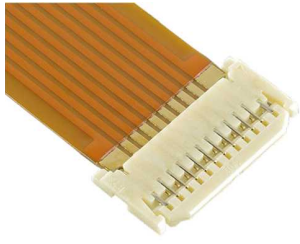


MINIFLEX® 4-ST

Super low profile (height = 0.5 mm),
0.4 mm pitch, horizontal mating, backflip



- ✓ Super low height 0.5 mm
- ✓ High FPC retention force with additional mechanical lock
- ✓ Usability for closing actuator without FPC

Pin counts:

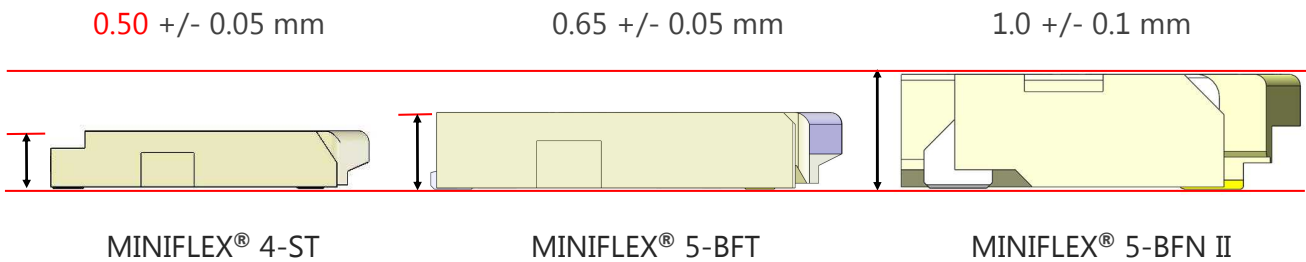
Range	Up to 15
Available	4, 6, 8, 10, 12

*Please inquire for pin counts not listed or outside of the pin count range.

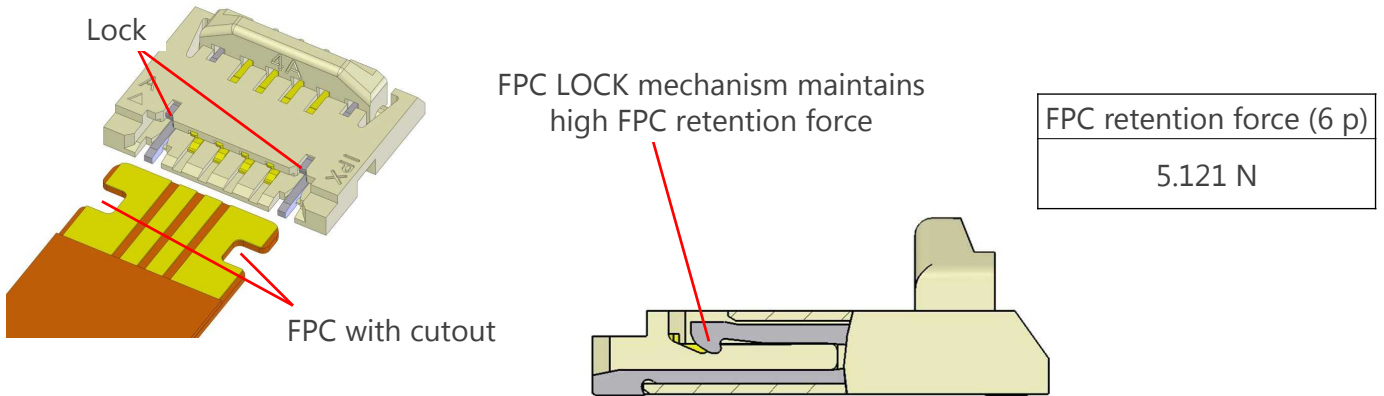
Part Number	20588	
Contact Pitch (mm)	0.40	
Board Pitch (mm)	0.40	
Height (mm)	0.50 +/- 0.05	
Width Formula (mm)	1.90 + (0.4 * ?p)	
Depth (mm)	Actuator Open	2.70
	Actuator Close	3.00
Wiping length (mm)	0.80	
FPC Insertion Depth (mm)	1.00	
FPC Thickness (mm)	0.12 +/- 0.03	
Current Rating	0.4A /pin(6A/conn.)	
Contact Point	Top	
Compatibility	Original	

Super Low Height 0.5 mm

Lowest height in our MINIFLEX® series product lineup



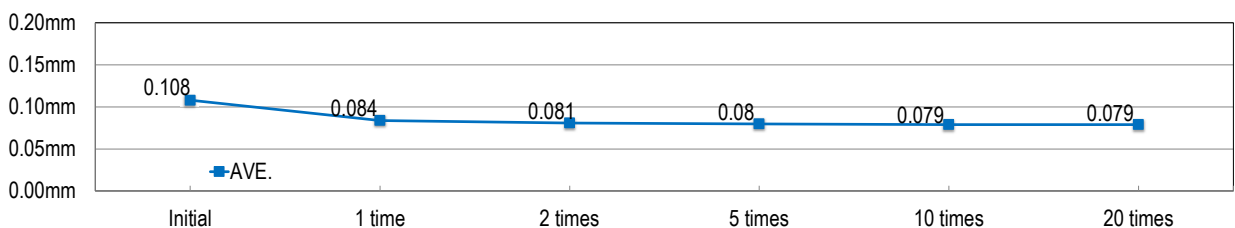
High FPC retention force with additional mechanical lock



Usability for closing actuator without FPC

The connector will still function even if the actuator is accidentally closed without the FPC being inserted after the SMT process

- Connector will still function reliably (contact gap graph 10 pins before and after operating actuator without FPC inserted)



- Insertion force of connector goes up
- Retention force of connector does not change significantly

MINIFLEX® 4-ST

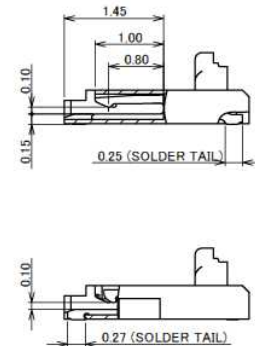
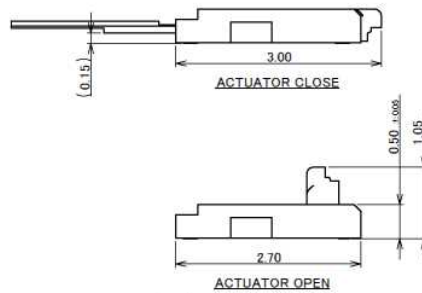
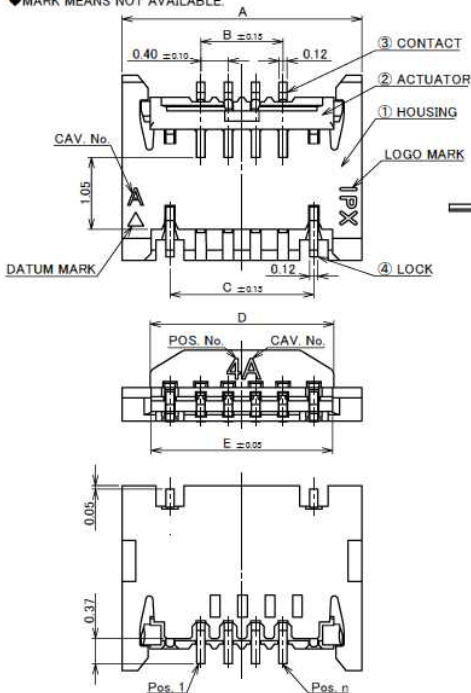
Component Parts Detail

Connector Assembly :

Recommended P/N	20588-0**E-01					
PART No.	Pos.	A	B	C	D	E
20588-004E-01	4P	3.50	1.20	2.10	2.68	2.65
20588-006E-01	6P	4.30	2.00	2.90	3.48	3.45
20588-008E-01	8P	5.10	2.80	3.70	4.28	4.25
20588-010E-01	10P	5.90	3.60	4.50	5.08	5.05
20588-012E-01	12P	6.70	4.40	5.30	5.88	5.85
◆20588-014E-01	14P	7.50	5.20	6.10	6.68	6.65
◆20588-015E-01	15P	7.90	5.60	6.50	7.08	7.05



◆MARK MEANS NOT AVAILABLE



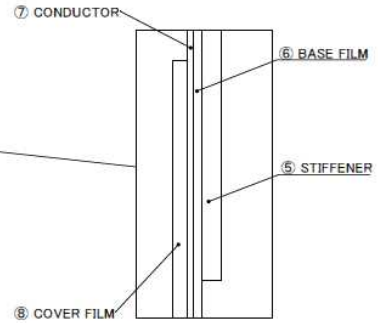
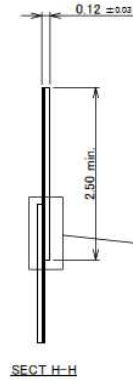
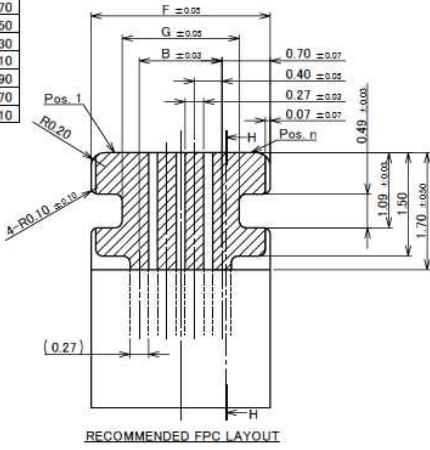
4	LOCK	PHOSPHOR BRONZE	SOLDER AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN. OTHER : Ni 1.00 μm MIN.
3	CONTACT	PHOSPHOR BRONZE	CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.00 μm MIN. SOLDER AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSING	LCP	UL94V-0, BEIGE
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

NOTES
1. CONTACT POINT : ONLY UPPER CONTACT

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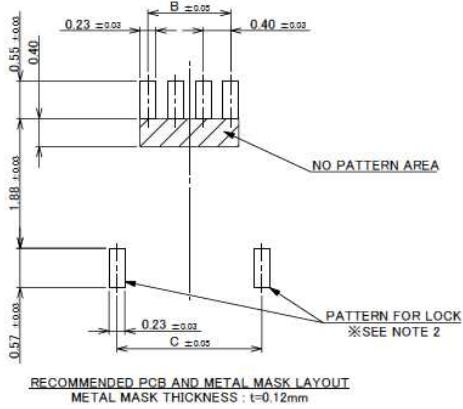
Connector Assembly :

Pos.	B	C	F	G
4P	1.20	2.10	2.60	1.70
6P	2.00	2.90	3.40	2.50
8P	2.80	3.70	4.20	3.30
10P	3.60	4.50	5.00	4.10
12P	4.40	5.30	5.80	4.90
14P	5.20	6.10	6.60	5.70
15P	5.60	6.50	7.00	6.10



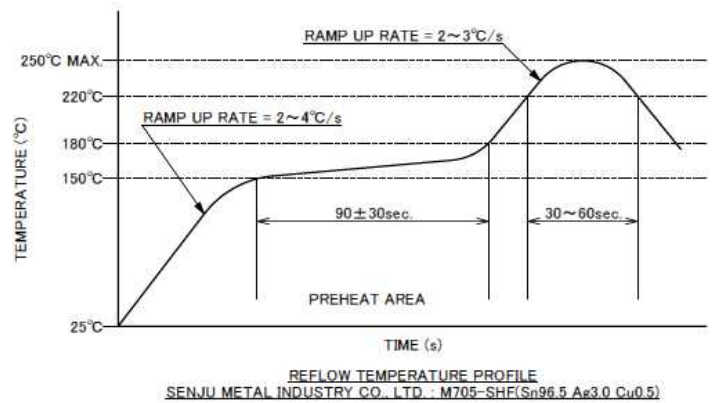
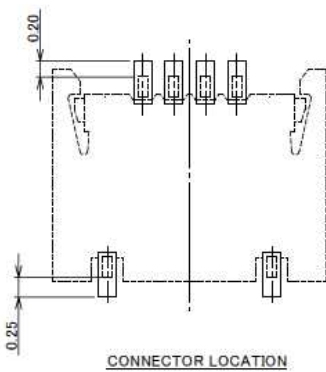
- NOTES:
 2. PLEASE DO NOT CONNECT THESE TWO SOLDER PADS TO THE ELECTRICAL CIRCUIT. (SIGNAL OR GROUND)
 3. ADHESIVE SHOULD USE THERMOSETTING.

8	COVER FILM	PI	
7	CONDUCTOR	COPPER	Au OVER Ni UNDER PLATING
6	BASE FILM	PI	
5	STIFFENER	PI	
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS



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Connector Assembly :



Rev.8

Connector Assembly :

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC (PER CONTACT)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.4A DC (PER CONTACT)/ 6.0A DC (PER CONNECTOR)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	20~80% (NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : \triangleleft 40mohm MAX.
INSULATION RESISTANCE	INITIAL : 100Mohm MIN. / AFTER TEST : 100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC200V
DURABILITY	20 CYCLES
ACT CLOSING FORCE (INITIAL / AFTER TEST)	4P : 1.8N MAX. / 6P : 2.4N MAX. / 8P : 3.0N MAX. 10P : 3.6N MAX. / 12P : 4.2N MAX.
ACT RELEASING FORCE (INITIAL / AFTER TEST)	4P : 0.06N MIN. / 6P : 0.08N MIN. / 8P : 0.10N MIN. 10P : 0.12N MIN. / 12P : 0.14N MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	4P : 2.50N MIN. / 6P : 2.62N MIN. / 8P : 2.74N MIN. 10P : 2.86N MIN. / 12P : 2.98N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1863
TEST REPORT	TR-13088
PACKING STANDARD	PST-13049
INSTRUCTION MANUAL	HIM-14024
APPEARANCE CRITERIA No.	QLS-A***

Rev.8



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