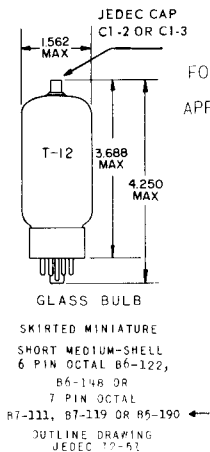


## TUNG-SOL

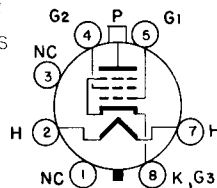
## BEAM PENTODE



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 6DQ6B IS A BEAM-POWER PENTODE PRIMARILY DESIGNED FOR USE AS THE HORIZONTAL-DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS. ITS HIGH ZERO-BIAS PLATE CURRENT AT LOW PLATE AND SCREEN VOLTAGES MAKES THE TUBE WELL SUITED FOR USE IN RECEIVERS THAT OPERATE AT LOW PLATE-SUPPLY VOLTAGES. IT DIFFERS FROM THE 6DQ6A IN HAVING HIGHER RATINGS AND HIGHER ZERO-BIAS PLATE CURRENT.

### DIRECT INTERELECTRODE CAPACITANCES - APPROX.

WITHOUT EXTERNAL SHIELD

|                             |      |    |
|-----------------------------|------|----|
| GRID TO PLATE (G TO P)      | 0.5  | pf |
| INPUT: (G1 TO H+K, BP + G2) | 15.0 | pf |
| OUTPUT: (P TO H+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              | 6500 | 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                         | 175  | MA.    |
| CATHODE CURRENT, PEAK                            | 610  | MA.    |
| GRID #1 CIRCUIT RESISTANCE, <sup>B</sup>         | 1.0  | MEGOHM |
| BULB TEMPERATURE, (AT HOTTEST POINT)             | 220  | °C     |

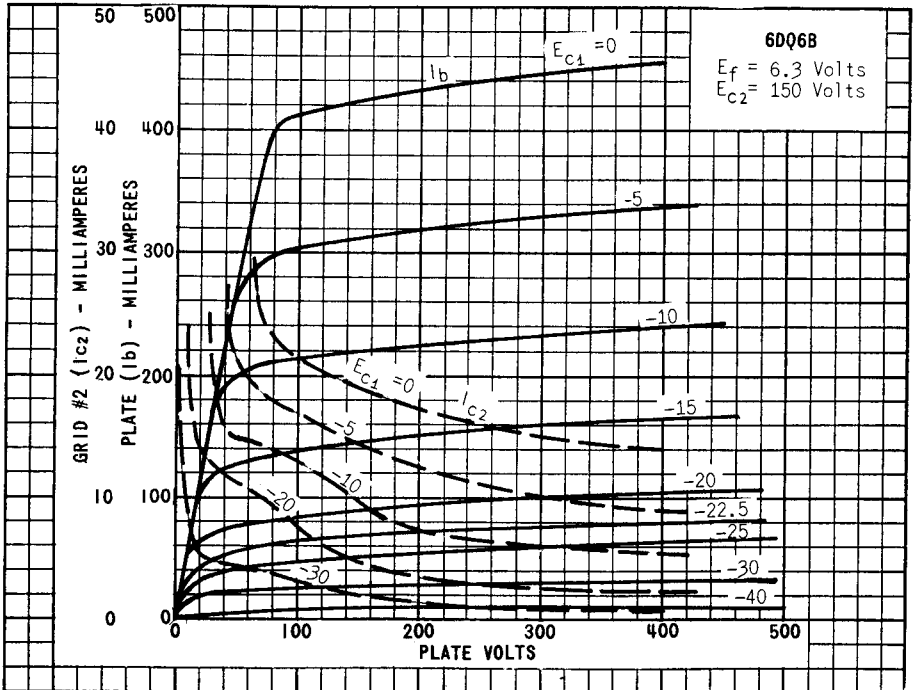
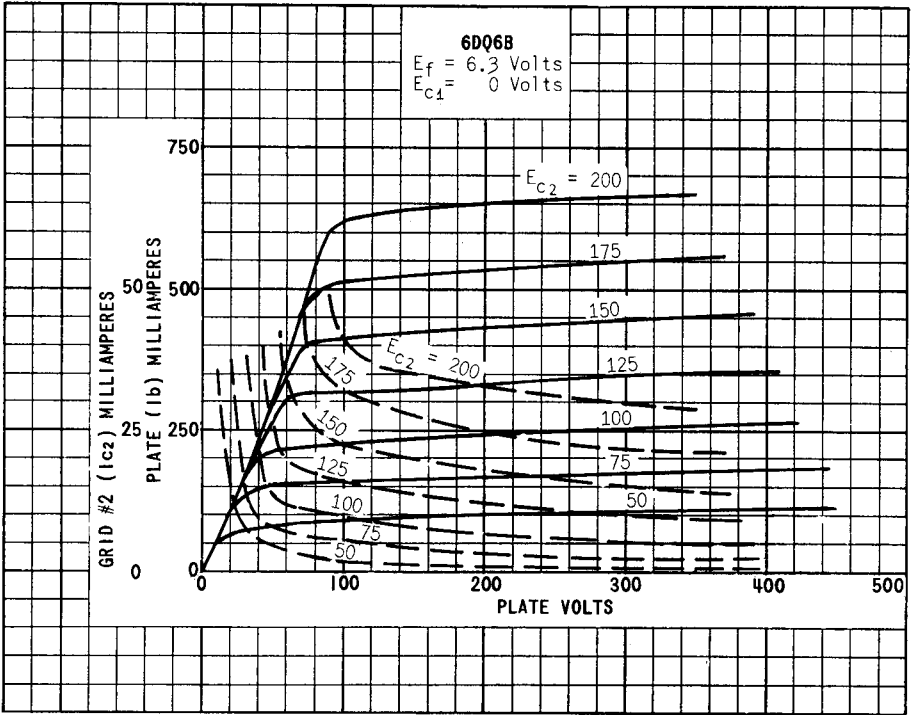
## AVERAGE CHARACTERISTICS

|  |        |            |
|--|--------|------------|
| PENTODE OPERATION: $E_b = 250V, E_{c2} = 150V, E_{c1} = -22.5V.$ |        |            |
| PLATE CURRENT  | 65     | MA.        |
| GRID #2 CURRENT  | 1.8    | MA.        |
| TRANSCONDUCTANCE   | 7300   | $\mu$ MHMS |
| PLATE RESISTANCE, APPROX.  | 18,000 | OHMS       |
| ZERO BIAS: $E_b = 60V, E_{c2} = 150V.$ (INSTANTANEOUS VALUES)    |        |            |
| PLATE CURRENT  | 345    | MA.        |
| GRID #2 CURRENT  | 27     | MA.        |
| CUTOFF: $I_b = 1 MA, E_b = 250 V, E_{c2} = 150 V.$               |        |            |
| GRID #1 VOLTAGE, APPROX.   | -42    | VOLTS      |
| CUTOFF: $I_b = 1 MA, E_b = 5000 V, E_{c2} = 150 V.$              |        |            |
| GRID #1 VOLTAGE, APPROX.   | -100   | VOLTS      |
| TRIODE $\mu$ : $E_b = E_{c2} = 150 V, E_{c1} = -22.5 V.$         |        |            |
|  | 4.4    |            |

→ 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.



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# 6DQ6B

## 6DQ6B

$E_f = 6.3$  Volts

$E_b = 250$  Volts

—————  $I_b$

-----  $I_c$

