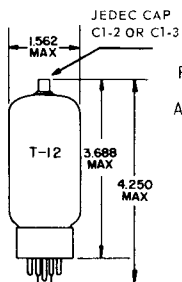


## TUNG-SOL

## BEAM PENTODE



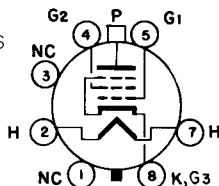
GLASS BULB

SKIRTED MINIATURE  
SHORT MEDIUM-SHELL  
6 PIN OCTAL B6-122,  
B6-148 OR  
7 PIN OCTAL  
B7-111, B7-119 OR B5-190 ←  
OUTLINE DRAWING  
JEDEC 12-51

FOR HORIZONTAL DEFLECTION AMPLIFIER  
APPLICATIONS IN TELEVISION RECEIVERS

ANY MOUNTING POSITION

PIN 42 IS OMITTED WHEN EITHER A  
B6-122 OR B6-148 BASE IS USED



BASING DIAGRAM  
JEDEC 6A

THE 17DQ6A 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 17DQ6A IS IDENTICAL TO THE 6DQ6A.

**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	16.8 VOLTS	450	MA.
HEATER SUPPLY LIMITS:			
CURRENT OPERATION		450±30	MA.
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
HEATER WARM-UP TIME, APPROX.*		11	SECONDS

→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:  $E_b = 250V, E_{c2} = 150V, E_{c1} = -22.5V.$ 

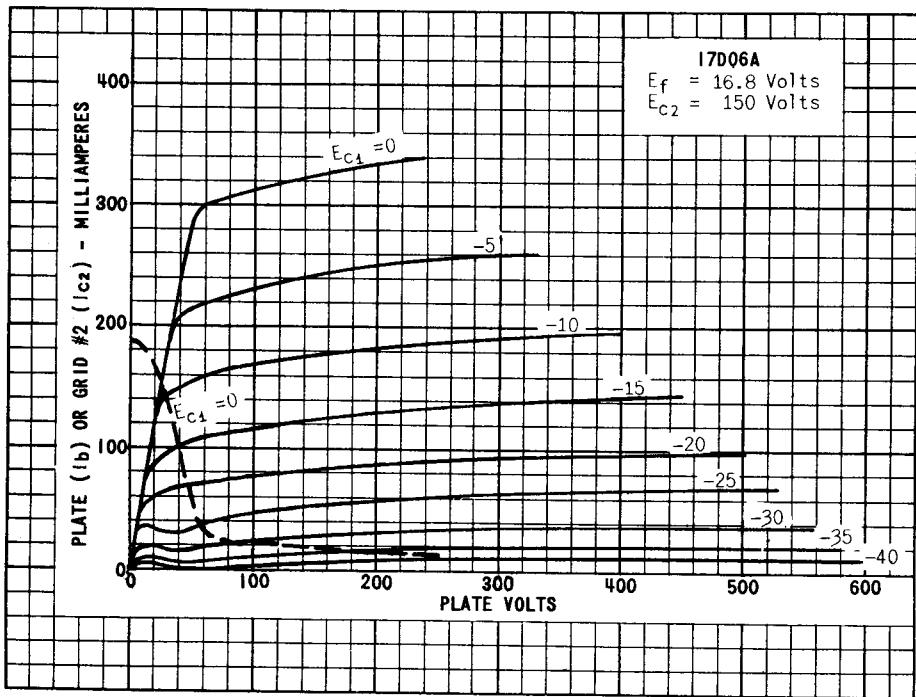
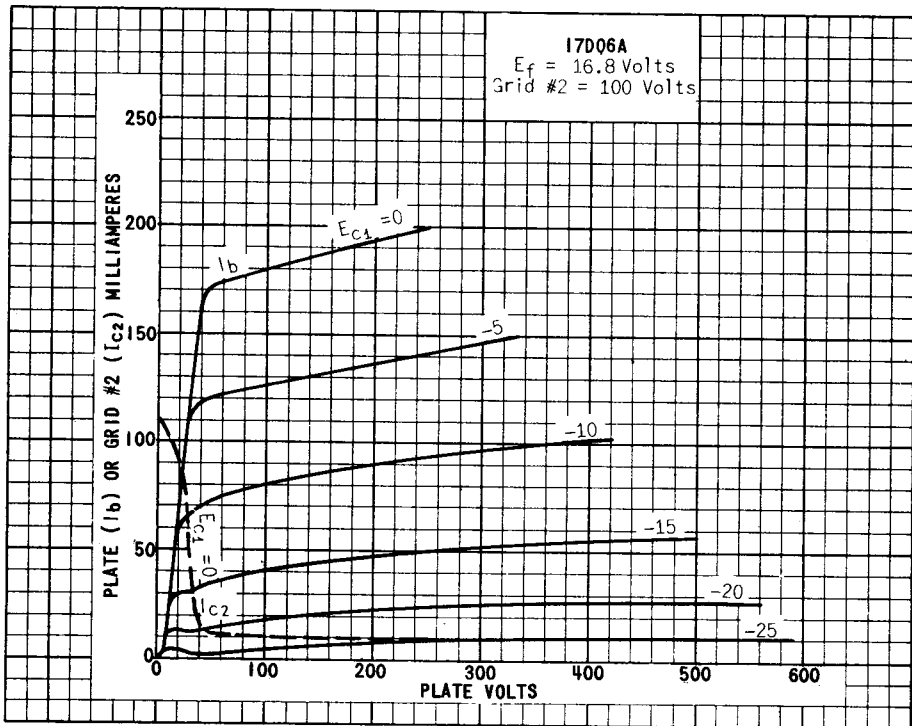
PLATE CURRENT	55	MA.
GRID #2 CURRENT	1.5	MA.
TRANSCONDUCTANCE	6600	μMHOS
PLATE RESISTANCE, APPROX.	20,000	OHMS
ZERO BIAS: $E_b = 60V, E_{c2} = 150V.$ (INSTANTANEOUS VALUES)		
PLATE CURRENT	315	MA.
GRID #2 CURRENT	25	MA.
CUTOFF: $I_b = 1 \text{ MA}, E_b = 250 \text{ V}, E_{c2} = 150 \text{ V}.$		
GRID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

\*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.



POWERED BY E. S. A.