

Traveling-Wave Tubes

Technical Information

RF PERFORMANCE

Tube Type	Frequency Range (Gc)	Min. Peak Saturated Power Output, (kw)	Maximum Duty	Maximum Pulse Width (μ sec)	Minimum Saturated Gain (db)
ZM-3174	5.4-6.2	1	0.01	10	40

- HIGH POWER
- C-BAND
- PPM FOCUSING

FEATURES

high gain
broad bandwidth
periodic permanent magnet focusing
metal-ceramic construction
ring-loop circuit
military environments
light weight
grid control
conduction cooling

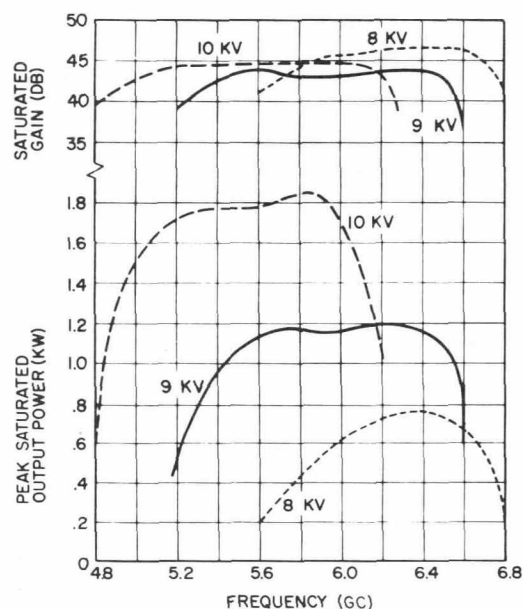
APPLICATIONS

radar
ecm
instrumentation
satellite telemetry

MECHANICAL & MISCELLANEOUS

VSWR, max	
Input.....	2.5
Output.....	2.5
Grid-to-other elements μ f (max)	20
Phase Shift, deg/1% change in cathode voltage (max)....	30
Weight, lb.	5
Overall length, in.	11.8
Mounting position.....	Any
Cooling.....	Conduction from base#
Connectors	
RF input	Mates with Omni-Spectra OSM-201 or equiv.
RF output	Mates with Omni-Spectra OSM hi-volt plug or equiv.
DC	Flying leads

TYPICAL CHARACTERISTICS



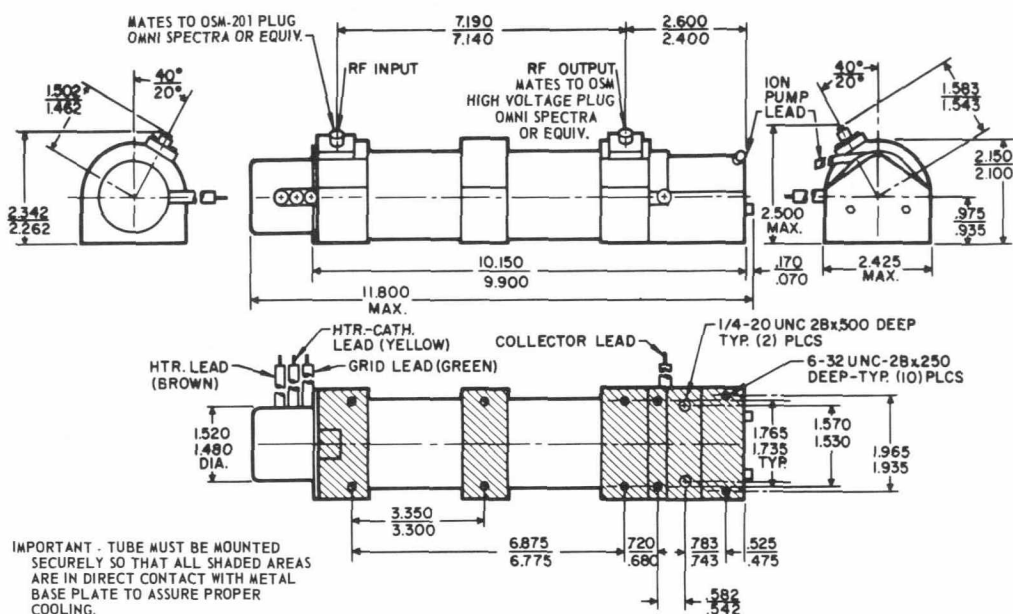
OPERATING CONDITIONS* †

Htr. vac or vdc	6.3
Htr. amp (max)	1.4
Cath. kv dc with resp. to anode...	-9 to -10
Peak cath. amp (max).....	1.2
Grid-bias vdc, with resp. to cath.	-300 to -350
Grid swing vdc, with resp. to grid-bias voltage	375 to 450
Peak grid amp (max).....	0.2
Coll. kv dc **, with resp. to anode	0
Ion pump vdc.....	2800

ENVIRONMENTAL

Shock.....	35 G, 12 ms, (energized) 3 axes
Vibration	15 G, 60-3000 cps, (operating) 3 axes
Acceleration	30 G, 1 min, 3 axes (operating)
Temp., ambient (operating)	-55 to +85°C
(storage).....	-55 to +125°C
Altitude.....	120,000 ft (operating)

OUTLINE



NOTES

To assure adequate cooling this tube must be securely mounted with maximum contact area to a good heat-conducting surface of sufficient heat capacity. Do not allow mounting surface temperature to exceed 115°C with tube operating at 1 kw, 0.01 duty.

* For the performance ratings specified, voltages should be adjusted to values specified by instructions accompanying each tube. These values will be within the ranges given above.

† The cathode voltage may be set at various values between -8 and -10.5 kv to obtain different power and gain characteristics.

** A modified version of the ZM-3174 with depressed collector is available.

These data are subject to change without notice.