High-Mu Triode

NUVISTOR TYPE
For Use as Grounded-Cathode, Neutralized RF-Amplifier
Tube in Tuners of VHF Television and FM Receivers

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (Design-Maximum Values):
Voltage (AC or DC) .................. 6.3 ± 0.6 volts
Current at heater volts = 6.3 ....... 0.135 amp
Peak heater-cathode voltage:
  Heater negative with respect to cathode ........ 100 max. volts
  Heater positive with respect to cathode ........ 100 max. volts

Direct Interelectrode Capacitances (Approx.):
  Grid to plate ...................... 0.92 pf
  Grid to cathode, shell, and heater .... 4.3 pf
  Plate to cathode, shell, and heater .... 1.8 pf
  Plate to cathode .................. 0.18 pf
  Heater to cathode .................. 1.6 pf

Characteristics, Class A\ amplifier:
  Plate Supply Voltage ............... 110 volts
  Grid Supply Voltage ................ 0 volts
  Cathode Resistor .................. 130 ohms
  Amplification Factor ............... 65
  Plate Resistance (Approx.) ........ 6600 ohms
  Transconductance ................. 9800 μmhos
  Plate Current ...................... 7 ma
  Grid Voltage (Approx.) for plate μa = 10 ... -4 volts

Mechanical:

Operating Position .................. Any
Type of Cathode ..................... Coated Unipotential
Maximum Overall Length ............ 0.800"
Maximum Seated Length ............. 0.625"
Maximum Diameter .................. 0.440"
Envelope .......................... Metal Shell MT4
Socket ............................. Cinch Mfg. Corp. No. 133 65 10 001, Industrial Electronic Hardware Co. No. Nu 5044 or No. Nu 5060, or equivalent
Base ............................... Medium Ceramic-Wafer Twelvar 5-Pin (JEDEC No.E5-65)

---- Indicates a change.
**6CW4**

Basing Designation for BOTTOM VIEW. . . . . . . . 12AQ

Pin 1° - Do Not Use
Pin 2 - Plate
Pin 3 - Same as Pin 1
Pin 4 - Grid
Pin 5 - Same as Pin 1
Pin 6 - Same as Pin 1
Pin 7 - Same as Pin 1
Pin 8 - Cathode
Pin 9 - Same as Pin 1
Pin 10 - Heater
Pin 12 - Heater

**AMPLIFIER — Class A1**

Maximum Ratings, Design-Maximum Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATE SUPPLY VOLTAGE</td>
<td>300 volts</td>
</tr>
<tr>
<td>PLATE VOLTAGE</td>
<td>135 volts</td>
</tr>
<tr>
<td>GRID VOLTAGE:</td>
<td></td>
</tr>
<tr>
<td>Negative-bias value</td>
<td>55 volts</td>
</tr>
<tr>
<td>Peak-positive value</td>
<td>0 volts</td>
</tr>
<tr>
<td>CATHODE CURRENT</td>
<td>15 ma</td>
</tr>
<tr>
<td>PLATE DISSIPATION:</td>
<td></td>
</tr>
<tr>
<td>With a minimum series plate-circuit resistance of 5000 ohms</td>
<td>1.5 watts</td>
</tr>
</tbody>
</table>

For lower values of series plate-circuit resistance, see accompanying Plate-Dissipation-Rating Chart

Typical Operation:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>70 volts</td>
</tr>
<tr>
<td>Grid Supply Voltage</td>
<td>0 volts</td>
</tr>
<tr>
<td>Grid Resistor</td>
<td>47000 ohms</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>68</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>5440 µhos</td>
</tr>
<tr>
<td>Transconductance</td>
<td>12500 µhos</td>
</tr>
<tr>
<td>Plate Current</td>
<td>7.2 ma</td>
</tr>
</tbody>
</table>

Maximum Circuit Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-Circuit Resistance:</td>
<td></td>
</tr>
<tr>
<td>For fixed-bias operation.</td>
<td>0.5 max. meghm</td>
</tr>
<tr>
<td>For cathode-bias operation.</td>
<td>2.2 max. meghms</td>
</tr>
</tbody>
</table>

*Pin is of a length such that its end does not touch the socket insertion plane.*

*b* A plate supply voltage of 300 volts may be used provided sufficient plate-circuit resistance and agc voltage are used to limit the voltage at the plate of the tube to 135 volts under conditions of maximum-rated plate dissipation (1.5 watts).

*c* For operation at metal-shell temperatures up to 135 °C.

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RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.
NOTE 1: MAXIMUM OUTSIDE DIAMETER OF 0.440" IS PERMITTED ALONG 0.190" LUG LENGTH.

NOTE 2: SHELL TEMPERATURE SHOULD BE MEASURED IN ZONE "A" BETWEEN BROKEN LINES.