SYLVANIA TYPE 12CN5
SHARP CUTOFF PENTODE

MECHANICAL DATA

Bulb: T-5½
Base: E7-1, Miniature Button 7-Pin 5-3
Outline: 7CV
Basing: Coated Unipotential Any
Cathode: Mounting Position: Any

SYLVANIA ELECTRONIC TUBES
HEATER CHARACTERISTICS

- Heater Voltage: 12.6 Volts
- Heater Current: 450 Ma
- Heater-Cathode Voltage (Design Center Values): 16 Volts Max.
- Heater Negative with Respect to Cathode: 16 Volts Max.
- Heater Positive with Respect to Cathode: 16 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES

<table>
<thead>
<tr>
<th>Shielded</th>
<th>Unshielded</th>
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<tbody>
<tr>
<td>Grid No. 1 to Plate</td>
<td>0.2 µf Max.</td>
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MAXIMUM RATINGS (Design Center Values)

- Plate Voltage: 16 Volts
- Grid No. 2 Voltage: 16 Volts
- Positive Grid No. 1 Voltage: 0 Volts
- Grid No. 1 Circuit Resistance: 2.2 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

- Plate Voltage: 12.6 Volts
- Grid No. 2 Voltage: 12.6 Volts
- Grid No. 1 Voltage: 2.2 Megohms
- Grid No. 1 Resistor: 4.5 Ma
- Grid No. 2 Current: 0.35 Ma
- Transconductance: 3800 µmhos
- Plate Resistance (approx.): 40,000 Ohms

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 15.3 volts, and that the maximum ratings provide a safety factor for the wide voltage variation encountered with this type of supply.
2. Average contact potential bias developed across the specified grid resistor.

APPLICATION

The Sylvania Type 12CN5 is a miniature sharp-cutoff pentode intended for use as an IF amplifier in automobile radio receivers. It is designed primarily to operate where the heater, plate, and screen voltages are obtained directly from a 12-volt automotive storage battery.

AVERAGE PLATE CHARACTERISTICS

(SyLVania ELECTRONIC TUBES)
12CN5 (Cont’d)

AVERAGE TRANSFER CHARACTERISTICS

$E_T = \text{RATED VALUE}$
$E_B = 12.6 \text{ VOLTS}$
$E_CZ = 126 \text{ VOLTS}$

GRID VOLTAGE

TRANSCONDUCTANCE (g_m) IN MICROMOHS

PLATE RESISTANCE (r_p) IN KILOOHMS

$\frac{I_p}{V}$ AND $I_{CZ}$ IN MA