

Stacking Height Guide for Parallel Board-to-Board Applications

Stacking Height Guide for Parallel Board-to-Board Applications (Continued)

[illegible]

0.5mm Fine Stack and Fine Mate Connectors

Product Facts

- Ultra fine, 0.5 [.020] pitch SMT connectors for board-to-board interconnections
- Low profile parallel board stacking heights as low as 1.5 [.059]
- Horizontal versions available for right angle board-to-board applications
- Surface areas provided to accommodate vacuum nozzles
- Available packaged in tape and reel for automatic placement per EIAJ standards
- Offered with tin or gold plating on mating surfaces
- Solder pegs are included for anti-peeling



Note: Fine Stack connectors are shown at the bottom; Fine Mate connectors are shown on top.

The Tyco Electronics 0.5mm Fine Stack and Fine Mate product lines are economical, surface-mount, ultra-fine pitch board-to-board connectors. Both product lines have been developed to meet the latest needs of the electronic industry for high density packaging.

These connectors offer a 0.5 [.020] contact pitch and parallel board stacking heights as low as 1.5 [.059] for Fine Stack connectors and ranging from 4.5 [.177] to 6.0 [.236] for Fine Mate connectors. They are ideally suited for applications requiring miniaturization, such as cellular phones, pagers, notebook computers, camcorders and other consumer electronics.

Both Fine Stack and Fine Mate connectors were designed for economical, automatic placement onto SMT printed circuit boards. The tab and receptacle designs include surface areas to accommodate "pick and place" vacuum nozzles without secondary covers. All products are "tape and reel" packaged, conforming to EIAJ standards.

0.5mm Fine Stack Receptacles, 0.5 [.020] Pitch

1.5mm [.059"] Stacking Height

Material and Finish

Housing — 6T nylon, high heat resistant resin

Contacts — Phosphor bronze, plated gold over nickel

Solder Pegs — Copper alloy, plated tin

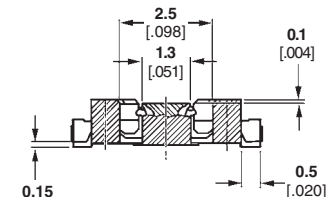
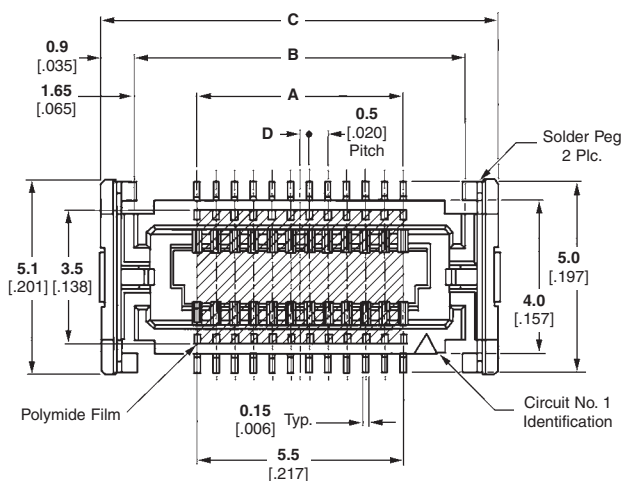
Related Product Data

Mating Tabs — page 15

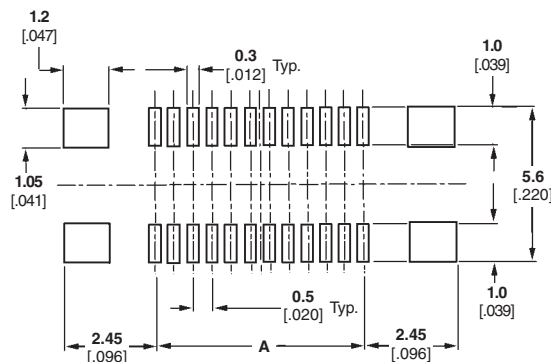
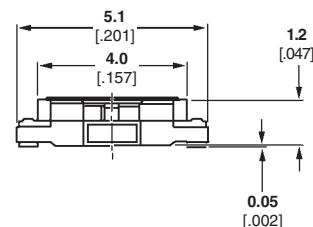
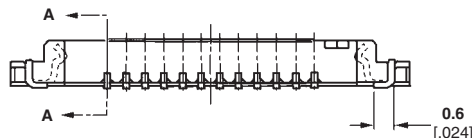
Technical Documents (page 113)

Product Specification

108-5546



Section A - A



Recommended PC Board Layout
(PC Board Thickness = 0.6 [.024] Min.)

No. of Positions	Dimensions				Keyed	Receptacle Part Number
	A	B	C	D		
20	4.5 .177	7.8 .307	9.6 .378	0.25 .010	Yes	2-5353512-0
30	7.0 .276	10.3 .406	12.1 .476	0.0	Yes	3-5353512-0
40	9.5 .374	12.8 .504	14.6 .575	0.25 .010	Yes	4-5353512-0
50	12.0 .472	15.3 .602	17.1 .673	0.0	No	5-5353159-0
60	14.5 .571	17.8 .701	19.6 .772	0.25 .010	No	6-5353159-0
70	17.0 .669	20.3 .799	22.1 .870	0.0	No	7-5353159-0
80	19.5 .768	22.8 .898	24.6 .969	0.25 .010	No	8-5353159-0

Note: Part Numbers are RoHS compliant.

1.5mm [.059"] Stacking Height

Material and Finish

Housing — 6T nylon, high heat resistant resin

Contacts — Phosphor bronze, plated gold over nickel

Solder Pegs — Copper alloy, plated tin

Related Product Data

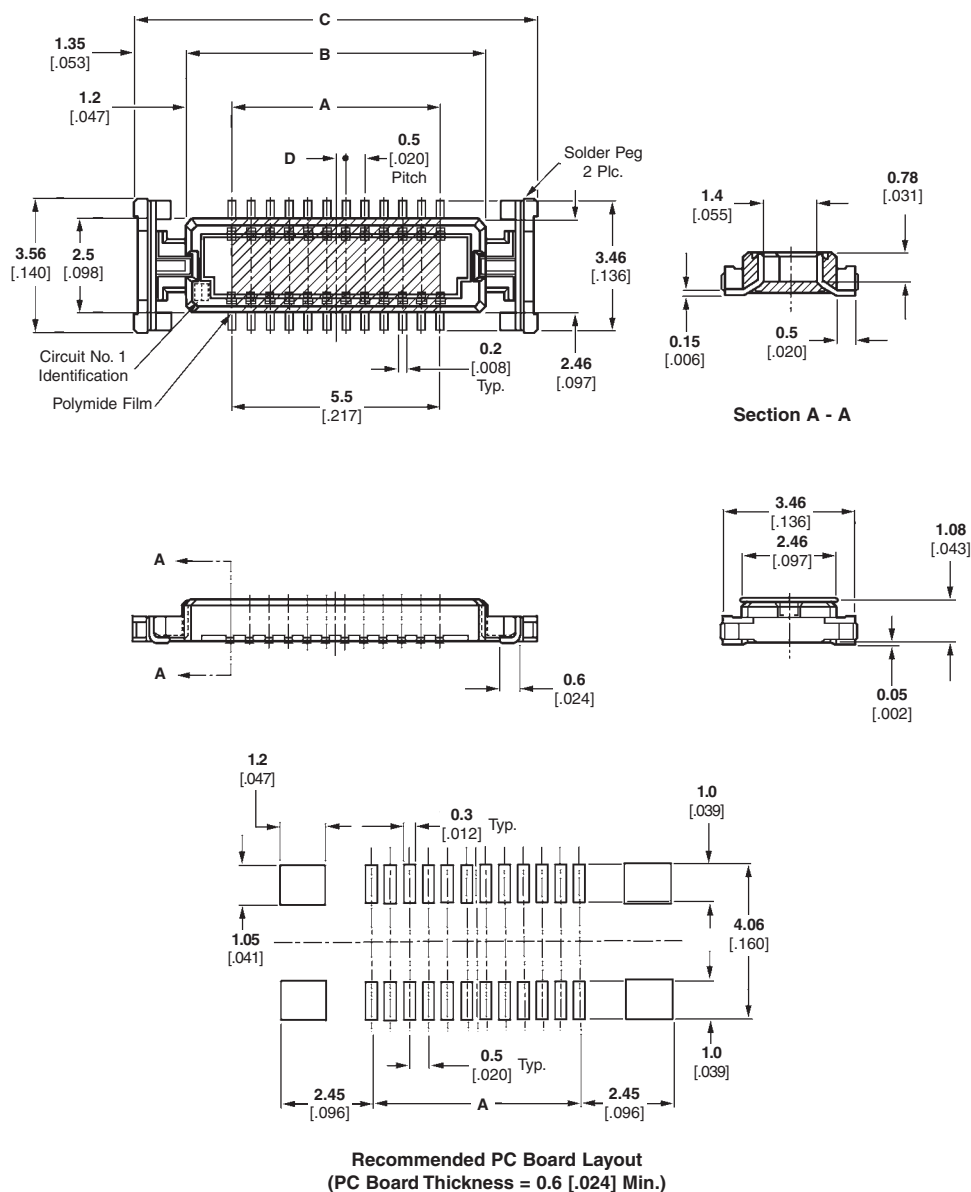
Mating Receptacles — page 14

Technical Documents (page 113)

Product Specification

108-5546

0.5mm Fine Stack Tabs (Plugs), 0.5 [.020] Pitch



No. of Positions	Dimensions				Stacking Height	Keyed	Tab Part Number
	A	B	C	D			
20	4.5 .177	6.9 .272	9.6 .378	0.25 .010	1.5 .059	Yes	2-5353515-0
30	7.0 .276	9.4 .370	12.1 .476	0.0	1.5 .059	Yes	3-5353515-0
40	9.5 .374	11.9 .469	14.6 .575	0.25 .010	1.5 .059	Yes	4-5353515-0
50	12.0 .472	14.4 .567	17.1 .673	0.25 .01	1.5 .059	No	5-5353164-0
60	14.5 .571	16.9 .665	19.6 .772	0.25 .010	1.5 .059	No	6-5353164-0
70	17.0 .669	19.4 .764	22.1 .870	0.0	1.5 .059	No	7-5353164-0
80	19.5 .768	21.9 .862	24.6 .969	0.25 .010	1.5 .059	No	8-5353164-0

Note: Part Numbers are RoHS compliant.

108-5425



No. of Positions	Dimensions				Keyed	With Boss	Part Number
	A	B	C	D			
16	3.50 .138	5.35 .211	8.40 .331	—	Yes	No	1-1747022-0
20	4.50 .177	5.75 .226	8.80 .346	—	No	No	1565357-9
				—	Yes	No	1747022-9
50	12.00 .472	13.25 .522	16.30 .642	—	No	No	1565357-6
60	14.50 .571	15.75 .620	18.80 .740	—	No	No	1565357-5
				17.85 .703	No	Yes	5-1565357-5
70	17.00 .669	18.25 .719	21.30 .826	—	No	No	1565357-4
				20.95 .825	Yes	Yes	5-1747022-4
80	19.50 .768	21.35 .841	24.40 .961	—	No	No	1565357-3
				23.45 .923	No	Yes	5-1565357-3
				—	Yes	No	1747022-3
				23.45 .923	Yes	Yes	5-1747022-3
100	24.50 .965	25.75 1.014	28.80 1.134	—	No	No	1565357-1

South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

**4.0mm, 4.5mm, 5.5mm
and 6.0mm Stacking
Heights**

Material and Finish

Housing — 6T nylon, high heat resistant resin

Contacts — Phosphor bronze, plated gold with entire contact underplated nickel

Tail Plate — Copper alloy, plated tin

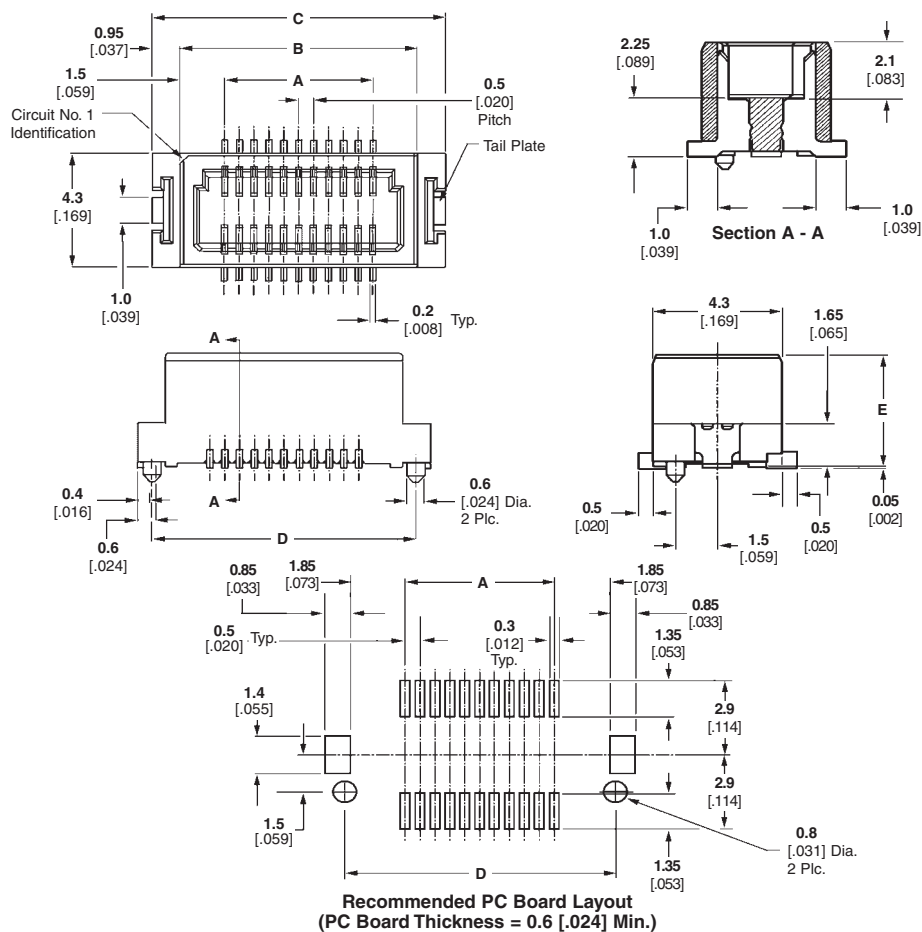
Related Product Data

Mating Receptacles — page 16

Technical Documents (page 113)

Product Specification
108-5425

0.5mm Fine Mate Vertical Tabs (Plugs), 0.5 [.020] Pitch



No. of Positions	Dimensions					Stack Height	Keyed	With Boss	Part Number
	A	B	C	D	E				
16	3.50 .138	5.35 .211	8.40 .331	—	3.30 .130	4.50 .177	Yes	No	1-1747038-0
20	4.50 .177	5.75 .226	8.80 .346	—	3.30 .130	4.50 .177	Yes	No	1747038-9
				—	4.30 .169	5.50 .217	No	No	1565359-9
50	12.00 .472	13.25 .522	16.30 .642	—	4.80 .189	6.00 .236	No	No	1747032-6
				17.85 .703	2.70 .106	4.00 .157	No	Yes	5-1747028-5
60	14.50 .571	15.75 .620	18.80 .740	—	3.30 .130	4.50 .177	No	No	1565359-5
				—	4.30 .169	5.50 .217	No	No	1747032-5
70	17.00 .669	18.25 .719	21.30 .826	—	2.70 .106	4.00 .157	No	No	1747028-4
				—	3.30 .130	4.50 .177	No	No	1747028-3
80	19.50 .768	21.35 .841	24.40 .961	23.45 .923	3.30 .130	4.50 .177	No	Yes	1565359-3
				23.45 .923	4.30 .169	5.50 .217	No	Yes	5-1747254-3
100	24.50 .965	25.75 1.014	28.80 1.134	—	4.80 .189	6.00 .236	No	No	1747035-3
				—	2.70 .106	4.00 .157	No	No	1747028-1
				—	3.30 .130	4.50 .177	No	No	1565359-1

Note: Part Numbers are RoHS compliant.

**4.0mm, 4.5mm, 5.5mm
and 6.0mm Stacking
Heights**

Material and Finish

Housing — 6T nylon, high heat resistant resin

Contacts — Phosphor bronze, plated gold with entire contact underplated nickel

Tail Plate — Copper alloy, plated tin

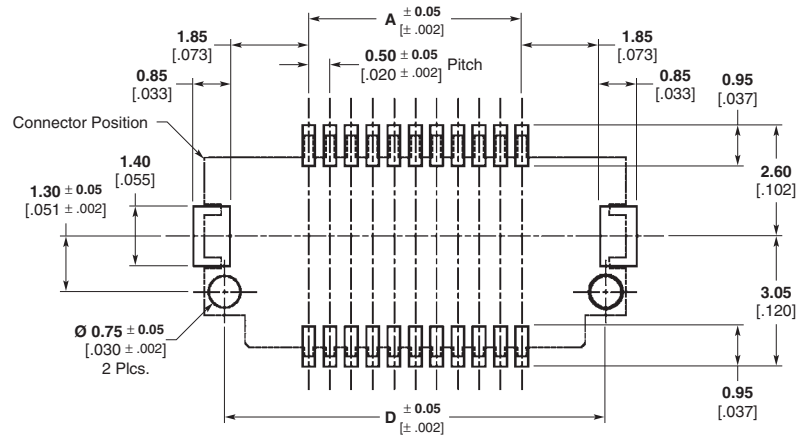
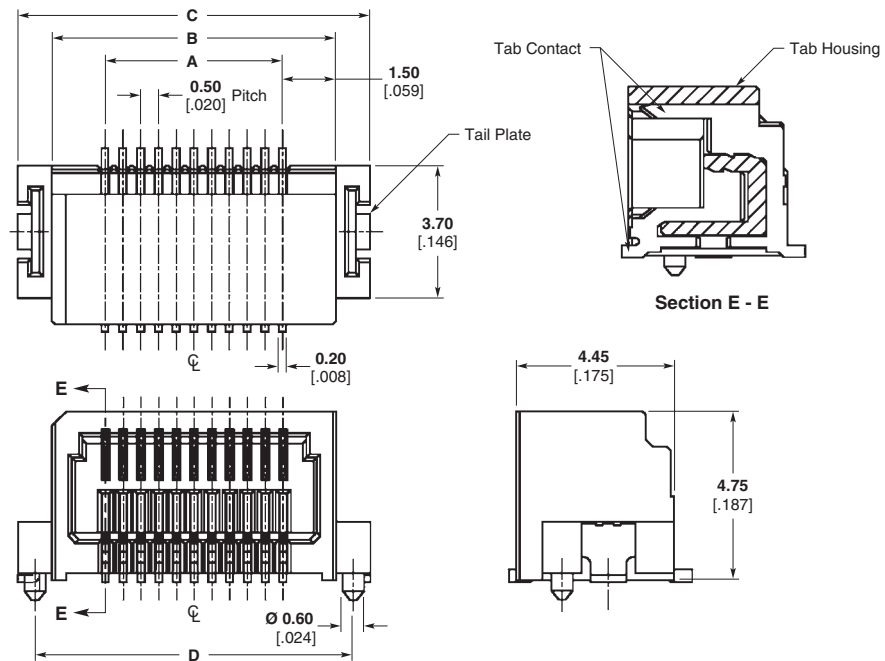
Related Product Data

Mating Receptacles — page 16

Technical Documents (page 113)

Product Specification
108-5425

0.5mm Fine Mate Right Angle Tabs (Plugs), 0.5 [.020] Pitch



Recommended PC Board Layout

No. of Positions	Dimensions				Keyed	With Boss	Part Number
	A	B	C	D			
16	3.50 .138	5.35 .211	8.40 .331	—	Yes	No	1-1747257-0
20	4.50 .177	5.75 .226	8.80 .346	—	No	No	1747025-9
50	12.00 .472	13.25 .522	16.30 .642	—	No	No	1747025-6
60	14.50 .571	15.75 .620	18.80 .740	—	No	No	1747025-5
70	17.00 .669	18.25 .719	21.30 .826	—	No	No	1747025-4
				20.95 .825	No	Yes	5-1747025-4
80	19.50 .768	21.35 .841	24.40 .961	—	No	No	1747025-3
				23.45 .923	No Yes	Yes Yes	5-1747025-3 5-1747257-3
100	24.50 .965	25.75 1.014	28.80 1.134	—	No	No	1747025-1

Note: Part Numbers are RoHS compliant.