**VDSL Transformers**

For Ikanos SmartLeap

These surface mount transformers are designed specifically for use with the Ikanos SmartLeap chipset series for high-speed telecom applications.

They are available in 6-pin and 8-pin versions for both ANSI and ETSI standards. They all feature 60 dB minimum longitudinal balance, −75 dB maximum harmonic distortion and 1500 V winding-to-winding isolation.

Coilcraft can also custom engineer transformers to meet your specific requirements. For free evaluation samples, contact Coilcraft or visit [www.coilcraft.com](http://www.coilcraft.com).

### Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Standard</th>
<th>Number of pins</th>
<th>Inductance1</th>
<th>DCR max (Ohms)</th>
<th>Leakage inductance2</th>
<th>Turns ratio line:chip</th>
<th>Capacitance3</th>
<th>Stray capacitance4</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0233-A</td>
<td>ANSI</td>
<td>6</td>
<td>200</td>
<td>1.00</td>
<td>0.184</td>
<td>3:1</td>
<td>10.0</td>
<td>25.0</td>
</tr>
<tr>
<td>C0971-A</td>
<td>ANSI</td>
<td>8</td>
<td>200</td>
<td>0.913</td>
<td>0.154</td>
<td>3:1</td>
<td>25.0</td>
<td>25.0</td>
</tr>
<tr>
<td>B0709-B</td>
<td>ETSI</td>
<td>6</td>
<td>200</td>
<td>0.913</td>
<td>0.113</td>
<td>7:2</td>
<td>25.0</td>
<td>15.0</td>
</tr>
<tr>
<td>B0749-B</td>
<td>ETSI</td>
<td>8</td>
<td>200</td>
<td>0.913</td>
<td>0.113</td>
<td>7:2</td>
<td>25.0</td>
<td>15.0</td>
</tr>
</tbody>
</table>

1. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc.
2. Leakage inductance tested across the primary with the secondary shorted.
3. Capacitance tested between windings with 0.1 Vrms applied at 80 kHz.
4. Stray capacitance tested across the primary with 0.1 Vrms applied at 2.5 MHz.
5. Operating temperature range −40°C to +85°C.
6. Electrical specifications at 25°C

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

**Schematics**

- **B0233-A, B0709-B**
  - Line side
  - Chip side

- **C0971-A, B0749-B**
  - Line side
  - Chip side

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This product is not RoHS-compliant. Contact Coilcraft for current status or possible alternatives.
VDSL Transformers for Ikanos SmartLeap

B0749-B, C0971-A

B0233-A, B0709-B

Packaging 300 per 13" reel  Plastic tape: 32 mm wide, 0.42 mm thick, 32 mm pocket spacing, 10.7 mm pocket depth

Packaging 450 per 13" reel  Plastic tape: 24 mm wide, 0.45 mm thick, 16 mm pocket spacing, 9.0 mm pocket depth

Core material  Ferrite
Terminations  Non-RoHS tin-lead over nickel over phos bronze.
Weight  1.8 – 2.0 g
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 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
PCB washing  Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf