TP-104

RF Pulse Transformer, 750 KHz - 400 MHz

Rev. V3

Features
• 50 Ohms Unbalanced/200 Ohms Balanced
• Low Insertion Loss: 0.4 dB Typical
• DC Isolation: Input to Output
• MIL-STD-202 Screening Available

Description
The flux coupled Balun Transformer can provide a wide range of impedance ratios: 1:1, 4:1, 9:1 and 16:1 are most common. DC isolation from primary coil to secondary coil is also a feature of this device.

Schematic/Pin Configuration

```
2
| 6
| 5
50 Ohms Unbalanced

| 4
200 Ohms Balanced
```

Pins 1 & 3 are grounded to case
**Pin 5 to be externally grounded**

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</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Output - 200 Ohms Balanced</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>0.55</td>
</tr>
<tr>
<td>VSWR</td>
<td>—</td>
<td>5 MHz - 200 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.3:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>750 MHz - 400 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>2.0:1</td>
</tr>
<tr>
<td>Input Power</td>
<td>—</td>
<td>750 MHz - 4 MHz</td>
<td>Watts</td>
<td>—</td>
<td>—</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 MHz - 400 MHz</td>
<td>Watts</td>
<td>—</td>
<td>—</td>
<td>1.0</td>
</tr>
<tr>
<td>Rise Time</td>
<td>10 - 90%</td>
<td>—</td>
<td>nS</td>
<td>—</td>
<td>0.55</td>
<td>—</td>
</tr>
<tr>
<td>Droop (10%)</td>
<td>—</td>
<td>—</td>
<td>nS</td>
<td>—</td>
<td>130</td>
<td>—</td>
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</tbody>
</table>
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Typical Performance Curves

**Insertion Loss**

- **Frequency (MHz)**: 0.5 to 500
- **Insertion Loss (dB)**: 0 to 5.0

**VSWR**

- **Frequency (MHz)**: 0.5 to 900
- **VSWR**: 1.0 to 1.6

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
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<tbody>
<tr>
<td>TP-104 PIN</td>
<td>FP-1</td>
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