



6C4

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### MEDIUM-MU TRIODE

For use in AM and other HF circuits

#### GENERAL DATA

##### Electrical:

Heater, for Unipotential Cathode:

Voltage . . . . . 6.3 . . . . . ac or dc volts  
Current . . . . . 0.15 . . . . . amp

Direct Interelectrode Capacitances:<sup>0</sup>

Grid to plate . . . . . 1.6  $\mu\mu\text{f}$   
Grid to cathode and heater . . . . . 1.8  $\mu\mu\text{f}$   
Plate to cathode and heater . . . . . 1.3  $\mu\mu\text{f}$

##### Mechanical:

Mounting Position . . . . . Any  
Maximum Overall Length . . . . . 2-1/8"  
Maximum Seated Length . . . . . 1-7/8"  
Length, Base Seat to Bulb Top (Excluding tip) . . . . . 1-1/2"  $\pm$  3/32"  
Maximum Diameter . . . . . 3/4"  
Bulb . . . . . T-5-1/2  
Base . . . . . Small-Button Miniature 7-Pin (JEDEC No. E7-1)  
Basing Designation for BOTTOM VIEW . . . . . 6BG

Pin 1 - Plate		Pin 4 - Heater
Pin 2 - Internal Connection Do Not Use		Pin 5 - Plate
Pin 3 - Heater		Pin 6 - Grid
		Pin 7 - Cathode

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

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE . . . . . 300 max. volts  
PLATE DISSIPATION . . . . . 3.5 max. watts  
HEATER-CATHODE VOLTAGE:  
Heater negative with respect to cathode . . . . . 200 max. volts  
Heater positive with respect to cathode . . . . . 200<sup>m</sup> max. volts

##### Characteristics:

Plate Voltage . . . . . 100 250 volts  
Grid Voltage . . . . . 0 -8.5 volts  
Amplification Factor . . . . . 19.5 17  
Plate Resistance (Approx.) . . . . . 6250 7700 ohms  
Transconductance . . . . . 3100 2200  $\mu\text{mhos}$   
Plate Current . . . . . 11.8 10.5 ma

##### Maximum Circuit Values:

Grid-Circuit Resistance:  
For fixed-bias operation . . . . . 0.25 max. megohm  
For cathode-bias operation . . . . . 1.0 max. megohm

<sup>0</sup> With no external shield.

<sup>m</sup>: See next page.

→ indicates a change.

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## MEDIUM-MU TRIODE

→ **Typical Operation as Resistance-Coupled Amplifier:**

See *RESISTANCE-COUPLED AMPLIFIER CHART No. 10*  
at front of this Section.

### RF POWER AMPLIFIER & OSCILLATOR—Class C Telegraphy

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

DC PLATE VOLTAGE . . . . .	300 max.	volts
DC GRID VOLTAGE . . . . .	-50 max.	volts
DC PLATE CURRENT . . . . .	25 max.	ma
DC GRID CURRENT . . . . .	8 max.	ma
PLATE DISSIPATION . . . . .	5 max.	watts

→ **PEAK HEATER-CATHODE VOLTAGE:**

Heater negative with respect to cathode . . . . .	200 max.	volt.
Heater positive with respect to cathode . . . . .	200 <sup>max.</sup>	volts

**Typical Operation at Frequencies up to 50 Mc:\***

DC Plate Voltage . . . . .	300	volts
DC Grid Voltage . . . . .	-27	volts
DC Plate Current . . . . .	25	ma
DC Grid Current (Approx.) . . . . .	7	ma
Driving Power (Approx.) . . . . .	0.35	watt
Useful Power Output (Approx.) . . . . .	5.5	watts

\* The dc component must not exceed 100 volts.

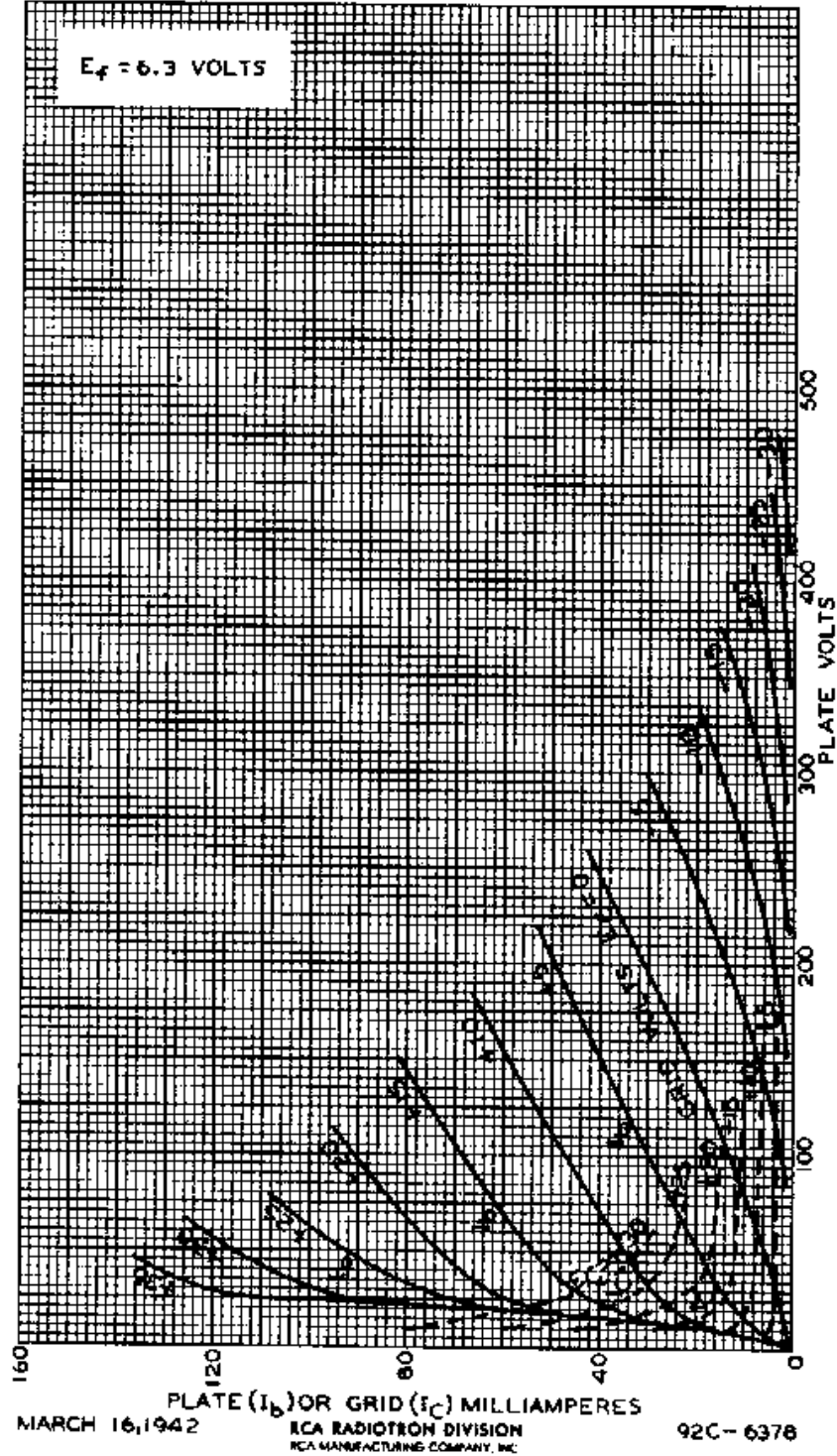
\* Approximately 2.5 watts can be obtained when the 6C4 is used at 150 Mc as an oscillator with grid resistor of 10000 ohms and maximum rated input.



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### AVERAGE PLATE CHARACTERISTICS

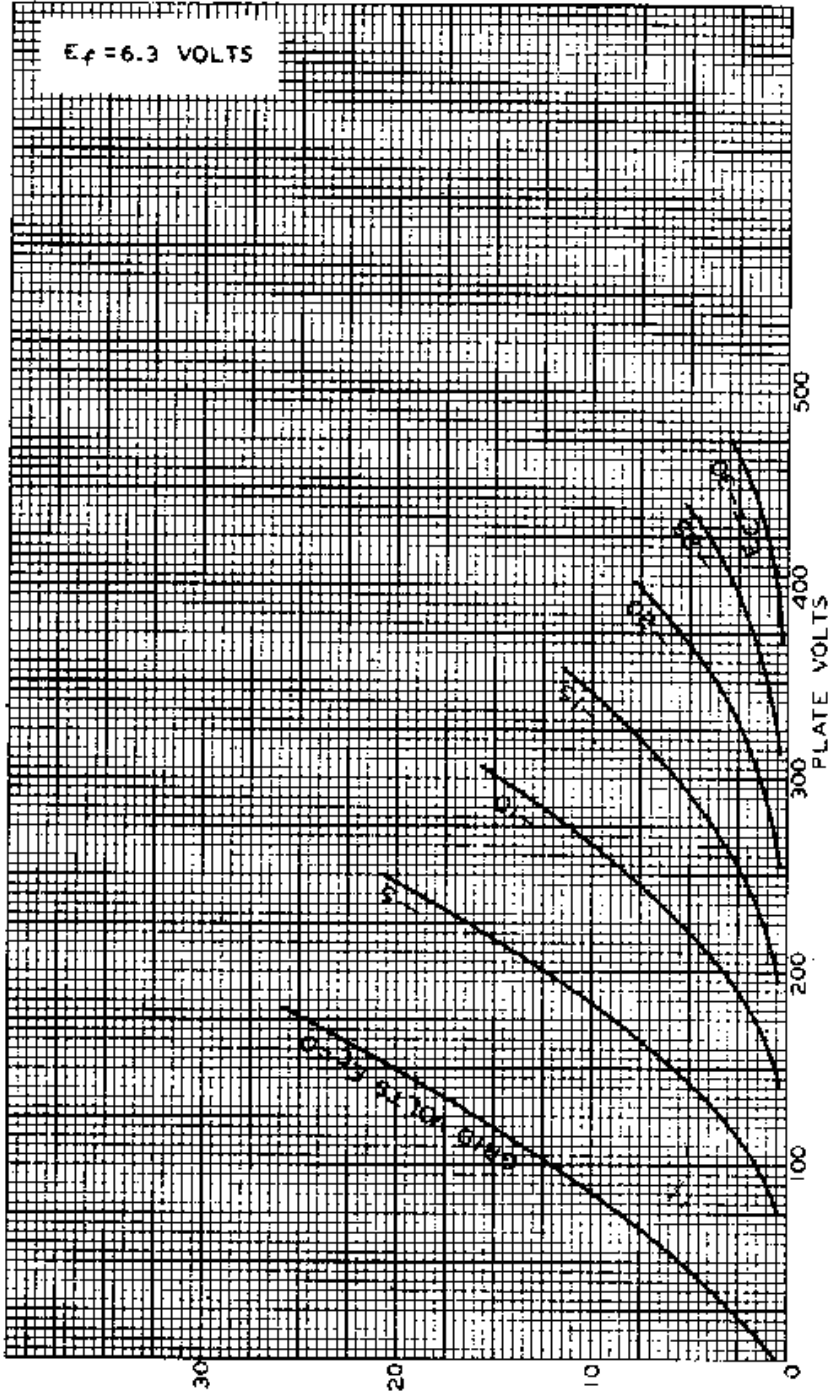


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### AVERAGE PLATE CHARACTERISTICS



MARCH 14, 1942

PLATE MILLIAMPERES

RCA RADIOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

92C-6377