

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC) 6.3^a 6.3 ± 0.6 volts

Current 0.450 ± 0.030 0.450^b amp

Warm-up time (Average) 11 — sec

Peak heater-cathode
voltage:

Heater negative with
respect to cathode 200 max. volts

Heater positive with
respect to cathode 200^c max. volts

Direct Interelectrode Capacitances:

	<i>Without External Shield</i>	<i>With External Shield^d</i>	
Triode Unit:			
Grid to plate	1.3	1.2	μf
Grid to cathode and heater.	2.8	3.2	μf
Plate to cathode and heater.	0.44	0.9	μf
Pentode Unit:			
Grid No.1 to plate.	0.038 max.	0.018 max.	μf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater.	4.8	5.0	μf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	0.9	1.6.	μf
Pentode grid No.1 to triode plate.	0.05 max.	0.036 max.	μf
Pentode plate to triode plate.	0.075 max.	0.012 max.	μf
Heater to cathode	6.5	6.5 ^e	μf

Characteristics, Class A₁ Amplifier:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Plate Voltage	125	100	125 volts
Grid-No.2 Voltage	—	70	125 volts
Grid-No.1 Voltage	—1	0	—1 volt
Amplification Factor.	40	—	—
Plate Resistance (Approx.).	6000	—	300000 ohms
Transconductance.	6500	5700	5500 μmhos



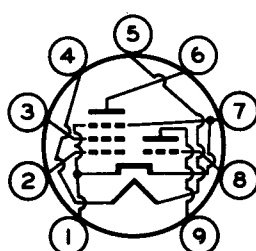
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	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Plate Current.	12	— 9	ma
Grid-No.2 Current.	—	— 2.2	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 20.	-7	— 6.5	volts

Mechanical:

Operating Position	 Any
Type of Cathode.	Coated Unipotential
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	.9PA

Pin 1 - Pentode
Grid No.3,
Cathode,
Internal
Shield
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
Grid No.3,
Cathode,
Internal
Shield
Pin 8 - Triode Grid
Pin 9 - Triode Plate

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
PLATE VOLTAGE.	275 max.	275 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	—	275 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
PLATE DISSIPATION.	1.7 max.	2.3 max.	watts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 137.5 volts.	—	0.45 max.	watt
For grid-No.2 voltages between 137.5 and 275 volts.	—	See <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			

Maximum Circuit Values:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	—	0.1 max.	megohm
For cathode-bias operation.	—	0.5 max.	megohm



- a At heater amperes = 0.450.
- b At heater volts = 6.3.
- c The dc component must not exceed 100 volts.
- d With external shield JEDEC No.315 connected to pin 3 except as noted.
- e With external shield JEDEC No.315 connected to pin 6.

