

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)	Data Group
ZM-3389	2.7 - 3.1	5.0	0.01	20	37	S-4
ZM-3314	2.9 - 3.1	2.5	0.03	40	37	S-1
ZM-3387	2.9 - 3.1	2.5	0.03	40	37	S-2
ZM-3388	2.9 - 3.1	2.5	0.03	40	37	S-3

- HIGH POWER
- S-BAND
- PPM FOCUSING

FEATURES

high gain
flat power output
low voltage
periodic permanent magnet focusing
metal-ceramic construction
ring-loop circuit
military environments
lightweight

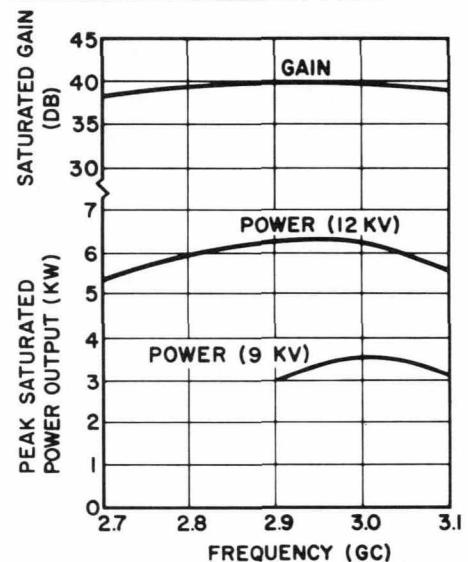
APPLICATIONS

radar
ecm

MECHANICAL & MISCELLANEOUS

Data Group	S-1	S-2	S-3	S-4
VSWR, max (cold)				
Input.....	2.5	2.5	2.5	2.5
Output	2.5	2.5	2.5	2.5
Cath. -to-ground pf (max)...	20	20	20	20
Power flatness with constant drive (db)	1.0	1.0	1.0	1.0
Phase Shift, deg/1% change in cathode voltage (max).	45	45	45	60
Weight, lb	10.5	10.5	10.5	10.5
Overall length, in.	18	18	18	18
Mounting position	Any	Any	Any	Any
Cooling				
Liquid, water, flow, gpm.	0.2	0.2	---	---
Forced air, cfm(sea level)	---	---	50	50
Connectors (Female)				
RF input.....	TNC	N	N	N
RF output	TNC	N	N	N

TYPICAL CHARACTERISTICS



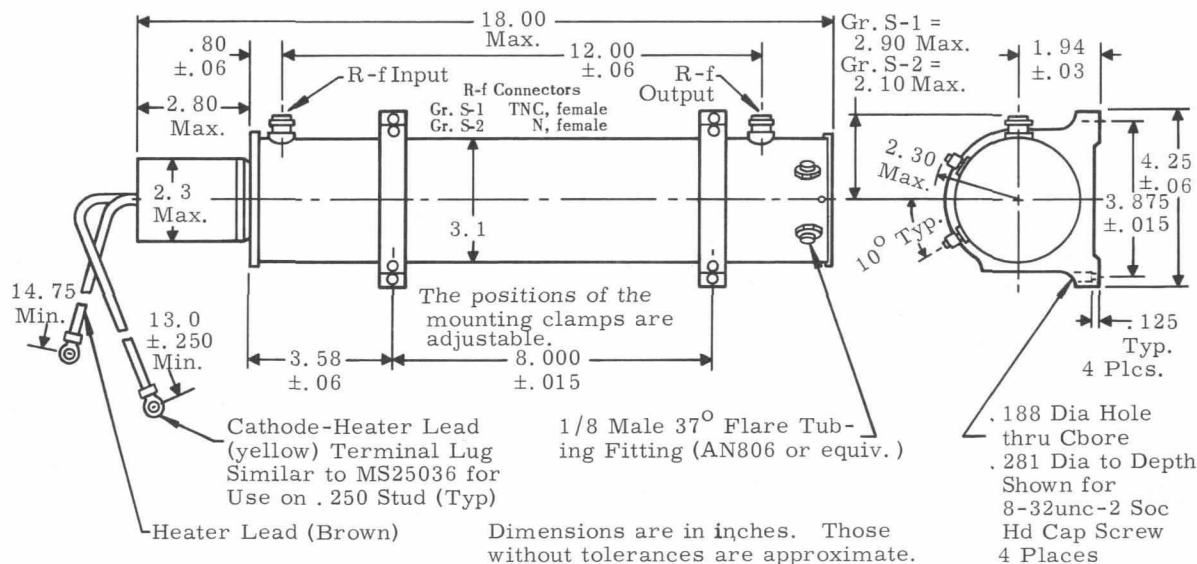
OPERATING CONDITIONS*

Data Group	S-1, S-2, S-3	S-4
Htr. vac or vdc.....	6.3	6.3
Htr. amp (max.)	3.0	3.0
Cath. kv dc#.....	-8.5 to -9.5	-11.5 to -13
Peak cath. amp (nom)	2.0	3.0

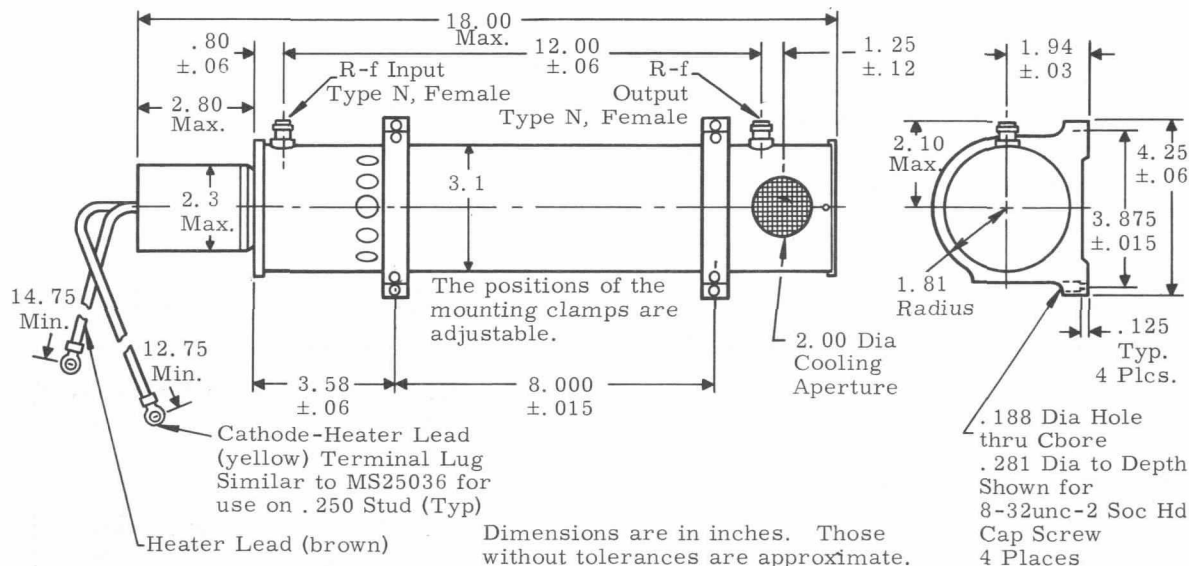
ENVIRONMENTAL

Shock.....	30 G, 11 msec (energized)
Vibration.....	0.1 in DA, 5-23 cps (operating)
Temp., ambient (operating).....	-54 to +71C
(storage).....	-62 to +95C

OUTLINE - DATA GROUPS S-1 AND S-2



OUTLINE - DATA GROUPS S-3 AND S-4



NOTES

- † Coolants other than water may be used at appropriate flow rates.
 - * 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.
 - # Cathode voltage is with respect to ground. The anode, r-f circuit, and collector are connected to the tube package which must be grounded prior to application of voltages.
- These data are subject to change without notice.