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 phosphorous 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 reflows 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.

**Dimensions – surface mount parts**

**Dimensions – through hole parts**

- Parts manufactured prior to August 2015 may be marked differently.

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**Recommended Board Layout**

- Dot indicates pin #1
- Recommended Land Pattern
### Wideband Transformers

<table>
<thead>
<tr>
<th>Schematic</th>
<th>Part number</th>
<th>Impedance ratio pri:sec</th>
<th>Bandwidth (MHz)</th>
<th>Insertion loss max (dB)</th>
<th>Pri (pins 4-6) L min (µH)</th>
<th>DCR max (mOhm)</th>
<th>Sec (pins 1-3) L min (µH)</th>
<th>DCR max (mOhm)</th>
<th>DC imbalance max (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB1-1SL_</td>
<td>WB1-1L</td>
<td>1:1</td>
<td>0.150–500</td>
<td>0.70</td>
<td>27</td>
<td>75</td>
<td>27</td>
<td>75</td>
<td>—</td>
</tr>
<tr>
<td>WB1-1SL</td>
<td>WB1-1L</td>
<td>1:1</td>
<td>0.100–350</td>
<td>0.50</td>
<td>25</td>
<td>100</td>
<td>25</td>
<td>100</td>
<td>—</td>
</tr>
<tr>
<td>WB1.18-3SL_</td>
<td>WB1.18-3L</td>
<td>1:1.18</td>
<td>0.040–300</td>
<td>0.50</td>
<td>90</td>
<td>300</td>
<td>108</td>
<td>330</td>
<td>—</td>
</tr>
<tr>
<td>WB1.5-6SL</td>
<td>WB1.5-6L</td>
<td>1:1.5</td>
<td>0.050–325</td>
<td>0.26</td>
<td>56</td>
<td>120</td>
<td>84</td>
<td>150</td>
<td>—</td>
</tr>
<tr>
<td>WB2-1-2WSL_</td>
<td>WB2-1-2WL</td>
<td>1:2</td>
<td>0.080–700</td>
<td>1.00</td>
<td>38</td>
<td>100</td>
<td>75</td>
<td>150</td>
<td>—</td>
</tr>
<tr>
<td>WB2.5-6SL</td>
<td>WB2.5-6L</td>
<td>1:2.5</td>
<td>0.080–225</td>
<td>0.26</td>
<td>30</td>
<td>100</td>
<td>75</td>
<td>150</td>
<td>—</td>
</tr>
<tr>
<td>WB4-6SL</td>
<td>WB4-6L</td>
<td>1:4</td>
<td>0.100–125</td>
<td>0.50</td>
<td>25</td>
<td>100</td>
<td>100</td>
<td>200</td>
<td>—</td>
</tr>
<tr>
<td>WB9-1SL</td>
<td>WB9-1L</td>
<td>1:9</td>
<td>0.125–125</td>
<td>0.57</td>
<td>25</td>
<td>100</td>
<td>225</td>
<td>250</td>
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<tr>
<td>WB16-1SL</td>
<td>WB16-1L</td>
<td>1:16</td>
<td>0.050–100</td>
<td>0.60</td>
<td>56</td>
<td>75</td>
<td>896</td>
<td>330</td>
<td>—</td>
</tr>
<tr>
<td>WB36-1SL</td>
<td>WB36-1L</td>
<td>1:36</td>
<td>0.100–45</td>
<td>0.50</td>
<td>25</td>
<td>50</td>
<td>900</td>
<td>180</td>
<td>—</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - **WB25-1SLD**
     - **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 Adc 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

**WB1-1**
- 3 dB bandwidth: 0.150 – 500 MHz

**WB1-6**
- 3 dB bandwidth: 0.100 – 350 MHz

**WB1.18-3**
- 3 dB bandwidth: 0.040 – 300 MHz

**WB1.5-6**
- 3 dB bandwidth: 0.050 – 325 MHz

**WB2-1-2W**
- 3 dB bandwidth: 0.080 – 700 MHz

**WB2.5-6**
- 3 dB bandwidth: 0.080 – 225 MHz

**WB4-6**
- 3 dB bandwidth: 0.100 – 125 MHz

**WB9-1**
- 3 dB bandwidth: 0.125 – 125 MHz

**WB9-1**
- 3 dB bandwidth: 0.125 – 125 MHz

**WB16-1**
- 3 dB bandwidth: 0.050 – 100 MHz

**WB36-1**
- 3 dB bandwidth: 0.100 – 45 MHz

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

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

Attenuation measured on a network analyzer (re: 50 Ohms)
Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Coilcraft:
WB3015-SMLD  WB3010-SMLB  WB2-1-2WSLB  WB1-6SLB  WBT2.5-6SLD  WBT4-1SLD  WB9-1L  WBT2.5-6SLB  WB4-6TSLD  WBT4-1L  WBT25-1SLD  WB1-1TSLD  WBT2.5-6L  WB1015-SMLB  WB3-1TSLB  WB3-1TSLD  WB2010-SMLB  WB2.5-6TL  WBT16-1SLD  WB2-5-6SLD  WB13-1TSLB  WB1-6L  WB13-1TL  WB3010-SMLD  WB1-1TSLB  WB4-6TL  WB1015-SMLD  WB16-1L  WB36-1SLB  WB5-1TSLB  WB2.5-6TSLB  WB36-1L  WB2010-1-SMLD  WB2-1TSLB  WBT16-1SLB  WB3010-1-SMLD  WB1.18-3SLD  WB3010-1-SMLB  WB2040-SMLB  WBT4-1ASLD  WB4-1HSLB  WB3040-SMLD  WBT1.5-1L  WB3040-SMLB  WB5-1TSLD  WB16-1SLB  WB4-6L  WB1010-1-SMLD  WB1040-SMLB  WB1.18-3SLB  WBT4-1ASLB  WBT16-1L  WBT1-6SLD  WB2040-SMLD  WBT2.5-6TSLD  WB8-1TSLD  WB9-1SLD  WB1-6SLD  WB3-1TL  WB8-1TL  WB1040-SMLD  WB2-1-2WSLD  WB1-6TL  WBT4-1SLB  WB2.5-6L  WB4-6SLB  WBT25-1L  WB1010-SMLD  WB4-6TSLB  WBT1-5-1SLD  WB13-1TSLD  WBT1.5-1SLB  WB3015-SMLB  WB1-1L  WB1-1TL  WB4-1HL  WBT25-1SLB  WBT4-1SLD  WB2-1TSLD  WB2-1TL  WB16-1SLD  WBT1-6SLB  WB16-6TSLB  WB1-6TSLB  WB2.5-6SLB  WB2010-SMLD  WB1-6TSLD  WB16-6TSLD  WB4-1HSLD  WB16-6TL  WB2010-1-SMLB  WB1.18-3L