BEAM POWER PENTODE

UNIPOTENTIAL CATHODE
HEATER
25.0 VOLTS 0.30 AMP.
AC OR DC
ANY MOUNTING POSITION

GLASS BULB
SKIRTED MINIATURE CAP

THE 25DQ6A IS A HIGH-PERVEANCE BEAM POWER PENTODE DESIGNED FOR USE AS A HORIZONTAL DEFLECTION AMPLIFIER TUBE IN HIGH EFFICIENCY DEFLECTION CIRCUITS OF TELEVISION RECEIVERS. THERMAL CHARACTERISTICS OF THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TUBES WHICH ARE SIMILARLY CONTROLLED. EXCEPT FOR THE CONTROLLED HEATER WARM-UP TIME AND HEATER RATINGS THE 25DQ6A IS IDENTICAL TO THE 6DQ6A.

DIRECT INTERELECTRODE CAPACITANCES—APPROX.
WITHOUT EXTERNAL SHIELD
GRID #1 TO PLATE 0.55 µµµµ f
GRID #1 TO CATHODE & GRID #3, HEATER AND GRID #2 15 µµµµ f
PLATE TO CATHODE & GRID #3, HEATER AND GRID #2 7 µµµµ f

RATINGS A
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM
HORIZONTAL DEFLECTION AMPLIFIER

HEATER VOLTAGE 25.0 VOLTS
MAXIMUM PLATE VOLTAGE :
DC (INCLUDING BOOST) 700 VOLTS
PEAK POSITIVE—PULSE (ABSOLUTE MAX.) 6000 VOLTS
PEAK NEGATIVE—PULSE 1575 VOLTS
MAXIMUM DC GRID #2 VOLTAGE 200 VOLTS
MAXIMUM GRID #1 VOLTAGE :
DC -50 VOLTS
PEAK 300 VOLTS
MAXIMUM CATHODE CURRENT :
DC 140 MA.
PEAK 440 MA.
MAXIMUM GRID #2 INPUT 3 WATTS

A FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS; FEDERAL COMMUNICATIONS COMMISSION".

B THIS RATING IS APPLICABLE WHERE THE DURATION OF THE VOLTAGE PULSE DOES NOT EXCEED 15% OF ONE HORIZONTAL SCANNING CYCLE. IN A 525-LINE, 30-FRAME SYSTEM 15% OF THE HORIZONTAL SCANNING CYCLE IS 10 MICROSECONDS.

C UNDER NO CIRCUMSTANCES SHOULD THIS ABSOLUTE VALUE BE EXCEEDED.
RATINGS Continued...

MAXIMUM PLATE DISSIPATION

MAXIMUM PEAK HEATER–CATHODE VOLTAGE:
- HEATER NEGATIVE WITH RESPECT TO CATHODE
  TOTAL DC AND PEAK
  VOLTS
- HEATER POSITIVE WITH RESPECT TO CATHODE
  TOTAL DC AND PEAK
  VOLTS

MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT ON BULB SURFACE)

MAXIMUM CIRCUIT VALUES:
- GRID #4 CIRCUIT RESISTANCE:
  FOR GRID RESISTOR–BIAS OPERATION
  MEGOHM
- HEATER WARM-UP TIME (AVERAGE)
  SECONDS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

<table>
<thead>
<tr>
<th>CLASS A1 AMPLIFIER</th>
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<tbody>
<tr>
<td>HEATER VOLTAGE</td>
<td>25.0</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.30</td>
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<tr>
<td>PLATE VOLTAGE</td>
<td>60</td>
</tr>
<tr>
<td>GRID #2 VOLTAGE</td>
<td>150</td>
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<tr>
<td>GRID #4 VOLTAGE</td>
<td>0</td>
</tr>
<tr>
<td>MU-FACTOR, GRID #2 TO GRID #1</td>
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</tr>
<tr>
<td>PLATE RESISTANCE (APPROX.)</td>
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</tr>
<tr>
<td>TRANSCONDUCTANCE</td>
<td>---</td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>300E</td>
</tr>
<tr>
<td>GRID #2 CURRENT</td>
<td>27E</td>
</tr>
<tr>
<td>GRID #4 VOLTAGE (APPROX.)</td>
<td>---</td>
</tr>
<tr>
<td>FOR PLATE CURRENT OF 1 MA.</td>
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</tbody>
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A FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION".

B 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.

C 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.

D HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.