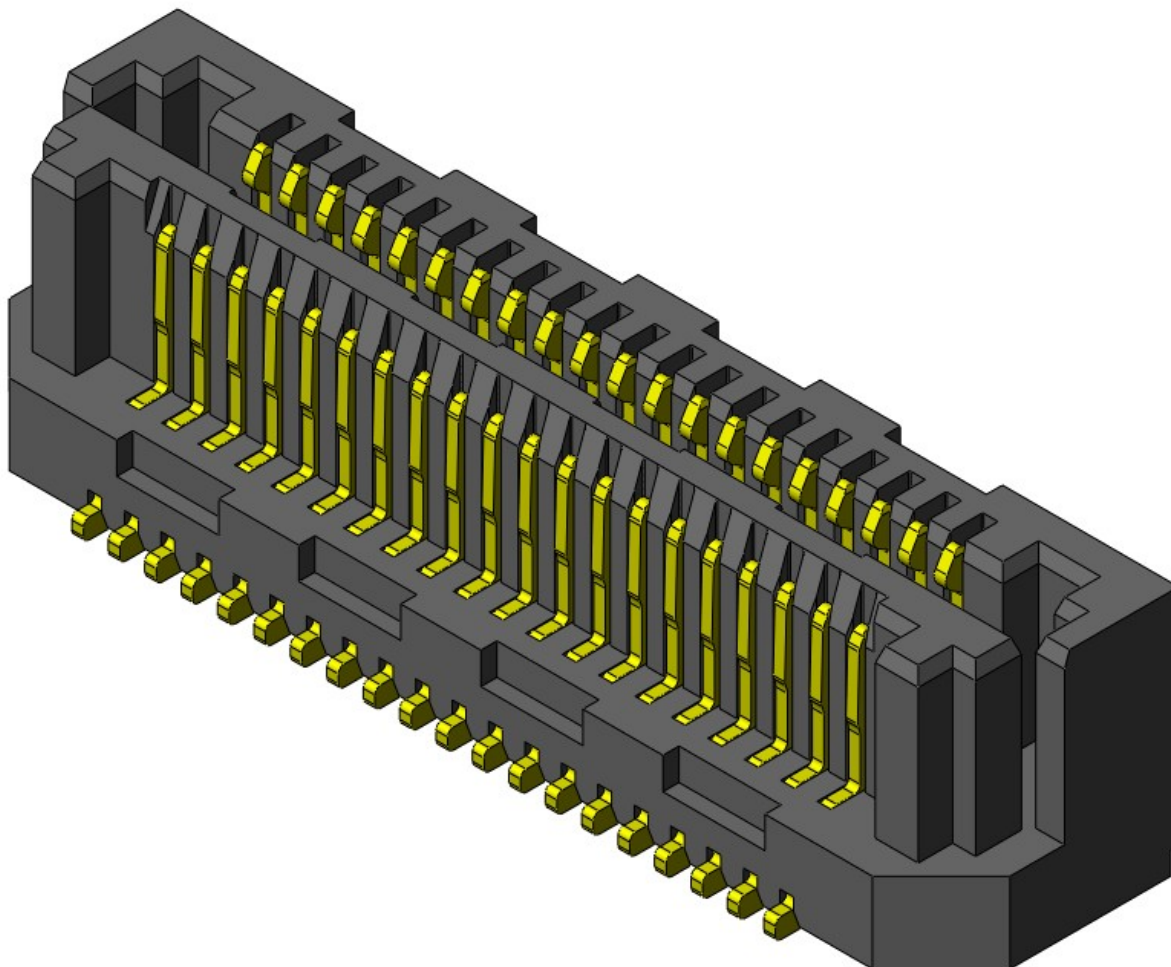


Series: LSS 0,635mm (.025") Razor Beam™ High Speed Hermaphroditic Terminal/Socket Strip

LSS Series – Terminal/Socket, Vertical Orientation



Series: LSS 0,635mm (.025") Razor Beam™ High Speed Hermaphroditic Terminal/Socket Strip

1.0 SCOPE

1.1 This specification covers performance, testing and quality requirements for Samtec LSS Series 0,635 mm (.025") Razor Beam™ High Speed Hermaphroditic Terminal/Socket Strip connectors. All information contained in this specification is for two LSS Series connectors in a 6 mm mated height vertical configuration 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 www.samtec.com?LSS.

3.0 TESTING

3.1 Current Rating: 1.7 A (6 Adjacent Pins Powered)

3.2 Voltage Rating: 300 VAC

3.3 Operating Temperature Range: -55°C to +125°C

3.4 Electrical:

ITEM	TEST CONDITION	REQUIREMENT
Withstanding Voltage	EIA-364-20 (No Flashover, Sparkover, or Breakdown)	900 VAC
Insulation Resistance	EIA-364-21 (1000 MΩ minimum)	5,000 MΩ
Contact Resistance (LLCR)	EIA-364-23	Δ 15 mΩ maximum (Samtec defined)/ No damage

3.5 Mechanical:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Durability	EIA-364-09C	100 cycles	Pass
Random Vibration	EIA-364-28 Condition V, Letter B 7.56 G 'RMS', 50 to 2000 Hz, 2 hours per axis, 3 axis total , PSD 0.04	Visual Inspection: No Damage LLCR: Δ 15 mΩ maximum Event Detection: No interruption > 50 Nanoseconds	Pass
Mechanical Shock	EIA-364-27 100 G, 6 milliseconds, sawtooth wave, 11.3 fps, 3 shocks/direction, 3 axis (18 total shocks)	Visual Inspection: No Damage LLCR: Δ 15 mΩ maximum Event Detection: No interruption > 50 Nanoseconds	Pass
Normal Force	EIA-364-04	30 grams minimum for gold interface	Pass

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3.6 Environmental:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Thermal Shock	EIA-364-32 Thermal Cycles: 100 (30 minute dwell) Hot Temp: +85°C Cold Temp: -55°C Hot/Cold Transition: Immediate	Visual Inspection: No Damage LLCR: Δ 15 m Ω DWV: 900 VAC IR: >25,000 M Ω	Pass
Thermal Aging (Temp Life)	EIA-364-17 Test Condition 4 @ 105°C Condition B for 250 hours	Visual Inspection: No Damage LLCR: Δ 15 m Ω DWV: 900 VAC IR: >25,000 M Ω	Pass
Cyclic Humidity	EIA-364-31 Test Temp: +25°C to +65°C Relative Humidity: 90 to 95% Test Duration: 240 hours	Visual Inspection: No Damage LLCR: Δ 15 m Ω DWV: 900 VAC IR: >25,000 M Ω	Pass
Gas Tight	EIA-364-36 Gas Exposure: Nitric Acid Vapor Duration: 60 min. Drying Temp.: 50°C +/- 3°C Measurements: Within 1 hour of Exposure	LLCR: Δ 15 m Ω	Pass

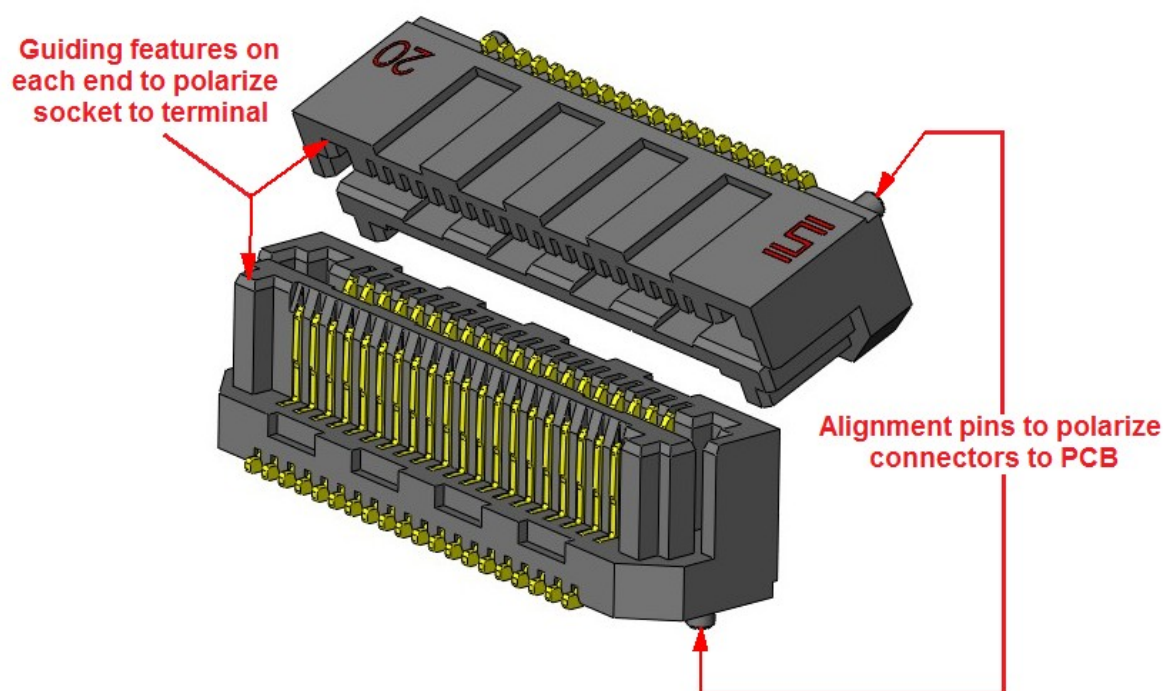
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4.0 MATED SYSTEM

4.1 Mated View Print

See <http://www.samtec.com/documents/webfiles/cpdf/LSS%20MATED%20VIEWS-MKT.pdf> for views and dimensions of mated connectors.

5.0 POLARIZING FEATURES



6.0 HIGH SPEED PERFORMANCE

6.1 Based on a 3 dB insertion loss

6.2 System Impedance: 50 ohm for single-ended and 100 ohm for differential pair

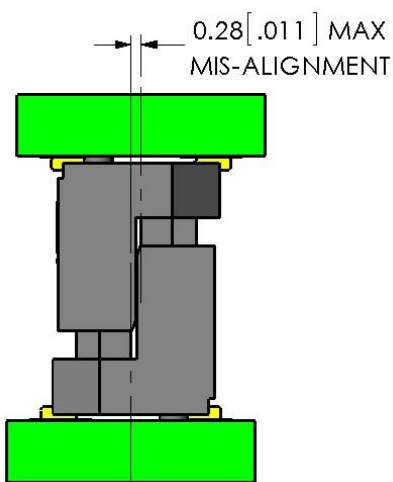
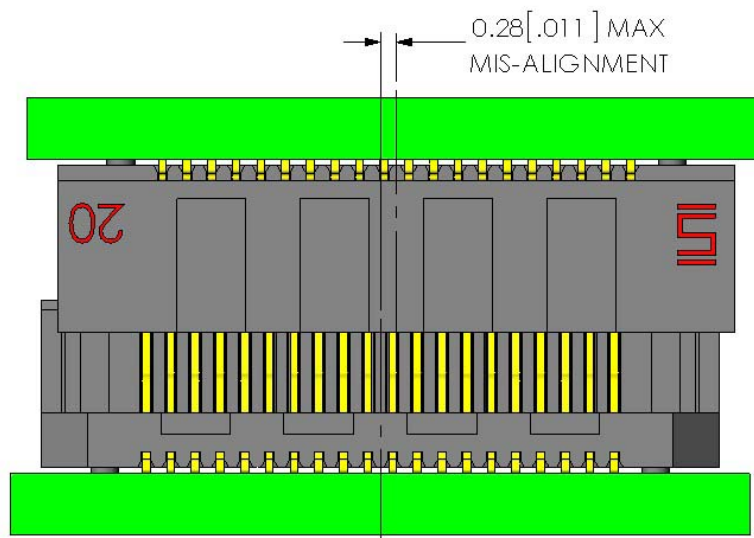
Stack Height	Single-Ended Signaling	Differential Pair Signaling
6 mm	10.0 GHz/20.0 Gbps	9.0 GHz/18.0 Gbps

Series: LSS 0,635mm (.025") Razor Beam™ High Speed Hermaphroditic Terminal/Socket Strip

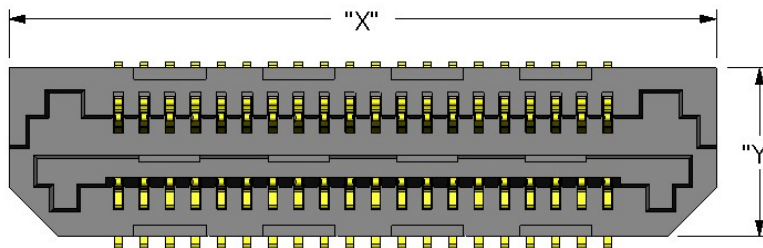
7.0 PROCESSING RECOMMENDATIONS

7.1 Mating Alignment Requirements:

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

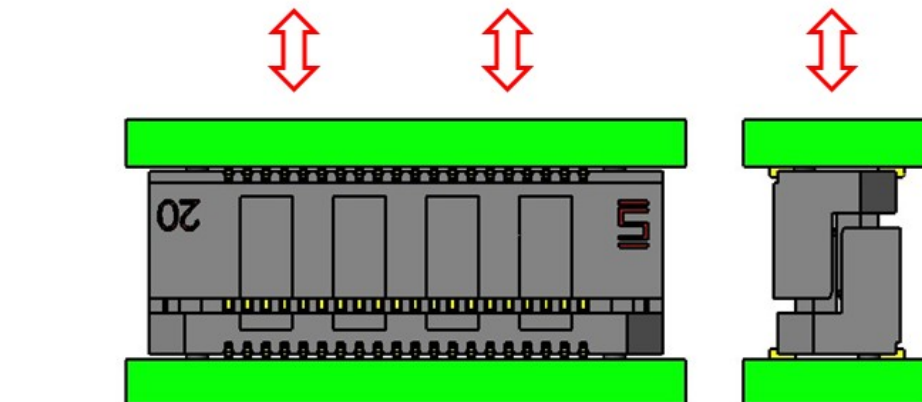


7.1.2 The parts can be rigidly misaligned by no more than .002" (0,05 mm) in the X- and .002" (0,05 mm) in the Y-direction to ensure a good mate.

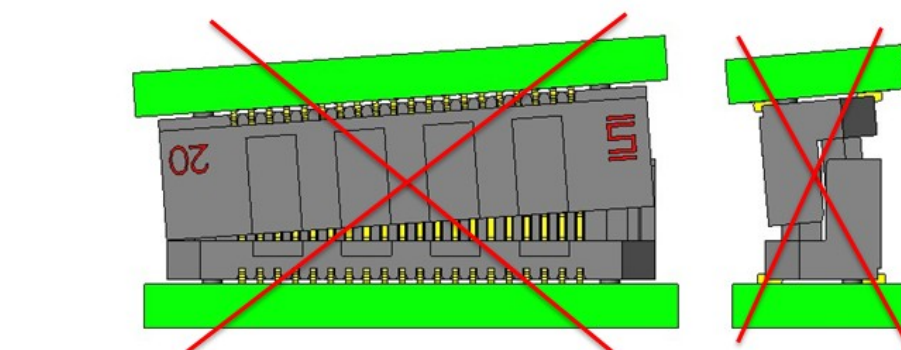


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7.2 Mating Angle Requirements: Connectors to be mated and unmated axially only. Zippering angles may damage connector and/or solder joints.



7.2.1



7.2.2

7.3 Maximum Reflow Passes: The parts can withstand three reflow passes at a maximum oven temperature of 260°C.

7.4 Stencil Thickness: The stencil thickness is .006" (0,15 mm).

7.5 Placement: Machine placement of the parts is recommended.

7.6 Hardware: Board-to-board standoffs are recommended to provide a robust mechanical connection. Samtec's wide variety of standoff options can be found here: [SO - Board Stacking Standoff](#)

7.7 Thermal Profile: Due to the large number of processing variables (printed wiring board design, reflow oven type, component quantity, solder paste type, etc.), Samtec does not provide specific reflow profiles for any connector. We recommend that the solder paste manufacturer's guidelines be followed for optimum soldering results.

7.8 Reflow Environment: Samtec recommends the use of a low level oxygen environment (typically achieved through Nitrogen gas infusion) in the reflow process to improve solderability.

7.9 Samtec, Inc. has verified that our connectors may be cleaned in accordance with the solvents and conditions designated in the EIA-364-11A standard.



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8.0 ADDITIONAL RESOURCES

- 8.1** For additional mechanical testing or product information, contact our Customer Engineering Support Group at CES@samtec.com
- 8.2** For additional information on high speed performance testing, contact our Signal Integrity Group at SIG@samtec.com
- 8.3** For additional processing information, contact our Interconnect Processing Group at IPG@samtec.com
- 8.4** For RoHS, REACH or other environmental compliance information, contact our Product Environmental Compliance Group at PEC@samtec.com