6AW8A

High-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 ± 0.6	volts
Current at 6.3 volts	0.6[a]	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*[b]	
Triode Unit:			
Grid to plate	2.2	2.2	μμf
Grid to cathode, pentode cathode & grid No.3 & internal shield, and heater	3.2	3.4	μμf
Plate to cathode, pentode cathode & grid No.3 & internal shield, and heater	1.8	3	μμf
Pentode Unit:			
Grid No.1 to plate	0.05 max.	0.04 max.	μμf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater	10	10	μμf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	3.6	4.5	μμf
Pentode grid No.1 to triode plate	0.008 max.	0.005 max.	μμf
Pentode plate to triode plate	0.150 max.	0.025 max.	μμf

Characteristics, Class A_1 Amplifier:

	Triode Unit	*Pentode Unit*		
Plate Supply Voltage	200	65	150	volts
Grid-No.2 Supply Voltage	–	150	150	volts
Grid-No.1 Voltage	-2	0	–	volts
Cathode Resistor	–	–	150	ohms
Amplification Factor	70	–	–	
Plate Resistance (Approx.)	0.0175	–	0.2	megohm

← Indicates a change.

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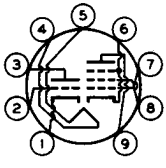
	Triode Unit	*Pentode Unit*	
Transconductance	4000	9500	μmhos
Plate Current	4	46[c] 15	ma
Grid-No.2 Current	–	15[c] 3.5	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20	-5	-8	volts

Mechanical:

Operating Position . . . . . Any
Maximum Overall Length . . . . . 2-5/8"
Maximum Seated Length . . . . . 2-3/8"
Length, Base Seat to Bulb-Top (Excluding tip) . . . 2" ± 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 9DX

Pin 1 – Triode Cathode
Pin 2 – Triode Grid
Pin 3 – Triode Plate
Pin 4 – Heater
Pin 5 – Heater



Pin 6 – Pentode Cathode, Grid No.3, Internal Shield
Pin 7 – Pentode Grid No.1
Pin 8 – Pentode Grid No.2
Pin 9 – Pentode Plate

AMPLIFIER — Class A_1

→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 *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
GRID-No.1 (CONTROL-GRID) VOLTAGE: Positive-bias value	0 max.	0 max.	volts
PLATE DISSIPATION	1.1 max.	3.75 max.	watts
GRID-No.2 INPUT: For grid-No.2 voltages up to 165 volts	–	1.1 max.	watts
For grid-No.2 voltages between 165 and 330 volts	–	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	

→Indicates a change.

PEAK HEATER-CATHODE VOLTAGE:					
Heater negative with respect to cathode. . .	200	max.	200	max.	volts
Heater positive with respect to cathode. . .	200[d]	max.	200[d]	max.	volts

Maximum Circuit Values:

	Triode Unit		*Pentode Unit*		
Grid-No.1-Circuit Resistance:					
For fixed-bias operation	0.5	max.	0.25	max.	megohm
For cathode-bias operation	1	max.	1	max.	megohm

[a] In series-heater-string operation, the heater current rating is 0.600 ± 0.040 ampere at 6.3 volts.

[b] With external shield JEDEC No.315 connected to pins 4 and 5.

[c] This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

[d] The dc component must not exceed 100 volts.

OPERATING CONSIDERATIONS

Because the internal shield is connected to the pentode cathode and grid No.3, the impedance in the cathode circuit should be kept as low as possible to minimize cross-coupling effects.

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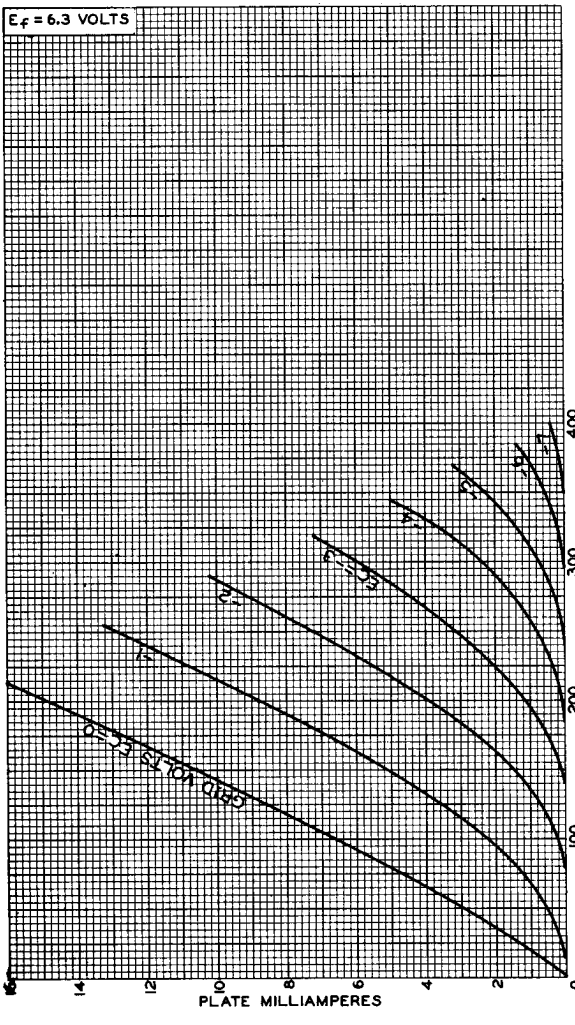
AVERAGE PLATE CHARACTERISTICS
Triode Unit



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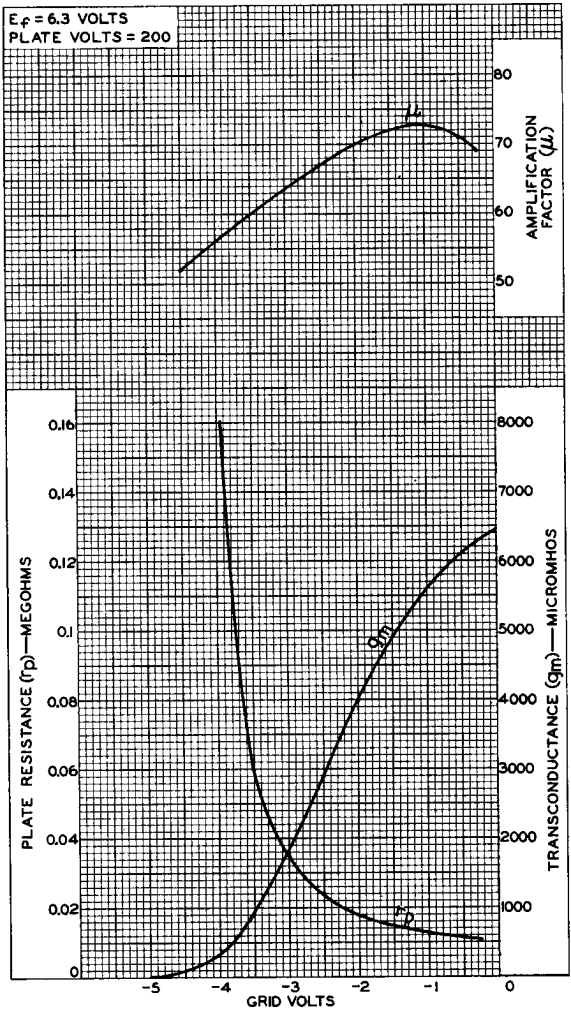
AVERAGE CHARACTERISTICS

Triode Unit



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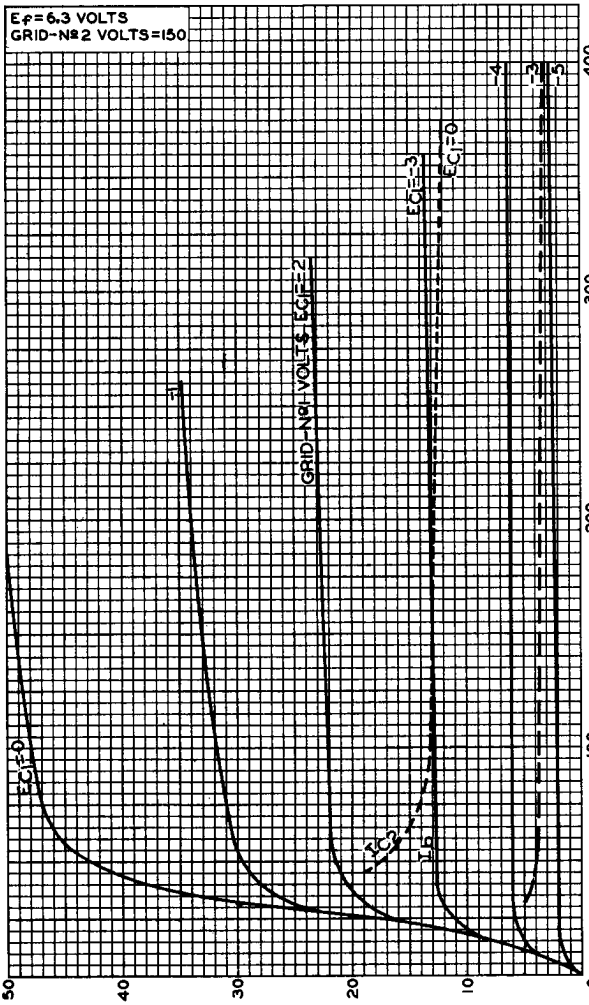
AVERAGE CHARACTERISTICS
Pentode Unit



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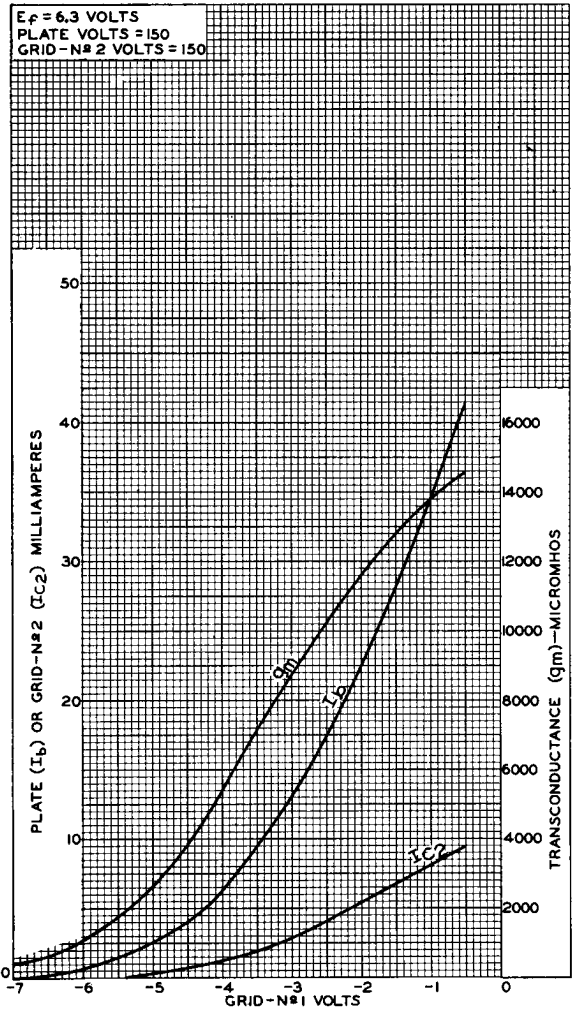
RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

AVERAGE CHARACTERISTICS
Pentode Unit



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