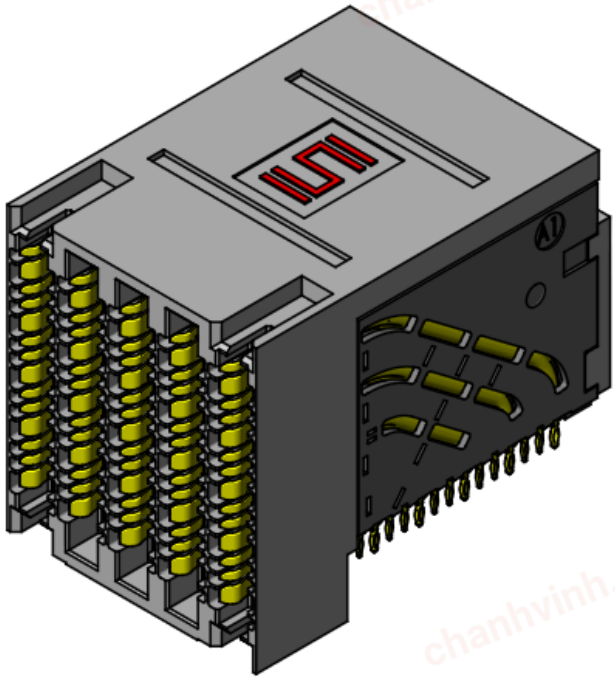
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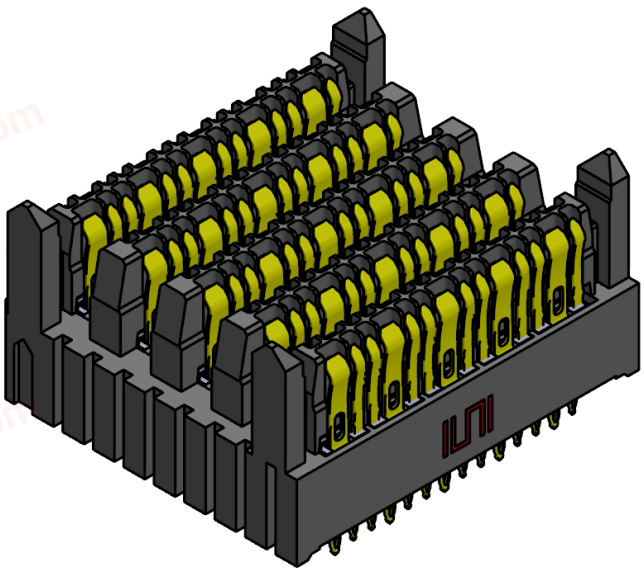
Product Specification

Series: EBTF-RA / EBTM 2.00 mm (.0787") ExaMAX® Right-Angle Receptacle & Vertical Header

EBTF-RA Series –Receptacle, Right-Angle Orientation



EBTM Series –Header, Vertical Orientation



Other configurations available for:

Co-planar board-to-board applications

See www.samtec.com for more information.

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Series: EBTF-RA / EBTM 2.00 mm (.0787") ExaMAX® Right-Angle Receptacle & Vertical Header

1.0 SCOPE

1.1 This specification covers performance, testing and quality requirements for Samtec EBTF-RA/EBTM Series 2.00 mm (.0787") ExaMAX® Right-Angle Receptacle & Vertical Header mated set. All information contained in this specification is for a EBTF Series – 4 pairs per column mated to a EBTM Series -4 pairs per column unless otherwise noted.

2.0 DETAILED INFORMATION

2.1 Product prints, footprints, catalog pages, test reports and other specific, detailed information can be found at EBTF-RA: https://www.samtec.com/products/ebtf-ra
EBTM-DV: https://www.samtec.com/products/ebtm; EBTM-RA: https://www.samtec.com/products/ebtm-ra

2.2 Industry or Trade Association standards
Telcordia GR-1217-CORE (Separable Electrical Connectors Used in Telecommunications Hardware).

3.0 TESTING

3.1 Current Rating: EIA 364-70

	ExaMAX Backplane Current Rating (amperes)	
	4-Pair	6-Pair
Individual Signal Contact (centrally located in connector)	4	4
Split Single IMLA (signal contacts carrying load, ground contacts carrying return)	13	17
Full Adjacent IMLAs (1 IMLA carrying load, 2nd adjacent IMLA carrying return)	19	20

Note: "IMLA" = "Insert Molded Leadframe Assembly," sometimes termed "wafer" or "Chicklet"

3.2 Voltage Rating: 150 VAC

3.3 Operating Temperature Range: -55°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)	500 VAC
Insulation Resistance	EIA-364-21	1000 MΩ minimum
Contact Resistance (LLCR)	EIA-364-23	Δ 10 mΩ maximum / No damage

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3.6 Mechanical:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Durability	EIA-364-09C	200 cycles	Pass
Random Vibration	EIA-364-28 Condition II, sinusoidal, 10g, 10-500 Hz, 15 min cycles	Visual Inspection: No Damage Discontinuities: less than 1 µs	Pass
Mechanical Shock	EIA-364-27 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	Pass
Compliant Pin Insertion Force	EIA-364-05	12 N Maximum per pin 18 N Maximum per pin (EBDM-RA)	Pass
Compliant Pin Retention Force	EIA-364-05	3.5 N Minimum	Pass

ITEM	TEST CONDITION	NUMBER OF PAIRS	NUMBER OF COLUMNS	MAXIMUM VALUE AT 100 CYCLES
Mating Force	EIA-364-13	4	10	38.56 N
		6	12	72.13 N

3.7 Environmental:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Thermal Shock	EIA-364-32 Thermal Cycles: 5 (30 minute dwell) Hot Temp: 85°C Cold Temp: -55°C Hot/Cold Transition: Immediate	Visual Inspection: No Damage LLCR: Δ 10 mΩ DWV: 500 VAC IR: >1,000 MΩ	Pass
Thermal Aging (Temp Life)	EIA-364-17 Test Condition 4 @ 85°C Condition B for 500 hours	Visual Inspection: No Damage LLCR: Δ 10 mΩ DWV: 500 VAC IR: >1,000 MΩ	Pass
Cyclic Humidity	EIA-364-31 Test Temp: 25°C to 65°C Relative Humidity: 90 to 95% Test Duration: 500 hours	Visual Inspection: No Damage LLCR: Δ 10 mΩ DWV: 500 VAC IR: >1,000 MΩ	Pass
Mixed Flowing Gas	EIA-364-65 Class IIA, 4 gas Duration: 20 days Test Temp.: 30°C Relative Humidity: 70%	LLCR: Δ 10 mΩ	Pass

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4.0 MATED SYSTEM

4.1 Mated Views

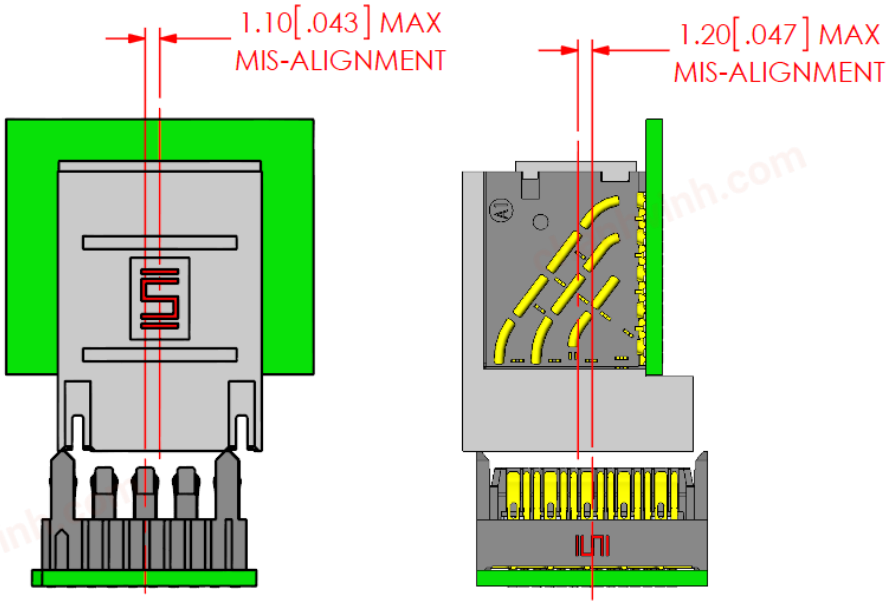
Mated view information can be found at link below:

Samtec-examax-application-specification.pdf

5.0 PROCESSING RECOMMENDATIONS

5.1 Mating Alignment Requirements:

5.1.1 Maximum guidance/capture in applications where at least one half of the interface is free to float.

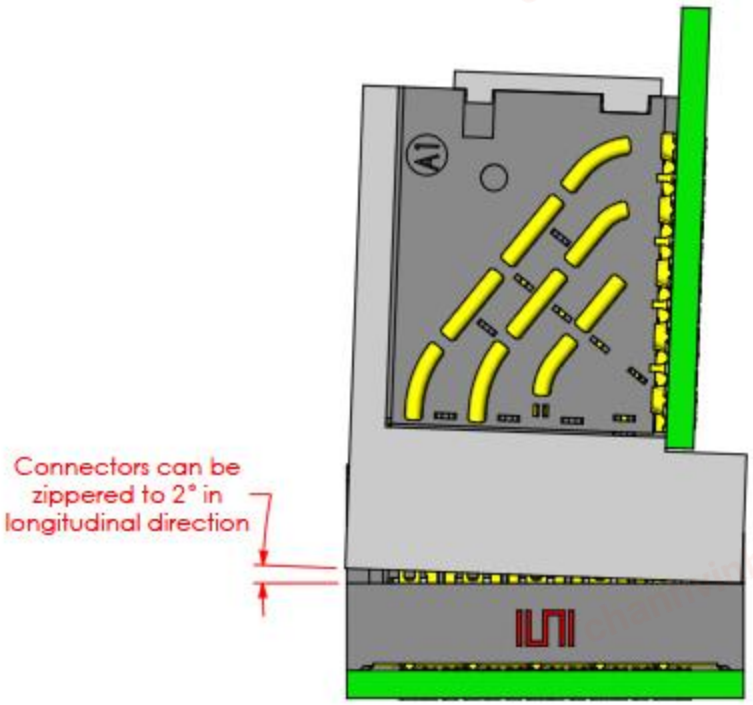


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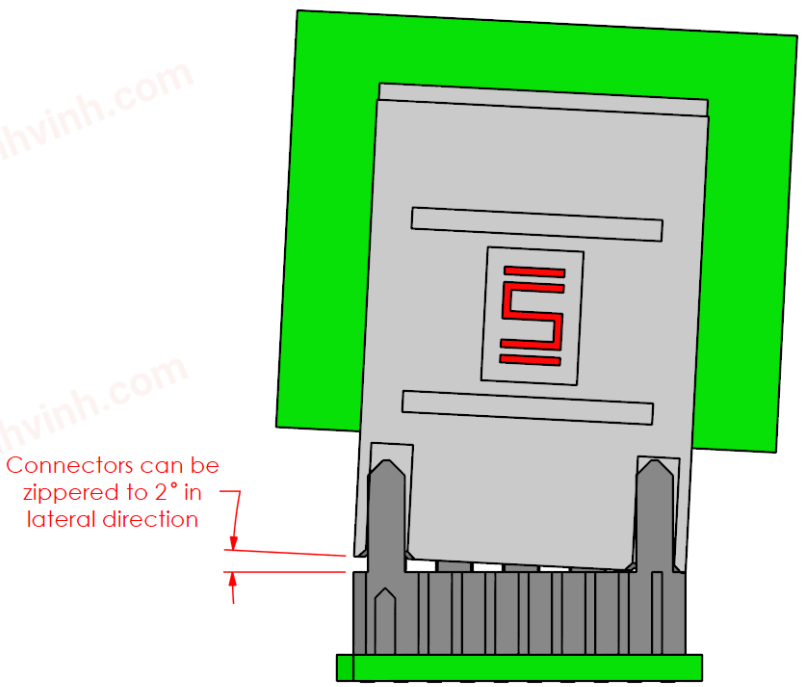
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5.2 Mating Angle Requirements: The connector can be zippered in either directions.



5.2.1



5.2.2

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5.3 Board Insertion Procedure and Insertion Tools
Board insertion procedures and Insertion Tool information can be found at the link below:
Samtec-examax-application-specification.pdf

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**

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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.**

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