DESCRIPTION AND RATING

The 12AT7 is a miniature, high-mu, twin triode designed for use as a grounded-grid radio-frequency amplifier or as a combined oscillator and mixer at frequencies below approximately 300 megacycles.

GENERAL

ELECTRICAL
Cathode—Coated Unipotential Series Parallel
Heater Voltage, AC or DC 12.6 6.3 Volts
Heater Current 0.15 0.3 Amperes

Direct Interelectrode Capacitances With Without
Shield* Shield
Grid to Plate, Each Section 1.5 1.5 µµf
Input, Each Section 2.2 2.2 µµf
Output, Section 1 1.2 0.5 µµf
Output, Section 2 1.5 0.4 µµf
Heater to Cathode, Each Section 2.4 2.4 µµf

With Without
Shield † Shield
Grounded-Grid Operation
Plate to Cathode, Each Section 0.2 0.2 µµf
Grounded-Grid Input, Each Section 4.6 4.6 µµf
Grounded-Grid Output, Each Section 2.6 1.8 µµf

MECHANICAL
Mounting Position—Any
Envelope—T-6½, Glass
Base—E9-1, Small Button 9-Pin

MAXIMUM RATINGS

DESIGN-CENTER VALUES, EACH SECTION
Plate Voltage 300 Volts
Negative DC Grid Voltage 50 Volts
Plate Dissipation 2.5 Watts

Heater-Cathode Voltage
Heater Positive with Respect to Cathode 90 Volts
Heater Negative with Respect to Cathode 90 Volts

PHYSICAL DIMENSIONS

GENERAL ELECTRIC

Supersedes ET-T470A, dated 1-50
CLASS A₁ AMPLIFIER, EACH SECTION

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value 1</th>
<th>Value 2</th>
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<tbody>
<tr>
<td>Plate Voltage</td>
<td>100</td>
<td>250</td>
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<tr>
<td>Cathode-Bias Resistor</td>
<td>270</td>
<td>200</td>
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<tr>
<td>Amplification Factor</td>
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<td>60</td>
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<tr>
<td>Plate Resistance, approximate</td>
<td>15000</td>
<td>10900</td>
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<tr>
<td>Transconductance</td>
<td>4000</td>
<td>5500</td>
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<td>Plate Current</td>
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<td>10</td>
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<tr>
<td>Grid Voltage, approximate</td>
<td>-5</td>
<td>-12</td>
</tr>
</tbody>
</table>

* With external shield (RETMA 315) connected to cathode of section under test.
† With external shield (RETMA 315) connected to grid of section under test.

AVERAGE PLATE CHARACTERISTICS

E₁ = RATED VALUE

[Graph showing plate characteristics]