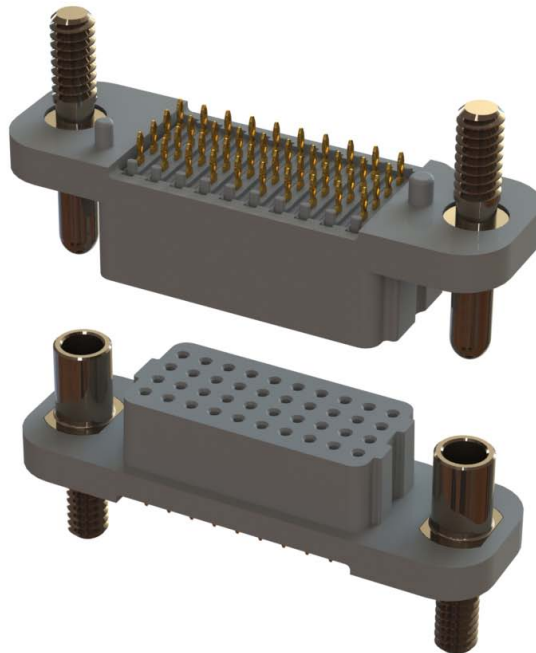


# **verSI**

The AirBorn verSI (versatile connectors with high-speed signal integrity) open-pin field product line is designed to meet the requirements for high-speed/high-density/signal integrity 100  $\Omega$  and 85  $\Omega$  differential serial bus applications while still delivering the reliability customers have come to expect from AirBorn.

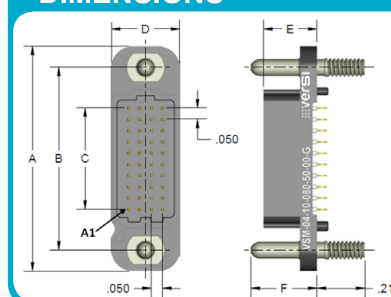




**VSM – Vertical (Male) 1.27 mm Pitch**

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 and plated thru-hole.

### 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	0.700

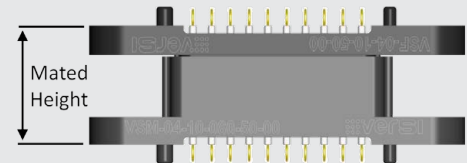
SPACING OPTION CODES	E		F		SPACING OPTIONS	E	F
	inches	mm	inches	mm			
-080	0.235	5.96	0.290	7.36	8 mm	0.235	0.290
-100	0.314	7.79	0.369	9.37	10 mm	0.314	0.369
-120	0.392	9.95	0.447	11.35	12 mm	0.392	0.447
-160	0.550	13.96	0.605	15.36	16 mm	0.550	0.605
-200	0.707	17.94	0.762	19.34	20 mm	0.707	0.762
-250	0.904	22.94	0.959	24.34	25 mm	0.904	0.959

**ORDER FORM**

Sample Part Number Format: **VSM-XX-XX-XXX-XX-XX (-X)**

<b>VSM</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>
<p><b>SERIES</b> Vertical (Male) 1.27 mm</p>	<p><b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows</p>	<p><b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns</p>	<p><b>BOARD SPACING*</b> 080 – 8 mm 100 – 10 mm 120 – 12 mm 160 – 16 mm 200 – 20 mm 250 – 25 mm</p>	<p><b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au</p>	<p><b>TERMINATION</b> 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"</p>	<p><b>OPTIONS</b> Blank – No Options G – Guide Pin Hardware J – Jackscrew L – Locking Screw</p>

SPACING OPTIONS	OPTION CODE	MATED HEIGHT
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

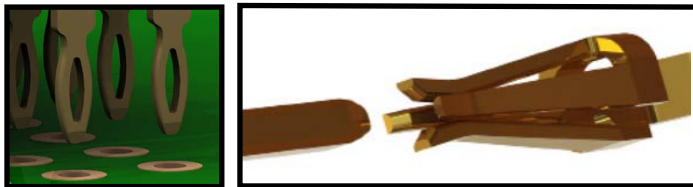


**NOTES**

Connector potting is standard  
\* Board spacing may be ordered from 8–25 mm in 1 mm increments.

**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.



### 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	

**MATERIALS and FINISHES**

Pin Contacts: . . . . . Phos bronze per ASTM B103 or per BeCu ASTM B768 (press-fit contact)  
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**

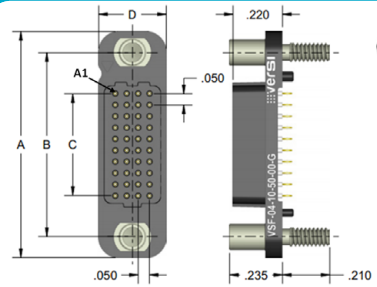
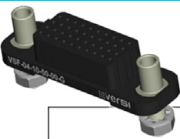
Contact Rating: . . . . . 2 amperes maximum  
Operating Temperature: . . . . . -55° C to 125° C  
Min. Contact Wipe: . . . . . 1.27 mm (0.050")  
Contact Normal Force: . . . . . .35–40 grams  
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz  
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC  
Durability: . . . . . 2500 connector mating cycles  
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)  
Shock: . . . . . 50 g (EIA-364-27, condition E)



**VSF – Vertical (Female) 1.27 mm Pitch**

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 or plated thru-hole.

**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	0.700

**ORDER FORM**

Sample Part Number Format: **VSF-XX-XX-XX-XX (-X)**

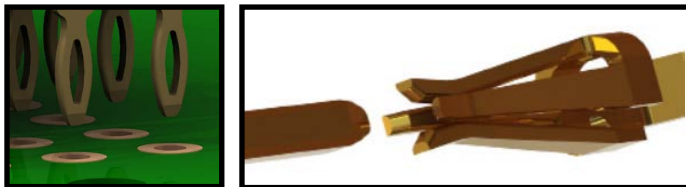
ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>VSF</b>					
<b>SERIES</b> Vertical (Female) 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>TERMINATION</b> 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"	<b>OPTIONS</b> Blank – No Options G – Guide Socket N – Locking Jacknut

**NOTES**

Connector potting is standard.

**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 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.

**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	

**PERFORMANCE**

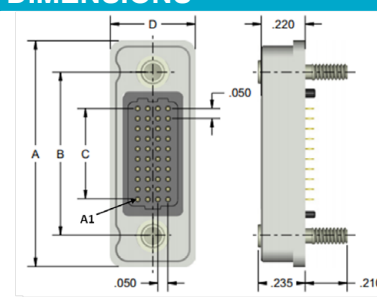
Contact Rating: . . . . . 2 amperes maximum  
Operating Temperature: . . . . . -55° C to 125° C  
Min. Contact Wipe: . . . . . 1.27 mm (0.050")  
Contact Normal Force: . . . . . .35–40 grams  
Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz  
Insulation Resistance: . . . . . 5,000 megaohms minimum @ 500 VDC  
Durability: . . . . . 2500 connector mating cycles  
Sinusoidal Vibration: . . . . . 20 g (EIA-364-28, condition IV)  
Shock: . . . . . 50 g (EIA-364-27, condition E)



**VRM – Vertical Rugged (Male)**  
**1.27 mm Pitch**

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

**DIMENSIONS**



VRM 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

BOARD SPACING		
	E	F
8 mm	0.239	n/a
10 mm	0.319	0.374
12 mm	0.397	0.452
16 mm	0.555	0.610
20 mm	0.712	0.767
25 mm	0.909	0.964

**ORDER FORM**

Sample Part Number Format: **VRM-XX-XX-XXX-XX-XX (-X)**

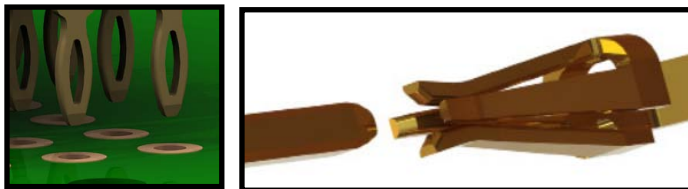
ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>VRM</b>						
<b>SERIES</b> Vertical Rugged (Male) 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>BOARD SPACING*</b> 080 – 8 mm 100 – 10 mm 120 – 12 mm 160 – 16 mm 200 – 20 mm 250 – 25 mm	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>TERMINATION</b> 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"	<b>OPTIONS</b> Blank – No Options G – Guide Pin Hardware** J – Jackscrew** L – Locking screw**

**NOTES**

Connector potting is standard.  
\* Board spacing may be ordered from 8–25 mm in 1 mm increments.  
\*\* Not available with 8 mm board spacing

**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  
Pin Contacts: Phos bronze per ASTM B103 or per BeCu ASTM B768 (press-fit contact)  
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.

**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	

**PERFORMANCE**

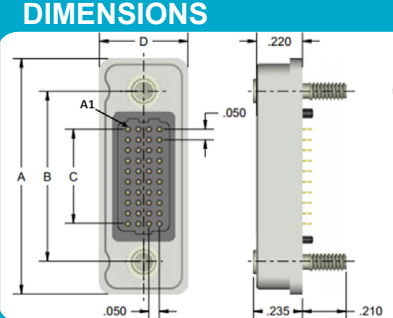
Contact Rating: 2 amperes maximum  
Operating Temperature: -55° C to 125° C  
Min. Contact Wipe: 1.27 mm (0.050")  
Contact Normal Force: .35–40 grams  
Max Recommended Voltage: 200 V, RMS, 60 Hz  
Insulation Resistance: 5,000 megaohms minimum @ 500 VDC  
Durability: 2500 connector mating cycles  
Sinusoidal Vibration: 20 g (EIA-364-28, condition IV)  
Shock: 50 g (EIA-364-27, condition E)



**VRF – Vertical Rugged (Female)**  
**1.27 mm Pitch**

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

**ORDER FORM**

Sample Part Number Format: **VRF-XX-XX-XX-XX (-X)**

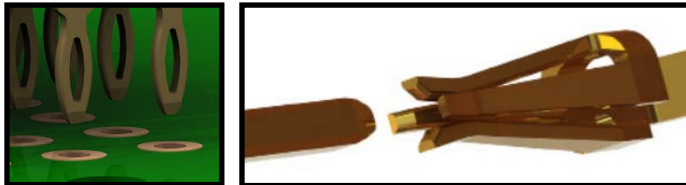
ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>VRF</b>					
<b>SERIES</b> Vertical Rugged (Female) 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>TERMINATION</b> 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"	<b>OPTIONS</b> Blank – No Options G – Guide Hardware N – Locking/Jacknut

**NOTES**

Connector potting is standard.

**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)**

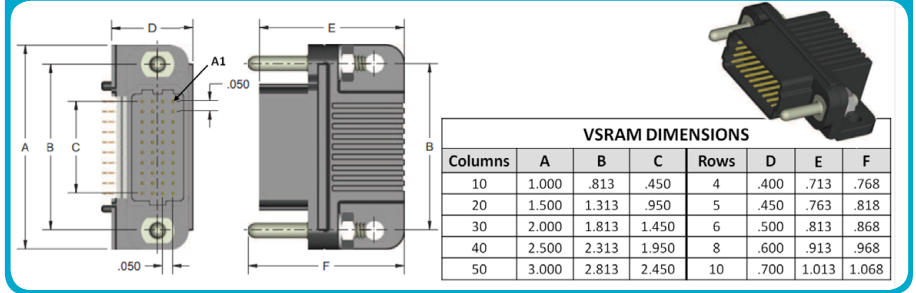
1	Diff. Insertion Loss	22 GHz @ -2 db	
2	Diff. Return Loss	7.5 GHz @ -20 db	17.5 GHz @ -10 db
3	Diff. Impedance	100 ohm ±10%	
4	Diff. Skew	< 2 psec	



**VSRAM – Right Angle (Male)**  
**1.27 mm Pitch**

VSRAM signal-integrity connectors are used in right angle, PCB-mount applications where a male interface is required. Termination styles include press-fit, paste-in-hole or plated thru-hole.

### DIMENSIONS



VSRAM DIMENSIONS							
Columns	A	B	C	Rows	D	E	F
10	1.000	.813	.450	4	.400	.713	.768
20	1.500	1.313	.950	5	.450	.763	.818
30	2.000	1.813	1.450	6	.500	.813	.868
40	2.500	2.313	1.950	8	.600	.913	.968
50	3.000	2.813	2.450	10	.700	1.013	1.068

### ORDER FORM

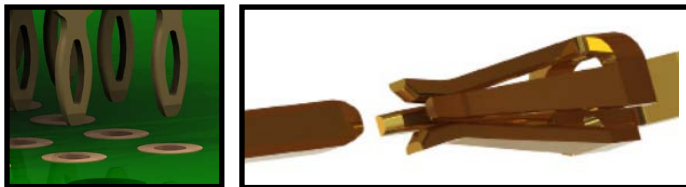
Sample Part Number Format: **VSRAM-XX-XX-XX-XX (-X)**

<b>VSRAM</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>	<b>ENTER CODE</b>
<b>SERIES</b> Right Angle (Male) 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>TERMINATION</b> 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"	<b>OPTIONS</b> Blank – No Options G – Guide Hardware N – #2-56 Threaded Nut

**NOTES**  
Connector potting is standard.

### 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.



### 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	

### MATERIALS and FINISHES

Pin Contacts (Mating Face): Phos bronze per ASTM B103  
 Pin Contacts (Termination): BeCu ASTM B768 (press-fit contact) or brass alloy per ASTM B36 (PIH or PTH)  
 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

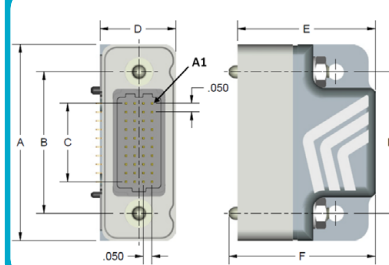
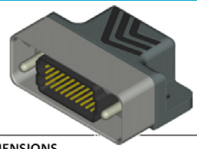
Contact Rating: 2 amperes maximum  
 Operating Temperature: -55° C to 125° C  
 Min. Contact Wipe: 1.27 mm (0.050")  
 Contact Normal Force: .35–40 grams  
 Max Recommended Voltage: 200 V, RMS, 60 Hz  
 Insulation Resistance: 5,000 megaohms minimum @ 500 VDC  
 Durability: 2500 connector mating cycles  
 Sinusoidal Vibration: 20 g (EIA-364-28, condition IV)  
 Shock: 50 g (EIA-364-27, condition E)



**VRRAM – Rugged Right Angle (Male) 1.27 mm Pitch**

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

**DIMENSIONS**

VRRAM DIMENSIONS							
Columns	A	B	C	Rows	D	E	F
10	1.125	0.813	0.450	4	0.438	0.795	0.845
20	1.625	1.313	0.950	5	0.488	0.845	0.868
30	2.125	1.813	1.450	6	0.538	0.895	0.945
40	2.625	2.313	1.950	8	0.638	0.995	1.045
50	3.125	2.813	2.450	10	0.738	1.095	1.145

**ORDER FORM**

Sample Part Number Format: VRRAM-XX-XX-XX-XX (-X)

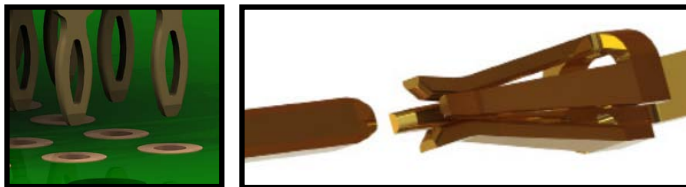
ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>VRRAM</b>					
<b>SERIES</b> Rugged Right Angle (Male) 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>TERMINATION</b> 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"	<b>OPTIONS</b> Blank – No Options G – Guide Hardware N – #2-56 Threaded Nut

**NOTES**

Connector potting is standard.

**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  
 Pin Contacts (Mating Face): . . . . . Phos bronze per ASTM B103  
 Pin Contacts (Termination): . . . . . BeCu ASTM B768 (press-fit contact) or brass alloy per ASTM B36 (PIH or PTH)  
 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.

**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	

**PERFORMANCE**

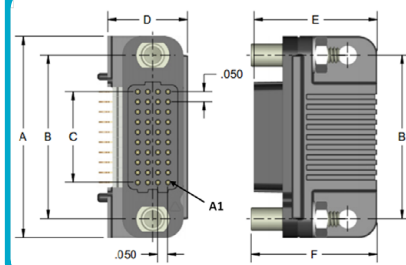
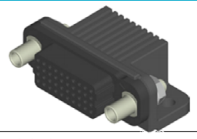
Contact Rating: . . . . . 2 amperes maximum  
 Operating Temperature: . . . . . -55° C to 125° C  
 Min. Contact Wipe: . . . . . 1.27 mm (0.050")  
 Contact Normal Force: . . . . . .35–40 grams  
 Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz  
 Insulation Resistance: . . . . . 5,000 megaohms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



**VSRAF – Right Angle (Female)**  
**1.27 mm Pitch**

VSRAF signal-integrity connectors are used in right angle, PCB-mount applications where a female interface is required. Termination styles include press-fit, paste-in-hole or plated thru-hole.

**DIMENSIONS**

VSRAF DIMENSIONS							
Columns	A	B	C	Rows	D	E	F
10	1.125	0.813	0.450	4	0.438	0.795	0.845
20	1.625	1.313	0.950	5	0.488	0.845	0.868
30	2.125	1.813	1.450	6	0.538	0.895	0.945
40	2.625	2.313	1.950	8	0.638	0.995	1.045
50	3.125	2.813	2.450	10	0.738	1.095	1.145

**ORDER FORM**

Sample Part Number Format: VSRAF-XX-XX-XX-XX (-X)

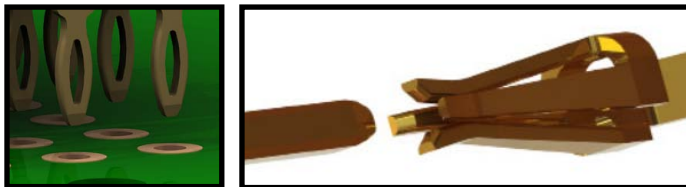
VSRAF	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>SERIES</b> Right Angle (Female) 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>TERMINATION</b> 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"	<b>OPTIONS</b> Blank – No Options G – Guide Hardware N – #2-56 Threaded Nut

**NOTES**

Connector potting is standard.

**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 Contact (Mating Face): . . . . . BeCu per ASTM B194  
 Socket Contact (Termination): . . . . . Brass alloy per ASTM B36 (PIH or PTH) or BeCu per ASTM B194 (press-fit contact)  
 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.

**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	

**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)

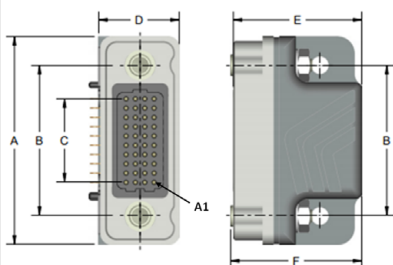
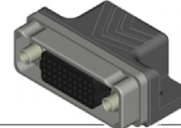




**VRRAF – Rugged Right Angle (Female)**

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

**DIMENSIONS**

VRRAF DIMENSIONS							
Columns	A	B	C	Rows	D	E	F
10	1.125	0.813	0.450	4	0.438	0.699	0.715
20	1.625	1.313	0.950	5	0.488	0.749	0.765
30	2.125	1.813	1.450	6	0.538	0.799	0.815
40	2.625	2.313	1.950	8	0.638	0.899	0.915
50	3.125	2.813	2.450	10	0.738	0.999	1.015

**ORDER FORM**

Sample Part Number Format: VRRAF-XX-XX-XX-XX (-X)

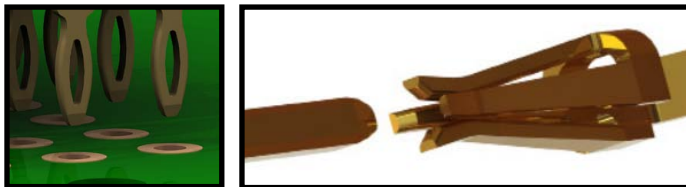
ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>VRRAF</b>					
<b>SERIES</b> Rugged Right Angle (Female) 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>TERMINATION</b> 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"	<b>OPTIONS</b> Blank – No Options G – Guide Hardware E – EMI Gasket GE – Guide Hardware / EMI Gasket N – #2-56 Nut NE – #2-56 Nut / EMI Gasket

**NOTES**

Connector potting is standard.

**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.



**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	

**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 (Mating Face): . . . . . BeCu per ASTM B194  
 Socket Contact (Termination): . . . . . Brass alloy per ASTM B36 (PIH or PTH) or BeCu per ASTM B194 (press-fit contact)  
 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**

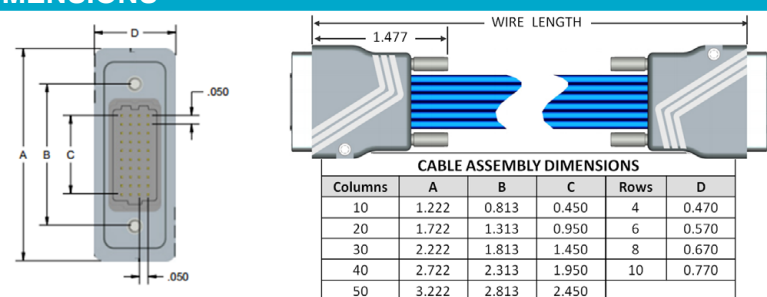
Contact Rating: . . . . . 2 amperes maximum  
 Operating Temperature: . . . . . -55° C to 125° C  
 Min. Contact Wipe: . . . . . 1.27 mm (0.050")  
 Contact Normal Force: . . . . . .35–40 grams  
 Max Recommended Voltage: . . . . . 200 V, RMS, 60 Hz  
 Insulation Resistance: . . . . . 5,000 megaohms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



**VRD – Differential Pair Twinax Cable Assembly, 1.27 mm Pitch**

VRD cable assemblies are designed for twinax applications. These cable assemblies come in standard lengths but custom lengths and configurations can also be requested. Ruggedized hoods are standard

**DIMENSIONS**



CABLE ASSEMBLY DIMENSIONS					
Columns	A	B	C	Rows	D
10	1.222	0.813	0.450	4	0.470
20	1.722	1.313	0.950	6	0.570
30	2.222	1.813	1.450	8	0.670
40	2.722	2.313	1.950	10	0.770
50	3.222	2.813	2.450		

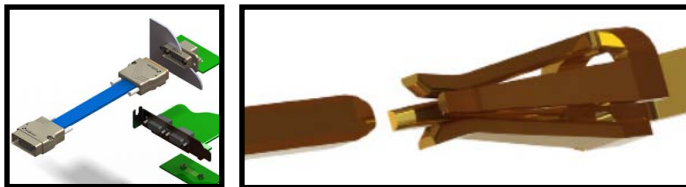
**ORDER FORM** Sample Part Number Format: VRD-XX-XX-XX-XX-XX-XXX

ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>VRD</b>						
<b>SERIES</b> Differential Pair Twinax Cable Assembly 1.27 mm	<b>ROWS</b> 04 – 4 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>CONNECTOR 1</b> 01 – Male 02 – Male, Panel Mount 03 – Female 04 – Female, Panel Mount	<b>CONNECTOR 2</b> 00 – Flying Leads 01 – Male 02 – Male, Panel Mount 03 – Female 04 – Female, Panel Mount	<b>LENGTH*</b> 030 – 0.30 M 040 – 0.40 M 050 – 0.50 M 060 – 0.60 M 070 – 0.70 M 080 – 0.80 M 090 – 0.90 M 100 – 1.00 M 150 – 1.50 M 200 – 2.00 M 300 – 3.00 M

**NOTES**  
\* Other cable lengths and configurations available.

**FEATURES**

verSI 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.



**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	

**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  
 Pin Contacts: Phos bronze per ASTM B103 or per BeCu ASTM B194 (press-fit contact)  
 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**

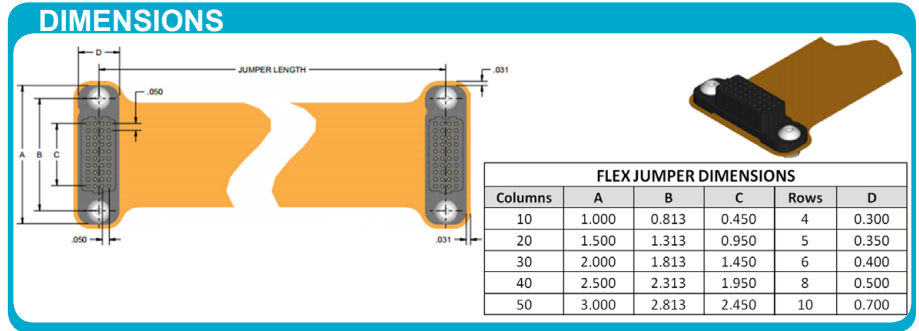
Contact Rating: 2 amperes maximum  
 Operating Temperature: -55° C to 125° C  
 Min. Contact Wipe: 1.27 mm (0.050")  
 Contact Normal Force: .35–40 grams  
 Max Recommended Voltage: 200 V, RMS, 60 Hz  
 Insulation Resistance: 5,000 megaohms minimum @ 500 VDC  
 Durability: 2500 connector mating cycles  
 Sinusoidal Vibration: 20 g (EIA-364-28, condition IV)  
 Shock: 50 g (EIA-364-27, condition E)



**VSX – Flexible Circuit Jumper Assembly**

VSX flexible circuit jumpers come in standard lengths and wiring configurations, but custom specifications can be requested.

**DIMENSIONS**



FLEX JUMPER 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	0.700

**ORDER FORM**

Sample Part Number Format: VSX-XX-XX-XX-XX-XX-XXX

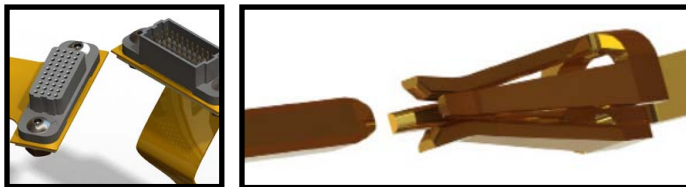
VSX	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE	ENTER CODE
<b>SERIES</b> Flexible Circuit Jumper 1.27 mm	<b>ROWS</b> 04 – 4 Rows 05 – 5 Rows 06 – 6 Rows 08 – 8 Rows 10 – 10 Rows	<b>COLUMNS</b> 10 – 10 Columns 20 – 20 Columns 30 – 30 Columns 40 – 40 Columns 50 – 50 Columns	<b>CONTACT PLATING</b> 30 – 30 μ" Au 50 – 50 μ" Au	<b>CONNECTOR 1</b> 01A – Male; No Hardware 03A – Female 01G – Male; Guide Pin Hardware 03G – Female; Guide Socket Hardware	<b>CONNECTOR 2</b> 01A – Male; No Hardware 03A – Female 01G – Male; Guide Pin Hardware 03G – Female; Guide Socket Hardware	<b>LENGTH*</b> 015 – 0.15 M 030 – 0.30 M 045 – 0.45 M

**NOTES**

\* Other cable lengths and configurations available.

**FEATURES**

verSI 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.



**MATERIALS and FINISHES**

Socket Contact: ..... BeCu per ASTM B194  
 Pin Contacts: ..... Phos bronze per ASTM B103 or per BeCu ASTM B768 (press-fit contact)  
 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.

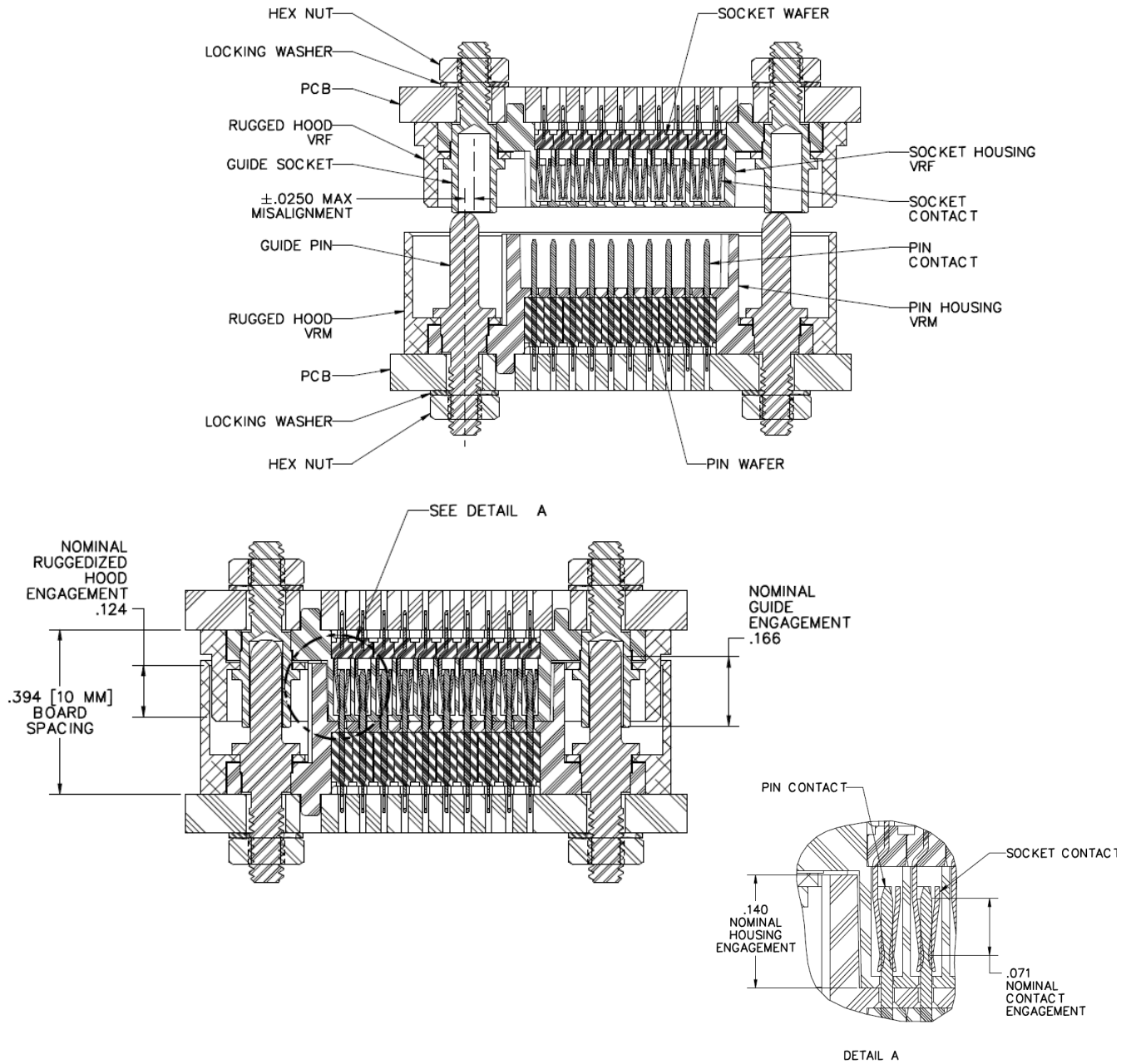
**SI DATA – Simulated (Connectors Only)**

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	

**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)

**verSI VERTICAL MISALIGNMENT AND ENGAGEMENT DIAGRAM**



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