



6C4

6C4

# MEDIUM-MU TRIODE

For use in FM 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>o</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" ± 3/32" ←

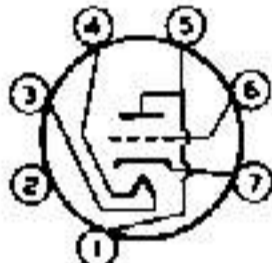
Maximum Diameter . . . . . 3/4"

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 2 - Internal Connection  
Do Not Use
- Pin 3 - Heater



- Pin 4 - Heater
- Pin 5 - Plate
- 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>max</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>o</sup> With no external shield.

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

← indicates a change.

6C4



## 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.

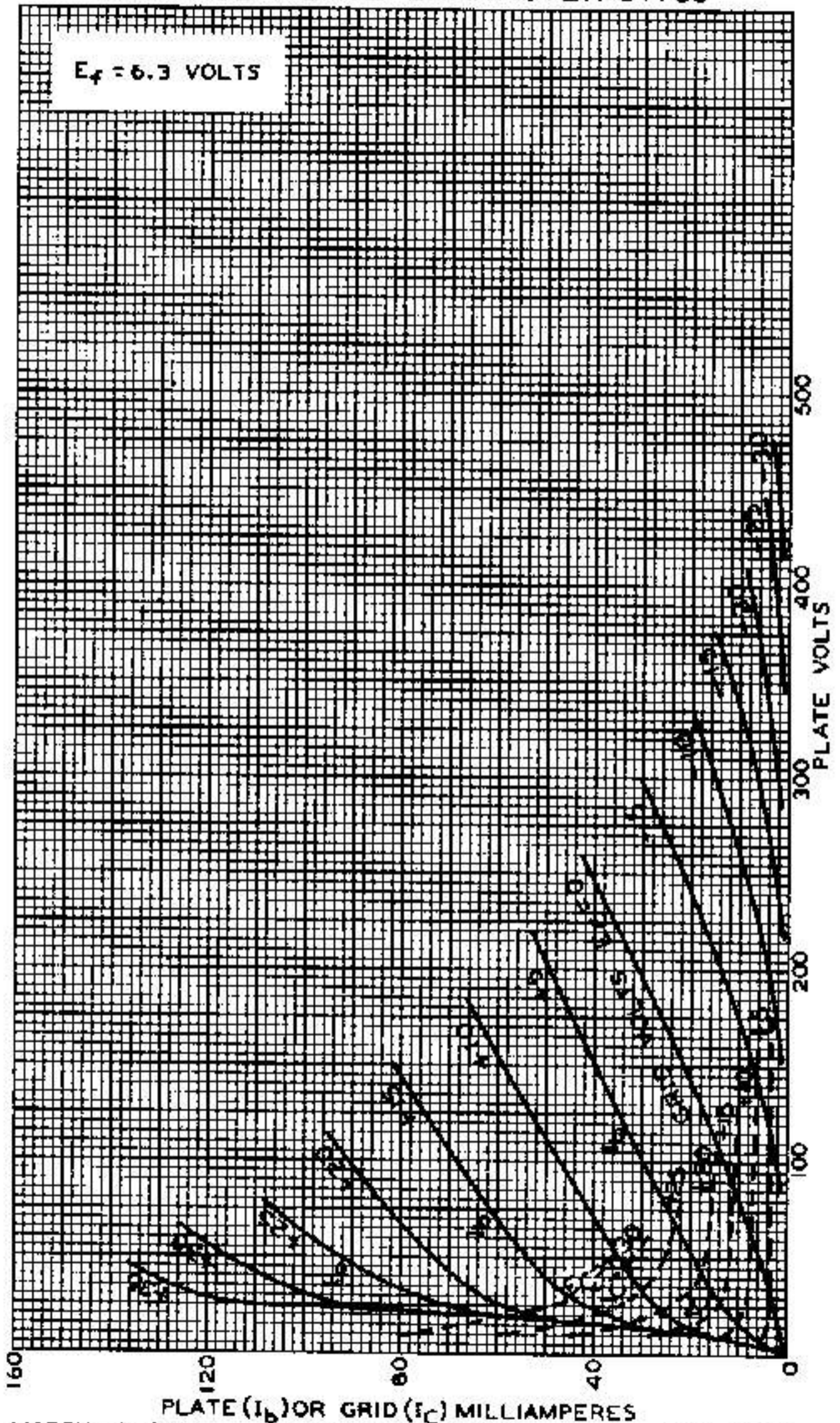


6C4

6C4

### AVERAGE PLATE CHARACTERISTICS

$E_f = 6.3$  VOLTS



MARCH 16, 1942

RCA RADIOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

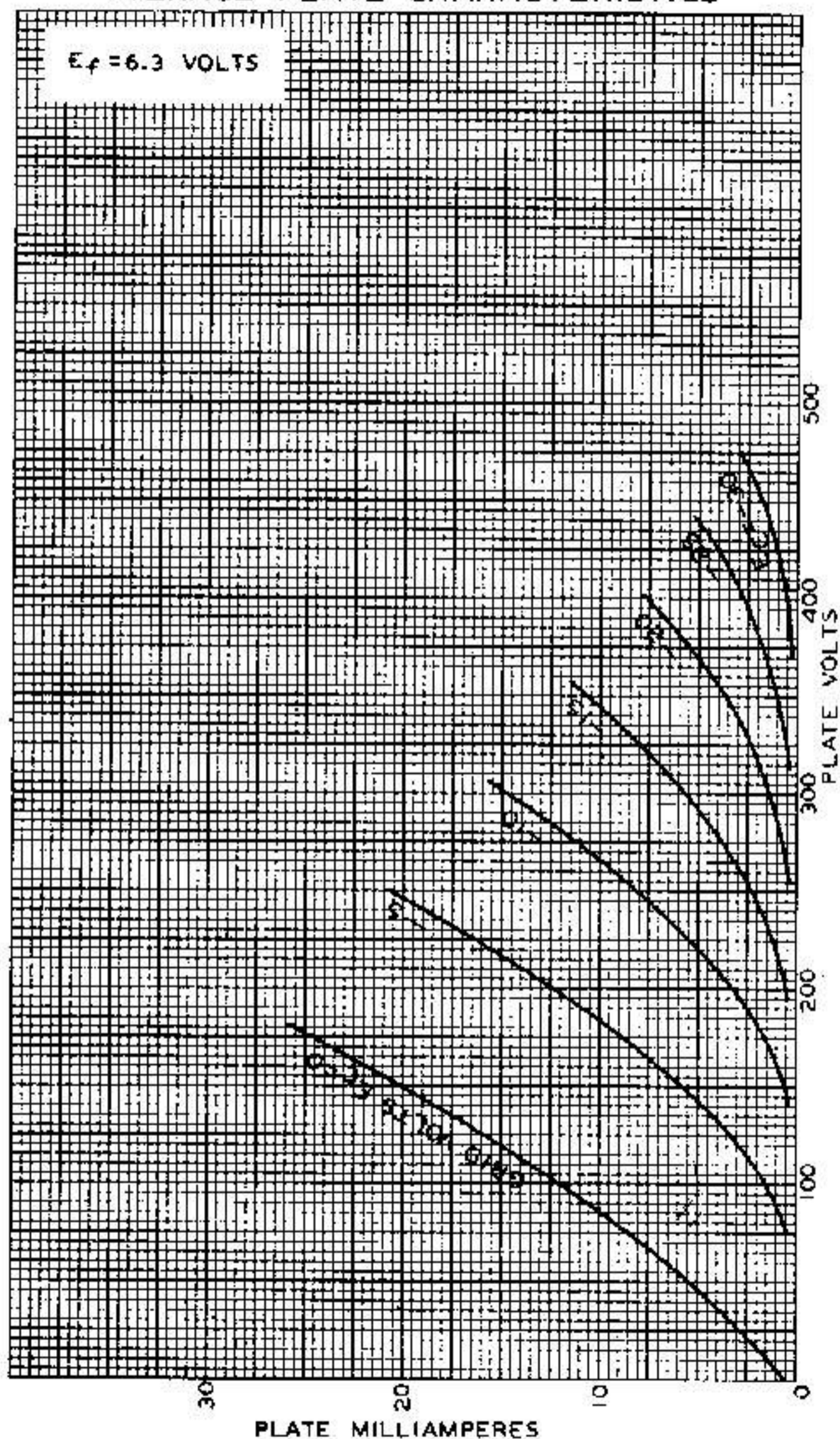
92C-6378

6CA



6C4

## AVERAGE PLATE CHARACTERISTICS



MARCH 14, 1942

RCA RADOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

92C-6377