



8332

REFLEX KLYSTRON

VA-242G/
8332

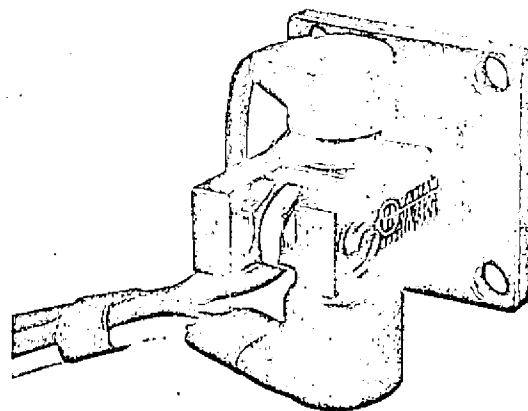
DATA SHEET

9.7-9.9 Gc

DESCRIPTION

The VA-242G/8332 is an extremely rugged, long-life, reflex klystron which produces an output of 500 milliwatts or more between 9.7 and 9.9 gigacycles. The tube is an ideal pump tube for parametric amplifiers. It is equally well suited to any application requiring excellent frequency stability under severe environmental conditions, including airborne doppler radar or navigator service. Exceptional frequency stability can be achieved by using this tube in combination with stalo cavities. Each tube is trimmable ± 100 megacycles.

JEDEC TYPE 8332



FEATURES

- Small frequency deviation under vibration.
- Low temperature coefficient.
- Molded base for high altitude operation.
- Meets extreme environmental specifications.

GENERAL CHARACTERISTICS

ELECTRICAL

Frequency -----	9.7 to 9.9 Gc
Output, minimum -----	500 mW
Beam Voltage -----	500 Vdc
Beam Current -----	55 mAdc
Heater Voltage -----	6.3 V
Heater Current, typical -----	1.2 A

PHYSICAL

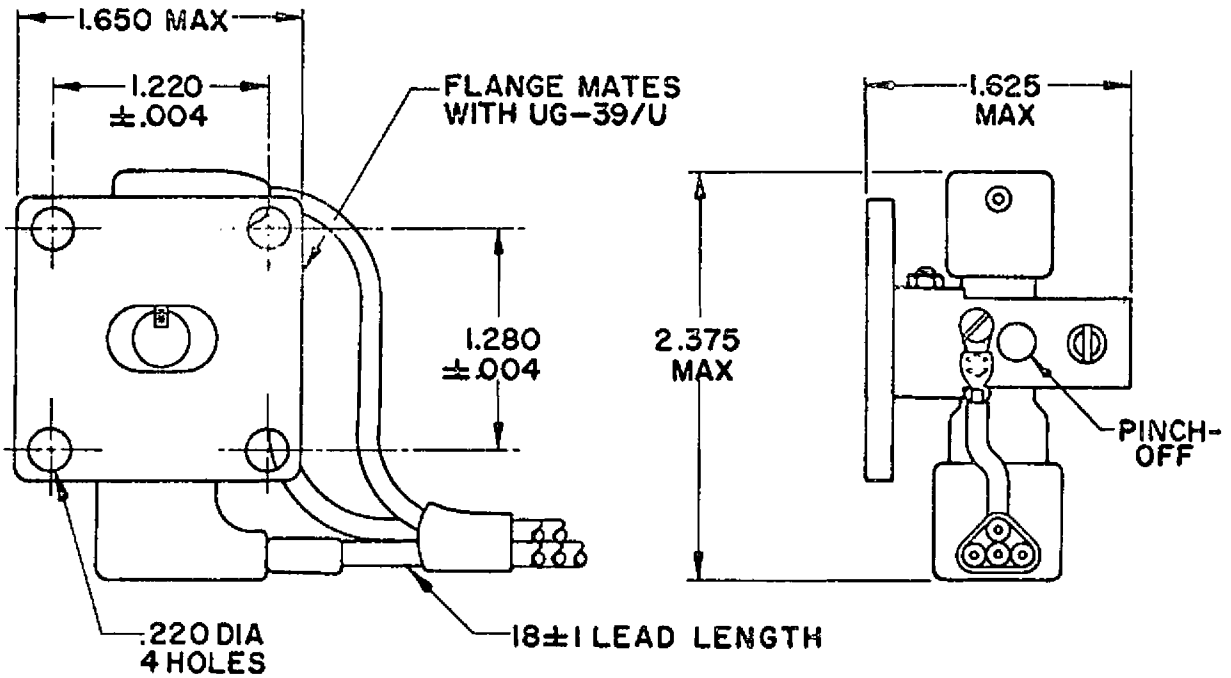
Dimensions -----	See Outline Drawing
Weight, maximum -----	8 oz
Mounting Position -----	Any
Cathode -----	Oxide coated, unipotential
Cooling ¹ -----	Forced Air or Conduction

OPERATING CONDITIONS AND RATINGS

	Typical Operation ²	Range Values for Equipment Design ³		Absolute Ratings ⁴		
		Min	Max	Min	Max	
Frequency -----	9.80	---	---	---	---	Gc
Output, matched load -----	870	500	---	---	---	mW
Output, optimum load -----	915	500	---	---	---	mW
Beam Voltage -----	500	---	---	---	525	Vdc
Beam Current at 500 volts -----	55	45	66	---	---	mAdc
Electronic Tuning Range, 3 db ⁵ -----	55	40	---	---	---	Mc
Reflector Voltage ⁶ -----	-315	-270	-350	-20	-1000	Vdc
Reflector Voltage Modulation						
Coefficient -----	0.64	0.5	1.5	---	---	Mc/V
Temperature Coefficient -----	-100	---	± 150	---	---	kc/ $^{\circ}$ C
FM Frequency Deviation:						
Vibration (10G, 10-1000 cps) -----	0.05	---	0.250	---	---	Mc(p-p)
Shock (150G) -----	0.05	---	2.0	---	---	Mc
Heater Voltage -----	6.3	5.7	7.0	5.7	7.0	V
Heater Current at 6.3 volts -----	1.2	1.08	1.32	---	---	A

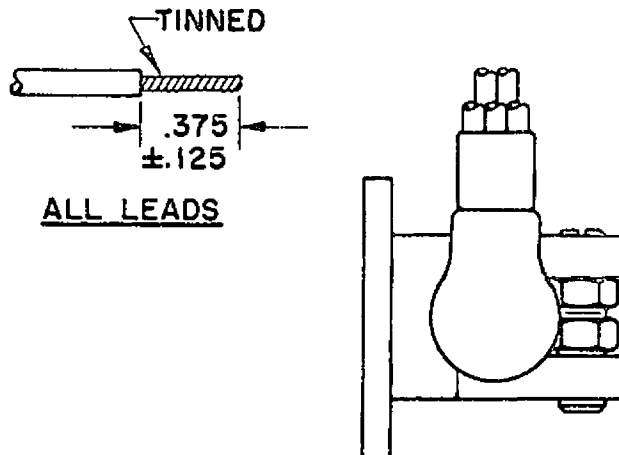
VA-242G/8332

OUTLINE DRAWING



LEAD CONNECTIONS	
YELLOW	HEATER
⊕ GREEN	CATHODE
⊕ WHITE	HEATER
GRAY	REFLECTOR
BROWN	BODY

⊕ INTERNALLY CONNECTED
DIMENSIONS ARE IN INCHES



NOTES:

- Maximum allowable surface temperature is 200°C. For maximum tube life, the temperature of the tube should not exceed 100°C. When cooling by conduction, a heat sink is required to maintain the flange temperature at or below 100°C.
- Although values are for the VA-242G/8332, they are representative of the VA-242 series.
- These values are acceptance limits for VA-242G/8332 tubes when operated at a beam voltage of 500 Vdc. Equipment design should allow for these variations.
- Ratings should not be exceeded under continuous or transient conditions. A single rating may be the limitation and simultaneous operation at more than one rating may not be possible. Equipment design should limit voltage and environmental variations so that ratings will never be exceeded.
- Measured between half-power points.
- Reflector must always be at least 20 volts negative with respect to the cathode.