

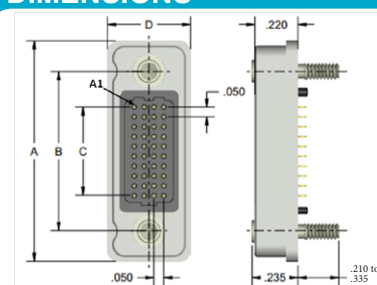



**VRF – Vertical Rugged**

**Pitch: 1.27 mm**

VRF signal-integrity connectors are ruggedized versions of the standard VSF female connectors. These connectors can be used in extreme environmental conditions while maintaining high reliability and continuous performance.

**DIMENSIONS**



VRF DIMENSIONS						
Columns	A	B	C	Rows	D	
10	1.125	0.813	0.450	4	0.425	
20	1.625	1.313	0.950	5	0.475	
30	2.125	1.813	1.450	6	0.525	
40	2.625	2.313	1.950	8	0.625	
50	3.125	2.813	2.450	10	0.725	

**Sample Part Number Format: VRF-04-10-30-04-J**



**SERIES**  
Vertical Rugged  
(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**  
30 – 30 μ" Au  
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"



**OPTIONS**  
Blank – No options  
G – Guide socket (boards up to .125" thk)  
G1 – Guide socket (boards .125"- .250" thk)  
J – #2-56 Jackscrew (boards up to .125" thk)  
J1 – #2-56 Jackscrew (boards .125"- .250" thk)  
L – #2-56 Locking screw (boards up to .125" thk)  
L1 – #2-56 Locking screw (boards .125"- .250" thk)  
N – #2-56 Locking jacknut (boards up to .125" thk)  
N1 – #2-56 Locking jacknut (boards .125"- .250" thk)  
GE – Guide pin/EMI gasket (boards up to .125" thk)  
G1E – Guide pin/EMI gasket (boards .125"- .250" thk)  
NE – #2-56 Locking jacknut/EMI gasket (boards up to .125" thk)  
N1E – #2-56 Locking jacknut/EMI gasket (boards .125"- .250" thk)

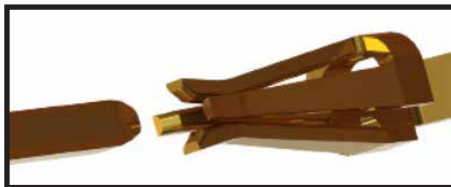
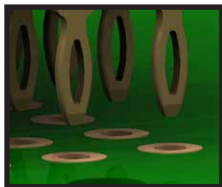
**NOTES**

Connector potting is standard.

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**

Shell: . . . . . Aluminum alloy 6061-T6 per QQ-A-250/11 or 6061-T6511 per QQ-A-200/8  
Finish: . . . . . Electroless nickel per SAE AMS-C-26074, Grade B, Class 3  
Socket Contact: . . . . . BeCu per ASTM B194  
Contact Finish: . . . . . Localized gold finish per ASTM B488 over nickel per ASTM B689 Type I  
Molded Insulators: . . . . . Glass-filled liquid crystal polymer (LCP) per ASTM D5138  
Hardware: . . . . . Stainless steel per ASTM A582/A582M or ASTM A320; passivated per ASTM A967, SAE AMS-QQ-P-35

NOTE: AirBorn can manufacture other configurations to your exact specifications.

**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)

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

1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	