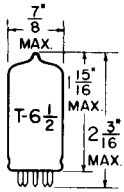
TUNG-SOL

DOUBLE-DIODE PENTODE

MINIATURE TYPE

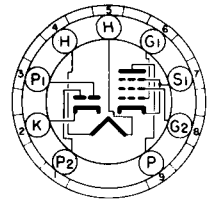


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
6.3±10% VOLTS 0.45 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
SMALL BUTTON
9 PIN BASE
9HK

THE 6BW8 IS A DOUBLE-DIODE PENTODE IN WHICH SEPARATE CATHODES ARE PROVIDED FOR THE TWO SECTIONS. THE DIODE SECTIONS ARE INTENDED FOR USE PRIMARILY AS A HORIZONTAL PHASE DETECTOR IN TELEVISION RECEIVERS. THE PENTODE SECTION IS SUITABLE FOR USE AS A SOUND IF AMPLIFIER, SOUND LIMITER, AND AUTOMATIC-GAIN-CONTROL KEYER.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

PENTODE GRID #1 TO PLATE (MAX.)	0.020	μμf
PENTODE INPUT	4.8	μμf
PENTODE OUTPUT	2.6	μμf
GRID #1 TO EACH DIODE PLATE (MAX.)	0.006	μμf
DIODE #1 PLATE TO DIODE CATHODE & HEATER	1.3	μμf
DIODE #2 PLATE TO DIODE CATHODE & HEATER	1.2	μμf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	6.3 ±6%	VOLTS
MAXIMUM PLATE VOLTAGE	330	VOLTS
MAXIMUM SCREEN-SUPPLY VOLTAGE	330	VOLTS
MAXIMUM SCREEN VOLTAGE	SEE SCREEN RATING CHART	
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	VOLTS
MAXIMUM NEGATIVE DC GRID #1 VOLTAGE	55	VOLTS
MAXIMUM PLATE DISSIPATION	3.0	WATTS
MAXIMUM SCREEN DISSIPATION	0.55	WATTS
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 FIXED BIAS	0.1	MEGOHMS
WITH CATHODE BIAS	0.5	MEGOHMS
MAXIMUM DIODE CURRENT FOR CONTINUOUS OPERATION (EA. SEC.)	5.0	MA.

CONTINUED ON FOLLOWING PAGE

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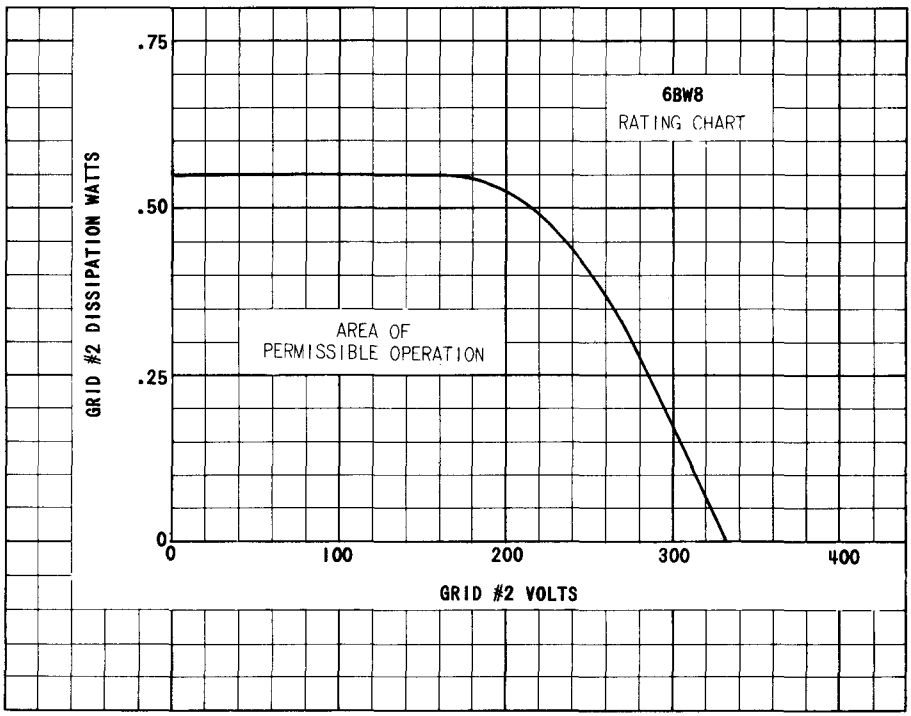
TUNG-SOL

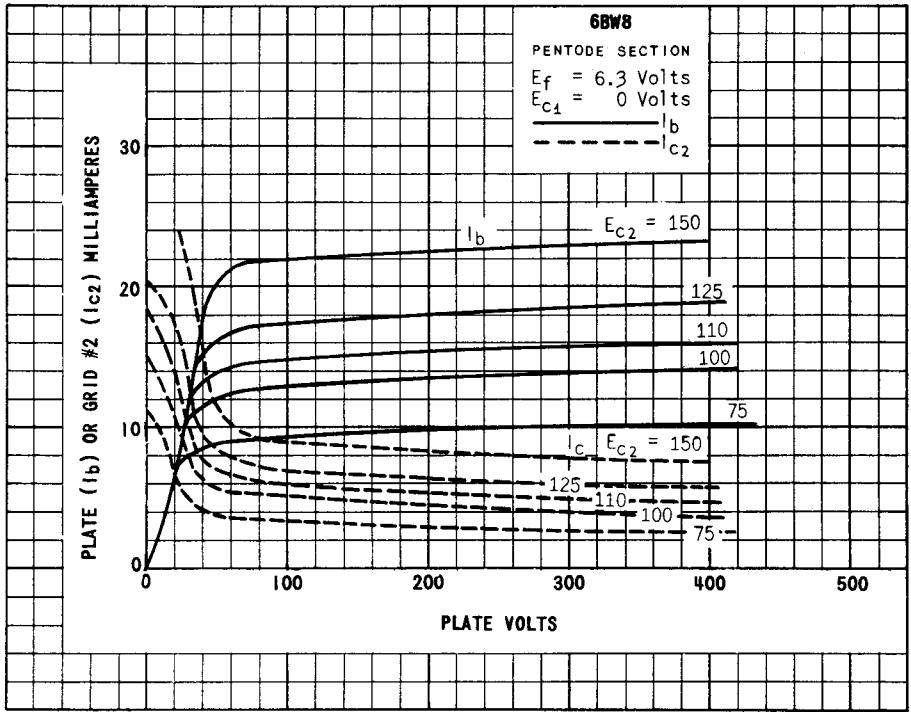
CONTINUED FROM PRECEDING PAGE

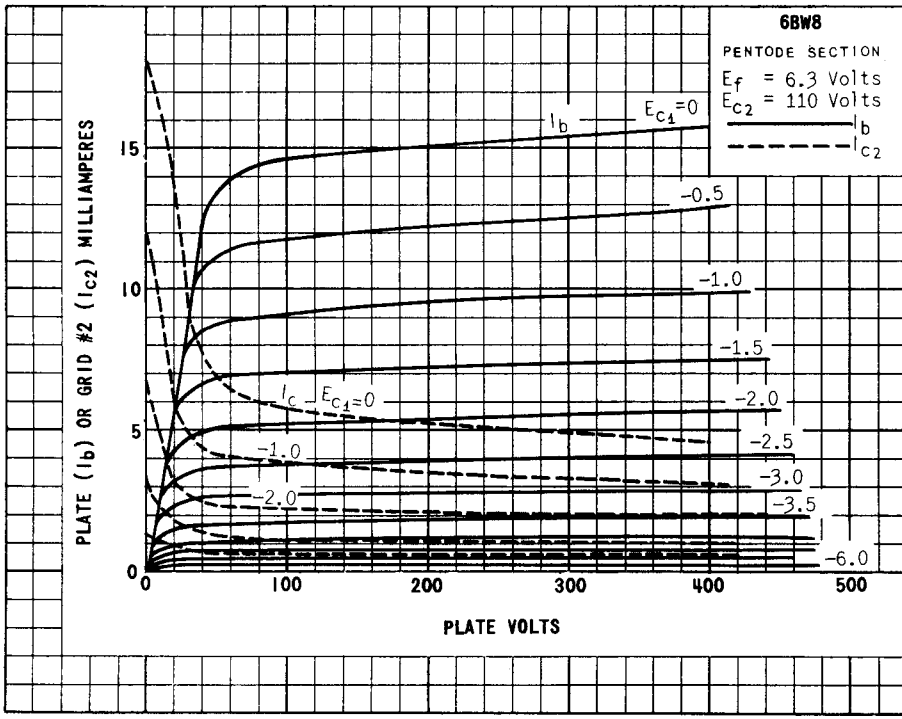
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

HEATER VOLTAGE	6.3±6%	VOLTS
HEATER CURRENT	0.45	AMP.
PLATE VOLTAGE	250	VOLTS
SCREEN VOLTAGE	110	VOLTS
CATHODE-BIAS RESISTOR	68	OHMS
PLATE RESISTANCE (APPROX.)	0.25	MEGOHMS
TRANSCONDUCTANCE	5200	μMHOS
PLATE CURRENT	10	MA.
SCREEN CURRENT	3.5	MA.
GRID #1 VOLTAGE (APPROX.) $I_b = 10$ μAMPS	-10	VOLTS
AVERAGE DIODE CURRENT (EACH DIODE) WITH 5 VOLTS DC APPLIED	20	MA.

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.







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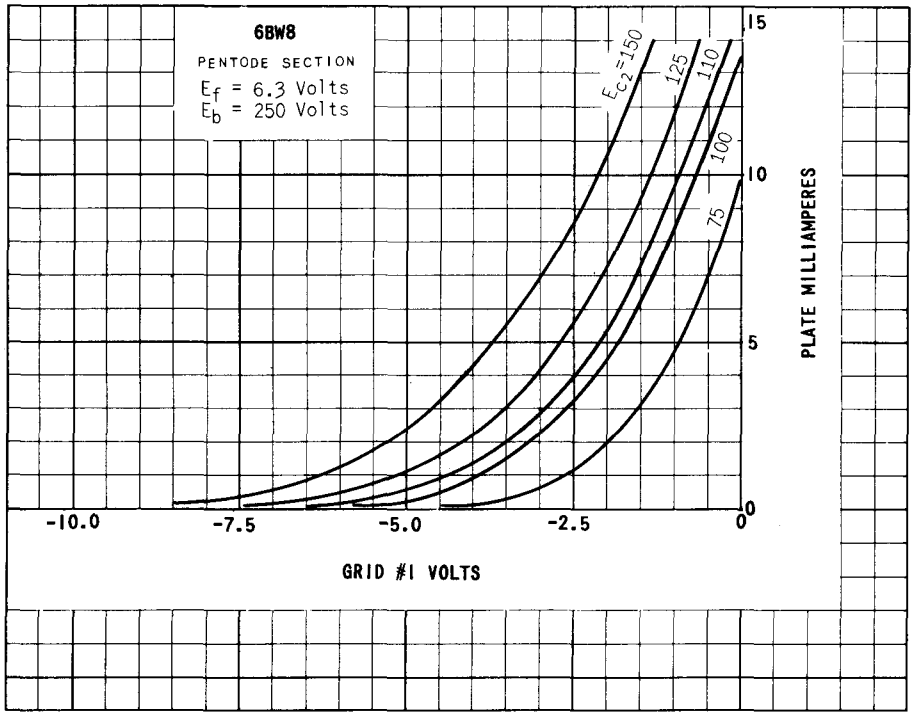
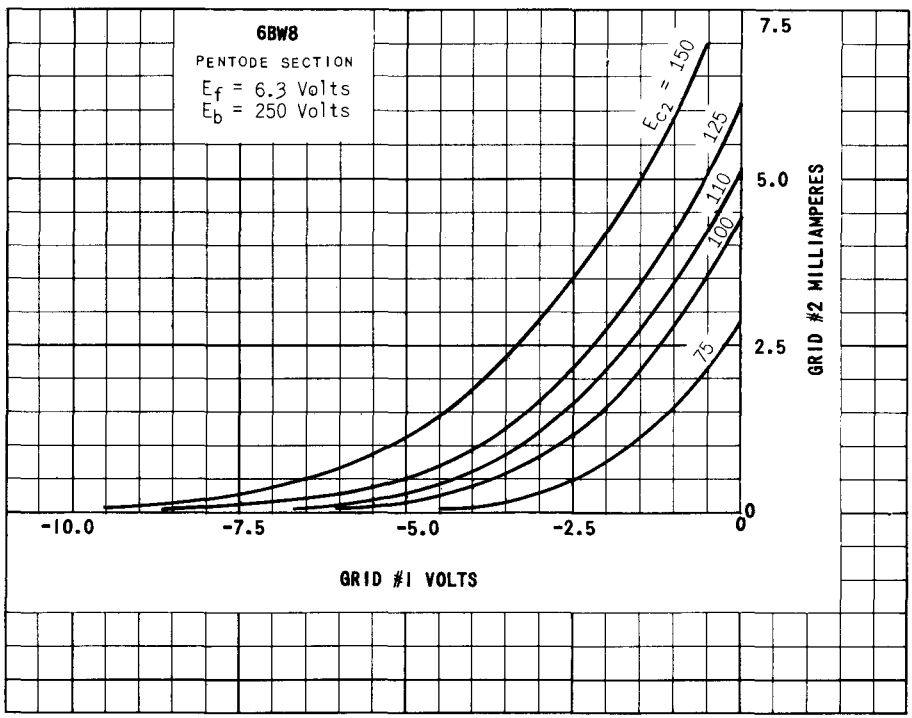
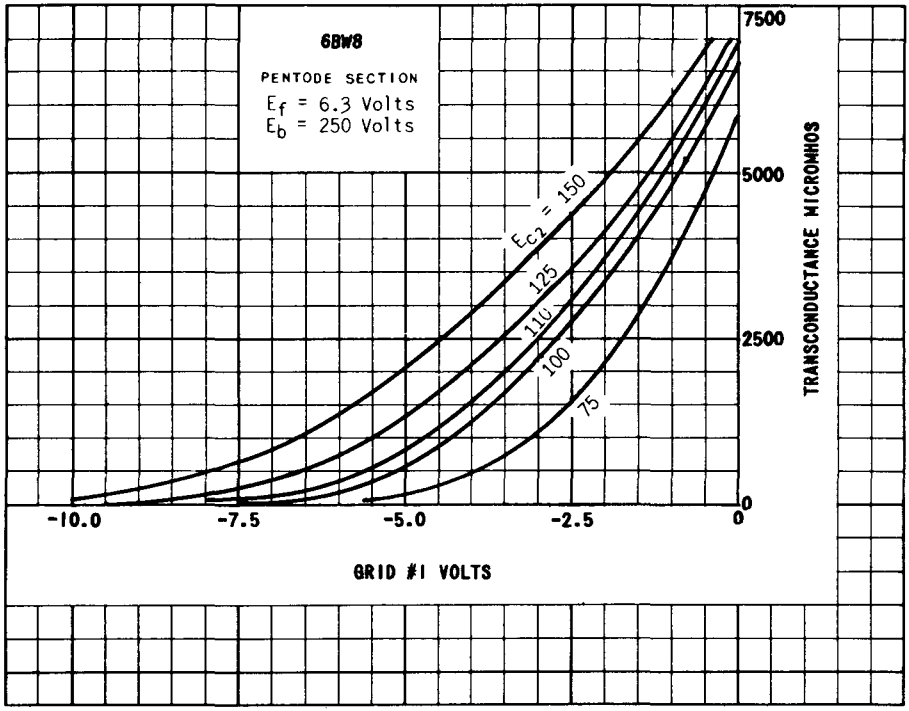
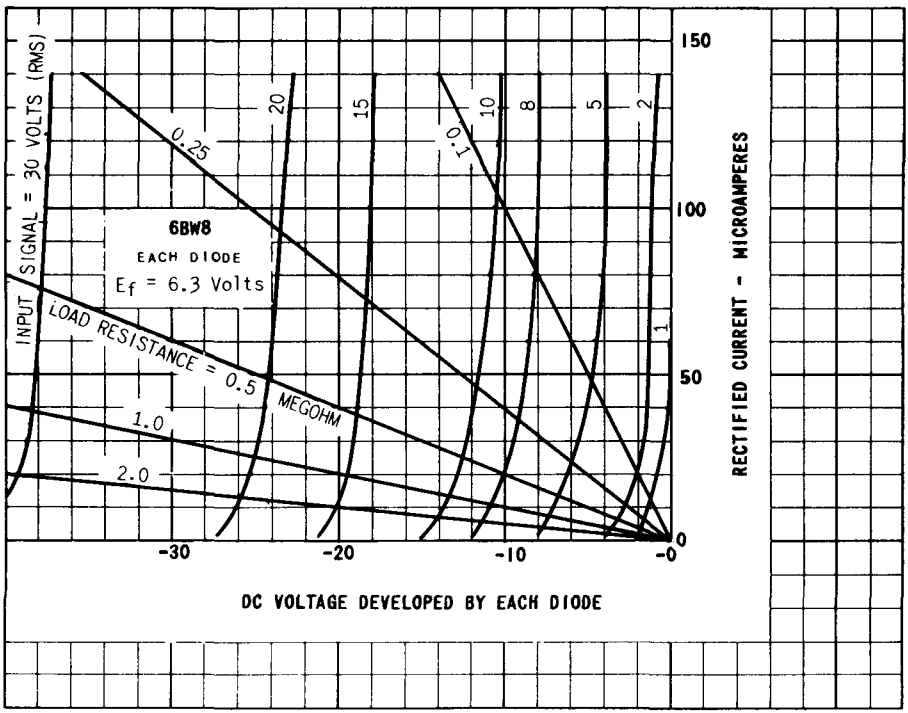

6BW8
PENTODE SECTION
Ef = 6.3 Volts
Eb = 250 Volts
Ec2=150
125
110
100
75
15
10
5
0
PLATE MILLIAMPERES
-10.0
-7.5
-5.0
-2.5
0
GRID #1 VOLTS


6BW8
PENTODE SECTION
Ef = 6.3 Volts
Eb = 250 Volts
Ec2 = 150
125
110
100
75
7.5
5.0
2.5
0
GRID #2 MILLIAMPERES
-10.0
-7.5
-5.0
-2.5
0
GRID #1 VOLTS


6BW8
PENTODE SECTION
Ef = 6.3 Volts
Eb = 250 Volts
Ec2 = 150
125
110
100
75
7500
5000
2500
0
TRANSCONDUCTANCE MICROMHOS
-10.0
-7.5
-5.0
-2.5
0
GRID #1 VOLTS


INPUT SIGNAL = 30 VOLTS (RMS)
0.25
20
15
1.0
10
8
5
2
1
6BW8
EACH DIODE
Ef = 6.3 Volts
LOAD RESISTANCE = 0.5 MEGOHM
1.0
2.0
150
100
50
0
RECTIFIED CURRENT - MICROAMPERES
-30
-20
-10
-0
DC VOLTAGE DEVELOPED BY EACH DIODE