

Traveling-Wave Tubes

ZM-3331

ZM-3349

Technical Information

- LOW NOISE
- Ku-BAND
- SRPM FOCUSING

RF PERFORMANCE

Tube Type	Frequency Range (Gc)	Maximum Noise Figure (db)	Minimum Small Signal Gain (db)	Minimum Saturation Power Output (mw)	Data Group
ZM-3349	9.75 - 15.0	11	30	5	2
ZM-3331	12.0 - 16.0	10	30	5	1

FEATURES

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

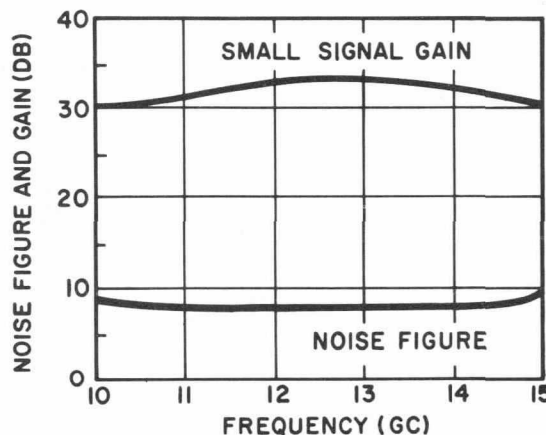
APPLICATIONS

radar
ecm
instrumentation
communications
radiometry

MECHANICAL & MISCELLANEOUS

VSWR, Input and Output (max) 2.5
Mounting Position Any
Weight, lb..... 9.3
Overall Length, in. 12.1
Cooling..... Convection
RF Connectors..... See Outline
DC Connector..... Cannon
KPT-02H12-10PN
(or equiv.)

TYPICAL CHARACTERISTICS



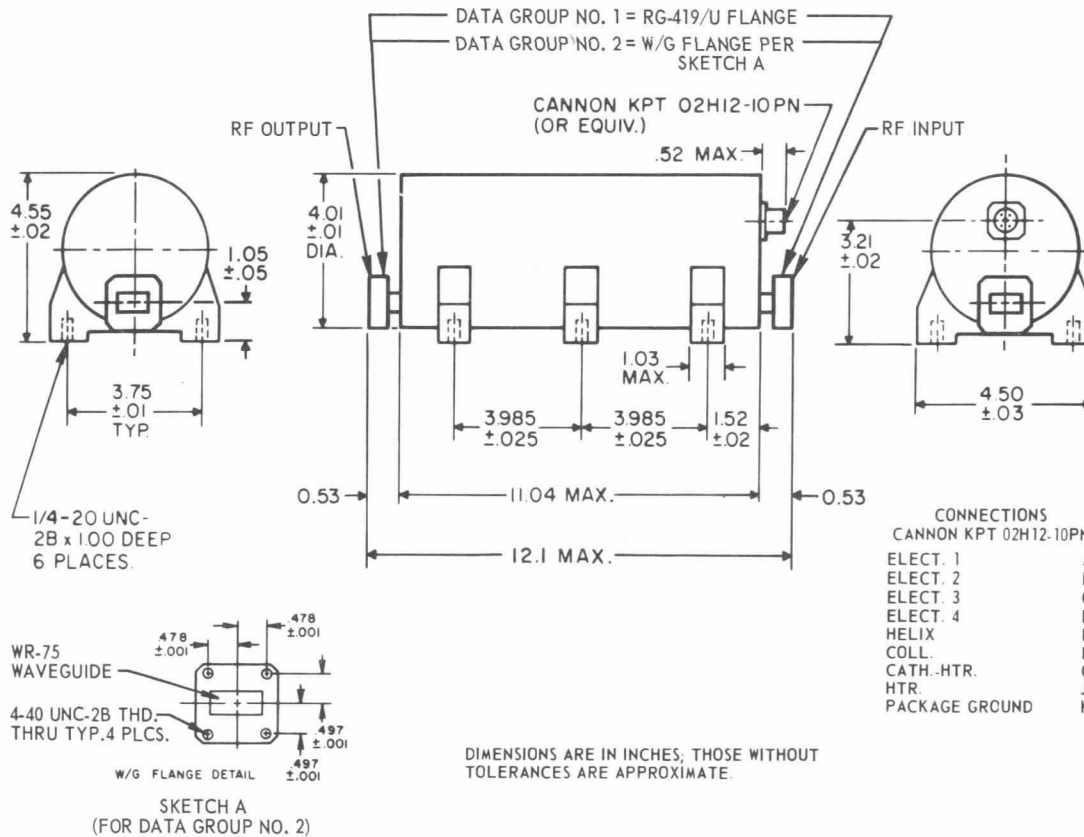
OPERATING CONDITIONS [†]

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.....	50 to 150
Elect. 4, vdc.....	250 to 500
Helix, vdc.....	900 to 1200
Helix, μ a (max.).....	100
Collector, vdc.....	1050 to 1350
Beam, μ a (max.).....	1200

ENVIRONMENTAL

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

OUTLINE (Data Groups 1 and 2)



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.

TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky