



50C5

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BEAM POWER TUBE

7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	50 + 10%	volts
Current	0.15	amp

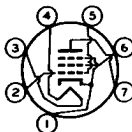
Direct Interelectrode Capacitances
(Approx.):⁰

Grid No.1 to plate.	0.6	μ f
Grid No.1 to cathode & grid No.3, grid No.2, and heater	13	μ f
Plate to cathode & grid No.3, grid No.2, and heater	8.5	μ f

Mechanical:

Operating Position.	Any
Maximum Overall Length.	2-5/8"
Maximum Seated Length.	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip).	2" $\pm$ 3/32"
Diameter.	0.650" to 0.750"
Dimensional Outline	See General Section
Bulb.	T5-1/2
Base.	Small Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW.	7CV

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



Pin 4-Heater
Pin 5-Grid No.1
Pin 6-Grid No.2
Pin 7-Plate

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE.	150	max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE.	130	max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE	0	max.	volts
GRID-No.2 INPUT.	1.4	max.	watts
PLATE DISSIPATION.	7	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200 [▲]	max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	220	max.	°C

▲ Indicates a change.



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→ Typical Operation and Characteristics:

Plate Voltage.	120	volts
Grid-No.2 Voltage.	110	volts
Grid-No.1 Voltage.	-8	volts
Peak AF Grid-No.1 Voltage.	8	volts
Zero-Signal Plate Current.	49	ma
Max.-Signal Plate Current.	50	ma
Zero-Signal Grid-No.2 Current.	4	ma
Max.-Signal Grid-No.2 Current.	8.5	ma
Plate Resistance (Approx.)	10000	ohms
Transconductance	7500	μ mhos
Load Resistance.	2500	ohms
Total Harmonic Distortion.	10	%
Max.-Signal Power Output	2.3	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.1 max.	megohm
For cathode-bias operation	0.5 max.	megohm

○ without external shield.

▲ The dc component must not exceed 100 volts.

NOTE: Except for a different basing arrangement, which simplifies the problem of meeting Underwriters' Laboratories requirements in the design of ac/dc receivers, the 50C5 is similar to the miniature type 50B5.

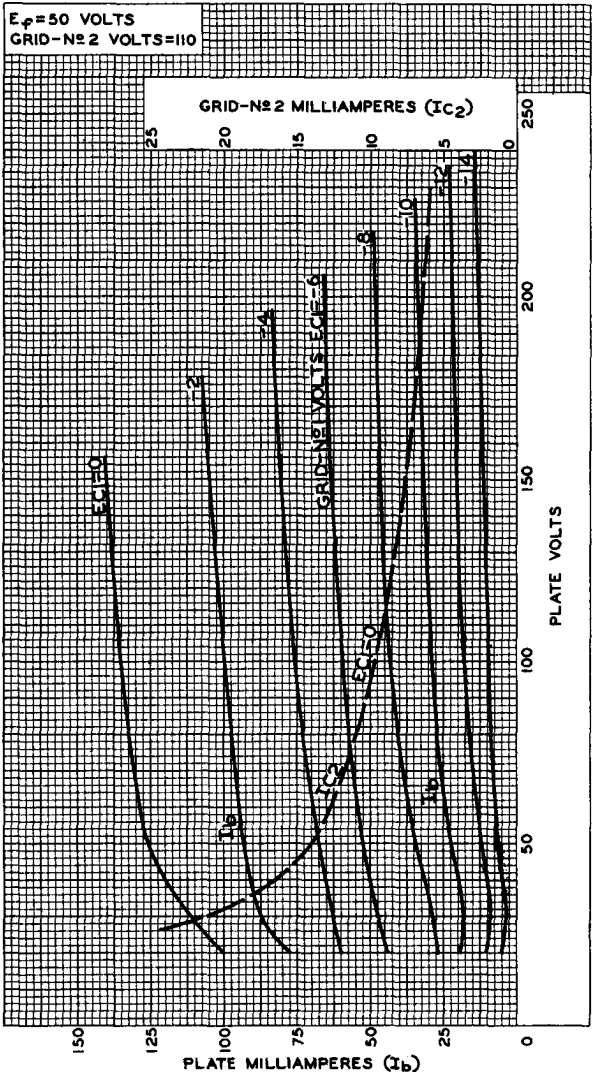
→ indicates a change.



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AVERAGE CHARACTERISTICS



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OPERATION CHARACTERISTICS

$E_f = 50$ VOLTS
PLATE VOLTS = 120
GRID-N₂ VOLTS = 110
GRID-N₁ VOLTS = -8
RMS SIGNAL VOLTS = 5.65

