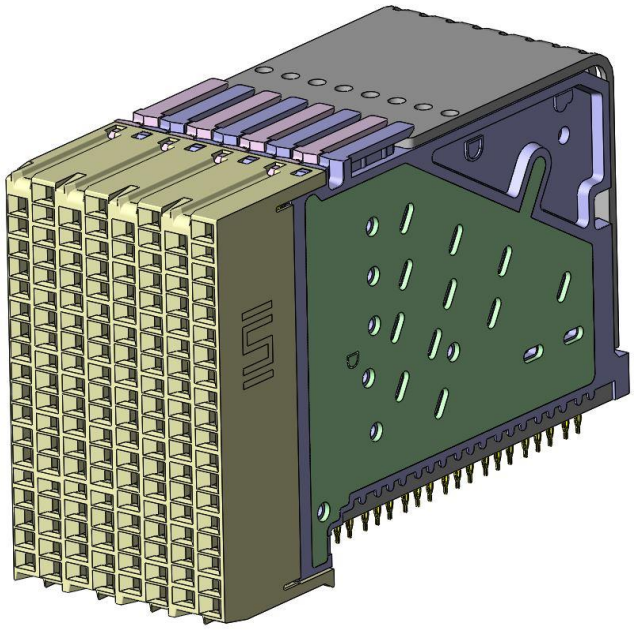
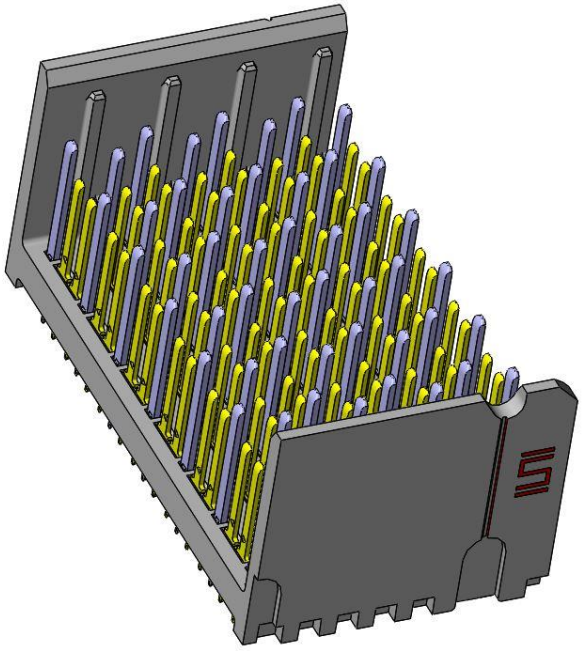
Series: HDTF / HDTM XCede® HD 1.80 mm Right-Angle Receptacle & Vertical Header

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	15 N Maximum	PASS
Power Compliant Retention Force	EIA-364-05	2 N Minimum	PASS

ITEM	TEST CONDITION	NUMBER OF PAIRS	NUMBER OF COLUMNS	MAXIMUM VALUE AT 100 CYCLES
Mating Force	EIA-364-13	4	8	PASS
		6	8	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:
http://suddendocs.samtec.com/notesandwhitepapers/xcede-hd-overview.pdf

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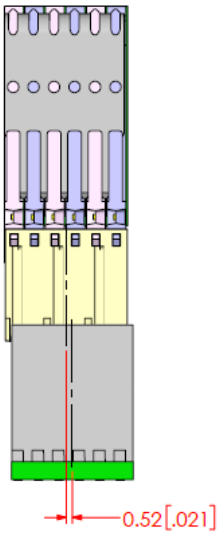
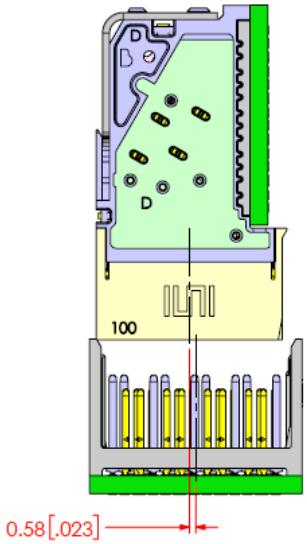
5.0 PROCESSING RECOMMENDATIONS

5.1 Mating Alignment Requirements:

5.1.1 Allowable initial linear misalignment.



INITIAL X AXIS LINEAR MISALIGNMENT



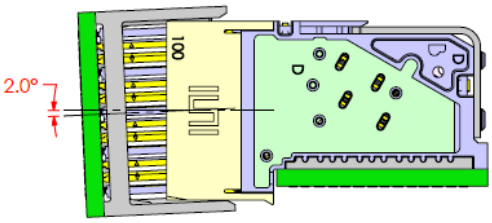
INITIAL Y AXIS LINEAR MISALIGNMENT

NON APPLICABLE

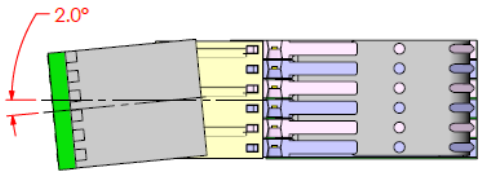
INITIAL Z AXIS LINEAR MISALIGNMENT

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

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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**

USE OF PRODUCT SPECIFICATION SHEET

This Product Specification Sheet ("PSS") is a brief summary of information related to the Product identified. As a summary, it should only be used for the limited purpose of considering the purchase/use of Product. For specific, detailed information, including but not limited to testing and Product footprint, refer to Section 2.0 of this document and the links there provided to test reports and prints. This PSS is the property of Samtec, Inc. ("Samtec") and contains proprietary information of Samtec, our various licensors, or both. Samtec does not grant express or implied rights or license under any patent, copyright, trademark or other proprietary rights and the use of the PSS for building, reverse engineering or replication is strictly prohibited. By using the PSS, the user agrees to not infringe, directly or indirectly, upon any intellectual property rights of Samtec and acknowledges that Samtec, our various licensors, or both own all intellectual property therein. The PSS is presented "AS IS". While Samtec makes every effort to present excellent information, the PSS is only provided as a guideline and does not, therefore, warrant it is without error or defect or that the PSS contains all necessary and/or relevant information about the Product. The user agrees that all access and use of the PSS is at its own risk. **NO WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY KIND WHATSOEVER ARE PROVIDED.**