

CABLINE®-CAL

較低嵌合高度(嵌合高度 = 0.7 mm) · 高速數據傳輸(20+ Gbps/lane), 機械鎖扣 · 0.4 mm間距, 水平對插款的極細同軸線連接器

Product Specifications:

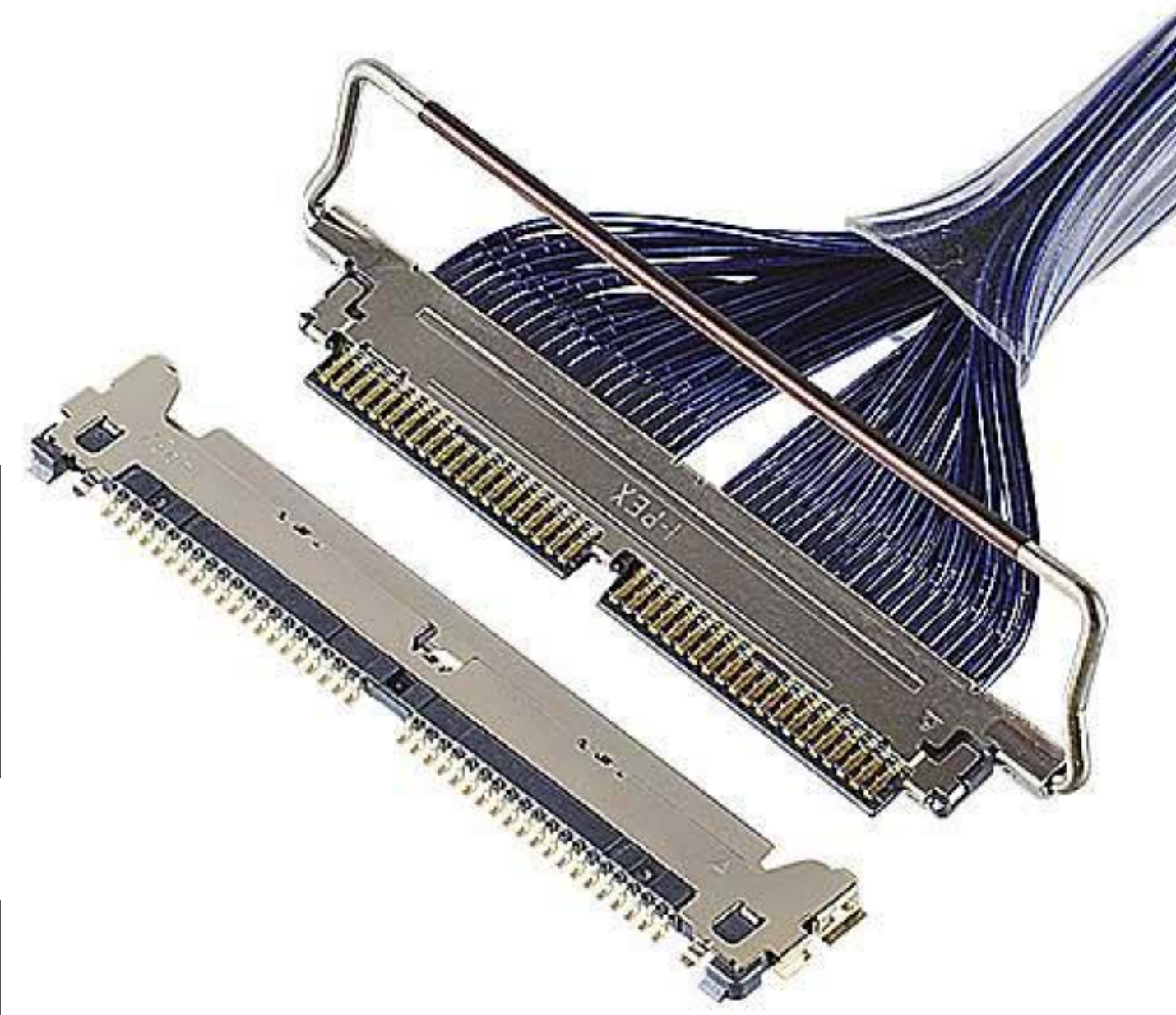
| | | |
|--------------------|------------|---------------------------------|
| Mating type | Horizontal | |
| Board Pitch (mm) | 0.4 | |
| Wiping Length (mm) | 0.4 | |
| Mated size (mm) | Height | 0.7 +/- 0.1 |
| | Width | Formula: 10-20p: 6.85 +(0.4*?p) |
| | Width | Formula: 22-40p: 8.05 +(0.4*?p) |
| Pin Counts | Depth | 5.5 |
| | Range | Up to 40 |
| | Available | 30, 40 |

Applicable Cable Size:

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

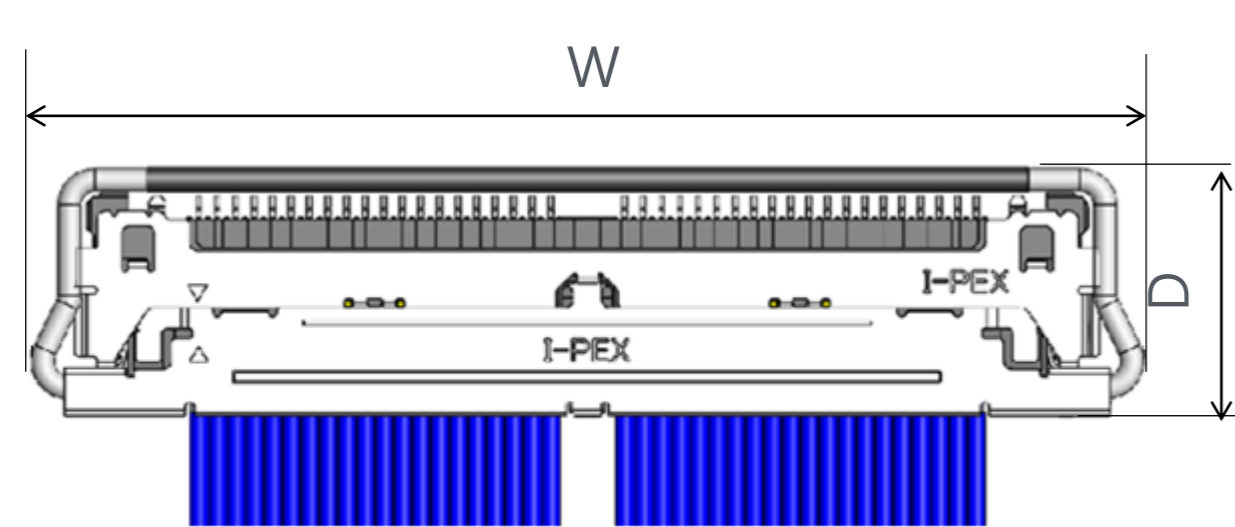
Applicable Standards (Reference Only):

USB4 Gen3/Thunderbolt 4 (20 Gbps/lane), PCIe Gen 4 (16 GT/s), USB 3.1 Gen 2 (10 Gbps), eDP HBR 3 (8.1 Gbps)

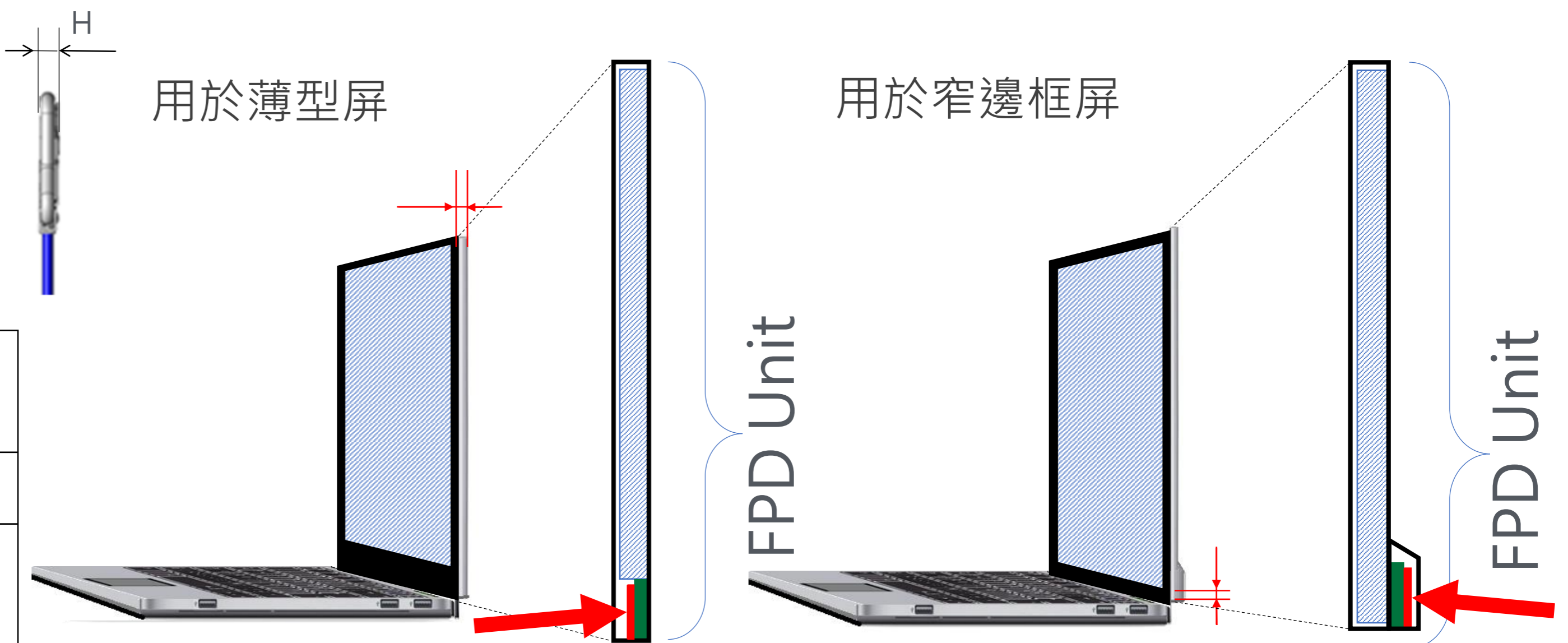


*若有規格外 Pin 數需求, 請與當地負責業務窗口聯繫。

適用於低空間的连接器



| CABLINE®-CAL 40p 一套嵌合後的尺寸(mm) | | |
|----------------------------------|------|---------------------|
| W | D | H |
| 24.05 | 5.50 | 0.70 (0.80 max.) |

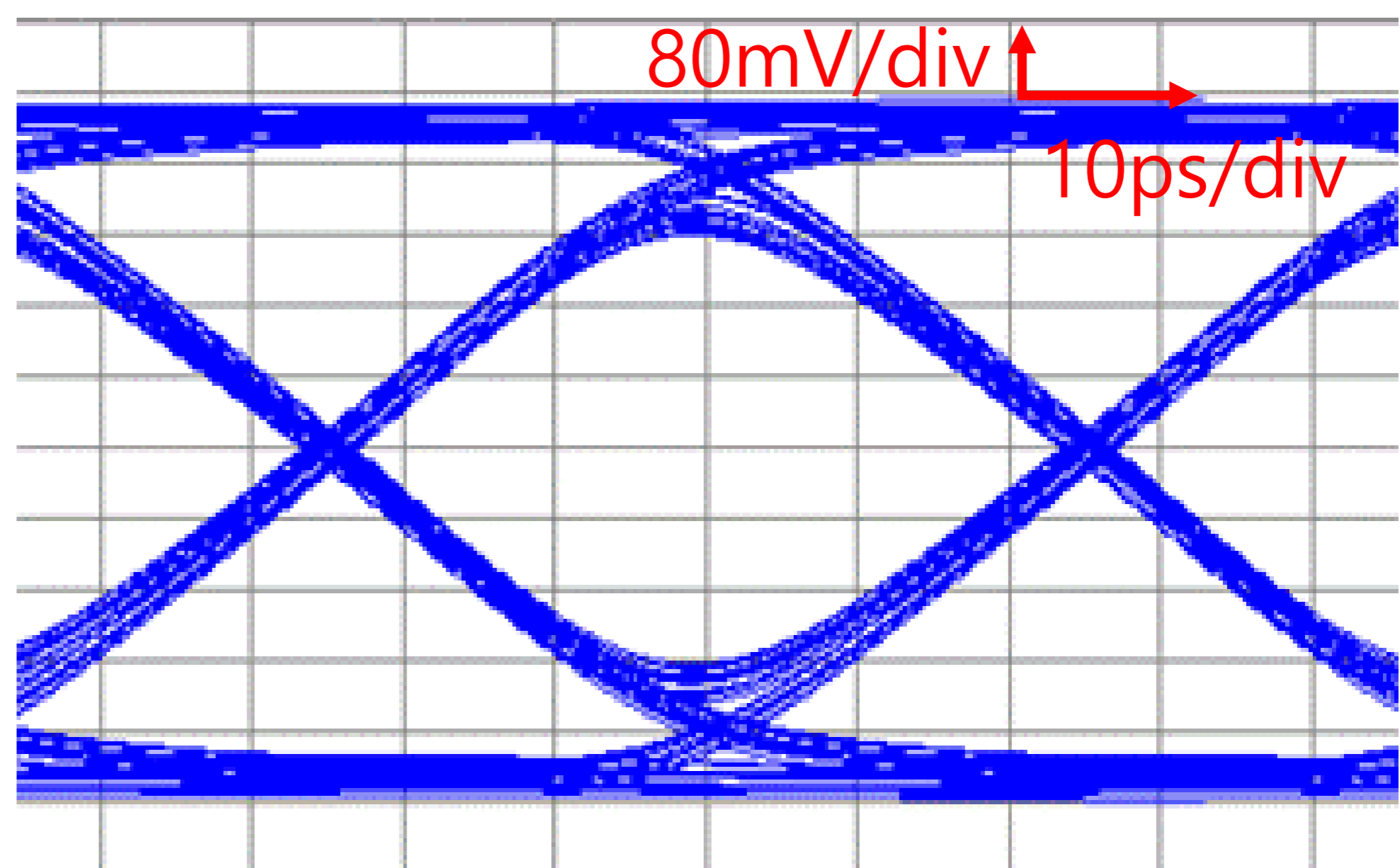


高速率傳輸, USB4 Gen3/Thunderbolt 4 (20Gbps/lane) 應用的理想之選

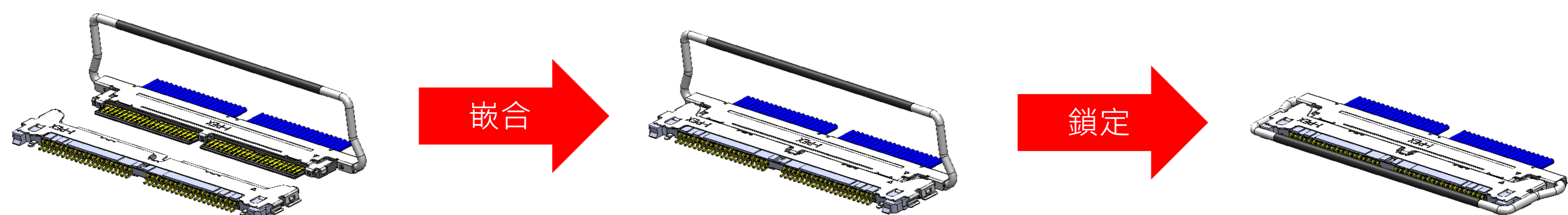
USB4 Gen3/Thunderbolt 4 (20Gbps/lane)

眼圖 (微分)
Bit rate : 20Gbps
上升時間 : 30ps (10-90%)
輸入電壓 : 800mVp-p

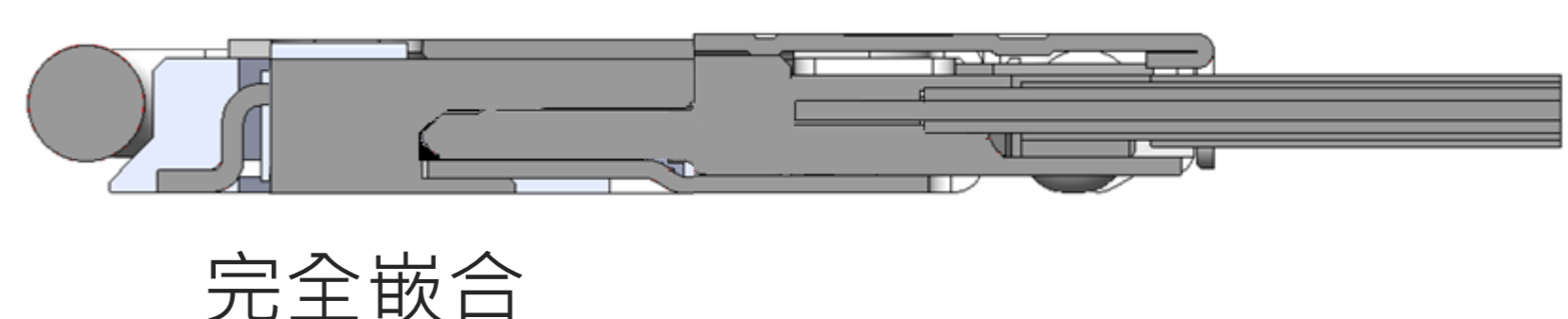
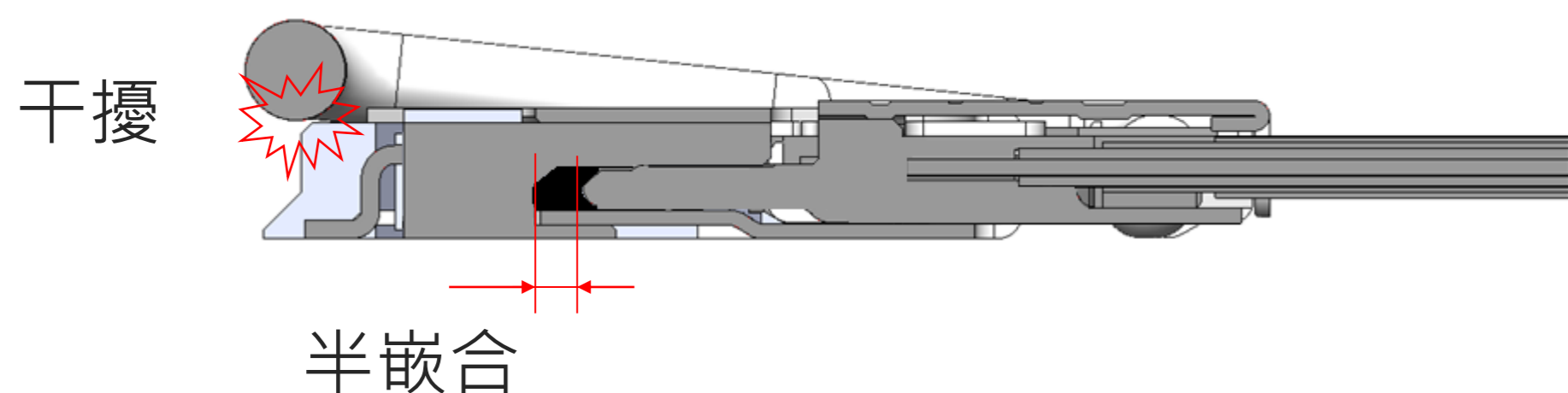
*更多測試細節, 請聯繫 I-PEX 連接器。



機械式鎖扣防止半嵌合和連接器彈出/未嵌合

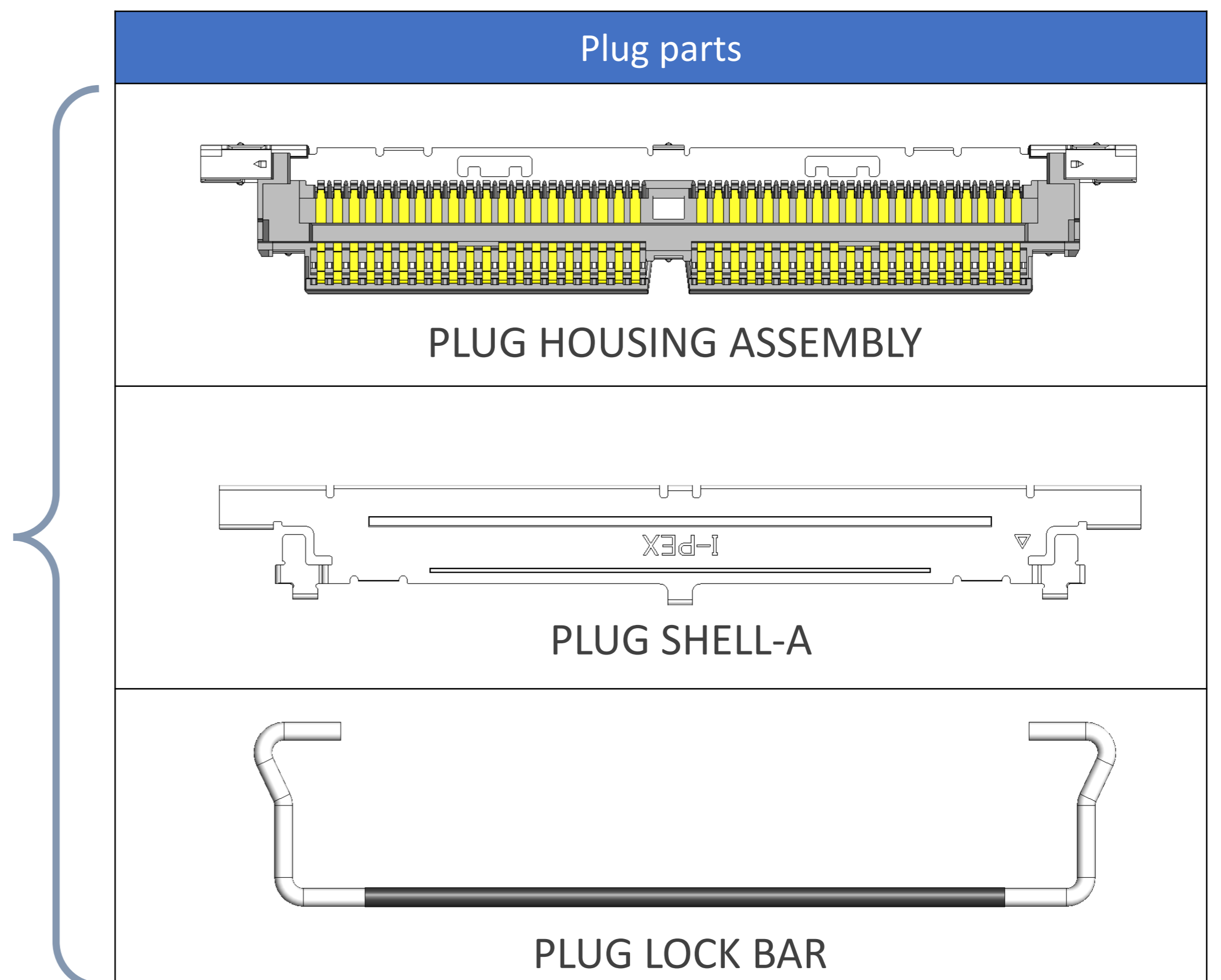
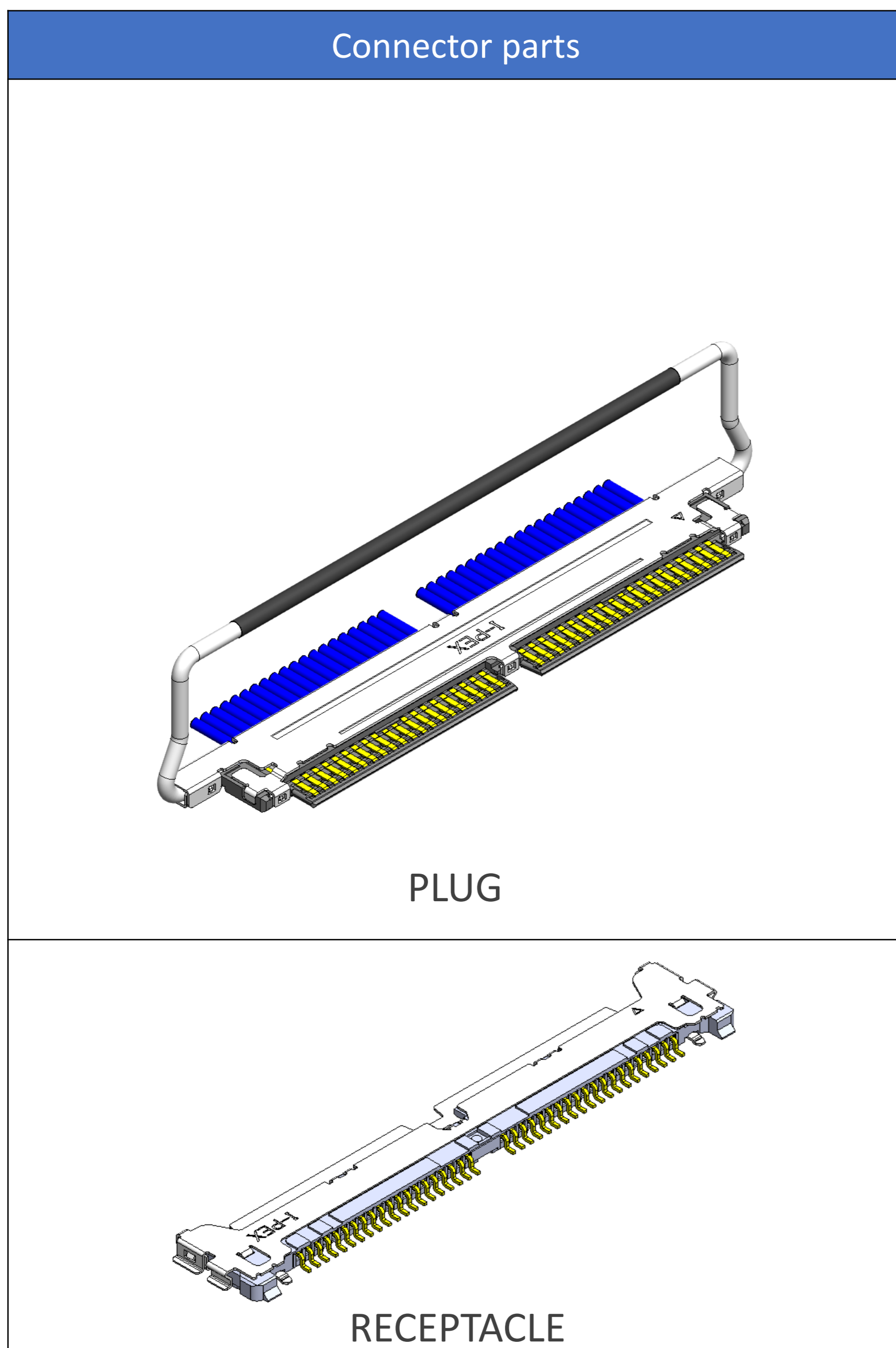


只有當公座完全和母座嵌合時, 機械鎖扣才能鎖上



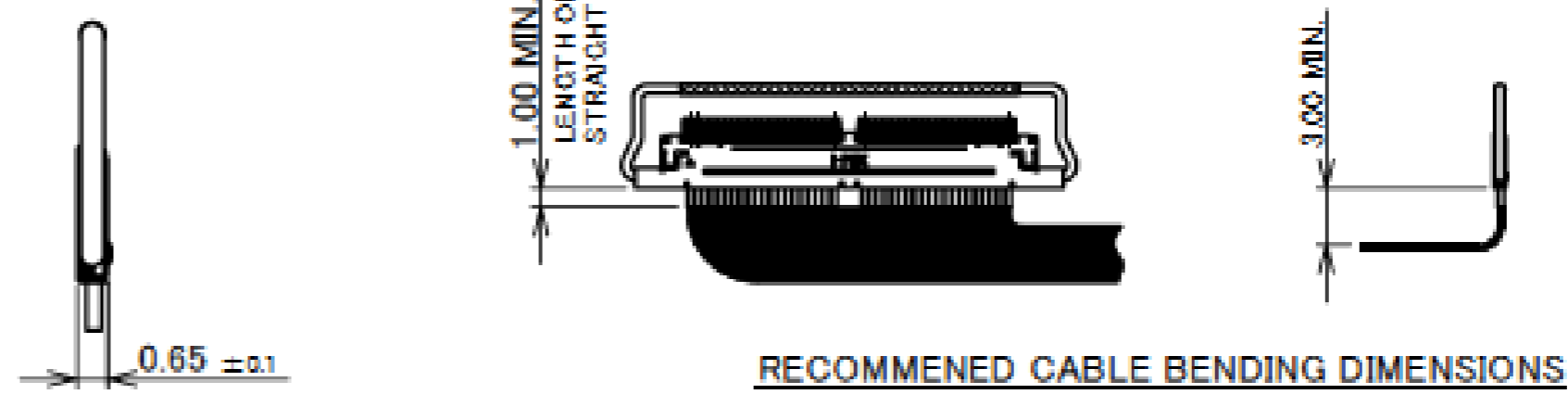
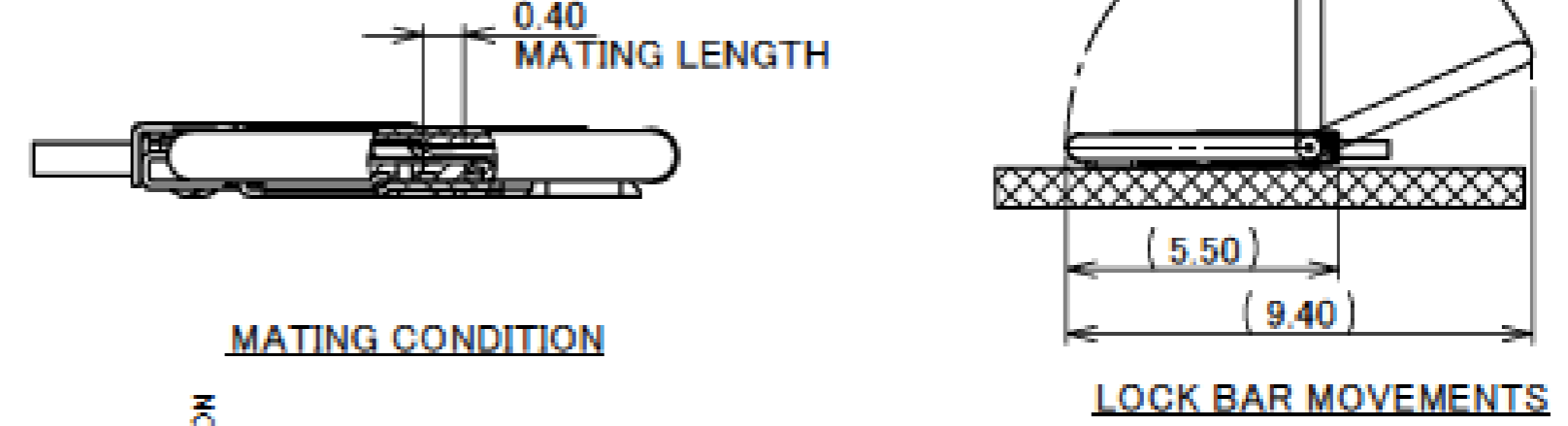
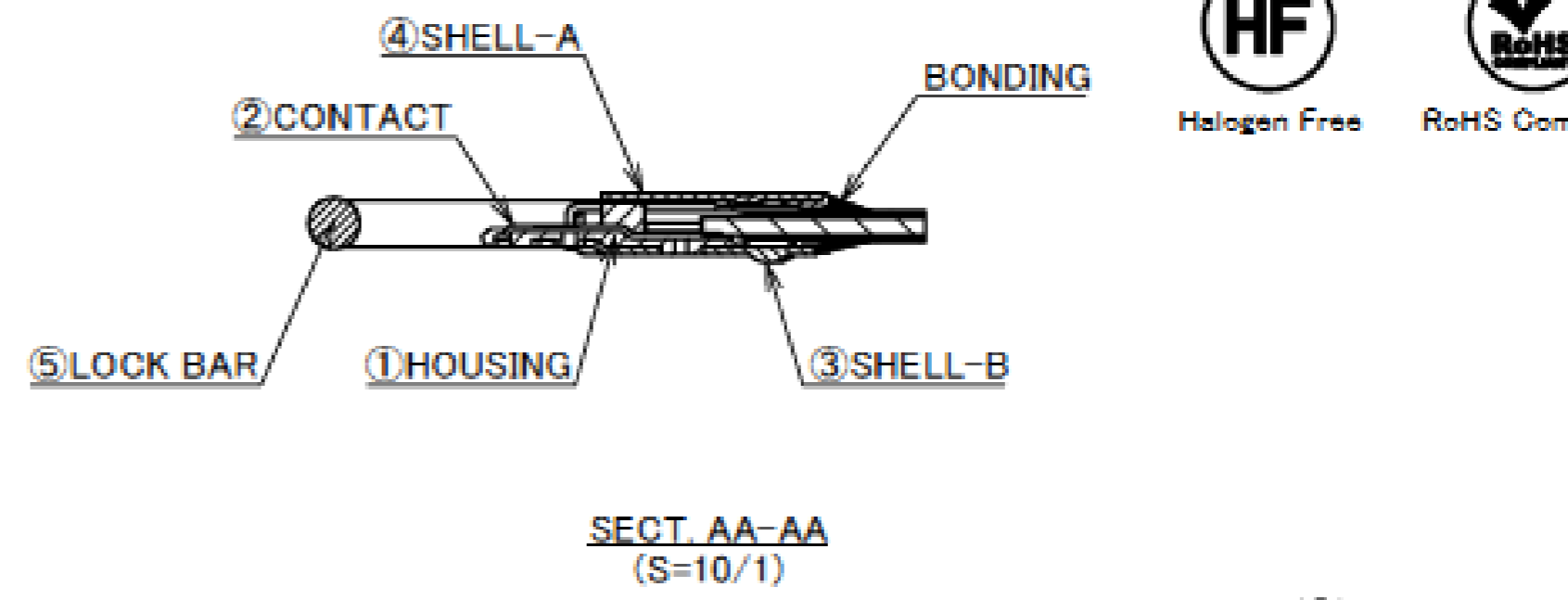
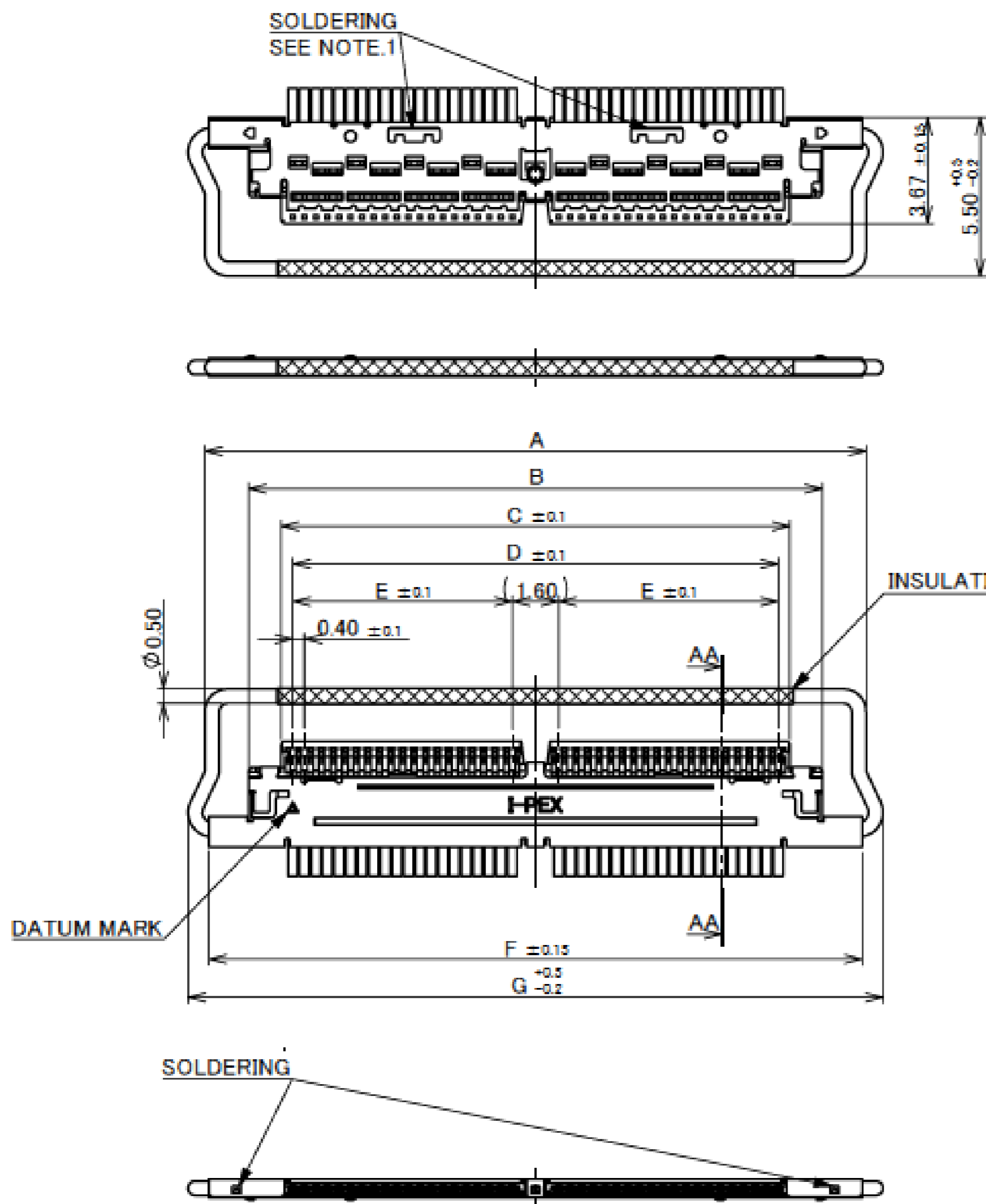
Component Parts Details

Component Parts



Plug for Cable Assembly

| Recommended P/N | | 20728-0**T-01 | | | | | | |
|-----------------|------|---------------|-------|-------|-------|------|-------|-------|
| PART NO. | Pos. | A | B | C | D | E | F | G |
| 20728-030T-01 | 30 | 18.89 | 15.86 | 13.60 | 12.80 | 5.60 | 18.60 | 20.05 |
| 20728-040T-01 | 40 | 22.89 | 19.86 | 17.60 | 16.80 | 7.60 | 22.60 | 24.05 |

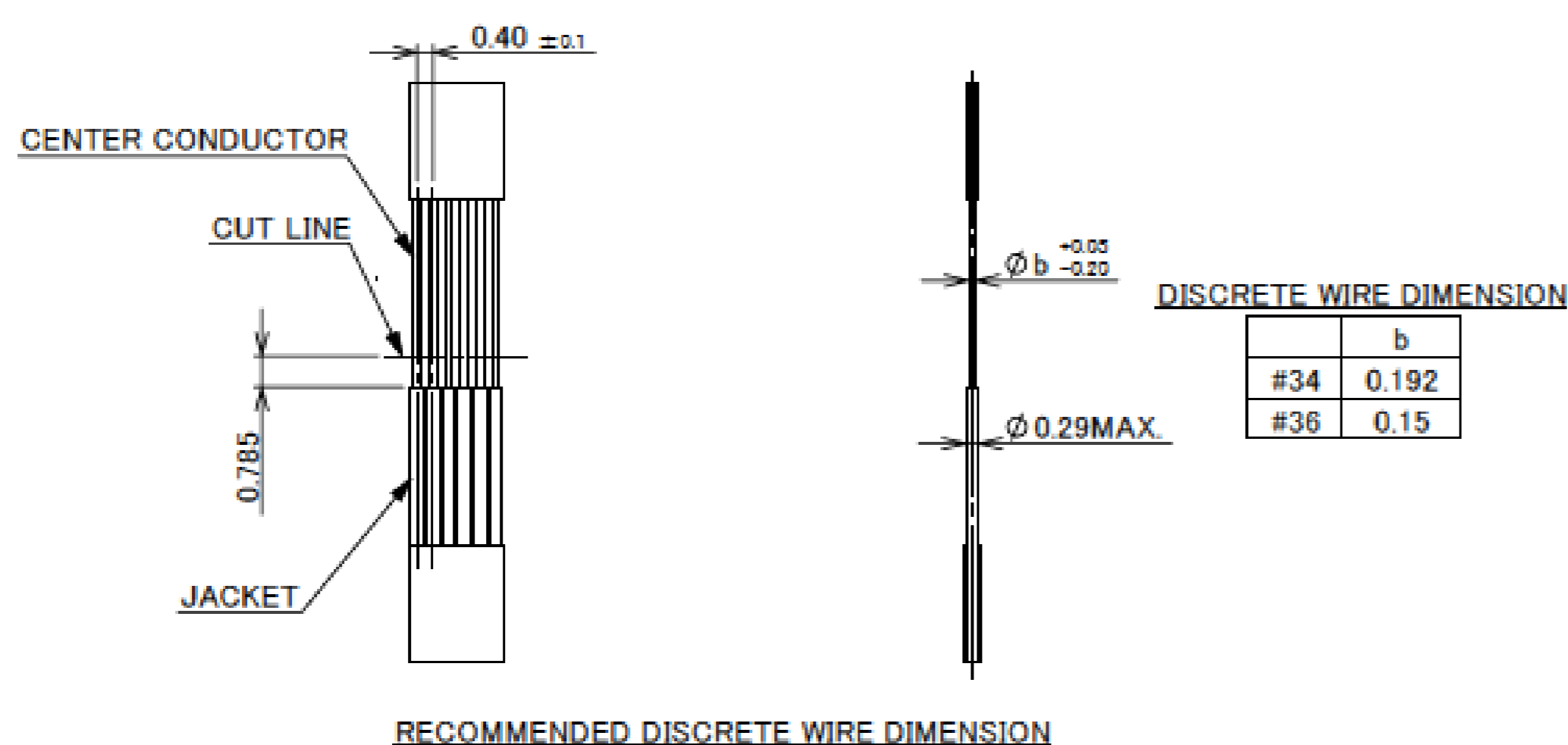
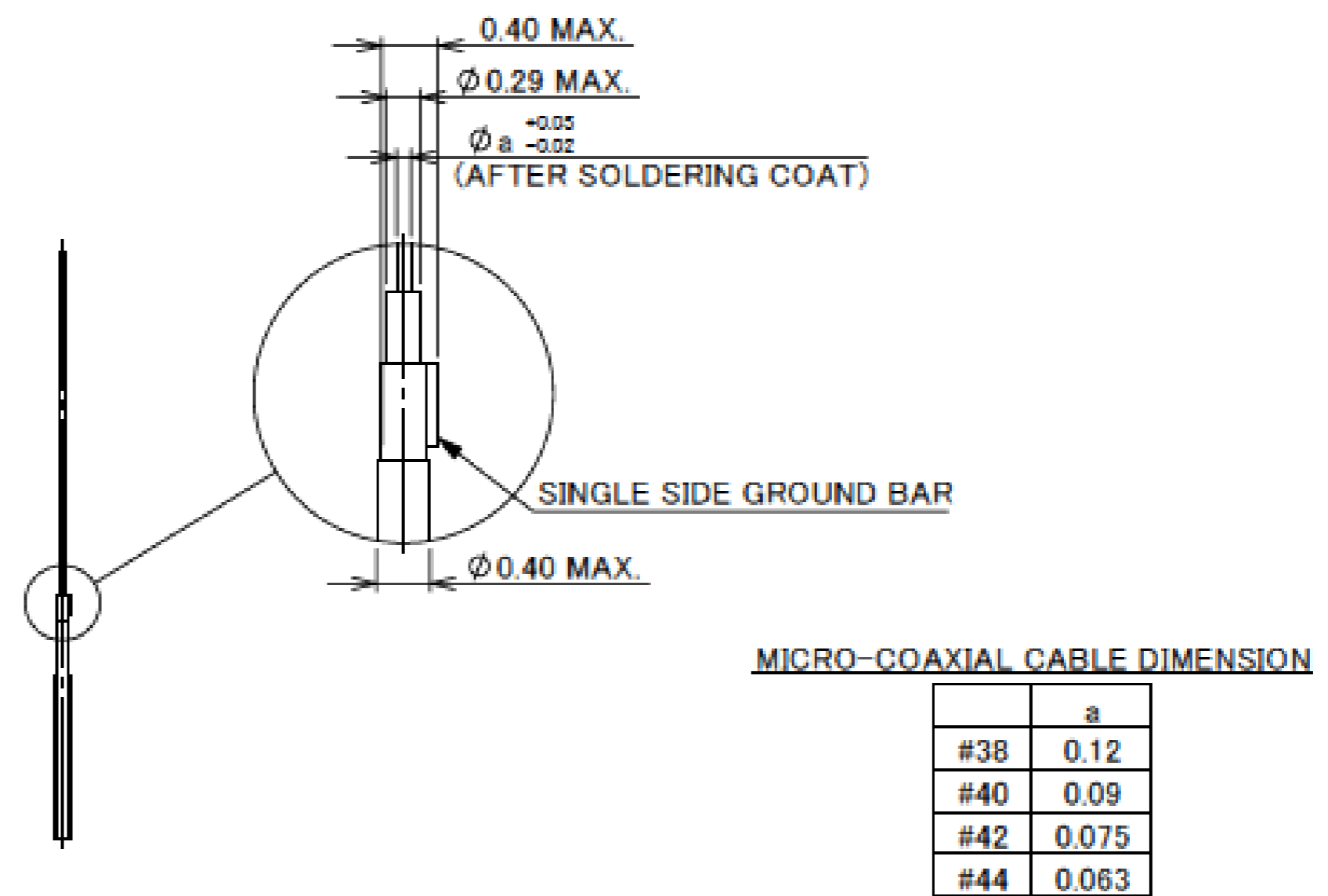
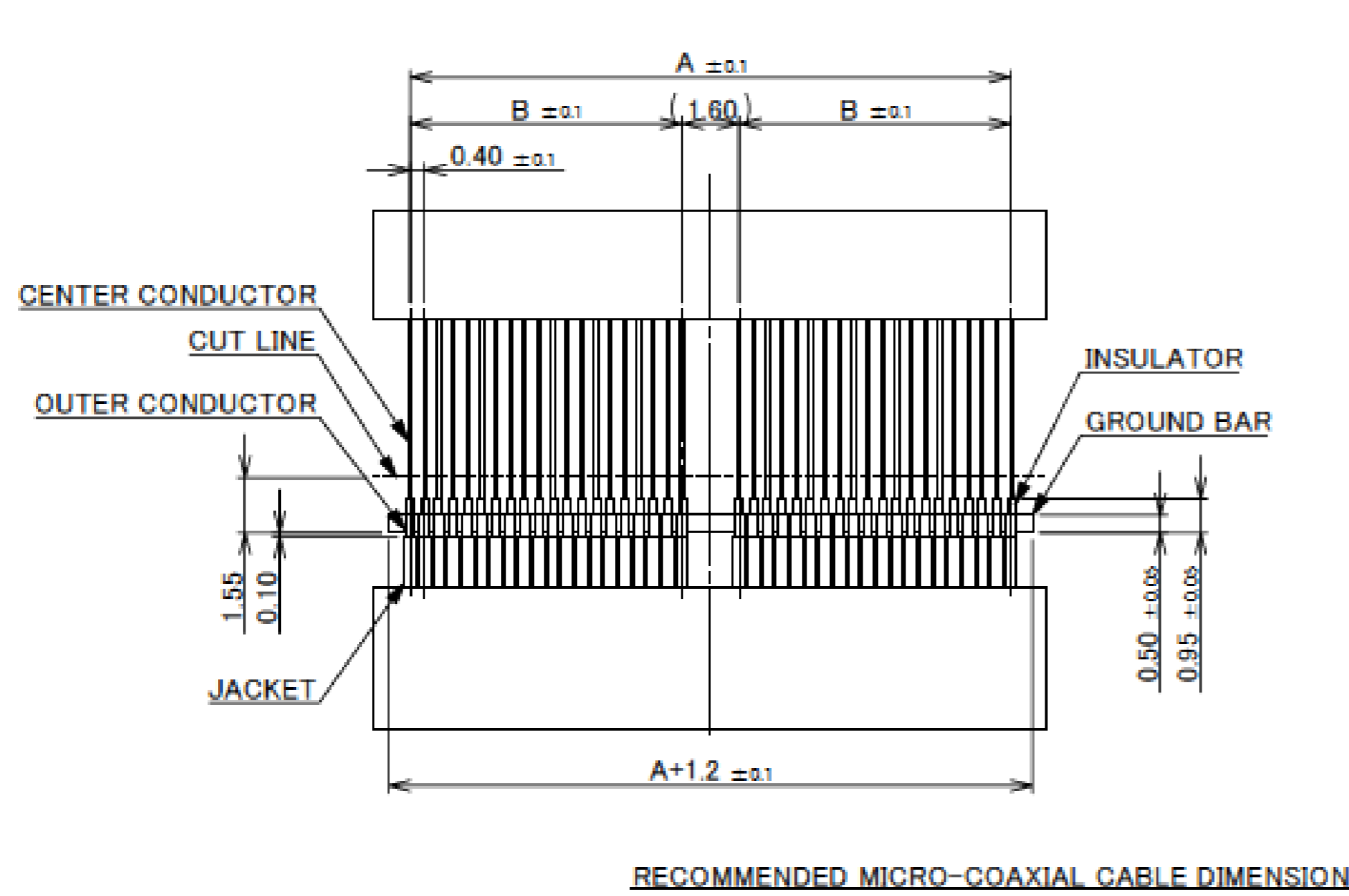


| NO | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|----|-------------|-----------------|--|
| 5 | LOCK BAR | SUS | - |
| 4 | SHELL-A | PHOSPHOR BRONZE | PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN. |
| 3 | SHELL-B | PHOSPHOR BRONZE | PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN. |
| 2 | CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.0 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN. |
| 1 | HOUSING | LCP | UL94V-0,BLACK, RED PHOSPHORUS FREE |

NOTES.
1. SOLDERING IS ONLY A CASE WITH GND-BAR.

Rev.6

| PART NO. | Pos. | A | B |
|---------------|------|-------|------|
| 20728-030T-0# | 30 | 12.80 | 5.60 |
| 20728-040T-0# | 40 | 16.80 | 7.60 |



Rev.6

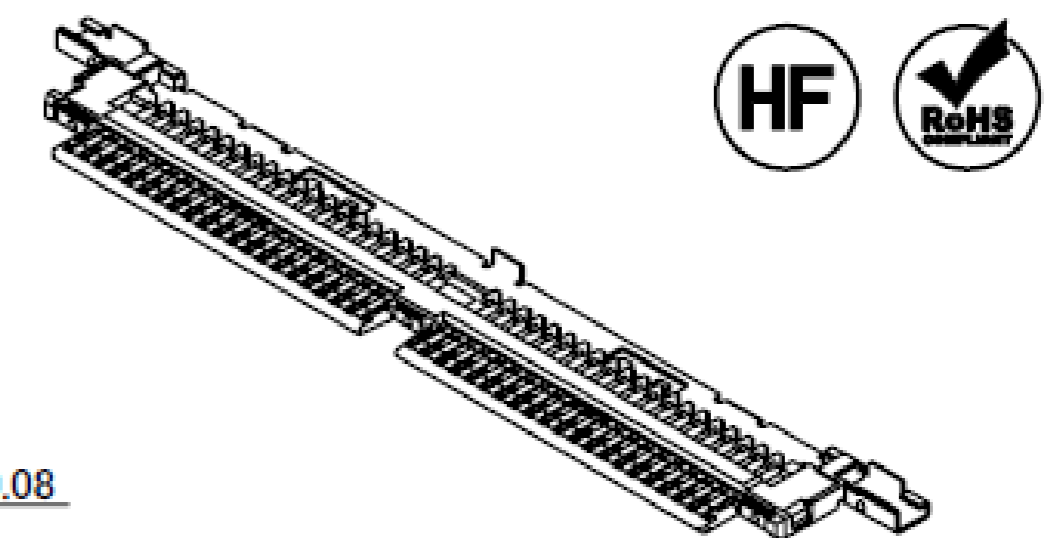
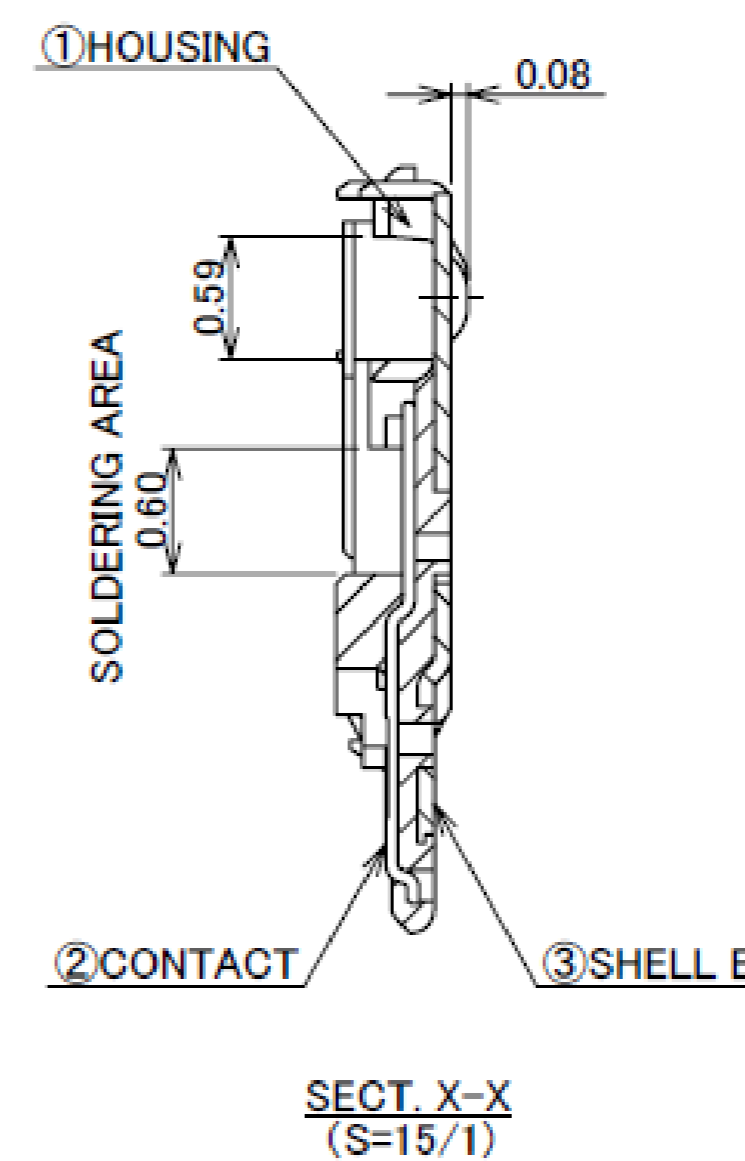
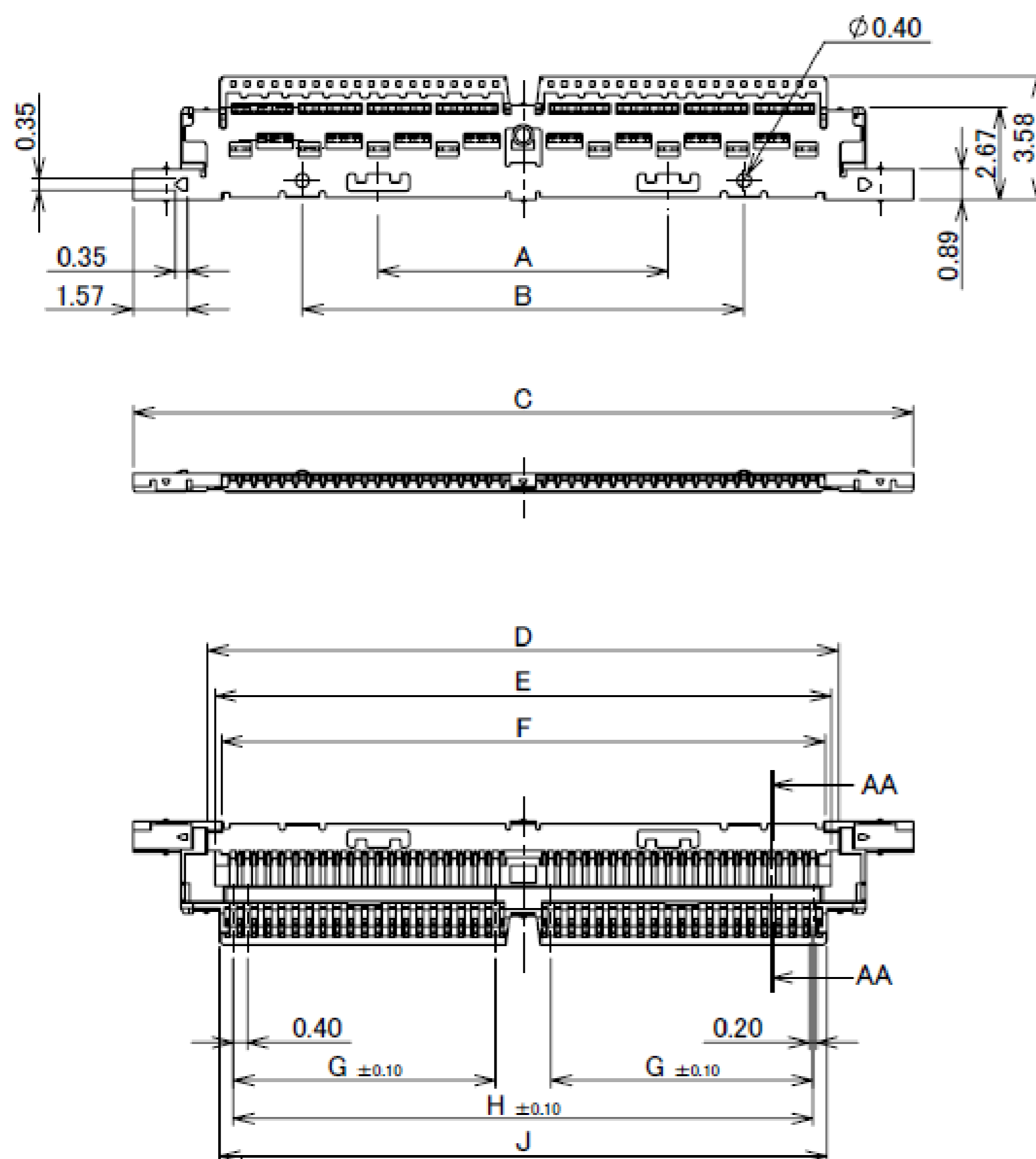
Plug for Cable Assembly

| ITEMS | SPECIFICATION |
|---------------------------------------|--|
| APPLICABLE CABLE | MICRO-COAXIAL CABLE : AWG# 38,40,42,44 DISCRETE WIRE : AWG# 34,36 |
| RATING VOLTAGE | 100V AC (PER CONTACT PIN) |
| RATING AMPERAGE (FOR CONTACT) | 0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 40 CONTACTS 0.30A AC/DC [AWG#40] PER CONTACT PIN/UP TO 32 CONTACTS 0.50A AC/DC [AWG#38] PER CONTACT PIN, FOR POWER/UP TO 14 CONTACTS 0.80A AC/DC [AWG#36] PER CONTACT PIN, FOR POWER/UP TO 5 CONTACTS 1.00A AC/DC [AWG#34] PER CONTACT PIN, FOR POWER/UP TO 4 CONTACTS ※ TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION |
| OPERATING TEMPERATURE | 233~358K(-40°C~+85°C) |
| OPERATING HUMIDITY | 85% MAX.(NON-CONDENSING) |
| CONTACT RESISTANCE | INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : \triangleleft 140mohm MAX. 275mohm MAX.(AWG#36) 360mohm MAX.(AWG#38) 600mohm MAX.(AWG#40) 700mohm MAX.(AWG#42) 1080mohm MAX.(AWG#44) |
| GROUND SHELL RESISTANCE | INITIAL : 50mohm MAX. / AFTER TEST : \triangleleft 40mohm MAX. |
| INSULATION RESISTANCE | INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | AC250V 1min |
| DURABILITY | 30 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | 30P : 12.0N MAX. 40P : 16.0N MAX. |
| UNMATING FORCE (INITIAL / AFTER TEST) | 30P : 1.80N MIN. 40P : 2.40N MIN. |
| CABLE RETENTION FORCE | 30P : 11.8N MIN. 40P : 12.4N MIN. |
| PRODUCT SPECIFICATION | PRS-2371 |
| TEST REPORT | TR-17036 |
| INSTRUCTION MANUAL | HIM-17010 |
| ASSEMBLY MANUAL | ASM-17003 |
| APPEARANCE CRITERIA No. | QLS-A*** |

Rev.6

Plug Housing Assembly

| Recommended P/N | | 20777-0**T-01 | | | | | | | | | |
|-----------------|------|---------------|-------|-------|-------|-------|-------|------|-------|-------|--|
| PART No. | Pos. | A | B | C | D | E | F | G | H | J | |
| 20777-030T-01 | 30 | 4.40 | 8.80 | 18.60 | 14.30 | 13.85 | 13.50 | 5.60 | 12.80 | 13.60 | |
| 20777-040T-01 | 40 | 8.40 | 12.80 | 22.60 | 18.30 | 17.85 | 17.50 | 7.60 | 16.80 | 17.60 | |



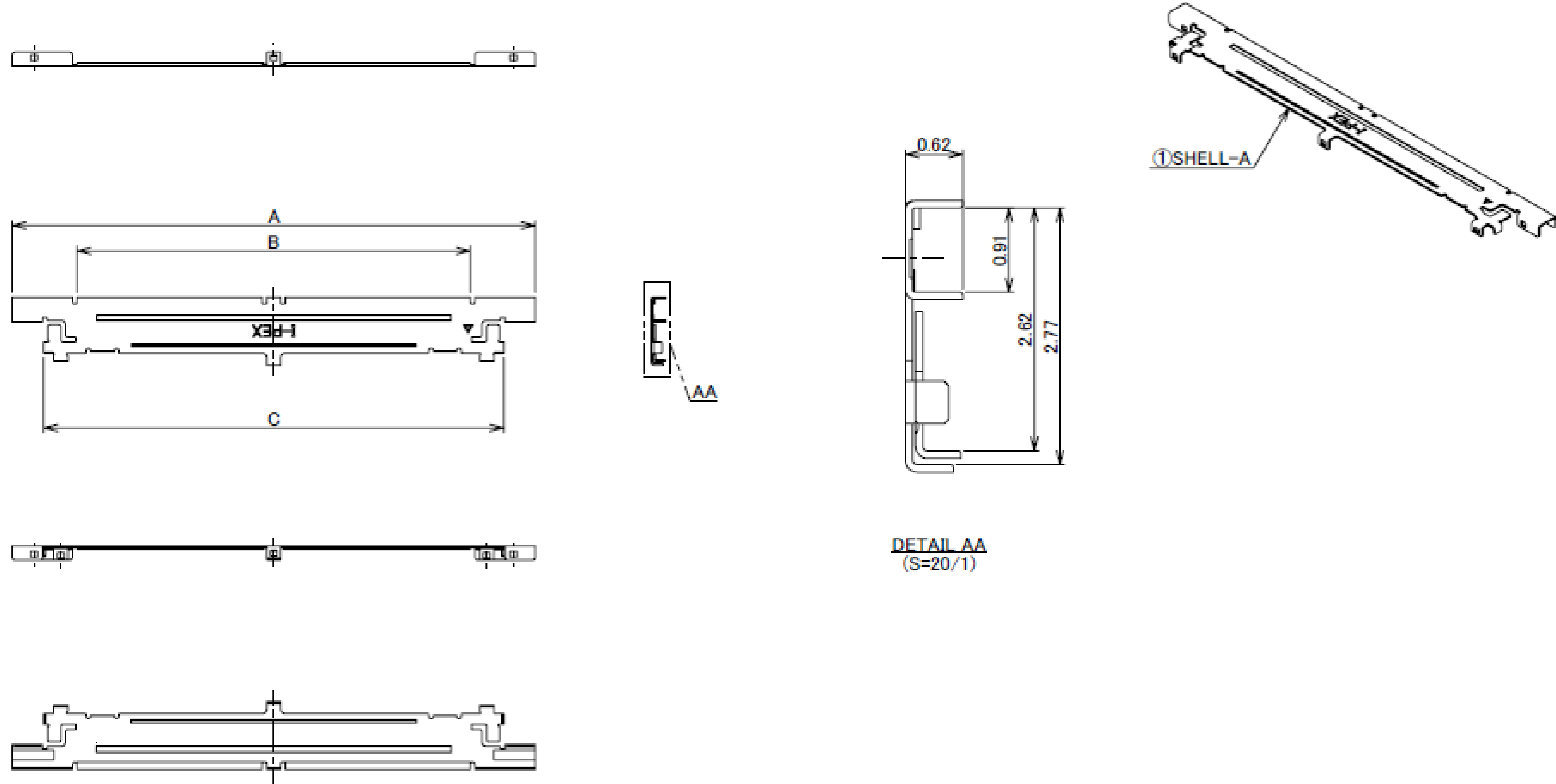
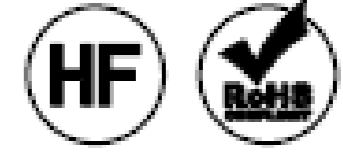
NOTES.
1. THIS PART IS ASSEMBLED WITH P/N: 3298-0**1 AND 3300-**1 AFTER SOLDERING CABLES AND SHALL BE ASSIGNED AS P/N: 20728-0**T-01.

| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|-----|-------------|-----------------|--|
| 3 | SHELL-B | PHOSPHOR BRONZE | PARTIAL Au 0.003 μ m MIN. OVER 1.00 μ m MIN. |
| 2 | CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μ m MIN. CONTACT & SOLDERING AREA : Au 0.03 μ m MIN. |
| 1 | HOUSING | LCP | UL94-0, BLACK, RED PHOSPHORUS FREE |

Rev.4

Plug Shell-A

| Recommended P/N | | 3298-0**1 | | |
|-----------------|------|-----------|-------|-------|
| PART No. | Pos. | A | B | C |
| 3298-0301 | 30 | 18.60 | 12.98 | 15.86 |
| 3298-0401 | 40 | 22.60 | 16.98 | 19.86 |



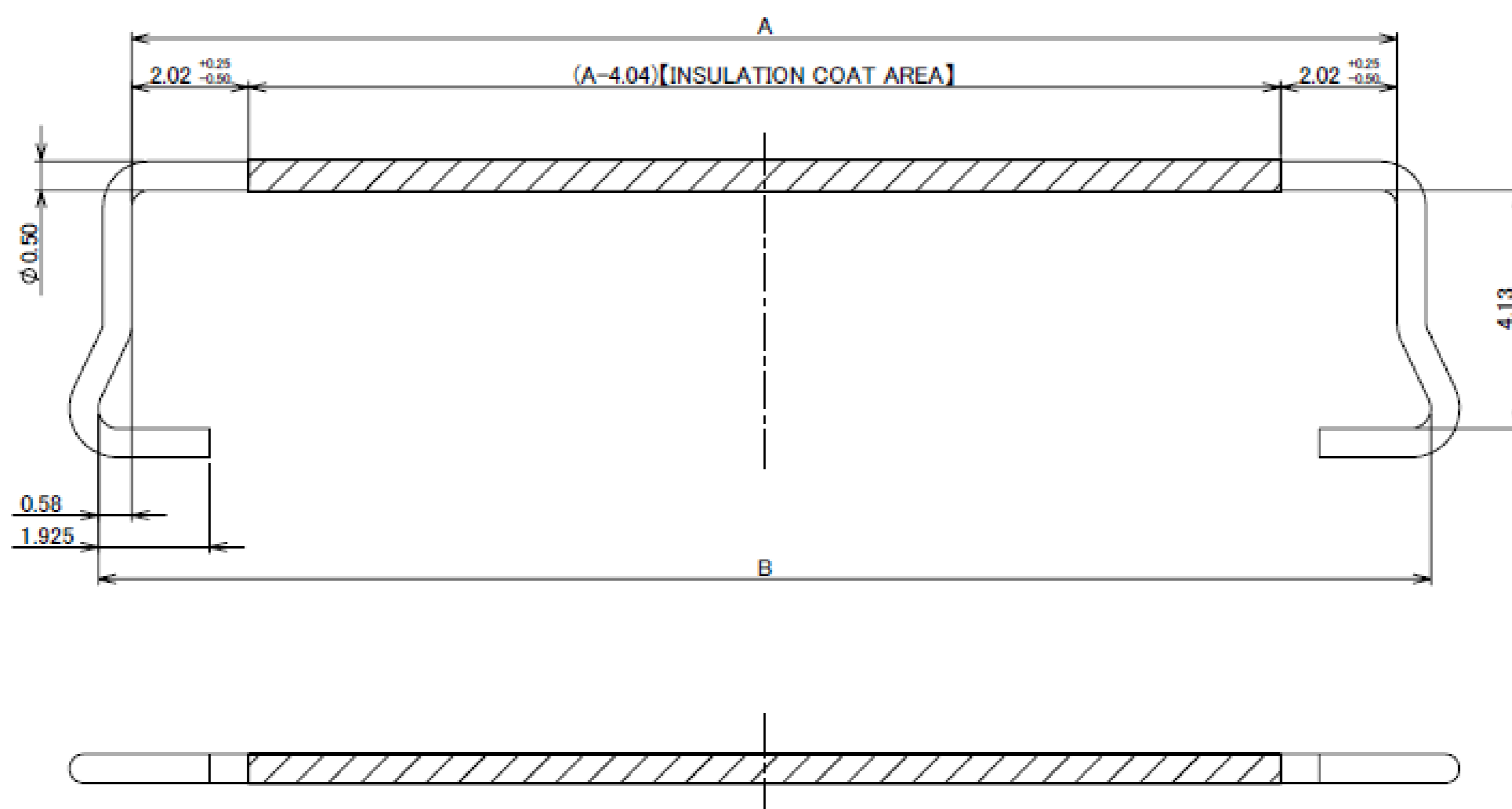
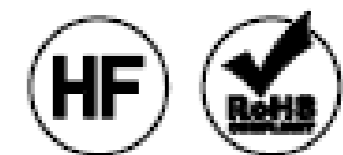
DETAIL AA
(S=20/1)

| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|-----|-------------|-----------------|--|
| 1 | SHELL-A | PHOSPHOR BRONZE | PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN. |

Rev.3

Plug Lock Bar

| Recommended P/N | | 3300-0**1 | |
|-----------------|------|-----------|-------|
| PART No. | Pos. | A | B |
| 3300-0301 | 30 | 17.89 | 19.05 |
| 3300-0401 | 40 | 21.89 | 23.05 |

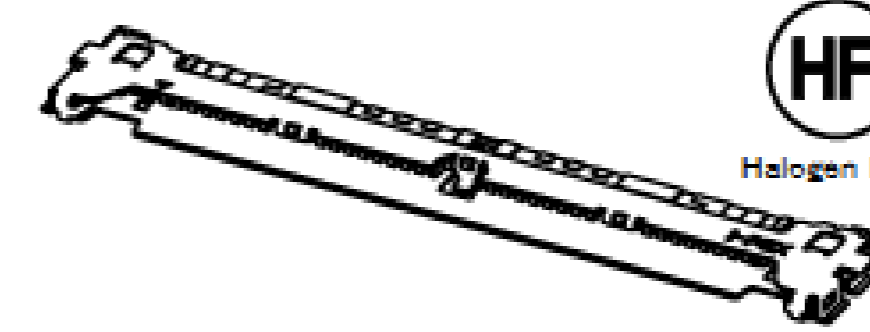


| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|-----|-------------|----------|------------------|
| 1 | LOCK BAR | SUS | -- |

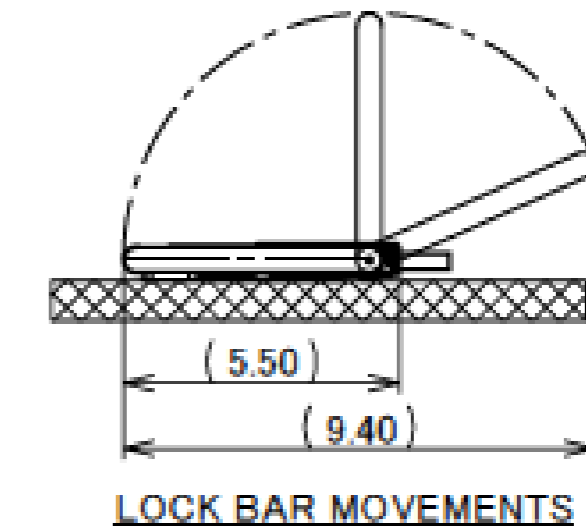
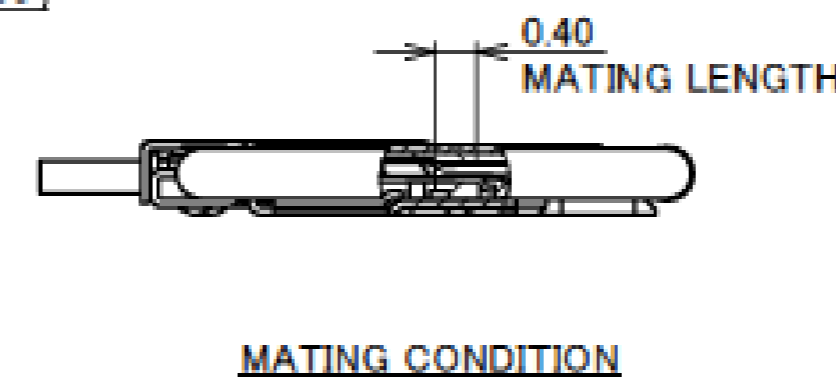
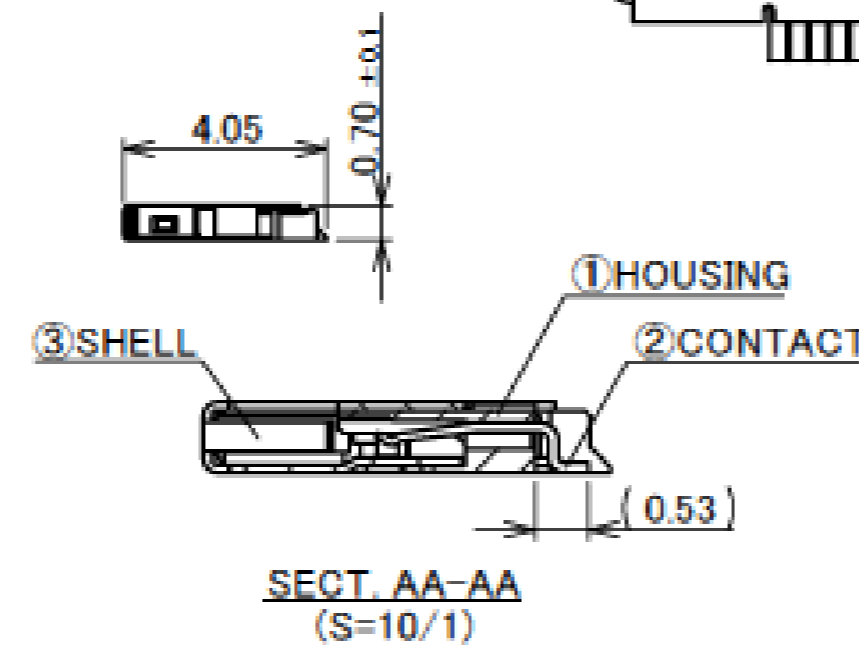
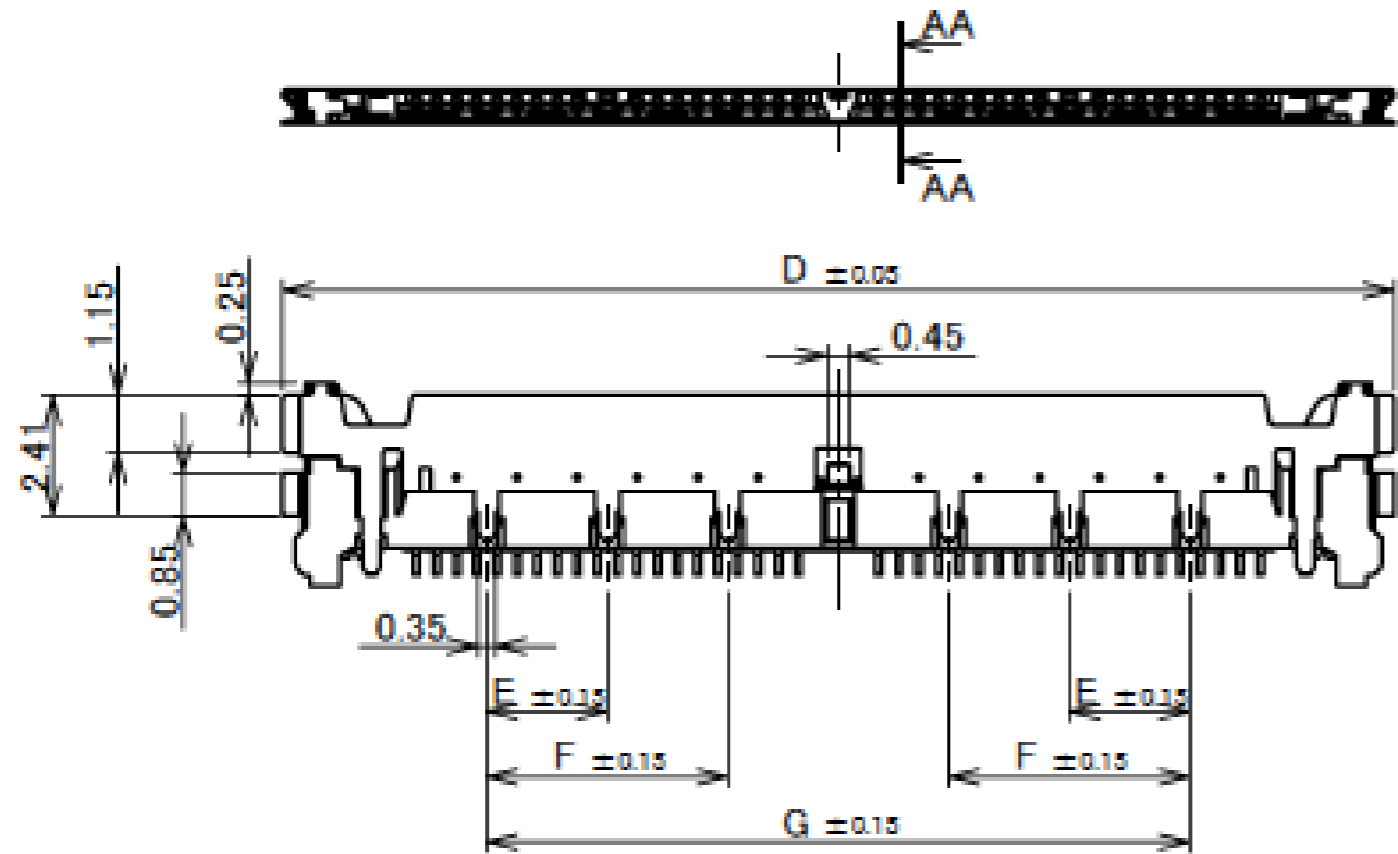
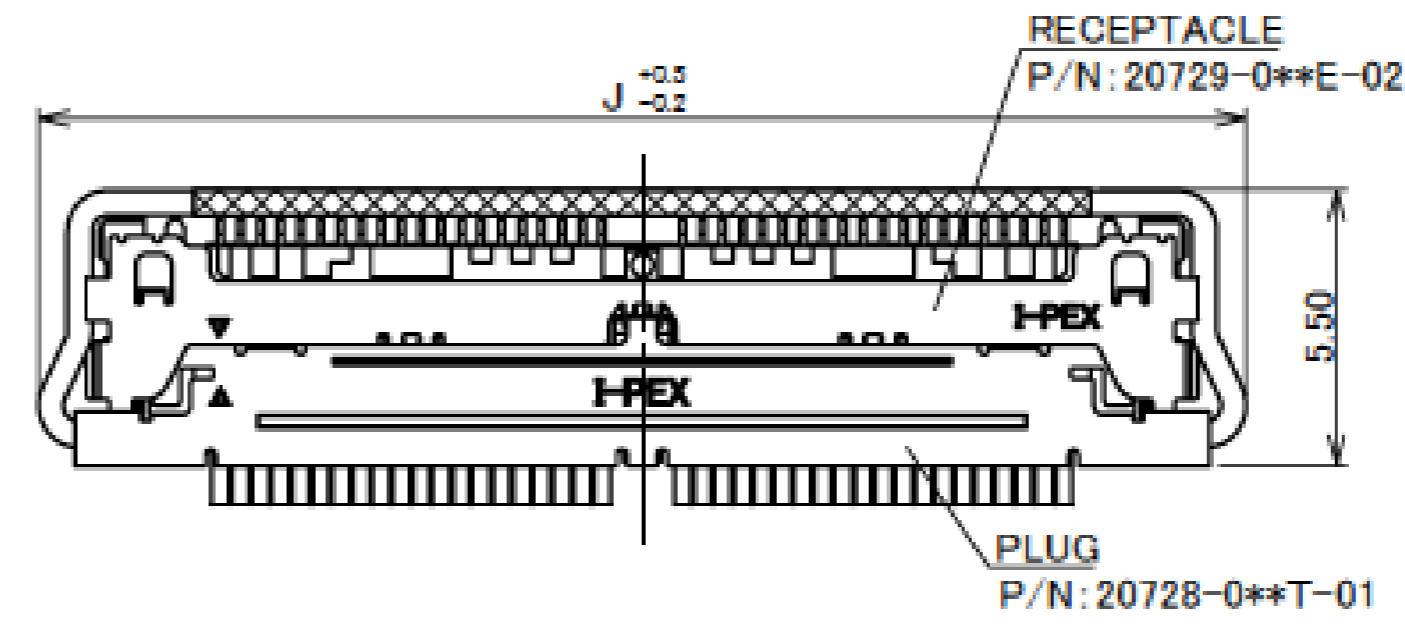
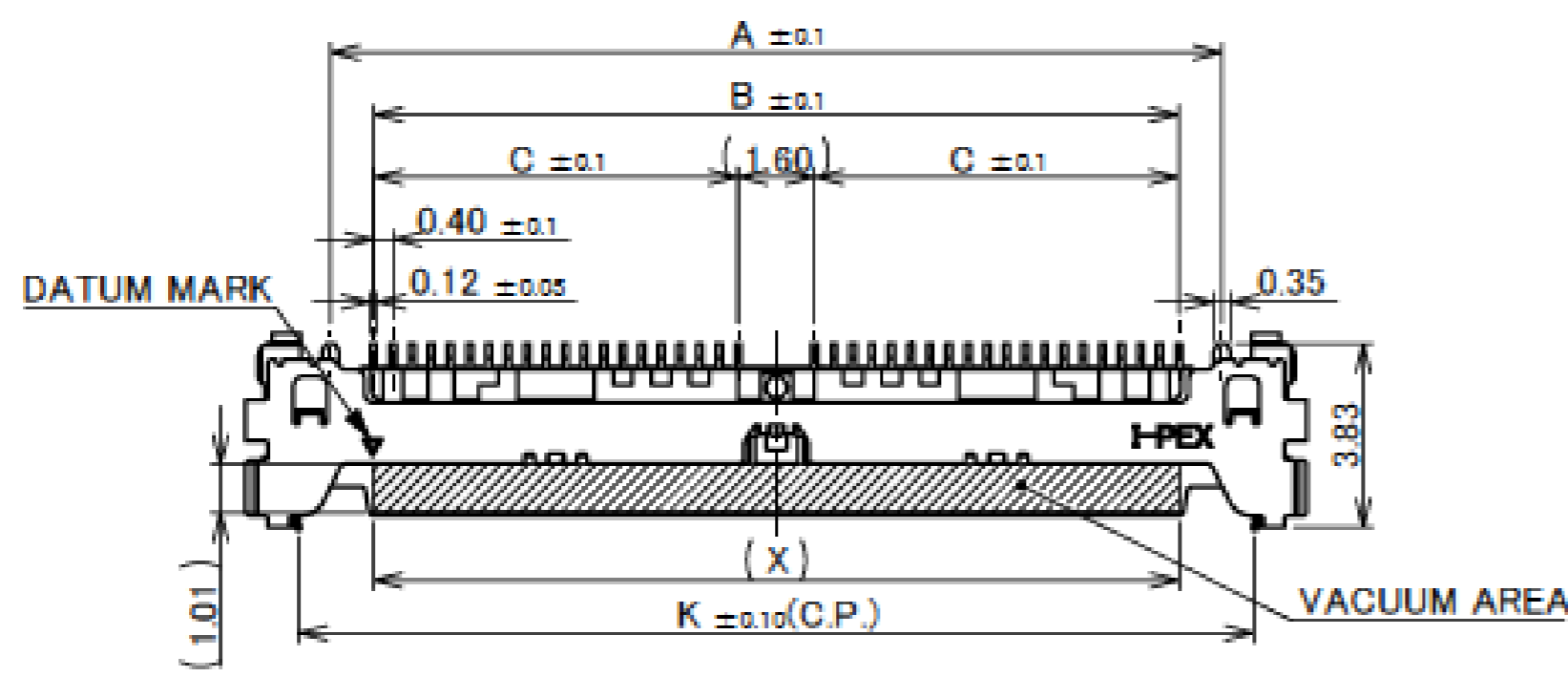
Rev.3

Receptacle Assembly

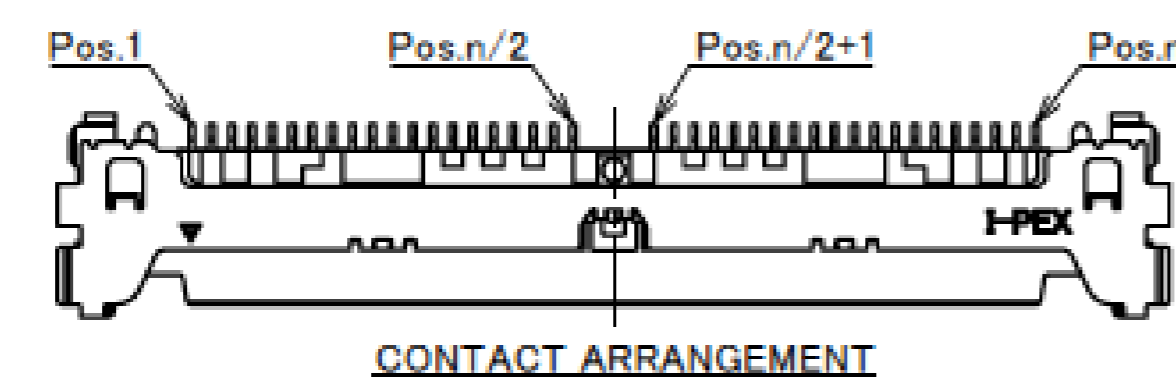
| Recommended P/N | | 20729-0**E-02 | | | | | | | | | |
|-----------------|------|---------------|-------|------|-------|------|------|-------|-------|-------|-------|
| PART NO. | Pos. | A | B | C | D | E | F | G | H | K | X |
| 20729-030E-02 | 30 | 14.60 | 12.80 | 5.60 | 18.14 | - | 2.80 | 10.00 | 20.05 | 15.95 | 12.81 |
| 20729-040E-02 | 40 | 18.60 | 16.80 | 7.60 | 22.14 | 2.40 | 4.80 | 14.00 | 24.05 | 19.95 | 16.81 |



Halogen Free RoHS Compliant

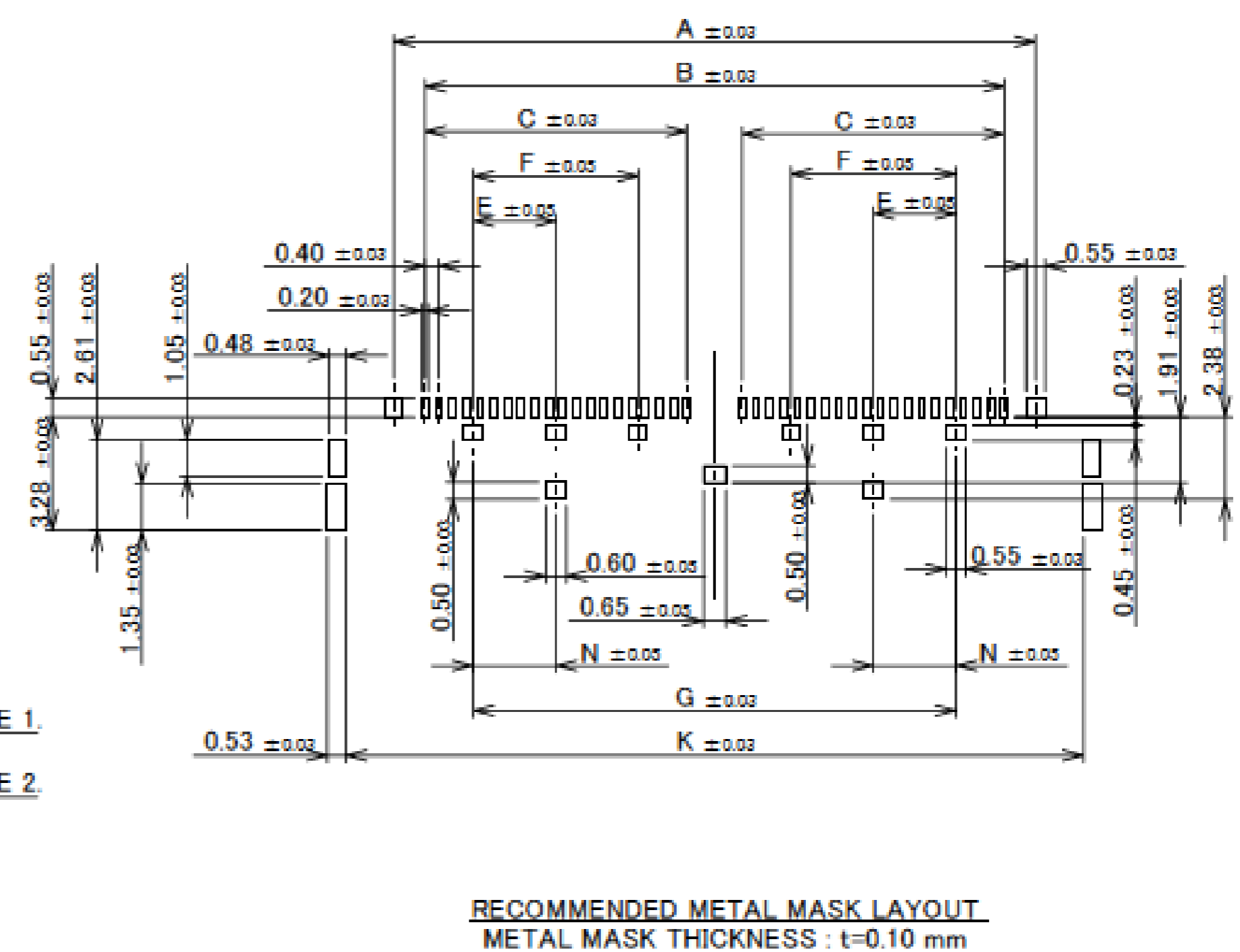
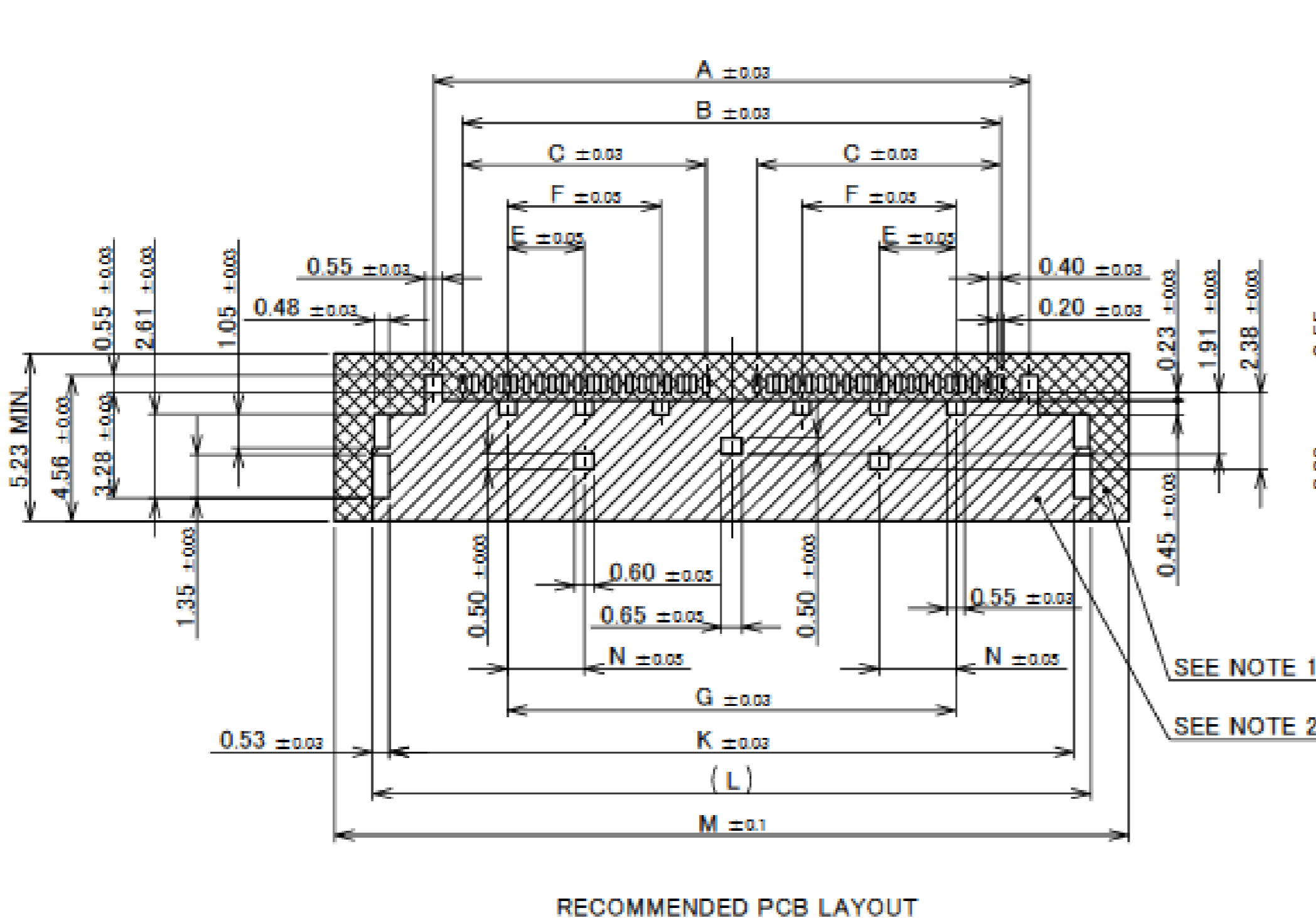


| NO. | DISCRIPTION | MATERIAL | FINISH , REMARKS |
|-----|-------------|-----------------|--|
| 3 | SHELL | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.02 μm MIN. |
| 2 | CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN. |
| 1 | HOUSING | LCP | UL94V-0. BLACK, RED PHOSPHORUS FREE |



Rev.8

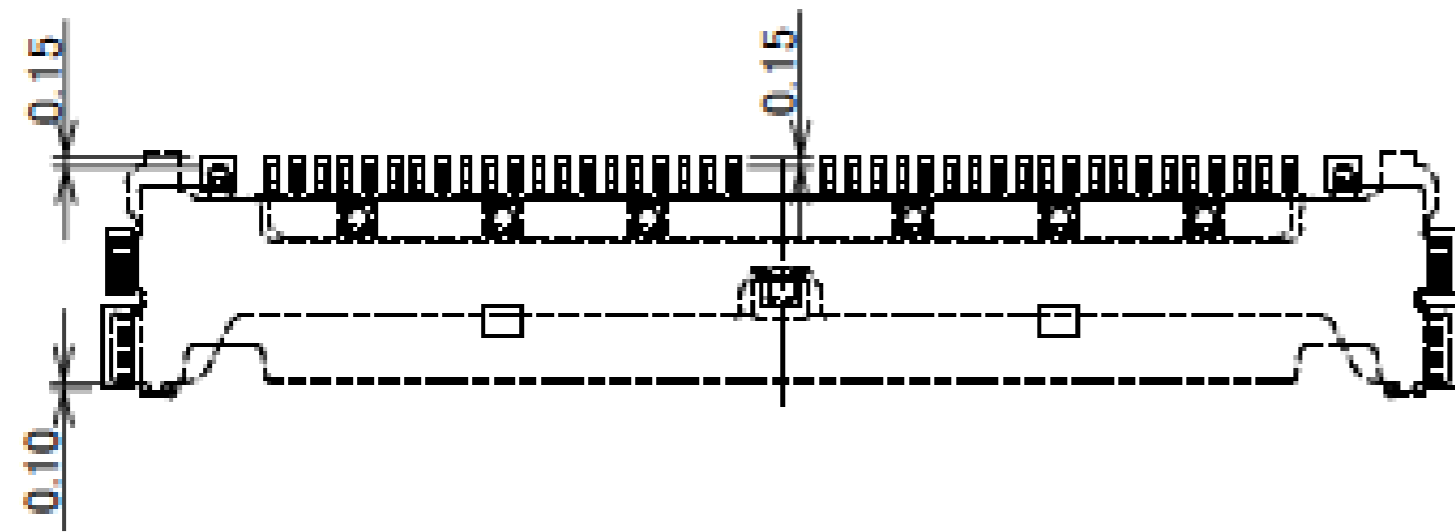
| PART NO. | Pos. | A | B | C | E | F | G | K | L | M | N |
|---------------|------|-------|-------|------|------|------|-------|-------|-------|-------|------|
| 20729-030E-02 | 30 | 14.60 | 12.80 | 5.60 | - | 2.80 | 10.00 | 17.38 | 18.44 | 20.80 | 1.40 |
| 20729-040E-02 | 40 | 18.60 | 16.80 | 7.60 | 2.40 | 4.80 | 14.00 | 21.38 | 22.44 | 24.80 | 2.40 |



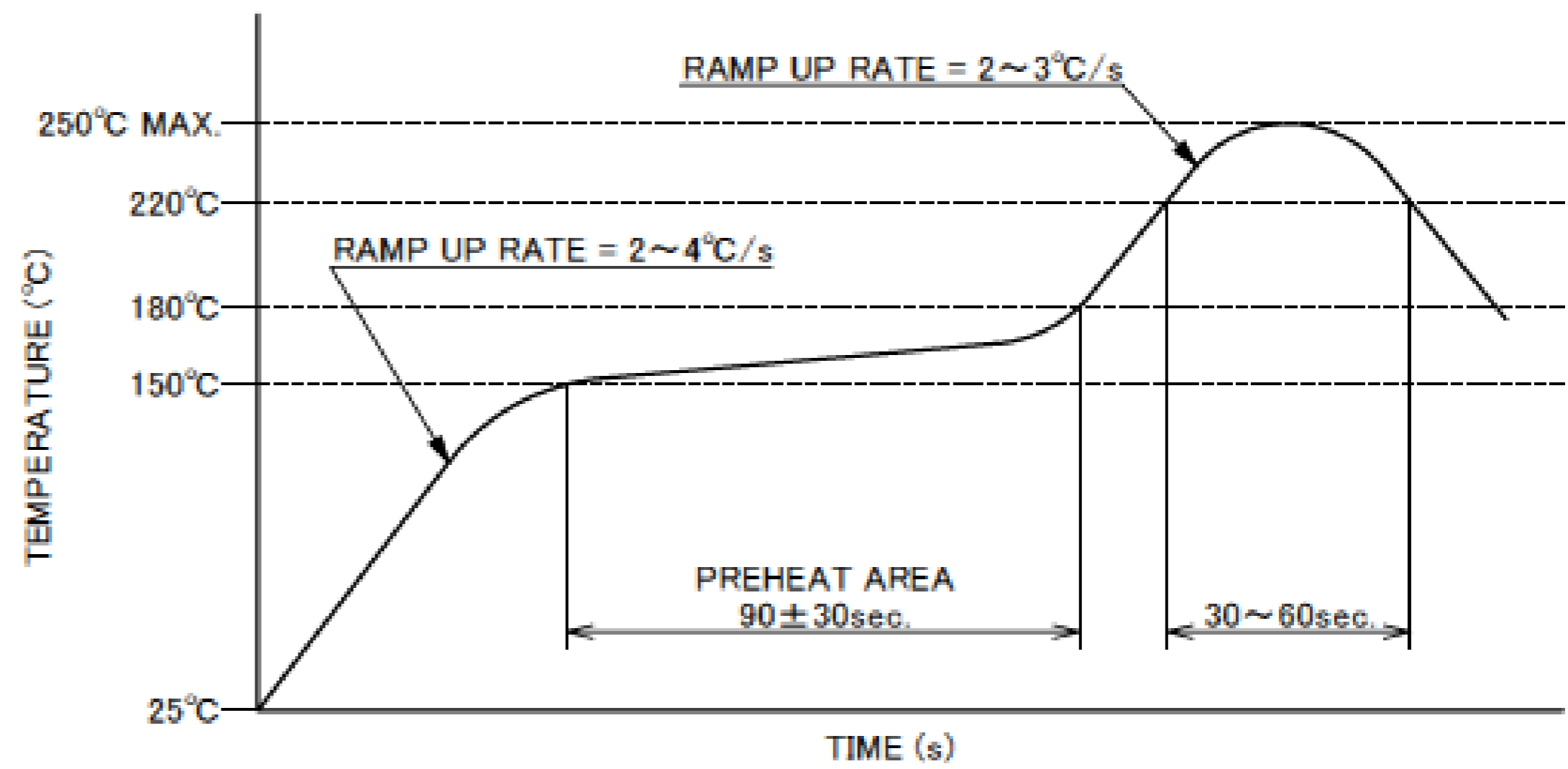
NOTES.
1. DO NOT MOUNT ANOTHER COMPONENTS IN THIS AREA.
2. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.8

Receptacle Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.8

| ITEMS | SPECIFICATION |
|---------------------------------------|--|
| APPLICABLE CABLE | MICRO-COAXIAL CABLE: AWG# 40,42,44 DISCRETE WIRE : AWG# 34,36 |
| RATING VOLTAGE | 100V AC (PER CONTACT PIN) |
| RATING AMPERAGE (FOR CONTACT) | 0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 40 CONTACTS 0.30A AC/DC [AWG#40] PER CONTACT PIN/UP TO 32 CONTACTS 0.50A AC/DC [AWG#38] PER CONTACT PIN, FOR POWER/UP TO 14 CONTACTS 0.80A AC/DC [AWG#36] PER CONTACT PIN, FOR POWER/UP TO 5 CONTACTS 1.00A AC/DC [AWG#34] PER CONTACT PIN, FOR POWER/UP TO 4 CONTACTS ※ TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION |
| OPERATING TEMPERATURE | 233~358K(-40°C~+85°C) |
| OPERATING HUMIDITY | 85% MAX.(NON-CONDENSING) |
| CONTACT RESISTANCE | INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : \triangleleft40mohm MAX. 275mohm MAX.(AWG#36) 600mohm MAX.(AWG#40) 700mohm MAX.(AWG#42) 1080mohm MAX.(AWG#44) |
| GROUND SHELL RESISTANCE | INITIAL : 50mohm MAX. / AFTER TEST : \triangleleft40mohm MAX. |
| INSULATION RESISTANCE | INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | AC250V 1min |
| DURABILITY | 30 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | 30P : 12.0N MAX. 40P : 16.0N MAX. |
| UNMATING FORCE (INITIAL / AFTER TEST) | 30P : 1.80N MIN. 40P : 2.40N MIN. |
| CABLE RETENTION FORCE | 30P : 11.8N MIN. 40P : 12.4N MIN. |
| COPLANARITY | 0.10 MAX. |
| PRODUCT SPECIFICATION | PRS-2371 |
| TEST REPORT | TR-17036 |
| PACKING STANDARD | PST-17058 |
| INSTRUCTION MANUAL | HIM-17010 |
| APPEARANCE CRITERIA No. | QLS-A*** |

Rev.8

Custom Connectors Available

 RF Connector

MHF® series



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



Optical Module

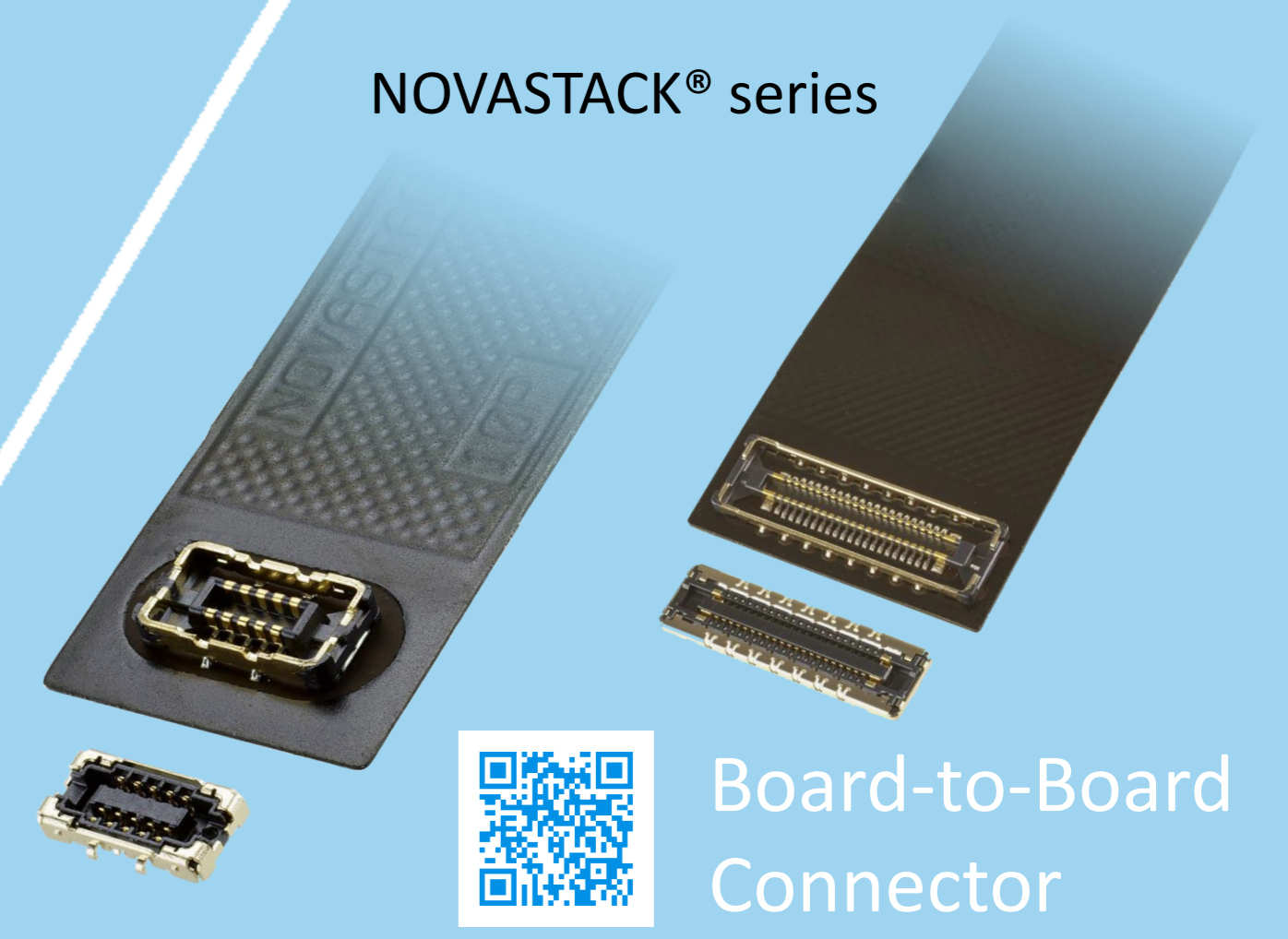
LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector



Power Connector/
Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



FPC FFC Connector



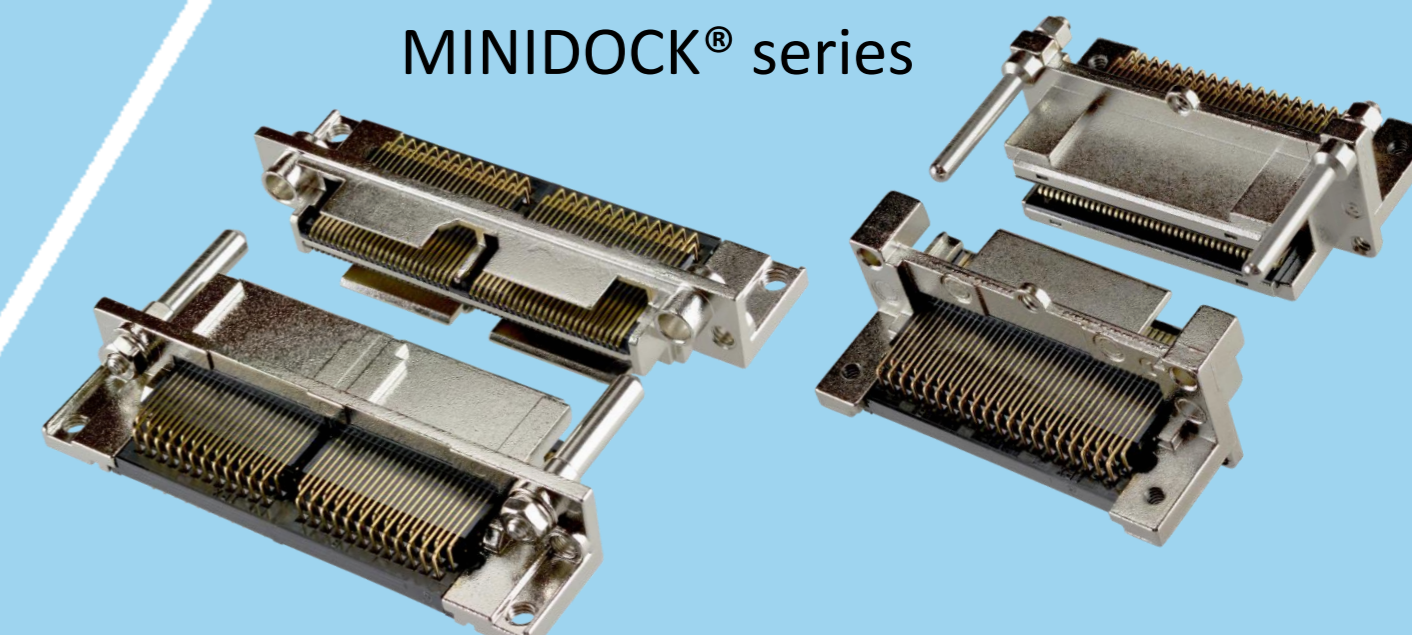
Inquiry



MINIDOCK® series



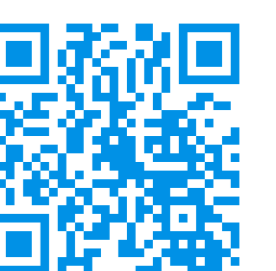
I/O Connector



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Contact your sales representative or more detailed information.

www.i-pex.com



I-PEX

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