



Catalog 2.0

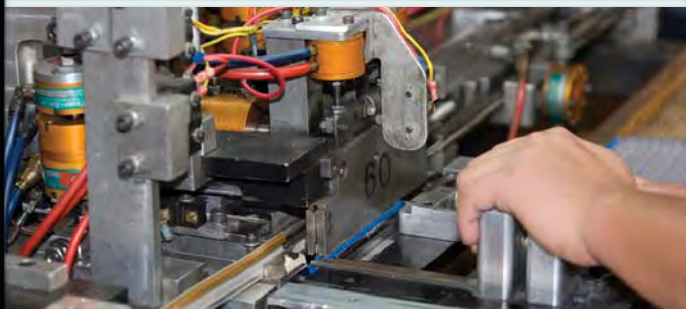
SULLINS

CONNECTOR SOLUTIONS



The Perfect Fit.
FAST.





The Sullins Advantage

Sullins Builds Solutions

Need a standard connector or a special one built to your specifications? We'll help you get the perfect fit-fast! And we offer more design choices than any competitor out there.

High Quality Connectors

Our in-house manufacturing facility in California employs the latest production methods and rigorous quality control to deliver reliable, high quality connectors every time.

Five-day Turnaround*

We strive to deliver your order within five business days so you can spend time on more important things.

Technical Expertise

Sullins' team of applications engineers and technical experts is always ready to help you develop the best solution for your specific application, tackle complex engineering challenges, and provide you the resources you need to bring your project to life.

RoHS Compliant

Being good to the environment is important to us and our customers. That's why we only use RoHS compliant parts in all our products.

* While our average delivery time is within five business days, some connector designs with more customized specifications may require additional time to complete.



Order Samples & Products:
www.sullinscorp.com
info@sullinscorp.com
888.774.3100 toll-free

USA HQ | 801 E Mission Rd, San Marcos, CA 92069, USA
+1-760-744-0125 | fax +1-760-744-6081

Taiwan | 10F, NO 268, Fuxing S. Rd., Sec. 2, Taipei, Taiwan
+886-2-2738-7377 | fax +886-2-2738-3586





Sullins' Capabilities

Sullins Connector Solutions is a leader in developing and delivering reliable, cutting-edge connectors for diverse applications and industries worldwide. Headquartered in San Diego, California, Sullins provides a broad selection of 100% RoHS, UL/CUL approved board-level interconnects, including card edge connectors, headers and wire-to-board connectors. Our extensive connector design experience and modular tooling practices allow us to help leading companies and engineers all over the world by providing customized connectors that are tailored to their specific applications.



Quality

- We want to exceed customer expectations at every level of service provided
- Continuous improvement on all aspects of manufacturing operations
- Soon to be AS9100 certified!
- RoHS compliance on all parts
- Quality control on all raw materials and finished parts based on Statistical Process Control (SPC) methods



Product Development

- We offer the largest variety of card edge connectors
- Continuous research & development of new connectors to meet new and unique demands
- Dedicated to expand product offering to provide a one-stop shopping experience for customers looking for board level interconnect products



Speed & Flexibility

- Most orders shipped within 5 business days
- Small orders never a problem
- Same-day response to customer inquiries and Request-for-Quote (RFQ)



Manufacturing

- In-house molding of various plastic materials, including thermoplastic, high temperature Polyamide and Polyphenylene Sulfide, etc.
- Full range of precision machining tools to support quick tooling and automated production
- Quick change tools allow for small runs within production runs
- Automated systems to allow efficient product assembly



Custom Connector Solutions

- In-house design and custom molding capabilities to support quick turn-around time
- Extensive connector design expertise to assist with design analysis and prototype development
- Advanced connector design tools and quick prototyping for design simulation
- Modular tooling allows for quick switch from prototype to production



Global Sales & Services

- Partnerships with a network of strategically located distributors for more efficient global sales and services
- Asia Pacific Operations established to provide close-range sales support as well as engineering and connector design consultation in the region
- Asia Pacific operations promote logistical convenience by supporting flexible drop-ship options, thus reducing overall lead time.



Sullins D-SUB

D-Sub Solder Type - 100 Series	01-02
D-Sub Dip Straight Type - 101 Series	03-04
D-Sub IDC Type - 103 Series	05-06
D-Sub HD Solder Type - 104 Series	07-08
D-Sub Right Angle Type - 107 Series	09-12
D-Sub H.D. Right Angle Type - 108 Series	13-14
D-Sub High Profile Straight Type - 155 Series	15-16
D-Sub H.D. High Profile PCB Type - 160 Series	17-18
D-Sub Right Angle Slim Type - 223 Series	19-20
D-Sub Right Angle Type - 224 Series	21-22

Sullins Modular Jack

SMJ001 Series GIGABIT Modular Jack Side Entry Type	23-24
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SMJ103 Series Low Profile Vertical RJ45 10/100 Base-T	29-30
SMJ200 Series RJ45+Single Port USB 10/100 Base-T	31-32
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Sullins Power

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SBP106 Series High Power Male Connector	42



SBP116 Series High Power Male Connector -----	43
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SBP128 Series High Power Female Connector-----	50
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Sullins Headers

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2.00mm [.079"] Contact Centers, Top/Bottom Entry SMT Female Headers -----	73-74
2.54mm [.100"] Contact Centers, Top/Bottom Entry SMT Female Headers -----	75-76
1.00mm [.039"] Contact Centers, Shrouded (Box) Headers Straight/SMT -----	77



SPECIFICATIONS

Material

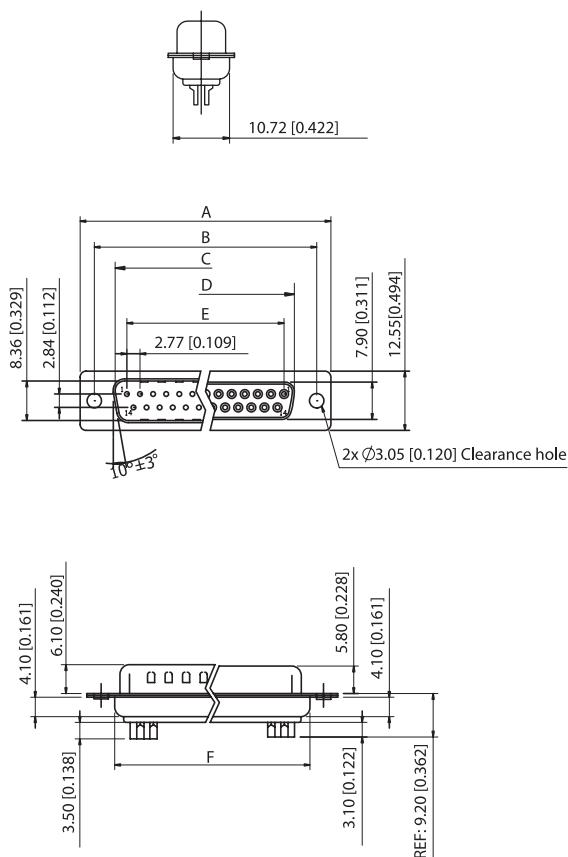
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

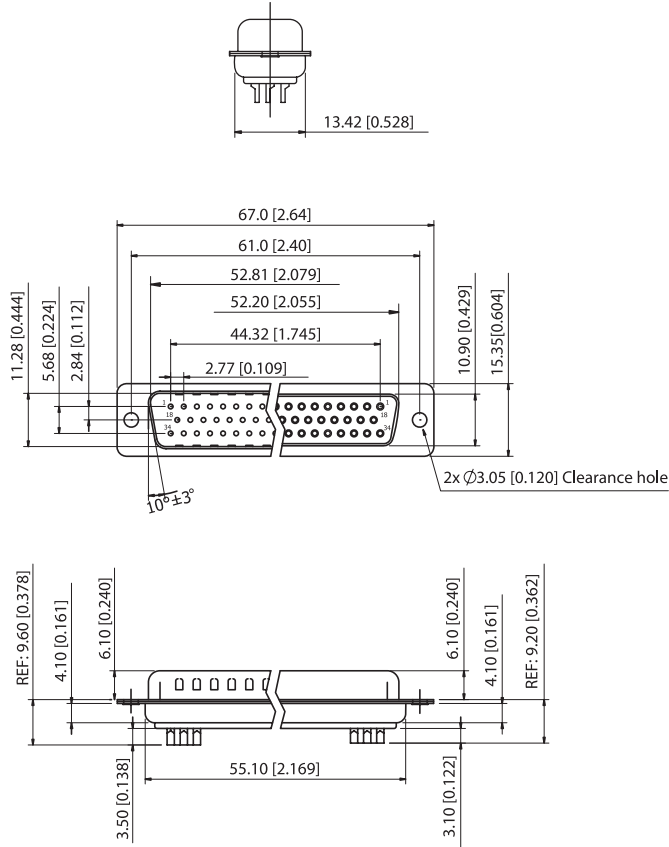
- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS

9,15,25,37 Positions



50 Positions



Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
9	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	19.20	0.756
15	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	27.70	1.091
25	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	41.10	1.618
37	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	57.30	2.256

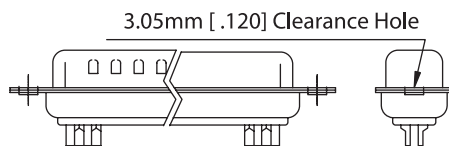


PART NUMBER OPTIONS

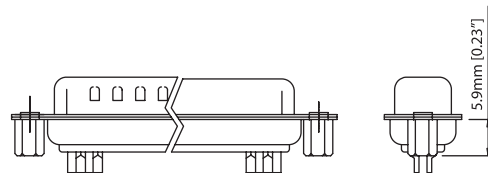
CONTACT PLATING (All Platings Have .000050" Nickel Underplate) W = Gold Flash On Contact Surface, .000100" Pure Tin On Termination. B = .000010" Gold On Contact Surface, .000100" Pure Tin On Termination. U = .000015" Gold On Contact Surface, .000100" Pure Tin On Termination. C = .000030" Gold On Contact Surface, .000100" Pure Tin On Termination.		INSULATOR COLOR 1.Black (Standard) 2.Blue 3.Green 6.White	
SHELL PLATING 0. Cr ⁺ 3 Yellow Chrome 1. Nickel 2. Tin (Standard) 3. Cr ⁺ 6 Yellow Chrome 4. Gold Flash 5. Tin without Dimple 6. Cr ⁺ 6 Yellow Chrome, With Dimple		POSITION OF CLINCH NUT (REFER TO BELOW FIGURE FOR DETAIL) 0. 3.05mm [.120] Clearance Hole 1. Front Rivet, 5.9mm[0.23] 2. Rear Rivet, 5.9mm[0.23] 3. Rivet+2 Prong Boardlock ϕ 3.2 x 6.0 L [0.13 x 0.24]	
CONTACT TYPE M : MALE F : FEMALE		FLANGE MOUNTING OPTION 0. ϕ 3.05mm [ϕ .120] Clearance Hole 1. #4-40 Female Thread 8. #4-40 UNC (5.0 X 10.0mm [0.20 X 0.39]) Female Screwlock Installed 9. #4-40 UNC (5.0 X 10.0mm [0.20 X 0.39]) Female Screwlock Bulk-Packed 4. M3 Female Thread 5. M3 (5.0 X 10.0mm [0.20 X 0.39]) Female Screwlock Installed	
NO. OF PINS 09 : 09 POSITIONS 15 : 15 POSITIONS 25 : 25 POSITIONS 37 : 37 POSITIONS 50 : 50 POSITIONS		FERRITE N : Without Ferrite	
		PIN TYPE S : STAMPED PIN M : MACHINED PIN	

POSITION OF CLINCH NUT Consult sales or factory for other mounting style options

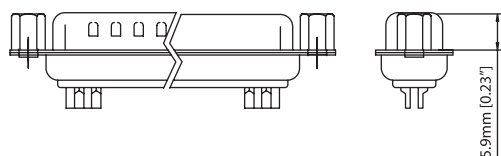
0. 3.05mm [.120] Clearance Hole



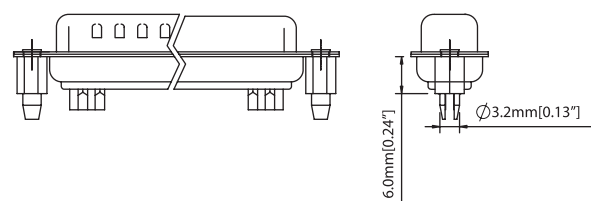
2. Rear Rivet, 5.9mm[0.23]



1. Front Rivet, 5.9mm[0.23]



3. Rivet+2 Prong Boardlock
 ϕ 3.2 x 6.0 L [0.13 x 0.24]





SPECIFICATIONS

Material

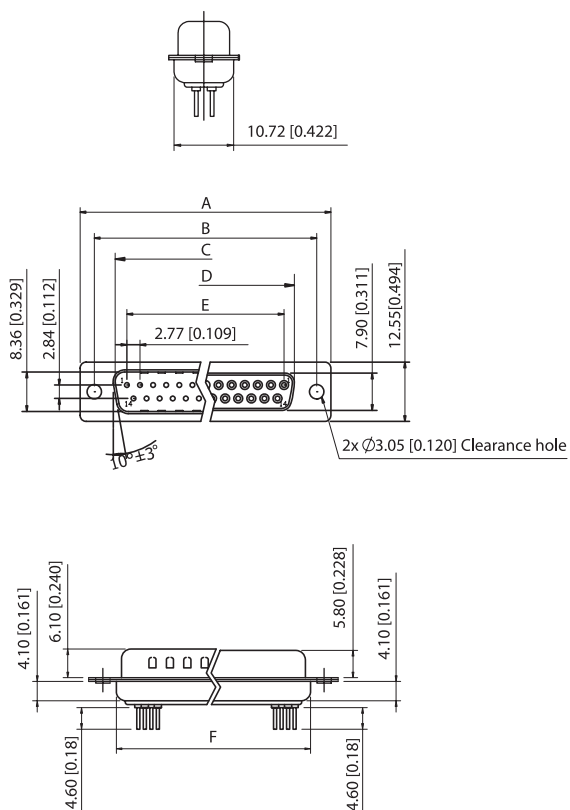
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

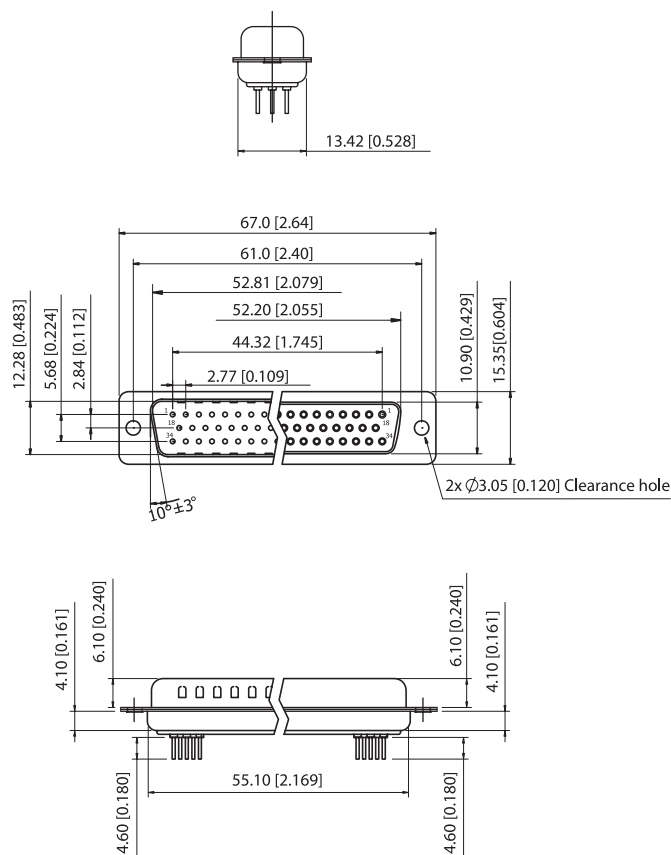
- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MegOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS

9,15,25,37 Positions



50 Positions



Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
9	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	19.20	0.756
15	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	27.70	1.091
25	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	41.10	1.618
37	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	57.30	2.256

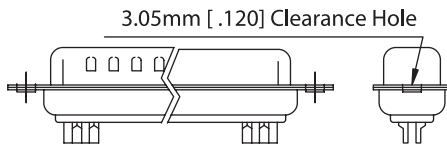


PART NUMBER OPTIONS

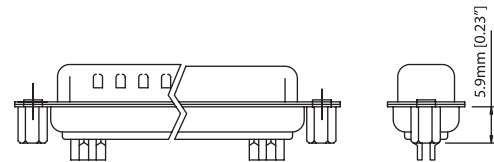
SDS101-PR		
CONTACT PLATING (All Platings Have .000050" Nickel Underplate)		INSULATOR COLOR
W = Gold Flash On Contact Surface, .000100" Pure Tin On Termination.		1. Black (Standard) 2. Blue
B = .000010" Gold On Contact Surface, .000100" Pure Tin On Termination.		6. White
U = .000015" Gold On Contact Surface, .000100" Pure Tin On Termination.		POSITION OF CLINCH NUT (REFER TO BELOW FIGURE FOR DETAIL)
C = .000030" Gold On Contact Surface, .000100" Pure Tin On Termination.		0. $\varnothing 3.05\text{mm}$ [.120] Clearance Hole
		1. Front Rivet, 5.9mm[0.23]
		2. Rear Rivet, 5.9mm[0.23]
		3. Rivet+2 Prong Boardlock $\varnothing 3.2 \times 6.0 \text{ L}$ [0.13 x 0.24]
SHELL PLATING		FLANGE MOUNTING OPTION
0. Cr+3 Yellow Chrome	1. Nickel	0. $\varnothing 3.05\text{mm}$ [$\varnothing 0.120$] Clearance Hole
2. Tin (Standard)	3. Cr+6 Yellow Chrome	1. #4-40 Female Thread
4. Gold Flash		8. #4-40 UNC (5.0 X 10.0mm [0.20 X 0.39]) Female Screwlock Installed
		9. #4-40 UNC (5.0 X 10.0mm [0.20 X 0.39]) Female Screwlock Bulk-Packed
CONTACT TYPE		4. M3 Female Thread
M : MALE		5. M3 (5.0 X 10.0mm [0.20 X 0.39]) Female Screwlock Installed
F : FEMALE		
NO. OF PINS		FERRITE
09 : 09 POSITIONS		N : Without Ferrite
15 : 15 POSITIONS		
25 : 25 POSITIONS		PIN TYPE
37 : 37 POSITIONS		S : STAMPED PIN
50 : 50 POSITIONS		M : MACHINED PIN

POSITION OF CLINCH NUT Consult sales or factory for other mounting style options

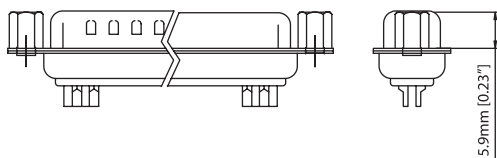
0. 3.05mm [.120] Clearance Hole



2. Rear Rivet, 5.9mm[0.23]

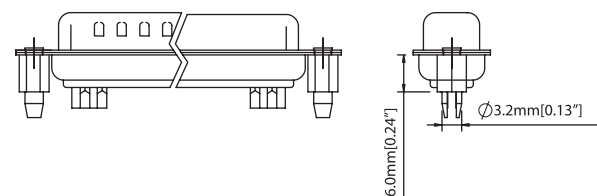


1. Front Rivet, 5.9mm[0.23]



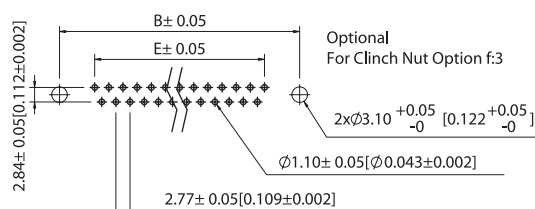
3. Rivet+2 Prong Boardlock

$\varnothing 3.2 \times 6.0 \text{ L}$ [0.13 x 0.24]

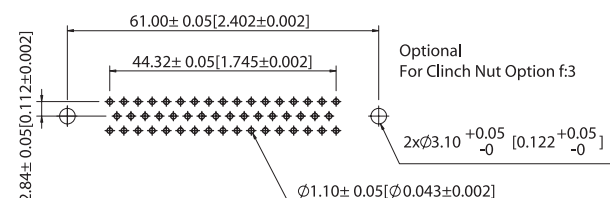


RECOMMENDED PCB LAYOUT

9,15,25,37 Positions



50 Positions





SPECIFICATIONS

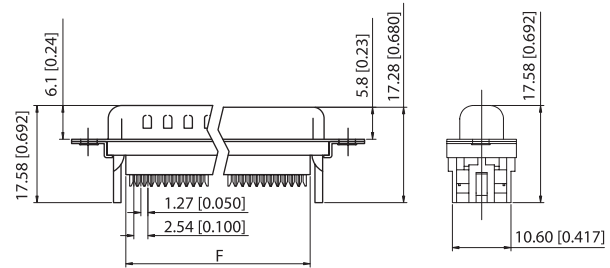
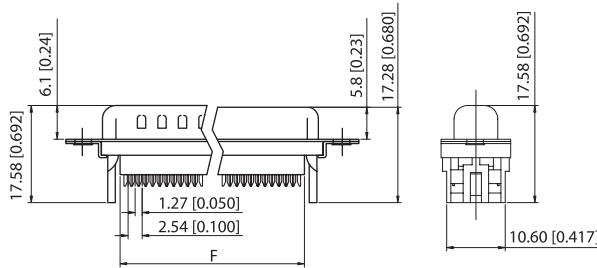
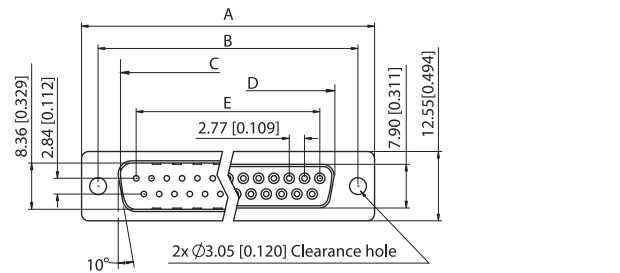
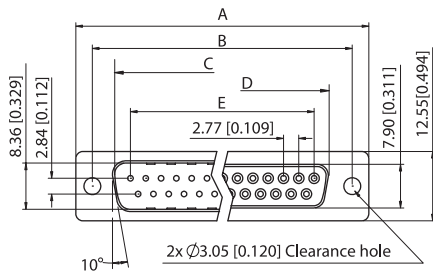
Material

- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Screwlock: Steel, Nickel Plated

Electrical

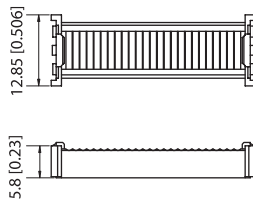
- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS

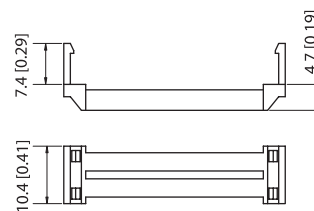


Without Insulator Support

With Insulator Support



COVER



Strain Relief
Optional See P/N Coding

Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
9	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	19.20	0.756
15	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	27.70	1.091
25	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	41.10	1.618
37	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	57.30	2.256

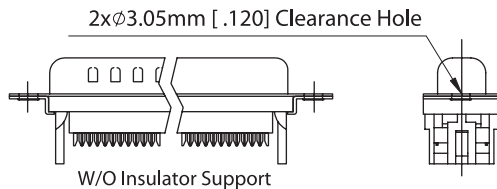


PART NUMBER OPTIONS

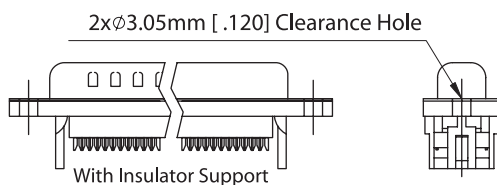
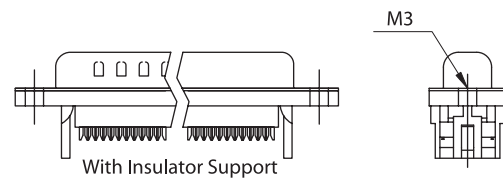
CONTACT PLATING (All Platings Have .000050" Nickel Underplate)		INSULATOR COLOR	
W = Gold Flash On Contact Surface, .000100" Pure Tin On Termination.		1. With Insulator Support 2. W/O Insulator Support	
B = .000010" Gold On Contact Surface, .000100" Pure Tin On Termination.		SR TYPE	
U = .000015" Gold On Contact Surface, .000100" Pure Tin On Termination.		1: Plastic Strain Relief	
C = .000030" Gold On Contact Surface, .000100" Pure Tin On Termination.		2: Metal Shell Strain Relief	
		3: Without Strain Relief	
SHELL PLATING		INSULATOR COLOR	
1. Nickel		1: Black (Standard)	
2. Tin (Standard)		2: Blue	
CONTACT TYPE		POSITION OF CLINCH NUT	
M : MALE		0. $\varnothing 3.05\text{mm}$ [.120] Clearance Hole	
F : FEMALE		5. Rear Rivet, 4.0mm[0.16]	
NO. OF PINS		FLANGE MOUNTING OPTION	
09 : 09 POSITIONS		(REFER TO BELOW FIGURE FOR DETAIL)	
15 : 15 POSITIONS		0. $\varnothing 3.05\text{mm}$ [$\varnothing 0.120$] Clearance Hole	
25 : 25 POSITIONS		1. #4-40 Female Thread	
37 : 37 POSITIONS		4. M3 Female Thread	
		7. M2.6 Female Thread	
		A. #4-40 Female Thread: 4.0mm[0.16]	
		FERRITE	
		N : Without Ferrite	
		PIN TYPE	
		S : STAMPED PIN	

FLANGE MOUNTING OPTION Consult sales or factory for other mounting style options

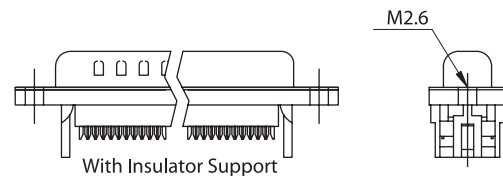
0. 3.05mm [.120] Clearance Hole



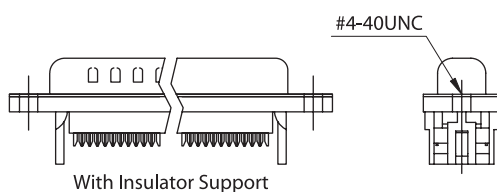
4. M3 Female Thread



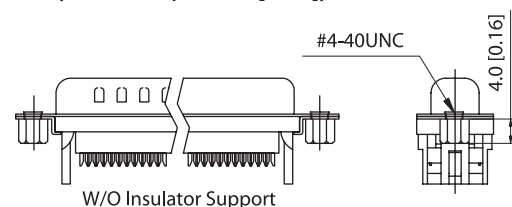
7. M2.6 Female Thread



1. #4-40 Female Thread



A. #4-40 Female Thread: 4.0mm[0.16] (Rear Rivet, 4.0mm[0.16])





D-Sub HD Solder Type - 104 SERIES

SPECIFICATIONS

Material

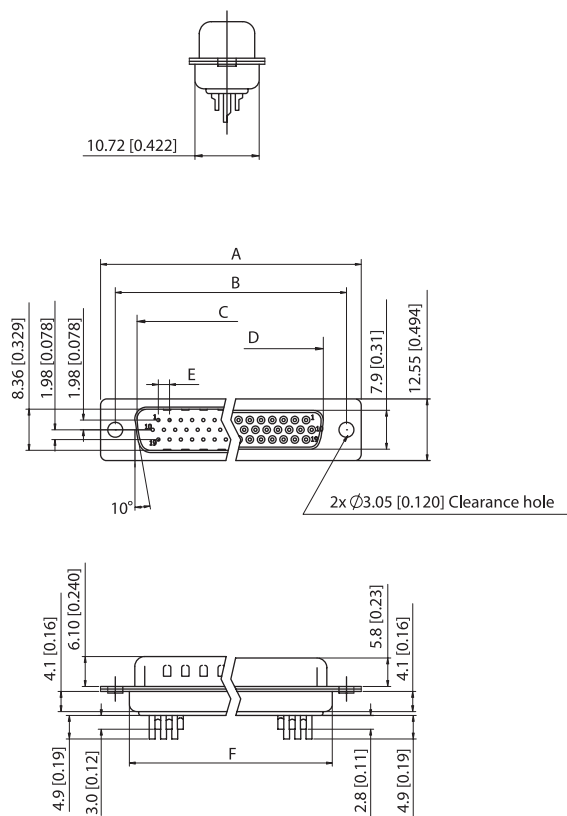
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Screwlock: Steel, Nickel Plated

Electrical

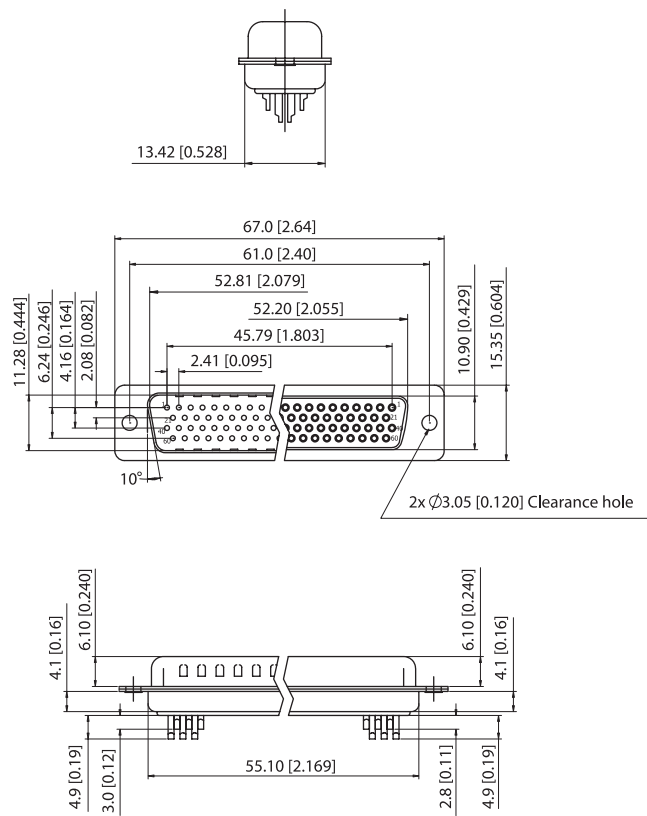
- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS

15, 26, 44, 62 Positions



78 Positions



Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
15	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	19.20	0.756
26	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	27.70	1.091
44	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	41.10	1.618
62	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	57.30	2.256

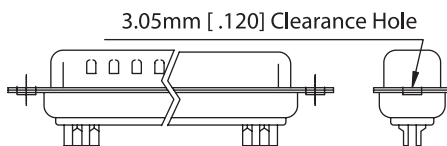


PART NUMBER OPTIONS

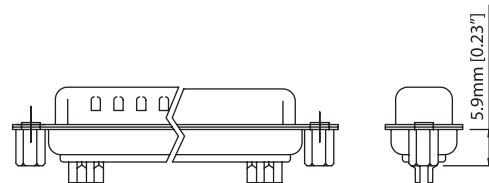
CONTACT PLATING (All Platings Have .000050" Nickel Underplate) W = Gold Flash On Contact Surface, .000100" Pure Tin On Termination. B = .000010" Gold On Contact Surface, .000100" Pure Tin On Termination. U = .000015" Gold On Contact Surface, .000100" Pure Tin On Termination. C = .000030" Gold On Contact Surface, .000100" Pure Tin On Termination.		INSULATOR COLOR 1.Black (Standard) 2.Blue 6.White	
SHELL PLATING 1. Nickel 2. Tin (Standard)		POSITION OF CLINCH NUT (REFER TO BELOW FIGURE FOR DETAIL) 0. $\varnothing 3.05\text{mm}$ [.120] Clearance Hole 1. Front Rivet, 5.9mm[0.23] 2. Rear Rivet, 5.9mm[0.23] 3. Rivet+2 Prong Boardlock $\varnothing 3.2 \times 6.0 \text{ L}$ [0.13 x 0.24]	
CONTACT TYPE M : MALE F : FEMALE		FLANGE MOUNTING OPTION 0. $\varnothing 3.05\text{mm}$ [$\varnothing .120$] Clearance Hole 1. #4-40 Female Thread 2. #4-40 UNC (5.0 X 10.mm [0.20 X 0.39]) Female Screwlock Installed 3. #4-40 UNC (5.0 X 10.mm [0.20 X 0.39]) Female Screwlock Bulk-Packed 4. M3 Female Thread	
NO. OF PINS 15 : 15 POSITIONS 26 : 26 POSITIONS 44 : 44 POSITIONS 62 : 62 POSITIONS 78 : 78 POSITIONS		FERRITE N : Without Ferrite	
		PIN TYPE S : STAMPED PIN M : MACHINED PIN	

POSITION OF CLINCH NUT Consult sales or factory for other mounting style options

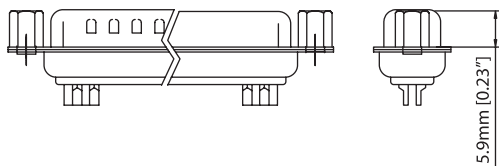
0. 3.05mm [.120] Clearance Hole



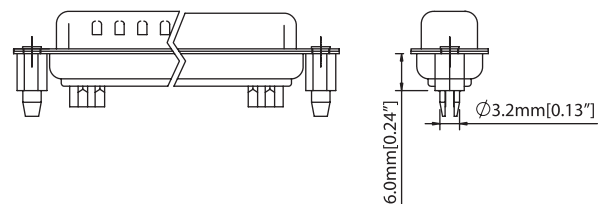
2. Rear Rivet, 5.9mm[0.23]



1. Front Rivet, 5.9mm[0.23]



3. Rivet+2 Prong Boardlock
 $\varnothing 3.2 \times 6.0 \text{ L}$ [0.13 x 0.24]





D-Sub Right Angle Type - 107 SERIES

SPECIFICATIONS

Material

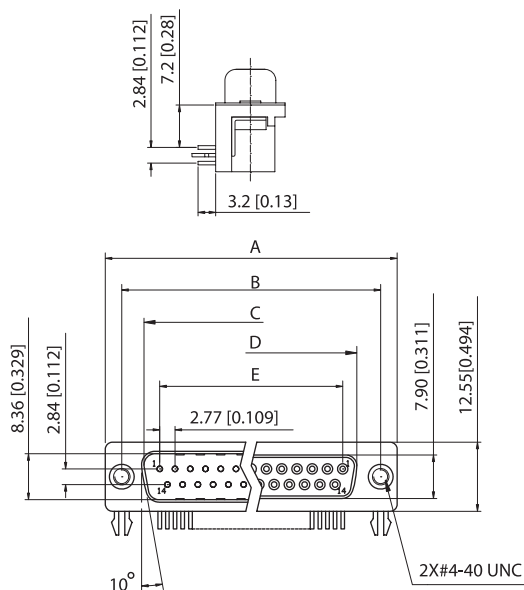
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

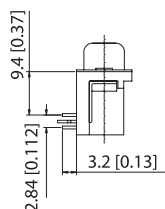
- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS With 7.2mm[0.28"], 9.4mm[0.37"], 13.84mm[0.545"] Footprint

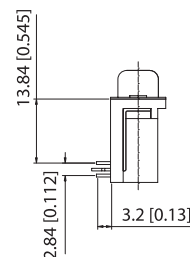
7.2mm[0.28"] Footprint



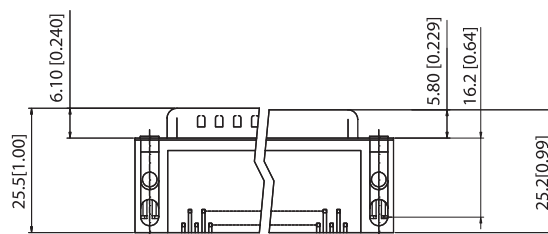
9.4mm[0.37"] Footprint



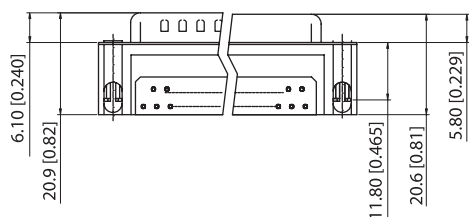
13.84mm[0.545"] Footprint



7.2mm[0.28"] Footprint



9.4mm[0.37"] Footprint



13.84mm[0.545"] Footprint

Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
9	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	11.08	0.436
15	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	19.39	0.763
25	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	33.24	1.309
37	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	49.86	1.963



SPECIFICATIONS

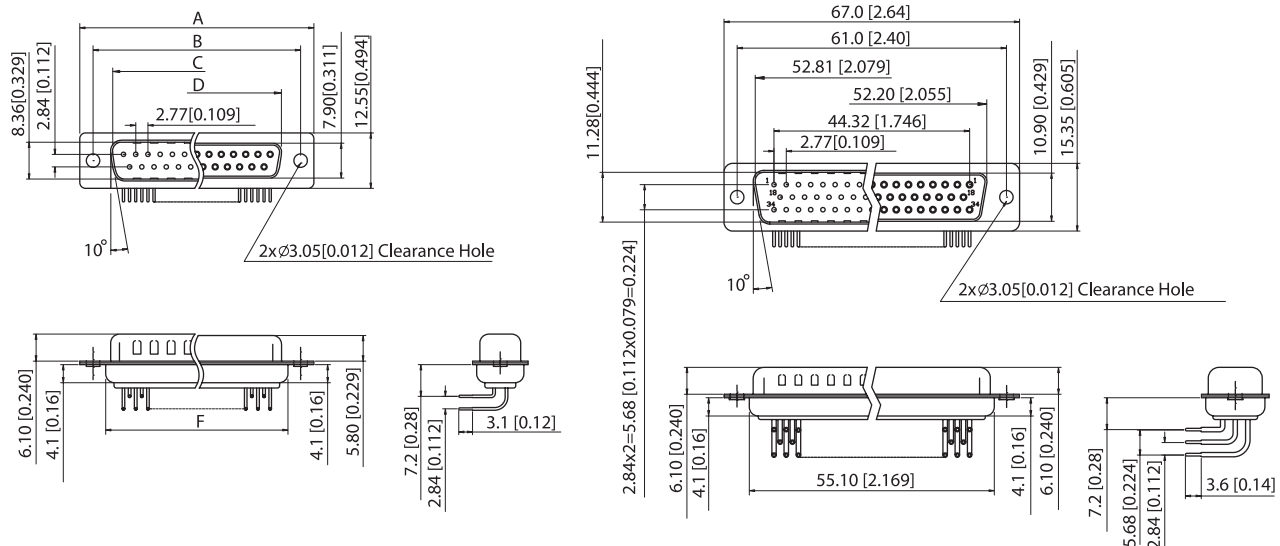
Material

- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS With 7.2mm[0.28"] Footprint Machined Pin (W/O Rear Cover) & 50 Positions Machined Pin (W/O Rear Cover)

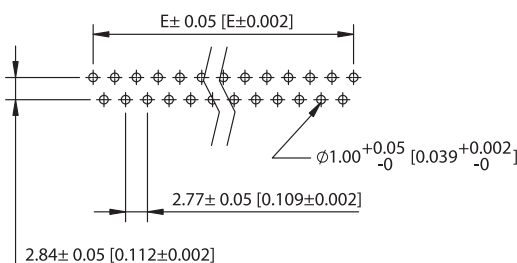


7.2mm[0.28"] Footprint Machined Pin (W/O Rear Cover)

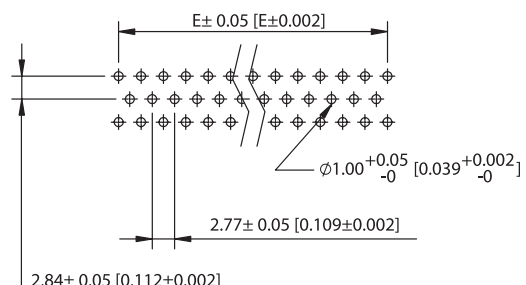
50 Positions Machined Pin (W/O Rear Cover)

Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
9	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	19.20	0.756
15	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	27.70	1.091
25	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	41.10	1.618
37	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	57.30	2.256

RECOMMENDED PCB LAYOUT



7.2mm[0.28"] Footprint Machined Pin (W/O Rear Cover)



50 Positions Machined Pin (W/O Rear Cover)



D-Sub H.D. Right Angle Type - 108 SERIES

SPECIFICATIONS

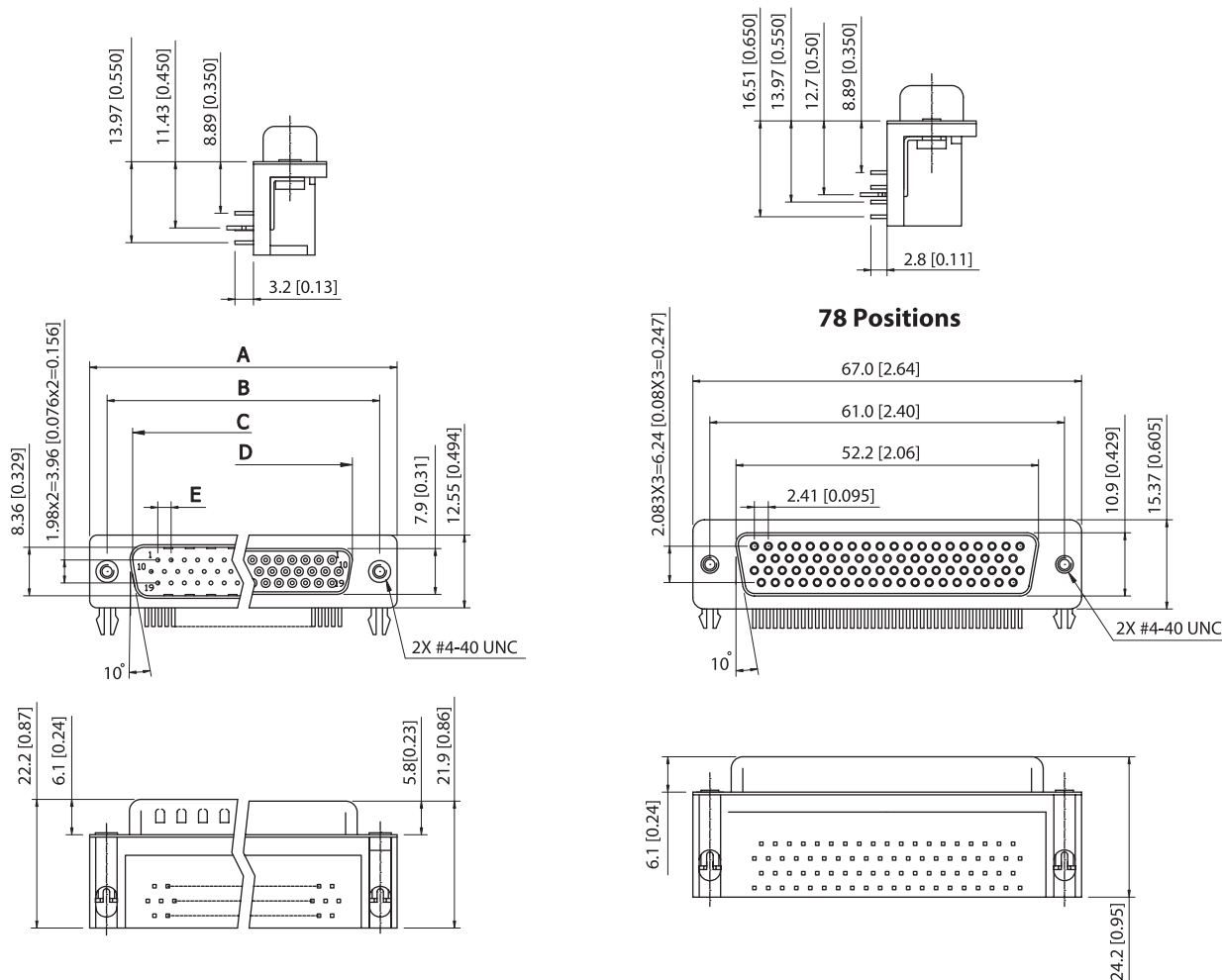
Material

- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS



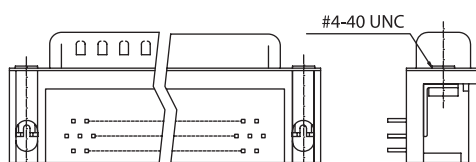
Positions	A		B		C		D		E		F		G	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
15	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	2.29	0.090	7.04	0.277	1.145	0.045
26	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	2.29	0.090	7.04	0.277	1.145	0.045
44	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	2.29	0.090	7.04	0.277	1.145	0.045
62	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	2.41	0.065	7.00	0.276	1.205	0.040



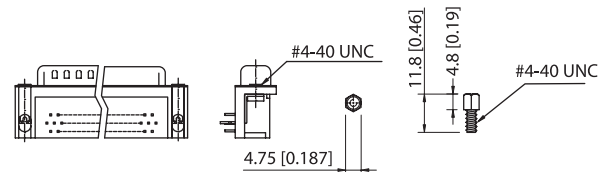
PART NUMBER OPTIONS

CONTACT PLATING (All Platings Have .000050" Nickel Underplate) W = Gold Flash On Contact Surface, .000100" Pure Tin On Termination. B = .000010" Gold On Contact Surface, .000100" Pure Tin On Termination. U = .000015" Gold On Contact Surface, .000100" Pure Tin On Termination. C = .000030" Gold On Contact Surface, .000100" Pure Tin On Termination. N = .000050" Gold On Contact Surface, .000100" Pure Tin On Termination. P = Gold Flash Overall		INSULATOR COLOR 1. Black (Standard) 2. Blue	
SHELL PLATING 1. Nickel 2. Tin (Standard)		RIVET OPTIONS (REFER TO BELOW FIGURE FOR DETAIL) 0. None 1. Grounding Strap #4-40 Threaded On Panel 2. Grounding Strap #4-40 Threaded On PCB & Panel 3. Grounding Hook Boardlock+2 Prong	
CONTACT TYPE M : MALE F : FEMALE		FLANGE MOUNTING OPTION (REFER TO BELOW FIGURE FOR DETAIL) 1. #4-40 Female Thread 2. #4-40 UNC (4.8 X 11.8mm [0.19 X 0.46]) Female Screwlock Installed 3. #4-40 UNC (4.8 X 11.8mm [0.19 X 0.46]) Female Screwlock Bulk-Packed **6. #4-40 UNC (4.8 X 11.8mm [0.19 X 0.46]) Female Screwlock Installed ** Remove Screwlock to Disassemble Boardlock Bracket	
NO. OF PINS 15 : 15 POSITIONS 26 : 26 POSITIONS 44 : 44 POSITIONS 62 : 62 POSITIONS 78 : 78 POSITIONS		FERRITE N : Without Ferrite	
		PIN TYPE S : STAMPED PIN M : MACHINED PIN	

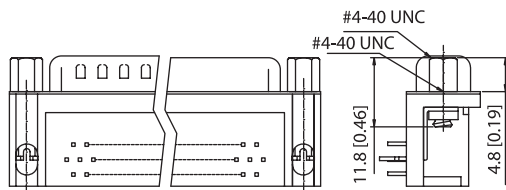
RIVET OPTIONS & FLANGE MOUNTING OPTION



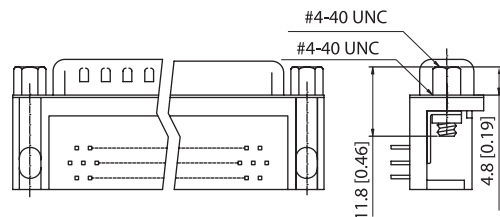
Grounding Hook Boardlock+2 Prong
(#4-40 Female Thread)



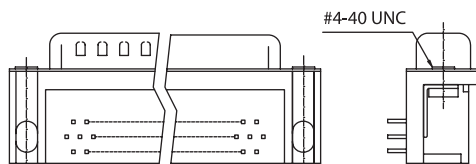
Grounding Hook Boardlock+2 Prong
(#4-40 UNC (4.8 X 11.8mm [0.19 X 0.46])
Female Screwlock Bulk-Packed)



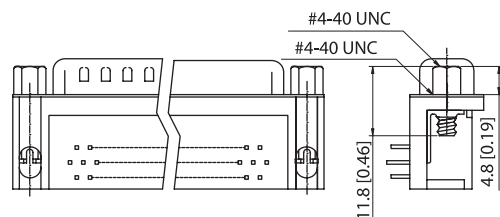
Grounding Hook Boardlock+2 Prong
(#4-40 UNC (4.8 X 11.8mm [0.19 X 0.46])
Female Screwlock Installed)



Grounding Strap #4-40 Threaded on Panel
(#4-40 UNC (4.8 X 11.8mm [0.19 X 0.46])
Female Screwlock Installed)



Grounding Strap #4-40 Threaded on Panel
(#4-40 Female Thread)



Grounding Hook Boardlock+2 Prong
(#4-40 UNC (4.8 X 11.8mm [0.19 X 0.46])
Female Screwlock Installed)



D-Sub High Profile Straight Type - 155 SERIES

SPECIFICATIONS

Material

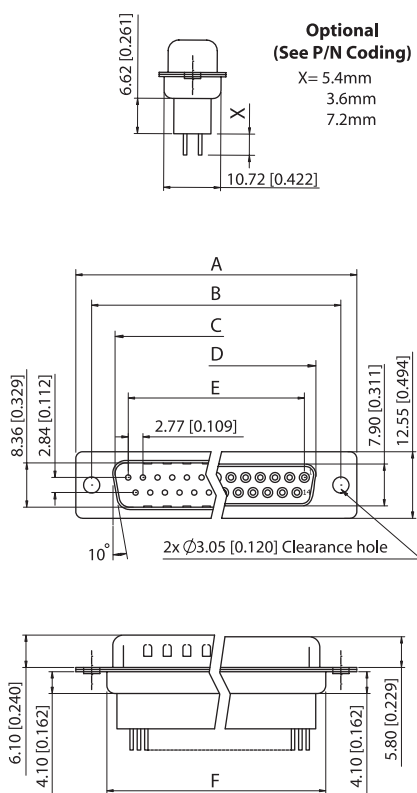
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

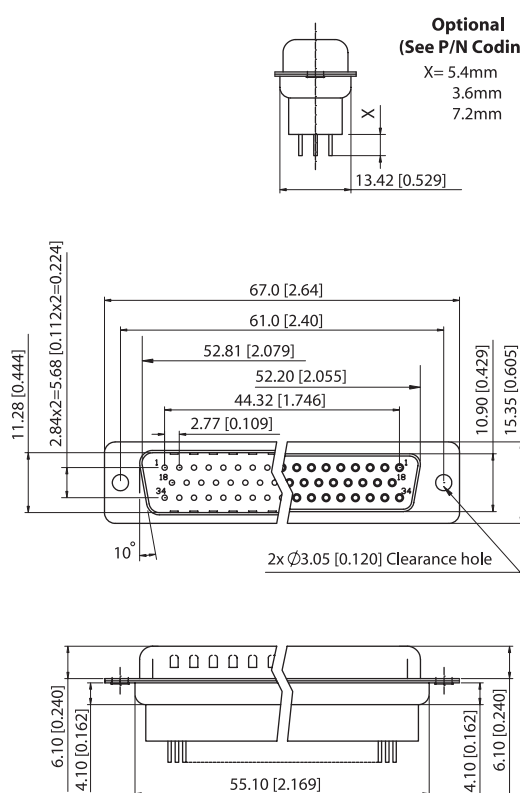
- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS

9,15,25,37 Positions



50 Positions



Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
9	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	19.20	0.756
15	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	27.70	1.091
25	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	41.10	1.618
37	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	57.30	2.256



PART NUMBER OPTIONS

SDS155-PR

CONTACT PLATING

(All Platings Have .000050" Nickel Underplate)

W = Gold Flash On Contact Surface,
.000100" Pure Tin On Termination.
B = .000010" Gold On Contact Surface,
.000100" Pure Tin On Termination.
U = .000015" Gold On Contact Surface,
.000100" Pure Tin On Termination.
C = .000030" Gold On Contact Surface,
.000100" Pure Tin On Termination.

SHELL PLATING

0. Cr+3 Yellow Chrome 1. Nickel
2. Tin (Standard) 3. Cr+6 Yellow Chrome

CONTACT TYPE

M : MALE
F : FEMALE

NO. OF PINS

09 : 09 POSITIONS
15 : 15 POSITIONS
25 : 25 POSITIONS
37 : 37 POSITIONS
50 : 50 POSITIONS

INSULATOR COLOR

1. Black (Standard)

RIVET OPTIONS

(REFER TO BELOW FIGURE FOR DETAIL)

0. $\phi 3.05\text{mm}$ [.120] Clearance Hole
1. Front Rivet, 5.9mm[0.23]
2. Rear Rivet, 5.9mm[0.23]
4. Boardlock+2 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43]
6. Boardlock+4 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43]

FLANGE MOUNTING OPTION

0. $\phi 3.05\text{mm}$ [$\phi 0.120$] Clearance Hole
1. #4-40 Female Thread
8. #4-40 UNC (5.0 X 10.mm [0.20 X 0.39])
Female Screwlock Installed
9. #4-40 UNC (5.0 X 10.mm [0.20 X 0.39])
Female Screwlock Bulk-Packed

FERRITE

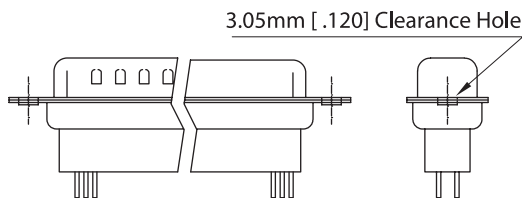
N : Without Ferrite

PIN TYPE

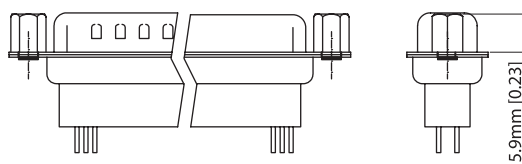
S : STAMPED PIN : 5.4mm [0.21]
M : MACHINED PIN : 5.4mm [0.21]
Q : STAMPED PIN : 3.6mm [0.14]
R : STAMPED PIN : 7.2mm [0.28]

RIVET OPTIONS

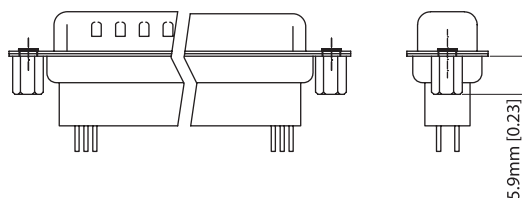
0. 3.05mm [.120] Clearance Hole



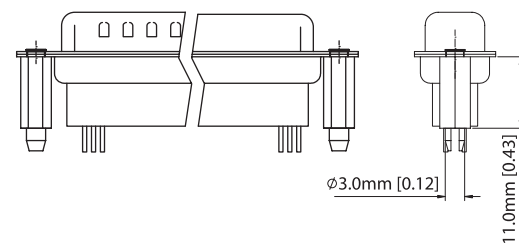
1. Front Rivet, 5.9mm[0.23]



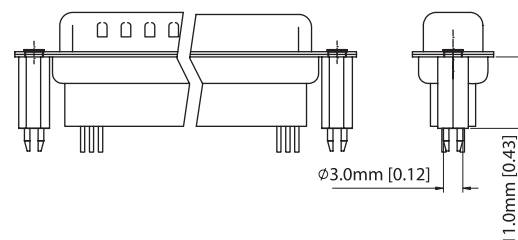
2. Rear Rivet, 5.9mm[0.23]



4. Boardlock+2 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43]



6. Boardlock+4 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43]





D-Sub H.D. High Profile PCB Type - 160 SERIES

SPECIFICATIONS

Material

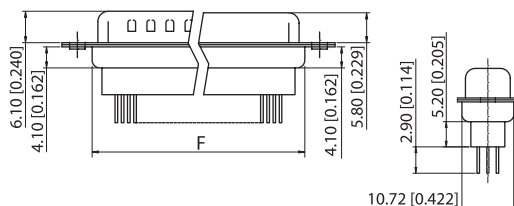
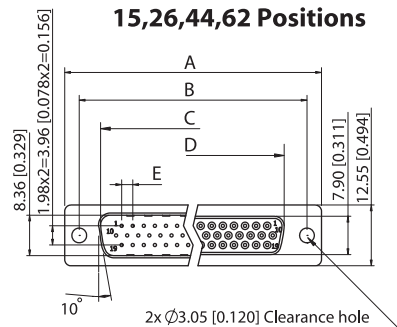
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Screwlock: Steel, Nickel Plated

Electrical

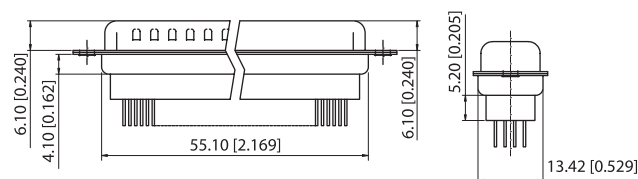
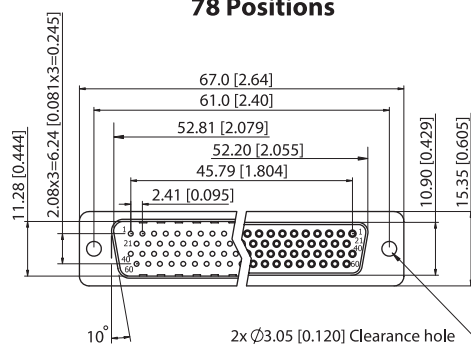
- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz

DIMENSIONS

15,26,44,62 Positions



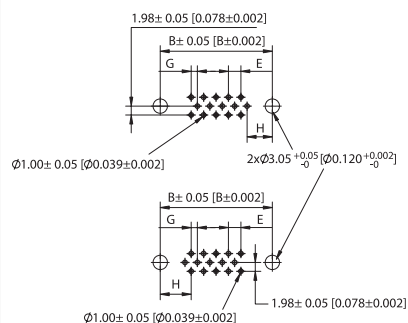
78 Positions



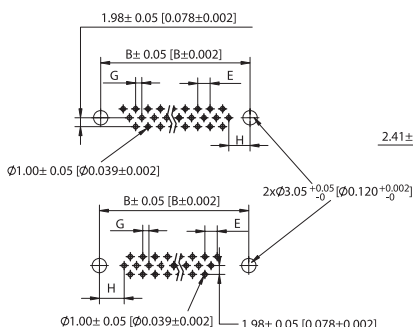
Positions	A		B		C		D		E		F	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
15	30.81	1.213	24.99	0.984	16.92	0.666	16.33	0.643	11.08	0.436	19.20	0.756
26	39.20	1.543	33.30	1.311	25.25	0.994	24.70	0.972	19.39	0.763	27.70	1.091
44	53.05	2.088	47.04	1.852	38.96	1.534	38.40	1.512	33.24	1.309	41.10	1.618
62	69.40	2.732	63.50	2.500	55.42	2.182	54.80	2.158	49.86	1.963	57.30	2.256

RECOMMENDED PCB LAYOUT

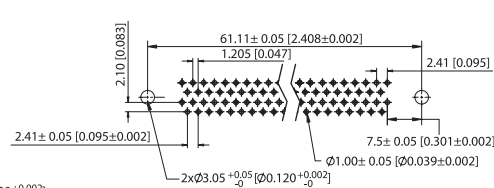
15 Positions



26,44,62 Positions



78 Positions



Positions	G		H	
	mm	inch	mm	inch
15	1.145	0.0451	7.04	0.277
26	1.145	0.0451	6.88	0.271
44	1.145	0.0451	6.88	0.271
62	1.205	0.0474	7.00	0.275

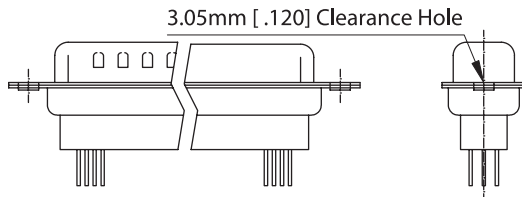


PART NUMBER OPTIONS

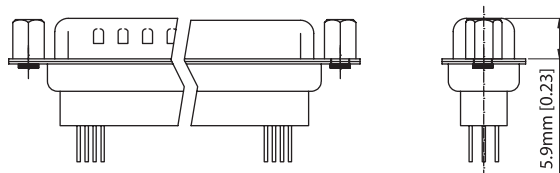
CONTACT PLATING (All Platings Have .000050" Nickel Underplate) W = Gold Flash On Contact Surface, .000100" Pure Tin On Termination. B = .000010" Gold On Contact Surface, .000100" Pure Tin On Termination. U = .000015" Gold On Contact Surface, .000100" Pure Tin On Termination. C = .000030" Gold On Contact Surface, .000100" Pure Tin On Termination.		INSULATOR COLOR 1.Black 2.Blue	
SHELL PLATING 0. Cr+3 Yellow Chrome 1. Nickel 2. Tin (Standard) 3. Cr+6 Yellow Chrome		RIVET OPTIONS (REFER TO BELOW FIGURE FOR DETAIL) 0. $\phi 3.05\text{mm}$ [.120] Clearance Hole 1. Front Rivet, 5.9mm[0.23] 2. Rear Rivet, 5.9mm[0.23] 4. Boardlock+2 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43] 6. Boardlock+4 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43]	
CONTACT TYPE M : MALE F : FEMALE		FLANGE MOUNTING OPTION 0. $\phi 3.05\text{mm}$ [$\phi 0.120$] Clearance Hole 1. #4-40 Female Thread B. #4-40 UNC (5.8 X 11.8mm [0.23 X 0.46]) Female Screwlock Installed C. #4-40 UNC (5.8 X 11.8mm [0.23 X 0.46]) Female Screwlock Bulk-Packed	
NO. OF PINS 15 : 15 POSITIONS 26 : 26 POSITIONS 44 : 44 POSITIONS 62 : 62 POSITIONS 78 : 78 POSITIONS		FERRITE N : Without Ferrite	
		PIN TYPE S : STAMPED PIN : 5.4mm [0.21] M : MACHINED PIN : 5.4mm [0.21] Q : STAMPED PIN : 3.6mm [0.14] R : STAMPED PIN : 7.2mm [0.28] T : MACHINED PIN : 7.5mm [0.30]	

RIVET OPTIONS

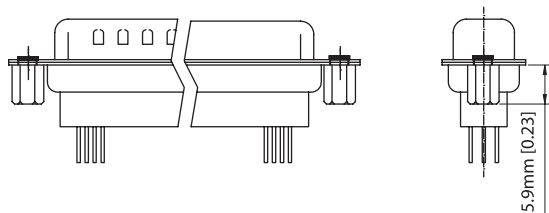
0. 3.05mm [.120] Clearance Hole



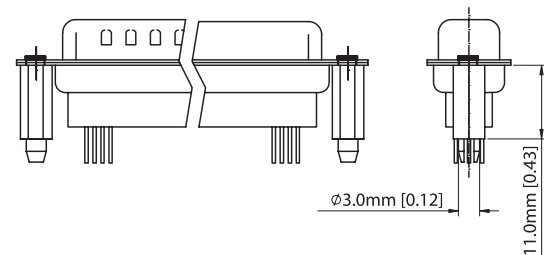
1. Front Rivet, 5.9mm[0.23]



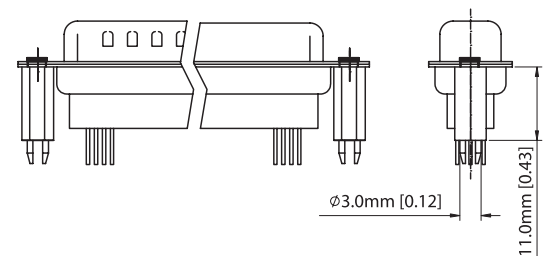
2. Rear Rivet, 5.9mm[0.23]



4. Boardlock+2 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43]



6. Boardlock+4 Prong $\phi 3.0 \times 11.0 \text{ L}$ [0.12 x 0.43]





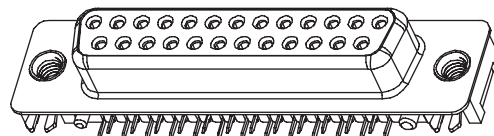
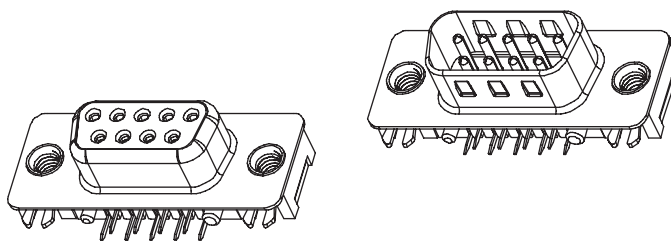
SPECIFICATIONS

Material

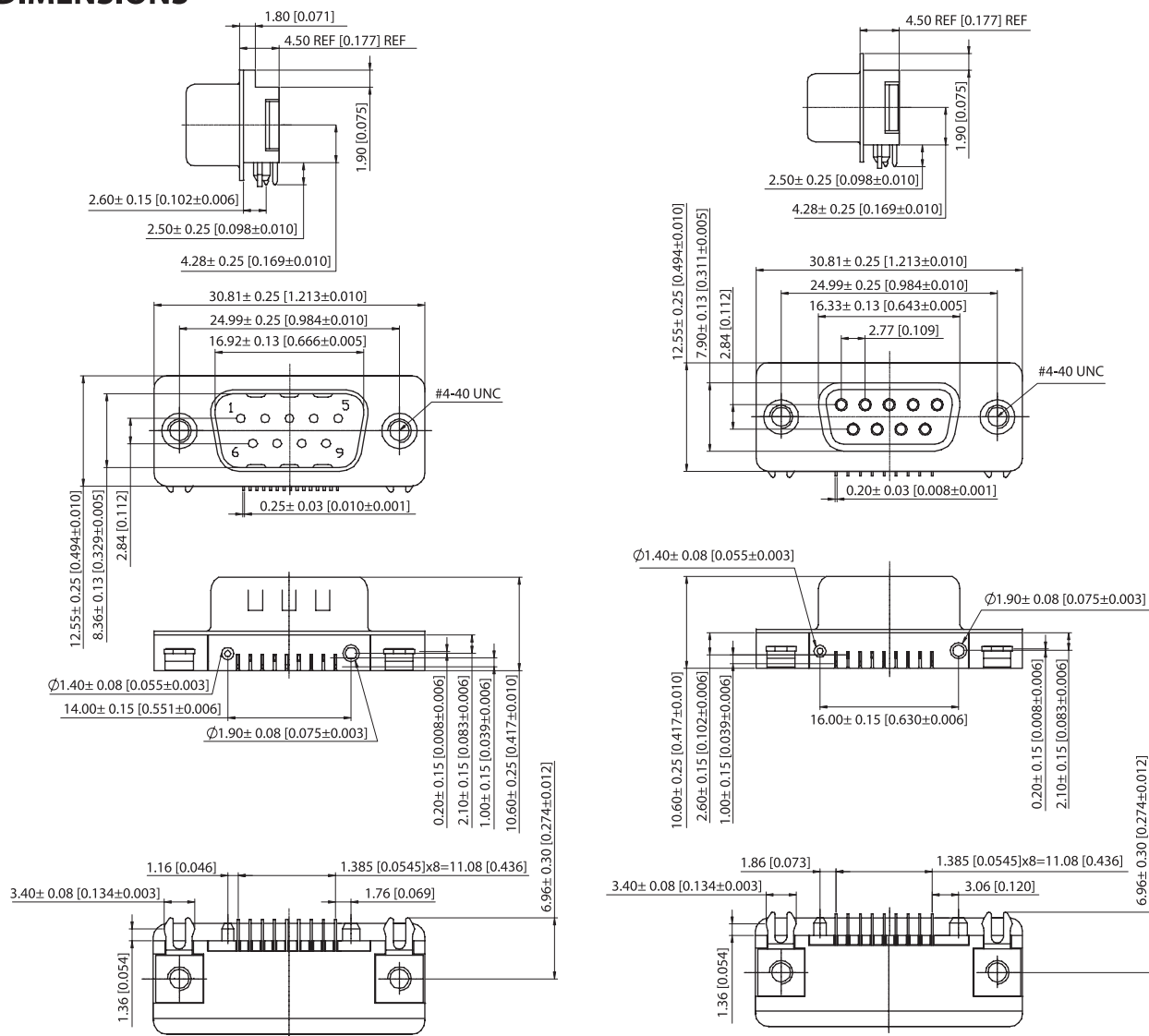
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MagOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz



DIMENSIONS





PART NUMBER OPTIONS

SDS223-PR

CONTACT PLATING

(All Platings Have .000050" Nickel Underplate)

W = Gold Flash On Contact Surface,
Pure Tin On Termination.

B = .000010" Gold On Contact Surface,
.000100" Pure Tin On Termination.

U = .000015" Gold On Contact Surface,
.000100" Pure Tin On Termination.

C = .000030" Gold On Contact Surface,
.000100" Pure Tin On Termination.

SHELL PLATING

- 0. Cr+3 Yellow Chrome
- 2. Tin (Standard)

- 1. Nickel
- 3. Cr+6 Yellow Chrome

CONTACT TYPE

M : MALE

F : FEMALE

NO. OF PINS

09 : 09 POSITIONS

25 : 25 POSITIONS (FEMALE)

INSULATOR COLOR

- 1.Black
- 2.Blue (Standard)
- 3.White

RIVET OPTIONS

- 0. None
- 1. Grounding Strap #4-40 Threaded on PANEL
- 2. Grounding Strap #4-40 Threaded on PCB & PANEL
- 3. Grounding Hook Boardlock+2 Prong

FLANGE MOUNTING OPTION

- 0. $\phi 3.05\text{mm}$ [$\phi 0.120$] Clearance Hole
- 1. #4-40 Female Thread
- 8. #4-40 UNC (4.8 X 11.8mm [0.19X 0.46])
Female Screwlock Installed
- 9. #4-40 UNC (4.8 X 11.8mm [0.19X 0.46])
Female Screwlock Bulk-Packed

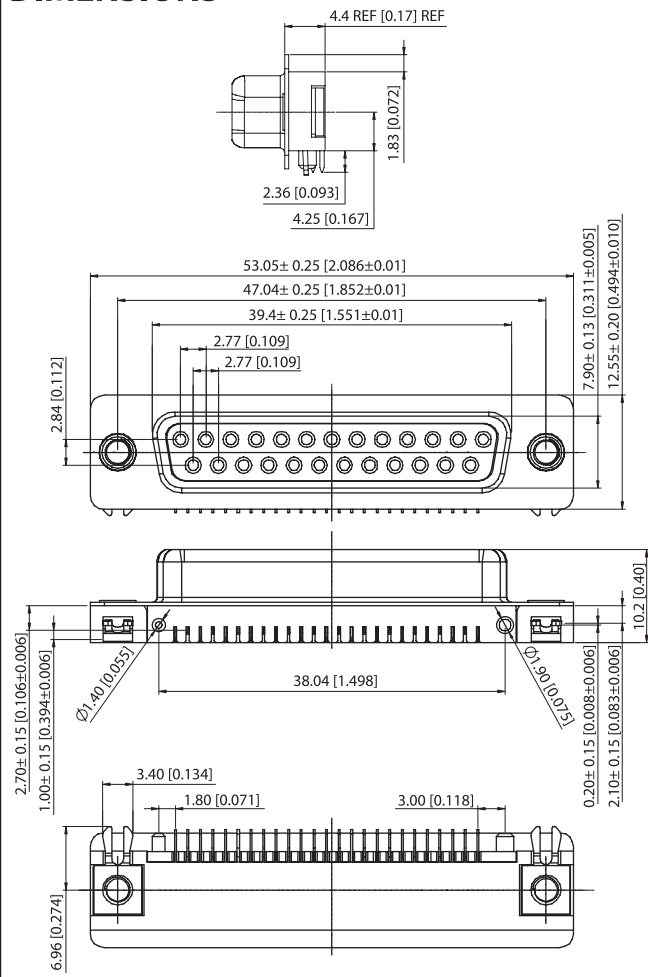
FERRITE

N : Without Ferrite

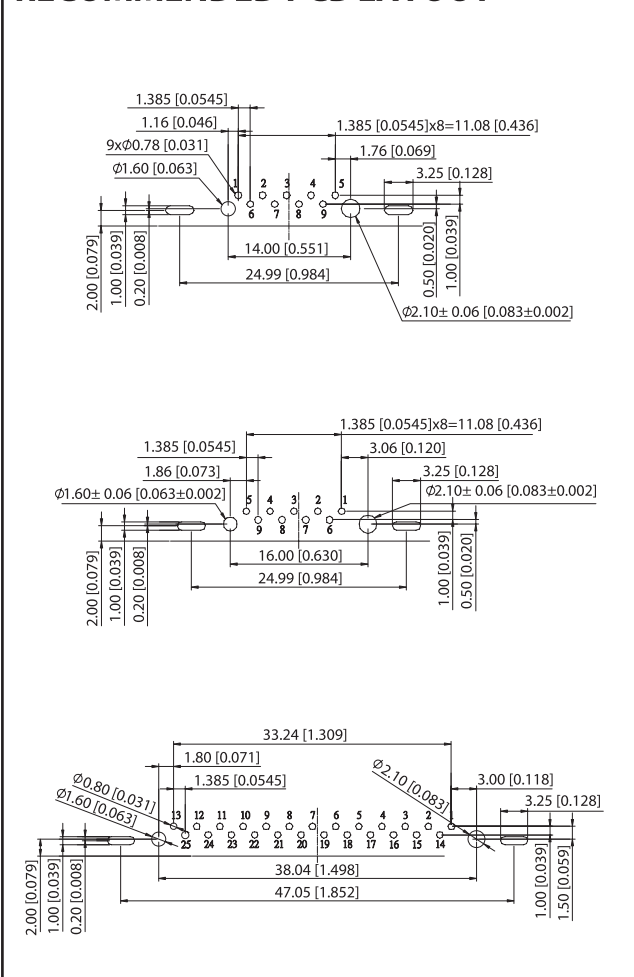
PIN TYPE

S : STAMPED PIN

DIMENSIONS



RECOMMENDED PCB LAYOUT



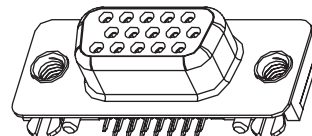
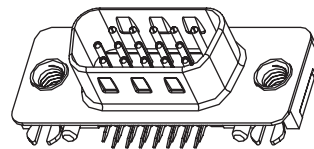
SPECIFICATIONS

Material

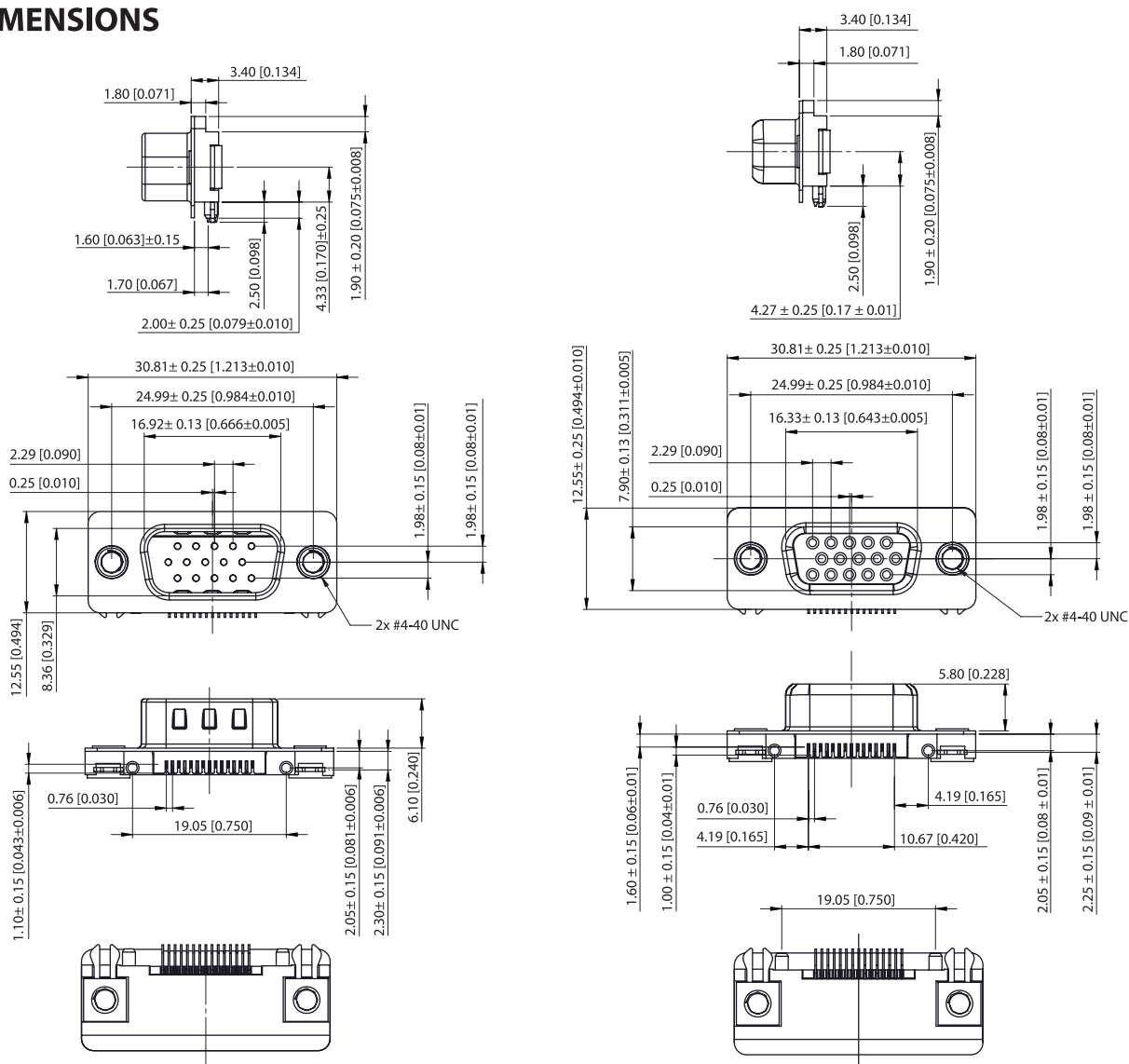
- Insulator: Glass-Filled Thermoplastic PBT, UL 94V-0
- Contact: Brass
- Clinch Nut: Brass, Nickel Plated
- Boardlock: Brass, Tin Plated
- Screwlock: Steel, Nickel Plated

Electrical

- Contact Resistance: 20m OHMs Max at 1 Amp DC.
- Insulation Resistance: 1000 MegOHMs at 500 VDC.
- Dielectric withstanding Voltage: 1000 Vac/Rms 60Hz for 1 Minute
- Current Rating: 3 Amps
- Voltage Rating: 250 Vac/Rms 60Hz



DIMENSIONS

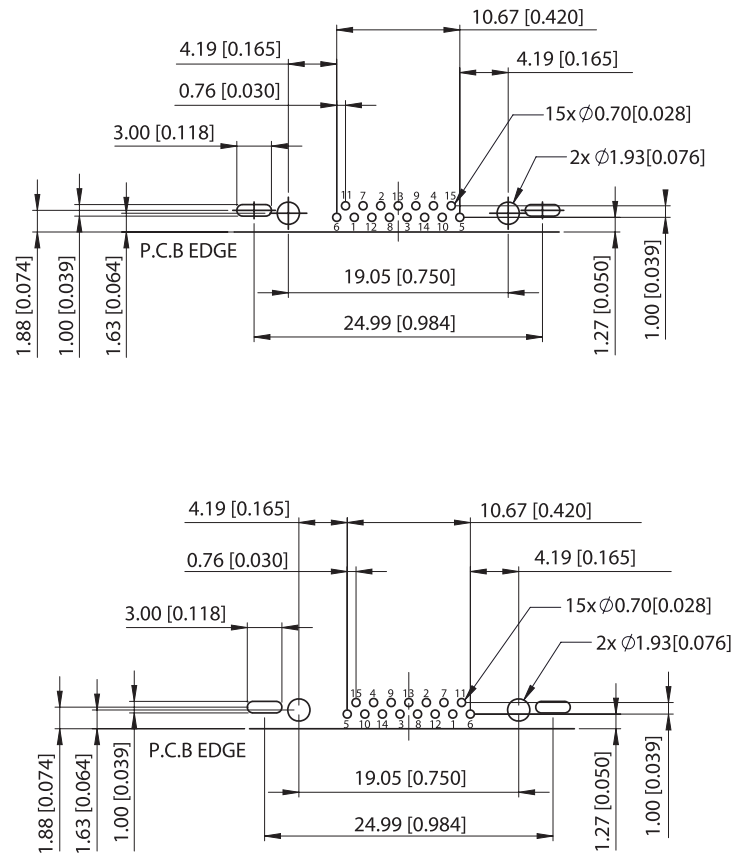




PART NUMBER OPTIONS

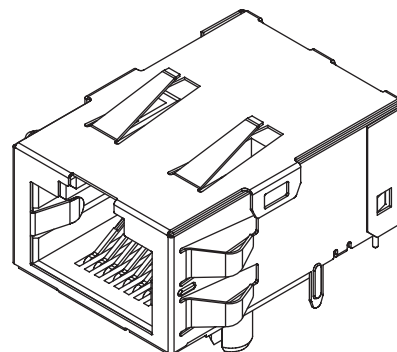
SDS224-PR		
CONTACT PLATING		INSULATOR COLOR
W = .000050" Nickel Underplate, Gold Flash On Contact Surface, .000100" Pure Tin On Termination.		1.Black 2.Blue (Standard)
SHELL PLATING		RIVET OPTIONS
1. Nickel 2. Tin (Standard) 3. Cr ⁺ 6 Yellow Chrome 4. Gold Flash		0. None 1. Grounding Strap #4-40 Threaded on PANEL 2. Grounding Strap #4-40 Threaded on PCB & PANEL 3. Grounding Hook Boardlock+2 Prong
CONTACT TYPE		FLANGE MOUNTING OPTION
M : MALE F : FEMALE		0. $\varnothing 3.05\text{mm}$ [$\varnothing 0.120$] Clearance Hole 1. #4-40 UNC Female Thread 8. #4-40 UNC (4.8 X 11.8mm [0.19X 0.46]) Female Screwlock Installed 9. #4-40 UNC (4.8 X 11.8mm [0.19X 0.46]) Female Screwlock Bulk-Packed
NO. OF PINS		FERRITE
15 : 15 POSITIONS		N : Without Ferrite
PIN TYPE		
S : STAMPED PIN		

RECOMMENDED PCB LAYOUT

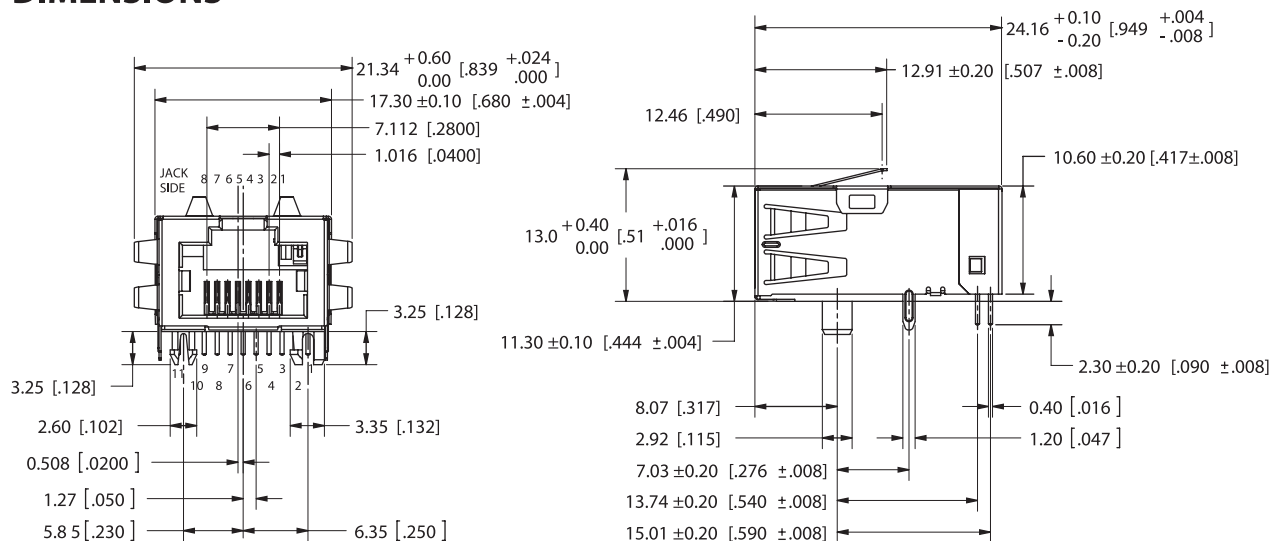


SPECIFICATIONS

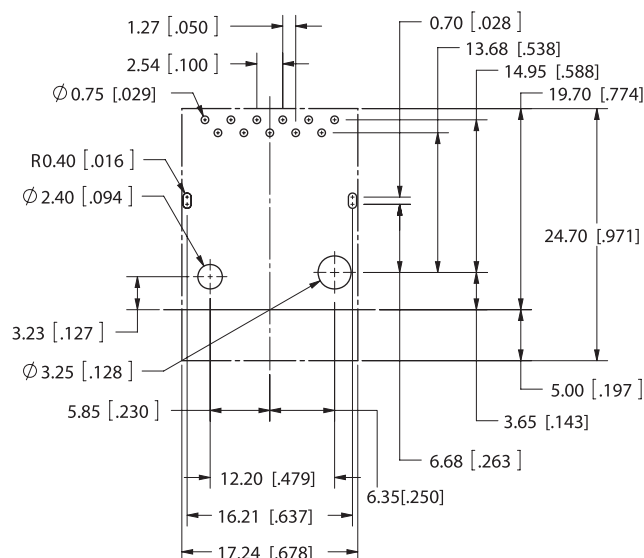
- Housing: PA46 TS250F6D 9B0040 UL94V-0
- Overmold: Liquid Crystal Polymer Glass-Filled UL94V-0
- Coil Box: Liquid Crystal Polymer Glass-Filled UL94V-0
- Terminal: Copper Alloy, .000039" Min Nickel Underplate,
.000050" Min Gold on Contact Surface,
.000039" Min Tin on Termination.
- TAIL: C2680 R-H, .000039" Min Nickel Underplate,
.000039" Min Tin on Termination.
- SHELL: C2680 R-H, .000039" Min Nickel Underplate,
.000039" Min Tin on Termination.



DIMENSIONS

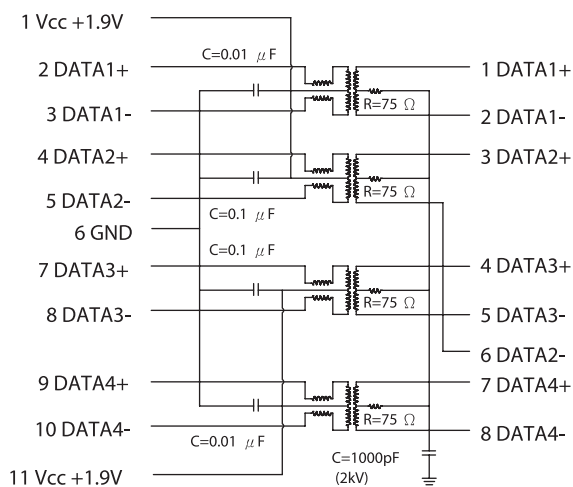


RECOMMENDED PCB LAYOUT



PCB SIDE

JACK SIDE

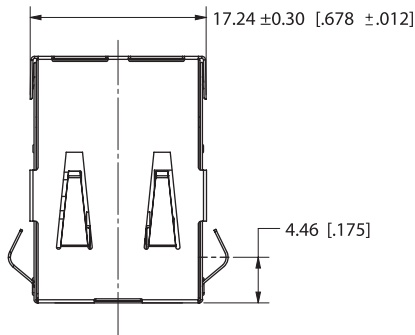




- Impedance: 100 OHMS
- Transmit Open Circuit Inductance: 350uh Minimum @100kHz
- Turns Ratio(Board:Cable): TX 1:1 RX 1:1
- Transmit Bidirectional All 4 Pairs,
- Receive Bidirectional All 4 Pairs.

DIMENSIONS

PART NUMBER CODING SMJ001-S88N-DS-11



DIELECTRIC:CUT OFF CURRENT 1mA MAXIMUM IN 2250 VDC or 1500 VAC/ 1 MINUTE

	TEST ITEM	FREQUENCY	SPECIFICATION REQUIREMENT
1	Insertion Loss	100KHz	1.2 dB MAXIMUM
		1~125MHz	$0.2+0.002*(f \text{ MHz})^{1.4}$ dB MAXIMUM
2	Return Loss	0.1~30MHz	16 dB MINIMUM
		30~60MHz	$10-20*\text{LOG}_{10}(f \text{ MHz}/60)$ dB MINIMUM
		60~100MHz	10 dB MINIMUM
3	Common Mode to Common Mode Rejection	2~20MHz	35 dB MINIMUM
		20~200MHz	$15-20*\text{LOG}_{10}(f \text{ MHz}/200)$ dB MINIMUM
4	Common Mode to Differential Mode Conversion	2~15MHz	40 dB MINIMUM
		16~200MHz	$15-20*\text{LOG}_{10}(f \text{ MHz}/200)$ dB MINIMUM
5	Near End Cross-Talk	1~15MHz	35 dB MINIMUM
		16~100MHz	24 dB MINIMUM



SMJ100 Series Vertical RJ45 10/100 Base-T

SPECIFICATIONS

- Plastic Housing: RJ Housing: PBT,UL94V-0 ,Black
Transformer Housing: Phenolic ,UL94v-0 ,Black
- Terminals: RJ Contacts:0.25mm Thickness,Phosphor Bronze C5191H
- Shields: Shield: Stainless Steel. PCB: FR-4 Two layer PCB
- Screw Terminals: Steel Alloy
- RJ Contact: .000050" min. Nickel Underplate, .000006" Selective Gold.
- Shield Grounding Legs: Pre-soldering.
- Transmitter & Receiver Filter:

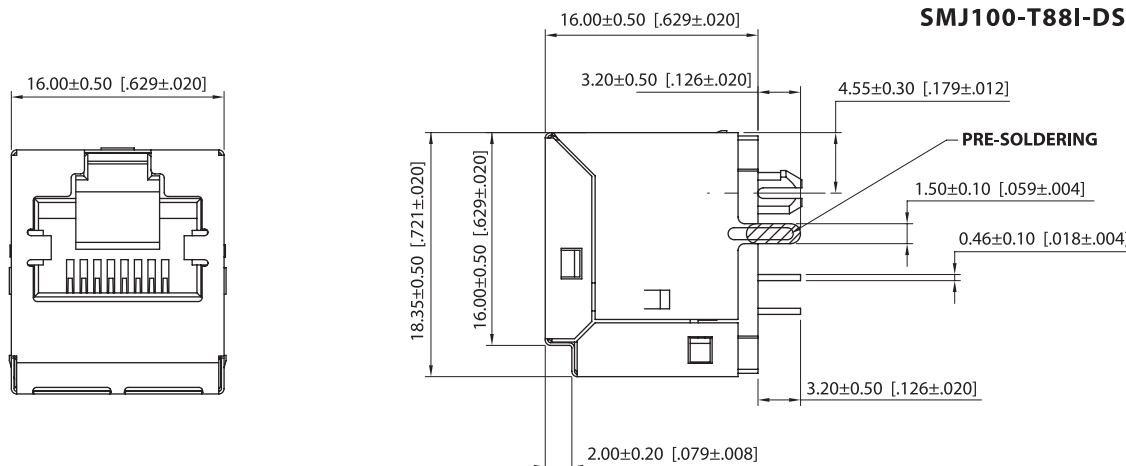
Insertion Loss (dB Max)	Return Loss at 100 Ω (dB Max)		
1~100MHz	1~30MHz	30~60MHz	60~80MHz
-1.0	-18	-16	-12

- Common Mode Rejection @ 1~100 MHz: -30dB MIN
- Cross Talk @ 1~100 MHz: -35dB MIN
- Inductance @ 100KHz/ 0.1V, 8mA DC BIAS: 350uH MIN
- HiPot Test: 1500Vrms, 60sec
- Operating Temperature Range: 0° C to +70° C.

DIMENSIONS / RECOMMENDED PCB LAYOUT

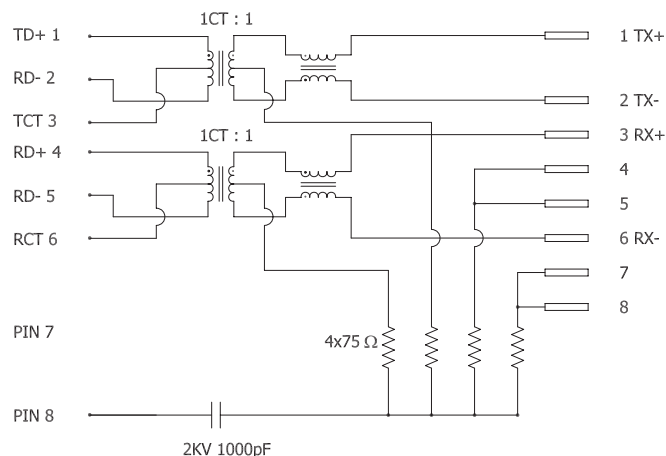
PART NUMBER CODING

SMJ100-T88I-DS-11

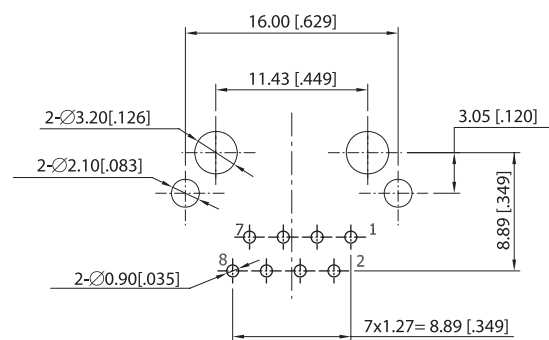


SCHEMATIC:

PCB SIDE



CABLE SIDE





SMJ300 Series Vertical RJ45 Without Transformer, Top Entry Type

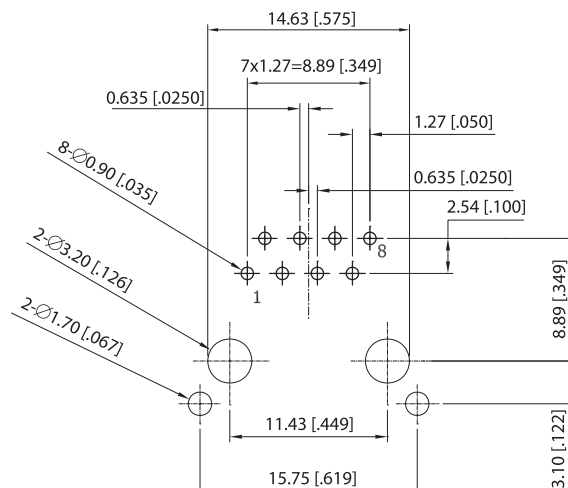
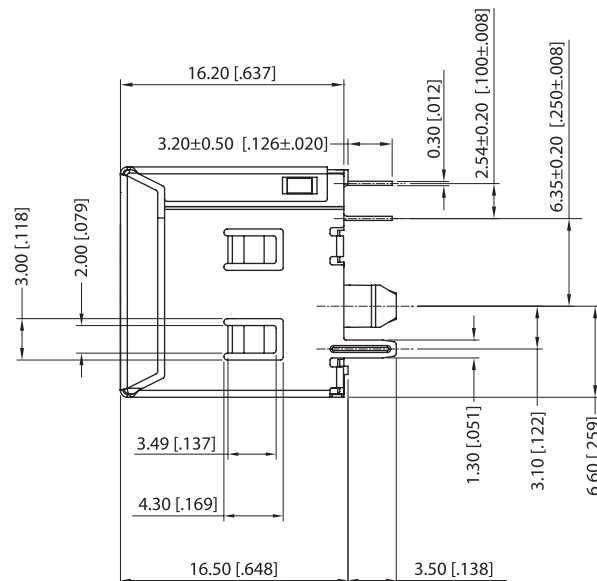
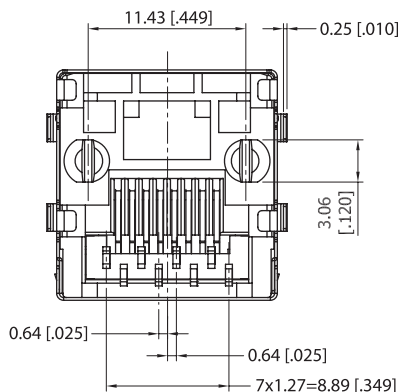
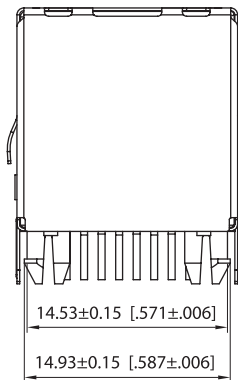
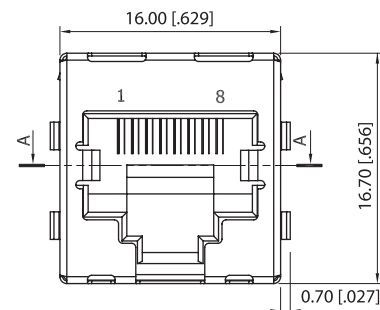
SPECIFICATIONS

- Housing: Thermoplastic, UL94V-0 ,Black
- Insert: Thermoplastic, UL94V-0 ,Black
- Terminals: 0.30mm Thickness, Phosphor Bronze.
- Shell: 0.20mm Thickness, Brass.
- Plating:
Terminal:
Contact Area: .000050" Gold on Contact Surface.
Solder Tail: .000100" min. Tin On Termination.
Under Plate: .000050" min Nickel Underplate.
- Shell:
Under Plate: .000030" min. Nickel Underplate.
Surface Appearance: Bright Nickel.

DIMENSIONS / RECOMMENDED PCB LAYOUT

PART NUMBER CODING

SMJ300-T88N-DS-01

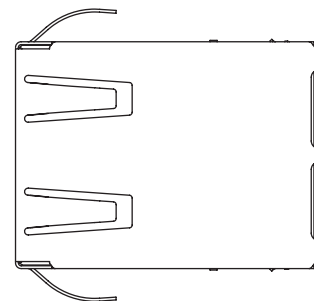




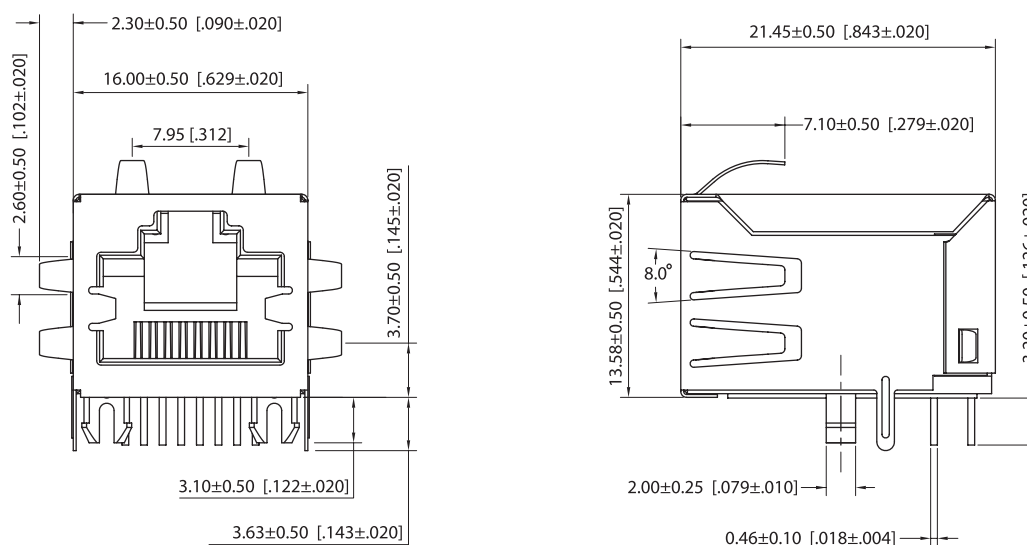
SMJ102 Series RJ45 10/100 Base-T, Side Entry

SPECIFICATIONS

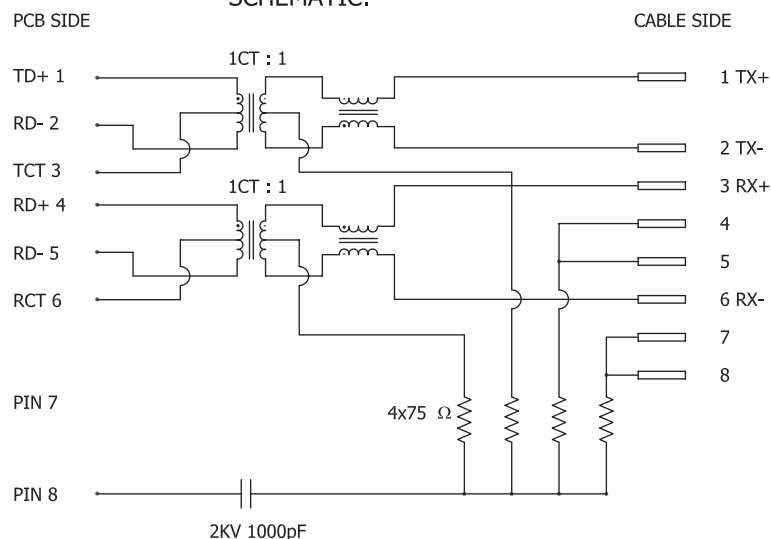
- Plastic Housing: RJ Housing: Ny46,UL94V-0,Black
Transformer Housing: Phenolic,UL94v-0,Black
- Terminals: RJ Contacts:0.25mm Thickness,Phosphor Bronze C5191H
RJ Solder pins: Ø0.46mm,Phosphor Bronze C5191H
- Shields: Shield: 0.2mm Thickness, Brass C2680H. PCB: FR-4 Two layer PCB
- RJ Contact: .000050" min. Nickel Underplate,
.000006" min Gold on Contact Surface,
.000050" min Tin on Termination.
- RJ Solder pin: Pre-soldering on Solder tail,
.000030" min Nickel Underplate.
- Shell: .000030" min Nickel Overall, Pre-soldering on Ground Legs.



DIMENSIONS



SCHEMATIC:



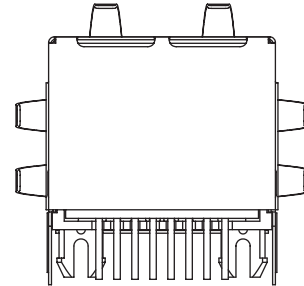


Electrical Properties

- Transmitter & Receiver Filter:

Insertion Loss (dB Max)	Return Loss at 100Ω (dB Max)		
1~100MHz	1~30MHz	30~60MHz	60~80MHz
-1.0	-18	-16	-12

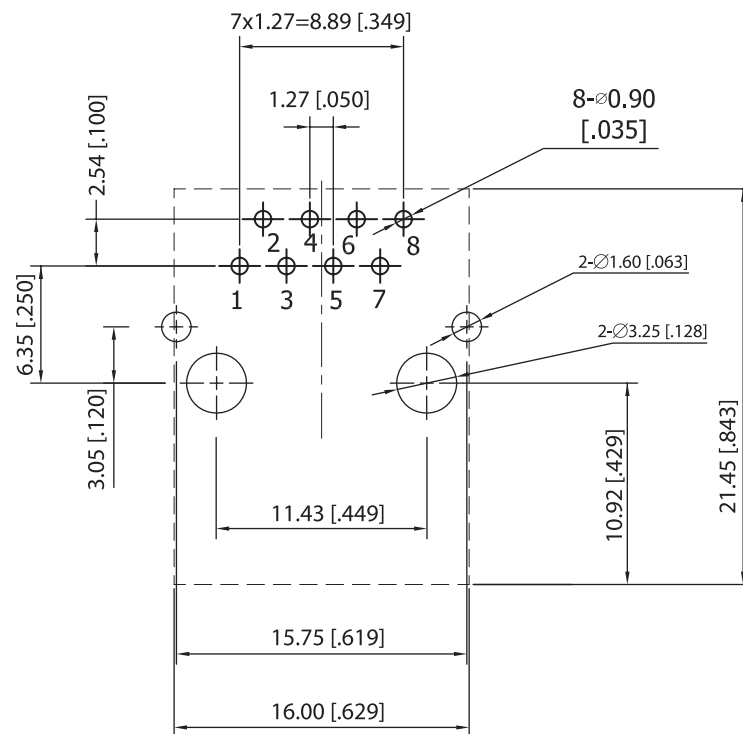
- Common Mode Rejection @ 1~100 MHz: -30dB MIN
- Cross Talk @ 1~100 MHz: -35dB MIN
- Inductance @ 100KHz/ 0.1V, 8mA DC BIAS: 350uH MIN
- HiPot Test: 1500Vrms, 60sec
- Operating Temperature Range: 0° C to +70° C.



RECOMMENDED PCB LAYOUT

PART NUMBER CODING

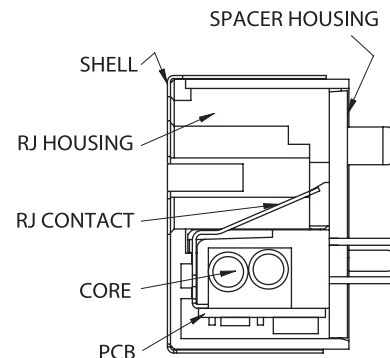
SMJ102-S88I-DS-11



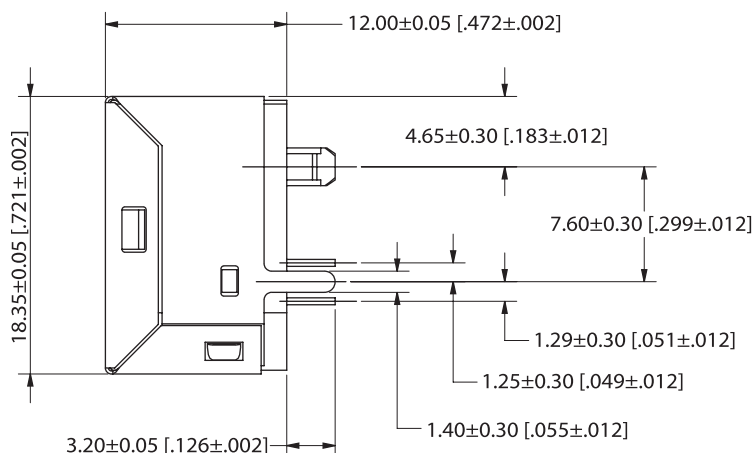
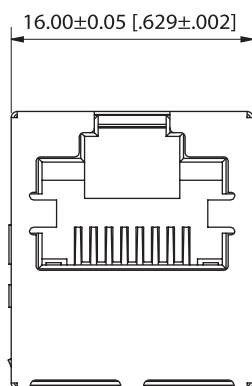
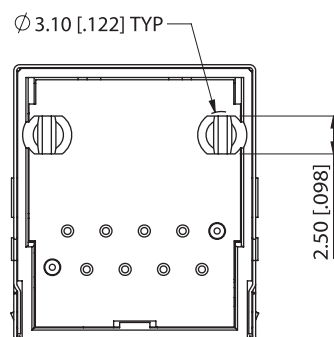
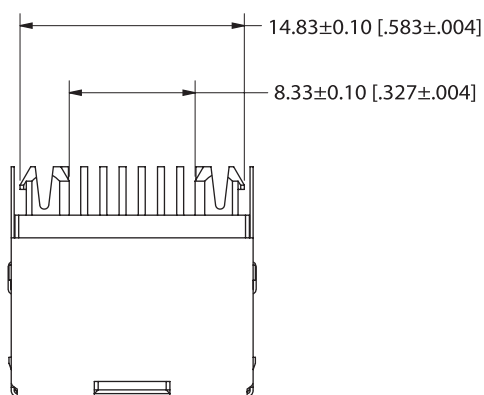


SPECIFICATIONS

- Plastic Housing: RJ Housing: PBT, UL94V-0 ,Black
Spacer Housing: PA46, UL94V-0 ,Black
Transformer Housing: Phenolic ,UL94v-0 ,Black
- Terminals: RJ Contacts: 0.25mm Thickness, Phosphor Bronze C5191H
RJ Solder pins: Ø0.46mm ,Phosphor Bronze C5191H
- Shields: Shield: 0.2mm Thickness, Brass C2680H. PCB: FR-4 Two layer PCB
- RJ Contact: .000050" min. Nickel Underplate,
.000006" min Gold on Contact Surface,
.000050" min Tin on Termination.
- RJ Solder pin: .000030" min Nickel Underplate, .000050" min Tin Overall.
- Shell: .000030" min Nickel Overall, Pre-soldering on Ground Legs.
- Operating Temperature Range: 0° C to +70° C.



DIMENSIONS





SMJ103 Series Low Profile Vertical RJ45 10/100 Base-T

Electrical Properties

• Transmitter & Receiver Filter:

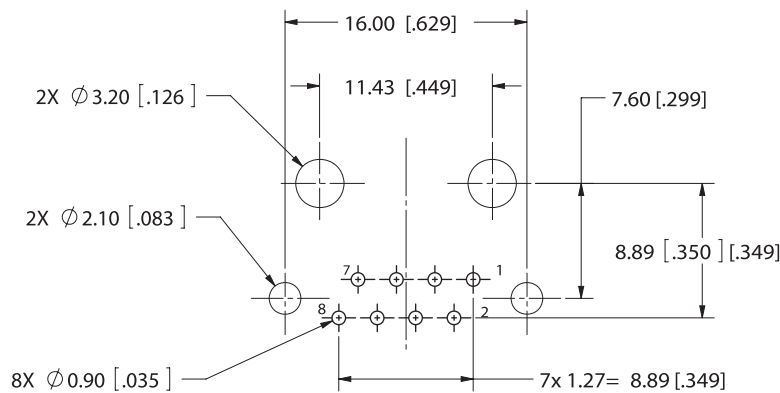
Insertion Loss (dB Max)	Return Loss at 100Ω (dB Max)		
1~100MHz	1~30MHz	30~60MHz	60~80MHz
-1.0	-18	-16	-12

- Common Mode Rejection @ 1~100 MHz: -30dB MIN
- Cross Talk @ 1~100 MHz: -35dB MIN
- Inductance @ 100KHz/ 0.1V, 8mA DC BIAS: 350uH MIN
- HiPot Test: 1500Vrms, 60sec

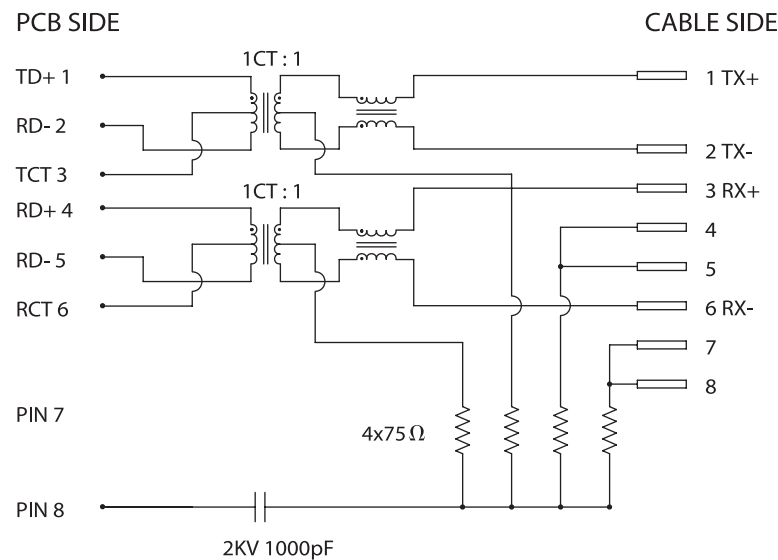
RECOMMENDED PCB LAYOUT

PART NUMBER CODING

SMJ103-T88I-DS-11



SCHEMATIC:

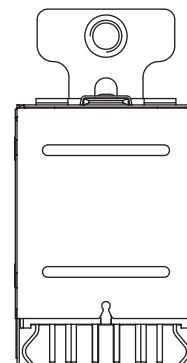




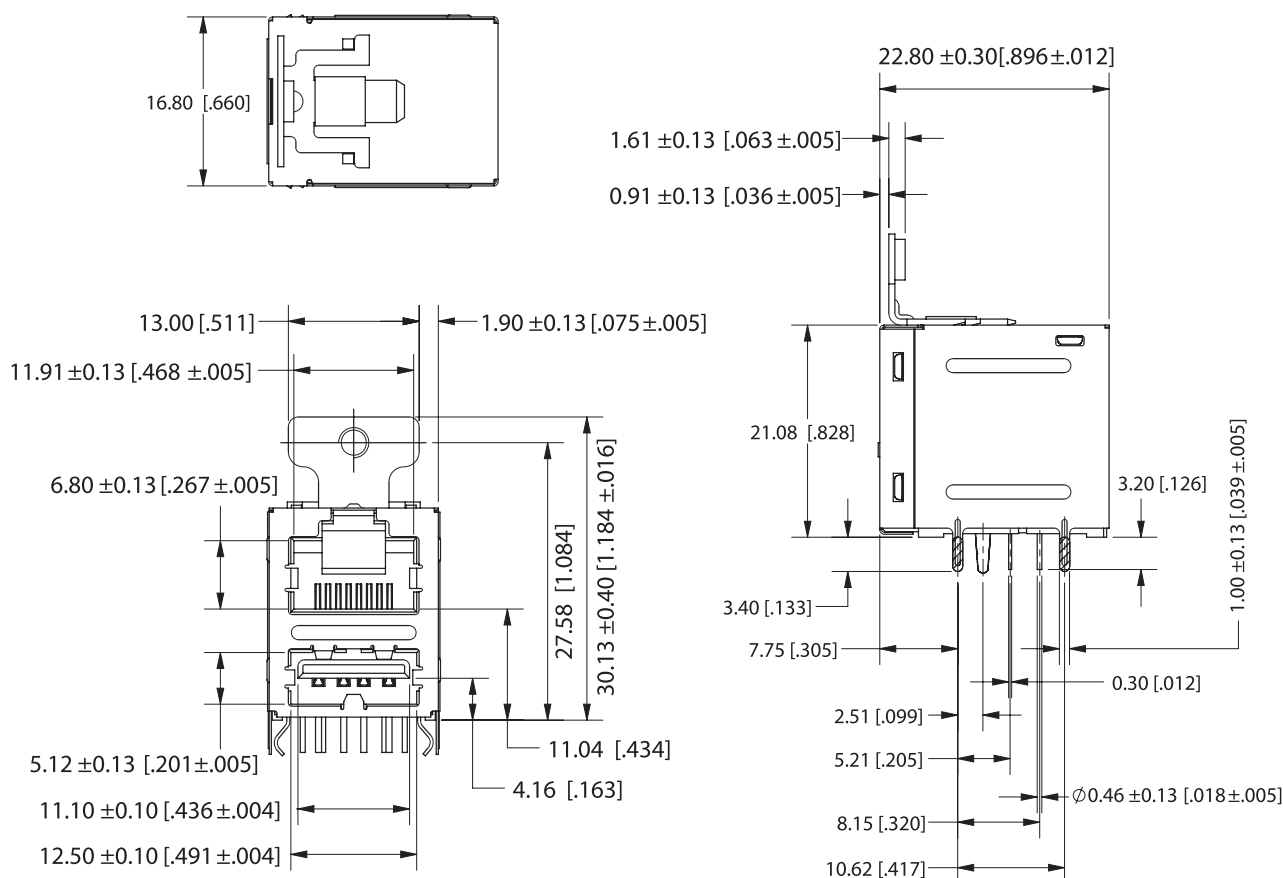
SMJ200 Series RJ45+Single Port USB 10/100 Base-T

SPECIFICATIONS

- Plastic Housing: RJ Housing: PBT,UL94V-0 ,Black
Transformer Housing: Phenolic ,UL94v-0 ,Black
- Terminals: RJ Contacts:0.25mm Thickness,Phosphor Bronze C5191H
RJ Solder pins: Ø0.46mm ,Phosphor Bronze C5191H
- Shields: Front Shield: 0.20mm Thickness,SUS201
Back Shield: 0.20mm Thickness,Brass C2680
USB Grounding legs: 0.30mm Thickness,S50C
- Screw Terminals: Steel Alloy
- PCB: FR-4 Two layer PCB
- RJ Contact: .000050" min. Nickel Underplate, .000030" Gold On Contact Surface.
- RJ Solder Pins: .000050" Nickel Underplate, .000100" min.Pure Tin, Matte On Termination.
- USB Contact & Solder Pins: .000050" Nickel Underplate, Selected G/F and Tin Plating Over.
- Back Shield: .000030"~.000080" Nickel Overall, Pre-soldering on grounding legs
- USB Grounding Legs: .000050" Nickel Underplate, .000100" min.Pure Tin, Matte On Termination.
- Durability:1000 times
- USB module complies with USB 2.0 standards
- Operating Temperature Range: 0° C to +70° C.
- Storage Temperature: -40° C to +85° C.



DIMENSIONS





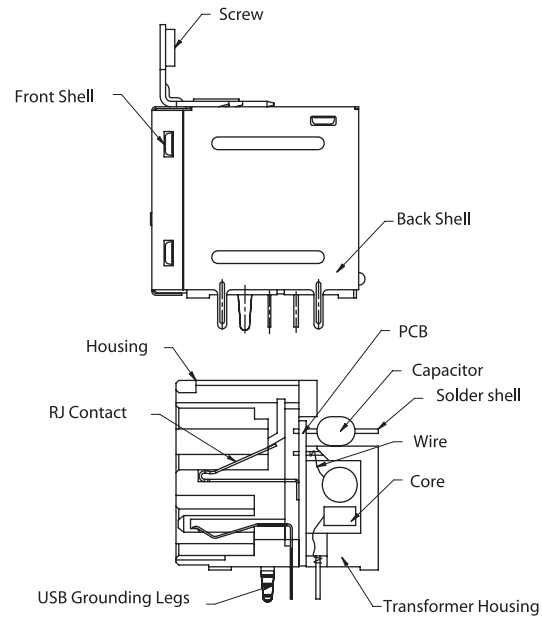
SMJ200 Series RJ45+Single Port USB 10/100 Base-T

Electrical Properties

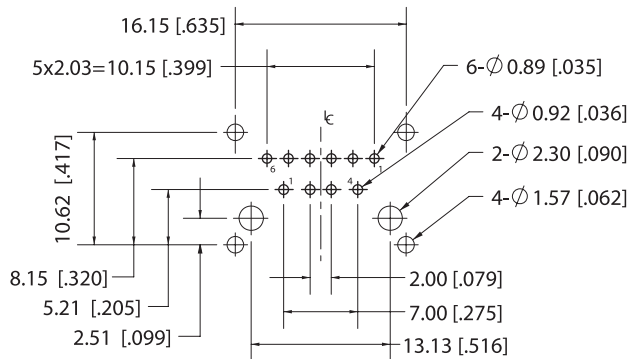
• Transmitter & Receiver Filter:

Insertion Loss (dB Max)	Return Loss at 100 Ω (dB Max)		
1~100MHz	1~30MHz	30~60MHz	60~80MHz
-1.0	-18	-16	-12

- Common Mode Rejection @ 1~100 MHz: -30dB MIN
- Cross Talk @ 1~100 MHz: -35dB MIN
- Inductance @ 100KHz/ 0.1V, 8mA DC BIAS: 350uH MIN
- HiPot Test: 1500Vrms, 60sec
- USB Ratings:
Insulation Resistance: 1000 M Ohm(MIN)
Contact Resistance : 30 m Ohm(MAX)
Dielectric Withstanding Voltage: 750 VAC

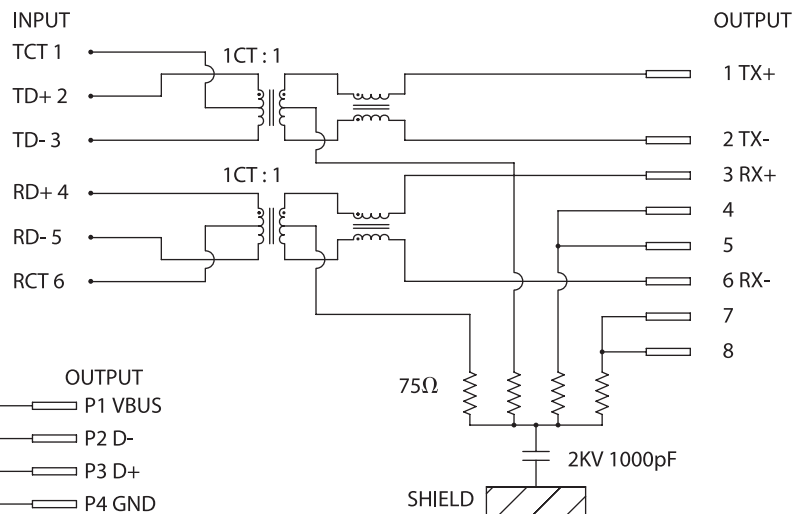


RECOMMENDED PCB LAYOUT

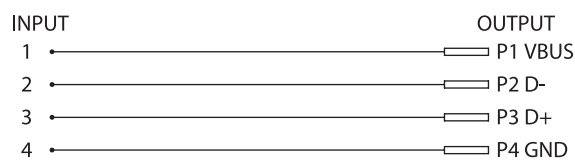


PART NUMBER CODING SMJ200-S00C-DS-11

1. RJ45



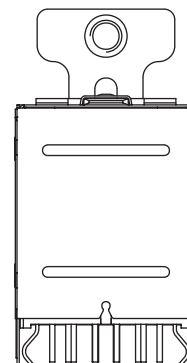
2. USB



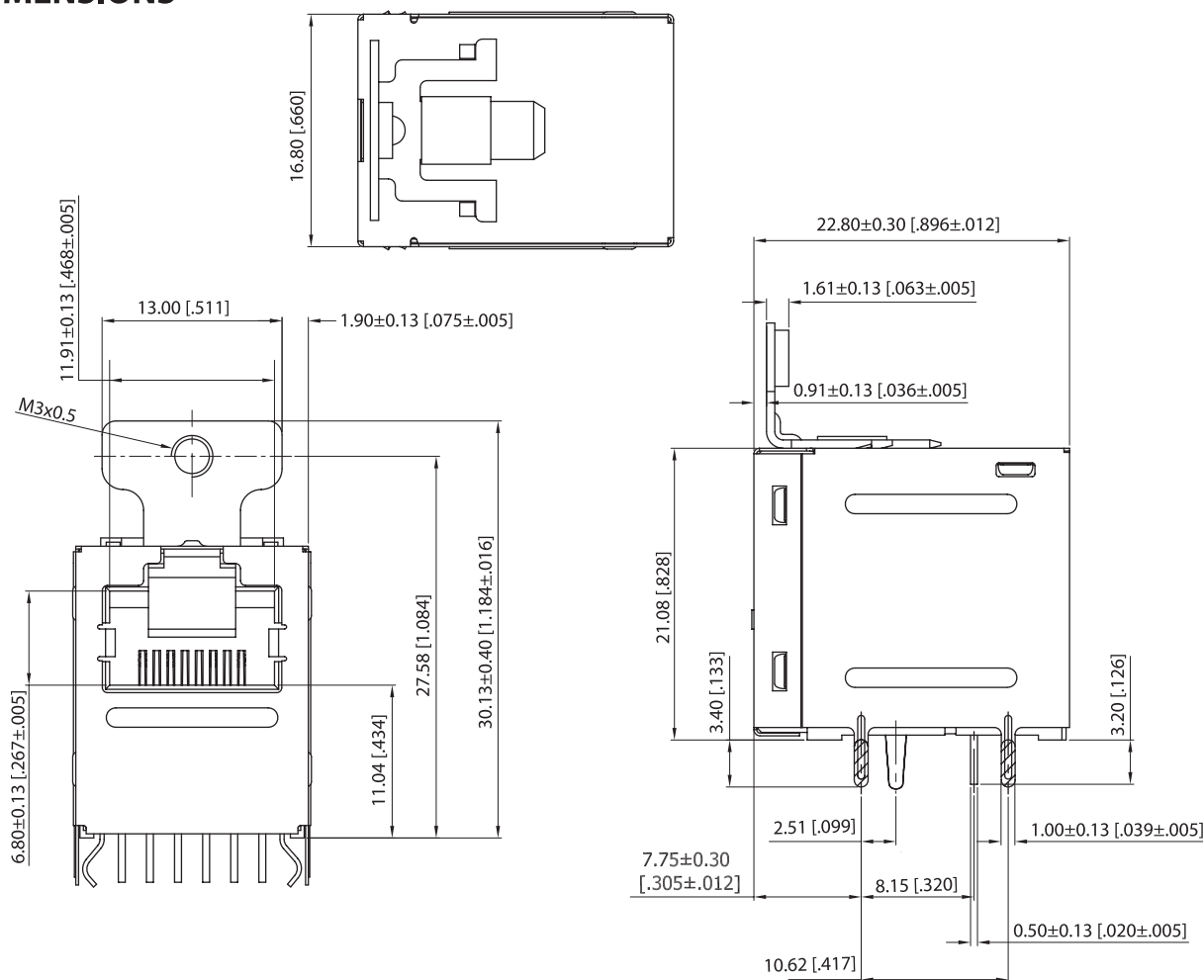


SPECIFICATIONS

- Plastic Housing: RJ Housing: PBT,UL94V-0 ,Black
Transformer Housing: Phenolic ,UL94v-0 ,Black
- Terminals: RJ Contacts:0.25mm Thickness,Phosphor Bronze C5191H
RJ Solder pins: Ø0.46mm ,Phosphor Bronze C5191H
- Shields: Front Shield: 0.20mm Thickness,SUS201
Back Shield: 0.20mm Thickness,Brass C2680
USB Grounding legs: 0.30mm Thickness,S50C
- Screw Terminals: Steel Alloy
- PCB: FR-4 Two layer PCB
- RJ Contact: .000050" min. Nickel Underplate, .000030" Gold On Contact Surface.
- RJ Solder Pins: .000050" Nickel Underplate, .000100" min.Pure Tin, Matte On Termination.
- Back Shield: .000030"~.000080" Nickel Overall, Pre-soldering on grounding legs
- USB Grounding Legs: .000050" Nickel Underplate, .000100" min.Pure Tin, Matte On Termination.
- Durability:1000 times
- Operating Temperature Range: 0° C to +70° C.
- Storage Temperature: -40° C to +85° C.



DIMENSIONS



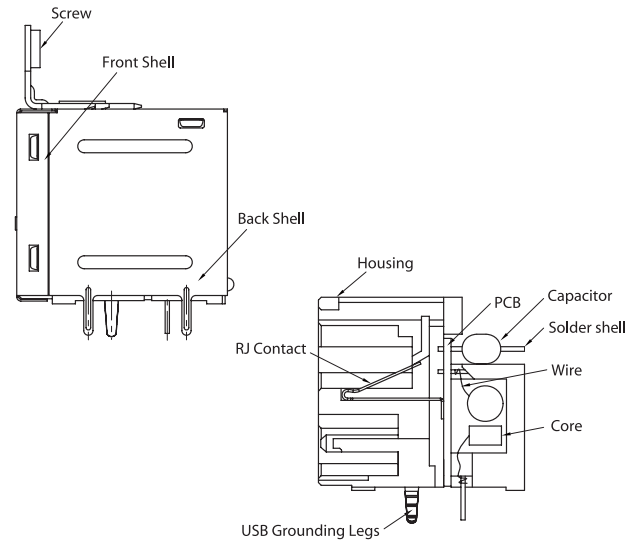


Electrical Properties

• Transmitter & Receiver Filter:

Insertion Loss (dB Max)	Return Loss at 100 Ω (dB Max)		
1~100MHz	1~30MHz	30~60MHz	60~80MHz
-1.0	-18	-16	-12

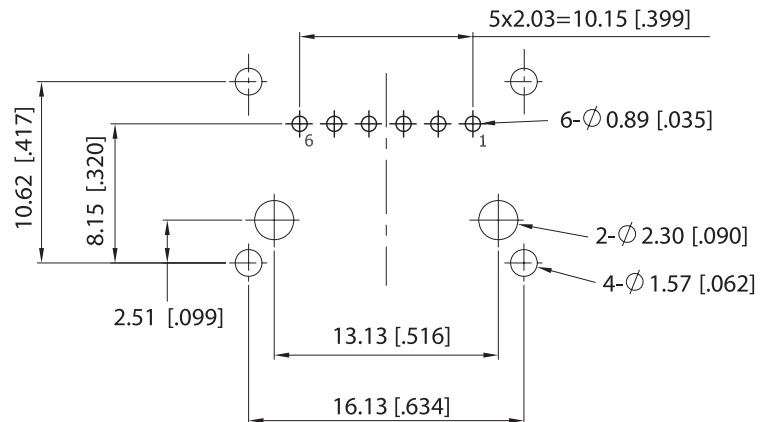
- Common Mode Rejection @ 1~100 MHz: -30dB MIN
- Cross Talk @ 1~100 MHz: -35dB MIN
- Inductance @ 100KHz/ 0.1V, 8mA DC BIAS: 350uH MIN
- HiPot Test: 1500Vrms, 60sec



RECOMMENDED PCB LAYOUT

PART NUMBER CODING

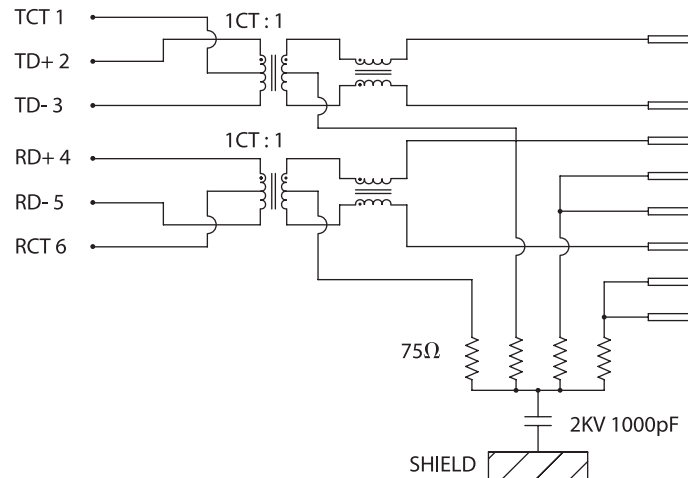
SMJ201-S66C-DS-11



SCHEMATIC

RJ45

INPUT



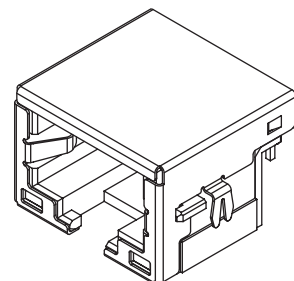
OUTPUT



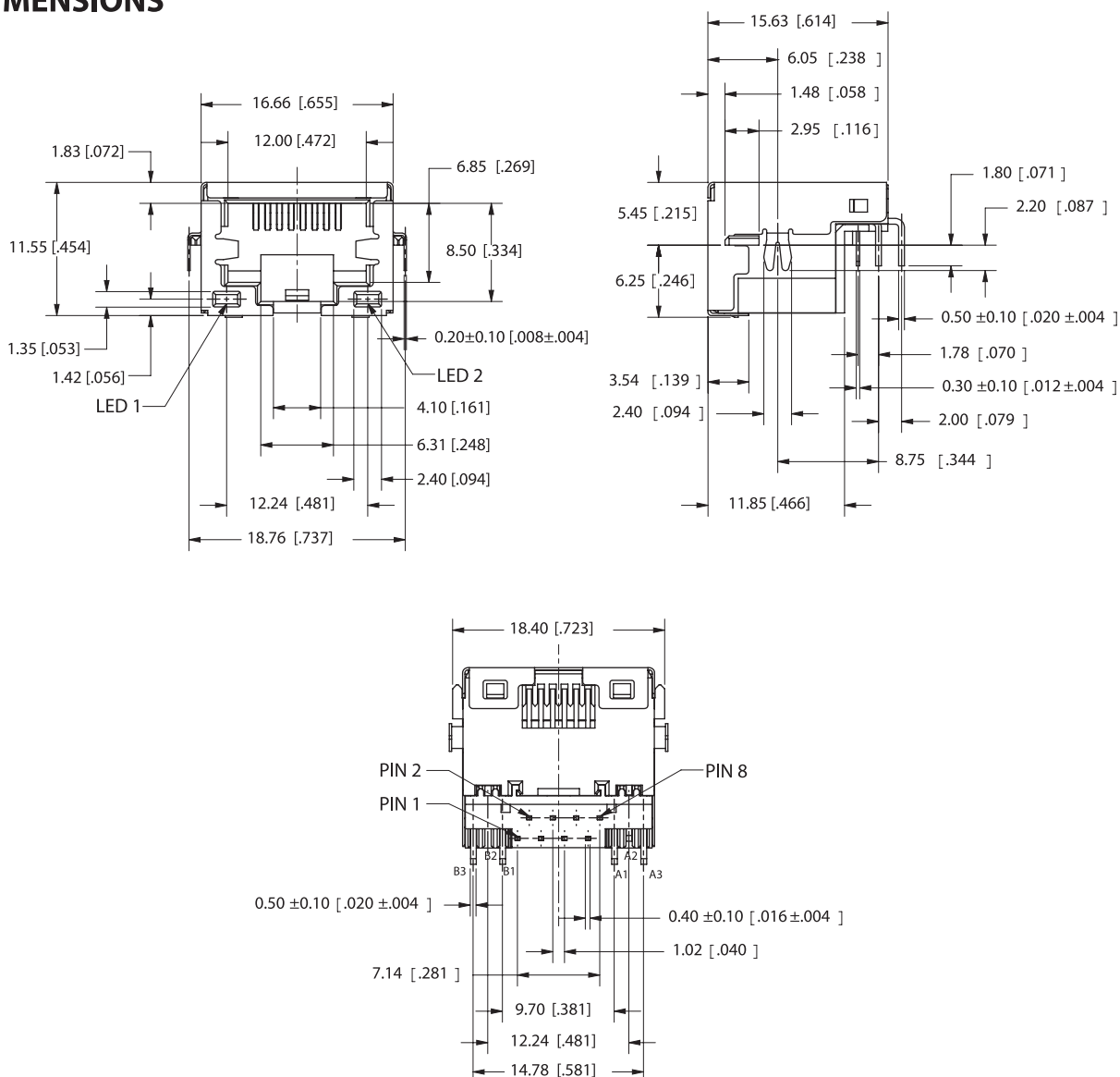
SMJ401 Series RJ45 Without Transformer with LED, Side Entry

SPECIFICATIONS

- Housing/Cover: PA6T With 30% GF, UL94V-0 ,Black
- Contact: Phosphor Bronze
- Shell: Brass.
- LED: Epoxy
- Contact: .000050" min Nickel Underplated,
Gold Flash on Contact Surface,
.000100" Pure Tin, Matte on Termination.
- Shell: .000050" min Nickel Underplate.
- LED: .000050" min Nickel Underplated, .000100" Pure Tin, Matte on Termination.



DIMENSIONS



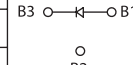


SMJ401 Series RJ45 Without Transformer with LED, Side Entry

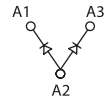
LED Characteristics:

- Power Dissipation: 60mW Max.
- Forward Current: 30mA Max.
- Forward Voltage: 2.2 Volts Typical.
- Reverse Voltage: 5.0 Volts Typical.
- Peak Emission Wavelength:
GREEN LED: 560~580nm Typical.
YELLOW LED: 580~600nm Typical.
ORANGE LED: 595~615nm Typical.
- LOW HALOGEN SPEC:
CHLORINE(Cl): 900ppm MAX.
BROMINE(Br): 900ppm MAX.

LED ELECTRICAL CHARACTERISTIC		
NODE (LED 1)	COLOR	
B1(+)	B3(-)	YELLOW
B2 : UNUSED		



LED ELECTRICAL CHARACTERISTIC		
NODE (LED 2)	COLOR	
A1(-)	A2(+)	ORANGE
A3(-)	A2(+)	GREEN
A1(-) & A3(-)	A2(+)	YELLOW



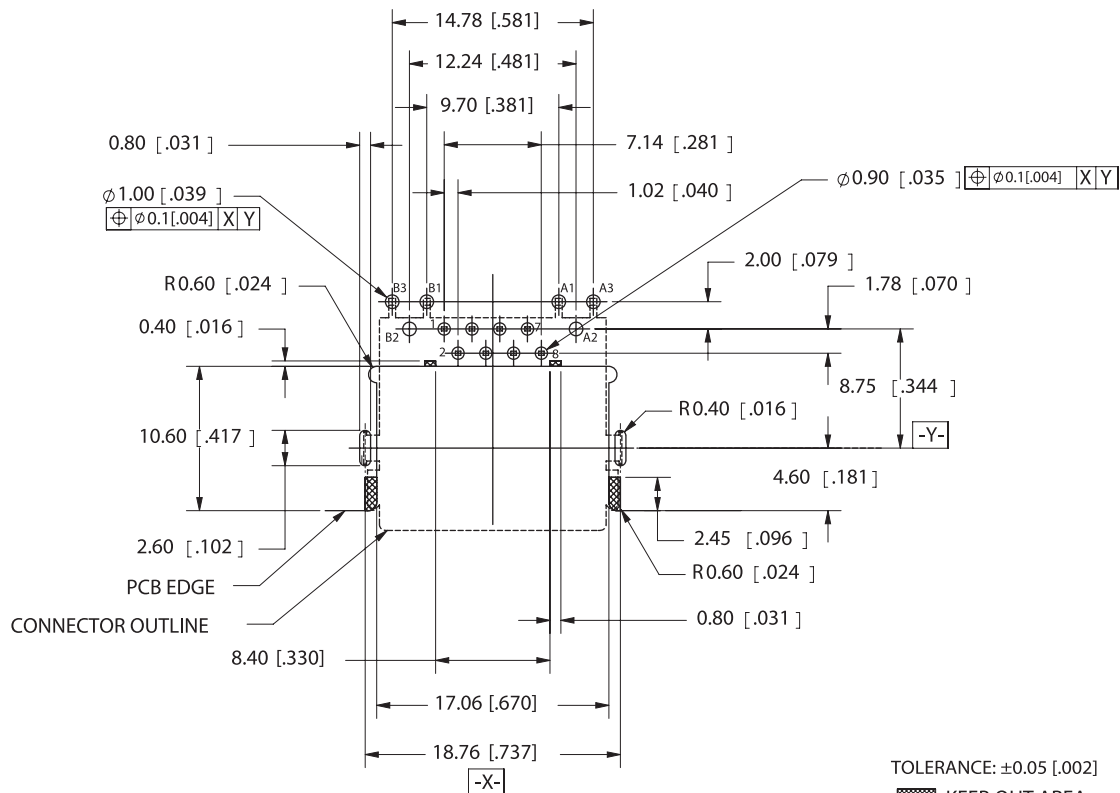
PART NUMBER CODING

SMJ401-S88W-DS-01Y

LED Color

O = Orange
G = Green
Y = Yellow

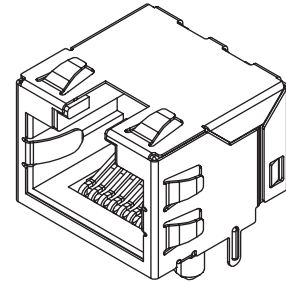
RECOMMENDED PCB LAYOUT





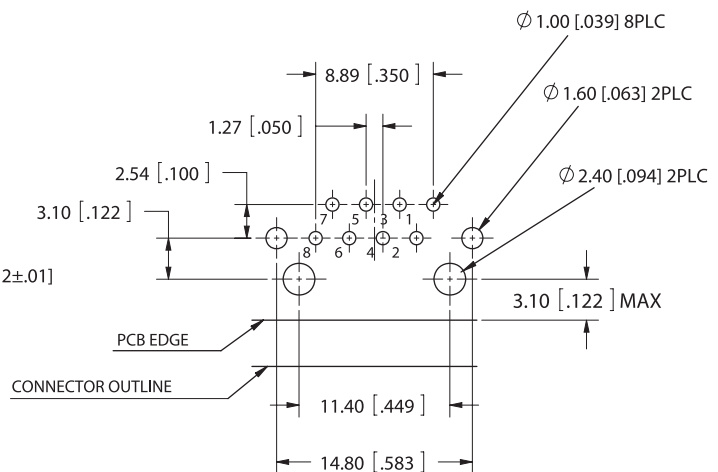
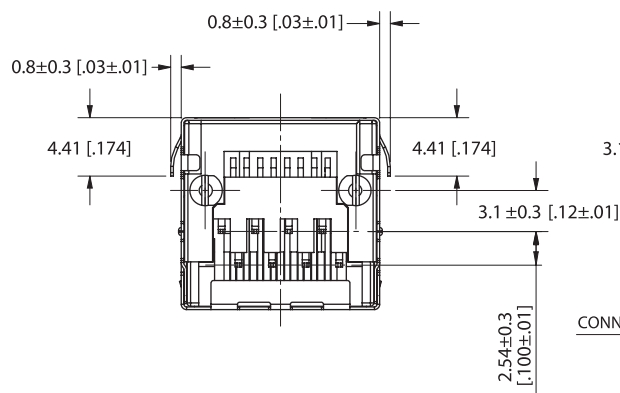
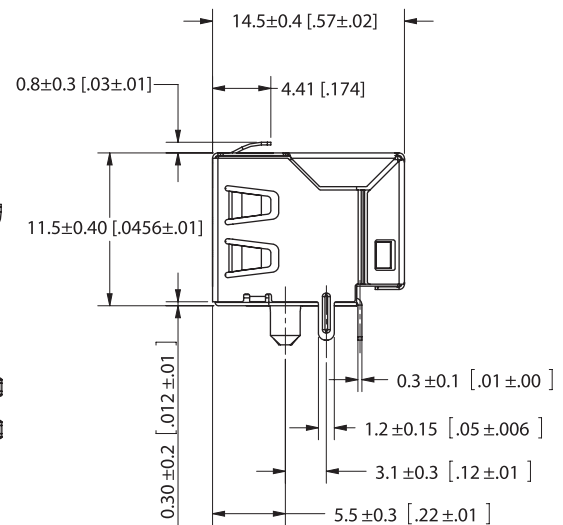
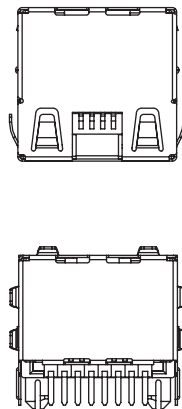
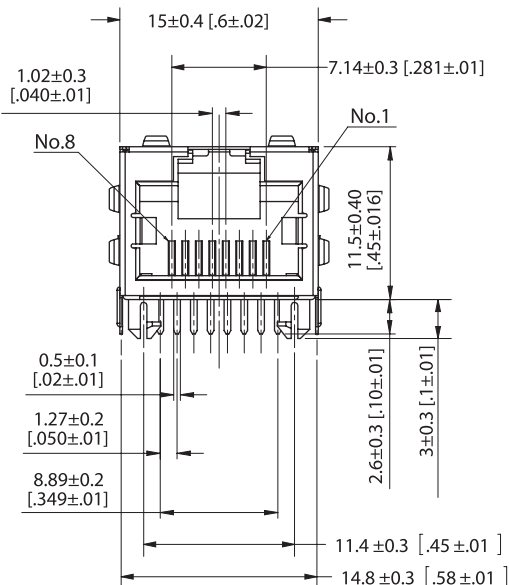
SPECIFICATIONS

- Housing: Thermoplastic, UL94V-0, Black
- Insert: Thermoplastic, UL94V-0, Black
- Terminals: 0.30mm Thickness, Phosphor Bronze.
- Shell: 0.20mm Thickness, Brass.
- Plating:
Terminal:
Contact Area: .000050" Gold on Contact Surface.
Solder Tail: .000100" min. Tin On Termination.
Under Plate: .000050" min Nickel Underplate.
- Shell:
Under Plate: .000030" min. Nickel Underplate. (Soldering Available)
Surface Appearance: Bright Nickel.



DIMENSIONS / RECOMMENDED PCB LAYOUT

PART NUMBER CODING SMJ400-S88N-DS-01

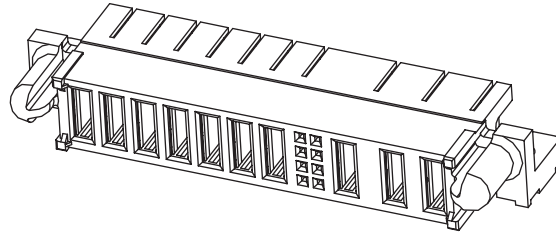




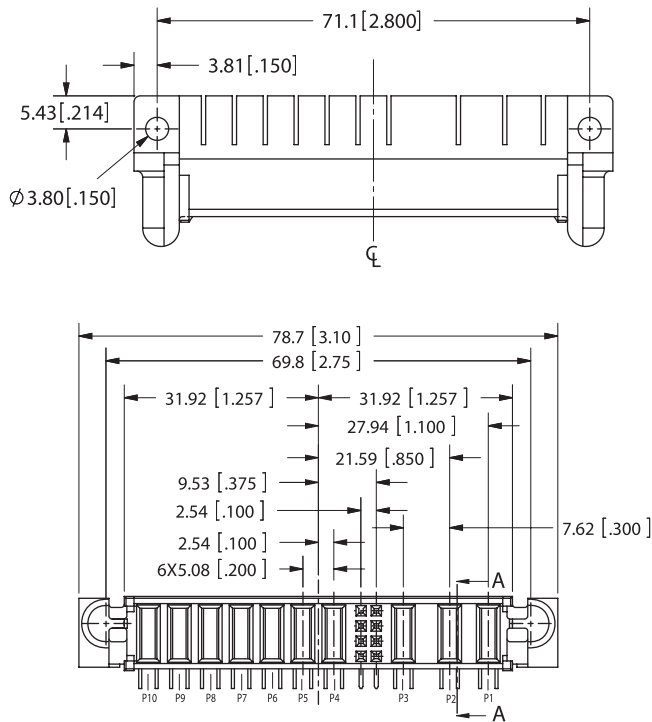
SBP101 Series High Power Female Connector 7P + 8S + 3P

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000010" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP101-M18B-RA.



DIMENSIONS

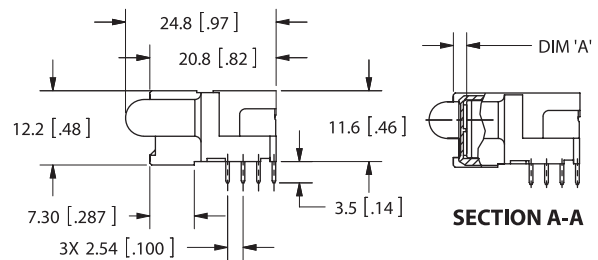


PART NUMBER OPTIONS

SBP101 - F18B - RA

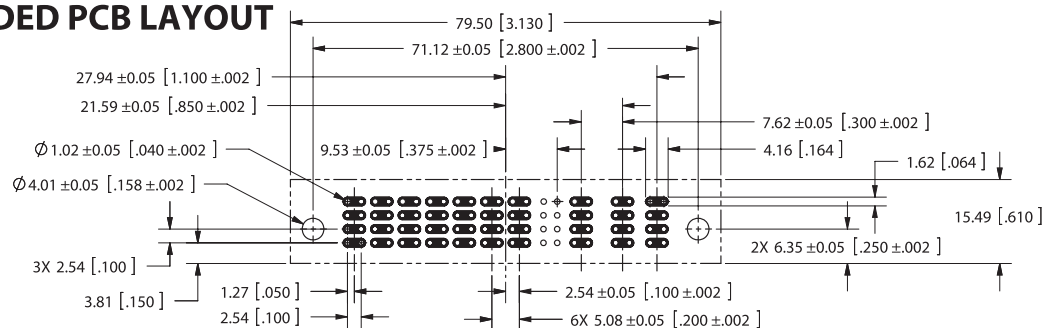
TOTAL NUMBER OF CONTACTS

18= 7 Power Contacts + 8 Signal Contacts
+ 3 Power Contacts



CONTACT ID	P1, P2, P5, P6, P7	P3, P4, P8, P9, P10
DIM 'A'	2.7 [.11]	2.2 [.09]

RECOMMENDED PCB LAYOUT



PCB THICKNESS 2.00mm [.079], TOLERANCE ± 0.05 [.002]

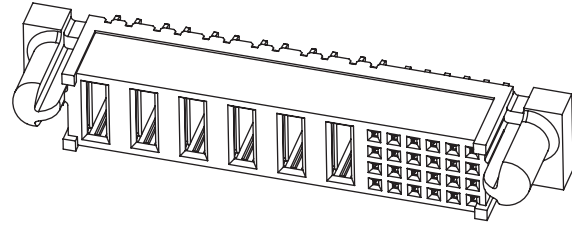




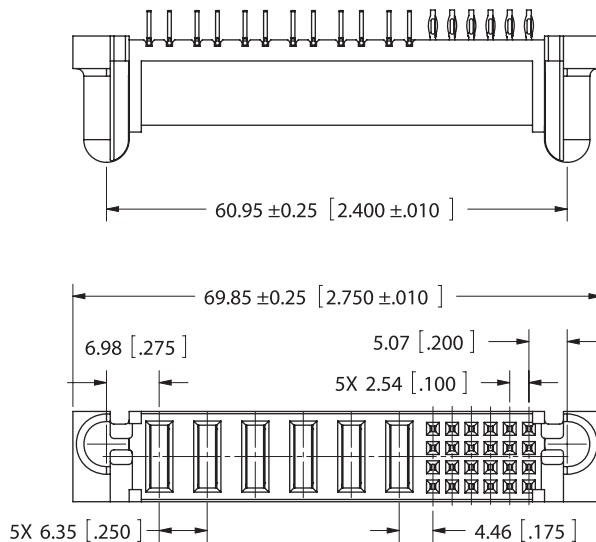
SBP106 Series High Power Female Connector

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000010" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP106-M30_-RA-A or SBP106-M30_-RA-B.



DIMENSIONS

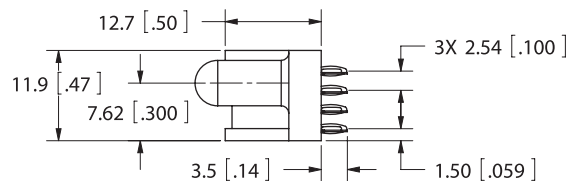


PART NUMBER OPTIONS

SBP106 - F30B - ST

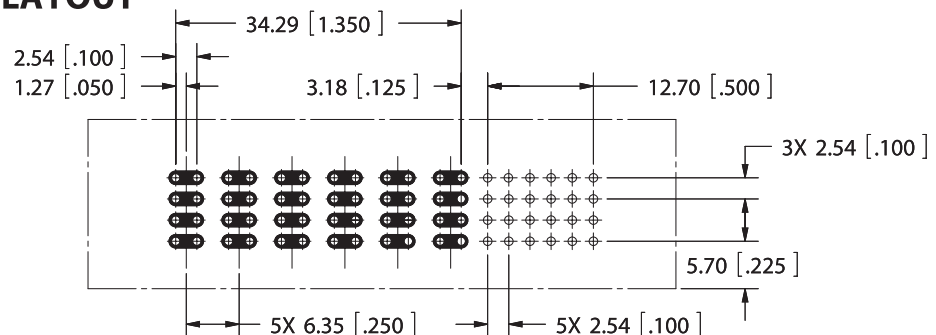
TOTAL NUMBER OF CONTACTS

30= 24 Signal Contacts + 6 Power Contacts



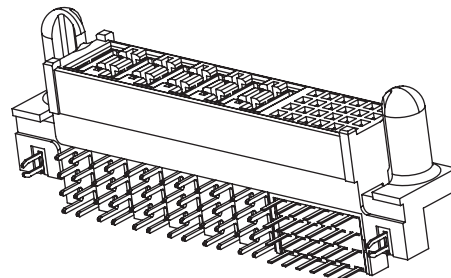
RECOMMENDED PCB LAYOUT

PCB THICKNESS 2.00mm [.079],
TOLERANCE ± 0.05 mm [.002]

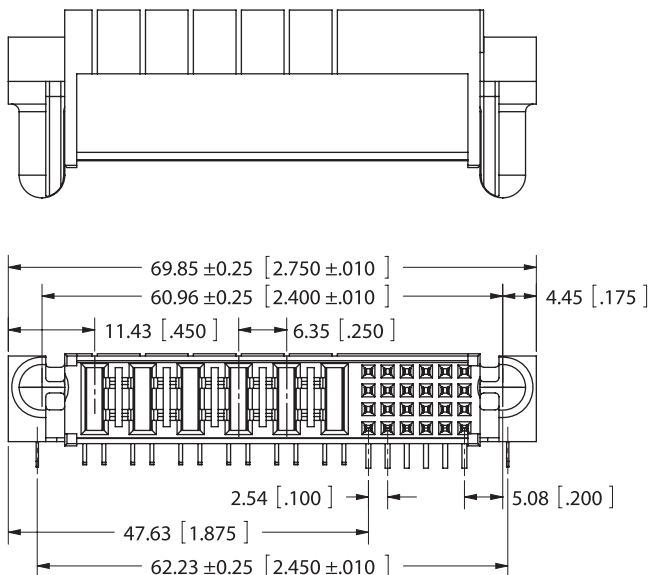
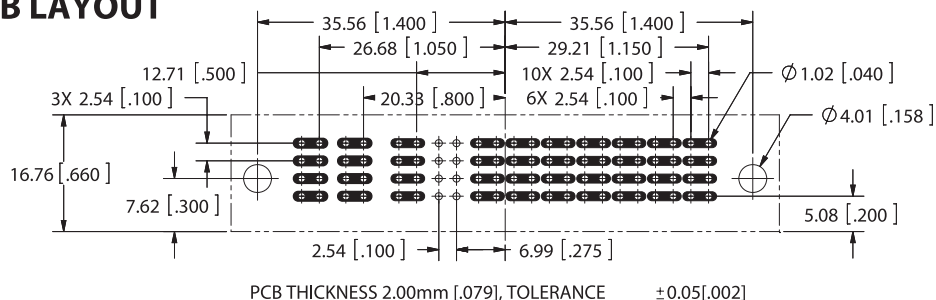


**SBP106 Series High Power Female Connector R/A****SPECIFICATIONS**

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000010" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP106-M30_-RA-A or SBP106-M30_-RA-B.

**DIMENSIONS****PART NUMBER OPTIONS SBP106 - F30B - RA****TOTAL NUMBER OF CONTACTS**

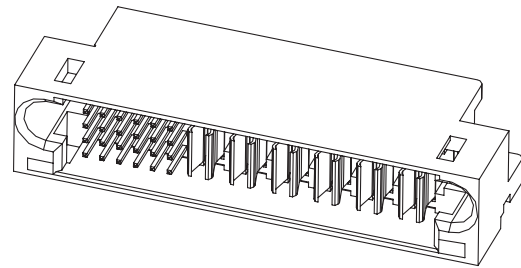
30 = 6 Power Contacts + 24 Signal Contacts

**RECOMMENDED PCB LAYOUT**



SPECIFICATIONS

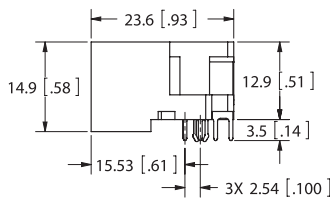
- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP106-F30B-RA or SBP106-F30B-ST.



DIMENSIONS

PART NUMBER OPTIONS

SBP106 - M30 - RA-



TOTAL NUMBER OF CONTACTS
30 = 24 Signal Contacts + 6 Power Contacts

SHORT PIN POSITIONS

(See Table 1)

A = Short Pin in Position U1

B = Short Pin in Positions S4 and R4

PLATING

(.000050" Min Nickel Underplate)

I = .000005" Gold on Contact Surface,

.000100" Pure Tin, Matte on Termination.

C = .000030" Gold on Contact Surface,

.000100" Pure Tin, Matte on Termination.

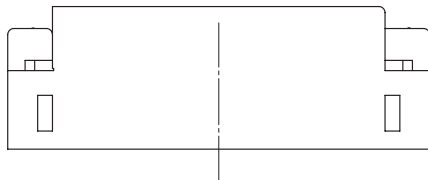
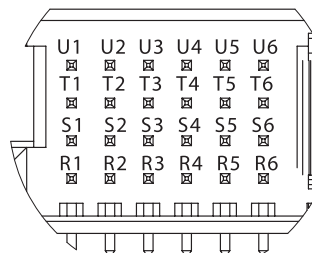
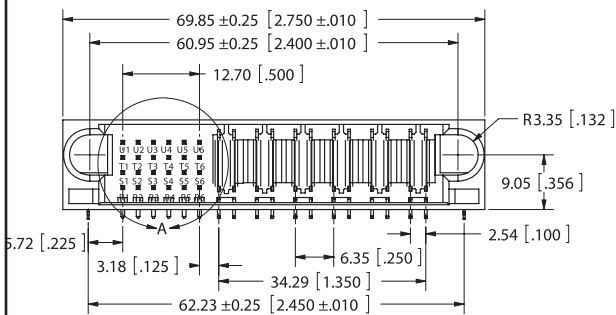


TABLE 1

TYPE A	CONTACT PIN ID	U1	Ux / Tx / Sx / Rx
	HEAD HEIGHT	5.6 [0.22]	6.8 [0.27]
TYPE B	CONTACT PIN ID	S4 / R4	Ux / Tx / Sx / Rx
	HEAD HEIGHT	5.6 [0.22]	6.8 [0.27]

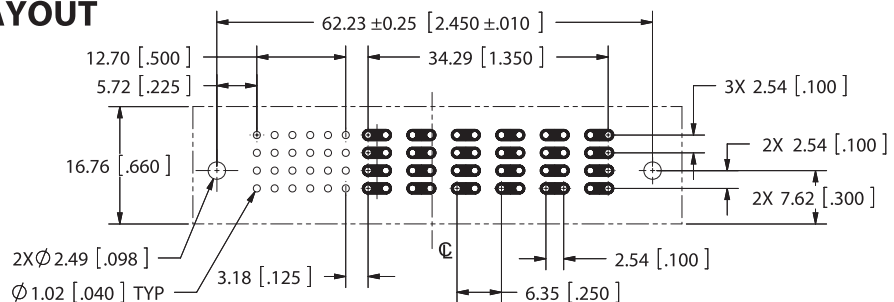


DETAIL A
SCALE 5:1

RECOMMENDED PCB LAYOUT

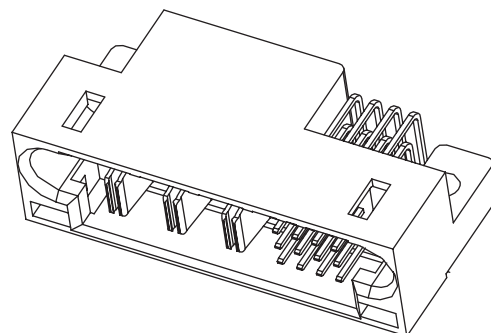
PCB THICKNESS 2.00mm [.079],

TOLERANCE ±0.05mm [.002]



SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0
Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000030" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP116-F19C-RA.



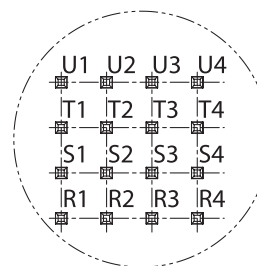
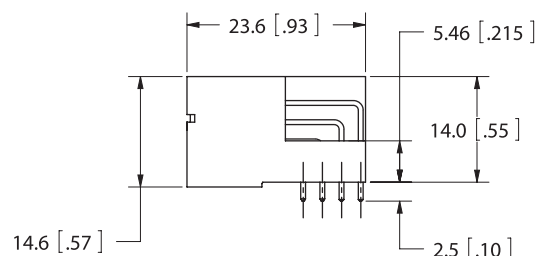
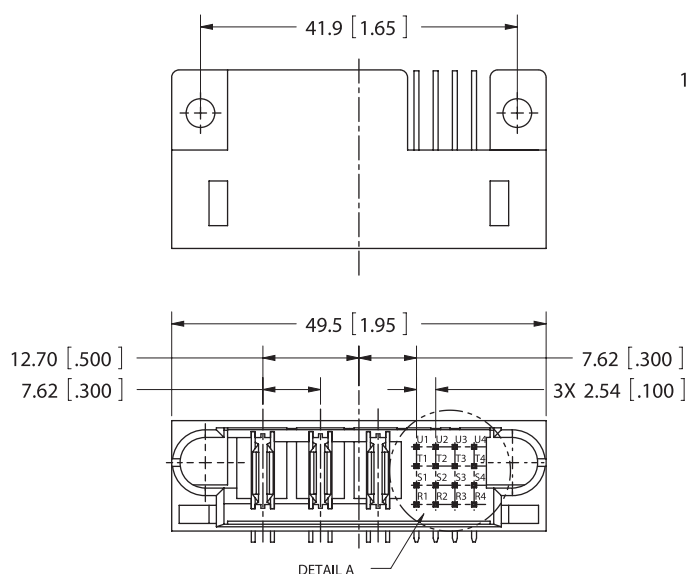
DIMENSIONS

PART NUMBER OPTIONS

SBP116 - M19C - RA

TOTAL NUMBER OF CONTACTS

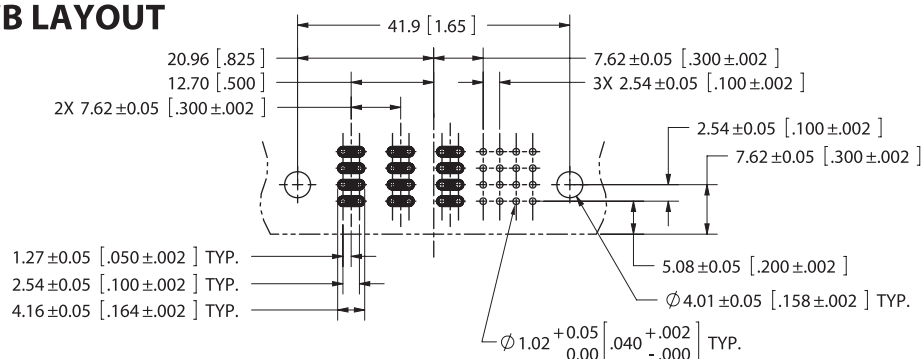
19= 3 Power Contacts + 16 Signal Contacts



DETAIL A

CONTACT PIN ID	Ux/Tx/Sx/Rx
HEAD HEIGHT	6.8 [.27]

RECOMMENDED PCB LAYOUT

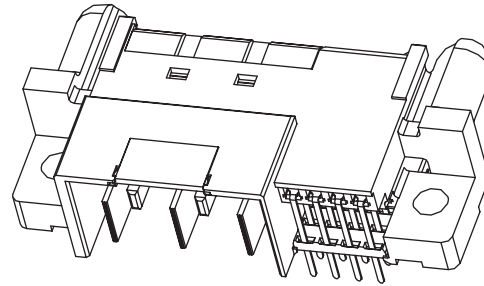




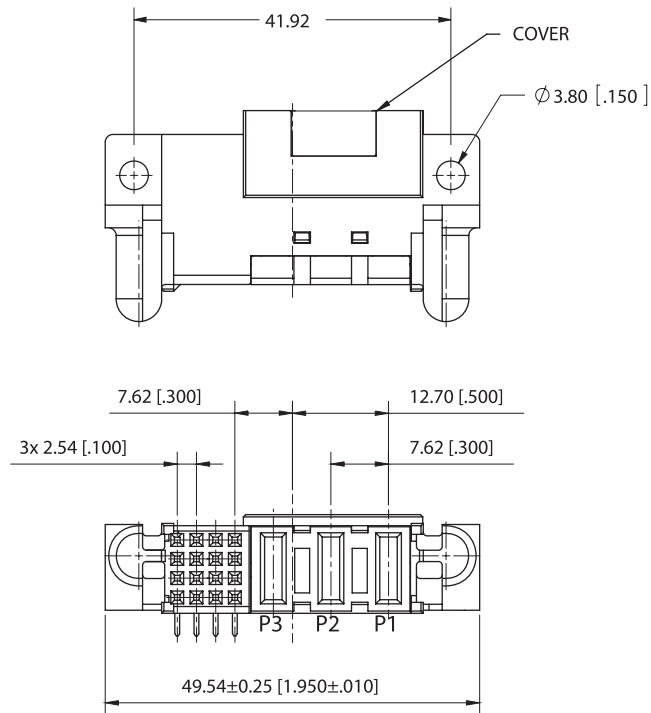
SBP116 Series High Power Female Connector

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000030" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP116-M19C-RA.



DIMENSIONS



PART NUMBER OPTIONS

SBP116 - F19C - RA

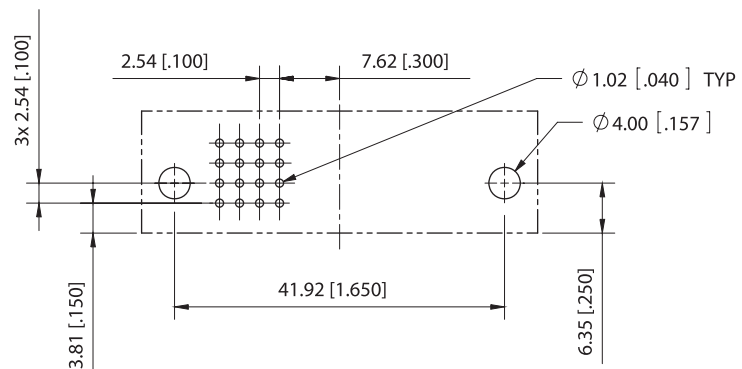
TOTAL NUMBER OF CONTACTS

19 = 16 Signal Contacts + 3 Power Contacts

CONTACT ID	P1, P2,	P3,
DIM 'A'	2.10 [.083]	2.70 [.106]

RECOMMENDED PCB LAYOUT

TOLERANCE ±0.05 [.002]

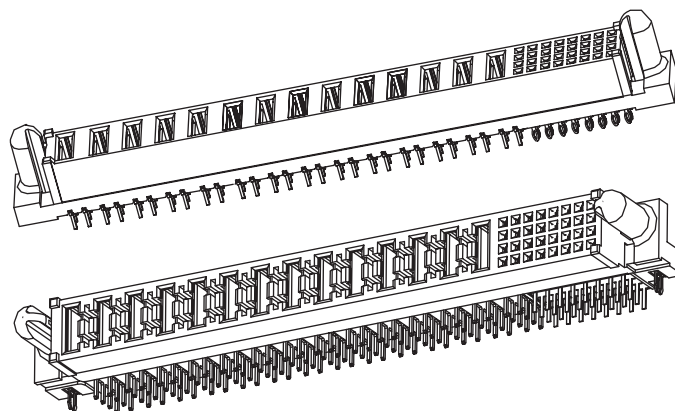




SBP119 Series High Power Female Connector 14P + 32S Straight/Right Angle

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000010" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP119-M46B-RA.

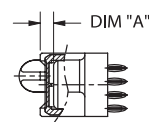
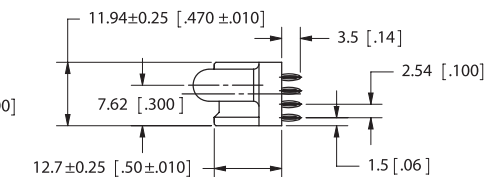
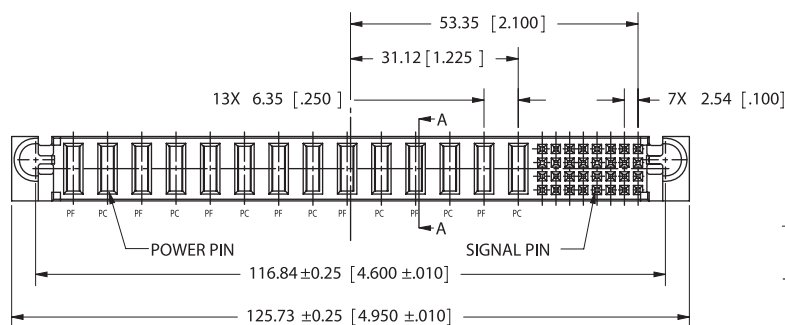
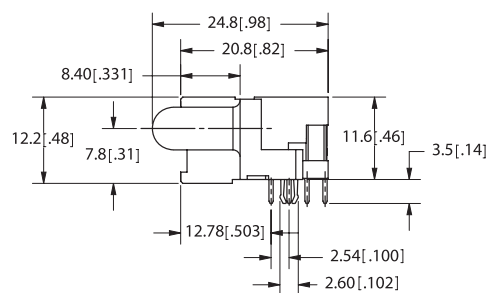
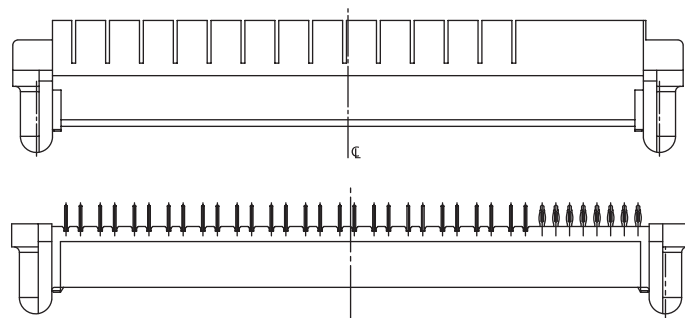


DIMENSIONS

PART NUMBER OPTIONS SBP119 - F46B - RA

TOTAL NUMBER OF CONTACTS
46 = 14 Power Contacts + 32 Signal Contacts

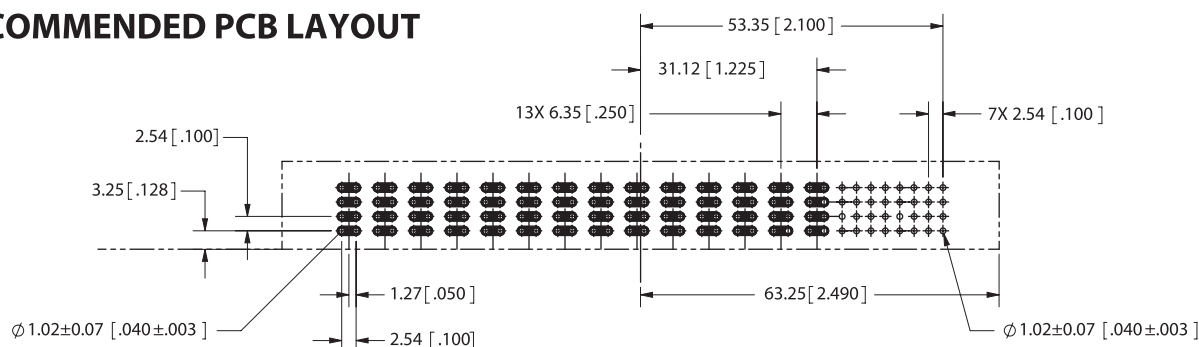
TERMINATION TYPE
ST = Straight
RA = Right Angle



A - A SECTION

CONTACT PIN ID	PC	PF
DIM 'A'	2.5 [.10]	3.2 [.13]

RECOMMENDED PCB LAYOUT

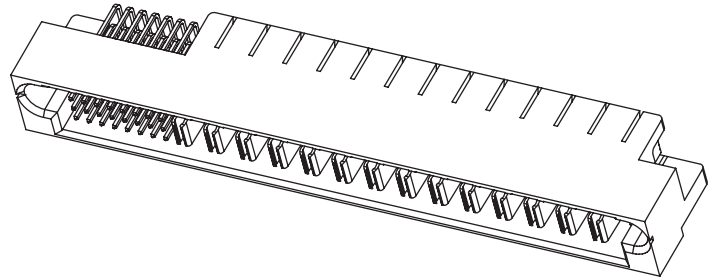




SBP119 Series High Power Male Connector 14P + 32S

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000030" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC
- Paired With SBP119-F46B-RA or SBP119-F46B-ST.

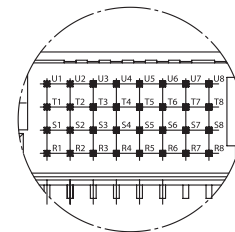
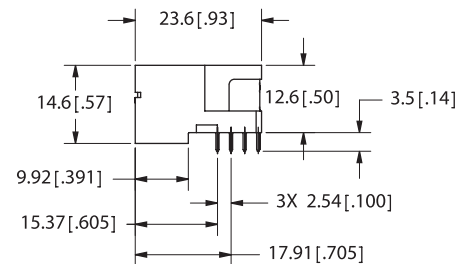
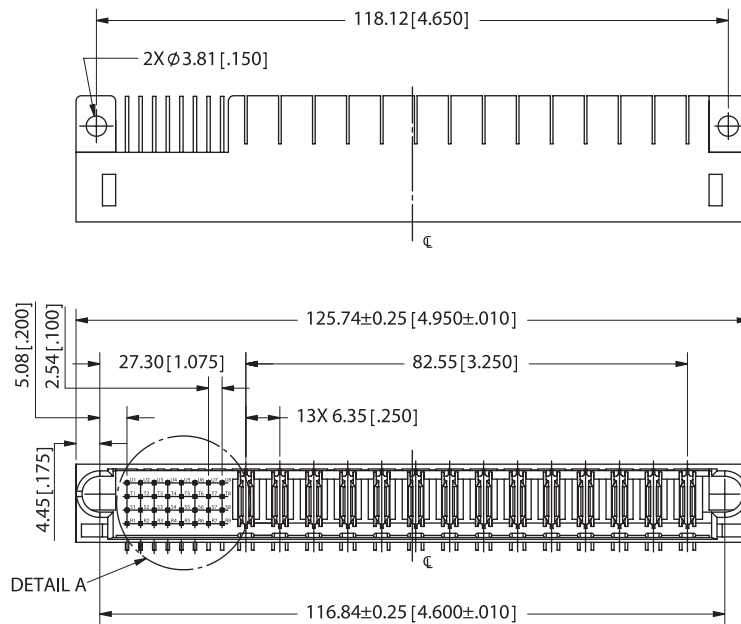


DIMENSIONS

PART NUMBER OPTIONS SBP119 - M46B - RA

TOTAL NUMBER OF CONTACTS

46 = 32 Signal Contacts + 14 Power Contacts

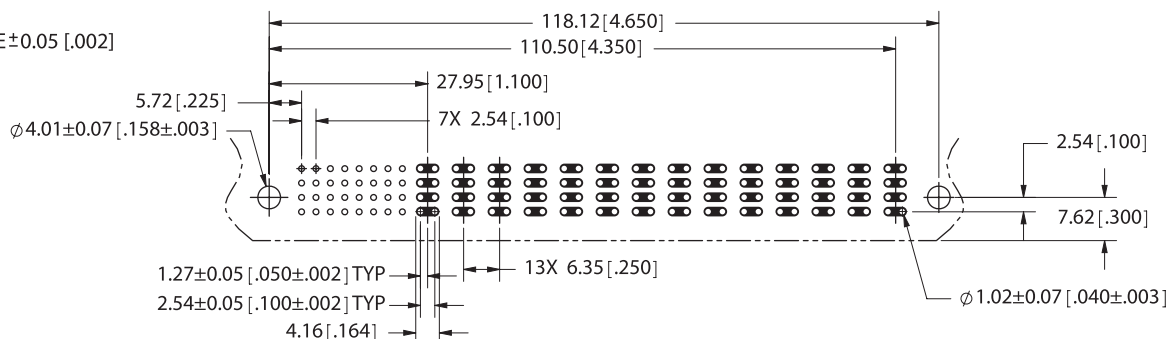


DETAIL A

CONTACT PIN ID	Ux/Tx/Sx/Rx
HEAD HEIGHT	6.8 [.27]

RECOMMENDED PCB LAYOUT

TOLERANCE ± 0.05 [.002]

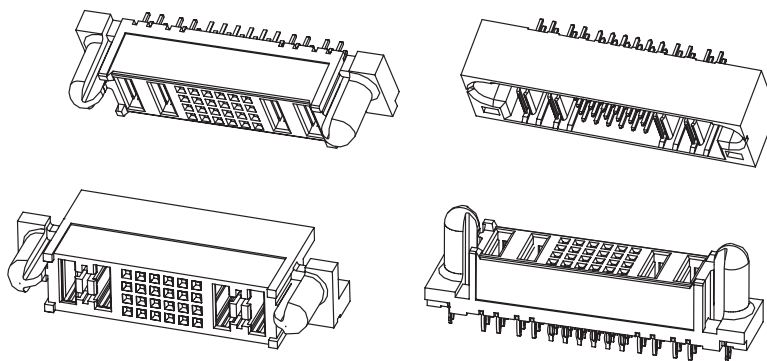




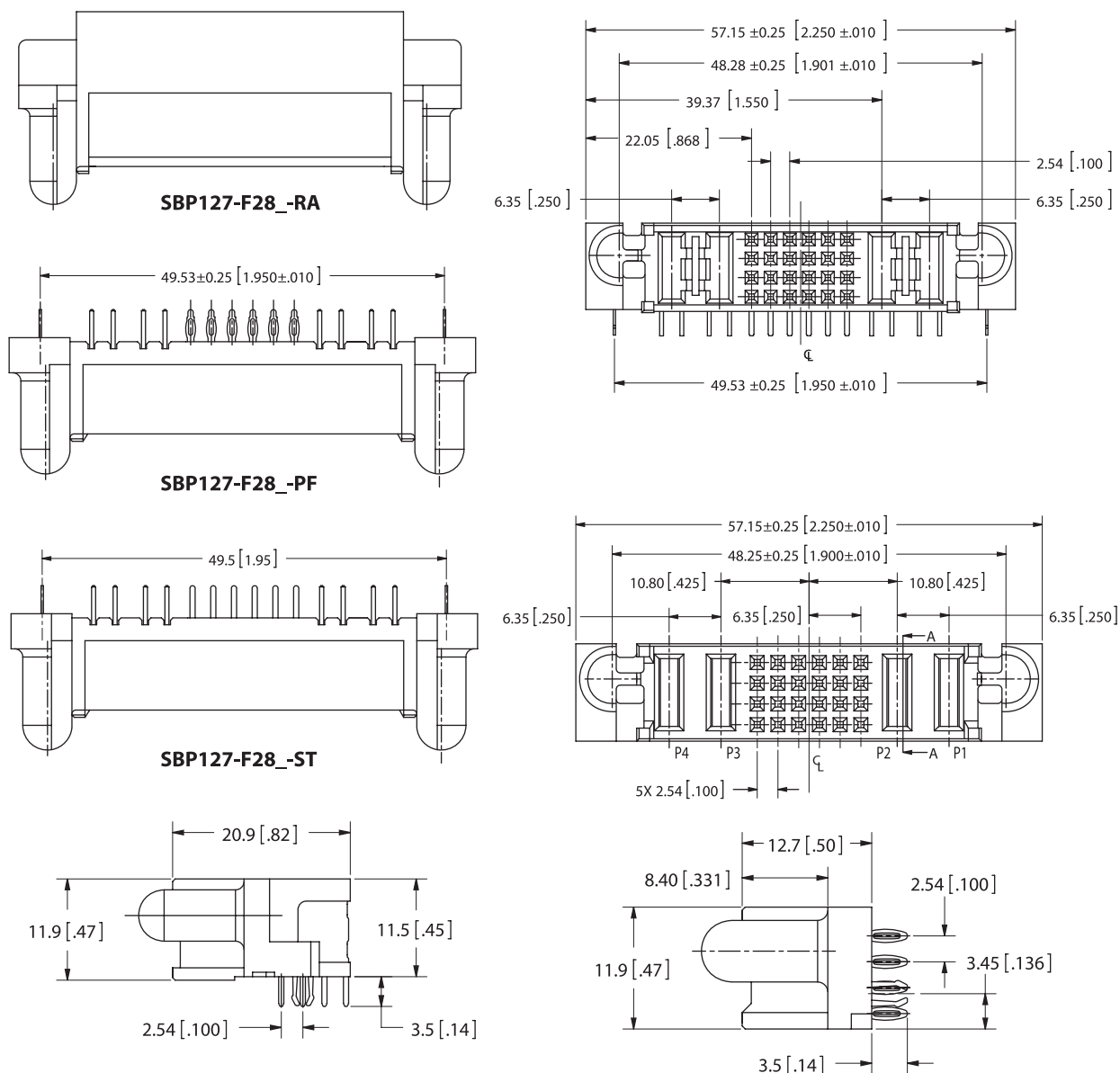
SBP127 Series High Power Male/Female Connector 2P + 24S + 2P Straight/Right Angle

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
Signal Contact: 1 A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
Signal Contact: 500 Megohms @ 500 VDC



DIMENSIONS





SBP127 Series High Power Male/Female Connector 2P + 24S + 2P Straight/Right Angle

PART NUMBER OPTIONS

SBP127 - F 28 B - ST

CONTACT TYPE

M : MALE
F : FEMALE

TOTAL NUMBER OF CONTACTS

28 = 2 Power Contacts + 24 Signal Contacts
+ 2 Power Contacts

TERMINATION TYPE

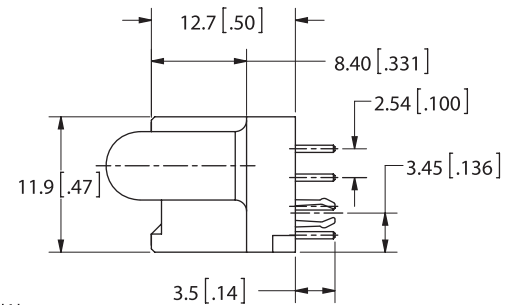
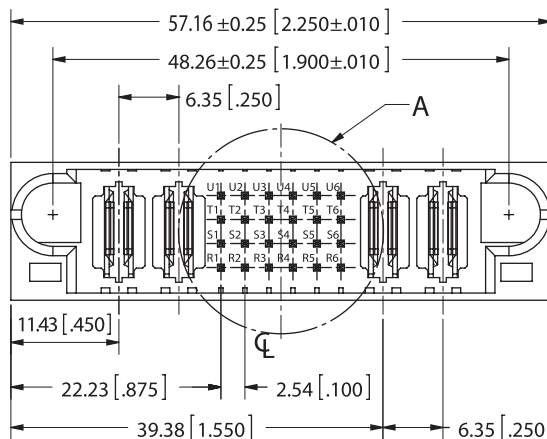
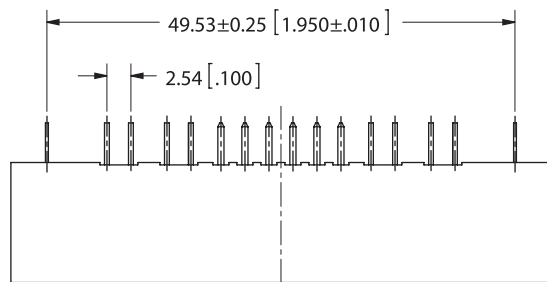
ST = Straight
RA = Right Angle
PF = Press Fit

CONTACT PLATING

B = .000010" Gold On Contact Surface,
.000100" Pure Tin On Termination.
C = .000030" Gold On Contact Surface,
.000100" Pure Tin On Termination.

DIMENSIONS

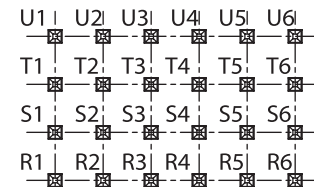
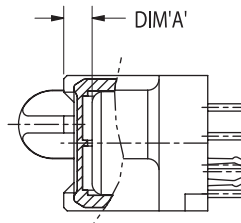
SBP127-M28_-ST



SBP127-F28_-ST

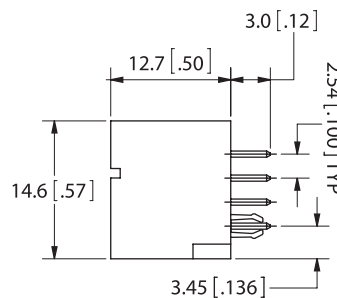
A - A SECTION

CONTACT PIN ID	P1 / P4	P2 / P3
DIM 'A'	3.2 [.13]	2.5 [.10]

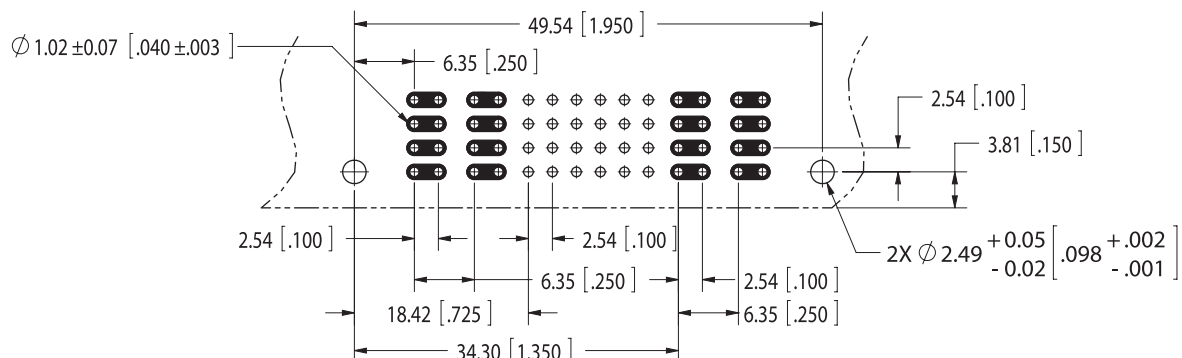


A DETAIL

CONTACT PIN ID	Ux/Tx/Sx/Rx
HEAD HEIGHT	6.9 [.27]

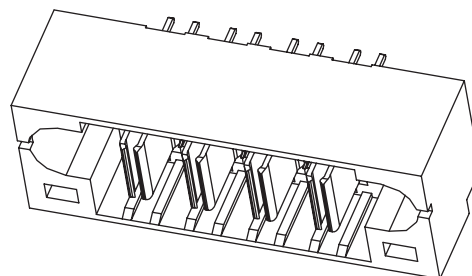


RECOMMENDED PCB LAYOUT

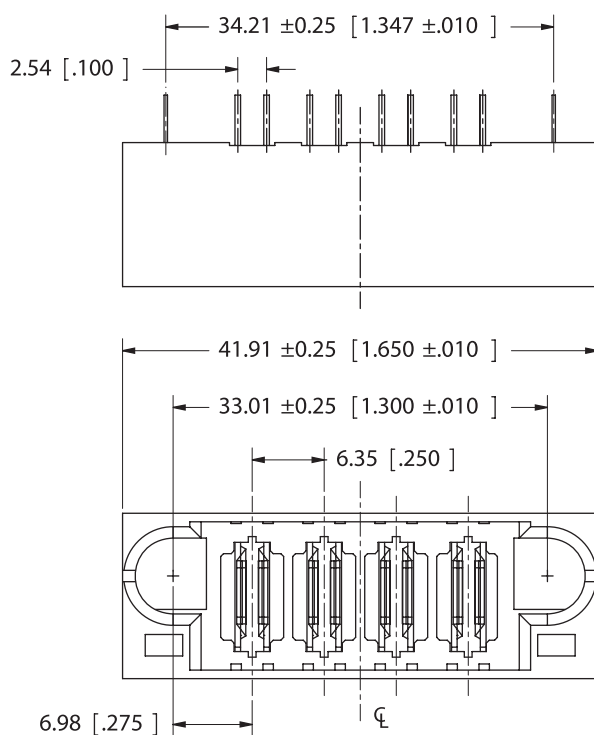


SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0
Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000030" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
- Paired With SBP128-F04B-ST.



DIMENSIONS

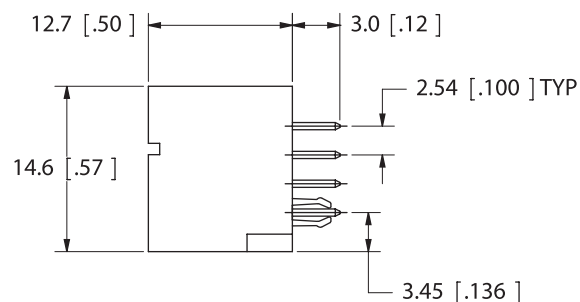


PART NUMBER OPTIONS

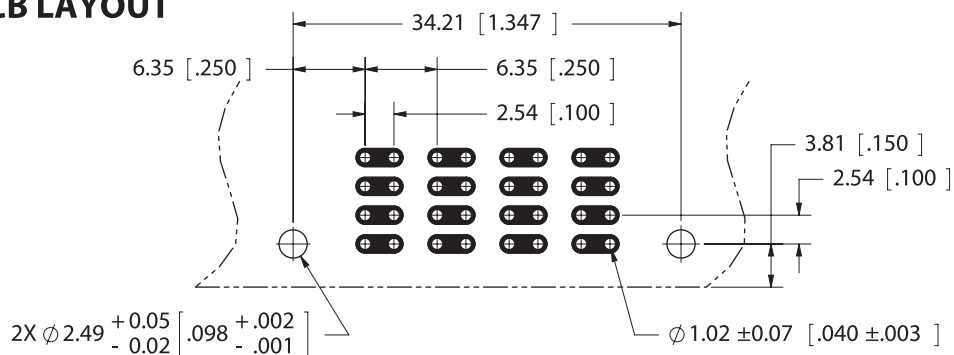
SBP128 - M04C - ST

– TOTAL NUMBER OF CONTACTS

04 = 4 Power Contacts



RECOMMENDED PCB LAYOUT

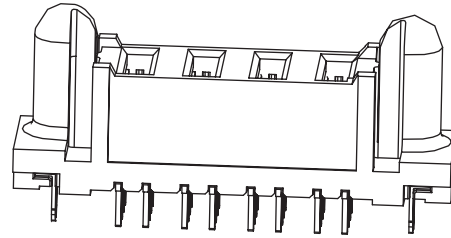




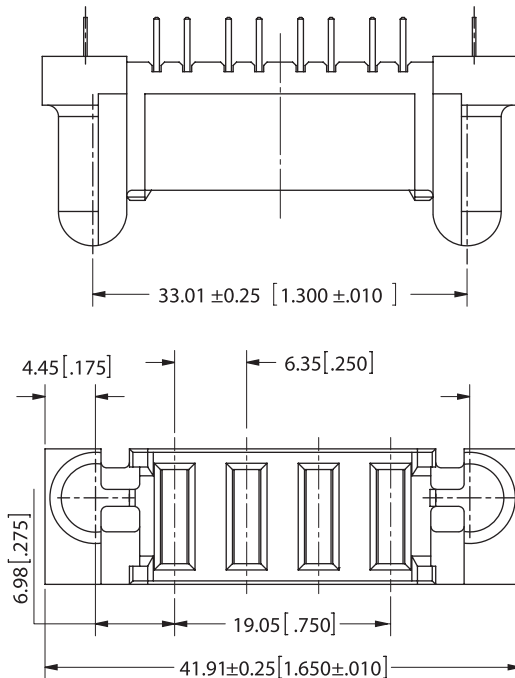
SBP128 Series High Power Female Connector

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000010" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
- Paired With SBP128-M04C-ST.



DIMENSIONS

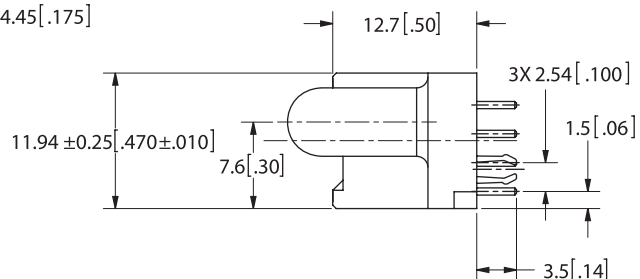


PART NUMBER OPTIONS

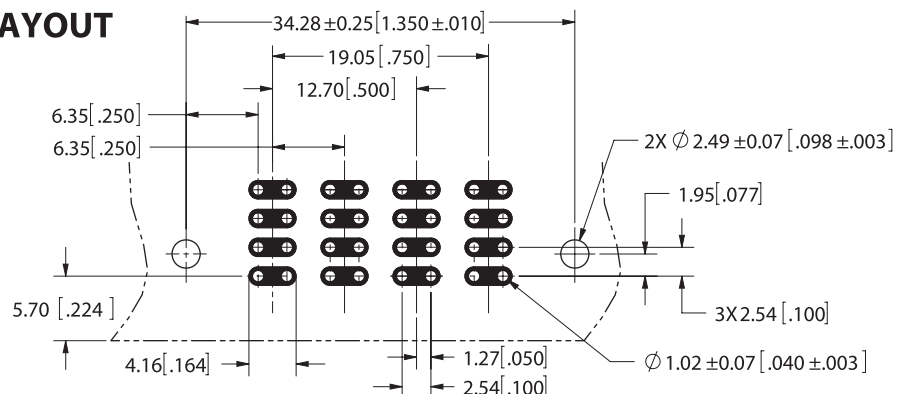
SBP128 - F04B - ST

TOTAL NUMBER OF CONTACTS

04= 4 Power Contacts



RECOMMENDED PCB LAYOUT

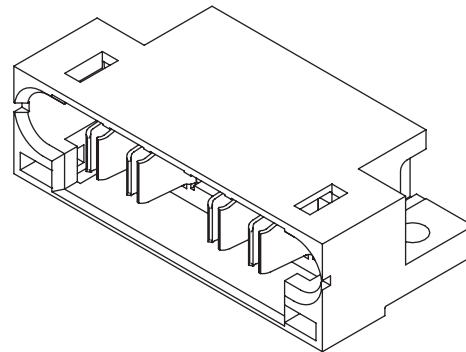




SBP181 Series High Power Male Connector

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Plating: .000050" Nickel Underplate
.000030" Gold On Contact Surface,
.000100" Pure Tin Matte On Termination
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
- Paired With SBP181-F04_-RA.



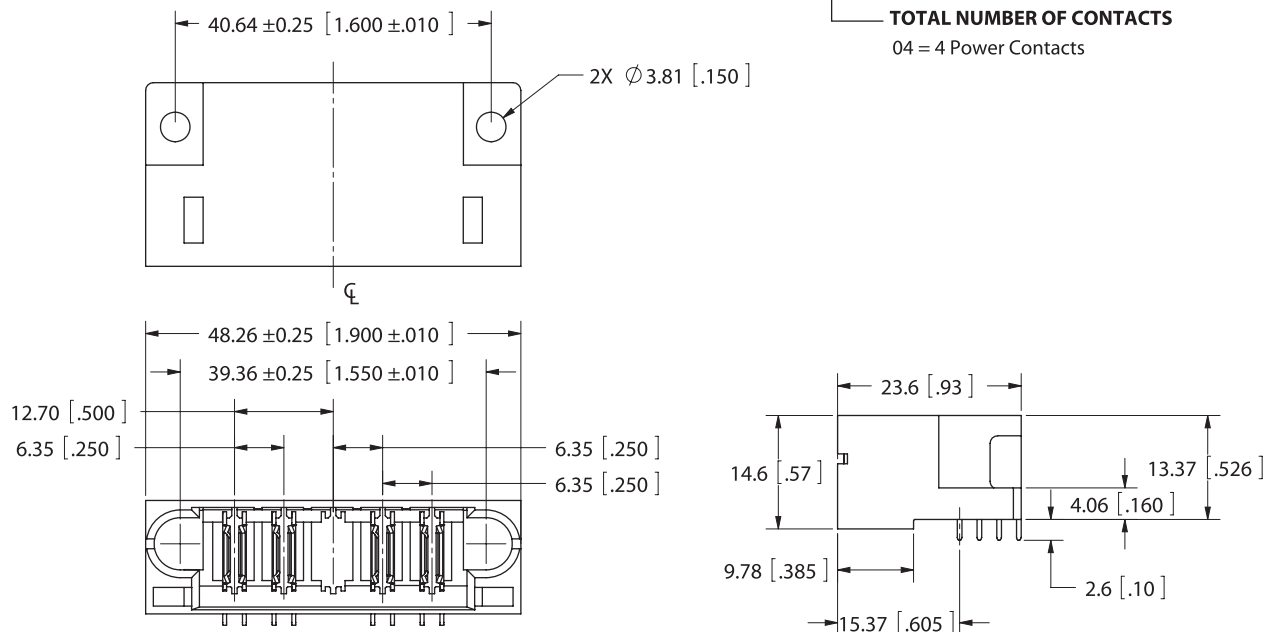
DIMENSIONS

PART NUMBER OPTIONS

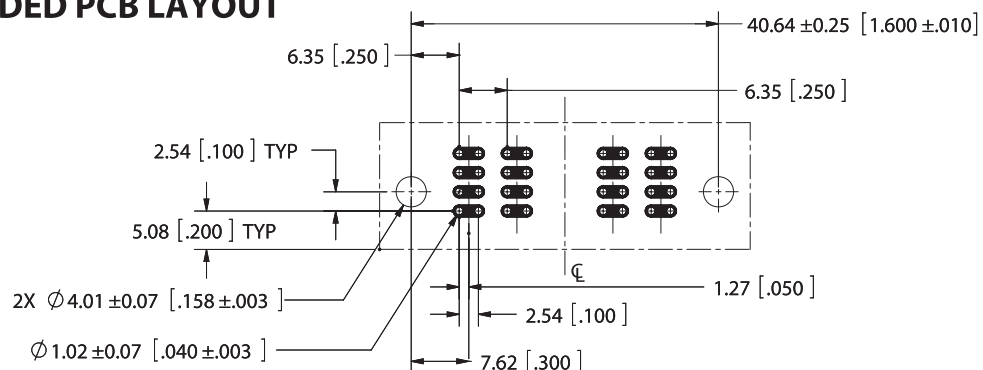
SBP181 - M04C - RA

TOTAL NUMBER OF CONTACTS

04 = 4 Power Contacts



RECOMMENDED PCB LAYOUT

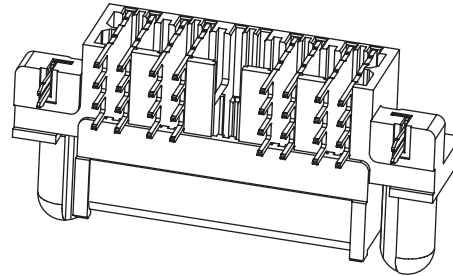




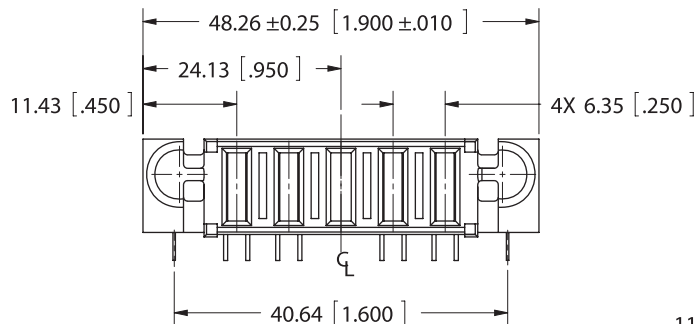
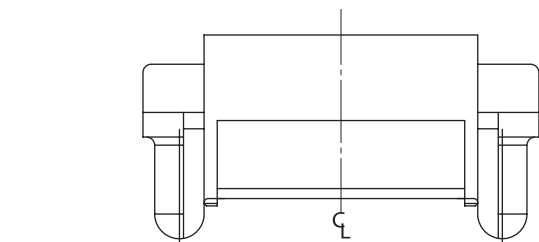
SBP181 Series High Power Female Connector

SPECIFICATIONS

- Insulator: Glass Filled Polyester, UL 94-V-0 Rated or Other Equivalent Resins.
- Contacts: High Conductivity Copper Alloy
- Operating Temperature: 105°C max
- Current Rating: Power Contact: 30A
- Insulation Resistance:
Power Contact: 1000 Megohms @ 500 VDC
- Paired With SBP181-M04C-RA.



DIMENSIONS



PART NUMBER OPTIONS SBP181 - F04 B - ST

TOTAL NUMBER OF CONTACTS

04= 4 Power Contacts

PLATING

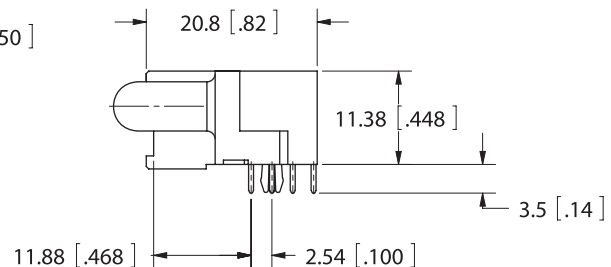
(.000050" Nickel Underplate)

B = .000010" Gold On Contact Surface,

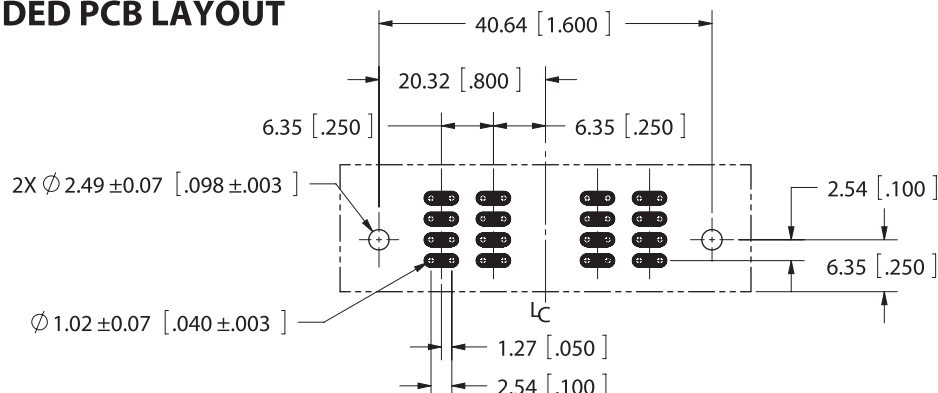
.000100" Pure Tin Matte On Termination

c = .000030" Gold On Contact Surface,

.000100" Pure Tin Matte On Termination



RECOMMENDED PCB LAYOUT





SWT 201 Series Crimp Terminal

SPECIFICATIONS

- Material: Phosphor Bronze.
- Plating: See Part Number Coding.
- Wire Range: AWG #24 - #28.
- Insulation O.D.: $\phi 1.20\text{mm} \sim \phi 1.50\text{mm}$.
- Quantity Per Reel = 10,000 Pieces.
- Used In SWH201 SERIES Housing.
- Plating Before Stamping/Forming.

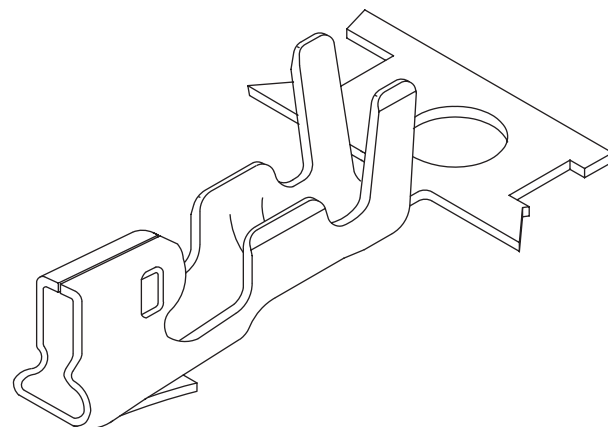
PART NUMBER CODING

SWT201-UP N-S01-UU-UU

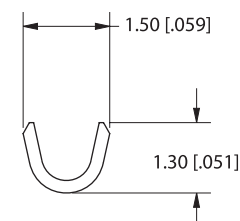
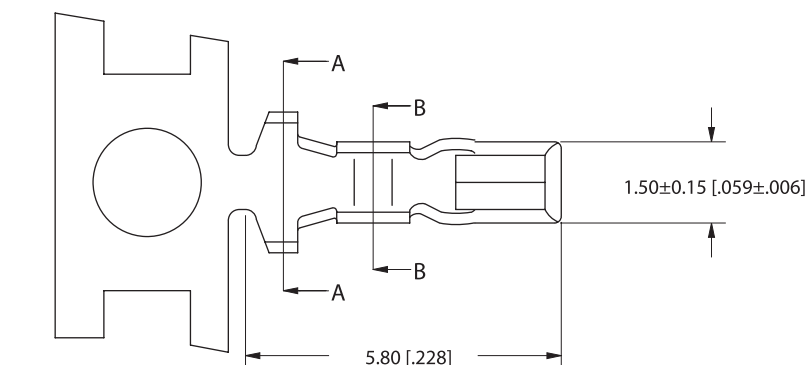
Plating

T= .000015" Min Nickel Underplate, .000040" Min Pure Tin, Bright Overall.

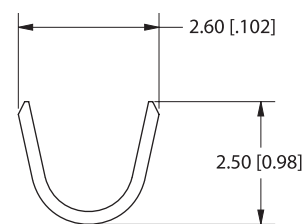
P= .000040" Min Nickel Underplate, Gold Flash Overall.



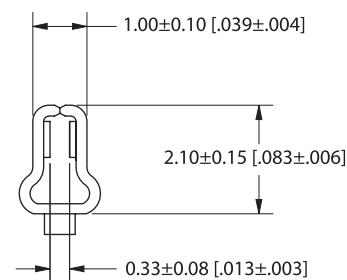
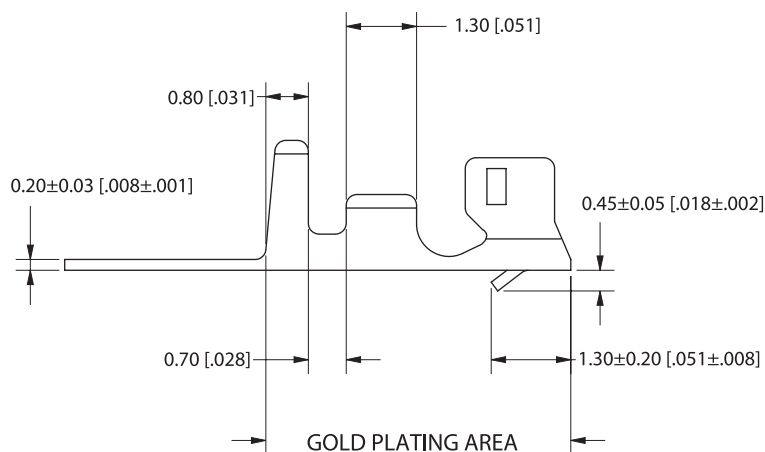
DIMENSIONS



SECTION B-B



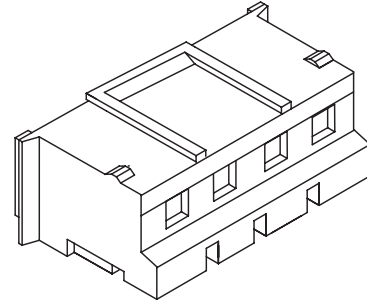
SECTION A-A



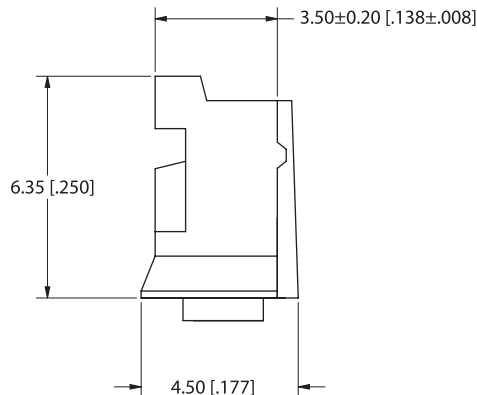
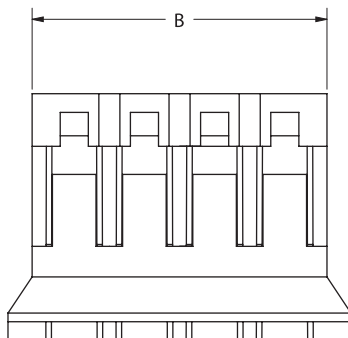
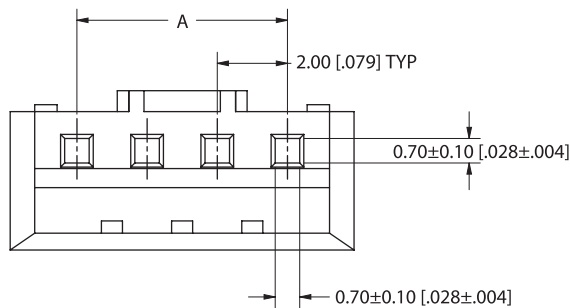


SPECIFICATIONS

- Insulator Material: Nylon 66, UL 94V-0 Color: White.
- Contact Resistance: 20m OHMs Max.
- Current Rating: 1 AMP per contact
- Dielectric WithStanding: 800 V AC.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: -25° C TO +85° C.
- Voltage Rating: 125V AC/DC.
- SUITABLE FOR SWH201 SERIES TERMINAL.
- MATES WITH SWR201 SERIES SINGLE ROW WAFER.



DIMENSIONS



PART NUMBER CODING

SWH201-NULN-S -UU-WH

Number Of Positions
(Contact Per row)

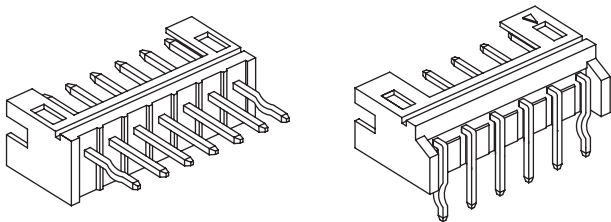
Part Number	Positions/ Contacts	A		B	
		mm	inch	mm	inch
SWH201-NULN-S02-UU-WH	02/02	2.00	0.079	4.40	0.173
SWH201-NULN-S03-UU-WH	03/03	4.00	0.157	6.40	0.252
SWH201-NULN-S04-UU-WH	04/04	6.00	0.236	8.40	0.331
SWH201-NULN-S05-UU-WH	05/05	8.00	0.315	10.40	0.409
SWH201-NULN-S06-UU-WH	06/06	10.00	0.394	12.40	0.488
SWH201-NULN-S07-UU-WH	07/07	12.00	0.472	14.40	0.567
SWH201-NULN-S08-UU-WH	08/08	14.00	0.551	16.40	0.646
SWH201-NULN-S09-UU-WH	09/09	16.00	0.630	18.40	0.724
SWH201-NULN-S10-UU-WH	10/10	18.00	0.709	20.40	0.803
SWH201-NULN-S11-UU-WH	11/11	20.00	0.787	22.40	0.882
SWH201-NULN-S12-UU-WH	12/12	22.00	0.866	24.40	0.961
SWH201-NULN-S13-UU-WH	13/13	24.00	0.945	26.40	1.039
SWH201-NULN-S14-UU-WH	14/14	26.00	1.024	28.40	1.118
SWH201-NULN-S15-UU-WH	15/15	28.00	1.102	30.40	1.197
SWH201-NULN-S16-UU-WH	16/16	30.00	1.181	32.40	1.276



SWR201 Series Single Row Wafer 2.0mm [.079"] CC, SMT

SPECIFICATIONS

- Insulator Material: Nylon 66, UL 94V-0
- Contact Resistance: 20m OHMs Max.
- Contact Plating: .000020" Min. Nickel Underplate, Pure Tin, Bright Overall.
- Current Rating: 1 AMP per contact
- Dielectric Withstanding: 800 V AC.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: -25° C TO +85° C.
- Voltage Rating: 125V AC/DC.
- MATES WITH SWH201 SERIES SINGLE ROW WAFER.



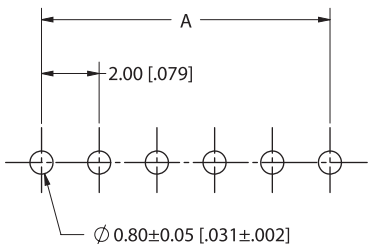
PART NUMBER CODING

SWR201-NRTN-S - -WH

Number Of Positions
(Contact Per row)

Termination Type
SA= End Pins Kink Right
RL= Right Angle With Kinked End Pins

RECOMMENDED PCB LAYOUT

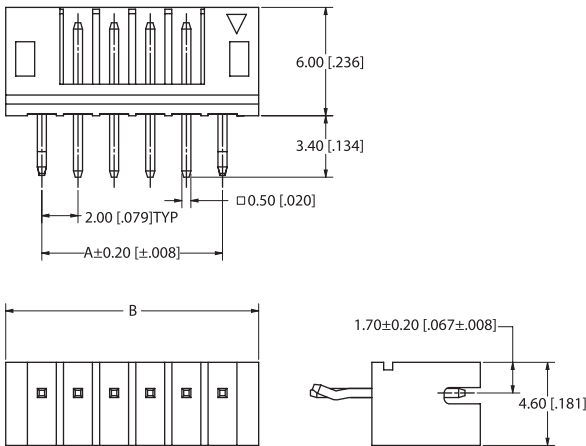


P.C. BOARD THICKNESS: 0.80 ~ 1.60mm[.031" ~ .063"]

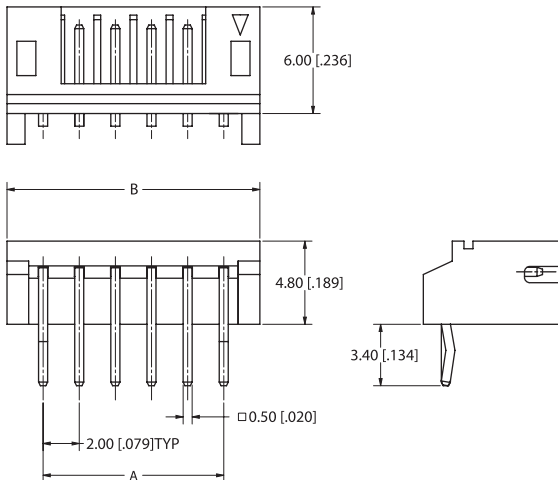
Part Number	Positions/ Contacts	A		B	
		mm	inch	mm	inch
SWR201-NRTN-S02-_-WH	02/02	2.00	0.079	5.90	0.232
SWR201-NRTN-S03-_-WH	03/03	4.00	0.157	7.90	0.311
SWR201-NRTN-S04-_-WH	04/04	6.00	0.236	9.90	0.390
SWR201-NRTN-S05-_-WH	05/05	8.00	0.315	11.90	0.469
SWR201-NRTN-S06-_-WH	06/06	10.00	0.394	13.90	0.547
SWR201-NRTN-S07-_-WH	07/07	12.00	0.472	15.90	0.626
SWR201-NRTN-S08-_-WH	08/08	14.00	0.551	17.90	0.705
SWR201-NRTN-S09-_-WH	09/09	16.00	0.630	19.90	0.783
SWR201-NRTN-S10-_-WH	10/10	18.00	0.709	21.90	0.862
SWR201-NRTN-S11-_-WH	11/11	20.00	0.787	23.90	0.941
SWR201-NRTN-S12-_-WH	12/12	22.00	0.866	25.90	1.020
SWR201-NRTN-S13-_-WH	13/13	24.00	0.945	27.90	1.098
SWR201-NRTN-S14-_-WH	14/14	26.00	1.024	29.90	1.177
SWR201-NRTN-S15-_-WH	15/15	28.00	1.102	31.90	1.256
SWR201-NRTN-S16-_-WH	16/16	30.00	1.181	33.90	1.335

DIMENSIONS

SWR201-NRTN-Sxx -SA-WH



SWR201-NRTN-Sxx -RL-WH

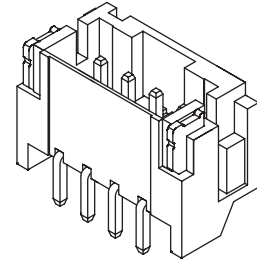
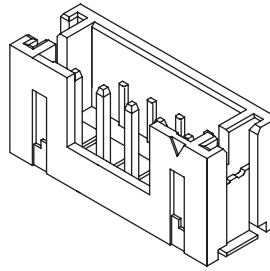




SWR201 Series Single Row Wafer 2.0mm [.079"] CC, SMT

SPECIFICATIONS

- Insulator Material: Nylon 66, UL 94V-0
- Contact Resistance: 20m OHMs Max.
- Contact Plating: .000020" Min. Nickel Underplate, Pure Tin, Bright Overall.
- Current Rating: 1 AMP per contact
- Dielectric Withstanding: 800 V AC.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: -25° C TO +85° C.
- Voltage Rating: 125V AC/DC.
- MATES WITH SWH201 SERIES SINGLE ROW WAFER.



PART NUMBER CODING

SWR201-NRTN-S - -BG

Number Of Positions
(Contact Per row)

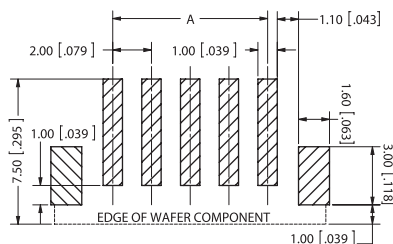
Termination Type

SM = Surface Mount

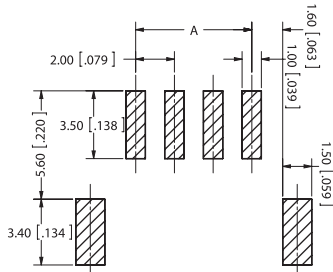
HM = Horizontal Surface Mount

RECOMMENDED PCB LAYOUT

SWR201-NRTN-Sxx -SM-BG



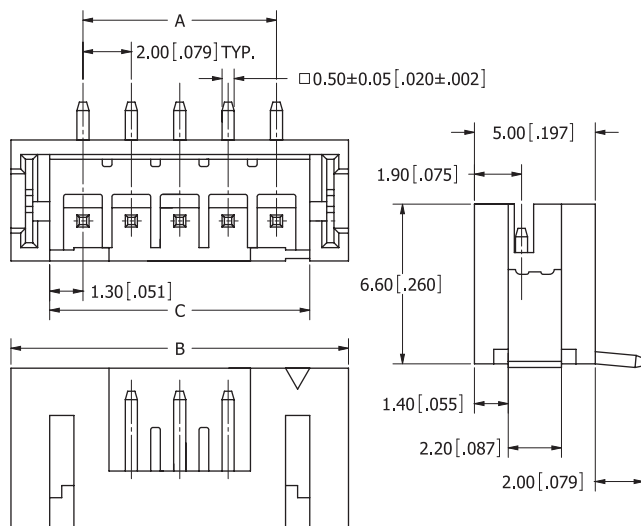
SWR201-NRTN-Sxx -HM-BG



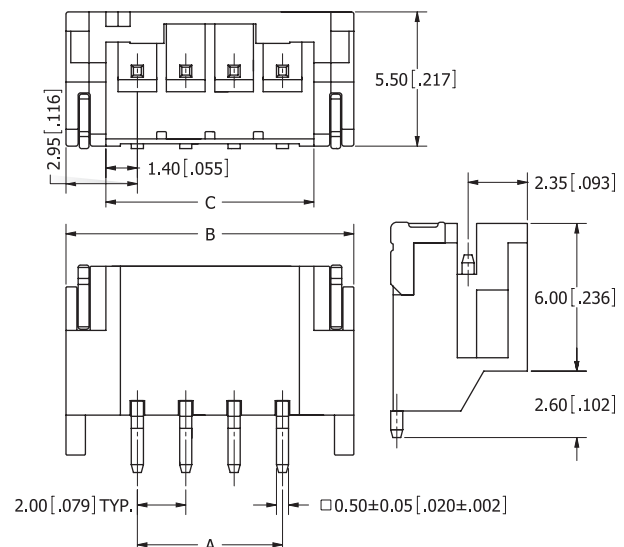
Part Number	Positions/ Contacts	A		B		C	
		mm	inch	mm	inch	mm	inch
SWR201-NRTN-S02-__-BG	02/02	2.00	0.079	8.00	0.315	4.60	0.181
SWR201-NRTN-S03-__-BG	03/03	4.00	0.157	10.00	0.394	4.80	0.189
SWR201-NRTN-S04-__-BG	04/04	6.00	0.236	12.00	0.472	6.60	0.260
SWR201-NRTN-S05-__-BG	05/05	8.00	0.315	14.00	0.551	6.80	0.268
SWR201-NRTN-S06-__-BG	06/06	10.00	0.394	16.00	0.630	8.60	0.339
SWR201-NRTN-S07-__-BG	07/07	12.00	0.472	18.00	0.709	8.80	0.346
SWR201-NRTN-S08-__-BG	08/08	14.00	0.551	20.00	0.787	10.60	0.417
SWR201-NRTN-S09-__-BG	09/09	16.00	0.630	22.00	0.866	10.80	0.425
SWR201-NRTN-S10-__-BG	10/10	18.00	0.709	24.00	0.945	12.60	0.496
SWR201-NRTN-S11-__-BG	11/11	20.00	0.787	26.00	1.024	12.80	0.504
SWR201-NRTN-S12-__-BG	12/12	22.00	0.866	28.00	1.102	14.60	0.575
SWR201-NRTN-S13-__-BG	13/13	24.00	0.945	30.00	1.181	14.80	0.583
SWR201-NRTN-S14-__-BG	14/14	26.00	1.024	32.00	1.260	16.60	0.654
SWR201-NRTN-S15-__-BG	15/15	28.00	1.102	34.00	1.339	16.80	0.661
SWR201-NRTN-S16-__-BG	16/16	30.00	1.181	36.00	1.417	18.60	0.732
						18.80	0.740
						20.60	0.811
						20.80	0.819
						22.60	0.890
						22.80	0.898
						24.60	0.969
						24.80	0.976
						26.60	1.047
						26.80	1.055
						28.60	1.126
						28.80	1.134
						30.60	1.205
						30.80	1.213
						32.60	1.283
						32.80	1.291

DIMENSIONS

SWR201-NRTN-Sxx -SM-BG



SWR201-NRTN-Sxx -HM-BG

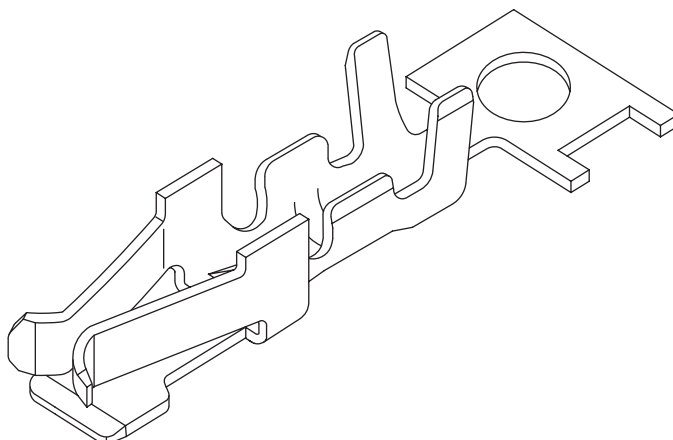




SWT 204 Series Crimp Terminal

SPECIFICATIONS

- Material: Phosphor Bronze.
- Plating: See Part Number Coding.
- Wire Range: AWG #22 - #26.
- Insulation O.D.: $\phi 1.35\text{mm} \sim \phi 1.70\text{mm}$.
- Quantity Per Reel = 10,000 Pieces.
- Used In SWH204 SERIES Housing.
- Plating Before Stamping/Forming.



PART NUMBER CODING

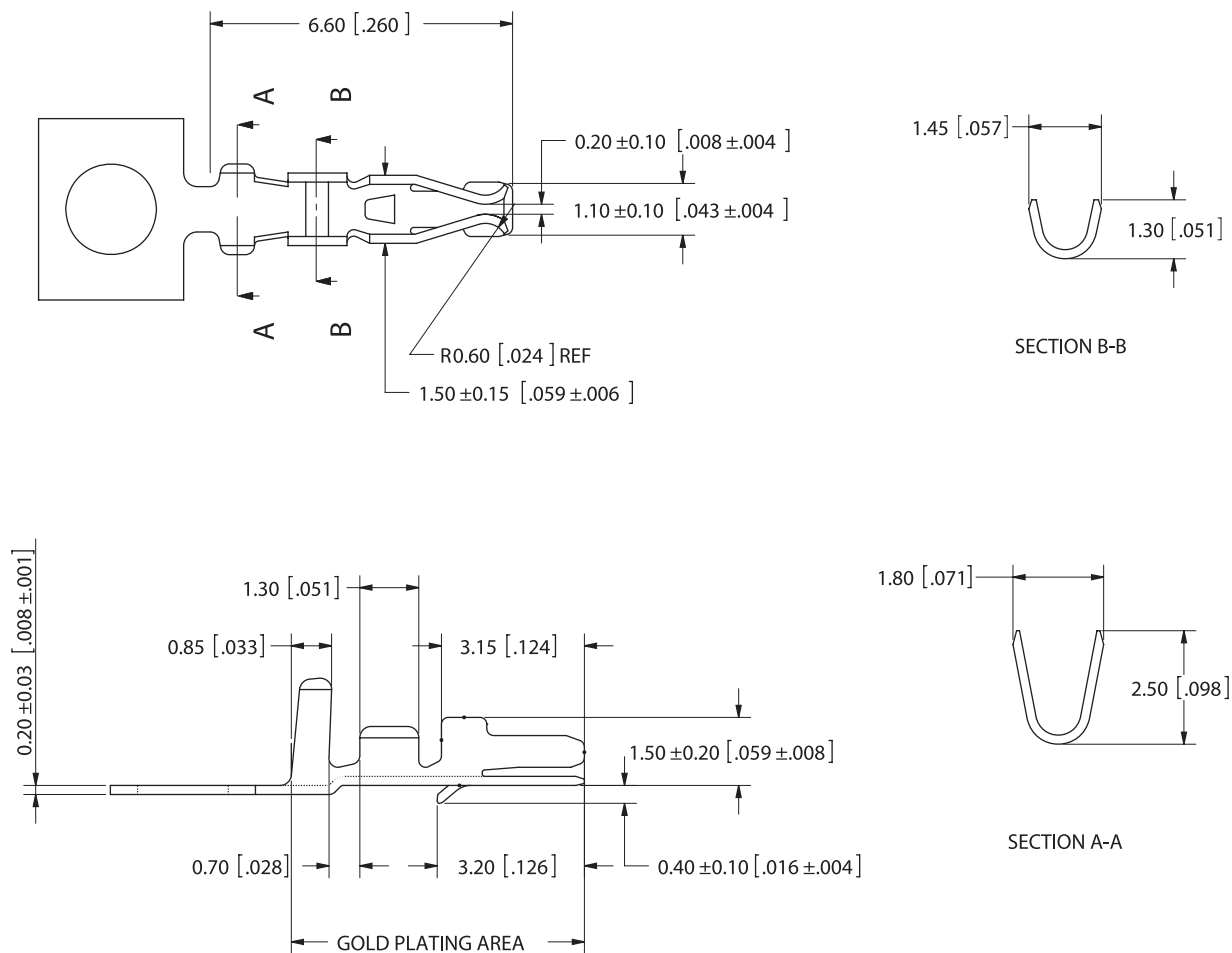
SWT204-UP N-S01-UU-UU

Plating

T= .000015" Min Nickel Underplate, .000040" Min Pure Tin, Bright Overall.

P= .000040" Min Nickel Underplate, Gold Flash Overall.

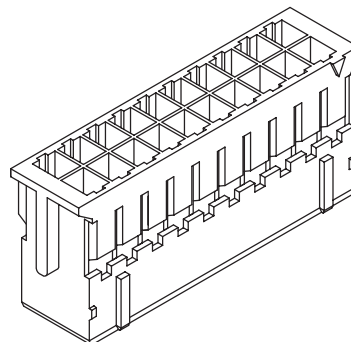
DIMENSIONS



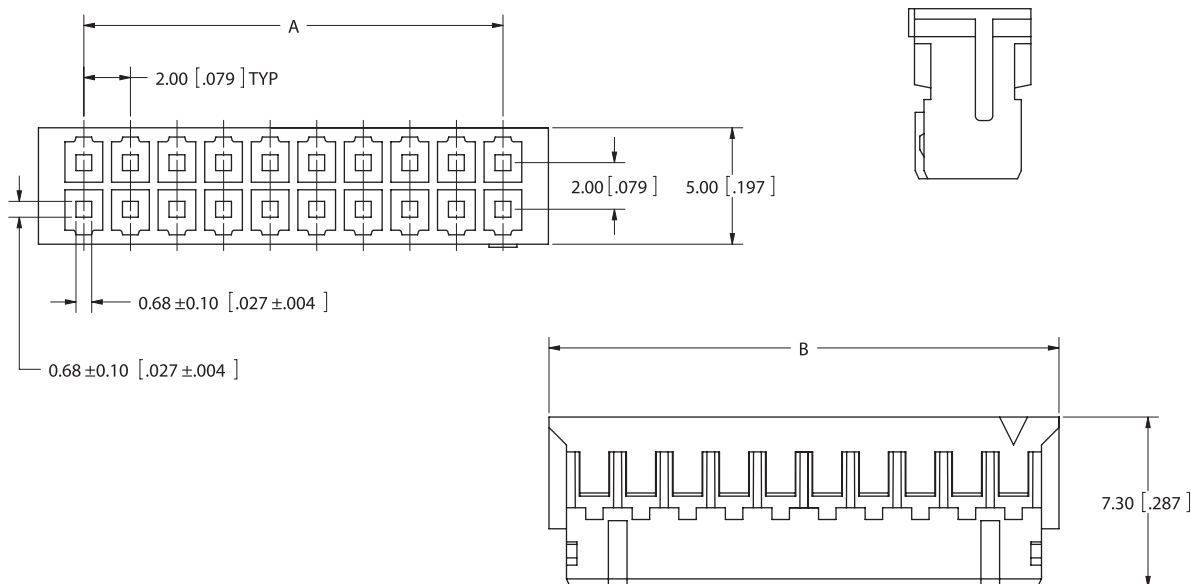


SPECIFICATIONS

- Insulator Material: Nylon 66, UL 94V-0 Color: White.
- Contact Resistance: 10m OHMs Max.
- Current Rating: 3 AMP per contact
- Dielectric WithStanding: 800 V AC.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: -25° C TO +85° C.
- Voltage Rating: 50V AC/DC.
- Suitable for SWT204 Series Terminal.
- Mates with SWR204 Series Dual Row Wafer.



DIMENSIONS



PART NUMBER CODING

SWH204-NULN-S -UU-WH

Number Of Positions
(Contact Per row)

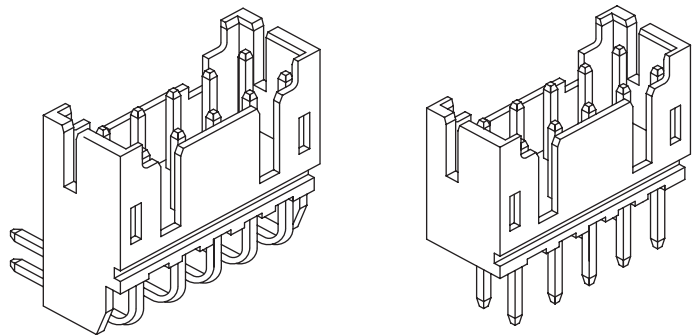
Part Number	Positions/ Contacts	A		B	
		mm	inch	mm	inch
SWH204-NULN-D02-UU-WH	02/04	2.00	0.079	5.90	0.232
SWH204-NULN-D03-UU-WH	03/06	4.00	0.157	7.90	0.311
SWH204-NULN-D04-UU-WH	04/08	6.00	0.236	9.90	0.390
SWH204-NULN-D05-UU-WH	05/10	8.00	0.315	11.90	0.469
SWH204-NULN-D06-UU-WH	06/12	10.00	0.394	13.90	0.547
SWH204-NULN-D07-UU-WH	07/14	12.00	0.472	15.90	0.626
SWH204-NULN-D08-UU-WH	08/16	14.00	0.551	17.90	0.705
SWH204-NULN-D09-UU-WH	09/18	16.00	0.630	19.90	0.783
SWH204-NULN-D10-UU-WH	10/20	18.00	0.709	21.90	0.862
SWH204-NULN-D11-UU-WH	11/22	20.00	0.787	23.90	0.941
SWH204-NULN-D12-UU-WH	12/24	22.00	0.866	25.90	1.020
SWH204-NULN-D13-UU-WH	13/26	24.00	0.945	27.90	1.098
SWH204-NULN-D14-UU-WH	14/28	26.00	1.024	29.90	1.177
SWH204-NULN-D15-UU-WH	15/30	28.00	1.102	31.90	1.256
SWH204-NULN-D16-UU-WH	16/32	30.00	1.181	33.90	1.335
SWH204-NULN-D17-UU-WH	17/34	32.00	1.260	35.90	1.413
SWH204-NULN-D20-UU-WH	20/40	38.00	1.496	41.90	1.650



SWR204 Series Dual Row Wafer 2.0mm [.079"] CC, Straight/Right Angle

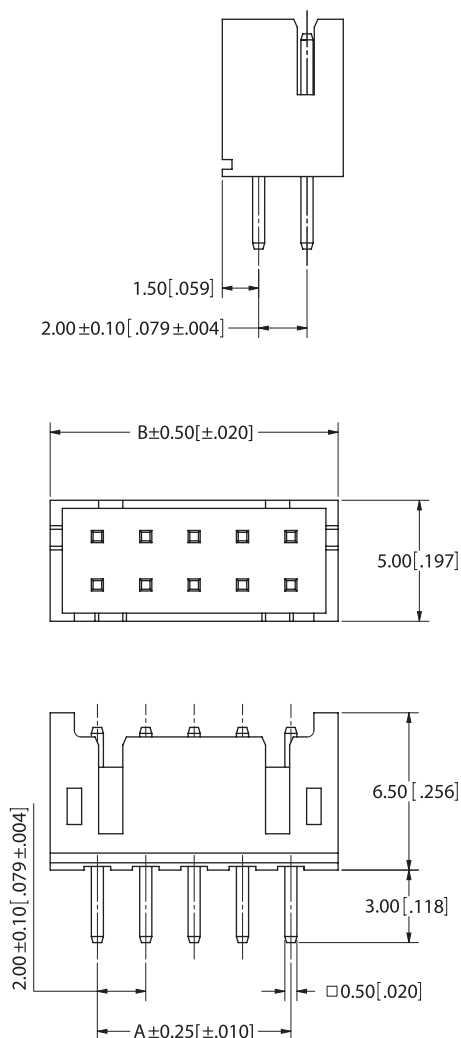
SPECIFICATIONS

- Insulator Material: Nylon 66, UL 94V-0
- Contact Resistance: 10m OHMs Max.
- Contact Plating: .000020" Min. Nickel Underplate, Pure Tin, Bright Overall.
- Current Rating: 3 AMP per contact
- Dielectric Withstanding: 800 V AC.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: -25° C TO +85° C.
- Voltage Rating: 50V AC/DC.
- Mates with SWH204 Series Dual Row Housing.

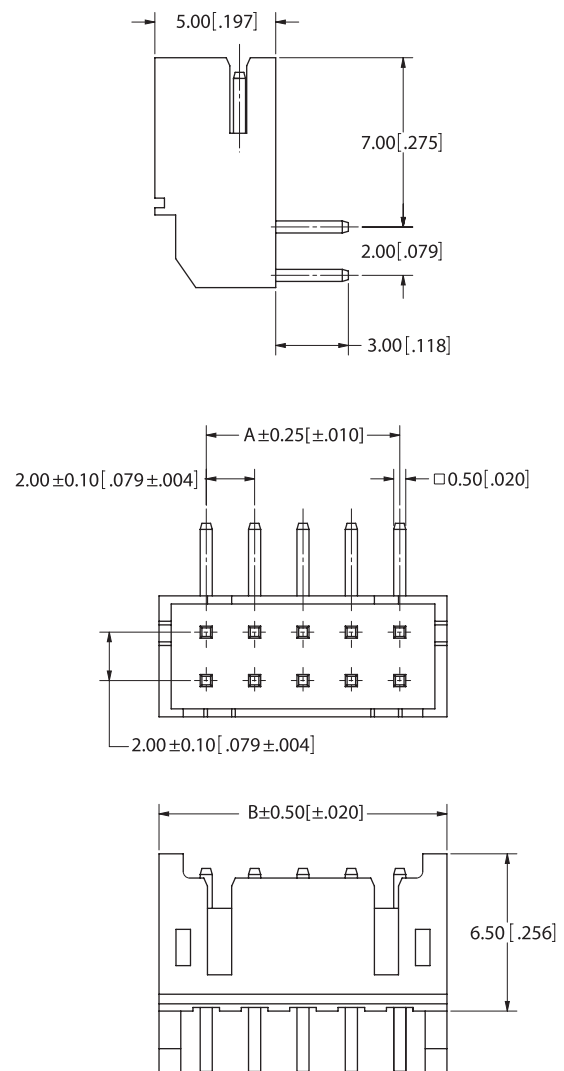


DIMENSIONS

SWR204-NRTN-Dxx -ST-GA



SWR204-NRTN-Dxx -RA-GA





SWR204 Series Dual Row Wafer 2.0mm [.079"] CC, Straight/Right Angle

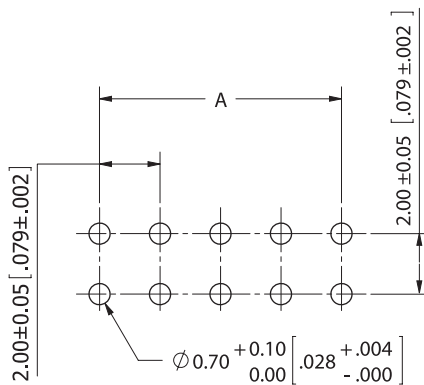
PART NUMBER CODING

SWR204-NRTN-D - -GA

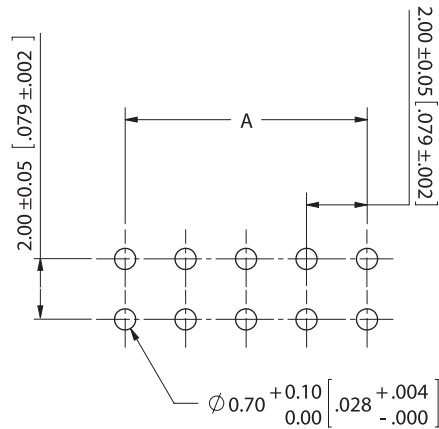
Number Of Positions _____ Termination Type
(Contact Per row) ST= Straight
RA= Right Angle

RECOMMENDED PCB LAYOUT

SWR204-NRTN-Dxx -ST-GA



SWR204-NRTN-Dxx -RA-GA

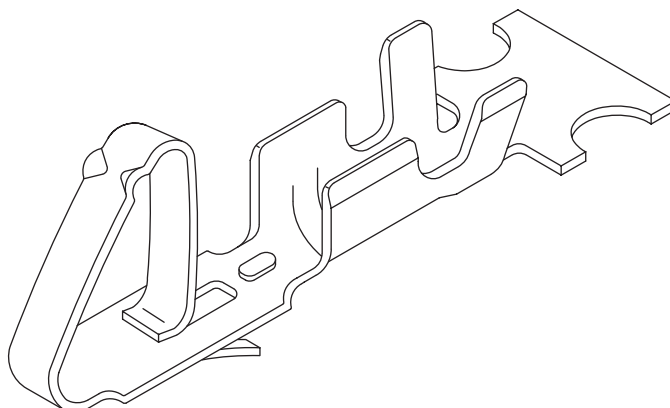


P.C. BOARD THICKNESS: 0.80 ~ 1.60mm [.031" ~ .063"]

Part Number	Positions/Contacts	A		B	
		mm	inch	mm	inch
SWR204-NRTN-D02-__-GA	02/04	2.00	0.079	5.90	0.232
SWR204-NRTN-D03-__-GA	03/06	4.00	0.157	7.90	0.311
SWR204-NRTN-D04-__-GA	04/08	6.00	0.236	9.90	0.390
SWR204-NRTN-D05-__-GA	05/10	8.00	0.315	11.90	0.469
SWR204-NRTN-D06-__-GA	06/12	10.00	0.394	13.90	0.547
SWR204-NRTN-D07-__-GA	07/14	12.00	0.472	15.90	0.626
SWR204-NRTN-D08-__-GA	08/16	14.00	0.551	17.90	0.705
SWR204-NRTN-D09-__-GA	09/18	16.00	0.630	19.90	0.783
SWR204-NRTN-D10-__-GA	10/20	18.00	0.709	21.90	0.862
SWR204-NRTN-D11-__-GA	11/22	20.00	0.787	23.90	0.941
SWR204-NRTN-D12-__-GA	12/24	22.00	0.866	25.90	1.020
SWR204-NRTN-D13-__-GA	13/26	24.00	0.945	27.90	1.098
SWR204-NRTN-D14-__-GA	14/28	26.00	1.024	29.90	1.177
SWR204-NRTN-D15-__-GA	15/30	28.00	1.102	31.90	1.256
SWR204-NRTN-D16-__-GA	16/32	30.00	1.181	33.90	1.335
SWR204-NRTN-D17-__-GA	17/34	32.00	1.260	35.90	1.413
SWR204-NRTN-D20-__-GA	20/40	38.00	1.496	41.90	1.650

SPECIFICATIONS

- Material: See Part Number Coding
- Plating: See Part Number Coding.
- Wire Range: AWG #20 - #26.
- Insulation O.D.: $\varnothing 1.35\text{mm} \sim \varnothing 1.90\text{mm}$.
- Quantity Per Reel = 10,000 Pieces.
- Used In SWH25X Series Housing.
- Plating Before Stamping/Forming.



PART NUMBER CODING

SWT25X-U N-S01-UU-UU

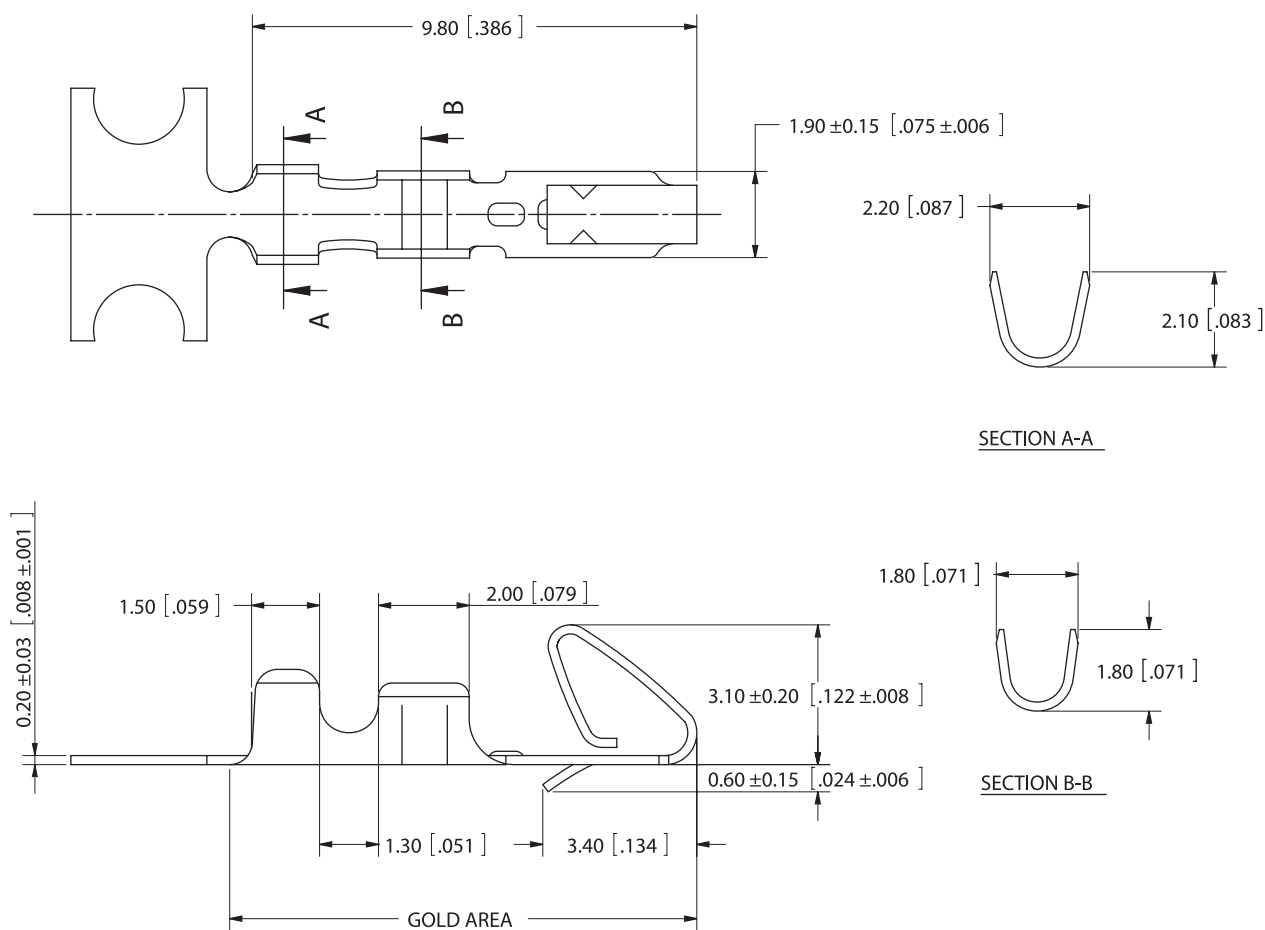
– Plating

RT= Brass, .000015" Min Nickel Underplate, .000040" Min Pure Tin, Bright Overall (Note 7).

PT= Phosphor Bronze .000015" Min Nickel Underplate, .000040" Min Pure Tin, Bright Overall (Note 7).

RP= Brass, .000040" Min Nickel Underplate, Gold Flash Overall.

DIMENSIONS

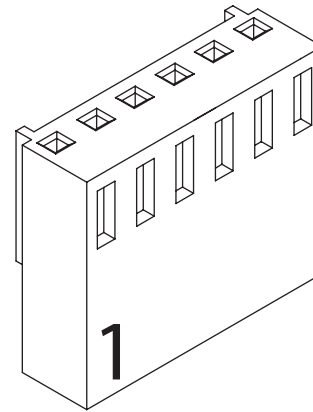




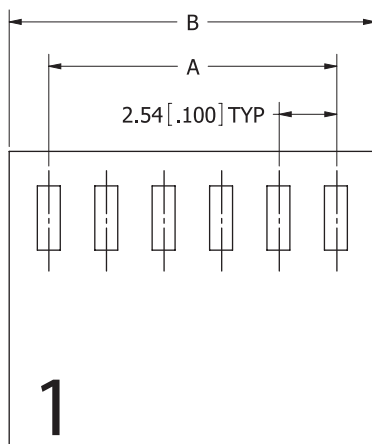
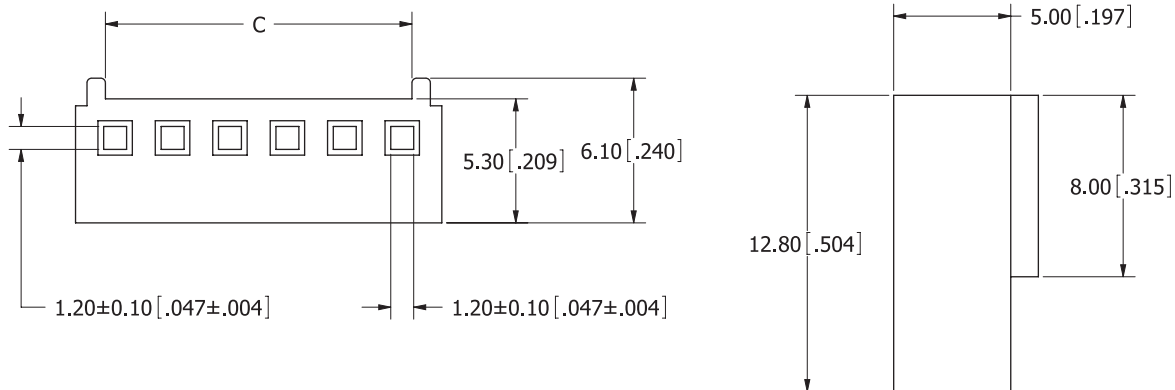
SWH25X Series Housing 2.54mm [.100"] CC

SPECIFICATIONS

- Insulator Material: Nylon 66, UL 94V-0 Color: White.
- Contact Resistance: 20m OHMs Max.
- Current Rating: 5 AMP per contact
- Dielectric WithStanding: 1000 V AC.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: -25° C TO +85° C.
- Voltage Rating: 250V AC/DC.
- Suitable for SWH25X Series Terminal.
- Mates with SWR25X Series Wafer.



DIMENSIONS



PART NUMBER CODING

SWH201-NULN-S -UU-WH

Number Of Positions
(Contact Per row)

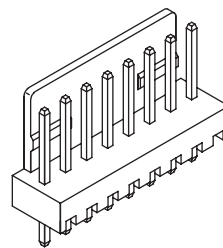
Part Number	Positions/ Contacts	A		B		C	
		mm	inch	mm	inch	mm	inch
SWH25X-NULC-S02-UU-BA	02/02	2.54	0.100	5.79	0.228	3.07	0.121
SWH25X-NULC-S03-UU-BA	03/03	5.08	0.200	8.33	0.328	5.61	0.221
SWH25X-NULC-S04-UU-BA	04/04	7.62	0.300	10.87	0.428	8.15	0.321
SWH25X-NULC-S05-UU-BA	05/05	10.16	0.400	13.41	0.528	10.69	0.421
SWH25X-NULC-S06-UU-BA	06/06	12.70	0.500	15.95	0.628	13.23	0.521
SWH25X-NULC-S07-UU-BA	07/07	15.24	0.600	18.49	0.728	15.77	0.621
SWH25X-NULC-S08-UU-BA	08/08	17.78	0.700	21.03	0.828	18.31	0.721
SWH25X-NULC-S09-UU-BA	09/09	20.32	0.800	23.57	0.928	20.85	0.821
SWH25X-NULC-S10-UU-BA	10/10	22.86	0.900	26.11	1.028	23.39	0.921
SWH25X-NULC-S11-UU-BA	11/11	25.40	1.000	28.65	1.128	25.93	1.021
SWH25X-NULC-S12-UU-BA	12/12	27.94	1.100	31.19	1.228	28.47	1.121
SWH25X-NULC-S13-UU-BA	13/13	30.48	1.200	33.73	1.328	31.01	1.221
SWH25X-NULC-S14-UU-BA	14/14	33.02	1.300	36.27	1.428	33.55	1.321
SWH25X-NULC-S15-UU-BA	15/15	35.56	1.400	38.81	1.528	36.09	1.421
SWH25X-NULC-S16-UU-BA	16/16	38.10	1.500	41.35	1.628	38.63	1.521
SWH25X-NULC-S17-UU-BA	17/17	40.64	1.600	43.89	1.728	41.17	1.621
SWH25X-NULC-S18-UU-BA	18/18	43.18	1.700	46.43	1.828	43.71	1.721
SWH25X-NULC-S19-UU-BA	19/19	45.72	1.800	48.97	1.928	46.25	1.821
SWH25X-NULC-S20-UU-BA	20/20	48.26	1.900	51.51	2.028	48.79	1.921



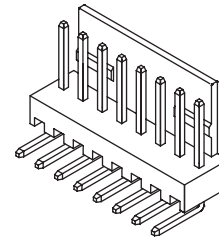
SWR25X Series Single Row Wafer 2.54mm [.100"] CC, Straight/Right Angle

SPECIFICATIONS

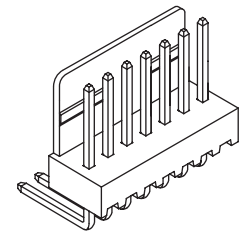
- Insulator Material: Nylon 66, UL 94V-0
- Contact Material: Brass.
- Contact Resistance: 20m OHMs Max.
- Contact Plating: .000020" Min. Nickel Underplate, Pure Tin, Bright Overall.
- Current Rating: 5 AMP per contact
- Dielectric Withstanding: 1000 V AC.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: -25° C TO +85° C.
- Voltage Rating: 250V AC/DC.
- Mates with SWH25X Series Single Row Housing.



(ST) STRAIGHT



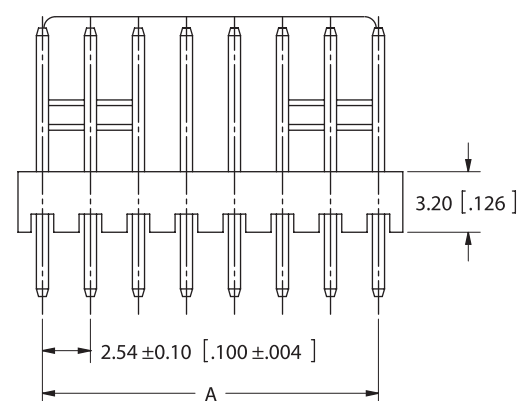
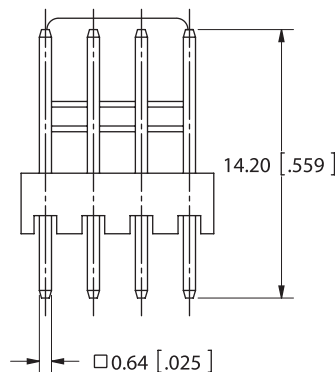
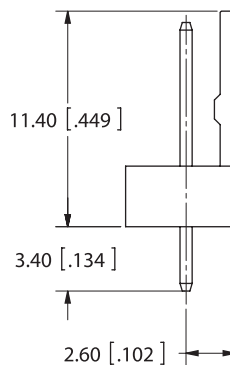
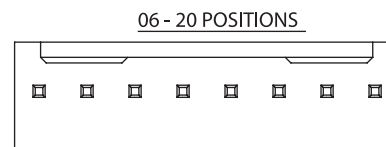
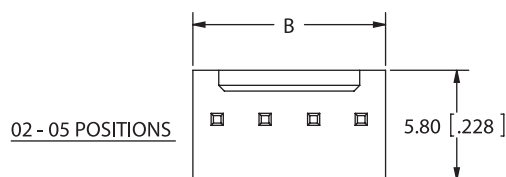
(RA) TYPE 2



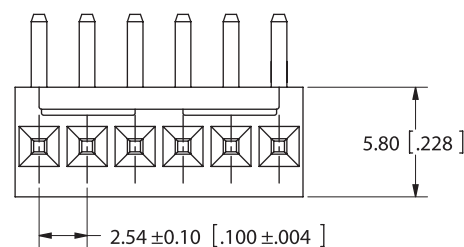
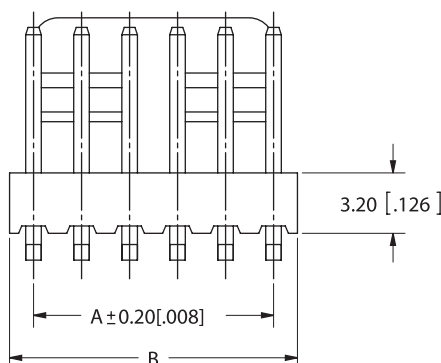
(RB) TYPE 1

DIMENSIONS

SWR25X-NRTC-S__-ST-BA



SWR25X-NRTC-S__-RB-BA





SWR25X Series Single Row Wafer 2.54mm [.100"] CC, Straight/Right Angle

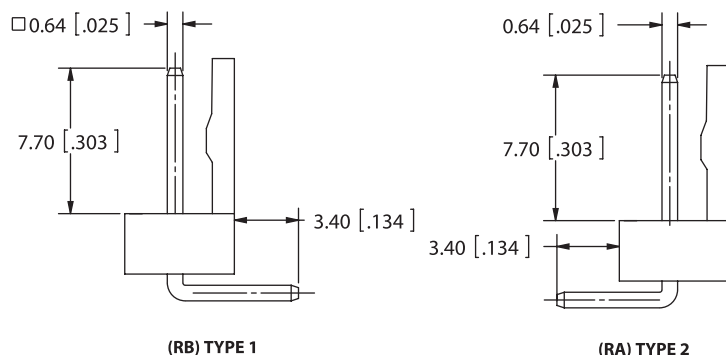
PART NUMBER CODING

SWR25X-NRTC-S - -BA

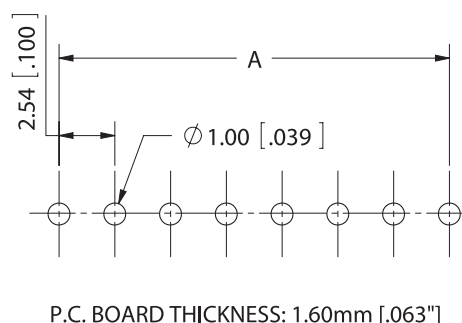
Number Of Positions (Contact Per row) **Termination Type**

ST = Straight
RA = Right Angle (Type 2)
RB = Right Angle (Type 1)

DIMENSIONS



RECOMMENDED PCB LAYOUT



Part Number	Positions/ Contacts	A		B		B			
						TYPE2 (RA)		TYPE1 (RB)	
		mm	inch	mm	inch	mm	inch	mm	inch
SWR25X-NRTC-S02-__-BA	02/04	2.54	0.100	5.12	0.202	5.12	0.202	5.08	0.200
SWR25X-NRTC-S03-__-BA	03/06	5.08	0.200	7.66	0.302	7.66	0.302	7.62	0.300
SWR25X-NRTC-S04-__-BA	04/08	7.62	0.300	10.20	0.402	10.20	0.402	10.16	0.400
SWR25X-NRTC-S05-__-BA	05/10	10.16	0.400	12.74	0.502	12.74	0.502	12.70	0.500
SWR25X-NRTC-S06-__-BA	06/12	12.70	0.500	15.30	0.602	15.30	0.602	15.24	0.600
SWR25X-NRTC-S07-__-BA	07/14	15.24	0.600	17.94	0.706	17.94	0.706	17.78	0.700
SWR25X-NRTC-S08-__-BA	08/16	17.78	0.700	20.48	0.806	20.48	0.806	20.32	0.800
SWR25X-NRTC-S09-__-BA	09/18	20.32	0.800	23.02	0.906	23.02	0.906	22.86	0.900
SWR25X-NRTC-S10-__-BA	10/20	22.86	0.900	25.58	1.007	25.58	1.007	25.40	1.000
SWR25X-NRTC-S11-__-BA	11/22	25.40	1.000	28.12	1.107	28.12	1.107	27.94	1.100
SWR25X-NRTC-S12-__-BA	12/24	27.94	1.100	30.68	1.208	30.68	1.208	30.48	1.200
SWR25X-NRTC-S13-__-BA	13/26	30.48	1.200	33.10	1.303	33.10	1.303	33.02	1.300
SWR25X-NRTC-S14-__-BA	14/28	33.02	1.300	35.80	1.409	35.80	1.409	35.56	1.400
SWR25X-NRTC-S15-__-BA	15/30	35.56	1.400	38.34	1.509	38.34	1.509	38.10	1.500
SWR25X-NRTC-S16-__-BA	16/32	38.10	1.500	40.94	1.612	40.94	1.612	40.64	1.600
SWR25X-NRTC-S17-__-BA	17/34	40.64	1.600	43.30	1.705	43.30	1.705	43.18	1.700
SWR25X-NRTC-S18-__-BA	18/36	43.18	1.700	45.90	1.807	45.90	1.807	45.72	1.800
SWR25X-NRTC-S19-__-BA	19/38	45.72	1.800	48.56	1.912			48.26	1.900
SWR25X-NRTC-S20-__-BA	20/40	48.26	1.900	50.80	2.000	50.80	2.000	50.80	2.000

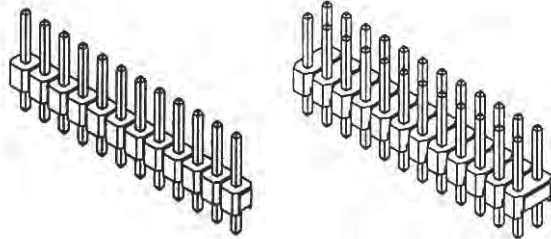


Sullins Headers

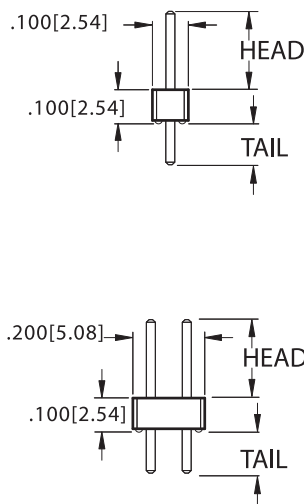
2.54 mm [.100"] Contact Centers, Male Breakaway Header Dip Solder

SPECIFICATIONS

- 3 amp current rating per contact
- UL Flammability Rating: 94V-0
- Insulator: PBT, Nylon 6T, Nylon 9T
- Contact Material: Brass



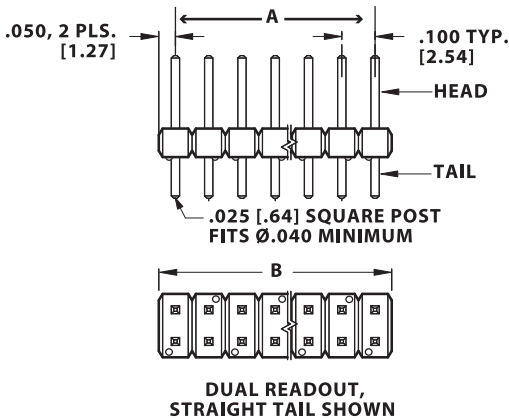
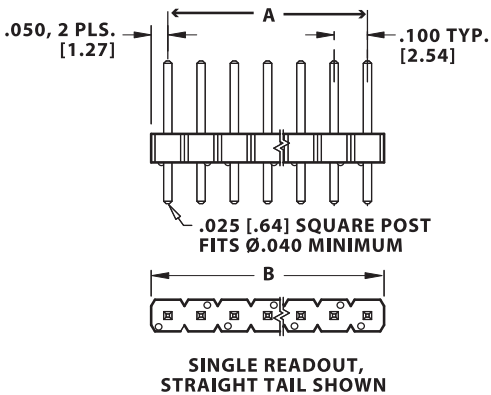
TERMINATION TYPES STRAIGHT TERMINATIONS



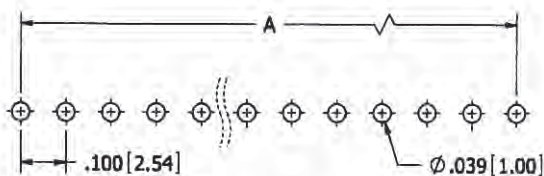
P/N CODE	HEAD DIMENSION	TAIL DIMENSION
AA	.230[5.84]	.120[3.05]
AB	.230[5.84]	.230[5.84]
AC	.230[5.84]	.320[8.13]
AD	.230[5.84]	.420[10.67]
AE	.230[5.84]	.520[13.21]
AF	.230[5.84]	.620[15.75]
AG	.230[5.84]	.720[18.29]
AH	.230[5.84]	.820[20.83]
AI	.230[5.84]	.900[22.86]
AJ	.230[5.84]	1.000[25.40]
AK	.230[5.84]	.035[0.89]
FA	.318[8.08]	.120[3.05]
FB	.318[8.08]	.220[5.59]
FC	.318[8.08]	.320[8.13]
FD	.318[8.08]	.420[10.67]
FE	.318[8.08]	.520[13.21]
FF	.318[8.08]	.620[15.75]
FG	.318[8.08]	.710[18.29]
FH	.318[8.08]	.810[20.83]
FI	.318[8.08]	.910[23.37]
FJ	.318[8.08]	.050[1.27]
ZA	.120[3.05]	.120[3.05]
ZB	.120[3.05]	.095[2.41]
ZC	.120[3.05]	.260[6.60]
ZD	.120[3.05]	.610[15.49]
ZI	.520[13.21]	.110[2.79]
ZJ	.720[18.29]	.110[2.79]
ZO	.820[20.83]	.110[2.79]
ZQ	1.020[25.91]	.110[2.79]
ZR	1.220[30.99]	.110[2.79]

DIMENSIONS

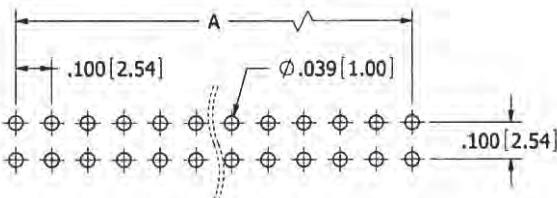
Dimensions in [] are in millimeters, all others are in inches.



RECOMMENDED PCB LAYOUT



SINGLE READOUT, STRAIGHT TAIL SHOWN



DUAL READOUT, STRAIGHT TAIL SHOWN

**2.54 mm [.100"] Contact Centers, Male Breakaway Header
Dip Solder**



PART NUMBER OPTIONS

INSULATOR/CONTACT MATERIAL	PR	B	C	002	S	AA	N - RC	
PR = PBT/BRASS Operating Temperature: -40°C to + 105°C Processing Temperature: 245° ± 5° C for 3~5 sec. Max.								TERMINATION TYPE AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, ZA, ZB, ZC, ZD, ZI, ZJ, ZO, ZQ, ZR
NR = NYLON 6T/BRASS Operating Temperature: -40°C to + 105°C Processing Temperature: 230° for 60 sec. Max. (260° for 10 sec. Max.)								READOUT S = Single D = Dual
GR = NYLON 9T/BRASS Operating Temperature: -40°C to + 105°C Processing Temperature: 230° for 60 sec. Max. (260° for 10 sec. Max.)								NUMBER OF POSITIONS Contact Per Row, 002 Thru 040
CONTACT FINISH - RoHS Compliant All platings are Lead Free and have .000050" Nickel underplate								CONTACT CENTERS .100" [2.54mm]
Contact Surface								
Termination								
B = .00010" Gold								.000100" Pure Tin, Matte
C = .000030" Gold								.000100" Pure Tin, Matte
E = .000100" Pure Tin, Matte								.000100" Pure Tin, Matte
P = Gold Flash								Gold Flash

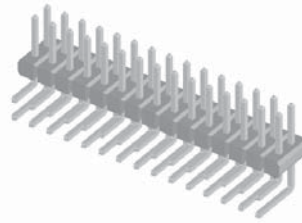
PART NUMBER	A		B		PART NUMBER	A		B	
	Inches	[MM]	Inches	[MM]		Inches	[MM]	Inches	[MM]
_R_C002S__N-RC	0.100	2.54	0.200	5.08	_R_C002D__N-RC	0.100	2.54	0.200	5.08
_R_C003S__N-RC	0.200	5.08	0.300	5.08	_R_C003D__N-RC	0.200	5.08	0.300	5.08
_R_C004S__N-RC	0.300	7.62	0.400	10.16	_R_C004D__N-RC	0.300	7.62	0.400	10.16
_R_C005S__N-RC	0.400	10.16	0.500	12.70	_R_C005D__N-RC	0.400	10.16	0.500	12.70
_R_C006S__N-RC	0.500	12.70	0.600	15.24	_R_C006D__N-RC	0.500	12.70	0.600	15.24
_R_C007S__N-RC	0.600	15.24	0.700	17.78	_R_C007D__N-RC	0.600	15.24	0.700	17.78
_R_C008S__N-RC	0.700	17.78	0.800	20.32	_R_C008D__N-RC	0.700	17.78	0.800	20.32
_R_C009S__N-RC	0.800	20.32	0.900	22.86	_R_C009D__N-RC	0.800	20.32	0.900	22.86
_R_C010S__N-RC	0.900	22.86	1.000	25.40	_R_C010D__N-RC	0.900	22.86	1.000	25.40
_R_C011S__N-RC	1.000	25.40	1.100	27.94	_R_C011D__N-RC	1.000	25.40	1.100	27.94
_R_C012S__N-RC	1.100	27.94	1.200	30.48	_R_C012D__N-RC	1.100	27.94	1.200	30.48
_R_C013S__N-RC	1.200	30.48	1.300	33.02	_R_C013D__N-RC	1.200	30.48	1.300	33.02
_R_C014S__N-RC	1.300	33.02	1.400	35.56	_R_C014D__N-RC	1.300	33.02	1.400	35.56
_R_C015S__N-RC	1.400	35.56	1.500	38.10	_R_C015D__N-RC	1.400	35.56	1.500	38.10
_R_C016S__N-RC	1.500	38.10	1.600	40.64	_R_C016D__N-RC	1.500	38.10	1.600	40.64
_R_C017S__N-RC	1.600	40.64	1.700	43.18	_R_C017D__N-RC	1.600	40.64	1.700	43.18
_R_C018S__N-RC	1.700	43.18	1.800	45.72	_R_C018D__N-RC	1.700	43.18	1.800	45.72
_R_C019S__N-RC	1.800	45.72	1.900	48.26	_R_C019D__N-RC	1.800	45.72	1.900	48.26
_R_C020S__N-RC	1.900	48.26	2.000	50.80	_R_C020D__N-RC	1.900	48.26	2.000	50.80
_R_C021S__N-RC	2.000	50.80	2.100	53.34	_R_C021D__N-RC	2.000	50.80	2.100	53.34
_R_C022S__N-RC	2.100	53.34	2.200	55.88	_R_C022D__N-RC	2.100	53.34	2.200	55.88
_R_C023S__N-RC	2.200	55.88	2.300	58.42	_R_C023D__N-RC	2.200	55.88	2.300	58.42
_R_C024S__N-RC	2.300	58.42	2.400	60.96	_R_C024D__N-RC	2.300	58.42	2.400	60.96
_R_C025S__N-RC	2.400	60.96	2.500	63.50	_R_C025D__N-RC	2.400	60.96	2.500	63.50
_R_C026S__N-RC	2.500	63.50	2.600	66.04	_R_C026D__N-RC	2.500	63.50	2.600	66.04
_R_C027S__N-RC	2.600	66.04	2.700	68.58	_R_C027D__N-RC	2.600	66.04	2.700	68.58
_R_C028S__N-RC	2.700	68.58	2.800	71.12	_R_C028D__N-RC	2.700	68.58	2.800	71.12
_R_C029S__N-RC	2.800	71.12	2.900	73.66	_R_C029D__N-RC	2.800	71.12	2.900	73.66
_R_C030S__N-RC	2.900	73.66	3.000	76.20	_R_C030D__N-RC	2.900	73.66	3.000	76.20
_R_C031S__N-RC	3.000	76.20	3.100	78.74	_R_C031D__N-RC	3.000	76.20	3.100	78.74
_R_C032S__N-RC	3.100	78.74	3.200	81.28	_R_C032D__N-RC	3.100	78.74	3.200	81.28
_R_C033S__N-RC	3.200	81.28	3.300	83.82	_R_C033D__N-RC	3.200	81.28	3.300	83.82
_R_C034S__N-RC	3.300	83.82	3.400	86.36	_R_C034D__N-RC	3.300	83.82	3.400	86.36
_R_C035S__N-RC	3.400	86.36	3.500	88.90	_R_C035D__N-RC	3.400	86.36	3.500	88.90
_R_C036S__N-RC	3.500	88.90	3.600	91.44	_R_C036D__N-RC	3.500	88.90	3.600	91.44
_R_C037S__N-RC	3.600	91.44	3.700	93.98	_R_C037D__N-RC	3.600	91.44	3.700	93.98
_R_C038S__N-RC	3.700	93.98	3.800	96.52	_R_C038D__N-RC	3.700	93.98	3.800	96.52
_R_C039S__N-RC	3.800	96.52	3.900	99.06	_R_C039D__N-RC	3.800	96.52	3.900	99.06
_R_C040S__N-RC	3.900	99.06	4.000	101.60	_R_C040D__N-RC	3.900	99.06	4.000	101.60



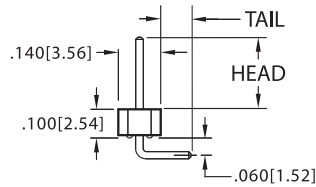
**2.54 mm [.100"] Contact Centers, Male Breakaway Header
Right Angle/SMT**

SPECIFICATIONS

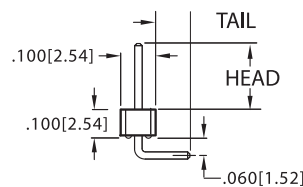
- 3 amp current rating per contact
- UL Flammability Rating: 94V-0
- Insulator: PBT, Nylon 6T, Nylon 9T
- Contact Material: Brass



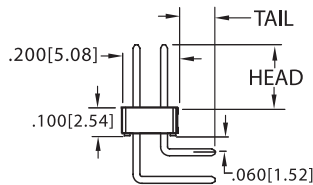
RIGHT ANGLE BEND TERMINATIONS



**RIGHT ANGLE
(Standard)**



**RIGHT ANGLE SINGLE (Narrow)
-M71 Modification Code**

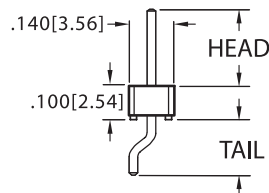


**RIGHT ANGLE DUAL (Narrow)
-M71 Modification Code**

P/N CODE	HEAD DIMENSION	TAIL DIMENSION	-M71 TAIL DIMENSION
BA	.230[5.84]	.100[2.54]	.120[3.05]
BB	.230[5.84]	.200[5.08]	.220[5.59]
BC	.230[5.84]	.300[7.62]	.320[8.13]
BD	.230[5.84]	.400[10.16]	.420[10.67]
BE	.230[5.84]	.500[12.17]	.520[13.21]
BF	.230[5.84]	.600[15.24]	.620[15.75]
BG	.230[5.84]	.700[17.78]	.720[18.29]
BH	.230[5.84]	.800[20.32]	.820[20.83]
BI	.230[5.84]	.900[22.86]	.920[23.37]
BJ	.230[5.84]	1.000[25.40]	1.020[25.91]
GA	.318[8.08]	.100[2.54]	.120[3.05]
GB	.318[8.08]	.200[5.08]	.220[5.59]
GC	.318[8.08]	.300[7.62]	.320[8.13]
GD	.318[8.08]	.400[10.16]	.420[10.67]
GE	.318[8.08]	.600[15.24]	.620[15.75]
GF	.318[8.08]	.800[20.32]	.820[20.83]
DA	.120[3.05]	.120[3.05]	.140[3.56]

SMT TERMINATIONS

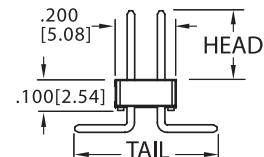
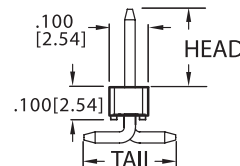
Single Row with -M89 Modification Code



P/N CODE	HEAD DIMENSION	TAIL DIMENSION
BS	.230[5.84]	.180[4.57]
GS	.318[8.08]	.180[4.57]
ZC	.120[3.05]	.180[4.57]
ZU	.420[10.67]	.180[4.57]

SMT TERMINATIONS

Single or Dual Row with -M30 Modification Code



P/N CODE	HEAD DIMENSION	SINGLE ROW TAIL DIMENSION	DUAL ROW TAIL DIMENSION
AB	.230[5.84]	.320[8.13]	.420[10.67]
FB	.318[8.08]	.300[7.62]	.400[10.16]
ZS	.120[3.05]	.200[5.08]	.300[7.62]
ZT	.420[10.67]	.200[5.08]	.300[7.62]

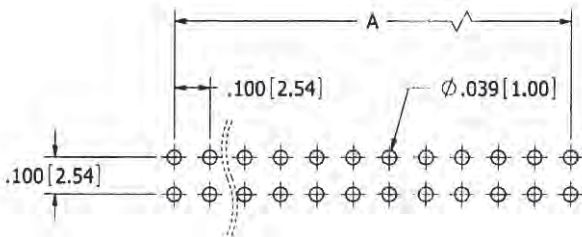
**2.54 mm [.100"] Contact Centers, Male Breakaway Header
Right Angle/SMT**



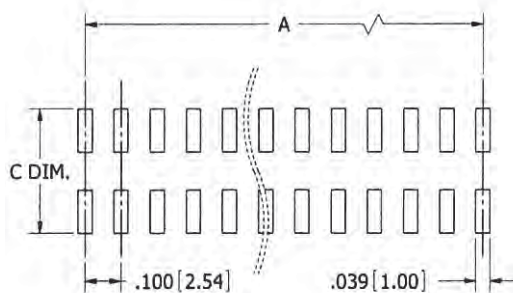
PART NUMBER OPTIONS

INSULATOR/CONTACT MATERIAL		PR	B	C	002	S	AA	N - Mxx	RC	MODIFICATION CODE (Consult Factory)	
PR = PBT/BRASS										OMIT FOR STANDARD	
Operating Temperature: -40°C to + 105°C										-M30 = SMT ('G' Material Only), Vertical	
Processing Temperature: 245° ± 5° C for 3~5 sec. Max.										-M89 = SMT ('G' Material Only), Horizontal	
NR = NYLON 6T/BRASS										-M71 = Narrow Body (Right Angle Only)	
Operating Temperature: -40°C to + 105°C										MOUNTING STYLE	
Processing Temperature: 230° for 60 sec. Max.										N = No Mounting	
(260° for 10 sec. Max.)										TERMINATION TYPE	
GR = NYLON 9T/BRASS										Right Angle = BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ	
Operating Temperature: -40°C to + 105°C										GA, GB, GC, GD, GE, GF, DA (<i>Single Row Only</i>)	
Processing Temperature: 230° for 60 sec. Max.										Right Angle with -M71 Modification Code	
(260° for 10 sec. Max.)										= BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, GA, GB, GE, GF	
CONTACT FINISH - RoHS Compliant										SMT with -M89 Modification Code	
All platings are Lead Free and have .000050" Nickel underplate										= BS, GS, ZC, ZU (<i>Single Row Only</i>)	
Contact Surface										SMT with -M30 Modification Code	
Termination										= AB, FB, ZS, ZT	
B = .000010" Gold	.000100" Pure Tin, Matte									READOUT	
C = .000030" Gold	.000100" Pure Tin, Matte									S = Single	
E = .000100" Pure Tin, Matte	.000100" Pure Tin, Matte									D = Dual	
P = Gold Flash	Gold Flash									NUMBER OF POSITIONS	
CONTACT CENTERS										Contact Per Row, 002 Thru 040	
.100" [2.54mm]											

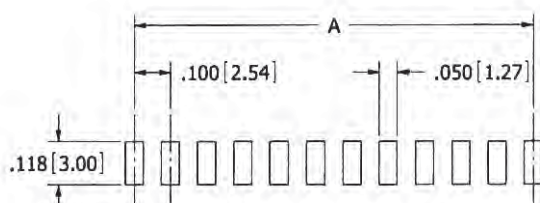
RECOMMENDED PCB LAYOUT



RIGHT ANGLE DUAL (Narrow)
-M71 Modification Code



Single or Dual Row with -M30 Modification Code



Single Row with -M89 Modification Code

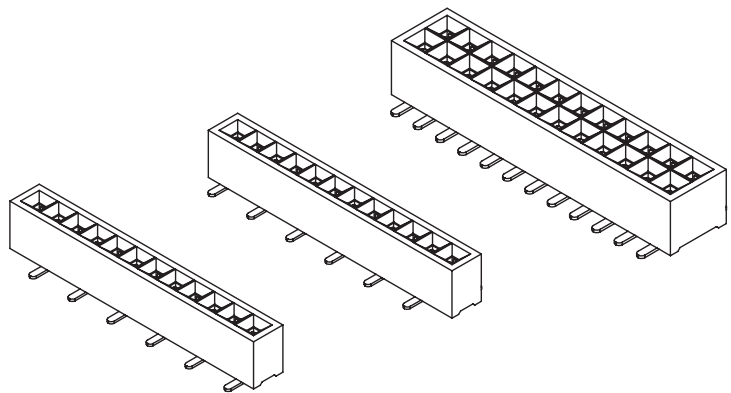
PART NUMBER	A		B	
	Inches	[MM]	Inches	[MM]
_R_C002__N__RC	0.100	2.54	0.200	5.08
_R_C003__N__RC	0.200	5.08	0.300	5.08
_R_C004__N__RC	0.300	7.62	0.400	10.16
_R_C005__N__RC	0.400	10.16	0.500	12.70
_R_C006__N__RC	0.500	12.70	0.600	15.24
_R_C007__N__RC	0.600	15.24	0.700	17.78
_R_C008__N__RC	0.700	17.78	0.800	20.32
_R_C009__N__RC	0.800	20.32	0.900	22.86
_R_C010__N__RC	0.900	22.86	1.000	25.40
_R_C011__N__RC	1.000	25.40	1.100	27.94
_R_C012__N__RC	1.100	27.94	1.200	30.48
_R_C013__N__RC	1.200	30.48	1.300	33.02
_R_C014__N__RC	1.300	33.02	1.400	35.56
_R_C015__N__RC	1.400	35.56	1.500	38.10
_R_C016__N__RC	1.500	38.10	1.600	40.64
_R_C017__N__RC	1.600	40.64	1.700	43.18
_R_C018__N__RC	1.700	43.18	1.800	45.72
_R_C019__N__RC	1.800	45.72	1.900	48.26
_R_C020__N__RC	1.900	48.26	2.000	50.80
_R_C021__N__RC	2.000	50.80	2.100	53.34
_R_C022__N__RC	2.100	53.34	2.200	55.88
_R_C023__N__RC	2.200	55.88	2.300	58.42
_R_C024__N__RC	2.300	58.42	2.400	60.96
_R_C025__N__RC	2.400	60.96	2.500	63.50
_R_C026__N__RC	2.500	63.50	2.600	66.04
_R_C027__N__RC	2.600	66.04	2.700	68.58
_R_C028__N__RC	2.700	68.58	2.800	71.12
_R_C029__N__RC	2.800	71.12	2.900	73.66
_R_C030__N__RC	2.900	73.66	3.000	76.20
_R_C031__N__RC	3.000	76.20	3.100	78.74
_R_C032__N__RC	3.100	78.74	3.200	81.28
_R_C033__N__RC	3.200	81.28	3.300	83.82
_R_C034__N__RC	3.300	83.82	3.400	86.36
_R_C035__N__RC	3.400	86.36	3.500	88.90
_R_C036__N__RC	3.500	88.90	3.600	91.44
_R_C037__N__RC	3.600	91.44	3.700	93.98
_R_C038__N__RC	3.700	93.98	3.800	96.52
_R_C039__N__RC	3.800	96.52	3.900	99.06
_R_C040__N__RC	3.900	99.06	4.000	101.60



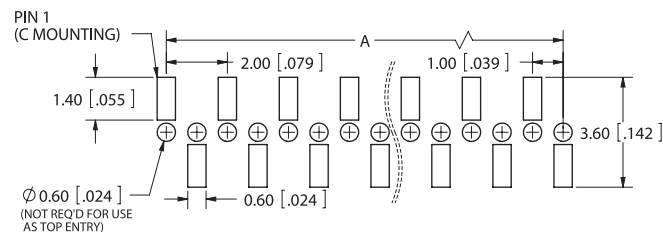
1.00mm [.039"] Contact Centers, Top/Bottom Entry SMT Female Headers

SPECIFICATIONS

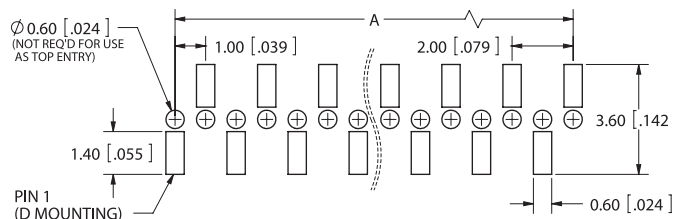
- Insulator Material: L.C.P, UL 94V-0
- Contact Resistance: 20m OHMs Max.
- Current Rating: 1 AMP per contact
- Dielectric Withstanding Voltage: AC 300 V.
- Insulation Resistance: 1000 Mega OHMS
- Operating Temperature: - 40° C to + 125° C
- Processing Temperature: 260° C for 10 seconds Max.



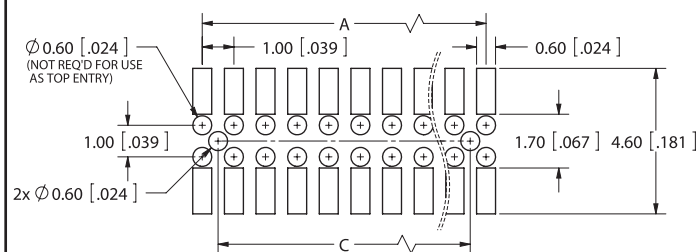
RECOMMENDED PCB LAYOUT



SFM210-LP_E-S_-SC-BK

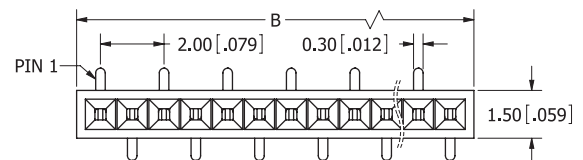


SFM210-LP_E-S_-SD-BK

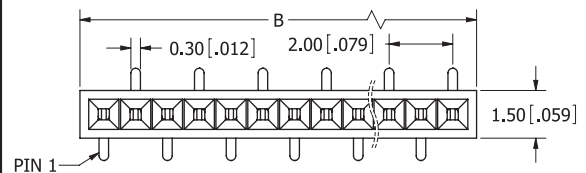


SFM210-LP_E-D_-SD-BK

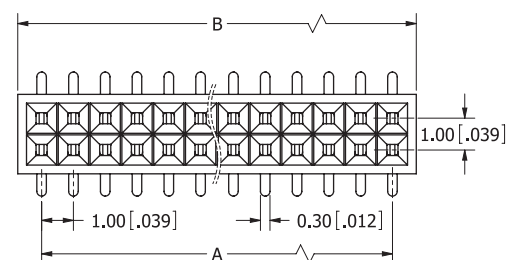
DIMENSIONS



SFM210-LP_E-S_-SC-BK
(STANDARD)



SFM210-LP_E-S_-SD-BK
(OPPOSITE BEND, APPLICABLE ON EVEN PIN COUNTS)



SFM210-LP_E-D_-SD-BK



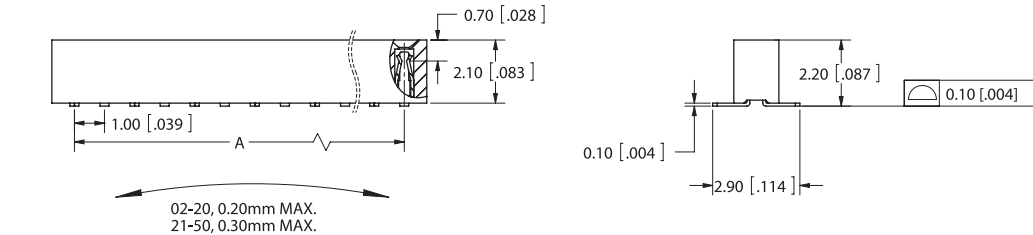
1.00mm [.039"] Contact Centers, Top/Bottom Entry SMT Female Headers

PART NUMBER OPTIONS

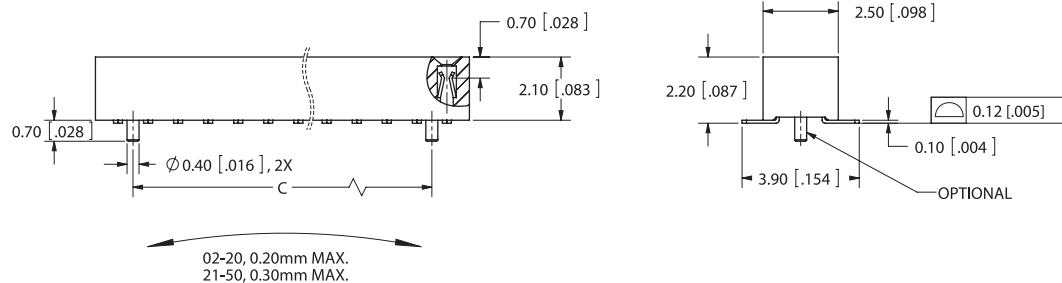
SERIES	SFM210- L P E - D - S - BK	COLOR
SFM210 = Female Header		BK = Black
W/2.10mm Insulator Height		
HOUSING MATERIAL		MOUNTING STYLES
L = L.C.P.		C = Surface Mount, Single Row Pin1 (Standard)
CONTACT MATERIAL		D = Surface Mount, Single Row Pin1 (Opposite Bend)
P = Phosphor Bronze		M = Surface Mount W/O Guide Posts
PLATING		P = Surface Mount W/ Guide Posts
P = Gold Flash Overall		NUMBER OF POSITIONS
S = 10u" Gold overall		(Contact Per Row, 02 Thru 50)
CONTACT CENTERS		READOUT
E = 1.00mm		S = Single
		D = Dual

DIMENSIONS Dimensions in [] are in inches , all others are in millimeters.

Single Row



Dual Row



No. of Contacts Single/Dual	A		B		C	
	mm	inch	mm	inch	mm	inch
02/04*	1.00	0.039	2.50	0.098	N/A	N/A
03/06	2.00	0.079	3.50	0.138	1.00	0.039
04/08	3.00	0.118	4.50	0.177	2.00	0.079
05/10	4.00	0.157	5.50	0.217	3.00	0.118
06/12	5.00	0.197	6.50	0.256	4.00	0.157
07/14	6.00	0.236	7.50	0.295	5.00	0.197
08/16	7.00	0.276	8.50	0.335	6.00	0.236
09/18	8.00	0.315	9.50	0.374	7.00	0.276
10/20	9.00	0.354	10.50	0.413	8.00	0.315
11/22	10.00	0.394	11.50	0.453	9.00	0.354
12/24	11.00	0.433	12.50	0.492	10.00	0.394
13/26	12.00	0.472	13.50	0.531	11.00	0.433
14/28	13.00	0.512	14.50	0.571	12.00	0.472
15/30	14.00	0.551	15.50	0.610	13.00	0.512
16/32	15.00	0.591	16.50	0.650	14.00	0.551
17/34	16.00	0.630	17.50	0.689	15.00	0.591
18/36	17.00	0.669	18.50	0.728	16.00	0.630
19/38	18.00	0.709	19.50	0.768	17.00	0.669
20/40	19.00	0.748	20.50	0.807	18.00	0.709
21/42	20.00	0.787	21.50	0.846	19.00	0.748
22/44	21.00	0.827	22.50	0.886	20.00	0.787
23/46	22.00	0.866	23.50	0.925	21.00	0.827
24/48	23.00	0.906	24.50	0.965	22.00	0.866
25/50	24.00	0.945	25.50	1.004	23.00	0.906

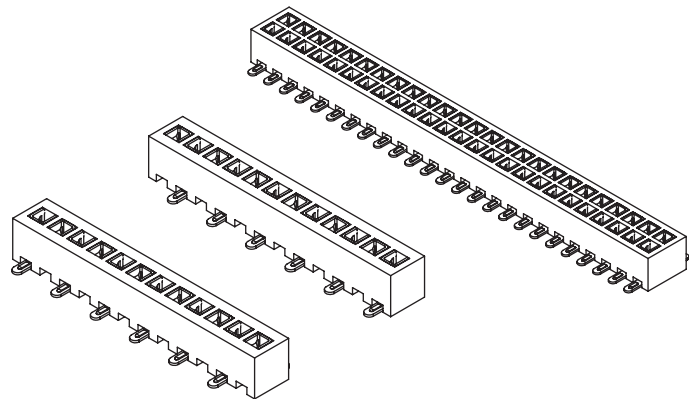
No. of Contacts Single/Dual	A		B		C	
	mm	inch	mm	inch	mm	inch
26/52	25.00	0.984	26.50	1.043	24.00	0.945
27/54	26.00	1.024	27.50	1.083	25.00	0.984
28/56	27.00	1.063	28.50	1.122	26.00	1.024
29/58	28.00	1.102	29.50	1.161	27.00	1.063
30/60	29.00	1.142	30.50	1.201	28.00	1.102
31/62	30.00	1.181	31.50	1.240	29.00	1.142
32/64	31.00	1.220	32.50	1.280	30.00	1.181
33/66	32.00	1.260	33.50	1.319	31.00	1.220
34/68	33.00	1.299	34.50	1.358	32.00	1.260
35/70	34.00	1.339	35.50	1.398	33.00	1.299
36/72	35.00	1.378	36.50	1.437	34.00	1.339
37/74	36.00	1.417	37.50	1.476	35.00	1.378
38/76	37.00	1.457	38.50	1.516	36.00	1.417
39/78	38.00	1.496	39.50	1.555	37.00	1.457
40/80	39.00	1.535	40.50	1.594	38.00	1.496
41/82	40.00	1.575	41.50	1.634	39.00	1.535
42/84	41.00	1.614	42.50	1.673	40.00	1.575
43/86	42.00	1.654	43.50	1.713	41.00	1.614
44/88	43.00	1.693	44.50	1.752	42.00	1.654
45/90	44.00	1.732	45.50	1.791	43.00	1.693
46/92	45.00	1.772	46.50	1.831	44.00	1.732
47/94	46.00	1.811	47.50	1.870	45.00	1.772
48/96	47.00	1.850	48.50	1.909	46.00	1.811
49/98	48.00	1.890	49.50	1.949	47.00	1.850
50/100	49.00	1.929	50.50	1.988	48.00	1.890



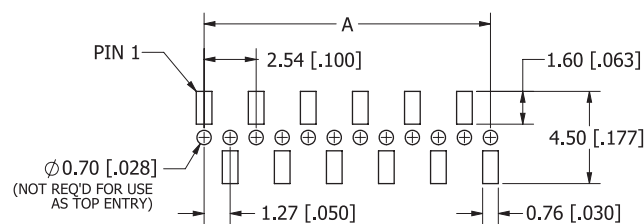
1.27mm [.050"] Contact Centers, Top/Bottom Entry SMT Female Headers

SPECIFICATIONS

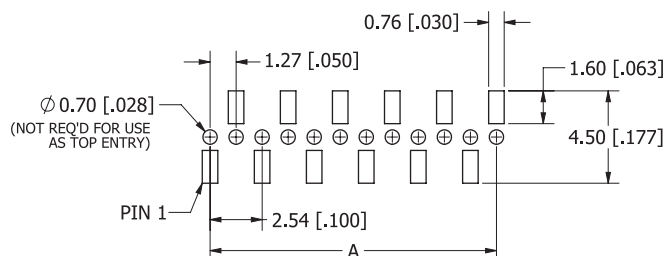
- Insulator Material: Nylon 6T, UL 94V-0
- Contact Resistance: 20m OHMs Max.
- Current Rating: 1 AMP per contact
- Dielectric Withstanding: 500 V AC.
- Insulation Resistance: 5000 Mega OHMS
- Operating Temperature: - 40° C to + 105° C
- Processing Temperature: 230° C for 60 seconds Max.



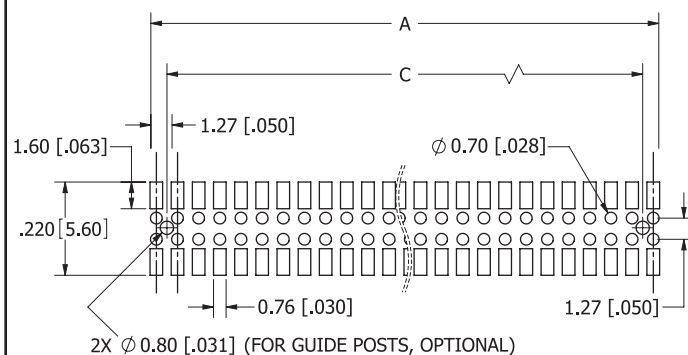
RECOMMENDED PCB LAYOUT



SFM230-NPPB-S_-SC-BK

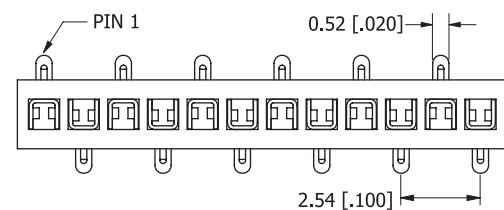


SFM230-NPPB-S_-SD-BK

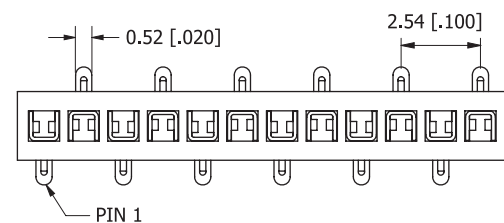


SFM230-NPPB-D_-S_-BK

DIMENSIONS

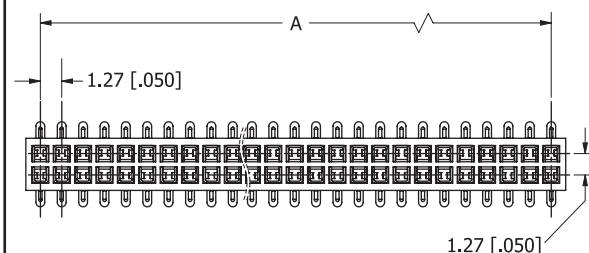


SFM230-NPPB-S_-SC-BK
(STANDARD)



SFM230-NPPB-S_-SD-BK

(OPPOSITE BEND, APPLICABLE ON EVEN PIN COUNTS)



SFM230-NPPB-D_-S_-BK

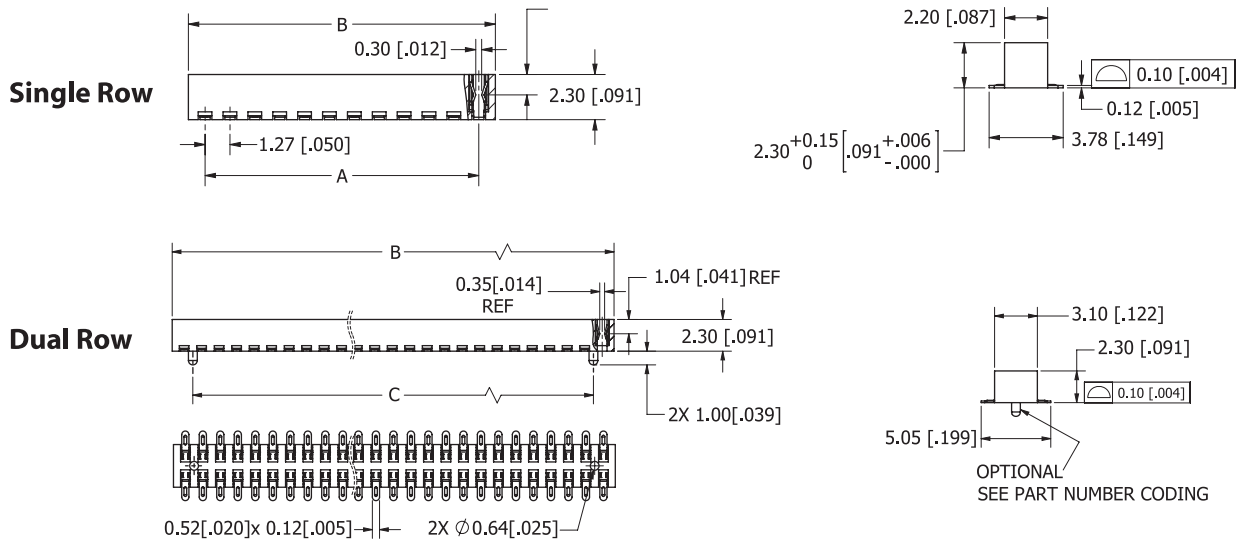


1.27mm [.050"] Contact Centers, Top/Bottom Entry SMT Female Headers

PART NUMBER OPTIONS

SERIES	SFM230-N P P B-D -S -BK	COLOR
SFM230 = Female Header W/2.30mm Insulator Height		BK = Black
PLASTIC HOUSING		MOUNTING STYLES
N = Nylon 6T		C = Surface Mount, Single Row Pin1 (Standard)
CONTACT MATERIAL		D = Surface Mount, Single Row Pin1 (Opposite Bend)
P = Phosphor Bronze		M = Surface Mount W/O Guide Posts
PLATING		P = Surface Mount W/ Guide Posts
P = Gold Flash Overall		NUMBER OF POSITIONS
CONTACT CENTERS		(Contact Per Row, 02 Thru 50)
B = 1.27mm [.050"]		READOUT
		S = Single
		D = Dual

DIMENSIONS Dimensions in [] are in inches , all others are in millimeters.

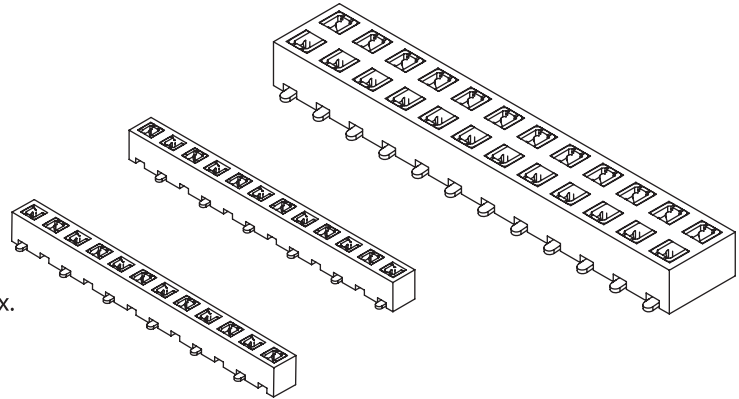


No. of Contacts Single/Dual	A		B		C	
	inch	mm	inch	mm	inch	mm
02/04*	0.050	1.27	0.118	2.99	N/A	N/A
03/06	0.100	2.54	0.168	4.26	0.050	1.27
04/08	0.150	3.81	0.218	5.53	0.100	2.54
05/10	0.200	5.08	0.268	6.80	0.150	3.81
06/12	0.250	6.35	0.318	8.07	0.200	5.08
07/14	0.300	7.62	0.368	9.34	0.250	6.35
08/16	0.350	8.89	0.418	10.61	0.300	7.62
09/18	0.400	10.16	0.468	11.88	0.350	8.89
10/20	0.450	11.43	0.518	13.15	0.400	10.16
11/22	0.500	12.70	0.568	14.42	0.450	11.43
12/24	0.550	13.97	0.618	15.69	0.500	12.70
13/26	0.600	15.24	0.668	16.96	0.550	13.97
14/28	0.650	16.51	0.718	18.23	0.600	15.24
15/30	0.700	17.78	0.768	19.50	0.650	16.51
16/32	0.750	19.05	0.818	20.77	0.700	17.78
17/34	0.800	20.32	0.868	22.04	0.750	19.05
18/36	0.850	21.59	0.918	23.31	0.800	20.32
19/38	0.900	22.86	0.968	24.58	0.850	21.59
20/40	0.950	24.13	1.018	25.85	0.900	22.86
21/42	1.000	25.40	1.068	27.12	0.950	24.13
22/44	1.050	26.67	1.118	28.39	1.000	25.40
23/46	1.100	27.94	1.168	29.66	1.050	26.67
24/48	1.150	29.21	1.218	30.93	1.100	27.94
25/50	1.200	30.48	1.268	32.20	1.150	29.21
26/52	1.250	31.75	1.318	33.47	1.200	30.48
27/54	1.300	33.02	1.368	34.74	1.250	31.75
28/56	1.350	34.29	1.418	36.01	1.300	33.02
29/58	1.400	35.56	1.468	37.28	1.350	34.29
30/60	1.450	36.83	1.518	38.55	1.400	35.56
31/62	1.500	38.10	1.568	39.82	1.450	36.83
32/64	1.550	39.37	1.618	41.09	1.500	38.10
33/66	1.600	40.64	1.668	42.36	1.550	39.37
34/68	1.650	41.91	1.718	43.63	1.600	40.64
35/70	1.700	43.18	1.768	44.90	1.650	41.91
36/72	1.750	44.45	1.818	46.17	1.700	43.18
37/74	1.800	45.72	1.868	47.44	1.750	44.45
38/76	1.850	46.99	1.918	48.71	1.800	45.72
39/78	1.900	48.26	1.968	49.98	1.850	46.99
40/80	1.950	49.53	2.018	51.25	1.900	48.26
41/82	2.000	50.80	2.068	52.52	1.950	49.53
42/84	2.050	52.07	2.118	53.79	2.000	50.80
43/86	2.100	53.34	2.168	55.06	2.050	52.07
44/88	2.150	54.61	2.218	56.33	2.100	53.34
45/90	2.200	55.88	2.268	57.60	2.150	54.61
46/92	2.250	57.15	2.318	58.87	2.200	55.88
47/94	2.300	58.42	2.368	60.14	2.250	57.15
48/96	2.350	59.69	2.418	61.41	2.300	58.42
49/98	2.400	60.96	2.468	62.68	2.350	59.69
50/100	2.450	62.23	2.518	63.95	2.400	60.96

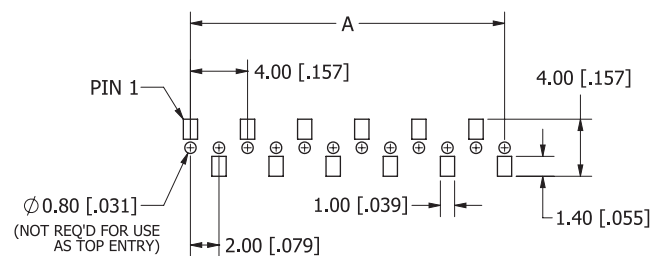


SPECIFICATIONS

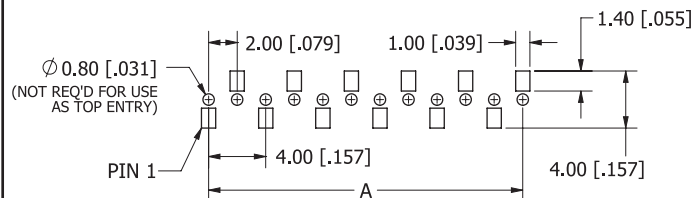
- Insulator Material: Nylon 6T, UL 94V-0
- Contact Resistance: 20m OHMs Max.
- Current Rating: 2 AMP per contact
- Dielectric Withstanding: 500 V AC.
- Insulation Resistance: 5000 Mega OHMS
- Operating Temperature: - 40° C to + 105° C
- Processing Temperature: 230° C for 60 seconds Max.



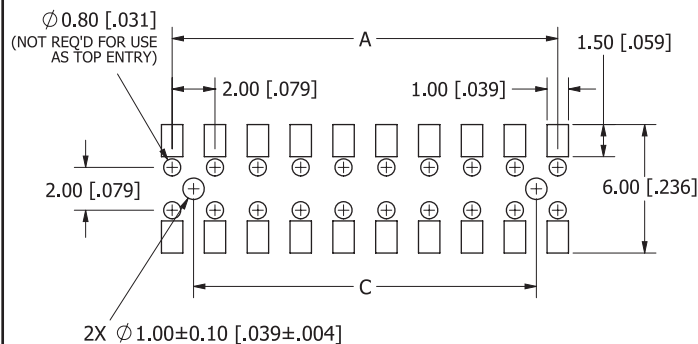
RECOMMENDED PCB LAYOUT



SFM230-NPPN-S__SC-BK

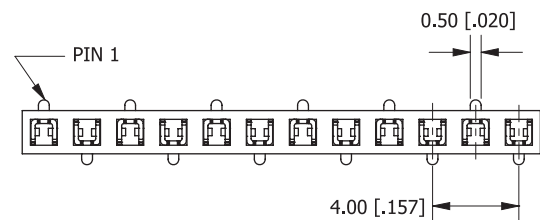


SFM230-NPPN-S__SD-BK

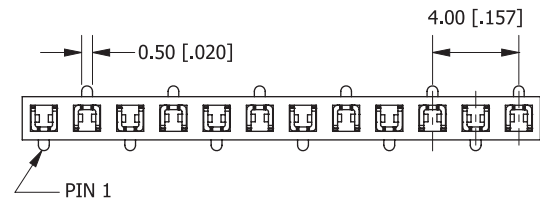


SFM230-NPPN-D__S_-BK

DIMENSIONS

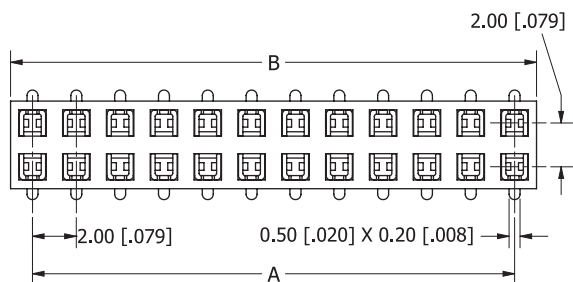


SFM230-NPPN-S__SC-BK
(STANDARD)



SFM230-NPPN-S__SD-BK

(OPPOSITE BEND, APPLICABLE ON EVEN PIN COUNTS)



SFM230-NPPN-D__S_-BK

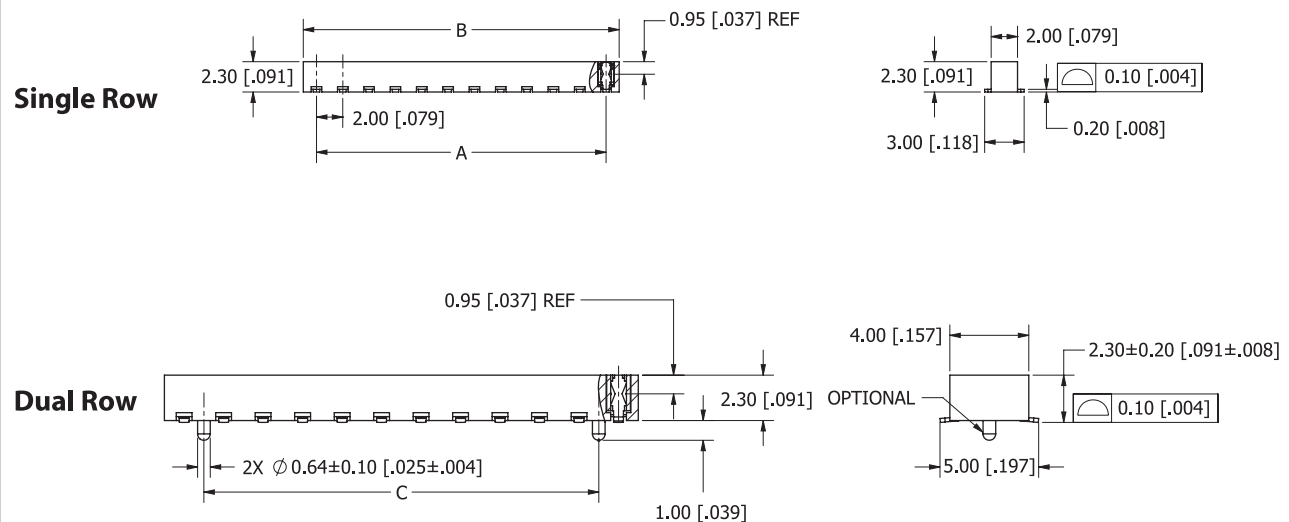


2.00mm [.079"] Contact Centers, Top/Bottom Entry SMT Female Headers

PART NUMBER OPTIONS

SERIES	SFM230-N P P N-D -S -BK	COLOR
SFM230 = Female Header W/2.30mm Insulator Height		BK = Black
PLASTIC HOUSING		MOUNTING STYLES
N = Nylon 6T		C = Surface Mount, Single Row Pin1 (Standard)
CONTACT MATERIAL		D = Surface Mount, Single Row Pin1 (Opposite Bend)
P = Phosphor Bronze		M = Surface Mount W/O Guide Posts
PLATING		P = Surface Mount W/ Guide Posts
P = Gold Flash Overall		NUMBER OF POSITIONS
CONTACT CENTERS		(Contact Per Row, 02 Thru 50)
N = 2.00mm [.079"]		READOUT
		S = Single
		D = Dual

DIMENSIONS Dimensions in [] are in inches , all others are in millimeters.



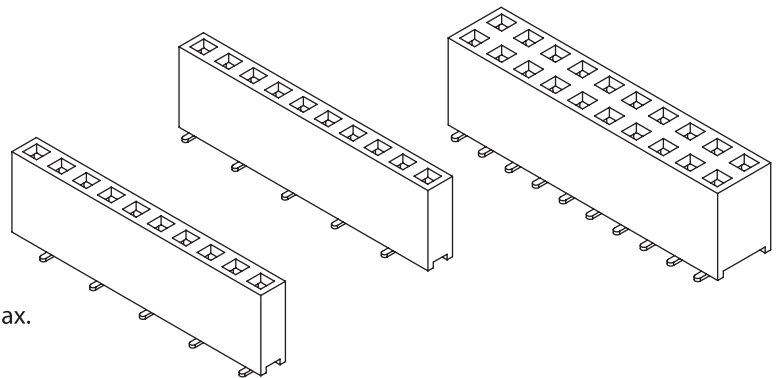
No. of Contacts Single/Dual	A		B		C		No. of Contacts Single/Dual	A		B		C	
	inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	inch	mm
							21/42	1.575	40.00	1.654	42.00	1.496	38.00
02/04*	0.079	2.00	0.157	4.00	N/A	N/A	22/44	1.654	42.00	1.732	44.00	1.575	40.00
03/06	0.157	4.00	0.236	6.00	0.079	2.00	23/46	1.732	44.00	1.811	46.00	1.654	42.00
04/08	0.236	6.00	0.315	8.00	0.157	4.00	24/48	1.811	46.00	1.890	48.00	1.732	44.00
05/10	0.315	8.00	0.394	10.00	0.236	6.00	25/50	1.890	48.00	1.969	50.00	1.811	46.00
06/12	0.394	10.00	0.472	12.00	0.315	8.00	26/52	1.969	50.00	2.047	52.00	1.890	48.00
07/14	0.472	12.00	0.551	14.00	0.394	10.00	27/54	2.047	52.00	2.126	54.00	1.969	50.00
08/16	0.551	14.00	0.630	16.00	0.472	12.00	28/56	2.126	54.00	2.205	56.00	2.047	52.00
09/18	0.630	16.00	0.709	18.00	0.551	14.00	29/58	2.205	56.00	2.283	58.00	2.126	54.00
10/20	0.709	18.00	0.787	20.00	0.630	16.00	30/60	2.283	58.00	2.362	60.00	2.205	56.00
11/22	0.787	20.00	0.866	22.00	0.709	18.00	31/62	2.362	60.00	2.441	62.00	2.283	58.00
12/24	0.866	22.00	0.945	24.00	0.787	20.00	32/64	2.441	62.00	2.520	64.00	2.362	60.00
13/26	0.945	24.00	1.024	26.00	0.866	22.00	33/66	2.520	64.00	2.598	66.00	2.441	62.00
14/28	1.024	26.00	1.102	28.00	0.945	24.00	34/68	2.598	66.00	2.677	68.00	2.520	64.00
15/30	1.102	28.00	1.181	30.00	1.024	26.00	35/70	2.677	68.00	2.756	70.00	2.598	66.00
16/32	1.181	30.00	1.260	32.00	1.102	28.00	36/72	2.756	70.00	2.835	72.00	2.677	68.00
17/34	1.260	32.00	1.339	34.00	1.181	30.00	37/74	2.835	72.00	2.913	74.00	2.756	70.00
18/36	1.339	34.00	1.417	36.00	1.260	32.00	38/76	2.913	74.00	2.992	76.00	2.835	72.00
19/38	1.417	36.00	1.496	38.00	1.339	34.00	39/78	2.992	76.00	3.071	78.00	2.913	74.00
20/40	1.496	38.00	1.575	40.00	1.417	36.00	40/80	3.071	78.00	3.150	80.00	2.992	76.00



2.54mm [.100"] Contact Centers, Top/Bottom Entry SMT Female Headers

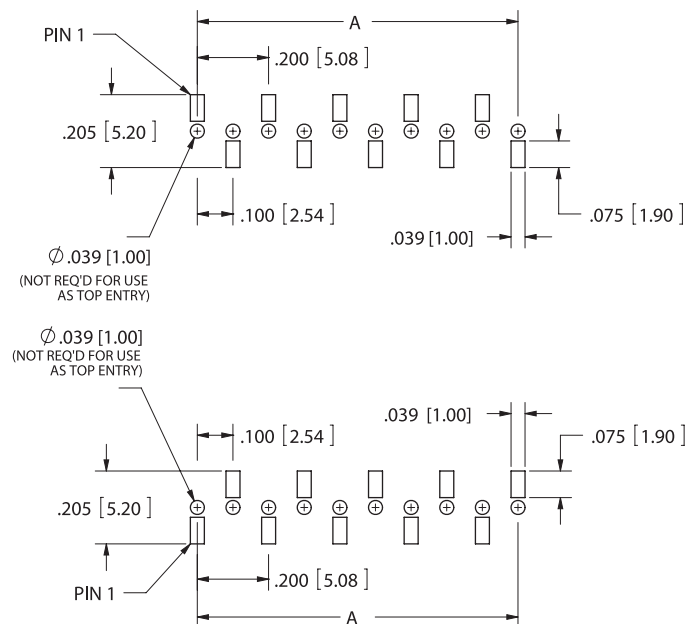
SPECIFICATIONS

- Insulator Material: Nylon 6T, UL 94V-0
- Contact Resistance: 20m OHMs Max.
- Current Rating: 3 AMP per contact
- Dielectric With Standing: 1000 V AC.
- Insulation Resistance: 5000 Mega OHMS
- Operating Temperature: - 40° C to + 105° C
- Processing Temperature: 230° C for 60 seconds Max.

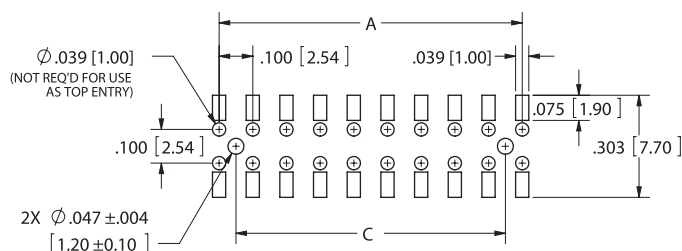


RECOMMENDED PCB LAYOUT

SINGLE ROW

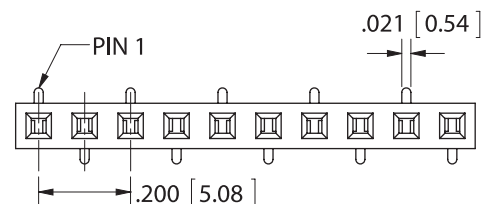


DUAL ROW



DIMENSIONS

SINGLE ROW

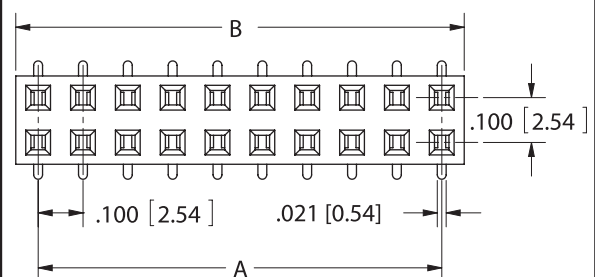


(STANDARD)



(Opposite Bend, Applicable on Even PIN Counts)

DUAL ROW





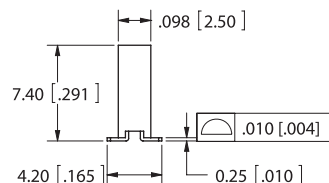
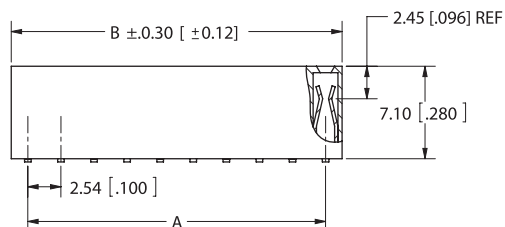
2.54mm [.100"] Contact Centers, Top/Bottom Entry SMT Female Headers

PART NUMBER OPTIONS

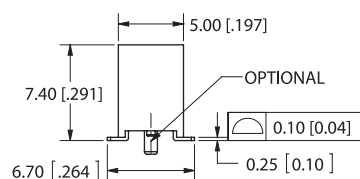
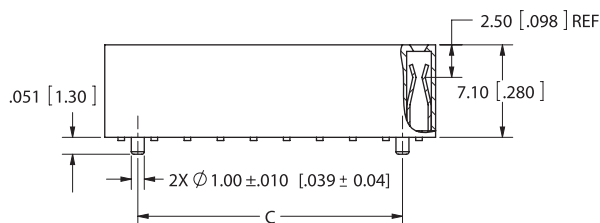
SERIES	SFM710- N P P C -D -S -BK	COLOR
SFM710 = Female Header W/7.10mm Insulator Height		BK = Black
SFM850 = Female Header W/8.50mm Insulator Height		
PLASTIC HOUSING		MOUNTING STYLES
N = Nylon 6T		C = Surface Mount, Single Row Pin1 (Standard)
		D = Surface Mount, Single Row Pin1 (Opposite Bend)
		M = Surface Mount W/O Guide Posts
		P = Surface Mount W/ Guide Posts
CONTACT MATERIAL		NUMBER OF POSITIONS
P = Phosphor Bronze		(Contact Per Row, 02 Thru 40)
PLATING		READOUT
P = Gold Flash Overall		S = Single
		D = Dual
CONTACT CENTERS		
C = 2.54mm [.100"]		

DIMENSIONS Dimensions in [] are in inches , all others are in millimeters.

Single Row



Dual Row



No. of Contacts Single/Dual	A		B		C	
	inch	mm	inch	mm	inch	mm
02/04*	0.100	2.54	0.200	5.08	N/A	N/A
03/06	0.200	5.08	0.300	7.62	0.100	2.54
04/08	0.300	7.62	0.400	10.16	0.200	5.08
05/10	0.400	10.16	0.500	12.70	0.300	7.62
06/12	0.500	12.70	0.600	15.24	0.400	10.16
07/14	0.600	15.24	0.700	17.78	0.500	12.70
08/16	0.700	17.78	0.800	20.32	0.600	15.24
09/18	0.800	20.32	0.900	22.86	0.700	17.78
10/20	0.900	22.86	1.000	25.40	0.800	20.32
11/22	1.000	25.40	1.100	27.94	0.900	22.86
12/24	1.100	27.94	1.200	30.48	1.000	25.40
13/26	1.200	30.48	1.300	33.02	1.100	27.94
14/28	1.300	33.02	1.400	35.56	1.200	30.48
15/30	1.400	35.56	1.500	38.10	1.300	33.02
16/32	1.500	38.10	1.600	40.64	1.400	35.56
17/34	1.600	40.64	1.700	43.18	1.500	38.10
18/36	1.700	43.18	1.800	45.72	1.600	40.64
19/38	1.800	45.72	1.900	48.26	1.700	43.18
20/40	1.900	48.26	2.000	50.80	1.800	45.72

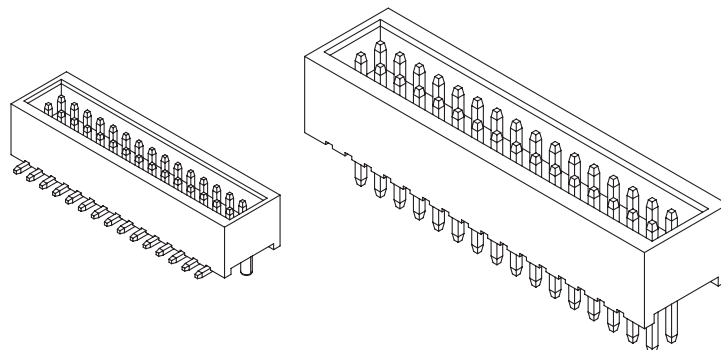
No. of Contacts Single/Dual	A		B		C	
	inch	mm	inch	mm	inch	mm
21/42	2.000	50.80	2.100	53.34	1.900	48.26
22/44	2.100	53.34	2.200	55.88	2.000	50.80
23/46	2.200	55.88	2.300	58.42	2.100	53.34
24/48	2.300	58.42	2.400	60.96	2.200	55.88
25/50	2.400	60.96	2.500	63.50	2.300	58.42
26/52	2.500	63.50	2.600	66.04	2.400	60.96
27/54	2.600	66.04	2.700	68.58	2.500	63.50
28/56	2.700	68.58	2.800	71.12	2.600	66.04
29/58	2.800	71.12	2.900	73.66	2.700	68.58
30/60	2.900	73.66	3.000	76.20	2.800	71.12
31/62	3.000	76.20	3.100	78.74	2.900	73.66
32/64	3.100	78.74	3.200	81.28	3.000	76.20
33/66	3.200	81.28	3.300	83.82	3.100	78.74
34/68	3.300	83.82	3.400	86.36	3.200	81.28
35/70	3.400	86.36	3.500	88.90	3.300	83.82
36/72	3.500	88.90	3.600	91.44	3.400	86.36
37/74	3.600	91.44	3.700	93.98	3.500	88.90
38/76	3.700	93.98	3.800	96.52	3.600	91.44
39/78	3.800	96.52	3.900	99.06	3.700	93.98
40/80	3.900	99.06	4.000	101.60	3.800	96.52



1.00mm [.039"] Contact Centers, Shrouded (Box) Headers Straight/SMT

SPECIFICATIONS

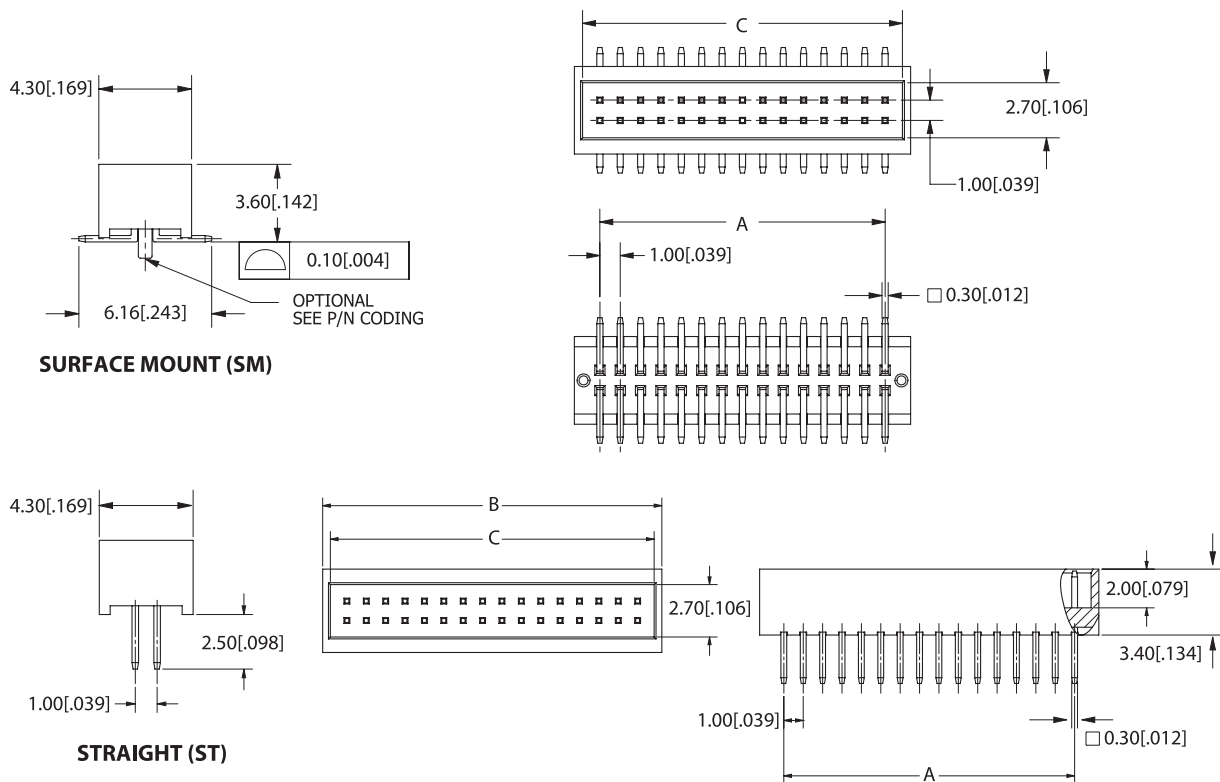
- Operating Temperature: - 40° C to + 125° C
- Processing Temperature: 230° C for 60 seconds Max.
(260° C, 10 seconds)
- UL Flammability Rating: 94V-0
- Voltage Rating: 20m OHMs Max.
- Current Rating: 1 AMP per contact
- Voltage Drop: AC 300 V.
- Insulation Resistance: 1000 Mega OHMS



PART NUMBER OPTIONS

SERIES	SBH51	L	P	P	E	D	10	ST	BK	COLOR
SBH51 = Box Header										BK = Black
HOUSING MATERIAL										TERMINATION TYPE
L = LCP										ST = Straight
CONTACT MATERIAL										SM = Surface Mount Without Post
P = Phosphor Bronze										SP = Surface Mount With Post
CONTACT FINISH - RoHS Compliant										NUMBER OF CONTACT POSITIONS (Pins per Row)
P = Gold Flash Overall										03 thru 50
S = .000010" Gold Overall										NUMBER OF ROWS
CONTACT CENTERS										D = Dual Row
E = 1.00mm [.039"]										

DIMENSIONS For complete drawings, go to www.sullinscorp.com or e-mail techsupport@sullinscorp.com





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Sullins Connector Solutions is the leader in developing and delivering reliable, cutting-edge connectors for diverse applications and industries worldwide. Headquartered in San Marcos, California, and privately held, Sullins provides the largest selection of 100% RoHS, UL/CUL approved edgecards and headers in the industry. Our high-level, high-density and high-temperature connectors are specifically designed for mission-critical applications used by leading manufacturers and developers all over the world.

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Sullins acquired Micro Plastics, Inc. in 2004 to offer customers a broader range of innovative connectors and customer-driven services.

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Sullins is committed to using quality, RoHS compliant parts to produce reliable, high quality connectors. Our completely streamlined, in-house manufacturing facility allows us to deliver orders within 5 days or less.*

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Sullins accommodates all types of orders, large or small. We'll even accept orders as small as 10 connectors.

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* While our average delivery time is within five business days, some connector designs with more customized specifications may require additional time to complete.

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Taiwan | 10F, NO 268, Fuxing S. Rd., Sec. 2, Taipei, Taiwan
+886-2-2738-7377 | fax +886-2-2738-3586



Applications for Sullins Connectors:

- Aircraft Electronic Controls and Radio Communications
- Computing Equipment and Peripherals
- Consumer Electronics and Household Appliances
- Office Equipment
- Automotive Electronics and Accessories
- Casino Gaming Devices
- Medical Devices
- Industry Machinery and Process Control Equipment
- Telecommunication
- Vending Machines
- Burn-in Ovens and Test Equipment
- And more...

The Sullins Advantage

- Five-day Lead Time*
- Free Samples – Fast!
- High Quality and Reliable Connectors
- Engineering Design and Technical Support
- Connector Experts at Your Service Assist with Specific Project Requirements
- Design and Build Custom Parts to Suit Your Needs
- RoHS Compliance



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Headers and Shunts/Jumpers

Features and Benefits:

Headers

- Available in a large variety of male and female header types for all kinds of applications
- Available in 1.0mm, 0.050", 2.0mm, and 0.100" contact centers
- Various insulator heights to accommodate different application needs
- Available in board stacking configurations
- Choices of termination types include straight and right angle thru hole, as well as surface mount
- Various plating options, including full gold, selective gold, and pure tin
- .100" male headers now available in 150°C high temperature configuration!

Shunts/Jumpers

- Available in 0.050", 2.0mm, 0.100", and 0.200" contact centers
- Various insulator heights to accommodate different application needs
- Various plating options, including full gold and pure tin, to support different mating cycle needs



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*More customized specifications may require additional time to complete.

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Applications for Sullins Test Sockets:

- Burn-in and Test Systems
- Electronic Component Testing
- Burn-in Boards
- High Power Device Testers
- Highly Accelerated Life Test
- Semiconductor Testing
- Communications Equipment
- Medical Equipment Instrumentation
- Power Converters and Power Supplies
- Aerospace
- Automotive
- And more...

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- RoHS Compliance
- Made in USA



Sullins Custom Test Sockets

Features and Benefits:

- High Temperature, High Current, and Reliability test socket solutions
- Open designs available to replace clamshell type sockets for maximum heat dissipation
- Custom designs for almost any Diode/MOSFET/Transistor
- Low minimum order quantities
- Fastest lead times in the industry on custom designs
- Kelvin design sockets available
- In-House design and custom molding capabilities
- Expert engineering assistance with your design to save you time and money
- Operating temperature ranges of -65°C to +250°C
- Modular tooling for cost effective modifications to current parts
- Full Gold, Selective Gold, and Full Tin plating options available in various thicknesses to provide the best balance of durability cycles and price



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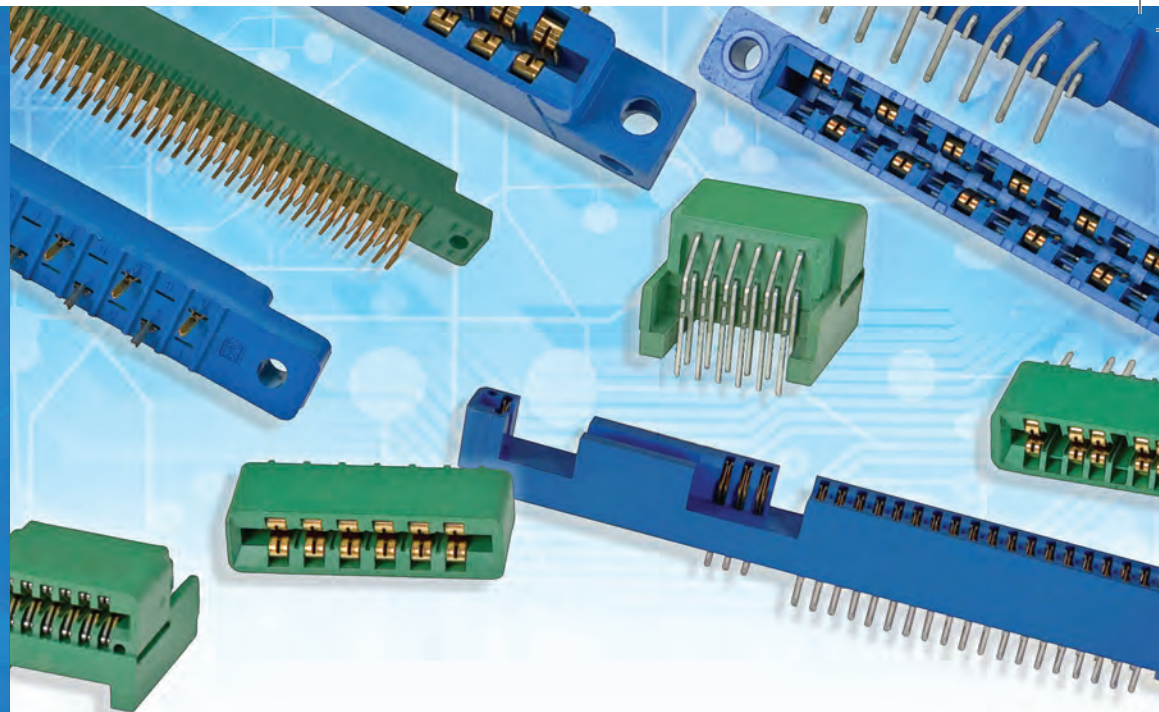
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Custom Connector Solutions

Features and Benefits:

- Expert engineering team
- In-house design and custom molding capabilities
- Fastest lead time in the industry for custom parts
- Quick change tools allow for small runs within production runs
- Modular tooling allows for quick switch from prototype to production
- Common customization include: molded-in keys, selective loading, special plating, special row spacing
- Modular tooling allows for minimal tooling cost on simple solutions, while competitive for complex solutions
- 3D CAD utilized for design
- Design analysis can lead to cost savings
- Assist with the design up front to save time and money later
- Customer logos or appearance options available



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Applications for Sullins Connectors:

- Burn-in Ovens and Test Equipment
- Electronic Component Testing
- Data Storage Servers
- Communications Equipment
- Networking Equipment
- LED Applications
- Medical Devices
- And more...

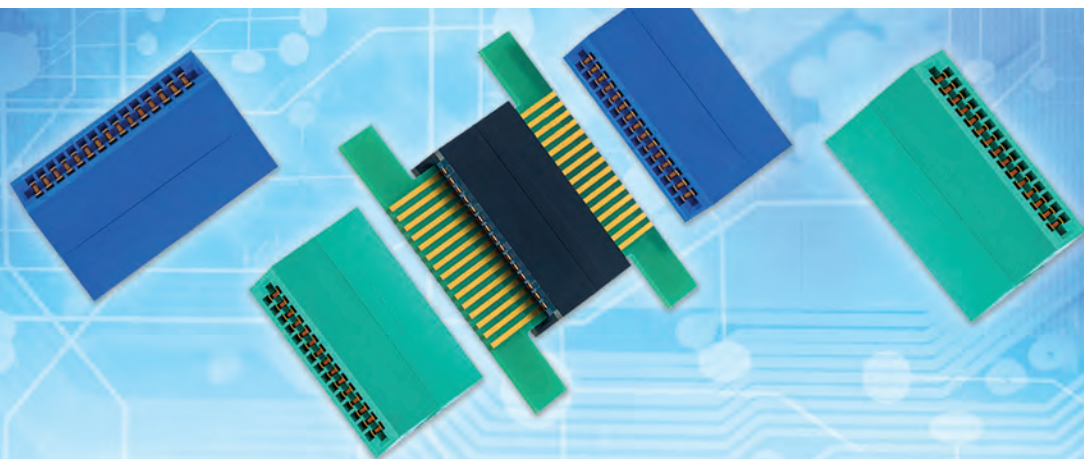
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Dual Edge Connector **NEW!**

Specifications:

- Now available in 0.100"[2.54mm] with 5-60 pins per row
 - 0.125"[3.18mm] and 0.156"[3.96mm] contact centers, with up to 40 pins per row available upon special request
- Supports an operating temperature of up to 150°C
- Fits 0.062"[1.57mm]-thick PC boards in both card slots
 - Other board thicknesses available upon special request
- Mounting styles include straddle mount, flush mounting holes, or no mounting
 - Other mounting options available upon special request
- Standard 30u" selective gold plating promotes long lasting usage
 - Other plating options available upon request
- Current rating: 3 Amperes per contact
- Contact resistance: 30 Milliohms max
- Insulation resistance: 5000 Megohms

Features & Benefits:

- Reliable high temperature board-to-board interconnection up to 150°C
- Easily replaceable without the need of desoldering
- High signal integrity connector interface for R&D and Life Tests applications
- HTOL, HAST & LTOL and in-line production and burn-in testing compatible
- Superior durability of 500 mating cycles



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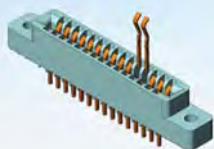
Any Application, Any Industry.
Sullins Finds the Perfect Fit.

SULLINS
CONNECTOR SOLUTIONS

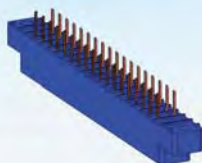
New and Coming Soon from Sullins!

Product Roadmap

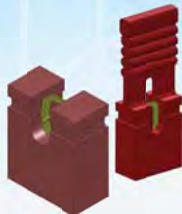
Low Profile
Cantilever Style
Card Edge



.173 Row Spacing
Card Edge



Expanding Jumper
Line



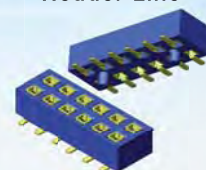
Modular Jack
+ RJ45



High Power + Signal
Connectors



Expanding
Top+ Bottom Dual
Entry SMT Female
Header Line



USB 2.0 and 3.0



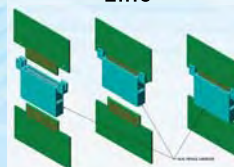
D-SUB Connectors



HDMI



Expanding Dual
Edge Connector
Line



At Sullins, we listen to your recommendations; we create products to meet your needs, while exploring the frontiers of novel connector designs. Our product roadmap represents some of our new connectors currently in development. As always, let us help you turn your ideas into your next successful endeavor. We thank you for your continued relationship with Sullins Connector Solutions.



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