



# 25C5

## BEAM POWER TUBE

7-Pin Miniature Type

TENTATIVE DATA

RCA-25C5 is a beam power tube of the 7-pin miniature type intended for use particularly in the audio output stage of radio receivers.

Because of its high power sensitivity and high efficiency at low plate and screen voltages, the 25C5 is capable of providing a relatively high power output. For example, in class A<sub>1</sub> amplifier service, a single 25C5 operated with a plate voltage of 120 volts, and a grid-No.2 voltage of 110 volts, can deliver a maximum signal power output of 2.3 watts.

### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC) . . . . .	25	volts
Current . . . . .	0.3	amp
Direct Interelectrode Capacitances (Approx. without external shield):		
Grid No.1 to plate . . . . .	0.6	μf
Grid No.1 to cathode & grid No.3, heater, and grid No.2. . . . .	13	μf
Plate to cathode & grid No.3, heater, and grid No.2. . . . .	8.5	μf

#### Mechanical:

Operating Position . . . . .	Any
Maximum Overall Length . . . . .	2-5/8"
Maximum Seated Length . . . . .	2-3/8"
Length from Base Seat to Bulb Top (Excluding tip). . . . .	2" ± 3/32"
Maximum Diameter . . . . .	3/4"
Bulb . . . . .	T-5-1/2"
Base . . . . .	Small-Button Miniature 7-Pin (JETEC No.E7-1)

### AMPLIFIER - Class A<sub>1</sub>

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

PLATE VOLTAGE. . . . .	135 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE. . . . .	117 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE: Positive bias value. . . . .	0 max.	volt
PLATE DISSIPATION. . . . .	6 max.	watts

GRID-No.2 INPUT. . . . .	1.25 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

#### 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	μmhos
Load Resistance. . . . .	2500	ohms
Total Harmonic Distortion. . . . .	10	per cent
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

\* The dc component must not exceed 100 volts.

### OPERATING CONSIDERATIONS

The *maximum ratings* in the tabulated data for the 25C5 are working design-center maximums established according to the standard design-center system of rating electron tubes. Tubes so rated will give satisfactory performance in equipment designed so that these maximum ratings will not be exceeded when the equipment is operated from ac or dc power-line supplies whose normal voltage, including normal variations, falls within ± 10 per cent of line-center voltage value of 117 volts.

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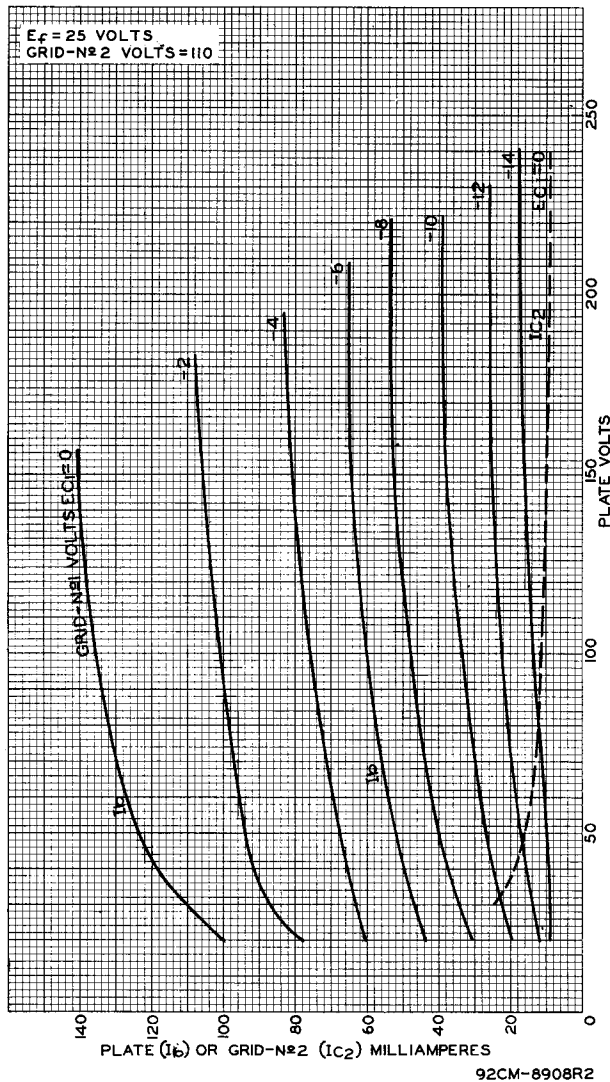


Fig. 1 - Average Characteristics for Type 25C5.

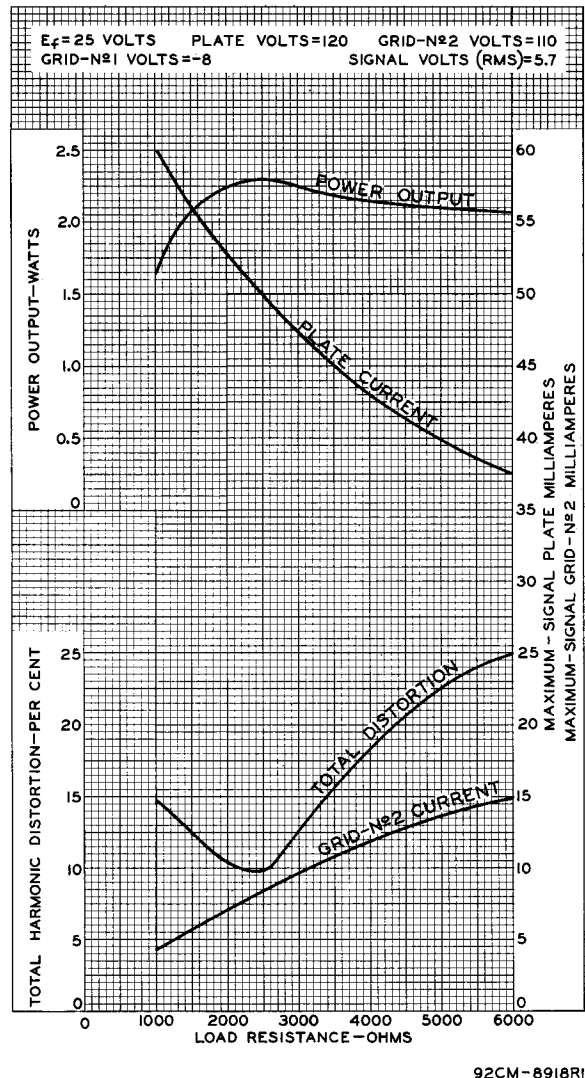
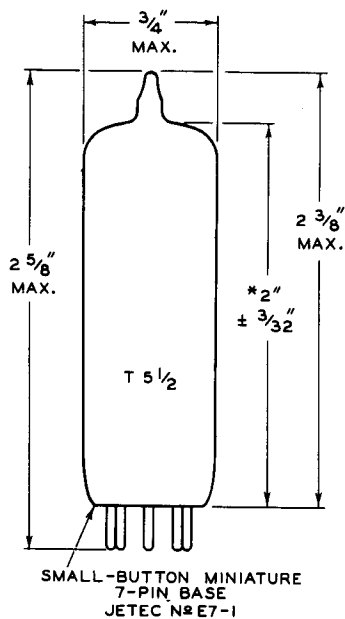


Fig. 2 - Operation Characteristics for Type 25C5.

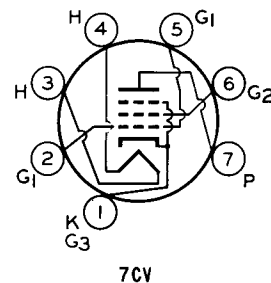
**DIMENSIONAL OUTLINE**



\* MEASURED FROM BASE SEAT TO BULB TOP LINE AS DETERMINED BY RING GAUGE OF 7/16" I.D.

**SOCKET CONNECTIONS**

**Bottom View**



- 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