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# TRIPLE DIODE-HIGH-MU TRIODE

9-PIN MINIATURE TYPE

*With heater having controlled warm-up time*

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathodes:

Voltage . . . . .	6.3	. . . . . ac or dc volts
Current . . . . .	0.45 ± 6%	. . . . . amp
Warm-up time (Average). . . . .	11	. . . . . sec

*For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.*

Direct Interelectrode Capacitances:

	<i>Without External Shield</i>	<i>With External Shield*</i>	
<i>Triode Unit:</i>			
Grid to plate . . . . .	1.7	1.7	μμf
Grid to cathode & internal shield (pin 7), and heater. . . . .	1.6	1.7	μμf
Plate to cathode & internal shield (pin 7), and heater. . . . .	1.2	2.4	μμf
<i>Diode Units:</i>			
Diode-No.1 plate to cathode & internal shield (pin 7), and heater. . . . .	3.8	3.8	μμf
Diode-No.2 plate to cathode & internal shield (pin 3), and heater. . . . .	3.8	3.8 <sup>•</sup>	μμf
Diode-No.3 plate to cathode & internal shield (pin 7), and heater. . . . .	3.4	3.6	μμf
Diode-No.2 cathode & internal shield (pin 3) to all other electrodes, and heater. . . . .	7.5	8.5 <sup>■</sup>	μμf
Triode grid to any diode plate . . . . .	0.034 max.	0.034 max.	μμf

### Characteristics, Class A<sub>1</sub> Amplifier (Triode Unit):

Plate Voltage . . . . .	100	250	volts
Grid Voltage . . . . .	-1	-3	volts
Amplification Factor. . . . .	70	70	
Plate Resistance (Approx.). . . . .	54000	58000	ohms
Transconductance. . . . .	1300	1200	μmhos
Plate Current . . . . .	0.8	1	ma

### Mechanical:

Operating Position. . . . .	Any
Maximum Overall Length. . . . .	2-3/16"

\* , • , ■ : See next page.



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Maximum Seated Length . . . . .	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-9/16" ± 3/32"
Diameter . . . . .	0.750" to 0.875"
Dimensional Outline . . . . .	See General Section
Bulb . . . . .	T6-1/2
Base . . . . .	Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW . . . . .	9E

Pin 1—Diode—No.3

Pin 6—Diode—No.1

Plate

Plate

Pin 2—Diode—No.2

Pin 7—Cathode of

Plate

Triode &amp;

Pin 3—Diode—No.2

Diodes No.1

Cathode,

&amp; No.3,

Internal

Internal

Shield

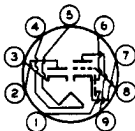
Shield

Pin 4—Heater

Pin 8—Triode Grid

Pin 5—Heater

Pin 9—Triode Plate



### TRIODE UNIT — AMPLIFIER — Class A<sub>1</sub>

#### Maximum Ratings, Design-Maximum Values.

PLATE VOLTAGE . . . . .	330 max.	volts
GRID VOLTAGE:		
Positive-bias value . . . . .	0 max.	volts
PLATE DISSIPATION . . . . .	1.1 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode . . . . .	100 max.	volts
Heater positive with respect to cathode . . . . .	100 max.	volts

#### Typical Operation as Resistance-Coupled Amplifier:

See RESISTANCE-COUPLED AMPLIFIER CHART No.7  
at front of this Section

### DIODE UNITS — Three

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

PLATE CURRENT (For each diode) . . . . .	5.5 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode . . . . .	100 max.	volts
Heater positive with respect to cathode . . . . .	100 max.	volts

#### Characteristics (Each Unit):

Plate Voltage . . . . .	5	volts
Plate Current . . . . .	20	ma

#### Diode Considerations:

Diode No.1, diode No.3, and the triode have a common cathode, and diode No.2 has a separate cathode. Diode No.2 (pins 2 & 3) and diode No.3 (pins 1 & 7) are recommended for use in FM detector applications, while diode No.1 (pins 6 & 7) is recommended for use as an AM detector.



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## TRIPLE DIODE—HIGH-MU TRIODE

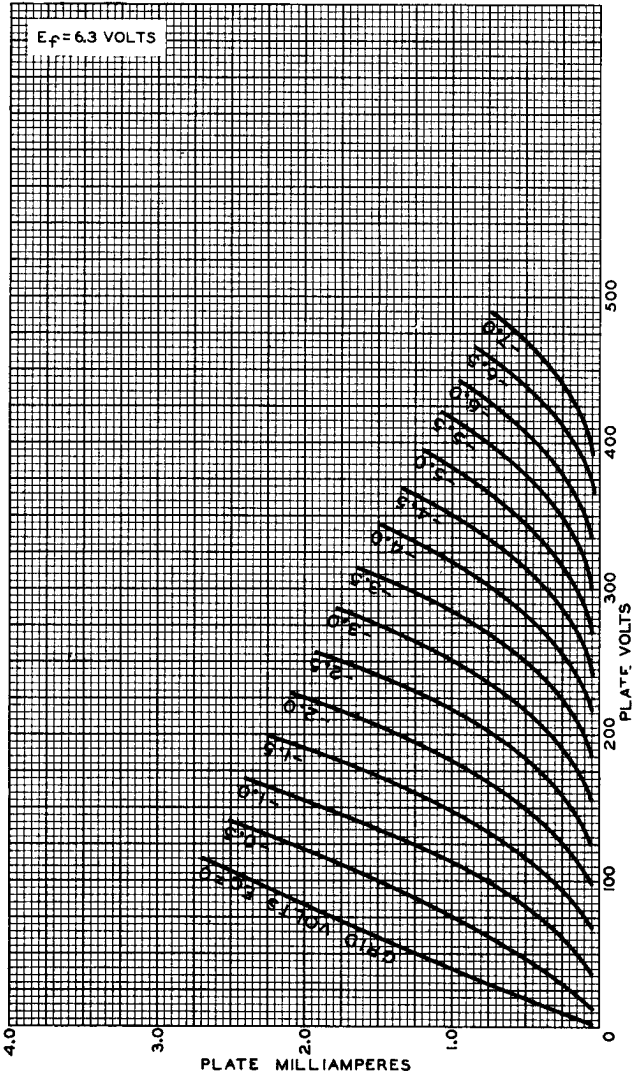
- \* With external shield JEDEC No.315 connected to pin 7 except as noted.
- With external shield JEDEC No.315 connected to pin 3.
- With external shield JEDEC No.315 connected to pins 4 and 5.

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AVERAGE PLATE CHARACTERISTICS  
TRIODE UNIT



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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

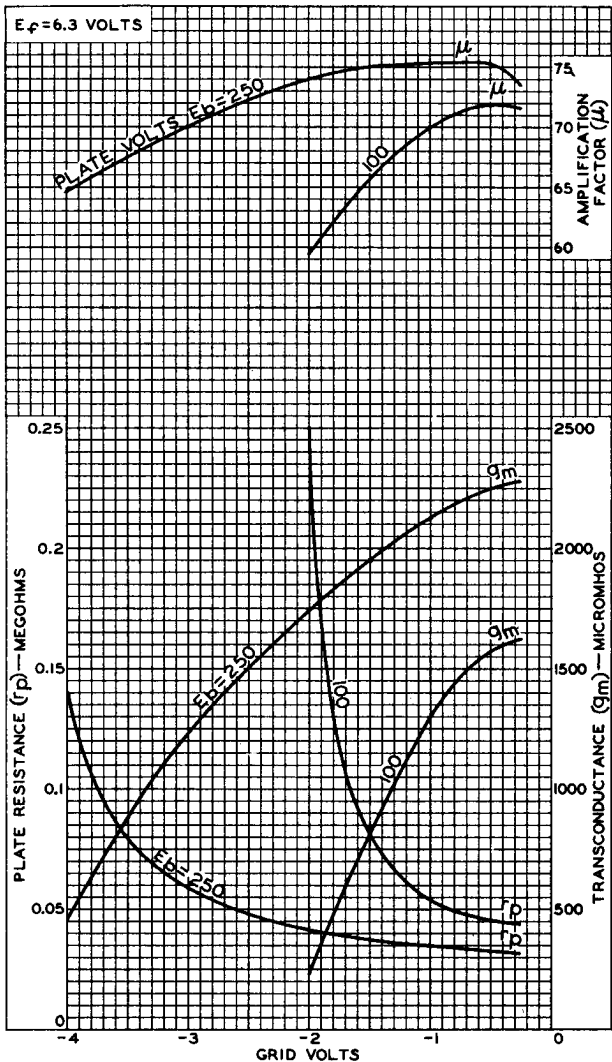
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AVERAGE CHARACTERISTICS  
TRIODE UNIT

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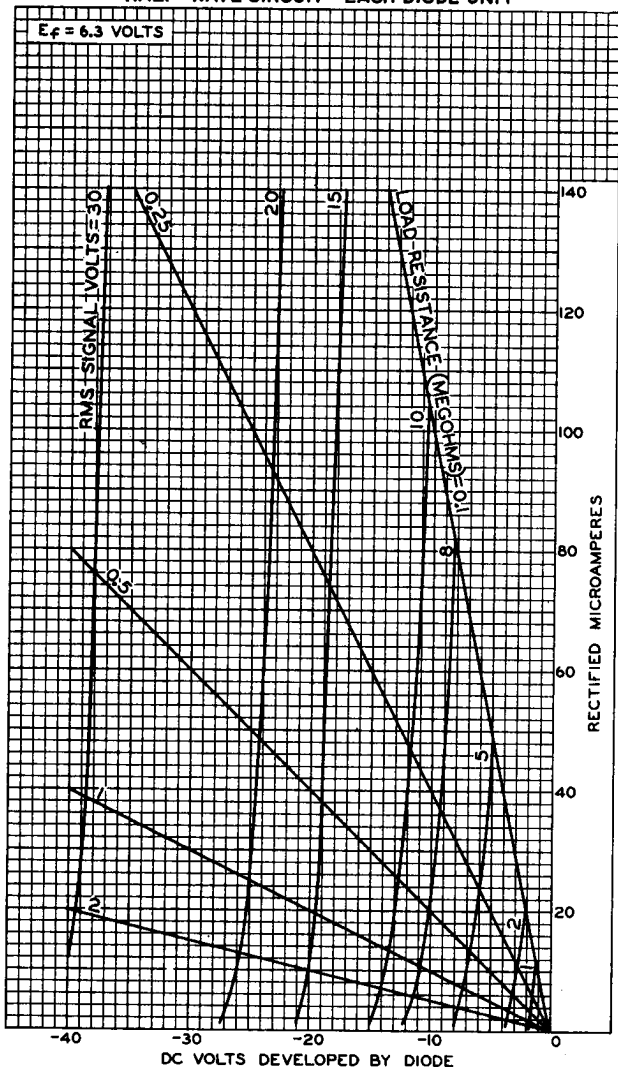


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AVERAGE CHARACTERISTICS  
HALF-WAVE CIRCUIT—EACH DIODE UNIT



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92CM-9610