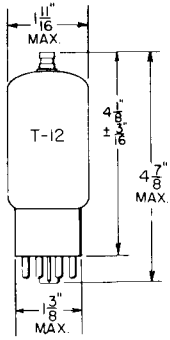
TUNG-SOL



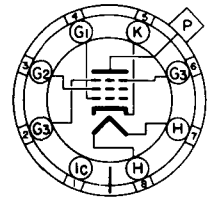
GLASS BULB
SMALL CAP
WITH GROOVE

PENTODE

COATED UNIPOTENTIAL CATHODE

HEATER
6.3 VOLTS 0.15 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
MEDIUM-SHELL
8 PIN OCTAL

THE 6BU5 IS A HIGH VOLTAGE BEAM PENTODE DESIGNED PRIMARILY FOR USE AS A SHUNT VOLTAGE REGULATOR IN THE HIGH VOLTAGE POWER SUPPLY OF COLOR TELEVISION RECEIVERS. IT HAS LOW CURRENT REQUIREMENTS AND EXHIBITS A SHARP CUT-OFF CHARACTERISTIC.

DIRECT INTERELECTRODE CAPACITANCES – APPROX.
WITH NO EXTERNAL SHIELD

GRID #1 TO PLATE	0.024	μμf
INPUT	3.0	μμf
OUTPUT	0.9	μμf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

TV HIGH VOLTAGE REGULATOR SERVICE

HEATER VOLTAGE	6.3	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
MAXIMUM PLATE VOLTAGE	20 000	VOLTS
MAXIMUM GRID #2 VOLTAGE	100	VOLTS
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	VOLTS
MAXIMUM NEGATIVE DC GRID #1 VOLTAGE	50	VOLTS
MAXIMUM PLATE DISSIPATION	20	WATTS
MAXIMUM GRID #2 DISSIPATION	0.1	WATT
MAXIMUM CATHODE CURRENT	2.5	MA.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	SEE RATING CHART	

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
AVERAGE CHARACTERISTICS

HEATER VOLTAGE	6.3		VOLTS
HEATER CURRENT	0.15		AMP.
PLATE VOLTAGE	20 000	20 000	VOLTS
SUPPRESSOR VOLTAGE	0	0	VOLTS
GRID #2 VOLTAGE	70	70	VOLTS
GRID #1 VOLTAGE	-3.4	-2.4	VOLTS
PLATE CURRENT	0.55	1.0	MA.
GRID #2 CURRENT	---	0.4	MA.
GRID #1 VOLTAGE (APPROX.) I_b = 30 μAMP.	---	-6.5	VOLTS

CONTINUED ON FOLLOWING PAGE

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TUNG-SOL

CONTINUED FROM PRECEDING PAGE

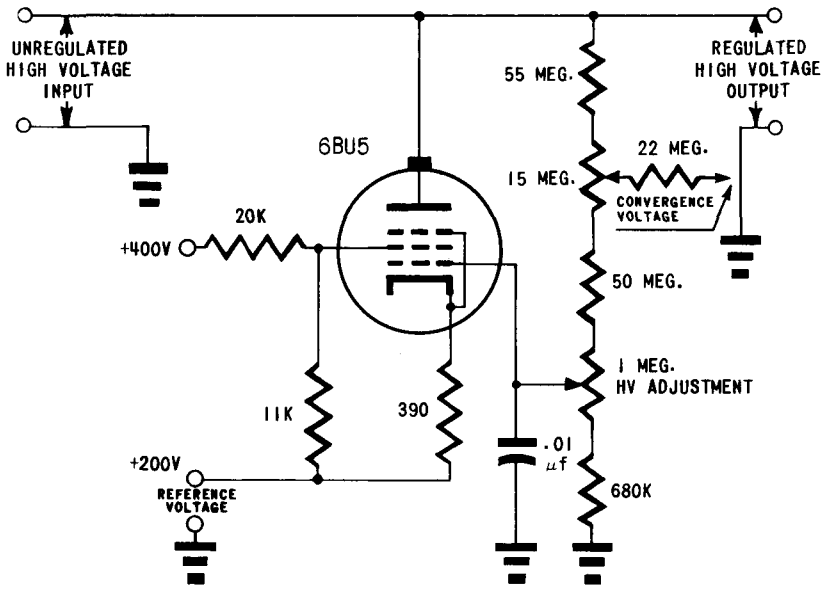
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS – CONT'D

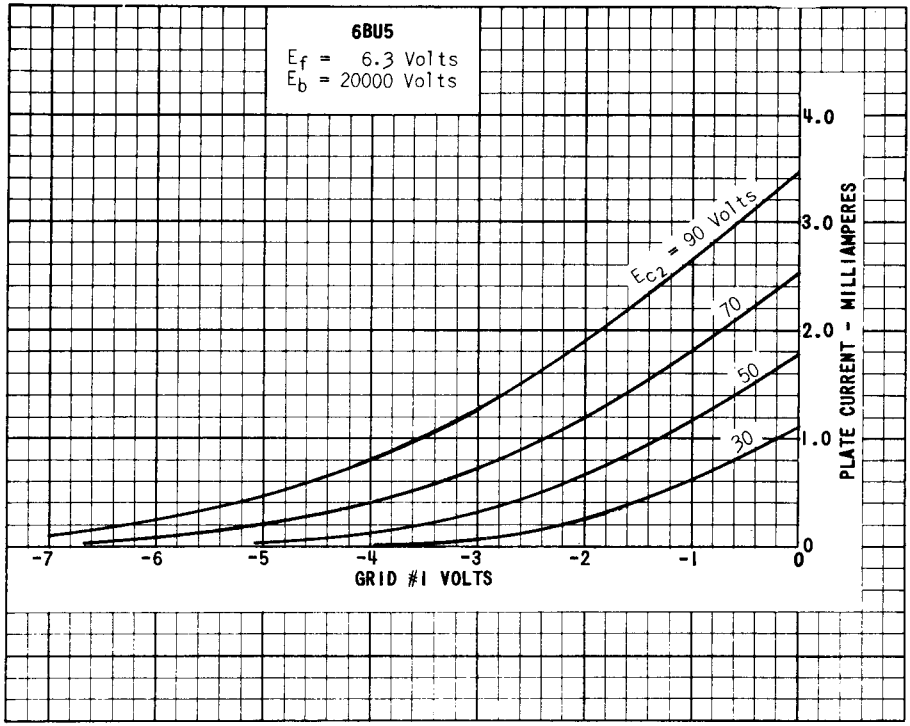
TV HIGH-VOLTAGE REGULATOR SERVICE

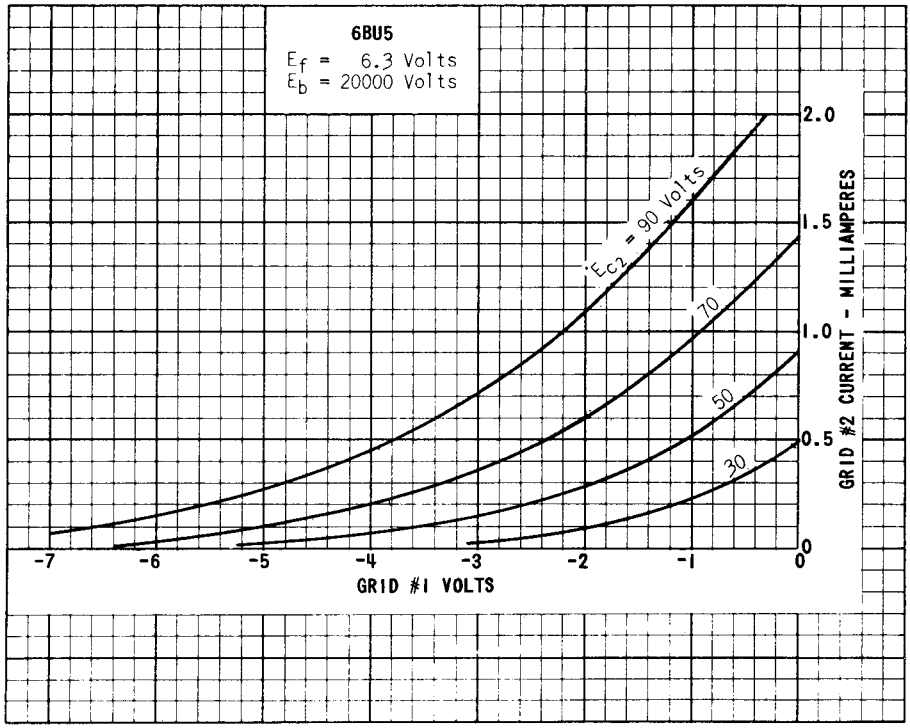
SEE CIRCUIT DIAGRAM

HEATER VOLTAGE		6.3	VOLTS
HEATER CURRENT		0.15	AMP.
UNREGULATED DC SUPPLY VOLTAGE		29 900	VOLTS
EQUIVALENT RESISTANCE OF UNREGULATED SUPPLY		8.5	MEGOHMS
GRID #2 VOLTAGE		70	VOLTS
DC REFERENCE VOLTAGE		200	VOLTS
SUPPRESSOR VOLTAGE		0	VOLTS
DC LOAD CURRENT	0	1.0	MA.
DC PLATE CURRENT	1.0	0.05	MA.
DC GRID #2 CURRENT	0.5	0.03	MA.
REGULATED DC OUTPUT VOLTAGE	20 000	19 600	VOLTS

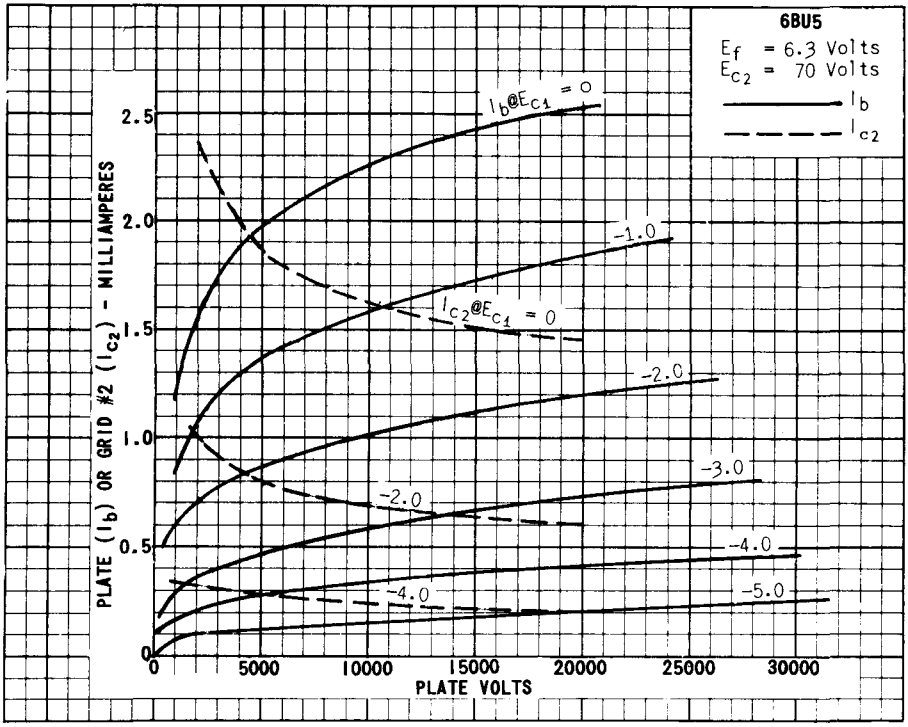
NOTE: HIGH VOLTAGE OPERATION OF THE 6BU5 CAN RESULT IN THE PRODUCTION OF X-RAYS WHICH CAN CONSTITUTE A HEALTH HAZARD UNLESS THESE TUBES ARE ADEQUATELY SHIELDED. THE NEED FOR THIS PRECAUTION SHOULD BE CONSIDERED IN EQUIPMENT DESIGN. RELATIVELY SIMPLE SHIELDING SHOULD PROVE ADEQUATE.

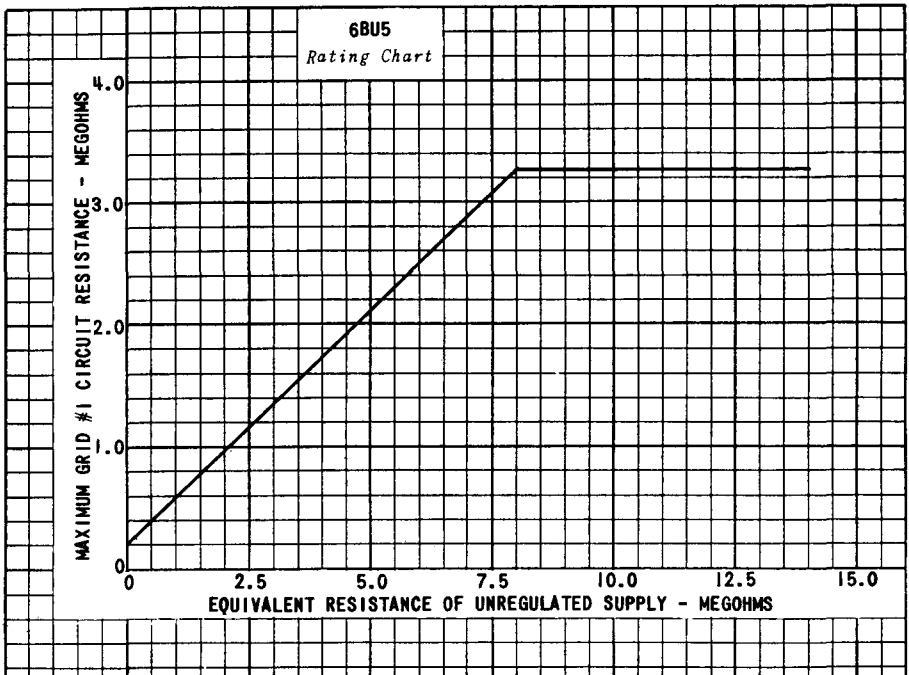



6BU5
Ef = 6.3 Volts
Eb = 20000 Volts
Ec2 = 90 Volts
70
50
30
4.0
3.0
2.0
1.0
0
PLATE CURRENT - MILLIAMPERES
-7
-6
-5
-4
-3
-2
-1
0
GRID #1 VOLTS


6BU5
Ef = 6.3 Volts
Eb = 20000 Volts
Ec2 = 90 Volts
70
50
30
2.0
1.5
1.0
0.5
0
GRID #2 CURRENT - MILLIAMPERES
-7
-6
-5
-4
-3
-2
-1
0
GRID #1 VOLTS

6BU5


6BU5
E_f = 6.3 Volts
E_{c2} = 70 Volts
I_b
I_{c2}
I_b@E_{c1} = 0
-1.0
I_{c2}@E_{c1} = 0
-2.0
-3.0
-2.0
-4.0
-4.0
-5.0
PLATE (I_b) OR GRID #2 (I_{c2}) - MILLIAMPERES
0
0.5
1.0
1.5
2.0
2.5
0
5000
10000
15000
20000
25000
30000
PLATE VOLTS


6BU5
Rating Chart
MAXIMUM GRID #1 CIRCUIT RESISTANCE - MEGOHMS
0
1.0
2.0
3.0
4.0
0
2.5
5.0
7.5
10.0
12.5
15.0
EQUIVALENT RESISTANCE OF UNREGULATED SUPPLY - MEGOHMS