5	1	2	1								CP																			
DS6	2	5									5	7																		
DS7	1	3																												
DS8	7	8	3								1																			
DS9	1	2	CP								CP																			
DT7	1	3	1								CP																			
DW1	2	8									4									6										
DW2	1	2	8								4									5										
DW3	1	8	3								2	4								6										
DW4	2	8	8								4									6										
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DW8	1	3	2								4									5										
DW9	3	4	1								7									2										
F8	1	8	7	6	3						5																			
G8	1	8	6								CP																			
ID1	4	5	2	1							7									3										
ID2	4	5	3	1							7									2										
ID3	4	5	7	8							1								6	3	9									
P1S	4	5	3	2	9	1					7	1																		
P3S	1	7	8	6	3	4					2	5																		
P4S	1	7		4	6	1					CP																			
P5S	1	8		2	3	5					6	7																		
P6S	1	2		3	4	6					CP																			
P7S	1	7		4	3	5					6																			
P8S	4	5		3	1	6					7																			
P9S	4	8	1	2	3	5					6	7																		
P10	2	7	8	CP	4	1					CP																			
P11	1	2		3	CP	6					CP																			
P12	1	6		4	3	5					CP																			
P13	1	7		4	3	5					CP																			
P14	2	7		5	3	4					CP																			
P15	1	6	7	CP	3	5					CP																			
P16	4	5	7	8	3	2					7																			
P17	4	5	3	9	1	8					6																			
P18	8	9	3	5	2	4					1																			

## Group XXV—BASES—Continued

Base No.	Section 1								Section 2								A <sub>3</sub>	Sec 4	A <sub>5</sub>	Deflection 1				Deflection 2			
	H	H	K	g <sub>1</sub>	g <sub>2</sub>	g <sub>3</sub>	g <sub>4</sub>	g <sub>5</sub>	H	H	K	g <sub>1</sub>	g <sub>2</sub>	g <sub>3</sub>	A	K	A	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>		
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P21	4	5	3	1	6	3												CP									
P22	2	6	1	7	3	8												4									
P23	2	7	3	5	8	3												1									
P24	4	9	1	7	2	1											10										
P25	4	5	9	1	7	2	8										3										
P26	4	9	1	10	6	1											3										
P27	2	6	3	4	5	3											1										
P28	2	4	6	7	1	6											3										
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P35	4	5	3	2	8	9	1	3									6										
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P38	4	5		7	2	1											CP										
P39	3	7	4	CP	5	2											1										
P40	4	5	3	2	1	3											9										
P41	3	10	12	7	4	12											1										
PD3	4	5	1	2	9	7											6										
PD5	2	7	1	5	4	1											3									CP	
PD6	2	7	8	CP	6	1											3									4	
PD7	4	5	2	1	7	2											6		3	2	8					5	
PD8	6	8	3	1	2	3											CP		5	3	CP					9	
PD9	4	5	6	7	3	6											1										
PS1	1	8	6	7	5	2											3	4									
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PS3	1	8		7	5	4											3	2									
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PS8	2	7		4	5												CP										
PS9	4	5	3	7	2	3											1										
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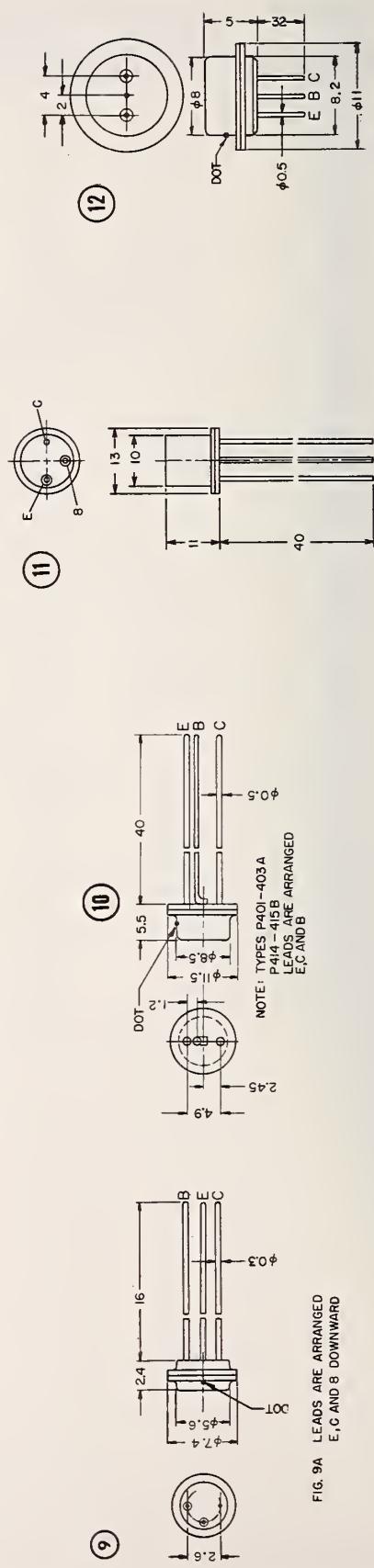
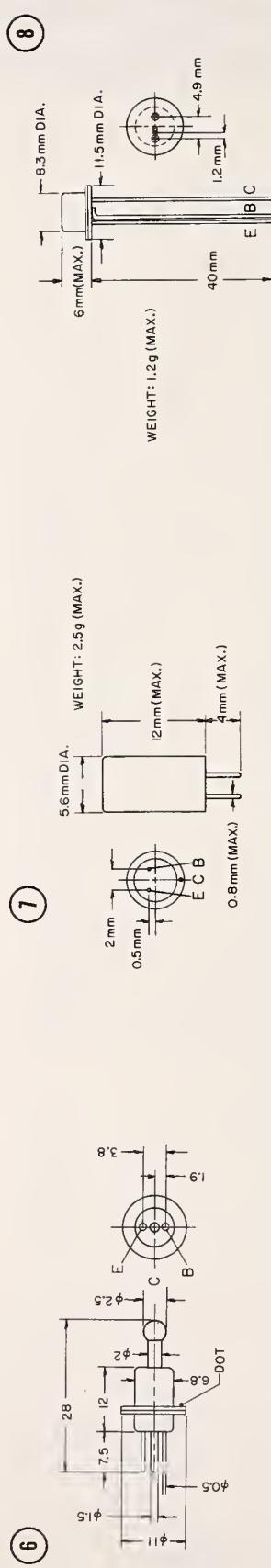
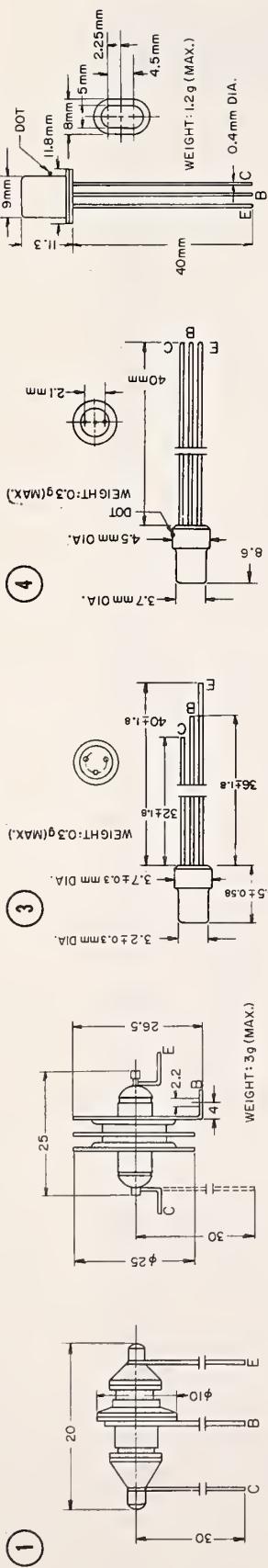
**Group XXV – BASES – Continued**

Base No.	Section 1									Section 2									A <sub>3</sub>	Sec 4	A <sub>5</sub>	Deflection 1				Deflection 2				
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T30	1	2		5														3												
T31	2	3	5	4														1												
T32	10	12	7	4														1												
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TE9	4	5	1	9	8													CP												
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TS8	2	7	1	5													CP	3												
TS9	2	7		CP														CP												
TT1	4	5	7	8														9												
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4AJ																		2		5		3								
4BB	2	7	8	CP														CP												
4BQ	2	7	8															3												
4D	1	4		3														2												
4F	1	3		4														2												
4G	1	4	3															2												
4T2	1	2		4														CP												
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5AW	1	5	4	3	2	4												CP												
5BT	2	7	3	5	8	3												CP												
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Group XXV—BASES—Continued.

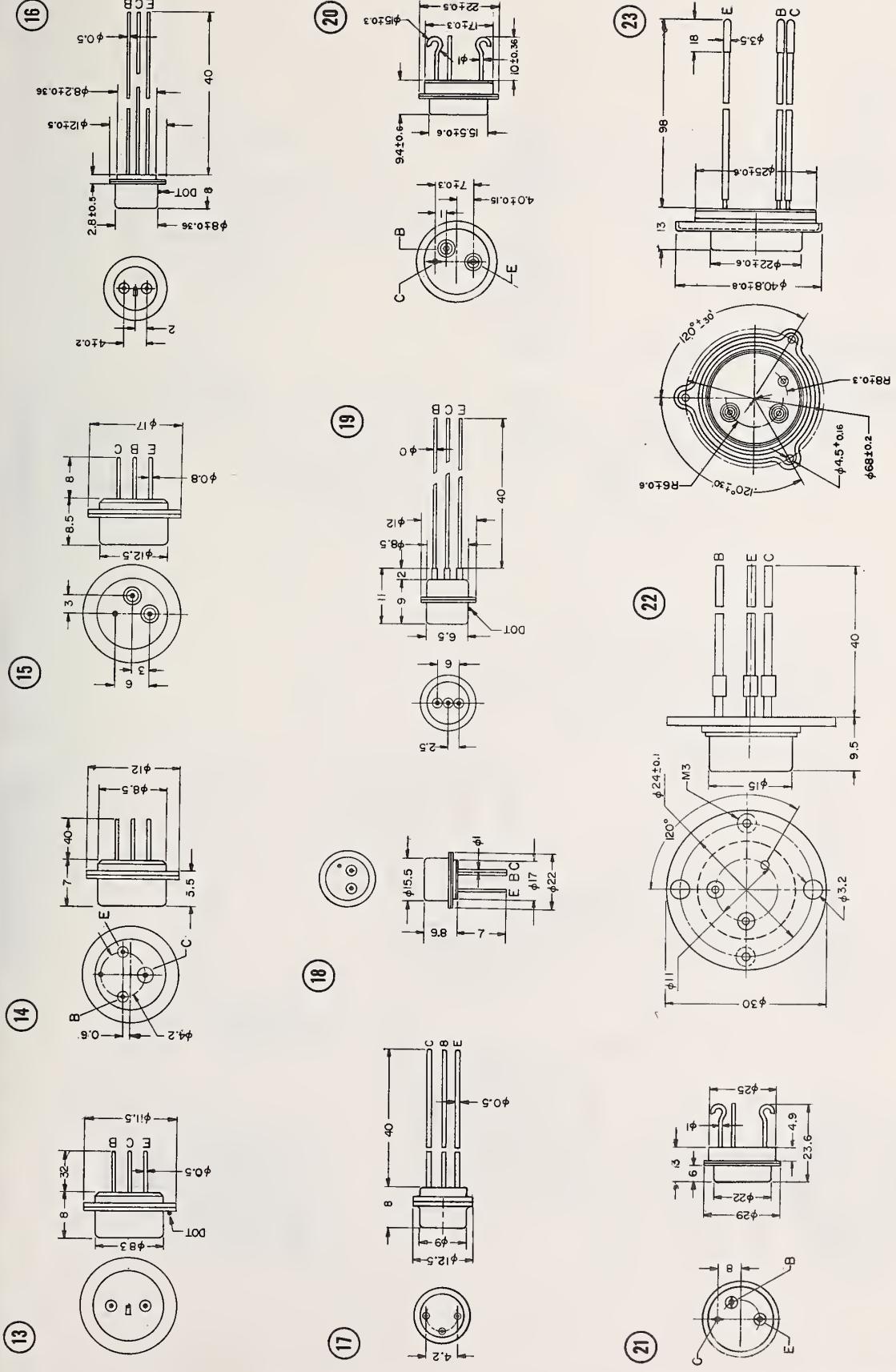
Base No.	Section 1									Section 2									A <sub>3</sub>	Sec 4		A <sub>5</sub>	Deflection 1				Deflection 2						
	H	H	K	g <sub>1</sub>	g <sub>2</sub>	g <sub>3</sub>	g <sub>4</sub>	g <sub>5</sub>	A	Sh	H	H	K	g <sub>1</sub>	g <sub>2</sub>	g <sub>3</sub>	A	K	A	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>						
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7DF	3	4	1	2	5	6											7																
7DN				2													1																
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8BE	7	8	2	1						3								5															
8BK	2	7	3	4	6	3				8																							
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8N	2	7	5	4	6	3				8																							
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# TRANSISTOR OUTLINE DRAWINGS GROUP **X**

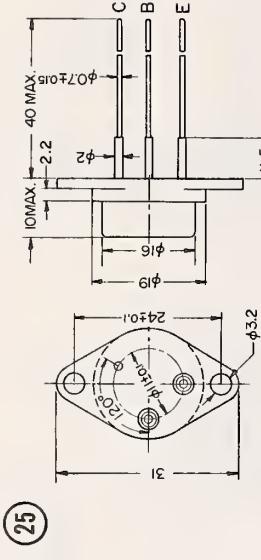
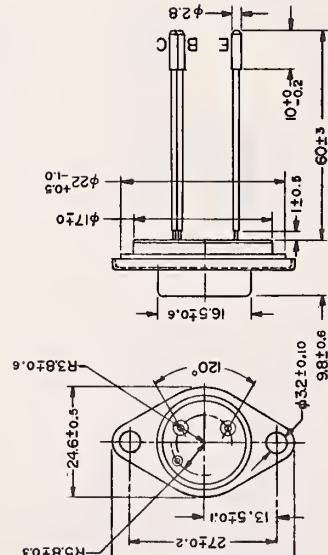
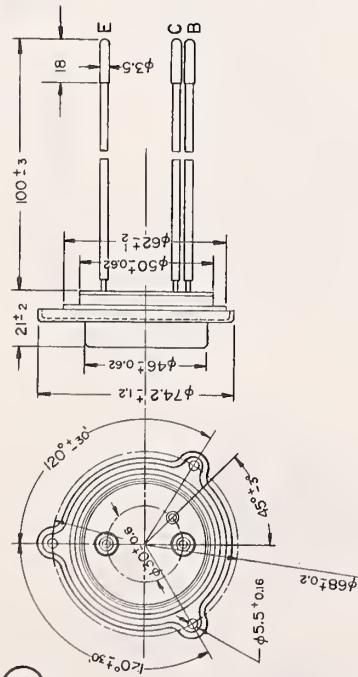


NOTE: TYPES GT 308, GT 311  
AND GT 313  
LEADS ARE ARRANGED  
E, C AND B

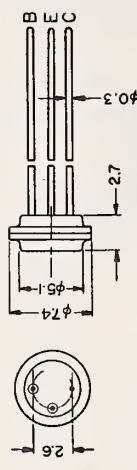
# TRANSISTOR OUTLINE DRAWINGS (CONT'D)



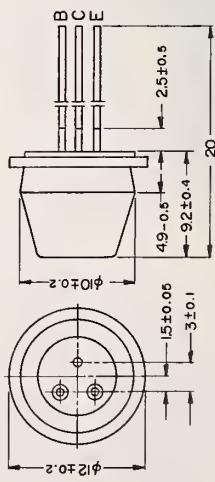
# TRANSISTOR OUTLINE DRAWINGS



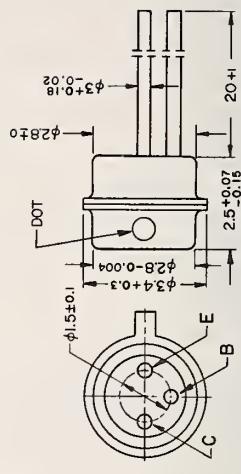
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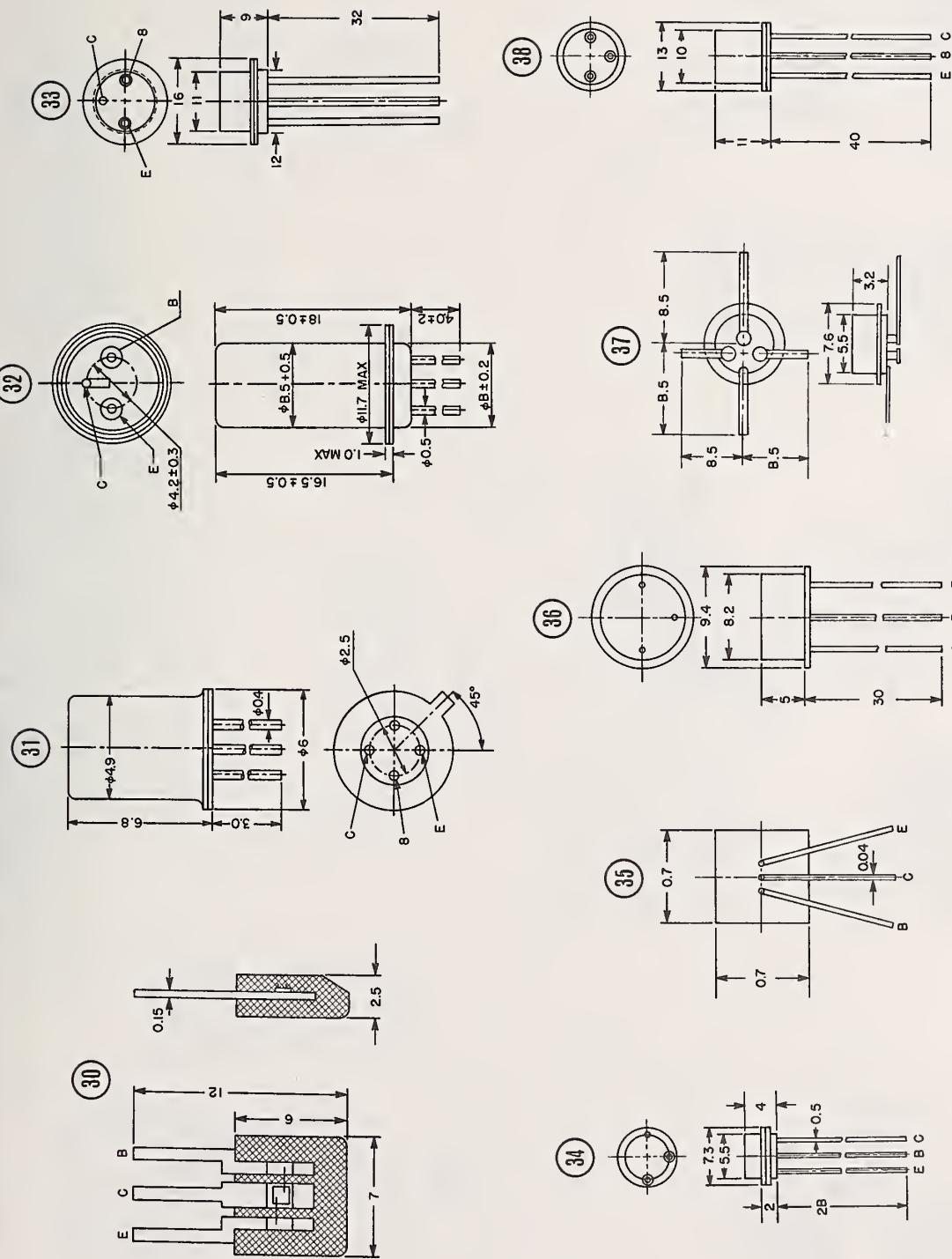
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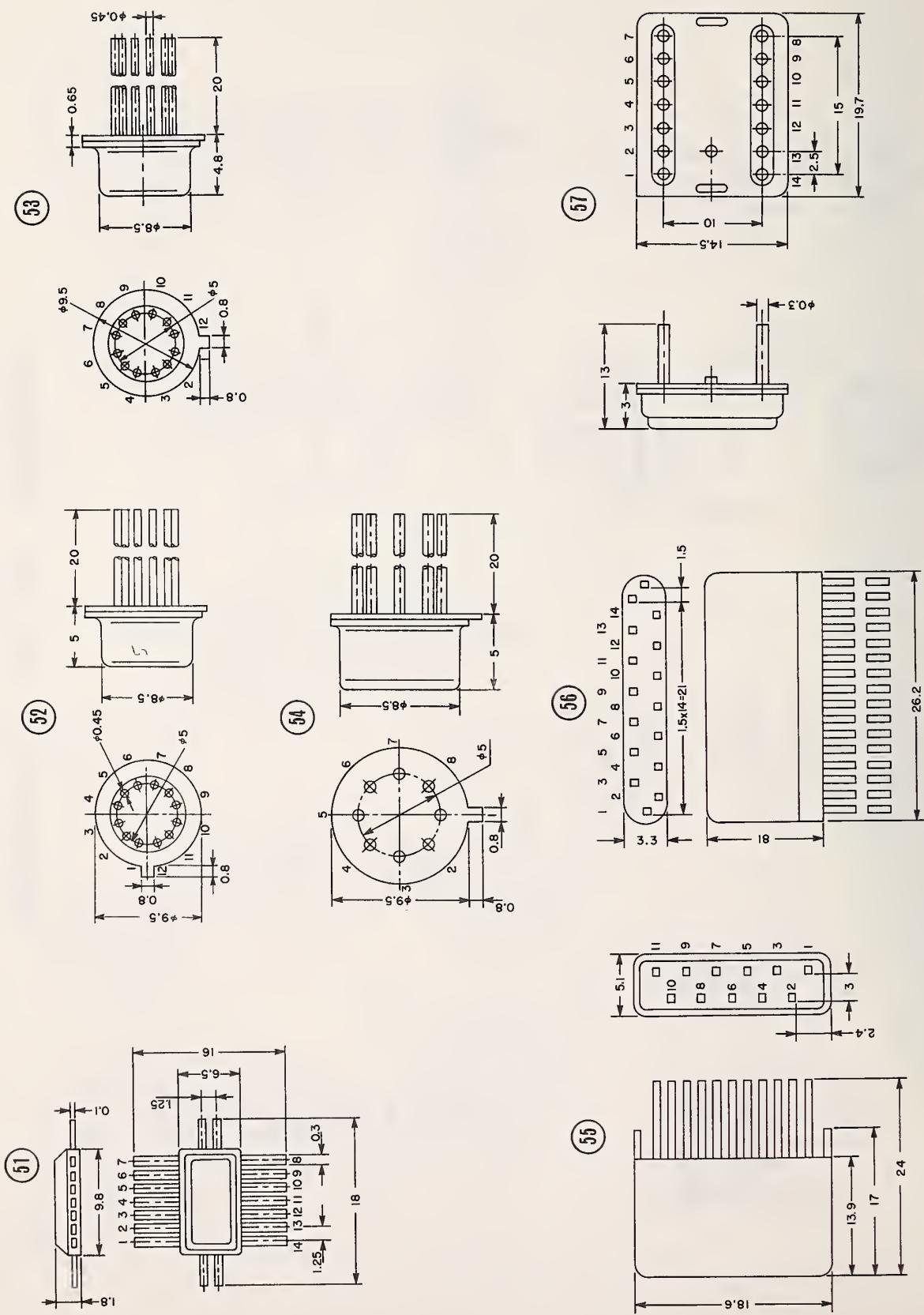
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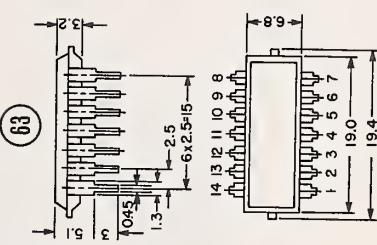
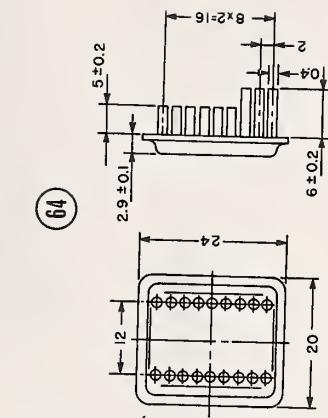
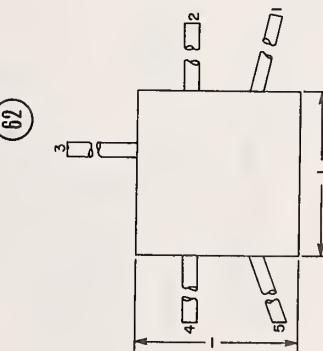
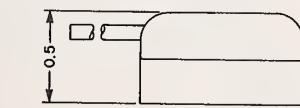
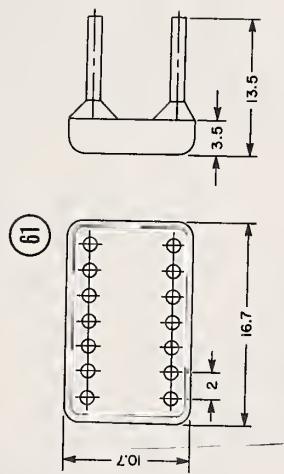
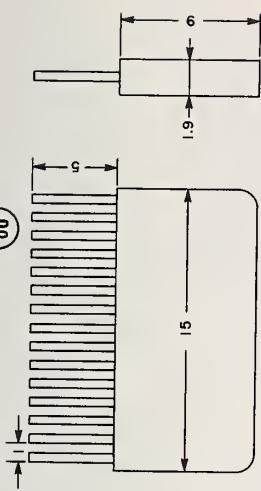
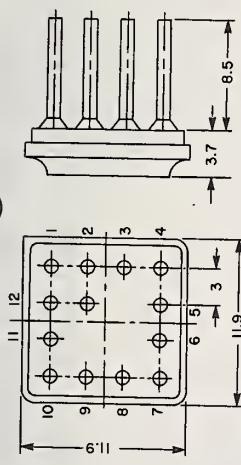
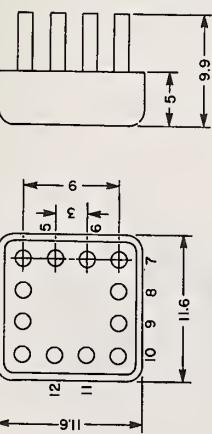
# TRANSISTOR OUTLINE DRAWINGS



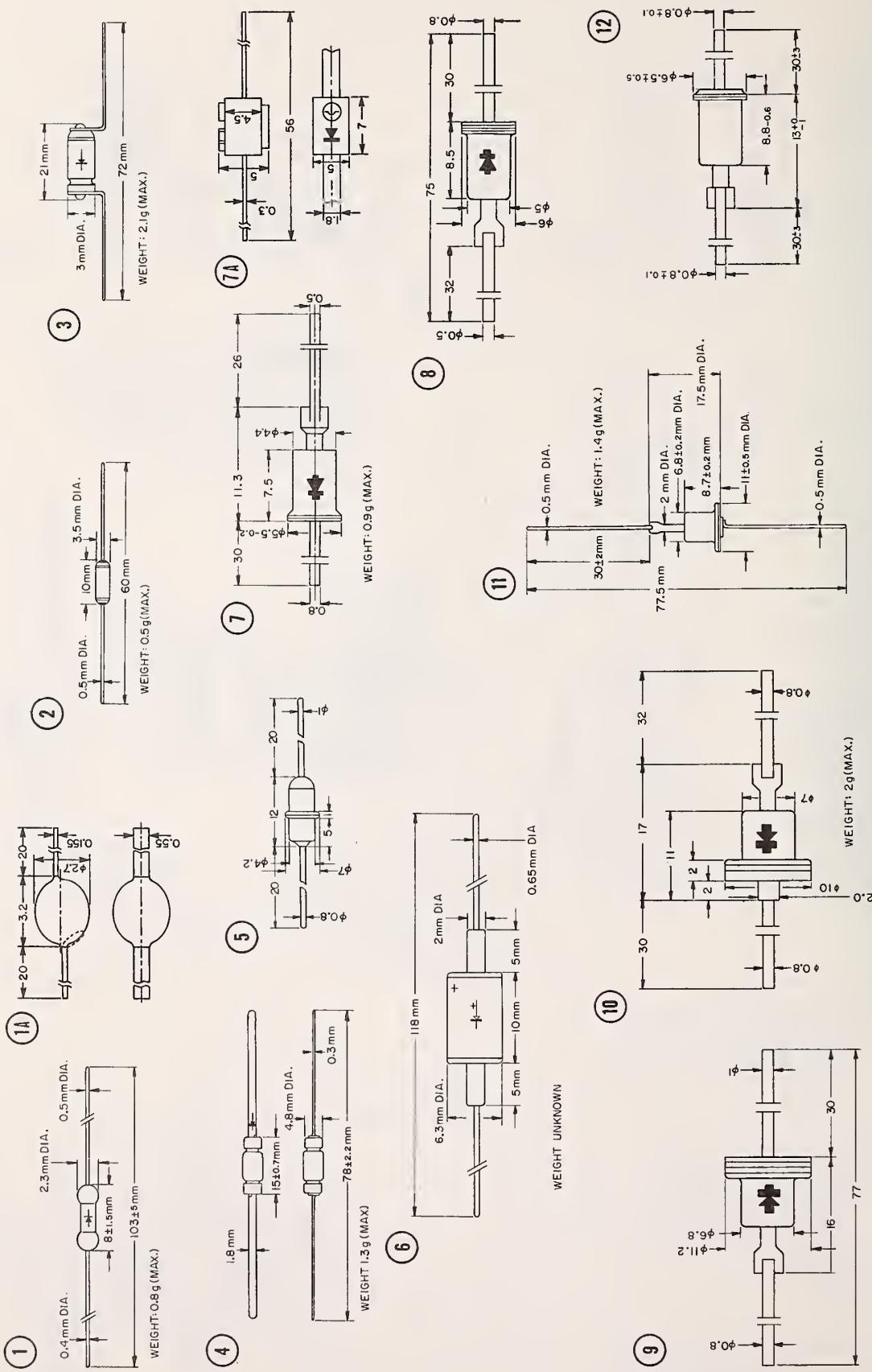
# INTEGRATED CIRCUITS



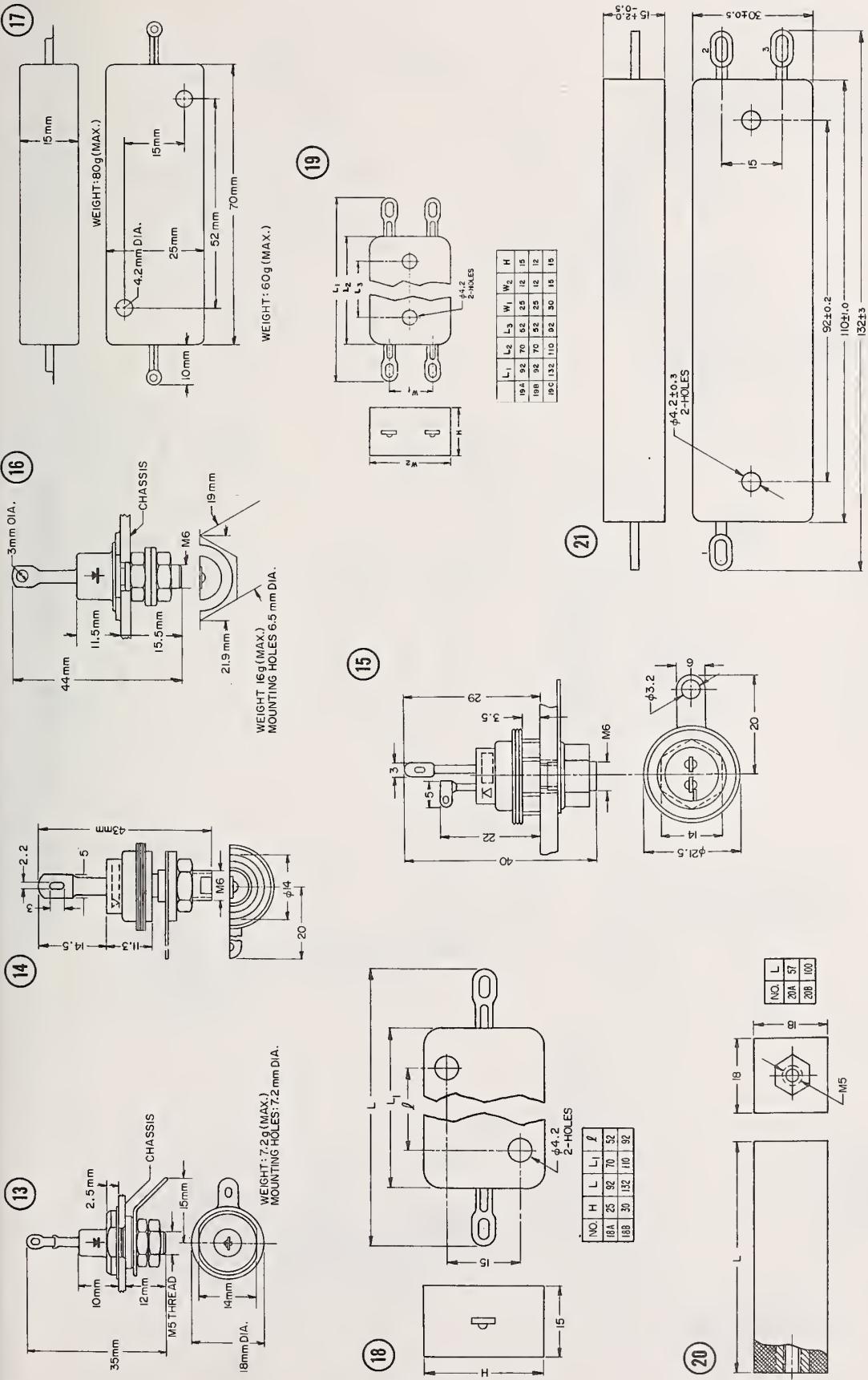
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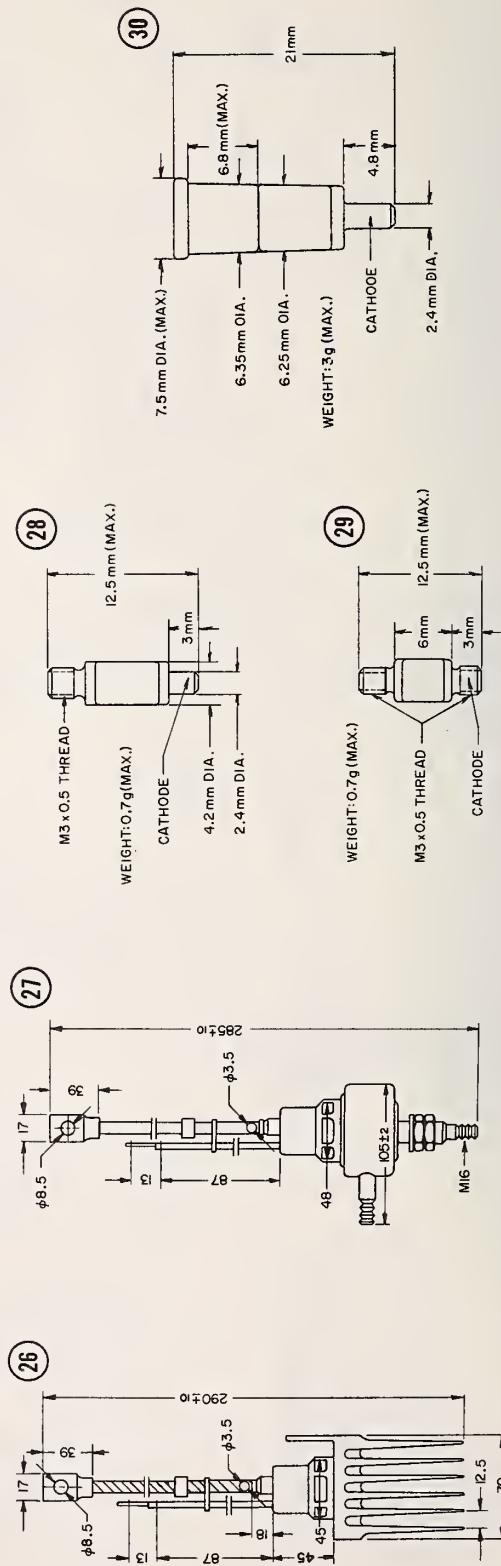
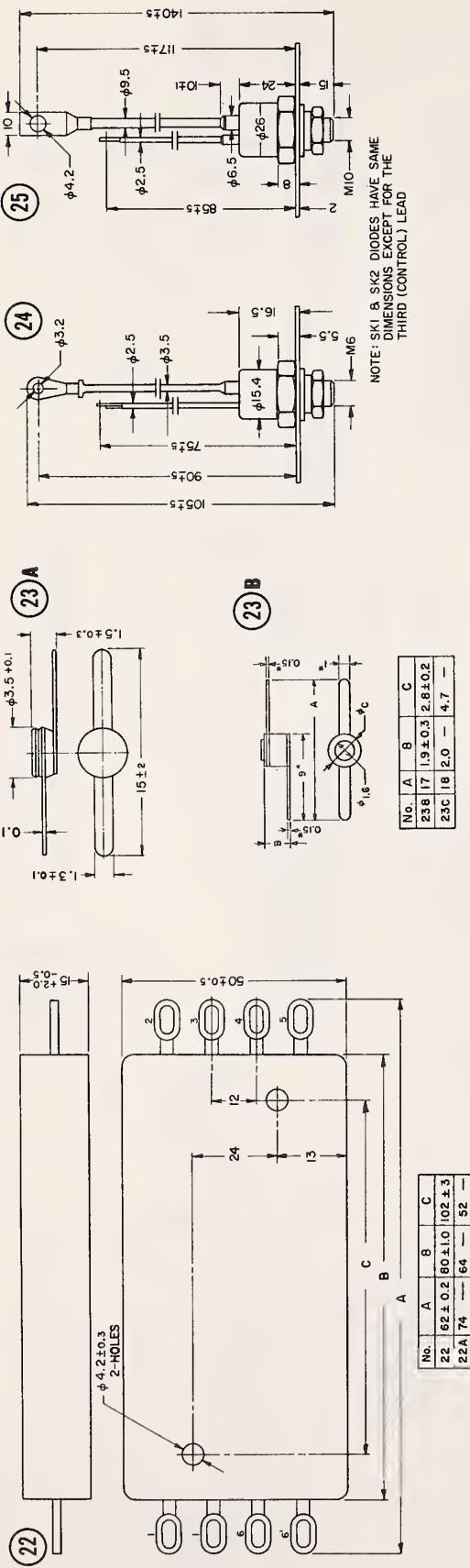
**DIODE OUTLINE DRAWINGS**  
**GROUPS XI, XII, XIII & XIV**



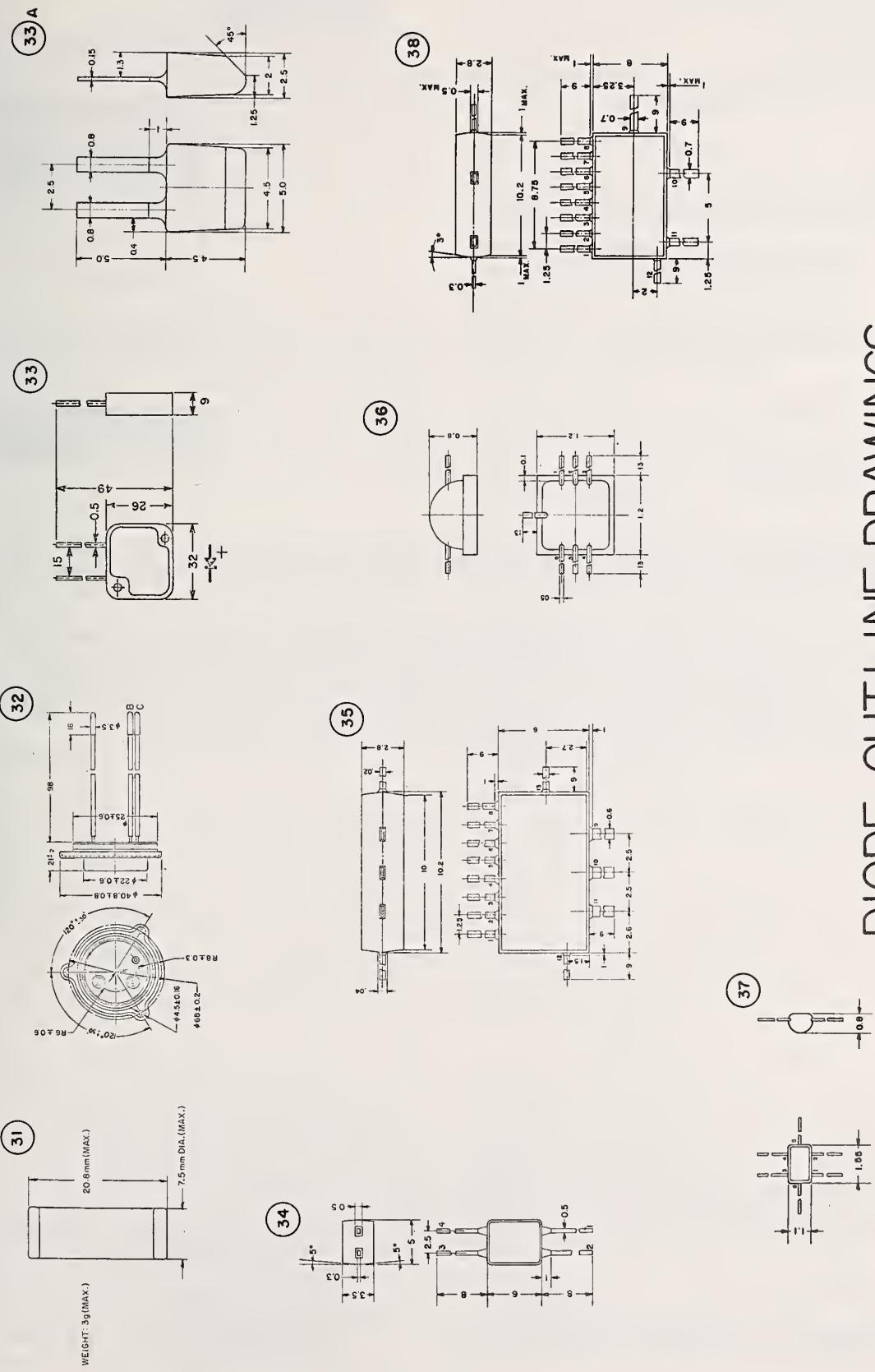
## DIODE OUTLINE DRAWINGS (CON'T)



# DIODE OUTLINE DRAWINGS



# DIODE OUTLINE DRAWINGS



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