

**TUNG-SOL****DOUBLE-DIODE PENTODE**

MINIATURE TYPE

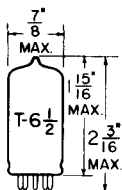
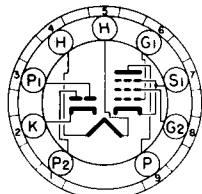
COATED UNIPOTENTIAL CATHODE

HEATER

6.3±10% VOLTS 0.45 AMP.

AC OR DC

ANY MOUNTING POSITION

**GLASS BULB****BOTTOM VIEW**SMALL BUTTON  
9 PIN BASE

9HK

THE 6BW8 IS A DOUBLE-DIODE PENTODE IN WHICH SEPARATE CATHODES ARE PROVIDED FOR THE TWO SECTIONS. THE DIODE SECTIONS ARE INTENDED FOR USE PRIMARILY AS A HORIZONTAL PHASE DETECTOR IN TELEVISION RECEIVERS. THE PENTODE SECTION IS SUITABLE FOR USE AS A SOUND IF AMPLIFIER, SOUND LIMITER, AND AUTOMATIC-GAIN-CONTROL KEYS.

**DIRECT INTERELECTRODE CAPACITANCES**

WITHOUT EXTERNAL SHIELD

|                                          |       |     |
|------------------------------------------|-------|-----|
| PENTODE GRID #1 TO PLATE (MAX.)          | 0.020 | μuf |
| PENTODE INPUT                            | 4.8   | μuf |
| PENTODE OUTPUT                           | 2.6   | μuf |
| GRID #1 TO EACH DIODE PLATE (MAX.)       | 0.006 | μuf |
| DIODE #1 PLATE TO DIODE CATHODE & HEATER | 1.3   | μuf |
| DIODE #2 PLATE TO DIODE CATHODE & HEATER | 1.2   | μuf |

**RATINGS**

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

|                                                           |                         |         |
|-----------------------------------------------------------|-------------------------|---------|
| HEATER VOLTAGE                                            | 6.3 ±6%                 | VOLTS   |
| MAXIMUM PLATE VOLTAGE                                     | 330                     | VOLTS   |
| MAXIMUM SCREEN-SUPPLY VOLTAGE                             | 330                     | VOLTS   |
| MAXIMUM SCREEN VOLTAGE                                    | SEE SCREEN RATING CHART |         |
| MAXIMUM POSITIVE DC GRID #1 VOLTAGE                       | 0                       | VOLTS   |
| MAXIMUM NEGATIVE DC GRID #1 VOLTAGE                       | 55                      | VOLTS   |
| MAXIMUM PLATE DISSIPATION                                 | 3.0                     | WATTS   |
| MAXIMUM SCREEN DISSIPATION                                | 0.55                    | WATTS   |
| MAXIMUM HEATER-CATHODE VOLTAGE:                           |                         |         |
| HEATER POSITIVE WITH RESPECT TO CATHODE                   |                         |         |
| DC COMPONENT                                              | 100                     | VOLTS   |
| TOTAL DC AND PEAK                                         | 200                     | VOLTS   |
| HEATER NEGATIVE WITH RESPECT TO CATHODE                   |                         |         |
| TOTAL DC AND PEAK                                         | 200                     | VOLTS   |
| MAXIMUM GRID #1 CIRCUIT RESISTANCE                        |                         |         |
| WITH FIXED BIAS                                           | 0.1                     | MEGOHMS |
| WITH CATHODE BIAS                                         | 0.5                     | MEGOHMS |
| MAXIMUM DIODE CURRENT FOR CONTINUOUS OPERATION (EA. SEC.) | 5.0                     | MA.     |

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

|                                                               |        |         |
|---------------------------------------------------------------|--------|---------|
| HEATER VOLTAGE                                                | 6.3±6% | VOLTS   |
| HEATER CURRENT                                                | 0.45   | AMP.    |
| PLATE VOLTAGE                                                 | 250    | VOLTS   |
| SCREEN VOLTAGE                                                | 170    | VOLTS   |
| CATHODE-BIAS RESISTOR                                         | 68     | OHMS    |
| PLATE RESISTANCE (APPROX.)                                    | 0.25   | MEGOHMS |
| TRANSCONDUCTANCE                                              | 5200   | μMHOS   |
| PLATE CURRENT                                                 | 10     | MA.     |
| SCREEN CURRENT                                                | 3.5    | MA.     |
| GRID #1 VOLTAGE (APPROX.) $I_b=10$ μAMPS                      | -10    | VOLTS   |
| AVERAGE DIODE CURRENT (EACH DIODE)<br>WITH 5 VOLTS DC APPLIED | 20     | MA.     |

DESIGN-MAXIMUM RATINGS ARE THE LIMITING VALUES EXPRESSED WITH RESPECT TO BOGIE TUBES AT WHICH SATISFACTORY TUBE LIFE CAN BE EXPECTED TO OCCUR. TO OBTAIN SATISFACTORY CIRCUIT PERFORMANCE, THEREFORE, THE EQUIPMENT DESIGNER MUST ESTABLISH THE CIRCUIT DESIGN SO THAT NO DESIGN-MAXIMUM VALUE IS EXCEEDED WITH A BOGIE TUBE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, AND ENVIRONMENTAL CONDITIONS.

