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Tabulation of Data  
on Semiconductor Amplifiers  
and Oscillators  
at Microwave Frequencies

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DEPARTMENT  
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# TECHNICAL NOTE 597

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## Tabulation of Data on Semiconductor Amplifiers and Oscillators at Microwave Frequencies

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## FOREWORD

This tabulation of data on semiconductor amplifiers and oscillators at microwave frequencies has been prepared by the National Bureau of Standards Electron Devices Data Service. Established in 1948 to provide technical data on electron tubes to members of the Bureau staff, the service has since been extended to include other scientists and engineers in government and industry. In the course of the program, a large volume of information on electron tubes and semiconductor devices has been accumulated. In order to make this information more readily available, a system was devised for automatically tabulating the data in handbook form. Present tabulations include Tabulation of Data on Microwave Tubes, NBS Handbook 104 (1967); Tabulation of Data on Receiving Tubes, NBS Handbook 103 (1967); Tabulation of Data on East European Electron Devices, NBS Report 9925 (1968); and Tabulation of Published Data on Soviet Electron Devices Through March 1970, NBS Technical Note 526, presently being updated.

All the included information has been taken from the manufacturers technical 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.

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TABULATION OF DATA ON SEMICONDUCTOR  
AMPLIFIERS AND OSCILLATORS AT MICROWAVE FREQUENCIES

Charles P. Marsden

This tabulation includes some of the basic characteristics of semiconductor microwave devices, specifically amplifiers and oscillators of foreign and domestic origin.

*Key Words:* Amplifiers; basic characteristics; microwave; oscillators; semiconductor; solid state.

1. INTRODUCTION

With the increased use of semiconductor microwave devices as supplements to microwave tubes, it has become apparent that a listing of basic characteristics of such devices would assist the potential user in his selection of a device to fulfill his requirements. The listing includes typical devices offered by the manufacturers. Since a great number of these devices are custom-made, it would not be feasible to include every type known to be available, but rather, we have endeavored to tabulate data on off-the-shelf items as supplied by the various manufacturers.

Almost any electrical or mechanical variant of a basic design will be provided according to customer specifications since the present state of the production art encourages custom-made devices. For this reason it should be kept in mind that this tabulation is meant to serve only as a guide in the preliminary selection of semiconductor microwave devices. For most applications technical assistance from the manufacturer will be necessary regarding mechanical modifications and changes in electrical parameters.

The tabulation contains the basic electrical and mechanical characteristics of semiconductor microwave devices, specifically those devices categorized as amplifiers and oscillators. Some applications for these devices include telemetry, radar, communications and satellite systems, or other applications requiring small sized, light-weight devices capable of withstanding extremes of such environmental parameters as temperature, acceleration, etc.

## 2. ORGANIZATION OF THE TABULATION

The semiconductor microwave devices tabulation consists of two principal sections as follows:

- (1) Alphabetical-Numerical Listing of devices by type number.
- (2) Characteristic Listing by device type (amplifier, oscillator, and multiplier), center frequency, and power output in that order.

## 3. EXPLANATION OF THE CODE

Definitions of terms and explanation of the code used in the tabulation follow.

### 3.1. Code Terminology

The Alphabetical-Numerical Listing and the Characteristic Listing are in tabular form, consisting of 14 primary columns. The headings of these columns and their meanings are given below.

A blank in any column indicates that the characteristic designated by that column heading is not applicable to the device in question, or that no value was given in the available data.

*Type Number* - The alphabetical-numerical designation assigned by the manufacturer.

*Device Type* - A three-letter code describing the application and/or structure as indicated by the manufacturer.

ADO	Avalanche Diode Oscillator	OSX	Crystal Controlled Oscillator
AMM	Amplifier/Multiplier	PAR	Parametric Amplifier
AMP	Amplifier	PRE	Preamplifier
CSO	Cavity-Stablized Oscillator	TDA	Tunnel-Diode Amplifier
GOS	Gunn-Effect Oscillator	TOM	Transistor Oscillator and Multiplier
IPO	Impatt Oscillator		
MIA	Mixer and Amplifier	TRA	Transistor Amplifier
MUL	Multiplier	VTO	Varactor Tuned Oscillator
GSC	Oscillator	YTO	Yig Tuned Oscillator

*Frequency* - Both minimum and maximum frequency of operation in gigahertz. Only devices having a minimum frequency of operation above 0.2 GHz have been included in this tabulation.

\* indicates that the tabulated value is the center frequency or a center frequency is preselected in the range shown.

*Tuning Method* - The method of frequency tuning is indicated by the following code:

FX Fixed Tuned.

MC Mechanically Tuned.

ME Mechanically and Electrically Tuned.

VT Voltage Tuned.

YT Yig Tuned.

*Bandwidth* - The frequency difference in MHz between half-power points for amplifier devices or the tuning range for oscillator devices.

*Power Requirements* - Typical voltage in volts and maximum current in mA.

*Power Output* - The minimum CW output in mW.

# Minimum pulsed power output in mW.

\* Power output is in dBm.

W The unit of Power Output is changed from mW to watts.

*Gain* - The minimum gain for amplifiers in dB.

*NF* - The maximum noise figure in dB.

*Operating Temperature* - The stated permissible ambient temperatures in degrees Fahrenheit with in which the device operates.

*Volume* - The typical volume of the device in cubic inches (excluding connectors).

*Weight* - The weight in ounces of the device which may or may not include connectors.

*Coupling* -

CO Coaxial.

WG Wave Guide.

Manufacturer -

AC	Acrodyne Industries Inc. 666 Davisville Road Willow Grove, Pa. 19090	FS	Fairchild Microwave and Opto- electronics Div. 2513 Charleston Road Mountain View, Cal. 94040
AI	Alpha Industries, Inc. 20 Sylvan Rd. Woburn, Mass. 01801	GC	General Electric Co., Ltd. The M-0 Valve Co. LTD Brook Green Works, Hammersmith London W6, England
AK	Altek Corp. 11700 Old Columbia Pike Silver Spring, Md. 20904	GR	Greenway Industries, Inc. 840 West Church Road Mechanicsburg, Pa. 17055
AL	American Electronic Labs., Inc. Colmar, Pa. 18915	IM	International Microwave Corp. 33 River Road Cos Cob, Conn. 06807
AP	Applied Technology 3410 Hillview Avenue Stanford Industrial Park Palo Alto, Cal. 94304	IS	Intradyme Systems, Inc. 1261 Birchwood Drive Sunnyvale, Cal. 94086
AR	Applied Research, Inc. 76 South Bayles Avenue Port Washington, N.Y. 11050	MA	Microwave Associates Inc. Burlington, Mass. 01803
AT	Airtron Div. of Litton Industries 200 East Hanover Avenue Morris Plains, N.J. 07950	ME	Mu-del Electronics Inc. 2426 Linden Lane Silver Spring, Md. 20910.
AV	Avantek, Inc. 2981 Copper Road Santa Clara, Cal. 95051	MM	Micromega Div. Bunker Ramo Corp. 12575 Beatrice St. Los Angeles, Cal. 90066
CL	Centilabs Corp. 2455 Old Middlefield Way Mountain View, Cal. 94040	MP	Microwave Products Group Inc. Gage Laboratories, Inc. 100 Express St. Plainview, L.I., N.Y. 11803
EF	Emf Systems, Inc. P.O. Box 1109 State College, Pa. 16801	MQ	Miteq 100 Ricefield Lane Hauppauge, N.Y. 11787
EM	E & M Laboratories 5388 Sterling Center Drive Westlake Village, Cal. 91360	MS	Micro State Electronics Corp. Subsidiary of Raytheon Corp. 130 Second Avenue Waltham, Mass. 02154
FR	Frequency Sources, Inc. Kennedy Drive P.O. Box 159 North Chelmsford, Mass. 01863		

OK	OKI Electronics of Am., Inc. The OKI Bldg. 500/506 S.E. 24th St. Fort Lauderdale, Fla. 33316	SC	Spectra-Microwave, Inc. 915 Linda Vista Avenue Mountain View, Cal. 94040
OP	Optimax, Inc. P.O. Box 105 Colmar, Pa. 18915	SK	Spacekom, Inc. P.O. Box 10 Goleta, Cal. 93017
OS	Omni Spectra, Inc. 253 S. Hinton Avenue Scottsdale, Ariz. 85251	SP	Sperry Rand Corporation Sperry Microwave Electronics P.O. Box 4648 Clearwater, Fla. 33518
PE	Physical Electronics Labs. 1185 O'Brien Drive Menlo Park, Cal. 94025	TR	Trak Microwave Corporation 4726 Eisenhower Blvd. Tampa, Fla. 33614
RC	Radio Corporation of America Electronics Components Harrison, N.J. 07029	VA	Varian Associates Inc. Solid State Division Salem Road Beverly, Mass. 01915
RH	RHG Electronics Labs., Inc. 94 Milbar Blvd. Farmington, L.I., N.Y. 11735	WJ	Watkins-Johnson Co. 3333 Hilview Avenue Stanford Industrial Park Palo Alto, Cal. 94304
SA	Sanders Associates, Inc. P.O. Box 907 Nashua, N.H. 03060		

ZL Zeta Laboratories  
616 National Avenue  
Mountain View, Cal. 94040

4. ALPHABETICAL-NUMERICAL LISTING

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
A52D2	AMP	0.5	1.0			24	280	**20	30	6	54	70	<10	12.0	CO	OP
A154N	AMP	1.4	1.5			24		**15	25	<5	54	70	<10	12.0	CO	OP
A172N	AMP	1.7	1.7			24		**10	25	<6	54	71	<10	12.0	CO	OP
A185N	AMP	1.7	1.9			24		**10	25	<6	54	71	<10	12.0	CO	OP
A230N	AMP	2.2	2.3			24		**10	25	6	54	71	<10	12.0	CO	OP
A-230-17-5	AMP**<0.3					28		5	17	<3	55	70	2		CO	MP
A-230-30-10	AMP**<0.3					28		10	30	<3	55	70	5		CO	MP
A-230-50-1C	AMP**<0.3					28		100	50	<3	55	70	9		CO	MP
A-230-50-1K	AMP<0.3					28		1000	50	<3	55	70	8		CO	MP
A-230-90-1C	AMP**<0.3					28		100	90	<3	55	70	9		CO	MP
A251J2	AMP	0.3	0.5			24		**20	30	5	54	71	16	12.0	CO	OP
A251J4	AMP	0.3	1.0			24	210	**10	25	8	54	71	<10	12.0	CO	OP
A-405-17-5	AMP**<0.5					28		5	17	<3	55	70	2		CO	MP
A-405-30-10	AMP**<0.5					28		10	30	<3	55	70	5		CO	MP
A-405-50-1C	AMP**<0.5					28		100	50	<3	55	70	5		CO	MP
A-405-50-1K	AMP**<0.5					28		1000	50	<3	55	70	8		CO	MP
A-405-90-1C	AMP**<0.5					28		100	90	<3	55	70	9		CO	MP
A-450-17-5	AMP**<0.5					28		5	17	<3	55	70	2		CO	MP
A-450-30-10	AMP**<0.5					28		10	30	<3	55	70	5		CO	MP
A-450-50-1C	AMP**<0.5					28		100	50	<3	55	70	5		CO	MP
A-450-50-1K	AMP**<0.5					28		1000	50	<3	55	70	8		CO	MP
A-450-90-1C	AMP**<0.5					28		100	90	<3	55	70	9		CO	MP
A551J2	AMP	0.6	1.1			24	300	**20	25	6	54	71	16	12.0	CO	OP
A-750-17-1	AMP**<0.8					28		1	17	<3	55	70	5		CO	MP
A-750-30-10	AMP**<0.8					28		10	30	<3	55	70	5		CO	MP
A-750-50-1C	AMP**<0.8					28		100	50	<3	55	70	9		CO	MP
A-750-50-10	AMP**<0.8					28		10	50	<3	55	70	9		CO	MP
A-750-90-50	AMP**<0.8					28		50	90	<3	55	70	9		CO	MP
A-870-17-1	AMP**<0.9					28		1	17	<4	55	70	5		CO	MP
A-870-30-10	AMP**<0.9					28		10	30	<4	55	70	5		CO	MP
A-870-50-1C	AMP**<0.9					28		100	50	<4	55	70	9		CO	MP
A-870-50-10	AMP**<0.9					28		10	50	<4	55	70	9		CO	MP
A-870-90-50	AMP**<0.9					28		50	90	<4	55	70	9		CO	MP
A-995-17-1	AMP**<1.0					28		1	17	4	55	70	5		CO	MP
A-995-30-10	AMP**<1.0					28		10	30	4	55	70	5		CO	MP
A-995-50-1C	AMP**<1.0					28		100	50	4	55	70	9		CO	MP
A-995-50-10	AMP**<1.0					28		10	50	4	55	70	9		CO	MP
A-995-90-50	AMP**<1.0					28		50	90	4	55	70	9		CO	MP
A-1090-17-1	AMP**<1.1					28		1	17	4	55	70	5		CO	MP
A-1090-30-10	AMP**<1.1					28		10	30	4	55	70	5		CO	MP
A-1090-50-1C	AMP**<1.1					28		100	50	4	55	70	9		CO	MP
A-1090-50-10	AMP**<1.1					28		10	50	4	55	70	9		CO	MP
A-1090-90-50	AMP**<1.1					28		50	90	4	55	70	9		CO	MP
A-1485-17-1	AMP**<1.5					28		1	17	<6	55	70	5		CO	MP
A-1485-30-10	AMP**<1.5					28		10	30	<6	55	70	5		CO	MP
A-1485-50-1C	AMP**<1.5					28		100	50	<6	55	70	9		CO	MP
A-1485-50-10	AMP**<1.5					28		10	50	<6	55	70	9		CO	MP
A-1485-90-50	AMP**<1.5					28		50	90	<6	55	70	9		CO	MP
A2004/1	AMP	0.5	2.0		150				20		20	65			CO	AC
A-2451	AMP	0.2	0.5		15	28		75W	30		71	21	20.0		CO	AC
ACC SERIES	TRA	1.2	2.7		100	12			10	7	20	71			CO	IM
ACG SERIES	TRA	1.2	2.8		100	12			10	6	20	71			CO	IM
ACH SERIES	TRA	1.2	2.8		100	24			10	6	20	71			CO	IM
ACP SERIES	TDA	1.7	18.0		100			50	10	5					CO	IM
ACP-1850	TDA	1.7	2.0	FX	300	24	15	**29	10	<5	10	71	25		CO	IM

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
ACP-2150	TJA	2.0	2.3	FX	300	24	15	*-29	10	<5	10	71	26		CO	IM
ACP-2450	TJA	2.3	2.6	FX	300	24	15	*-29	10	<5	10	71	26		CO	IM
ACP-2600	TJA	2.4	2.8	FX	400	24	15	*-29	10	<5	10	71	26		CO	IM
ACP-2800	TJA	2.6	3.0	FX	400	24	15	*-29	10	<5	10	71	26		CO	IM
ACP-3000	TJA	2.8	3.2	FX	400	24	15	*-29	10	<5	10	71	13		CO	IM
ACP-3300	TJA	3.0	3.6	FX	600	24	15	*-29	10	<5	10	71	13		CO	IM
ACP-3600	TJA	3.3	3.9	FX	600	24	15	*-29	10	<5	10	71	13		CO	IM
ACP-3950	TJA	3.6	4.3	FX	700	24	15	*-29	10	<5	10	71	13		CO	IM
ACP-4300	TJA	4.0	4.7	FX	700	24	15	*-29	10	<5	10	71	13		CO	IM
ACP-4650	TJA	4.3	5.0	FX	700	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-5000	TJA	4.7	5.3	FX	600	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-5300	TJA	5.0	5.6	FX	600	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-5600	TJA	5.3	5.9	FX	600	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-5900	TJA	5.6	6.3	FX	700	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-6300	TJA	5.9	6.7	FX	800	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-6700	TJA	6.3	7.1	FX	800	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-7100	TJA	6.7	7.5	FX	800	24	15	*-29	10	<5	10	71	6		CO	IM
ACP-7900	TJA	7.5	8.3	FX	800	24	15	*-29	10	<5	10	71	6		CO	IM
ACP-8650	TJA	7.9	9.4	FX	15H	24	15	*-29	10	<5	10	71	6		CO	IM
ACP-9400	TJA	<8.7	10.2	FX	15H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-10000	TJA	9.4	10.6	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-10500	TJA	10.0	11.2	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-11200	TJA	10.6	11.8	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-11800	TJA	11.2	12.4	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-12400	TJA	11.8	13.0	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-13000	TJA	12.0	14.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACP-14000	TJA	13.0	15.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACP-15000	TJA	14.0	16.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACP-16000	TJA	15.0	17.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACP-17000	TJA	16.0	19.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACP-18000	TJA	17.0	19.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACS SERIES	TRA	1.2	2.8		100	24			10	8	55	85			CO	IM
AJ-10 SERIES	IPD	8.2	12.4	MC	250	-95	40	250			30	70	2	6.0		OK
AJC-10A	IPD	8.2	12.4	MC	500	95	40	60			30	70			CO	OK
ADC-10B	IPD	8.2	12.4	MC	500	95	40	100			30	70			CO	OK
AJC-10C	IPD	8.2	12.4	MC	500	95	40	150			30	70			CO	OK
AJC-10J	IPD	8.2	12.4	MC	500	95	40	250			30	70			CO	OK
AJS-10A	IPD	8.2	12.4	MC	500	95	40	60			30	70			WG	OK
AJS-10B	IPD	8.2	12.4	MC	500	95	40	100			30	70			WG	OK
AJS-10C	IPD	8.2	12.4	MC	500	95	40	150			30	70			WG	OK
AJS-10J	IPD	8.2	12.4	MC	500	95	40	250			30	70			WG	OK
AJW-10A	IPD	8.2	12.4	MC	500	95	40	60			30	70			WG	OK
AJW-10B	IPD	8.2	12.4	MC	500	95	40	100			30	70			WG	OK
AJW-10C	IPD	8.2	12.4	MC	500	95	40	150			30	70			WG	OK
AJW-10J	IPD	8.2	12.4	MC	500	95	40	250			30	70			WG	OK
AF036	OSC	3.6	3.9	MC		20	150	10			30	60	9		CO	AT
AF036H	OSC	3.6	3.9			20	300	50			30	60	9		CO	AT
AF038	OSC	>3.8	4.2	MC		30	150	10			30	60	9		CO	AT
AF038H	OSC	>3.8	4.2			20	300	50			30	60	9		CO	AT
AF041	OSC	4.1	4.4	MC		20	150	10			30	60	9		CO	AT
AF041H	OSC	4.1	4.4			20	300	50			30	60	9		CO	AT
AF043	OSC	>4.3	>4.9	MC		20	150	10			30	60	9		CO	AT
AF043H	OSC	>4.3	>4.9			20	300	50			30	60	9		CO	AT
AF054	OSC	5.4	5.9	MC		20	150	10			30	60	9		CO	AT
AF054H	OSC	5.4	5.9			20	300	50			30	60	9		CO	AT



TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
AF058	OSC	>5.8	>6.4			20	150	10			30	60	9		CO	AT
AF058.4	OSC	>5.8	>6.4			20	300	50			30	60	9		CO	AT
AF064	OSC	>6.4	>6.9			20	150	50			30	60	9		CO	AT
AF064H	OSC	>6.4	>6.9			20	300	50			30	60	9		CO	AT
AF068	OSC	6.8	7.2			20	150	10			30	60	9		CO	AT
AF070	OSC	7.0	>7.5			20	150	10			30	60	9		CO	AT
AF075	OSC	7.5	8.0			20	150	10			30	60	9		CO	AT
AF079	OSC	<8.0	8.5			20	150	10			30	60	9		CO	AT
AF0106	OSC	>0.6	>1.2			20	150	10			30	60	9		CO	AT
AF0112	OSC	11.2	<11.8			20	150	10			30	60	9		CO	AT
AF0116	OSC	>11.6	>12.2			20	150	10			30	60	9		CO	AT
AF0121	OSC	>12.1	12.7			20	150	10			30	60	9		CO	AT
AF0126	OSC	>12.6	>13.2			20	150	10			30	60	9		CO	AT
AF0131	OSC	>13.1	<13.8			20	150	10			30	60	9		CO	AT
AF0136	OSC	>13.6	>14.2			20	150	10			30	60	9		CO	AT
ALN115	AMP	1.4	1.5			20	30	*0	25	<5			<10	8.3	CO	OP
ALN120	AMP	1.0	2.0			20	30	*-10	25	6			<10	8.3	CO	OP
ALN150	AMP	1.0	1.5			20	30	*5	25	<6			<10	8.3	CO	OP
ALN204	AMP	0.2	0.4			20	30	*5	25	4			<10	8.3	CO	OP
ALN223	AMP	2.2	2.3			20	30	*0	25	<6			<10	8.3	CO	OP
ALN255	AMP	0.3	0.5			20	30	*5	25	4			<10	8.3	CO	OP
ALN306	AMP	0.3	0.6			20	30	*5	25	<5			<10	8.3	CO	OP
ALN408	AMP	0.4	0.8			20	30	*5	25	<5			<10	8.3	CO	OP
ALN459	AMP	0.5	0.9			20	30	*5	25	<5			<10	8.3	CO	OP
ALN501	AMP	0.5	1.0			20	30	*5	25	5			<10	8.3	CO	OP
ALN511	AMP	0.6	1.1			20	30	*5	25	<6			<10	8.3	CO	OP
ALN790	AMP	0.7	0.9			20	30	*5	25	<5			<10	8.3	CO	OP
ALN812	AMP	0.8	1.3			20	30	*5	25	5			<10	8.3	CO	OP
AM1540N	TRA	>1.4	>1.5			15	50	**8	30	<5						AV
AM-1542N	TRA	>1.4	>1.5			15	35	**8	20	<5						AV
AM-1600N	TRA	<1.5	<1.7			15	50	**10	30	4						AV
AM-2000N	TRA	1.0	2.0			15	50	**10	25	<6						AV
AM-2002N	TRA	1.0	2.0			15	65	**10	32	<6						AV
AM-2050N	TRA	1.0	2.0			15	50	**10	27	<5						AV
AM-2600N	TRA	1.0	2.6			15	70	**8	35	6						AV
AM-4000N	TRA	2.0	4.0			15	75	**7	28	9	54	95		9.0		AV
AM-4001N	TRA	2.0	4.0			15	85	**7	33	9						AV
AM-4002N	TRA	2.0	4.0			15	70	**7	23	9						AV
AM-4050N	TRA	2.0	4.0			15	75	**7	29	<8						AV
AM-4051N	TRA	2.0	4.0			15	85	**7	34	<8						AV
AM-4052N	TRA	2.0	4.0			15	70	**7	24	<8						AV
AM-4053N	TRA	2.0	4.0			15	90	**7	38	<8						AV
AMP1000N	TRA	1.0	2.0			15	60	**7	25	6	85	10	14.0			AV
AMP1500N	TRA	0.5	1.5			15	60	**8	25	8						AV
AMP-2000N	TRA	1.0	2.0			15	165	**20	30	7			13	16.0	CO	AV
AMP2400N	TRA	1.4	2.4			15	200	**20	30	<8			13		CO	AV
AMP2401N	TRA	1.4	2.4			15	110	**15	26	<8			13		CO	AV
AMP2402N	TRA	1.4	2.4			15	90	**20	6	15			<6		CO	AV
AMP2600N	TRA	1.0	2.6			15	75	**6	30	<8	85	10				AV
AMT1001	TRA	0.1	1.0			15	13	**3	14	<5			1	3.5	CO	AV
AMT1002	TRA	0.1	1.0			15	23	**6	14	5			1	3.5	CO	AV
AMT1003	TRA	0.1	1.0			15	36	**6	28	<5			1	3.5	CO	AV
AMT1004	TRA	0.1	1.0			15	59	**6	42	5			2	6.3	CO	AV
AMT1005	TRA	0.1	1.0			15	82	**6	56	<5			2	6.3	CO	AV
AMT2001	TRA	0.1	2.0			15	13	**2	9	<7			1	3.5	CO	AV

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
AMT2002	TRA	0.1	2.0			15	23	**5	0	<8			1	3.5	CO	AV
AMT2003	TRA	0.1	2.0			15	36	**5	18	<7			1	3.5	CO	AV
AMT2004	TRA	0.1	2.0			15	59	**5	26	<7			1	3.5	CO	AV
AMT2005	TRA	0.1	2.0			15	82	**5	34	<7			2	6.3	CO	AV
AMT2006	TRA	0.1	2.0			15	105	**5	42	<7			2	6.3	CO	AV
AMT2007	TRA	0.1	2.0			15	128	**5	50	<7			2	6.3	CO	AV
AMT-2013	TRA	1.0	2.0			15	30	**6	17	<6			1	3.5	CO	AV
AMT-2014	TRA	1.0	2.0			5	50	**6	25	<6			1	3.5	CO	AV
AMT-2015	TRA	1.0	2.0			15	70	**6	34	<6			<2	6.3	CO	AV
AMT2300	AMP	2.0	4.0			15	23	**6	15	<6						CO AV
AMT2301	AMP	2.0	4.0			15	50	**10	22	<6						CO AV
AMT2302	AMP	2.0	4.0			15	70	**10	30	<6						AV
AMT2303	AMP	2.0	4.0			15	90	**10	38	<6						AV
AMT-4002	TRA	2.0	4.0			15	40	**4	<10	10			1	3.5	CO	AV
AMT-4003	TRA	2.0	4.0			15	50	**4	14	10			1	3.5	CO	AV
AMT-4005	TRA	2.0	4.0			15	100	**10	23	10			<2	6.3	CO	AV
AMT-4004	TRA	2.0	4.0			15	80	**4	19	10			<2	6.3	CO	AV
AMT-4005	TRA	2.0	4.0			15	120	**10	28	10			<2	6.3	CO	AV
AMT-4007	TRA	2.0	4.0			15	140	**10	32	10			2	9.0	CO	AV
AMT-4008	TRA	2.0	4.0			15	160	**10	37	10			2	9.0	CO	AV
AP-20T	TRA	0.2	0.4			24	250	**20	30	<7						AV
AP-25T	TRA	<0.3	0.5			24	250	**20	30	<7						AV
AP255	AMP	<0.3	0.5			115		*0	27	<3			25			CO OP
AP501	AMP	0.5	1.0			115		**5	27	3			25			CO OP
AP-1000T	TRA	0.5	1.0			15	540	**29	30	10						AV
AP036	OSX	3.6	3.9	MC		20	300	10			30	60	39			CO AT
AP036H	OSX	3.6	3.9	MC		20	400	50			30	60	39			CO AT
AP038	OSX	>3.8	4.1	MC		20	300	10			30	60	39			CO AT
AP038H	OSX	>3.8	4.1	MC		20	400	50			30	60	39			CO AT
AP041	OSX	4.1	4.4	MC		20	300	10			30	60	39			CO AT
AP041H	OSX	4.1	4.4	MC		20	400	50			30	60	39			CO AT
AP043	OSX	>4.3	>4.9	MC		20	300	10			30	60	39			CO AT
AP043H	OSX	>4.3	>4.9	MC		20	400	50			30	60	39			CO AT
AP054	OSX	5.4	5.9	MC		20	300	10			30	60	39			CO AT
AP054H	OSX	5.4	5.9	MC		20	400	50			30	60	39			CO AT
AP058	OSX	>5.8	>6.4	MC		20	300	10			30	60	39			CO AT
AP058H	OSX	>5.8	>6.4	MC		20	400	50			30	60	39			CO AT
AP054	OSX	>6.4	>6.9	MC		20	300	10			30	60	39			CO AT
AP054H	OSX	>6.4	>6.9	MC		20	400	50			30	60	39			CO AT
AP068	OSX	6.8	7.2	MC		20	300	10			30	60	39			CO AT
AP070	OSX	7.0	>7.5	MC		20	300	10			30	60	39			CO AT
AP075	OSX	7.5	8.0	MC		20	300	10			30	60	39			CO AT
AP079	OSX	<8.0	8.5	MC		20	300	10			30	60	39			CO AT
AP0105	OSX	>10.6	>11.2	MC		20	300	10			30	60	39			CO AT
APU112	OSX	11.2	<11.8	MC		20	300	10			30	60	39			CO AT
AP0116	OSX	>11.6	>12.2	MC		20	300	10			30	60	39			CO AT
AP0121	OSX	>12.1	12.7	MC		20	300	10			30	60	39			CO AT
AP0126	OSX	>12.6	>13.2	MC		20	300	10			30	60	39			CO AT
AP0131	OSX	>13.1	<13.8	MC		20	300	10			30	60	39			CO AT
AP0136	OSX	>13.6	>14.2	MC		20	300	10			30	60	39			CO AT
AT1000V	TRA	<0.8	<1.0			15	29	**8	23	<4						AV
AV-7200	YTO	2.0	4.0	YT	2G	20			25		54	71				CO AV
AV-7201	YTO	2.0	4.0	YT	2G	20			25		0	65				CO AV
AV-7202	YTO	2.0	4.0	YT	2G	20			30		0	65				CO AV
AV01658	ADJ	8.2	12.4			10	30				25	50	1			AL

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE #dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
AX0-10	OSX	*1.0				28	140	50			35	90			CO	AT
AX0-15	OSX	*1.5				28	140	20			35	90			CO	AT
AX0-35	OSX	*3.5				28	140	5			35	90			CO	AT
AX0-85	OSX	*8.5				28	140	3			35	90			CO	AT
AX0-95	OSX	*9.5				28	140	3			35	90			CO	AT
BLN204	AMP	0.2	0.4			-20	30	**5	25	3			10	8.2	CO	OP
BLN255	AMP	0.3	0.5			-20	30	**5	25	3			10	8.2	CO	OP
BLN305	AMP	0.3	0.6			-20	30	**5	25	<4			10	8.2	CO	OP
BLN408	AMP	0.4	0.8			-20	30	**5	25	4			10	8.2	CO	OP
BLN459	AMP	0.5	0.9			-20	40	**5	25	4			10	8.2	CO	OP
BLN501	AMP	0.5	1.0			-20	30	**5	25	4			10	8.2	CO	OP
BLN790	AMP	0.7	0.9			-20	30	**5	30	3			10	8.2	CO	OP
C31C20M	ADJ	5.5	6.5	MC		100	25	100			55	71	1	1.5		SP
C31C25M	ADJ	5.5	6.5	MC		100	70	250			55	71	1	1.5		SP
C31K13V	ADJ	12.5	14.0	ME		90	20	20			55	71	1	3.0		SP
C31X20M	ADJ	8.5	9.0	MC		100	25	100			55	71	1	1.5		SP
C31X20V	ADJ	9.0	9.3	ME		100	35	100			55	71	1	2.0		SP
C31X20V-1	ADJ	9.3	9.5	ME		100	35	100			+15	27	1	2.0		SP
C31X23V	ADJ	9.0	9.3	ME		100	70	200			55	71	1	2.0		SP
C31X25M	ADJ	8.5	9.0	MC		100	70	250			55	71	1	1.5		SP
C35X35F	ADJ	7.0	9.0	FX		100	400	2000			0	90	3	4.0		SP
CA2040	AMP	0.2	0.4			15	20	**5	25	<3			2	1.8	CO	EM
CA2550	AMP	0.2	0.5			15	20	**5	25	<3			2	1.8	CO	EM
CA3060	AMP	0.3	0.6			15	20	**5	25	<3			2	1.8	CO	EM
CA5001	AMP	0.5	1.0			15	40	**10	29	3			2	1.8	CO	EM
DA205	AMP	0.2	0.5	MC		12	8		10	<5			<1	0.7	CO	SA
JA510	AMP	0.5	1.0	MC	UCT	15	28		25	5			4	4.1	CO	SA
DA1214	AMP	1.2	1.4			-15	25		20	5			10	16.0	CO	SA
DC1850	AMP	*1.9			20	28	2A	15W	12		55	71	17	10.0	CO	SA
JG623	OSC	2.2	2.3	FX		30	375	#2W			20	55			CO	SA
JG-700-C	OSC	4.0	8.0			28	500	1200			55	75	<5		CO	SA
JG-700-L	OSC	1.0	2.0			28	500	5000			55	75	<5		CO	SA
JG-700-S	OSC	2.0	4.0			28	500	3000			55	75	<5		CO	SA
JG-700-X	OSC	8.0	10.0			28	500	400			55	75	<5		CO	SA
JG716	OSC	0.8	<1.5	MC		15	35	10			0	85	5		CO	SA
JG717	OSC	<1.5	4.0	MC		15	35	5			0	85	13		CO	SA
JG718	OSC	4.0	6.0	MC		15	35	5			0	85	13		CO	SA
JG720	OSC	>1.4	>1.5	FX		28	350	2W			55	75	4		CO	SA
JG729	TOS*	>2.2				30		2W			55	65			CO	SA
JG736	OSX*	>2.2				15	50	10			35	65	5		CO	SA
JG-760-C	OSX	4.0	8.0	FX		28		3W			54	85			CO	SA
JG-760-L	OSX	1.0	2.0	FX		28		10W			54	85			CO	SA
JG-760-S	OSX	2.0	4.0	FX		28		5W			54	85			CO	SA
JG-760-UHF	OSX	0.3	1.0	FX		28		50W			54	85			CO	SA
JG-760-X	OSX	8.0	10.0	FX		28		500			54	85			CO	SA
JG792	OSC*	<9.3		VT	500	18	40	5			55	75	<6	3.0	CO	SA
JG797	OSC	*3.0			500	28	50	50			55	95	<5		CO	SA
JG798	OSC	*5.0			16	28	50	10			55	95	3		CO	SA
JG799	OSC	*9.0			16	28	50	5			55	95	11		CO	SA
JG790	OSC	2.6	3.2	VT		26	150	500			55	75	<2		CO	SA
EA-100	AMP	0.2	0.4		10%	28		1W	16						CO	G?
EA-101	AMP	0.4	0.8		8%	28		1W	16						CO	G?
EA-102	AMP	0.8	1.2		6%	28		1W	16						CO	G?
EA-103	AMP	1.2	1.6		3%	28		1W	16						CO	G?
EA-104	AMP	1.6	2.2		2%	28		1W	16						CO	G?

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. 3	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
EA-105	AMP	2.2	3.0	2%	2R		1W	16							CO	GR
EA-119	AMP	<0.3	0.5	2%	2R		10W	30		+10	45	54			CO	GR
EA-120	AMP	<0.3	0.5	2%	2R		20W	30		+10	45	54			CO	GR
EA-121	AMP	<0.3	0.5	2%	2R		40W	30		+10	45	54			CO	GR
EID9000x	MIA	*10.0		10%	15	40	**7	55	6						WG	EM
EL-101	CSO	1.2	1.6	MC	400	24		10			0	50	4		CO	GR
EL-102A	CSO	1.6	2.1	MC	500	24		10			0	50	3		CO	GR
EL-104	CSO	3.2	3.7	MC	500	24		10			0	50	3		CO	GR
EL-105	CSO	3.7	4.2	MC	500	24		10			0	50	3		CO	GR
EL-105	CSO	4.2	4.6	MC	400	24		10			0	50	3		CO	GR
EL-107	CSO	4.6	5.0	MC	400	24		10			0	50	3		CO	GR
EL-108A	CSO	5.0	5.4	MC	400	24		10			0	50	6		CO	GR
EL-109A	CSO	5.4	5.9	MC	500	24		10			0	50	6		CO	GR
EL-110A	CSO	5.9	6.4	MC	500	24		10			0	50	6		CO	GR
EL-111A	CSO	6.4	6.9	MC	500	24		10			0	50	6		CO	GR
EL-112A	CSO	6.9	7.4	MC	500	24		10			0	50	6		CO	GR
EL-125	GOS	8.2	12.0	MC	38H	15	200	5			0	45	29		CO	GR
EL-130	CSO	0.5	0.8	MC	300	24		10			0	50	11		CO	GR
EL-131	CSO	0.8	1.2	MC	400	24		10			0	50	11		CO	GR
EL-132	CSO	2.1	2.6	MC	500	24		10			0	50	3		CO	GR
ELH-101	GOS	8.2	12.0	MC	38H	23	700	5			30	50	30		CO	GR
EP-146C	OSC	0.3	0.6	VT	OCT	24		20					38		CO	GR
EP-146J	OSC	0.6	1.0	VT	OCT	24		20					38		CO	GR
EP-146E	OSC	0.8	1.5	VT	OCT	24		20					38		CO	GR
EP-149C	OSC	>0.3	<0.6	VT	OCT	24		20			+10	45			CO	GR
EP-149D	OSC	<0.6	1.0	VT	OCT	24		20			+10	45			CO	GR
EP-149E	OSC	0.8	1.5	VT	OCT	24		20			+10	45			CO	GR
EP-150 SERIES	OSC	*1.6	6.0	VT	5%	24		5			+10	45	6		CO	GR
ESH2040	AMP	0.2	0.4			20	135	**20	29	6			5		CO	EM
ESH2550	AMP	0.2	0.5			20	135	**20	29	7			5		CO	EM
ESK2040	AMP	0.2	0.4			24	240	**27	23	9			8		CO	EM
ESK2550	AMP	0.2	0.5			24	240	**27	23	10			8		CO	EM
ESK5001	AMP	0.5	1.0			20	120	**20	23	7			<7		CO	EM
EX-104	MJL	0.5	0.8	10%				5					2		CO	GR
EX-105	MJL	0.8	1.2	8%				5					2		CO	GR
EX-106	MJL	1.2	1.6	8%				5					2		CO	GR
EX-107	MJL	1.6	2.4	8%				100					8		CO	GR
EX-108	MJL	2.4	3.2	5%				100					8		CO	GR
EX-109	MJL	3.2	4.8	5%				100					8		CO	GR
EX-110	MJL	4.8	6.4	3%				80					6		CO	GR
EX-111	MJL	6.4	9.6	3%				80					6		CO	GR
EX-112-1	MJL	1.2	2.0	5%				8W			20	75	34	30.0	CO	GR
EY-103A	OSX	0.5	1.0			28		100			0	50	30		CO	GR
EY-104A	OSX	1.0	2.5			28		100			0	50	30		CO	GR
EY-105A	OSX	2.5	4.0			28		100			0	50	30		CO	GR
EY-106A	OSX	4.0	5.0			28		100			0	50	30		CO	GR
EY-107A	OSX	5.0	7.2			28		100			0	50	46		CO	GR
EY-108A	OSX	7.2	8.6			28		100			0	50	46		CO	GR
EY-109A	OSX	8.6	10.0			28		100			0	50	46		CO	GR
EY-117A	OSX	0.5	1.0			28		5			0	50	20		CO	GR
EY-118A	OSX	1.0	2.5			28		5			0	50	20		CO	GR
EY-119A	OSX	2.5	4.0			28		5			0	50	20		CO	GR
EY-120A	OSX	4.0	5.0			28		5			0	50	20		CO	GR
EY-121A	OSX	5.0	7.2			28		5			0	50	35		CO	GR
EY-122A	OSX	7.2	8.6			28		5			0	50	35		CO	GR

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
EY-123A	OSX	8.6	10.0			28		5			0	50	35		CO	GR
FM-100	MJL	3.5	14.0		4%	28	650	25					25	24.0	CO	AP
FM-100-1	MJL	*2.0			3%	28	1A	300					25	24.0	CO	AP
FM-100-2	MJL	*2.0			3%	28	2A	1500					24	24.0	CO	AP
FS-1R	OSC	4.0	6.5	MC	12%	20	125	4			0	60	2		CO	FR
FS-2	OSC	0.6	1.2	VT	12%	60	300	1000			10	70	<4		CO	FR
FS-2H	OSC	0.6	1.2	VT	10%	60	300	2000			10	70	<4		CO	FR
FS-2M	OSC	0.2	0.6	VT	12%	60	300	1000			10	70	<4		CO	FR
FS-2K	OSC	0.2	1.4	MC	1%	40		1000			0	60	6		CO	FR
FS-3K	OSC	2.0	4.0	MC	1%	28		30			0	60	3		CO	FR
FS-5	OSC	0.1	2.0	MC	15%	28		25			0	60	2		CO	FR
FS-6	OSC	0.3	1.8	VT	15%	24		20			55	90	2		CO	FR
FS-6H	OSC	0.3	1.8	VT	10%	24		100			55	90	2		CO	FR
FS-7	OSC	0.1	2.0	MC	15%	28		50			0	60	2		CO	FR
FS-7K	OSC	0.1	2.0	MC	1%	28		100			0	60	2		CO	FR
FS-9R	OSC	4.0	6.0	MC	1%	28		25			0	60	2		CO	FR
FS-14A	OSC	2.3	2.9		325	60	300	250			10	70	7		CO	FR
FS-14B	OSC	2.8	3.3	VT	400	60	300	200			10	70	7		CO	FR
FS-14C	OSC	3.1	3.6	VT	450	60	300	200			10	70	7		CO	FR
FS-14D	OSC	3.5	4.3	VT	500	60	300	200			10	70	5		CO	FR
FS-14E	OSC	4.2	4.9	VT	500	60	300	175			10	70	5		CO	FR
FS-14F	OSC	4.9	5.6	VT	600	60	300	125			10	70	5		CO	FR
FS-14G	OSC	5.4	6.0	VT	600	60	300	100			10	70	5		CO	FR
FS-14L	OSC	3.5	6.0	MC	1%	40		150			0	60	5		CO	FR
FS-14R	OSC	2.3	3.5	MC	1%	40		500			0	60	8		CO	FR
FS-17R	OSC	5.0	11.0	MC	1%	28		10			0	60	3		CO	FR
FS-18	OSC	4.8	11.0	VT	500	24		3			0	60	3		CO	FR
FS-18H	OSC	8.5	11.0	VT	11H	24		1			0	60	3		CO	FR
FS-213	OSX	<0.3	<0.5			15		10			10	50	5		CO	FR
FS-21CHP	OSX	<0.5	1.8			28		50			10	50	<13		CO	FR
FS-21CLP	OSX	<0.5	1.5			15		5			10	50	<13		CO	FR
FS-21CWP	OSX	<0.5	1.8			28		10			0	60	<13		CO	FR
FS-21K	MJL	<0.5	1.8					50					16		CO	FR
FS-22	OSX	6.0	11.0			28		5			0	60	13		CO	FR
FS-22H	MJL	6.0	11.0					5					13		CO	FR
FS-23	OSC	2.5	5.5	VT	15%	24		20			0	60	<5		CO	FR
FS-24	OSC	7.0	10.0	VT	500	60	300	40			10	70			CO	FR
FS-24M	OSC	10.0	11.0	VT	400	60	300	25			10	70			CO	FR
FS-24K	OSC	7.0	10.5	MC	1%	40		100			0	60	7		CO	FR
FS-25	OSC	1.8	2.5	VT	200	100	24	20			0	60	2		CO	FR
FS-26	CSO	1.2	1.5	MC	300	24	80	10			30	71	<4		CO	FR
FS-27H	CSO	3.6	6.0	MC	500	24	80	20			30	71	<4		CO	FR
FS-28	CSO	1.5	2.3	MC	800	24	80	10			30	71	3		CO	FR
FS-29A	OSX	2.5	6.0			28		5			0	60	50		CO	FR
FS-293	OSX	6.0	11.0			28		2			0	60	58		CO	FR
FS-30	OSX	2.5	6.0			15		5			0	60	<12		CO	FR
FS-30A	OSX	1.8	2.5			28		20			0	60	14		CO	FR
FS-30HP	OSX	2.5	6.0			28		20			0	60	<12		CO	FR
FS-30H	MJL	2.5	6.0					5					11		CO	FR
FS-31	CSO	2.0	3.0	MC	1K	24	80	10			30	71	3		CO	FR
FS-31A	CSO	3.0	4.0	MC	1K	24	80	10			30	71	3		CO	FR
FS-31B	CSO	3.5	4.5	MC	1K	24	80	10			30	71	<3		CO	FR
FS-31S	CSO	2.4	3.2	MC	800	24	80	10			30	71	3		CO	FR
FS-35	OSC	15.0	17.0	VT	500	60	300	25			10	70	6		CO	FR
FS-36	OSC	0.5	1.5	VT	OCT	28		10			0	60	2		CO	FR

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				* dBm mW	- °C				
											dB	dB				
FS-36H	OSC	0.5	1.0	VT	0CT	2A		250			0	60	2		CO	FR
FS-37H	CSO	7.5	10.4	MC	600	24	30	5			30	71	4		CO	FR
FS-37L	CSO	4.0	7.5	MC	500	24	30	10			30	71	4		CO	FR
FS-37M	MJL	4.0	10.4					5					4		CO	FR
FS-39	OSX	0.1	<0.5			15		5			10	50	34		CO	FR
FS-39	OSX	<0.5	1.8			29		1			10	50	45		CO	FR
FS-40	ADJ	8.0	12.4	MC	100	95	40	10			0	60	2		CO	FR
FS-42	ADJ	8.0	12.4	MC	10%	95	40	10			0	60	2		CO	FR
FS-47	OSC	2.0	4.0	VT	0CT	24		15			0	60	2		CO	FR
FS-48	OSC	15.0	18.0	VT	1K	2A		10			0	60	<12		CO	FR
FS-48R	CSO	15.5	16.5	MC	300	24	30	5			30	71	<13		WG	FR
FS-49	OSX	12.4	19.0			29		2			0	60	19		WG	FR
FS-50L	OSC	1.5	2.7	VT	15%	26	200	150			0	60	11		CO	FR
FS-50S	OSC	2.0	2.4	VT	10%	26	200	50			0	60	11		CO	FR
FS-51	GOS	5.0	11.0	MC	12%	12	350	5			0	60	2		CO	FR
FS-52	GOS	4.9	11.0	VT	12%	15	350	10			0	60	2		CO	FR
FS-53	OSC	4.5	6.0	VT	10%	26	200	10			0	60	11		CO	FR
FS-54	OSC	7.5	11.0	VT	10%	26	200	5			0	60	11		CO	FR
FS-55	OSC	14.0	16.0	VT	2%	26	200	5			0	60	11		CO	FR
FS-143	MJL	4.6	5.2					5					5		CO	FR
FS-178A	MJL	>1.2	<1.4			20		1000					23		CO	FR
FS-210	IPD	6.5	12.4	MC	4G	-95	40	3			0	60	22		CO	FR
FS-217	MJL	*2.6						500					4		CO	FR
FS-220A	OSX	1.5	3.0			23		3000			0	60	30		CO	FR
FS-220S	OSX	3.0	4.5			29		1000			10	50	30		CO	FR
FS-220C	OSX	4.5	7.0			28		500			0	60	30		CO	FR
FS-220D	OSX	7.0	9.6			28		250			0	60	30		CO	FR
FS-251	GOS	12.4	19.0	MC	1%	12	350	10			0	60	2		WG	FR
FS-275	MJL	9.0	10.5					40					70		CO	FR
FS-306	GOS	4.2	5.8	VT	16H	15	350	20			0	60	19		CO	FR
FS-307	GOS	5.8	8.0	VT	22H	15	350	20			0	60	19		CO	FR
FS-309	GOS	8.2	10.0	VT	18H	15	350	20			0	60	19		CO	FR
FS-316	MJL	7.8	7.9					300					58		CO	FR
FS-329	OSX	9.6	10.5			29		100			0	60	70		CO	FR
FS-330	OSX	12.4	19.0			29		25			0	60	35		WG	FR
GF0(X)-104	GOS	8.2	9.7			12	600	10			30	60	3	3.0	WG	FS
GF0(X)-105	GOS	9.1	10.6			12	600	10			30	60	3	3.0	WG	FS
GF0(X)-106	GOS	10.0	11.5			12	600	10			30	60	3	3.0	WG	FS
GF0(X)-107	GOS	10.9	12.4			12	600	10			30	60	3	3.0	WG	FS
GF0(X)-114	GOS	8.2	9.7			12	600	25			30	60	3	3.0	WG	FS
GF0(X)-115	GOS	9.1	10.6			12	600	25			30	60	3	3.0	WG	FS
GF0(X)-116	GOS	10.0	11.5			12	600	25			30	60	3	3.0	WG	FS
GF0(X)-117	GOS	10.9	12.4			12	600	25			30	60	3	3.0	WG	FS
GO-1	GOS	*8.2		FX		12	500	50							SK	
GOX-100	GOS	8.2	9.7			12	600	10			30	60		4.0	WG	FS
GOX-101	GOS	9.1	10.6			12	600	10			30	60		4.0	WG	FS
GOX-102	GOS	10.2	11.7			12	600	10			30	60		4.0	WG	FS
GOX-103	GOS	10.9	12.4			12	600	10			30	60		4.0	WG	FS
GOX-111	GOS	9.1	10.6			12	600	25			30	60		4.0	WG	FS
GOX-112	GOS	10.2	11.7			12	600	25			30	60	<1	4.0	WG	FS
GOX1200	GOS*10.5			MC	100	12	400	50			30	60	<2	<2.0	CO	FS
GS4K SERIES	GOS	18.0	26.5	MC	500	7		15			54	71	1	1.8	WG	VM
GS4X SERIES	GOS	8.0	12.4	MC	500	12		25			54	71	6	3.3	WG	VM
GS4Y SERIES	GOS	12.4	18.0	MC	500	10		25			54	71	3	2.8	WG	VM
HCA2040	AMP	0.2	0.4			15	100	*+20	18	<6			2	1.8		EM

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE MHz	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN		MAX. NF	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA		dB	dB		-°C	+°C				
HCA2550	AMP	0.2	0.5			15	100	**20	18	<6			2	1.8		FM	
HCA5001	AMP	0.5	1.0			15	120	**20	13	7			2	1.8		FM	
HFV-2(TX)-1415	AMP	1.4	1.5			12	20		20	5			7	7.0	CO	AR	
HFV-2(TX)-2223	AMP	2.2	2.3			12	20		18	<6			7	7.0	CO	AR	
HFV-2(TX)-2550/P	AMP	0.3	0.5			29	600	2W	10				15			CO AR	
HFV-3(TX)-2040	TRA	2.0	4.0			15	30		15	<9	40	71	<5	10.0	CO	AR	
HFV-4(TX)-1020	TRA	1.0	2.0			15	50		20	<6	40	71	<5	10.0	CO	AR	
HFV-4(TX)-50200	TRA	0.5	2.0			15	45	**10	25	<7	40	71	<5		CO	AR	
KA-1	PAR	*35.0		FX	650	12	500		9	8						SK	
L-6	PAR	*1.7		MC	50	12	500		17	<2						SK	
L-7	PAR	*2.3		FX	400	12	500		12	2						SK	
L-8	PAR	*2.3		FX	150	12	500		15	2						SK	
L-9	PAR	*2.1		MC	10	12	500		20	<3						SK	
LO-100 SERIES	OSC	3.5	14.0			25	500	25				0	60	25	24.0	CO	AP
M-250-250	OSX	<*0.3		MC	10%	29		250				55	85	1		CO	MP
M-450-250	OSX	<*0.5		MC	10%	29		250				55	85	1		CO	MP
M-720-250	OSX	<*0.7		MC	10%	29		250				55	85	1		CO	MP
M1000-2000	OSX	*1.0		MC	10%	29		2000				55	85	1		CO	MP
M-1030-250	OSX	<*1.1		MC	10%	29		250				55	85	1		CO	MP
M-1220-250	OSX	*1.2		MC	10%	29		250				55	85	1		CO	MP
M-1480-250	OSX	<*1.5		MC	10%	29		250				55	85	1		CO	MP
M-2000-10J0	OSX	*2.0		MC	10%	29		1000				55	85	1		CO	MP
M-2250-100	OSX	<*2.3		MC	10%	29		100				55	85	1		CO	MP
M-3000-100	OSX	*3.0		MC	10%	29		100				55	85	1		CO	MP
MA-85<10	OSX	15.3	15.6			20	300	<2				54	79	38	30.0	WG	MA
MA-87K11	MJL	*13.3				29	1A	150				54	71	30	19.0	WG	MA
MA-8010-XF1 SER.	GOS	>10.6	<13.2	MC		-20	125	1				30	55	31	18.0	WG	MA
MA-8012-XF2 SER.	GOS	>10.6	<13.2	ME		-20	125	1				30	55	31	20.0	WG	MA
MA-8012-ZF02	GOS	15.9	16.5	VT	40	7	350	2				40	85	4		WG	MA
MA-8012A-XF09	GOS	9.0	9.5	VT	50	12	250	2				40	85	10		WG	MA
MA49750	GOS	>10.5*				9	500	50				30	70	3		WG	MA
MDA1000	PRE	0.1	1.0			115	180		28	<9			514			CO	VE
MDA1415	PRE	1.4	1.5			20	30		25	<5			14			CO	VE
MDA1423	PRE	1.4	2.3			-20	60		20	8			14			CO	VE
MDA2223	PRE	2.2	2.3			-20	30		25	<6			14			CO	VE
MDA3940	PRE	*0.4				20	100		35	<3			24			CO	VE
MDA5001	PRE	0.5	1.0			12	50		43	6			30			CO	VE
MDS1415	PRE	>1.4	>1.5			5		**5	10	4			5	6.0		CO	VE
MDS2223	PRE	2.2	2.3			5		**5	10	<6			5	6.0		CO	VE
MHA300B	AMP	*0.3			200	12	55	**5	25	4			1			CO	FS
MHA500B	AMP	*0.5			25	12	55	**5	25	4			1			CO	FS
MHA600B	AMP	<*0.5			475	12	55	*0	19	6			1			CO	FS
MHA700B	AMP	*0.7			200	12	55	*0	20	6			1			CO	FS
MHA1500B	AMP	*1.5			500	12	40	*0	20	7			1			CO	FS
MLT1.7	OSC	1.7	2.1			20	2A	2W					172			CO	RH
MLT2.2	OSC	2.2	2.3			20	2A	2W					172			CO	RH
MLT3.7	OSC	3.7	4.2			20	2A	1W					172			CO	RH
MLT4.4	OSC	4.4	5.0			20	2A	1W					172			CO	RH
MLT5.9	OSC	5.9	6.5			20	2A	500					172			CO	RH
MLT7.1	OSC	7.1	8.4			20	2A	300					172			CO	RH
MMC 20-1.5	MIA	1.0	2.0	FX	1K	25	25	*0	20	<9	40	71	2			CO	IM
MMC 20-3.0	MIA	2.0	4.0	FX	2K	25	25	*0	20	<8	40	71	1			CO	IM
MMC 20-6.0	MIA	4.0	8.0	FX	4K	25	25	*0	20	8	40	71	1			CO	IM
MMC 20-10	MIA	8.0	12.0	FX	40H	25	25	*0	20	9	40	71	<2			CO	IM
MMC 20-15	MIA	12.0	18.0	FX	60H	25	25	*0	20	10	40	71	<2			CO	IM

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT * dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
MMC 30-1.5	VIA	1.0	2.0	FX	1K	25	25	*0	30	<8	40	71	2		CO	IM
MMC 30-3.0	VIA	2.0	4.0	FX	2K	25	25	*0	30	<8	40	71	1		CO	IM
MMC 30-6.0	VIA	4.0	8.0	FX	4K	25	25	*0	30	8	40	71	1		CO	IM
MMC 30-10	VIA	8.0	12.0	FX	40H	25	25	*0	30	9	40	71	<2		CO	IM
MMC 30-15	VIA	12.0	18.0	FX	60H	25	25	*0	30	10	40	71	<2		CO	IM
MMP1-2 SERIES	VIA	1.0	2.0		240	12	40		20	8	30	71			CO	R4
MMP2-4 SERIES	VIA	2.0	4.0		240	12	40		20	8	30	71			CO	R4
MMP4-8 SERIES	VIA	4.0	8.0		240	12	40		20	8	30	71			CO	R4
MO(L)-102	OSC	<1.0	1.1	MC		-20	120	250			30	60	7	8.0		FS
MO(L)-104	OSC	>1.1	>1.2	MC		20	120	250			30	60	7	8.0		FS
MO(L)-106	OSC	1.2	>1.3	MC		20	120	250			30	60	7	8.0		FS
MO(L)-108	OSC	>1.3	>1.5	MC		20	120	250			30	60	7	8.0		FS
MO(L)-110	OSC	1.5	>1.7	MC		20	120	100			30	60	7	8.0		FS
MO(L)-112	OSC	1.7	>2.0	MC		20	120	75			30	60	7	8.0		FS
MO(S)-114	OSC	2.0	>2.3	MC		20	120	50			30	60	5	8.0		FS
MO(S)-116	OSC	2.3	>2.7	MC		20	120	20			30	60	3	2.5		FS
MO(S)-118	OSC	2.7	>3.2	MC		20	120	20			30	60	3	2.5		FS
MP5-1/2SERIES	PRE	0.5	1.0			+12			25	<9					CO	R4
MP7/2 SERIES	PRE	7.5	8.5			+12			25	7					WG	R4
MP8/2 SERIES	PRE	8.5	9.6			+12			25	7					WG	R4
MPC 20-1.5	VIA	1.0	2.0	FX	1K	12	25	*0	20	8	40	71	5		CO	IM
MPC 20-3.0	VIA	2.0	4.0	FX	2K	12	25	*0	20	9	40	71	5		CO	IM
MPC 20-6.0	VIA	4.0	8.0	FX	4K	12	25	*0	20	9	40	71	5		CO	IM
MPC 20-10	VIA	8.0	12.0	FX	40H	12	25	*0	20	10	40	71	5		CO	IM
MPC 30-1.5	VIA	1.0	2.0	FX	1K	12	25	*0	30	8	40	71	5		CO	IM
MPC 30-3.0	VIA	2.0	4.0	FX	2K	12	25	*0	30	9	40	71	5		CO	IM
MPC 30-6.0	VIA	4.0	8.0	FX	4K	12	25	*0	30	9	40	71	6		CO	IM
MPC 30-10	VIA	8.0	12.0	FX	40H	12	25	*0	30	10	40	71	6		WG	IM
MPW 20-9.0	VIA	8.5	9.6	FX	11H	12	25	*0	20	<9	40	71	<5		WG	IM
MPW 20-10	VIA	9.5	12.5	FX	29H	12	25	*0	20	9	40	71	<5		WG	IM
MPW 20-15	VIA	12.4	18.0	FX	54H	12	25	*0	20	10	40	71	5		WG	IM
MPW 30-9.0	VIA	8.5	9.6	FX	11H	12	25	*0	30	<9	40	71	<5		WG	IM
MPW 30-10	VIA	9.5	12.5	FX	29H	12	25	*0	30	9	40	71	<5		WG	IM
MPW 30-15	VIA	12.4	18.0	FX	54H	12	25	*0	30	10	40	71	6		WG	IM
MQ10000 SERIES	OSC	0.2	4.0	VT	OCT	-20	150	50			25	75	2	2.3	CO	MQ
MQ10300 SERIES	OSC	0.2	1.4	MC	20%	-20	150	50			25	75	2	2.2	CO	MQ
MQ10600 SERIES	OSC	0.3	2.0	VT	OCT	20	150	50			25	75	<1	<0.7	CO	MQ
MQ20000 SERIES	AMP	0.2	1.0		OCT	12		*0	20	<4	54	71	5		CO	MQ
MQ20100 SERIES	AMP	1.0	4.0		OCT	12		*+5	20	10	54	71	10		CO	MQ
MS(C)-48	OSC	>4.3	>4.9	MC		20		10			30	60	6	17.0		FS
MS(C)-52	OSC	5.4	5.9	MC		20		10			30	60	6	17.0		FS
MS(C)-54	OSC	>5.8	>6.4	MC		20		10			30	60	6	17.0		FS
MS(C)-56	OSC	>6.4	>6.9	MC		20		10			30	60	6	17.0		FS
MS(C)-58	OSC	6.8	7.2	MC		20		10			30	60	6	17.0		FS
MS(C)-60	OSC	7.0	>7.5	MC		20		5			30	60	6	17.0		FS
MS(C)-62	OSC	7.5	8.0	MC		20		5			30	60	6	17.0		FS
MS(C)A-480	OSC	>4.3	>4.6	MC		20	400	50			30	60	30	30.0		FS
MS(C)3-480	OSC	4.6	>4.9	MC		20	400	50			30	60	30	30.0		FS
MS(C)540	OSC	5.9	6.4	MC		20	400	50			30	60	30	30.0		FS
MS(C)560	OSC	>6.3	>6.8	MC		20	400	50			30	60	30	30.0		FS
MS(K)80	OSC	>12.1	12.7			20	300	5			30	60	10	21.0		FS
MS(K)82	OSC	>12.6	>13.2			20	300	5			30	60	10	21.0		FS
MS(S)-42	OSC	3.6	3.9	MC		20	300	10			30	60	<6	17.0		FS
MS(S)-44	OSC	3.8	4.2	MC		20	400	10			30	60	<6	17.0		FS
MS(S)-420	OSC	3.6	3.9	MC		20	400	50			30	60	30	30.0		FS



TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD OR BANDWIDTH RANGE MHZ	POWER IN		MIN. POWER OUT *dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER	
		CENTER OR MIN. GHZ	MAX. GHZ		V	mA				-°C	+°C					
MS(S)-440	OSC	3.8	4.2	MC	20	400	50			30	60	30	30.0	FS		
MS(X)-04	OSC	<8.0	8.5	MC	20	300	5			30	60	<6	17.0	FS		
MS(X)74	OSC	>10.6	>11.2		20	300	10			30	60	10	21.0	FS		
MS(X)-76	OSC	11.2	<11.8		20	300	10			30	60	10	21.0	FS		
MS(X)76	OSC	>11.6	>12.2		20	300	5			30	60	10	21.0	FS		
MSCA540	GOS	<5.9	6.1		20	400	50			30	60			WG	FS	
MSCB540	GOS	6.1	<6.4		20	400	50			30	60			WG	FS	
MVL-2700	OSC	1.0	2.0	VT	20	80	50			30	60	2	4.0	FS		
MVS4700	OSC	2.0	4.0	VT	20	150	40			30	60	2	3.0	FS		
MVS4710	OSC	2.0	4.0	VT	20	150	75			30	60	2	3.0	FS		
NTAC-14b53	TDA	>1.4	<1.6		28			20	<4	0	50	144		CO	MS	
NTAC-2250-B	TDA	2.2	2.3		28			20	<4	0	50	88		CO	MS	
OA75JA	OSC	0.5	1.0	VT	-30	120	400			30	60	2	6.0	CO	IS	
OA-375-30-1	PRE	<0.3	0.5	OCT	28			30	4	55	70	5		CO	MP	
OA-375-40-50	PRE	<0.3	0.5	OCT	28			40	4	55	70	8		CO	MP	
OA-750-30-1	PRE	0.5	1.0	OCT	28			30	4	55	70	5		CO	MP	
OA-750-40-50	PRE	0.5	1.0	OCT	28			40	5	55	70	8		CO	MP	
OB50JB	OSC	1.0	2.0	VT	-24	150	150					<3	5.0	CO	IS	
OB00JB	OSC	2.0	4.0	VT	-24	150	100					<3	5.0	CO	IS	
OB30CM	GOS	4.2	4.4	MC	500	13	650	5		30	70		3.5	CO	IS	
OB65GB	OSC	3.0	4.3	VT	-24	150	30					<3	5.0	CO	IS	
OE65CM	GOS	5.4	5.9	MC	500	6	650	5		30	70		3.5	CO	IS	
OE75FB	OSC	4.0	5.5	VT	-24	150	25					<2	4.0	CO	IS	
OF67CM	GOS	6.4	6.9	MC	500	6	650	25		30	70		3.5	CO	IS	
OF80EB	OSC	5.0	6.6	VT	-24	150	20					<2	4.0	CO	IS	
OH75CM	GOS	7.5	8.0	MC	500	6	650	5		30	70		3.5	CO	IS	
OI75CM	GOS	8.5	9.0	MC	500	6	650	5		30	70		3.5	CO	IS	
OJ25CM	GOS	9.0	9.5	MC	500	6	650	5		30	70		3.5	CO	IS	
OK05CM	GOS	9.8	10.3	MC	500	6	650	5		30	70		3.5	CO	IS	
OK45CM	GOS	10.2	10.7	MC	500			20		30	70		3.5	CO	IS	
OL75CM	GOS	11.5	12.0	MC	500			20		30	70		3.5	CO	IS	
OL-103	YTO	1.0	2.0		15	50	5			20	60	<6	8.0	CO	PE	
OL-103A	CSO	2.6	3.2	MC	600	24	10			0	50	3		CO	GR	
OLS2001	OSC	1.5	3.5	FX	-21		50			30	72	3	4	CO	CL	
OM-1.5-30-20-10	MIA	1.0	2.0		28			15	R	50	70	5		CO	MP	
OM-3.0-30-20-10	MIA	2.0	4.0		28			15	R	50	70	5		CO	MP	
OM-6.0-30-20-10	MIA	4.0	8.0		28			15	<R	50	70	5		CO	MP	
OM-10.0-30-20-10	MIA	8.0	12.0		28			15	9	50	70	5		CO	MP	
OM50CM	GOS	12.2	12.7	MC	500	6	650	5		30	70		3.5	CO	IS	
OM-750-30-20-10	MIA	0.5	1.0		28			15	<R	50	70	5		CO	MP	
OP-100	YTO	0.5	1.0		15	50	5			20	60	<6	8.0	CO	PE	
OR50JA	OSC	1.0	2.0	VT	-20	150	200			30	60	2	6.0	CO	IS	
OS-100	YTO	2.0	4.0		15	50	2			20	60	<5	8.0	CO	PE	
OX-100	GOS	8.0	12.4	VT	7	450	10					31	56.0	CO	PE	
PAB1AA	PAR	0.7	0.9	FX	20	115	1500		20	2	0	50	440	144	CO	IS
PB25AB	PAR	2.2	3.3	FX	100	115	1500		20	2	0	50	222	112	CO	IS
PB31AA	PAR	<1.3	<1.4	FX	20	115	1500		20	2	0	50	440	144	CO	IS
PB31AB	PAR	<1.3	<1.4	FX	70	115	1500		20	2	0	50	845	160	CO	IS
PC15AA	PAR	1.9	2.4	FX	30	115	1500		20	2	0	50	440	144	CO	IS
PC25AA	PAR	2.2	3.3		40	115	1500		20	2	0	50	440	144	CO	IS
PC80AA	PAR	2.7	2.9		40	115	1500		20	2	0	50	440	144	CO	IS
PS-8	OSC	0.2	<0.3	ME								5	5.0	CO	EF	
PS-9	OSC	<0.2	0.3	ME								5	5.0	CO	EF	
PS-10	OSC	<0.2	0.3	ME								5	5.0	CO	EF	
PS-11	OSC	0.2	0.4	ME								5	5.0	CO	EF	

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
P5-12	OSC	0.5	1.0	ME									5	5.0	CO	EF
S05-1200-15	TRA	<1.2	1.2	FX	50	24		**6		<5	55	85	11		CO	IM
S05-1200-20	TRA	<1.2	1.2	FX	50	24		**6		<5	55	85	11		CO	IM
S-6	PAR	*3.0		FX	600	12	500		12	>2						SK
S-7	PAR	*3.0		FX	850	12	500		14	<2						SK
S-8	PAR	*2.5		MC	25	12	500		20	<1						SK
S10-1300-15	TRA	<1.3	<1.4	FX	100	24		**6		<5	55	85	11		CO	IM
S10-1300-20	TRA	<1.3	<1.4	FX	100	24		**6		<5	55	85	11		CO	IM
S10-1400-15	TRA	<1.4	<1.5	FX	100	24		**6		<5	55	85	11		CO	IM
S10-1400-20	TRA	<1.4	<1.5	FX	100	24		**6		<5	55	85	11		CO	IM
S10-1500-15	TRA	<1.5	<1.6	FX	100	24		**6		<5	55	85	11		CO	IM
S10-1500-20	TRA	<1.5	<1.6	FX	100	24		**6		<5	55	85	11		CO	IM
S10-1600-15	TRA	<1.6	<1.7	FX	100	24		**6		<5	55	85	9		CO	IM
S10-1600-20	TRA	<1.6	<1.7	FX	100	24		**6		<5	55	85	8		CO	IM
S10-1700-15	TRA	<1.7	<1.8	FX	100	24		**6		<5	55	85	9		CO	IM
S10-1700-20	TRA	<1.7	<1.8	FX	100	24		**6		<5	55	85	9		CO	IM
S10-1800-15	TRA	<1.8	<1.9	FX	100	24		**6		<5	55	85	9		CO	IM
S10-1800-20	TRA	<1.8	<1.9	FX	100	24		**6		<5	55	85	9		CO	IM
S10-1900-15	TRA	<1.9	<2.0	FX	100	24		**6		<5	55	85	8		CO	IM
S10-1900-20	TRA	<1.9	<2.2	FX	100	24		**6		<5	55	85	9		CO	IM
S10-2000-15	TRA	<2.0	<2.1	FX	100	24		**6		<5	55	85	9		CO	IM
S10-2000-20	TRA	<2.0	<2.1	FX	100	24		**6		<5	55	85	8		CO	IM
S10-2100-15	TRA	<2.1	<2.2	FX	100	24		**6		<5	55	85	9		CO	IM
S10-2100-20	TRA	<2.1	<2.2	FX	100	24		**6		<5	55	85	9		CO	IM
S20-1300-15	TRA	1.2	1.4	FX	200	24		**6		<5	55	85	11		CO	IM
S20-1300-20	TRA	1.2	1.4	FX	200	24		**6		<5	55	85	11		CO	IM
S20-1400-15	TRA	1.3	1.5	FX	200	24		**6		<5	55	85	11		CO	IM
S20-1400-20	TRA	1.3	1.5	FX	200	24		**6		<5	55	85	11		CO	IM
S20-1500-15	TRA	1.4	1.6	FX	200	24		**6		<5	55	85	9		CO	IM
S20-1500-20	TRA	1.4	1.6	FX	200	24		**6		<5	55	85	8		CO	IM
S20-1600-15	TRA	1.5	1.7	FX	200	24		**6		<5	55	85	9		CO	IM
S20-1600-20	TRA	1.5	1.7	FX	200	24		**6		<5	55	85	9		CO	IM
S20-1700-15	TRA	1.6	1.8	FX	200	24		**6		<5	55	85	9		CO	IM
S20-1700-20	TRA	1.6	1.8	FX	200	24		**6		<5	55	85	9		CO	IM
S20-2200-15	TRA	2.1	2.3	FX	200	24		**6		<5	55	85	8		CO	IM
S20-2200-20	TRA	2.1	2.3	FX	200	24		**6		<5	55	85	8		CO	IM
S20-2400-15	TRA	2.3	2.5	FX	200	24		**6		<5	55	85	8		CO	IM
S20-2400-20	TRA	2.3	2.5	FX	200	24		**6		<5	55	85	8		CO	IM
S50-3950-20	TRA	3.7	4.2	FX	500	24		**6		<5	55	85	9		CO	IM
S103V	OSC	0.3	0.7	VT	150	28	1A	#10W							CO	AC
S229	GOS	9.0	10.0	FX		10	250	12					<2	6.0	RC	
S262	GOS	*8.7		FX		-10	150	20	20	10			<1	1.0	RC	
S272	GOS	*8.7		MC	200	-10	160	20	20	10			1	3.0	RC	
S278	GOS	8.0	10.0	VT	270	-10	150	1					1	3.0	RC	
S279	GOS	8.0	10.0	VT	450	-10	150	5					5	6.0	RC	
S283	GOS	*8.7		MC	200	-10	510	100	20	10			<1	3.0	RC	
S285	GOS	*5.6		FX		14	150	125					1	2.5	RC	
S289	IPD	*10.5				10	120	25			30	80	2	2.5	WG	RC
S291	GOS	*8.7		MC	200	-10	550	100					1	4.0	RC	
S293	IPD	*10.0		VT	600	-9	210	10			40	75	3	8.0	CO	RC
S294	IPD	*12.0		VT		-7	195	10			54	75	<1	1.5	CO	RC
S301	GOS	8.0	10.0	FX		10	120	10			30	80	<3	2.5	WG	RC
S302	GOS	10.0	12.0	FX		10	120	10			30	80	<3	2.5	WG	RC
S303	GOS	8.0	10.0	FX		10	120	30			30	80	<3	2.5	WG	RC
S304	GOS	10.0	12.0	FX		10	120	30			30	80	<3	2.5	WG	RC

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT PULSE *dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
S305	GOS	8.0	10.0	FX		10	300	60			30	80	<3	2.5	WG	RC
S306	GOS	10.0	12.0	FX		10	300	60			30	80	<3	2.5	WG	RC
S307	GOS	8.0	10.0	FX		10	600	120			30	80	<3	2.5	WG	RC
S308	GOS	10.0	12.0	FX		10	600	120			30	80	<3	2.5	WG	RC
S319	GOS	8.0	10.0	FX		20	1A	#1W			30	80	<3	2.5	WG	RC
S320	GOS	10.0	12.0	FX		20	1A	#1W			30	80	<3	2.5	WG	RC
S321	GOS	8.0	10.0	FX		30	4A	#5W			30	80	<3	2.5	WG	RC
S322	GOS	10.0	12.0	FX		30	4A	#5W			30	80	<3	2.5	WG	RC
S323	GOS	4.0	6.0	FX		13	150	10			30	80	1	2.5	CO	RC
S324	GOS	6.0	8.0	FX		13	150	10			30	80	1	2.5	CO	RC
S325	GOS	4.0	6.0	FX		13	200	30			30	80	1	2.5	CO	RC
S325	GOS	6.0	8.0	FX		13	200	30			30	80	1	2.5	CO	RC
S327	GOS	4.0	6.0	FX		13	240	60			30	80	1	2.5	CO	RC
S328	GOS	6.0	8.0	FX		13	240	60			30	80	1	2.5	CO	RC
S329	GOS	4.0	6.0	FX		13	480	120			30	80	1	2.5	CO	RC
S330	GOS	6.0	8.0	FX		13	480	120			30	80	1	2.5	CO	RC
S331	GOS	4.0	6.0	FX		50	500	#1W			30	80	1	2.5	CO	RC
S332	GOS	6.0	8.0	FX		50	500	#1W			30	80	1	2.5	CO	RC
S333	GOS	4.0	6.0	FX		50	25H	#5W			30	80	1	2.5	CO	RC
S334	GOS	6.0	8.0	FX		50	25H	#5W			30	80	1	2.5	CO	RC
S335	GOS	4.0	6.0	FX		50	35H	#10W			30	80	1	2.5	CO	RC
S-1002-6	OSX	0.6	0.8			24		1W			30	60	21		CO	AC
S-1002-8	OSX	0.8	1.0			24		1W			30	60	21		CO	AC
S-1002-10	OSX	1.0	1.2			24		1W			30	60	21		CO	AC
S1007	OSC	1.0	3.0					75					19		CO	AC
SMA-400N	AMP	*0.4			100	15			25	3			<3		CO	SM
SMA-400NM	AMP	*0.4			100	15			25	3			<1		CO	SM
SMA-550V	AMP*	>0.5			100	28			17	5			4		CO	SM
SMA-550VA	AMP*	>0.5			100	28			24	5			5		CO	SM
SMA1500N	AMP	>1.4	>1.5			115			20	5			48		CO	SM
SMA1500ND	AMP	>1.4	>1.5			24			20	5			13		CO	SM
SMA1500NA	AMP	>1.4	>1.5			115			20	<5			48		CO	SM
SMA1500NAD	AMP	>1.4	>1.5			24			20	<5			13		CO	SM
SMA1550P	AMP*	>1.5			50	24		500	27				38		CO	SM
SMA1600N	AMP	>1.5	>1.6			24			20	5			13		CO	SM
SMA1600P2	AMP	*1.6			20	28		1700	39				38		CO	SM
SMA1600P5	AMP	*1.6			40	28		5W	45				53		CO	SM
SMA1607-5W	AMP*	>1.6			40	28		5W	45				53		CO	SM
SMA2115N	AMP*	>2.1			40	9			10	5			2		CO	SM
SMA2250N	AMP*	>2.2			100	12			15	5			3		CO	SM
SP-300/200	PRE	0.2	0.4			12	20	*0	30	4			6		CO	AP
SP-375/250	PRE	0.3	0.5			12	20	*0	30	4			6		CO	AP
SP-450/300	PRE	0.3	0.6			12	30	*-3	30	5			6		CO	AP
SP-650/700	PRE	0.3	1.0			12	36	*-3	25	6			6		CO	AP
SP-750/500	PRE	0.5	1.0			12	28	*-3	25	6			6		CO	AP
SP-1500/1000	PRE	1.0	2.0			12	40	**3	25	7			<2		CO	AP
SP-2250/1500	PRE	1.5	3.0			12	50	*0	25	9			<2		CO	AP
SP-3000/2000	PRE	2.0	4.0			12	50	*0	20	10			<3		CO	AP
SPS1500/1000	PRE	1.0	2.0			115	2W	*0	25	9			18		CO	AP
SPS3000/2000	PRE	2.0	4.0			115	2W	*0	20	10			18		CO	AP
SSJ9 SERIES	OSC	12.4	14.0	VT	250	-30	80	<3			20	60	6	8.0	WG	GC
SSX-3	OSC	8.0	10.5	VT	400	18	80	4			20	60	6	4.0	WG	GC
SW-7	OSC	*4.1		FX		12	30	80								SK
SWA-7075-5	GOS	7.0	7.5	MC	500	-12	120	*5			54	85	8		WG	I"
SWA-7075-10	GOS	7.0	7.5	MC	500	-12	120	*10			54	85	8		WG	I"

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
SWA-7075-15	GOS	7.0	7.5	MC	500	-12	120	*15			54	85	8		WG	IM
SWA-7075-20	GOS	7.0	7.5	MC	500	-12	120	*20			54	85	8		WG	IM
SWA-7580-5	GOS	7.5	8.0	MC	500	-12	120	*5			54	85	8		WG	IM
SWA-7580-10	GOS	7.5	8.0	MC	500	-12	120	*10			54	85	8		WG	IM
SWA-7580-20	GOS	7.5	8.0	MC	500	-12	120	*20			54	85	8		WG	IM
SWA-8085-5	GOS	8.0	8.5	MC	500	-12	120	*5			54	85	8		WG	IM
SWA-8085-10	GOS	8.0	8.5	MC	500	-12	120	*10			54	85	8		WG	IM
SWA-8085-15	GOS	8.0	8.5	MC	500	-12	120	*15			54	85	8		WG	IM
SWA-8085-20	GOS	8.0	8.5	MC	500	-12	120	*20			54	85	8		WG	IM
SWA-8595-5	GOS	8.5	9.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-8595-10	GOS	8.5	9.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-8595-15	GOS	8.5	9.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-8595-20	GOS	8.5	9.5	MC	1K	-12	120	*20			54	85	8		WG	IM
SWA-95105-5	GOS	9.5	10.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-95105-10	GOS	9.5	10.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-95105-15	GOS	9.5	10.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-95105-20	GOS	9.5	10.5	MC	1K	-12	120	*20			54	85	8		WG	IM
SWA-105115-5	GOS	10.5	11.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-105115-10	GOS	10.5	11.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-105115-15	GOS	10.5	11.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-105115-20	GOS	10.5	11.5	MC	1K	-12	120	*20			54	85	8		WG	IM
SWA-115125-5	GOS	11.5	12.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-115125-10	GOS	11.5	12.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-115125-15	GOS	11.5	12.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-115125-20	GOS	11.5	12.5	MC	1K	-12	120	*20			54	85	8		WG	IM
SWA-125135-5	GOS	12.5	13.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-125135-10	GOS	12.5	13.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-125135-15	GOS	12.5	13.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-125135-20	GOS	12.5	13.5	MC	1K	-12	120	*20			54	85	8		WG	IM
SYA3200	ADJ	8.2	12.4	MC	250	-50	25	10			30	71	2		WG	AT
SYA3200A	ADJ	8.2	12.4	MC	250	-50	25	25			30	71	2		WG	AT
SYA3200B	ADJ	8.2	12.4	MC	250	-50	25	50			30	71	2		WG	AT
SYA3201	ADJ	8.2	12.4	MC	250	-70	25	10			30	71	<1		CO	AT
SYA3201A	ADJ	8.2	12.4	MC	250	-70	25	25			30	71	<1		CO	AT
SYA3201B	ADJ	8.2	12.4	MC	250	-70	25	50			30	71	<1		CO	AT
SYA3205	ADJ	8.2	12.4	MC	250	110	60	100			30	71			CO	AT
SYA3205A	ADJ	8.2	12.4	MC	100	110	80	250			30	71			CO	AT
SYA3205B	ADJ	8.2	12.4	MC	75	110	120	500			30	71			CO	AT
SYA-3205	ADJ	8.2	12.4	MC	250	110	60	100			30	71	<1	1.0	WG	AT
SYA-3205A	ADJ	8.2	12.4	MC	100	110	80	250			30	71	<1	1.0	WG	AT
SYA-3206B	ADJ	8.2	12.4	MC	75	110	120	500			30	71	<1	1.0	WG	AT
SYA-3220	ADJ*	10.5				120	60	100			30	71	1	4.0	WG	AT
SYG-2001 SERIES	MJL	26.0	37.2	FX	200			90			55	85	3	6.0	WG	AT
SYG-2010 SERIES	MJL	18.0	24.8	FX	300			125			55	85	3	6.0	WG	AT
SYG2030	ADJ	18.0	24.8	MC	60	120	80	40			30	71	9	8.0	WG	AT
SYG2030A	ADJ	18.0	24.8	MC	60	120	80	100			30	71	9	8.0	WG	AT
SYG2035	ADJ	26.0	37.2	MC	90	120	80	40			30	71	9	8.0	WG	AT
SYG2035A	ADJ	26.0	37.2	MC	90	120	80	100			30	71	9	8.0	WG	AT
SYM8410 SERIES	MIA	5.5	8.5			12	40	*+5	30	<9	65	125	2		CO	AT
SYM8420 SERIES	MIA	8.5	11.5			12	40	*+5	30	9	65	125	2		CO	AT
SYM8430 SERIES	MIA	10.7	13.2			12	40	*+5	30	9	65	125	2		CO	AT
T-425/S	AMP	0.9	1.2		5%	29		430W		30			13	15.0	CO	AC
TQN-101	TRA	<0.2	>0.3			20	35		20	3	50	70	6		CO	MS
TQN-102	TRA	<1.4	<1.5			20	35		20	5	50	70	15		CO	MS
TQN-102A	TRA	<1.4	<1.5			20	35		20	<5	50	70	15		CO	MS

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR MHz TUNING RANGE	POWER IN		MIN. POWER OUT * dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
TQN-103	TRA	2.2	2.3			20	35		20	6	50	70	15		CO	MS
TQN-103A	TRA	2.2	2.3			20	35		20	<6	50	70	15		CO	MS
TQN-104	TRA	<1.4	<1.5			20	35		25	<5	50	70	15		CO	MS
TQN-105	TRA	2.2	2.3			20	35		25	<6	50	70	15		CO	MS
TQN-1445	TRA	>1.4	>1.5						15	>4			3	6.0	CO	MS
TQN-2250	TRA	2.2	2.3			20	30		15	<6			3	6.0	CO	MS
TQJ-102	TRA	<0.3	0.5			20	35		25	<5	50	70	16		CO	MS
TQO-103	TRA	0.5	1.0			20	35		25	<7	50	70	14		CO	MS
TQO-104	TRA	1.0	2.0			20	35		20	<7	50	70	15		CO	MS
TQW-1450	TRA	1.4	2.3			20	30		10	<6			3	6.0	CO	MS
TQw1804	TRA	1.4	2.3			20	35		>5	10	50	70	15		CO	MS
TQw1805	TRA	1.4	2.3			20	35		11	10	50	70	15		CO	MS
TQw1806	TRA	1.4	2.3			20	35		>16	10	50	70	15		CO	MS
TQw1807	TRA	1.4	2.3			20	35		22	10	50	70	15		CO	MS
J-107	TRA	*0.4		FX	20	12	20		35	2						SK
JH-2(TX)-1347	AMP	*1.3			50	28	850	10W	10				44		CO	AR
JHC3100/475	VIA	*3.1				15	40	**10	22	8					CO	AR
JHF-5	PAR	*0.4		MC	20	12	500		16	1						SK
JHM-3(TX)-4965-3	AMM	*5.0				28	450	1250					247	70.0		AR
JM-4.55/1700-2	MJL	4.0	5.7					10					162	44.0	CO	AR
JM-6.85/2300-2	MJL	5.7	8.0					10					75	35.0	CO	AR
VSJ3814-1000	AMP	<0.9	<1.2			28	600	400			10	85	36	26.0	CO	TP
VSJ9075	YTD	12.3	18.1			15	700	5			0	50		28.0	CO	VA
VSU9076	YTD	12.3	18.1			15	700	5			0	50		28.0	CO	VA
VSJ9502A	IPD	*12.4	15.0	FX		70	40	25			20	70	1	4.0	WG	VA
VSJ9502AT	IPD	*12.4	15.0	MC		70	40	25			20	70	1	4.0	WG	VA
VSJ9502B	IPD	*12.4	15.0	FX		70	45	50			20	70	1	4.0	WG	VA
VSJ9502BT	IPD	*12.4	15.0	MC		70	45	50			20	70	1	4.0	WG	VA
VSJ9502C	IPD	*12.4	15.0	FX		70	50	100			20	50	1	4.0	WG	VA
VSJ9502CT	IPD	*12.4	15.0	MC		70	50	100			20	50	1	4.0	WG	VA
VSJ9502L	IPJ	*12.4	15.0	FX		70	70	150			20	50	1	4.0	WG	VA
VSJ9502F	IPJ	*12.4	15.0	FX		70	80	200			20	50	1	4.0	WG	VA
VSJ9503A	IPD	*15.0	18.0	FX		90	40	25			20	70	1	4.0	WG	VA
VSJ9503AT	IPD	*15.0	18.0	MC		70	30	25			20	70	1	4.0	WG	VA
VSJ9503B	IPD	*15.0	18.0	FX		90	50	50			20	50	1	4.0	WG	VA
VSJ9503BT	IPD	*15.0	18.0	MC		70	50	50			20	50	1	4.0	WG	VA
V5X9070	YTD	5.0	12.4			15	600	10			0	50	10	28.0	CO	VA
V5X9071	YTD	7.9	12.4			17	600	10			0	50		28.0	CO	VA
V5X9500A	IPD	*8.0	10.0	FX		90	30	25			20	70	>1	4.0	WG	VA
V5X9500AT	IPD	*8.0	10.0	MC		95	30	25			20	70	>1	4.0	WG	VA
V5X9500B	IPJ	*8.0	10.0	FX		90	50	50			20	70	>1	4.0	WG	VA
V5X9500BT	IPD	*8.0	10.0	MC		95	50	50			20	70	>1	4.0	WG	VA
V5X9500C	IPD	*8.0	10.0	FX		90	50	100			20	50	>1	4.0	WG	VA
V5X9500CT	IPD	*8.0	10.0	MC		95	50	100			20	50	>1	4.0	WG	VA
V5X9500E	IPD	*8.0	10.0	FX		90	55	150			20	50	>1	4.0	WG	VA
V5X9500ET	IPD	*8.0	10.0	MC		95	55	150			20	50	>1	4.0	WG	VA
V5X9500F	IPD	*8.0	10.0	FX		90	70	200			20	50	>1	4.0	WG	VA
V5X9501A	IPD	*10.0	12.4	FX		95	30	25			20	70	>1	4.0	WG	VA
V5X9501B	IPD	*10.0	12.4	FX		95	50	50			20	70	>1	4.0	WG	VA
V5X9501C	IPD	*10.0	12.4	FX		95	50	100			20	50	>1	4.0	WG	VA
V5X9501E	IPD	*10.0	12.4	FX		95	55	150			20	50	>1	4.0	WG	VA
V5X9501F	IPD	*10.0	12.4	FX		95	70	200			20	50	>1	4.0	WG	VA
VT-0451	OSC	<0.3	0.5	VT		-30		50			20	60	3	2.5	CO	SC
VT-0452	OSC	<0.3	0.5	VT		-30		500			20	60	3	2.5	CO	SC
VT-0531	OSC	<0.4	<0.8	VT		-30		30			20	60	3	2.5	CO	SC

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT * dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
VT-0532	OSC	<0.4	<0.8	VT		-30		300			20	60	3	2.5	CO	SC
VT-0712	OSC	0.5	1.0	VT		-30		100			20	60	3	2.5	CO	SC
VT-0722	OSC	0.5	1.0	VT		-30		250			20	60	3	2.5	CO	SC
VT-0751	OSC	0.5	1.0	VT		-30		50			20	60	3	2.5	CO	SC
VT-0752	OSC	0.5	1.0	VT		-30		500			20	60	3	2.5	CO	SC
VT-1131	OSC	<0.8	1.5	VT		-30		30			20	60	3	2.5	CO	SC
VT-1132	OSC	<0.8	1.5	VT		-30		300			20	60	3	2.5	CO	SC
VT-1522	OSC	1.0	2.0	VT		-30		250			20	60	3	2.5	CO	SC
VT-2212	OSC	1.5	3.0	VT		-30		100			20	60	3	2.5	CO	SC
VT-3021	OSC	2.0	4.0	VT		-30		25			20	60	3	2.5	CO	SC
VT-3051	OSC	2.0	4.0	VT		-30		50			20	60	3	2.5	CO	SC
VT-3141	OSC	2.1	4.2	VT		-30		40			20	60	3	2.5	CO	SC
VJ1414A SERIES	GOS	12.4	18.0	MC	100	3	500	25			54	70	2	3.0	WG	MA
VJ1717B SERIES	GOS	12.4	18.0	MC	100	8	800	50			54	70	2	3.0	WG	MA
VJ2020C SERIES	GOS	12.4	18.0	MC	100	8	12H	100			54	70	2	3.0	WG	MA
VX1717SP	GOS*10.5			MC	1%	12		50			20	3R	3	3.0	WG	MA
VX2020 SERIES	GOS	8.2	12.4	MC	20%	12	750	100			40	90	3	3.0	WG	MA
WJ569	YTO	1.0	2.0	YT	OCT	15	60	20			30	65	3	9.0	CO	WJ
WJ569-1	YTO	1.0	2.0	YT	OCT	15	60	10			30	65	<3	9.0	CO	WJ
WJ569-2	YTO	1.0	2.2	YT	OCT	15	60	20					3	9.0	CO	WJ
WJ569-3	YTO	1.0	2.0	YT	OCT	15	60	50			30	65	3	9.0	CO	WJ
WJ571	YTO	0.5	1.0			15	60	20			30	65	3	9.0	CO	WJ
WJ571-1	YTO	0.5	1.0	YT	OCT	15	60	100			30	65	3	9.0	CO	WJ
WJ571-6	YTO	0.6	1.2			15	60	50					3	9.0	CO	WJ
WJ571-10	YTO	<0.8	<0.9			24	530	60			0	50	30	24.0	CO	WJ
WJ571-11	YTO	<0.6	>1.5			15	60	20			30	65	3	9.0	CO	WJ
WJ572	YTO	2.0	4.0	YT	OCT	15	60	6			30	65	3	9.0	CO	WJ
WJ572-13	YTO	2.0	2.4			15	60	4			30	65	3	9.0	CO	WJ
WJ572-19	YTO	<1.6	>3.1			15	700	10			0	50	16	20.0	CO	WJ
WJ572-32	YTO	2.0	3.0			15	60	4					3	9.0	CO	WJ
WJ572-33	YTO	3.0	4.0			15	60	4					3	9.0	CO	WJ
WJ-736	TRA	0.5	1.0			-15	<1W	*10	25	4			4	3.0	CO	WJ
WJ-737	TRA	1.0	2.0			-15	<1W	*0	25	6			4	3.0	CO	WJ
WJ737-14	TRA	>1.4	>1.5			-15		*0	25	<6			<4	3.0	CO	WJ
WJ-738	TRA	0.5	1.0			115	<2W	*10	25	4			<9	6.0	CO	WJ
WJ-739	TRA	1.0	2.0			115	<2W	*0	25	6			<9	6.0	CO	WJ
WJ739-14	TRA	1.0	2.0			115		*0	2R	5			<9	9.0	CO	WJ
WJ739-15	TRA	1.0	2.0			115		*10	35	R			<22	22.0	CO	WJ
WJ-740	TRA	0.5	1.0			115	<2W	1	2R	4			18	10.0	CO	WJ
WJ-741	TRA	1.0	2.0			115	<2W	4	2R	5			18	10.0	CO	WJ
WJ772-5	TRA	2.2	2.3			115		*5	25	6	30	65	12	9.0	CO	WJ
WJ780	TRA	1.0	2.6			115		5	27	7			<12	9.0	CO	WJ
WJ799	MJL	2.0	12.4			>1W		10			0	50	10	44.0	CO	WJ
WJ1134	AMP	0.5	1.0	YT	15			*-5	20	R			53	30.0	CO	WJ
WJ1135	AMP	1.2	2.0	YT	25			*0	20	R			53	30.0	CO	WJ
WJ1136	AMP	2.0	4.0	YT	25			*-5	20	11			53	30.0	CO	WJ
WJ2800	VTO	0.5	1.0	VT		24	200	100					4	6.0	CO	WJ
WJ2802	VTO	1.0	2.0	VT		15	250	30					4	6.0	CO	WJ
WJ2803	VTO	1.0	2.0	VT		15	250	100					4	6.0	CO	WJ
WJ2804	VTO	2.0	4.0	VT		15	200	20					4	6.0	CO	WJ
WJ2805	VTO	2.0	4.0	VT		15	200	40					4	6.0	CO	WJ
WJ2805-B	VTO	<2.2	<3.7	VT		15	200	60					4	6.0	CO	WJ
WJ2805-6	OSC	4.0	6.0			15	200	20					4	6.0	CO	WJ
WJ2805-8	OSC	6.0	8.0			15	200	20					4	6.0	CO	WJ
WJ2810	VTO	1.4	2.4	VT		15	250	40					4	6.0	CO	WJ

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE MHZ	POWER IN		MIN. POWER OUT #PULSE *dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
WJ2811	VTO	<0.3	0.5	VT		24	200	100					4	6.0	CO	WJ
WJ2813-3	VTO	<1.2	>1.3	VT		15	200	100					4	6.0	CO	WJ
WJ3017	AMP	2.0	4.0	YT	25			*+7	30	11			150	160	CO	WJ
WJ3018	AMP	4.0	8.0	YT	30			*+7	30	<12			150	160	CO	WJ
WJ3019	AMP	8.0	12.0	YT	30			*+7	30	<12			150	160	CO	WJ
WJ3020	AMP	12.0	18.0	YT	35			*+7	30	14			171	176	CO	WJ
WJ3021	AMP	0.5	2.0	YT	15			*-5	20	14			374	400	CO	WJ
WJ3022	AMP	4.0	12.0	YT	25			*-5	25	14			193	210	CO	WJ
WJ3023	AMP	2.0	8.0	YT	25			*-5	20	<13			374	400	CO	WJ
WJ3024	AMP	8.0	18.0	YT	30			*-5	20	14			374	400	CO	WJ
WJ5004-2	TRA	2.0	4.0			115		*10	30	<9			22	22.0	CO	WJ
WJ5004-3	TRA	3.7	4.2			-48		*0	15	9			<8	3.0	CO	WJ
WJ5004-4	TRA	2.0	4.0			115	30	*5	25	7			12	6.0	CO	WJ
WJ5008	YTO	9.0	12.4	YT		9	800	10			0	65	<9	34.0	CO	WJ
WJ5008-3	YTO	7.0	11.0	YT		9	800	10			0	65	<9	34.0	CO	WJ
WJ5008-4	YTO	8.5	9.6	YT		9	800	20			0	65	<9	34.0	CO	WJ
WJ5008-18	OSC	8.0	12.4	YT		-15	700	10					<9	36.0	CO	WJ
WJ5041	YTO	12.4	18.0	YT		9	800	7			0	65	<9	34.0	CO	WJ
WJ5041-4	YTO	10.0	18.0	YT		9	800	3			0	65	<9	34.0	CO	WJ
WJ5041-5	YTO	15.5	16.5	YT		9	800	20			0	65	<9	34.0	CO	WJ
WJ5041-8	OSC	12.4	18.0	YT	OCT	-15	700	5					<9	36.0	CO	WJ
WJ5059	AMM	2.0	12.4	YT		15	900	10			0	50	270	168	CO	WJ
WJ5060	AMM	1.0	12.4	YT		15	900	10			0	50	270	176	CO	WJ
WJ5077	YTO	0.5	1.0	YT	OCT	15	245	20					<16	20.0	CO	WJ
WJ5078	YTO	1.0	2.0	YT	OCT	15	440	15					<16	20.0	CO	WJ
WJ5079	YTO	2.0	4.0	YT	OCT	15	840	5					<16	20.0	CO	WJ
WJ5090-4	TRA	2.0	4.5			115		*+5	25	<8			9	6.0	CO	WJ
NJ6007	TRA	1.0	4.0			115		*+5	25	<8			9	6.0	CO	WJ
X-2	PAR	*8.2		MC	20	12	500		20	3						SK
X-6	PAR	*8.0		FX	1K	12	500		14	<3						SK
X-7	PAR	*9.3		FX	1K	12	500		15	<3						SK
X-10	PAR	*9.3		FX	200	12	500		20	3						SK
X-11	PAR	*8.4		MC	30	12	500		20	<3						SK
224	AMP	0.8	0.9		100	28		50W	27		20	50	35	14.0	CO	AC
428	OSC	9.5	11.0	VT	400	28	100	5								AK
429	OSC	8.0	10.0	VT	400	28	100	5								AK
430A	OSC	1.0	1.2	VT	100	24	250	1W			40	70	3		CO	AK
430B	OSC	1.3	1.5	VT	100	24	250	1W			40	70	3		CO	AK
433	OSC	8.5	10.0	VT	350	28	140	10								AK
438	OSC	8.5	9.7	VT	400			10								AK
444	OSC	8.5	9.7	VT	400			10								AK
453	GOS	7.0	8.0	MC		8	350	5					7	8.0	WG	AK
1135-MDR	OSC	*1.1		MC	10	42	3A	#35W			54	81	<4	6.0	CO	CL
3800-9200	AMM	13.2	14.0		400	28	500	50			+5	35	98	92.0	CO	TR
3800-9202	AMM	14.4	15.2		400	28	500	50			+5	35	98	92.0	CO	TR
4002	CSO	<0.8	1.3		10%	28	125	50					6		CO	ZL
4003	CSO	1.3	1.8		10%	28	125	10					6		CO	ZL
4008	CSO	1.3	5.0		2%	28	125	10					7		CO	ZL
4009	CSO	5.0	10.0		2%	28	125	10					7		CO	ZL
4200	OSX	*1.0				28	250	1000			20	65	9		CO	ZL
4201	OSX	*4.0				28	250	400			20	65	17		CO	ZL
4202	OSX	*9.0				28	250	200			20	65	23		CO	ZL
4210	OSX	<0.3	0.5			15	50	10			20	65	<4		CO	ZL
4211	OSX	0.5	1.0			15	65	10			20	65	<5		CO	ZL
4213	OSX	1.0	5.5			15	200	10			20	65	9	9.0	CO	ZL

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN			MIN. GAIN	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER		
		CENTER OR MIN. GHz	MAX. GHz			V	mA	MIN. POWER OUT #PULSE *dBm		MIN. dB	MAX. dB					-°C	+°C
4214	OSX	5.5	10.0			28	225	10		20	65	11	11.0	CO	ZL		
4215	OSX	10.0	18.0			28	225	10		20	65	15	14.0	CO	ZL		
4222	OSX	<0.3				23	250	1500		20	65	15		CO	ZL		
4230	OSX	<0.3				28	250	1500		20	65	9		CO	ZL		
4231	OSX	*0.5				28	250	1500		20	65	9		CO	ZL		
4232	OSX	*1.0				28	250	1000		20	65	9		CO	ZL		
4242	OSX	*1.0				23	250	1000				18		CO	ZL		
4243	OSX	*2.0				23	250	500				18		CO	ZL		
4244	OSX	*4.0				23	250	400				18		CO	ZL		
4245	OSX	*5.0				28	250	200				18		CO	ZL		
4255	OSX	*6.0				28	250	200		20	65	24		CO	ZL		
4256	OSX	*9.0				23	250	150		20	65	24		CO	ZL		
4257	OSX	*12.0				28	250	100		20	65	24		CO	ZL		
4258	OSX	*18.0				28	250	50		20	65	24		CO	ZL		
5000-9200	OSX	*16.5				28	550	50		18	40	98	92.0	WG	TR		
5008-9901	TOX	8.5	<9.8			20	350	10		20	70	49	92.0	CO	TR		
5008-9904	TOX	<9.3	<9.6	VT		24	500	50		0	71	55	49.0	CO	TR		
5022-16	MUL	<7.2	<7.7			23	600	*+20	40	0	60	63	32.0	CO	ZL		
5024-9200	OSX	16.0	16.5			28	400	#20		20	70	33	32.0	CO	TR		
5025-2901	OSX	15.5	15.8			28	600	100		20	70	44	40.0	WG	TR		
5026-9200	OSX	12.0	14.0			28		250		10	70	99	48.0	WG	TR		
5030-9201	TOX	16.0	17.0			30	250	12		20	70	33	36.0	CO	TR		
5030-9202	TOX	16.1	16.4			30	250	4		20	70	33	36.0	WG	TR		
6000-1300	OSC	2.7	3.0	MC		28	15	15		0	95	2	4.0	CO	TR		
6000-1305	OSC	3.1	3.4	MC		28	15	15		0	70	2	4.0	CO	TR		
6000-1306	OSC	3.2	3.6	MC		28	15	8		0	70	2	4.0	CO	TR		
6000-1307	OSC	2.2	2.7	MC		28	15	10		0	70	2	4.0	CO	TR		
6013	OSX	>1.8	<2.0			15	200	*+3		5	55	16	17.0	CO	ZL		
6054-9901	TOX	9.2	9.7	VT		-30	350	8		20	70	27	26.0	WG	TR		
6055-9201	TOX	16.0	17.0	VT		30	350	6		20	70	58	32.0	WG	TR		
6503	OSC	>0.2	<0.3			28	1A	3000		20	85	18	16.0	CO	ZL		
6510	MUL	2.2	2.3	100		12	200	*-13		0	50	120		CO	ZL		
6900-1900	GO5	8.5	9.6			12	500	3		20	70	<1	2.5	CO	TR		
28651-18	OSC	<0.3		MC 20%		20	150	200		20	71	1	1.3	CO	OS		
28651-21	OSC	<0.5		MC 20%		20	150	100		20	71	1	1.3	CO	OS		
28652-22	OSC	<0.6		MC 20%		20	150	100		20	71	1	1.3	CO	OS		
28652-23	OSC	<0.7		MC 20%		20	150	25		20	71	1	1.3	CO	OS		
28652-24	OSC	>0.8		MC 20%		20	150	25		20	71	1	1.3	CO	OS		
28653-26	OSC	*1.2		MC 20%		20	100	10		20	71	1	1.3	CO	OS		
28653-27	OSC	*1.5		MC 20%		20	100	10		20	71	1	1.3	CO	OS		
28653-28	OSC	*1.8		MC 20%		20	100	10		20	71	1	1.3	CO	OS		
28654-29	OSC	*2.0		MC 20%		20	100	10		20	71	1	1.3	CO	OS		
28671-60	OSC	0.2	0.5	VT OCT		20	200	250		0	71	1	1.3	CO	OS		
28672-62	OSC	0.5	1.0	VT OCT		20	200	150		0	70	1	1.3	CO	OS		
28673-64	OSC	1.0	2.0	VT OCT		20	200	50		0	70	1	1.3	CO	OS		
28773-64	OSC	1.0	2.0	VT OCT		20	200	100		0	71	2	1.8	CO	OS		
28774-66	OSC	2.0	4.0	VT OCT		20	200	70		0	71	2	1.8	CO	OS		
28781-60	OSC	0.2	0.5	VT OCT		24	250	400		0	71	2	1.8	CO	OS		
28782-62	OSC	0.5	1.0	VT OCT		24	250	200		0	71	2	1.8	CO	OS		
28783-64	OSC	1.0	2.0	VT OCT		24	250	50		0	71	2	1.8	CO	OS		
28784-66	OSC	2.0	4.0	VT OCT		24	250	20		0	71	2	1.8	CO	OS		
28790 SERIES	OSC	4.8	12.0	VT				10							CO	OS	
29003-60-20	MIA	1.0	2.0			-20			20 10			<2	1.6	CO	OS		
46202H	AMP	>1.6	2.0			28	500	3W	7	20	71	<3	6.0	CO	HA		
46203H	AMP	1.8	2.1			12	250	*23	13	55	100	>3	6.0	CO	HA		



TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
117000MS	OSC	*1.1		MC		30	1A	#5W			54	81	<4	6.0	CO	CL
1820004V	OSC	*1.8		MC				2W			55	85	9	10	CO	CL
2710054	TOM	2.5	3.0	MC		-28	200	1W			30	71	4			CL
286523-25	OSC	*1.0		MC	20%	20	100	25			20	71	1	1.3	CO	OS
287734-65	OSC	1.5	3.0	VT	OCT	20	200	100			0	71	2	1.8	CO	OS
287745-67	OSC	2.6	5.2	VT	OCT	20	200	20			0	71	2	1.8	CO	OS
287812-61	OSC	0.3	0.6	VT	OCT	24	250	200			0	71	2	1.8	CO	OS
287834-63	OSC	0.7	1.5	VT	OCT	24	250	50			0	71	2	1.8	CO	OS
290012-60-20	MIA	<0.3	1.0			-20			20	0			<2	1.5	CO	OS

5. CHARACTERISTIC LISTING

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE MHz	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN		OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA		dB	MAX. NF dB	TEMPERATURE					
											- °C	+ °C				
EQN-101	TRA	<0.2	>0.3			20	35		20	3	50	70	6		CO	MS
A-230-17-5	AMP	*<0.3				23		5	17	<3	55	70	2		CO	MP
A-230-30-10	AMP	*<0.3				23		10	30	<3	55	70	5		CO	MP
A-230-50-1C	AMP	*<0.3				23		100	50	<3	55	70	9		CO	MP
A-230-90-1C	AMP	*<0.3				23		100	90	<3	55	70	9		CO	MP
A-230-50-1K	AMP	<0.3				23		1000	50	<3	55	70	8		CO	MP
SP-300/200	PRE	0.2	0.4			12	20	*0	30	4			6		CO	AP
ALV204	AMP	0.2	0.4			20	30	*5	25	4			<10	8.3	CO	OP
3LV204	AMP	0.2	0.4			-20	30	**5	25	3			10	8.2	CO	OP
CA2040	AMP	0.2	0.4			15	20	**5	25	<3			2	1.8	CO	EM
MHA300B	AMP	*0.3			200	12	55	**5	25	4			1		CO	FS
AP-20T	TRA	0.2	0.4			24	250	**20	30	<7						AV
ESH2040	AMP	0.2	0.4			20	135	**20	29	6			5		CO	EM
HCA2040	AMP	0.2	0.4			15	100	**20	18	<6			2	1.8	CO	EM
ESA2040	AMP	0.2	0.4			24	240	**27	23	0			8		CO	EM
EA-100	AMP	0.2	0.4		10%	23		1W	16						CO	GR
DA205	AMP	0.2	0.5	MC		12	8		10	<5			<1	0.7	CO	SA
CA2550	AMP	0.2	0.5			15	20	**5	25	<3			2	1.8	CO	EM
ESH2550	AMP	0.2	0.5			20	135	**20	29	7			5		CO	EM
HCA2550	AMP	0.2	0.5			15	100	**20	18	<6			2	1.8	EM	EM
ESK2550	AMP	0.2	0.5			24	240	**27	23	10			8		CO	EM
A-2451	AMP	0.2	0.5		15	23		75W	30			71	21	20.0	CO	AC
TQO-102	TRA	<0.3	0.5			20	35		25	<5	50	70	16		CO	MS
OA-375-30-1	PRE	<0.3	0.5	OCT		23			30	4	55	70	5		CO	MP
OA-375-40-50	PRE	<0.3	0.5	OCT		23			40	4	55	70	8		CO	MP
AP255	AMP	<0.3	0.5			115		*0	27	<3			25		CO	OP
AP-251	TRA	<0.3	0.5			24	250	**20	30	<7						AV
EA-119	AMP	<0.3	0.5	2%	2%	23		10W	30		+10	45	54		CO	GR
EA-120	AMP	<0.3	0.5	2%	2%	23		20W	30		+10	45	54		CO	GR
EA-121	AMP	<0.3	0.5	2%	2%	23		40W	30		+10	45	54		CO	GR
JHF-5	PAR	*0.4		MC	20	12	500		16	1						SK
SMA-400M	AMP	*0.4			100	15			25	3			<1		CO	SM
SMA-400N	AMP	*0.4			100	15			25	3			<3		CO	SM
MDA3940	PRE	*0.4				20	100		35	<3			24		CO	ME
J-107	TRA	*0.4		FX	20	12	20		35	2						SK
SP-375/250	PRE	0.3	0.5			12	20	*0	30	4			6		CO	AP
ALN255	AMP	0.3	0.5			20	30	*5	25	4			<10	8.3	CO	OP
3LV255	AMP	0.3	0.5			-20	30	**5	25	3			10	8.2	CO	OP
A25102	AMP	0.3	0.5			24		**20	30	5	54	71	16	12.0	CO	OP
HFN-2(TX)-2550/P	AMP	0.3	0.5			23	600	2W	10				16		CO	AR
SP-450/300	PRE	0.3	0.6			12	30	**3	30	5			6		CO	AP
ALV306	AMP	0.3	0.6			20	30	*5	25	<5			<10	8.3	CO	OP
3LV306	AMP	0.3	0.6			-20	30	**5	25	<4			10	8.2	CO	OP
CA3060	AMP	0.3	0.6			15	20	**5	25	<3			2	1.8	CO	EM
MHA600B	AMP	<*0.5			475	12	55	*0	19	6			1		CO	FS
A-405-17-5	AMP	<*0.5				23		5	17	<3	55	70	2		CO	MP
A-450-17-5	AMP	<*0.5				23		5	17	<3	55	70	2		CO	MP
A-405-30-10	AMP	<*0.5				23		10	30	<3	55	70	5		CO	MP
A-450-30-10	AMP	<*0.5				23		10	30	<3	55	70	5		CO	MP
A-405-50-1C	AMP	<*0.5				23		100	50	<3	55	70	5		CO	MP
A-450-50-1C	AMP	<*0.5				23		100	50	<3	55	70	5		CO	MP
A-405-90-1C	AMP	<*0.5				23		100	90	<3	55	70	9		CO	MP
A-450-90-1C	AMP	<*0.5				23		100	90	<3	55	70	9		CO	MP
A-405-50-1K	AMP	<*0.5				23		1000	50	<3	55	70	8		CO	MP
A-450-50-1K	AMP	<*0.5				23		1000	50	<3	55	70	8		CO	MP

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
MHA500 <sub>B</sub>	AMP	*0.5			25	12	55	**5	25	4			1		CO	FS
SMA-550V	AMP	>0.5			100	23			17	5			4		CO	SM
SMA-550VA	AMP	>0.5			100	23			24	5			5		CO	SM
MJA1000	PRE	0.1	1.0			115	130		28	<9			514		CO	ME
AMT1001	TRA	0.1	1.0			15	13	**3	14	<5			1	3.5	CO	AV
AMT1002	TRA	0.1	1.0			15	23	**6	14	5			1	3.5	CO	AV
AMT1003	TRA	0.1	1.0			15	36	**6	23	<5			1	3.5	CO	AV
AMT1004	TRA	0.1	1.0			15	59	**6	42	<5			2	6.3	CO	AV
AMT1005	TRA	0.1	1.0			15	32	**6	56	<5			2	6.3	CO	AV
MQ20000 SERIES	AMP	0.2	1.0		OCT	12		*0	20	<4	54	71	5		CO	MQ
ALN403	AMP	0.4	0.8			20	30	*5	25	<5			<10	3.3	CO	OP
3LN403	AMP	0.4	0.8			-20	30	**5	25	4			10	3.2	CO	OP
EA-101	AMP	0.4	0.8		8%	23		1W	16						CO	GR
290012-60-20	MIA	<0.3	1.0			-20			20	9			<2	1.5	CO	OS
SP-650/700	PRE	0.3	1.0			12	36	**3	25	5			6		CO	AP
A251J4	AMP	0.3	1.0			24	210	**10	25	3	54	71	<10	12.0	CO	OP
MHA700 <sub>B</sub>	AMP	*0.7			200	12	55	*0	20	5			1		CO	FS
ALN459	AMP	0.5	0.9			20	30	*5	25	<5			<10	3.3	CO	OP
3LN459	AMP	0.5	0.9			-20	40	**5	25	4			10	3.2	CO	OP
WJ-740	TRA	0.5	1.0			115	<2W	1	23	4			13	10.0	CO	WJ
WJ1134	AMP	0.5	1.0	YT	15			**5	20	3			53	30.0	CO	WJ
SP-750/500	PRE	0.5	1.0			12	23	**3	25	5			6		CO	AP
ALN501	AMP	0.5	1.0			20	30	*5	25	5			<10	3.3	CO	OP
AP501	AMP	0.5	1.0			115		**5	27	3			25		CO	OP
3LN501	AMP	0.5	1.0			-20	30	**5	25	4			10	3.2	CO	OP
CA5001	AMP	0.5	1.0			15	40	**10	29	3			2	1.3	CO	EV
WJ-733	TRA	0.5	1.0			-15	<1W	*10	25	4			4	3.0	CO	WJ
WJ-733	TRA	0.5	1.0			115	<2W	*10	25	4			<9	6.0	CO	WJ
A52D2	AMP	0.5	1.0			24	230	**20	30	6	54	70	<10	12.0	CO	OP
ESK5001	AMP	0.5	1.0			20	130	**20	23	7			<7		CO	EV
HCA5001	AMP	0.5	1.0			15	120	**20	13	7			2	1.3	CO	EV
AP-1000T	TRA	0.5	1.0			15	540	**29	30	10					CO	AV
OM-750-30-20-10	MIA	0.5	1.0			23			15	<3	50	70	5		CO	MP
DA510	AMP	0.5	1.0	MC	OCT	15	23		25	5			4	4.1	CO	SA
MP5-1/2SERIES	PRE	0.5	1.0			+12			25	<9					CO	R4
TQ0-103	TRA	0.5	1.0			20	35		25	<7	50	70	14		CO	MS
JA-750-30-1	PRE	0.5	1.0		OCT	23			30	4	55	70	5		CO	MP
JA-750-40-50	PRE	0.5	1.0		OCT	23			40	5	55	70	3		CO	MP
DA5001	PRE	0.5	1.0			12	50		43	6			30		CO	VE
A-750-17-1	AMP	<0.8				23		1	17	<3	55	70	5		CO	MP
A-750-30-10	AMP	<0.8				23		10	30	<3	55	70	5		CO	MP
A-750-50-10	AMP	<0.8				23		10	50	<3	55	70	9		CO	MP
A-750-90-50	AMP	<0.8				23		50	90	<3	55	70	9		CO	MP
A-750-50-1C	AMP	<0.8				23		100	50	<3	55	70	9		CO	MP
PA31AA	PAR	0.7	0.9	FX	20	115	1500		20	2	0	50	440	144	CO	IS
ALN790	AMP	0.7	0.9			20	30	*5	25	<5			<10	3.3	CO	OP
3LN790	AMP	0.7	0.9			-20	30	**5	30	3			10	3.2	CO	OP
ALN511	AMP	0.6	1.1			20	30	*5	25	<5			<10	3.3	CO	OP
A551J2	AMP	0.6	1.1			24	300	**20	25	5	54	71	16	12.0	CO	OP
224	AMP	0.8	0.9		100	23		50W	27		20	50	35	14.0	CO	AC
AT1000	TRA	<0.8	<1.0			15	29	**8	23	<4					CO	AV
A-870-17-1	AMP	<0.9				23		1	17	<4	55	70	5		CO	MP
A-870-30-10	AMP	<0.9				23		10	30	<4	55	70	5		CO	MP
A-870-50-10	AMP	<0.9				23		10	50	<4	55	70	9		CO	MP
A-870-90-50	AMP	<0.9				23		50	90	<4	55	70	9		CO	MP
A-870-50-1C	AMP	<0.9				23		100	50	<4	55	70	9		CO	MP

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD OR BANDWIDTH OR MHz TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER	
		CENTER OR MIN. GHz	MAX. GHz		V	mA				mW	-°C					+°C
A-995-17-1	AMP	<1.0			28		1	17	4	55	70	5		CO	MP	
A-995-30-10	AMP	<1.0			28		10	30	4	55	70	5		CO	MP	
A-995-50-10	AMP	<1.0			28		10	50	4	55	70	9		CO	MP	
A-995-90-50	AMP	<1.0			28		50	90	4	55	70	9		CO	MP	
A-995-50-1C	AMP	<1.0			28		100	50	4	55	70	9		CO	MP	
AMP1500 J	TRA	0.5	1.5		15	50	**8	25	9						AV	
EA-102	AMP	0.8	1.2	6%	28		1W	16						CO	GR	
VSJ3814-1000	AMP	<0.9	<1.2		28	600	400			10	85	36	26.0	CO	TR	
AMT2001	TRA	0.1	2.0		15	13	**2	9	<7			1	3.5	CO	AV	
AMT2002	TRA	0.1	2.0		15	23	**5	9	<8			1	3.5	CO	AV	
AMT2003	TRA	0.1	2.0		15	36	**5	18	<7			1	3.5	CO	AV	
AMT2004	TRA	0.1	2.0		15	59	**5	25	<7			1	3.5	CO	AV	
ALN812	AMP	0.8	1.3		20	30	*5	25	5			<10	8.3	CO	OP	
AMT2005	TRA	0.1	2.0		15	92	**5	34	<7			2	6.3	CO	AV	
AMT2005	TRA	0.1	2.0		15	105	**5	42	<7			2	6.3	CO	AV	
AMT2007	TRA	0.1	2.0		15	128	**5	50	<7			2	6.3	CO	AV	
T-425/S	AMP	0.9	1.2	5%	28		#30W	30				13	15.0	CO	AC	
A-1090-17-1	AMP	<1.1			28		1	17	4	55	70	5		CO	MP	
A-1090-30-10	AMP	<1.1			28		10	30	4	55	70	5		CO	MP	
A-1090-50-10	AMP	<1.1			28		10	50	4	55	70	9		CO	MP	
A-1090-90-50	AMP	<1.1			28		50	90	4	55	70	9		CO	MP	
A-1090-50-1C	AMP	<1.1			28		100	50	4	55	70	9		CO	MP	
S05-120J-15	TRA	<1.2	1.2	FX 50	24		**6	<5	55	85		11		CO	IM	
S05-120U-20	TRA	<1.2	1.2	FX 50	24		**6	<5	55	85		11		CO	IM	
A2004/1	AMP	0.5	2.0	150				20		20	65			CO	AC	
WJ3021	AMP	0.5	2.0	YT 15			**5	20	14			374	400	CO	WJ	
ALN150	AMP	1.0	1.5		20	30	*5	25	<6			<10	8.3	CO	OP	
HFW-4(TX)-50200	TRA	0.5	2.0		15	45	**10	25	<7	40	71	<5		CO	AP	
JA1214	AMP	1.2	1.4		-15	25		20	5			10	16.0	CO	SA	
S20-130U-20	TRA	1.2	1.4	FX 200	24		**6	<5	55	85		11		CO	IM	
S20-130U-15	TRA	1.2	1.4	FX 200	24		**6	<5	55	85		11		CO	IM	
JH-2(TX)-1347	AMP	*1.3		50	28	850	10W	10				44		CO	AP	
PB31AA	PAR	<1.3	<1.4	FX 20	115	1500		20	2	0	50	440	144	CO	IS	
PB31AB	PAR	<1.3	<1.4	FX 70	115	1500		20	2	0	50	845	160	CO	IS	
S10-130U-15	TRA	<1.3	<1.4	FX 100	24		**6	<5	55	85		11		CO	IM	
S10-130U-20	TRA	<1.3	<1.4	FX 100	24		**6	<5	55	85		11		CO	IM	
S20-140U-15	TRA	1.3	1.5	FX 200	24		**6	<5	55	85		11		CO	IM	
S20-140U-20	TRA	1.3	1.5	FX 200	24		**6	<5	55	85		11		CO	IM	
EA-103	AMP	1.2	1.6	3%	28		1W	16						CO	GR	
TQN-102A	TRA	<1.4	<1.5		20	35		20	<5	50	70	15		CO	MS	
TQN-102	TRA	<1.4	<1.5		20	35		20	5	50	70	15		CO	MS	
TQN-104	TRA	<1.4	<1.5		20	35		25	<5	50	70	15		CO	MS	
S10-140U-15	TRA	<1.4	<1.5	FX 100	24		**6	<5	55	85		11		CO	IM	
S10-140U-20	TRA	<1.4	<1.5	FX 100	24		**6	<5	55	85		11		CO	IM	
HFW-2(TX)-1415	AMP	1.4	1.5		12	20		20	5			7	7.0	CO	AP	
MDA1415	PRE	1.4	1.5		20	30		25	<5			14		CO	MF	
ALN115	AMP	1.4	1.5		20	30	*0	25	<5			<10	8.3	CO	OP	
A154 J	AMP	1.4	1.5		24		**15	25	<5	54	70	<10	12.0	CO	OP	
TQN-1485	TRA	>1.4	>1.5					15	>4			3	6.0	CO	MS	
SMA1500NA	AMP	>1.4	>1.5		115			20	<5			48		CO	SM	
SMA1500NAJ	AMP	>1.4	>1.5		24			20	<5			13		CO	SM	
SMA1500ND	AMP	>1.4	>1.5		24			20	5			13		CO	SM	
SMA1500N	AMP	>1.4	>1.5		115			20	5			48		CO	SM	
WJ737-14	TRA	>1.4	>1.5		-15		*0	25	<6			<4	3.0	CO	WJ	
WDS1415	PRE	>1.4	>1.5			5	**5	10	4			5	6.0	CO	MF	
AM1540N	TRA	>1.4	>1.5		15	50	**8	30	<5						AV	

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE MHz	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
AM-1542N	TRA	>1.4	>1.5			15	35	**8	20	<5						AV
A-1485-17-1	AMP*	<1.5				28		1	17	<6	55	70	5		CO	WD
A-1485-30-10	AMP*	<1.5				28		10	30	<6	55	70	5		CO	WD
A-1485-50-10	AMP*	<1.5				28		10	50	<6	55	70	9		CO	WD
A-1485-90-50	AMP*	<1.5				28		50	90	<6	55	70	9		CO	WD
A-1485-50-10C	AMP*	<1.5				28		100	50	<6	55	70	9		CO	WD
ALV120	AMP	1.0	2.0			20	30	*-10	25	6			<10	8.3	CO	OP
MMC 20-1.5	MIA	1.0	2.0	FX	1K	25	25	*0	20	<8	40	71	2		CO	IM
MPC 20-1.5	MIA	1.0	2.0	FX	1K	12	25	*0	20	8	40	71	5		CO	IM
MHA1500J	AMP	*1.5			500	12	40	*0	20	7			1		CO	FS
WJ-737	TRA	1.0	2.0			-15	<1W	*0	25	6			4	3.0	CO	WJ
WJ-739	TRA	1.0	2.0			115	<2W	*0	25	6			<9	6.0	CO	WJ
WJ739-14	TRA	1.0	2.0			115		*0	28	5			<9	9.0	CO	WJ
SPS1500/1000	PRE	1.0	2.0			115	2W	*0	25	9			18		CO	AP
MMC 30-1.5	MIA	1.0	2.0	FX	1K	25	25	*0	30	<8	40	71	2		CO	IM
MPC 30-1.5	MIA	1.0	2.0	FX	1K	12	25	*0	30	8	40	71	5		CO	IM
SP-1500/1000	PRE	1.0	2.0			12	40	**3	25	7			<2		CO	AP
S20-1500-15	TRA	1.4	1.6	FX	200	24		**6		<5	55	85	8		CO	IM
S20-1500-20	TRA	1.4	1.6	FX	200	24		**6		<5	55	85	8		CO	IM
AMT-201J	TRA	1.0	2.0			15	30	**6	17	<6			1	3.5	CO	AV
AMT-2014	TRA	1.0	2.0			5	50	**6	25	<6			1	3.5	CO	AV
AMT-2015	TRA	1.0	2.0			15	70	**6	34	<6			<2	6.3	CO	AV
AMP1000N	TRA	1.0	2.0			15	60	**7	25	6		85	10	14.0		AV
WJ739-15	TRA	1.0	2.0			115		*10	35	9			<22	22.0	CO	WJ
AM-2000N	TRA	1.0	2.0			15	50	**10	25	<6						AV
AM-2002N	TRA	1.0	2.0			15	65	**10	32	<6						AV
AM-2050N	TRA	1.0	2.0			15	50	**10	27	<5						AV
AMP-2000N	TRA	1.0	2.0			15	165	**20	30	7			13	16.0	CO	AV
DM-1.5-30-20-10	MIA	1.0	2.0			29			15	8	50	70	5		CO	WD
29003-60-20	MIA	1.0	2.0			-20			20	10			<2	1.6	CO	OS
MMP1-2 SERIES	MIA	1.0	2.0		240	12	40		20	8	30	71			CO	RH
HFW-4(TX)-1020	TRA	1.0	2.0			15	50		20	<6	40	71	<5	10.0	CO	AP
TQO-104	TRA	1.0	2.0			20	35		20	<7	50	70	15		CO	MS
WJ-741	TRA	1.0	2.0			115	<2W	4	28	5			18	10.0	CO	WJ
TAC-14353	TJA	>1.4	<1.6			28			20	<4	0	50	144		CO	MS
SMA1550P	AMP*	>1.5			50	24		500	27				39		CO	SM
S10-1500-15	TRA	<1.5	<1.6	FX	100	24		**6		<5	55	85	11		CO	IM
S10-1500-20	TRA	<1.5	<1.6	FX	100	24		**6		<5	55	85	11		CO	IM
SMA1600J	AMP	>1.5	>1.6			24			20	5			13		CO	SM
AM-1600N	TRA	<1.5	<1.7			15	50	**10	30	4						AV
WJ1135	AMP	1.2	2.0	YT	25			*0	20	9			53	30.0	CO	WJ
S20-1600-15	TRA	1.5	1.7	FX	200	24		**6		<5	55	85	8		CO	IM
S20-1600-20	TRA	1.5	1.7	FX	200	24		**6		<5	55	85	8		CO	IM
SMA1600P2	AMP	*1.6			20	28			1700	39			38		CO	SM
SMA1600P5	AMP	*1.6			40	28		5W	45				53		CO	SM
SMA1607-5W	AMP*	>1.6			40	28		5W	45				53		CO	SM
S10-1600-15	TRA	<1.6	<1.7	FX	100	24		**6		<5	55	85	8		CO	IM
S10-1600-20	TRA	<1.6	<1.7	FX	100	24		**6		<5	55	85	8		CO	IM
L-5	PAR	<1.7		MC	50	12	500		17	<2						SK
S20-1700-15	TRA	1.6	1.8	FX	200	24		**6		<5	55	85	8		CO	IM
S20-1700-20	TRA	1.6	1.8	FX	200	24		**6		<5	55	85	8		CO	IM
A172J	AMP	1.7	1.7			24		**10	25	<6	54	71	<10	12.0	CO	OP
S10-1700-15	TRA	<1.7	<1.8	FX	100	24		**6		<5	55	85	8		CO	IM
S10-1700-20	TRA	<1.7	<1.8	FX	100	24		**6		<5	55	85	8		CO	IM
WJ780	TRA	1.0	2.6			115		5	27	7			<12	9.0	CO	WJ
AMP2600J	TRA	1.0	2.6			15	75	**6	30	<8		85	10			AV

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				*dBm	mW				
AM-2600-N	TRA	1.0	2.6			15	70	**8	35	6						AV
A185-N	AMP	1.7	1.9			24		**10	25	<6	54	71	<10	12.0	CO	OP
4620H	AMP	>1.6	2.0			28	500	3W	7		20	71	<3	6.0	CO	HA
S10-1800-15	TRA	<1.8	<1.9	FX	100	24		**6	<5		55	85	8		CO	IM
S10-1800-20	TRA	<1.8	<1.9	FX	100	24		**6	<5		55	85	8		CO	IM
ACP-1850	TDA	1.7	2.0	FX	300	24	15	*-29	10	<5	10	71	25		CO	IM
TQW1804	TRA	1.4	2.3			20	35		>5	10	50	70	15		CO	MS
TQW-1450	TRA	1.4	2.3			20	30		10	<6			3	6.0	CO	MS
TQW1805	TRA	1.4	2.3			20	35		11	10	50	70	15		CO	MS
TQW1806	TRA	1.4	2.3			20	35		>16	10	50	70	15		CO	MS
4DA1423	PRE	1.4	2.3			-20	60		20	8			14		CO	ME
TQW1807	TRA	1.4	2.3			20	35		22	10	50	70	15		CO	MS
AMP2401-N	TRA	1.4	2.4			15	110	**15	26	<8			13		CO	AV
AMP2400N	TRA	1.4	2.4			15	200	**20	30	<8			13		CO	AV
PMP2402N	TRA	1.4	2.4			15	90	**20	6	15			<6		CO	AV
EA-104	AMP	1.6	2.2		2%	28		1W	16						CO	GR
DC1850	AMP	*1.9			20	28	2A	15W	12		55	71	17	10.0	CO	SA
S10-1900-15	TRA	<1.9	<2.0	FX	100	24		**6	<5		55	85	8		CO	IM
ACC SERIES	TRA	1.2	2.7		100	12			10	7	20	71			CO	IM
46203H	AMP	1.8	2.1			12	250	*23	13		55	100	>3	6.0	CO	HA
ACH SERIES	TRA	1.2	2.8		100	24			10	6	20	71			CO	IM
ACS SERIES	TRA	1.2	2.8		100	24			10	8	55	85			CO	IM
ACS SERIES	TRA	1.2	2.8		100	12			10	6	20	71			CO	IM
S10-1900-20	TRA	<1.9	<2.2	FX	100	24		**6	<5		55	85	8		CO	IM
S10-2000-15	TRA	<2.0	<2.1	FX	100	24		**6	<5		55	95	8		CO	IM
S10-2000-20	TRA	<2.0	<2.1	FX	100	24		**6	<5		55	85	8		CO	IM
L-9	PAR	*2.1		MC	10	12	500		20	<3						SK
SMA2115N	AMP*	>2.1			40	9			10	5			2		CO	S*
S10-2100-15	TRA	<2.1	<2.2	FX	100	24		**6	<5		55	85	8		CO	IM
S10-2100-20	TRA	<2.1	<2.2	FX	100	24		**6	<5		55	85	8		CO	IM
ACP-2150	TDA	2.0	2.3	FX	300	24	15	*-29	10	<5	10	71	25		CO	IM
PC15AA	PAR	1.9	2.4	FX	30	115	1500		20	2	0	50	440	144	CO	IS
S20-2200-15	TRA	2.1	2.3	FX	200	24		**6	<5		55	85	8		CO	IM
S20-2200-20	TRA	2.1	2.3	FX	200	24		**6	<5		55	85	8		CO	IM
SMA2250N	AMP*	>2.2			100	12			15	5			3		CO	S*
ALN223	AMP	2.2	2.3			20	30	*0	25	<6			<10	8.3	CO	OP
SP-2250/1500	PRE	1.5	3.0			12	50	*0	25	9			<2		CO	AP
4DS2223	PRE	2.2	2.3				5	**5	10	<6			5	6.0	CO	ME
*J772-5	TRA	2.2	2.3			115		*5	25	6	30	65	12	9.0	CO	WJ
A230N	AMP	2.2	2.3			24		**10	25	6	54	71	<10	12.0	CO	OP
TQN-2250	TRA	2.2	2.3			20	30		15	<6			3	6.0	CO	MS
HFW-2(TX)-2223	AMP	2.2	2.3			12	20		18	<6			7	7.0	CO	AT
NTAC-2250-B	TDA	2.2	2.3			28			20	<4	0	50	88		CO	MS
TQN-103	TRA	2.2	2.3			20	35		20	6	50	70	15		CO	MS
TQN-103A	TRA	2.2	2.3			20	35		20	<6	50	70	15		CO	MS
TQN-105	TRA	2.2	2.3			20	35		25	<6	50	70	15		CO	MS
4DA2223	PRE	2.2	2.3			-20	30		25	<6			14		CO	ME
TQN-105	TRA	2.2	2.3			20	35		25	<6	50	70	15		CO	MS
L-7	PAR	*2.3		FX	400	12	500		12	2						SK
L-8	PAR	*2.3		FX	150	12	500		15	2						SK
S20-2400-15	TRA	2.3	2.5	FX	200	24		**6	<5		55	85	8		CO	IM
S20-2400-20	TRA	2.3	2.5	FX	200	24		**6	<5		55	85	8		CO	IM
ACP-2450	TDA	2.3	2.5	FX	300	24	15	*-29	10	<5	10	71	25		CO	IM
S-8	PAR	*2.5		MC	25	12	500		20	<1						SK
*J5007	TRA	1.0	4.0			115		**5	25	<8			9	6.0	CO	WJ
4Q20100 SERIES	AMP	1.0	4.0	OCT		12		**5	20	10	54	71	10		CO	MO

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. 3	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
ACP-2500	TDA	2.4	2.8	FX	400	24	15	*-29	10	<5	10	71	26		CO	IM
EA-105	AMP	2.2	3.0		2K	28		1W	16						CO	GP
PC25AA	PAR	2.2	3.3		40	115	1500		20	2	0	50	440	144	CO	IS
PB25AB	PAR	2.2	3.3	FX	100	115	1500		20	2	0	50	222	112	CO	IS
ACP-280U	TDA	2.6	3.0	FX	400	24	15	*-29	10	<5	10	71	26		CO	IM
PC80AA	PAR	2.7	2.9		40	115	1500		20	2	0	50	440	144	CO	IS
S-6	PAR	*3.0		FX	600	12	500		12	2						SK
S-7	PAR	*3.0		FX	850	12	500		14	<2						SK
HFW-3(TX)-2040	TRA	2.0	4.0			15	30		15	<2	40	71	<5	10.0	CO	AR
OM-3.0-30-20-10	MIA	2.0	4.0			28			15	8	50	70	5		CO	MP
WMP2-4 SERIES	MIA	2.0	4.0		240	12	40		20	8	30	71			CO	RH
ACP-3000	TDA	2.8	3.2	FX	400	24	15	*-29	10	<5	10	71	13		CO	IV
WJ1135	AMP	2.0	4.0	YT	25			*-5	20	11			53	80.0	CO	WJ
WMC 20-3.0	MIA	2.0	4.0	FX	2K	25	25	*0	20	<8	40	71	1		CO	IM
WPC 20-3.0	MIA	2.0	4.0	FX	2K	12	25	*0	20	9	40	71	5		CO	IM
WMC 30-3.0	MIA	2.0	4.0	FX	2K	25	25	*0	30	<8	40	71	1		CO	IM
WPC 30-3.0	MIA	2.0	4.0	FX	2K	12	25	*0	30	9	40	71	5		CO	IM
SP-3000/2000	PRE	2.0	4.0			12	50	*0	20	10			<3		CO	AP
SPS3000/2000	PRE	2.0	4.0			115	2W	*0	20	10			18		CO	AP
AMT-4002	TRA	2.0	4.0			15	40	*+4	<10	10			1	3.5	CO	AV
AMT-4003	TRA	2.0	4.0			15	60	*+4	14	10			1	3.5	CO	AV
AMT-4004	TRA	2.0	4.0			15	80	*+4	19	10			<2	6.3	CO	AV
WJ5004-4	TRA	2.0	4.0			115	30	*5	25	7			12	6.0	CO	WJ
AMT2300	AMP	2.0	4.0			15	23	*+6	15	<6					CO	AV
WJ3017	AMP	2.0	4.0	YT	25			*+7	30	11			150	160	CO	WJ
AM-4000N	TRA	2.0	4.0			15	75	*+7	28	9	54	95		9.0		AV
AM-4001N	TRA	2.0	4.0			15	85	*+7	33	9						AV
AM-4002N	TRA	2.0	4.0			15	70	*+7	23	9						AV
AM-4050N	TRA	2.0	4.0			15	75	*+7	29	<8						AV
AM-4051N	TRA	2.0	4.0			15	85	*+7	34	<8						AV
AM-4052N	TRA	2.0	4.0			15	70	*+7	24	<8						AV
AM-4053N	TRA	2.0	4.0			15	90	*+7	38	<8						AV
AMT2301	AMP	2.0	4.0			15	50	*+10	22	<6					CO	AV
AMT2302	AMP	2.0	4.0			15	70	*+10	30	<6						AV
AMT2303	AMP	2.0	4.0			15	90	*+10	38	<6						AV
AMT-4005	TRA	2.0	4.0			15	100	*+10	23	10			<2	6.3	CO	AV
AMT-4006	TRA	2.0	4.0			15	120	*+10	28	10			<2	6.3	CO	AV
AMT-4007	TRA	2.0	4.0			15	140	*+10	32	10			2	9.0	CO	AV
AMT-4008	TRA	2.0	4.0			15	160	*+10	37	10			2	9.0	CO	AV
WJ5004-2	TRA	2.0	4.0			115		*10	30	<9			22	22.0	CO	WJ
JHC3100/475	MIA	*3.1				15	40	*+10	22	8					CO	AR
WJ5090-4	TRA	2.0	4.5			115		*+5	25	<8			9	6.0	CO	WJ
ACP-3300	TDA	3.0	3.6	FX	600	24	15	*-29	10	<5	10	71	13		CO	IM
ACP-3600	TDA	3.3	3.9	FX	600	24	15	*-29	10	<5	10	71	13		CO	IM
JCP-395U	TDA	3.6	4.3	FX	700	24	15	*-29	10	<5	10	71	13		CO	IM
WJ5004-3	TRA	3.7	4.2			-48		*0	15	9			<8	3.0	CO	WJ
S50-395U-20	TRA	3.7	4.2	FX	500	24		*+6	<5	55	85	8			CO	IM
ACP-4300	TDA	4.0	4.7	FX	700	24	15	*-29	10	<5	10	71	13		CO	IM
ACP-465U	TDA	4.3	5.0	FX	700	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-5000	TDA	4.7	5.3	FX	600	24	15	*-29	10	<5	10	71	<5		CO	IM
WJ3023	AMP	2.0	8.0	YT	25			*-5	20	<13			374	400	CO	WJ
JHM-3(TX)-4965-3	AMM	*5.0				28	450	1250					247	70.0		AR
ACP-5300	TDA	5.0	5.6	FX	600	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-5600	TDA	5.3	5.9	FX	600	24	15	*-29	10	<5	10	71	<5		CO	IM
ACP-590U	TDA	5.6	6.3	FX	700	24	15	*-29	10	<5	10	71	<5		CO	IM
OM-6.0-30-20-10	MIA	4.0	8.0			28			15	<9	50	70	5		CO	MP



TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE MHZ	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
MMP4-8 SERIES	MIA	4.0	8.0		240	12	40		20	8	30	71			CO	RH
MMC 20-6.0	MIA	4.0	8.0	FX	4K	25	25	*0	20	8	40	71	1		CO	IM
MPC 20-6.0	MIA	4.0	8.0	FX	4K	12	25	*0	20	9	40	71	6		CO	IM
MMC 30-6.0	MIA	4.0	8.0	FX	4K	25	25	*0	30	8	40	71	1		CO	IM
MPC 30-6.0	MIA	4.0	8.0	FX	4K	12	25	*0	30	9	40	71	6		CO	IM
WJ3018	AMP	4.0	8.0	YT	30			**7	30	<12			150	160	CO	WJ
ACP-6300	TDA	5.9	6.7	FX	800	24	15	*-29	10	<5	10	71	<5		CO	IM
WJ5060	AMM	1.0	12.4	YT		15	900	10			0	50	270	176	CO	WJ
ACP-6700	TDA	6.3	7.1	FX	800	24	15	*-29	10	<5	10	71	<5		CO	IM
SYMB410 SERIES	MIA	5.5	8.5			12	40	**5	30	<9	65	125	2		CO	AT
ACP-7100	TDA	6.7	7.5	FX	800	24	15	*-29	10	<5	10	71	6		CO	IM
WJ5059	AMM	2.0	12.4	YT		15	900	10			0	50	270	168	CO	WJ
ACP-7900	TDA	7.5	8.3	FX	800	24	15	*-29	10	<5	10	71	6		CO	IM
X-6	PAR	*8.0		FX	1K	12	500		14	<3						SK
MP7/2 SERIES	PRE	7.5	8.5			+12			25	7					WG	RH
WJ3022	AMP	4.0	12.0	YT	25			**5	25	14			193	210	CO	WJ
X-2	PAR	*8.2		MC	20	12	500		20	3						SK
X-11	PAR	*8.4		MC	30	12	500		20	<3						SK
ACP-8650	TDA	7.9	9.4	FX	15H	24	15	*-29	10	<5	10	71	6		CO	IM
MPW 30-9.0	MIA	8.5	9.6	FX	11H	12	25	*0	30	<9	40	71	<5		WG	IM
MPW 20-9.0	MIA	8.5	9.6	FX	11H	12	25	*0	20	<9	40	71	<5		WG	IM
MPB/2 SERIES	PRE	8.5	9.6			+12			25	7					WG	RH
X-7	PAR	*9.3		FX	1K	12	500		15	<3						SK
X-10	PAR	*9.3		FX	200	12	500		20	3						SK
ACP-9400	TDA	<8.7	10.2	FX	15H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP SERIES	TDA	1.7	18.0		100			50	10	5					CO	IM
OM-10.0-30-20-10	MIA	8.0	12.0			28			15	9	50	70	5		CO	MP
ACP-10000	TDA	9.4	10.6	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
MMC 30-10	MIA	8.0	12.0	FX	40H	25	25	*0	30	9	40	71	<2		CO	IM
MPC 30-10	MIA	8.0	12.0	FX	40H	12	25	*0	30	10	40	71	6		WG	IM
MMC 20-10	MIA	8.0	12.0	FX	40H	25	25	*0	20	9	40	71	<2		CO	IM
MPC 20-10	MIA	8.0	12.0	FX	40H	12	25	*0	20	10	40	71	6		CO	IM
SYMB420 SERIES	MIA	8.5	11.5			12	40	**5	30	9	65	125	2		CO	AT
EID9000X	MIA*	10.0			10%	15	40	**7	55	6					WG	EM
WJ3019	AMP	8.0	12.0	YT	30			**7	30	<12			150	160	CO	WJ
ACP-10500	TDA	10.0	11.2	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
MPW 20-10	MIA	9.5	12.5	FX	29H	12	25	*0	20	9	40	71	<5		WG	IM
MPW 30-10	MIA	9.5	12.5	FX	29H	12	25	*0	30	9	40	71	<5		WG	IM
ACP-11200	TDA	10.6	11.8	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-11300	TDA	11.2	12.4	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
SYMB430 SERIES	MIA	10.7	13.2			12	40	**5	30	9	65	125	2		CO	AT
ACP-12400	TDA	11.8	13.0	FX	12H	24	15	*-29	10	<5	10	71	2		CO	IM
ACP-13000	TDA	12.0	14.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
WJ3024	AMP	8.0	18.0	YT	30			**5	20	14			374	400	CO	WJ
3800-9200	AMM	13.2	14.0		400	28	500	50			+5	35	98	92.0	CO	TR
ACP-14000	TDA	13.0	15.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
3800-9202	AMM	14.4	15.2		400	28	500	50			+5	35	98	92.0	CO	TR
ACP-15000	TDA	14.0	16.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
MMC 20-15	MIA	12.0	18.0	FX	60H	25	25	*0	20	10	40	71	<2		CO	IM
MMC 30-15	MIA	12.0	18.0	FX	60H	25	25	*0	30	10	40	71	<2		CO	IM
WJ3020	AMP	12.0	18.0	YT	35			**7	30	14			171	176	CO	WJ
MPW 20-15	MIA	12.4	18.0	FX	54H	12	25	*0	20	10	40	71	6		WG	IM
MPW 30-15	MIA	12.4	18.0	FX	54H	12	25	*0	30	10	40	71	6		WG	IM
ACP-16000	TDA	15.0	17.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACP-17000	TDA	16.0	18.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
ACP-18000	TDA	17.0	19.0	FX	20H	24	15	*-29	10	6	10	71	2		CO	IM
KA-1	PAR*	35.0		FX	650	12	500		9	8						SK

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER			
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				mW	dB					dB	-°C	+°C
																		IN. 3	Oz.
PS-8	OSC	0.2	<0.3	VE									5	5.0	CO	EF			
PS-10	OSC	<0.2	0.3	VE									5	5.0	CO	EF			
PS-9	OSC	<0.2	0.3	VE									5	5.0	CO	EF			
6509	OSC	>0.2	<0.3			28	1A	3000			20	85	19	16.0	CO	ZL			
FS-38	OSX	0.1	<0.5			15		5			10	50	34		CO	FR			
28651-18	OSC	<*0.3		VC	20%	20	150	200			20	71	1	1.3	CO	OS			
M-250-250	OSX	<*0.3		VC	10%	28		250			55	85	1		CO	MP			
4222	OSX	<*0.3				28	250	1500			20	65	15		CO	ZL			
4230	OSX	<*0.3				28	250	1500			20	65	9		CO	ZL			
PS-11	OSC	0.2	0.4	VE									5	5.0	CO	EF			
28671-60	OSC	0.2	0.5	VT	OCT	20	200	250			0	71	1	1.3	CO	OS			
28781-60	OSC	0.2	0.5	VT	OCT	24	250	400			0	71	2	1.8	CO	OS			
4210	OSX	<0.3	0.5			15	50	10			20	65	<4		CO	ZL			
FS-213	OSX	<0.3	<0.5			15		10			10	50	5		CO	FR			
VT-0451	OSC	<0.3	0.5	VT		-30		50			20	60	3	2.5	CO	SC			
WJ2811	VTO	<0.3	0.5	VT		24	200	100					4	6.0	CO	WJ			
VT-0452	OSC	<0.3	0.5	VT		-30		500			20	60	3	2.5	CO	SC			
FS-2M	OSC	0.2	0.6	VT	12%	60	300	1000			10	70	<4		CO	FR			
EP-149C	OSC	>0.3	<0.6	VT	OCT	24		20			+10	45			CO	GR			
EP-146C	OSC	0.3	0.6	VT	OCT	24		20					38		CO	GR			
287812-61	OSC	0.3	0.6	VT	OCT	24	250	200			0	71	2	1.8	CO	OS			
28651-21	OSC	<*0.5		VC	20%	20	150	100			20	71	1	1.3	CO	OS			
M-450-250	OSX	<*0.5		VC	10%	28		250			55	85	1		CO	MP			
4231	OSX	*0.5				28	250	1500			20	65	9		CO	ZL			
S108V	OSC	0.3	0.7	VT	150	28	1A	#10W							CO	AC			
VT-0531	OSC	<0.4	<0.8	VT		-30		30			20	60	3	2.5	CO	SC			
28652-22	OSC	<*0.6		VC	20%	20	150	100			20	71	1	1.3	CO	OS			
VT-0532	OSC	<0.4	<0.8	VT		-30		300			20	60	3	2.5	CO	SC			
EL-130	CSO	0.5	0.3	VC	300	24		10			0	50	11		CO	GR			
OG-760-UHF	OSX	0.3	1.0	FX		28		50W			54	85			CO	SA			
28652-23	OSC	<*0.7		VC	20%	20	150	25			20	71	1	1.3	CO	OS			
M-720-250	OSX	<*0.7		VC	10%	28		250			55	85	1		CO	MP			
S-1002-6	OSX	0.6	0.8			24		1W			30	60	21		CO	AC			
PS-12	OSC	0.5	1.0	VE									5	5.0	CO	EF			
OP-100	YTO	0.5	1.0			15	50	5			20	60	<6	8.0	CO	PE			
EY-117A	OSX	0.5	1.0			28		5			0	50	20		CO	GR			
4211	OSX	0.5	1.0			15	55	10			20	65	<5		CO	ZL			
WJ571	YTO	0.5	1.0			15	50	20			30	65	3	9.0	CO	WJ			
WJ5077	YTO	0.5	1.0	YT	OCT	15	245	20					<16	20.0	CO	WJ			
VT-0751	OSC	0.5	1.0	VT		-30		50			20	60	3	2.5	CO	SC			
EY-103A	OSX	0.5	1.0			28		100			0	50	30		CO	GR			
WJ571-1	YTO	0.5	1.0	YT	OCT	15	50	100			30	65	3	9.0	CO	WJ			
VT-0712	OSC	0.5	1.0	VT		-30		100			20	60	3	2.5	CO	SC			
WJ2800	VTO	0.5	1.0	VT		24	200	100					4	6.0	CO	WJ			
28672-62	OSC	0.5	1.0	VT	OCT	20	200	150			0	70	1	1.3	CO	OS			
28782-62	OSC	0.5	1.0	VT	OCT	24	250	200			0	71	2	1.8	CO	OS			
FS-357	OSC	0.5	1.0	VT	OCT	28		250			0	60	2		CO	FR			
VT-0722	OSC	0.5	1.0	VT		-30		250			20	60	3	2.5	CO	SC			
0A75JA	OSC	0.5	1.0	VT		-30	120	400			30	60	2	6.0	CO	IS			
VT-0752	OSC	0.5	1.0	VT		-30		500			20	60	3	2.5	CO	SC			
EP-149D	OSC	<0.6	1.0	VT	OCT	24		20			+10	45			CO	GR			
EP-146D	OSC	0.6	1.0	VT	OCT	24		20					38		CO	GR			
MJ10300 SERIES	OSC	0.2	1.4	VC	20%	20	150	50			25	75	2	2.2	CO	MP			
FS-2R	OSC	0.2	1.4	VC	1%	40		1000			0	60	6		CO	FR			
28652-24	OSC	>*0.8		VC	20%	20	150	25			20	71	1	1.3	CO	OS			

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *PULSE *dBm mW	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
wJ571-10	YTO	<0.8	<0.9			24	530	60			0	50	30	24.0	CO	WJ
wJ571-6	YTO	0.6	1.2			15	50	50					3	9.0	CO	WJ
FS-2	OSC	0.6	1.2	VT	12%	60	300	1000			10	70	<4		CO	FR
S-1002-8	OSX	0.8	1.0			24		1W			30	60	21		CO	AC
FS-2H	OSC	0.6	1.2	VT	10%	60	300	2000			10	70	<4		CO	FR
AF0106	OSC	>0.6	>1.2			20	150	10			30	60	9		CO	AT
FS-21CLP	OSX	<0.5	1.5			15		5			10	50	<13		CO	FR
FS-36	OSC	0.5	1.5	VT	OCT	28		10			0	60	2		CO	FR
EL-131	CSO	0.8	1.2	MC	400	24		10			0	50	11		CO	GR
286523-25	OSC	*1.0		MC	20%	20	100	25			20	71	1	1.3	CO	OS
AX0-10	OSX	*1.0				28	140	50			35	90			CO	AT
4200	OSX	*1.0				28	250	1000			20	65	9		CO	ZL
4232	OSX	*1.0				28	250	1000			20	65	9		CO	ZL
4242	OSX	*1.0				28	250	1000					18		CO	ZL
M1000-2000	OSX	*1.0		MC	10%	28		2000			55	85	1		CO	MP
4002	CSO	<0.8	1.3		10%	28	125	50					6		CO	ZL
MO(L)-102	OSC	<1.0	1.1	MC		-20	120	250			30	60	7	9.0		FS
wJ571-11	YTO	<0.6	>1.5			15	50	20			30	65	3	9.0	CO	WJ
FS-6	OSC	0.3	1.8	VT	15%	24		20			55	90	2		CO	FR
FS-5	OSC	0.1	2.0	MC	15%	28		25			0	60	2		CO	FR
FS-7	OSC	0.1	2.0	MC	15%	28		50			0	60	2		CO	FR
FS-6H	OSC	0.3	1.8	VT	10%	24		100			55	90	2		CO	FR
FS-7R	OSC	0.1	2.0	MC	1%	28		100			0	60	2		CO	FR
M-1030-250	OSX	<*1.1		MC	10%	28		250			55	85	1		CO	MP
287834-63	OSC	0.7	1.5	VT	OCT	24	250	50			0	71	2	1.8	CO	OS
430A	OSC	1.0	1.2	VT	100	24	250	1W			40	70	3		CO	AK
S-1002-10	OSX	1.0	1.2			24		1W			30	60	21		CO	AC
1170004S	OSC	*1.1		MC		30	1A	#5W			54	91	<4	6.0	CO	CL
1135-MOR	OSC	*1.1		MC	10	42	3A	#35W			54	91	<4	6.0	CO	CL
FS-39	OSX	<0.5	1.8			28		1			10	50	45		CO	FR
FS-21CMP	OSX	<0.5	1.8			28		10			0	60	<13		CO	FR
VT-1131	OSC	<0.8	1.5	VT		-30		30			20	60	3	2.5	CO	SC
FS-21CHP	OSX	<0.5	1.8			28		50			10	50	<13		CO	FR
VT-1132	OSC	<0.8	1.5	VT		-30		300			20	60	3	2.5	CO	SC
DG715	OSC	0.8	<1.5	MC		15	35	10			0	85	5		CO	SA
EP-146E	OSC	0.8	1.5	VT	OCT	24		20					38		CO	GR
EP-149E	OSC	0.8	1.5	VT	OCT	24		20			+10	45			CO	GR
MQ10600 SERIES	OSC	0.3	2.0	VT	OCT	20	150	50			25	75	<1	<0.7	CO	MO
MO(L)-104	OSC	>1.1	>1.2	MC		20	120	250			30	60	7	9.0		FS
28653-26	OSC	*1.2		MC	20%	20	100	10			20	71	1	1.3	CO	OS
M-1220-250	OSX	*1.2		MC	10%	28		250			55	85	1		CO	MP
wJ2813-3	VTO	<1.2	>1.3	VT		15	200	100					4	6.0	CO	WJ
MO(L)-106	OSC	1.2	>1.3	MC		20	120	250			30	60	7	9.0		FS
FS-26	CSO	1.2	1.6	MC	300	24	90	10			30	71	<4		CO	FR
EL-101	CSO	1.2	1.6	MC	400	24		10			0	50	4		CO	GR
430B	OSC	1.3	1.5	VT	100	24	250	1W			40	70	3		CO	AK
MO(L)-108	OSC	>1.3	>1.5	MC		20	120	250			30	60	7	8.0		FS
DG720	OSC	>1.4	>1.5	FX		28	350	2W			55	75	4		CO	SA
M-1480-250	OSX	<*1.5		MC	10%	28		250			55	85	1		CO	MP
OL-103	YTO	1.0	2.0			15	50	5			20	60	<6	8.0	CO	PF
wJ569-1	YTO	1.0	2.0	YT	OCT	15	50	10			30	65	<3	9.0	CO	WJ
28653-27	OSC	*1.5		MC	20%	20	100	10			20	71	1	1.3	CO	OS
wJ5078	YTO	1.0	2.0	YT	OCT	15	440	15					<16	20.0	CO	WJ
AX0-15	OSX	*1.5				28	140	20			35	90			CO	AT
wJ569	YTO	1.0	2.0	YT	OCT	15	50	20			30	65	3	9.0	CO	WJ

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME N.3	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
WJ2802	VTJ	1.0	2.0	VT		15	250	30					4	6.0	CO	WJ
WJ569-3	YTO	1.0	2.0	YT	OCT	15	50	50			30	65	3	9.0	CO	WJ
MVL-2700	OSC	1.0	2.0	VT		20	80	50			30	60	2	4.0		FS
28673-64	OSC	1.0	2.0	VT	OCT	20	200	50			0	70	1	1.3	CO	OS
28793-64	OSC	1.0	2.0	VT	OCT	24	250	50			0	71	2	1.8	CO	OS
WJ2803	VTJ	1.0	2.0	VT		15	250	100					4	6.0	CO	WJ
28773-64	OSC	1.0	2.0	VT	OCT	20	200	100			0	71	2	1.8	CO	OS
0350JB	OSC	1.0	2.0	VT		-24	150	150					<3	5.0	CO	IS
0R50JA	OSC	1.0	2.0	VT		-20	150	200			30	60	2	6.0	CO	IS
VT-1522	OSC	1.0	2.0	VT		-30		250			20	60	3	2.5	CO	SC
JG-700-L	OSC	1.0	2.0			28	500	5000			55	75	<5			CO SA
JG-760-L	OSX	1.0	2.0	FX		28		10W			54	85				CO SA
4003	CSO	1.3	1.8		10%	28	125	10					5			CO ZL
WJ569-2	YTO	1.0	2.2	YT	OCT	15	50	20					3	9.0	CO	WJ
MO(L)-110	OSC	1.5	>1.7	MC		20	120	100			30	60	7	9.0		FS
EY-113A	OSX	1.0	2.5			28		5			0	50	20			CO GR
EY-104A	OSX	1.0	2.5			28		100			0	50	30			CO GR
28553-28	OSC	*1.8		MC	20%	20	100	10			20	71	1	1.3	CO	OS
1B2000MV	OSC	*1.8		MC				2W			55	85	9	10		CO CL
EL-102A	CSO	1.6	2.1	MC	500	24		10			0	50	3			CO GR
MO(L)-112	OSC	1.7	>2.0	MC		20	120	75			30	60	7	8.0		FS
601B	OSX	>1.8	<2.0			15	200	*+8			5	55	16	17.0		CO ZL
FS-28	CSO	1.5	2.3	MC	800	24	80	10			30	71	3			CO FR
WJ2810	VTJ	1.4	2.4	VT		15	250	40					4	6.0	CO	WJ
MLT1.7	OSC	1.7	2.1			20	2A	2W					172			CO RH
28654-29	OSC	*2.0		MC	20%	20	100	10			20	71	1	1.3	CO	OS
S1007	OSC	1.0	3.0					75					19			CO AC
4243	OSX	*2.0				28	250	500					18			CO ZL
M-2000-1000	OSX	*2.0		MC	10%	28		1000			55	85	1			CO MP
MO10000 SERIES	OSC	0.2	4.0	VT	OCT	-20	150	50			25	75	2	2.3	CO	MO
FS-50L	OSC	1.5	2.7	VT	15%	26	200	150			0	60	11			CO FR
FS-25	OSC	1.8	2.5	VT	200	100	24	20			0	60	2			CO FR
FS-30A	OSX	1.8	2.5			28		20			0	60	14			CO FR
MO(S)-114	OSC	2.0	>2.3	MC		20	120	50			30	60	5	9.0		FS
D6736	OSX*	>2.2				15	50	10			35	65	5			CO SA
JG729	TOS*	>2.2				30		2W			55	65				CO SA
VT-2212	OSC	1.5	3.0	VT		-30		100			20	60	3	2.5	CO	SC
287734-65	OSC	1.5	3.0	VT	OCT	20	200	100			0	71	2	1.8	CO	OS
MLT2.2	OSC	2.2	2.3			20	2A	2W					172			CO RH
JG623	OSC	2.2	2.3	FX		30	375	#2W			20	55				CO SA
FS-220A	OSX	1.5	3.0			28		3000			0	60	30			CO FR
M-2250-100	OSX*	<2.3		MC	10%	28		100			55	85	1			CO MP
WJ572-13	YTO	2.0	2.4			15	50	4			30	65	3	9.0	CO	WJ
FS-505	OSC	2.0	2.4	VT	10%	26	200	50			0	60	11			CO FR
EL-132	CSO	2.1	2.6	MC	500	24		10			0	50	3			CO GR
WJ572-19	YTO	<1.6	>3.1			15	700	10			0	50	16	20.0	CO	WJ
6000-1307	OSC	2.2	2.7	MC		28	15	10			0	70	2	4.0	CO	TR
MO(S)-116	OSC	2.3	>2.7	MC		20	120	20			30	60	3	2.5		FS
WJ572-32	YTO	2.0	3.0			15	50	4					3	9.0	CO	WJ
FS-31	CSO	2.0	3.0	MC	1<	24	80	10			30	71	3			CO FR
OLS2001	OSC	1.5	3.5	FX		-21		50			30	72	3	4	CO	CL
FS-14A	OSC	2.3	2.9		325	50	300	250			10	70	7			CO FR
JG717	OSC	<1.5	4.0	MC		15	35	5			0	85	13			CO SA
FS-315	CSO	2.4	3.2	MC	800	24	80	10			30	71	3			CO FR
6000-1300	OSC	2.7	3.0	MC		28	15	15			0	95	2	4.0	CO	TR

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
OL-103A	CSO	2.6	3.2	MC	600	24		10			0	50	3		CO	GR
DG790	OSC	2.6	3.2	VT		26	150	500			55	75	<2		CO	SA
FS-14R	OSC	2.3	3.5	MC	1%	40		500			0	60	8		CO	FR
WJ2805-8	VT0	<2.2	<3.7	VT		15	200	60					4	6.0	CO	WJ
MO(S)-118	OSC	2.7	>3.2	MC		20	120	20			30	60	3	2.5	FS	
AV-7200	YTO	2.0	4.0	YT	2G	20			25		54	71			CO	AV
AV-7201	YTO	2.0	4.0	YT	2G	20			25		0	65			CO	AV
AV-7202	YTO	2.0	4.0	YT	2G	20			30		0	65			CO	AV
OS-100	YTO	2.0	4.0			15	50	2			20	60	<5	8.0	CO	PE
WJ5079	YTO	2.0	4.0	YT	OCT	15	840	5					<16	20.0	CO	WJ
WJ572	YTO	2.0	4.0	YT	OCT	15	60	6			30	65	3	9.0	CO	WJ
FS-47	OSC	2.0	4.0	VT	OCT	24		15			0	60	2		CO	FR
WJ2804	VT0	2.0	4.0	VT		15	200	20					4	6.0	CO	WJ
28784-66	OSC	2.0	4.0	VT	OCT	24	250	20			0	71	2	1.8	CO	OS
VT-3021	OSC	2.0	4.0	VT		-30		25			20	60	3	2.5	CO	SC
FS-3R	OSC	2.0	4.0	MC	1%	28		30			0	60	3		CO	FR
MVS4700	OSC	2.0	4.0	VT		20	150	40			30	60	2	3.0	FS	
WJ2805	VT0	2.0	4.0	VT		15	200	40					4	6.0	CO	WJ
JG787	OSC	*3.0			500	28	50	50			55	95	<5		CO	SA
VT-3051	OSC	2.0	4.0	VT		-30		50			20	60	3	2.5	CO	SC
28774-66	OSC	2.0	4.0	VT	OCT	20	200	70			0	71	2	1.8	CO	OS
MVS4710	OSC	2.0	4.0	VT		20	150	75			30	60	2	3.0	FS	
OJ00JB	OSC	2.0	4.0	VT		-24	150	100					<3	5.0	CO	IS
M-3000-100	OSX	*3.0		MC	10%	28		100			55	85	1		CO	MP
DG-700-S	OSC	2.0	4.0			28	500	3000			55	75	<5		CO	SA
DG-760-S	OSX	2.0	4.0	FX		28		5W			54	85			CO	SA
FS-143	OSC	2.8	3.3	VT	400	50	300	200			10	70	7		CO	FR
4008	CSO	1.3	5.0		2%	28	125	10					7		CO	ZL
VT-3141	OSC	2.1	4.2	VT		-30		40			20	60	3	2.5	CO	SC
EY-119A	OSX	2.5	4.0			28		5			0	50	20		CO	GR
4213	OSX	1.0	5.5			15	200	10			20	65	9	9.0	CO	ZL
6000-1305	OSC	3.1	3.4	MC		28	15	15			0	70	2	4.0	CO	TR
EY-105A	OSX	2.5	4.0			28		100			0	50	30		CO	GR
FS-14C	OSC	3.1	3.6	VT	450	50	300	200			10	70	7		CO	FR
6000-1306	OSC	3.2	3.6	MC		28	15	8			0	70	2	4.0	CO	TR
EL-104	CSO	3.2	3.7	MC	500	24		10			0	50	3		CO	GR
WJ572-33	YTO	3.0	4.0			15	50	4					3	9.0	CO	WJ
AX0-35	OSX	*3.5				28	140	5			35	90			CO	AT
FS-31A	CSO	3.0	4.0	MC	1K	24	80	10			30	71	3		CO	FR
0065JB	OSC	3.0	4.3	VT		-24	150	30					<3	5.0	CO	IS
AF035	OSC	3.6	3.9	MC		20	150	10			30	60	9		CO	AT
AP035	OSX	3.6	3.9	MC		20	300	10			30	60	39		CO	AT
MS(S)-42	OSC	3.6	3.9	MC		20	300	10			30	60	<6	17.0	FS	
AF035H	OSC	3.6	3.9			20	300	50			30	60	9		CO	AT
AP035H	OSX	3.6	3.9	MC		20	400	50			30	60	39		CO	AT
MS(S)-420	OSC	3.6	3.9	MC		20	400	50			30	60	30	30.0	FS	
FS-220B	OSX	3.0	4.5			28		1000			10	50	30		CO	FR
EP-150 SERIES	OSC	*1.6	6.0	VT	5%	24		5			+10	45	6		CO	GR
287745-67	OSC	2.6	5.2	VT	OCT	20	200	20			0	71	2	1.8	CO	OS
FS-14D	OSC	3.5	4.3	VT	500	50	300	200			10	70	5		CO	FR
EL-105	CSO	3.7	4.2	MC	500	24		10			0	50	3		CO	GR
MLT3.7	OSC	3.7	4.2			20	2A	1W					172		CO	RH
AP038	OSX	>3.8	4.1	MC		20	300	10			30	60	39		CO	AT
AP038H	OSX	>3.8	4.1	MC		20	400	50			30	60	39		CO	AT
FS-31J	CSO	3.5	4.5	MC	1K	24	80	10			30	71	<3		CO	FR

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *PULSE *dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. 3	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
MS(S)-44	OSC	3.8	4.2	MC		20	400	10			30	60	<6	17.0		FS
FS-23	OSC	2.5	5.5	VT	15%	24		20			0	60	<5		CO	FR
MS(S)-440	OSC	3.8	4.2	MC		20	400	50			30	60	30	30.0		FS
4244	OSX	*4.0				28	250	400					18		CO	ZL
4201	OSX	*4.0				28	250	400			20	65	17		CO	ZL
AF033	OSC	>3.8	4.2	MC		30	150	10			30	60	9		CO	AT
AF033H	OSC	>3.8	4.2			20	300	50			30	60	9		CO	AT
SW-7	OSC	*4.1		FX		12	30	80								SK
FS-29A	OSX	2.5	6.0			28		5			0	60	50		CO	FR
FS-30	OSX	2.5	6.0			15		5			0	60	<12		CO	FR
AF041	OSC	4.1	4.4	MC		20	150	10			30	60	9		CO	AT
AP041	OSX	4.1	4.4	MC		20	300	10			30	60	39		CO	AT
FS-304P	OSX	2.5	6.0			28		20			0	60	<12		CO	FR
AF041H	OSC	4.1	4.4			20	300	50			30	60	9		CO	AT
AP041H	OSX	4.1	4.4	MC		20	400	50			30	60	39		CO	AT
QJ30CM	GOS	4.2	4.4	MC	500	13	650	5			30	70		3.5	CO	IS
EL-106	CSO	4.2	4.6	MC	400	24		10			0	50	3		CO	GR
MS(C)A-480	OSC	>4.3	>4.6	MC		20	400	50			30	60	30	30.0		FS
EY-120A	OSX	4.0	5.0			28		5			0	50	20		CO	GR
EY-105A	OSX	4.0	5.0			28		100			0	50	30		CO	GR
FS-14E	OSC	4.2	4.9	VT	500	60	300	175			10	70	5		CO	FR
AF043	OSC	>4.3	>4.9	MC		20	150	10			30	60	9		CO	AT
AP043	OSX	>4.3	>4.9	MC		20	300	10			30	60	39		CO	AT
MS(C)-4B	OSC	>4.3	>4.9	MC		20		10			30	60	6	17.0		FS
AF043H	OSC	>4.3	>4.9			20	300	50			30	60	9		CO	AT
AP043H	OSX	>4.3	>4.9	MC		20	400	50			30	60	39		CO	AT
MLT4.4	OSC	4.4	5.0			20	2A	1W					172		CO	RH
OE75FB	OSC	4.0	5.5	VT		-24	150	25					<2		CO	IS
MS(C)B-480	OSC	4.6	>4.9	MC		20	400	50			30	60	30	30.0		FS
FS-14L	OSC	3.5	6.0	MC	1%	40		150			0	60	5		CO	FR
EL-107	CSO	4.6	5.0	MC	400	24		10			0	50	3		CO	GR
FS-274	CSO	3.6	6.0	MC	500	24	90	20			30	71	<4		CO	FR
JG713	OSC	4.0	6.0	MC		15	35	5			0	95	13		CO	SA
JG786	OSC	*5.0			1G	28	50	10			55	95	3		CO	SA
S323	GOS	4.0	6.0	FX		13	150	10			30	80	1	2.5	CO	RC
FS-306	GOS	4.2	5.8	VT	16H	15	350	20			0	60	19		CO	FR
WJ2806-6	OSC	4.0	6.0			15	200	20					4	6.0	CO	WJ
FS-32X	OSC	4.0	6.0	MC	1%	28		25			0	60	2		CO	FR
S325	GOS	4.0	6.0	FX		13	200	30			30	80	1	2.5	CO	RC
S327	GOS	4.0	6.0	FX		13	240	60			30	80	1	2.5	CO	RC
S329	GOS	4.0	6.0	FX		13	480	120			30	80	1	2.5	CO	RC
S331	GOS	4.0	6.0	FX		50	500	41W			30	80	1	2.5	CO	RC
S333	GOS	4.0	6.0	FX		50	25H	45W			30	80	1	2.5	CO	RC
S335	GOS	4.0	6.0	FX		50	35H	410W			30	80	1	2.5	CO	RC
EL-108A	CSO	5.0	5.4	MC	400	24		10			0	50	6		CO	GR
FS-1R	OSC	4.0	6.5	MC	12%	20	125	4			0	60	2		CO	FR
FS-53	OSC	4.5	6.0	VT	10%	26	200	10			0	60	11		CO	FR
FS-14F	OSC	4.9	5.6	VT	600	50	300	125			10	70	5		CO	FR
S285	GOS	*5.6		FX		14	150	125					1	2.5		RC
OE65LM	GOS	5.4	5.9	MC	500	5	650	5			30	70		3.5	CO	IS
AF054	OSC	5.4	5.9	MC		20	150	10			30	60	9		CO	AT
AP054	OSX	5.4	5.9	MC		20	300	10			30	60	39		CO	AT
EL-109A	CSO	5.4	5.9	MC	500	24		10			0	50	6		CO	GR
MS(C)-52	OSC	5.4	5.9	MC		20		10			30	60	6	17.0		FS
AF054H	OSC	5.4	5.9			20	300	50			30	60	9		CO	AT

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
AP054H	OSX	5.4	5.9	MC		20	400	50			30	60	39			CO AT
FS-143	OSC	5.4	6.0	VT	600	60	300	100			10	70	5			CO FR
FS-37L	CSO	4.0	7.5	MC	500	24	80	10			30	71	4			CO FR
FS-220C	OSX	4.5	7.0			28		500			0	60	30			CO FR
QF80EB	OSC	5.0	6.6	VT		-24	150	20					<2	4.0		CO JS
MSCA540	GOS	<5.9	6.1			20	400	50			30	60				WG FS
C31C20M	ADJ	5.5	6.5	MC		100	25	100			55	71	1	1.5		SP
4245	OSX	*6.0				28	250	200					18			CO ZL
4255	OSX	*6.0				28	250	200			20	65	24			CO ZL
C31C25M	ADJ	5.5	6.5	MC		100	70	250			55	71	1	1.5		SP
DG-700-C	OSC	4.0	8.0			28	500	1200			55	75	<5			CO SA
JG-760-C	OSX	4.0	8.0	FX		28		3W			54	85				CO SA
EY-121A	OSX	5.0	7.2			28		5			0	50	35			CO GR
EY-107A	OSX	5.0	7.2			28		100			0	50	46			CO GR
AF05B	OSC	>5.8	>6.4			20	150	10			30	60	9			CO AT
AP05B	OSX	>5.8	>6.4	MC		20	300	10			30	60	39			CO AT
MS(C)-54	OSC	>5.8	>6.4	MC		20		10			30	60	6	17.0		FS
AF05BH	OSC	>5.8	>6.4			20	300	50			30	60				CO AT
AP05BH	OSX	>5.8	>6.4	MC		20	400	50			30	60	39			CO AT
EL-110A	CSO	5.9	6.4	MC	500	24		10			0	50	6			CO GR
MS(C)540	OSC	5.9	6.4	MC		20	400	50			30	60	30	30.0		FS
MLT5.9	OSC	5.9	6.5			20	2A	500					172			CO RH
MSCB540	GOS	6.1	<6.4			20	400	50			30	60				WG FS
MS(C)500	OSC	>6.3	>6.8	MC		20	400	50			30	60	30	30.0		FS
EL-111A	CSO	6.4	6.9	MC	500	24		10			0	50	6			CO GR
OF67CM	GOS	6.4	6.9	MC	500	6	650	25			30	70		3.5		CO IS
AP064	OSX	>6.4	>6.9	MC		20	300	10			30	60	39			CO AT
MS(C)-56	OSC	>6.4	>6.9	MC		20		10			30	60	6	17.0		FS
AF064	OSC	>6.4	>6.9			20	150	50			30	60	9			CO AT
AF064H	OSC	>6.4	>6.9			20	300	50			30	60	9			CO AT
AP064H	OSX	>6.4	>6.9	MC		20	400	50			30	60	39			CO AT
FS-307	GOS	5.8	8.0	VT	22H	15	350	20			0	60	19			CO FR
AF068	OSC	6.8	7.2			20	150	10			30	60	9			CO AT
AP068	OSX	6.8	7.2	MC		20	300	10			30	60	39			CO AT
MS(C)-58	OSC	6.8	7.2	MC		20		10			30	60	6	17.0		FS
S324	GOS	6.0	8.0	FX		13	150	10			30	80	1	2.5		CO RC
WJ2806-8	OSC	6.0	8.0			15	200	20					4	6.0		CO WJ
S325	GOS	6.0	8.0	FX		13	200	30			30	80	1	2.5		CO RC
S328	GOS	6.0	8.0	FX		13	240	60			30	80	1	2.5		CO RC
S330	GOS	6.0	8.0	FX		13	480	120			30	80	1	2.5		CO RC
S332	GOS	6.0	8.0	FX		50	500	41W			30	80	1	2.5		CO RC
S334	GOS	6.0	8.0	FX		50	25H	45W			30	80	1	2.5		CO RC
EL-112A	CSO	6.9	7.4	MC	500	24		10			0	50	6			CO GR
SWA-7075-5	GOS	7.0	7.5	MC	500	-12	120	*5			54	85	8			WG I*
SWA-7075-10	GOS	7.0	7.5	MC	500	-12	120	*10			54	85	8			WG I*
SWA-7075-15	GOS	7.0	7.5	MC	500	-12	120	*15			54	85	8			WG I*
SWA-7075-20	GOS	7.0	7.5	MC	500	-12	120	*20			54	85	8			WG I*
MS(C)-00	OSC	7.0	>7.5	MC		20		5			30	60	6	17.0		FS
AF070	OSC	7.0	>7.5			20	150	10			30	60	9			CO AT
AP070	OSX	7.0	>7.5	MC		20	300	10			30	60	39			CO AT
453	GOS	7.0	8.0	MC		8	350	5					7	8.0		WG AK
4009	CSO	5.0	10.0		28	28	125	10					7			CO ZL
OH75CM	GOS	7.5	8.0	MC	500	6	650	5			30	70		3.5		CO IS
MS(C)-02	OSC	7.5	8.0	MC		20		5			30	60	6	17.0		FS
AF075	OSC	7.5	8.0			20	150	10			30	60	9			CO AT

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
AP075	OSX	7.5	8.0	MC		20	300	10			30	60	39		CO	AT
4214	OSX	5.5	10.0			29	225	10			20	65	11	11.0	CO	ZL
MLT7.1	OSC	7.1	8.4			20	2A	300					172		CO	R-1
SWA-7580-5	GOS	7.5	8.0	MC	500	-12	120	*5			54	95	8		WG	IM
SWA-7580-10	GOS	7.5	8.0	MC	500	-12	120	*10			54	95	8		WG	IM
SWA-7580-20	GOS	7.5	8.0	MC	500	-12	120	*20			54	95	8		WG	IM
FS-18	OSC	4.8	11.0	VT	500	24		3			0	60	3		CO	FR
EY-122A	OSX	7.2	8.6			29		5			0	50	35		CO	GR
FS-52	GOS	4.8	11.0	VT	12%	15	350	10			0	50	2		CO	FR
EY-103A	OSX	7.2	8.6			28		100			0	50	45		CO	GR
FS-51	GOS	5.0	11.0	MC	12%	12	350	5			0	60	2		CO	FR
FS-17R	OSC	5.0	11.0	MC	1%	29		10			0	60	3		CO	FR
C35X35F	ADD	7.0	9.0	FX		100	400	2000			0	90	3	4.0	SP	
G0-1	GOS	*8.2		FX		12	500	50							SK	
MS(X)-64	OSC	<8.0	9.5	MC		20	300	5			30	60	<6	17.0	FS	
AF079	OSC	<8.0	8.5			20	150	10			30	60	9		CO	AT
AP079	OSX	<8.0	8.5	MC		20	300	10			30	60	39		CO	AT
SWA-8085-5	GOS	8.0	8.5	MC	500	-12	120	*5			54	85	8		WG	IM
SWA-8085-10	GOS	8.0	8.5	MC	500	-12	120	*10			54	85	8		WG	IM
SWA-8085-15	GOS	8.0	8.5	MC	500	-12	120	*15			54	85	8		WG	IM
SWA-8085-20	GOS	8.0	8.5	MC	500	-12	120	*20			54	85	8		WG	IM
FS-220J	OSX	7.0	9.6			28		250			0	60	30		CO	FR
28790 SERIES	OSC	4.8	12.0	VT				10							CO	OS
FS-293	OSX	6.0	11.0			28		2			0	60	58		CO	FR
AX0-85	OSX	*8.5				28	140	3			35	90			CO	AT
FS-22	OSX	6.0	11.0			28		5			0	60	13		CO	FR
FS-24	OSC	7.0	10.0	VT	500	50	300	40			10	70			CO	FR
S262	GOS	*8.7		FX		-10	160	20	20	10			<1	1.0	RC	
S272	GOS	*8.7		MC	200	-10	160	20	20	10			1	3.0	RC	
S283	GOS	*8.7		MC	200	-10	510	100	20	10			<1	3.0	RC	
S291	GOS	*8.7		MC	200	-10	550	100					1	4.0	RC	
O175CM	GOS	8.5	9.0	MC	500	6	650	5			30	70		3.5	CO	IS
LO-100 SERIES	OSC	3.5	14.0			25	500	25			0	60	25	24.0	CO	AP
FS-24R	OSC	7.0	10.5	MC	1%	40		100			0	60	7		CO	FR
C31X20M	ADD	8.5	9.0	MC		100	25	100			55	71	1	1.5	SP	
C31X25M	ADD	8.5	9.0	MC		100	70	250			55	71	1	1.5	SP	
FS-37H	CSJ	7.5	10.4	MC	600	24	80	5			30	71	4		CO	FR
GFO(X)-104	GOS	8.2	9.7			12	600	10			30	60	3	3.0	WG	FS
GDX-100	GOS	8.2	9.7			12	600	10			30	60		4.0	WG	FS
GFO(X)-114	GOS	8.2	9.7			12	600	25			30	60	3	3.0	WG	FS
SWA-8595-5	GOS	8.5	9.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-8595-10	GOS	8.5	9.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-8595-15	GOS	8.5	9.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-8595-20	GOS	8.5	9.5	MC	1K	-12	120	*20			54	85	8		WG	IM
S278	GOS	8.0	10.0	VT	270	-10	150	1					1	3.0	RC	
DG789	OSC	*9.0			1G	28	50	5			55	95	11		CO	SA
S279	GOS	8.0	10.0	VT	450	-10	150	5					5	6.0	RC	
429	OSC	8.0	10.0	VT	400	28	100	5							AK	
S301	GOS	8.0	10.0	FX		10	120	10			30	80	<3	2.5	WG	RC
WJ5008-3	YTD	7.0	11.0	YT		9	800	10			0	65	<9	34.0	CO	WJ
VSX9500A	IPO	*8.0	10.0	FX		90	30	25			20	70	>1	4.0	WG	VA
VSX9500AT	IPO	*8.0	10.0	MC		95	30	25			20	70	>1	4.0	WG	VA
S303	GOS	8.0	10.0	FX		10	120	30			30	80	<3	2.5	WG	RC
VSX9500J	IPO	*8.0	10.0	FX		90	50	50			20	70	>1	4.0	WG	VA
VSX9500JT	IPO	*8.0	10.0	MC		95	50	50			20	70	>1	4.0	WG	VA



TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *PULSE *dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
S305	GOS	8.0	10.0	FX		10	300	60			30	80	<3	2.5	WG	RC
VSX9500C	IPO	*8.0	10.0	FX		90	60	100			20	50	>1	4.0	WG	VA
VSX9500CT	IPO	*8.0	10.0	MC		95	60	100			20	50	>1	4.0	WG	VA
S307	GOS	8.0	10.0	FX		10	600	120			30	80	<3	2.5	WG	RC
VSX9500E	IPO	*8.0	10.0	FX		90	65	150			20	50	>1	4.0	WG	VA
VSX9500ET	IPO	*8.0	10.0	MC		95	65	150			20	50	>1	4.0	WG	VA
4256	OSX	*9.0				23	250	150			20	65	24		CO	ZL
VSX9500F	IPO	*8.0	10.0	FX		90	70	200			20	50	>1	4.0	WG	VA
4202	OSX	*9.0				23	250	200			20	65	23		CO	ZL
DG-700-X	OSC	8.0	10.0			28	500	400			55	75	<5		CO	SA
DG-750-X	OSX	8.0	10.0	FX		28		500			54	85			CO	SA
S319	GOS	8.0	10.0	FX		20	1A	#1W			30	80	<3	2.5	WG	RC
S321	GOS	8.0	10.0	FX		30	4A	#5W			30	80	<3	2.5	WG	RC
6900-1900	GOS	8.5	9.6			12	500	3			20	70	<1	2.5	CO	TR
WJ5008-4	YTO	8.5	9.6	YT		9	800	20			0	65	<9	34.0	CO	WJ
438	OSC	8.5	9.7	VT	400			10								AK
444	OSC	8.5	9.7	VT	400			10								AK
FS-308	GOS	8.2	10.0	VT	18H	15	350	20			0	60	19		CO	FR
C31X20V	ADO	9.0	9.3	ME		100	35	100			55	71	1	2.0		SP
C31X23V	ADO	9.0	9.3	ME		100	70	200			55	71	1	2.0		SP
MA-8012A-XF09	GOS	9.0	9.5	VT	50	12	250	2			40	85	10		WG	MA
SSX-8	OSC	8.0	10.5	VT	400	13	80	4			20	60	6	4.0	WG	GC
FS-54	OSC	7.5	11.0	VT	10%	26	200	5			0	60	11		CO	FR
0J25CM	GOS	9.0	9.5	MC	500	6	650	5			30	70		3.5	CO	IS
433	OSC	8.5	10.0	VT	350	28	140	10								AK
DG782	OSC*	<9.3		VT	500	18	40	5			55	75	<6	3.0	CO	SA
EY-123A	OSX	8.6	10.0			28		5			0	50	35		CO	GR
EY-109A	OSX	8.6	10.0			28		100			0	50	46		CO	GR
C31X20V-1	ADO	9.3	9.5	ME		100	35	100			+15	27	1	2.0		SP
FS-210	IPO	6.5	12.4	MC	46	-95	40	3			0	60	22		CO	FR
AX0-95	OSX	*9.5				28	140	3			35	90			CO	AT
S229	GOS	9.0	10.0	FX		10	250	12					<2	6.0		RC
FS-18W	OSC	8.5	11.0	VT	11H	24		1			0	60	3		CO	FR
G0X-101	GOS	9.1	10.6			12	600	10			30	60		4.0	WG	FS
GF0(X)-105	GOS	9.1	10.6			12	600	10			30	60	3	3.0	WG	FS
G0X-111	GOS	9.1	10.6			12	600	25			30	60		4.0	WG	FS
GF0(X)-115	GOS	9.1	10.6			12	600	25			30	60	3	3.0	WG	FS
S293	IPO*	10.0		VT	600	-9	210	10			40	75	3	8.0	CO	RC
SWA-95105-5	GOS	9.5	10.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-95105-10	GOS	9.5	10.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-95105-15	GOS	9.5	10.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-95105-20	GOS	9.5	10.5	MC	1K	-12	120	*20			54	85	8		WG	IM
0K05CM	GOS	9.8	10.3	MC	500	6	650	5			30	70		3.5	CO	IS
FS-329	OSX	9.6	10.5			28		100			0	60	70		CO	FR
EL-126	GOS	8.2	12.0	MC	38H	15	200	5			0	45	29		CO	GR
ELH-101	GOS	8.2	12.0	MC	38H	28	700	5			30	50	30		CO	GR
VSX9071	YTO	7.9	12.4			17	600	10			0	50		28.0	CO	VA
FS-40	ADO	8.0	12.4	MC	100	95	40	10			0	60	2		CO	FR
FS-42	ADO	8.0	12.4	MC	10%	95	40	10			0	60	2		CO	FR
OX-100	GOS	8.0	12.4	VT		7	450	10					31	56.0	CO	PE
WJ5008	YTO	8.0	12.4	YT		9	800	10			0	65	<9	34.0	CO	WJ
WJ5008-18	OSC	8.0	12.4	YT		-15	700	10					<9	36.0	CO	WJ
VSX9070	YTO	8.0	12.4			15	600	10			0	50	10	28.0	CO	VA
GSX SERIES	GOS	8.0	12.4	MC	500	12		25			54	71	6	3.3	WG	MM
428	OSC	9.5	11.0	VT	400	28	100	5								AK

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT *PULSE *dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
AV01658	ADO	8.2	12.4			10	30				25	50	1			AL
5YA3200	ADO	8.2	12.4	VC	250	-50	25	10			30	71	2		WG	AI
SYA3201	ADO	3.2	12.4	VC	250	-70	25	10			30	71	<1		CO	AI
SYA3200A	ADO	8.2	12.4	VC	250	-50	25	25			30	71	2		WG	AI
5YA3201A	ADO	8.2	12.4	VC	250	-70	25	25			30	71	<1		CO	AI
SYA3200B	ADO	8.2	12.4	VC	250	-50	25	50			30	71	2		WG	AI
SYA3201B	ADO	3.2	12.4	VC	250	-70	25	50			30	71	<1		CO	AI
ADC-10A	IPO	8.2	12.4	VC	500	95	40	60			30	70			CO	OK
ADS-10A	IPO	3.2	12.4	VC	500	95	40	60			30	70			WG	OK
ADW-10A	IPO	8.2	12.4	VC	500	95	40	60			30	70			WG	OK
ADC-10B	IPO	8.2	12.4	VC	500	95	40	100			30	70			CO	OK
ADS-10B	IPO	8.2	12.4	VC	500	95	40	100			30	70			WG	OK
ADW-10B	IPO	8.2	12.4	VC	500	95	40	100			30	70			WG	OK
SYA3205	ADO	8.2	12.4	VC	250	110	60	100			30	71			CO	AI
SYA-3206	ADO	8.2	12.4	VC	250	110	60	100			30	71	<1	1.0	WG	AI
VX2020 SERIES	GOS	8.2	12.4	VC	20%	12	750	100			40	80	3	3.0	WG	VA
AJC-10C	IPO	8.2	12.4	VC	500	95	40	150			30	70			CO	OK
ADS-10C	IPO	8.2	12.4	VC	500	95	40	150			30	70			WG	OK
ADW-10C	IPO	8.2	12.4	VC	500	95	40	150			30	70			WG	OK
AD-10 SERIES	IPO	8.2	12.4	VC	250	-95	40	250			30	70	2	6.0		OK
ADC-10J	IPO	8.2	12.4	VC	500	95	40	250			30	70			CO	OK
ADS-10J	IPO	8.2	12.4	VC	500	95	40	250			30	70			WG	OK
ADW-10J	IPO	8.2	12.4	VC	500	95	40	250			30	70			WG	OK
SYA3205A	ADO	8.2	12.4	VC	100	110	90	250			30	71			CO	AI
SYA-3206A	ADO	8.2	12.4	VC	100	110	90	250			30	71	<1	1.0	WG	AI
SYA3205B	ADO	8.2	12.4	VC	75	110	120	500			30	71			CO	AI
SYA-3206B	ADO	8.2	12.4	VC	75	110	120	500			30	71	<1	1.0	WG	AI
OK45CM	GOS	10.2	10.7	VC	500			20			30	70		3.5	CO	IS
FS-24M	OSC	10.0	11.0	VT	400	60	300	25			10	70			CO	FR
S289	IPO*10.5					10	120	25			30	80	2	2.5	WG	RC
GOX1200	GOS*10.5			VC	100	12	400	50			30	60	<2	<2.0	CO	FS
VX1717SP	GOS*10.5			VC	1%	12		50			20	38	3	3.0	WG	VA
SYA-322U	ADO*10.5					120	60	100			30	71	1	4.0	WG	AI
MA49750	GOS>10.5*					9	500	50			30	70	3		WG	VA
GFO(X)-106	GOS	10.0	11.5			12	600	10			30	60	3	3.0	WG	FS
GFO(X)-116	GOS	10.0	11.5			12	600	25			30	60	3	3.0	WG	FS
AP0105	OSX>10.6>11.2	VC				20	300	10			30	60	39		CO	AT
MS(X)7+	OSC>10.6>11.2					20	300	10			30	60	10	21.0		FS
GOX-102	GOS	10.2	11.7			12	600	10			30	60		4.0	WG	FS
GOX-112	GOS	10.2	11.7			12	600	25			30	60	<1	4.0	WG	FS
SWA-105115-5	GOS	10.5	11.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-105115-10	GOS	10.5	11.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-105115-15	GOS	10.5	11.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-105115-20	GOS	10.5	11.5	MC	1K	-12	120	*20			54	85	8		WG	IM
S302	GOS	10.0	12.0	FX		10	120	10			30	90	<3	2.5	WG	RC
S304	GOS	10.0	12.0	FX		10	120	30			30	80	<3	2.5	WG	RC
S306	GOS	10.0	12.0	FX		10	300	60			30	80	<3	2.5	WG	RC
S308	GOS	10.0	12.0	FX		10	600	120			30	80	<3	2.5	WG	RC
S320	GOS	10.0	12.0	FX		20	1A	H1W			30	80	<3	2.5	WG	RC
S322	GOS	10.0	12.0	FX		30	4A	H5W			30	80	<3	2.5	WG	RC
VSX9501A	IPO*10.0	12.4	FX			95	30	25			20	70	>1	4.0	WG	VA
VSX9501B	IPO*10.0	12.4	FX			95	50	50			20	70	>1	4.0	WG	VA
VSX9501C	IPO*10.0	12.4	FX			95	60	100			20	50	>1	4.0	WG	VA
VSX9501E	IPO*10.0	12.4	FX			95	65	150			20	50	>1	4.0	WG	VA
VSX9501F	IPO*10.0	12.4	FX			95	70	200			20	50	>1	4.0	WG	VA

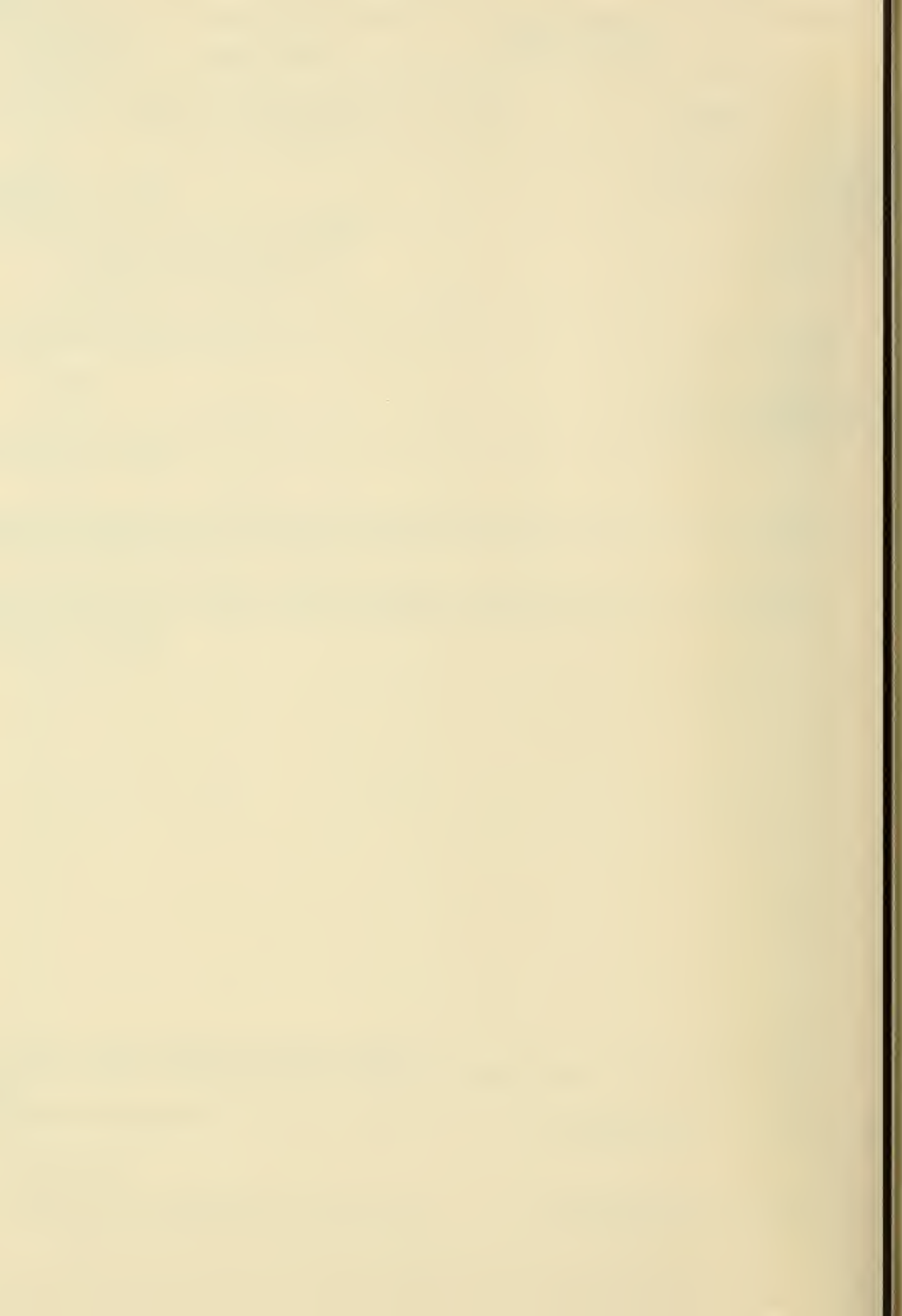
TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE	POWER IN		MIN. POWER OUT #PULSE *dBm	MIN. GAIN	MAX. NF	OPERATING TEMPERATURE		VOLUME	WEIGHT	COUPLING	MANUFACTURER
		CENTER OR MIN. GHZ	MAX. GHZ			V	mA				-°C	+°C				
AF0112	OSC	11.2	<11.8			20	150	10			30	60	9		CO	AT
AP0112	OSX	11.2	<11.8	MC		20	300	10			30	60	39		CO	AT
MS(X)-76	OSC	11.2	<11.8			20	300	10			30	60	10	21.0	FS	
GOX-103	GOS	10.9	12.4			12	600	10			30	60		4.0	WG	FS
GF0(X)-107	GOS	10.9	12.4			12	600	10			30	60	3	3.0	WG	FS
GF0(X)-117	GOS	10.9	12.4			12	600	25			30	60	3	3.0	WG	FS
OL75CM	GOS	11.5	12.0	MC	500			20			30	70		3.5	CO	IS
MA-8010-XF1 SER.	GOS	>10.6	<13.2	MC		-20	125	1			30	55	31	18.0	WG	VA
MA-8012-XF2 SER.	GOS	>10.6	<13.2	ME		-20	125	1			30	55	31	20.0	WG	MA
MS(X)7s	OSC	>11.6	>12.2			20	300	5			30	60	10	21.0		FS
AF0115	OSC	>11.6	>12.2			20	150	10			30	60	9		CO	AT
AP0115	OSX	>11.6	>12.2	MC		20	300	10			30	60	39		CO	AT
S294	IPO	*12.0		VT		-7	185	10			54	75	<1	1.5	CO	RC
4257	OSX	*12.0				28	250	100			20	65	24		CO	7L
SWA-115125-5	GOS	11.5	12.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-115125-10	GOS	11.5	12.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-115125-15	GOS	11.5	12.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-115125-20	GOS	11.5	12.5	MC	1K	-12	120	*20			54	85	8		WG	IM
MS(K)80	OSC	>12.1	12.7			20	300	5			30	60	10	21.0	FS	
AF0121	OSC	>12.1	12.7			20	150	10			30	60	9		CO	AT
AP0121	OSX	>12.1	12.7	MC		20	300	10			30	60	39		CO	AT
QMS0CM	GOS	12.2	12.7	MC	500	6	650	5			30	70		3.5	CO	IS
MS(K)82	OSC	>12.6	>13.2			20	300	5			30	60	10	21.0	FS	
AF0125	OSC	>12.6	>13.2			20	150	10			30	60	9		CO	AT
AP0125	OSX	>12.6	>13.2	MC		20	300	10			30	60	39		CO	AT
SWA-125135-5	GOS	12.5	13.5	MC	1K	-12	120	*5			54	85	8		WG	IM
SWA-125135-10	GOS	12.5	13.5	MC	1K	-12	120	*10			54	85	8		WG	IM
SWA-125135-15	GOS	12.5	13.5	MC	1K	-12	120	*15			54	85	8		WG	IM
SWA-125135-20	GOS	12.5	13.5	MC	1K	-12	120	*20			54	85	8		WG	IM
5026-9200	OSX	12.0	14.0			28		250			10	70	99	48.0	WG	TR
SSJ9 SERIES	OSC	12.4	14.0	VT	250	-30	80	<3			20	60	6	8.0	WG	GC
C31K13V	ADJ	12.5	14.0	ME		90	20	20			55	71	1	3.0	SP	
AF0131	OSC	>13.1	<13.8			20	150	10			30	60	9		CO	AT
AP0131	OSX	>13.1	<13.8	MC		20	300	10			30	60	39		CO	AT
VJS9502A	IPO	*12.4	15.0	FX		70	40	25			20	70	1	4.0	WG	VA
VJS9502AT	IPO	*12.4	15.0	MC		70	40	25			20	70	1	4.0	WG	VA
VJS9502s	IPO	*12.4	15.0	FX		70	45	50			20	70	1	4.0	WG	VA
VJS95023T	IPO	*12.4	15.0	MC		70	45	50			20	70	1	4.0	WG	VA
VJS9502C	IPO	*12.4	15.0	FX		70	50	100			20	50	1	4.0	WG	VA
VJS9502CT	IPO	*12.4	15.0	MC		70	60	100			20	50	1	4.0	WG	VA
VJS9502E	IPO	*12.4	15.0	FX		70	70	150			20	50	1	4.0	WG	VA
VJS9502F	IPO	*12.4	15.0	FX		70	80	200			20	50	1	4.0	WG	VA
AF0135	OSC	>13.6	>14.2			20	150	10			30	60	9		CO	AT
AP0135	OSX	>13.6	>14.2	MC		20	300	10			30	60	39		CO	AT
WJ5041-4	YTD	10.0	18.0	YT		9	800	3			0	65	<9	34.0	CO	WJ
4215	OSX	10.0	18.0			28	225	10			20	65	16	14.0	CO	ZL
FS-55	OSC	14.0	16.0	VT	2%	26	200	5			0	60	11		CO	FR
FS-49	OSX	12.4	18.0			28		2			0	60	19		WG	FR
VJS9075	YTD	12.3	18.1			15	700	5			0	50		28.0	CO	VA
VJS9075	YTD	12.3	18.1			15	700	5			0	50		29.0	CO	VA
WJ5041-8	OSC	12.4	18.0	YT	OCT	-15	700	5					<9	36.0	CO	WJ
WJ5041	YTD	12.4	18.0	YT		9	800	7			0	65	<9	34.0	CO	WJ
FS-251	GOS	12.4	18.0	MC	1%	12	350	10			0	60	2		WG	FR
FS-330	OSX	12.4	18.0			28		25			0	60	35		WG	FR
GSMY SERIES	GOS	12.4	18.0	MC	500	10		25			54	71	3	2.8	WG	MM

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE MHz	POWER IN		MIN. POWER OUT #PULSE *dBm mW	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN. 3	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
VJ1414A SERIES	GOS	12.4	18.0	MC	100	8	500	25			54	70	2	3.0	WG	VA
VJ1717B SERIES	GOS	12.4	18.0	MC	100	8	800	50			54	70	2	3.0	WG	VA
VJ2020C SERIES	GOS	12.4	18.0	MC	100	8	12H	100			54	70	2	3.0	WG	VA
VA-85K10	OSX	15.3	15.6			20	300	<2			54	79	38	30.0	WG	VA
5025-2901	OSX	15.5	15.8			28	600	100			20	70	44	40.0	WG	TR
FS-48R	CSJ	15.5	16.5	MC	300	24	90	5			30	71	<13		WG	FR
WJ5041-5	YTO	15.5	16.5	YT		9	800	20			0	65	<9	34.0	CO	WJ
FS-35	OSC	15.0	17.0	VT	500	60	300	25			10	70	6		CO	FR
4A-8012-ZF02	GOS	15.9	16.5	VT	40	7	350	2			40	85	4		WG	VA
5024-9200	OSX	16.0	16.5			28	400	#20			20	70	33	32.0	CO	TR
FS-48	OSC	15.0	18.0	VT	1K	28		10			0	60	<12		CO	FR
VSU9503A	IPQ*15.0	18.0	FX			90	40	25			20	70	1	4.0	WG	VA
VSU9503AT	IPQ*15.0	18.0	MC			70	30	25			20	70	1	4.0	WG	VA
5000-9200	OSX*16.5					28	550	50			18	40	98	92.0	WG	TR
VSU9503B	IPQ*15.0	18.0	FX			90	50	50			20	50	1	4.0	WG	VA
VSU9503BT	IPQ*15.0	18.0	MC			70	50	50			20	50	1	4.0	WG	VA
4258	OSX*18.0					28	250	50			20	65	24		CO	ZL
SYG2030	ADO	18.0	24.8	MC	60	120	90	40			30	71	9	8.0	WG	AT
SYG2030A	ADO	18.0	24.8	MC	60	120	80	100			30	71	9	8.0	WG	AT
85MK SERIES	GOS	18.0	26.5	MC	500	7		15			54	71	1	1.8	WG	MM
SYG2035	ADO	26.0	37.2	MC	90	120	90	40			30	71	9	8.0	WG	AT
SYG2035A	ADO	26.0	37.2	MC	90	120	90	100			30	71	9	8.0	WG	AT

TYPE NUMBER	DEVICE TYPE	FREQUENCY		TUNING METHOD	BANDWIDTH OR TUNING RANGE MHz	POWER IN		MIN. POWER OUT *dBm	MIN. GAIN dB	MAX. NF dB	OPERATING TEMPERATURE		VOLUME IN <sup>3</sup>	WEIGHT Oz.	COUPLING	MANUFACTURER
		CENTER OR MIN. GHz	MAX. GHz			V	mA				-°C	+°C				
EX-104	MJL	0.5	0.8		10%			5					2		CO	GR
EX-105	MJL	0.8	1.2		8%			5					2		CO	GR
FS-21M	MJL	<0.5	1.8					50					16		CO	FR
FS-17M	MJL	>1.2	<1.4			20		1000					23		CO	FR
EX-106	MJL	1.2	1.6		8%			5					2		CO	GR
EX-112-1	MJL	1.2	2.0		5%			8W			20	75	34	30.0	CO	GR
EX-107	MJL	1.6	2.4		8%			100					8		CO	GR
FM-100-1	MJL	*2.0			3%	2A	1A	300					25	24.0	CO	AP
FM-100-2	MJL	*2.0			3%	2A	2A	1500					24	24.0	CO	AP
6510	MJL	2.2	2.3		100	12	200	*-13			0	50	120		CO	ZL
FS-217	MJL	*2.6						500					4		CO	FR
271005M	TM	2.5	3.0	MC		-2A	200	1W			30	71	4			CL
EX-103	MJL	2.4	3.2		5%			100					8		CO	GR
EX-109	MJL	3.2	4.8		5%			100					8		CO	GR
FS-304	MJL	2.5	6.0					5					11		CO	FR
VM-4.85/1700-2	MJL	4.0	5.7					10					162	44.0	CO	AP
FS-143	MJL	4.6	5.2					5					5		CO	FR
EX-110	MJL	4.8	6.4		3%			80					6		CO	GR
VM-6.85/2300-2	MJL	5.7	8.0					10					75	36.0	CO	AP
FS-374	MJL	4.0	10.4					5					4		CO	FR
WJ799	MJL	2.0	12.4				>1W	10			0	50	10	44.0	CO	WJ
5022-16	MJL	<7.2	<7.7			2A	600	*+20	40		0	60	63	32.0	CO	ZL
FS-315	MJL	7.8	7.9					300					58		CO	FR
EX-111	MJL	6.4	9.6		3%			80					6		CO	GR
FS-22M	MJL	6.0	11.0					5					13		CO	FR
FM-100	MJL	3.5	14.0		4%	2A	650	25					25	24.0	CO	AP
5009-9901	TM	8.5	<9.8			20	350	10			20	70	49	32.0	CO	TP
5003-9904	TM	<9.3	<9.6	VT		24	500	50			0	71	55	48.0	CO	TP
6054-9901	TM	9.2	9.7	VT		-30	350	8			20	70	27	26.0	WG	TR
FS-275	MJL	9.0	10.5					40					70		CO	FR
MA-87K11	MJL	*13.3				2A	1A	150			54	71	30	19.0	WG	MA
5030-9202	TM	16.1	16.4			30	250	4			20	70	33	36.0	WG	TR
5056-9201	TM	16.0	17.0	VT		30	350	6			20	70	58	32.0	WG	TR
5030-9201	TM	16.0	17.0			30	250	12			20	70	33	36.0	CO	TR
SYG-2010 SERIES	MJL	18.0	24.8	FX	300			125			55	85	3	6.0	WG	AT
SYG-2001 SERIES	MJL	26.0	37.2	FX	200			90			55	85	3	6.0	WG	AI

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