

High-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Center Values*):

Voltage (AC or DC) 6.3 ± 0.6 volts
Current at heater volts = 6.3 0.720 amp

Peak heater-cathode voltage

(Each unit):

Heater negative with
respect to cathode. 200 max. volts

Heater positive with
respect to cathode. 200 max. volts

Direct Interelectrode Capacitances:^a

Triode Unit:

Grid to plate 2.7 μf

Grid to all other elements
except plate. 4.0 μf

Plate to all other elements
except grid 2.3 μf

Grid to heater. 0.1 max. μf

Pentode Unit:

Grid No.1 to plate. 0.1 max. μf

Grid No.1 to all other elements
except plate. 9.0 μf

Plate to all other elements
except grid No.1. 4.5 μf

Grid No.1 to heater 0.1 max. μf

Triode plate to pentode grid No.1 0.01 max. μf

Triode grid to pentode grid No.1. 0.01 max. μf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit			
Plate Voltage	200	170	200	220	volts
Grid-No.2 Voltage	—	170	200	220	volts
Grid-No.1 Voltage	-1.7	-2.1	-2.9	-3.4	volts
Amplification Factor.	65	—	—	—	
Mu Factor, Grid No.2 to					
Grid No.1	—	36	36	36	
Plate Resistance (Approx.).	—	0.1	0.13	0.15	megohm
Transconductance.	4000	11000	10400	10000	μmhos
Plate Current	3	18	18	18	ma
Grid-No.2 Current	—	3	3	3	ma

Mechanical:

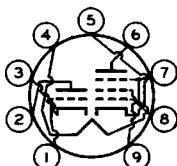
Operating Position. Any
Type of Cathodes. Coated Unipotential
Maximum Overall Length. 2-5/8"
Maximum Seated Length 2-3/8"



6DX8

Length, Base Seat to Bulb Top (Excluding tip). 2" $\pm$ 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. 9HX

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



Pin 7-Pentode
 Grid No.3,
 Pentode
 Cathode,
 Internal
 Shield
 Pin 8-Pentode
 Grid No.1
 Pin 9-Pentode
 Grid No.2

AMPLIFIER — Class A₁

Maximum Ratings, Design-Center Values:

	Triode Unit	Pentode Unit	
PLATE SUPPLY VOLTAGE.	550 max.	550 max.	volts
PEAK PLATE VOLTAGE with maximum plate ma. = 0.1 ^b	600 max.	—	volts
PLATE VOLTAGE.	300 max.	300 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE.	—	550 max.	volts
GRID-No.2 VOLTAGE.	—	300 max.	volts
CATHODE CURRENT.	12 max.	40 max.	ma
GRID-No.2 INPUT.	—	1.7 max.	watts
PLATE DISSIPATION.	1 max.	4 max.	watts

Typical Operation (Pentode Unit):

As video-output tube

Plate Supply Voltage.	170	200	220	volts
Series Plate Resistor.	3000	3000	3000	ohms
Grid-No.2 Voltage.	170	200	220	volts
Grid-No.1 Voltage.	-2	-2.8	-3.3	volts
Transconductance.	10400	10000	9700	μ mhos
Plate Current.	18	18	18	ma
Grid-No.2 Current.	3.2	3.1	3.1	ma

Maximum Circuit Values:

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance: For fixed-bias operation.	1 max.	1 max.	megohm
For cathode-bias operation.	3 max.	2 max.	megohms

^a Without external shield.

^b With duty factor = 0.18 maximum and pulse duration = 18 microseconds maximum.

