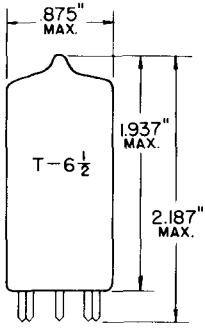
TUNG-SOL

TWIN TRIODE

MINIATURE TYPE

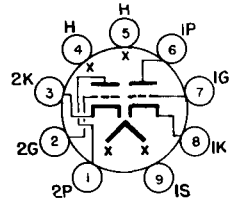


GLASS BULB
MINIATURE BUTTON
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-2

COATED UNIPOTENTIAL CATHODE

CASCODE AMPLIFIER
FOR SERIES STRING VHF
TELEVISION RECEIVERS

ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
JEDEC 9AJ

THE 6BC8 IS A MEDIUM-MU, SEMI-REMOTE CUT-OFF TWIN TRIODE USING THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE AS A CASCODE AMPLIFIER IN VHF TELEVISION RECEIVER TUNERS.

DIRECT INTERELECTRODE CAPACITANCES

EXTERNAL SHIELD #315 CONNECTED TO PIN 9

	#1 TRIODE	#2 TRIODE	
GRID TO PLATE (G TO P)	→ 1.2	→ 1.2	pf
PLATE TO CATHODE (P TO K)		→ 0.12	pf
HEATER TO CATHODE (H TO K)	→ 2.8	→ 2.8	pf
#1 INPUT: G1 TO (H+K+I.S.)	→ 2.6		pf
#2 INPUT: K TO (H+G+I.S.)[A]		→ 5.5	pf
#1 OUTPUT: P TO (H+K+I.S.)	1.3		pf
#2 OUTPUT: P TO (H+G+I.S.)[A]		→ 2.4	pf
#1 PLATE TO #2 PLATE (1P TO 2P)(MAX.)	→ .02		pf
#2 PLATE TO #1 PLATE AND GRID:(2P TO 1P+1G) MAXIMUM	→ .04		pf

[A] READ AS GROUNDED GRID AMPLIFIER.

→ INDICATES A CHANGE.

CONTINUED ON FOLLOWING PAGE

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HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	6.3 VOLTS	400	MA.
HEATER SUPPLY LIMITS:			
VOLTAGE OPERATION		6.3±0.6	VOLTS
MAXIMUM HEATER CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE[B]			
TOTAL DC AND PEAK		200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS

MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

PLATE VOLTAGE	250	VOLTS
PLATE DISSIPATION	2.2	WATTS
CATHODE CURRENT	→ 22	MA.
GRID CIRCUIT RESISTANCE	0.5	MEGOHM

TYPICAL OPERATING CHARACTERISTICS

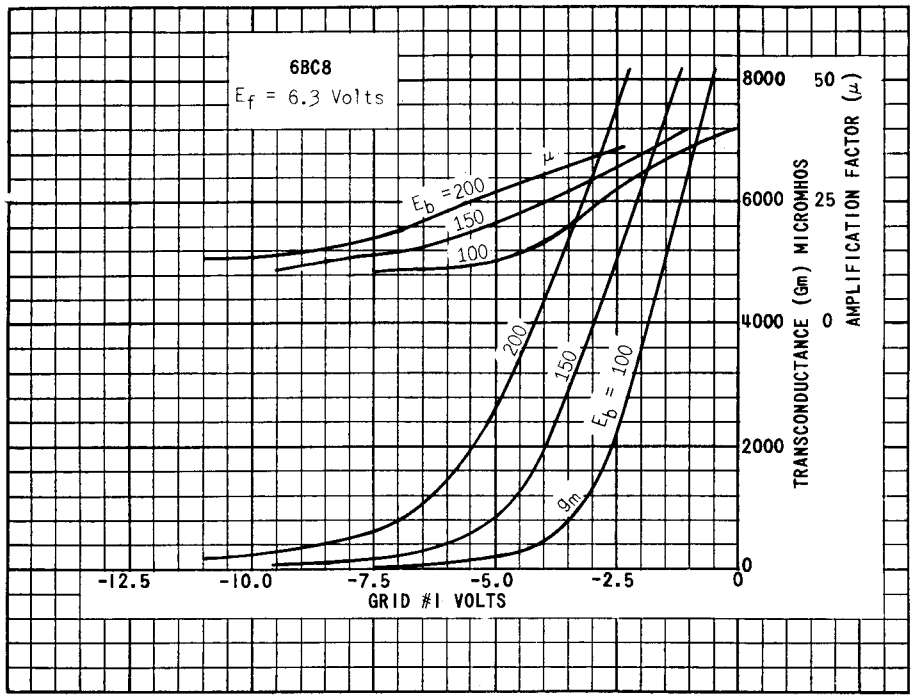
CLASS A_1 AMPLIFIER

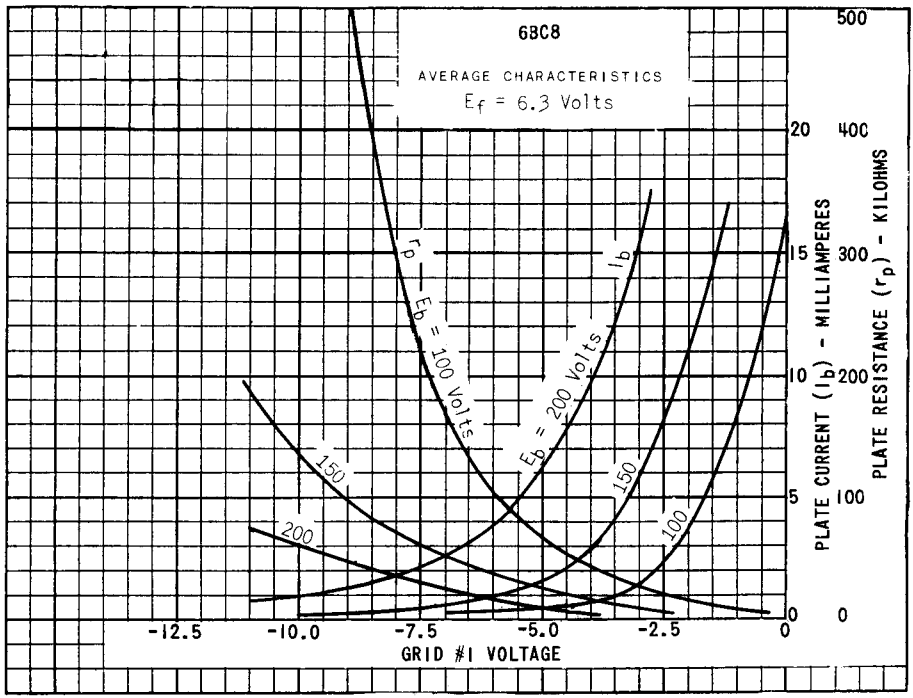
EACH UNIT

PLATE VOLTAGE	150	VOLTS
CATHODE RESISTOR	220	OHMS
PLATE RESISTANCE*	5300	OHMS
TRANSCONDUCTANCE	6200	μMHOS
AMPLIFICATION FACTOR	35	
PLATE CURRENT	10	MA.
GRID VOLTAGE (APPROX.) FOR GM =50 μMHOS	-13	VOLTS

[B]THIS RATING MAY BE AS HIGH AS 300 VOLTS UNDER CUTOFF CONDITIONS WHEN THE TUBE IS USED AS A CASCODE AMPLIFIER AND THE TWO SECTIONS ARE CONNECTED IN SERIES.

DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A BOGEY ELECTRON DEVICE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS. THE DEVICE MANUFACTURER CHOOSES THESE VALUES TO PROVIDE ACCEPTABLE SERVICEABILITY OF THE DEVICE, TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN DEVICE CHARACTERISTICS. THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY DEVICE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION, AND ENVIRONMENTAL CONDITIONS.





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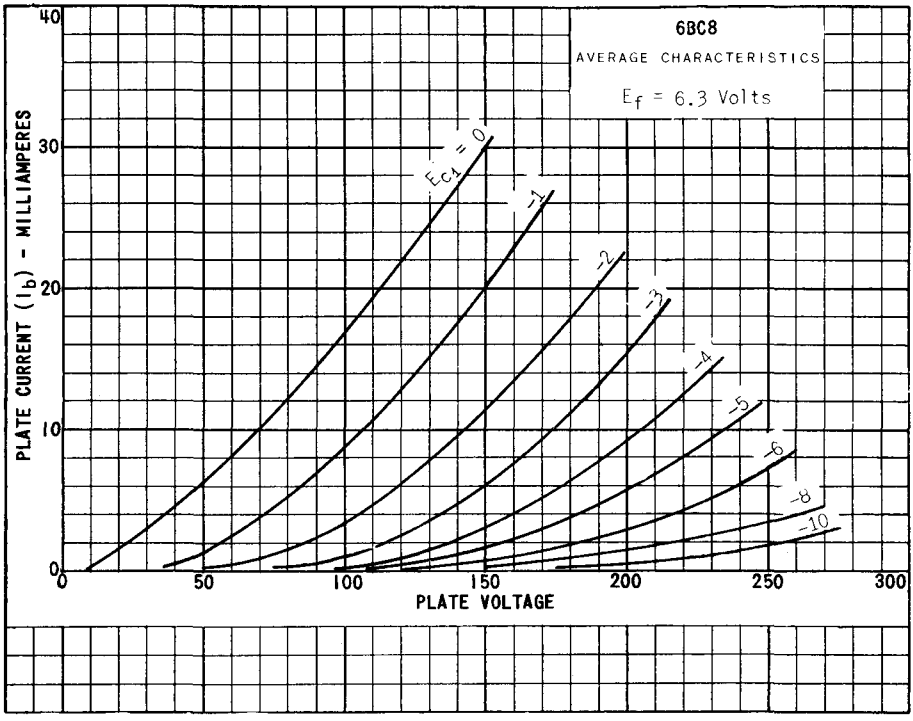
6BC8


6BC8
AVERAGE CHARACTERISTICS
E_f = 6.3 Volts
E_{c1} = 0
-1
-2
-3
-4
-5
-6
-8
-10
PLATE CURRENT (I_b) - MILLIAMPERES
PLATE VOLTAGE
0
10
20
30
40
0
50
100
150
200
250
300