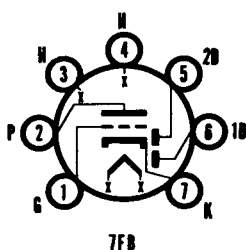




**SYLVANIA TYPE 12EL6**  
**DOUBLE DIODE**  
**HIGH MU TRIODE**



**MECHANICAL DATA**

Bulb.....	T-5 $\frac{1}{2}$
Base.....	E7-1, Miniature Button 7-Pin
Outline.....	5-2
Basing.....	7FB
Cathode.....	Coated Unipotential
Mounting Position.....	Any

**ELECTRICAL DATA**

**HEATER CHARACTERISTICS**

Heater Voltage <sup>1</sup> .....	12.6 Volts
Heater Current.....	150 Ma
<b>Heater-Cathode Voltage (Design Center Values)</b>	
Heater Negative with Respect to Cathode.....	30 Volts Max.
Heater Positive with Respect to Cathode.....	30 Volts Max.

# 12EL6 (Cont'd)

## DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid to Plate.....	1.8 $\mu\mu\text{f}$
Input: g to (h + k).....	2.2 $\mu\mu\text{f}$
Output: p to (h + k).....	1.0 $\mu\mu\text{f}$
Diode Plate to Diode Plate.....	1.0 $\mu\mu\text{f}$

## MAXIMUM RATINGS (Design Center Values)

Plate Voltage.....	30 Volts
Cathode Current.....	20 Ma
Grid Circuit Resistance.....	10 Megohms
Average Diode Current.....	1.0 Ma

## CHARACTERISTICS AND TYPICAL OPERATION

### Class A<sub>1</sub> Amplifier

Plate Voltage.....	12.6 Volts
Grid Voltage.....	0 Volts
Plate Current.....	750 $\mu\text{a}$
Transconductance.....	1200 $\mu\text{mhos}$
Amplification Factor.....	55
Plate Resistance.....	45,000 Ohms
Average Diode Current with 10 Volts Applied (Each Diode) <sup>2</sup> .....	2.0 Ma

### Resistance Coupled Amplifier

Plate Supply Voltage.....	12.6 Volts
Grid Voltage <sup>3</sup> .....	
Grid Resistor.....	1.0 Megohm
Plate Load Resistor.....	1.0 Megohm
Input Capacitor.....	0.02 $\mu\text{f}$
Output Capacitor.....	0.01 $\mu\text{f}$
Grid Resistor of Following Stage.....	2.0 Megohms
Voltage Gain at 400 CPS <sup>4</sup> .....	16

## NOTES:

1. This tube is intended for use in automobile radios operated from a nominal 12 volt battery. Design of the tube is such that the heater will operate satisfactorily over the range 10.0 volts to 15.9 volts, and that the maximum ratings provide a safety factor for the wide voltage variation encountered with this type of supply.
2. Test condition only.
3. Contact potential bias developed across specified grid resistor.
4. Measured at an output voltage of 1.0 volt RMS.

## APPLICATION

The Sylvania Type 12EL6 is a miniature double diode, high mu triode intended for use as a second detector audio amplifier. It is designed for operation where the heater and plate voltages are supplied directly from a 12 volt automotive storage battery.

## AVERAGE PLATE CHARACTERISTICS

