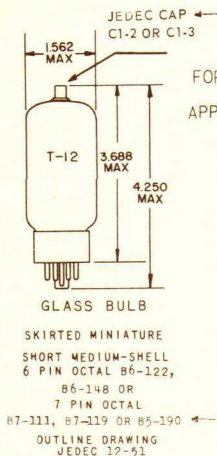


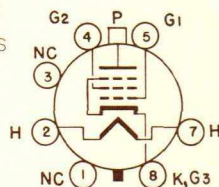
## TUNG-SOL

## BEAM PENTODE



COATED UNIPOTENTIAL CATHODE  
FOR HORIZONTAL DEFLECTION AMPLIFIER  
APPLICATIONS IN TELEVISION RECEIVERS

ANY MOUNTING POSITION  
PIN #1 IS OMITTED WHEN EITHER A  
B6-122 OR B6-148 BASE IS USED



BASING DIAGRAM  
JEDEC 6AM

THE 6DQ6A 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 6DQ6A IS IDENTICAL TO THE 12DQ6A.

## DIRECT INTERELECTRODE CAPACITANCES - APPROX.

WITHOUT EXTERNAL SHIELD

|                                          |      |    |
|------------------------------------------|------|----|
| GRID TO PLATE (G TO P)                   | 0.5  | pf |
| INPUT: (G1 TO H <sup>+</sup> K, BP + G2) | 15.0 | pf |
| OUTPUT: (P TO H <sup>+</sup> K, BP + B2) | 7.0  | pf |

## HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

|                                         |           |         |       |
|-----------------------------------------|-----------|---------|-------|
| AVERAGE CHARACTERISTICS                 | 6.3 VOLTS | 1200    | MA.   |
| HEATER SUPPLY LIMITS:                   |           |         |       |
| VOLTAGE OPERATION                       |           | 6.3±0.6 | VOLTS |
| MAXIMUM HEATER-CATHODE VOLTAGE:         |           |         |       |
| HEATER POSITIVE WITH RESPECT TO CATHODE |           |         |       |
| DC                                      |           | 100     | VOLTS |
| TOTAL DC AND PEAK                       |           | 200     | VOLTS |
| HEATER NEGATIVE WITH RESPECT TO CATHODE |           |         |       |
| TOTAL DC AND PEAK                       |           | 200     | VOLTS |

→ INDICATES A CHANGE.

CONTINUED ON FOLLOWING PAGE

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

HORIZONTAL DEFLECTION AMPLIFIER<sup>A</sup>

|                                                  |      |        |
|--------------------------------------------------|------|--------|
| PLATE SUPPLY VOLTAGE, DC (BOOST+DC POWER SUPPLY) | 770  | VOLTS  |
| PLATE VOLTAGE, PEAK PULSE, POSITIVE              | 6000 | VOLTS  |
| PLATE VOLTAGE, PEAK PULSE, NEGATIVE              | 1500 | VOLTS  |
| PLATE DISSIPATION, <sup>B</sup>                  | 18   | WATTS  |
| GRID #1 VOLTAGE, PEAK PULSE, NEGATIVE            | 330  | VOLTS  |
| GRID #2 VOLTAGE, DC                              | 220  | VOLTS  |
| GRID #2 DISSIPATION                              | 3.6  | WATTS  |
| CATHODE CURRENT, AVERAGE                         | 155  | MA.    |
| CATHODE CURRENT, PEAK                            | 540  | MA.    |
| GRID #1 CIRCUIT RESISTANCE, <sup>B</sup>         | 1.0  | MEGOHM |
| BULB TEMPERATURE, (AT HOTTEST POINT)             | 220  | °C     |

## AVERAGE CHARACTERISTICS

|                                                                         |        |            |
|-------------------------------------------------------------------------|--------|------------|
| PENTODE OPERATION: $E_b = 250V$ , $E_{c2} = 150V$ , $E_{c1} = -22.5V$ . |        |            |
| PLATE CURRENT                                                           | 55     | MA.        |
| GRID #2 CURRENT                                                         | 1.5    | MA.        |
| TRANSCONDUCTANCE                                                        | 6600   | $\mu$ MHOS |
| PLATE RESISTANCE, APPROX.                                               | 20,000 | OHMS       |
| ZERO BIAS: $E_b = 60V$ , $E_{c2} = 150V$ . (INSTANTANEOUS VALUES)       |        |            |
| PLATE CURRENT                                                           | 315    | MA.        |
| GRID #2 CURRENT                                                         | 25     | MA.        |
| CUTOFF: $I_b = 1$ MA, $E_b = 250$ V, $E_{c2} = 150$ V.                  |        |            |
| GRID #1 VOLTAGE, APPROX.                                                | -40    | VOLTS      |
| CUTOFF: $I_b = 1$ Ma, $E_b = 5000$ V, $E_{c2} = 150$ V.                 |        |            |
| GRID #1 VOLTAGE, APPROX.                                                | -100   | VOLTS      |
| TRIODE MU: $E_b = E_{c2} = 150$ V, $E_{c1} = -22.5$ V.                  |        |            |
|                                                                         | 4.5    |            |

→ INDICATES A CHANGE.

<sup>A</sup> FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

<sup>B</sup> IN STAGES OPERATING WITH GRID LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

