



5B8

5B8

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	4.7		ac or dc volts
Current	0.6		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:⁰

Triode Unit:

Grid to plate.	1.7	μ f
Grid to cathode & pentode grid No.3 & internal shield, and heater.	1.9	μ f
Plate to cathode & pentode grid No.3 & internal shield, and heater.	1.4	μ f

Pentode Unit:

Grid No.1 to plate	0.05 max.	μ f
Grid No.1 to cathode, grid No.2, and heater	6	μ f
Plate to cathode, grid No.3 & triode cathode & internal shield, grid No.2, and heater	2.6	μ f
Plate to cathode, grid No.2, and heater	0.15	μ f
Triode grid to pentode plate	0.0078	μ f
Pentode grid No.1 to triode plate.	0.0033	μ f
Pentode plate to triode plate.	0.06	μ f

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate-Supply Voltage	200	200	volts
Grid-No.2 Supply Voltage	—	150	volts
Grid Voltage	—6	—	volts
Cathode Resistor	—	180	ohms
Amplification Factor	19	—	
Plate Resistance (Approx.)	5750	300000	ohms
Transconductance	3300	6200	μ hos
Plate Current.	13	9.5	ma
Grid-No.2 Current.	—	2.8	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 10.	—19	—8	volts

⁰: See next page.



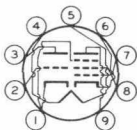
5B8

MEDIUM-MU TRIODE -- SHARP-CUTOFF PENTODE

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 (JETEC No.E9-1)
 Basing Designation for BOTTOM VIEW 9EC

Pin 1-Pentode
 Grid No.3,
 Triode
 Cathode,
 Internal
 Shield
 Pin 2-Triode Grid
 Pin 3-Triode Plate
 Pin 4-Heater



Pin 5-Heater
 Pin 6-Pentode
 Grid No.1
 Pin 7-Pentode
 Cathode
 Pin 8-Pentode
 Grid No.2
 Pin 9-Pentode
 Plate

AMPLIFIER — Class A₁

Maximum Ratings, Design-Center 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	-	0.5 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 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

○, ▲: See next page.



5B8

5B8

MEDIUM-MU TRIODE — SHARP-CUTOFF PENTODE

Maximum Circuit Values:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
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.

* If either unit is operated at maximum rated conditions, grid-No.1-circuit resistances for both units should not exceed the stated values.

