NUVISTOR TYPE

Having Gold-Plated Envelope and Base Pins to Assure Positive Grounding and Low Pin-Contact Resistance for Oscillator Applications at UHF Frequencies

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 ..................... 1.8 pf
Grid to cathode, shell, and heater .......... 4.4 pf
Plate to cathode, shell, and heater .......... 1.9 pf
Plate to cathode .................... 0.25 pf
Heater to cathode ................... 1.4 pf
Grid to cathode ..................... 3.7 pf

Characteristics, Class A1 Amplifier:
Plate Supply Voltage .................. 75 volts
Cathode Resistor ..................... 100 ohms
Amplification Factor .................. 35
Plate Resistance (Approx.) .......... 3100 ohms
Transconductance .................... 11500 μmhos
Plate Current ....................... 10.5 ma
Grid Voltage (Approx.) for plate μa = 10 ........ −7 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 .................. Industrial Electronic Hardware Corp. No. MSN0707-1, or equivalent
Base .................. Medium Ceramic-Wafer Twelvar 7-Pin (JEDEC No. E7-83)
Basing Designation for BOTTOM VIEW. . . . . . . . . . . . . . . . . . . . . . . . . . . . . 12EA

Pin 1 - Plate
Pin 2 - Plate
Pin 3* - Do Not Use
Pin 4 - Grid
Pin 5 - Same as Pin 3
Pin 6 - Grid
Pin 7 - Cathode
Pin 8 - Same as Pin 3
Pin 9 - Same as Pin 3
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^b max. volts</td>
</tr>
<tr>
<td>PLATE VOLTAGE</td>
<td>125 max. volts</td>
</tr>
<tr>
<td>GRID VOLTAGE</td>
<td></td>
</tr>
<tr>
<td>Negative-bias value</td>
<td>55 max. volts</td>
</tr>
<tr>
<td>Peak-positive value</td>
<td>2 max. volts</td>
</tr>
<tr>
<td>CATHODE CURRENT</td>
<td>15 max. ma</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>1 max. watt</td>
</tr>
</tbody>
</table>

Typical Operation:

As oscillator at 950 Mc

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>60</td>
</tr>
<tr>
<td>Grid Voltage</td>
<td>-2</td>
</tr>
<tr>
<td>Grid Resistor</td>
<td>5600  ohms</td>
</tr>
<tr>
<td>Plate Current</td>
<td>8</td>
</tr>
<tr>
<td>Grid Current</td>
<td>350   μa</td>
</tr>
</tbody>
</table>

Maximum Circuit Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-Circuit Resistance:^c</td>
<td></td>
</tr>
<tr>
<td>For fixed-bias operation</td>
<td>0.1 max. megohm</td>
</tr>
<tr>
<td>For cathode-bias operation</td>
<td>0.2 max. megohm</td>
</tr>
</tbody>
</table>

---

^a 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 that a sufficiently large resistor is used in the plate circuit to limit the plate dissipation to one watt under any condition of operation.
^c For operation at metal-shell temperatures up to 135° C.
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.