



6EA8

6EA8

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

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:

	Without External Shield	With External Shield ^o	
Triode Unit:			
Grid to plate	1.7	1.7	μf
Grid to cathode and heater.	3	3.2	μf
Plate to cathode and heater.	0.3	1.1	μf
Pentode Unit:			
Grid No.1 to plate.	0.02 max.	0.01 max.	μf
Grid No.1 to cathode & grid No.3 & internal shield, grid-No.2, and heater.	5	5	μf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	2.6	3.4	μf
Heater to cathode	3	3 ^o	μf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate-Supply Voltage.	150	125	volts
Grid-No.2 Voltage	—	125	volts
Grid-No.1 Voltage	—	-1	volt
Cathode Resistor.	56	—	ohms
Amplification Factor.	40	—	
Plate Resistance (Approx.)	5000	8000	ohms
Transconductance.	8500	6400	μmhos
Plate Current	18	12	ma
Grid-No.2 Current	—	4	ma
Grid-No.1 Voltage (Approx.) for plate μa = 10	-12	-9	volts

Mechanical:

Operating Position. Any
^o, [•]: See next page.

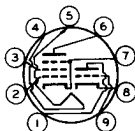


6EA8

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

Maximum Overall Length 2-3/16"
 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 9AE

Pin 1—Triode Plate
 Pin 2—Pentode
 Grid No.1
 Pin 3—Pentode
 Grid No.2
 Pin 4—Heater
 Pin 5—Heater
 Pin 6—Pentode Plate



Pin 7—Pentode
 Cathode,
 Pentode
 Grid No.3,
 Internal
 Shield
 Pin 8—Triode Cathode
 Pin 9—Triode Grid

CONVERTER SERVICE

Maximum Ratings, Design-Maximum Values:

	Triode Unit as Osc.	Pentode Unit as Mixer	
PLATE VOLTAGE	330 max.	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	—	330 max.	volts
GRID-No.2 VOLTAGE	—	See Grid-No.2 Input	
<i>Rating Chart at front of Receiving Tube Section</i>			
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 165 volts	—	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts	—	See Grid-No.2 Input	
<i>Rating Chart at front of Receiving Tube Section</i>			
PLATE DISSIPATION	3 max.	3.1 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200 max.	200 max.	volts
Heater positive with respect to cathode	200 [▲] max.	200 [▲] max.	volts

○ With external shield JEDEC No.315 connected to cathode of unit under test except as noted.

● With external shield JEDEC No.315 connected to ground.

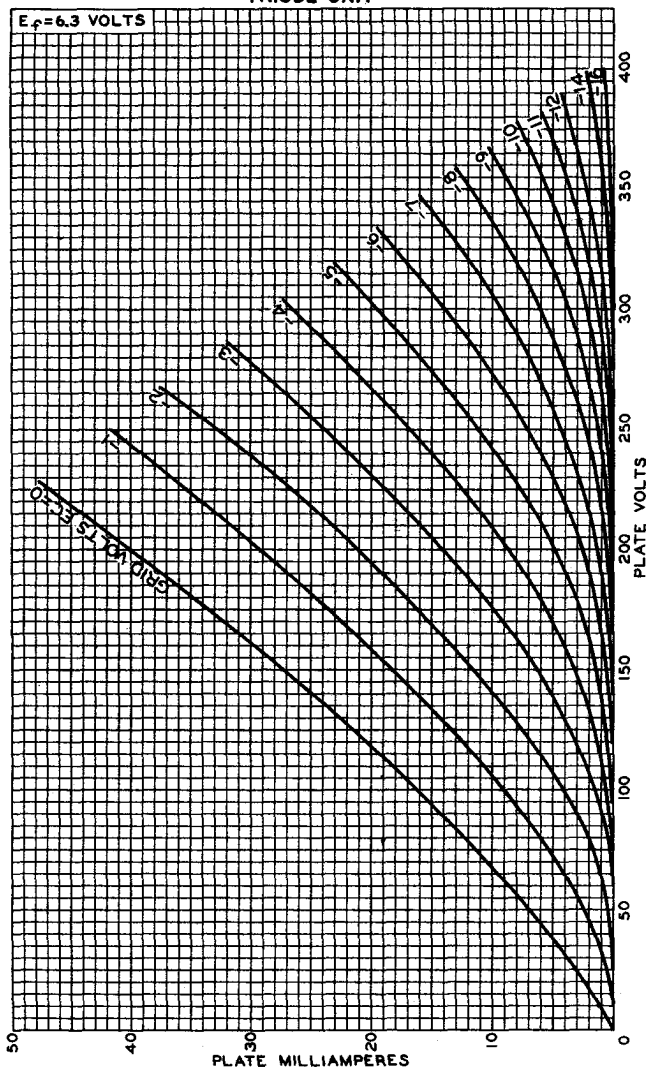
▲ The dc component must not exceed 100 volts.



6EA8

6EA8

AVERAGE PLATE CHARACTERISTICS TRIODE UNIT

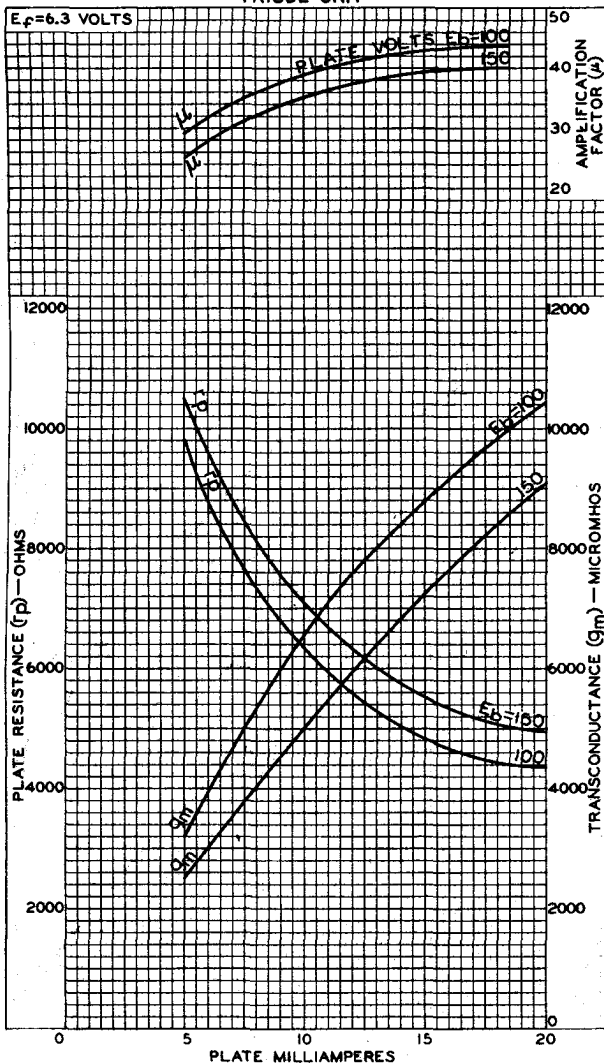


6EA8



6EA8

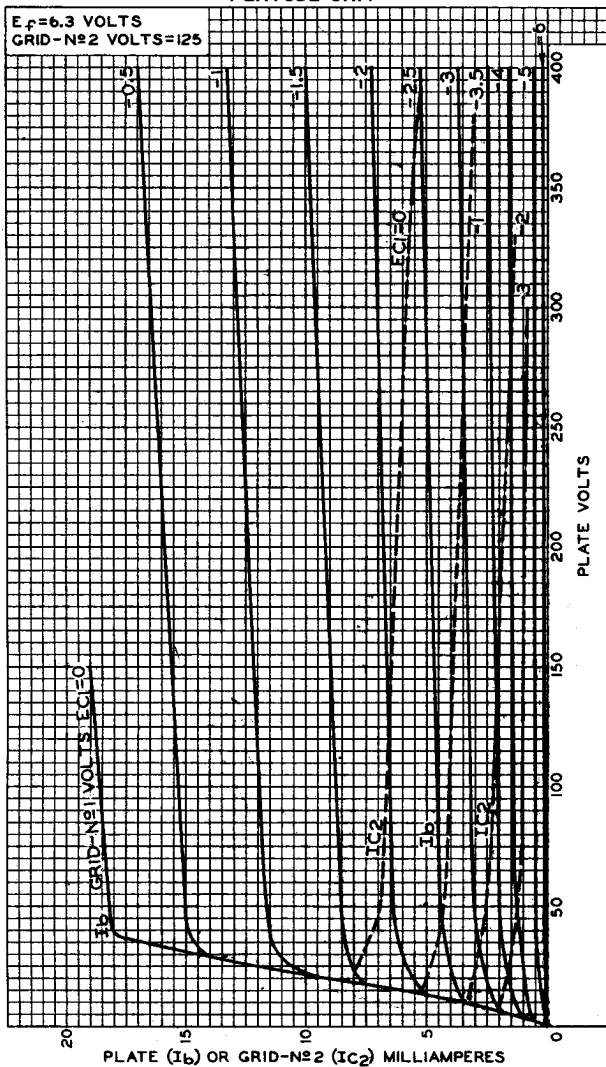
AVERAGE CHARACTERISTICS TRIODE UNIT





6EA8

AVERAGE CHARACTERISTICS PENTODE UNIT



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9867

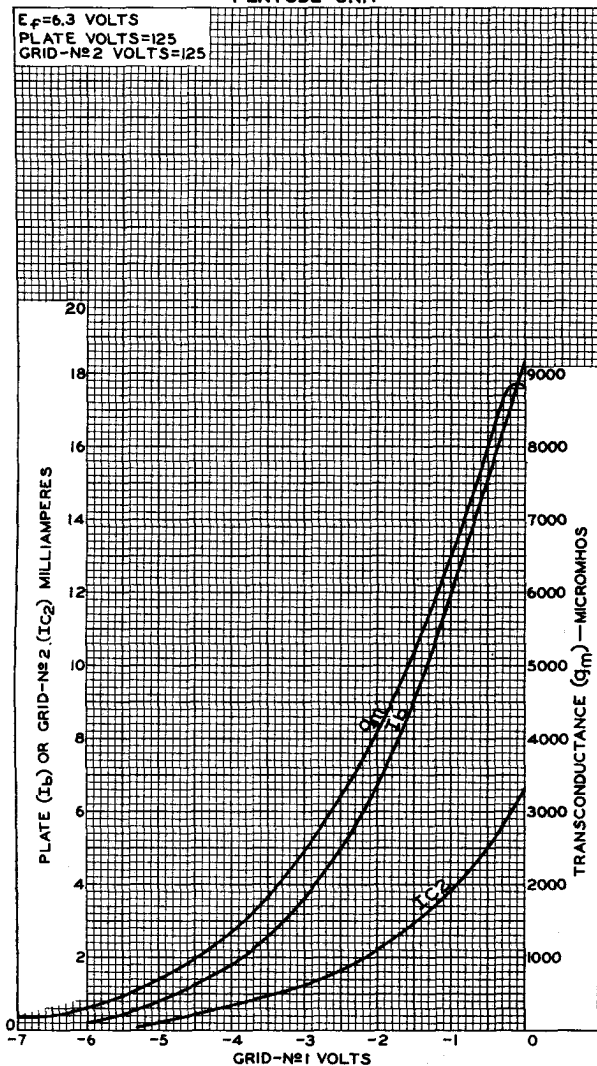
6EA8



6EA8

AVERAGE CHARACTERISTICS
PENTODE UNIT

$E_f = 6.3$ VOLTS
PLATE VOLTS = 125
GRID-№2 VOLTS = 125



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9868

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC)	6.3	volts
Current	0.45 ± 6%	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield ^a	
<i>Triode Unit:</i>			
Grid to plate	1.7	1.7	μf →
Grid to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater.	3	3.2	μf
Plate to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater.	1.4	1.9	μf
<i>Pentode Unit:</i>			
Grid No.1 to plate.	0.02 max.	0.01 max.	μf
Grid No.1 to cathode & grid No.3 & internal shield, grid-No.2, and heater.	5	5	μf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater . . .	2.6	3.4	μf
Heater to cathode (Each unit) .	3	3 ^b	μf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate-Supply Voltage.	150	125	volts
Grid-No.2 Voltage	—	125	volts
Grid-No.1 Voltage	—	-1	volt
Cathode Resistor.	56	—	ohms
Amplification Factor.	40	—	
Plate Resistance (Approx.) . . .	5000	200000	ohms →
Transconductance.	8500	6400	μmhos
Plate Current	18	12	ma
Grid-No.2 Current	—	4	ma
Grid-No.1 Voltage (Approx.) for plate μa = 10	-12	-9	volts

→ Indicates a change.

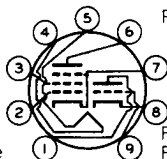


6EA8

Mechanical:

Operating Position. Any
 Maximum Overall Length. 2-3/16"
 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. 9AE

Pin 1 - Triode Plate
 Pin 2 - Pentode
 Grid No.1
 Pin 3 - Pentode
 Grid No.2
 Pin 4 - Heater
 Pin 5 - Heater
 Pin 6 - Pentode Plate



Pin 7 - Pentode
 Cathode,
 Pentode
 Grid No.3,
 Internal
 Shield
 Pin 8 - Triode Cathode
 Pin 9 - Triode Grid

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	Triode Unit	Pentode Unit	
PLATE VOLTAGE	330 max.	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE.	-	330 max.	volts
GRID-No.2 VOLTAGE	-	See <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 165 volts	-	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts	-	See <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			
→ PLATE DISSIPATION	2.5 max.	3.1 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200 max.	200 max.	volts
Heater positive with respect to cathode.	200 ^c max.	200 ^c max.	volts

^a With external shield JEDEC No.315 connected to cathode of unit under test except as noted.

^b With external shield JEDEC No.315 connected to ground.

^c The dc component must not exceed 100 volts.

→ Indicates a change.

