

Traveling-Wave Tubes

Technical Information

- LOW NOISE
- S-BAND
- PM FOCUSING
- MAGNETICALLY SHIELDED

RF PERFORMANCE

Tube Type	Frequency Range (Gc)	Maximum Noise Figure* (db)	Minimum SS Gain (db)	Minimum Saturation Power Output (mw)
ZM-3183	2.0 - 4.0	8	25	1
ZM-3283	2.3 - 4.45	8	25	1

FEATURES

lowest noise
broadband
permanent magnet focused
metal ceramic construction
military environments
lightweight
crystal mixer protection
magnetically shielded[#]

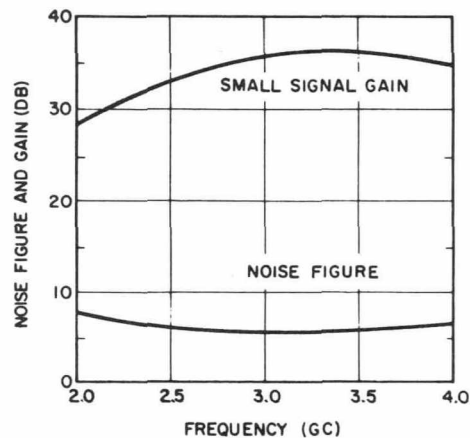
APPLICATIONS

radar
ecm
instrumentation
communications
radiometry

MECHANICAL & MISCELLANEOUS

VSWR, max.
Input 2.5
Output 3.0
Mounting Position Any
Weight, lb. 18
Overall Length, in. ... 12.5
Cooling Convection
RF Connectors Type N
DC Connector Cannon
KPT-02H12-10 PN

TYPICAL CHARACTERISTICS



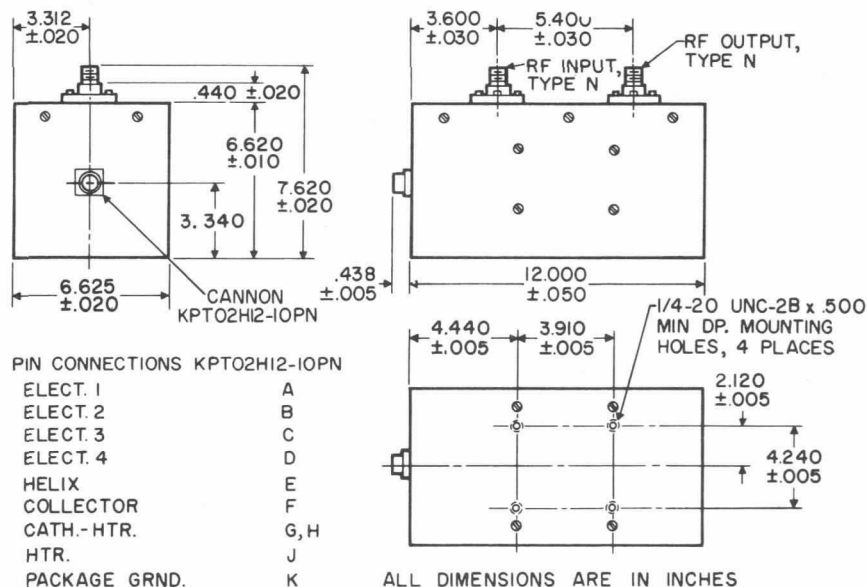
OPERATING CONDITIONS[†]

Htr, vac or vdc	6.3
Htr, amp (max.)	0.35
Elect. 1, vdc	-10 to 0
Elect. 2, vdc	10 to 30
Elect. 3, vdc	25 to 100
Elect. 4, vdc	50 to 200
Helix, vdc	150 to 275
Helix, μ a (max.)	50
Collector, vdc	400 to 600
Beam, μ a (max.)	600

ENVIRONMENTAL

Shock	30 G, 11 ms, (energized)	3 axes
Vibration	5 G, 55 to (operating)	2000 cps
Temp. Ambient	-20 C to (operating)	+ 70 C
Altitude	100,000 ft. (operating)	
Acoustic Noise	135 db, 25 to (operating)	12,000 cps

OUTLINE



NOTES

- * Noise figures apply over the entire band with the same operating voltages that provide minimum gain variation. Noise figures of 5.5 to 7 db can be supplied for narrow-band optimized versions of this tube. If requirements exist for an improved noise figure over a limited bandwidth, consult the nearest Tube Department sales office.
- [†] All voltages may be isolated from ground; i.e., it is not necessary to operate the cathode, helix, collector, or any other electrode at ground potential. Voltages shown are measured with respect to cathode. For minimum noise and optimum gain characteristics, voltages should be adjusted within ranges specified by instructions accompanying each tube.
- # Since these tubes are magnetically shielded they are suitable for applications requiring close physical spacing with other tubes or magnetic materials.

These data are subject to change without notice.