

# CABLINE®-CA II PLUS

全屏蔽設計帶機械鎖扣，高速數據傳輸，0.4mm間距，水平插拔款的極細同軸連接器

\*想獲得更高的傳輸速率 (64 Gbps PAM4)，歡迎查看可以配合 CABLINE-CA II PLUS 母座 (20790-060E-01/-02) 使用的 [CABLINE-CA IIP PLUS 線束解決方案](#)。

**Product Specifications:**

|                    |            |                          |
|--------------------|------------|--------------------------|
| Mating type        | Horizontal |                          |
| Board Pitch (mm)   | 0.4        |                          |
| Wiping Length (mm) | 0.54       |                          |
| Mated size (mm)    | Height     | 1.2 max. with cover      |
|                    | Width      | Formula: 6.95 + (0.4*?p) |
|                    | Depth      | 6.7                      |
| Pin Counts         | Range      | Up to 60                 |
|                    | Available  | 60                       |

**Applicable Cable Size:**

|                                |  |
|--------------------------------|--|
| Maximum O.D. (mm)              | 0.4  |
| Micro-Coaxial for Signal (AWG) | 45 ohm: #38 or smaller<br>50 ohm: #40 or smaller |
| Twinax (AWG)                   | #40, #42   |
| Discrete (AWG)                 | #34 or smaller                                   |

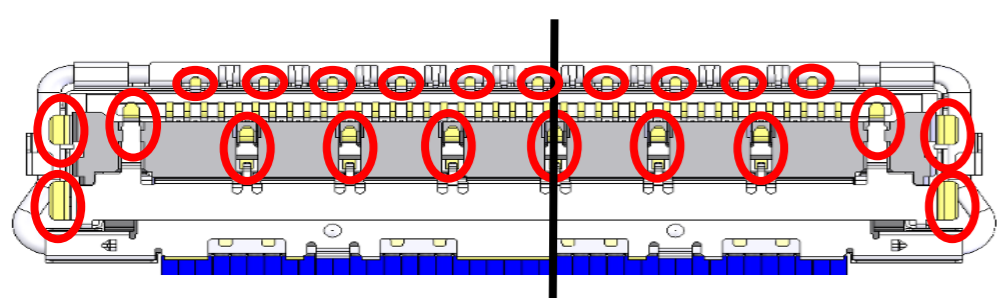
**Applicable Standards (Reference Only):**

USB4 Gen3/Thunderbolt 4 (20 Gbps/lane), PCIe® Gen 4 (16 GT/s), eDP HBR 3 (8.1 Gbps)

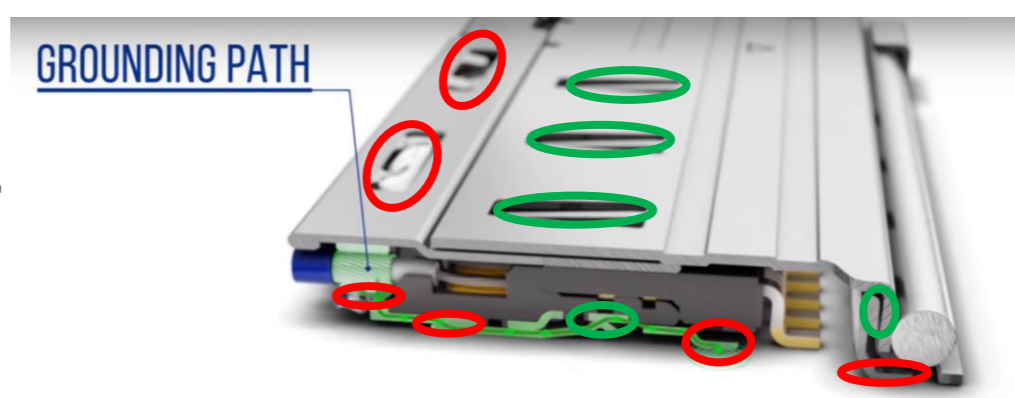
\*若有規格外 Pin 數需求，請與當地負責業務窗口聯繫。  
\*我們也提供 CABLINE-CA II 20, 30, 40, 50p 產品(狹窄空間的款式)。



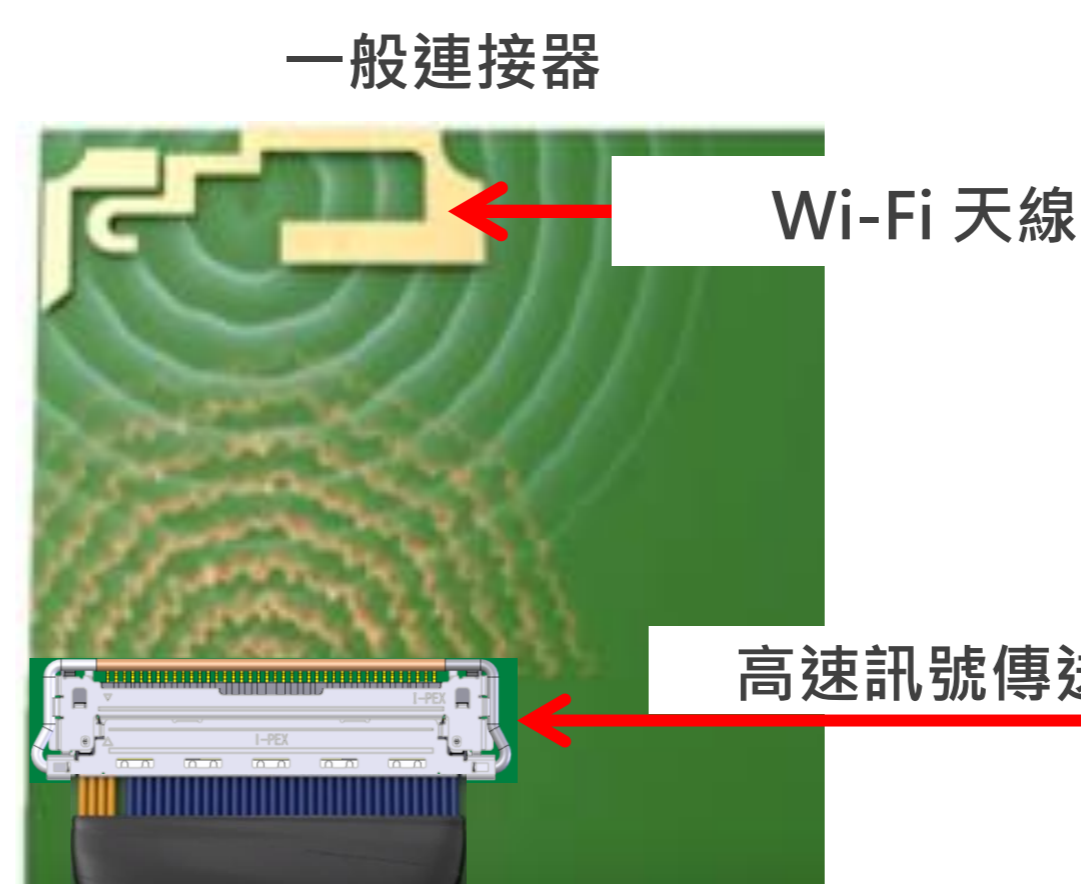
## ▶ ZenShield® 的全屏蔽和多點接地設計，有效防止EMI外洩



連接器底部視圖



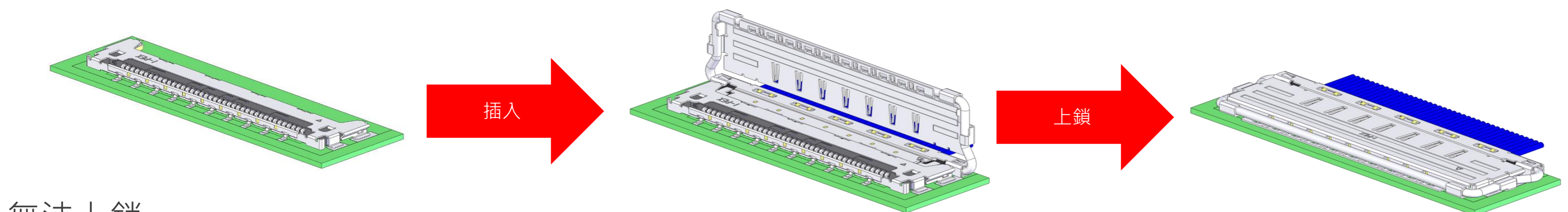
○ 焊點  
○ 機械式觸點



ZenShield® 全屏蔽式連接器

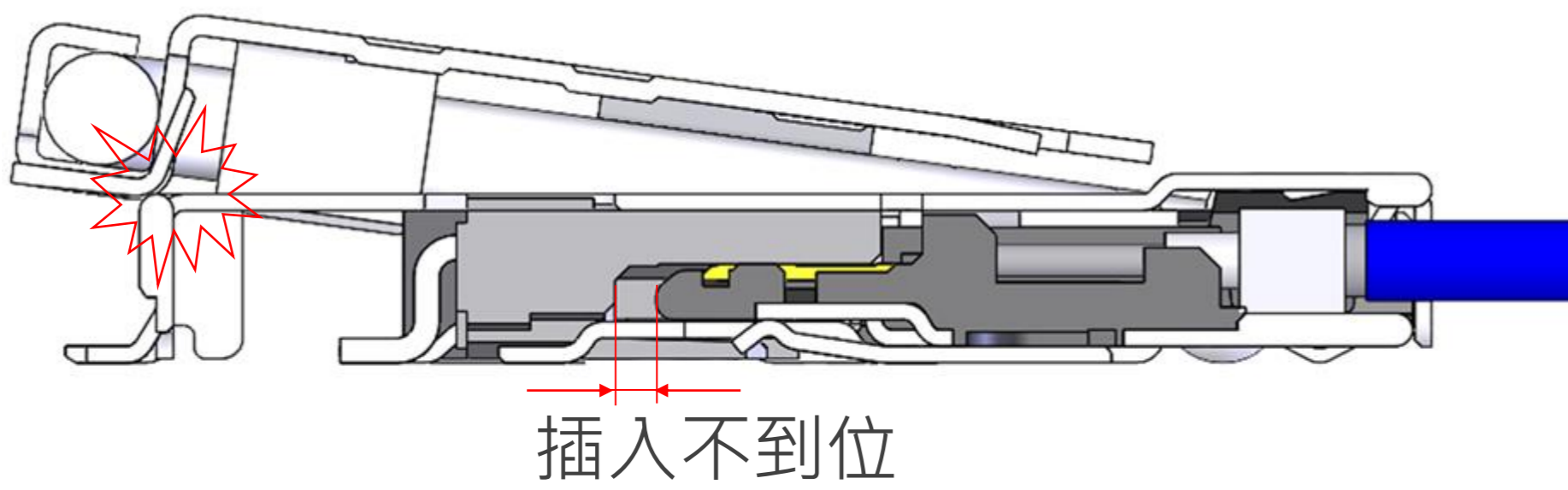
連接器可以放置於更靠近天線的位置

## ▶ 機械式鎖扣罩防止連接器不完全嵌合及脫落

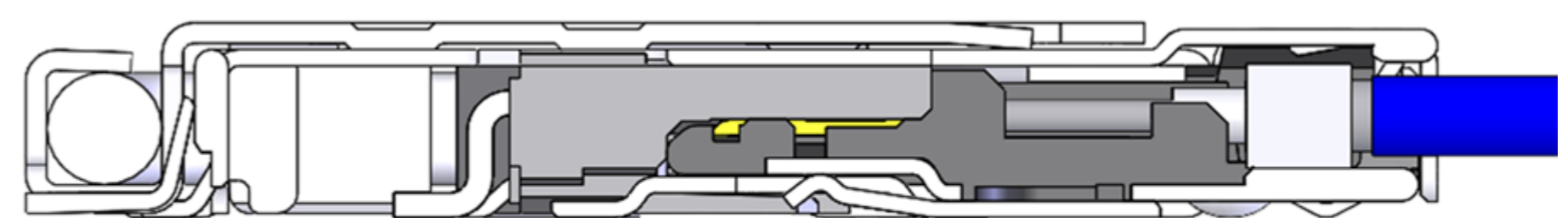


無法上鎖

只有當完全插入後，SHELL才能上鎖



插入不到位



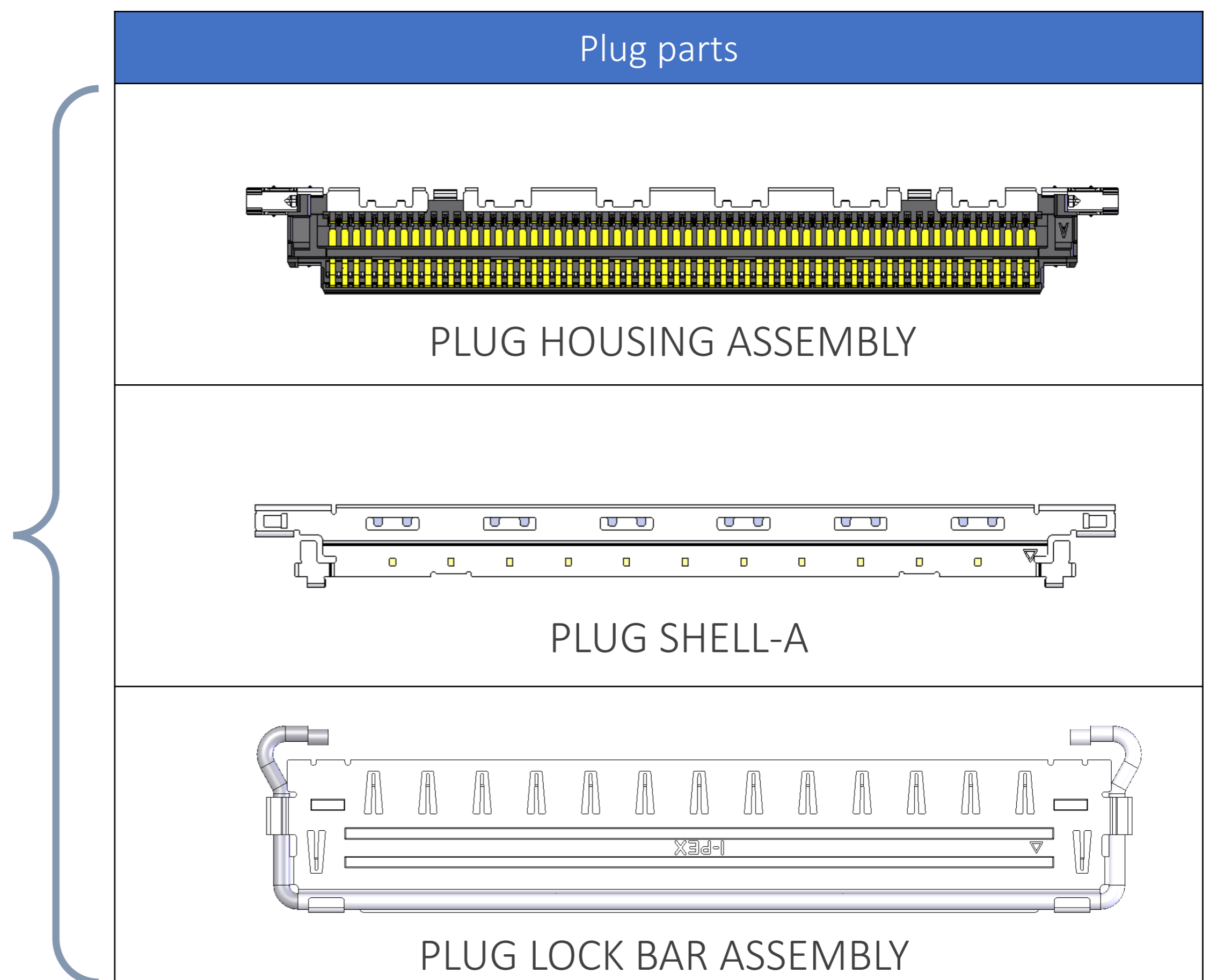
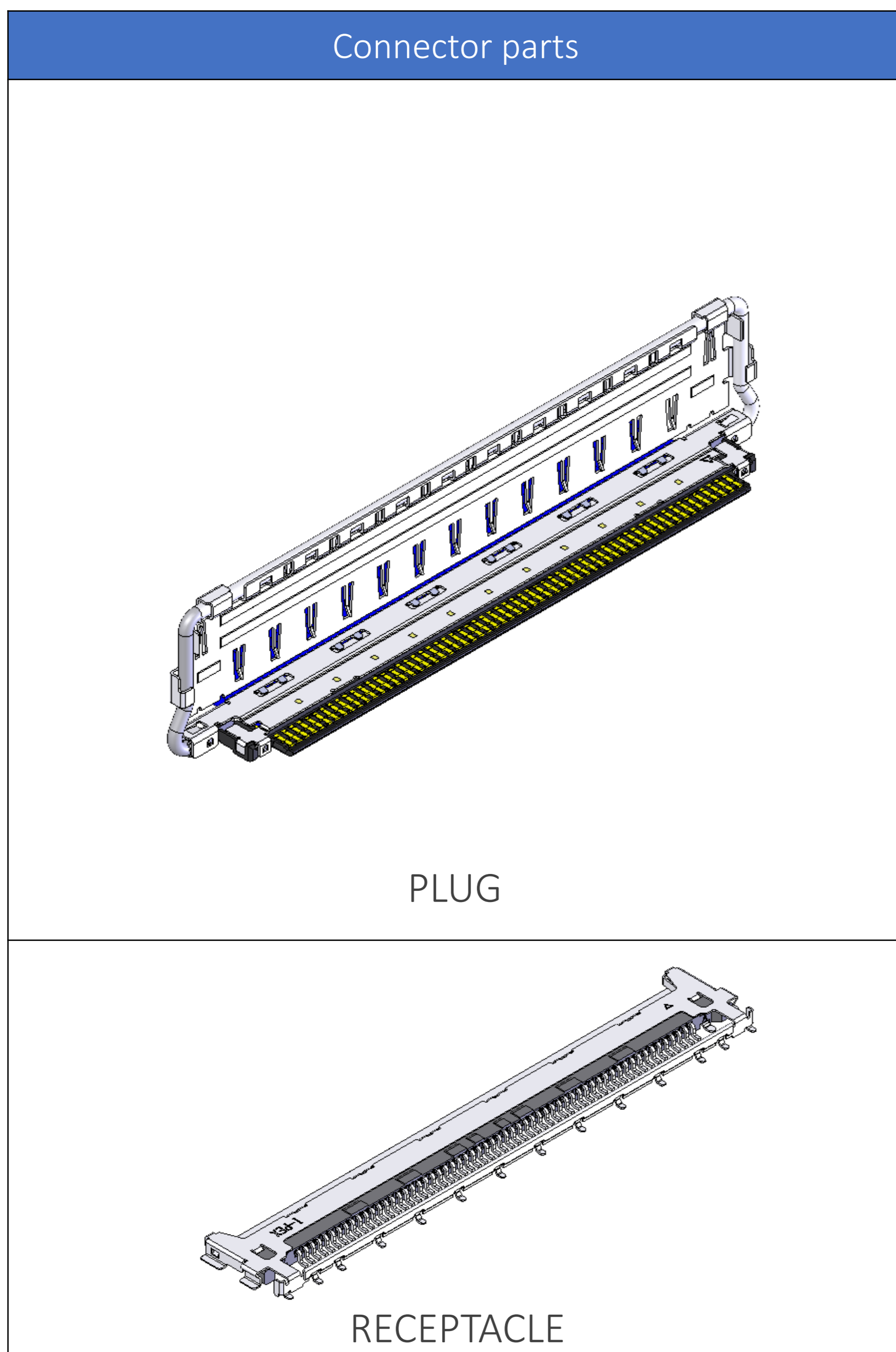
完全插入

## ▶ 屏蔽殼內部預設VIA通孔區域

| CABLINE®-CA II (窄型設計) 40p                            | CABLINE®-CA II PLUS (寬型設計) 60p                                      |
|--|---|
| <p>0.25 +/- 0.05 mm</p>                              | <p>0.75 +/- 0.05 mm</p>   |
| <p>Ground, Signal, Ground, PCB, Via, Contact Pad</p> | <p>Ground, Signal, Ground, PCB, Via, Contact Pad</p> <p>更大的通孔空間</p> |

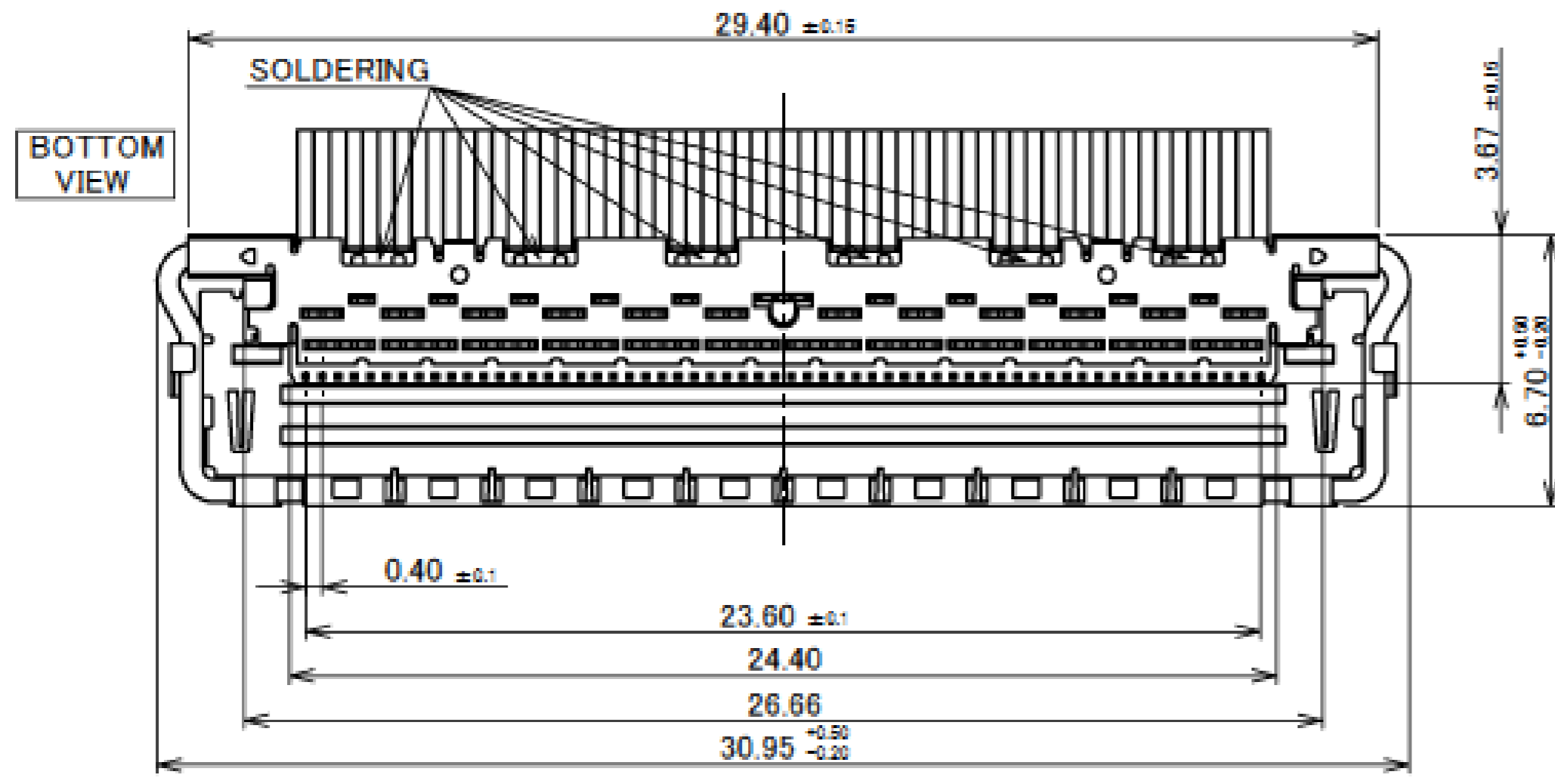
# Component Parts Details

## Component Parts

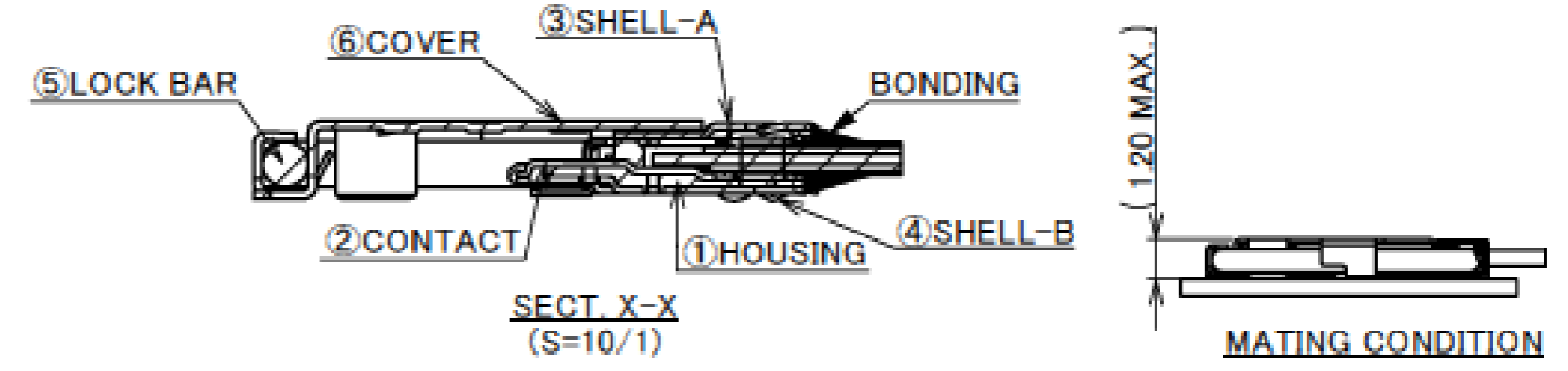
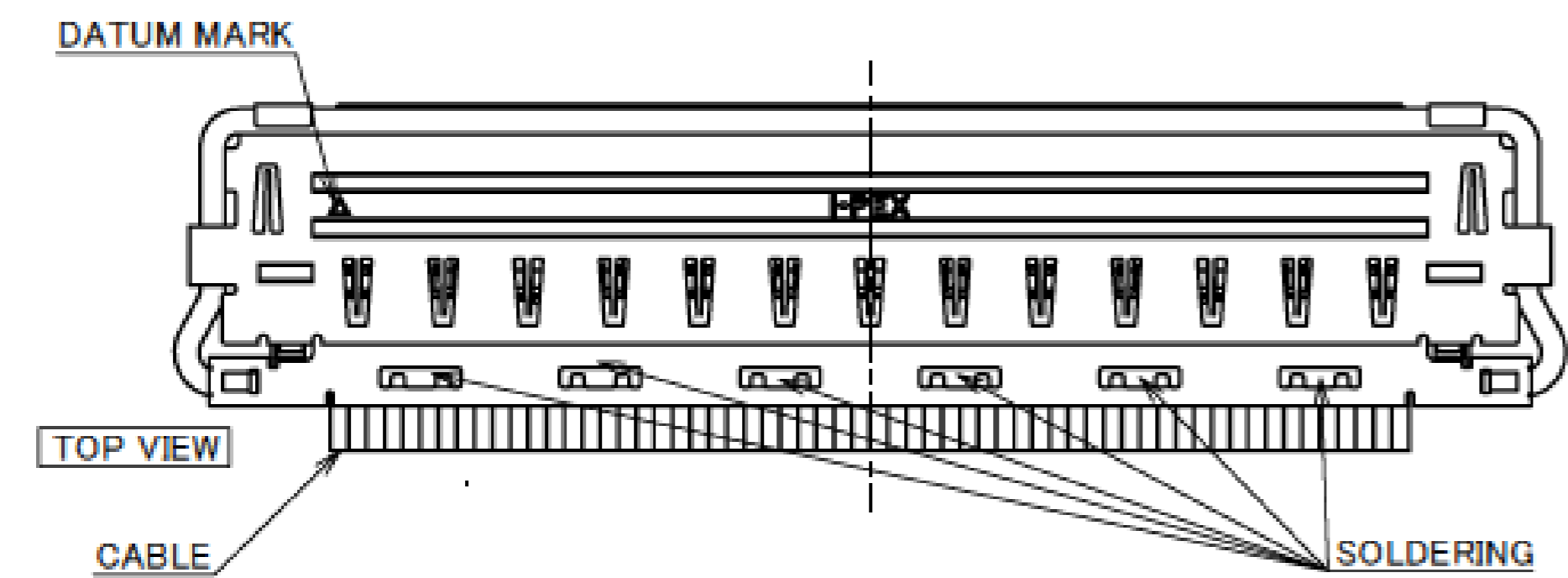
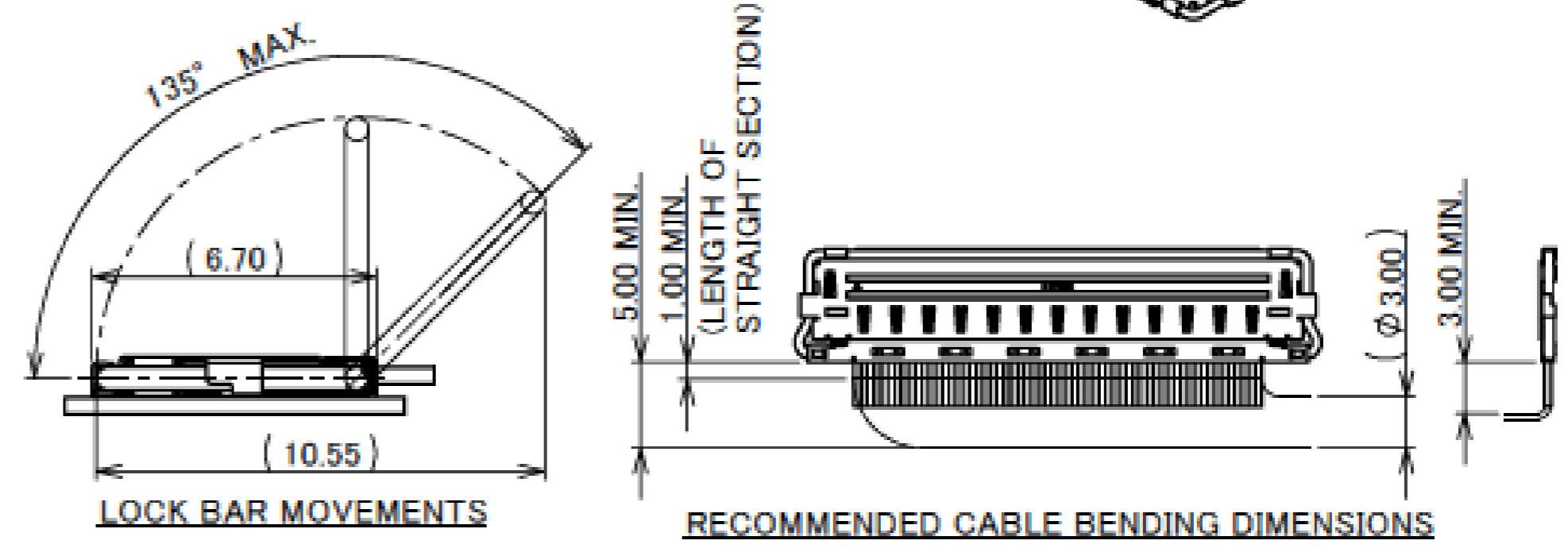


# Plug for Cable Assembly

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20788-0**T-01 |
| PART NO.        | Pos.          |
| 20788-060T-01   | 60            |



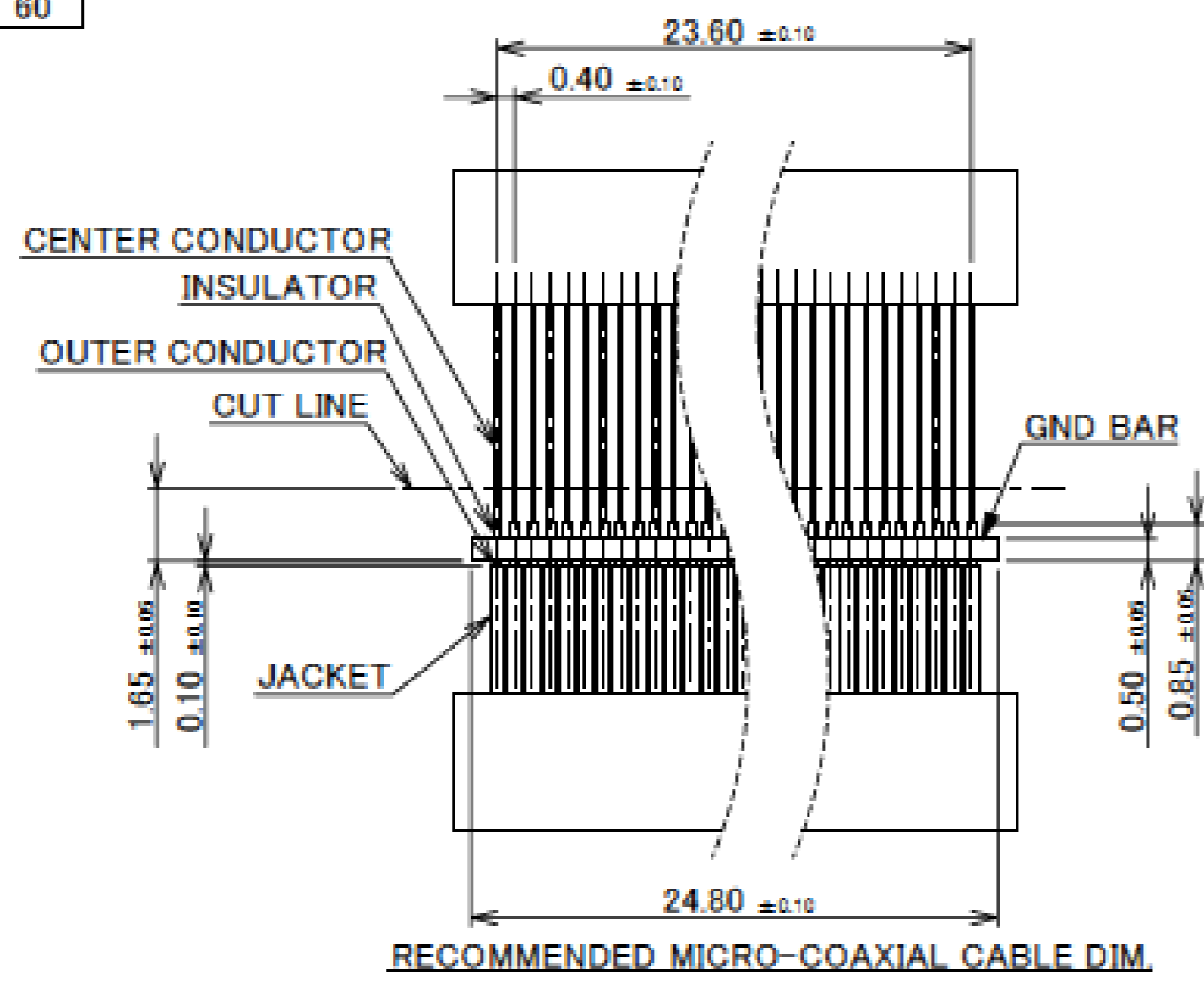
P/N : 20788-0 \*\* T-0 1  
Pos.



| NO. | DISCRIPTION | MATERIAL        | FINISH , REMARKS   |
|-----|-------------|-----------------|--|
| 6   | COVER       | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.   |
| 5   | LOCK BAR    | SUS φ 0.55      | -  |
| 4   | SHELL-B     | PHOSPHOR BRONZE | PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.                          |
| 3   | SHELL-A     | PHOSPHOR BRONZE | PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.                          |
| 2   | CONTACT     | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT & SOLDERING AREA : Au 0.03 μm MIN. |
| 1   | HOUSING     | LCP             | UL94V-0 ,BLACK   |

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|               |      |
|---------------|------|
| PART NO.      | Pos. |
| 20788-060T-01 | 60   |



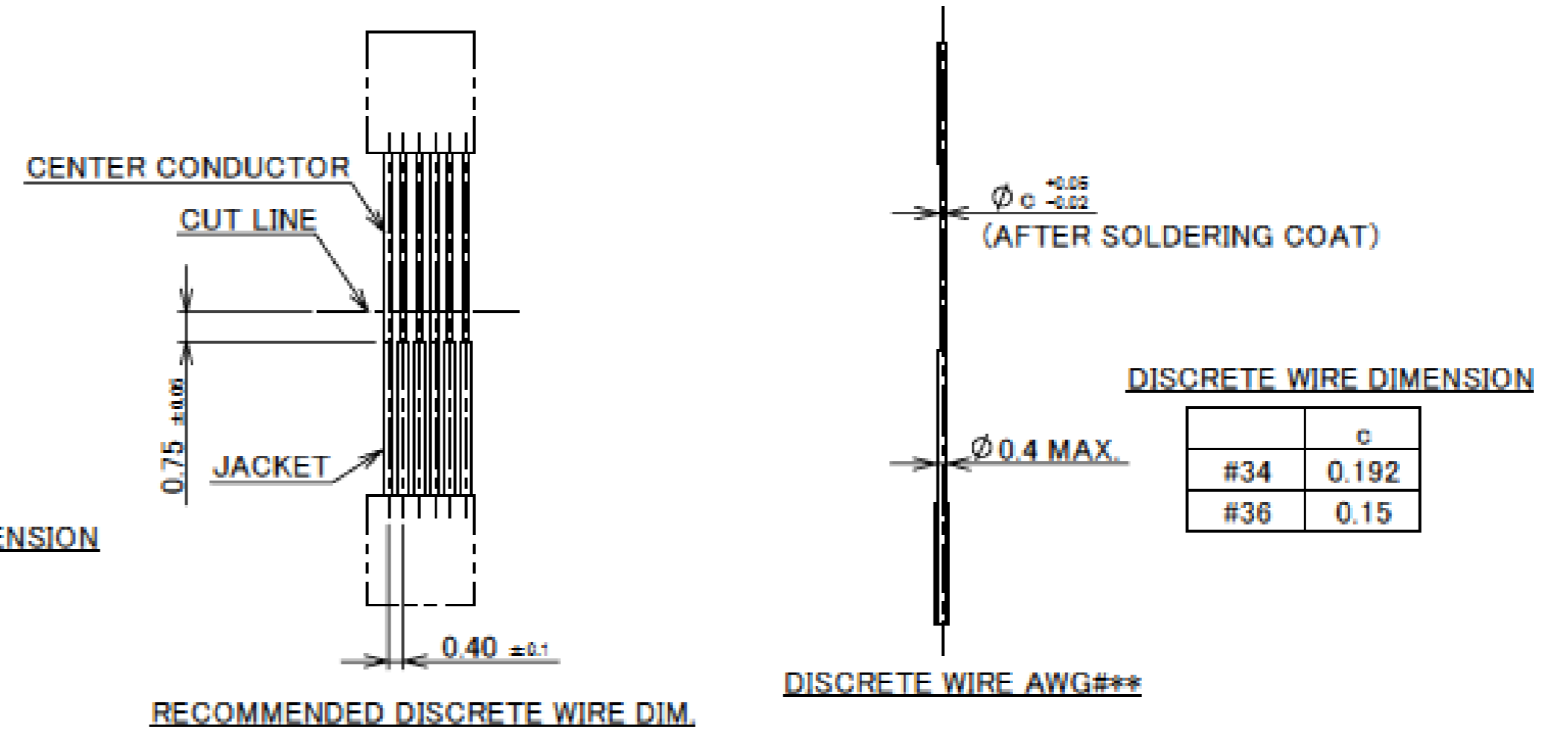
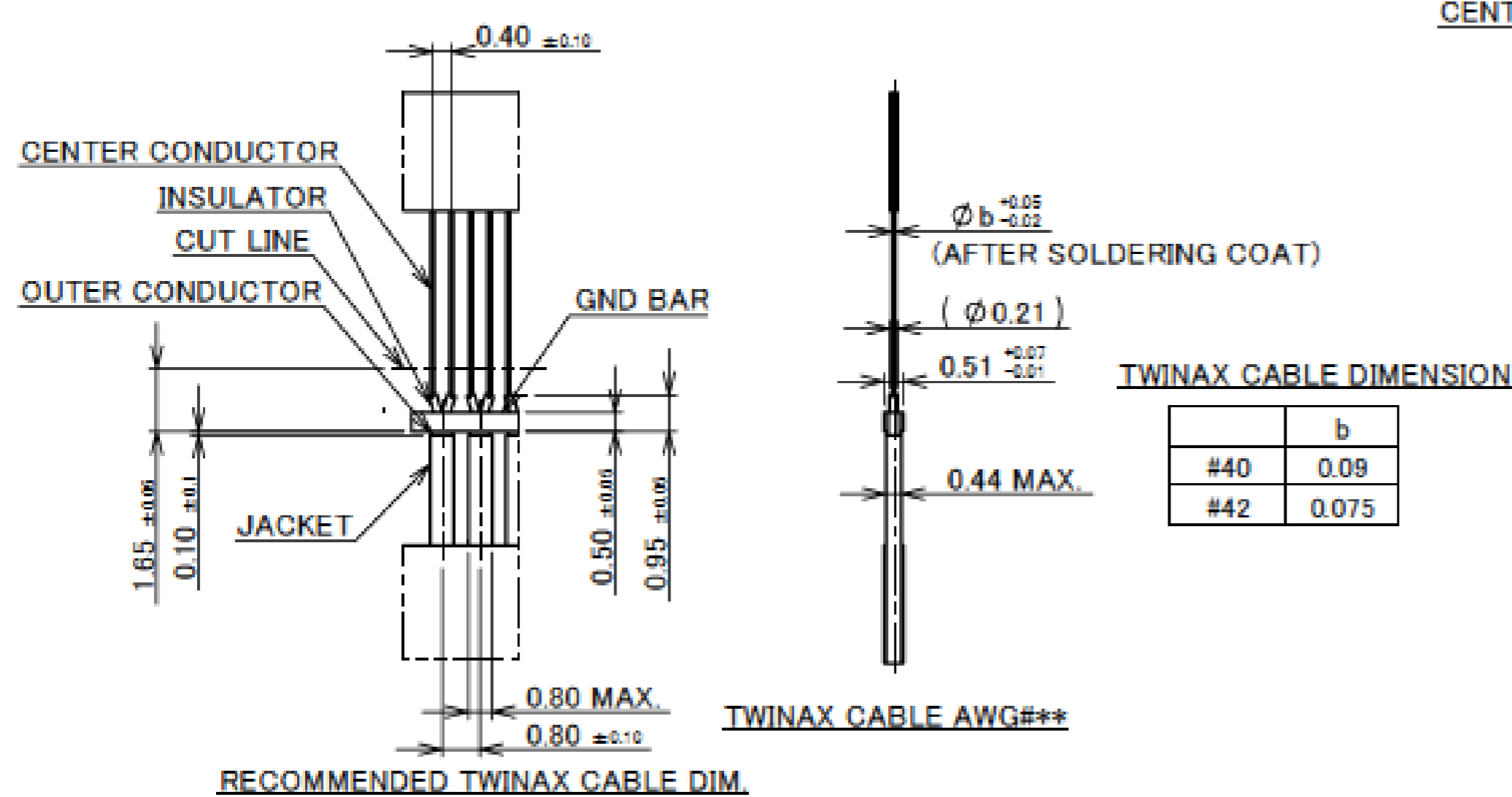
CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

|     | a     |
|-----|-------|
| #38 | 0.12  |
| #40 | 0.09  |
| #42 | 0.075 |
| #44 | 0.063 |

CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE

|     | a    |
|-----|------|
| #36 | 0.15 |

MICRO-COAXIAL CABLE #36 : NOT RECOMMENDED FOR HIGH SPEED SIGNAL TRANSFER

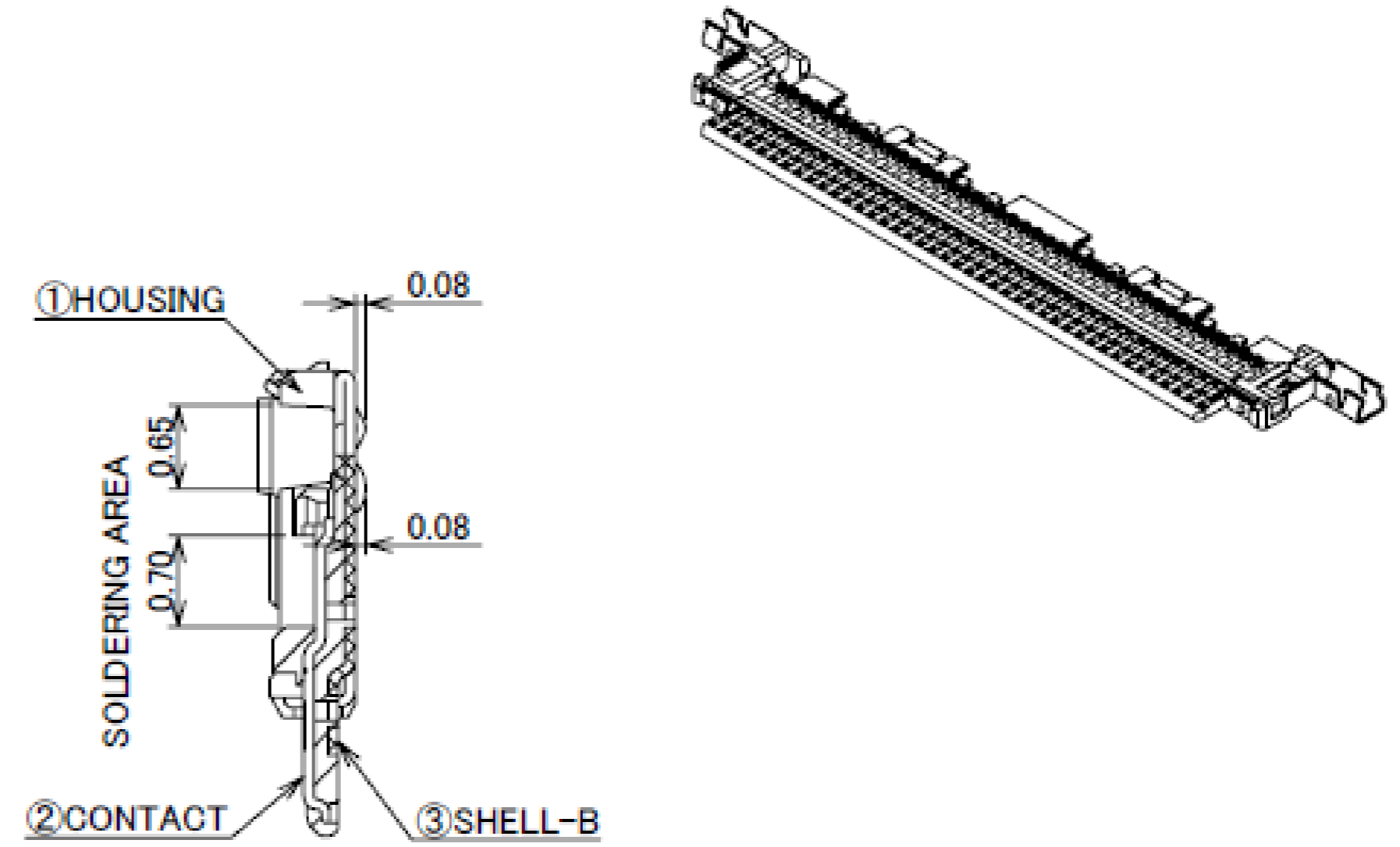
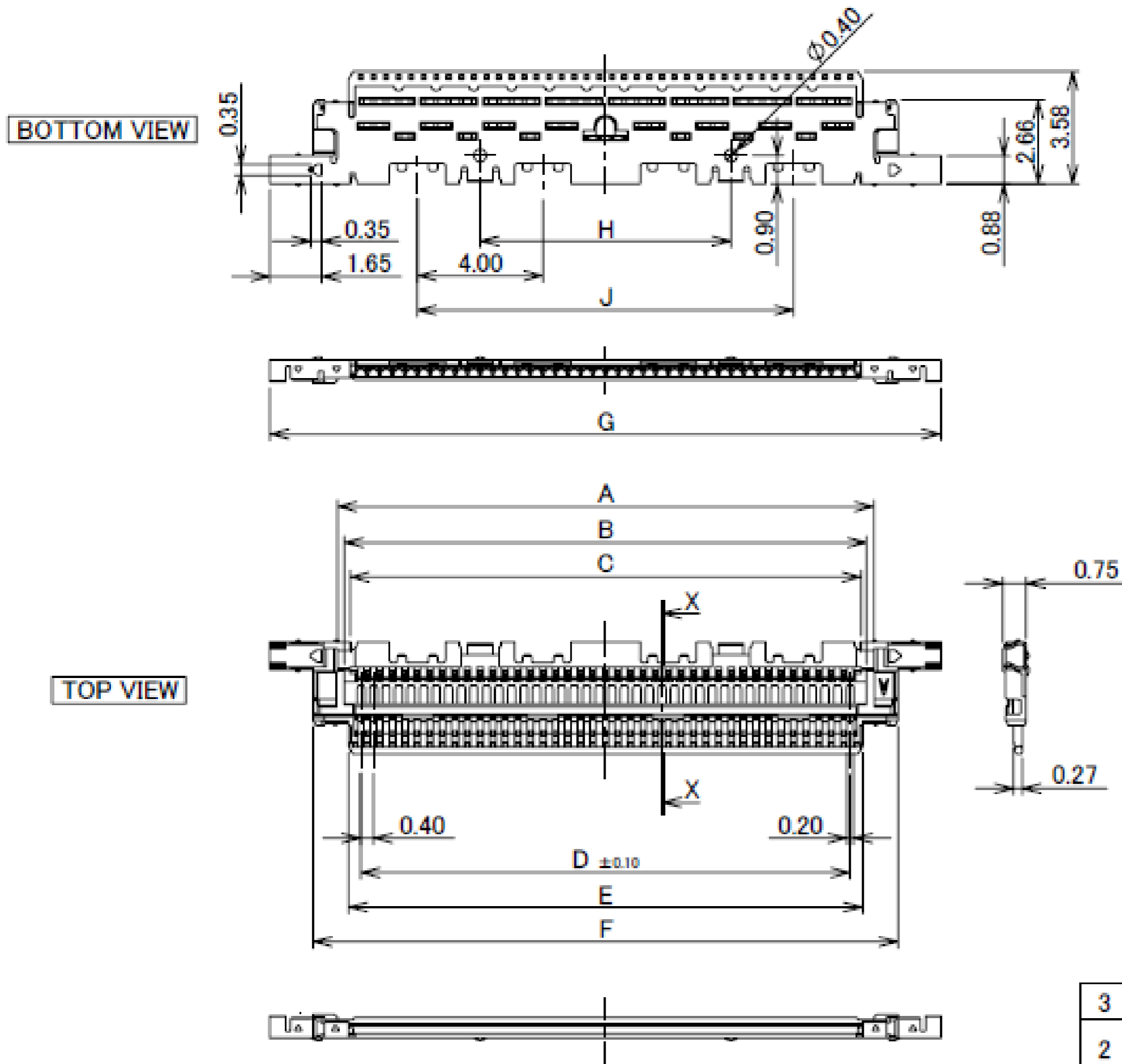
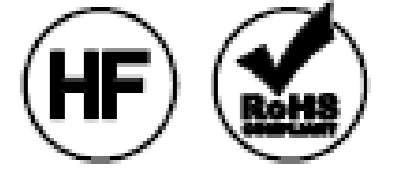


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# Plug Housing Assembly

Recommended P/N 20680-0\*\*T-01

| PART NO.      | Pos. | A     | B     | C     | D     | E     | F     | G     | H     | J     |
|---------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 20680-020T-01 | 20   | 9.10  | 8.65  | 8.30  | 7.60  | 8.40  | 10.66 | 13.40 | -     | 5.00  |
| 20680-030T-01 | 30   | 13.10 | 12.65 | 12.30 | 11.60 | 12.40 | 14.66 | 17.40 | 4.00  | 8.00  |
| 20680-040T-01 | 40   | 17.10 | 16.65 | 16.30 | 15.60 | 16.40 | 18.66 | 21.40 | 8.00  | 12.00 |
| 20680-050T-01 | 50   | 21.10 | 20.65 | 20.30 | 19.60 | 20.40 | 22.66 | 25.40 | 12.00 | 16.00 |
| 20680-060T-01 | 60   | 25.10 | 24.65 | 24.30 | 23.60 | 24.40 | 26.66 | 29.40 | 16.00 | 20.00 |



SECT. X-X  
(S=15/1)

NOTES.

- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0\*\*1) AND LOCK BAR ASSY(P/N 20681-0\*\*T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20679-0\*\*T-01
- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0\*\*1) AND LOCK BAR ASSY(P/N 20789-0\*\*T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20788-0\*\*T-01

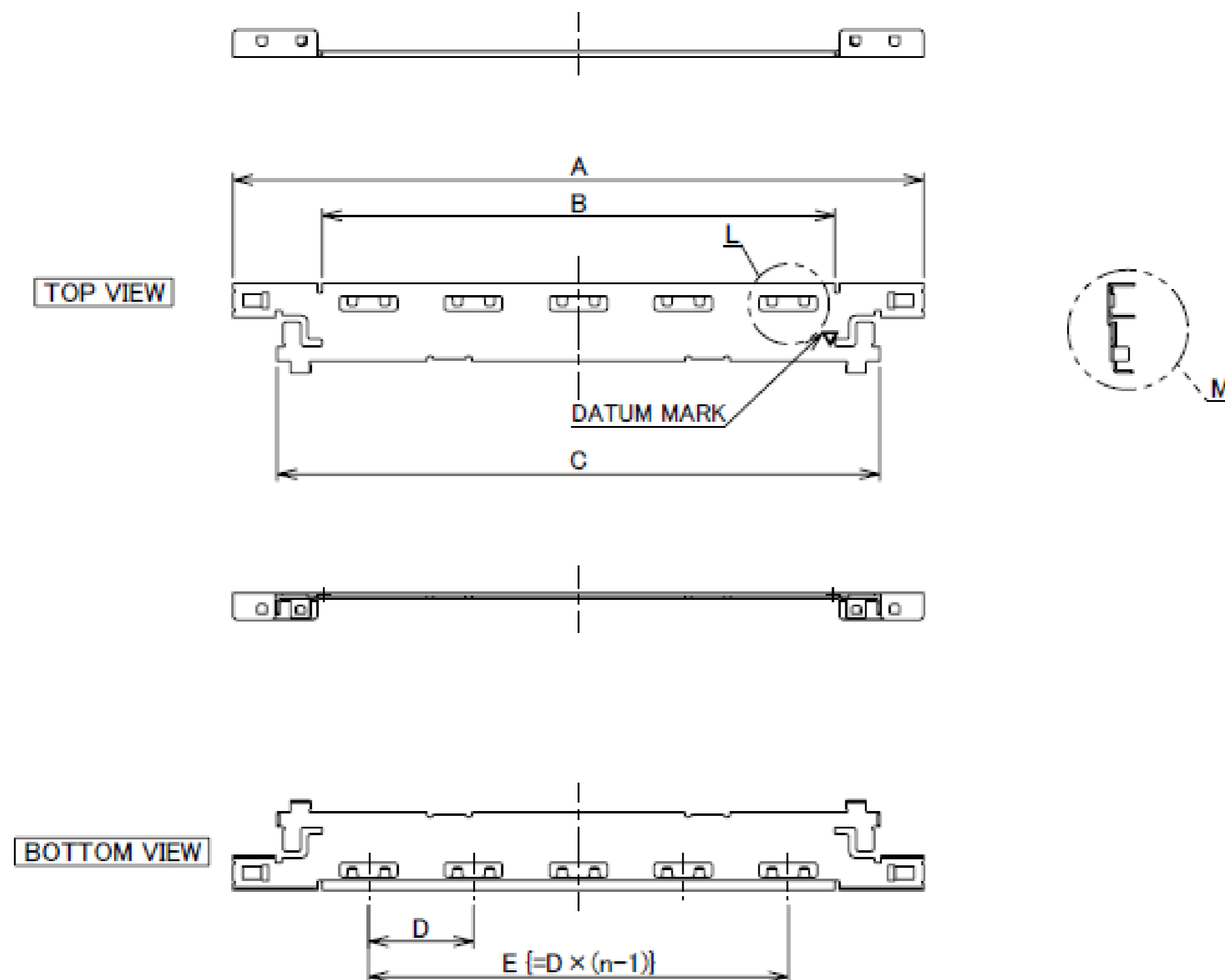
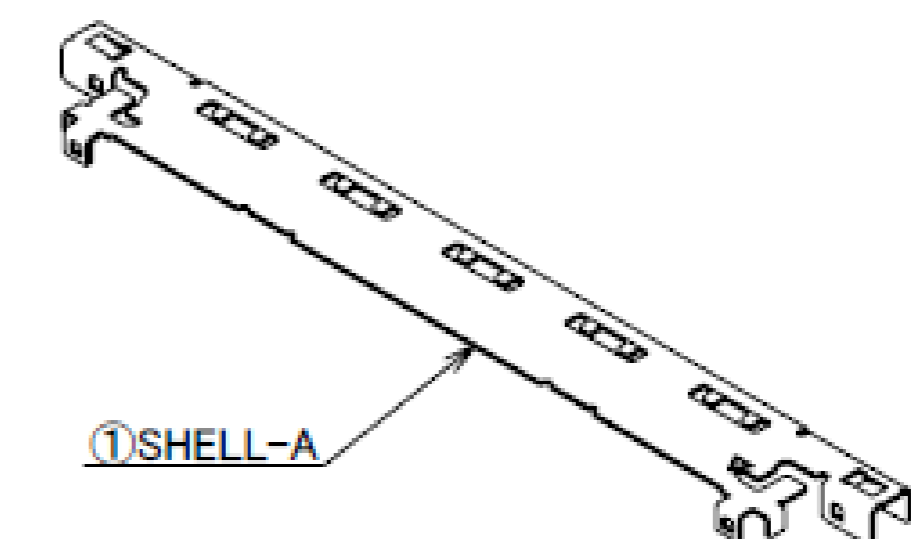
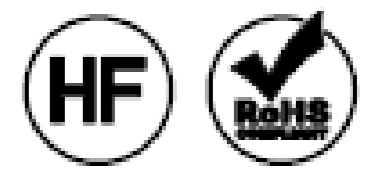
| NO. | DISCRIPTION | MATERIAL        | FINISH , REMARKS   |
|-----|-------------|-----------------|--|
| 3   | SHELL-B     | PHOSPHOR BRONZE | PARTIAL Au 0.003 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.                          |
| 2   | CONTACT     | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT & SOLDERING AREA : Au 0.03 $\mu$ m MIN. |
| 1   | HOUSING     | LCP             | UL94V-0 ,BLACK   |

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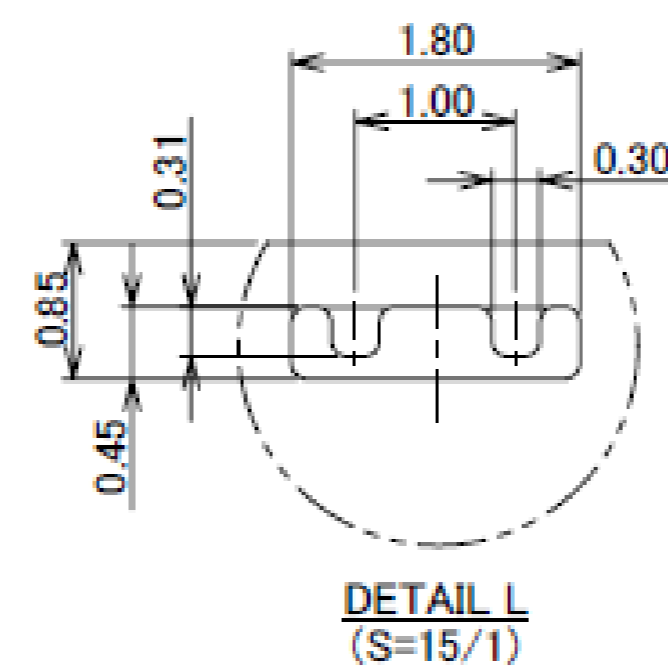
# Plug Shell-A

Recommended P/N 3204-0\*\*1

| PART NO.  | Pos. | A     | B     | C     | D    | E     |
|-----------|------|-------|-------|-------|------|-------|
| 3204-0201 | 20   | 13.40 | 7.88  | 10.66 | 2.50 | 5.00  |
| 3204-0301 | 30   | 17.40 | 11.88 | 14.66 | 3.00 | 9.00  |
| 3204-0401 | 40   | 21.40 | 15.88 | 18.66 | 3.25 | 13.00 |
| 3204-0501 | 50   | 25.40 | 19.88 | 22.66 | 3.40 | 17.00 |
| 3204-0601 | 60   | 29.40 | 23.88 | 26.66 | 4.00 | 20.00 |



DETAIL M  
(S=20/1)



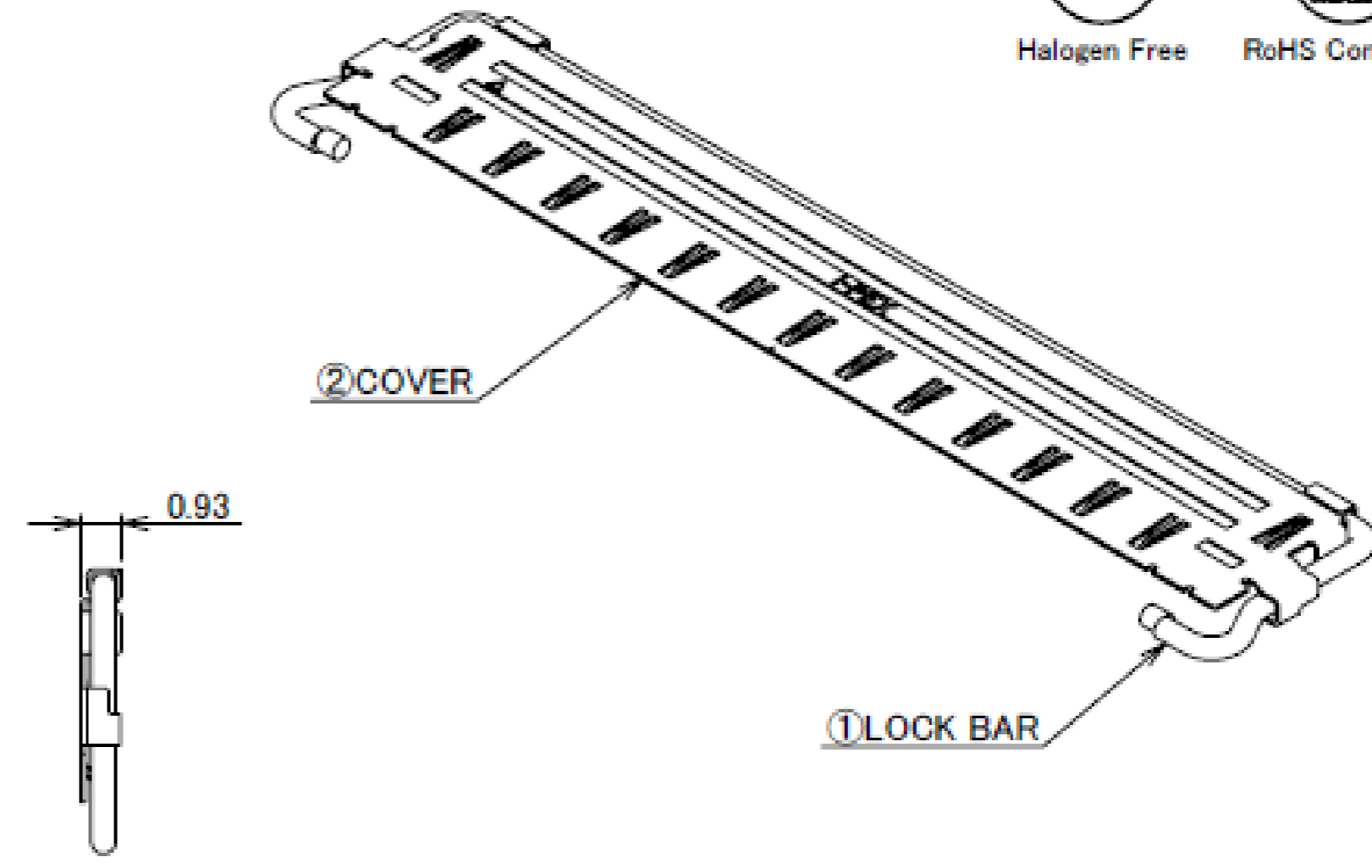
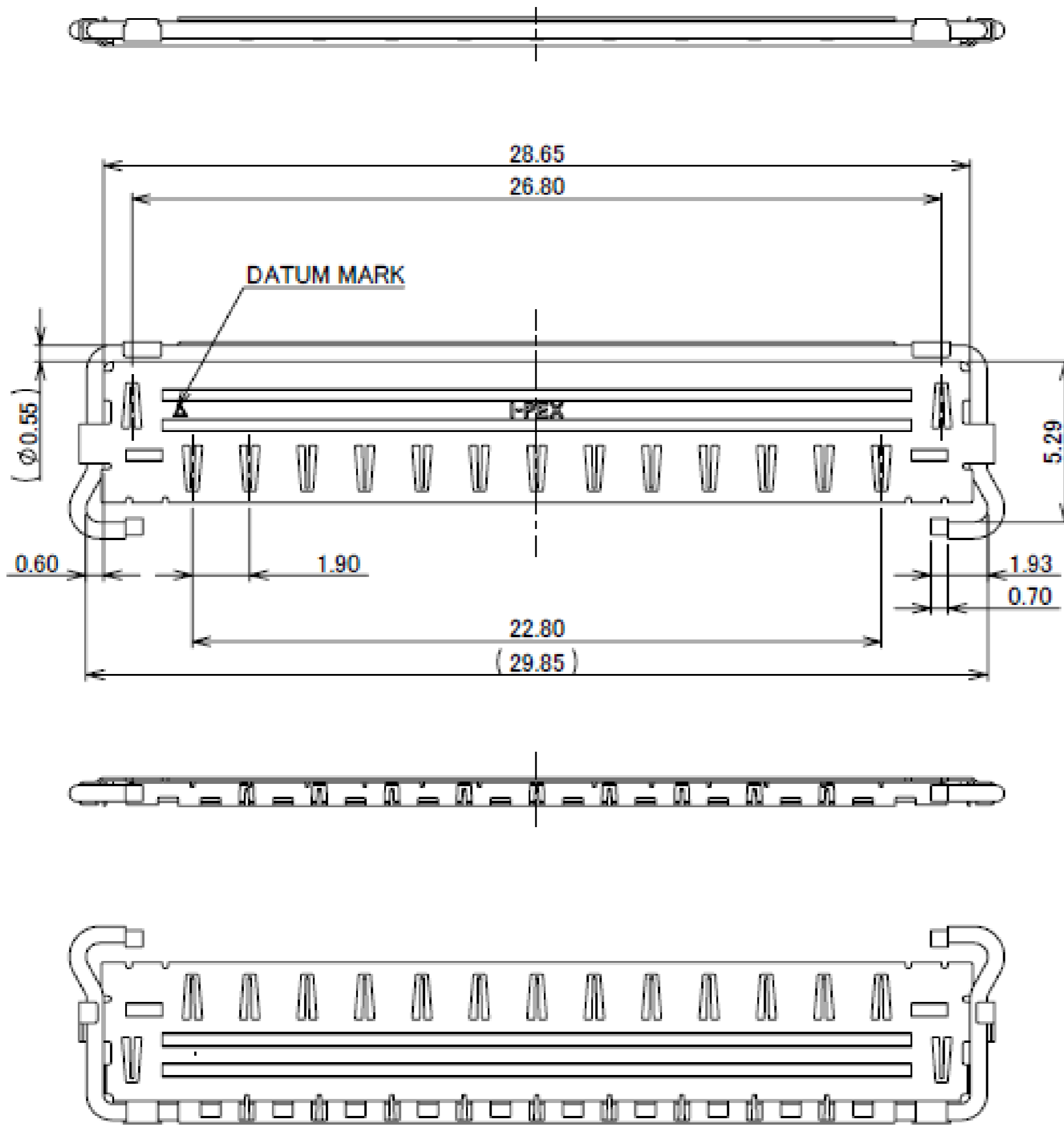
DETAIL L  
(S=15/1)

| NO. | DISCRIPTION | MATERIAL        | FINISH , REMARKS  |
|-----|-------------|-----------------|---|
| 1   | SHELL-A     | PHOSPHOR BRONZE | PARTIAL Au 0.003 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN. |

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# Lock Bar Assembly

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20789-0**T-01 |
| PART NO.        | Pos.          |
| 20789-060T-01   | 60            |

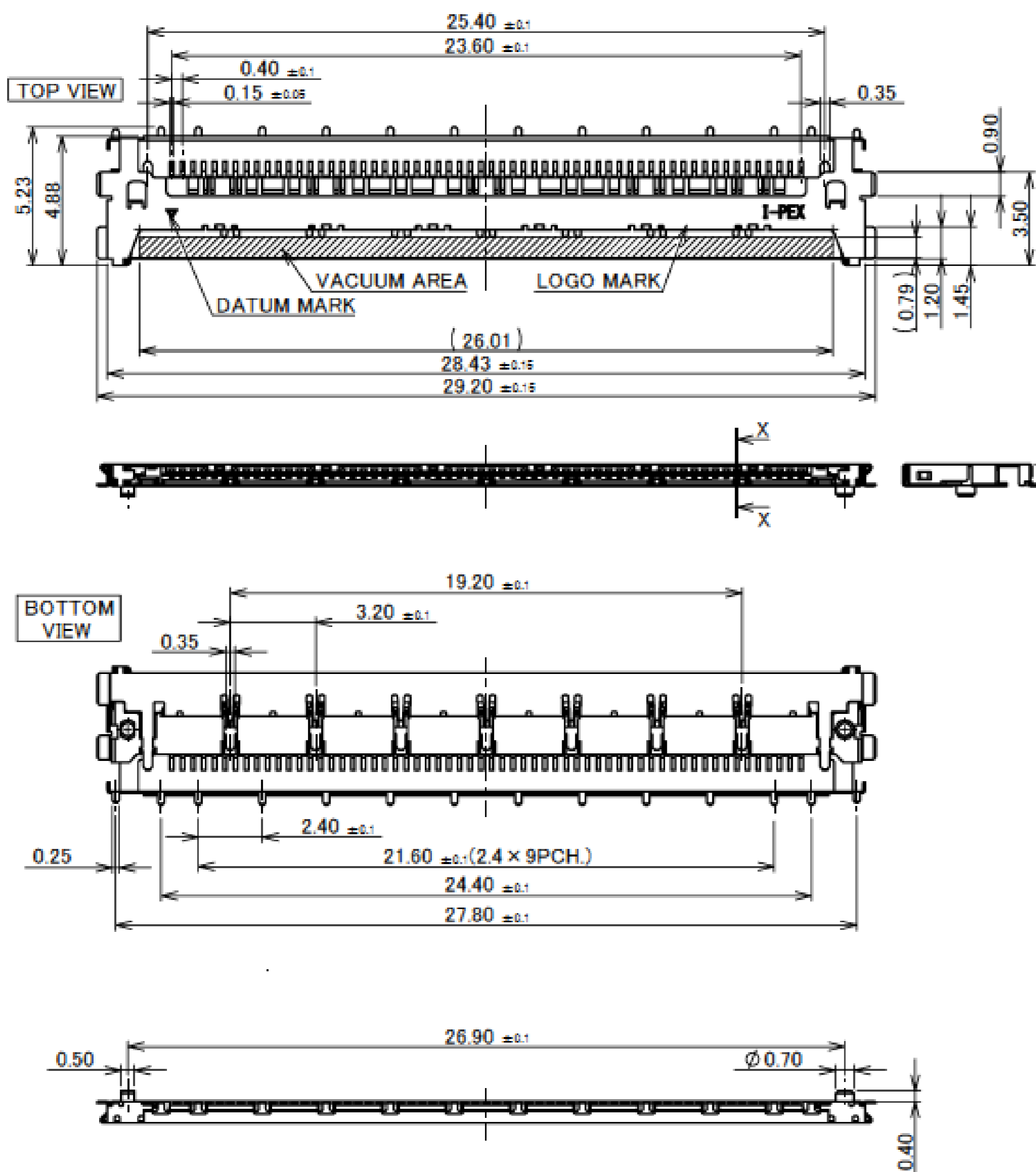


|     |             |                 |                               |
|-----|-------------|-----------------|-------------------------------|
| 2   | COVER       | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN. |
| 1   | LOCK BAR    | SUS $\phi 0.55$ | -                             |
| NO. | DISCRIPTION | MATERIAL        | FINISH , REMARKS              |

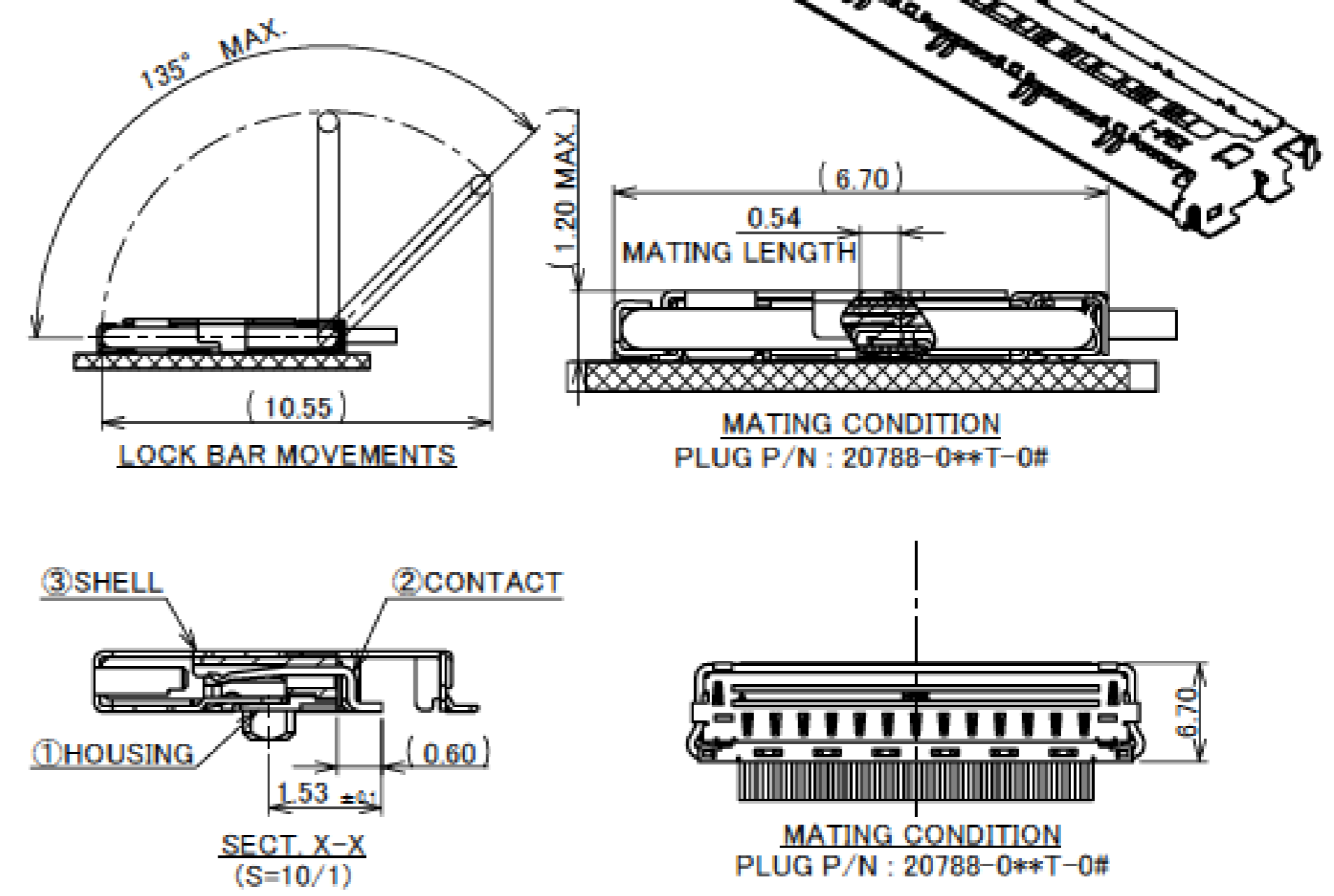
Rev.9

# Receptacle Assembly

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20790-0**E-02 |
| PART NO.        | Pos.          |
| 20790-060E-##   | 60            |



P/N : 20790-0\*\*E-##  
 1 : WITH BOSS  
 2 : WITHOUT BOSS  
 SEE TABLE 1  
 Pos.

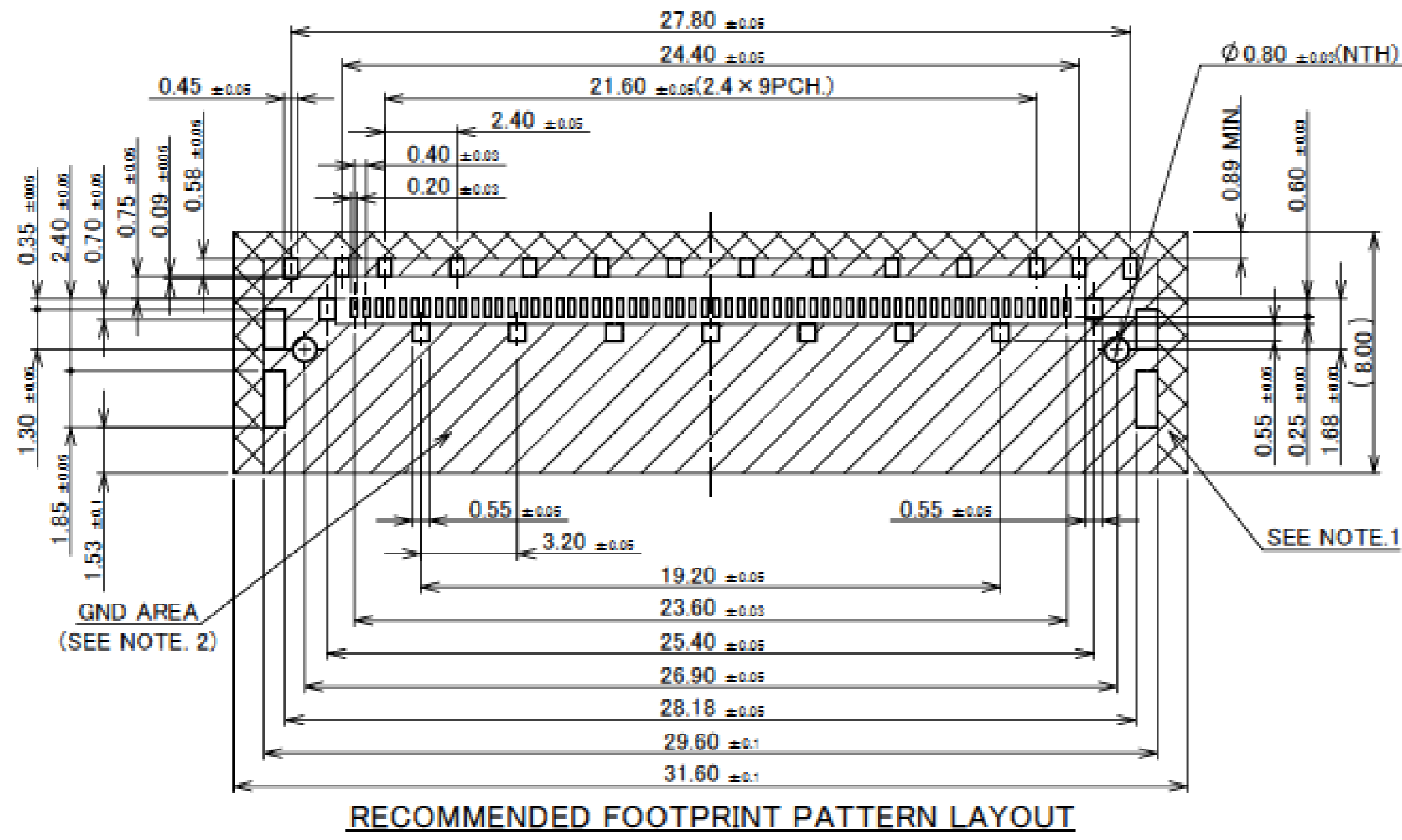


| PART NO.      | CONTACT FINISH   |
|---------------|--|
| 20790-0**E-0# | CONTACT & SOLDERING AREA : Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.  |
| 20790-0**E-1# | CONTACT AREA : Au 0.38 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.<br>SOLDERING AREA : Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN. |

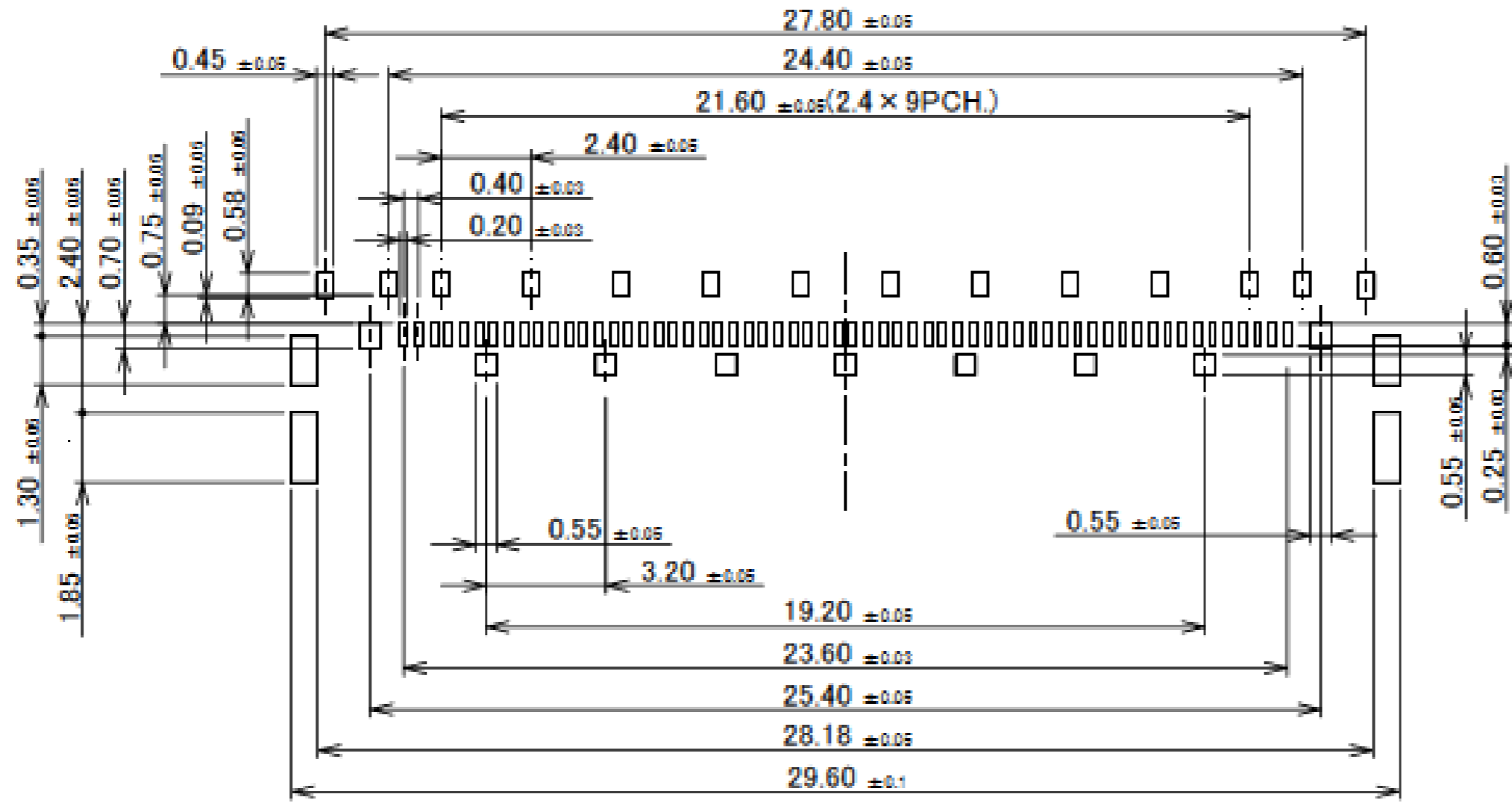
|     |             |                 |  |
|-----|-------------|-----------------|--|
| 3   | SHELL       | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>SOLDERING AREA : Au 0.03 $\mu$ m MIN. |
| 2   | CONTACT     | PHOSPHOR BRONZE | SEE TABLE 1  |
| 1   | HOUSING     | LCP             | UL94V-0 .BLACK   |
| NO. | DISCRIPTION | MATERIAL        | FINISH , REMARKS   |

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# Receptacle Assembly

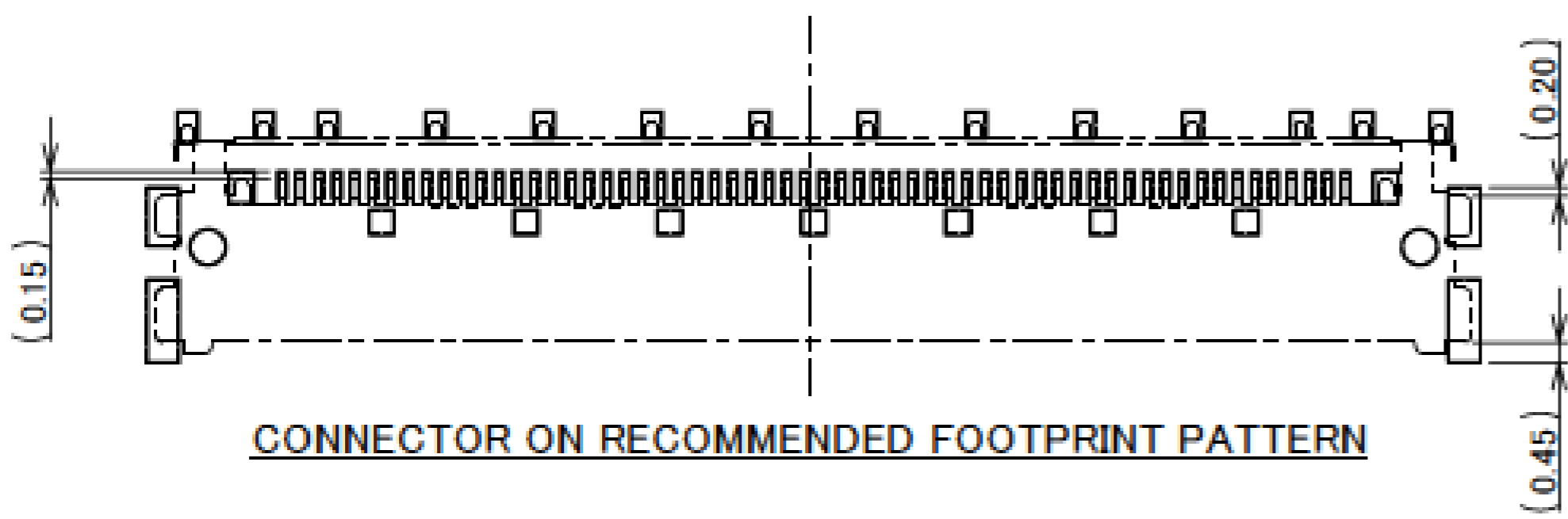


RECOMMENDED FOOTPRINT PATTERN LAYOUT

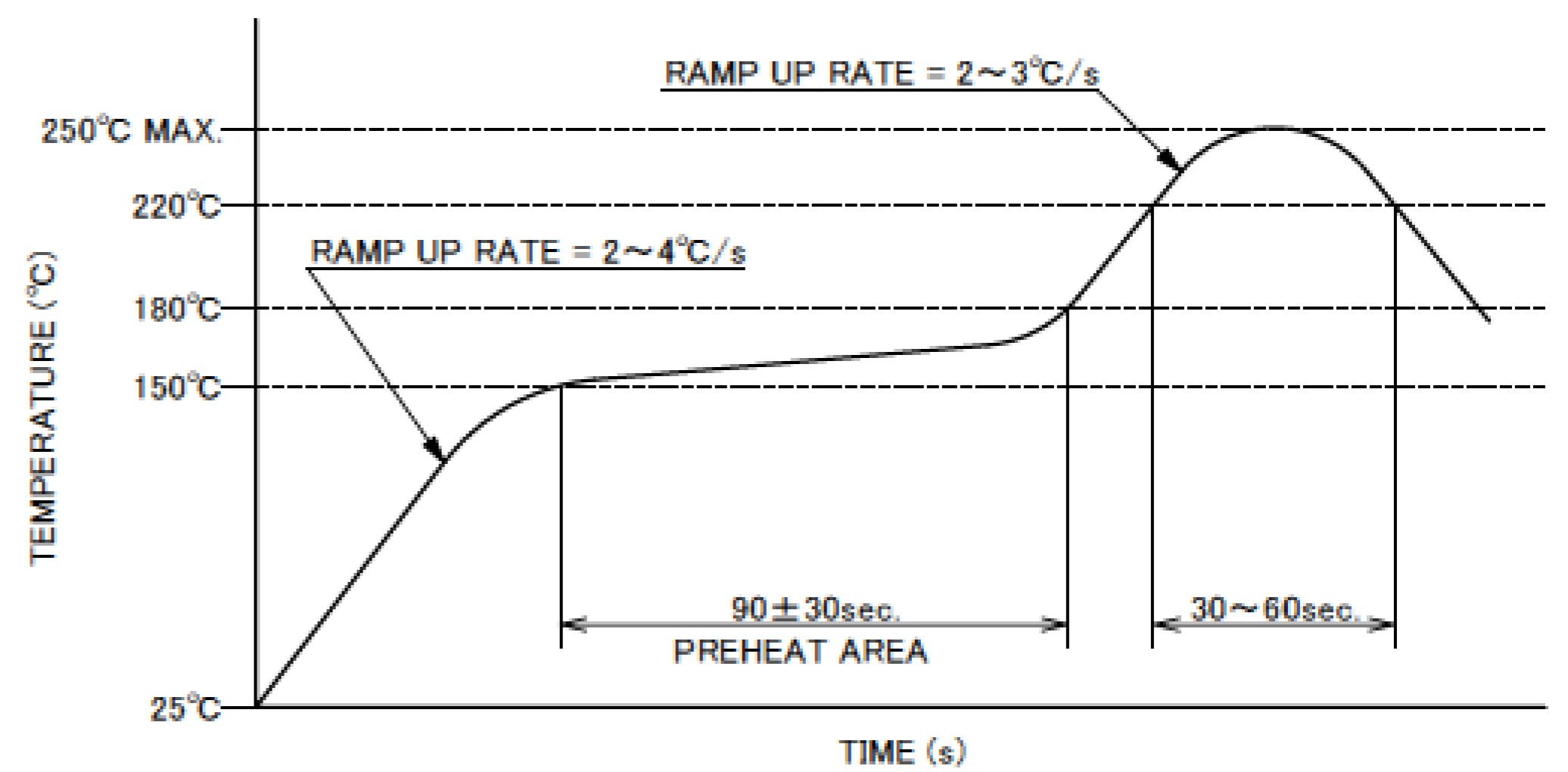


RECOMMENDED METAL MASK LAYOUT  
METAL MASK THICKNESS : t=0.12mm

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



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

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| ITEMS                                       | SPECIFICATION   |
|---|---|
| APPLICABLE CABLE                            | MICRO-COAXIAL CABLE : AWG# 44 , 42 , 40 , 38 , 36<br>DISCRETE WIRE : AWG# 36 , 34<br>TWINAX CABLE : AWG# 40 , 42  |
| RATING VOLTAGE                              | 100V AC (PER CONTACT PIN)   |
| RATING AMPERAGE (FOR CONTACT)               | 0.1A AC/DC [AWG#44] PER CONTACT PIN / UP TO 60 CONTACTS<br>0.24A AC/DC [AWG#42] PER CONTACT PIN / UP TO 60 CONTACTS<br>0.3A AC/DC [AWG#40] PER CONTACT PIN / UP TO 60 CONTACTS<br>0.5A AC/DC [AWG#38] PER CONTACT PIN / UP TO 18 CONTACTS<br>0.8A AC/DC [AWG#36] PER CONTACT PIN / UP TO 6 CONTACTS<br>1.0A AC/DC [AWG#34] PER CONTACT PIN / UP TO 6 CONTACTS<br>※TESTING BY REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE<br>MAY AFFECTED BY ACTUAL SITUATION |
| OPERATING TEMPERATURE                       | 248~378K(-40°C~105°C)   |
| OPERATING HUMIDITY                          | 85% MAX.(NON-CONDENDING)  |
| CONTACT RESISTANCE                          | INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : $\triangle$ 40mohm MAX.<br>275mohm MAX.(AWG#36)<br>360mohm MAX.(AWG#38)<br>600mohm MAX.(AWG#40)<br>700mohm MAX.(AWG#42)<br>1080mohm MAX.(AWG#44)  |
| GROUND SHELL RESISTANCE                     | INITIAL : 50mohm MAX. / AFTER TEST : $\triangle$ 40mohm MAX.  |
| INSULATION RESISTANCE                       | INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.   |
| DIELECTRIC WITHSTANDING VOLTAGE             | AC250V 1min   |
| DURABILITY                                  | 30 CYCLES   |
| MATING FORCE (INITIAL / AFTER 30 CYCLES)    | 29.10N MAX.   |
| UN-MATING FORCE (INITIAL / AFTER 30 CYCLES) | 6.0N MIN.   |
| CABLE RETENTION FORCE                       | 29.40N MIN.   |
| PRODUCT SPECIFICATION                       | PRS-2261  |
| TEST REPORT                                 | TR-16075, TR-23031  |
| INSTRUCTION MANUAL                          | HIM-16028   |
| ASSEMBLY MANUAL                             | ASM-16004   |
| APPEARANCE CRITERIA NO.                     | QLS-A***  |

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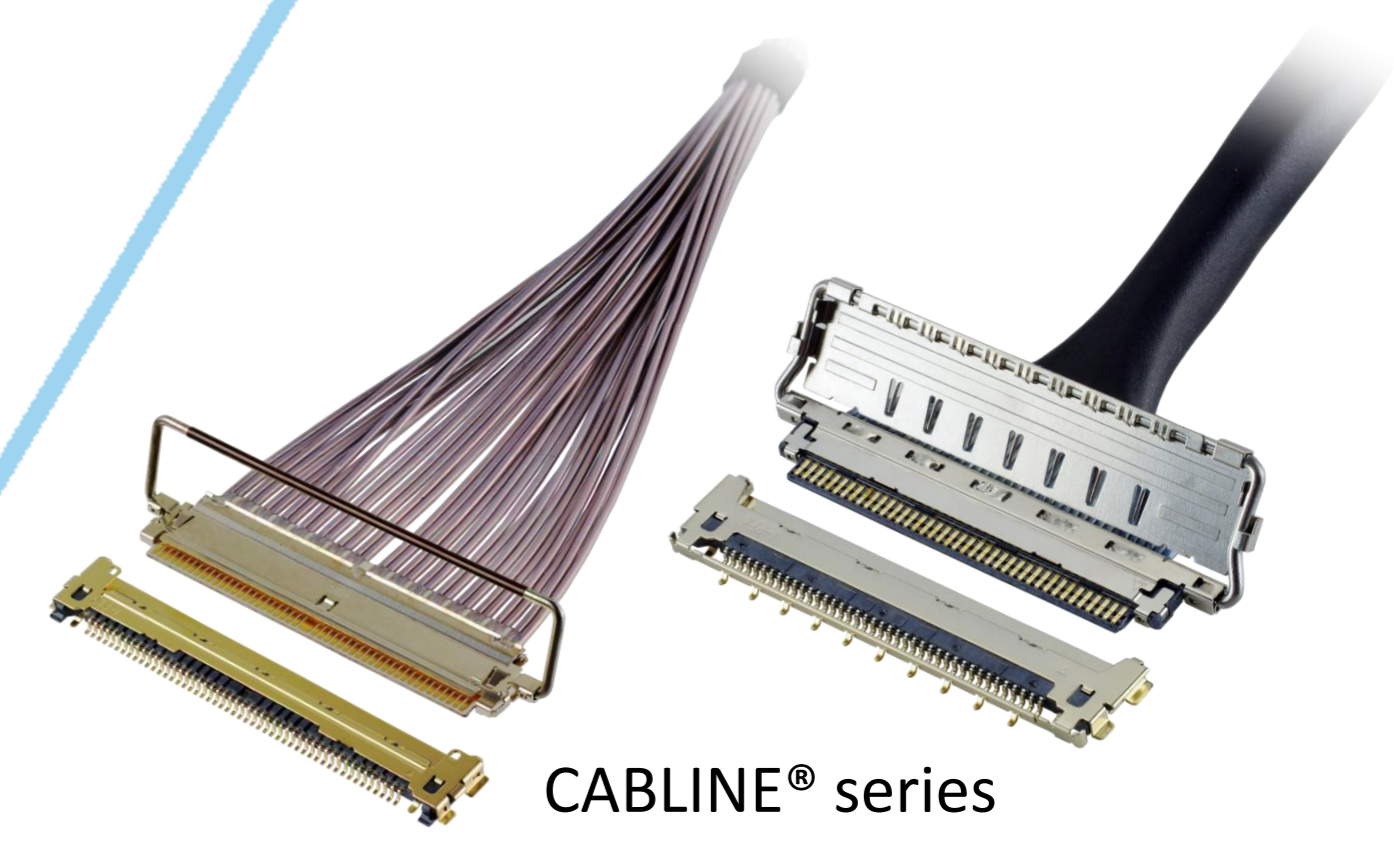
# Custom Connectors Available

 RF Connector

MHF® series



CABLINÉ® series  
Micro-coaxial/Twinax/  
Discrete Wire Connector



Optical Module

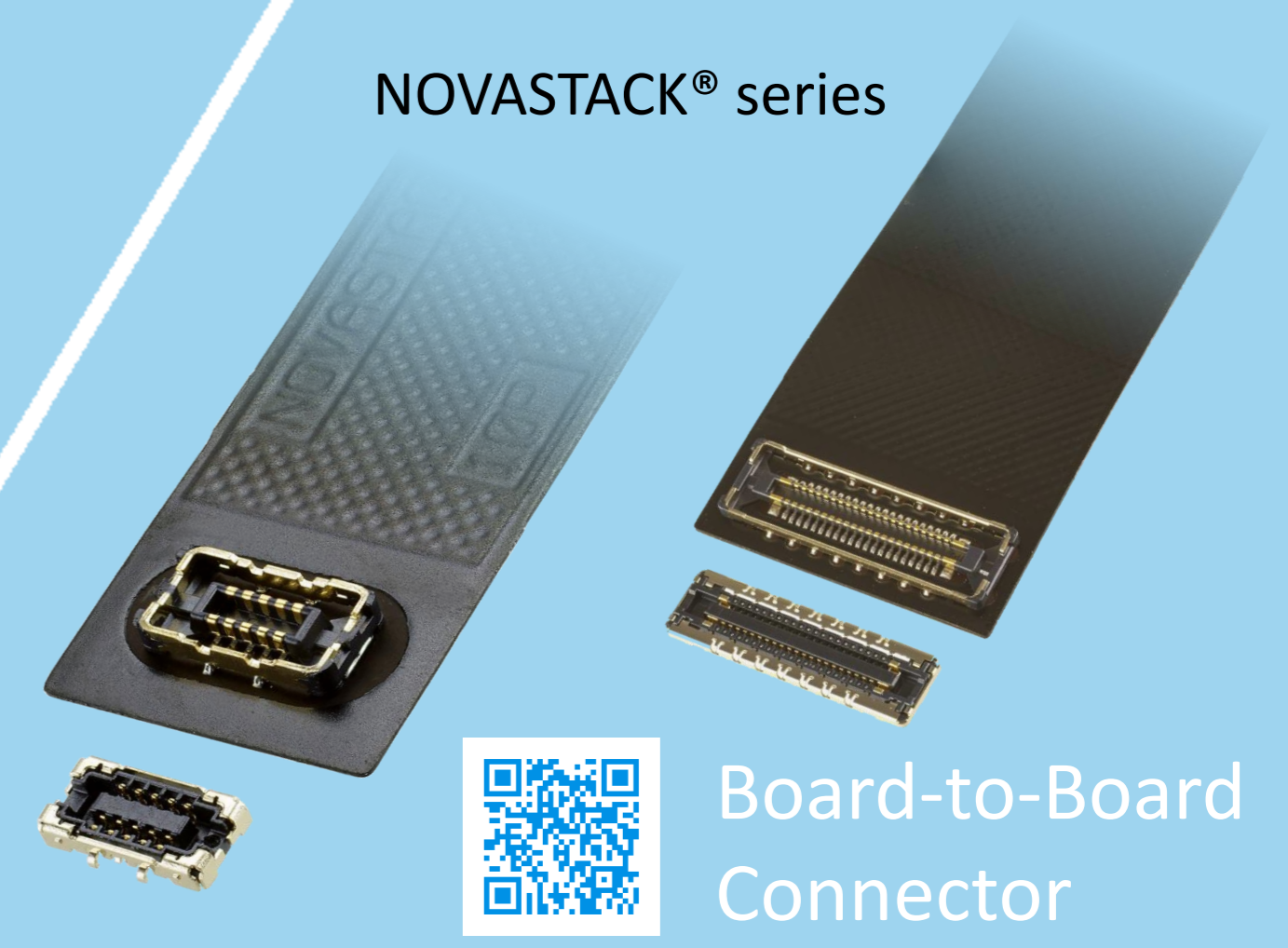
LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector



Power Connector/  
Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



FPC FFC Connector



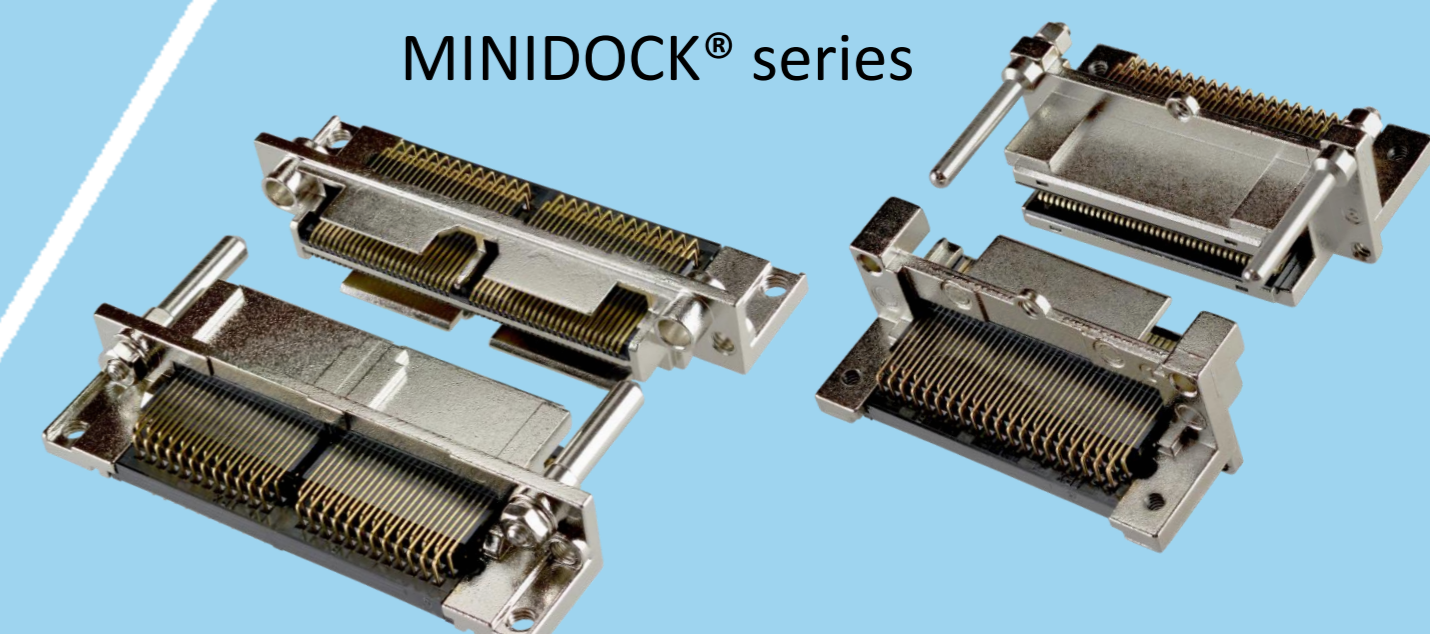
Inquiry



MINIDOCK® series



I/O Connector



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Contact your sales representative or more detailed information.

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