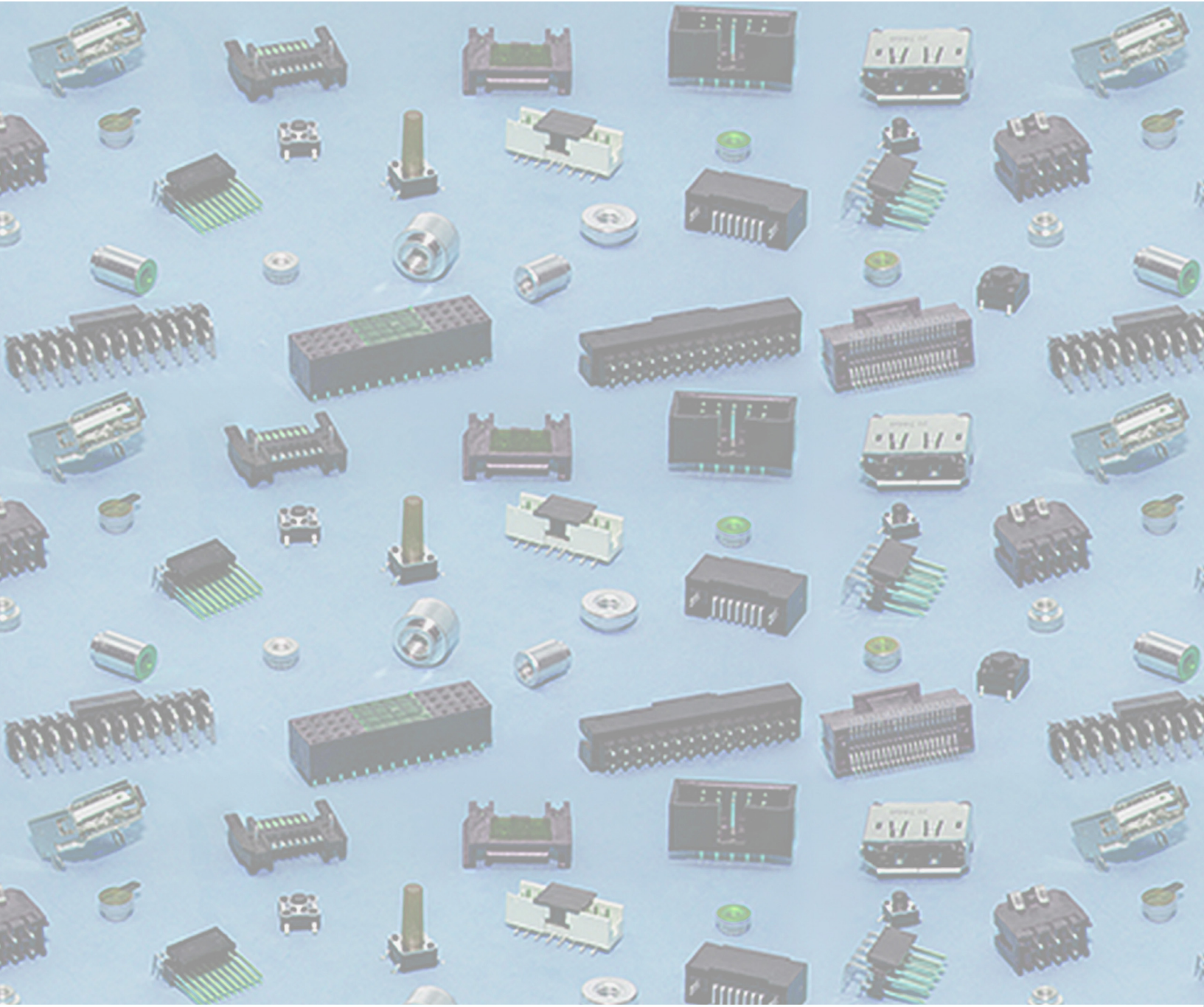
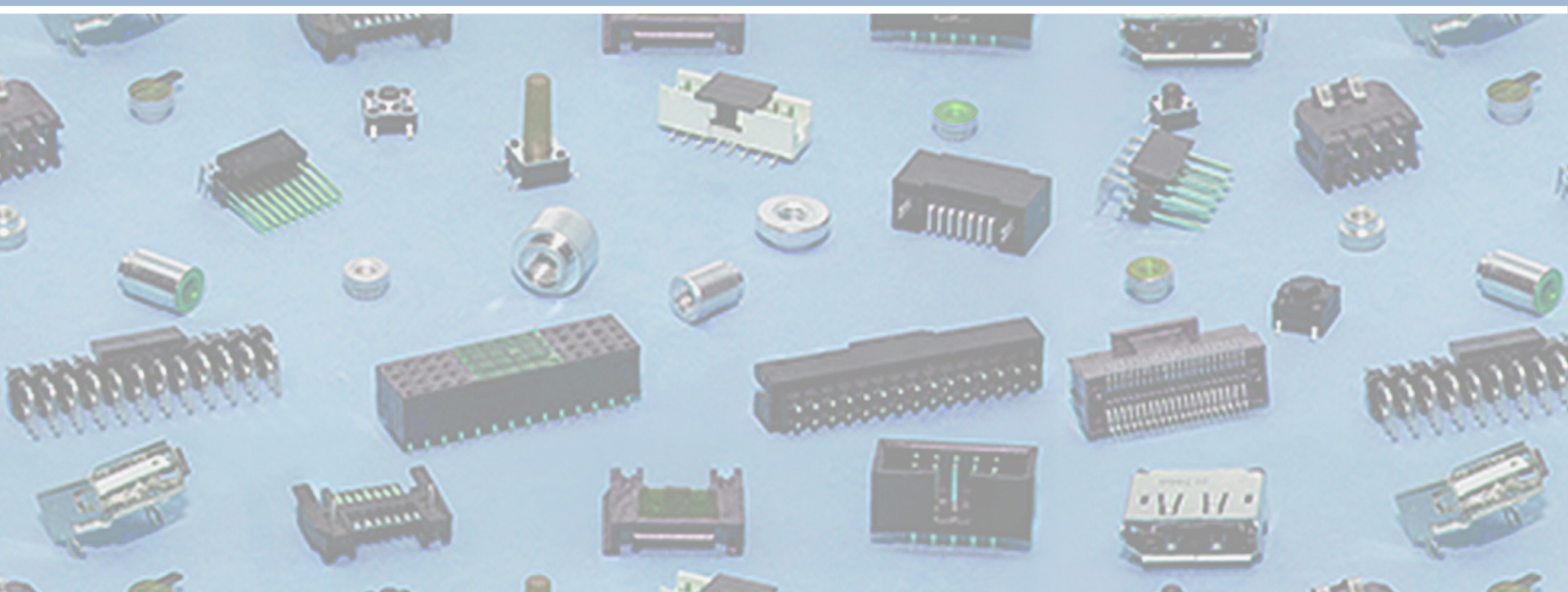




SamyTronic

Connectors, fasteners and more for PC Boards



SURFACE MOUNT NUTS

The best solution for SMT/PCB assembly

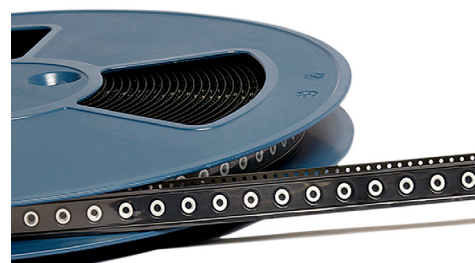
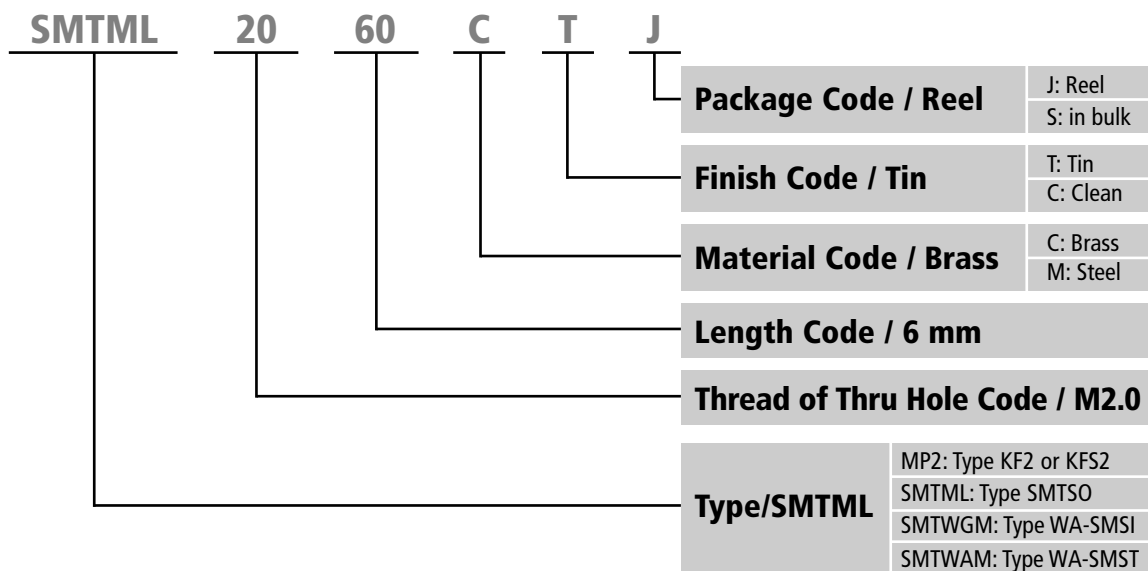


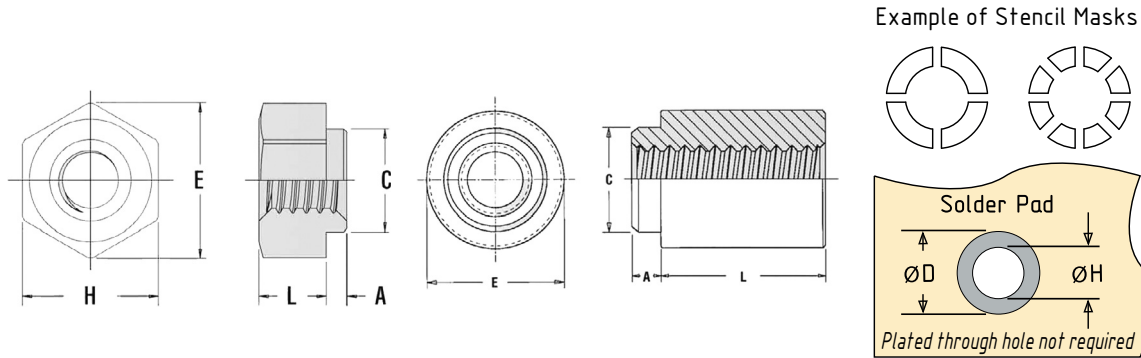
Surface mount nuts and spacers / standoffs

Whether a fan is to be attached to the circuit board or the circuit board itself is built into the housing, you need threaded supports such as nuts or spacers. In most cases these must be installed in a separate operation.

The ST thread mounts are components that have been specially developed for SMT applications. Since the threaded nuts and sockets are supplied in convenient, machine-compliant tape & reel packaging, they can be machine-fitted directly in the assembly process on pads preprinted with solder paste. In the reflow oven, the threaded carrier connects to the circuit board without destroying the circuit board, as might be the case when it is pressed in.

Threaded carriers or sockets can be supplied in various heights and diameters. The basic material is usually steel, but it can also be a copper alloy, tin-plated or nickel-plated surface. ROHS compliant.





All dimensions are in millimeters

Thread Size x Pitch	Thru Hole +0.1-0.08	Type	Thread or Thru Hole Code	Length Code "L"±0,13 (Length code in millimeters)*							Min Sheet Thickness	A Max.	C Max.	E		H Nom.	Ø H Hole Size in Sheet +0.08	Ø D Min. Solder Pad
														Ref.	±0.13			
M1x0,25	—	SMTML	010	1	2	3	—	—	—	—	0,5	0,48	2,41	3,45	—	3	2,5	4,19
M1,2x0,25	—	SMTML	012	1	2	3	—	—	—	—	0,5	0,48	2,41	3,45	—	3	2,5	4,19
M1,4x0,3	—	SMTML	014	1	2	3	—	—	—	—	0,5	0,48	2,41	3,45	—	3	2,5	4,19
M1,6x0,35	—	SMTML	016	1	2	3	—	—	—	—	0,5	0,48	2,41	3,45	—	3	2,5	4,19
M2x0,4	—	SMTML	020	—	2	3	4	6	8	10	1,53	1,53	3,6	—	5,56	—	3,73	6,2
M2,5x0,45	—	SMTML	025	—	2	3	4	6	8	10	1,53	1,53	4,09	—	5,56	—	4,22	6,2
M3x0,5	—	SMTML	030	—	2	3	4	6	8	10	1,53	1,53	4,09	—	5,56	—	4,22	6,2
M3,5x0,6	—	SMTML	035	—	2	3	4	6	8	10	1,53	1,53	5,28	—	7,14	—	5,41	7,77
M4x0,7	—	SMTML	040	—	2	3	4	6	8	10	1,53	1,53	6,22	—	8,74	—	6,35	9,37
—	3,6	SMTML	036	—	2	3	4	6	8	10	1,53	1,53	5,28	—	7,14	—	5,41	7,77
—	4,2	SMTML	042	—	2	3	4	6	8	10	1,53	1,53	6,22	—	8,74	—	6,35	9,37

* - other sizes can be provided under customer's inquiry

Number of parts per reel

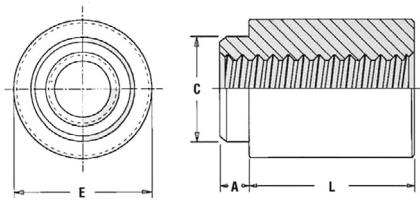
Thread/Thru-Hole Size	Length Code							
	1	2	3	4	6	8	10	12
0-80	—	3500	—	2000	—	—	—	—
2-56,4-40,6-32,116,143	—	2000	—	1000	—	700	—	380
8-32	—	1500	—	700	—	500	—	300
M1, M1.2, M1.4, M1.6	3500	2500	2000	—	—	—	—	—
M2, M2.5, M3, M3.5, 3.6	—	2000	1000	1000	700	500	380	—
M4, 4.2	—	1500	1000	700	500	400	300	—

Processing

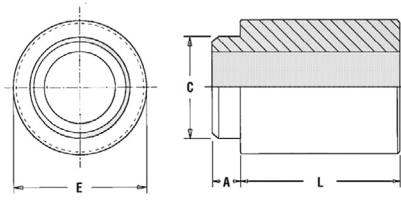
1. With adhesive patch by means of standard vacuum pipette
2. Without adhesive patch by means of special vacuum pipette



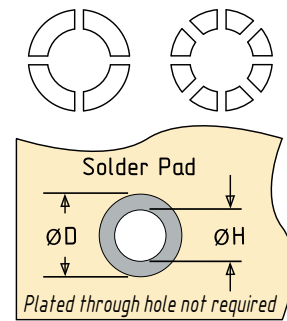
**SMTWGM (Type WA-SMSI)
with Thread**



**SMTWAM (Type WA-SMST)
with Through Hole**



Example of Stencil Masks



All dimensions are in millimeters

Thread Size x Pitch	Type	Thread Code	Length Code "L"±0,13 (Length code in millimeters)*															A ±0.10	C ±0.10	E ±0.10	Ø H Hole Size In Sheet +0.08	Ø D Min. Solder Pad																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
M2x0,4	SMTWGM	M2	1	1,5	2	2,5	3	3,5	4	4,5	5	6	7	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Thru-Hole Size	Type	Thru-Hole Code	Length Code "L"±0,13 (Length code in millimeters)*																	A ±0.10	C ±0.10	E ±0.10	Ø H Hole Size In Sheet +0.08	Ø D Min. Solder Pad		
2,25	SMTWAM	2,25	1	1,5	2	2,5	3	3,5	4	4,5	5	6	7	8	—	—	—	—	—	—	—	1,4	2,8	4,35	3	5,3
2,7	SMTWAM	2,7	1	1,5	2	2,5	3	—	4	—	5	6	7	8	9	10	—	—	—	—	—	1,4	3,5	5,1	3,7	6
3,3	SMTWAM	3,3	1	1,5	2	2,5	3	—	4	—	5	6	7	8	9	10	11	12	13	14	15	1,4	4,2	6	4,4	7,4
4,5	SMTWAM	4,5	1	—	2	—	3	—	4	—	5	6	7	8	9	10	—	—	—	—	—	1,4	5,2	8,2	5,4	9,4

* - other sizes can be provided under customer's inquiry

Number of parts per reel

Thread/ Thru-Hole Size	Length Code																		
	1	1,5	2	2,5	3	3,5	4	4,5	5	6	7	8	9	10	11	12	13	14	15
M 2/2.25	2500	2000	2000	1600	1600	900	900	900	800	700	600	500	—	—	—	—	—	—	—
M 2.5/2.7	2000	1500	1500	1000	1000	1000	1000	800	800	700	600	500	500	500	—	—	—	—	—
M 3/3.3	2000	1200	1200	1000	1000	1000	1000	800	800	700	600	500	500	300	300	300	250	220	200
M 4/4.5	1500	—	1000	—	800	—	700	—	500	500	400	400	300	300	—	—	—	—	—

Processing

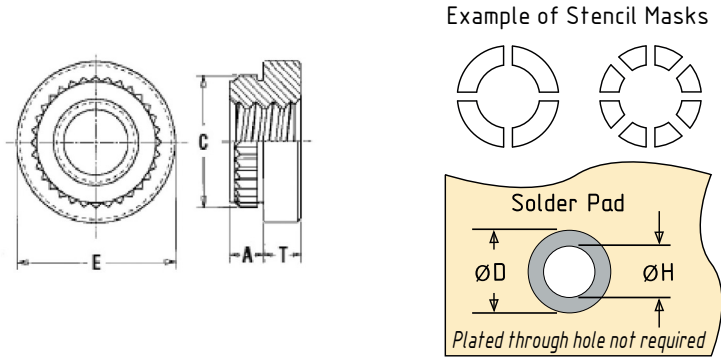
1. With adhesive patch by means of standard vacuum pipette
2. Without adhesive patch by means of special vacuum pipette



Fasteners for use with PC boards



MP2 (Types KF2 & KFS2)



All dimensions are in millimeters

Thread Size x Pitch	Type	Thread Code	A (Shank) Max.	Min. Sheet Thickness	H in PC board +0,01	C ±0,08	E ±0,13	T* ±0,13	D min	Number of parts per reel
M2 x 0,4	MP2	M2	1,53	1,53	4,3	4,19	5,56	1,5	6,2	1500
M2.5x0,45	MP2	M2,5	1,53	1,53	4,8	4,68	5,56	1,5	6,2	1500
M3 x 0,5	MP2	M3	1,53	1,53	4,8	4,68	5,56	1,5	6,2	1500
M4 x 0,7	MP2	M4	1,53	1,53	7	6,86	8,74	2	9,4	900
M5 x 0,8	MP2	M5	1,53	1,53	7,5	7,37	9,53	3	10,3	800

* - other sizes can be provided under customer's inquiry

Type MP2 broaching and broach/flare mount fasternes

Type	Thread Code	Max. Nut Tightening Torque (N•m)	Test Sheet Thickness & Test Sheet Material	Installation (kN)	Pushout (N) (2)	Torque-out (N•m)
MP2	M2/2.5/3	(3)	1.5 mm FR-4 Fiberglass	2.2	290	1.7
	M4	(3)	1.5 mm FR-4 Fiberglass	2.2	420	3.4
	M5	(3)	1.5 mm FR-4 Fiberglass	2.9	440	4.5

(1) The values reported are averages when all installation specifications and procedures are followed. Variations in mounting hole size, sheet material, and installation procedure will affect this data. Performance testing of this product in your application is recommended. We will be happy to provide samples for this purpose or perform the installation for you.

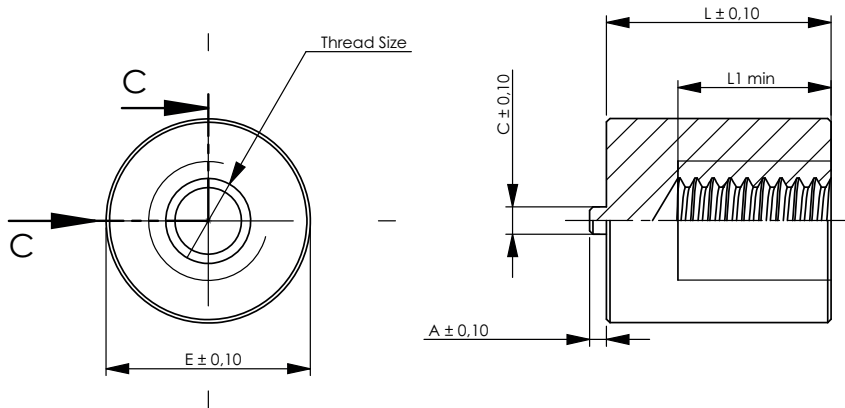
(2) These are typical values for parts installed in drilled mounting holes. Punched mounting holes yield values approximately 15% less.

(3) Not applicable.

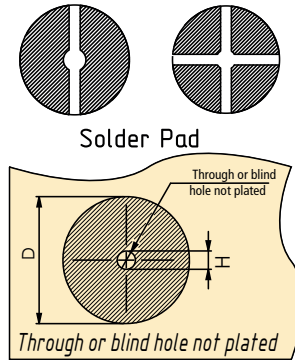
Processing

1. With adhesive patch by means of standard vacuum pipette
2. Without adhesive patch by means of special vacuum pipette





Example of Stencil Masks



Thread Size x Pitch	Type	Thread Code	Length Code "L"±0,10 (Length code in millimeters)*												A ±0.10	C ±0.10	E ±0.10	L1 ±0.10	Ø H Hole Size In Sheet +0.08	Ø D Min. Solder Pad
M2x0,4	SMTSLM	M2	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	0,5	0,8	4,35	3	1	5,3	
M3x0,5	SMTSLM	M3	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	0,5	0,8	6	3	1	7,4	
M4x0,7	SMTSLM	M4	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	0,6	1	7	3-4	1,2	8,3	

* - other sizes can be provided under customer's inquiry

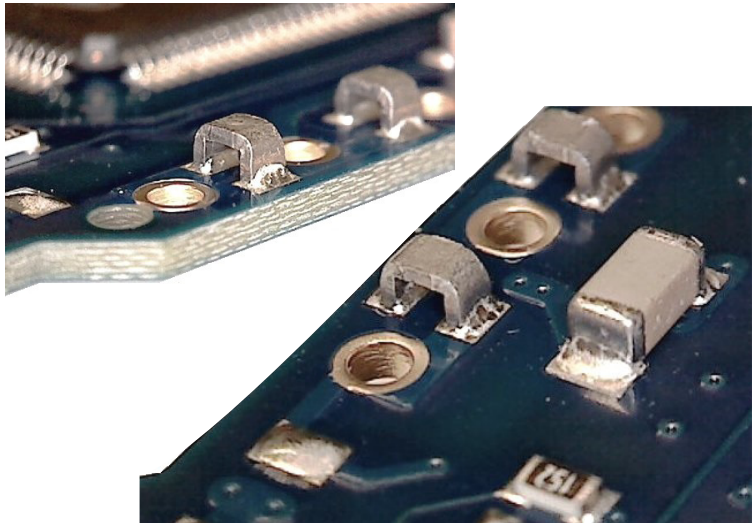
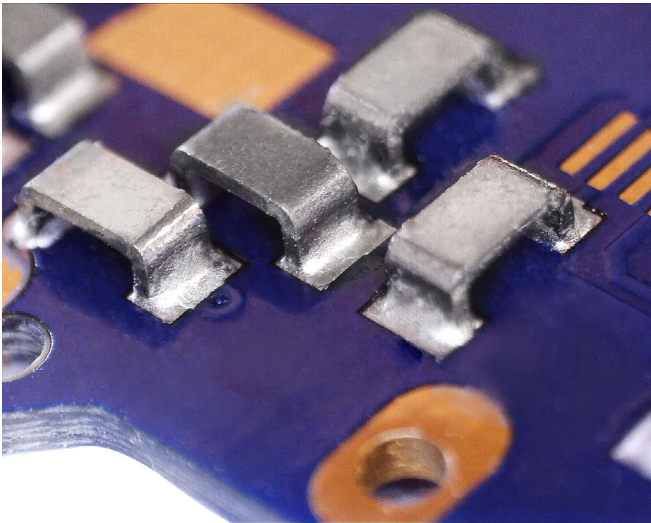
Number of parts per reel

Thread Size x Pitch	Length Code										
	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10
M2x0,4	900	800	750	700	650	600	600	600	500	500	500
M3x0,5	900	800	750	700	650	600	600	600	500	500	500
M4x0,7	600	600	550	550	450	450	400	400	350	350	350

Processing

1. With adhesive patch by means of standard vacuum pipette
2. Without adhesive patch by means of special vacuum pipette





The JP series has been specially developed for SMT applications. An inexpensive solution to connect two points on a circuit board with a current-proof zero-ohm resistor. This jumper / bridge is made of a copper alloy coated with a thin layer of lead-free tin (ROHS compliant).

The jumper / bridge provides sufficient space for circuit board paths, which means that expensive or time-consuming insulation is no longer required. This keeps production costs down.
The jumper / JP bridge can be assembled by machine and is supplied in standard tape & reel packaging, suitable for most assembly machines.

The JP Jumper / current-proof bridge is delivered on a 13" reel (10,000 pieces). Possible delivery sizes of the components are 0603, 0805 and 1206. Other designs are also possible, please inquire.

Specification:

- Contact Material: Brass
- Finish: 1µm - 3µm tin plated
- Package Size: 13" reel, (10,000 pieces)
- Taping Specification: Tape & reel
- RoHS compliant

Electrical:

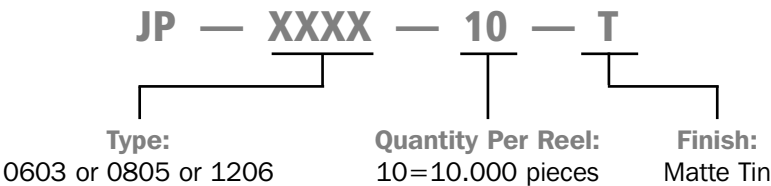
- Maximum Current: 2.0 amperes

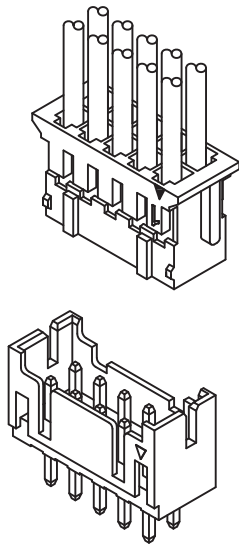
All dimensions are in millimeters

Dimension/Type	0603	0805	1206
Length (L)	1,60	2,00	3,10
Width (W)	0,80	1,27	1,57
Height (H)	0,80	1,27	1,27

* - other sizes can be provided under customer's inquiry

Ordering Information





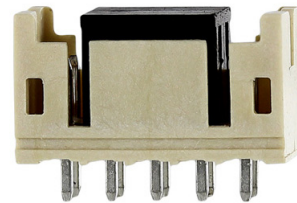
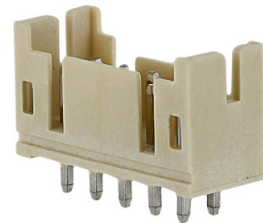
This is a 2.0 mm pitch, crimp style, double row, wire to board connector. It is specially designed for THR applications / machine assembly, pick and place.

Specification:

- Material: LCP or PA46 (color - natur)
- Contacts Terminal: Brass
- Plating: Tin-Plated / Gold Plated
- Operating Voltage (Max.) 250V AC/DC
- Current Rating (Max.) 3A DC/AC
- Operating Temperature -40°C to +105°C
(including temperature rise in applying electrical current)
- Contact resistance: 20 mΩ max.
- Insulation resistance: 1000 MΩ min.
- Dielectric withstanding voltage: 800V AC/minute

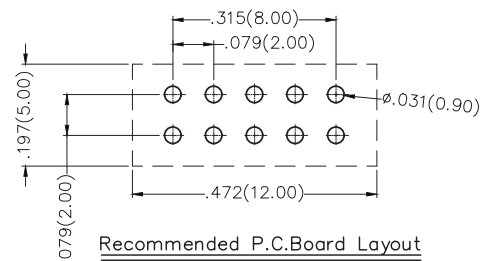
Packaging:

- Tape & reel with Pick Pad

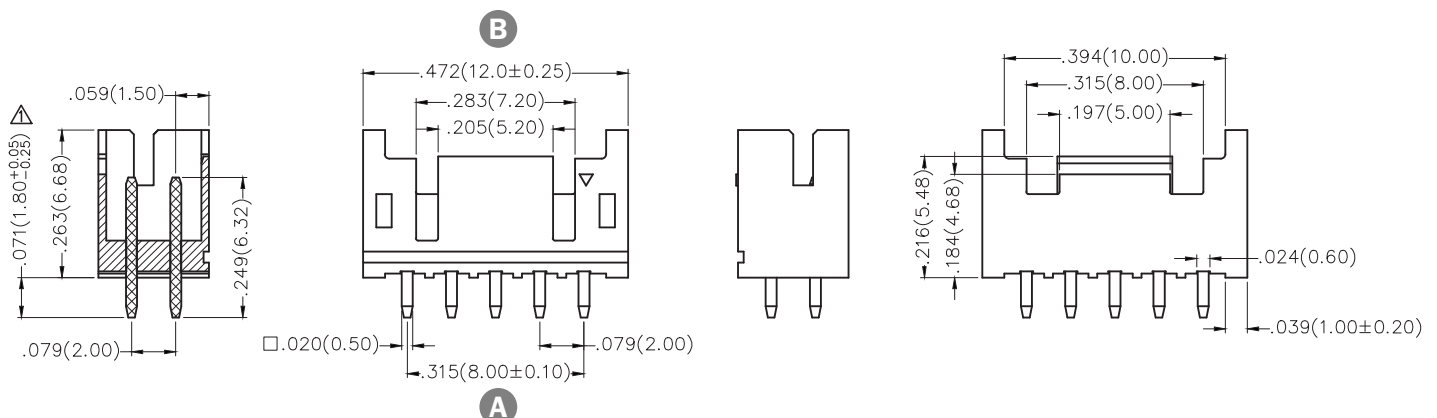


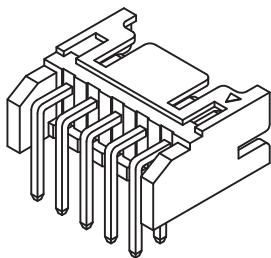
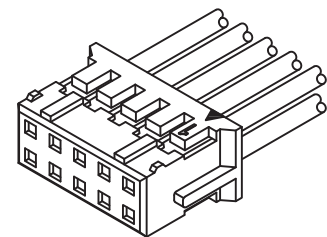
180° Dual Row Wafer

Contacts	Part number	Dimensions (mm)	
		A	B
10	FWF20005-D10S33W5MA	8	12
12	FWF20005-D12S33W5MA	10	14
14	FWF20005-D14S33W5MA	12	16
16	FWF20005-D16S33W5MA	14	18
18	FWF20005-D18S33W5MA	16	20
20	FWF20005-D20S33W5MA	18	22
22	FWF20005-D22S33W5MA	20	24
24	FWF20005-D24S33W5MA	22	26
26	FWF20005-D26S33W5MA	24	28
28	FWF20005-D28S33W5MA	26	30
30	FWF20005-D30S33W5MA	28	32
32	FWF20005-D32S33W5MA	30	34
34	FWF20005-D34S33W5MA	32	36



Recommended P.C.Board Layout
Tolerances: $\pm 0.002(0.05)$





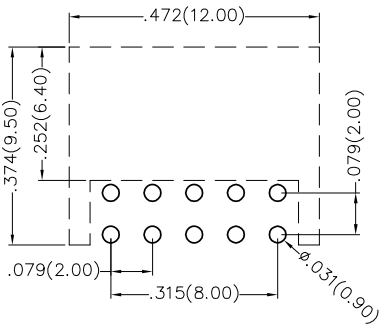
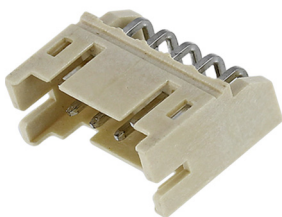
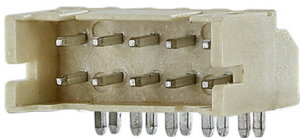
Specification:

- Material: LCP or PA46 (color - natur)
- Contacts Terminal: Brass
- Plating: Tin-Plated / Gold Plated
- Operating Voltage (Max.) 250V AC/DC
- Current Rating (Max.) 3A DC/AC
- Operating Temperature -40°C to +105°C (including temperature rise in applying electrical current)
- Contact resistance: 20 mΩ max.
- Insulation resistance: 1000 MΩ min.
- Dielectric withstanding voltage: 800V AC/minute

Packaging:

- Tape & reel with Pick Area

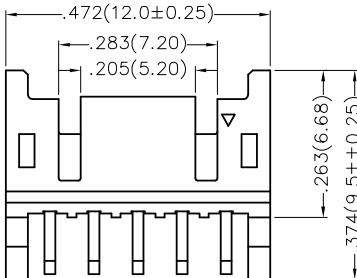
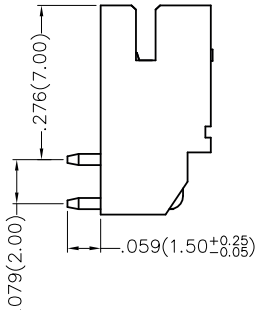
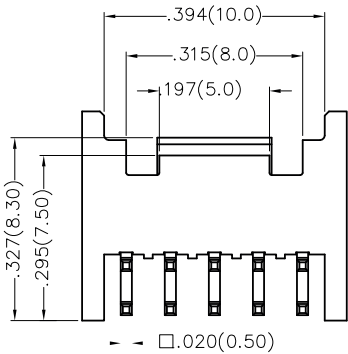
90° Dual Row Wafer



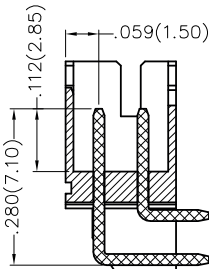
Recommended P.C.Board Layout

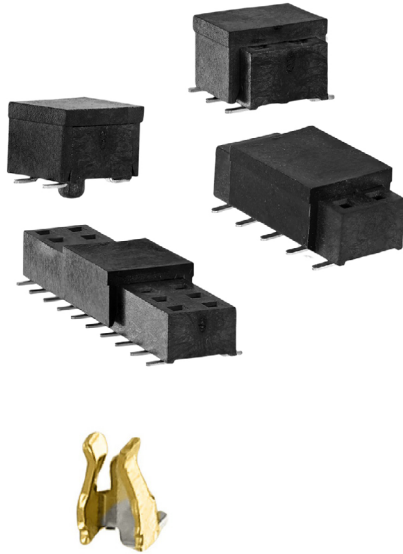
Tolerances: ±.002(0.05)

B



A





Duplex plating: gold plated on contact area and matte tin plated over nickel in solder area.

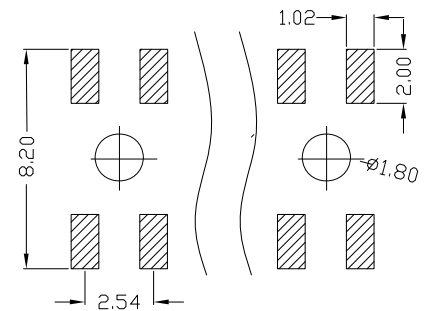
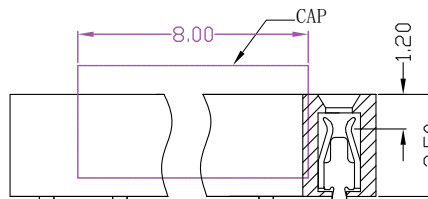
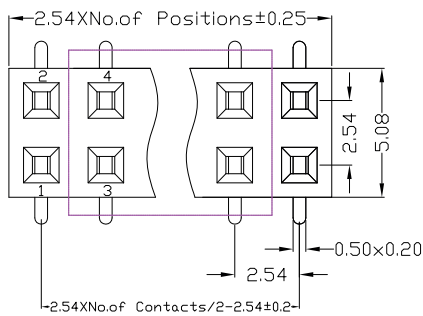
Meet Requirements of IPC JEDEC J-STD-001G

Specification:

- Housing: LCP+30% G.F. UL94V-0, Color: Black
- Contact: Copper alloy with XX μm (XX μin) Gold on Contact Area,
- 2 μm (80 μin) Min Matte Tin on Tail Over 1.27 μm (50 μin) Min Nickel
- Rating Current: 3AMP
- Contact Resistance: 20m Ω Max
- Insulating Resistance: 1000m Ω Min
- Withstanding Voltage: AC 500V
- Temperature Range: -40°C to +105°C
- All Materials Meet the RoHS
- Meet Requirements of IPC JEDEC J-STD-001G
- Pins Coplanarity no more then 100 microns

Packaging:

- Tape & reel with cap



Ordering Information

F136A - 12 05 C4 D MU B 1

NO. OF PINS
2 ~ 40P

Contact Plating

<i>Full of Gold</i>	<i>Semi-gold</i>
A0=0.8u"	B0=0.8u"
A1=1u"	B1=1u"
A2=1.5u"	B2=1.5u"
A3=2u"	B3=2u"
A3=2u"	B3=2u"
A5=5u"	B5=5u"
A6=10u"	B6=10u"
A7=15u"	B7=15u"
A8=20u"	B8=20u"
A9=30u"	B9=30u"

S1=Ordinary Tin Plated
S2=Matte Tin Plated
S3=Tin-plated High-temperature
C4=0.076 μm (3 μin) Gold in Contact Area, 2 μm (80 μin) Min Matte Tin on Tail Over 1.27 μm (50 μin) Min Nickel

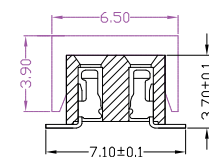
INSULATOR MATERIAL:

B: PA6T
C: PA9T
D: LCP

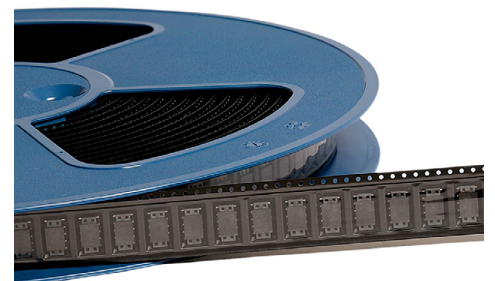
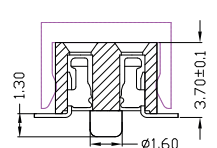
PACKING

A: PE Bag
B: Tape & Real
C: Tube
D: Tube & CAP
E: Tray

Type 1



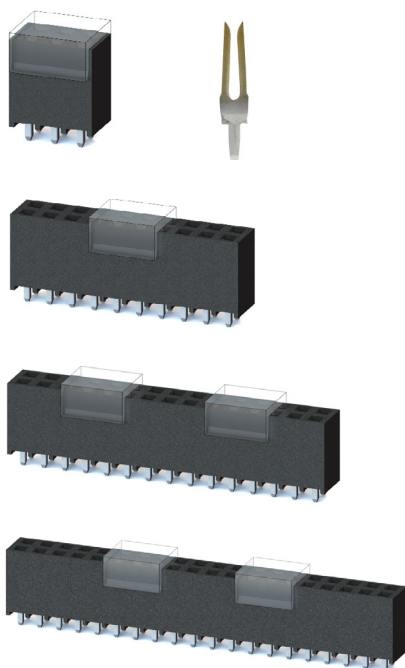
Type 2



2.54mm Female Header, Dual Row



Pitch 2.54mm, H8.5mm, 2*x Pin, THR, LCP



Duplex plating: gold plated on contact area and matte tin plated over nickel in solder area.

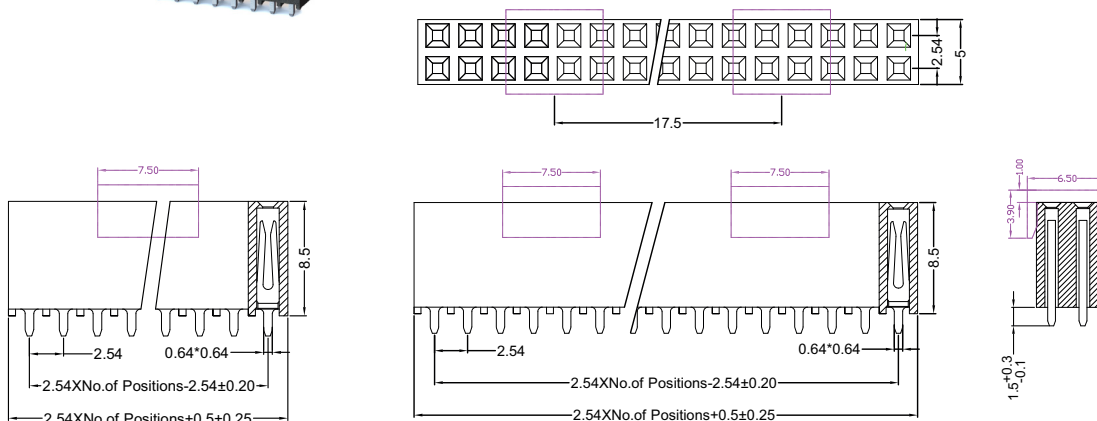
Meet Requirements of IPC JEDEC J-STD-001G

Specification:

- Housing: LCP+30% G.F. UL94V-0, Color: Black
- Contact: Copper alloy with XX μm (XX μm) Gold on Contact Area,
- 5 μm (200 μm) Min Matte Tin on Tail Over 1.27 μm (50 μm) Min Nickel
- Rating Current: 3AMP
- Contact Resistance: 20m Ω Max
- Insulating Resistance: 1000m Ω Min
- Withstanding Voltage: AC 500V
- Temperature Range: -40°C to +105°C
- All Materials Meet the RoHS

Packaging:

- Tape & reel with cap



Ordering Information

F185 - 12 XX AO D SY B 1

NO. OF PINS
Per Row
3 ~ 20P

Contact Plating

Full of Gold	Semi-gold
A0=0.8u"	B0=0.8u"
A1=1u"	B1=1u"
A2=1.5u"	B2=1.5u"
A3=2u"	B3=2u"
A3=2u"	B3=2u"
A5=5u"	B5=5u"
A6=10u"	B6=10u"
A7=15u"	B7=15u"
A8=20u"	B8=20u"
A9=30u"	B9=30u"

INSULATOR MATERIAL:

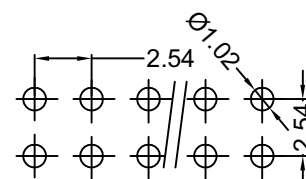
A: PBT
B: PA6T
C: PA9T
D: LCP

PACKING

A: PE Bag
B: Tape & Real
C: Tube
D: Tube & CAP
E: Tray

2*3P-2*13P	1CAP
2*14P-2*20P	2CAP

S1=Ordinary Tin Plated, S2=Matte Tin Plated
S3=Tin-plated High-temperature
C6=plating: Contact area-Gold 10 μm over
Nikel 50 μm : Solder tail Tin 200 μm over Nikel 50 μm



Recommended P.C.Board Layout



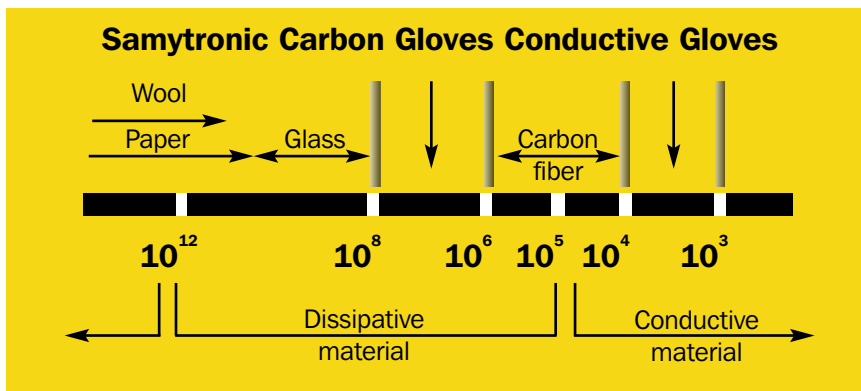
The Smart Flex series is intended for assembly, quality inspection and packaging work in the following areas:

- Fine electronics
- Electronics accessories in various industrial sectors
- The antistatic properties of the Smart Flex series are achieved by adding carbon fibers to the nylon carrier, which are highly effective in preventing electrostatic discharges. The flexible, seamless nylon carrier (15-gauge) offers good dexterity and ensures a comfortable fit.
- Thanks to the polyurethane coating on the fingertips, the Smart Flex series offers good grip and durability. This further improves fit and flexibility.
- The coating of the fingertips also prevents the transfer of sweat to electronic components.

Minimum order quantity 10 pairs (one package).
Each pair has a size mark and is individually wrapped.

Samytronic ESD PU Top Coated Carbon gloves are made of high electricity conductive yarns (10 Pow 6-8). It has good elasticity with delicate materials, and washable. Polyurethane is coated on fingertip of gloves; Having excellent anti-static effect, and prevent skin irritations caused by corona discharge.

Specifikation:



15 g carbon fiber finger top PU coated glove

Tear SER No:
Calibration Date:
Temperature: 21°C

SAMPLE REFERENCE:
Machine operations functional: OK
Humidity: 40%rH

Name	(Ω) Anti-static electricity
Sample 1	10 ⁷
Sample 2	10 ⁶
Sample 3	10 ⁸
Sample 4	10 ⁷

ALL testing carried out within controlled environment