

# 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	28,34,42,56,62 /+ 4

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

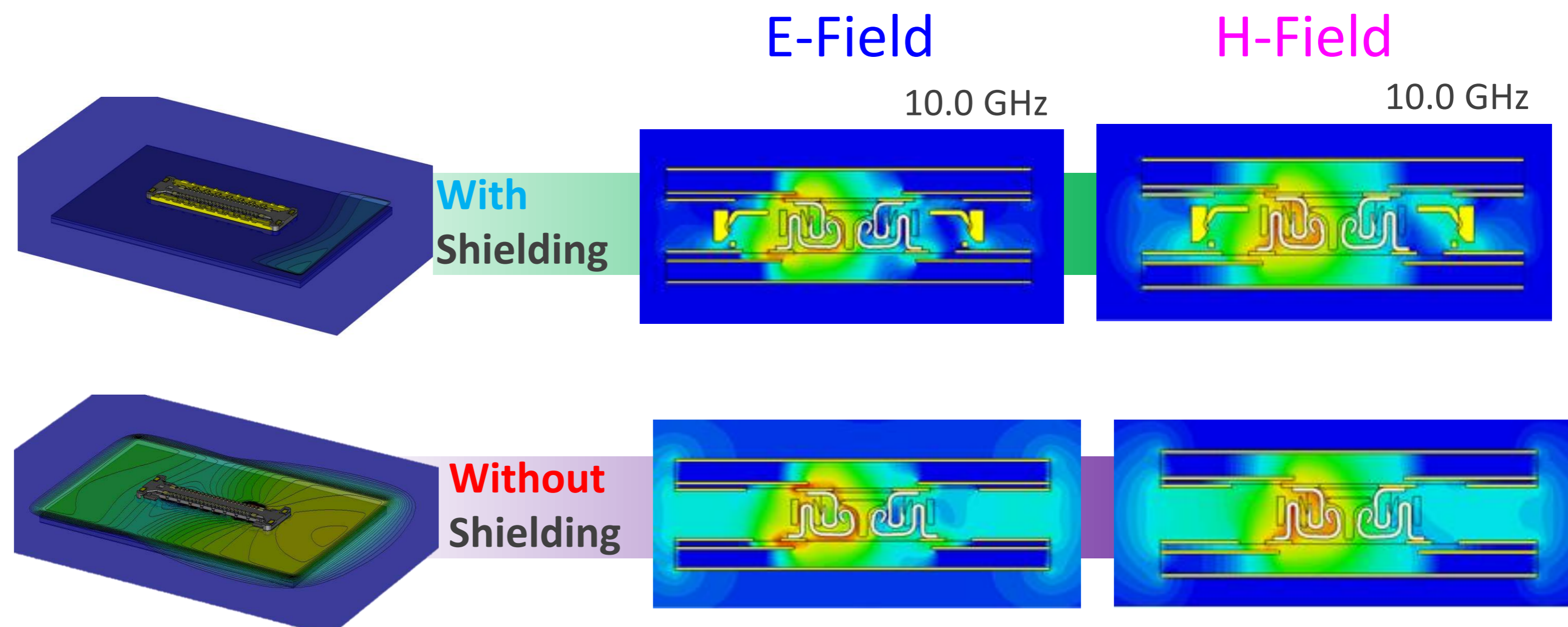
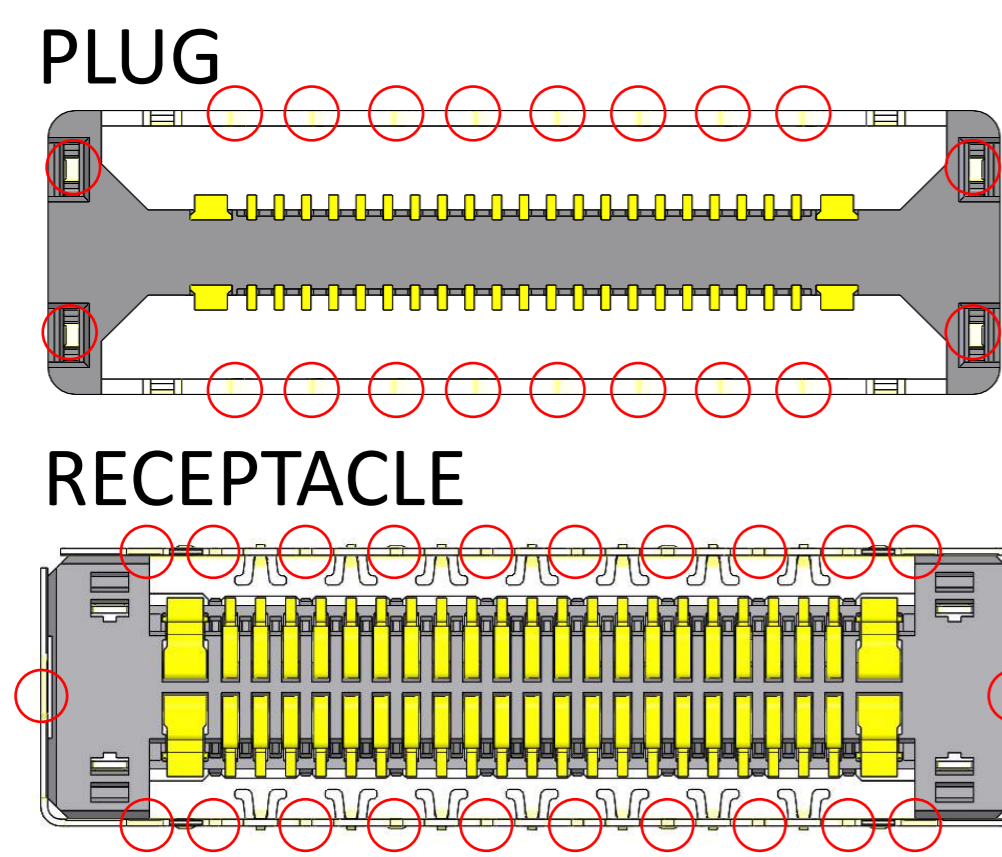
## Applicable Standards (Reference Only):

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

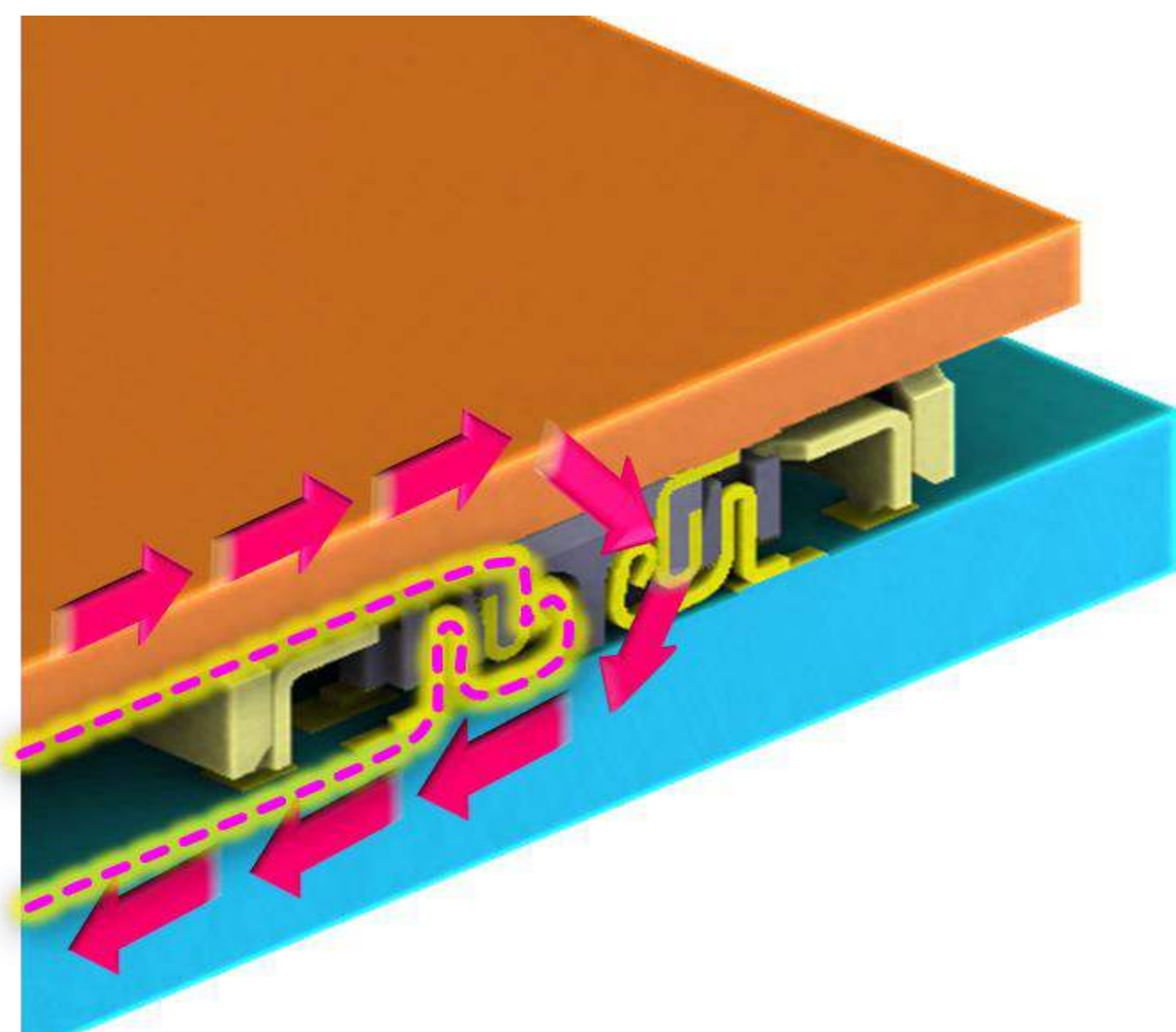


## ▶ ZenShield® fully-shielded with multi-point grounds to prevent EMI leakage

### ○ Ground SMT points

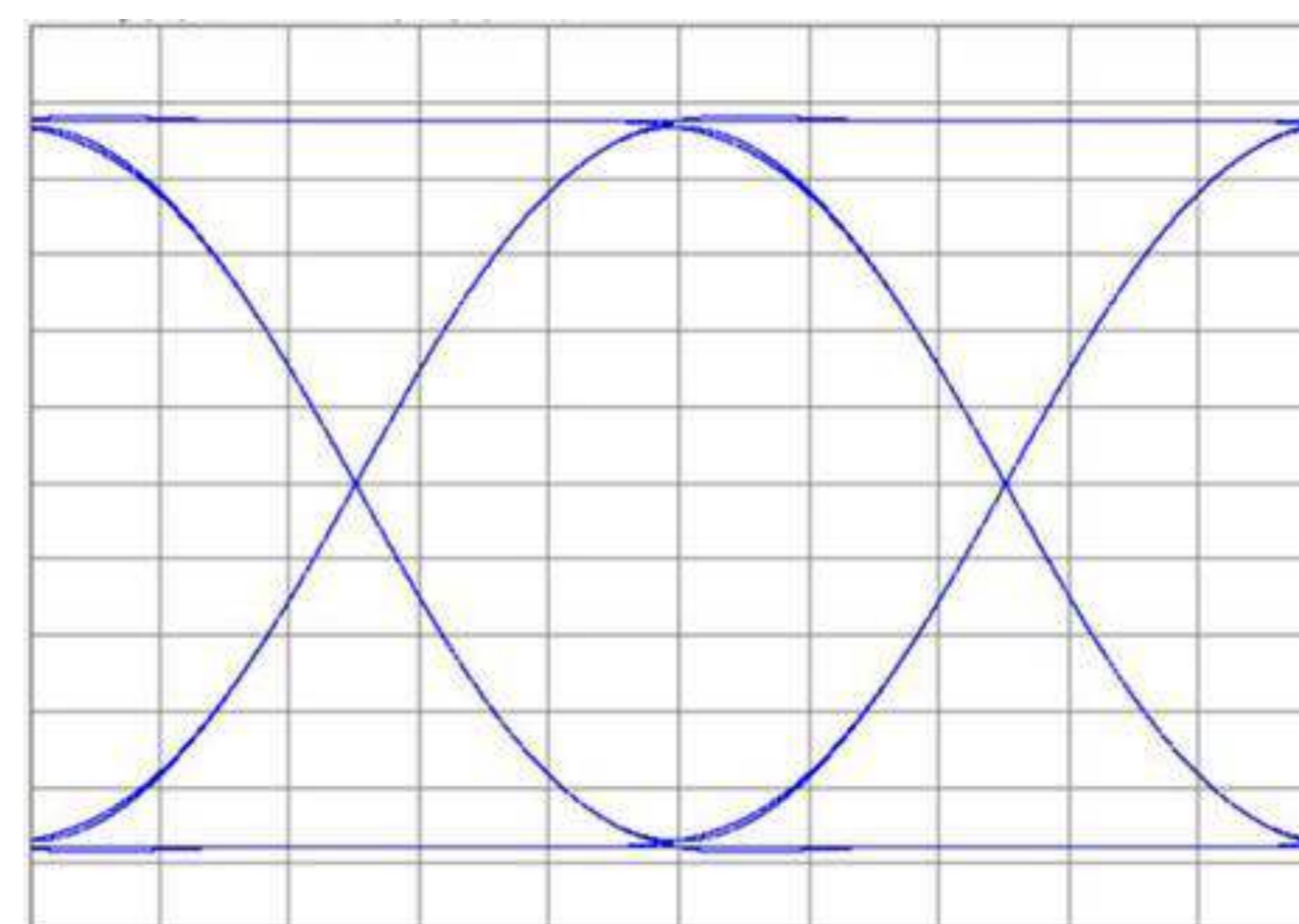


## ▶ Ideal for high-speed transmission e.g. USB4 / Thunderbolt 4 (20+ Gbps / lane)



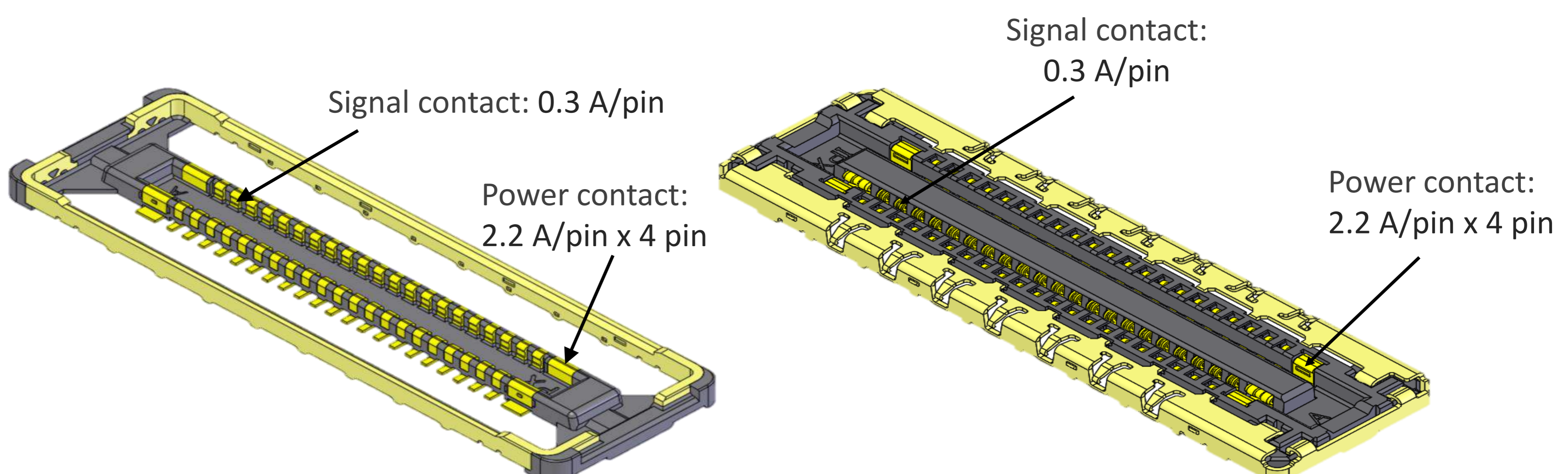
\*Please contact I-PEX for more test details.

### Eye pattern



Bit rate : 25 Gbps  
Rise time : 20 ps (10-90%)  
Input voltage : 800 mVp-p

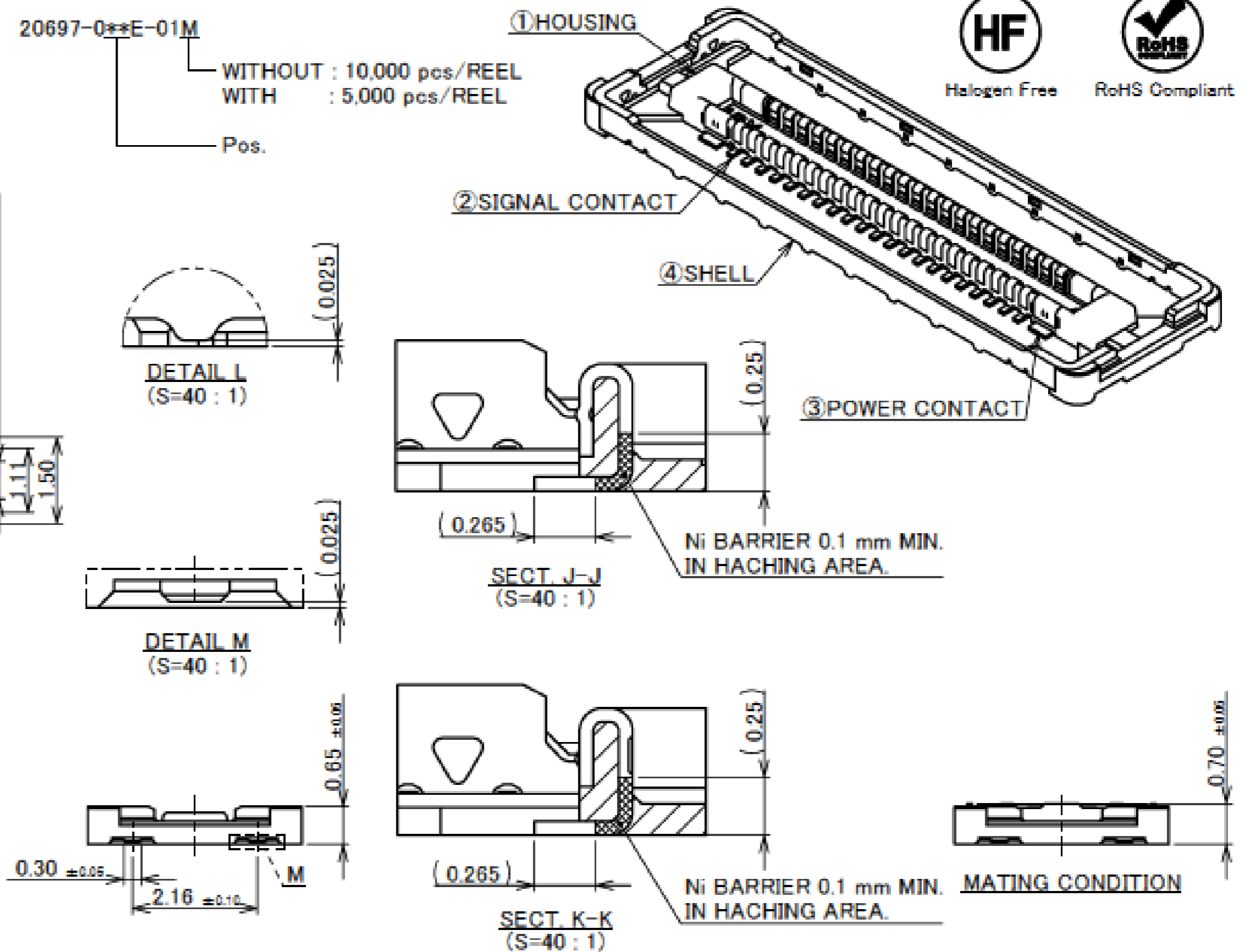
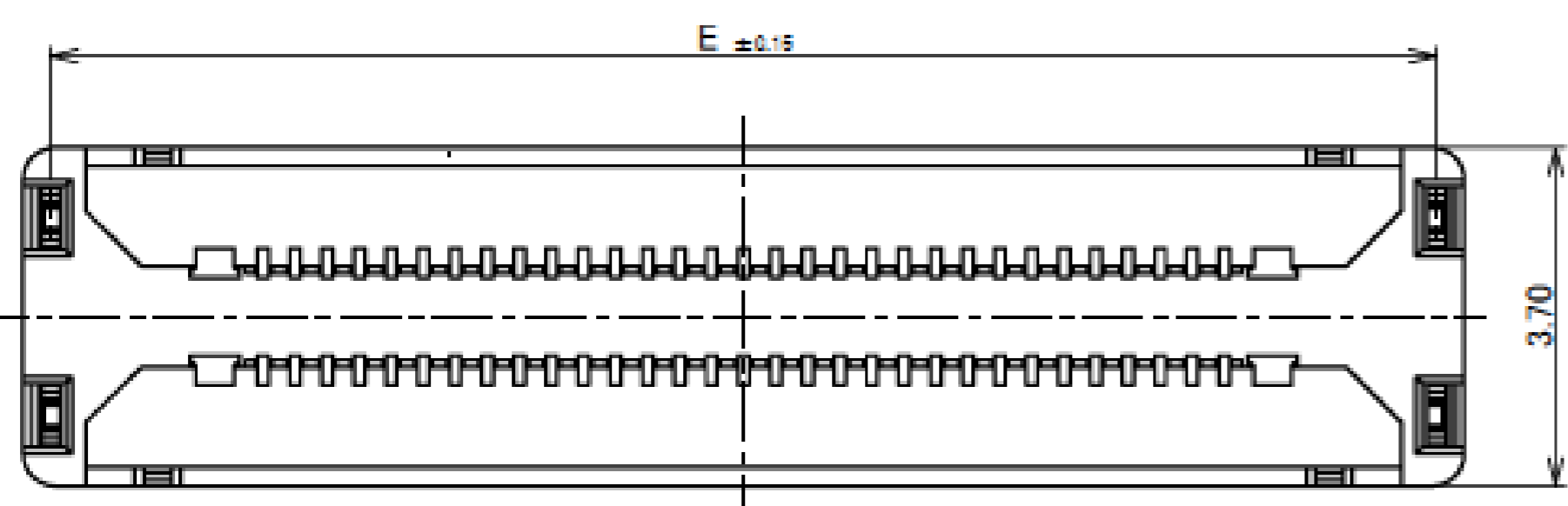
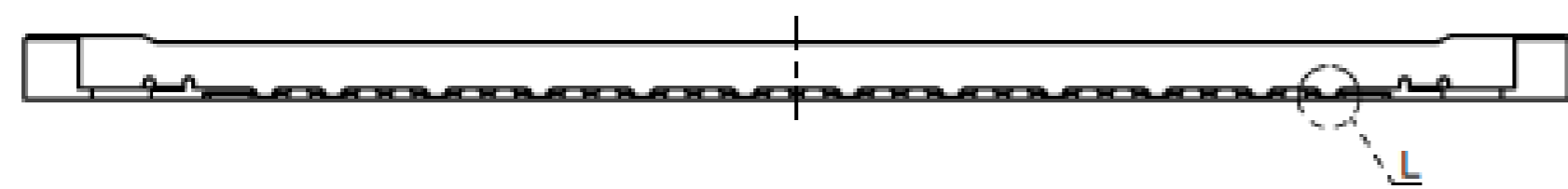
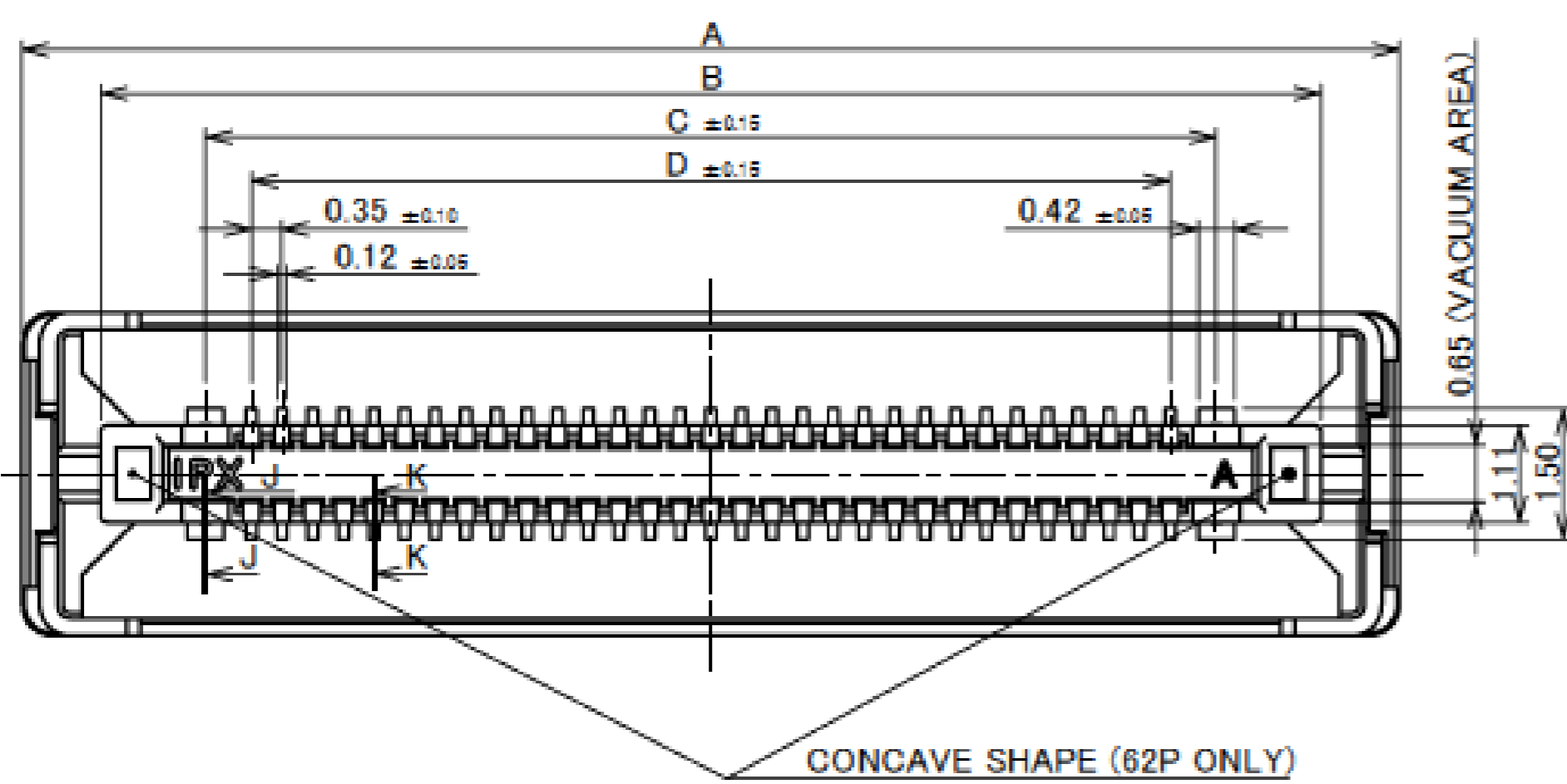
## ▶ 2.2 A power pin x 4 for power delivery



# Component Parts Detail

## Plug Assembly

Recommended P/N		20697-0**E-01#					
PART No.	SIGNAL POS.	POWER POS.	A	B	C	D	E
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

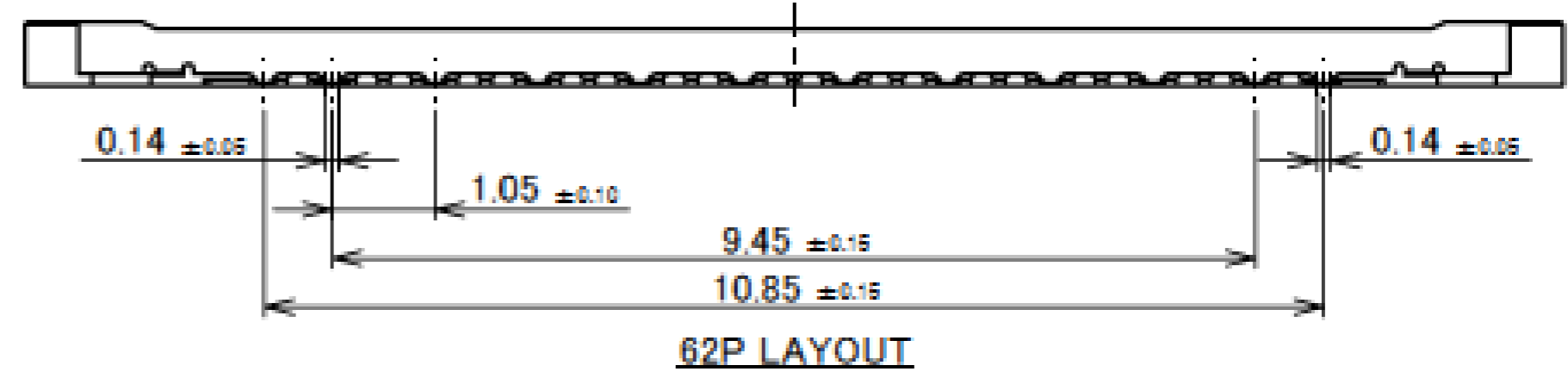
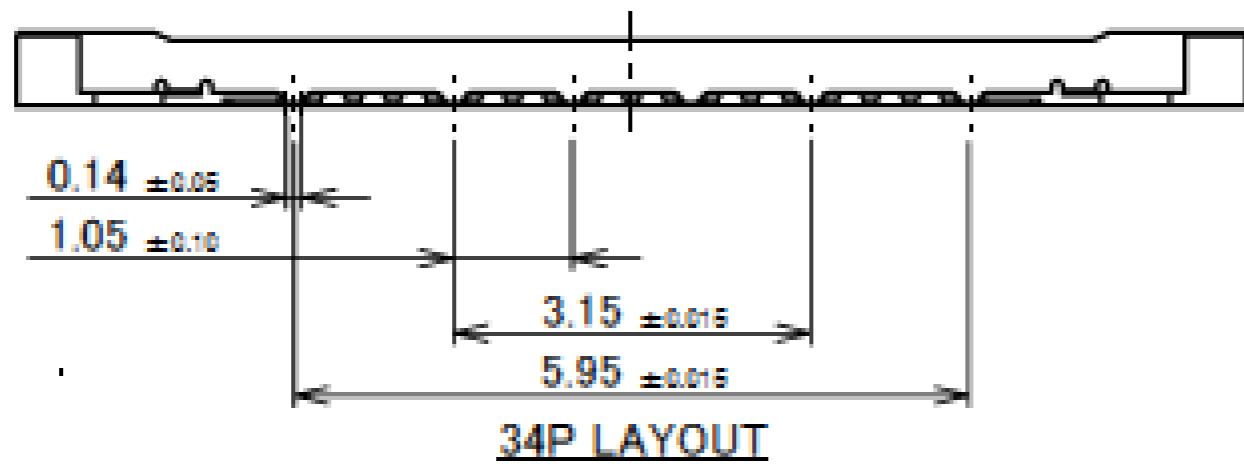
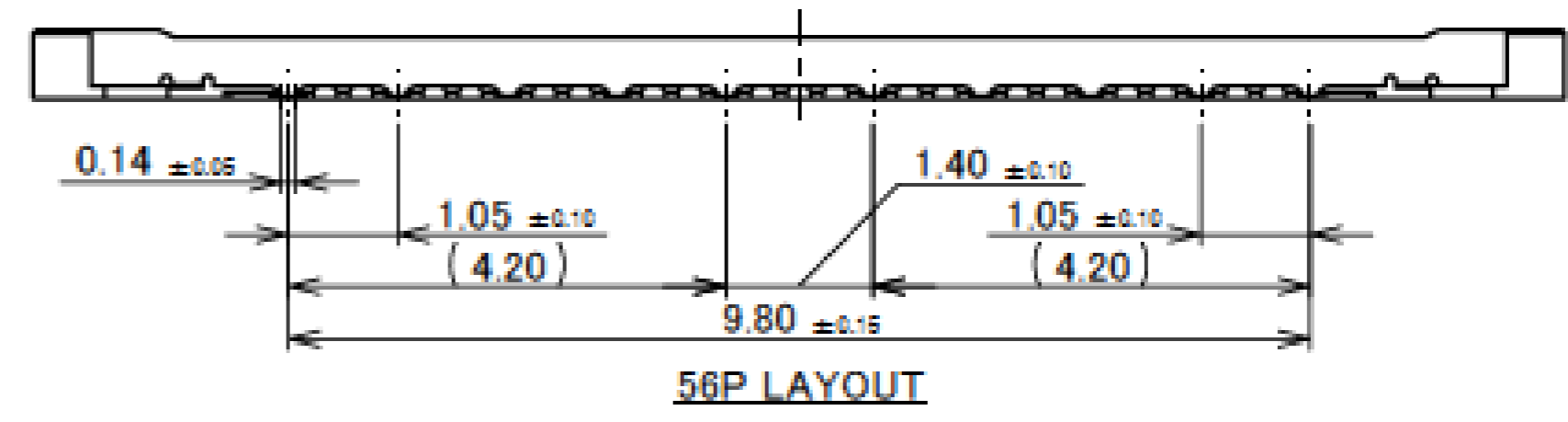
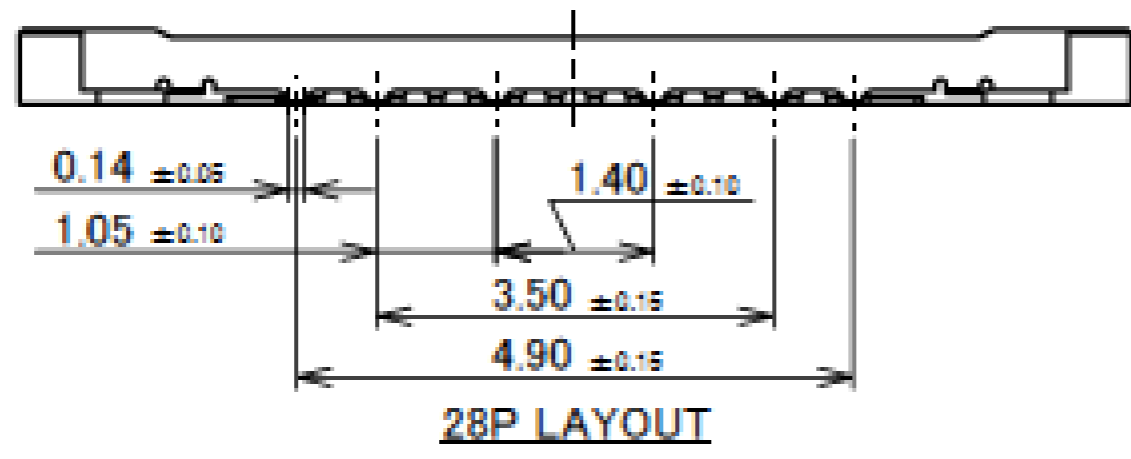
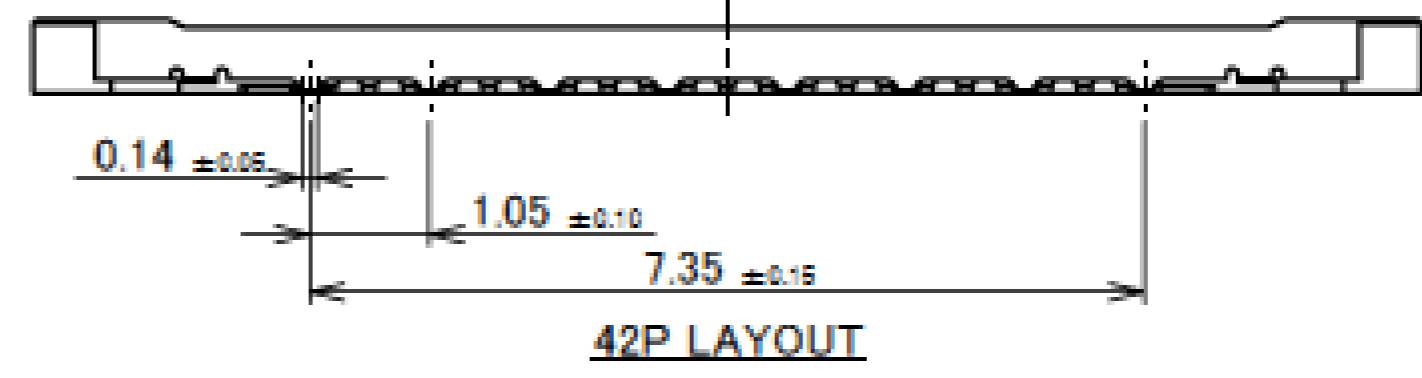


NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.27 μm MIN. Au 0.01 μm MIN.
3	POWER CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μm MIN. CONTACT PART Au 0.05 μm MIN. SOLDERING PART Au 0.02 μm MIN.
2	SIGNAL CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μm MIN. CONTACT PART Au 0.05 μm MIN.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

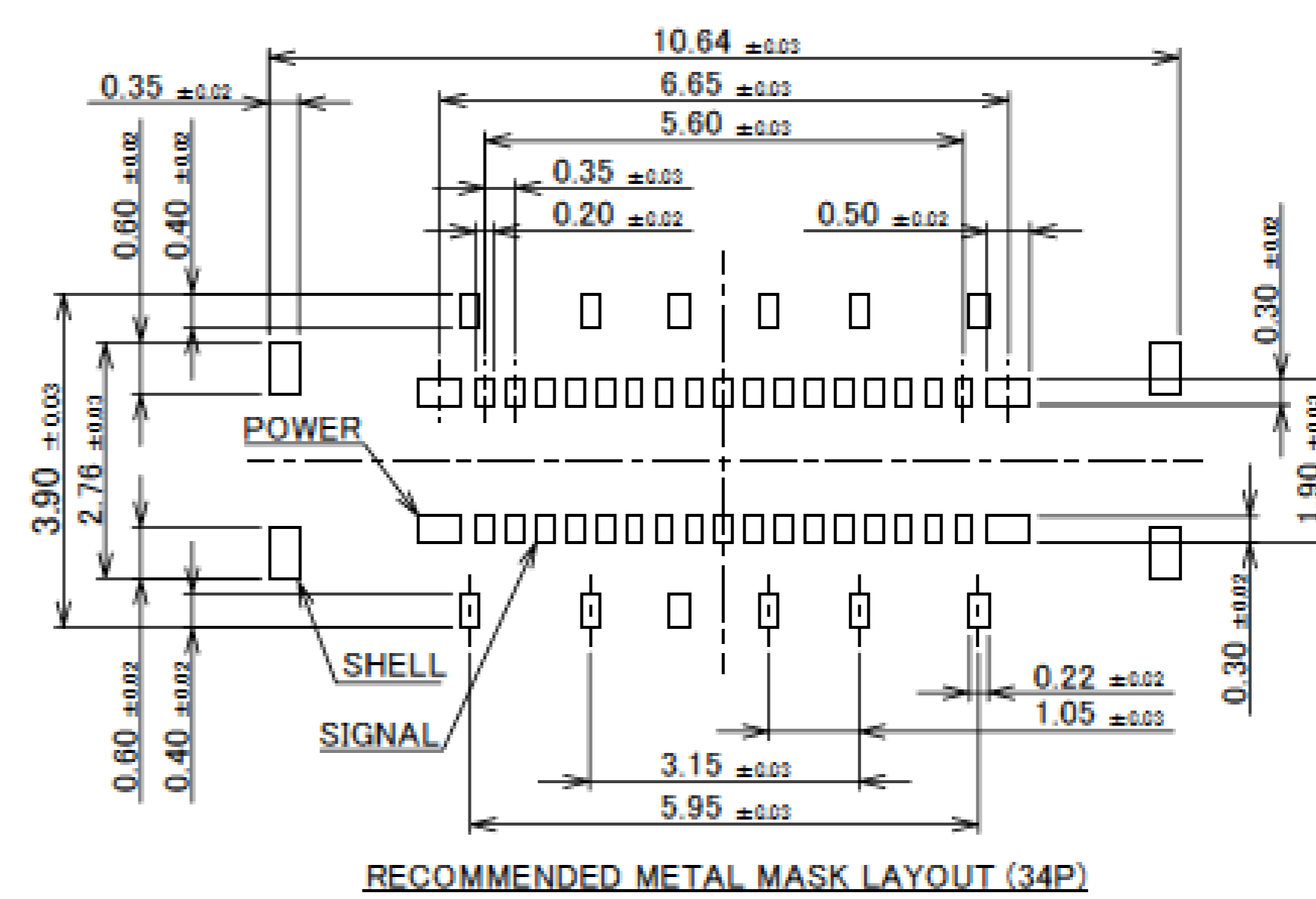
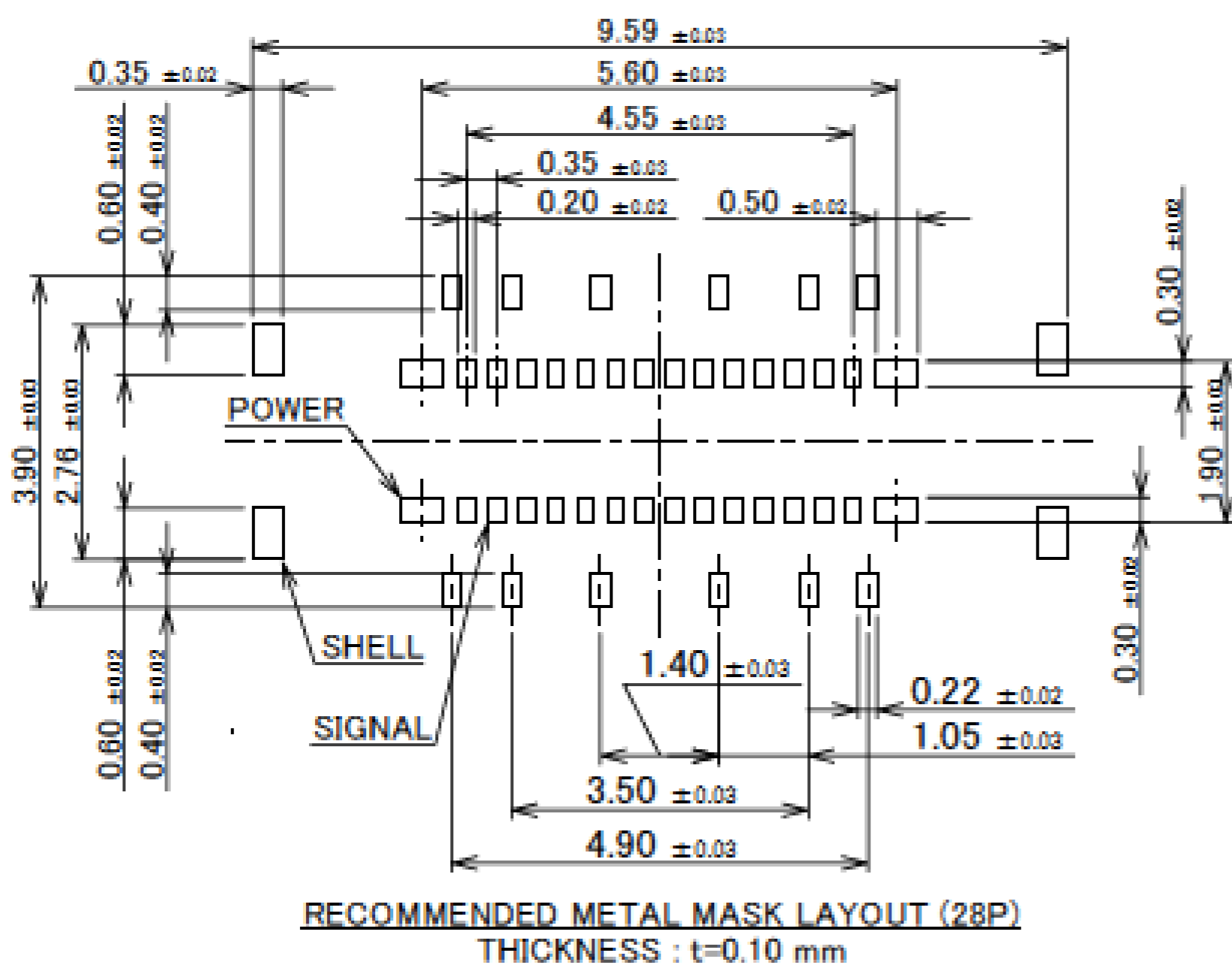
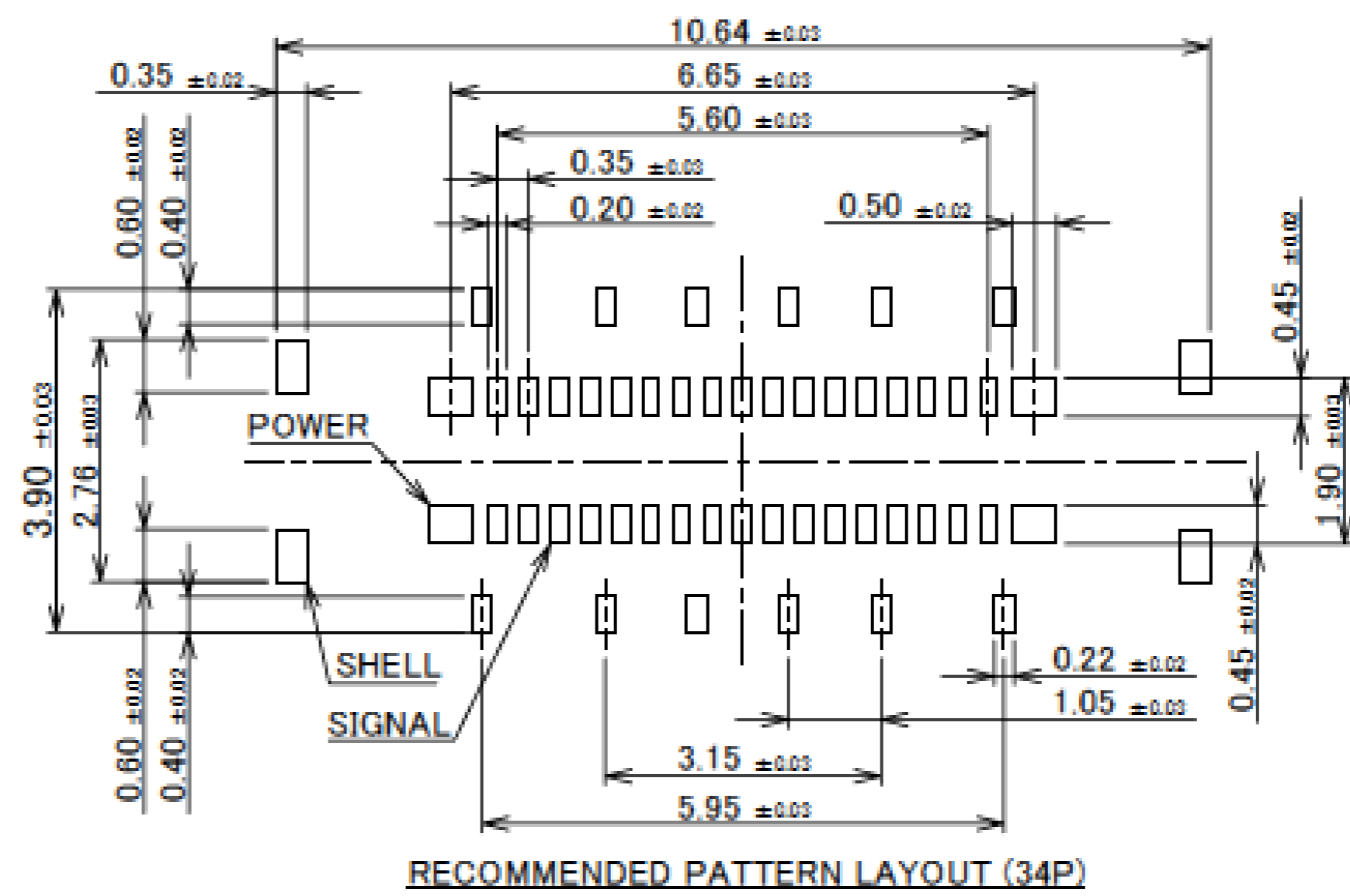
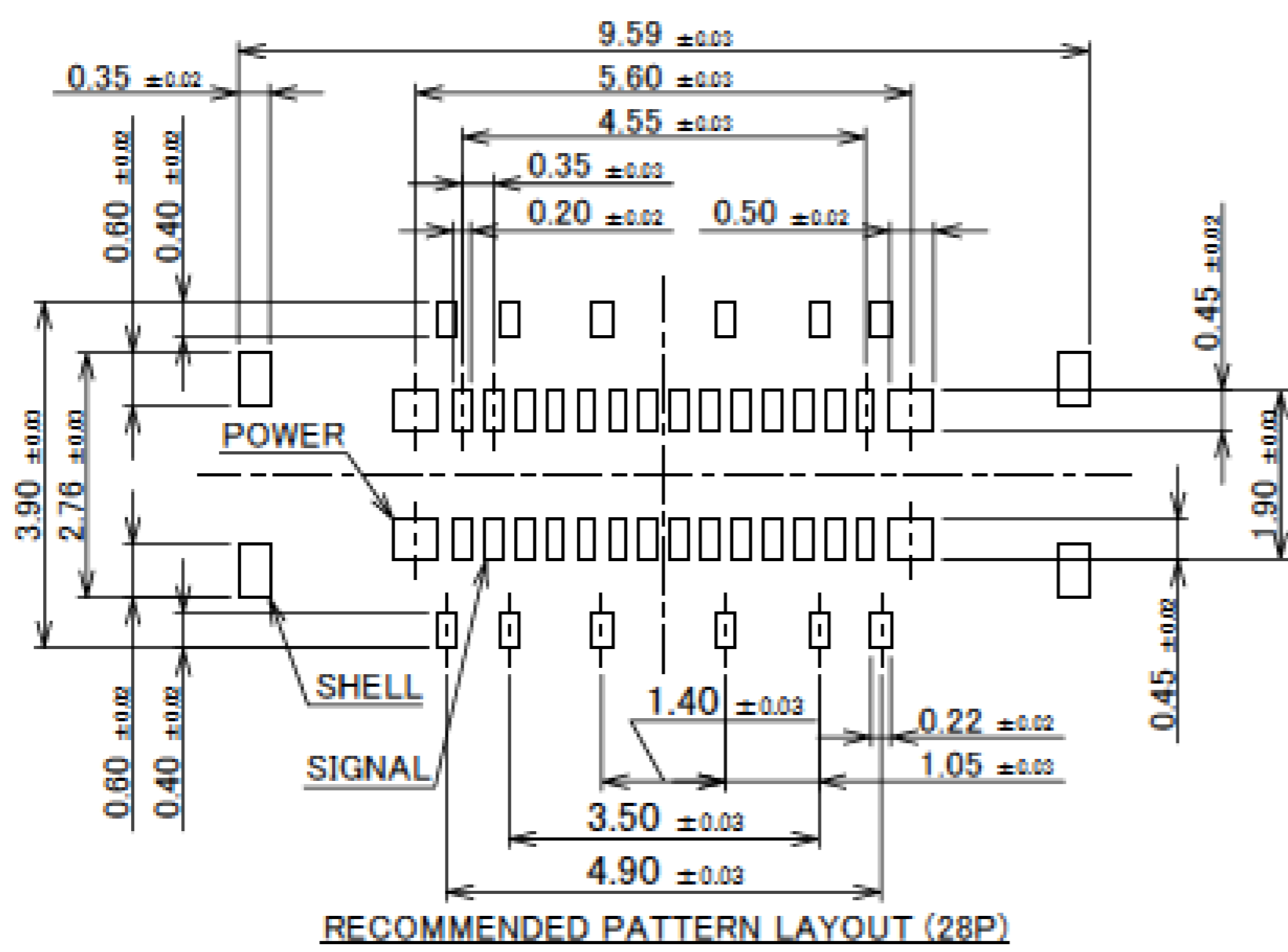
# Plug Assembly

PART No.	SIGNAL POS.	POWER POS.
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  
 WITHOUT : 10,000 pcs/REEL  
 WITH : 5,000 pcs/REEL  
 Pos.

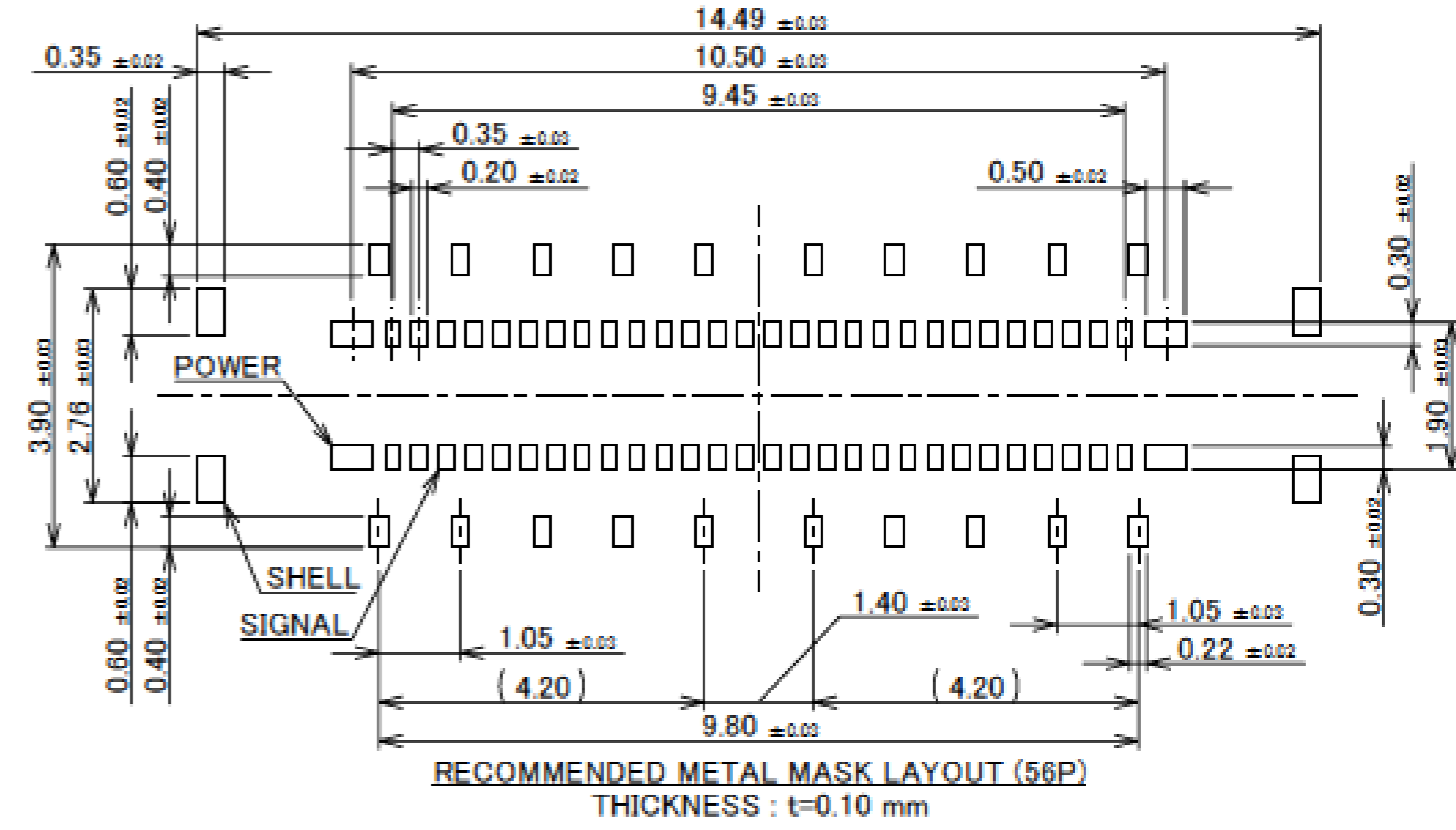
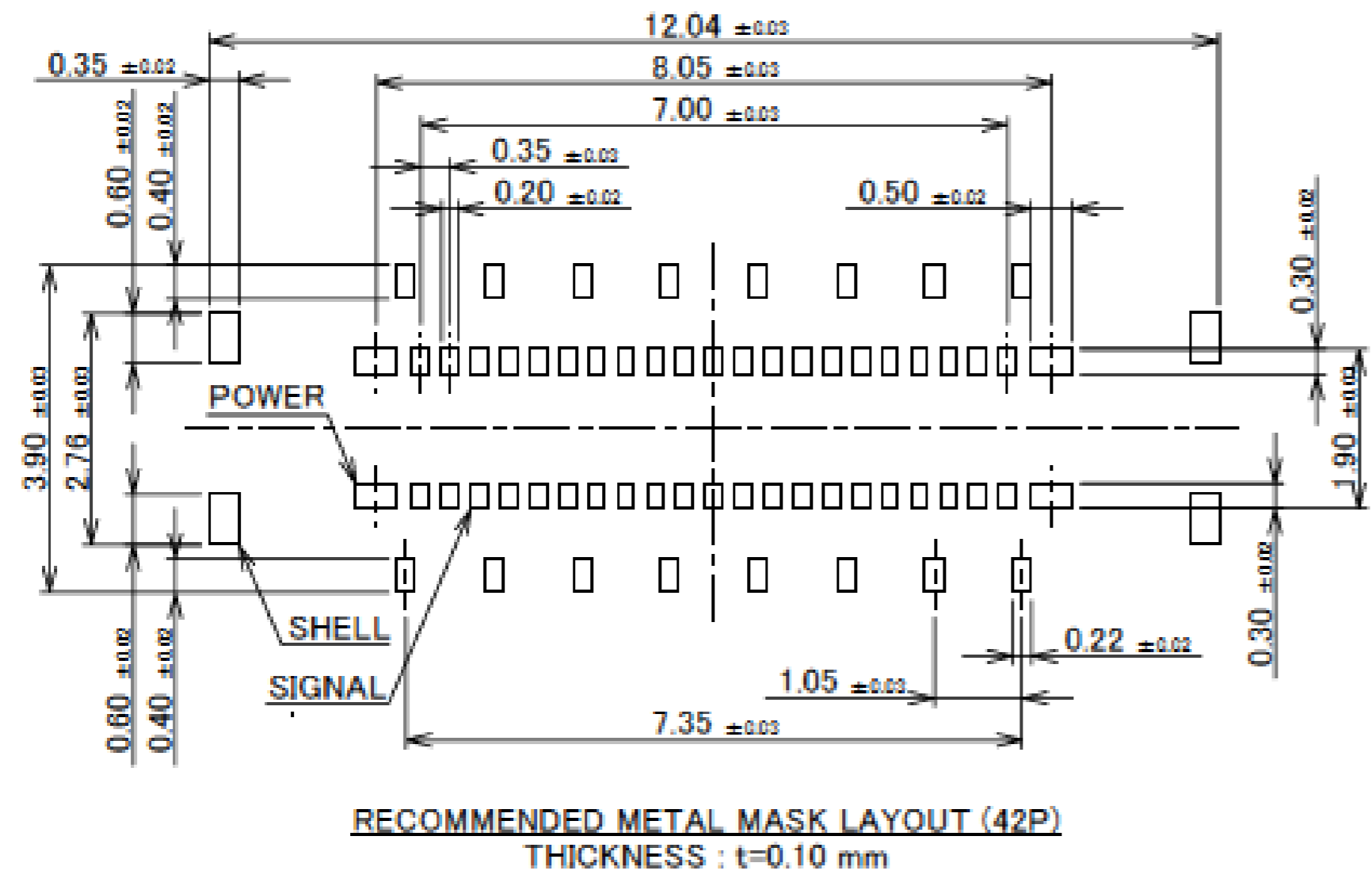
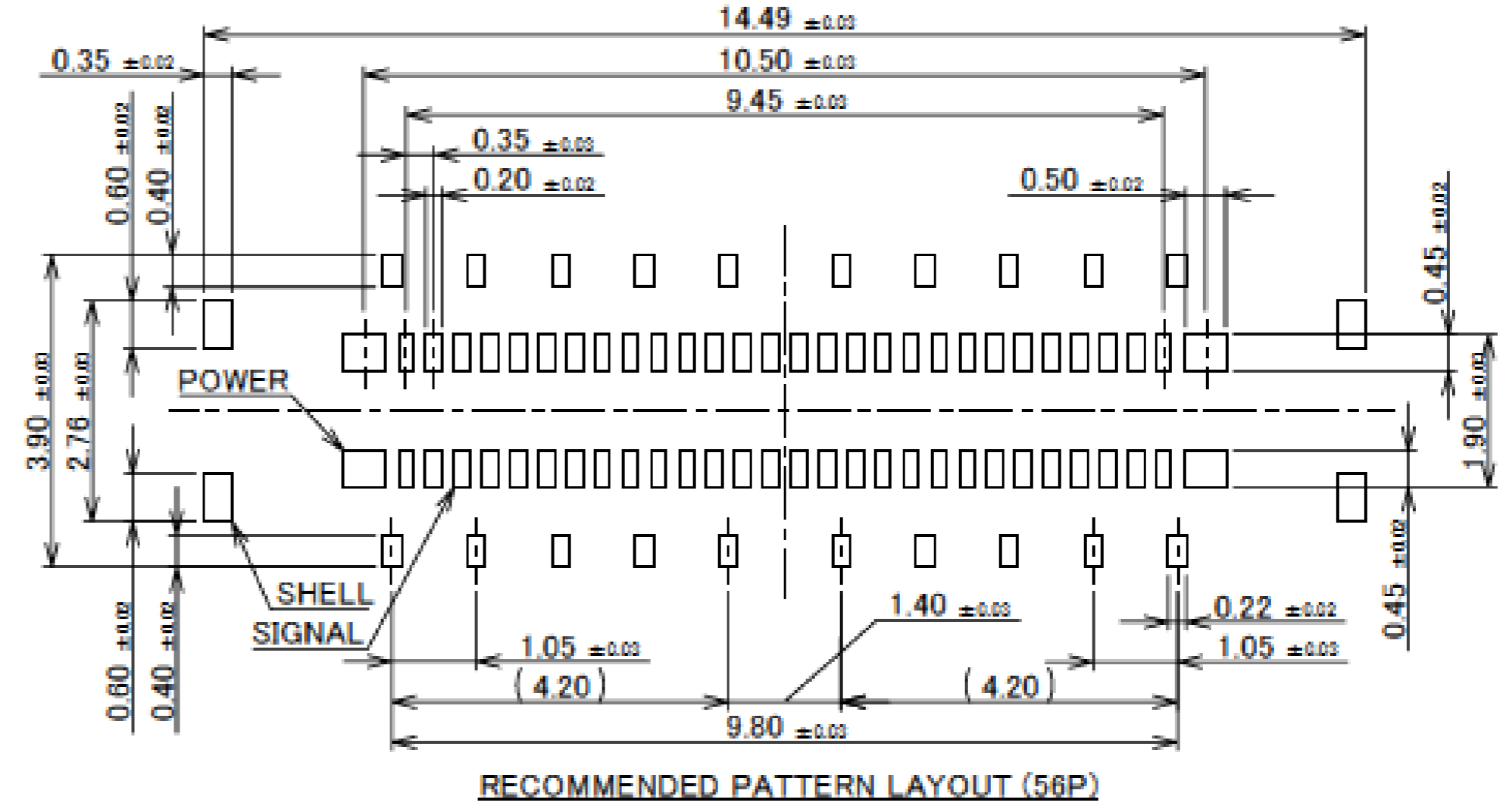
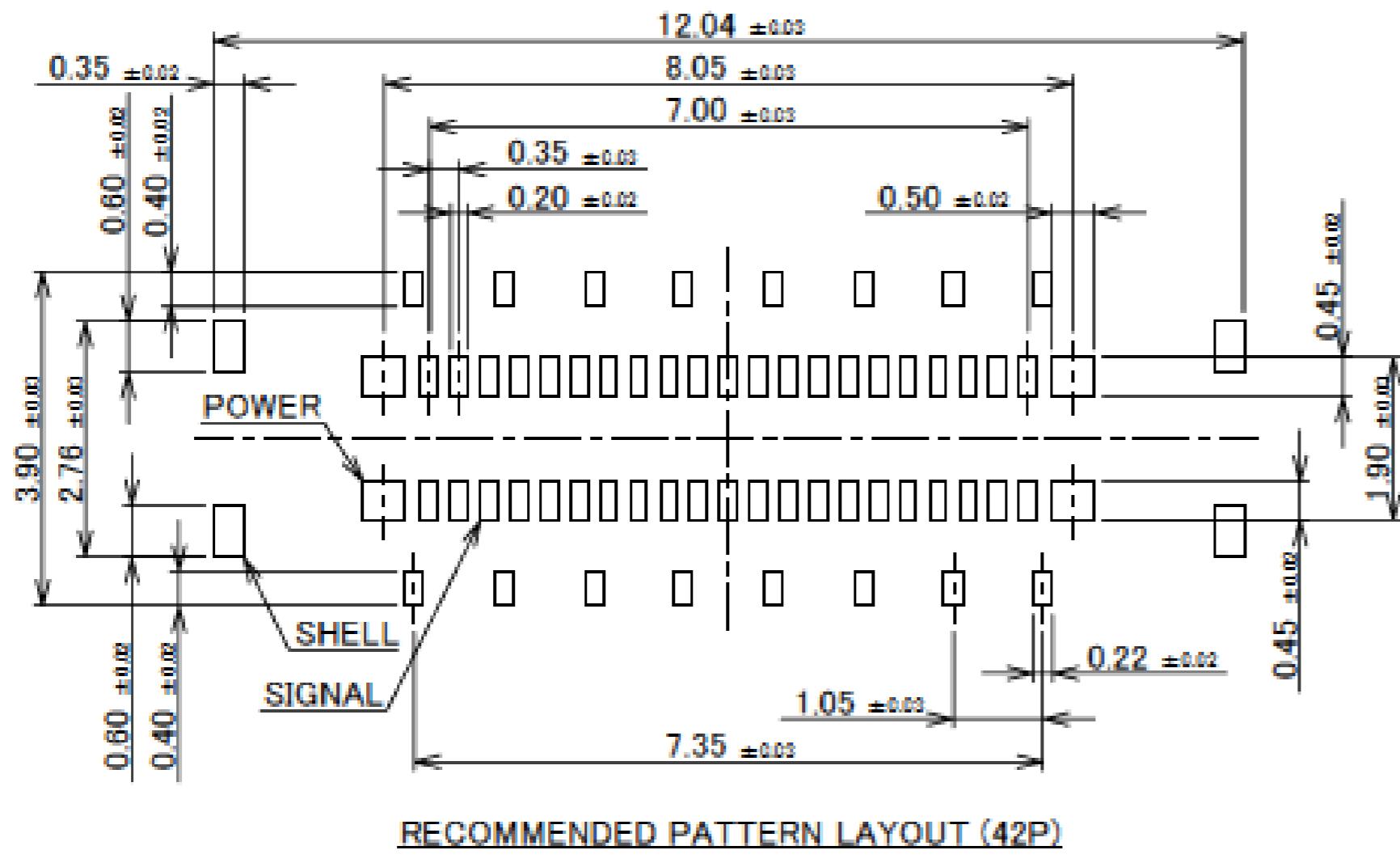


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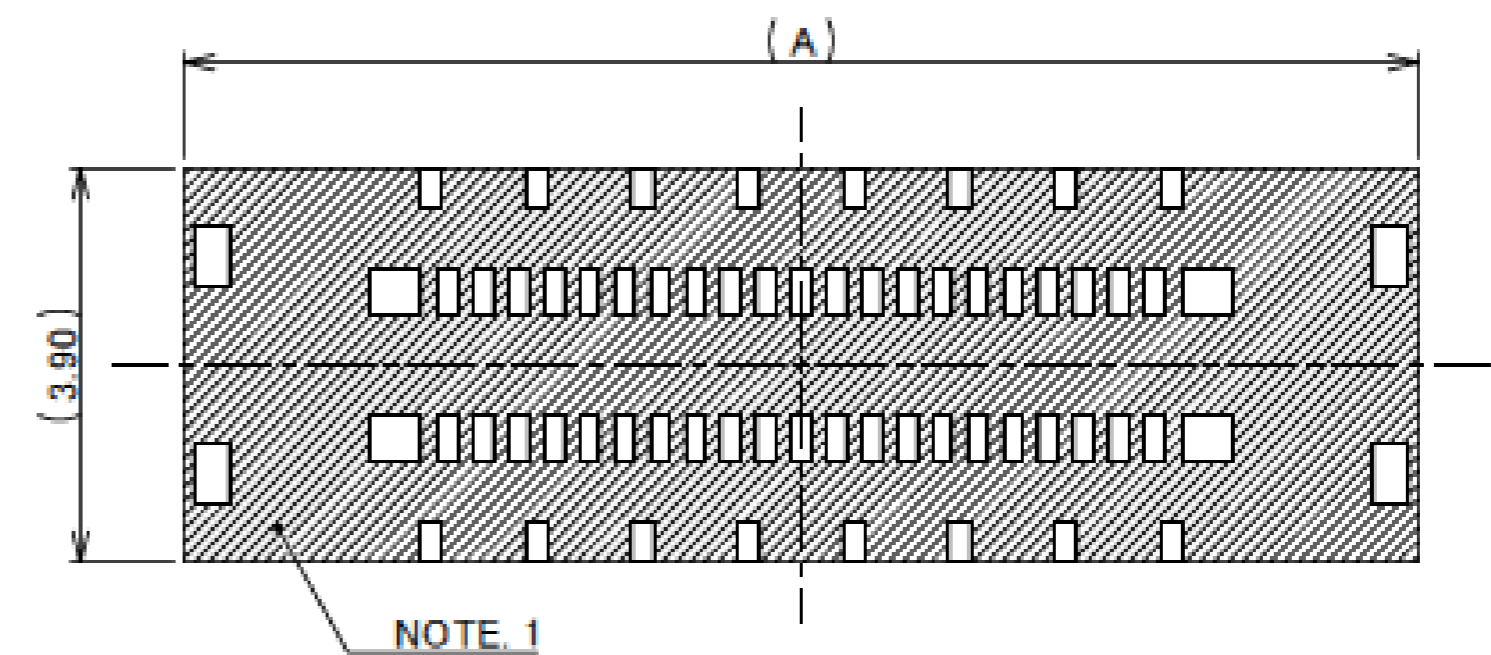
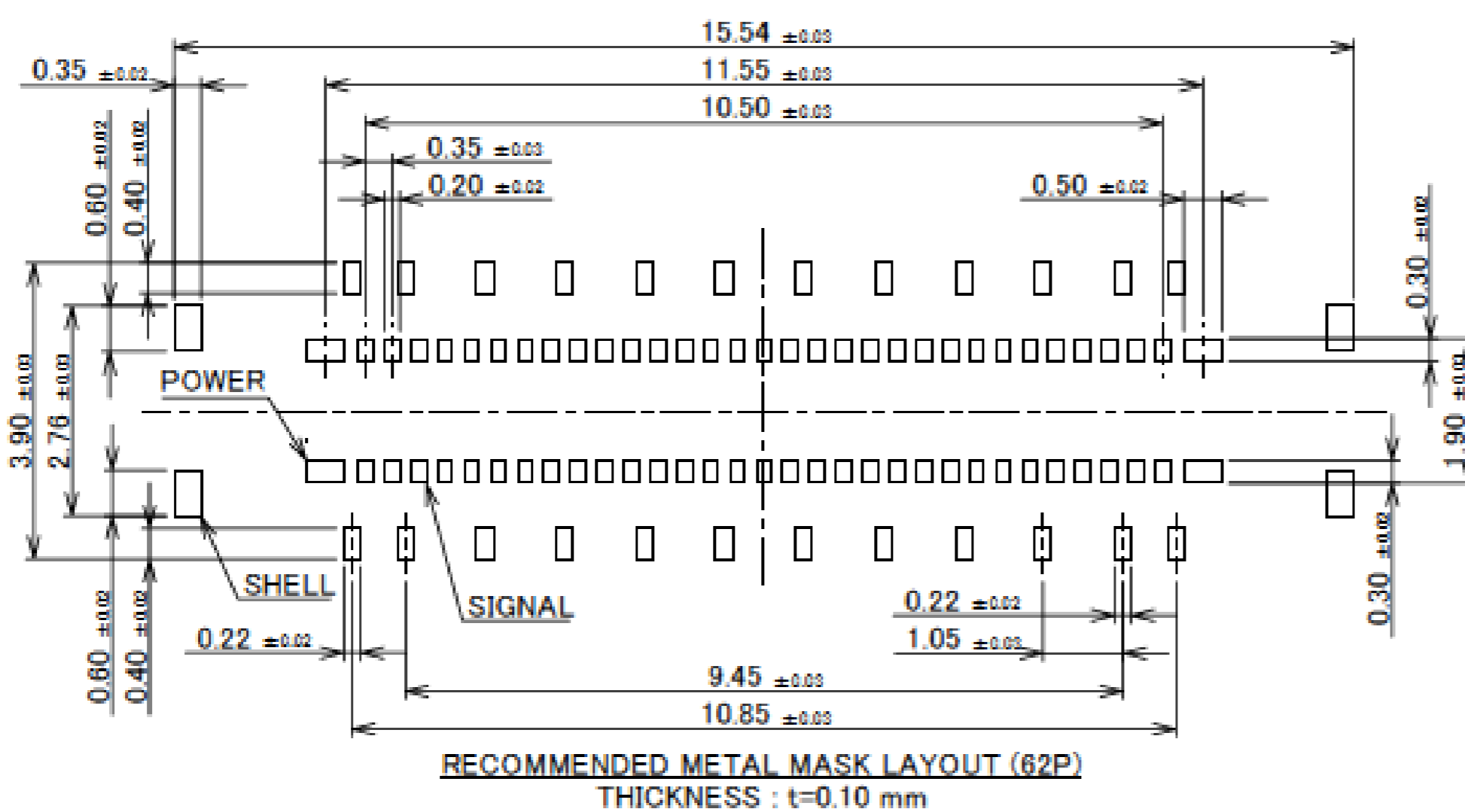
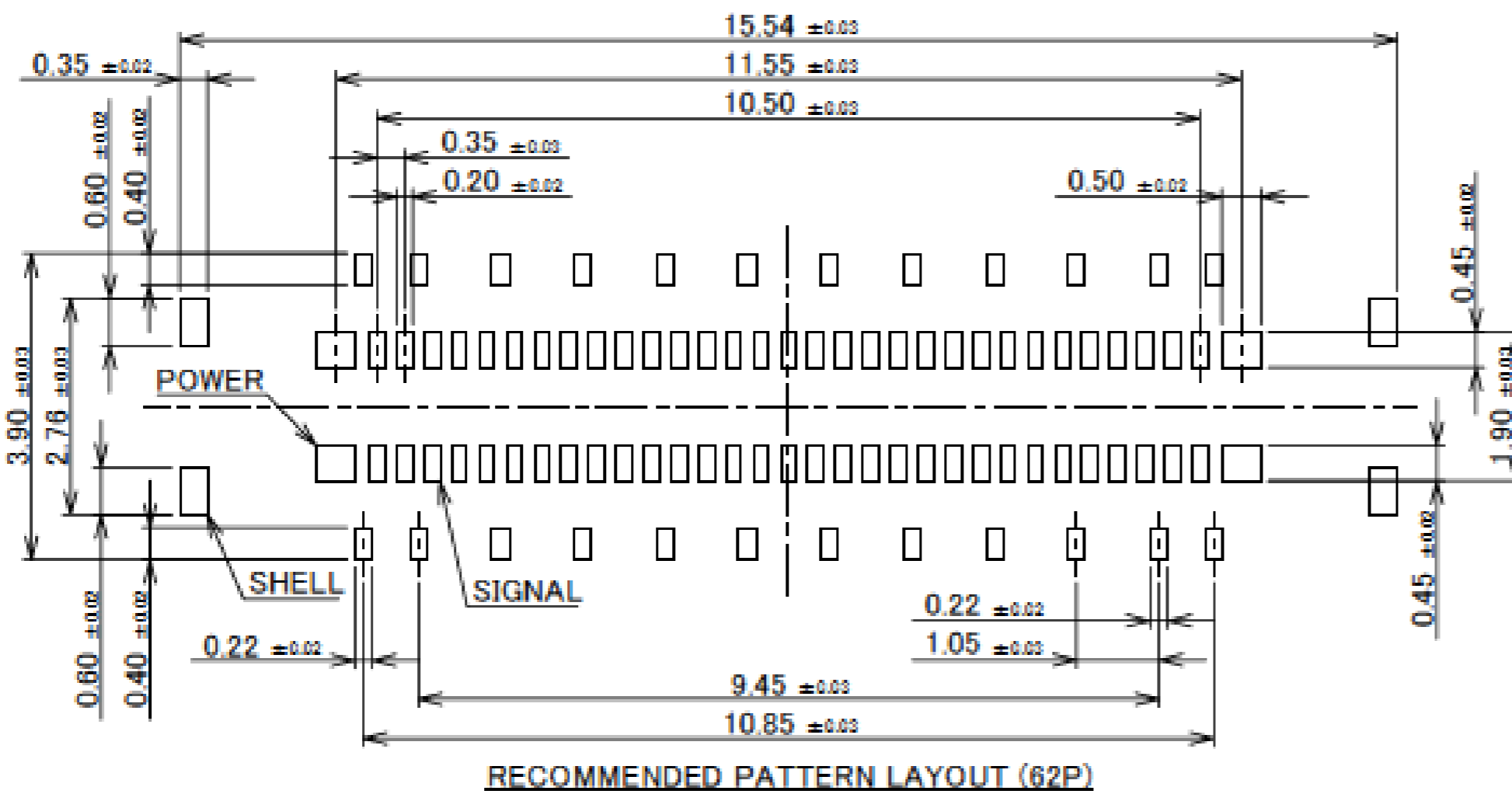


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# Plug Assembly



PART No.	SIGNAL POS.	POWER POS.	A
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

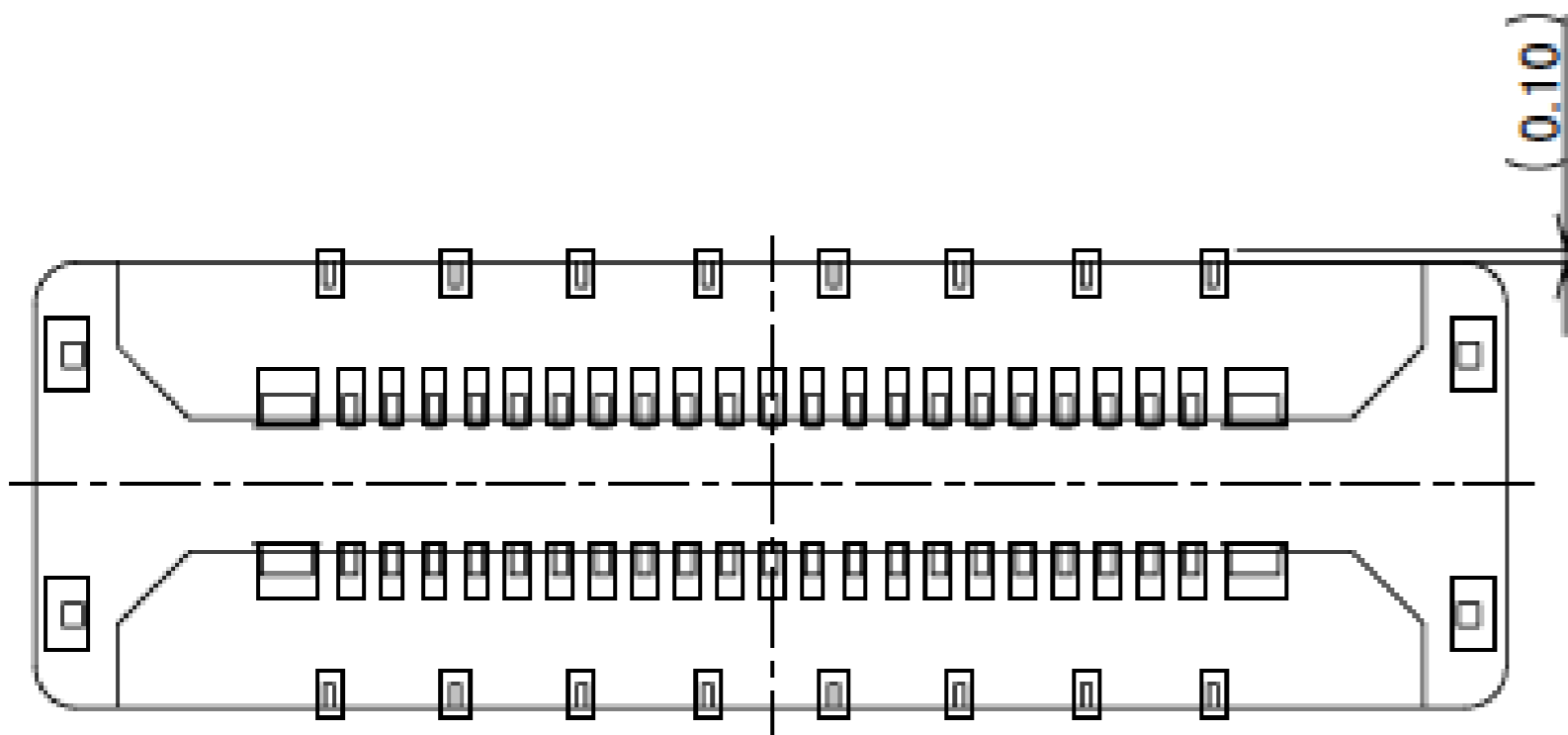


NOTES.  
1. THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.

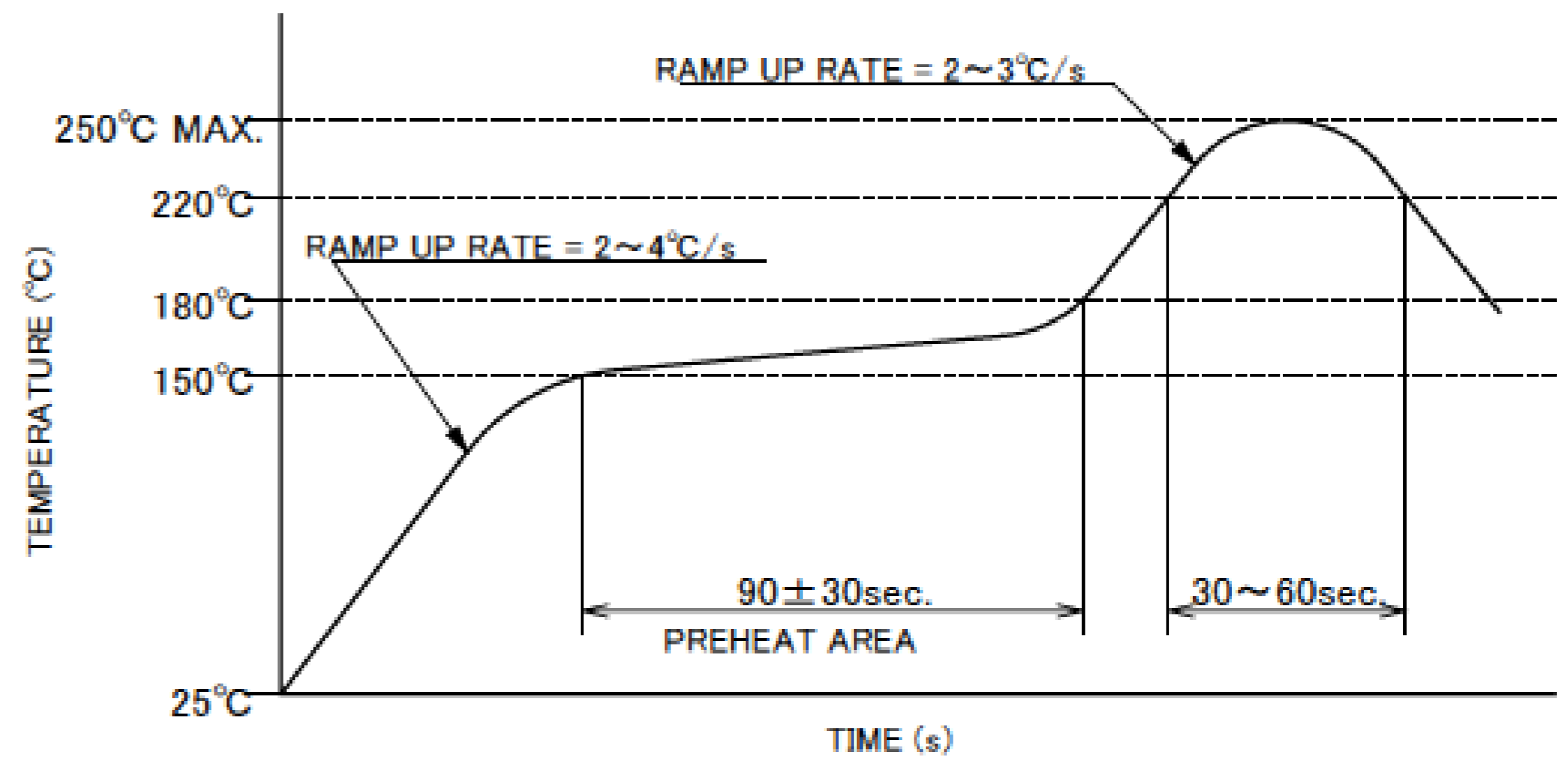
Rev.7

Rev.7

# Plug Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.7

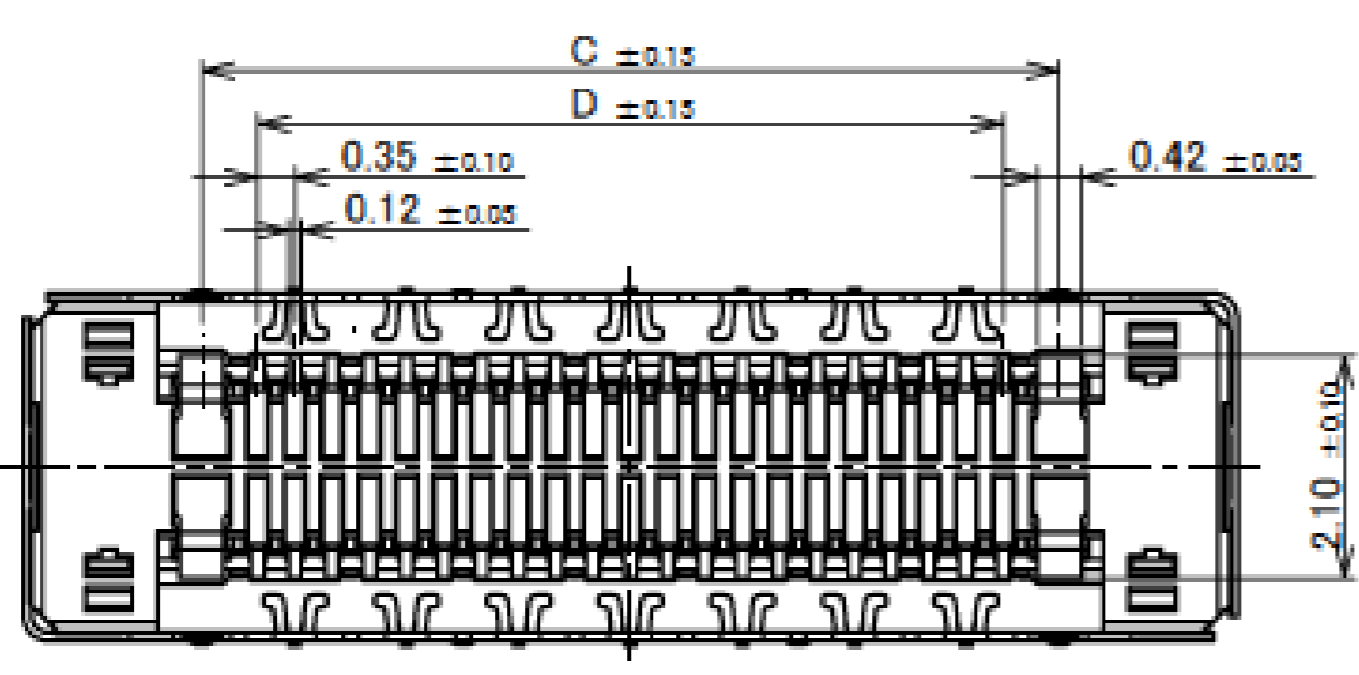
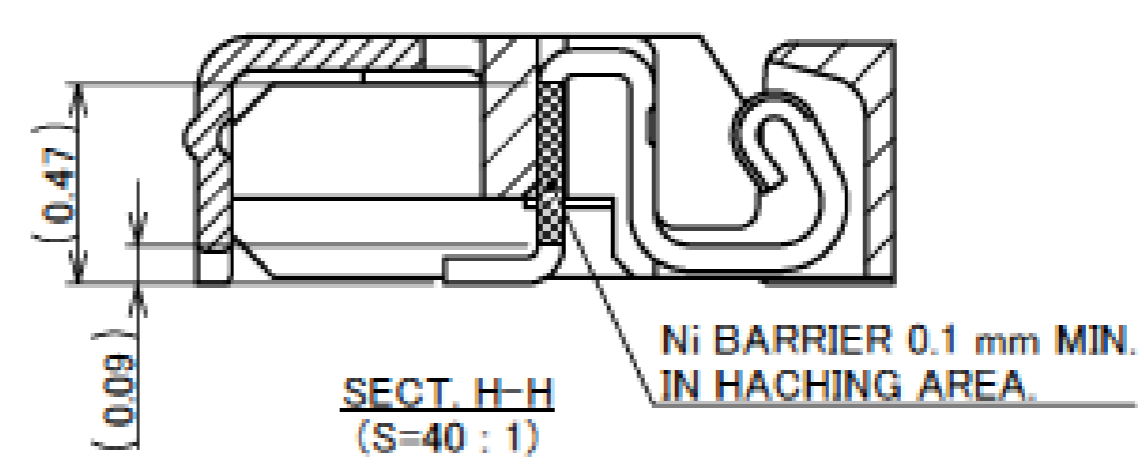
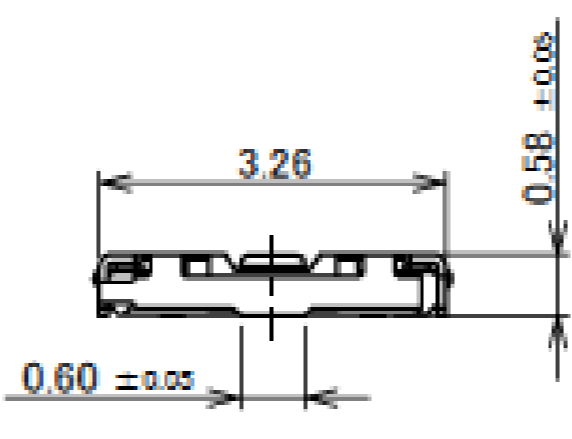
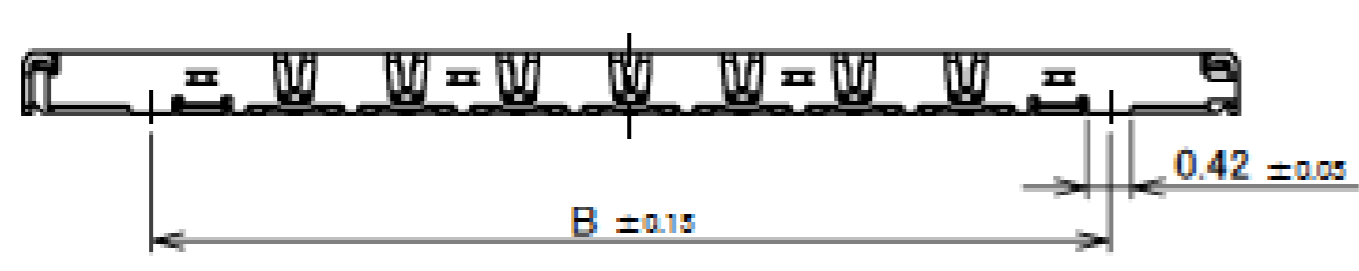
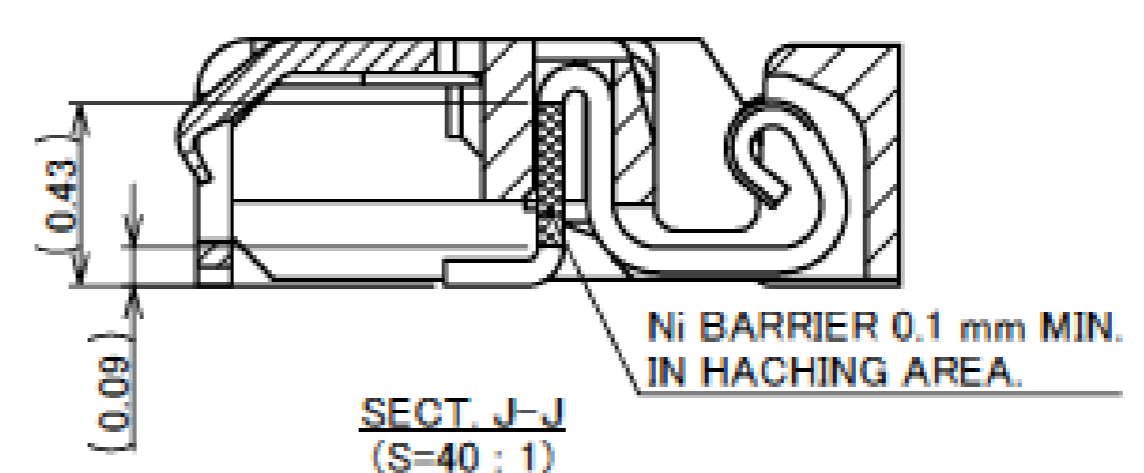
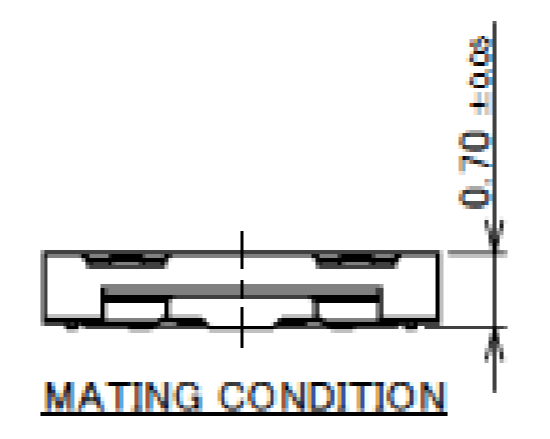
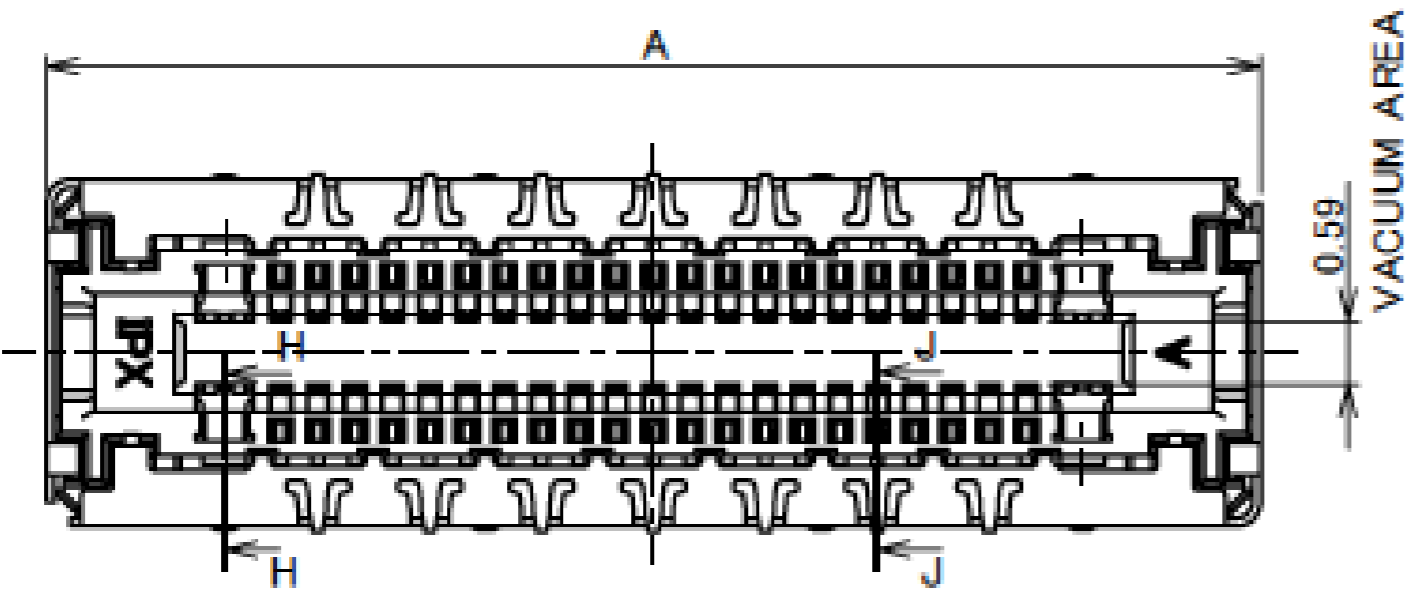
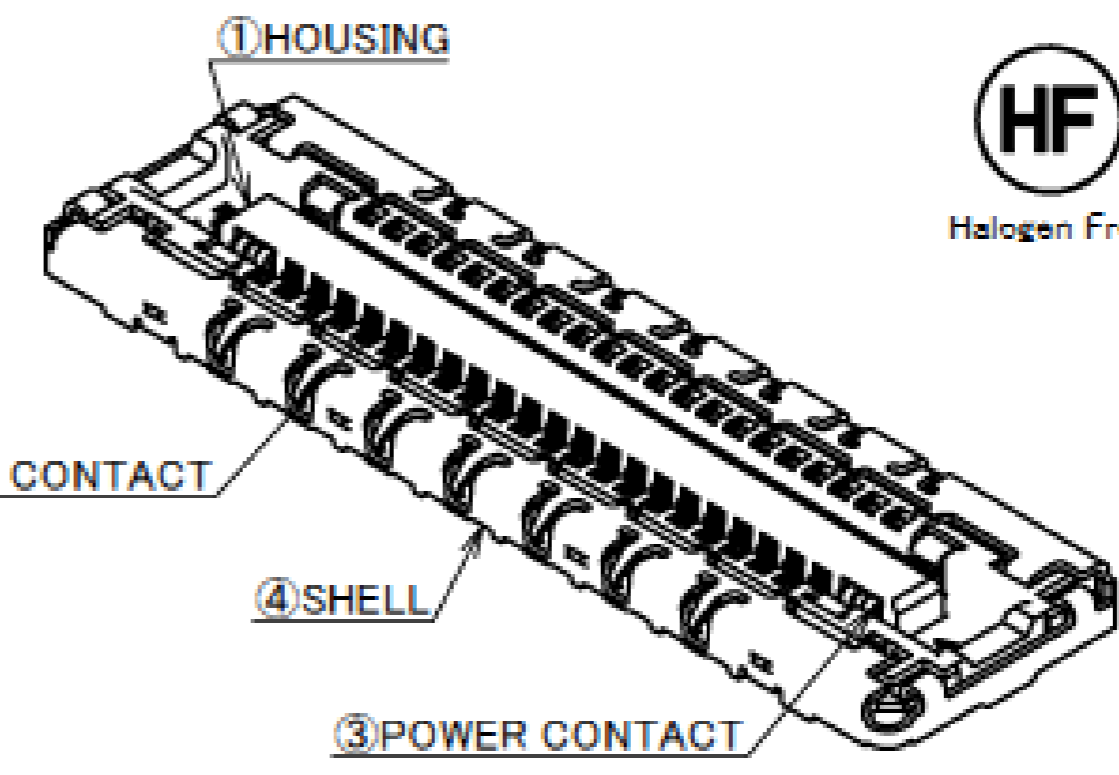
ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	20698-0**E-01*
RATING VOLTAGE	60V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)/ 12.0A AC/DC(TOTAL)
RATING AMPERAGE (FOR POWER CONTACT)	2.2A AC/DC (PER CONTACT PIN)/ 8.8A AC/DC(TOTAL)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 40mohm MAX. / AFTER TEST : $\Delta$ 40mohm MAX.
CONTACT RESISTANCE (FOR POWER CONTACT)	INITIAL : 20mohm MAX. / AFTER TEST : $\Delta$ 20mohm MAX.
CONTACT RESISTANCE (FOR GROUND)	INITIAL : 20mohm MAX. / AFTER TEST : $\Delta$ 20mohm MAX.
INSULATION RESISTANCE	INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL)	$1.0N \times n + 4.0N$ MAX.
UNMATING FORCE (AFTER TEST)	$0.1N \times n + 0.4N$ 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.7

# Receptacle Assembly

Recommended P/N		20698-0**E-01#				
PART No.	SIGNAL POS.	POWER POS.	A	B	C	D
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.

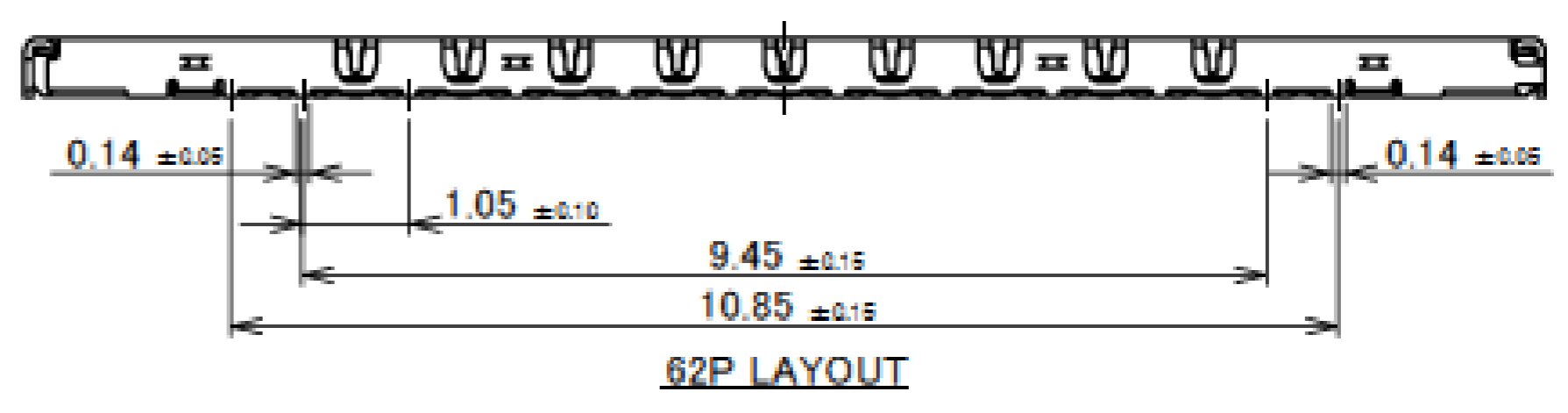
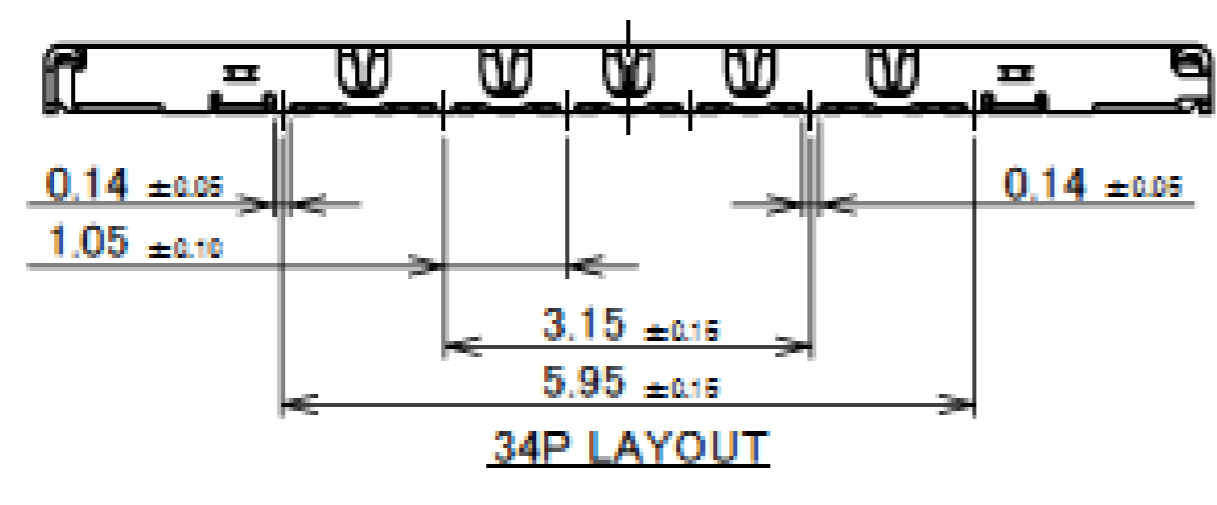
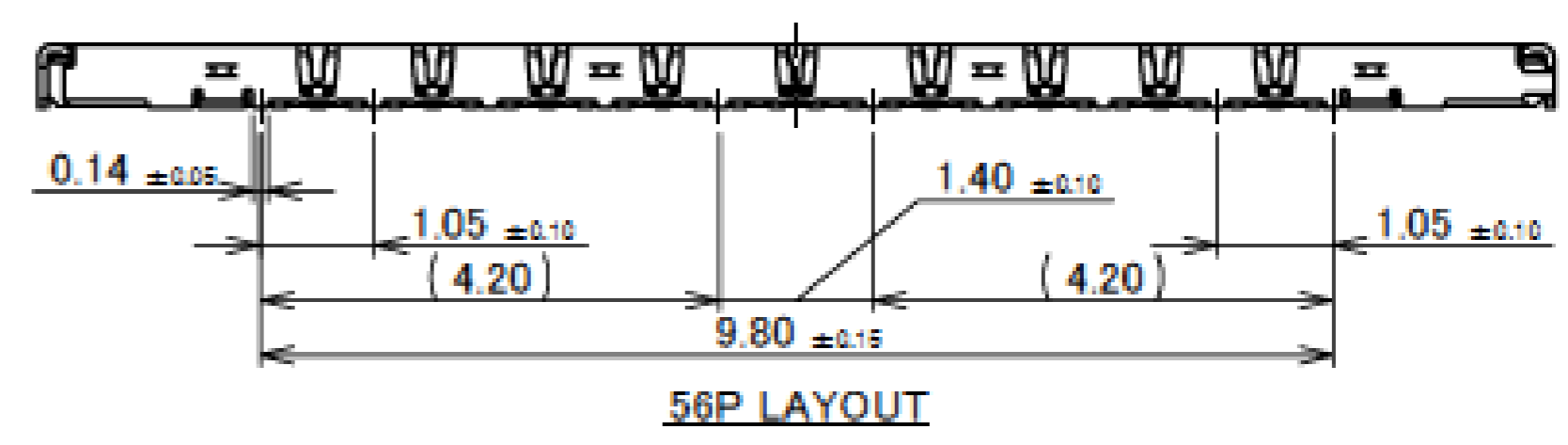
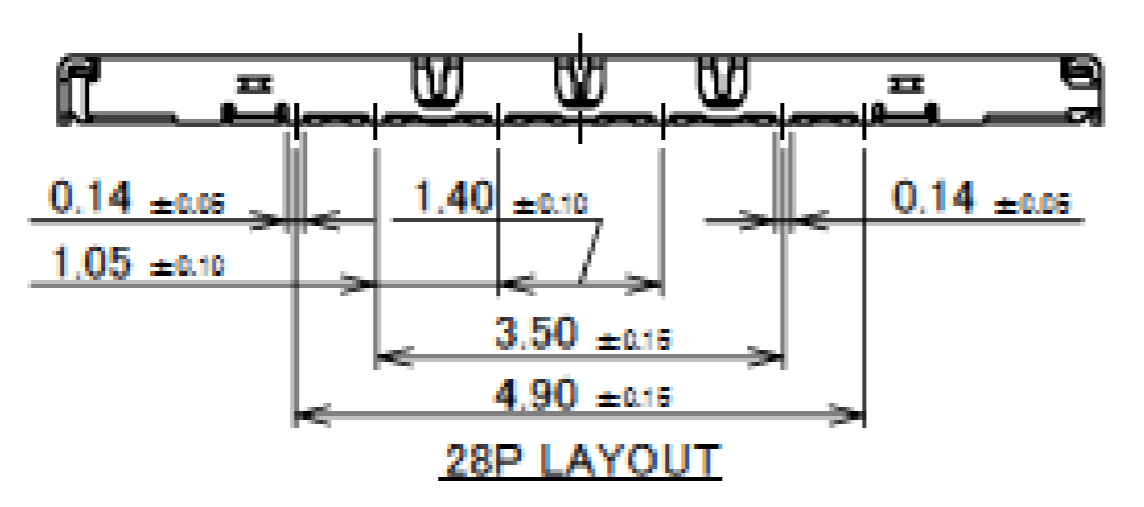
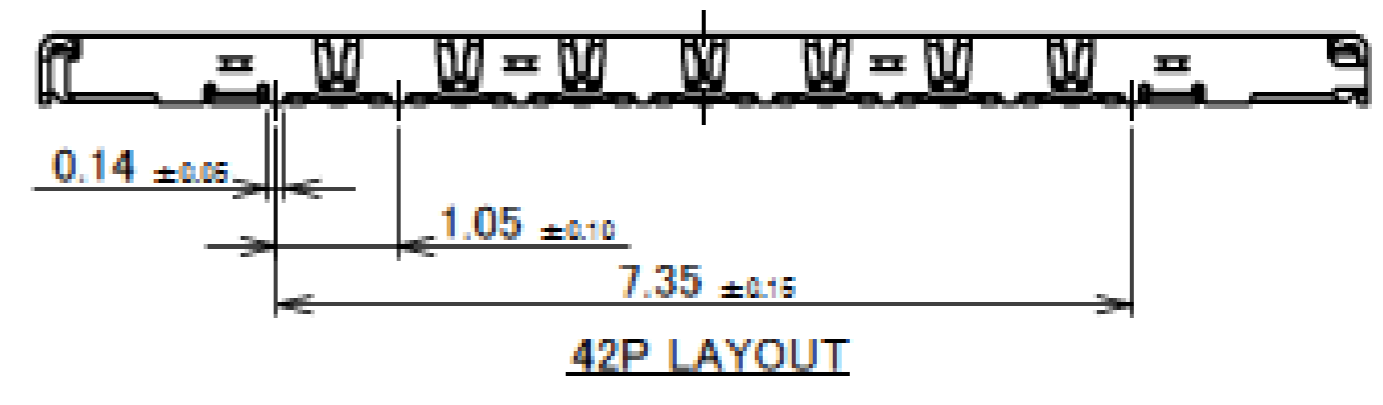


4	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.27 μm MIN. Au 0.01 μm MIN.
3	POWER CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μm MIN. CONTACT PART Au 0.05 μm MIN. SOLDERING PART Au 0.02 μm MIN.
2	SIGNAL CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μm MIN. CONTACT PART Au 0.10 μm MIN. SOLDERING PART Au 0.02 μm MIN.
1	HOUSING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

Rev.10

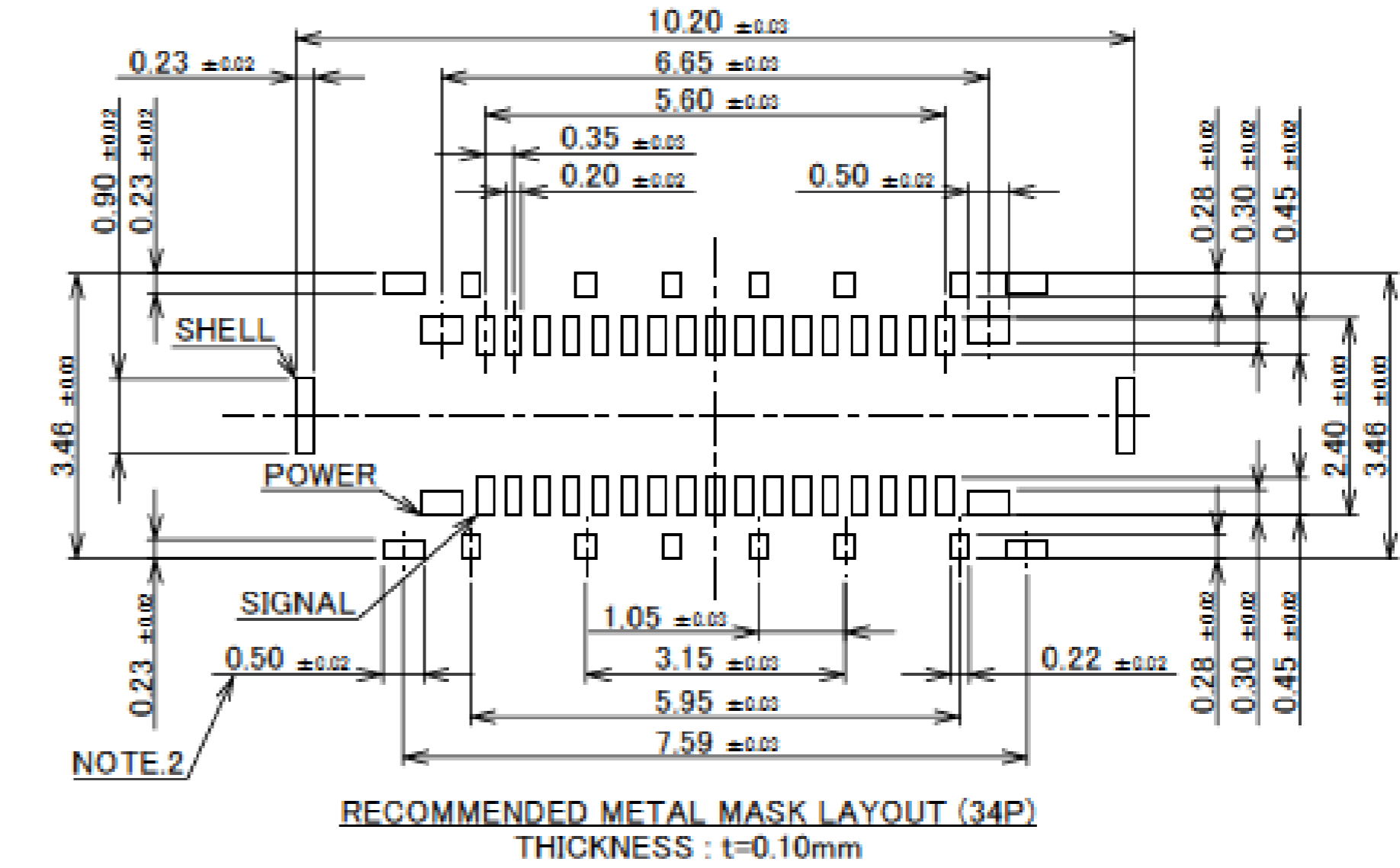
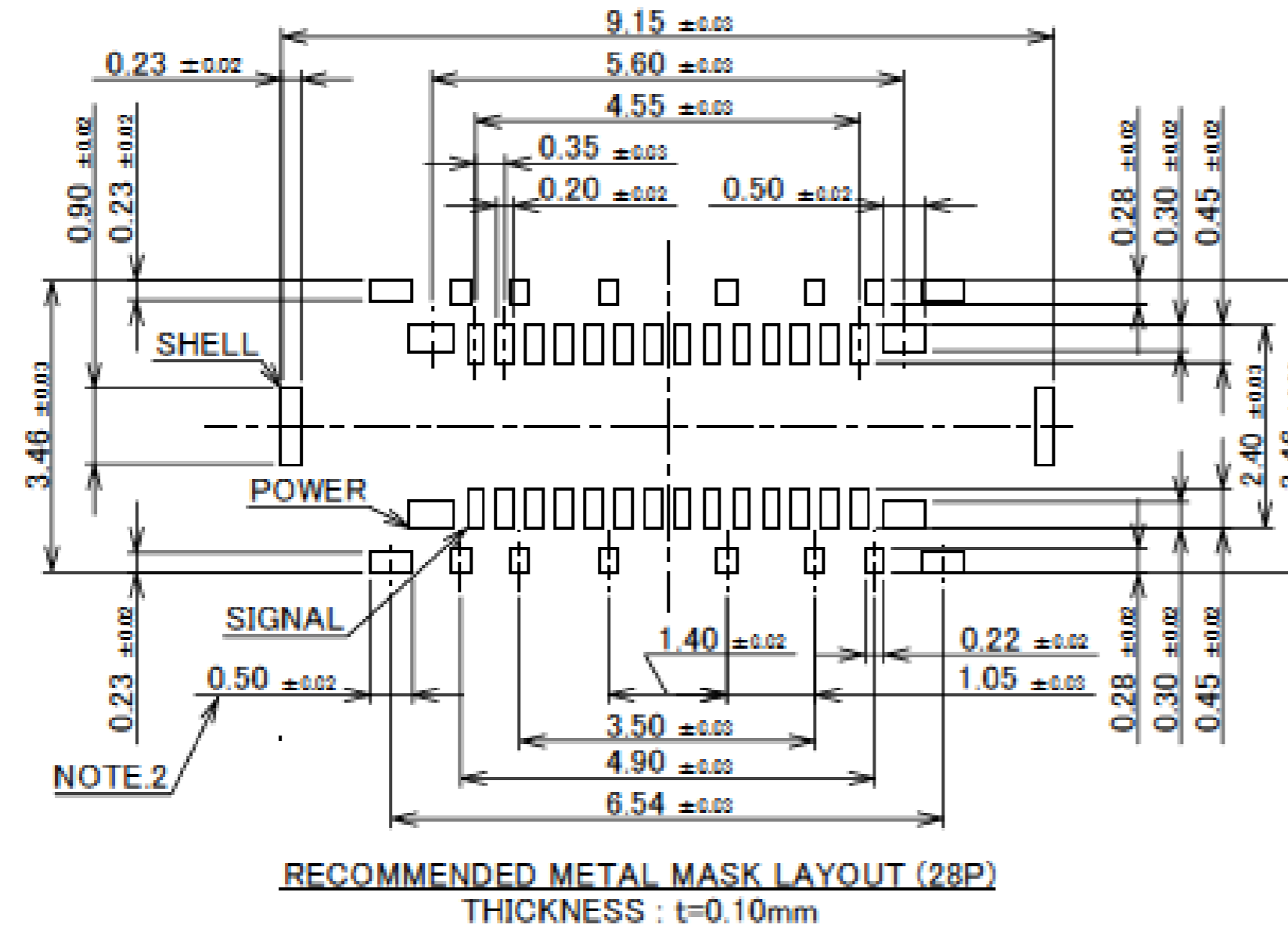
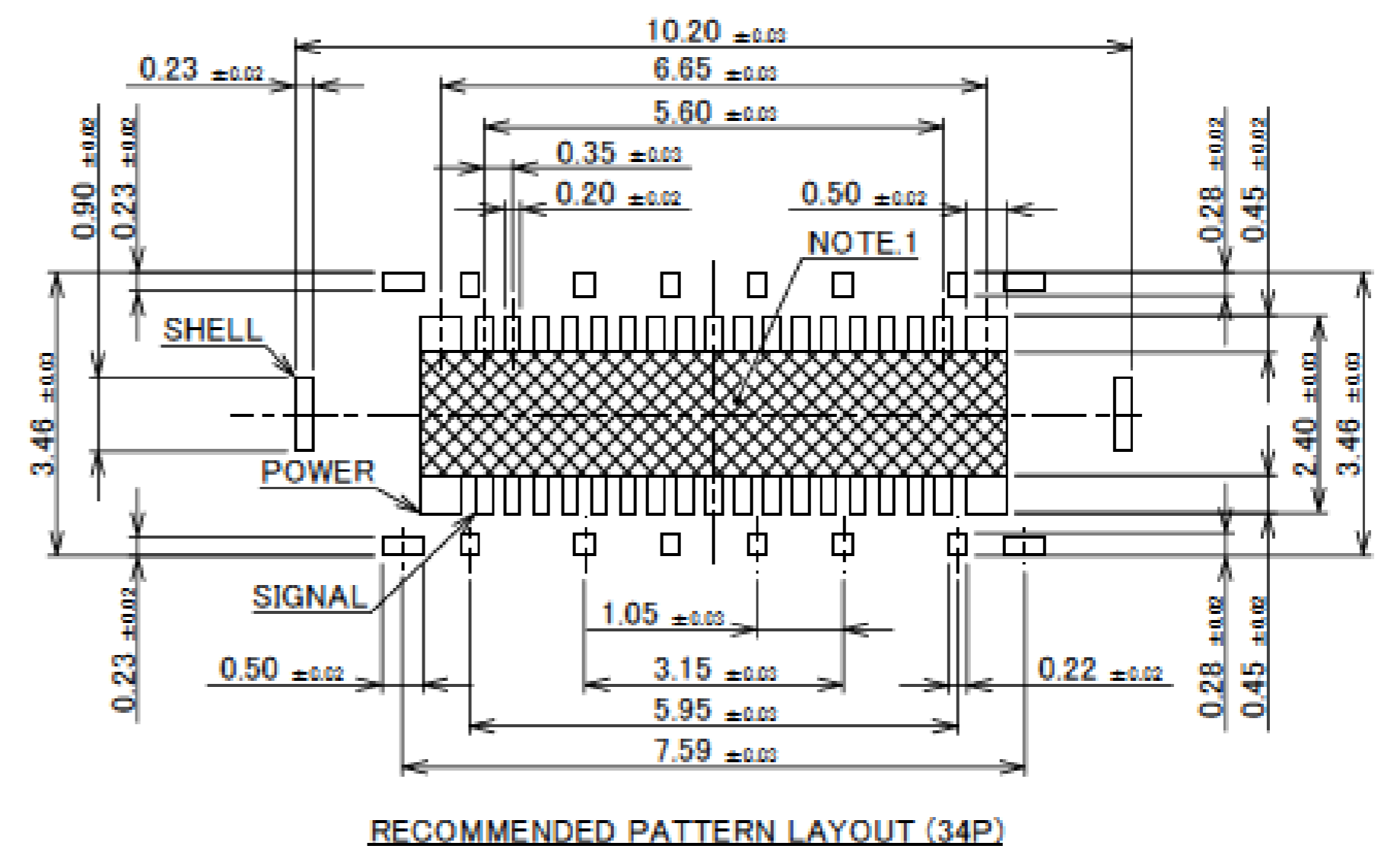
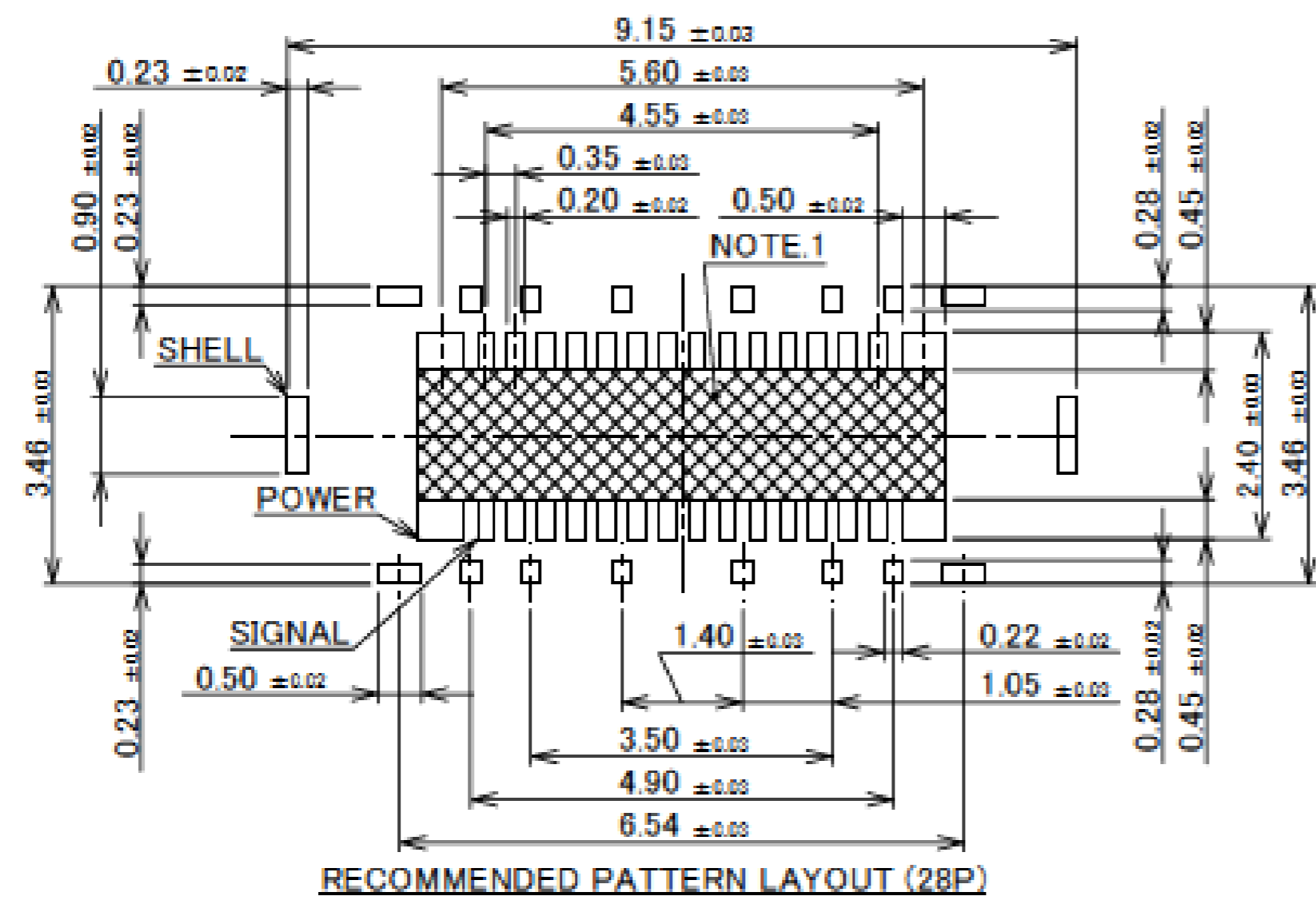
PART No.	SIGNAL POS.	POWER POS.
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20698-034E-01	34P	4P
20698-042E-01#	42P	4P
20698-056E-01#	56P	4P
20698-062E-01#	62P	4P

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



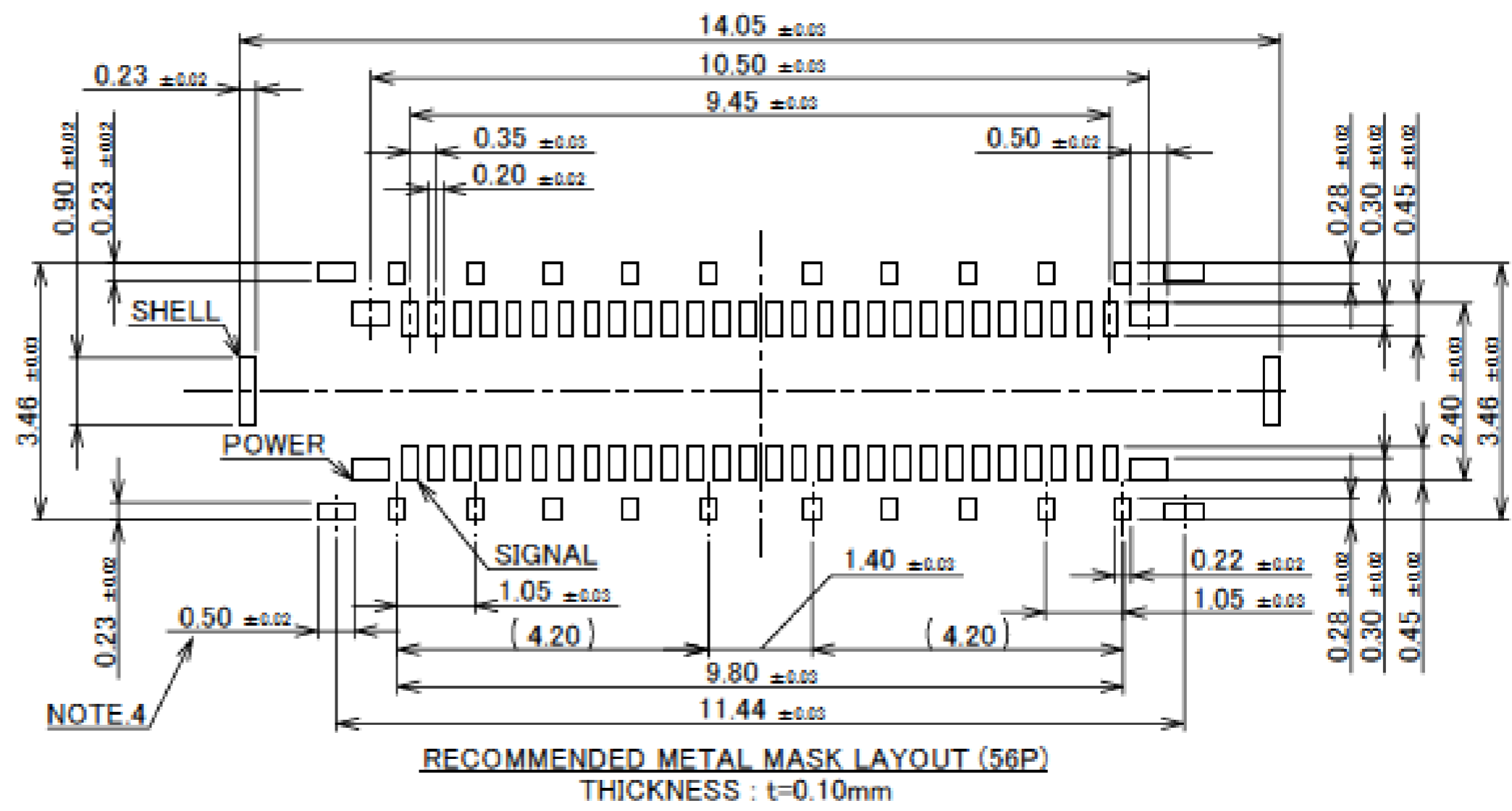
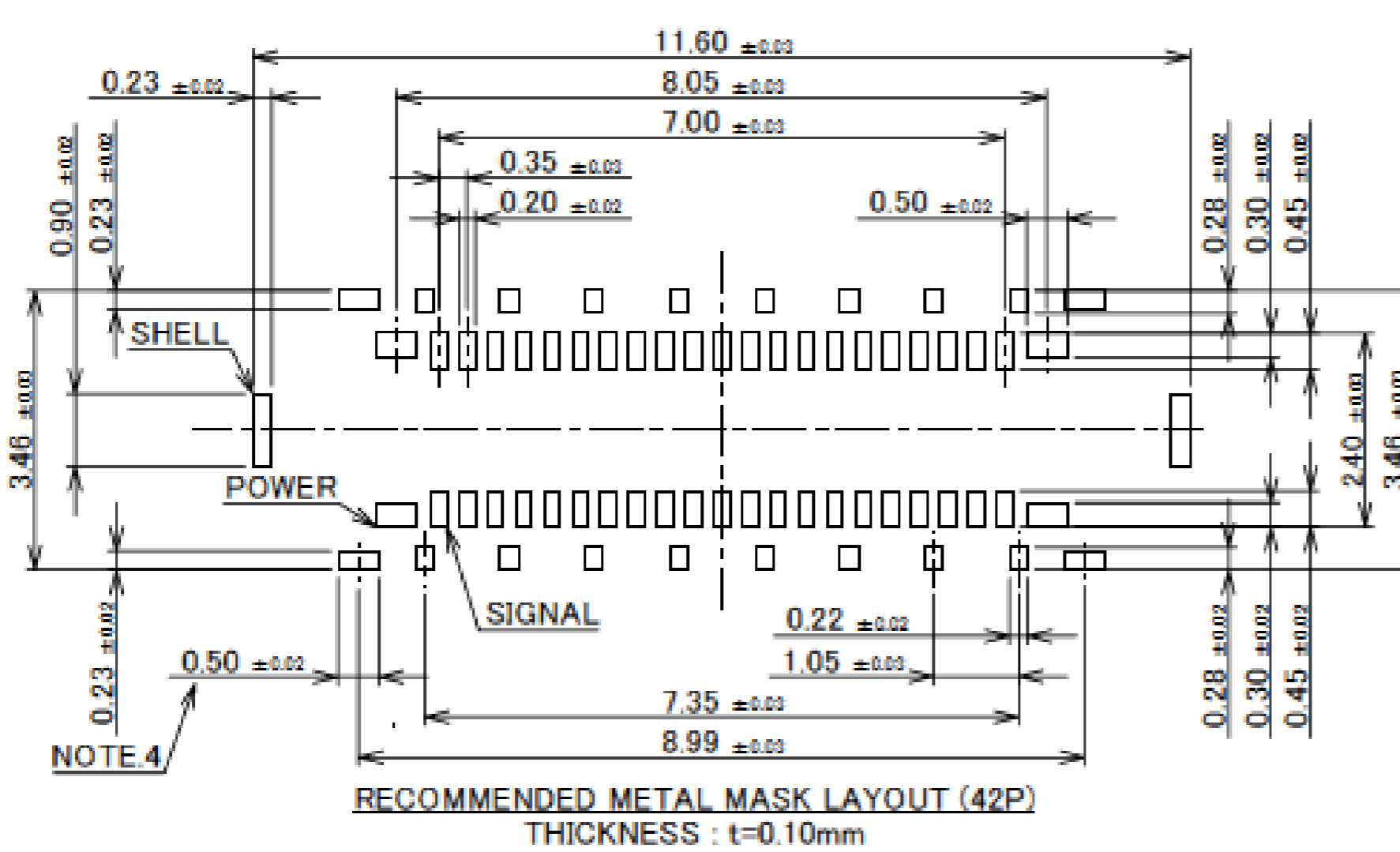
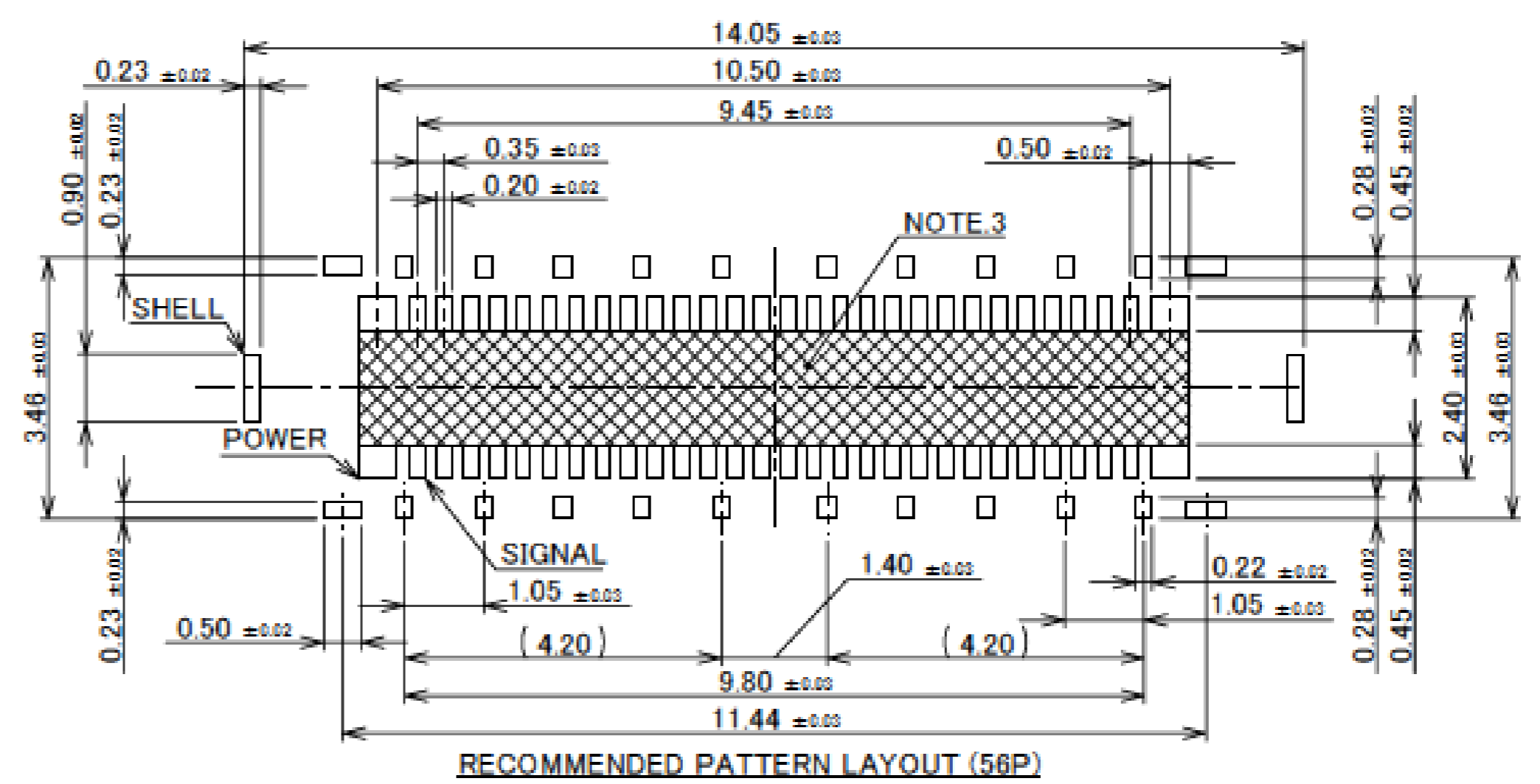
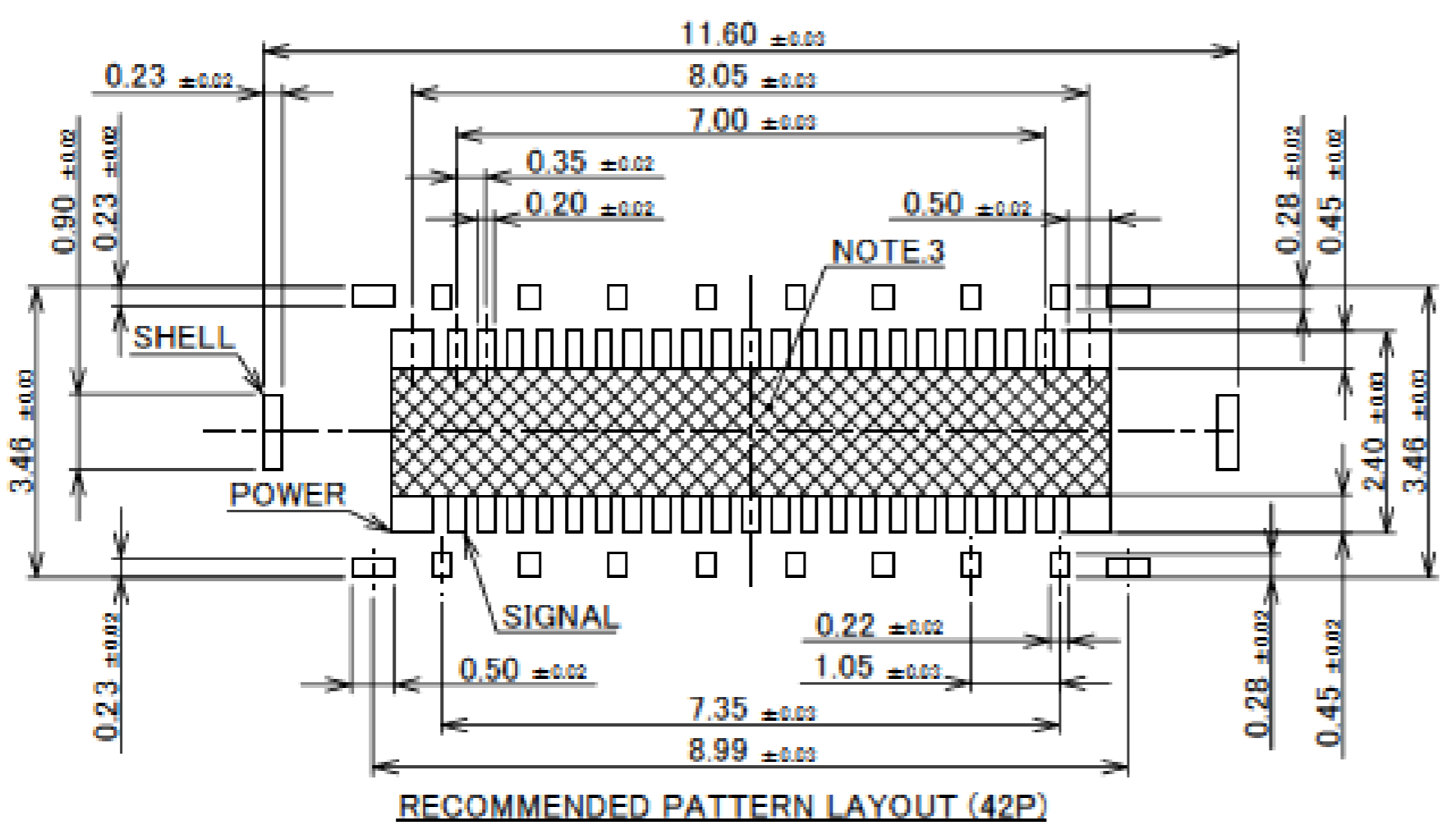
Rev.10

# Receptacle Assembly



- 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.10

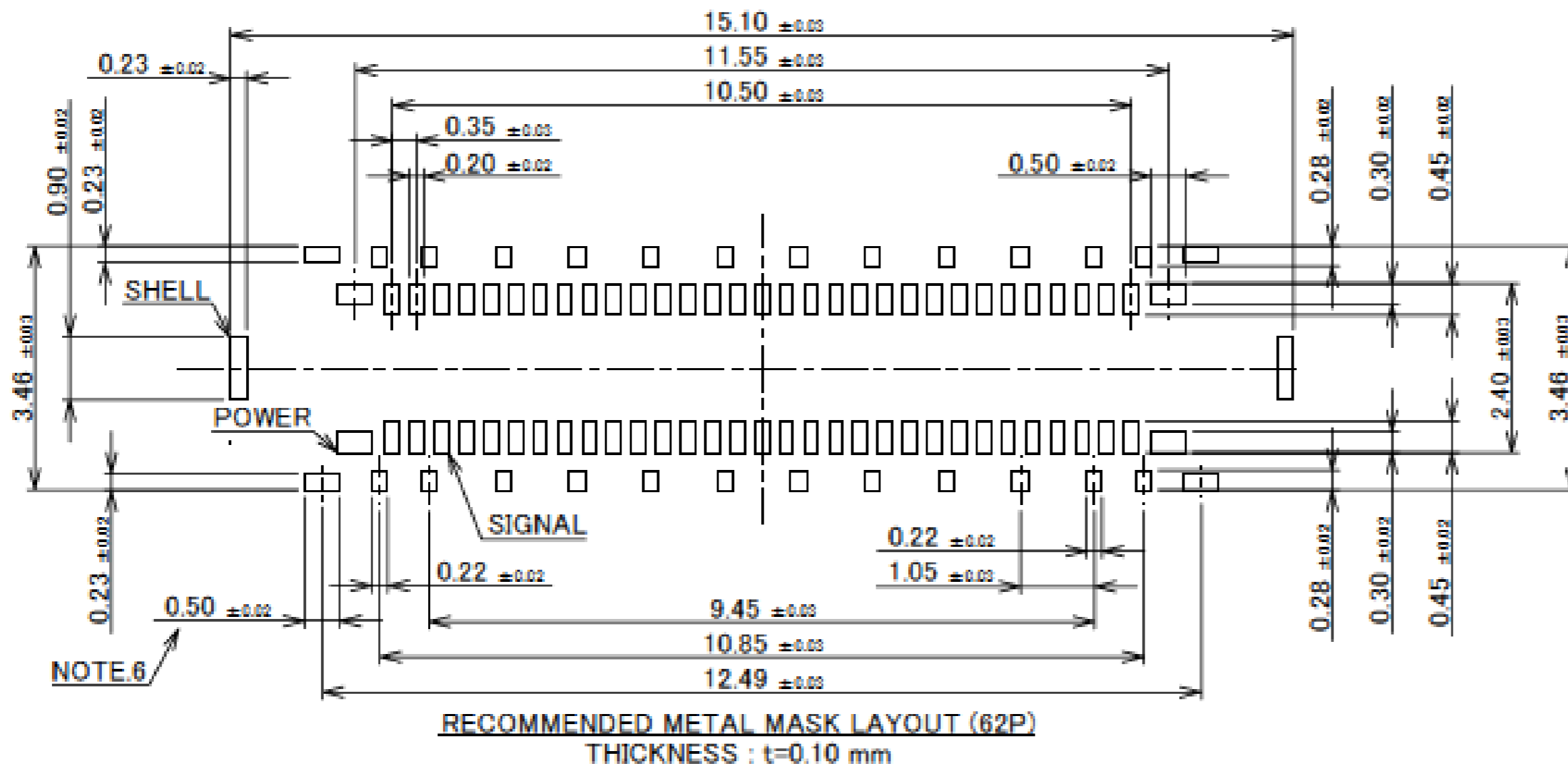
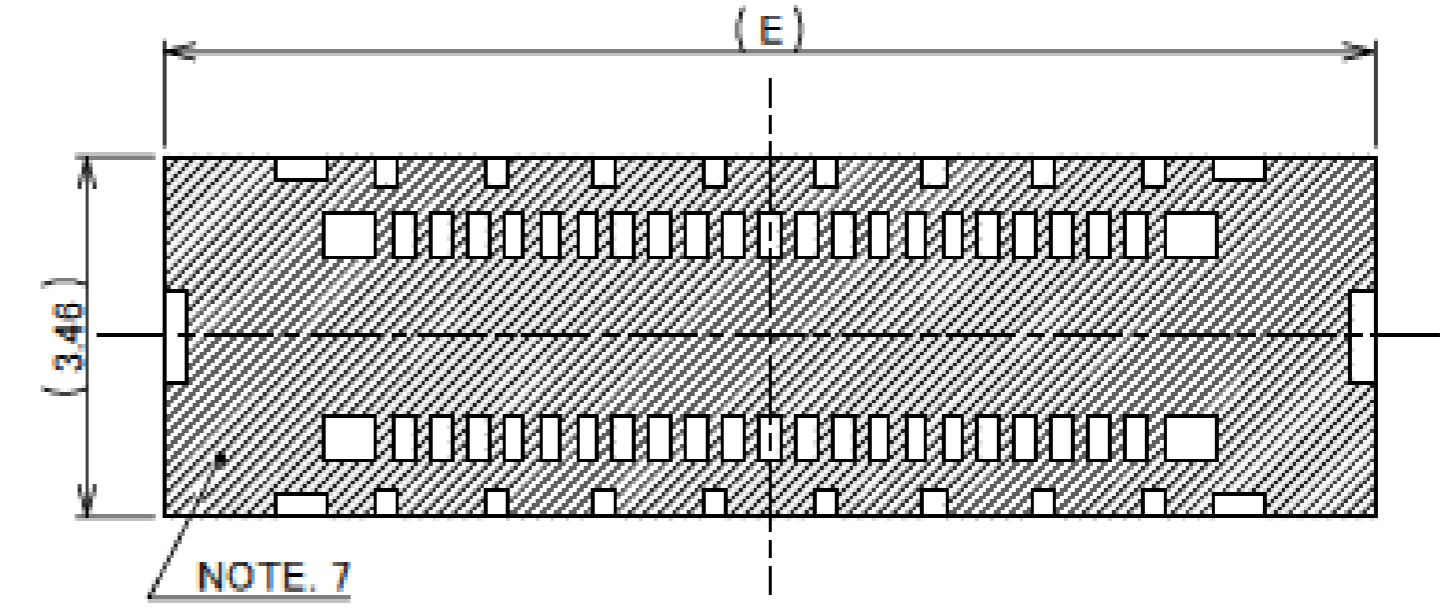
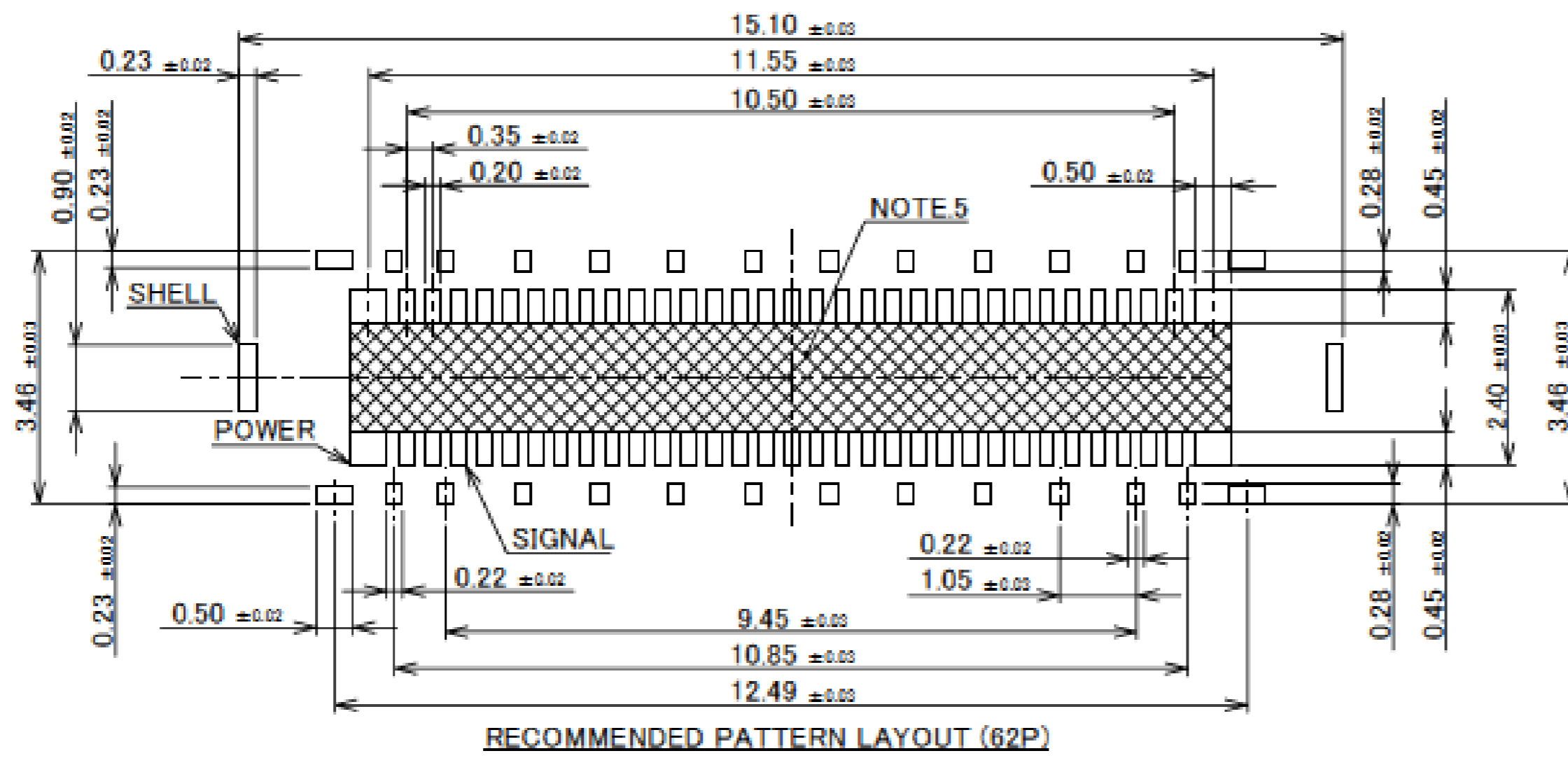


- NOTES**  
 3. SOLDER RESIST MUST BE APPLIED TO THIS AREA.  
 4. WHEN THE THICKNESS OF THE METAL MASK IS 0.12 mm, PLEASE SET IT TO 0.41 mm.

Rev.10

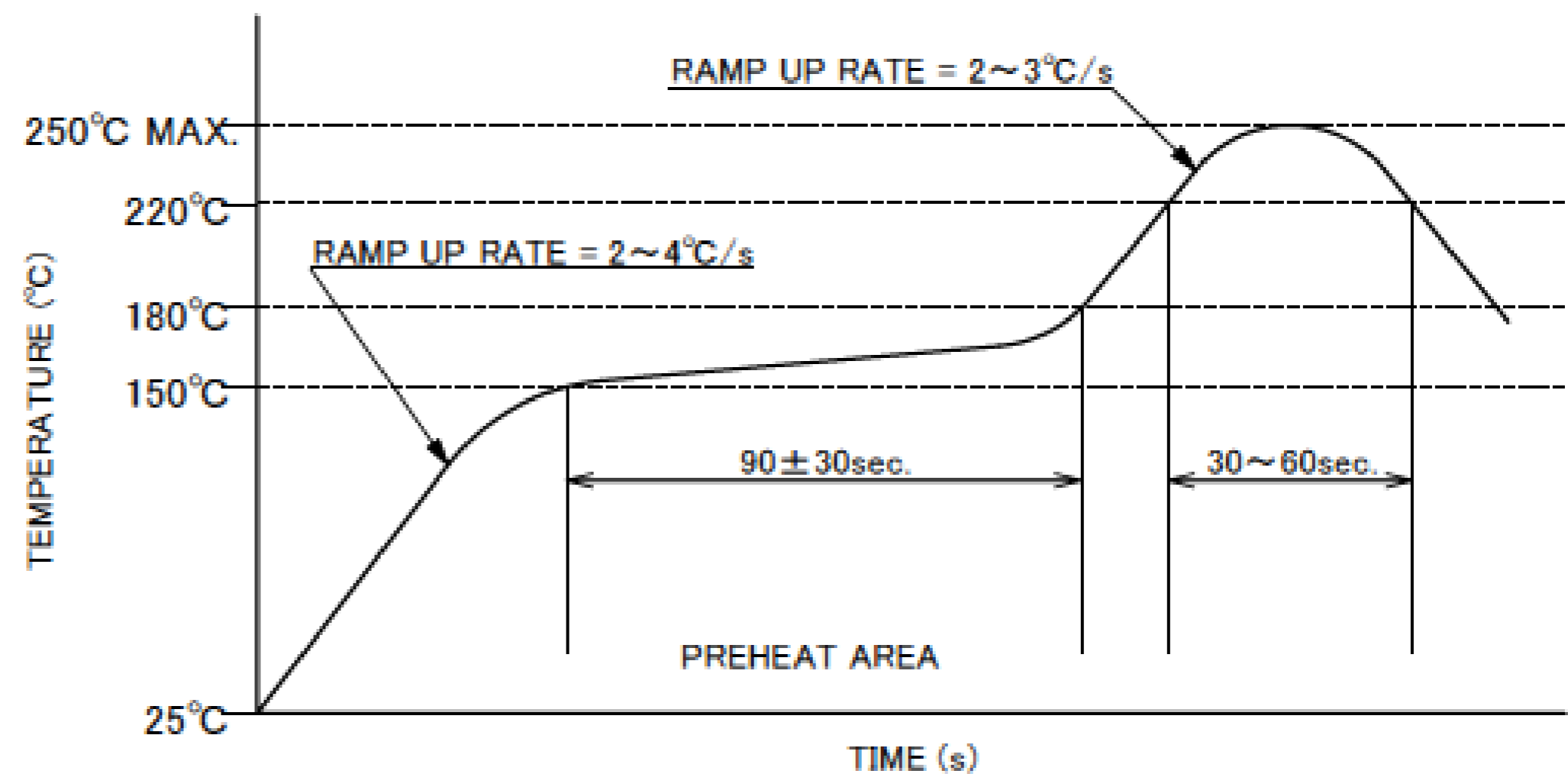
# Receptacle Assembly

PART No.	SIGNAL POS.	POWER POS.	E
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
- SOLDER RESIST MUST BE APPLIED TO THIS AREA.
  - WHEN THE THICKNESS OF THE METAL MASK IS 0.12 mm, PLEASE SET IT TO 0.41 mm.
  - DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.

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



# 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°C~+85°C)
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)	$1.0N \times n + 4.0N$ MAX.
UNMATING FORCE (AFTER TEST)	$0.1N \times n + 0.4N$ 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***

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Board to Board



High-Density



Autolocking FPC/FFC



High-Density



FPC/FFC



Micro-Coaxial / Discrete Cable



High-Speed



RF



High-Frequency



Optical Module



High-Speed



Effector



Power



High-Power



I/O (Input/Output)



Quick charge



Custom Connectors Available

Inquiry



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