

# Fine Pitch SMT Board to Board Connectors

## Series 5046



Series 5046 is the board to board, fine pitch connector which meets the requirement for high density circuitry in the market and designed especially for portable equipment. Mated height between boards can be from 3.0mm to 4.5mm.

### FEATURES

Series 5046 is offered with or without strain relief.

Designed to have the strong resistance against torque forces on mating area to achieve the high reliability in the natural fall shock environment.

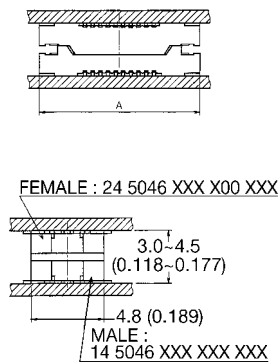
Adoption of bellows type contact with excellent contact reliability.

High durability to achieve 50 mating cycles.

Parts are supplied in tape and reel with 1000 pieces per reel.

### SPECIFICATIONS

Series	5046
Mated Height	3.0, 3.5, 4.0, 4.5mm
Pitch	0.5mm
Current	0.4A Max
Voltage	50V Max
D.W. Voltage	500V rms/min.
Mating Cycles	50



No. of Pos.	Dimension A
020	10.5 (0.413)
030	13.0 (0.512)
040	15.5 (0.610)
050	18.0 (0.709)
060	20.5 (0.807)
070	23.0 (0.906)
080	25.5 (1.004)
090	28.0 (1.102)
100	30.5 (1.201)
110	33.0 (1.299)
120	35.5 (1.398)

Series	Variation	Mated Height	Gold Plating	Strain Relief	Vacuum Cover	Part Number			Number of Positions																
									020	030	040	050	060	070	080	090	100	110	120						
5046	Plug	3.0mm	0.1µm	0	O	14 5046	XXX	6	30	829	O	O	O	O	O	O	O	O	O	O	O	O	O		
						14 5046	XXX	1	30	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
			14 5046	XXX	5	30	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
			14 5046	XXX	0	30	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
		14 5046	XXX	6	35	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
		14 5046	XXX	1	35	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
		14 5046	XXX	5	35	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
		14 5046	XXX	0	35	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
		14 5046	XXX	6	40	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
		14 5046	XXX	1	40	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
		14 5046	XXX	5	40	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
		14 5046	XXX	0	40	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	14 5046	XXX	6	45	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	1	45	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	5	45	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	0	45	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	1	45	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	5	45	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	0	45	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	6	00	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	1	00	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	5	00	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	14 5046	XXX	2	00	829	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	

Types without strain relief offer greater space saving on the pcb

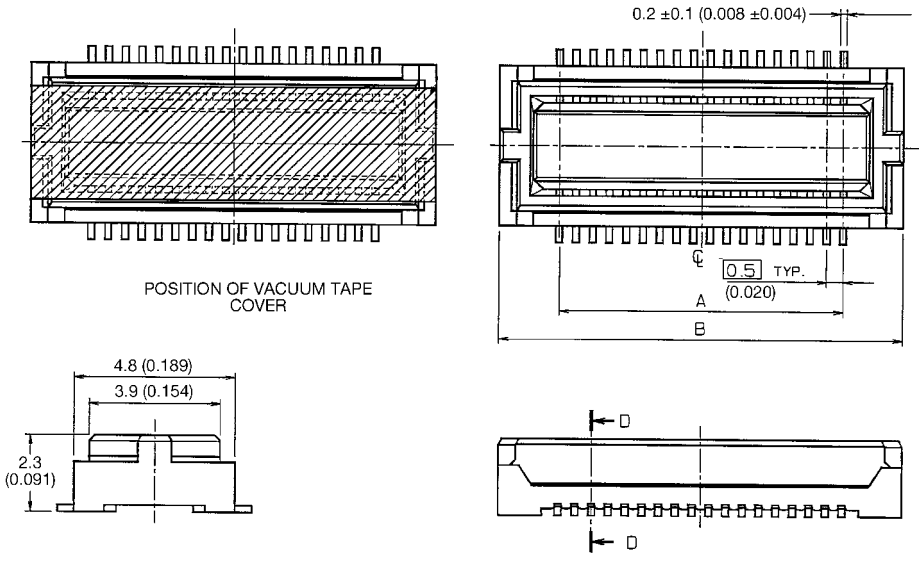
O = Available  
1 = Not available

# Fine Pitch SMT Board to Board Connectors

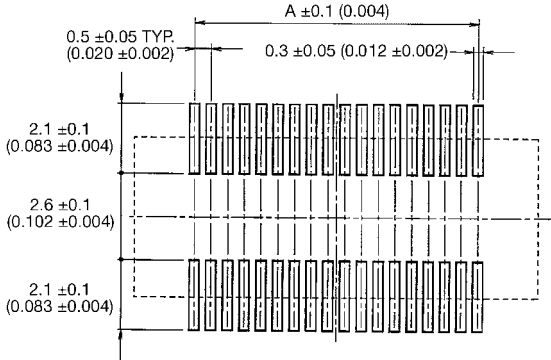
## Series 5046

### Plug for Mated Height with Receptacle of 3.0mm

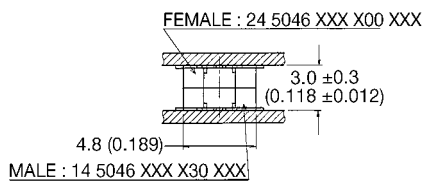
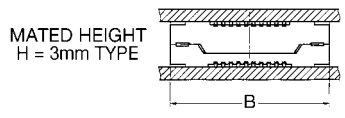
Without Strain Relief



No. of Pos.	Dimension	
	A	B
020	4.5 (0.177)	8.1 (0.319)
030	7.0 (0.276)	10.6 (0.417)
040	9.5 (0.374)	13.1 (0.516)
050	12.0 (0.472)	15.6 (0.614)
060	14.5 (0.571)	18.1 (0.713)
070	17.0 (0.669)	20.6 (0.811)
080	19.5 (0.768)	23.1 (0.909)
090	22.0 (0.866)	25.6 (1.008)
100	24.0 (0.945)	28.1 (1.106)
110	27.0 (1.063)	30.5 (1.201)
120	29.5 (1.161)	33.1 (1.303)



RECOMMENDED P.C. BOARD LAYOUT



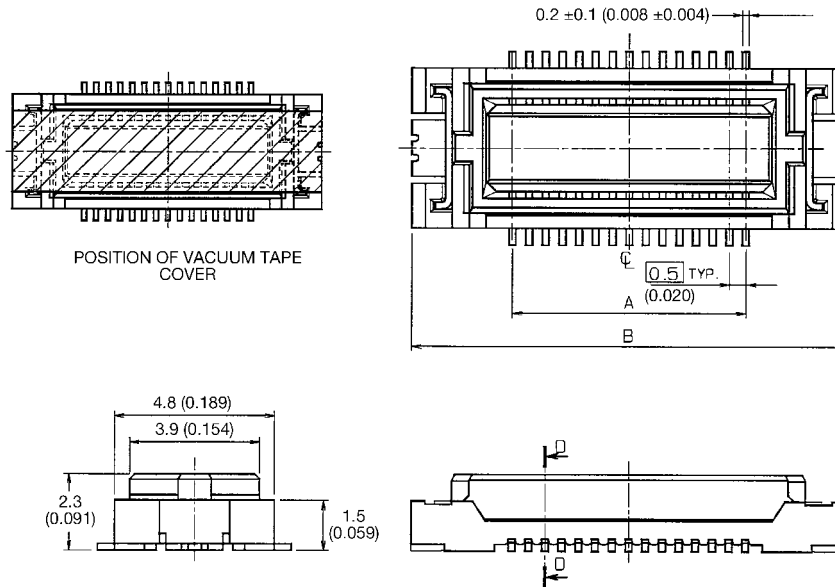
# Fine Pitch SMT Board to Board Connectors



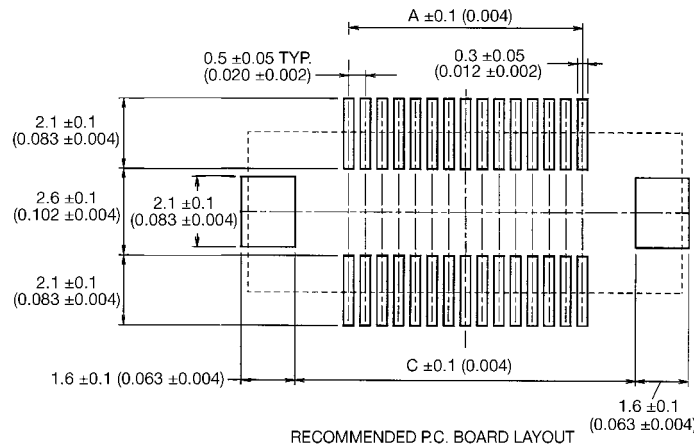
Series 5046

Plug for Mated Height with Receptacle of 3.0mm

With Strain Relief



No. of Pos.	Dimension		
	A	B	C
020	4.5 (0.177)	10.5 (0.413)	7.7 (0.303)
030	7.0 (0.276)	13.0 (0.512)	10.2 (0.402)
040	9.5 (0.374)	15.5 (0.610)	12.7 (0.500)
050	12.0 (0.472)	18.0 (0.709)	15.2 (0.598)
060	14.5 (0.571)	20.5 (0.807)	17.7 (0.697)
070	17.0 (0.669)	23.0 (0.906)	20.2 (0.795)
080	19.5 (0.768)	25.5 (1.004)	22.7 (0.894)
090	22.0 (0.866)	28.0 (1.102)	25.2 (0.992)
100	24.5 (0.965)	30.5 (1.201)	27.7 (1.091)
110	27.0 (1.063)	33.0 (1.299)	30.2 (1.189)
120	29.5 (1.161)	35.5 (1.398)	32.7 (1.287)



## HOW TO ORDER

<b>14</b>	<b>5046</b>	<b>XXX</b>	<b>X30</b>	<b>829</b>
<b>Prefix</b> 14 = Male	<b>Series Number</b>	<b>Number of Positions</b> 020 030 040 050 060 070 080 090 100 110 120	<b>Variation Code</b> 0 = Without strain relief 1 = With strain relief 5 = Without strain relief, with vacuum cover 6 = With strain relief, with vacuum cover	<b>Finish Code</b>

Mated Height	P/N	
3.0mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X30 829

Parts are supplied in tape and reel packaging with 1000 pieces per reel.

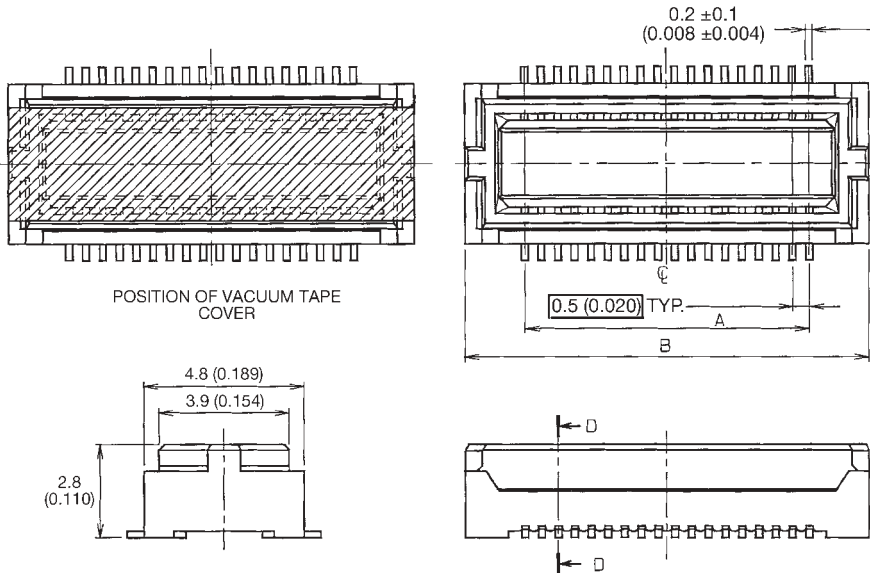
# Fine Pitch SMT Board to Board Connectors



Series 5046

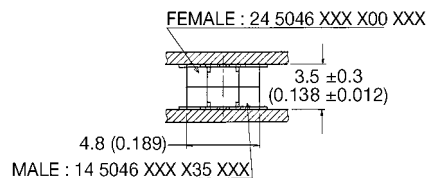
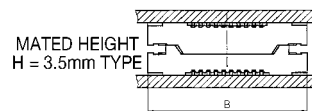
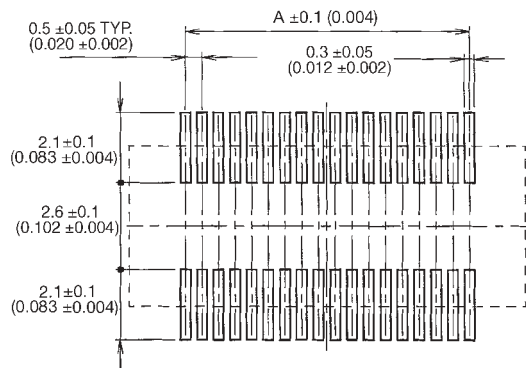
Plug for Mated Height with Receptacle of 3.5mm

Without Strain Relief



POSITION OF VACUUM TAPE COVER

No. of Pos.	Dimension	
	A	B
020	4.5 (0.177)	8.1 (0.319)
030	7.0 (0.276)	10.6 (0.417)
040	9.5 (0.374)	13.1 (0.516)
050	12.0 (0.472)	15.6 (0.614)
060	14.5 (0.571)	18.1 (0.713)
070	17.0 (0.669)	20.6 (0.811)
080	19.5 (0.768)	23.1 (0.909)
090	22.0 (0.866)	25.6 (1.008)
100	24.0 (0.945)	28.1 (1.106)
110	27.0 (1.063)	30.5 (1.201)
120	29.5 (1.161)	33.1 (1.303)



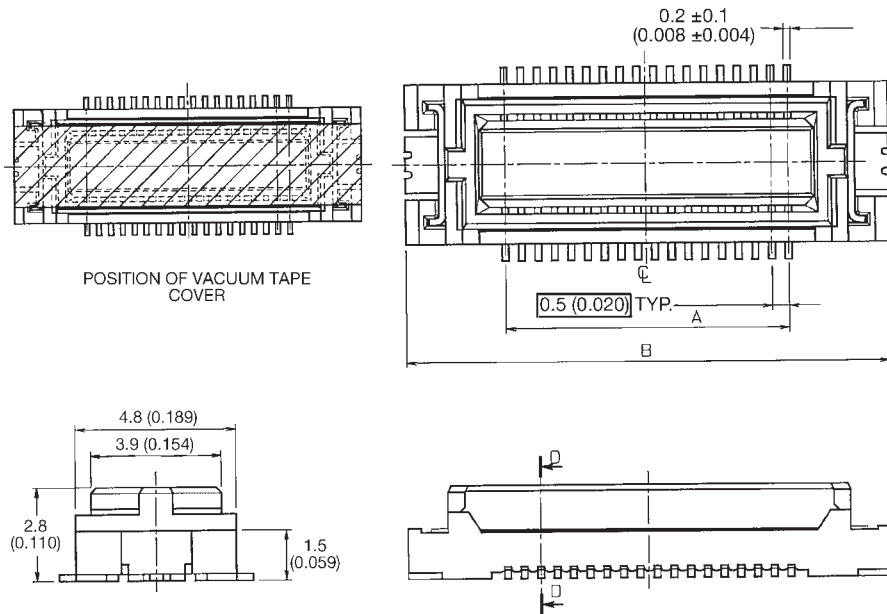
# Fine Pitch SMT Board to Board Connectors



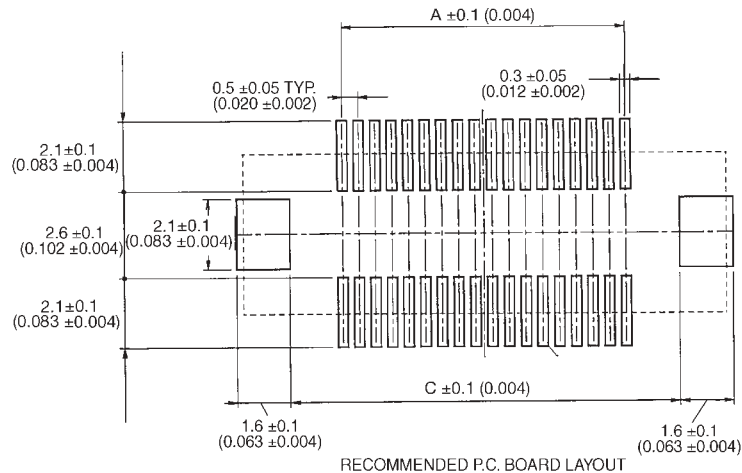
## Series 5046

### Plug for Mated Height with Receptacle of 3.5mm

With Strain Relief



No. of Pos.	Dimension		
	A	B	C
020	4.5 (0.177)	10.5 (0.413)	7.7 (0.303)
030	7.0 (0.276)	13.0 (0.512)	10.2 (0.402)
040	9.5 (0.374)	15.5 (0.610)	12.7 (0.500)
050	12.0 (0.472)	18.0 (0.709)	15.2 (0.598)
060	14.5 (0.571)	20.5 (0.807)	17.7 (0.697)
070	17.0 (0.669)	23.0 (0.906)	20.2 (0.795)
080	19.5 (0.768)	25.5 (1.004)	22.7 (0.894)
090	22.0 (0.866)	28.0 (1.102)	25.2 (0.992)
100	24.5 (0.945)	30.5 (1.201)	27.7 (1.091)
110	27.0 (1.063)	33.0 (1.299)	30.2 (1.189)
120	29.5 (1.161)	35.5 (1.398)	32.7 (1.287)



## HOW TO ORDER

**14**

**Prefix**  
14 = Male

**5046**

**Series Number**

**XXX**

**Number of Positions**

- 020
- 030
- 040
- 050
- 060
- 070
- 080
- 090
- 100
- 110
- 120

**X35**

**Variation Code**

- 0 = Without strain relief
- 1 = With strain relief
- 5 = Without strain relief, with vacuum cover
- 6 = With strain relief, with vacuum cover

**829**

**Finish Code**

Parts are supplied in tape and reel packaging with 1000 pieces per reel.

Mated Height	P/N	
3.5mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X35 829

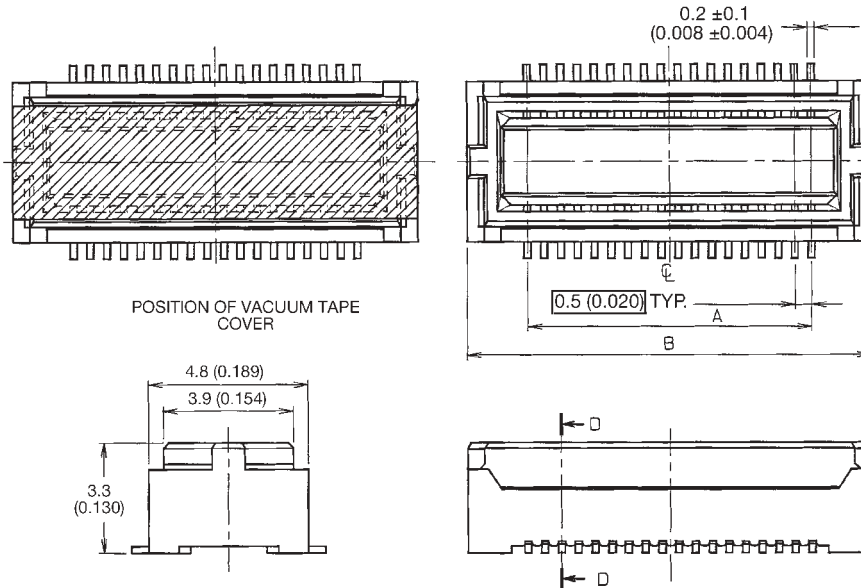
# Fine Pitch SMT Board to Board Connectors



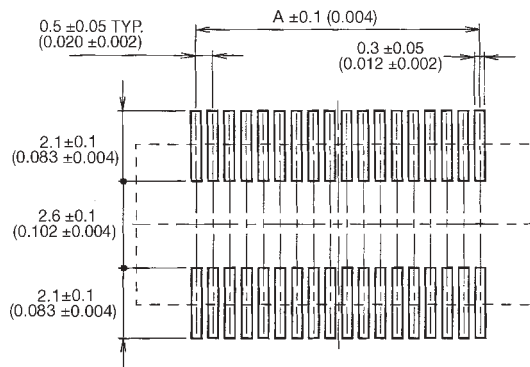
Series 5046

Plug for Mated Height with Receptacle of 4.0mm

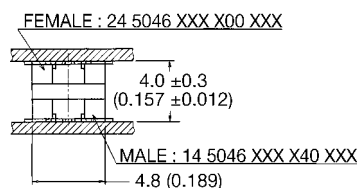
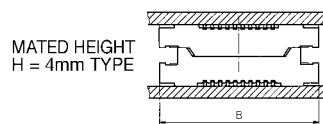
Without Strain Relief



No. of Pos.	Dimension	
	A	B
020	4.5 (0.177)	8.1 (0.319)
030	7.0 (0.276)	10.6 (0.417)
040	9.5 (0.374)	13.1 (0.516)
050	12.0 (0.472)	15.6 (0.614)
060	14.5 (0.571)	18.1 (0.713)
070	17.0 (0.669)	20.6 (0.811)
080	19.5 (0.768)	23.1 (0.909)
090	22.0 (0.866)	25.6 (1.008)
100	24.0 (0.945)	28.1 (1.106)
110	27.0 (1.063)	30.5 (1.201)
120	29.5 (1.161)	33.1 (1.303)



RECOMMENDED P.C. BOARD LAYOUT



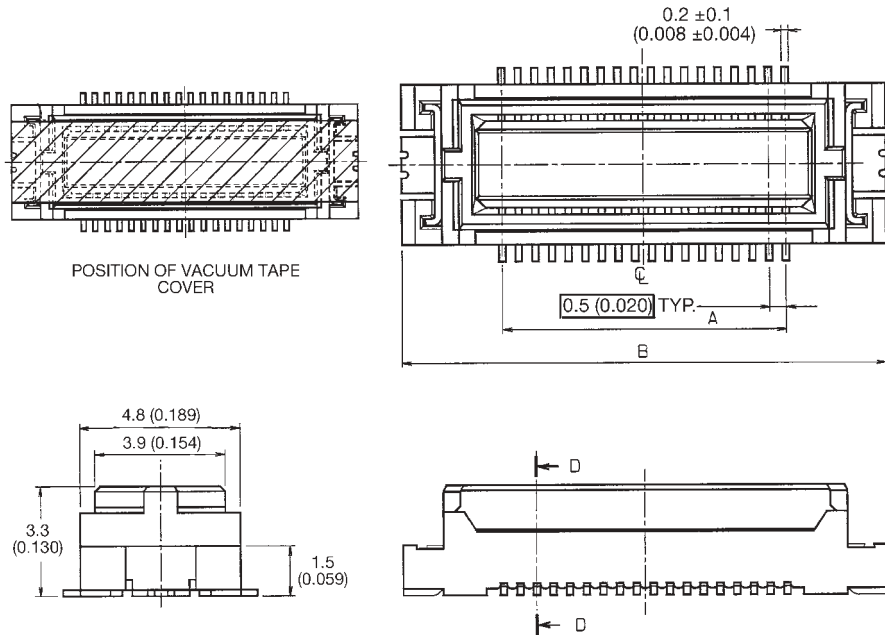
# Fine Pitch SMT Board to Board Connectors



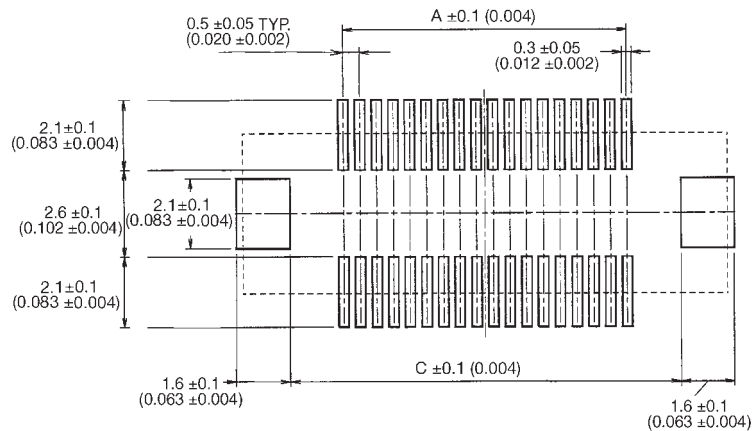
## Series 5046

### Plug for Mated Height with Receptacle of 4.0mm

With Strain Relief



No. of Pos.	Dimension		
	A	B	C
020	4.5 (0.177)	10.5 (0.413)	7.7 (0.303)
030	7.0 (0.276)	13.0 (0.512)	10.2 (0.402)
040	9.5 (0.374)	15.5 (0.610)	12.7 (0.500)
050	12.0 (0.472)	18.0 (0.709)	15.2 (0.598)
060	14.5 (0.571)	20.5 (0.807)	17.7 (0.697)
070	17.0 (0.669)	23.0 (0.906)	20.2 (0.795)
080	19.5 (0.768)	25.5 (1.004)	22.7 (0.894)
090	22.0 (0.866)	28.0 (1.102)	25.2 (0.992)
100	24.5 (0.965)	30.5 (1.201)	27.7 (1.091)
110	27.0 (1.063)	33.0 (1.299)	30.2 (1.189)
120	29.5 (1.161)	35.5 (1.398)	32.7 (1.287)



RECOMMENDED P.C. BOARD LAYOUT

## HOW TO ORDER

**14**

**Prefix**  
14 = Male

**5046**

**Series Number**

**XXX**

**Number of Positions**

- 020
- 030
- 040
- 050
- 060
- 070
- 080
- 090
- 100
- 110
- 120

**X40**

**Variation Code**

- 0 = Without strain relief
- 1 = With strain relief
- 5 = Without strain relief, with vacuum cover
- 6 = With strain relief, with vacuum cover

**829**

**Finish Code**

Parts are supplied in tape and reel packaging with 1000 pieces per reel.

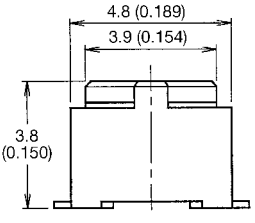
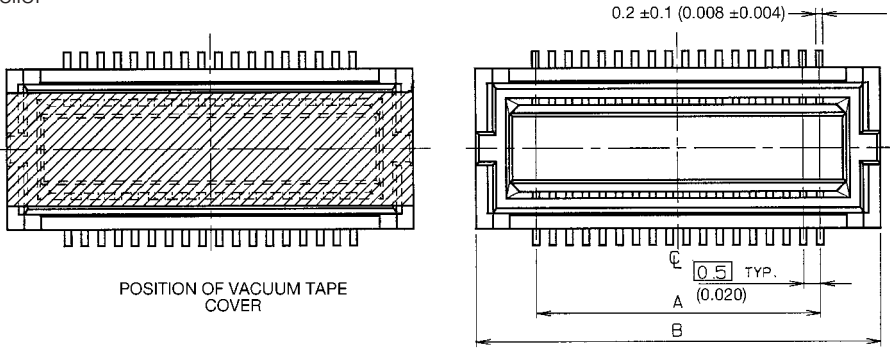
Mated Height	P/N	
4.0mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X40 829

# Fine Pitch SMT Board to Board Connectors

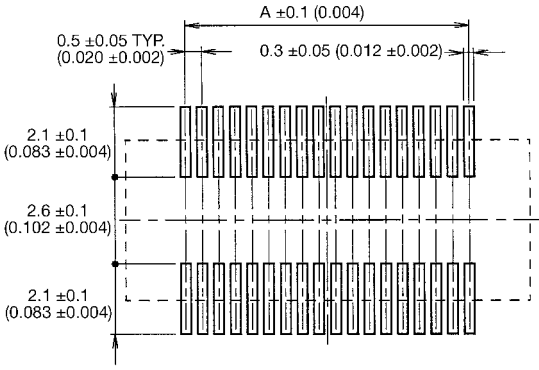
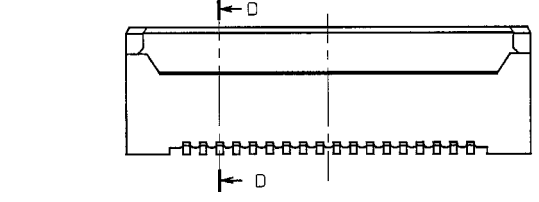
Series 5046

Plug for Mated Height with Receptacle of 4.5mm

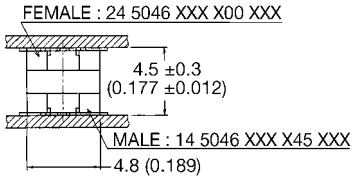
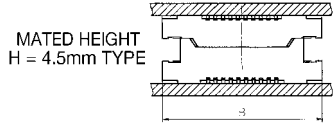
Without Strain Relief



No. of Pos.	Dimension	
	A	B
020	4.5 (0.177)	8.1 (0.319)
030	7.0 (0.276)	10.6 (0.417)
040	9.5 (0.374)	13.1 (0.516)
050	12.0 (0.472)	15.6 (0.614)
060	14.5 (0.571)	18.1 (0.713)
070	17.0 (0.669)	20.6 (0.811)
080	19.5 (0.768)	23.1 (0.909)
090	22.0 (0.866)	25.6 (1.008)
100	24.0 (0.945)	28.1 (1.106)
110	27.0 (1.063)	30.6 (1.205)
120	29.5 (1.161)	33.1 (1.303)



RECOMMENDED P.C. BOARD LAYOUT



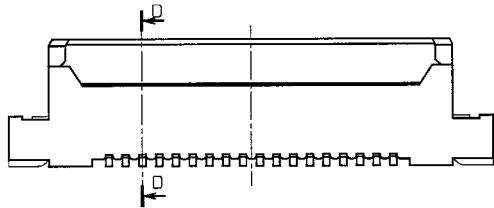
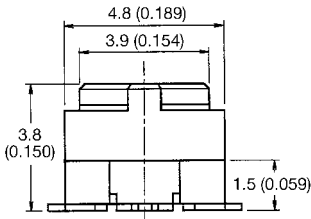
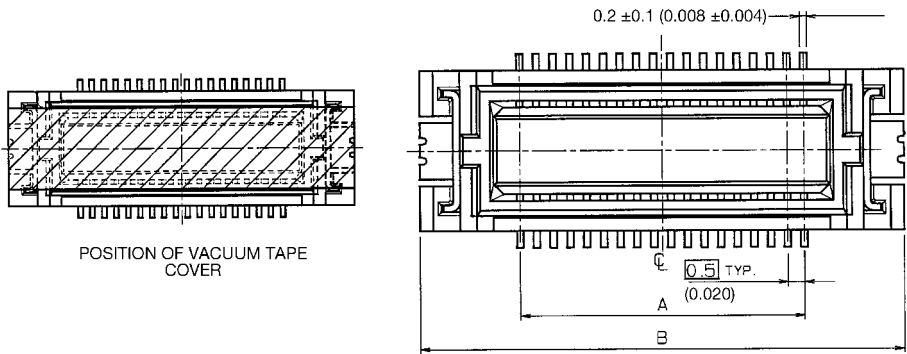


# Fine Pitch SMT Board to Board Connectors

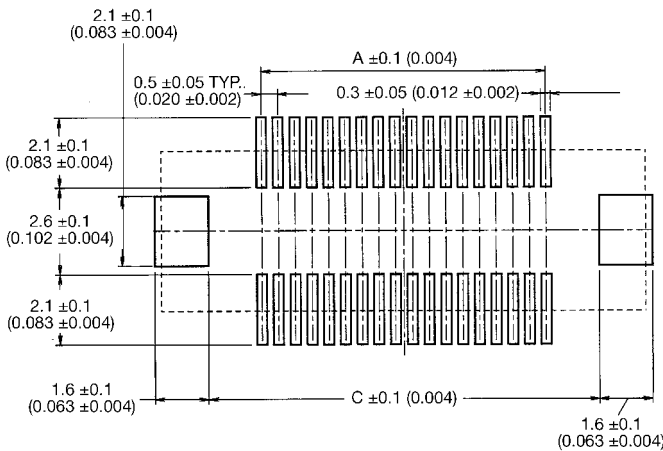
## Series 5046

### Plug for Mated Height with Receptacle of 4.5mm

With Strain Relief



No. of Pos.	Dimension		
	A	B	C
020	4.5 (0.177)	10.5 (0.413)	7.7 (0.303)
030	7.0 (0.276)	13.0 (0.512)	10.2 (0.402)
040	9.5 (0.374)	15.5 (0.610)	12.7 (0.500)
050	12.0 (0.472)	18.0 (0.709)	15.2 (0.598)
060	14.5 (0.571)	20.5 (0.807)	17.7 (0.697)
070	17.0 (0.669)	23.0 (0.906)	20.2 (0.795)
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100	24.5 (0.965)	30.5 (1.201)	27.7 (1.091)
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120	29.5 (1.161)	35.5 (1.398)	32.7 (1.287)



RECOMMENDED P.C. BOARD LAYOUT

### HOW TO ORDER

**14**

Prefix  
14 = Male

**5046**

Series Number

**XXX**

Number of Positions

**X45**

Variation Code  
 0 = Without strain relief  
 1 = With strain relief  
 5 = Without strain relief, with vacuum cover  
 6 = With strain relief, with vacuum cover

**829**

Finish Code

- 020
- 030
- 040
- 050
- 060
- 070
- 080
- 090
- 100
- 110
- 120

Parts are supplied in tape and reel packaging with 1000 pieces per reel.

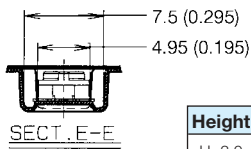
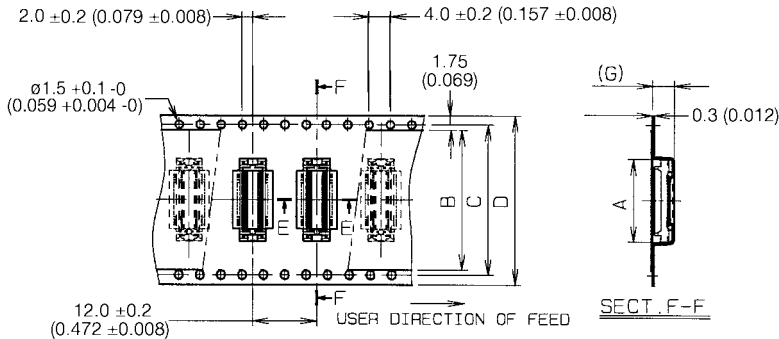
Mated Height	P/N	
4.5mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X45 829

# Fine Pitch SMT Board to Board Connectors

## Series 5046 Plug Tape and Reel Package

### H=3.0, 3.5, 4.0, 4.5mm

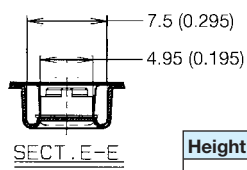
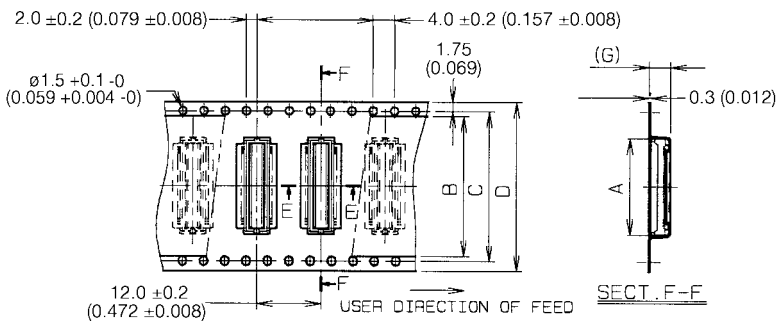
WITH STRAIN RELIEF



Height	G
H=3.0	4.1 (0.161)
H=3.5	4.1 (0.161)
H=4.0	4.6 (0.181)
H=4.5	4.6 (0.181)

	No. of Pos.	A	B	C	D
32mm Tape	020	8.1 (0.319)	26.5 (1.043)	28.4 (1.118)	32.0 (1.260)
	030	10.6 (0.417)			
	040	13.1 (0.516)			
	050	15.6 (0.614)			
	060	18.1 (0.713)			
44mm Tape	070	20.6 (0.811)	38.5 (1.516)	40.4 (1.591)	44.0 (1.732)
	080	23.1 (0.909)			
	090	25.6 (1.008)			
56mm Tape	100	28.1 (1.106)	50.5 (1.988)	52.4 (2.063)	56.0 (2.205)
	110	30.6 (1.205)			
	120	33.1 (1.303)			

WITHOUT FLANGE / WITHOUT STRAIN RELIEF



Height	G
H=3.0	4.1 (0.161)
H=3.5	4.1 (0.161)
H=4.0	4.6 (0.181)
H=4.5	4.6 (0.181)

	No. of Pos.	A	B	C	D
32mm Tape	020	8.1 (0.319)	26.5 (1.043)	28.4 (1.118)	32.0 (1.260)
	030	10.6 (0.417)			
	040	13.1 (0.516)			
	050	15.6 (0.614)			
	060	18.1 (0.713)			
44mm Tape	070	20.6 (0.811)	38.5 (1.516)	40.4 (1.591)	44.0 (1.732)
	080	23.1 (0.909)			
	090	25.6 (1.008)			
56mm Tape	100	28.1 (1.106)	50.5 (1.988)	52.4 (2.063)	56.0 (2.205)
	110	30.6 (1.205)			
	120	33.1 (1.303)			

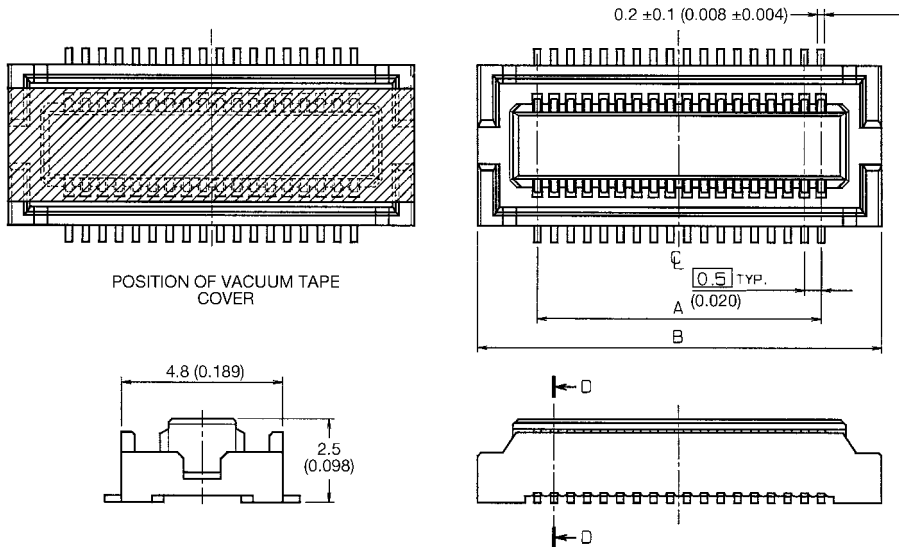
# Fine Pitch SMT Board to Board Connectors



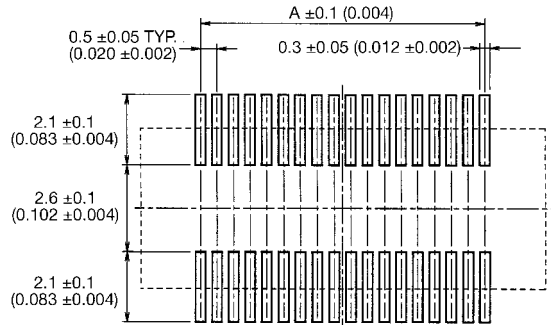
Series 5046

Receptacle for Mated Height with Plug of 3.0, 3.5, 4.0 or 4.5mm

Without Strain Relief



No. of Pos.	Dimension	
	A	B
020	4.5 (0.177)	8.1 (0.319)
030	7.0 (0.276)	10.6 (0.417)
040	9.5 (0.374)	13.1 (0.516)
050	12.0 (0.472)	15.6 (0.614)
060	14.5 (0.571)	18.1 (0.713)
070	17.0 (0.669)	20.6 (0.811)
080	19.5 (0.768)	23.1 (0.909)
090	22.0 (0.866)	25.6 (1.008)
100	24.5 (0.965)	28.1 (1.106)
110	27.0 (1.063)	30.6 (1.205)
120	29.5 (1.161)	33.1 (1.303)



RECOMMENDED P.C. BOARD LAYOUT

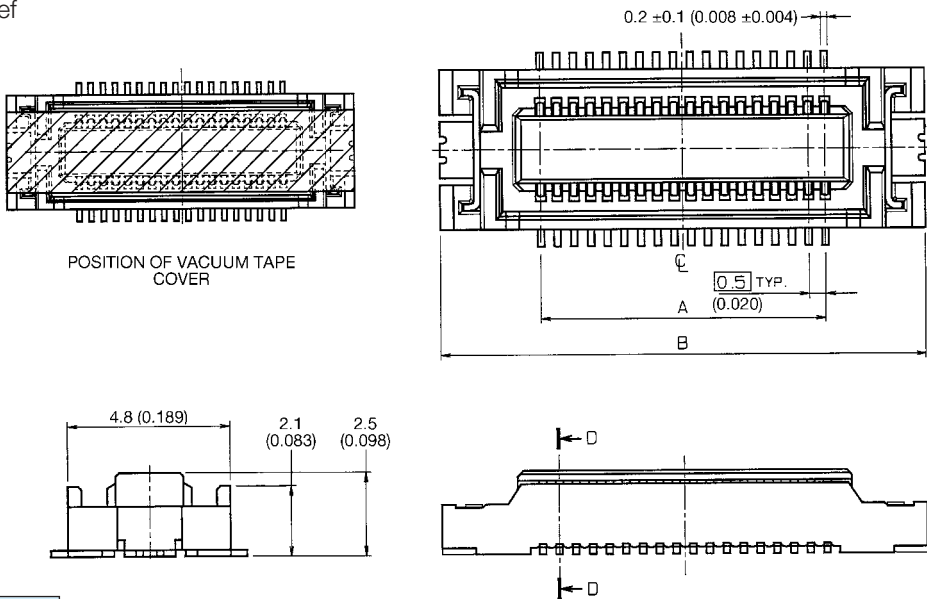
# Fine Pitch SMT Board to Board Connectors



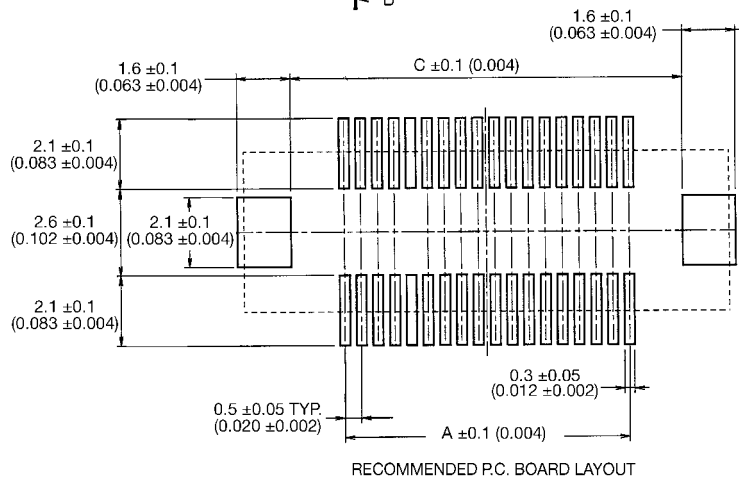
## Series 5046

Receptacle for Mated Height with Plug of 3.0, 3.5, 4.0 or 4.5mm

With Strain Relief



No. of Pos.	Dimension		
	A	B	C
020	4.5 (0.177)	10.5 (0.413)	7.7 (0.303)
030	7.0 (0.276)	13.0 (0.512)	10.2 (0.402)
040	9.5 (0.374)	15.5 (0.610)	12.7 (0.500)
050	12.0 (0.472)	18.0 (0.709)	15.2 (0.598)
060	14.5 (0.571)	20.5 (0.807)	17.7 (0.697)
070	17.0 (0.669)	23.0 (0.906)	20.2 (0.795)
080	19.5 (0.768)	25.5 (1.004)	22.7 (0.894)
090	22.0 (0.866)	28.0 (1.102)	25.2 (0.992)
100	24.5 (0.965)	30.5 (1.201)	27.7 (1.091)
110	27.0 (1.063)	33.0 (1.299)	30.2 (1.189)
120	29.5 (1.161)	35.5 (1.398)	32.7 (1.287)



## HOW TO ORDER

**24**

**Prefix**  
24 = Female

**5046**

**Series Number**

**XXX**

**Number of Positions**

- 020
- 030
- 040
- 050
- 060
- 070
- 080
- 090
- 100
- 110
- 120

**X00**

**Variation Code**

- 0 = Without strain relief
- 1 = With strain relief
- 5 = Without strain relief, with vacuum cover
- 6 = With strain relief, with vacuum cover

**829**

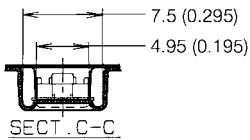
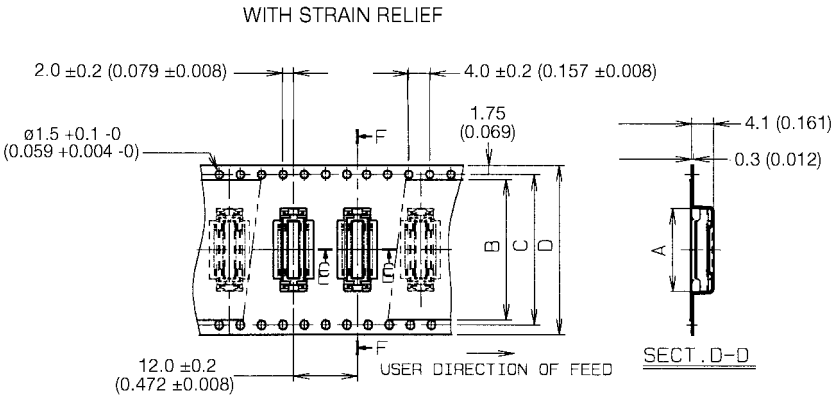
**Finish Code**

Mated Height		P/N
4.5mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X45 829
4.0mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X40 829
3.5mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X35 829
3.0mm	Female	24 5046 XXX X00 829
	Male	14 5046 XXX X30 829

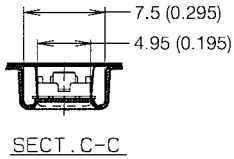
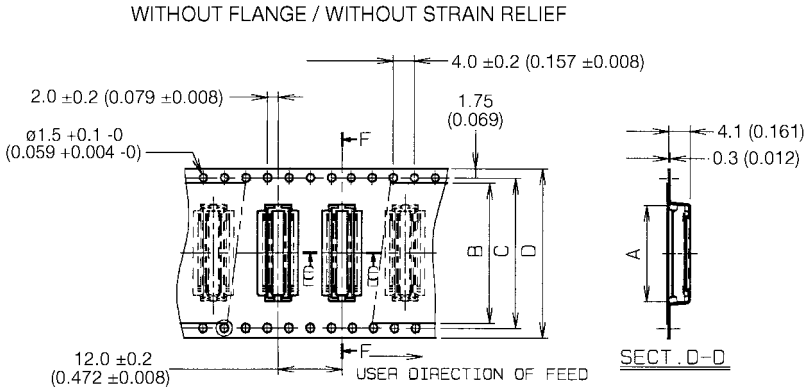
Parts are supplied in tape and reel packaging with 1000 pieces per reel.

# Fine Pitch SMT Board to Board Connectors

## Series 5046 Receptacle Tape and Reel Package



	No. of Pos.	A	B	C	D
32mm Tape	020	10.65 (0.419)	26.5 (1.043)	28.4 (1.118)	32.0 (1.260)
	030	13.15 (0.518)			
	040	15.65 (0.616)			
	050	18.15 (0.715)			
	060	20.65 (0.813)			
44mm Tape	070	23.15 (0.911)	38.5 (1.516)	40.4 (1.591)	44.0 (1.732)
	080	25.65 (1.010)			
	090	28.15 (1.108)			
	100	30.65 (1.207)			
56mm Tape	110	33.15 (1.305)	50.5 (1.988)	52.4 (2.063)	56.0 (2.205)
	120	35.65 (1.404)			



	No. of Pos.	A	B	C	D
32mm Tape	020	10.65 (0.419)	26.5 (1.043)	28.4 (1.118)	32.0 (1.260)
	030	13.15 (0.518)			
	040	15.65 (0.616)			
	050	18.15 (0.715)			
	060	20.65 (0.813)			
44mm Tape	070	23.15 (0.911)	38.5 (1.516)	40.4 (1.591)	44.0 (1.732)
	080	25.65 (1.010)			
	090	28.15 (1.108)			
	100	30.65 (1.207)			
56mm Tape	110	33.15 (1.305)	50.5 (1.988)	52.4 (2.063)	56.0 (2.205)
	120	35.65 (1.403)			