

CABLINE®-VS IIF

Fully-shielded with mechanical lock, suitable for high-data-rate transfer (32 Gbps/lane), 0.5 mm pitch, Horizontal mating type FPC plug connector

Product Specifications:

Mating type	Horizontal	
Board Pitch (mm)	0.5	
Wiping Length (mm)	0.48	
Mated size (mm)	Height	1.2 max. with cover
	Width	Formula: $6.85 + (0.5 * ?p)$
	Depth	7.24
Pin Counts	Range	Up to 60
	Available	30, 40

Applicable FPC

FPC Type	Shielded FPC
FPC Pitch (mm)	0.5
FPC Contact Point	Top
FPC Thickness (mm)	Contact Area: $0.25 + 0.02 / - 0.03$
	Ground Area: $0.37 + 0.04 / - 0.06$

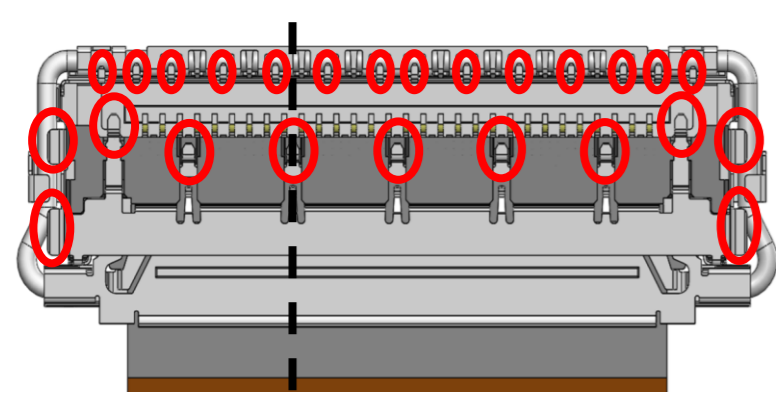
Applicable Standards (Reference Only):

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

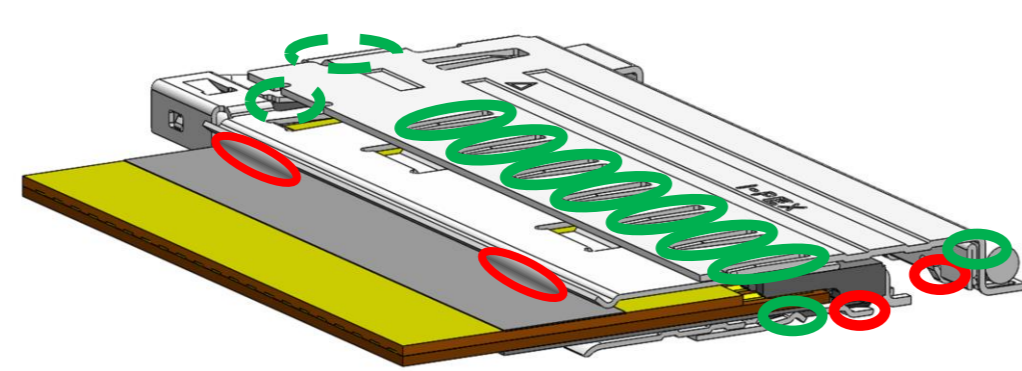
* Please inquire for pin counts not listed or outside of the pin count range.



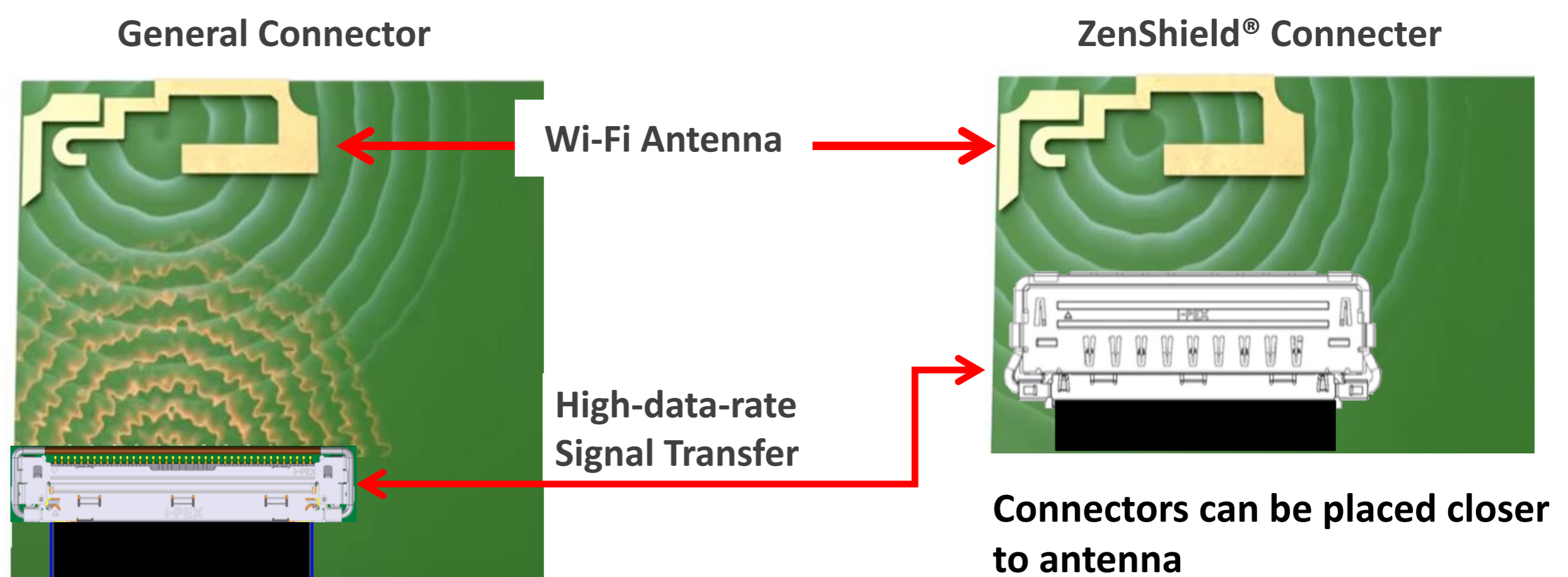
▶ **ZenShield® fully-shielded with multi-point grounds is ideal for EMC solutions**



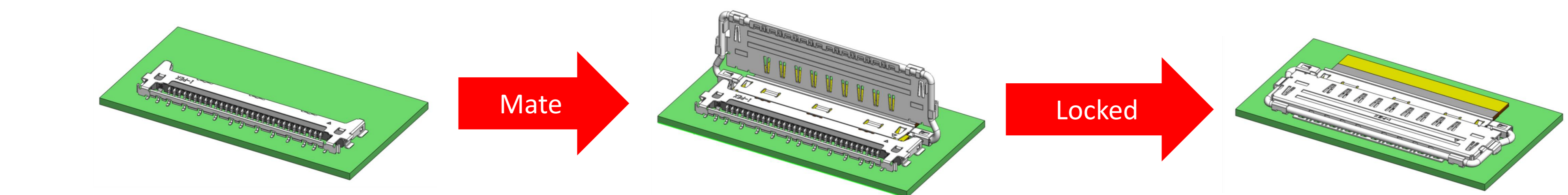
View From Back



- Soldered contacts
- Mechanical contacts

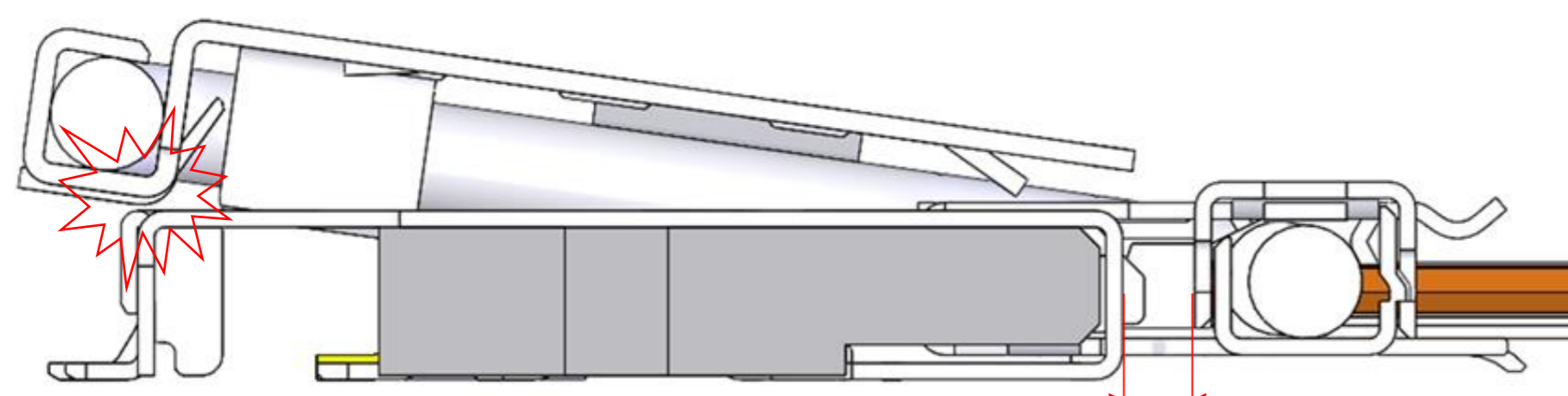


▶ **Mechanical locking cover prevents incomplete mating and back-out/unmating**

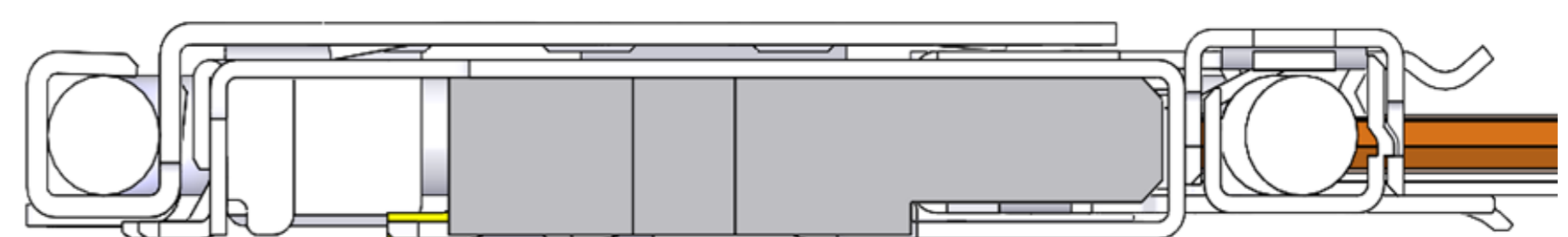


can only be locked when mating is complete

Unable to lock



incomplete mating

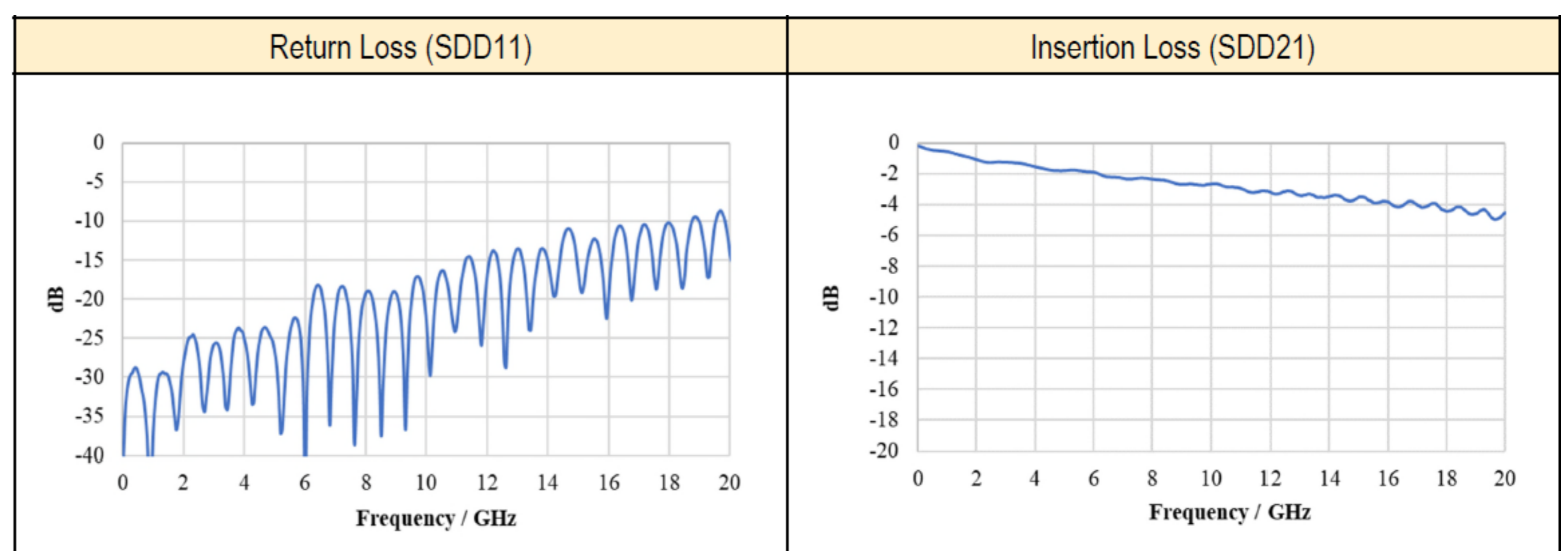


complete mating

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

Measurement results

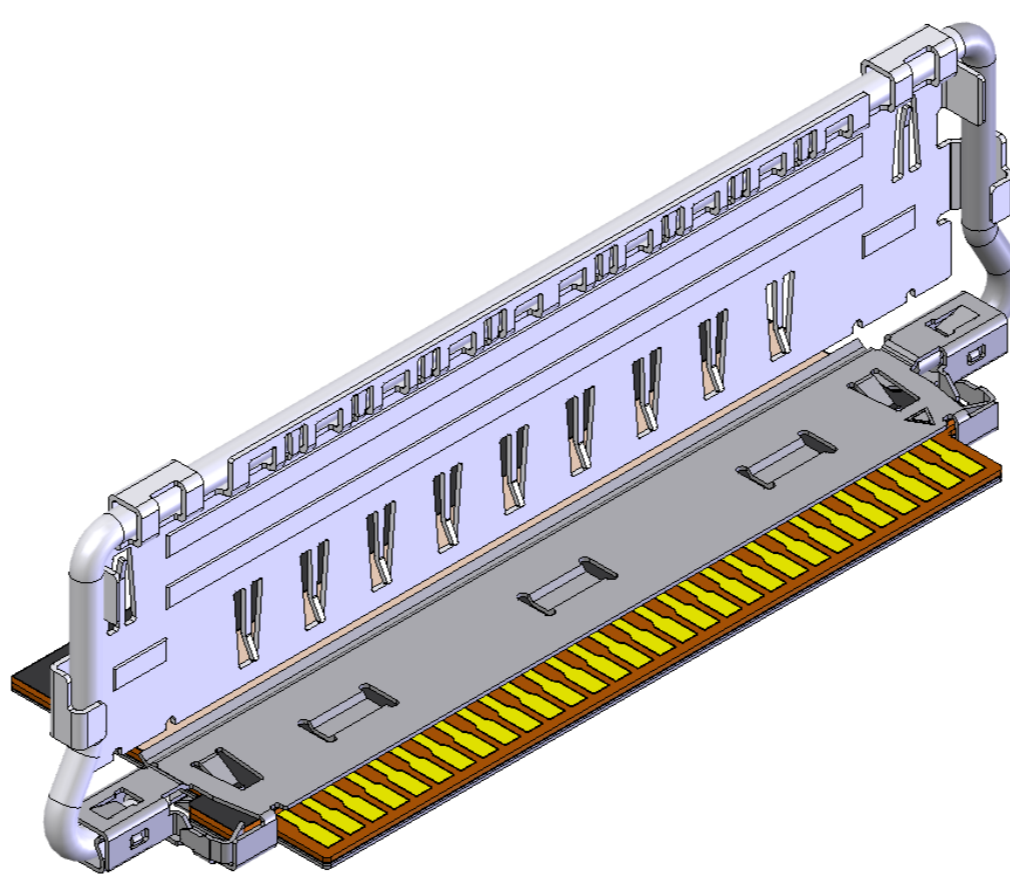
Connector: CABLINE-VS IIF 40P
FPC: Shielded FPC,
Differential 85 ohm, Length : 100 mm
Pin Assignment: GSSGSSG



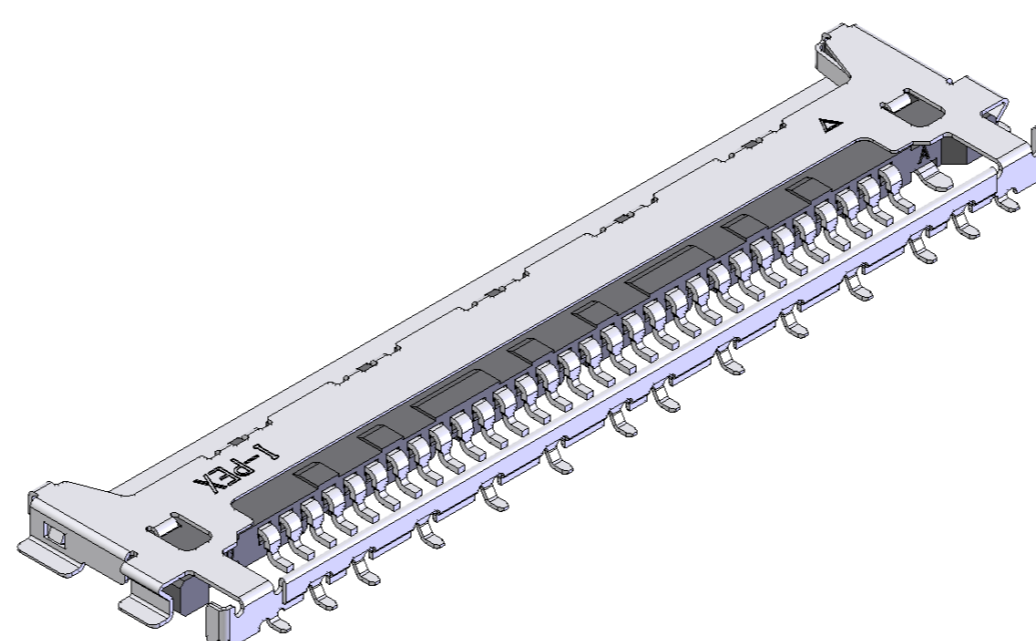
Component Parts Details

Component Parts

Connector parts



CABLINE-VS IIF PLUG with FPC



CABLINE-VS II RECEPTACLE

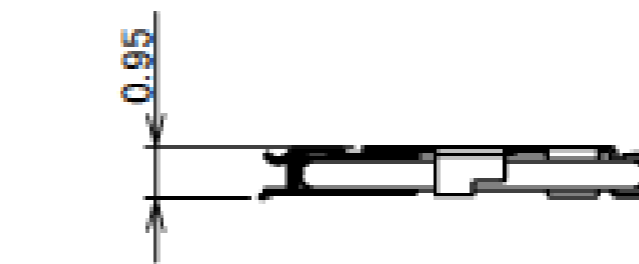
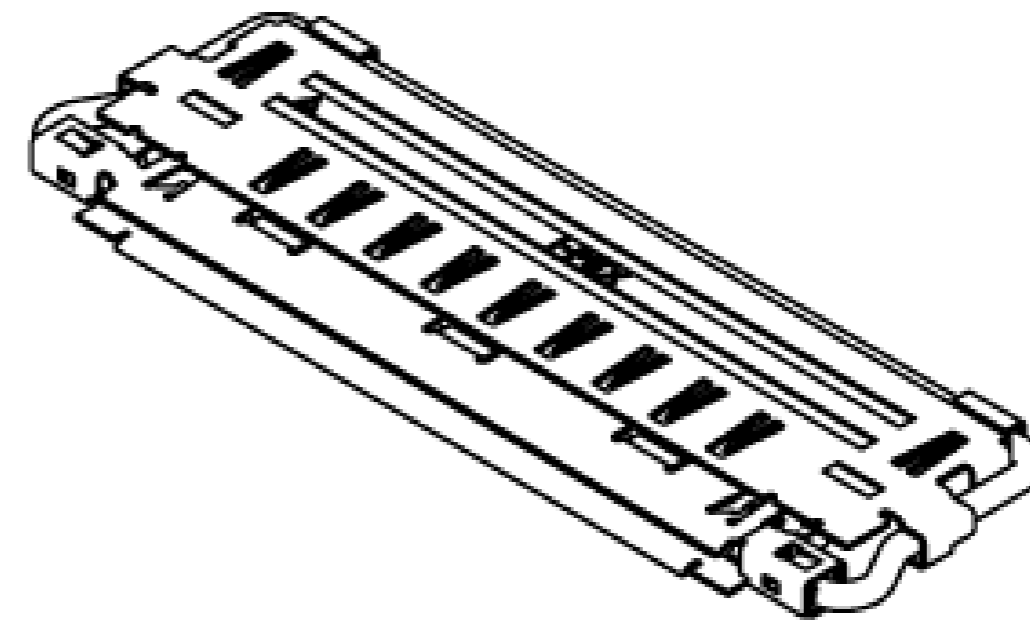
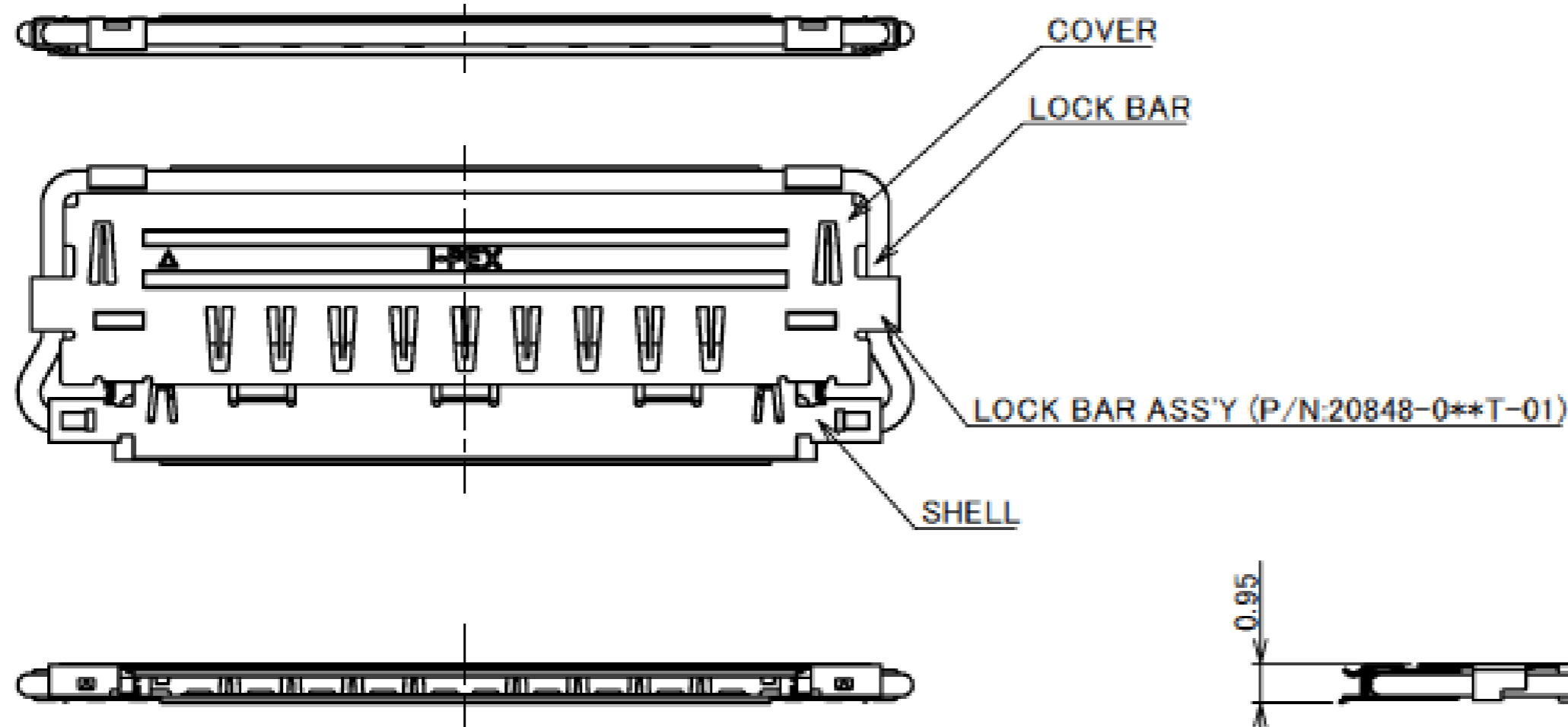
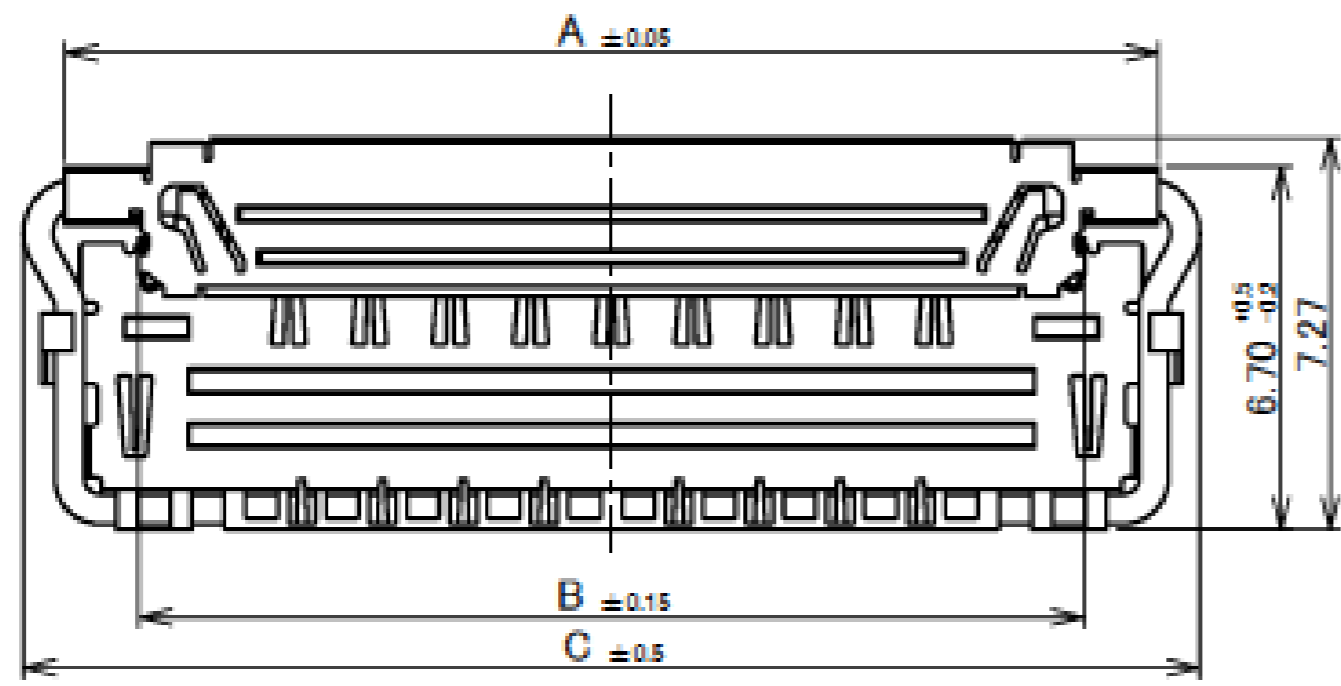
Shell Assembly

Recommended P/N		20862-0**T-01		
PART No.	Pos.	A	B	C
20862-030T-01	30	20.30	17.56	21.85
20862-040T-01	40	25.30	22.56	26.85



Halogen Free

RoHS Compliant



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

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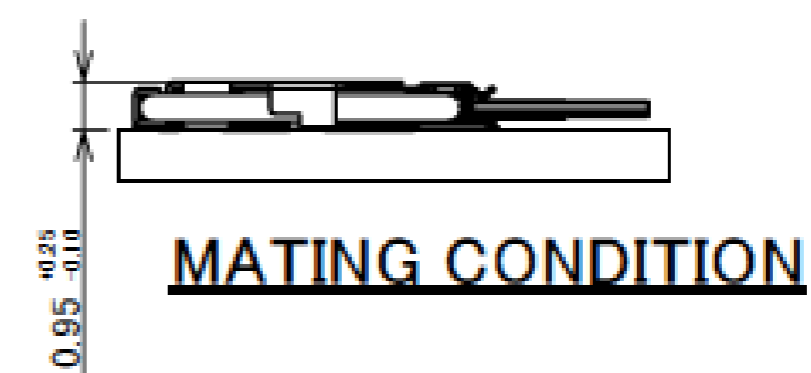
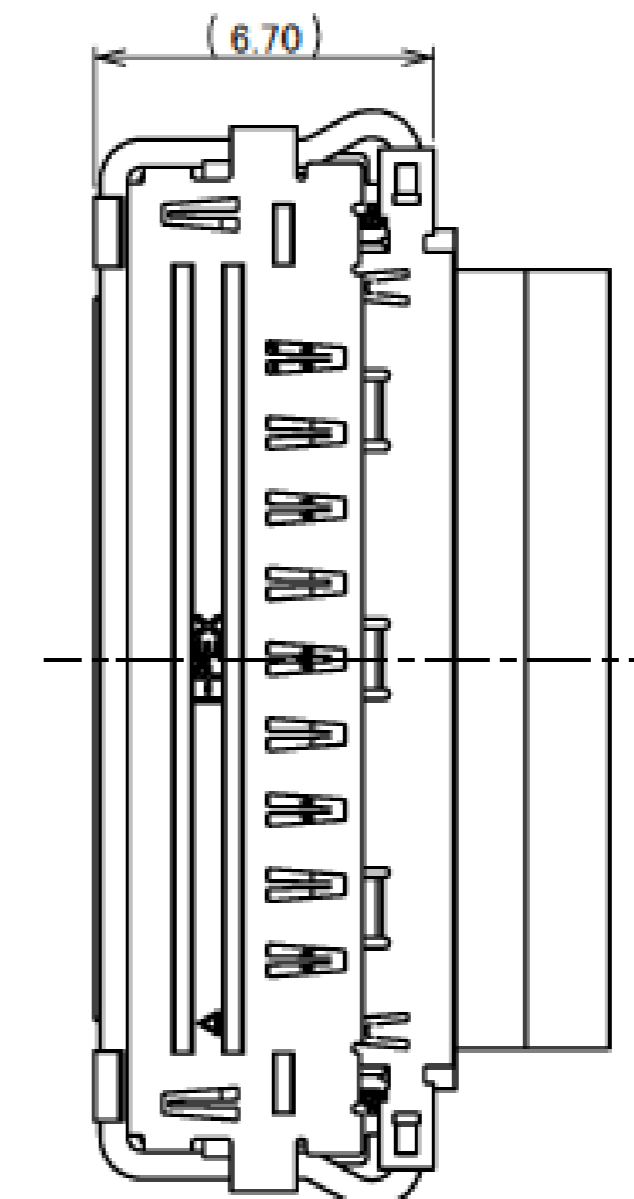
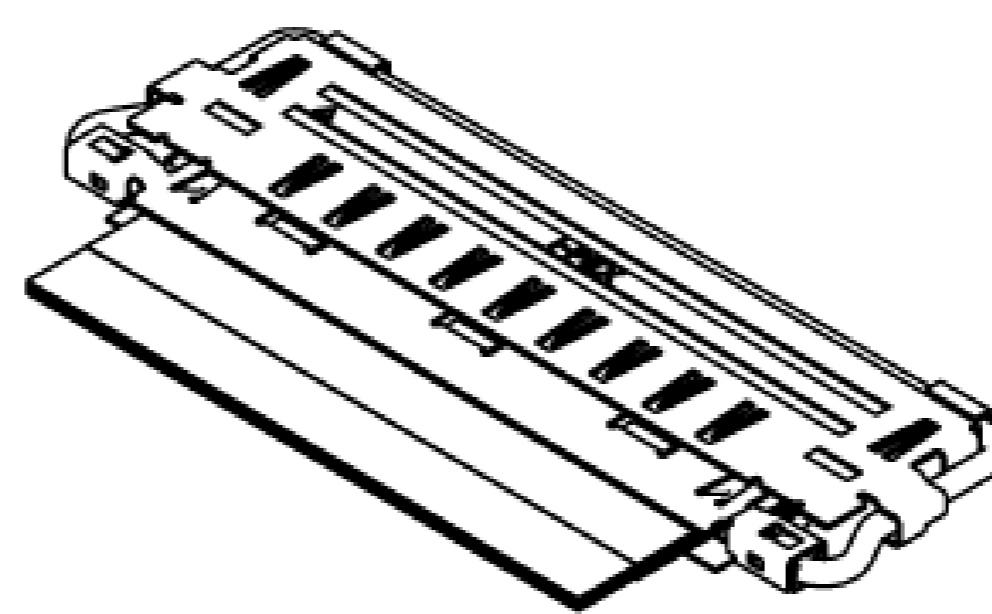
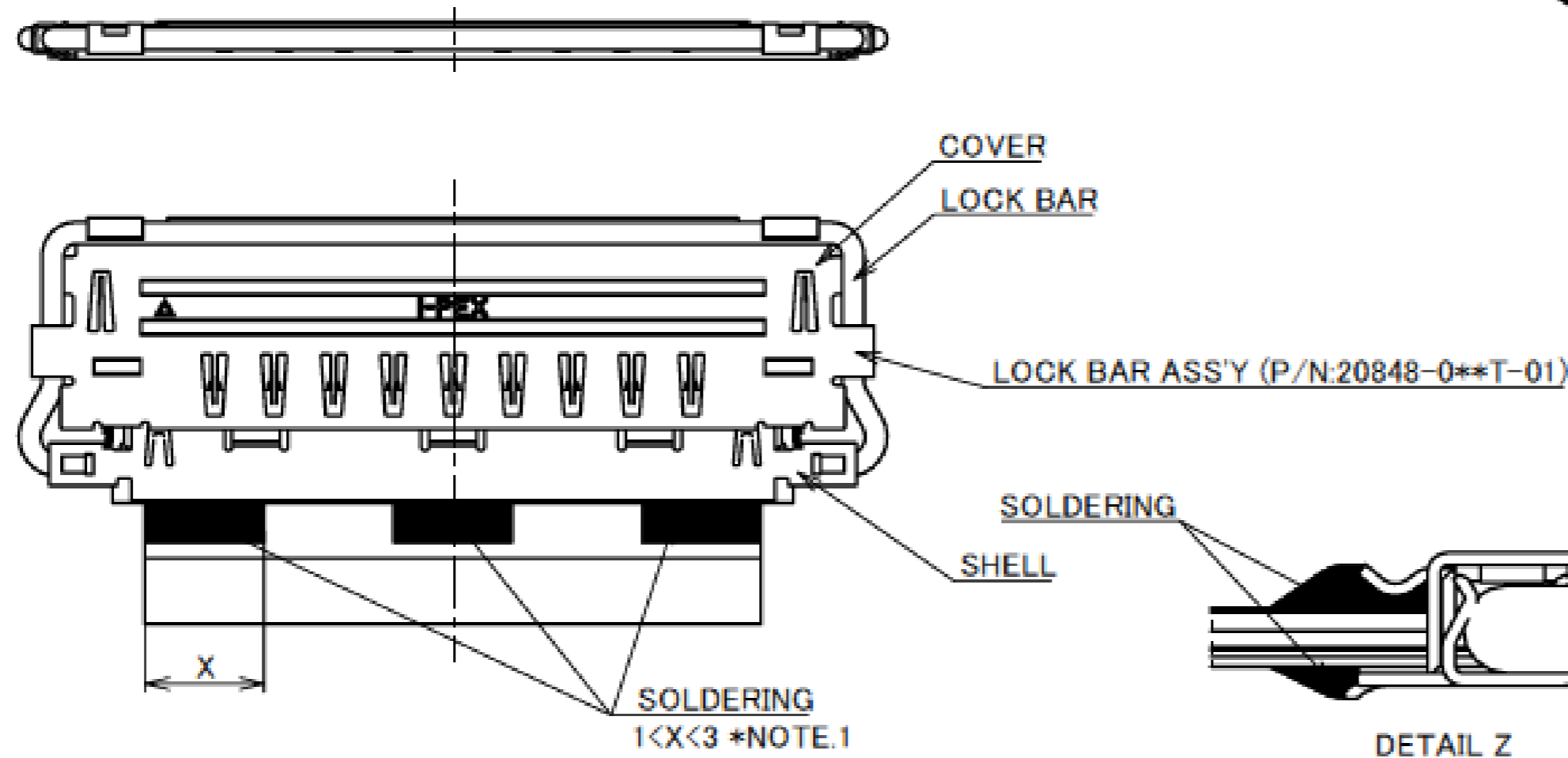
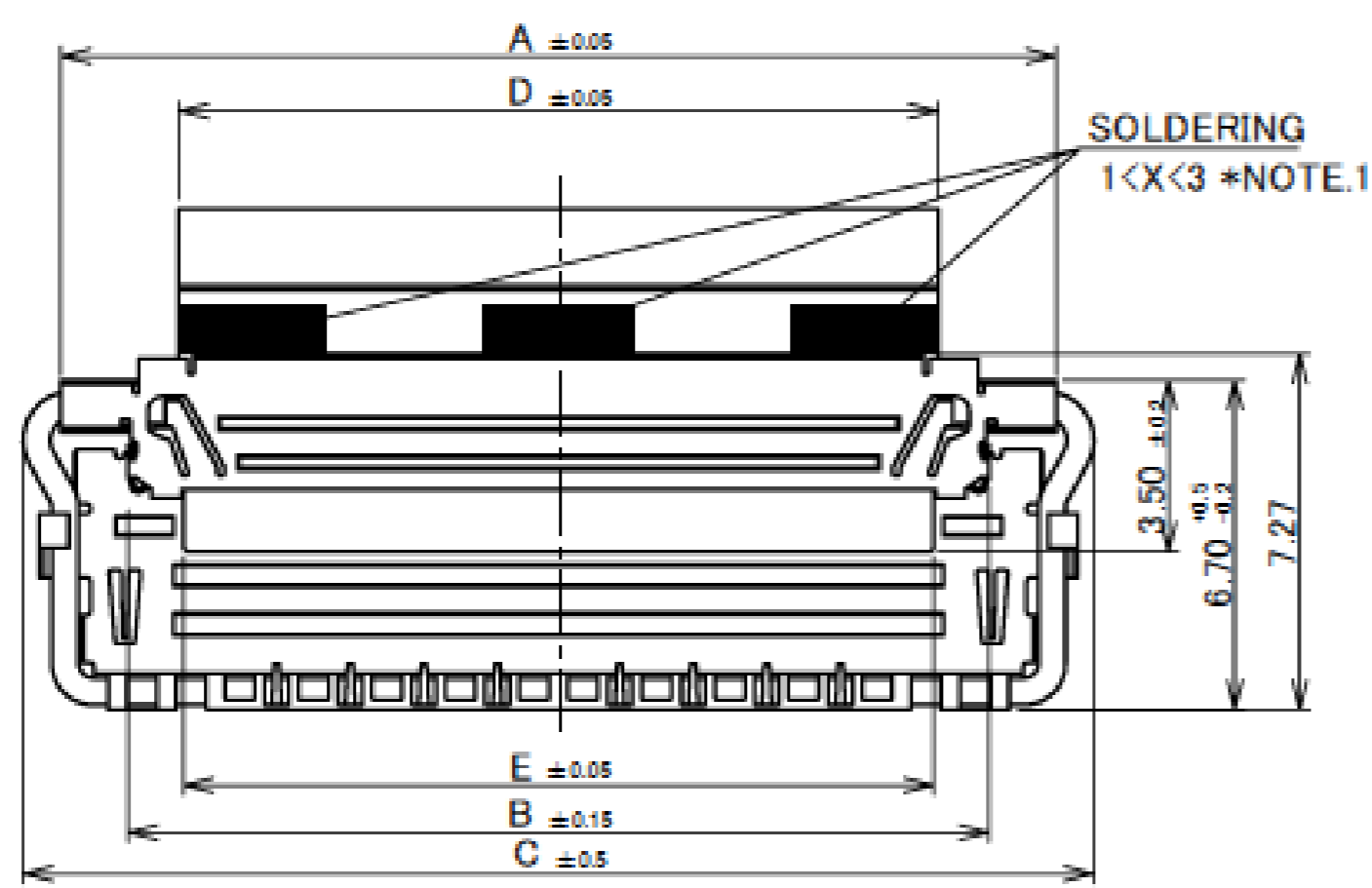
Recommended P/N		20862-0**T-01				
PART No.	Pos.	A	B	C	D	E
20862-030T-01	30	20.30	17.56	21.85	15.50	15.30
20862-040T-01	40	25.30	22.56	26.85	20.50	20.30

FPC ASS'Y STATE COVER CLOSE



Halogen Free

RoHS Compliant



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

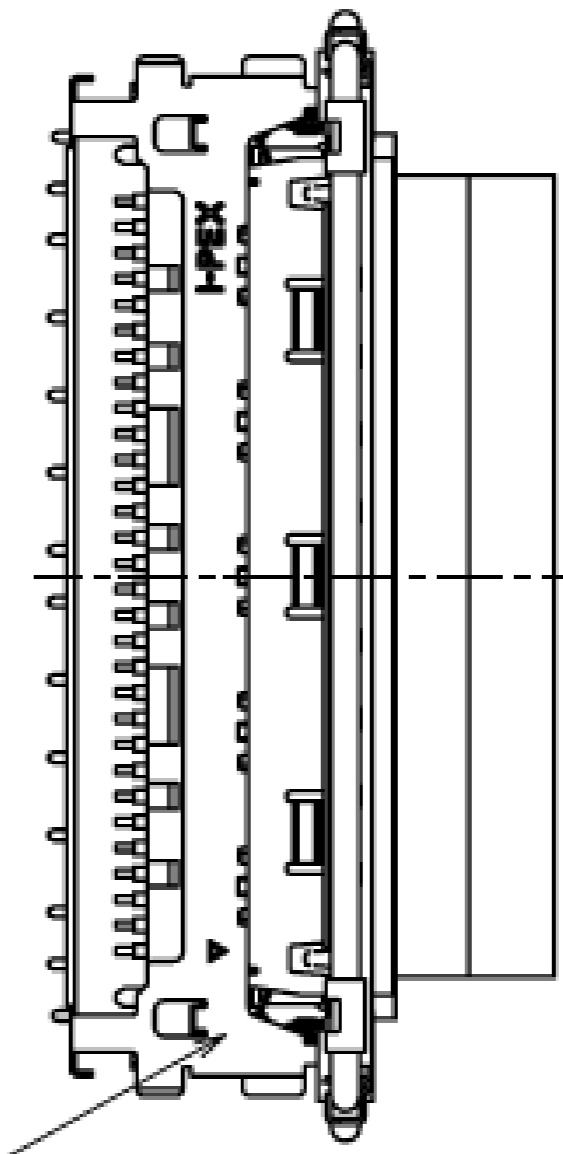
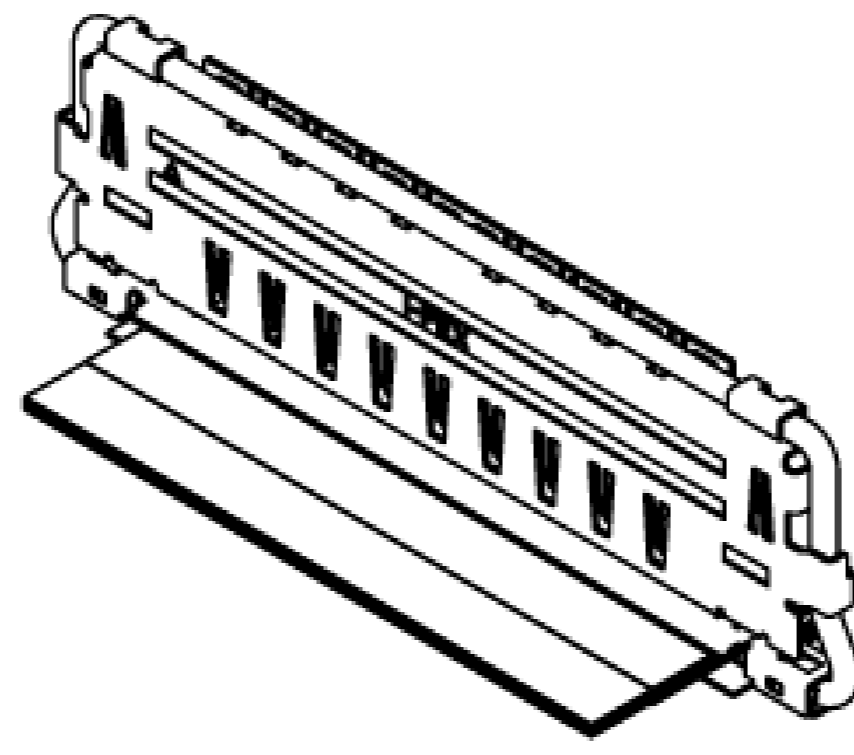
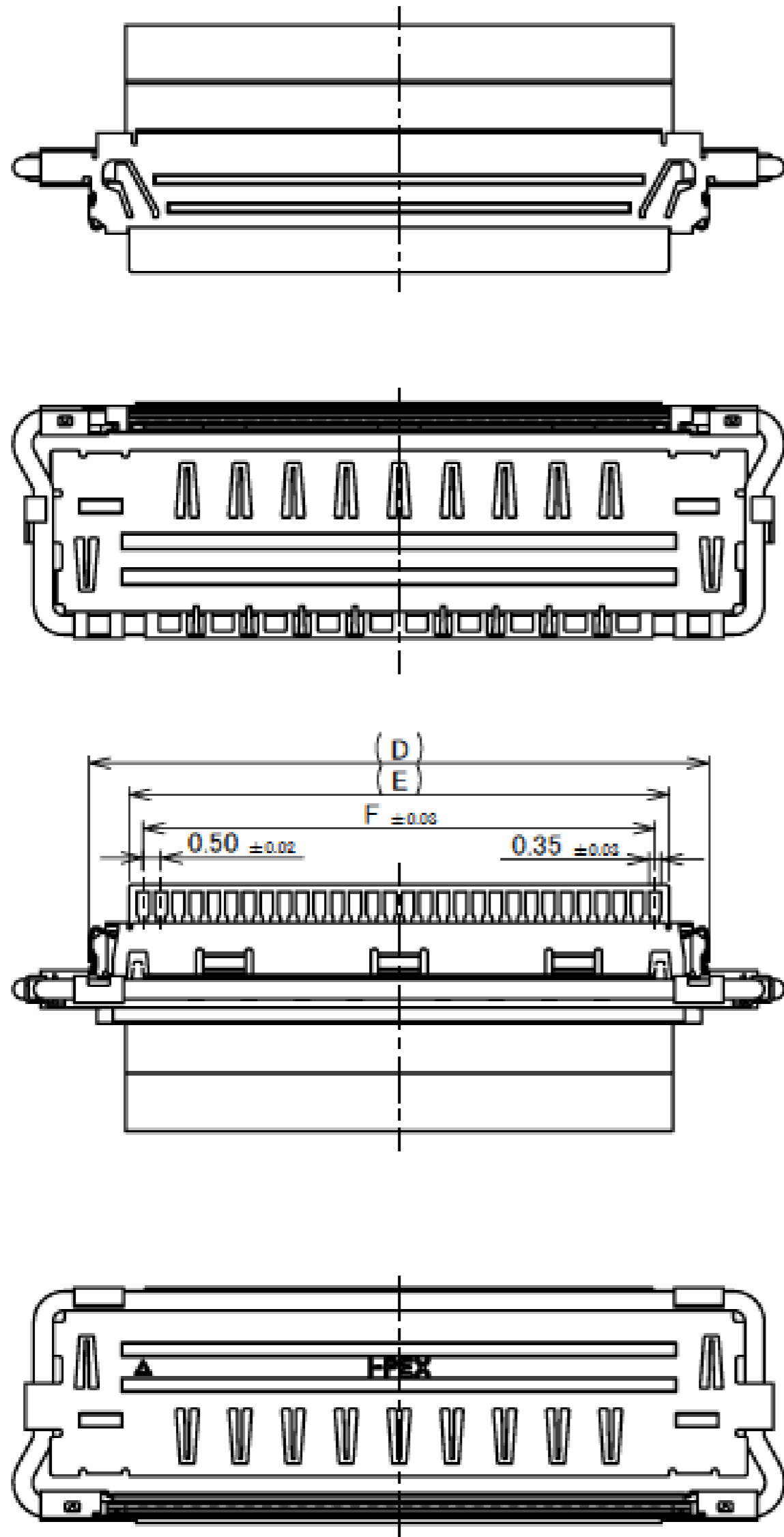


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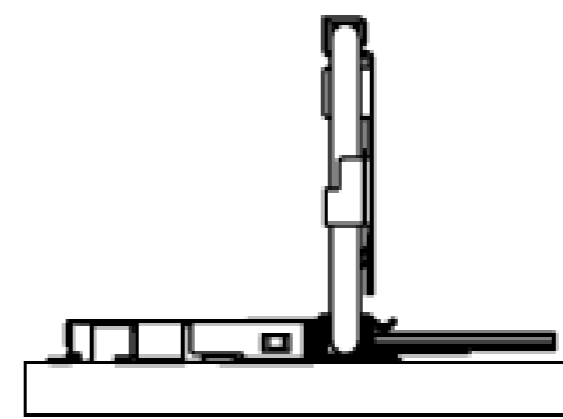
Shell Assembly

Recommended P/N		20862-0**T-01		
PART No.	Pos.	D	E	F
20862-030T-01	30	17.56	15.30	14.50
20862-040T-01	40	22.56	20.30	19.50

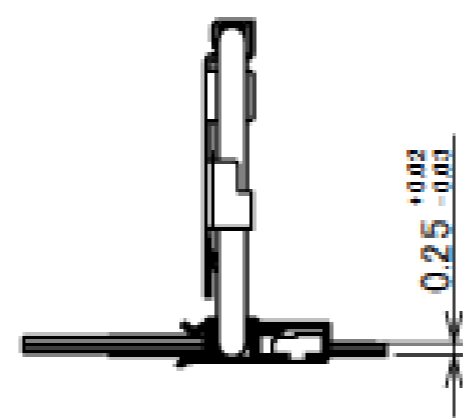
FPC ASS'Y STATE COVER OPEN



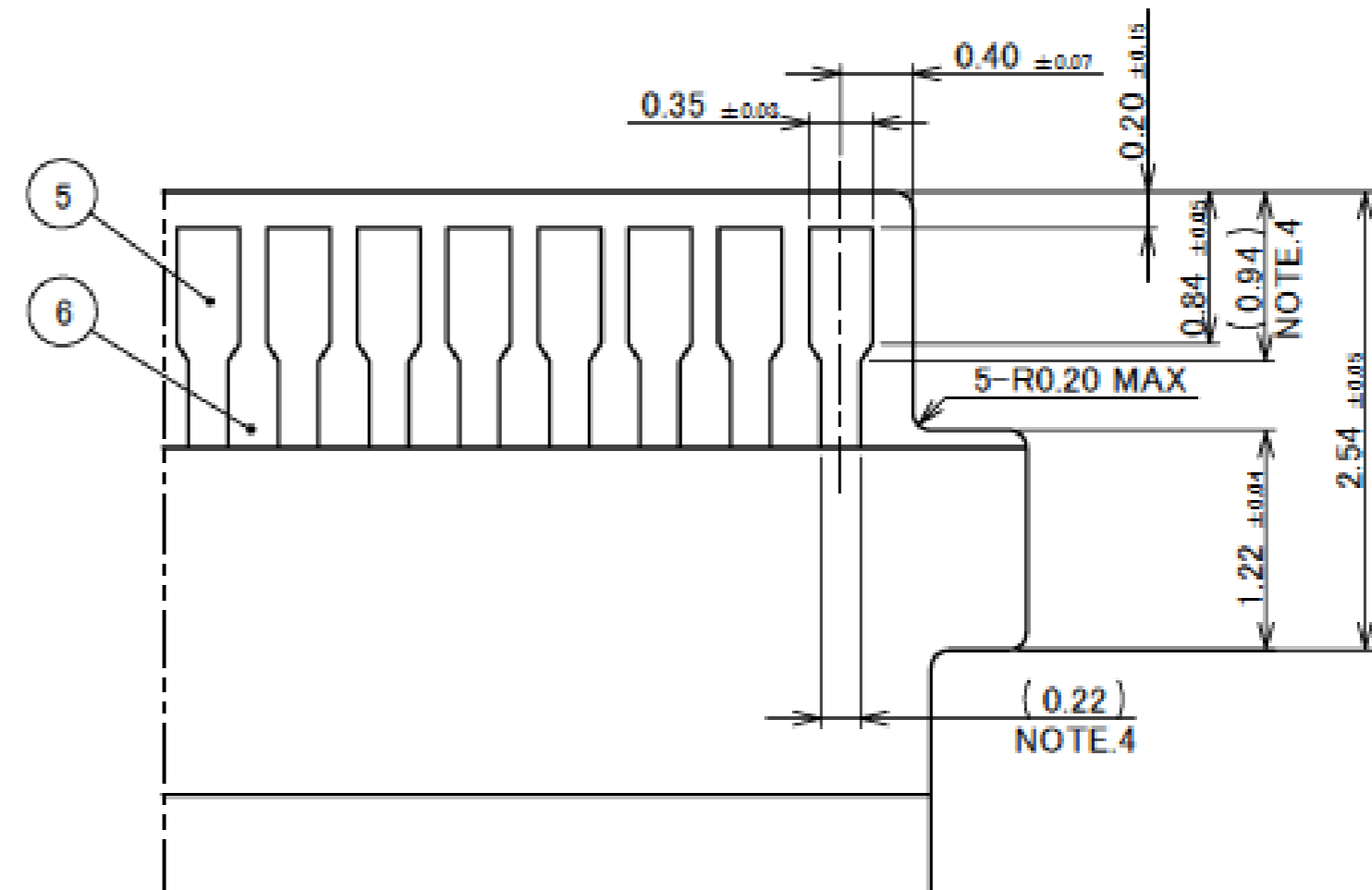
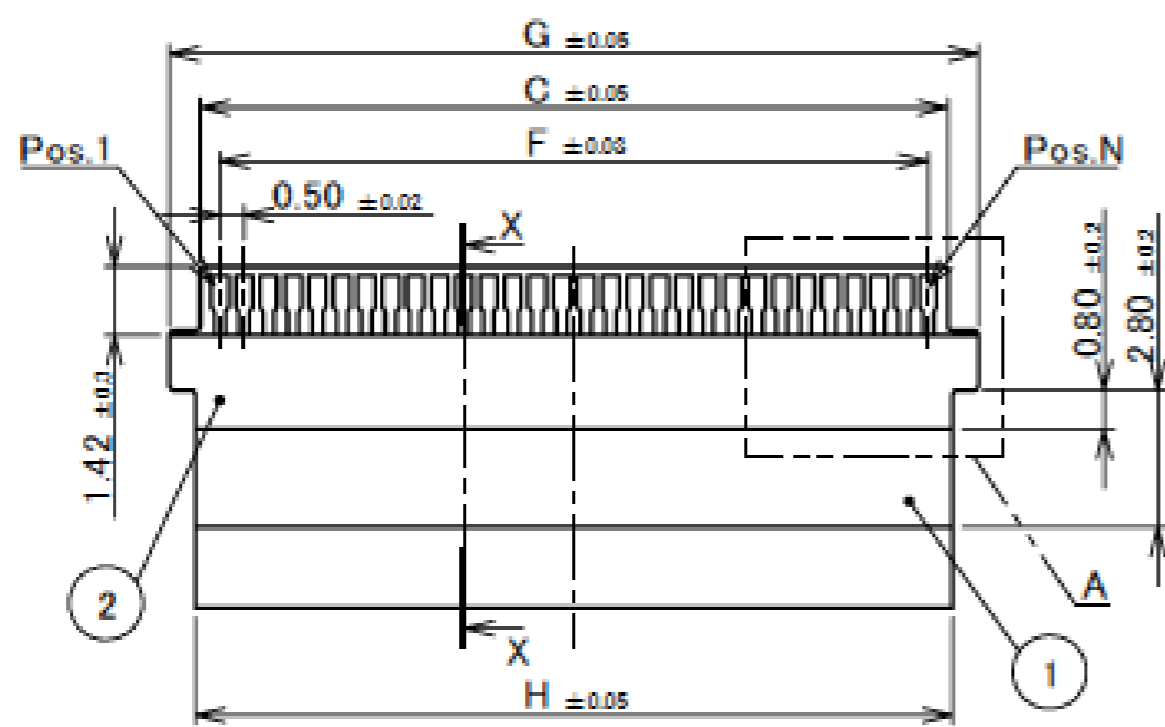
RECE ASS'Y (P/N 20849-0**E-01)



MATING CONDITION



PART No.	Pos.	C	F	G	H
20862-030T-01	30	15.30	14.50	16.56	15.50
20862-040T-01	40	20.30	19.50	21.56	20.50

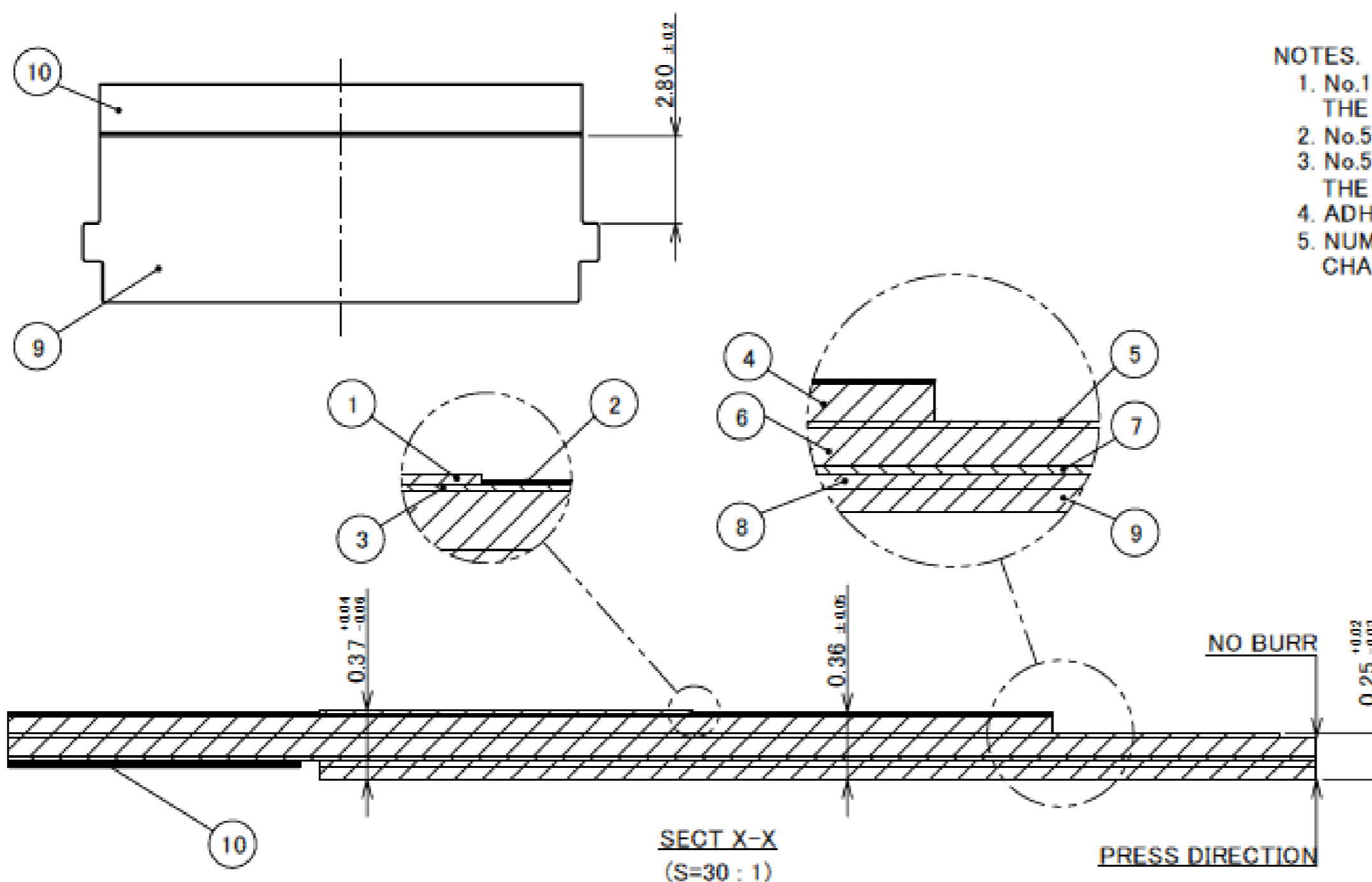


DETAIL A
(S=20/1)

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	MATERIAL	PLATING
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	-	-



SECT X-X
(S=30 : 1)

PRESS DIRECTION

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Shell Assembly

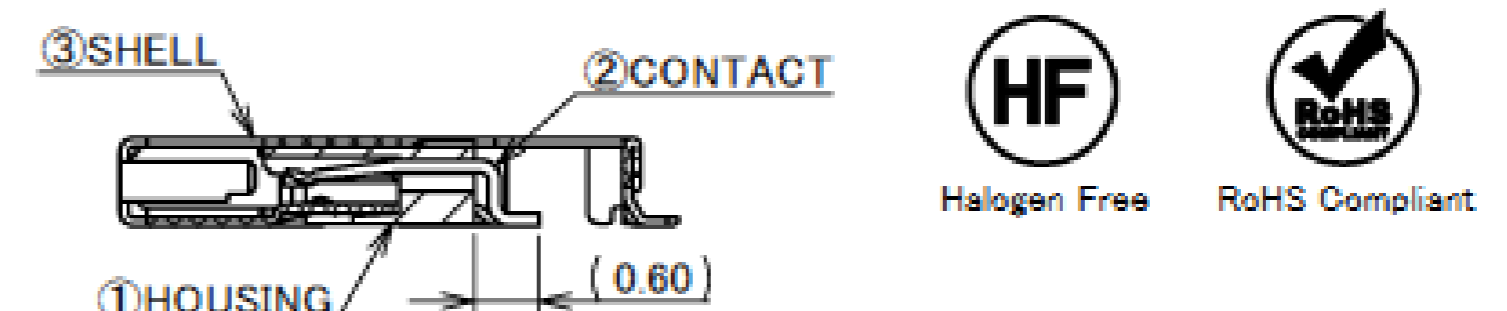
ITEMS	SPECIFICATION
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : Δ 40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : Δ 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 : 13.50N MAX. 40P : 18.00N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	30P : 1.44N MIN. 40P : 1.92N MIN.
PRODUCT SPECIFICATION	PRS-2430
TEST REPORT	TR-17086
PACKING STANDARD	PST-17134
INSTRUCTION MANUAL	HIM-17039
ASSEMBLY MANUAL	ASM-17010
APPEARANCE CRITERIA No.	QLS-A***

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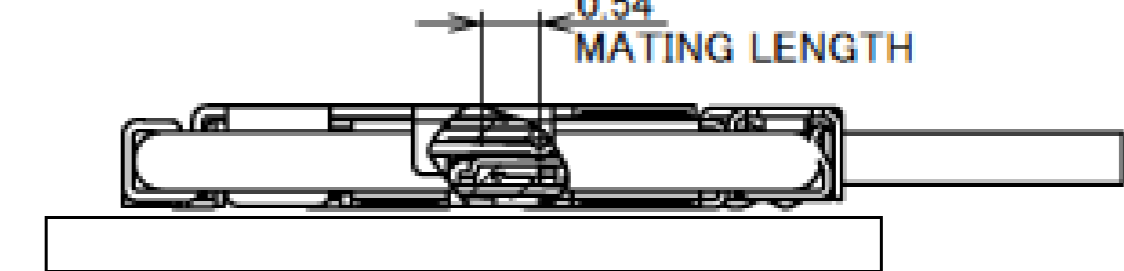
Receptacle Assembly

Recommended P/N		20849-0**E-01				
PART NO.	Pos.	A	B	C	D	E
20849-020E-0#	20	11.30	9.50	14.33	15.10	11.91
20849-030E-0#	30	16.30	14.50	19.33	20.10	16.91
20849-040E-0#	40	21.30	19.50	24.33	25.10	21.91

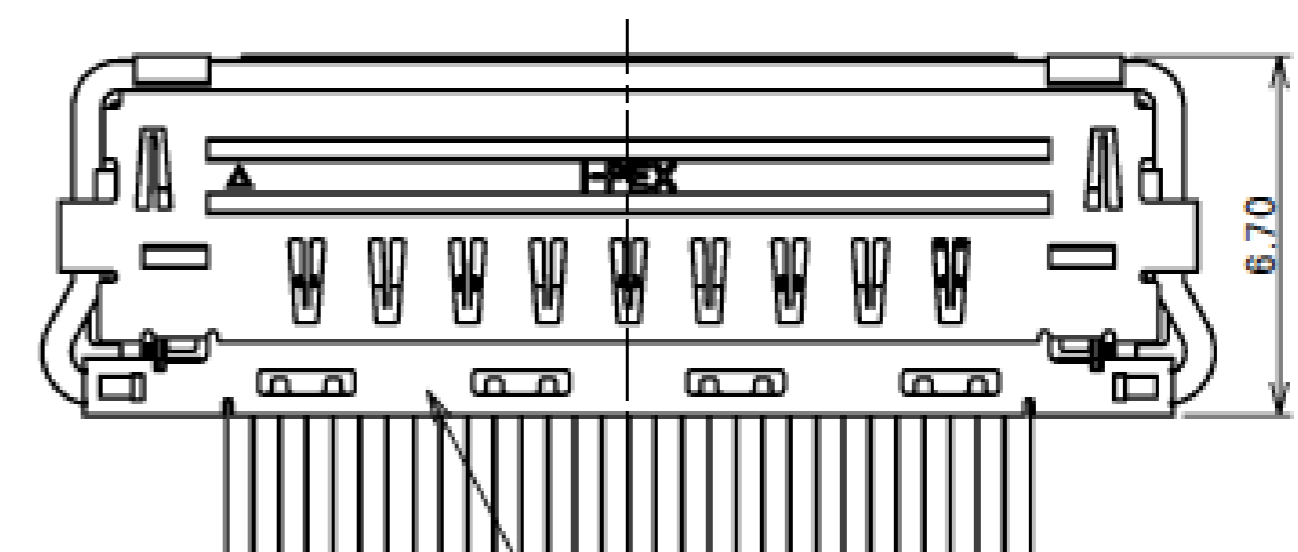
P/N : 20849-0**E-0#
SEE TABLE 1
POS.



SECT. W-W
(S = 10 : 1)



MATING CONDITION
(S = 10 : 1)



MATING CONDITION

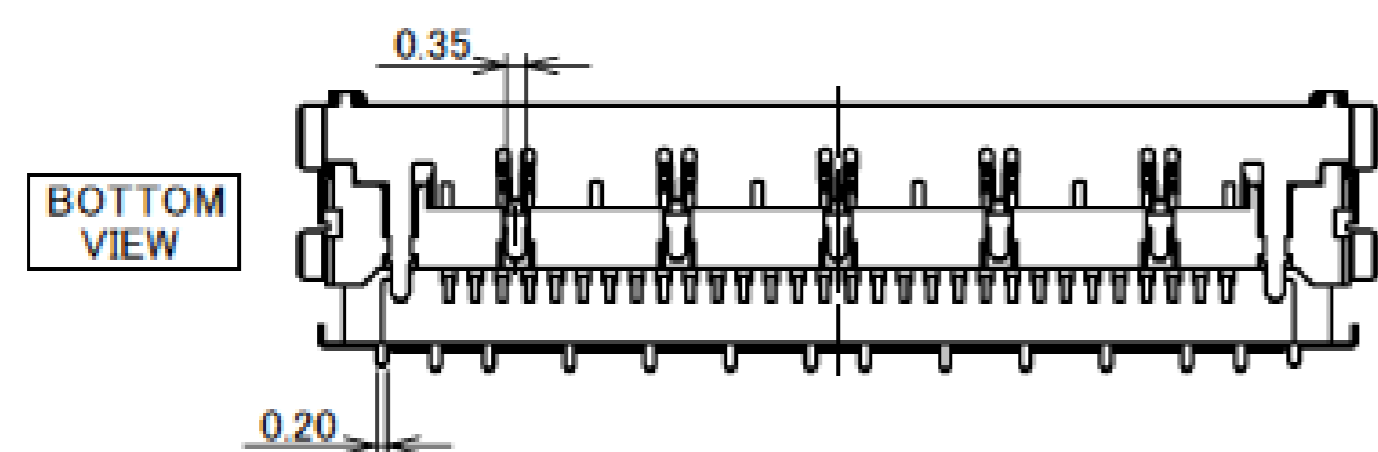
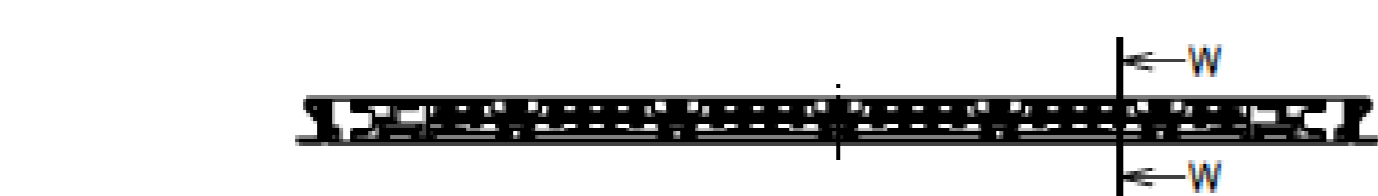
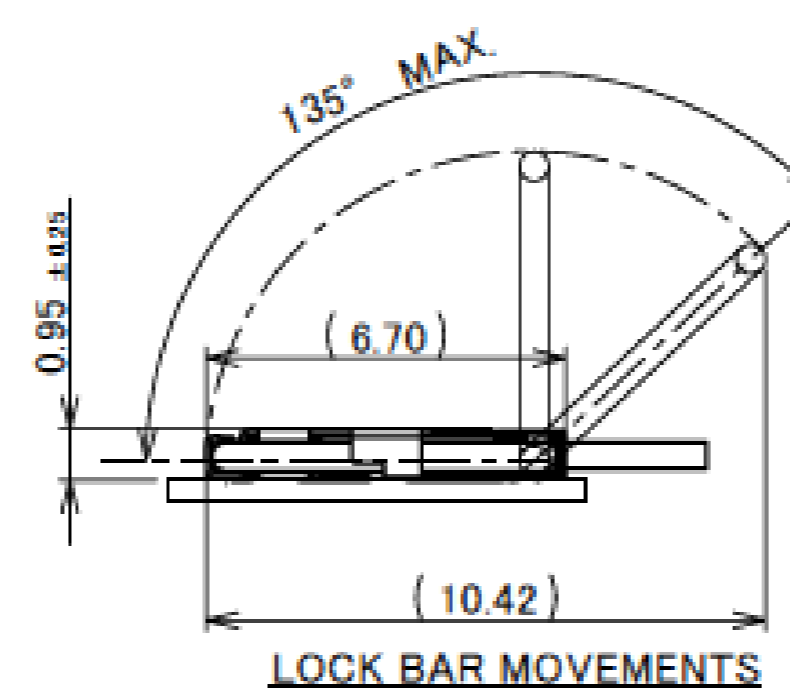
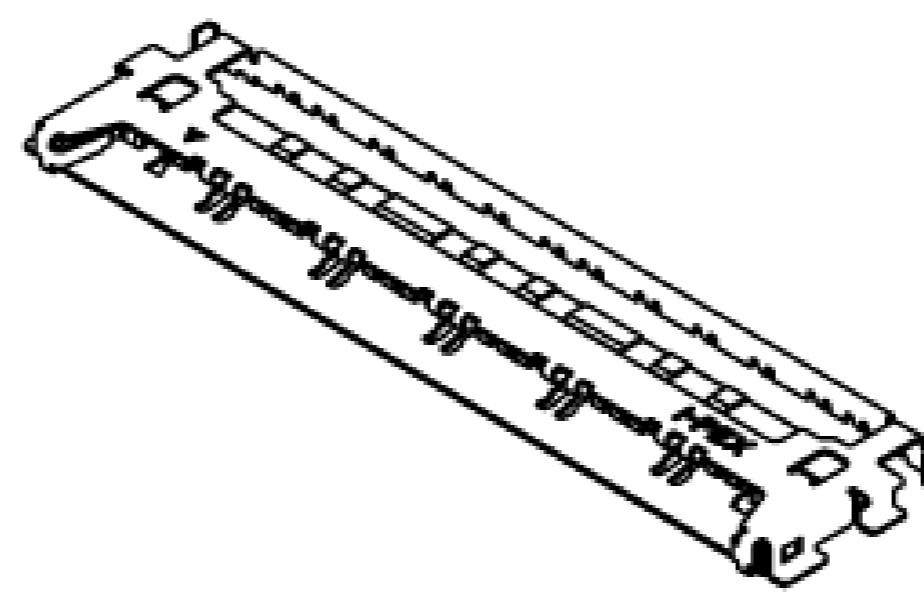
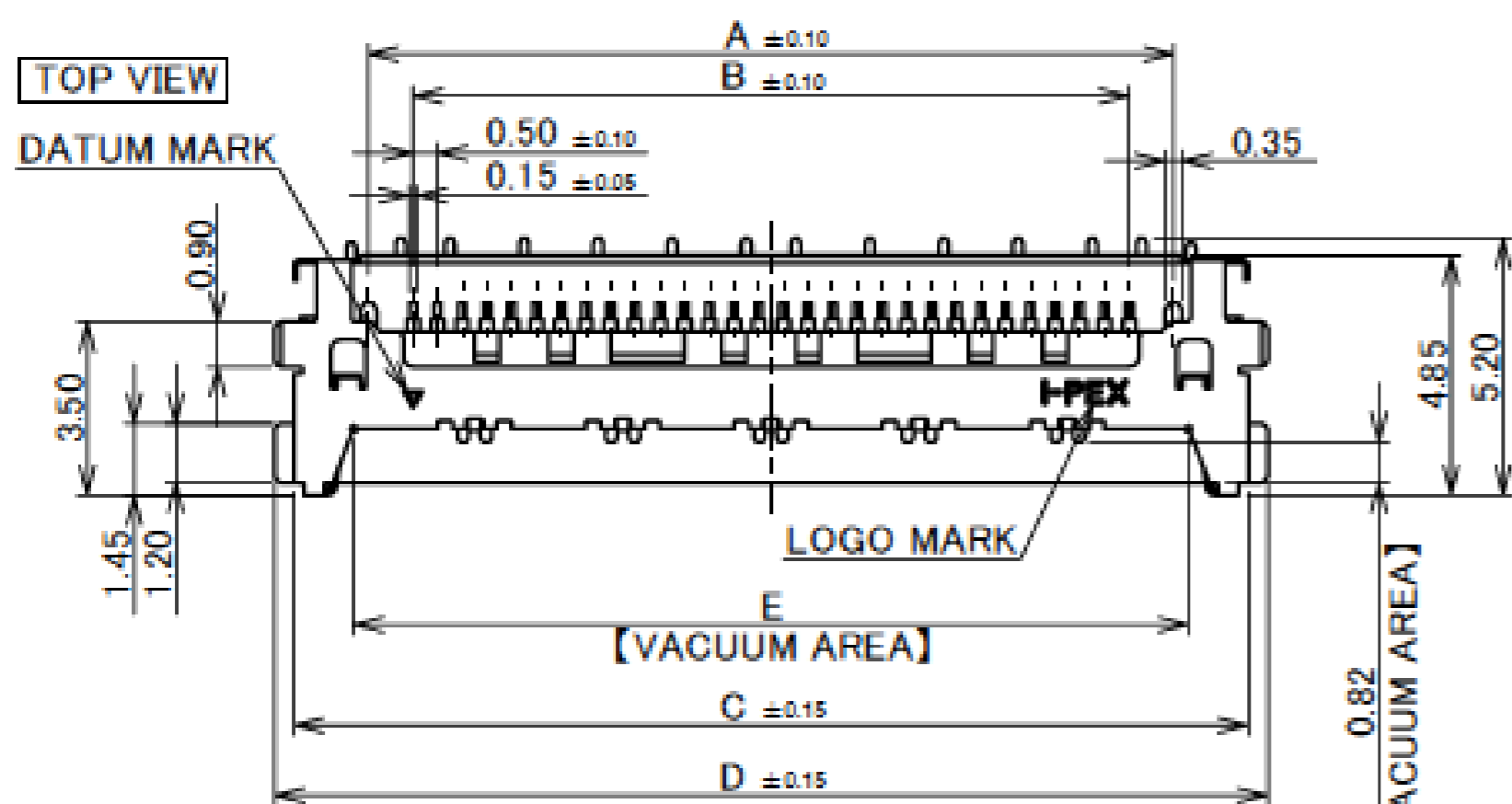


TABLE 1

PART NO.	CONTACT FINISH	SHELL FINISH
20849-0**E-01	CONTACT & SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.	ALL OVER Ni 1.00 μ m MIN.
20849-0**E-02	CONTACT AREA : Au 0.38 μ m MIN. OVER Ni 1.27 μ m MIN. SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.	SOLDERING AREA : Au 0.02 μ m MIN.

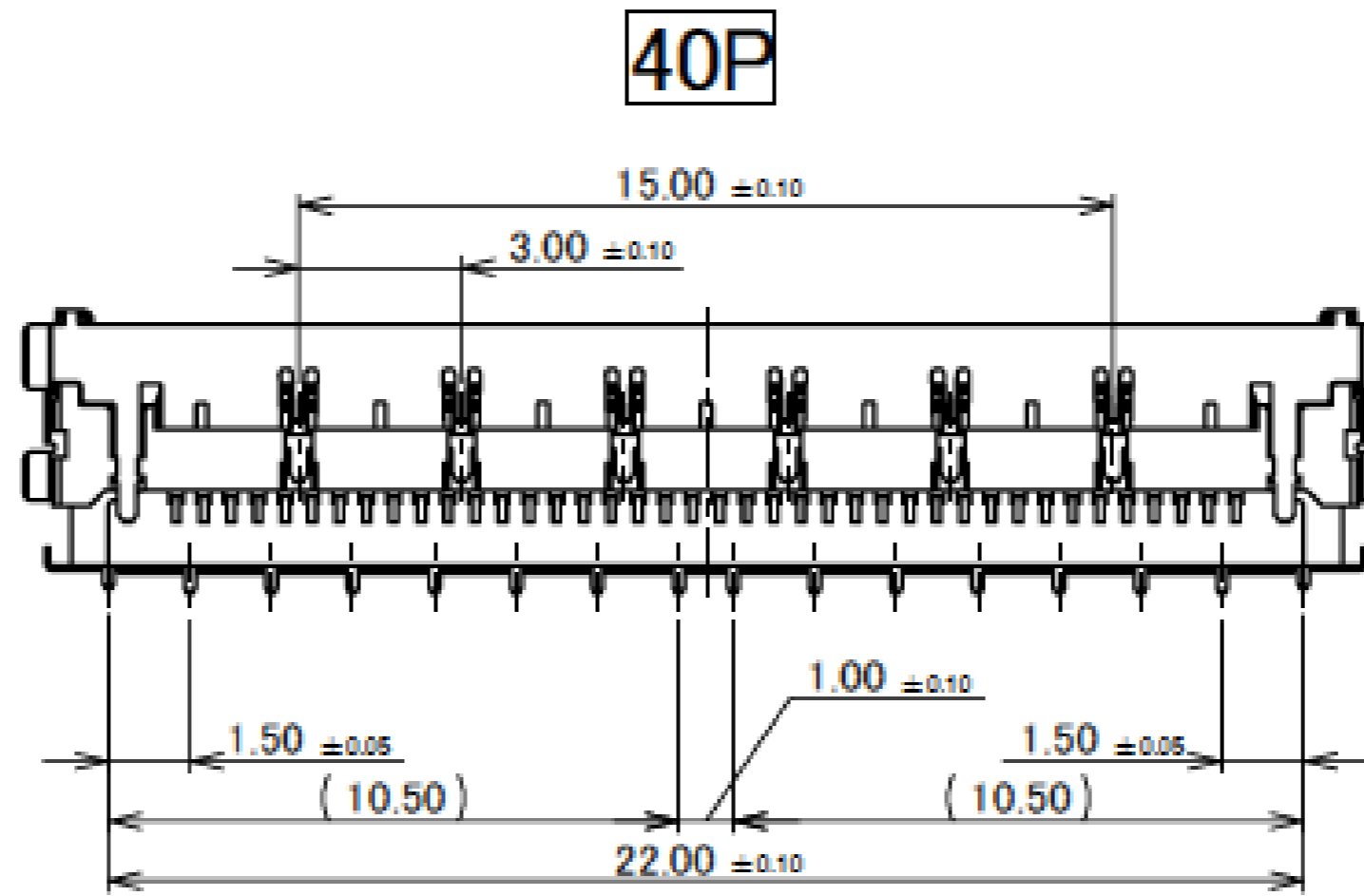
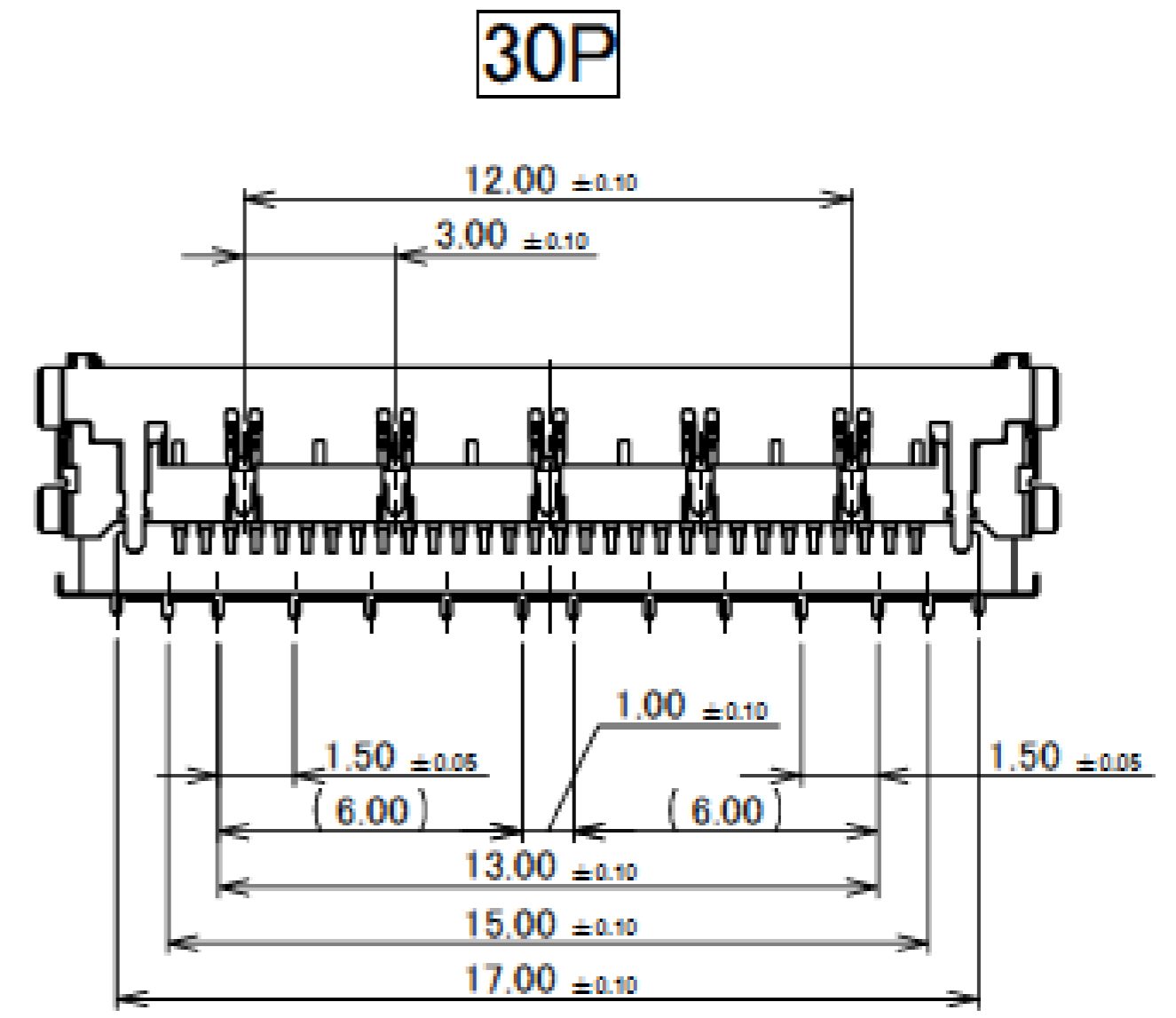
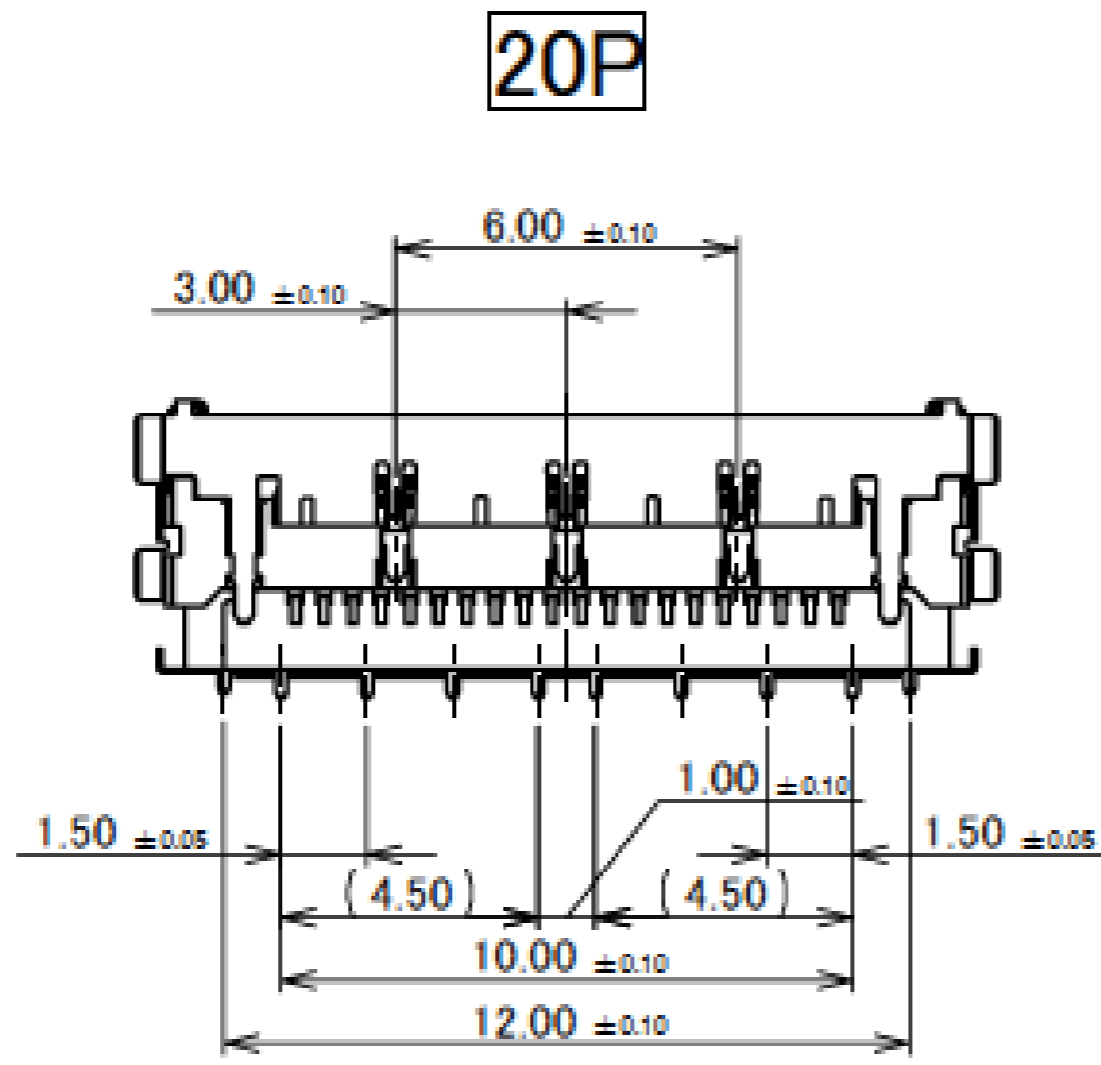
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL	PHOSPHOR BRONZE	SEE TABLE 1
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0. BLACK

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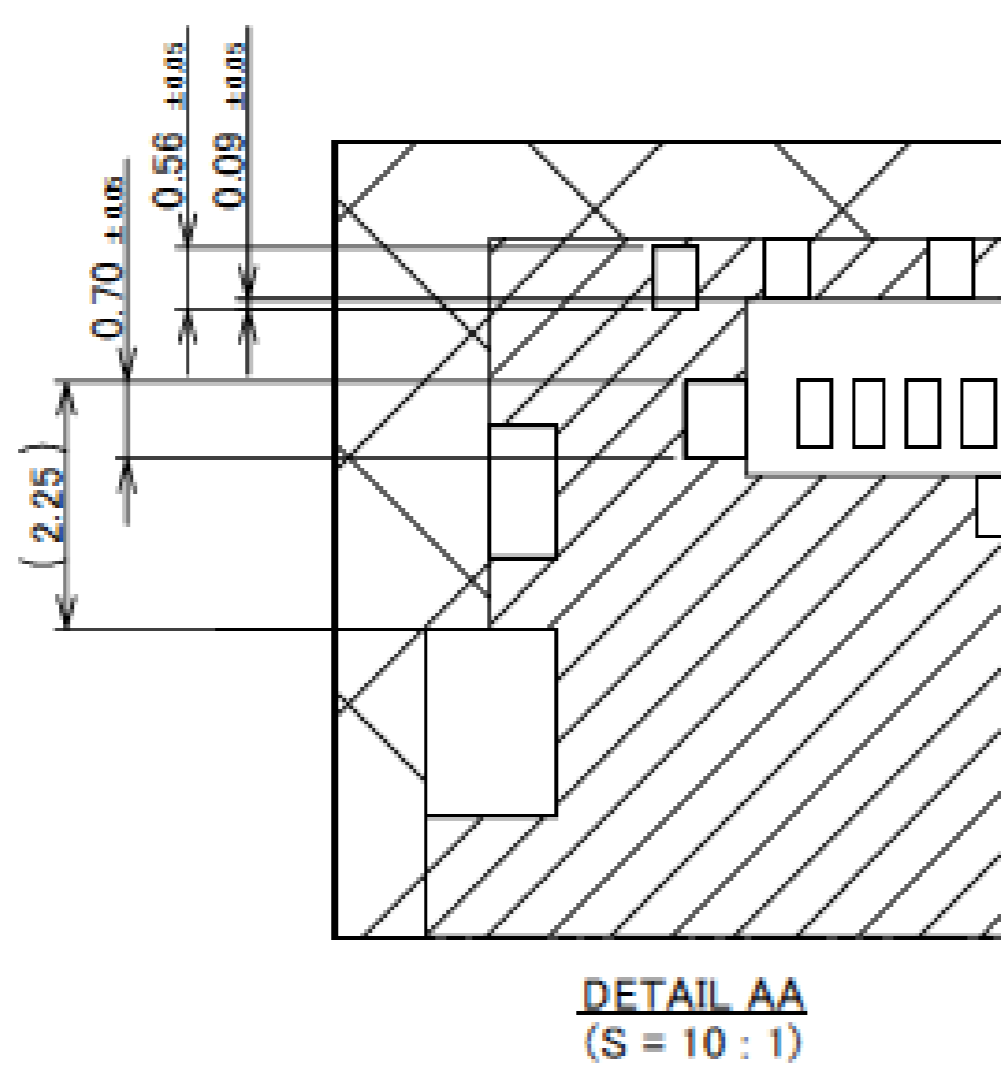
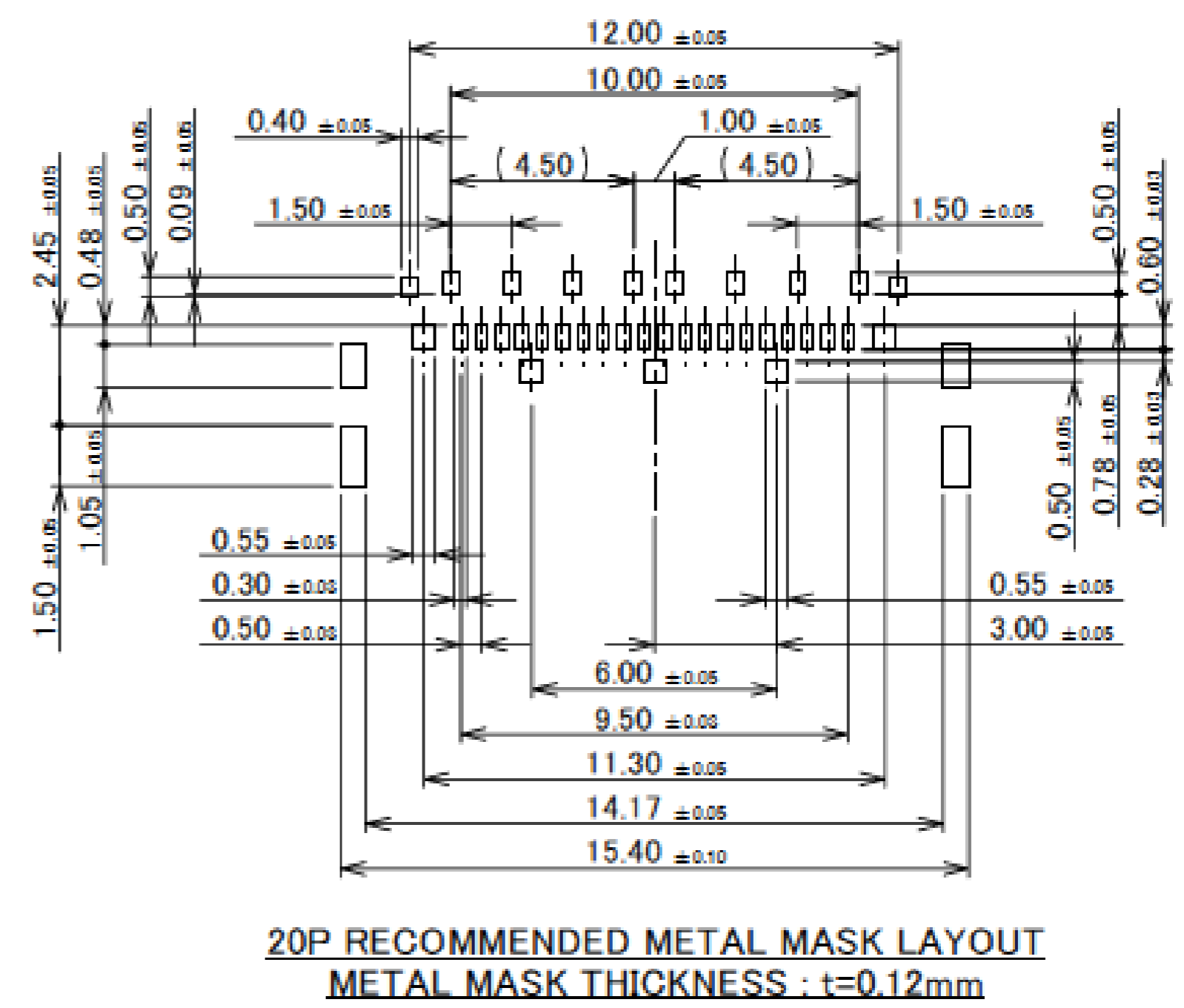
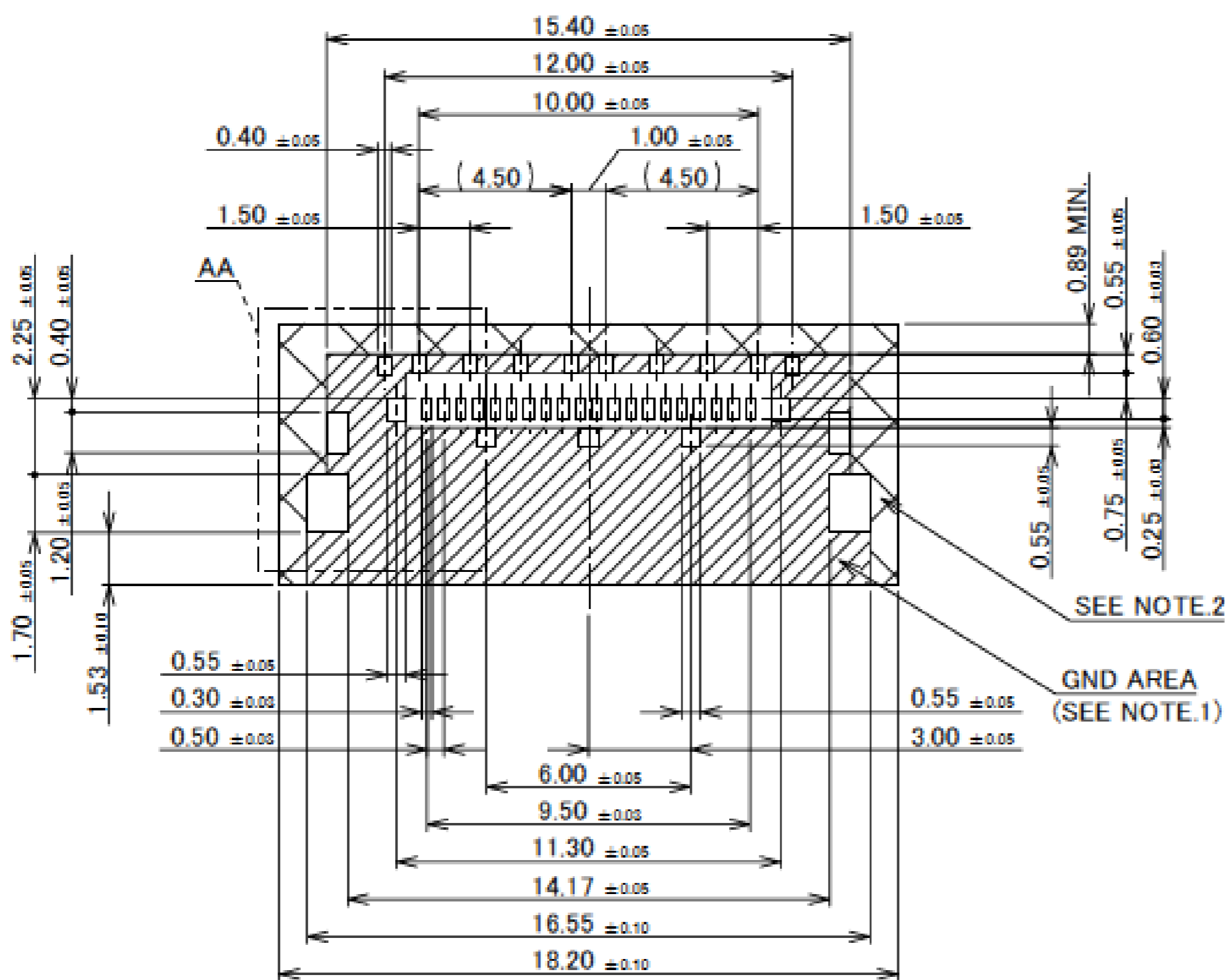
Receptacle Assembly

PART NO.	Pos.
20849-020E-0#	20
20849-030E-0#	30
20849-040E-0#	40

BOTTOM VIEW



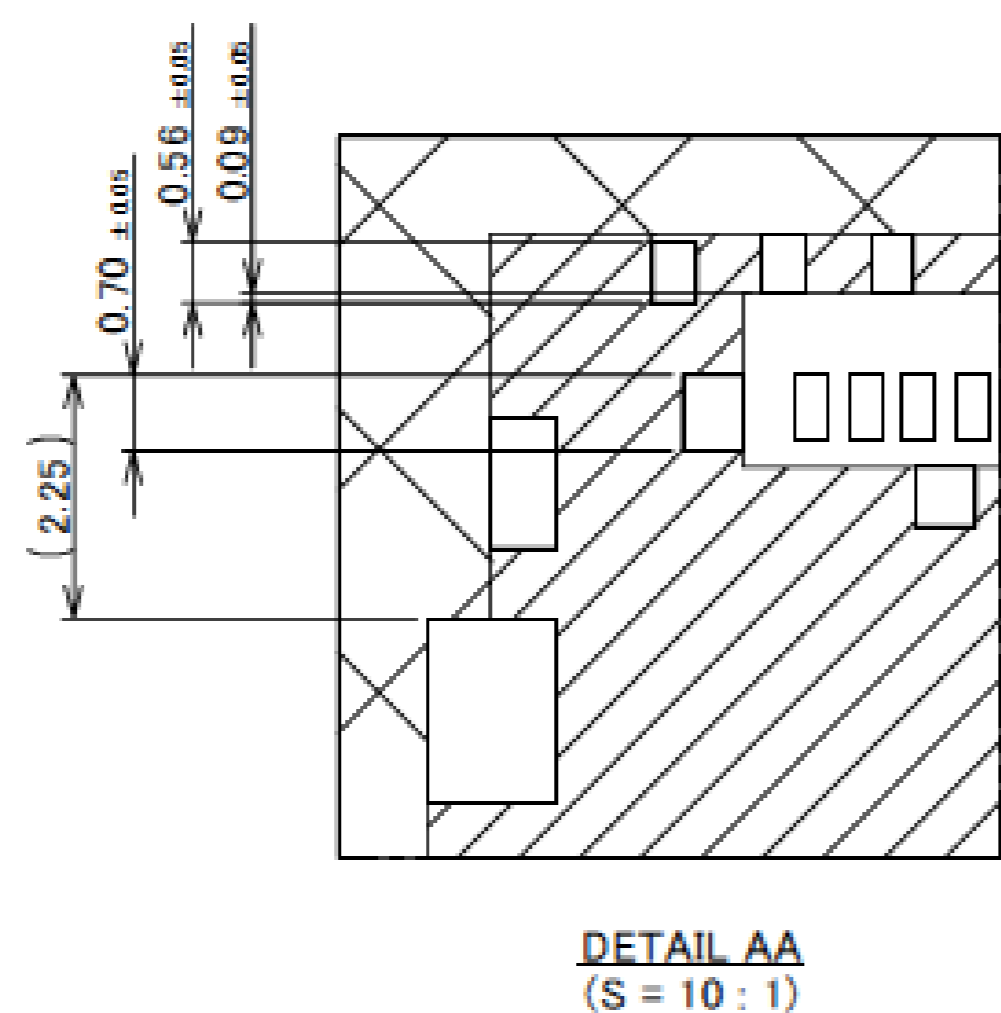
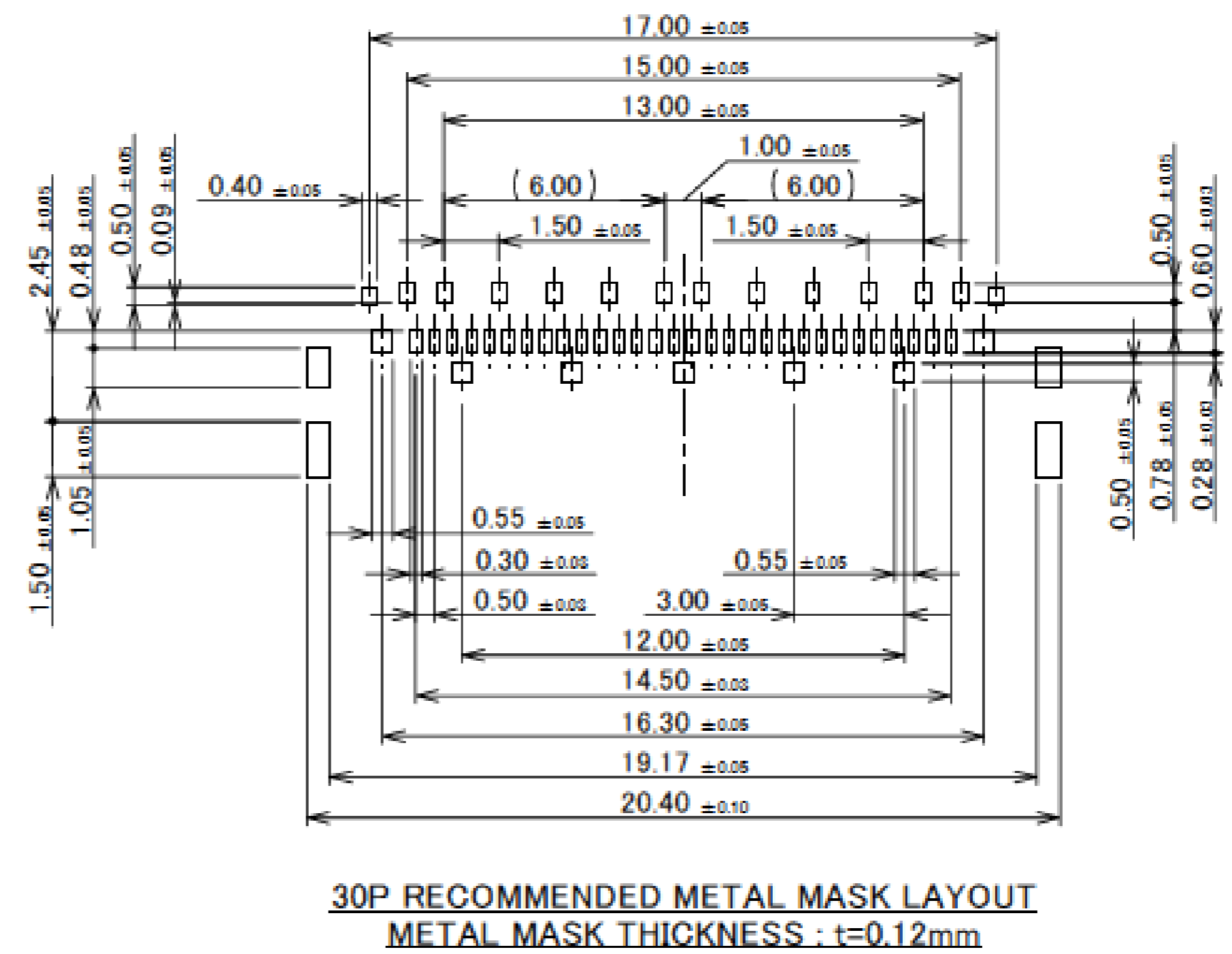
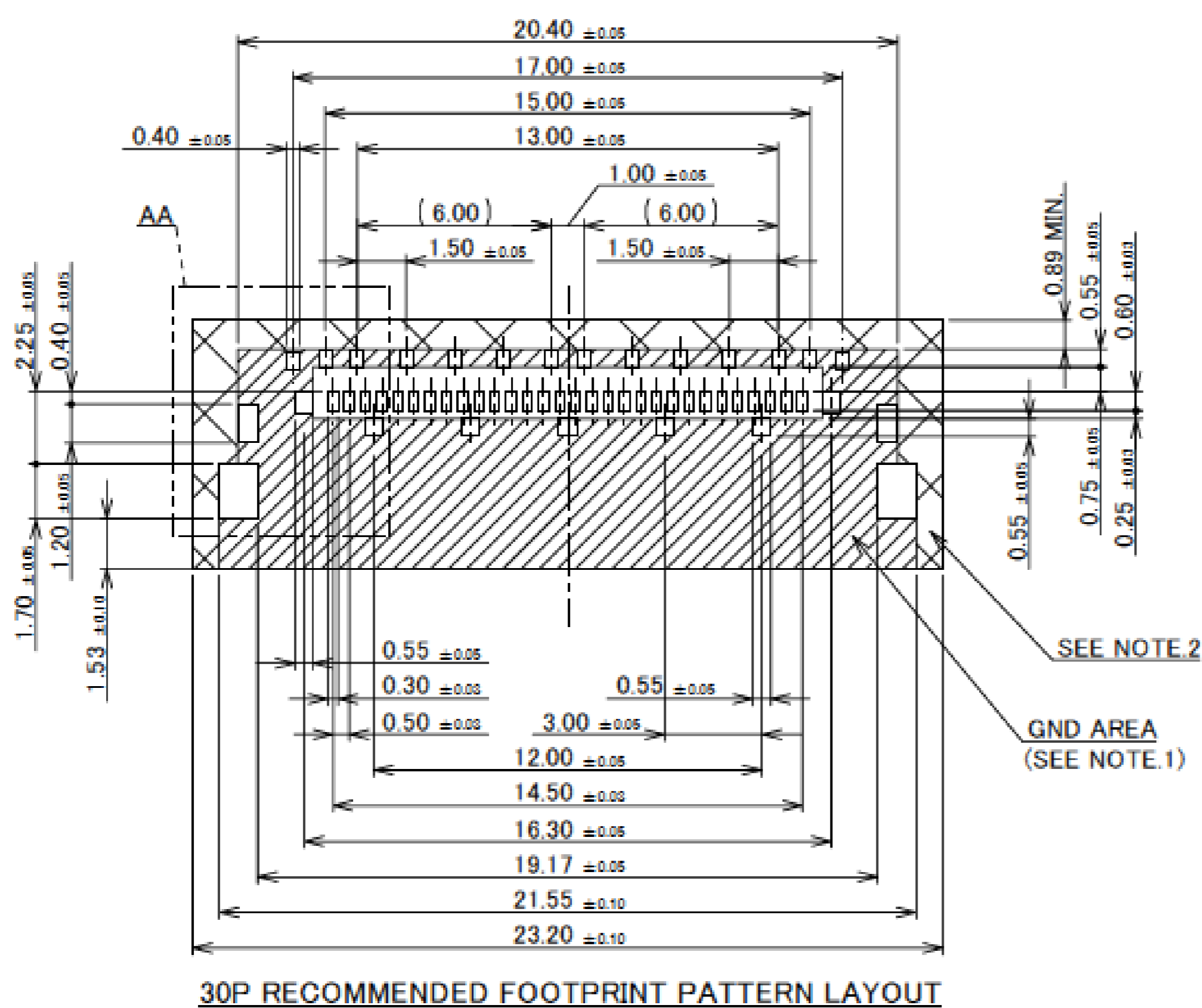
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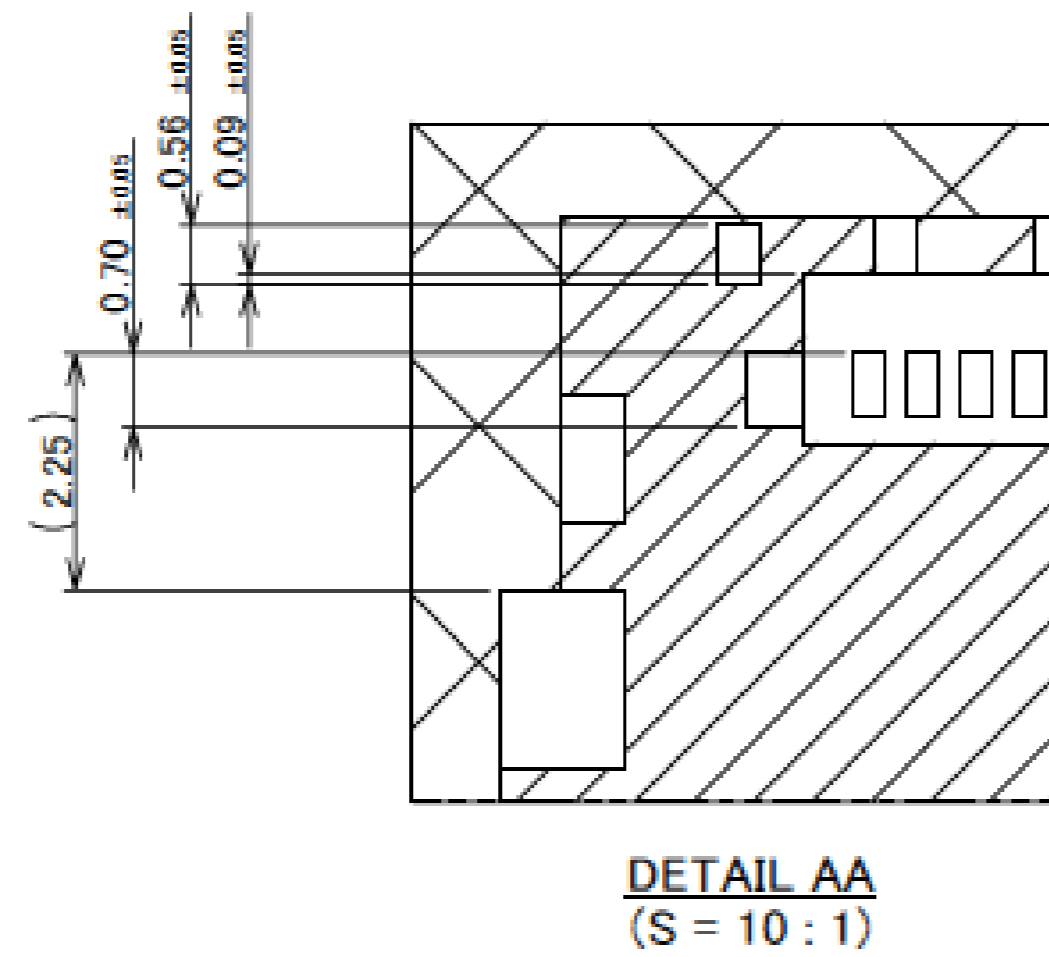
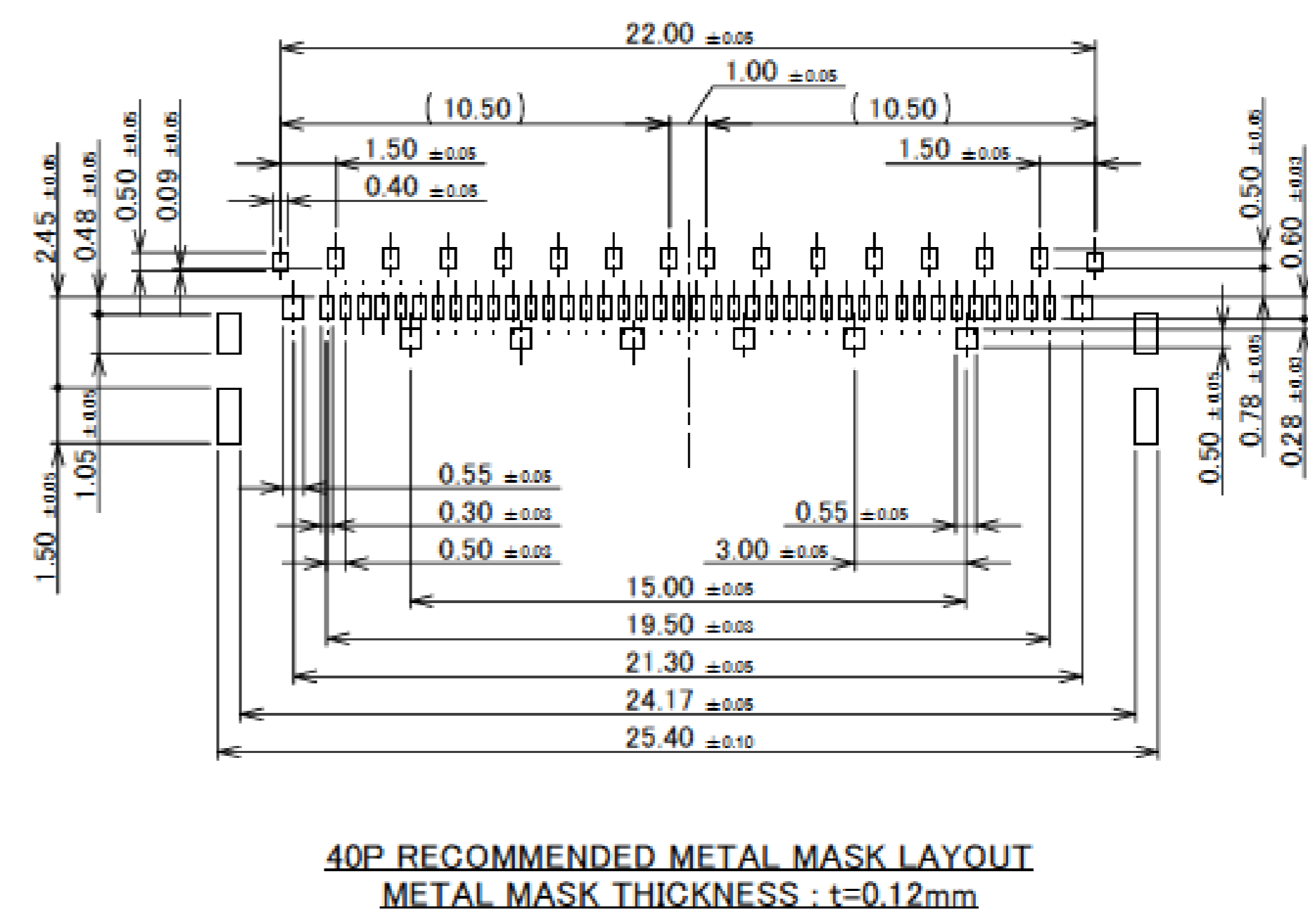
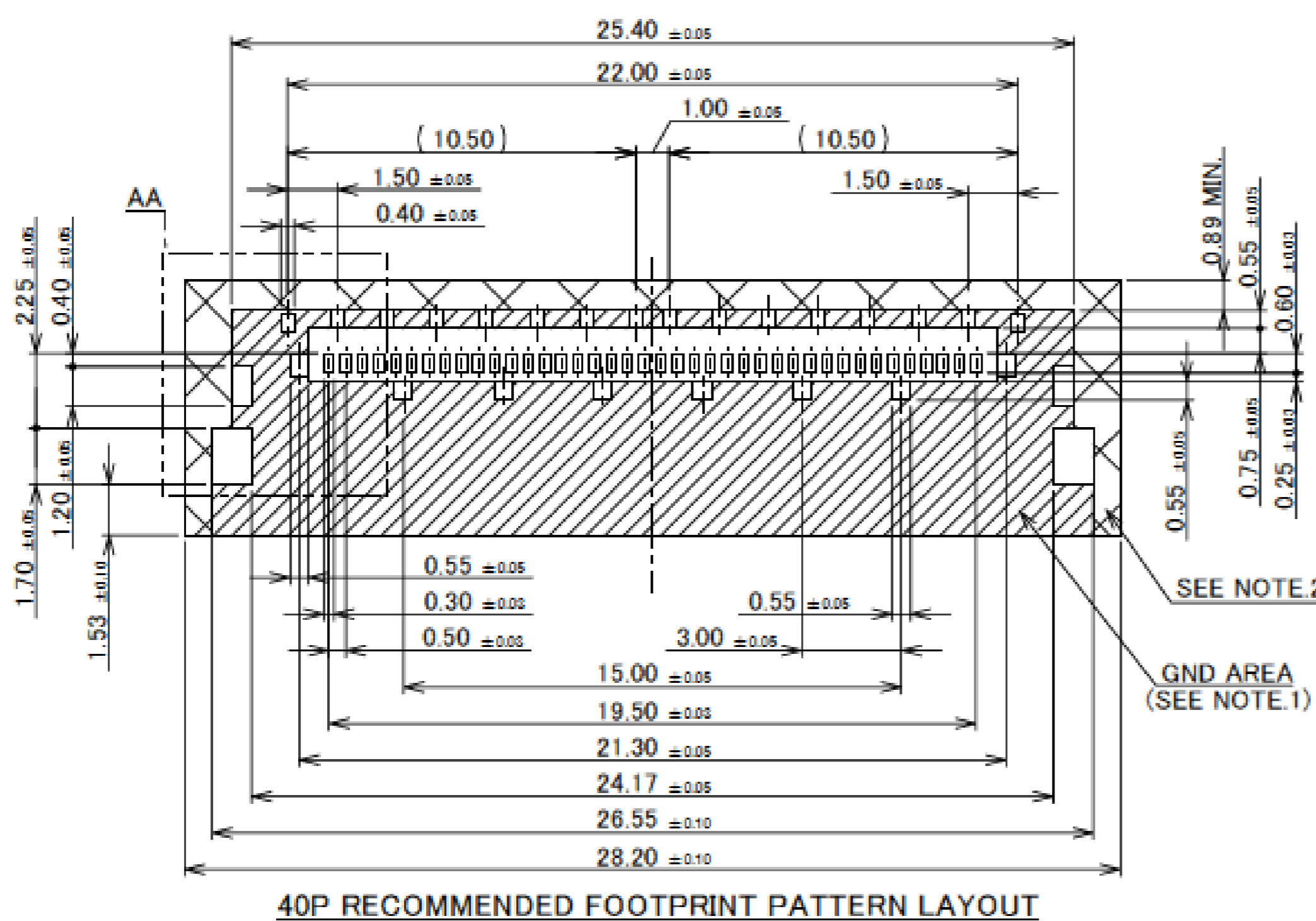
- NOTES.
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA.
2. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.

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Receptacle Assembly

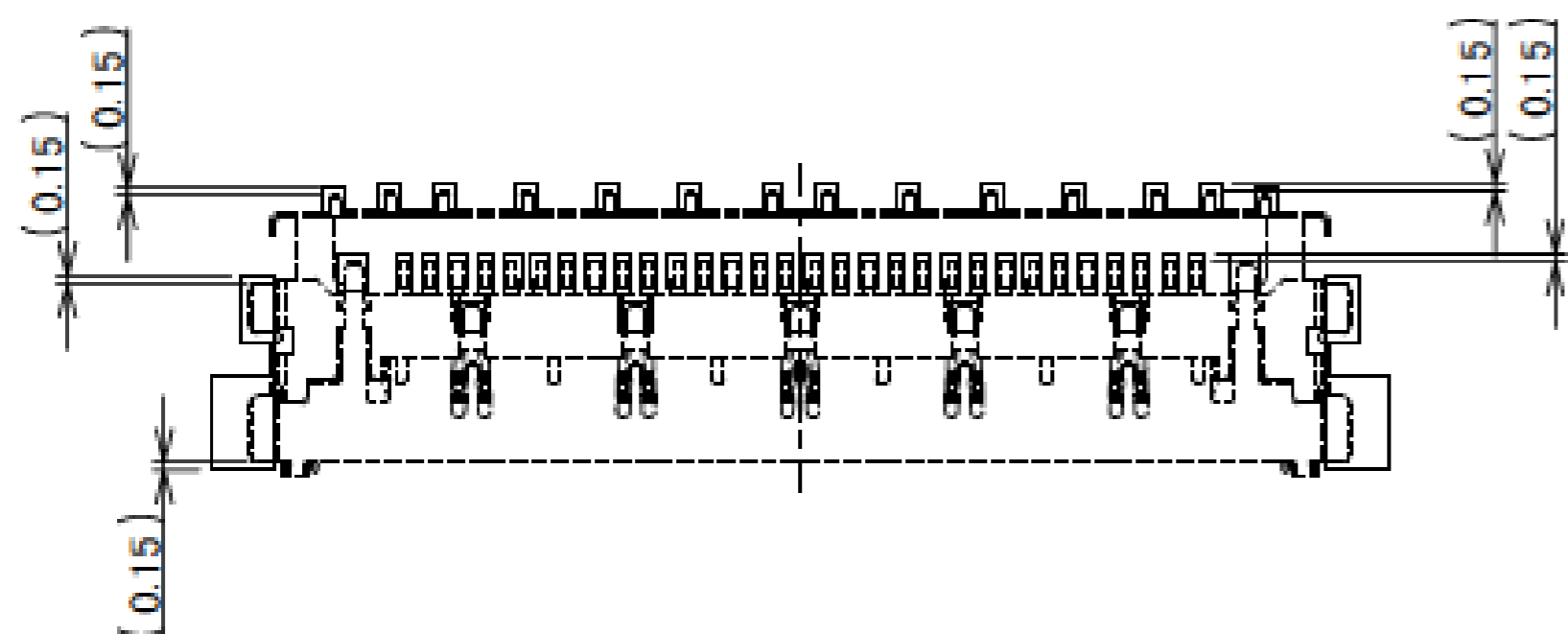


NOTES.
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA.
2. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.

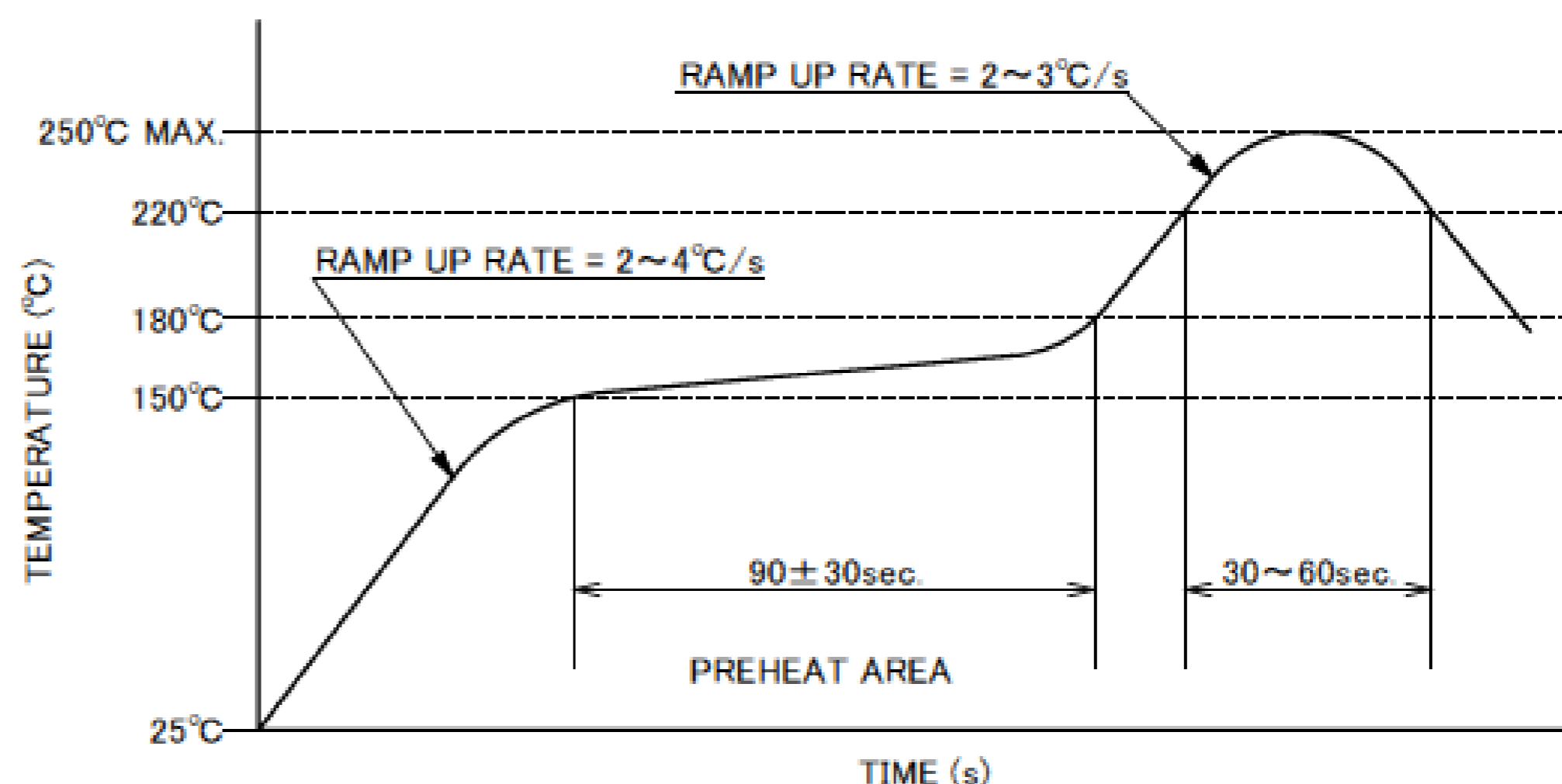


NOTES.
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA.
2. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.

Receptacle Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.14

FOR CABLINE-VS II PLUG CABLE ASSEMBLY (DWG NO. 20846)

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG# 36 , 34 , 32 TWINAX CABLE : AWG# 40
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 40 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 40 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN/UP TO 40 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT PIN/UP TO 23 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT PIN/UP TO 10 CONTACTS 1.0A AC/DC [AWG#34] FOR POWER PER CONTACT PIN/UP TO 9 CONTACTS 1.0A AC/DC [AWG#32] FOR POWER PER CONTACT PIN/UP TO 9 CONTACTS ※ TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION.
OPERATING TEMPERATURE	233~378K(-40°C~+105°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE	INITIAL : 140mohm MAX.(AWG#32) / AFTER TEST : \triangle40mohm MAX. 180mohm MAX.(AWG#34) 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 : \triangle140mohm MAX.
INSULATION RESISTANCE	INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER 30 CYCLES)	20P : 9.70N MAX. / 30P : 14.55N MAX. / 40P : 19.40N MAX.
UNMATING FORCE (INITIAL / AFTER 30 CYCLES)	20P : 2.00N MIN. / 30P : 3.00N MIN. / 40P : 4.00N MIN.
CABLE RETENTION FORCE	20P : 9.80N MIN. / 30P : 14.70N MIN. / 40P : 19.60N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2398
TEST REPORT	TR-17060 (20849-0**E-01) / TR-18048 (20849-0**E-02)
PACKING STANDARD	PST-17079
INSTRUCTION MANUAL	HIM-17015
ASSEMBLY MANUAL	ASM-17005
APPEARANCE CRITERIA No.	QLS-A***

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Custom Connectors Available

 RF Connectors

MHF® series



CABLINA® series



Micro-Coaxial/Twinax Connectors

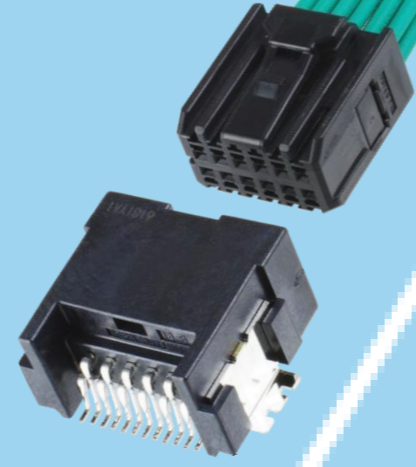


Wire-to-Board Connectors/Terminals

AP series



ISH® series



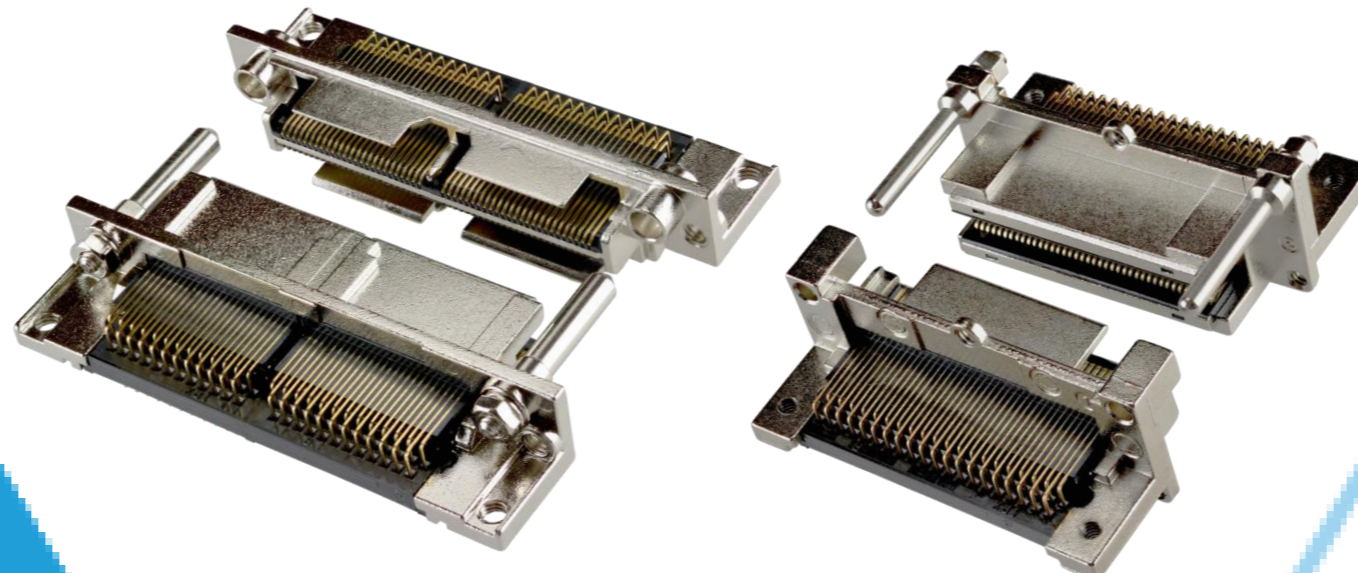
NOVASTACK® series



Board-to-Board Connectors



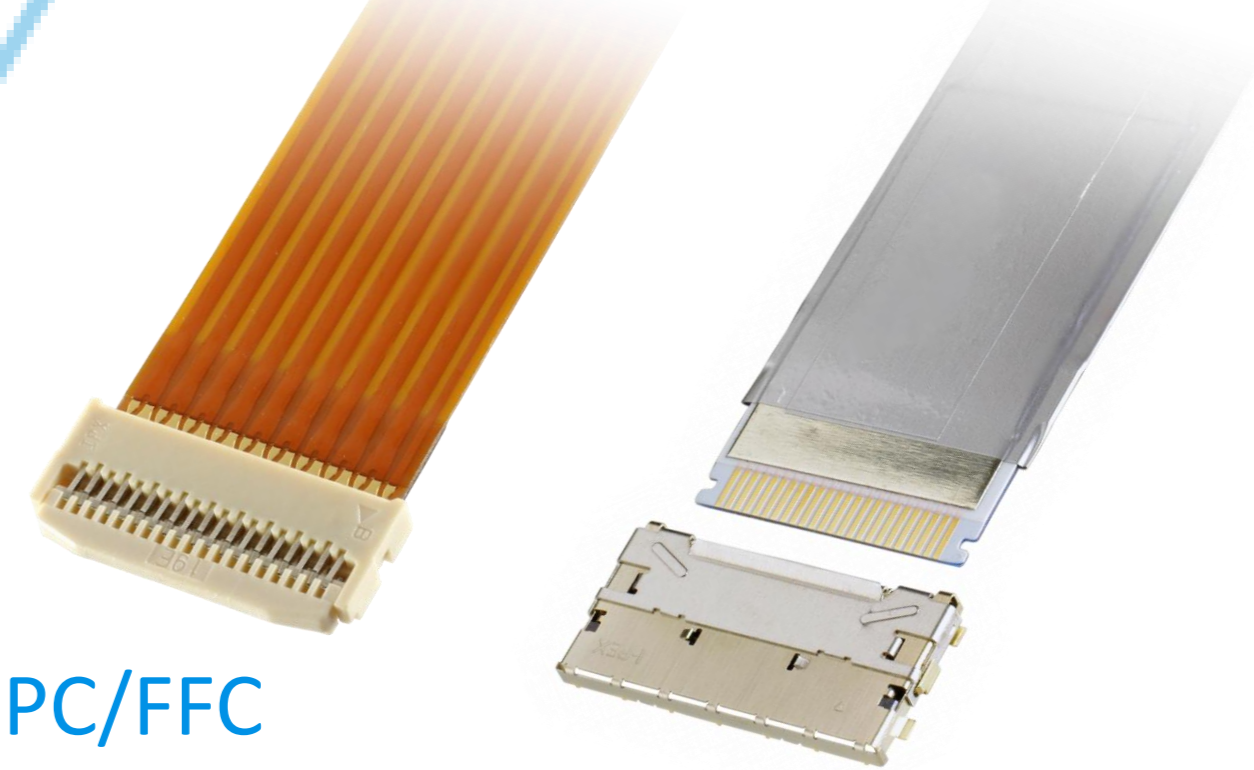
I/O Connectors



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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