

NOVASTACK® 35-HDP

High-speed (20+ Gbps/lane) fully-shielded with power contacts, 0.35 mm pitch, 0.7 mm height

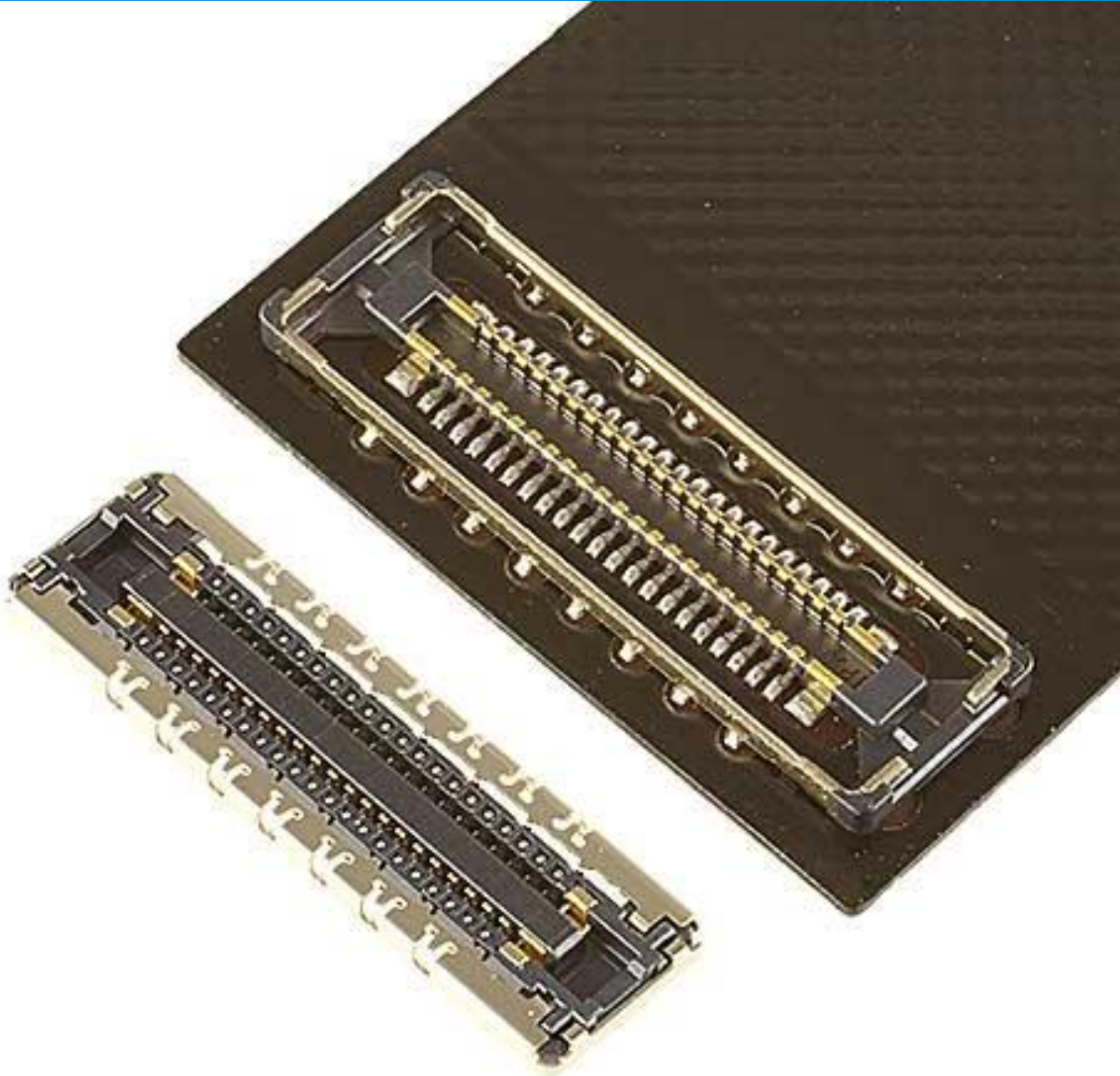
Product Specifications:

Board Pitch (mm)		0.35
Wiping Length (mm)		Signal contact : 0.11, Power contact : 0.13
Mated Size (mm)	Height	0.7 +/- 0.05
	Width	Formula: 4.89+(0.35*?p/2)
	Depth	3.7
Current Rating	Signal	0.3 A/pin
	Power	2.2 A/pin x 4
Pin Counts	Range	6 - 76 (signal) + 4 (power)
	Available	16, 28, 34, 42, 56, 62 /+ 4

Applicable Standards (Reference Only):

USB4 (20 Gbps/lane) USB 3.1 Gen 2 (10 Gbps)
eDP HBR 3 (8.1 Gbps) eDP HBR 2 (5.4 Gbps)
HDMI 2.0 (6 Gbps) V-By-One HS 1.4 (4 Gbps)
MiPi standards

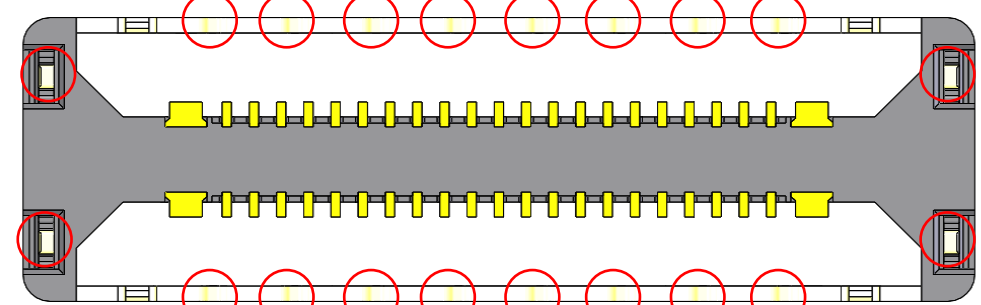
* Please inquire for pin counts not listed or outside of the pin count range.



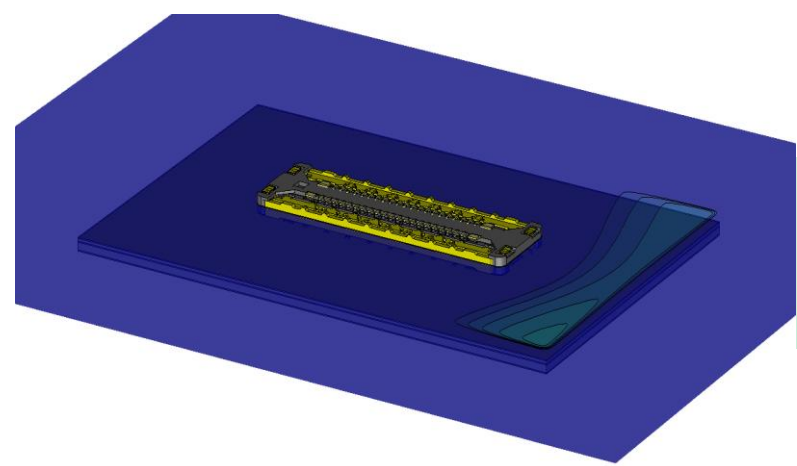
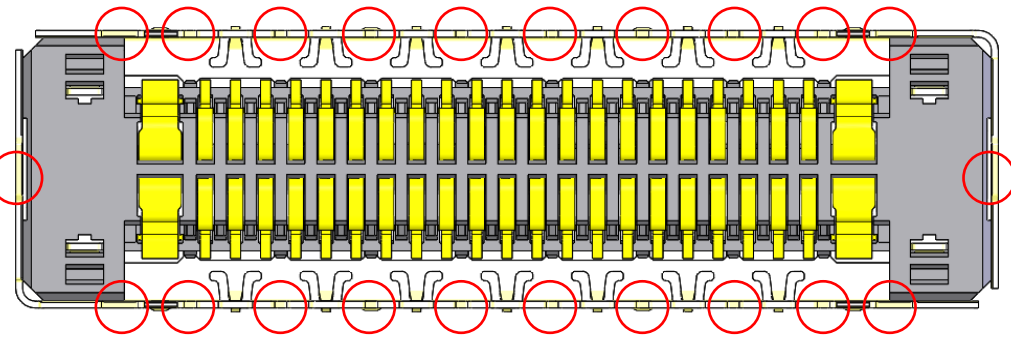
► ZenShield® fully-shielded with multi-point grounds to prevent EMI leakage

○ Ground SMT points

PLUG



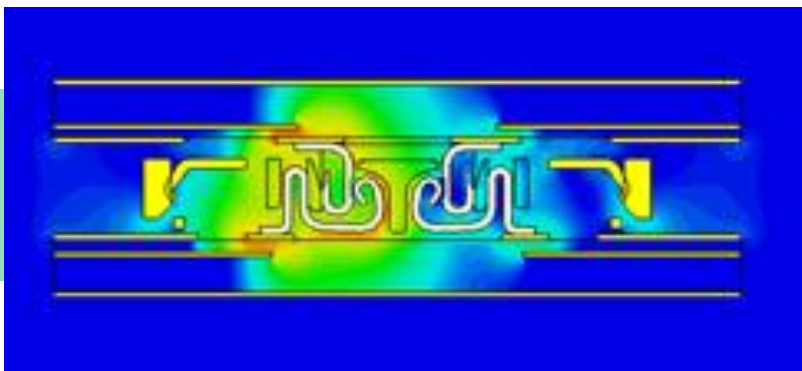
RECEPTACLE



With Shielding

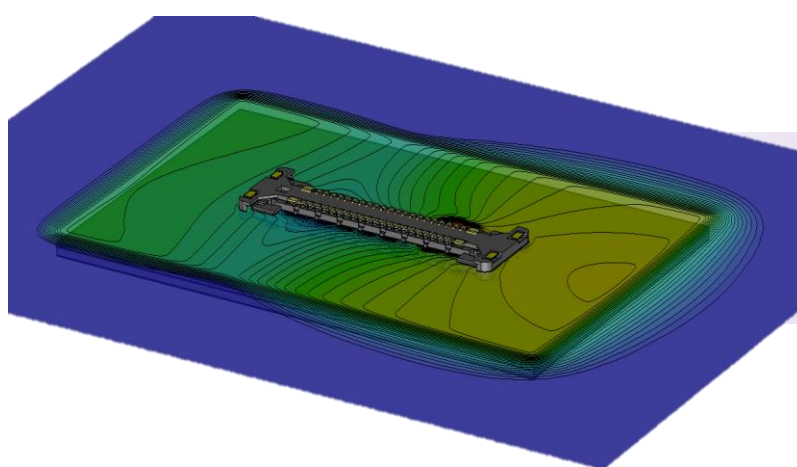
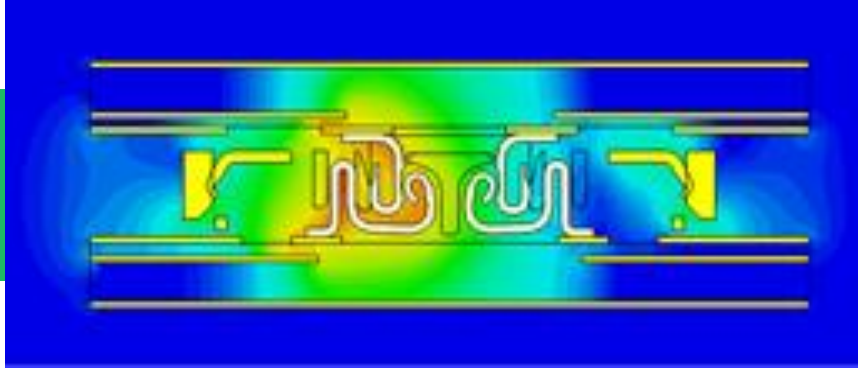
E-Field

10.0 GHz

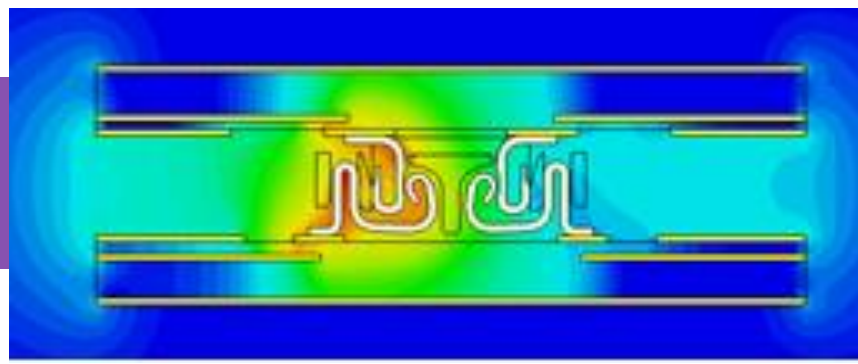
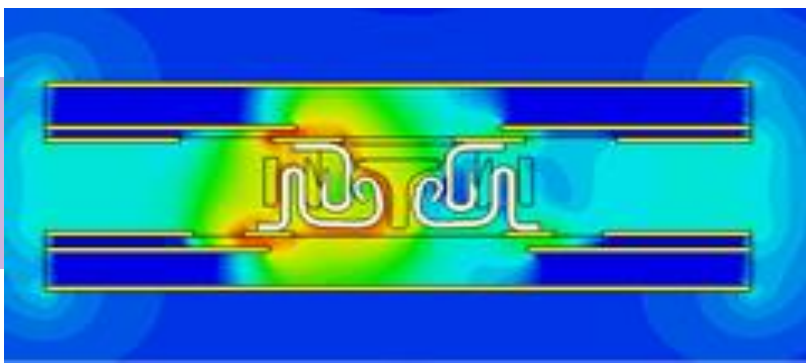


H-Field

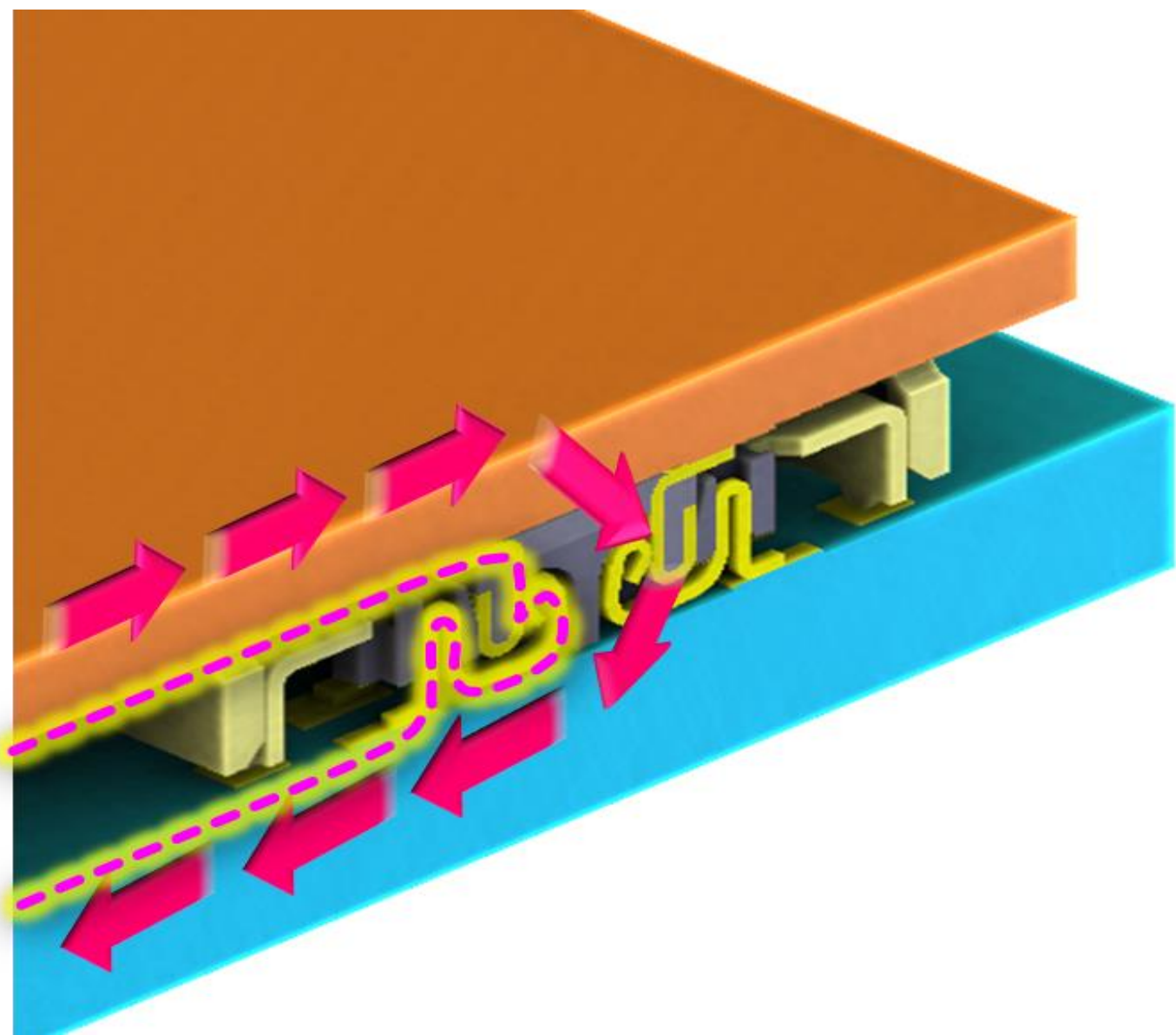
10.0 GHz



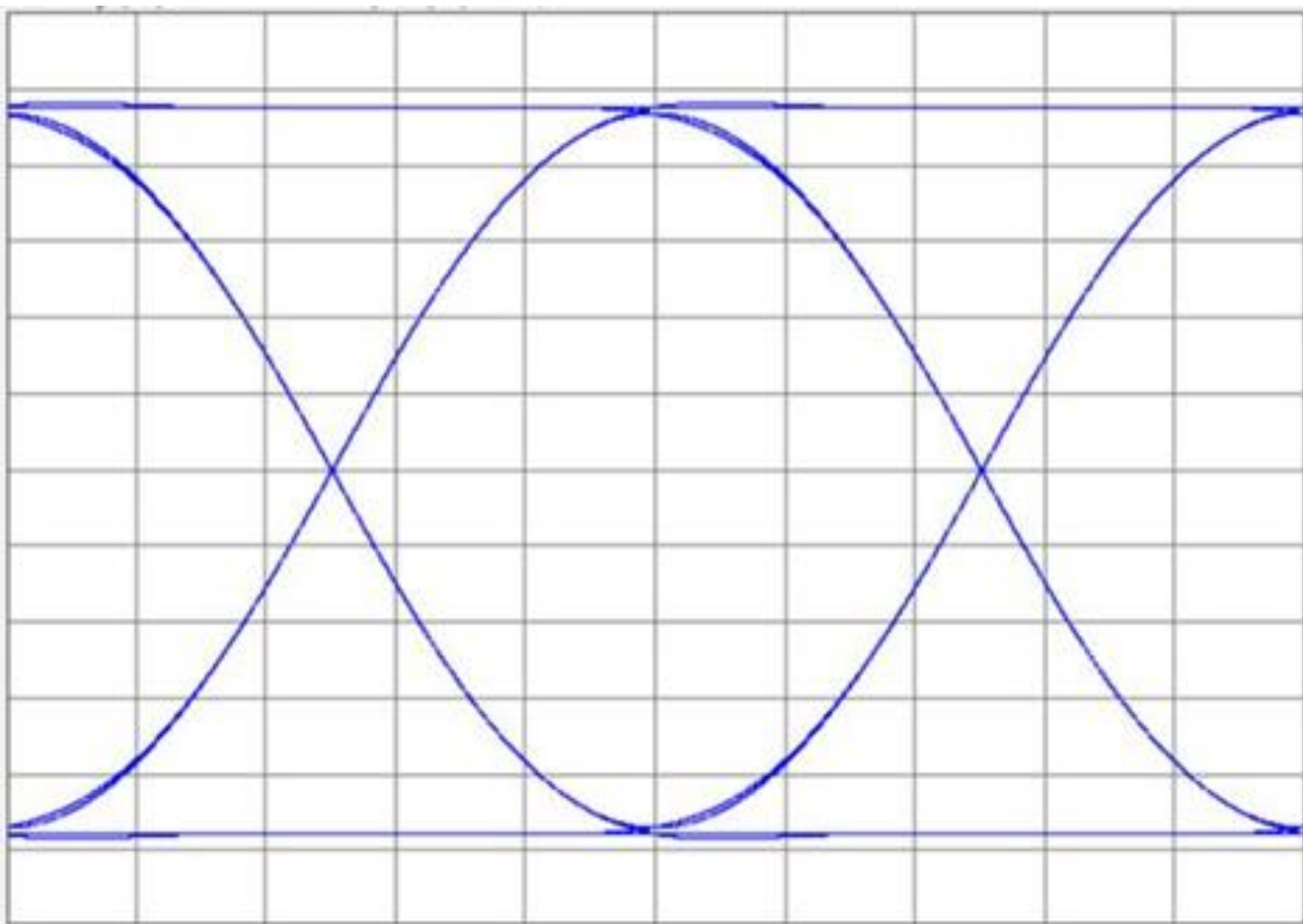
Without Shielding



► Ideal for high-speed transmission e.g. USB4 / Thunderbolt 4 (20+ Gbps / lane)



Eye pattern



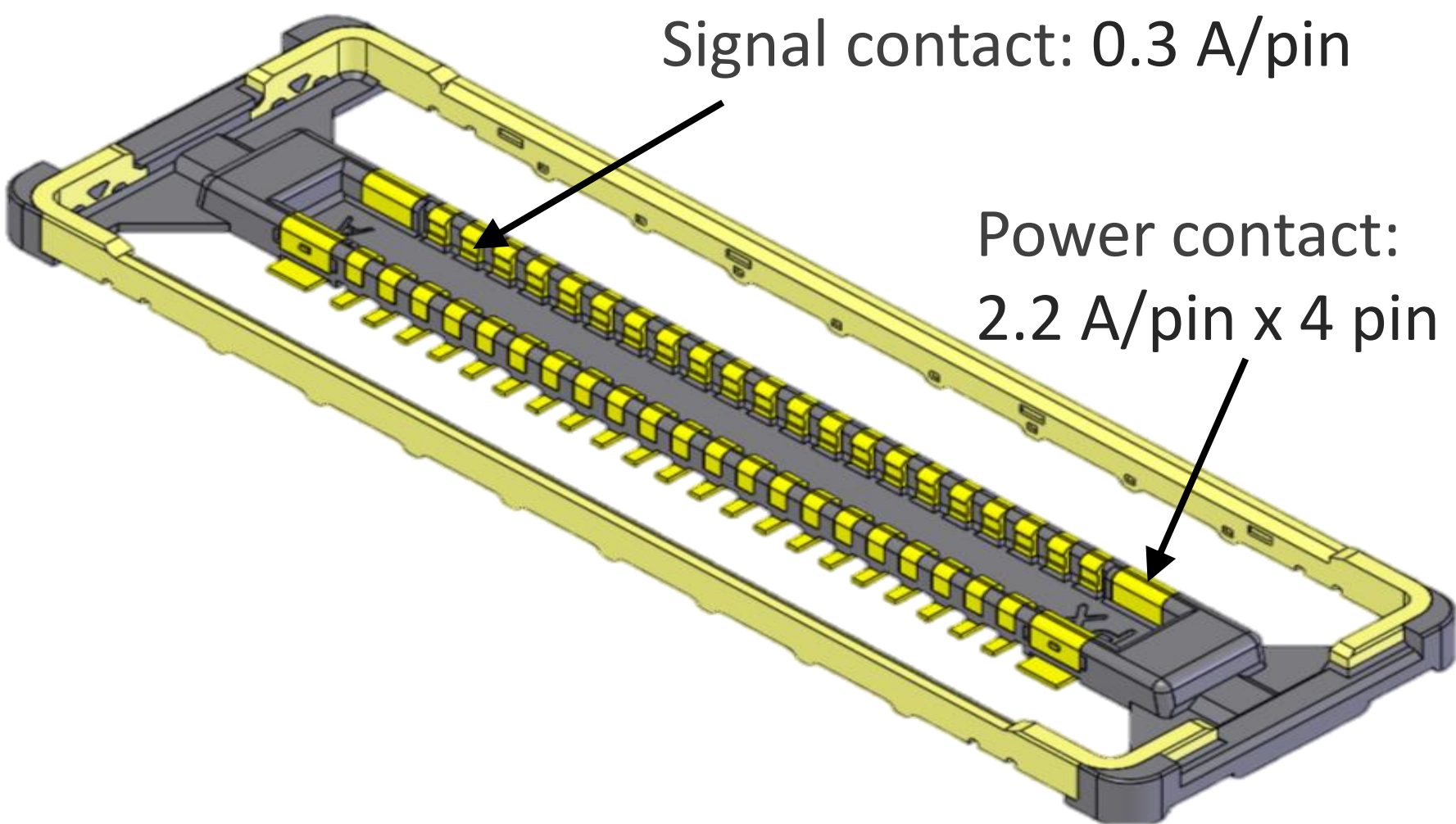
Bit rate : 25 Gbps

Rise time : 20 ps (10-90%)

Input voltage : 800 mVp-p

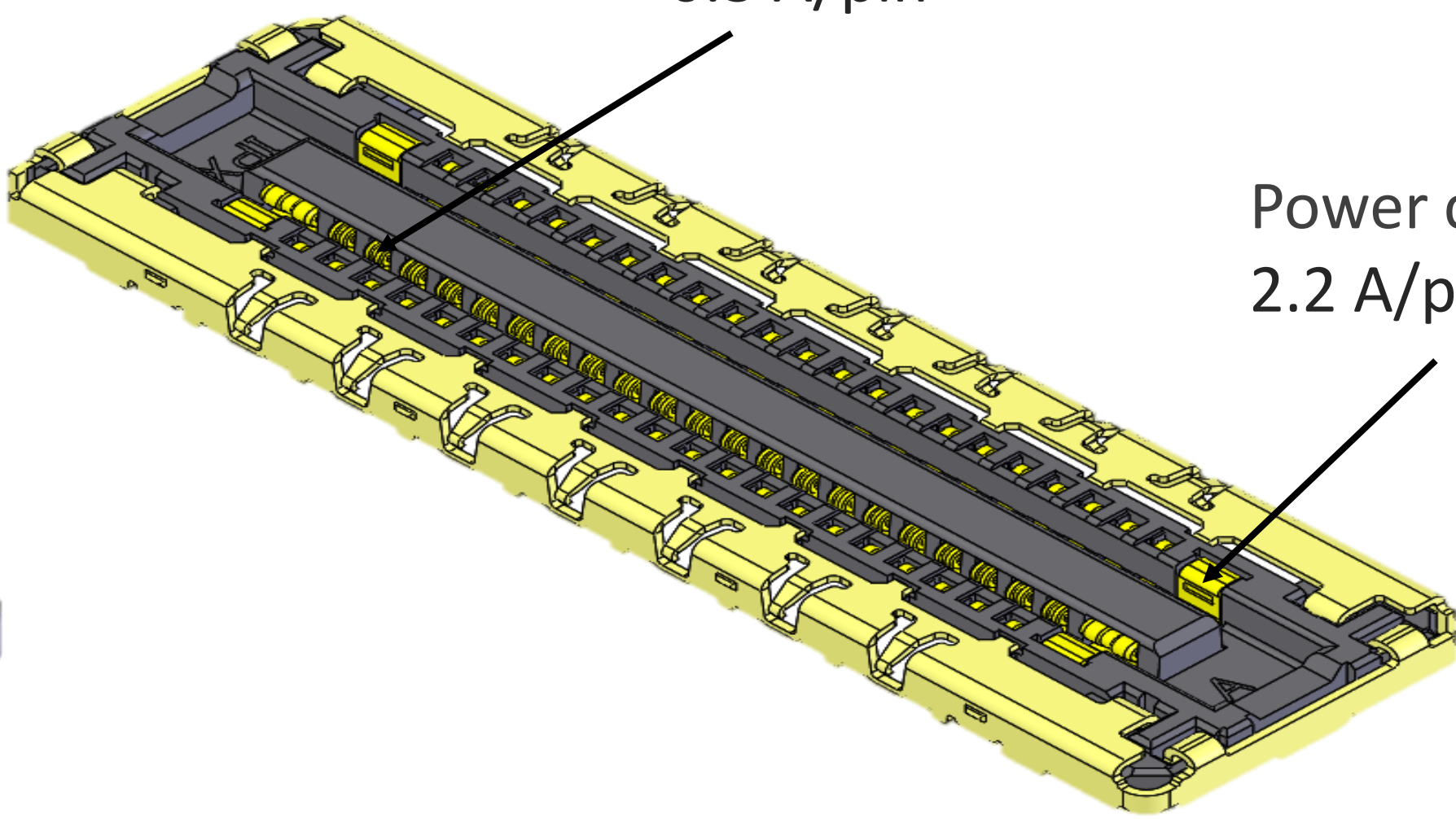
*Please contact I-PEX for more test details.

► 2.2 A power pin x 4 for power delivery



Signal contact: 0.3 A/pin

Power contact:
2.2 A/pin x 4 pin



Signal contact:
0.3 A/pin

Power contact:
2.2 A/pin x 4 pin

Component Parts Detail

Plug Assembly

Recommended P/N 20697-0**E-01#-#

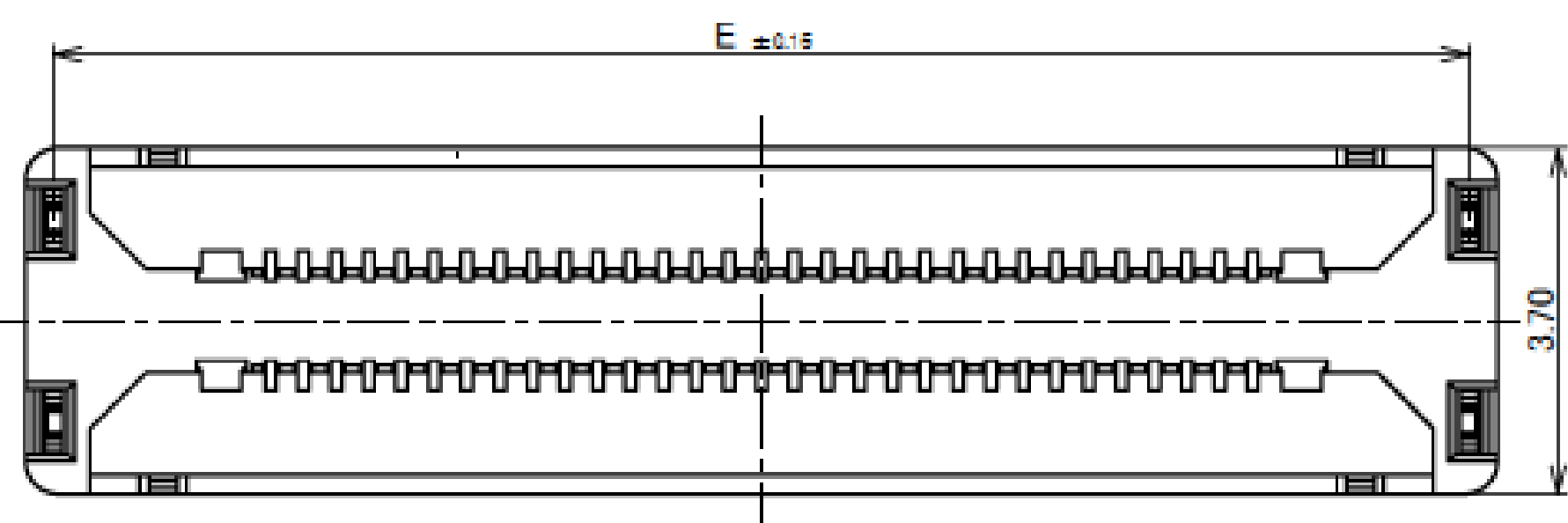
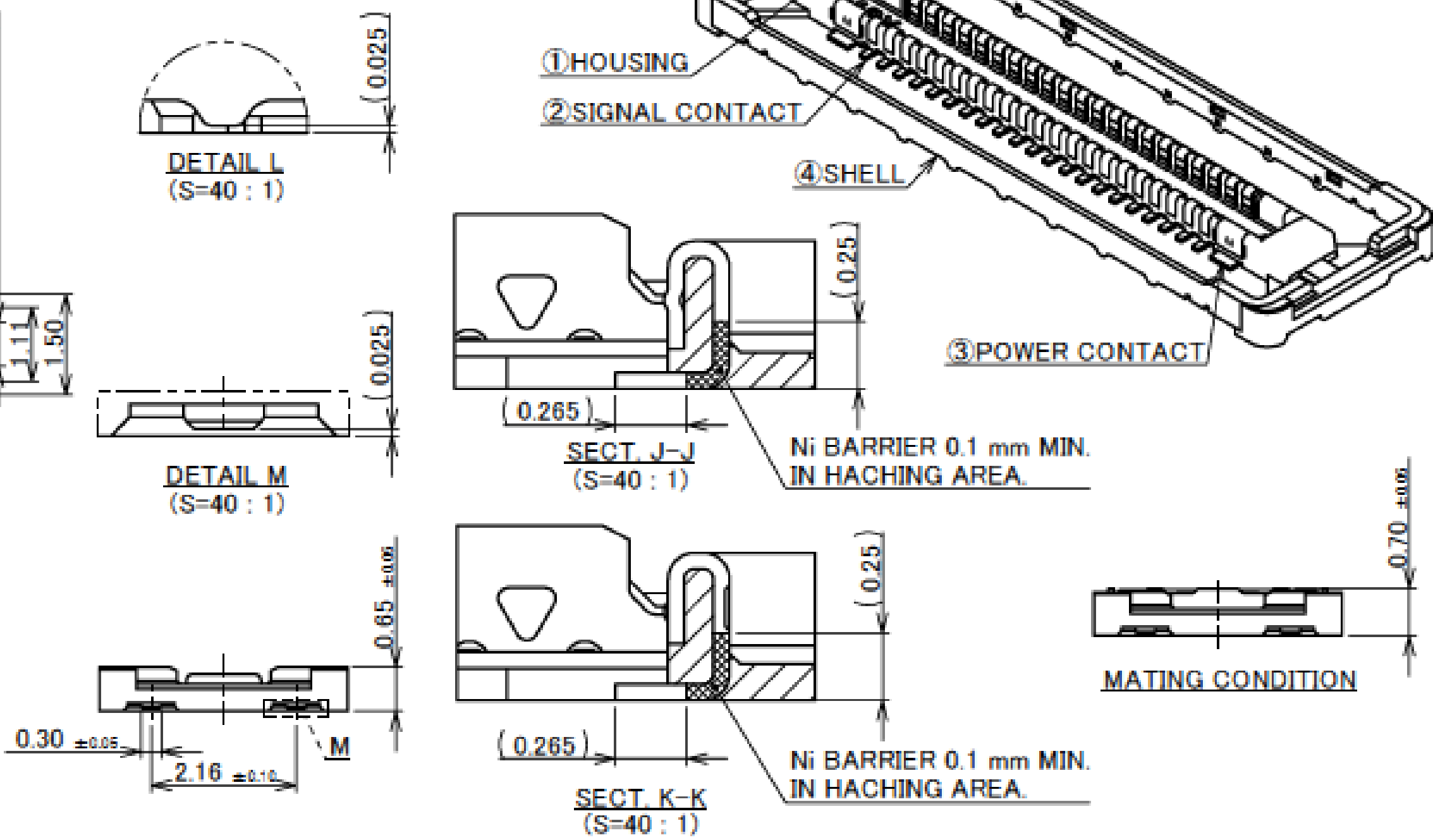
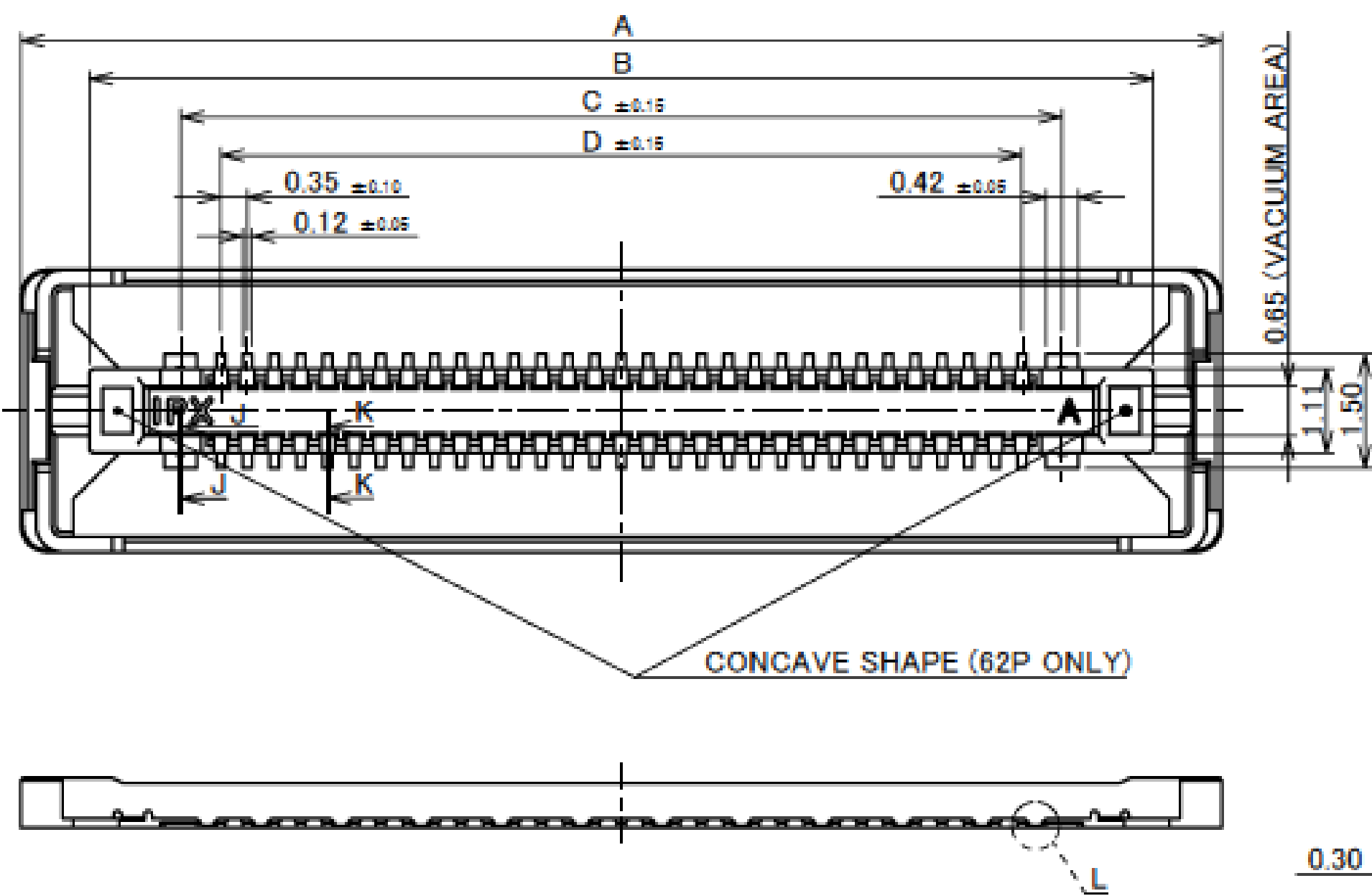
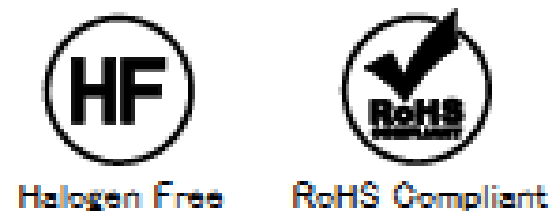
PART No.	SIGNAL POS.	POWER POS.	A	B	C	D	E
20697-016E-01-P	16P	4P	7.69	5.89	3.50	2.45	7.09
20697-028E-01	28P	4P	9.79	7.99	5.60	4.55	9.19
20697-034E-01	34P	4P	10.84	9.04	6.65	5.60	10.24
20697-042E-01#	42P	4P	12.24	10.44	8.05	7.00	11.64
20697-056E-01#	56P	4P	14.69	12.89	10.50	9.45	14.09
20697-062E-01#	62P	4P	15.74	13.94	11.55	10.50	15.14

20697-0**E-01M-P

HOUSING MATERIAL
WITHOUT : LCP, UL94-0, BLACK
WITH : LCP, UL94-0, BLACK (PFAS FREE)

WITHOUT : 10,000 pcs/REEL
WITH : 5,000 pcs/REEL

Pos.



4	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.27 μ m MIN. Au 0.01 μ m MIN.
3	POWER CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μ m MIN. CONTACT PART Au 0.05 μ m MIN. SOLDERING PART Au 0.02 μ m MIN.
2	SIGNAL CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μ m MIN. CONTACT PART Au 0.05 μ m MIN. SOLDERING PART Au 0.02 μ m MIN.
1	HOUSING	LCP	UL94V-0, BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Plug Assembly

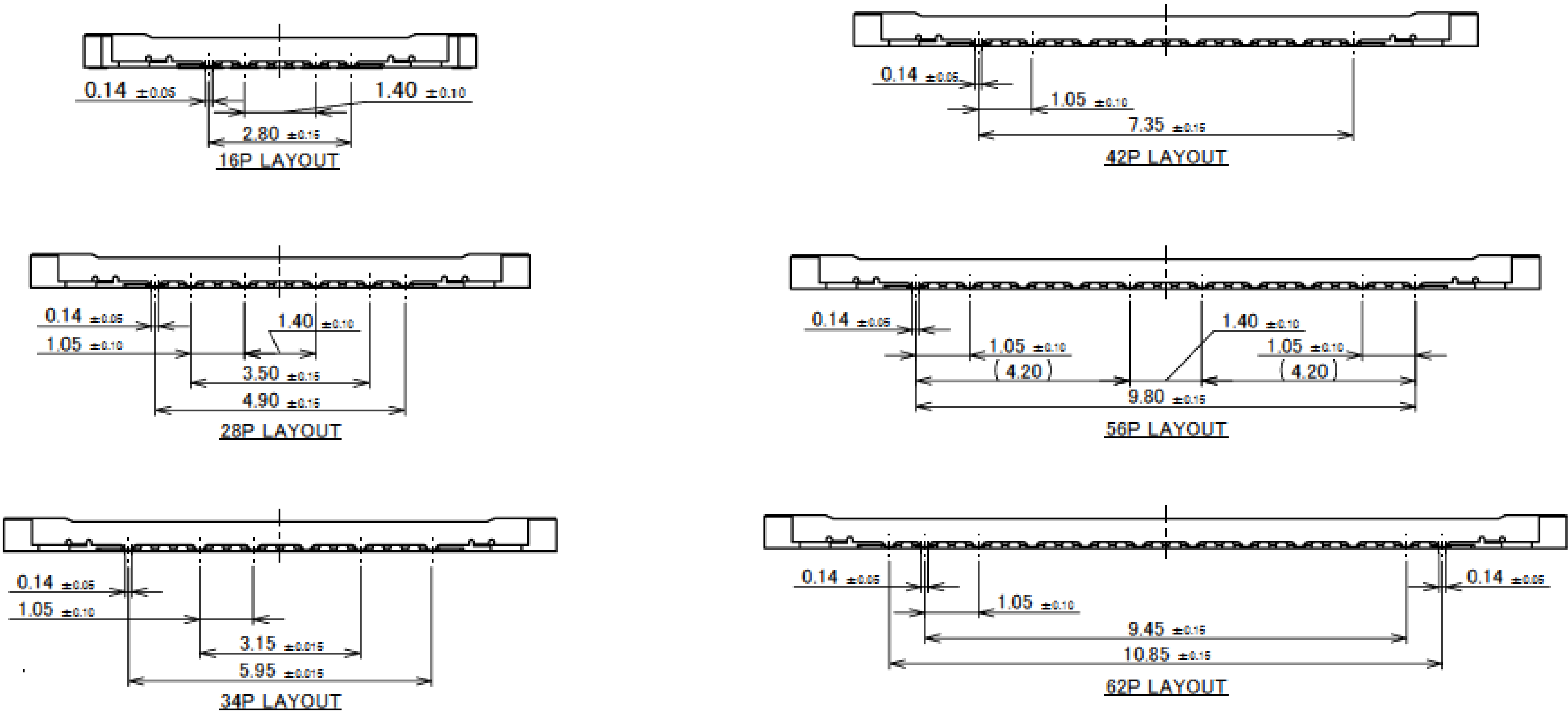
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20697-028E-01	28P	4P
20697-034E-01	34P	4P
20697-042E-01#	42P	4P
20697-056E-01#	56P	4P
20697-062E-01#	62P	4P

20697-0**E-01M-P

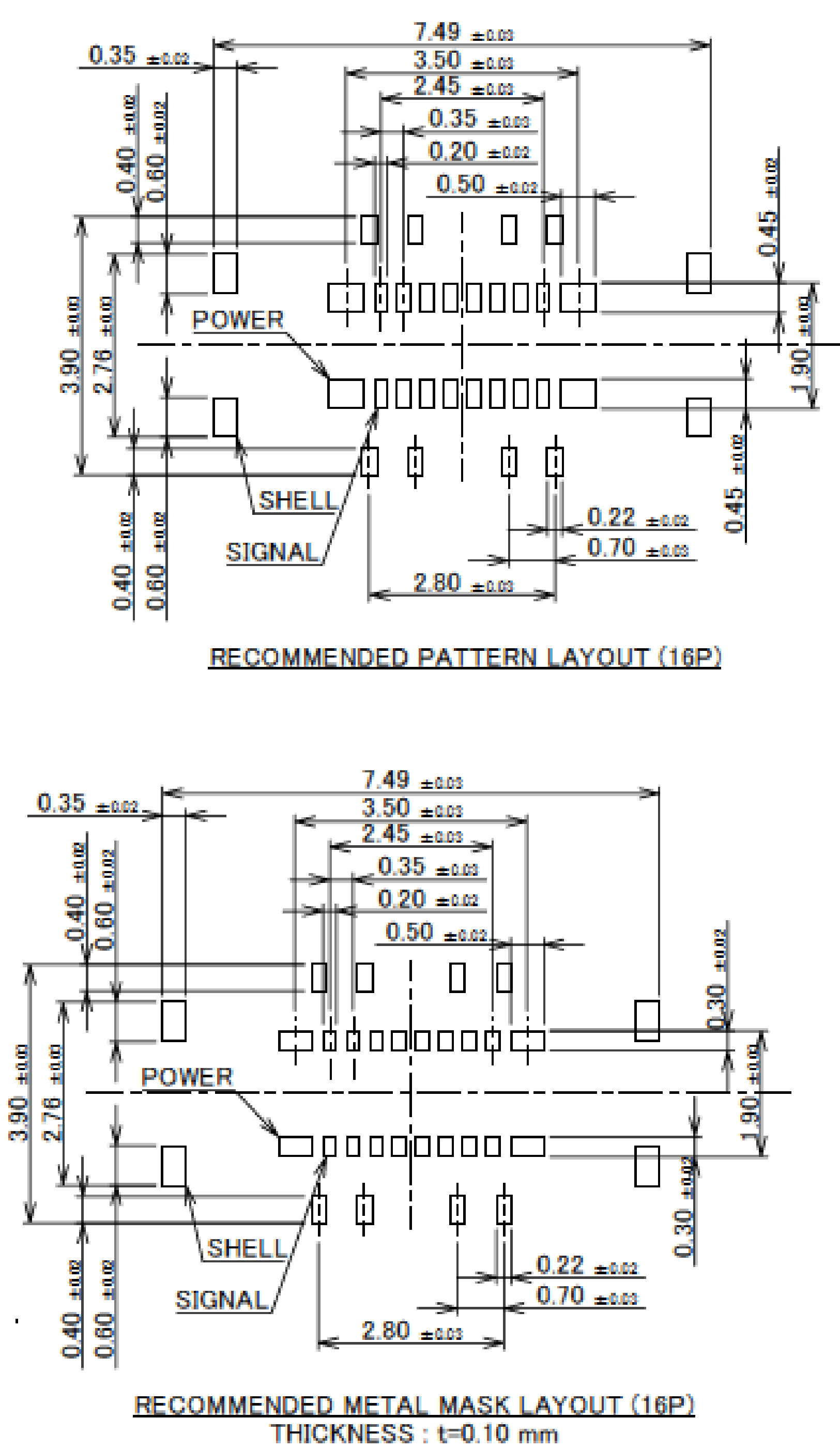
HOUSING MATERIAL
WITHOUT : LCP, UL94-0, BLACK
WITH : LCP, UL94-0, BLACK (PFAS FREE)

WITHOUT : 10,000 pcs/REEL
WITH : 5,000 pcs/REEL

Pos.

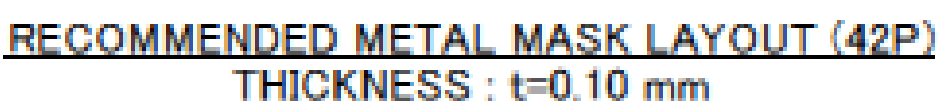
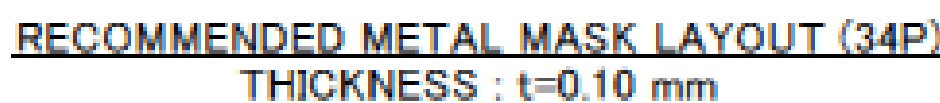


Rev.8

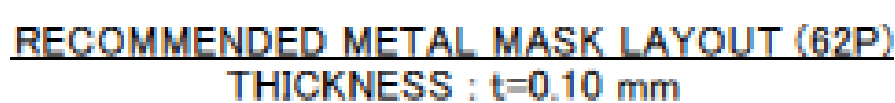
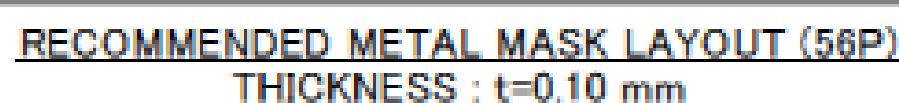


Rev.8

Plug Assembly



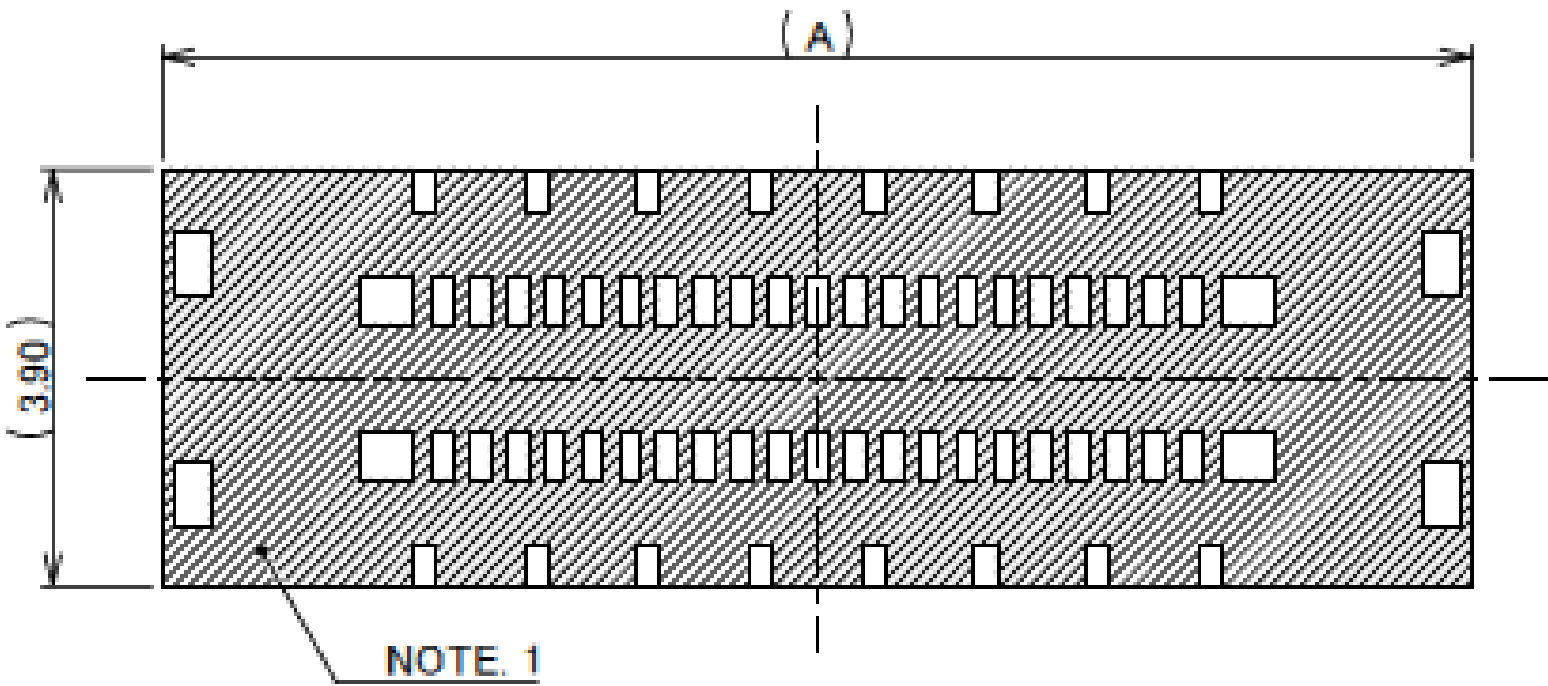
Rev.8



Rev.8

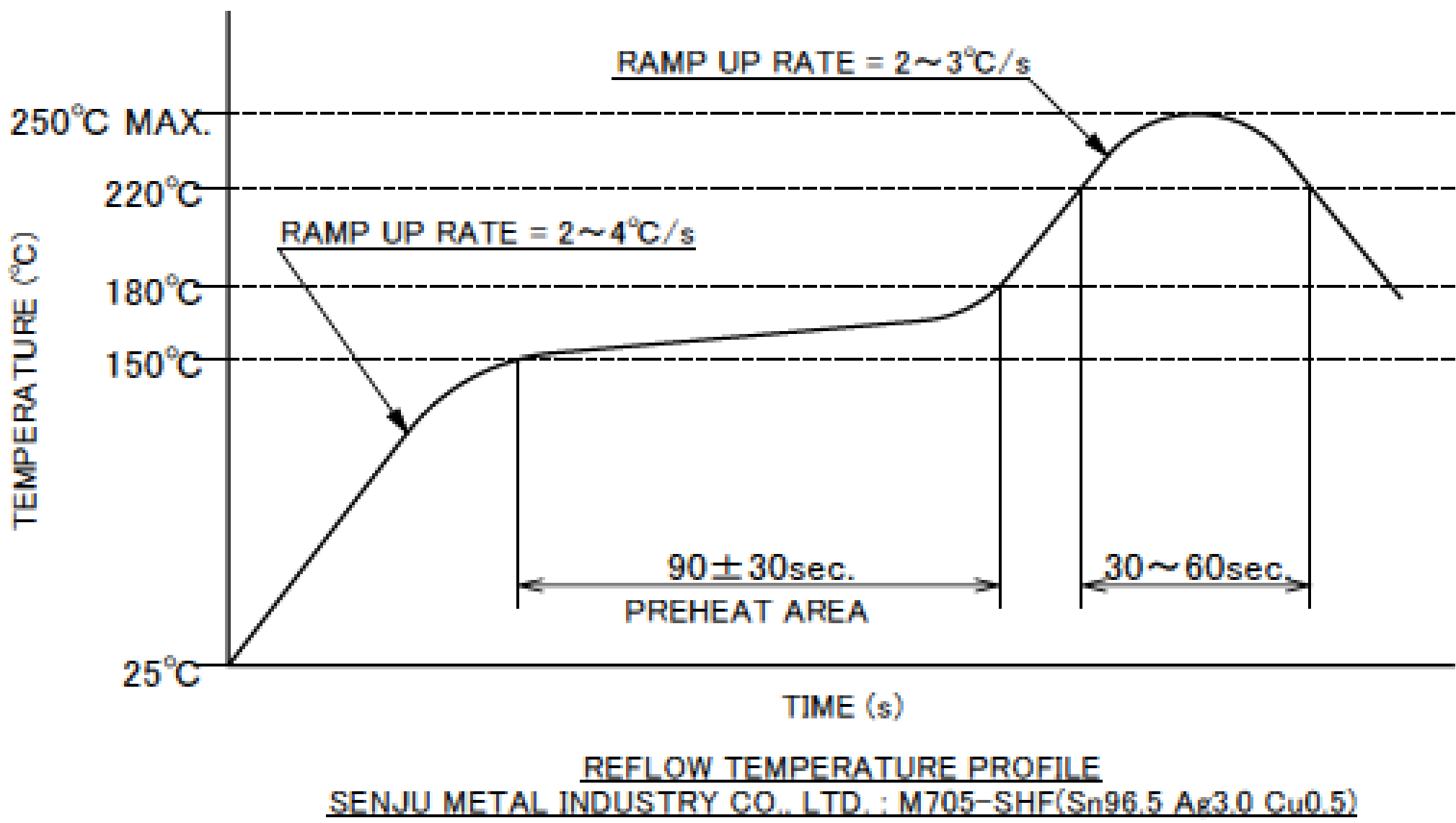
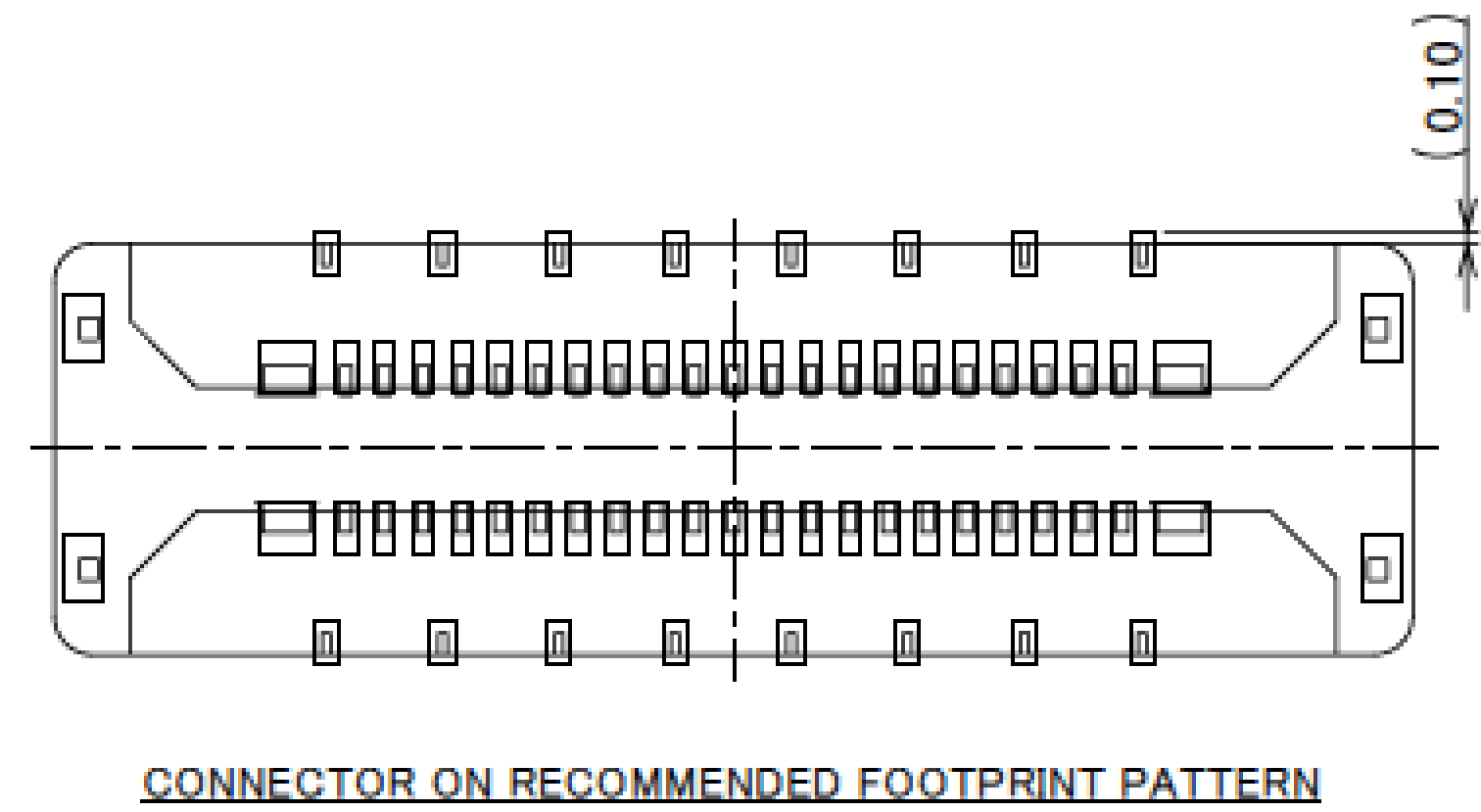
Plug Assembly

PART No.	SIGNAL POS.	POWER POS.	A
20697-016E-01-P	16P	4P	7.69
20697-028E-01	28P	4P	9.79
20697-034E-01	34P	4P	10.84
20697-042E-01#	42P	4P	12.24
20697-056E-01#	56P	4P	14.69
20697-062E-01#	62P	4P	15.74



NOTES.
1. THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.

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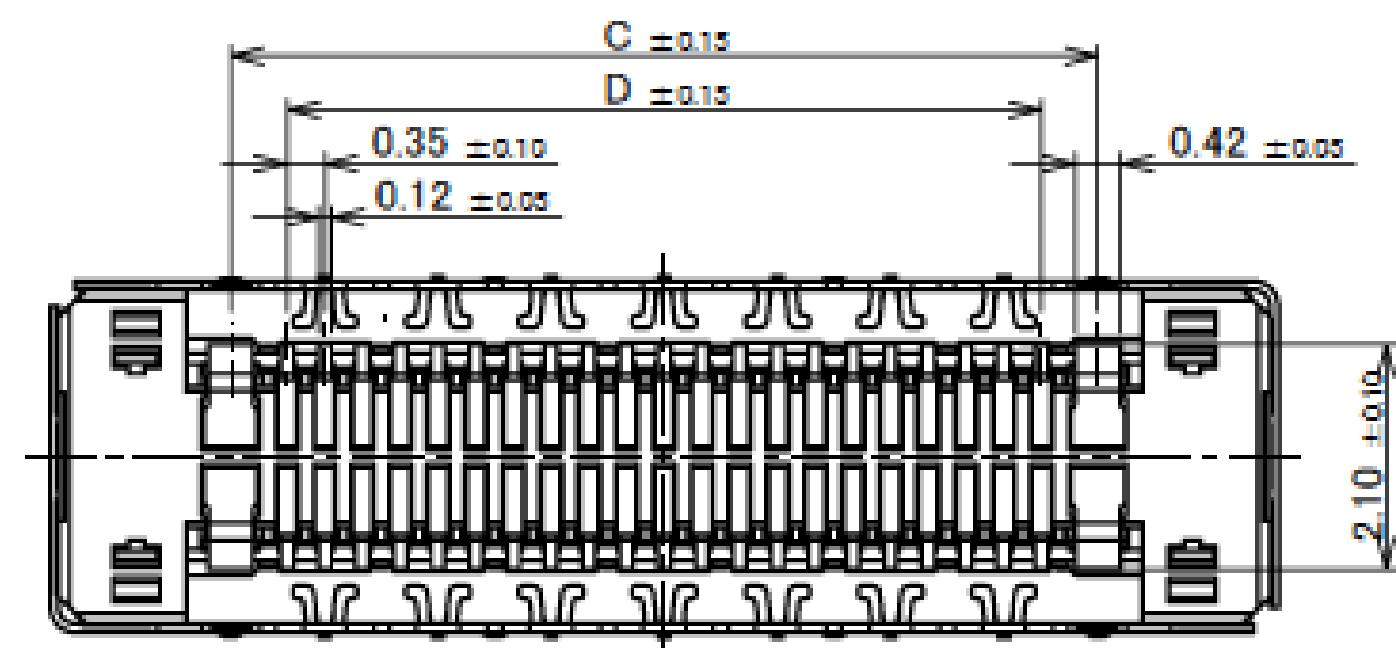
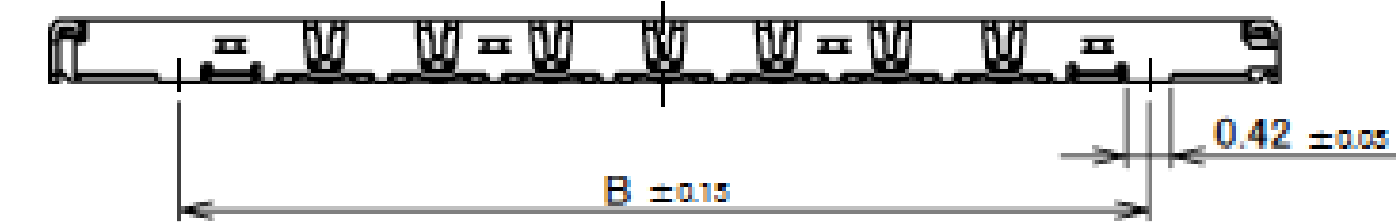
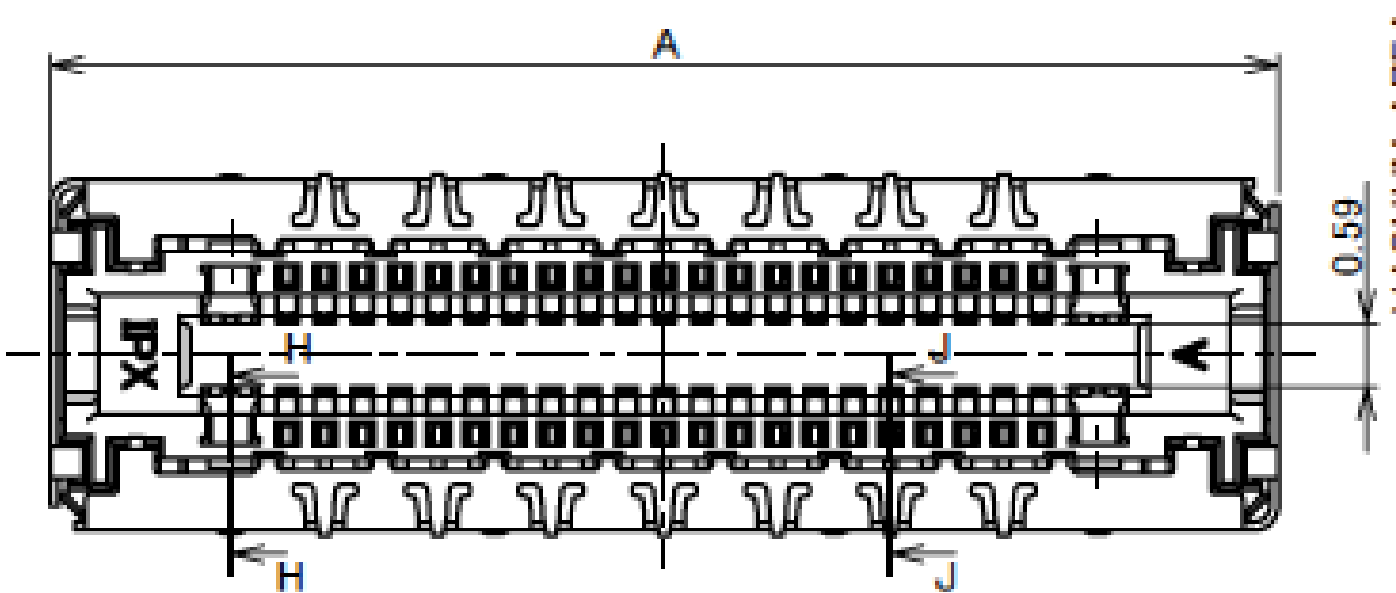
Plug Assembly

ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	20698-0**E-01*
RATING VOLTAGE	60V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)/ 12.0A AC/DC(TOTAL)
RATING AMPERAGE (FOR POWER CONTACT)	2.2A AC/DC (PER CONTACT PIN)/ 8.8A AC/DC(TOTAL)
OPERATING TEMPERATURE	233~358K(-40℃~+85℃)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 40mohm MAX. / AFTER TEST : $\triangle$ 40mohm MAX.
CONTACT RESISTANCE (FOR POWER CONTACT)	INITIAL : 20mohm MAX. / AFTER TEST : $\triangle$ 20mohm MAX.
CONTACT RESISTANCE (FOR GROUND)	INITIAL : 20mohm MAX. / AFTER TEST : $\triangle$ 20mohm MAX.
INSULATION RESISTANCE	INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL)	16P: 32.0N MAX. 28P: 32.0N MAX. 34P: 38.0N MAX. 42P: 46.0N MAX. 56P: 60.0N MAX. 62P: 66.0N MAX.
UNMATING FORCE (AFTER TEST)	16P: 3.2N MIN. 28P: 3.2N MIN. 34P: 3.8N MIN. 42P: 4.6N MIN. 56P: 6.0N MIN. 62P: 6.6N MIN.
COPLANARITY	CONTACT AND POWER CONTACT: 0.08 MAX. SHELL: 0.105 MAX.
PRODUCT SPECIFICATION	PRS-2187
TEST REPORT	TR-16014
PACKING STANDARD	PST-15083 (10K/REEL) PST-16125 (5K/REEL)
INSTRUCTION MANUAL	HIM-15020
APPEARANCE CRITERIA No.	QLS-A***

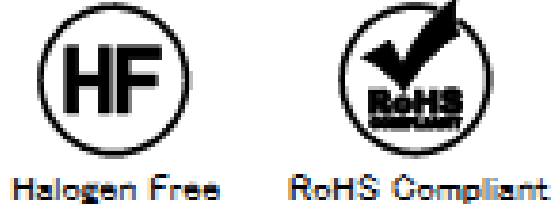
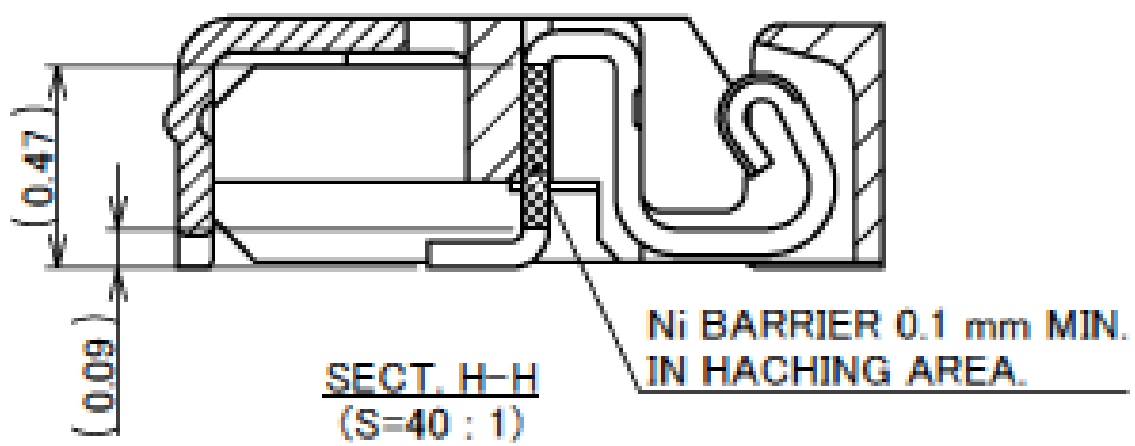
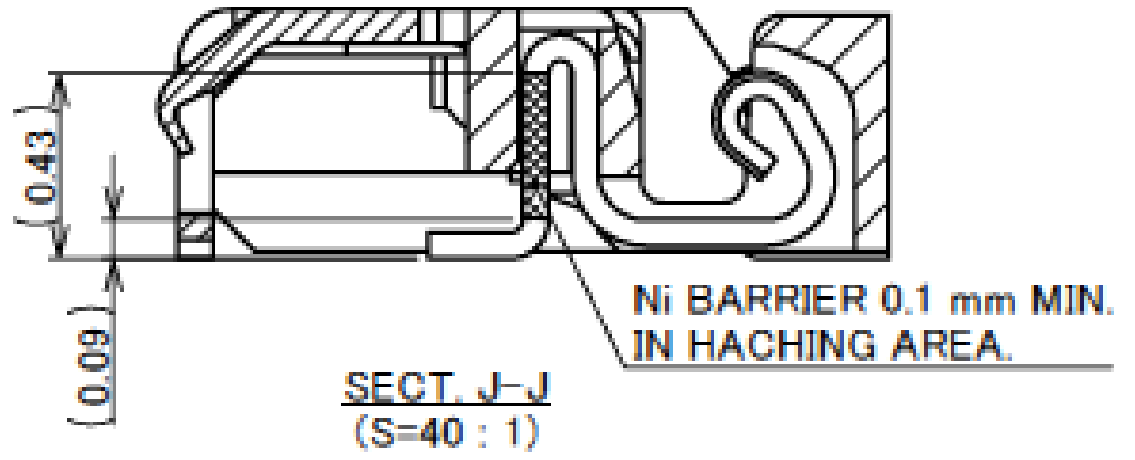
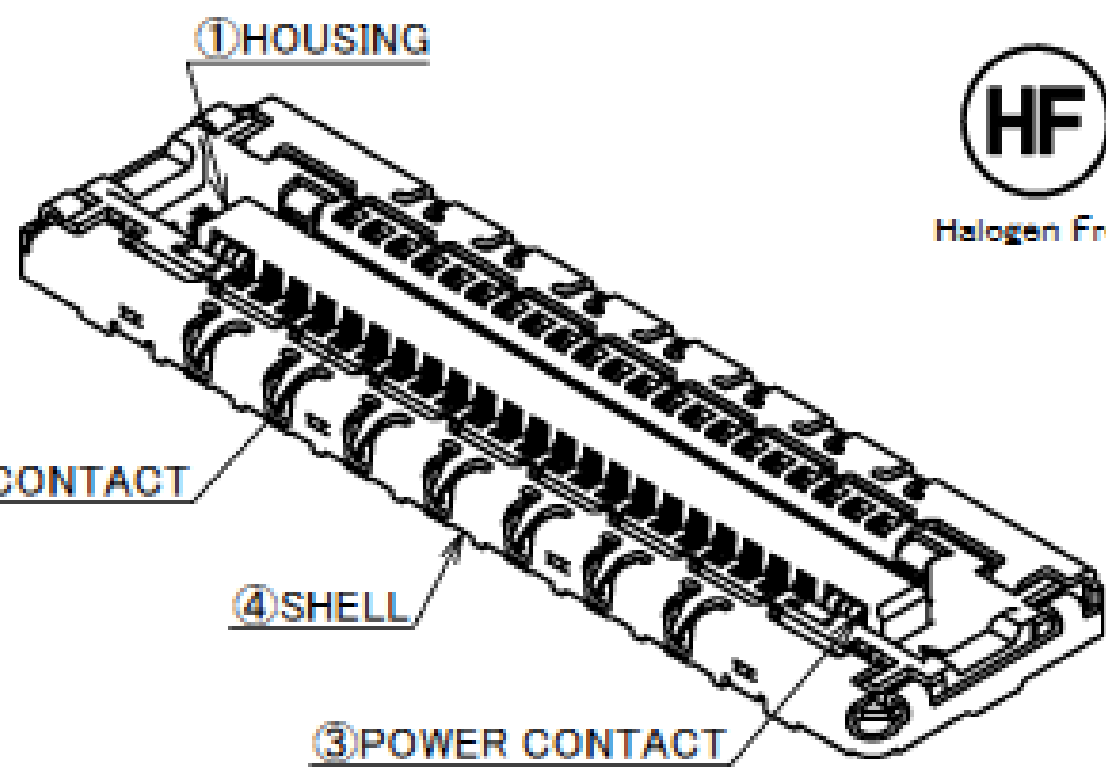
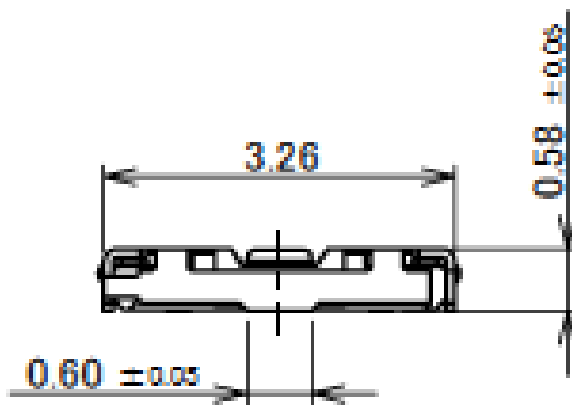
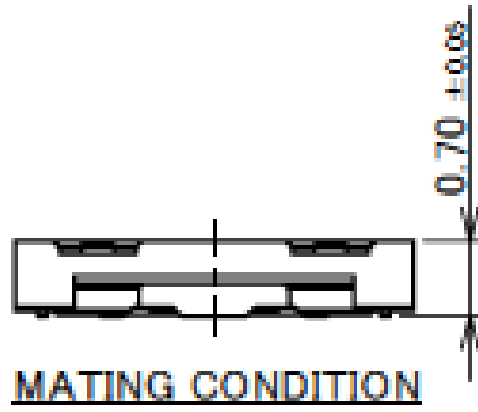
Rev.8

Receptacle Assembly

Recommended P/N		20698-0**E-01#					
PART No.	SIGNAL POS.	POWER POS.	A	B	C	D	
20698-016E-01	16P	4P	6.85	4.44	3.50	2.45	
20698-028E-01	28P	4P	8.95	6.54	5.60	4.55	
20698-034E-01	34P	4P	10.00	7.59	6.65	5.60	
20698-042E-01#	42P	4P	11.40	8.99	8.05	7.00	
20698-056E-01#	56P	4P	13.85	11.44	10.50	9.45	
20698-062E-01#	62P	4P	14.90	12.49	11.55	10.50	



20698-0**E-01M
WITHOUT : 10,000 pcs/REEL
WITH : 5,000 pcs/REEL
Pos.



4	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.27 μ m MIN. Au 0.01 μ m MIN.
3	POWER CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μ m MIN. CONTACT PART Au 0.05 μ m MIN. SOLDERING PART Au 0.02 μ m MIN.
2	SIGNAL CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μ m MIN. CONTACT PART Au 0.10 μ m MIN. SOLDERING PART Au 0.02 μ m MIN.
1	HOUSING	LCP	UL94V-0, BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.11

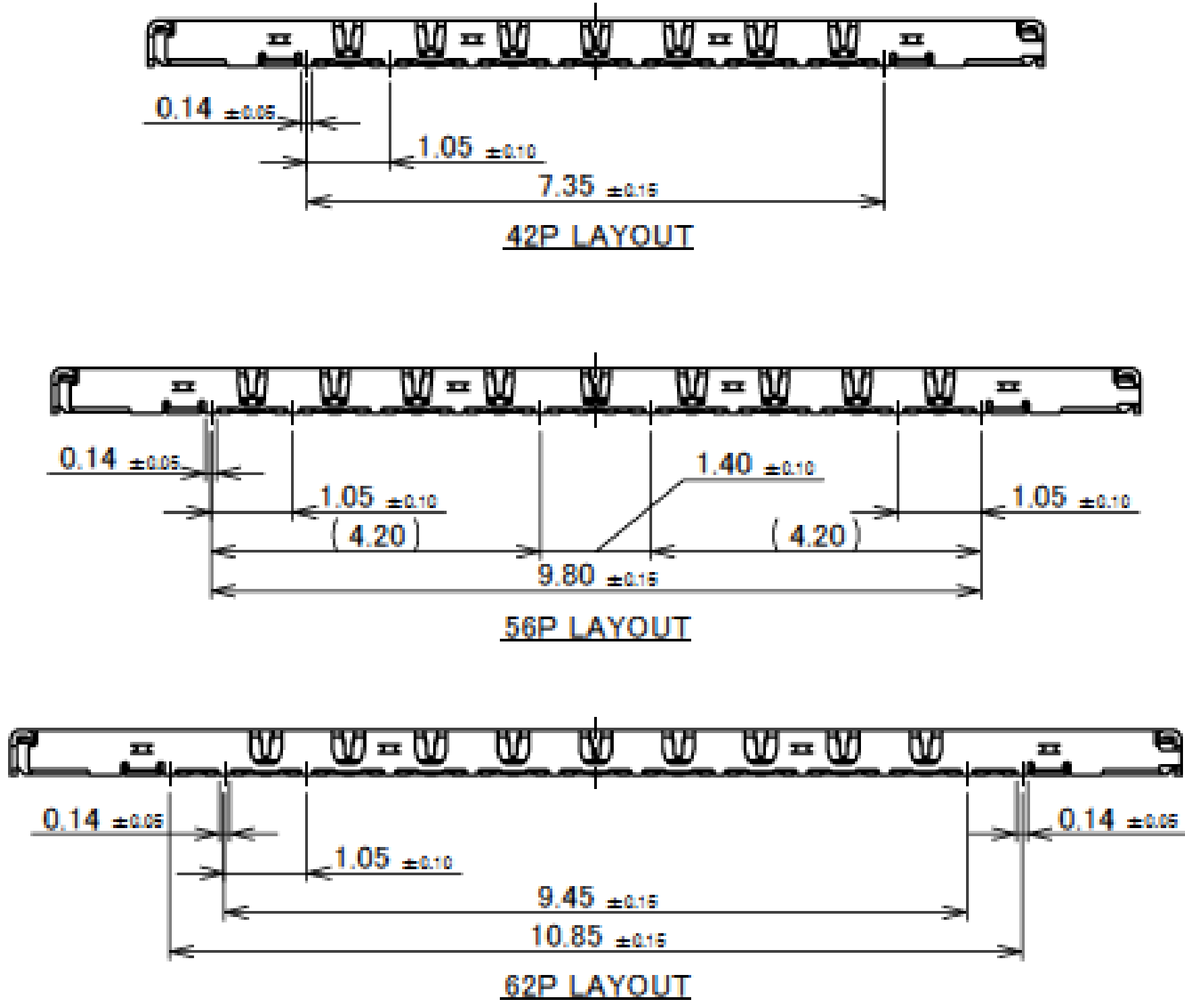
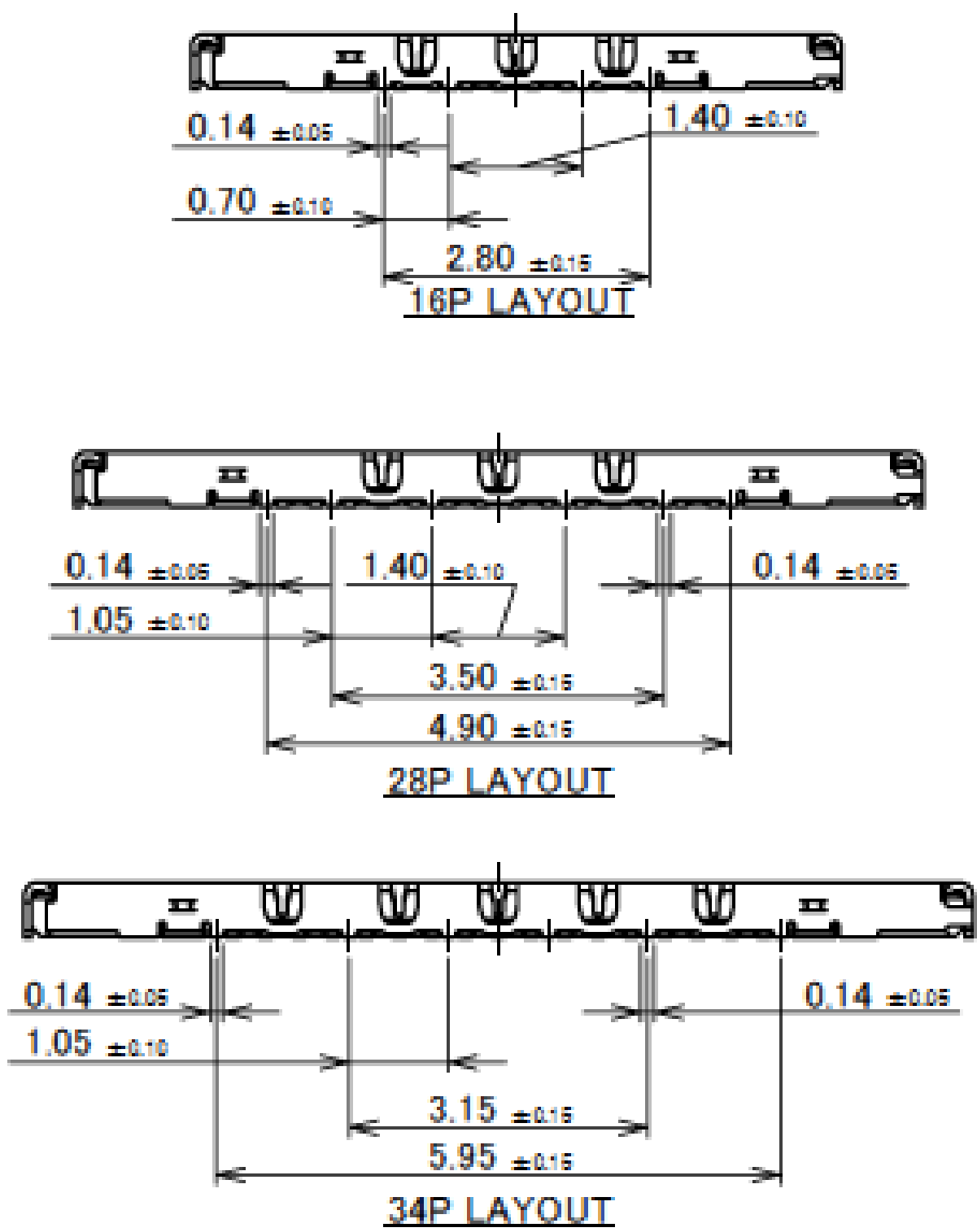
Receptacle Assembly

PART No.	SIGNAL POS.	POWER POS.
20698-016E-01	16P	4P
20698-028E-01	28P	4P
20698-034E-01	34P	4P
20698-042E-01#	42P	4P
20698-056E-01#	56P	4P
20698-062E-01#	62P	4P

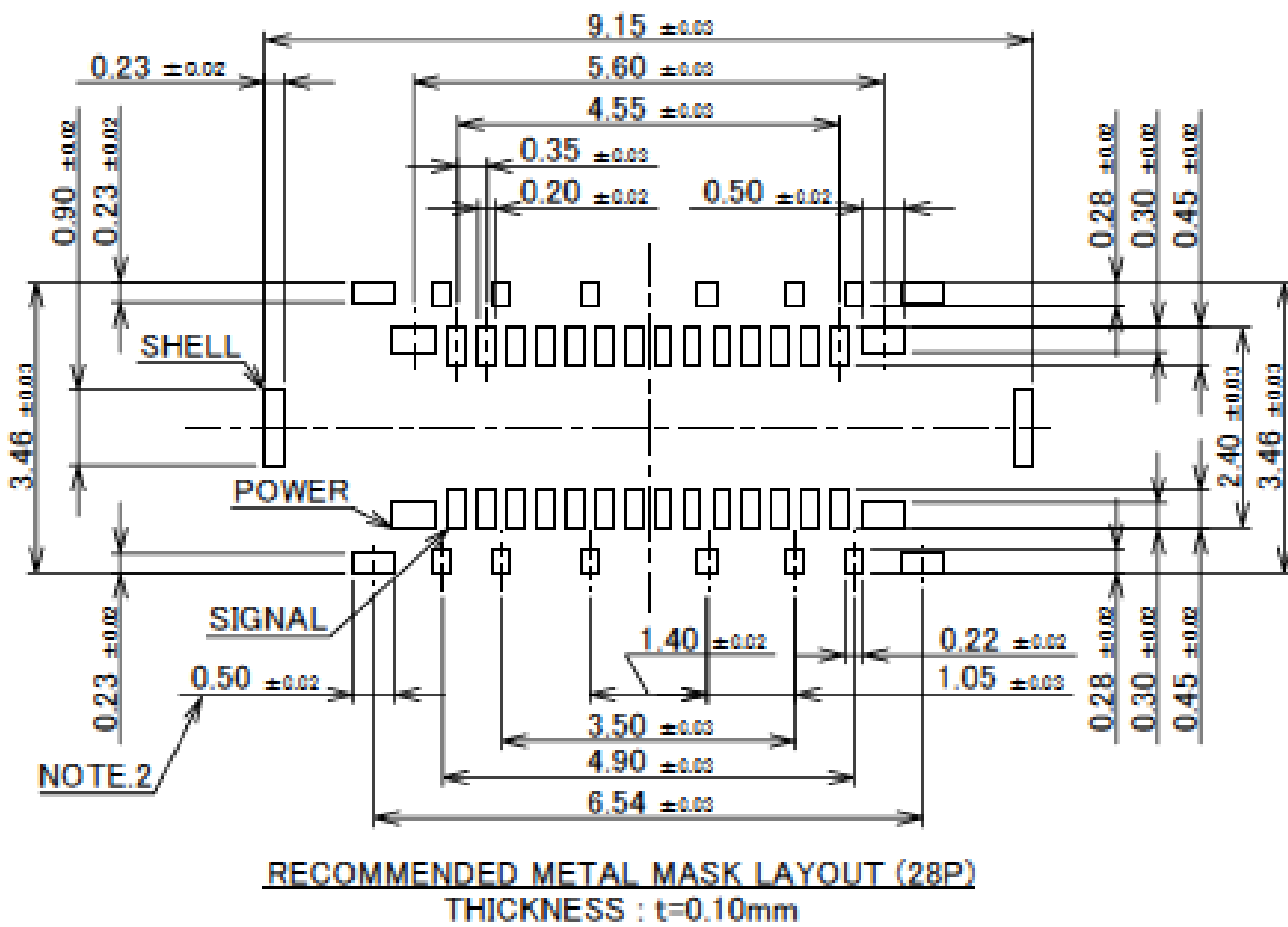
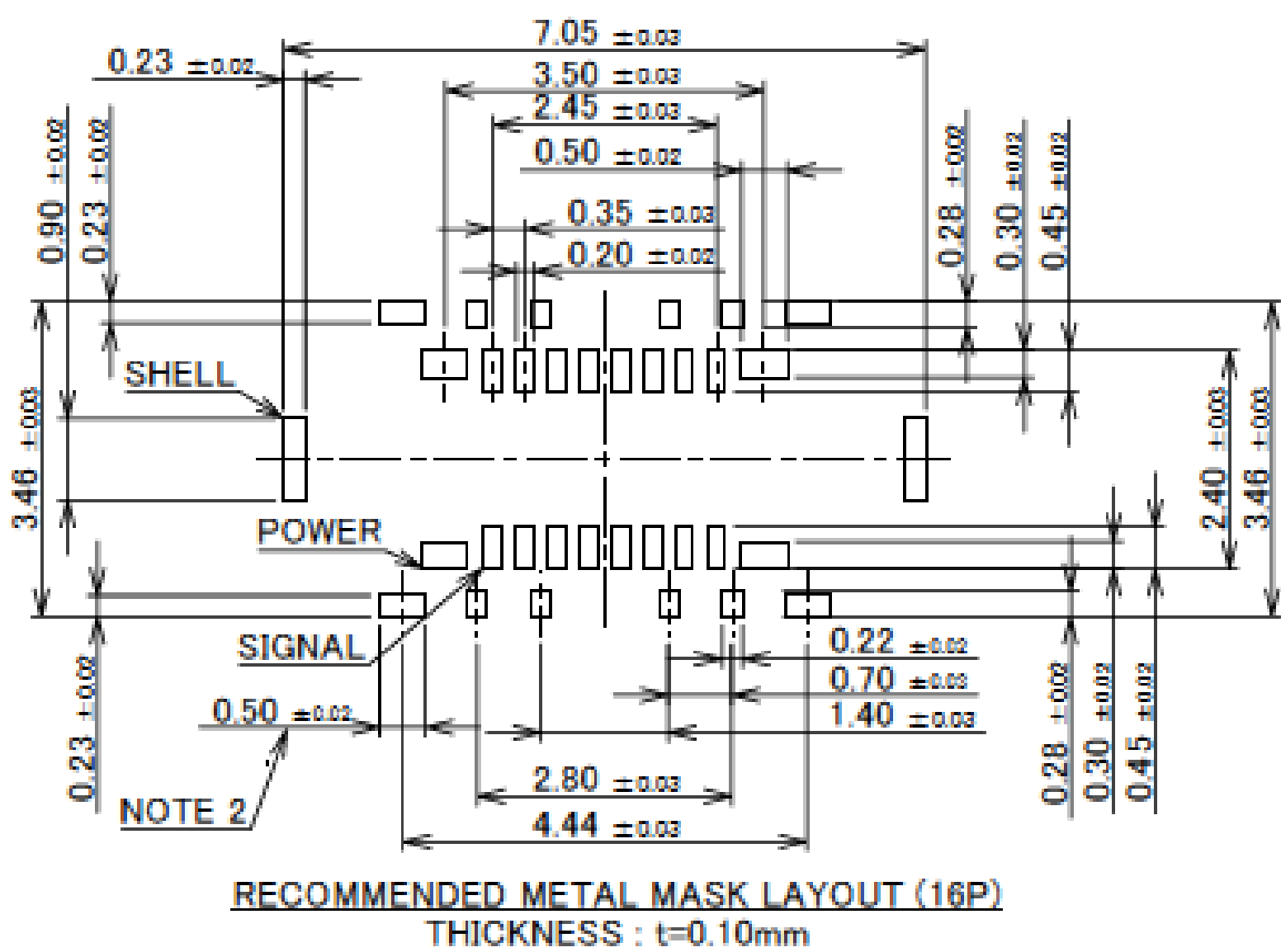
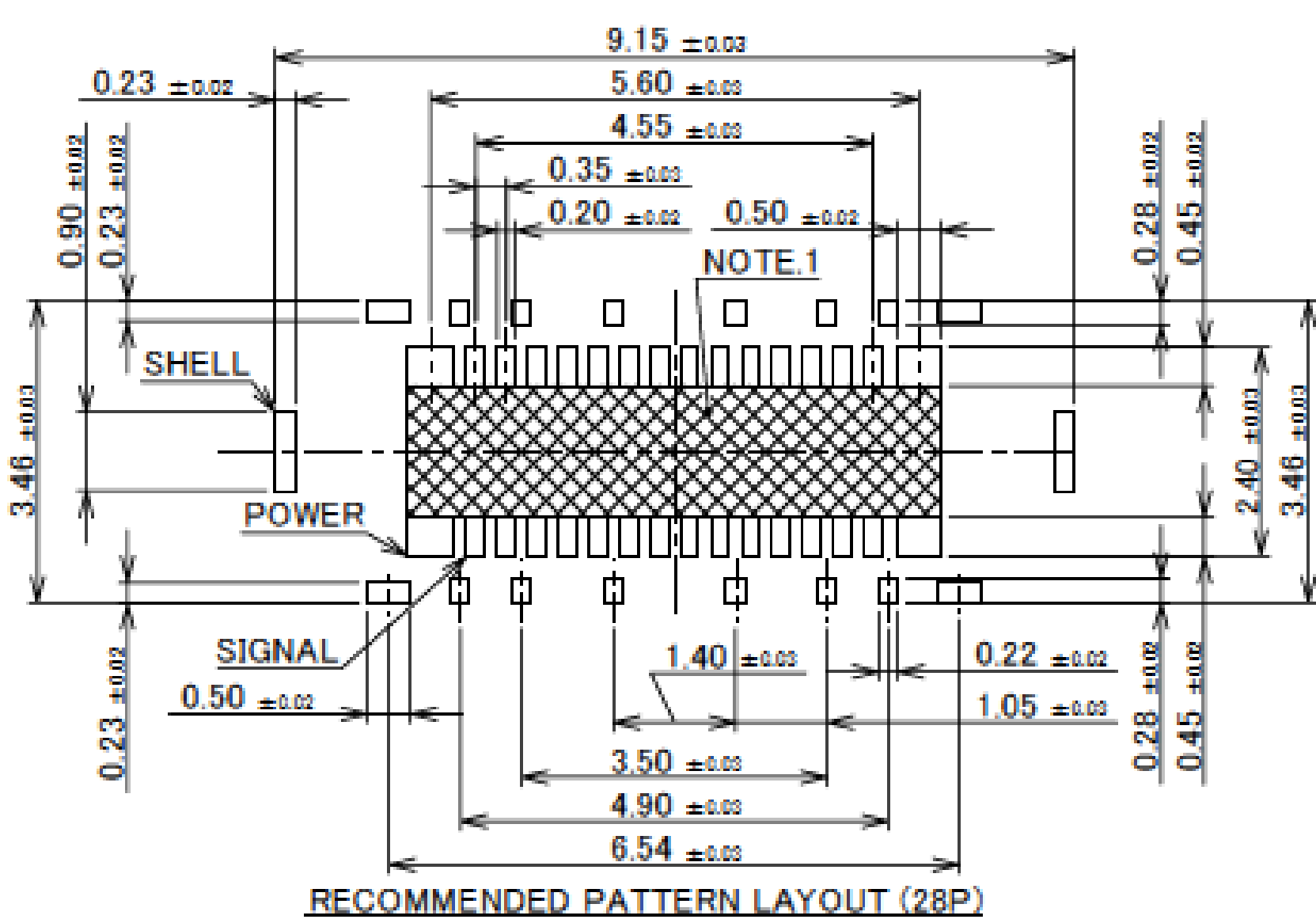
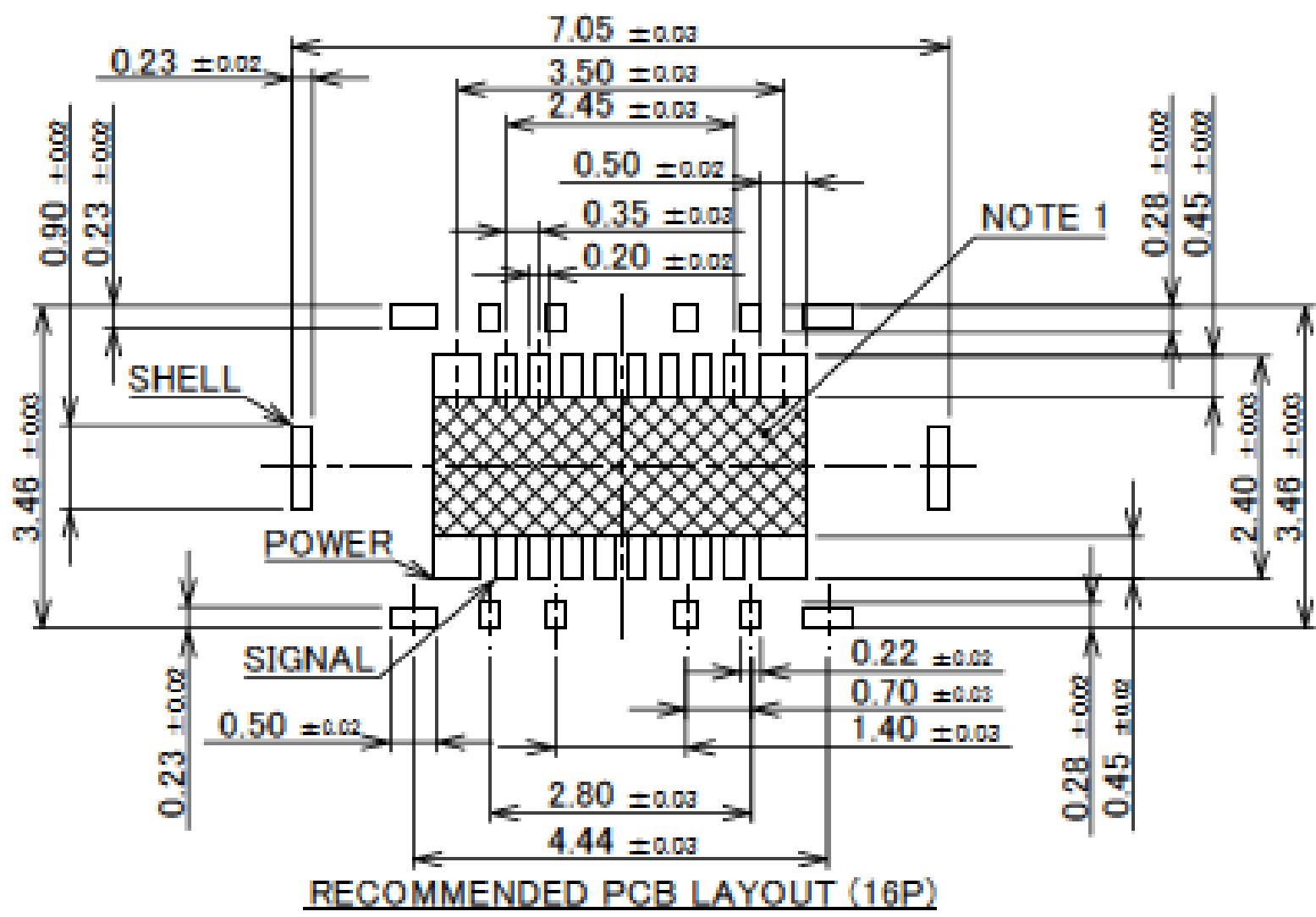
20698-0**E-01M

WITHOUT : 10,000 pcs/REEL
WITH : 5,000 pcs/REEL

Pos.



Rev.11



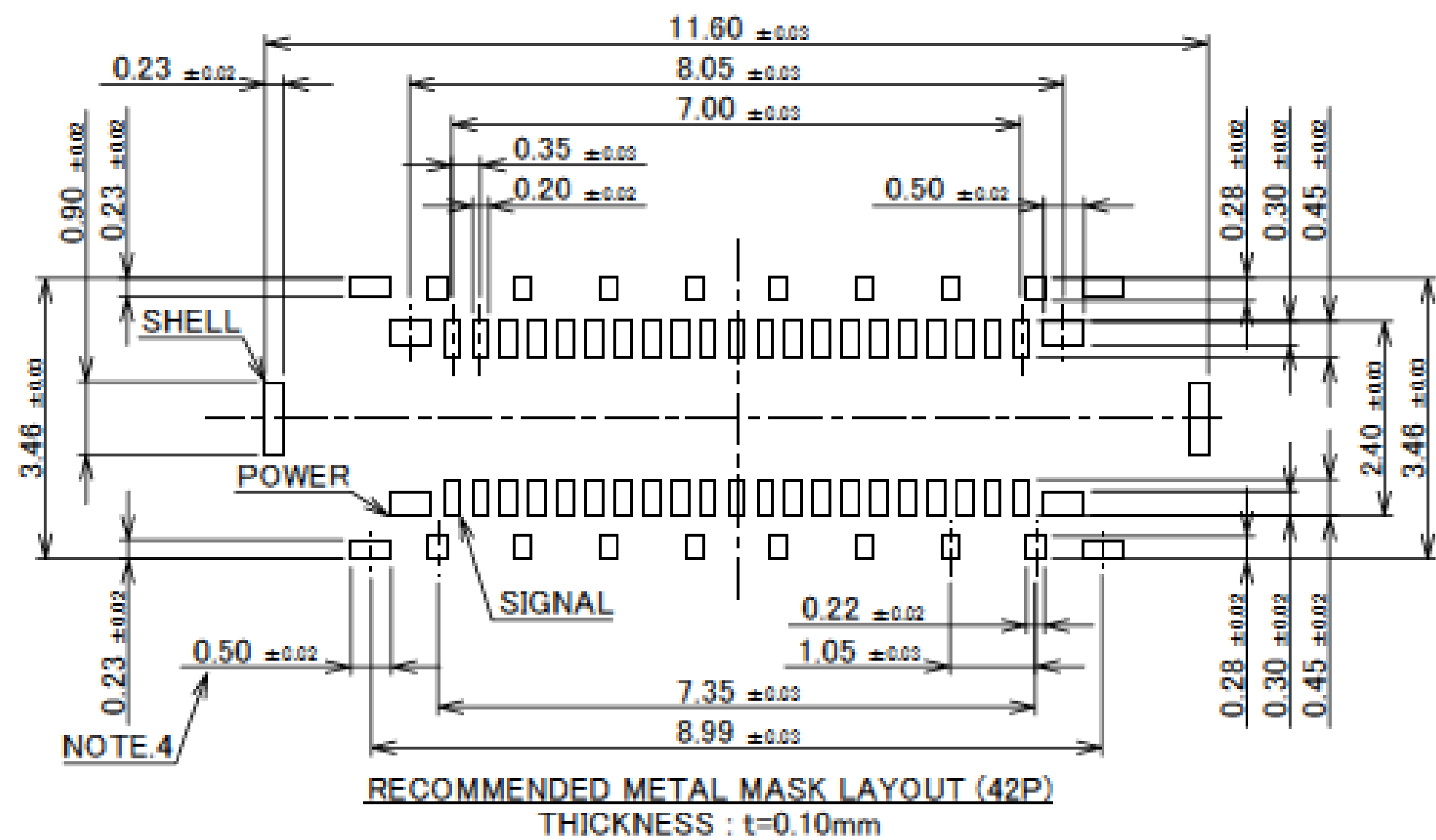
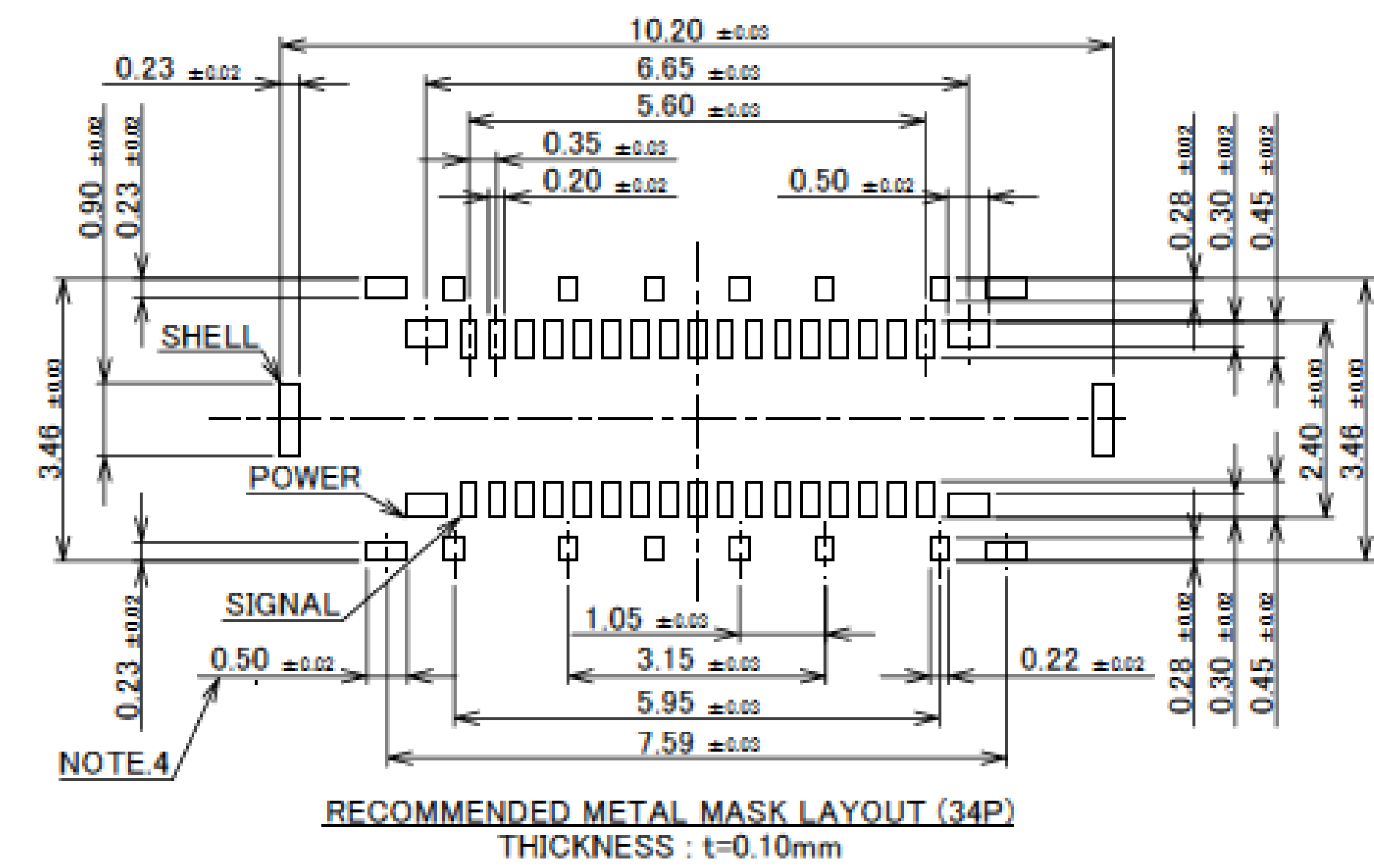
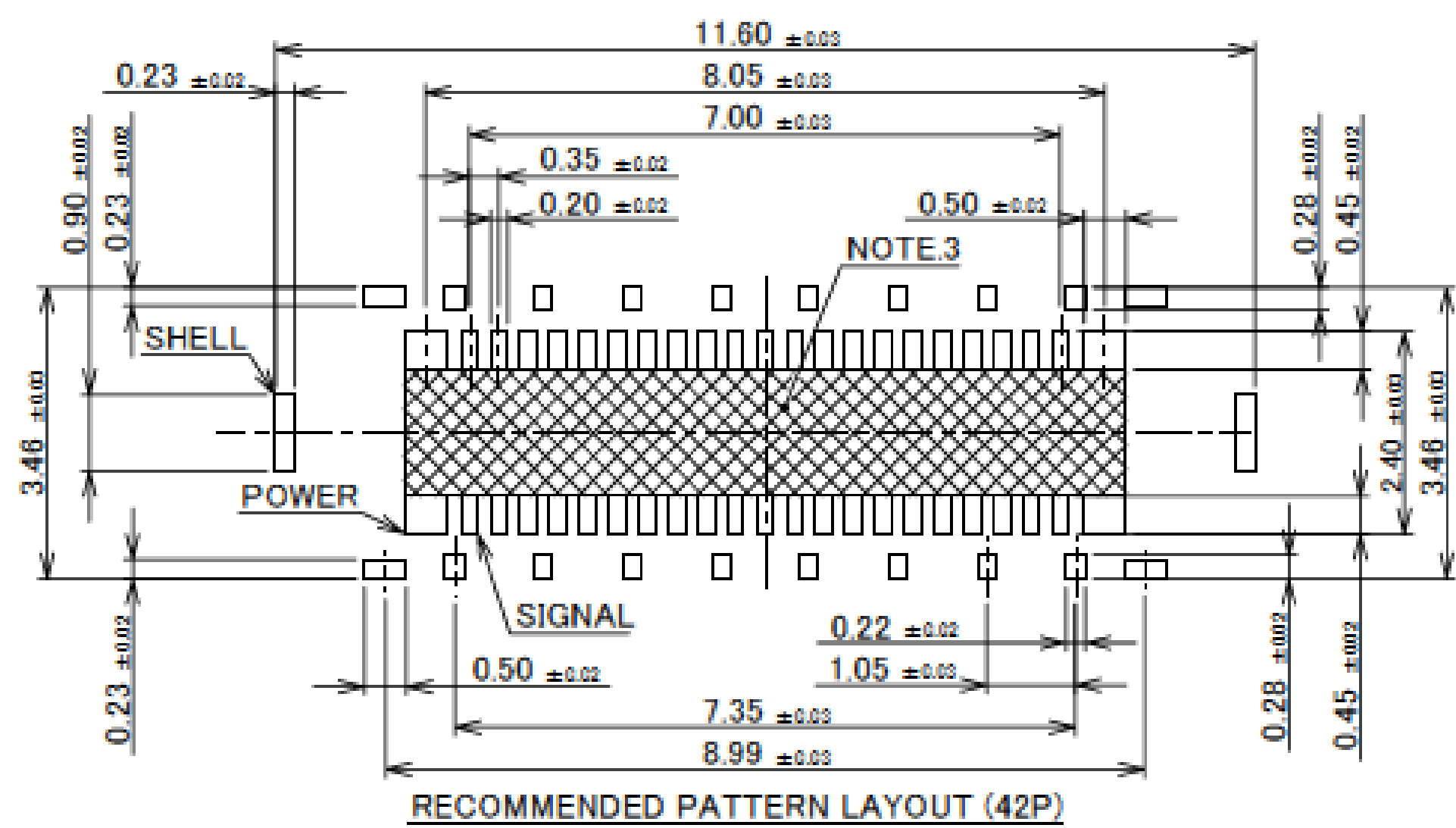
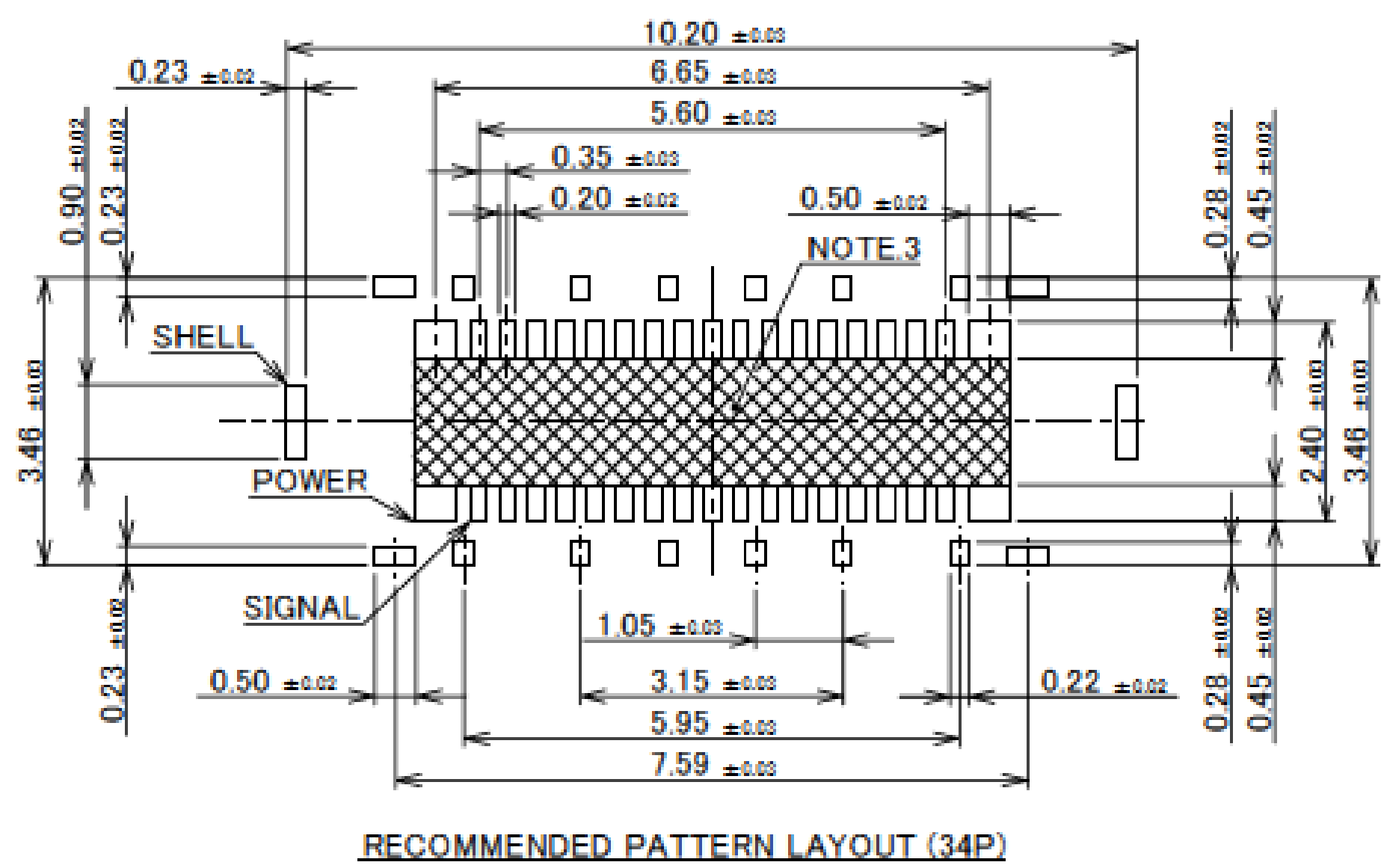
NOTES

1. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

2. WHEN THE THICKNESS OF THE METAL MASK IS 0.12 mm, PLEASE SET IT TO 0.41 mm.

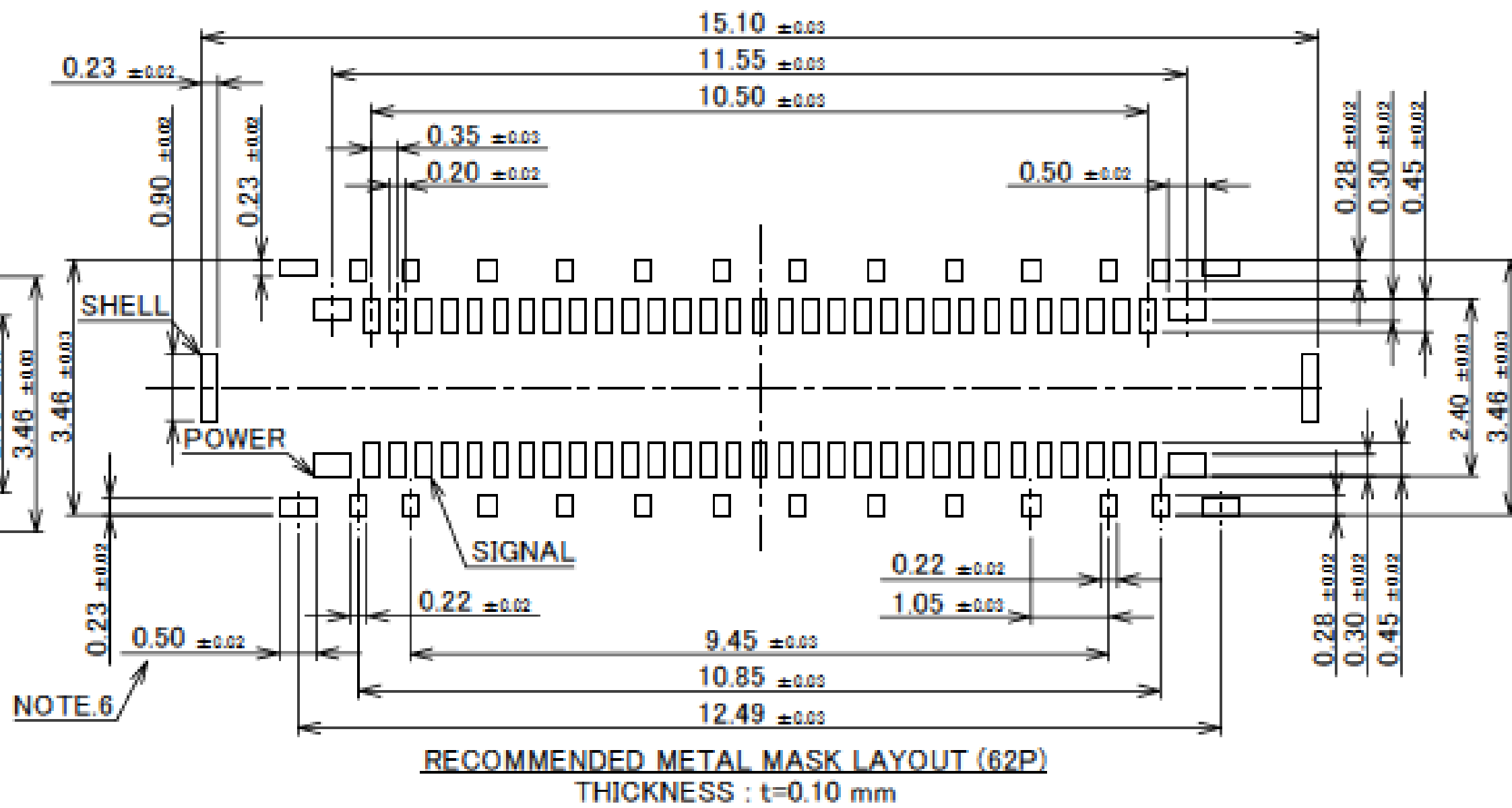
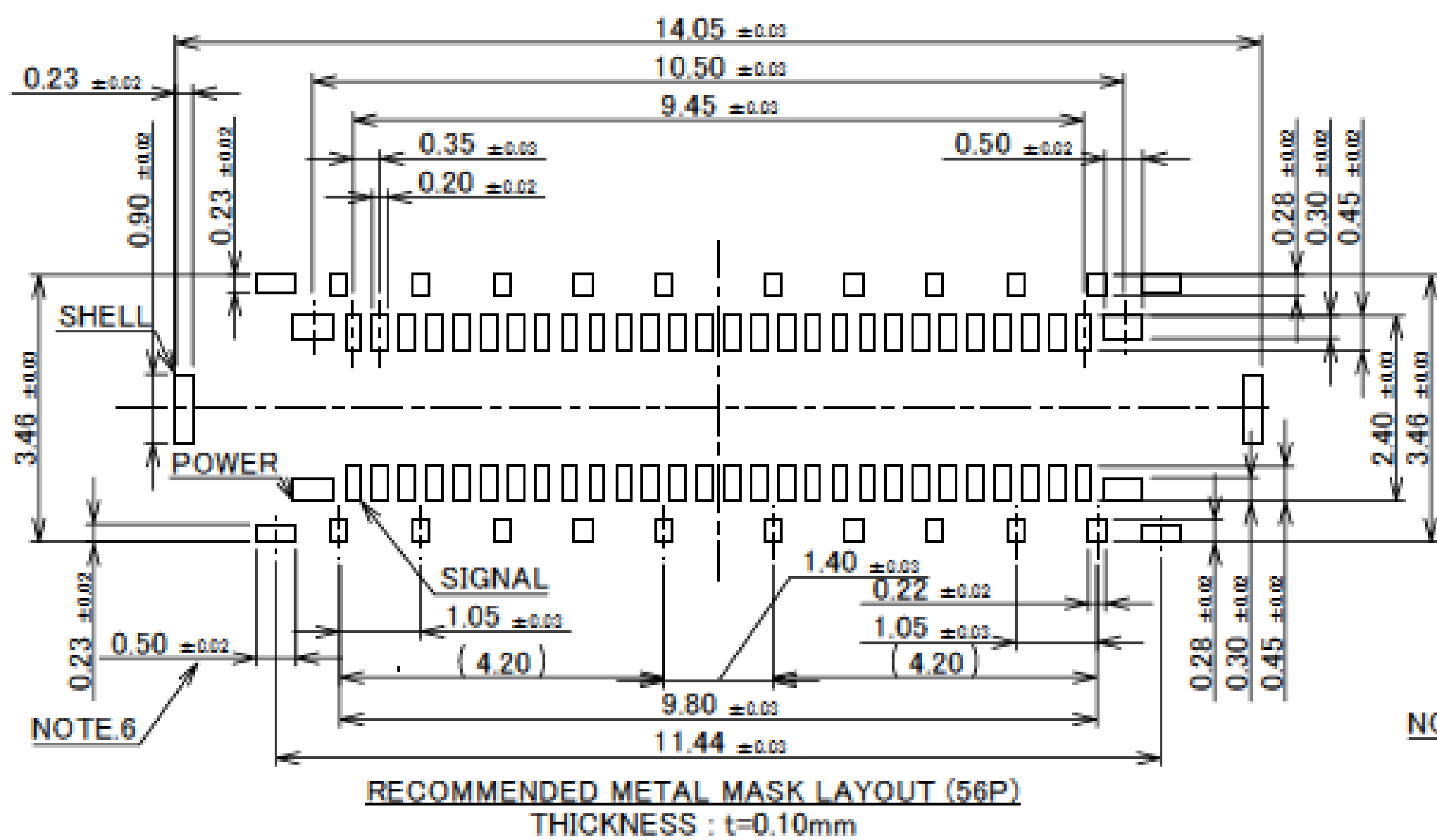
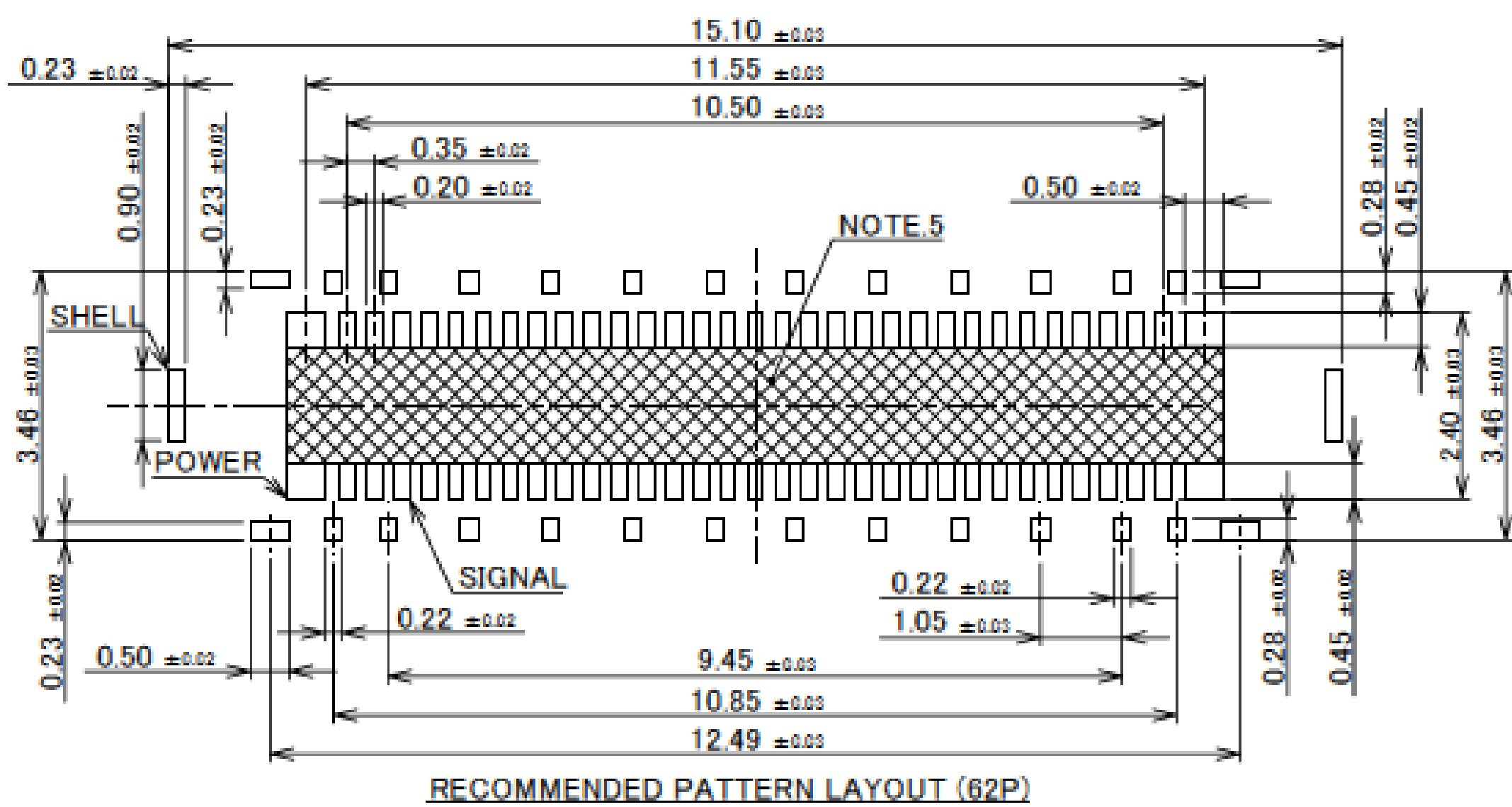
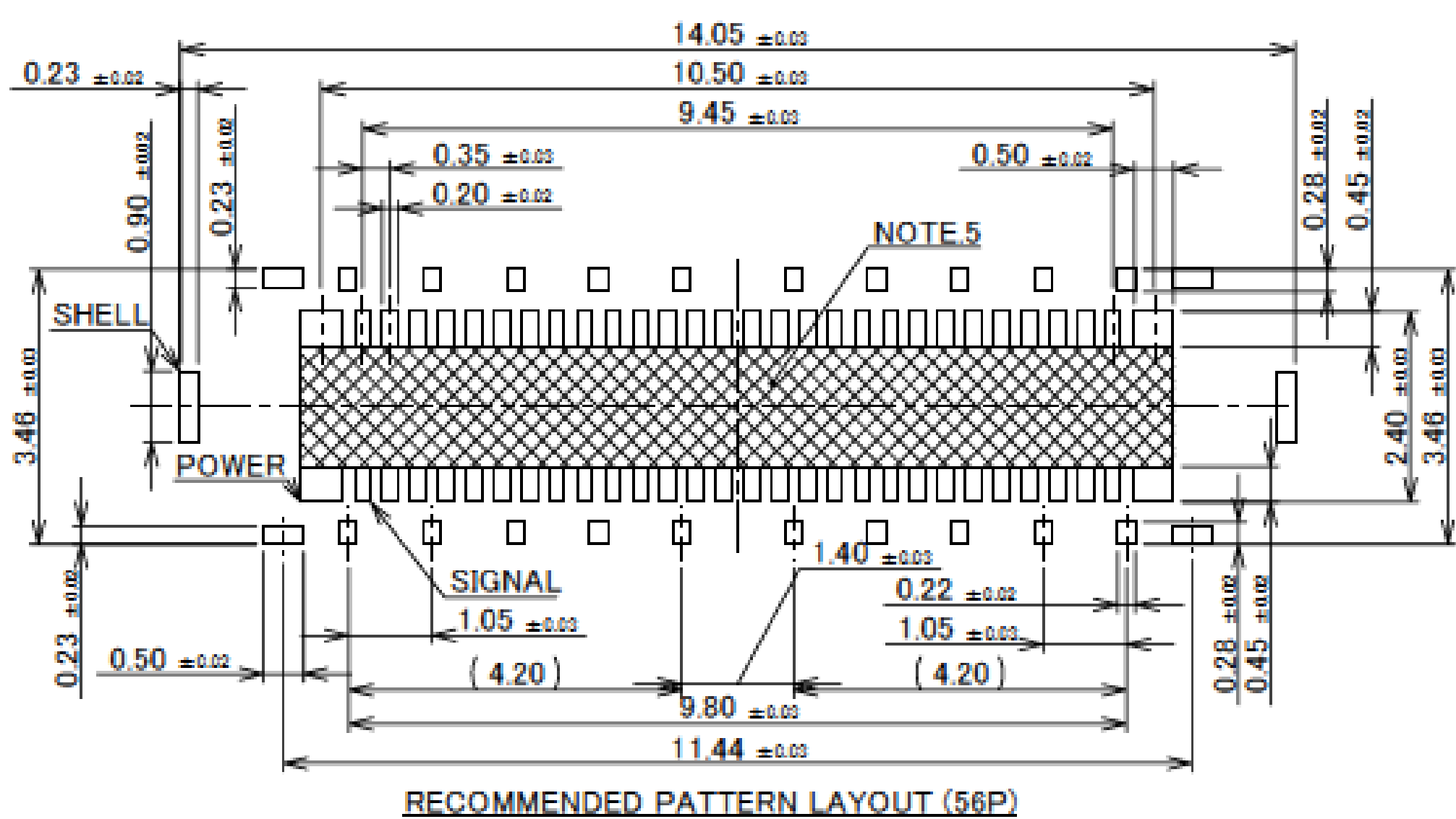
Rev.11

Receptacle Assembly



NOTES
3. SOLDER RESIST MUST BE APPLIED TO THIS AREA.
4. WHEN THE THICKNESS OF THE METAL MASK IS 0.12 mm, PLEASE SET IT TO 0.41 mm.

Rev.11

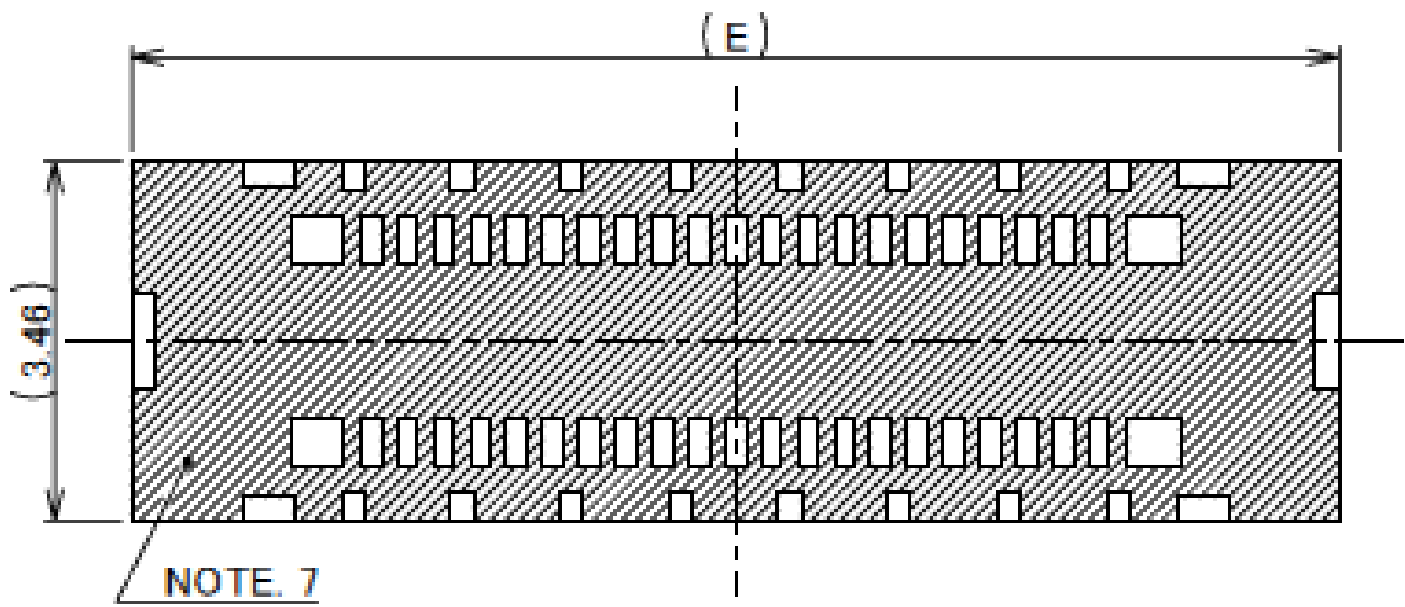


NOTES
5. SOLDER RESIST MUST BE APPLIED TO THIS AREA.
6. WHEN THE THICKNESS OF THE METAL MASK IS 0.12 mm, PLEASE SET IT TO 0.41 mm.

Rev.11

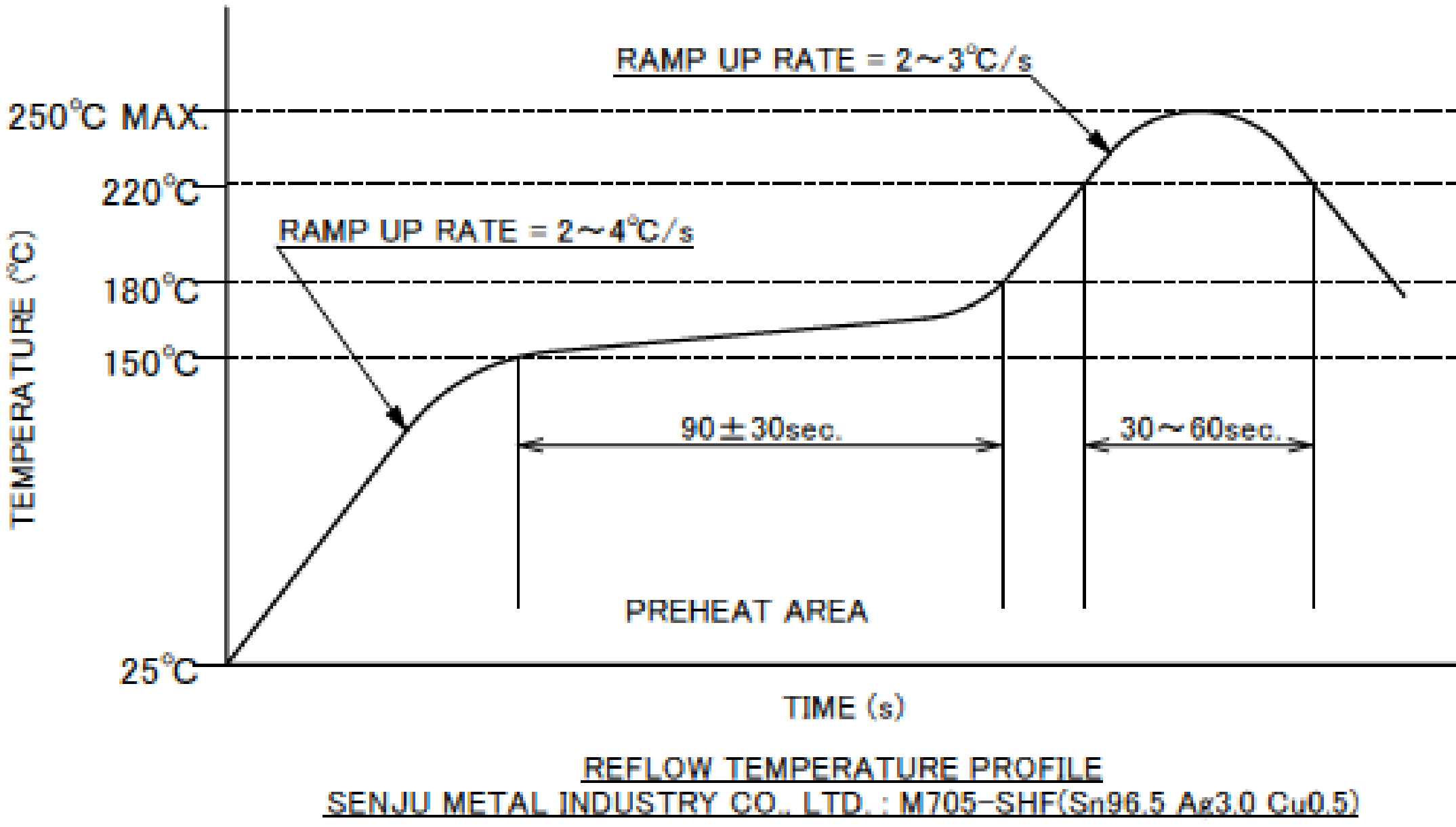
Receptacle Assembly

PART No.	SIGNAL POS.	POWER POS.	E
20698-016E-01	16P	4P	7.05
20698-028E-01	28P	4P	9.15
20698-034E-01	34P	4P	10.20
20698-042E-01#	42P	4P	11.60
20698-056E-01#	56P	4P	14.05
20698-062E-01#	62P	4P	15.10



NOTES
7. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.

Rev.11



Rev.11

Receptacle Assembly

ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	20697-0**E-01*~*
RATING VOLTAGE	60V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)/ 12.0A AC/DC(TOTAL)
RATING AMPERAGE (FOR POWER CONTACT)	2.2A AC/DC (PER CONTACT PIN)/ 8.8A AC/DC(TOTAL)
OPERATING TEMPERATURE	233~358K(-40℃~+85℃)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 40mohm MAX. / AFTER TEST : $\triangle$ 40mohm MAX.
CONTACT RESISTANCE (FOR POWER CONTACT)	INITIAL : 20mohm MAX. / AFTER TEST : $\triangle$ 20mohm MAX.
CONTACT RESISTANCE (FOR GROUND)	INITIAL : 20mohm MAX. / AFTER TEST : $\triangle$ 20mohm MAX.
INSULATION RESISTANCE	INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL)	16P: 32.0N MAX. 28P: 32.0N MAX. 34P: 38.0N MAX. 42P: 46.0N MAX. 56P: 60.0N MAX. 62P: 66.0N MAX.
UNMATING FORCE (AFTER TEST)	16P: 3.2N MIN. 28P: 3.2N MIN. 34P: 3.8N MIN. 42P: 4.6N MIN. 56P: 6.0N MIN. 62P: 6.6N MIN.
COPLANARITY	0.08 MAX.
PRODUCT SPECIFICATION	PRS-2187
TEST REPORT	TR-16014
PACKING STANDARD	PST-15084 (10K/REEL) PST-16126 (5K/REEL)
INSTRUCTION MANUAL	HIM-15020
APPEARANCE CRITERIA No.	QLS-A***

Custom Products Available

RF Connector

MHF® series



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



Optical Module

LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector

Power Connector/ Terminal

AP series

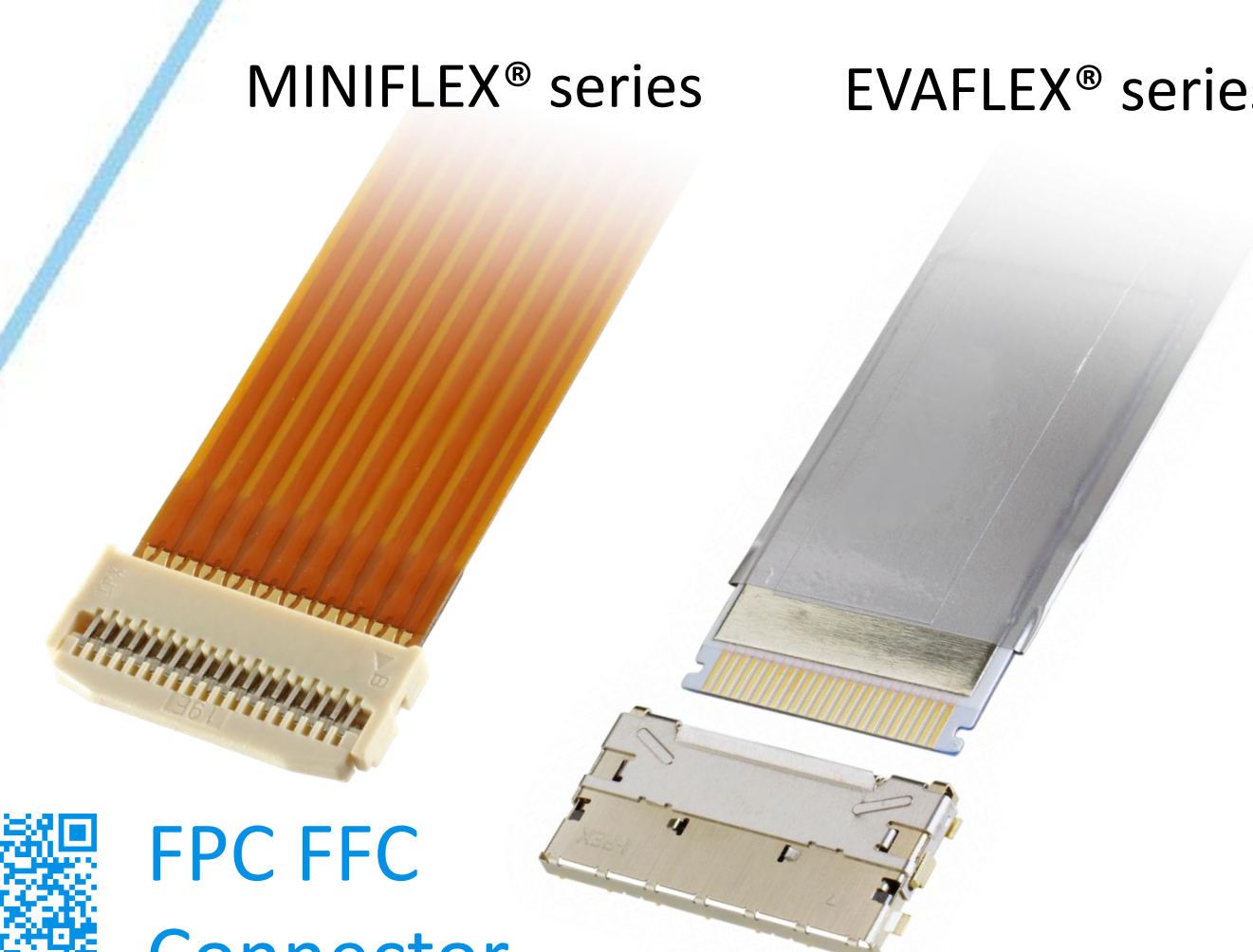
ISH® series



MINIFLEX® series

EVAFLEX® series

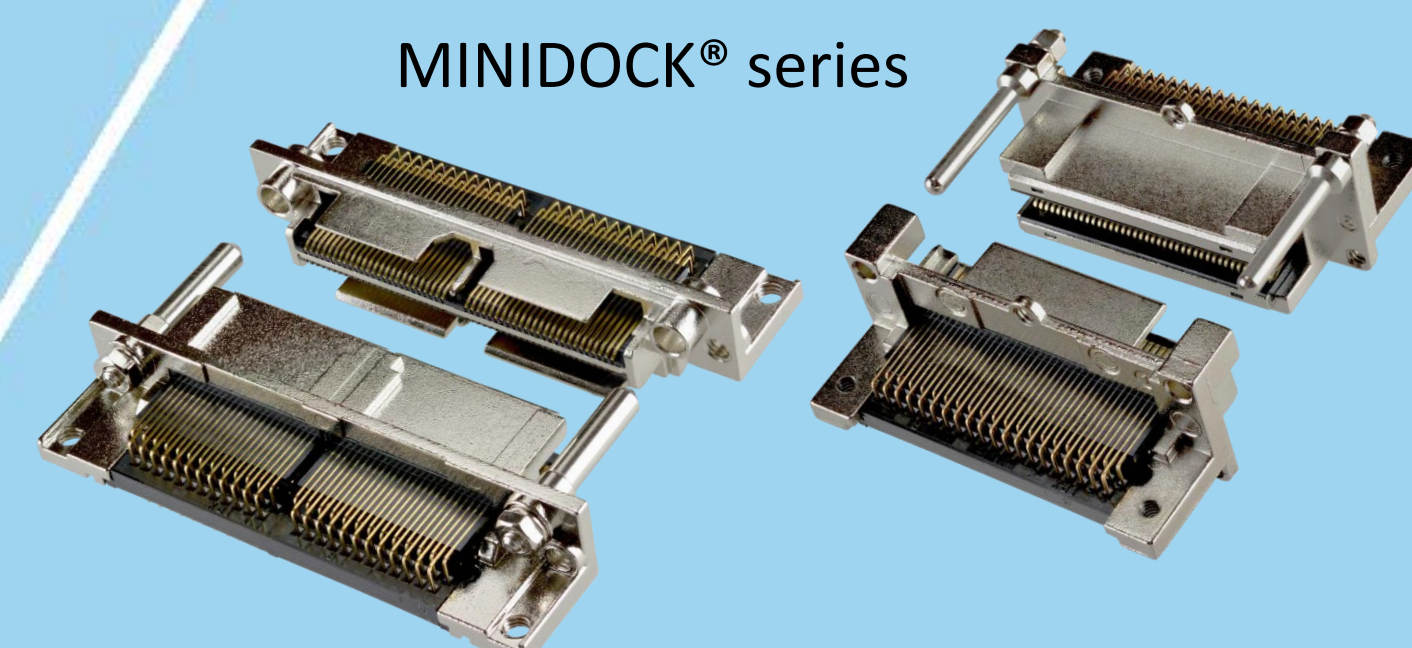
FPC FFC Connector



Inquiry



MINIDOCK® series



I/O Connector

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