BEAM POWER PENTODE

UNIPOTENTIAL CATHODE
HEATER
6.3±0.6 VOLTS 2.5 AMP.
AC OR DC
ANY MOUNTING POSITION

THE 6DQ5 IS A HIGH-PERFORMANCE BEAM POWER PENTODE DESIGNED FOR USE AS A HORIZONTAL-DEFLECTION AMPLIFIER IN COLOR TELEVISION RECEIVERS.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.
WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE: 0.5 µµf
GRID #2 TO: (†:+G4; †: & G2)
PLATE TO: (†:+G4+H & G2)

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM
HORIZONTAL DEFLECTION AMPLIFIER

MAXIMUM PLATE VOLTAGE:
DC (INCLUDING BOOST): 990 VOLTS
PEAK POSITIVE-PULSE (ABS. MAX.): 6,500 VOLTS
PEAK NEGATIVE-PULSE: 1,100 VOLTS
MAXIMUM DC GRID #2 (SCREEN-GRID) VOLTAGE: 190 VOLTS
MAXIMUM PEAK NEGATIVE-PULSE GRID #1 (CONTROL-GRID) VOLTAGE: 250 VOLTS
MAXIMUM CATHODE CURRENT:
DC: 315 MA.
PEAK: 1,100 MA.
MAXIMUM GRID #2 INPUT
MAXIMUM PLATE DISSIPATION
3.2 WATTS
24 WATTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL ELECTRIC INC. ELECTRON TUBE DIVISION BLOOMFIELD, NEW JERSEY, U.S.A. DECEMBER 1, 1961 PLATE #6332
RATINGS — CONT'D
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM
HORIZONTAL DEFLECTION AMPLIFIER

MAXIMUM PEAK HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE 200 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE 200 VOLTS
BULB TEMPERATURE (AT HOTTEST POINT ON BULB SURFACE)
220 °C

MAXIMUM CIRCUIT VALUES
GRID #1 CIRCUIT RESISTANCE:
FOR GRID RESISTOR-BIAS OPERATION 0.47 MEGOHM

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A1 AMPLIFIER

<table>
<thead>
<tr>
<th>PLATE VOLTAGE</th>
<th>125</th>
<th>70</th>
<th>17%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRID #2 [SCREEN-GRID] VOLTAGE</td>
<td>125</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>GRID #4 [CONTROL-GRID] VOLTAGE</td>
<td>-25</td>
<td>0</td>
<td>-25</td>
</tr>
<tr>
<td>MUP-FACTOR, GRID #2 TO GRID #1</td>
<td>3.3</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>PLATE RESISTANCE (APPROX.)</td>
<td>---</td>
<td>5</td>
<td>500 OHMS</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE</td>
<td>---</td>
<td>10</td>
<td>500 µMhos</td>
</tr>
<tr>
<td>GRID VOLTAGE (APPROX.) FOR PLATE CURRENT OF 1 MA.</td>
<td>---</td>
<td>---</td>
<td>-55 VOLTS</td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>---</td>
<td>550</td>
<td>110 MA.</td>
</tr>
<tr>
<td>GRID #2 CURRENT</td>
<td>---</td>
<td>42</td>
<td>5 MA.</td>
</tr>
</tbody>
</table>

A AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE CONCERNING TELEVISION BROADCAST STATIONS", FEDERAL COMMUNICATIONS COMMISSION.

B THIS RATING IS APPLICABLE WHERE THE DURATION OF THE VOLTAGE PULSE DOES NOT EXCEED 15 PERCENT OF THE HORIZONTAL SCANNING CYCLE. IN A 525-LINE, 30-FRAME SYSTEM 15 PERCENT OF THE HORIZONTAL SCANNING CYCLE IS 30 MICROSECONDS.

C UNDER NO CIRCUMSTANCES SHOULD THIS ABSOLUTE VALUE BE EXCEEDED.

D IT IS ESSENTIAL THAT THE PLATE DISSIPATION BE LIMITED IN THE EVENT OF LOSS OF GRID SIGNAL. FOR THIS PURPOSE, SOME PROTECTIVE MEANS SUCH AS A CATHODE RESISTOR OF SUITABLE VALUE SHOULD BE EMPLOYED.

E THE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

F THESE VALUES CAN BE MEASURED BY A METHOD INVOLVING A RECURRENT WAVEFORM SUCH THAT THE PLATE DISSIPATION AND GRID #2 INPUT WILL BE KEPT WITHIN RATINGS IN ORDER TO PREVENT DAMAGE TO THE TUBE.
6DQ5

$E_f = 6.3$ Volts
$E_{c2} = 150$ Volts

$E_{c2} = 0$

$E_{c1} = -45$

$E_{c1} = -40$

$E_{c1} = -35$

$E_{c1} = -30$

$E_{c1} = -25$

$E_{c1} = -20$

$E_{c1} = -15$

$E_{c1} = -10$

$E_{c1} = 0$

$E_{c2} = -5$

$E_{c2} = -10$

$E_{c2} = -15$

$E_{c2} = -20$

$E_{c2} = -25$

$E_{c2} = -30$

$E_{c2} = -35$

$E_{c2} = -40$

$E_{c2} = -45$

$E_{c2} = -50$

$E_{c2} = -55$

$E_{c2} = -60$

$E_{c2} = -65$

$E_{c2} = -70$

$E_{c2} = -75$

$E_{c2} = -80$

$E_{c2} = -85$

$E_{c2} = -90$

$E_{c2} = -95$

$E_{c2} = -100$

$E_{c2} = -105$

$E_{c2} = -110$

$E_{c2} = -115$

$E_{c2} = -120$

$E_{c2} = -125$

$E_{c2} = -130$

$E_{c2} = -135$

$E_{c2} = -140$

$E_{c2} = -145$

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$E_{c2} = -165$

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$E_{c2} = -190$

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$E_{c2} = -200$

$E_{c2} = -205$

$E_{c2} = -210$

$E_{c2} = -215$

$E_{c2} = -220$

$E_{c2} = -225$

$E_{c2} = -230$

$E_{c2} = -235$

$E_{c2} = -240$

$E_{c2} = -245$

$E_{c2} = -250$

$E_{c2} = -255$

$E_{c2} = -260$

$E_{c2} = -265$

$E_{c2} = -270$

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$E_{c2} = -280$

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$E_{c2} = -310$

$E_{c2} = -315$

$E_{c2} = -320$

$E_{c2} = -325$

$E_{c2} = -330$

$E_{c2} = -335$

$E_{c2} = -340$

$E_{c2} = -345$

$E_{c2} = -350$

$E_{c2} = -355$

$E_{c2} = -360$

$E_{c2} = -365$

$E_{c2} = -370$

$E_{c2} = -375$

$E_{c2} = -380$

$E_{c2} = -385$

$E_{c2} = -390$

$E_{c2} = -395$

$E_{c2} = -400$