



6CL8-A

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## MEDIUM-MU TRIODE— SHARP-CUTOFF TETRODE

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:

	<i>Without External Shield</i>	<i>With External Shield<sup>o</sup></i>	
<i>Triode Unit:</i>			
Grid to plate . . . . .	1.8	1.8	μf
Grid to cathode, tetrode cathode & internal shield, and heater . . . . .	2.8	2.8	μf
Plate to cathode, tetrode cathode & internal shield, and heater . . . . .	1.5	2	μf
<i>Tetrode Unit:</i>			
Grid No.1 to plate . . . . .	0.02 max.	0.01 max.	μf
Grid No.1 to cathode & internal shield, grid No.2, and heater . . . . .	5	5	μf
Plate to cathode & internal shield, grid No.2, and heater . . . . .	2	3	μf
Tetrode grid No.1 to triode plate . . . . .	0.015 max.	0.01 max.	μf
Tetrode plate to triode plate . . . . .	0.15 max.	0.03 max.	μf
Heater to cathode (Each Unit).	3	3 <sup>o</sup>	μf

#### Characteristics, Class A<sub>1</sub> Amplifier:

	<i>Triode Unit</i>	<i>Tetrode Unit</i>		
Plate Voltage . . . . .	125	100	125	volts
Grid-No.2 Voltage . . . . .	-	70	125	volts
Grid-No.1 Voltage . . . . .	-1	-	-1	volt
Amplification Factor . . . . .	40	-	-	
Plate Resistance (Approx.) . . . . .	5000	-	20000	ohms
Transconductance . . . . .	8000	7000	6500	μmhos
Plate Current . . . . .	14	-	12	ma
Grid-No.2 Current . . . . .	-	-	4	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20 . . . . .	-9	-	-9	volts

← Indicates a change.

6CL8-A



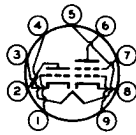
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**MEDIUM-MU TRIODE—  
SHARP-CUTOFF TETRODE**

**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" ± 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. . . . . 9FX

Pin 1 - Triode Grid  
 Pin 2 - Triode Plate  
 Pin 3 - Triode  
           Cathode  
 Pin 4 - Heater  
 Pin 5 - Heater  
 Pin 6 - Tetrode Plate



Pin 7 - Tetrode  
           Grid No.2  
 Pin 8 - Tetrode  
           Cathode,  
           Internal  
           Shield  
 Pin 9 - Tetrode  
           Grid No.1

**CONVERTER**

**Maximum Ratings, Design-Maximum Values:**

	<i>Triode Unit as Osc.</i>	<i>Tetrode Unit as Mixer</i>	
PLATE VOLTAGE. . . . .	330 max.	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE . . . . .	-	330 max.	volts
GRID-No.2 VOLTAGE. . . . .	-	<i>See Grid-No.2 Input</i>	
<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. . . . .	-	<i>See Grid-No.2 Input</i>	
<i>Rating Chart at front of Receiving Tube Section</i>			
PLATE DISSIPATION. . . . .	2.5 max.	3 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode . . . . .	200 max.	200 max.	volts
Heater positive with respect to cathode . . . . .	200 <sup>▲</sup> max.	200 <sup>▲</sup> max.	volts

→ Indicates a change.



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## Maximum Circuit Values:

	<i>Triode Unit</i>	<i>Tetrode 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

○ 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.