Medium-Mu Twin Triode
With Semiremote-Cutoff Characteristic

9-PIN MINIATURE TYPE
For Use in Cascode-Type Circuits of VHF TV Tuners

ELECTRICAL

Heater Characteristics and Ratings
Voltage (AC or DC) ............... 6.3 ± 0.6 V
Current at 6.3 V .................. 0.400 A
Heater-Cathode Voltage:
Peak positive ................... 200 V
Peak negative^a ................ 200 V
Average ........................ 100 V
Direct Inter-electrode Capacitances (Approx.)^b

<table>
<thead>
<tr>
<th>Grid to plate</th>
<th>Input: G to (K, IS, H)</th>
<th>Input: K to (G, IS, H)</th>
<th>Output: P to (K, IS, H)</th>
<th>Output: P to (G, IS, H)</th>
<th>Plate to cathode</th>
<th>Heater to cathode</th>
<th>Plate of unit No.1 to plate of unit No.2</th>
<th>Plate of unit No.2 to plate and grid of unit No.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit No.1</td>
<td>1.2 pF</td>
<td>2.6 pF</td>
<td>1.3 pF</td>
<td>2.8 pF</td>
<td>0.12 pF</td>
<td>2.8 pF</td>
<td>0.02 pF</td>
<td>0.04 pF</td>
</tr>
<tr>
<td>Unit No.2</td>
<td>1.2 pF</td>
<td>5.5 pF</td>
<td>2.4 pF</td>
<td>2.8 pF</td>
<td>0.12 pF</td>
<td>2.8 pF</td>
<td>0.02 pF</td>
<td>0.04 pF</td>
</tr>
</tbody>
</table>

MECHANICAL

Operating Position .................. Any
Type of Cathode ................... Coated Unipotential
Maximum Overall Length .............. 2.187 in
Maximum Seated Length .............. 1.937 in
Maximum Diameter .................. 0.875 in
Length, Base Seat to Bulb Top
Excluding tip ........................ 1.469 to 1.656 in

Dimensional Outline (JEDEC 6-2) ..... See General Section
Envelopes .......................... JEDEC T6-1/2
Base .................................. Small-Button Noval 9-Pin (JEDEC E9-1)

TERMINAL DIAGRAM (Bottom View)

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

^a Indicates a change.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>150 V</td>
</tr>
<tr>
<td>Cathode Resistor</td>
<td>220 Ω</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>35</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>5300 Ω</td>
</tr>
<tr>
<td>Transconductance</td>
<td>6200 μmho</td>
</tr>
<tr>
<td>Plate Current</td>
<td>10 mA</td>
</tr>
<tr>
<td>Grid Voltage for $g_m = 50$ μmho</td>
<td>-13 V</td>
</tr>
</tbody>
</table>

**AMPLIFIER—CLASS A1**

<table>
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<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage $^a$</td>
<td>150 V</td>
</tr>
<tr>
<td>Cathode Current</td>
<td>22 mA</td>
</tr>
<tr>
<td>Plate Dissipation</td>
<td>2.2 W</td>
</tr>
</tbody>
</table>

**MAXIMUM CIRCUIT VALUES**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-No.1 Circuit Resistance</td>
<td>0.5 MΩ</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For cathode-bias operation*

$^a$ This rating may be as high as 300 volts under cutoff conditions when the tube is used as a cascode amplifier and the two units are connected in series.

$^b$ With external shield JEDEC No.315 connected to internal shield.

$^c$ Read as grounded grid amplifier.
AVERAGE CHARACTERISTICS
FOR EACH UNIT

$E_f = 6.3$ VOLTS

GRID VOLTS
-12  -10  -8   -6   -4   -2   0

PLATE MILLIAMPERES
20
16
12
8
4

PLATE VOLTAGE 1000
PLATE VOLTAGE 1200
PLATE VOLTAGE 1500