SMT Data Line EMI Filters  DFT7160

• Current-compensated ring core double choke
• Miniature footprint; less than 5 mm tall
• Exceptional common mode noise attenuation.
• 250 Vrms, one minute isolation (hipot) between windings

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Common mode impedance max (kΩms)</th>
<th>Cutoff frequency2 (MHz)</th>
<th>Inductance (mH)3</th>
<th>Test frequency (kHz)</th>
<th>Irms4 (mA)</th>
<th>DCR max5 (Ωms)</th>
<th>Leakage inductance max (µH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFT7160-513SL_</td>
<td>3.97 @ 69 MHz</td>
<td>25</td>
<td>0.051</td>
<td>0.0357</td>
<td>100</td>
<td>700</td>
<td>0.300</td>
</tr>
<tr>
<td>DFT7160-513BL_</td>
<td>4.00 @ 55 MHz</td>
<td>570</td>
<td>0.051</td>
<td>0.0357</td>
<td>100</td>
<td>700</td>
<td>0.300</td>
</tr>
<tr>
<td>DFT7160-474BL_</td>
<td>2.42 @ 7.5 MHz</td>
<td>410</td>
<td>0.47</td>
<td>0.329</td>
<td>100</td>
<td>1000</td>
<td>0.210</td>
</tr>
<tr>
<td>DFT7160-105BL_</td>
<td>3.12 @ 6.0 MHz</td>
<td>420</td>
<td>1.0</td>
<td>0.700</td>
<td>10</td>
<td>900</td>
<td>0.210</td>
</tr>
<tr>
<td>DFT7160-225BL_</td>
<td>6.66 @ 4.7 MHz</td>
<td>670</td>
<td>2.2</td>
<td>1.54</td>
<td>10</td>
<td>600</td>
<td>0.500</td>
</tr>
<tr>
<td>DFT7160-475BL_</td>
<td>13.47 @ 3.0 MHz</td>
<td>440</td>
<td>4.7</td>
<td>3.29</td>
<td>10</td>
<td>500</td>
<td>0.600</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

- Packaging: **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (250 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 (1000 parts per full reel).

2. Frequency at which the differential mode attenuation equals 3 dB

3. Inductance is for each winding, measured at test frequency using an Agilent/HP 4286A impedance analyzer and a Coilcraft SMD-A fixture


5. DCR is specified per winding.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

- Core material  Ferrite
- Environmental  RoHS compliant
- Terminations  RoHS compliant matte tin over nickel over phos-bronze
- Weight 220 – 230 mg
- Ambient temperature –40°C to +85°C with Irms current
- Maximum part temperature +105°C (ambient + temp rise)
- Storage temperature Component: –40°C to +105°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 250/7” reel; 1000/13” reel Plastic tape: 16 mm wide, 0.4 mm thick, 12 mm pocket spacing, 4.8 mm pocket depth
- PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.
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Attenuation vs Frequency

Differential Mode

Common Mode
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Impedance vs Frequency

**Differential Mode**

**Common Mode**