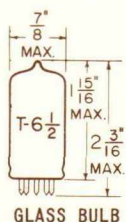


## TUNG-SOL

## DIODE-DISSIMILAR DUO-TRIODE

MINIATURE TYPE



GLASS BULB

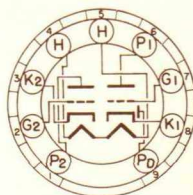
COATED UNIPOTENTIAL CATHODE

HEATER

12.6 VOLTS 0.45 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

SMALL BUTTON MINIATURE  
9 PIN BASE

94C

THE 12DW8 IS A DIODE-DISSIMILAR DUO-TRIODE DESIGNED TO FUNCTION AS A COMBINED SECOND DETECTOR, FIRST AUDIO STAGE, AND TRANSISTOR DRIVER STAGE IN 12 VOLT HYBRID AUTOMOBILE RADIOS. TRIODE #1 IS THE FIRST AUDIO STAGE, TRIODE #2 IS THE DRIVER.

## DIRECT INTERELECTRODE CAPACITANCES

|                                      | WITH <sup>A</sup><br>SHIELD | WITHOUT<br>SHIELD |                  |
|--------------------------------------|-----------------------------|-------------------|------------------|
| <b>TRIODE #1:</b>                    |                             |                   |                  |
| GRID TO PLATE (G TO P)               | 1.8                         | 1.8               | $\mu\mu\text{f}$ |
| INPUT: G TO (H+K)                    | 2.9                         | 1.6               | $\mu\mu\text{f}$ |
| OUTPUT: P TO (H+K)                   | 1.4                         | 0.7               | $\mu\mu\text{f}$ |
| DIODE PLATE TO TRIODE #1 GRID (MAX.) | 0.4                         | 0.4               | $\mu\mu\text{f}$ |
| <b>TRIODE #2:</b>                    |                             |                   |                  |
| GRID TO PLATE (G TO P)               | 3.5                         | 3.2               | $\mu\mu\text{f}$ |
| INPUT: G TO (H+K)                    | 4.4                         | 4.4               | $\mu\mu\text{f}$ |
| OUTPUT: P TO (H+K)                   | 2.1                         | 0.7               | $\mu\mu\text{f}$ |

<sup>A</sup> WITH EXTERNAL SHIELD #315 CONNECTED TO PIN #8.

## RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

|                                         | DIODE | TRIODE<br>#1 | TRIODE<br>#2 |        |
|-----------------------------------------|-------|--------------|--------------|--------|
| HEATER VOLTAGE                          | 12.6  | 12.6         | 12.6         | VOLTS  |
| MAXIMUM DC HEATER-CATHODE VOLTAGE:      |       |              |              |        |
| HEATER NEGATIVE WITH RESPECT TO CATHODE | 16.0  | 16.0         | 16.0         | VOLTS  |
| HEATER POSITIVE WITH RESPECT TO CATHODE | 16.0  | 16.0         | 16.0         | VOLTS  |
| MAXIMUM PLATE VOLTAGE                   |       | 16.0         | 16.0         | VOLTS  |
| MAXIMUM POSITIVE DC GRID VOLTAGE        |       | 0            | 0            | VOLTS  |
| MAXIMUM PLATE DISSIPATION               | 0.5   | 0.5          | 0.5          | WATTS  |
| MAXIMUM GRID CIRCUIT RESISTANCE         |       | 1.5          | 1.5          | MEGOHM |

CONTINUED ON FOLLOWING PAGE

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

|                                 | TRIODE #1 | TRIODE #2 | DIODE |           |
|---------------------------------|-----------|-----------|-------|-----------|
| HEATER VOLTAGE                  | 12.6      | 12.6      | 12.6  | VOLTS     |
| HEATER CURRENT                  | 0.45      | 0.45      | 0.45  | AMP.      |
| PLATE SUPPLY VOLTAGE            | 12.6      | 12.6      |       | VOLTS     |
| TRANSCONDUCTANCE                | 2700      | 6500      |       | $\mu$ MHO |
| AMPLIFICATION FACTOR            | 9.5       | 6.4       |       |           |
| PLATE CURRENT                   | 1.9       | 7.5       |       | MA.       |
| AVERAGE DIODE CURRENT @ 10 V.   |           |           | 20    | MA.       |
| GRID VOLTAGE                    | 0         | 0         |       | VOLTS     |
| GRID RESISTOR                   | 1.5       | 1.0       |       | MEGOHMS   |
| PLATE VOLTAGE DROPPING RESISTOR | 100       | 100       |       | OHMS      |

DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A BOGEY ELECTRON DEVICE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS. THE DEVICE MANUFACTURER CHOOSES THESE VALUES TO PROVIDE ACCEPTABLE SERVICEABILITY OF THE DEVICE, TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN DEVICE CHARACTERISTICS. THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY DEVICE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION, AND ENVIRONMENTAL CONDITIONS.