

CABLINE®-CA II PLUS

フルシールド、メカニカルロック付き、高速伝送対応(32 Gbps/lane)、0.4 mmピッチ、水平嵌合タイプ細線同軸コネクタ

*更に高速64 Gbps PAM4には、CABLINE-CA II PLUS レセプタクル (20790-060E-01/-02) に嵌合する
[CABLINE-CA II PLUS ハーネス ソリューション](#)をご確認ください。

Product Specifications:

Mating type	Horizontal	
Board Pitch (mm)	0.4	
Wiping Length (mm)	0.54	
Mated size (mm)	Height	1.2 max. with cover
	Width	Formula: $6.95 + (0.4 * ?p)$
	Depth	6.7
Pin Counts	Range	Up to 60
	Available	60

Applicable Cable Size:

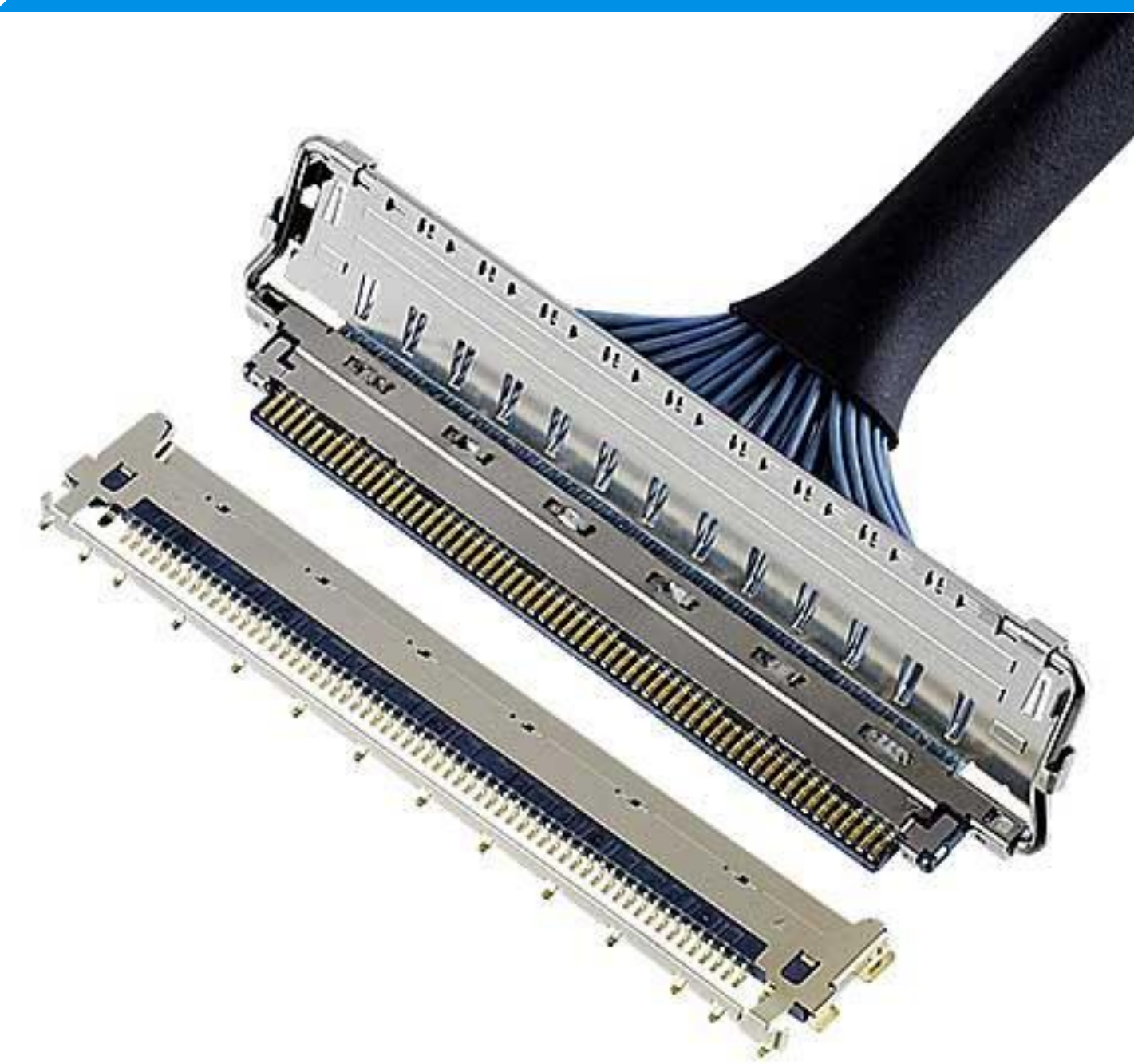
Maximum O.D. (mm)	0.4
Micro-Coaxial for Signal (AWG)	45 ohm: #38 or smaller 50 ohm: #40 or smaller
Twinax (AWG)	#40, #42
Discrete (AWG)	#34 or smaller

Applicable Standards (Reference Only):

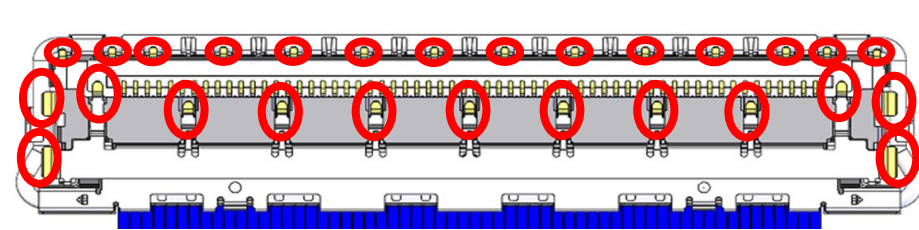
32 Gbps/ Lane, USB4 Gen4 (40 Gbps/ Lane PAM3)
 Display Port UHBR20 (20 Gbps/Lane),

*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。

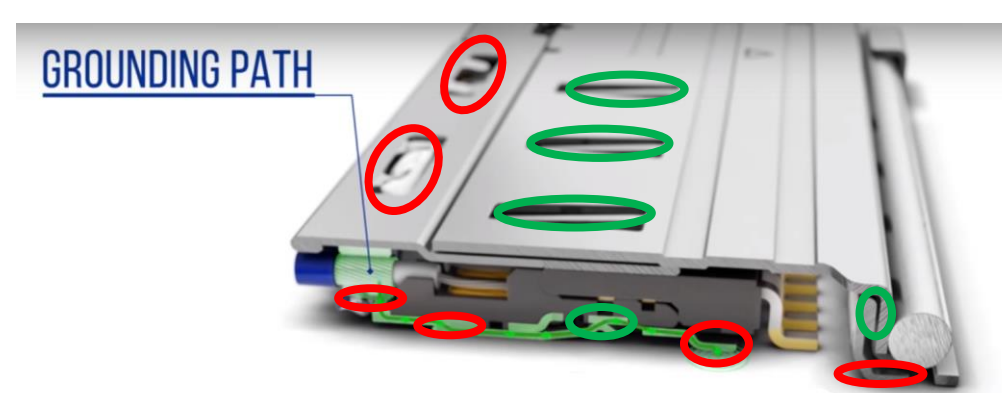
*CABLINE-CA II (狭小スペースタイプ)で 20, 30, 40, 50pの芯数もございます。



▶ ZenShield®フルシールドと多点グランド構造で、EMCソリューションに最適

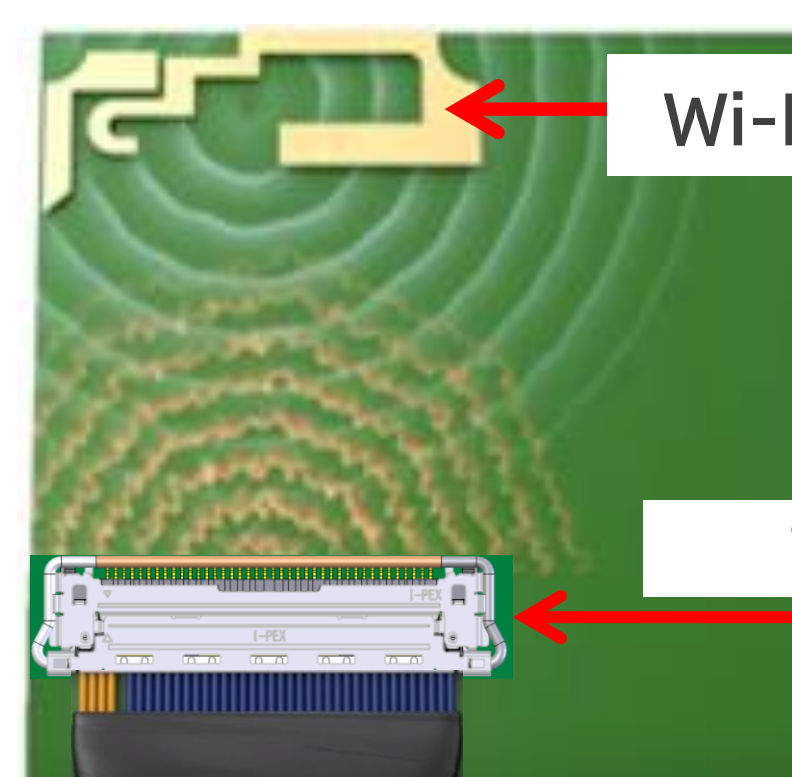


下から見たコネクタ

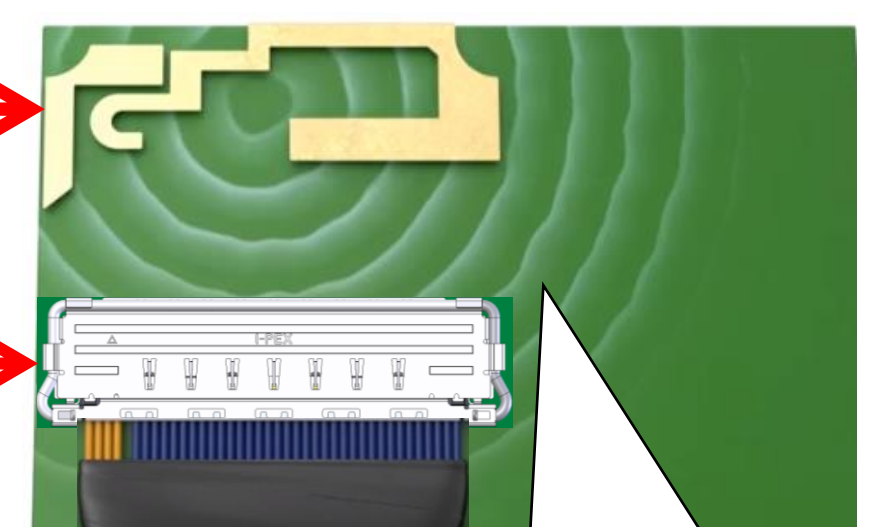


○ はんだ付け接点部
 ○ メカニカル接点部

一般的なコネクタ

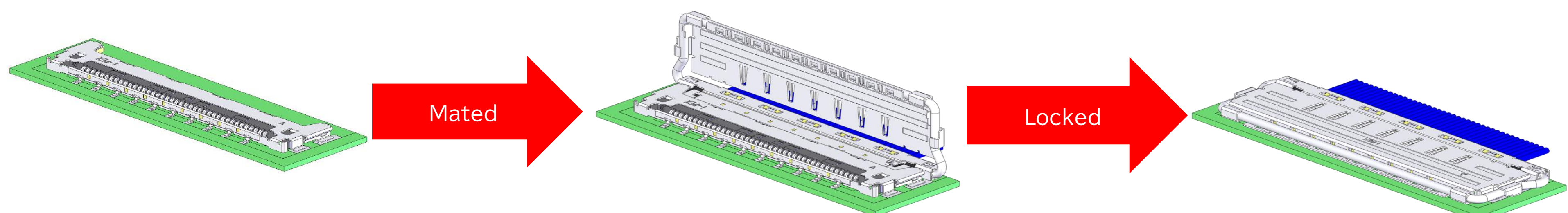


ZenShield®コネクタ

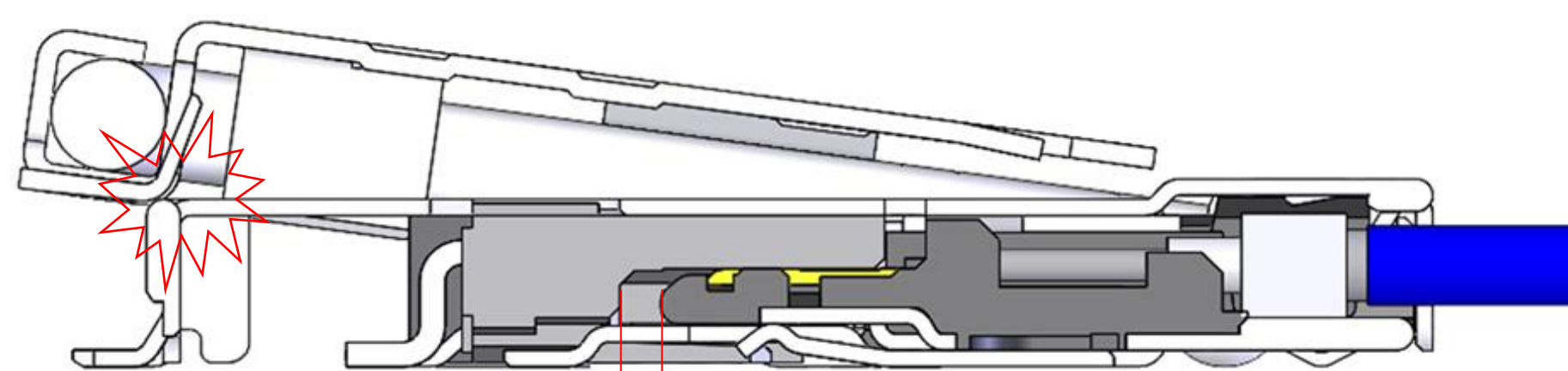


アンテナ付近まで
コネクタ実装が可能に

▶ メカニカルロックバーによる半嵌合防止とプラグ抜け防止

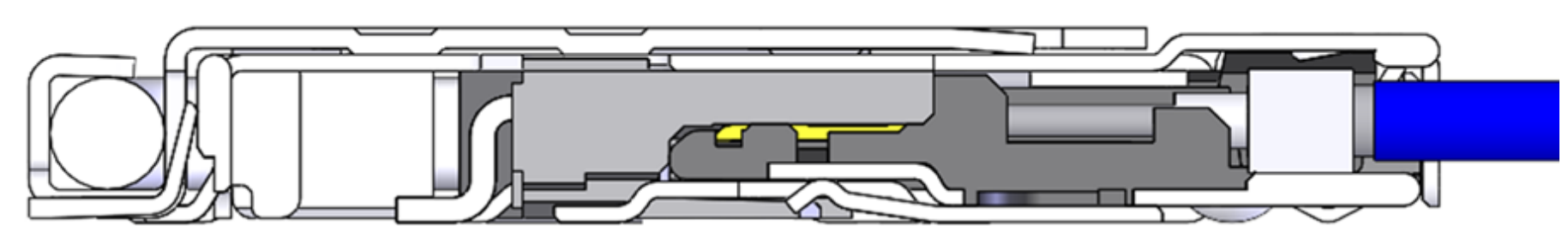


干渉



不完全嵌合

プラグがレセプタクルに正常に嵌合されている場合にのみロックが可能



正常嵌合

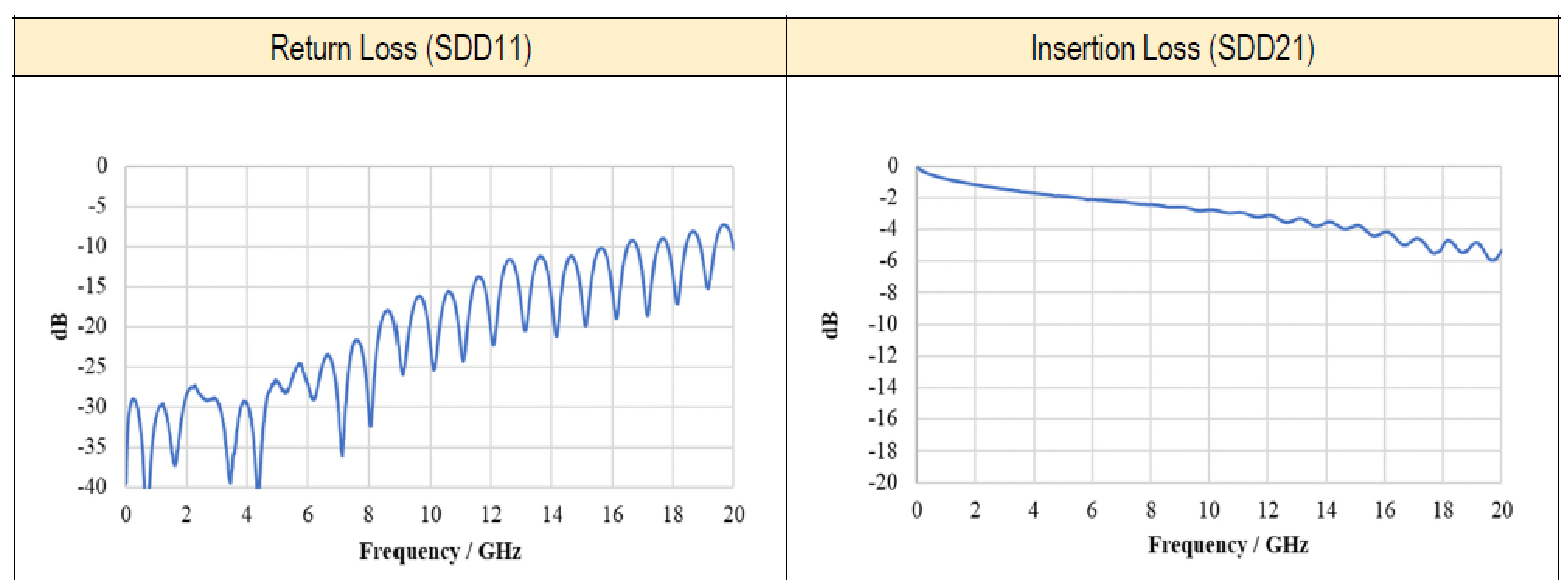
▶ 32Gbps/lane の高速伝送内部接続に最適

Measurement results

Connector: CABLINE-CA II 40P

Cable: Micro-coaxial cable
 AWG #40, 45ohm, Length : 100 mm

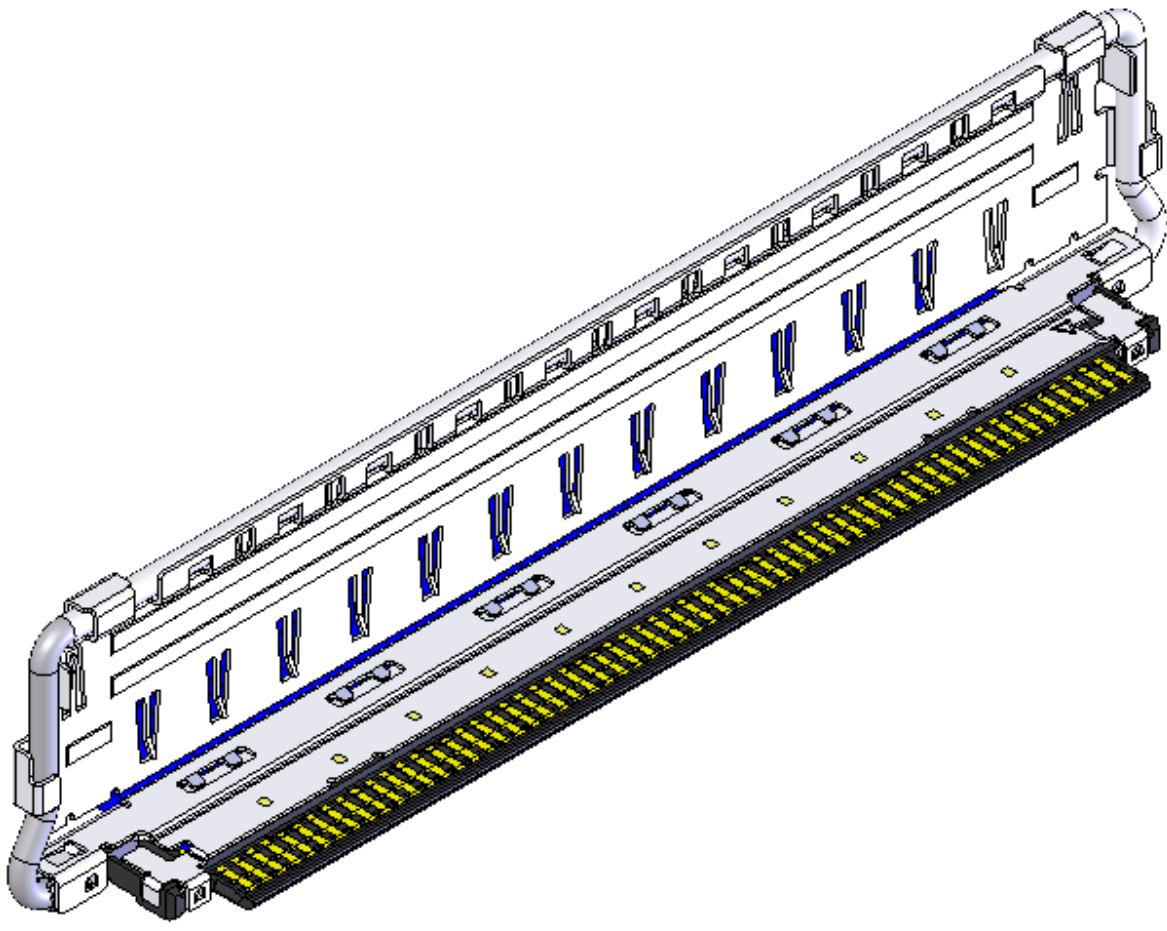
Pin Assignment: GSSGSSG



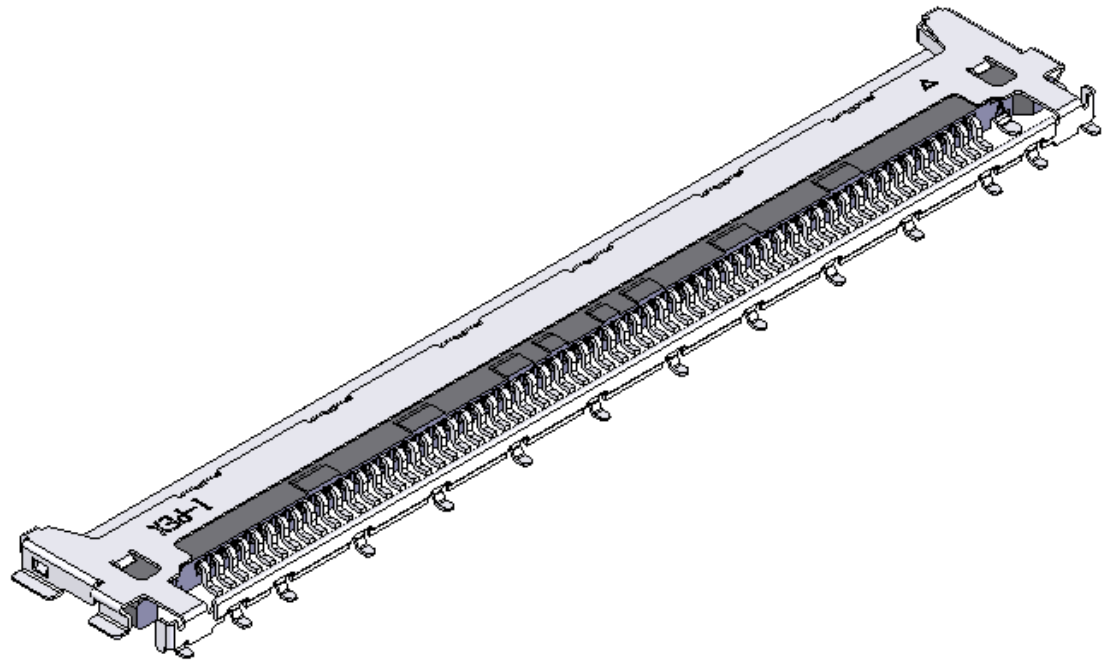
Component Parts Details

Component Parts

Connector parts

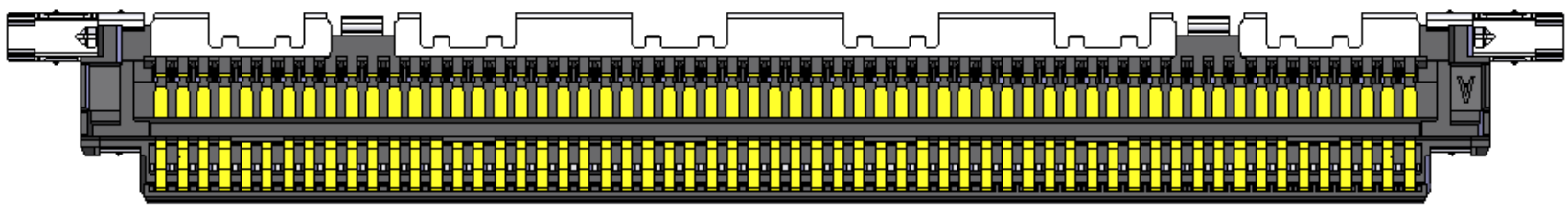


PLUG

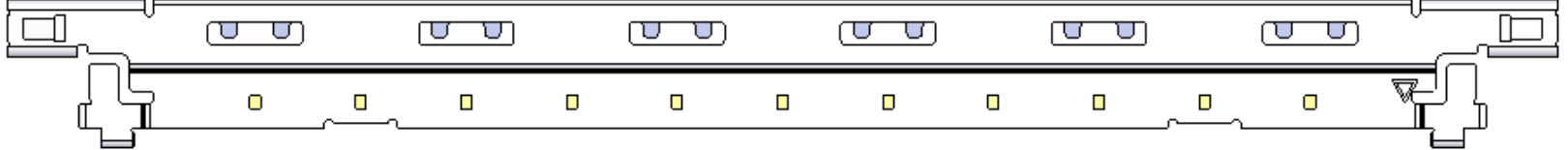


RECEPTACLE

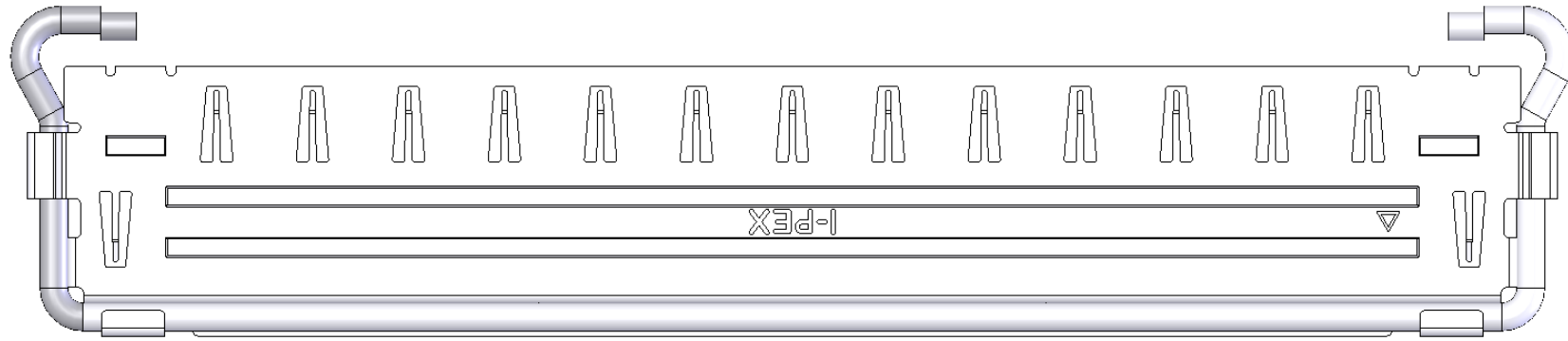
Plug parts



PLUG HOUSING ASSEMBLY



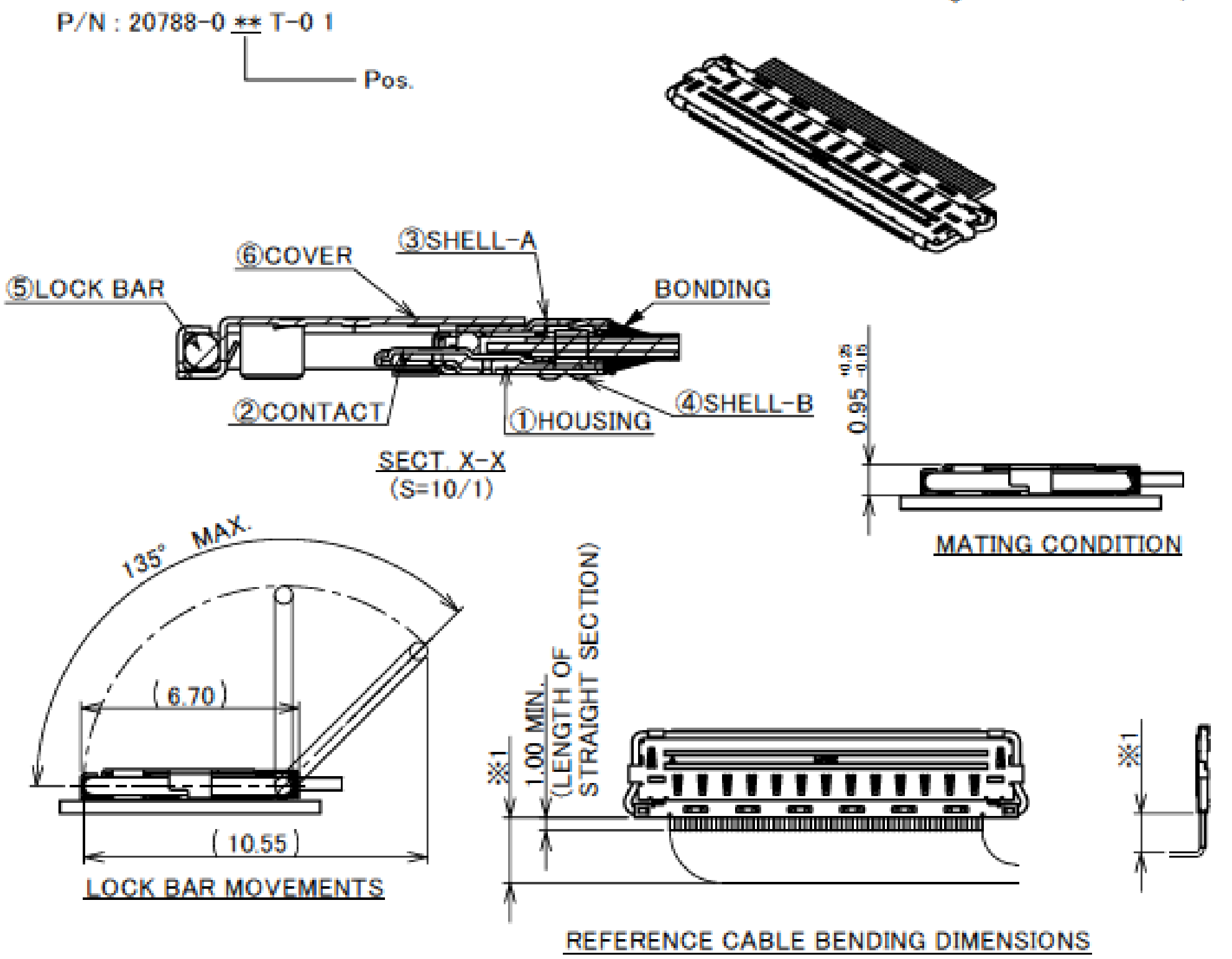
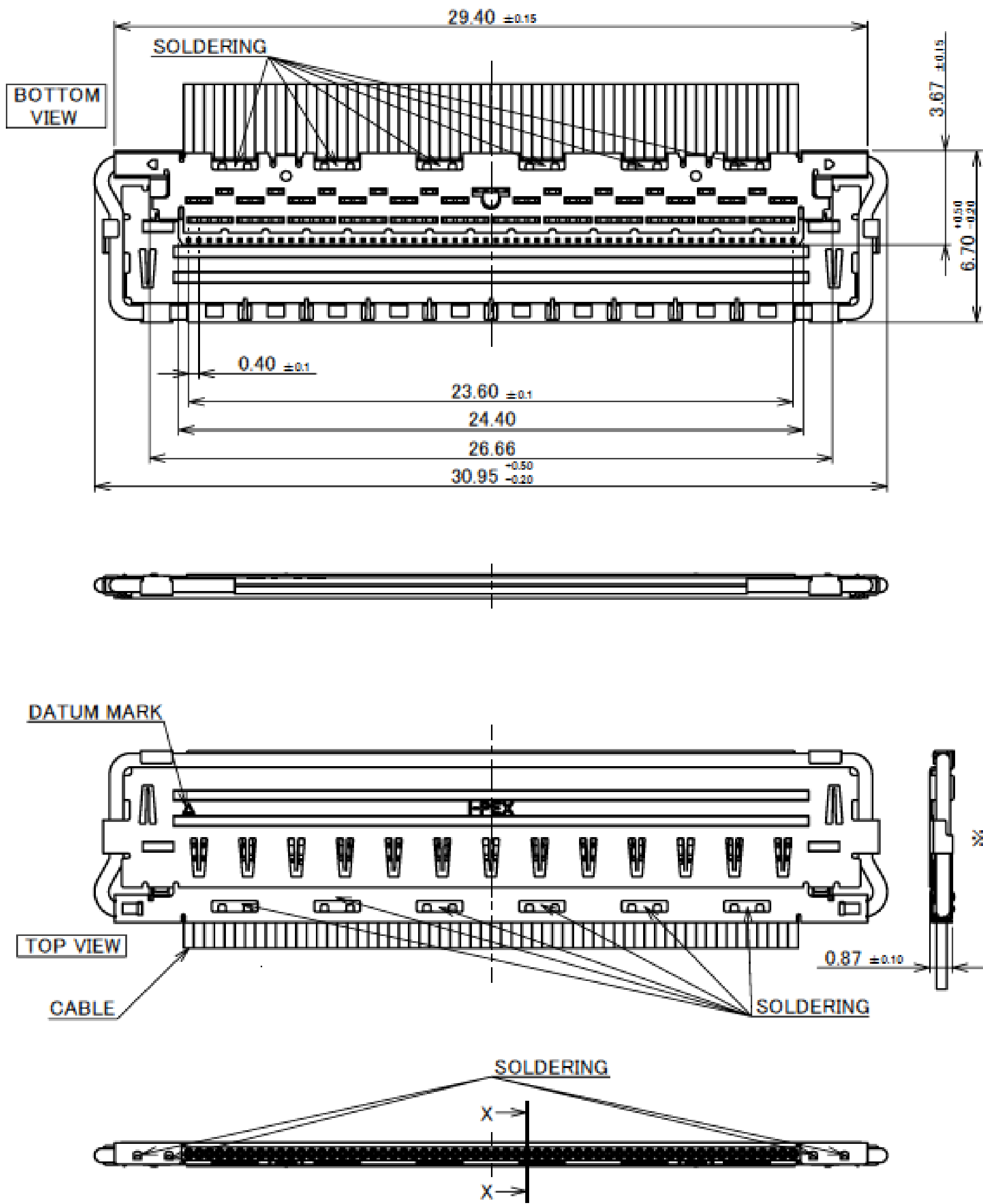
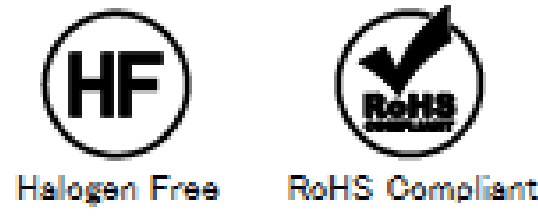
PLUG SHELL-A



PLUG LOCK BAR ASSEMBLY

Plug for Cable Assembly

Recommended P/N		20788-0**T-01
PART NO.	Pos.	
20788-060T-01	60	

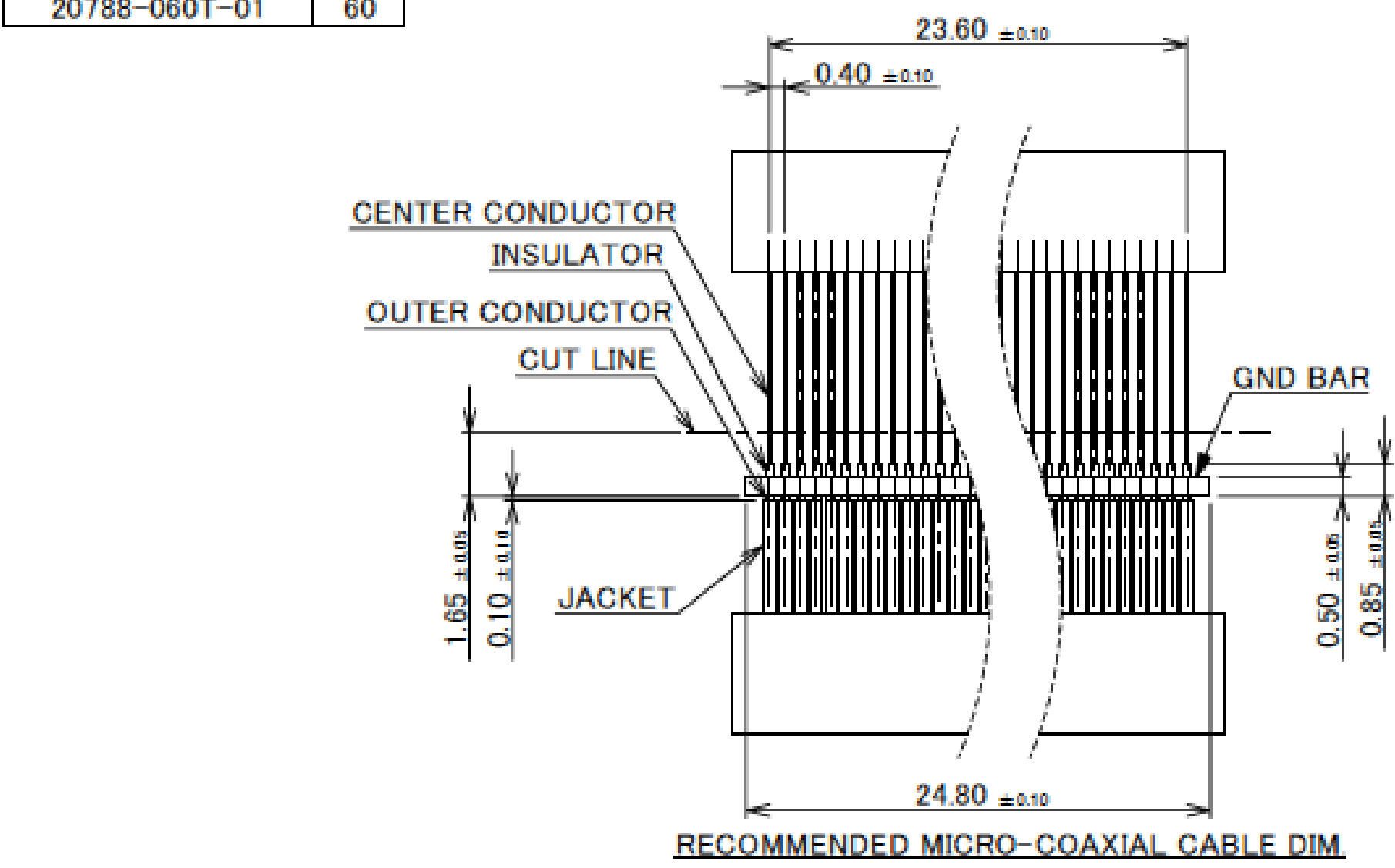


※1 : THE BEND DIMENSIONS MAY VARY BASED ON THE SIZE AND QUANTITY OF CABLES.
PLEASE CONFIRM THE MINIMUM BENDING RADIUS WITH I-PEX OR THE HARNESS MANUFACTURER.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
6	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
5	LOCK BAR	SUS φ0.55	-
4	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
3	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 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	UL94V-0 ,BLACK

Rev.14

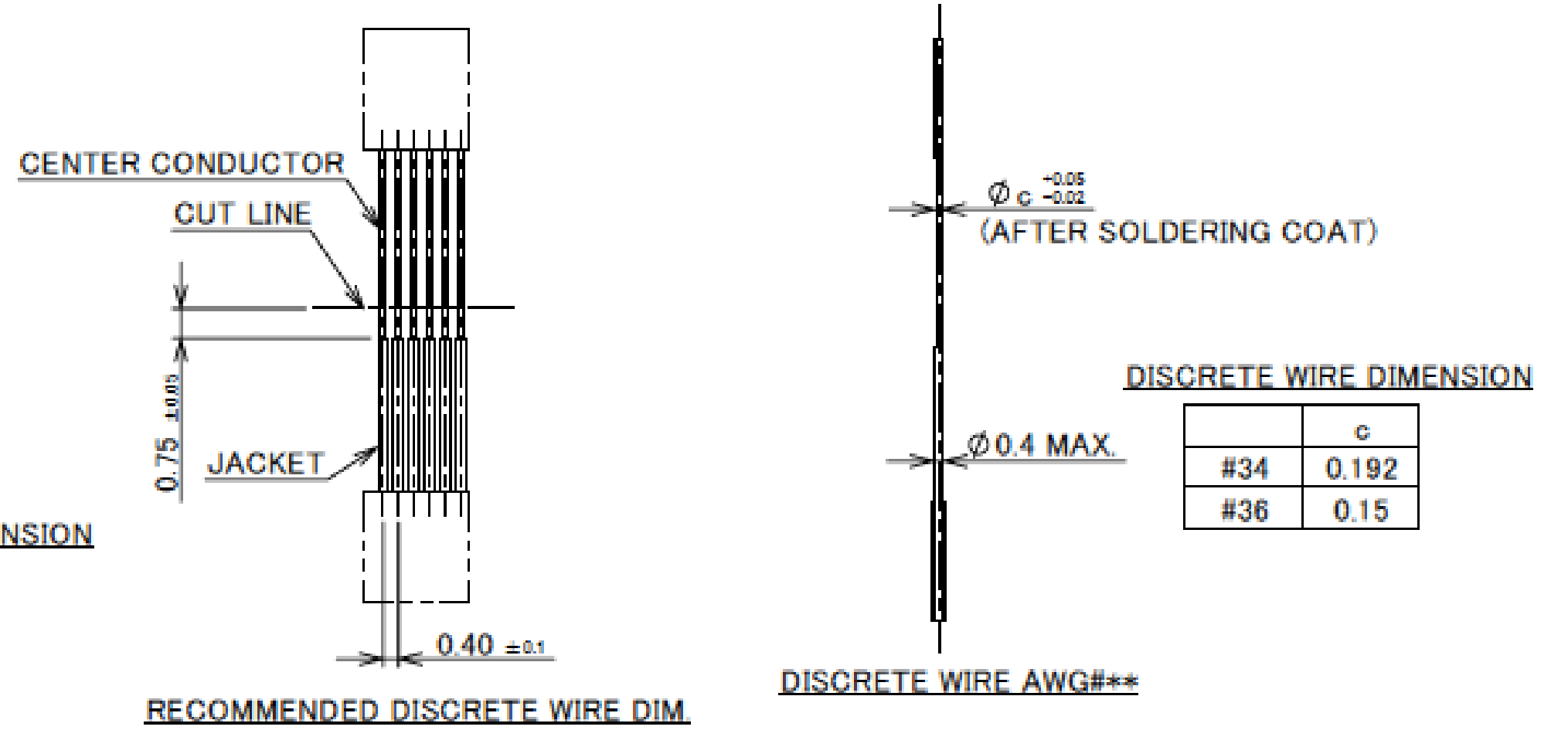
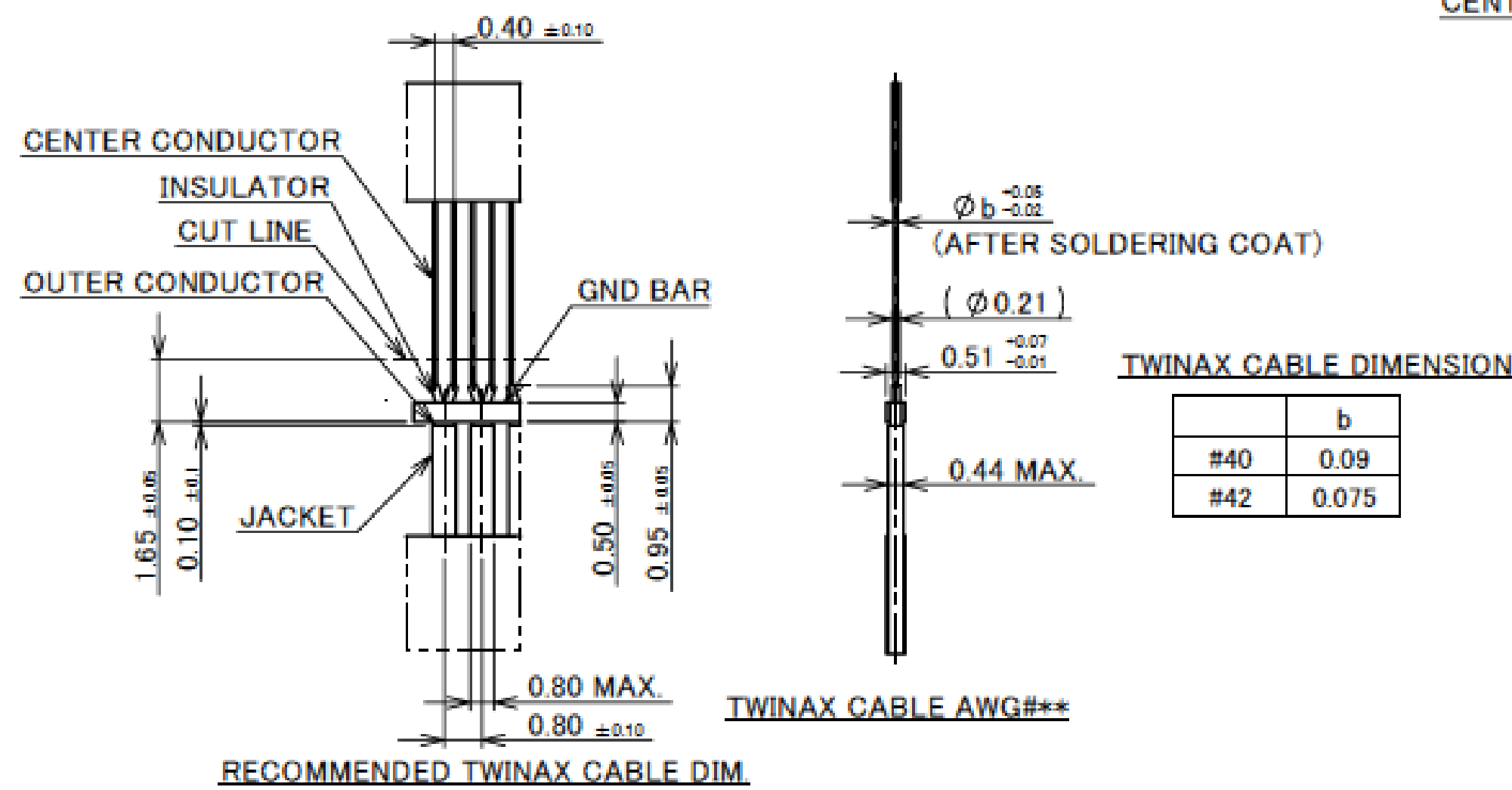
PART NO.	Pos.
20788-060T-01	60



CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE		
	a	
#38	0.12	
#40	0.09	
#42	0.075	
#44	0.063	

CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE		
	a	
#36	0.15	

MICRO-COAXIAL CABLE #36 : NOT RECOMMENDED FOR HIGH SPEED SIGNAL TRANSFER



Rev.14

Plug for Cable Assembly

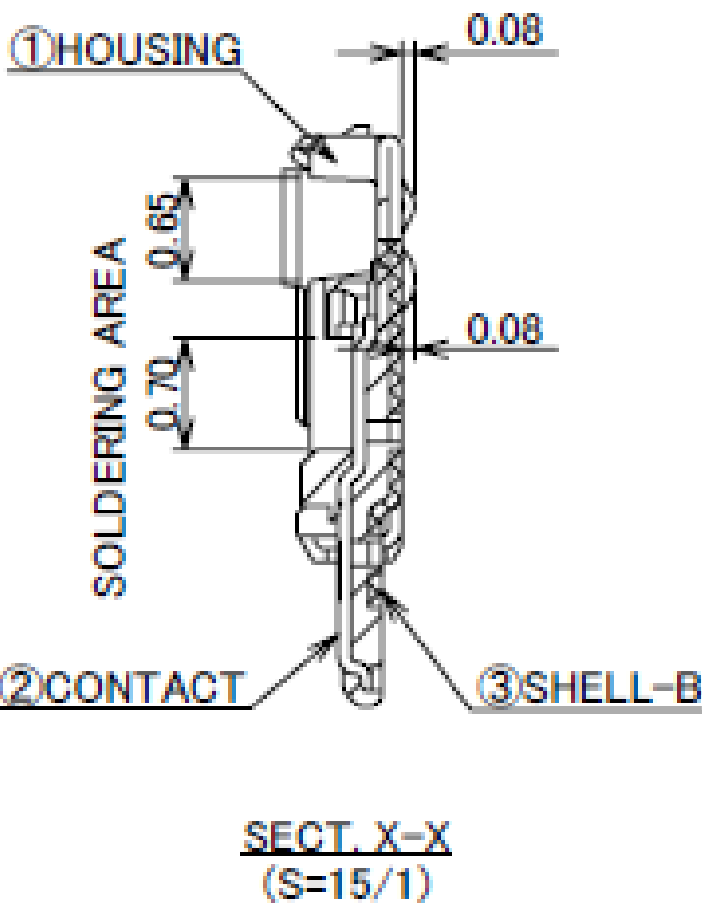
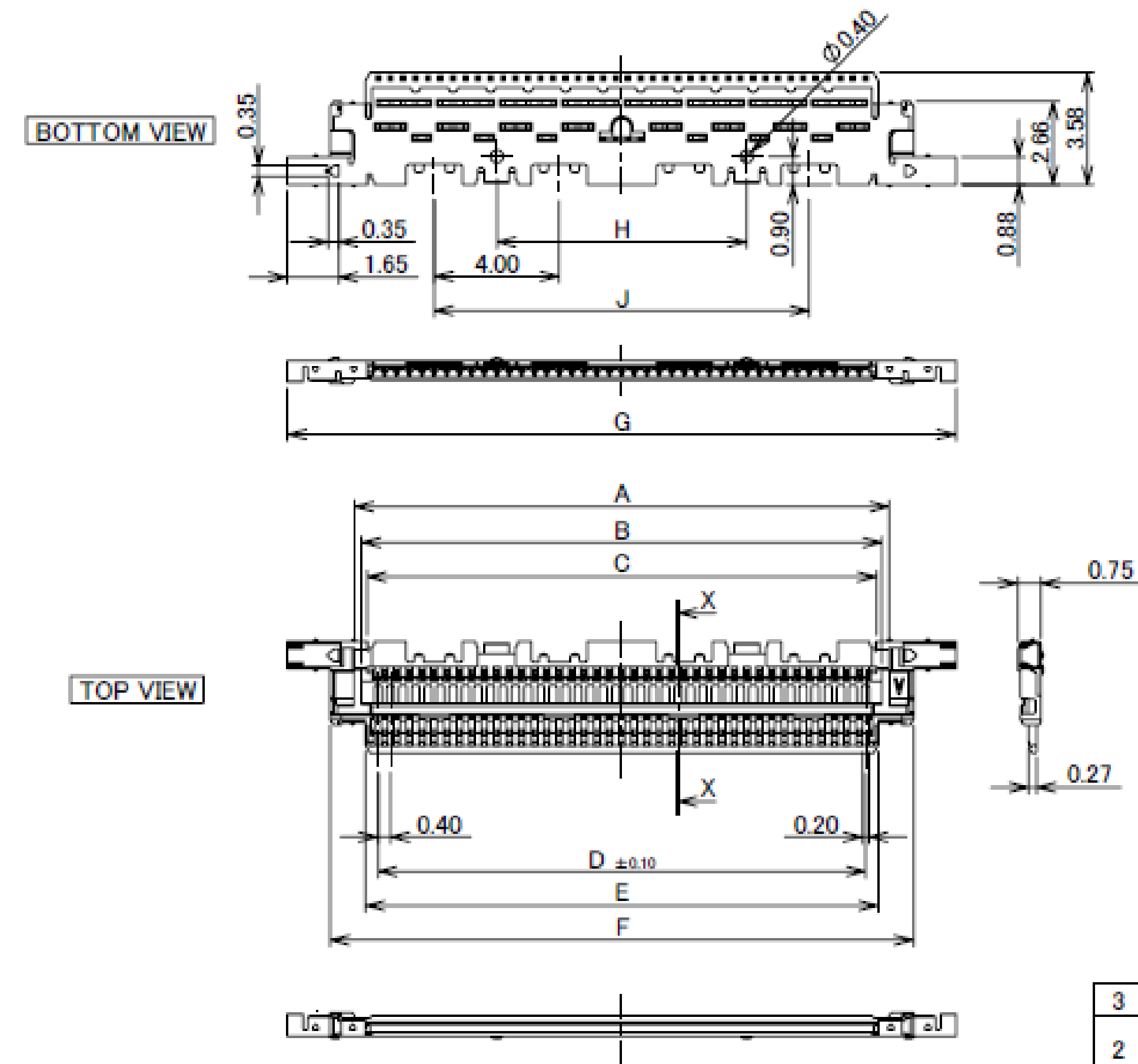
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG# 36 , 34 TWINAX CABLE : AWG# 40 , 42
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON 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	248~378K(-40℃~105℃)
OPERATING HUMIDITY	85% MAX.(NON-CONDENDING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : $\angle$ 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 : $\angle$ 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.
PRODUCT SPECIFICATION	PRS-2261
TEST REPORT	TR-16075, TR-23031
INSTRUCTION MANUAL	HIM-16028
ASSEMBLY MANUAL	ASM-16004
APPEARANCE CRITERIA NO.	QLS-A***

Rev.14

Plug Housing Assembly

Recommended P/N 20680-0**T-01

PART NO.	Pos.	A	B	C	D	E	F	G	H	J
20680-020T-01	20	9.10	8.65	8.30	7.60	8.40	10.66	13.40	-	5.00
20680-030T-01	30	13.10	12.65	12.30	11.60	12.40	14.66	17.40	4.00	8.00
20680-040T-01	40	17.10	16.65	16.30	15.60	16.40	18.66	21.40	8.00	12.00
20680-050T-01	50	21.10	20.65	20.30	19.60	20.40	22.66	25.40	12.00	16.00
20680-060T-01	60	25.10	24.65	24.30	23.60	24.40	26.66	29.40	16.00	20.00



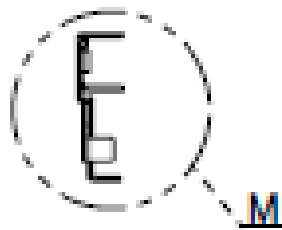
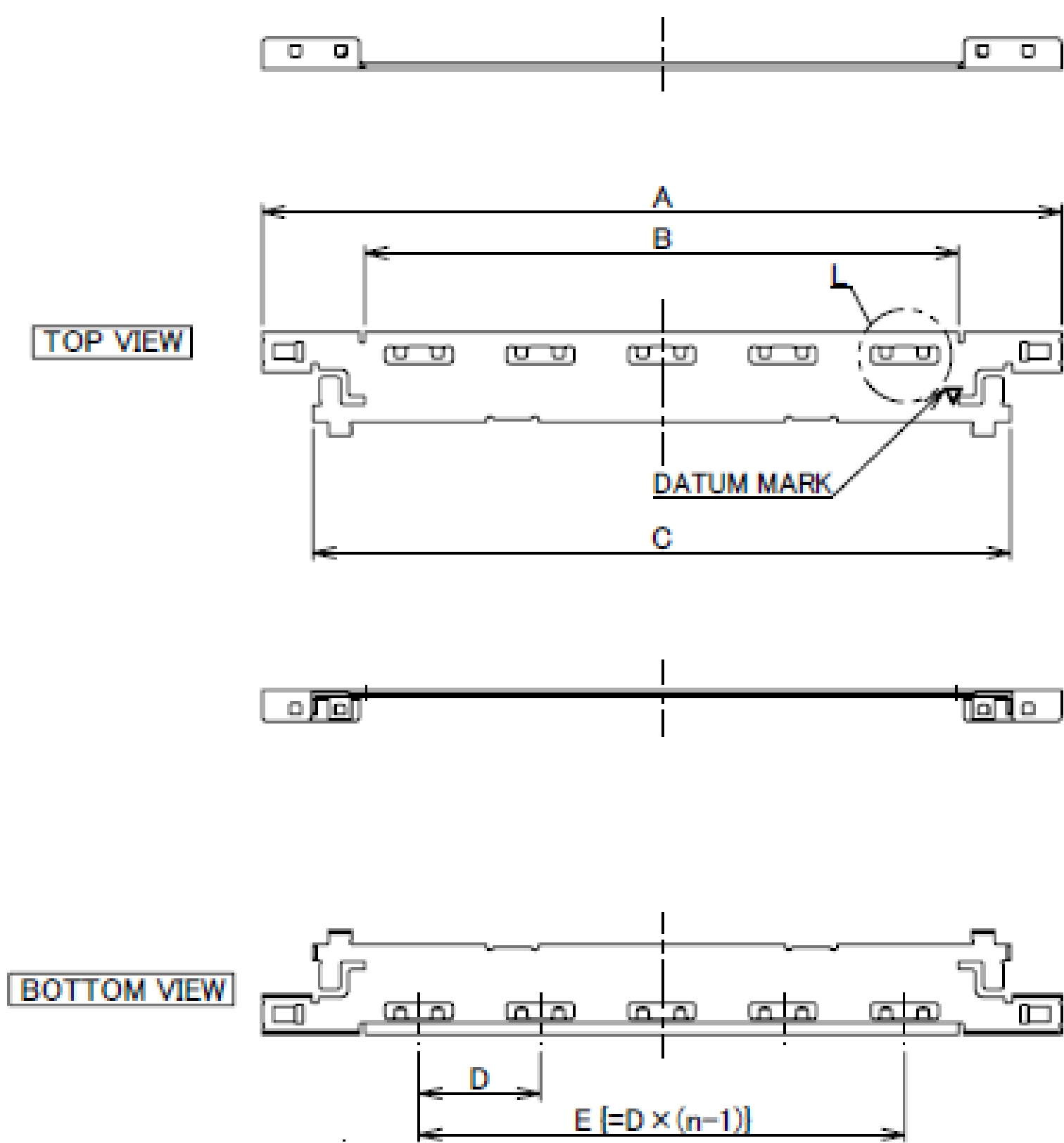
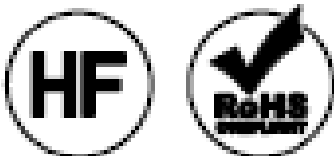
- NOTES.
- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20681-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20679-0**T-01
 - THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20789-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20788-0**T-01

3	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 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	UL94V-0 ,BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

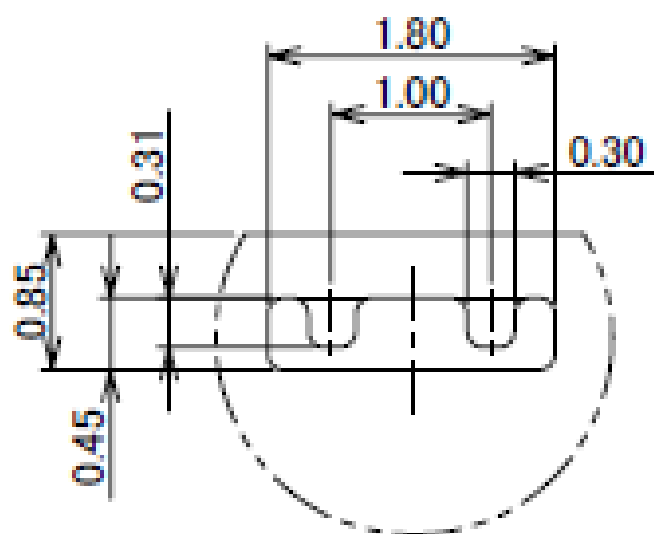
Rev.7

Plug Shell-A

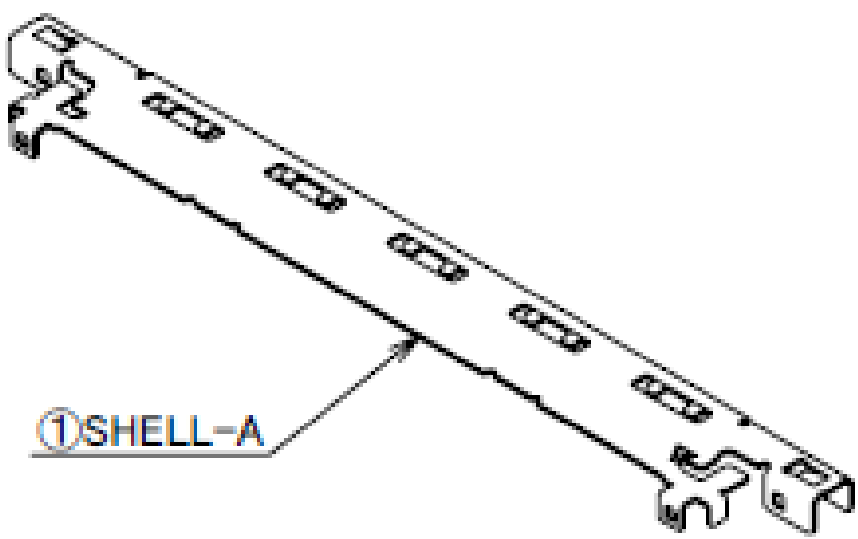
Recommended P/N		3204-0**1				
PART NO.	Pos.	A	B	C	D	E
3204-0201	20	13.40	7.88	10.66	2.50	5.00
3204-0301	30	17.40	11.88	14.66	3.00	9.00
3204-0401	40	21.40	15.88	18.66	3.25	13.00
3204-0501	50	25.40	19.88	22.66	3.40	17.00
3204-0601	60	29.40	23.88	26.66	4.00	20.00



DETAIL M
(S=20/1)



DETAIL L
(S=15/1)

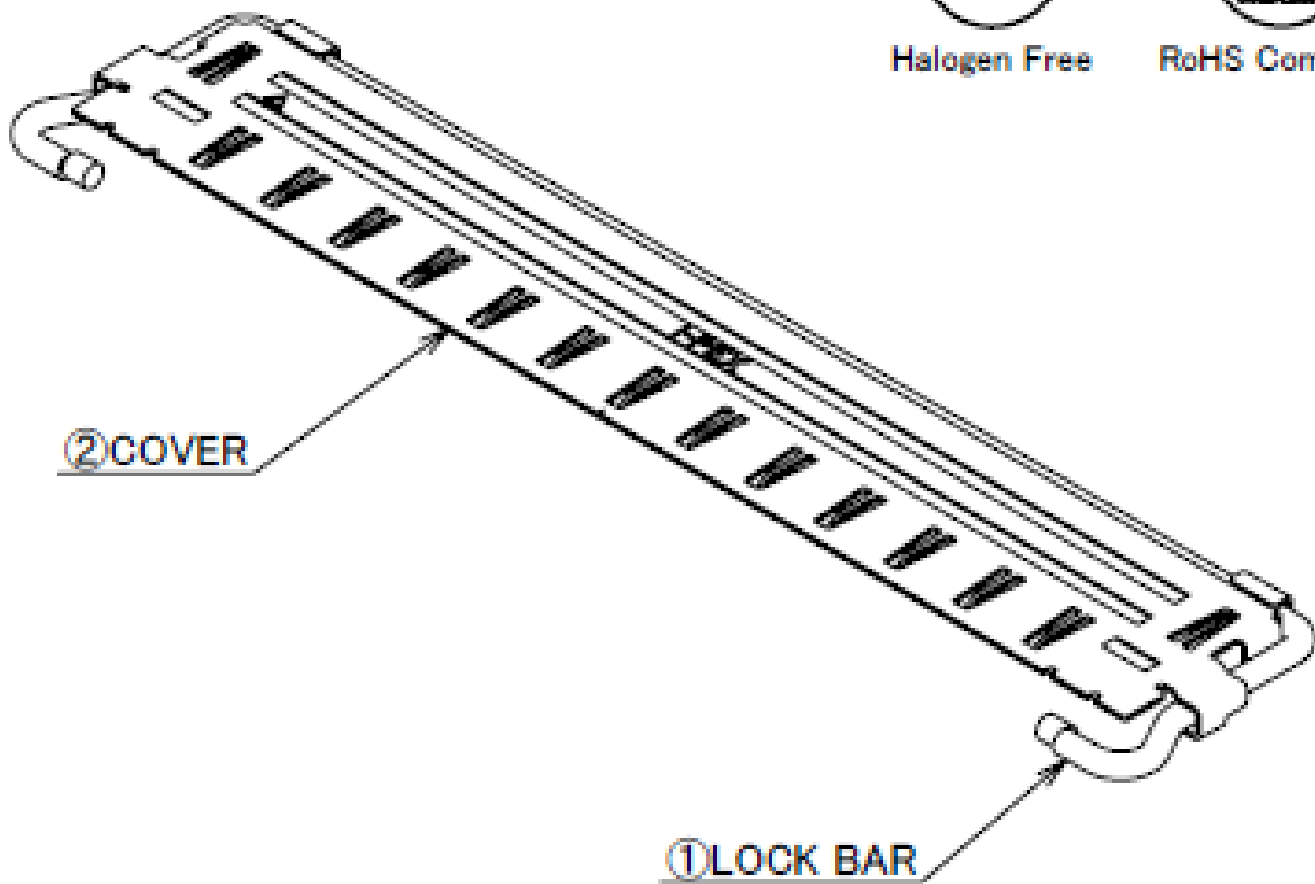
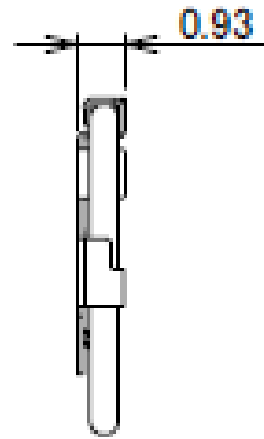
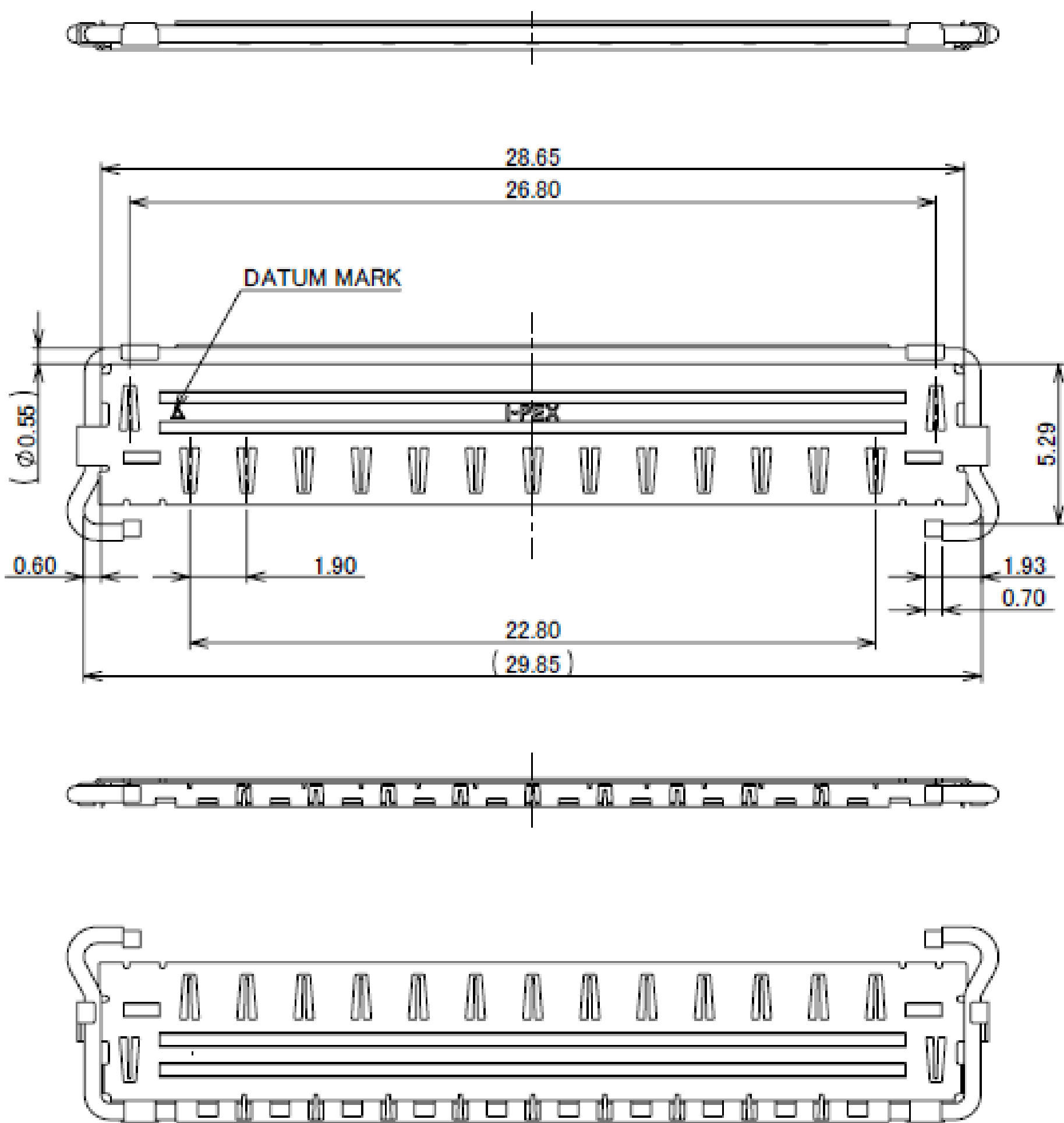
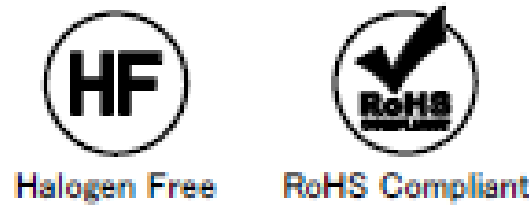


1	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.7

Lock Bar Assembly

Recommended P/N		20789-0**T-01
PART NO.	Pos.	
20789-060T-01	60	



2	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
1	LOCK BAR	SUS φ0.55	-
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.9

Receptacle Assembly

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

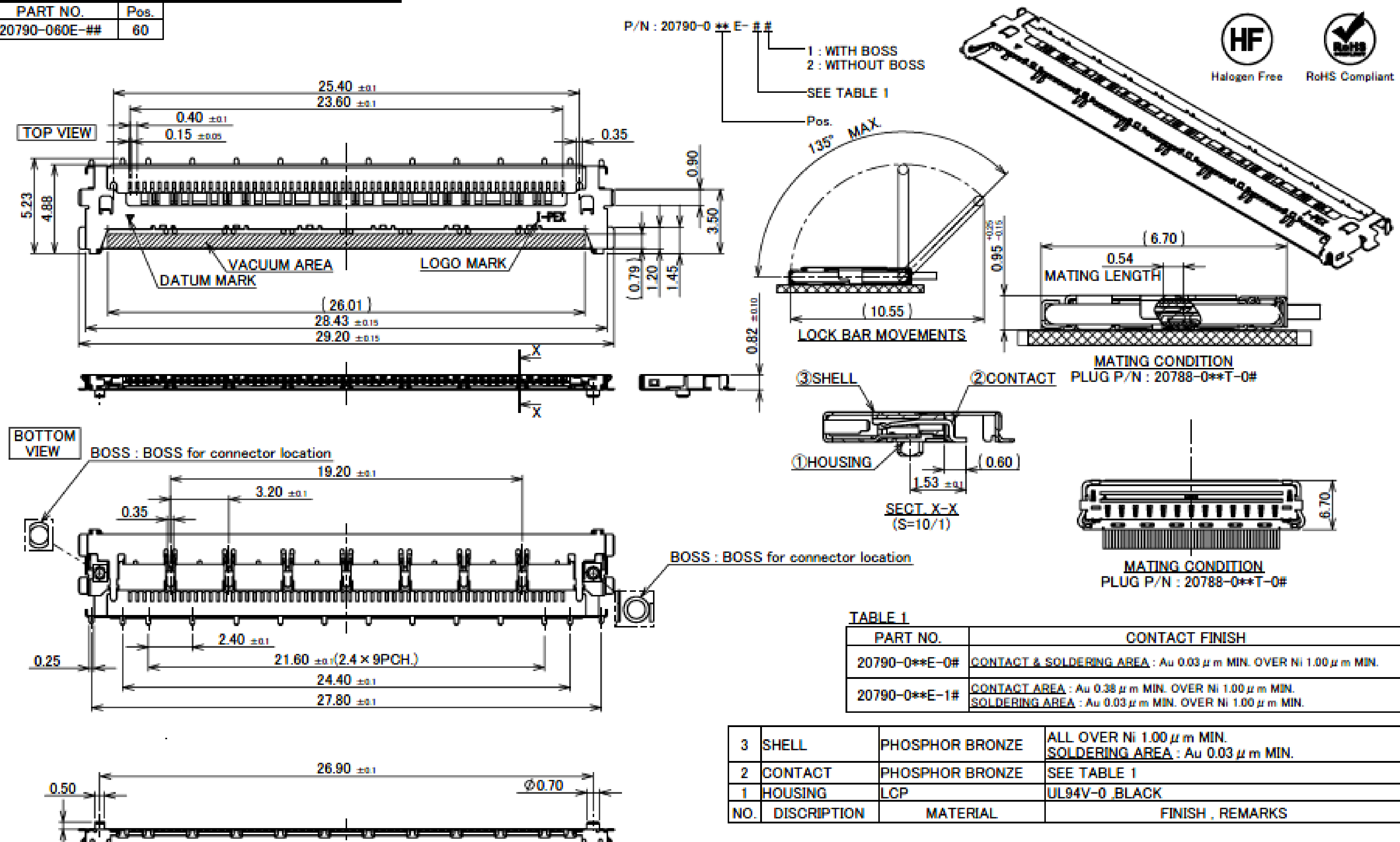
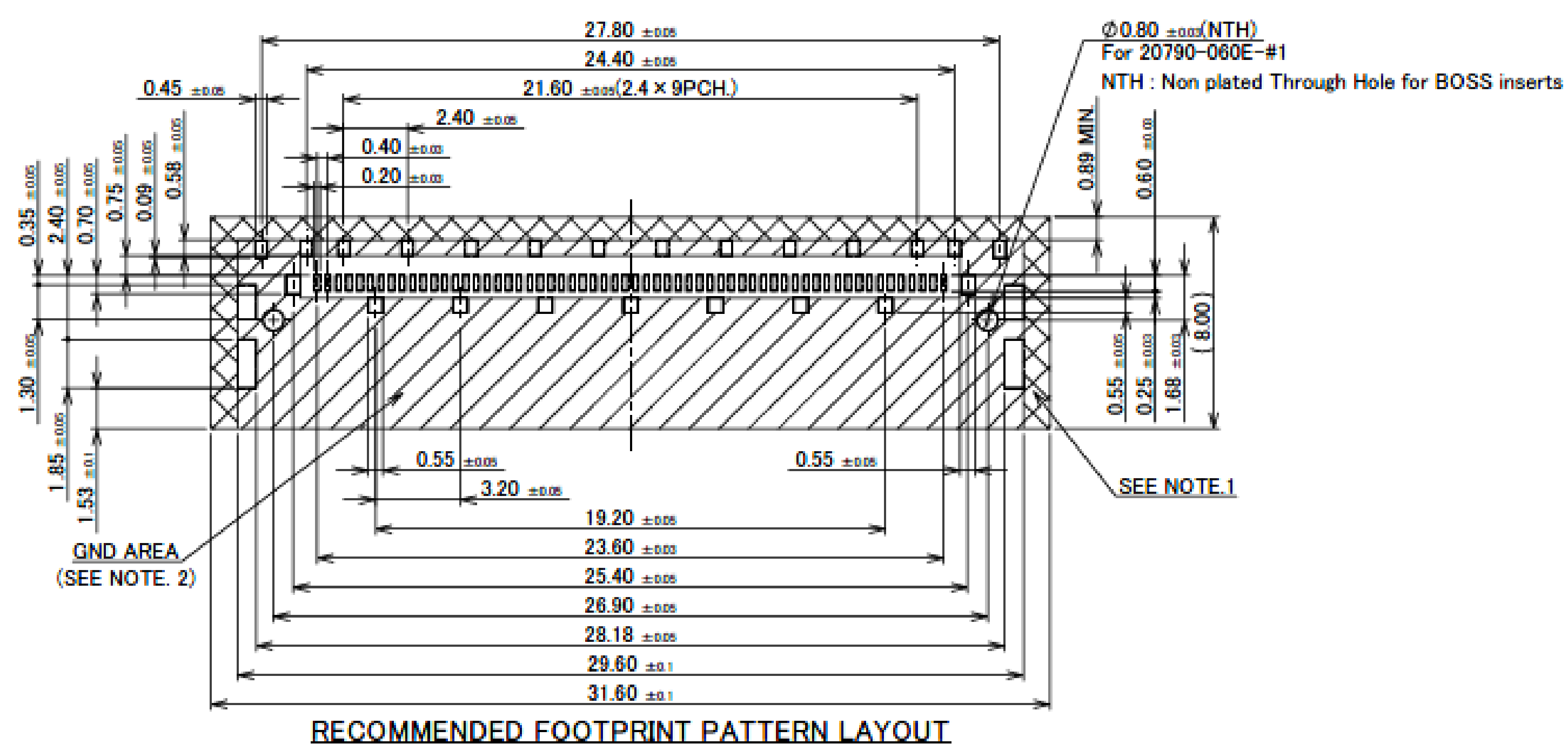


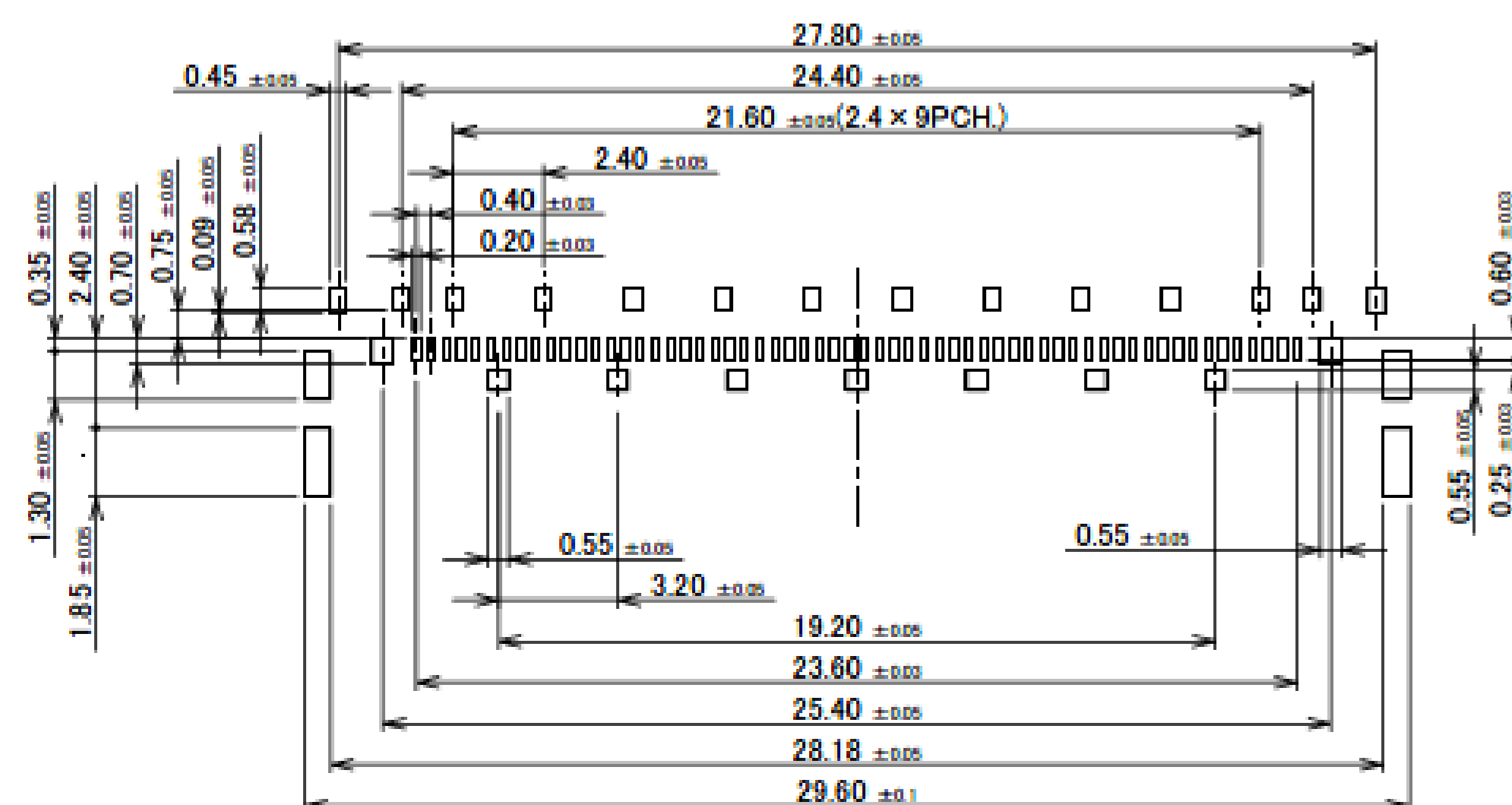
TABLE 1	
PART NO.	CONTACT FINISH
20790-0**E-0#	<u>CONTACT & SOLDERING AREA</u> : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.
20790-0**E-1#	<u>CONTACT AREA</u> : Au 0.38 μ m MIN. OVER Ni 1.00 μ m MIN. <u>SOLDERING AREA</u> : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.

3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. <u>SOLDERING AREA</u> : Au 0.03 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0 ,BLACK
NO.	DISCRPTION	MATERIAL	FINISH , REMARKS

Rev.17



RECOMMENDED FOOTPRINT PATTERN LAYOUT

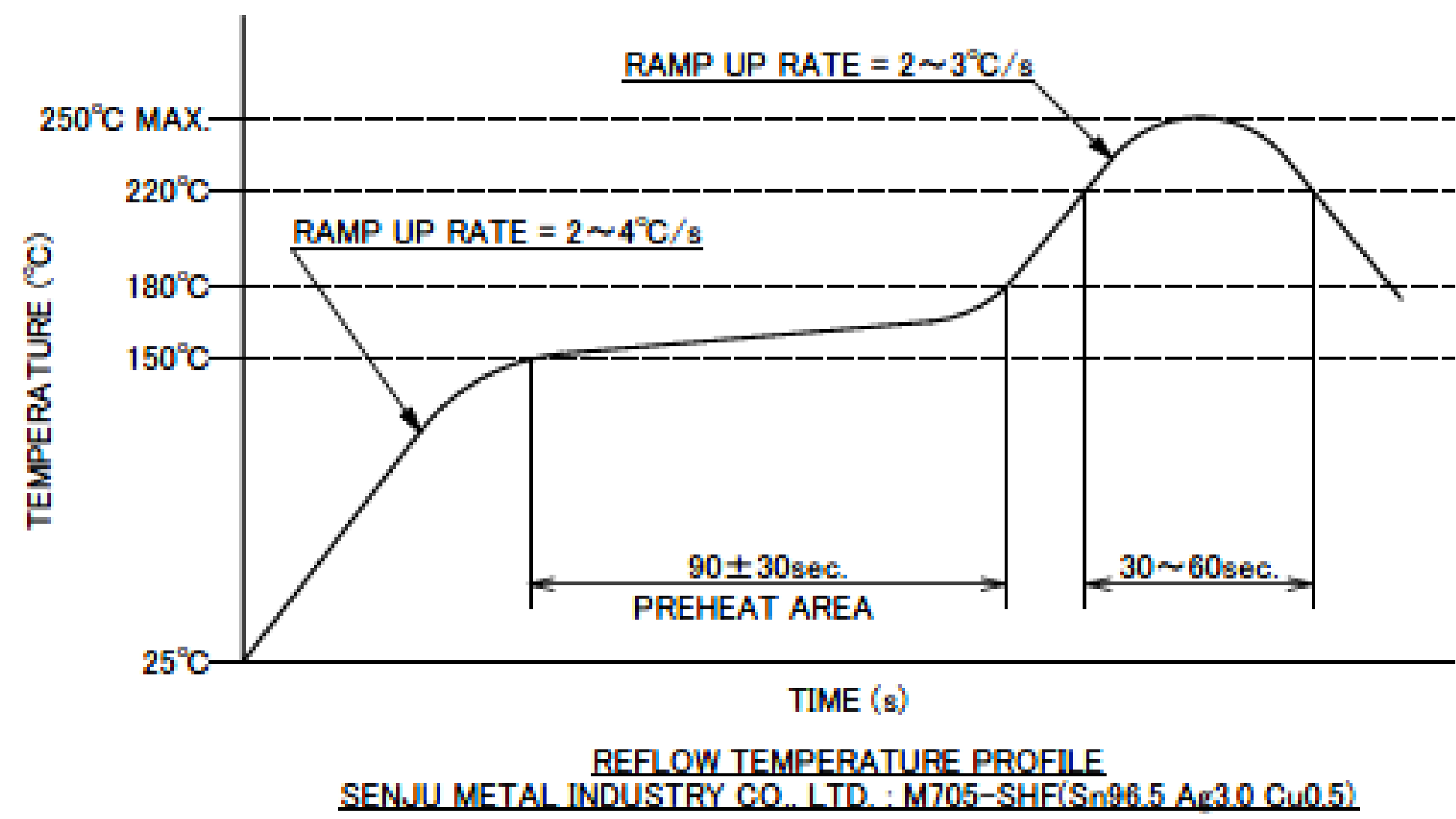
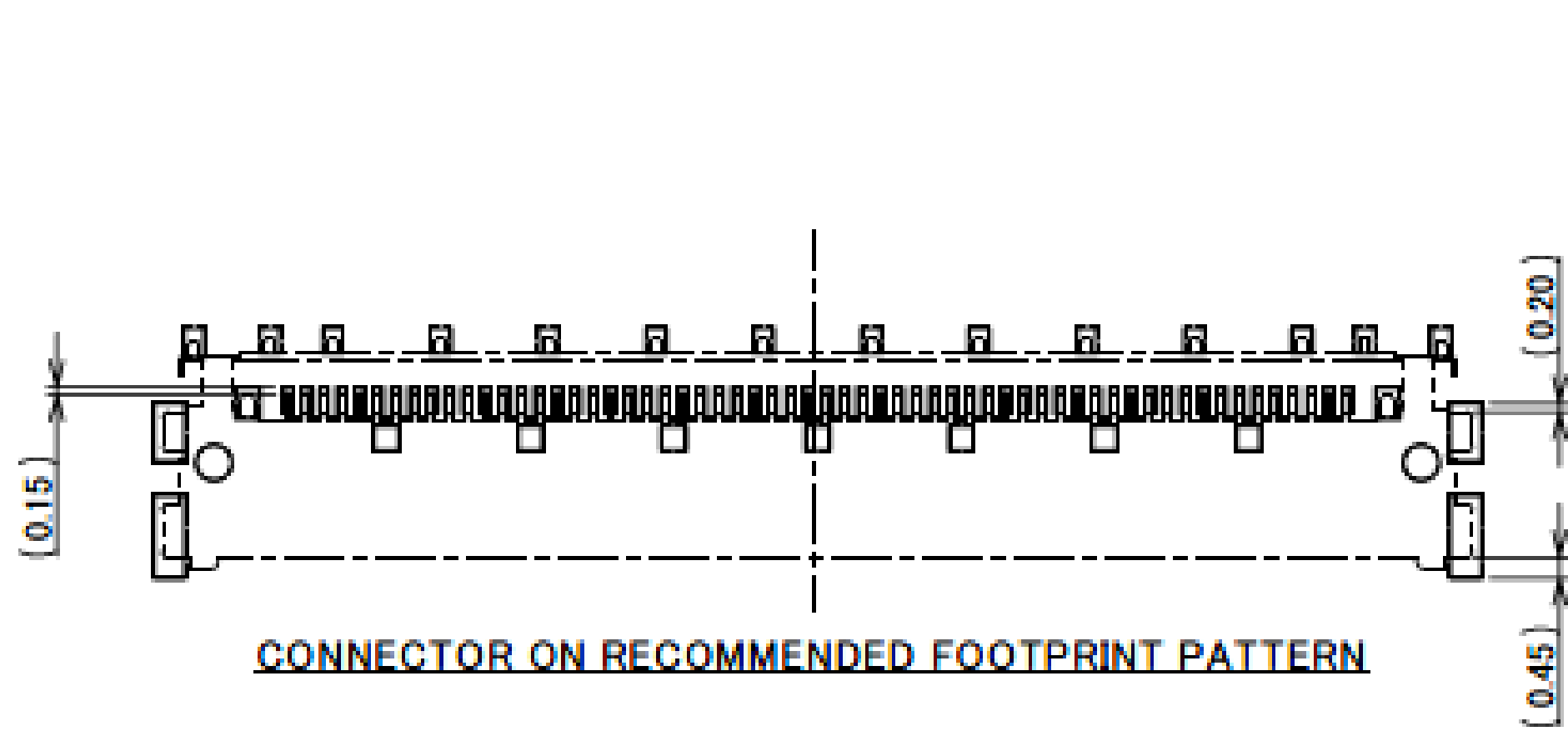


RECOMMENDED METAL MASK LAYOUT
METAL MASK THICKNESS : $t=0.12\text{mm}$

NOTES.

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

Receptacle Assembly



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-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

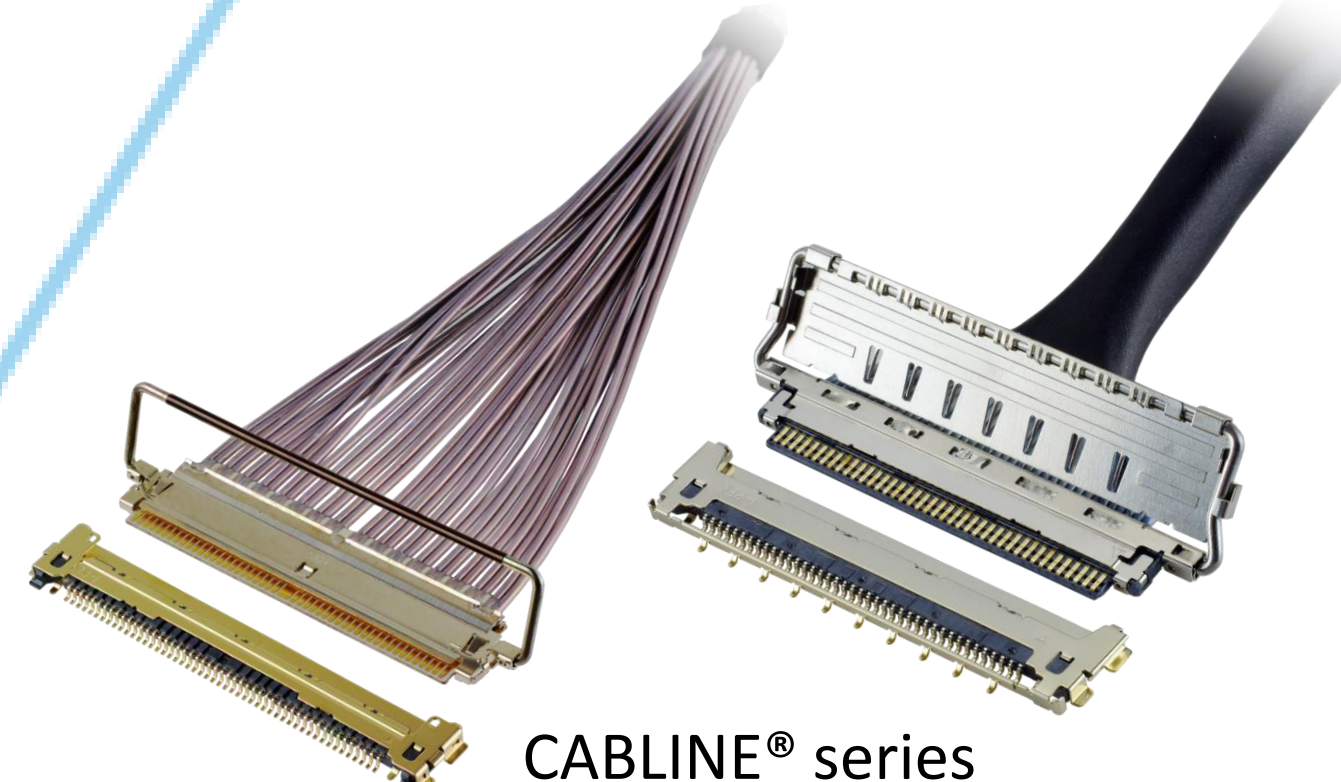
MHF® series



CABLINE® series



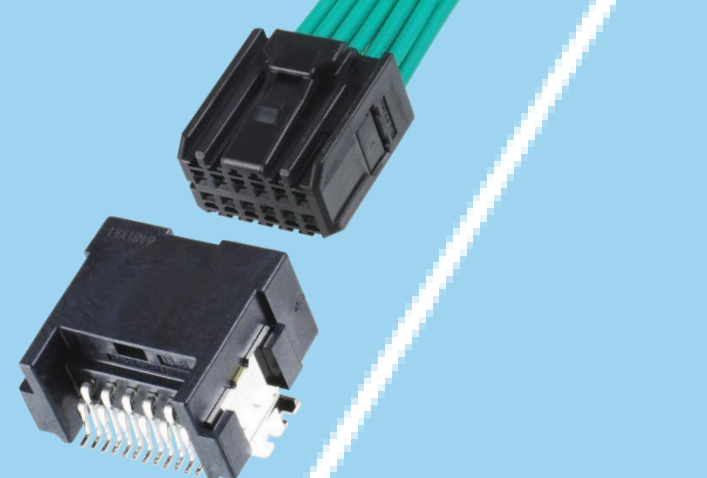
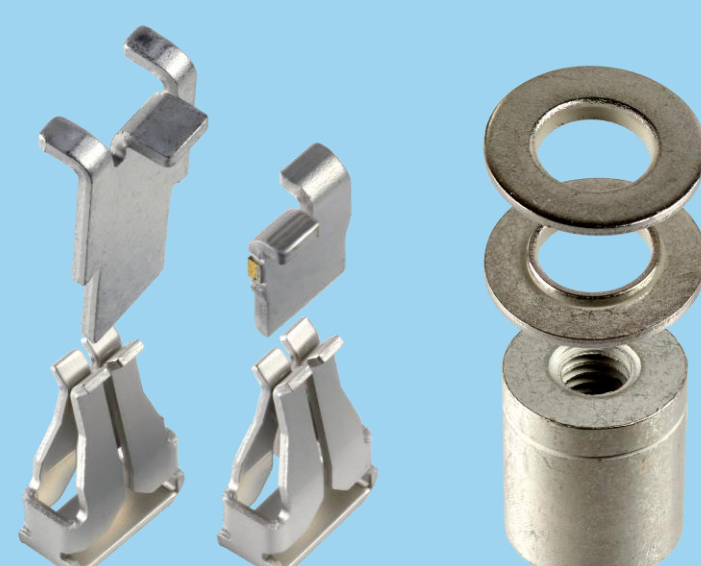
Micro-Coaxial/Twinax
Connectors



Wire-to-Board
Connectors/
Terminals

AP series

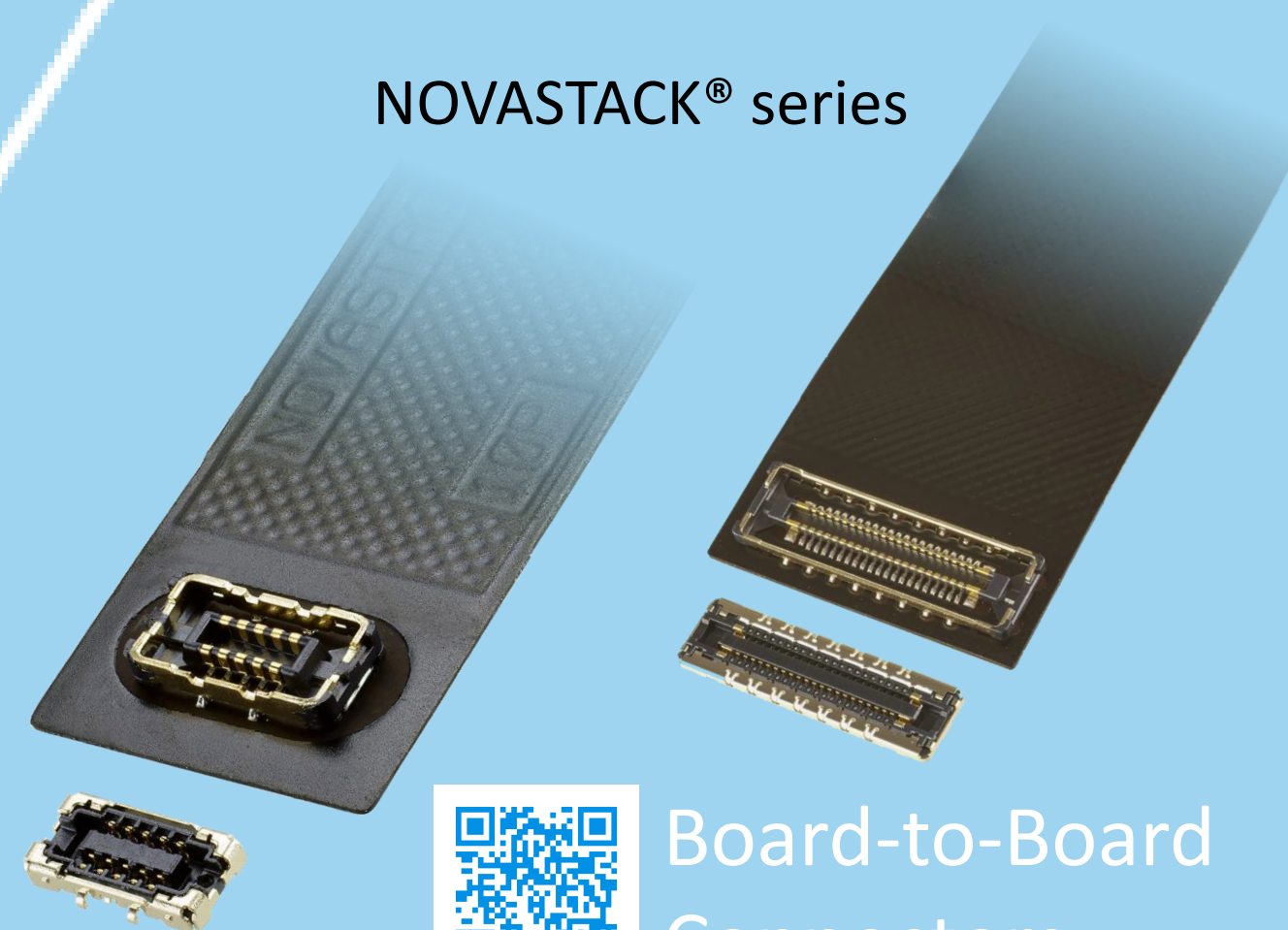
ISH® series



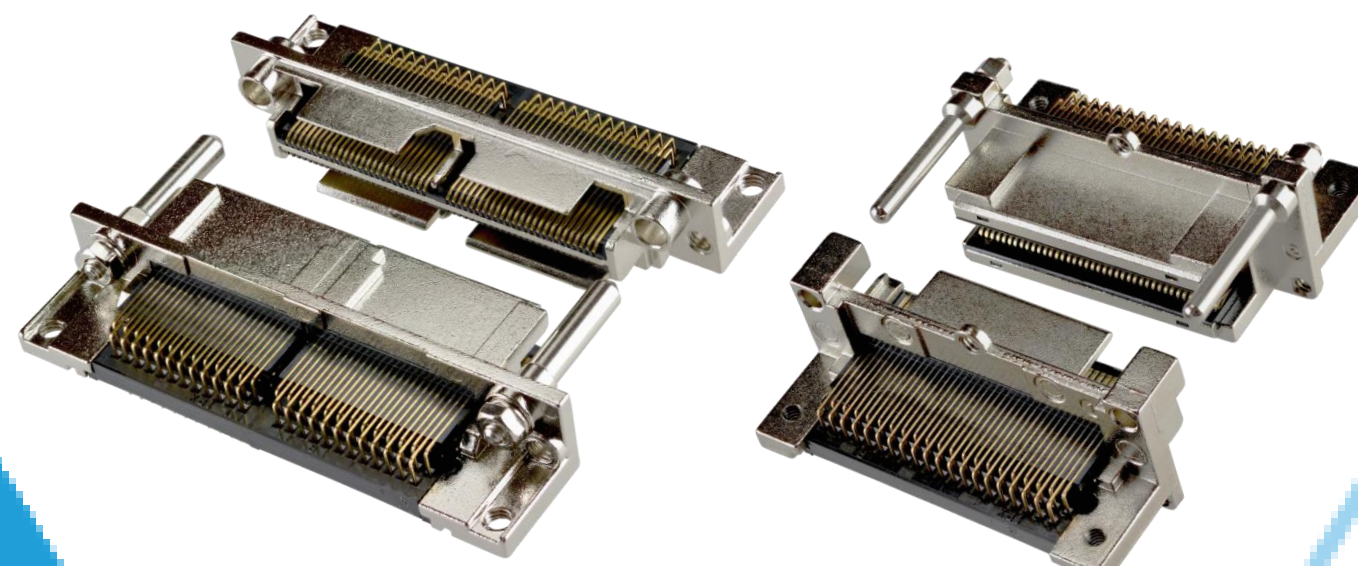
NOVASTACK® series



Board-to-Board
Connectors



I/O
Connectors



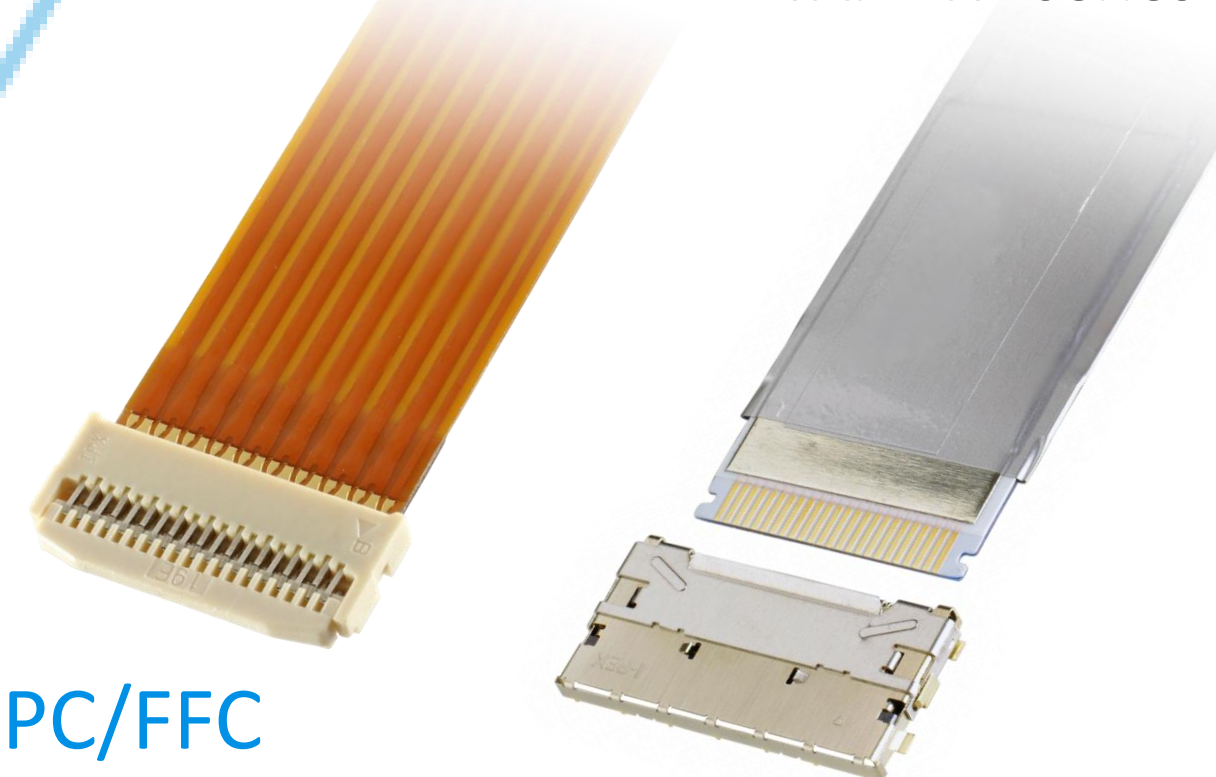
MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC
Connectors



Inquiry



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