

**METCOM INC**  
 SALEM MASSACHUSETTS

# Gas Switching Duplexer Tubes

MAP OF OLDE SALEM  
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**METCOM INC.**  
SALEM, MASSACHUSETTS

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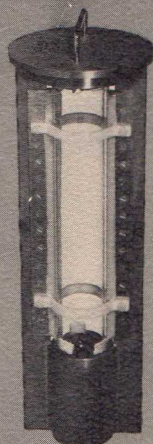


## CELL TYPE EXTERNAL CAVITY TR TUBES



Number Designation	Coaxial Cavity Tunable Cell	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
7309/MPT-26	3 1/2 Coaxial Fixed Tuned	300-600	2000	5000	Flange Mounted
7324/MPT-11	3 1/2 Coaxial Fixed Tuned	300-600	2000	4000	Plug in Mount
7821/MPT-12	3 1/2 Coaxial Fixed Tuned	200-600	200	10000	Flange Mounted High Average Power Application
7901/MPT-13	3 1/2 Coaxial Fixed Tuned	300-600	20	40	Plug in Mount
7902/MPT-17	3 1/2 Coaxial Fixed Tuned	300-600	3000	5000	Plug in Mount
MPT-10	Tunable	575-625	2000	4000	Cavity Mount
MPT-14	3 1/2 Coaxial Fixed Tuned	200-600	200	10000	Plug in Mount 7821 MPT-12
MPT-15A	7/8 Coaxial Fixed Tuned	300-600	30	60	Plug in Mount
MPT-16A	7/8 Coaxial Fixed Tuned	300-600	2	4	Plug in Mount
MPT-22	7/8 Coaxial Fixed Tuned	200-600	15	500	Strip Line Mounted
MPT-17A	3 1/2 Coaxial Fixed Tuned	300-600	3000	5000	MPT-17 with 30 μs R.T.
MPT-18	3 1/2 Coaxial Fixed Tuned	420-430	2000	2000	Flange Mounted High Power
MPT-20	3 1/2 Coaxial Fixed Tuned	400-450	2000	2000	Plug in Mount
MPT-21	3 1/2 Coaxial Fixed Tuned	200-600	200	1000	Plug in Mount
8060/MPT-23	3 1/2 Coaxial Fixed Tuned	Classified			
8061/MPT-24	3 1/2 Coaxial Fixed Tuned	Classified			
MPT-25	3 1/2 Coaxial Fixed Tuned	300-600	2000	5000	Plug in Mount
MPT-27	3 1/2 Coaxial Fixed Tuned	400-450	20	20	Flange Mounted
MPT-28	7/8 Coaxial Fixed Tuned	300-600	1000	1000	Plug in Mount
MPT-29	7/8 Coaxial Fixed Tuned	200-600	15	500	Plug in Mount
MPT-30	3 1/2 Coaxial Fixed Tuned	400-450	1500	1500	Plug in Mount
MPT-31	3 1/2 Tunable	600-900	2000	4000	Cavity Mount
MZT-11	6 1/2 Coaxial Fixed Tuned	10-50	5000	100000	Cavity Mount

## FOLDED CYLINDERS



Number Designation	Frequency In Mc	Peak Power In Kw	Average Power In Kw	Brief Description
MDS-11	300-600	3000	5	3 1/2 Coaxial Line Mounted
MDS-24	300-600	2500	150	Cavity Mounted
MDS-54	300-600	2500	150	Cavity Mounted
MDS-58	300-600	2500	150	Cavity Mounted
MDS-59	300-600	2500	150	Cavity Mounted
MDS-62	300-600	2500	150	Cavity Mounted
MDS-63	300-600	2500	150	Cavity Mounted
MDS-64	300-600	2500	150	Cavity Mounted
MDS-65	300-600	2500	150	Cavity Mounted
MDS-66	300-600	2500	150	Cavity Mounted
MDS-67	300-600	2500	150	Cavity Mounted
MDS-68	300-600	2500	150	Cavity Mounted
MDS-69	300-600	2500	150	Cavity Mounted
MDS-70	300-600	2500	150	Cavity Mounted
MDS-71	300-600	2500	150	Cavity Mounted
MDS-72	300-600	2500	150	Cavity Mounted
MDS-73	300-600	2500	150	Cavity Mounted
MDS-74	300-600	2500	150	Cavity Mounted
MDS-75	300-600	2500	150	Cavity Mounted



## FOLDED CYLINDERS Cont.

Number Designation	Frequency In Mc	Peak Power In Kw	Average Power In Kw	Brief Description
MDS-76	300-600	2500	150	Cavity Mounted
MDS-77	300-600	2500	150	Cavity Mounted
MDS-78	300-600	2500	150	Cavity Mounted
MDS-79	300-600	2500	150	Cavity Mounted
MDS-80	300-600	2500	150	Cavity Mounted
MDS-81	300-600	2500	150	Cavity Mounted
MDS-82	300-600	2500	150	Cavity Mounted
MDS-83	300-600	2500	150	Cavity Mounted
MDS-86	300-600	2500	150	Cavity Mounted
MPT-19	400-450	50	3	Cavity Mounted WR-2100 Guide

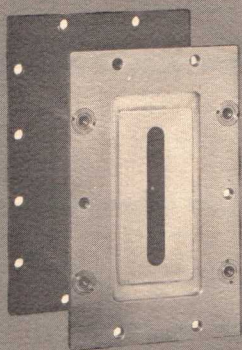
## GAS SWITCHING DUPLEXER TUBES L BAND

### L BAND TUNABLE — BAND PASS — PRE TR — AND TR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
5939A/MLT-21	Pre-TR	1250-1350	550	550	Used in Pairs Dumbbell Type
6260/MLT-22	Pre-TR	1250-1350	2000	2000	Dumbbell Type
6605/MLT-23	Pre-TR	1250-1350	2000	2000	Broadband Pressurizable
6632/MLT-24	Tunable Band Pass TR	1215-1355	2000	2000	Broadband
6633/MLT-17	Band Pass TR	1220-1365	2000	2000	Broadband Pressurizable
6634/MLT-25	Dual Band Pass TR	1250-1350	5000	5000	RT = 150 μs use with Sidewall Couplers
7152/MLT-16B	Pre-TR	1250-1350	2000	2000	Broadband 1000 Hr. Life
7166/MLT-10	Band Pass TR	1200-1365	2000	2000	Broadband Pressurizable Short Length 6633
7365/MLT-27	Band Pass TR	1250-1350	10	10	Broadband Crystal Protector 3 Elements
7823/MLT-13	Band Pass TR	1250-1350	50	50	Broadband Crystal Protector
MLT-18	Band Pass TR	1200-1365	2000	2000	7166 with Special Mounting Gasket
MLT-29	Band Pass TR	1250-1350	50	50	Broadband Crystal Protector w/Ignitor Electrode
6322/MLT-11	Tunable Cell Type TR	1215-1355	450	450	Two Disc
MLT-12	Tunable Band Pass TR	1215-1355	450	450	1000 Hr. Life 6322
MLT-15	Tunable Band Pass TR	1215-1355	450	450	6322 with reinforcing ring
1B23/MLT-19	Fixed Tuned Cell TR	900-1200	450	450	One Disc
1B40/MLT-20	Separate Cavity TR	1075-1095	1	1	Electrode less Discharge
MLT-30	Pre-TR	1250-1350	2000	2000	5939A with 7152 Window
MLT-32	Band Pass TR	1205-1225	10	10	Broadband
MLT-33	Band Pass TR	1250-1350	100	100	1000 Hr. Life Crystal Protector
MLT-35	Band Pass TR	1350-1450	500	500	1000 Hr. Life Crystal Protector
MLT-37	Band Pass TR	1250-1350	100	100	MLT-33 with Aluminum Cast Body
MLT-38	Dual Pre-TR	1250-1350	2000	2000	Dual 7152
MLT-39	Band Pass TR	1200-1365	2000	2000	Cell type element
MLT-40	Band Pass TR	1250-1350	100	100	Cell type element crystal protector — Mates with UG-418/U

### L BAND ATR TUBES

Number Designation	Type	Center Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
6628/MLA-11	ATR	Single-1222 Pairs-1285	2000	2000	Fixed Tuned Half Height Guide
6962/MLA-12	ATR	1285	2000	2000	Half Height Guide Low Q, Double Iris Window
MLA-10	ATR	1300	2000	2000	Fixed Tuned

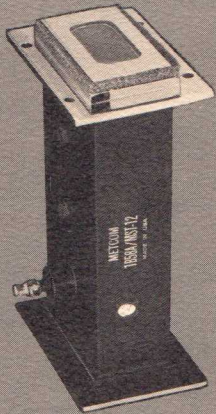




## GAS SWITCHING DUPLEXER TUBES S BAND

### S BAND — TUNABLE — BAND PASS — PRE-TR AND TR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
1B27/MST-13	Cell Type TR	2700-3400	100	100	Tunable
1B38/MST-26	Pre-TR	2690-2910	750	750	Broadband Fixed Tuned
1B54/MST-27	Pre-TR	3400-3700	750	750	Broadband Fixed Tuned
1B55/MST-18	Band Pass TR	3365-3740	750	600	Broadband Fixed Tuned
1B58A/MST-12	Band Pass TR	2664-2964	750	600	Broadband Fixed Tuned
1B62/MST-14	Cell Type TR	2700-3300	350	350	Fixed Tuned
5853/MST-23	Band Pass TR	2900-3200	750	600	Broadband Fixed Tuned
5927/MST-21	Band Pass TR	3100-3500	750	750	Broadband Fixed Tuned
6117/MST-11	Band Pass TR	2664-2964	750	600	10 Hole Flange Pressurizable 1B58A Mounting
6635/MST-18	Cell Type Tunable TR	2690-2710	5	5	Integral Cavity
6636/MST-24	Dual Band Pass TR	2700-2900	750	750	Dual 1B58A
6637/MST-29	Cell Type TR	3135-3465	50	50	Fixed Tuned
6638/MST-30	Cell Type TR	3135-3465	50	50	6637 with Positive Ignitor
7366/MST-15	Band Pass TR	2900-3200	4	4	Three Element Crystal Protector
MST-10	Band Pass TR	2700-2900	100	4	Low Power 1B58A Crystal Protector
MST-16	Coaxial Tunable TR	2700-2900	100	100	Type N Coaxial Input & Output
MST-19	Cell Type Tunable TR	2700-3400	100	100	1000 Hr. 1B27
MST-20	Coaxial Band Pass TR	2800-3000	750	750	Type N Coaxial Input and Output
MST-22	Dual Band Pass TR	2700-2900	1000	750	Three Elements
MST-25	Band Pass TR	2700-2900	300	4	1000 Hour Life Crystal Protector
MST-31	Dual Band Pass TR	2900-3200	1200	1200	Dual High Power 5853
MST-32	Band Pass TR	3350-3650	800	800	High Power Crystal Protector
MST-33	Band Pass TR	2700-2900	250	250	Low Power 1B58A
MST-34	Dual Band Pass TR	2700-2900	1000	750	For Use With Tap Wall Coupler
MST-35	Band Pass TR	2700-2900	50	50	Crystal Protector
MST-36	Band Pass TR	2950-3250	1200	1200	High Powered 5853
MST-37	Coaxial Tunable TR	3000-3100	100	100	Type N Coaxial Input and Output
8099/MST-38	Band Pass TR	2625-2925	100	100	Broadband Fixed Tuned
MST-39	Band Pass TR	2700-2900	250	250	Round Flange
MST-40	Band Pass TR	2900-3100	300	300	Traveling Wave Protector
MST-41	Dual Band Pass Pre-TR	2650-2950	1000	2	Fixed Tuned
MST-42	Dual Band Pass TR	2940-3060	1000	750	Three Elements
MST-43	Band Pass TR	2665-2965	100	100	1000 Hr. Life
MST-44	Band Pass TR	2900-3100	500	500	Crystal Protector
MST-45	Band Pass TR	2600-3000	1200	1200	1B58A with ceramic window
MST-46	Band Pass TR	2800-3100	3000	3000	Crystal Protector
MST-47	Band Pass TR	3350-3650	800	800	High Power Replacement for MST-32



### S BAND ATR TUBES

Number Designation	Type	Center Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
1B44/MSA-12	ATR	2750	750	750	Fixed Tuned
1B52/MSA-21	ATR	3625	750	750	Fixed Tuned
1B53/MSA-15	ATR	3479	750	750	Fixed Tuned
1B56/MSA-11	ATR	2850	750	750	Fixed Tuned
1B57/MSA-22	ATR	3325	750	750	Fixed Tuned
5792/MSA-16	ATR	2950	750	750	Fixed Tuned
5793/MSA-17	ATR	3050	750	750	Fixed Tuned
5921/MSA-18	ATR	3200	750	750	Fixed Tuned
5922/MSA-19	ATR	3400	750	750	Fixed Tuned
6024/MSA-20	ATR	2800	750	750	Fixed Tuned
MSA-10	ATR	2800	1000	1000	15 $\mu$ sec Rec. Time
MSA-13	ATR	2950	2000	2400	Fixed Tuned
MSA-14	ATR	3050	2000	2400	Fixed Tuned
MSA-23	ATR	2800	1000	1000	Fixed Tuned
MSA-24	ATR	2800	1000	1000	Fixed Tuned 1000 Hr. Life



## GAS SWITCHING DUPLEXER TUBES C BAND

### C BAND — TUNABLE — BAND PASS — PRE-TR AND TR TUBES

Number Designation	Type	Frequency in Mc	Peak Power in Kw	Average Power in Watts	Brief Description
1B50/MCT-33	Tunable Band Pass TR	6000-7100	500	500	Integral Tunable
5865/MCT-32	Band Pass TR	5395-5905	300	300	Fixed Tuned
5925/MCT-31	Band Pass TR	5200-5530	1000	1000	Fixed Tuned
6568/MCT-17	Band Pass TR	5395-5905	3000	3000	Phase Controlled within $\pm 5^\circ$
6624/MCT-13	Band Pass TR	5350-5450	85	85	Commercial Weather Radar Fixed Tuned, Three Elements Saddle Mount, Input Mount
6639/MCT-14	Tunable TR	5450-5650	20	20	Flange Mount
6640/MCT-16	Dual Band Pass TR	5395-5905	700	700	Fixed Tuned
6641/MCT-34	Dual Band Pass TR	5150-5410	1000	1000	Fixed Tuned
6905/MCT-10	Dual Band Pass TR	5395-5905	3000	3000	Fixed Tuned, Phase Controlled within $\pm 5^\circ$ when used with 6906
6906-MCT-26	Band Pass TR	5395-5905	5	5	Fixed Tuned, Phase Controlled within $\pm 5^\circ$ when used with 6905
7367/MCT-35	Band Pass TR	5475-5825	10	10	Three Element, Crystal Protector
MCT-11	Band Pass TR	5395-5905	1000	1000	Choke Flange, Low Power Side 6568
MCT-12	Dual Pre-TR	5395-5905	500	500	Fixed Tuned, Ionizes Above 10 Watts
MCT-15	Tunable TR	5540-5560	1	1	Fast Recovery Time 6639
MCT-18	Pre-TR	5395-5905	1000	1000	Fixed Tuned, Ionizes Above 10 Watts
MCT-19	Band Pass TR	5395-5905	.4	.4	Saddle Mount
MCT-20	Dual Band Pass TR	5220-5340	1000	1000	Fixed Tuned
MCT-21	Band Pass TR	5395-5905	500	500	High Power 5865
MCT-24	Band Pass TR	5250-5350	300	300	5865 Except for Frequency
MCT-27	Band Pass TR	5395-5905	250	250	Crystal Protector
MCT-28	Coaxial Band Pass TR	5395-5905	4	4	Type N Input and Output
MCT-29	Band Pass TR	5350-5450	85	85	Crystal Protector WR-137 WG
MCT-36	Band Pass TR	4445-4465	1.75	1.75	MCT-27 1000 Hr. Life Phase Control
MCT-37	Band Pass TR	5450-5650	250	250	Low Noise
MCT-38	Dual Band Pass TR	5875-5975	1000	2000	Ceramic Window

### C BAND ATR TUBES

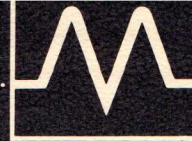
Number Designation	Type	Center Frequency in Mc	Peak Power in Kw	Average Power in Watts	Brief Description
1B51/MCA-14	ATR	6425	200	200	Fixed Tuned
6022/MCA-13	ATR	5365	1000	1000	Fixed Tuned
6081/MCA-11	ATR	5640	300	300	Fixed Tuned
6455/MCA-12	ATR	5640	300	300	Fixed Tuned
6591/MCA-10	ATR	5400	150	150	Commercial Weather Radar Fixed Tuned

## GAS SWITCHING DUPLEXER TUBES X BAND

### X BAND — TUNABLE — BAND PASS — PRE-TR AND TR TUBES

Number Designation	Type	Frequency in Mc	Peak Power in Kw	Average Power in Watts	Brief Description
1B24A/MXT-14	Tunable	8490-9600	100	100	Integral Cavity
1B63A/MXT-15	Band Pass TR	8490-9578	200	200	Band Pass Fixed Tuned
1B63B/MXT-15A	Band Pass TR	8490-9578	200	200	1000 Hour Life 1B63A
5863/MXT-64	Band Pass TR	8490-9578	250	250	Bell Lab Flanges, 5 Elements
6035/MXT-65	Band Pass TR	8490-9578	200	200	Parallel Flanges
6164/MXT-66	Band Pass TR	8490-9578	250	250	Controlled Phase Shift
6232/MXT-41	Band Pass TR	8490-9578	200	200	1B63A with Flange for RG51/U

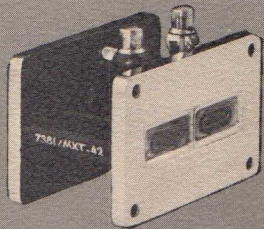




## GAS SWITCHING DUPLER TUBES X BAND Cont.

### X BAND — TUNABLE — BAND PASS — PRE-TR AND TR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
6334/MXT-19	Dual Band Pass TR	8490-9578	200	200	Dual 1B63A
6368/MXT-67	Band Pass TR	8490-9578	1000	1000	Fixed Tuned
6378/MXT-20	Tunable	8490-9600	100	100	1B24A without Reservoir
6564/MXT-68	Dual Band Pass TR	8490-9578	250	250	For Large X Guide
6642/MXT-60	Dual Band Pass TR	8490-9578	200	200	6334 with Large X Input Flange Small X Output Flange for High Power
6644/MXT-45	Band Pass TR	8490-9578	100	100	1B63A with 1.5 μS Rec. Time
6645/MXT-61	Band Pass TR	8490-9578	100	100	1B63A for High and Low Temp. Operation
6646/MXT-70	Dual Band Pass TR	8490-9578	100	100	6334 with 1.5 μS Rec. Time
6648/MXT-71	Dual Band Pass TR	8490-9578	200	200	6334 for Saddle Mount
6795A/MXT-12	Band Pass TR	9000-9400	40	40	Crystal Protector Narrow Band Saddle Flange Mount
6795B/MXT-95	Band Pass TR	9100-10,000	40	40	Saddle Flange Mount
6796/MXT-72	Dual Band Pass TR	8490-9578	200	200	Short Length 6334
6797/MXT-73	Dual Band Pass TR	8490-9578	200	200	6334 Miniaturized Contact Mount
6805/MXT-74	Dual Band Pass TR	8500-9600	200	200	6648 with Ignitor Encapsulated
7369/MXT-76	Band Pass TR	8490-9578	10	10	Crystal Protector Short Length
7379/MXT-91	Dual Band Pass TR	8490-9578	500	500	High Power Large X Input Flange Small X Output Flange
7380/MXT-24	Dual Band Pass TR	8600-9600	500	500	Large X Input Flange Small X Output Flange
7381/MXT-42	Dual Band Pass TR	8490-9578	200	200	6334 for High and Low Temp. Operation
7381A/MXT-42A	Dual Band Pass TR	8490-9578	200	200	7381 with Low Leakage at High Temperature
MXT-10	Band Pass TR	9100-9500	10	10	Crystal Protector Narrow Band
MXT-12	Dual Band Pass TR	8490-9578	200	200	6334 with .100 Common Wall
MXT-16	Band Pass TR	8490-9578	100	100	Phase Control
MXT-17	Band Pass TR	8490-9578	200	200	High Rep. Rate, Fast Rec. Time Crystal Protector 4 Elements for High and Low Temp. Operation
MXT-21	Band Pass TR	9240-9450	5	5	Phase Control TR
MXT-22	Dual Band Pass TR	8490-9578	100	100	Phase Control TR
MXT-23	Band Pass TR	8490-9578	100	100	Phase Control TR
MXT-26	Dual Band Pass TR	8490-9578	500	500	Impedance Input Flange
MXT-27	Dual Band Pass TR	8490-9578	250	250	6642 with Heater and Thermostat
MXT-29	Tunable	9300-10,000	100	100	Modified 6378 for High and Low Temp. Use
MXT-32	Dual Pre-TR	8500-9600	200	200	30db Signal Reduction
MXT-33	Band Pass TR	8500-9600	10	10	Crystal Protector for High and Low Temp. Operation 1.070"
MXT-34	Dual Band Pass TR	8490-9578	10	10	Crystal Protector 3 Elements
MXT-37	Band Pass TR	8700-8900	0.20	20	50 KC Rep. Rate
MXT-38	Band Pass TR	8700-8900	0.05	5	50 KC Rep. Rate
MXT-39A	Band Pass TR	8490-9610	200	200	1B63A for Severe Environmental Conditions
MXT-46	Band Pass TR	8500-9600	10	10	High Temperature Crystal Protector 200 MW Max. Breakdown
MXT-47	Dual Band Pass TR	8490-9578	200	200	6334 with 100 MW Max. Breakdown
MXT-48	Dual Band Pass TR	8490-9578	500	500	Phase Matching within ±3° used with MXT-49
MXT-49	Band Pass TR	8490-9578	100	100	Phase Matching within ±3° used with MXT-48
MXT-51	Cross Guide Duplexer	9325-9425	100	100	Fixed Tuned
MXT-52	Band Pass TR	8490-9578	10	10	MXT-46 with 150 MW Max. Breakdown
MXT-53	Dual Band Pass TR	8490-9578	200	200	Impedance Input Flange Struttred for Vibration
MXT-54	Dual Band Pass TR	8490-9578	500	500	Impedance Input Flange
MXT-56	Band Pass TR	8500-9600	4	4	1.7905 Element Low Loss and Breakdown TR





## GAS SWITCHING DUPLER TUBES X BAND Cont.

### X BAND — TUNABLE — BAND PASS — PRE-TR AND TR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
MXT-58	Band Pass TR	8490-9578	200	200	1B63A with Tapped Holes Both Flanges
MXT-59	Band Pass TR	8490-9578	10	10	MXT-33 with 150 $\mu$ Adc Ig. Current and Struts
MXT-63	Dual Band Pass TR	9000-9400	40	40	1.070" Saddle Mount
MXT-77	Band Pass TR	8500-9600	10	10	MXT 33 Electrically with MXT-49 Outline with Non Magnetic Flanges
MXT-78	Cross Guide Duplexer	9325-9425	100	100	MXT-51 with Special Non Magnetic Flanges
MXT-79	Band Pass TR	8490-9610	10	10	MXT-21 Modified
MXT-80	Band Pass TR	8700-8900	0.05	5	MXT-37 Electrically with MXT-46 Outline
MXT-81	Band Pass TR	9345-9405	10	10	High Low Temperature MXT-10 Fast RT
MXT-82	Dual Band Pass TR	8490-9578	200	200	6334 Electrically 7381 Outline with Struts
MXT-83	Band Pass TR	9000-9400	40	40	6795A Electrically MXT-10 Outline
MXT-84	Dual Band Pass TR	8490-9578	250	250	Similar to 6642 with 2 Holes Each Flange
MXT-85	Band Pass TR	9000-9160	100	100	1B63A Outline
MXT-86	Tunable	8600-9600	100	100	1B24A with 250-400 Vde Voltage Drop
MXT-90	Band Pass	9200-9400	200	200	Low Leakage Crystal Protector
MXT-92	Band Pass TR	9335-9415	2	2	Crystal Protector Narrow Band
MXT-93	Dual Band Pass TR	8500-9600	1	1	Crystal Protector Phase Control
MXT-94	Band Pass TR	8490-9578	200	200	1B63A with fast R.T.
MXT-96	Dual Pass TR	9000-9400	125	125	7381 Outline 3 $\mu$ s R.T. Uniform Ins. Loss $\pm$ 0.5 db. Phase Control High Temp.
MXT-97	Band Pass TR.	9000-9400	20	20	3 $\mu$ s R.T. Uniform Ins. Loss $\pm$ 0.5 db. Phase Control High Temp.
MXT-98	Band Pass TR	8490-9578	250	250	MXT-27 without Heater
MXT-99	Band Pass TR	9300-10,000	200	200	Fixed Tuned
MXT-100	Dual Band Pass TR	8490-9578	1	1	Arc Loss 1.0 db
MXT-101	Dual Band Pass TR	8850-9450	0.5	0.5	6334 Outline Crystal Protector
MXT-102	Band Pass TR	8500-9600	2	2	High Low Temp Crystal Protector
MXT-103	Band Pass TR	8490-9578	200	200	Phase Matched within $\pm$ 5 $^\circ$
MXT-104	Dual Band Pass TR	8490-9578	200	200	Phase Matched within $\pm$ 5 $^\circ$
MXT-105	Dual Band Pass TR	8490-9578	200	200	6334 Tapped Both Flanges
MXT-106	Band Pass TR	8500-9600	10	10	1B63A Outline Crystal Protector
MXT-107	Dual Band Pass TR	8500-9600	200	200	6334 with 0.9 Ins. Loss
MXT-108	Band Pass TR	8500-9600	1	1	Crystal Protector
MXT-109	Dual Band Pass TR	8490-9578	200	200	RT = 5 $\mu$ s @ -40 $^\circ$ C
MXT-110	Dual Band Pass TR	8950-9050	250	250	RT = 5 $\mu$ s @ -40 $^\circ$ C
MXT-111	Band Pass TR	8500-9600	10	10	Non Magnetic Flanges
MXT-112	Band Pass TR	9200-9400	20	20	Saddle Output Flange Mount 2 oz. Weight
MXT-116	Dual Band Pass TR	9590-9610	250	250	RT = 2 $\mu$ s @ 25 $^\circ$ C RT = 4 $\mu$ s @ -55 $^\circ$ C
MXT-118	Band Pass TR	8490-9578	250	250	6642 with Std. Flanges
MXT-119	Band Pass TR	9325-9425	300	300	3/4" Long
MXT-120	Band Pass TR	8500-9600	20	20	M4 Tap and mm Holes







## GAS SWITCHING DUPLEXER TUBES X BAND Cont.

### X BAND ATR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In KW	Average Power In Watts	Brief Description
6369/MXA-22	ATR	8750	250	250	Fixed Tuned Miniature 1B37A
6393/MXA-15	ATR	9300	250	250	Fixed Tuned Miniature 1B35A
6396/MXA-16	ATR	9300	250	250	Fixed Tuned 6393 in Half Height Guide
6629/MXA-30	ATR	8800	250	250	Fixed Tuned for RG-51/U Guide
6630/MXA-31	ATR	9375	250	250	Fixed Tuned for RG-51/U Guide
6631/MXA-32	ATR	8750	250	250	Fixed Tuned 1B37A with Ignitor
6890/MXA-10	ATR	9300	30	30	Fixed Tuned High Temp. Oper.
MXA-12	ATR	9300	250	250	Fixed Tuned for High and Low Temp. Environment
MXA-13	ATR	9650	30	30	Fixed Tuned for High and Low Temp. Environment
MXA-20	ATR	9375	300	300	Fixed Tuned for High and Low Temp. Environment
MXA-21	ATR	9300	250	250	Fixed Tuned
MXA-33	ATR	9300	250	250	Fixed Tuned Fast R.T.
MXA-34	ATR	8800	250	250	Fixed Tuned
MXA-35	ATR	9300	250	250	Fixed Tuned

## GAS SWITCHING DUPLEXER TUBES Ku-K-Ka BAND

### Ku BAND — TUNABLE — BAND PASS — PRE-TR AND TR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
6560/MKT-10	Dual Band Pass TR	15,000-17,000	100	100	Fixed Tuned
6649/MKT-19	Band Pass TR	15,000-17,000	100	100	Fixed Tuned
7368/MKT-22	Band Pass TR	15,000-17,000	10	10	Crystal Protector; 3 Elements
7563/MKT-23	Band Pass TR	15,000-17,000	90	135	Fixed Tuned
MKT-12	Band Pass TR	15,000-17,000	5	0	Phase Control and Cad. Plated Flanges
MKT-13	Dual Band Pass TR	15,000-17,000	100	100	MKT-10 with Cad. Plated Flanges
MKT-14	Dual Band Pass TR	15,000-17,000	100	100	MKT-10 with Phase Control and Cad. Plated Flanges
MKT-15	Dual Band Pass TR	16,000-16,400	100	100	Narrow Band
MKT-24	Dual Band Pass TR	16,000-18,000	135	135	Operates Between -55° and +105°C
MKT-25	Band Pass TR	16,000-17,000	10	10	Crystal Protector Operates Between -55°C and +120°C
MKT-27	Band Pass TR	16,000-17,000	5	5	Crystal Protector Operates Between -55°C and +120°C
MKT-29	Band Pass TR	16,200-16,600	5	5	Operates -55 to +125°C
MKT-32	Band Pass TR	15,000-17,000	10	10	.450 Long, Ins. Loss .6 db
MKT-33	Dual Band Pass TR	15,300-15,800	100	100	Fixed Tuned
MKT-34	Band Pass TR	15,300-15,700	10	10	Low Noise Crystal Protector
MKT-35	Band Pass TR	15,900-16,100	10	10	Crystal Protector
MKT-36	Dual Band Pass TR	16,000-17,000	4	4	Crystal Protector with Phase Control
MKT-37	Band Pass TR	16,000-17,000	10	10	Crystal Protector
MKT-38	Band Pass TR	16,000-17,000	150	150	High Power Operation
1B26/MKT-17	Tunable TR	23,630-24,580	100	100	Integral Cavity
6282/MKT-11	Band Pass TR	23,350-24,950	35	35	Fixed Tuned
6650/MKT-20	Tunable TR	23,630-24,580	24	24	MKT-17 with No Reservoir
MKT-26	Dual Band Pass TR	23,800-24,270	50	50	Fixed Tuned



## GAS SWITCHING DUPLEXER TUBES Ku-K-Ka BAND Cont.

Number Designation	Type	Center Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
1B36/MKA-10	ATR	24,000	30	30	Fixed Tuned

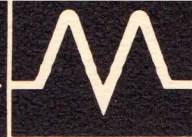
### Ka BAND — TUNABLE — BAND PASS — PRE-TR AND TR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
6545/MKT-18	Tunable TR	33,814-35,906	100	100	Integral Cavity
6685/MKT-21	Dual Band Pass TR	33,500-36,250	20	20	Fixed Tuned
MKT-16	Band Pass TR	33,700-35,700	1.5	1.5	Crystal Protector, Operates Between -55°C and +125°C
MKT-28	Band Pass TR	34,500-35,200	8	10	Crystal Protector, Operates to +75°C

Number Designation	Type	Frequency In Mc	Peak Power in Kw	Average Power In Watts	Description
MPD-13	Broadband Branched Duplexer	Classified			3/8 Coaxial
MPD-14	Broadband Receiver Protector	300-600	50	3000	WR-2100 Transition to 3/8 Coaxial
MPD-18	Balanced Broadband Duplexer	400-450	3000	5	3/8 Coaxial
MLD-10	Receiver Protector	1610	3	0.5	High Q Cavity
MLD-11	Balanced Duplexer	1215-1365	10000	50000	Waveguide Mounted
MLD-12	Branched Duplexer	1205-1215	50	2500	Waveguide
MLD-13	Duplexer	845-855	50	2500	3/8 Coaxial
MXD-13	Monopulse Duplexer	8490-9578	200	200	Waveguide
MZD-11	Monoplexer	55 ± 10°	1000	5000	3/8 Coaxial

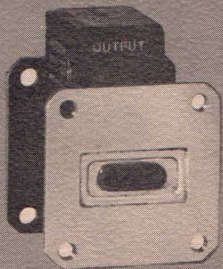
## SOLID STATE LIMITERS SOLID STATE GASEOUS LIMITERS GASEOUS DUPLEXERS P Band

Number Designation	Type	Frequency Mc Protection	Peak Power In Kw	Average Power In Watts	Insertion Loss	Isolation db	Connectors	Brief Description
MPL-20	Gaseous-Solid State Limiter	205-230	10	500	1	30	Type C	Strip Line
MPL-18	Gaseous-Solid State Limiter	420-450	15	120	1	30	3/8 Input N Output	Strip Line
MPL-17	Gaseous-Solid State Limiter	400-450	10	10	.5	30	Type C and N	Strip Line
MPL-19	Gaseous-Solid State Limiter	400-450	10	10	.5	30	Type N	Strip Line
MZL-12	Gaseous-Solid State Limiter	130-180	12	100	.5	30	1/8 Coax	Lumped Component Circuitry
MPL-10	Solid State Limiter	205-230	.6	.3	.5	10	Sub miniature	Lumped Component Circuitry
MPL-11	Solid State Limiter	50-450	1	30	.25	33	Type N	Strip Line
MPL-13	Solid State Limiter	50-450	4	50	.25	25	BNC	Coaxial Line
MPL-14	Solid State Limiter	350-500	10	200	1	25	Type N	Coaxial Line
MPL-15	Solid State Limiter	350-500	5	100	1	25	Type N	Coaxial Line



## CITRIMS RECEIVER PROTECTORS

Number Designation	Tube Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Solenoid Voltage VDC	Attenuation with CiTRims Closed
6602/MSC-10	Band Pass TR	3100-3500	750	750	17-30	40 db Min.
MSC-11	Dual Band Pass TR	3400-3700	750	750	28	40
6592/MCC-10	Band Pass TR	5200-5530	1000	1000	28	40
6594/MCC-11	Band Pass TR	5395-5905	300	300	28	40
7447/MCT-30	Dual Band Pass TR	5400-5900	700	700	28	40
MCT-25	Dual Band Pass TR	5400-5900	700	700	6	40
MCC-13	Band Pass TR	5395-5905	300	300	28	40
MCC-14	Band Pass TR	5850-6000	30	.030	28	30
MCC-15	Dual Band Pass TR	5400-5900	700	700	115 (VAC)	40
MCC-16	Band Pass TR	5400-5900	100	100	28	30
MCC-17	Band Pass TR	5450-5825	250	250	28	40
MCC-18	Band Pass TR	5395-5905	50	50	6	20
6565/MXC-10	Tunable TR	8490-9600	30	30	14	40
6593/MXC-11	Band Pass TR	8490-9578	250	250	28	40
6595/MXC-12	Tunable TR	8490-9600	30	30	3 (AC-DC)	40
6596/MXT-30	Dual Band Pass TR	8490-9578	250	250	28	40
6597/MXC-13	Band Pass TR	8490-9578	250	250	6 (AC-DC)	40
6598/MXC-23	Dual CiTRim	8500-9600	50	50	28	40
6599/MXC-14	Dual Band Pass TR	8490-9578	250	250	6 (AC-DC)	40
6600/MXC-15	Tunable CiTRim	8490-9600	250	250	6 (AC-DC)	40
6601/MXC-16	Dual Band Pass TR	8490-9578	500	500	28	40
6613/MXT-43	Dual Band Pass TR	8490-9578	500	500	28	40
6615/MXT-62	Band Pass TR	8490-9578	250	250	28	40
6616/MXC-17	Band Pass TR	8490-9578	250	250	17-30	40
6904/MXC-18	Band Pass TR	8490-9578	250	250	28	40
MXC-19	Band Pass TR	9300-9450	40	40	28	25
MXC-20	Band Pass TR	9250-9500	250	250	28	30
MXC-21	Band Pass TR	9250-9500	250	250	28	30
MXC-22	Band Pass TR	9250-9500	250	250	28	30
MXC-24	Band Pass TR	8200-8600	1	1	28	40
MXC-25	Dual Band Pass TR	8490-9578	250	250	28	40
MXC-26	Dual Band Pass TR	8490-9578	250	250	28	40
MXC-27	Band Pass TR	9250-9500	250	250	28	30
MXC-28	Band Pass TR	9300-9450	40	40	28	25
MXC-29	Band Pass TR	9300-9450	40	40	28	20
MXC-30	Band Pass TR	9550-10050	1	1	28	40
MXC-31	Band Pass TR	9250-9500	100	100	28	30
MXC-32	Band Pass TR	9250-9500	250	250	28	30
MXC-33	Band Pass TR	9250-9500	100	100	28	30
MXT-11	Band Pass TR	8490-9578	250	250	28	22
MXC-34	CiTRim	8490-9578	1	1	28	40
MXC-35	Dual Band Pass TR	9600-10,000	1	1	28	30
MXC-37	Band Pass TR	9600-10,000	1	1	28	40
MXT-35	Band Pass TR	8500-9500	10	10	28	23
MXT-36	CiTRim	9600-10000	1	1	28	40
MXT-44	Band Pass TR	8490-9578	250	250	28	40
MXC-38	Dual Band Pass TR	8500-9600	500	500	28	40
MXT-57	Band Pass TR	8490-9578	250	250	28	40
6588/MKC-10	Band Pass TR	23700-24300	1	1	14	30
MXC-39	CiTRim	9000-10,000	1	1	28	40
MKC-41	Dual Band Pass TR	9460-9540	01500	0.50	28	12
MKC-11	Dual Band Pass TR	15,800-16,500	100	100	28	25
MKC-12	Band Pass TR	15,800-16,500	10	10	28	25
MKC-13	Dual Band Pass TR	16,600-17,100	60	60	28	25
MKC-14	Dual Band Pass TR	16,600-17,100	10	10	28	25



## SALES REPRESENTATIVES

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Micron Enterprises  
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CDB Enterprises  
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Huntington L. I. New York  
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Mr. L. W. Adezio  
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Tel: Greensboro, North Carolina  
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312-453-3380  
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2511 Drexel  
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Jack F. McKinney Sales Company  
1303 Chemical Street  
Dallas, Texas  
Tel.: ME 1-9450

### Arizona and New Mexico

Fryco Company  
Lighthall Building  
Scottsdale, Arizona  
Tel.: Whitney 5-3281, 5-8071

### California and Seattle, Washington

C. W. Swift and Associates  
15166 Ventura Blvd.  
Sherman Oaks, California  
Tel.: STate 4-8550

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Don Mills, Ontario, Canada  
Hickory 4-4429

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N. D. G. Montreal, Quebec  
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Tel.: 212-255-8901  
France, Australia, and Japan

Dage Corporation  
757 Main Street  
Stamford, Connecticut  
Tel: 203-324-3123  
All countries except those listed  
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### Wright-Patterson Air Development Center

Dayton, Ohio  
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Dayton 24, Ohio  
Tel.: Beverly 3-0849