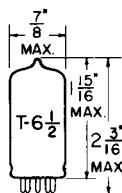


TUNG-SOL**DIODE-PENTODE**

MINIATURE TYPE

**GLASS BULB**

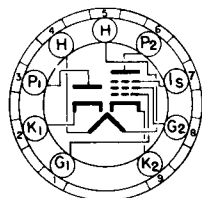
COATED UNIPOTENTIAL CATHODE

HEATER

12.6 VOLTS 0.200 AMP.

AC OR DC

ANY MOUNTING POSITION

**BOTTOM VIEW**
MINIATURE BUTTON
9 PIN BASE

THE 12DE8 IS A COMBINED REMOTE CUT-OFF PENTODE AND DIODE WITH INDEPENDENT UNIPOTENTIAL CATHODES IN THE 9-PIN MINIATURE CONSTRUCTION. THE PENTODE SECTION IS INTENDED FOR USE AS AN RF OR IF AMPLIFIER WHERE THE HEATER, PLATE AND SCREEN GRID POTENTIALS ARE OBTAINED DIRECTLY FROM AN AUTOMOTIVE BATTERY.

DIRECT INTERELECTRODE CAPACITANCES

	WITHOUT SHIELD	
PENTODE GRID #1 TO PLATE: (MAX.)	.006	$\mu\mu\text{f}$
PENTODE INPUT:	5.5	$\mu\mu\text{f}$
PENTODE OUTPUT:	5.7	$\mu\mu\text{f}$
DIODE INPUT:	3.7	$\mu\mu\text{f}$
DIODE OUTPUT:	5.7	$\mu\mu\text{f}$
COUPLING (DIODE PLATE TO PENTODE GRID (MAX.))	.018	$\mu\mu\text{f}$
COUPLING (DIODE PLATE TO PENTODE PLATE (MAX.))	.012	$\mu\mu\text{f}$
COUPLING (DIODE CATHODE TO PENTODE GRID (MAX.))	.13	$\mu\mu\text{f}$
COUPLING (DIODE CATHODE TO PENTODE PLATE (MAX.))	.0016	$\mu\mu\text{f}$

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE ^A	12.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE	± 30	VOLTS
MAXIMUM PLATE VOLTAGE	30	VOLTS
MAXIMUM GRID #2 VOLTAGE	30	VOLTS
MAXIMUM CATHODE CURRENT	20	MA.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	10	MEG OHMS
MAXIMUM AVERAGE DIODE CURRENT	5	MA.

^A THIS TUBE IS INTENDED TO BE USED IN AUTOMOTIVE SERVICE FROM A NOMINAL 12 VOLT BATTERY SOURCE. THE HEATER IS THEREFORE DESIGNED TO OPERATE OVER THE 10.0 TO 15.9 VOLTAGE RANGE ENCOUNTERED IN THIS SERVICE. THE MAXIMUM RATINGS OF THE TUBE PROVIDE FOR AN ADEQUATE SAFETY FACTOR SUCH THAT THE TUBE WILL WITHSTAND THE WIDE VARIATION IN SUPPLY VOLTAGES.

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.200	AMP.
PLATE VOLTAGE	12.6	VOLTS
GRID #3 VOLTAGE ^B	0	VOLTS
GRID #2 VOLTAGE	12.6	VOLTS
GRID #1 VOLTAGE	-0.80 ^C	VOLTS
PLATE CURRENT	1 300	μAMPS
GRID #2 CURRENT	500	μAMPS
PLATE RESISTANCE (APPROX.)	.3	MEGOHM
TRANSCONDUCTANCE ^D	1 500	μMHOS
GRID #1 VOLTAGE (APPROX.)		
FOR $G_m^D = 10 \mu MHOS$	-6.0	VOLTS
DIODE CURRENT WITH 5 VOLTS APPLIED	20	MA.

^C AVERAGE BIAS DEVELOPED ACROSS A 2.2 MEGOHM GRID RESISTOR.

^D FROM GRID #1 TO PLATE.

^B CONNECTED TO CATHODE AT SOCKET.

