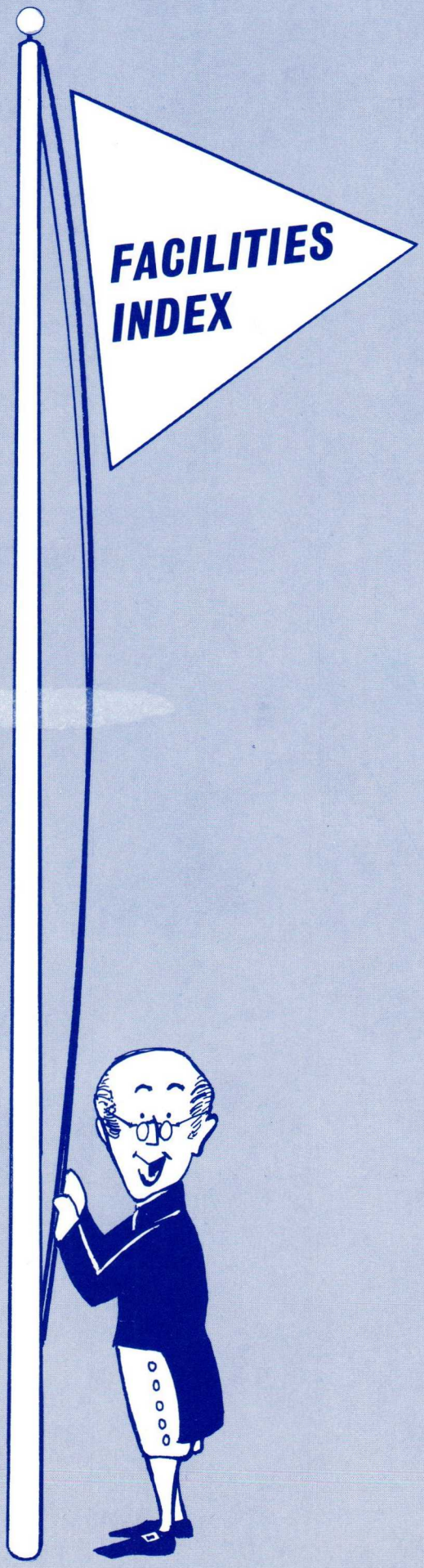
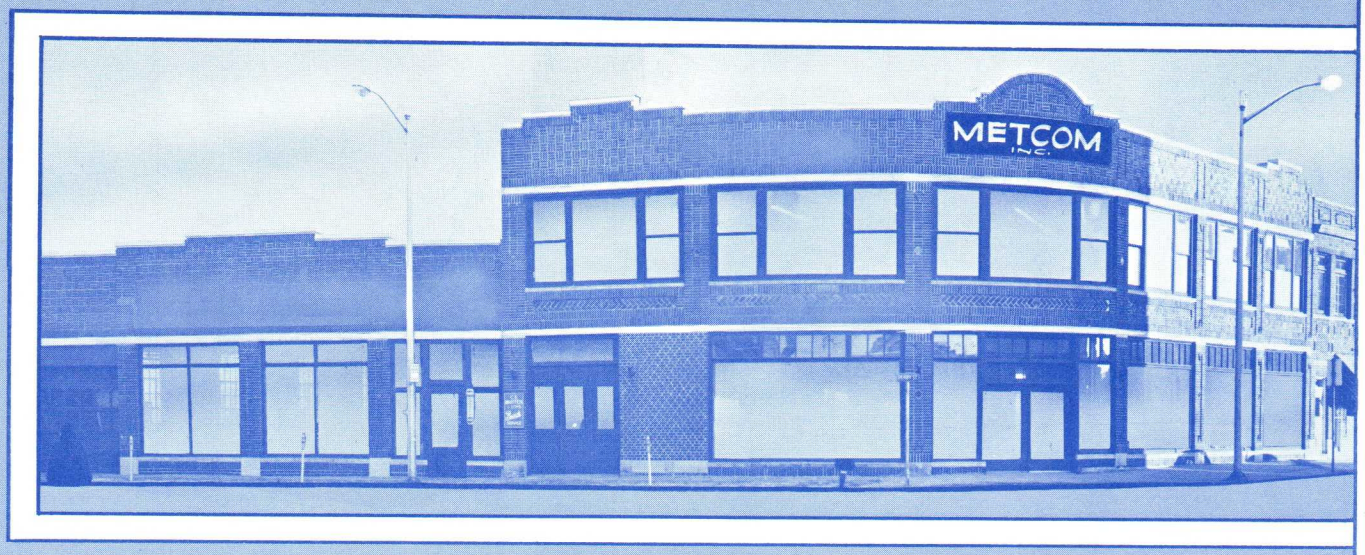

METCOM INC.
SALEM, MASSACHUSETTS
CATALOG and FACILITIES INDEX



FACILITIES INDEX

METCOM / *for better microwave tubes and devices*

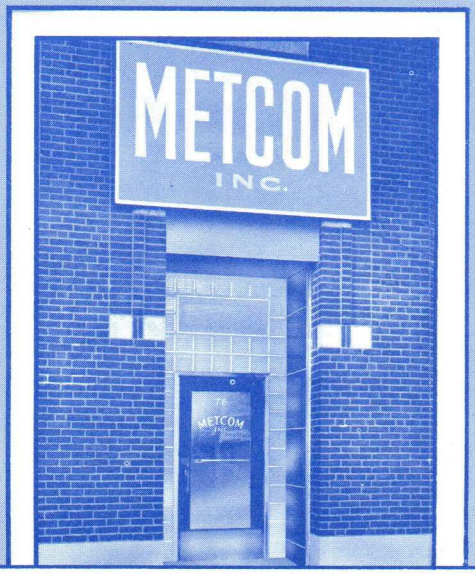


Metcom occupies three buildings housing approximately 115,000 square feet of prime manufacturing space. Two of these buildings are located in historic Salem, Massachusetts with the third in an adjoining town about one mile away.

Depicted herein in addition to the catalog items are:

Manufacturing Facilities
High Power Testing Facilities
Low Power Testing Facilities
Brazing Facilities
High Vacuum Exhaust Facilities

Metcom invites you to examine this new catalog and solicits your inquiry for any product needed in the product lines shown.

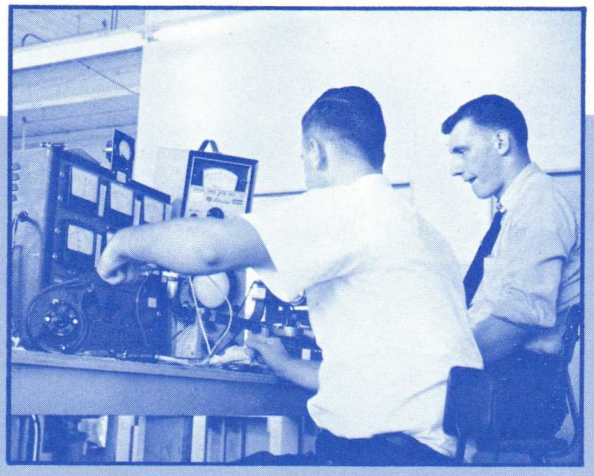


Quality Control

As the only certified Small Business holding a certificate to produce microwave tubes and devices under MIL-Q-9858A it is only necessary to quote the opening paragraph of the MIL-Q-9858A manual to understand Metcom's complete dedication to Quality Control:

Scope

Metcom, Inc. has established and maintains a Quality Control Program — which includes an inspecton and calibration system — to assure that the supplies and services produced for our customers acceptances — are in compliance with the prescribed technical and control requirement of the customer contract and purchase order through controlled accuracy of Metcom's measuring and test equipment, together with controlled production methods and processes.



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	3⅛ Coaxial Fixed Tuned	300–600	2000	5000	Flange Mounted
7324/MPT-11	3⅛ Coaxial Fixed Tuned	300–600	2000	4000	Plug in Mount
7821/MPT-12	3⅛ Coaxial Fixed Tuned	200–600	200	10000	Flange Mounted High Average Power Application
7901/MPT-13	3⅛ Coaxial Fixed Tuned	300–600	20	40	Plug in Mount
7902/MPT-17	3⅛ Coaxial Fixed Tuned	300–600	3000	5000	Plug in Mount
MPT-10	Tunable	575–625	2000	4000	Cavity Mount
MPT-13A	3-⅛ Coaxial Fixed Tuned	300-600	30	50	Plug in mount for pulsed KA operation
MPT-14	3⅛ Coaxial Fixed Tuned	200–600	200	10000	Plug in Mount 7821/MPT-12
MPT-15	⅞ Coaxial Fixed Tuned	300-600	15	120	Plug in mount
MPT-15A	⅞ Coaxial Fixed Tuned	300–600	30	60	Plug in Mount
8313/MPT-16	⅞ Coaxial Fixed Tuned	300-600	500	0.9	Plug in mount
MPT-22	⅞ Coaxial Fixed Tuned	200–600	15	500	Strip Line Mounted
MPT-17A	3⅛ Coaxial Fixed Tuned	300–600	3000	5000	MPT-17 with 30 μs R.T.
MPT-18	3⅛ Coaxial Fixed Tuned	420–430	2000	2000	Flange Mounted High Power
MPT-20	3⅛ Coaxial Fixed Tuned	400–450	2000	2000	Plug in Mount
MPT-21	3⅛ Coaxial Fixed Tuned	200–600	200	1000	Plug in Mount
8060/MPT-23	3⅛ Coaxial Fixed Tuned	Classified			
8061/MPT-24	3⅛ Coaxial Fixed Tuned	Classified			
MPT-25	3⅛ Coaxial Fixed Tuned	300–600	2000	5000	Plug in Mount
MPT-27	3⅛ Coaxial Fixed Tuned	400–450	20	20	Flange Mounted
MPT-28	⅞ Coaxial Fixed Tuned	300–600	1000	1000	Plug in Mount
MPT-29	⅞ Coaxial Fixed Tuned	200–600	15	500	Plug in Mount
MPT-30	3⅛ Coaxial Fixed Tuned	400–450	1500	1500	Plug in Mount
MPT-31	3⅛ Tunable	600–900	2000	4000	Cavity Mount
MZT-11	6⅛ Coaxial Fixed Tuned	10–50	5000	100000	Cavity Mount
MPT-16A	⅞ Coaxial Fixed Tuned	300-600	500	0.9	Plug in mount for pulsed KA operation
MPT-33	3-⅛ Coaxial Fixed Tuned	220	60	60	Plug in mount
MPT-34	Fixed Tuned Coaxial	10-600	15	500	Strip Line Mounted
MPT-35	Fixed Tuned Coaxial	10-600	15	500	Modified MPT-34
MPT-37	3-⅛ Coaxial Fixed Tuned	300-600	34		Plug in mount
MPT-39	3-⅛ Coaxial Fixed Tuned	300-600	3000	5000	MPT-17 Special Fill
MPT-40	3-⅛ Coaxial Fixed Tuned	200-600	3000	5000	Cavity Mount
MPT-41	3-⅛ Coaxial Fixed Tuned	200-600	3000	5000	Cavity Mount Modified MPT-40
MPT-42	Tunable Cell Type	1215-1355	450	450	Modified 6322
MPT-43	Classified				
MPT-44	Classified				
MPT-45	3-⅛ Coaxial Fixed Tuned	350-500	300	500	Flange Mount

GAS SWITCHING DUPLEXER TUBES

L Band

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 Dumbell Type
6260/MLT-22	Pre-TR	1250–1350	2000	2000	Dumbell 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
8272/MLT-41	Band-pass TR	1250-1350	500	500	MLT-33 with aluminum cast body
MLT-42	Band-pass TR	1220-1365	2000	2000	Broadband TR
MLT-44	Band-pass TR	1275-1300	10	10	Broadband Crystal Protector
MLT-45	Band-pass TR	1220-1365	2000	2000	Broadband Crystal Protector
MLT-47	Band-pass TR	1250-1350	200	2000	Low Loss — Fast Recovery Quartz Cylinder Construction
MLT-48	Tunable	800-850	2000	4000	Cavity Mount
MLT-49	Band-pass TR	1250-1350	800	800	Low Loss — Aluminum cast body
MLT-50	Dual Pre-TR	1260-1340	5000	150,000	Quartz Cylinder Pre-TR
MLT-51	Band-pass TR	1250-1350	100	100	MLT-33 — tapped holes
MLT-54	Dual Pre-TR	1300-1400	20mw	40kw	Cylinder Mount

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
MLA-13	ATR	1300mcs ±5%	3000	6000	Fixed Tuned

GAS SWITCHING DUPLEXER TUBES

S Band

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 Protetor
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
MST-48	Band-pass TR	2664-2964	750	750	Broadband Fixed Tuned
MST-50	Band-pass TR	2900-3100	300	300	Traveling Wave Protector
8622/MST-52	Pre-TR and TR	2900-3100	300	300	Receiver Protector
MST-53	Band-pass TR	2664-2964	750	750	Low Loss 1B58A
MST-54	Band-pass TR	2800-3000	10	10	Crystal Protector. Waveguide hybrid
MST-56	Band-pass TR	2800-3200	60	60	UG-53/U Flanges
MST-57	Band-pass TR	2900-3500	100	100	Duplexer Waveguide Hybrid Type
8623 / MST-58	Band-pass TR	2900-3100	50	50	Quartz Cylinder input receiver protector
MST-59	Band-pass TR	3030-3110	25	25	Crystal Protector
8578 / MST-60	Dual TR	2700-2900	1000	1000	Duplexer Waveguide Hybrid Type
MST-61	Dual TR	3030-3110	25	25	Three elements
MST-62	Dual TR	2700-2900	1000	1000	Modified MST-22
MST-63	Classified				
MST-64	Classified				
MST-65	Dual TR	2880-3100	750	600	1B58A outline

GAS SWITCHING DUPLEXER 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 μsec 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
MSA-25	Dual ATR	3000	5000	5	Fixed Tuned
MSA-26	Classified				

S Band ATR TUBES

C Band

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 Fixed Tuned
6568/MCT-17	Band Pass TR	5395–5905	3000	3000	Phase Controlled within ±5°
6624/MCT-13	Band Pass TR	5350–5450	85	85	Commerial 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 ±5° when used with 6906
6906–MCT-26	Band Pass TR	5395–5905	5	5	Fixed Tuned, Phase Controlled within ±5° 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
7849/ MCT-23	Band-pass TR	5395-5905	500	500	Crystal Protector
MCT-40	Band-pass TR	5395-5905	300	300	Low Loss
MCT-41	Dual Band-pass TR	5250-5710	1000	1000	Fixed Tuned
MCT-42	Classified				
MCT-43	Band-pass TR	5380-5420	100	100	Modified MCT-16/6640
MCT-44	Dual Band-pass TR	5250-5710	10	10	Fixed Tuned
MCT-45	Band-pass TR	5350-5450	4	4	Long Life 2000 hours
MCT-46	Band-pass TR	5395-5905	500	500	Flangeless TR

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

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
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 6334 with Large X Input Flange
6642/MXT-60	Dual Band Pass TR	8490–9578	200	200	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
6645B/MXT-61B	Band-pass TR	8490-9578	100	100	Modified MXT-61/6645B
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
724B / MXT-55	Band-pass TR	8451-9862	200	200	Fixed tuned separate cavity
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
MXT-21	Band Pass TR	9240–9450	5	5	Crystal Protector 4 Elements for High and Low Temp. Operation
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	20	0.20	50 KC Rep. Rate
MXT-38	Band Pass TR	8700–8900	5	0.05	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 Strutted 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
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 150μ Adc Ig. Current and Struts
MXT-63	Dual Band Pass TR	9000–9400	40	40	1.070" Saddle Mount

GAS SWITCHING DUPLEXER TUBES

X Band

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
MXT-66	Band-pass TR	8500-9600	200	200	Phase Control
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-89	Dual Band Pass TR	8490-9610	200	200	7381 with $\pm 3^\circ$ phase control
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 3μs R.T. Uniform Ins. Loss $\pm$0.5 db. Phase Control High Temp.
MXT-97	Band Pass TR.	9000-9400	20	20	3μs 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 = 5μs @ -40°C
MXT-110	Dual Band Pass TR	8950-9050	250	250	RT = 5μs @ -40°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 = 2μs @ 25°C RT = 4μs @ -55°C 6334 Outline
MXT-118	Band Pass TR	8490-9578	250	250	6642 with Std. Flanges
MXT-119	Band Pass TR	9325-9425	300	300	$\frac{3}{4}$" Long
MXT-120	Band Pass TR	8500-9600	20	20	M4 Tap and mm Holes
MXT-121	Band-pass TR	8500-9600	20	20	Crystal Protector
MXT-122	Band-pass TR	8500-9600	2	2	MXT-102 special holes output flange Crystal Protector
MXT-124	Band-pass TR	8500-9600	1	1	Phase Control
MXT-125	Band-pass TR	9325-9425	20	20	Crystal Protector
MXT-126	Band-pass TR	9325-9425	20	20	Modified MXT-125
MXT-128	Band-pass TR	8490-9578	40	40	Low Loss 1B63A
8574/MXT-132	Dual Band pass TR	5800-9600	20	20	Low noise
MXT-133	Crossed-guide Duplexer	9325-9425	100	100	MXT-78 except 1170 peak flanges
MXT-134	Dual Band-pass TR	8490-9610	200	200	Quartz bottle input
MXT-135	Band-pass TR	8490-9578	100	100	MXT-70 with RT=1 usec @ 50kw
MXT-136	Band-pass TR	8490-9578	200	200	MXT-104 except 0.5usec RT
MXT-137	Dual Band-pass TR	8490-9610	200	200	MXT-42 with Bell Lab. flange
MXT-140	Band-pass TR	9250-9350	30	30	Low noise, fixed tuned
MXT-143	Band-pass TR	9600-10,400	100	100	CW crystal protector
MXT-144	Band-pass TR	9000-9600	100	100	MXT-125 outline
MXT-145	Band-pass TR	8500-9400	10	10	MXT-33 modified
MXT-149	Dual Band-pass TR	8490-9500	250	250	Modified 6334

GAS SWITCHING DUPLEXER TUBES

X Band ATR TUBES

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
1B35A/MXA-14	ATR	9300	250	250	Fixed tuned for RG-52/U guide
1B37A/MXA-19	ATR	8750	250	250	Fixed tuned for RG-52/U guide
5864/MXA-17	ATR	9375	250	250	Fixed tuned for RG-52/U guide
6162/MXA-25	ATR	9080	250	250	Fixed tuned for RG-52/U guide
6163/MXA-11	ATR	9050	250	250	Fixed Tuned for RG-52/U guide
6214/MXA-26	ATR	9375	250	250	Fixed tuned for RG-52/U guide
6304/MXA-29	ATR	9300	250	250	Fixed tuned for RG-52/U guide
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
8481/MXA-36	ATR		150	150	Fixed tuned for RG-52/U guide

GAS SWITCHING DUPLEXER TUBES

Ku Band

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	100	100	MKT-19 with 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
MKT-16	Band-pass TR	33,700-35,700	15	15	Fixed Tuned
8599 / MKT-39	Band-pass TR	15,500-17,500	50	50	Crystal Protector
MKT-40	Band-pass TR	16,000-16,500	10	10	Crystal Protector
MKT-42	Band-pass TR	15,000-17,000	100	100	Lowloss MKT-19
MKT-43	Band-pass TR	15,400-15,700	5	5	MKT-29 except Frequency
MKT-44	Band-pass TR	16,000-17,000	5	5	Crystal Protector
MKT-48	Band-pass TR	15,500-17,500	10	10	Crystal Protector
MKT-50	Band-pass TR	16,400-16,650	1.0	1.0	Crystal Protector
MKT-51	Band-pass TR	15,400-15,600	1.0	1.0	Crystal Protector
MKT-52	Band-pass TR	15,700-15,900	1.0	1.0	Crystal Protector

K Band

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Brief Description
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
1B36/MKA-10	ATR	24,000	30	30	Fixed Tuned
MKA-11	ATR	15,500	5	5	Fixed Tuned

Ka Band

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	Bank Pass TR	34,500–35,200	8	10	Crystal Protector, Operates to +75°C

CITRIMS RECEIVER PROTECTORS

C Band

S Band

X Band

Ku Band

Number Designation	Tube Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Solenoid Voltage VDC	Attenuation with CiTRims Closed
6592/MCC-10	Band Pass TR	5200–5530	1000	1000	28	40
6594/MCC-11	Band Pass TR	5395–5905	300	300	28	40
MCC-12	Dual Band-pass TR	5400-5900	1000	1000	28	25
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
MCC-19	Band-pass TR	5395-5905	300	40	300	6
MCC-20	Band-pass TR	5400-5900	250	40	250	28
MCC-21	Band-pass TR	5395-5755	100	40	100	28
MCC-24	Band-pass TR	5400-5900	100	30	100	28
7447/MCT-30	Dual Band Pass TR	5400–5900	700	700	28	40
MCT-25	Dual Band Pass TR	5400–5900	700	700	28	40
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
MSC-13	Citrim	3100-3500	750	40	750	28
MSC-15	Citrim	3100-3500	750	45	750	28
MXC-44	Dual Band-pass TR	8500-9600	500	40	500	20-29
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
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
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
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
MXC-34	Band Pass TR	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
MXC-38	Dual Band Pass TR	8500–9600	500	500	28	40
MXC-39	CiTRim	9000—10,000	1	1	28	40
6599/MXA-14	Dual Band Pass TR	8490–9578	250	250	6(AC-DC)	40
6596/MXT-30	Dual Band Pass TR	8490–9578	250	250	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
MXT-35	Band Pass TR	8500–9500	10	10	28	23
MXT-36	Band Pass TR	9600–10000	1	1	28	40
MXT-44	Band Pass TR	8490–9578	250	250	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
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
MKC-15	Dual Band-pass TR	16,000-17,000	10	10	28	25
MKC-16	Dual Band-pass TR	16,000-17,000	4	4	28	25
MKC-17	Dual Band-pass TR	15,400-15,600	40	40	28	25

Brazing Furnaces · Induction Heaters

Vacuum tube companies who are seriously involved in the present day technological race must be equipped in great depth with high temperature, controlled atmosphere brazing furnaces, brazing type induction heaters and ceramic-metal bonding ovens. Metcom is equipped in such depth with dozens of the most modern type furnaces in all muffle sizes as well as belt driven automatic brazing ovens.

Assembly

Metcom maintains efficiently laid out completely equipped assembly stations for all classes of tubes and devices manufactured. All stations, ranging from simple etching benches to complex pressure hoods equipped with microscopes, are manned by highly trained technicians, skilled artisans of their own craft.

FOLDED CYLINDERS

Number Designation	Frequency In Mc	Peak Power In Kw	Average Power In Kw	Brief Description
MDS-11	300–600	3000	5	3⅛ 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
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
MDS-87	Classified			
MDS-88	Classified			
MDS-89	Classified			
MPT-19	400–450	50	3	Cavity Mounted WR-2100 Guide
MPT-36	Classified			

SOLID STATE LIMETERS

Number Design ation	Type	Frequency Mc Protection	Peak Power In Kw	Average Power In Watts	Insertion Loss	Isola tion db	Connectors	Brief Description
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
MPL-12	Solid State	10-30	100	50	25	20	N	

SOLID STATE GASEOUS LIMITERS

P Band

Number Design ation	Type	Frequency Mc Protection	Peak Power In Kw	Average Power In Watts	Insertion Loss	Isola tion db	Connectors	Brief Description
MPL-17	Solid State Gaseous Limiter	400-450	10	10	.5	30	C and N	
MPL-18	Solid State Gaseous Limiter	420-450	15	120	1.0	30	N	
MPL-19	Solid State Gaseous Limiter	400-450	10	10	.5	30	N	
MPL-20	Solid State Gaseous Limiter	205-230	10	.5	1.0	30	C	
MPL-21	Solid State Gaseous Limiter	406-450	.5	1	.25	20	N	
MPL-24	Classified							
MPL-25	Solid State Gaseous Limiter	400-450	1	2	.5	30	N	
MPL-26	Solid State Gaseous Limiter	410-450	.5	1	2	20	3-1/8 and 1-5/8	
MPL-28	Solid State Gaseous Limiter	350-450	.03	.5	.5	20	N	
MPL-29	Solid State Gaseous Limiter	400-450	.5	100	.4	20	3-1/8 and 1-5/8	
MPL-30	Solid State Gaseous Limiter	400-450	2	5	.5	20	N	

GASEOUS DUPLEXERS

P Band

Number Designation	Type	Frequency In Mc	Peak Power in Kw	Average Power In Watts	Description
MPD-13	Broadband Branched Duplexer	Classified			3⅛ Coaxial
MPD-14	Broadband Receiver Protector	300–600	50	3000	WR-2100 Transition to 3⅛ Coaxial
MPD-18	Balanced Broadband Duplexer	400–450	3000	5	3⅛ Coaxial
MPD-22	Balanced Duplexer	415-445	250	12.5	3⅛ Coaxial
MPD-24	Duplexer	73-74.6	120	2.4	1⅝ Coaxial
MPD-25	Classified				

L Band

Number Designation	Type	Frequency In Mc	Peak Power in Kw	Average Power In Watts	Description
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	3⅛ Coaxial

DUPLEXERS (Cont.)

L Band

Number Designation	Type	Frequency In Mc	Peak Power in Kw	Average Power In Watts	Description
MLD-17	Balanced Duplexer	1260-1340	50	1500	Type N receiver output

X Band

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Description
MXD-13	Monopulse Duplexer	8490–9578	200	200	Waveguide

Z Band

Number Designation	Type	Frequency In Mc	Peak Power In Kw	Average Power In Watts	Description
MZD-11	Monoplexer	55 ± 10°	1000	5000	3⅛ Coaxial

MICROWAVE CAVITIES

Number Designation	Type	Frequency In Mc	QL	Insertion Loss in db MLX	Brief Description
1Q26A/MXQ-11	Reference Cavity	9280	1000–1500	8	Temp. Range — −65 to +100°C
MXQ-12	Reference Cavity	8800	1200–1800	8	Light Weight
MXQ-14	Reference Cavity	8700	1000–2000	10	Dual Mode ±150MC
MXQ-15A	Ref. Cavity	8500-9400	1000-2000	13	Dual Mode

SPARK GAPS

Number Designation	Breakdown Voltage In KV. Min.	Max.	Number Designation	Breakdown Voltage In KV. Min.	Max.
1B22/MDS-23	2.0	3.0	MDS-111	35.0	40.0
1B31/MDS-32	6.8	9.9	MDS-112	23.5	24.5
1B41/MDS-33	8.7	10.2	MDS-116	39.0	45.0
1B45/MDS-34	14.5	16.5	MDS-121	1.45	1.65
MDS-10	16.0	18.0	MDS-138	5.4	6.6
MDS-12	18.0	20.0	MDS-147	5.00	5.20
MDS-13	8.5	10.0	MDS-148	0.80	1.00
MDS-14	10.5	12.0	MDS-150	13	20
MDS-15	23.0	27.0	MDS-152	1.7	2.5
MDS-16	5.5	6.5			
MDS-17	14.0	16.0			
MDS-18	16.0	18.0			
MDS-19	6.5	7.5			
MDS-21	19.0	21.0			
MDS-26	7.2	7.7			
MDS-27	2.7	3.7			
MDS-28	18.0	20.0			
MDS-29	32.0	35.0			
MDS-30	12.0	14.0			
MDS-31	1.5	2.5			
MDS-35	1.0	1.2			
MDS-36	1.2	2.0			
MDS-37	3.0	4.0			
MDS-38	0.1	1.0			
MDS-39	200	300			
MDS-40	5.0	6.0			
MDS-41	14.0	16.0			
MDS-44	23.0	25.0			
MDS-55	11.25	13.75			
MDS-56	24	26			
MDS-90	1.8	3.2			
MDS-104	2.7	3.3			
MDS-105	7.5	9.0			
MDS-96	31.0	40.0			
MDS-102	18.0	22.0			

PRESSURIZING WINDOWS

S Band

Number Designation	Frequency Coverage	Max. VSWR	Peak Power (Kw)	Pressure Differential (psia)	W/G Size
MSW-1	2675–2925	1.10	750	30	RG-48/U Solderable
MSW-2	2670–2620	1.1	750	30	RG-48/U Solderable Viewing Window
MSW-3	2800–3200	1.20	750	30	Flange Mounted
MSW-4	2600–3700	1.2	1000	30	RG-48/U Flange Mounted
MSW-5	2700–2900	1.20	750	30	Flange Mounted
MSW-6	2675–2925	1.10	1000	30	RG-48/U Solderable
MSW-7	2800–3200	1.20	750	30	Solderable
MSW-8	2600–4000	1.5	1000	30	RG-48/U Flange Mounted
MSW-10	2600–3700	1.30	750	30	RG-48/U Triple Slot Solderable
MSW-11	2000–2400	1.05	10	30	RG-104/U or RG-105/U Ceramic
MSW-12	2600–3000	1.10	750	30	RG-48/U Solderable
MSW-13	2800-3200	1.20	250	30	UG-53/U Flange Mounted
MSW-14	2800-3200	1.20	250	30	RG-48/U
MSW-15	2800-3150	1.10	12	30	RG-48/U Flange mounted
MSW-16	Classified				
MSW-17	2700-2900	1.2	1000	30	Flange Mounted

PRESSURIZING WINDOWS

C Band

Number Designation	Frequency Coverage	Max. VSWR	Peak Power (Kw)	Pressure Differential (psig)	W/G Size
MCW-1	5200–5900	1.20	500	30	RG-50/U Solderable
MCW-2	5100–5320	1.15	500	30	RG-49/U Solderable
MCW-3	4900–5100	1.15	500	30	RG-49/U Solderable
MCW-4	5250–5850	1.10	800	45	Triple Slot Solderable
MCW-5	5800–8200	1.10	500	30	Triple Slot Solderable
MCW-7	5100–5900	1.25	500	30	RG-49/U Solderable
MCW-8	5450–5825	1.12	750	30	RG-49/U Solderable
MCW-10	4900–5100	1.15	100	30	RG-49/U Solderable
MCW-11	5200–5800	1.50	6000	45	RG-49/U Flange Mounted
MCW-13	5400–5900	1.20	1200	40	RC-95/U Flange Mounted
MCW-14	5400-5700	1.20	1200	40	RG-95/U Flange Mounted
MCW-15	5400-5700	1.20	1200	40	RG-95/U Flange Mounted
MCW-16	7100-7800	1.12	10CW	8	RG-50/U Flange Mounted
MCW-17	5200-5900	1.20	1200	40	RG-95/U Flange Mounted
MCW-18	5100-5900	1.15	2000	70	RG-95/U Flange Mounted

X Band

Number Designation	Frequency Coverage	Max. VSWR	Peak Power (Kw)	Pressure Differential (psig)	W/G Size
MXW-1	9150–9600	1.10	430	30	Flange Mounted
MXW-2	8600–10000	1.10	430	30	Flange Mounted
MXW-3	9210–9410	1.10	250	30	RG-51/U Solderable
MXW-4	8830–9330	1.10	430	30	Flange Mounted
MXW-5	9200–9420	1.10	250	30	RG-52/U Solderable
MXW-6	8850–9330	1.10	430	30	Flange Mounted
MXW-7	8700–8900	1.10	430	30	Flange Mounted
MXW-8	8645–9555	1.15	430	30	Flange Mounted
MXW-9	6150–6850	1.3	250	30	RG-50/U Solderable
MXW-10	9200–9420	1.10	250	30	RG-52/U Solderable
MXW-11	8530–8750	1.10	250	30	RG-52/U Solderable
MXW-12	8650–8870	1.10	250	30	RG-52/U Solderable
MXW-13	8870–9090	1.10	250	30	RG-52/U Solderable
MXW-14	8990–9210	1.10	250	30	RG-52/U Solderable
MXW-15	9250–9405	1.10	430	50	Flange Mounted
MXW-16	8500–9600	1.12	500	30	Mica Flange Mounted
MXW-17	9400–9600	1.20	250	30	RG-52/U Solderable
MXW-18	8490–9600	1.15	430	30	Flange Mounted
MXW-19	9150–9600	1.10	430	30	Flange Mounted
MXW-20	8490–9578	1.20		30	Mica Speial Mounting
MXW-21	8100-12,400	1.15	200	30	Mica special mounting
MXW-22	8500–9600	1.12	200	30	Flange Mounted
MXW-23	9200–9420	1.10	250	30	MXW-10 .060 Kovar
MXW-24	10200–10300	1.3	500	30	RG-52/U Solderable
MXW-25	8490–9578	1.12	500	30	RG-51/U Flange Mounted
MXW-26	9200–9420	1.10	250	30	MXW-10 .040 Kovar
MXW-27	9300 ± 20	1.10	250	30	RG-52/U Solderable
MXW-28	8490–9578	1.12	500	30	RG-52/U Mica Flange Mounted
MXW-29	90000	1.2	500	30	RG-52/U Solderable
MXW-30	10250–10500	1.20	8 Ave.	30	RG-51/U Special Flange Mounting
MXW-31	8980	1.10	250	30	RG-52/U Solderable
MXW-32	8490–9600	1.08	200	60/30	RG-52/U Triple Slot Solderable
MXW-33	10200–10600	1.2	2.5 Ave.	30	Mounts to UG-40A/U
MXW-34	8200–12400	1.08		30	RG-52–U Solderable
MXW-35	9900	1.10	150	30	RG-52/U Solderable
MXW-36	8500–9600	1.08	3.60	30	RG-52/U Flange Mounted
MXW-39	8700-9700	1.10	10 ave.	45	RG-52/U Flange mounted
MXW-40	8400–9600	1.08	200	30	Triple Slot Solderable
MXW-42	8490–9578	1.15	200	30	Flange Mounted
MXW-43	8500–10240	1.2	200	30	RG-52/U Solderable
MXW-44	8500–9600	1.2	300	30	Triple Slot Solderable
MXW-48	8350-11,000	1.25	200	30	RG-52/U solderable
MXW-49	9100	1.15	300	30	Flange Mounted

PRESSURIZING WINDOWS

K Band

Number Designation	Frequency Coverage	Max. VSWR	Peak Power (Kw)	Pressure Differential (psig)	W/G Size
MKW-10	13300 ± .01%	1.07		15	RG-51/U Solderable
MKW-11	34600–35200	1.10	20 Ave. To Be Specified	30	RG-96/U Solderable
MKW-12	16300–16700	1.10		15	RG-91/U Solderable
MKW-13	16,000-17,000	1.45		15	RG-91/U

WAVEGUIDE COMPONENTS

Special Waveguide Components available upon request.

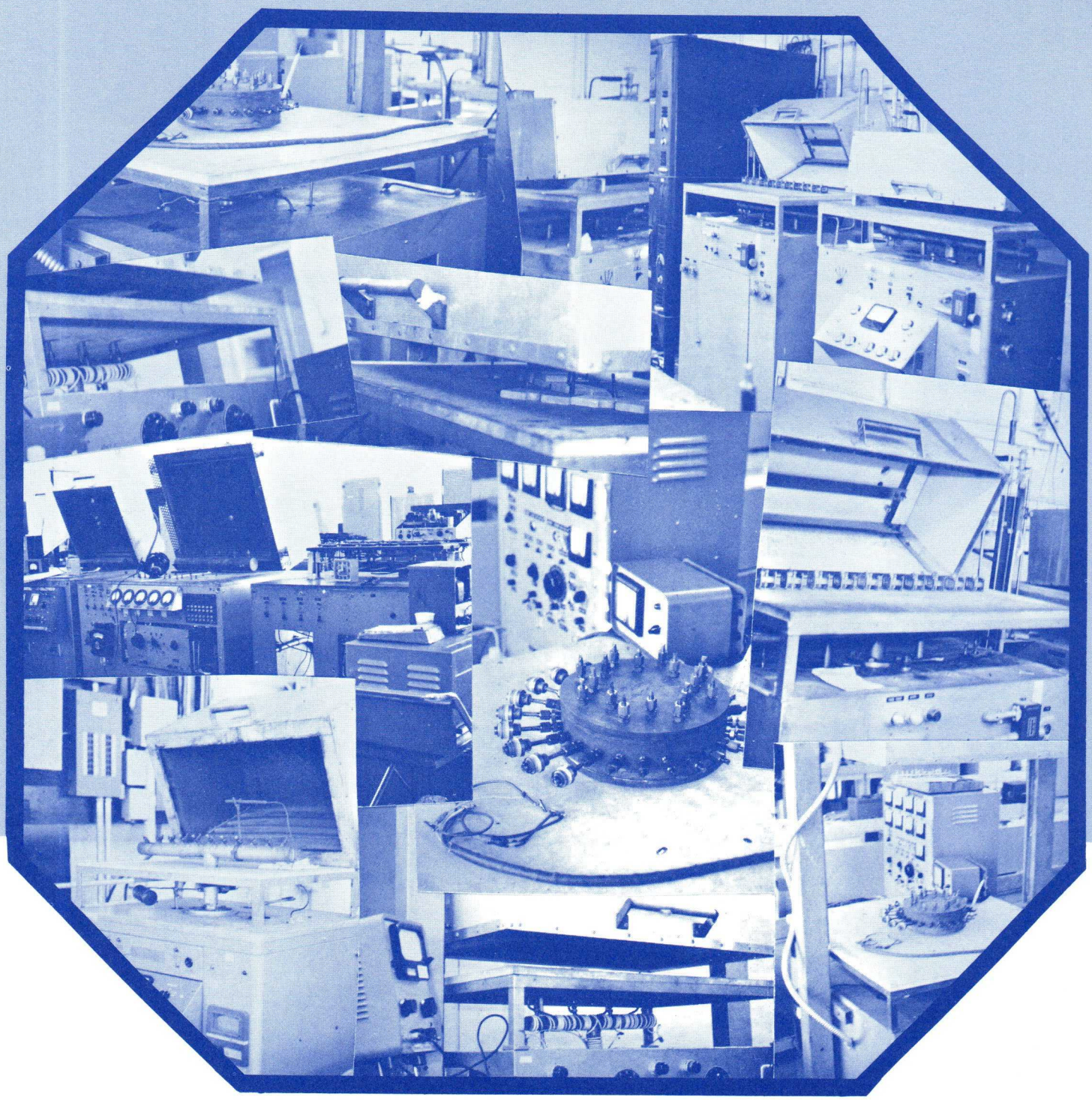
FERRITE ISOLATORS

Number Designation	Type	Frequency Mc	Peak Power In Kw	Average Power In Watts	Insertion Loss db Max	Isolation db Min	Connectors
MCD-10	Coaxial	5400–5900	2	6	1.0	15	TNC
MCD-11	Coaxial	5400–5900	2	6	1.0	15	N
MCD-13	Coaxial	5400–5900	2	6	1.0	15	N and TNC
MXD-10	Coaxial	8200–10000	2	6	1.0	20	N
MCD-12	Coaxial	Classified					N and TNC
MCD-14	Coaxial	Classified					TNC

Test Equipment for Power Tubes

Manufacturers of magnetrons, klystrons and tetrodes must be fully equipped to drive, tune, measure, detect and life test all types of tubes manufactured.

Metcom is equipped to perform all production, design, qualification and environmental tests specified by its customers for every power tube manufactured.



Exhaust Facilities

Manufacturers of vacuum tubes must be equipped with the finest available exhaust equipment and facilities. Metcom is proud of the extensive exhaust facilities which consist of elaborate Vac Ion Double Vacuum Exhaust gear for large power tubes through Multi-Head Turret Exhaust equipment for high production tubes in addition to Multi-Head Metal Manifold, Valvable Gas Switching Tube Exhaust facilities, capable of gas filling as well as exhaust.

MAGNETRONS

C Band

Number Designation	Frequency Mc	Peak Output Watts	Peak Anode Voltage KV	Peak Anode Current A	Pulse Duration μs	Duty Cycle	Brief Description
7088/MCM-32	5400–5900	100	1.3	0.80	1.000	.0020	Tunable Pulsed Beacon Application
7417/MCM-10	5500–5600	10,000	7.5	4.00	0.200	.0003	Fixed-Tuned Pulsed
7443/MCM-23	5400–5900	400	2.0	1.10	1.000	.0020	Tunable Pulsed Beacon Application
7444/MCM-13	5400–5900	1000	2.8	1.90	1.000	.0020	Tunable Pulsed Beacon Application
MCM-11							
MCM-12	5400–5900	400	2.0	1.10	1.000	.0020	Tunable Pulsed Beacon Application
MCM-14	5400–5900	500	2.2	1.10	1.000	.0020	Tunable Pulsed Beacon Application
MCM-15	5400–5900	400	2.0	1.10	1.000	.0020	Tunable Pulsed Beacon Application
MCM-16	5400–5900	1200	2.8	1.90	1.000	.0020	Tunable Pulsed Beacon Application
MCM-18	5400–5900	700	2.5	1.5	1.000	.0020	Tunable Pulsed Beacon Application
MCM-20	5500–5800	25	0.5	0.19	1.000	.0020	Tunable Pulsed Beacon Application
MCM-26	5400–5900	1000	2.7	1.7	1.000	.0020	Tunable Pulsed Beacon Application
MCM-27	5400–5900	500	2.2	1.1	1.000	.0020	Tunable Pulsed Beacon Application
MCM-28	5400–5900	1200	2.8	1.7	1.000	.0020	Tunable Pulsed Beacon Application
MCM-29	5400–5900	2500	3.3	3.5	1.000	.0020	Tunable Pulsed Beacon Application
MCM-30	5400–5900	159	1.3	1.0	1.000	.0020	Tunable Pulsed Beacon Application
MCM-31	5400–5900	250	1.5	1.1	1.000	.0020	Tunable Pulsed Beacon Application
MCM-33	5400–5900	2000	3.3	3.0	1.000	.0020	Tunable Pulsed Beacon Application
MCM-34	5400–5900	150	1.3	1.0	1.000	.0020	Tunable Pulsed Beacon Application
MCM-36	5400–5900	900	2.1	1.5	1.200	.0020	Tunable Pulsed Beacon Application
MCM-37	5400–5900	4000	4.3	4.2	1.000	.0010	Tunable Pulsed Beacon Application
MCM-38	5400–5900	200/400	2.3	1.1	1.000	.0020	Tunable Pulsed Beacon Application
MCM-39	5400–5900	1500	2.9	2.0	1.200	.0020	Tunable Pulsed Beacon Application
MCM-40	5200-5700	900	3.0	2.10	1,000	.0020	Tunable Pulsed Beacon Application
MCM-41	5400-5900	400	2.4	1.30	1,000	.0020	Tunable Pulsed Beacon Application
MCM-43	5400-5900	600	2.8	1.70	1.000	.0020	Tunable Pulsed Beacon Application
MCM-44	5400-5900	1000	2.6	2.0	1.000	.002	Tunable Pulsed Beacon Application
MCM-45	5400-5900	450	2.3	1.1	0.500	.002	Tunable Pulsed Beacon Application
MCM-46	5400-5900	600	2.8	1.70	1.000	.0020	Tunable Pulsed Beacon Application

X Band

Number Designation	Frequency Mc	Peak Output Watts	Peak Anode Voltage KV	Peak Anode Current A	Pulse Duration μs	Duty Cycle	Brief Description
7445/MXM-19	9100–9500	100	1.3	0.90	1.000	.0020	Tunable Pulsed Beacon Application
MXM-10	9345–9405	800	2.8	1.50	0.250	.0015	Fixed-Tuned Pulsed
MXM-11	9100–9500	100	1.2	0.80	1.000	.0020	Tunable Pulsed Beacon Application
MXM-13	8500–8900	150	1.4	1.0	1.000	.0020	Tunable Pulsed Beacon Application
MXM-14	9000–9600	150	1.4	1.0	1.000	.0020	Tunable Pulsed Beacon Application
MXM-15	9345–9405	3000	2.8	2.50	0.250	.0015	Fixed-Tuned Pulsed
MXM-16	8800–9600	1000	2.9	1.9	1.000	.0020	Tunable Pulsed Beacon Application
MXM-20	9100-9400	5	5.0	90ma			Tunable Pulsed Beacon
MXM-21	9345–9405	2500	3.0	4.0	1.000	.002	Fixed-Tuned Pulsed
MXM-22	8900–9000	1000	2.7	2.0	1.000	.0020	Waveguide Output
MXM-23	8500–8900	1000	2.6	2.0	1.000	.002	Tunable Pulsed Beacon
MXM-24	8900–9600	2500	3.4	3.5	1.000	.0020	Waveguide Output
MXM-26	8900–9500	150 (min.)	1.3	1.0	1.000	.0010	Tunable Pulsed Beacon Application
MXM-27	9100-9400	10	9.0	90ma			Tunable Pulsed Beacon
MXM-28	9000–9600	1000	2.6	2.0	3.000	.0010	Tunable Pulsed Beacon Application
MXM-30	8900–9400	1700	3.0	2.5	3.000	.0010	Tunable Pulsed Beacon Application
MXM-31	9300–10,000	7500	3.7	4.5	2.000	.0010	Air Cooled Tunable Integral Magnet
MXM-32	8800–9500	500	2.4	1.5	1.000	.0020	Air Cooled Tunable Integral Magnet
MXM-33	9100-9500	1000	3.0	2.0	1.0	.002	Tunable Pulsed Beacon
MXM-36	9275–9475	10	0.55	0.15	1.000	.0003	Fixed Tuned, Pulsed Beacon Appl.
MXM-37	9070–9090	150	1.4	1.1	1.000	.0030	1⅜ Cube, Fixed Tuned Pulsed Beacon
MXM-38	8600–9000	500	2.3	1.3	1.000	.0020	Tunable, Pulsed Beacon UG-39/U Flange Mounted
MXM-39	8600–9000	750	2.6	1.7	1.000	.0020	Tunable, Pulsed Beacon UG-39/U Flange Mounted
MXM-40	8900–9600	2000	3.3	3.0	1.000	.0020	Tunable, Pulsed Beacon UG-39/U Flange Mounted
MXM-41	8800–10,000	20,000	0.93	0.055	cw	1.000	Fixed Frequency
MXM-42	8800–9200	400	2.1	1.3	3.500	.0045	Tunable, Pulsed Beacon UG-39/U Flange Mounted
MXM-43	9345-9405	24	8.0	8.2	2.2	.001	Fixed Freq.
MXM-44	9000-9600	1000	2.6	2.0	3.0	.002	Tunable Pulsed Beacon
MXM-45	9000–9600	750	2.6	1.7	1.000	.0020	Tunable, Pulsed Beacon UG-39/U Flange Mounted
MXM-46	8800–9600	1000	2.9	1.9	1.000	.0020	TNC Bulkhead Mounting
MXM-47	8950–9350	200 (min.)	1.5	1.1	1.000	.0020	TNC Coax
MXM-48	9100–9600	500	2.4	1.3	1.000	.0020	Fixed Tuned TNC Coax
MXM-49	9300-10,000	65	15.0	15.0	3.3		Tunable Freq.
MXM-50	8800-9500	400	2.2	1.3			Tunable Pulsed Beacon Application
MXM-52	8800-9500	350	2.7	1.4			Tunable Pulsed Beacon Application

MAGNETRONS (Cont.) X Band

Number Designation	Frequency Mc	Peak Output Watts	Peak Anode Voltage KV	Peak Anode Current A	Pulse Duration μs	Duty Cycle	Brief Description
MXM-53	8500-9100	1350	3.2	2.5			Tunable Pulsed Beacon Application
MXM-54	9000-9600	1350	3.2	2.5			Tunable Pulsed Beacon Application
MXM-55	9250-9350	1900	3.5	3.5		5,000	Tunable Pulsed Beacon Application
MXM-56	9300-9400	10	0.80	0.25		1,000	Tunable Pulsed Beacon Application
MXM-58	8800-9500	400	2.3	1.4	0.4	.002	Tunable Pulsed Beacon
MXM-62	9350-9650	1000	2.4	2.5	3.15	.002	Tunable Pulsed Beacon
MXM-63	9400-9600	2000	3.0	2.5	1.0	.002	Conduction Cooled tunable integral magnet
MXM-64	9275-9405	50	1.2	0.8	1.0	.002	Miniaturized pulsed, ATR cooled, tunable integral magnet

KLYSTRONS

X Band

Number Designation	Frequency Mc	Minimum Power Output mW	Resonator Voltage V	Reflector Voltage Min.	Reflector Voltage Max.	Brief Description
6310/MXK-14	8500–10,000	15	200	–75	–165	Single Screw Tuner
		40	300	–90	–250	Waveguide Coupling, 3 Pin Pee Wee Base and Reflector Cap
6312/MXK-15	8500–10,000	15	200	–75	–165	Single Screw Tuner, Waveguide Coupling 18" Leads
		40	300	–90	–250	
6314/MXK-16	8500–10,000	15	200	–75	–165	Lock Nut Tuning, Waveguide Output, 18" Leads
		40	300	–90	–250	
6315/MXK-17	8500–10,000	30	250	–50	–120	Single Screw Tuner, Waveguide Coupling 18" Leads
6316/MXK-18	8500–10,000	15	200	–75	–165	Lock Nut Tuning Waveguide
		35	300	–90	–250	Output Viking Connector
6781/MXK-11	8500–10,000	15	200	–75	–165	Single Screw Tuner
		40	300	–90	–200	Waveguide Output, Viking Connector
6975/MXK-21	8500–9600	20	300	–55	–135	Heater Current 0.4–0.5A
		30	300	–90	–250	External Cavity Tuning, Waveguide Output 3 Pin Pee Wee Base and Reflector Cap
MXK-12	8500–10,000	15	200	–75	–165	Single Screw Tuner
		40	300	–90	–200	Waveguide Output, Viking Connector Temperature Compensated
MXK-19	8500–10,000	15	210	–75	–165	Single Screw Tuner on Cathode Side of Tube,
		35	310	–90	–200	Completely Insulated Tube and Tuner Deutch Connector
MXK-20	11,000	15	200	–75	–165	6781 Centered at 11,000 KMc
		40	300	–90	–200	
MXK-22	10,000–10,250	100	500	–150	–225	Waveguide Output, Single Screw Tuner 18" Leads
MXK-23	8500–9500	15	300	–140	–150	Waveguide Output, Mechanically Tuned Output. 3 Pin Pee Wee Base and Reflector Cap
MXK-24	9800-11,200	70	400	—200	—350	Single screw tuner 3 pin pee wee base and reflector cap
MXK-24A	8500–10,500	50	300	–55	–225	MXK-17 with Special Tuning Screw
MXK-25	8500–10,500	120	350	–50	–300	Molded Flexible Leads, Viking Connector
MXK-26	8100–12,400	100	500	0	–1000	Waveguide Output, Micrometer Tuner
MXK-26B	7100-11,000	100	500	–20	–1000	Waveguide Output,
MXK-27	10,200–12,800	100	500	–20	–1000	Micrometer Tuning
MXK-28	8000–9500	500	500	–	–300	Fixed Tuned, Window Flange Screw
MXK-29	9375–9415	30	250	0	–1000	Single Screw Tuning Waveguide Coupling 3 Pin Pee Wee Base and Reflector Cap
MXK-30	8500–11,000	500	500	–200	– 250	Dielectric tuning 1500 Mc within specified Band
MXK-31	9160–9250	25	300	0	–1000	Modified 6781
		620	500		–380	
MXK-32	8500–10,000	320	500		–200	Very Rugged, External Tuning Cavity
		75	300		–150	
MXK-33	9600–10,800	10	250	–30	–100	Single Screw Tuning Waveguide Coupling
		30	300	–70	–175	3 Pin Pee Wee Base and Reflector Top Cap
MXK-35	10,500-12,200	50	400	—120	—220	Lock Nut Tuning
		150	400	—270	—370	3 Pin Base with Cap Waveguide Output
MXK-36	10,400-12,300	150	400	—270	—330	Lock Nut Tuning
		150	400	—310	—370	3 Pin Base with Cap Waveguide Output
MXK-38	8500-10,000	200	500	—350	—410	Molded Leads
		15	210	—100	—165	Differential Screw Tuner
MXK-41	8200-11,500	100	500	—130	—360	Lock Nut Tuning
		300	500	—130	—210	3 Pin Base with Cap Waveguide Output
MXK-42	8200-11,500	100	500	—130	—360	Lock Nut Tuning
		300	500	—130	—210	Molded Leads Waveguide Output
MXK-43	8500-10,000	500	500	—200	—525	Single Screw Tuner
		20	300	— 50	—250	Gold Plated Body Surfaces 3 Pin Base with Cap Waveguide Output
MXK-44	8500-10,000	50	350	— 85	—145	Single Screw Tuner
		100	350	—170	—225	3 Pin Base with Cap Waveguide Output
MXK-45	10,000-15,500	10	650	—100	—550	Cavity Mounted Molded Leads

KLYSTRONS Cont.

X Band

Number Designation	Frequency Mc	Minimum Power Output mW	Resonator Voltage V	Reflector Voltage Min.	Reflector Voltage Max.	Brief Description
MXK-46	10,700–11,700	25	400	−100	−250	Single Screw Tuner 3 pin base, waveguide output
6780/MXK-47	8500–10,000	25	200	− 55	−225	Single Screw Tuner molded leads waveguide output
MXK-48	8400–10,300	30	350	−150	−300	Single Screw Tuner 3 pin base, waveguide output
MXK-50	11,000–12,400	70	550	−100	−500	Single Screw Tuner 3 pin base, waveguide output
MXK-51	10,500–11,500	20	200	− 50	−200	Dielectric tuning, TNC output
MXK-52	9100–9500	10	175	− 50	−100	Dielectric tuning, molded leads, waveguide output
MXK-53*	9100–11,000	5000	1350	—	—	Two resonator oscillator waveguide output, fixed tuned
MXK-54	10,700–11,700	400	550	−200	−400	Dielectric tuning molded leads waveguide output
MXK-55	11,700–12,700	400	550	−200	−400	Dielectric tuning molded leads waveguide output
MXK-56	9870–9970	500	500	−270	−350	Dielectric tuning molded leads waveguide output
MXK-57	8800-9200	40	250	—75	—150	Used in Stalo cavity
MXK-58	8500–9600	20	300	−140	−150	
		20	300	− 85	−105	Modified 6975
MXK-59	9250–9550	20	300	−105	−150	Modified 6975
MXK-60	9750–10,150	500	500	−270	−360	Dielectric tuning molded leads waveguide output
MXK-61	8750–9150	500	500	−270	−360	Dielectric tuning molded leads waveguide output
MXK-62	9300–10,200	70	400	− 90	− 300	Dielectric tuning, molded leads waveguide output
MXK-63	8500–9600	500	500	−200	−350	Dielectric tuning, molded leads waveguide output
MXK-65	8500-10,000	200	400	200-350		MXK-32 Outline
MXK-66	7100-8500	80	400	100-350		Single seven tuner
MXK-67	8500-10,000	500	500	270-500		3-pin Base, Waveguide Output
MXK-68	10,000-11,500	500	500	270-500		MXK-30 Outline
MXK-69	11,500-12,500	500	500	270-500		MXK-30 Outline
MXK-72	10,450-10,850	500	500	270-360		MXK-30 Outline
MXK-73	9100-9500	500	175	—80	—100	Modified MXK-52 mechanically
MXK-75	8500-9600	20	300	—55	—135	50 megacycles electrical tuning
MXK-78	Classified					
MXK-82	10525±5	60	300	—100	—100	Fixed tuned ruggedized
MXK-83	11,700-12,200	200	750	—200	—400	Conduction cooled
MXK-84	10,200-11,200	1500	1250	—300	—500	Conduction cooled

* In development

K Band

Number Designation	Frequency Mc	Minimum Power Output mW	Resonator Voltage V	Reflector Voltage Min.	Reflector Voltage Max.	Brief Description
MKK-10	18,132–18,332	100	200	150	−400	Waveguide Output, Fixed Tuned, 12" Leads
MKK-12	13,3 ±5	15	2900-3100	60-70		Liquid-cooled, extremely rugged, low noise (—131db, 10kc from carrier).
MKK-13	Classified	—	—	—	—	Reflex, Single Screw Tuner, Waveguide Output
MKK-14	11,000-14,000	400	500	—270	—350	Reflex, Differential Tuning Screw Waveguide Output Molded Leads, Fixed Tuned
MKK-16	13,3 ±5	5	2100-2250	40-50		Liquid-cooled, extremely rugged, low noise (—131db, 10kc from carrier).

KLYSTRONS (Cont.)

Ku Band

Number Designation	Frequency Mc	Minimum Power Output mW	Resonator Voltage V	Reflector Voltage Min.	Reflector Voltage Max.	Brief Description
MKK-17	13,350-13,650	750	1700			Specify Frequency Desired Two Resonator Oscillator, Tunable, Waveguide Output
MKK-18*	17,000–18,000	300	750	−200	−300	Dielectric tuning waveguide output
MKK-19*	23,500–24,500	20	400	−200	−300	Mates with UG-599/U dielectric tuning
MKK-21*	34,000–35,600	15	400	− 60	−100	Mates with UG-599/U dielectric tuning
MKK-22	13,300 ±5	2000	2200	—	—	2 Cavity Oscillator
MKK-23	12,400–14,500	20	300	−200	−400	Single Screw Tuner
MKK-24	15,800–16,200	20	300	− 50	−110	Mates with UG-419/U
MKK-24A	16,200-16,500	20	300	-100	-200	Molded leads, screw tuner
MKK-24B	15,800-16,200	20	300	-95	-125	Mates with UG-419/U
MKK-25	14,000–17,500	30	300	− 60	−300	Single Screw Tuner
MKK-26	16,000–17,000	20	300	− 50	−150	Mates with UG-419/U
MKK-26A	16,000-17,060	15	300	-100	-160	Mates with UG-419/U
MKK-27	CLASSIFIED					
MKK-28	15,800-16,200	20	350	0-500		Waveguide Output, Molded Leads
MKK-29	13,000-14,000	40	350	0-500		Dielectric Tuner
MKK-32*	22,000-25,000	100	400	120-180		Output dielectric tuning
MKK-33	14,400-15,400	200	650	50-250		Output dielectric tuning
MKK-35	13,500+1%	385	600	100-1,000		Use MKK-14 Description
MKK-40	12,500-13,500	400	500	-150	-350	Molded leads, dielectric tuning
MKK-41	Classified					
MKK-42	15,800-16,500	20	300	-90	130	Salt spray sealed tuner
MKK-44	15,800-16,500	15	300	85-125		Dielectric Tuner, Molded Leads
MKK-47	13,245-13,330	20	300	75-200		Trimmable Tuned, Molded Leads

* In development

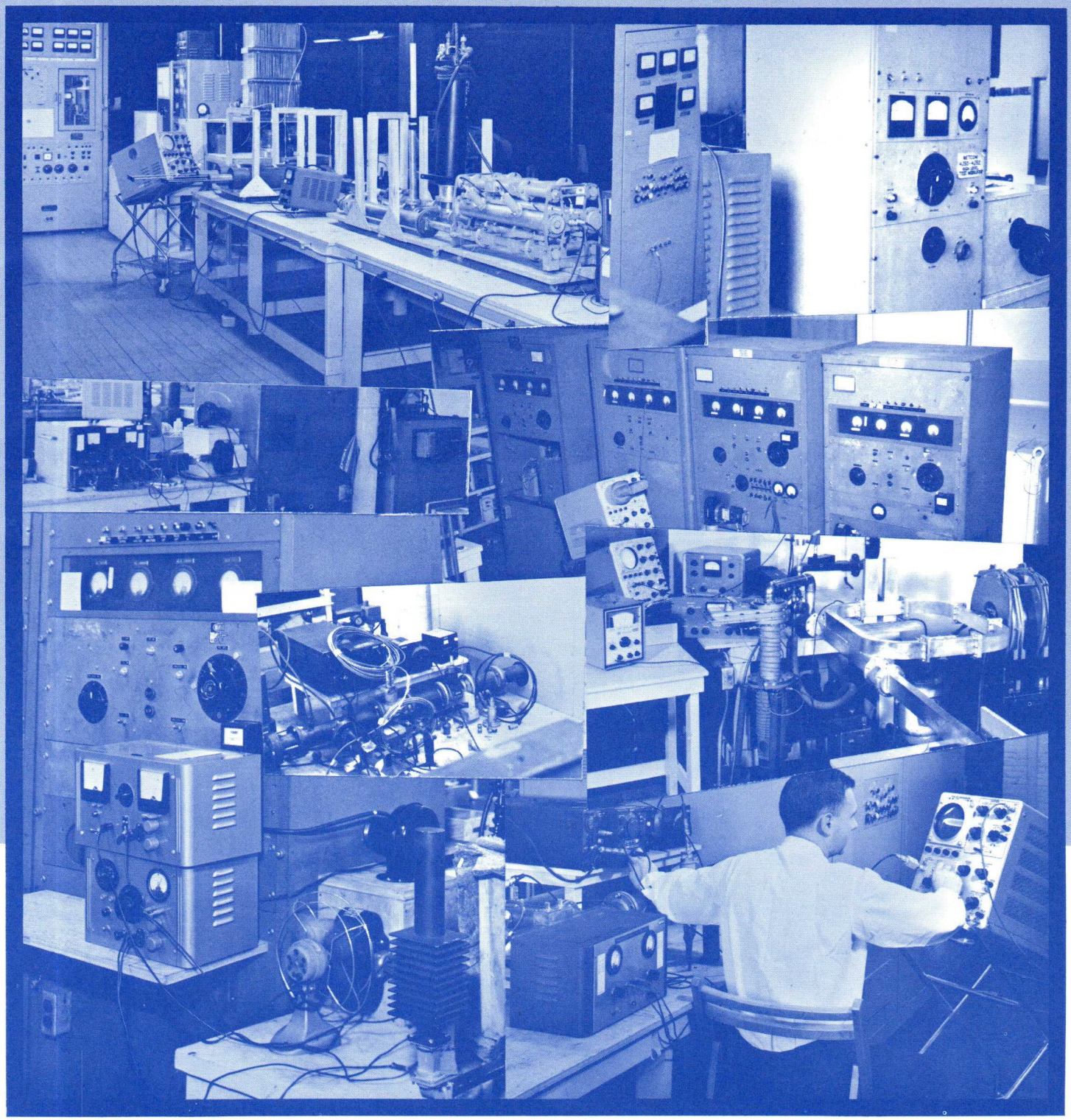
Number Designation	Frequency KMc	Minimum Power Output W	Resonator Voltage V	Resonator Current Average	Brief Description
MKK-12	13,3 ±5	15	2900-3100	60-70	Liquid-cooled, extremely rugged, low noise (—131db, 10kc from carrier).
MKK-16	13,3 ±5	5	2100-2250	40-50	Liquid-cooled, extremely rugged, low noise (—131db, 10kc from carrier).
MKK-22	13,3 ±2	2	2075-2225	17-25	Conduction-cooled, extremely rugged, very low noise (—14db, 10kc from carrier).
MKK-37	13,3 ±1	1	1550-1650	20-30	Air-cooled, extremely rugged, low noise (—131db, 10kc from carrier).
MKK-76	8800 ±20mc	2	7db (Sat.)	750	Extremely rugged, temperature compensated, trimmable tuned, two cavity amplifier.

TETRODES

Number Designation	Plate	Screen	Amplifier Power	Frequency	Description
6884	1KV	300V	85w with min. drive of 3.3w	UHF-1300mc	Air cooled
6843	1KV	300V	85w with min. drive of 3.3w	UHF-1300mc	Conduction cooled
7214	5KV	1.2KV	65KW with min. drive 1KW (15db gain)	UHF-1300mc	Air cooled
6952	50 KV	As required	2000kw utilizing 10db gain	UHF-1000mc	Handles pulse widths up to several hundred microsecond pulses Liquid cooled.

Low Level Testing

The manufacture of specialized microwave tubes requires detailed knowledge of the static characteristics of each individual tube. Testing of Gas Switching Tubes (TR's) involves reading the Static Insertion Loss, VSWR, Interaction, Duplexer Loss, Output VSWR, Phase at all Frequencies, and many other characteristics. Metcom provides its customers with testing of such characteristics in depth by maintaining high cost Oscillating, Measuring, Detecting and Displaying Devices at all radar frequency bands from 10 mc/s through the high millimeter bands.



High Power Testing

Manufacturers of components to be used in a higher order assembly must, for proper protection of his customer, assure himself and his customer that the product sold will function properly under the dynamic conditions of the customer's equipment. In order to give such assurance Metcom has assembled complete testing equipment including pulsed power oscillators and amplifiers capable of frequency generation from VHF bands through all conventional radar frequencies including millimeter bands. Also power, from a few watts to multi-megawatts is available in all bands with short and long pulse capability and variable duty cycles.

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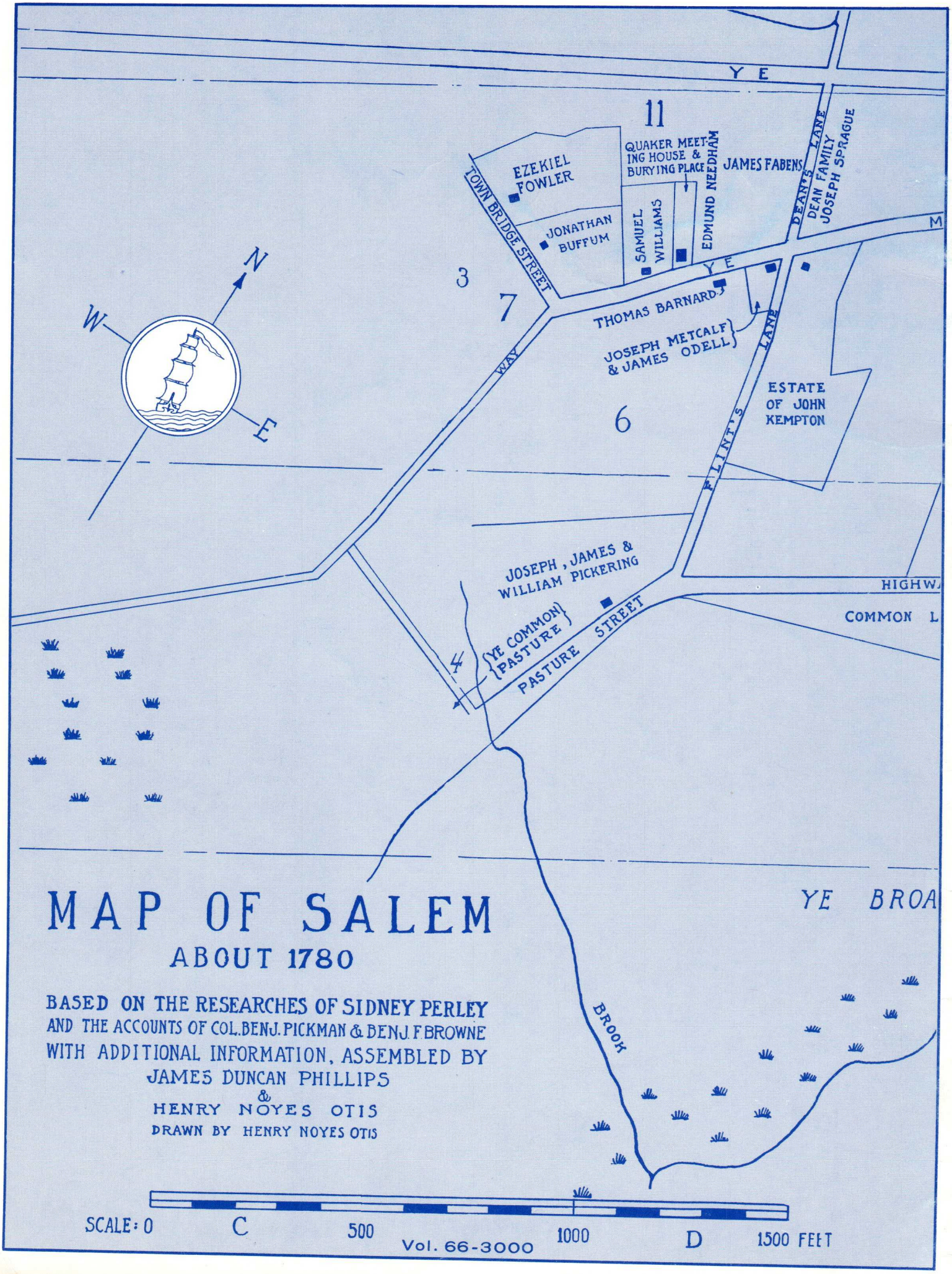

MAP OF SALEM

ABOUT 1780

BASED ON THE RESEARCHES OF SIDNEY PERLEY
AND THE ACCOUNTS OF COL. BENJ. PICKMAN & BENJ. F. BROWNE
WITH ADDITIONAL INFORMATION, ASSEMBLED BY
JAMES DUNCAN PHILLIPS
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