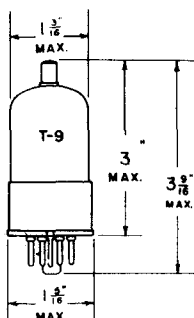


## TUNG-SOL



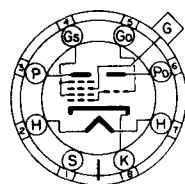
## TRIODE HEXODE CONVERTER

UNIPOTENTIAL CATHODE

HEATER

12.6 VOLTS    0.15 AMPERE  
AC OR DC

GLASS BULB



8 K

BOTTOM VIEW

SMALL WAFER 8 PIN OCTAL BASE WITH METAL SHELL

THE TUNG-SOL 12K8GT CONSISTS OF A TRIODE OSCILLATOR AND A HEXODE MIXER IN A COMMON ENVELOPE. THE PHYSICAL DESIGN OF THIS TUBE REDUCES INTER-ACTION BETWEEN THE OSCILLATOR AND MIXER SECTIONS AND MAKES FOR STABLE OPERATION ON THE HIGH FREQUENCIES AS WELL AS THE BROADCAST BAND. IT IS USED IN AC-DC SUPERHETERODYNES USING 150 MA. HEATER TUBES.

## RATINGS

|                                               |      |       |
|-----------------------------------------------|------|-------|
| MAXIMUM HEXODE PLATE (P) VOLTAGE              | 300  | VOLTS |
| MAXIMUM HEXODE SCREEN (Gs) SUPPLY VOLTAGE     | 300  | VOLTS |
| MAXIMUM HEXODE SCREEN (Gs) VOLTAGE            | 150  | VOLTS |
| MAXIMUM HEXODE PLATE DISSIPATION              | 0.75 | WATT  |
| MAXIMUM HEXODE SCREEN DISSIPATION             | 0.7  | WATT  |
| MAXIMUM TOTAL CATHODE CURRENT                 | 16   | MA.   |
| MINIMUM EXTERNAL SIGNAL GRID (G) BIAS VOLTAGE | 0    | VOLT  |
| MAXIMUM OSCILLATOR ANODE (Po) VOLTAGE         | 125  | VOLTS |
| MAXIMUM OSCILLATOR ANODE DISSIPATION          | 0.75 | WATT  |

FOR "INTERPRETATION OF RATINGS" REFER TO FRONT OF BOOK.

CONTINUED NEXT PAGE

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

## CONVERTER SERVICE

|                                            |        |        |        |
|--------------------------------------------|--------|--------|--------|
| HEXODE PLATE (P) VOLTAGE                   | 100    | 250    | VOLTS  |
| HEXODE SCREEN (G <sub>s</sub> ) VOLTAGE    | 100    | 100    | VOLTS  |
| HEXODE CONTROL GRID (G) VOLTAGE            | -3     | -3     | VOLTS  |
| OSCILLATOR ANODE (P <sub>o</sub> ) VOLTAGE | 100    | 100    | VOLTS  |
| HEXODE PLATE CURRENT                       | 2.3    | 2.5    | MA.    |
| HEXODE SCREEN CURRENT                      | 6.2    | 6.0    | MA.    |
| OSCILLATOR ANODE CURRENT                   | 3.8    | 3.8    | MA.    |
| OSCILLATOR GRID (G <sub>o</sub> ) CURRENT  | 0.15   | 0.15   | MA.    |
| TOTAL CATHODE CURRENT                      | 12.5   | 12.5   | MA.    |
| OSCILLATOR GRID RESISTOR                   | 50 000 | 50 000 | OHMS   |
| CONVERSION TRANSCONDUCTANCE                | 325    | 350    | μMHOS  |
| HEXODE PLATE RESISTANCE APPROX.            | 0.4    | 0.6    | MEGOHM |
| HEXODE CONTROL GRID VOLTAGE APPROX.        | -30    | -30    | VOLTS  |

FOR CONVERSION TRANSCONDUCTANCE = 2 μMHOS

DIRECT INTERELECTRODE CAPACITANCES<sup>5</sup>

|                                                                                    |                      |     |
|------------------------------------------------------------------------------------|----------------------|-----|
| SIGNAL GRID TO MIXER PLATE (G TO P)                                                | 0.08 <sup>MAX.</sup> | μμf |
| SIGNAL GRID TO OSCILLATOR PLATE (G TO P <sub>o</sub> )                             | 0.05 <sup>MAX.</sup> | μμf |
| SIGNAL GRID TO OSCILLATOR GRID (G TO G <sub>o</sub> )                              | 0.2 <sup>MAX.</sup>  | μμf |
| OSCILLATOR GRID TO OSCILLATOR PLATE (G <sub>o</sub> TO P <sub>o</sub> )            | 1.8                  | μμf |
| SIGNAL INPUT: G TO ALL OTHER ELECTRODES                                            | 4.6                  | μμf |
| OSCILLATOR INPUT: G <sub>o</sub> TO ALL OTHER ELECTRODES<br>EXCEPT P <sub>o</sub>  | 6.5                  | μμf |
| OSCILLATOR OUTPUT: P <sub>o</sub> TO ALL OTHER ELECTRODES<br>EXCEPT G <sub>o</sub> | 3.4                  | μμf |
| MIXER OUTPUT: P TO ALL OTHER ELECTRODES                                            | 4.8                  | μμf |
| OSCILLATOR GRID TO MIXER PLATE (G <sub>o</sub> TO P)                               | 0.15 <sup>MAX.</sup> | μμf |

<sup>A</sup> WITH EXTERNAL SHIELD CONNECTED TO CATHODE.

NOTE: THE TRANSCONDUCTANCE OF THE OSCILLATOR SECTION (NOT OSCILLATING) IS APPROXIMATELY 3000 μMHOS WHEN THE TRIODE PLATE VOLTAGE IS 100 VOLTS, AND THE TRIODE GRID VOLTAGE IS ZERO VOLTS.