TP-102

RF Pulse Transformer,
1 - 500 MHz

Features
- 50 Ohms Unbalanced/200 Ohms Unbalanced
- Fast Rise Time: 0.35 nS
- Low Insertion Loss: 0.75 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: \( T_A = -55^\circ C \) to \( +85^\circ C \)

<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 Output - 200 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>0.75</td>
</tr>
<tr>
<td>VSWR</td>
<td>—</td>
<td>5 MHz - 250 MHz Ratio</td>
<td>—</td>
<td>1.3:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>2 MHz - 500 MHz Ratio</td>
<td>—</td>
<td>1.6:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>1 - 2 MHz Ratio</td>
<td>—</td>
<td>2.0:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Power</td>
<td>—</td>
<td>1 MHz - 5 MHz Watts</td>
<td>—</td>
<td>—</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>5 GHz - 1 GHz Watts</td>
<td>—</td>
<td>—</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Rise Time</td>
<td>10 - 90%</td>
<td>—</td>
<td>nS</td>
<td>0.35</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Droop (10%)</td>
<td>—</td>
<td>—</td>
<td>nS</td>
<td>150</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
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Typical Performance Curves

**insertion Loss**

![Insertion Loss vs Frequency](image1)

**VSWR**

![VSWR vs Frequency](image2)

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-102 PIN</td>
<td>FP-1</td>
</tr>
</tbody>
</table>

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