

# 6BW8

## Twin Diode—Sharp-Cutoff Pentode

### 9-PIN MINIATURE TYPE

#### GENERAL DATA

##### Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC) . . . . .  $6.3 \pm 10\%$  volts  
Current . . . . . 0.45 amp

Direct Interelectrode Capacitances:<sup>a</sup>

##### Pentode Unit:

Grid No.1 to plate. . . . . 0.02 max.  $\mu\text{f}$   
Grid No.1 to cathode & grid No.3  
& internal shield, grid No.2,  
and heater. . . . . 4.8  $\mu\text{f}$   
Plate to cathode & grid No.3  
& internal shield, grid No.2,  
and heater. . . . . 2.6  $\mu\text{f}$

##### Diode Units:

Diode-No.1 plate to cathode  
and heater. . . . . 1.3  $\mu\text{f}$   
Diode-No.2 plate to cathode  
and heater. . . . . 1.2  $\mu\text{f}$   
Pentode grid No.1 to either  
diode plate . . . . . 0.006 max.  $\mu\text{f}$

##### Characteristics, Class A<sub>1</sub> Amplifier (Pentode Unit):

Plate Supply Voltage. . . . . 250 volts  
Grid-No.2 Supply Voltage. . . . . 110 volts  
Cathode Resistor. . . . . 68 ohms  
Plate Resistance (Approx.). . . . . 0.25 megohm  
Transconductance. . . . . 5200  $\mu\text{mhos}$   
Grid-No.2 Current . . . . . 3.5 ma  
Plate Current . . . . . 10 ma  
Grid-No.1 Voltage (Approx.) for  
plate  $\mu\text{a} = 10$  . . . . . -10 volts

##### Mechanical:

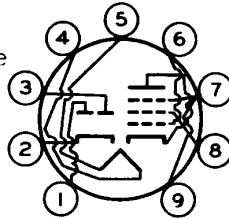
Operating Position. . . . . Any  
Maximum Overall Length. . . . .  $2\text{-}3/16"$   
Maximum Seated Length . . . . .  $1\text{-}15/16"$   
Length, Base Seat to Bulb Top (Excluding tip) . . . . .  $1\text{-}9/16" \pm 3/32"$   
Diameter. . . . .  $0.750"$  to  $0.875"$   
Dimensional Outline . . . . . See *General Section*  
Bulb. . . . . T6-1/2  
Base. . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)



# 6BW8

Basing Designation for BOTTOM VIEW. . . . . 9HK

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



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

## PENTODE UNIT — AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE. . . . . 330 max. volts  
 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:  
 Negative-bias value. . . . . 55 max. volts  
 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 max. watts  
 PEAK HEATER-CATHODE VOLTAGE:  
 Heater negative with respect to cathode. 200 max. volts  
 Heater positive with respect to cathode. 200<sup>b</sup> max. volts

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance:  
 For fixed-bias operation . . . . . 0.1 max. megohm  
 For cathode-bias operation . . . . . 0.5 max. megohm

## DIODE UNITS — Two

*Values are for Each Unit*

### Maximum Ratings, Design-Maximum Values:

PLATE CURRENT. . . . . 5 max. ma  
 PEAK HEATER-CATHODE VOLTAGE:  
 Heater negative with respect to cathode. 200 max. volts  
 Heater positive with respect to cathode. 200<sup>b</sup> max. volts

### Characteristics, Instantaneous Test Condition:

Plate Current for plate volts = 5. . . . . 20 ma

<sup>a</sup> Without external shield.

<sup>b</sup> The dc component must not exceed 100 volts.