

Traveling-Wave Tubes

Technical Information

RF PERFORMANCE

Tube Type	Frequency Range (Gc)	Maximum Noise Figure (db)	Minimum SS Gain (db)	Minimum Saturation Power Output (mw)
ZM-3443	7.0 - 8.5	9.0	37	20
ZM-3258	7.0 - 11.0	10.0	37	20
ZM-3202	7.0 - 12.0	11.0	33	10
ZM-3259	8.0 - 12.0	10.0	33	10
ZM-3444	8.5 - 9.6	9.0	37	20

- LOW NOISE
- X-BAND
- PPM FOCUSING

FEATURES

lowest noise
broadband
periodic permanent magnet focused
metal ceramic construction
military environments
lightweight
crystal mixer protection

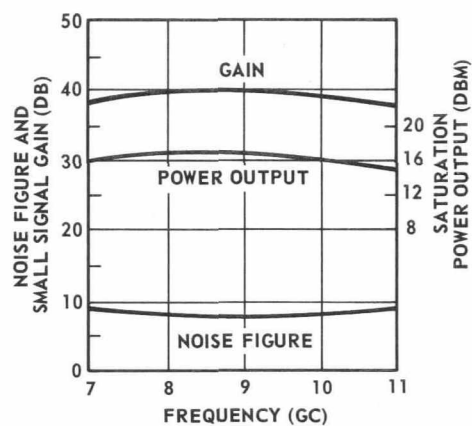
APPLICATIONS

radar
ecm
instrumentation
communications
radiometry

MECHANICAL & MISCELLANEOUS

VSWR, max.
Input..... 2.5
Output..... 2.5
Mounting Position..... Any
Weight, lb..... 4.25
Overall Length, in..... 12.81
Cooling..... Convection
RF Connectors..... Type N
DC Connector..... Winchester M12P or equiv.
Collector Connector.... Winchester PM1P-LS or equiv.

TYPICAL CHARACTERISTICS



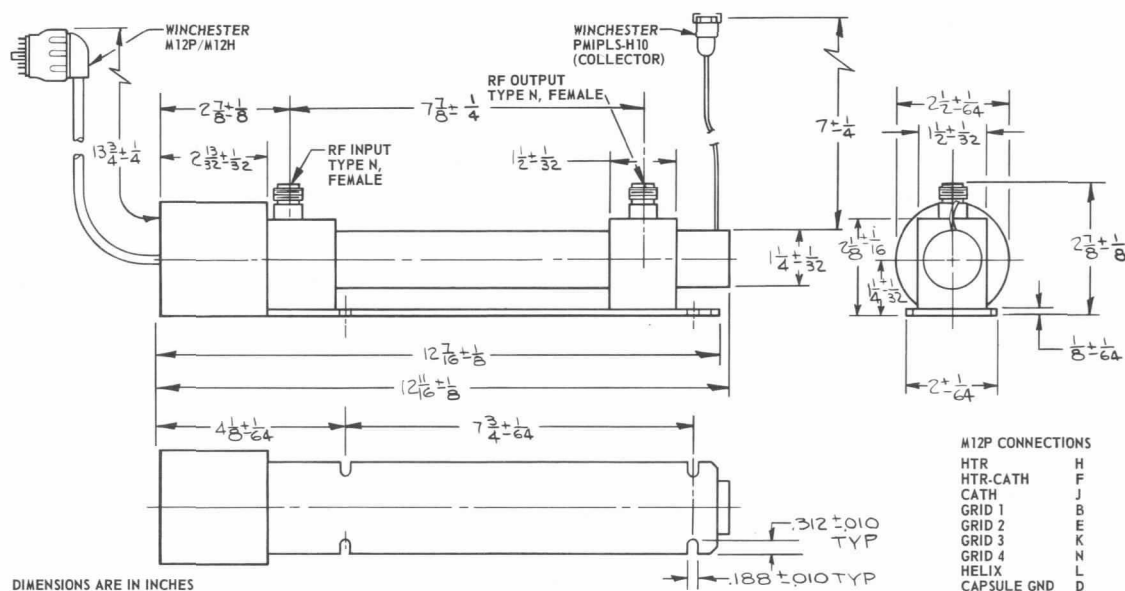
OPERATING CONDITIONS†

Htr, vac or vdc.....	6.3
Htr, amp (max.).....	0.26
Grid 1, vdc.....	-50 to 0
Grid 2, vdc.....	0 to 100
Grid 3, vdc.....	10 to 200
Grid 4, vdc.....	200 to 550
Helix, vdc.....	1125 to 1250
Helix, μ a (max.).....	500
Collector, vdc.....	1225 to 1400
Beam, μ a (max.).....	1000

ENVIRONMENTAL

Shock.....	30 G, 11 ms,
(energized)	3 axes
Vibration.....	15 G, 55 to
(operating)	2,000 cps
Temp, Ambient#....	-65 C to
(operating)	+100 C
Altitude.....	100,000 ft.
(operating)	
Acoustic Noise.....	135 db, 25 to
(operating)	12,000 cps

OUTLINE



DIMENSIONS ARE IN INCHES

NOTES

† Voltages shown are measured with respect to cathode. All voltages may be isolated from ground. For minimum noise and optimum gain characteristics, voltages should be adjusted to values specified by instructions accompanying each tube. These values will be within the ranges given above.

Some degradation of performance may occur under extremes of indicated environmental conditions.

Increased gain and power ratings are available when these tubes are optimized for a narrow frequency band. If such requirements exist, consult the nearest regional sales office of the Tube Department.

These data are subject to change without notice.