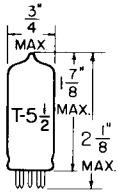
TUNG-SOL

PENTODE

MINIATURE TYPE

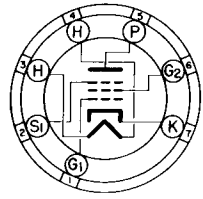


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
12.6 VOLTS 150 MA.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE
7CC

THE 12BA6 IS A PENTODE AMPLIFIER HAVING A REMOTE CONTROL GRID CHARACTERISTIC AND UTILIZING THE MINIATURE CONSTRUCTION. AS A RF AMPLIFIER IT IS CHARACTERIZED BY HIGH TRANSCONDUCTANCE AND LOW GRID-PLATE CAPACITANCE.

DIRECT INTERELECTRODE CAPACITANCES

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

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

RATINGS

INTERPRETED ACCORDING TO RMA STANDARD M8-210

HEATER VOLTAGE	12.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE	90	VOLTS
MAXIMUM PLATE VOLTAGE	300	VOLTS
MAXIMUM GRID #2 VOLTAGE	125	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	300	VOLTS
MAXIMUM NEGATIVE DC GRID #1 VOLTAGE	50	VOLTS
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	VOLTS
MAXIMUM PLATE DISSIPATION	3	WATTS
MAXIMUM GRID #2 DISSIPATION	0.6	WATT

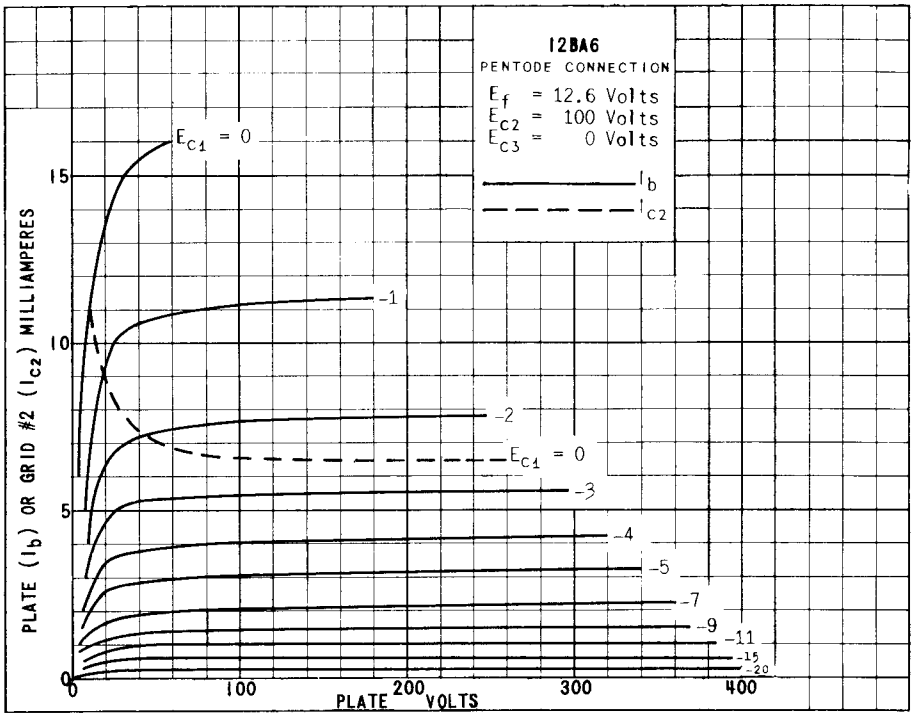
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

HEATER VOLTAGE	12.6	12.6	VOLTS
HEATER CURRENT	150	150	MA.
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	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

PLATE
2249
SEPT. 1
1949

12BA6 (6BA6)



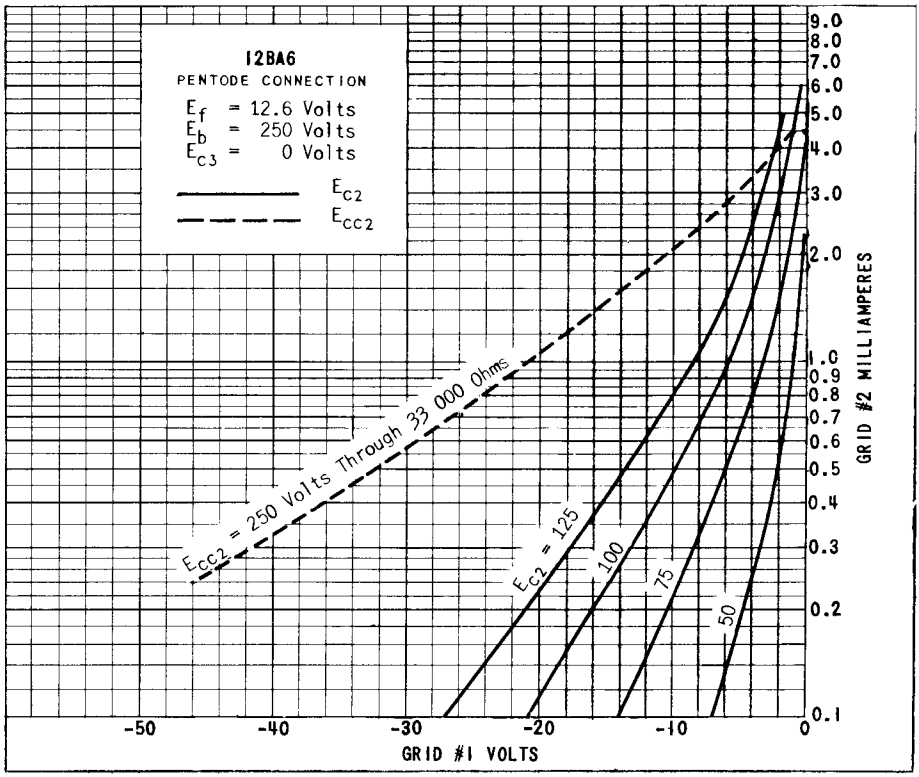


PLATE 1805
MAY 1 1947

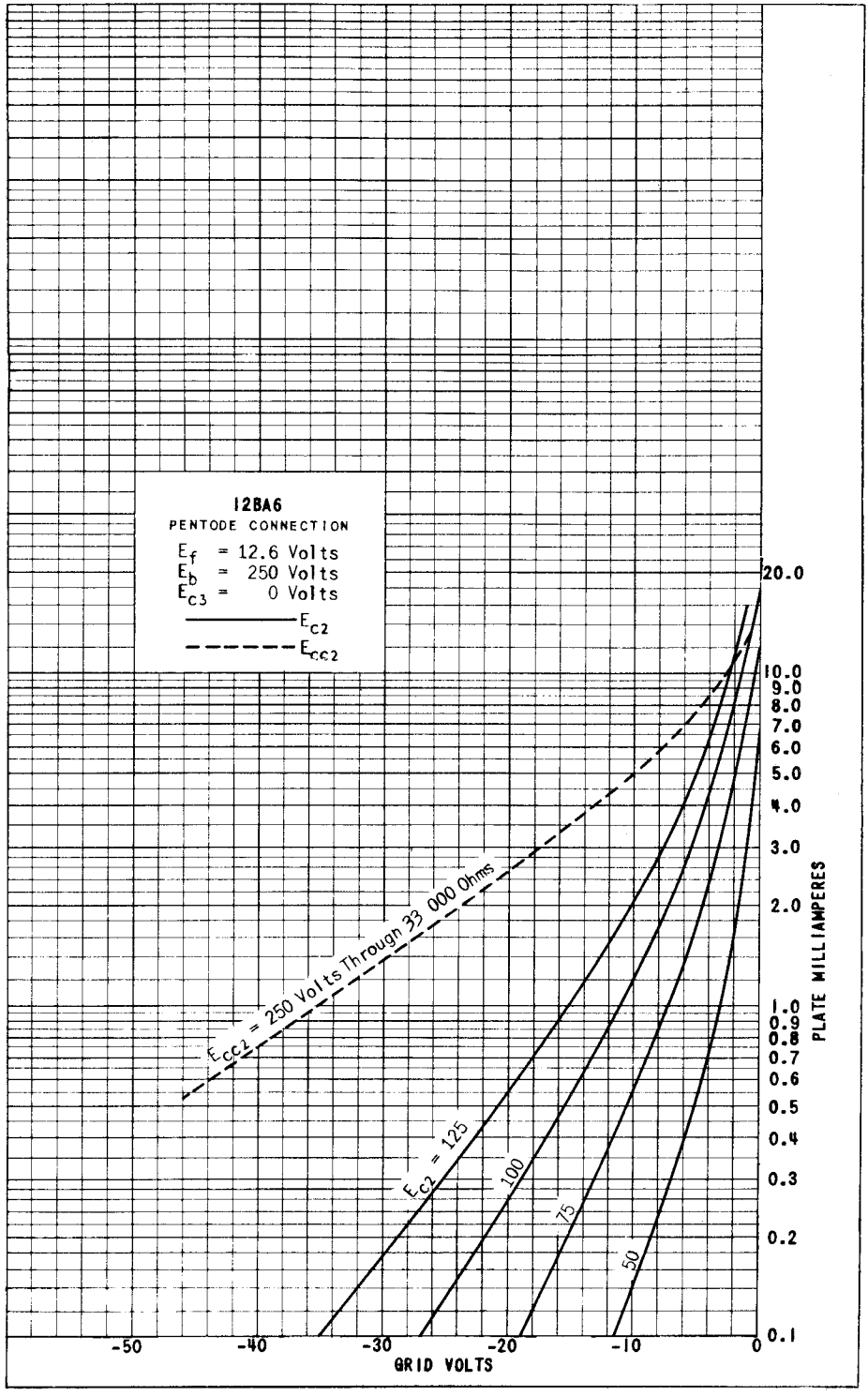


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PLATE
1806
MAY 1
1947

12BA6

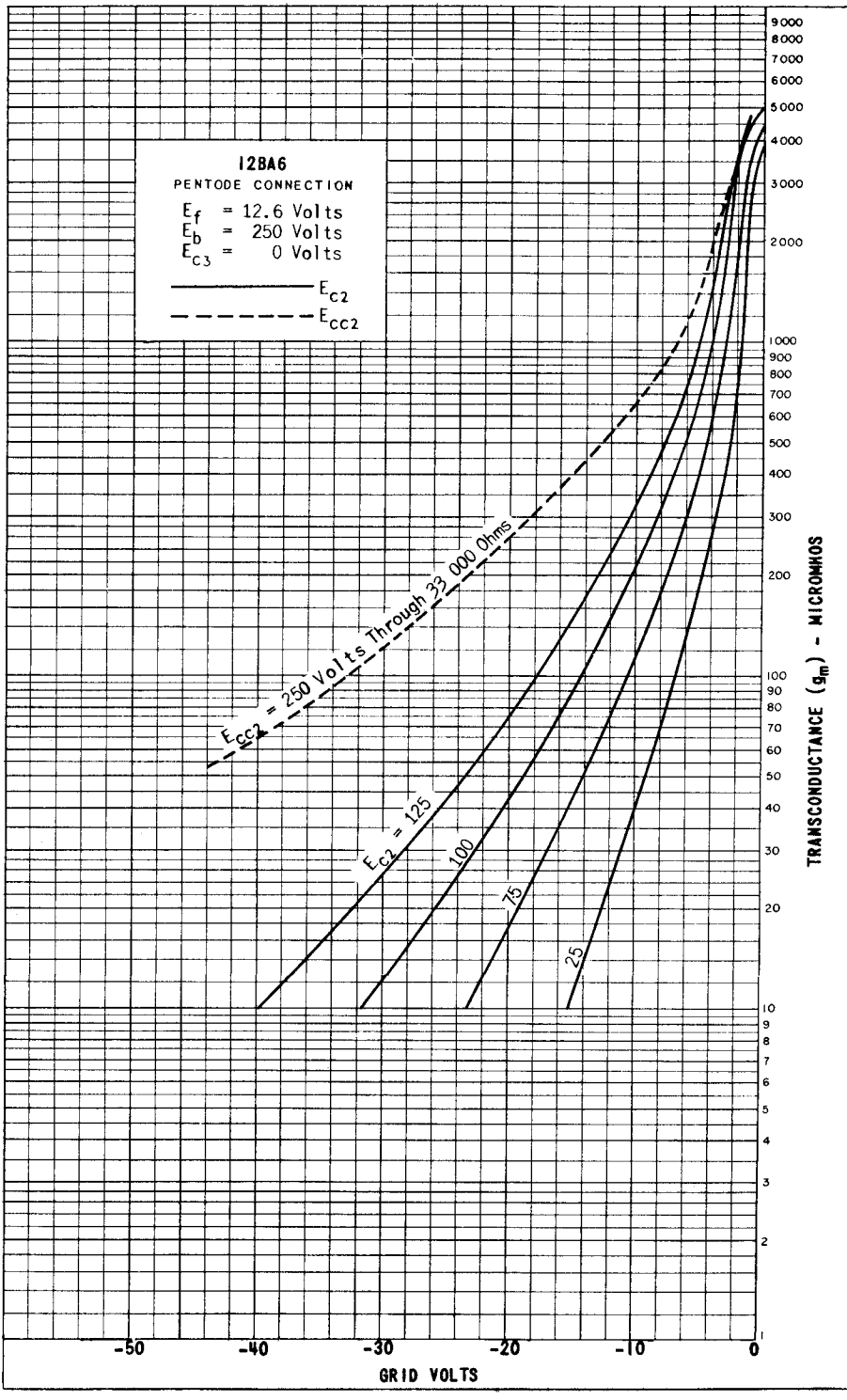


PLATE 1807
MAY 1 1947

TUNG-SOL

PENTODE

MINIATURE TYPE

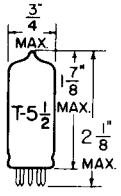
COATED UNIPOTENTIAL CATHODE

HEATER

12.6±1.3 VOLTS 0.15 AMP.

AC OR DC

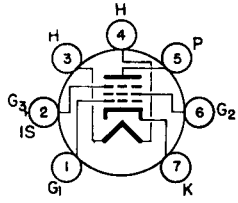
ANY MOUNTING POSITION



GLASS BULB

MINIATURE BUTTON 7 PIN BASE E7-1

OUTLINE DRAWING JEDEC 6-7



BOTTOM VIEW

BASING DIAGRAM

JEDEC 7BK ←

THE 12BA6 IS A PENTODE AMPLIFIER HAVING REMOTE CONTROL GRID CHARACTERISTIC AND UTILIZING THE MINIATURE CONSTRUCTION. AS AN RF AMPLIFIER IT IS CHARACTERIZED BY HIGH TRANSCONDUCTANCE AND LOW GRID–PLATE CAPACITANCE.

DIRECT INTERELECTRODE CAPACITANCES

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

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

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER 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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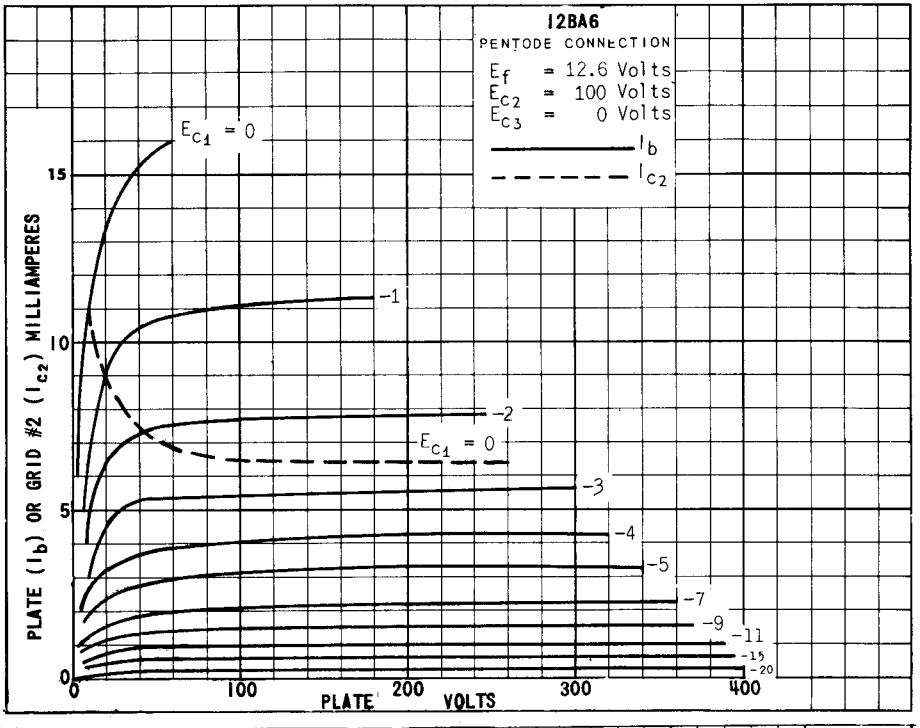
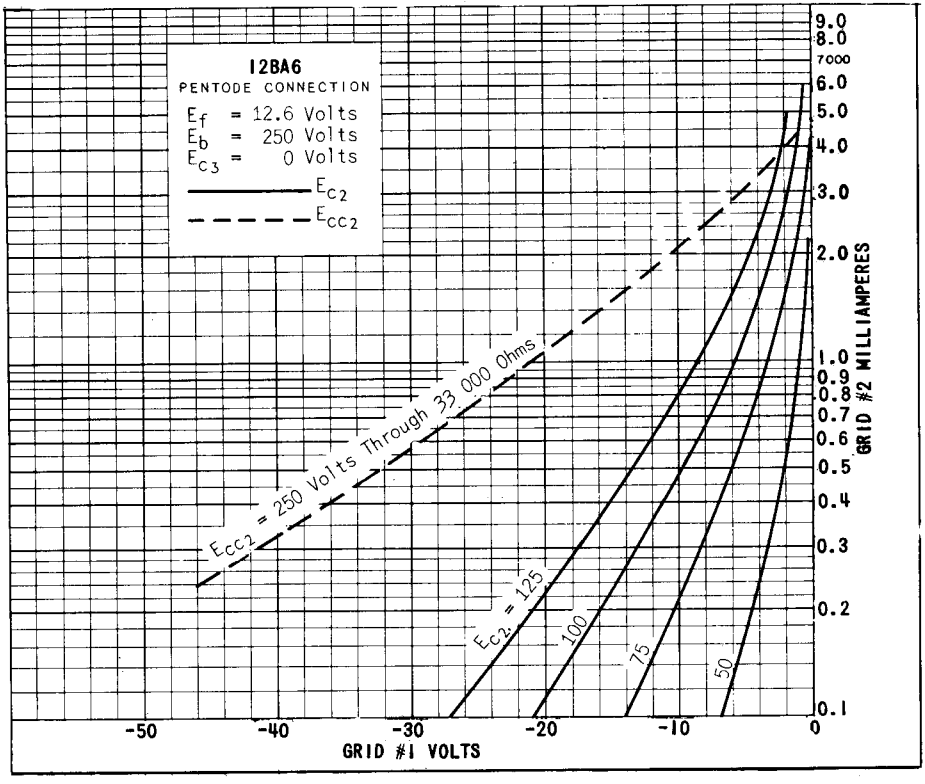

12BA6
PENTODE CONNECTION
Ef = 12.6 Volts
Ec2 = 100 Volts
Ec3 = 0 Volts
Ib
Ic2
Ec1 = 0
-1
-2
-3
-4
-5
-7
-9
-11
-15
-20
PLATE (Ib) OR GRID #2 (Ic2) MILLIAMPERES
PLATE VOLTS
0
5
10
15
100
200
300
400


12BA6
PENTODE CONNECTION
Ef = 12.6 Volts
Eb = 250 Volts
Ec3 = 0 Volts
Ec2
Ecc2
Ecc2 = 250 Volts Through 33,000 Ohms
Ec2 = 125
100
75
50
GRID #2 MILLIAMPERES
GRID #1 VOLTS
9.0
8.0
7000
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