Wideband Transformers

- Surface mount and through hole versions
- 500 Vrms, 1 minute interwinding isolation (hipot), 1/4 Watt RF input power
- 250 mA max current rating.
- For a smaller package size, see our WBC Series

**Core material** Ferrite

**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 0.38 – 0.40 g

**Ambient temperature** -40°C to +85°C

**Storage temperature** Component: -40°C to +85°C.
Tape and reel or tube packaging: -40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflo ws at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 60 per billion hours / 16,666,667 hours, calculated per Telcordia SR-332

**Packaging** (SM version): 500 per 13” reel;
Plastic tape: 24 mm wide, 0.42 mm thick, 20 mm pocket spacing, 6.6 mm pocket depth; (TH version): 70 per tube

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

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**Dimensions – surface mount parts**

**Dimensions – through hole parts**

**Recommended Land Pattern**

**Recommended Board Layout**

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*Parts manufactured prior to August 2015 may be marked differently.*
## Wideband Transformers

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<th>Insertion loss max (dB)</th>
<th>Pri (pins 4-6) L min (µH) DCR max (mOhm)</th>
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<tr>
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<td>WB4-6L</td>
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<td>100</td>
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<td>WB9-1L</td>
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<td>WB36-1L</td>
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<tr>
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<td>WB1-1TL</td>
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<td>0.050 – 200</td>
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<td>WB2-1TSL_</td>
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<td>120</td>
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<td>WB3-1TSL_</td>
<td>WB3-1TL</td>
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<td>0.040 – 500</td>
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<tr>
<td>WB4-1HSL_</td>
<td>WB4-1HL</td>
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<td>0.050 – 200</td>
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<td>1:5</td>
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<td>220</td>
<td>240</td>
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<td>WB8-1TL</td>
<td>1:8</td>
<td>0.150 – 400</td>
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<td>18</td>
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<td>144</td>
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<tr>
<td>WB13-1TSL_</td>
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<td>1:13</td>
<td>0.150 – 125</td>
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1. When ordering, please specify packaging code:

   **Packaging:**
   - D = 13" machine-ready reel. EIA-481 embossed plastic tape (500 parts per full reel).
   - B = Less than full reel. In tape, but not machine ready.
   To have a leader and trailer added ($25 charge), use code letter D instead.

2. Impedance ratio is for the full primary winding to the full secondary winding.

3. Inductance measured at 100 kHz, 0.1 V, 0 A dc on an Agilent/HP 4192 or equivalent.

4. DCR measured on a micro-ohmmeter.

5. DC imbalance is the maximum difference in current measured at pins 1 and 3 with the source at pin 2. Inductance drop is 15% at max imbalance.

6. Electrical specifications at 25°C. Measurements are referenced to 50 Ohms.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.
Transformers with no center taps

Attenuation measured on a network analyzer (re: 50 Ohms)
Transformers with secondary center tap

- **WB1-1T**: 3 dB bandwidth: 0.100 – 375 MHz
- **WB4-6T**: 3 dB bandwidth: 0.050 – 200 MHz
- **WB1-6T**: 3 dB bandwidth: 0.050 – 200 MHz
- **WB2-1T**: 3 dB bandwidth: 0.070 – 400 MHz
- **WB2.5-6T**: 3 dB bandwidth: 0.050 – 125 MHz
- **WB4-1H**: 3 dB bandwidth: 0.100 – 500 MHz
- **WB8-1T**: 3 dB bandwidth: 0.150 – 400 MHz
- **WB13-1T**: 3 dB bandwidth: 0.150 – 125 MHz
- **WB3-1T**: 3 dB bandwidth: 0.040 – 500 MHz
- **WB5-1T**: 3 dB bandwidth: 0.050 – 400 MHz
- **WB8-1T**: 3 dB bandwidth: 0.150 – 400 MHz
- **WB16-6T**: 3 dB bandwidth: 0.050 – 100 MHz

Attenuation measured on a network analyzer (re: 50 Ohms)
Transformers with primary and secondary center taps

WBT1-6
3 dB bandwidth: 0.040 – 200 MHz

WBT4-1A
3 dB bandwidth: 0.040 – 350 MHz

WBT1.5-1
3 dB bandwidth: 0.040 – 350 MHz

WBT16-1
3 dB bandwidth: 0.100 – 100 MHz

WBT2.5-6
3 dB bandwidth: 0.050 – 100 MHz

WBT25-1
3 dB bandwidth: 0.100 – 65 MHz

WBT4-1
3 dB bandwidth: 0.050 – 150 MHz

Attenuation measured on a network analyzer (re: 50 Ohms)