**VSM – Vertical (Male)**

**Pitch:** 1.27 mm

VSM signal-integrity connectors are used in vertical, PCB-mount applications where a male interface is required. Termination styles include press-fit, paste-in-hole, plated thru-hole, and surface-mount.

**Contact Rating:** 2 amperes maximum

**Operating Temperature:** -55° C to 125° C

**Min Contact Wipe:** 0.127 mm (0.050”)

**Contact Normal Force:** 35–40 grams

**Max Recommended Voltage:** 200 V, RMS, 60 Hz

**Insulation Resistance:** 5,000 megaohms minimum @ 500 VDC

**Durability:** 2500 connector mating cycles

**Sinusoidal Vibration:** 20 g (EIA-364-28, condition IV)

**Shock:** 50 g (EIA-364-27, condition E)

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**FEATURES**

- **versi** board-mount connectors feature low mating force/high-reliability contact system with four points of contact. The open-pin field design allows for flexibility in termination schemes. Single-ended, differential pair, power, and ground are all available in one connector design. Guide hardware is optional.

**MATERIALS and FINISHES**

- Pin Contacts: Phos bronze per ASTM B103 or BeCu per ASTM B768 (press-fit contact)
- Contact Finish: Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I, 50 µIN min
- Molded Insulators: Glass-filled liquid crystal polymer (LCP) per ASTM D5138
- Potting Compound: Frey Eng. Co. insulating compound CF3003-80
- Hardware (except washers): Stainless steel per ASTM A484/A484M, ASTM A582/A582M, or ASTM A320 passivated per SAE AMS-2700, Method 1, Type 2
- Washers: Stainless steel per NASM35333 (ASTM A240), passivated per NASM35333 (SAE AMS-2700)
- Solder Paste: Sn63Pb37 (PN WS483) and 42Sn/57.6Bi/0.4Ag (PN ALPHA CVP-520)

**PERFORMANCE**

- **Contact Rating:** 2 amperes maximum
- **Operating Temperature:** -55° C to 125° C
- **Min. Contact Wipe:** 0.127 mm (0.050”)
- **Contact Normal Force:** 35–40 grams
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- **Insulation Resistance:** 5,000 megaohms minimum @ 500 VDC
- **Durability:** 2500 connector mating cycles
- **Sinusoidal Vibration:** 20 g (EIA-364-28, condition IV)
- **Shock:** 50 g (EIA-364-27, condition E)

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**NOTES**

- Connector potting is standard.
- *Consult factory for additional board spacing options.
- †Used for PC board thickness 0.125” up to 0.250”
- ‡Surface Mount Termination only available on 4 Row vertical connectors.
- ‡No hardware supplied with blank hardware option connectors.
- AirBorn can manufacture other configurations to your exact specifications.
- RoHS Compliant (except for termination option 10); certificate of conformance available upon request with each shipment.

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**SI DATA – Simulated (Connectors Only)**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Diff. Insertion Loss</td>
<td>-0.25 dB @ 5 GHz – 3dB @ 16 GHz</td>
</tr>
<tr>
<td>2. Diff. Return Loss</td>
<td>-20 dB @ 5 GHz – -6 dB @ 14 GHz</td>
</tr>
<tr>
<td>3. Diff. Impedance</td>
<td>100 ohm ±10% @ 50 ps rise time</td>
</tr>
<tr>
<td>4. Diff. Skew</td>
<td>&lt; 2 psec</td>
</tr>
</tbody>
</table>

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**VSM-PNB-1R**