

CABLINE®-CAL

低背(高さ = 0.7 mm)、高速伝送対応(20 Gbps/lane)、メカニカルロック付き、0.4 mmピッチ、水平嵌合タイプ細線同軸コネクタ

Product Specifications:

Mating type	Horizontal	
Board Pitch (mm)	0.4	
Wiping Length (mm)	0.4	
Mated size (mm)	Height	0.80 Max
	Width	Formula: 10-20p: 6.85 + (0.4*?p)
	Depth	Formula: 22-40p: 8.05 + (0.4*?p)
Pin Counts	Range	Up to 40
	Available	30, 40

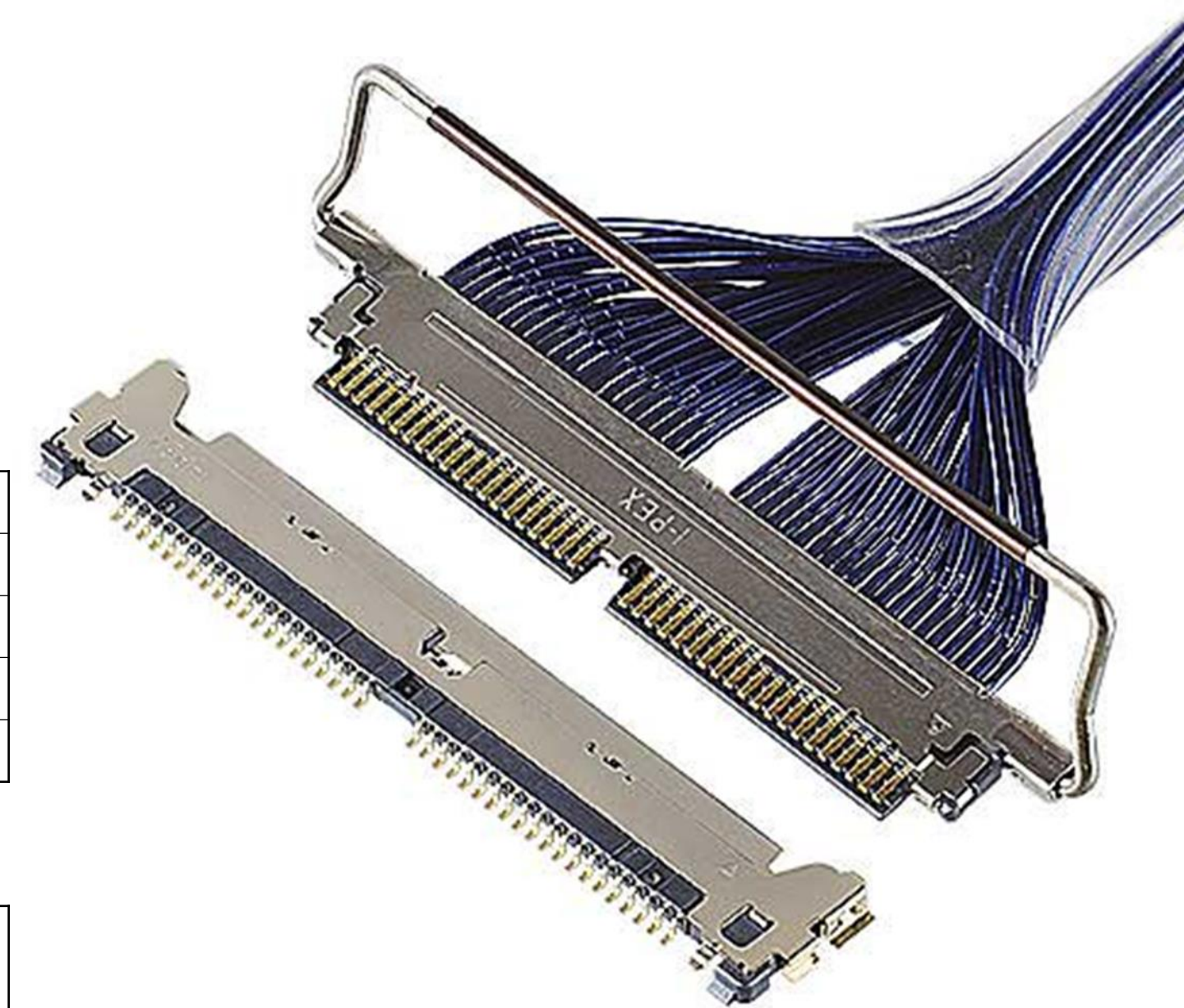
Applicable Cable Size:

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

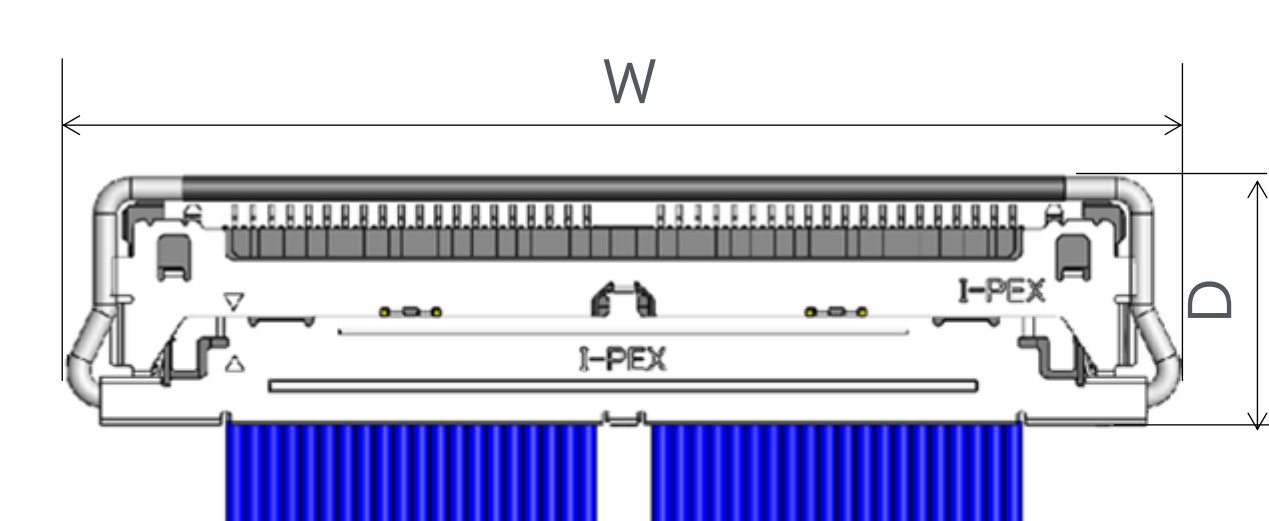
Applicable Standards (Reference Only):

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)

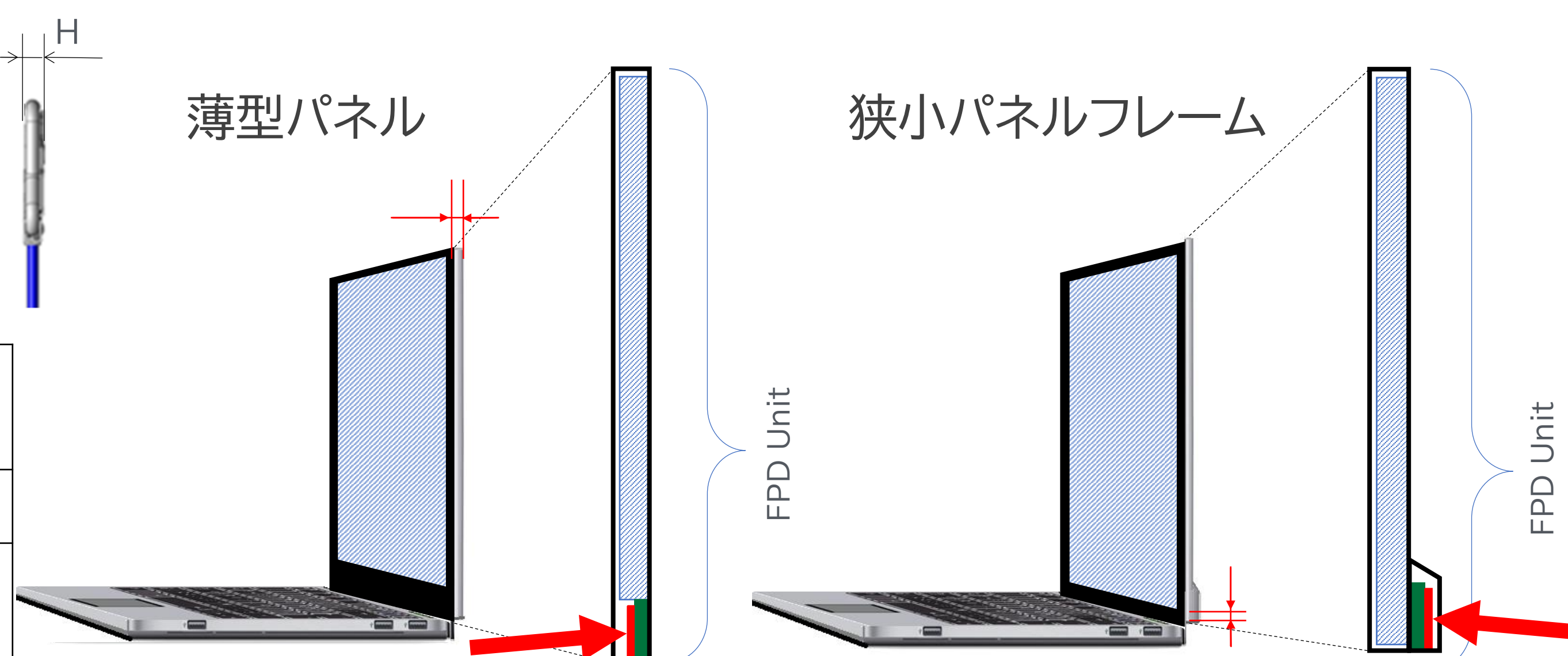
*記載のない極数の対応状況についてはお問い合わせください。



限られたコネクタスペースに対応する極薄設計



CABLINE®-CAL 40p Mated Set Dimensions (mm)		
W	D	H
24.05	5.50	0.70 (0.80 max.)

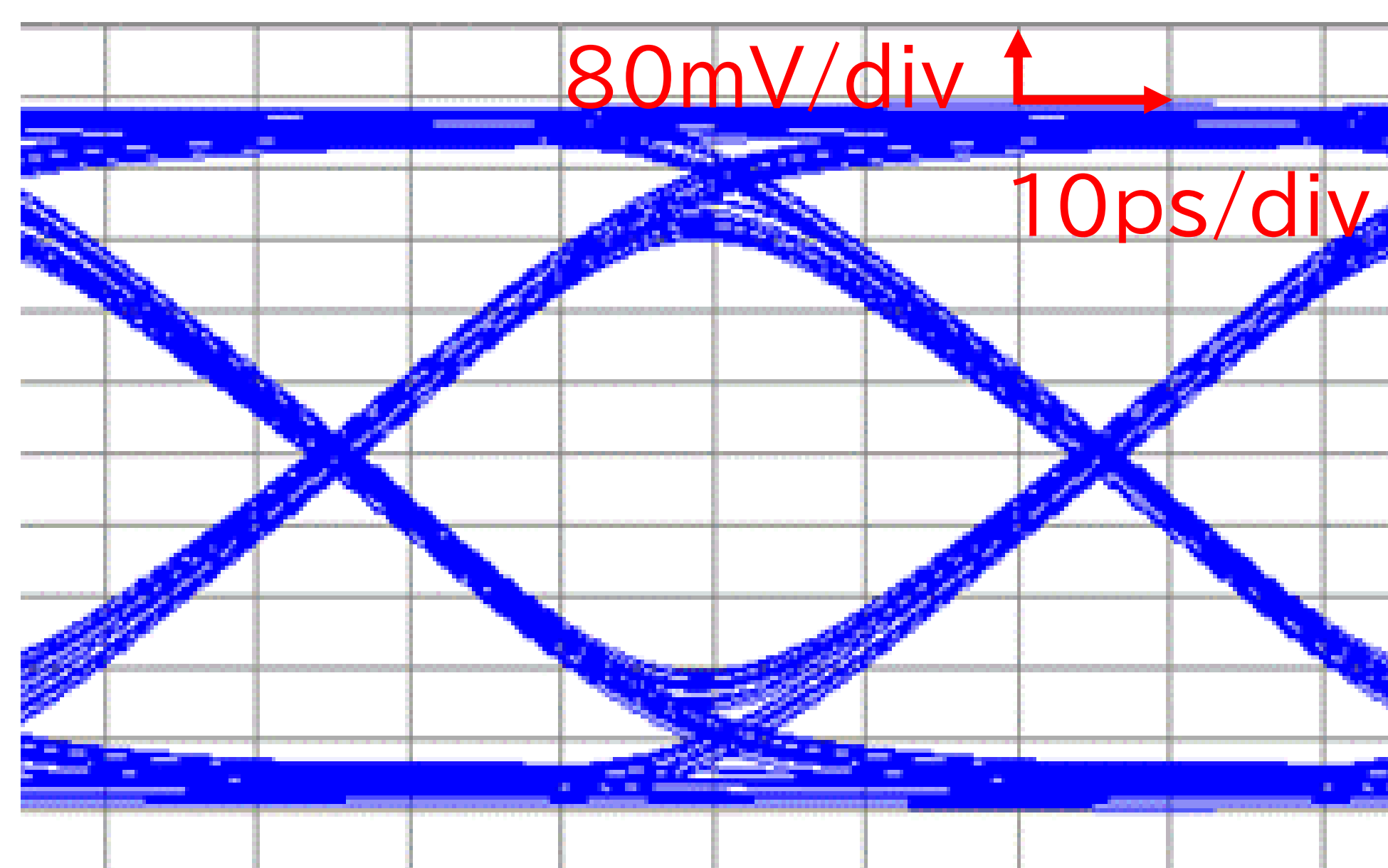


USB4 Gen3/Thunderbolt 4 (20Gbps/lane) の高速伝送内部接続に最適

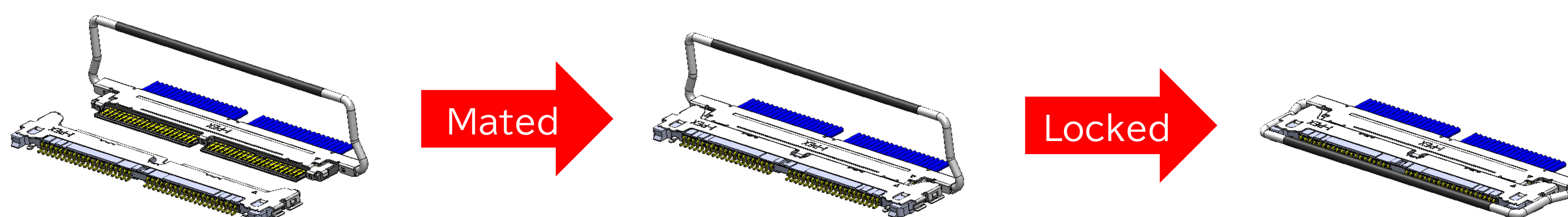
USB4 Gen3/Thunderbolt 4 (20Gbps/lane)

Eye pattern (Differential)
Bit rate : 20Gbps
Rise time : 30ps (10-90%)
Input voltage : 800mVp-p

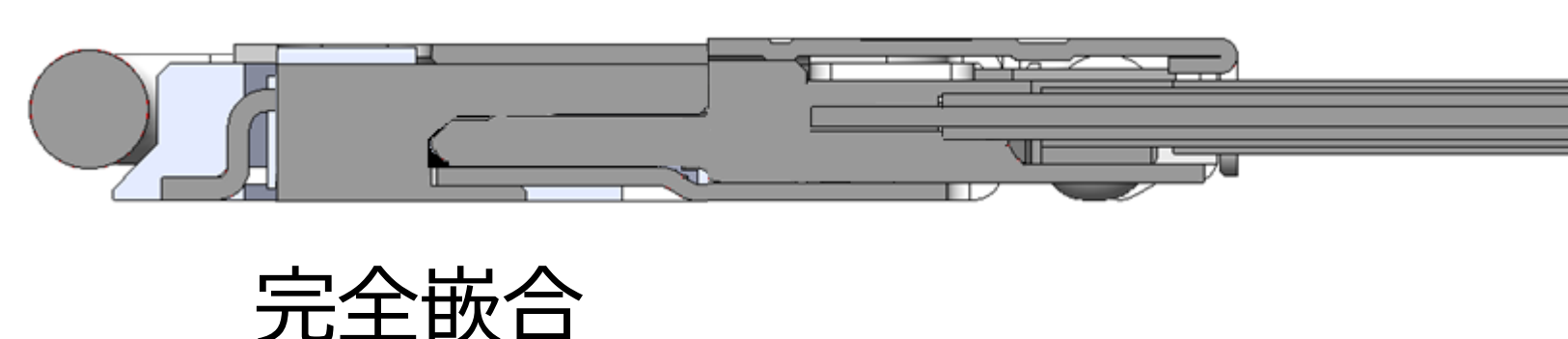
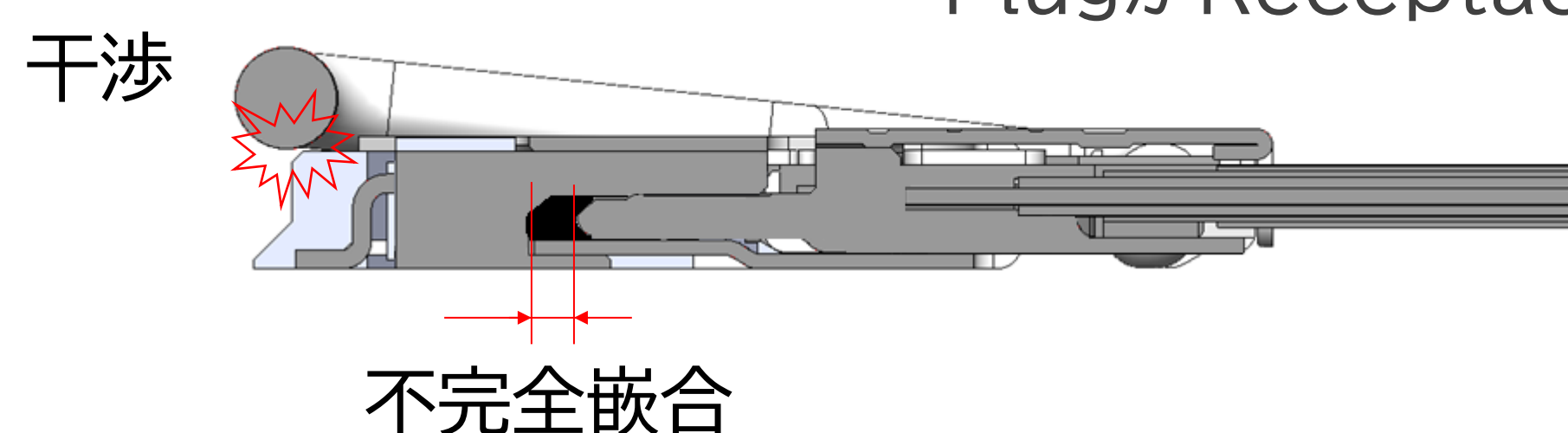
*試験データの詳細はI-PEX Connectorsにお問い合わせください



メカニカルロックバーによる不完全嵌合防止とPlug抜け防止



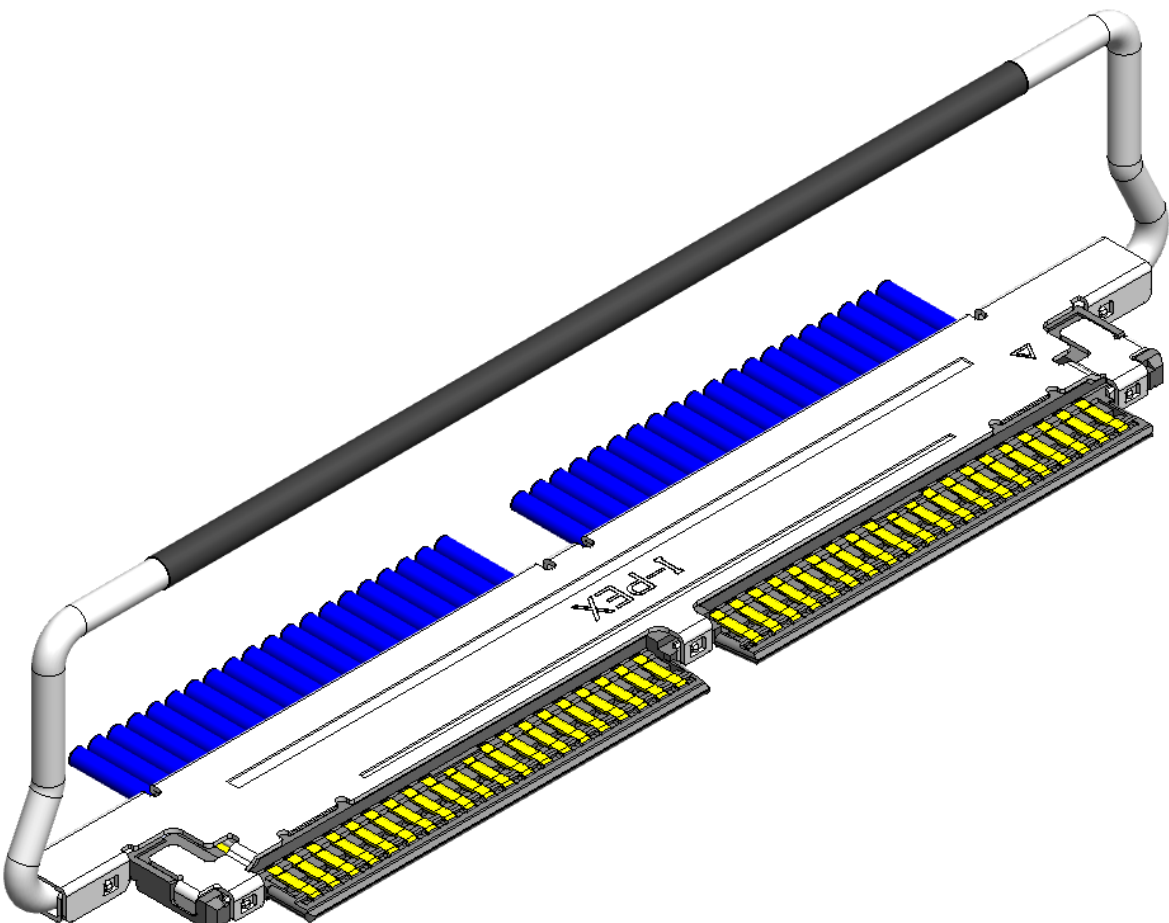
PlugがReceptacleに完全に嵌合されている場合にのみロックが可能



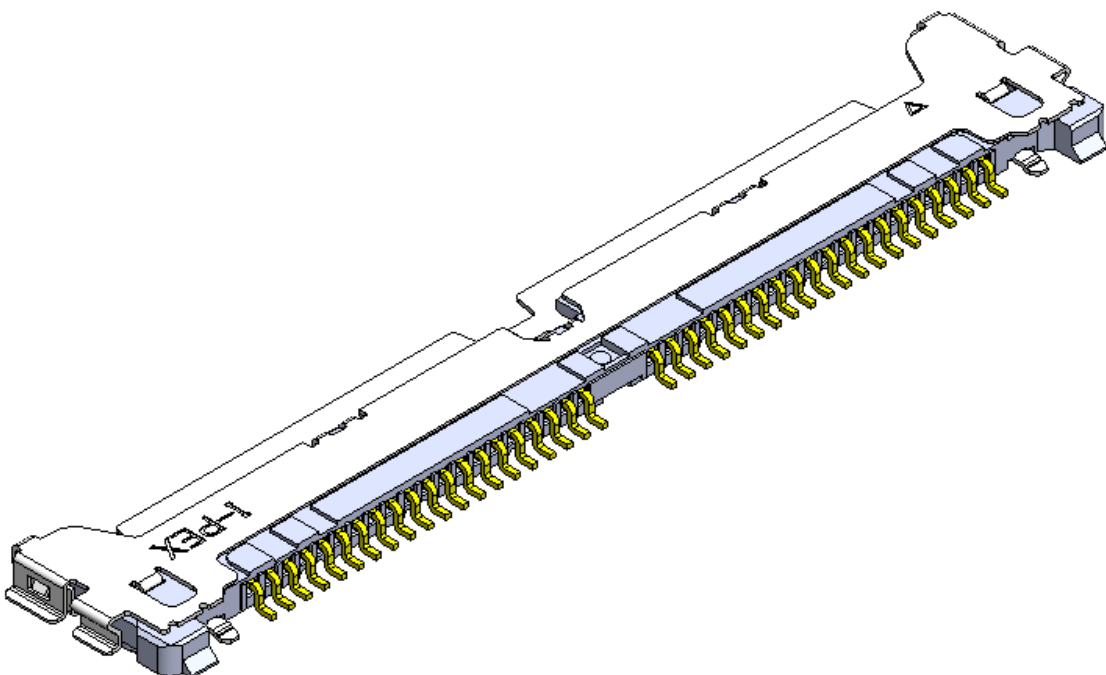
Component Parts Details

Component Parts

Connector parts

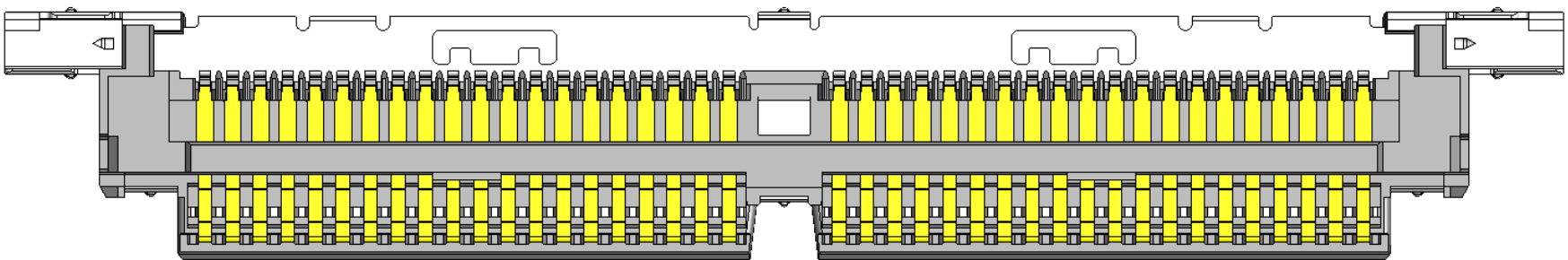


PLUG

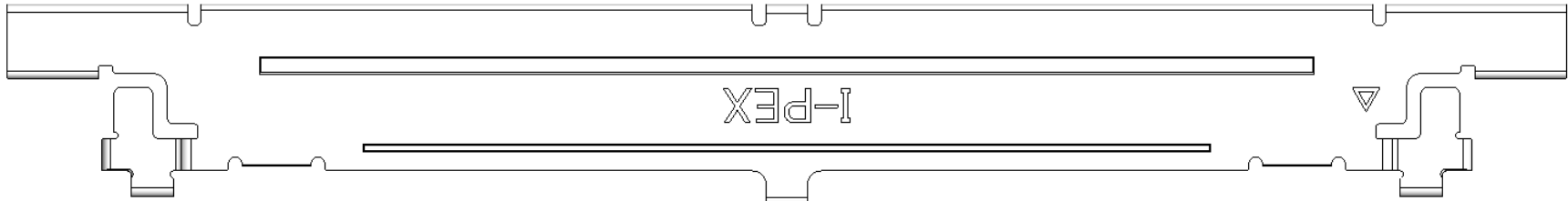


RECEPTACLE

Plug parts



PLUG HOUSING ASSEMBLY



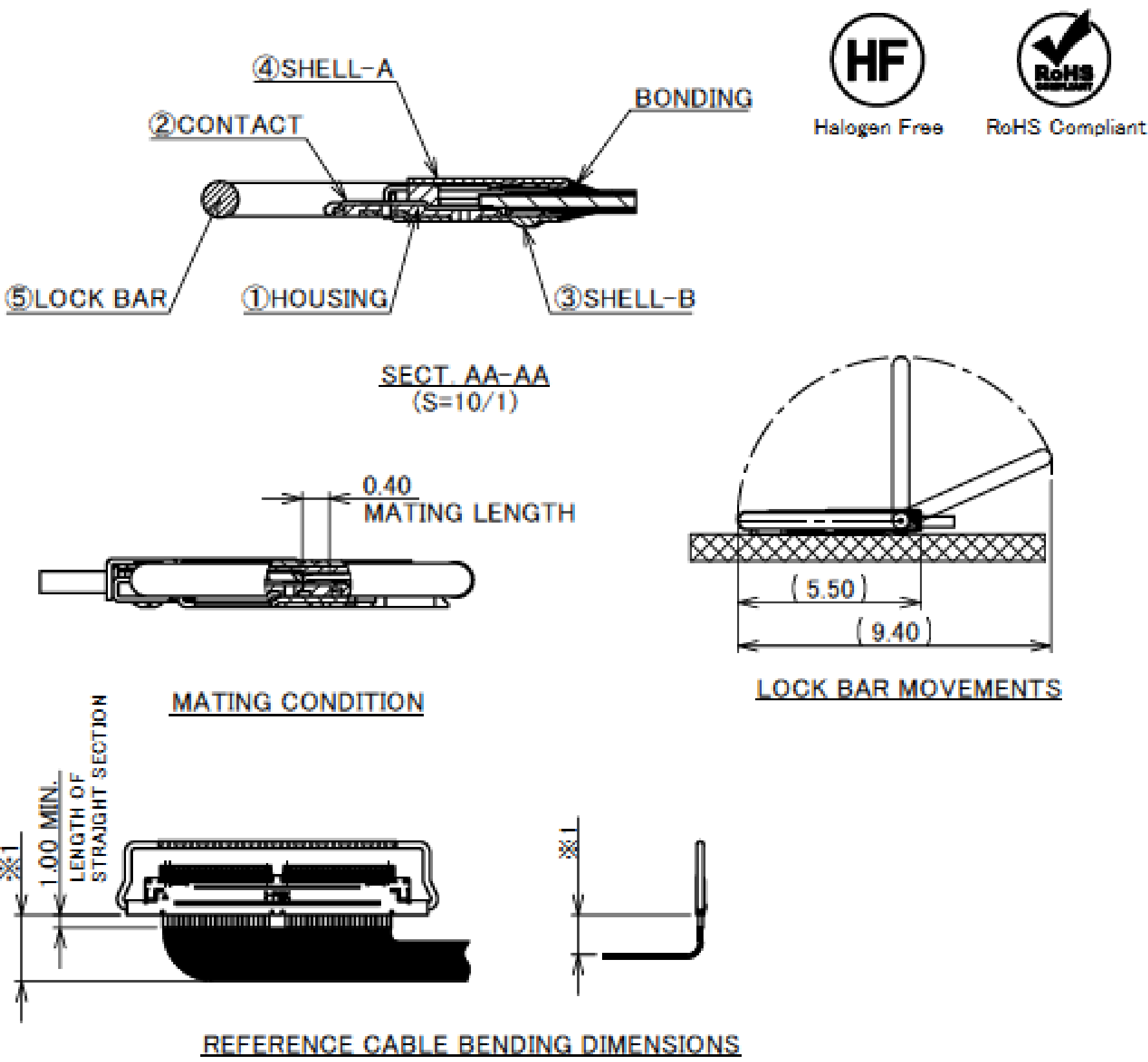
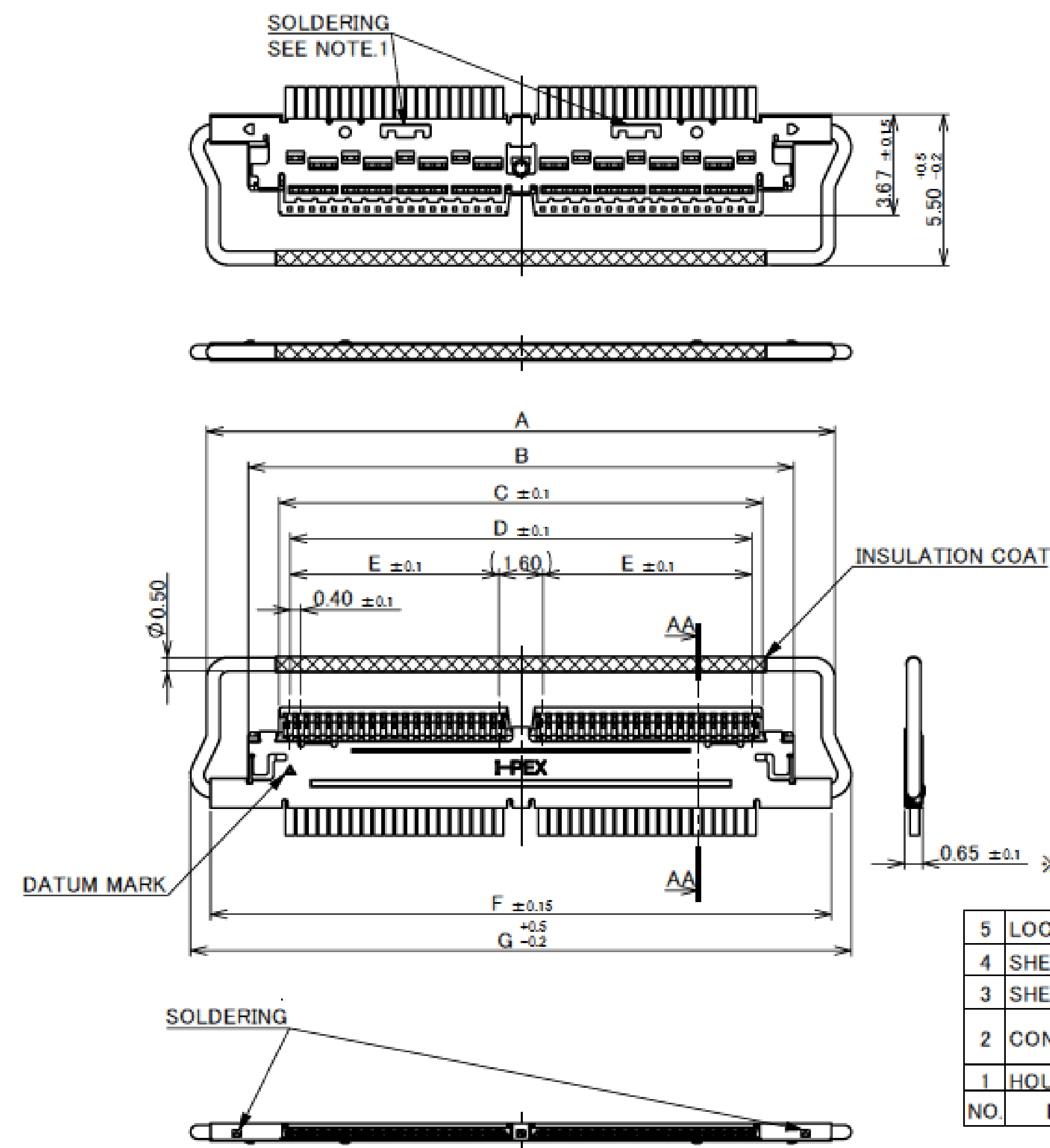
PLUG SHELL-A



PLUG LOCK BAR

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

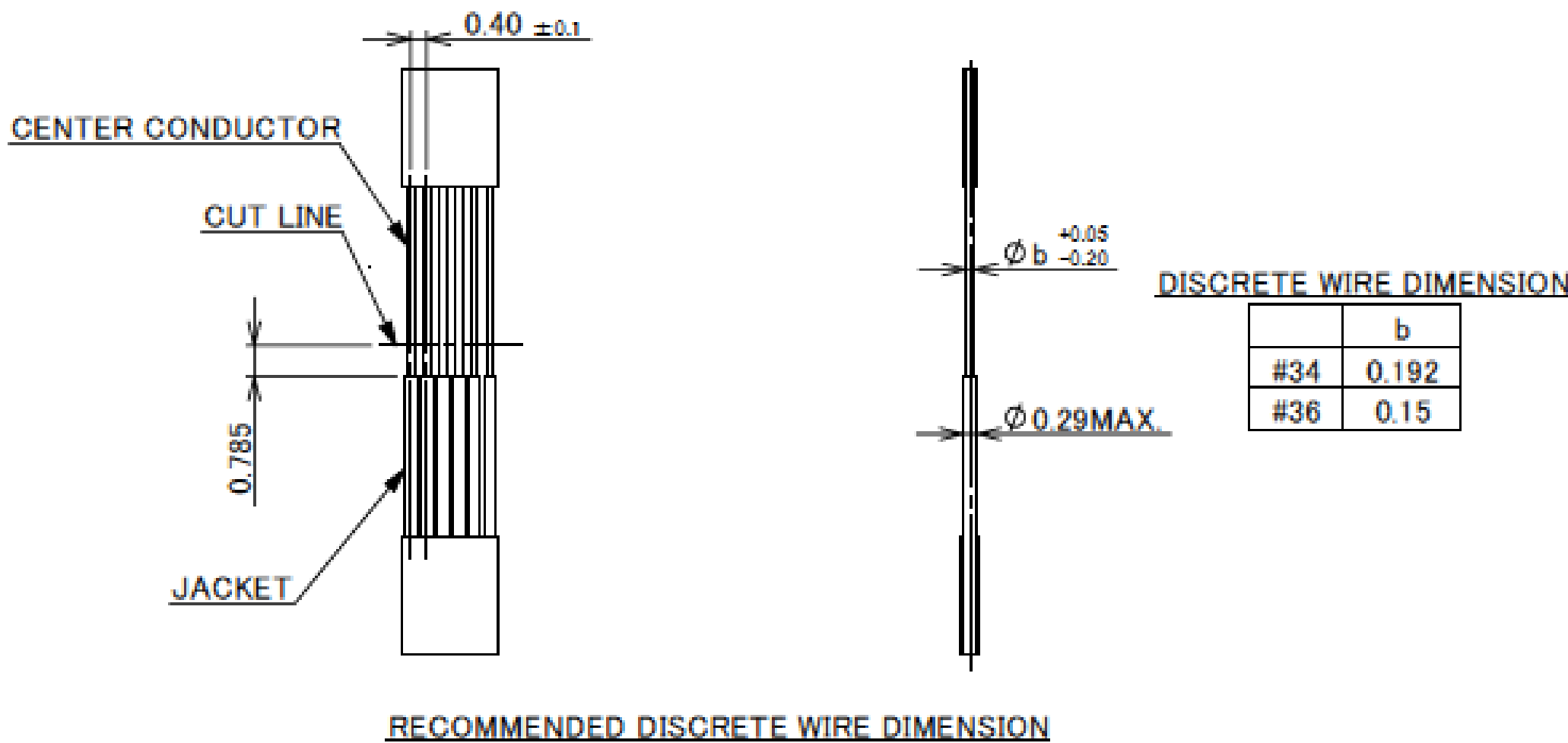
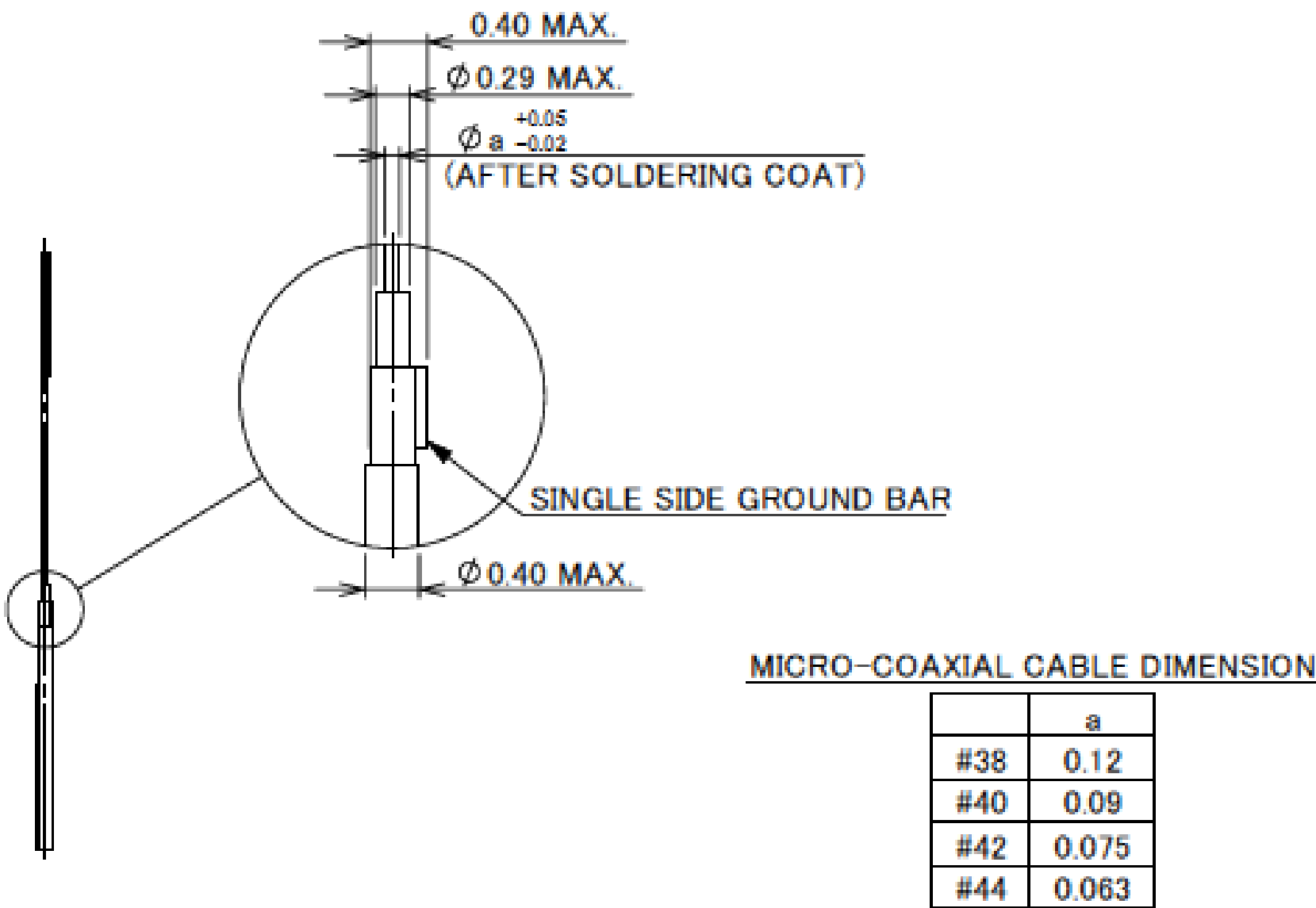
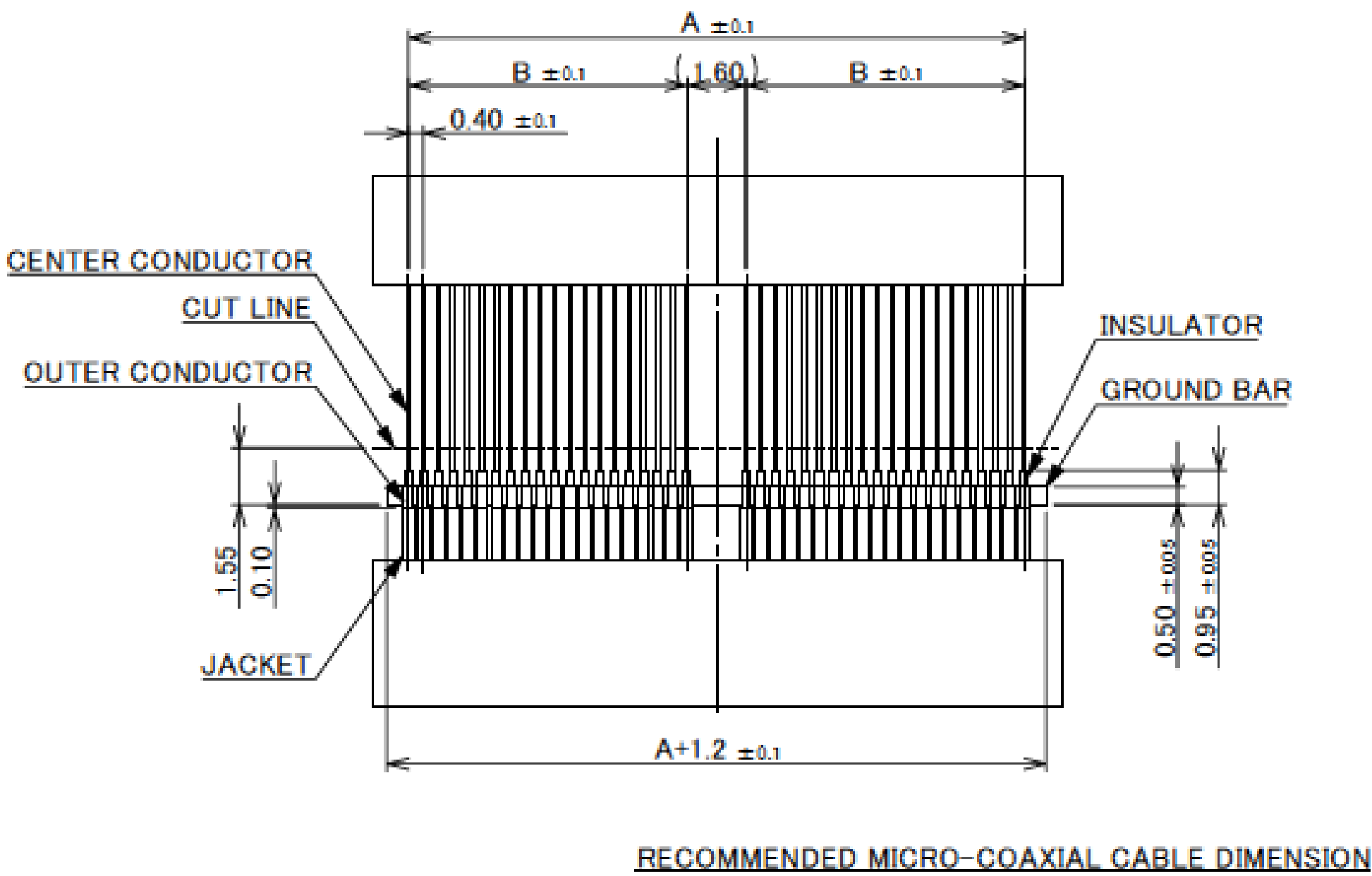


5	LOCK BAR	SUS	-
4	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.0 μ m MIN.
3	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.0 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.0 μ m MIN. CONTACT & SOLDERING AREA : Au 0.03 μ m MIN.
1	HOUSING	LCP	UL94V-0 BLACK RED PHOSPHORUS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

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

Rev.7

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



Rev.7

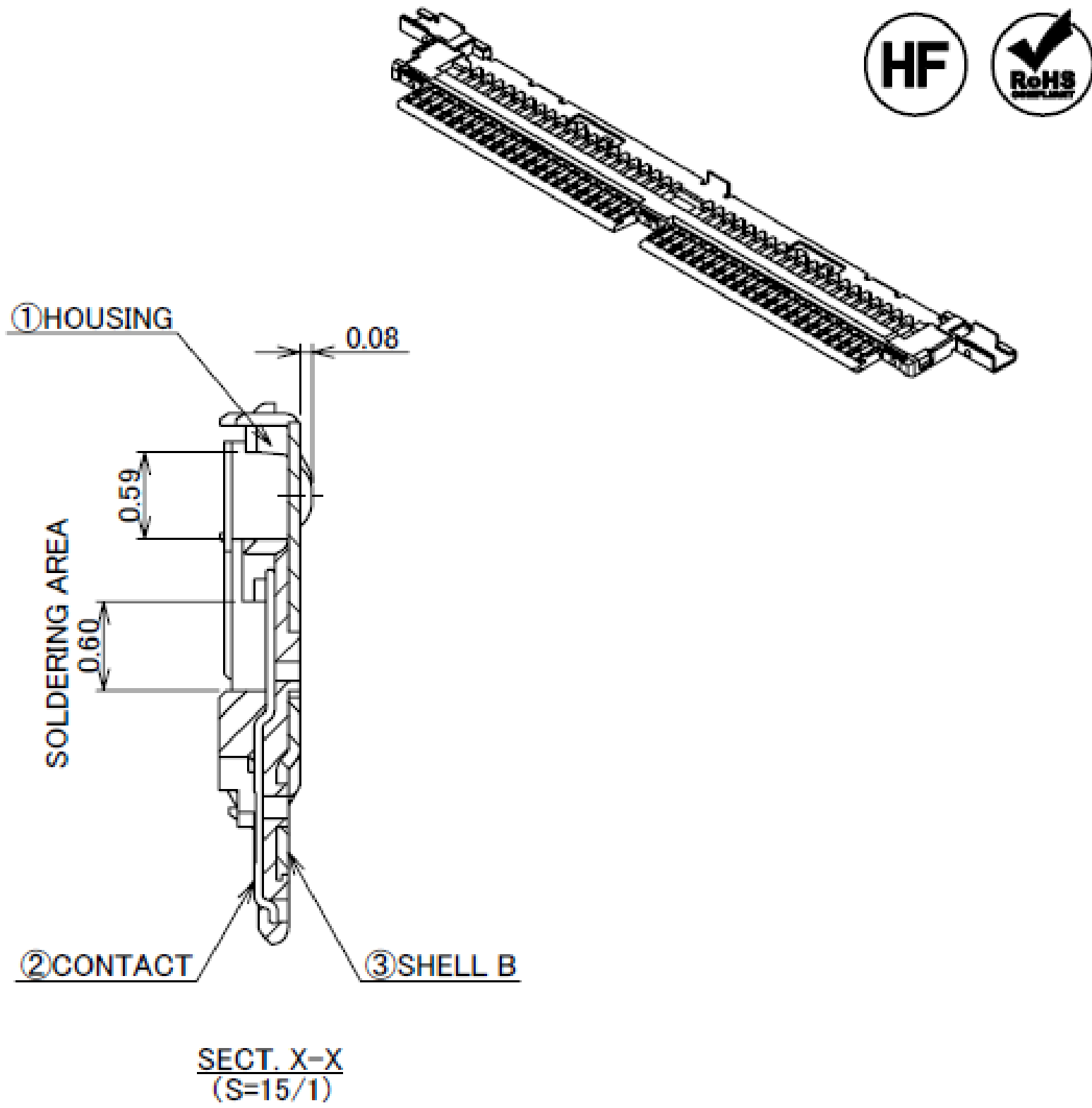
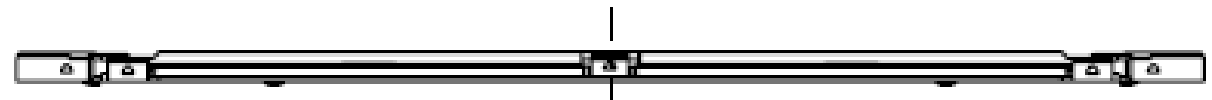
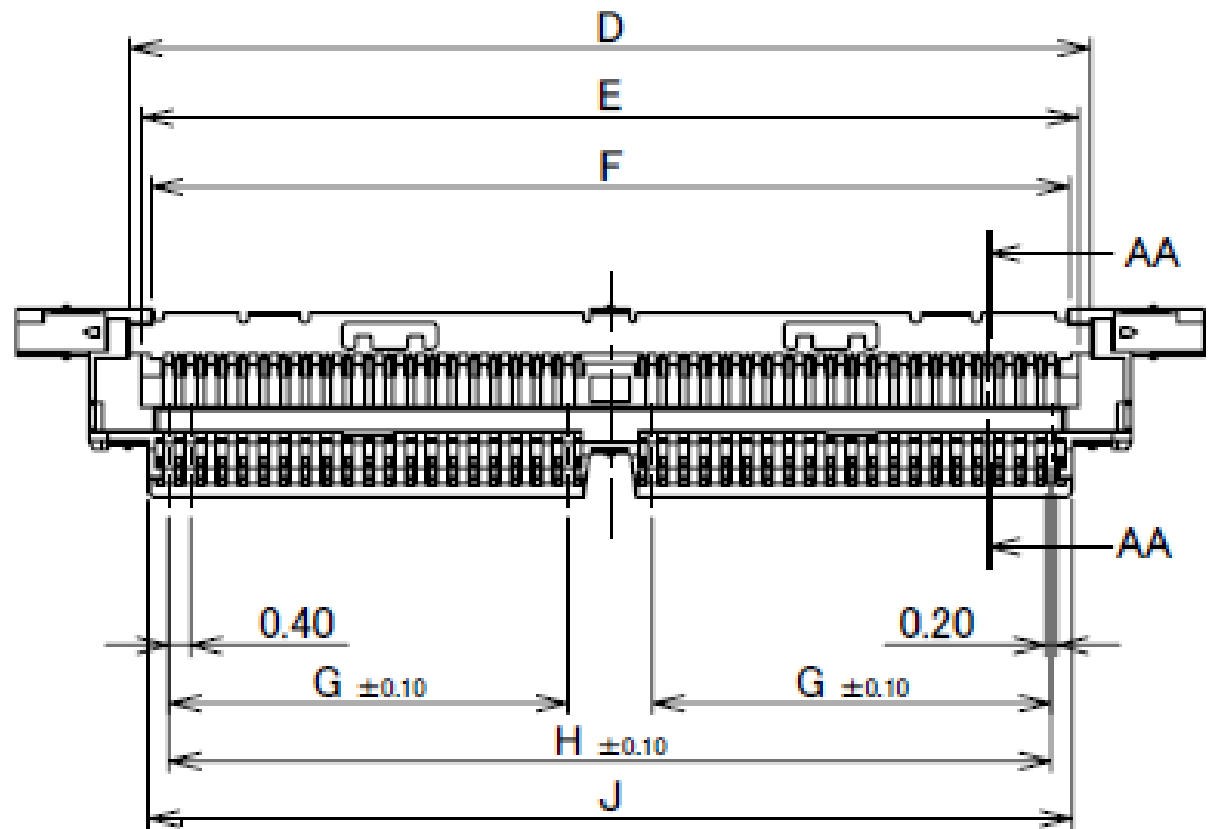
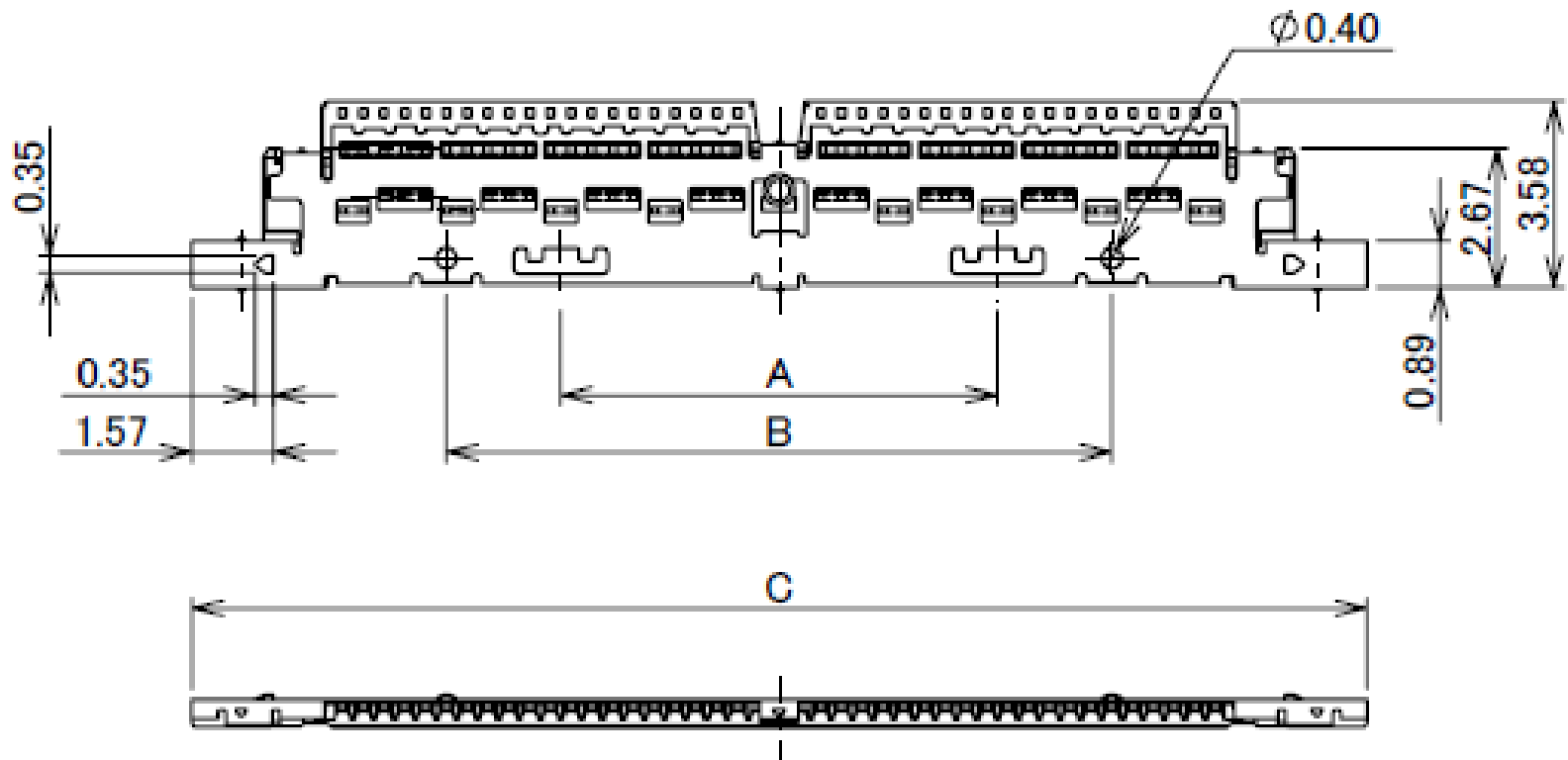
Plug for Cable Assembly

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 38,40,42,44 DISCRETE WIRE : AWG# 34,36
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※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)	0.15A 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℃~+85℃)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
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 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.7

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	



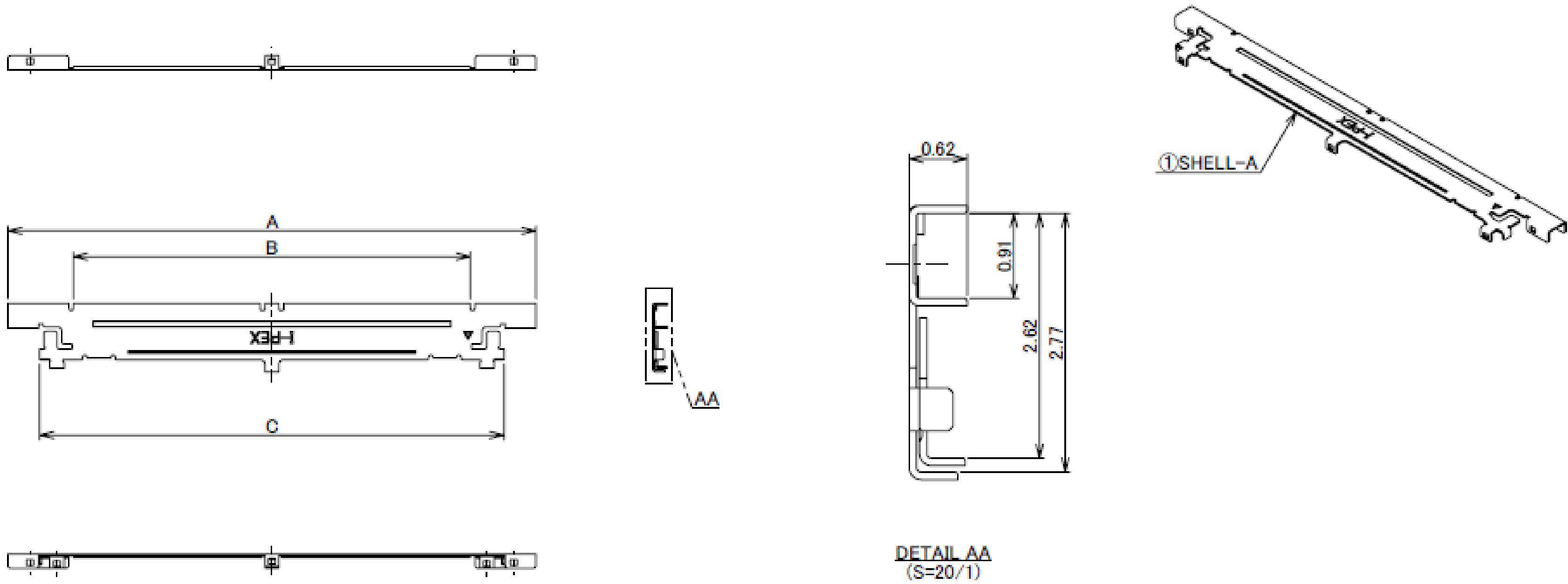
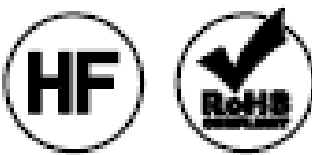
NOTES.
1. THIS PART IS ASSEMBLED WITH P/N:3298-0**1 AND 3300-**1 AFTER SOLDERING CABLES
AND SHALL BE ASSIGNED AS P/N: 20728-0**T-01.

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

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

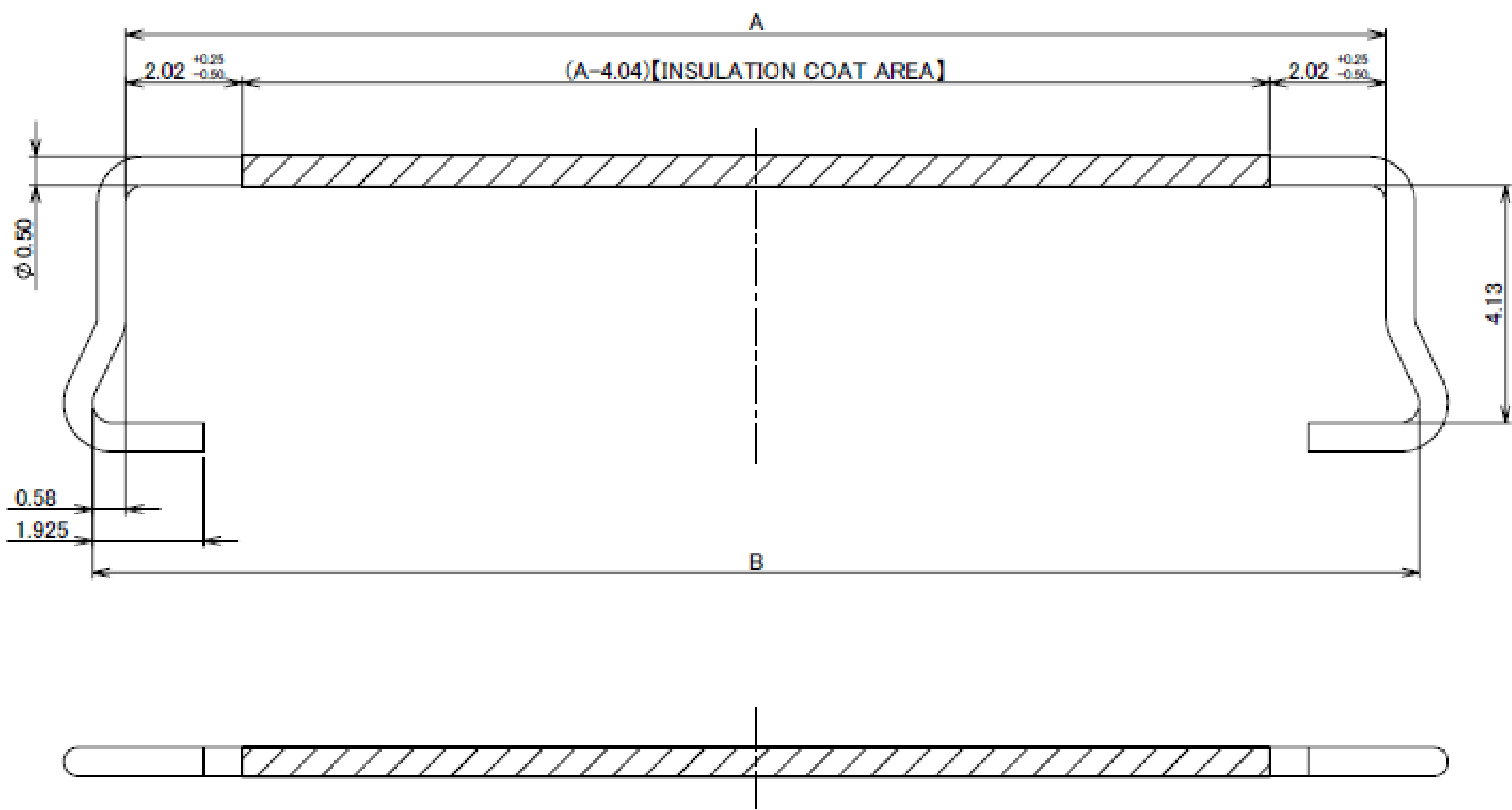


1	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.0 μ m MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

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

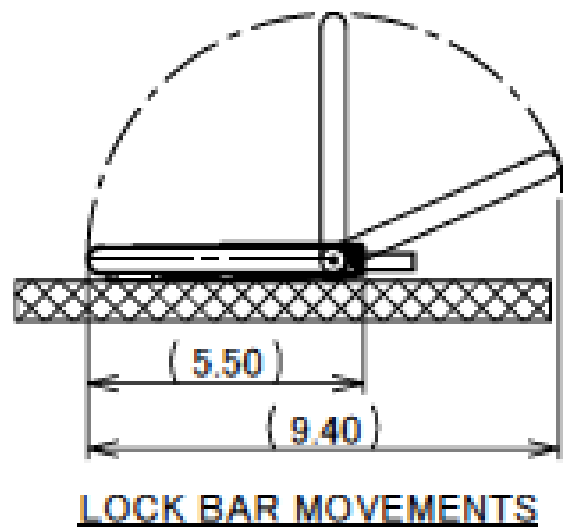
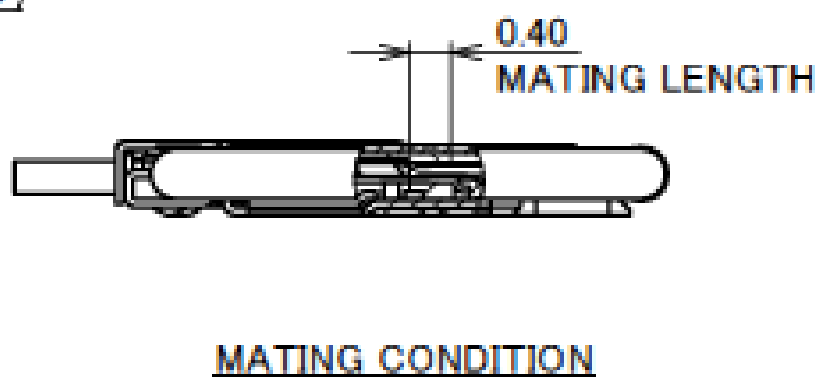
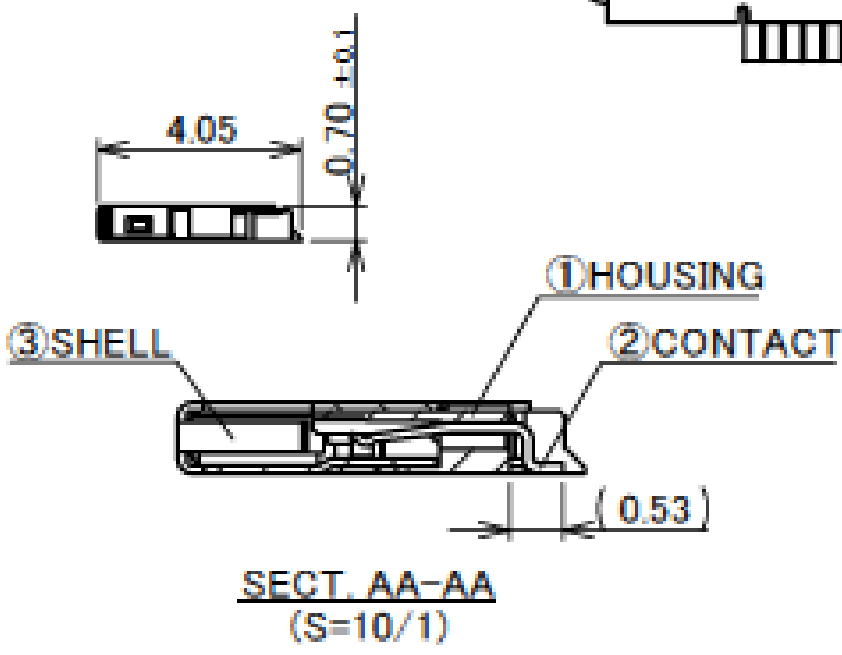
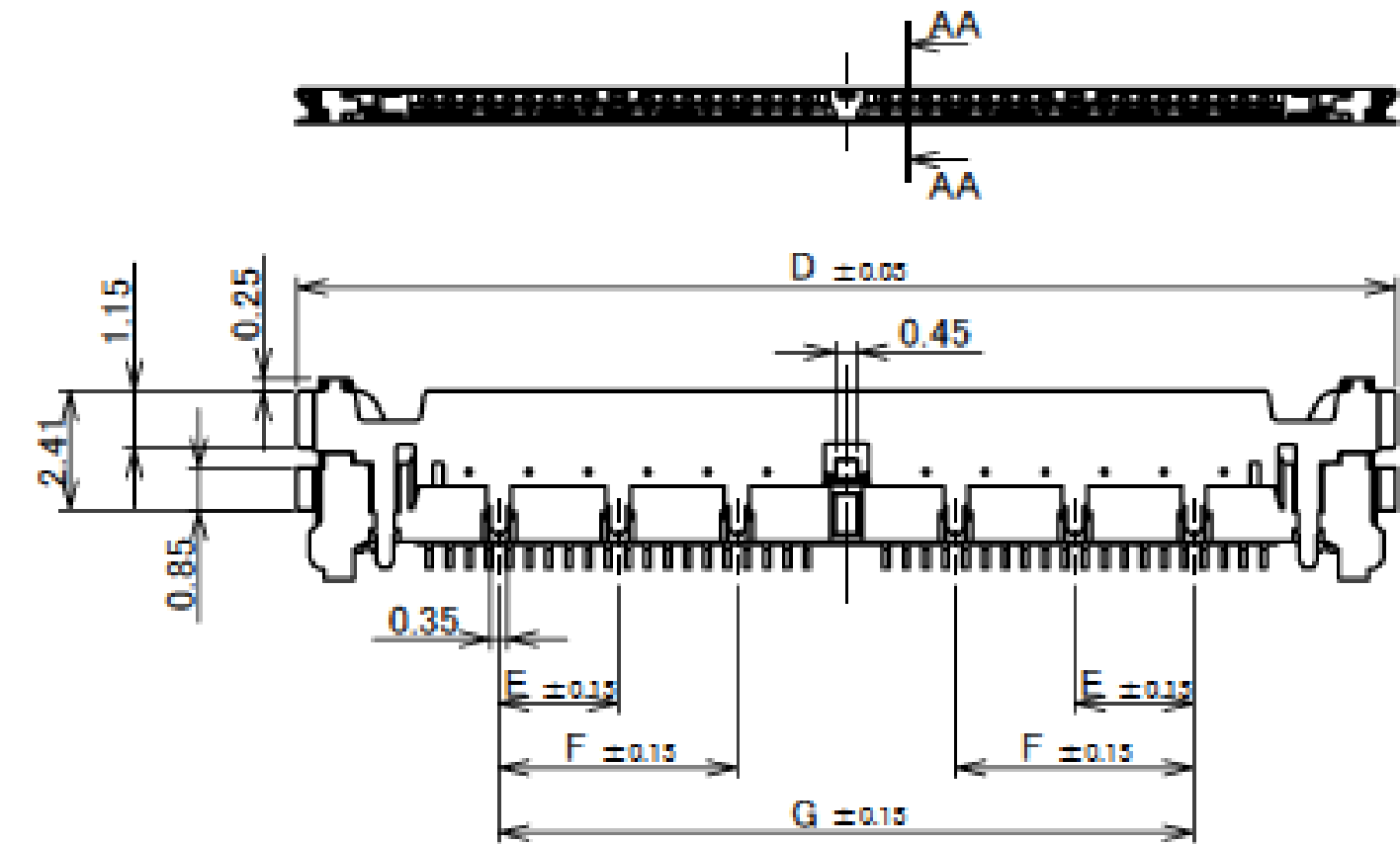
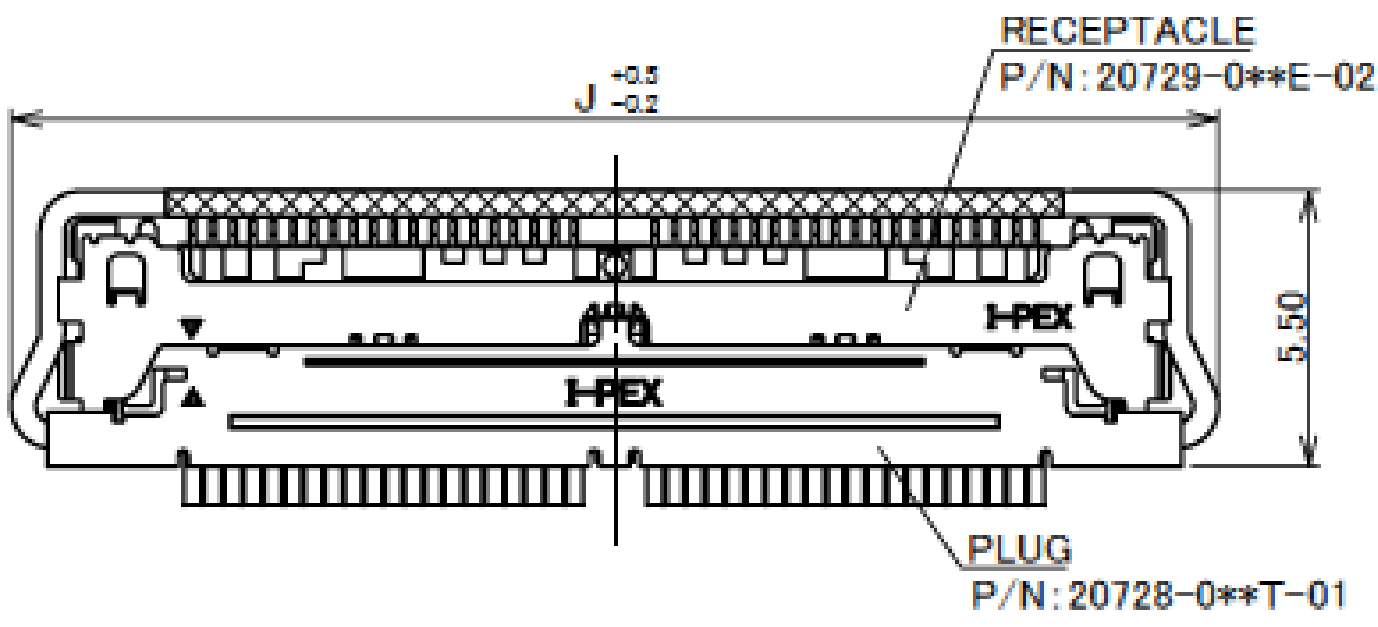
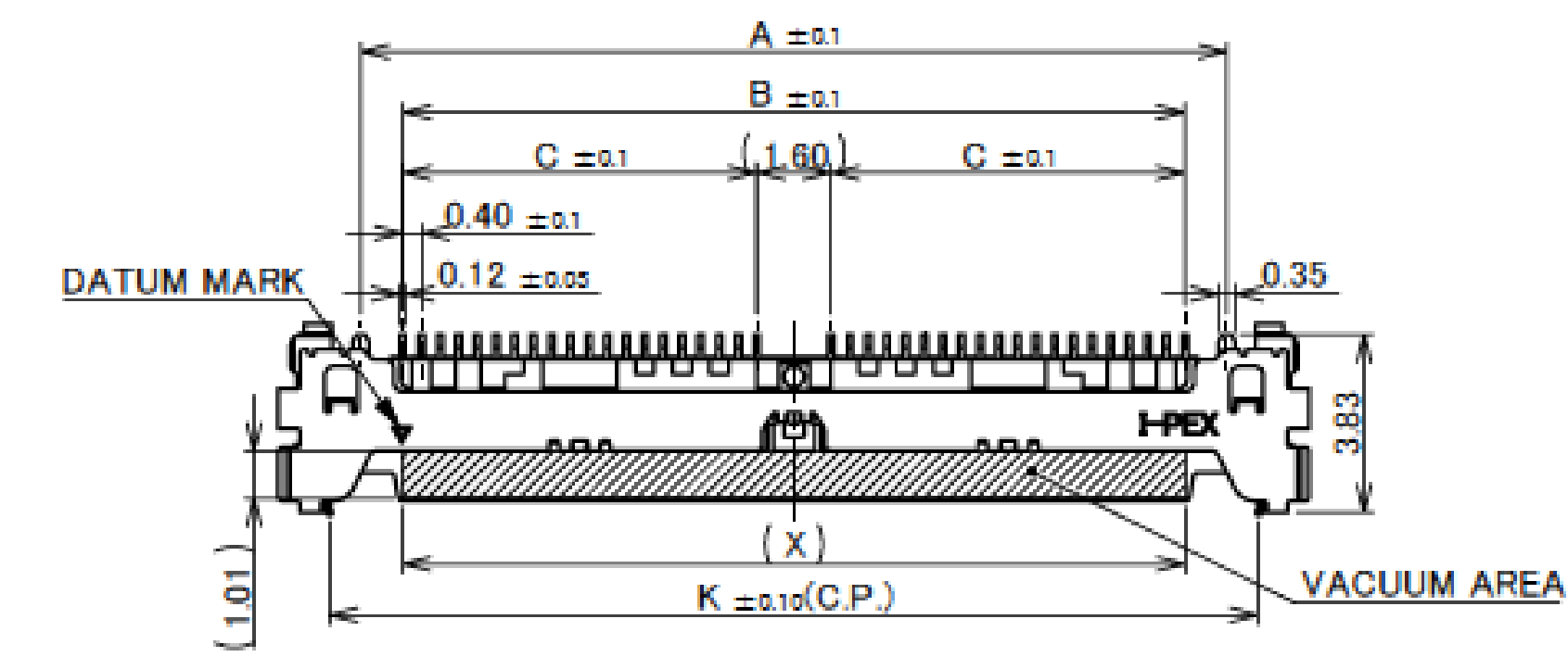
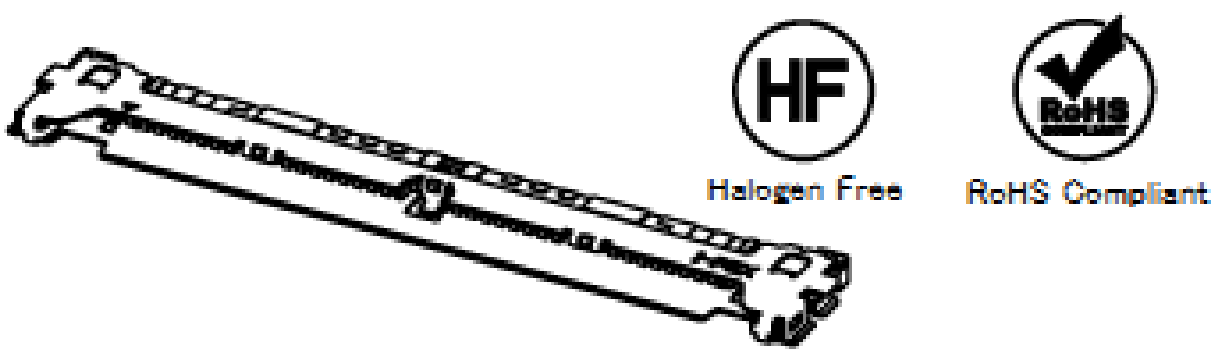


1	LOCK BAR	SUS	-
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

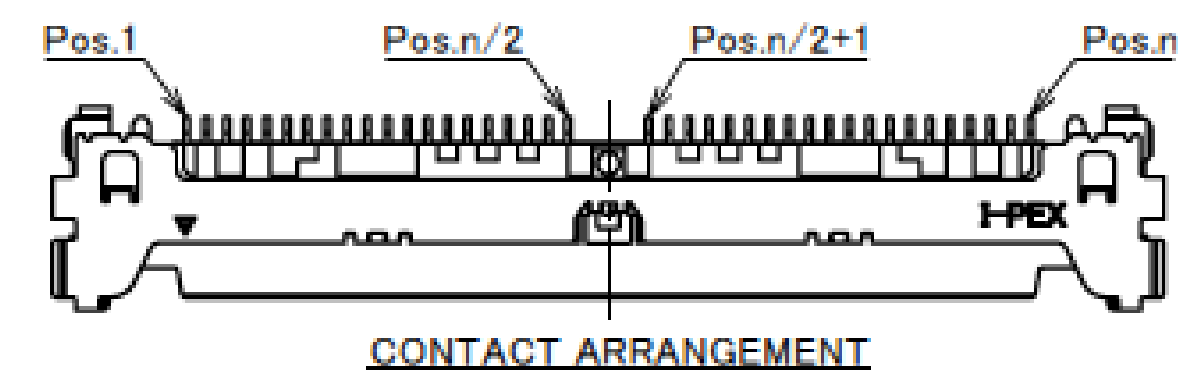
Rev.3

Receptacle Assembly

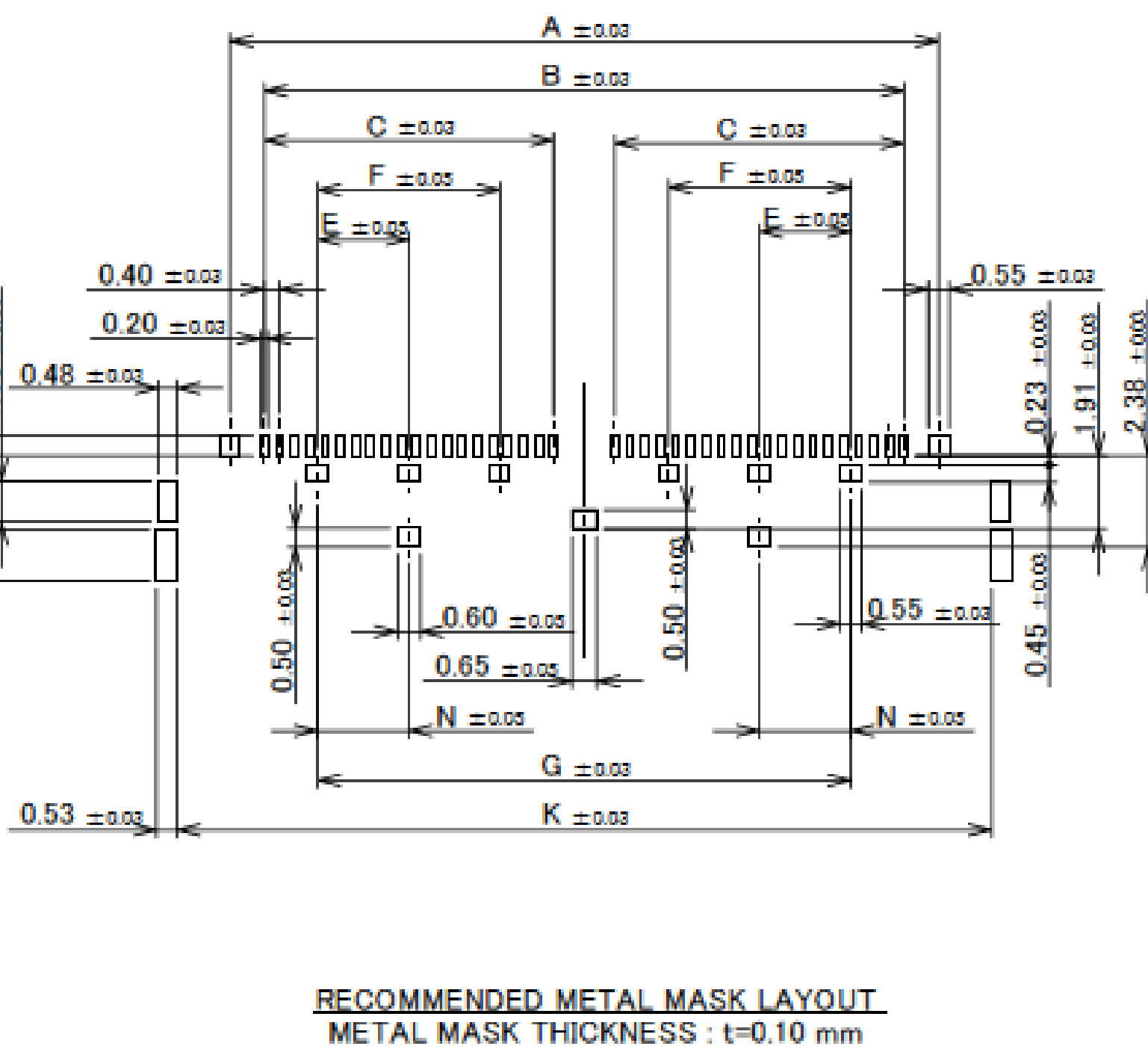
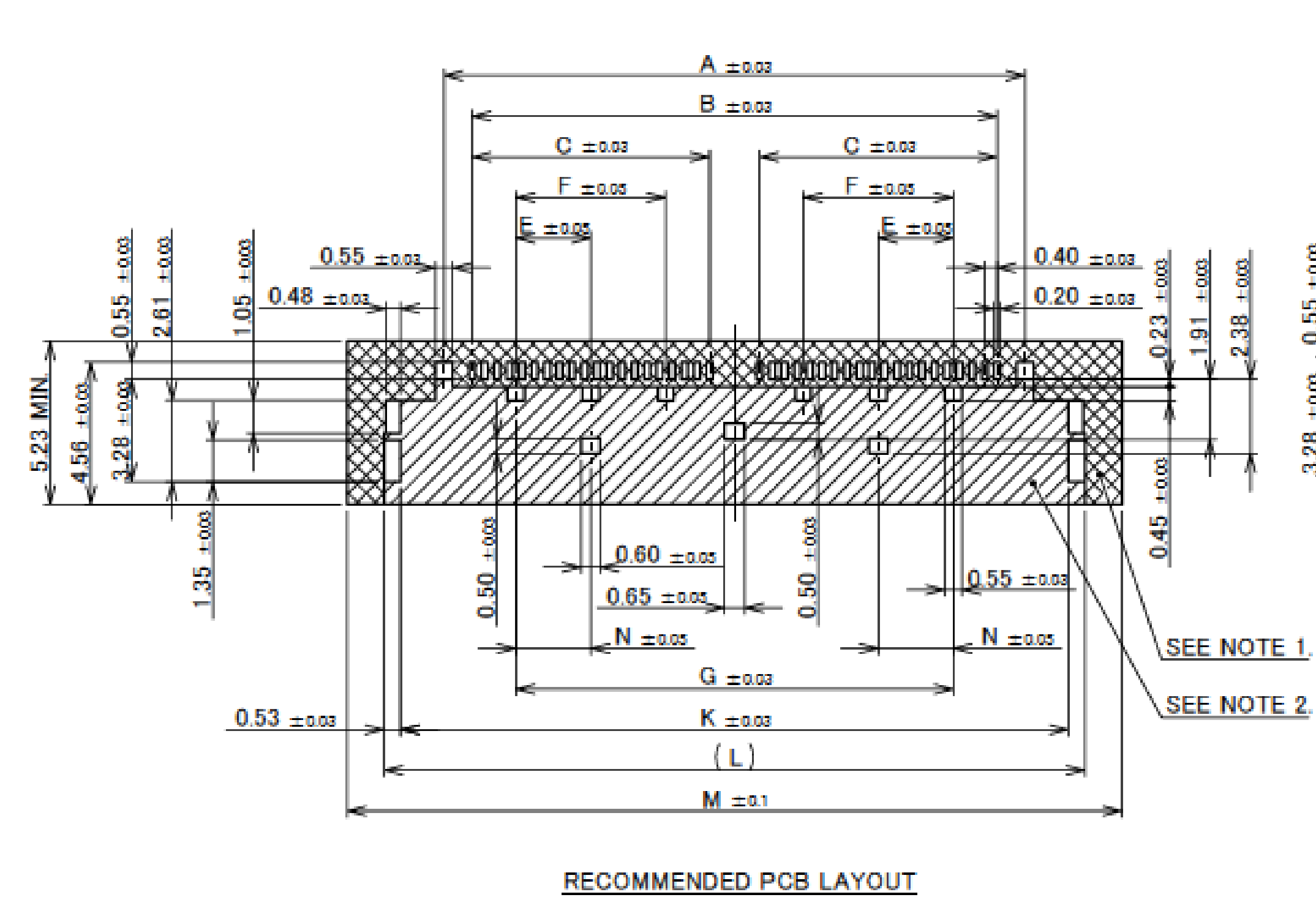
Recommended P/N		20729-0**E-02									
PART NO.	Pos.	A	B	C	D	E	F	G	H	K	X
20729-030E-02	30	14.60	12.80	5.60	18.14	-	2.80	10.00	20.05	15.95	12.81
20729-040E-02	40	18.60	16.80	7.60	22.14	2.40	4.80	14.00	24.05	19.95	16.81



NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. SOLDERING AREA : Au 0.02 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	UL94V-0, BLACK, RED PHOSPHORUS FREE

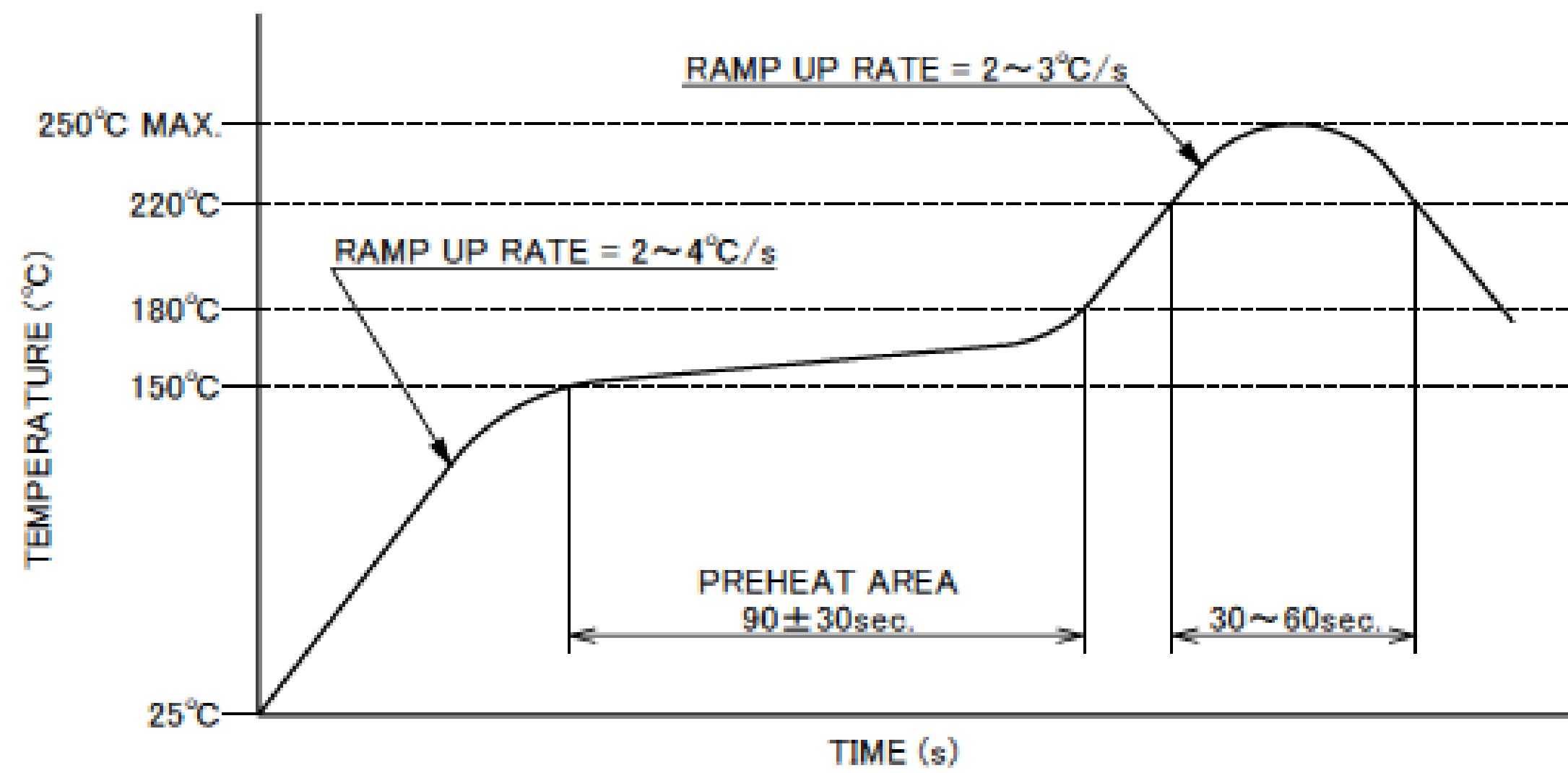
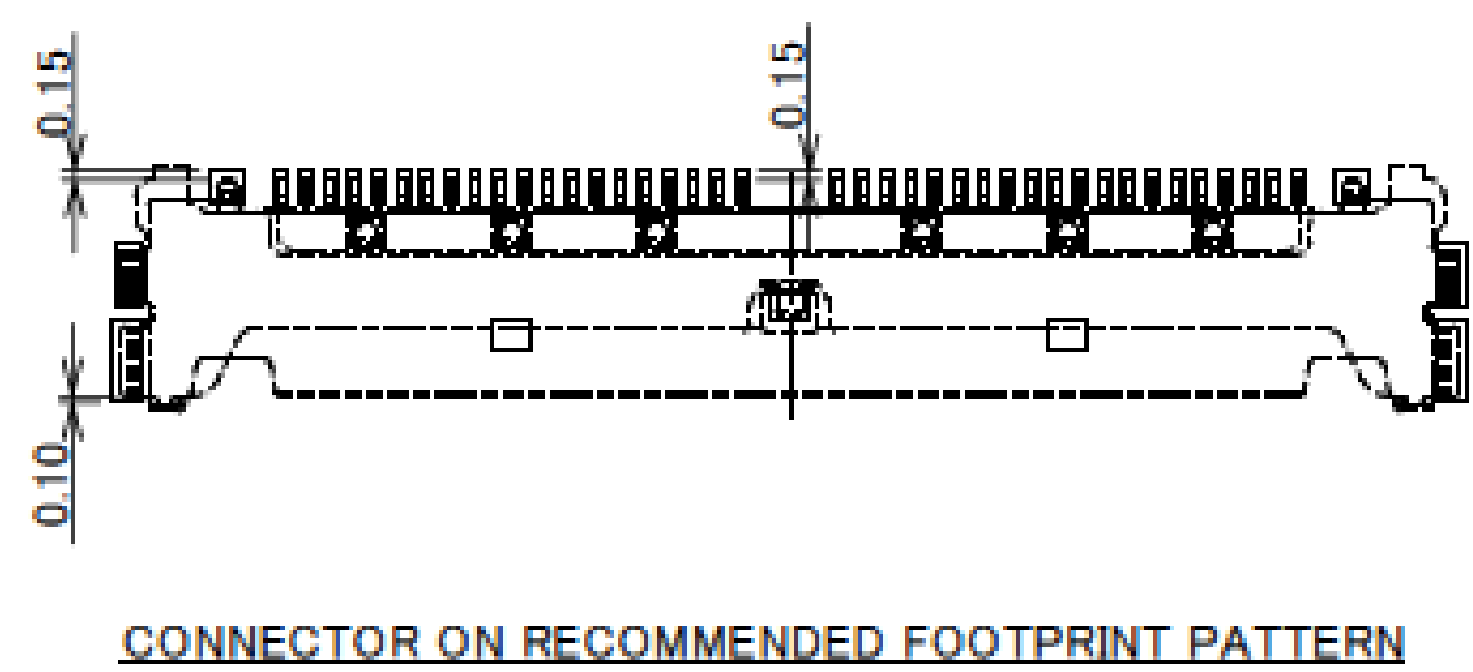


PART NO.	Pos.	A	B	C	E	F	G	K	L	M	N
20729-030E-02	30	14.60	12.80	5.60	-	2.80	10.00	17.38	18.44	20.80	1.40
20729-040E-02	40	18.60	16.80	7.60	2.40	4.80	14.00	21.38	22.44	24.80	2.40



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

Receptacle Assembly



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 : ≦40mohm 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 : ≦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.
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
Connectors

MHF® series



Micro-Coaxial/Twinax
Connectors

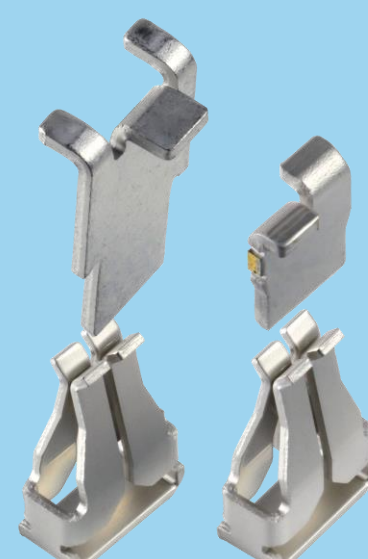


CABLIME® series

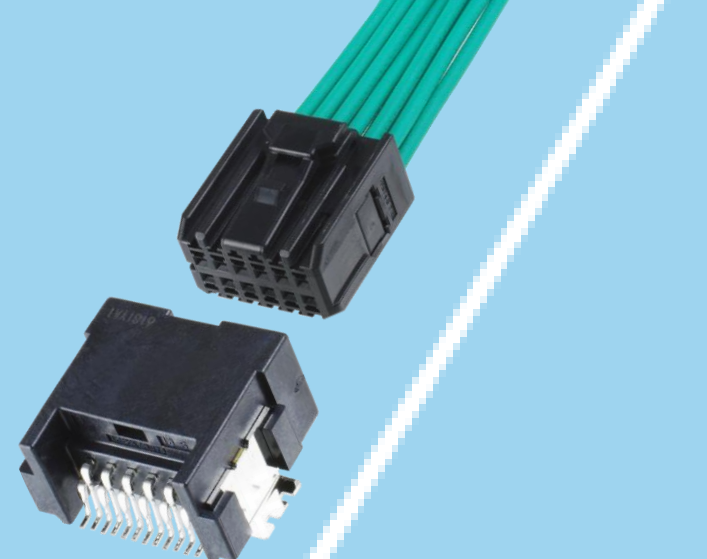


Wire-to-Board
Connectors/
Terminals

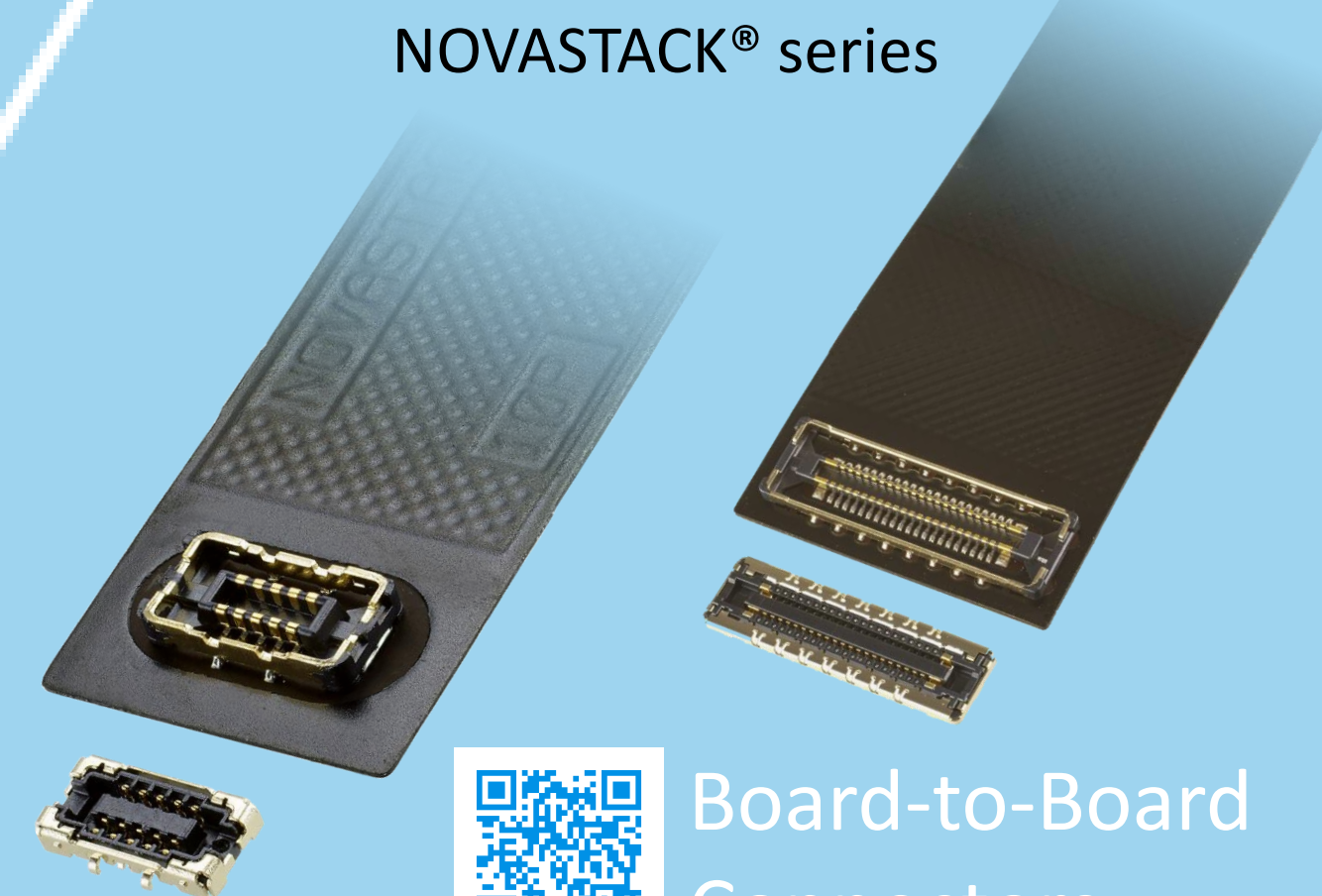
AP series



ISH® series



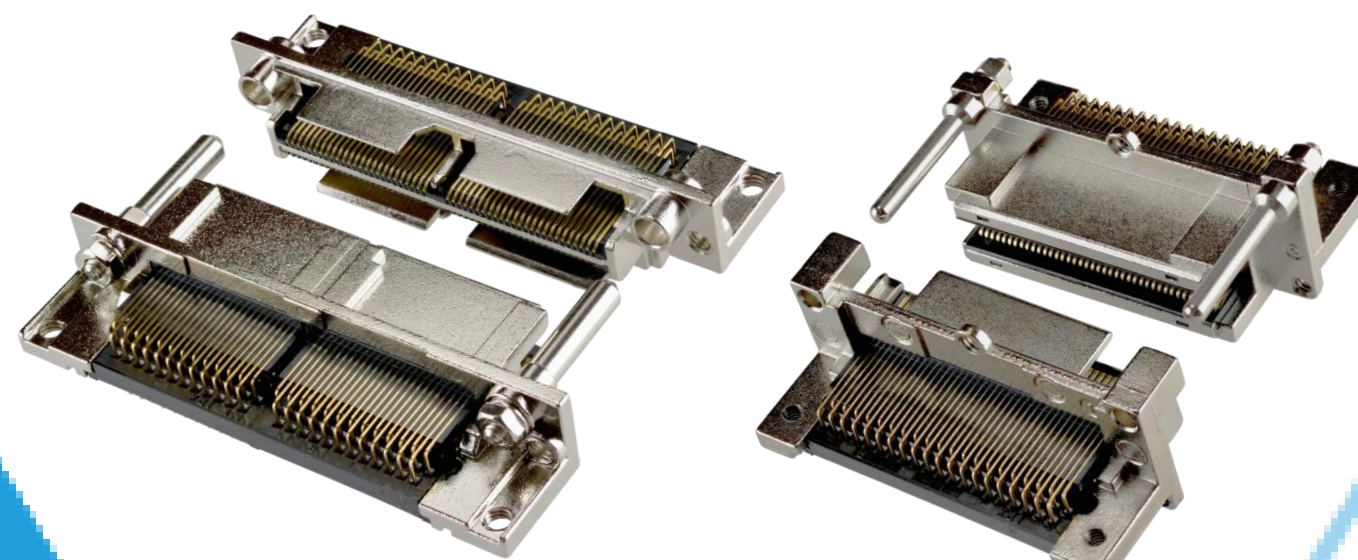
NOVASTACK® series



Board-to-Board
Connectors



I/O
Connectors



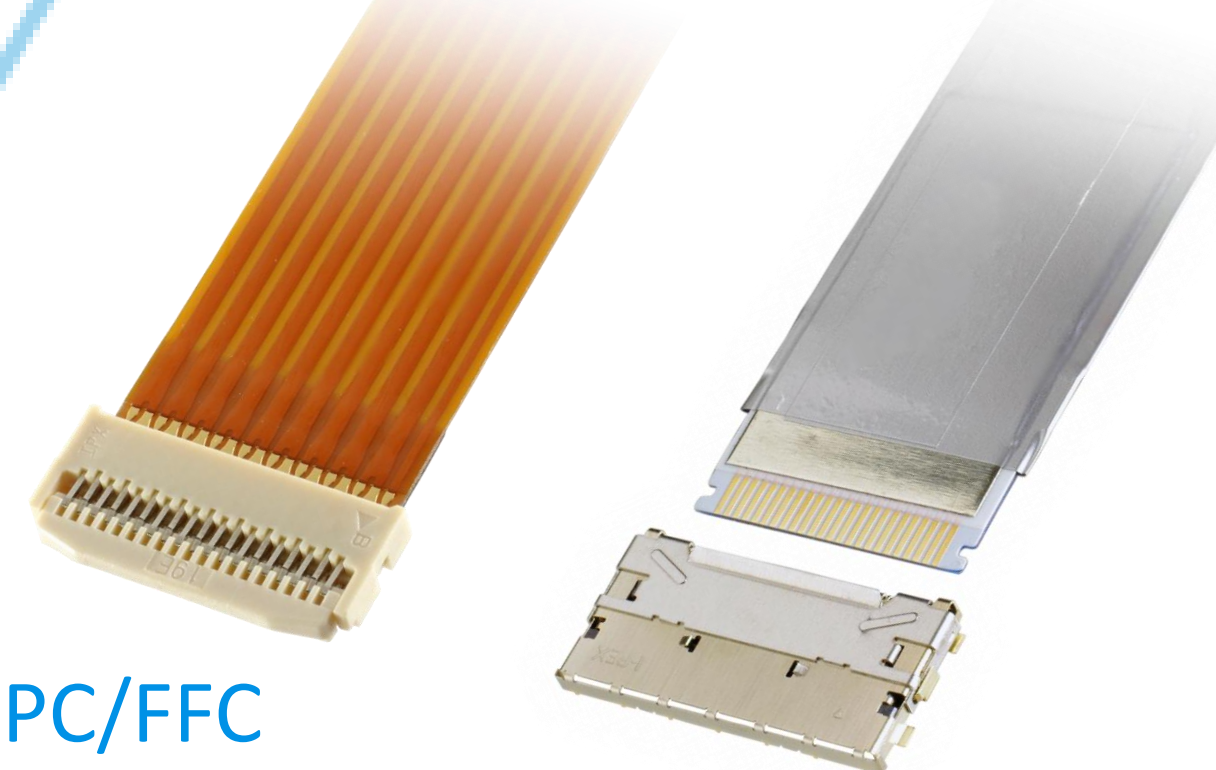
MINIDOCK™ series



FPC/FFC
Connectors

MINIFLEX® series

EVAFLEX® series



Inquiry



I-PEX, MHF, CABLINE, NOVASTACK, ISH, IARPB, MINIFLEX, EVAFLEX, MINIDOCK and ZenShield are registered trademarks of I-PEX Inc. Please note that the contents in the catalog might be changed without prior notification. I-PEX Inc. assumes no responsibility for any inaccuracies or obligation to update information on these documents. Please be sure to read and understand the latest "Precautions for Use" and "Instruction Manual" before you use our products. We shall not be responsible for any defects, damages or troubles in case you use our products without following the precautions for use. Please feel free to contact our sales representatives when you use our products for any applications that require very high reliability and safety, or that relate to human life (ex. nuclear power control, aerospace, transportation, medical equipment, safety equipment etc.).

Contact your sales representative
or more detailed information.

www.i-pex.com



I-PEX

© I-PEX Inc. 2025
All rights reserved