

CABLINE®-VSF

기계식 Lock 기능, 0.5mm Pitch, 수평 결합 타입 FPC Plug 커넥터

Product Specifications:

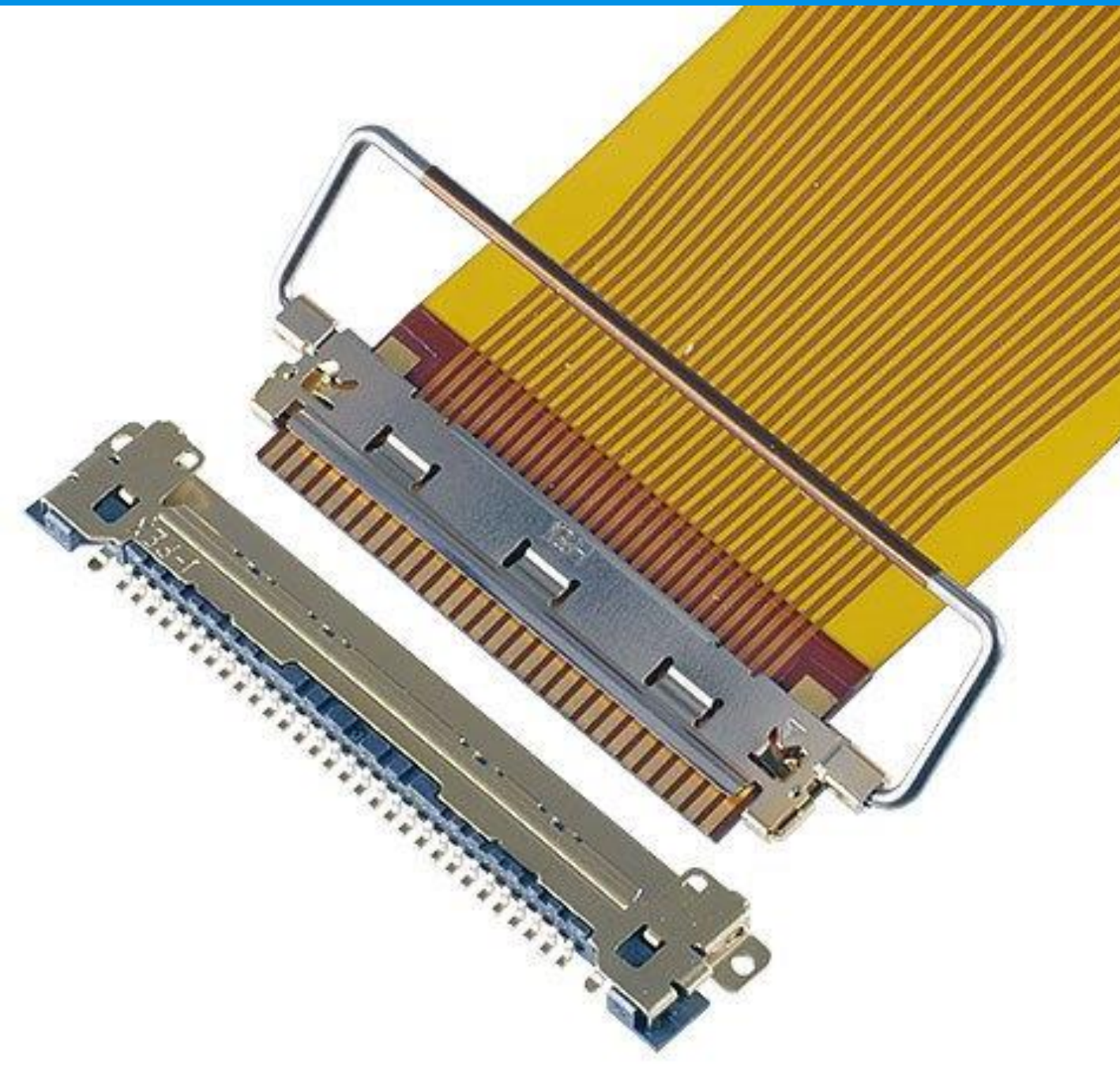
Mating type	Horizontal	
Board Pitch (mm)	0.5	
Wiping Length (mm)	0.62	
Mated size (mm)	Height	1.0 +/- 0.1
	Width	Formula: 7.55 + (0.5*?p)
	Depth	5.97
Pin Counts	Range	Up to 50
	Available	30, 40

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

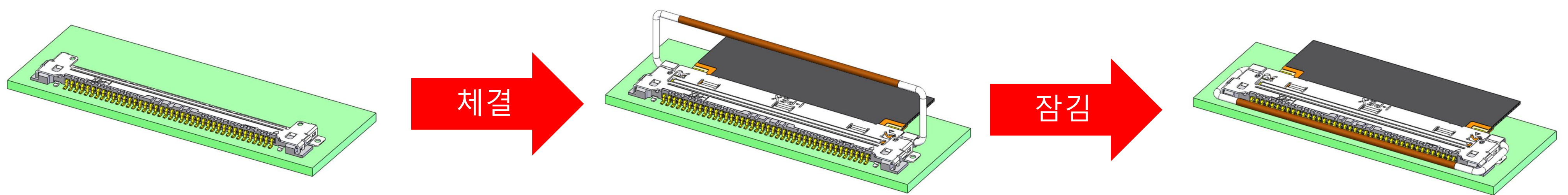
Applicable Standards (Reference Only):

PCIe® Gen 4 (16 GT/s/Lane), USB3.2 Gen2 (10 Gbps/Lane)
eDP HBR 3 (8.1 Gbps/Lane), USB3.2 Gen1(5 Gbps/Lane)



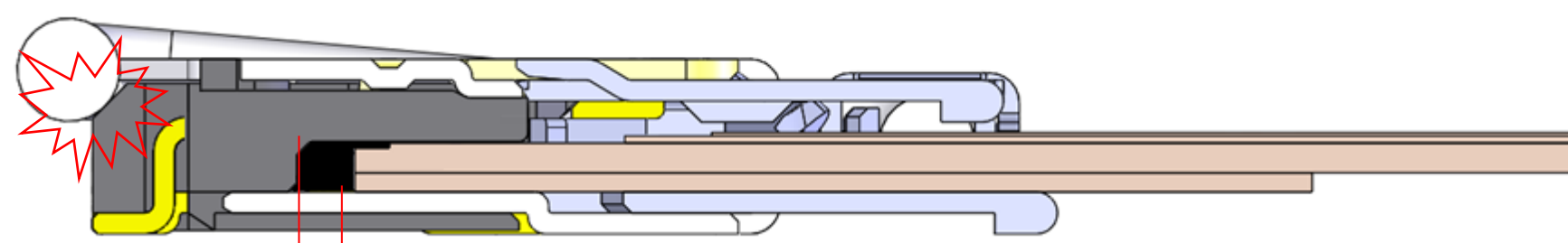
*기재가 되어있지 않은 핀 수의 대응 여부에 대해서는 문의해 부탁드립니다.

▶ 기계식 Locking bar에 의한 불완전 결합 방지와 Plug 이탈 방지

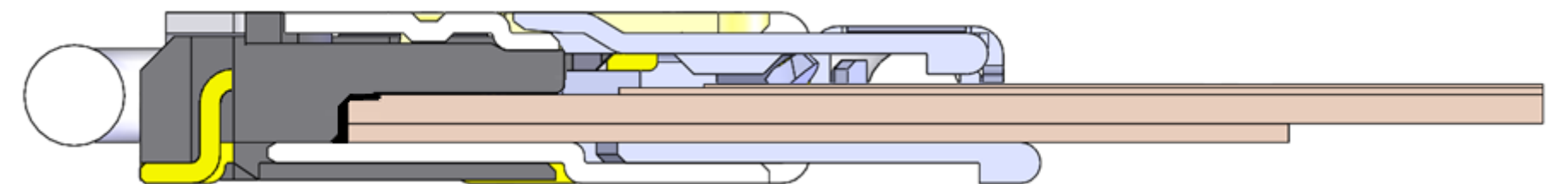


간섭

Lock Bar는 플러그와 리셉터클이 완전히 체결된 경우에만 온전한 기능을 할 수 있음

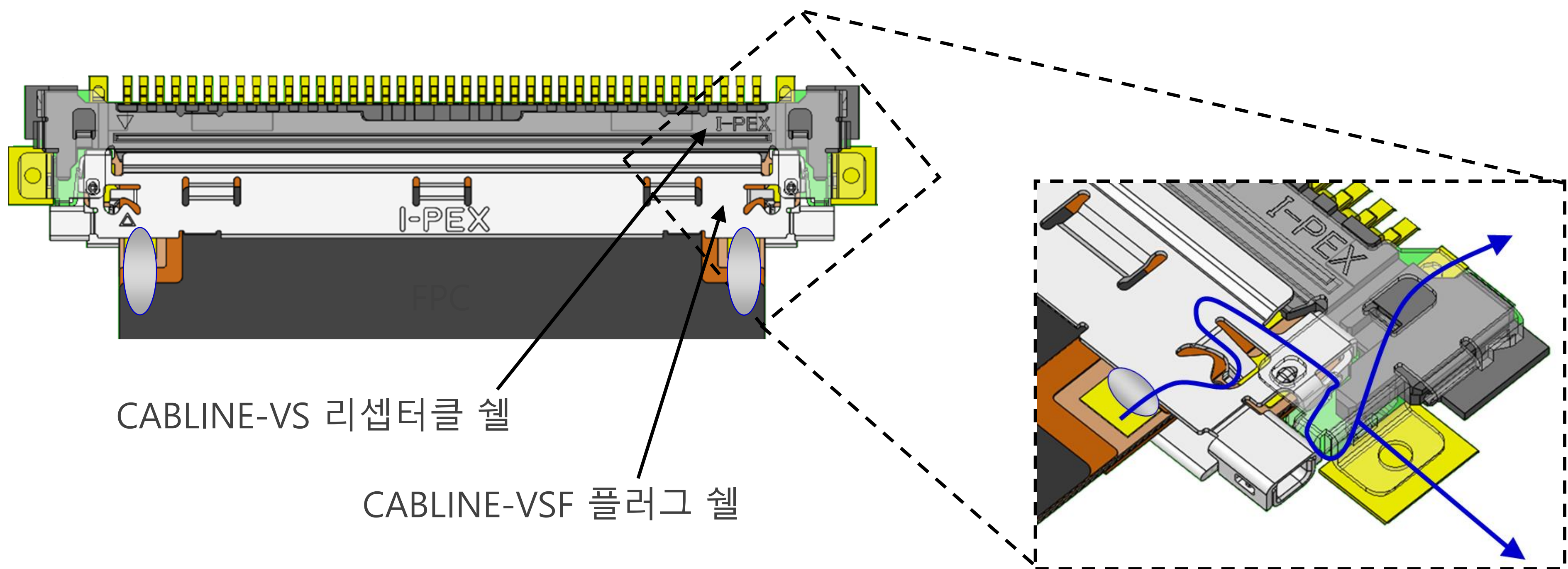


불완전한 체결



완전한 체결

▶ EMI 실드와 멀티 그라운드 접점 설계

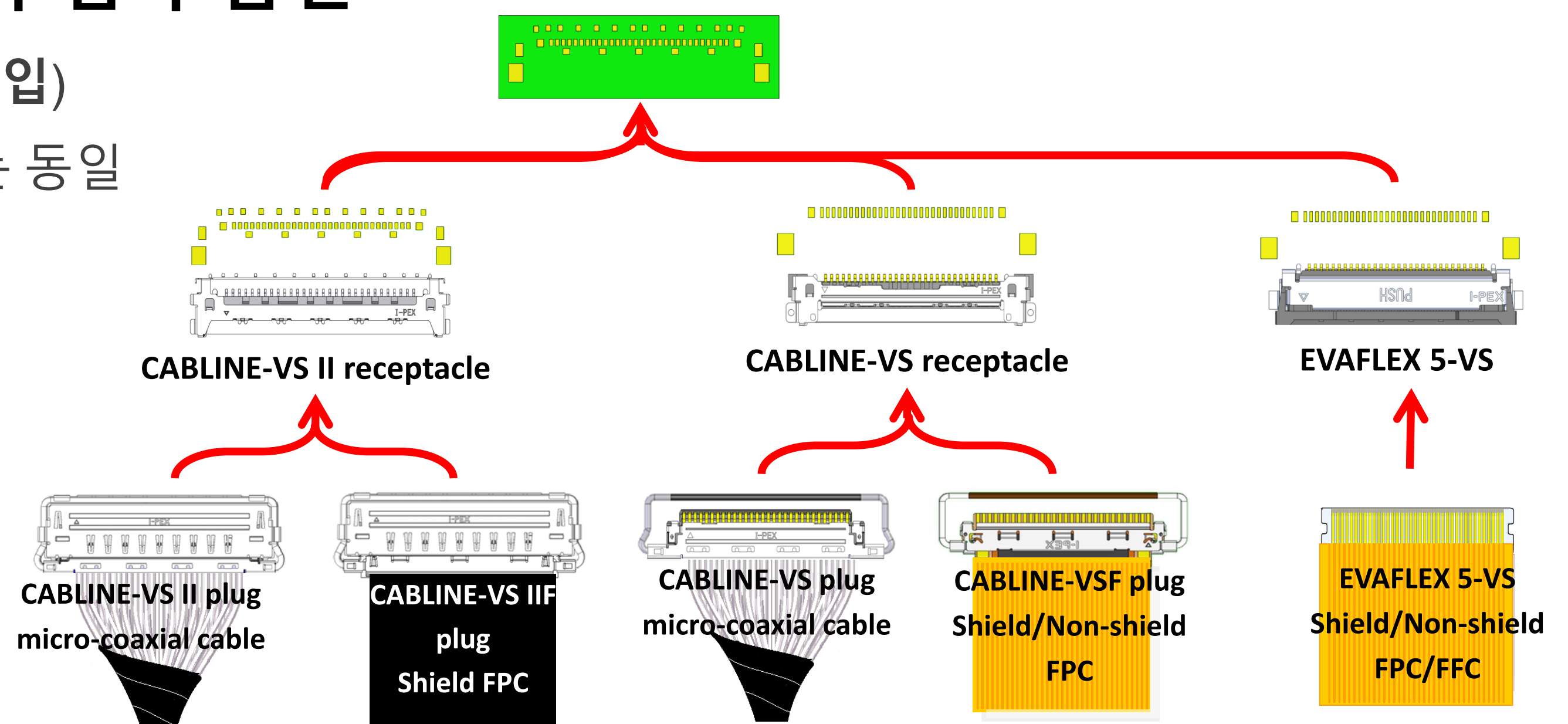


▶ I-PEX VS 시리즈의 다양한 커넥터 접속 옵션

I-PEX VS 시리즈(0.5mm 피치, 수평 결합 타입)

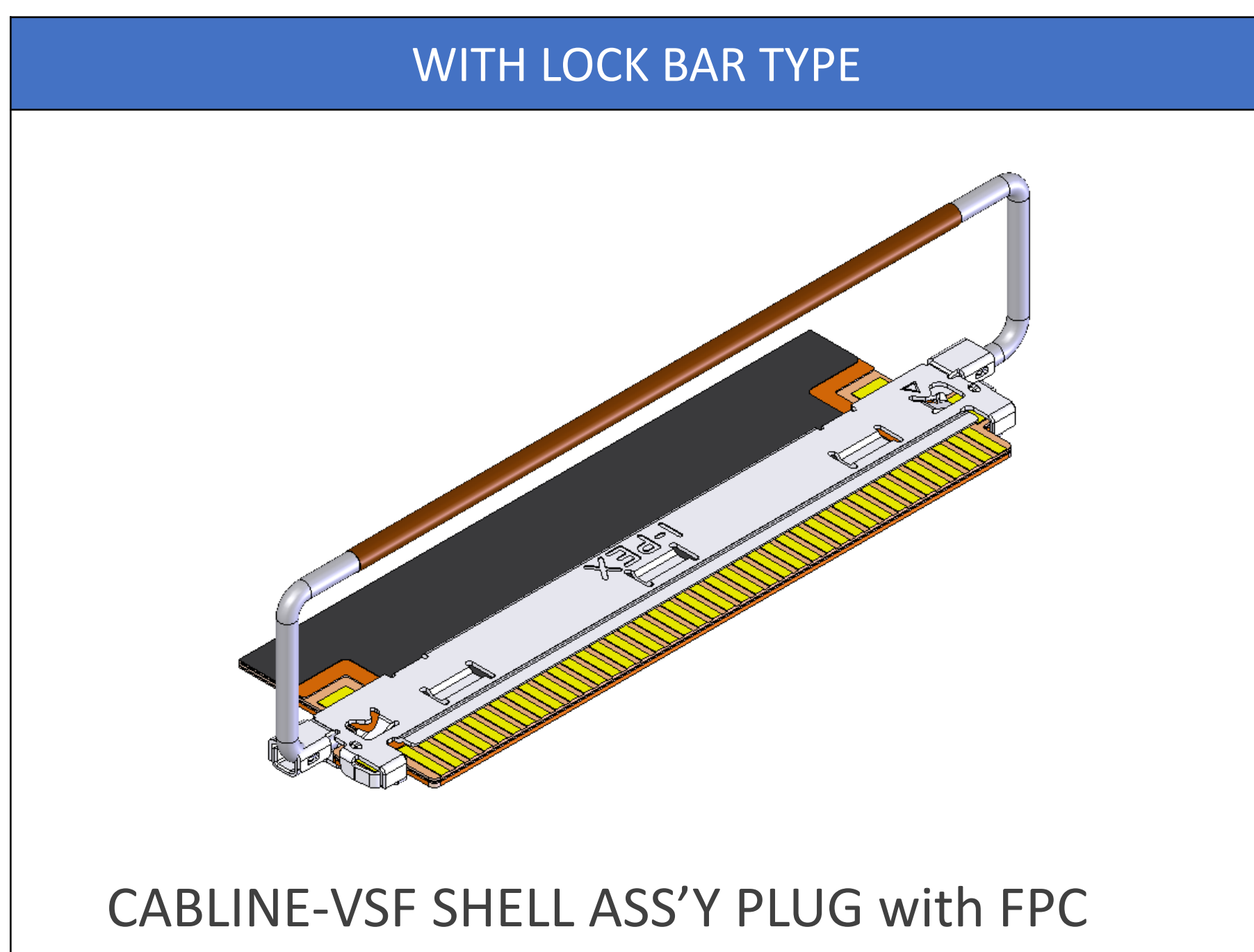
CABLINA-VS, VS II 리셉터클 및 EVAFLEX® 5-VS는 동일 PCB 레이아웃을 사용가능 합니다.

CABLINA-VS 리셉터클:
노트북 PC 패널 VESA 표준 커넥터 점유율 1위.

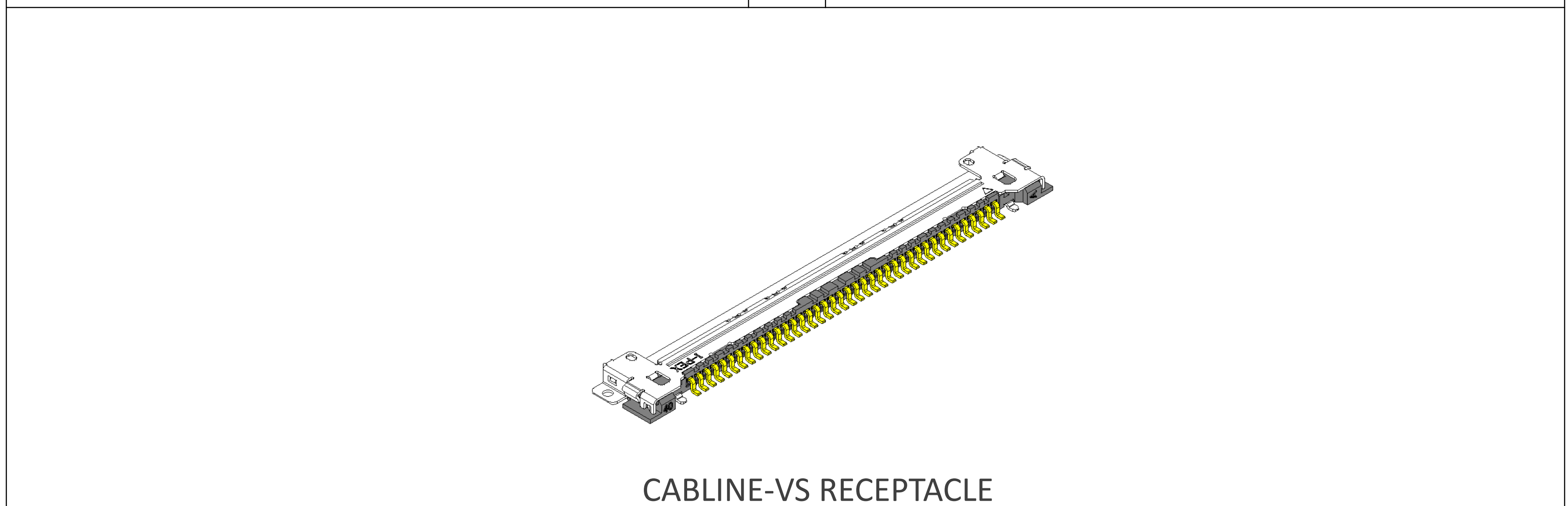
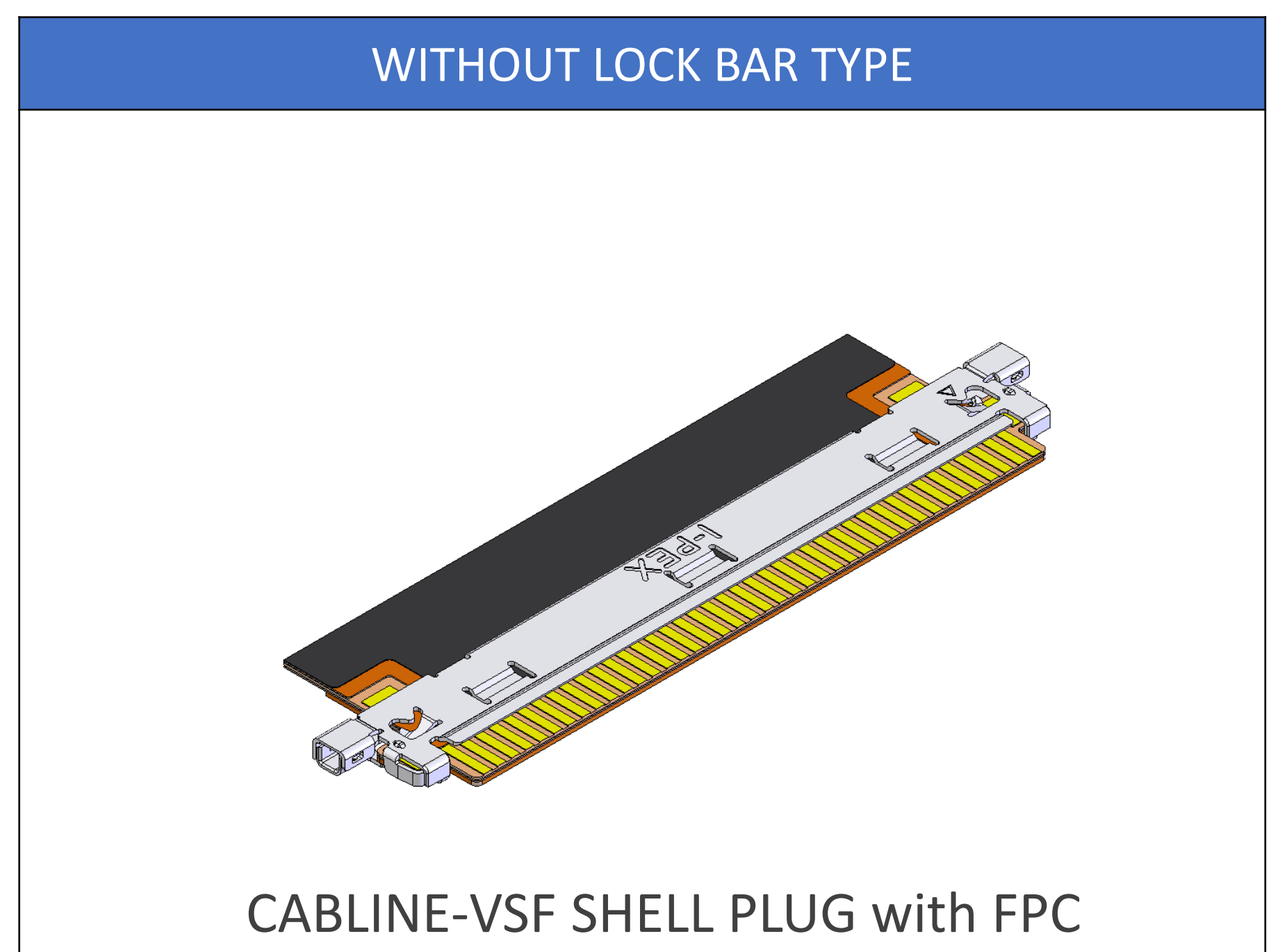


Component Parts Details

Component Parts



OR



Shell Assembly

Recommended P/N: 20645-0**T-01

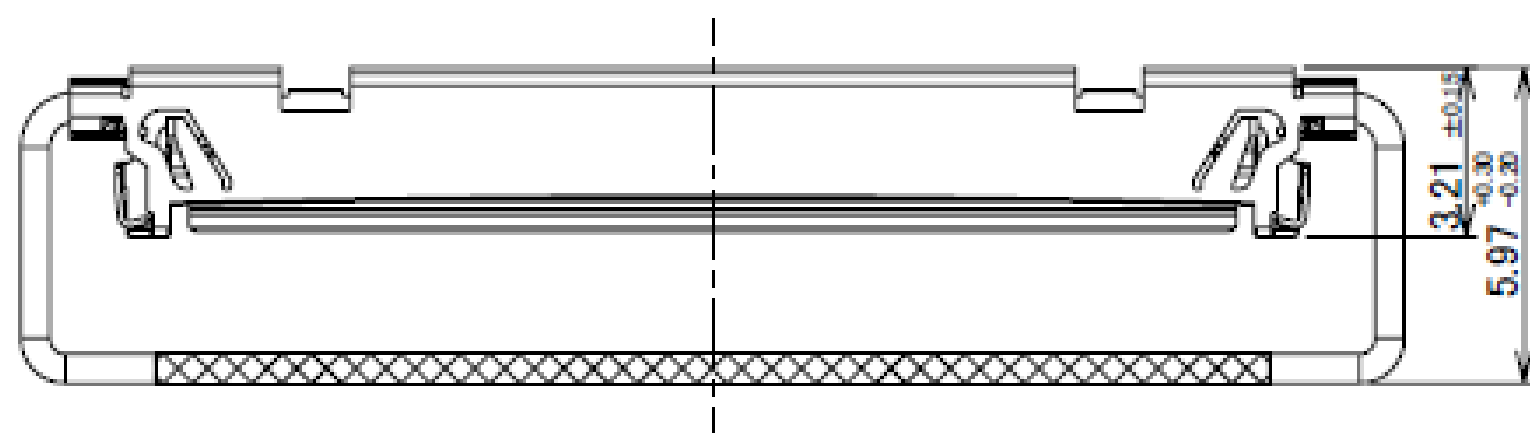
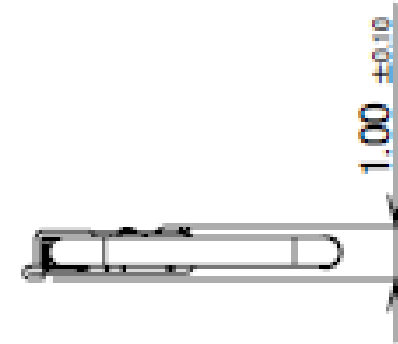
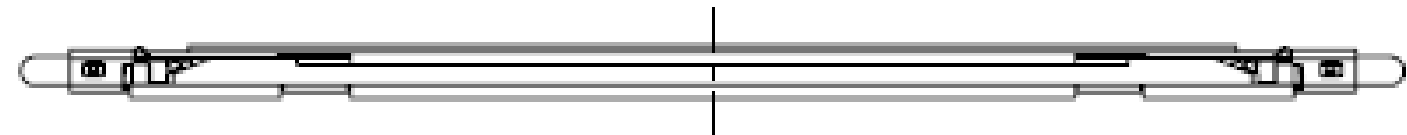
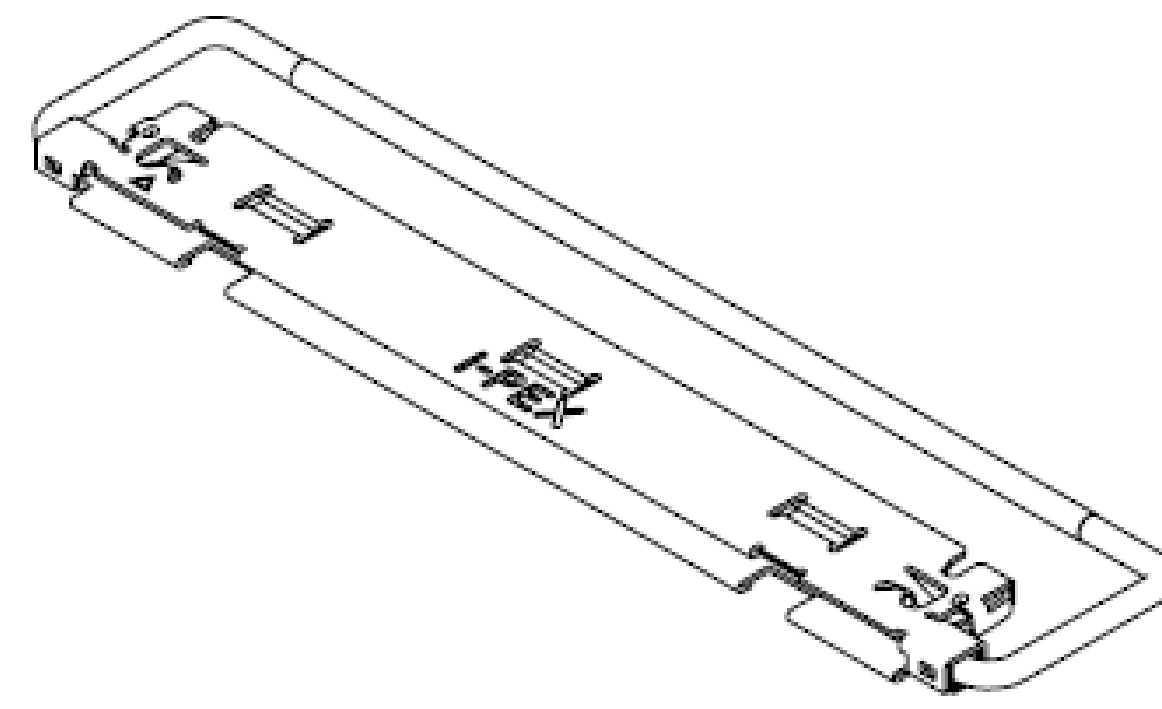
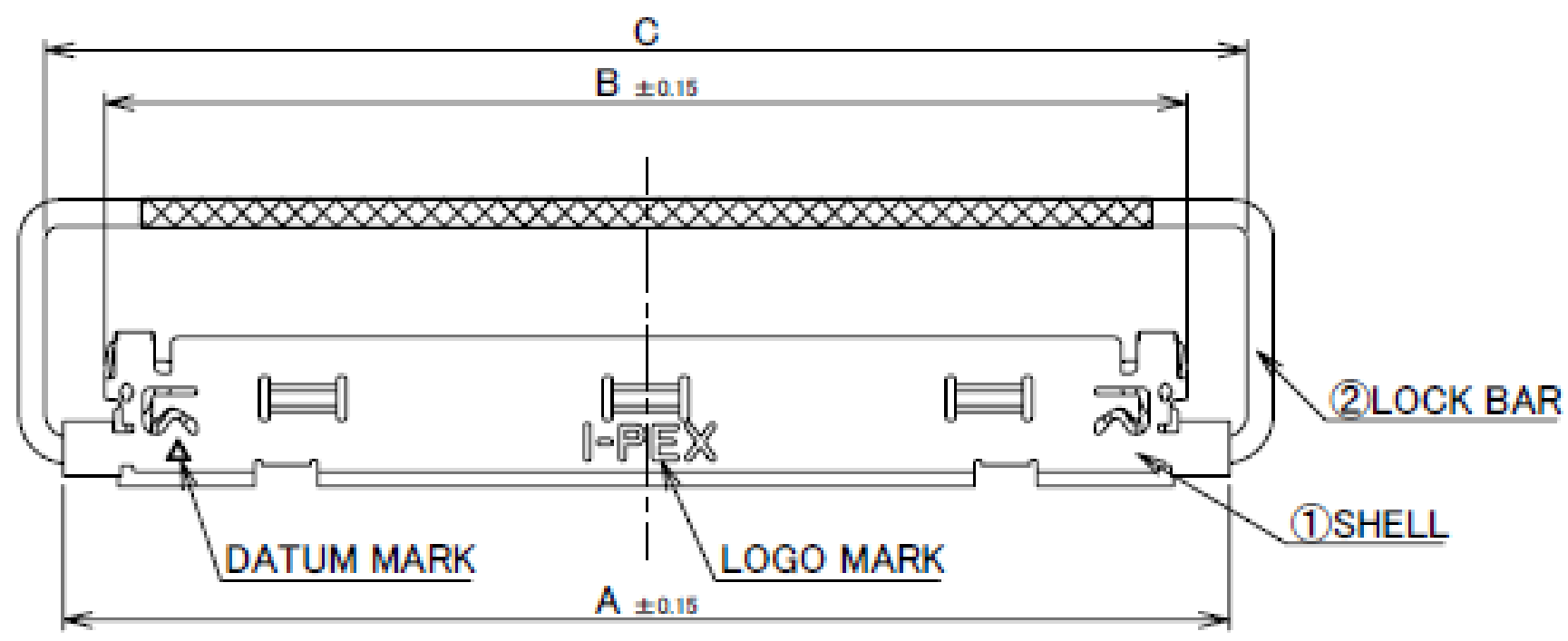
PART No.	A	B	C
20645-030T-01	19.30	17.56	20.05
20645-040T-01	24.30	22.56	25.05



Halogen Free



RoHS Compliant



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

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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

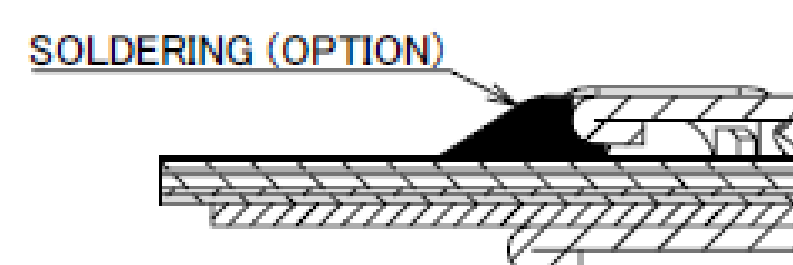
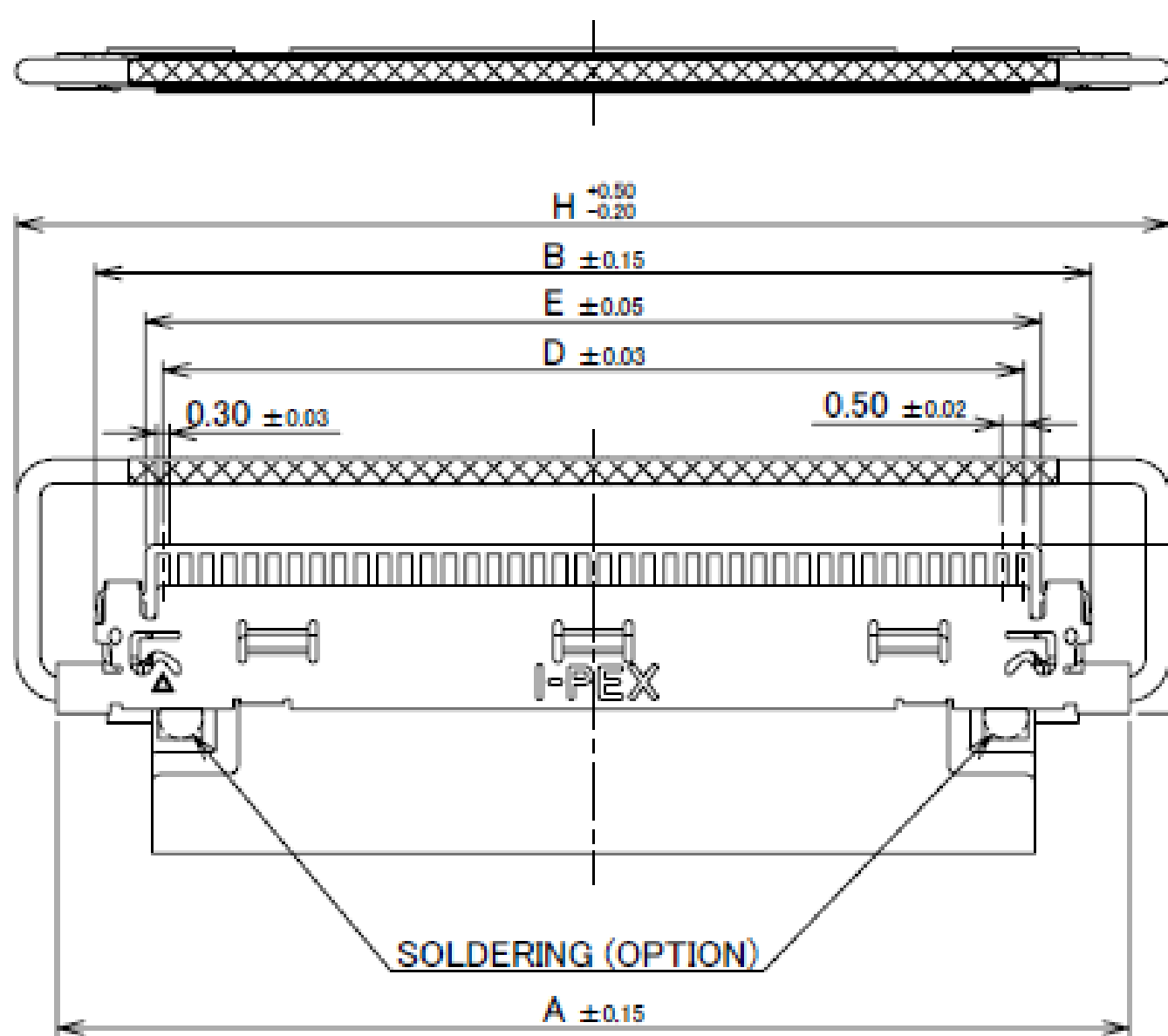
FPC ASS'Y STATE



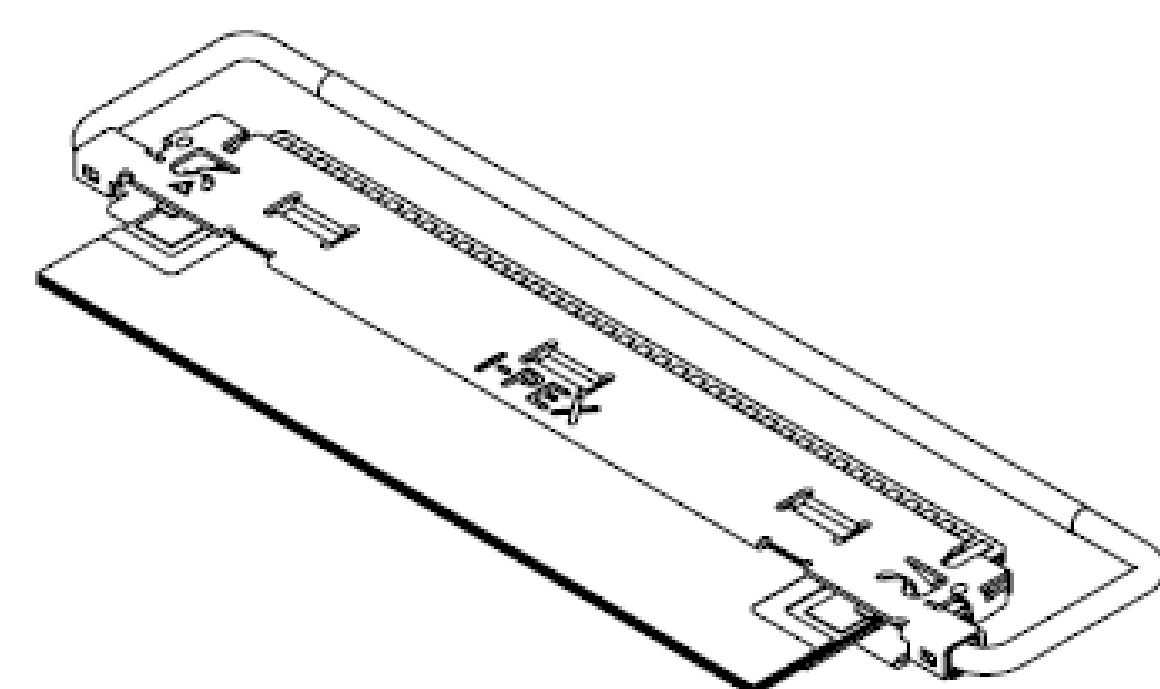
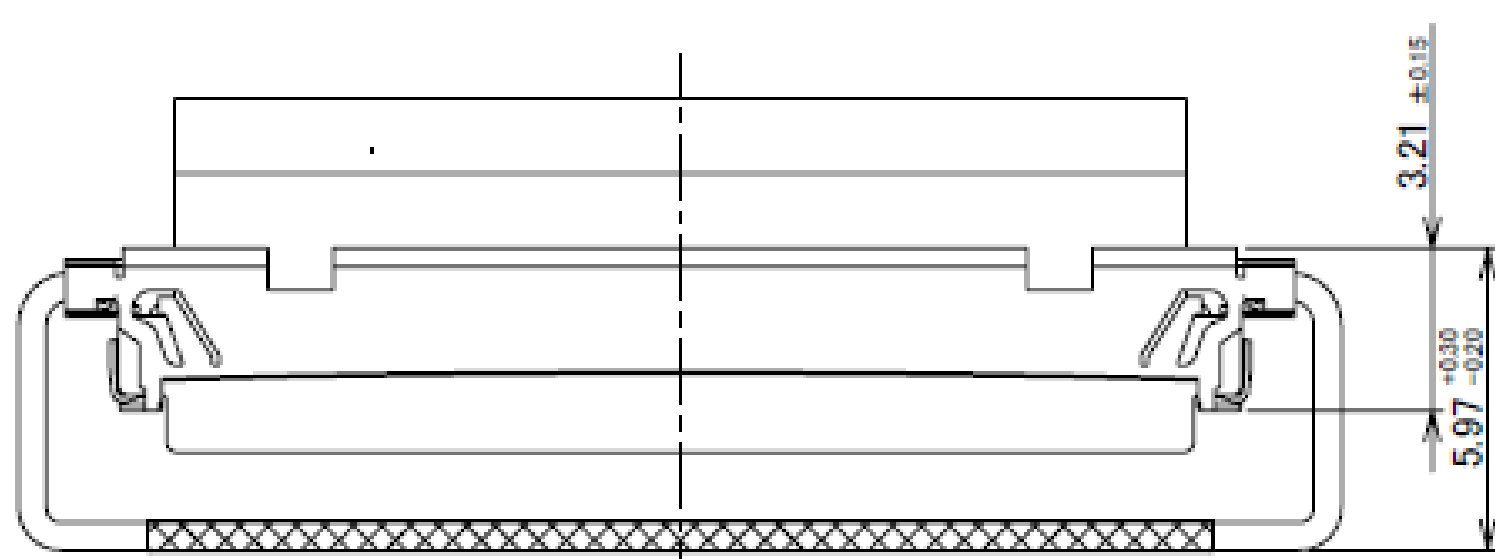
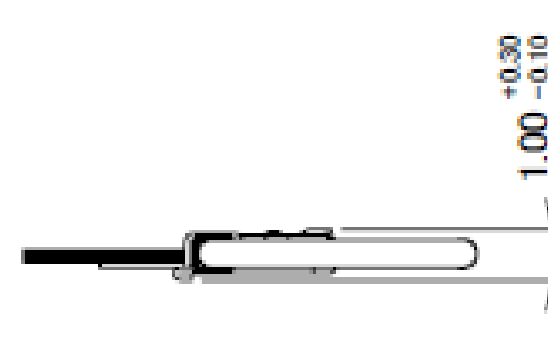
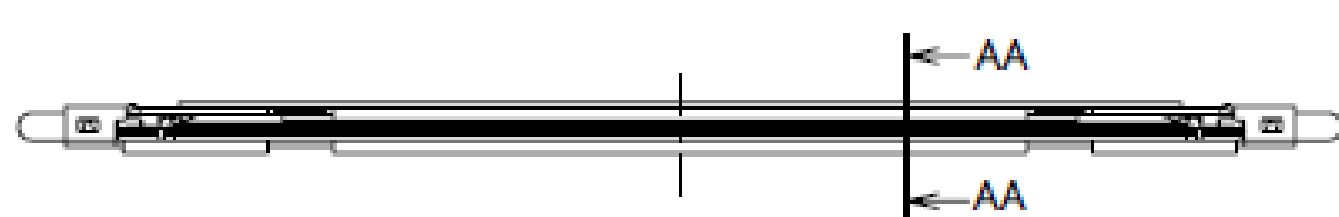
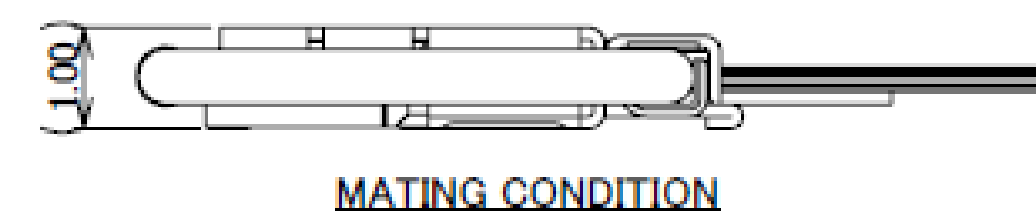
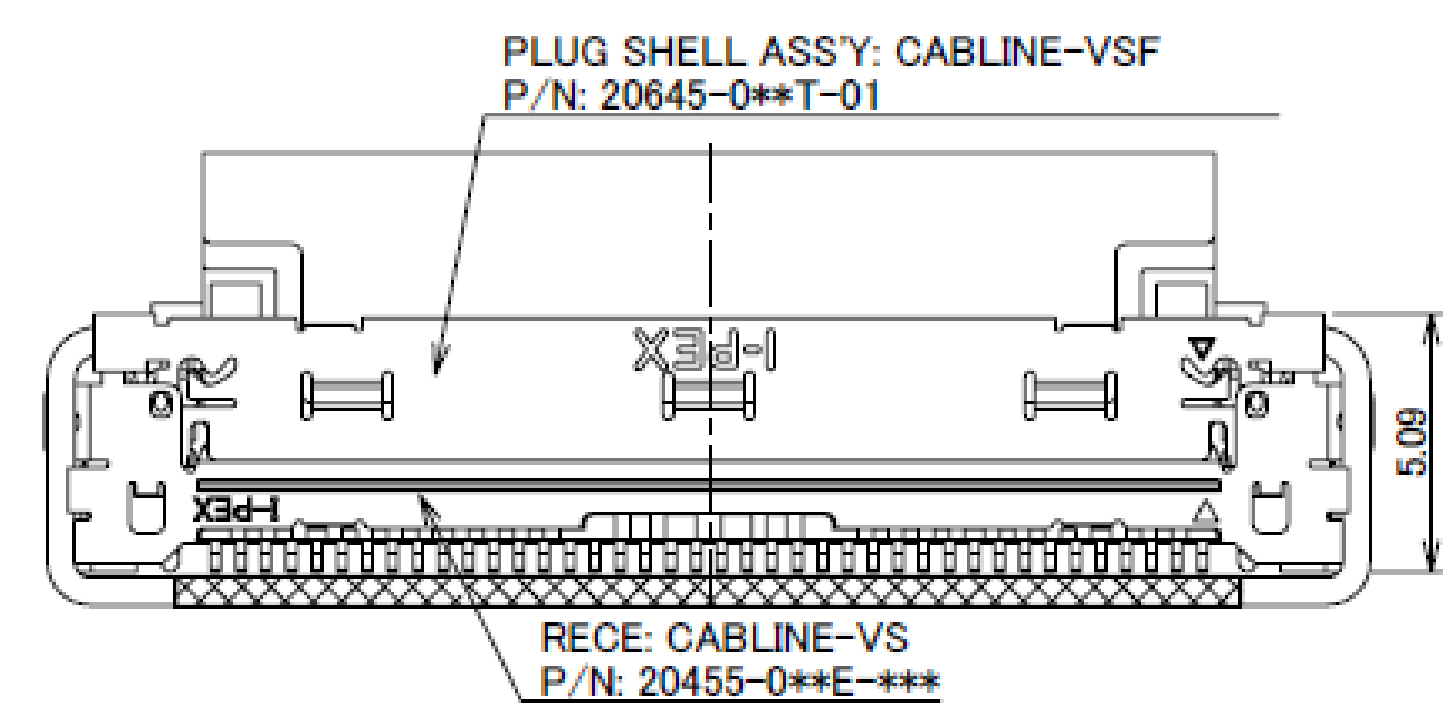
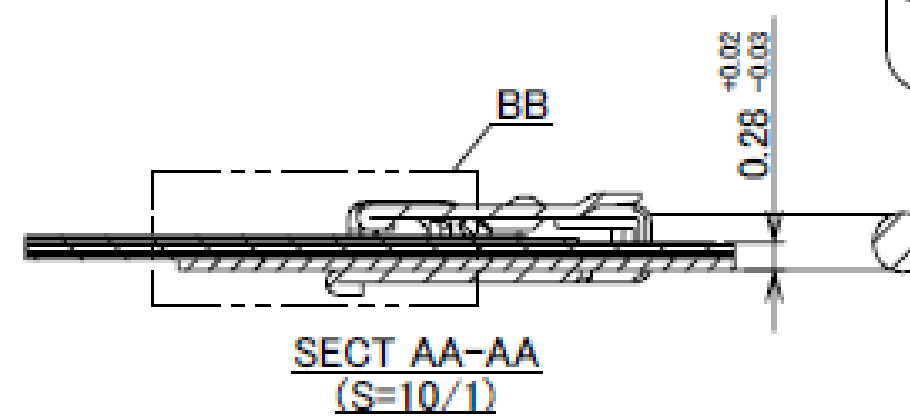
Halogen Free



RoHS Compliant



DETAIL BB
(S=20/1)

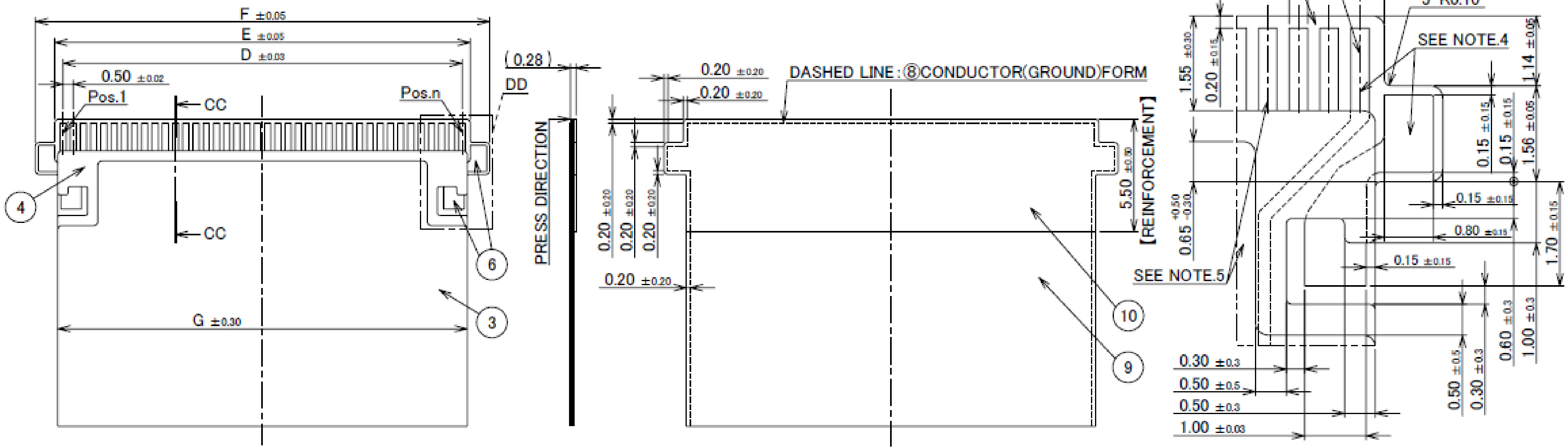


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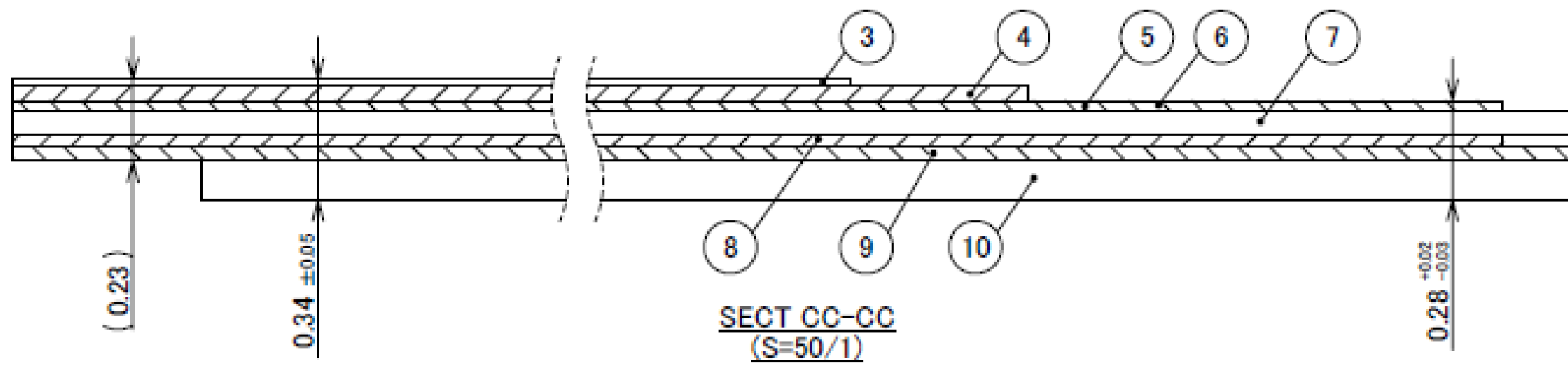
Shell Assembly

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)



SECT CC-CC
(S=50/1)

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

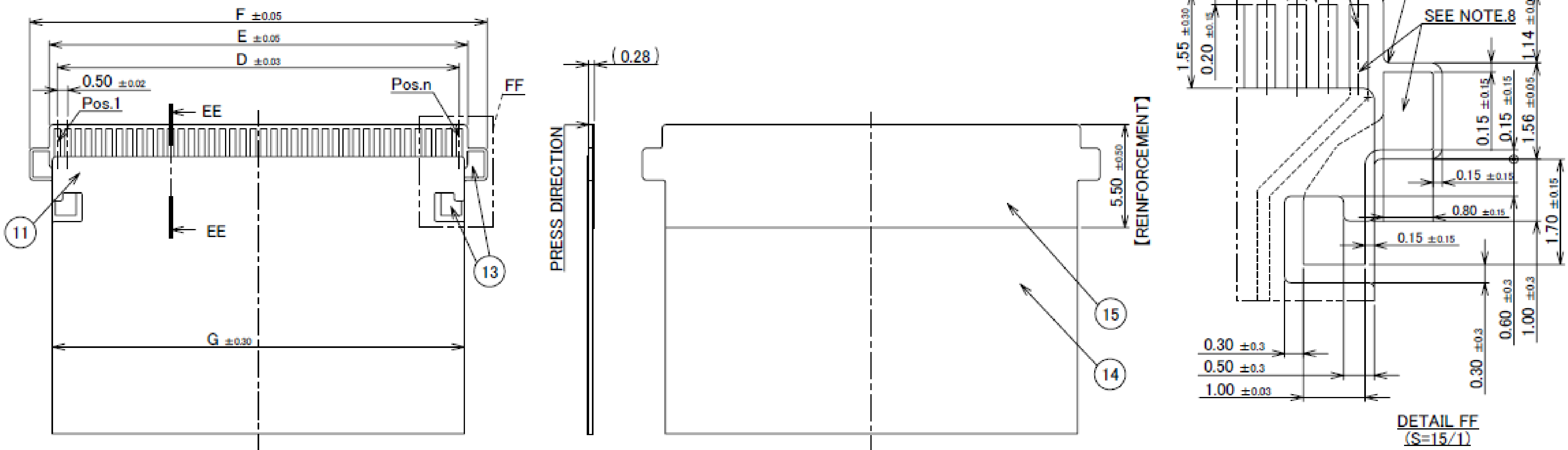
NOTES.

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

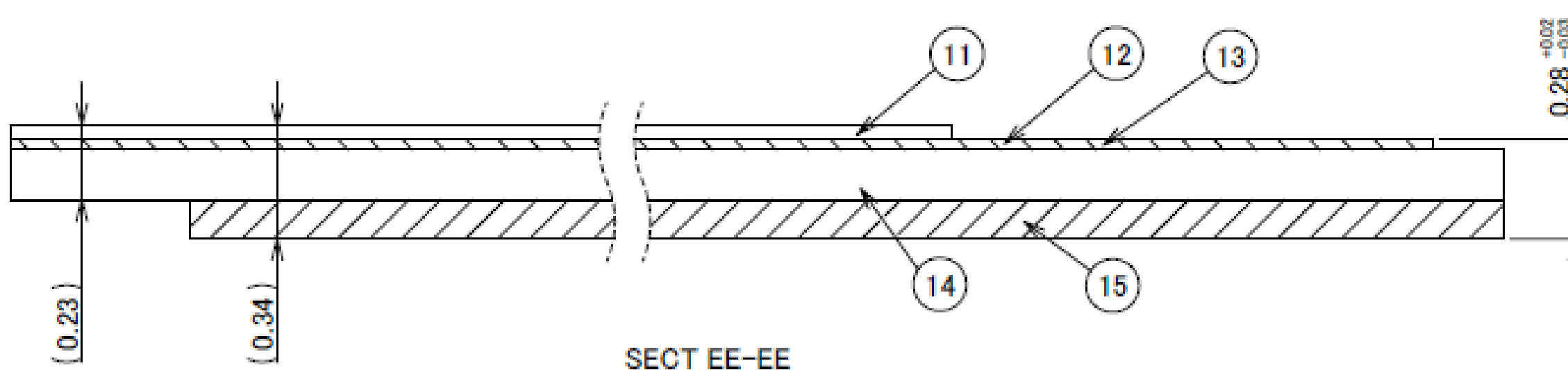
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POS.	D	E	F	G
30	14.50	15.30	17.20	15.00
40	19.50	20.30	22.20	20.00

RECOMMENDED FPC LAYOUT 【NON SHIELDED TYPE】



DETAIL FF
(S=15/1)



SECT EE-EE
(S=50/1)

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

NOTES.

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

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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.(NON-CONDENSING)
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***

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Receptacle Assembly

Recommended P/N	20455-0**E-76 (30P/40P/50P)	20455-A20E-76 (20P)					
PART NO.	Pos.	A	B	C	D	U	
20455-020E-#2	20	9.50	11.30	16.25	14.47	10.20	
20455-030E-##	30	14.50	16.30	21.25	19.47	15.20	
20455-040E-##	40	19.50	21.30	26.25	24.47	20.20	
20455-050E-##	50	24.50	26.30	31.25	29.47	25.20	

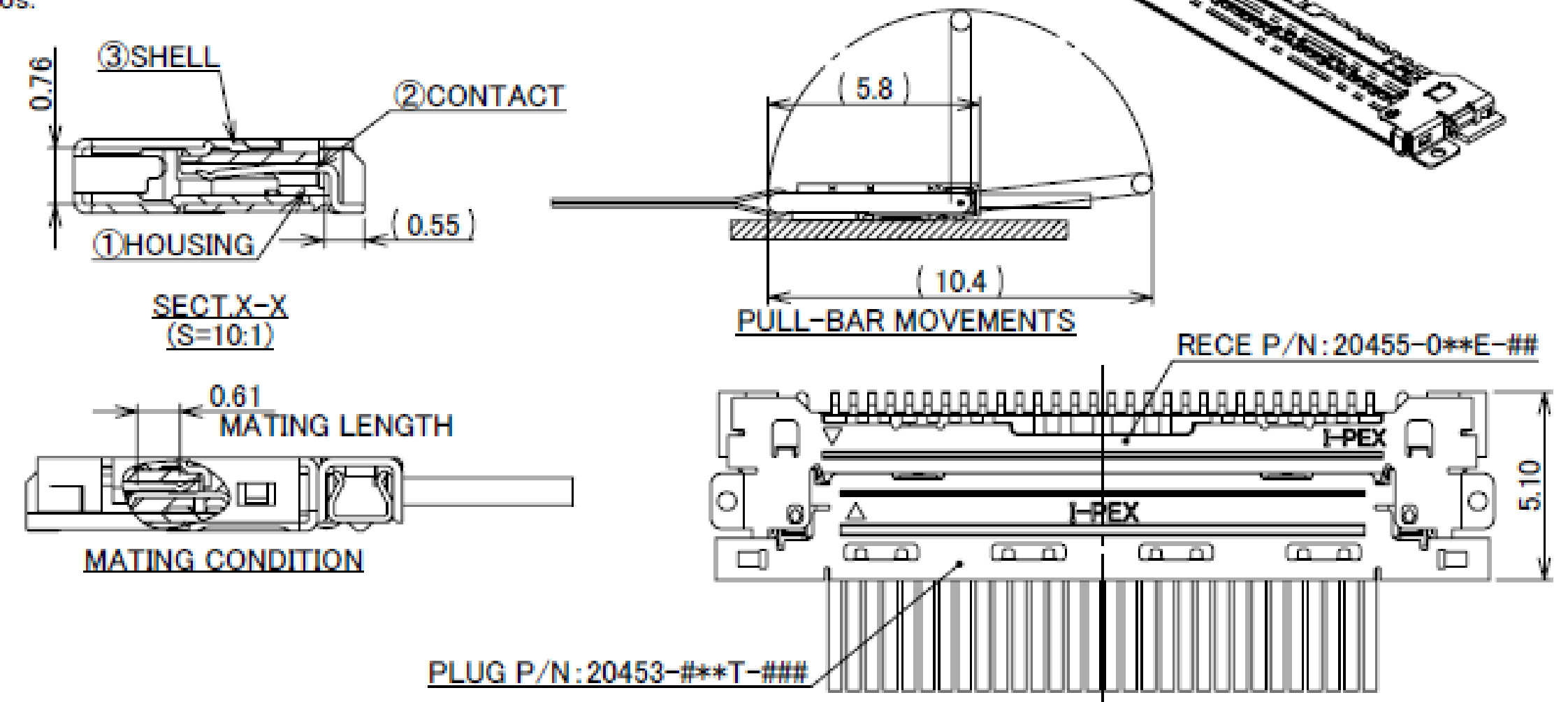
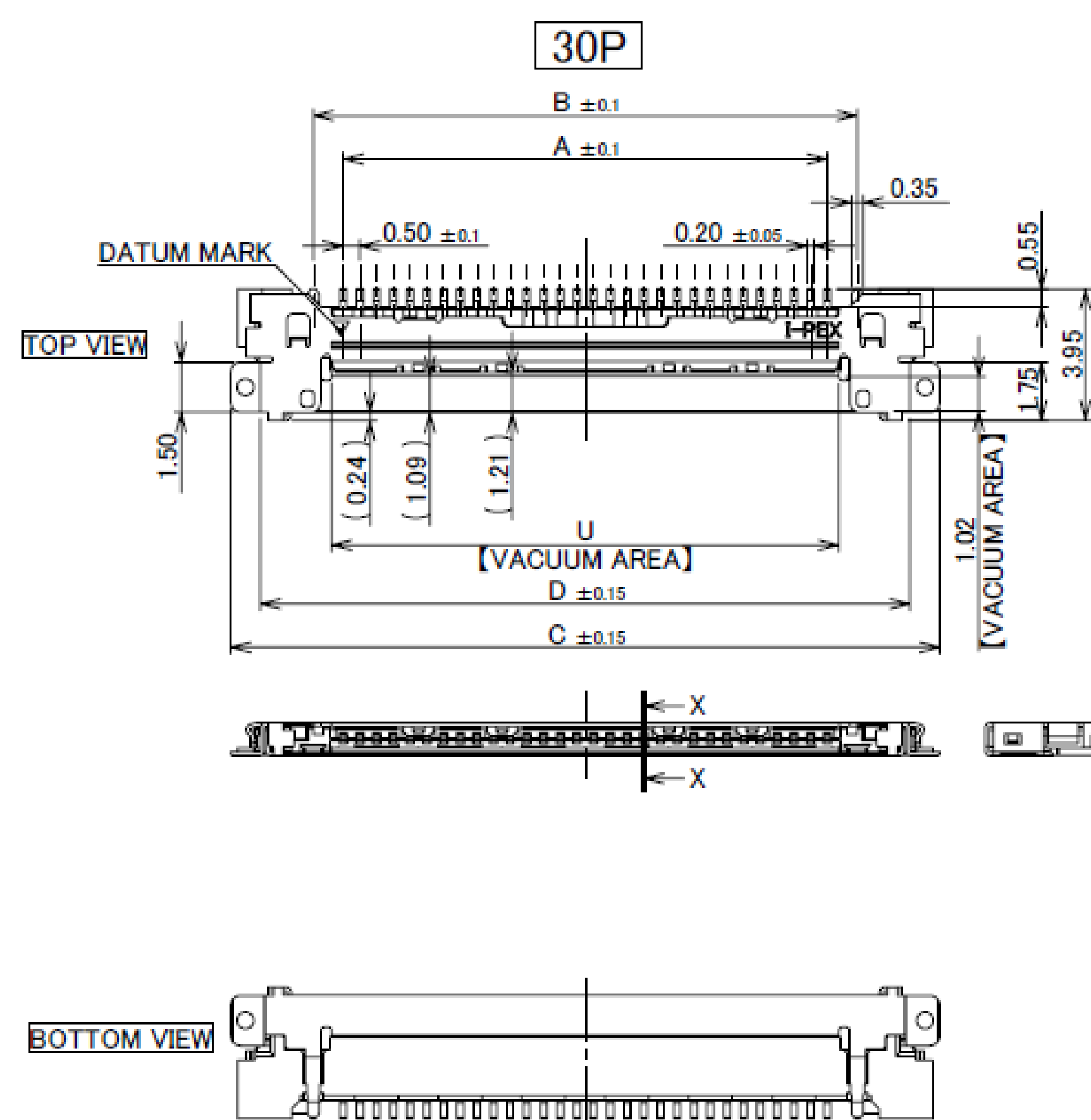


TABLE.1

PART NO.	DATUM MARK	CONTACT FINISH	SHELL FINISH
20455-0**E-02	WITH	CONTACT AREA Au 0.1 μ m MIN. OVER Ni 1.00 μ m MIN. SOLDERING AREA Au 0.05 μ m MIN. OVER Ni 1.00 μ m MIN.	Au 0.02 μ m MIN. OVER Ni 1.00 μ m MIN.
20455-0**E-66	WITH	CONTACT AREA Au 0.1 μ m MIN. OVER Ni 1.00 μ m MIN. SOLDERING AREA Au 0.05 μ m MIN. OVER Ni 1.00 μ m MIN.	Au 0.01 μ m MIN. OVER Ni 1.00 μ m MIN.
20455-0**E-76	WITHOUT	CONTACT AREA Au 0.1 μ m MIN. OVER Ni 1.00 μ m MIN. SOLDERING AREA Au 0.05 μ m MIN. OVER Ni 1.00 μ m MIN.	

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
2	CONTACT	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
1	HOUSING	LCP	UL94V-0, BLACK

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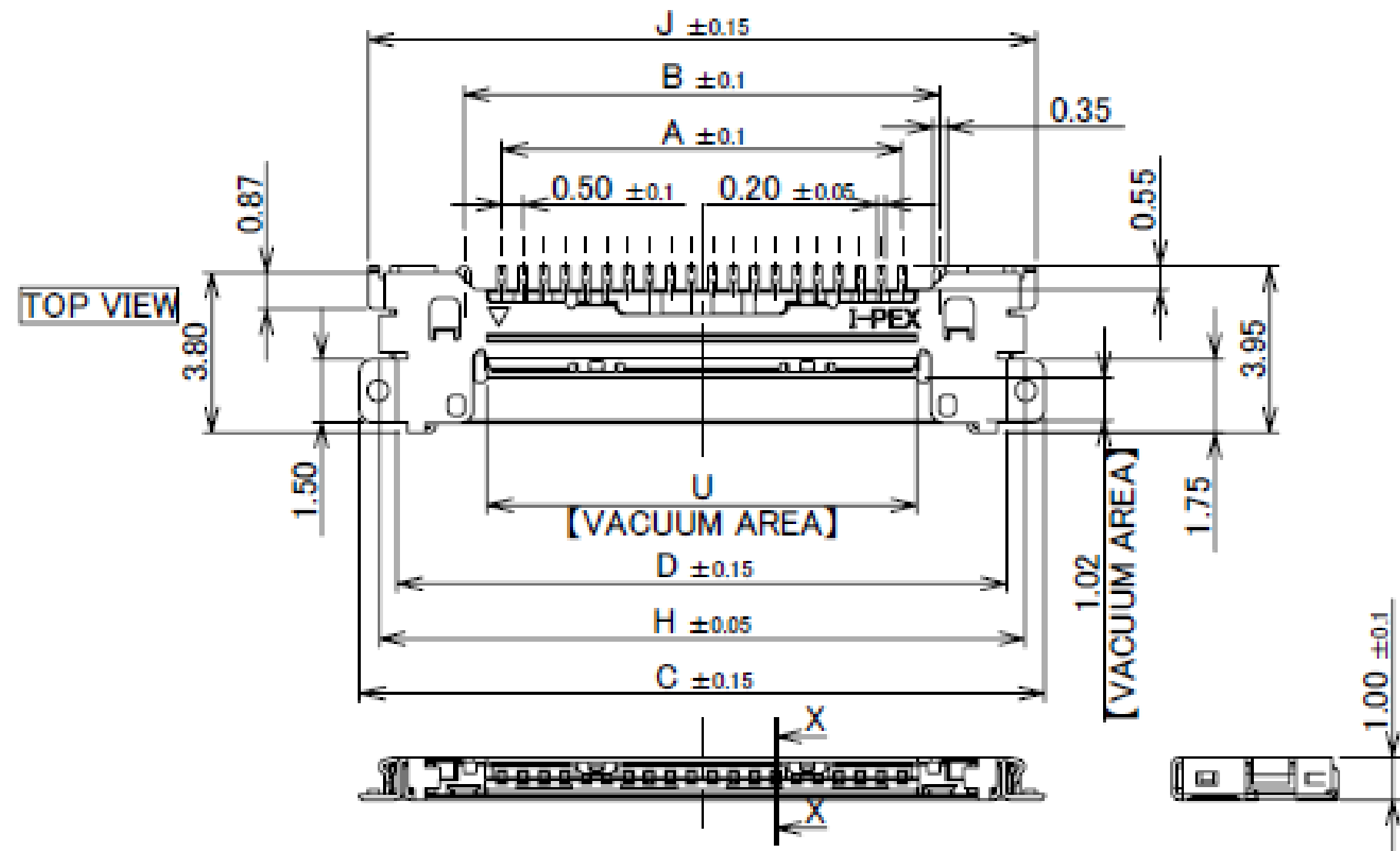
Receptacle Assembly

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



TYPE-A



BOTTOM VIEW

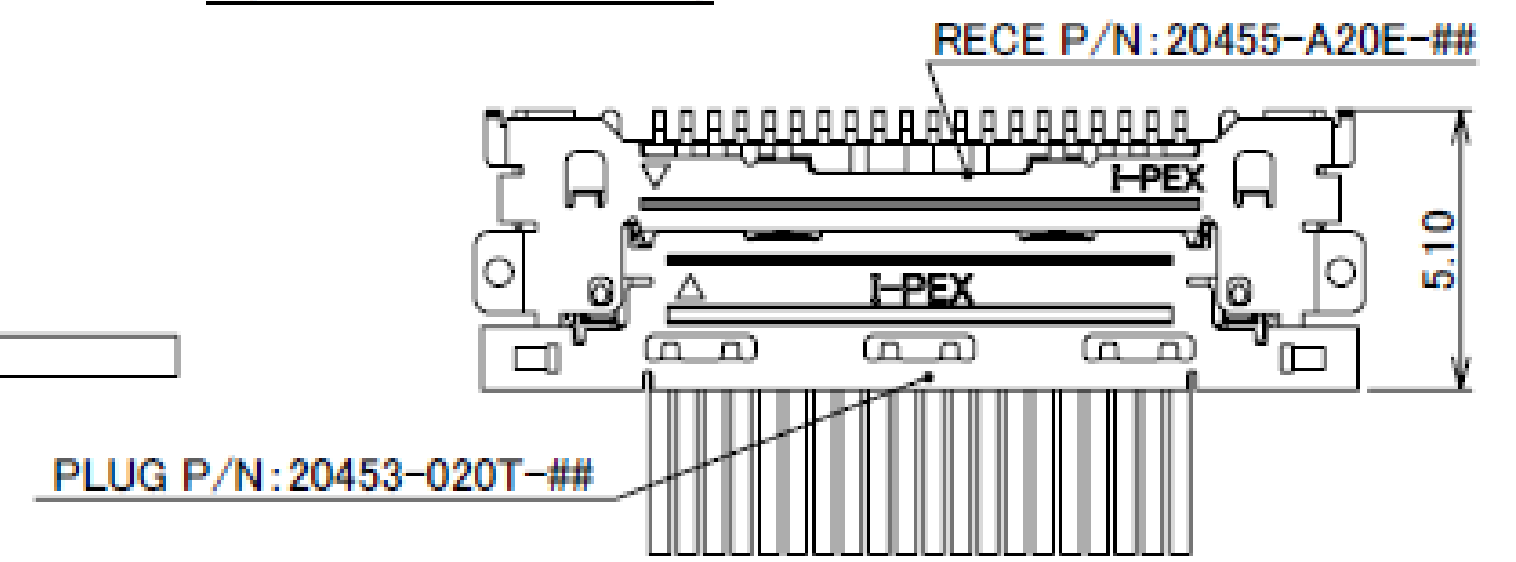
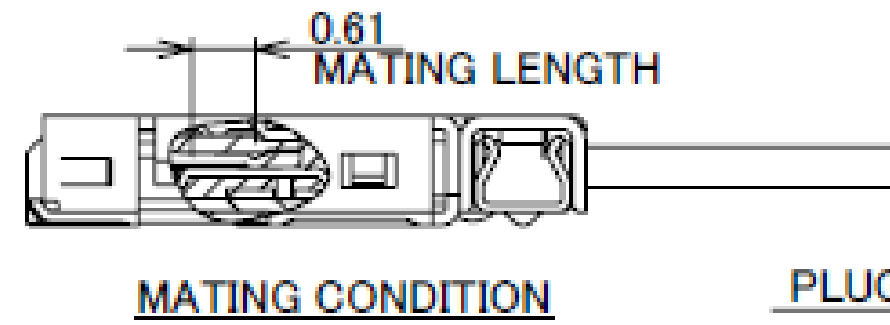
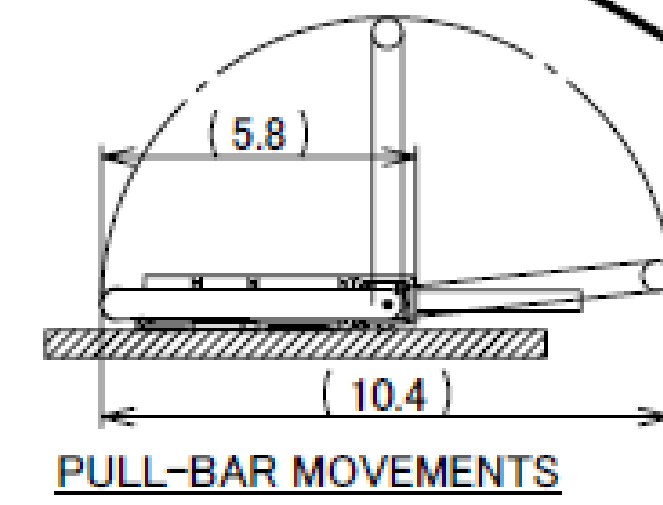
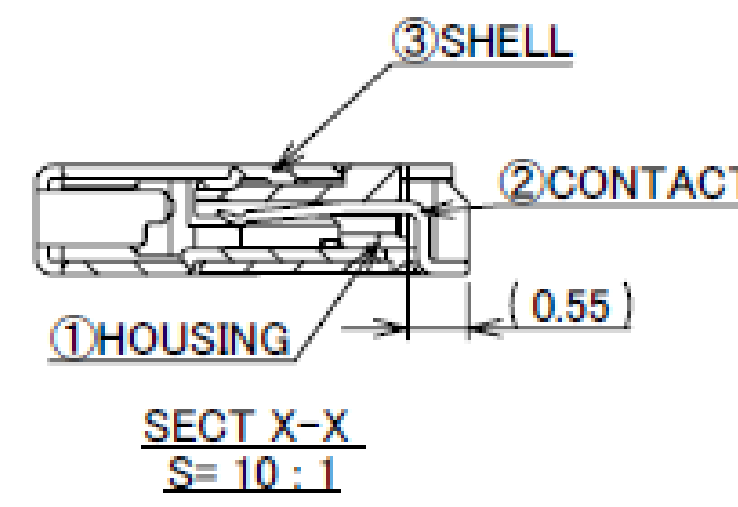
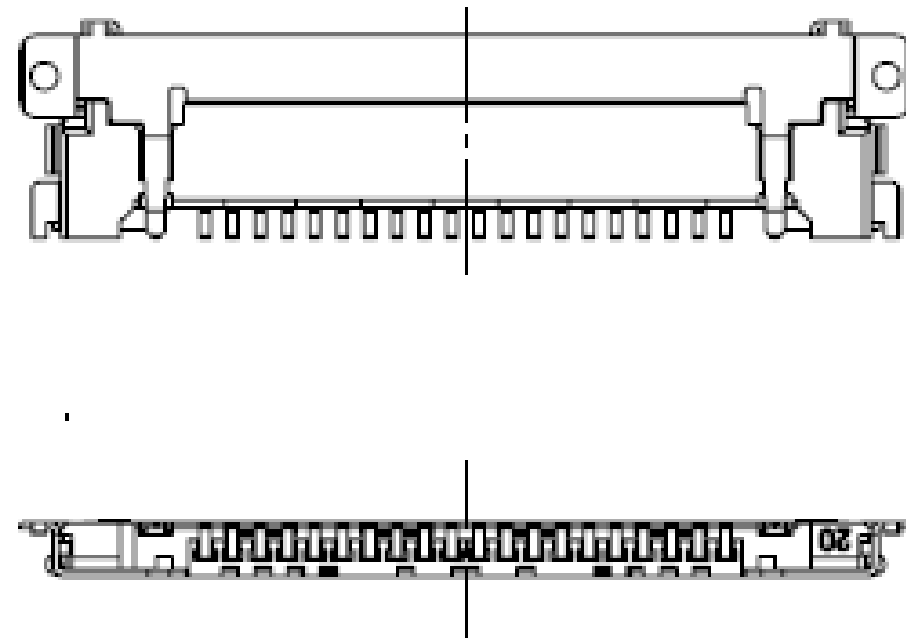


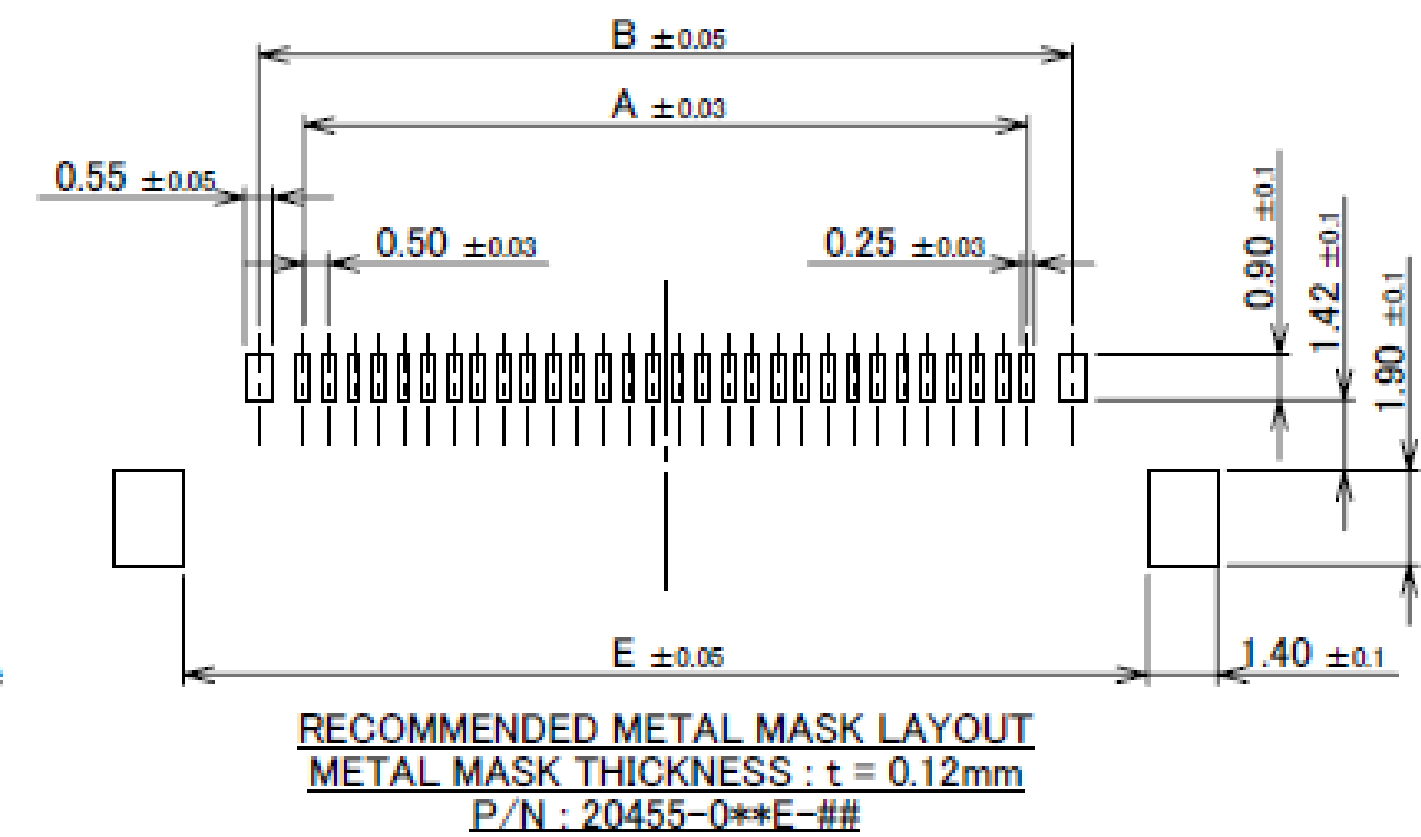
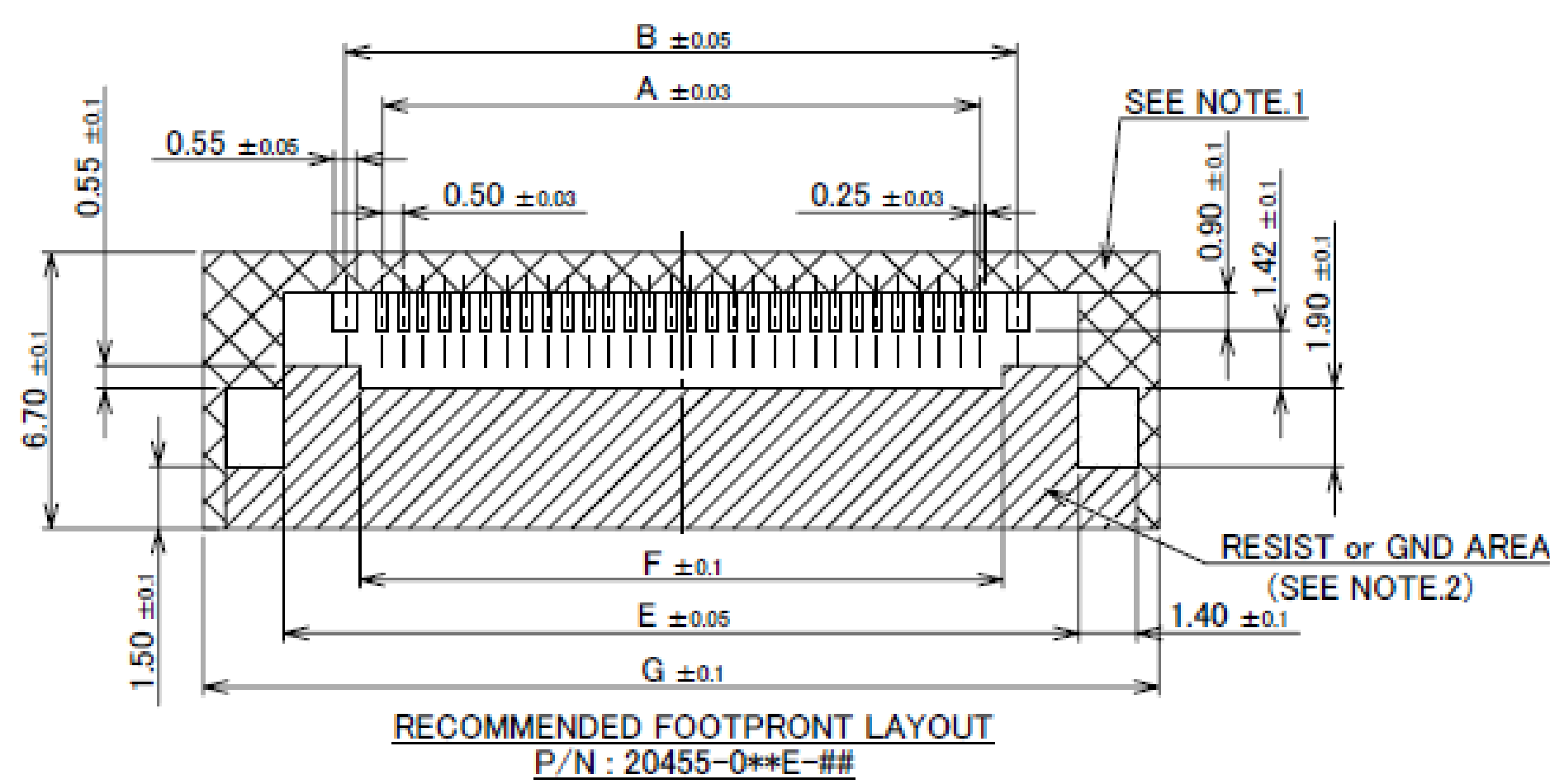
TABLE.2

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. SOLDERING AREA Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	Au 0.02 μm MIN. OVER Ni 1.00 μm MIN.
20455-A20E-12	WITHOUT	CONTACT AREA Au 0.1 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	Au 0.01 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. SOLDERING AREA Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	Au 0.01 μm MIN. OVER Ni 1.00 μm MIN.
20455-A20E-76	WITHOUT	CONTACT AREA Au 0.1 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	Au 0.01 μm MIN. OVER Ni 1.00 μm MIN.

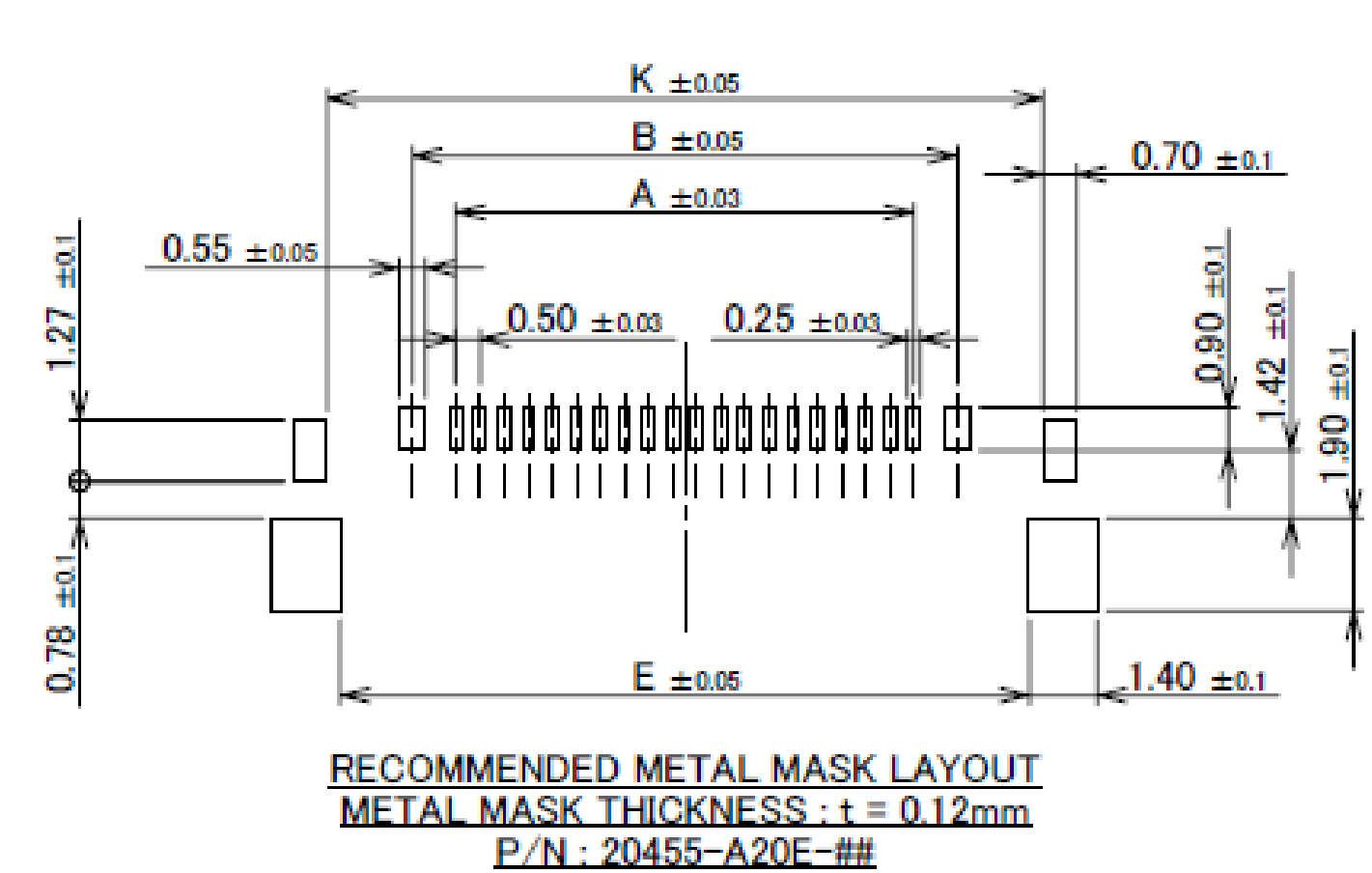
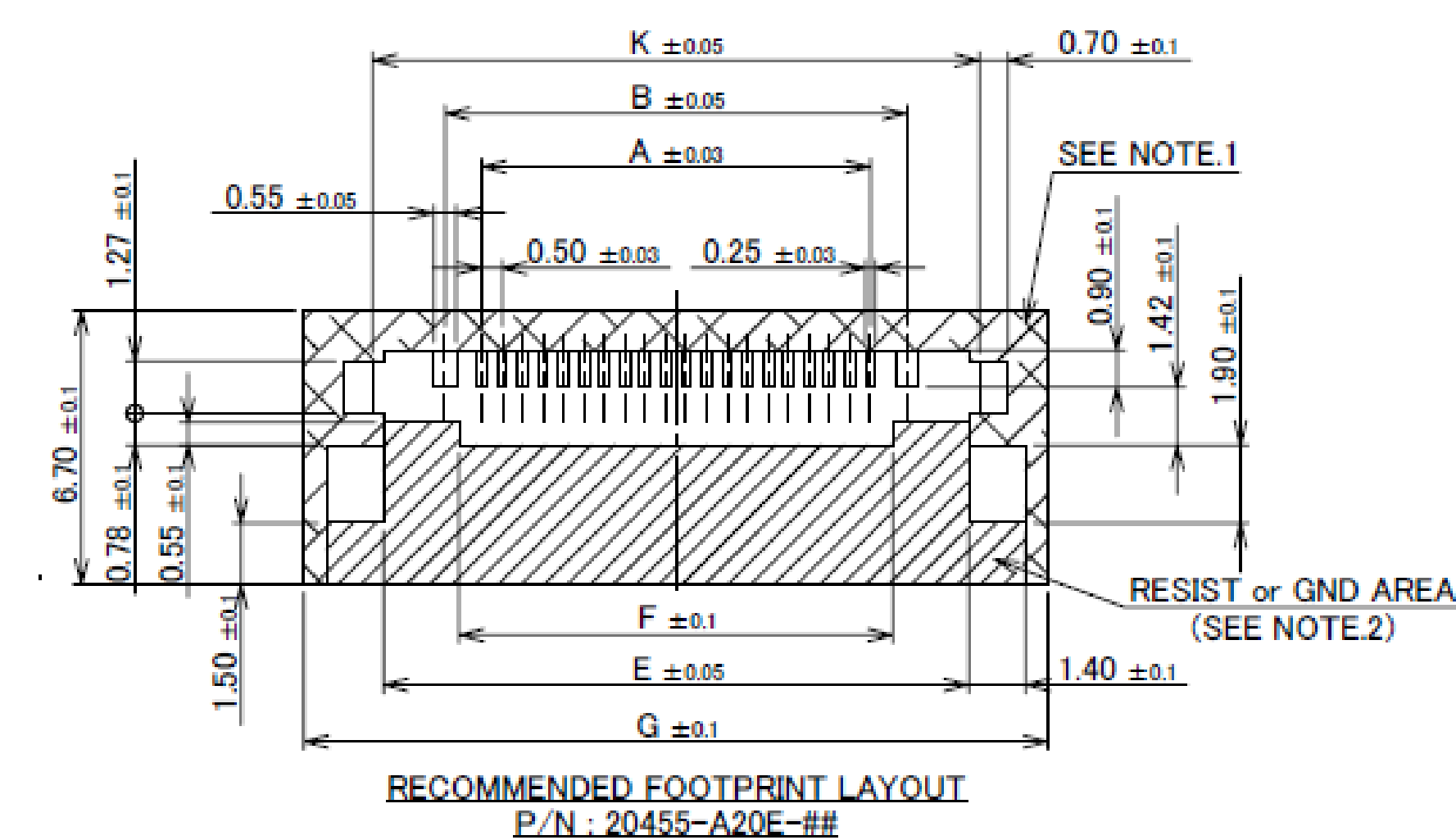
NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS
3	SHELL	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
2	CONTACT	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
1	HOUSING	LCP	UL94V-0, BLACK

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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	-	-	-



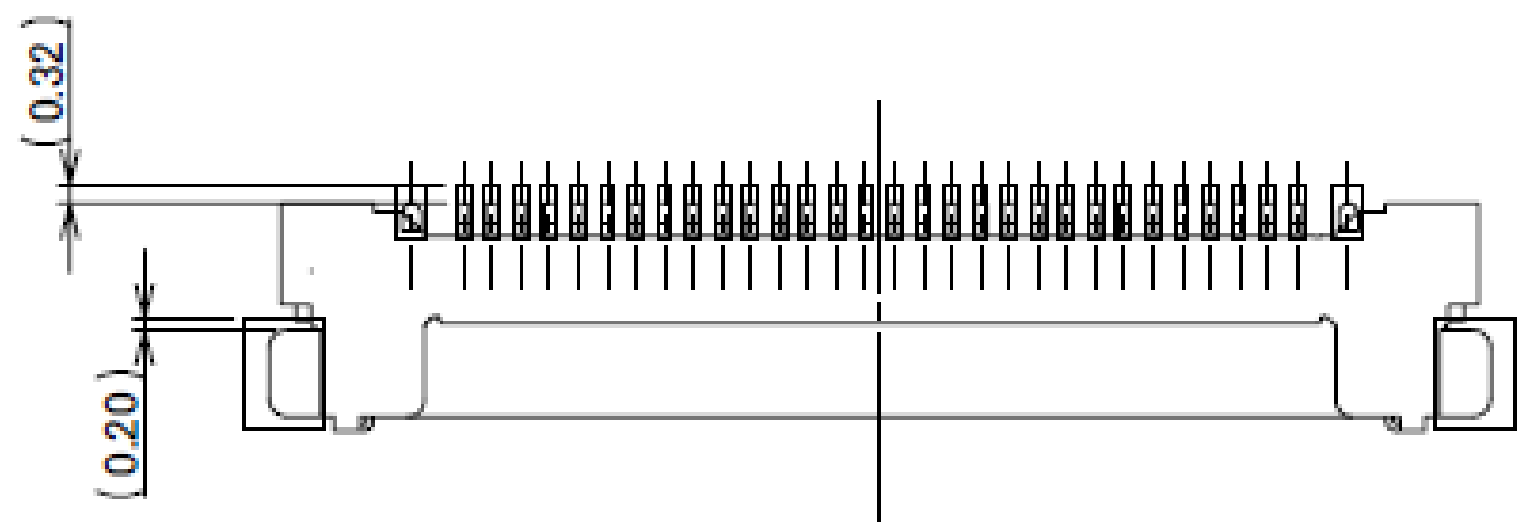
TYPE-A



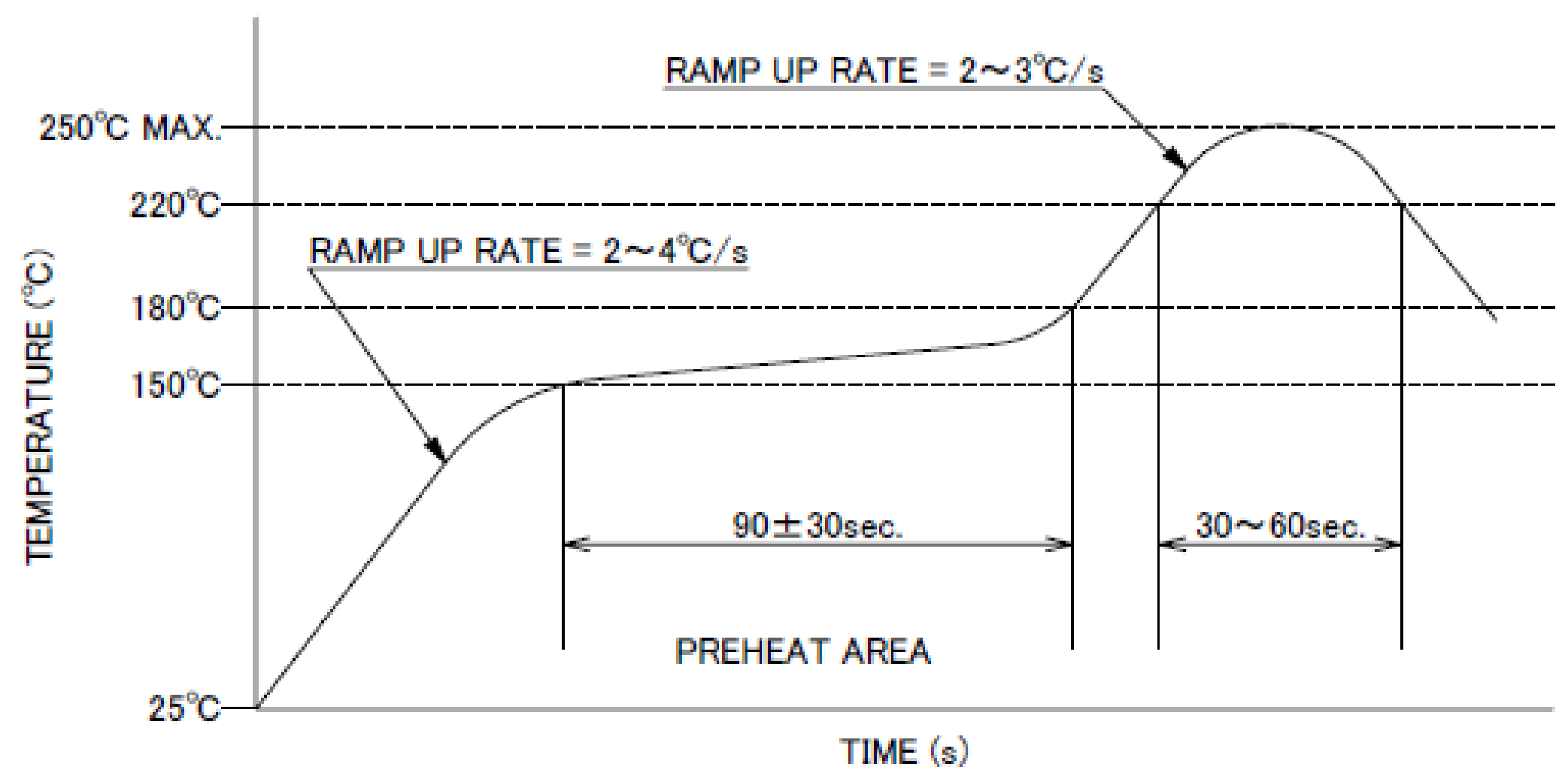
NOTES.
1. IN CASE OF PLUG WITH PULL-BAR, DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.
2. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

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Receptacle Assembly

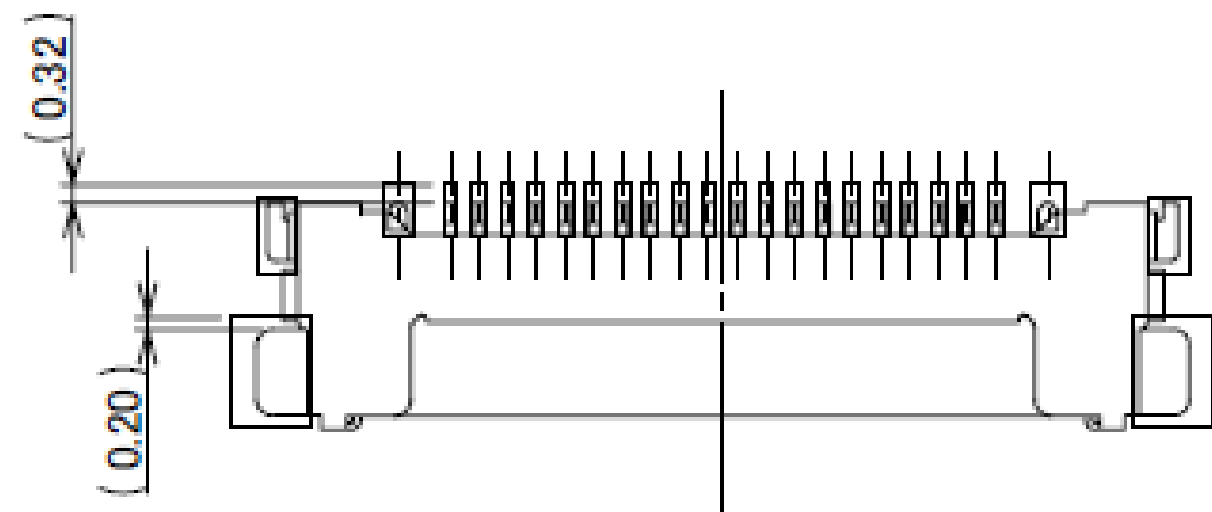


CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN
P/N : 20455-0**E-##



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-##

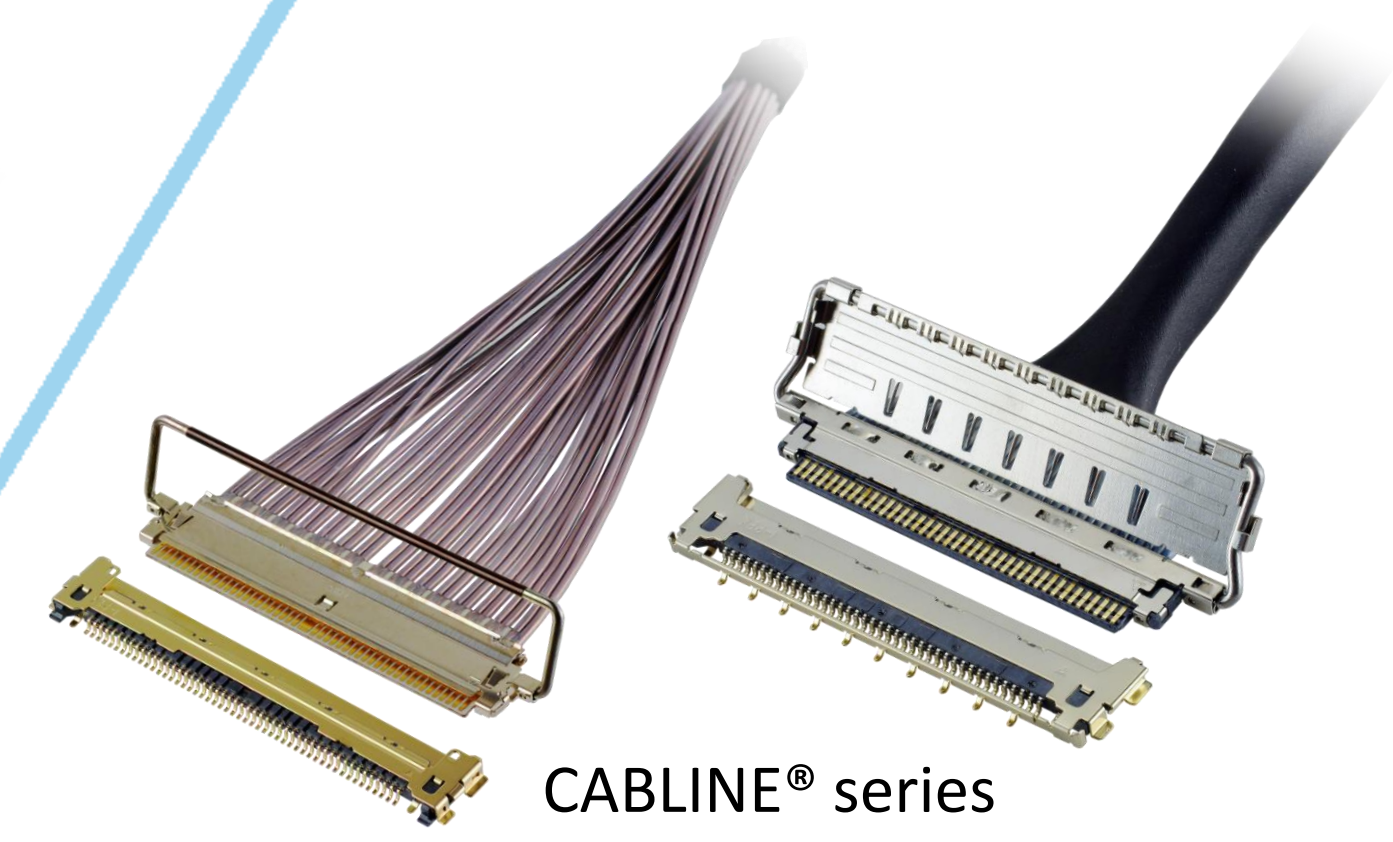
Custom Connectors Available

 RF Connector

MHF® series



CABLINÉ® series
Micro-coaxial/Twinax/
Discrete Wire Connector



Optical Module

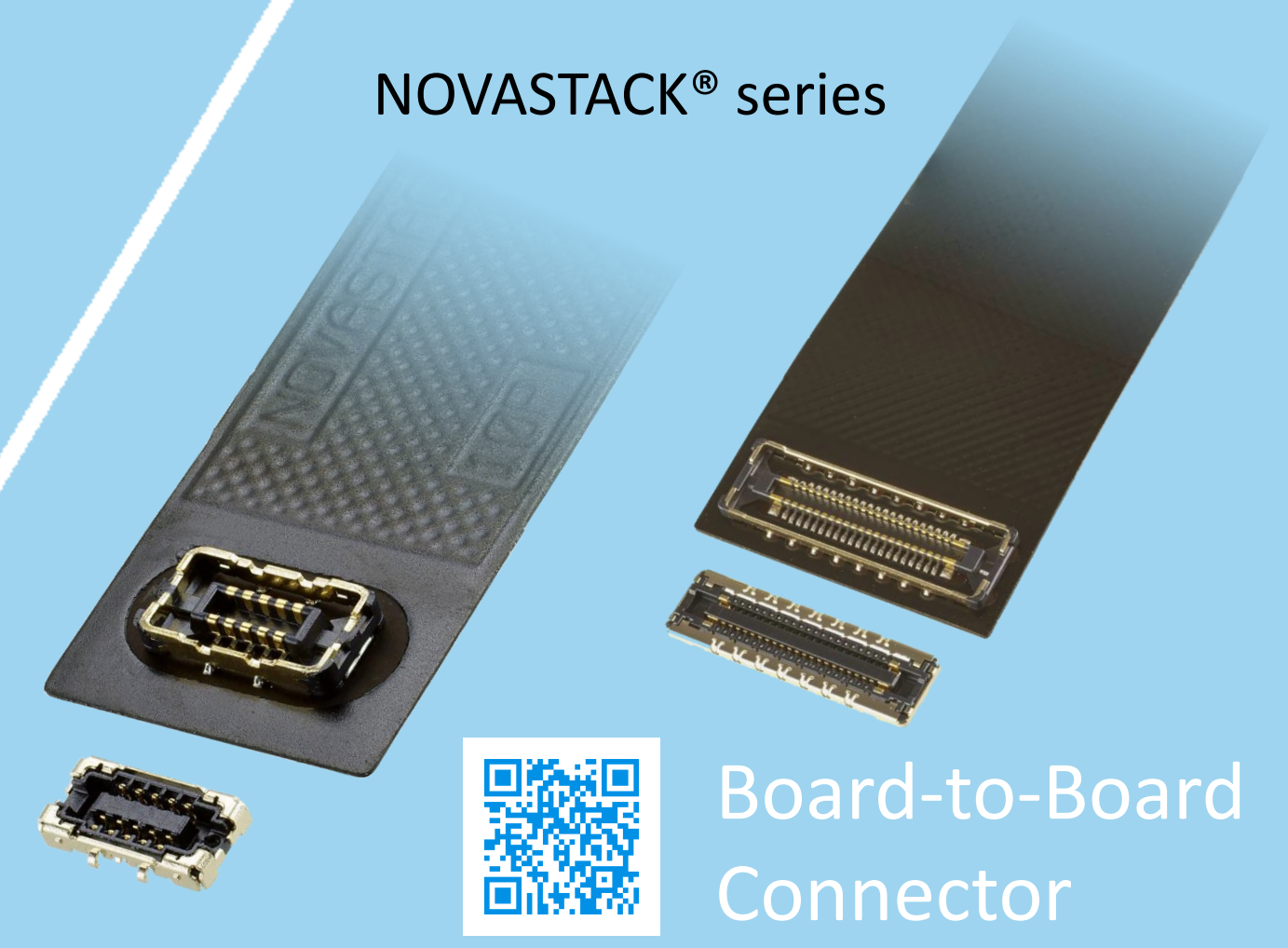
LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector



Power Connector/
Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



FPC FFC Connector



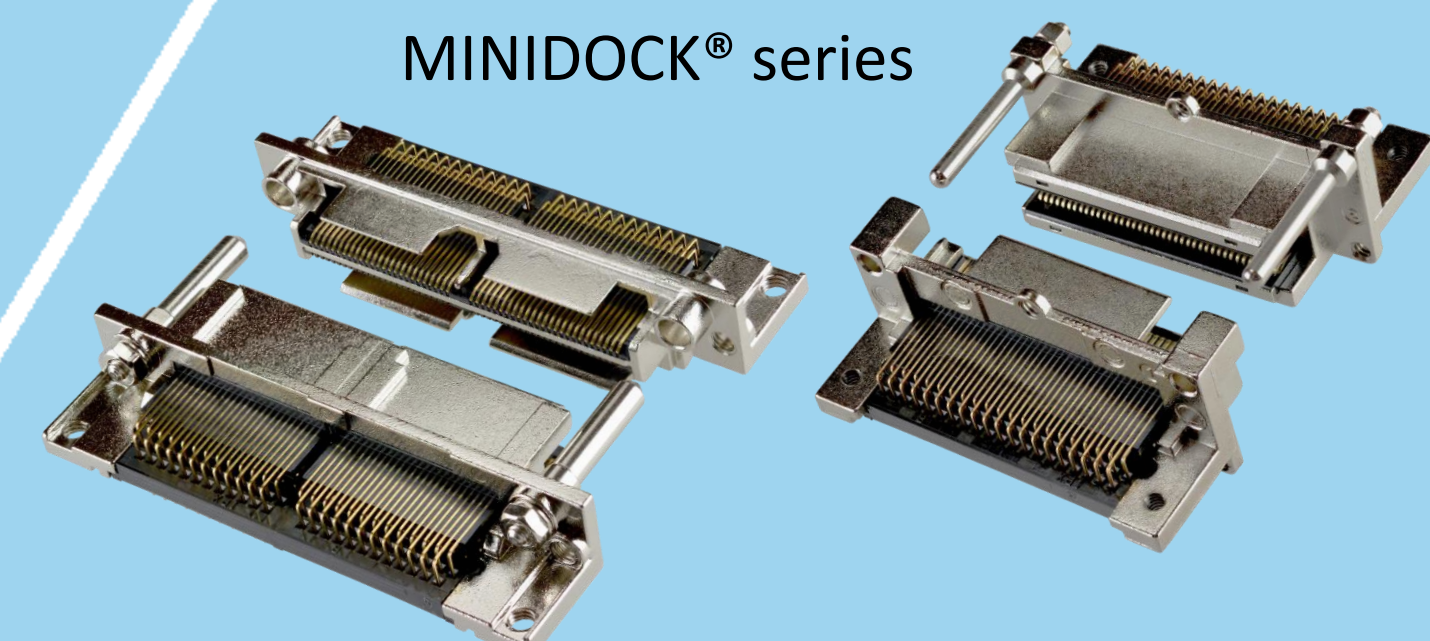
Inquiry



MINIDOCK® series



I/O Connector



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Contact your sales representative or more detailed information.

www.i-pex.com



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