

EIMAC MICROWAVE TUBES SHORT FORM CATALOG

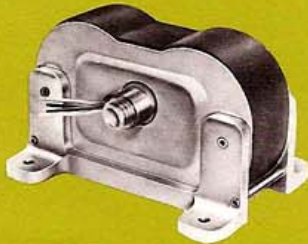
EIMAC'S MICROWAVE TUBES include traveling wave tubes, voltage tunable magnetrons, reflex klystrons and iso-klystrons (reflex klystrons factory-mated to isolators). Each designed to meet the demands of space-age microwave electronics. These rugged ceramic and metal tubes provide stable, efficient operation under severe environmental conditions. And prove their reliability daily in many applications.

TRAVELING WAVE TUBES



Type Number	Frequency	Power Output	Small Signal Gain	Beam Voltage	Features
EM-778	5-11 Gc	1 W	60 db	2900	Wideband—High Gain
EM-779	5-11 Gc	1 W	30 db	2900	Lower Gain Version of EM-778
X1002	C Band/X Band	1 W	Conversion Gain 25 db	2900	Frequency Multiplier
EM-1006	2-4 Gc	1 W	50 db	1200	Rugged—High Gain
X1007	2-4 Gc	2 W	60 db	1200	Gridded—Low Voltage
X1008	2.5-3.8 Gc	1 W	50 db	1250	Low Voltage—High Gain
EM-1010	4-8 Gc	1 W	60 db	2900	High Gain
EM-1011	4-8 Gc	1 W	30 db	2950	Low Gain Version
EM-1015S	C Band/X Band	2 W	45 db/40 db	2450	Harmonic Generator
EM-1015	4-8 Gc	3 W	60 db	2450	Med. Power—High Gain
EM-1016	4-8 Gc	3 W	30 db	2450	Lower Gain Version of EM-1015
X1019	4.0-4.1 Gc	20 W	25 db	2600	Narrow Band—High Power
X1020	5.8-6.3 Gc	20 W	30 db	2300	Narrow Band—High Power
X1021	4-8 Gc	10 W	30 db	2900	Wide Band—High Power
EM-1025	4-12 Gc	1 W	40 db	2900	3:1 Bandwidth
EM-1030	7-11 Gc	5 W	60 db	3200	Wide Band—High Gain—High Power
EM-1031	7-11 Gc	5 W	30 db	3200	Lower Gain Version of EM-1030
EM-1045	8-12 Gc	1 W	60 db	2950	Rugged—High Gain
EM-1046	8-12 Gc	1 W	30 db	2950	Lower Gain Version of EM-1045
EM-1050	8-12 Gc	3 W	60 db	3300	Med. Power—High Gain
EM-1051	8-12 Gc	3 W	30 db	3300	Lower Gain Version of EM-1050
EM-1060	2.5-11 Gc	0.5 W	30 db	2950	Wide Band— for Test Equipment

VOLTAGE TUNABLE MAGNETRONS



Type Number	Power Output	Tuning Range	Anode Voltage	Features
EM-747	50 mW (Min)	400-1200 Mc	800-1900 V	3:1 Bandwidth
EM-1080	100 mW (Min)	1200-2200 Mc	800-1400 V	2:1 Bandwidth
EM-1081	10 Watt (Min)	900-1200 Mc	1800-2380 V	High Power
X1084	30 mW (Min)	300-600 Mc	800-1550 V	2:1 Bandwidth
X1085	1 Watt (Min)	1200-1400 Mc	840-970 V	Light Weight

REFLEX KLYSTRONS



Type Number	Frequency	Power Output	Beam Voltage	Beam Current	Features
1K20XS	8.5-9.2 Gc	70 mW	300 V	40 mA	Rugged, Long Life
1K20XK	9.2-10.0 Gc	70 mW	300 V	40 mA	Rugged, Long Life
1K20XD	10.0-10.7 Gc	70 mW	300 V	40 mA	Rugged, Long Life
1K20XN	8.5-10.7 Gc	150 mW	400 V	65 mA	Trimmable ± 50 Mc Rugged, Power Stable
1K20XL	9.0-10.0 Gc	80 mW	350 V	50 mA	Trimmable ± 50 Mc Temp. Coeff. < 60 Kc/oc
1K20XR	9.2-9.6 Gc	50 mW	300 V	55 mA	Sealed Tuner Allows Pressurizing Ext. Cavity
1K015CA	5.35-5.95 Gc	70 mW	350 V	50 mA	Miniature Coax. Output
1K015CG	5.35-5.95 Gc	70 mW	350 V	50 mA	Waveguide Output
1K75CH	4300 \pm 50 Mc	.25 W/1W	550 V/750 V	35 mA/60 mA	Rugged, 100 Mc ETR Coaxial Output
1K75CK	4300 \pm 50 Mc	.25 W/1W	550 V/750 V	35 mA/60 mA	Rugged, 100 Mc ETR Waveguide Output
1K75CL	4300 \pm 50 Mc	.25 W/1W	550 V/750 V	35 mA/60 mA	Rugged, 100 Mc ETR Heat-Sink Mounting Flange
1K75CS	4300 \pm 50 Mc	.3 W/1W	700 V/900 V	60 mA/70 mA	Same as 1K75CL plus factory mated isolator
X1079	4.0-6.0 Gc	100 mW			Rugged, Tunable 400 Mc, Long Life
1K125CA	3.7-4.4 Gc	1.25 W	1000 V	75 mA	Low-Noise, Long-Life
1K125CB	4.4-5.0 Gc	1.8 W	1000 V	75 mA	Low-Noise, Long-Life
X1075	8.5-9.6 Gc	100 mW	400 V	40 mA	Rugged, Long-Life Tuner
X1077	10.7-13.5	50 mW	400 V	40 mA	Rugged, Long Life 500 Mc Tunability
X1078	10.7-13.5	500 mW	750 V	100 mA	Rugged, Long Life 500 Mc Tunability
X1106	10.7-13.5	100 mW	400 V	40 mA	In Development
X1107	10.7-13.5	1 W	750 V	100 mA	In Development

CW and PULSE TYPE KLYSTRONS



EIMAC'S HIGH POWER MICROWAVE LINE includes pulse type klystrons, continuous wave klystrons and water loads. High-power TWT's are under development. These products operate at average power levels above 100 watts. They are used in UHF television, missile and satellite tracking systems, radar astronomy—and nearly all tropospheric scatter communications systems throughout the free world.

	Frequency Gc	Bandwidth Mc	Peak Power mW	Average Power kW	Gain db	Beam Voltage kV
X-BAND CW						
X850	7.125-8.5	35	—	20	40	21
C-BAND PULSE						
4KM3CB	4.4-5.0	7	0.001	1	45	7.5
C-BAND CW						
4K3CB	4.4-5.0	7	—	1	46	7.5
S-BAND PULSE						
X632G	2.856	7	10	10	40	187
X3015	2.7-2.9	200	6	10	40	140
X3023	3.43-3.57	140	3	11	40	115
X700	2.4-2.9	6	0.02	1	40	21
4KP3SM	2.65-2.86	7	0.0075	0.015	54	14
S-BAND CW						
4KM70SJ	1.7-2.4	10	—	20	43	20
4KM70SK	2.55-2.7	10	—	20	43	21
5KM70SF	1.71-1.8	14	—	10	30	17
4KM50SJ	1.7-2.4	10	—	10	40	18
4KM50SK	2.55-2.7	10	—	10	40	17.5
5KM50SJ	1.7-2.4	10	—	10	53	18
4K3SJ	1.7-2.4	7	—	1	45	6.3
4K3SK	2.4-2.7	7	—	1	47	7
4K3SM	2.65-2.86	7	—	1	45	6.5
L-BAND PULSE						
X832	1.22-1.38	165	10	10	30	114
X780	1.235-1.365	15	2.5	75	35	115
X3002	1.235-1.365	3	0.004	0.12	27	10.3
3KM4000LT	0.96-1.215	2.5	0.04	1	33	26
L-BAND CW						
3K2500LX	0.98-1.2	2.5	—	1	27	7
X3002A	1.235-1.365	3	—	1	21.7	7.2
UHF PULSE						
X841D	0.4-0.45	50	2.5	150	33	115
X626AC	0.4-0.45	1	1.25	75	30	100
4KMP10,000LF	0.57-0.63	1.5	0.4	4	57	65
X602K	0.375-0.500	1	0.15	75	47	45
UHF-TV						
4KM70LA	0.47-0.61	8	—	12.5	30	13
4KM70LF	0.61-0.89	8	—	12.5	30	13
4KM100LA	0.47-0.61	8	—	25	31	16
4KM100LF	0.61-0.89	8	—	25	31	16
4KM150LA	0.47-0.61	8	—	50	34	22
4KM150LF	0.61-0.89	8	—	50	34	22
UHF-CW						
3K210,000LQ	0.755-0.985	7	—	75	14	27
5K210,000LO	0.755-0.985	10	—	75	50	25
4KM170,000LA	0.325-0.5	0.5	—	75	45	35
3KM50,000PA	0.225-0.4	0.25	—	20	30	23
4KM50,000LR	0.755-0.985	7	—	10	30	19
4KM50,000LQ	0.61-0.985	4	—	10	30	17
4KM50,000LF	0.61-0.79	8	—	10	30	18
4KM50,000LA3	0.4-0.61	3	—	10	47	17
4KM50LB	0.35-0.475	3	—	10	47	17
4KM3000LR	0.61-0.985	7	—	2	23	8.5
3KM3LB	0.35-0.475	2	—	2	26	9
3KM3000LA	0.385-0.585	2	—	2	30	9

WATER LOADS



Type Number	Type	Frequency Mc	Average Power Kw	Peak Power Mw	Max. VSWF
WL-120	3 1/8" Coax.	500-1200	50	3	1.15:1
WL-130	3 1/8" Coax.	320-1200	50	3	1.1:1
WL-140	3 1/8" Coax.	200-1200	50	3	1.18:1
WL-150	6 1/8" Coax.	250-750	300	5	1.1:1
WL-160	6 1/8" Coax.	200-750	300	5	1.07:1
WL-201	WR-430	1700-2400	24	—	1.1:1
WL-210	WR-975	750-1000	100	1.25	1.15:1
WL-220	WR-975	390-460	150	1.25	1.13:1

This short form catalog gives you an idea of how Eimac meets tomorrow's tube needs today. And more tubes are yet to come—with new capabilities, even greater performance. Another reason to keep your eye on Eimac—for advanced microwave tubes, high power klystrons, power grid tubes, accessories. For more complete details, send for Quick Reference Catalog and information on Eimac Data Sheet Service. Write to: Eitel-McCullough, Inc., San Carlos, California. Subsidiaries: Eitel-McCullough, S. A., Geneva, Switzerland; National Electronics, Geneva, Illinois.

KEEP YOUR EYE ON

