

## Beam Power Tube

For Use as a Horizontal-Deflection Amplifier Tube  
in Color and Black-and-White Television Receivers

## GENERAL DATA

## Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC) . . . . .	6.3 ± 0.6	volts
Current at heater volts = 6.3 . . . . .	2.500	amp

Peak heater-cathode voltage:

Heater negative with respect to cathode. . . . .	200	max. volts
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Heater positive with respect to cathode. . . . .	200 <sup>a</sup>	max. volts
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Direct Interelectrode Capacitances:<sup>b</sup>

Grid No.1 to plate. . . . .	0.5	pf
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Grid No.1 to cathode & grid No.3, grid No.2, and heater . . . . .	23.0	pf
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Plate to cathode & grid No.3, grid No.2, and heater . . . . .	11.0	pf
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Characteristics, Class A<sub>1</sub> Amplifier:

		Triode Con- nec- tion <sup>c</sup>		
Plate Voltage . . . . .	70	175	125	volts
Grid No.2 (Screen-Grid) Voltage . . . . .	125	125	-	volts
Grid No.1 (Control-Grid) Voltage . . . . .	0	-25	-25	volts
Amplification Factor. . . . .	-	-	3.3	
Plate Resistance (Approx.). . . . .	-	5500	-	ohms
Transconductance. . . . .	-	10500	-	μmhos
Plate Current . . . . .	550 <sup>d</sup>	110	-	ma
Grid-No.2 Current . . . . .	42 <sup>d</sup>	5	-	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 1 . . . . .	-	-55	-	volts

## Mechanical:

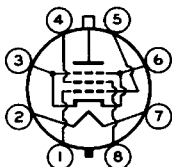
Operating Position. . . . .	Any
Type of Cathode . . . . .	Coated Unipotential
Maximum Overall Length. . . . .	5"
Seated Length . . . . .	4-1/4" ± 3/16"
Maximum Diameter. . . . .	1-9/16"
Bulb. . . . .	T12
Cap . . . . .	Small (JEDEC No.C1-1)
Base. . . . .	Short Medium-Shell Octal 8-Pin with External Barriers, Style B (JEDEC No.B8-118)



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Basing Designation for BOTTOM VIEW. . . . . 8JC

- Pin 1 - Grid No.1
- Pin 2 - Heater
- Pin 3 - Cathode,  
Grid No.3
- Pin 4 - Grid No.2
- Pin 5 - Grid No.1



- Pin 6 - Cathode,  
Grid No.3
- Pin 7 - Heater
- Pin 8 - Grid No.2  
Cap - Plate

## HORIZONTAL-DEFLECTION AMPLIFIER

### → Maximum Ratings, Design-Maximum Values:

*For operation in a 525-line, 30-frame system<sup>e</sup>*

DC PLATE-SUPPLY VOLTAGE . . . . .	990 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE <sup>f</sup> . . . . .	6500 max.	volts
PEAK NEGATIVE-PULSE PLATE VOLTAGE . . . . .	1100 max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE. . . . .	190 max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE . . . . .	250 max.	volts
CATHODE CURRENT:		
Peak . . . . .	1100 max.	ma
Average . . . . .	315 max.	ma
GRID-No.2 INPUT . . . . .	3.2 max.	watts
PLATE DISSIPATION <sup>g</sup> . . . . .	24 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface). . . . .	220 max.	°C

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For grid-resistor-bias operation<sup>g</sup> . . . . . 0.47 max. megohm

- <sup>a</sup> The dc component must not exceed 100 volts.
- <sup>b</sup> Without external shield.
- <sup>c</sup> With grid No.2 connected to plate.
- <sup>d</sup> These values can be measured by a method involving a recurrent wave form such that the plate dissipation, grid-No.2 input, and cathode current will be kept within ratings in order to prevent damage to the tube.
- <sup>e</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
- <sup>f</sup> This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
- <sup>g</sup> It is essential that the plate dissipation be limited in the event of loss of grid signal. For this purpose, some protective means such as a cathode resistor of suitable value be employed.

→ Indicates a change.

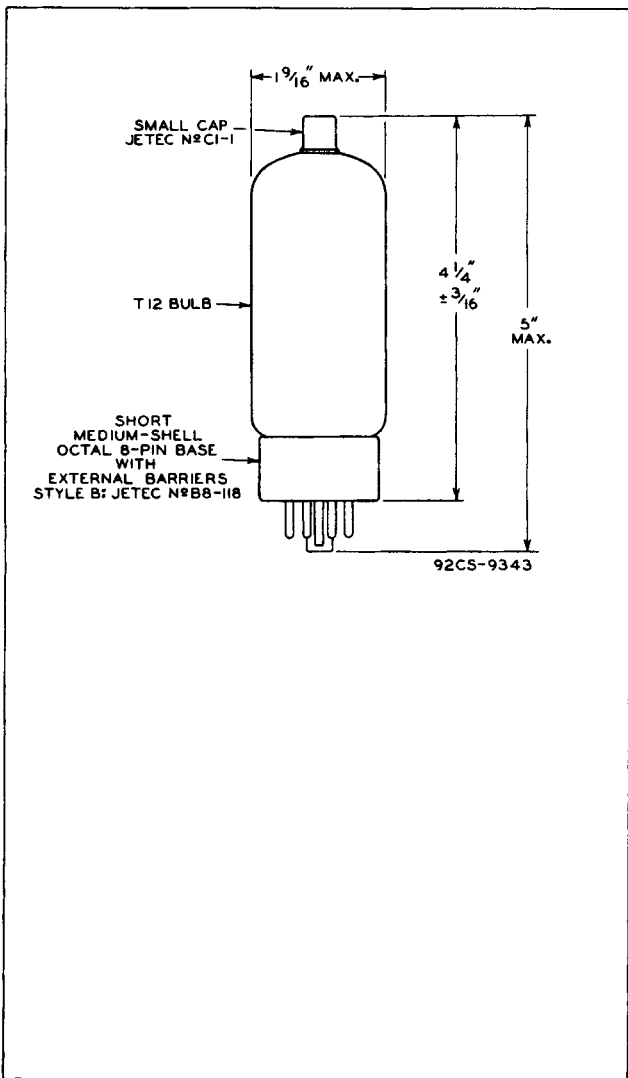




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# BEAM POWER TUBE

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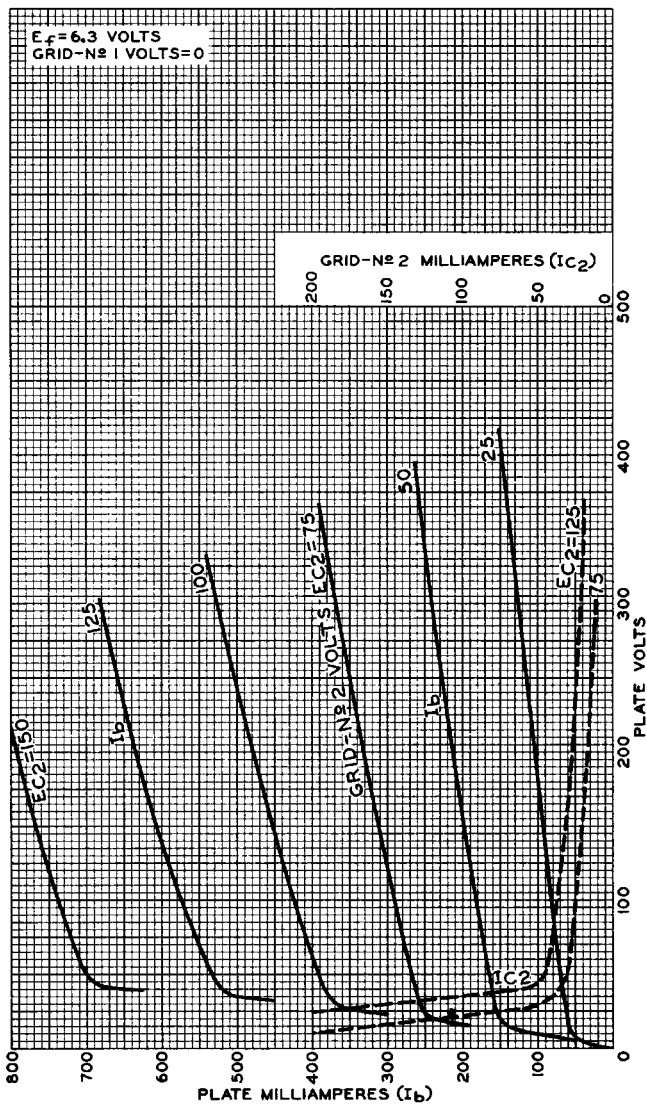


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## AVERAGE CHARACTERISTICS



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# AVERAGE CHARACTERISTICS

$E_f = 6.3$  VOLTS  
GRID-N $\#$ 2 VOLTS = 125

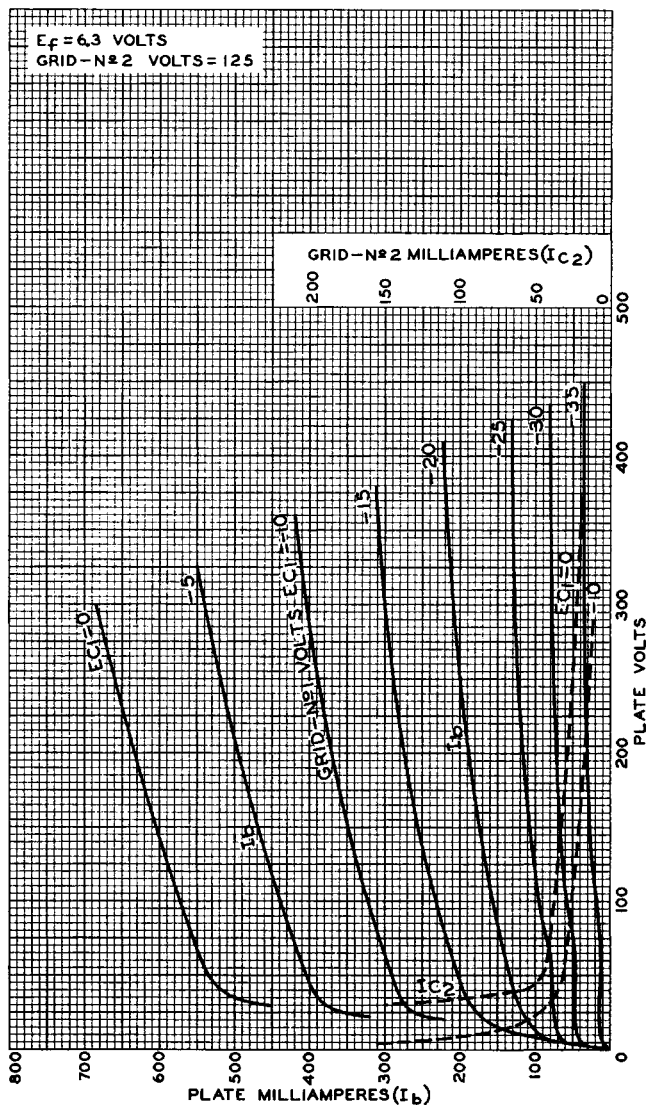


PLATE MILLIAMPERES ( $I_b$ )

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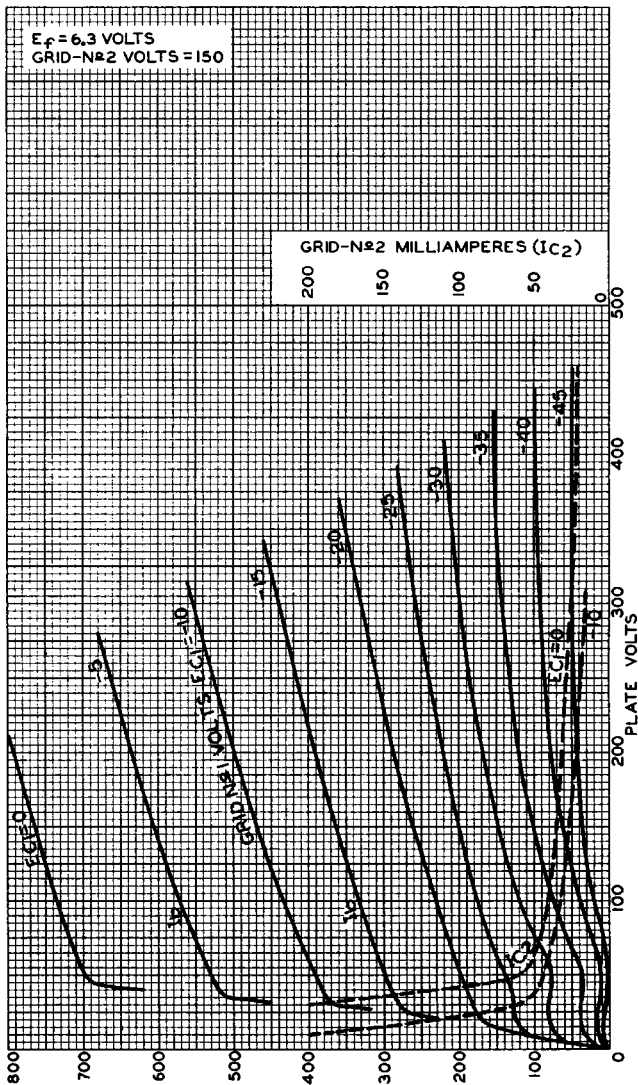
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### AVERAGE CHARACTERISTICS



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