Medium-Mu Twin Triode

9-PIN MINIATURE TYPE
For Applications Critical as to Microphonics

GENERAL DATA

Electronic:
Heater, for Unipotential Cathodes:

<table>
<thead>
<tr>
<th>Heater arrangement</th>
<th>Series</th>
<th>Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage (AC or DC)</td>
<td>12.6</td>
<td>6.3 ± 10%</td>
</tr>
<tr>
<td>Current</td>
<td>0.15 ± 6%</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Direct Inter-electrode Capacitances
(Approx.):

<table>
<thead>
<tr>
<th>Unit No.1</th>
<th>Unit No.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate</td>
<td>1.5</td>
</tr>
<tr>
<td>Grid to cathode and heater</td>
<td>1.6</td>
</tr>
<tr>
<td>Plate to cathode and heater</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Characteristics, Class A Amplifier (Each Unit):

| Plate Voltage | 100 | 250 | volts |
| Grid Voltage  | 0   | -8.5 | volts |
| Amplification Factor | 19.5 | 17 |
| Plate Resistance (Approx.) | 6250 | 7700 | ohms |
| Transconductance | 3100 | 2200 | μmhos |
| Plate Current  | 11.8 | 10.5 | ma |
| Grid Voltage (Approx.) for plate μa = 10 | - | -24 | volts |

Mechanical:
Operating Position: Any
Maximum Overall Length: 2-3/16" 1-15/16"
Maximum Seated Length: 1-9/16" 1-3/32"
Length, Base Seat to Bulb Top (Excluding tip): 0.750" to 0.875"
Diameter: See General Section
Bulb: TG-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 & 9 - Heater of Unit No.2
Pin 5 & 9 - Heater of Unit No.1

= Indicates a change.
AMPLIFIER — Class A
Values are for Each Unit

→ Maximum Ratings, Design-Maximum Values:
PLATE VOLTAGE ............... 330 max. volts
CATHODE CURRENT .......... 22 max. ma
PLATE DISSIPATION:
Either plate ................. 2.75 max. watts
Both plates (Both units operating) ... 5.5 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode. 200 max. volts
Heater positive with respect to cathode. 200 max. volts

Typical Operation as Resistance-Coupled Amplifier:
See RESISTANCE-COUPLED AMPLIFIER CHART No. 10
at front of this Section

Maximum Circuit Values:
Grid-Circuit Resistance:
For fixed-bias operation .......... 1 max. megohm

HORIZONTAL-DEFLECTION OSCILLATOR
Values are for Each Unit

→ Maximum Ratings, Design-Maximum Values:
For operation in a 525-line, 30-frame system
DC PLATE VOLTAGE ............... 330 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE .... 660 max. volts
CATHODE CURRENT:
Peak ......... 330 max. ma
Average ....... 22 max. ma
PLATE DISSIPATION:
Either plate ................. 2.75 max. watts
Both plates (Both units operating) ... 5.5 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode. 200 max. volts
Heater positive with respect to cathode. 200 max. volts

Maximum Circuit Values:
Grid-Circuit Resistance .......... 2.2 max. megohms

VERTICAL-DEFLECTION OSCILLATOR
Values are for Each Unit

→ Maximum Ratings, Design-Maximum Values:
For operation in a 525-line, 30-frame system
DC PLATE VOLTAGE ............... 330 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE .... 440 max. volts
CATHODE CURRENT:
Peak .......... 66 max. ma
Average ....... 22 max. ma

→ Indicates a change.
PLATE DISSIPATION:
   Either plate: 2.75 max. watts
   Both plates (Both units operating): 5.5 max. watts

PEAK HEATER-CATHODE VOLTAGE:
   Heater negative with respect to cathode: 200 max. volts
   Heater positive with respect to cathode: 200 max. volts

Maximum Circuit Values:
Grid-Circuit Resistance: 2.2 max. megohms

VERTICAL-DEFLECTION AMPLIFIER
Values are for Each Unit

Maximum Ratings, Design-Maximum Values:
For operation in a 525-line, 30-frame system:

DC PLATE VOLTAGE: 300 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE: 1200 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE: 275 max. volts

CATHODE CURRENT:
   Peak: 66 max. ma
   Average: 22 max. ma

PLATE DISSIPATION:
   Either plate: 2.75 max. watts
   Both plates (Both units operating): 5.5 max. watts

PEAK HEATER-CATHODE VOLTAGE:
   Heater negative with respect to cathode: 200 max. volts
   Heater positive with respect to cathode: 200 max. volts

Maximum Circuit Values:
Grid-Circuit Resistance:
   For cathode-bias operation: 2.2 max. megohms

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a Without external shield.
b The dc component must not exceed 100 volts.
c As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.
d This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

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Indicates a change.

RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

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