THE 12EA6 IS A PENTODE IN THE 7-PIN MINIATURE CONSTRUCTION. IT IS INTENDED FOR USE AS AN RF AMPLIFIER IN AUTOMOBILE RADIO RECEIVERS AND IS DESIGNED TO OPERATE WITH ITS PLATE AND SCREEN VOLTAGES SUPPLIED DIRECTLY FROM A 12 VOLT STORAGE BATTERY.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

<table>
<thead>
<tr>
<th>Capacitance (μF)</th>
<th>Grid 1 to Plate (Max.)</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04</td>
<td></td>
<td>11</td>
<td>4.0</td>
</tr>
</tbody>
</table>

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

- **Heater Voltage**: 12.6 V
- **Maximum Plate Voltage**: 16 V
- **Maximum Screen Voltage**: 16 V
- **Maximum Positive DC Grid #1 Voltage**: 0 V
- **Maximum Heater-Cathode Voltage**: 16 V
- **Heater Positive with Respect to Cathode**: 16 V
- **Heater Negative with Respect to Cathode**: 16 V
- **Maximum Grid #1 Circuit Resistance**: 10 MEGOHMS
- **Maximum Grid #3 Circuit Resistance**: 10 MEGOHMS

When used in automobile 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.

Design-Maximum ratings are the limiting values expressed with respect to logic 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 logic tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, and environmental conditions.

CONTINUED ON FOLLOWING PAGE
TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A1 AMPLIFIER

HEATER VOLTAGE 12.6 VOLTS
HEATER CURRENT 0.190 AMP.
PLATE VOLTAGE 12.6 VOLTS
SUPPRESSOR VOLTAGE 0 VOLTS
SCREEN VOLTAGE 12.6 VOLTS

GRID #2 RESISTOR (BYPASED) 10 MEGOHMS
PLATE RESISTANCE (APPROX.) 32 000 OHMS
TRANS CONDUCTANCE 3 800 MAH.
PLATE CURRENT 3.2 MA.
SCREEN CURRENT 1.4 MA.
GRID #1 VOLTAGE (APPROX.) \( I_b = 10 \mu A \) MEG.

\( -3.4 \) VOLTS MEGOHMS

INDICATES A CHANGE.