LOW-MU TWIN POWER TRIODE

GENERAL DATA

Heater, for Unipotential Cathodes:
Voltage ................ 6.3 ± 10% ... ac or dc volts
Current ................. 2.5 .............. amp

Direct Inter-electrode Capacitances (Approx.):
(Each Unit, without external shield):
Grid to Plate ................. 8 ... μf
Input ..................... 6 ... μf
Output ..................... 2.2 ... μf
Heater to Cathode:
Triode Unit No.1 ........ 6.5 ... μf
Triode Unit No.2 ........ 6 ... μf
Grid of Unit No.1 to Grid of Unit No.2 ... 0.5 ... μf
Plate of Unit No.1
to Plate of Unit No.2 ........ 2 ... μf

Characteristics, Amplifier Class A1 (Each Unit):
Plate-Supply Voltage ........... 135 ... volts
Cathode-Bias Resistor .......... 250 ... ohms
Amplification Factor .......... 2
Plate Resistance ............. 280 ... ohms
Transconductance ........... 7000 ... μmhos
Plate Current ................ 125 ... ma

Mechanical:
Mounting Position .............. Any
Maximum Overall Length ....... 4-1/16" ←
Maximum Seated Length ....... 3-1/2" ←
Maximum Diameter ............ 1-23/32" ←
Bulb .................. T-12 ←
Base .................. Large-Wafer Octal 8-Pin with Sleeve and External Barriers (JETEC No.B8-98)
Basing Designation for BOTTOM VIEW ........... 8BD

DC AMPLIFIER

Values are for Each Unit

Maximum Ratings, Absolute Values:
PLATE VOLTAGE .............. 250 max. volts
PLATE CURRENT ............. 125 max. ma
PLATE DISSIPATION ........ 13 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode .... 300 max. volts
Heater positive with respect to cathode .... 300 max. volts

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TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
LOW-MU TWIN POWER TRIODE

BULB TEMPERATURE*, .................. 200 max. °C

Maximum Circuit Values:

Grid-Circuit Resistance:
- For cathode-bias operation .......... 1.0 max. megohm
- For fixed-bias operation ............. 0.1 max. megohm
- For combined fixed and
cathode-bias operation .............. 0.1 max. megohm

BOOSTER SCANNING SERVICE
Values are for Each Unit

Maximum Ratings, Absolute Values:

For operation in a 525-line, 30-frame system^A

PEAK NEGATIVE-PULSE PLATE VOLTAGE* .......... 3000 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE ........... 2300 max. volts
DC PLATE CURRENT ......................... 125 max. ma
PLATE DISSIPATION ......................... 13 max. watts
PEAK HEATER-CATHODE VOLTAGE:
  Heater negative with respect to cathode* .... 300 max. volts
  Heater positive with respect to cathode .... 300 max. volts
BULB TEMPERATURE* ......................... 200 max. °C

Maximum Circuit Values (For maximum rated conditions):

Grid-Circuit Resistance:
- For cathode-bias operation .......... 1.0 max. megohm
- For fixed-bias operation .......... not recommended

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

<table>
<thead>
<tr>
<th>Note</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Current .....................</td>
<td>1</td>
<td>2.26</td>
</tr>
<tr>
<td>Amplification Factor (Each Unit) ...</td>
<td>1,2</td>
<td>1.4</td>
</tr>
<tr>
<td>Plate Current (Each Unit) ..........</td>
<td>1,2</td>
<td>100</td>
</tr>
<tr>
<td>Transconductance (Each Unit) ......</td>
<td>1,2</td>
<td>5800</td>
</tr>
<tr>
<td>Reverse Grid Current (Units in Parallel)</td>
<td>1,3</td>
<td>-</td>
</tr>
</tbody>
</table>

Note 1: With 6.3 volts ac or dc on heater.

Note 2: With plate-supply voltage of 135 volts, and cathode-bias resistor of 250 ohms in each cathode (both triode units operating).

Note 3: With plate-supply voltage of 135 volts, grid resistor of 1 megohm in each grid and cathode-bias resistor of 250 ohms in each cathode (both triode units operating).

- At hottest point on bulb surface.
- When fixed bias is used, the plate circuit should contain a protective resistance to provide a minimum drop of 15 volts dc at the normal operating conditions.

* ^A: See next page.

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DATA 1
when combined fixed- and cathode-bias is used, the cathode-bias portion should have a minimum value of 7.5 volts dc at the normal operating conditions.

As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

The duration of the voltage pulse must 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 microseconds.

Operation of this tube is not recommended with a damper pulse between heater and cathode.

SPECIAL RATINGS & PERFORMANCE DATA

Shock Rating:
Impact Acceleration ........... 450 max. g
Tubes are held rigid in four different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 450 g impact acceleration.

Fatigue Rating:
Vibrational Acceleration ....... 2.5 max. g
Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 25 cycles per second for 32 hours.

Low-Frequency Vibration Performance:
RMS Output Voltage ........... 200 max. mv
Under the following conditions and with units connected in parallel: Heater voltage of 6.3 volts, plate voltage supply of 135 volts, dc grid voltage of -7 volts, plate load resistance of 2000 ohms, and vibrational acceleration of 2.5 g at 25 cycles per second.

AUG. 1, 1953
TUBE DEPARTMENT
ELECTRONICS CORPORATION OF AMERICA, HARRISON, NEW JERSEY
AVERAGE PLATE CHARACTERISTICS
EACH TRIODE UNIT

E = 6.3 VOLTS

PLATE MILLIAMPERES

PLATE VOLTS

OCT. 19, 1951
TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7695