



12CT8

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MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

9-PIN MINIATURE TYPE

*Intended for use in equipment having
series heater-string arrangement*

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC)	12.6	volts
Current	0.3 ± 6%	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances:⁰

Triode Unit:

Grid to plate	2.2	μmf
Grid to cathode and heater.	2.4	μmf
Plate to cathode and heater	0.19	μmf

Pentode Unit:

Grid No.1 to plate.	0.044	μmf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater.	7.5	μmf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater.	2.4	μmf
Triode grid to pentode plate.	0.016 max.	μmf
Pentode grid No.1 to triode plate	0.01 max.	μmf
Pentode plate to triode plate	0.16 max.	μmf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate Supply Voltage.	150	200	volts
Grid-No.2 Supply Voltage.	—	125	volts
Cathode Resistor.	150	82	ohms
Amplification Factor.	40	—	
Plate Resistance (Approx.)	8200	150000	ohms
Transconductance.	4900	7000	μmhos
Plate Current	9	15	ma
Grid-No.2 Current	—	3.4	ma
Grid-No.1 Voltage (Approx.) for plate $\mu a = 100$	-6.5	-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

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Base. Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW. 9DA

Pin 1—Triode Plate

Pin 2—Triode Grid

Pin 3—Triode

Cathode

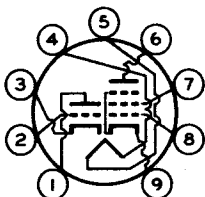
Pin 4—Heater

Pin 5—Heater

Pin 6—Pentode Plate

Pin 7—Pentode

Grid No.2



Pin 8—Pentode

Grid No.1

Pin 9—Pentode

Grid No.3,

Pentode

Cathode,

Internal

Shield

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	Triode Unit	Pentode Unit	
PLATE VOLTAGE	300 max.	300 max.	volts
GRID-No.2 (SCREEN-GRID)			
SUPPLY VOLTAGE	—	300 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

GRID-No.2 INPUT:			
For grid-No.2 voltages			
up to 150 volts	—	0.9 max.	watt
For grid-No.2 voltages			
between 150 and 300 volts	—	See Grid-No.2 Input	

Rating Chart at front of Receiving Tube Section

PLATE DISSIPATION	2.5 max.	2.75 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

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

○ without external shield.

▲ The dc component must not exceed 100 volts.