

MINIFLEX® 4-ST

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



Product Specifications:

| | | |
|--------------------|-----------|-------------------------|
| Board Pitch (mm) | 0.4 | |
| Wiping Length (mm) | 0.8 | |
| Size (mm) | Height | 0.50 +/- 0.05 |
| | Width | Formula: 1.9+(0.4*?p) |
| | Depth | Open: 2.7 Close: 3.0 |
| Pin counts | Range | 4-15 |
| | Available | 4, 6, 8, 10, 12 |

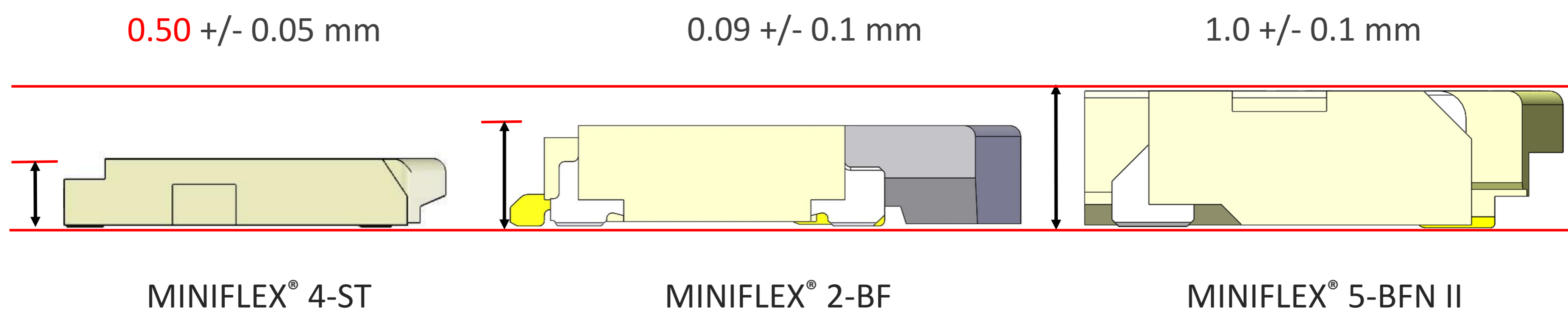
Applicable FPC/FFC:

| | |
|------------------------|---------------|
| FPC/FFC Contact Pitch | 0.4 |
| FPC/FFC Contact Point | Top |
| FPC/FFC Thickness (mm) | 0.12 +/- 0.03 |

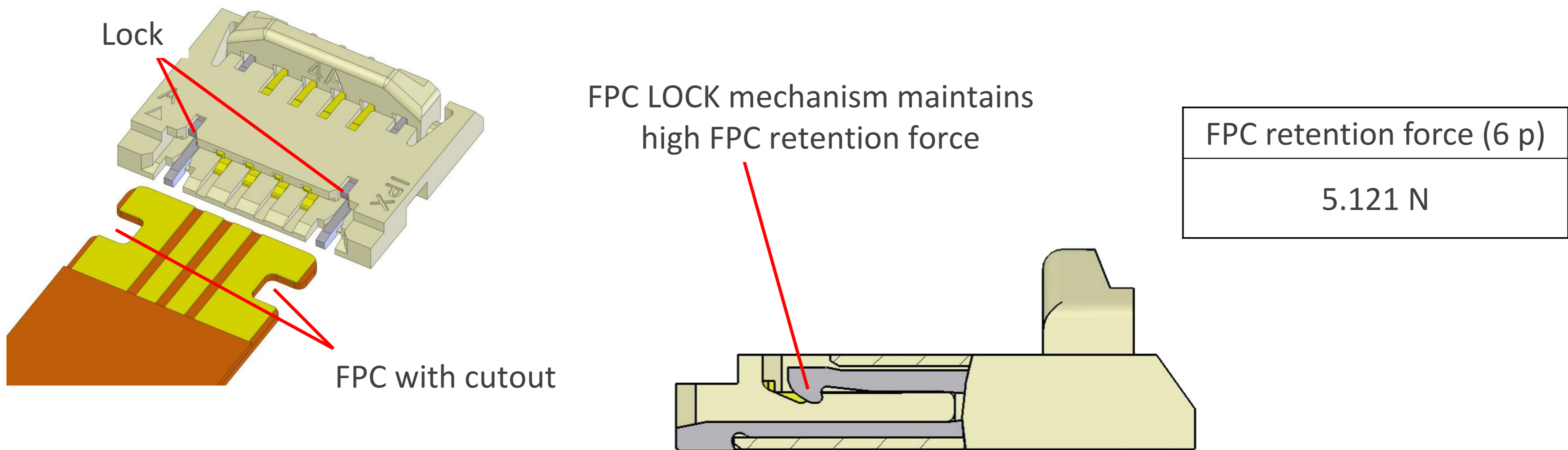
* Please inquire for pin counts not listed or outside of the pin count range.

▶ Super low height 0.5 mm

Lowest height in our MINIFLEX® series product lineup



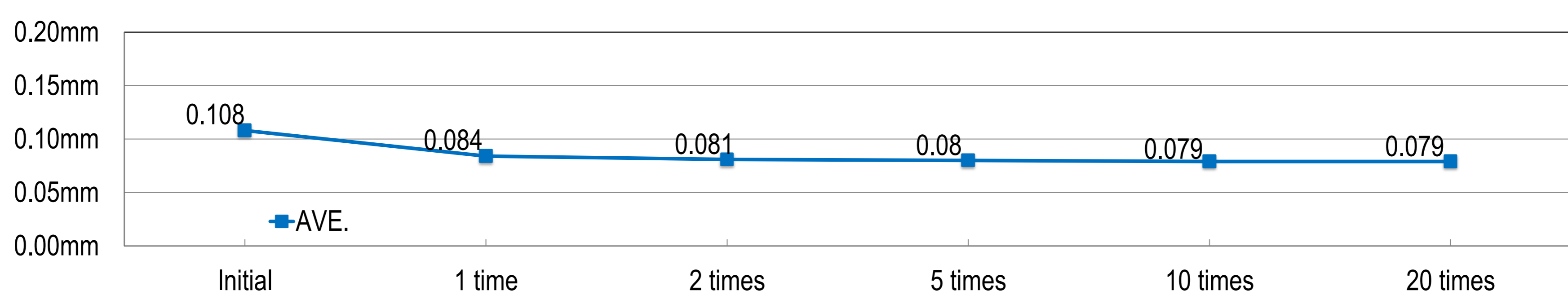
▶ High FPC retention force with additional mechanical lock



▶ 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

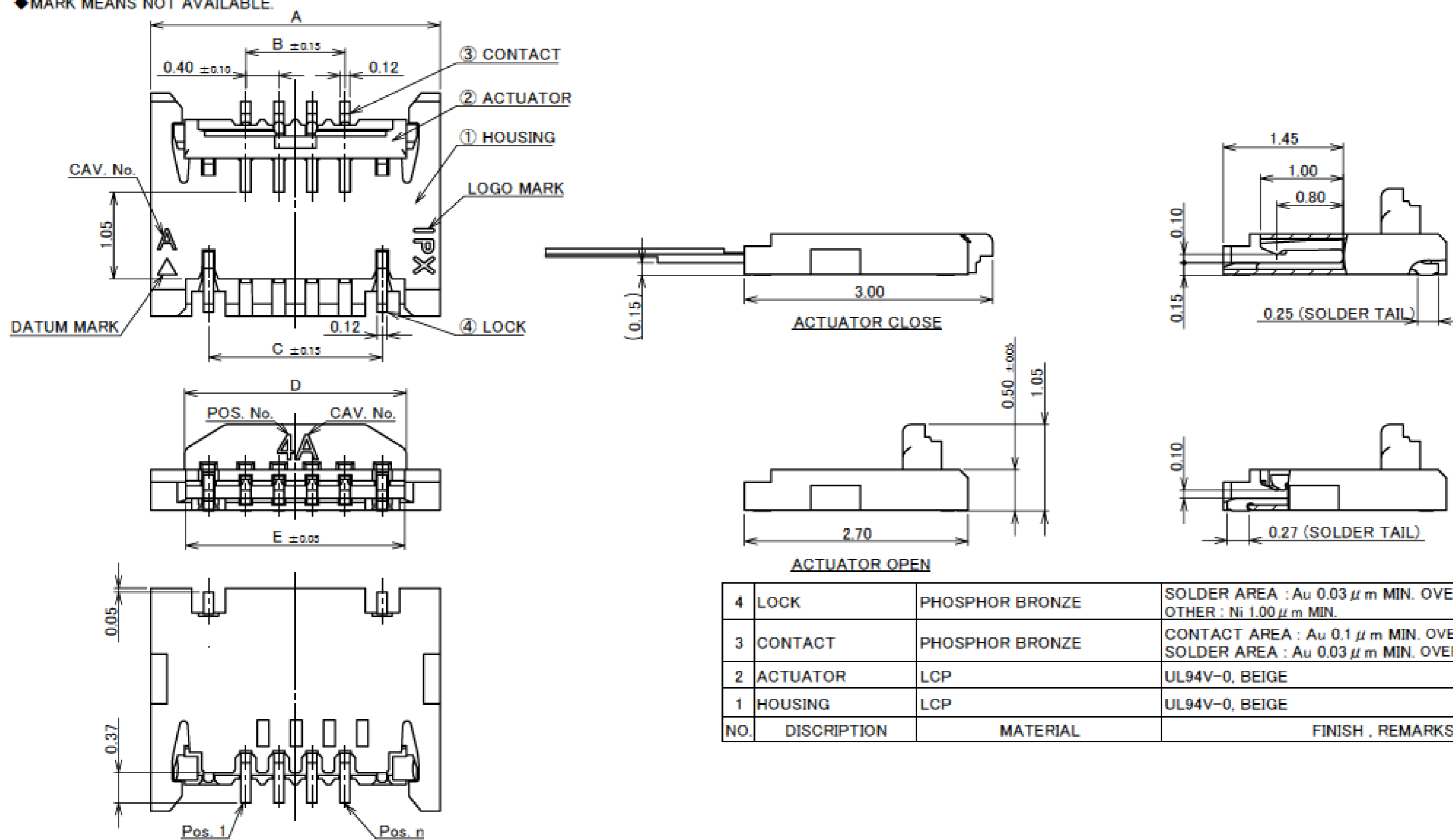
■ Retention force of connector does not change significantly

Component Parts Details

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.



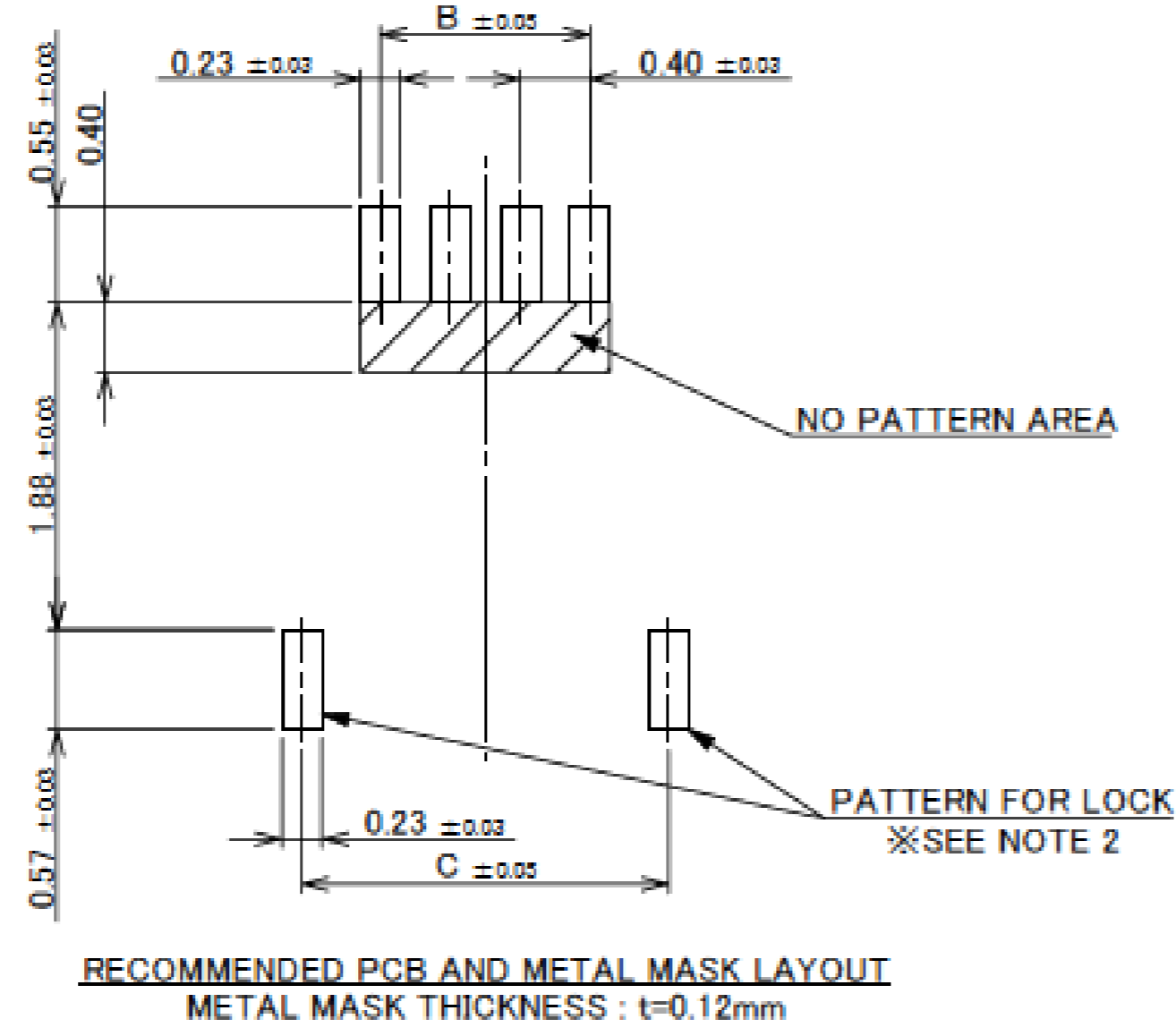
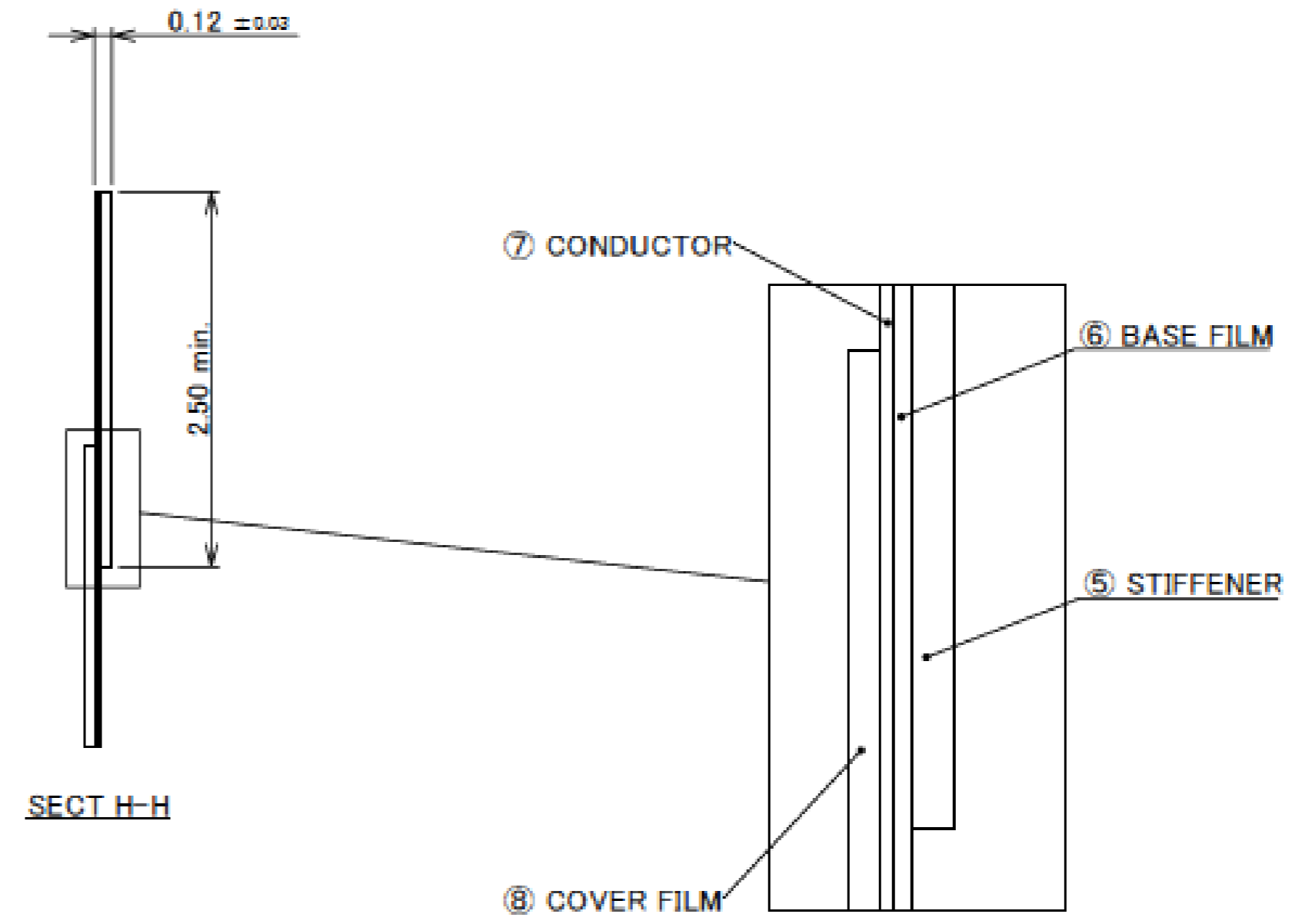
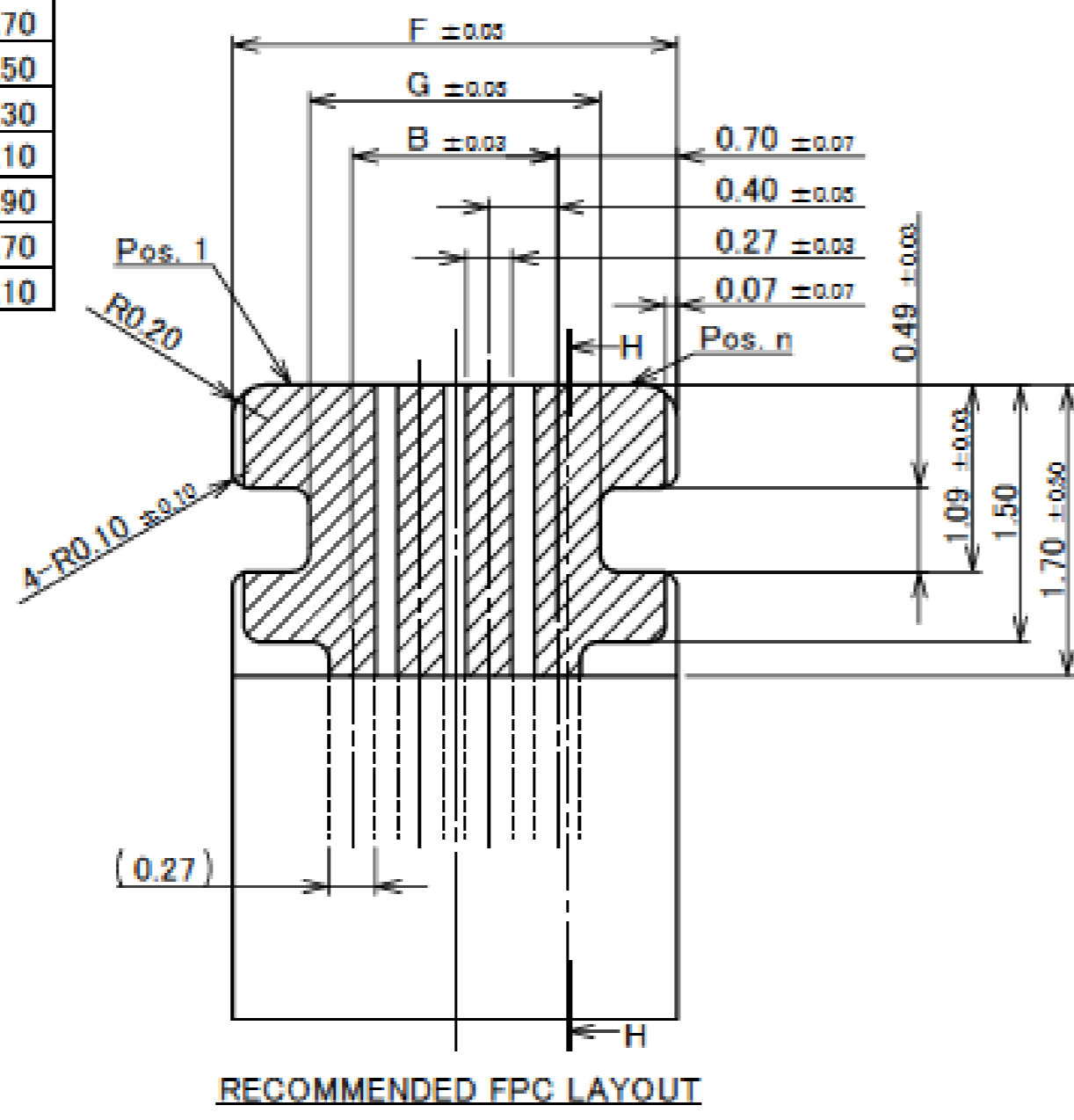
| 4 | LOCK | PHOSPHOR BRONZE | SOLDER AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN. OTHER : Ni 1.00 μ m MIN. |
|-----|-------------|-----------------|--|
| 3 | CONTACT | PHOSPHOR BRONZE | CONTACT AREA : Au 0.1 μ m MIN. OVER Ni 1.00 μ m MIN. SOLDER AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN. |
| 2 |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

NOTES
1. CONTACT POINT : ONLY UPPER CONTACT

Rev.8

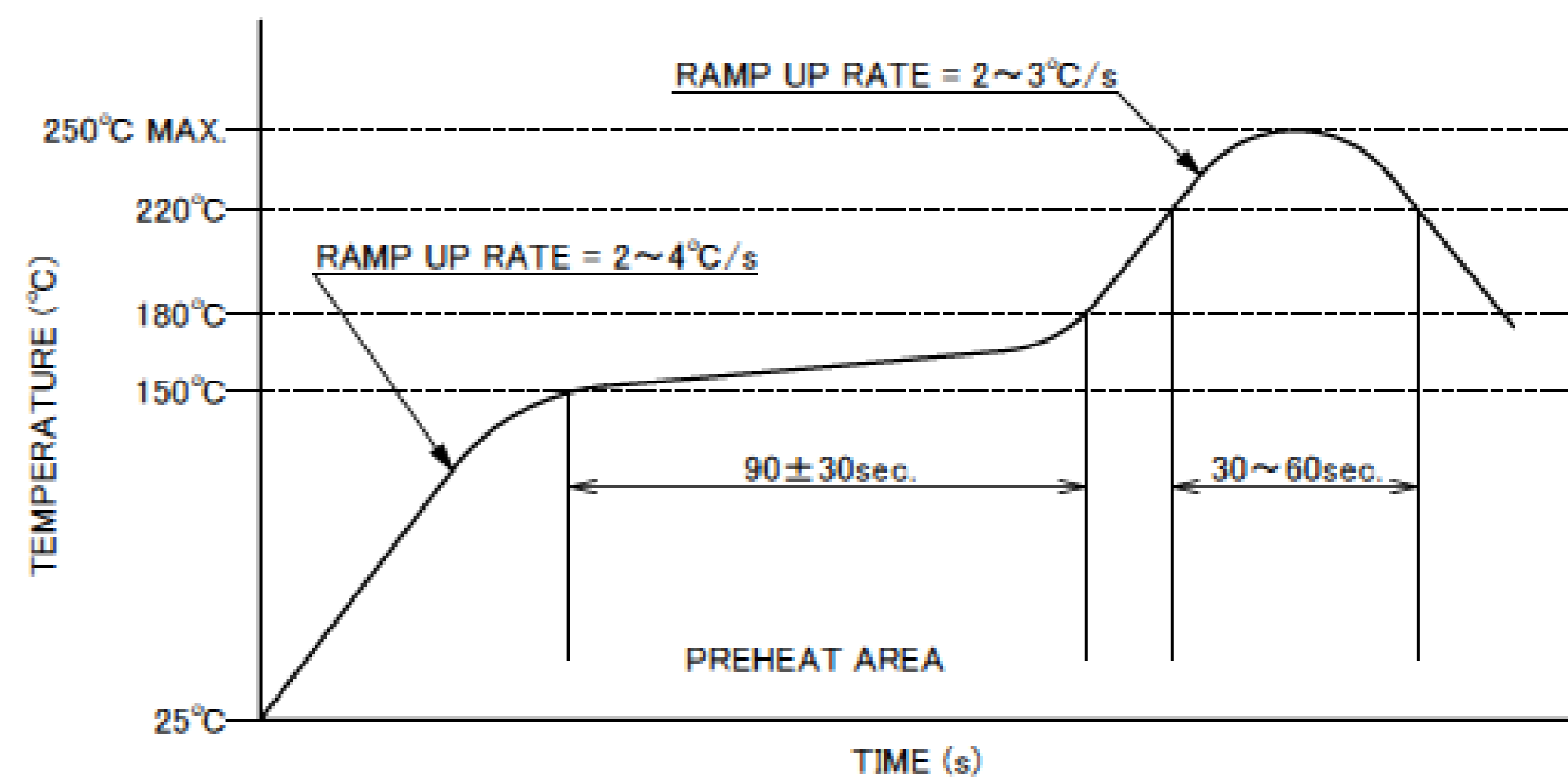
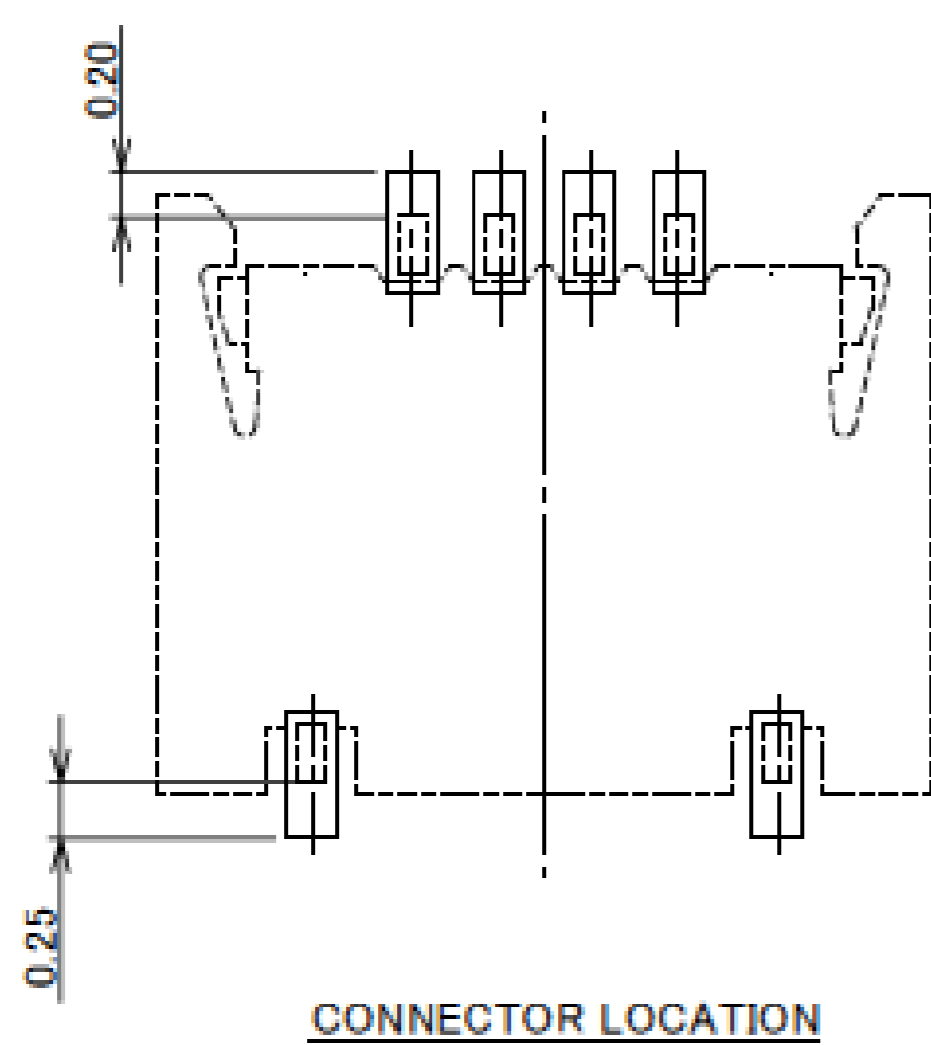
Connector Assembly

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

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



Connector Assembly

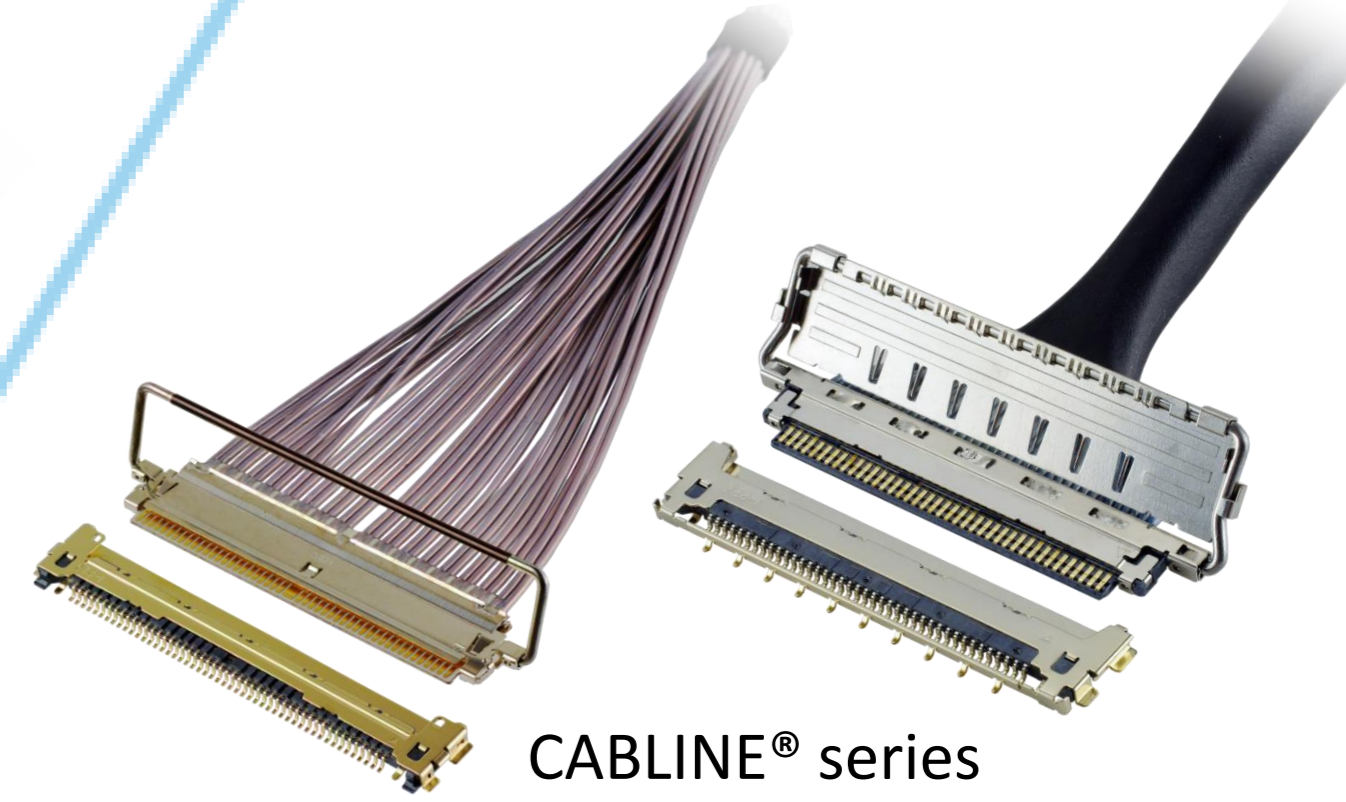
| ITEMS | SPECIFICATION |
|--|--|
| RATING VOLTAGE | 50V AC (PER CONTACT) |
| RATING AMPERAGE (FOR SIGNAL CONTACT) | 0.4A DC (PER CONTACT)/ 6.0A DC (PER CONNECTOR) |
| OPERATING TEMPERATURE | 233~358K(-40°C~+85°C) |
| OPERATING HUMIDITY | 20~80% (NON-CONDENSING) |
| CONTACT RESISTANCE (FOR SIGNAL CONTACT) | 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

Custom Connectors Available

 RF Connectors

MHF® series



CABLIN® series

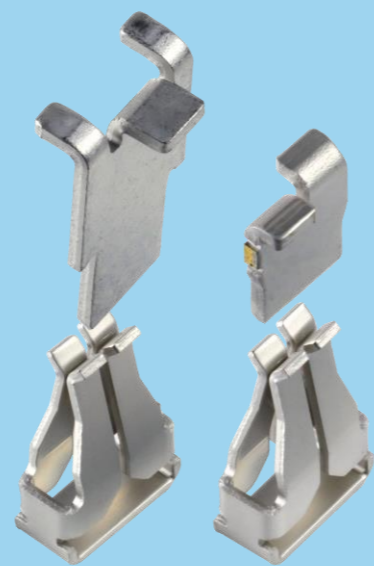


Micro-coaxial/Twinax Connectors

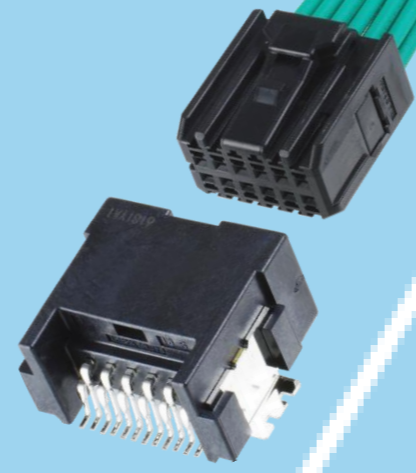


Wire-to-Board Connectors/Terminals

AP series



ISH® series



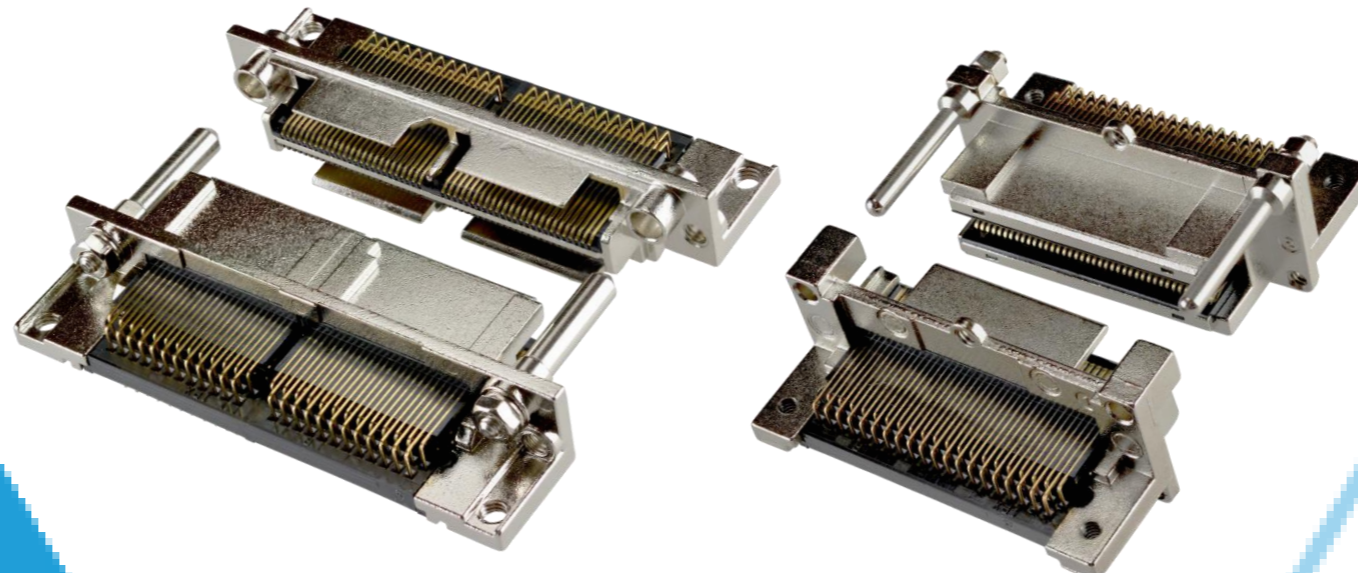
NOVASTACK® series



Board-to-Board Connectors



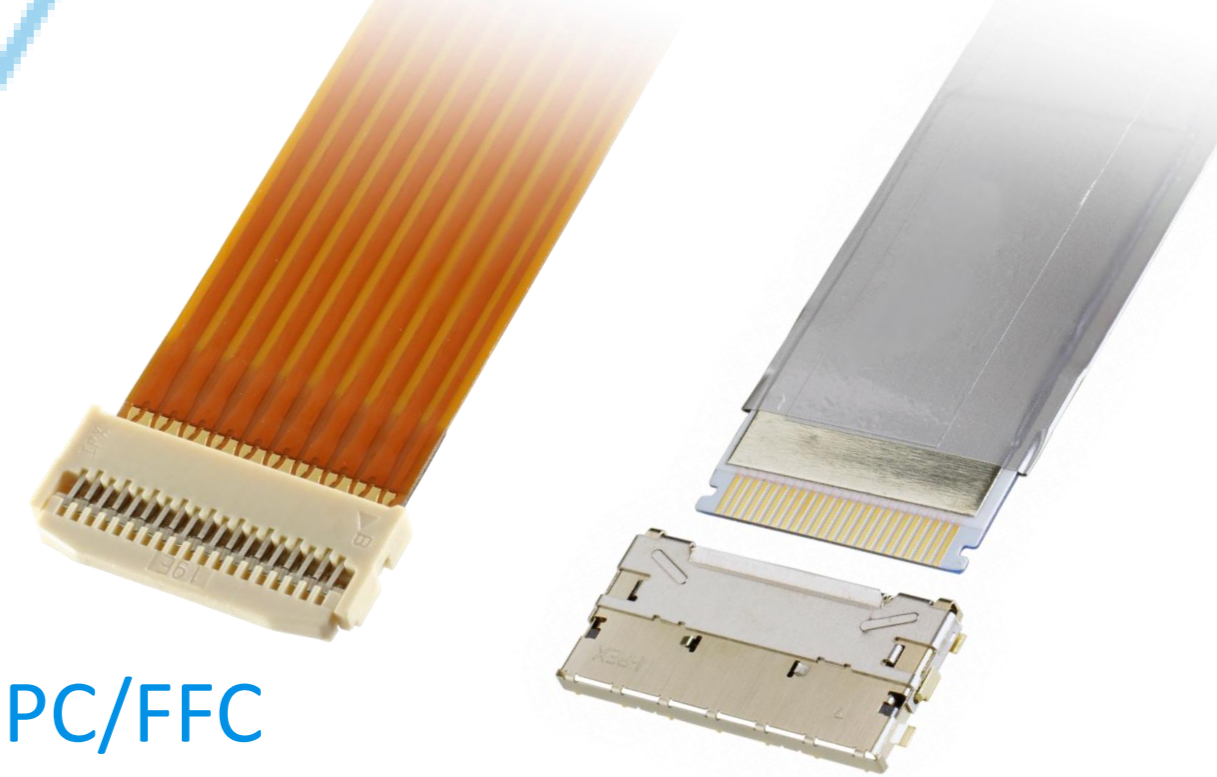
I/O Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC Connectors



Inquiry



I-PEX, MHF, CABLINE, NOVASTACK, ISH, IARPB, MINIFLEX, EVAFLEX, MINIDOCK and ZenShield are registered trademarks of I-PEX Inc. Please note that the contents in the catalog might be changed without prior notification. I-PEX Inc. assumes no responsibility for any inaccuracies or obligation to update information on these documents. Please be sure to read and understand the latest "Precautions for Use" and "Instruction Manual" before you use our products. We shall not be responsible for any defects, damages or troubles in case you use our products without following the precautions for use. Please feel free to contact our sales representatives when you use our products for any applications that require very high reliability and safety, or that relate to human life (ex. nuclear power control, aerospace, transportation, medical equipment, safety equipment etc.).

Contact your sales representative or more detailed information.

www.i-pex.com



I-PEX

© I-PEX Inc. 2025
All rights reserved