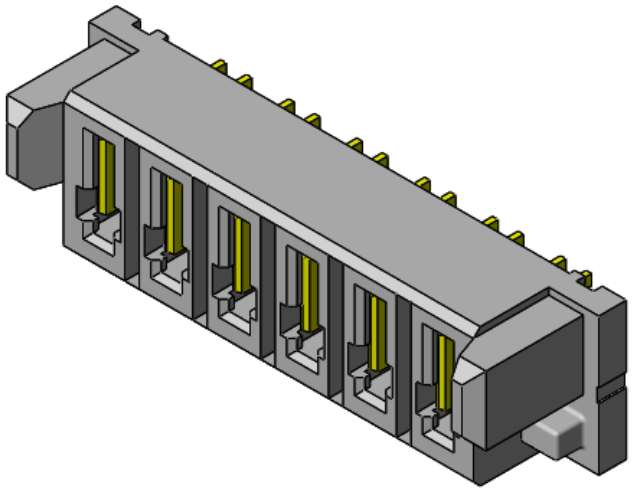
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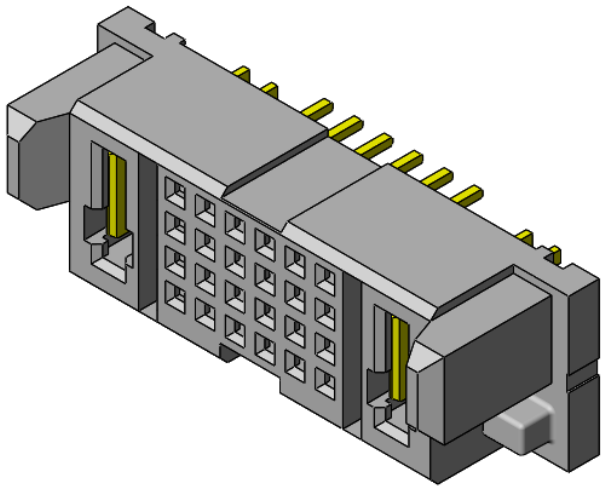
Product Specification

Series: MPS / MPT .1969" (5.00 mm) PowerStrip™/30 Amp Dual Blade Socket and Terminal Strip
MPSC / MPTC .1969" (5.00 mm) PowerStrip™/30 Amp Combo Socket and Terminal Strip

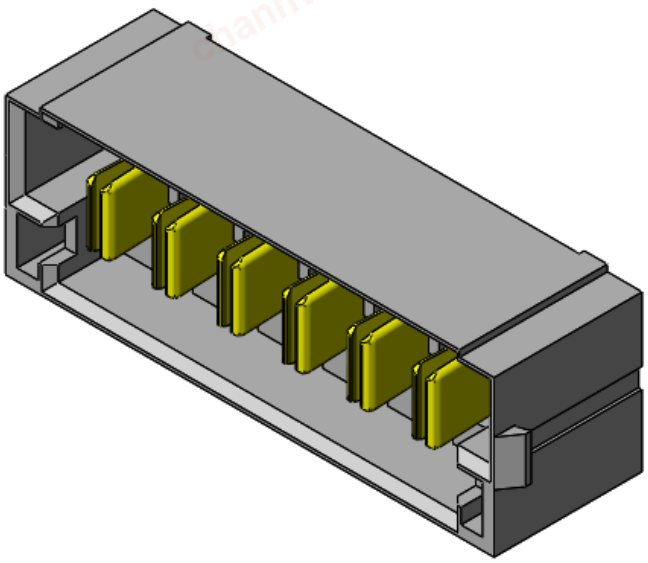
MPS Series – Socket, Vertical Orientation



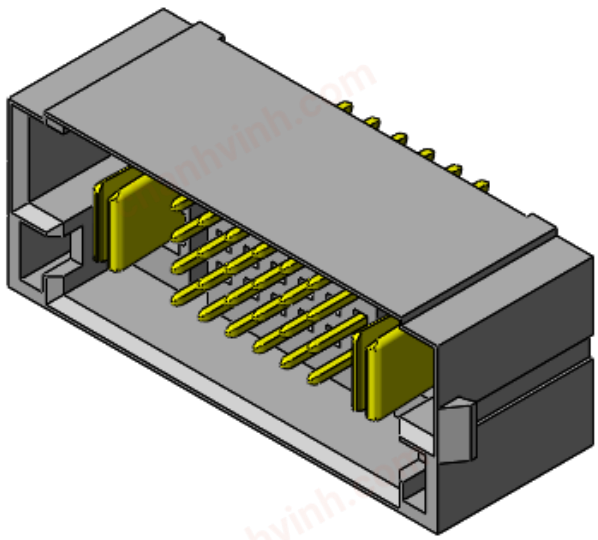
MPSC Series – Combo Socket, Vertical Orientation



MPT Series – Terminal, Vertical Orientation



MPTC Series – Combo Terminal, Vertical Orientation



Other configurations available for:

Right Angle applications
Cable Assembly applications

See www.samtec.com for more information.

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Series: MPS / MPT .1969'' (5.00 mm) PowerStrip™/30 Amp Dual Blade Socket and Terminal Strip
MPSC / MPTC .1969'' (5.00 mm) PowerStrip™/30 Amp Combo Socket and Terminal Strip

1.0 SCOPE

1.1 This specification covers performance, testing and quality requirements for Samtec MPS / MPT Series .1969'' (5.00 mm) PowerStrip™/30 Amp Dual Blade Socket and Terminal Strip system and MPSC / MPTC Series Signal/Power Combo Socket and Terminal Strip system . All information contained in this specification is for a Vertical socket / Vertical terminal mated configuration unless otherwise noted. Right Angle socket / Right Angle terminal mated configuration is available at www.samtec.com.

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/?MPS, http://www.samtec.com/?MPT, http://www.samtec.com/?MPSC and http://www.samtec.com/?MPTC

3.0 TESTING

3.1 Current Rating: Power Contact 28A (One Pin Powered Per Row) Signal Contacts 5A (One Pin Powered Per Row)
3.2 Voltage Rating: 250 VAC
3.3 Operating Temperature Range: -55°C to +105°C for Sn; -55°C to +125°C for Au
3.4 Electrical:

ITEM	TEST CONDITION	REQUIREMENT	STATUS
Withstanding Voltage	EIA-364-20 (No Flashover, Sparkover, or Breakdown)	750 VAC	Pass
Insulation Resistance	EIA-364-21 (1000 MΩ minimum)	5,000 MΩ	Pass
Contact Resistance (LLCR)	EIA-364-23	Δ 15 mΩ maximum (Samtec defined)/ No damage	Pass

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	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	Pass
Normal Force	EIA-364-04	30 grams minimum for Gold interface 100 grams minimum for Tin 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 mΩ DWV: 750 VAC IR: >5,000 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: 750 VAC IR: >5,000 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: 750 VAC IR: >5,000 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: Δ1 5 mΩ	Pass

4.0 MATED SYSTEM

4.1 Mated Views

MPS / MPT Mated view information can be found at link below:
http://suddendocs.samtec.com/prints/mpx%20mated%20document-mkt.pdf

MPSC / MPTC Mated view information can be found at link below:
http://suddendocs.samtec.com/prints/mpxc%20mated%20document-mkt.pdf

5.0 CREEPAGE AND CLEARANCE DISTANCES

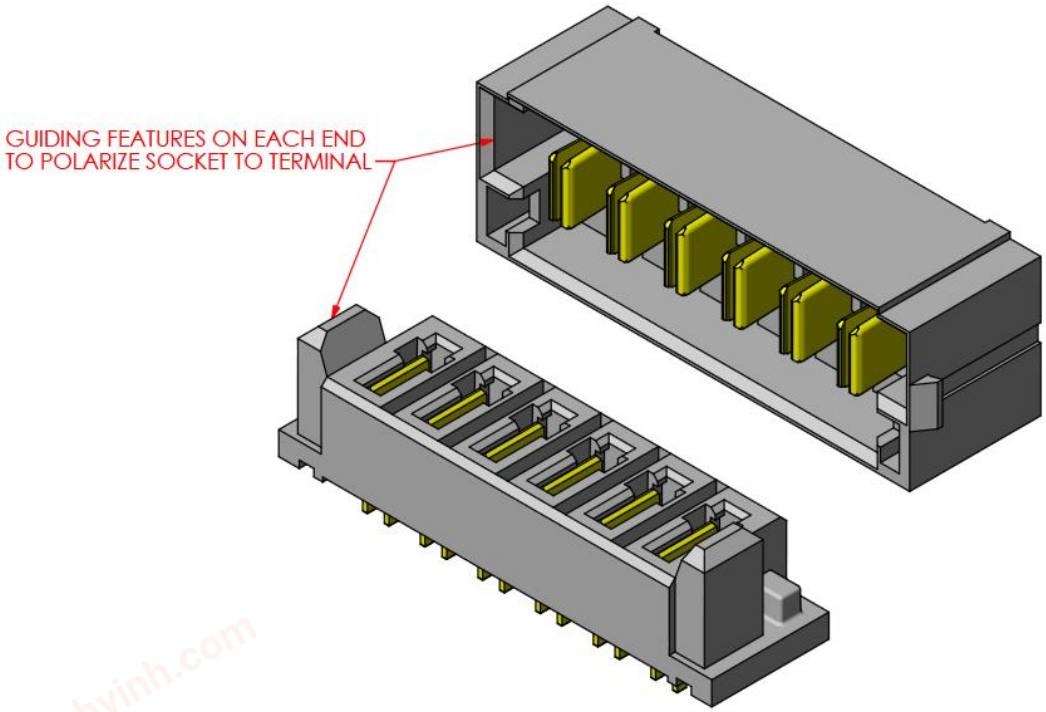
	Clearance	Creepage
MPS(C)-V	2.71mm (.107")	2.86mm (.113")
MPS(C)-V (-LC option)	1.93mm (.076")	2.65mm (.104")
MPS(C)-RA	2.71mm (.107")	2.86mm (.113")
MPS(C)-RA (-LC option)	1.85mm (.073")	2.60mm (.102")
MPT(C)-V	2.71mm (.107")	2.86mm (.113")
MPT(C)-V (-LC option)	2.54mm (.100")	2.86mm (.113")
MPT(C)-RA	2.71mm (.107")	2.86mm (.113")
MPT(C)-RA (-LC option)	1.84mm (.072")	2.59mm (.102")

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6.0 POLARIZING FEATURES



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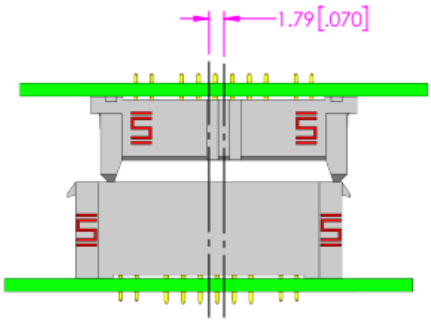
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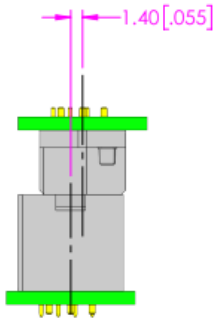
7.0 PROCESSING RECOMMENDATIONS

7.1 Mating Alignment Requirements:

7.1.1 Allowable initial linear misalignment



INITIAL X AXIS LINEAR MISALIGNMENT



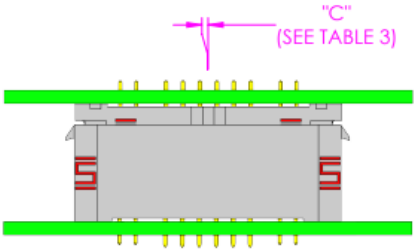
INITIAL Y AXIS LINEAR MISALIGNMENT

NOT APPLICABLE

INITIAL Z AXIS LINEAR MISALIGNMENT

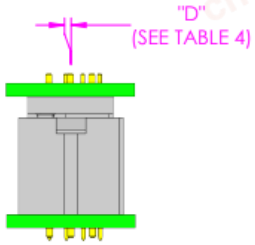
7.1.2 Allowable final linear misalignment

TABLE 3	
SERIES	"C"
MPSC TO MPTC	0.08 [.003]
MPS TO MPT	0.18 [.007]



FINAL X AXIS LINEAR MISALIGNMENT

TABLE 4	
SERIES	"D"
MPSC TO MPTC	0.08 [.003]
MPS TO MPT	0.25 [.010]



FINAL Y AXIS LINEAR MISALIGNMENT

SEE MATED DOCUMENT

FINAL Z AXIS LINEAR MISALIGNMENT

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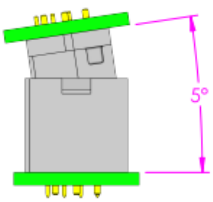
Series: MPS / MPT .1969" (5.00 mm) PowerStrip™/30 Amp Dual Blade Socket and Terminal Strip
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7.2 Mating Angle Requirements:

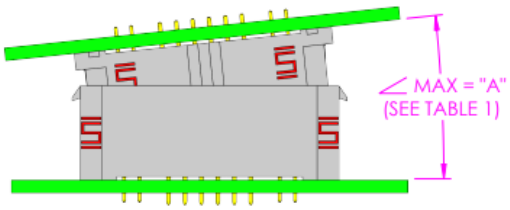
7.2.1 Allowable initial angular misalignment

TABLE 1			
MPTC TO MPSC SIGNAL PINS	"A" = DEG	MPT TO MPS NO OF POWER	"A" = DEG
-04, -08, -12, -16	5.0	-02, -03, -04	5.0
-20, -24	4.0	-05, -06	4.0
-36, -40, -48	3.0	-08	3.0
-80	1.0	N/A	

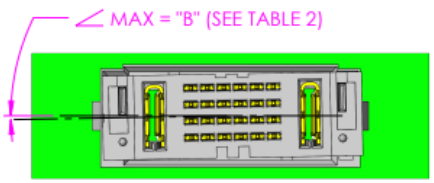
TABLE 2			
MPTC TO MPSC SIGNAL PINS	"B" = DEG	MPT TO MPS NO OF POWER	"B" = DEG
-04, -08, -12, -16	2.0	-02, -03, -04	2.0
-20, -24	1.5	-05, -06	1.5
-36, -40, -48	1.0	-08	1.0
-80	0.5	N/A	



INITIAL X AXIS ANGULAR MISALIGNMENT



INITIAL Y AXIS ANGULAR MISALIGNMENT



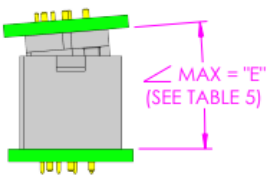
INITIAL Z AXIS ANGULAR MISALIGNMENT

7.2.2 Allowable final angular misalignment

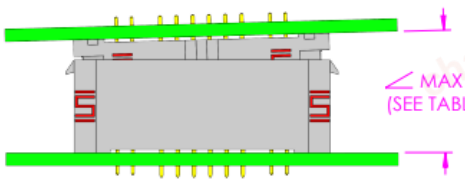
TABLE 5	
SERIES	"E" = DEG
MPSC TO MPTC	2.5
MPS TO MPT	3.0

TABLE 6			
MPTC TO MPSC SIGNAL PINS	"F" = DEG	MPT TO MPS NO OF POWER	"F" = DEG
-04, -08, -12, -16	2.0	-02, -03, -04	2.0
-20, -24	1.5	-05, -06	1.5
-36, -40, -48	1.0	-08	1.0
-80	0.5	N/A	

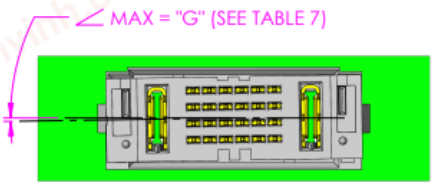
TABLE 7			
MPTC TO MPSC SIGNAL PINS	"G" = DEG	MPT TO MPS NO OF POWER	"G" = DEG
-04, -08, -12, -16	1.4	-02, -03, -04	1.1
-20, -24	0.8	-05, -06	0.8
-36, -40, -48	0.4	-08	0.6
-80	0.2	N/A	



FINAL X AXIS ANGULAR MISALIGNMENT



FINAL Y AXIS ANGULAR MISALIGNMENT



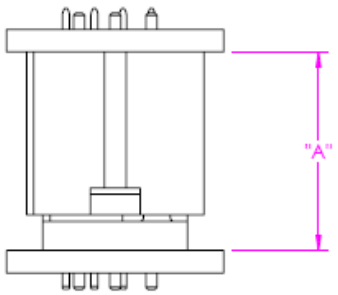
FINAL Z AXIS ANGULAR MISALIGNMENT

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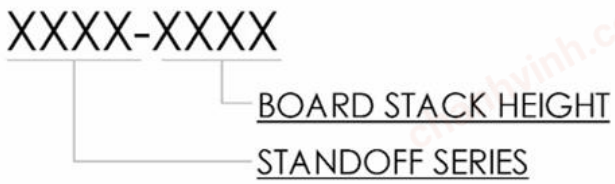
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7.3 Hardware: Board-to-board standoffs are recommended to provide a robust mechanical connection. Samtec offers several different types, which can be found here: Samtec Standoff Offerings.



	MPTC LEAD STYLE	
	-6.30	
MPSC LEAD STYLE	Nominal Connector Stack Height "A" mm [in]	Standoff
-7.70	13.88 [.546]	XXXX-1400
-9.70	15.88 [.625]	XXXX-1600



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7.4 ADDITIONAL RESOURCES

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

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

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

7.4.4 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.**