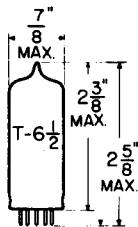


TUNG-SOL**DUPLEX-DIODE TETRODE**

MINIATURE TYPE

**GLASS BULB**

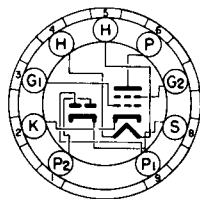
COATED UNIPOTENTIAL CATHODE

HEATER

12.6 VOLTS 0.375 AMP.

AC OR DC

ANY MOUNTING POSITION

**BOTTOM VIEW**SMALL BUTTON
9 PIN BASE

9HR

THE 12DV8 IS A DUPLEX-DIODE, SPACE-CHARGE-GRID TETRODE IN THE 9-PIN MINIATURE CONSTRUCTION. IT IS INTENDED FOR USE AS A COMBINED DETECTOR, AVC RECTIFIER, AND TRANSISTOR DRIVER. THE TETRODE SECTION IS SPECIALLY DESIGNED TO OPERATE WITH ITS PLATE AND SPACE-CHARGE-GRID VOLTAGES SUPPLIED DIRECTLY FROM A 12 VOLT STORAGE BATTERY.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

TETRODE GRID #2 TO PLATE	12	$\mu\mu\text{f}$
TETRODE INPUT	9.0	$\mu\mu\text{f}$
TETRODE OUTPUT	1.0	$\mu\mu\text{f}$
TETRODE GRID #2 TO ANY DIODE PLATE (MAX.)	0.015	$\mu\mu\text{f}$
DIODE #1 INPUT	1.7	$\mu\mu\text{f}$
DIODE #2 INPUT	1.6	$\mu\mu\text{f}$
DIODE #1 PLATE TO DIODE #2 PLATE (MAX.)	0.10	$\mu\mu\text{f}$

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	12.6 ^A	VOLTS
MAXIMUM PLATE VOLTAGE	16	VOLTS
MAXIMUM NEGATIVE CONTROL-GRID VOLTAGE	16	VOLTS
MAXIMUM SPACE-CHARGE-GRID VOLTAGE	16	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE		
HEATER POSITIVE WITH RESPECT TO CATHODE	16	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE	16	VOLTS
MAXIMUM CONTROL-GRID CIRCUIT RESISTANCE	10	MEG OHMS
MAXIMUM DIODE CURRENT FOR CONTINUOUS OPERATION (EA. DIODE)	5.0	MA.

^A WHEN USED IN AUTOMOTIVE SERVICE FROM A 12-VOLT SOURCE, UNDER NO CIRCUMSTANCES SHOULD THE HEATER VOLTAGE BE LESS THAN 10.0 VOLTS OR MORE THAN 15.9 VOLTS. THESE EXTREME VARIATIONS IN HEATER VOLTAGE MAY BE TOLERATED FOR SHORT PERIODS; HOWEVER, OPERATION AT OR NEAR THESE ABSOLUTE LIMITS IN HEATER VOLTAGE NECESSARILY INVOLVES SACRIFICE IN PERFORMANCE AT LOW HEATER VOLTAGE AND IN LIFE EXPECTANCY AT HIGH HEATER VOLTAGE. EQUIPMENT RELIABILITY CAN BE SIGNIFICANTLY INCREASED WITH IMPROVED SUPPLY-VOLTAGE REGULATION.

CONTINUED ON FOLLOWING PAGE

TUN-80L

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**AVERAGE CHARACTERISTICS**

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.375	AMP.
PLATE VOLTAGE	12.6	VOLTS
CATHODE RESISTOR	18	OHMS
CONTROL GRID RESISTOR	4.7	MEGOHMS
SPACE-CHARGE-GRID VOLTAGE	12.6	VOLTS
AMPLIFICATION FACTOR ^B	7.6	
PLATE RESISTANCE (APPROX.)	900	OHMS
TRANSCONDUCTANCE ^B	8 500	μMHOS
PLATE CURRENT	9.0	MA.
SPACE-CHARGE-GRID CURRENT	53	MA.
AVERAGE DIODE CURRENT (EACH DIODE)		
WITH 40 VOLTS DC APPLIED	3.0	MA.

CLASS A AMPLIFIER

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.375	AMP.
PLATE VOLTAGE	12.6	VOLTS
CATHODE RESISTOR	18	OHMS
CONTROL-GRID RESISTOR	4.7	MEGOHMS
SPACE-CHARGE-GRID VOLTAGE	12.6	VOLTS
PEAK AF CONTROL-GRID VOLTAGE	1.2	VOLTS
AF SIGNAL SOURCE RESISTANCE	300 000	OHMS
MAXIMUM SIGNAL PLATE CURRENT	6.8	MA.
SPACE-CHARGE-GRID CURRENT	54	MA.
LOAD RESISTANCE	1 250	OHMS
TOTAL HARMONIC DISTORTION (APPROX.)	3	PERCENT
POWER OUTPUT	5	MW.

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.

^B CONTROL GRID TO PLATE.