**SMT Mini Wideband Transformer**

- 3 dB bandwidth: 0.1 MHz to 3.5 GHz
- 1/4 Watt RF input power
- 250 mA max current rating.

**Core material** Ferrite  
**Terminations** RoHS compliant tin-silver-copper over silver-platinum-glass frit. Other terminations available at additional cost.  
**Weight** 90 mg max  
**Interwinding isolation** 300 V  
**Ambient temperature** –40°C to +85°C  
**Storage temperature** Component: –40°C to +85°C. Tape and reel packaging: –40°C to +80°C  
**Resistance to soldering heat** Max three 40 second refows 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** 750/7” reel; 3000/13” reel; Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 2.9 mm pocket depth  
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).  

<table>
<thead>
<tr>
<th>Part number¹</th>
<th>Impedance ratio pri: sec</th>
<th>Bandwidth (MHz)</th>
<th>Insertion loss max (dB)</th>
<th>Pins 1–4</th>
<th>Pins 2–3</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA4220-AL_</td>
<td>1:1</td>
<td>0.1 – 3500</td>
<td>0.2</td>
<td>L min²</td>
<td>DCR max³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>120</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging code:  

**JA4220-ALC**  
**Termination:** L = RoHS compliant tin-silver-copper over silver-platinum-glass frit.  
Special order: S = non-RoHS tin-lead (63/37).  
**Packaging:**  
C = 7” machine-ready reel. EIA-481 embossed plastic tape (750 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 C instead.  
D = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (3000 parts per full reel).  

2. Inductance measured at 1 MHz, 0.1 V, 0 A dc on an Agilent/HP 4192 or equivalent.  
3. DCR measured on a micro-ohmmeter.  
4. Electrical specifications at 25°C. Measurements are referenced to 50 Ohms.  
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
SMT Mini Wideband Transformer – JA4220-AL

Dot indicates pin 1

Recommended Land Pattern

Dimensions are in inches

Nominal dimensions of the substrate