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 multimegawatt 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 exchanger or interconnecting hoses required.

GENERAL CHARACTERISTICS

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" H2O
Operating Ambient
Temperature Range .................. -20 to +40°C

from JEDEC release #4258, May 13, 1963
**OPERATING CONDITIONS AND RATINGS**

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<th>Typical Operation</th>
<th>Maximum Ratings</th>
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<td>Frequency Coverage</td>
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<tr>
<td>Peak Output, saturation</td>
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<tr>
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<td>Beam Voltage</td>
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<tr>
<td>Peak Beam Current</td>
<td>3.0</td>
<td>4.0 a</td>
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<tr>
<td>Grid Bias Voltage</td>
<td>-150</td>
<td>-300 Vdc</td>
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<tr>
<td>Peak Grid Voltage, above cathode</td>
<td>550</td>
<td>700 v</td>
</tr>
<tr>
<td>Duty Cycle</td>
<td>0.002</td>
<td>0.003</td>
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<tr>
<td>Pulse Duration</td>
<td>10</td>
<td>15 µsec</td>
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<tr>
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<td>7.5</td>
<td>8.0 V</td>
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<tr>
<td>Heater Current</td>
<td>2.0</td>
<td>- A</td>
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<td>Heater Surge Current</td>
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<td>5.0 A</td>
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<td>Load VSWR</td>
<td>1.2:1</td>
<td>2.0:1</td>
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</table>

**CHARACTERISTIC CURVES**

- **OUTPUT CHARACTERISTICS**
  - Saturation Conditions: Beam Voltage 14.5 kV, Peak Beam Current 2.0 A
  - Frequency (GHz)
  - Gain (dB)

- **GAIN CHARACTERISTICS**
  - Saturation Conditions: Beam Voltage 14.5 kV, Peak Beam Current 2.0 A
  - Frequency (GHz)

**OUTLINE DRAWING**

- WINCHESTER SOCKET PM 6-S
- RF OUTPUT CONNECTOR UG-571/U
- RF INPUT CONNECTOR UG 571/U
- CLEARANCE HOLE FOR #10-32 SCREW (4 HOLES)

**DIMENSIONS ARE IN INCHES.**

**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.