

# CABLINE®-CX II Without Cover

狭ピッチ (0.25 mmピッチ)、低背 (高さ = 0.78 mm max)、メカニカルロック付き、シールド & 多点グランド接点、水平嵌合タイプ細線同軸コネクタ

## Product Specifications:

|                    |           |                           |
|--------------------|-----------|---------------------------|
| Mating type        |           | Horizontal                |
| Board Pitch (mm)   |           | 0.5                       |
| Wiping Length (mm) |           | 0.54                      |
| Mated size (mm)    | Height    | 0.78 Max                  |
|                    | Width     | Formula: 6.45 + (0.25*?p) |
|                    | Depth     | 5.21                      |
| Pin Counts         | Range     | Up to 40                  |
|                    | Available | 40                        |

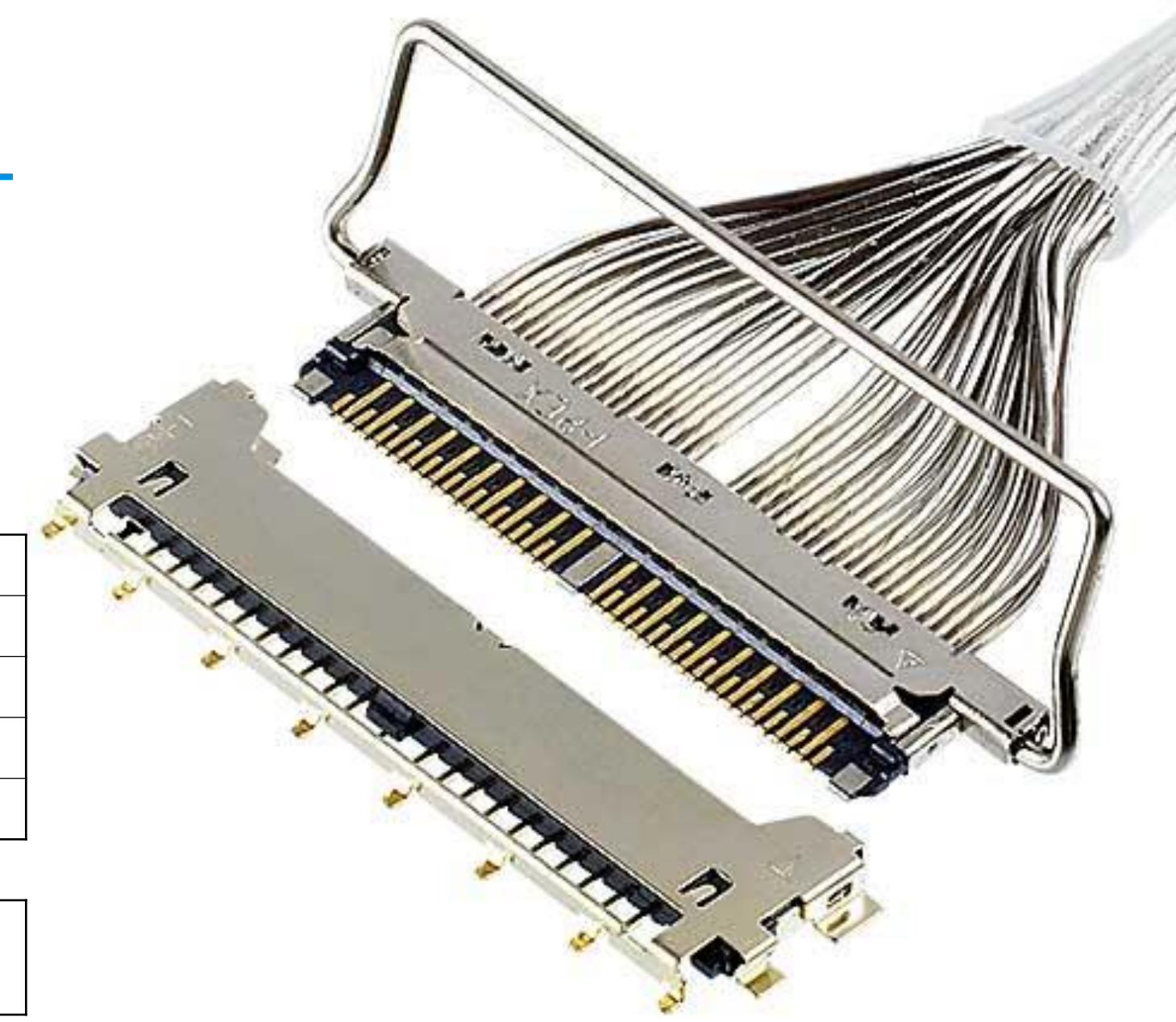
## Applicable Cable Size:

|                                |                                                  |
|--------------------------------|--------------------------------------------------|
| Maximum O.D. (mm)              | 0.25                                             |
| Micro-Coaxial for Signal (AWG) | 45 ohm: #44 or smaller<br>50 ohm: #46 or smaller |
| Twinax (AWG)                   | -                                                |
| Discrete (AWG)                 | #39 or smaller                                   |

## Applicable Standards (Reference Only):

USB 3.1 Gen 1 (5 Gbps), V-By-One HS 1.4 (4 Gbps), HDMI 1.3 (3.4 Gbps) Gbps

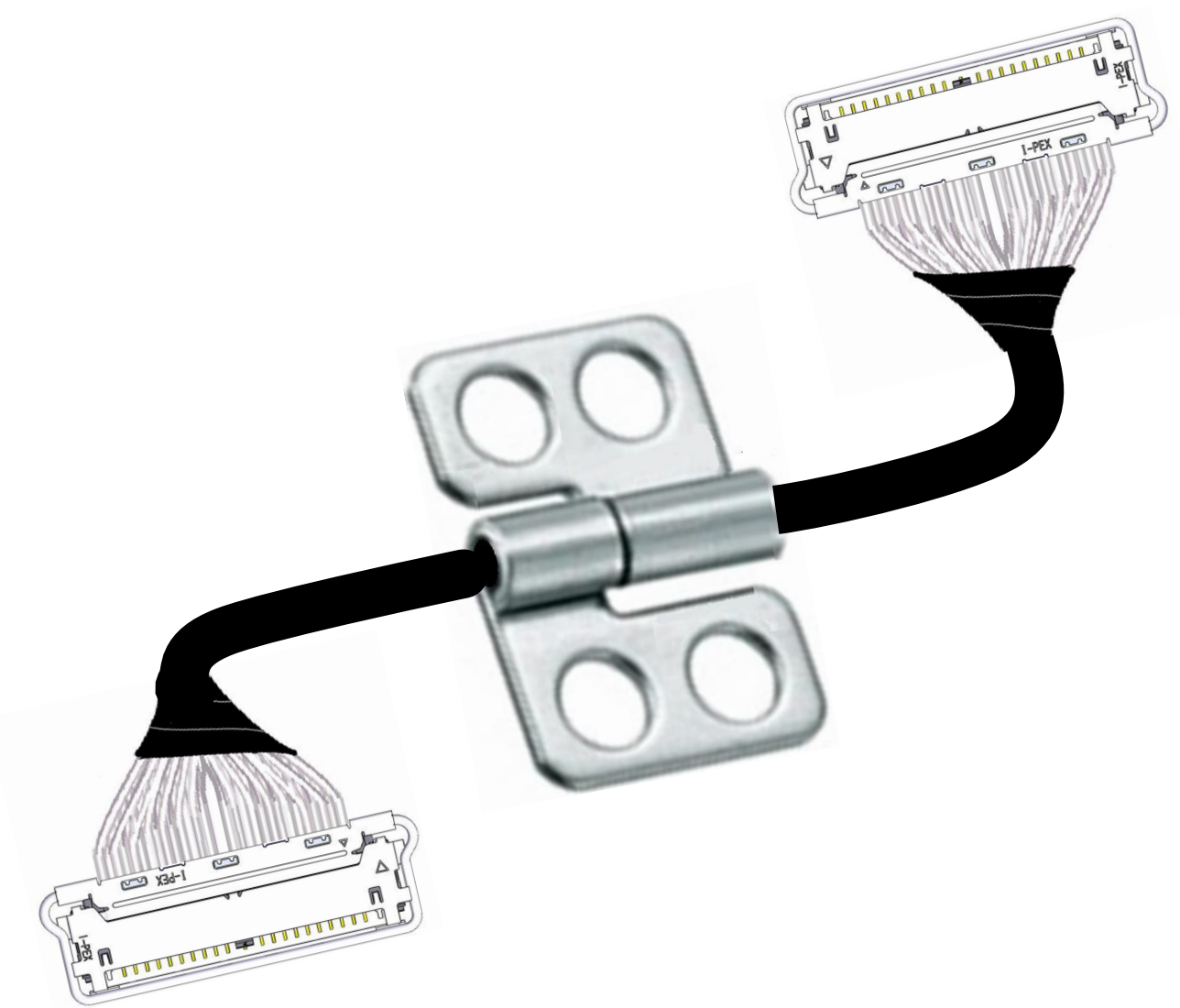
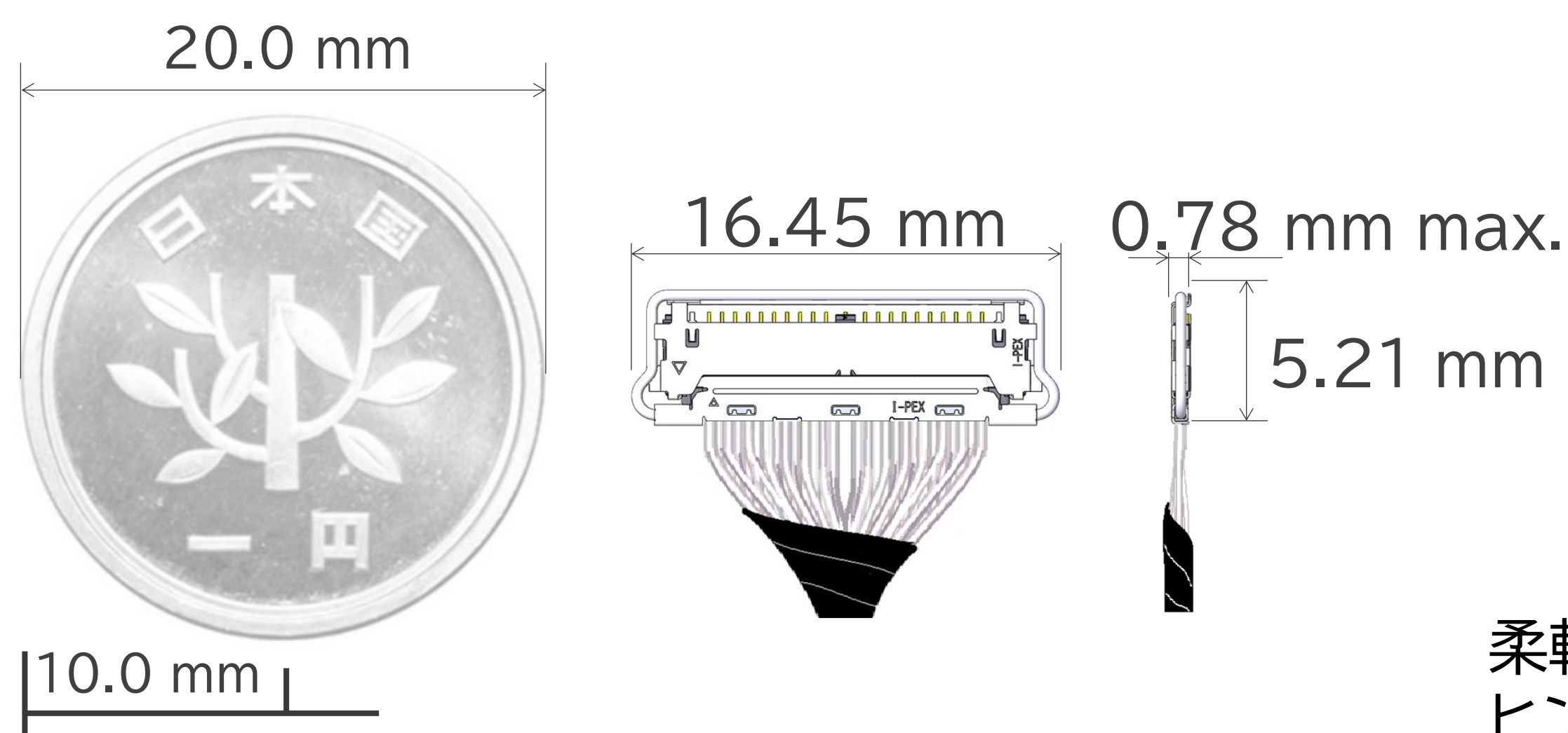
\*記載のない極数の対応状況についてはお問い合わせください。  
\*CABLINE®-CX II With Coverタイプ (嵌合高さ: 1.0mm max.) もございます。



## ▶ 狭小スペースに最適

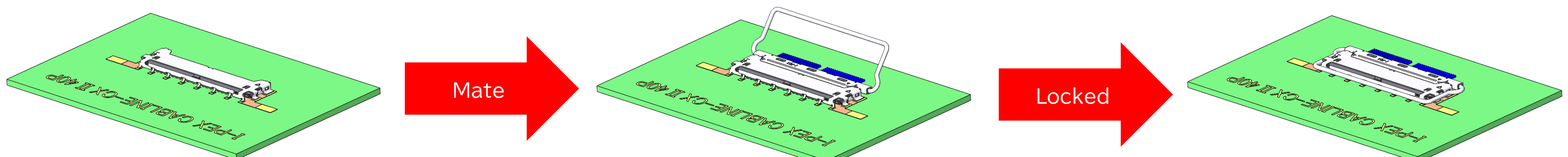
[細線同軸コネクタハーネスによるヒンジ部通過シミュレーション](#)

CABLINE-CX II 40p と 1円硬貨のサイズ比較  
嵌合高さ: 0.78mm max.



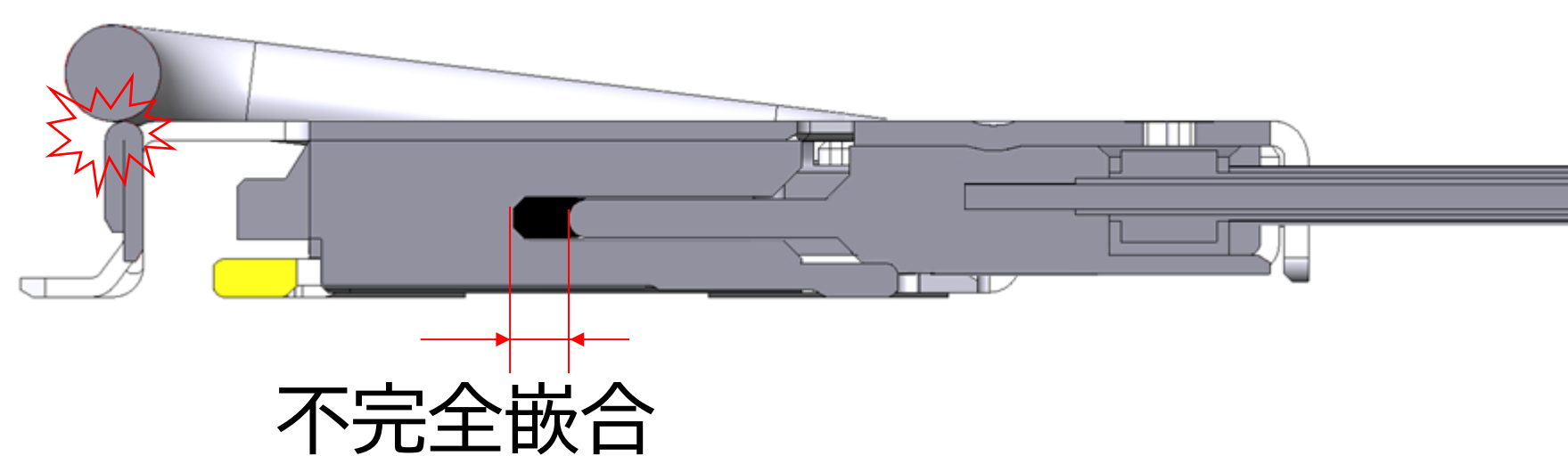
柔軟な細線同軸ケーブルハーネスは  
ヒンジのある小型アプリケーションに適応

## ▶ メカニカルロックバーによる不完全嵌合防止とPlug抜け防止

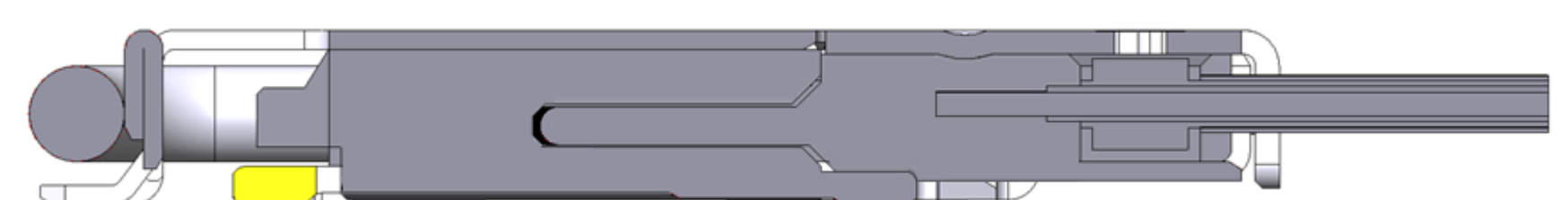


PlugがReceptacleに完全に嵌合されている場合にのみロックが可能

干渉

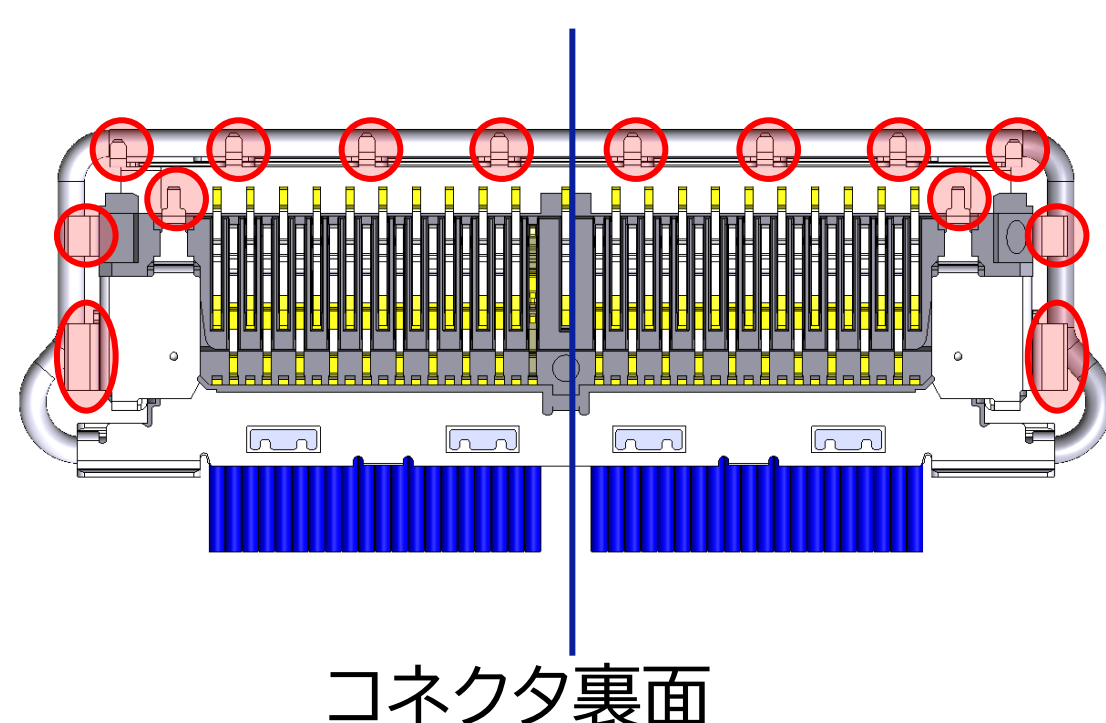


不完全嵌合



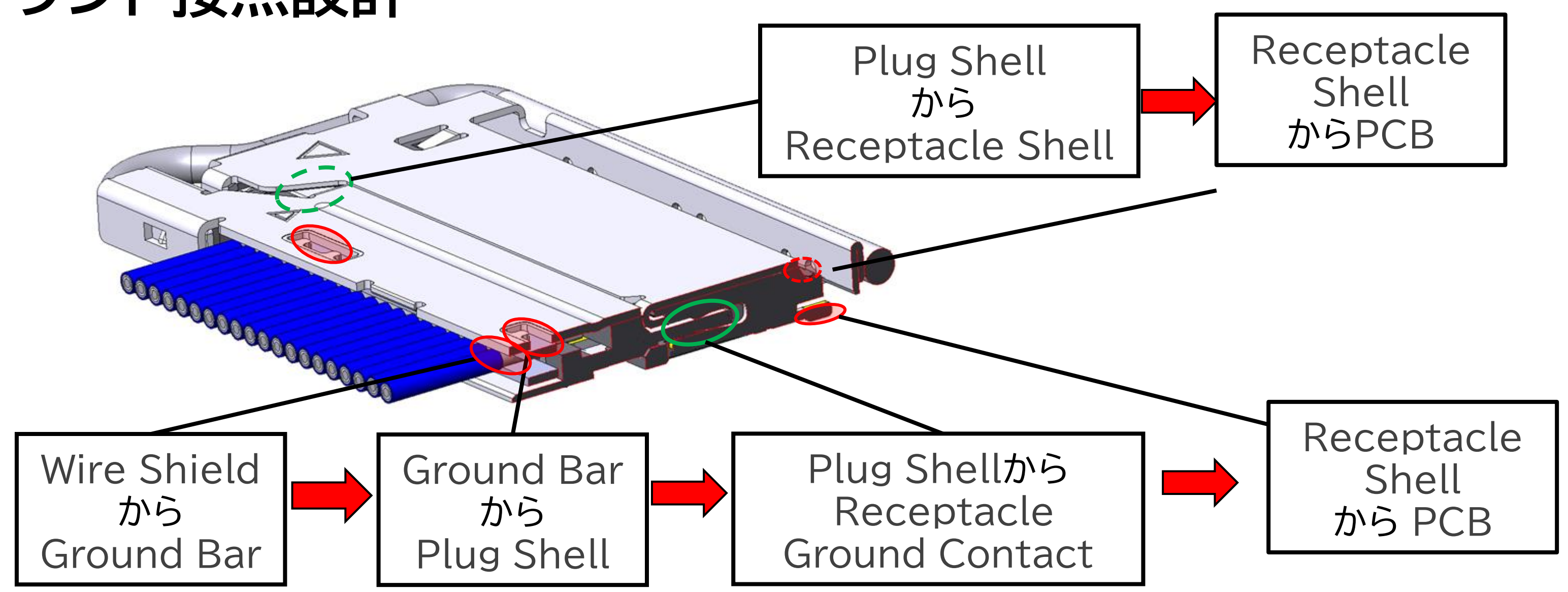
完全嵌合

## ▶ EMIシールドと多点グランド接点設計



コネクタ裏面

○ はんだ付け接点部  
○ メカニカル接点部

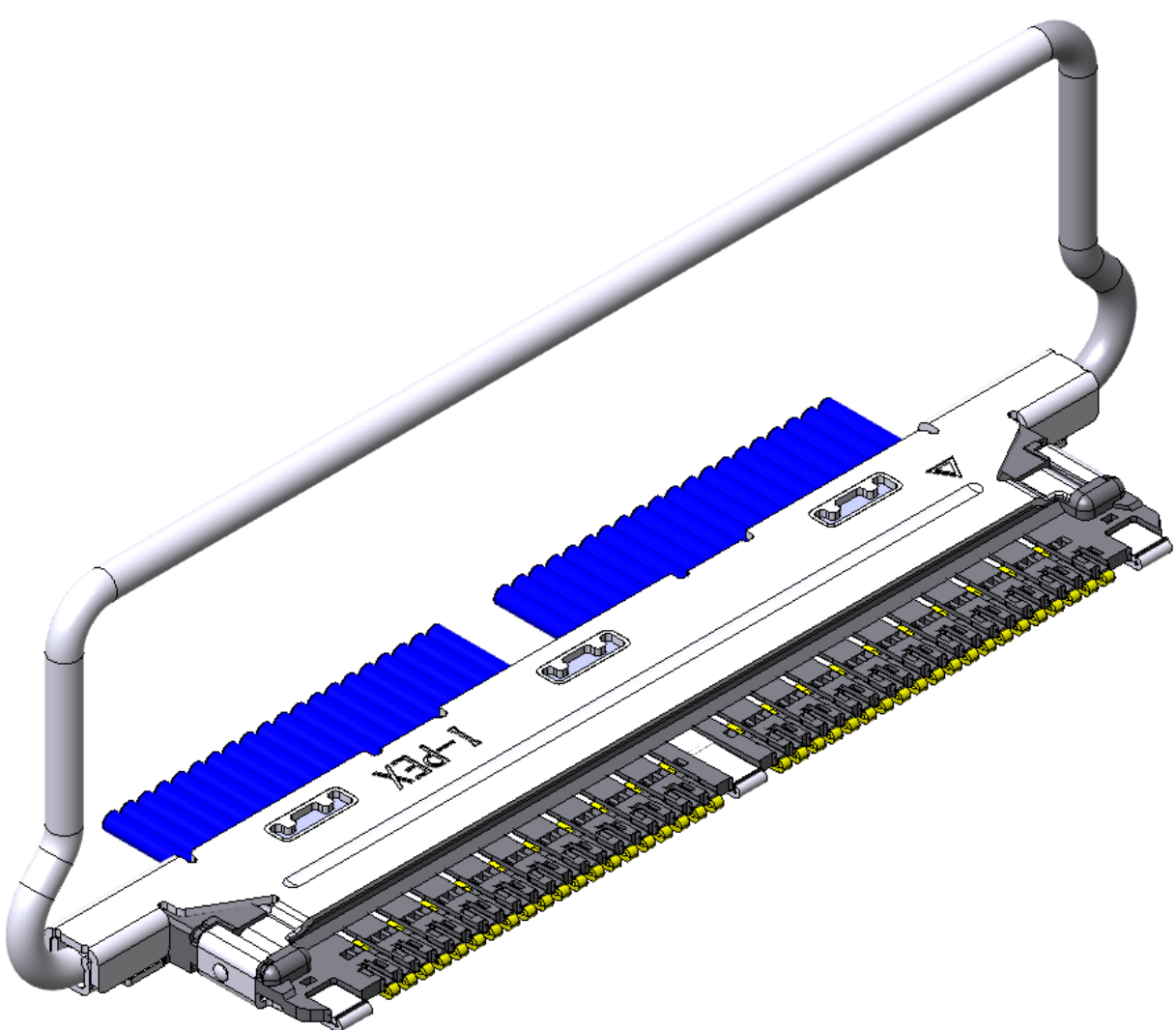




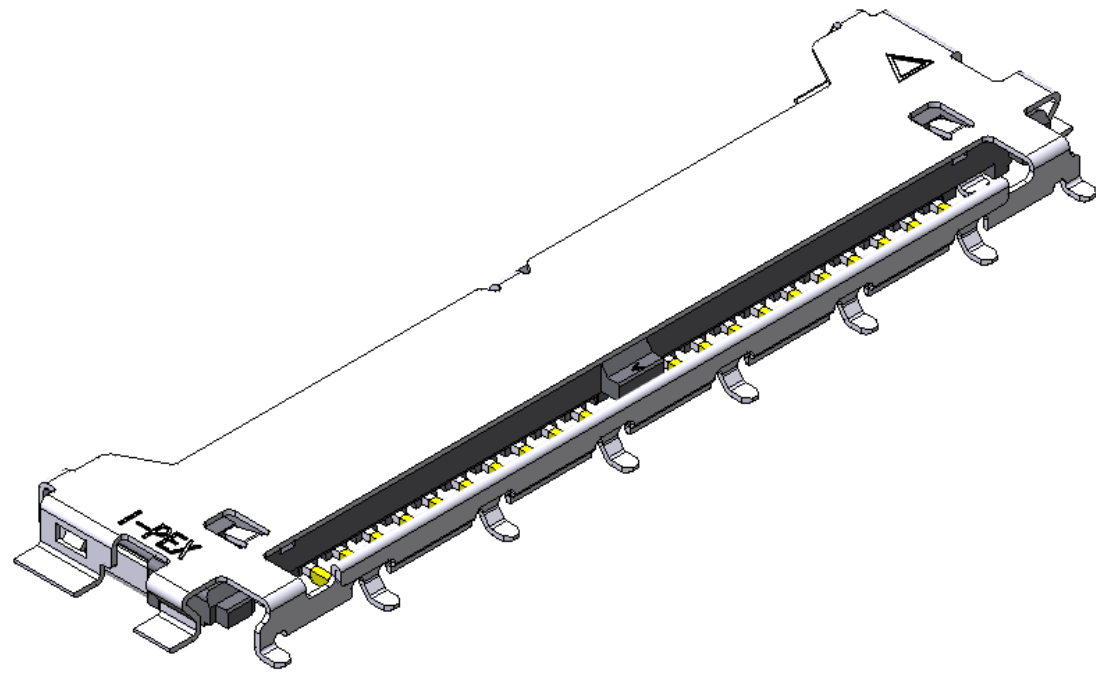
# Component Parts Details

## Component Parts

Connector parts

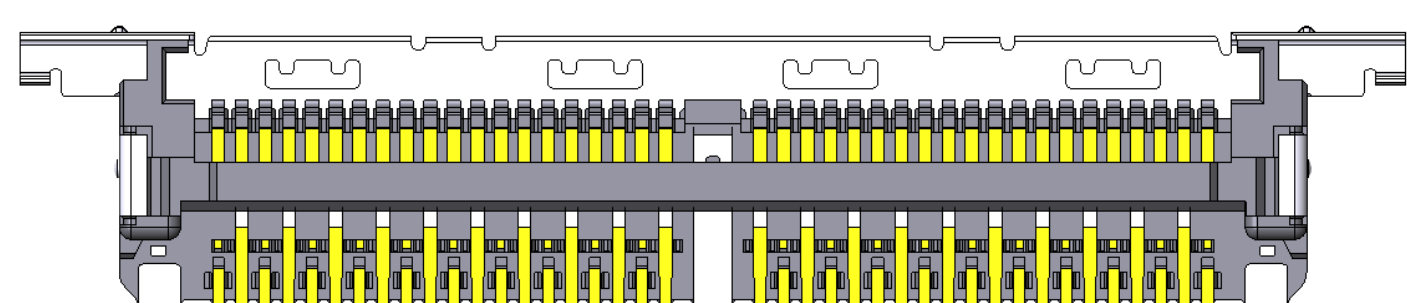


PLUG

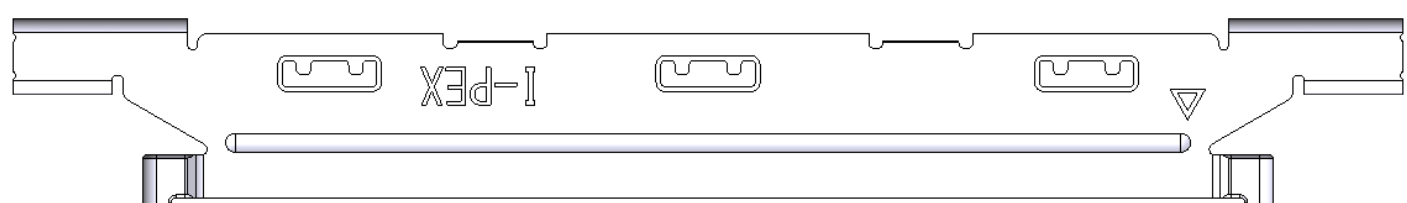


RECEPTACLE

Plug parts



PLUG HOUSING ASSEMBLY



PLUG SHELL-A

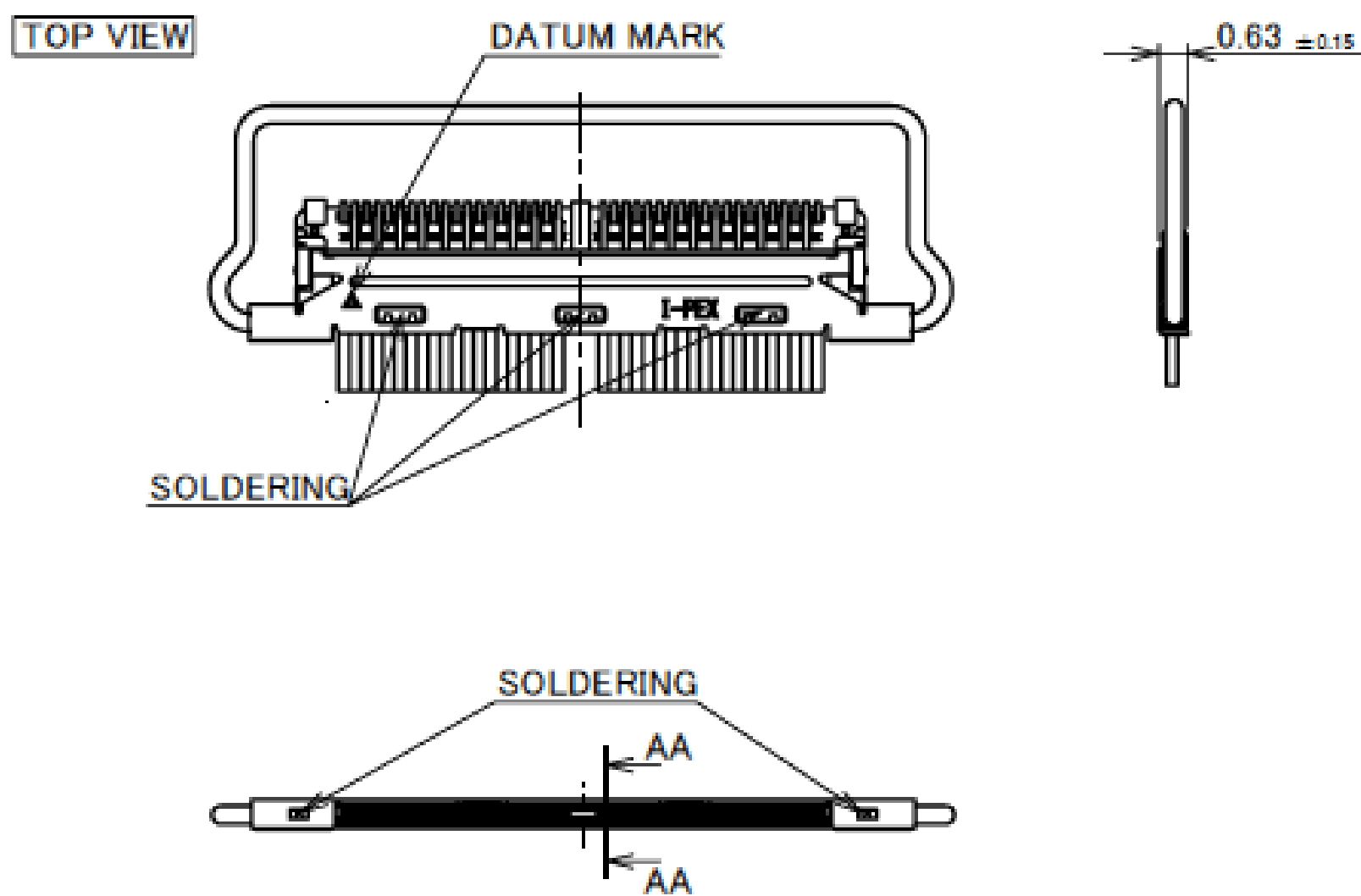
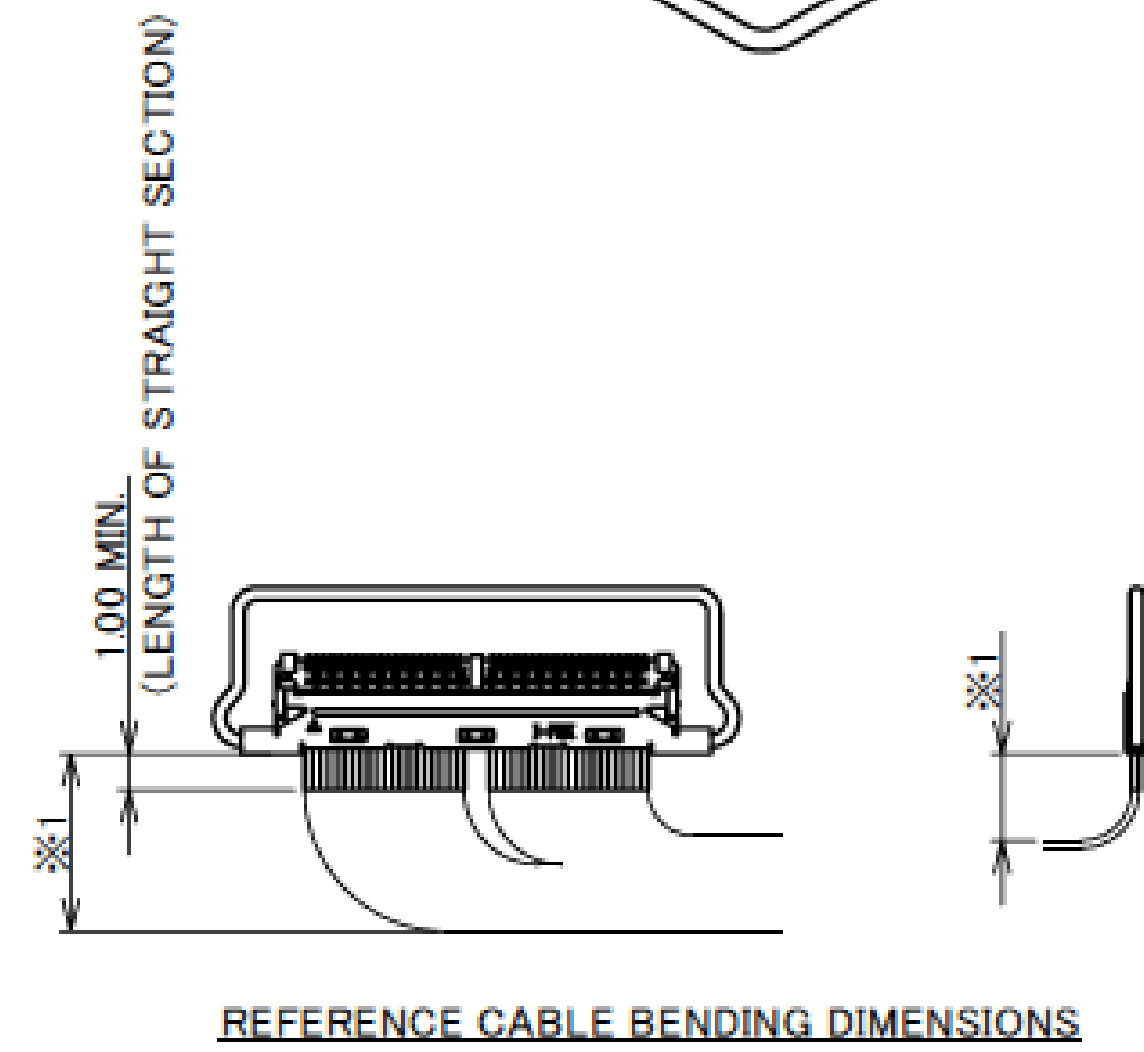
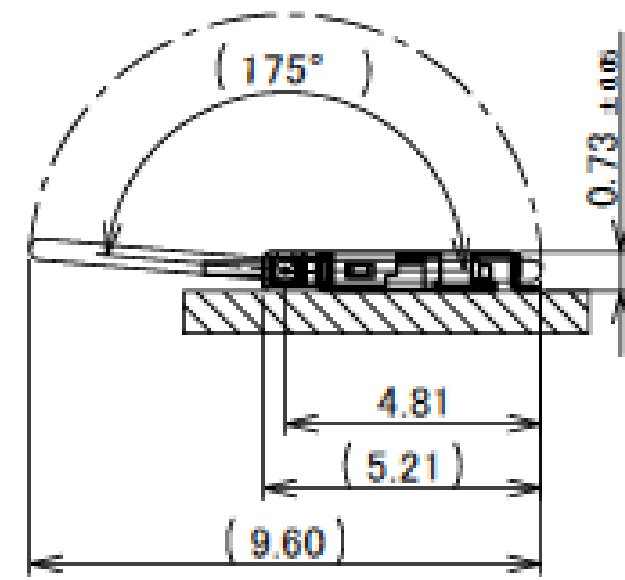
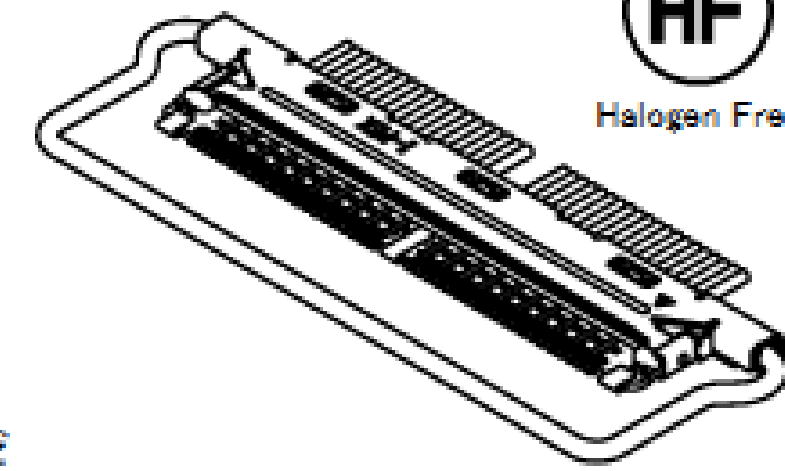
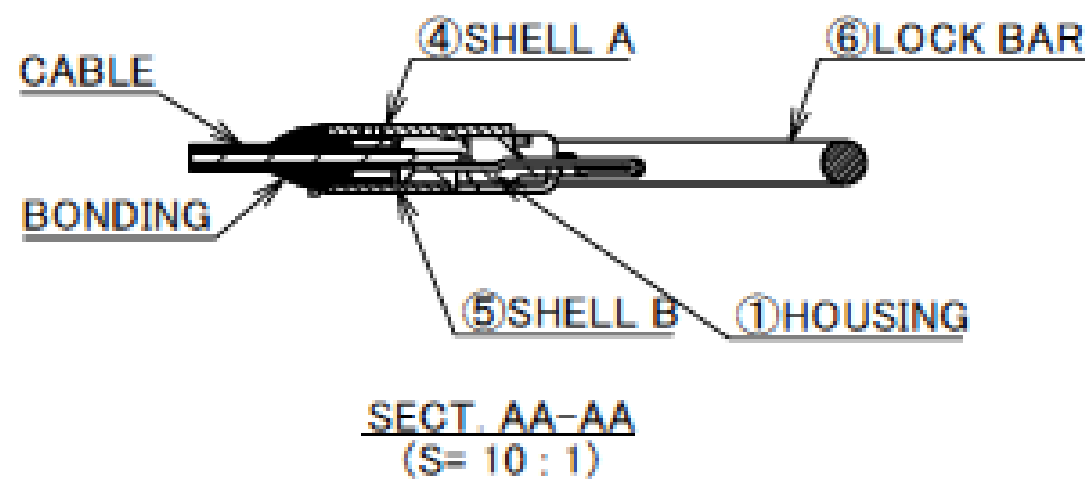
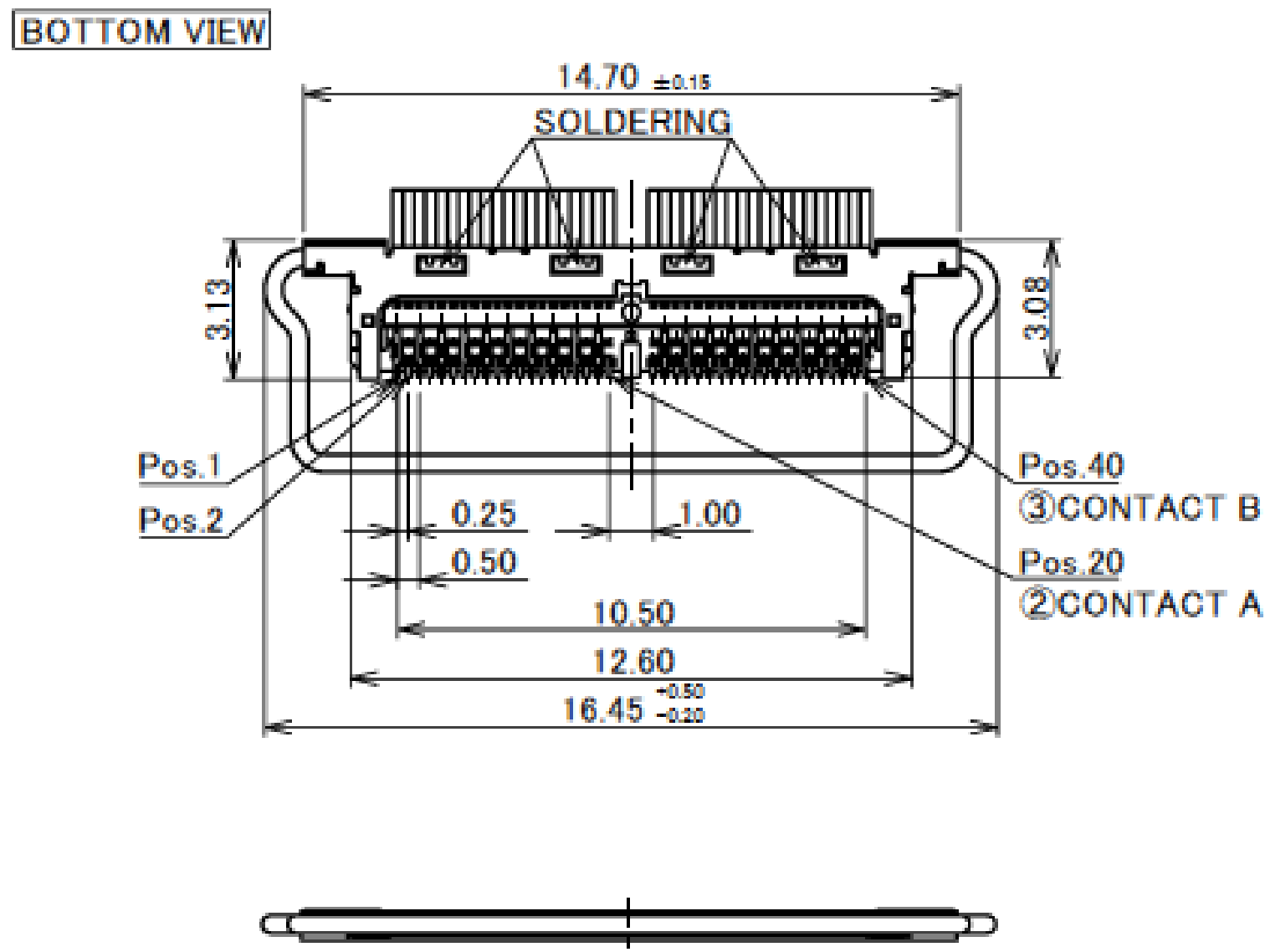


PLUG LOCK BAR



Plug for Cable Assembly

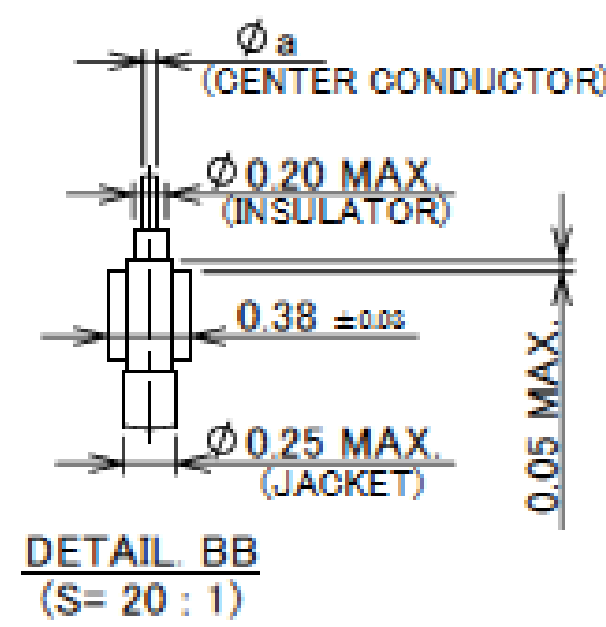
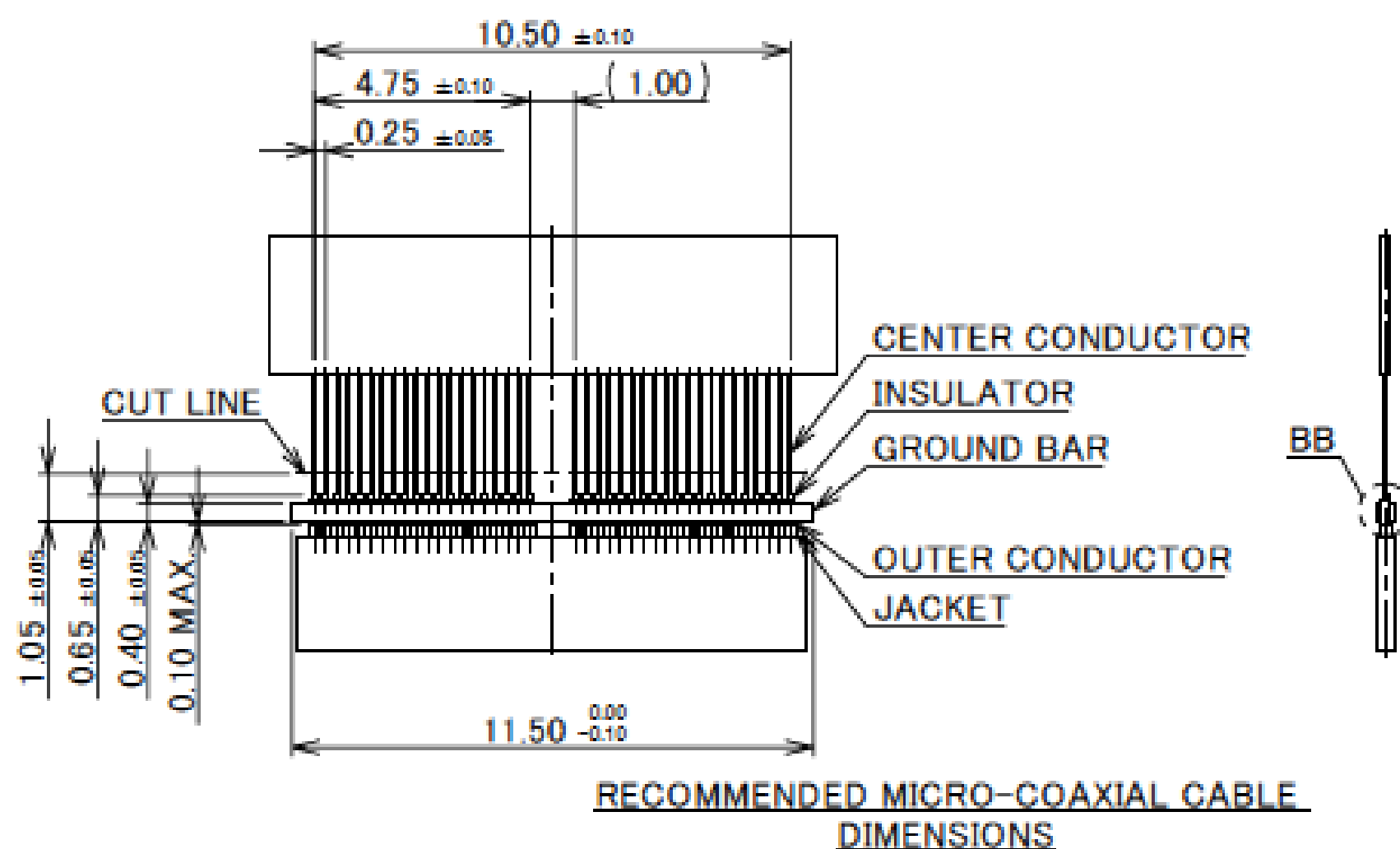
| Recommended P/N |      | 20978-040T-01 |
|-----------------|------|---------------|
| PART NO.        | Pos. |               |
| 20978-040T-01   | 40   |               |



※1 : THE BEND DIMENSIONS MAY VARY BASED ON THE SIZE AND QUANTITY OF CABLES.  
PLEASE CONFIRM THE MINIMUM BENDING RADIUS WITH I-PEX OR THE HARNESS MANUFACTURER.

| NO. | DISCRIPTION | MATERIAL     | FINISH , REMARKS                                                                                             |
|-----|-------------|--------------|--------------------------------------------------------------------------------------------------------------|
| 6   | LOCK BAR    | SUS          | -                                                                                                            |
| 5   | SHELL B     | SUS          | PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.                                                                |
| 4   | SHELL A     | SUS          | PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.                                                                |
| 3   | CONTACT B   | CORSON ALLOY | CONTACT AREA : Au 0.25 μm MIN. OVER Ni 2.00 μm MIN.<br>SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN. |
| 2   | CONTACT A   | CORSON ALLOY | CONTACT AREA : Au 0.25 μm MIN. OVER Ni 2.00 μm MIN.<br>SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN. |
| 1   | HOUSING     | LCP          | UL94V-0, BLACK                                                                                               |

Rev.4



CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

|     | a     |
|-----|-------|
| #44 | 0.063 |
| #46 | 0.048 |

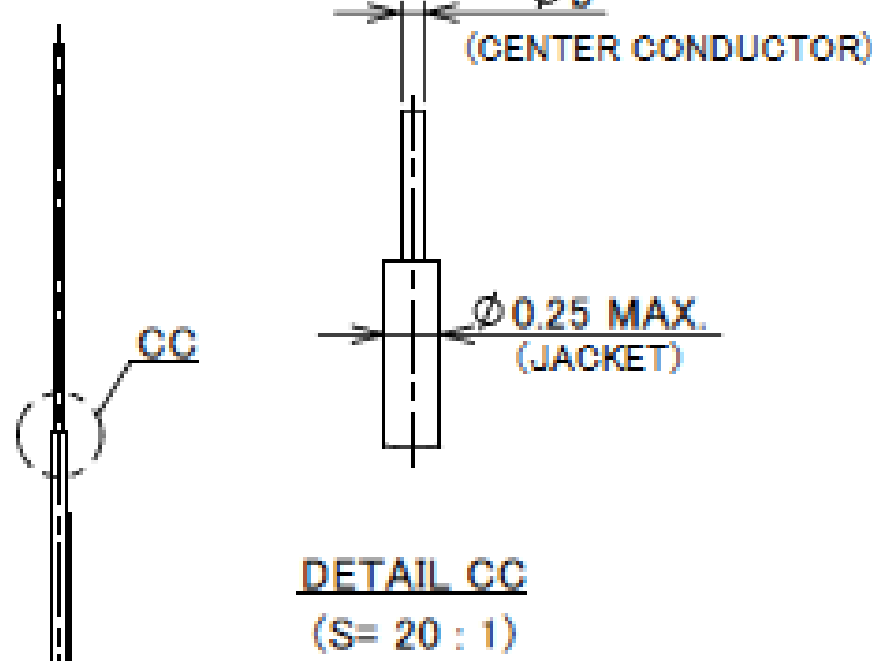
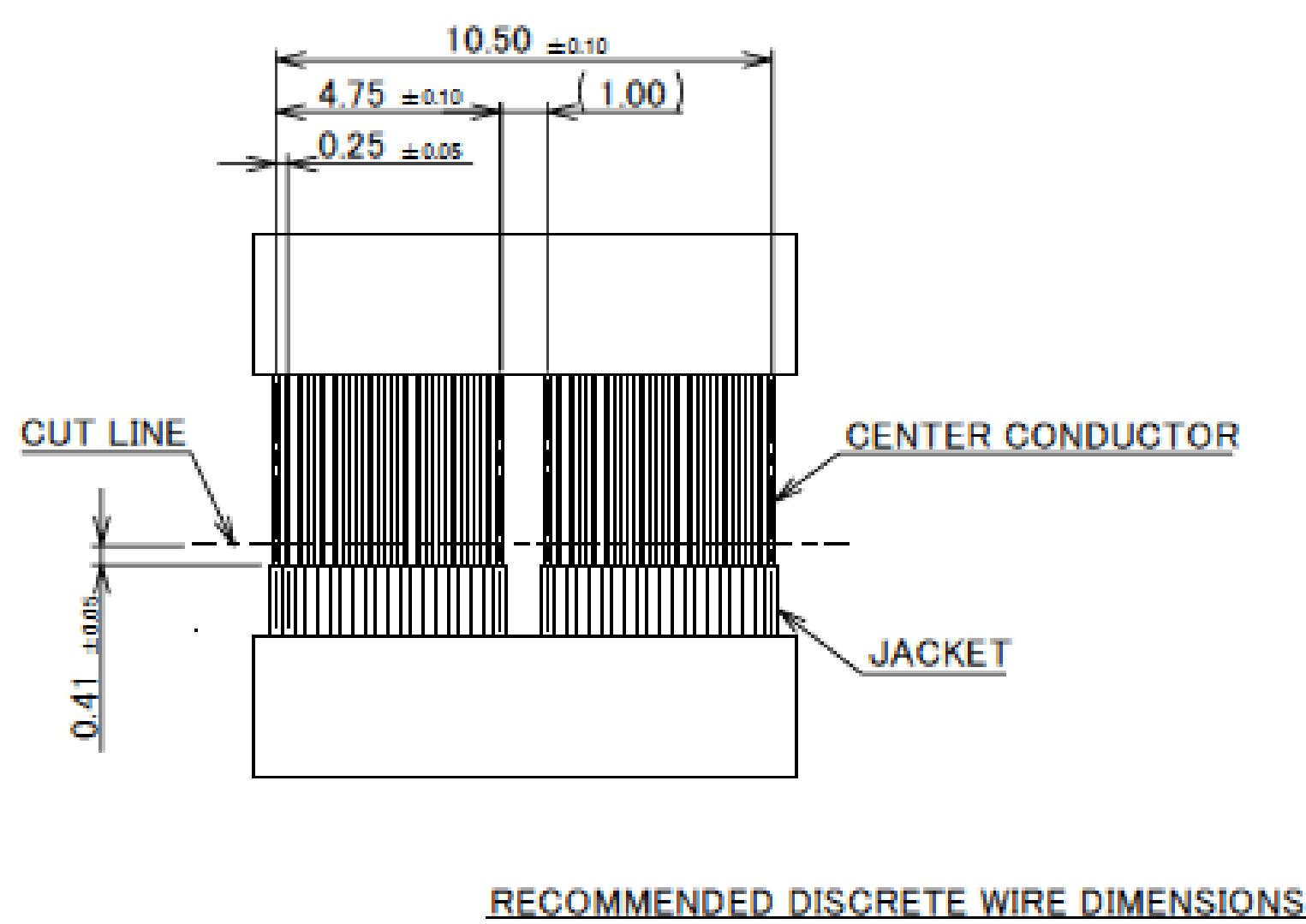
CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE

|     | a     |
|-----|-------|
| #39 | 0.102 |

MICRO-COAXIAL CABLE #39 : NOT RECOMMENDED  
FOR HIGH SPEED SIGNAL TRANSFER

DISCRETE WIRE DIMENSION

|     | b     |
|-----|-------|
| #39 | 0.102 |



Rev.4



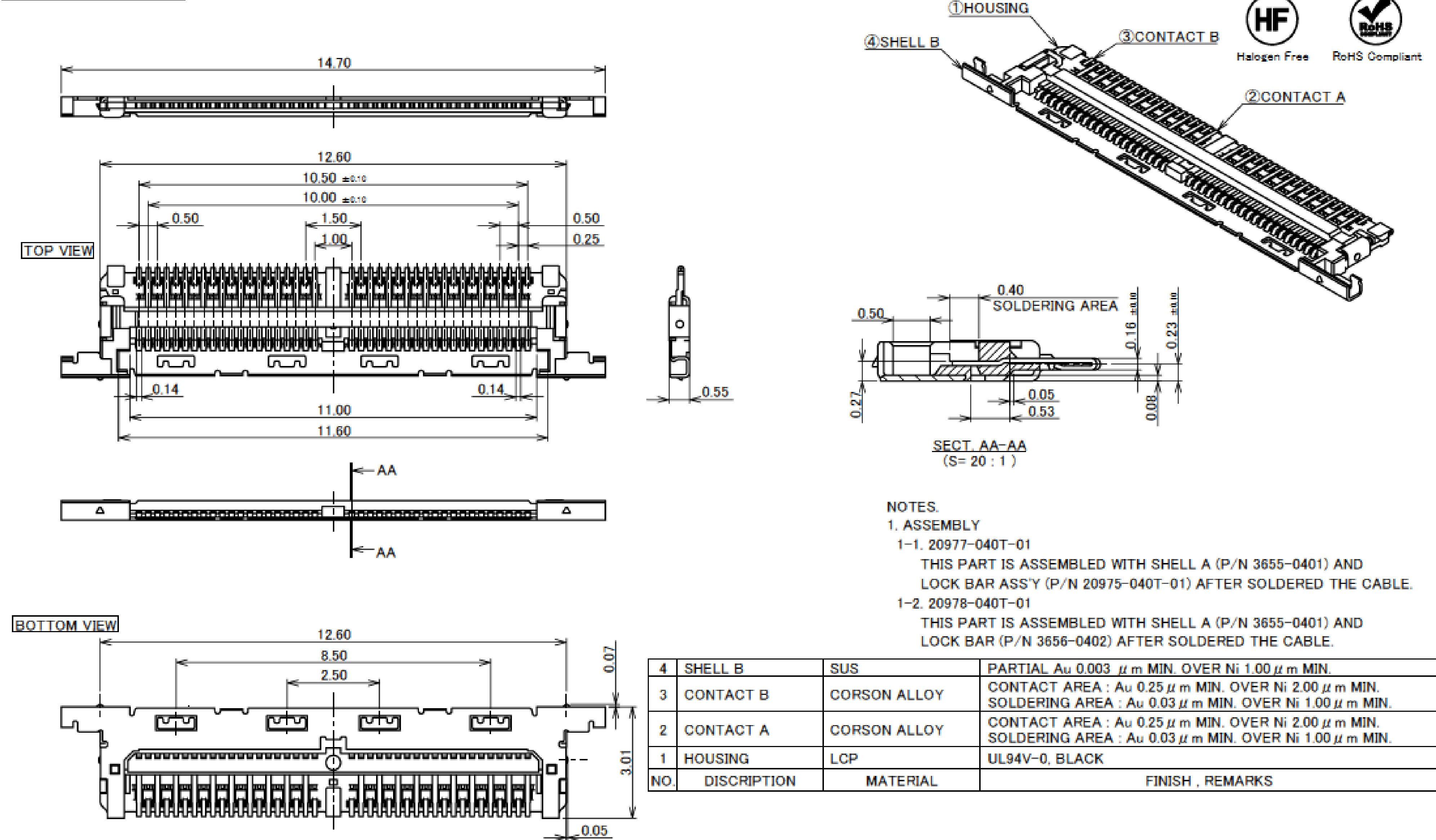
Plug for Cable Assembly

| ITEMS                                | SPECIFICATION                                                                                                                                                                                                                                                                      |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APPLICABLE CABLE                     | MICRO-COAXIAL CABLE : AWG# 46,44,39<br>DISCRETE WIRE : AWG# 39                                                                                                                                                                                                                     |
| RATING VOLTAGE                       | 100V AC (PER CONTACT PIN)<br>※THIS IS THE RATED VOLTAGE OF THE CONNECTOR.<br>PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS<br>DEPENDING ON THE CABLES USED.                                                                                                           |
| RATING AMPERAGE (FOR CONTACT)        | 0.10A AC/DC [AWG#46] PER CONTACT PIN/UP TO 40 CONTACTS<br>0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS<br>0.50A AC/DC [AWG#39] PER CONTACT PIN/UP TO 7 CONTACTS<br>※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE<br>TEMPERTURE RISE MAY AFFECTED BY ACTUAL SITUATION |
| OPERATING TEMPERATURE                | 233~358K(-40℃~+85℃) (CONTAINING TEMPERATURE RISE BY CURRENT)                                                                                                                                                                                                                       |
| OPERATING HUMIDITY                   | 85% MAX.(NON-CONDENSING)                                                                                                                                                                                                                                                           |
| CONTACT RESISTANCE                   | INITIAL : 388mohm MAX.(AWG#39) / AFTER TEST : ∠40mohm MAX.<br>INITIAL : 1,080mohm MAX.(AWG#44)<br>INITIAL : 1,830mohm MAX.(AWG#46)                                                                                                                                                 |
| GROUND SHELL RESISTANCE              | INITIAL : 50mohm MAX. / AFTER TEST : ∠40mohm MAX.                                                                                                                                                                                                                                  |
| INSULATION RESISTANCE                | INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.                                                                                                                                                                                                                               |
| DIELECTRIC WITHSTANDING VOLTAGE      | AC250V 1min                                                                                                                                                                                                                                                                        |
| DURABILITY                           | 20 CYCLES                                                                                                                                                                                                                                                                          |
| MATING FORCE (INITIAL / 20 CYCLES)   | 40P : 30.0N MAX.                                                                                                                                                                                                                                                                   |
| UNMATING FORCE (INITIAL / 20 CYCLES) | 40P : 4.0N MIN.                                                                                                                                                                                                                                                                    |
| CABLE RETENTION FORCE                | 40P : 19.60N MIN.                                                                                                                                                                                                                                                                  |
| PRODUCT SPECIFICATION                | PRS-2403                                                                                                                                                                                                                                                                           |
| TEST REPORT                          | TR-17063                                                                                                                                                                                                                                                                           |
| INSTRUCTION MANUAL                   | HIM-17040                                                                                                                                                                                                                                                                          |
| ASSEMBLY MANUAL                      | ASM-17011                                                                                                                                                                                                                                                                          |
| APPEARANCE CRITERIA No.              | QLS-A***                                                                                                                                                                                                                                                                           |

Rev.4

Plug Housing Assembly

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20974-040T-01 |
| PART NO.        | Pos.          |
| 20974-040T-01   | 40            |

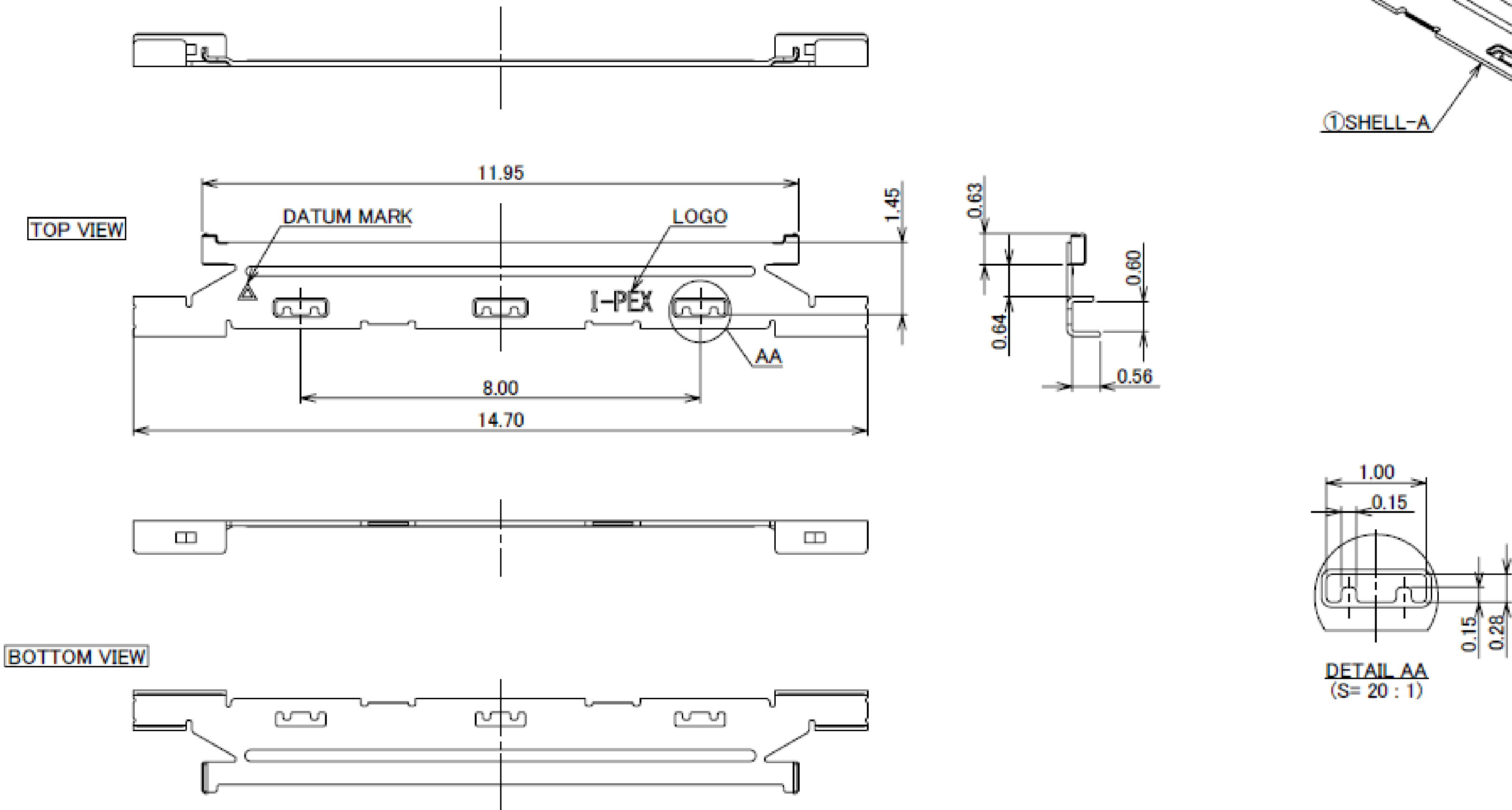
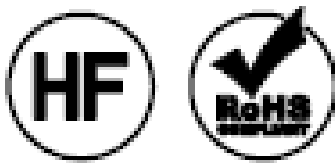


Rev.1



Plug Shell-A

|                 |           |
|-----------------|-----------|
| Recommended P/N | 3655-0401 |
| PART No.        |           |
| 3655-0401       |           |

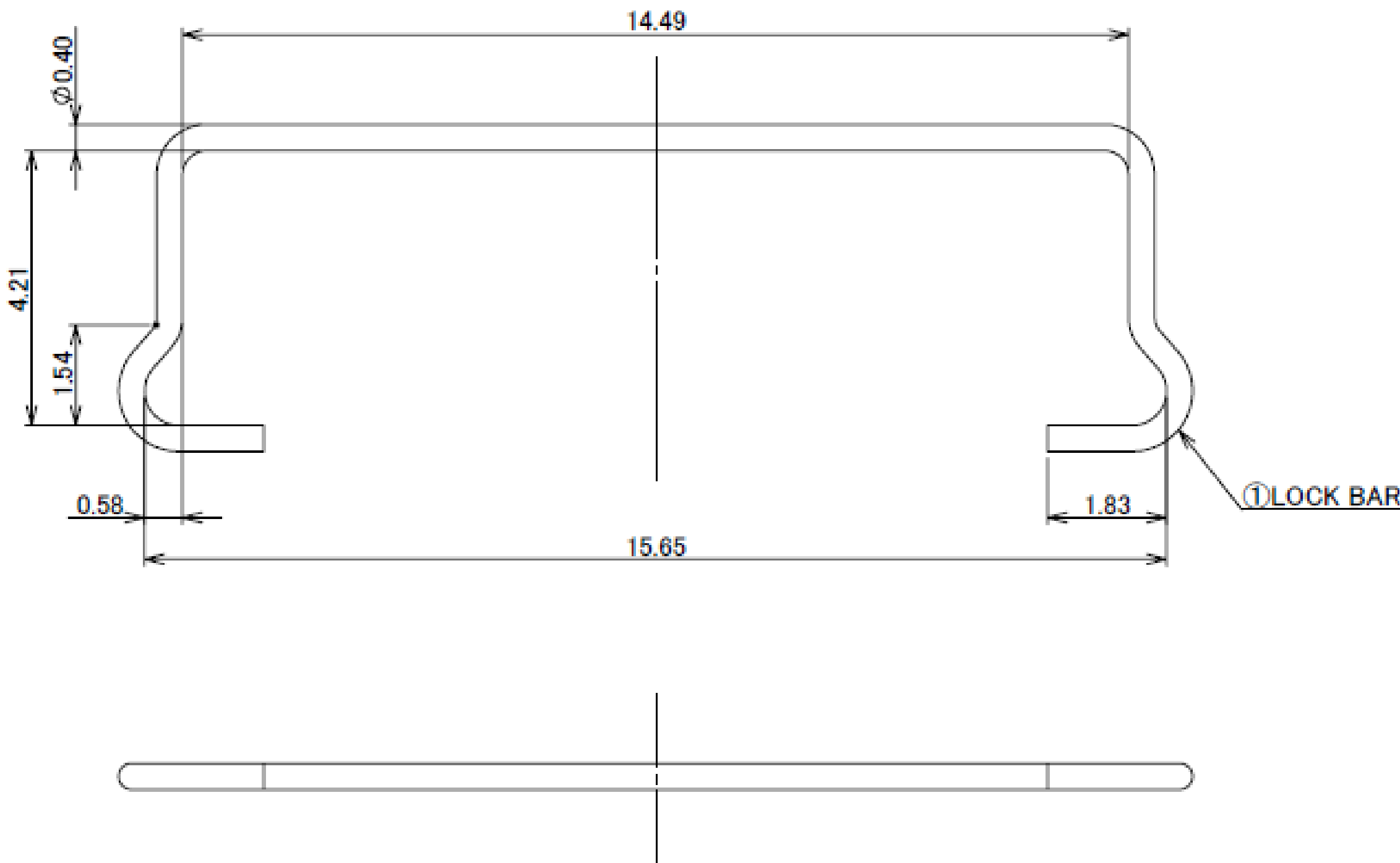
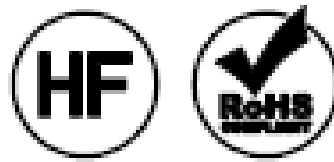


|     |             |          |                                                        |
|-----|-------------|----------|--------------------------------------------------------|
| 1   | SHELL-A     | SUS      | PARTIAL Au 0.003 $\mu$ m MIN. OVER Ni 1.0 $\mu$ m MIN. |
| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS                                       |

Rev.0

Plug Lock Bar

|                 |           |
|-----------------|-----------|
| Recommended P/N | 3656-0402 |
| PART No.        |           |
| 3656-0402       |           |



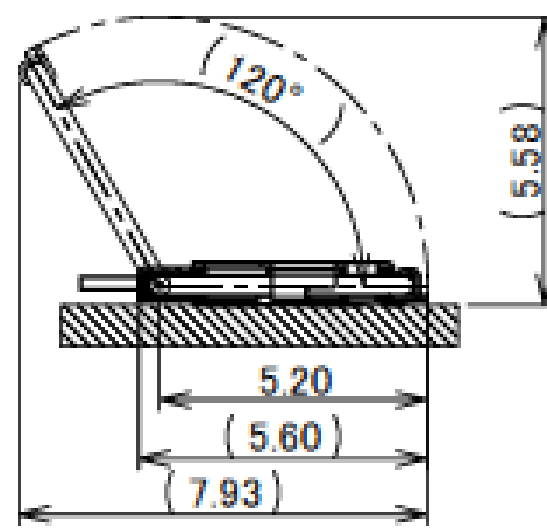
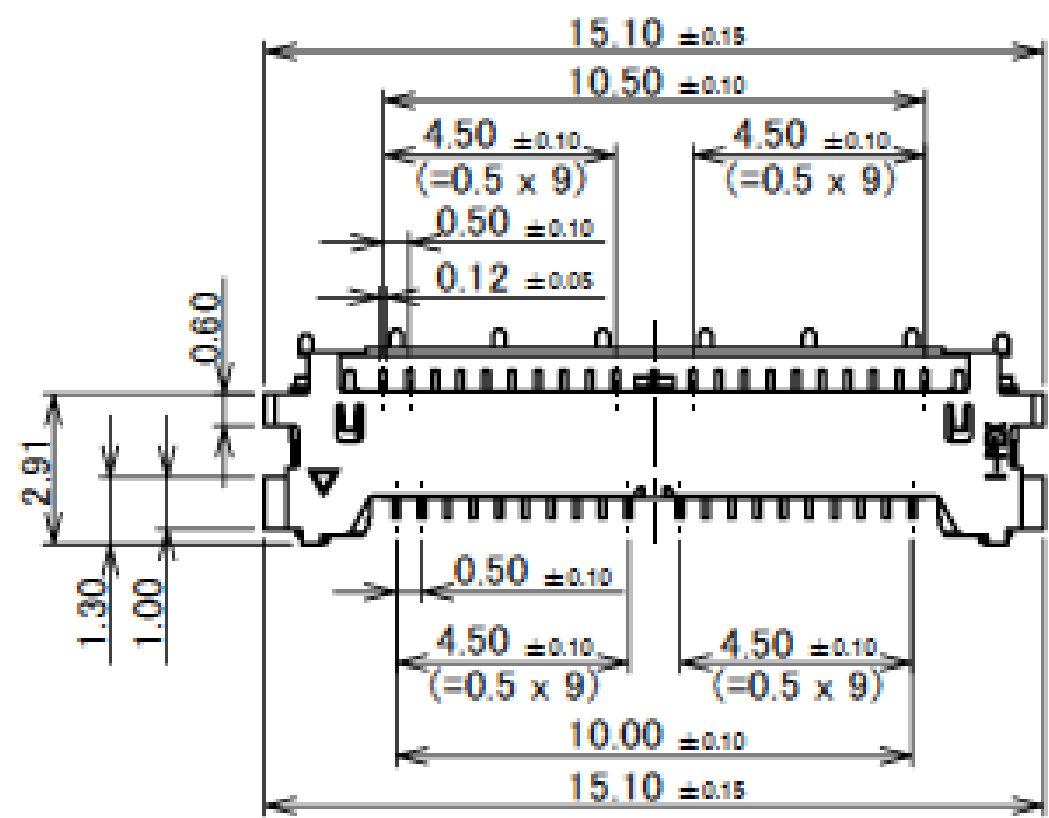
|     |             |                 |                  |
|-----|-------------|-----------------|------------------|
| 1   | LOCK BAR    | SUS $\phi$ 0.40 | -                |
| NO. | DISCRIPTION | MATERIAL        | FINISH , REMARKS |

Rev.0

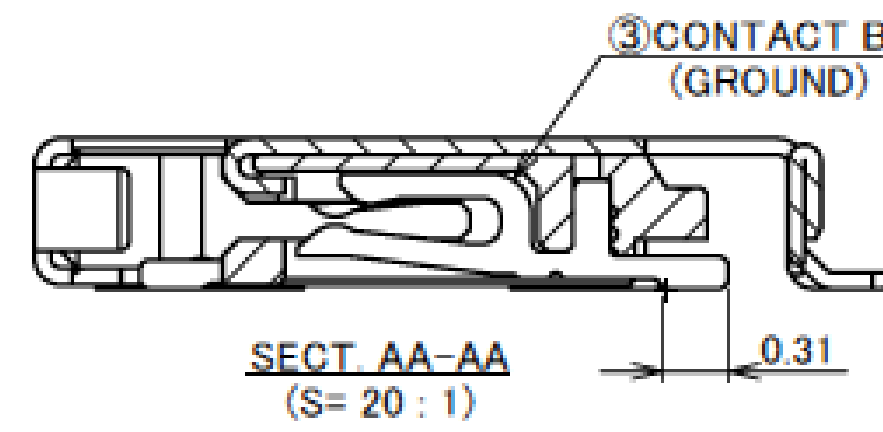
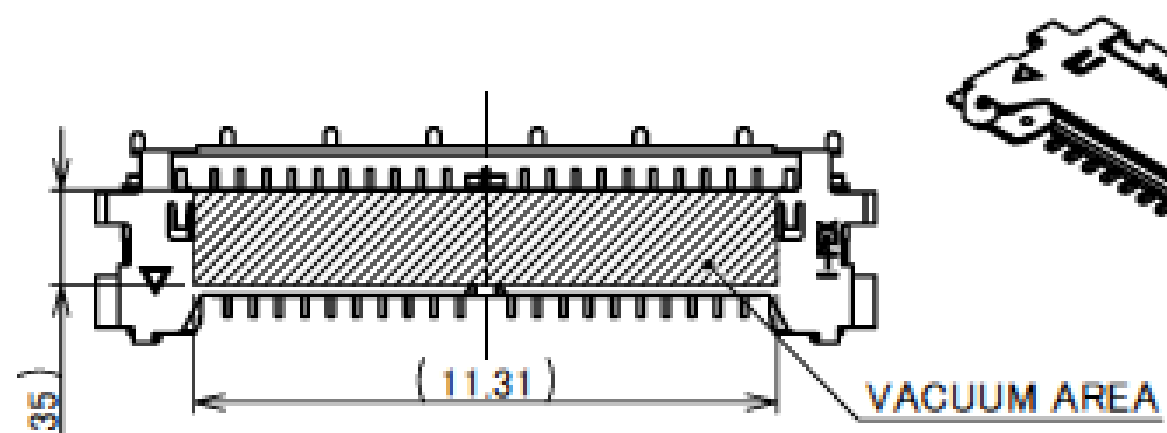
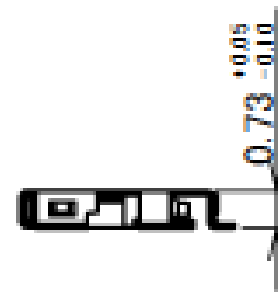


## Receptacle Assembly

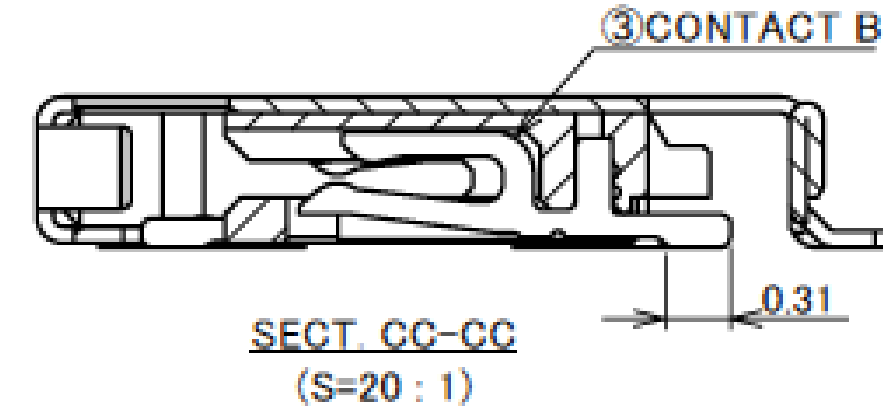
|                 |      |               |
|-----------------|------|---------------|
| Recommended P/N |      | 20976-040E-01 |
| PART NO.        | Pos. |               |
| 20976-040E-01   | 40   |               |



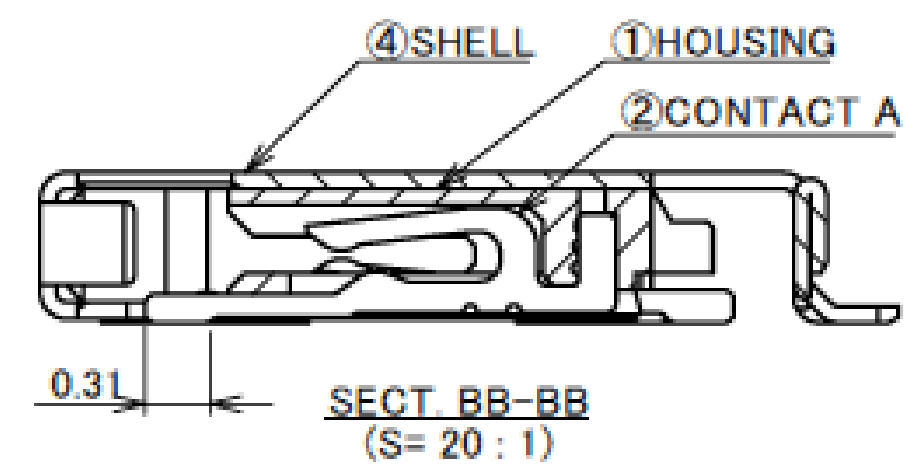
### LOCK BAR MOVEMENT



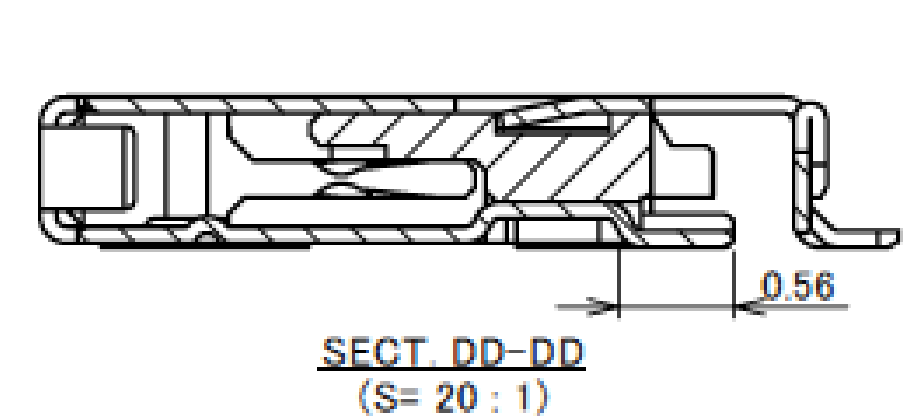
SECT. AA-A  
(S= 20 : 1)



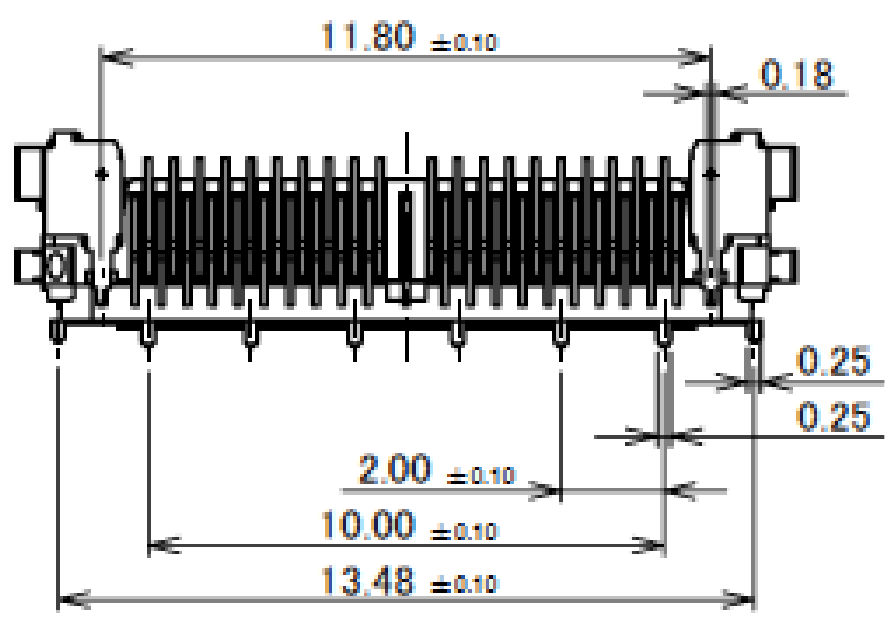
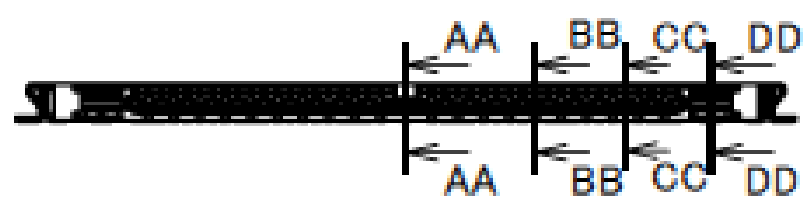
SECT. CC-C  
(S=20 : 1)



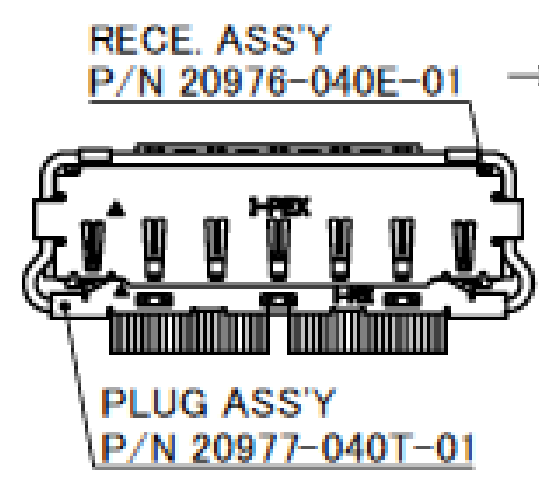
SECT. BB-E  
(S= 20 : 1)



SECT. DD-D  
(S= 20 ; 1)



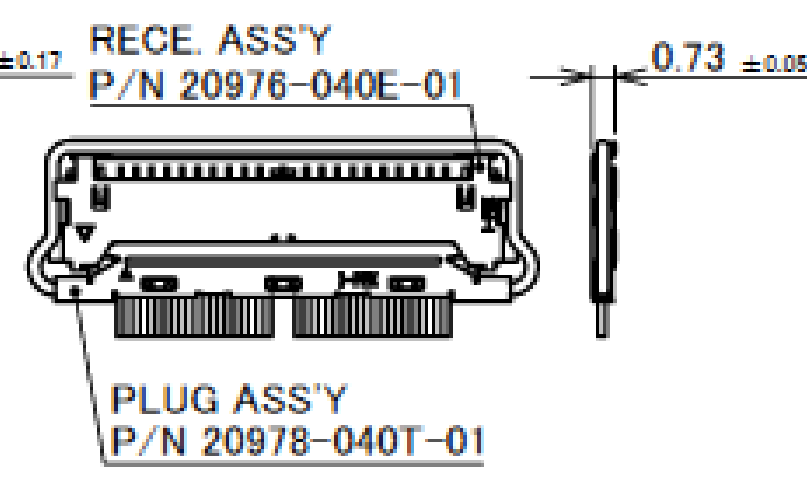
GROUND PITCH



RECE. ASS'Y  
P/N 20976-040E-01

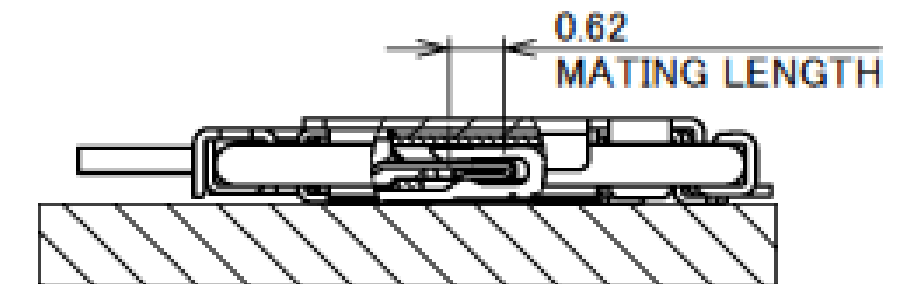


PLUG ASS'Y  
P/N 20977-040T-01



RECE. ASS'Y  
P/N 20976-040E-01

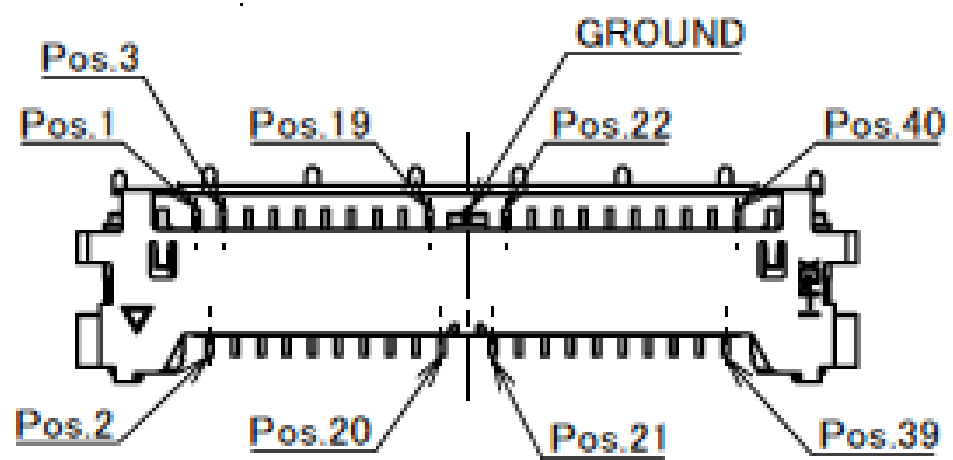
PLUG ASS'Y  
P/N 20978-040T-01



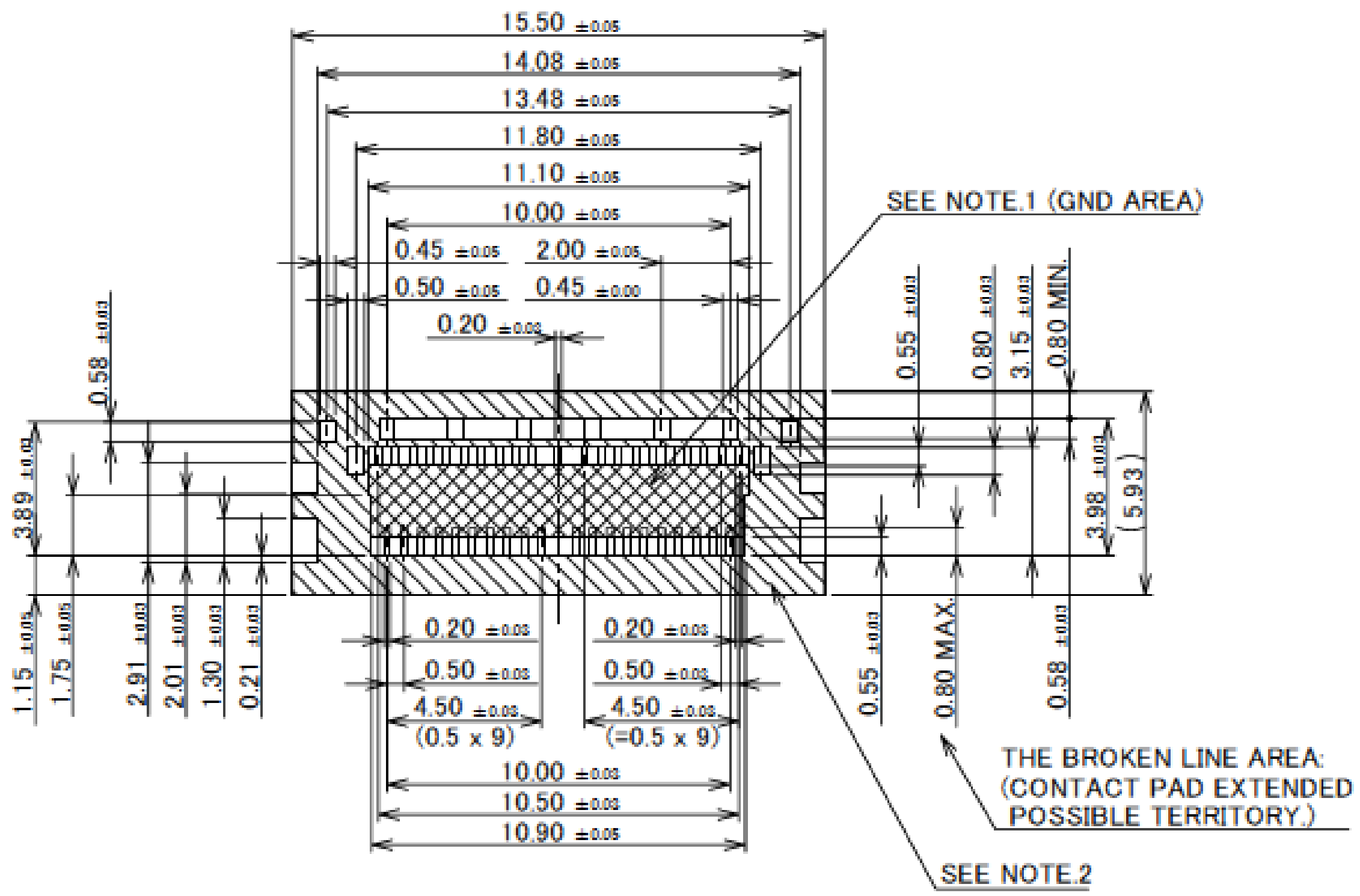
0.62  
← MATING LENGTH

### MATING CONDITION

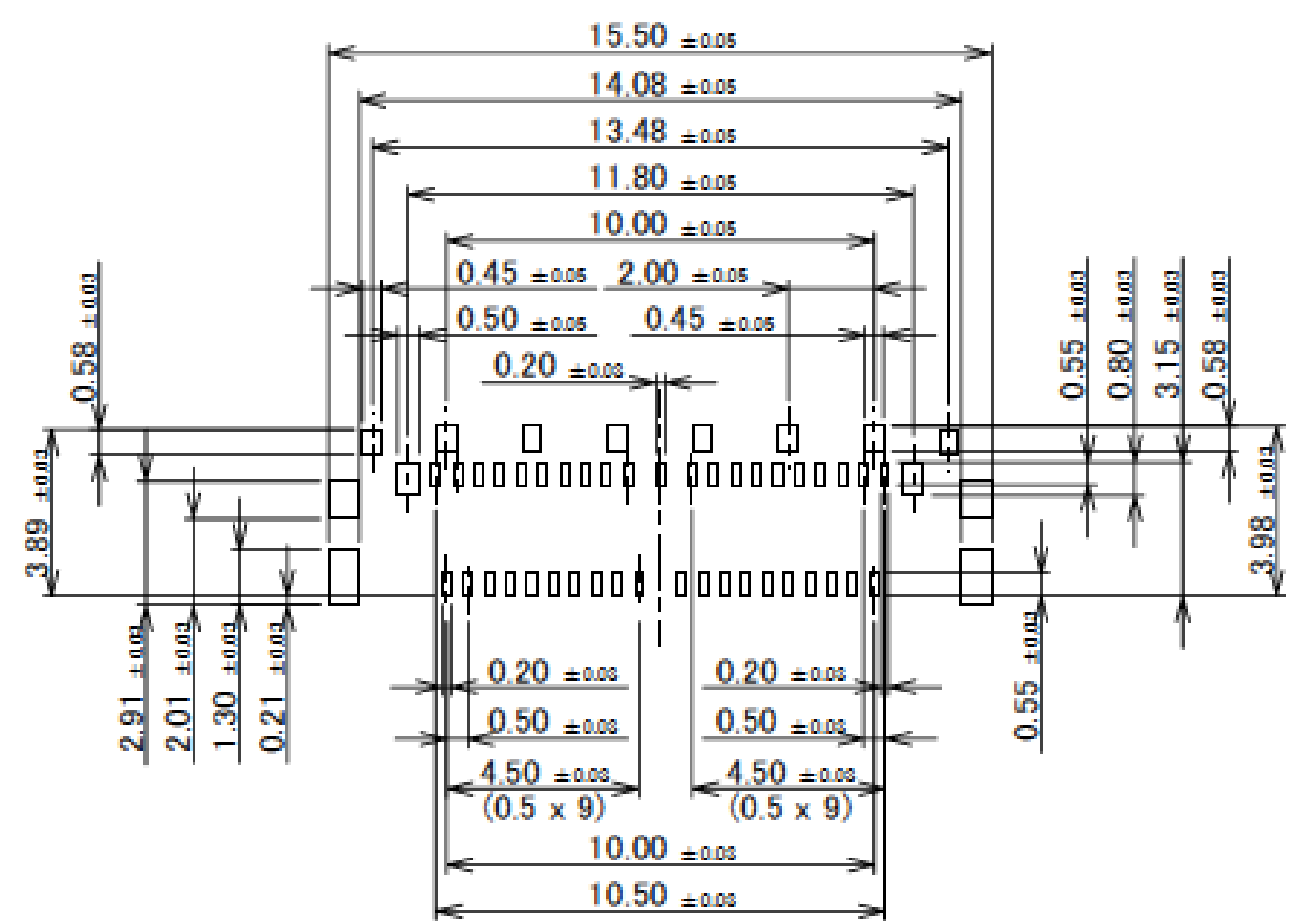
|     |            |                 |                                                                                                                                  |
|-----|------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------|
| 4   | SHELL      | PHOSPHOR BRONZE | PARTIAL Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.                                                                           |
| 3   | CONTACT B  | CORSON ALLOY    | CONTACT AREA : Au 0.10 $\mu$ 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. |
| 2   | CONTACT A  | CORSON ALLOY    | CONTACT AREA : Au 0.10 $\mu$ 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. | DISCRPTION | MATERIAL        | FINISH , REMARKS                                                                                                                 |



### CONTACT ARRANGEMENT



### RECOMMENDED FOOTPRINT PATTERN LAYOUT



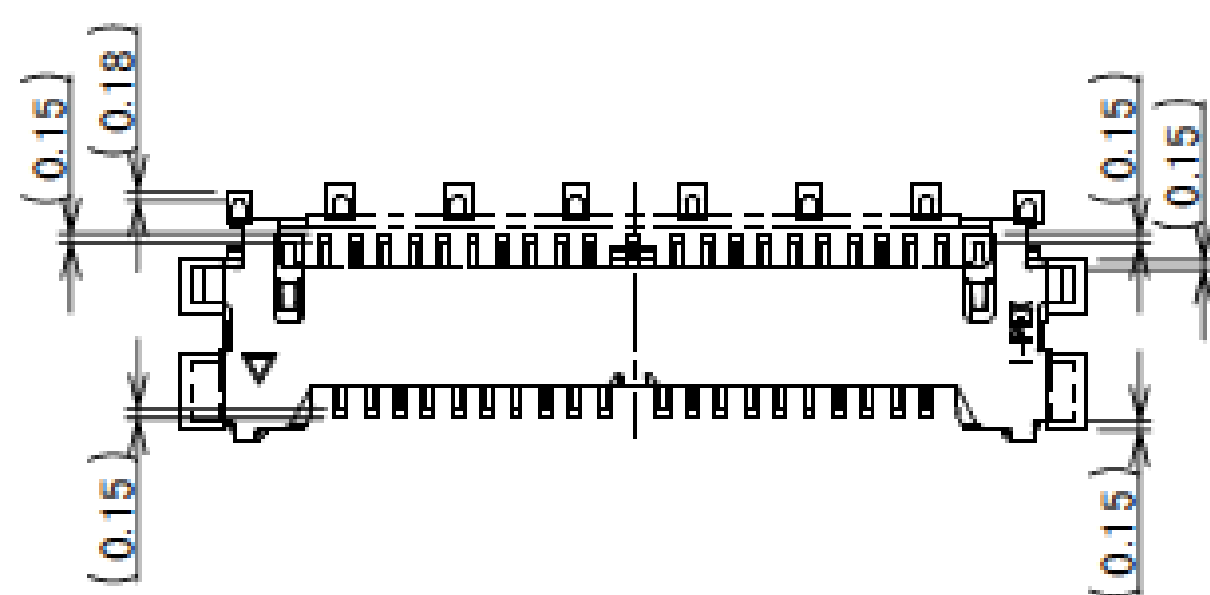
RECOMMENDED METAL MASK LAYOUT  
METAL MASK THICKNESS :  $t=0.12\text{ mm}$

NOTES:

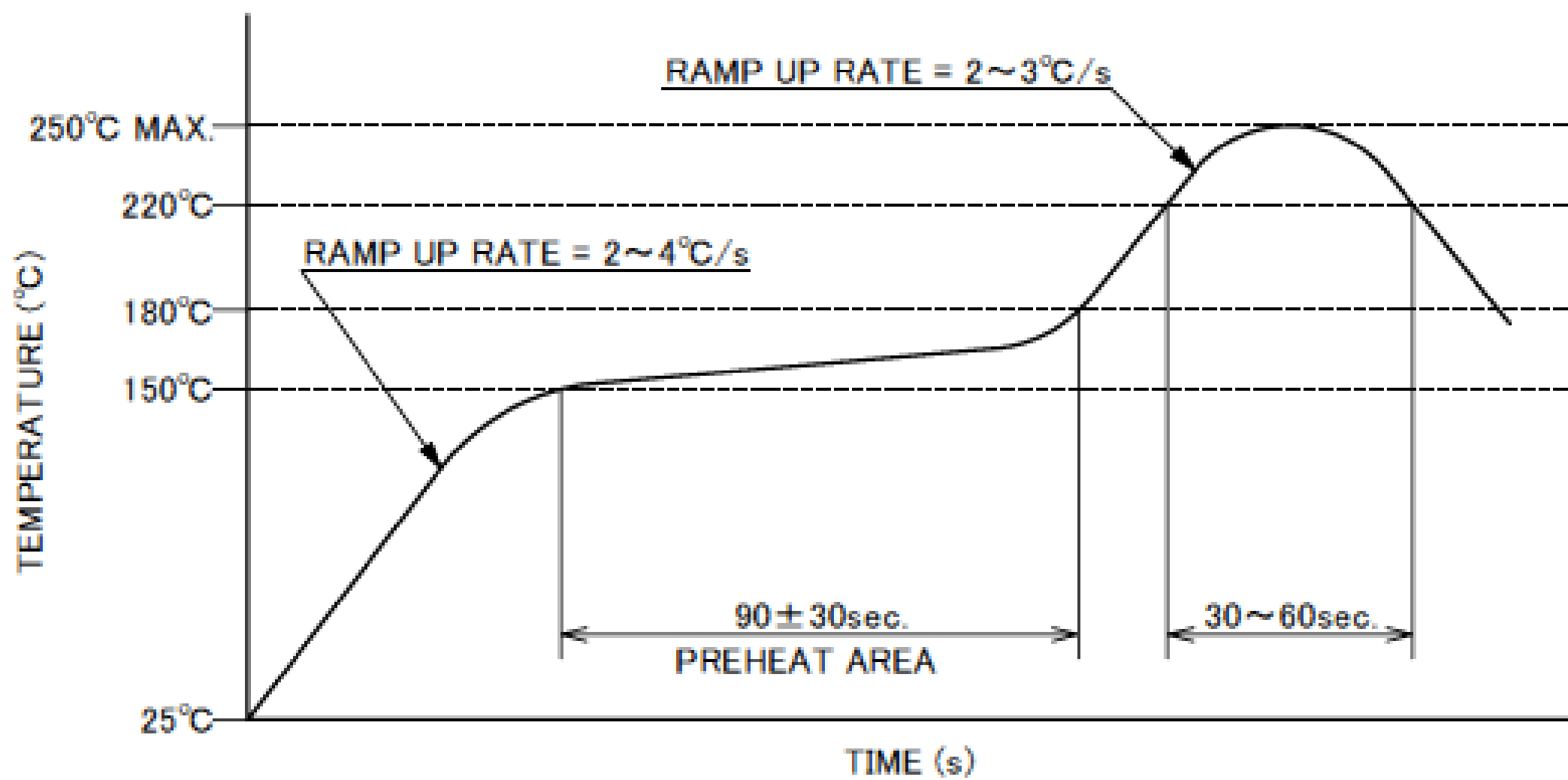
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA
2. DO NOT MOUNT ANOTHER COMPONENTS IN THIS AREA



Receptacle Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



REFLOW TEMPERATURE PROFILE  
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

Rev.3

| ITEMS                                | SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APPLICABLE CABLE                     | MICRO-COAXIAL CABLE : AWG# 46,44<br>DISCRETE WIRE : AWG# 39                                                                                                                                                                                                                                                                                                                                                                            |
| RATING VOLTAGE                       | 100V AC (PER CONTACT PIN)                                                                                                                                                                                                                                                                                                                                                                                                              |
| RATING AMPERAGE (FOR CONTACT)        | 0.10A AC/DC [AWG#46] PER CONTACT PIN/UP TO 40 CONTACTS<br>0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS<br>0.50A AC/DC [AWG#39]<br>PLUG WITH COVER CABLE ASS'Y (P/N : 20977-040T-01)<br>PER CONTACT PIN/UP TO 8 CONTACTS<br>PLUG WITHOUT COVER CABLE ASS'Y (P/N : 20978-040T-01)<br>PER CONTACT PIN/UP TO 7 CONTACTS<br>※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE<br>TEMPERTURE RISE MAY AFFECTED BY ACTUAL SITUATION |
| OPERATING TEMPERATURE                | 233~358K(-40°C~+85°C) (CONTAINING TEMPERATURE RISE BY CURRENT)                                                                                                                                                                                                                                                                                                                                                                         |
| OPERATING HUMIDITY                   | 85% MAX.(NON-CONDENSING)                                                                                                                                                                                                                                                                                                                                                                                                               |
| CONTACT RESISTANCE                   | INITIAL : 388mohm MAX.(AWG#39) / AFTER TEST : ≦140mohm MAX.<br>INITIAL : 1,080mohm MAX.(AWG#44)<br>INITIAL : 1,830mohm MAX.(AWG#46)                                                                                                                                                                                                                                                                                                    |
| GROUND SHELL RESISTANCE              | INITIAL : 50mohm MAX. / AFTER TEST : ≦140mohm MAX.                                                                                                                                                                                                                                                                                                                                                                                     |
| INSULATION RESISTANCE                | INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.                                                                                                                                                                                                                                                                                                                                                                                   |
| DIELECTRIC WITHSTANDING VOLTAGE      | AC250V 1min                                                                                                                                                                                                                                                                                                                                                                                                                            |
| DURABILITY                           | 20 CYCLES                                                                                                                                                                                                                                                                                                                                                                                                                              |
| MATING FORCE (INITIAL / 20 CYCLES)   | 40P : 30.0N MAX.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| UNMATING FORCE (INITIAL / 20 CYCLES) | 40P : 4.0N MIN.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| CABLE RETENTION FORCE                | 40P : 19.60N MIN.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| COPLANARITY                          | 0.10 MAX.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| PRODUCT SPECIFICATION                | PRS-2403                                                                                                                                                                                                                                                                                                                                                                                                                               |
| TEST REPORT                          | TR-17063                                                                                                                                                                                                                                                                                                                                                                                                                               |
| PACKING STANDARD                     | PST-17126                                                                                                                                                                                                                                                                                                                                                                                                                              |
| INSTRUCTION MANUAL                   | HIM-17035 (WHEN PLUG WITH COVER CABLE ASS'Y IS USED)<br>HIM-17040 (WHEN PLUG WITHOUT COVER CABLE ASS'Y IS USED)                                                                                                                                                                                                                                                                                                                        |
| APPEARANCE CRITERIA No.              | QLS-A***                                                                                                                                                                                                                                                                                                                                                                                                                               |

Rev.3



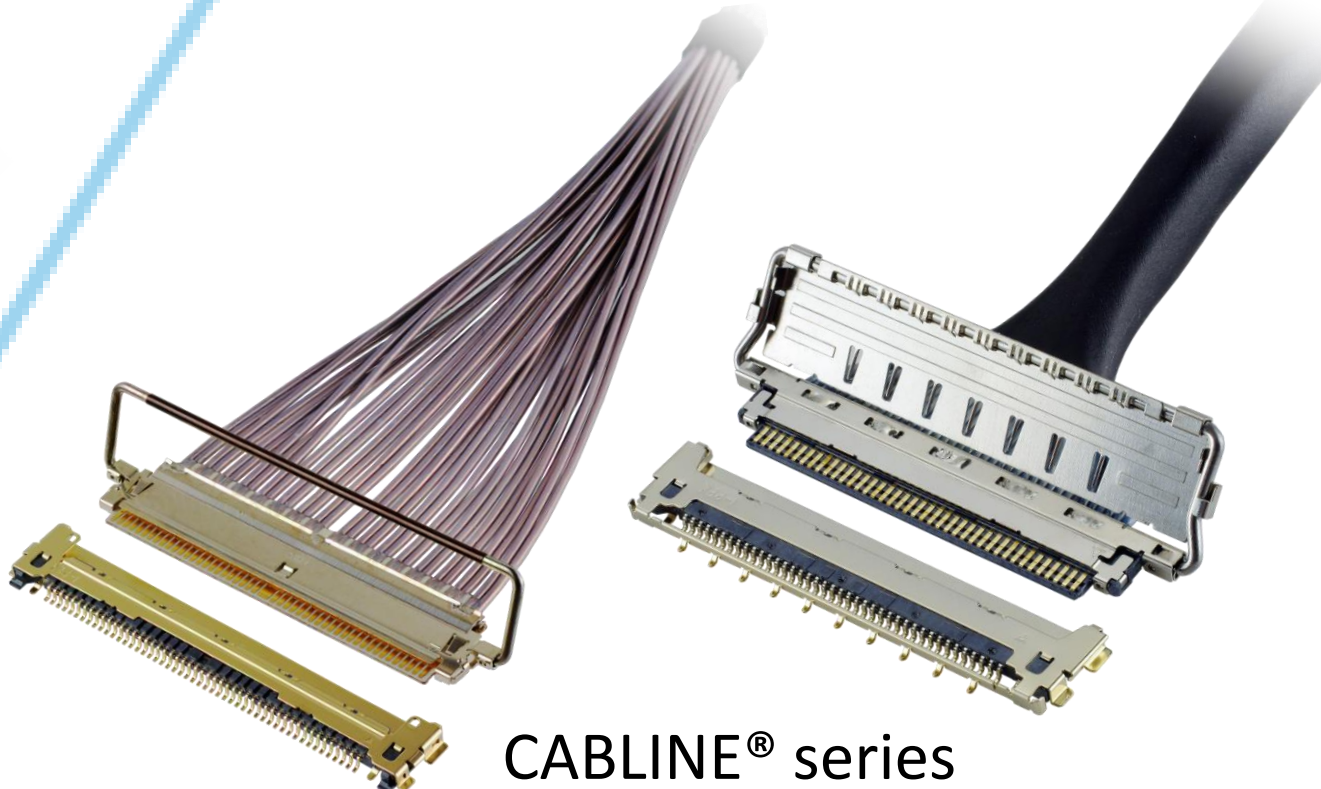
# Custom Connectors Available

 RF  
Connectors

MHF® series



CABLINE® series



Micro-Coaxial/Twinax  
Connectors



Wire-to-Board  
Connectors/  
Terminals

AP series



ISH® series



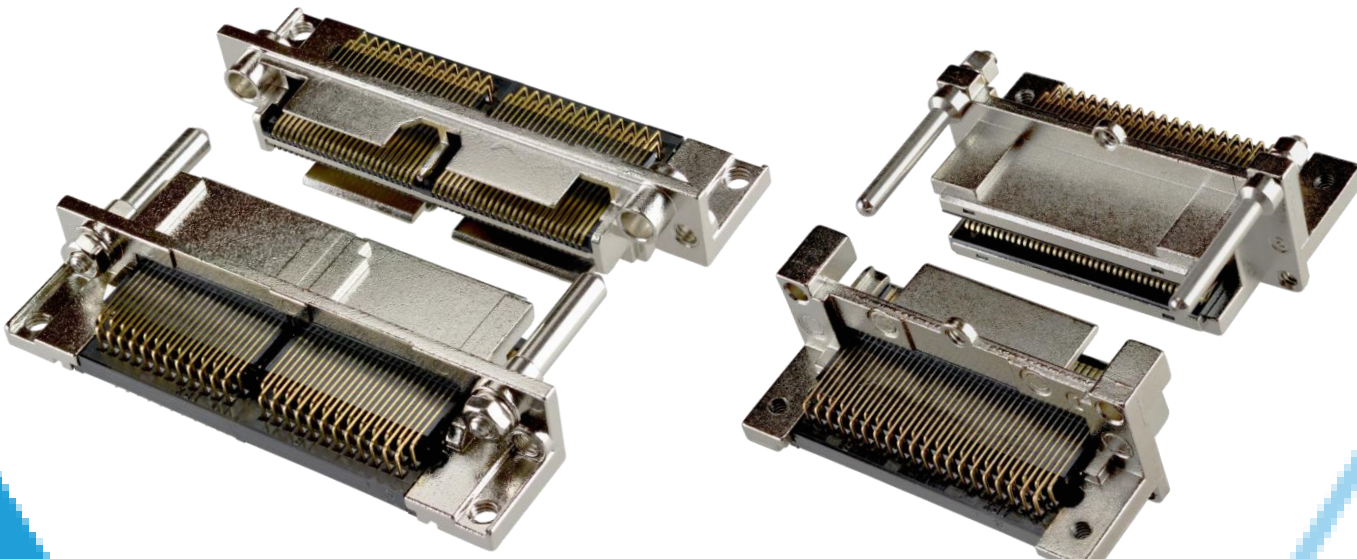
NOVASTACK® series



Board-to-Board  
Connectors



I/O  
Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC  
Connectors



Inquiry



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