

# CABLIN<sup>®</sup>-CA IIP PLUS

플 실드, 고속전송 대응(64Gbps/Lane PAM4), 0.4mm Pitch, 수평 결합 Type, Twinax 및 Micro 동축 Cable Assembly

**Product Specifications:**

Mating type	Horizontal	
Board Pitch (mm)	1.2 mm (differential pair) 0.4 mm (signal contacts)	
Wiping Length (mm)	0.495	
Mated size (mm)	Height	1.14 mm (1.3 mm max)
	Width	30.95 mm
	Depth	8.20 mm
Pin Counts	Range	Up to 60
	Available	60

**Applicable Cable Size:**

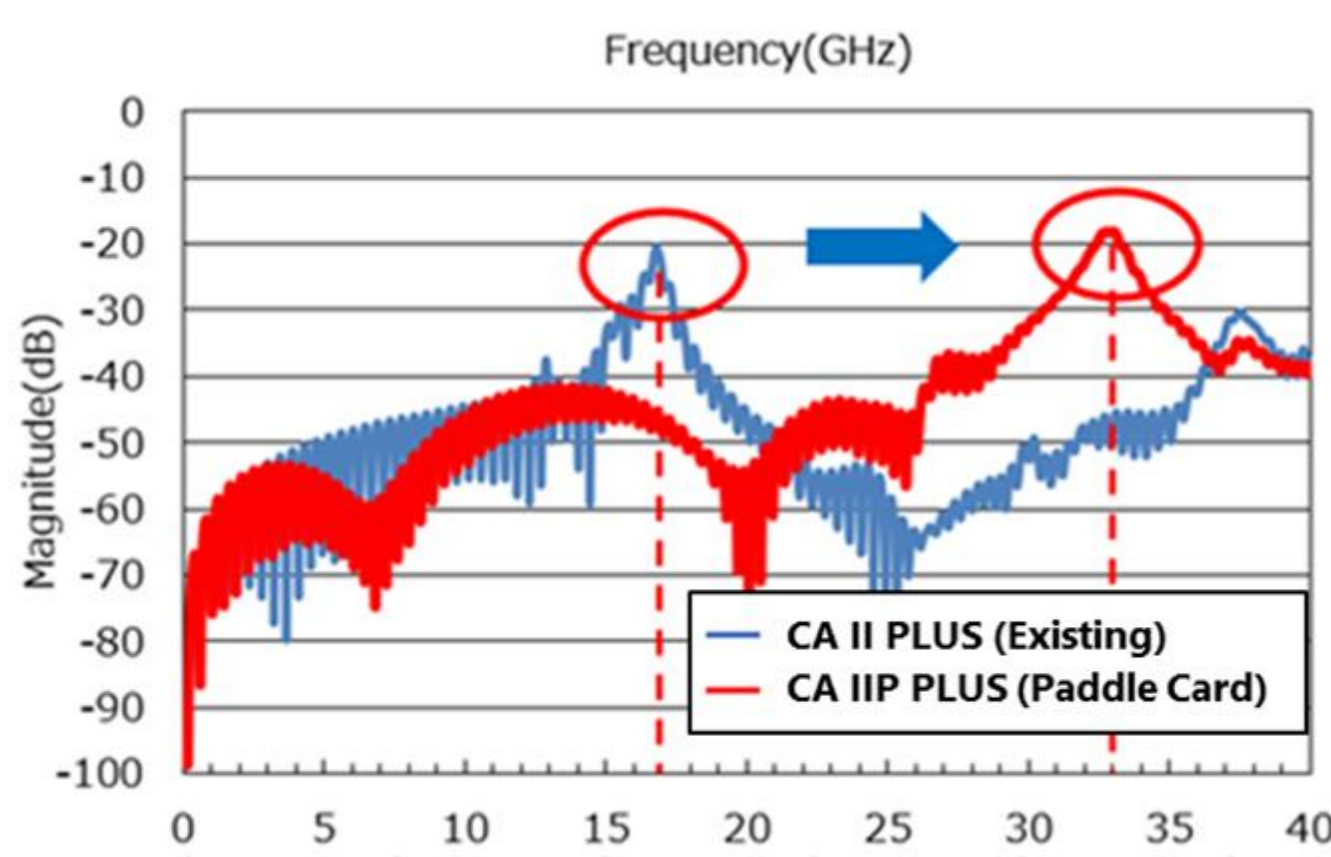
Maximum O.D. (mm)	1.2 mm (Twinax)
	0.4 mm (Micro-Coaxial)
	0.4 mm (Discrete)
Micro-Coaxial for Signal (AWG)	Diff 85 ohm: #38 & #36
Twinax for Signal (AWG)	Diff 85 ohm: #34
Discrete (AWG)	#32 or smaller



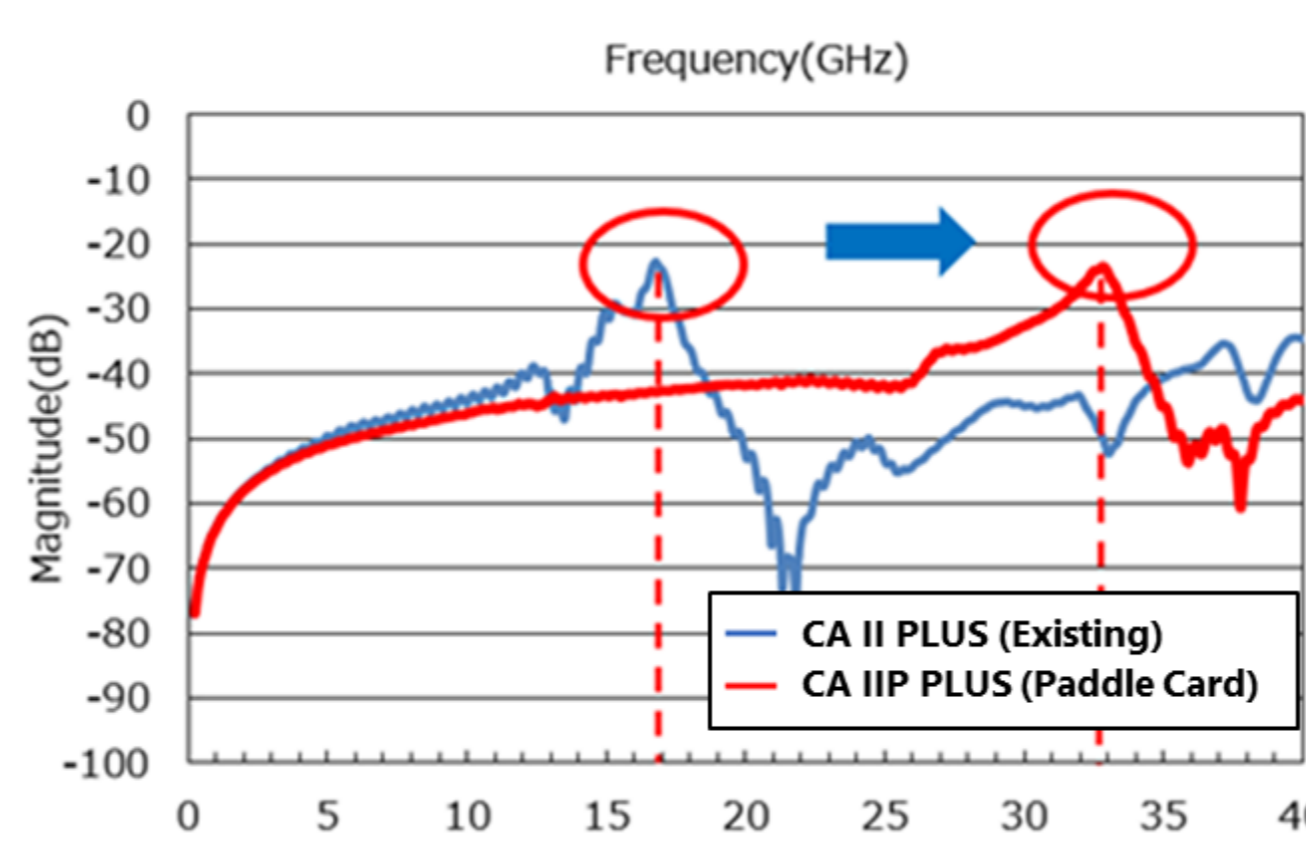
\*제품명 CABLINE<sup>®</sup>-CA IIP PLUS는 Harness의 제품 명칭입니다. Receptacle은 CABLINE<sup>®</sup>-CA II PLUS의 Receptacle(PN 20796-060E-##)입니다.  
 \*Plug는 Harness 제품으로 제공 가능합니다.. Cable 길이는 원하시는 길이로 맞출 수 있습니다.  
 \*기재가 없는 Pin수의 대응에 대해서는 문의해 주시기 바랍니다.

## ▶ Paddle Card 기술을 이용한 고속전송 64Gbps/lane PAM4

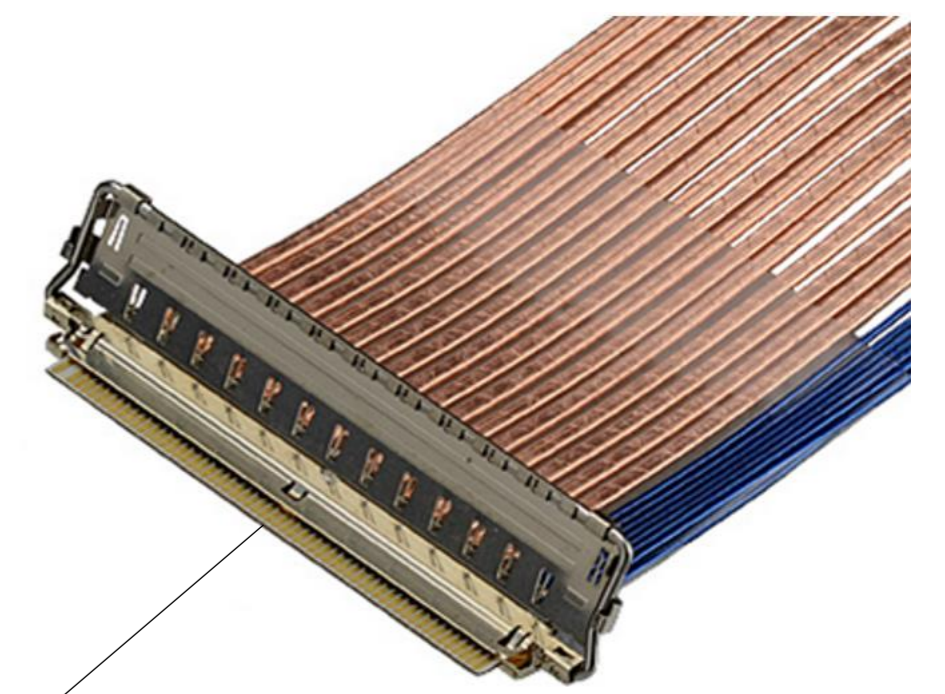
Cable Plug부에 Paddle Card를 채택함으로써 신호 품질을 향상시켜 기존 CABLINE Series보다 더 빠른 전송을 실현합니다.



Near End Cross Talk



Far End Cross Talk

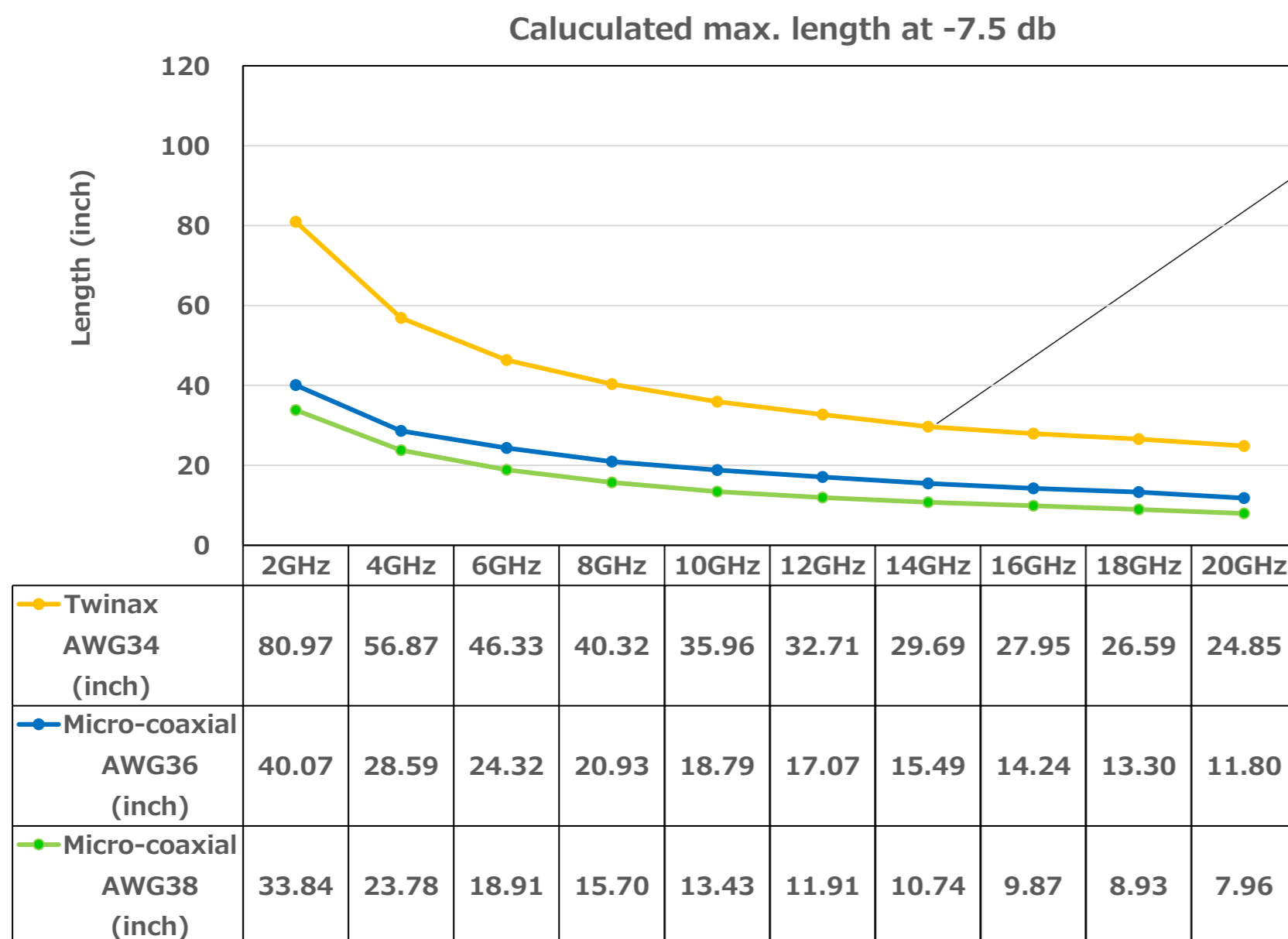


Paddle Card

Paddle Card의 기술 페이지

<https://www.i-pex.com/library/white-papers/paddle-card-technology>

## ▶ Twinax #34 Cable로 장거리 전송을 지원하며, Cable의 유연성이 있는 Micro-coaxial #38, 36 Cable로 배선이 용이합니다.

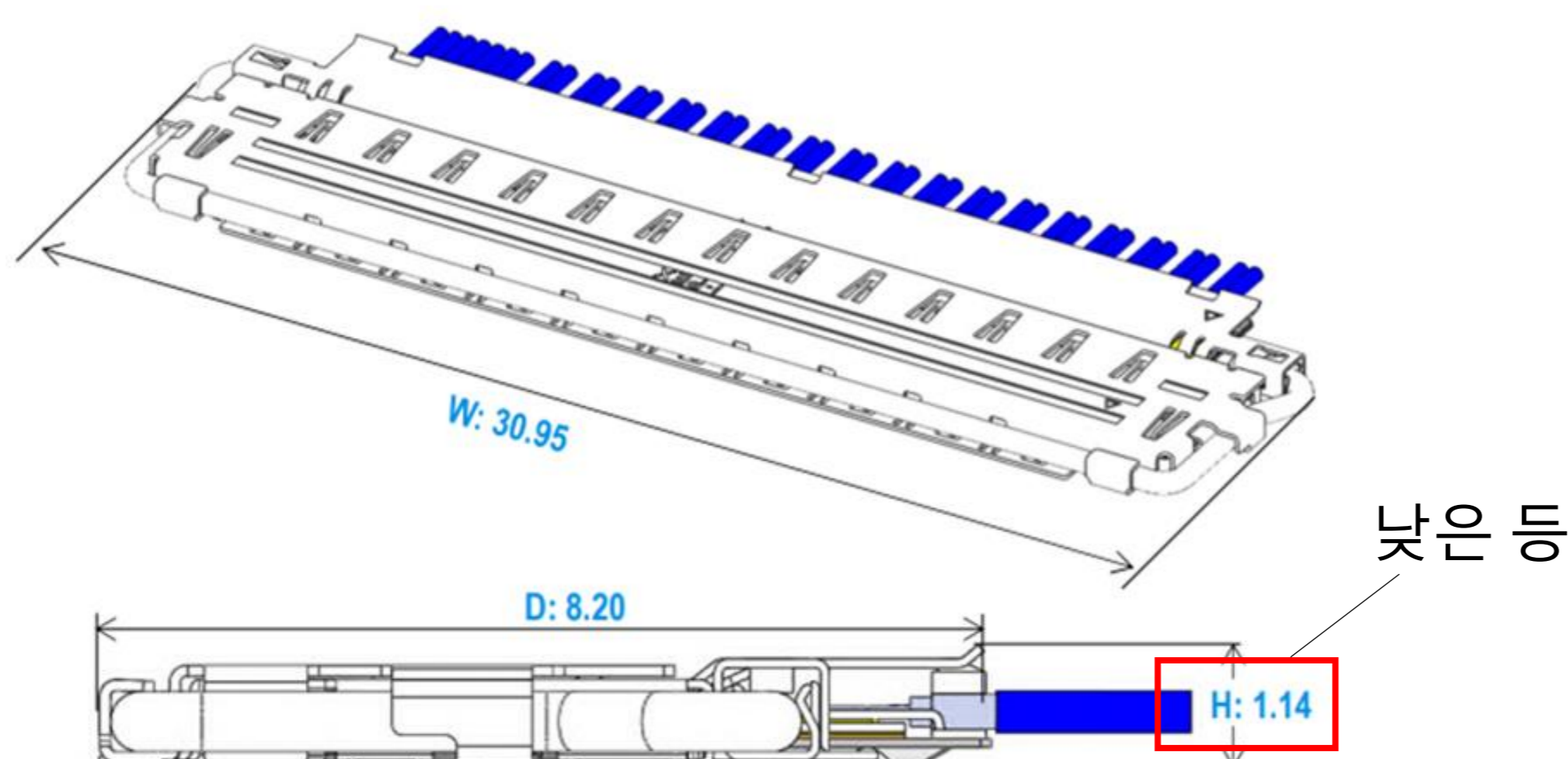


Twinax AWG34

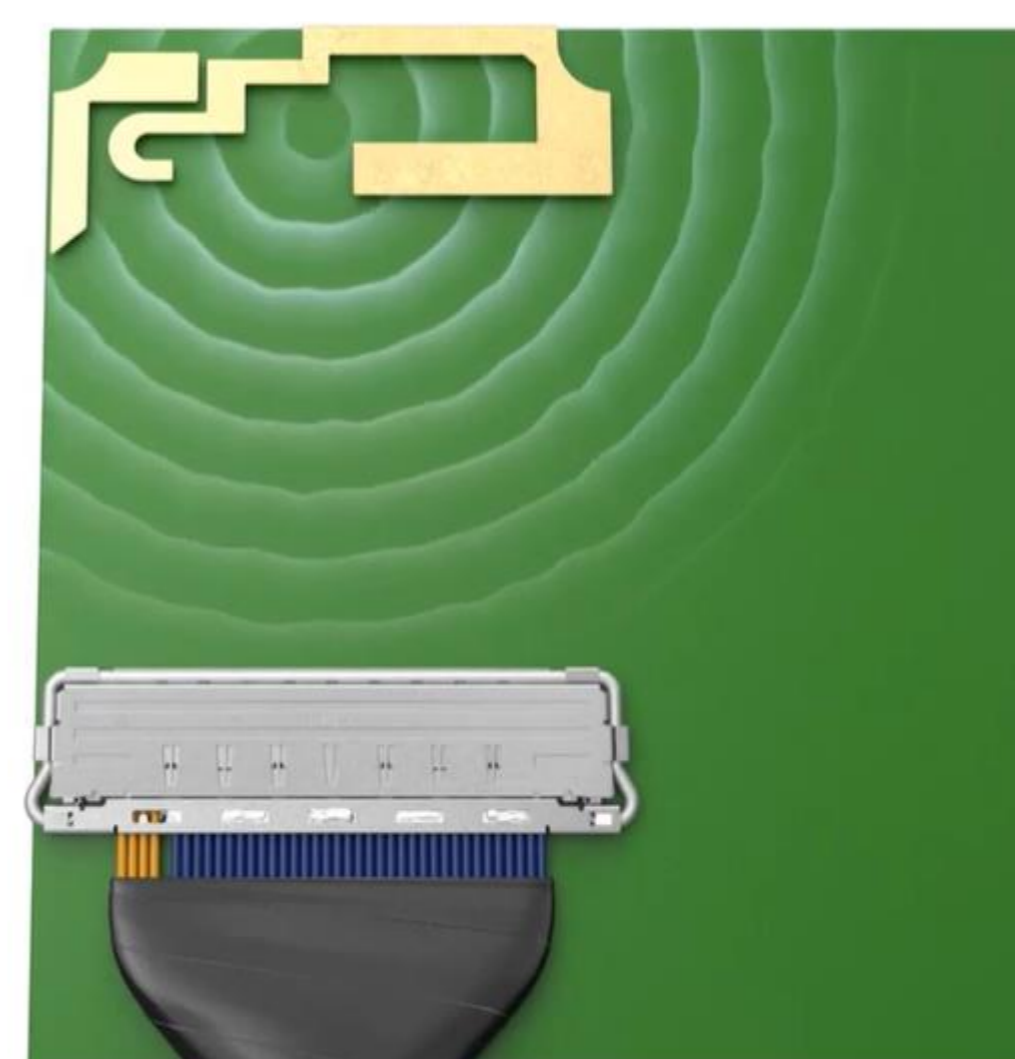
Flexibility of Micro-coaxial cable



## ▶ 저배 Type H=1.14 mm, 360도 Full Shield에 의한 EMC 대책과 다점 Ground 접점 디자인



EMC ZenShield<sup>®</sup> technology





# Component Parts Details

## Component Parts

### Connector parts



PLUG Harness



RECEPTACLE

# Plug Harness Assembly

PART No.	GROUP	CABLE LENGTH	DIFFERENTIAL LANE:C
82065-600B-01	A	200.00±5.00	TWINAX CABLE, AWG#34 85 OHM
82065-600B-02		500.00±10.00	
82065-600B-03	B	200.00±5.00	
82065-600B-04		500.00±10.00	
82065-400B-01	A	200.00±5.00	MICRO COAXIAL CABLE, AWG#36 42.5 OHM, BLUE
82065-400B-02		500.00±10.00	
82065-400B-03	B	200.00±5.00	
82065-400B-04		500.00±10.00	
82065-100B-01	A	200.00±5.00	MICRO COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
82065-100B-02		500.00±10.00	
82065-100B-03	B	200.00±5.00	
82065-100B-04		500.00±10.00	

- NOTE.
- TO HANDLE THIS CONNECTOR  
YOU MUST READ AND FOLLOW THE INSTRUCTION MANUAL BELOW.  
I-PEX INSTRUCTION MANUAL No.HIM-24004.
  - ELECTRIC CHARACTERISTICS  
WITHSTANDVOLTAGE : AC 250V LEAKAGE CURRENT 2.0mA MAX.  
INSULATION RESISTANCE : 50MΩ MIN. DC 100V
  - THE OPERATING TEMPERATURE OF THE HARNESS : 80°C MAX.

## FOR GROUP A

PIN ASSIGNMENT		
CONNECTOR 1	CABLE	CONNECTOR 2
60	NO CABLE	60
59	MICRO COAXIAL CABLE, AWG#38 42.5 OHM, BLUE	59
.	.	.
53	MICRO COAXIAL CABLE, AWG#38 42.5 OHM, BLUE	53
52	GROUND	52
51	C	51
50	GROUND	50
49	C	49
48	GROUND	48
47	C	47
46	GROUND	46
.	.	.
9	C	9
8	GROUND	8
7	C	7
6	GROUND	6
5	C	5
4	GROUND	4
3	C	3
2	GROUND	2
1	C	1

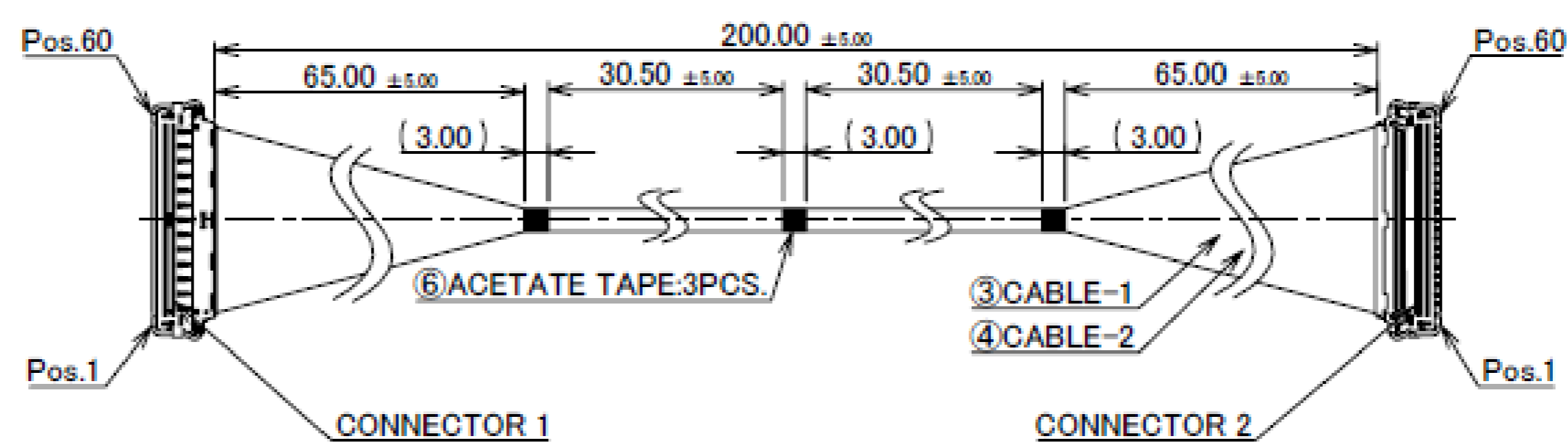
## FOR GROUP B

PIN ASSIGNMENT		
CONNECTOR 1	CABLE	CONNECTOR 2
60	C	60
59	NO CABLE	59
58	C	58
57	GROUND	57
56	C	56
55	GROUND	55
54	C	54
53	GROUND	53
52	C	52
51	GROUND	51
.	.	.
17	C	17
16	GROUND	16
15	C	15
14	GROUND	14
13	C	13
12	GROUND	12
11	C	11
10	GROUND	10
9	C	9
8	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE	8
.	.	.
1	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE	1

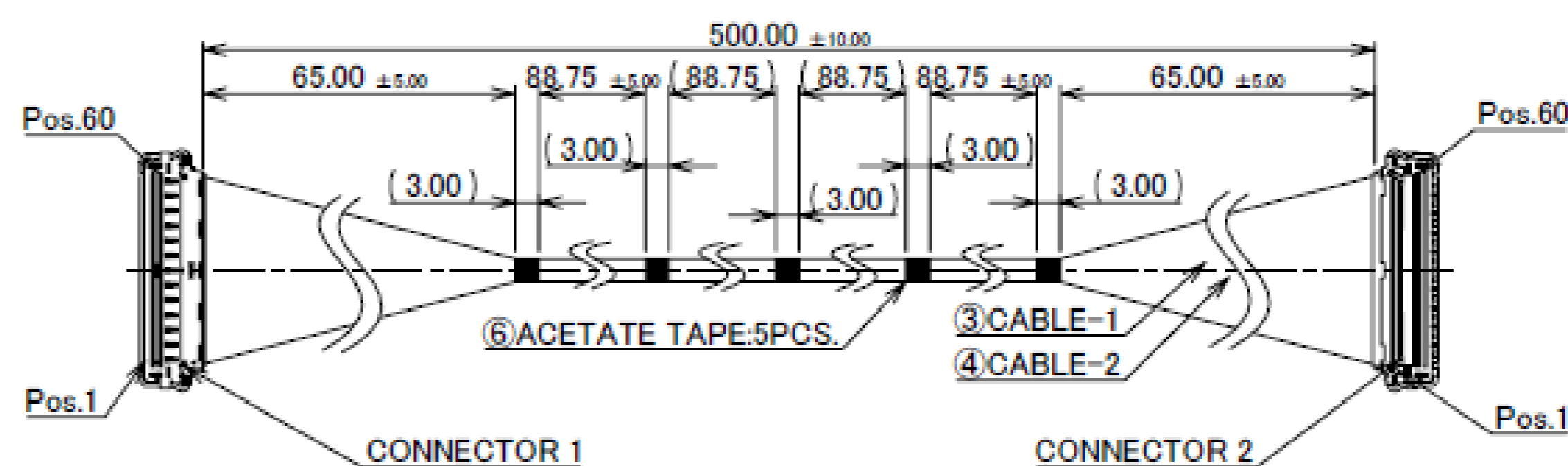
Rev.0

PART No.
82065-*00B-0#

82065-600B-01 82065-600B-03  
82065-400B-01 82065-400B-03  
82065-100B-01 82065-100B-03



82065-600B-02 82065-600B-04  
82065-400B-02 82065-400B-04  
82065-100B-02 82065-100B-04

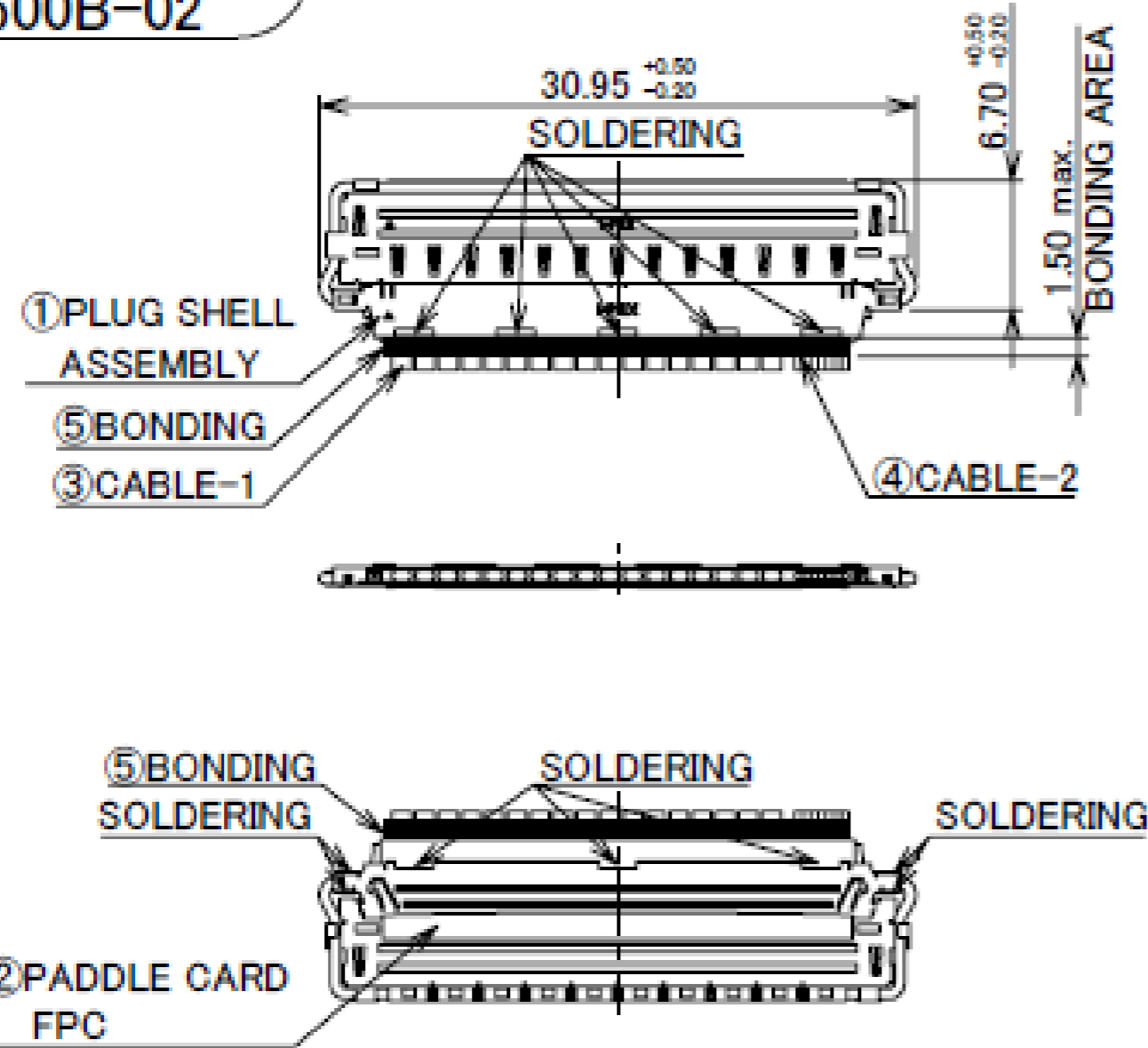


Rev.0

# Plug Harness Assembly

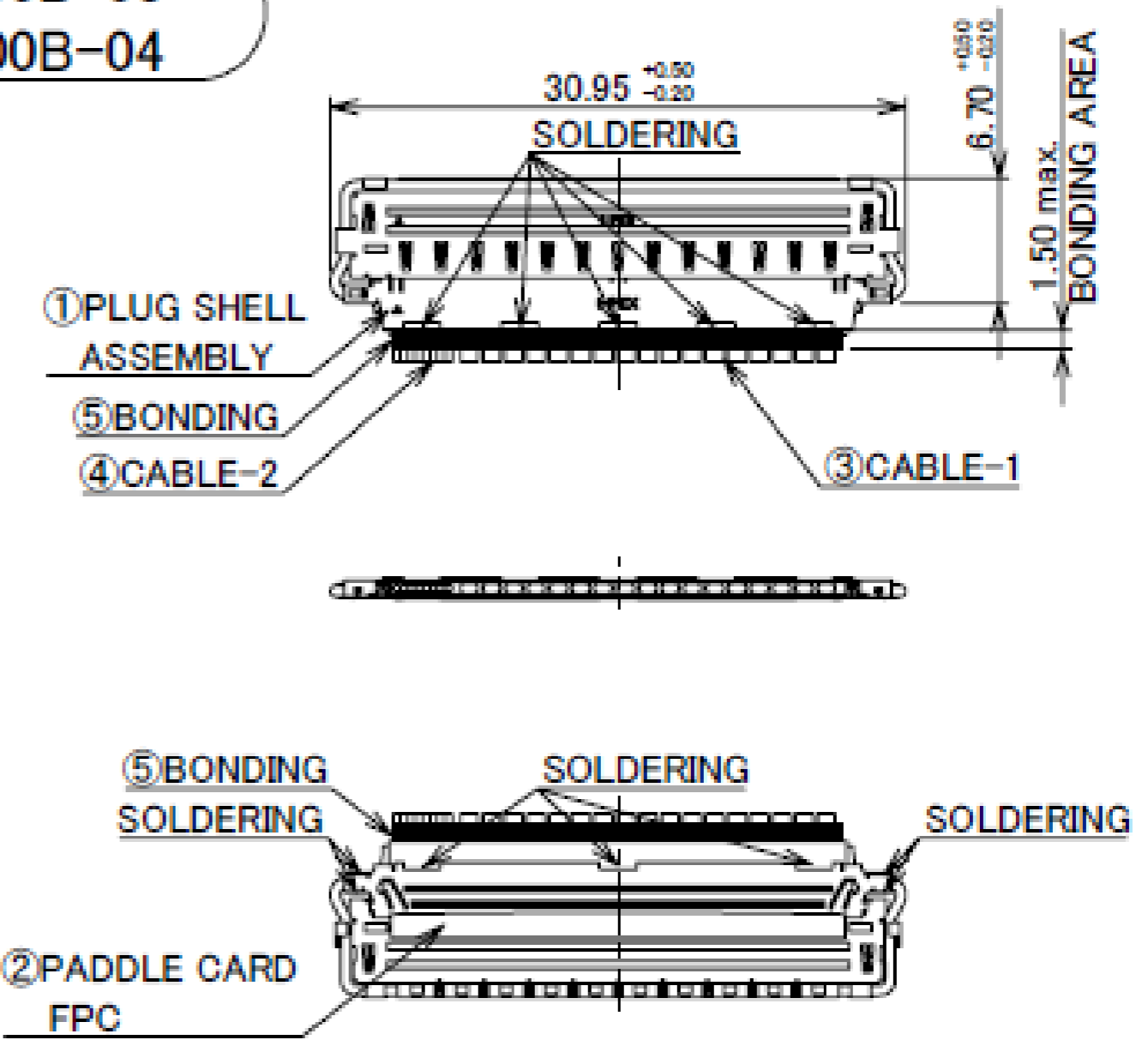
PART No.  
82065-600B-0#

82065-600B-01  
82065-600B-02



6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
4	CABLE-2	-	7	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
3	CABLE-1	-	17	TWINAX CABLE, AWG#34 85 OHM
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

82065-600B-03  
82065-600B-04

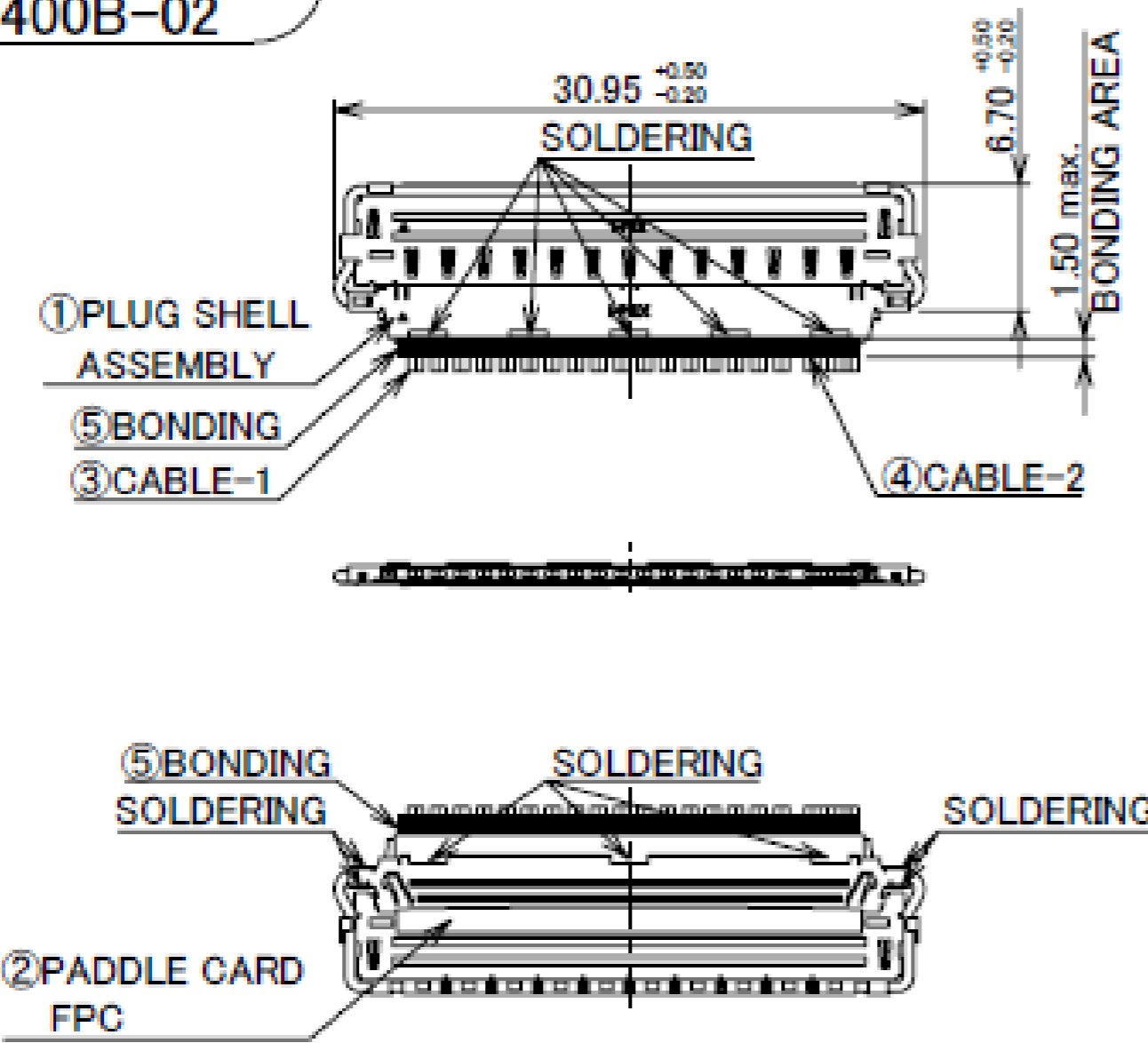


6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
4	CABLE-2	-	8	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
3	CABLE-1	-	17	TWINAX CABLE, AWG#34 85 OHM
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

Rev.0

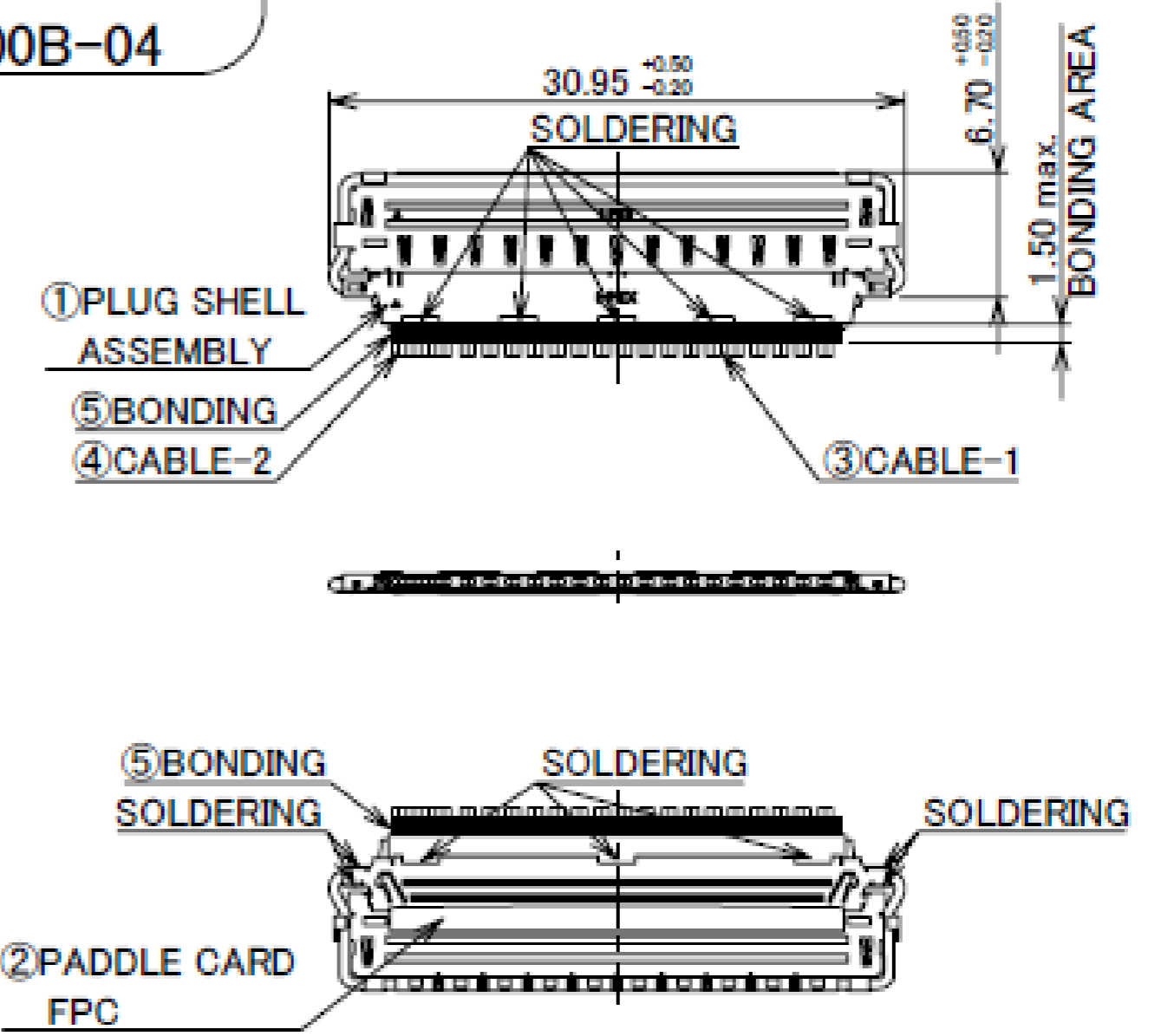
PART No.  
82065-400B-0#

82065-400B-01  
82065-400B-02



6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
4	CABLE-2	-	7	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
3	CABLE-1	-	34	MICRO-COAXIAL CABLE, AWG#36 42.5 OHM, BLUE
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

82065-400B-03  
82065-400B-04



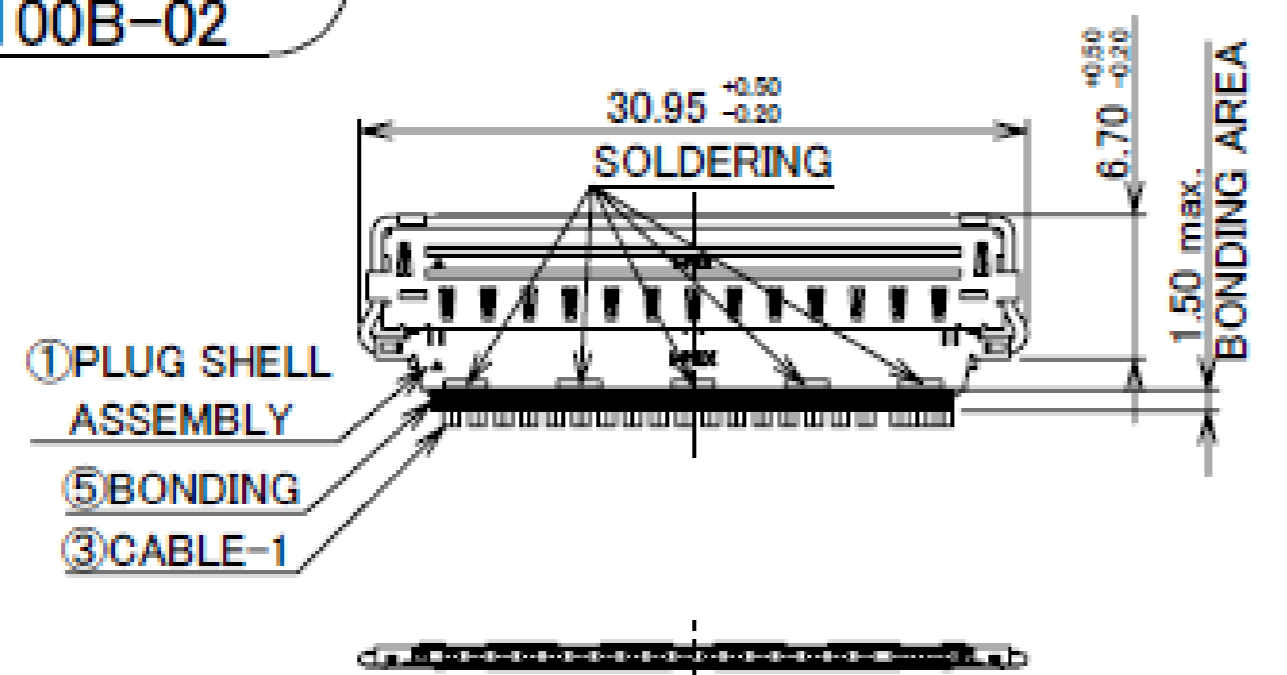
6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
4	CABLE-2	-	8	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
3	CABLE-1	-	34	MICRO-COAXIAL CABLE, AWG#36 42.5 OHM, BLUE
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

Rev.0

# Plug Harness Assembly

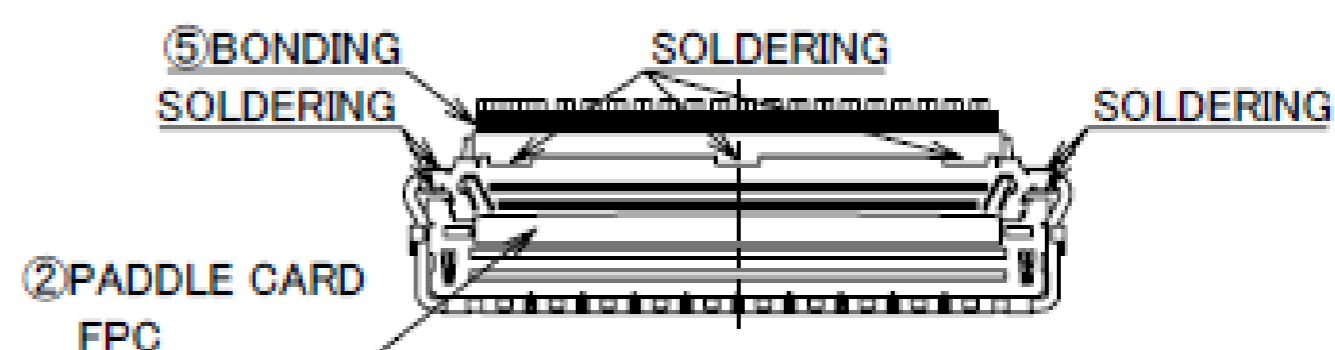
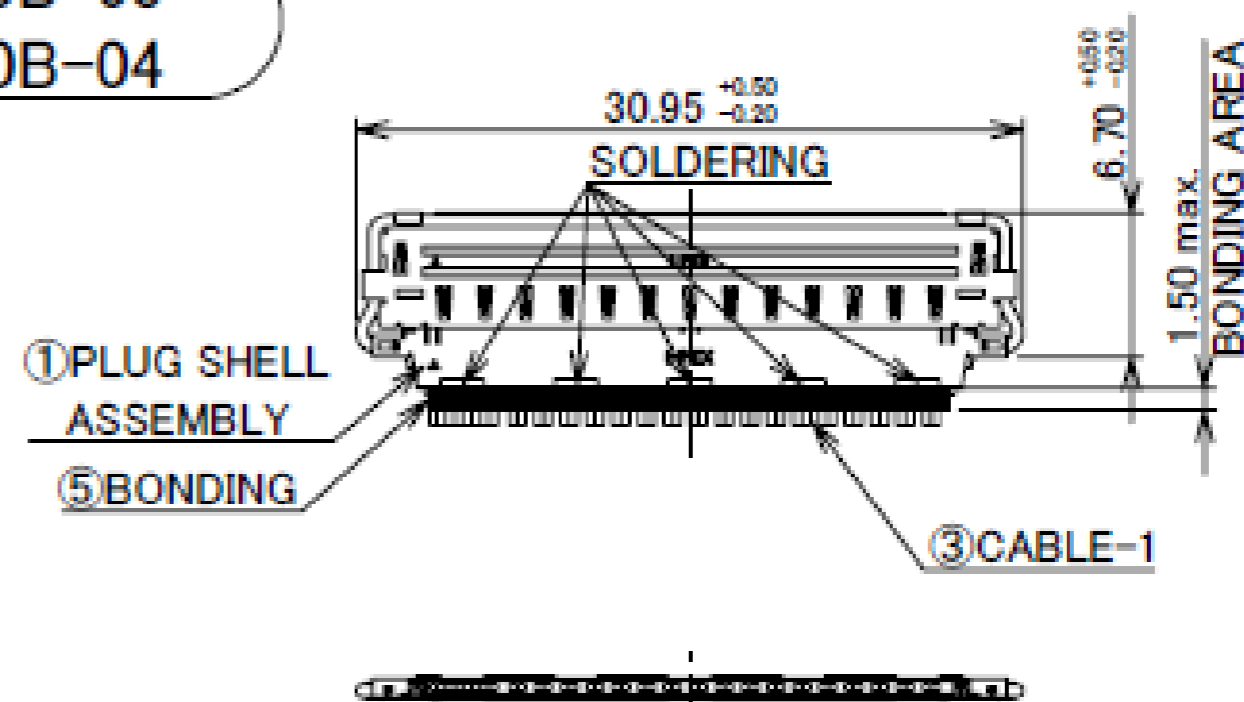
PART No.
82065-100B-0#

82065-100B-01  
82065-100B-02



6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
3	CABLE-1	-	41	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

82065-100B-03  
82065-100B-04



6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
3	CABLE-1	-	42	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

Rev.0

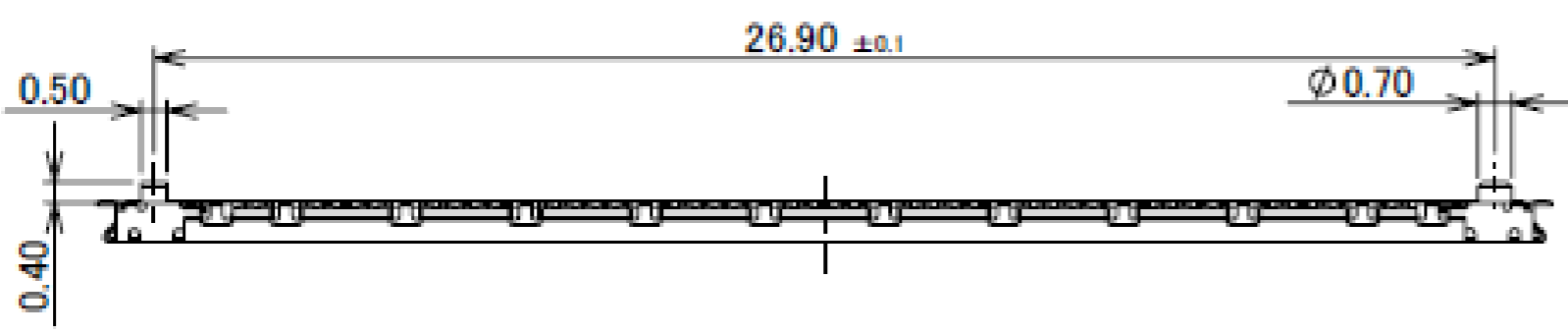
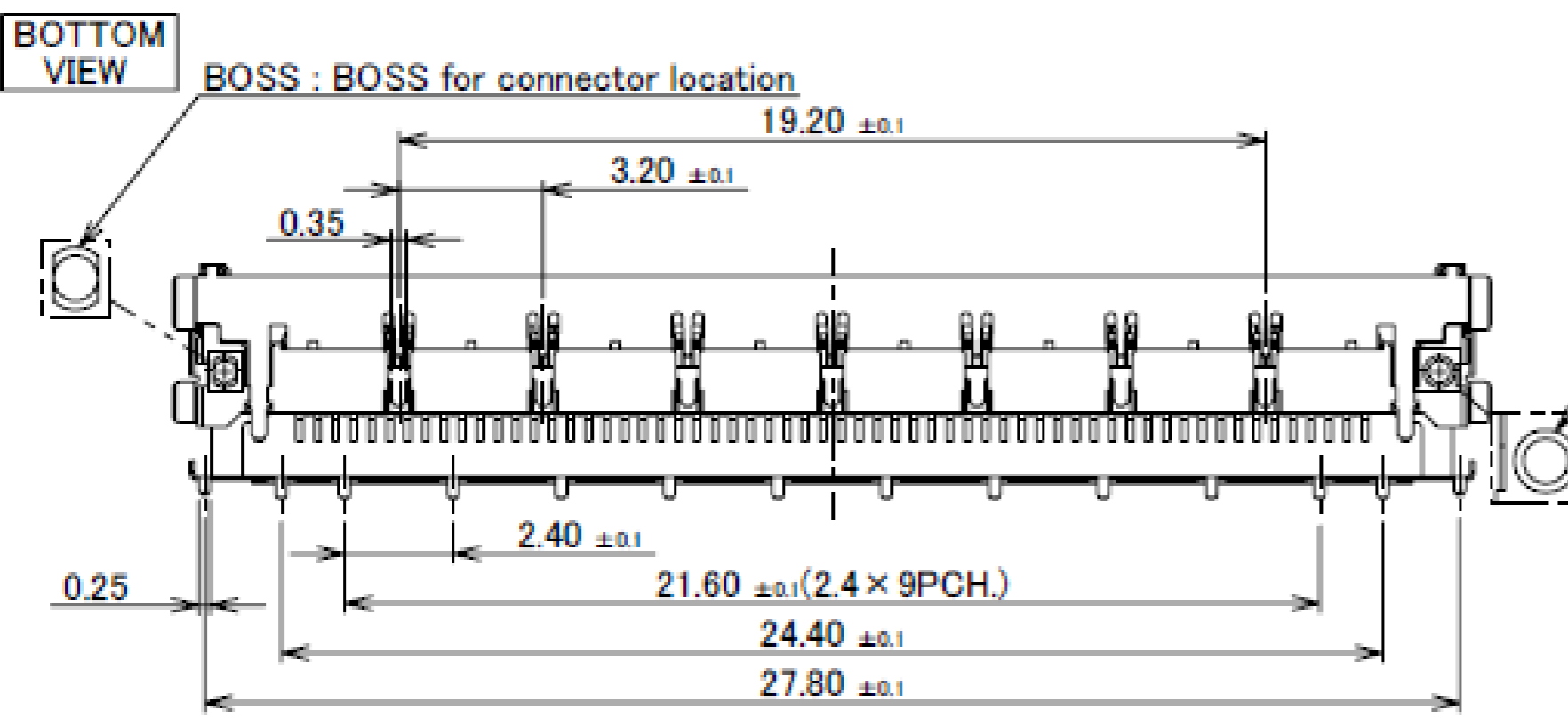
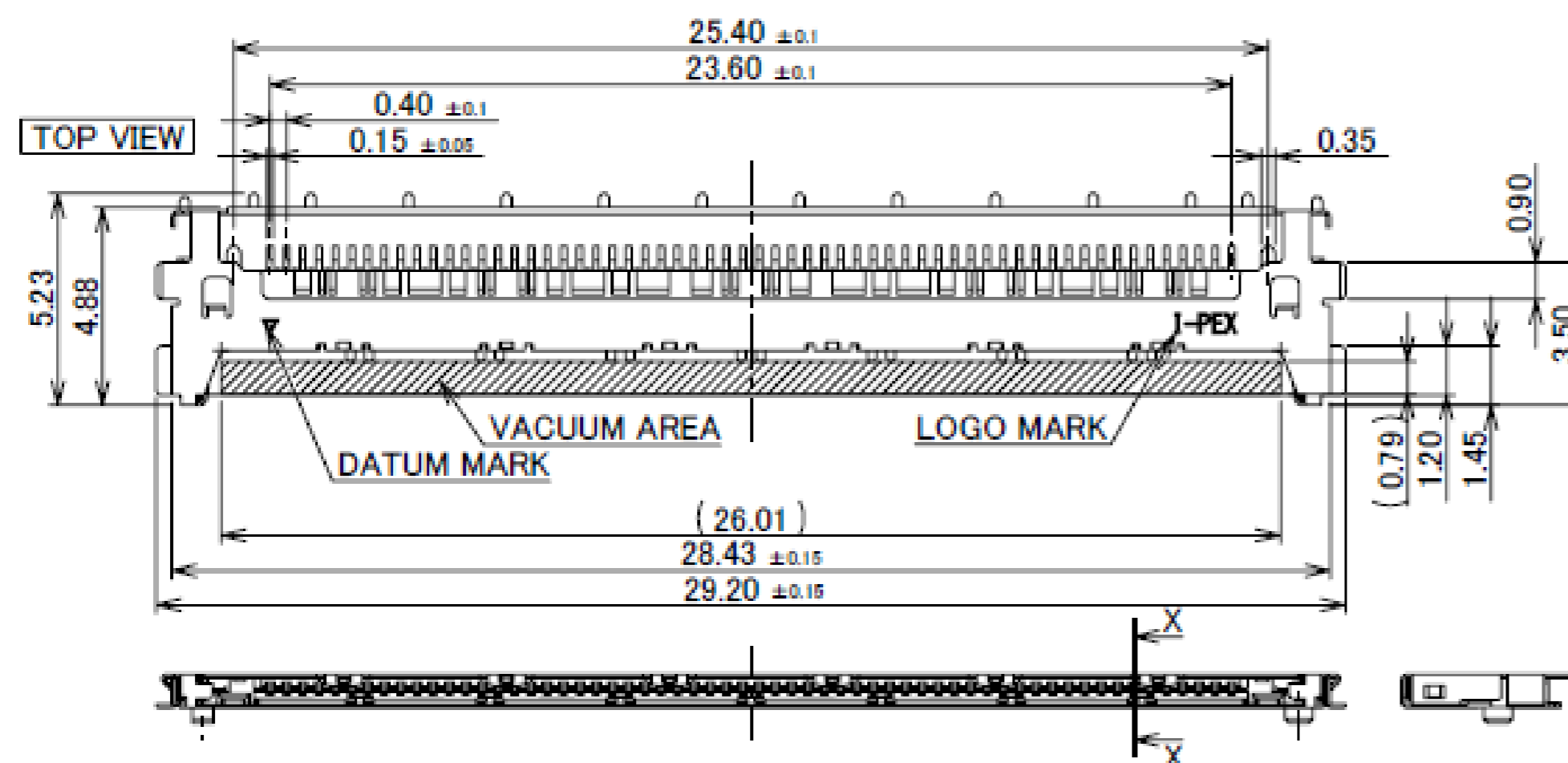
ITEMS	SPECIFICATIONS
APPLICABLE CABLE	Micro Coaxial: AWG#38 42.5 ohm (Diff 85ohm) Micro Coaxial: AWG#38 42.5 ohm (Diff 85ohm) TWINAX AWG#34 85 ohm
RATING AMPERAGE (FOR CONTACT)	0.4A AC/DC (Micro Coaxial: AWG#38 42.5 ohm (Diff 85ohm)) 0.4A AC/DC (Micro Coaxial: AWG#36 42.5 ohm (Diff 85ohm)) 0.6A AC/DC (TWINAX AWG#34 85ohm)  ※TESTING BY REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION
RATING VOLTAGE	100V AC (PER CONTACT PIN)
OPERATING TEMPERATURE	233 ~ 358K (-40°C ~ 85°C)
OPERATING HUMIDITY	85% MAX. (NON-CONDENDING)
CONTACT RESISTANCE	INITIAL: 380mohm MAX. (Micro Coaxial: AWG#38) 275mohm MAX. (Micro Coaxial: AWG#36) 180mohm MAX. (TWINAX AWG#34 85ohm)  AFTER TEST: Δ40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : Δ40mohm MAX.
INSULATION RESISTANCE	INITIAL: 1000Mohm MIN. / AFTER TEST: 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER 30 CYCLES)	60P: 40.0 N MAX.
UNMATING FORCE (INITIAL / AFTER 30 CYCLES)	60P: 2.0N MIN.
CABLE RETENTION FORCE	60P: 29.40 N MIN.
PRODUCT SPECIFICATION	PRS-2908
TEST REPORT	TR-24055
INSTRUCTION MANUAL	HIM-24004

Rev.0



# Receptacle Assembly

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



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

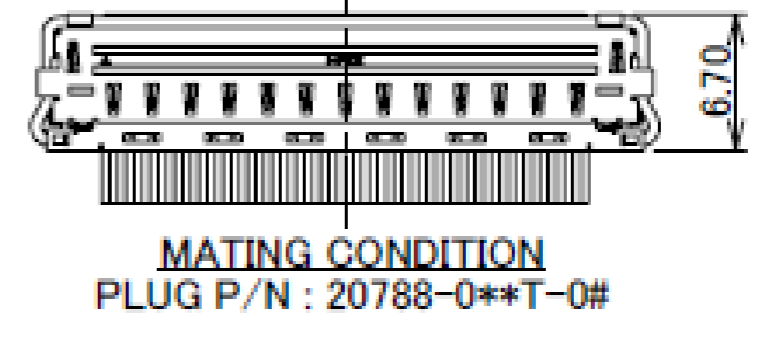
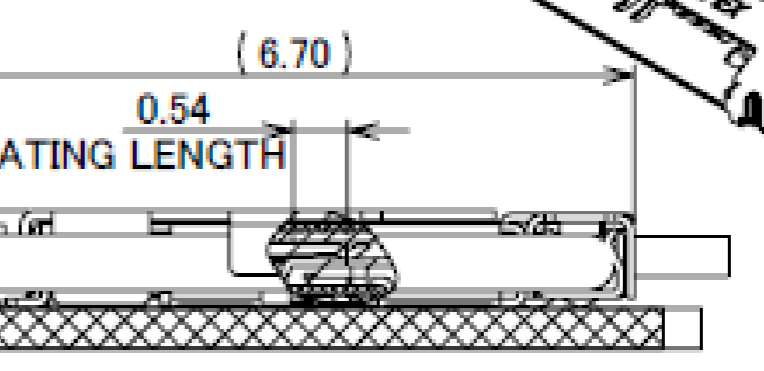
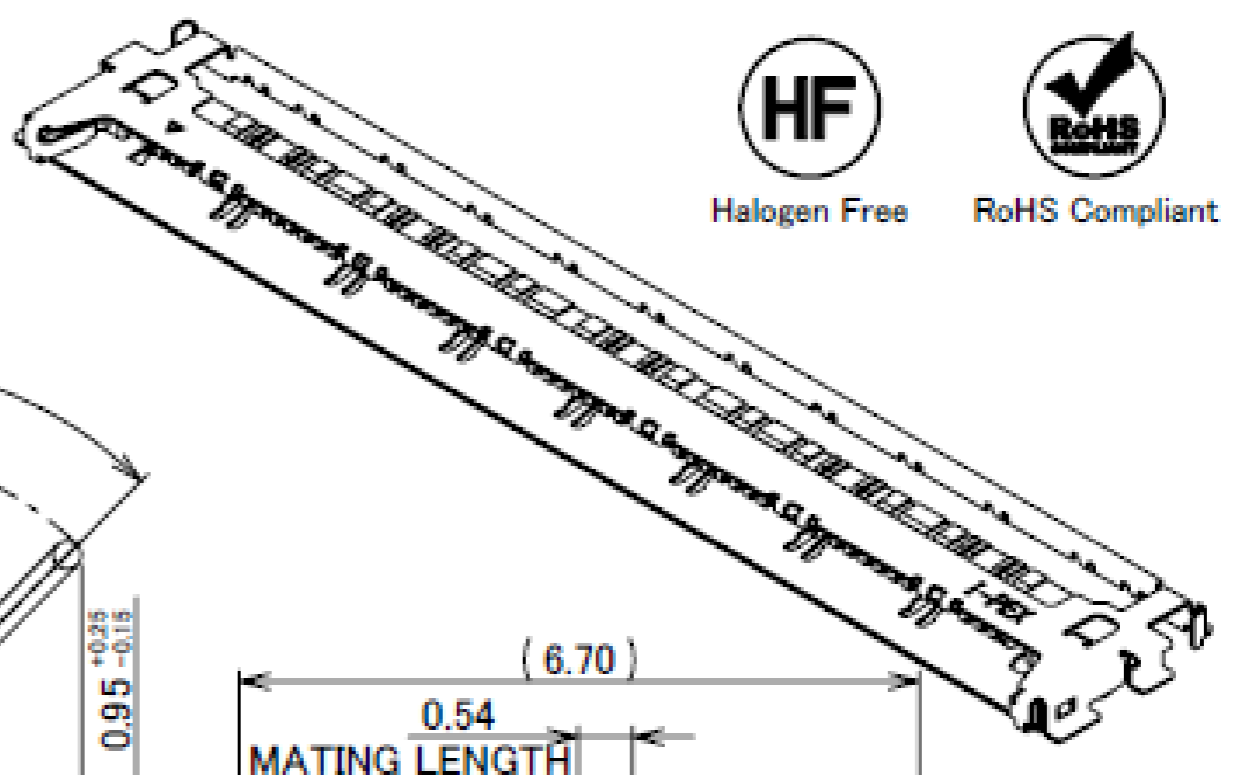
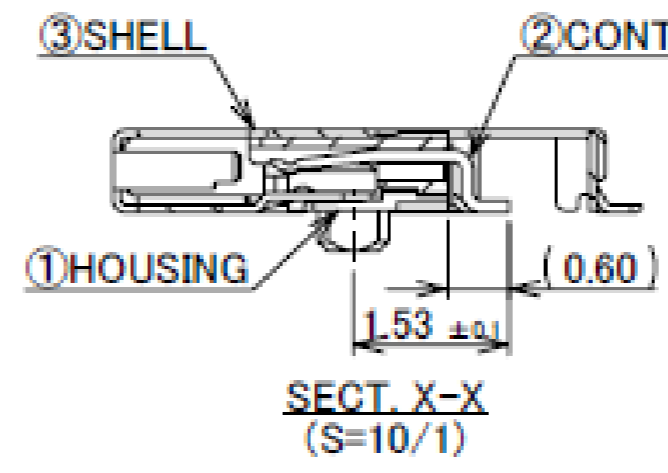
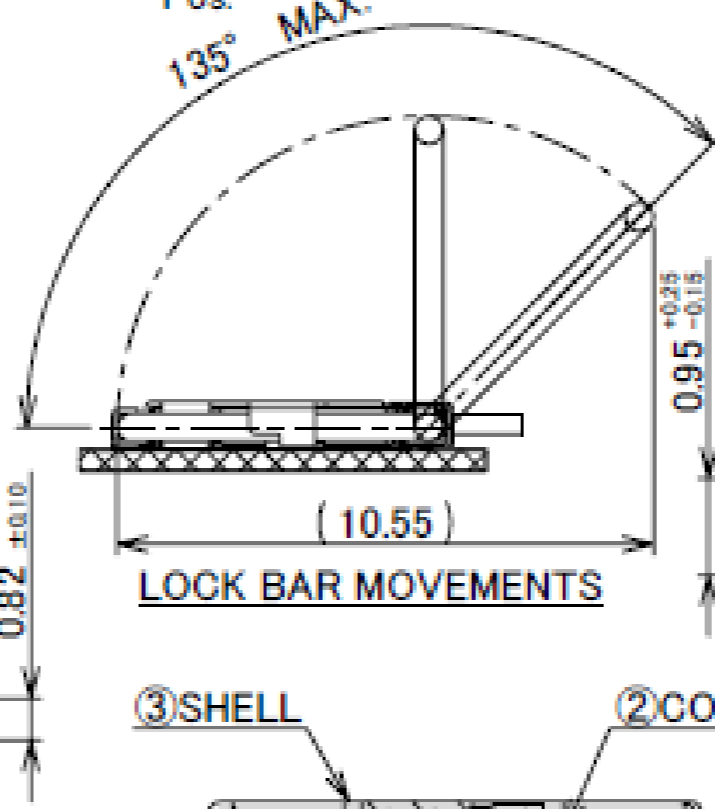
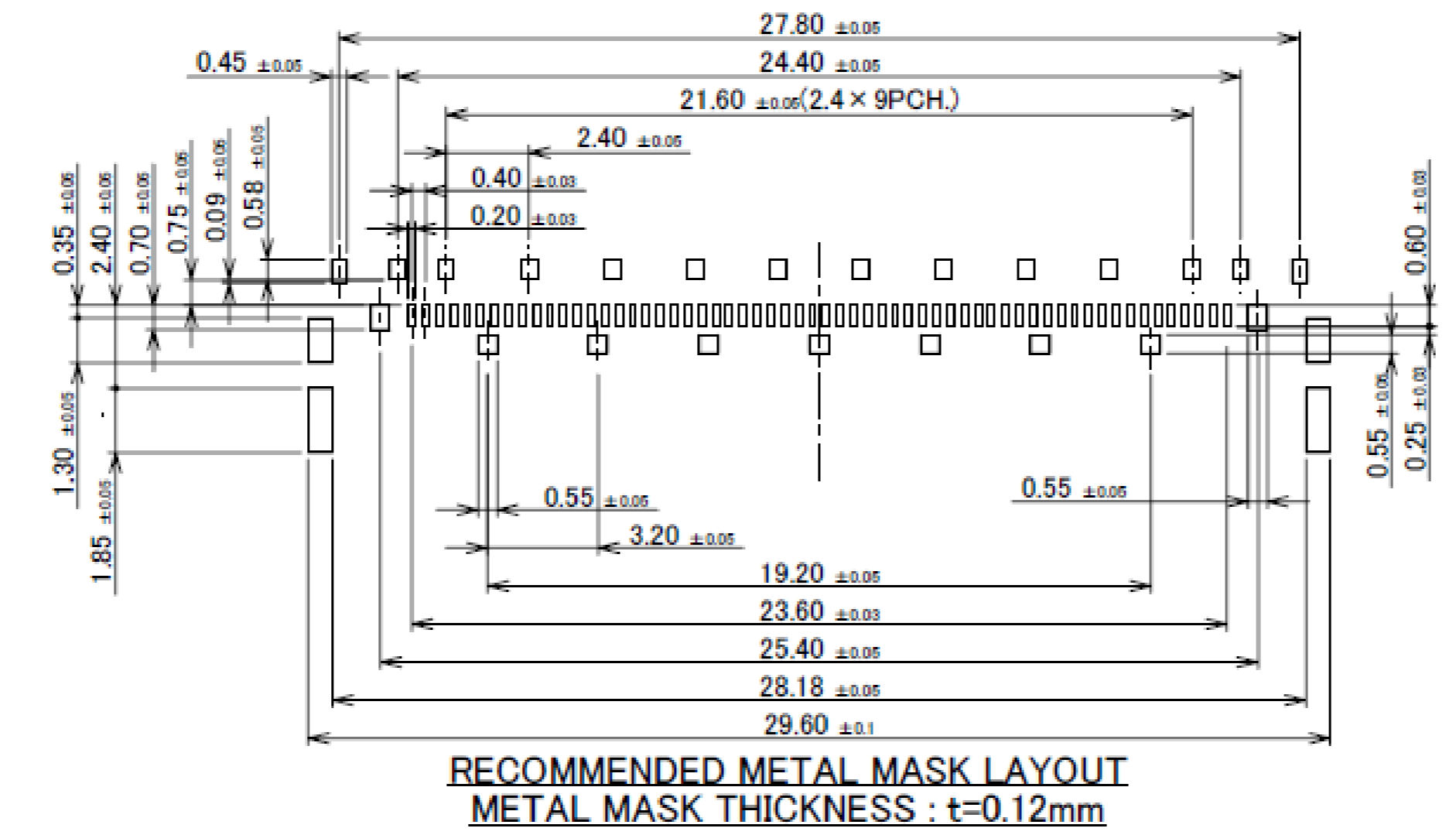
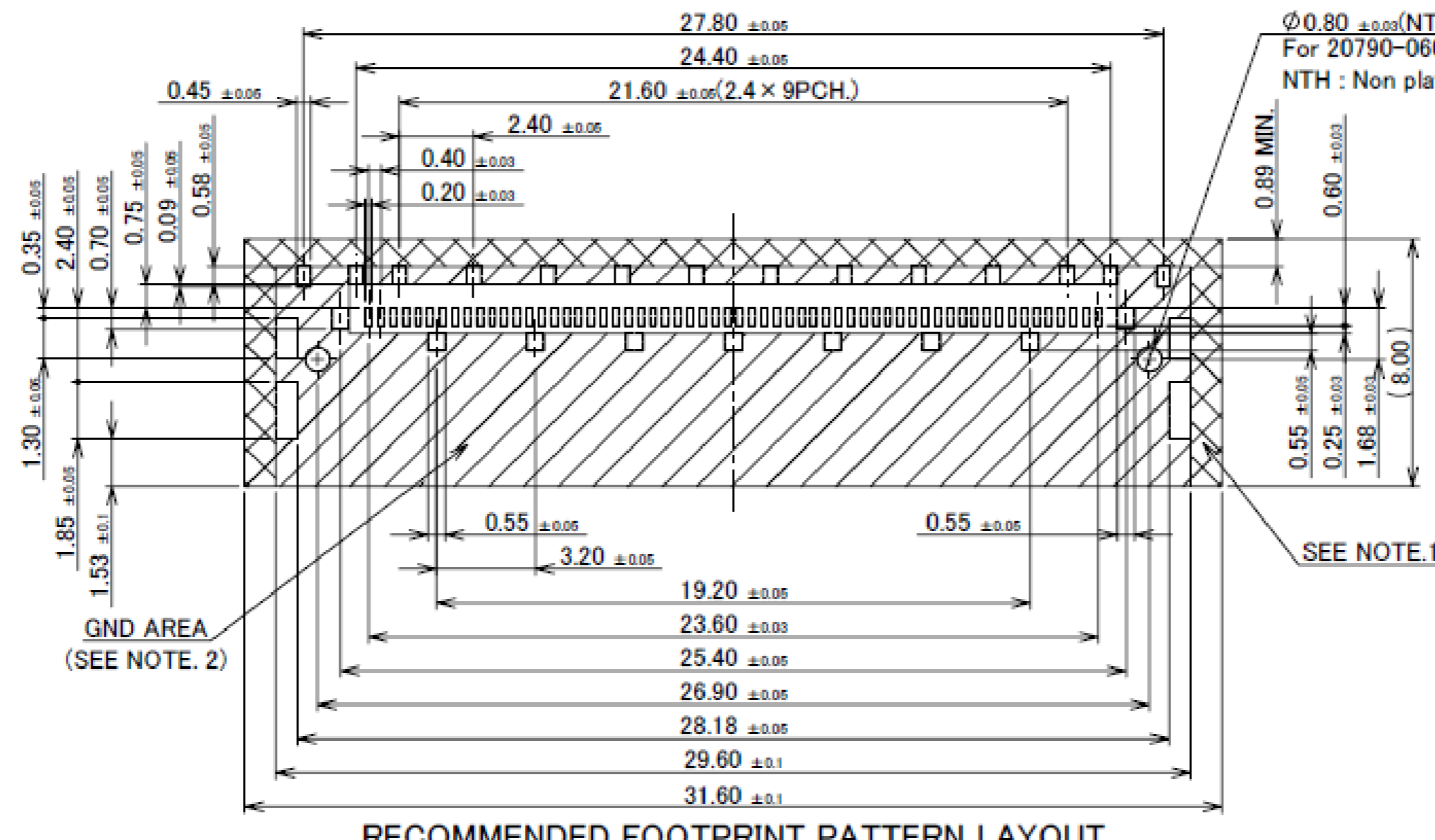


TABLE 1

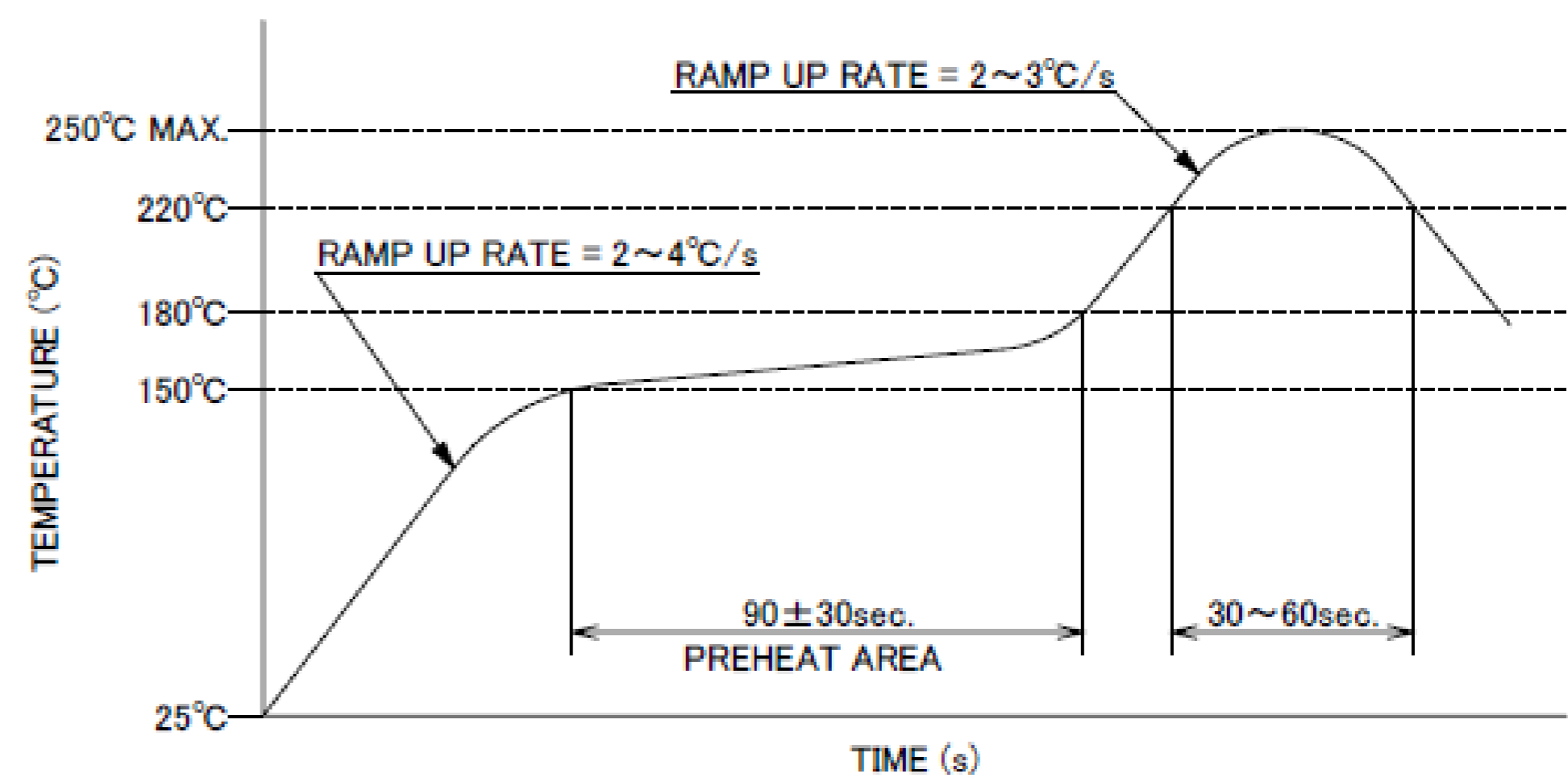
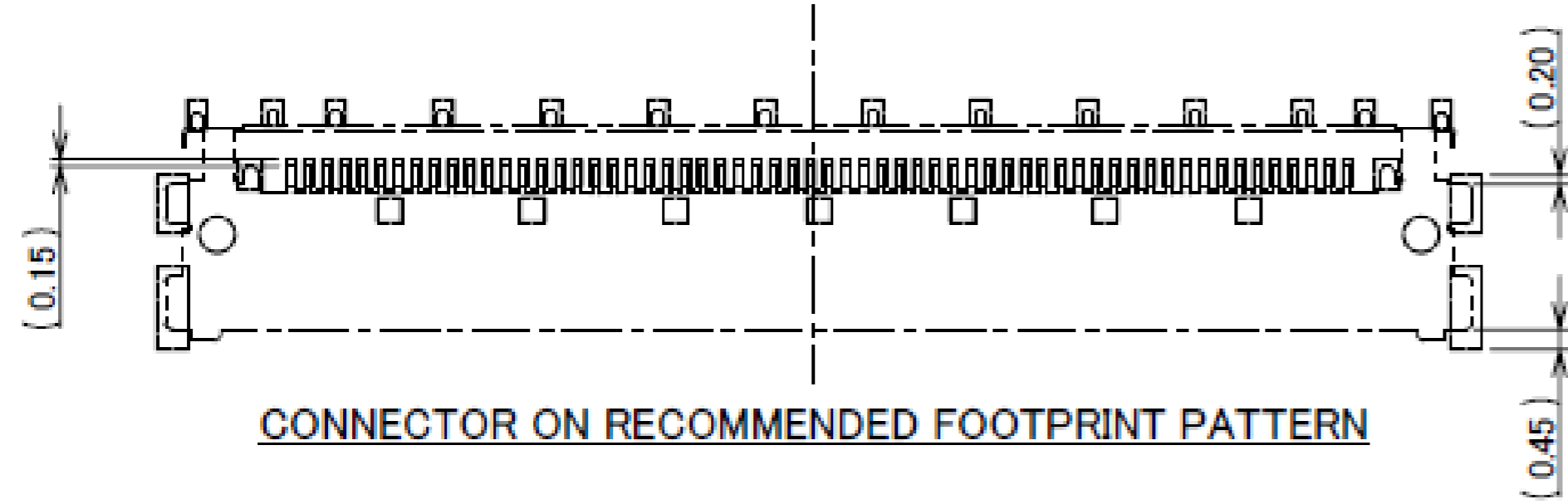
PART NO.	CONTACT FINISH
20790-0**E-0#	CONTACT & SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
20790-0**E-1#	CONTACT AREA : Au 0.38 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN.
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0 .BLACK



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

# Receptacle Assembly



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

Rev.17

FOR CABLINE-CA II PLUS PLUG CABLE ASSEMBLY (DWG. NO. 20788)

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG# 36 , 34 TWINAX CABLE : AWG# 40 , 42
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)	0.1A AC/DC [AWG#44] PER CONTACT PIN/UP TO 60 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 60 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN/UP TO 60 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT PIN/UP TO 18 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT PIN/UP TO 6 CONTACTS 1.0A AC/DC [AWG#34] PER CONTACT PIN/UP TO 6 CONTACTS ※TESTING BY REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION.
OPERATING TEMPERATURE	233~378K(-40°C~105°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : <math>\triangle</math>40mohm 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 : <math>\triangle</math>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.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2261
TEST REPORT	TR-16075, TR-23031
INSTRUCTION MANUAL	HIM-16028
PACKING STANDARD	PST-16078
APPEARANCE CRITERIA NO.	QLS-A***

Rev.17



# Custom Connectors Available

 RF Connectors

MHF® series



CABLIN® series



Micro-Coaxial/Twinax Connectors

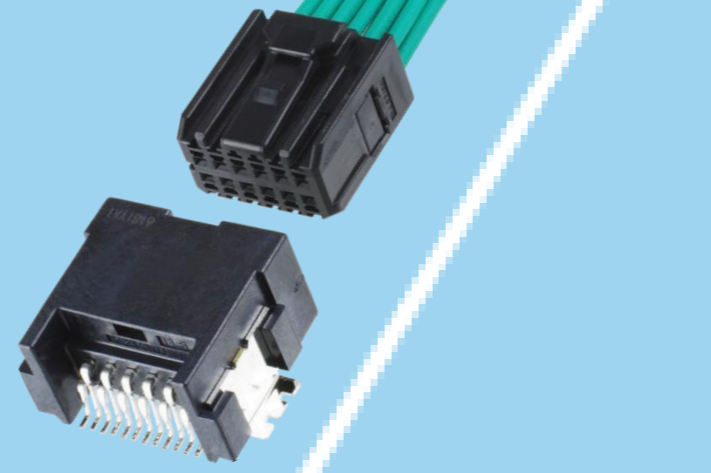


Wire-to-Board Connectors/Terminals

AP series



ISH® series



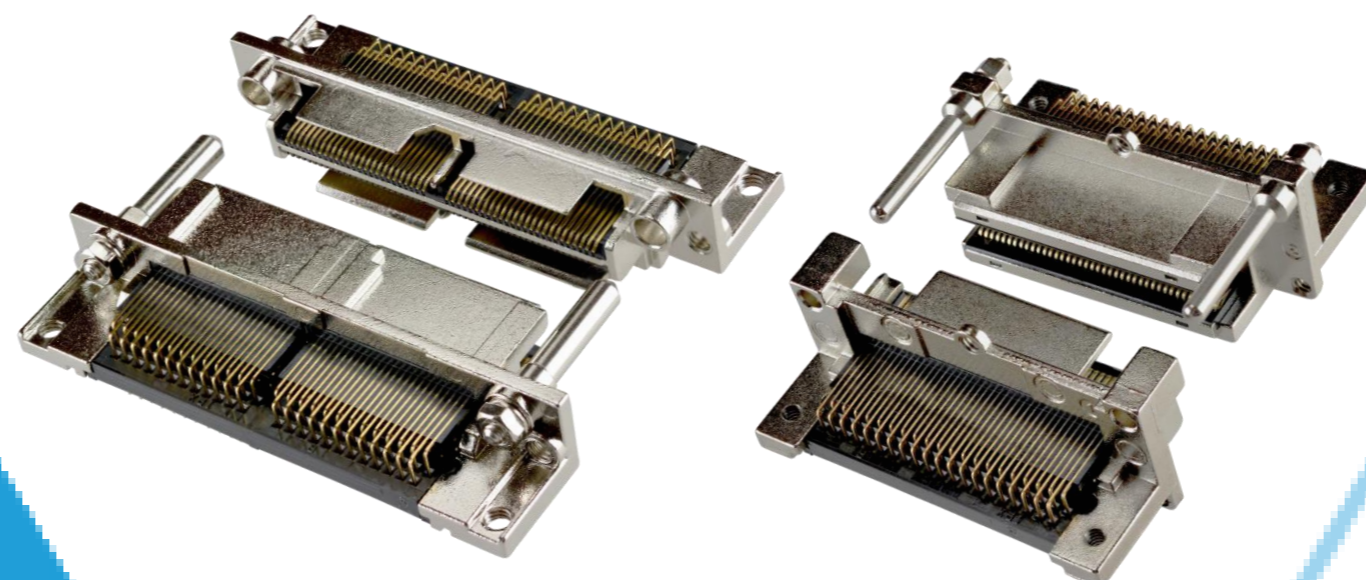
NOVASTACK® series



Board-to-Board Connectors



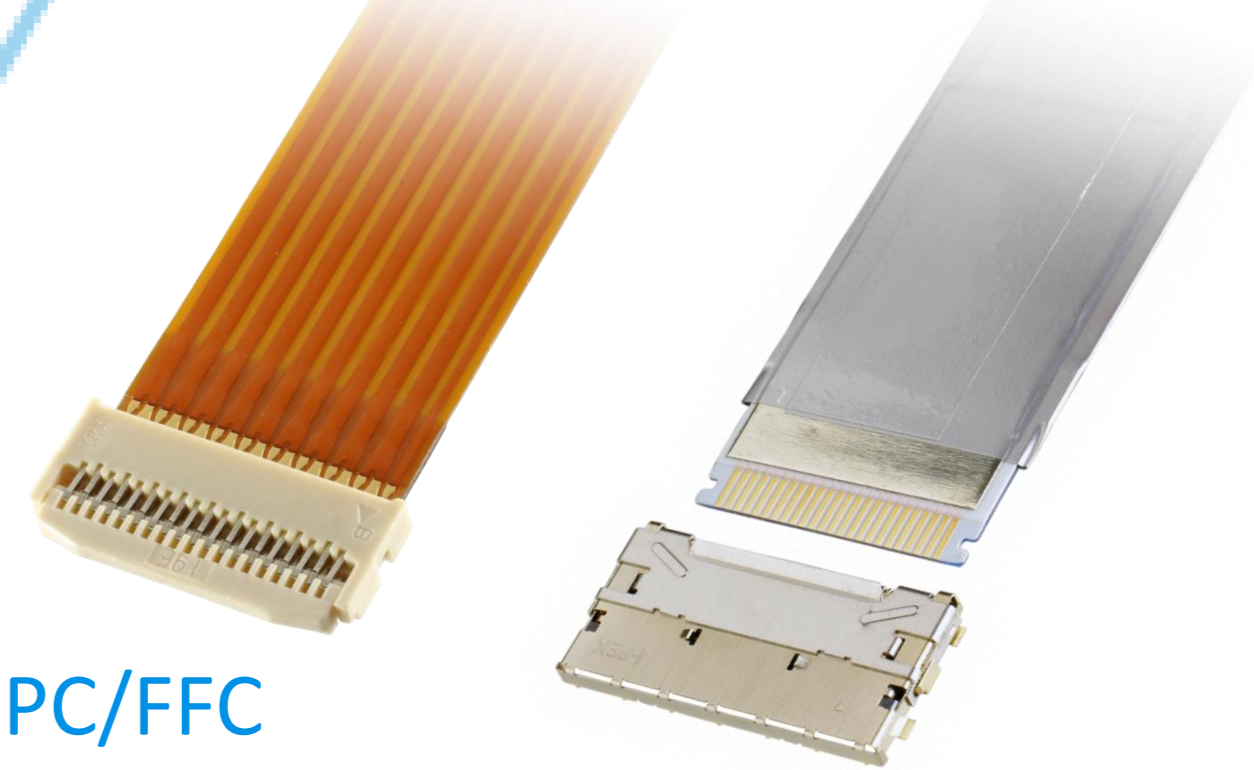
I/O Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC Connectors



Inquiry



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Contact your sales representative or more detailed information.

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