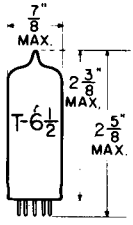
TUNG-SOL

DOUBLE TRIODE

MINIATURE TYPE

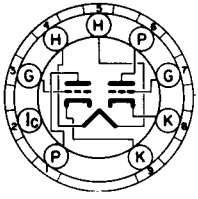


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
6.3±10% VOLTS 0.75 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
SMALL BUTTON
9 PIN BASE

9LG ←

THE 6CY7 IS A DISSIMILAR DOUBLE TRIODE IN THE 9 PIN MINIATURE CONSTRUCTION AND IS INTENDED FOR USE AS A COMBINED VERTICAL-DEFLECTION OSCILLATOR AND AMPLIFIER IN TELEVISION RECEIVERS. EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 6CY7 IS IDENTICAL TO THE 8CY7.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.®

	SEC. 1	SEC. 2	
GRID TO PLATE	1.8	4.4	μμf
INPUT	1.5	5.0	μμf
OUTPUT	0.30	1.0	μμf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

	VERTICAL-[B] OSCILLATOR SERVICE (SEC. 1)	VERTICAL-[B] DEFLECTION AMPLIFIER (SEC. 2)	
HEATER VOLTAGE	6.3	6.3	VOLTS
MAXIMUM DC PLATE VOLTAGE	350	350	VOLTS
MAXIMUM PEAK POSITIVE PULSE PLATE VOLTAGE	---	1 800	VOLTS
MAXIMUM PEAK NEGATIVE GRID VOLTAGE	400	250	VOLTS
MAXIMUM PLATE DISSIPATION	1.0	5.5[A]	WATTS
MAXIMUM DC CATHODE CURRENT	---	35	MA.
MAXIMUM DC PEAK CATHODE CURRENT	---	120	MA.
MAXIMUM HEATER CATHODE VOLTAGE			
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC COMPONENT	100	100	VOLTS
TOTAL DC AND PEAK	200	200	VOLTS.
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK	200	200	VOLTS
MAXIMUM GRID CIRCUIT RESISTANCE			
WITH FIXED BIAS	2.2	---	MEGOHMS
WITH CATHODE BIAS	2.2	2.2	MEGOHMS

CONTINUED ON FOLLOWING PAGE

→ INDICATES A CHANGE.

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

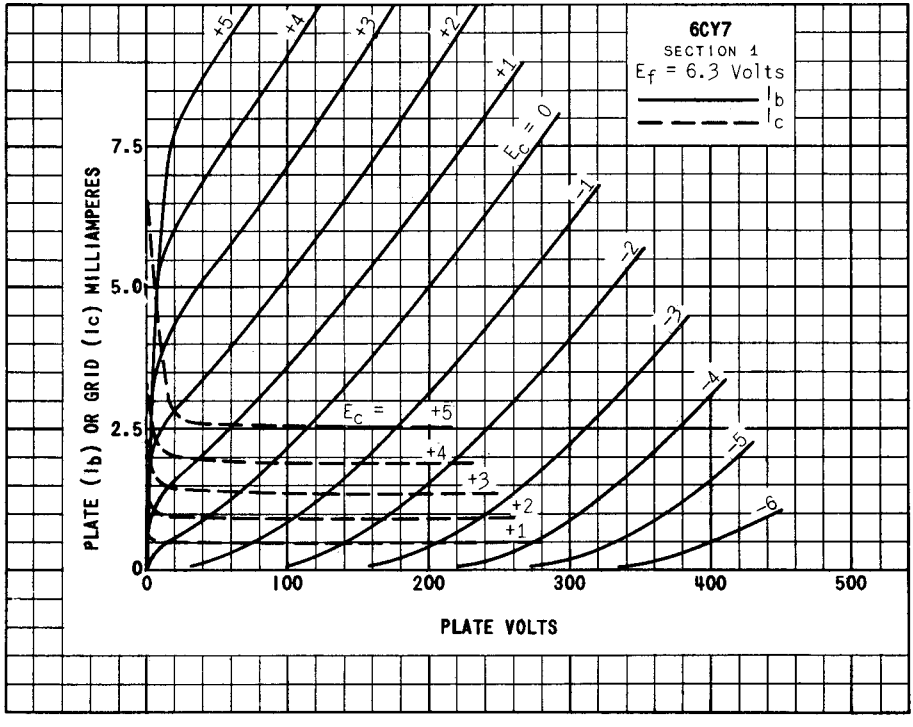
	SECTION 1 (OSCILLATOR)	SECTION 2 (AMPLIFIER)		
HEATER VOLTAGE	6.3	6.3	6.3	VOLTS
HEATER CURRENT	0.75	0.75	0.75	AMP.
PLATE VOLTAGE	250	60	150	VOLTS
GRID VOLTAGE	-3.0	0	---	VOLTS
CATHODE-BIAS RESISTOR	---	---	620	OHMS
AMPLIFICATION FACTOR	68	---	5.0	
PLATE RESISTANCE (APPROX.)	52 000	---	920	OHMS
TRANSCONDUCTANCE	1 300	---	5 400	μMHOS
PLATE CURRENT	1.2	80	30	MA.
PLATE CURRENT (APPROX.) E_c=-30V.	---	---	3.5	MA.
GRID VOLTAGE (APPROX.) I_b=200 μA.	---	---	-40	VOLTS
GRID VOLTAGE (APPROX.) I_b=10 μA.	-5.5	---	---	VOLTS

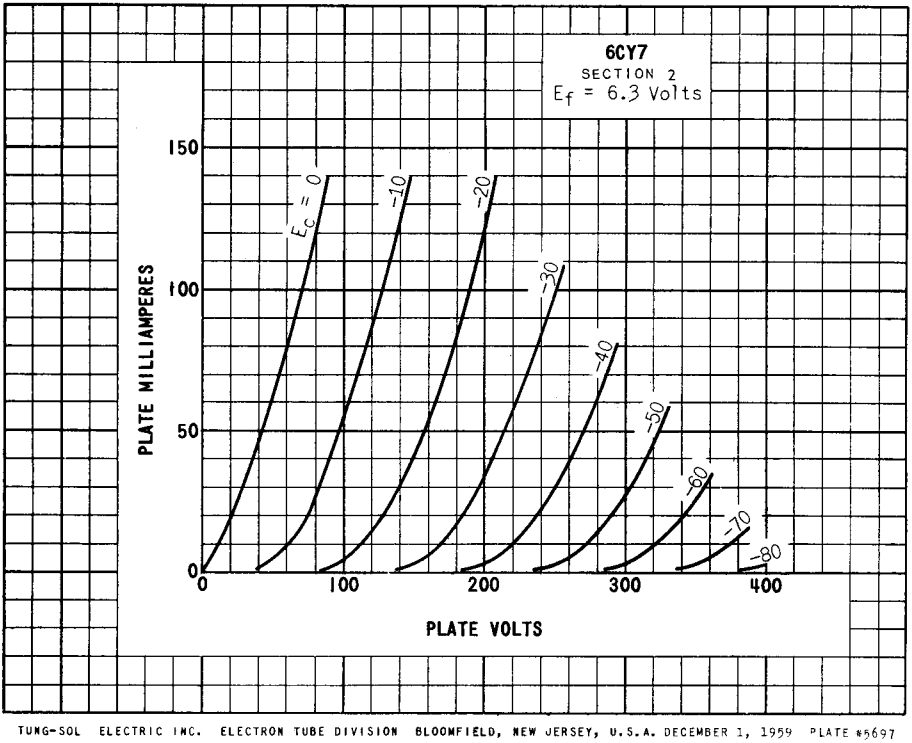
⊕ WITHOUT EXTERNAL SHIELD.

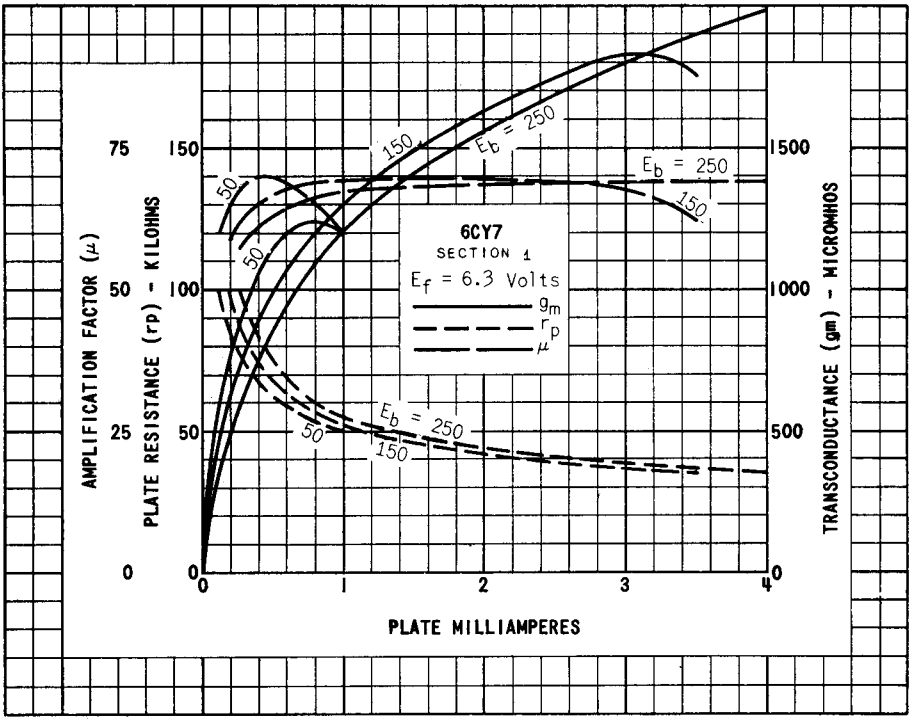
A IN STAGES OPERATING WITH GRID LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

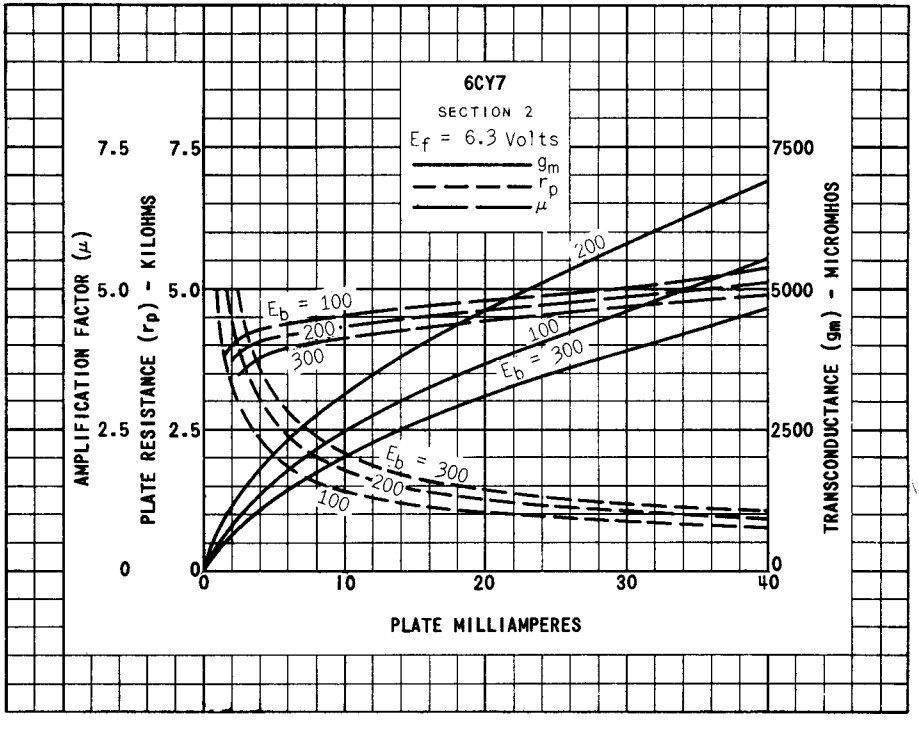
B FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

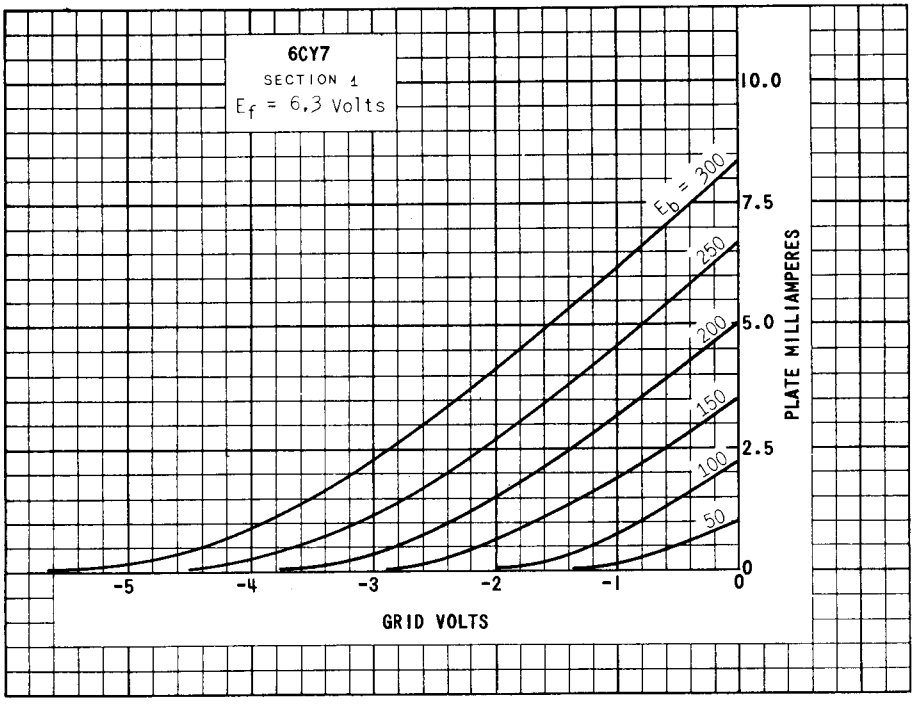
DESIGN-MAXIMUM RATINGS ARE THE LIMITING VALUES EXPRESSED WITH RESPECT TO BOGIE TUBES AT WHICH SATISFACTORY TUBE LIFE CAN BE EXPECTED TO OCCUR. TO OBTAIN SATISFACTORY CIRCUIT PERFORMANCE, THEREFORE, THE EQUIPMENT DESIGNER MUST ESTABLISH THE CIRCUIT DESIGN SO THAT NO DESIGN-MAXIMUM VALUE IS EXCEEDED WITH A BOGIE TUBE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, AND ENVIRONMENTAL CONDITIONS.

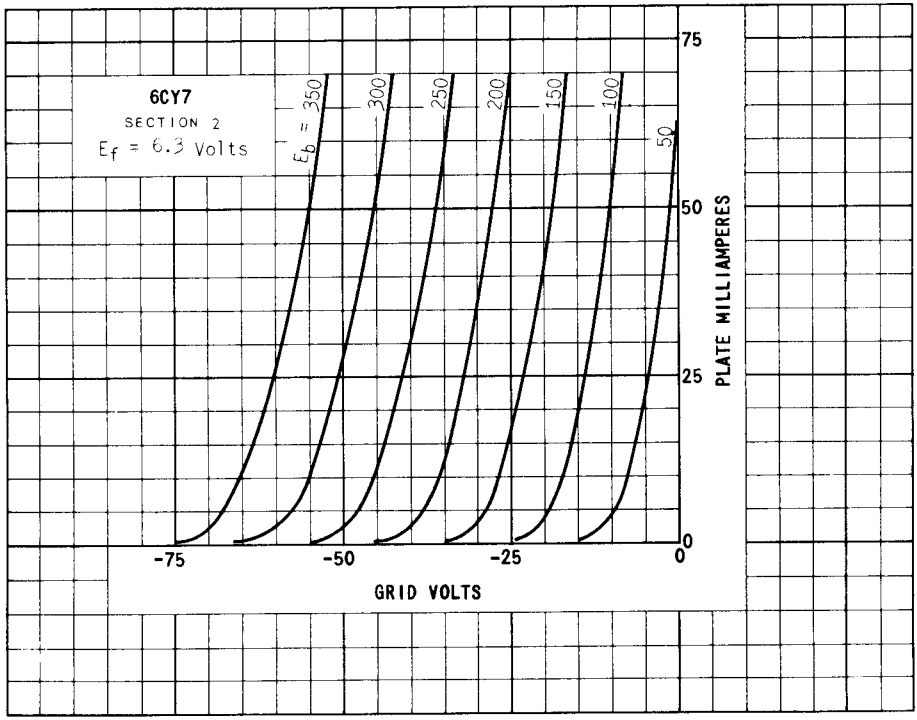

6CY7
SECTION 1
Ef = 6.3 Volts
Ib
Ic
PLATE (Ib) OR GRID (Ic) MILLIAMPERES
PLATE VOLTS
Ec = 0
+1
+2
+3
+4
+5
-1
-2
-3
-4
-5
-6
Ec =
0
2.5
5.0
7.5
100
200
300
400
500


6CY7
SECTION 2
Ef = 6.3 Volts
PLATE MILLIAMPERES
PLATE VOLTS
Ec = 0
-10
-20
-30
-40
-50
-60
-70
-80
0
50
100
150
100
200
300
400


6CY7
SECTION 1
Ef = 6.3 Volts
gm
rp
μ
Eb = 250
150
50
AMPLIFICATION FACTOR (μ)
PLATE RESISTANCE (rp) - KILOHMS
TRANSCONDUCTANCE (gm) - MICROMHOS
PLATE MILLIAMPERES
0
25
50
75
100
150
500
1000
1500
1
2
3
4


6CY7
SECTION 2
Ef = 6.3 Volts
gm
rp
μ
Eb = 100
200
300
AMPLIFICATION FACTOR (μ)
PLATE RESISTANCE (rp) - KILOHMS
TRANSCONDUCTANCE (gm) - MICROMHOS
PLATE MILLIAMPERES
0
2.5
5.0
7.5
2500
5000
7500
10
20
30
40


6CY7
SECTION 1
E_f = 6.3 Volts
E_b = 300
250
200
150
100
50
10.0
7.5
5.0
2.5
0
PLATE MILLIAMPERES
-5
-4
-3
-2
-1
0
GRID VOLTS


6CY7
SECTION 2
E_f = 6.3 Volts
E_b = 350
300
250
200
150
100
50
75
50
25
0
PLATE MILLIAMPERES
-75
-50
-25
0
GRID VOLTS