

# EVAFLEX® 5-HD

全屏蔽，高速数据传输，自动锁扣，水平插拔，0.5 mm间距的带屏蔽的 FFC/FPC连接器

## Product Specifications:

|                    |           |                         |
|--------------------|-----------|-------------------------|
| Board Pitch (mm)   |           | 0.5                     |
| Wiping Length (mm) |           | 1                       |
| Size (mm)          | Height    | 2.00 +/- 0.20           |
|                    | Width     | Formula: 5.2 + (0.5*?p) |
|                    | Depth     | 8.43 +/- 0.30           |
| Pin counts         | Range     | 10 - 40                 |
|                    | Available | 24                      |

\*如您需要了解未列出或不在范围内的Pin数，请咨询我们。

## Applicable FPC/FFC:

|                        |                                             |
|------------------------|---------------------------------------------|
| FPC/FFC Type           | Shielded FFC & FPC                          |
| FPC/FFC Contact Point  | Top                                         |
| FPC/FFC Thickness (mm) | 0.3 +/- 0.03 Contact<br>0.5 +/- 0.03 Ground |

## Applicable Standards (Reference Only):

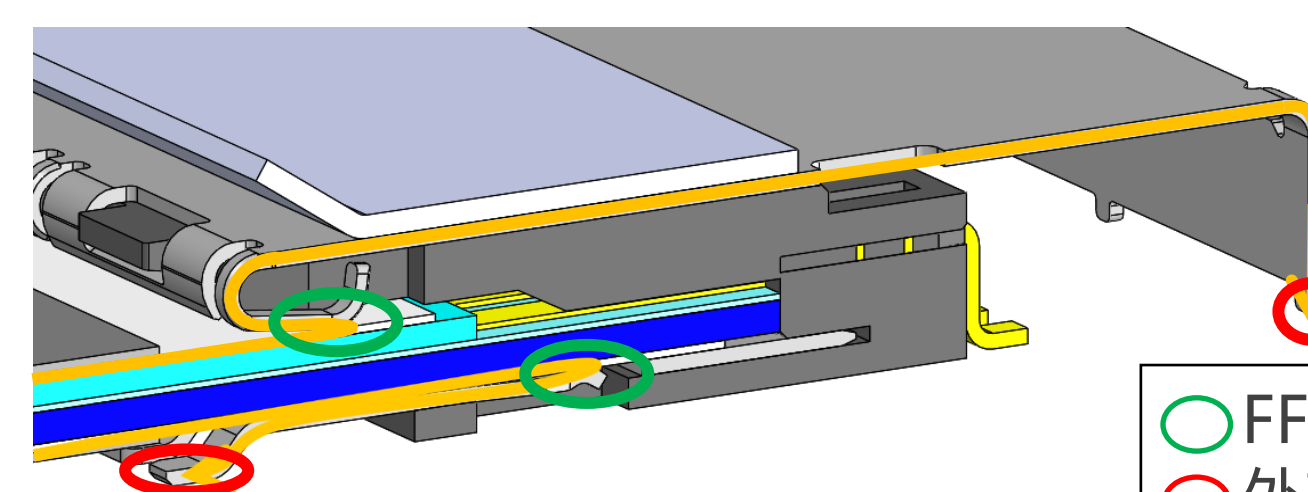
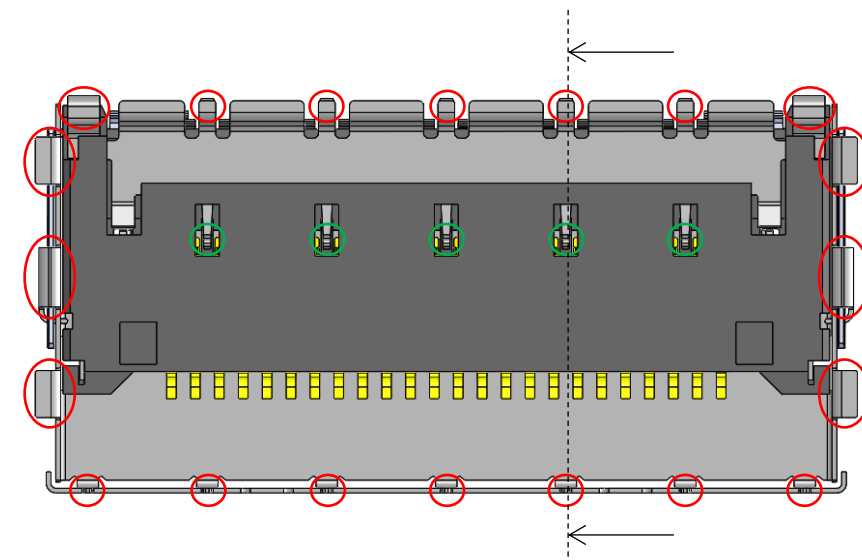
USB4 (20 Gbps/lane) USB 3.1 Gen 2 (10 Gbps) USB 3.1 Gen 1 (5 Gbps) V-by-One HS 1.4 (4 Gbps)



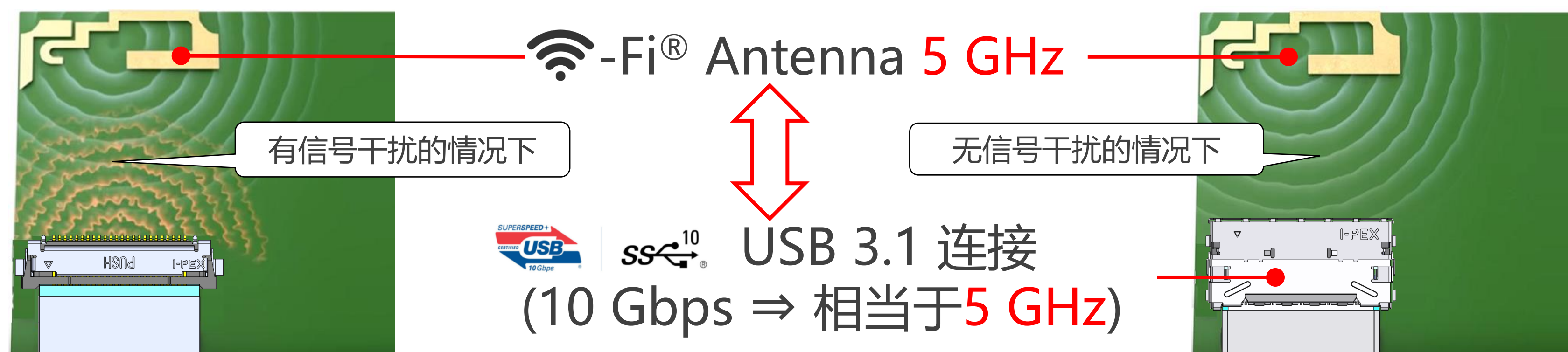
## ZenShield® 的全屏蔽和多点接地设计，有效防止EMI外泄

EVAFLEX 5-HD 24P  
“底视图”

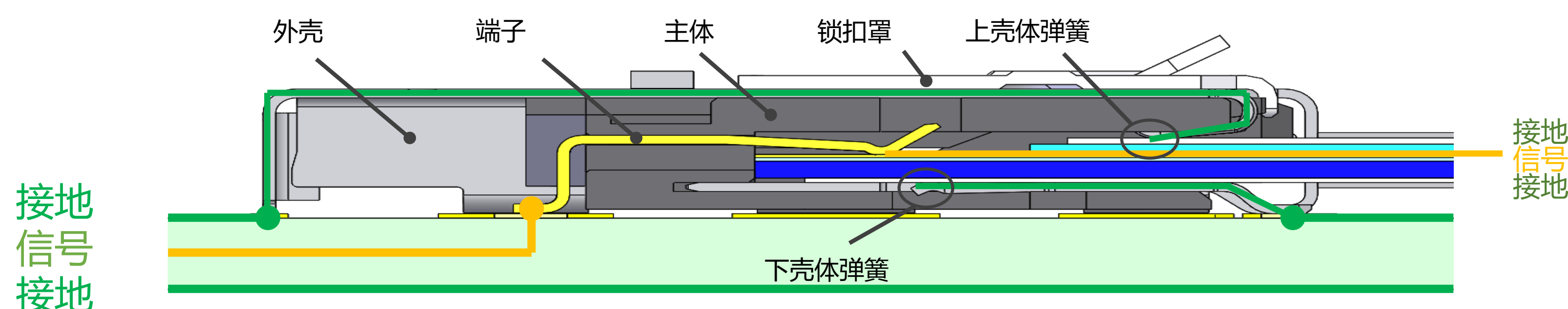
○ 焊接接点  
○ 机械接点



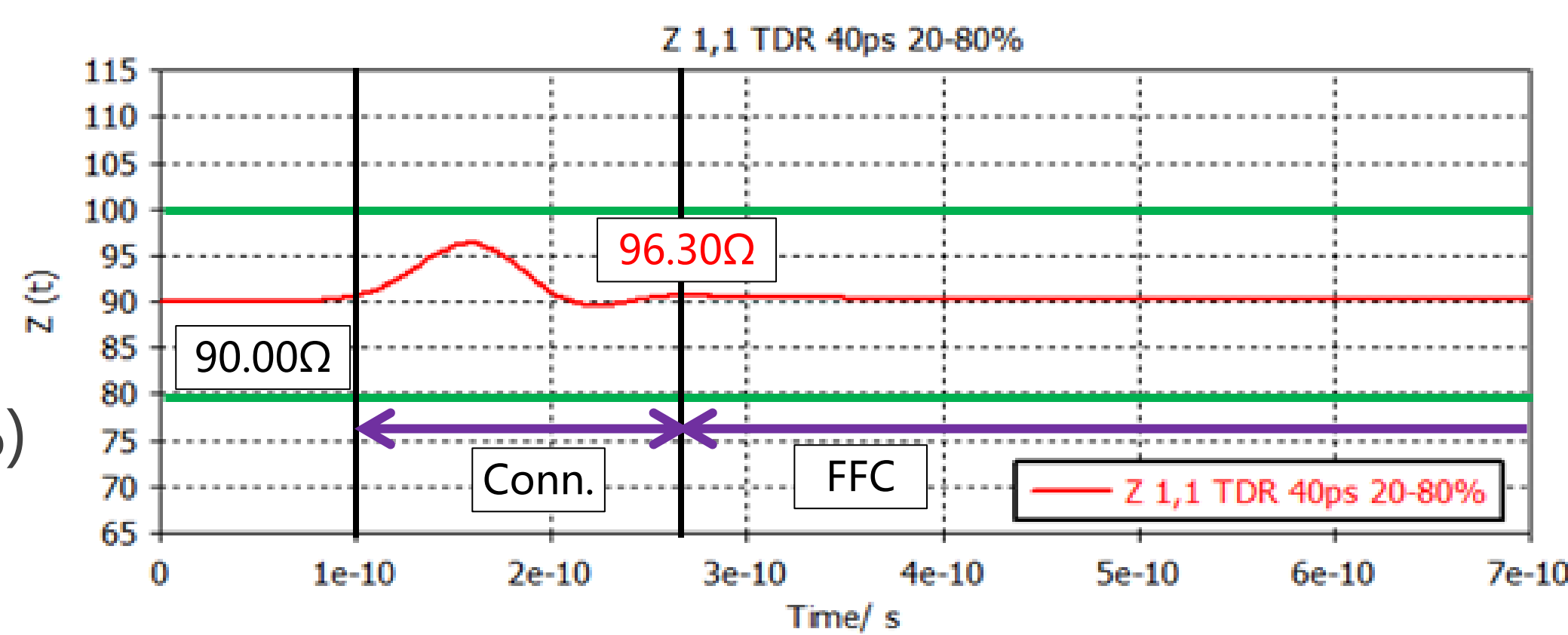
○ FFC 接地层到金属外壳  
○ 外壳到PCB



## 高速数据传输设计 ( 10+ Gbps USB® 3.1 Gen 2 )



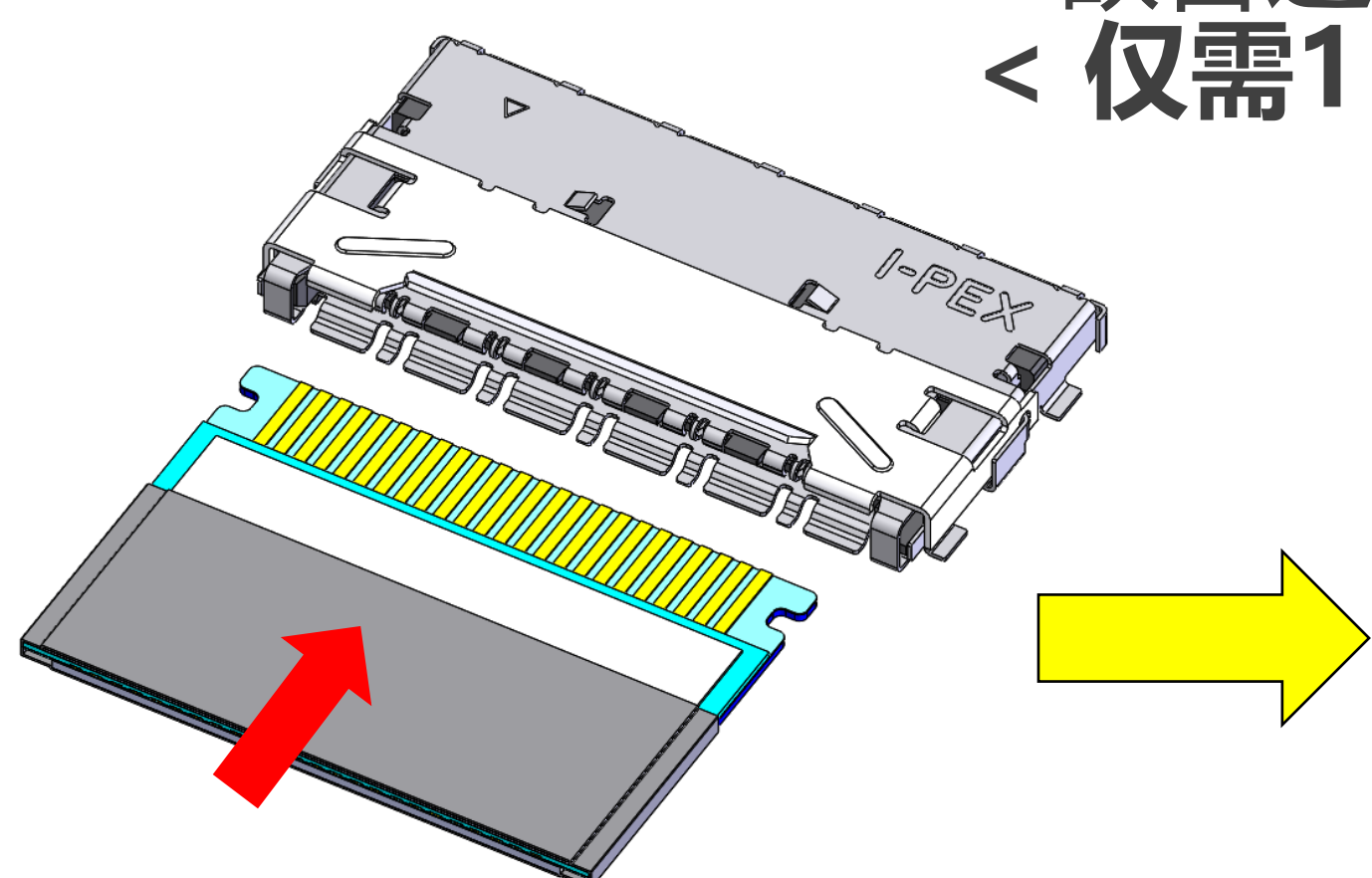
特性阻抗(差分)  
Tr = 40ps (20-80%)



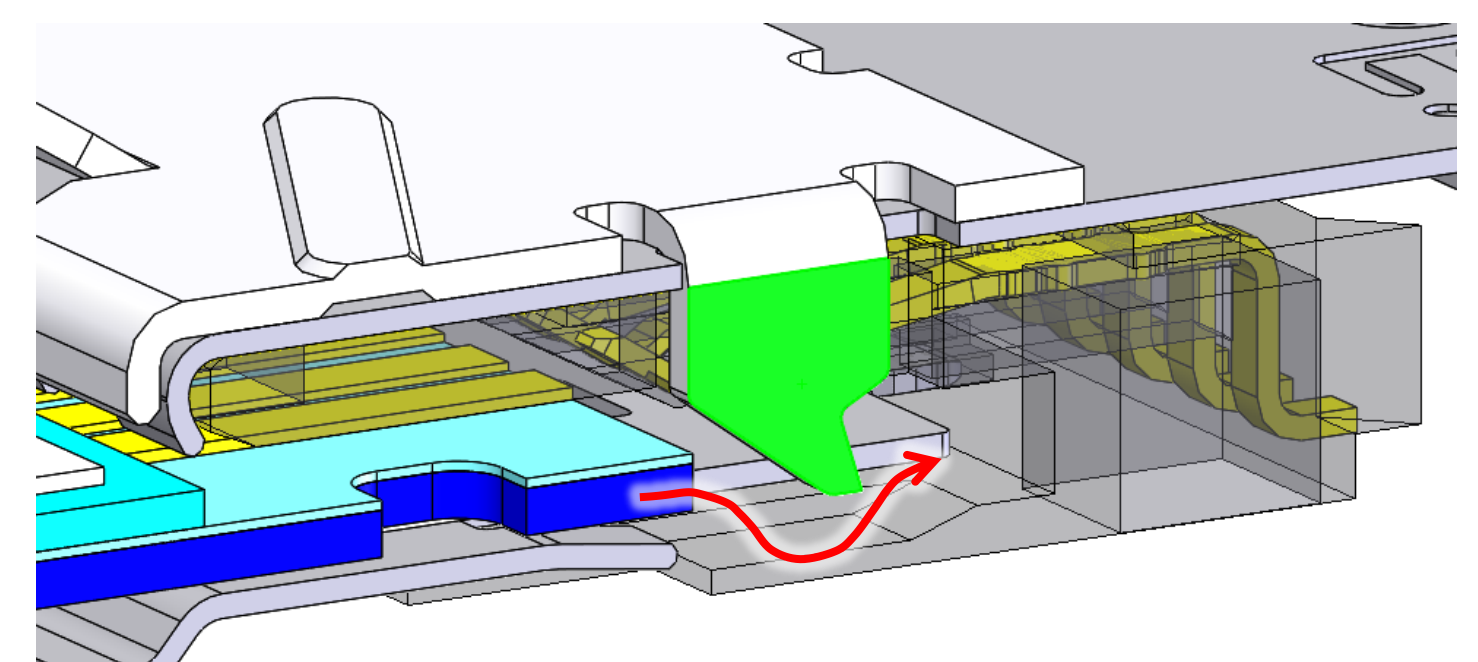
Spec. : 100Ω  
USB 3.1 (Gen2) Spec. / 90 Ohm±10Ω  
Spec. : 80Ω

## 自动锁扣的设计便于操作,适用于手动或机器人装配

嵌合过程  
< 仅需1步 >



<Position 1> FFC 插入 <Position 2> FFC 嵌合 (一步自动锁定)



截面.X-X 锁扣结构

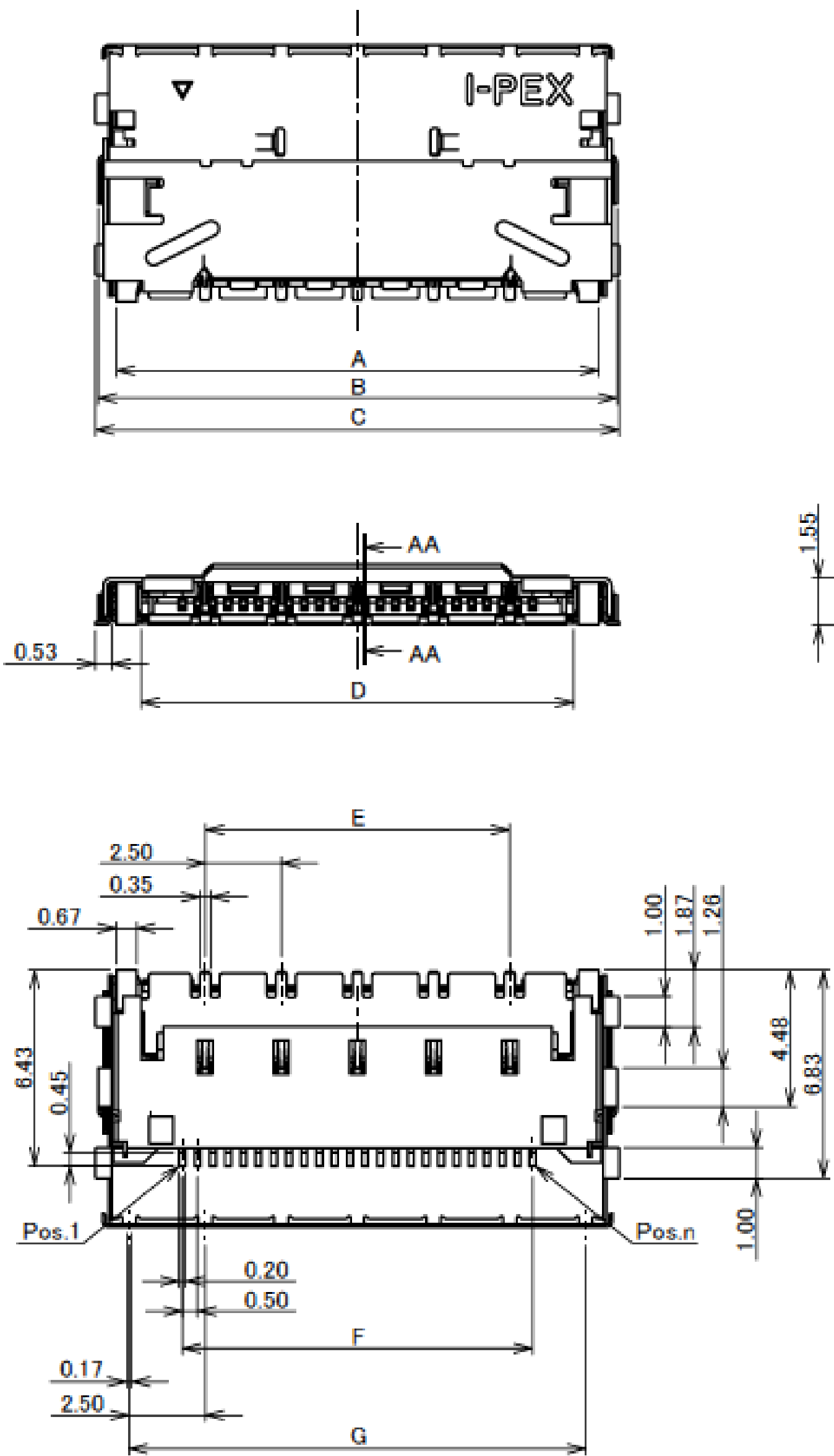
FFC凹槽口滑入锁扣部分并插入



# Component Parts Details

## Connector Assembly

| Recommended P/N |      | 20952-0**E-02 |       |       |       |       |       |       |
|-----------------|------|---------------|-------|-------|-------|-------|-------|-------|
| PART NO.        | Pos. | A             | B     | C     | D     | E     | F     | G     |
| 20952-024E-02   | 24   | 15.84         | 17.04 | 17.20 | 14.20 | 10.00 | 11.50 | 15.00 |

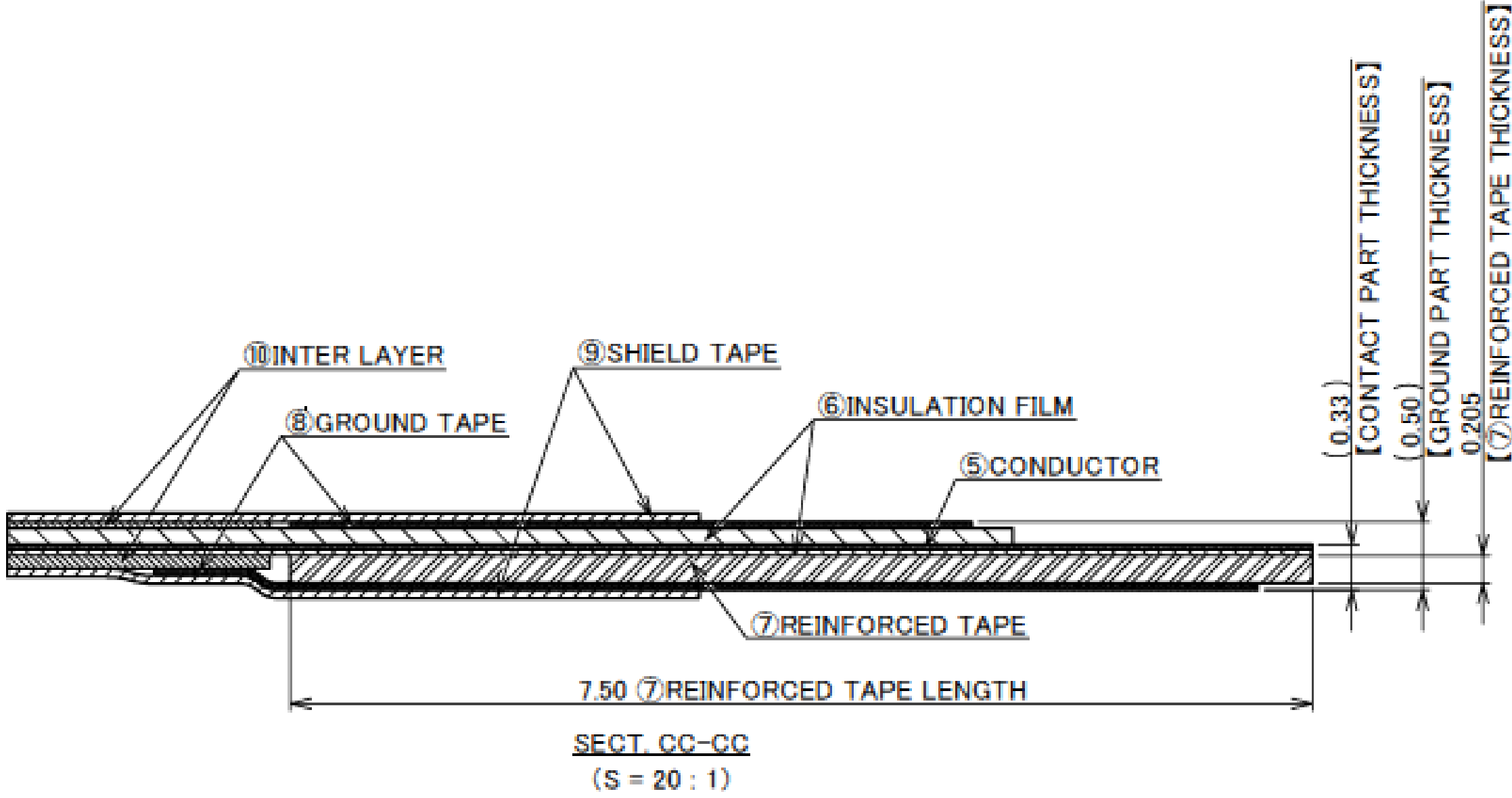
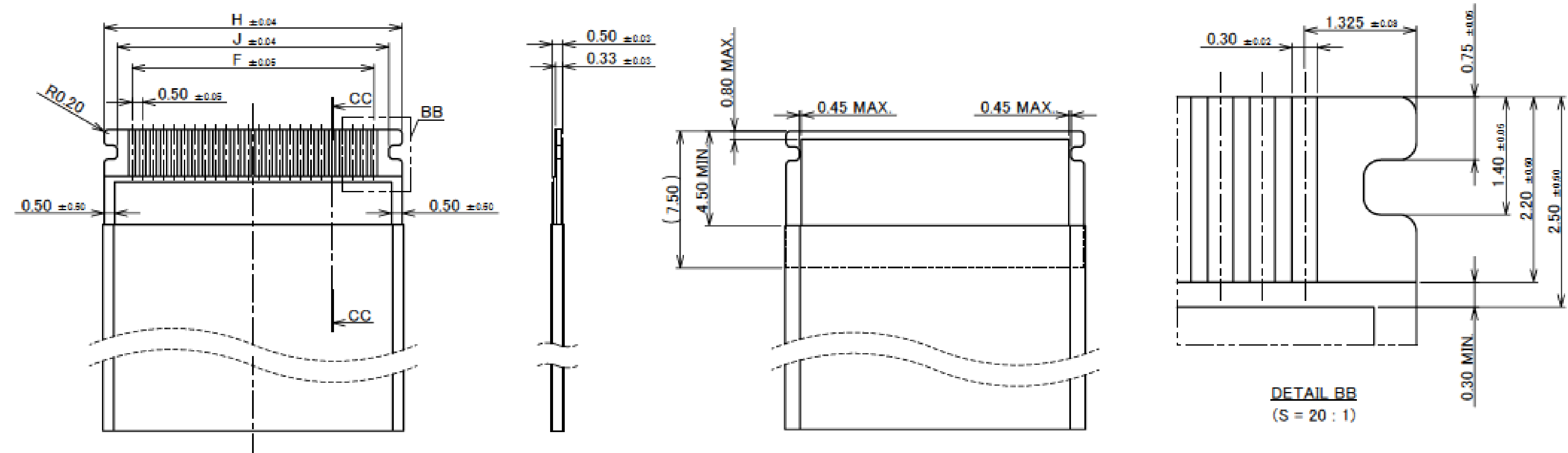


|     |             |              |                                                                                                                                |
|-----|-------------|--------------|--------------------------------------------------------------------------------------------------------------------------------|
| 4   | COVER       | SUS          |                                                                                                                                |
| 3   | SHELL       | CORSON ALLOY | ALL OVER Ni 1.00 $\mu$ m MIN.<br>SOLDERING AREA: Au 0.02 $\mu$ m MIN.                                                          |
| 2   | CONTACT     | CORSON ALLOY | CONTACT AREA: Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.<br>SOLDERING AREA: Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN. |
| 1   | HOUSING     | LCP          | UL94V-0, BLACK                                                                                                                 |
| NO. | DISCRIPTION | MATERIAL     | FINISH , REMARKS                                                                                                               |



Connector Assembly

| PART NO.      | Pos. | F     | H     | J     |
|---------------|------|-------|-------|-------|
| 20952-024E-02 | 24   | 11.50 | 14.15 | 12.90 |



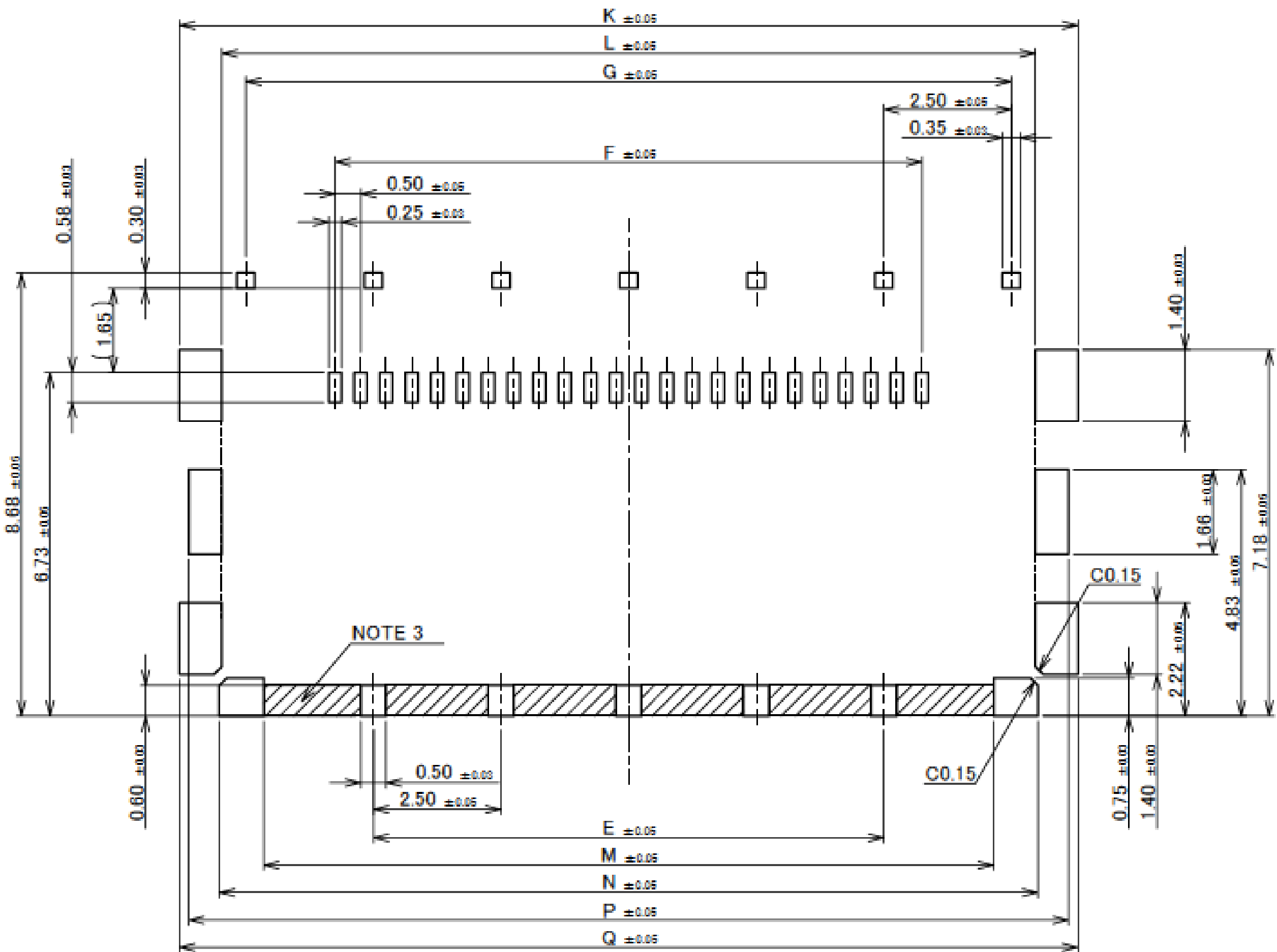
- NOTES.
1. DIFFERENTIAL IMPEDANCE : 90 ± 10 Ω
  2. SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF 85°C OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

| NO. | DISCRIPTION     | MATERIAL      | FINISH , REMARKS                                     |
|-----|-----------------|---------------|------------------------------------------------------|
| 10  | INTER LAYER     | ARBITRARY     |                                                      |
| 9   | SHIELD TAPE     | METALLIC FILM |                                                      |
| 8   | GROUND TAPE     | METALLIC FILM | POLISH or HALF POLISH Sn PLATING                     |
| 7   | REINFORCED TAPE | ARBITRARY     |                                                      |
| 6   | INSULATION FILM | ARBITRARY     |                                                      |
| 5   | CONDUCTOR       | COPPER ALLOY  | CONTACT AREA : Au 0.05 μ m MIN. OVER Ni 0.5 μ m MIN. |

Rev.5

Plug Housing Assembly

| PART NO.      | Pos. | E     | F     | G     | K     | L     | M     | N     | P     | Q     |
|---------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 20952-024E-02 | 24   | 10.00 | 11.50 | 15.00 | 17.60 | 15.94 | 14.30 | 16.04 | 17.24 | 17.60 |



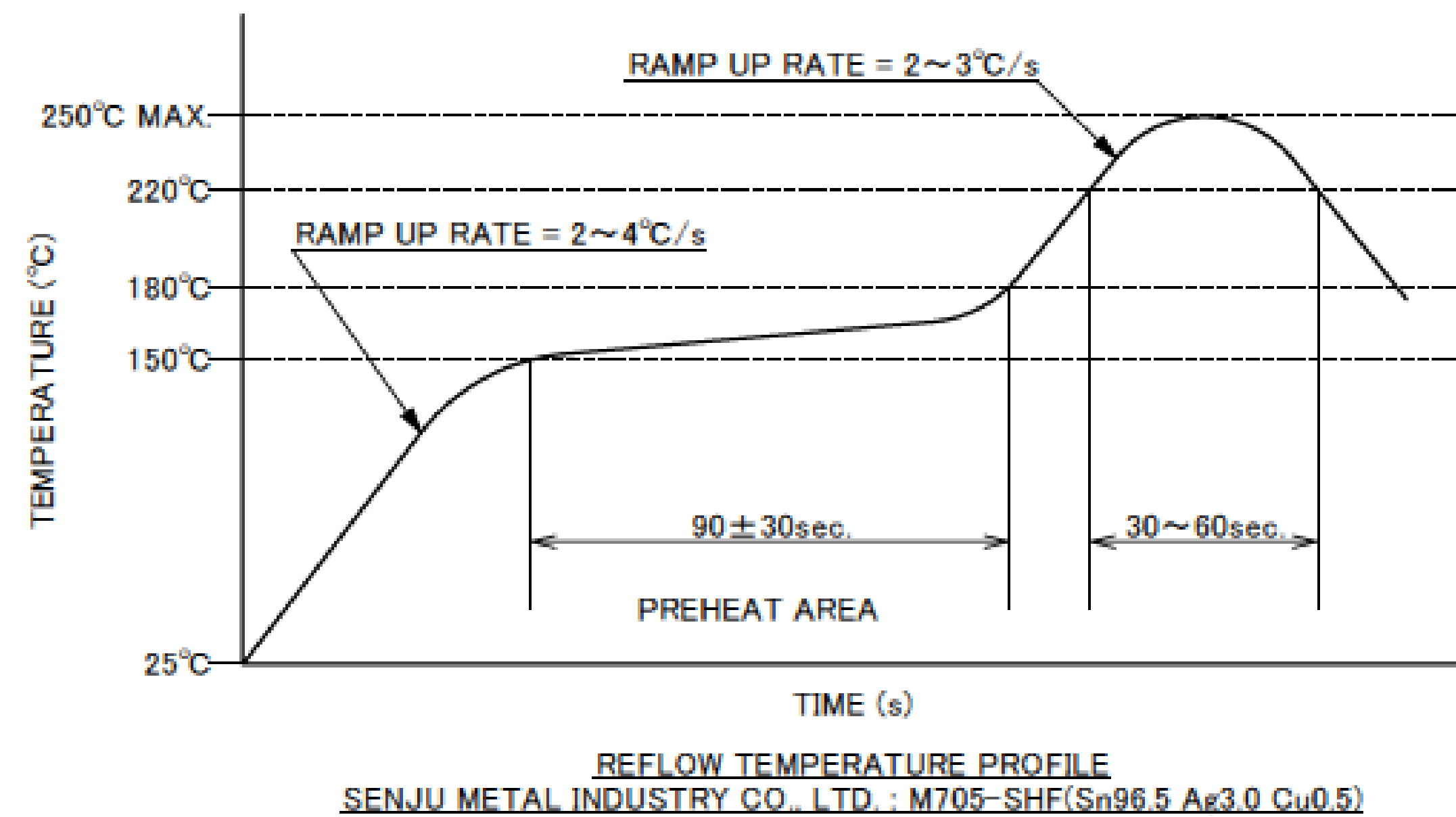
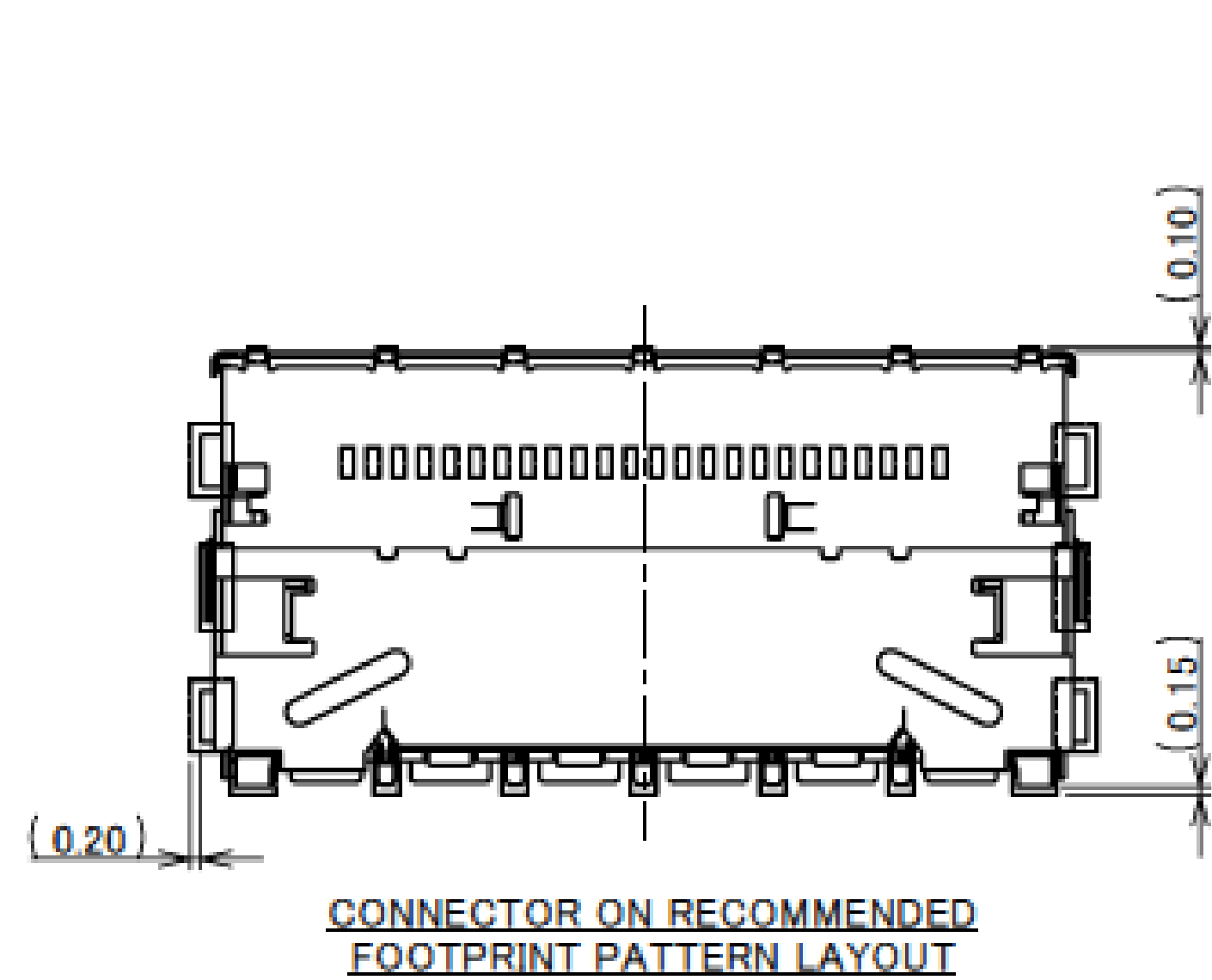
RECOMMENDED PCB & METALMASK LAYOUT  
THICKNESS t=0.12

- NOTES.
3. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.5



Connector Assembly



Rev.5

Plug Housing Assembly

| ITEMS                                          | SPECIFICATION                                              |
|------------------------------------------------|------------------------------------------------------------|
| RATING VOLTAGE                                 | 50V AC/DC (PER CONTACT PIN)                                |
| RATING AMPERAGE (FOR SIGNAL CONTACT)           | 0.30A AC/DC (PER CONTACT PIN)                              |
| OPERATING TEMPERATURE                          | 233~358K (-40°C~+85°C)                                     |
| OPERATING HUMIDITY                             | 85% RH. MAX. (NON-CONDENSING)                              |
| CONTACT RESISTANCE (FOR SIGNAL CONTACT)        | INITIAL : 60mohm MAX. / AFTER TEST : $\angle$ 140mohm MAX. |
| INSULATION RESISTANCE                          | INITIAL : 500Mohm MIN. / AFTER TEST : 500Mohm MIN.         |
| DIELECTRIC WITHSTANDING VOLTAGE                | AC 250V 1min                                               |
| DURABILITY                                     | 30 CYCLES                                                  |
| MATING FORCE (INITIAL / AFTER TEST)            | 24P : 22.00 N MAX.                                         |
| UNMATING FORCE (INITIAL / AFTER TEST)          | 24P : 2.30 N MIN.                                          |
| FFC/FPC RETENTION FORCE (INITIAL / AFTER TEST) | 24P : 8.50 N MIN.                                          |
| COPLANARITY                                    | 0.10 MAX.                                                  |
| PRODUCT SPECIFICATION                          | PRS-2645                                                   |
| TEST REPORT                                    | TR-20006                                                   |
| PACKING STANDARD                               | PST-19012                                                  |
| INSTRUCTION MANUAL                             | HIM-19004                                                  |
| APPEARANCE CRITERIA No.                        | QLS-A***                                                   |

Rev.5



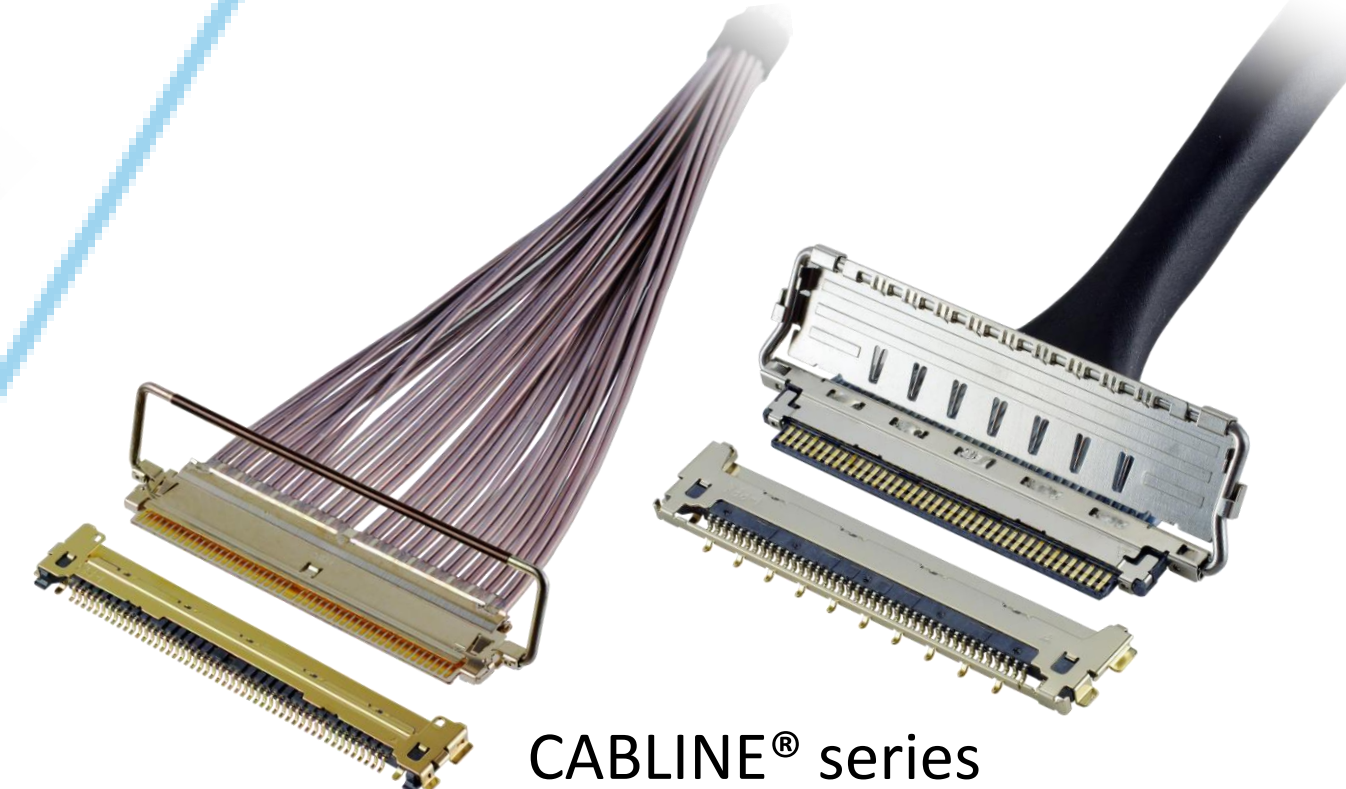
# Custom Connectors Available

 RF  
Connectors

MHF® series



Micro-coaxial/Twinax  
Connectors

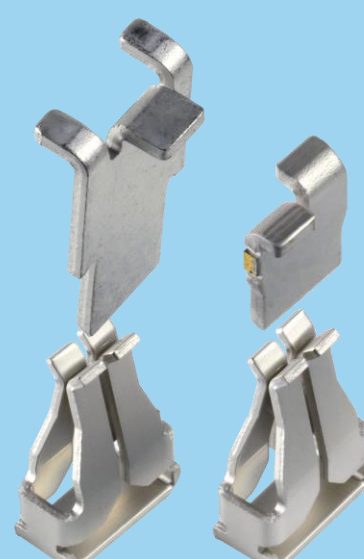


CABLINE® series

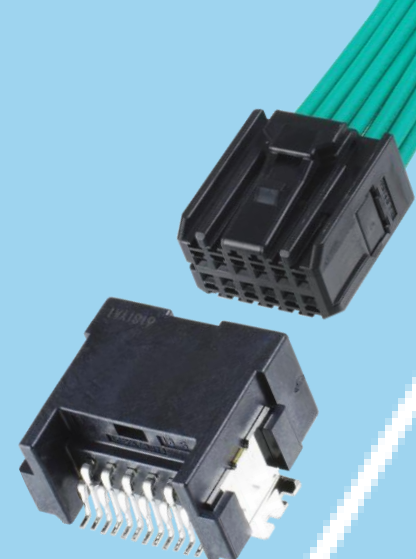


Wire-to-Board  
Connectors/  
Terminals

AP series



ISH® series



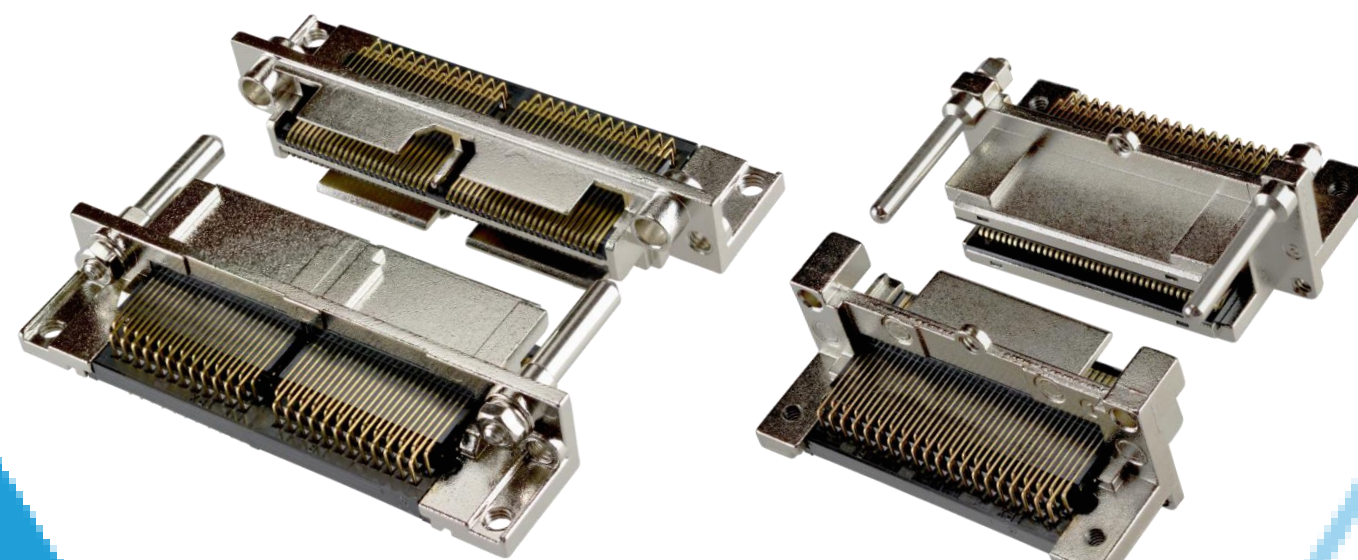
NOVASTACK® series



Board-to-Board  
Connectors



I/O  
Connectors



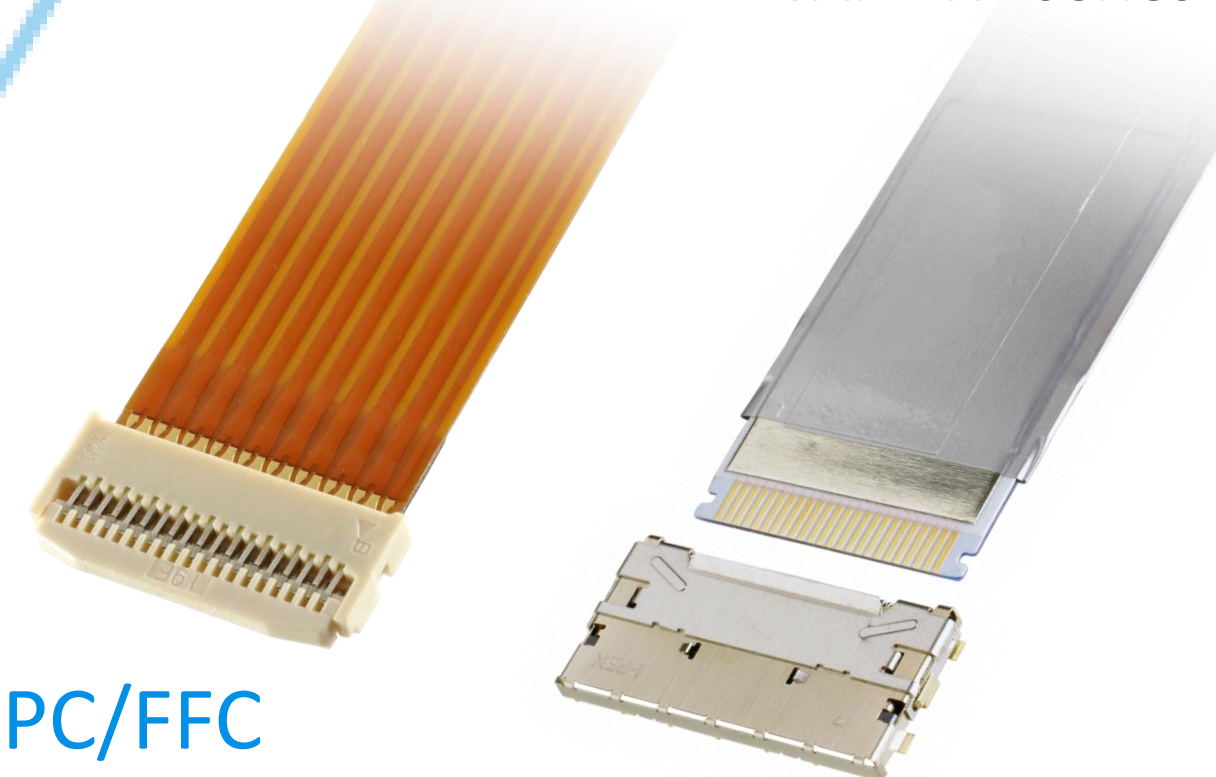
MINIDOCK™ series



FPC/FFC  
Connectors

MINIFLEX® series

EVAFLEX® series



Inquiry



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