TP-105

RF Pulse Transformer,
500 KHz - 1 GHz

Rev. V3

Features
- 50 Ohms Unbalanced/12.5 Ohms Unbalanced
- Low VSWR: 1.1:1 Typical
- Low Insertion Loss: 0.4 dB Typical
- MIL-STD-202 Screening Available

Description
The transformer coupled balun can provide a wide frequency range. DC isolation from primary coil to secondary coil is also a feature of this device.

Schematic/Pin Configuration

Electrical Specifications: \( T_A = -55°C \) to +85°C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Frequency</th>
<th>Units</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>Input - 50 Ohms Unbalanced</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Output - 12.5 Ohms Unbalanced</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td></td>
<td>10 - 50 MHz</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.5</td>
</tr>
<tr>
<td>VSWR</td>
<td></td>
<td>1 MHz - 500 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.4:1</td>
</tr>
<tr>
<td></td>
<td>500 KHz - 1 GHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.6:1</td>
<td></td>
</tr>
<tr>
<td>Input Power</td>
<td>500 KHz - 1 MHz</td>
<td>Watts</td>
<td>—</td>
<td>—</td>
<td>0.375</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 MHz - 5 MHz</td>
<td>Watts</td>
<td>—</td>
<td>—</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 MHz - 1 GHz</td>
<td>Watts</td>
<td>—</td>
<td>—</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Rise Time</td>
<td>10 - 90%</td>
<td>nS</td>
<td>—</td>
<td>0.3</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Droop (10%)</td>
<td></td>
<td>nS</td>
<td>—</td>
<td>350</td>
<td>—</td>
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</tr>
</tbody>
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FP-1

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Typical Performance Curves

**Insertion Loss**

![Insertion Loss Graph]

**VSWR**

![VSWR Graph]

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
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<tbody>
<tr>
<td>TP-105 PIN</td>
<td>FP-1</td>
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