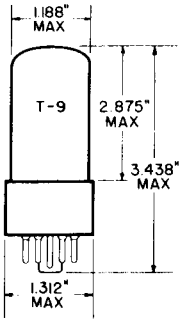
TUNG-SOL

PENTODE

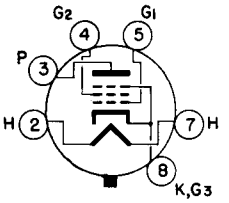


GLASS BULB
INTERMEDIATE-SHELL
6 PIN OCTAL
B6-81 AND B6-84
OUTLINE DRAWING
JEDEC 9-15

COATED UNIPOTENTIAL CATHODE

HEATER
6.3 VOLTS 0.68 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
BASING DIAGRAM
JEDEC 7AC

THE 6EY6 IS A BEAM POWER PENTODE DESIGNED FOR USE AS THE VERTICAL DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS EMPLOYING 110° DEFLECTION PICTURE TUBES. 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 TYPES WHICH ARE SIMILARLY CONTROLLED.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.

WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE	0.7	pf
INPUT	8.5	pf
OUTPUT	7.0	pf

RATINGS

INTERPRETED ACCORDING TO DESIGN-MAXIMUM SYSTEM

VERTICAL-DEFLECTION AMPLIFIER SERVICE[A]

MAXIMUM DC PLATE VOLTAGE	350	VOLTS
MAXIMUM PEAK PULSE PLATE VOLTAGE	2 500	VOLTS
MAXIMUM PEAK NEGATIVE-PULSE GRID #1 VOLTAGE*	250	VOLTS
MAXIMUM SCREEN VOLTAGE	300	VOLTS
MAXIMUM PLATE DISSIPATION[B]	11	WATTS
MAXIMUM SCREEN DISSIPATION[B]	2.75	WATTS
MAXIMUM DC CATHODE CURRENT	60	MA.
MAXIMUM PEAK CATHODE CURRENT	180	MA.
MAXIMUM HEATER-CATHODE VOLTAGE:		
HEATER POSITIVE WITH RESPECT TO CATHODE		
DC COMPONENT	100	VOLTS
TOTAL DC AND PEAK	200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE		
TOTAL DC AND PEAK	200	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE WITH CATHODE BIAS	2.2	MEGOHMS
MAXIMUM GRID #1 CIRCUIT RESISTANCE WITH FIXED BIAS	1.0	MEGOHMS
MAXIMUM BULB TEMPERATURE AT HOTTEST POINT	200	°C
HEATER WARM-UP TIME (APPROX.)	11.0	SECONDS

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

PLATE VOLTAGE	50	250	VOLTS
SCREEN VOLTAGE	250	250	VOLTS
GRID #1 VOLTAGE	0[C]	-17.5	VOLTS
PLATE RESISTANCE (APPROX.)	---	60 000	OHMS
TRANSCONDUCTANCE	---	4 400	μMHOS
PLATE CURRENT	153	44	MA.
SCREEN CURRENT	21	3.0	MA.
GRID #1 VOLTAGE (APPROX.) I_b = 100 μAMPS.		-48	VOLTS

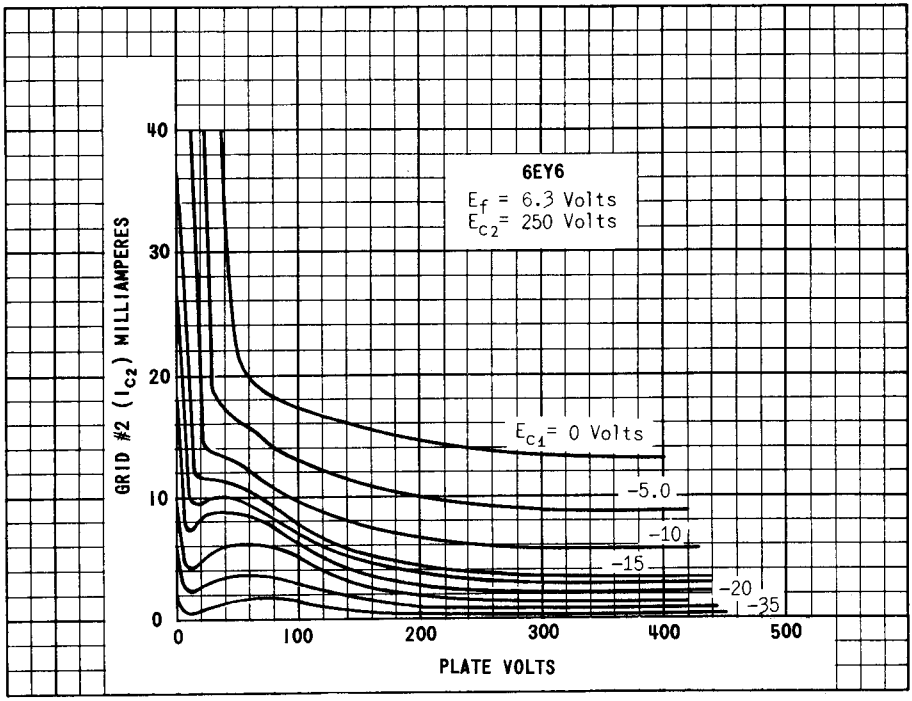
DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A BOGEY ELECTRON DEVICE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS. THE DEVICE MANUFACTURER CHOOSES THESE VALUES TO PROVIDE ACCEPTABLE SERVICEABILITY OF THE DEVICE, TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN DEVICE CHARACTERISTICS. THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY DEVICE UNDER THE WORST PROBABLE OPERATING CONDITIONS, WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION, AND ENVIRONMENTAL CONDITIONS.

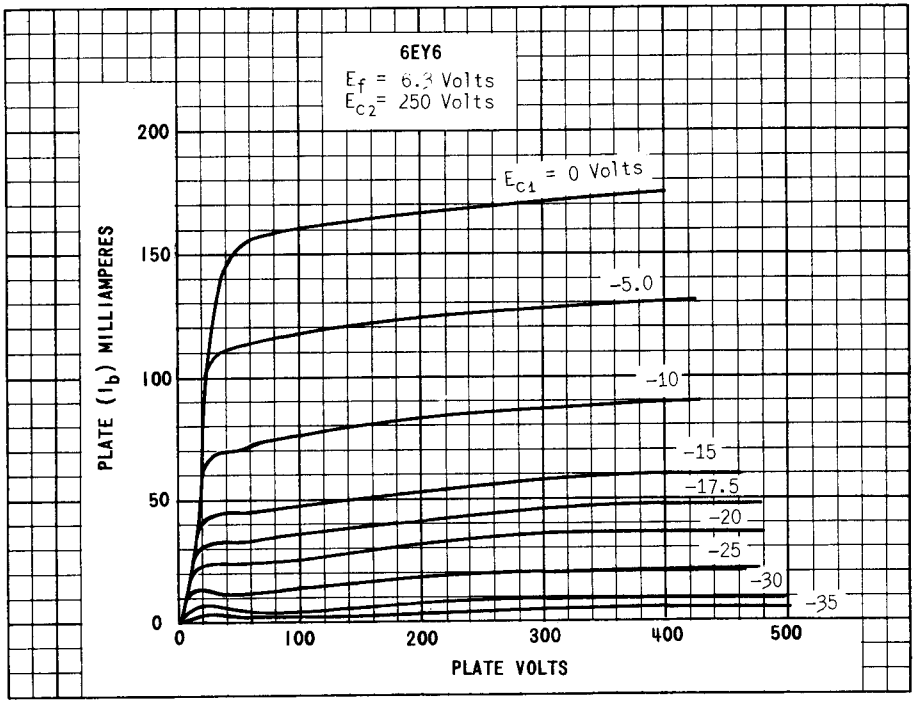
[A] FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

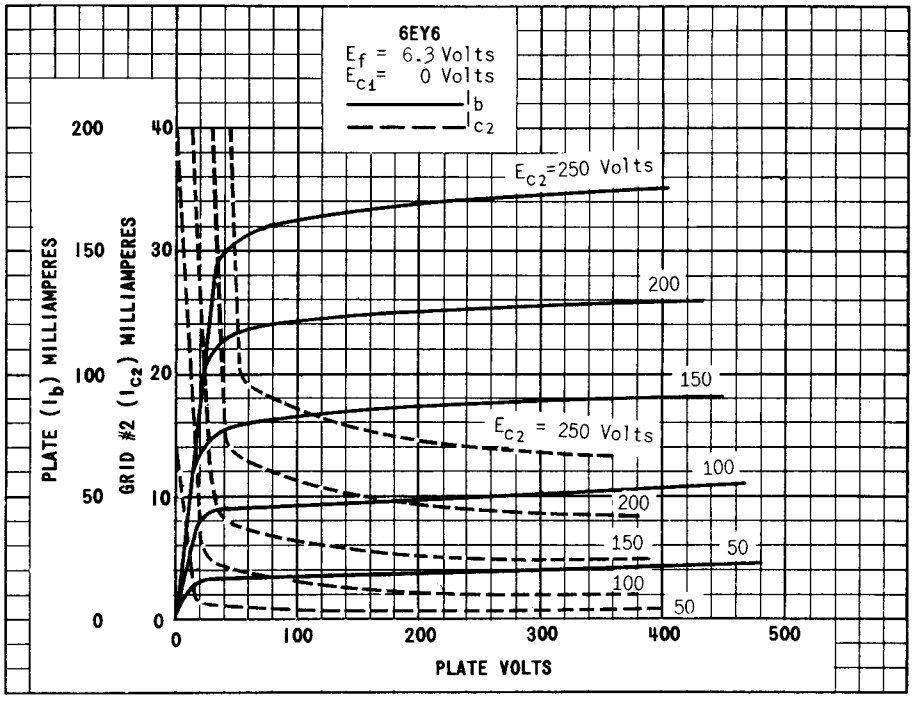
[B] IN STAGES OPERATING WITH GRID LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

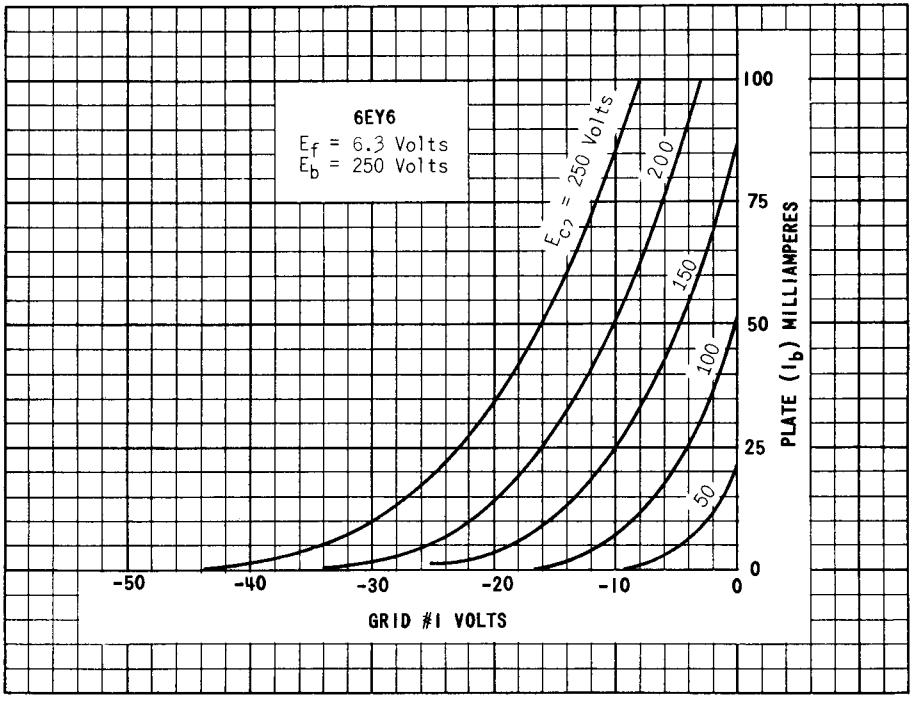
[C] APPLIED FOR SHORT INTERVAL (TWO SECONDS MAXIMUM) SO AS NOT TO DAMAGE TUBE.

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.






6EY6
E_f = 6.3 Volts
E_{c1} = 0 Volts
I_b
I_{c2}
E_{c2}=250 Volts
200
150
100
50
E_{c2} = 250 Volts
200
150
100
50
PLATE (I_b) MILLIAMPERES
GRID #2 (I_{c2}) MILLIAMPERES
PLATE VOLTS
0
100
200
300
400
500
0
50
100
150
200
0
10
20
30
40


6EY6
E_f = 6.3 Volts
E_b = 250 Volts
E_{c2} = 250 Volts
200
150
100
50
PLATE (I_b) MILLIAMPERES
GRID #1 VOLTS
-50
-40
-30
-20
-10
0
0
25
50
75
100