

## DESCRIPTION

The VA-128/8232 is a traveling wave pulse amplifier which delivers 7 to 9 kilowatts peak output between 2.7 and 3.6 gigacycles under saturation

conditions. It is a broadband driver for multi-megawatt amplifiers. The tube includes a control grid to permit low voltage beam switching.

## FEATURES

Periodic Permanent Magnet Focusing—  
 needs no magnet power supply.

Broadband—High Power—  
 amplifies pulses within its 900-Mc bandwidth  
 without adjustment for change of frequency.

Control Grid—  
 permits low voltage beam pulsing.

Forced Air Cooled—  
 permits compact equipment design; no heat ex-  
 changer or interconnecting hoses required.

## GENERAL CHARACTERISTICS<sup>1</sup>

### ELECTRICAL

Frequency Coverage .....	2.7 to 3.6 Gc
Beam Voltage .....	14.5 kVdc
Peak Beam Current .....	3.0 a
Heater Voltage .....	7.5 V
Heater Current, at 7.5 volts.....	2.0 A
Heater Warm-up Time, minimum.....	3 min
Capacitance, grid to all other electrodes..	25 pf
Focusing.....	Periodic Permanent Magnet

### PHYSICAL

Dimensions .....	See Outline Drawing
Weight, approximate.....	15 lb
Mounting Position .....	Any
Connectors .....	See Outline Drawing
Cooling .....	Forced Air
Air Flow, minimum .....	15 cfm
Pressure Head, at 15 cfm.....	1.5" H <sub>2</sub> O
Operating Ambient	
Temperature Range .....	-20 to +40°C

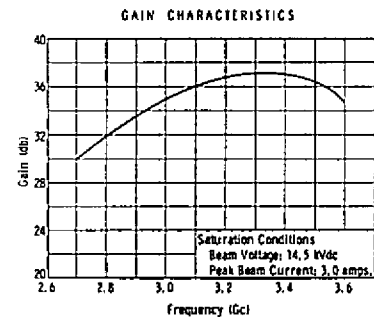
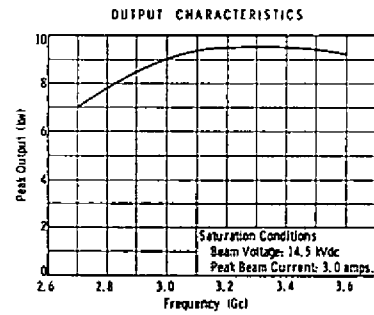
from JEDEC release #4258, May 13, 1963

**OPERATING CONDITIONS AND RATINGS**

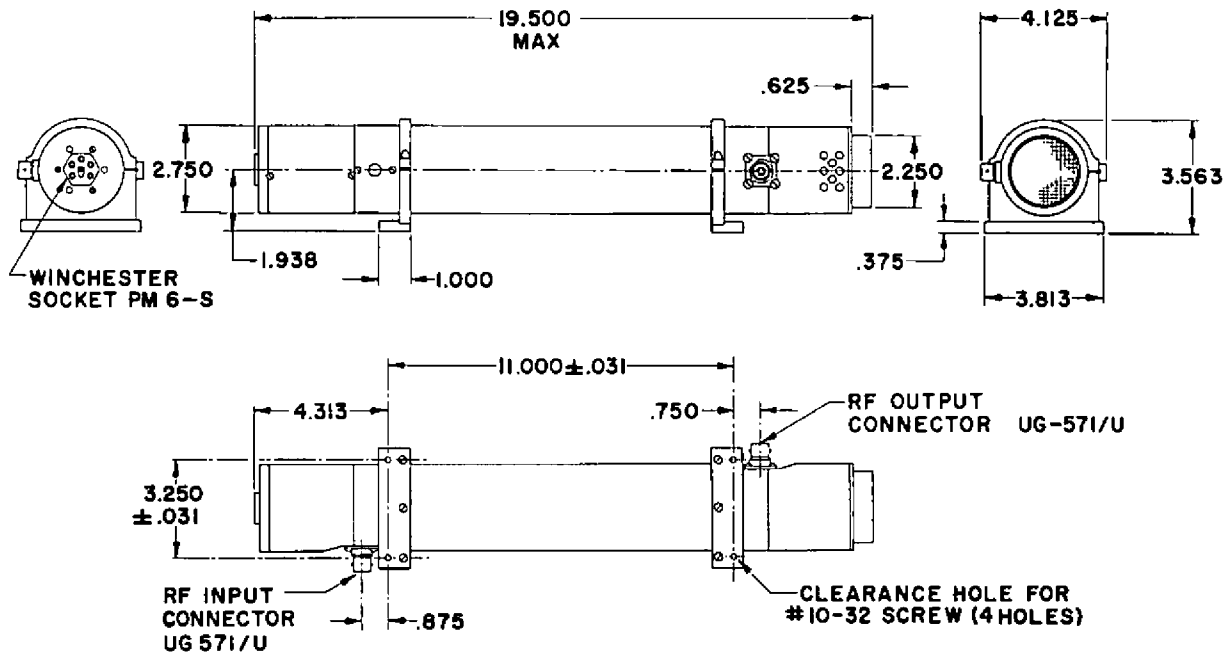
	Typical Operation <sup>1</sup>	Maximum Ratings <sup>2</sup>	
Frequency Coverage.....	See Curve	--	Gc
Peak Output, saturation.....	See Curve	--	kw
Average Output, saturation.....	20	--	W
Gain.....	See Curve	--	db
Drive Power.....	--	15	W
Beam Voltage.....	14.5	18	kVdc
Peak Beam Current.....	3.0	4.0	a
Grid Bias Voltage.....	-150	-300	Vdc
Peak Grid Voltage, above cathode.....	550	700	v
Duty Cycle.....	0.002	0.003	
Pulse Duration.....	10	15	μsec
Heater Voltage.....	7.5	8.0	V
Heater Current.....	2.0	--	A
Heater Surge Current.....	--	5.0	A
Load VSWR.....	1.2:1	2.0:1	

**CHARACTERISTIC CURVES**

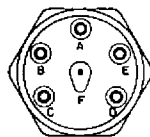
Typical performance values



**OUTLINE DRAWING**



DIMENSIONS ARE IN INCHES.



SOCKET CONNECTIONS	
A	CATHODE
B	NO CONNECTION
C	HEATER-CATHODE
D	HEATER
E	NO CONNECTION
F	GRID

**NOTES:**

1. Characteristics and operating values are based on performance tests. They may change as additional data are obtained.
2. 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.