

CABLINE®-VSF

带屏蔽功能的机械锁扣和多点接地设计，适用于高速数据传输 (32 Gbps/lane)
0.5 mm 间距, 水平对插款的FPC 型公头连接器

Product Specifications:

Mating type	Horizontal	
Board Pitch (mm)	0.5	
Wiping Length (mm)	0.62	
Mated size (mm)	Height	1.0 +/- 0.1
	Width	Formula: 7.55 + (0.5*?p)
	Depth	5.97
Pin Counts	Range	Up to 60
	Available	30, 40

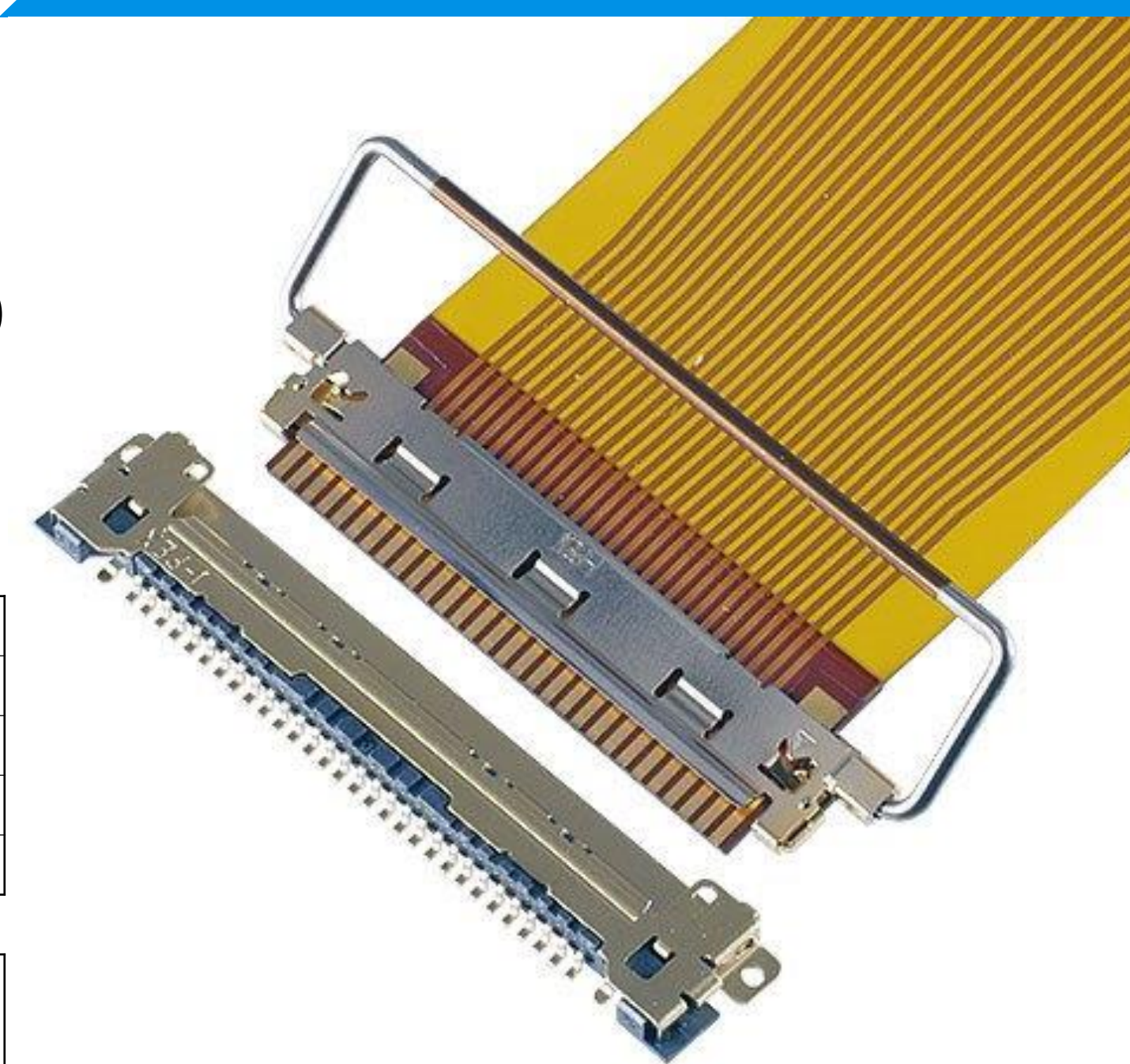
*如您需要了解未列出或不在范围内的Pin数，请咨询我们。

Applicable FPC

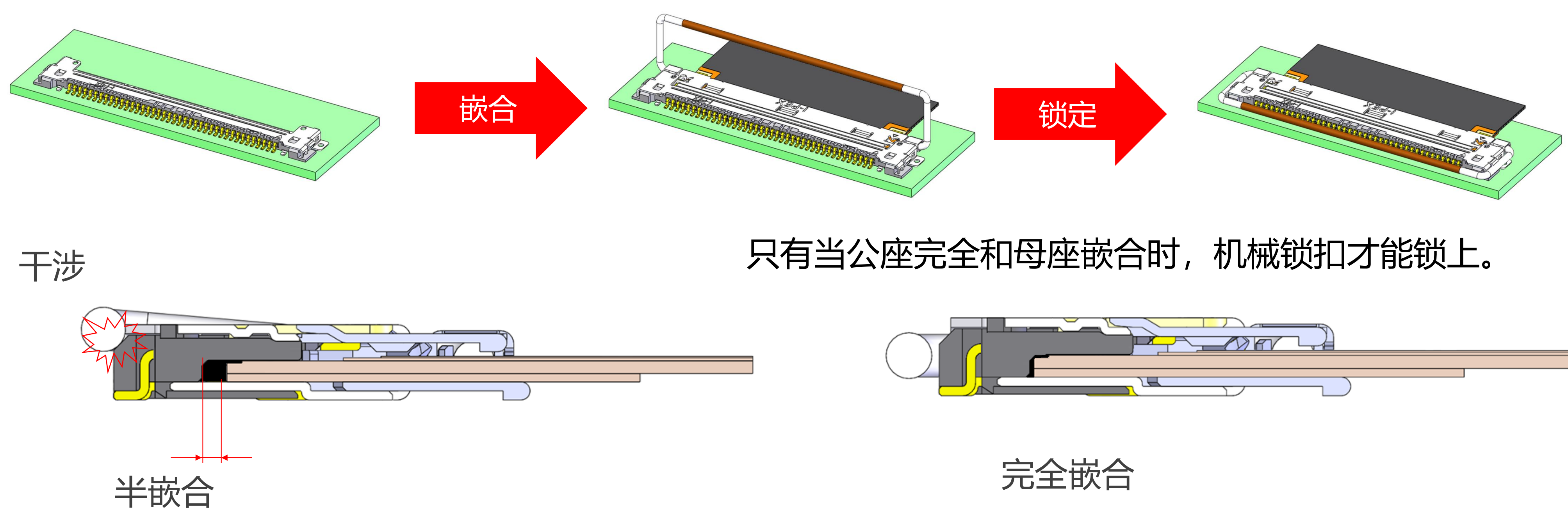
FPC Type	Shielded/Non-shielded FPC
FPC Pitch (mm)	0.5
FPC Contact Point	Top
FPC Thickness (mm)	Contact Area: 0.28 +0.02/-0.03
	Ground Area: 0.34 ± 0.05

Applicable Standards (Reference Only):

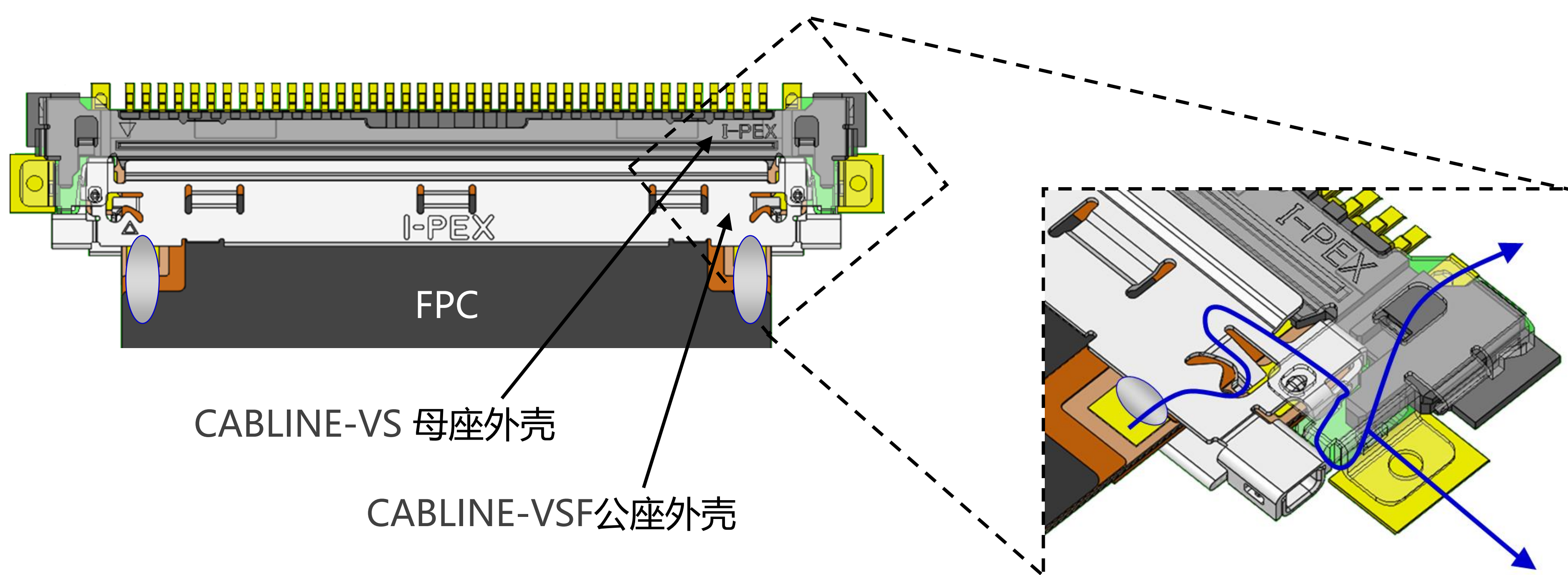
32 Gbps/ Lane, USB4 Gen4 (40 Gbps/ Lane PAM3)
Display Port UHBR20 (20 Gbps/Lane)



机械锁扣防止连接器不完全嵌合/未嵌合及脱落



EMI 屏蔽和多点接地设计



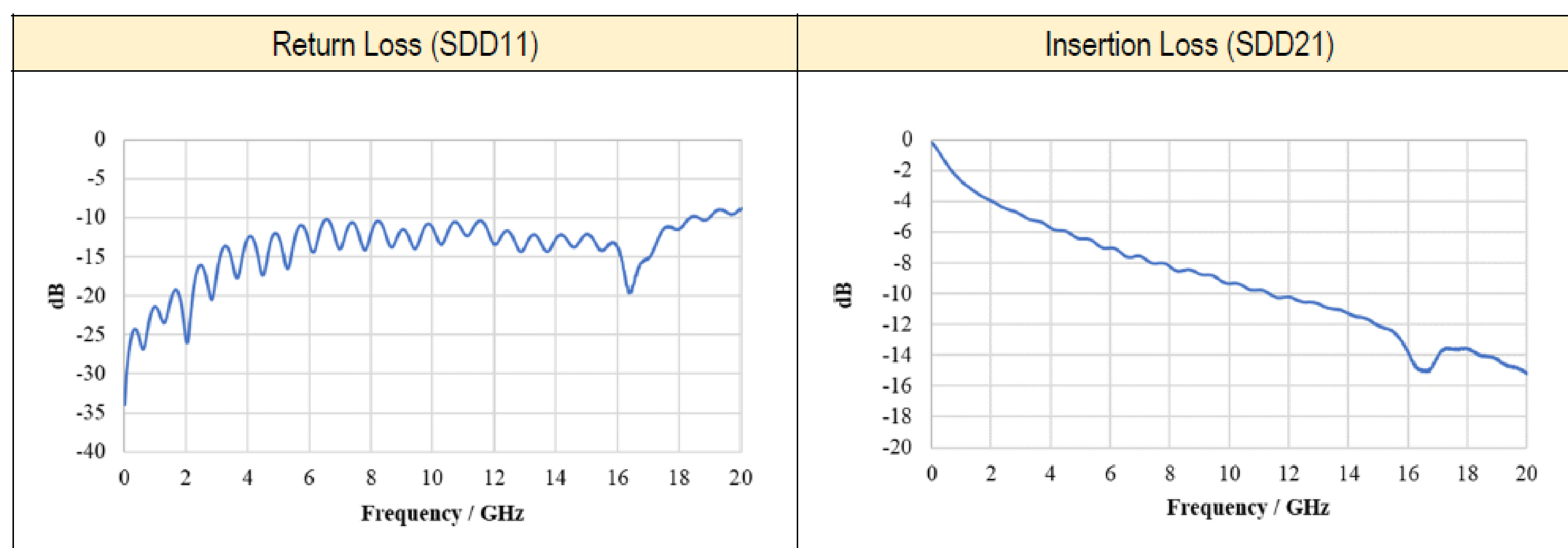
高速率传输, 32Gbps/lane应用的理想之选

Measurement results

Connector: CABLINE-VSF 40P

FPC: Shielded FPC,
Differential 100 ohm, Length : 100 mm

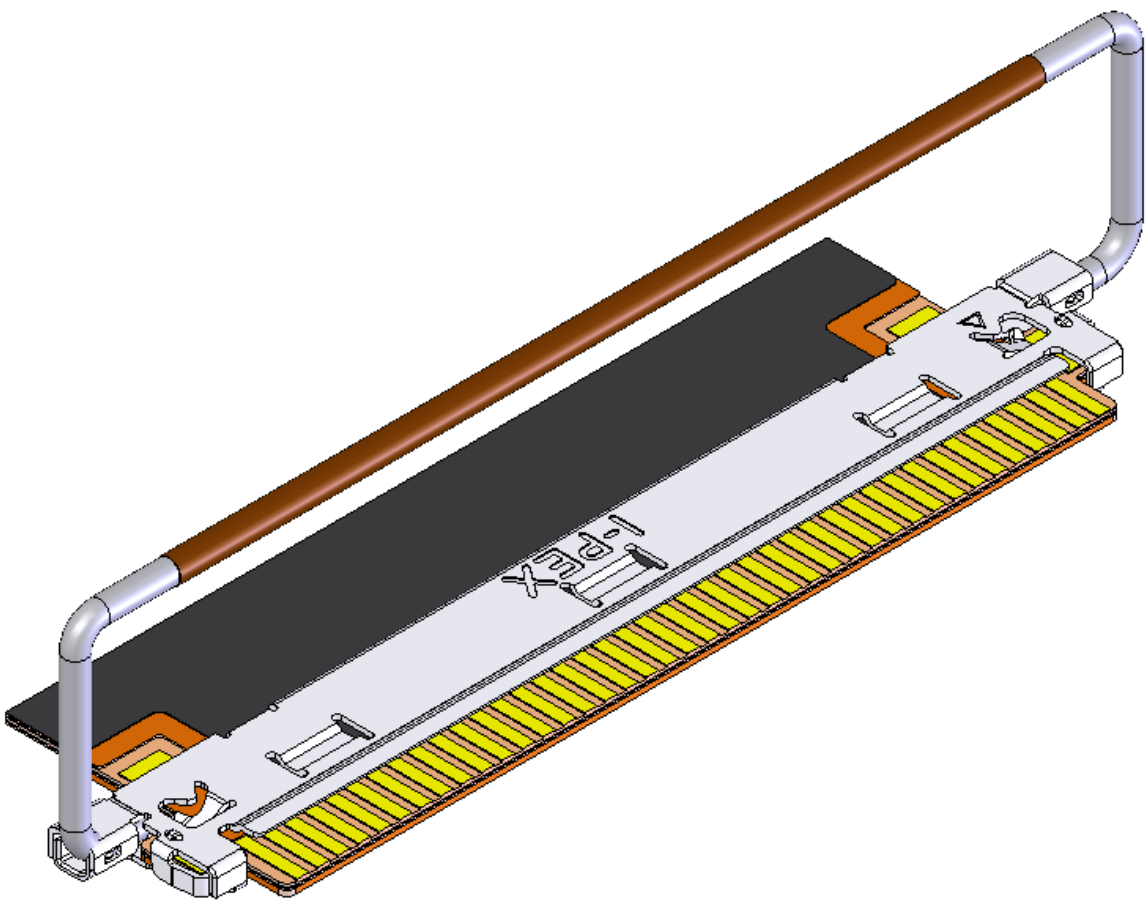
Pin Assignment: GSSGSSG



Component Parts Details

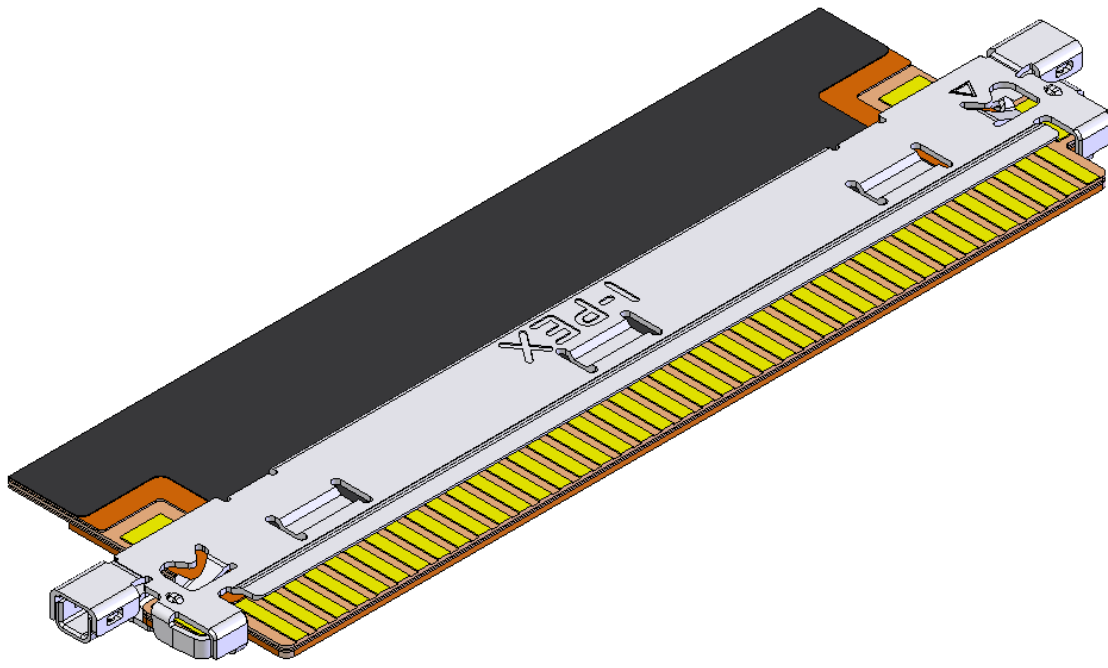
Component Parts

WITH LOCK BAR TYPE



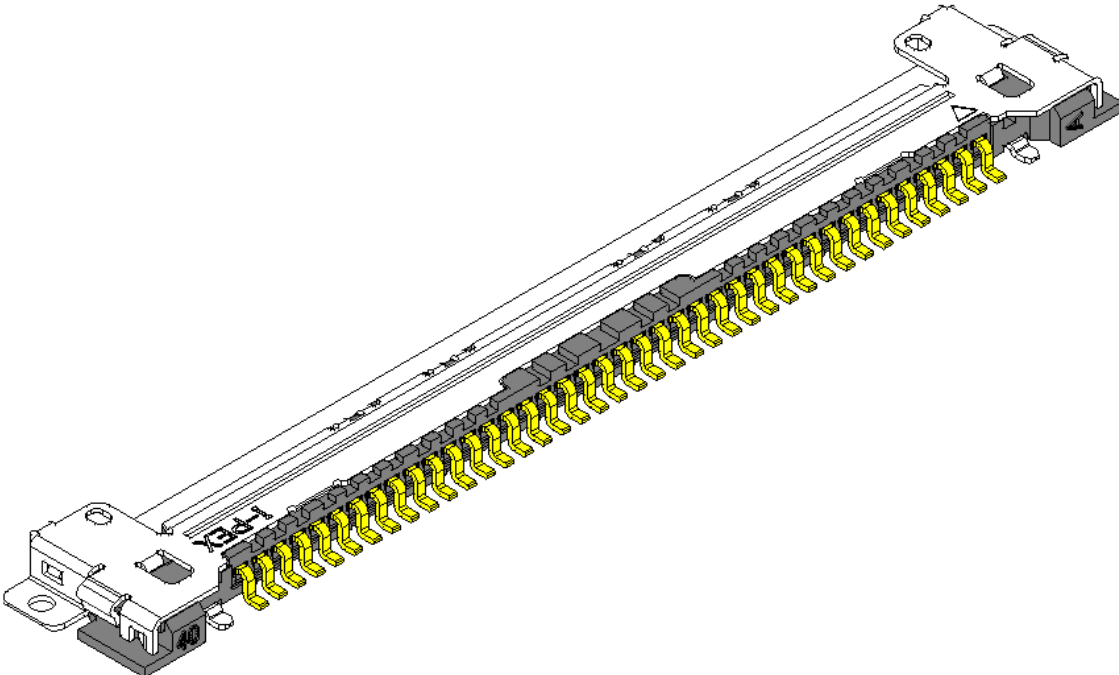
CABLINE-VSF SHELL ASS'Y PLUG with FPC

WITHOUT LOCK BAR TYPE



CABLINE-VSF SHELL PLUG with FPC

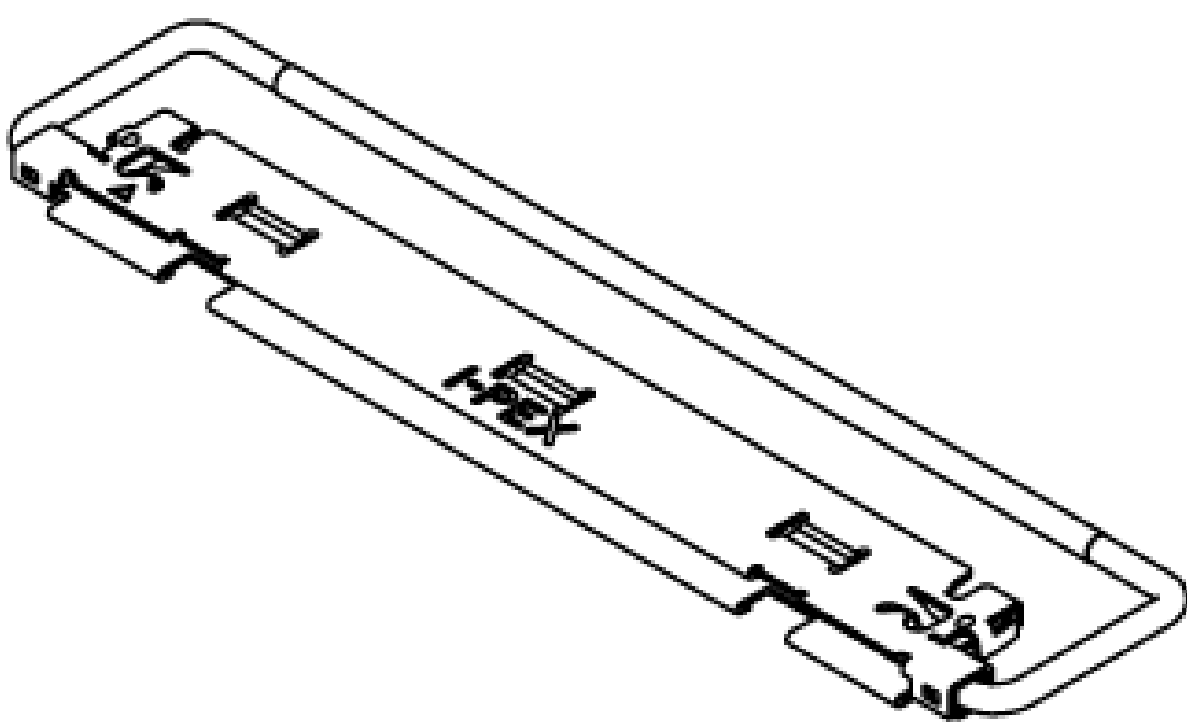
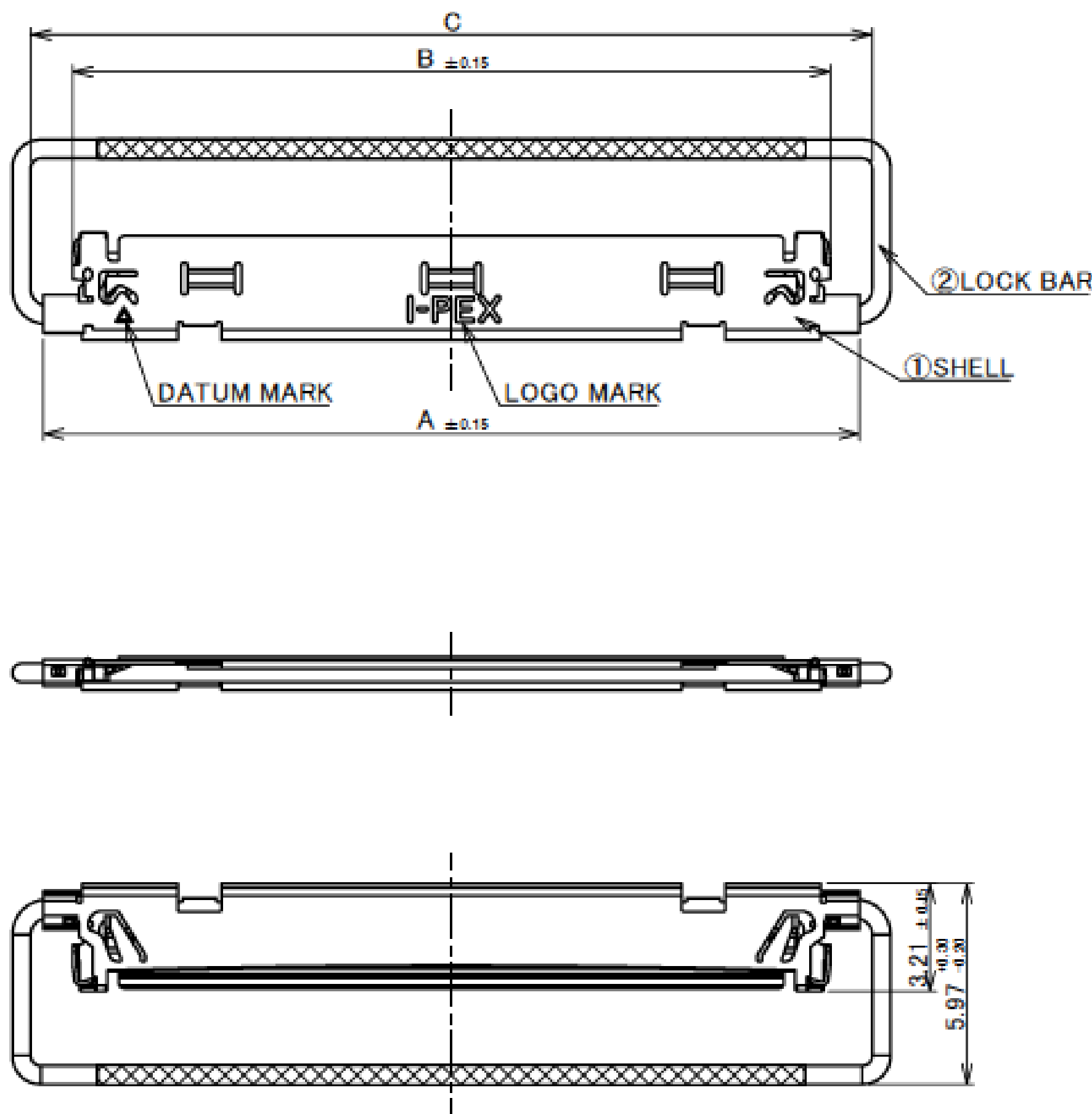
OR



CABLINE-VS RECEPTACLE

Shell Assembly

Recommended P/N		20645-0**T-01		
PART No.	A	B	C	
20645-030T-01	19.30	17.56	20.05	
20645-040T-01	24.30	22.56	25.05	

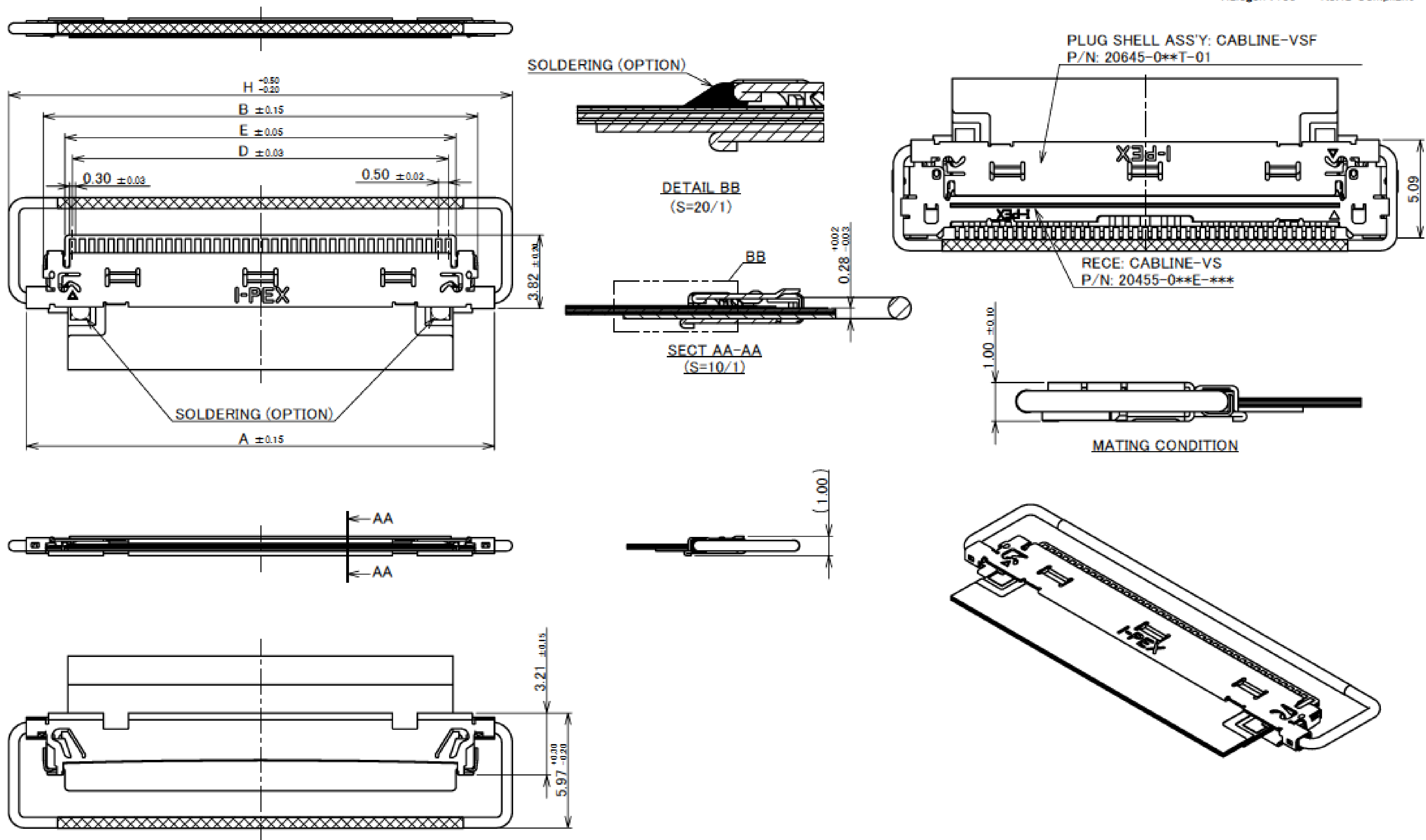
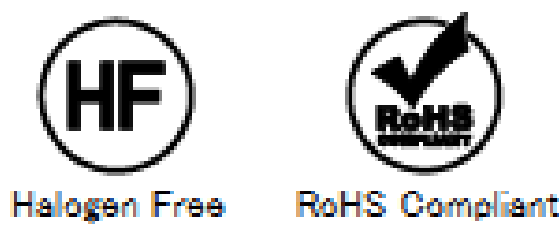


2	LOCK BAR	SUS	-
1	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT & SOLDERING AREA : Au 0.01 μ m MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.15

POS.	A	B	D	E	H
30	19.30	17.56	14.50	15.30	21.15
40	24.30	22.56	19.50	20.30	26.15

FPC ASS'Y STATE

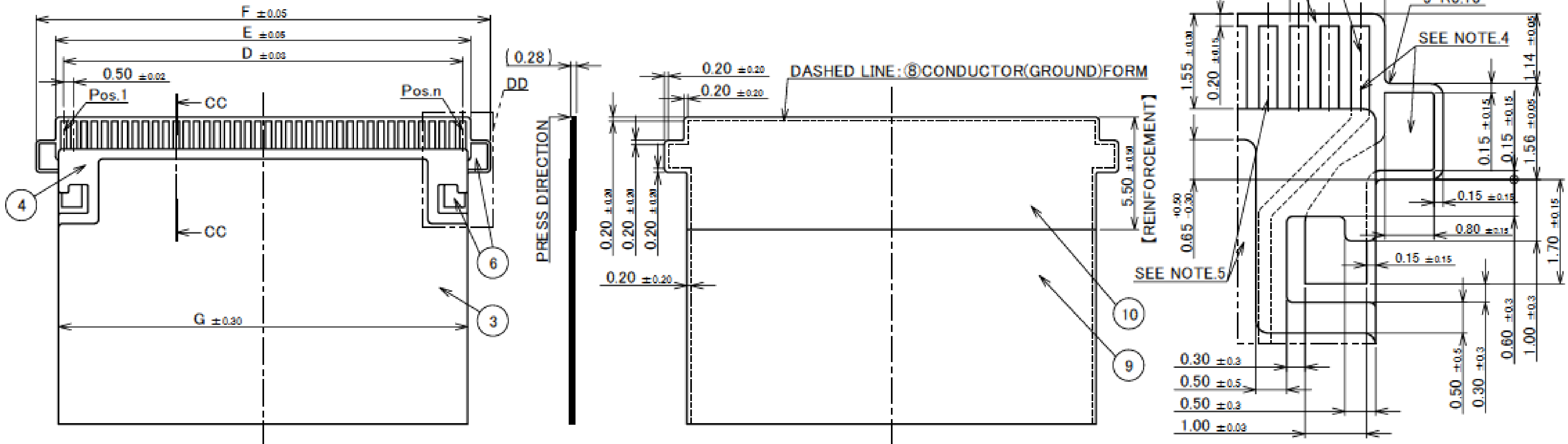


Rev.15

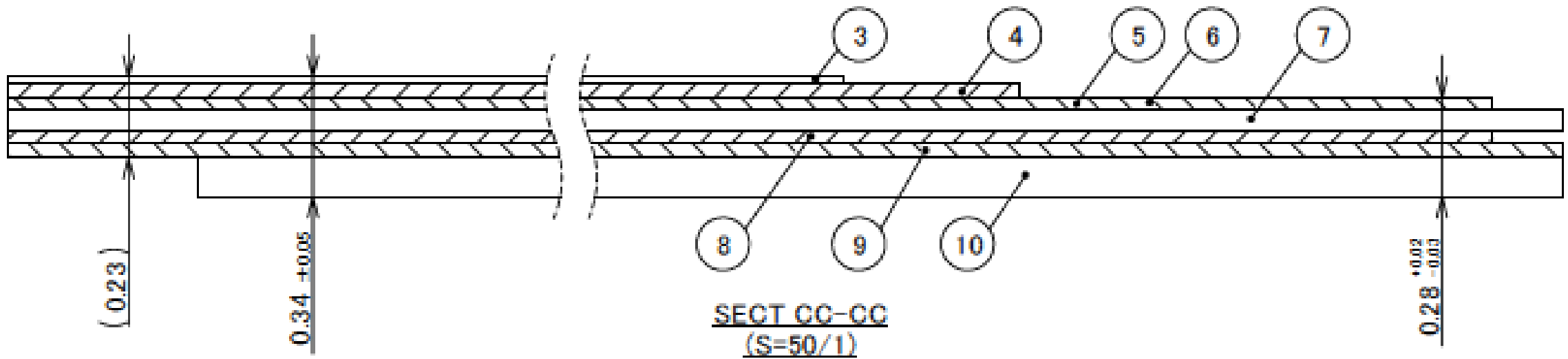
Shell Assembly

POS.	D	E	F	G
30	14.50	15.30	17.20	15.00
40	19.50	20.30	22.20	20.00

RECOMMENDED FPC LAYOUT
【SHIELDED TYPE】



DETAIL DD
(S=15/1)



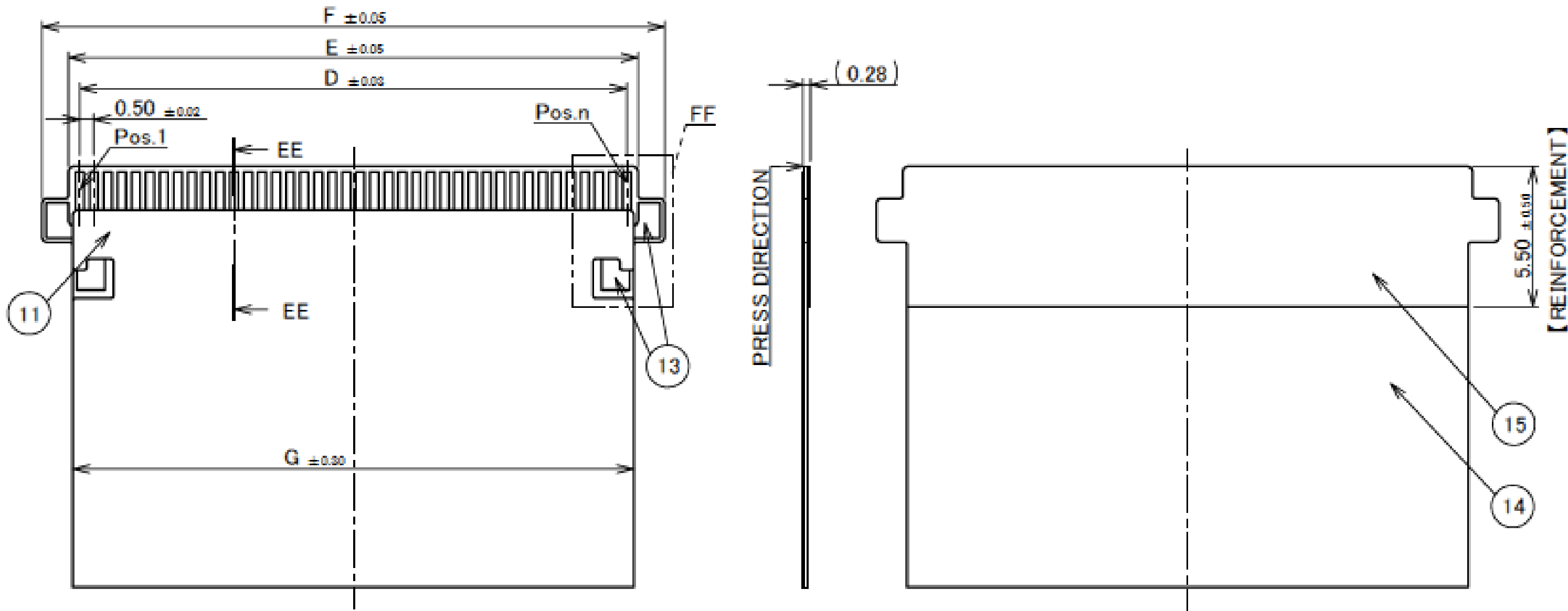
10	REINFORCING TAPE	-	-
9	INSULATOR	-	-
8	CONDUCTOR (GROUND)	Cu	-
7	INSULATOR	-	-
6	CONDUCTOR (GROUND)	Cu	Ni, Au
5	CONDUCTOR (SIGNAL)	Cu	Ni, Au
4	INSULATOR	-	-
3	SHIELD FILM	-	-
NO.	DESCRIPTION	MATERIAL	PLATING

- NOTES.
- 1. ADHESIVE SHOULD USE THERMOSETTING.
 - 2. No.6: CONDUCTOR(GROUND) AND No.8: CONDUCTOR(GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
 - 3. No.3: SHIELD FILM AND No.8: CONDUCTOR(GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
 - 4. No.5: CONDUCTOR(SIGNAL) AND No.6,8: CONDUCTOR(GROUND) ARE NOT CONTACTING.
 - 5. No.5: CONDUCTOR(SIGNAL) AND No.3: SHIELD FILM ARE NOT CONTACTING.

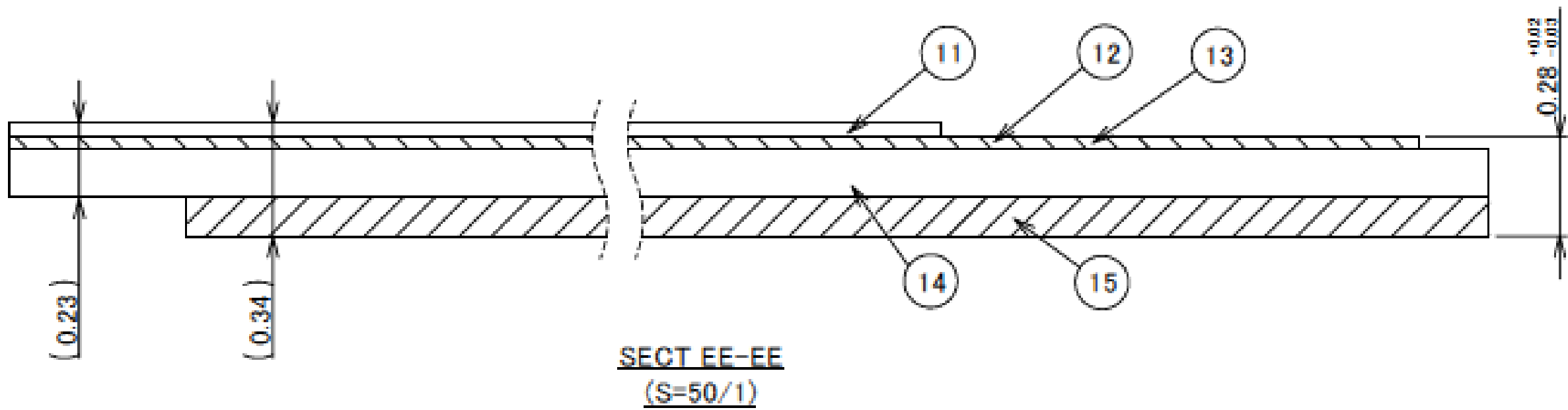
Rev.15

POS.	D	E	F	G
30	14.50	15.30	17.20	15.00
40	19.50	20.30	22.20	20.00

RECOMMENDED FPC LAYOUT
【NON SHIELDED TYPE】



DETAIL FF
(S=15/1)



15	REINFORCING TAPE	-	-
14	INSULATOR	-	-
13	CONDUCTOR (GROUND)	Cu	Ni, Au
12	CONDUCTOR (SIGNAL)	Cu	Ni, Au
11	INSULATOR	-	-
NO.	DESCRIPTION	MATERIAL	PLATING

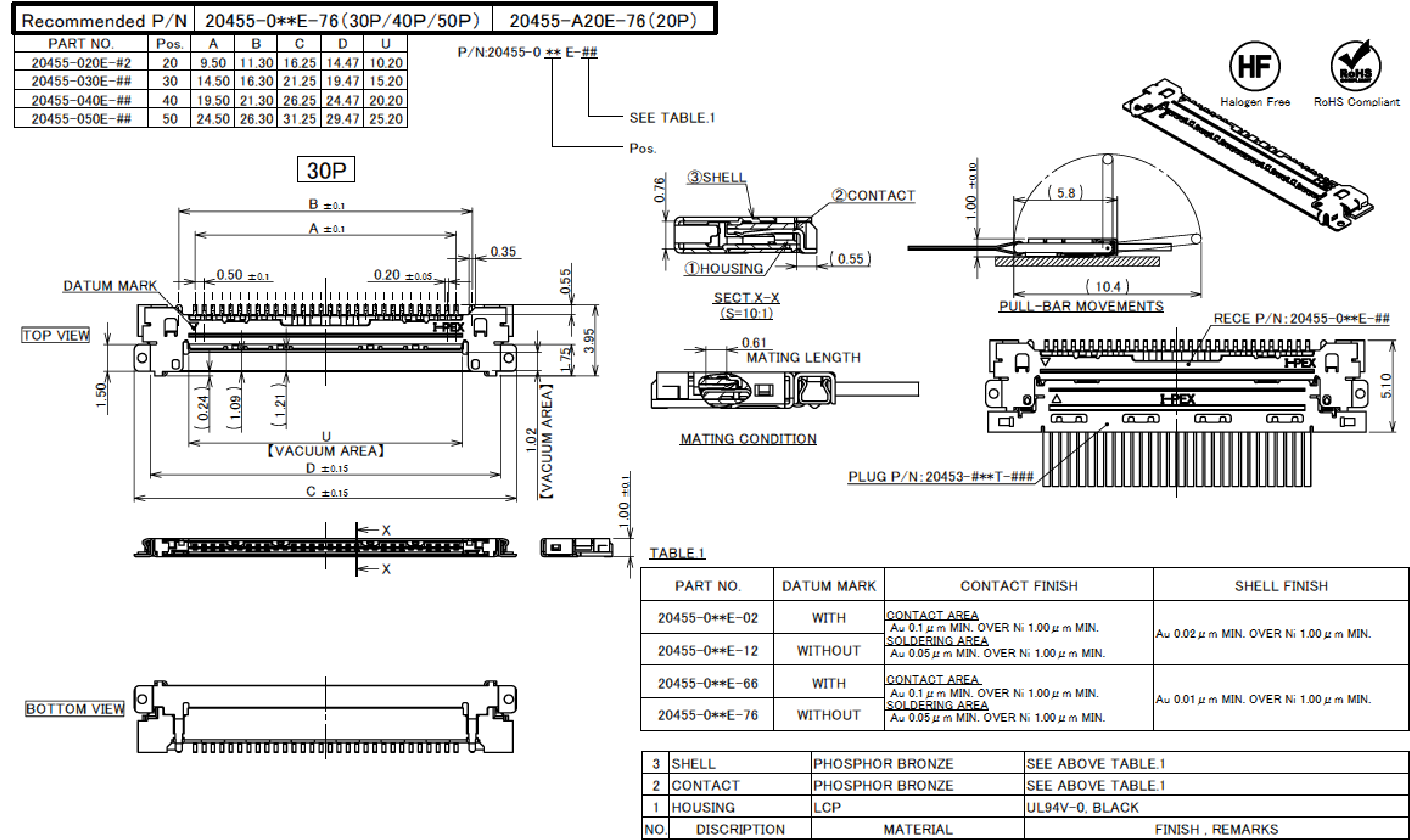
- NOTES.
- 6. ADHESIVE SHOULD USE THERMOSETTING.
 - 7. No.12: CONDUCTOR(SIGNAL) AND No.13: CONDUCTOR(GROUND) ARE NOT CONTACTING.

Rev.15

ITEMS	SPECIFICATION
RATING VOLTAGE	100V AC (PER CONTACT)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.5A AC/DC (PER CONTACT PIN) ※AVAILABLE UP TO 20PIN 0.3A AC/DC (PER CONTACT PIN) ※AVAILABLE FOR ALL PIN
OPERATING TEMPERATURE	233~358K(−40°C~+85°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : $\triangle$ 40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : $\triangle$ 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 : 24.0N MAX. / 40P : 32.0N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	30P : 1.1N MIN. / 40P : 1.4N MIN.
PRODUCT SPECIFICATION	PRS-1878
TEST REPORT	TR-14095, TR-17048
PACKING STANDARD	PST-14087
INSTRUCTION MANUAL	HIM-13010
ASSEMBLY MANUAL	ASM-13003
APPEARANCE CRITERIA No.	QLS-A***

Rev.15

Receptacle Assembly



Rev.34

Receptacle Assembly

Recommended P/N		20455-0**E-76(30P/40P/50P)							20455-A20E-76(20P)	
PART NO.	Pos.	A	B	C	D	H	J	U		
20455-A20E-##	20	9.50	11.30	16.25	14.47	15.32	15.84	10.20		

P/N:20455-A20E-##
A : TYPE-A
SEE TABLE 2

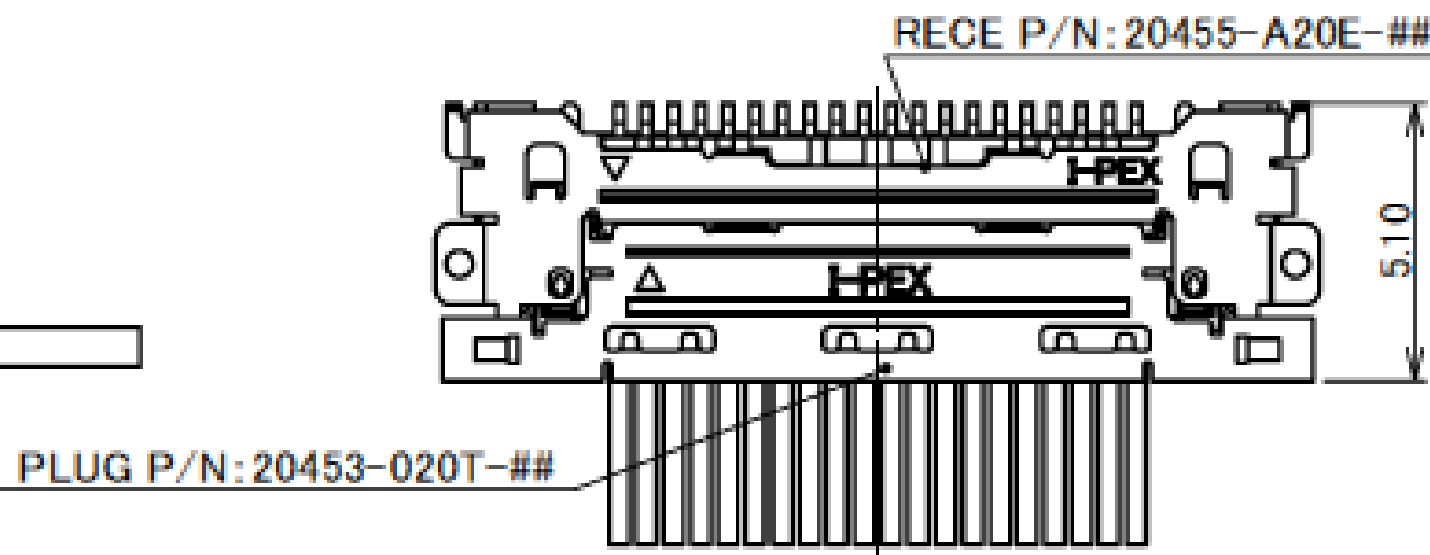
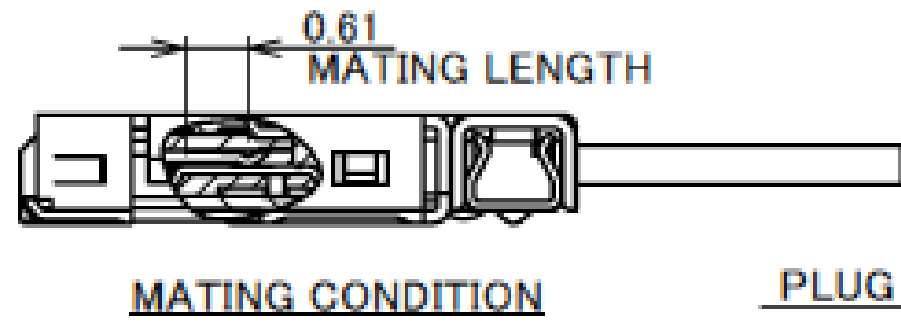
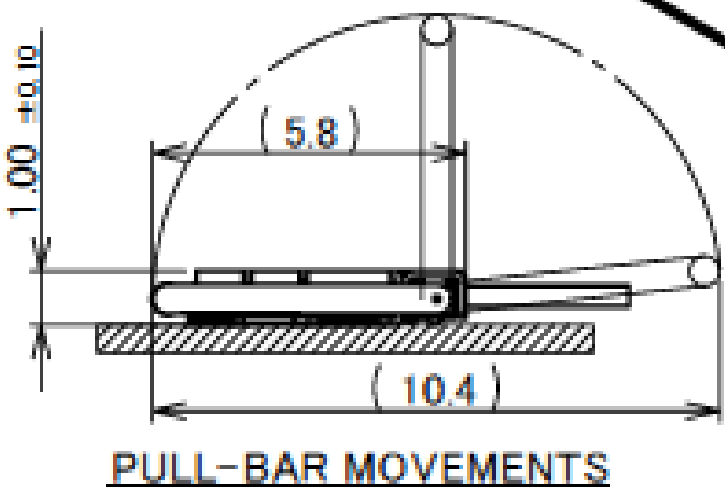
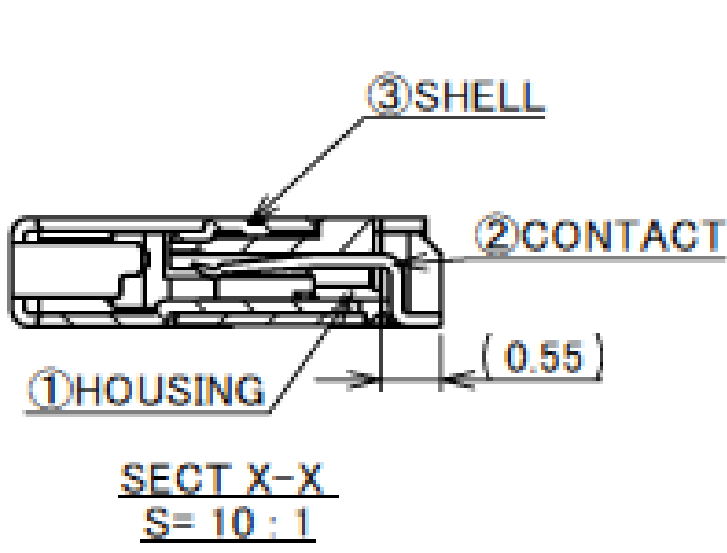
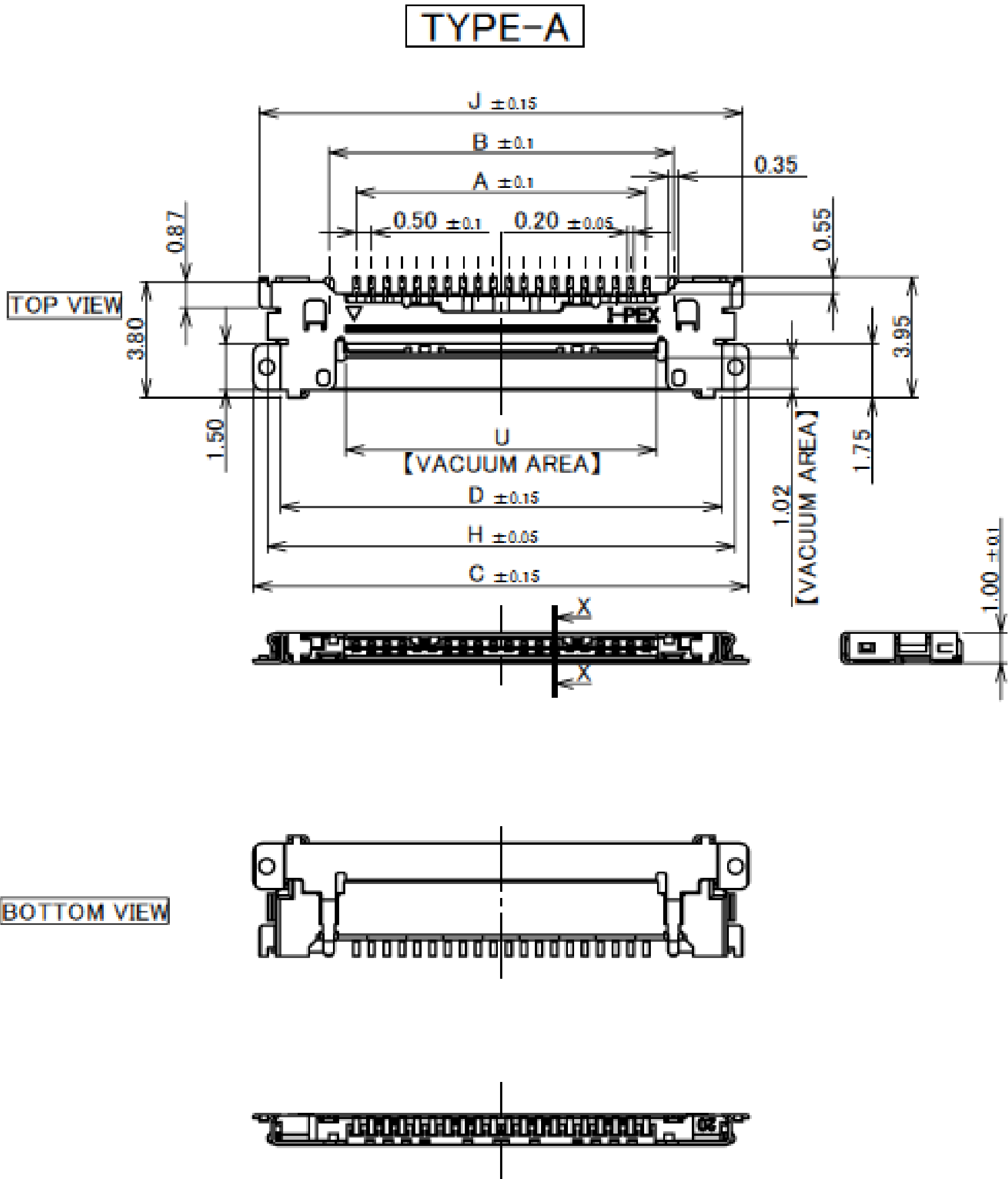
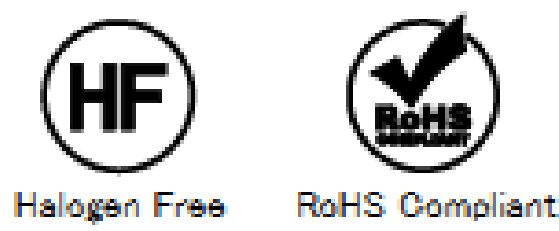
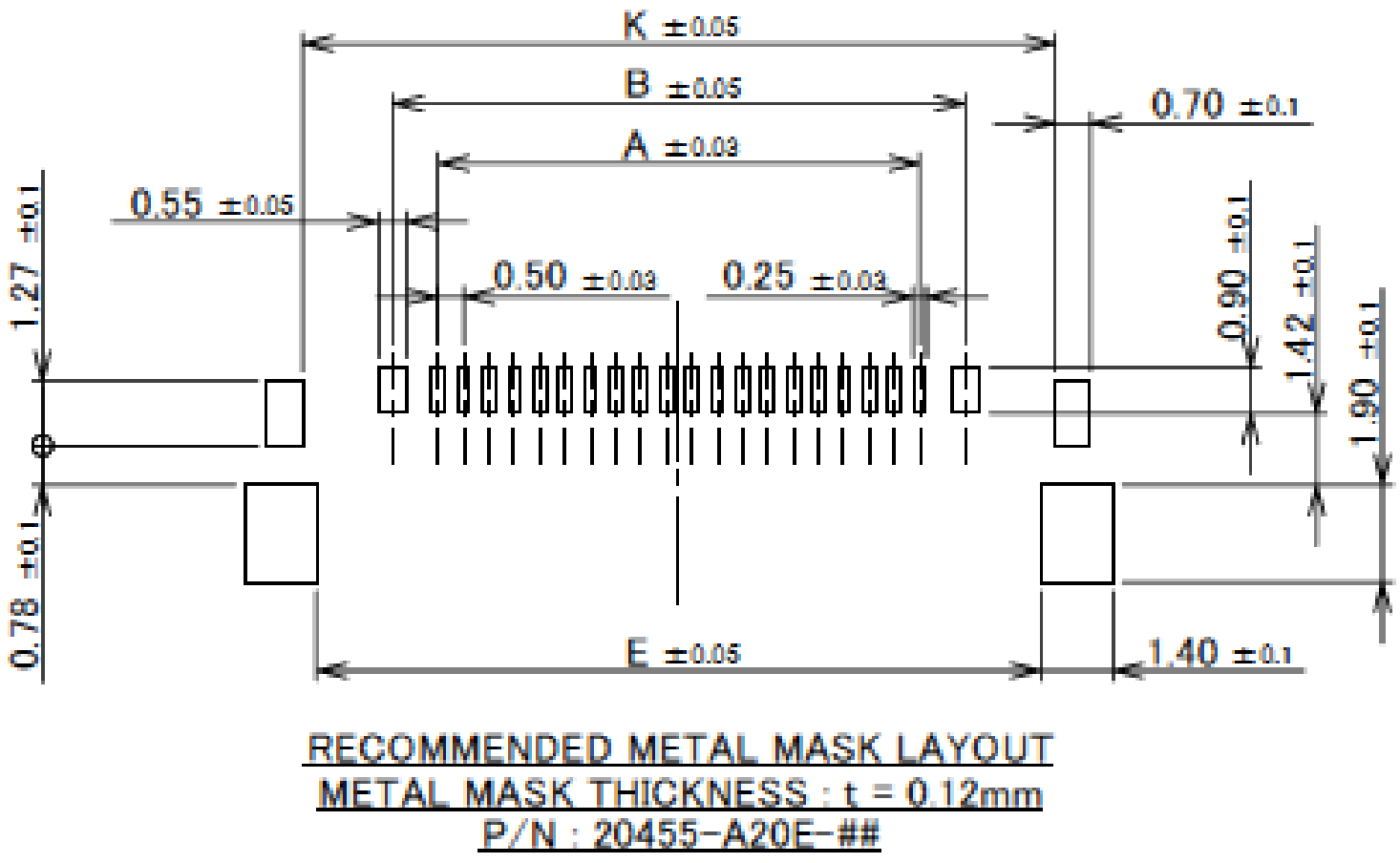
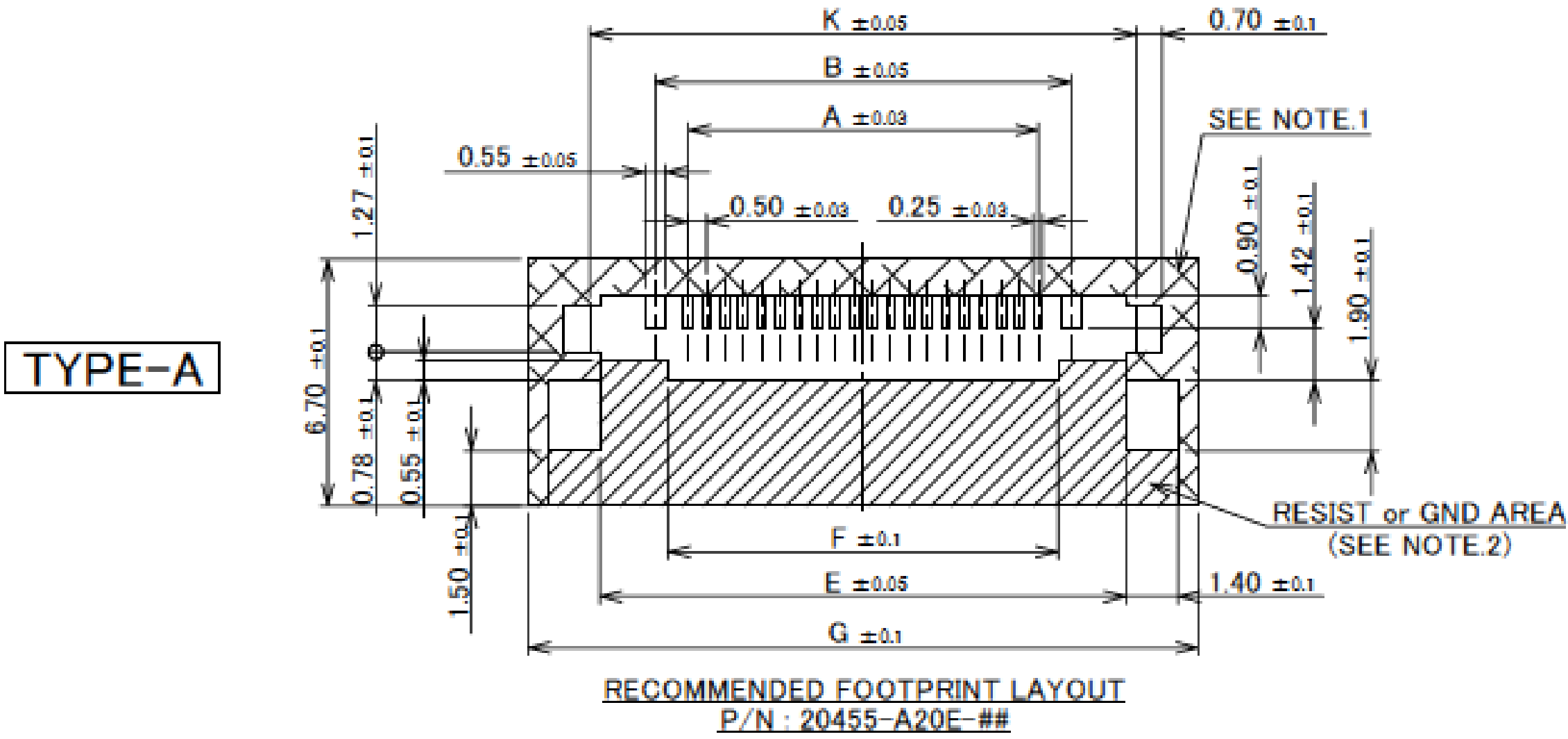
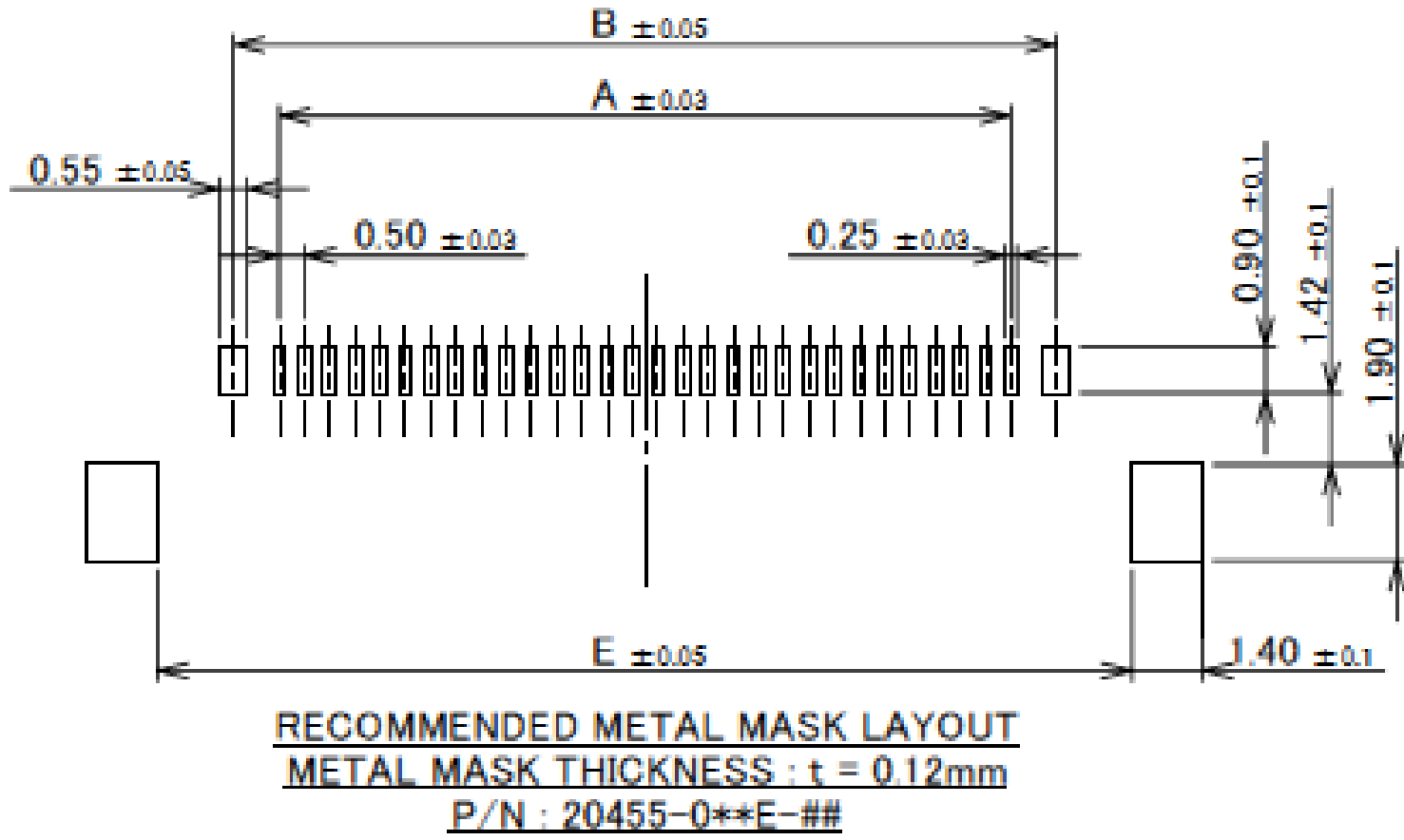
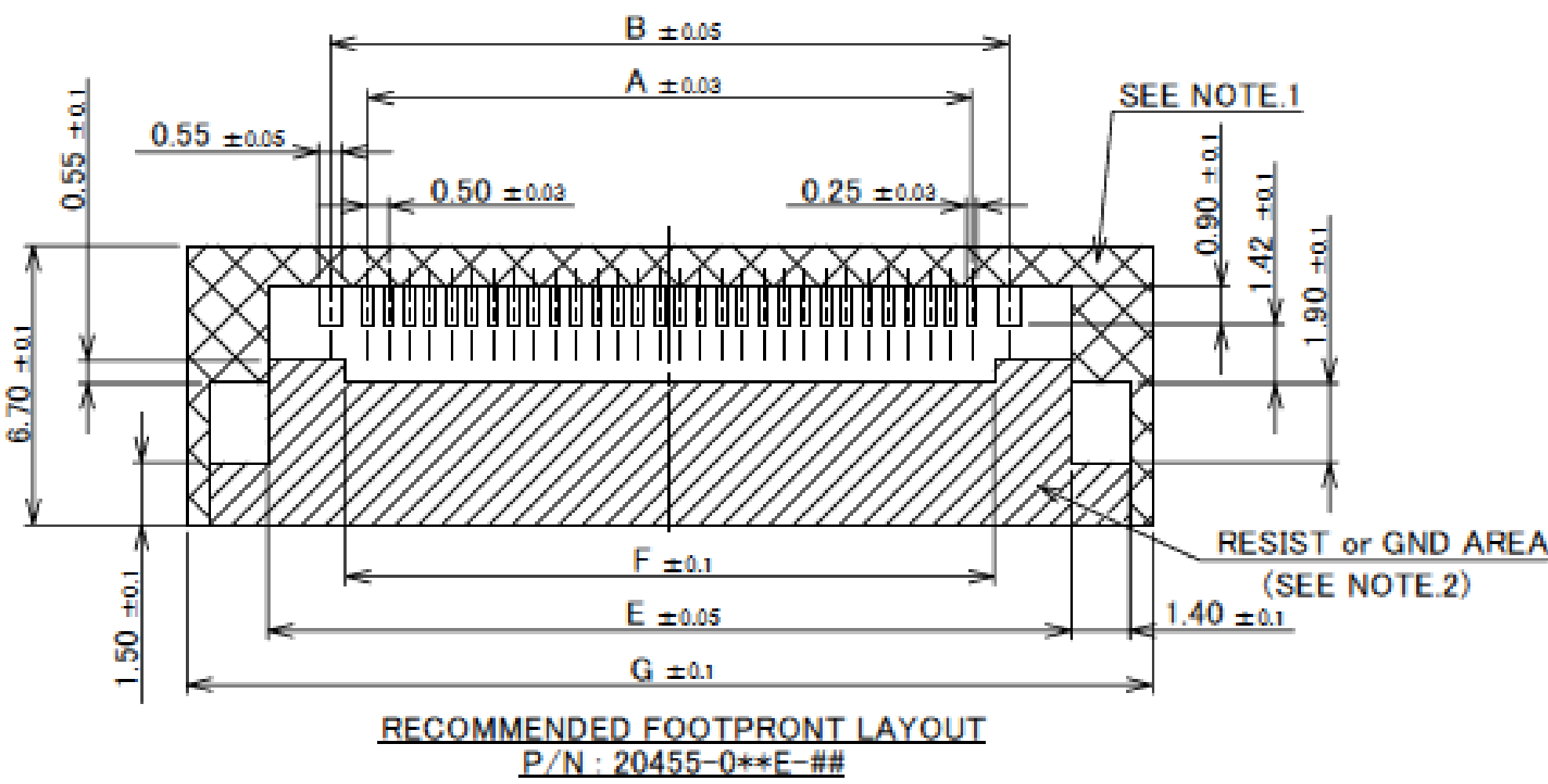


TABLE 2			
PART NO.	DATUM MARK	CONTACT FINISH	SHELL FINISH
20455-A20E-02	WITH	CONTACT AREA Au 0.1 μm MIN. OVER Ni 1.00 μm MIN.	Au 0.02 μm MIN. OVER Ni 1.00 μm MIN.
20455-A20E-12	WITHOUT	SOLDERING AREA Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	
20455-A20E-66	WITH	CONTACT AREA Au 0.1 μm MIN. OVER Ni 1.00 μm MIN.	Au 0.01 μm MIN. OVER Ni 1.00 μm MIN.
20455-A20E-76	WITHOUT	SOLDERING AREA Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	
3	SHELL	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
2	CONTACT	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
1	HOUSING	LCP	UL94V-0, BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.34

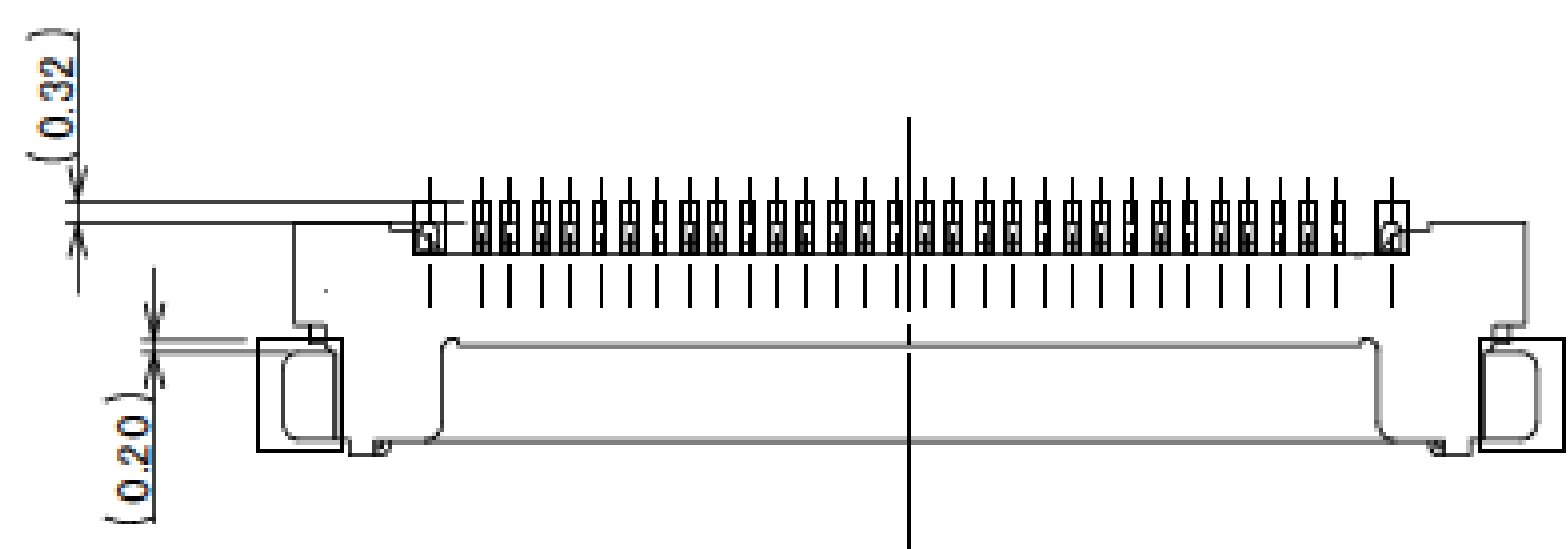
PART NO.	Pos.	A	B	E	F	G	H	J	K
20455-#20E-##	20	9.50	11.30	14.30	10.60	18.20	15.32	15.84	14.84
20455-030E-##	30	14.50	16.30	19.30	15.60	23.20	-	-	-
20455-040E-##	40	19.50	21.30	24.30	20.60	28.20	-	-	-
20455-050E-##	50	24.50	26.30	29.30	25.60	33.20	-	-	-



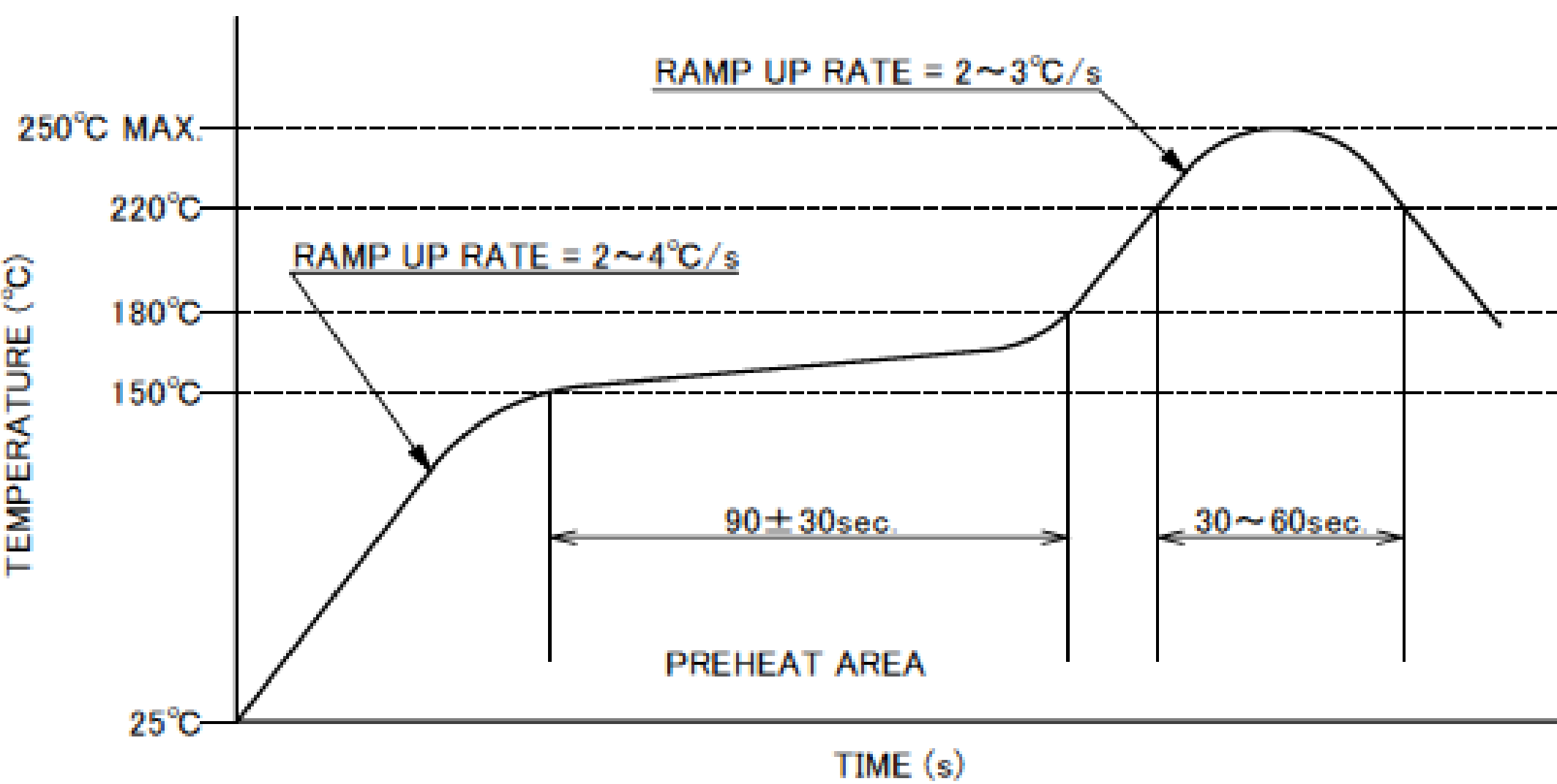
NOTES.
1. IN CASE OF PLUG WITH PULL-BAR, DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.
2. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.34

Receptacle Assembly

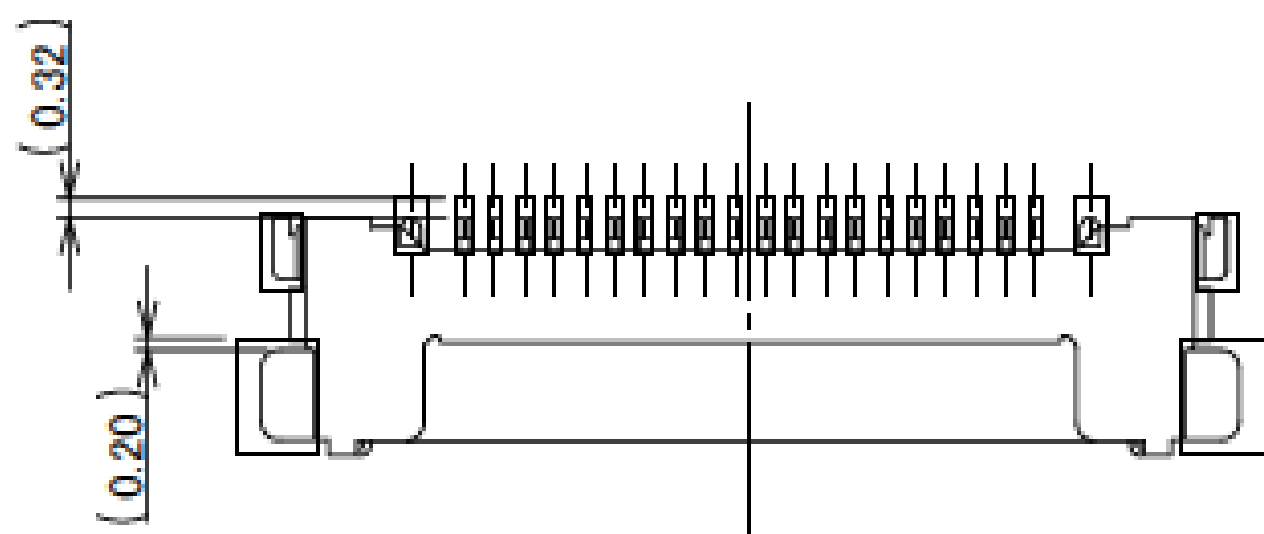


CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN
P/N : 20455-0**E-##



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

TYPE-A



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN
P/N : 20455-A20E-##

Rev.34

FOR CABLINE-VSF PLUG SHELL ASSEMBLY (DWG NO. 20645)

ITEMS	SPECIFICATION
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR CONTACT)	0.5A AC/DC (PER CONTACT PIN) ※AVAILABLE UP TO 20PIN 0.3A AC/DC (PER CONTACT PIN) ※AVAILABLE FOR ALL PIN ※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% R.H. MAX.
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : ≦40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 60mohm 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 : 24.0N MAX. 40P : 32.0N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	30P : 1.1N MIN. 40P : 1.4N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1878
TEST REPORT	TR-14095 (20455-0**E-#2#) TR-17048 (20455-0**E-#9#)
PACKING STANDARD	300-643
INSTRUCTION MANUAL	HIM-13010
APPEARANCE CRITERIA NO.	QLS-A***

Rev.34

Custom Connectors Available

 RF
Connectors

MHF® series



Micro-Coaxial/Twinax
Connectors

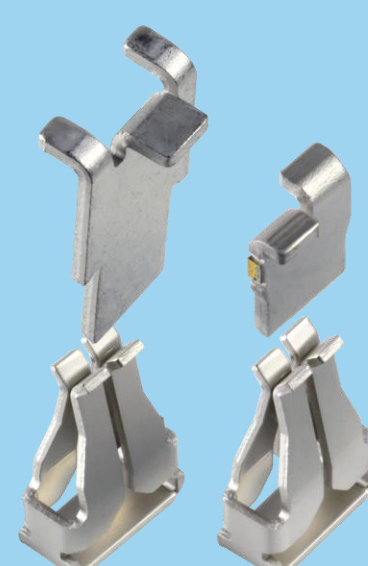


CABLIME® series

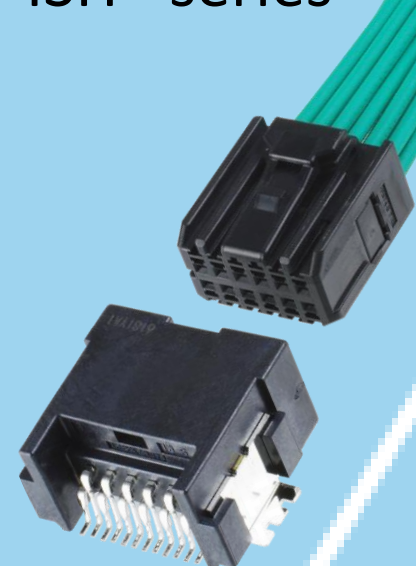


Wire-to-Board
Connectors/
Terminals

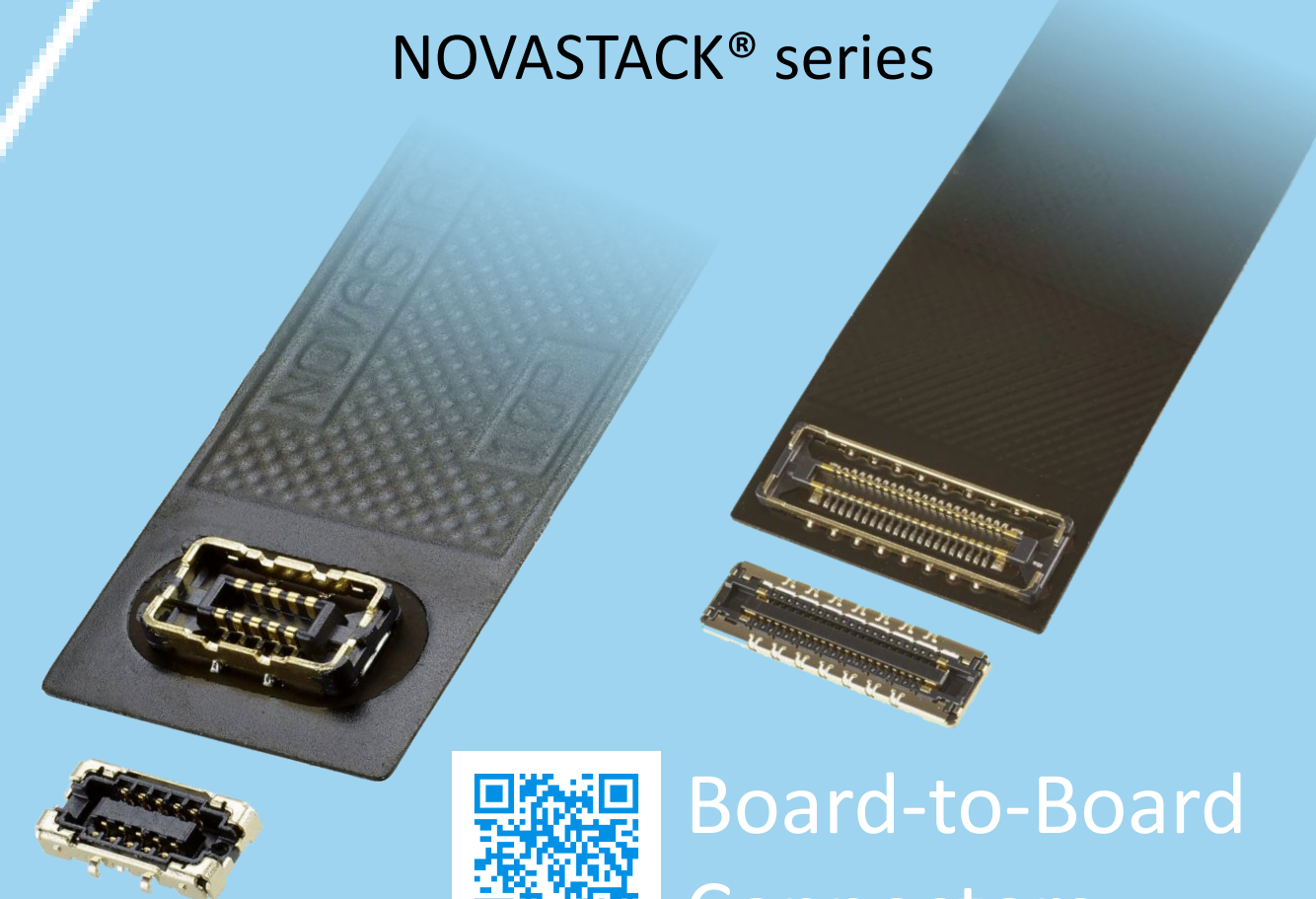
AP series



ISH® series



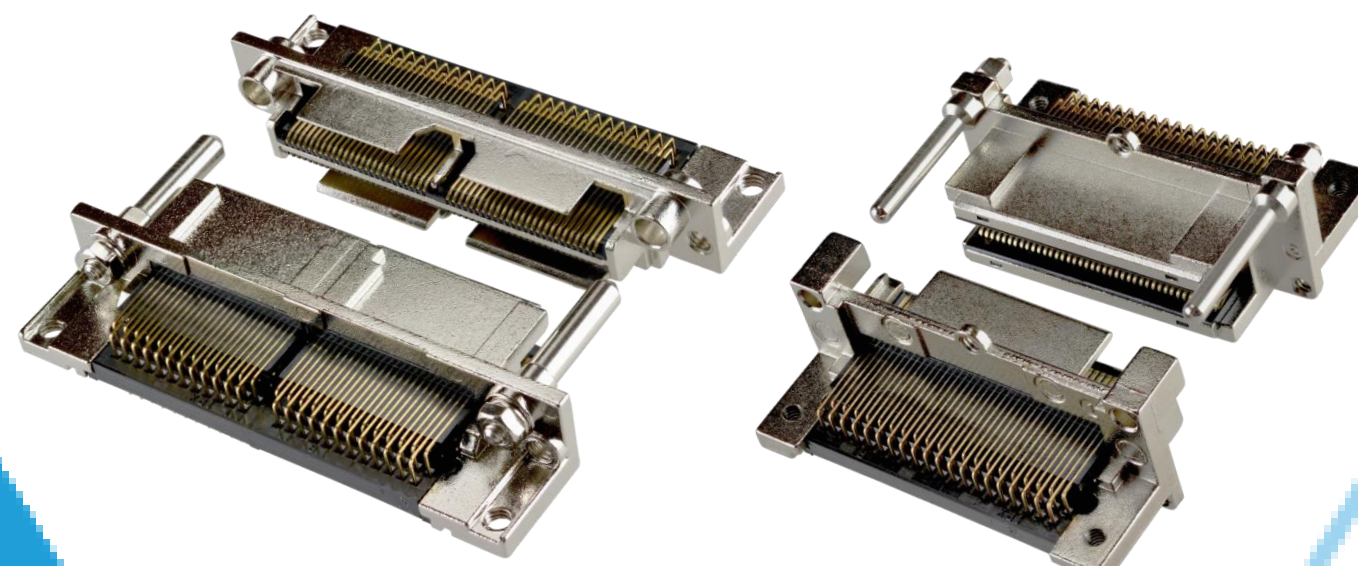
NOVASTACK® series



Board-to-Board
Connectors



I/O
Connectors



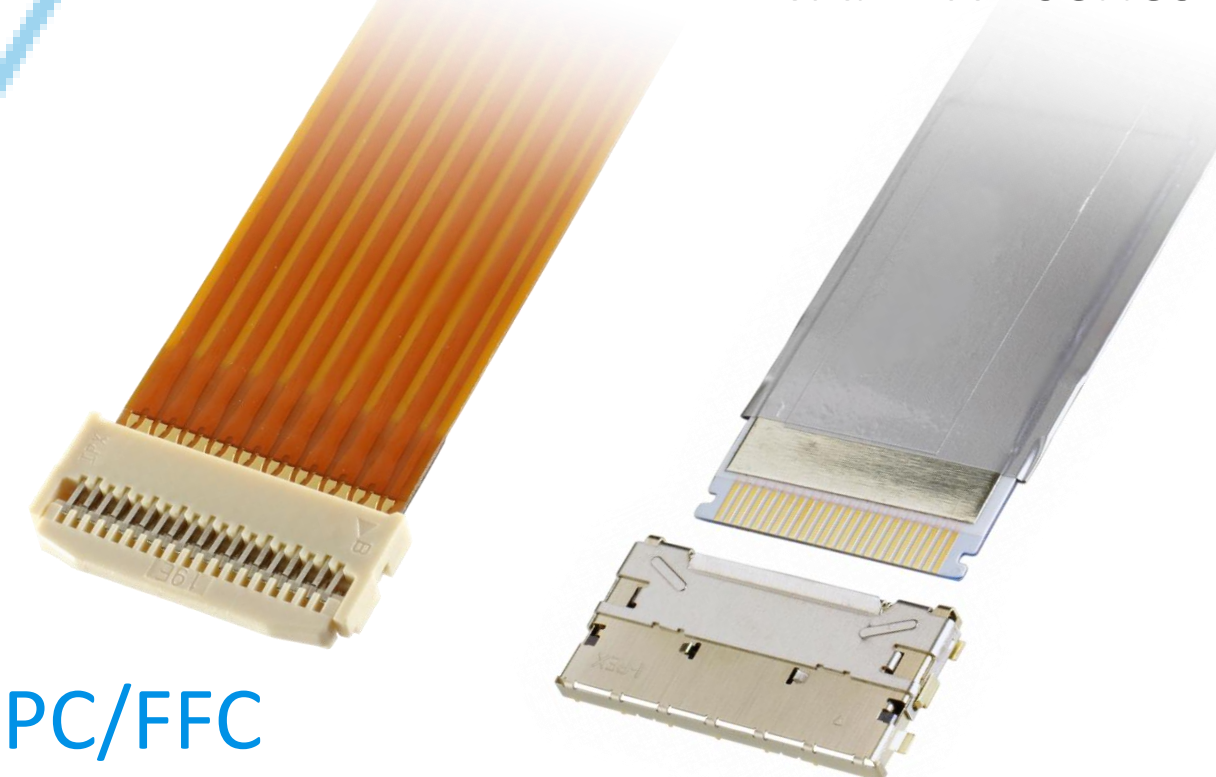
MINIDOCK™ series



FPC/FFC
Connectors

MINIFLEX® series

EVAFLEX® series



Inquiry



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