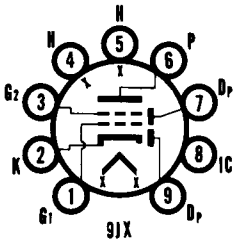
SYLVANIA TYPE 12DU7



MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-2
Basing	9J X
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage[1]	12.6 Volts
Heater Current	250 Ma
Heater-Cathode Voltage (Design Maximum Values)[2]	
Heater Negative with Respect to Cathode	16 Volts
Heater Positive with Respect to Cathode	16 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Tetrode Section

Grid No. 1 to Plate	0.6 μμf
Input: g1 to (h+Tk+g2)	11 μμf
Output: p to (h+Tk+g2)	3.6 μμf
Grid No. 1 to Diode Plate No. 1	0.22 μμf Max.
Grid No. 1 to Diode Plate No. 2	0.12 μμf Max.

MAXIMUM RATINGS (Design Maximum Values)[2]

Plate Voltage	16 Volts
Grid No. 2 Voltage	16 Volts
Grid No. 1 Resistance	10 Megohms
Average Diode Current (Each Diode)	1.0 Ma

CHARACTERISTICS AND TYPICAL OPERATING CONDITIONS

Plate Voltage	12.6 Volts
Grid No. 2 Voltage	12.6 Volts
Grid No. 1 Resistor[3]	2.2 Megohms
AF Grid Voltage (RMS)	1.6 Volts
Plate Current	12 Ma
Grid No. 2 Current	1.5 Ma
Transconductance	6200 μmhos
Plate Resistance (approx.)	6000 Ohms
Load Resistance	2700 Ohms
Maximum Signal Power Output	25 Mw
Total Harmonic Distortion	10 Percent
Average Diode Current with 10 Volts D C Applied, Each Diode	1.3 Ma

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. 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.
3. Average contact potential bias developed across specified grid resistor.

APPLICATION

Type 12DU7 is a miniature duo-diode tetrode designed for use as a combined detector, AVC rectifier and audio power amplifier driver.
It is designed for operation where the heater, plate and Grid No. 2 voltages are obtained directly from a 12 volt automotive storage battery.