Medium-Mu Twin Triode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (Design-Center Values):

Voltage (AC or DC) .................. 6.3 ± 0.6 volts
Current at heater volts = 6.3 ........ 0.300 amp
Peak heater-cathode voltage [Each unit]:
Heater negative with respect to cathode ........ 60 max. volts
Heater positive with respect to cathode ........ 120 max. volts

Direct Interelectrode Capacitances:

<table>
<thead>
<tr>
<th>Unit No. 1</th>
<th>Unit No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate .......... 1.4</td>
<td>1.4 µf</td>
</tr>
<tr>
<td>Grid to cathode, internal shield, and heater .......... 3.1</td>
<td>3.1 µf</td>
</tr>
<tr>
<td>Plate to cathode, internal shield, and heater .......... 1.75</td>
<td>1.65 µf</td>
</tr>
<tr>
<td>Heater to cathode .......... 2.6</td>
<td>2.7 µf</td>
</tr>
</tbody>
</table>

Characteristics, Class A1 Amplifier (Each Unit):

| Plate Supply Voltage ............... 100 | 90 volts |
| Grid Supply Voltage ............... 9 | 0 volts |
| Cathode Resistor .................. 680 | 120 ohms |
| Amplification Factor .............. 33 - |
| Transconductance .................. 12500 | 11500 µmhos |
| Plate Current ................. 15 | 12 ma |

Mechanical:

Operating Position ................... Any
Type of Cathodes .................. Coated Unipotential
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 .................. TS6-1/2
Base .................. Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW ............... 9AJ

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
AMPLIFIER — Class A1

Values are for Each Unit

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE:
- With plate dissipation = 0.8 watt or greater.......................... 220 max. volts
- With plate dissipation less than 0.8 watt................................. 250 max. volts
- With plate ma. = 0............................................. 400 max. volts
- With cathode ma. = 0.......................................... 550 max. volts

GRID VOLTAGE:
- Negative-bias value........................................ 100 max. volts
- Peak-negative value........................................... 200 max. volts

CATHODE CURRENT:
- Peak ......................................................... 100 max. ma
- Average...................................................... 20 max. ma

GRID INPUT.................................................. 0.03 max. watt

PLATE DISSIPATION:
- Either plate............................................... 1.5 max. watts
- Both plates (Both units operating)... 2 max. watts

BULB TEMPERATURE (At hottest point on bulb surface)........... 170 max. °C

Maximum Circuit Values:

Grid-Circuit Resistance:
- For fixed-bias operation........................................... Permitted only when plate ma. < 5 ma.
- For cathode-bias operation...................................... 1 max. megohm

a Without external shield.
b Operation under conditions listed in left-hand column is recommended because of the small spread in characteristics.
c Pulse duration (microseconds) = 200 max., duty factor = 0.10 max.

SPECIAL RATINGS & PERFORMANCE DATA

Shock Rating:

Impact Acceleration ........................................... 500 max. g

This test is performed on a sample lot of tubes from each production run to determine ability of tube to withstand the specified impact acceleration. Tubes are held rigid in four different positions in a Navy Type, High-impact (Flyweight) Shock Machine and are subjected to 5 blows at a hammer angle of 30°.

Fatigue Rating:

Vibrational Acceleration........................................ 2.5 max. g

This test is performed on a sample lot of tubes to determine ability of tube to withstand the specified vibrational acceleration. Tubes are rigidly mounted and are subjected for 52 hours to 2.5-g vibrational acceleration at 50 cycles per second in each of three directions.