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Painesville, OH 44077

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Hercules™ High-Speed D-Sub



The Hercules HS-D, High-Speed D-Sub, embedded in a rectangular VITA 92.0 style shell, provides a durable interconnect scheme that is suitable for ruggedized Military, Aerospace, and commercial applications that require a connector with high-bandwidth capability in a compact size for SWaP needs. Hercules HS-D supports data rates that can exceed 10 Gb/s per differential pair with low-skew signaling and shielding for EMI/RFI protection.

Features & Benefits

- Rugged, lightweight, machined VITA 92.0 style shells with gasketing for IP67 and EMI protection
- Supports data rates in excess of 10 Gb/s
- Differential pairs aligned in G-S-S-G layout
- Available in Plug-Cable Assemblies and Panel-Mount, Board-Mount Receptacles standard; SMT Tails available upon request
- Available in Shell Sizes A-E
- Available in positions 19, 31, 51, 75, and 108
- Cable types available in 24, 26, 28, and 30 AWG
- Custom-length cable assemblies available
- Customized shells and alternative space grade versions available

Electrical Performance

- Impedance: 100 ±10Ω differential at 100ps rise time
- Cross talk: < –35 dB up to 5GHz from multiple aggressors
- Insertion Loss: Max 1 dB up to 5 GHz
- Return Loss: Max 10 dB up to 5 GHz
- Power Per Contact: 3 Amp
- Insulation Resistance: 300 VDC, >300 MΩ, 60s Soak
- Dielectric Withstand Voltage: 300 VDC, <1mA, 60s Soak (1000 VDC available with custom materials)

Mechanical Performance

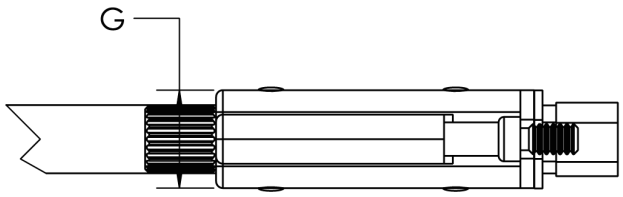
- Contact Material: Copper Alloy
- Standard Contact Finish: 100 µ-inch min AU Over 100 µ-inch min Ni
- Shell Mating Cycles: 500
- Shell Material: Aluminum Alloy / Zinc Alloy
- Shell Plating: Chromate Over Cadmium, Electroless Nickel, Black Zinc

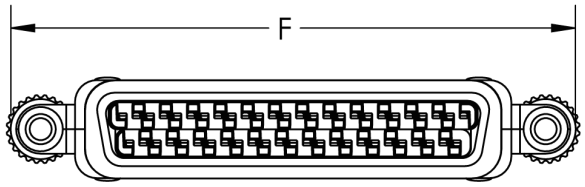
Environmental Performance

- -50 °C to +125 °C

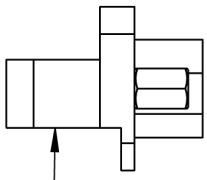
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Hercules HS-D is the Approved VITA-92.0 High-Speed Standard

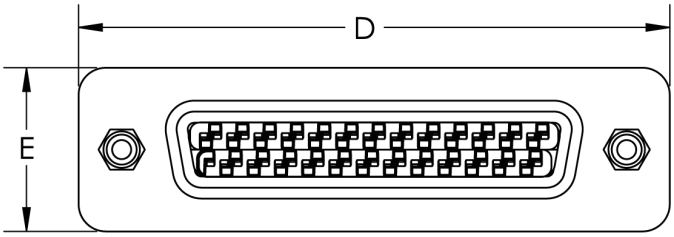




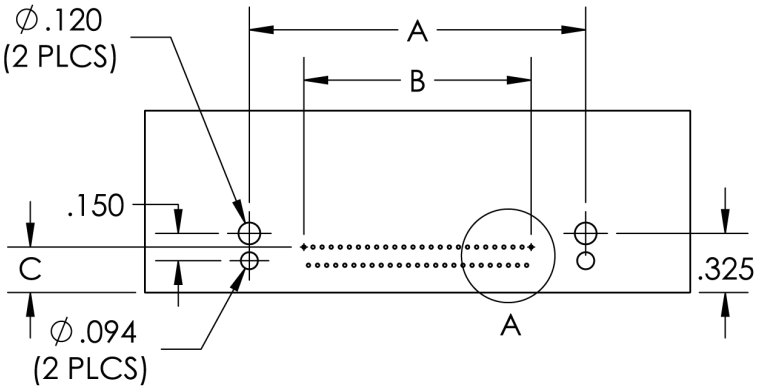
PLUG



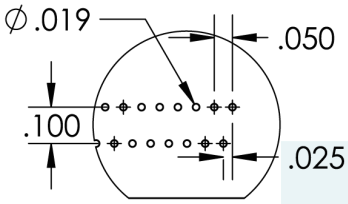
TOP SURFACE
OF BOARD



RECEPTACLE



RECOMENDED BOARD LAYOUT



DETAIL A
SCALE 2 : 1

VITA 92.0 Shell Size (Pin Count)	Contact Rows	Differential Pairs	Single Ended	A	B	C	D	E	F	G
A (19)	2	5	2	0.980 [24.89]	0.450 [11.43]	0.250 [6.35]	1.310 [33.27]	0.600 [15.24]	1.160 [29.46]	0.359 [9.12]
B (31)	2	9	2	1.310 [33.27]	0.750 [19.05]	0.250 [6.35]	1.591 [40.41]	0.600 [15.24]	1.490 [37.86]	0.359 [9.12]
C (51)	2	16	1	1.850 [46.99]	1.250 [31.75]	0.250 [6.35]	2.168 [55.07]	0.600 [15.24]	2.030 [51.56]	0.359 [9.12]
D (75)	2	24	1	2.500 [63.50]	1.850 [46.99]	0.250 [6.35]	2.768 [70.31]	0.600 [15.24]	2.680 [68.07]	0.359 [9.12]
E (108)	3	34	3	2.410 [61.21]	1.800 [45.72]	0.350 [8.89]	2.744 [69.60]	0.700 [17.78]	2.590 [65.79]	0.459 [11.66]

All dimensions in inches with conversion to metric

Contact Us to Request a Quote!

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