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10C8 HIGH-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)	10.5	volts
Current	0.3 ± 6%	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances:^o

Triode Unit:

Grid to plate	1.6	μmf
Grid to cathode and heater.	2.4	μmf
Plate to cathode and heater	0.2	μmf

Pentode Unit:

Grid No.1 to plate.	0.04 max.	μmf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater.	7	μmf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater.	2.2	μmf
Triode grid to pentode plate.	0.006 max.	μmf
Pentode grid No.1 to triode plate	0.008 max.	μmf
Pentode plate to triode plate	0.06 max.	μmf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	Pentode Unit (Triode Connection)	
Plate Supply Voltage.	250	135	135	volts
Grid-No.2 Supply Voltage	—	135	—	volts
Grid-No.1 Voltage	—	—	0	volts
Cathode Resistor.	390	100	—	ohms
Amplification Factor.	53	40	—	
Plate Resistance (Approx.)	0.012	0.19	—	megohm
Transconductance.	4400	8000	—	μmhos
Plate Current	7.3	11.5	33*	ma
Grid-No.2 Current	—	3.2	—	ma
Grid Voltage (Approx.) for plate $\mu_a = 10$	-10	—	—	volts
Grid-No.1 Voltage (Approx.) for plate $\mu_a = 50$	—	-6	—	volts

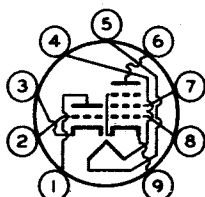


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Mechanical:

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 (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	
<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 150 volts	—	0.55 max.	watt
For grid-No. 2 voltages between 150 and 300 volts	—	See Grid-No. 2 Input	
<i>Rating Chart at front of Receiving Tube Section</i>			
PLATE DISSIPATION	2 max.	2.2 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



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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

VERTICAL-DEFLECTION OSCILLATOR

Triode Unit

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system[□]

DC PLATE VOLTAGE	300	max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE	400	max.	volts
CATHODE CURRENT:			
Peak	35	max.	ma
Average.	12	max.	ma
PLATE DISSIPATION.	1	max.	watt
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200 [▲]	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:			
For fixed-bias, grid-resistor-bias, or cathode-bias operation.	2.2	max.	megohms

VERTICAL-DEFLECTION AMPLIFIER

Pentode Unit (Triode Connection[♦])

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system[□]

DC PLATE VOLTAGE	300	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE* . . .	1000	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE. .	250	max.	volts
CATHODE CURRENT:			
Peak	55	max.	ma
Average.	18	max.	ma
PLATE DISSIPATION.	2.5	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	200	max.	volts
Heater positive with respect to cathode.	200	max.	volts

Maximum Circuit Values:

Grid-No.1 Circuit Resistance:			
For grid-resistor-bias or cathode-bias operation	2.2	max.	megohms

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- Without external shield.
- ◆ Grid No.2 connected to plate.
- * 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.
- ▲ The dc component must not exceed 100 volts.
- As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.
- * This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.