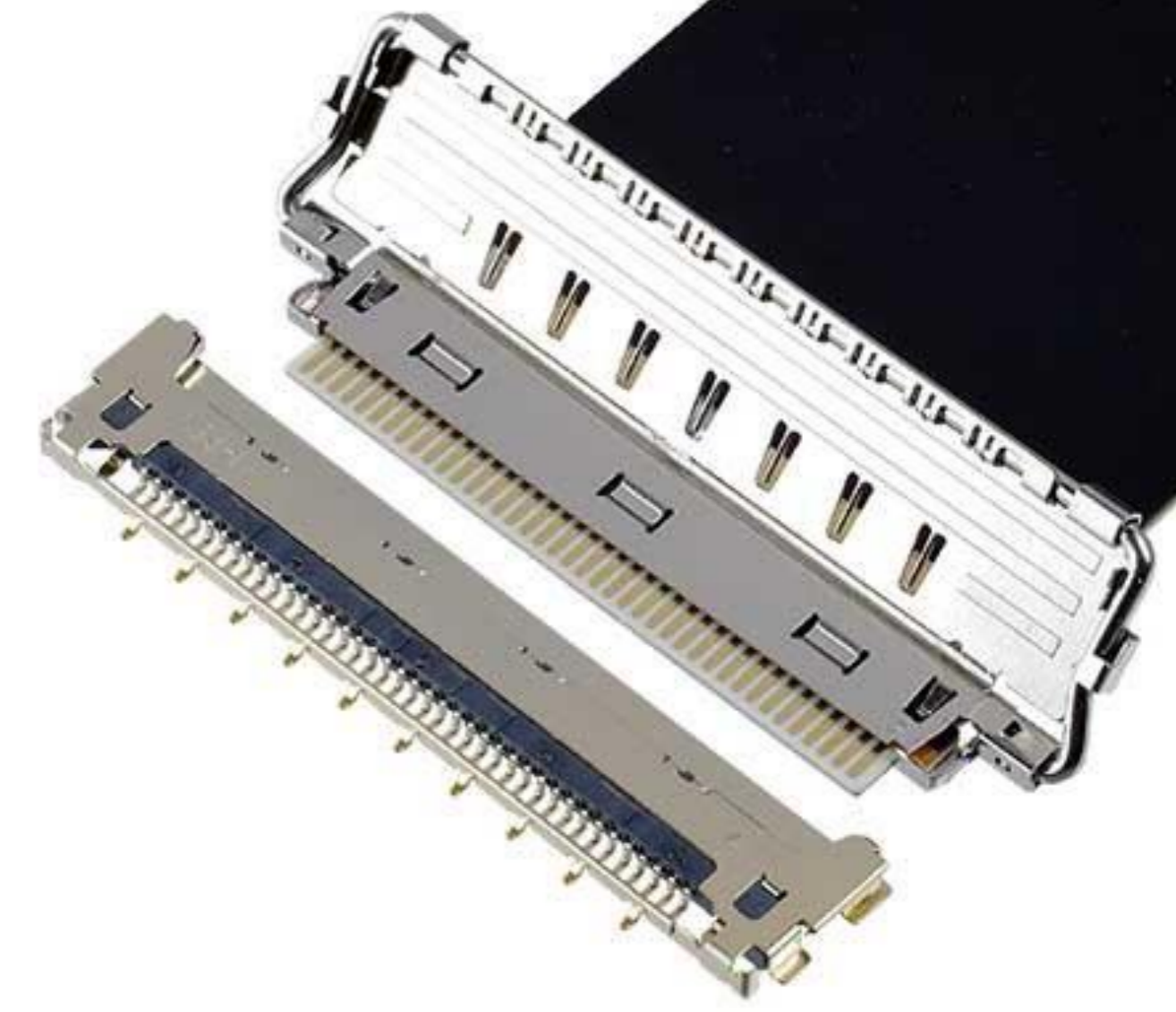


# CABLINE<sup>®</sup>-CA IIF

Fully-shielded with mechanical lock, suitable for high-data-rate transfer (32 Gbps/lane), 0.4 mm pitch, Horizontal mating type FPC plug connector



**Product Specifications:**

Mating type	Horizontal	
Board Pitch (mm)	0.4	
Wiping Length (mm)	0.48	
Mated size (mm)	Height	1.10 max. with cover
	Width	Formula: 6.95 + (0.4*?p)
	Depth	6.74
Pin Counts	Range	Up to 60
	Available	30, 40, 50

**Applicable FPC**

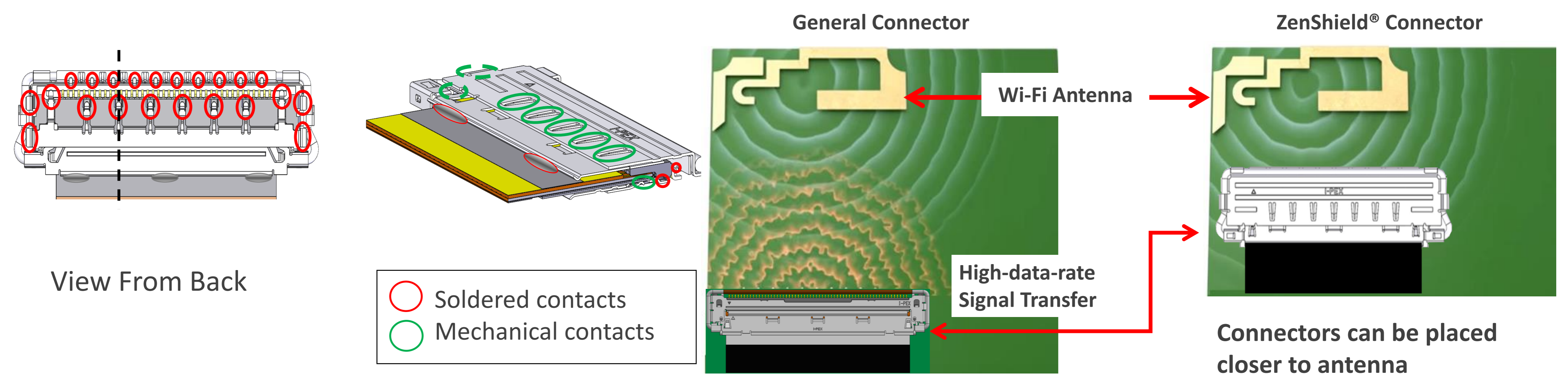
FPC Type	Shielded FPC
FPC Pitch (mm)	0.4
FPC Contact Point	Top
FPC Thickness (mm)	Contact Area: 0.25 +0.02/-0.03
	Ground Area: 0.37 +0.04/-0.06

**Applicable Standards (Reference Only):**

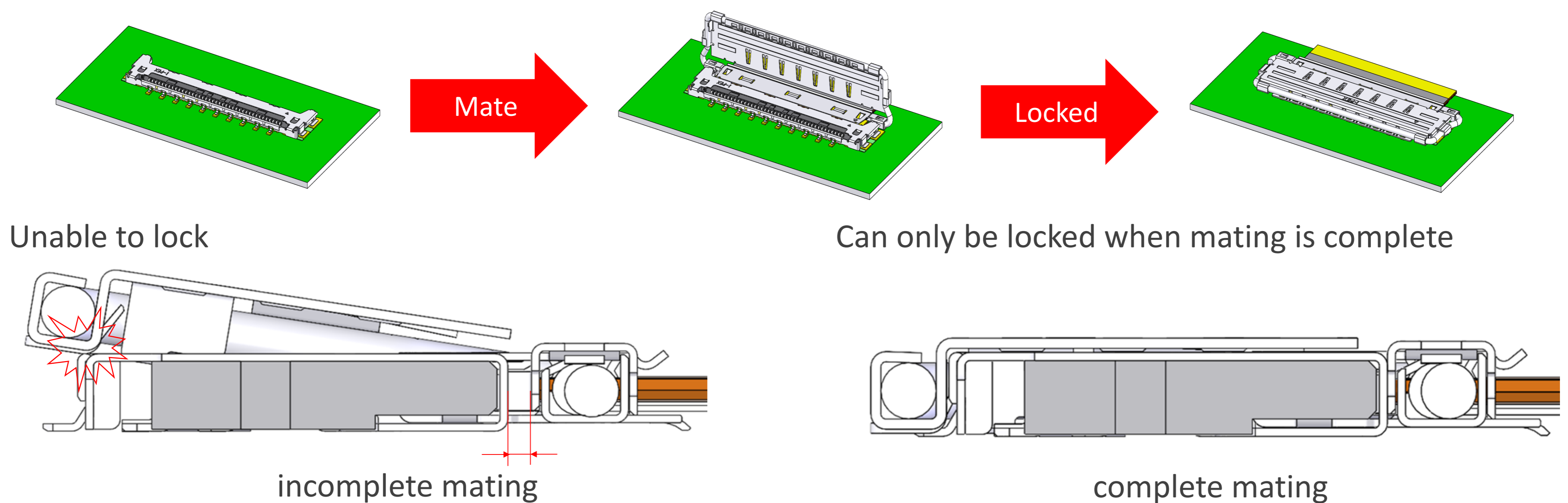
32 Gbps/ Lane, USB4 Gen4 (40 Gbps/ Lane PAM3)  
Display Port UHBR20 (20 Gbps/Lane),

\* Please inquire for pin counts not listed or outside of the pin count range.

► **ZenShield<sup>®</sup> fully-shielded with multi-point grounds is ideal for EMC solutions**



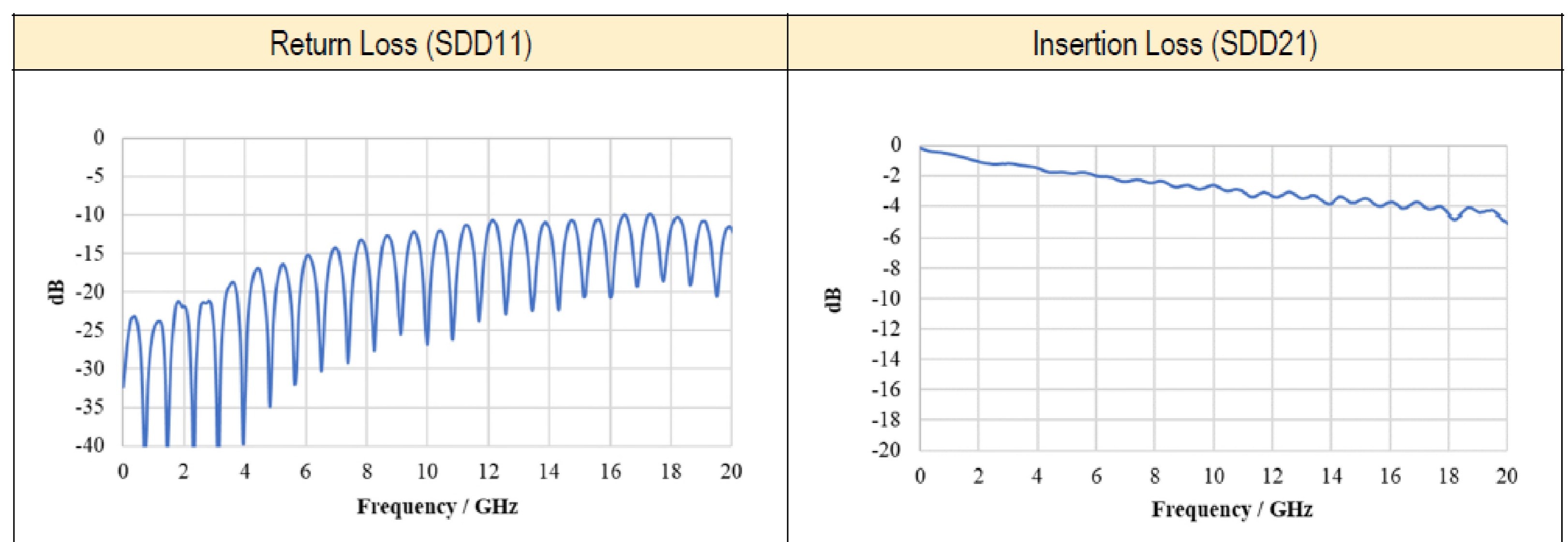
► **Mechanical locking cover prevents incomplete mating and back-out/unmating**



► **High-data-rate transfer, ideal for 32 Gbps/lane applications**

**Measurement results**

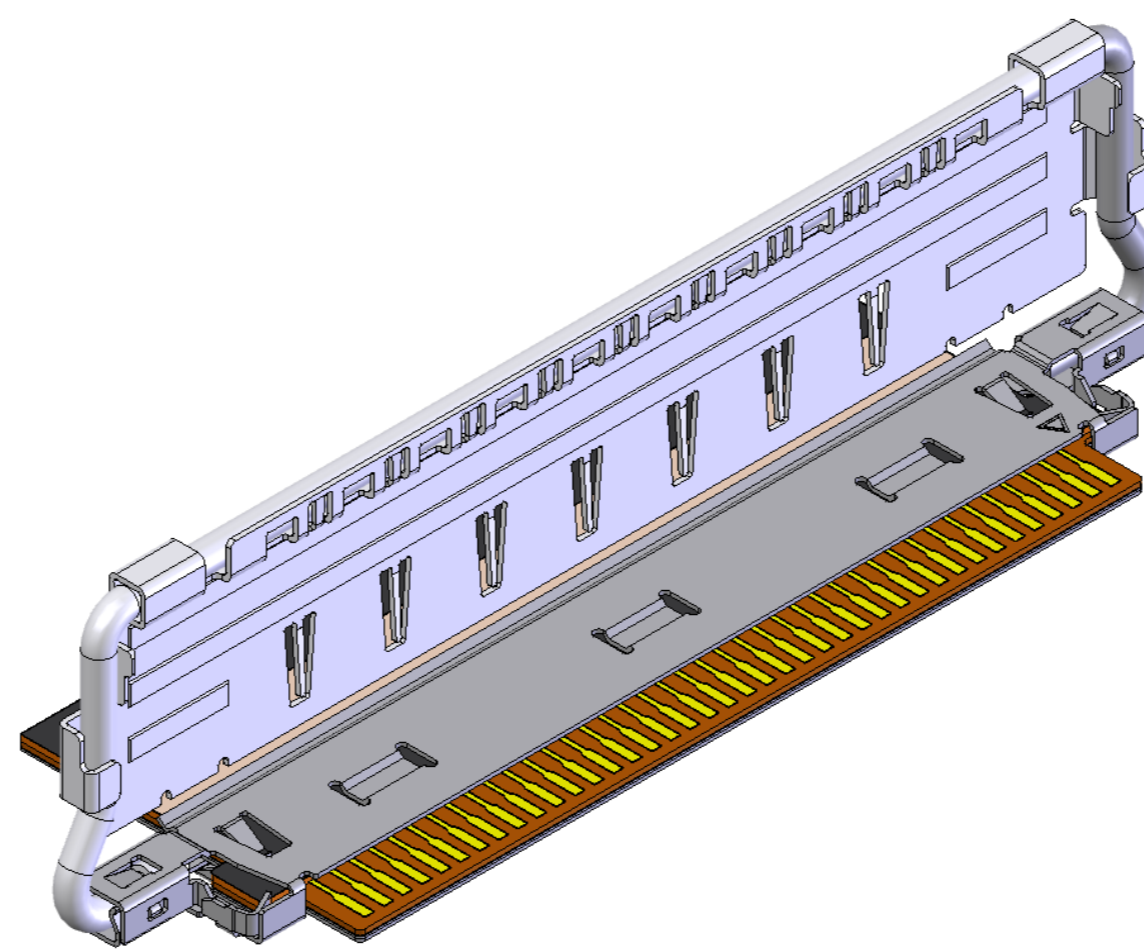
Connector: CABLINE-CA IIF 40P  
FPC: Shielded FPC, Differential 90 ohm, Length : 100 mm  
Pin Assignment: GSSGSSG



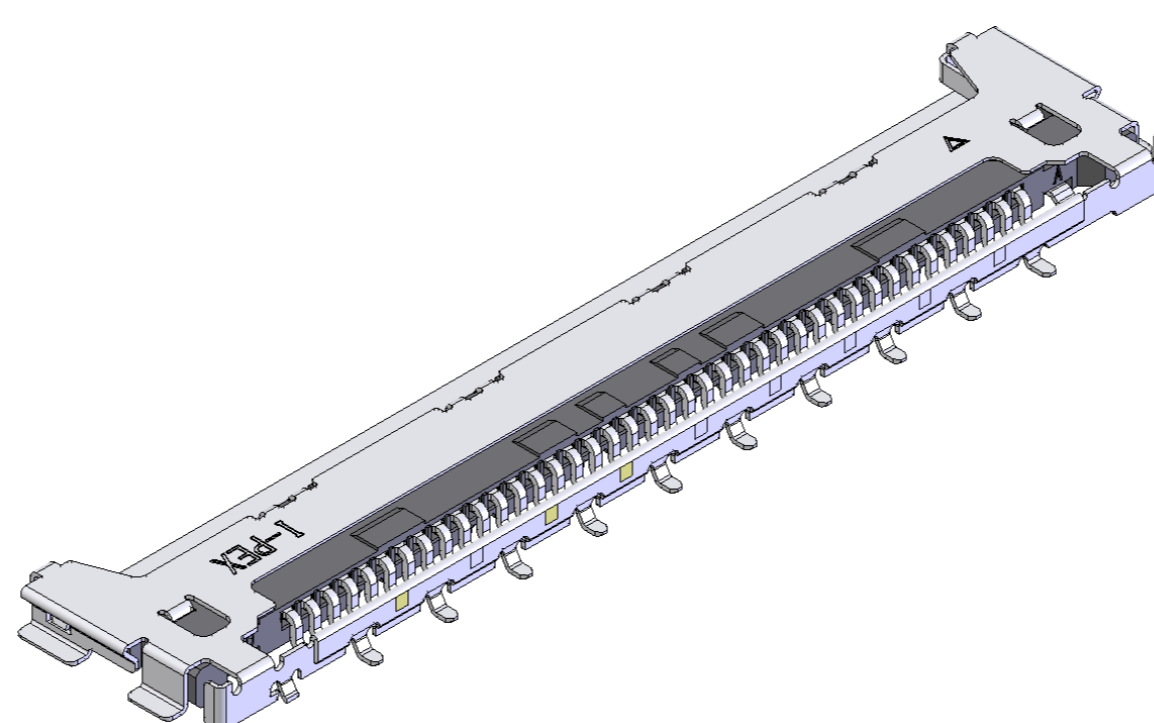
# Component Parts Details

## Component Parts

### Connector parts



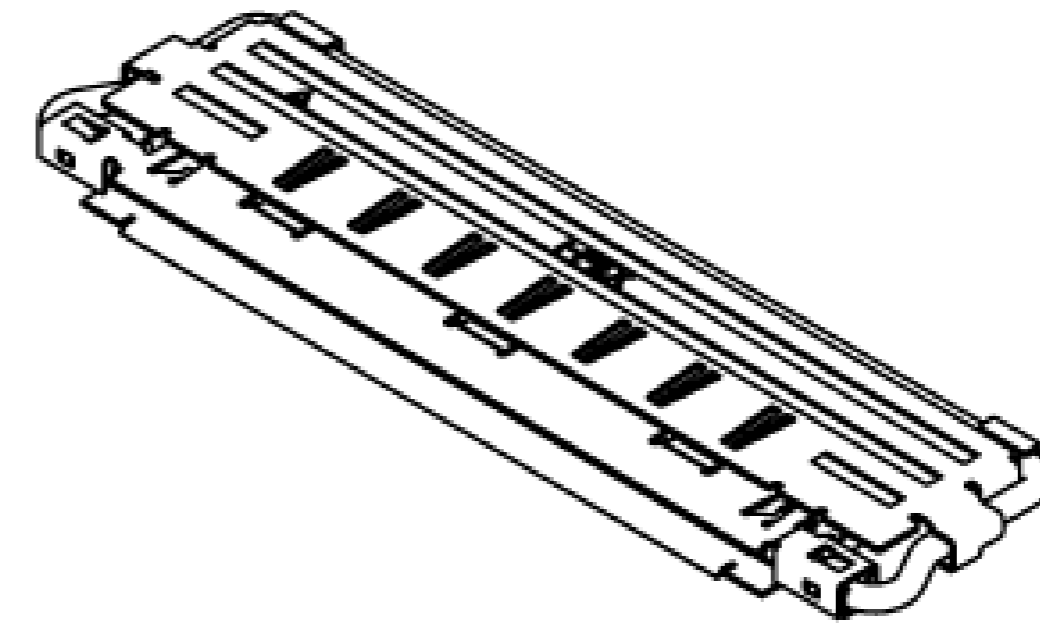
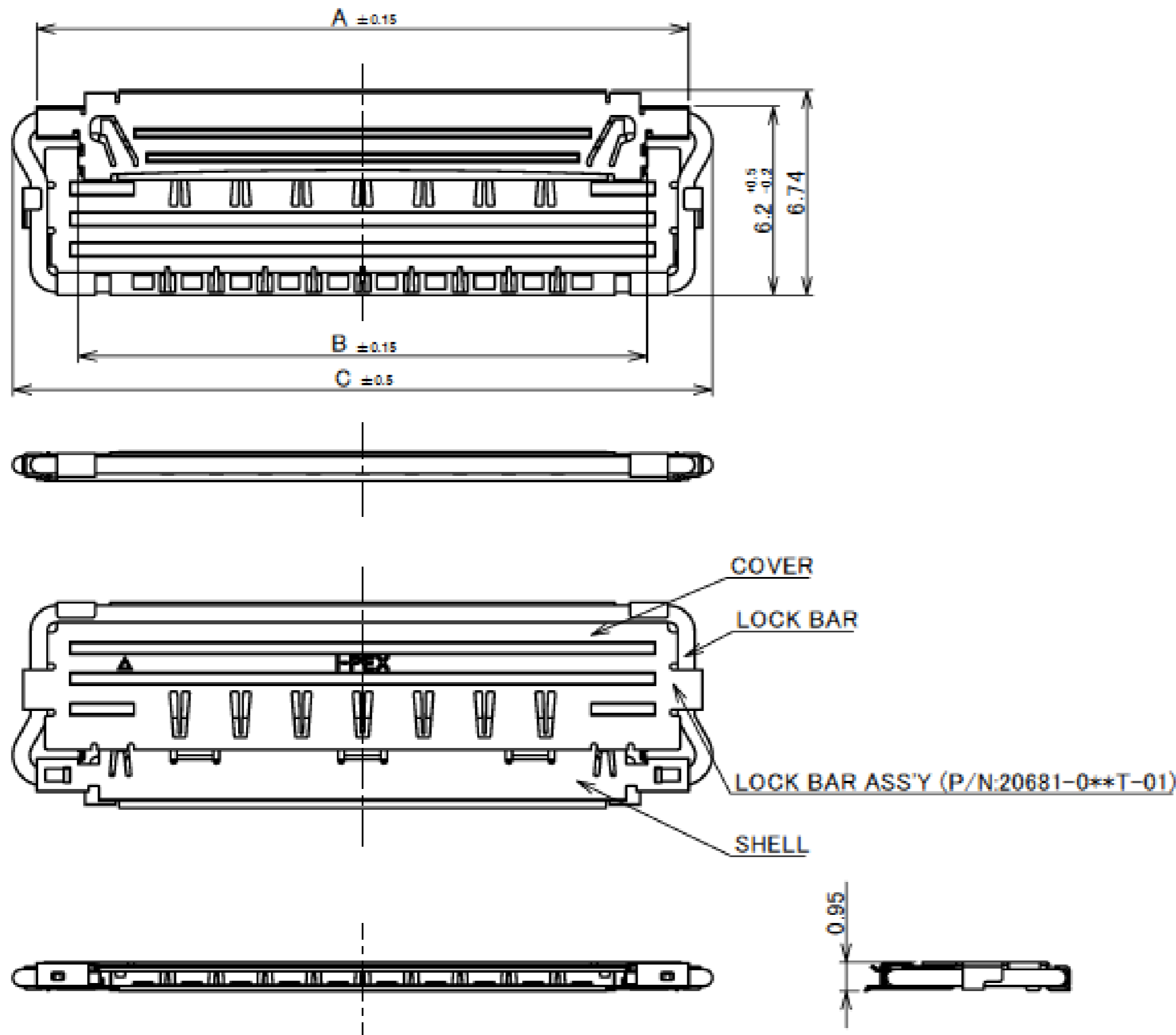
CABLINE-CA IIF PLUG with FPC



CABLINE-CA II RECEPTACLE

# Shell Assembly

Recommended P/N		20856-0**T-01		
PART No.	A	B	C	
20856-030T-01	17.40	14.66	18.95	
20856-040T-01	21.40	18.66	22.95	
20856-050T-01	25.40	22.66	26.95	

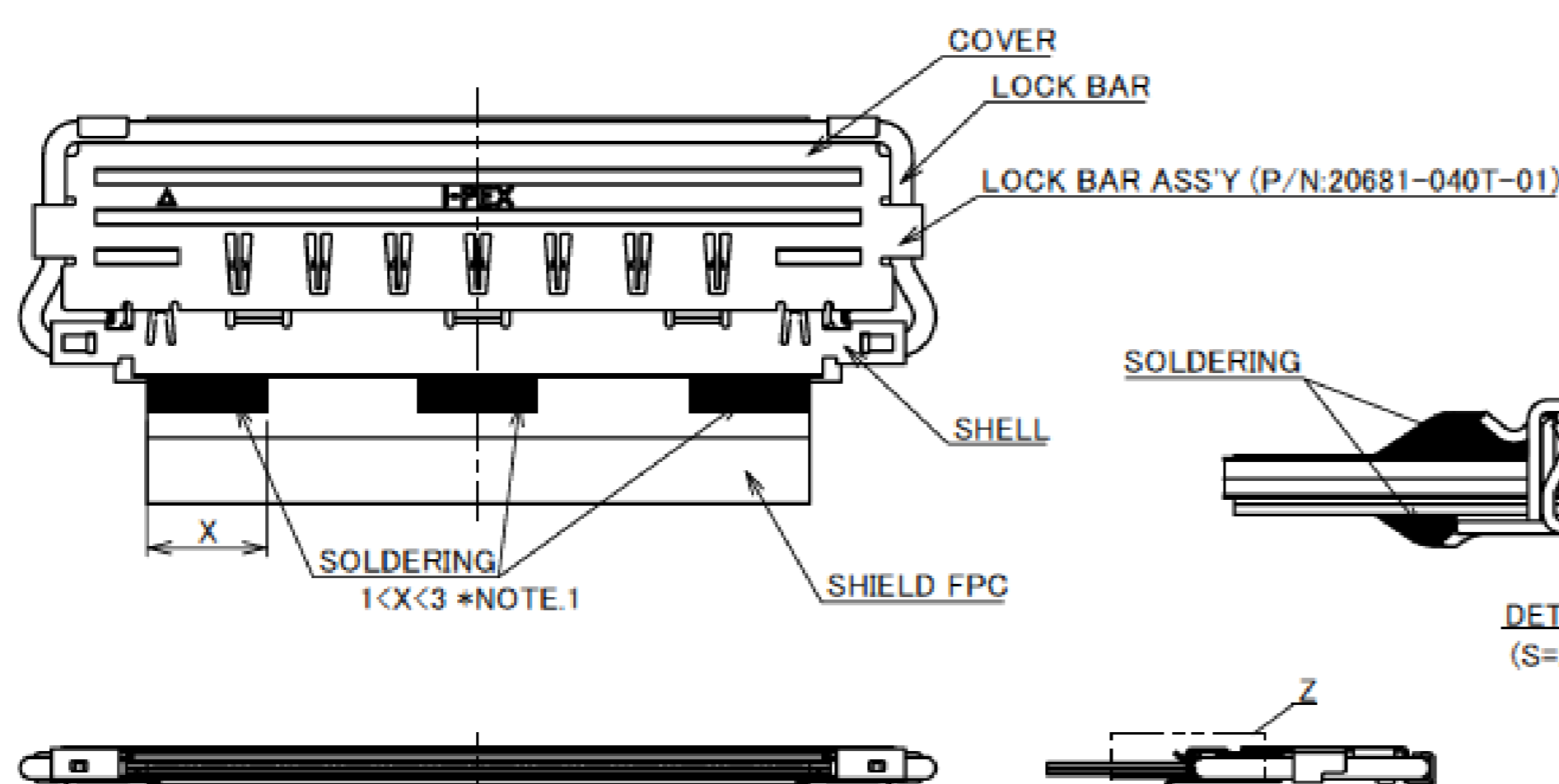
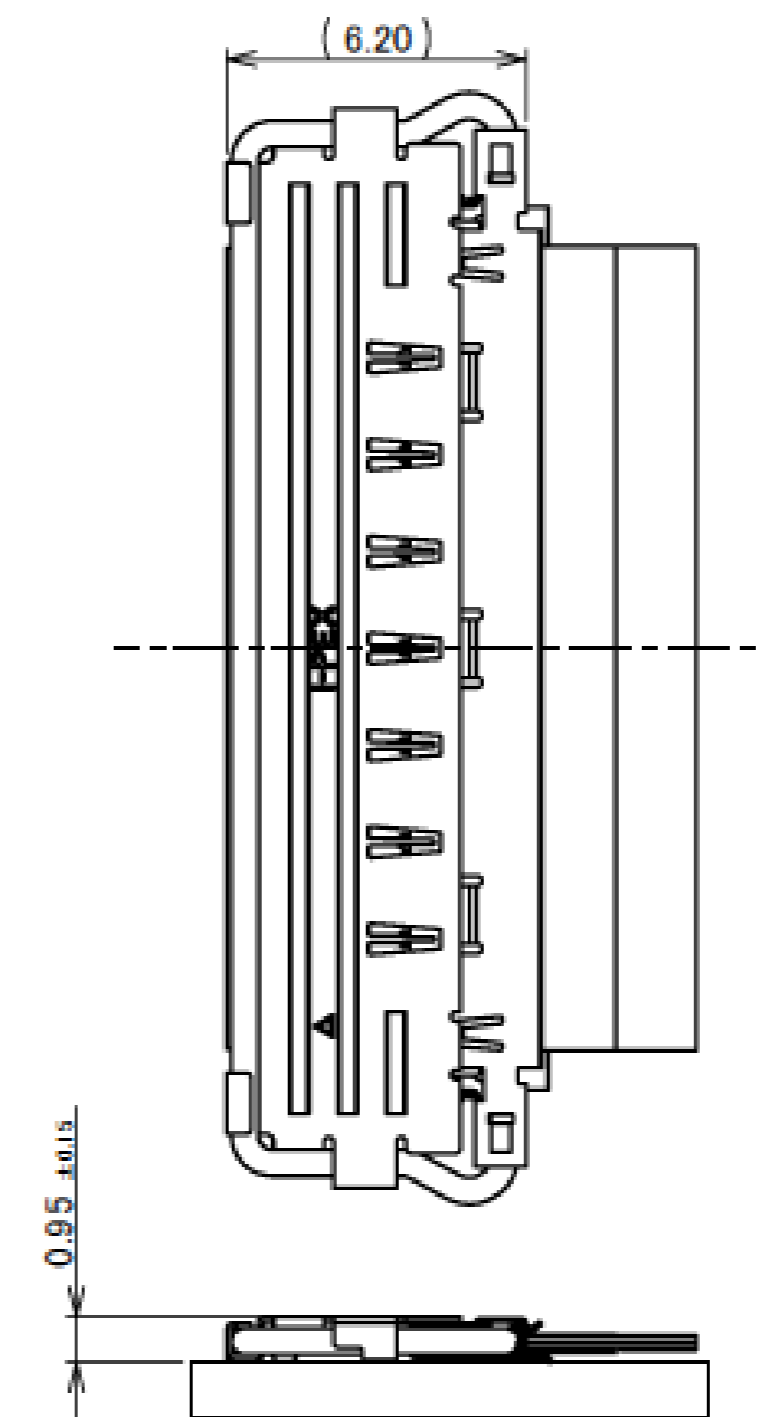
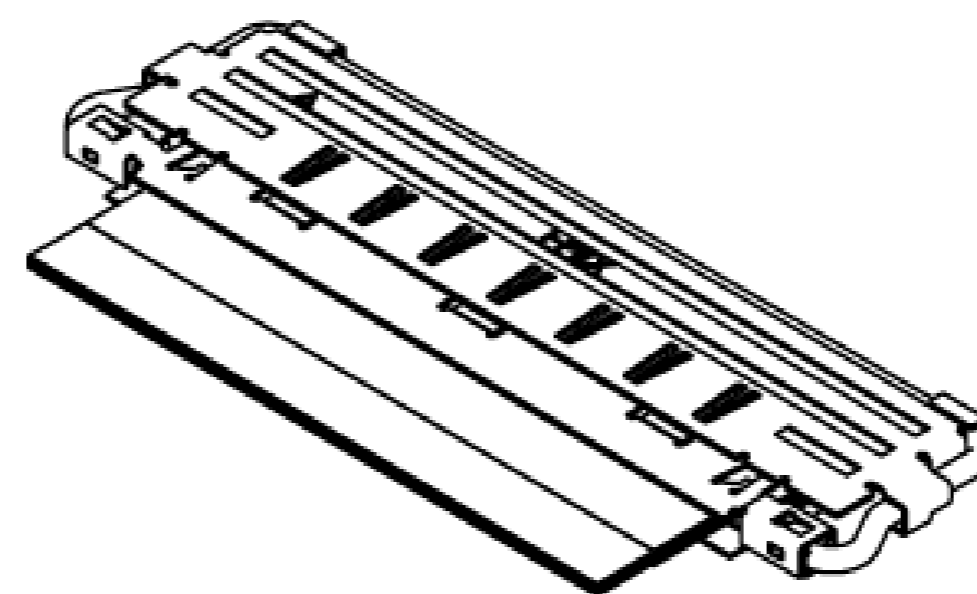
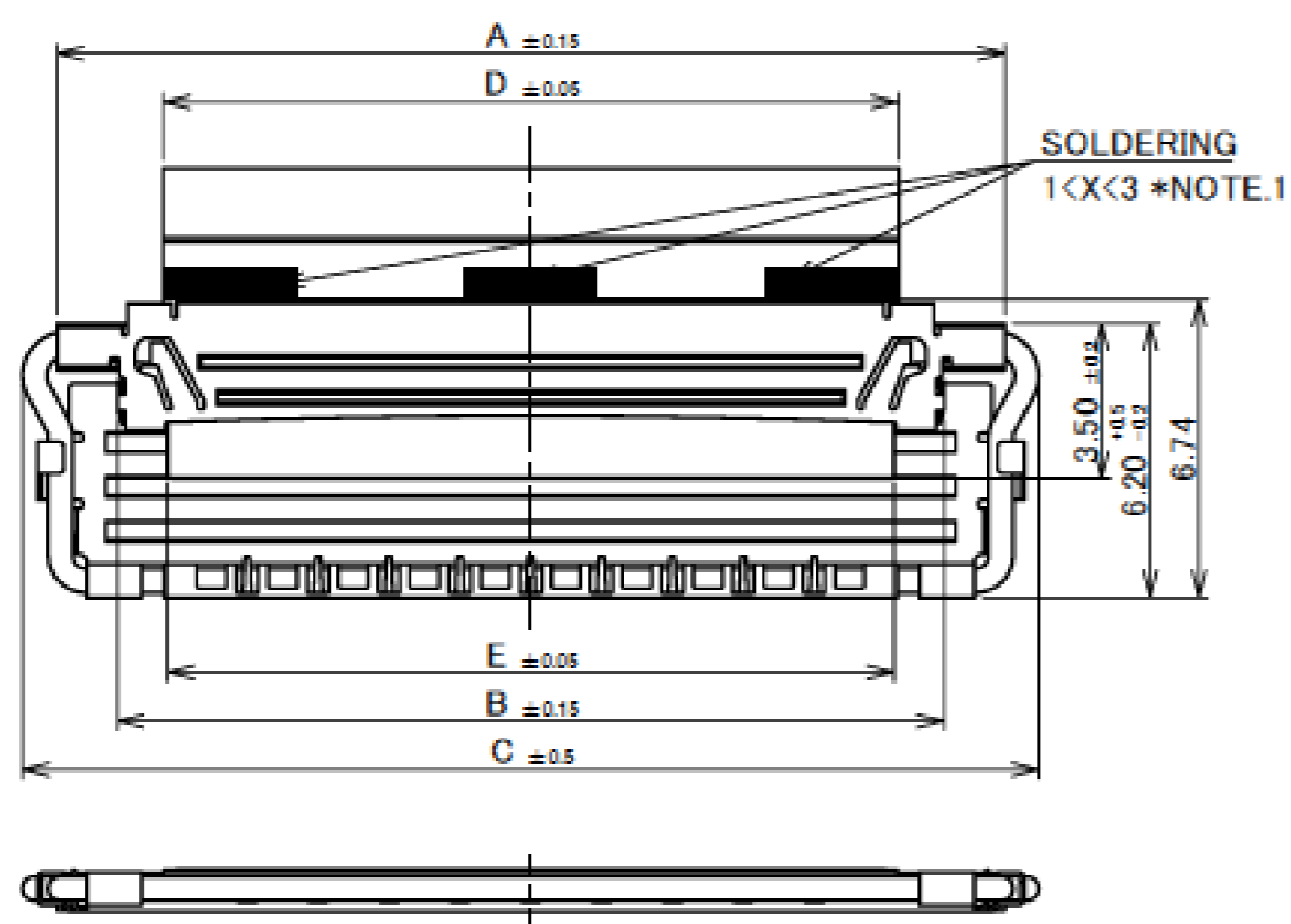


3	COVER	PHOSPHOR BRONZE	Ni PLATING
2	LOCK BAR	STAINLESS STEEL	-
1	SHELL	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

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Recommended P/N		20856-0**T-01				
PART No.	A	B	C	D	E	
20856-030T-01	17.40	14.66	18.95	12.60	12.40	
20856-040T-01	21.40	18.66	22.95	16.60	16.40	
20856-050T-01	25.40	22.66	26.95	20.60	20.40	

## FPC ASS'Y STATE COVER CLOSE



NOTES.  
1.Soldering Area X is recommended dimension.  
It does not mater if it might be exceed the recommended dimension.

Rev.13

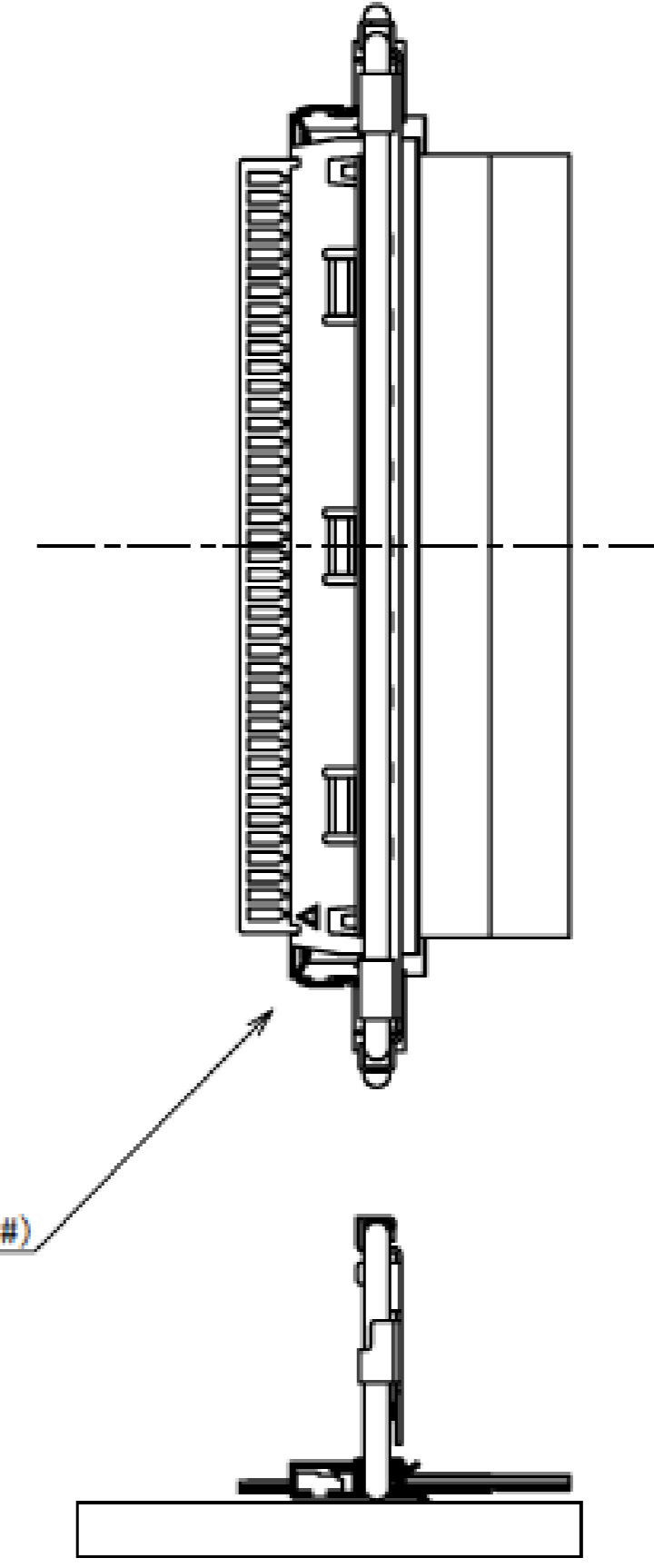
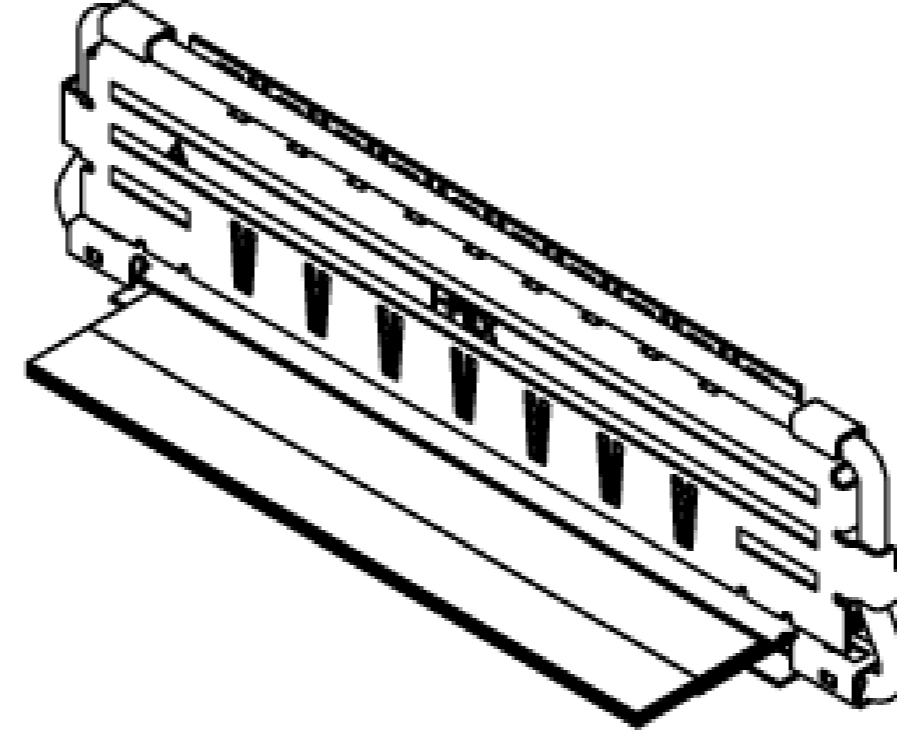
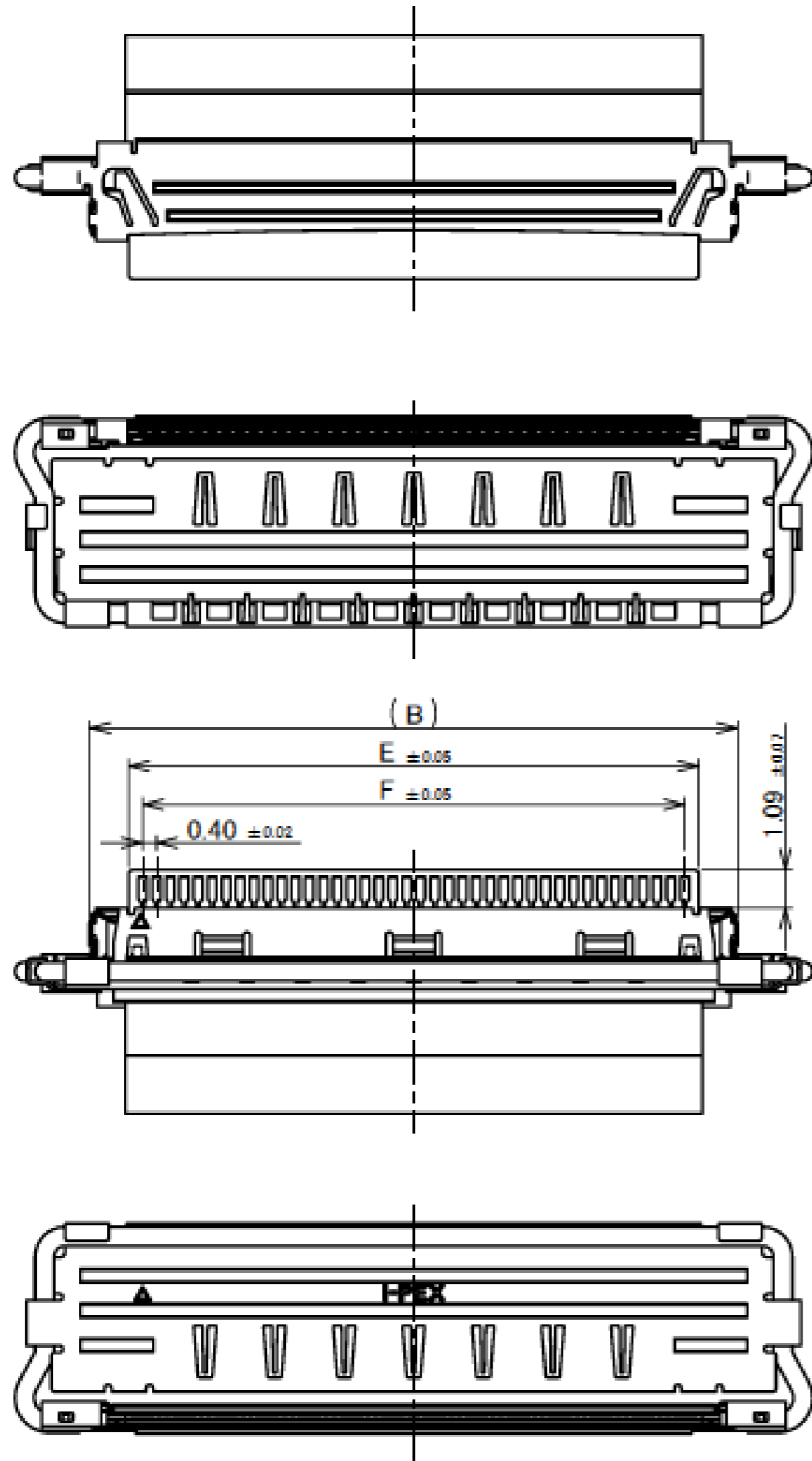
# Shell Assembly

Recommended P/N	20856-0**T-01		
PART No.	B	E	F
20856-030T-01	14.66	12.40	11.60
20856-040T-01	18.66	16.40	15.60
20856-050T-01	22.66	20.40	19.60

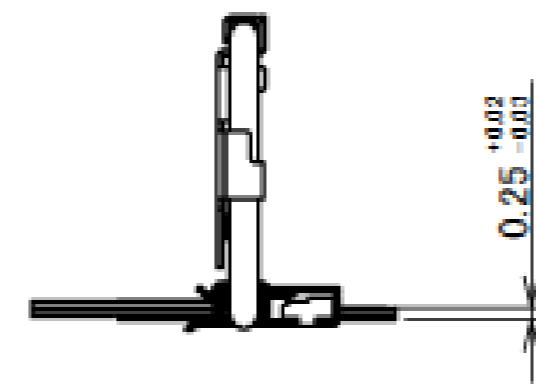


Halogen Free RoHS Compliant

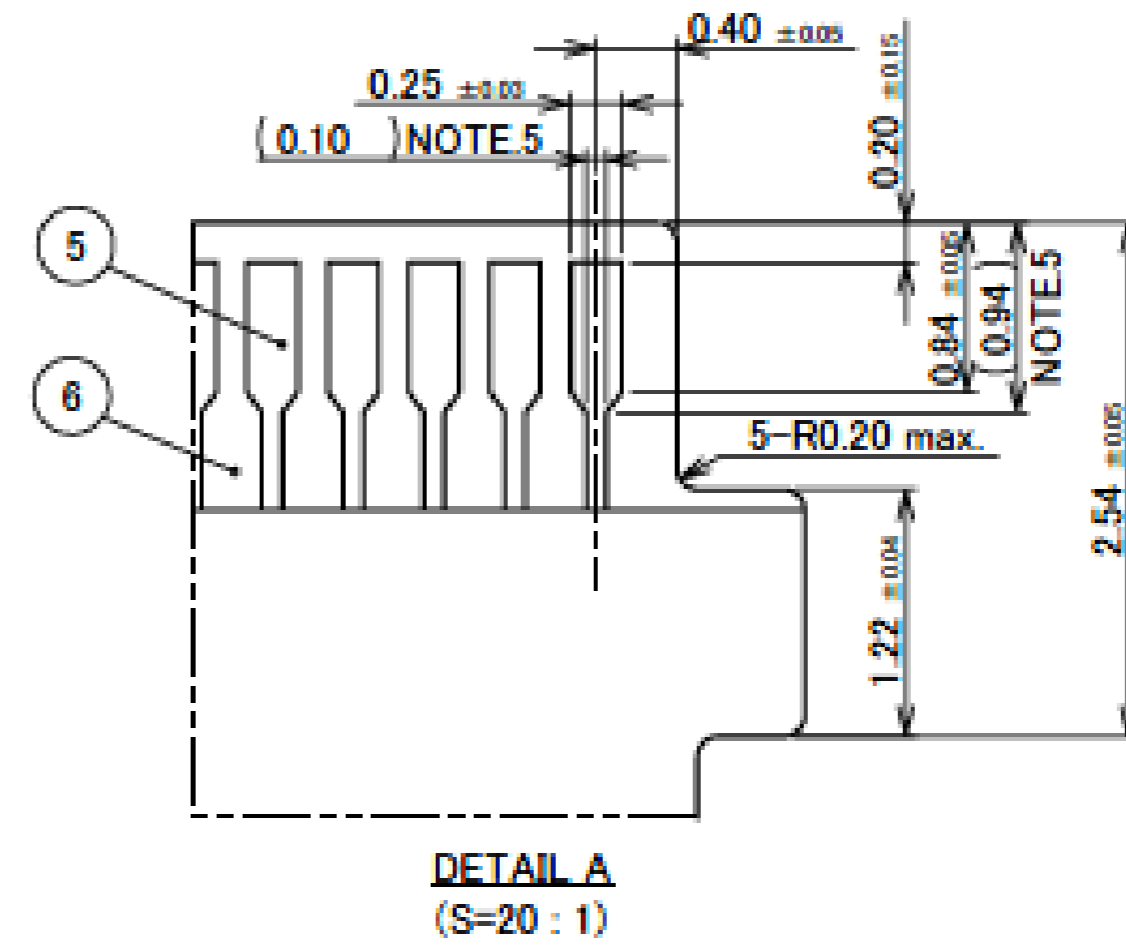
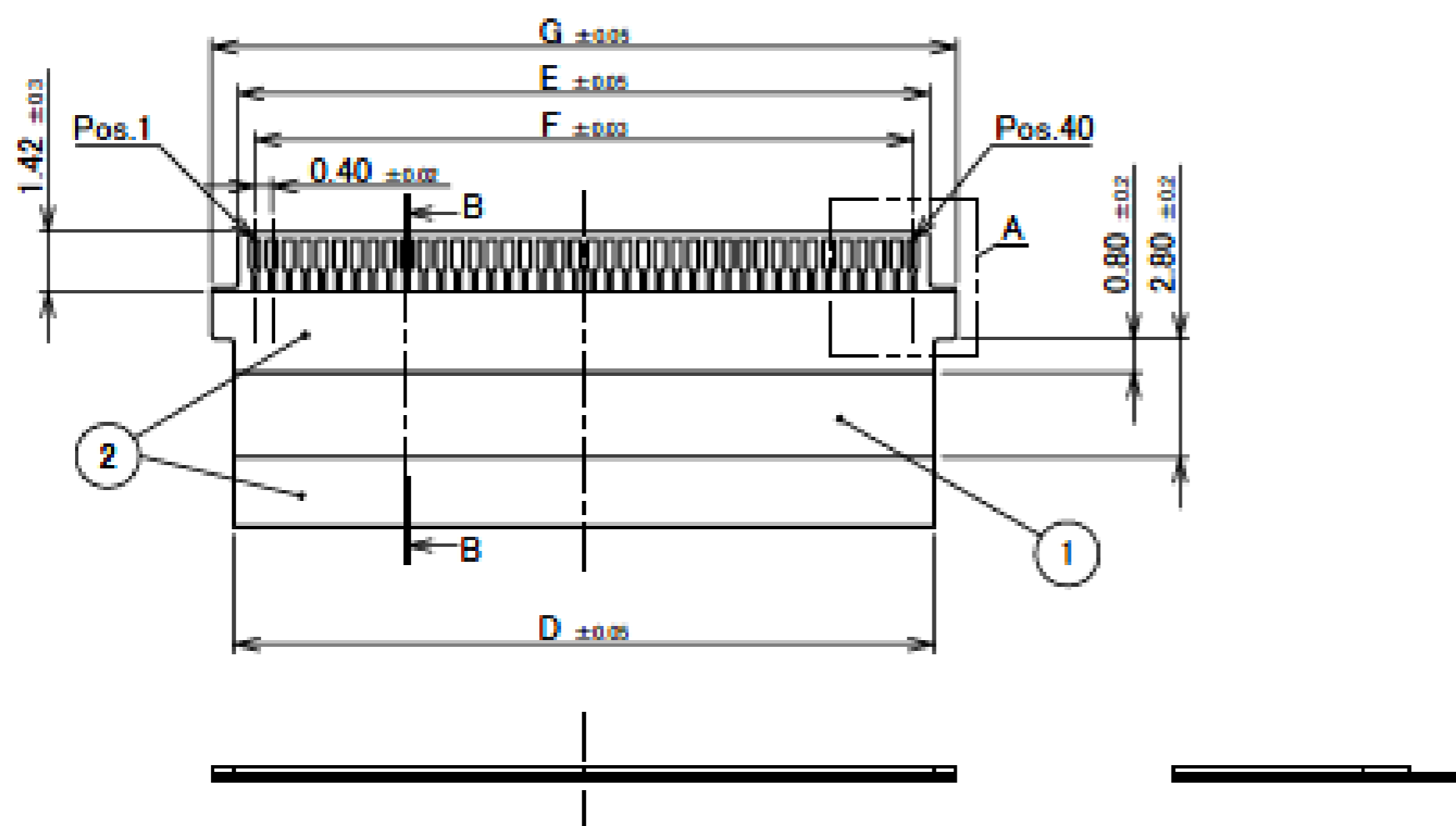
## FPC ASS'Y STATE COVER OPEN



**MATING CONDITION**



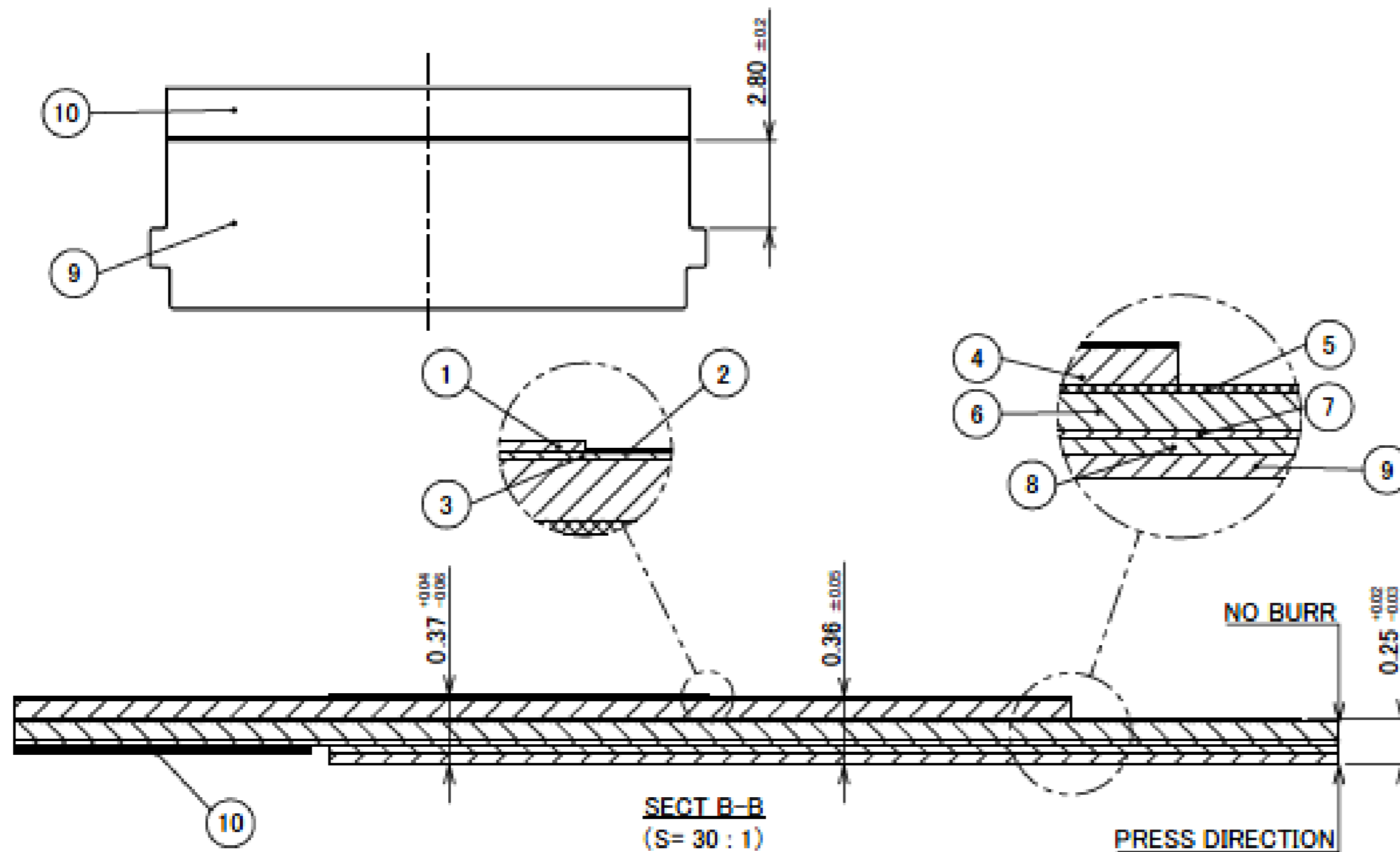
PART No.	D	E	F	G
20856-030T-01	12.60	12.40	11.60	13.66
20856-040T-01	16.60	16.40	15.60	17.66
20856-050T-01	20.60	20.40	19.60	21.66



### NOTES.

- No.1, 3, 7, 9 : CONDUCTOR (GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
- No.5 : SIGNAL Pos. AND No.1, 3, 7, 9 : CONDUCTOR (GROUND) ARE NOT CONTACTING.
- No.5 : GROUND Pos. AND No.1, 3, 7, 9 : CONDUCTOR (GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
- ADHESIVE SHOULD USE THERMOSETTING.
- NUMBERS WITHIN PARENTHESES ARE ARBITRARY DIMENSIONS. CHANGE DIMENSIONS IN ACCORDANCE WITH CHARACTERISTIC IMPEDANCE VALUE.

No.	DESCRIPTION	Cu	Ni, Au
1	CONDUCTOR(GROUND)	Cu	Ni, Au
2	INSULATOR	-	-
3	CONDUCTOR(GROUND)	Cu	-
4	INSULATOR	-	-
5	CONDUCTOR(SIGNAL, GROUND)	Cu	Ni, Au
6	INSULATOR	-	-
7	CONDUCTOR(GROUND)	Cu	-
8	CONDUCTIVE ADHESIVE	-	-
9	REINFORCING TAPE & CONDUCTOR(GROUND)	SUS	Ni
10	INSULATOR	-	-
No.	DESCRIPTION	MATERIAL PLATING	



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Rev.13

# Shell Assembly

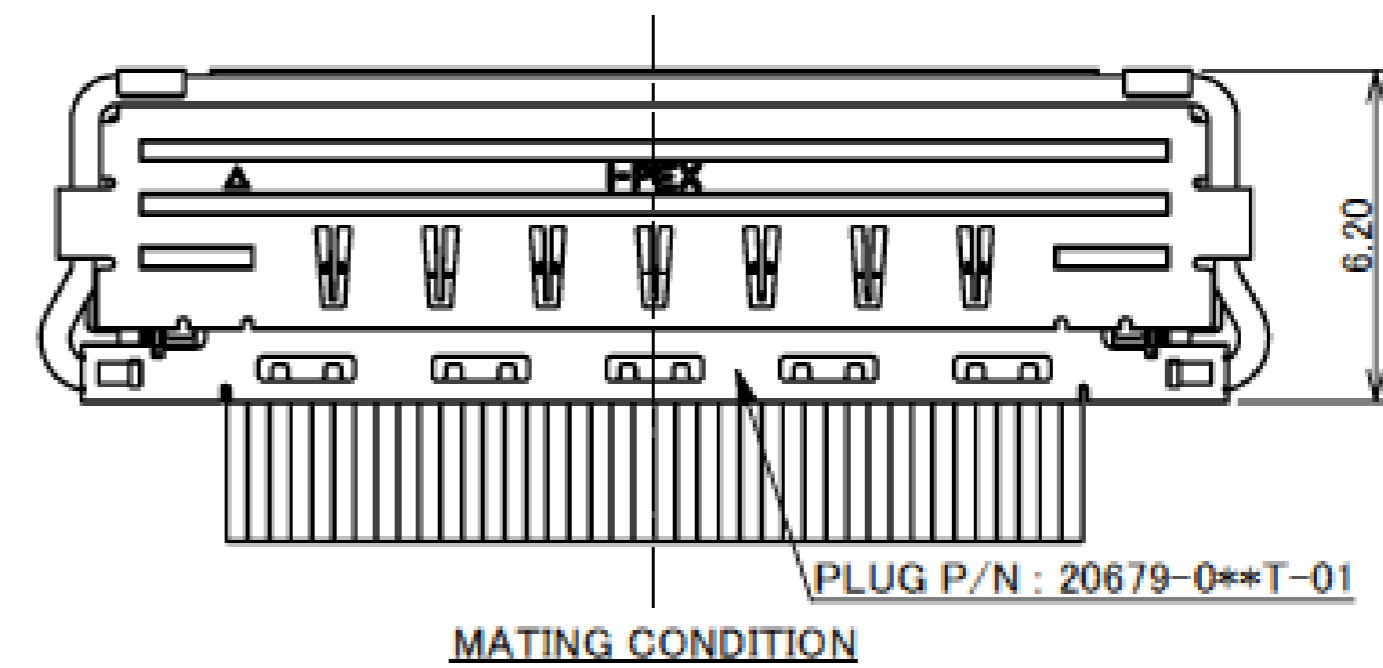
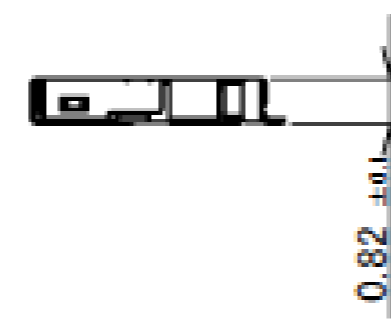
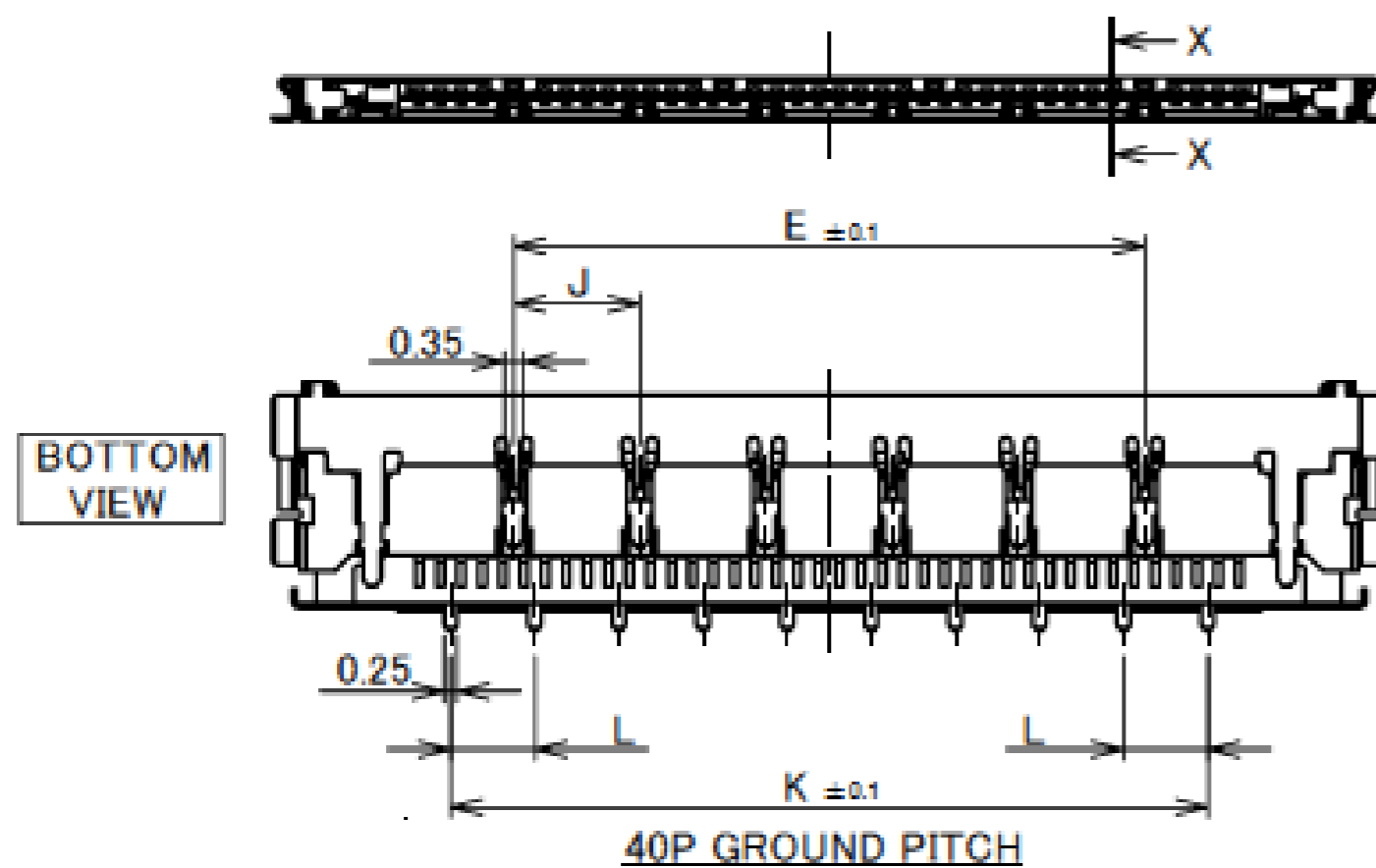
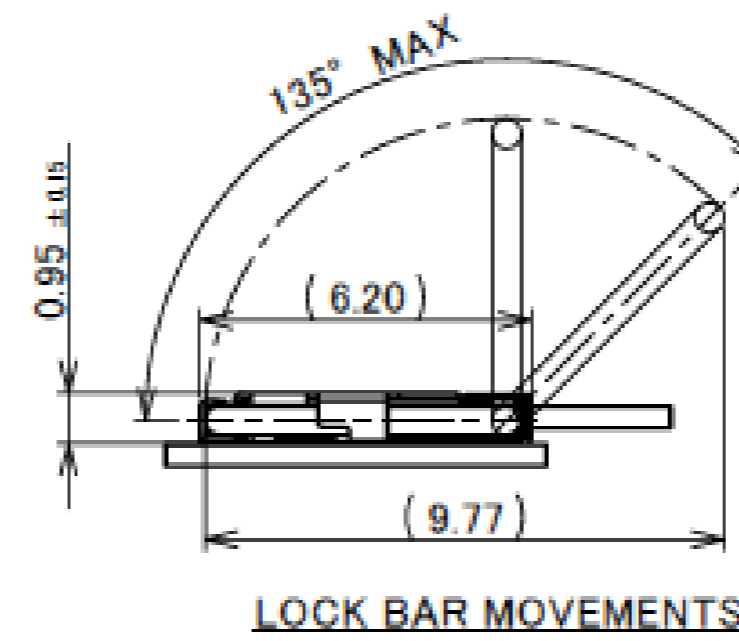
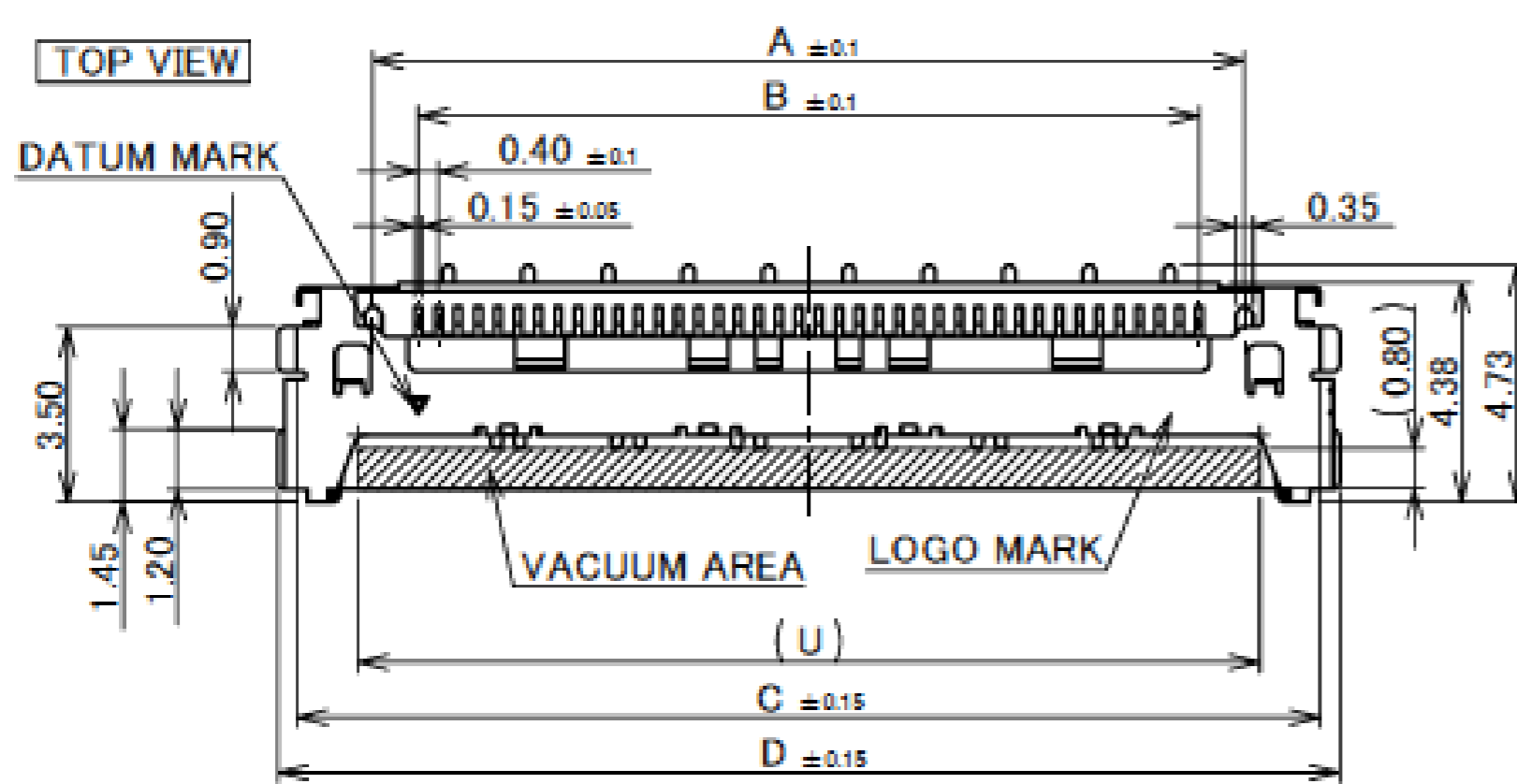
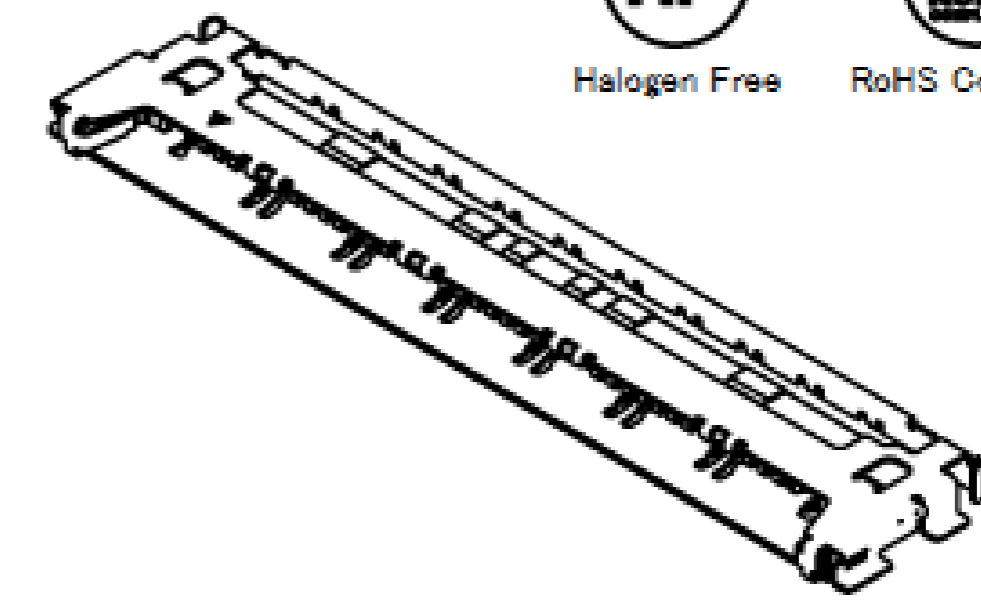
ITEMS	SPECIFICATION
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : $\leq$ 40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : $\leq$ 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 : 13.5N MAX. 40P : 18.0N MAX. 50P : 22.5N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	30P : 1.44N MIN. 40P : 1.92N MIN. 50P : 2.40N MIN.
PRODUCT SPECIFICATION	PRS-2418
TEST REPORT	TR-17079
PACKING STANDARD	PST-17104
INSTRUCTION MANUAL	HIM-17029
ASSEMBLY MANUAL	ASM-17006
APPEARANCE CRITERIA No.	QLS-A***

Rev.13

# Receptacle Assembly

Recommended P/N	20682-0**E-02										
PART NO.	Pos.	A	B	C	D	E	J	K	L	U	
20682-020E-02	20	9.40	7.60	12.43	13.20	4.80	2.40	5.60	2.00	10.01	
20682-030E-02	30	13.40	11.60	16.43	17.20	9.60	2.40	12.00	1.60	14.01	
20682-040E-02	40	17.40	15.60	20.43	21.20	12.00	2.40	14.40	1.60	18.01	
20682-050E-02	50	21.40	19.60	24.43	25.20	16.80	2.80	18.40	1.60	22.01	

P/N : 20682-0 \*\* E- 02  
Pos.

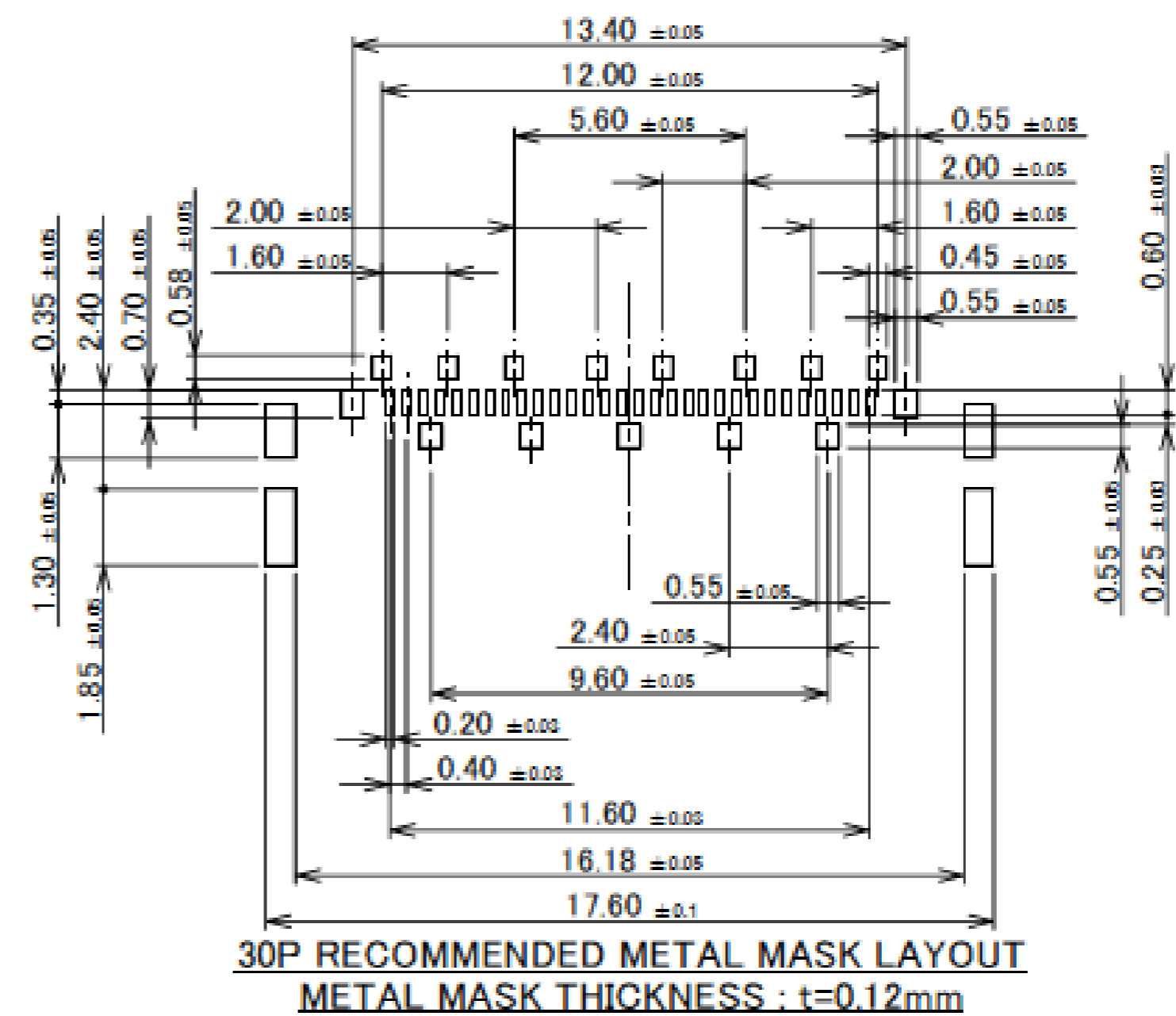
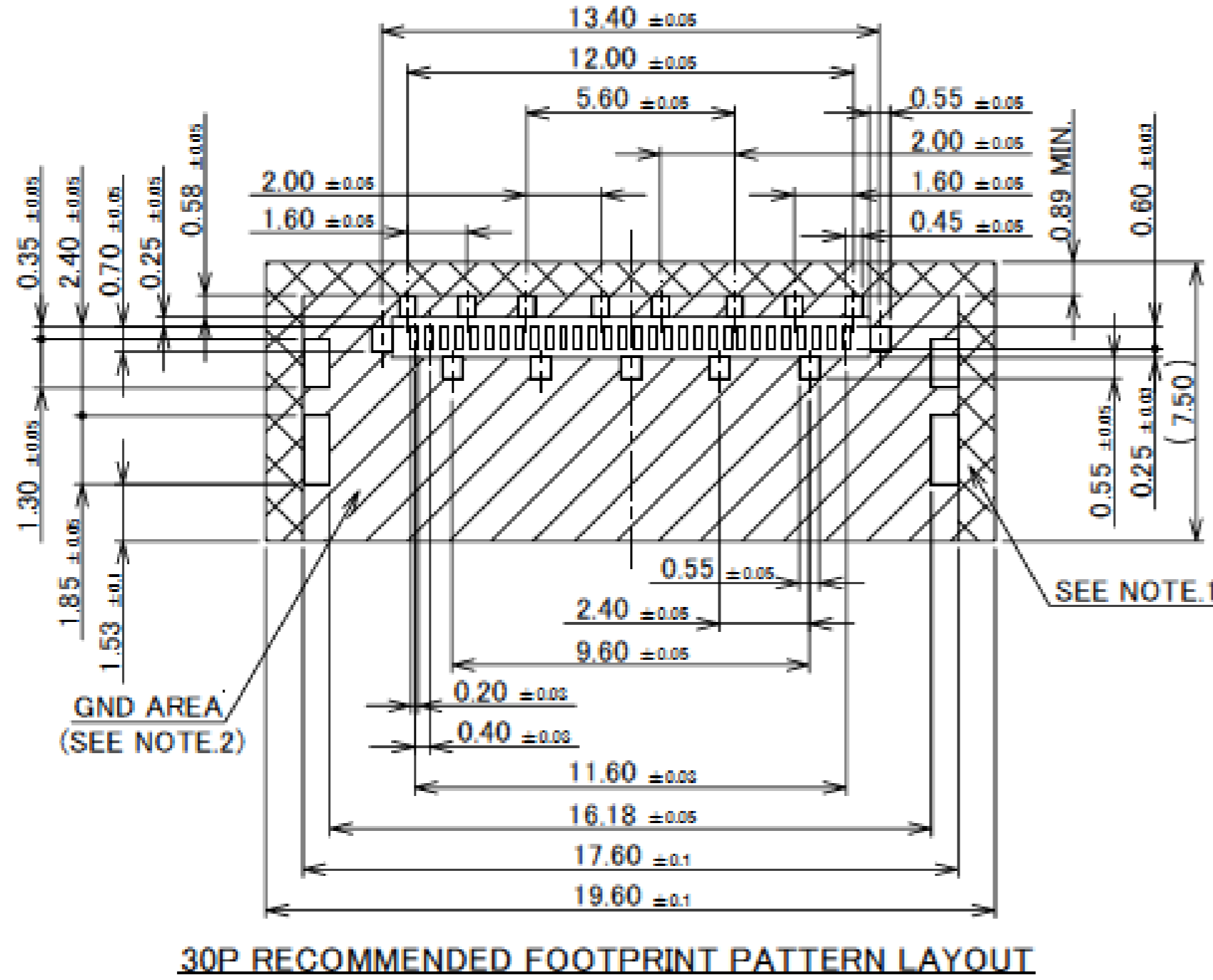
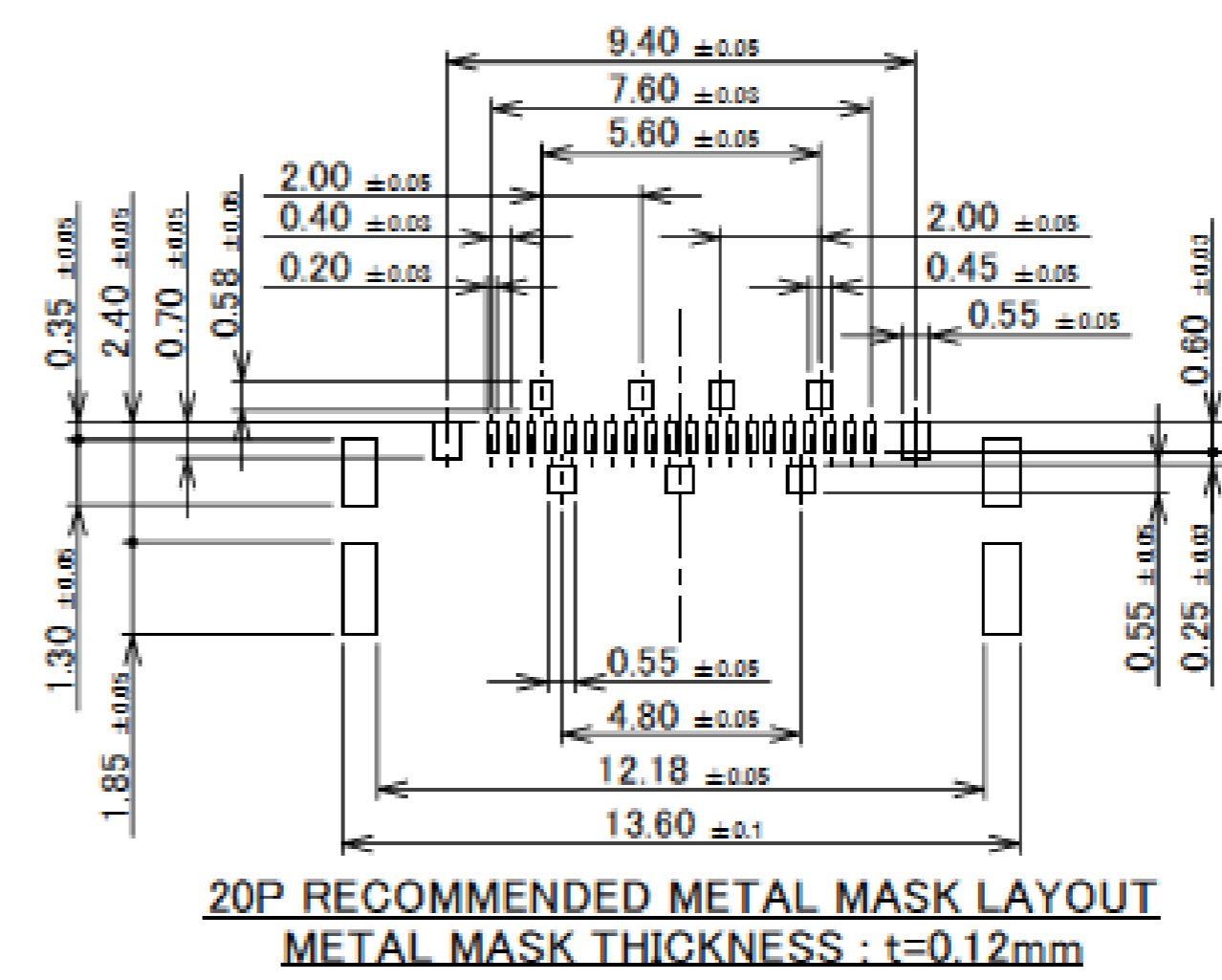
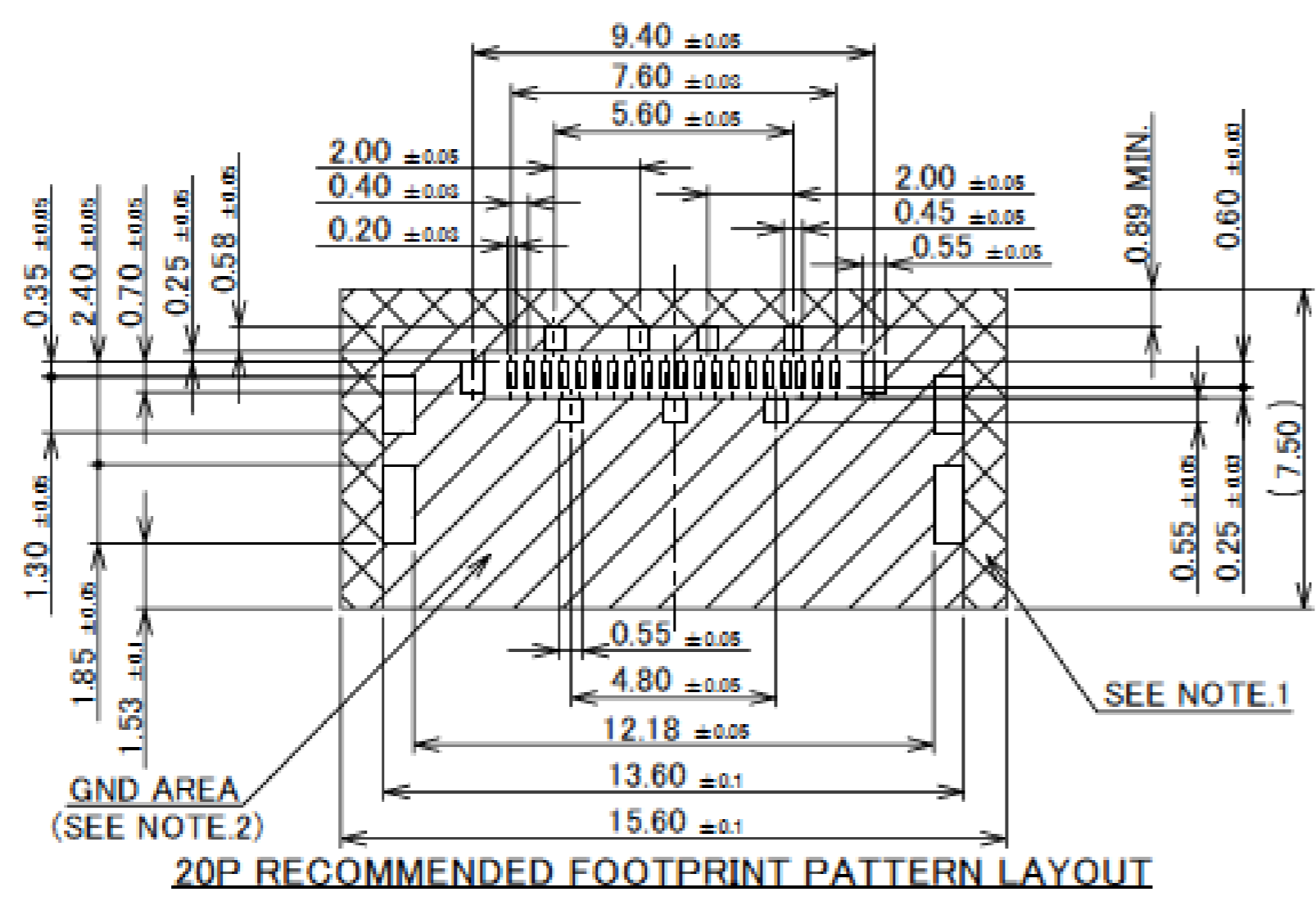
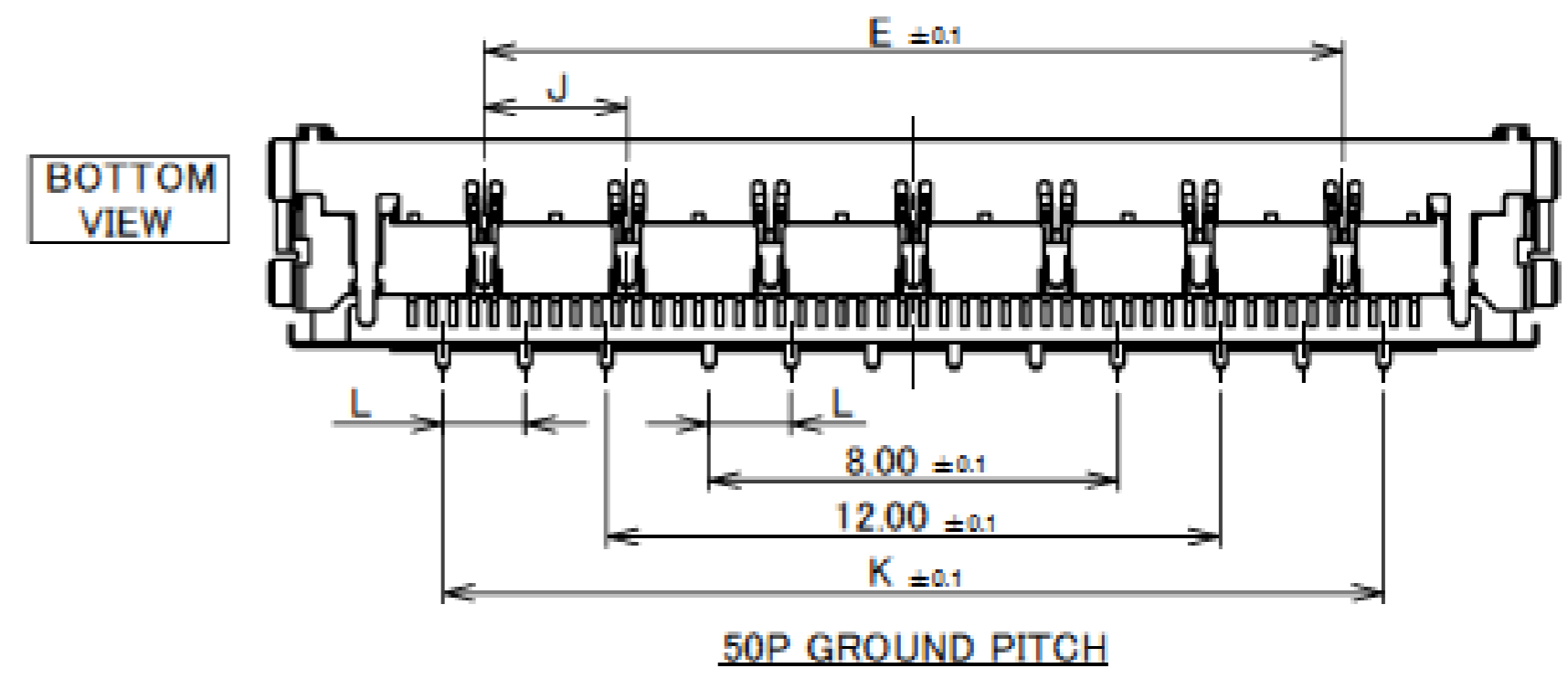
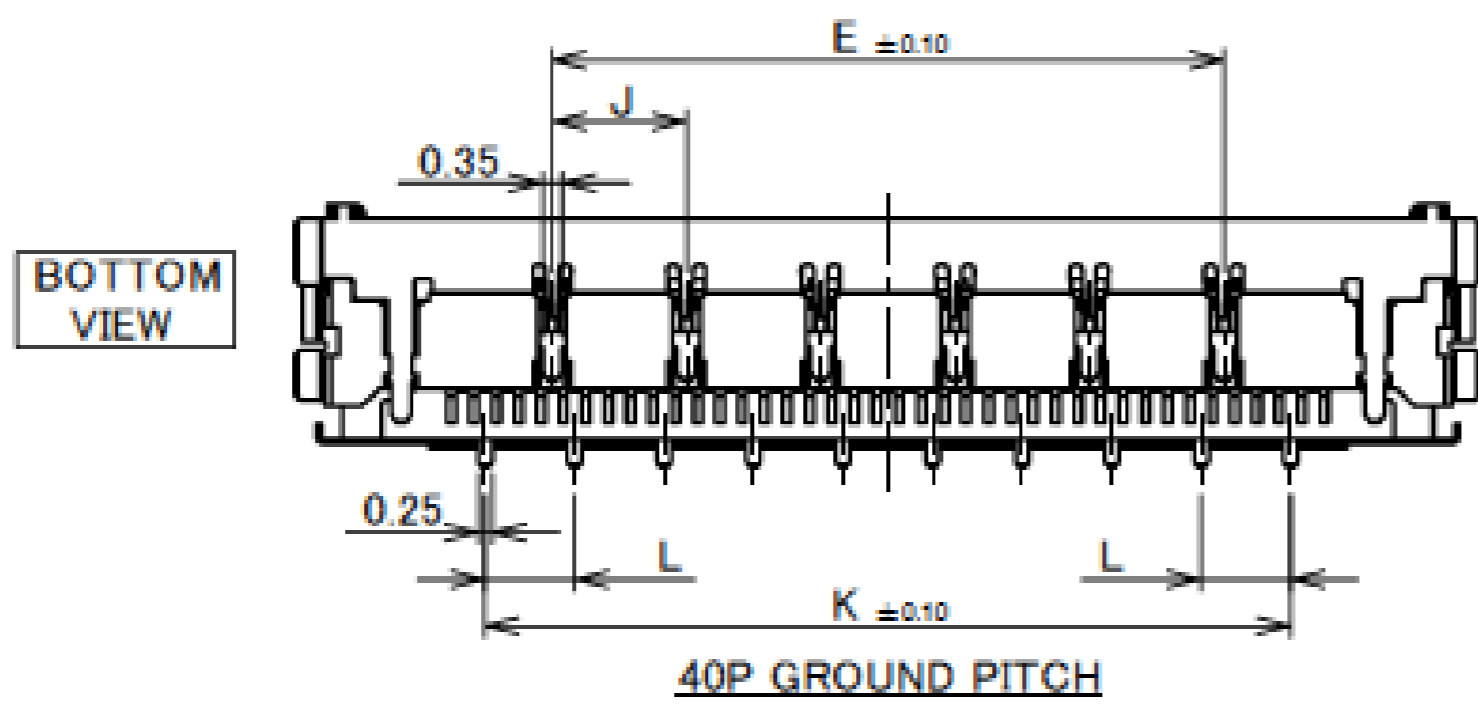
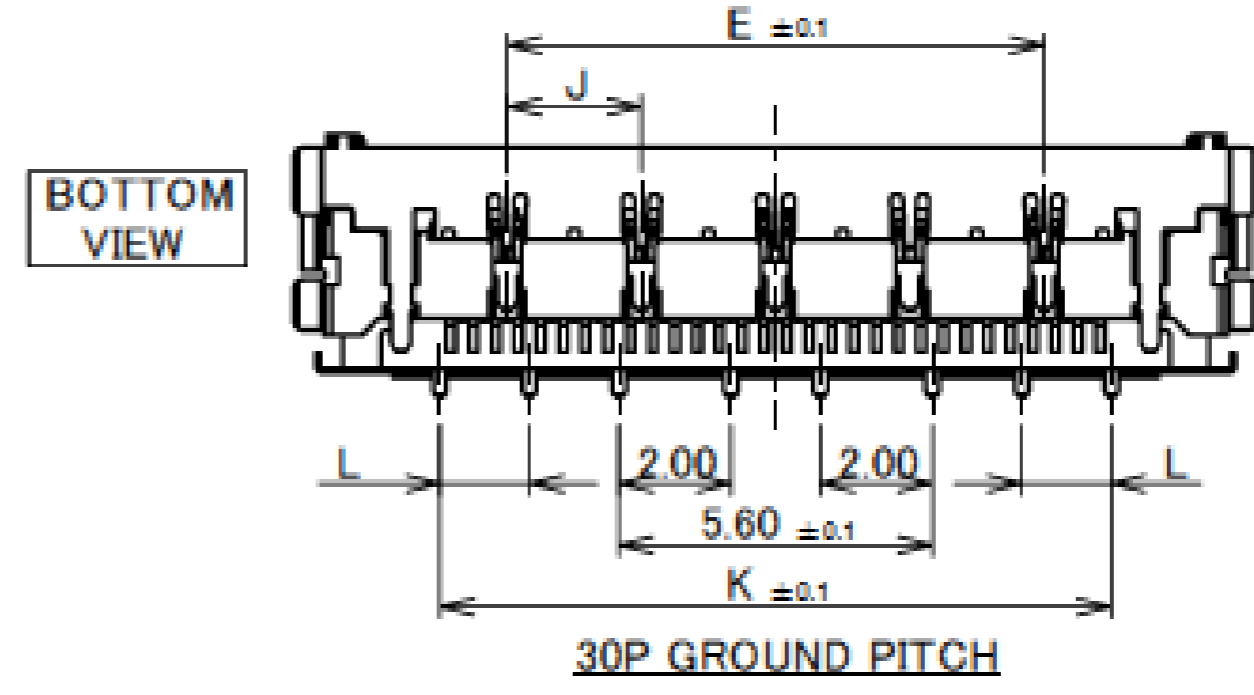
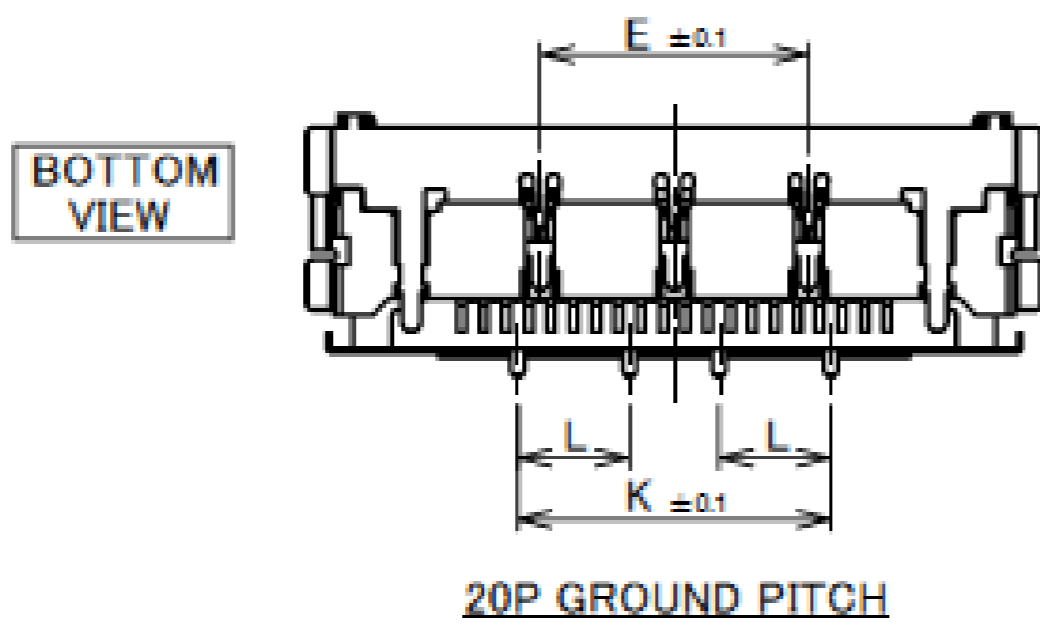


3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 $\mu$ m MIN. SOLDERING AREA : Au 0.03 $\mu$ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 $\mu$ m MIN. CONTACT & SOLDERING AREA : Au 0.03 $\mu$ m MIN.
1	HOUSING	LCP	UL94V-0 BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.16

# Receptacle Assembly

PART NO.	Pos.	E	J	K	L
20682-020E-02	20	4.80	2.40	5.60	2.00
20682-030E-02	30	9.60	2.40	12.00	1.60
20682-040E-02	40	12.00	2.40	14.40	1.60
20682-050E-02	50	16.80	2.80	18.40	1.60

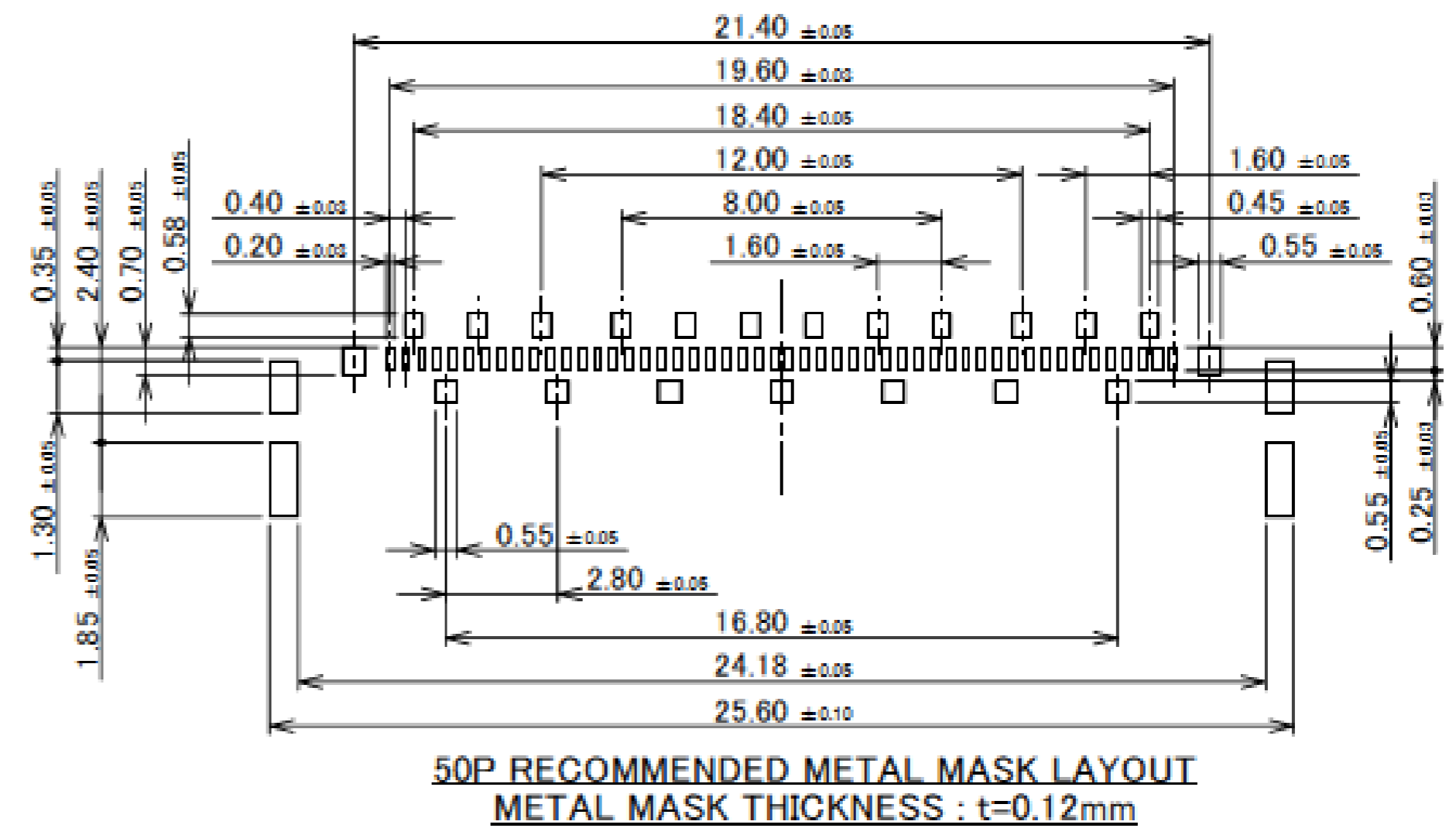
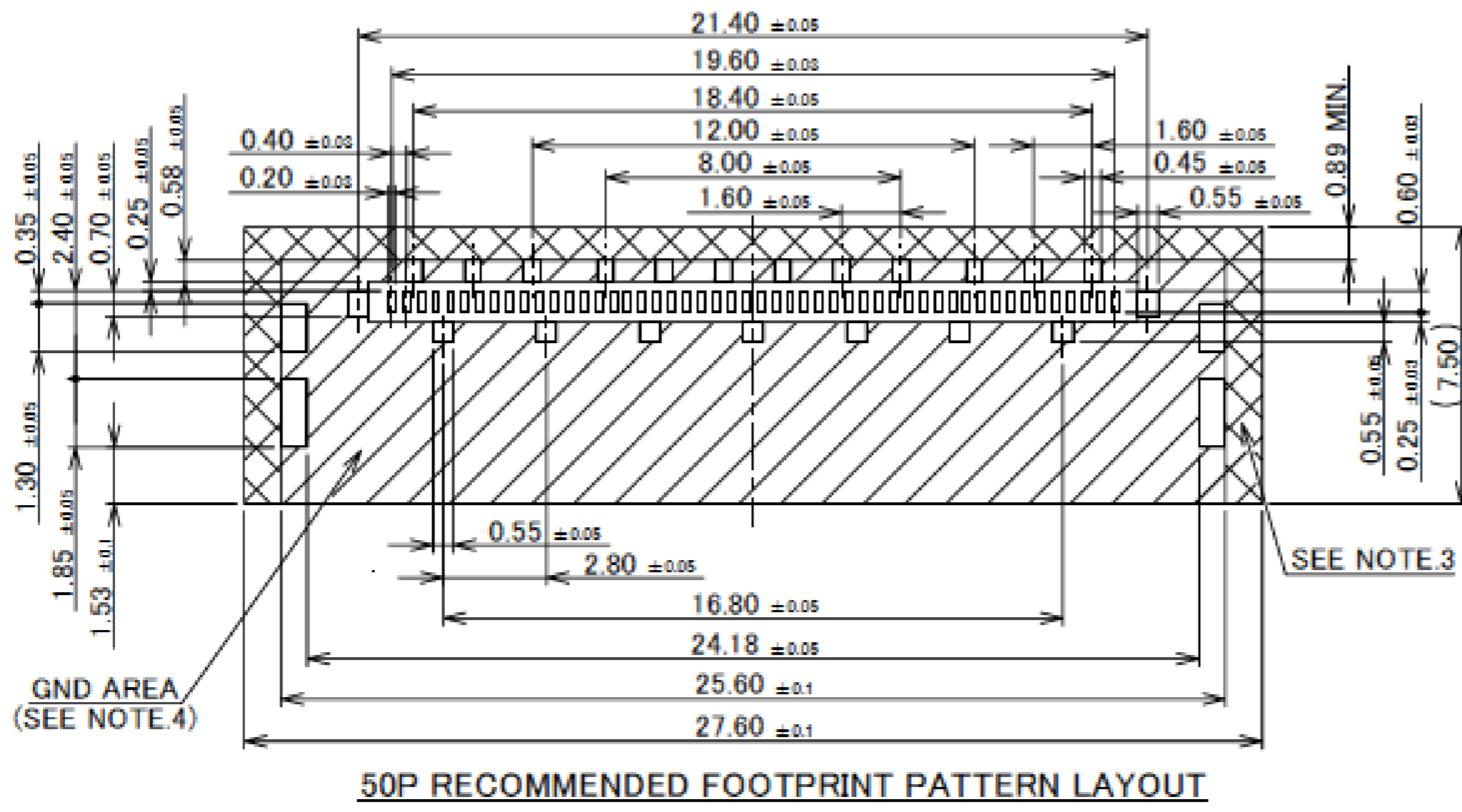
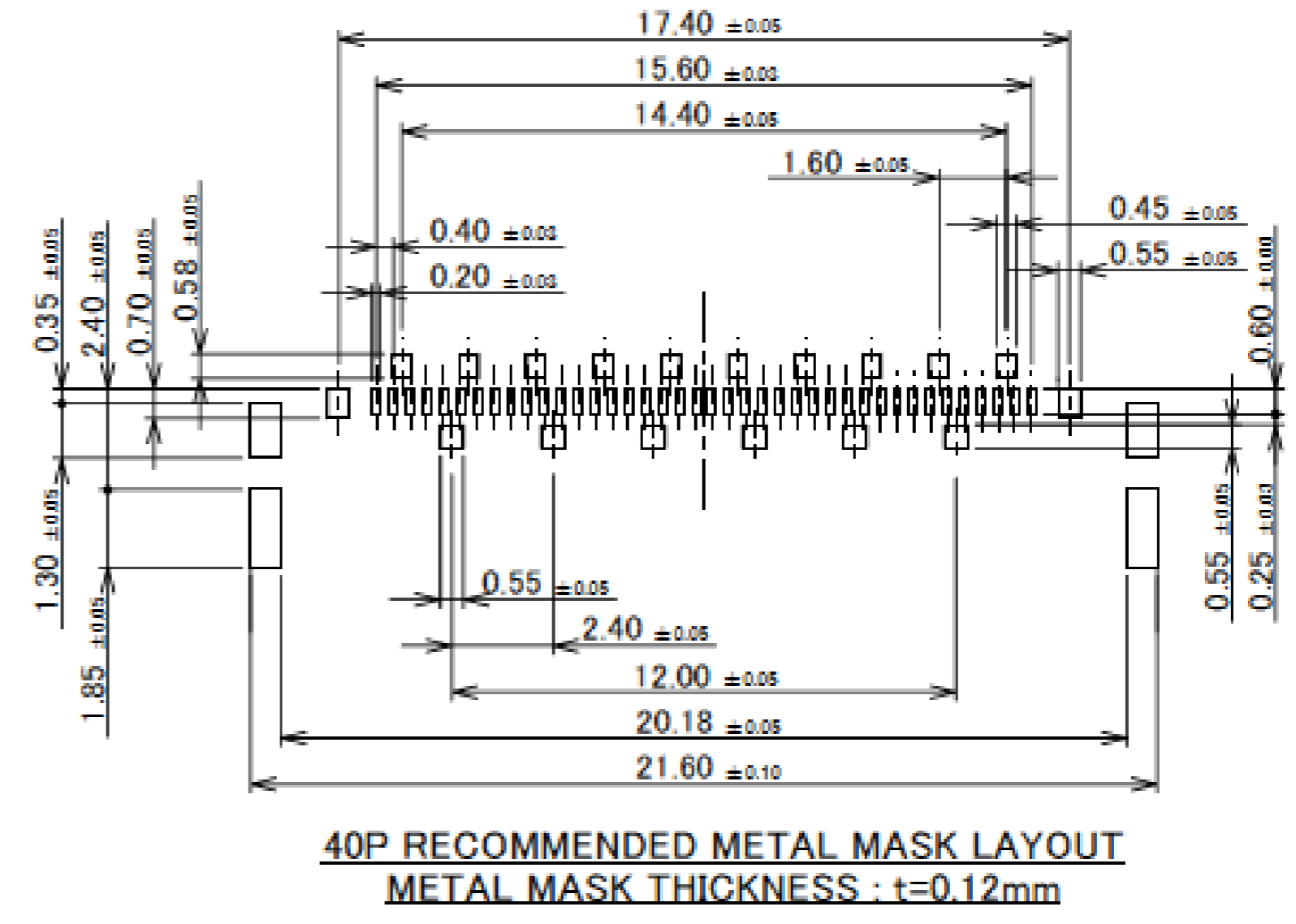
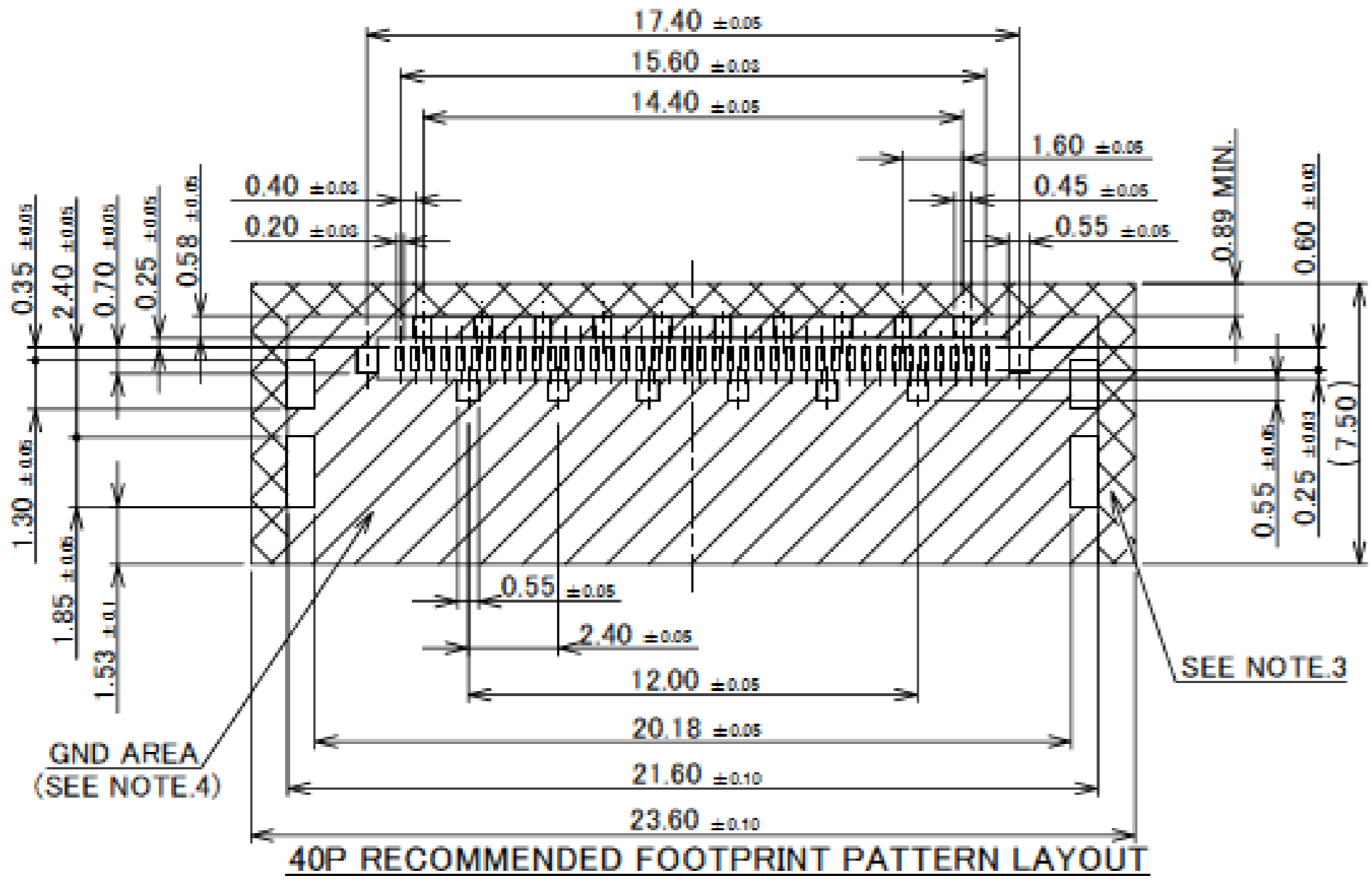


- NOTES:  
 1. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.  
 2. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.16

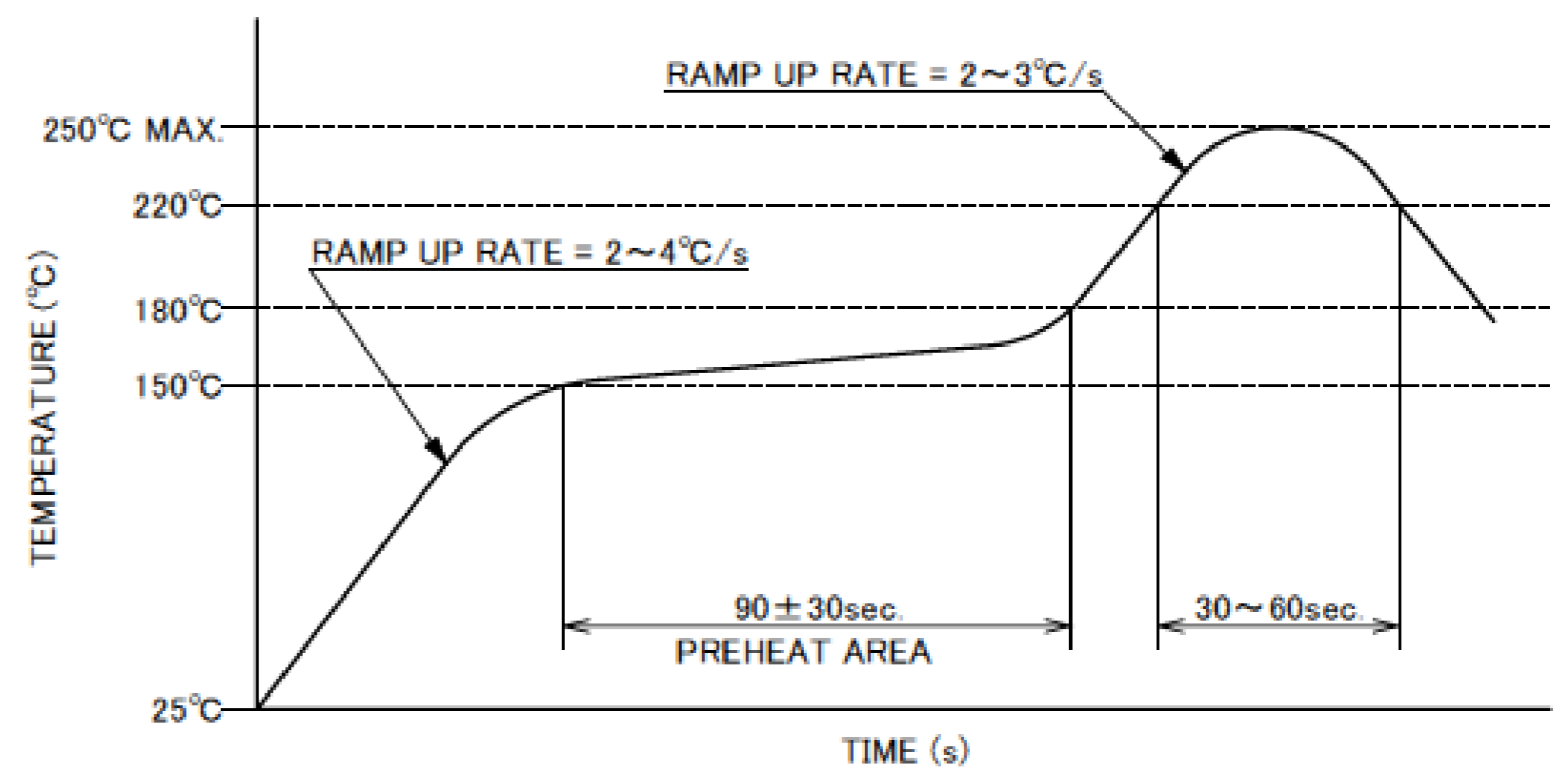
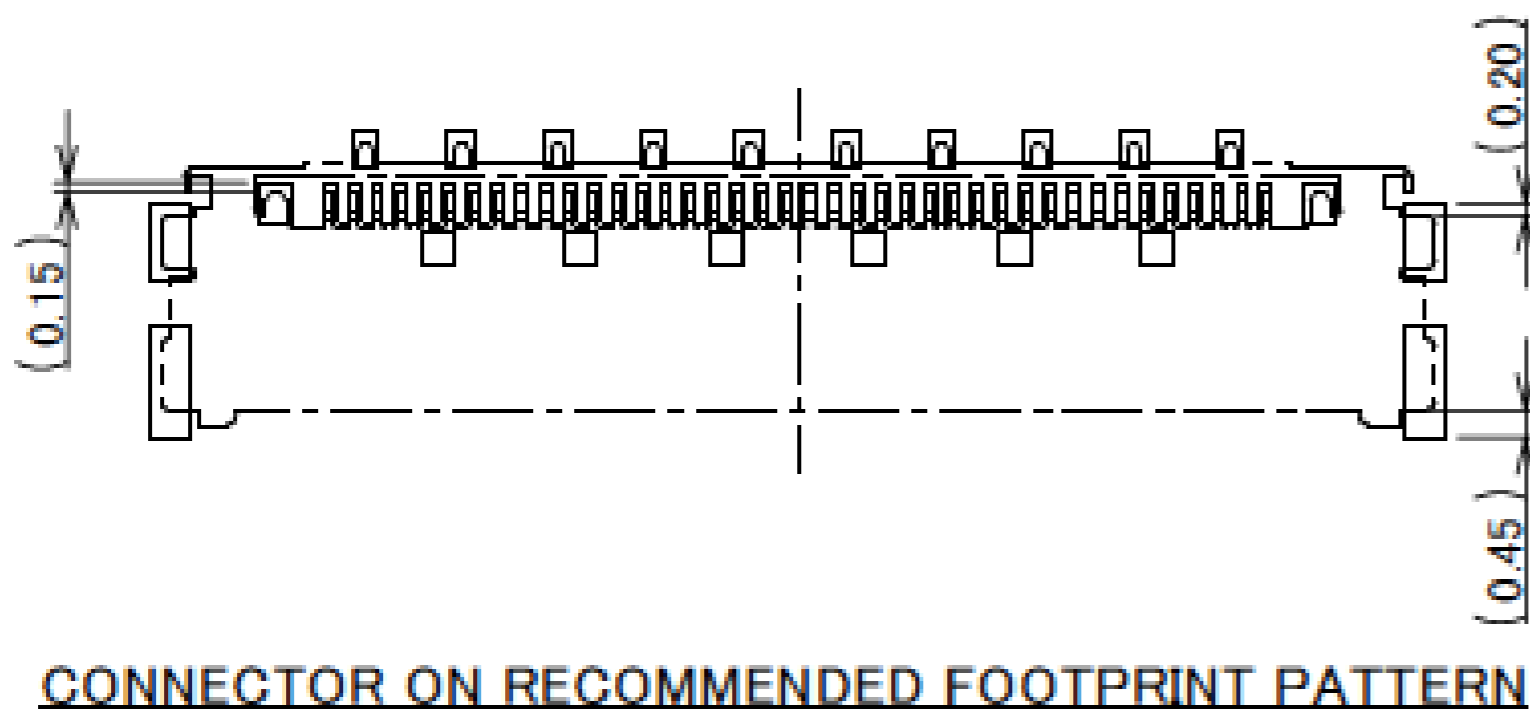
Rev.16

# Receptacle Assembly



- NOTES.  
3. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.  
4. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.16



# Receptacle Assembly

FOR CABLINE-CA IIF PLUG SHELL ASSEMBLY (DWG. NO. 20856)

ITEMS	SPECIFICATION
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT 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% MAX.(NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : $\triangleleft$ 40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : $\triangleleft$ 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 : 13.5N MAX. 40P : 18.0N MAX. 50P : 22.5N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	30P : 1.44N MIN. 40P : 1.92N MIN. 50P : 2.40N MIN.
PRODUCT SPECIFICATION	PRS-2418
TEST REPORT	TR-17079
PACKING STANDARD	PST-17104
INSTRUCTION MANUAL	HIM-17029
ASSEMBLY MANUAL	ASM-17006
APPEARANCE CRITERIA No.	QLS-A***

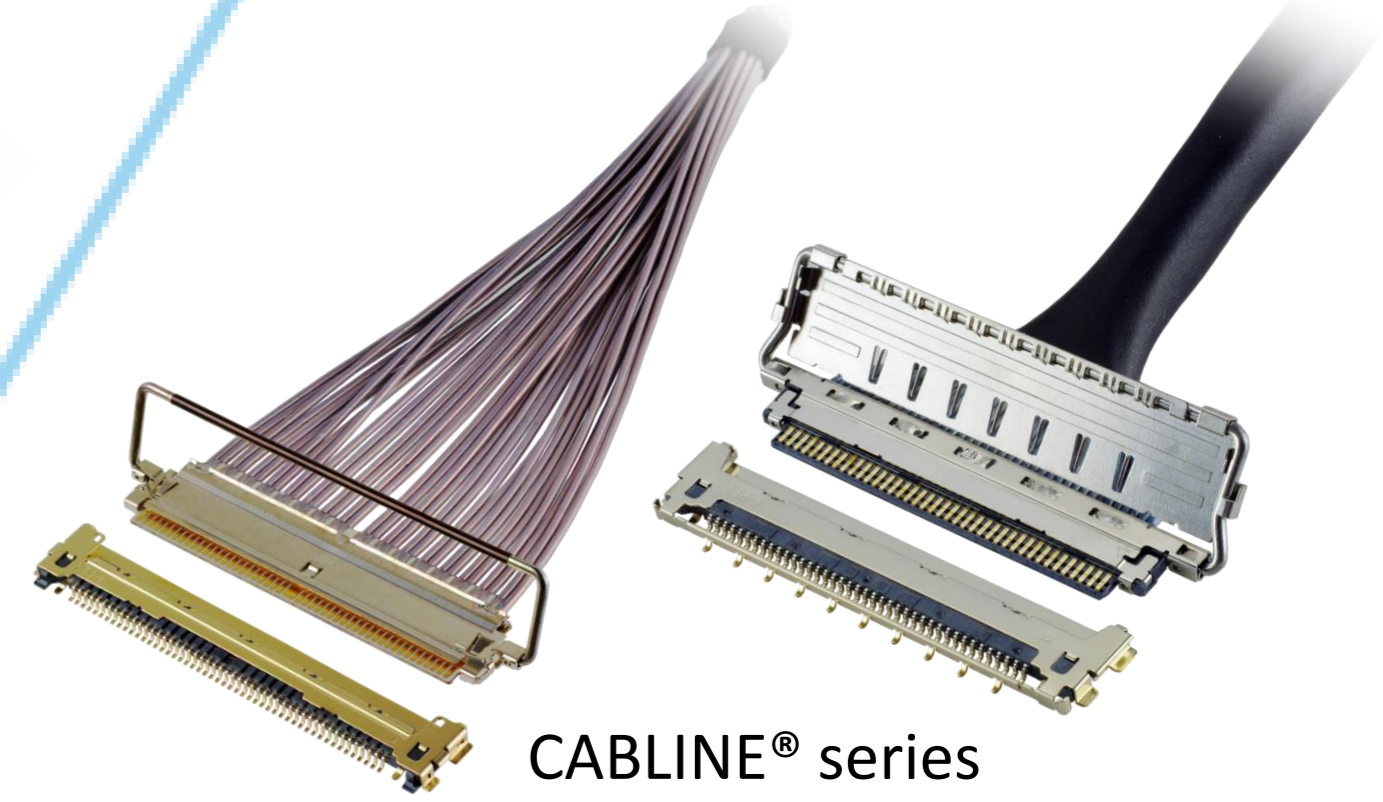
Rev.16



# Custom Connectors Available

 RF Connectors

MHF® series



CABLIN® series



Micro-Coaxial/Twinax Connectors



Wire-to-Board Connectors/Terminals

AP series

ISH® series



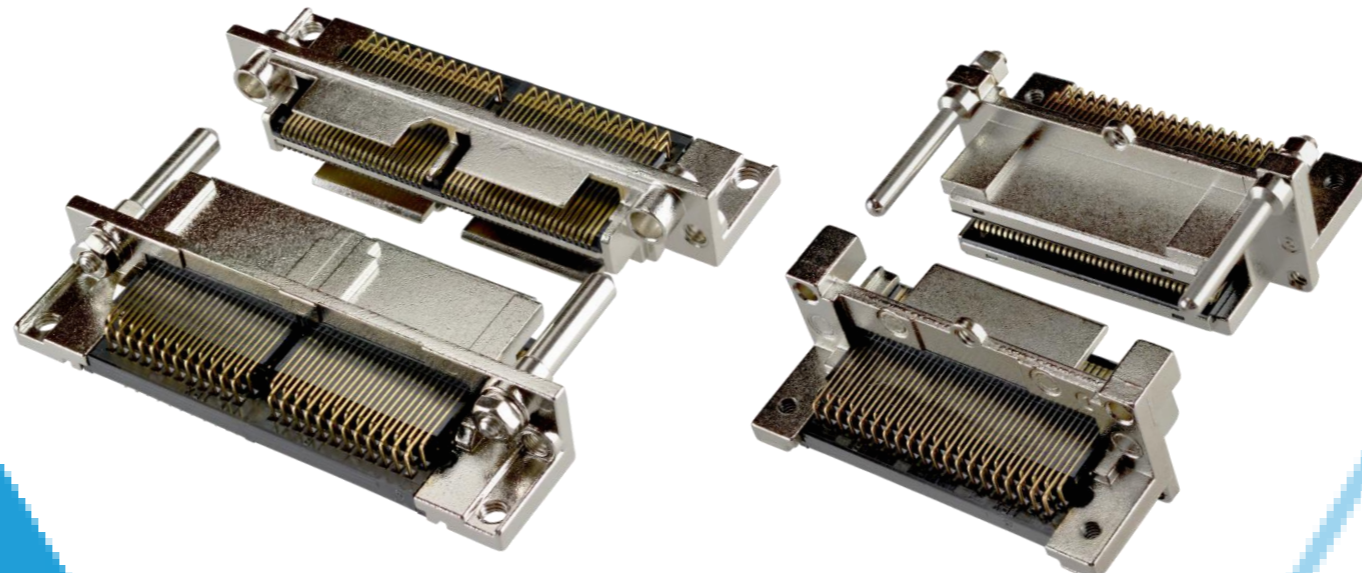
NOVASTACK® series



Board-to-Board Connectors



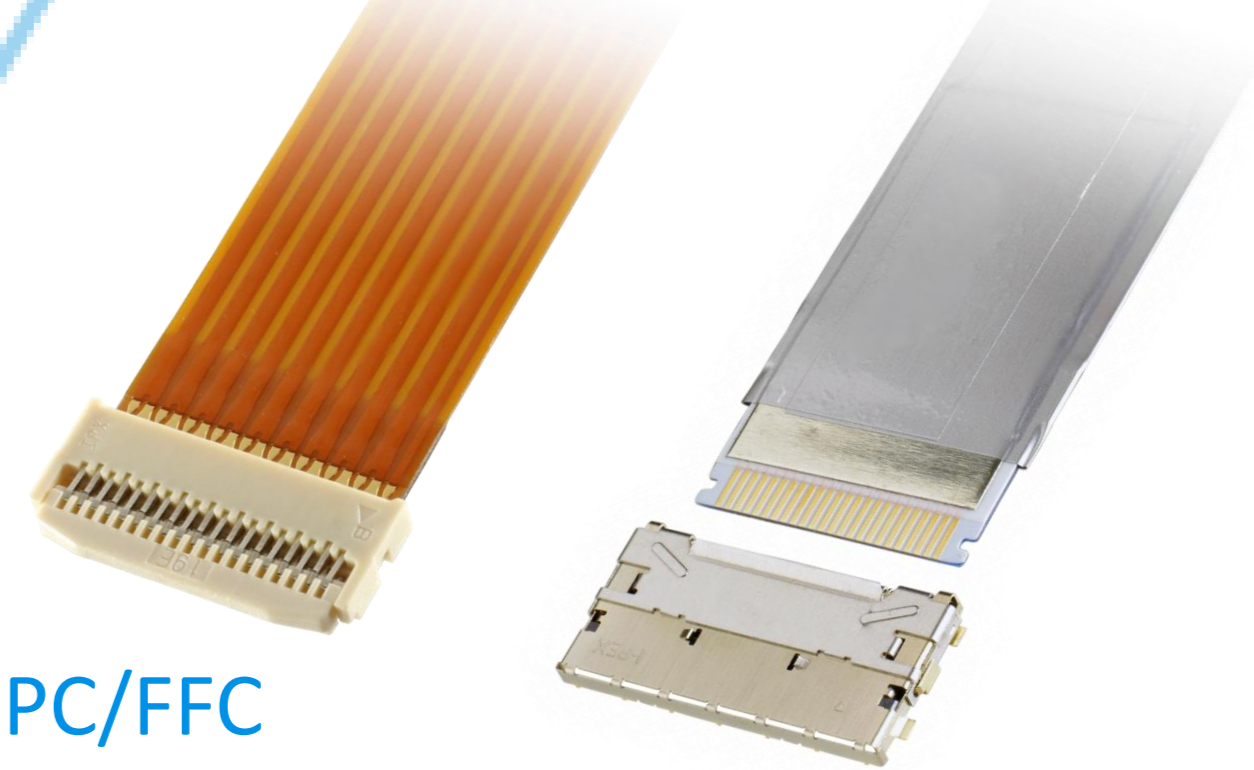
I/O Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC Connectors



Inquiry



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Contact your sales representative or more detailed information.

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