

Traveling-Wave Tubes

Technical Information

- LOW NOISE
- C-BAND
- SRPM FOCUSING

RF PERFORMANCE

Tube Type	Frequency Range (Gc)	Maximum Noise Figure (db)	Minimum SS Gain (db)	Minimum Saturation Power Output (mw)
ZM-3235	4.0 - 8.0	8	25	5
ZM-3220	4.3 - 7.35	7	30	10
ZM-3250	4.4 - 5.0	6	30	10
ZM-3237	5.4 - 5.9	6	30	10
ZM-3238	5.9 - 6.5	6	30	10

FEATURES

low noise
 broad bandwidth
 single-reversal permanent-magnet focusing*
 metal-ceramic construction
 military environments
 lightweight
 crystal mixer protection

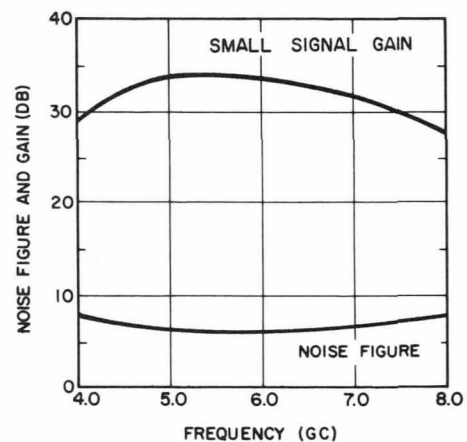
APPLICATIONS

radar
 ecm
 instrumentation
 communications
 radiometry

MECHANICAL & MISCELLANEOUS

VSWR, Input and Output (max)
 ZM-3235 2.5
 ZM-3220, ZM-3250, ZM-3237,
 ZM-3238 2.0
 Mounting Position Any
 Weight, lb 9.3
 Overall Length, in. 13.84
 Cooling Convection
 RF Connectors Type N, female
 DC Connector Cannon
 KPT-02H12-10PN
 (or equiv.)

TYPICAL CHARACTERISTICS



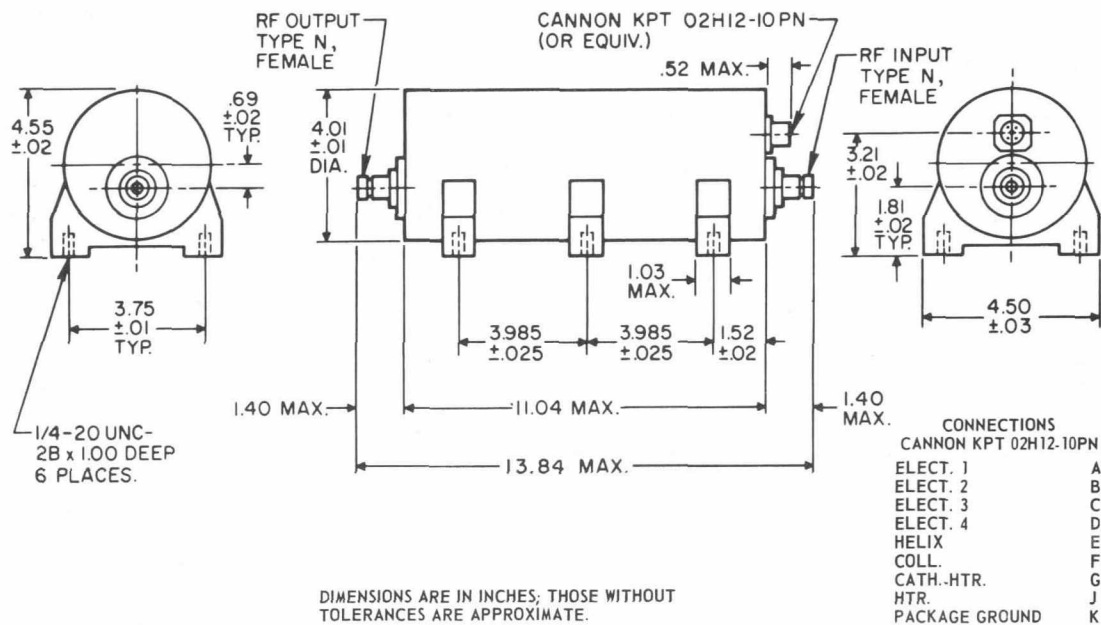
OPERATING CONDITIONS [†]

Htr, vac or vdc	6.3
Htr, amp (max.)	0.35
Elect. 1, vdc	-35 to 0
Elect. 2, vdc	25 to 75
Elect. 3, vdc	25 to 150
Elect. 4, vdc	50 to 350
Helix, vdc	550 to 750
Helix, μ a (max.)	100
Collector, vdc	800 to 1000
Beam, μ a(max.)	1200

ENVIRONMENTAL

Shock	30 G, 11ms, (energized) 3 axes
Vibration	15G, 90 to (operating) 2000 cps
Temp. Ambient	-65 to +71C #
Altitude	100,000 ft (operating)
Acoustic Noise	150db, 25 to (operating) 12,000 cps

OUTLINE



NOTES

- * Since these tubes are single-reversal permanent-magnet focused and magnetically shielded, they are well suited for applications requiring close physical spacing with other tubes or magnetic materials.
- [†] 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.
- # This tube is capable of operating to +100 C with approximately 0.5 db degradation in noise figure.

These data are subject to change without notice.