

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		0.5 mm
Wiping Length		0.62 mm
Mated Size	Height	1.0 +/- 0.1 mm
	Width	7.55 + (0.5 x pin count) mm
	Depth	5.97 mm
Pin Counts	Range	Up to 60
	Available	30, 40

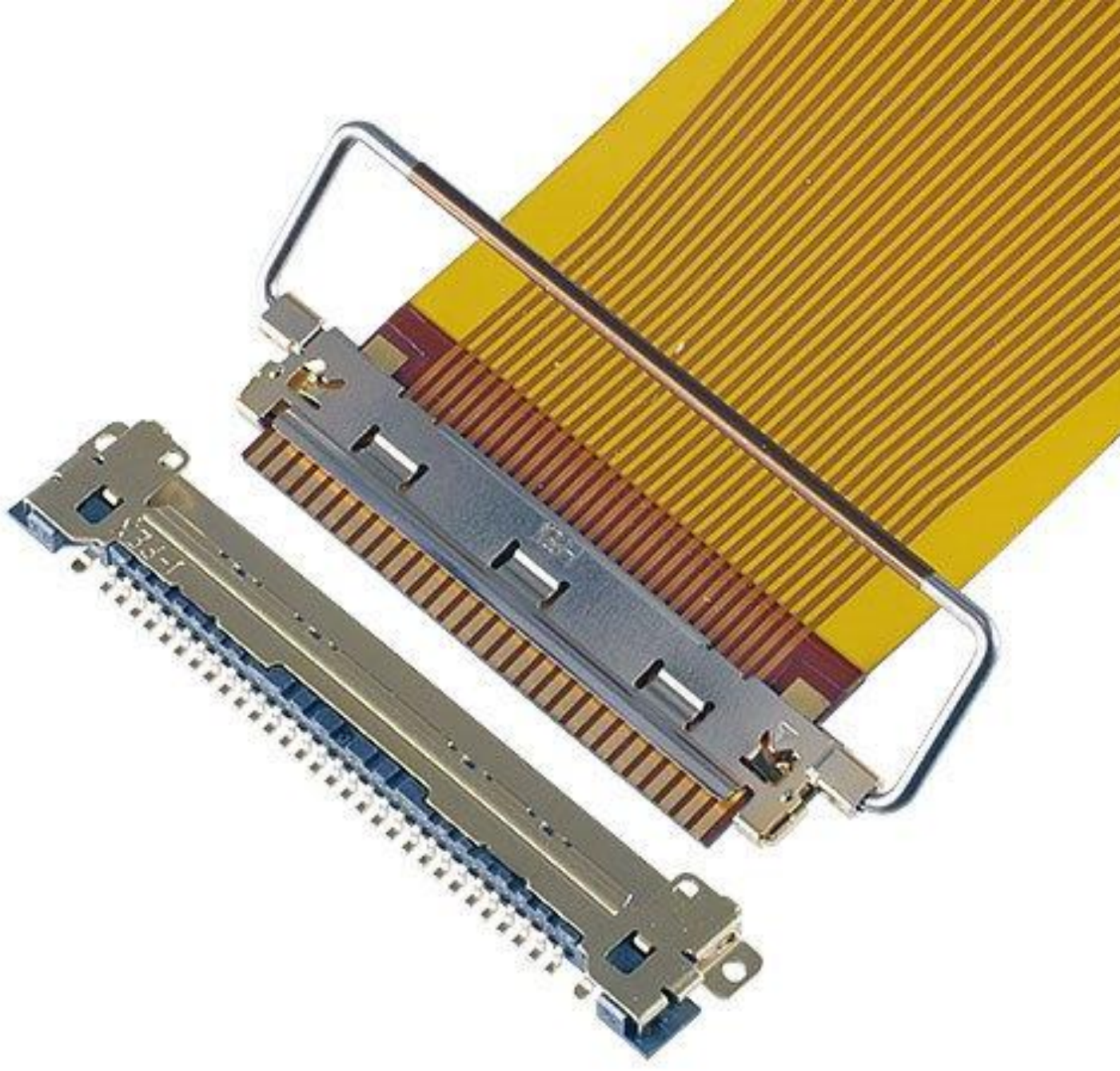
Applicable FPC

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

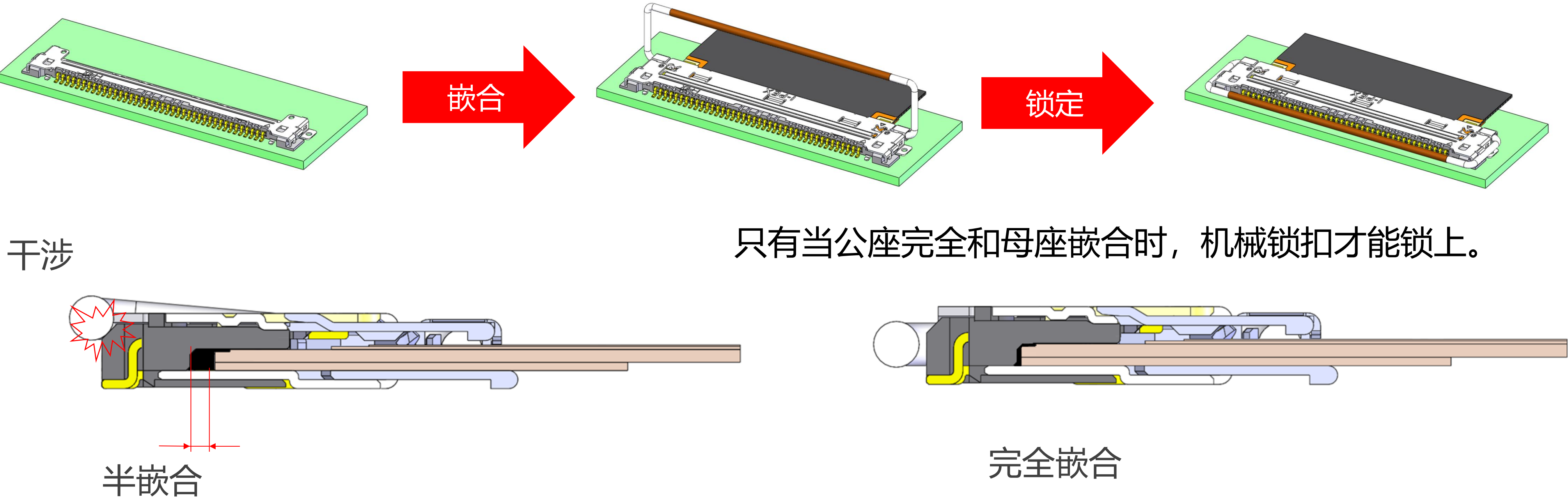
Applicable Standards (Reference Only):

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

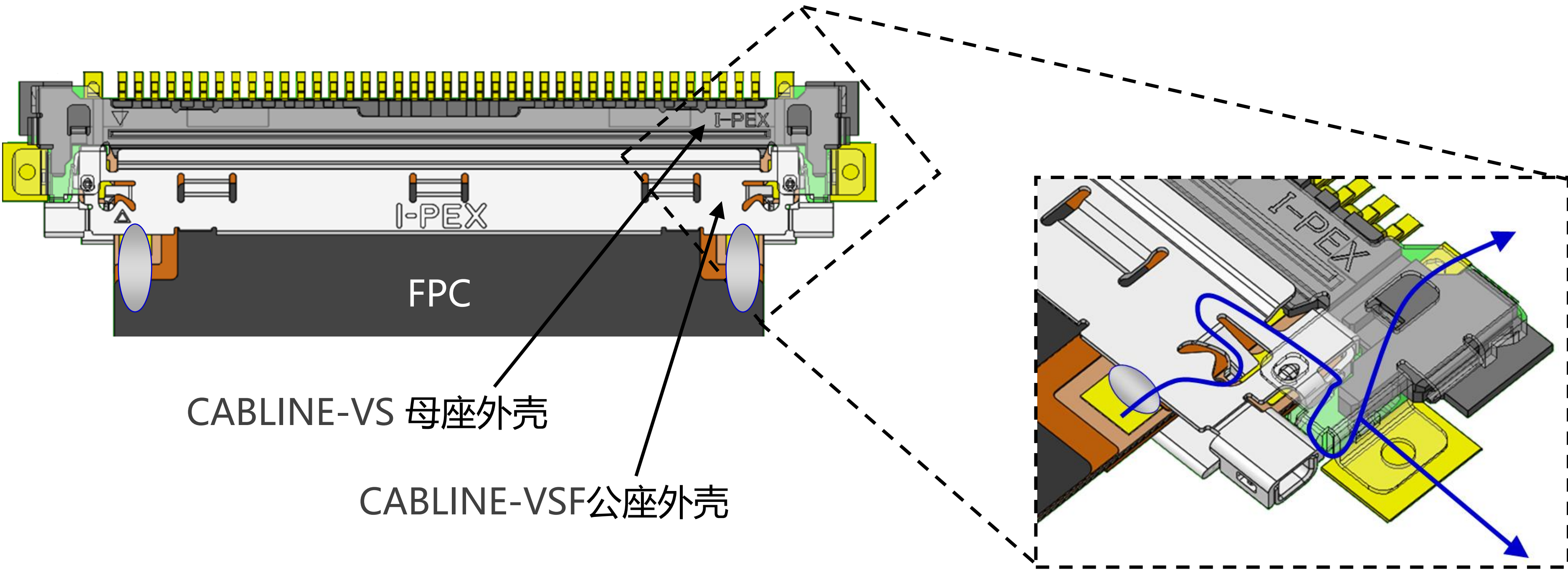
*如您需要了解未列出或不在范围内的Pin数，请咨询我们。



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



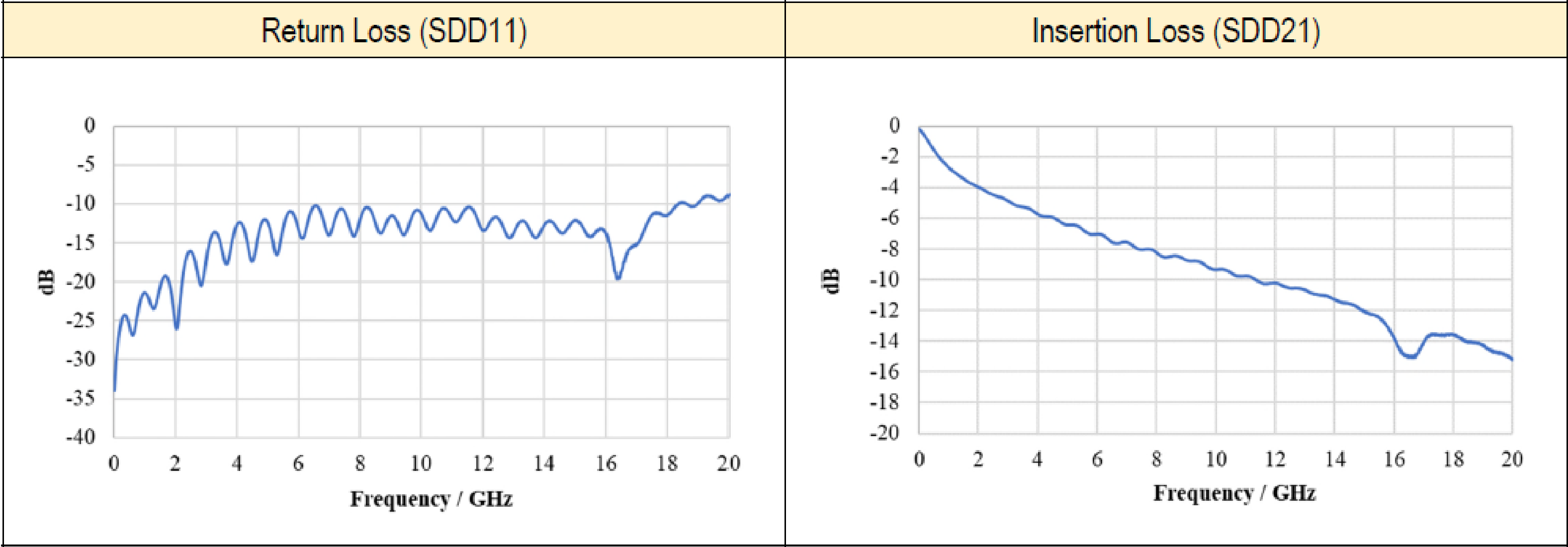
高速率传输, 32Gbps/lane应用的理想之选

Measurement results

Connector: CABLINE-VSF 40 pin

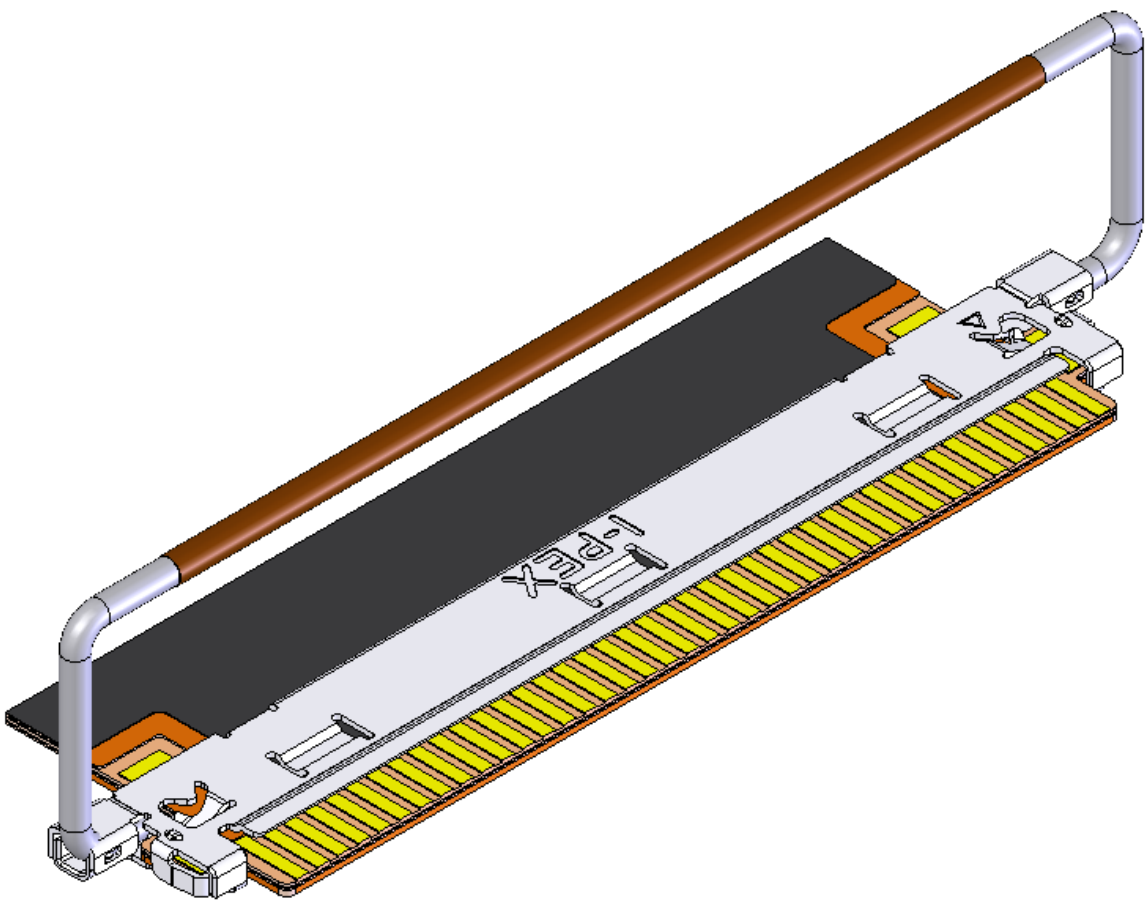
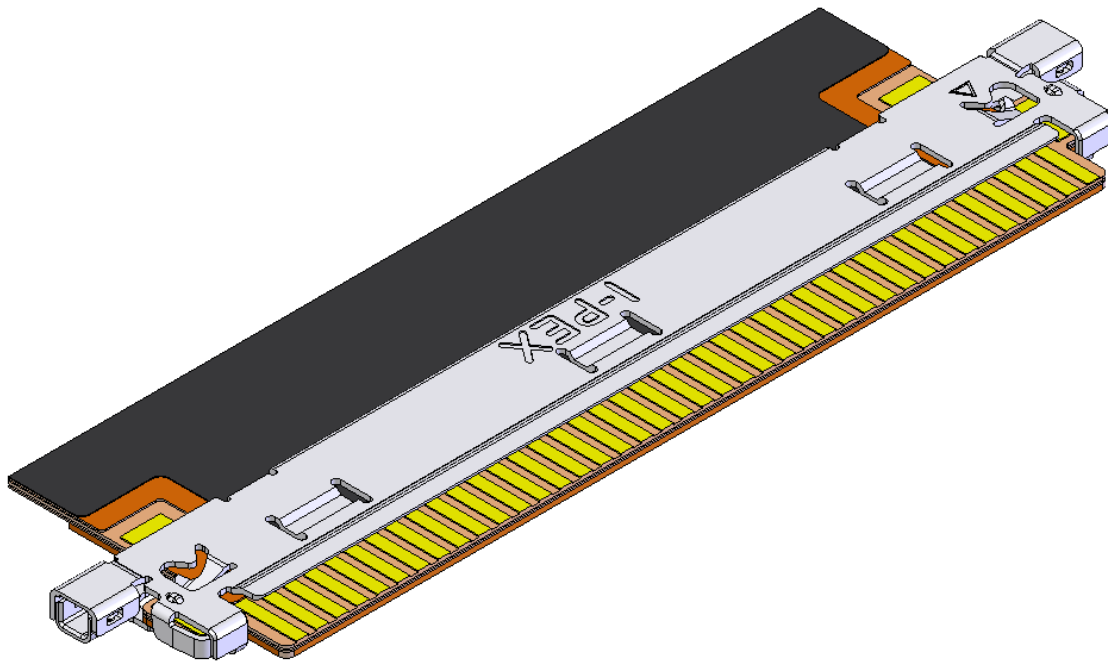
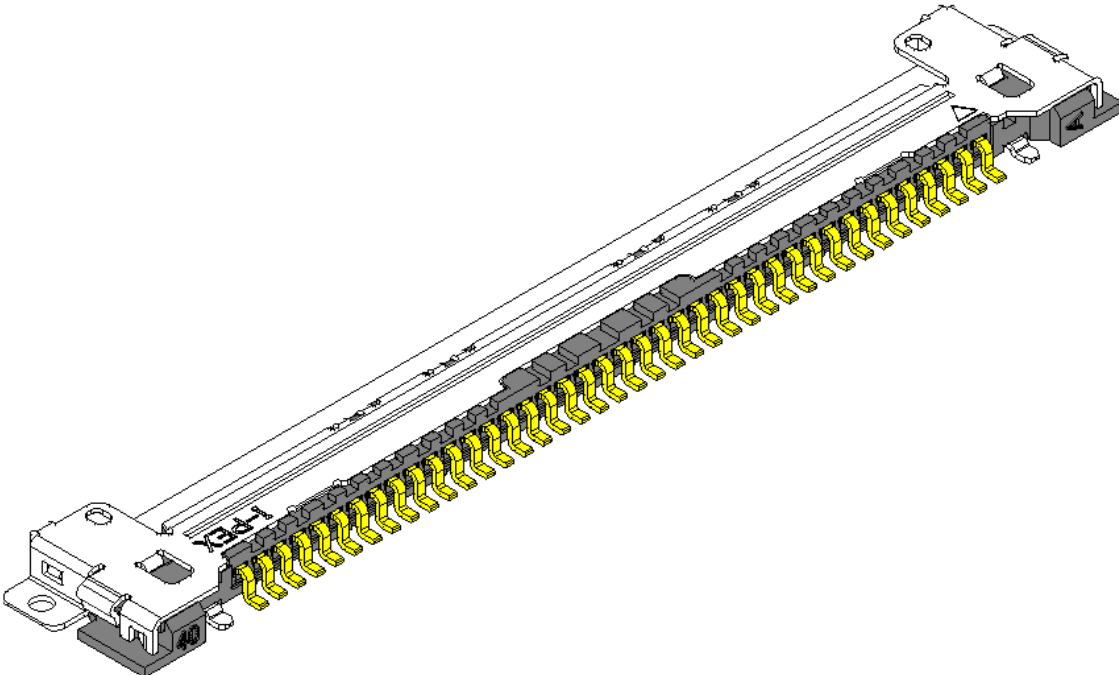
FPC: Shielded FPC,
Differential 100 ohm, Length : 100 mm

Pin Assignment: GSSGSSG



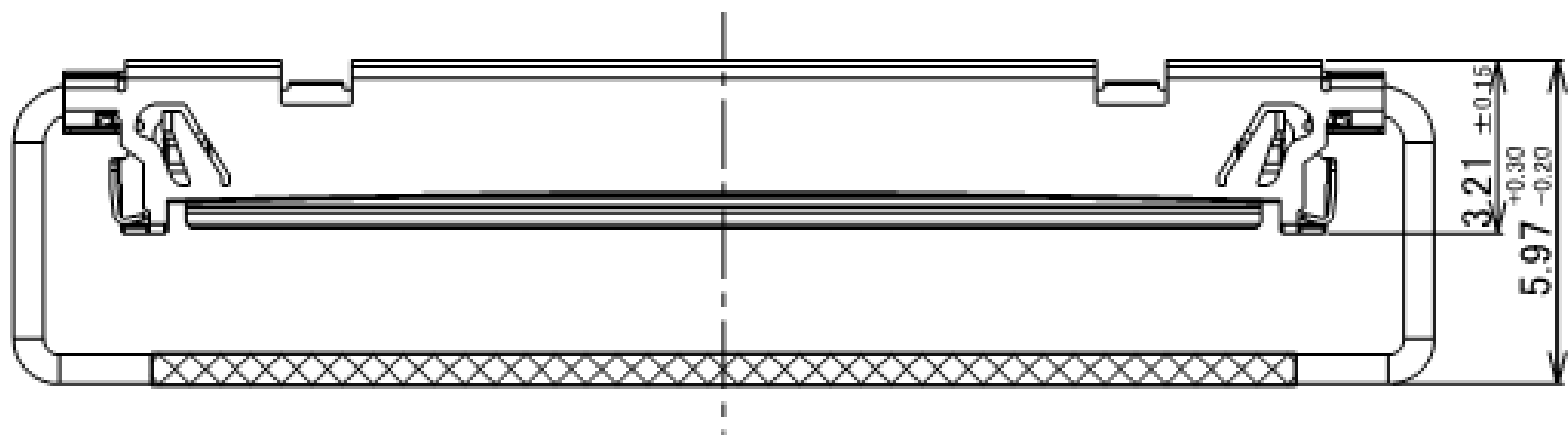
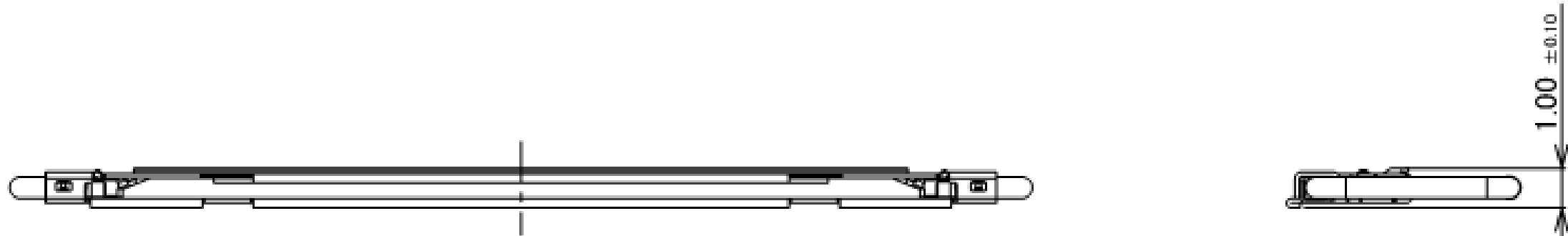
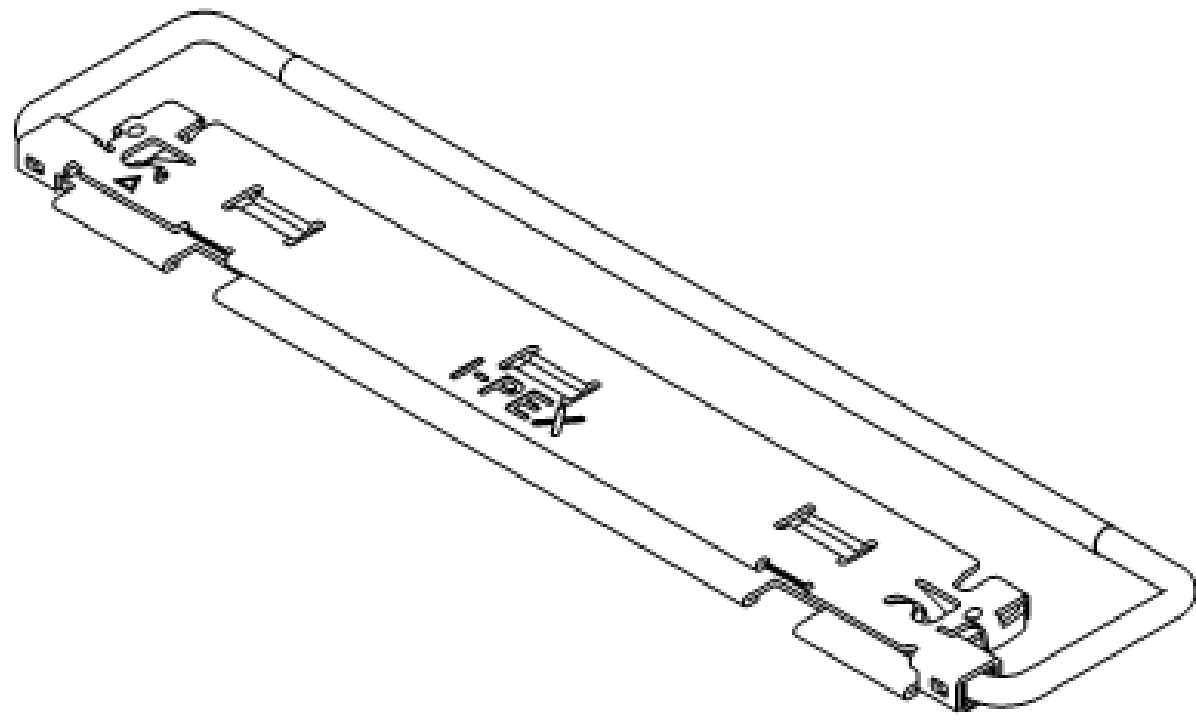
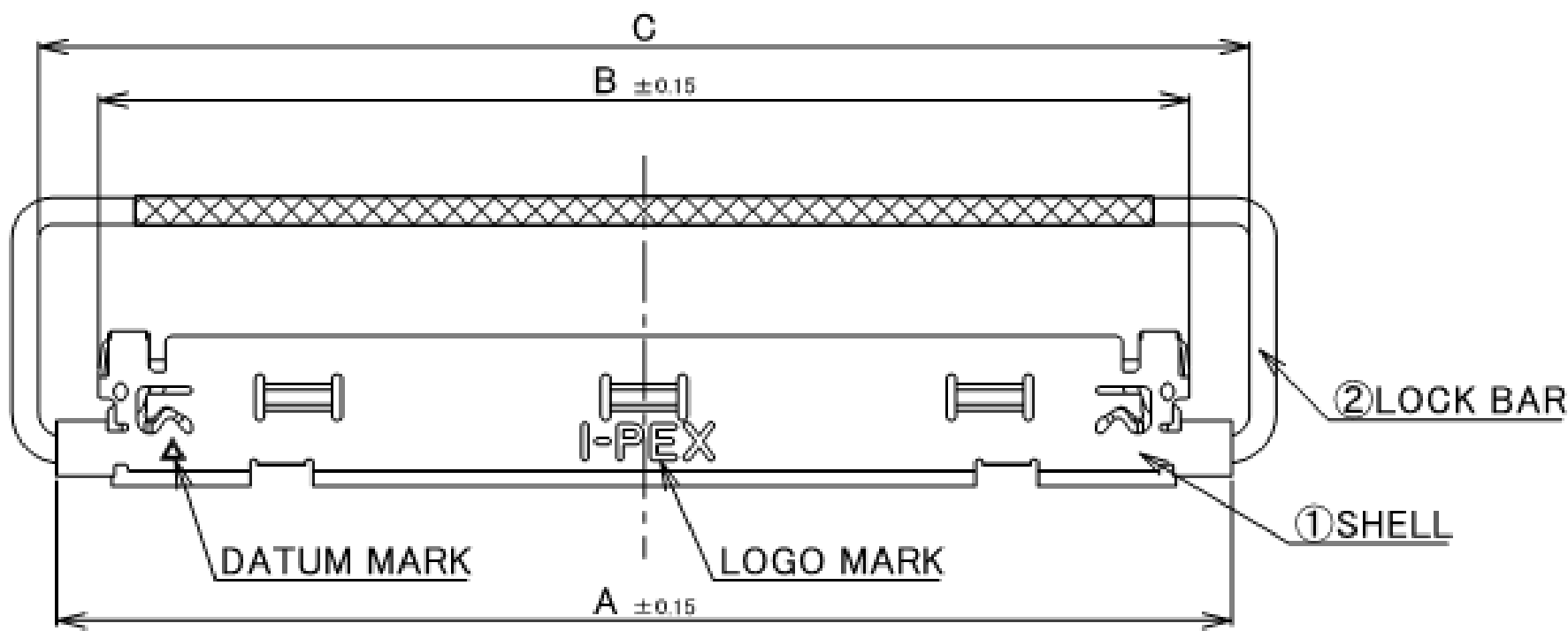
Component Parts Details

Component Parts

WITH LOCK BAR TYPE	WITHOUT LOCK BAR TYPE
 CABLIME-VSF SHELL ASS'Y PLUG with FPC	OR  CABLIME-VSF SHELL PLUG with FPC
 CABLIME-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	

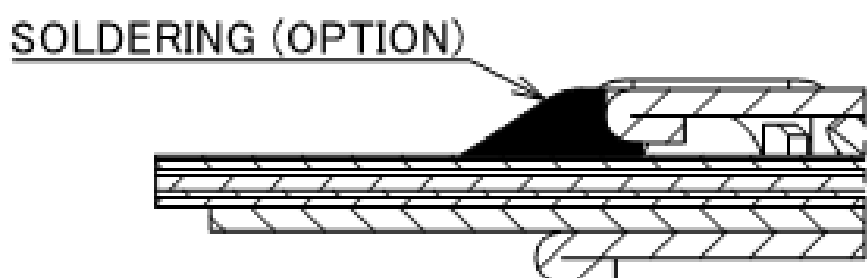
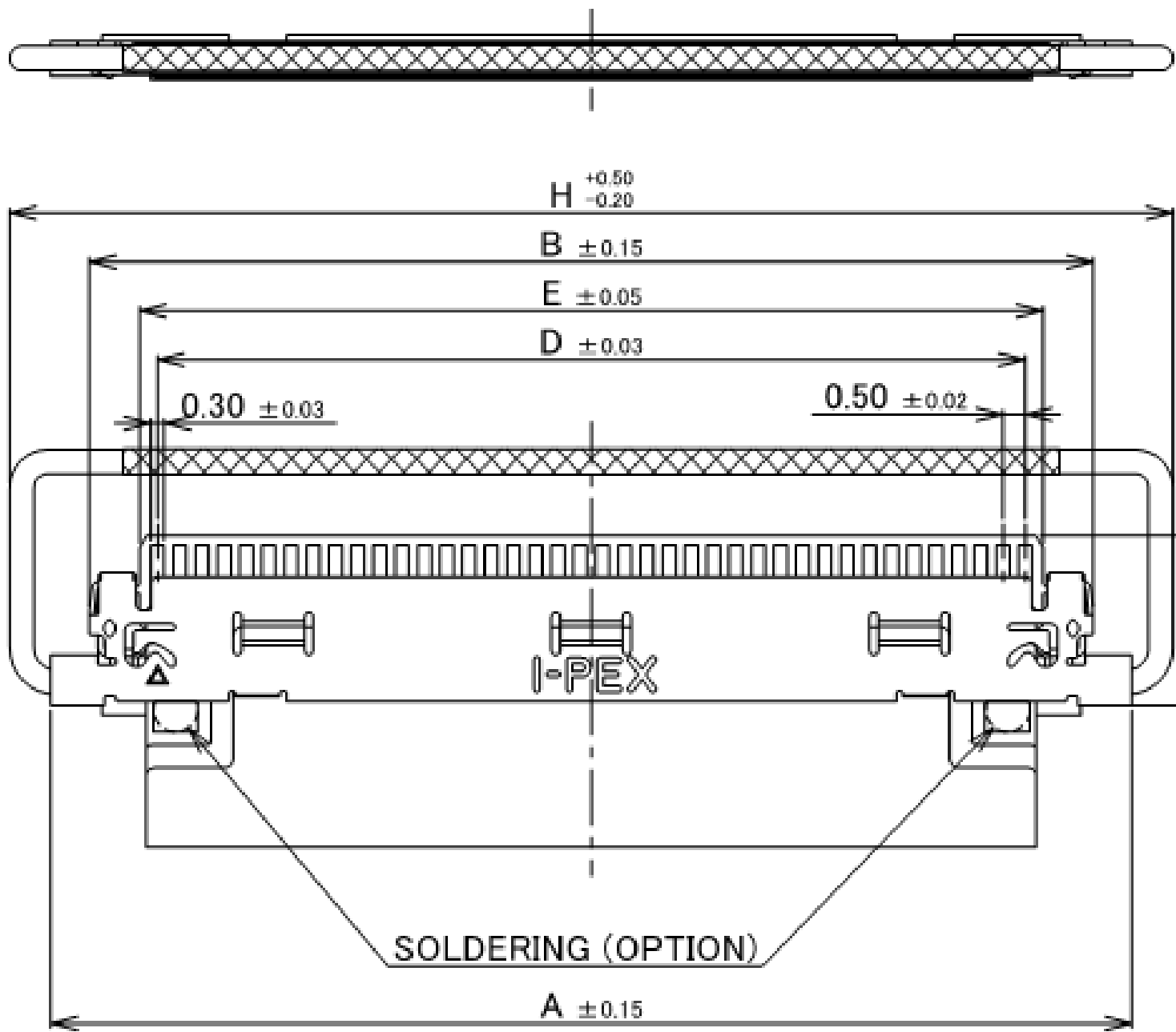
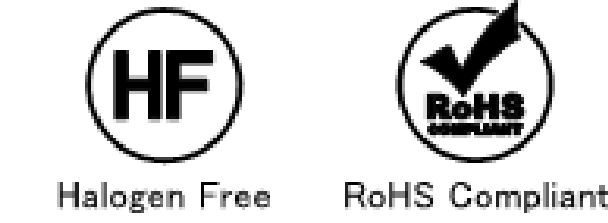


2	LOCK BAR	SUS	-
1	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT & SOLDERING AREA : Au 0.01 μ m MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

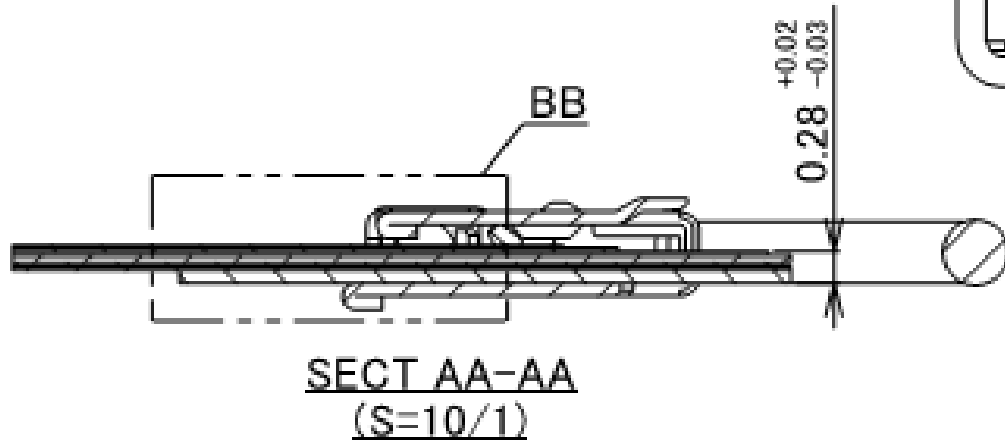
Rev.16

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

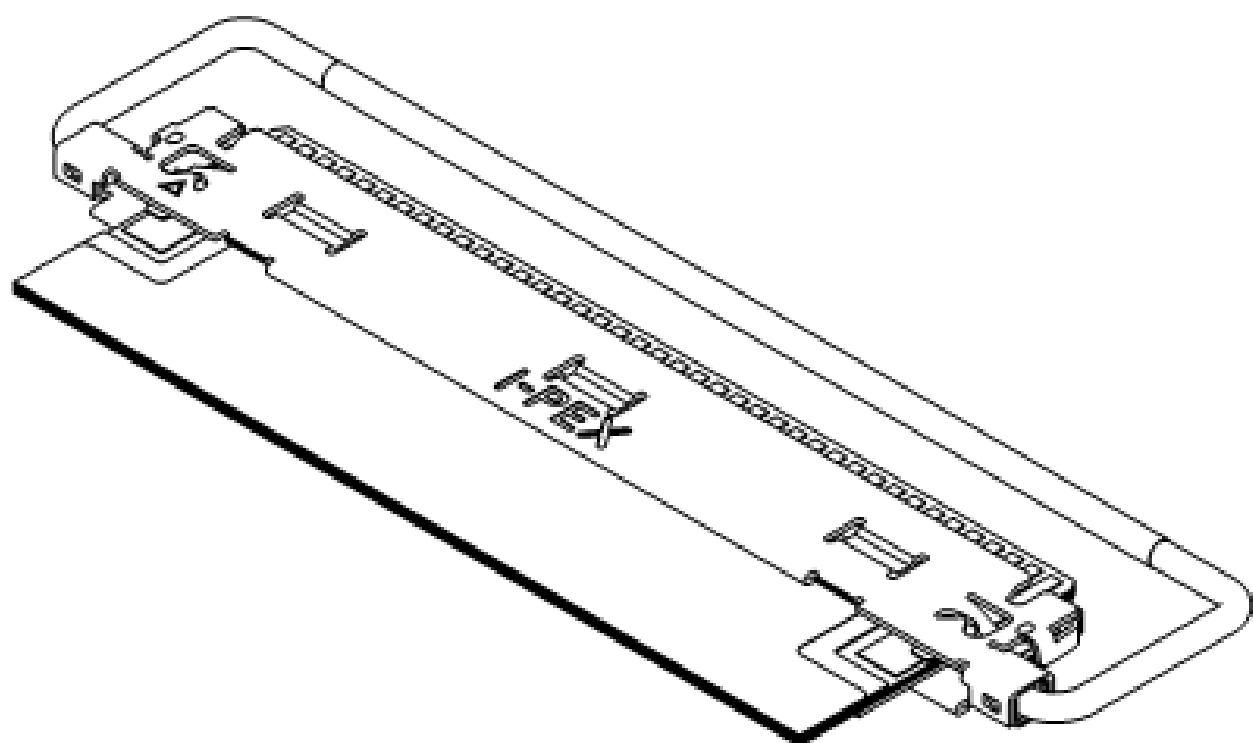
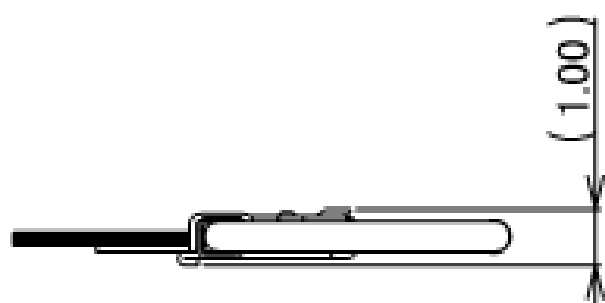
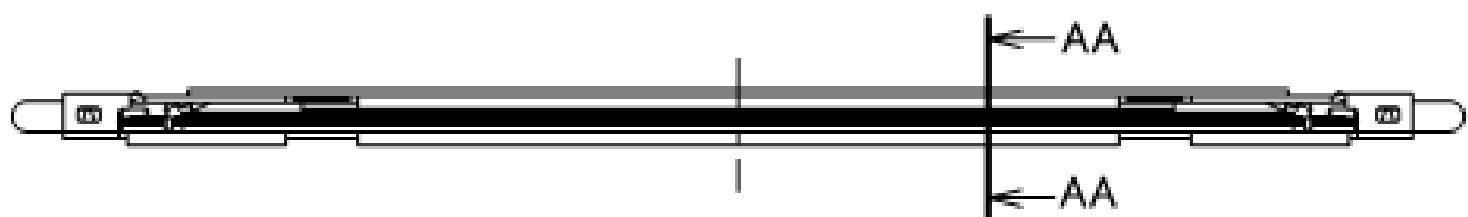
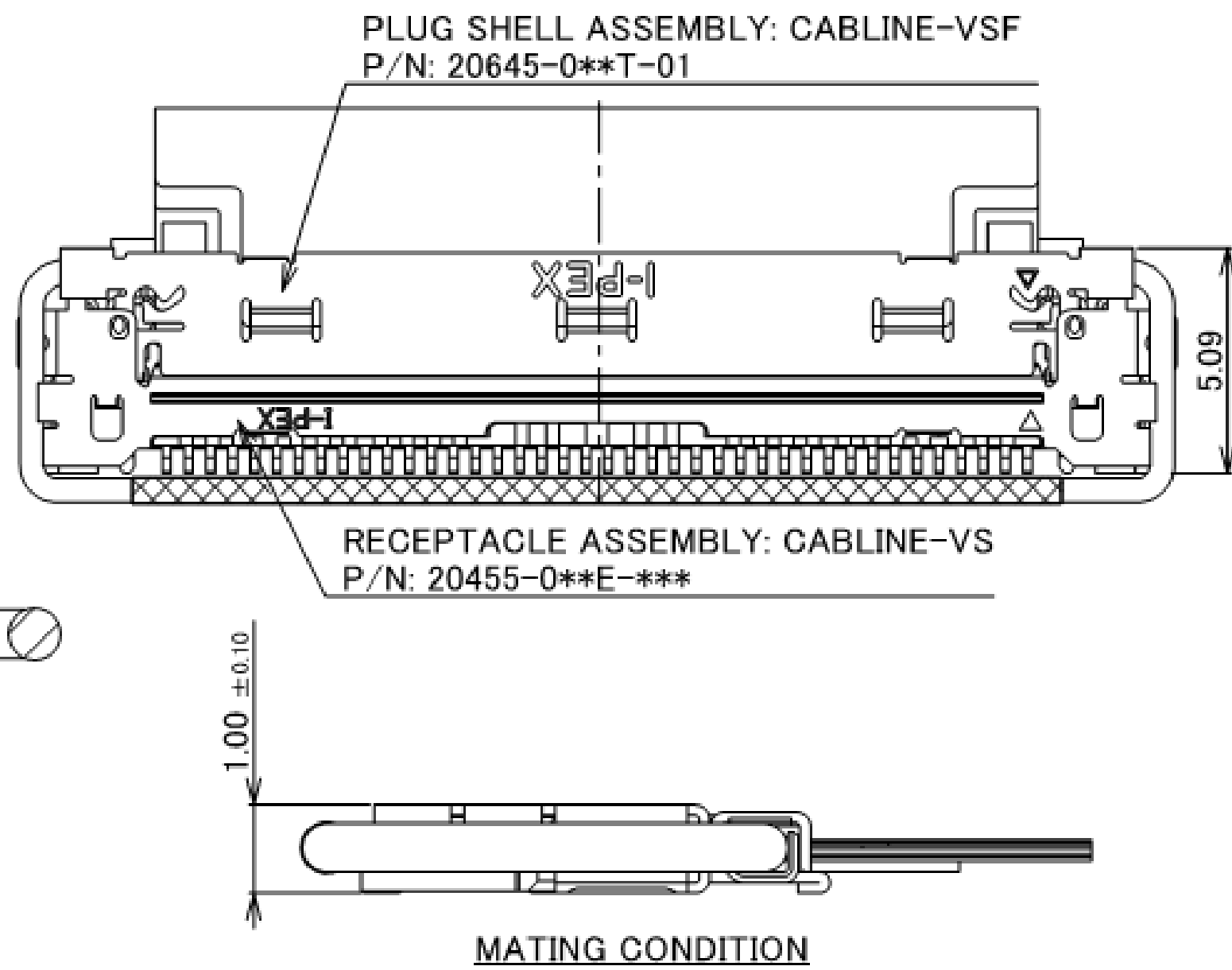
FPC ASSEMBLY STATE



DETAIL BB
(S=20/1)



SECT AA-AA
(S=10/1)

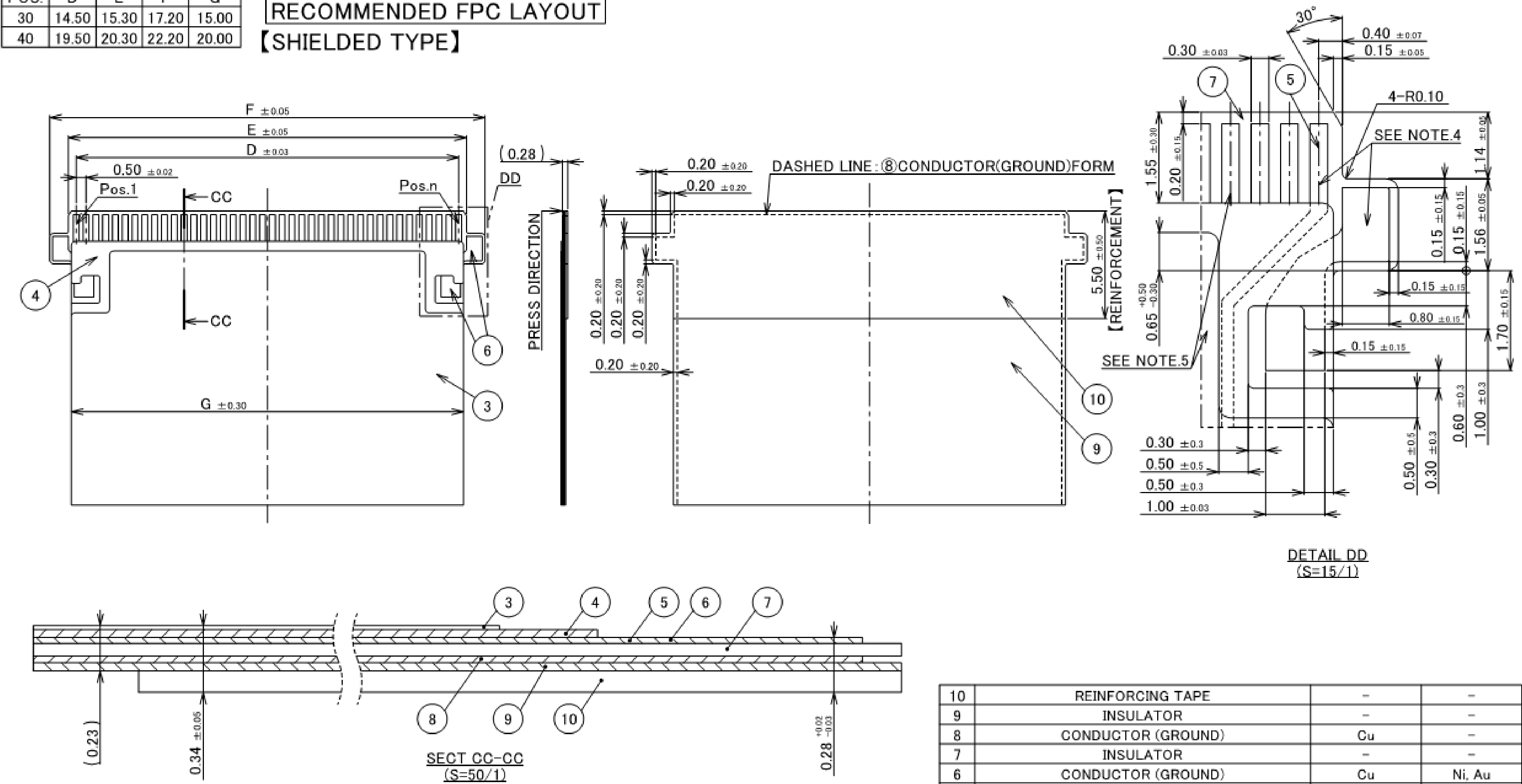


Rev.16

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】

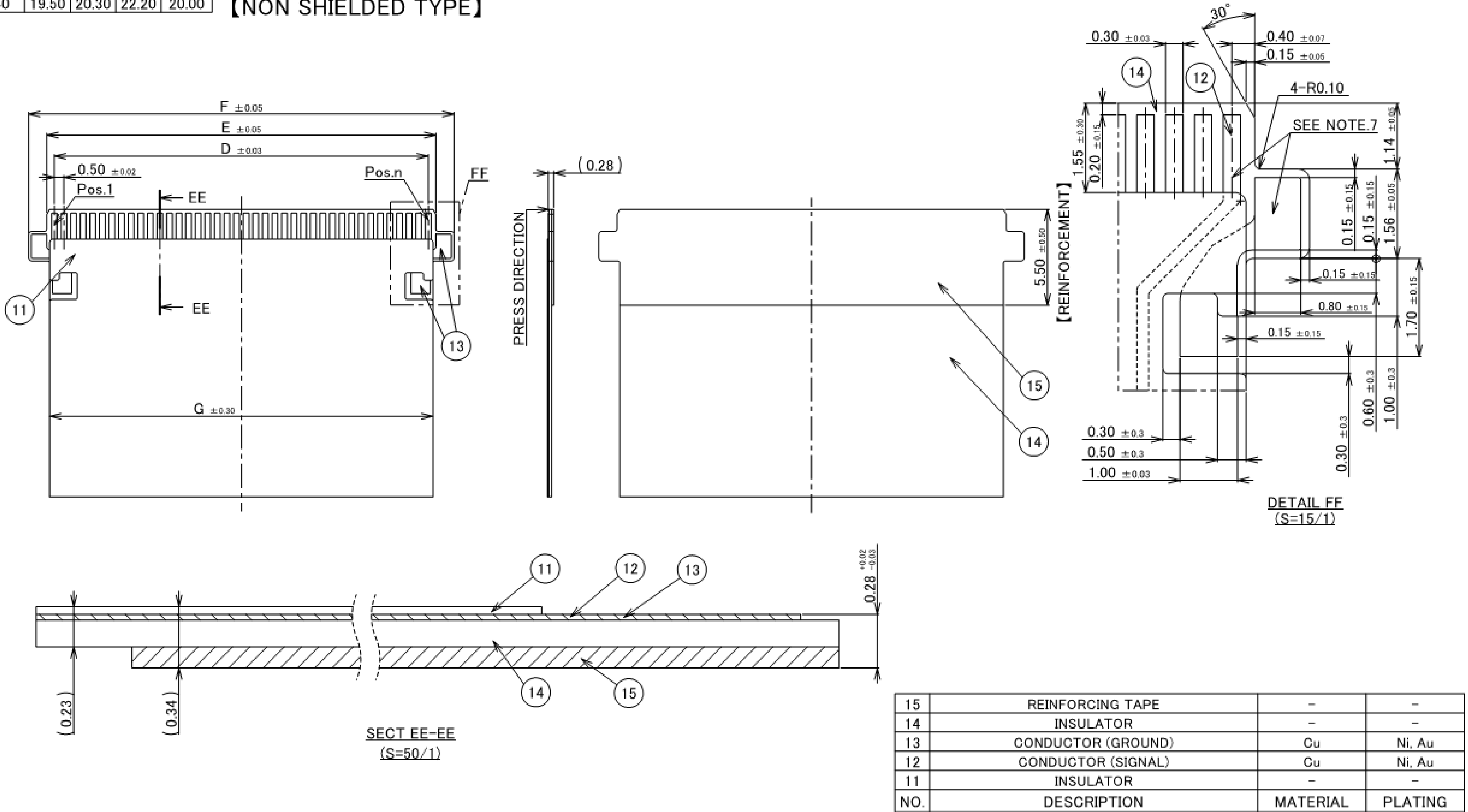


- NOTES.
- 1. ADHESIVE SHOULD USE THERMOSETTING.
 - 2. No.6: CONDUCTOR(GROUND) AND No.8: CONDUCTOR(GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
 - 3. No.3: SHIELD FILM AND No.8: CONDUCTOR(GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
 - 4. No.5: CONDUCTOR(SIGNAL) AND No.6.8: CONDUCTOR(GROUND) ARE NOT CONTACTING.
 - 5. No.5: CONDUCTOR(SIGNAL) AND No.3: SHIELD FILM ARE NOT CONTACTING.

Rev.16

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】



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

Rev.16

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.16

Receptacle Assembly

Recommended P/N		20455-0**E-76 (30P/40P/50P)					20455-A20E-76 (20P)	
PART NO.	Pos.	A	B	C	D	U	P/N:20455-0 ** E-## SEE TABLE 1	
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		

P/N:20455-0 ** E-##

SEE TABLE 1.

Pos.

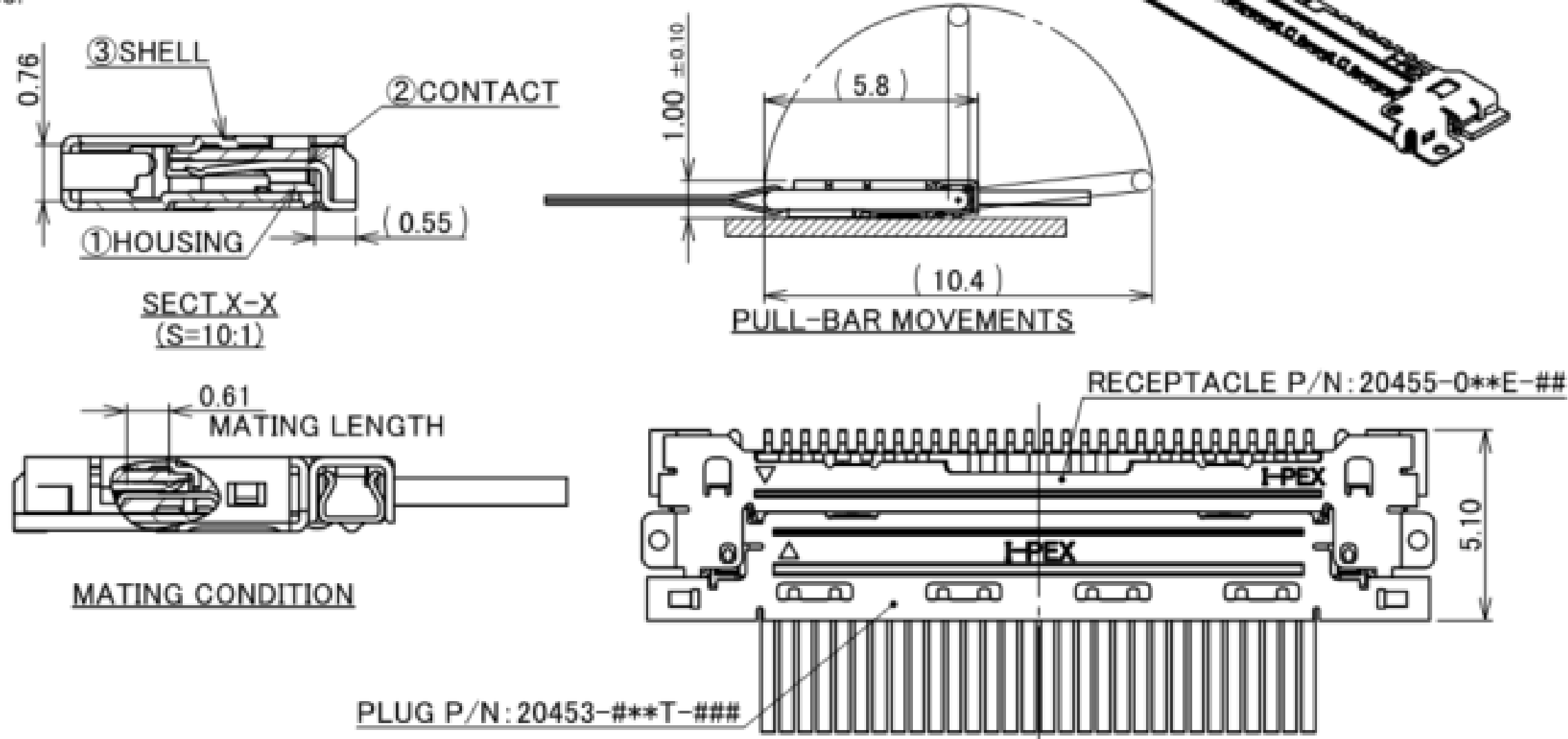
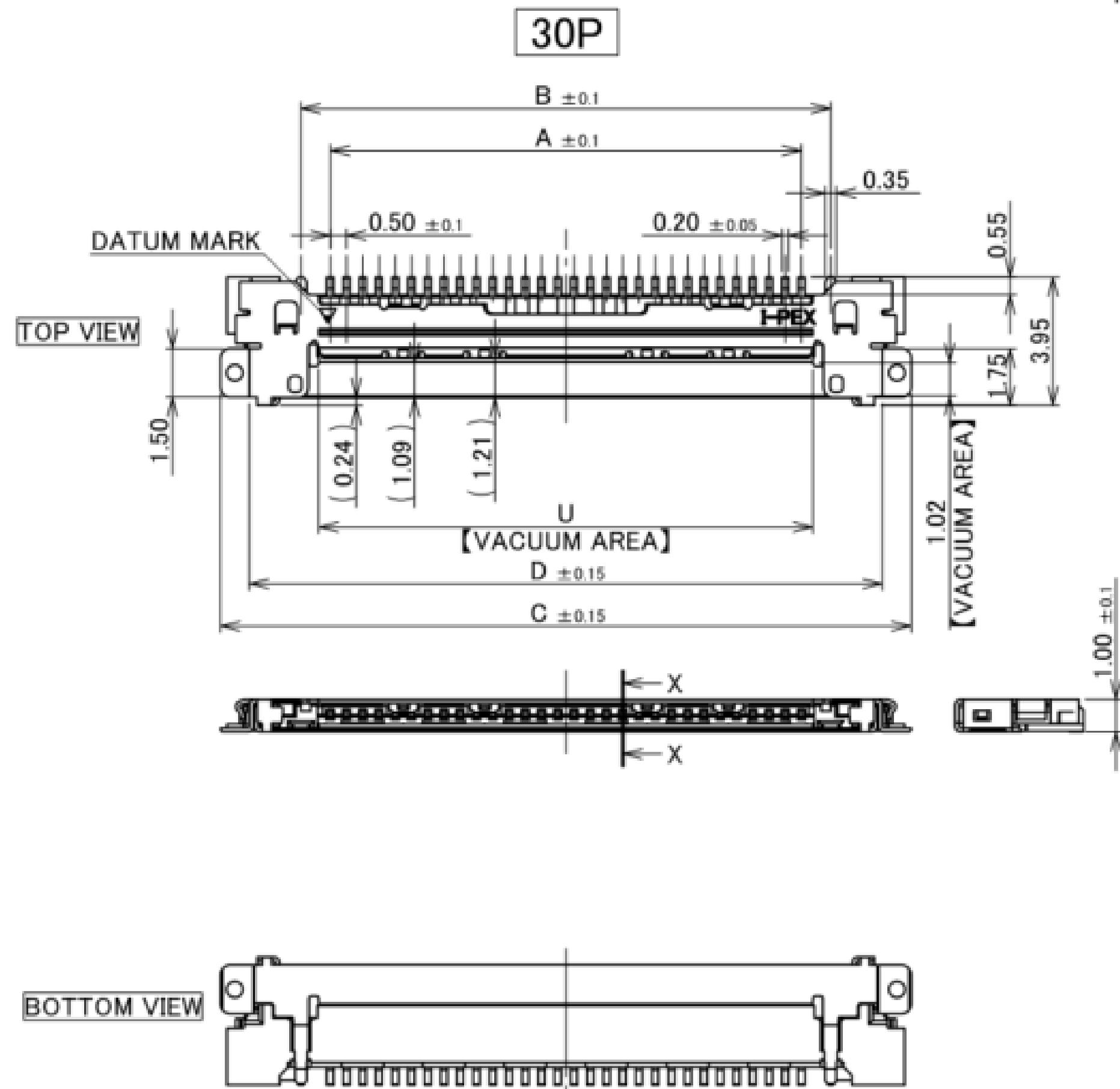


TABLE 1

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-12	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.	Au 0.01 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.	Au 0.01 μ m MIN. OVER Ni 1.00 μ m 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

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.

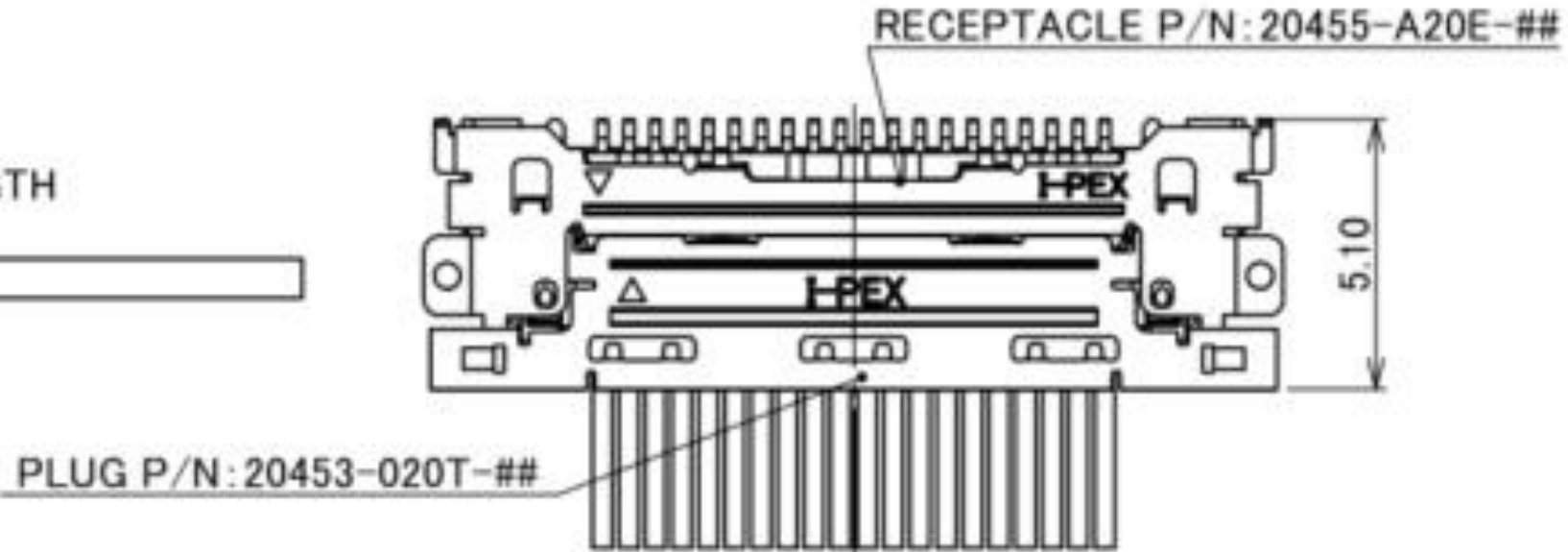
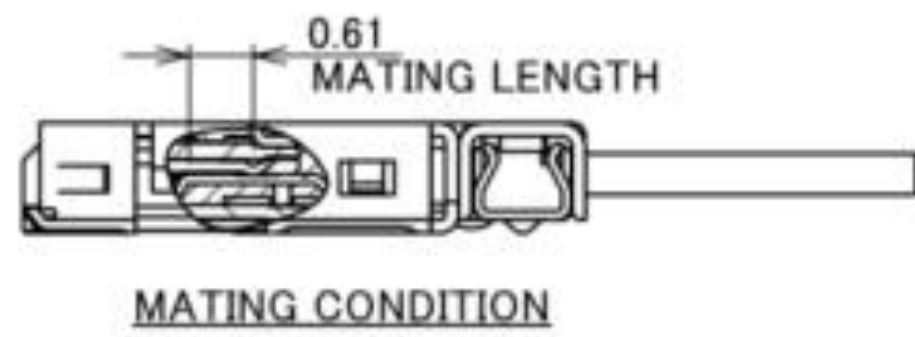
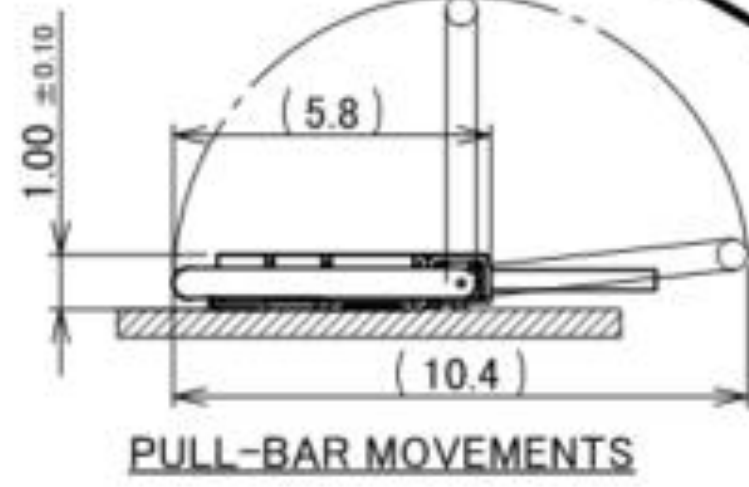
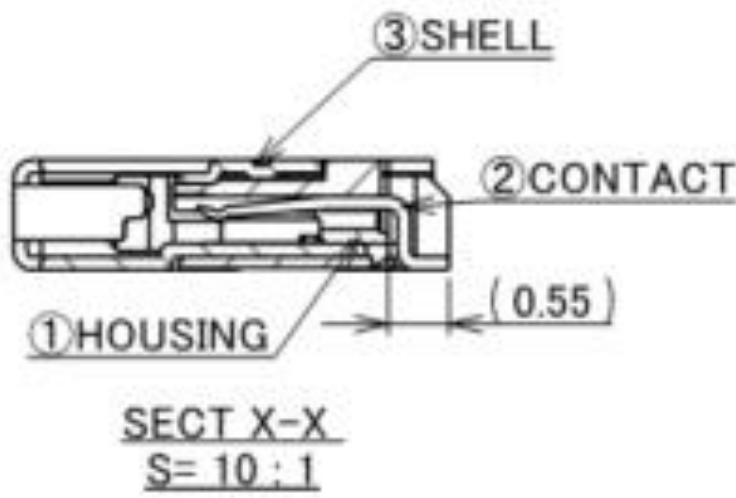
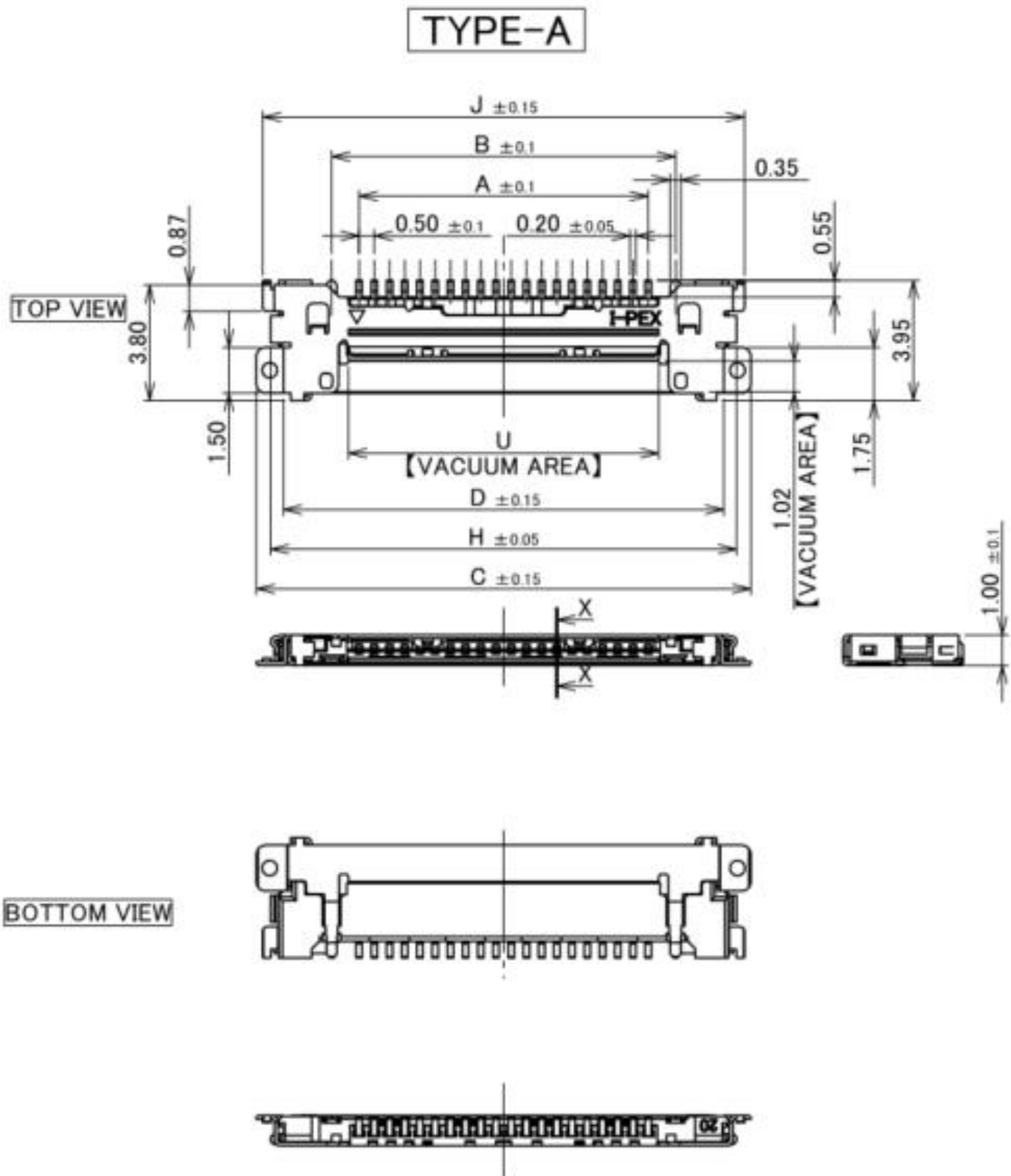


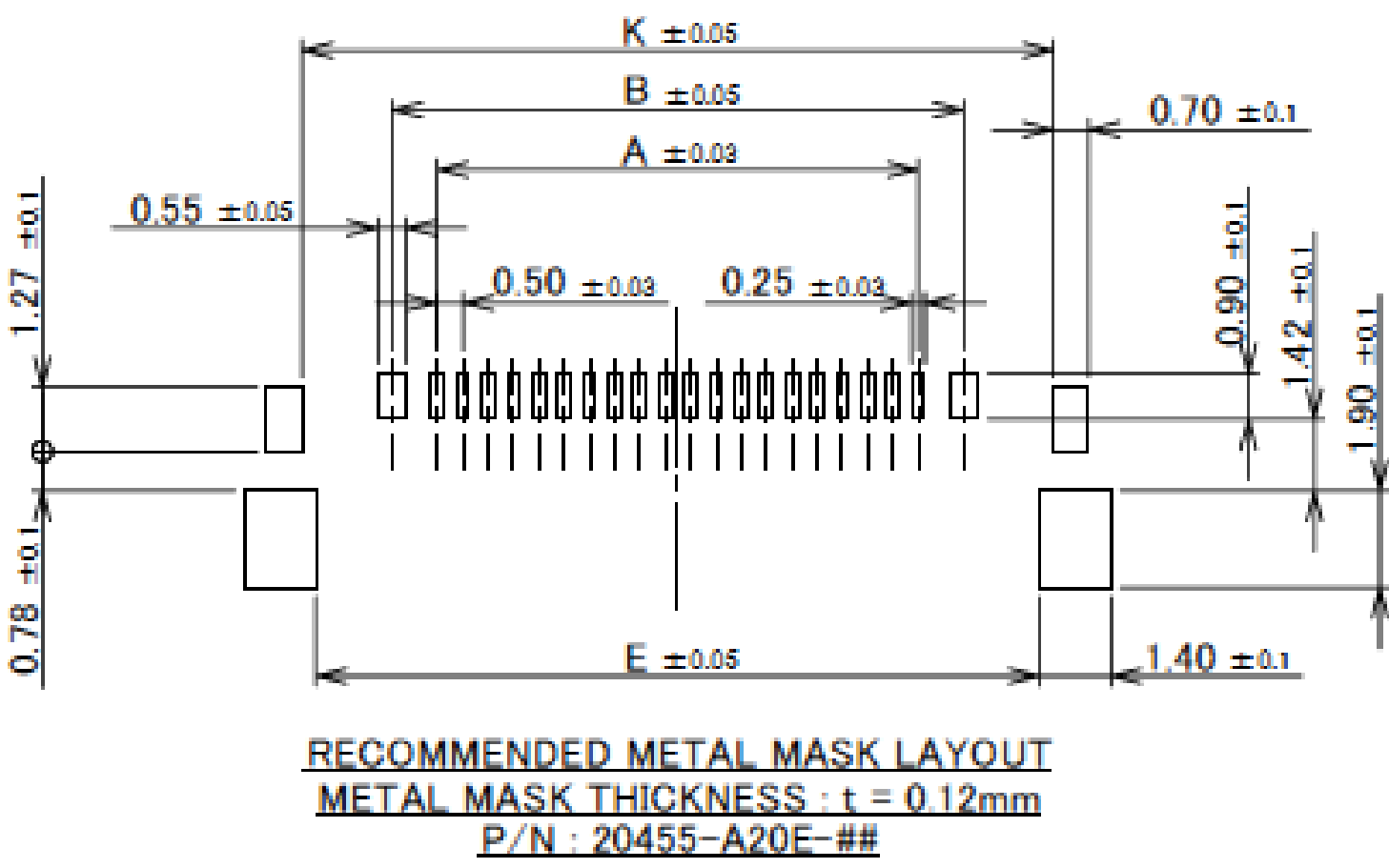
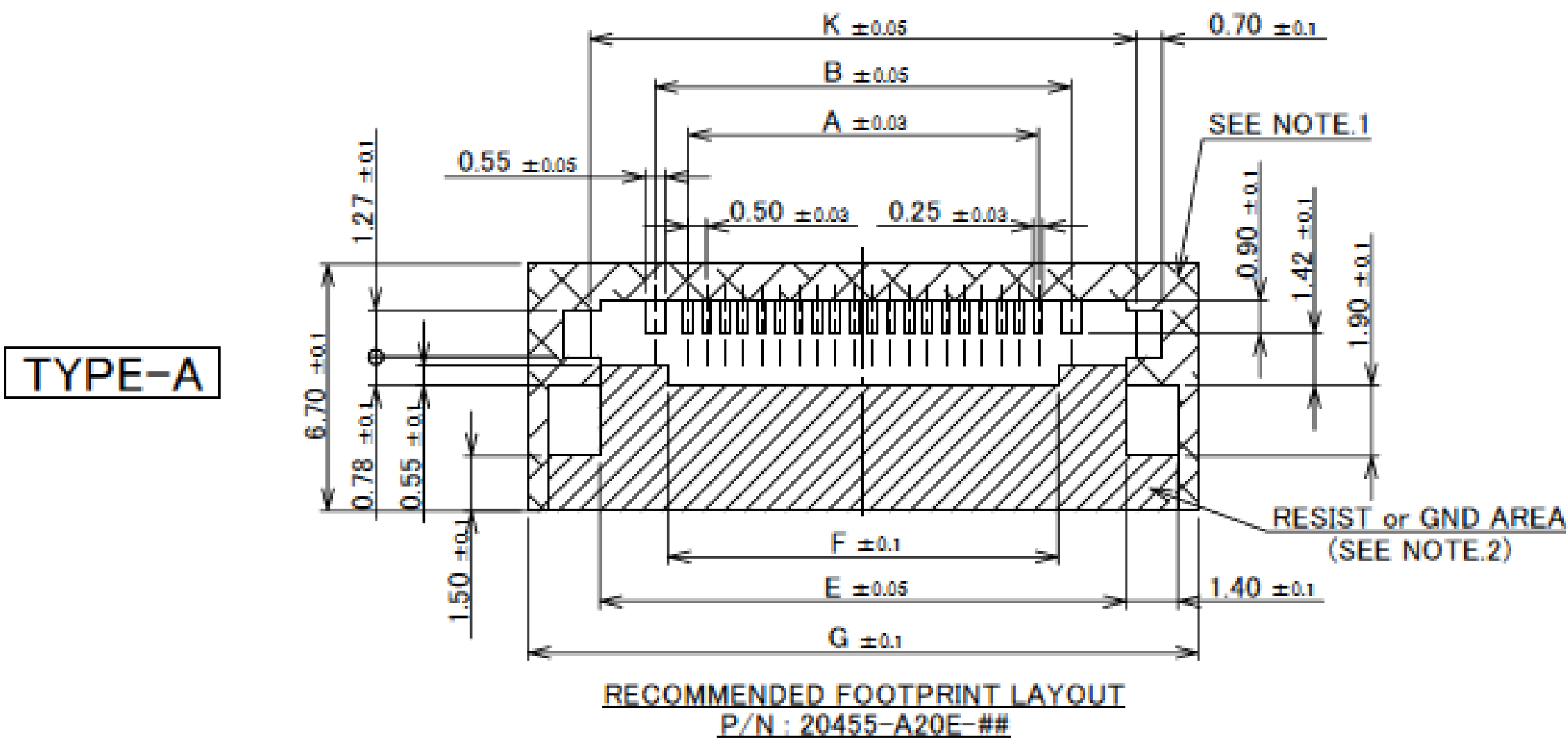
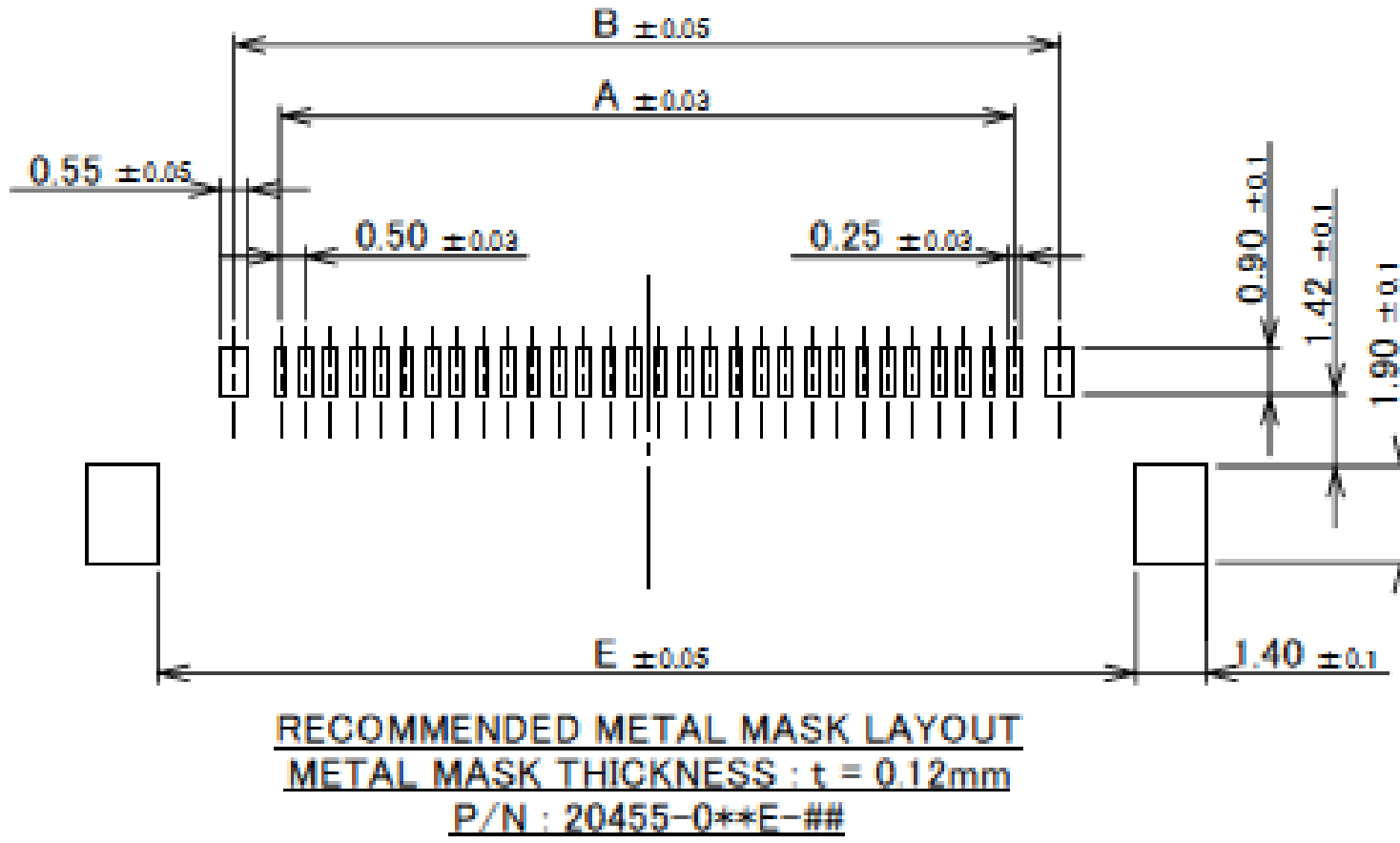
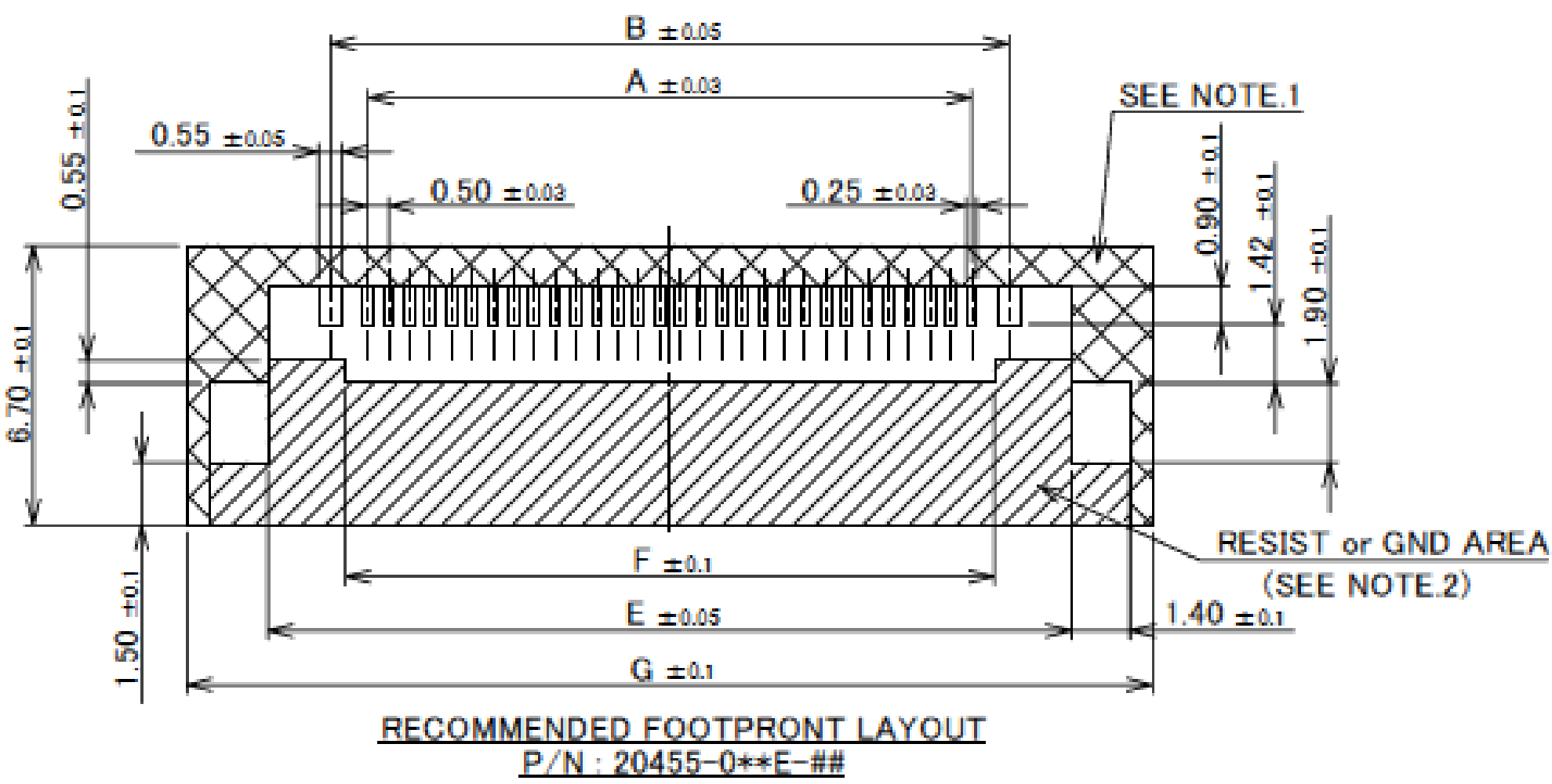
TABLE 2

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. 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		
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		

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

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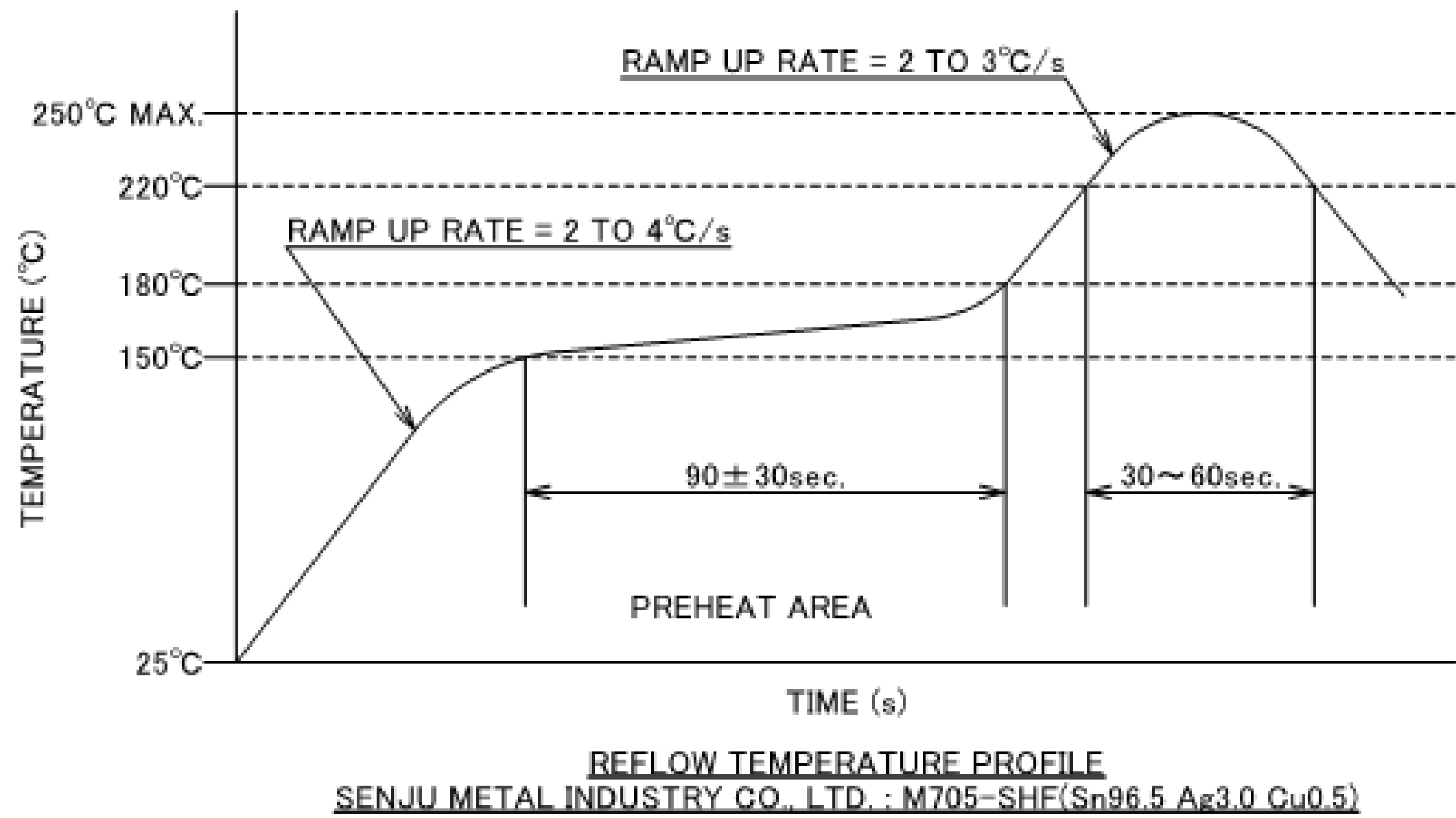
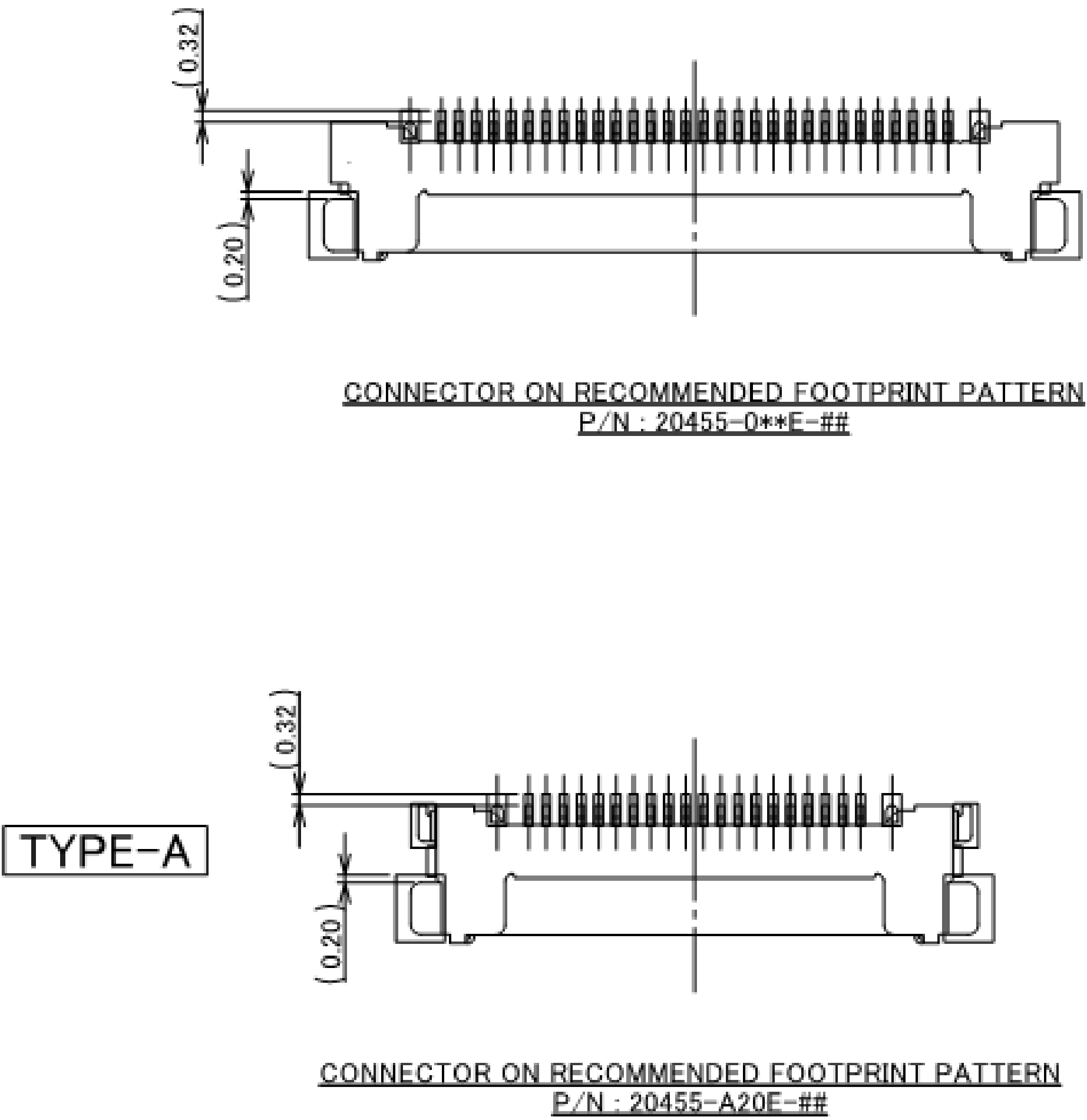
PART NO.	Pos.	A	B	E	F	G	H	J	K
20455-#20E-##	20	9.50	11.30	14.30	10.60	18.20	15.32	15.84	14.84
20455-030E-##	30	14.50	16.30	19.30	15.60	23.20	-	-	-
20455-040E-##	40	19.50	21.30	24.30	20.60	28.20	-	-	-
20455-050E-##	50	24.50	26.30	29.30	25.60	33.20	-	-	-



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.35

Receptacle Assembly



Rev.35

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

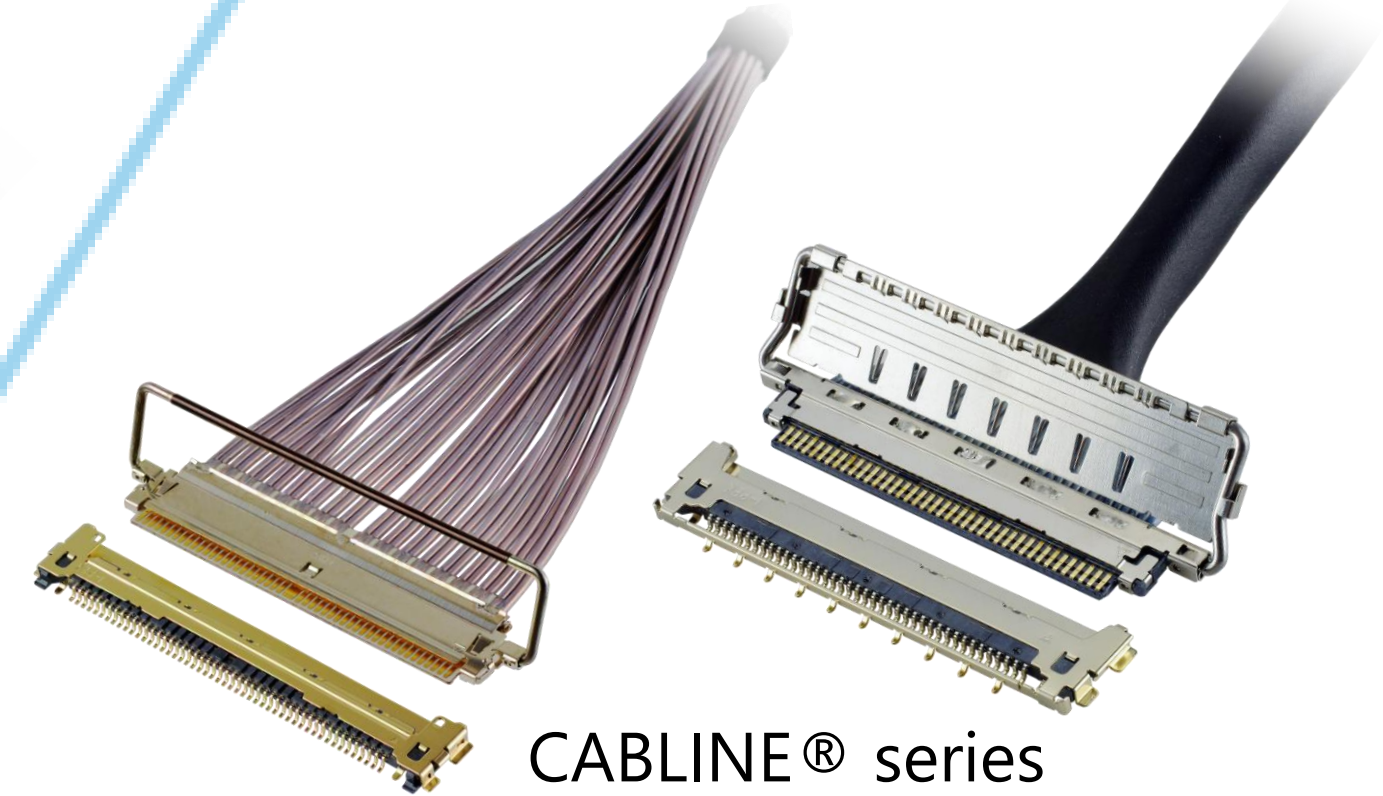
ITEMS	SPECIFICATION
RATED VOLTAGE	100V AC (PER CONTACT PIN)
RATED CURRENT (FOR CONTACT)	0.5A AC/DC (PER CONTACT PIN) ※AVAILABLE UP TO 20PIN 0.3A AC/DC (PER CONTACT PIN) ※AVAILABLE FOR ALL PIN ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION.
OPERATING TEMPERATURE	233 TO 358K(−40°C TO +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.35

Custom Connectors Available

RF Connectors

MHF® series



CABLINE® series

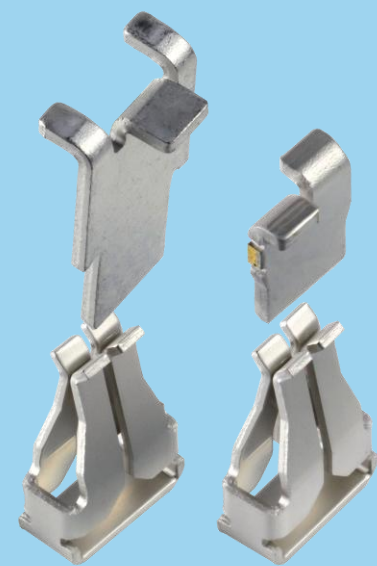


Micro-Coaxial/Twinaxial Connectors

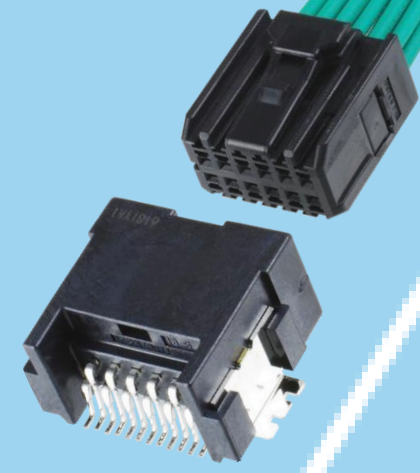


Wire-to-Board Connectors/ Terminals

AP series



ISH® series



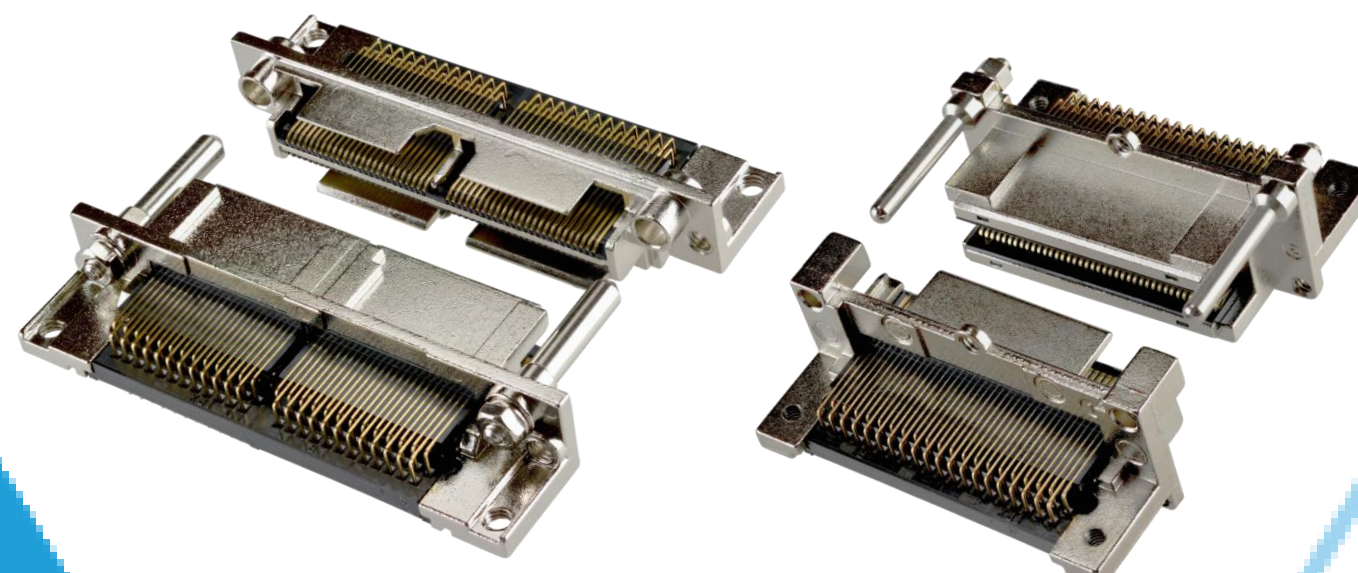
NOVASTACK® series



Board-to-Board Connectors



I/O Connectors



MINIDOCK™ series

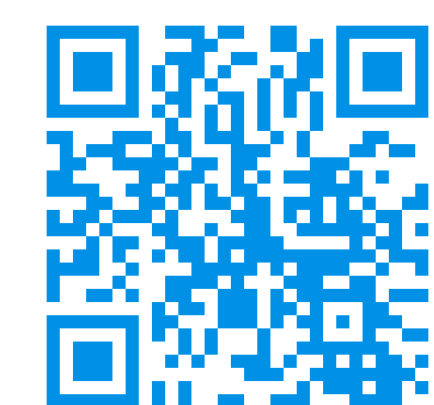
MINIFLEX® series EVAFLEX® series



FPC/FFC Connectors



Inquiry



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