

# CABLIN<sup>®</sup>-CX II With Cover

협피치(0.25 mm Pitch), 저배(높이 = 1.00 mm max.),  
실드 커버 & 멀티 그라운드 접점,수평 결합 타입 세션 동축 커넥터

## Product Specifications:

Mating type		Horizontal
Board Pitch (mm)		0.5
Wiping Length (mm)		0.54
Mated size (mm)	Height	1.00 max. with cover
	Width	Formula: 6.45 + (0.25*?p)
	Depth	5.6
Pin Counts	Range	Up to 40
	Available	40

## Applicable Cable Size:

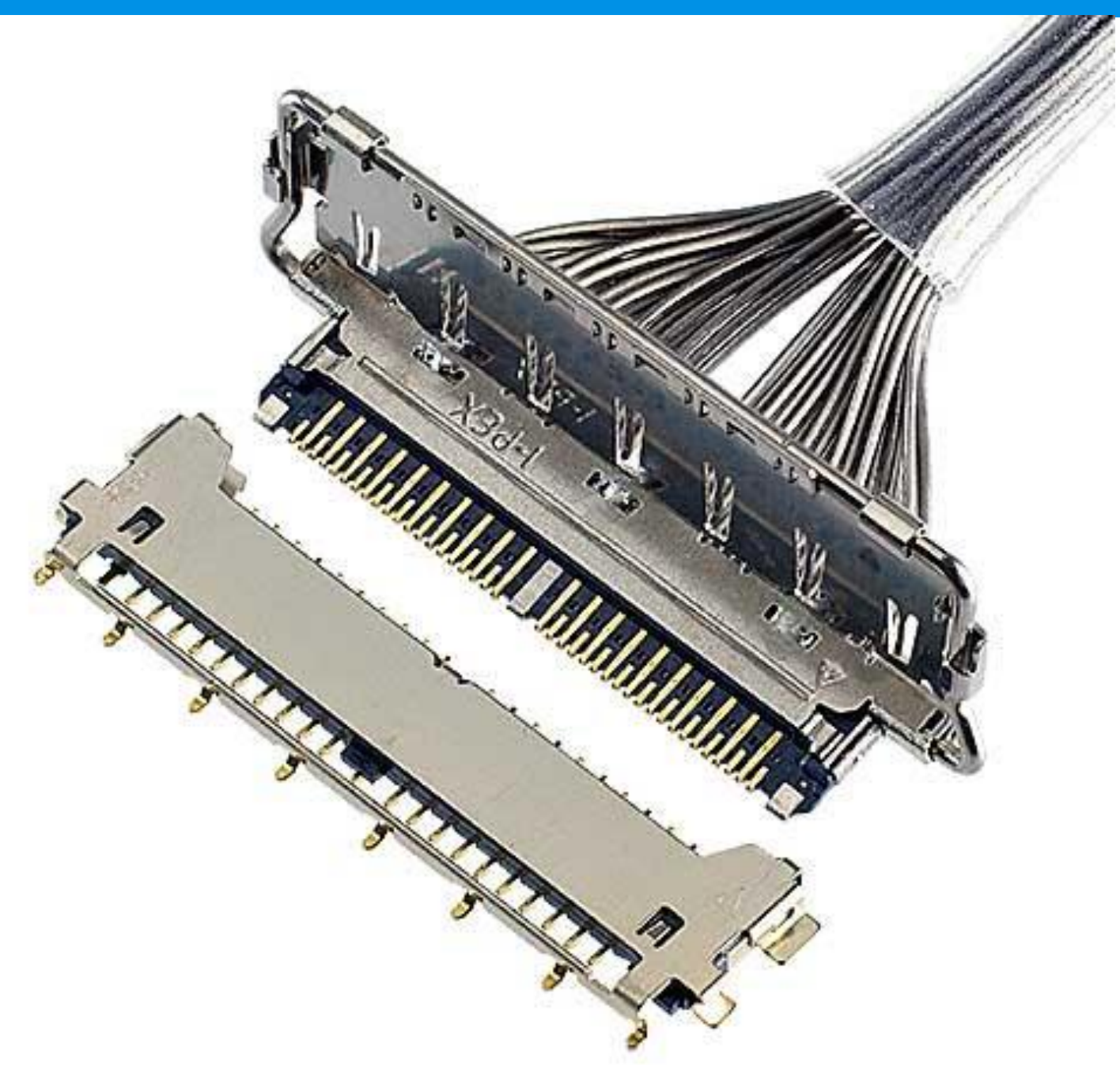
Maximum O.D. (mm)	0.25
Micro-Coaxial for Signal (AWG)	45 ohm: #44 or smaller 50 ohm: #46 or smaller
Twinax (AWG)	-
Discrete (AWG)	#39 or smaller

## 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

\*기재가 되어있지 않은 핀 수의 대응 여부에 대해서는 문의해 부탁드립니다.

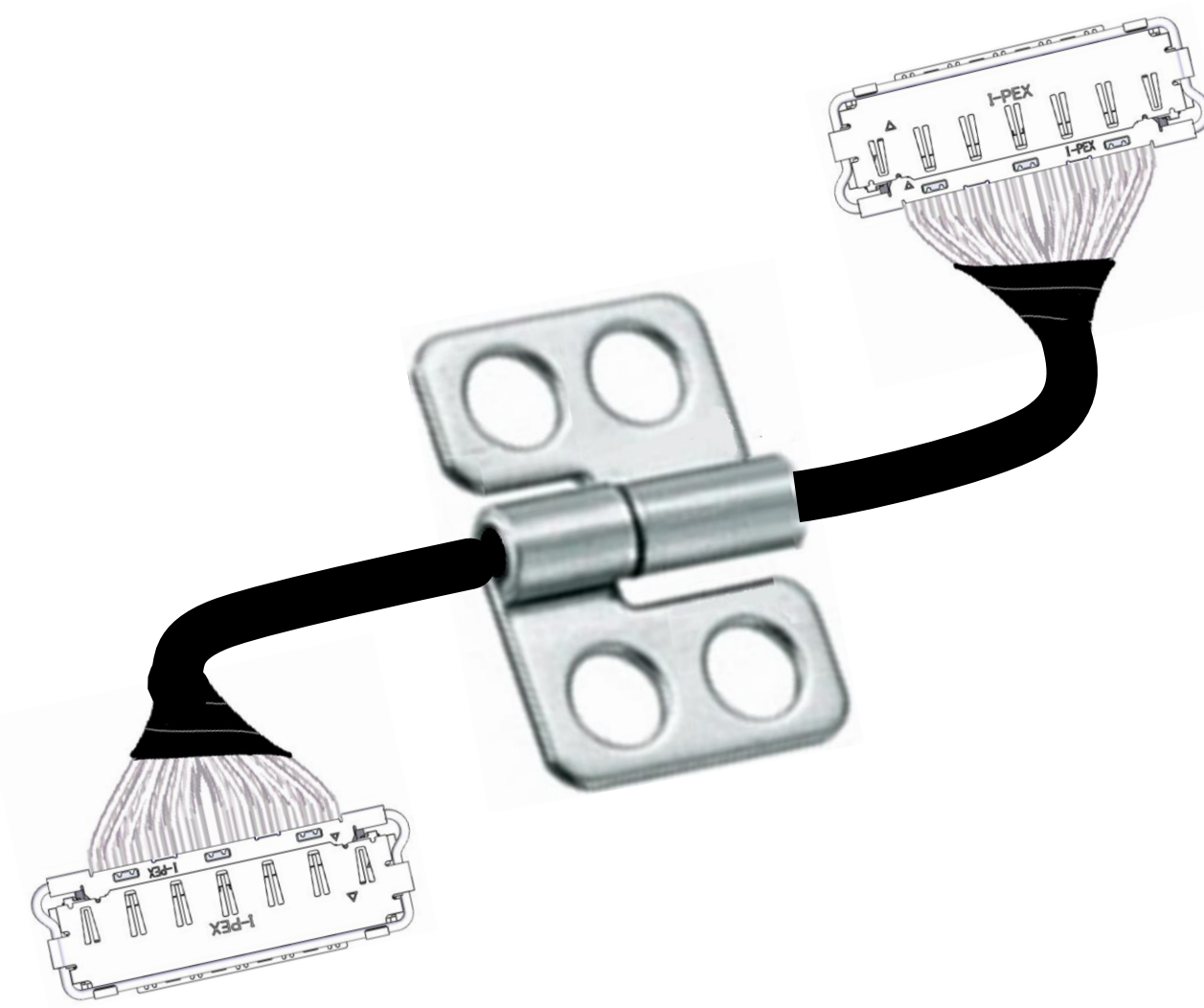
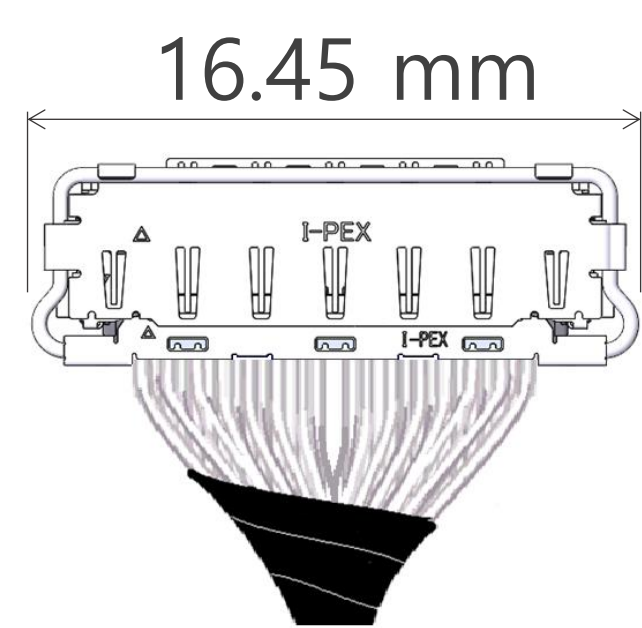
\*Without Cover타입 CABLINE<sup>®</sup>-CX II (체결 높이 최대 0.78mm)도 있습니다.



## ▶ 협소한 공간에 최적

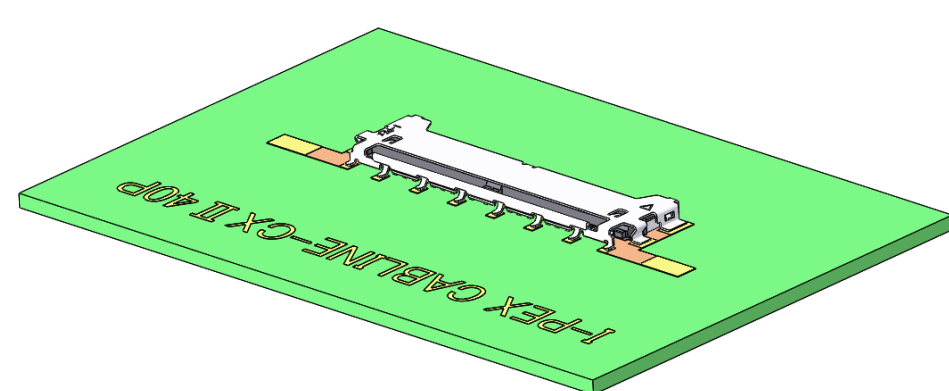
[CABLIN<sup>®</sup> 커넥터의 힌지부를 통과시키는 시뮬레이션](#)

CABLIN-CX II 40p크기는 1센트 동전보다 작습니다.  
체결 높이: 최대 1.0mm

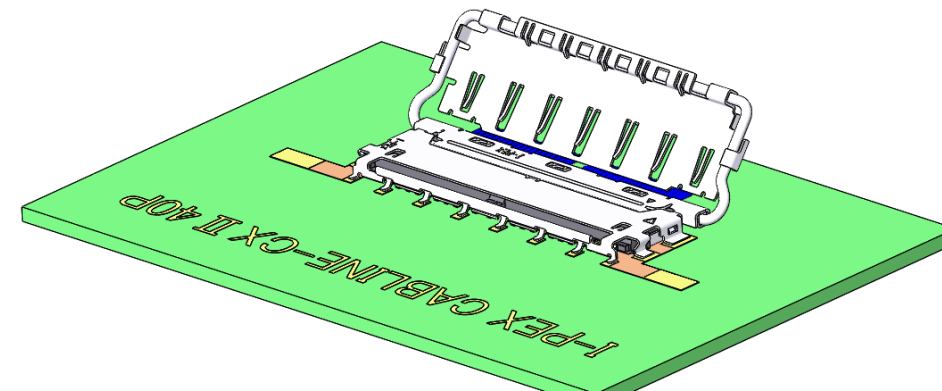


유연한 마이크로 동축 케이블 하네스는Hinge 디자인이 적용된 애플리케이션에 적합합니다.

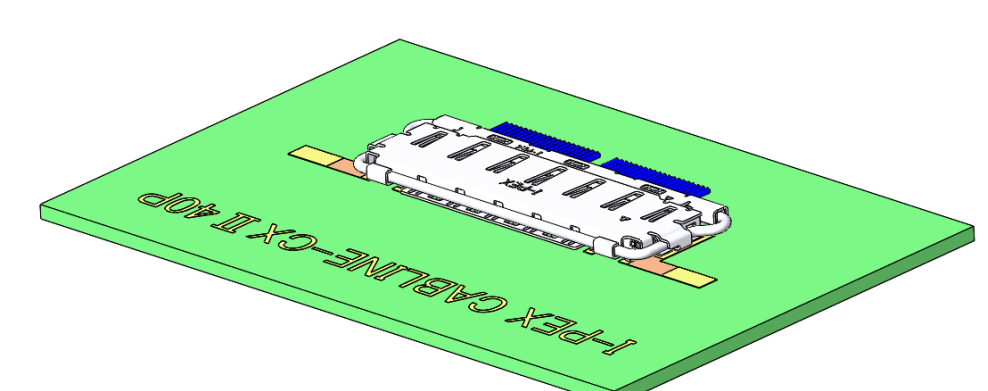
## ▶ 기계식 Lock 커버에 의한 실드 구조의 EMI 대책



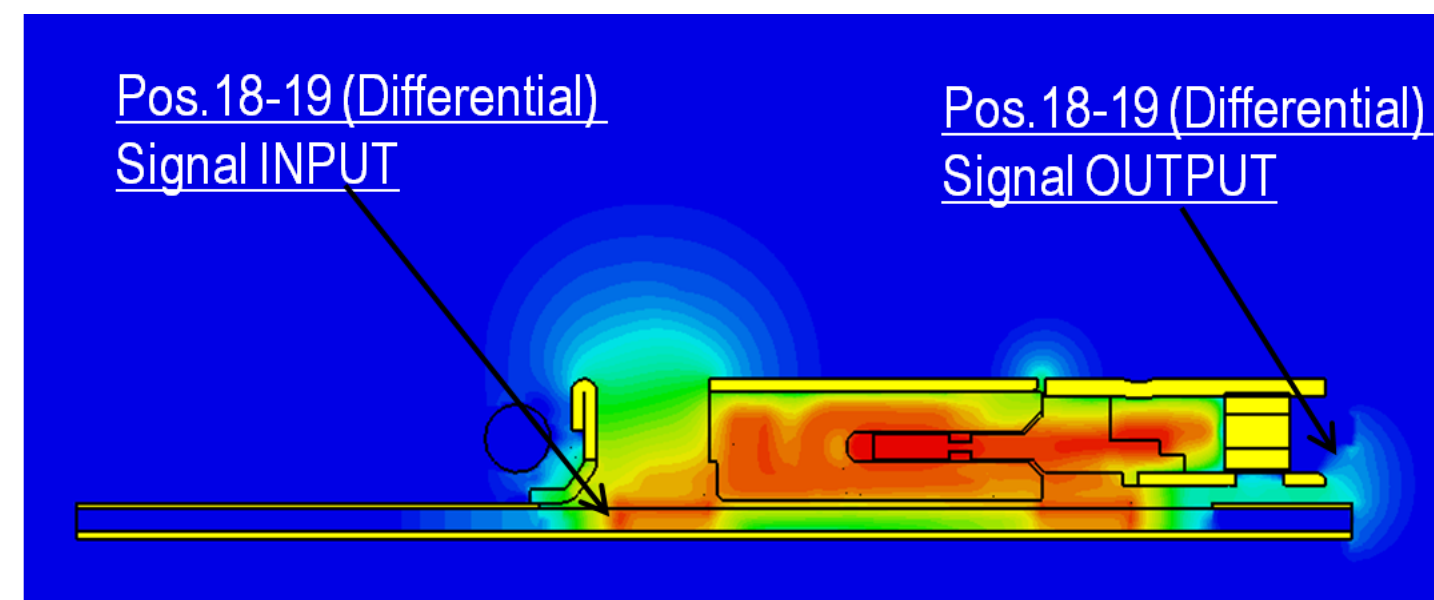
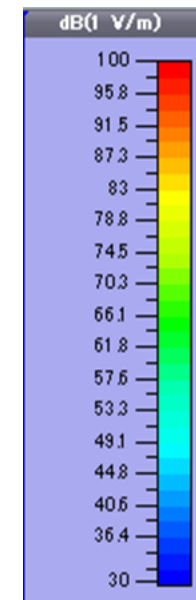
체결



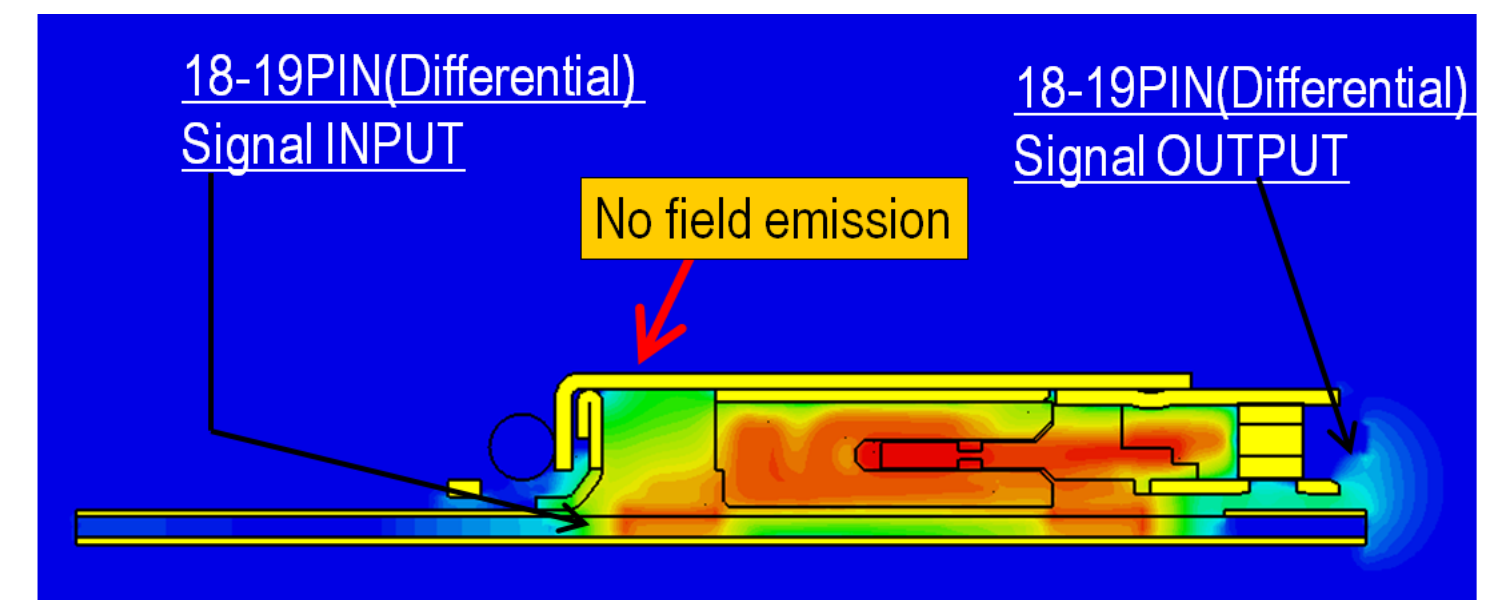
잠김



EMI 시뮬레이션 (2.4 GHz)

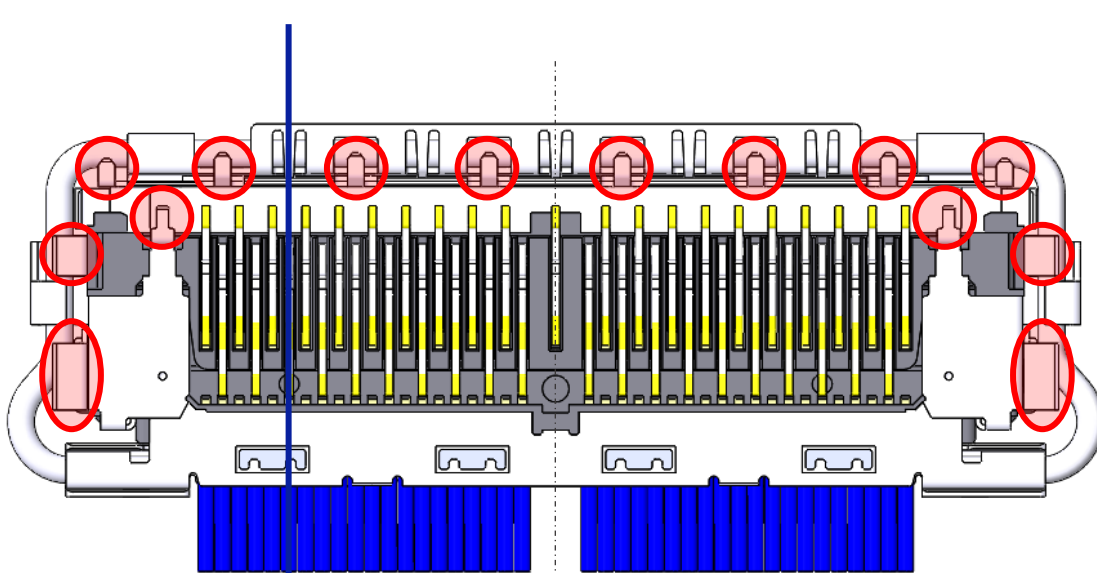


EMI 커버 미장착 시

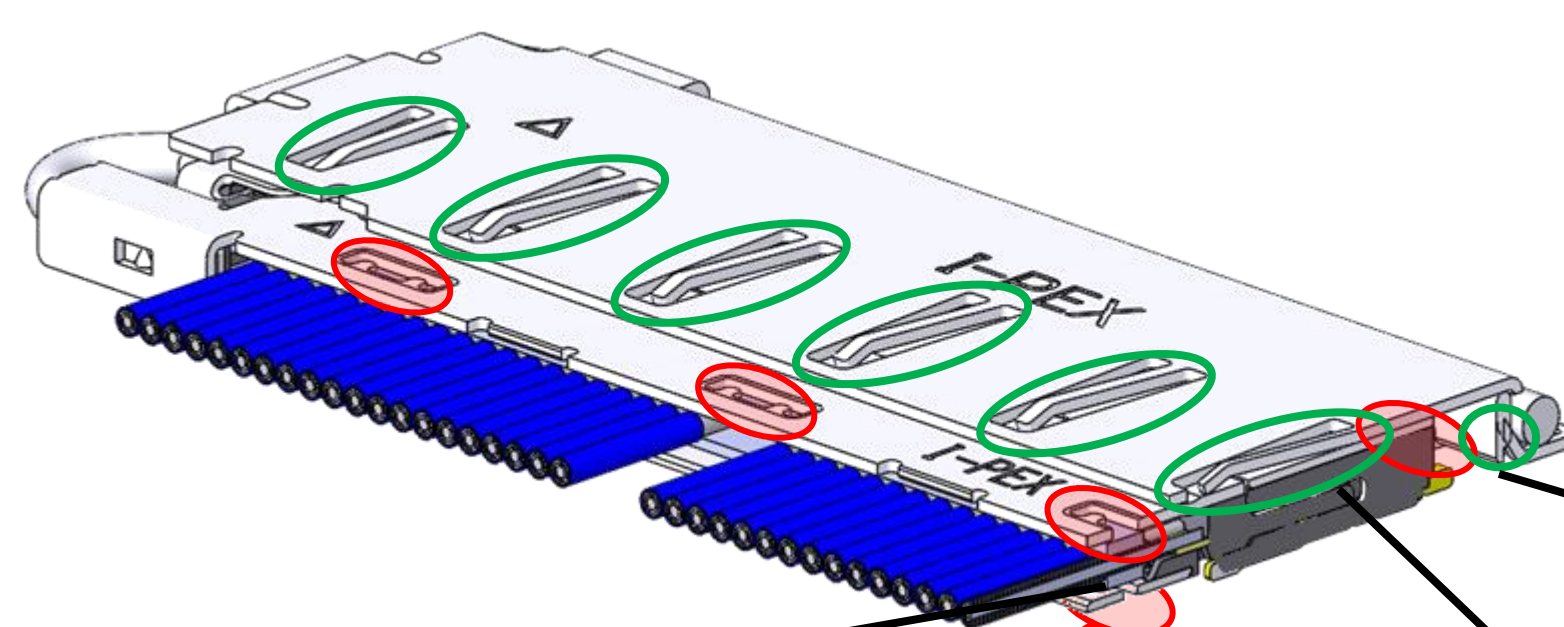


EMI 커버 장착 시

## ▶ EMI 실드 및 멀티 그라운드 접점 설계



아랫면



○ 납땜한 접촉부  
○ 기계적 접촉부

전선 차폐 - 접지 모션

접지 모션 - 플러그 쉘

플러그 쉘 - 커버 쉘

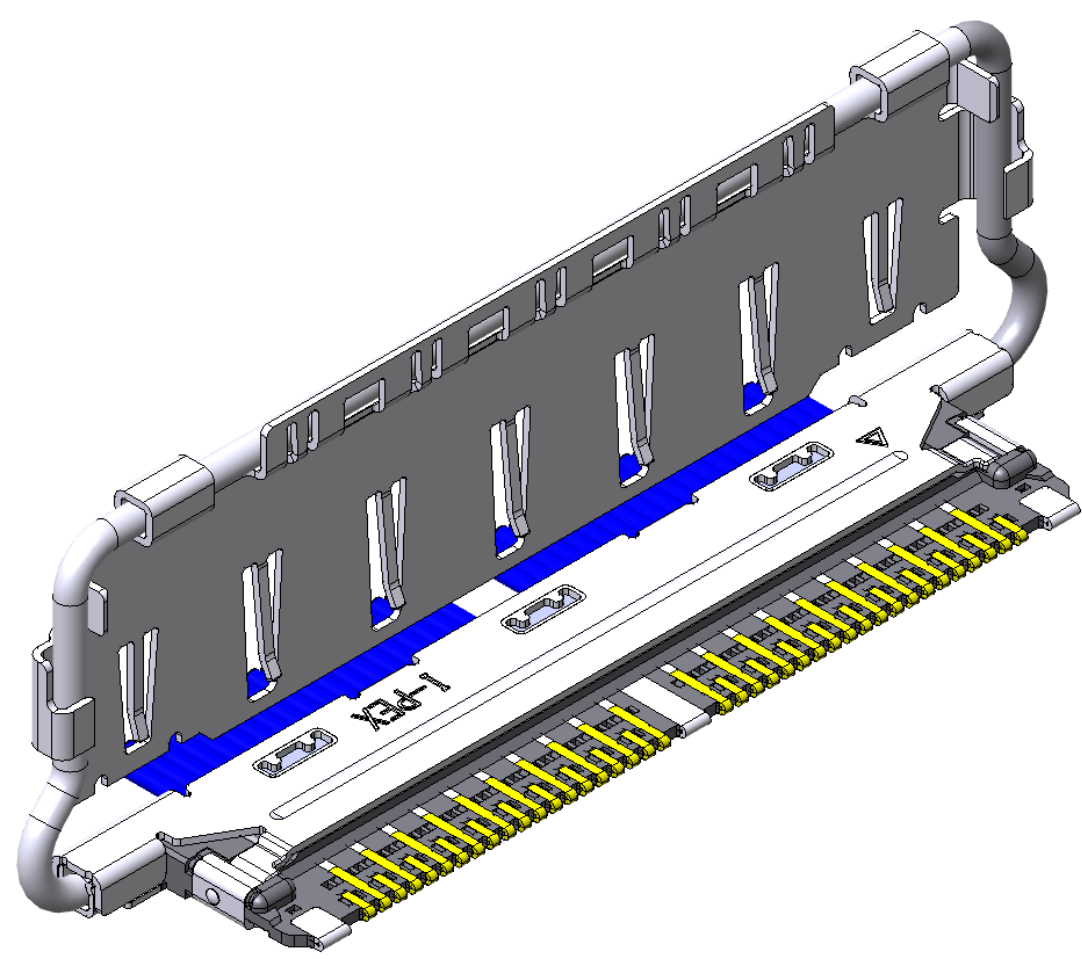
커버 쉘 - 리셉터클 쉘 및 PCB



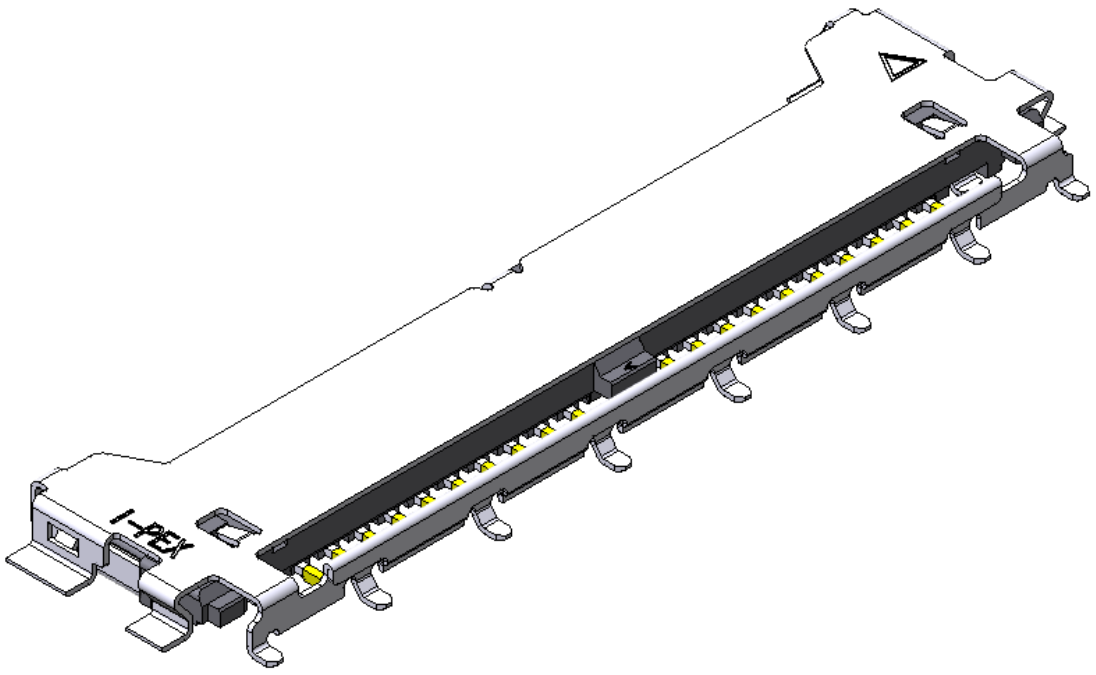
# Component Parts Details

## Component Parts

Connector parts

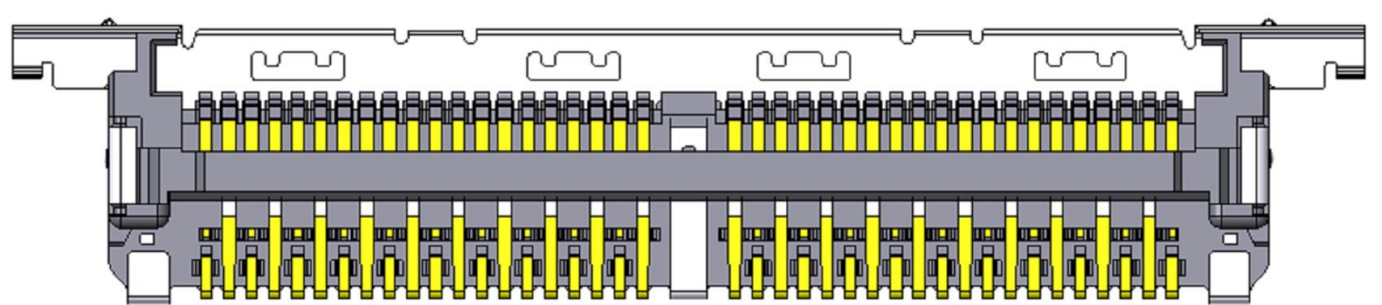


PLUG

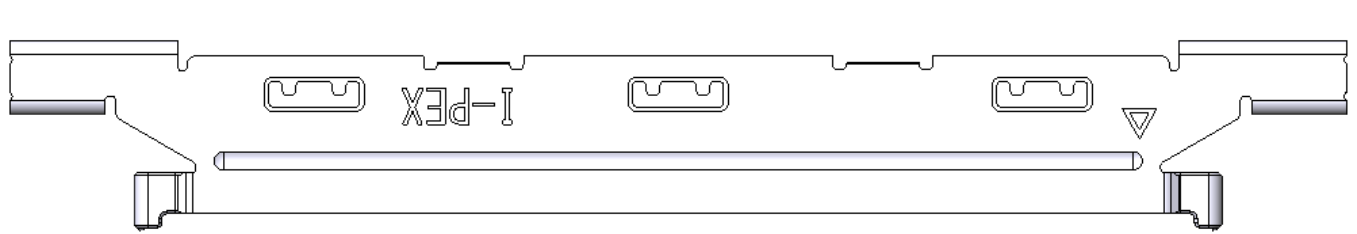


RECEPTACLE

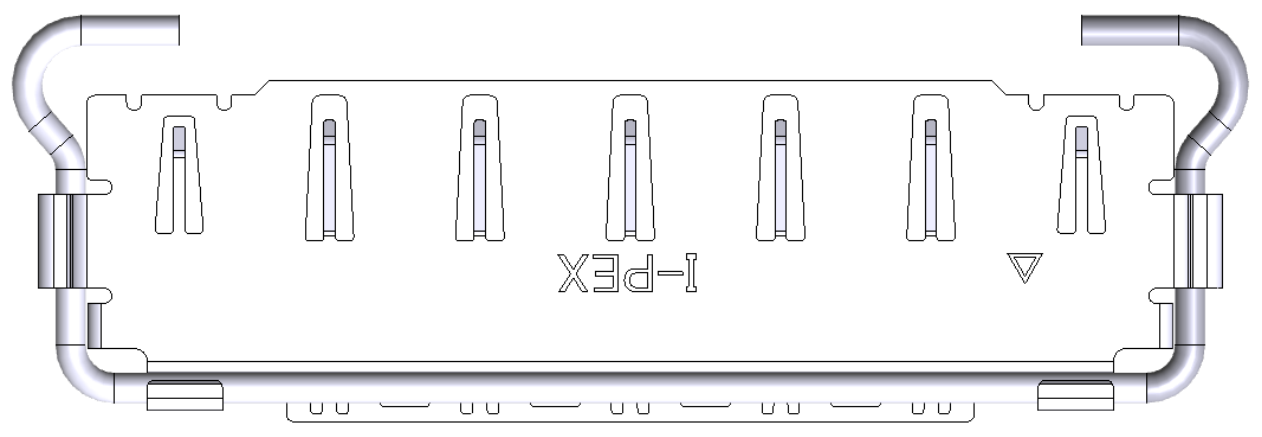
Plug parts



PLUG HOUSING ASSEMBLY



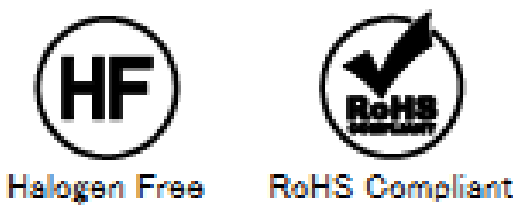
PLUG SHELL-A



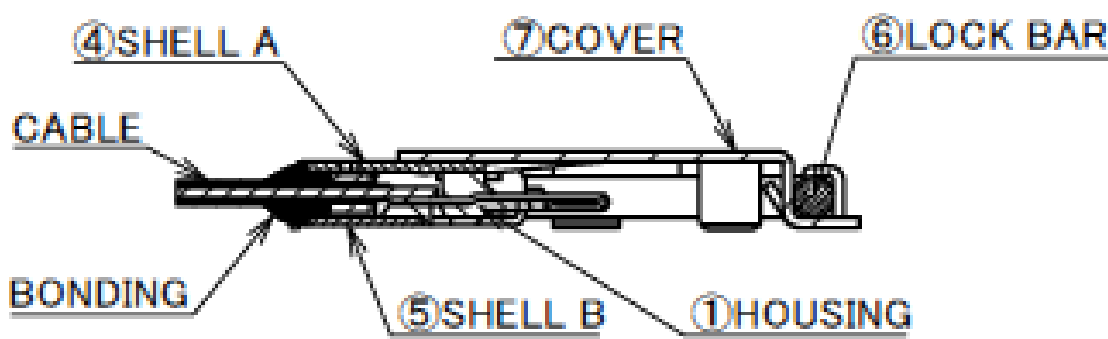
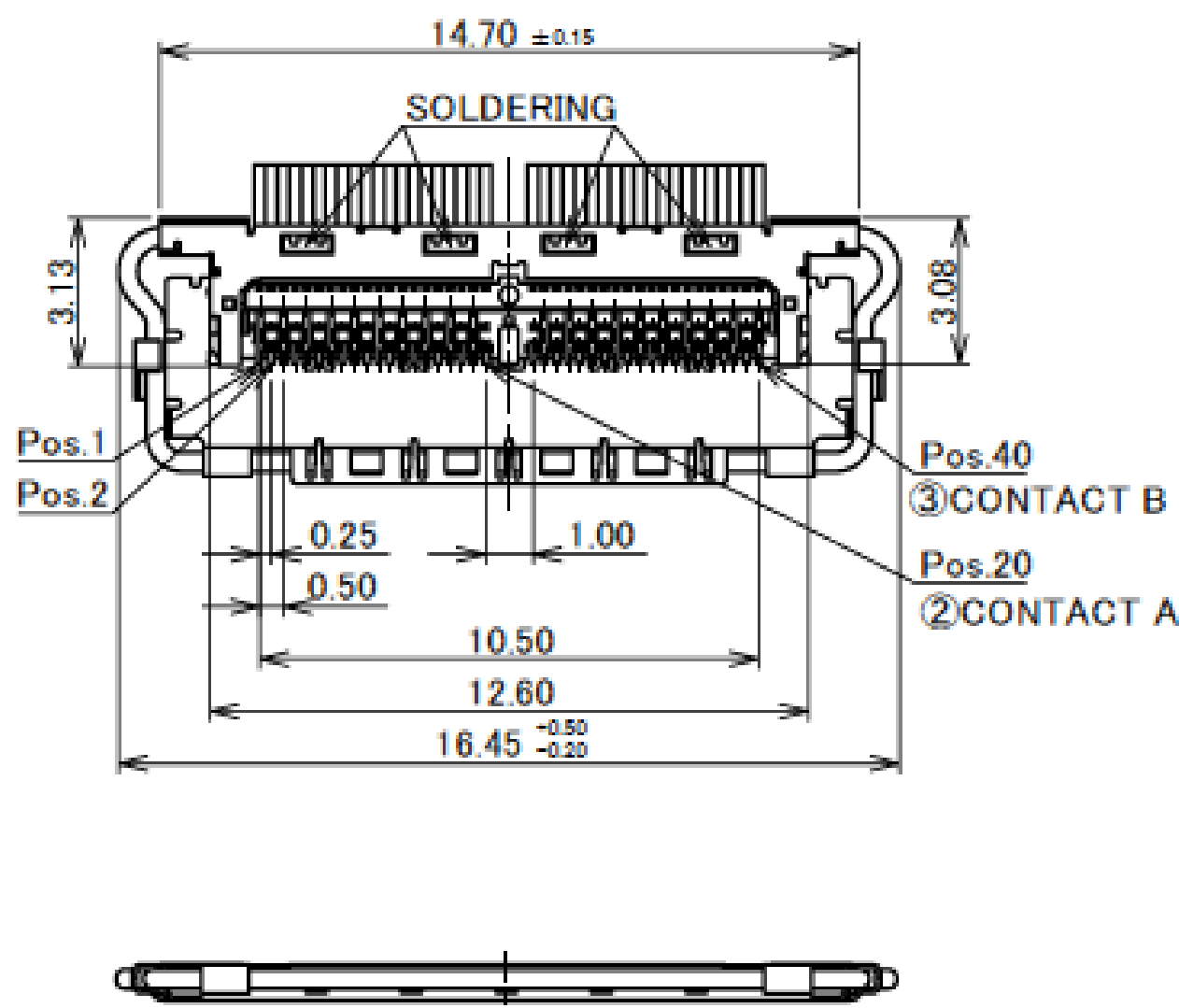
PLUG LOCK BAR ASSEMBLY

Plug for Cable Assembly

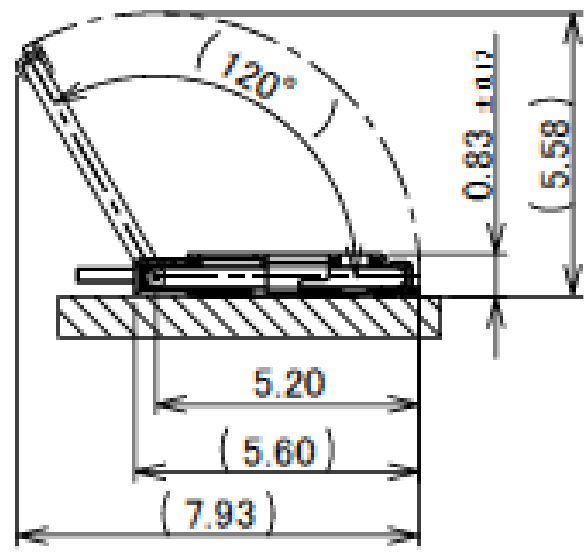
Recommended P/N		20977-040T-01
PART NO.	Pos.	
20977-040T-01	40	



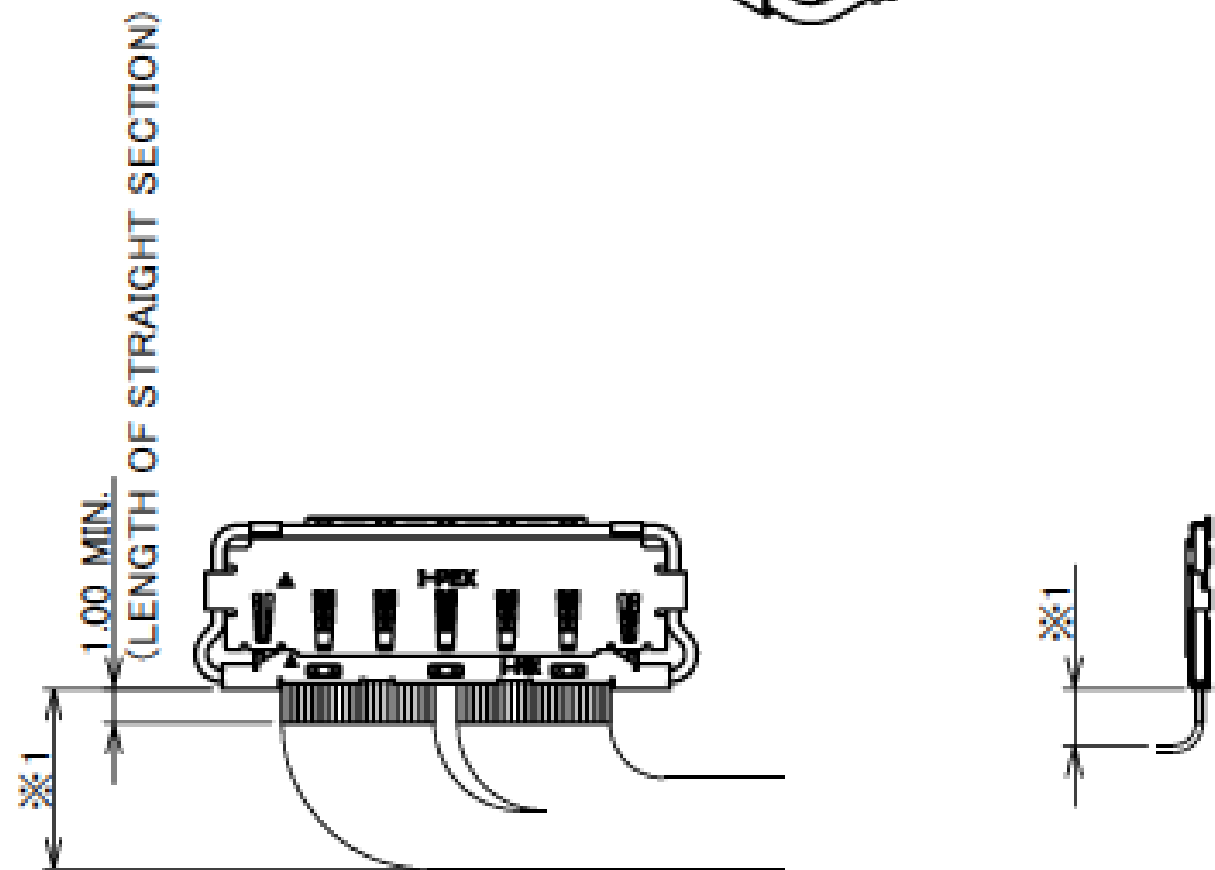
BOTTOM VIEW



SECT AA-AA  
(S= 10 : 1)

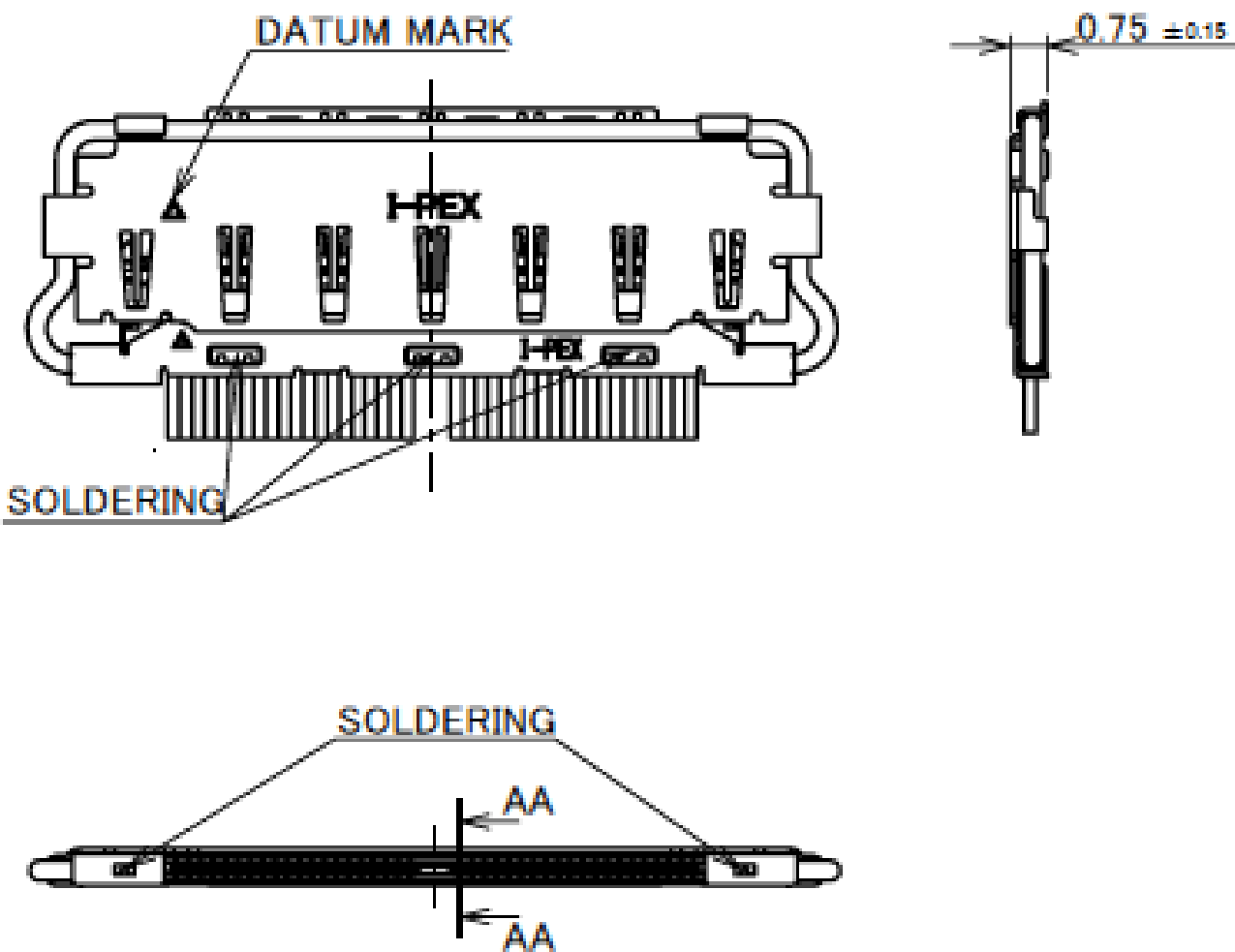


LOCK BAR MOVEMENT



REFERENCE CABLE BENDING DIMENSIONS

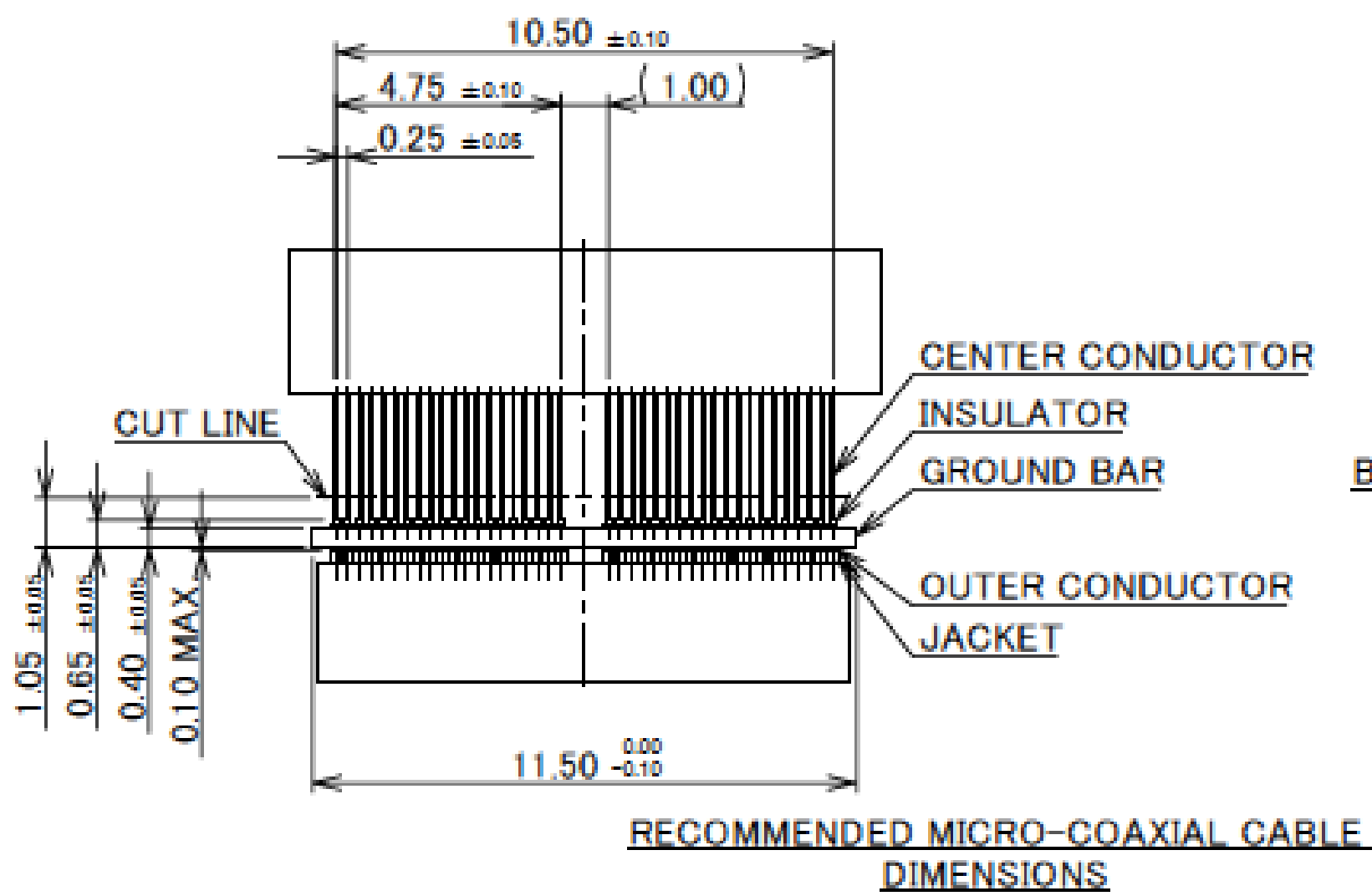
TOP VIEW



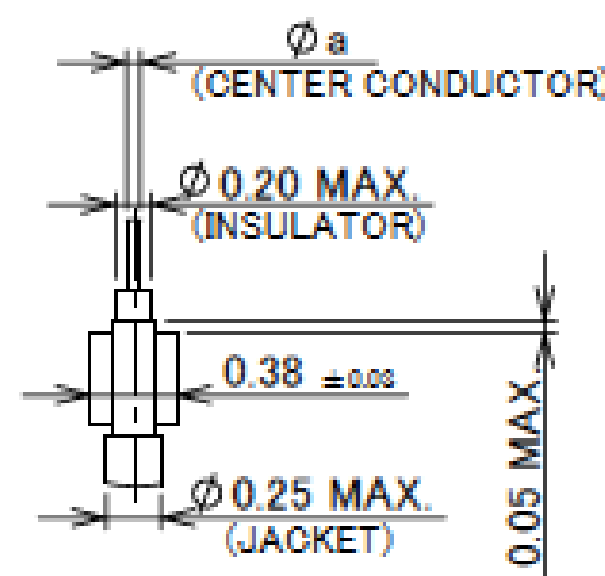
※1 : THE BEND DIMENSIONS MAY VARY BASED ON THE SIZE AND QUANTITY OF CABLES.  
PLEASE CONFIRM THE MINIMUM BENDING RADIUS WITH I-PEX OR THE HARNESS MANUFACTURER.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
7	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
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. 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. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK

Rev.4



RECOMMENDED MICRO-COAXIAL CABLE  
DIMENSIONS



DETAIL BB  
(S= 20 : 1)

CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

	a
#44	0.063
#46	0.048

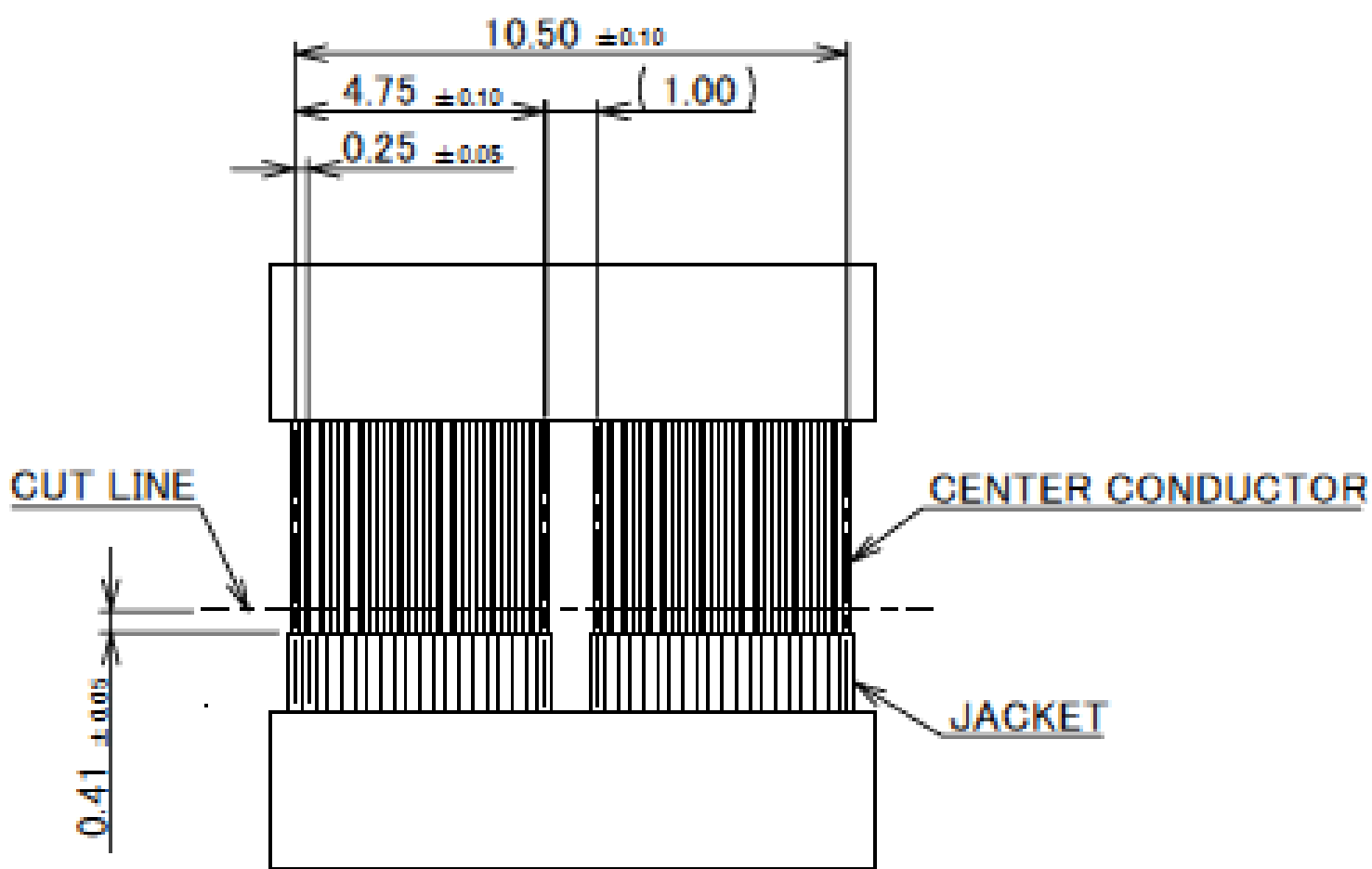
CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE

	a
#39	0.102

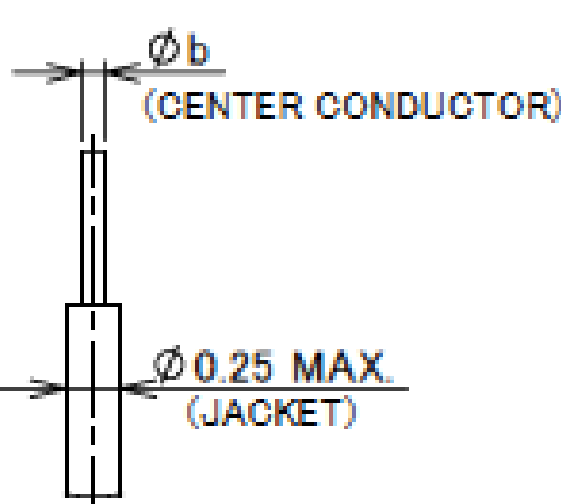
MICRO-COAXIAL CABLE #39 : NOT RECOMMENDED  
FOR HIGH SPEED SIGNAL TRANSFER

DISCRETE WIRE DIMENSION

	b
#39	0.102



RECOMMENDED DISCRETE WIRE DIMENSIONS



DETAIL CC  
(S= 20 : 1)

Rev.4

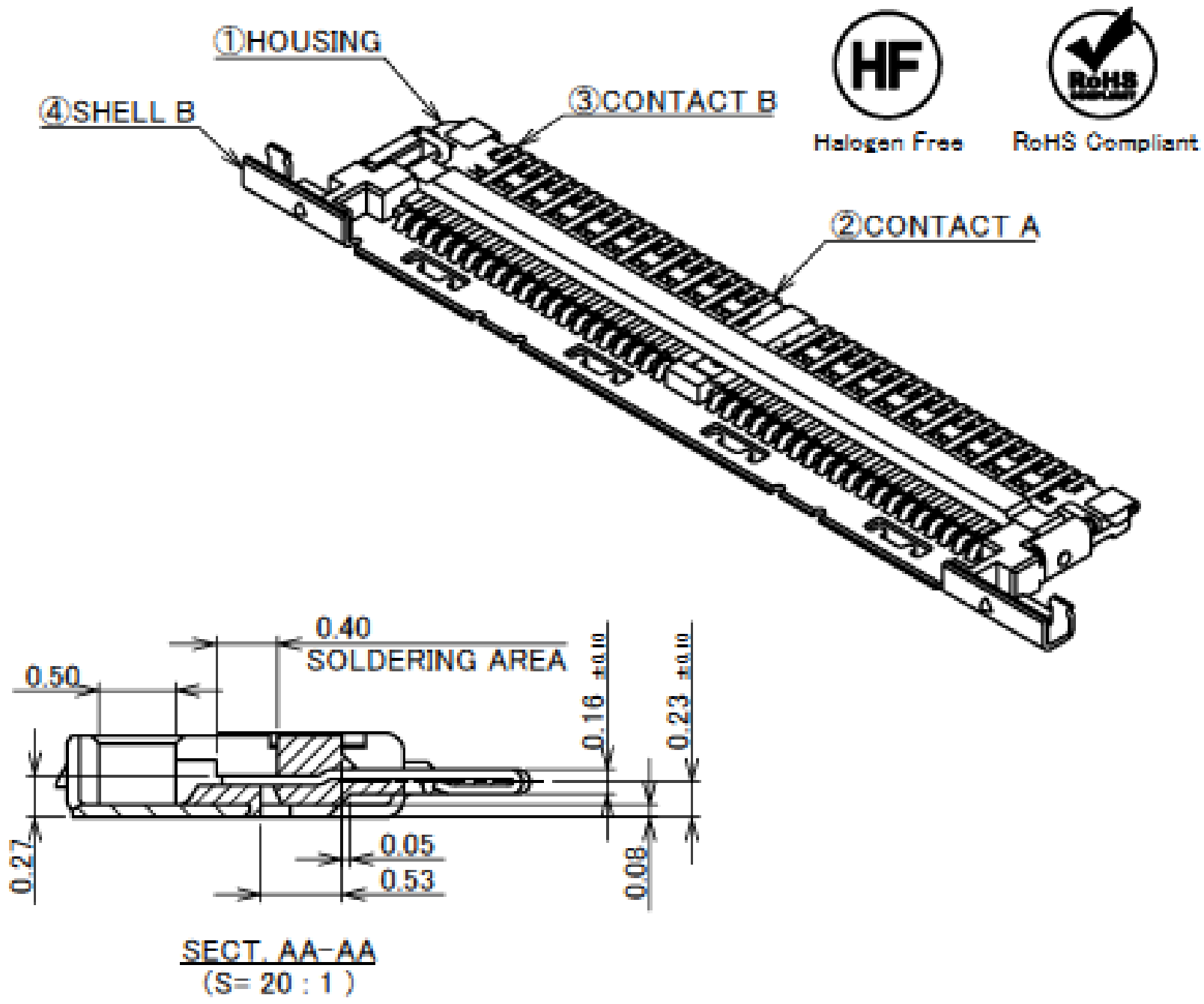
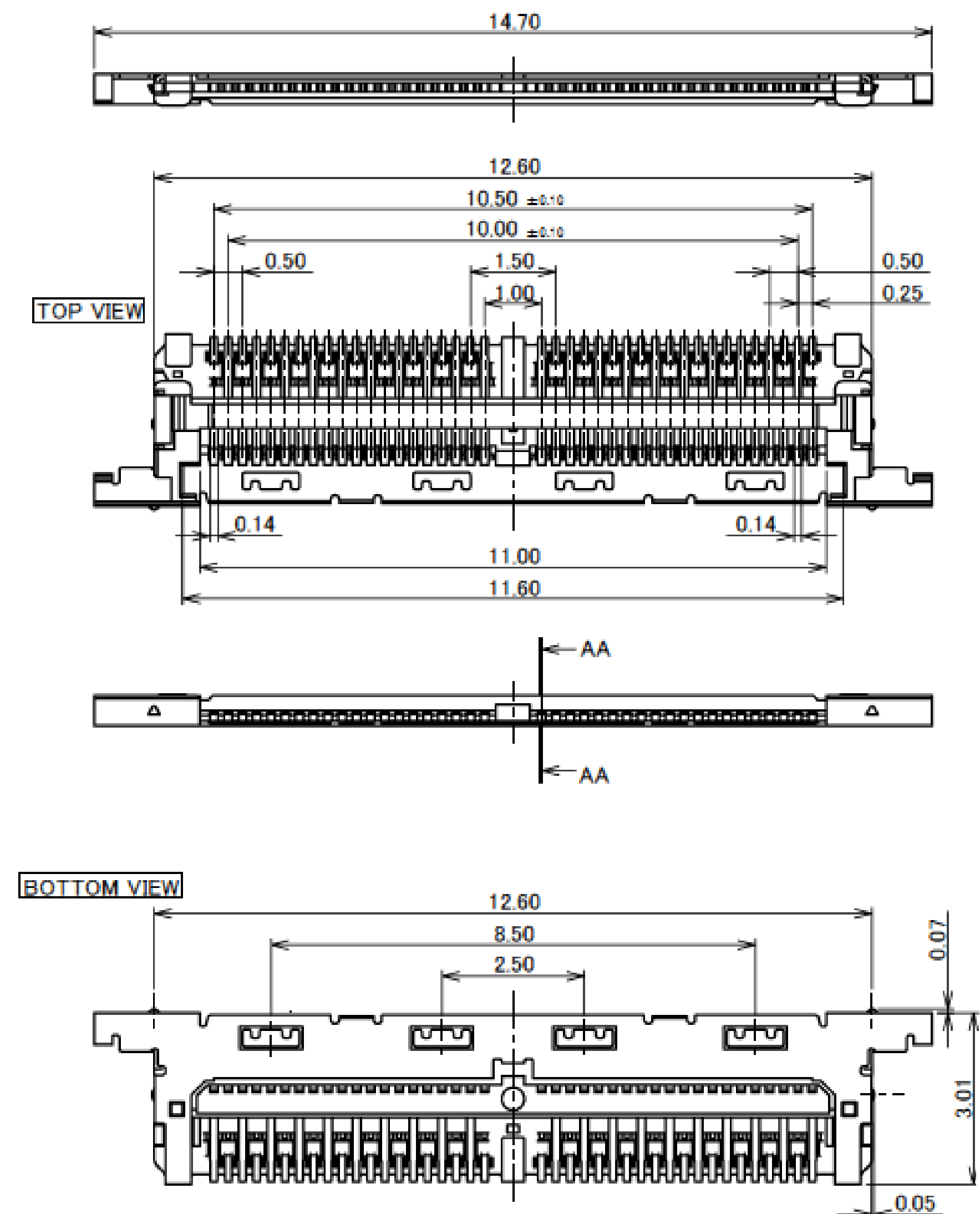
Plug for Cable Assembly

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 46,44,39 DISCRETE WIRE : AWG# 39
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATING AMPERAGE (FOR CONTACT)	0.10A AC/DC [AWG#46] PER CONTACT PIN/UP TO 40 CONTACTS 0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS 0.50A AC/DC [AWG#39] PER CONTACT PIN/UP TO 8 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE 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. INITIAL : 1,080mohm MAX.(AWG#44) 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-17035
ASSEMBLY MANUAL	ASM-17008
APPEARANCE CRITERIA No.	QLS-A***

Rev.4

Plug Housing Assembly

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



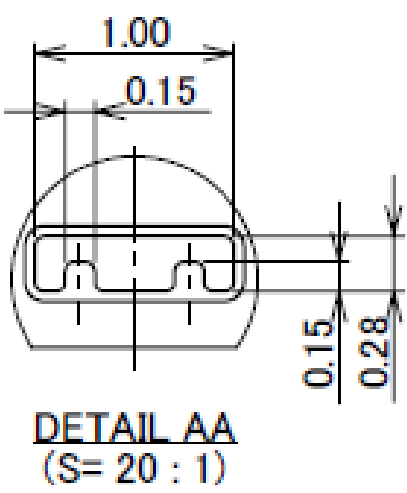
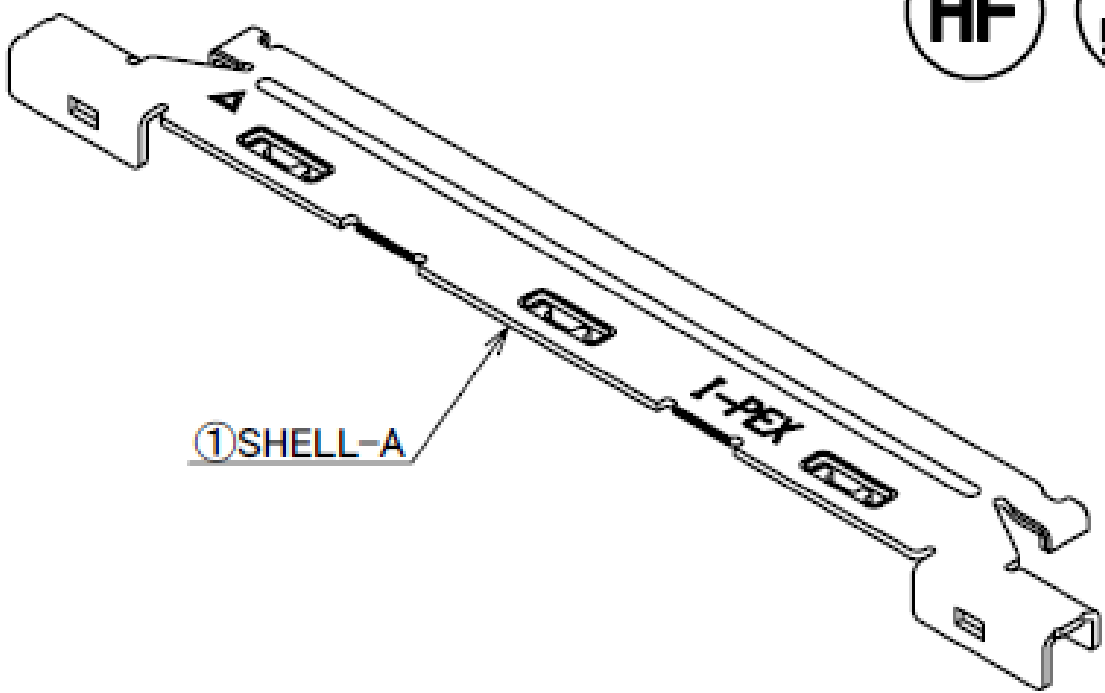
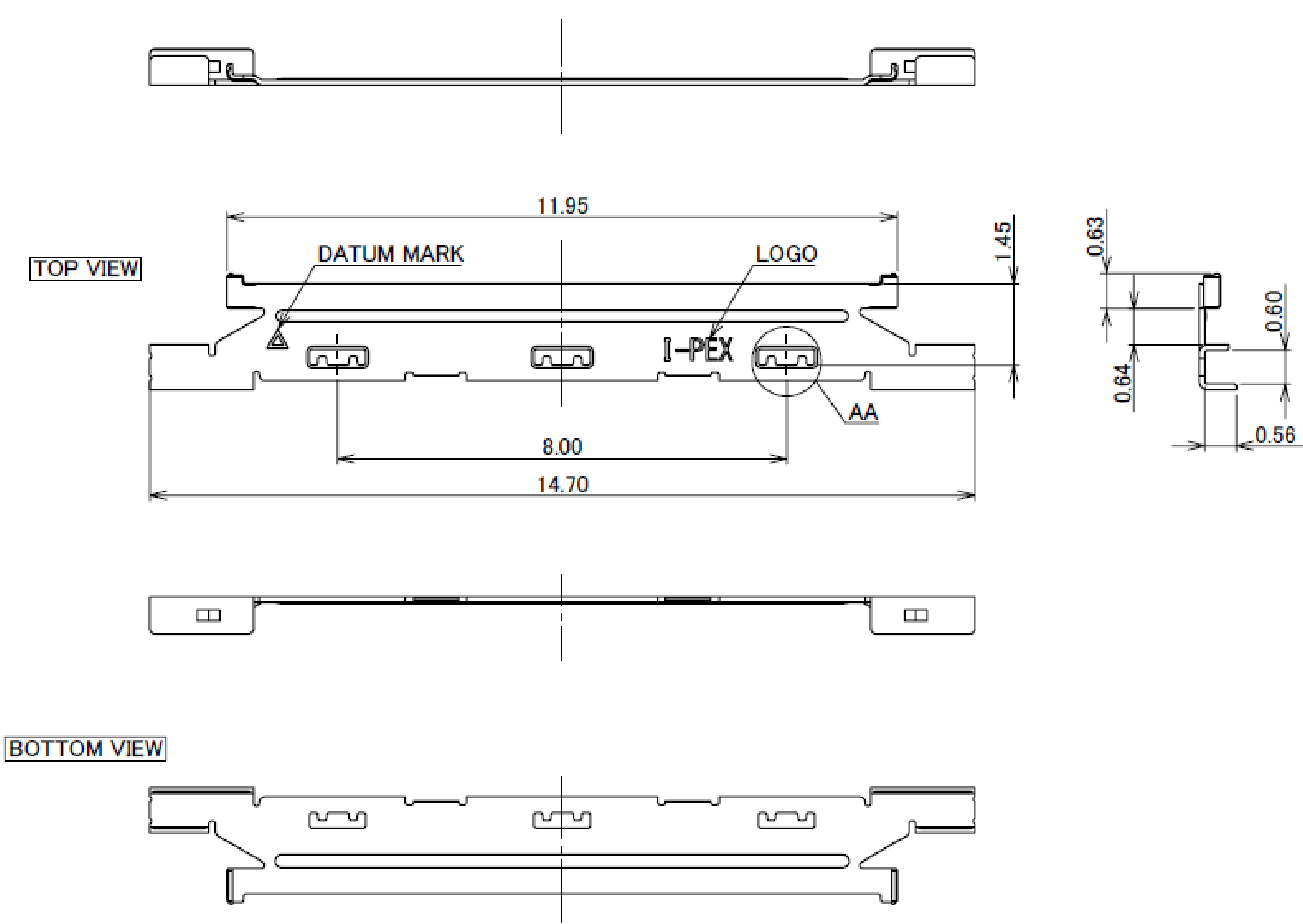
- NOTES.
1. ASSEMBLY
- 1-1. 20977-040T-01  
THIS PART IS ASSEMBLED WITH SHELL A (P/N 3655-0401) AND LOCK BAR ASS'Y (P/N 20975-040T-01) AFTER SOLDERED THE CABLE.
- 1-2. 20978-040T-01  
THIS PART IS ASSEMBLED WITH SHELL A (P/N 3655-0401) AND LOCK BAR (P/N 3656-0402) AFTER SOLDERED THE CABLE.

4	SHELL B	SUS	PARTIAL Au 0.003 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.
3	CONTACT B	CORSON ALLOY	CONTACT AREA : Au 0.25 $\mu$ m MIN. OVER Ni 2.00 $\mu$ m MIN. SOLDERING AREA : Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.
2	CONTACT A	CORSON ALLOY	CONTACT AREA : Au 0.25 $\mu$ m MIN. OVER Ni 2.00 $\mu$ m MIN. 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

Rev.1

Plug Shell-A

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

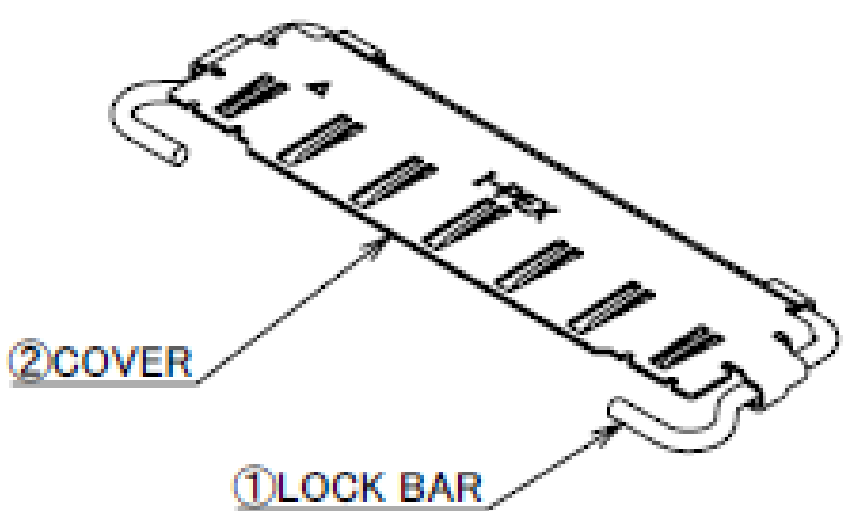
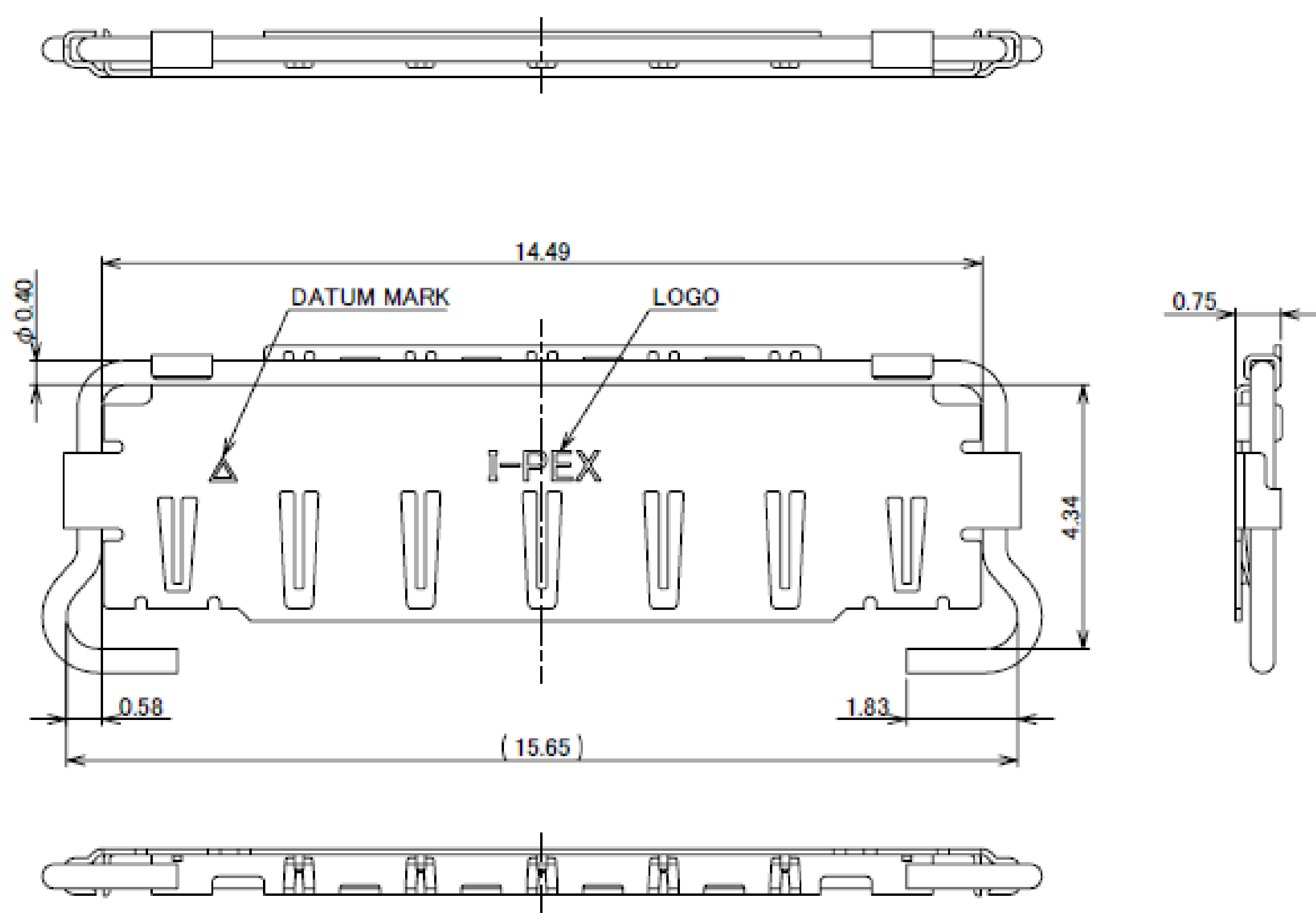
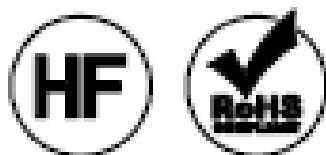


1	SHELL-A	SUS	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.0

Plug Lock Bar Assembly

Recommended P/N	20975-040T-01
PART No.	
20975-040T-01	

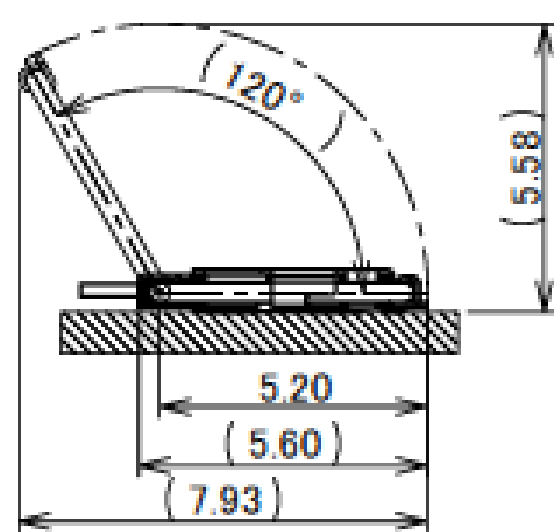
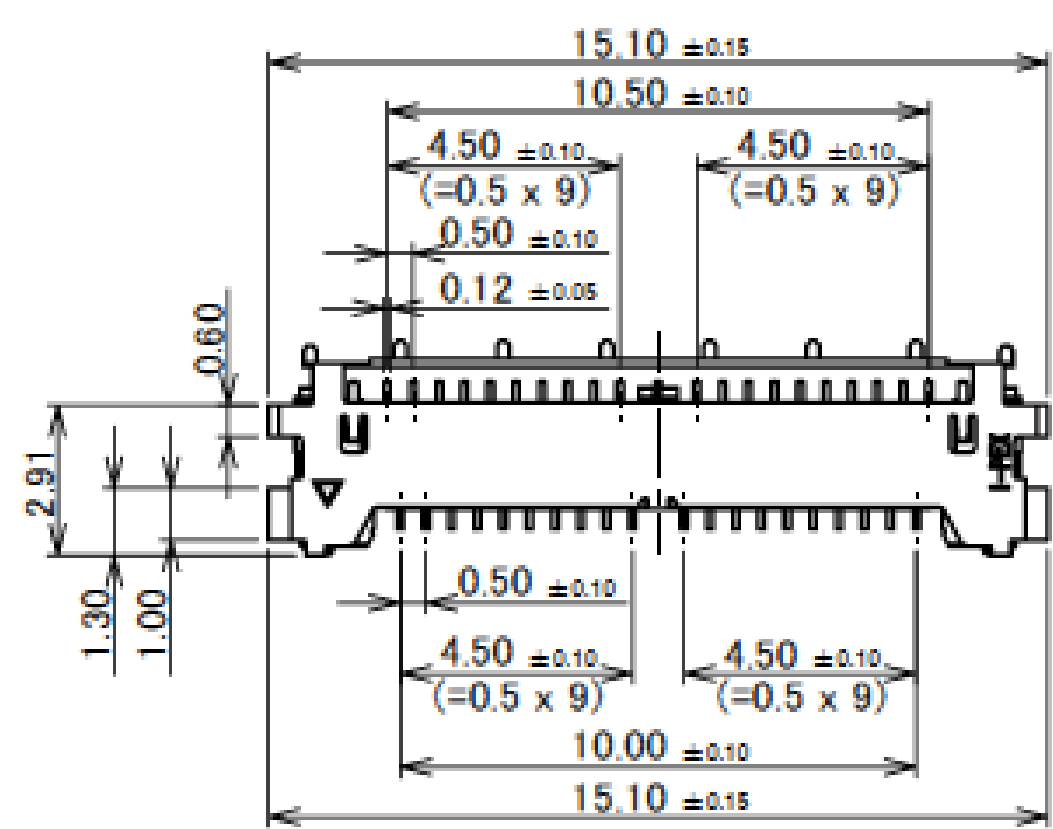


2	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
1	LOCK BAR	SUS φ0.40	-
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

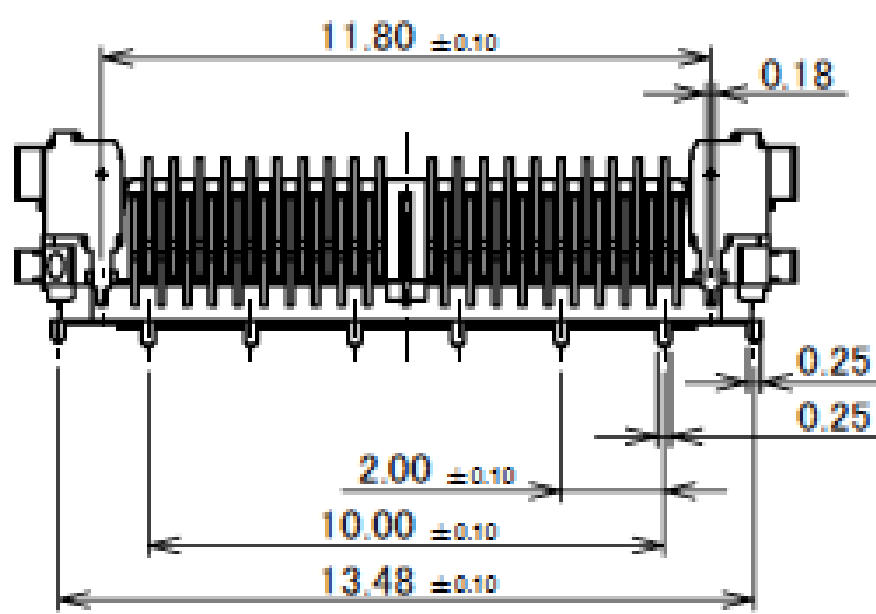
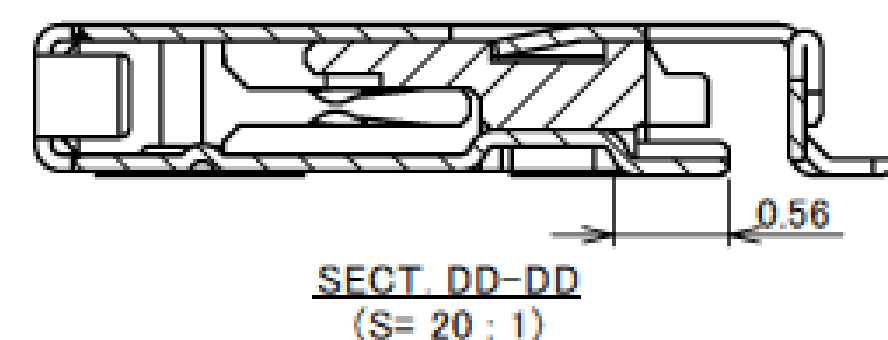
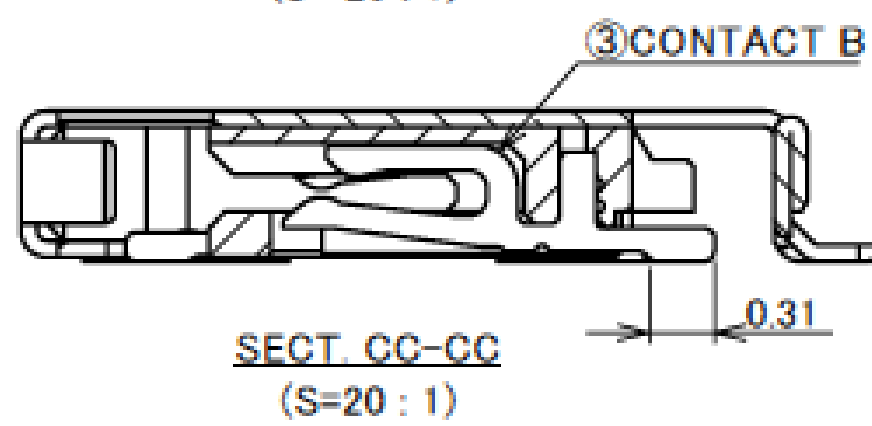
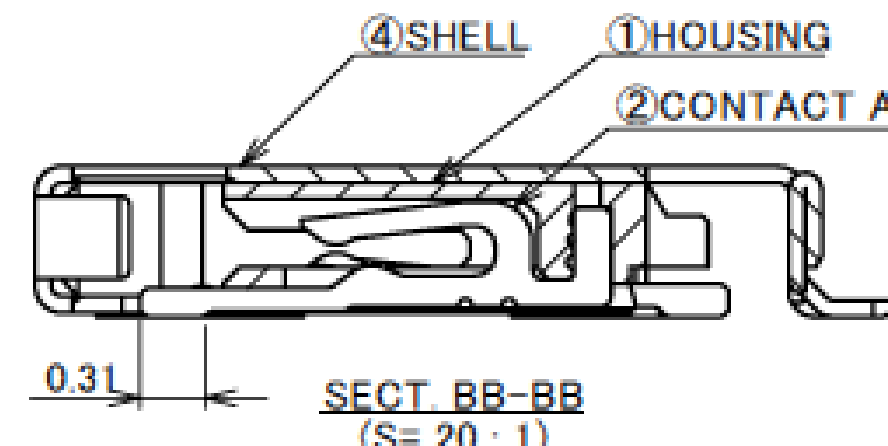
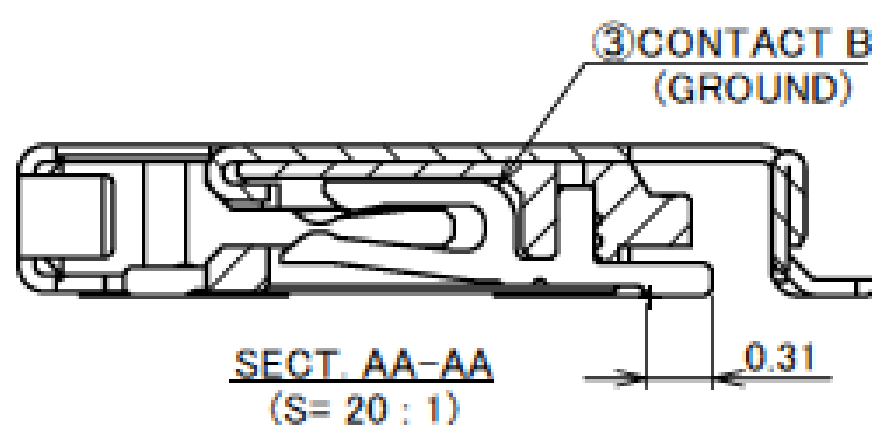
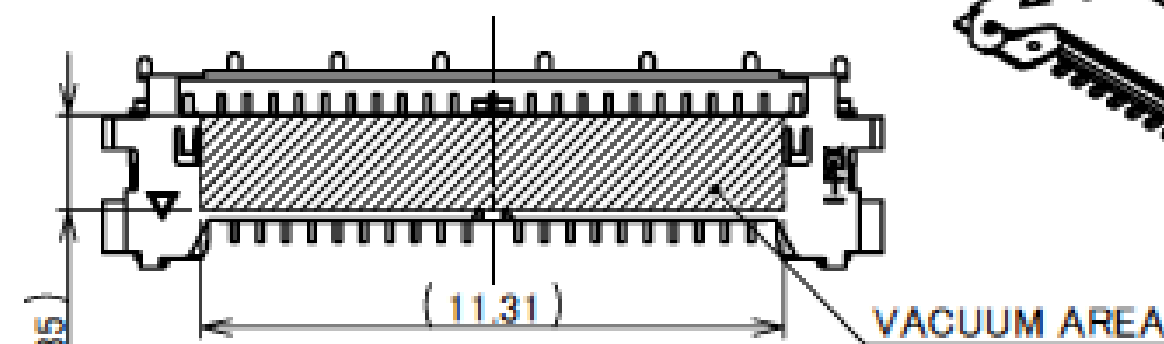
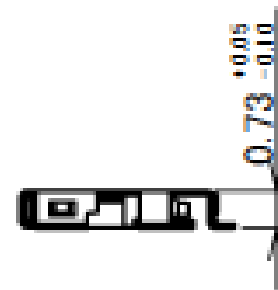
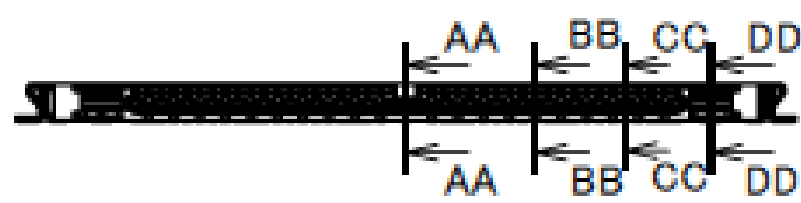
Rev.0

Receptacle Assembly

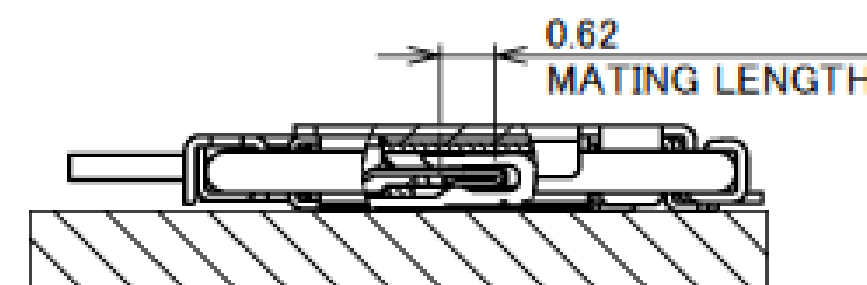
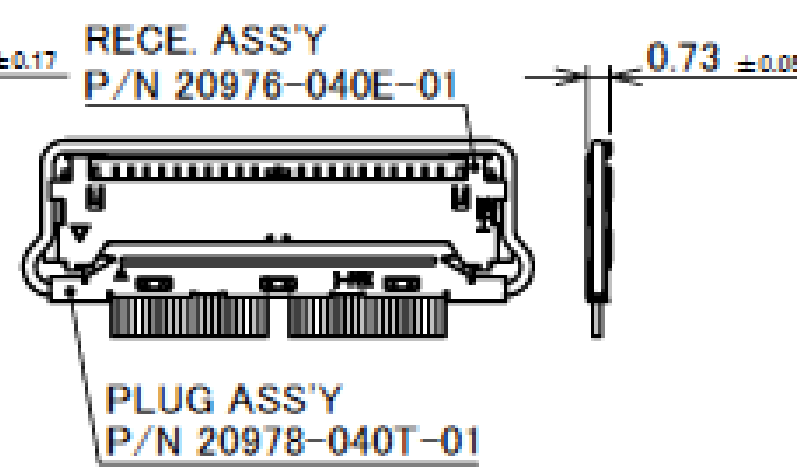
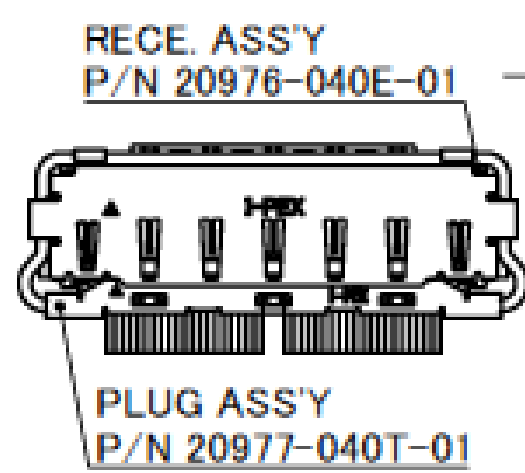
Recommended P/N		20976-040E-01
PART NO.	Pos.	
20976-040E-01	40	



LOCK BAR MOVEMENT

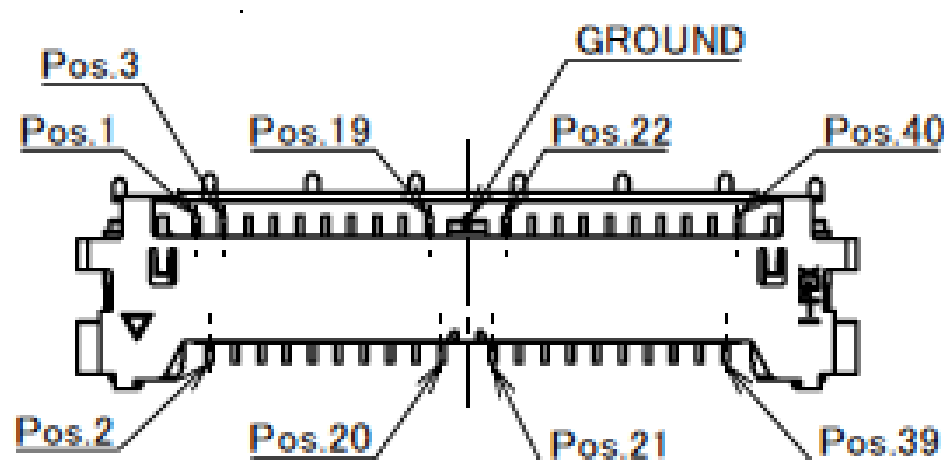


GROUND PITCH



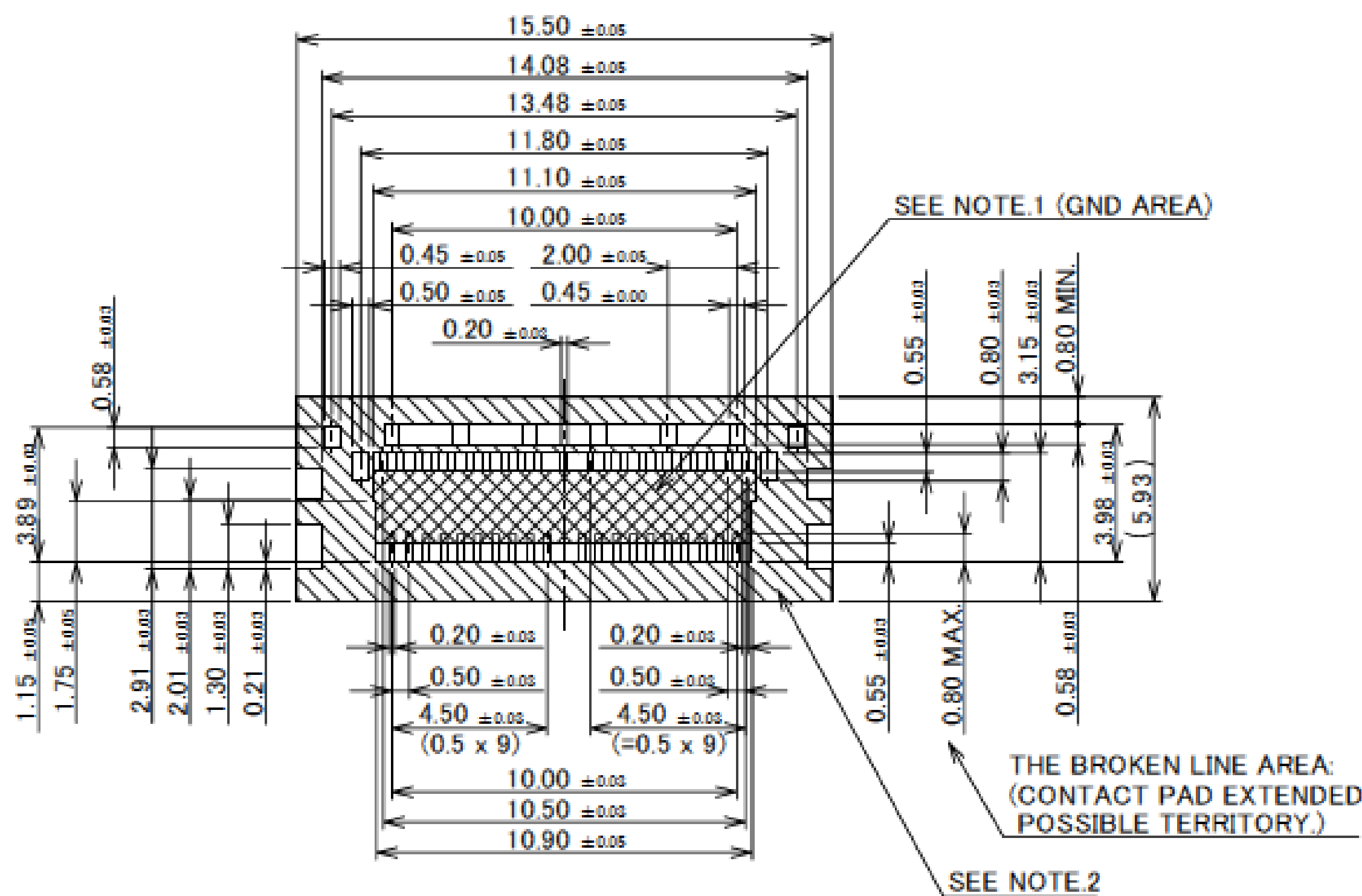
MATING CONDITION

NO	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	SHELL	PHOSHOR BRONZE	PARTIAL Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
3	CONTACT B	CORSON ALLOY	CONTACT AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT A	CORSON ALLOY	CONTACT AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK

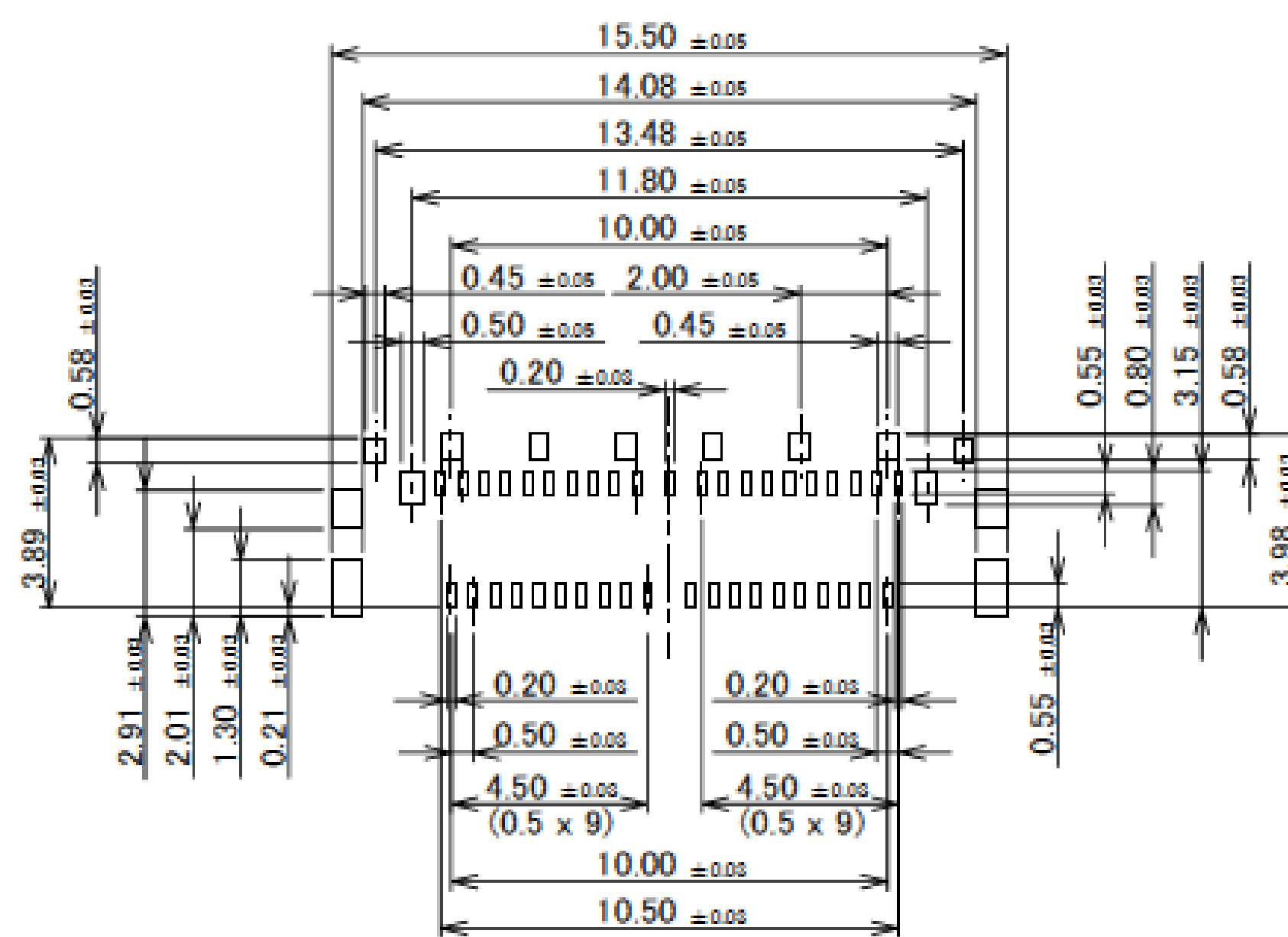


CONTACT ARRANGEMENT

Rev.3



RECOMMENDED FOOTPRINT PATTERN LAYOUT

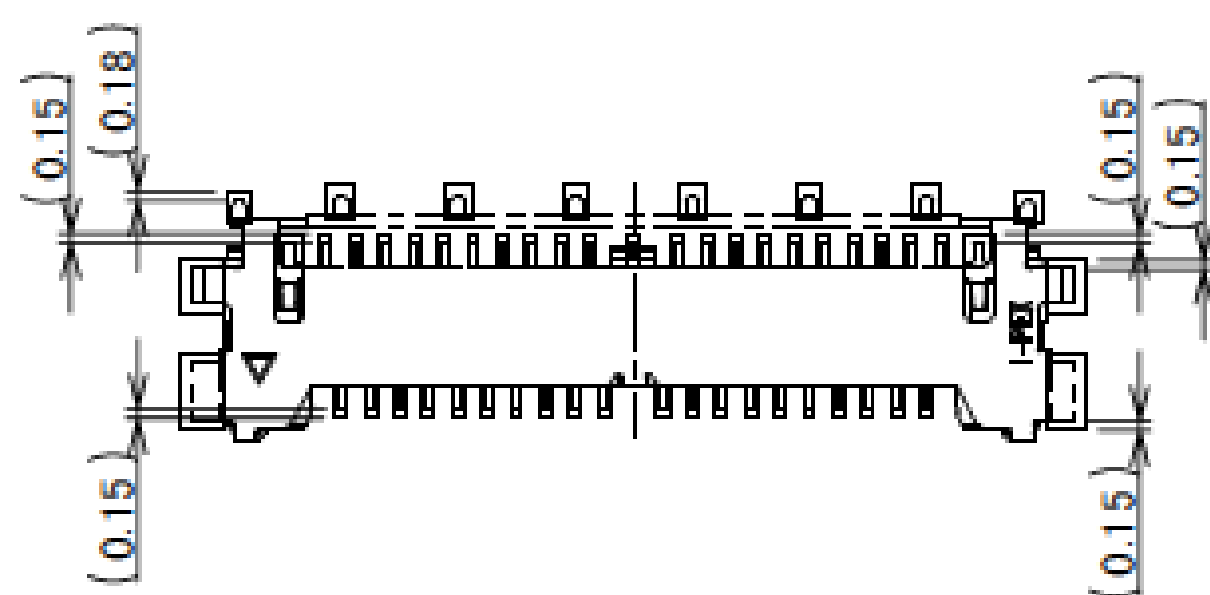


RECOMMENDED METAL MASK LAYOUT  
METAL MASK THICKNESS : t=0.12 mm

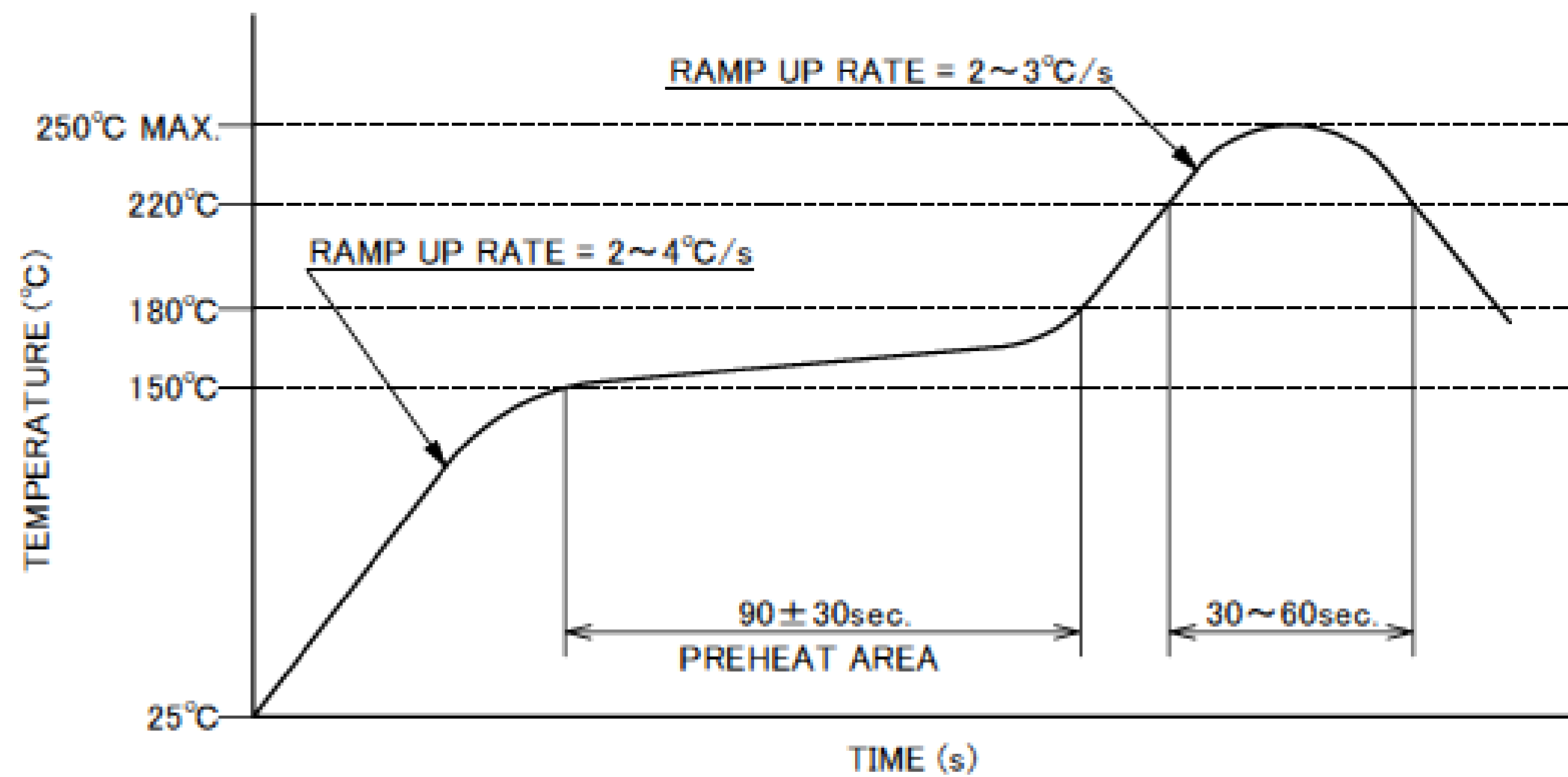
NOTES.  
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA  
2. DO NOT MOUNT ANOTHER COMPONENTS IN THIS AREA.

Rev.3

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 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 0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS 0.50A AC/DC [AWG#39] PLUG WITH COVER CABLE ASS'Y (P/N : 20977-040T-01) PER CONTACT PIN/UP TO 8 CONTACTS PLUG WITHOUT COVER CABLE ASS'Y (P/N : 20978-040T-01) PER CONTACT PIN/UP TO 7 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE 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. INITIAL : 1,080mohm MAX.(AWG#44) 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) HIM-17040 (WHEN PLUG WITHOUT COVER CABLE ASS'Y IS USED)
APPEARANCE CRITERIA No.	QLS-A***

Rev.3



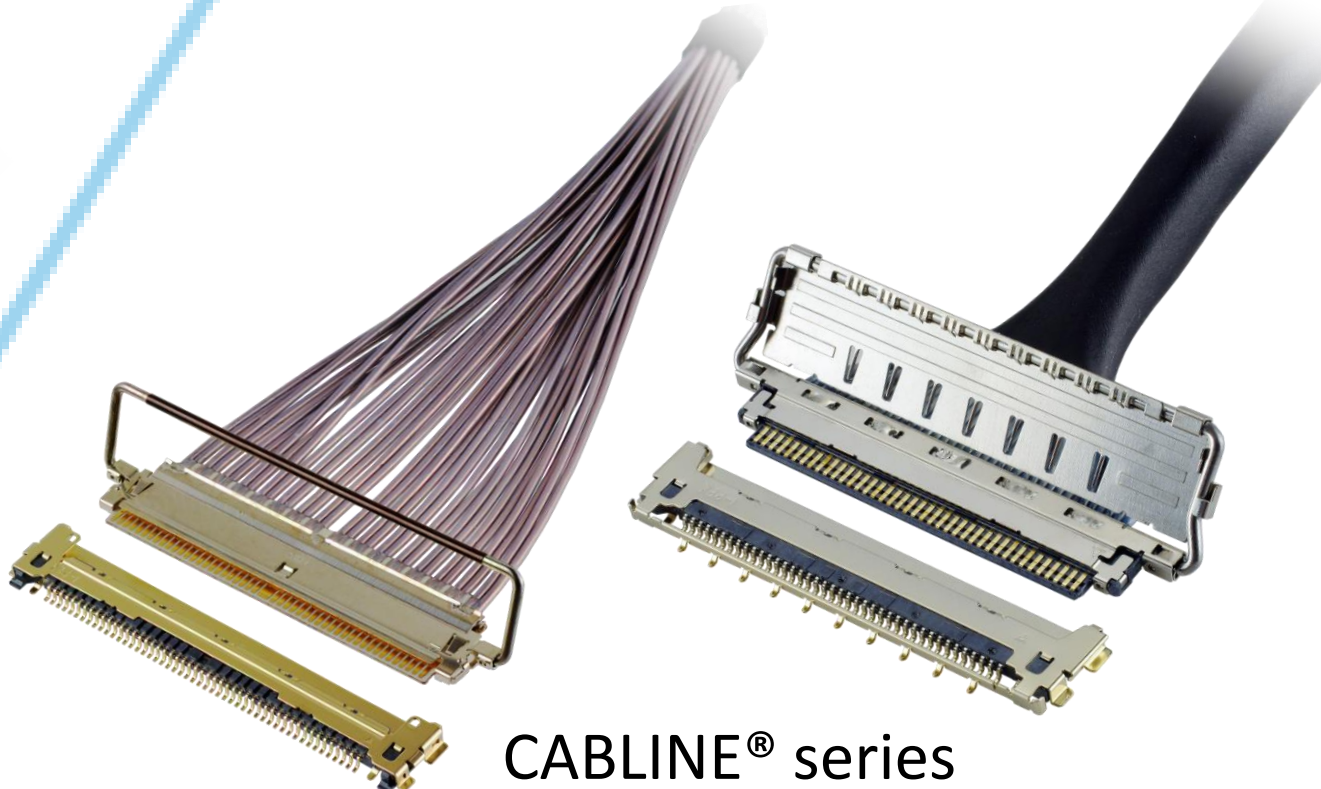
# Custom Connectors Available

 RF  
Connectors

MHF® series



CABLINE® series

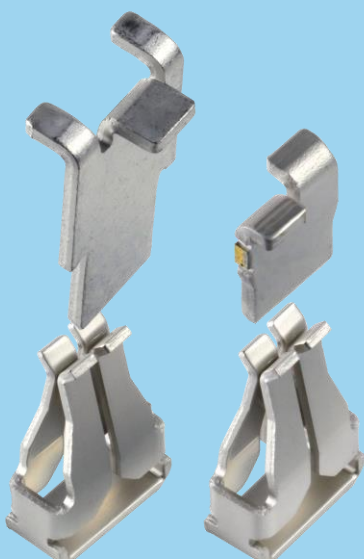


Micro-Coaxial/Twinax  
Connectors



Wire-to-Board  
Connectors/  
Terminals

AP series



ISH® series



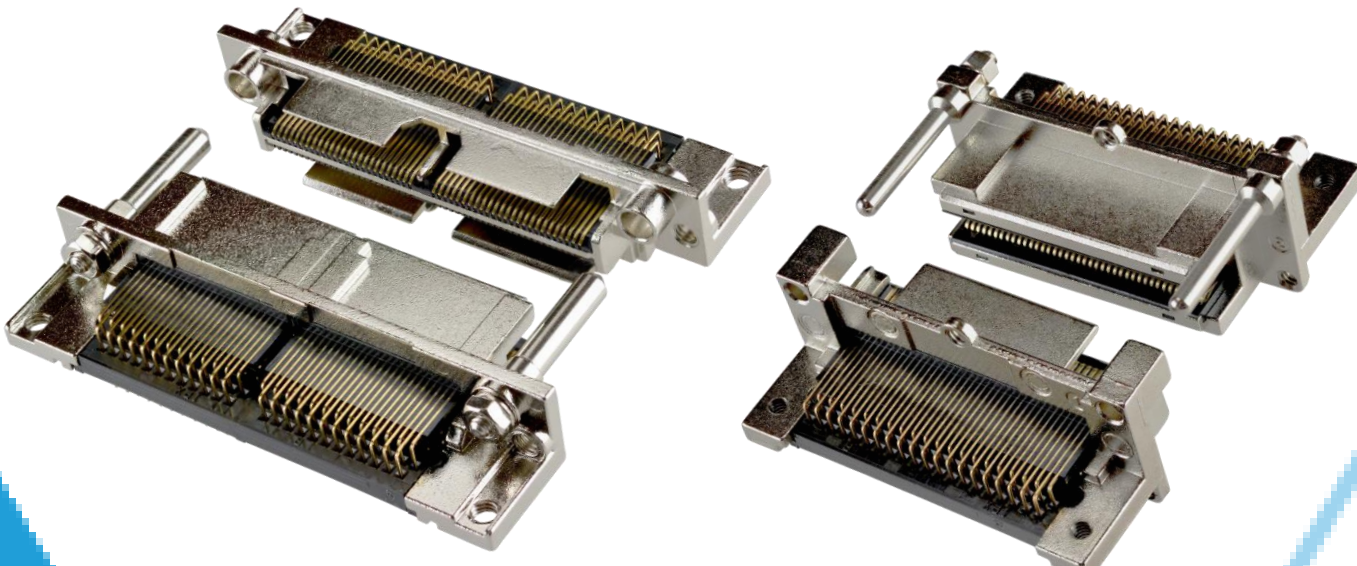
NOVASTACK® series



Board-to-Board  
Connectors



I/O  
Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC  
Connectors



Inquiry



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