



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.

DIMENSIONS

COLUMNS	A	B	C	ROWS	D
10	1.000	0.813	0.450	4	0.300
20	1.500	1.313	0.950	5	0.350
30	2.000	1.813	1.450	6	0.400
40	2.500	2.313	1.950	8	0.500
50	3.000	2.813	2.450	10	0.600

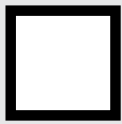
SPACING OPTION CODES	E		F	
	inches	mm	inches	mm
-080	0.235	5.95	0.290	7.36
-100	0.314	7.79	0.369	9.37
-120	0.392	9.95	0.447	11.35
-160	0.550	13.96	0.605	15.36
-200	0.707	17.94	0.762	19.34
-250	0.904	22.94	0.959	24.34

SPACING OPTIONS	E	F
8 mm	0.235	0.290
10 mm	0.314	0.369
12 mm	0.392	0.447
16 mm	0.550	0.605
20 mm	0.707	0.762
25 mm	0.904	0.959

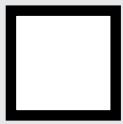
Sample Part Number Format: VSM-04-10-080-50-02-G



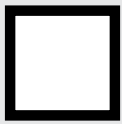
SERIES
 Vertical (Male)
 1.27 mm



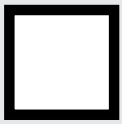
ROWS
 04 – 4 Rows
 05 – 5 Rows
 06 – 6 Rows
 08 – 8 Rows
 10 – 10 Rows



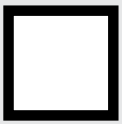
COLUMNS
 10 – 10 Columns
 20 – 20 Columns
 30 – 30 Columns
 40 – 40 Columns
 50 – 50 Columns



BOARD SPACING*
 080 – 8 mm
 100 – 10 mm
 120 – 12 mm
 160 – 16 mm
 200 – 20 mm
 250 – 25 mm



CONTACT PLATING
 50 – 50 μ" Au



TERMINATION
 00 – Press-fit
 01 – Paste-In-hole
 02 – PTH 0.078"
 03 – PTH 0.109"
 04 – PTH 0.140"
 05 – PTH 0.156"
 06 – PTH 0.172"
 10¹ – SMT - SN63PB37 Solder Dipped
 11¹ – SMT - 42Sn/57.6Bi/0.4Ag lead free, solder dipped



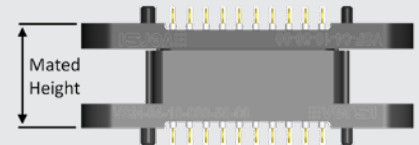
OPTIONS
 Blank – No options¹
 G – Guide pin¹
 G1 – Guide pin²
 J – Turning jackscrew¹
 J1 – Turning jackscrew²
 L – Locking screw¹
 L1 – Locking screw²
 N – Fixed jacknut¹
 N1 – Fixed jacknut²

NOTES

- Connector potting is standard.
- * Consult factory for additional board spacing options.
- ¹ Used for PC board thickness up to 0.125"
- ² 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

BOARD SPACING		MATED HEIGHT (in)
VALUE	CODE	NOMINAL
8 mm	080	0.315
10 mm	100	0.394
12 mm	120	0.473
16 mm	160	0.630
20 mm	200	0.788
25 mm	250	0.985

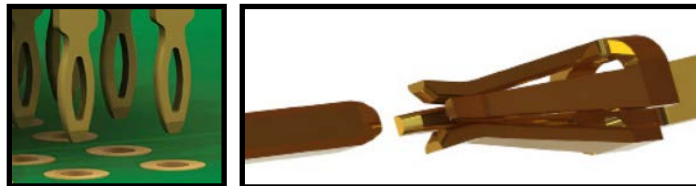
Max allowable separation between mating faces is 0.035 inches.



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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)

SI DATA – Simulated (Connectors Only)

1	Diff. Insertion Loss	-0.25 dB @ 5 GHz	-3dB @ 16 GHz
2	Diff. Return Loss	-20 dB @ 5 GHz	-6 dB @ 14 GHz
3	Diff. Impedance	100 ohm ±10% @ 50 ps rise time	
4	Diff. Skew	< 2 psec	

PERFORMANCE

- Contact Rating: 2 amperes maximum
- Operating Temperature: -55° C to 125° C
- Min. Contact Wipe: 1.27 mm (0.050")
- Contact Normal Force: 35–40 grams
- Max Recommended Voltage: 200 V, RMS, 60 Hz
- Insulation Resistance: 5,000 megohms 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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