

**HIGH DENSITY SMT 50mil(1.27mm) PITCH 2 PIECE  
CONNECTORS**

# **8900MS** SERIES





### FEATURES

- Contact design is highly reliable
- Low insertion force and withdrawal force
- Insulator protects the contacts from damage or breakage
- PPS insulator resists infrared soldering temperature
- SMT retention clips reduce the stress on SMT lead pins
- Tube packaging is available
- RoHS compliance

### SPECIFICATIONS

- Insulator : Glass-filled PPS (UL 94V-0), Brown
- Contact material : Copper alloy
- Plating : Contact area ; Gold over Nickel
  - (1)Standard : 0.05 $\mu$ m min. Gold
  - (2)Upon request : 0.25 $\mu$ m min. Gold
- Terminal area ; Tin copper over Nickel (Receptacle)  
Gold over Nickel (Plug)
- Current rating : 0.5A per contact
- Contact resistance : 40m  $\Omega$  max.
- Dielectric withstanding voltage: 650V AC for 1 minute
- Insulation resistance : 1,000M $\Omega$  min. at 500V DC
- Operating temperature : -55 $^{\circ}$ C to +85 $^{\circ}$ C

\* For recommendations concerning use of automatic assembly equipment with the 8900MS series, please consult our local office.

### ORDER CODE

**89** - [ ] - [ ] - [ ] - **MS** - [ ] - **F**

- Number of contacts
  - 020 : 20 pin
  - 030 : 30 pin
  - 040 : 40 pin
  - 050 : 50 pin
  - 060 : 60 pin
  - 080 : 80 pin
  - 100 : 100 pin
  - 120 : 120 pin
- Contact name
  - 177 : Receptacle
  - 178 : Plug
- Contact tail style
  - MS : Straight, SMT
- Series name
  - 8903 : Receptacle
  - 8913 : Plug
- F : RoHS Compliance
- Standoff height
  - Receptacle (8903)
    - A : For mating height of 7mm
    - B : For mating height of 8mm
  - Plug (8913)
    - A : For mating height of 7 and 8mm
- Plating of contact area
  - Omit : Au 0,05 $\mu$ m (Standard)
  - D : Au 0,25 $\mu$ m

### MATING COMBINATIONS

Unit:mm (inch)

\*1 : Insertion and removal angles are restricted

		PLUG (MALE) CONNECTORS					
		8911-□□□-178S□-A-F	8911-□□□-178S□-C-F	8913-□□□-178S□-A-F	8913-□□□-178S□-C-F	8911-□□□-178L□-F	8913-□□□-178MS□-A-F
RECEPTACLE (FEMALE) CONNECTORS	8901-□□□-177S□-A-F	Stack Height 7(0.276)	Stack Height 9(0.354)	*1 Stack Height 7(0.276)	*1 Stack Height 9(0.354)	Vertical Mating	*1 Stack Height 7(0.276)
	8901-□□□-177S□-B-F	Stack Height 8(0.315)	Stack Height 10(0.394)	*1 Stack Height 8(0.315)	*1 Stack Height 10(0.394)		*1 Stack Height 8(0.315)
	8901-□□□-177S□-D-F	Stack Height 10(0.394)	Stack Height 12(0.472)	*1 Stack Height 10(0.394)	*1 Stack Height 12(0.472)		*1 Stack Height 10(0.394)
	8903-□□□-177S□-A-F	Stack Height 7(0.276)	Stack Height 9(0.354)	Stack Height 7(0.276)	Stack Height 9(0.354)		Stack Height 7(0.276)
	8903-□□□-177S□-B-F	Stack Height 8(0.315)	Stack Height 10(0.394)	Stack Height 8(0.315)	Stack Height 10(0.394)		Stack Height 8(0.315)
	8903-□□□-177S□-D-F	Stack Height 10(0.394)	Stack Height 12(0.472)	Stack Height 10(0.394)	Stack Height 12(0.472)		Stack Height 10(0.394)
	8901-□□□-177L□-F	Vertical Mating	Vertical Mating	*1 Vertical Mating	*1 Vertical Mating	Horizontal Mating	*1 Vertical Mating
	8903-□□□-177MS□-A-F	No	No	Stack Height 7(0.276)	Stack Height 9(0.354)	No	Stack Height 7(0.276)
	8903-□□□-177MS□-B-F	No	No	Stack Height 8(0.315)	Stack Height 10(0.394)	No	Stack Height 8(0.315)

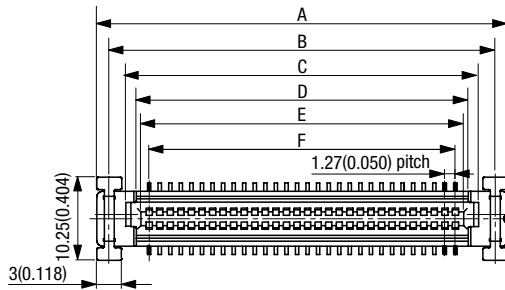
8903-□□□-177MS□-□-F (Receptacle)

Receptacle (SMT Straight Type)

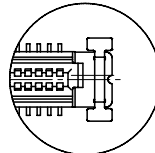


Unit:mm(inch)

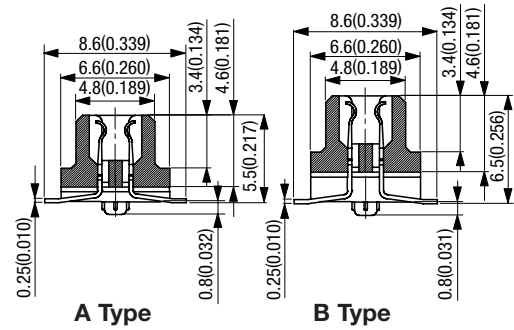
A Type (Standoff height)



B Type



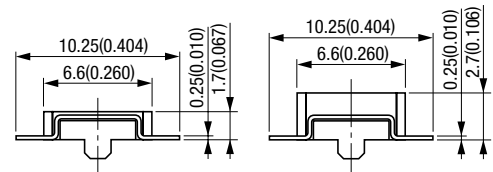
X-X' Cross Section



A Type

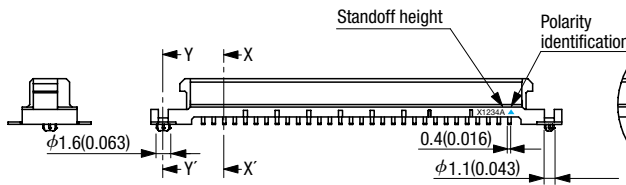
B Type

Y-Y' Cross Section

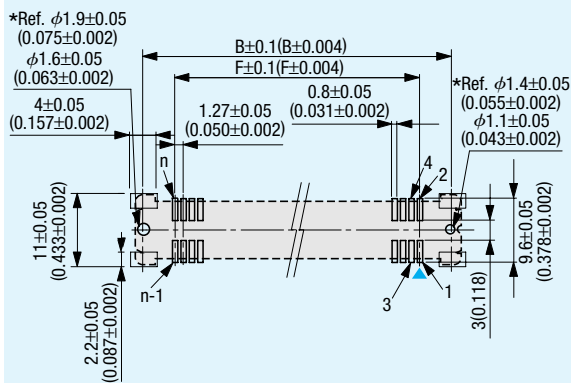


A Type

B Type



Printed Circuit Board Layout  
(Component Side View)



▼=Polarity identification  
"n" is number of contacts.  
\* 1.9 and 1.4 are the recommend hole sizes when using automated placement equipment. Precision of the placement equipment should be considered.

Packaging style
Pipe

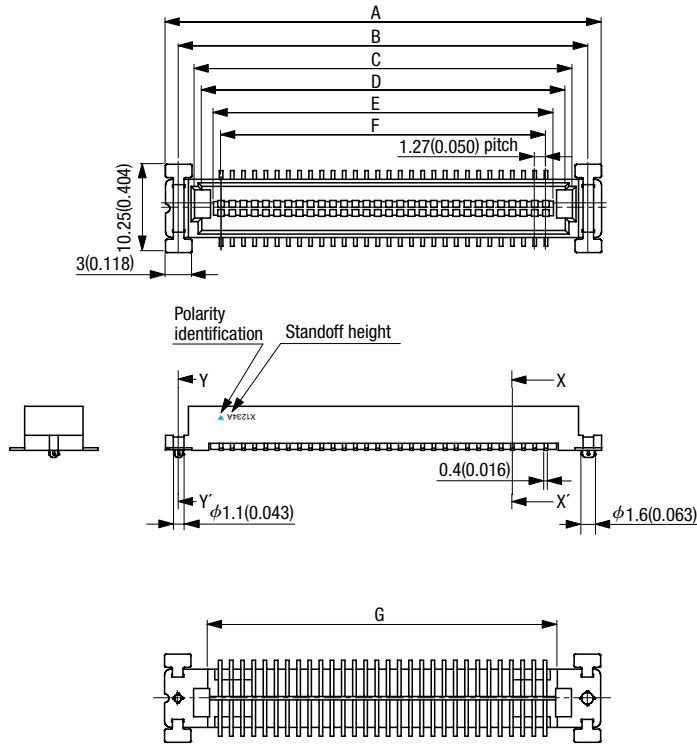
Product Table / Dimensions

No. of contacts	Part Number	A	B	C	D	E	F	G	Number of packaging
20	8903-020-177MS□-□-F	24.03 (0.946)	21.03 (0.828)	17.03 (0.670)	14.23 (0.560)	13.43 (0.529)	11.43 (0.450)	14.23 (0.560)	21
30	8903-030-177MS□-□-F	30.38 (1.196)	27.38 (1.078)	23.38 (0.920)	20.58 (0.810)	19.78 (0.779)	17.78 (0.700)	20.58 (0.810)	17
40	8903-040-177MS□-□-F	36.73 (1.446)	33.73 (1.328)	29.73 (1.170)	26.93 (1.060)	26.13 (1.029)	24.13 (0.950)	26.93 (1.060)	14
50	8903-050-177MS□-□-F	43.08 (1.696)	40.08 (1.578)	36.08 (1.420)	33.28 (1.310)	32.48 (1.279)	30.48 (1.200)	33.28 (1.310)	12
60	8903-060-177MS□-□-F	49.43 (1.946)	46.43 (1.828)	42.43 (1.670)	39.63 (1.560)	38.83 (1.529)	36.83 (1.450)	39.63 (1.560)	10
80	8903-080-177MS□-□-F	62.13 (2.446)	59.13 (2.328)	55.13 (2.170)	52.33 (2.060)	51.53 (2.029)	49.53 (1.950)	52.33 (2.060)	8
100	8903-100-177MS□-□-F	74.83 (2.946)	71.83 (2.828)	67.83 (2.670)	65.03 (2.560)	64.23 (2.529)	62.23 (2.450)	65.03 (2.560)	6
120	8903-120-177MS□-□-F	87.53 (3.446)	84.53 (3.328)	80.53 (3.170)	77.73 (3.060)	76.93 (3.029)	74.93 (2.950)	77.73 (3.060)	5

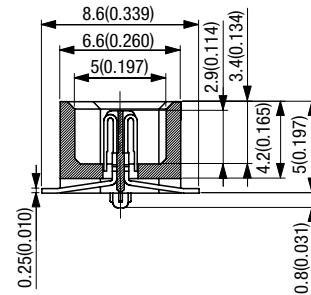
**8913-□□□-178MS□-A-F (Plug)**

Unit:mm(inch)

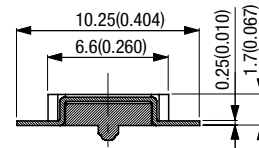
Plug (SMT Straight Type)



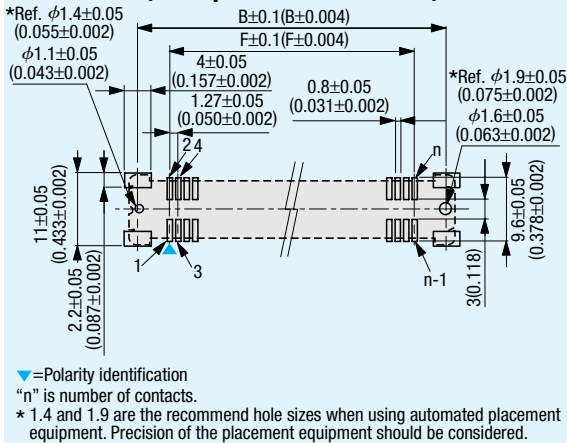
**X-X' Cross Section**



**Y-Y' Cross Section**



**Printed Circuit Board Layout (Component Side View)**



**Product Table / Dimensions**

No. of contacts	Part Number	A	B	C	D	E	F	G	Number of packaging
20	8913-020-178MS□-A-F	24.03 (0.946)	21.03 (0.828)	17.43 (0.686)	15.83 (0.623)	13.13 (0.517)	11.43 (0.450)	14.23 (0.560)	21
30	8913-030-178MS□-A-F	30.38 (1.196)	27.38 (1.078)	23.78 (0.936)	22.18 (0.873)	19.48 (0.767)	17.78 (0.700)	20.58 (0.810)	17
40	8913-040-178MS□-A-F	36.73 (1.446)	33.73 (1.328)	30.13 (1.186)	28.53 (1.123)	25.83 (1.017)	24.13 (0.950)	26.93 (1.060)	14
50	8913-050-178MS□-A-F	43.08 (1.696)	40.08 (1.578)	36.48 (1.436)	34.88 (1.373)	32.18 (1.267)	30.48 (1.200)	33.28 (1.310)	12
60	8913-060-178MS□-A-F	49.43 (1.946)	46.43 (1.828)	42.83 (1.686)	41.23 (1.623)	38.53 (1.517)	36.83 (1.450)	39.63 (1.560)	10
80	8913-080-178MS□-A-F	62.13 (2.446)	59.13 (2.328)	55.53 (2.186)	53.93 (2.123)	51.23 (2.017)	49.53 (1.950)	52.33 (2.060)	8
100	8913-100-178MS□-A-F	74.83 (2.946)	71.83 (2.828)	68.23 (2.686)	66.63 (2.623)	63.93 (2.517)	62.23 (2.450)	65.03 (2.560)	6
120	8913-120-178MS□-A-F	87.53 (3.446)	84.53 (3.328)	80.93 (3.186)	79.33 (3.123)	76.63 (3.017)	74.93 (2.950)	77.73 (3.060)	5

Packaging style
Pipe

Specifications and dimensions are subject to change without notice.