MEDIUM-MU TWIN TRIODE

9-PIN MINIATURE TYPE

Intended for use in equipment having series heater-string arrangement.

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

<table>
<thead>
<tr>
<th>Heater arrangement</th>
<th>Series</th>
<th>Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>12.6</td>
<td>6.3</td>
</tr>
<tr>
<td>Current</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Warm-up time (Average)</td>
<td>—</td>
<td>11</td>
</tr>
</tbody>
</table>

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances (Approx.):^0

<table>
<thead>
<tr>
<th>Unit No.1</th>
<th>Unit No.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate</td>
<td>2.6</td>
</tr>
<tr>
<td>Grid to cathode and heater</td>
<td>3.2</td>
</tr>
<tr>
<td>Plate to cathode and heater</td>
<td>0.5</td>
</tr>
<tr>
<td>Plate of unit No.1 to plate of unit No.2</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Mechanical:

Mounting Position | Any
Max. Overall Length | 2-5/8"
Max. Seated Length | 2-3/8"
Length, Base Seat to Bulb Top (Excluding tip) | 2" ± 3/32"
Max. Diameter | 7/8"
Bulb | 1-6-1/2
Base | Small-Button Noval 9-Pin (JETEC No.E9-1)

Basing Designation for BOTTOM VIEW | 9A

AMPLIFIER - Class A^1

Values are for Each Unit

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE | 300 max. volts

^0 Without external shield.

MAR. 1, 1955

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA 1
GRID VOLTAGE:
   Negative bias value .................. 50 max. volts
   Positive bias value .................. 0 max. volts
CATHODE CURRENT .................. 20 max. ma
PLATE DISSIPATION .................. 3.5 max. watts
PEAK HEATER-CATHODE VOLTAGE:
   Heater negative with respect to cathode . 200 max. volts
   Heater positive with respect to cathode . 200 max. volts

Characteristics:
   Plate Voltage ...................... 250 volts
   Grid Voltage ...................... -10.5 volts
   Amplification Factor .............. 16.5
   Plate Resistance (Approx.) .......... 5300 ohms
   Transconductance .................. 3100 μhos
   Plate Current ..................... 11.5 ma
   Plate Current for grid
      voltage of -14 volts ............. 4 ma
   Grid Voltage (Approx.) for
      plate current of 50 μamp .......... -23 volts

Maximum Circuit Values:
   Grid-Circuit Resistance:
      For fixed-bias operation .......... 0.25 max. megohm
      For cathode-bias operation ......... 1.0 max. megohm

HORIZONTAL DEFLECTION OSCILLATOR
Values are for Each Unit

Maximum Ratings, Design-Center Values:
   For operation in a 525-line, 30-frame system:
   DC PLATE VOLTAGE .................. 450 max. volts
   PEAK NEGATIVE-PULSE GRID VOLTAGE 600 max. volts
   CATHODE CURRENT:
      Peak .................................. 300 max. ma
      Average ............................. 20 max. ma
   PLATE DISSIPATION .................. 3.5 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 fixed-bias, grid-resistor bias, or
      cathode-bias operation .......... 2.2 max. megohms

* This rating is applicable where the duration of the voltage pulse does
  not exceed 15 per cent of one horizontal scanning cycle. In a 525-line,
  30-frame system, 15 per cent of one horizontal scanning cycle is 10 mi-
  croseconds.

△: See next page.
MEDIUM-MU TWIN TRIODE

VERTICAL DEFLECTION OSCILLATOR

Values are for Each Unit

Maximum Ratings, Design-Center Values:

For operation in a 525-line, 30-frame system:

DC PLATE VOLTAGE ........................................ 450 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE .................. 400 max. volts
CATHODE CURRENT:
  Peak ............................................... 70 max. ma
  Average .......................................... 20 max. ma
PLATE DISSIPATION ..................................... 3.5 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 fixed-bias, grid-resistor bias, or cathode-bias operation .......... 2.2 max. megohms

VERTICAL DEFLECTION AMPLIFIER

Values are for Each Unit

Maximum Ratings, Design-Center Values Except as Noted:

For operation in a 525-line, 30-frame system:

DC PLATE VOLTAGE ........................................ 450 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE# ................. 1500 max. volts
  (Absolute Maximum) ................................ 250 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE .................. 250 max. volts
CATHODE CURRENT:
  Peak ............................................... 70 max. ma
  Average .......................................... 20 max. ma
PLATE DISSIPATION ..................................... 3.5 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

# The dc component must not exceed 100 volts.
# As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
# 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.
# Under no circumstances should this absolute value be exceeded.