



6CD6-GA

# 6CD6-GA BEAM POWER TUBE

Supersedes Type 6CD6-G

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:

Voltage . . . . .	6.3 . . . . .	ac or dc volts
Current . . . . .	2.5 . . . . .	amp

Direct Interelectrode Capacitances (Approx.):<sup>o</sup>

Grid No.1 to plate. . . . .	1.1	$\mu\mu\text{f}$
Grid No.1 to cathode & grid No.3, grid No.2, and heater . . . . .	22	$\mu\mu\text{f}$
Plate to cathode & grid No.3, grid No.2, and heater . . . . .	8.5	$\mu\mu\text{f}$

### Characteristics, Class A<sub>1</sub> Amplifier:

Plate Voltage . . . . .	60	175	volts
Grid-No.2 (Screen-Grid) Voltage . . .	100	175	volts
Grid-No.1 (Control-Grid) Voltage. . .	0	-30	volts
Mu-Factor, Grid No.2 to Grid No.1 . .	-	3.9	
Plate Resistance (Approx.). . . . .	-	7200	ohms
Transconductance. . . . .	-	7700	$\mu\text{mhos}$
Plate Current . . . . .	230*	75	ma
Grid-No.2 Current . . . . .	21*	5.5	ma
Grid-No.1 Voltage (Approx.) for plate current of 1 ma . . . . .	-	-55	volts

### Mechanical:

Mounting Position . . . . . Vertical, base up or down, or  
Horizontal with pins 2 and 7 in vertical plane

Maximum Overall Length. . . . . 5"

Seated Length . . . . . 4-1/4"  $\pm$  3/16"

Maximum Diameter. . . . . 1-9/16"

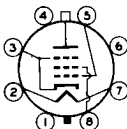
Bulb. . . . . T-12

Cap . . . . . Small (JETEC No.C1-1)

Base. . . . . Short Medium-Shell Octal 8-Pin  
with External Barriers, Style A (JETEC No.B8-110),  
or Short Medium-Shell Octal 8-Pin  
with External Barriers, Style B (JETEC No.B8-118)

Basing Designation for BOTTOM VIEW. . . . . 5BT

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



- Pin 5 - Grid No.1
- Pin 6 - No Connection
- Pin 7 - Heater
- Pin 8 - Grid No.2
- Cap - Plate

<sup>o</sup> Without external shield.

\* These values can be measured by a method involving a recurrent wave form such that the cathode current will be kept within ratings in order to prevent damage to the tube.

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HORIZONTAL DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

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

DC PLATE VOLTAGE . . . . .	700	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum) <sup>⊕</sup> . . . . .	7000 <sup>■</sup>	max.	volts
PEAK NEGATIVE-PULSE PLATE VOLTAGE . . . . .	1500	max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .	175	max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE . . . . .	-50	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE . . . . .	200	max.	volts
CATHODE CURRENT:			
Peak . . . . .	700	max.	ma
Average . . . . .	200	max.	ma
GRID-No.2 INPUT . . . . .	3	max.	watts
PLATE DISSIPATION† . . . . .	20	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. . . . .	200	max.	volts
Heater positive with respect to cathode. . . . .	200 <sup>▲</sup>	max.	volts
BULB TEMPERATURE (At hottest point on bulb surface) . . . . .			
	225	max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For grid-resistor-bias operation†. . . . 0.47 max. megohm

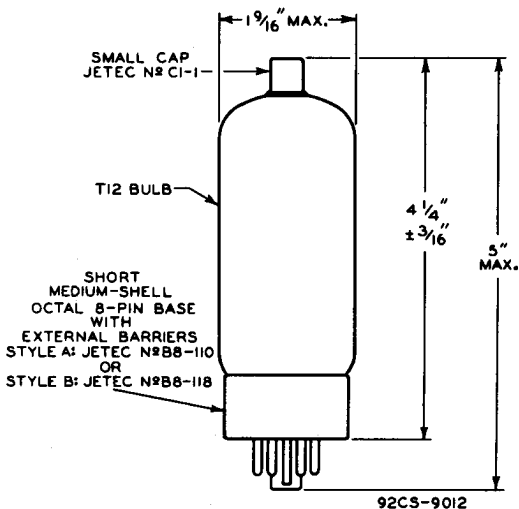
- As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
- Under no circumstances should this absolute value be exceeded.
- ⊕ The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
- † 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 should be employed.
- ▲ The dc component must not exceed 100 volts.



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### AVERAGE CHARACTERISTICS

$E_f = 6.3$  VOLTS  
GRID-N#2 VOLTS = 175

GRID-N#2 MILLIAMPERES ( $I_{C2}$ )

200      150      100      50

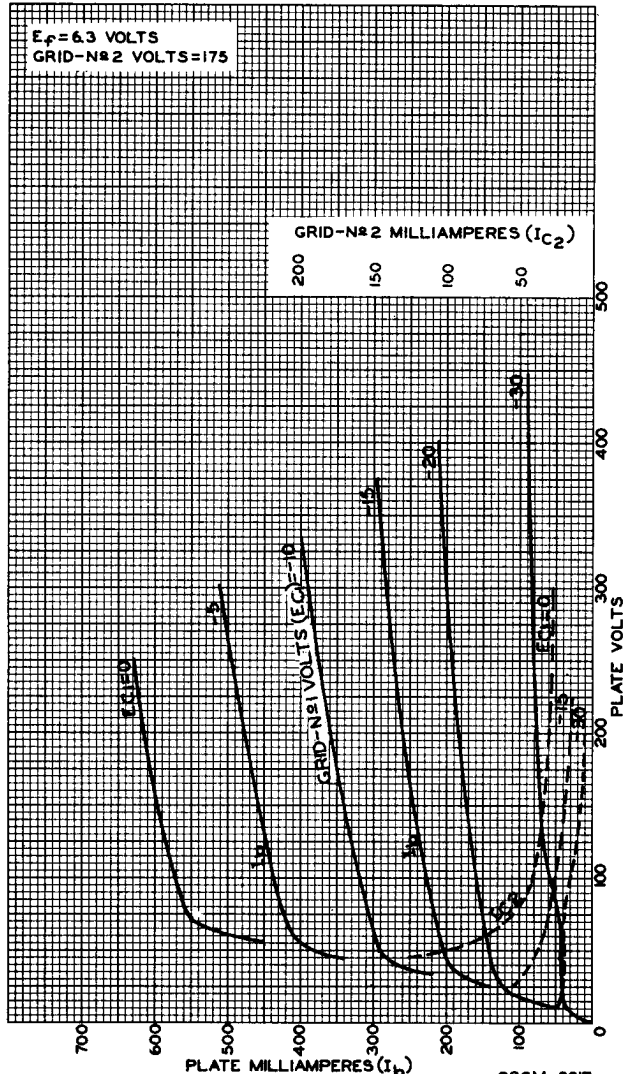


PLATE MILLIAMPERES ( $I_b$ )

PLATE VOLTS

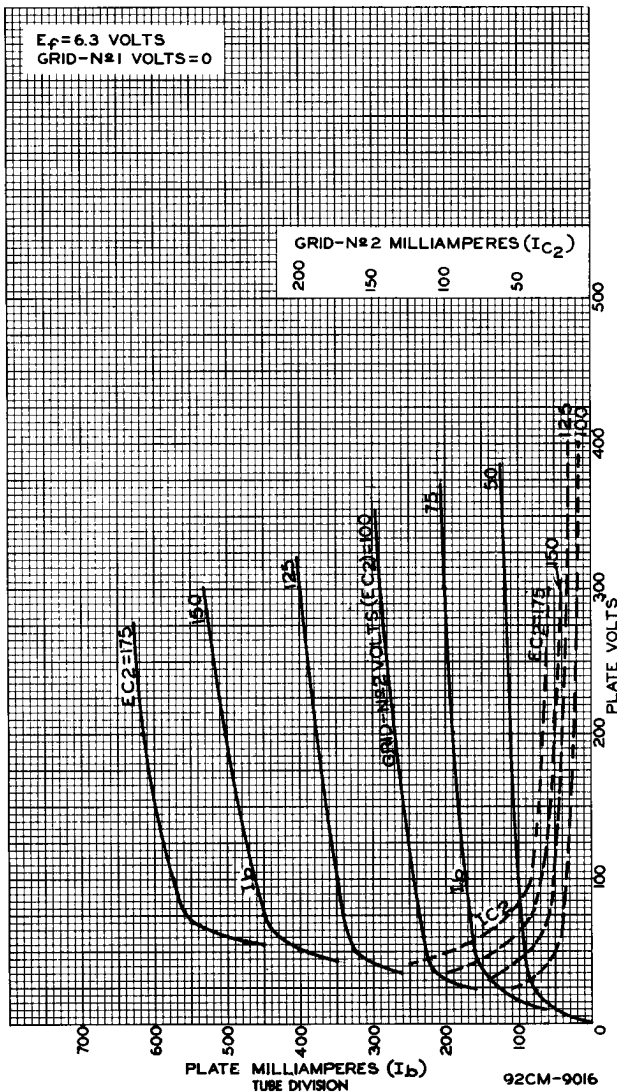
92CM-9017



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AVERAGE CHARACTERISTICS



92CM-9016