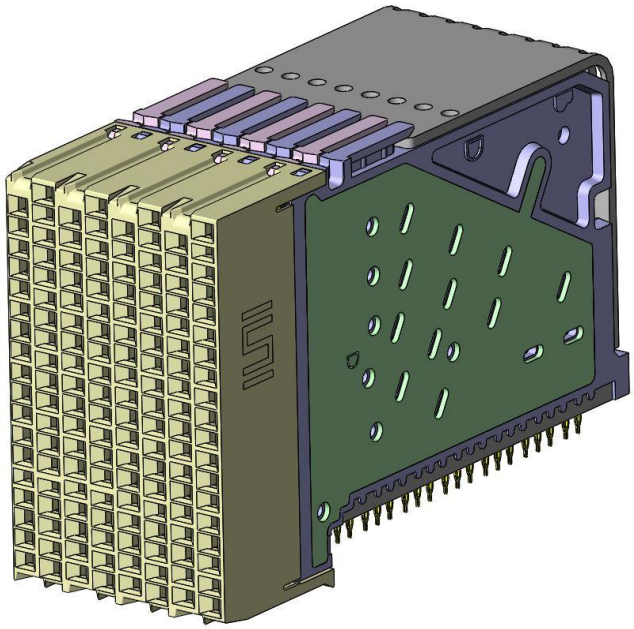
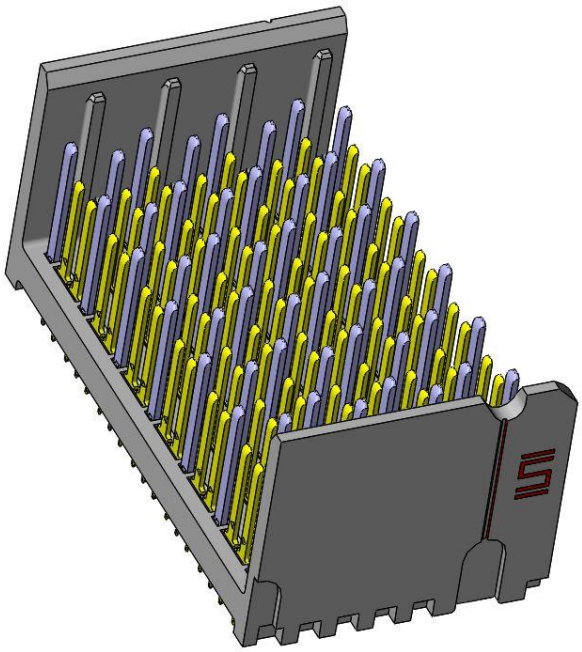
Series: HDTF / HDTM XCede® HD 1.80 mm Right-Angle Receptacle & Vertical Header

HDTF –Receptacle, Right-Angle Orientation



HDTM Series –Header, Vertical Orientation



See www.samtec.com for more information.

Series: HDTF / HDTM XCede® HD 1.80 mm Right-Angle Receptacle & Vertical Header

1.0 SCOPE

1.1 This specification covers performance, testing, and quality requirements for the Samtec HDTF/HDTM Series XCede® HD 1.80 mm Right-Angle Receptacle & Vertical Header mated set. XCede HD® uses a modular concept to interconnect two printed circuit boards. Both receptacle and header connectors are terminated to the printed circuit board with plated thru-hole compliant press-fit leads. The XCede® HD connector family consists of modular configurations with custom power and guidance modules which are connected to one another via a stiffener (also known as an organizer).

2.0 DETAILED INFORMATION

2.1 Product prints, footprints, catalog pages, test reports and other specific, detailed information can be found at http://www.samtec.com/?HDTF and http://www.samtec.com/?HDTM.

2.2 Industry or Trade Association standards
Telcordia GR-1217-CORE (Separable Electrical Connectors Used in Telecommunications Hardware).
EIA-364-B Electrical Connector Test Procedure Including Environmental Classifications
IEC-512-Electromechanical components for electronic equipment – Basic testing procedures and measuring methods, IEC-60352-6 international standards, solderless connections, press fit connections, general requirements, test method and practical guidance.

3.0 TESTING

3.1 Current Rating: EIA 364-70

	Current Rating
Signal Contact	1.5 Amps per contact
Shield Contact	1.5 Amps per contact
Power Contact	10 Amps per blade

3.2 Voltage Rating: 48 VAC (RMS)

3.3 Operating Temperature Range: -40°C to +105°C

3.4 Operating Humidity Range: up to 95% (Per EIA-364-31)

3.5 Electrical:

ITEM	TEST CONDITION	REQUIREMENT
Withstanding Voltage	EIA-364-20 (No Flashover, Sparkover, or Breakdown)	750 VAC
Insulation Resistance	EIA-364-21	1000 MΩ minimum
Contact Resistance (LLCR)	EIA-364-23	Δ 10 mΩ maximum / No damage
Compliant Pin to Plated Through Hole Resistance (LLCPR)	EIA-364-23	1 mΩ maximum / No damage

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3.6 Mechanical:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Durability	EIA-364-09C	250 cycles	PASS
Random Vibration	EIA-364-TP28, Test Condition V –C- 5.35g RMS, 2 hours per axis	Visual Inspection: No Damage LLCR: Δ 10 mΩ MAX	PASS
Mechanical Shock	EIA-364-27 Test Condition H, 30g's, 11ms, half-sine	Visual Inspection: No Damage Discontinuities: less than 1 µs	PASS
Normal Force	EIA-364-04	30 grams minimum for gold interface (signal and shield)	PASS
Signal and Shield Compliant Pin Insertion Force	EIA-364-05	26.7 N Maximum per pin (0.0177 drill) 35.6 N Maximum per pin (0.0217 drill)	PASS
Signal and Shield Compliant Pin Retention Force	EIA-364-05	3.56 N Minimum	PASS
Power Compliant Pin Insertion Force	EIA-364-05	66.7 N Maximum	PASS
Power Compliant Retention Force	EIA-364-05	8.9 N Minimum	PASS
Signal and Shield Contact Mating Force (Per Contact)	EIA-364-13	0.45 N Minimum	PASS
Power Module Mating Force (Per Contact)	EIA-364-13	0.85 N Minimum	PASS

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3.7 Environmental:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Thermal Shock	EIA-TP32B, Test Condition II, 25 cycles	Visual Inspection: No Damage LLCR: Δ 10 mΩ	PASS
Thermal Aging (Temp Life)	EIA-364-31C Method III Test Temp: 25°C to 65°C Relative Humidity: 80-98% Test Duration: 50 cycles and a minimum of 500 hours Preconditioning: 100 cycles	Visual Inspection: No Damage LLCR: Δ 10 mΩ	PASS
Cyclic Humidity	EIA-364-31C Method III Test Temp: 25°C to 65°C Relative Humidity: 80-98% Test Duration: 50 cycles and a minimum of 500 hours Preconditioning: 100 cycles	Visual Inspection: No Damage LLCR: Δ 10 mΩ	PASS
Mixed Flowing Gas	EIA-364-65 Class IIA, 4 gas Duration: 20 days	Visual Inspection: No damage LLCR: Δ 10 mΩ	PASS

4.0 MATED SYSTEM

4.1 Mated Views

Mated view information can be found at link below:
https://suddendocs.samtec.com/prints/hdtx 3-4-6 pair applications-mkt.pdf

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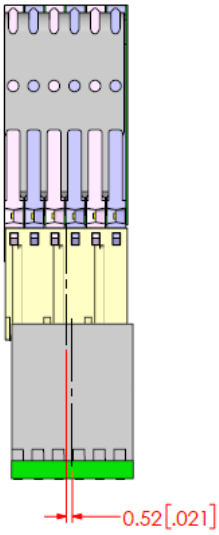
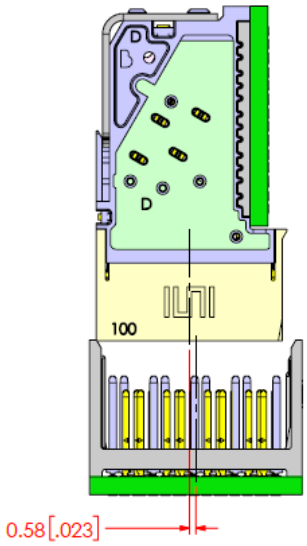
5.0 PROCESSING RECOMMENDATIONS

5.1 Mating Alignment Requirements:

5.1.1 Allowable initial linear misalignment.



INITIAL X AXIS LINEAR MISALIGNMENT



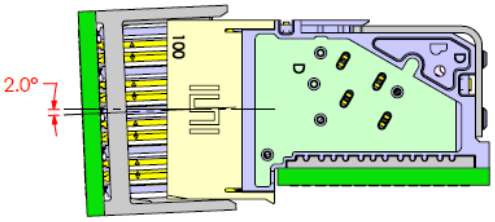
INITIAL Y AXIS LINEAR MISALIGNMENT

NON APPLICABLE

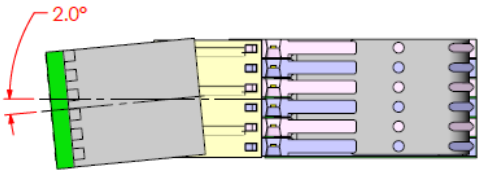
INITIAL Z AXIS LINEAR MISALIGNMENT

5.2 Mating Angle Requirements:

5.2.1 Allowable initial angular misalignment



INITIAL X AXIS ANGULAR MISALIGNMENT



INITIAL Y AXIS ANGULAR MISALIGNMENT

NON APPLICABLE

INITIAL Z AXIS ANGULAR MISALIGNMENT

5.3 Please see Samtec Compliant Pin Termination Specifications for further processing recommendations.

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6.0 ADDITIONAL RESOURCES

6.1 For additional mechanical testing or product information, contact our Customer Engineering Support Group at **CES@samtec.com**

6.2 For additional information on high speed performance testing, contact our Signal Integrity Group at **SIG@samtec.com**

6.3 For additional processing information, contact our Interconnect Processing Group at **IPG@samtec.com.**

6.4 For RoHS, REACH or other environmental compliance information, contact our Product Environmental Compliance Group at **PEC@samtec.com**