Wideband Bias Chokes – 4310LC

- Flat bandwidth with high impedance to 6 GHz
- Low DCR and excellent current handling
- Ideal for use in high current bias Tee applications

#### Core material
Ferrite

#### Environmental
RoHS compliant, halogen free

#### Terminations
RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.

#### Weight
0.42 g

#### Ambient temperature
-40°C to +85°C with Irms current.

#### Maximum part temperature
+125°C (ambient + temp rise)

#### 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 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)
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

#### Packaging
350/7″ reel, 1500/13″ reel; Plastic tape: 24 mm wide, 0.3 mm thick, 12 mm pocket spacing, 3.5 mm pocket depth

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

#### Inductance
2

#### SRF (typ)
3

#### DCR (max)
4

#### Irms (A)
5

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance</th>
<th>SRF (typ)</th>
<th>DCR (max)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310LC-132KE_</td>
<td>1.30 ±10% (µH)</td>
<td>235 MHz</td>
<td>15.1 mOhm</td>
<td>2.7 A</td>
</tr>
<tr>
<td>4310LC-352KE_</td>
<td>3.50</td>
<td>188 MHz</td>
<td>49.0 mOhm</td>
<td>2.3 A</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

- **4310LC-132KE**
  - Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (350 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 (1500 parts per full reel).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 16193 fixture in Agilent/HP 4284A impedance analyzer or equivalents.

3. SRF measured using Agilent/HP 8753D network analyzer or equivalent and a Coilcraft SMD-F test fixture.

4. DCR measured on Keithley 580 micro-ohmmeter or equivalent.

5. Current that causes the specified temperature rise from 25°C ambient.

Because of their open construction, these parts will not saturate.

7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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**Insertion Loss** (Ref: 50 Ohms)

**Impedance vs Frequency**

Insertion loss measured in a bias tee configuration with an Agilent/HP 8753ES network analyzer.

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>S21 (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>100</td>
<td>1000</td>
</tr>
<tr>
<td>1000</td>
<td>10000</td>
</tr>
</tbody>
</table>

Port 1 Port 2

**Impedance (Ohms)**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Impedance (Ohms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
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<td>100</td>
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