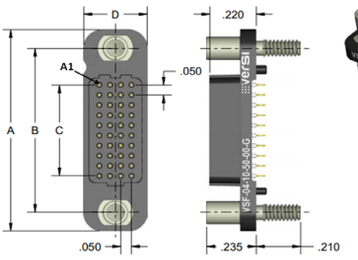
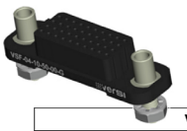
VSF – Vertical (Female)

Pitch: 1.27 mm

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

DIMENSIONS





VSF 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

Sample Part Number Format: VSF-04-10-50-02

VSF – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

SERIES
Vertical (Female)
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

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"
10† – SMT - SN63PB37 Solder Dipped
11† – SMT - 42Sn/57.6Bi/0.4Ag lead free, solder dipped

OPTIONS
Blank – No hardware‡
G – Guide socket[1]
G1 – Guide socket[2]
J – Turning jackscrew[1]
J1 – Turning jackscrew[2]
L – Locking screw[1]
L1 – Locking screw[2]
N – Fixed jacknut[1]
N1 – Fixed jacknut[2]

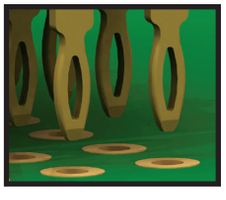
NOTES

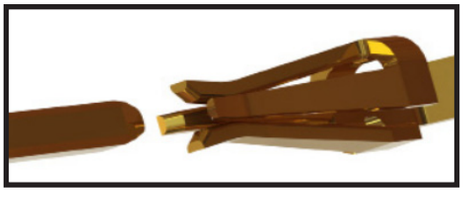
Connector potting is standard.
[1] Used for PC board thickness up to 0.125"
[2] Used for PC board thickness 0.125" up to 0.250"
† Surface Mount Termination only available on 4 Row vertical connectors.
‡ No hardware supplied with blank hardware option connectors.
AirBorn can manufacture other configurations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

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

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

Socket Contacts: . . . . . .BeCu per ASTM B194
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 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)