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

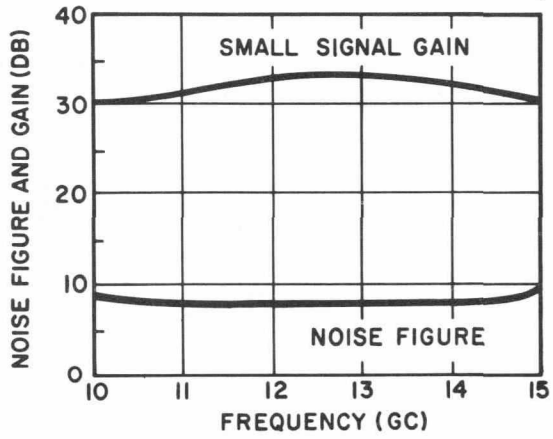
APPLICATIONS

- 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



GENERAL ELECTRIC

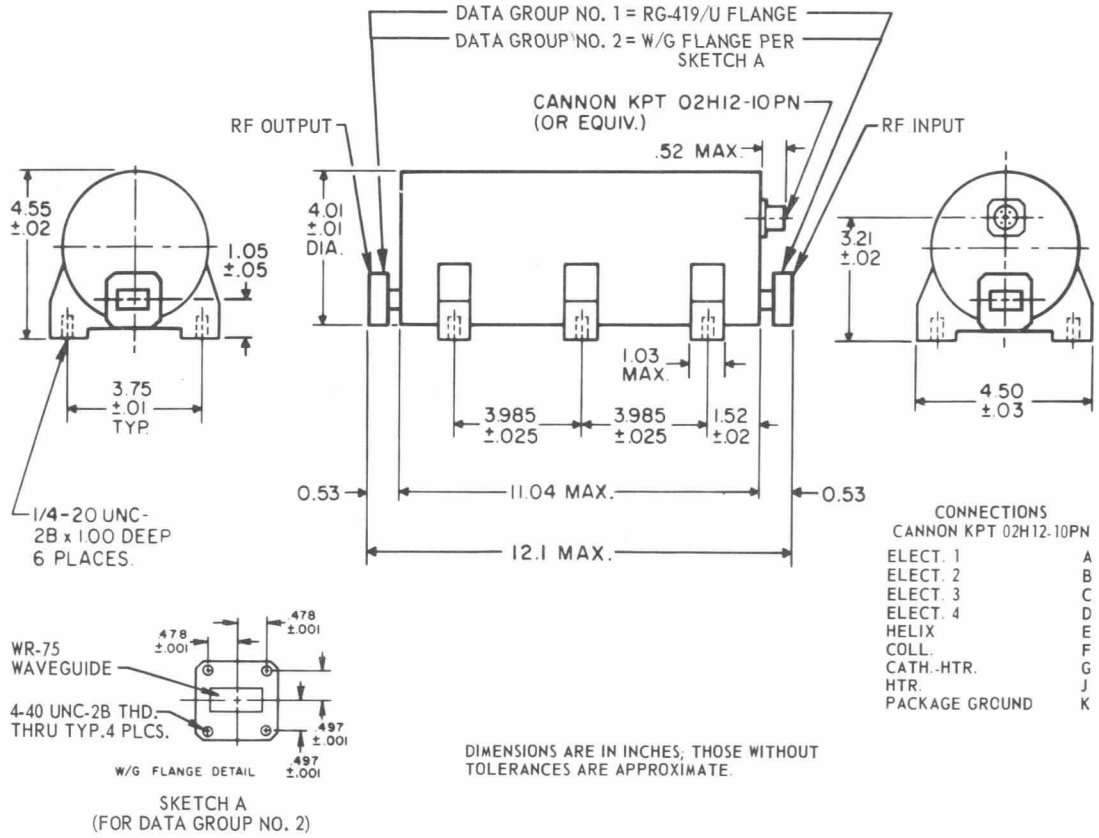
OPERATING CONDITIONS †

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, μa (max.)	100
Collector, vdc	1050 to 1350
Beam, μa (max.)	1200

ENVIRONMENTAL

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

OUTLINE (Data Groups 1 and 2)



SKETCH A
(FOR DATA GROUP NO. 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