TUNG-SOL

PENTODE

MINIATURE TYPE

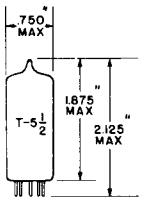
COATED UNIPOTENTIAL CATHODE

HEATER

3.15 VOLTS 600±40 MA.

AC OR DC

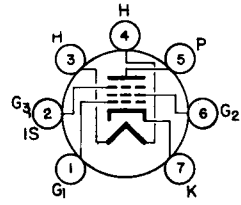
ANY MOUNTING POSITION



GLASS BULB

MINIATURE BUTTON 7 PIN BASE E7-1

OUTLINE DRAWING JEDEC 5-?



BOTTOM VIEW

BASING DIAGRAM JEDEC 7BK ←

THE 3BA6 IS A REMOTE CUT-OFF PENTODE USING THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR SERVICE AS A HIGH-GAIN FREQUENCY OR INTERMEDIATE-FREQUENCY AMPLIFIER IN 600 MA. SERIES HEATER OPERATED 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 TYPES WHICH ARE SIMILARLY CONTROLLED. WITH THE EXCEPTION OF HEATER RATINGS, ITS CHARACTERISTICS ARE IDENTICAL TO THE 6BA6.

DIRECT INTERELECTRODE CAPACITANCES

	WITH SHIELD[A]	WITHOUT SHIELD	
GRID TO PLATE: G_1 TO P (MAX.)	0.0035	0.0035	pf
INPUT: G_1 TO (H+K+G_2+G_3&IS)	5.5	5.5	pf
OUTPUT: P TO (H+K+G_2+G_3&IS)	5.5	5	pf

[A] EXTERNAL SHIELD #316 CONNECTED TO PIN #7.

→RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

MAXIMUM PEAK HEATER-CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	200[C]	VOLTS
MAXIMUM PLATE VOLTAGE	330	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	330	VOLTS
MAXIMUM GRID #2 VOLTAGE	SEE J5-C4	
MAXIMUM GRID #3 VOLTAGE (PIN #2 CONNECTED TO PIN #7 AT SOCKET)		
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	VOLTS
MAXIMUM NEGATIVE DC GRID #1 VOLTAGE	55	VOLTS
MAXIMUM PLATE DISSIPATION	3.4	WATTS
MAXIMUM GRID #2 DISSIPATION:		
FOR VOLTAGES UP TO 165 VOLTS	0.7	WATT
FOR VOLTAGES BETWEEN 165 & 330 VOLTS	SEE J5-C4	

[C] THE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

PLATE VOLTAGE	100	250	VOLTS
GRID #3 VOLTAGE	0	0	VOLTS
GRID #2 VOLTAGE	100	100	VOLTS
CATHODE BIAS RESISTOR	68	68	OHMS
PLATE RESISTANCE (APPROX.)	0.25	1.0	MEGOHM
TRANSCONDUCTANCE	4 300	4 400	μMHOS
PLATE CURRENT	10.8	11	MA.
GRID #2 CURRENT	4.4	4.2	MA.
GRID #1 VOLTAGE (APPROX.) FOR G_m = 40 μMHOS	−20	−20	VOLTS

→INDICATES A CHANGE.

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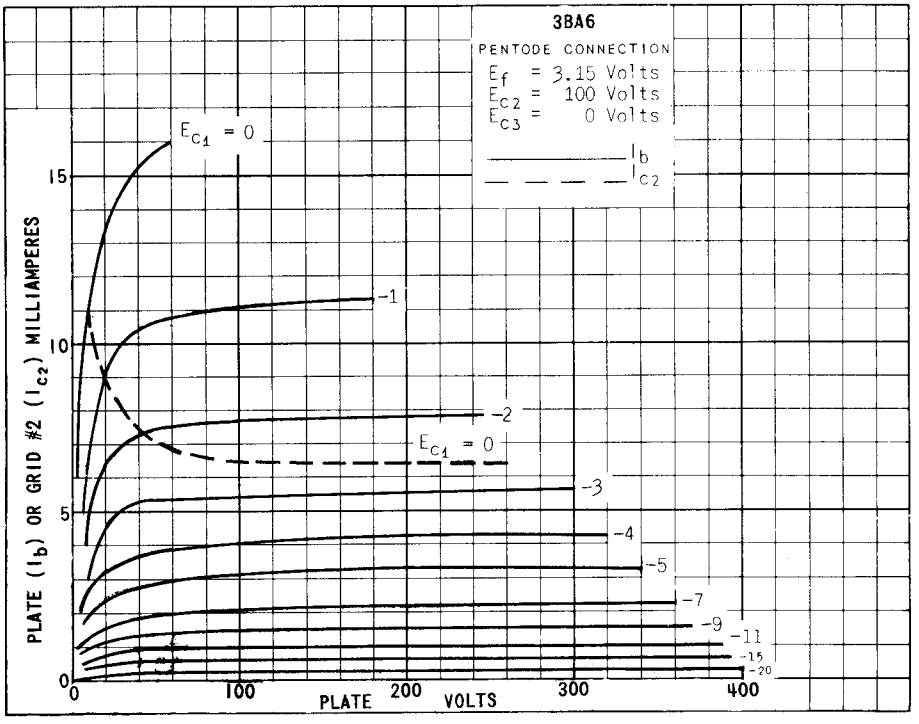
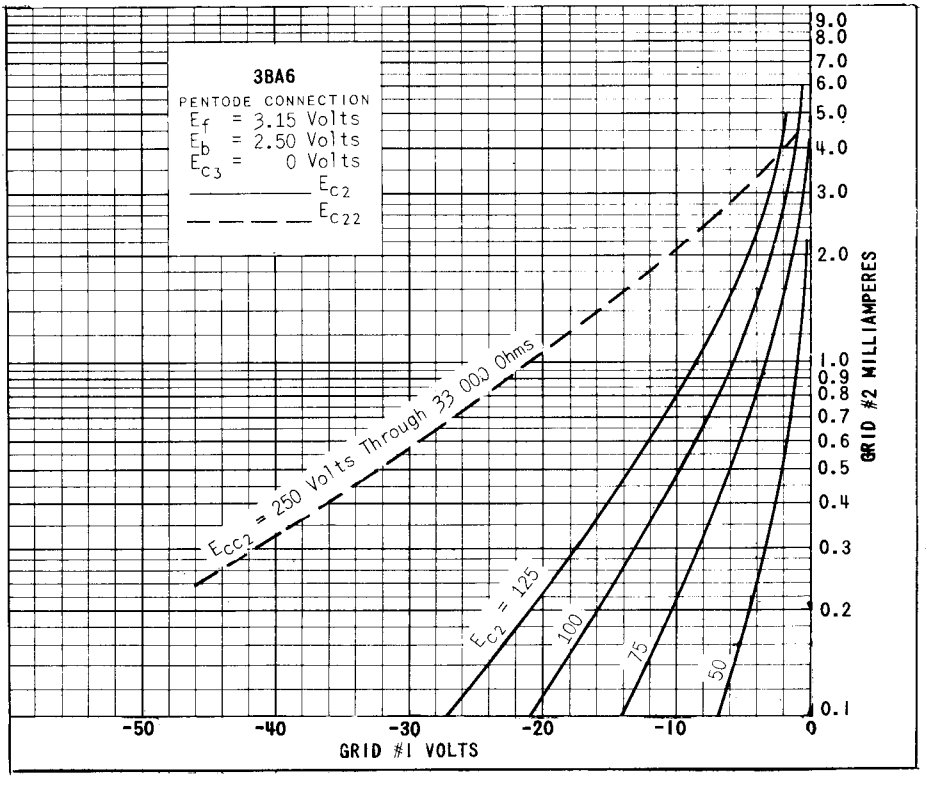
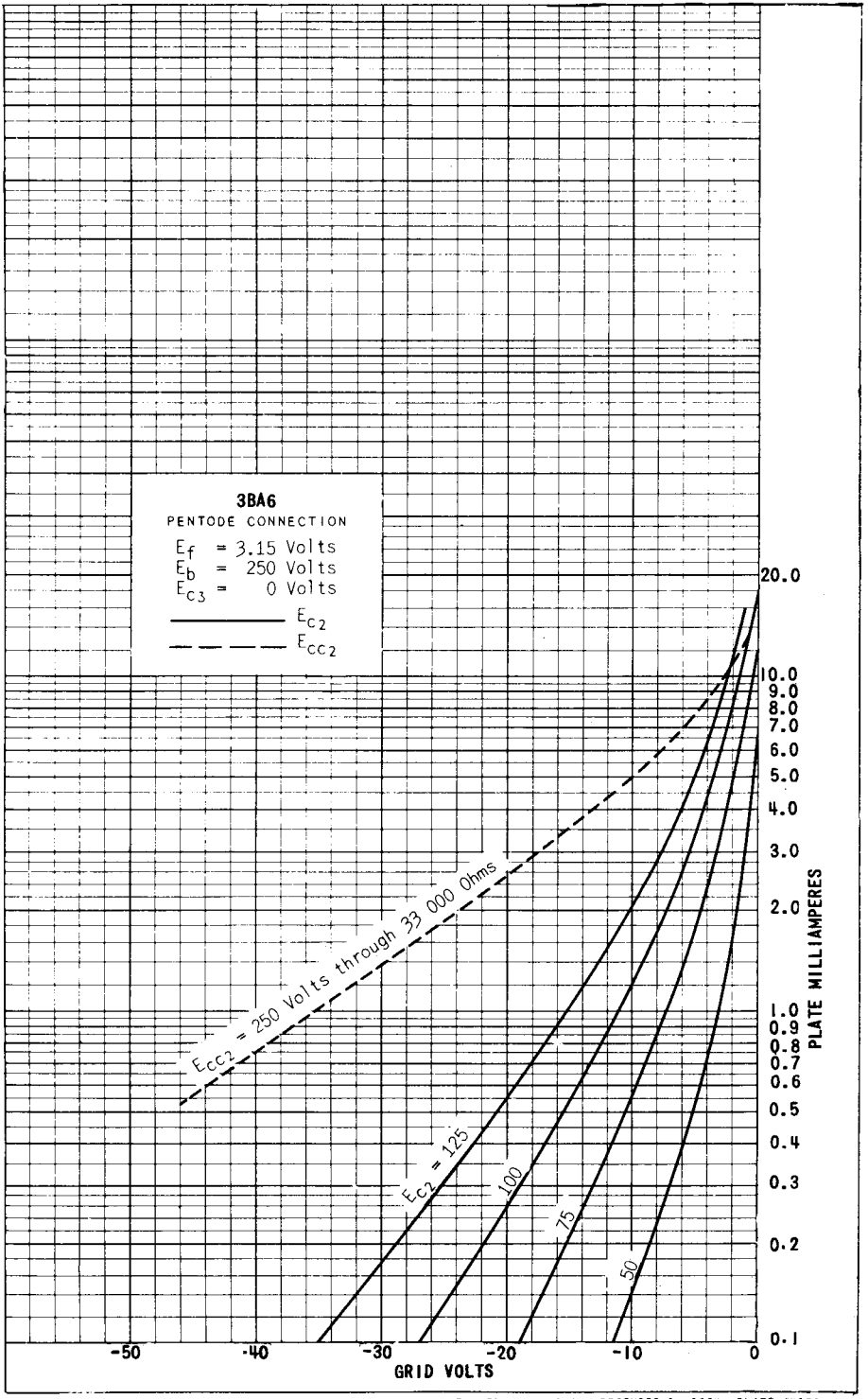
3BA6


3BA6
PENTODE CONNECTION
Ef = 3.15 Volts
Ec2 = 100 Volts
Ec3 = 0 Volts
Ib
Ic2
Ec1 = 0
-1
-2
Ec1 = 0
-3
-4
-5
-7
-9
-11
-15
-20
PLATE (Ib) OR GRID #2 (Ic2) MILLIAMPERES
PLATE VOLTS
0
5
10
15
100
200
300
400


3BA6
PENTODE CONNECTION
Ef = 3.15 Volts
Eb = 2.50 Volts
Ec3 = 0 Volts
Ec2
Ec22
Ecc2 = 250 Volts Through 33 000 Ohms
Ec2 = 125
100
75
50
GRID #2 MILLIAMPERES
GRID #1 VOLTS
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
-50
-40
-30
-20
-10
0



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3BA6

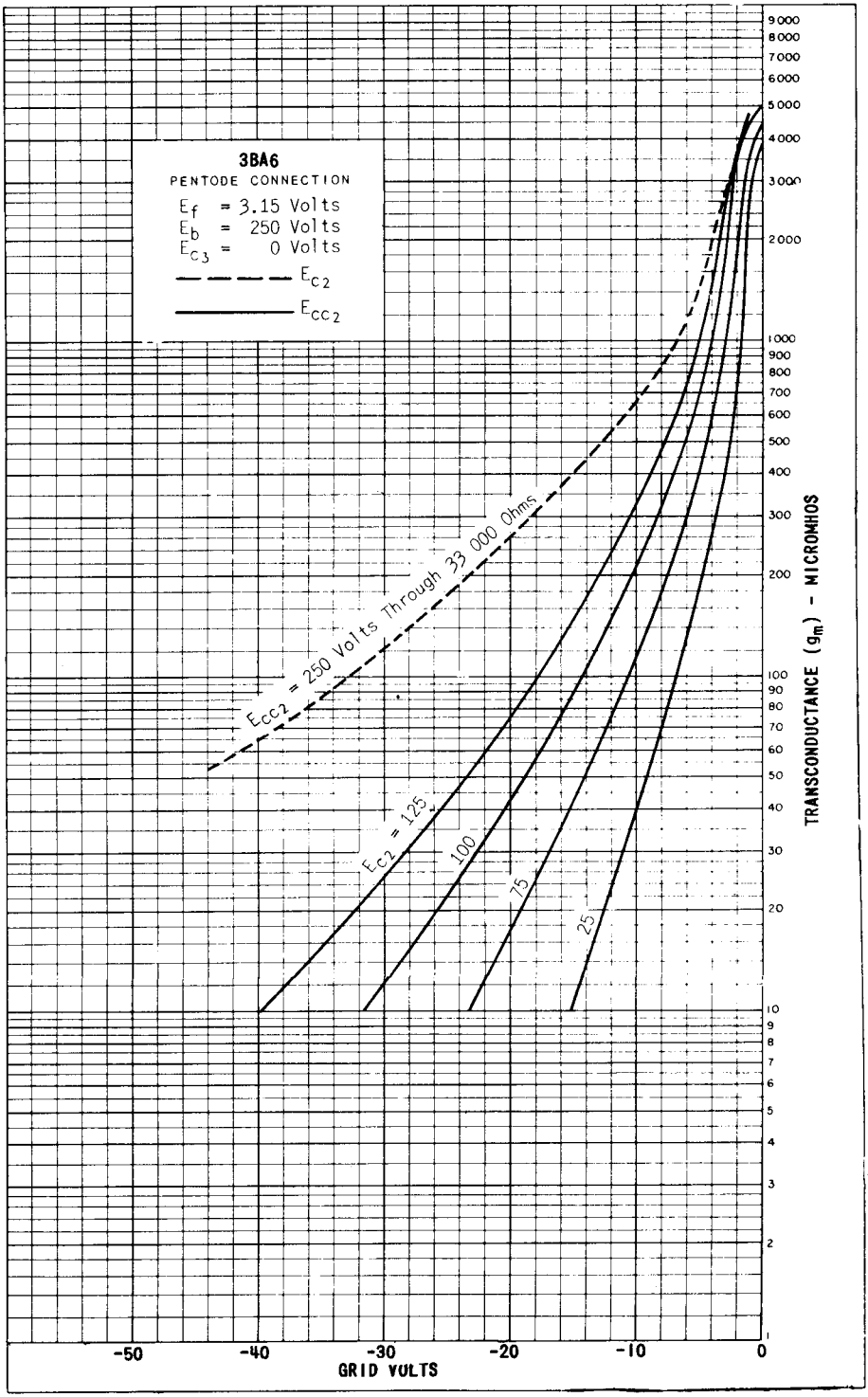

PLATE #4174 DECEMBER 1, 1954 TUNG-SOL ELECTRIC INC. ELECTRON TUBE DIVISION BLOOMFIELD, NEW JERSEY, U.S.A.