

CABLINE®-CA IIP PLUS

Fully-shielded, 64 Gbps/lane PAM4, 0.4 mm pitch, horizontal mating type
Twinax & micro-coaxial cable assembly

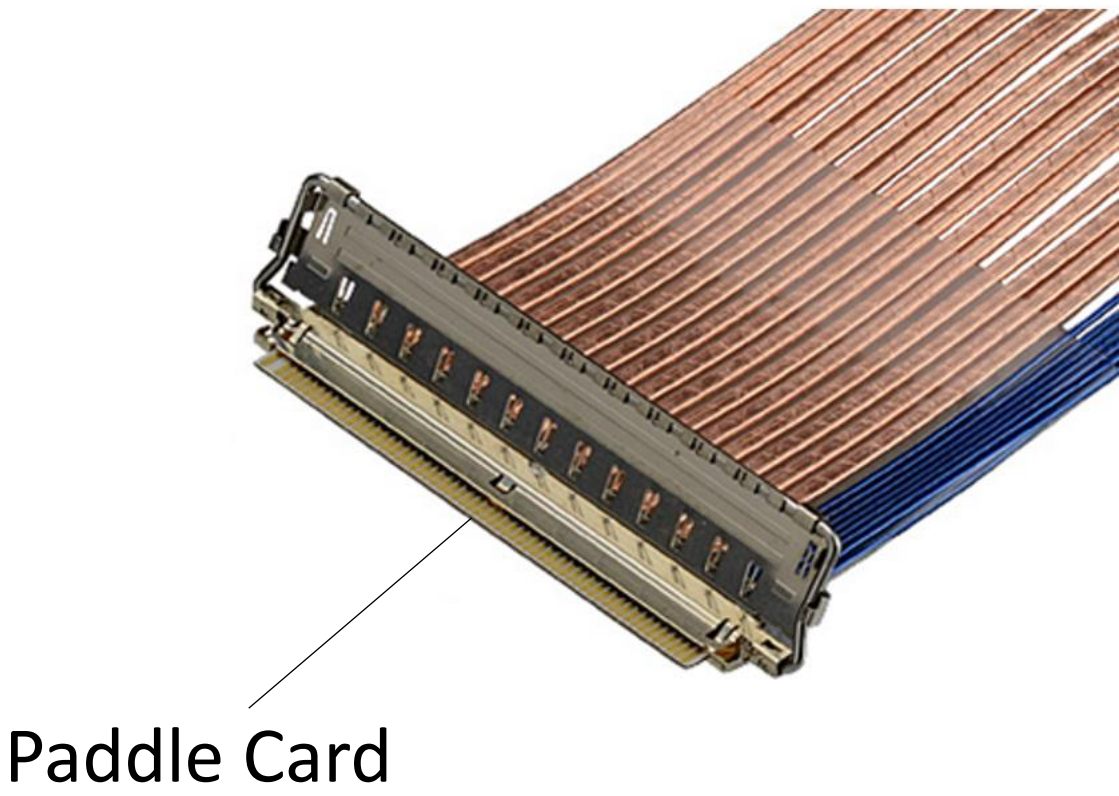
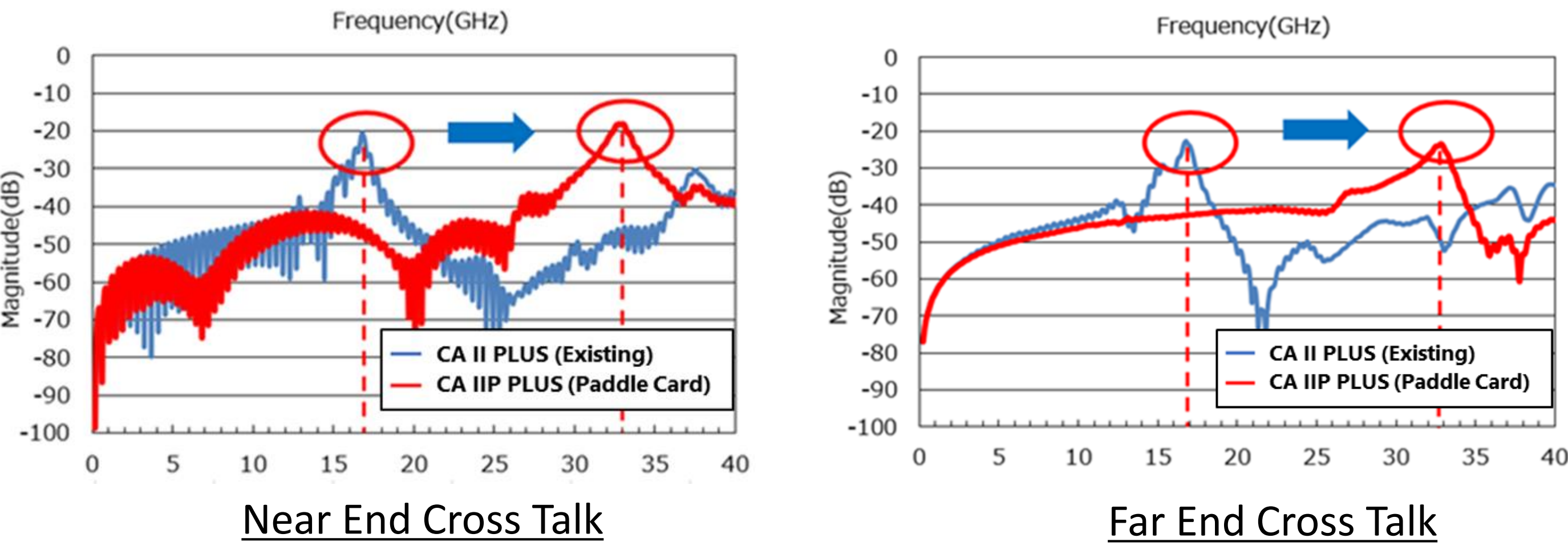
Product Specifications:			Applicable Cable Size:	
Mating type		Horizontal	Maximum O.D. (mm)	1.2 mm (Twinax) 0.4 mm (Micro-Coaxial) 0.4 mm (Discrete)
Board Pitch (mm)		1.2 mm (differential pair) 0.4 mm (signal contacts)	Micro-Coaxial for Signal (AWG)	Diff 85 ohm: #38 & #36
Wiping Length (mm)		0.495	Twinax for Signal (AWG)	Diff 85 ohm: #34
Mated size (mm)	Height	1.14 mm (1.3 mm max)	Discrete (AWG)	#32 or smaller
	Width	30.95 mm		
	Depth	8.20 mm		
Pin Counts	Range	Up to 60		
	Available	60		

*CABLINE®-CAP IIP PLUS is the name of the harness product. Receptacle is CABLINE®-CA II PLUS (PN : 20796-060E-##).
*Please inquire for pin counts not listed or outside of the pin count range.
*PLUG is supplied as a harnessed product. Cable length can be customized as desired.



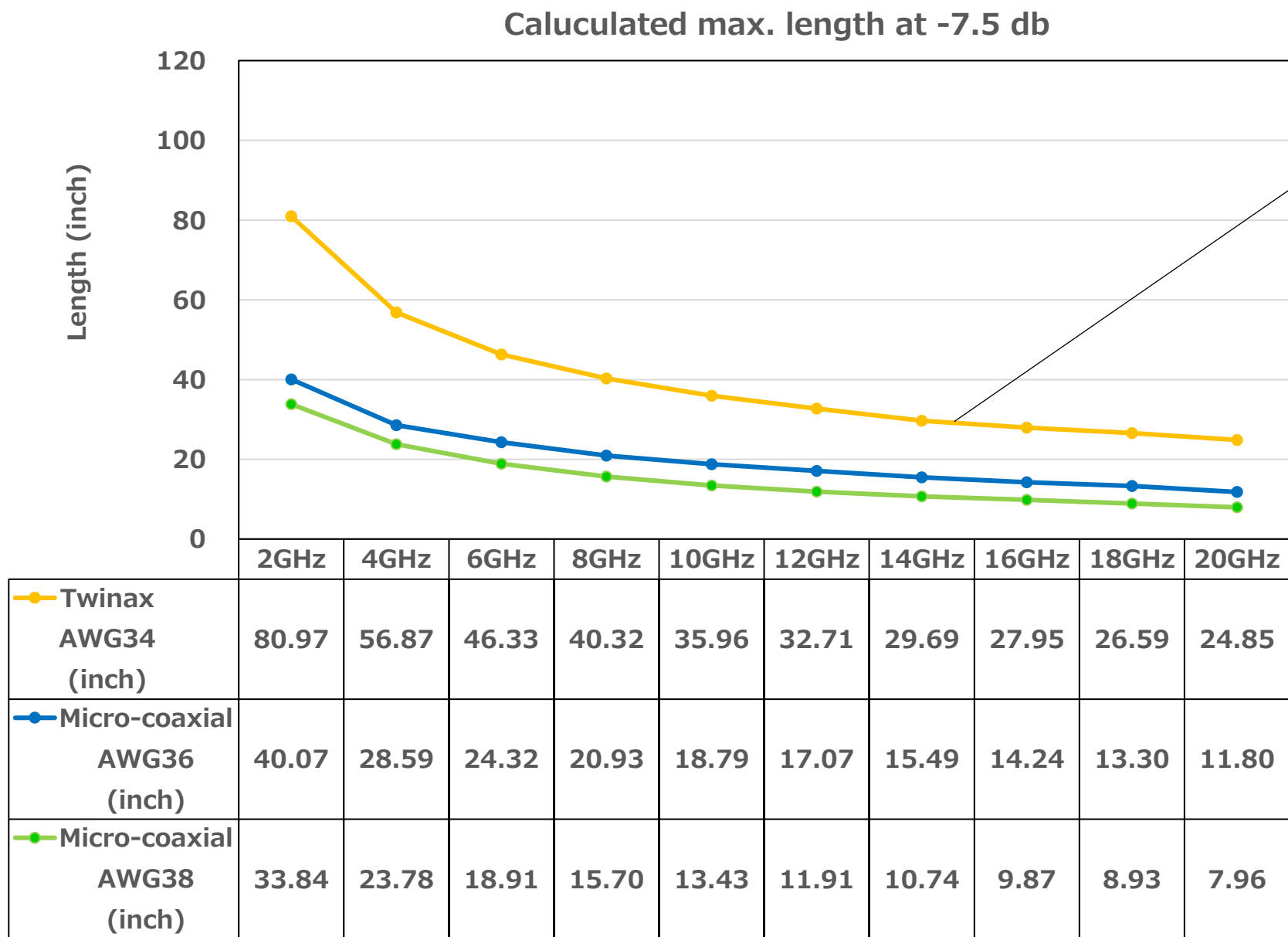
Supports high-speed data rate of 64 Gbps/lane PAM4 using paddle card technology

Offers High Signal Integrity by using a paddle card in the cable plug.
Data rates and Cross Talk performance of existing CABLINE series products are optimized even further.



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

AWG#34 Twinax cable is used for long-distance transmission. Also supports AWG#36 & #38 micro-coaxial cable for routing flexibility

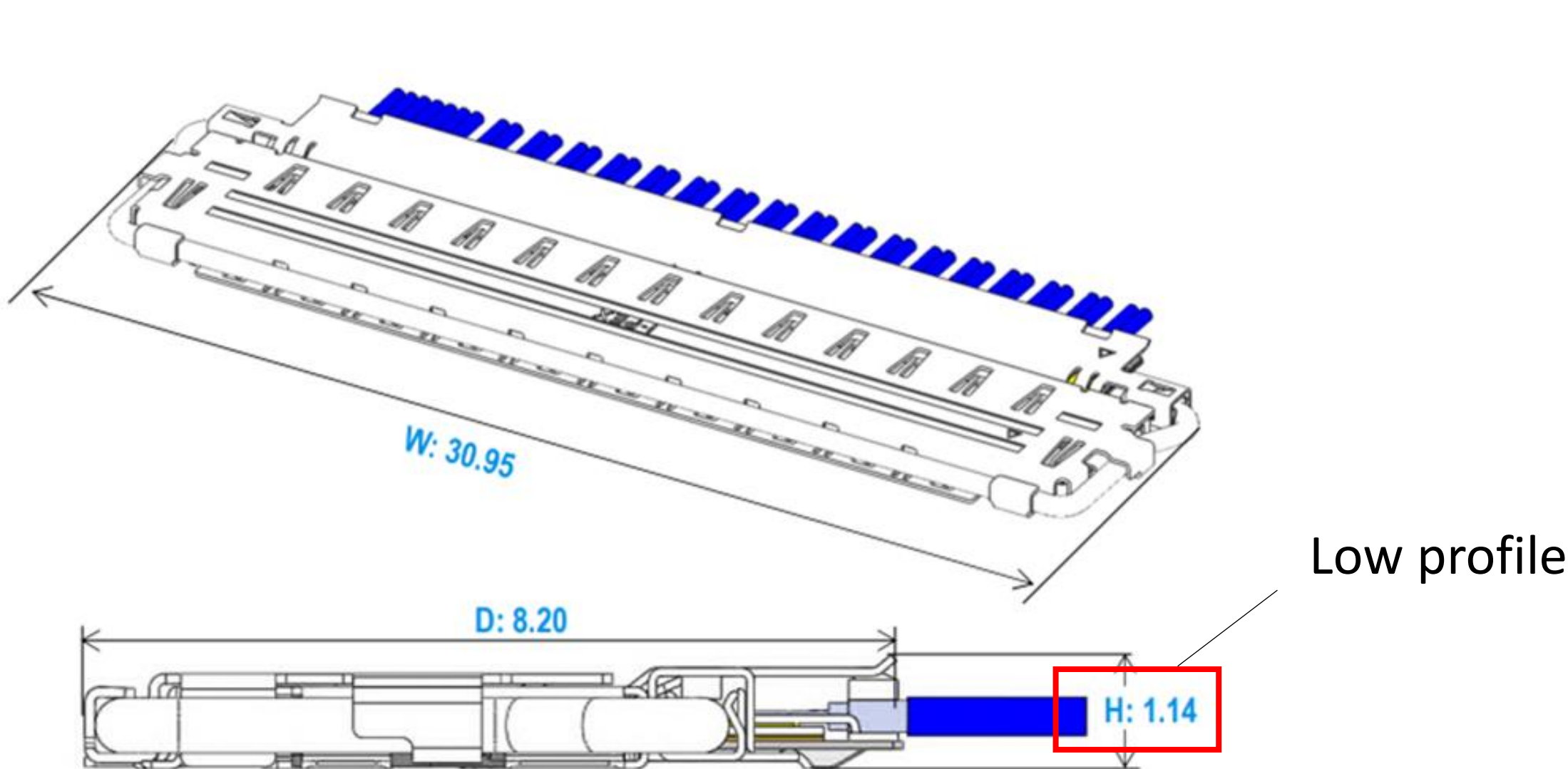


Twinax AWG34

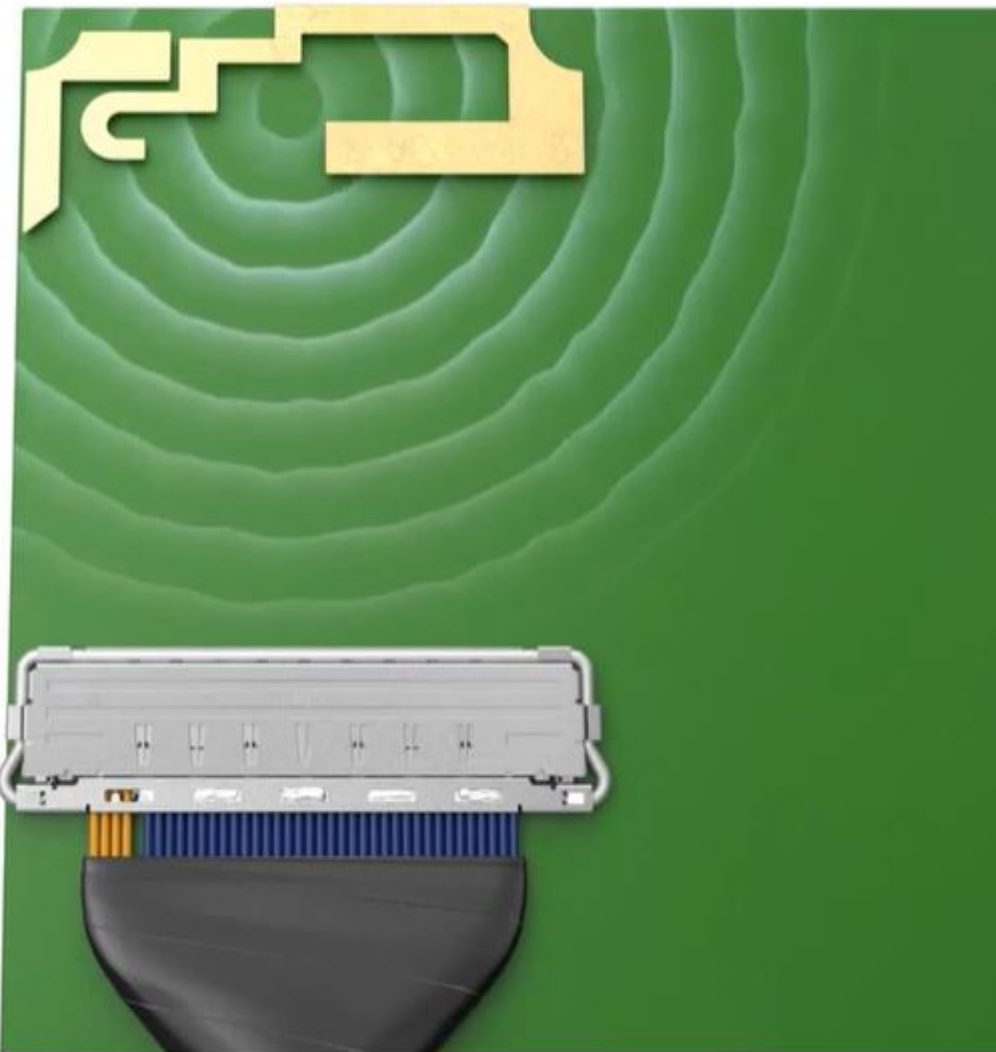
Flexibility of Micro-coaxial cable



Low profile with a mated height of 1.14mm, ideal for space-constrained applications, fully-shielded with ZenShield® technology





EMC
ZenShield® 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		200.00±5.00	
82065-600B-04	B	500.00±10.00	MICRO COAXIAL CABLE, AWG#36 42.5 OHM, BLUE
82065-400B-01	A	200.00±5.00	
82065-400B-02		500.00±10.00	
82065-400B-03	B	200.00±5.00	MICRO COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
82065-400B-04	A	500.00±10.00	
82065-100B-01		200.00±5.00	
82065-100B-02	A	500.00±10.00	MICRO COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
82065-100B-03		200.00±5.00	
82065-100B-04	B	500.00±10.00	

- NOTE.
- 1. TO HANDLE THIS CONNECTOR
YOU MUST READ AND FOLLOW THE INSTRUCTION MANUAL BELOW.
I-PEX INSTRUCTION MANUAL No.HIM-24004.
 - 2. ELECTRIC CHARACTERISTICS
WITHSTANDVOLTAGE : AC 250V LEAKAGE CURRENT 2.0mA MAX.
INSULATION RESISTANCE : 50MΩ MIN. DC 100V
 - 3. THE OPERATING TEMPERATURE OF THE HARNESS : 80℃ 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		50
49	GROUND	49
48	C	48
47		47
46	GROUND	46
.	.	.
.	.	.
9	C	9
8		8
7	GROUND	7
6	C	6
5		5
4	GROUND	4
3	C	3
2		2
1	GROUND	1

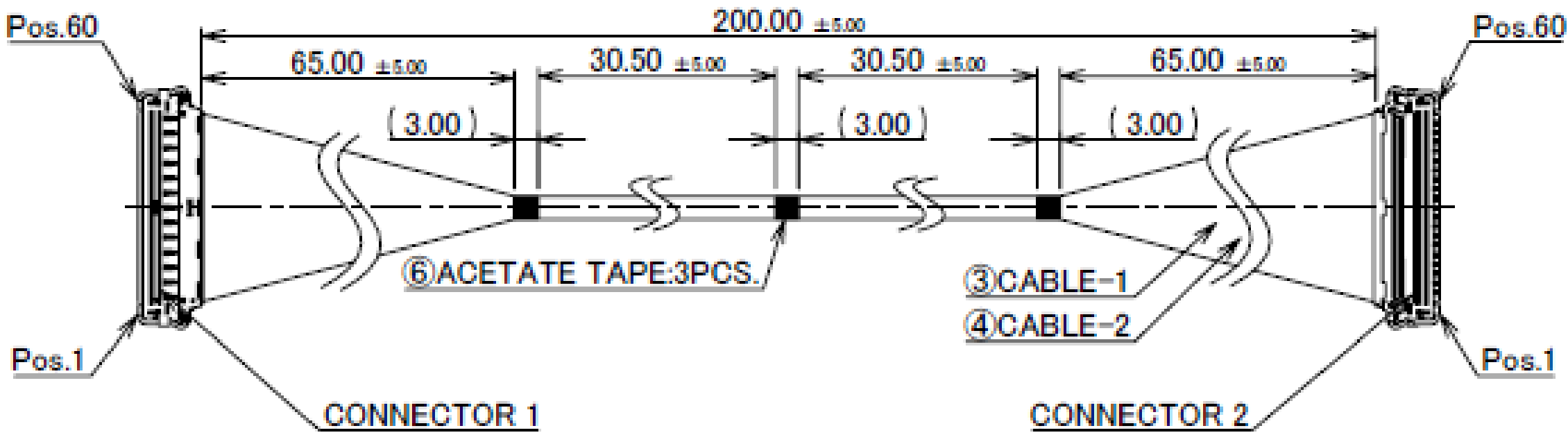
FOR GROUP B

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

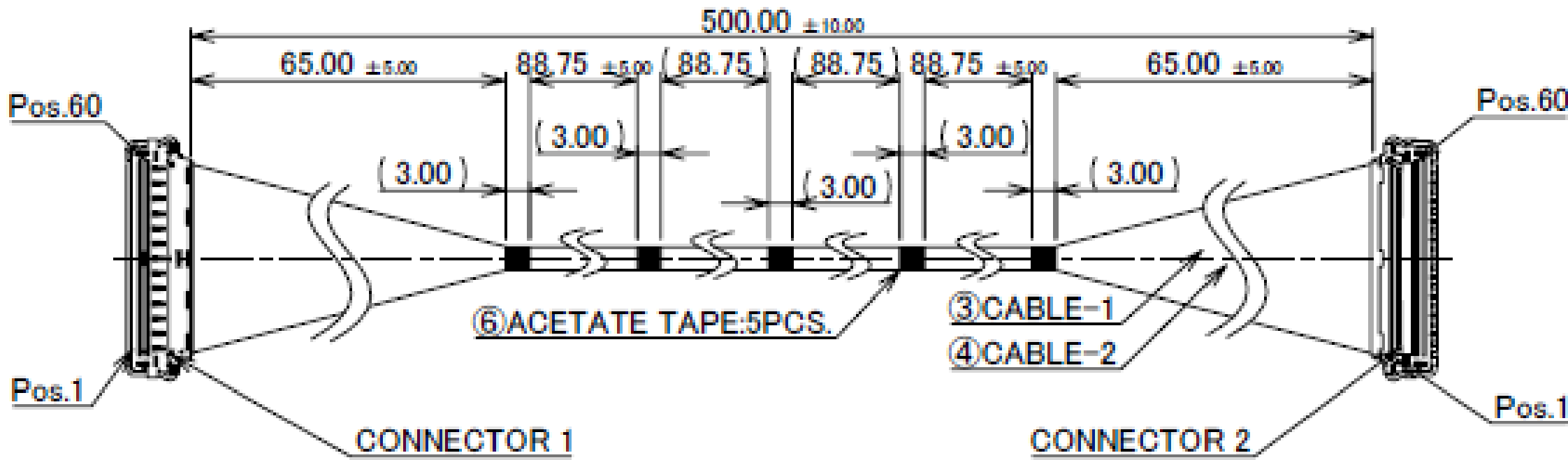
Rev.0

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

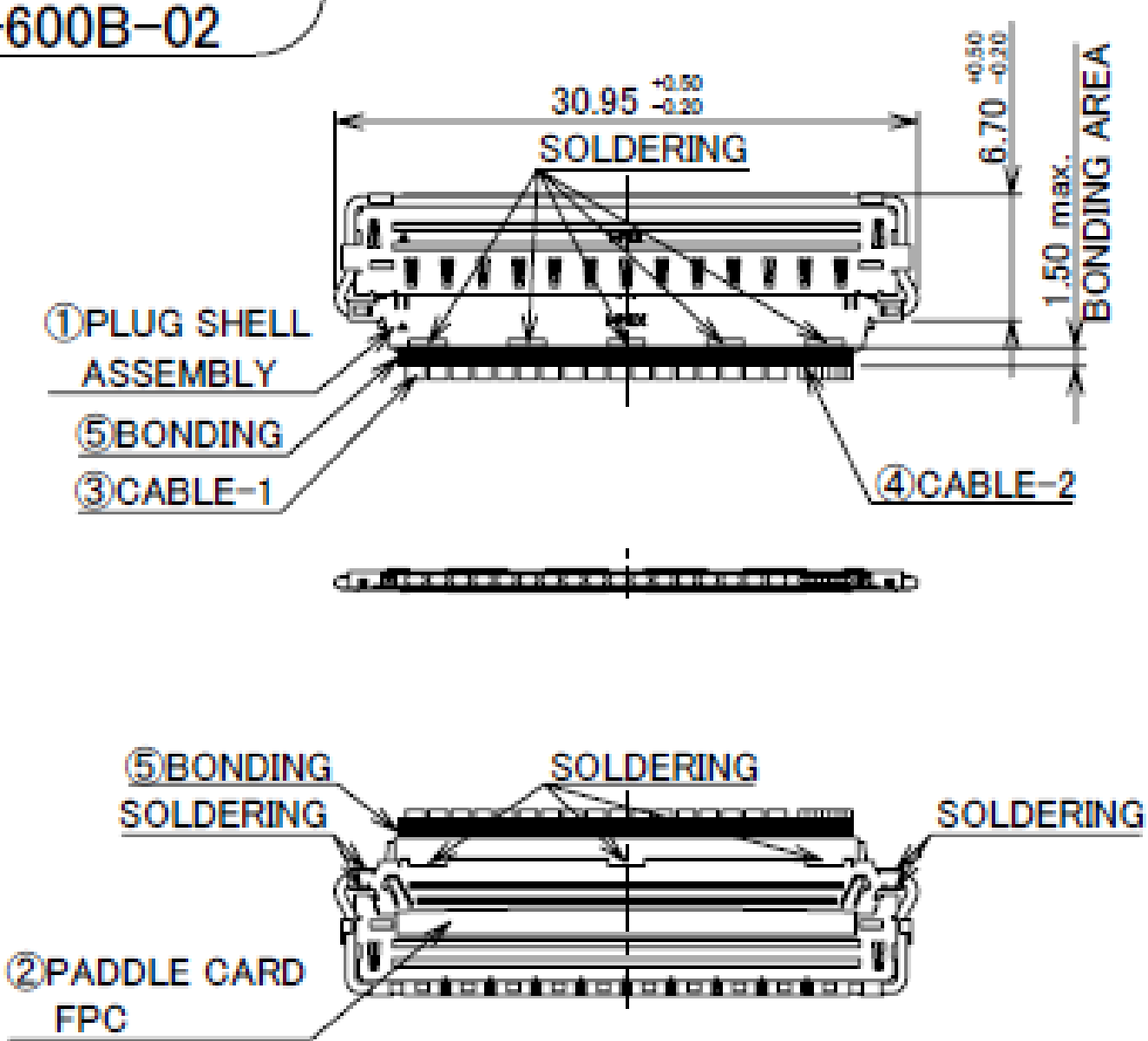


Rev.0

Plug Harness Assembly

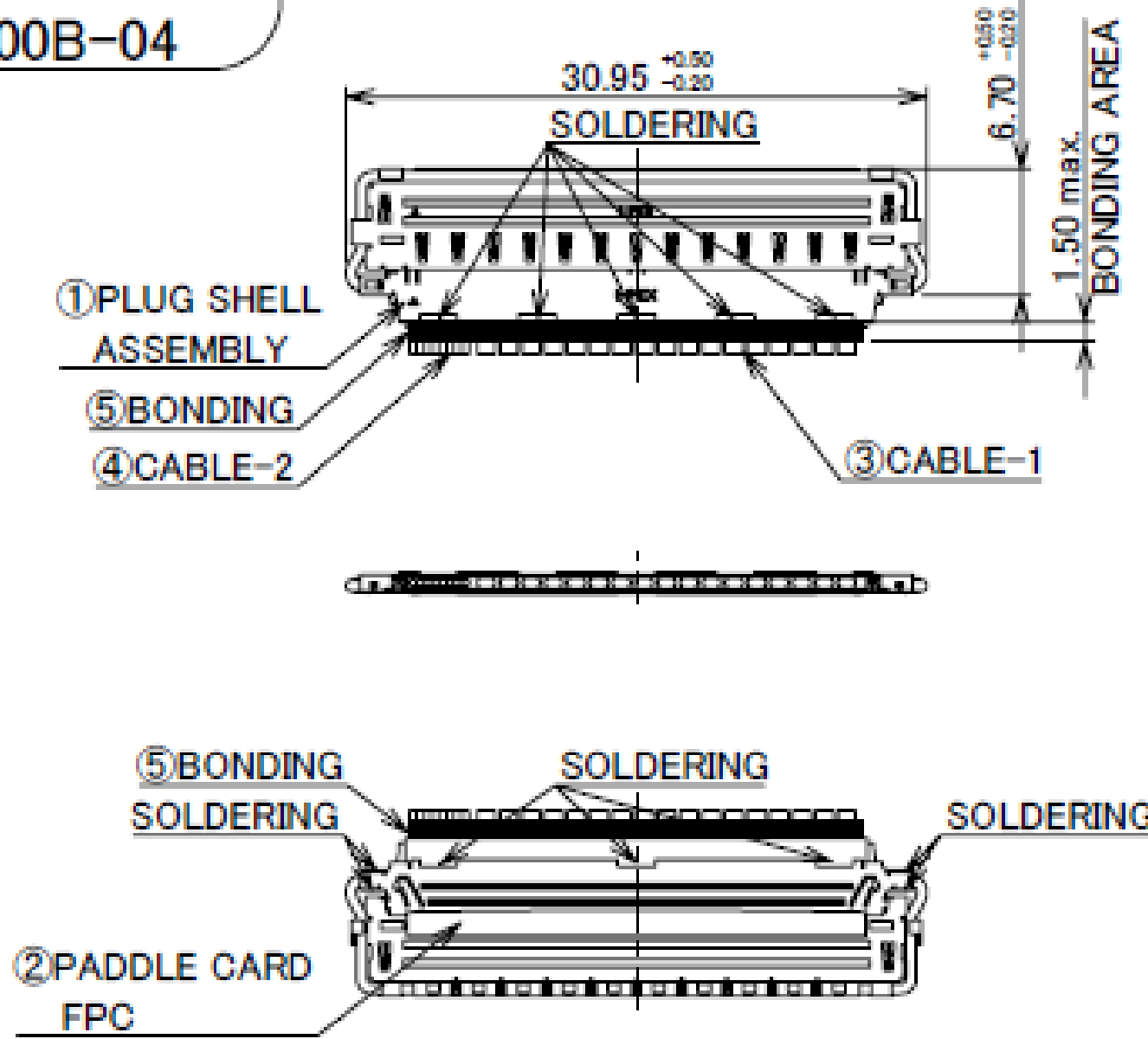
PART No.
82065-600B-0#

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

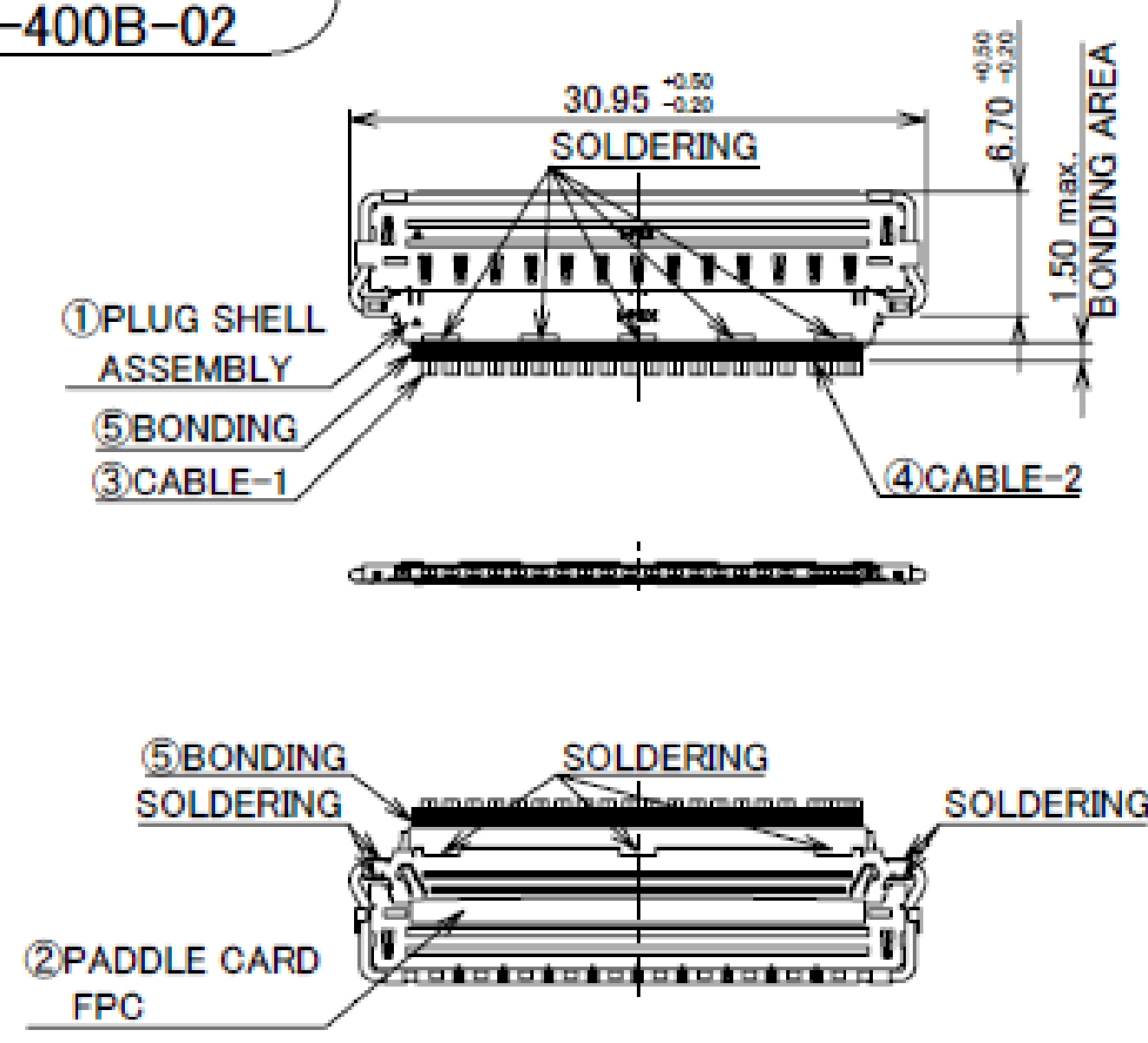


6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
4	CABLE-2	-	8	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
3	CABLE-1	-	17	TWINAX CABLE, AWG#34 85 OHM
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

Rev.0

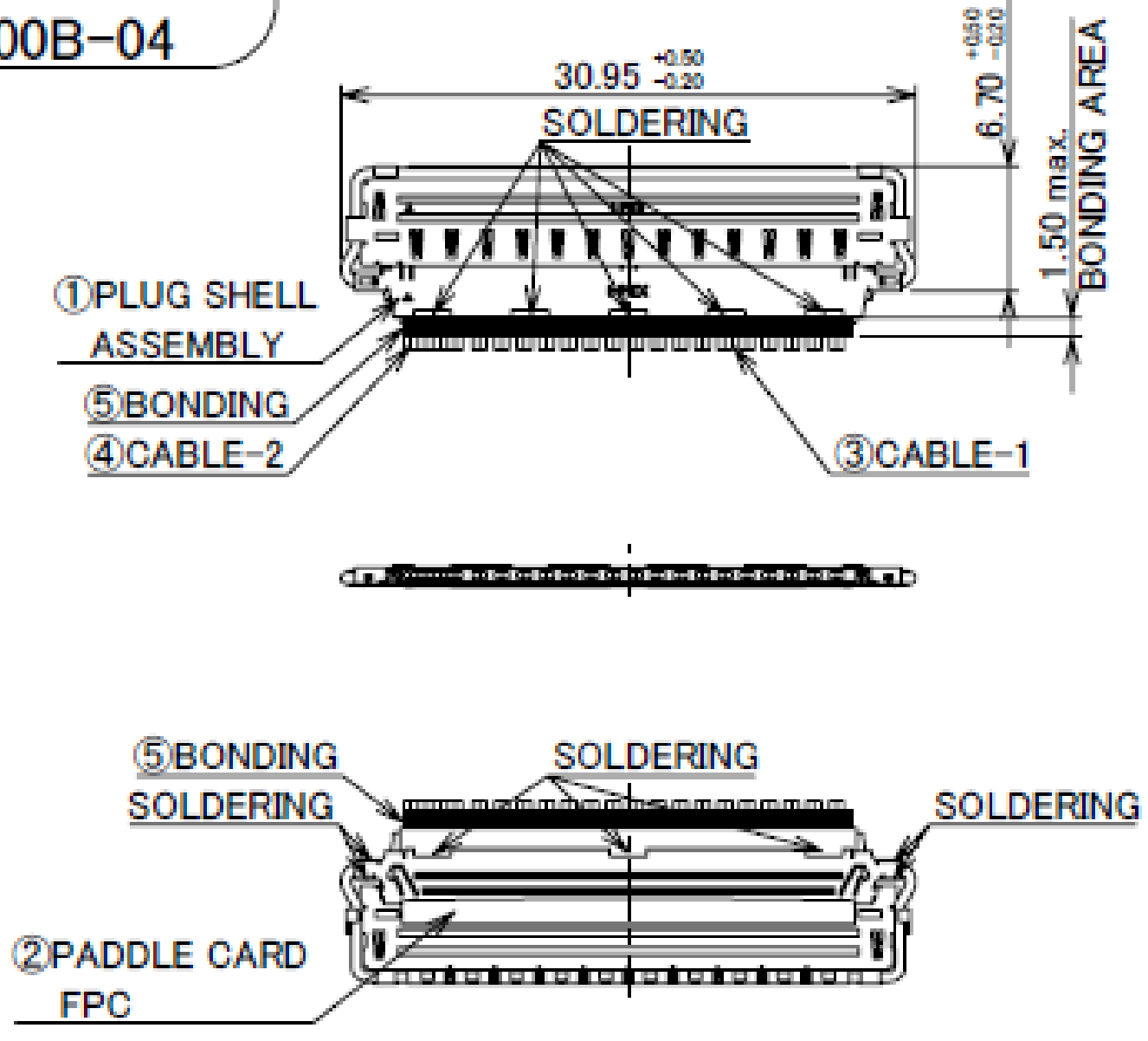
PART No.
82065-400B-0#

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



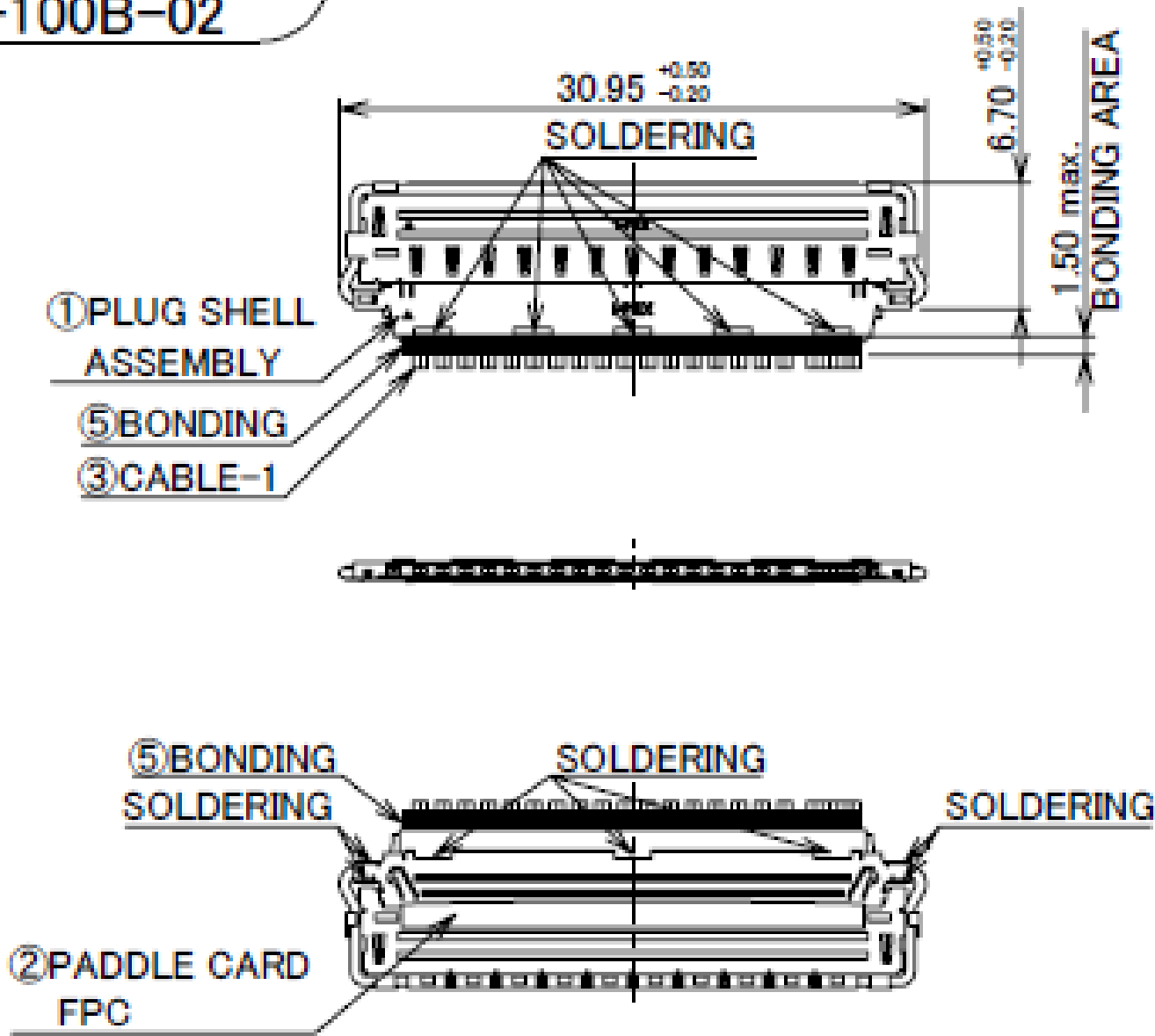
6	ACETATE TAPE	-	3OR5	BLACK
5	BONDING	-	-	UV GLUE
4	CABLE-2	-	8	MICRO-COAXIAL CABLE, AWG#38 42.5 OHM, BLUE
3	CABLE-1	-	34	MICRO-COAXIAL CABLE, AWG#36 42.5 OHM, BLUE
2	PADDLE CARD FPC	-	2	CONNECTOR 1 & 2
1	PLUG SHELL ASSEMBLY	21036-060T-01	2	CONNECTOR TO BE MATED : 20790-060E-02
NO.	DESCRIPTION	PARTS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

Rev.0

Plug Harness Assembly

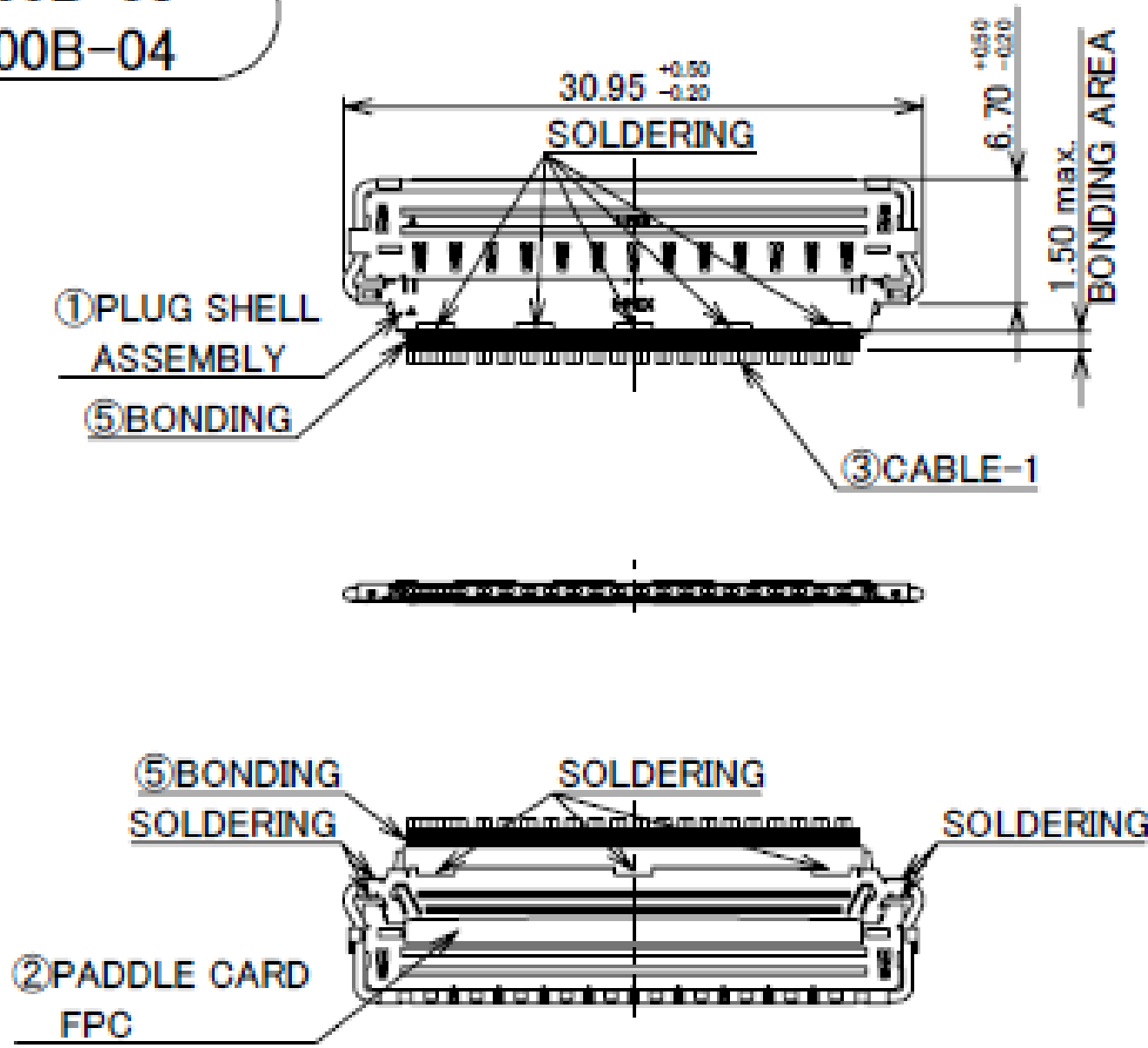
PART No.
82065-100B-0#

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



6	ACETATE TAPE	-	30R5	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	-	30R5	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℃～85℃)
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	

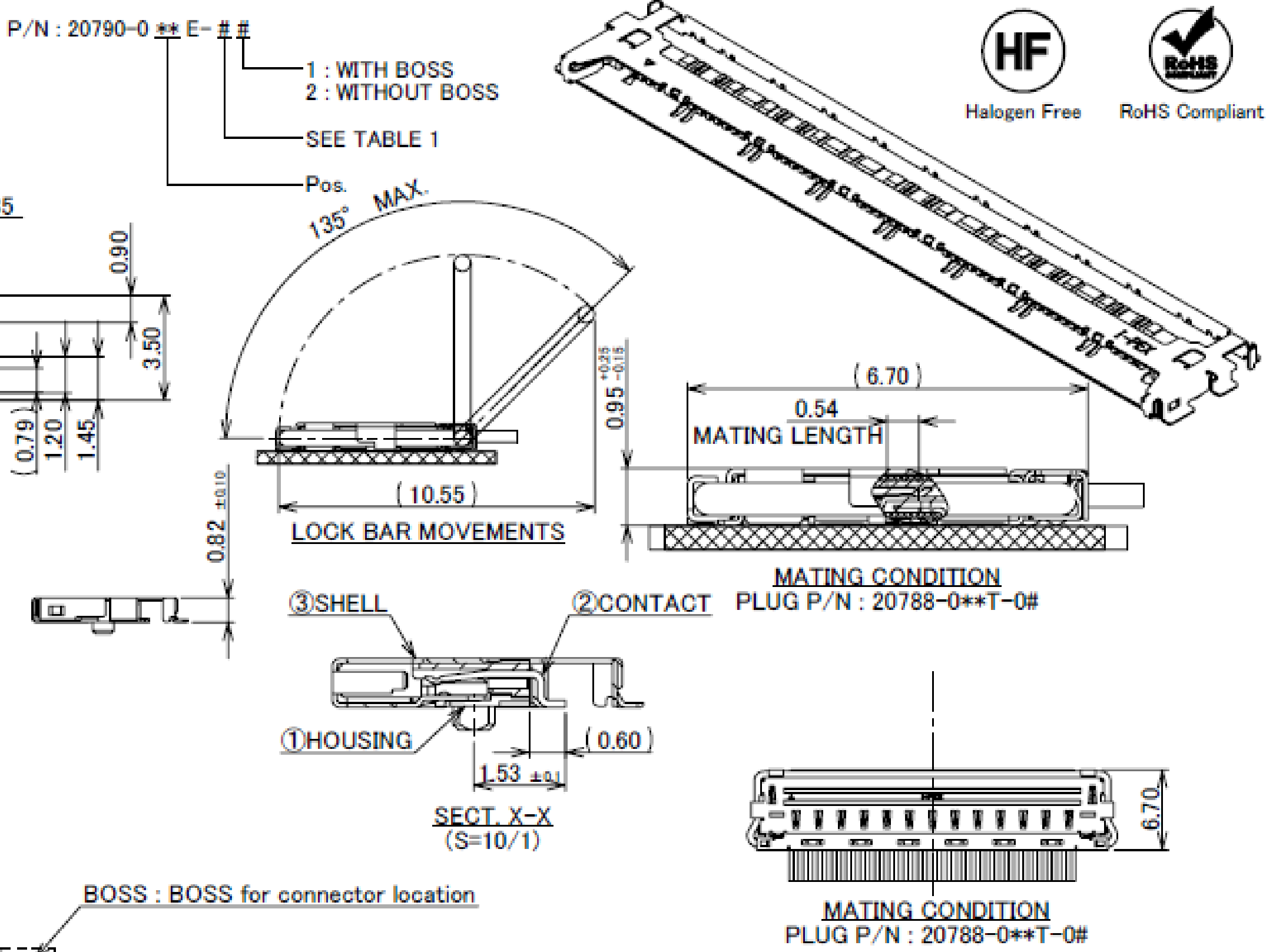
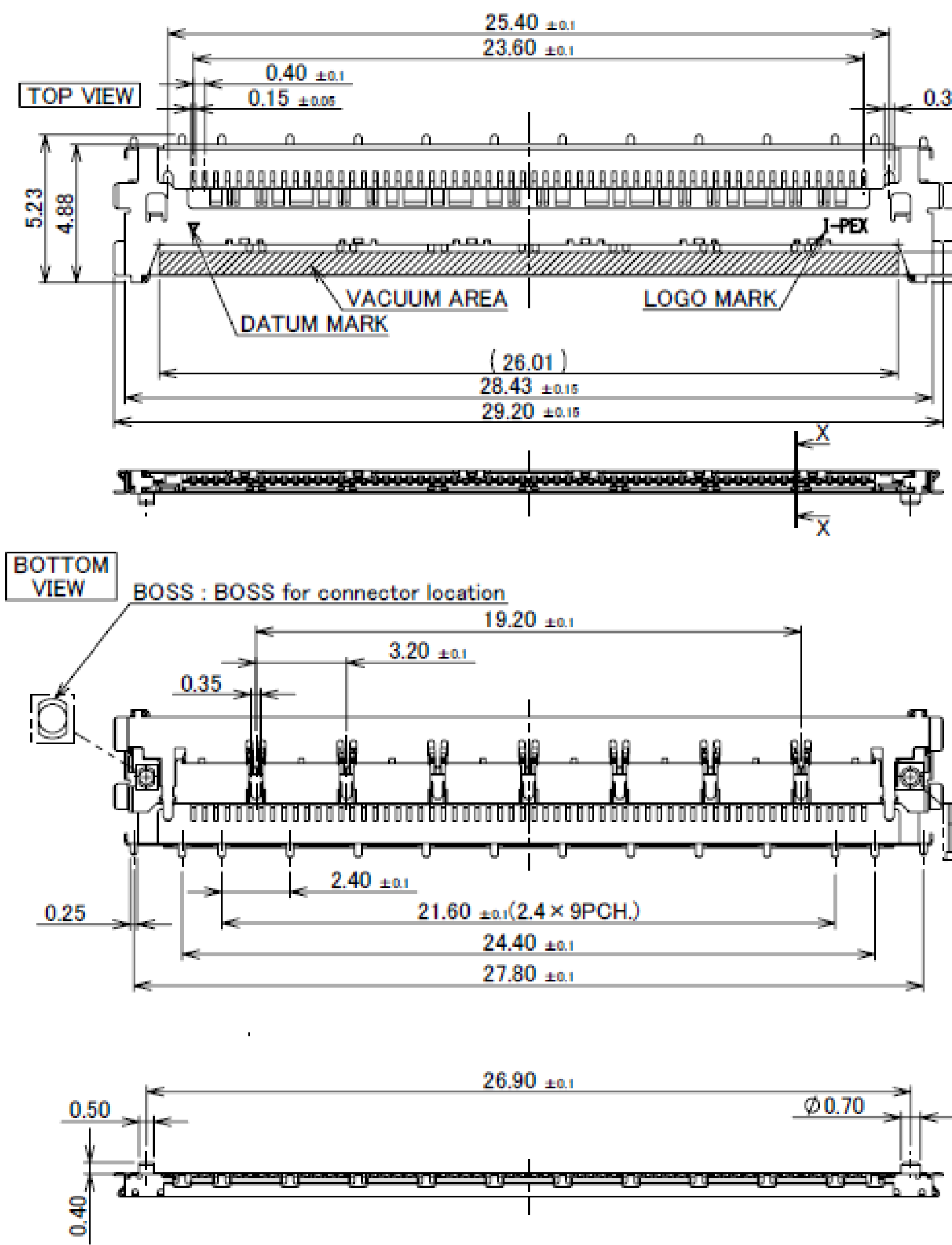
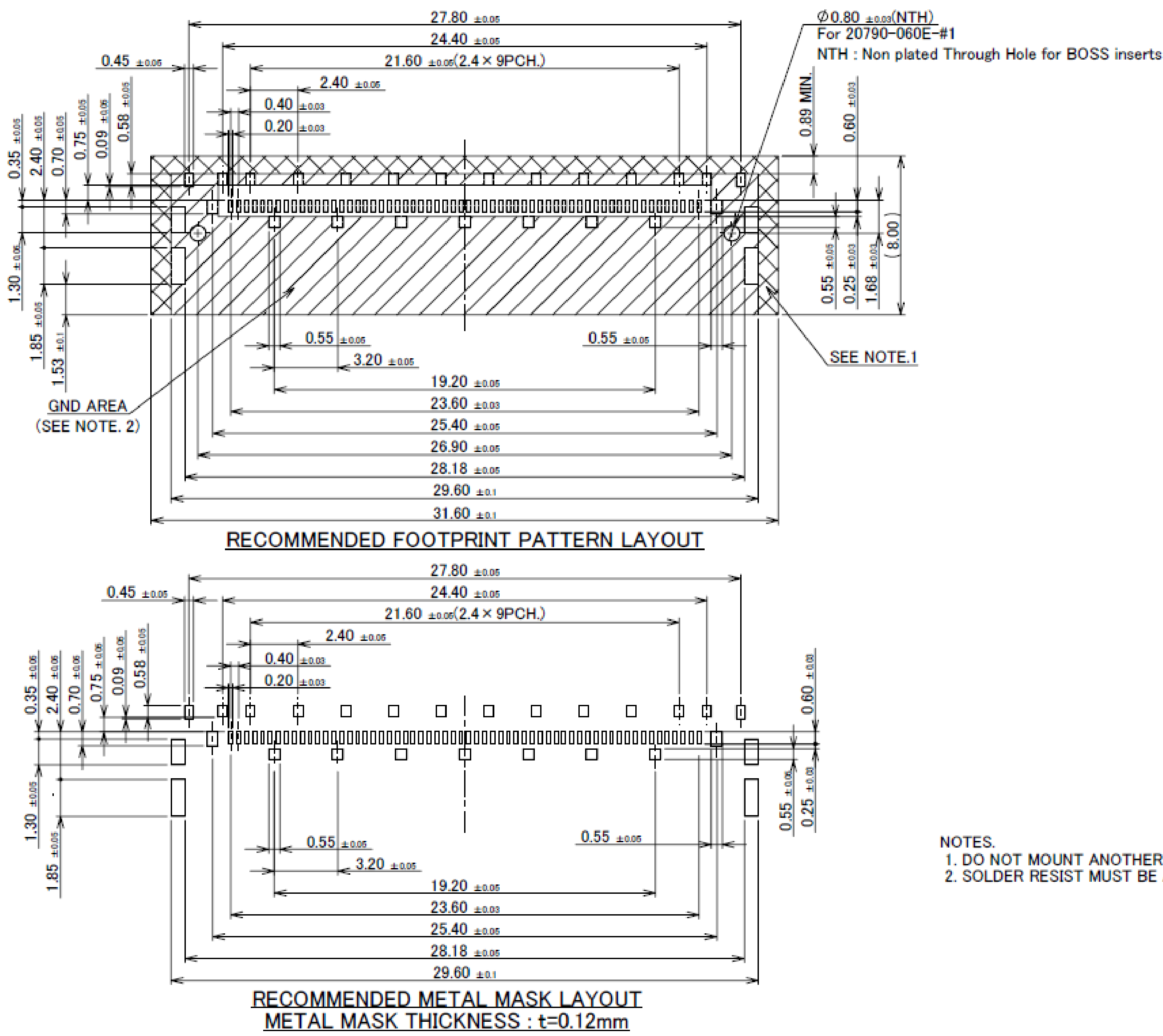


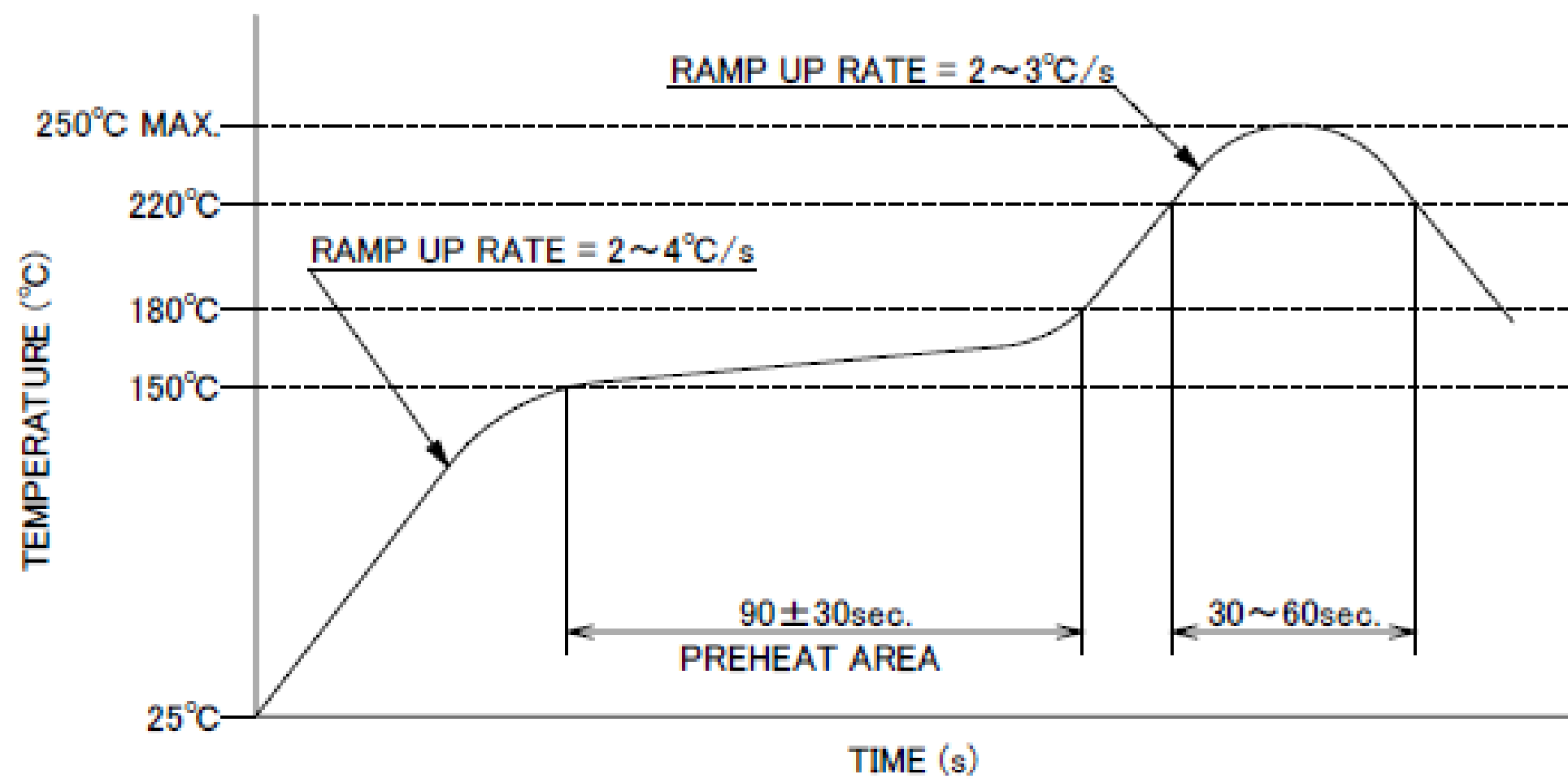
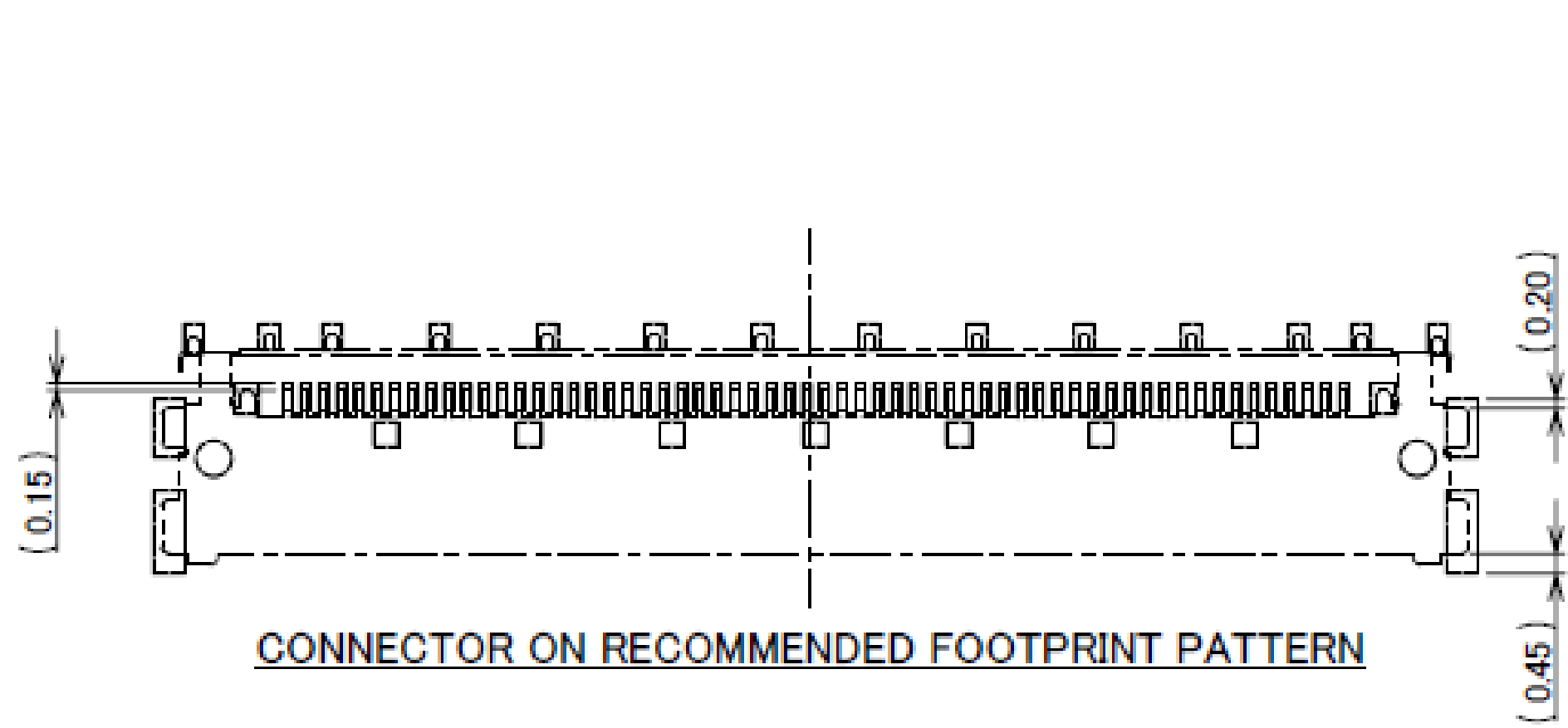
TABLE 1	
PART NO.	CONTACT FINISH
20790-0**E-0#	CONTACT & SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
20790-0**E-1#	CONTACT AREA : Au 0.38 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.

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)

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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-CONDENDING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : ≦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 : ≦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

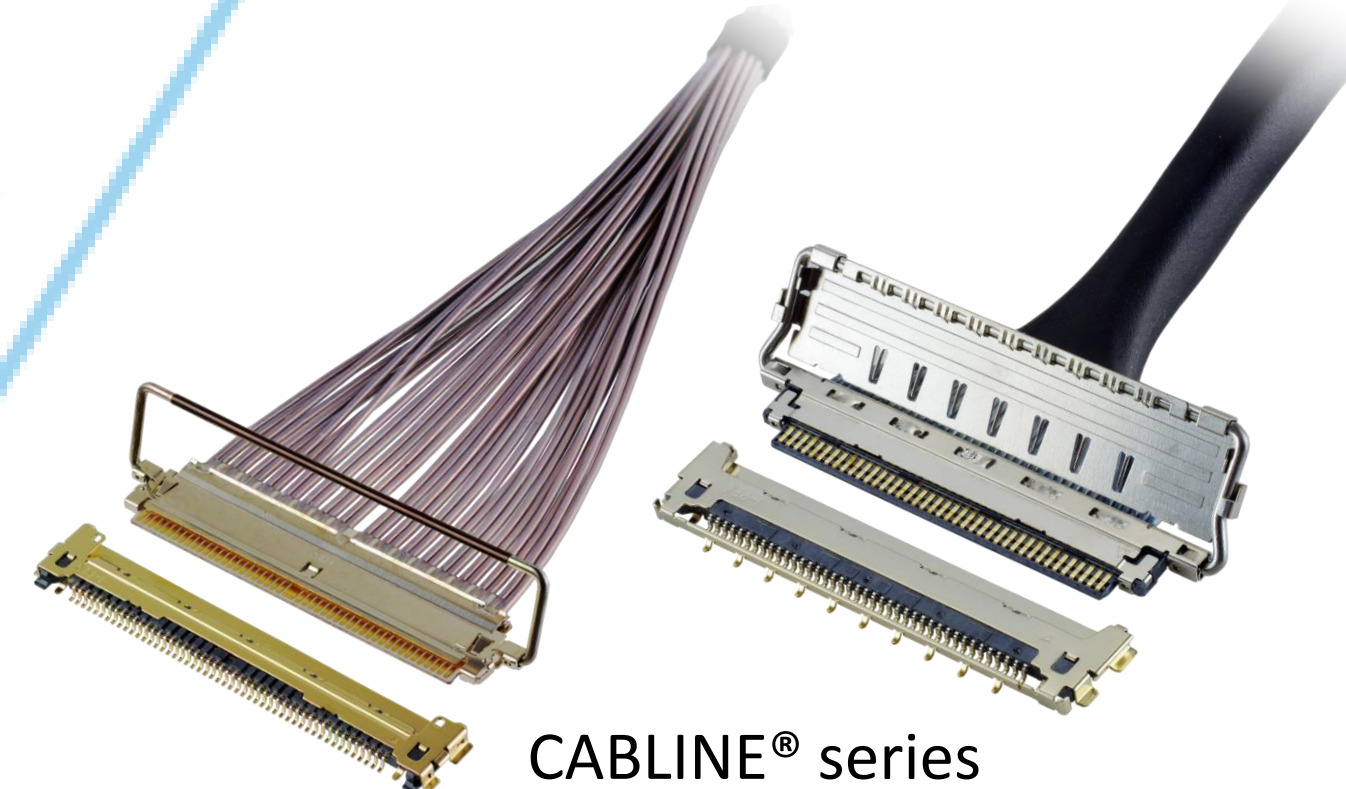
Custom Connectors Available

 RF
Connectors

MHF® series



Micro-Coaxial/Twinax
Connectors

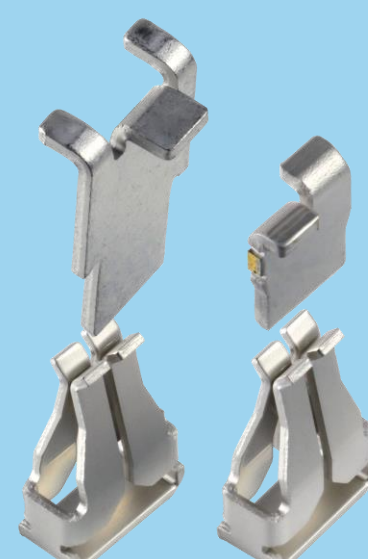


CABLIME® series

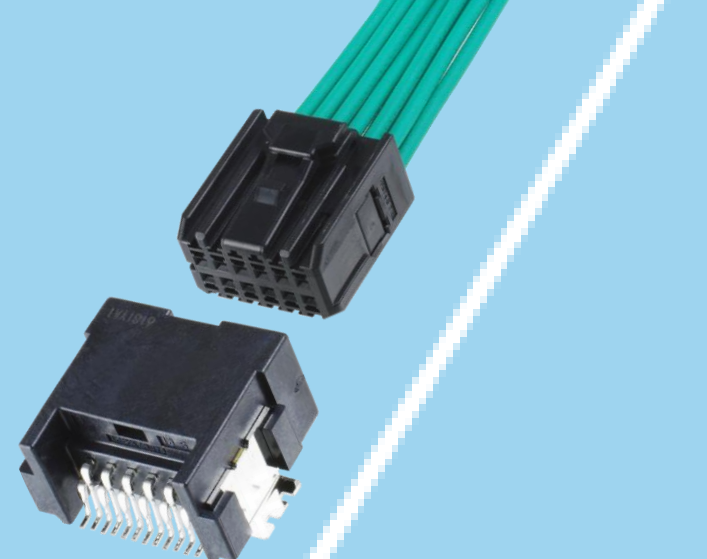


Wire-to-Board
Connectors/
Terminals

AP series



ISH® series



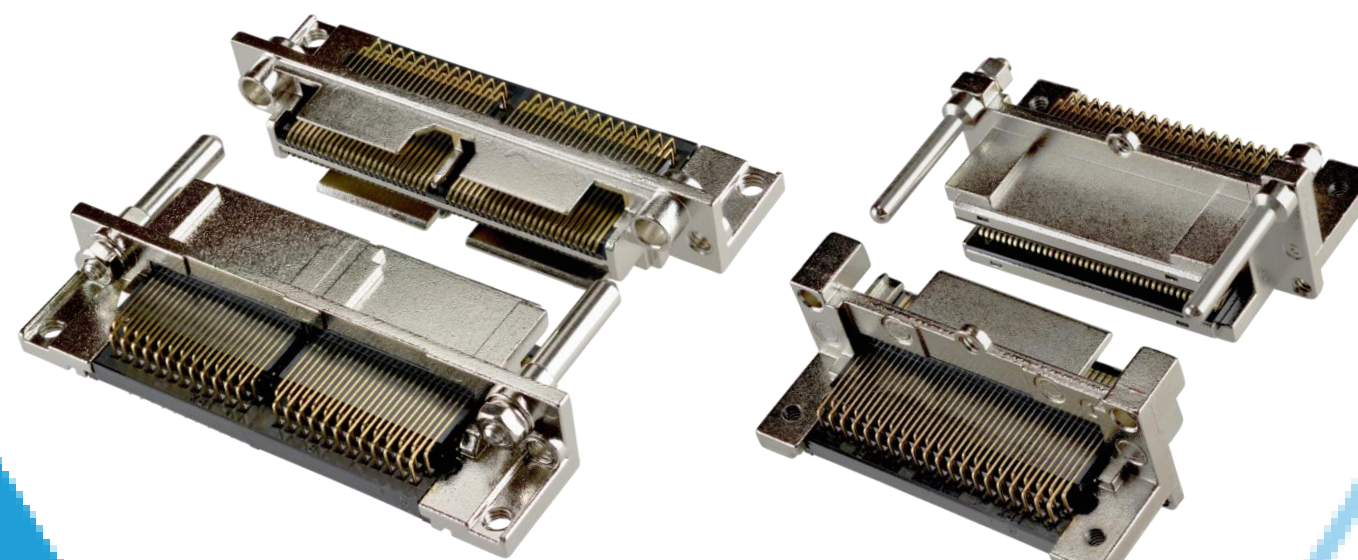
NOVASTACK® series



Board-to-Board
Connectors



I/O
Connectors



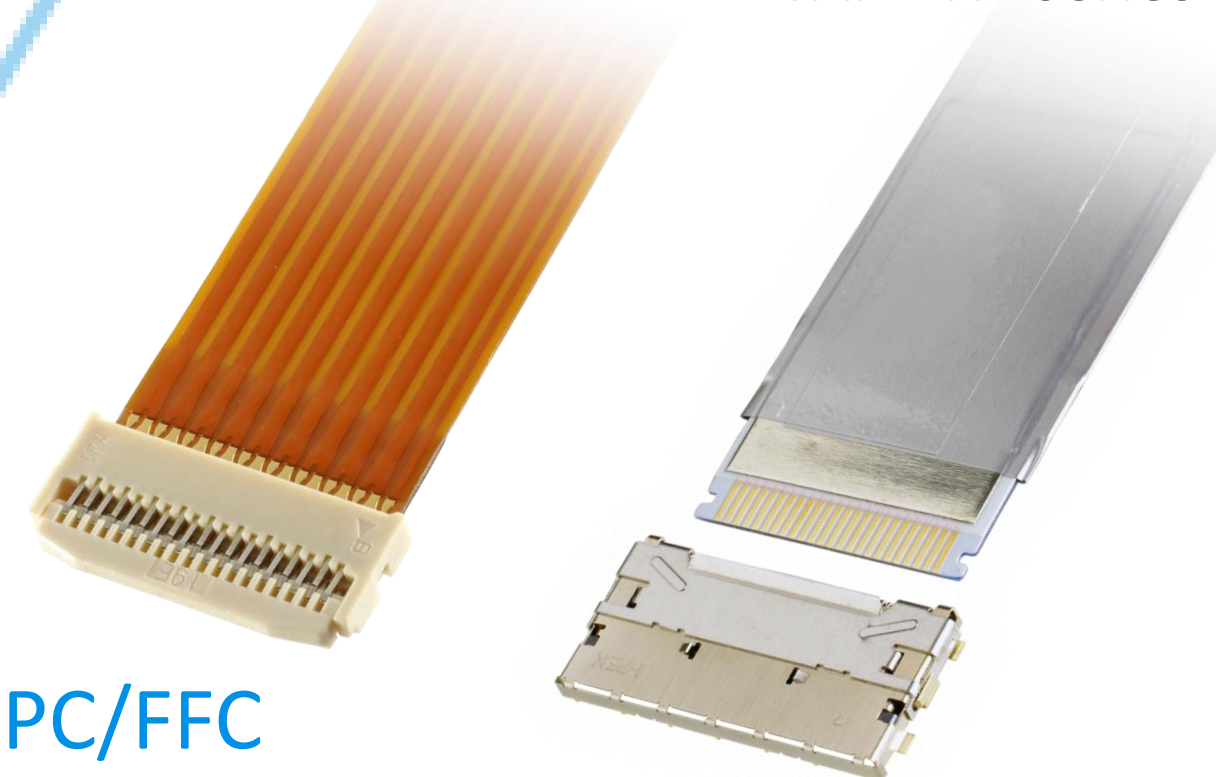
MINIDOCK™ series



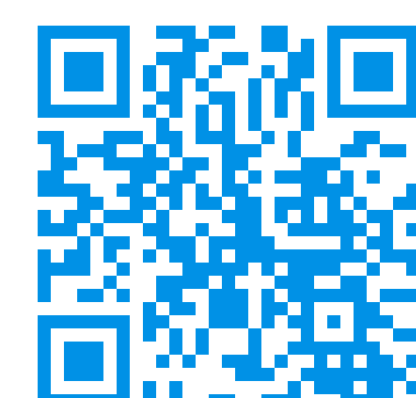
FPC/FFC
Connectors

MINIFLEX® series

EVAFLEX® series



Inquiry



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