Beam Hexode

7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (Design-Maximum Values):
Voltage (AC or DC).................. 6.3 ± 0.6 volts
Current at heater volts = 6.3........ 0.200 amp
Peak heater-cathode voltage:
  Heater negative with respect to cathode........ 200 ax. volts
  Heater positive with respect to cathode........ 200a max. volts

Direct Interelectrode Capacitances (Approx.):

<table>
<thead>
<tr>
<th>Without</th>
<th>With</th>
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<tbody>
<tr>
<td>External Shield</td>
<td>External Shield</td>
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<tr>
<td>Grid No.1 to plate........... 0.03</td>
<td>0.016</td>
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<tr>
<td>Grid No.1 to cathode &amp; grid No.4 &amp; grid No.2, grid No.3, and heater......... 4.8</td>
<td>4.8</td>
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<tr>
<td>Plate to cathode &amp; grid No.4 &amp; grid No.2, grid No.3, and heater............ 2</td>
<td>2.8</td>
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Characteristics, Class A Amplifier:

Plate Voltage.......................... 275 volts
Grid-No.3 Voltage...................... 135 volts
Grid-No.1 Voltage...................... 0.2 volt
Plate Resistance (Approx.)........... 0.24 megohm
Transconductance...................... 10000 μmhos
Plate Current.......................... 9 ma
Grid-No.3 Current..................... 0.17 ma
Grid-No.1 Voltage (Approx.) for transconductance (μmhos) = 100........... -5 volts

Mechanical:

Operating Position..................... Any
Type of Cathode........................ Coated Unipotential
Maximum Overall Length................ 2-1/8"
Maximum Seated Length................ 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip).... 1-1/2" ± 3/32"
Diameter................................ 0.650" ± 0.750"
Dimensional Outline...................... See General Section
Bulb.................................... .T5-1/2
Base.................................... Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW. .............. 7GA

Pin 1 - Grid No.1  
Pin 2 - Cathode, Grid No.2, Grid No.4  
Pin 3 - Heater  
Pin 4 - Heater  
Pin 5 - Plate  
Pin 6 - Grid No.3  
Pin 7 - Cathode, Grid No.2, Grid No.4

AMPLIFIER — Class A

**Maximum Ratings, Design-Maximum Values:**

- PLATE VOLTAGE .................. 300 max. volts
- GRID-No.3 (SCREEN-GRID) VOLTAGE ....... 150 max. volts
- GRID-No.1 (CONTROL-GRID) VOLTAGE:  
  - Negative-bias value ................ 50 max. volts  
  - Positive-bias value ............... 0 max. volts  
- CATHODE CURRENT ............... 20 max. ma  
- GRID-No.3 INPUT ............... 0.15 max. watt  
- PLATE DISSIPATION .............. 3.25 max. watts

**Maximum Circuit Values:**

- Grid-No.1-Circuit Resistance:  
  For fixed-bias operation.............. 0.5 max. megohm

* The dc component must not exceed 100 volts.
* With external shield JEDEC No.316 connected to pin 7.

**OPERATING CONSIDERATIONS**

This type has four grids—grid No.1 (Control grid), grid No.2 (Focusing grid), grid No.3 (Screen grid), and grid No.4 (Suppressor grid). Grid No.2 is (1) internally connected to cathode and grid No.4, (2) aligned with grid No.3, and (3) located between grids No.1 and No.3. The addition of grid No.2 results in an increase in the plate-current-to-screen-current ratio with subsequent noise reduction.