



Product Facts

- For parallel board stacking applications
- High density packaging on 0.8 [.031] centerline spacing
- Available sizes from 40 to 200 positions (in 20 position increments)
- Board stacking heights available from 5 [.197] to 16 [.630] (in 1 [.039] increments)
- Bellows type spring contacts are resistant to scooping and stubbing during mating and unmating
- Positioning bosses for proper on-board orientation
- Available packaged on “tape-and-reel” for automatic placement per EIA standards
- Recognized under the Component Program of Underwriter Laboratories Inc., File No. E28476



0.8mm Free Height (FH) Connectors



Tyco Electronics 0.8mm FH surface-mount connectors are designed for parallel board stacking applications using subminiature connectors to meet today's electronic industry requirements for high density packaging. It is possible to save more than 50% of the required board space when compared to conventional 1.27 [.050] centerline connectors. 0.8mm FH connectors are ideally suited for application downsizing, such as notebook PCs, pen pads, cellular telephones and other electronic equipment requiring miniature connector packaging.

Vertical board-mount plugs and receptacles are available. By mating combinations of plug and receptacle housing heights, board-to-board stacking heights from 5 [.197] to 16 [.630] (in 1 [.039] increments) can be achieved.

The receptacles are preloaded with the Tyco Electronics unique bellows-type spring contacts for reliable electrical connection with the plugs.

In addition, right angle plugs are available which mate to standard receptacles.

Performance Characteristics

Voltage Rating — 100 VAC

Current Rating — 0.5 ampere

Contact Resistance — 30 milliohms max. (initial)

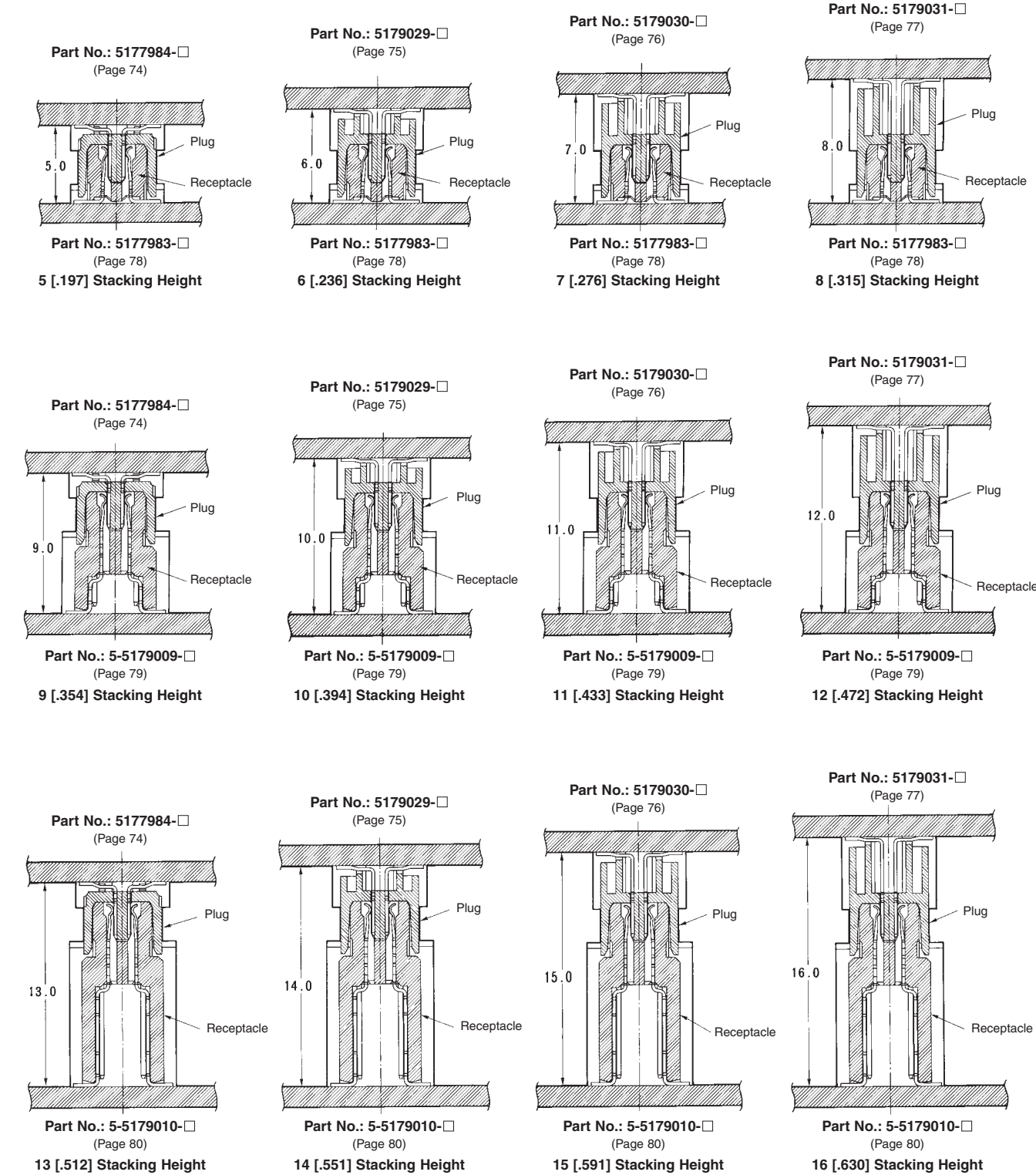
Dielectric Withstanding Voltage — 500 VAC (1 minute)

Operating Temperature — -40°C to +85°C (Including terminal temperature rise)

0.8mm Free Height (FH) Connectors

0.8mm Free Height (FH) Connectors (Continued)

Board-to-Board Stacking Heights (By Plug/Receptacle Combinations)



Notes: For specific dash nos. of sizes 40 to 200 positions (in 20-position increments), see pages 73 thru 81.
Part Numbers are RoHS compliant.



Electronics

Fine Pitch SMT Stacking Connectors
(Parallel Board-to-Board)



0.8mm Free Height (FH) Connectors (Continued)

0.8mm Product Tree														
Gender	Height	Plating Au Thickness	Package Type	Pickup Cap	40 Pos.	60 Pos.	80 Pos.	100 Pos.	120 Pos.	140 Pos.	160 Pos.	180 Pos.	200 Pos.	
5H	8µ"	Tube	No	5177983-1	5177983-2	5177983-3	5177983-4	5177983-5	5177983-6	5177983-8	5177983-9	1-5177983-0		
		Tube	Yes	5179229-1	5179229-2	5179229-3	5179229-4	5179229-5	5179229-6	5179229-8	5179229-9	1-5179229-0		
		Tape and Reel	Yes	5177985-1	5177985-2	5177985-3	5177985-4	5177985-5	5177985-6	5177985-8				
		Tube	No	6123000-1	6123000-2	6123000-3	6123000-4	6123000-5	6123000-6	6123000-8	6123000-9	1-6123000-0		
		Tube	Yes											
		Tape and Reel	Yes	5353999-1	5353999-2	5353999-3	5353999-4	5353999-5	5353999-6	5353999-8				
	30µ"	Tube	No	5-5179009-1	5-5179009-2	5-5179009-3	5-5179009-4	5-5179009-5	5-5179009-6	5-5179009-8	5-5179009-9	6-5179009-0		
		Tube	Yes	5179232-1	5179232-2	5179232-3	5179232-4	5179232-5	5179232-6	5179232-8	5179232-9	6-5179232-0		
		Tape and Reel	Yes	5-5179180-1	5-5179180-2	5-5179180-3	5-5179180-4	5-5179180-5	5-5179180-6					
		Tube	No	5084613-1	5084613-2	5084613-3	5084613-4	5084613-5	5084613-6	5084613-8	5084613-9	1-5084613-0		
		Tube	Yes											
		Tape and Reel	Yes	7-5179180-1	7-5179180-2	7-5179180-3	7-5179180-4	7-5179180-5	7-5179180-6					
9H	8µ"	Tube	No	5-5179010-1	5-5179010-2	5-5179010-3	5-5179010-4	5-5179010-5	5-5179010-6	5-5179010-8	5-5179010-9	6-5179010-0		
		Tube	Yes	5-5179233-1	5-5179233-2	5-5179233-3	5-5179233-4	5-5179233-5	5-5179233-6	5-5179233-8	5-5179233-9	6-5179233-0		
		Tape and Reel	Yes	5084616-1	5084616-2	5084616-3	5084616-4	5084616-5	5084616-6	5084616-8	5084616-9			
		Tube	No	5-6123212-1	5-6123212-2	5-6123212-3	5-6123212-4	5-6123212-5	5-6123212-6	5-6123212-8	5-6123212-9	6-6123212-0		
		Tube	Yes											
		Tape and Reel	Yes	5084618-1	5084618-2	5084618-3	5084618-4	5084618-5	5084618-6	5084618-8	5084618-9			
	30µ"	Tube	No	5177984-1	5177984-2	5177984-3	5177984-4	5177984-5	5177984-6	5177984-8	5177984-9	1-5177984-0		
		Tube	Yes	5179230-1	5179230-2	5179230-3	5179230-4	5179230-5	5179230-6	5179230-8	5179230-9	1-5179230-0		
		Tape and Reel	Yes	5177986-1	5177986-2	5177986-3	5177986-4	5177986-5	5177986-6	5177986-8				
		Tube	No	5084614-1	5084614-2	5084614-3	5084614-4	5084614-5	5084614-6	5084614-8	5084614-9	1-5084614-0		
		Tube	Yes											
		Tape and Reel	Yes	5-5177986-1	5-5177986-2	5-5177986-3	5-5177986-4	5-5177986-5	5-5177986-6	5-5177986-8				
6H	8µ"	Tube	No	5179029-1	5179029-2	5179029-3	5179029-4	5179029-5	5179029-6	5179029-8	5179029-9	1-5179029-0		
		Tube	Yes	2-5179230-1	2-5179230-2	2-5179230-3	2-5179230-4	2-5179230-5	2-5179230-6	2-5179230-8	2-5179230-9	3-5179230-0		
		Tape and Reel	Yes	1-5177986-1	1-5177986-2	1-5177986-3	1-5177986-4	1-5177986-5	1-5177986-6					
		Tube	No	5084615-1	5084615-2	5084615-3	5084615-4	5084615-5	5084615-6	5084615-8	5084615-9	1-5084615-0		
		Tube	Yes											
		Tape and Reel	Yes	6-5177986-1	6-5177986-2	6-5177986-3	6-5177986-4	6-5177986-5	6-5177986-6	6-5177986-8				
	30µ"	Tube	No	5179030-1	5179030-2	5179030-3	5179030-4	5179030-5	5179030-6	5179030-8	5179030-9	1-5179030-0		
		Tube	Yes	4-5179230-1	4-5179230-2	4-5179230-3	4-5179230-4	4-5179230-5	4-5179230-6	4-5179230-8	4-5179230-9	5-5179230-0		
		Tape and Reel	Yes	2-5177986-1	2-5177986-2	2-5177986-3	2-5177986-4	2-5177986-5	2-5177986-6					
		Tube	No	1-5179030-1	1-5179030-2	1-5179030-3	1-5179030-4	1-5179030-5	1-5179030-6	1-5179030-8	1-5179030-9	2-5179030-0		
		Tube	Yes	2-5179030-1	2-5179030-2	2-5179030-3	2-5179030-4	2-5179030-5	2-5179030-6	2-5179030-8	2-5179030-9	3-5179030-0		
		Tape and Reel	Yes											
7H	8µ"	Tube	No	5179031-1	5179031-2	5179031-3	5179031-4	5179031-5	5179031-6	5179031-8	5179031-9	1-5179031-0		
		Tube	Yes	6-5179230-1	6-5179230-2	6-5179230-3	6-5179230-4	6-5179230-5	6-5179230-6	6-5179230-8	6-5179230-9	7-5179230-0		
		Tape and Reel	Yes	3-5177986-1	3-5177986-2	3-5177986-3	3-5177986-4	3-5177986-5	3-5177986-6	3-5177986-8	3-5177986-9	4-517986-0		
		Tube	No	6123002-1	6123002-2	6123002-3	6123002-4	6123002-5	6123002-6	6123002-8	6123002-9	1-6123002-0		
		Tube	Yes											
		Tape and Reel	Yes	6123001-1	6123001-2	6123001-3	6123001-4	6123001-5	6123001-6	6123001-8	6123001-9			
	30µ"	Tube	No		316229-3	316229-2								
		Tube	No											
		Tube	Yes											
		Tube	No											
		Tube	Yes											
		Tape and Reel	Yes											

0.8mm Free Height (FH)
Connectors



Electronics

5mm Plugs for 5 [.197],
9 [.354] and 13 [.512]
Stacking Heights

Material and Finish

Housing — High temperature thermo-
plastic, natural color, 94V-0 rated

Contacts — Brass; duplex plated
0.00020 [.000008] min. gold on contact
area, 0.00100 [.000039] min. tin on sol-
der area, with entire contact underplated
0.00130 [.000051] min. nickel

Related Product Data

Performance Characteristics —
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Stacking Height Combinations —
page 72

Mating Receptacles — pages 78
thru 80

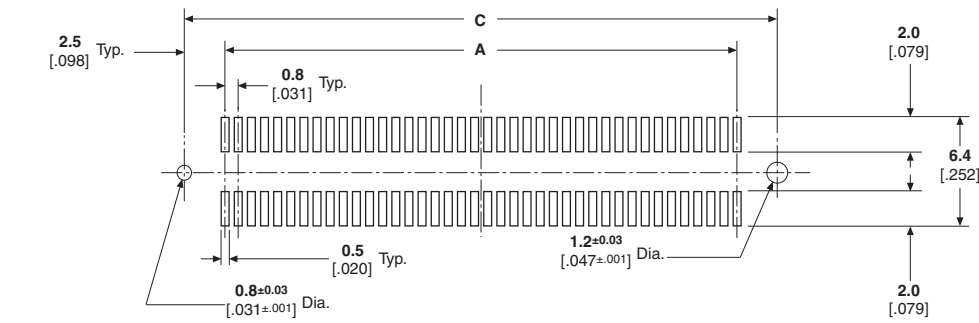
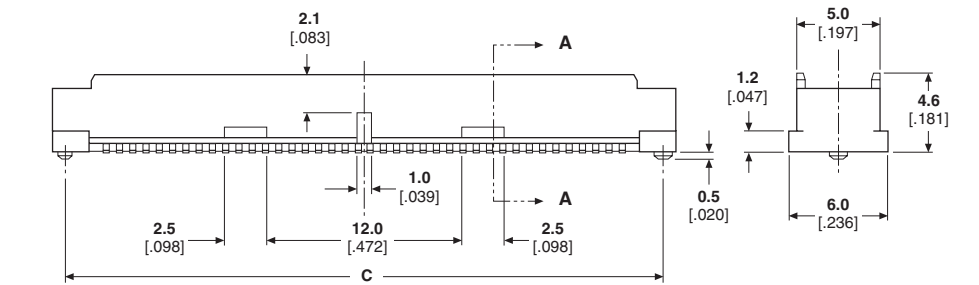
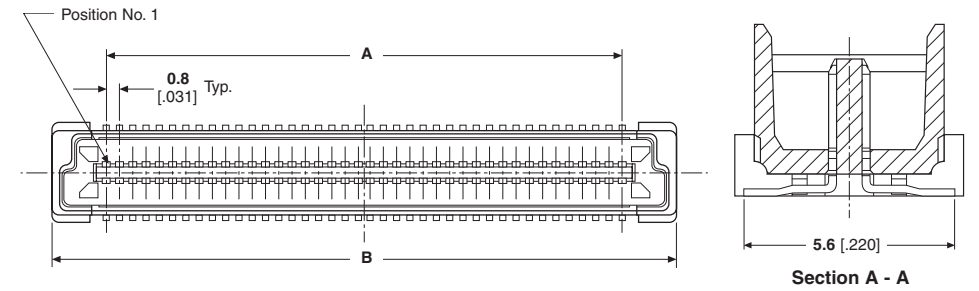
Technical Documents (page 113)

Product Specification
108-5390

Fine Pitch SMT Stacking Connectors
(Parallel Board-to-Board)



0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch



Recommended PC Board Layout

Dimensions			No. of Positions	Plating Type	Part Numbers		
A	B	C			Tube	Tube w/ Pickup Cap	Tape and Reel
15.20 .598	21.80 .858	20.20 .795	40	8μ" Au 30μ" Au	5177984-1 5084614-1	5179230-1 —	5177986-1 5-5177986-1
23.20 .913	29.80 1.173	28.20 1.110	60	8μ" Au 30μ" Au	5177984-2 5084614-2	5179230-2 —	5177986-2 5-5177986-2
31.20 1.228	37.80 1.488	36.20 1.425	80	8μ" Au 30μ" Au	5177984-3 5084614-3	5179230-3 —	5177986-3 5-5177986-3
39.20 1.543	45.80 1.803	44.20 1.740	100	8μ" Au 30μ" Au	5177984-4 5084614-4	5179230-4 —	5177986-4 5-5177986-4
47.20 1.858	53.80 2.118	52.20 2.055	120	8μ" Au 30μ" Au	5177984-5 5084614-5	5179230-5 —	5177986-5 5-5177986-5
55.20 2.173	61.80 2.433	60.20 2.370	140	8μ" Au 30μ" Au	5177984-6 5084614-6	5179230-6 —	5177986-6 5-5177986-6
63.20 2.488	69.80 2.748	68.20 2.685	160	8μ" Au 30μ" Au	5177984-8 5084614-8	5179230-8 —	5177986-8 5-5177986-8
71.20 2.803	77.80 3.063	76.20 3.000	180	8μ" Au 30μ" Au	5177984-9 5084614-9	5179230-9 —	— —
79.20 3.118	85.80 3.378	84.20 3.315	200	8μ" Au 30μ" Au	1-5177984-0 1-5084614-0	1-5179230-0 —	— —

Note: Part Numbers are RoHS compliant.

7mm Plugs for 7 [.276],
11 [.433] and 15 [.591]
Stacking Heights

Material and Finish

Housing — High temperature thermo-plastic, natural color, 94V-0 rated

Contacts — Brass; duplex plated
0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated
0.00130 [.000051] min. nickel

Related Product Data

Performance Characteristics —
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Stacking Height Combinations —
page 72

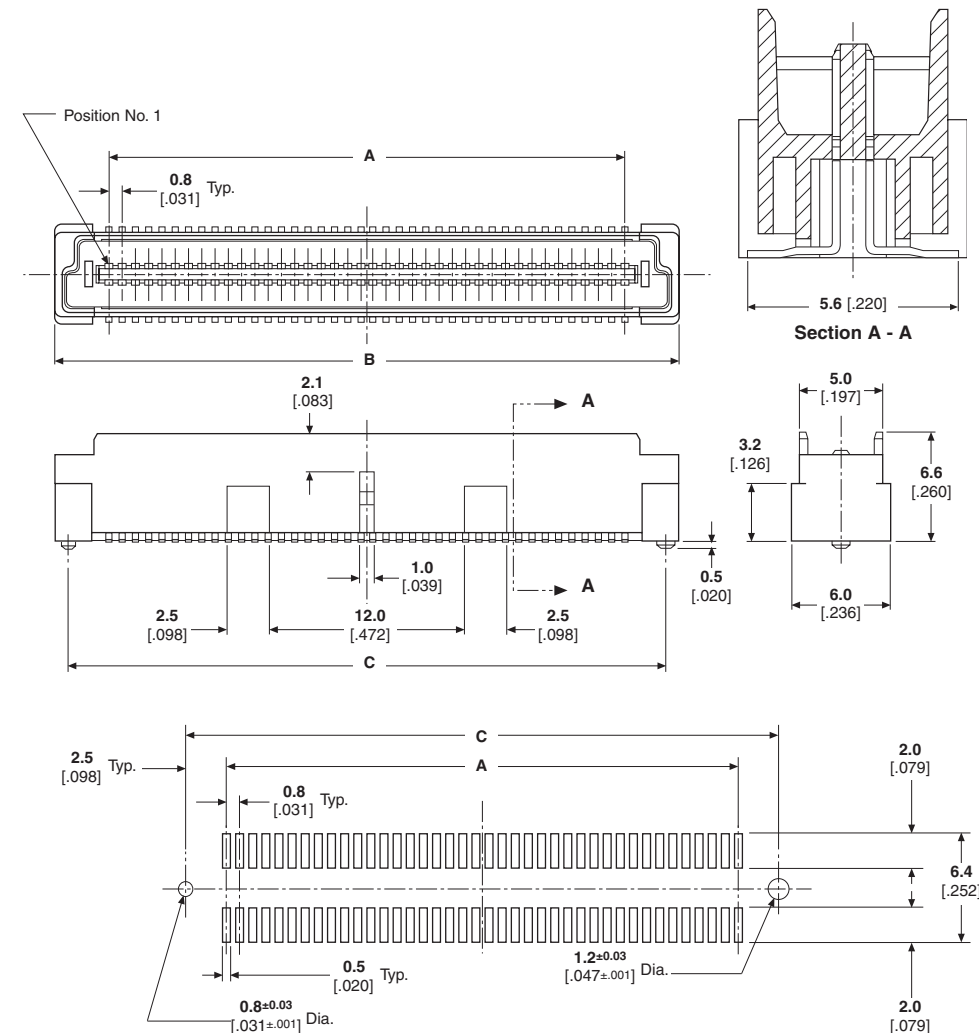
Mating Receptacles — pages 78
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Technical Documents (page 113)

Product Specification
108-5390

Fine Pitch SMT Stacking Connectors
(Parallel Board-to-Board)

0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch (Continued)



Recommended PC Board Layout

Dimensions			No. of Positions	Plating Type	Part Numbers		
A	B	C			Tube	Tube w/ Pickup Cap	Tape and Reel
15.20 .598	21.80 .858	20.20 .795	40	8µ" Au 30µ" Au	5179030-1 1-5179030-1	4-5179230-1 2-5179030-1	2-5177986-1 —
23.20 .913	29.80 1.173	28.20 1.110	60	8µ" Au 30µ" Au	5179030-2 1-5179030-2	4-5179230-2 2-5179030-2	2-5177986-2 —
31.20 1.228	37.80 1.488	36.20 1.425	80	8µ" Au 30µ" Au	5179030-3 1-5179030-3	4-5179230-3 2-5179030-3	2-5177986-3 —
39.20 1.543	45.80 1.803	44.20 1.740	100	8µ" Au 30µ" Au	5179030-4 1-5179030-4	4-5179230-4 2-5179030-4	2-5177986-4 —
47.20 1.858	53.80 2.118	52.20 2.055	120	8µ" Au 30µ" Au	5179030-5 1-5179030-5	4-5179230-5 2-5179030-5	2-5177986-5 —
55.20 2.173	61.80 2.433	60.20 2.370	140	8µ" Au 30µ" Au	5179030-6 1-5179030-6	4-5179230-6 2-5179030-6	2-5177986-6 —
63.20 2.488	69.80 2.748	68.20 2.685	160	8µ" Au 30µ" Au	5179030-8 1-5179030-8	4-5179230-8 2-5179030-8	2-5177986-8 —
71.20 2.803	77.80 3.063	76.20 3.000	180	8µ" Au 30µ" Au	5179030-9 1-5179030-9	4-5179230-9 2-5179030-9	2-5177986-9 —
79.20 3.118	85.80 3.378	84.20 3.315	200	8µ" Au 30µ" Au	1-5179030-0 2-5179030-0	5-5179230-0 3-5179030-0	3-5177986-0 —

Note: Part Numbers are RoHS compliant.

5mm Receptacles for 5 [.197], 6 [.236], 7 [.276] and 8 [.315] Stacking Heights

Material and Finish

Housing — High temperature thermo-plastic, natural color, 94V-0 rated

Contacts — Beryllium copper; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data

Performance Characteristics — page 71

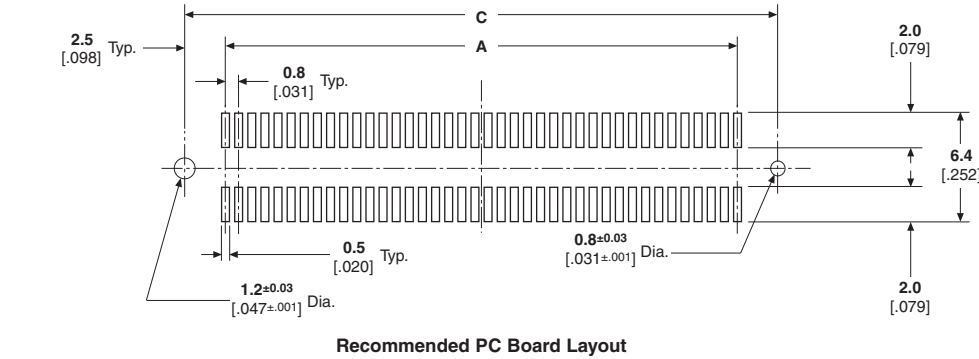
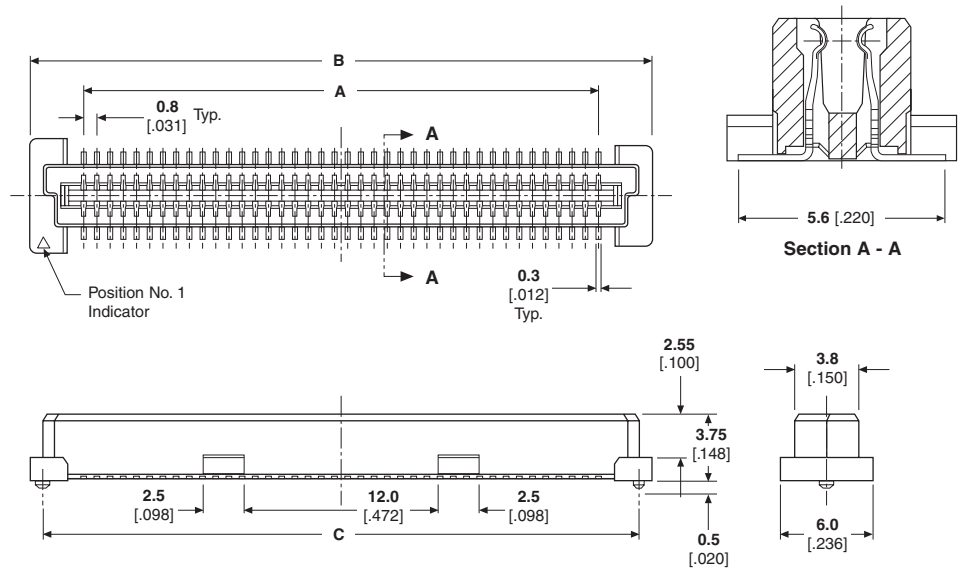
Stacking Height Combinations — page 72

Mating Plugs — pages 74 thru 77, and 81

Technical Documents (page 113)

Product Specification
108-5390

0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch (Continued)



Dimensions			No. of Positions	Plating Type	Part Numbers		
A	B	C			Tube	Tube w/ Pickup Cap	Tape and Reel
15.20 .598	21.80 .858	20.20 .795	40	8µ" Au 30µ" Au	5177983-1 6123000-1	5179229-1 —	5177985-1 5353999-1
23.20 .913	29.80 1.173	28.20 1.110	60	8µ" Au 30µ" Au	5177983-2 6123000-2	5179229-2 —	5177985-2 5353999-2
31.20 1.228	37.80 1.488	36.20 1.425	80	8µ" Au 30µ" Au	5177983-3 6123000-3	5179229-3 —	5177985-3 5353999-3
39.20 1.543	45.80 1.803	44.20 1.740	100	8µ" Au 30µ" Au	5177983-4 6123000-4	5179229-4 —	5177985-4 5353999-4
47.20 1.858	53.80 2.118	52.20 2.055	120	8µ" Au 30µ" Au	5177983-5 6123000-5	5179229-5 —	5177985-5 5353999-5
55.20 2.173	61.80 2.433	60.20 2.370	140	8µ" Au 30µ" Au	5177983-6 6123000-6	5179229-6 —	5177985-6 5353999-6
63.20 2.488	69.80 2.748	68.20 2.685	160	8µ" Au 30µ" Au	5177983-8 6123000-8	5179229-8 —	5177985-8 5353999-8
71.20 2.803	77.80 3.063	76.20 3.000	180	8µ" Au 30µ" Au	5177983-9 6123000-9	5179229-9 —	— —
79.20 3.118	85.80 3.378	84.20 3.315	200	8µ" Au 30µ" Au	1-5177983-0 1-6123000-0	1-5179229-0 —	— —

Note: Part Numbers are RoHS compliant.

0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch (Continued)

**9mm Receptacles for
9 [.354]. 10 [.394],
11 [.433] and 12 [.472]
Stacking Heights**

Material and Finish

Housing — High temperature thermoplastic, natural color, 94V-0 rated

Contacts — Beryllium copper; duplex plated 0.00020 [0.00008] min. gold on contact area, 0.00100 [0.00039] min. tin on solder area, with entire contact underplated 0.00130 [0.00051] min. nickel

Related Product Data

Performance Characteristics —
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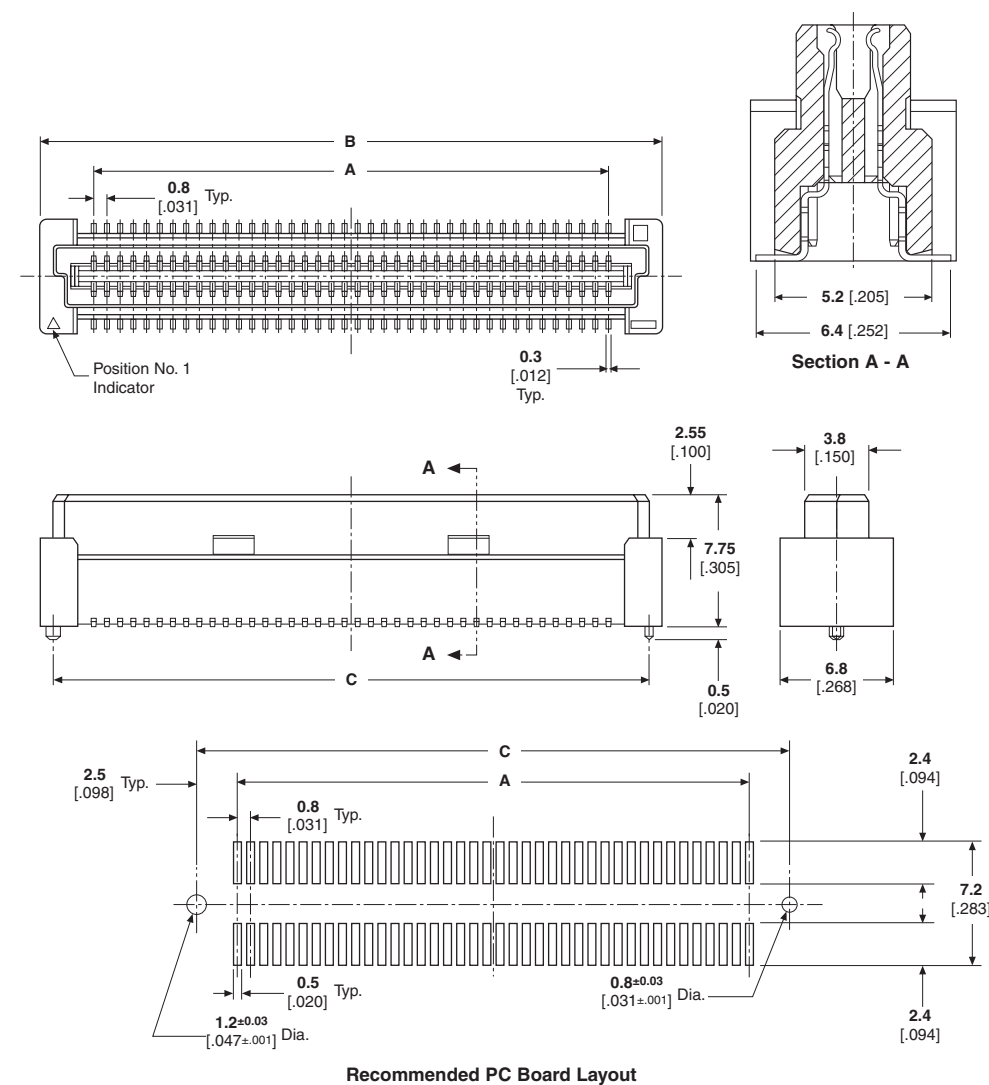
Stacking Height Combinations —
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Mating Plugs — pages 74 thru 77, and 81

Technical Documents (page 113)

Product Specification

108-5390



Dimensions			No. of Positions	Plating Type	Part Numbers		
A	B	C			Tube	Tube w/ Pickup Cap	Tape and Reel
15.20 .598	21.80 .858	20.20 .795	40	8μ ⁺ Au	5-5179009-1	—	5-5179180-1
				30μ ⁺ Au	5084613-1	—	7-5179180-1
23.20 .913	29.80 1.173	28.20 1.110	60	8μ ⁺ Au	5-5179009-2	5-5179232-2	5-5179180-2
				30μ ⁺ Au	5084613-2	—	7-5179180-2
31.20 1.228	37.80 1.488	36.20 1.425	80	8μ ⁺ Au	5-5179009-3	5-5179232-3	5-5179180-3
				30μ ⁺ Au	5084613-3	—	7-5179180-3
39.20 1.543	45.80 1.803	44.20 1.740	100	8μ ⁺ Au	5-5179009-4	5-5179232-4	5-5179180-4
				30μ ⁺ Au	5084613-4	—	7-5179180-4
47.20 1.858	53.80 2.118	52.20 2.055	120	8μ ⁺ Au	5-5179009-5	5-5179232-5	5-5179180-5
				30μ ⁺ Au	5084613-5	—	7-5179180-5
55.20 2.173	61.80 2.433	60.20 2.370	140	8μ ⁺ Au	5-5179009-6	5-5179232-6	5-5179180-6
				30μ ⁺ Au	5084613-6	—	7-5179180-6
63.20 2.488	69.80 2.748	68.20 2.685	160	8μ ⁺ Au	5-5179009-8	5-5179232-8	—
				30μ ⁺ Au	5084613-8	—	—
71.20 2.803	77.80 3.063	76.20 3.000	180	8μ ⁺ Au	5-5179009-9	5-5179232-9	—
				30μ ⁺ Au	5084613-9	—	—
79.20 3.118	85.80 3.378	84.20 3.315	200	8μ ⁺ Au	6-5179009-0	6-5179232-0	—
				30μ ⁺ Au	1-5084613-0	—	—

Note: Part Numbers are RoHS compliant.

0.8mm Free Height (FH) Connectors



13mm Receptacles for
13 [.512], 14 [.551],
15 [.591] and 16 [.630]
Stacking Heights

Material and Finish

Housing — High temperature thermo-
plastic, natural color, 94V-0 rated
Contacts — Beryllium copper; duplex
plated 0.00020 [.000008] min. gold on
contact area, 0.00100 [.000039] min. tin
on solder area, with entire contact
underplated 0.00130 [.000051] min.
nickel

Related Product Data

Performance Characteristics —
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Stacking Height Combinations —
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Mating Plugs — pages 74 thru 77,
and 81

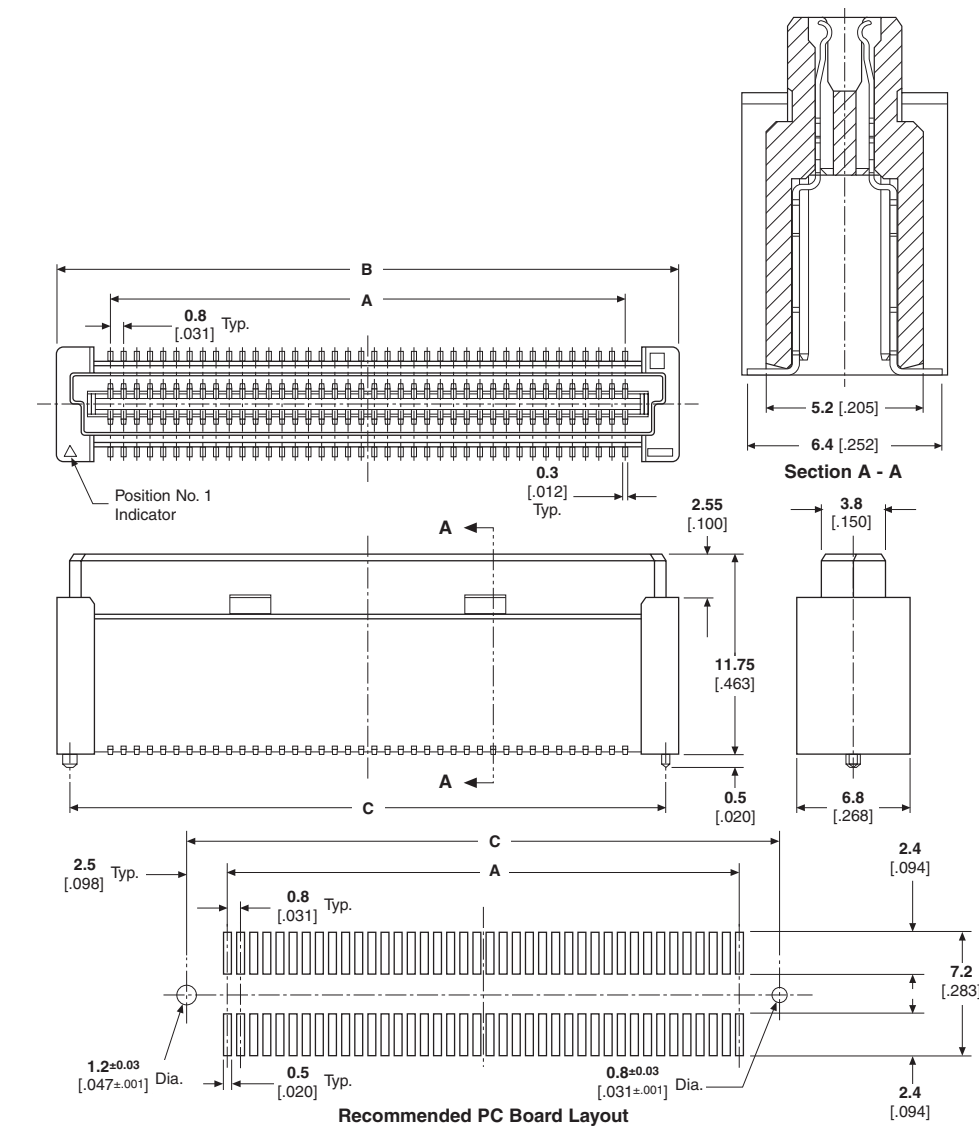
Technical Documents (page 113)

Product Specification
108-5390

Fine Pitch SMT Stacking Connectors
(Parallel Board-to-Board)



0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch (Continued)



Dimensions			No. of Positions	Plating Type	Part Numbers		
A	B	C			Tube	Tube w/ Pickup Cap	Tape and Reel
15.20 .598	21.80 .858	20.20 .795	40	8μ" Au 30μ" Au	5-5179010-1 5-6123212-1	5-5179233-1 —	5084616-1 5084618-1
23.20 .913	29.80 1.173	28.20 1.110	60	8μ" Au 30μ" Au	5-5179010-2 5-6123212-2	5-5179233-2 —	5084616-2 5084618-2
31.20 1.228	37.80 1.488	36.20 1.425	80	8μ" Au 30μ" Au	5-5179010-3 5-6123212-3	5-5179233-3 —	5084616-3 5084618-3
39.20 1.543	45.80 1.803	44.20 1.740	100	8μ" Au 30μ" Au	5-5179010-4 5-6123212-4	5-5179233-4 —	5084616-4 5084618-4
47.20 1.858	53.80 2.118	52.20 2.055	120	8μ" Au 30μ" Au	5-5179010-5 5-6123212-5	5-5179233-5 —	5084616-5 5084618-5
55.20 2.173	61.80 2.433	60.20 2.370	140	8μ" Au 30μ" Au	5-5179010-6 5-6123212-6	5-5179233-6 —	5084616-6 5084618-6
63.20 2.488	69.80 2.748	68.20 2.685	160	8μ" Au 30μ" Au	5-5179010-8 5-6123212-8	5-5179233-8 —	5084616-8 5084618-8
71.20 2.803	77.80 3.063	76.20 3.000	180	8μ" Au 30μ" Au	5-5179010-9 5-6123212-9	5-5179233-9 —	5084616-9 5084618-9
79.20 3.118	85.80 3.378	84.20 3.315	200	8μ" Au 30μ" Au	6-5179010-0 6-6123212-0	6-5179233-0 7-6123212-0	— —

Note: Part Numbers are RoHS compliant.

8mm Plugs for 5 [.197],
9 [.354] and 13 [.512]
Stacking Heights

Material and Finish

Housing — High temperature thermo-plastic, natural color, 94V-0 rated

Contacts — Brass; duplex plated
0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data

Performance Characteristics —
page 71

Stacking Height Combinations —
page 72

Mating Receptacles — pages 78
thru 80

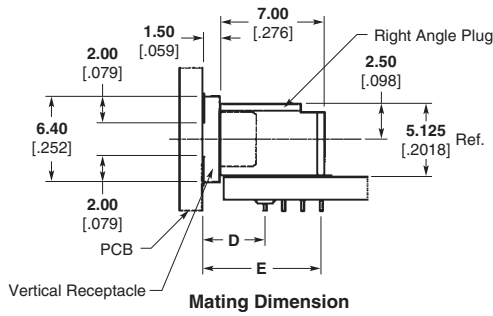
Technical Documents (page 113)

Product Specification
108-5390

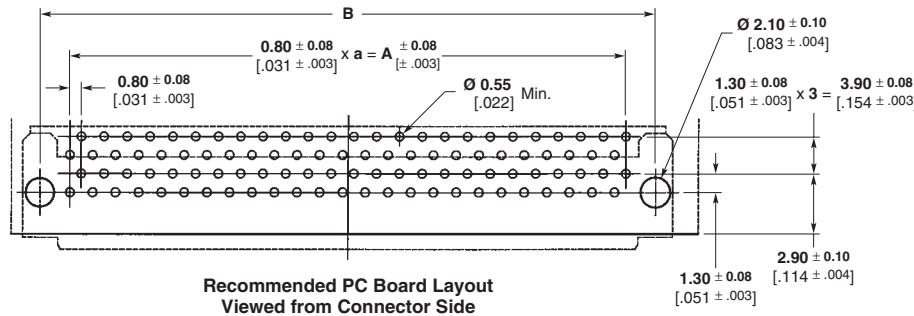
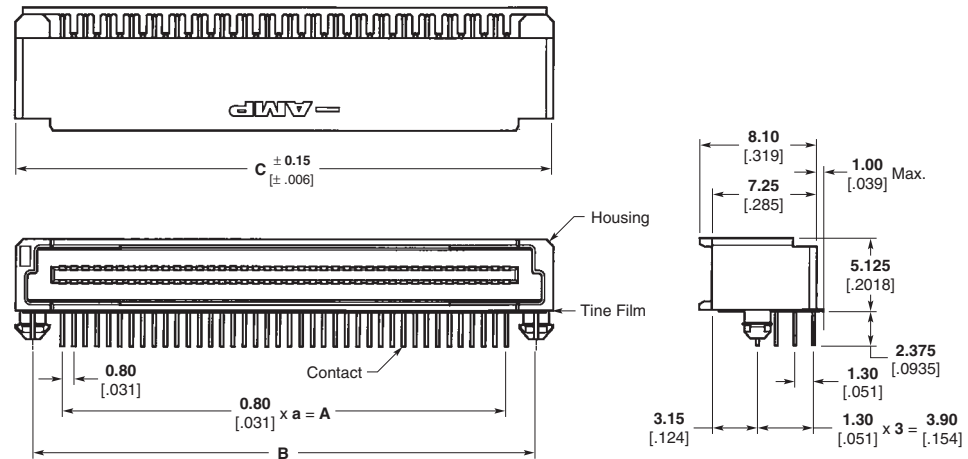
Fine Pitch SMT Stacking Connectors
(Parallel Board-to-Board)

AMP

0.8mm Free Height Right Angle Plugs, 0.8 [.031] Pitch



Receptacle Height	Dimension	
	D	E
5.00 .197	4.40 .173	8.30 .327
9.00 .354	8.40 .331	12.30 .484
13.00 .512	12.40 .488	16.30 .642



Dimension				No. of Positions	Part Number
A	B	C	a		
23.20 .913	27.40 1.079	29.80 1.173	29	60	316229-2
31.20 1.228	35.40 1.394	37.80 1.488	39	80	316229-3

Note: Part Numbers are RoHS compliant.

0.8mm Free Height (FH)
Connectors

