High-Mu Triode—Beam Power Tube

NOVAR TYPE
For Combined Vertical-Deflection Oscillator and Amplifier Service in TV Receivers

Electrical:
Heater Characteristics and Ratings:
Voltage (AC or DC) .................. 6.3 ± 0.6 volts
Current at heater volts = 6.3 .......... 1.100 amp
Peak heater-cathode voltage (Each unit):
Heater negative with respect to cathode 200 max. volts
Heater positive with respect to cathode 200 max. volts
Direct Interelectrode Capacitances (Approx.):
Triode Unit:
Grid to plate ....................... 0.44 pf
Gₚ to (Kₚ,H) ......................... 15.0 pf
Pₜ to (Kₜ,H) ......................... 7.0 pf
Beam Power Unit:
Grid No. 1 to plate .................. 0.048 pf
G₁p to (K₉+G₃₈,G₂₈,H) .............. 2.6 pf
Pₚ to (K₉+G₃₈,G₂₈,H) .............. 0.28 pf

Mechanical:
Operating Position .................. Any
Type of Cathodes ..................... Coated Unipotential
Maximum Overall Length .............. 3.110"
Maximum Seated Length ............... 2.730"
Length, Base Seat to Bulb Top (Excluding tip) 2.210" to 2.390"
Diameter .......................... 1.062" to 1.188"
Bulb ............................... T9
Socket .......................... Cinch Mfg. Co. No. 149 19 00 033, Industrial Electronics Hardware Corp. No. 50-0968-SL1, or equivalent
Base .......................... Small Button Novar 9-Pin (JEDEC No.E9-75)
Basing Designation for BOTTOM VIEW .......................... 9QT

Pin 1—Triode Cathode
Pin 2—Beam Power Grid No. 1
Pin 3—Beam Power Cathode & Grid No. 3
Pin 4—Heater
Pin 5—Heater
Pin 6—Beam Power Plate
Pin 7—Beam Power Grid No. 2
Pin 8—Triode Plate
Pin 9—Triode Grid

Characteristics, Class A₁ Amplifier:

<table>
<thead>
<tr>
<th></th>
<th>Triode Unit</th>
<th>Beam Power Unit</th>
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</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>250 volts</td>
<td>50 volts</td>
</tr>
<tr>
<td>Grid-No.2 Voltage</td>
<td>120 volts</td>
<td>120 volts</td>
</tr>
<tr>
<td>Grid-No.1 Voltage</td>
<td>0 volts</td>
<td>10 volts</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>64</td>
<td>7</td>
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</tbody>
</table>

DATA
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4-64
<table>
<thead>
<tr>
<th>Triode Unit</th>
<th>Beam Power Unit</th>
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<tbody>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>40000</td>
</tr>
<tr>
<td>Transconductance.</td>
<td>1600</td>
</tr>
<tr>
<td>Plate Current</td>
<td>1.4</td>
</tr>
<tr>
<td>Grid-No.2 Current</td>
<td>-</td>
</tr>
<tr>
<td>Grid-No.1 Voltage (Approx.) for plate</td>
<td>-</td>
</tr>
</tbody>
</table>

**VERTICAL-DEFLECTION OSCILLATOR (Triode Unit)**

**Maximum Ratings, Design-Maximum Values:**

*For operation in a 525-line, 30-frame system*\(^d\)

- DC Plate Voltage | 330 max. | volts |
- Peak Negative-Pulse Grid Voltage | 400 max. | volts |
- Peak Cathode Current | 77 max. | ma |
- Average Cathode Current | 22 max. | ma |
- Plate Dissipation | 1.5 max. | watts |

**Maximum Circuit Values:**

- Grid-Circuit Resistance: For grid-resistor-bias operation | 2.2 max. | megohms |

**VERTICAL-DEFLECTION AMPLIFIER (Beam Power Unit)**

**Maximum Ratings, Design-Maximum Values:**

*For operation in a 525-line, 30-frame system*\(^d\)

- DC Plate Voltage | 300 max. | volts |
- Peak Positive-Pulse Plate Voltage\(^e\) | 2000 abs.max. | volts |
- DC Grid-No.2 (Screen-Grid) Voltage | 150 max. | volts |
- Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage | 250 max. | volts |
- Peak Cathode Current | 200 max. | ma |
- Average Cathode Current | 70 max. | ma |
- Plate Dissipation | 12 max. | watts |
- Grid-No.2 Input | 1.9 max. | watts |

**Maximum Circuit Values:**

- Grid-No.1-Circuit Resistance: For grid-resistor-bias operation | 2.2 max. | megohms |

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\(^a\) The dc component must not exceed 100 volts.

\(^b\) Without external shield.

\(^c\) This value can be measured by a method involving a recurrent wave form such that the plate dissipation and grid-No.2 input will be kept within ratings in order to prevent damage to the tube.

\(^d\) As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

\(^e\) 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 milli-seconds.

**DIMENSIONAL OUTLINE & CURVES** shown under Type 15KY8 also apply to the 6KY8

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