

High-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC)	5.2	volts
Current	$0.6 \pm 6\%$	amp
Warm-up time (Average)	11	sec

Direct Interelectrode Capacitances:^a

Triode Unit:

Grid to plate	1.6	$\mu\mu\text{f}$
Grid to cathode & pentode grid No.3 & internal shield, and heater	2.4	$\mu\mu\text{f}$
Plate to cathode & pentode grid No.3 & internal shield, and heater	1.4	$\mu\mu\text{f}$

Pentode Unit:

Grid No.1 to plate	0.03 max.	$\mu\mu\text{f}$
Grid No.1 to cathode, grid No.2, and heater	6.5	$\mu\mu\text{f}$
Plate to cathode, grid No.3 & triode cathode & internal shield, grid No.2, and heater	2.2	$\mu\mu\text{f}$
Plate to cathode, grid No.2, and heater	4.2	$\mu\mu\text{f}$
Triode grid to pentode plate	0.005	$\mu\mu\text{f}$
Pentode grid No.1 to triode plate	0.008	$\mu\mu\text{f}$
Triode plate to pentode plate	0.04	$\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate Supply Voltage	250	125	volts
Grid-No.2 Supply Voltage	—	125	volts
Cathode Resistor	390	56	ohms
Amplification Factor	53	—	
Plate Resistance (Approx.)	0.012	0.15	megohm
Transconductance	4400	8600	μmhos
Plate Current	7.3	13.5	ma
Grid-No.2 Current	—	3.8	ma
Grid-No.1 Voltage (Approx.) for plate μa =			
10	-10	—	volts
20	—	-6	volts

Mechanical:

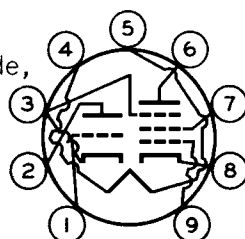
Operating Position	Any
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"



5DH8

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. 9EG

Pin 1-Triode Grid	Pin 5-Heater
Pin 2-Triode Plate	Pin 6-Pentode Plate
Pin 3-Triode Cathode,	Pin 7-Pentode
Pentode	Grid No.2
Grid No.3,	Pin 8-Pentode
Internal	Cathode
Shield	Pin 9-Pentode
Pin 4-Heater	Grid No.1



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 <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
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 <i>Grid-No.2 Input</i>	
<i>Rating Chart</i> at front of Receiving Tube Section			
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 ^b max.	200 ^b 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

VERTICAL-DEFLECTION OSCILLATOR

*Triode Unit***Maximum Ratings, Design-Maximum Values:***For operation in a 525-line, 30-frame system^c*

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 ^b	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias, cathode-bias,
or grid-resistor-bias operation 2.2 max. megohms

^a Without external shield.^b The dc component must not exceed 100 volts.^c As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.