

Diode—Sharp-Cutoff Pentode

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

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

Voltage (AC or DC)	6.3 ^a	6.3 ± 0.6	volts
Current	0.450 ± 0.030	0.450 ^b	amp
Warm-up time (Average)	11	—	sec

Peak heater-cathode

voltage (Each unit):

Heater negative with respect to cathode.	200 ^c max.	volts
Heater positive with respect to cathode.	200 ^c max.	volts

Direct Interelectrode Capacitances:^d

Diode Unit:

Plate to cathode and heater.	2.4	μf
Cathode to plate and heater.	3.0	μf

Pentode Unit:

Grid No.1 to plate	0.015 max.	μf
Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater	7.0	μf
Plate to cathode, grid No.3 & internal shield, grid No.2, and heater	3.2	μf
Diode plate to pentode grid No.1	0.005 max.	μf
Diode cathode to pentode plate	0.15 max.	μf
Diode plate to pentode plate	0.035 max.	μf

Characteristics, Class A₁ Amplifier:

Plate Supply Voltage	125	volts
Grid No.3.	Connected to cathode at socket	
Grid-No.2 Supply Voltage	125	volts
Cathode Resistor	56	ohms
Plate Resistance (Approx.)	0.2	megohm
Transconductance	9300	μmhos
Plate Current.	11.5	ma
Grid-No.2 Current.	3.6	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 20.	-6	volts
Grid-No.1 Voltage (Approx.) for plate ma. = 2, and cathode resistor (ohms) = 0.	-3	volts

Mechanical:

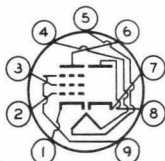
Operating Position	Any
Type of Cathodes	Coated Unipotential
Maximum Overall Length	2-3/16"
Maximum Seated Length.	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip).	1-9/16" ± 3/32"



6HJ8

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. 9CY

Pin 1 - Pentode
 Cathode
 Pin 2 - Pentode
 Grid No.1
 Pin 3 - Pentode
 Grid No.2
 Pin 4 - Heater
 Pin 5 - Heater
 Pin 6 - Pentode Plate



Pin 7 - Diode
 Cathode
 Pin 8 - Diode
 Plate
 Pin 9 - Pentode
 Grid No.3,
 Internal
 Shield

PENTODE UNIT — Class A₁ Amplifier

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE 330 max. volts
 GRID No.3 (SUPPRESSOR
 GRID) Connect to cathode at socket
 GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. . . 330 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. 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 See *Grid-No.2 Input Rating Chart*
 at front of Receiving Tube Section
 PLATE DISSIPATION 3.2 max. watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:
 For fixed-bias operation. 0.25 max. megohm
 For cathode-bias operation. 1 max. megohm

DIODE UNIT

Maximum Ratings, Design-Maximum Values:

DC PLATE CURRENT. 5 max. ma

Characteristics, Instantaneous Value:

Plate Current for plate volts = 10. 50 ma

- ^a At heater amperes = 0.450.
- ^b At heater volts = 6.3.
- ^c The dc component must not exceed 100 volts.
- ^d Without external shield.

