



6T8-A

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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	$0.45 \pm 6\%$		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:

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

Characteristics, Class A₁ 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" $\pm$ 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

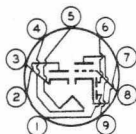
Pin 1—Diode-No.3
 Plate

Pin 2—Diode-No.2
 Plate

Pin 3—Diode-No.2
 Cathode,
 Internal
 Shield

Pin 4—Heater

Pin 5—Heater



Pin 6—Diode-No.1
 Plate

Pin 7—Cathode of
 Triode &
 Diodes No.1
 & No.3,
 Internal
 Shield

Pin 8—Triode Grid

Pin 9—Triode Plate

TRIODE UNIT — AMPLIFIER — Class A₁

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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- * 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

$E_f = 6.3$ VOLTS

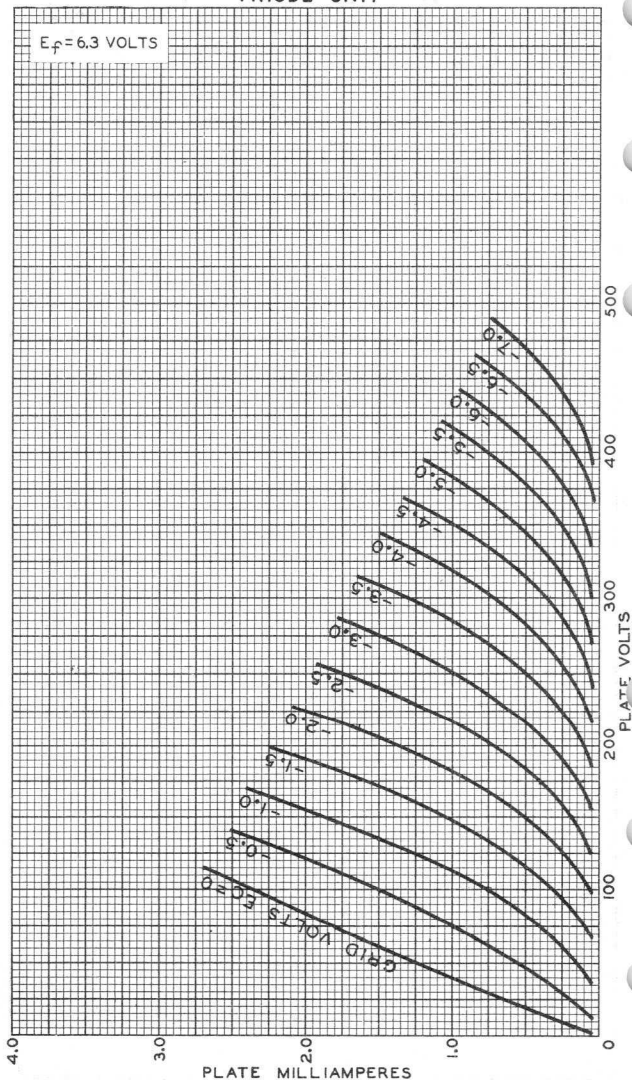


PLATE MILLIAMPERES

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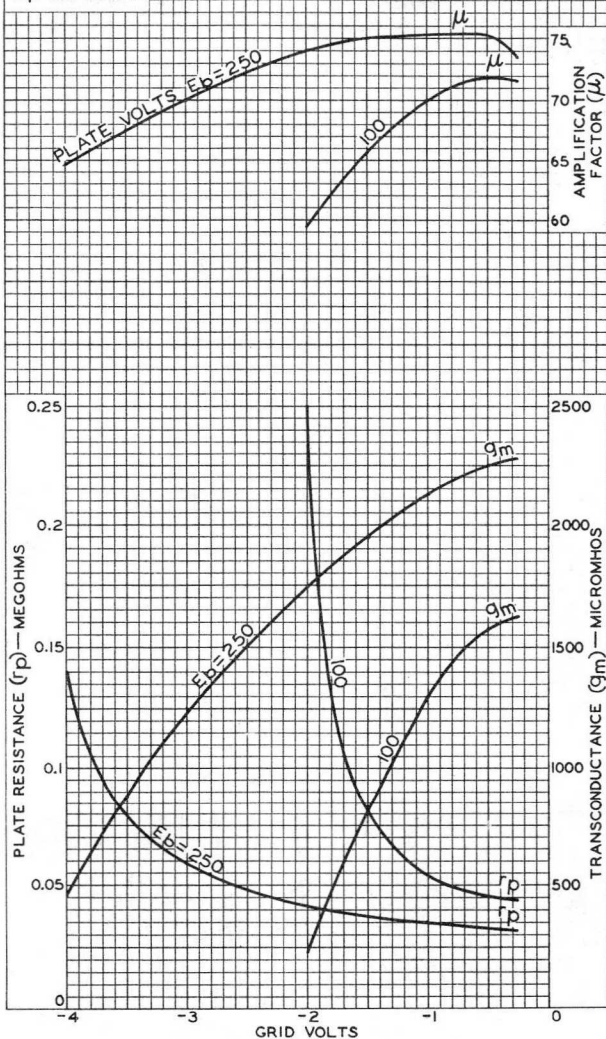


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AVERAGE CHARACTERISTICS TRIODE UNIT

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$E_f = 6.3$ VOLTS



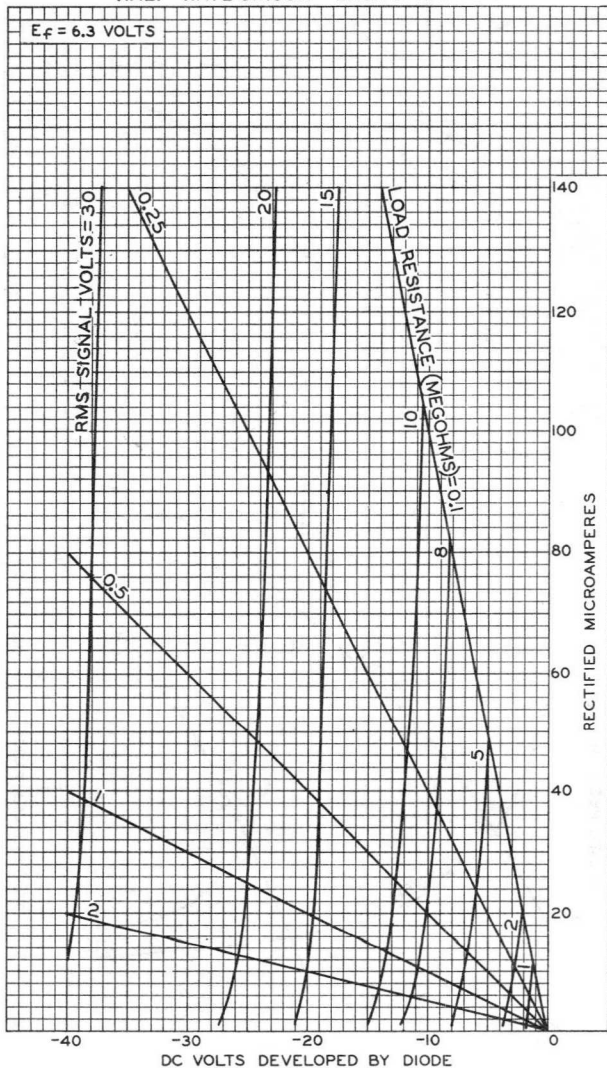
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AVERAGE CHARACTERISTICS
HALF-WAVE CIRCUIT—EACH DIODE UNIT

$E_f = 6.3$ VOLTS



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