Variable-Mu Twin Triode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathodes:
Voltage (AC or DC) .................. 6.3 volts
Current .................. 0.365 amp
Direct Interelectrode Capacitances:

<table>
<thead>
<tr>
<th>Without External Shield</th>
<th>With External Shield*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate (Each unit)</td>
<td>1.9</td>
</tr>
<tr>
<td>Plate to cathode (Each unit)</td>
<td>0.18</td>
</tr>
<tr>
<td>Heater to cathode (Each unit)</td>
<td>3</td>
</tr>
<tr>
<td>Plate of unit No.2 to plate of unit No.1.</td>
<td>0.04 max.</td>
</tr>
<tr>
<td>Plate of unit No.2 to grid of unit No.1.</td>
<td>0.003 max.</td>
</tr>
<tr>
<td>Grid of unit No.1 to cathode of unit No.2.</td>
<td>0.002 max.</td>
</tr>
</tbody>
</table>

Characteristics, Class A1 Amplifier (Each Unit):
Plate Voltage .................. 90 90 90 volts
Grid Voltage .................. -1.2 -5 -9 volts
Plate Resistance (Approx.) .................. 2500 ohms
Transconductance .................. 12500 625 125 μmhos
Plate Current .................. 15 - - ma

Mechanical:
Operating Position .................. Any
Maximum Overall Length .................. 2-3/16"
Maximum Seated Length .................. 1-15/16"
Length, Base Seat to Bulb Top
(Excluding tip) .................. 1-9/16" ± 3/32"
Diameter .................. 0.750" to 0.875"
Dimensional Outline .................. See General Section
Bulb .................. T6-1/2
Base .................. Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW .................. 9A

Pin 1 - Plate of Unit No.2
Pin 2 - Grid of Unit No.2
Pin 3 - Cathode of Unit No.2
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Plate of Unit No.1
Pin 7 - Grid of Unit No.1
Pin 8 - Cathode of Unit No.1
Pin 9 - Internal Shield

RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.
AMPLIFIER — Cascade Type

Maximum Ratings, Design-Center Values:

PLATE SUPPLY VOLTAGE
with plate current = 0. 550 max. volts
PLATE VOLTAGE (Each Unit) 130 max. volts
GRID VOLTAGE:
Negative-bias value (Each Unit) 50 max. volts
CATHODE CURRENT (Each Unit) 22 max. ma
PLATE DISSIPATION (Each Unit) 1.8 max. watts
HEATER-CATHODE VOLTAGE:
Unit No. 1: c
RMS voltage between cathode and heater. 50 max. volts
Unit No. 2: d
RMS voltage between cathode and heater e 50 max. volts
DC voltage between cathode and heater e 130 max. volts

Typical Operation:

In a cascade-type circuit with the grid of the output unit connected to a voltage divider f

Supply Voltage 180 volts
Plate Current 15 ma
Transconductance 12500 μmhos
Noise Figure g 6.5 db
Grid Voltage (Approx.) for transconductance (μmhos) = 125 -9 volts
Input Voltage for cross-modulation factor = 0.01 and transconductance (μmhos) = 125 500 millivolts

Maximum Circuit Values:

Grid-Circuit Resistance (Each Unit) 1 max. megohm

a With external shield JEDEC No. 315 connected to cathode of unit under test except as noted.
b With external shield JEDEC No. 315 connected to ground.
c Grounded—cathode input unit—pins 6, 7, and 8.
d Grounded—grid output unit—pins 1, 2, and 3.
e Cathode positive with respect to heater.
f In order not to exceed the maximum-rated plate voltage when the cascade-type amplifier is controlled, it is necessary to use a voltage divider for the grid of the grounded—grid output unit.
g Measured with tube operating in a television tuner.