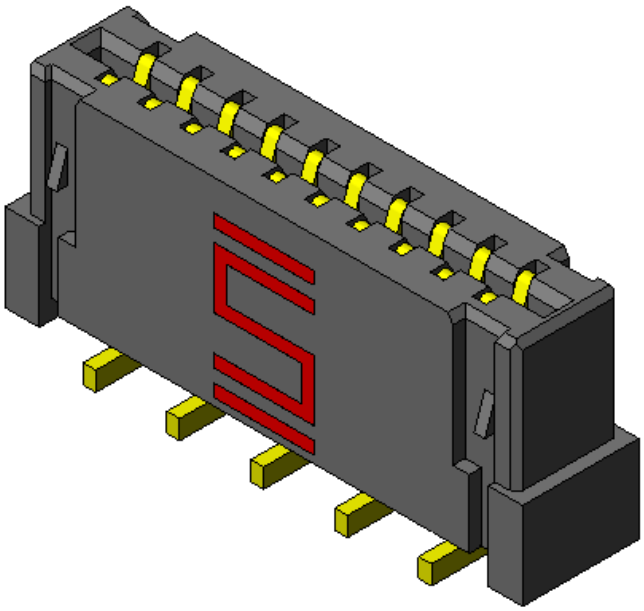
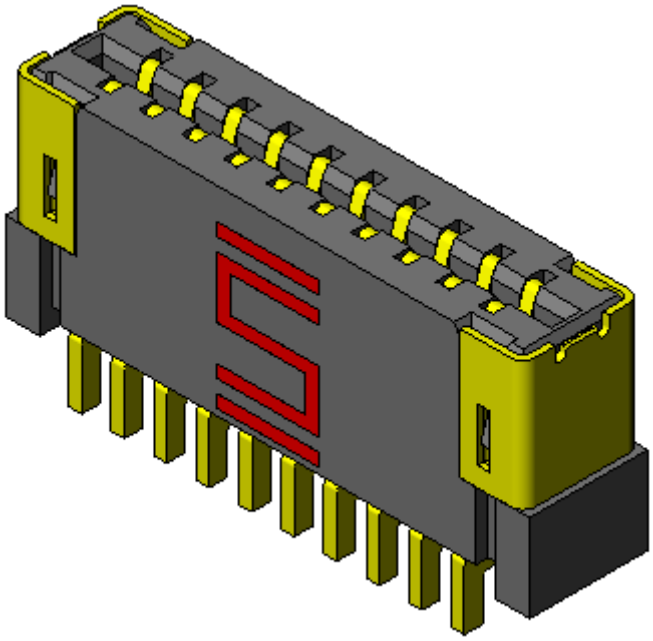
Series: FC1 1,00 mm (.0394”) Flat Flexible Cable (FFC) Socket Strip

FC1 Series – Socket, Vertical Orientation



FC1 Series – Socket, Horizontal Orientation



See www.samtec.com for more information.

Series: FC1 1,00 mm (.0394") Flat Flexible Cable (FFC) Socket Strip

1.0 SCOPE

1.1 This specification covers performance, testing and quality requirements for Samtec FC1 Series 1,00 mm (.0394") Flat Flexible Cable (FFC) Socket Strip. All information contained in this specification is for a Horizontal Orientation 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 http://www.samtec.com?FC1

3.0 TESTING

3.1 Current Rating: 4.3 A (One pin powered per row)
3.2 Voltage Rating: 215 VAC
3.3 Operating Temperature Range: -30°C to +80°C
3.4 Operating Humidity Range: 90% to 95% (Per EIA-364-31)
3.5 Electrical:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Withstanding Voltage	EIA-364-20 (No Flashover, Sparkover, or Breakdown)	650 VAC	Pass
Insulation Resistance	EIA-364-21 (1000 MΩ minimum)	1,000 MΩ	Pass
Contact Resistance (LLCR)	EIA-364-23	Δ 15 mΩ maximum (Samtec defined)/ No damage	Pass

3.6 Mechanical:

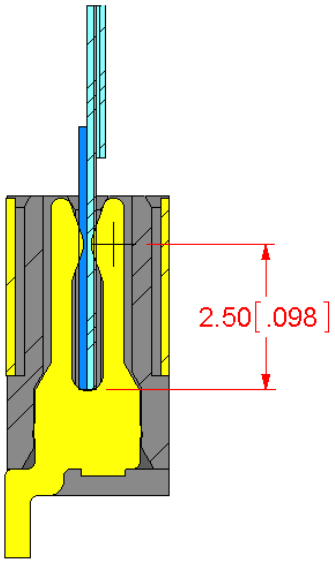
ITEM	TEST CONDITION	REQUIREMENT	STATUS
Durability	EIA-364-09C	25 cycles	Pass
Random Vibration	EIA-364-28 Condition V, Letter B 7.56 G 'RMS', 50 to 2000 Hz, 2 hours per axis, 3 axis total , PSD 0.04	Visual Inspection: No Damage LLCR: Δ 15 mΩ maximum Event Detection: No interruption > 50 Nanoseconds	Pass
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	100 grams minimum for tin interface	Pass

Series: FC1 1,00 mm (.0394") Flat Flexible Cable (FFC) Socket Strip

3.7 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 mΩ DWV: 650 VAC IR: >1,000 MΩ	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 mΩ DWV: 650 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: 240 hours	Visual Inspection: No Damage LLCR: Δ 15 mΩ DWV: 650 VAC IR: >1,000 MΩ	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 mΩ	Pass

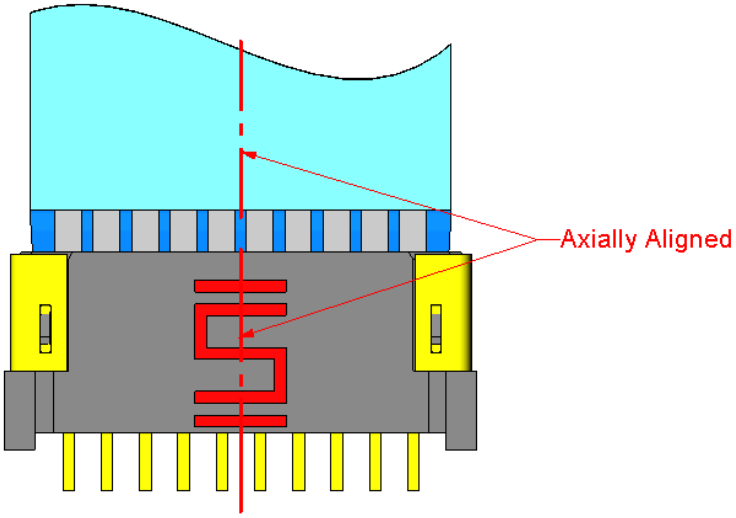
4.0 MATED SYSTEM



Series: FC1 1,00 mm (.0394") Flat Flexible Cable (FFC) Socket Strip

5.0 PROCESSING RECOMMENDATIONS

5.1 Maximum Angle Requirements: Cable must be axially aligned to connector when mated and un-mated.



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

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

5.4 Placement: Machine placement of the parts is strongly recommended.
Note: If the Locking Clip option (-LC) is used, manual placement will be required if the force needed to fully seat the connector exceeds the limit of the machine placement equipment. For more information, please visit the Processing page on our website or contact Samtec's Interconnect Processing Group at ipg@samtec.com.

5.5 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.

5.6 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.

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**