

NOVASTACK® 35-HDP 12

Fully-shielded, 1.2 mm mated height, 0.35 mm pitch, power contacts equipped, up to 40 Gbps per lane supporting board-to-board connector

Product Specifications:

Board Pitch		0.35 mm
Contact Mating Length		Signal contact : 0.19 mm Power contact : 0.27 mm
Mated Size	Height	1.2 +/- 0.05 mm
	Width	4.86 + (0.35 x pin count / 2) mm
	Depth	3.7 mm
Current Rating	Signal	0.3 A/pin
	Power	4.5 A/pin x 4
Pin Count	Range	Signal: 10 to 80, Power: + 4
	Available (signal +power)	22 + 4, 56 + 4, 62 + 4

Applicable Standards (Reference Only):

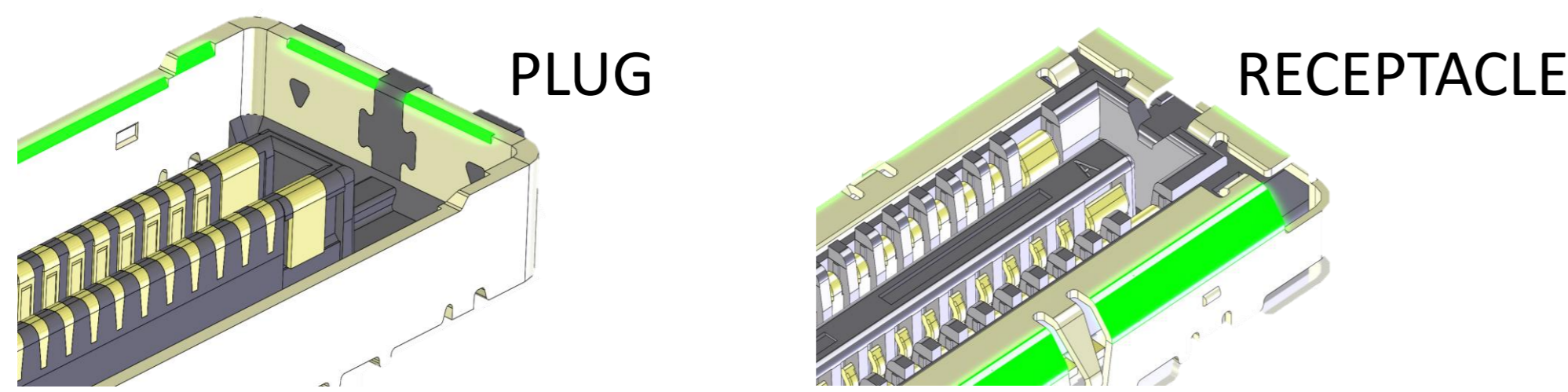
USB4 (20 Gbps/lane), USB 3.1 Gen 2 (10 Gbps), eDP HBR 3 (8.1 Gbps), eDP HBR 2 (5.4 Gbps), eDP (2.7 Gbps), HDMI 2.0 (6 Gbps), V-By-One HS 1.4 (4 Gbps), MiPi standards

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

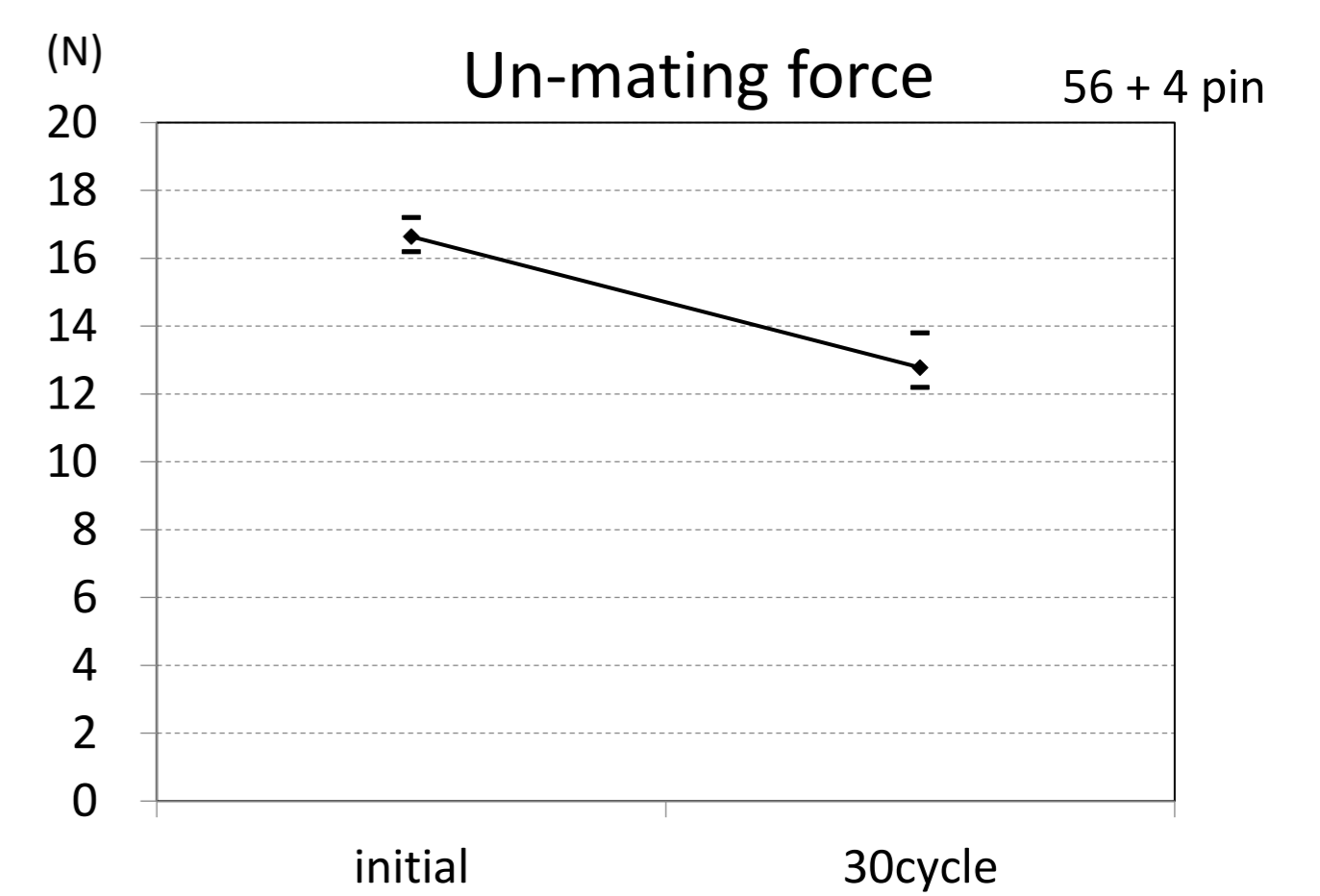


1.2 mm stack height design delivering excellent mating operability and connection reliability

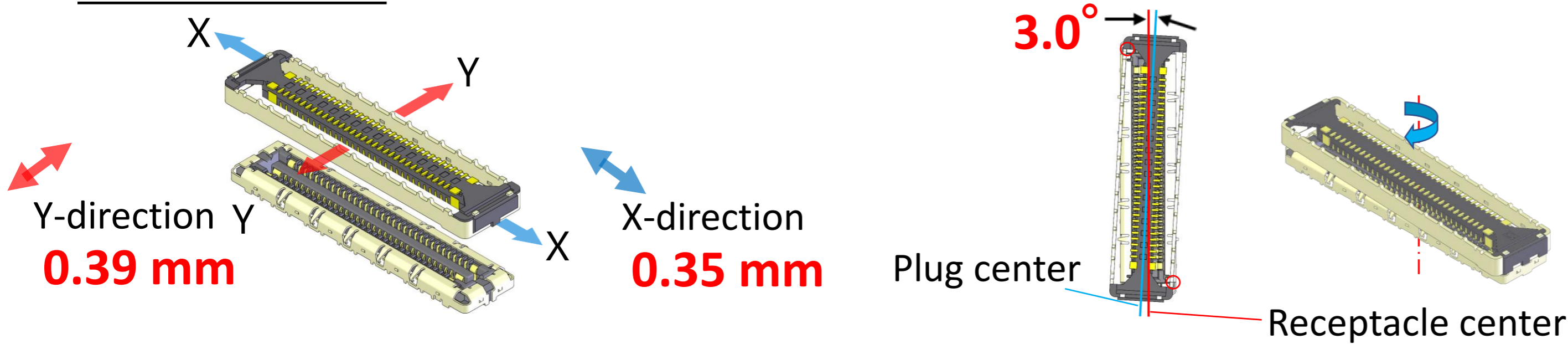
Mating guide



Un-mating force



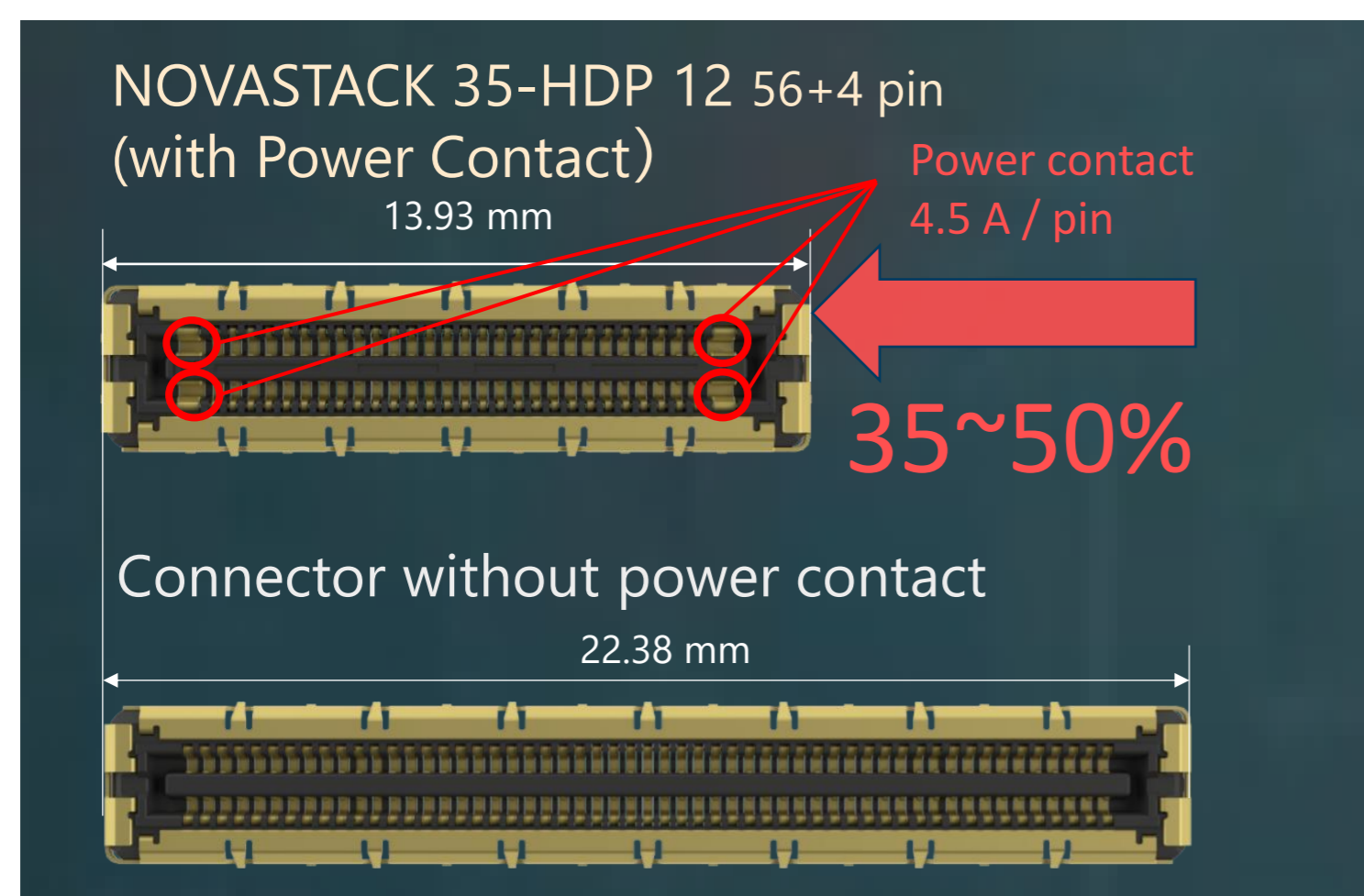
Guide amount



Compact connector design for high-density mounting, enabled by power contacts and ZenShield® shielding

By using power contacts, PCB space can be saved.*

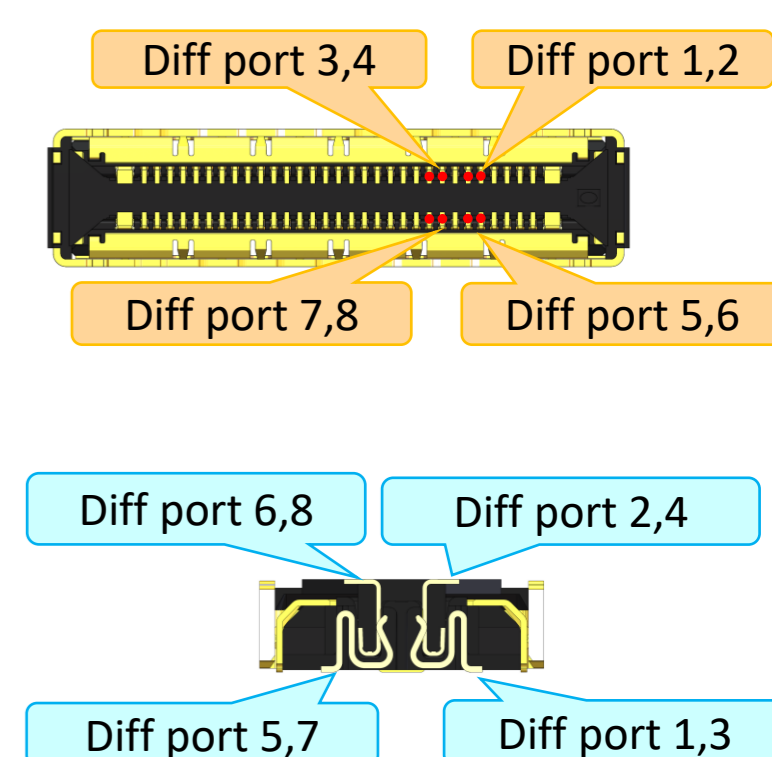
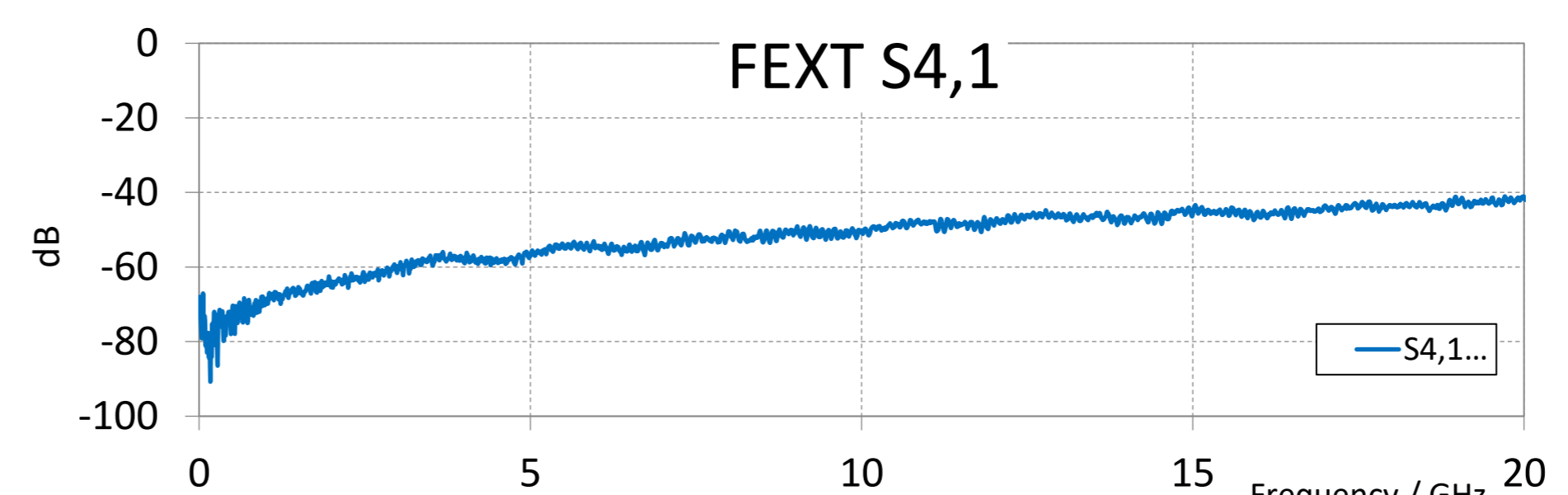
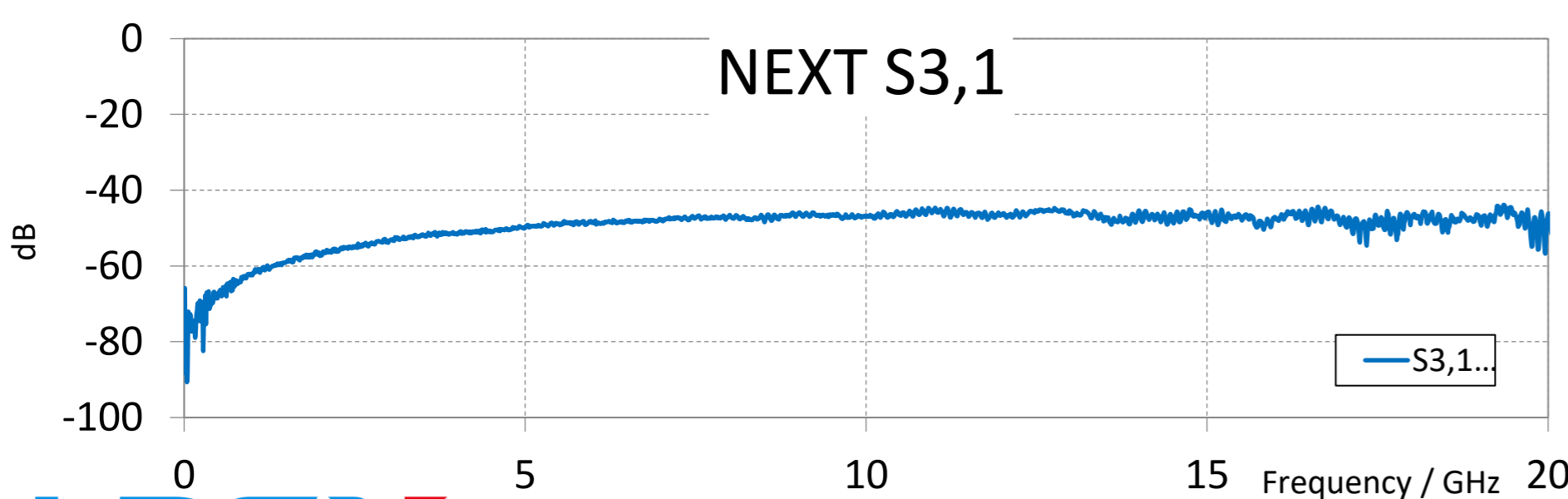
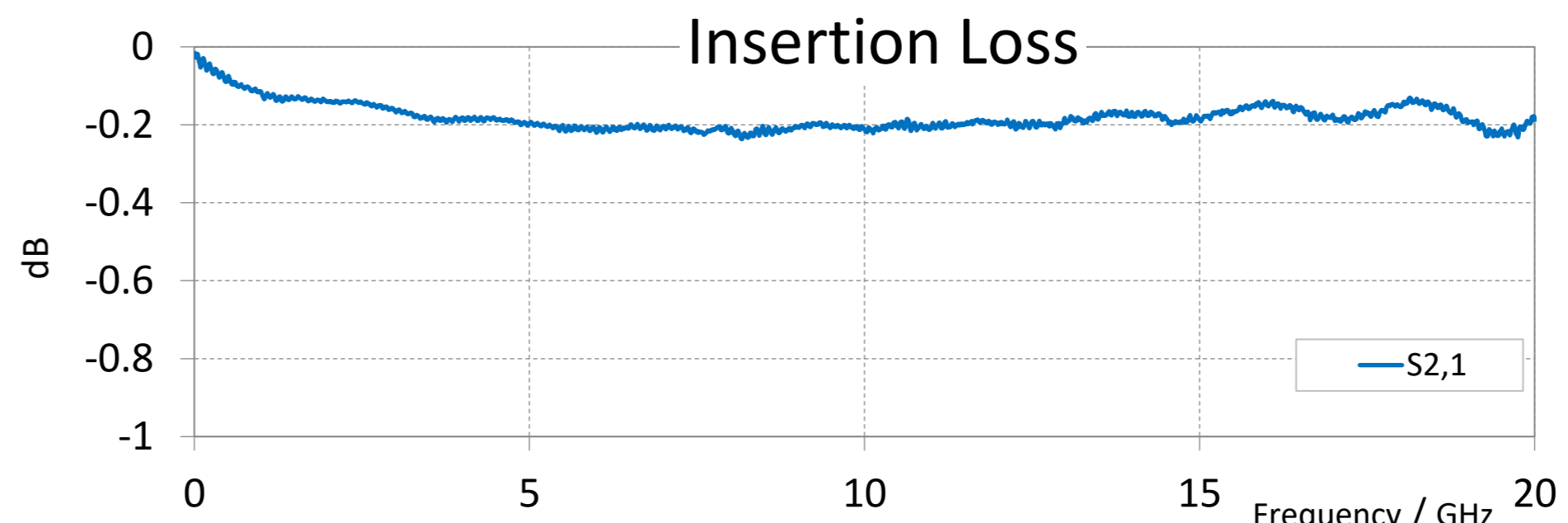
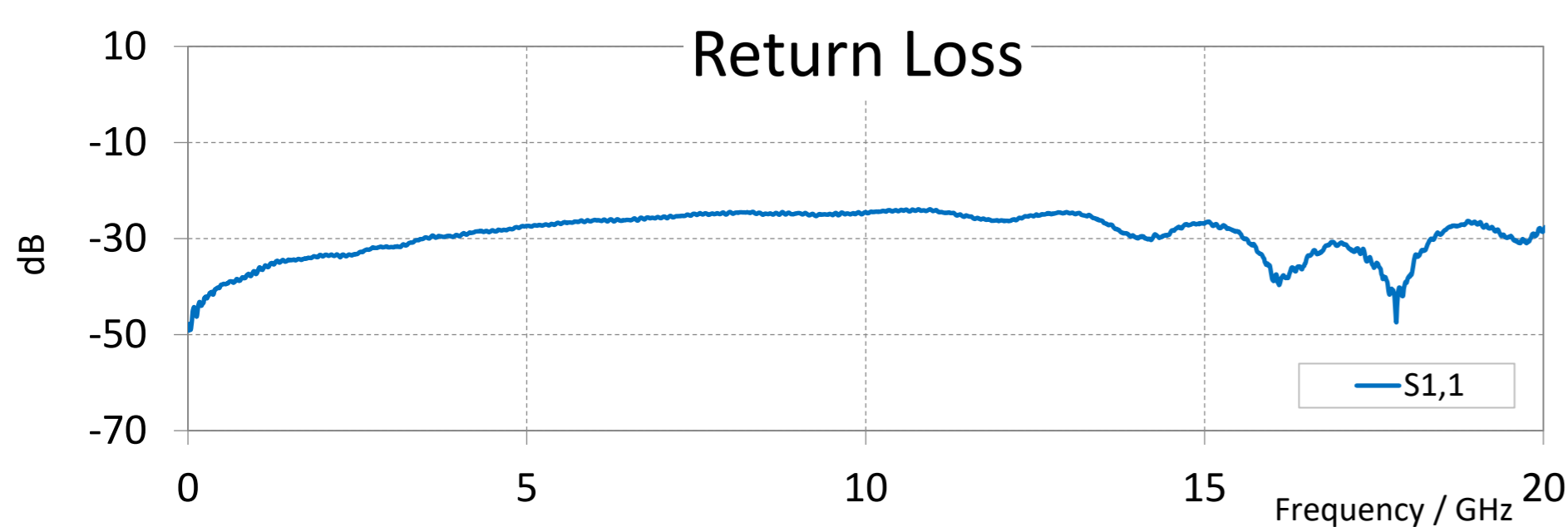
With ZenShield®, the connector can be placed near high-frequency equipment and antennas.



Comparison of connector sizes assuming 8A x 2 power transmission

*The downsizing ratio varies depending on the number of positions.

High-speed signal transmission performance supporting 40 Gbps per lane

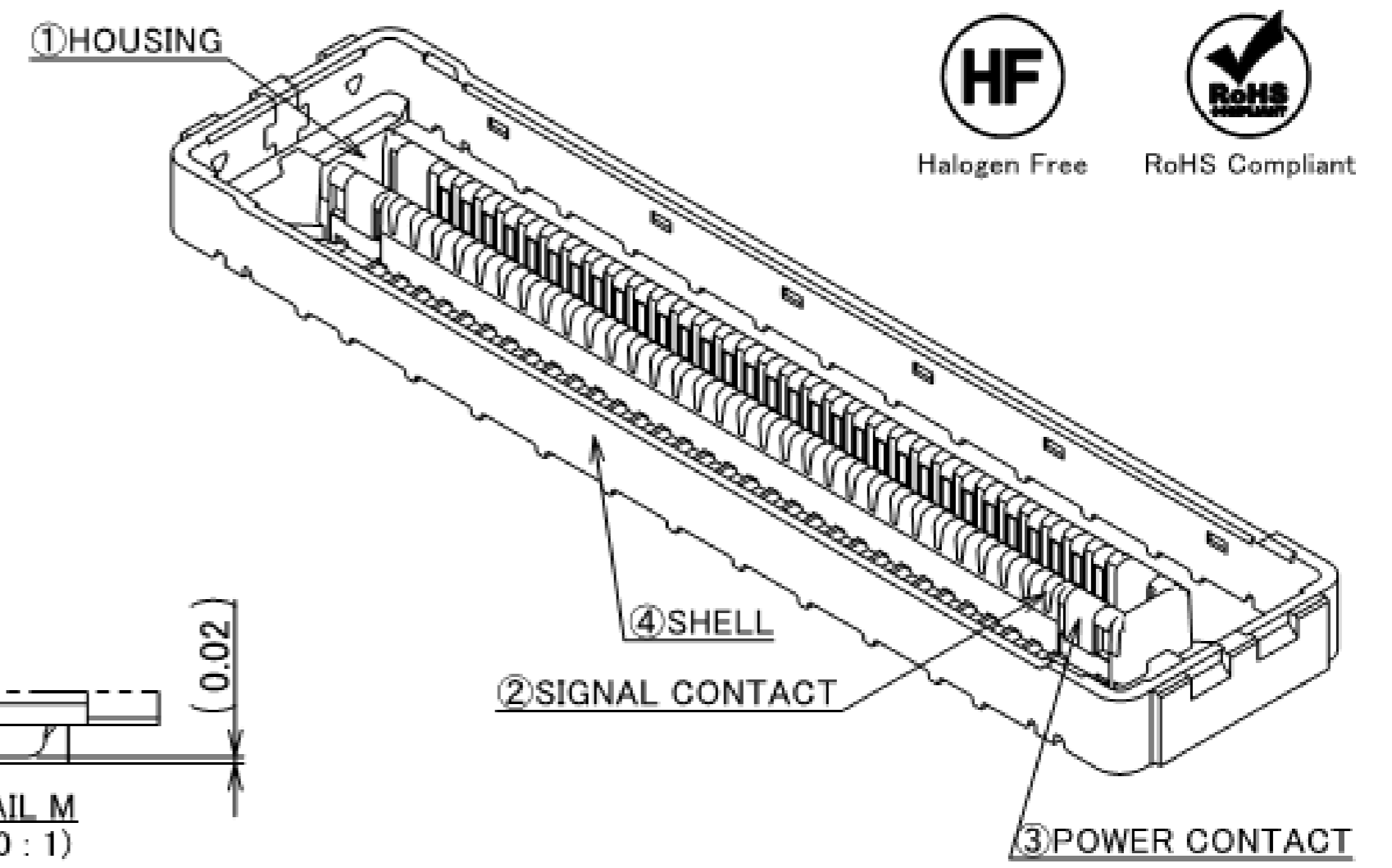
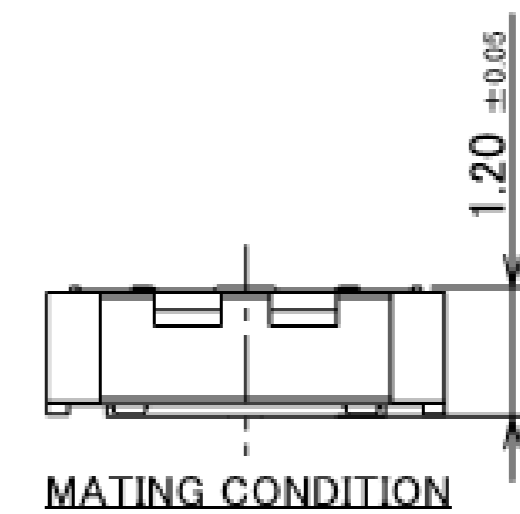
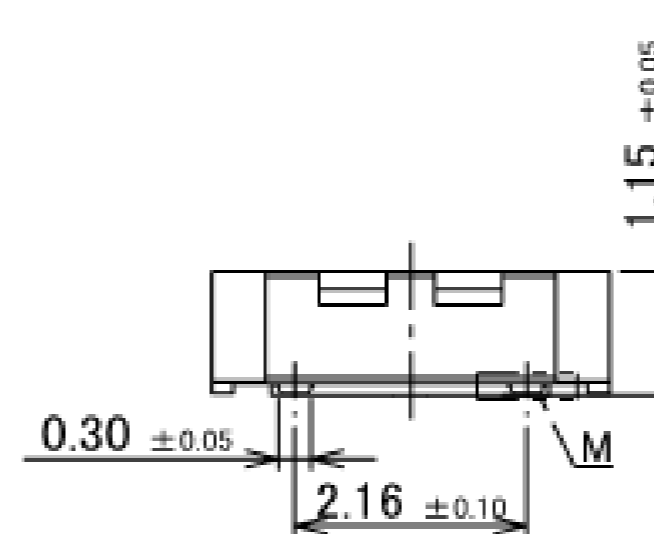
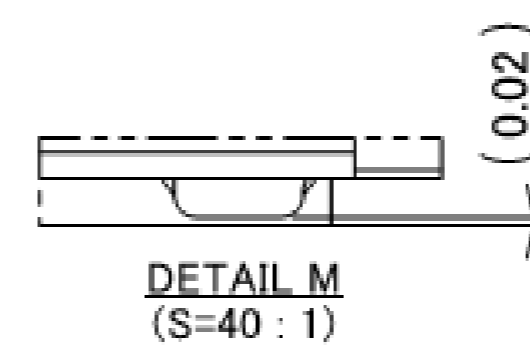
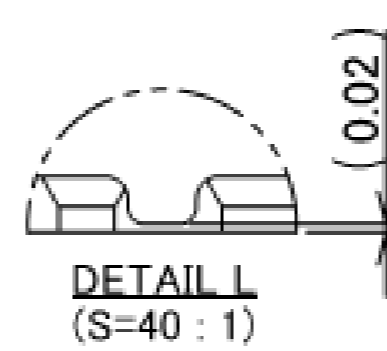
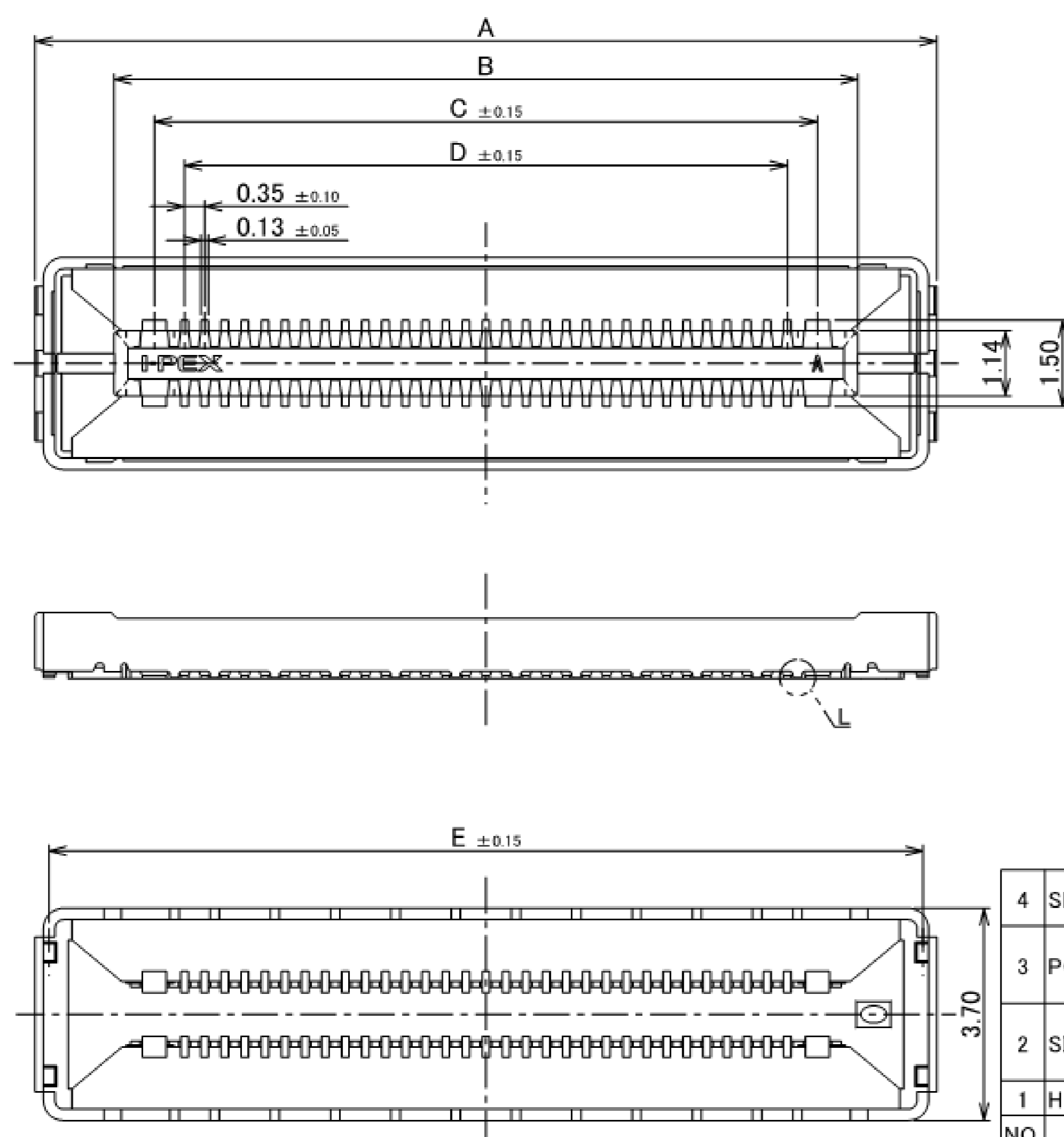


GSSGSSG
GSSGSSG

Component Parts Detail

Plug Assembly

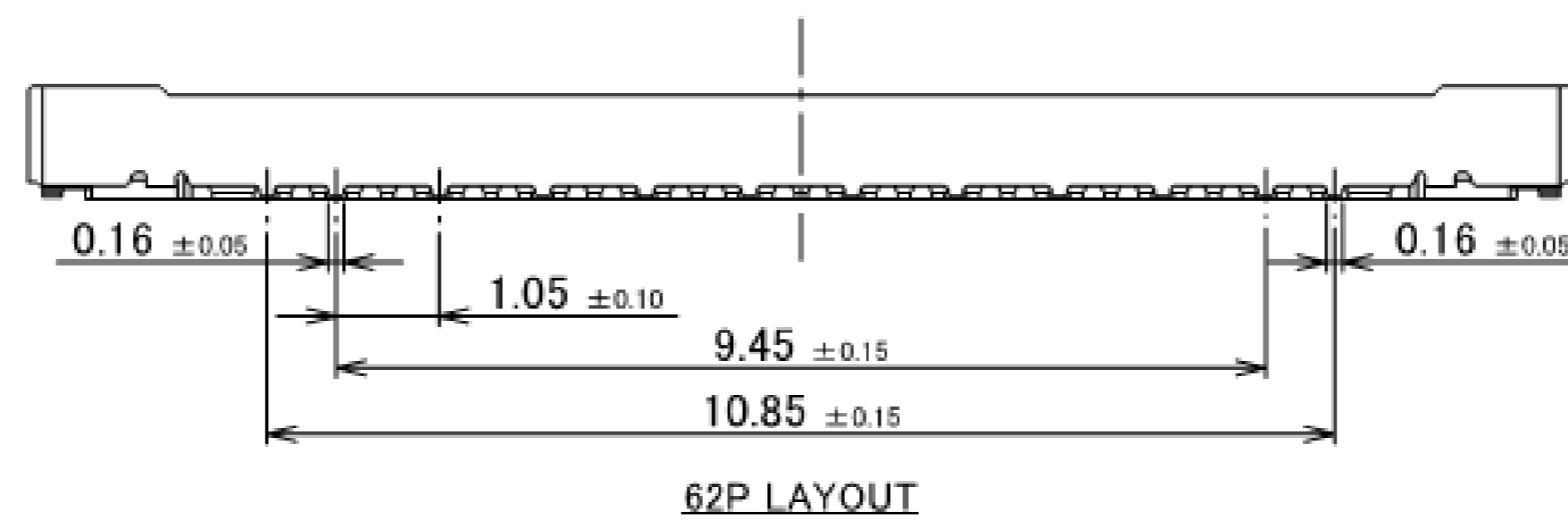
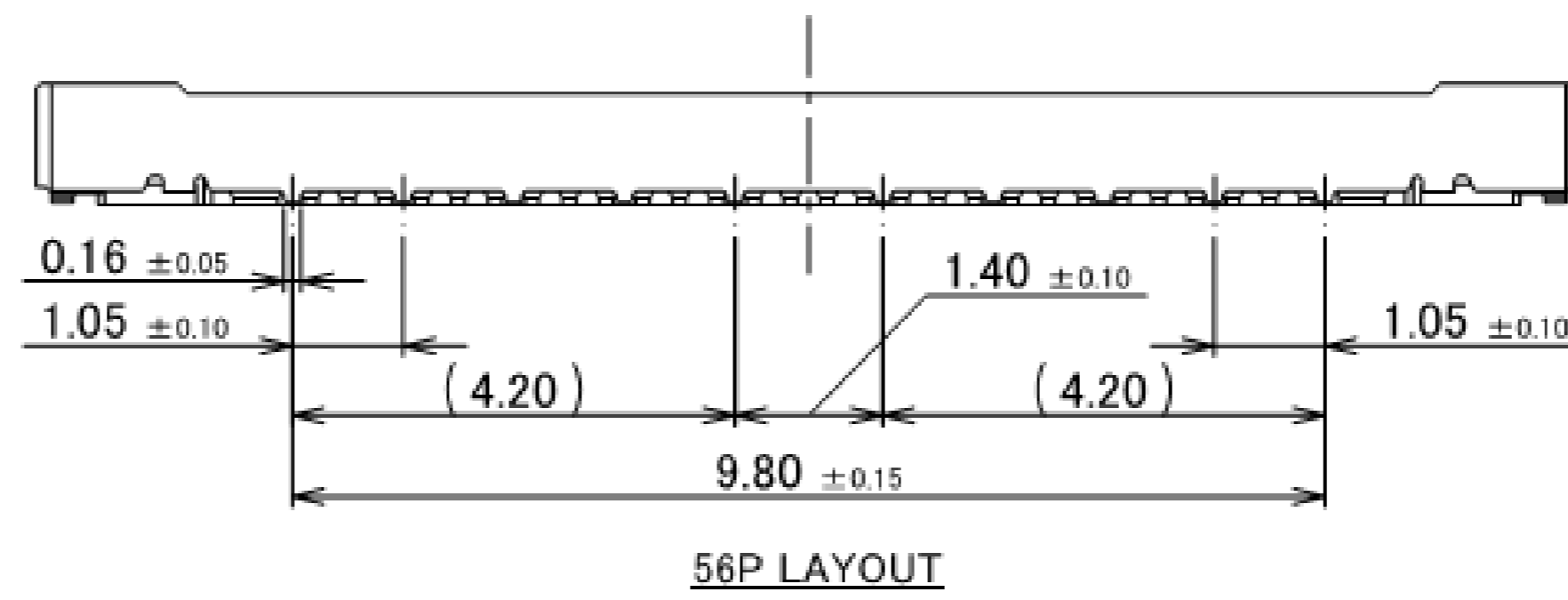
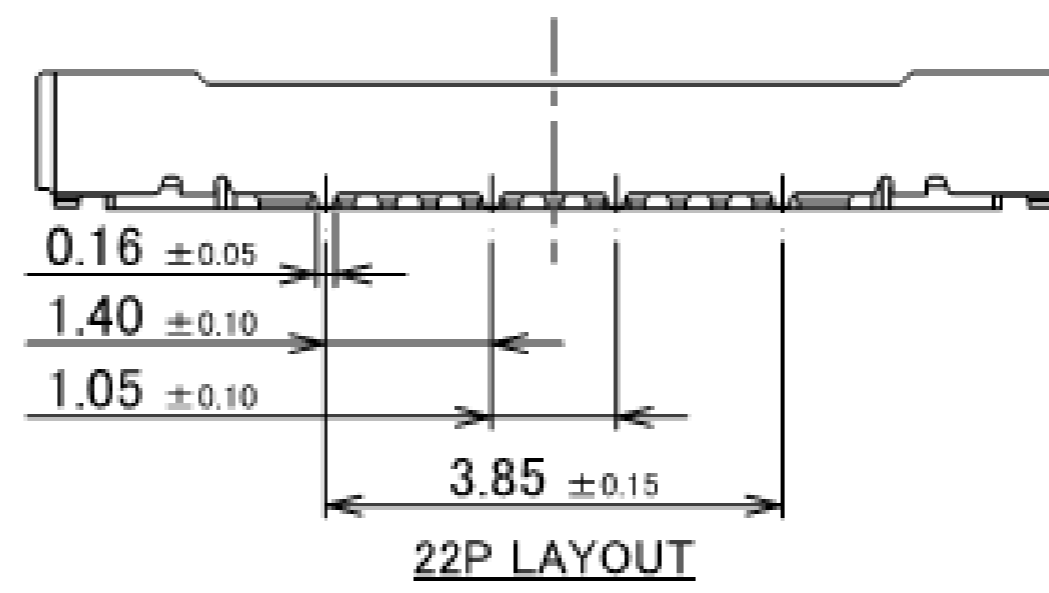
RECOMMENDED PART No.		21150-0**E-01					
PART No.	SIGNAL POS.	POWER POS.	A	B	C	D	E
21150-022E-01	22P	4P	8.71	5.96	4.55	3.50	8.22
21150-056E-01	56P	4P	14.66	11.91	10.50	9.45	14.17
21150-062E-01	62P	4P	15.71	12.96	11.55	10.50	15.22



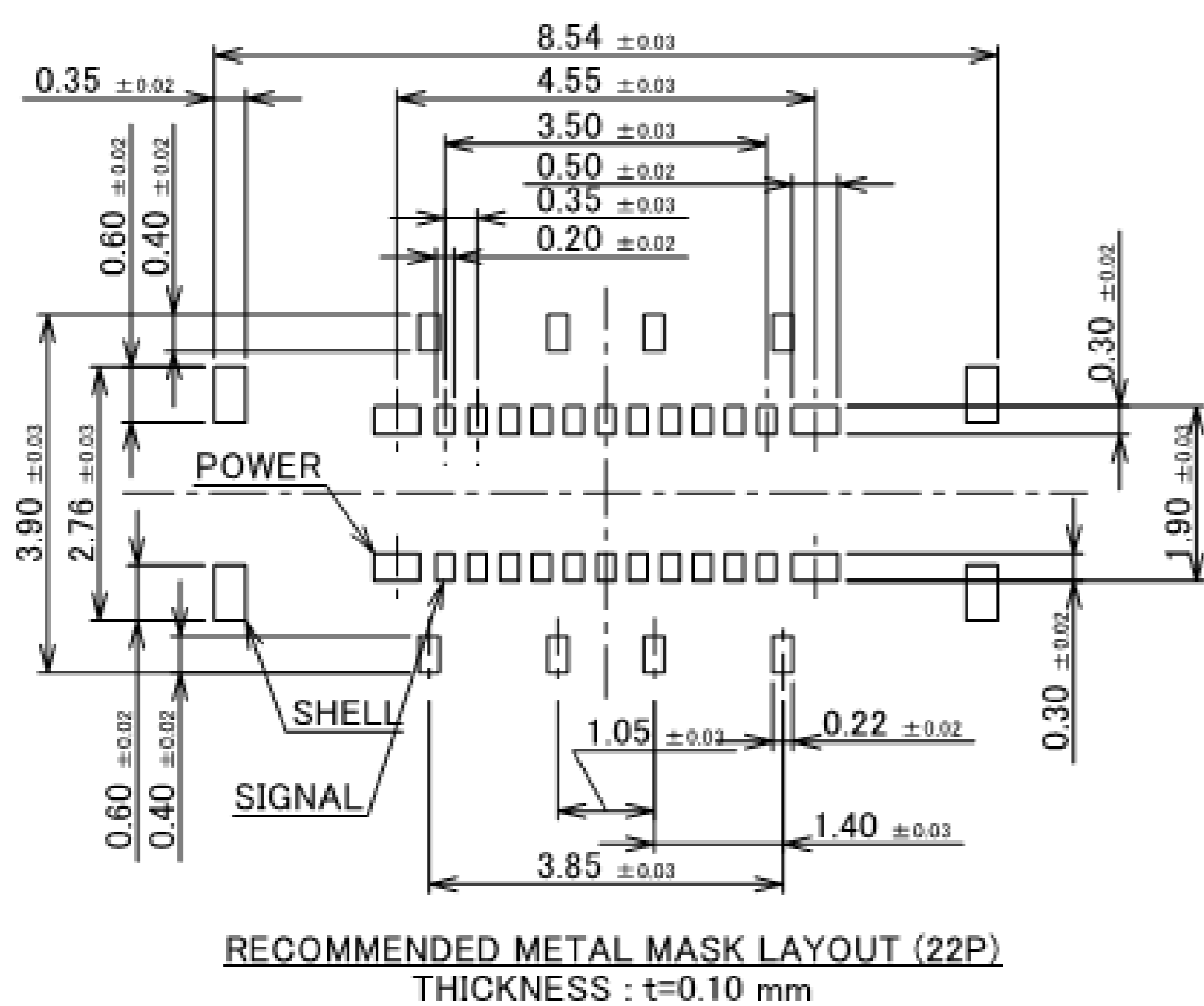
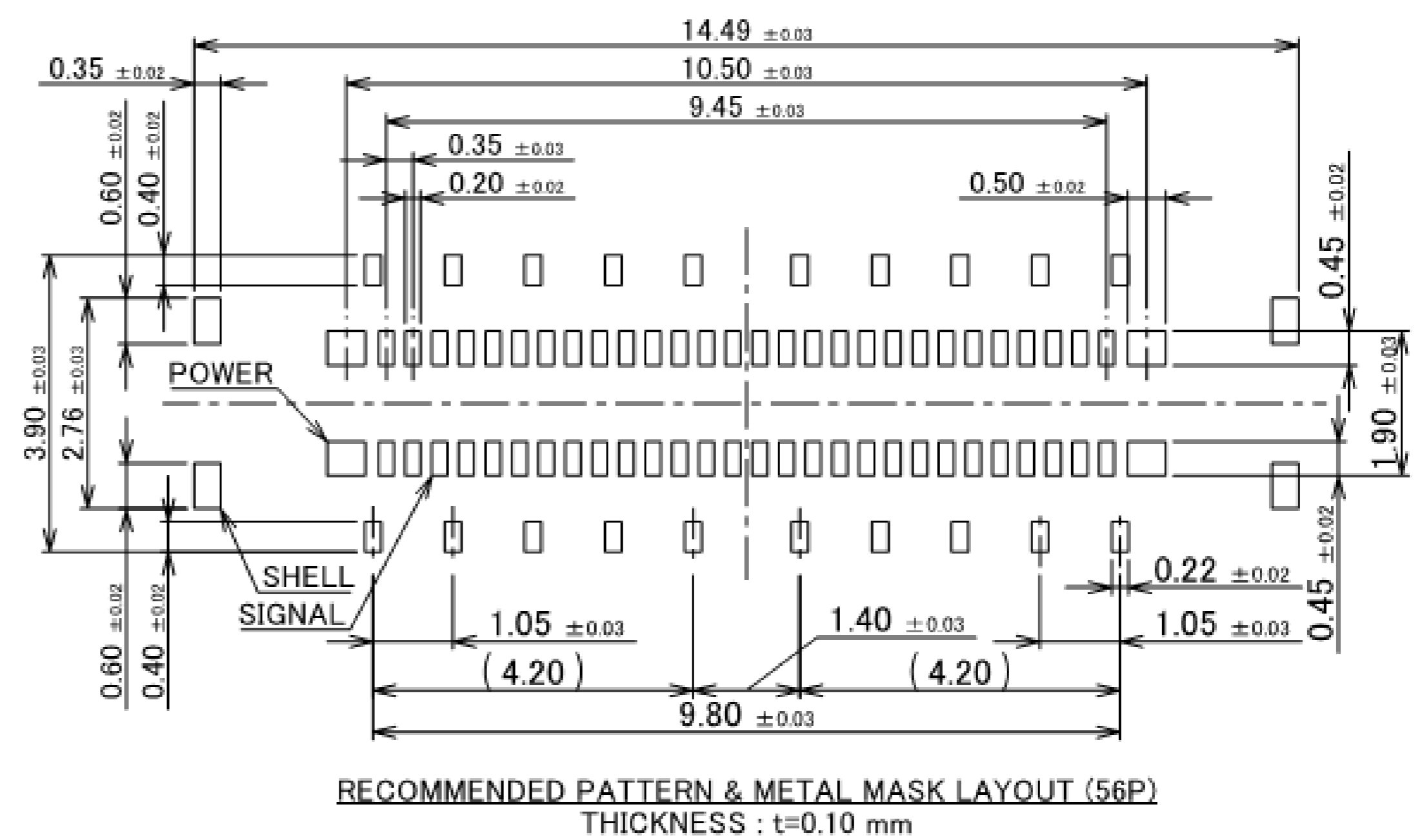
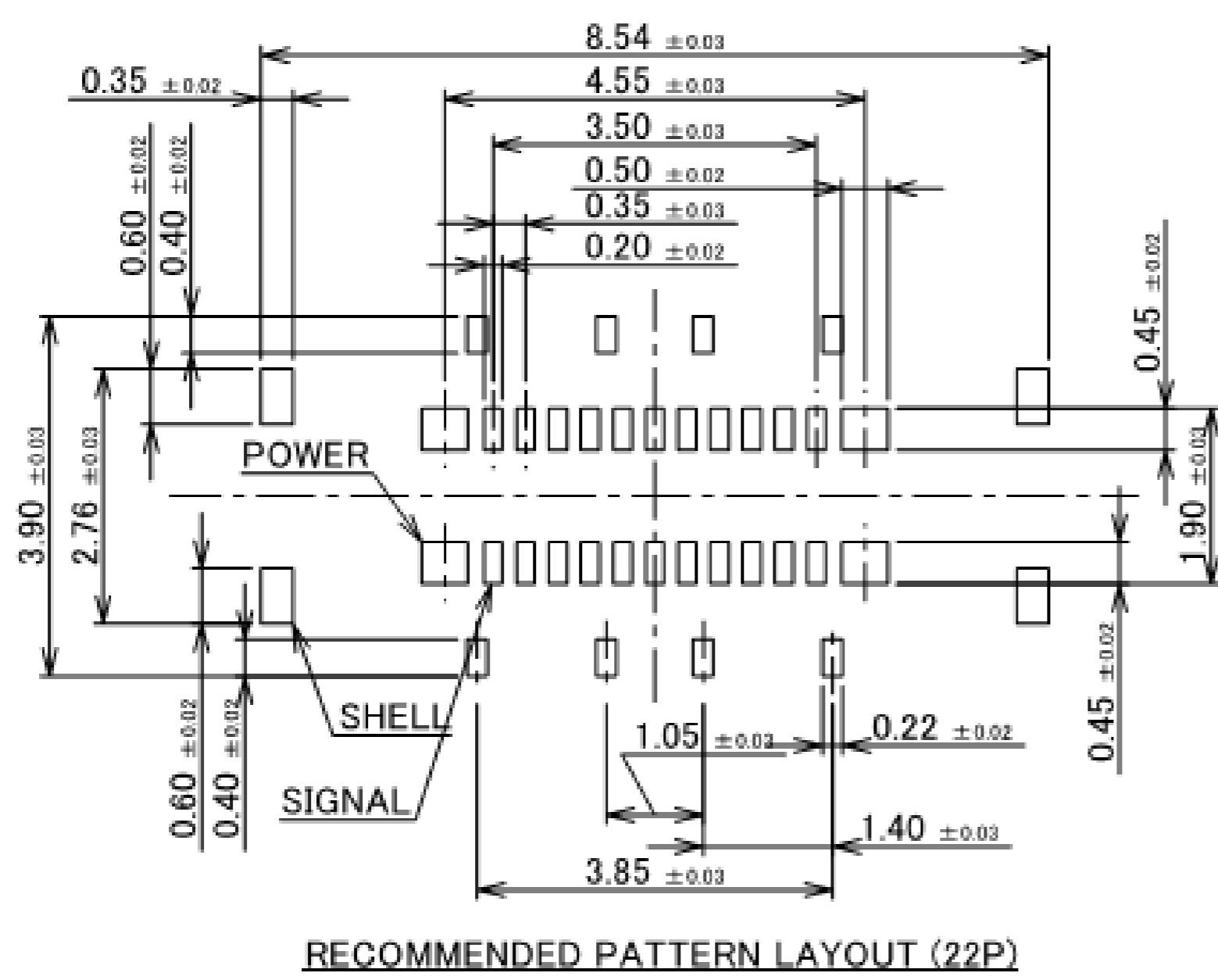
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	SHELL	CORSON ALLOY	ALL OVER Ni 1.27 μm MIN. Au 0.01 μm MIN. 0.025 μm MAX.
3	POWER CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μm MIN. CONTACT PART Au 0.05 μm MIN. SOLDERING PART Au 0.02 μm MIN.
2	SIGNAL CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μm MIN. CONTACT PART Au 0.05 μm MIN. SOLDERING PART Au 0.02 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK (PFAS FREE)

Plug Assembly

PART No.	SIGNAL POS.	POWER POS.
21150-022E-01	22P	4P
21150-056E-01	56P	4P
21150-062E-01	62P	4P



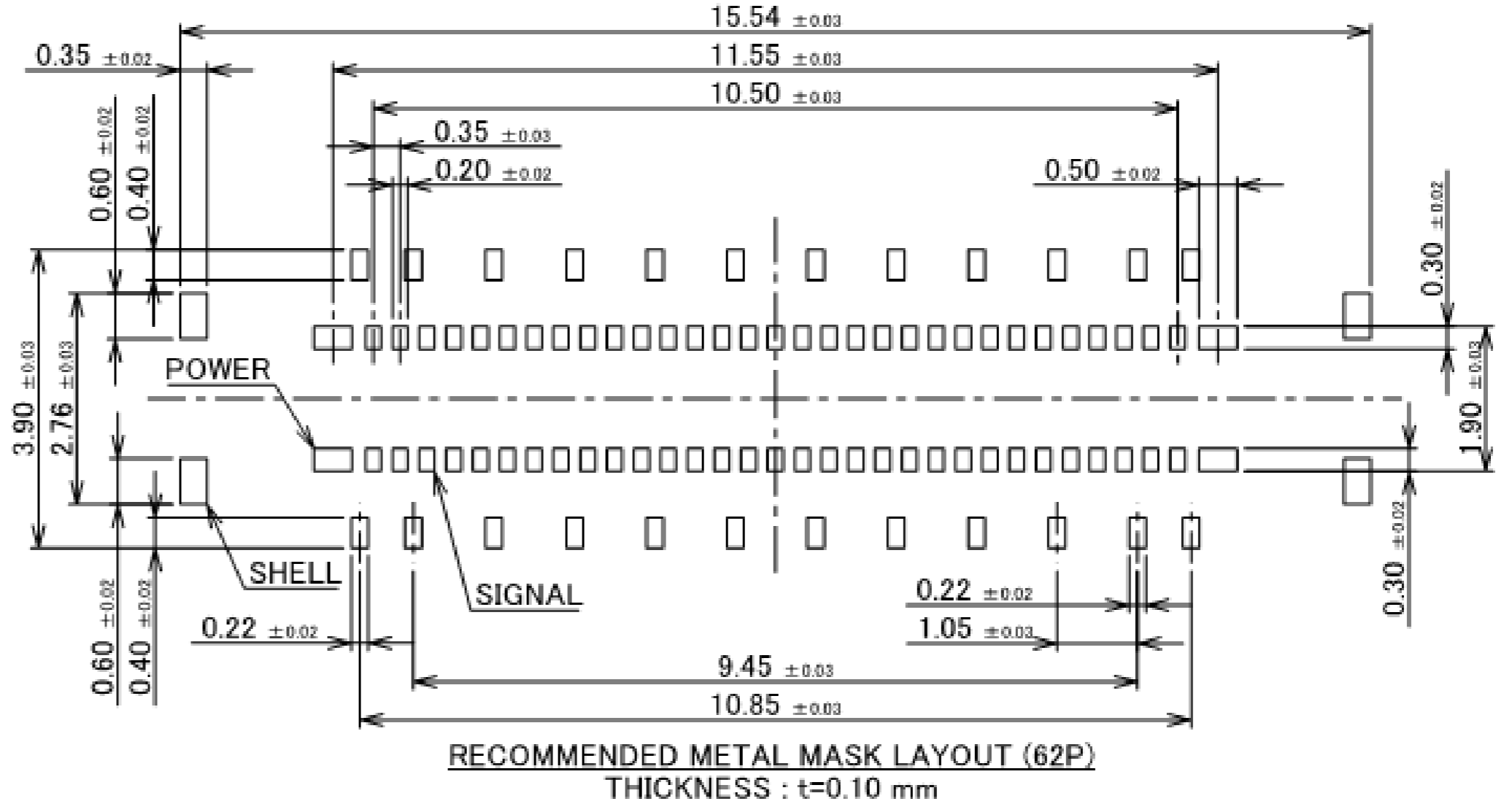
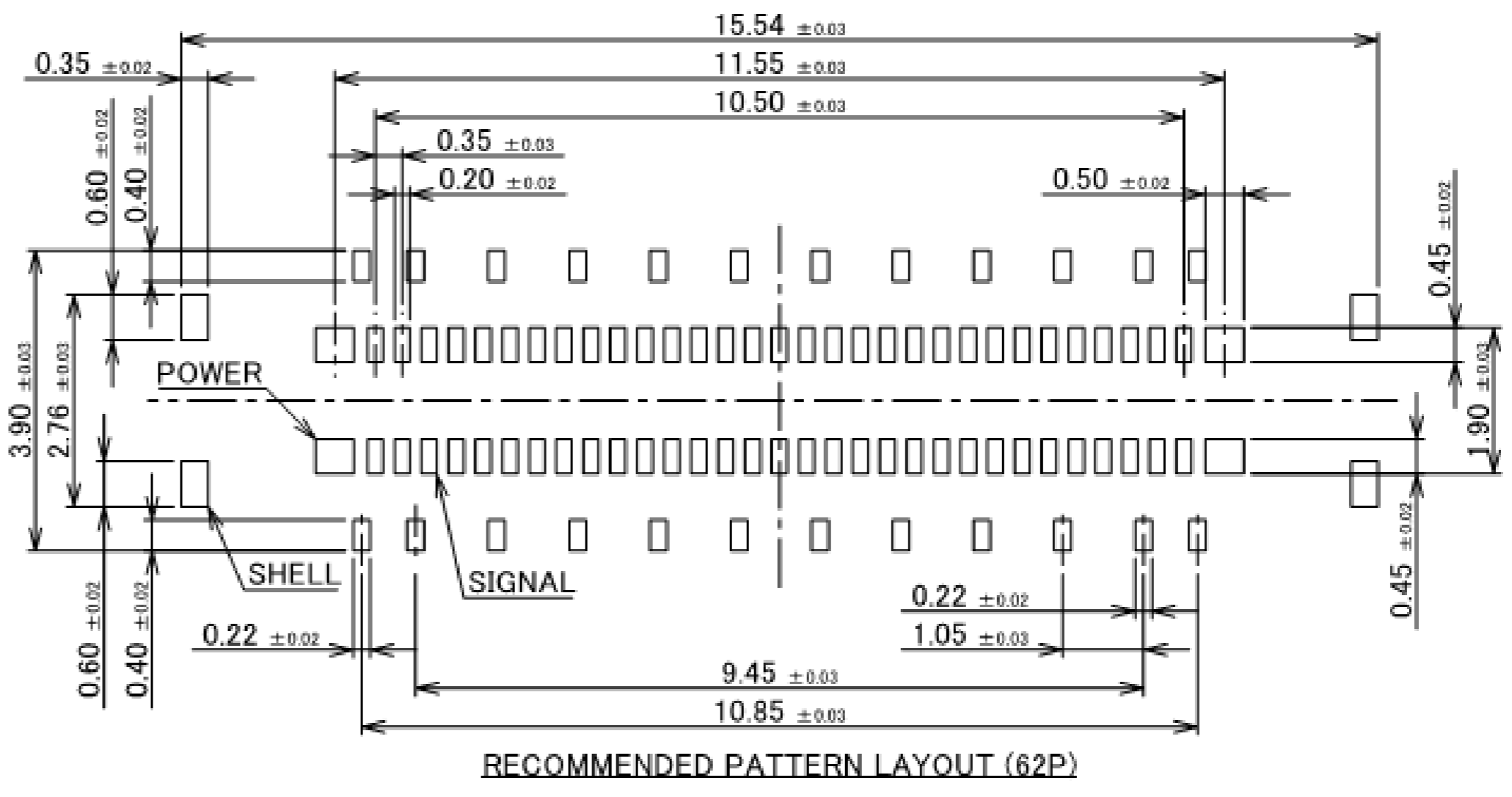
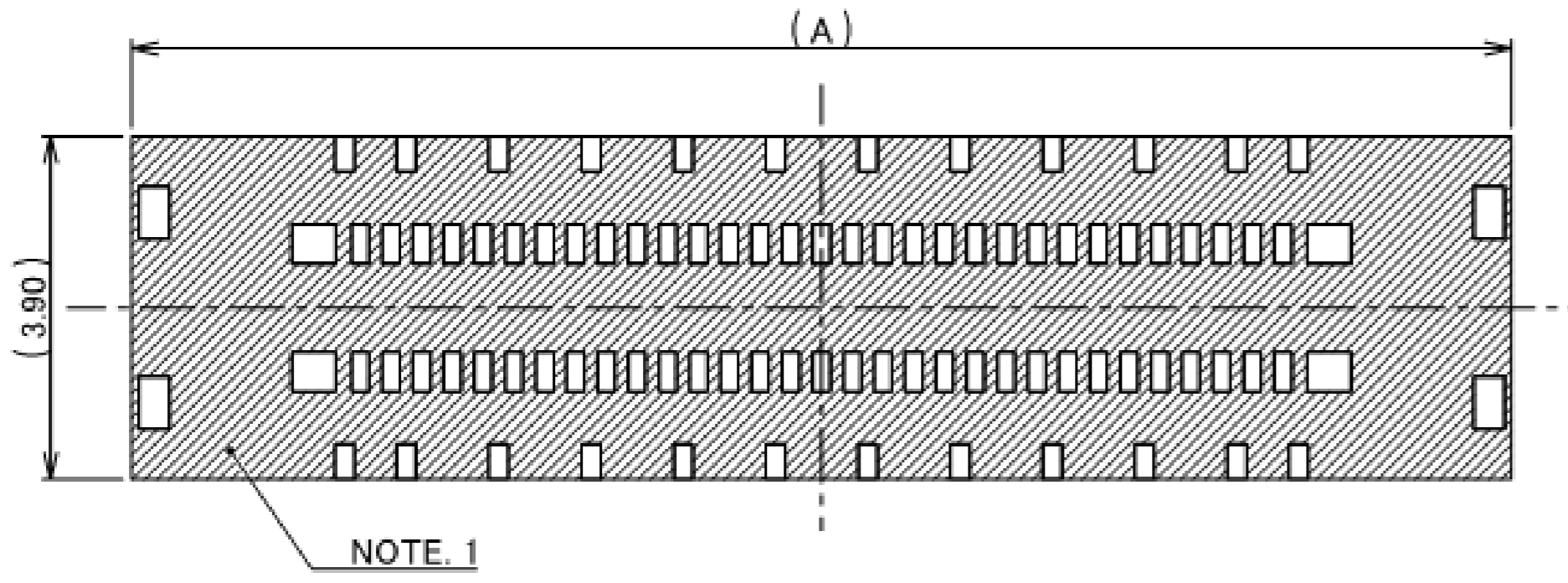
Rev.0



Rev.0

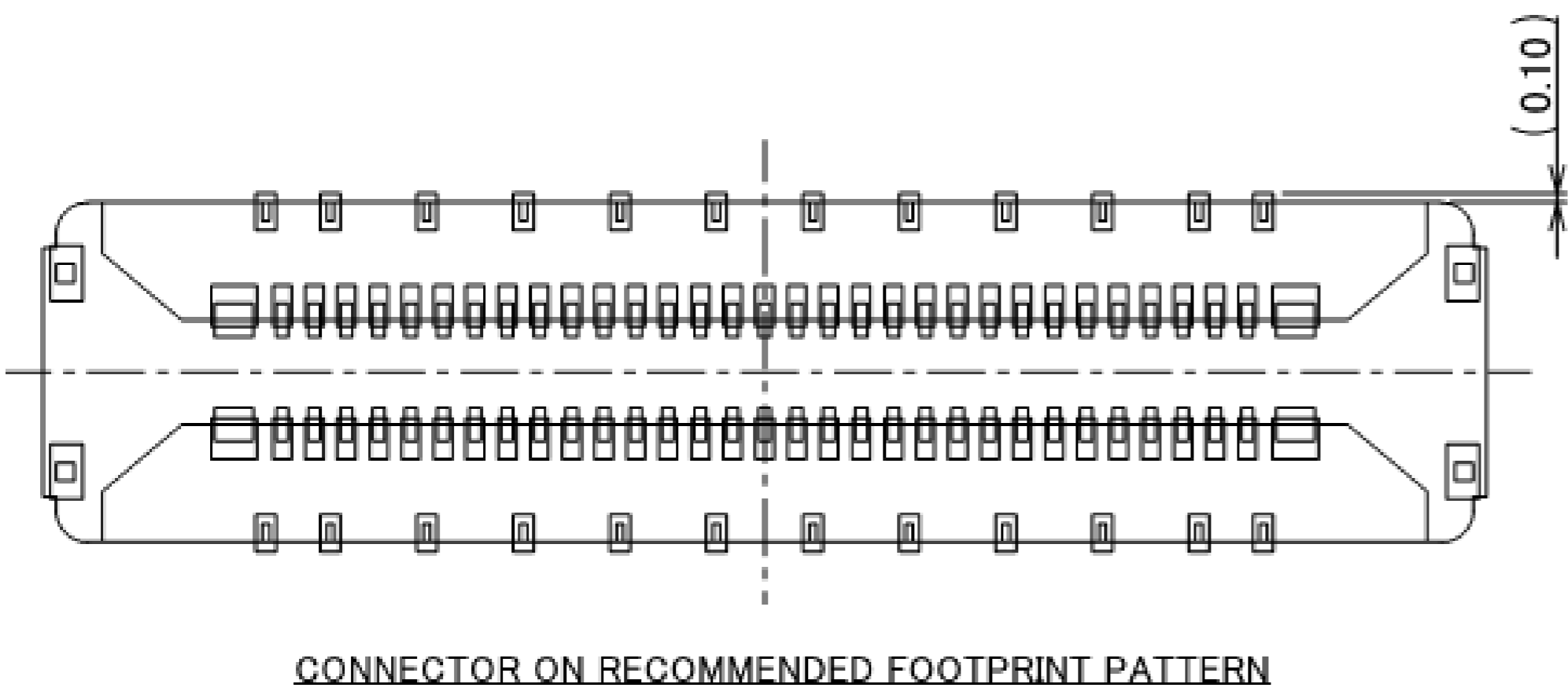
Plug Assembly

PART No.	SIGNAL POS.	POWER POS.	A
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21150-056E-01	56P	4P	14.69
21150-062E-01	62P	4P	15.74

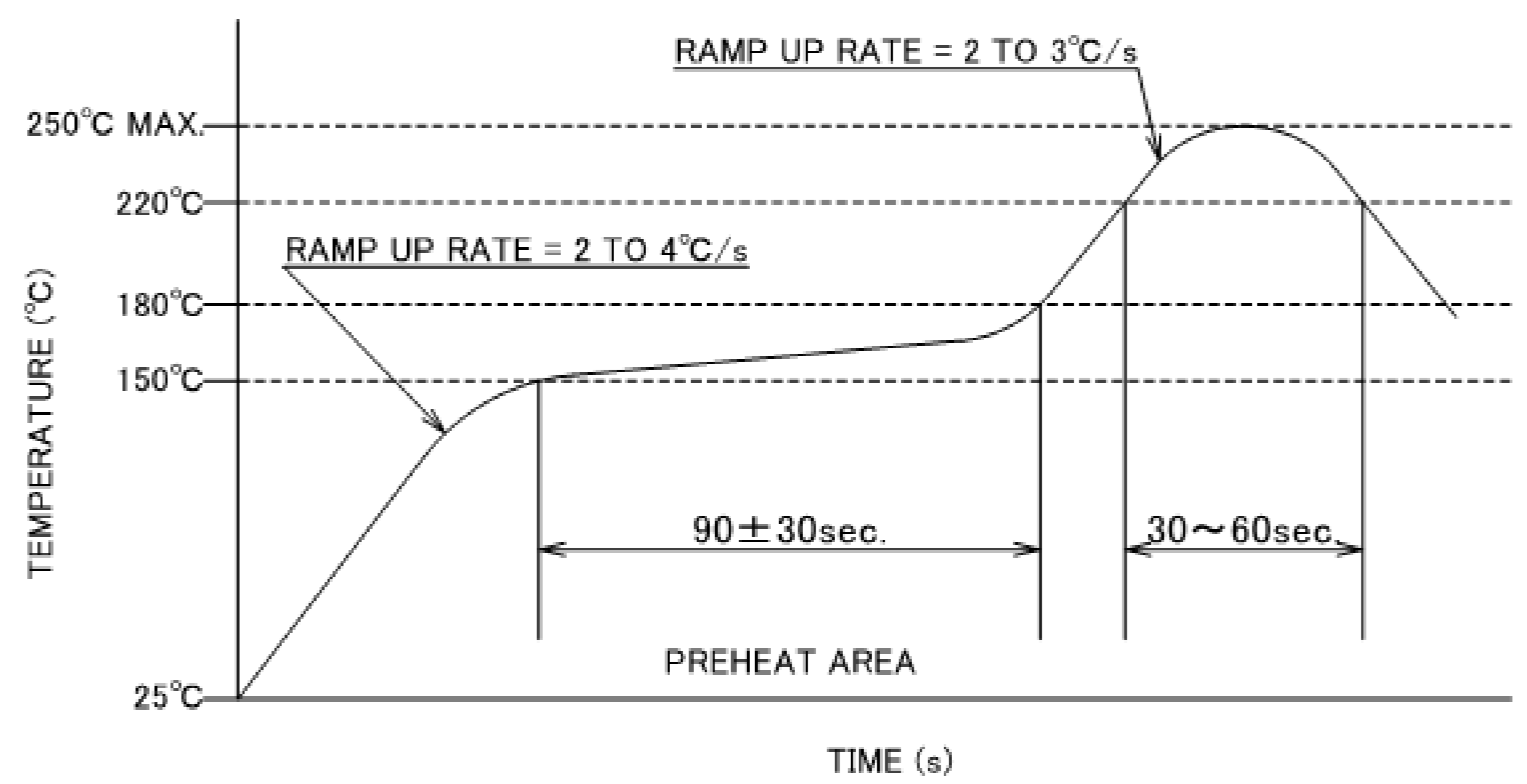


NOTES.
1. THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.

Rev.0



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

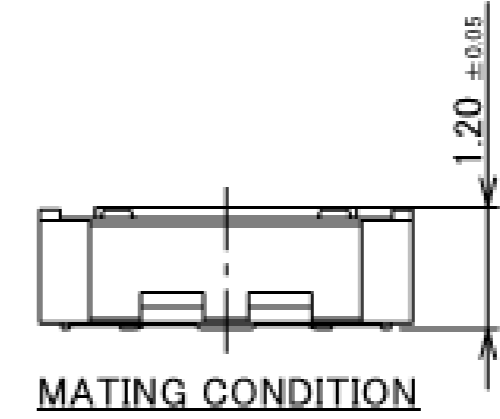
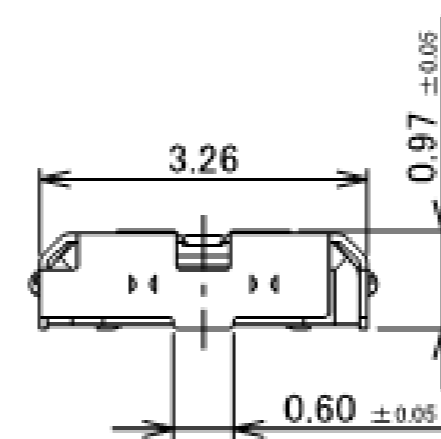
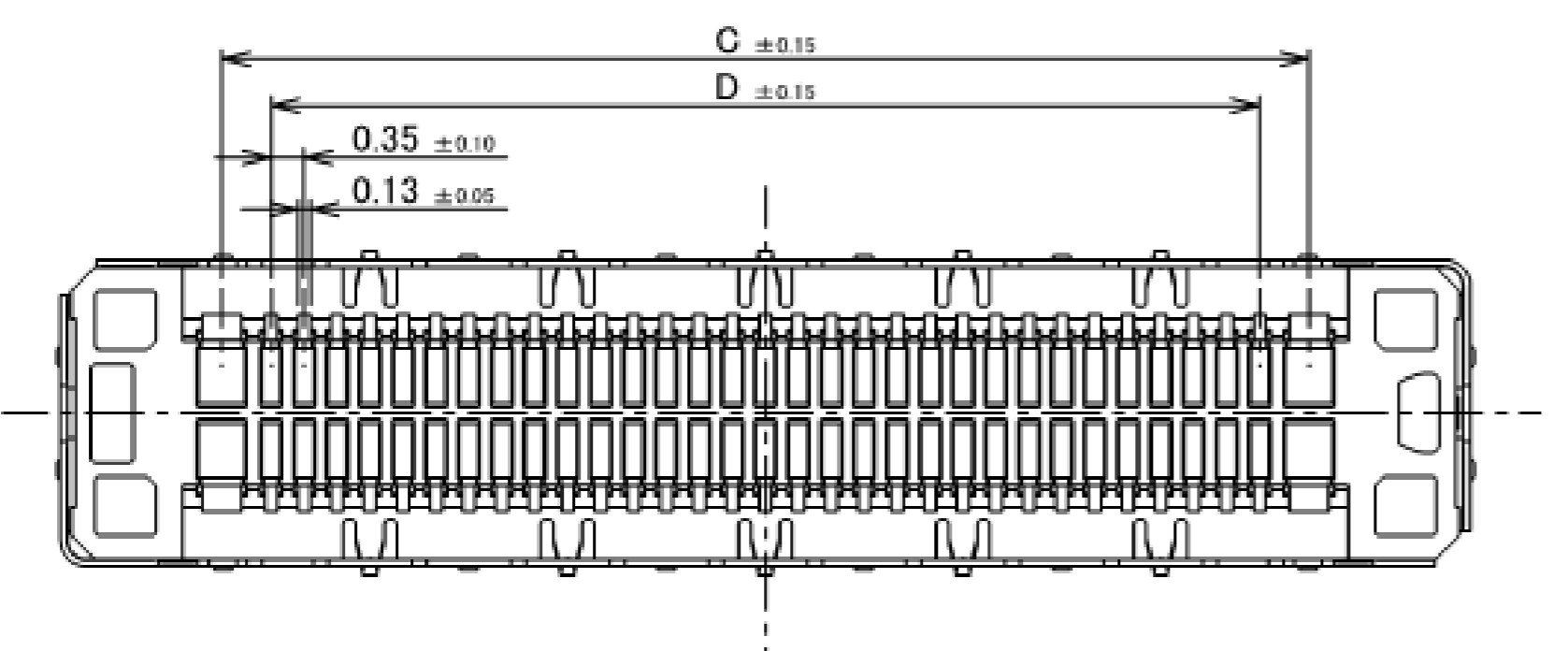
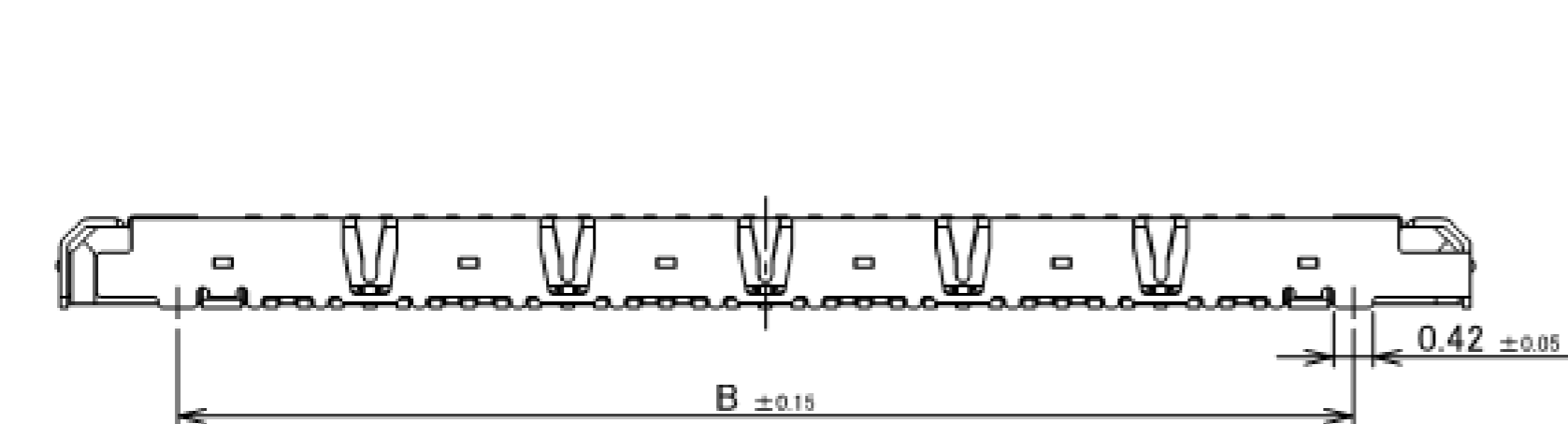
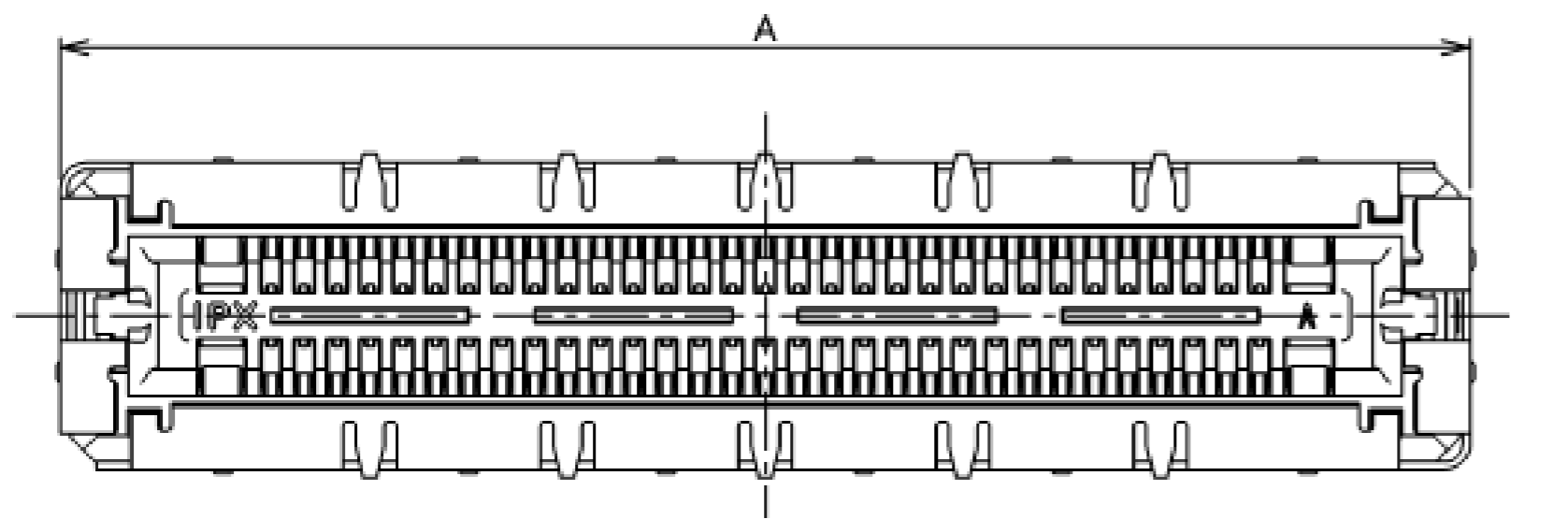
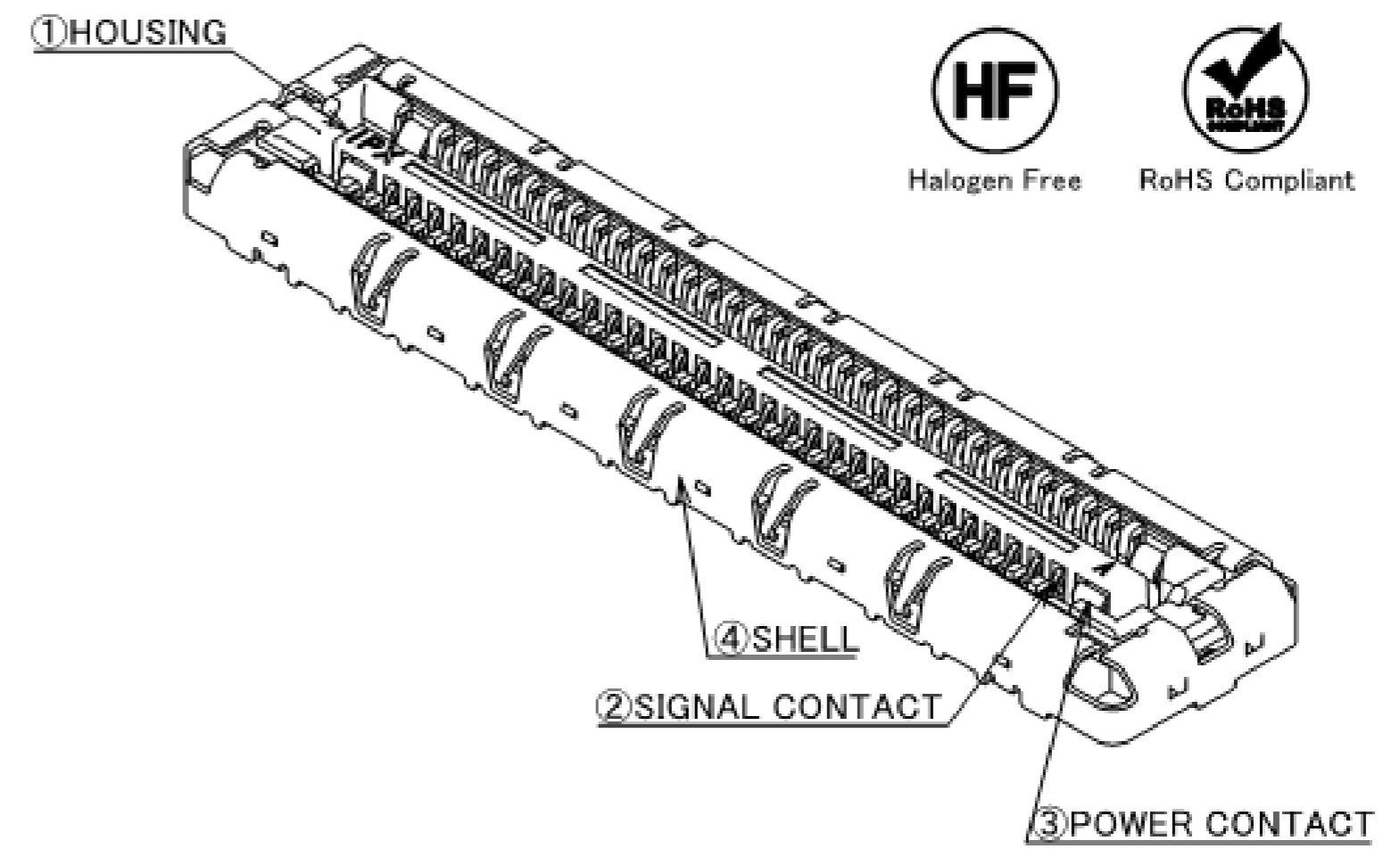
Plug Assembly

ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	21151-0**E-01
RATED VOLTAGE	60V AC (PER CONTACT PIN)
RATED AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)/ 12.0A AC/DC(TOTAL)
RATED AMPERAGE (FOR POWER CONTACT)	4.5A AC/DC (PER CONTACT PIN)/ 18.0A AC/DC(TOTAL)
OPERATING TEMPERATURE	233 TO 358K(-40°C TO +85°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 40mohm MAX. / AFTER TEST : Δ 40mohm MAX.
CONTACT RESISTANCE (FOR POWER CONTACT)	INITIAL : 10mohm MAX. / AFTER TEST : Δ 10mohm MAX.
CONTACT RESISTANCE (FOR GROUND)	INITIAL : 20mohm MAX. / AFTER TEST : Δ 20mohm MAX.
INSULATION RESISTANCE	INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL)	22P: 32.0 N MAX. 56P: 60.0 N MAX. 62P: 70.0 N MAX.
UNMATING FORCE (AFTER TEST)	22P: 3.2 N MIN. 56P: 6.0 N MIN. 62P: 7.0 N MIN.
COPLANARITY	CONTACT AND POWER CONTACT: 0.08 MAX. SHELL: 0.105 MAX.
PRODUCT SPECIFICATION	PRS-3005
TEST REPORT	TR-26015
PACKING STANDARD	PST-26017
INSTRUCTION MANUAL	HIM-26010
APPEARANCE CRITERIA No.	QLS-A***

Rev.0

Receptacle Assembly

RECOMMENDED PART No.		21151-0**E-01				
PART No.	SIGNAL POS.	POWER POS.	A	B	C	D
21151-022E-01	22P	4P	7.98	5.49	4.55	3.50
21151-056E-01	56P	4P	13.93	11.44	10.50	9.45
21151-062E-01	62P	4P	14.98	12.49	11.55	10.50

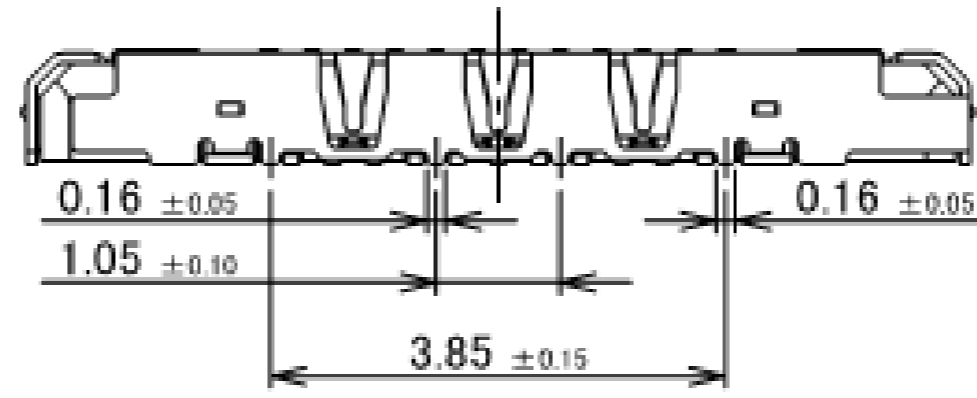


NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	SHELL	CORSON ALLOY	ALL OVER Ni 1.27 μ m MIN. Au 0.01 μ m MIN. 0.025 μ m MAX.
3	POWER CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μ m MIN. CONTACT PART Au 0.05 μ m MIN. SOLDERING PART Au 0.02 μ m MIN.
2	SIGNAL CONTACT	CORSON ALLOY	ALL OVER Ni 1.27 μ m MIN. CONTACT PART Au 0.05 μ m MIN. SOLDERING PART Au 0.02 μ m MIN.
1	HOUSING	LCP	UL94V-0, BLACK (PFAS FREE)

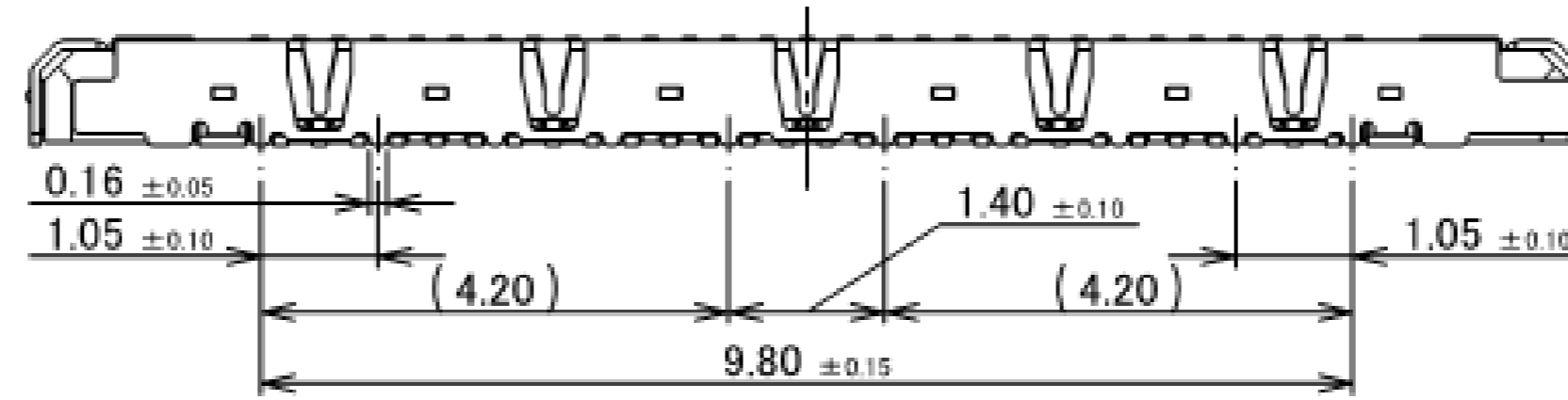
Rev.0

Receptacle Assembly

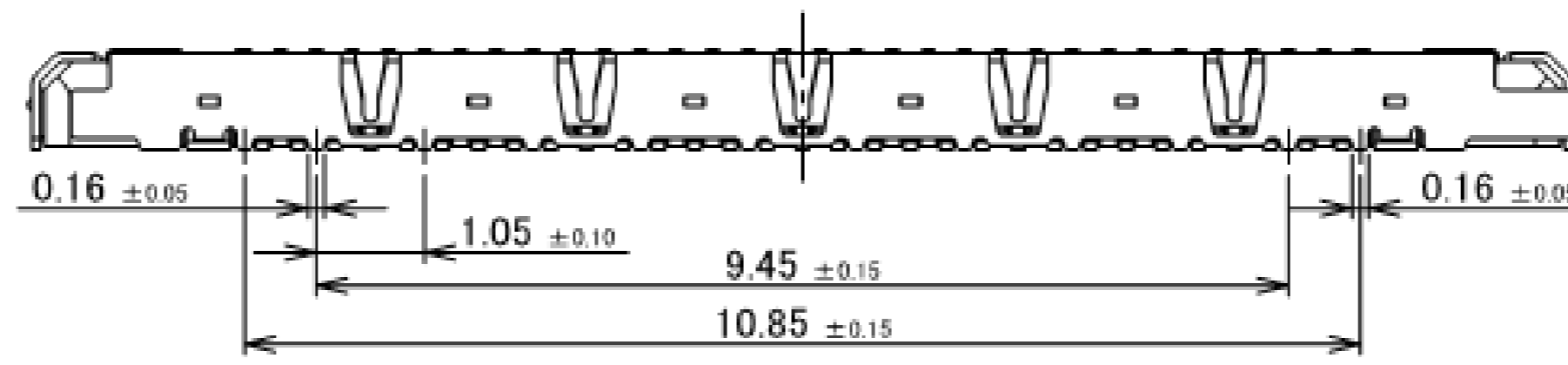
PART No.	SIGNAL POS.	POWER POS.
21151-022E-01	22P	4P
21151-056E-01	56P	4P
21151-062E-01	62P	4P



22P LAYOUT

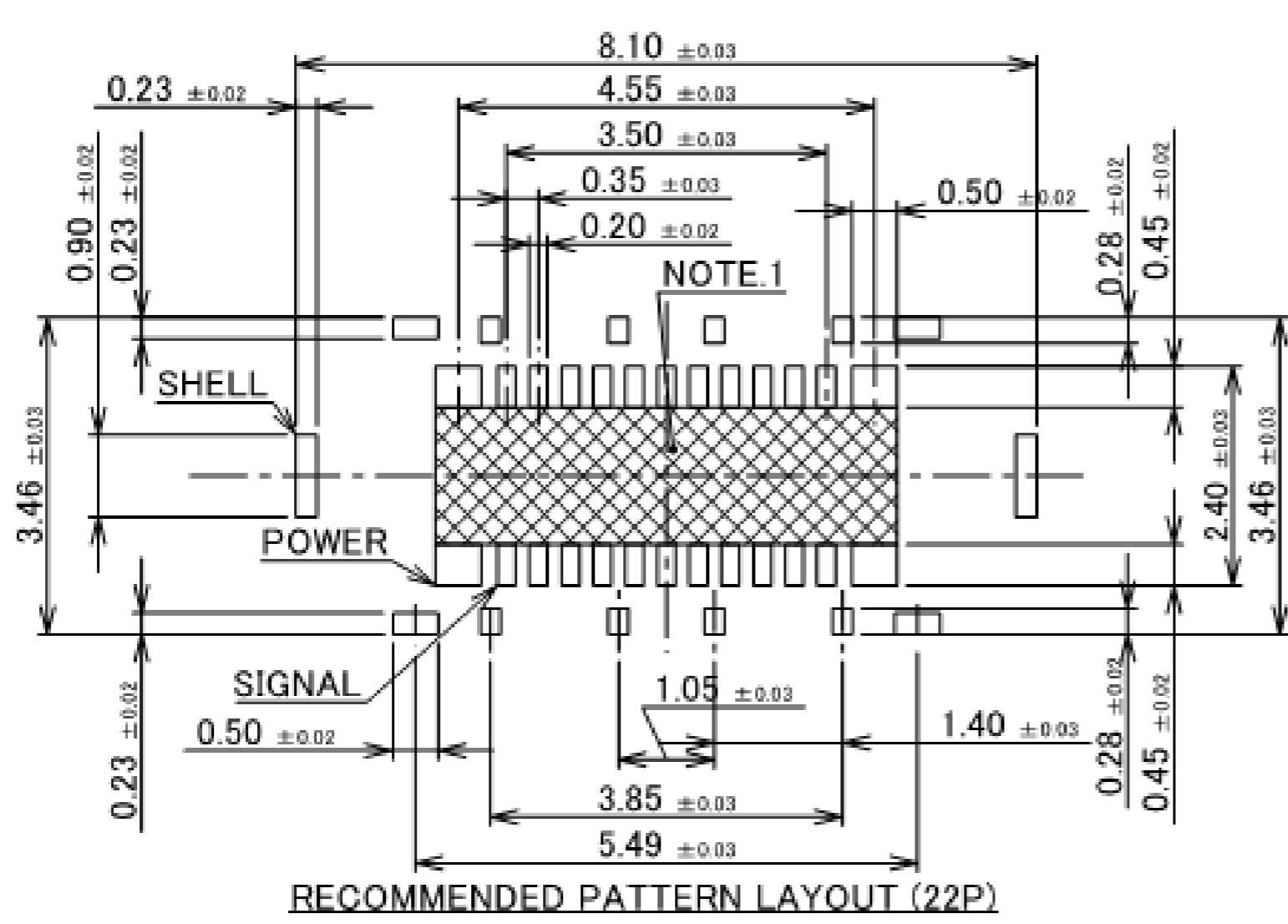


56P LAYOUT

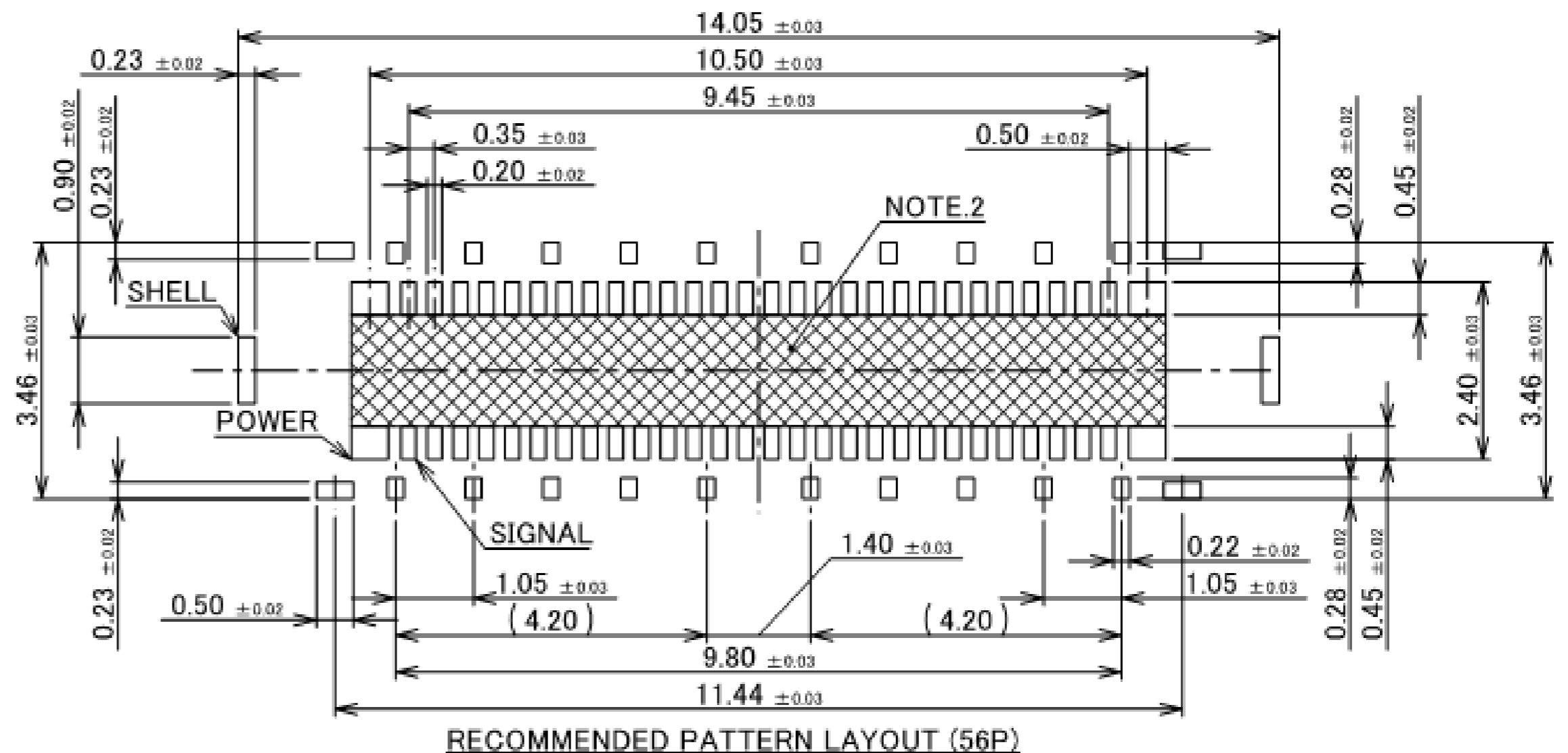


62P LAYOUT

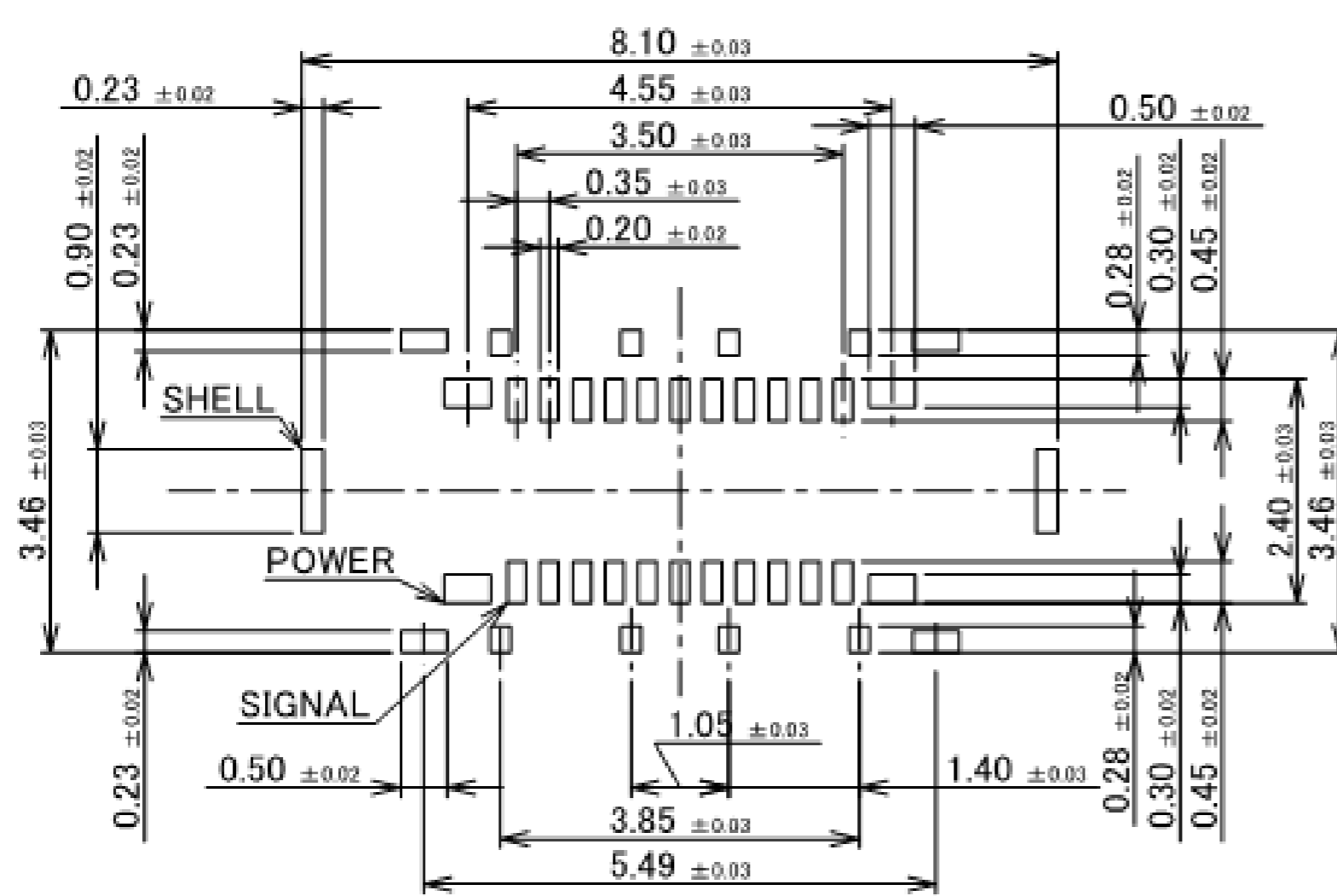
Rev.0



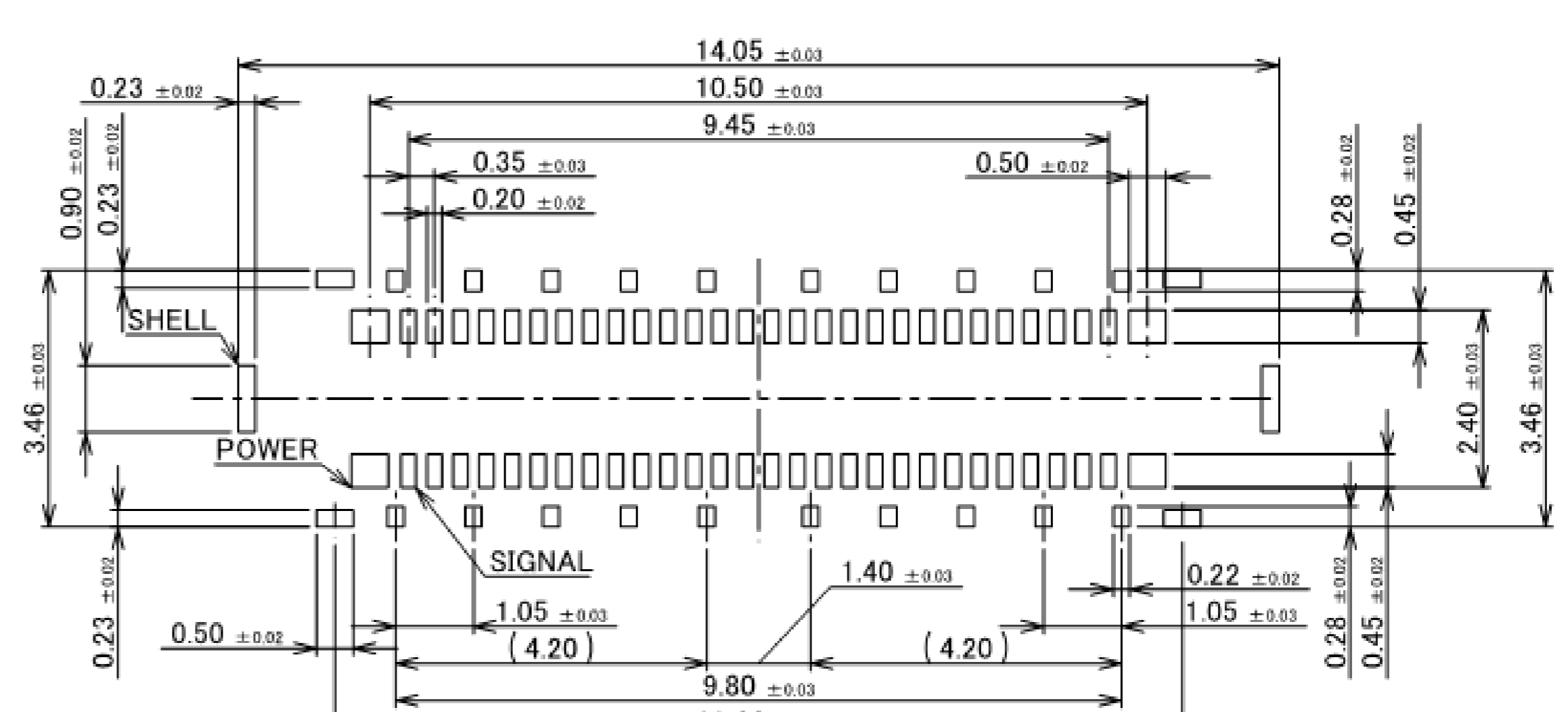
RECOMMENDED PATTERN LAYOUT (22P)



RECOMMENDED PATTERN LAYOUT (56P)



RECOMMENDED METAL MASK LAYOUT (22P)
THICKNESS : t=0.10mm



RECOMMENDED METAL MASK LAYOUT (56P)
THICKNESS : t=0.10mm

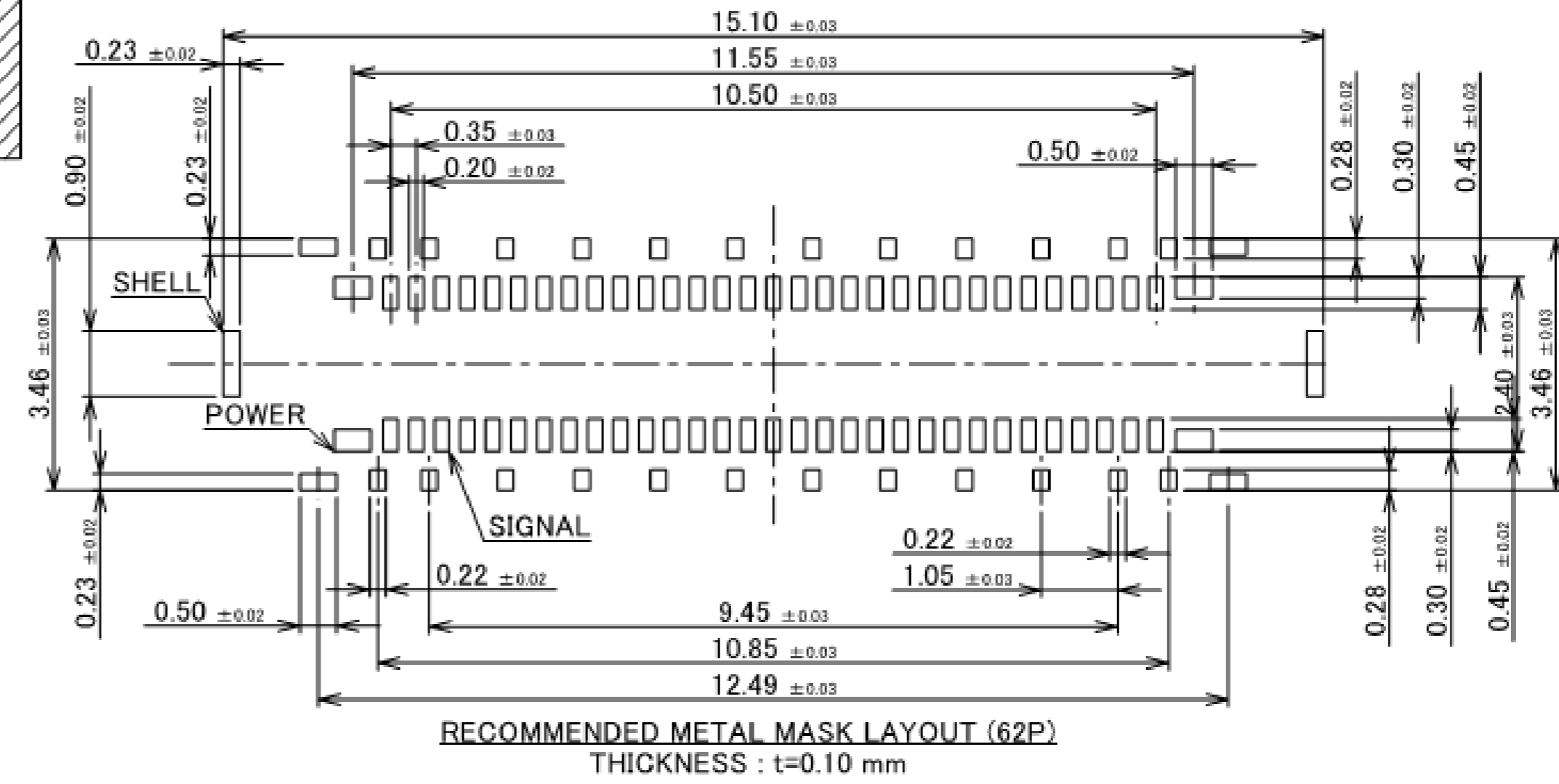
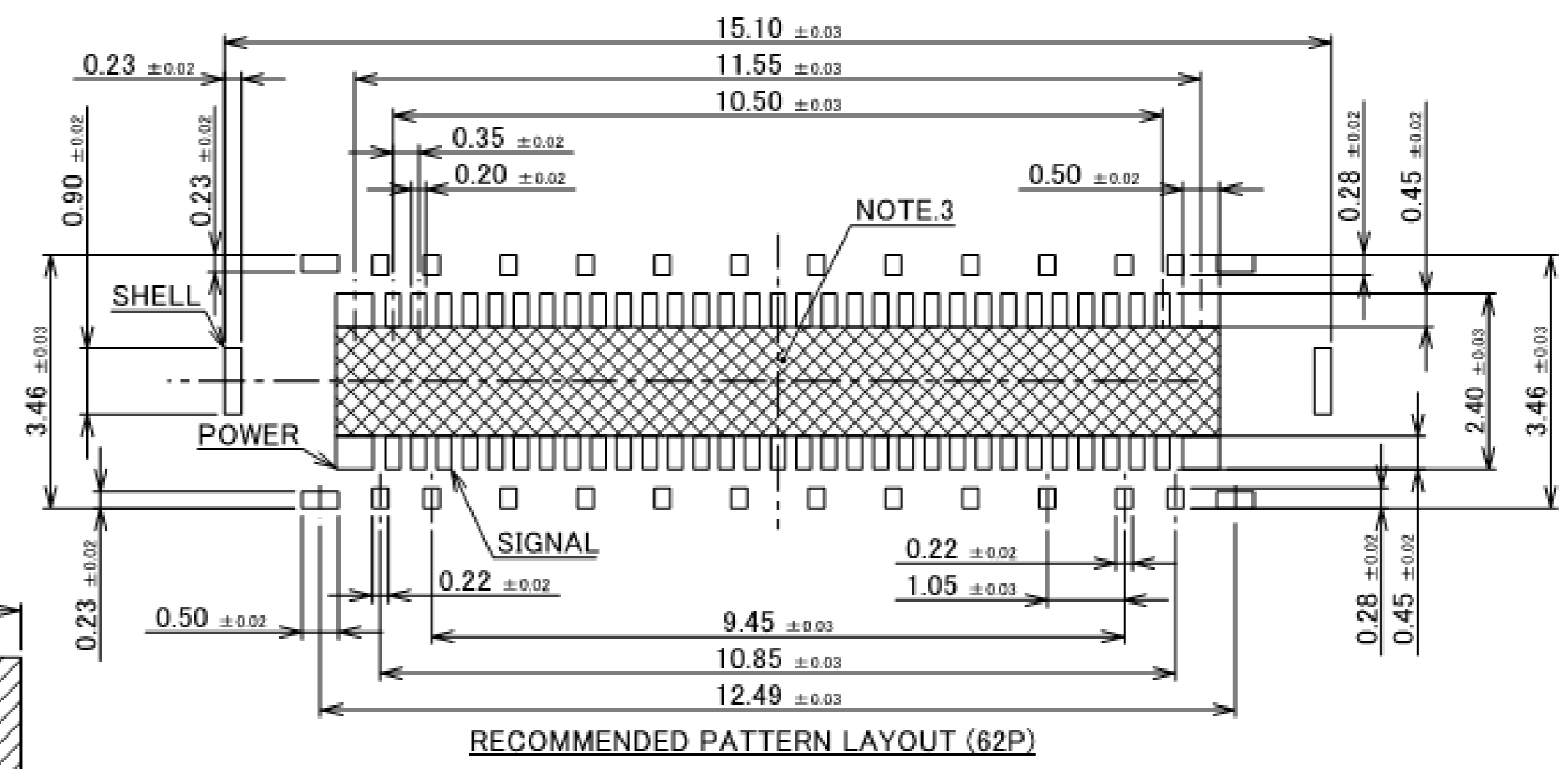
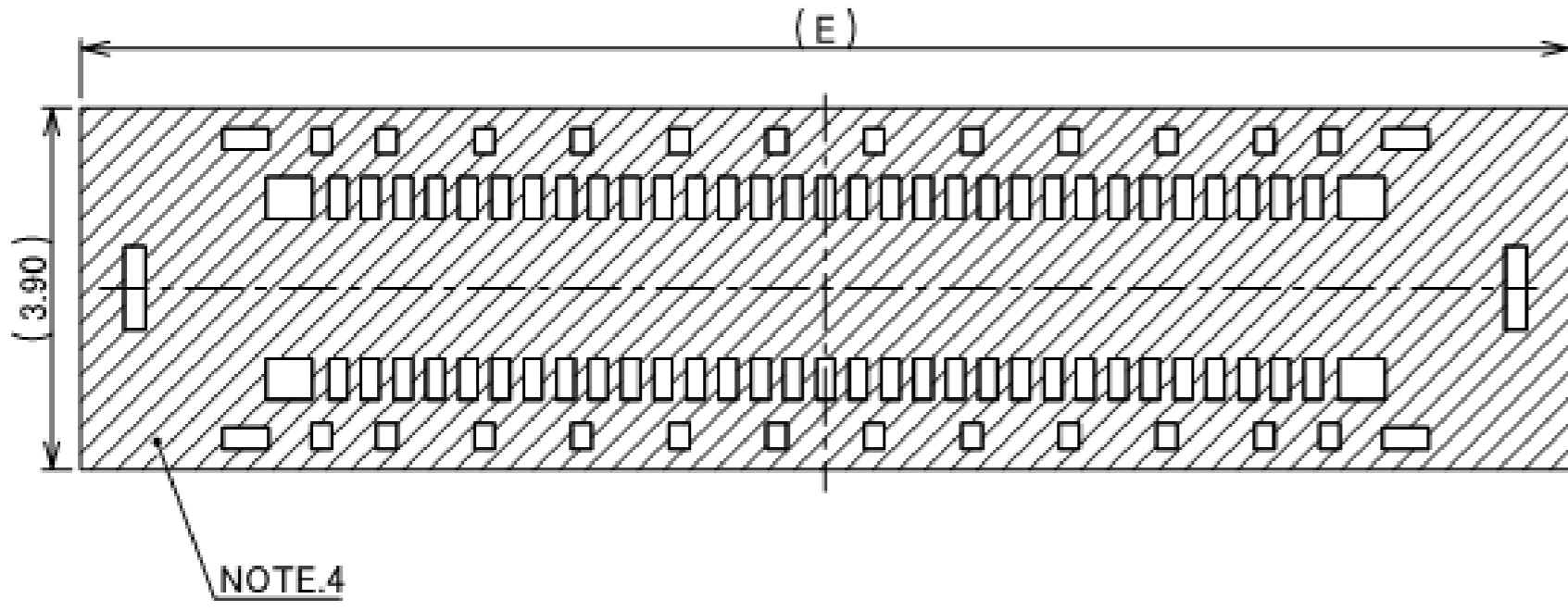
NOTES.

- SOLDER RESIST SHALL BE COATED IN CASE OF RUNNING TRACES ON THIS FOOT PRINT PATTERN PROHIBITION AREA.

Rev.0

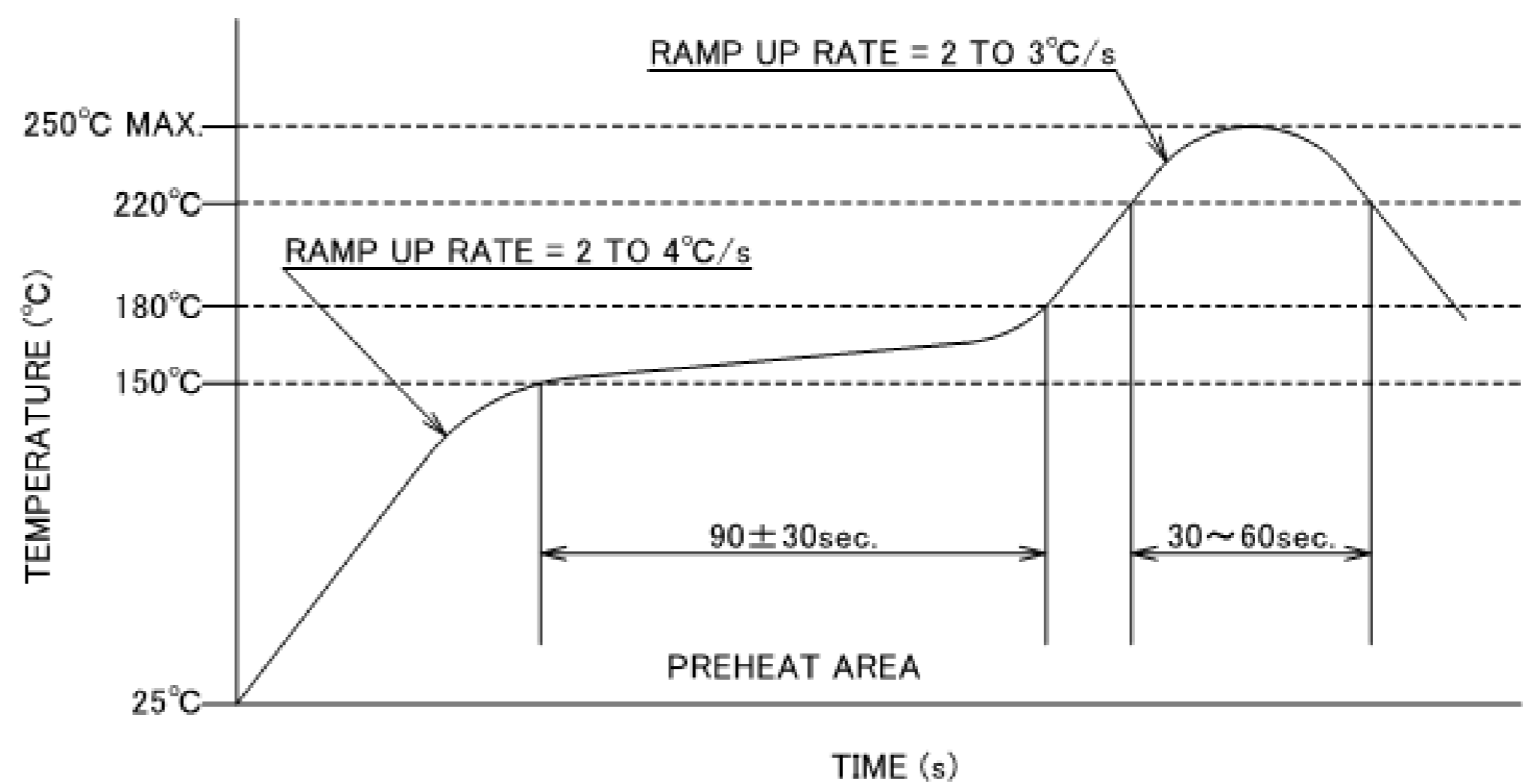
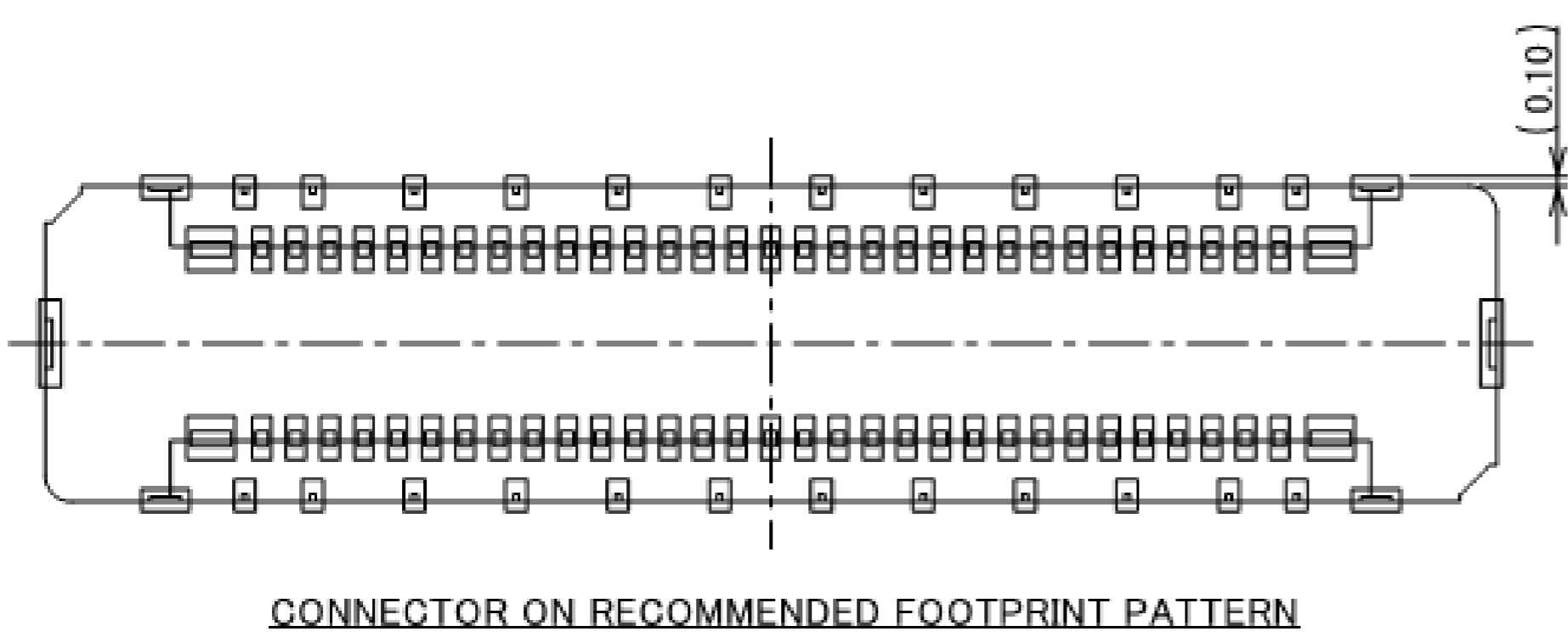
Receptacle Assembly

PART No.	SIGNAL POS.	POWER POS.	E
21151-022E-01	22P	4P	9.04
21151-056E-01	56P	4P	14.99
21151-062E-01	62P	4P	16.04



- NOTES.
- SOLDER RESIST SHALL BE COATED IN CASE OF RUNNING TRACES ON THIS FOOT PRINT PROHIBITION AREA.
 - THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.

Rev.0



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

Receptacle Assembly

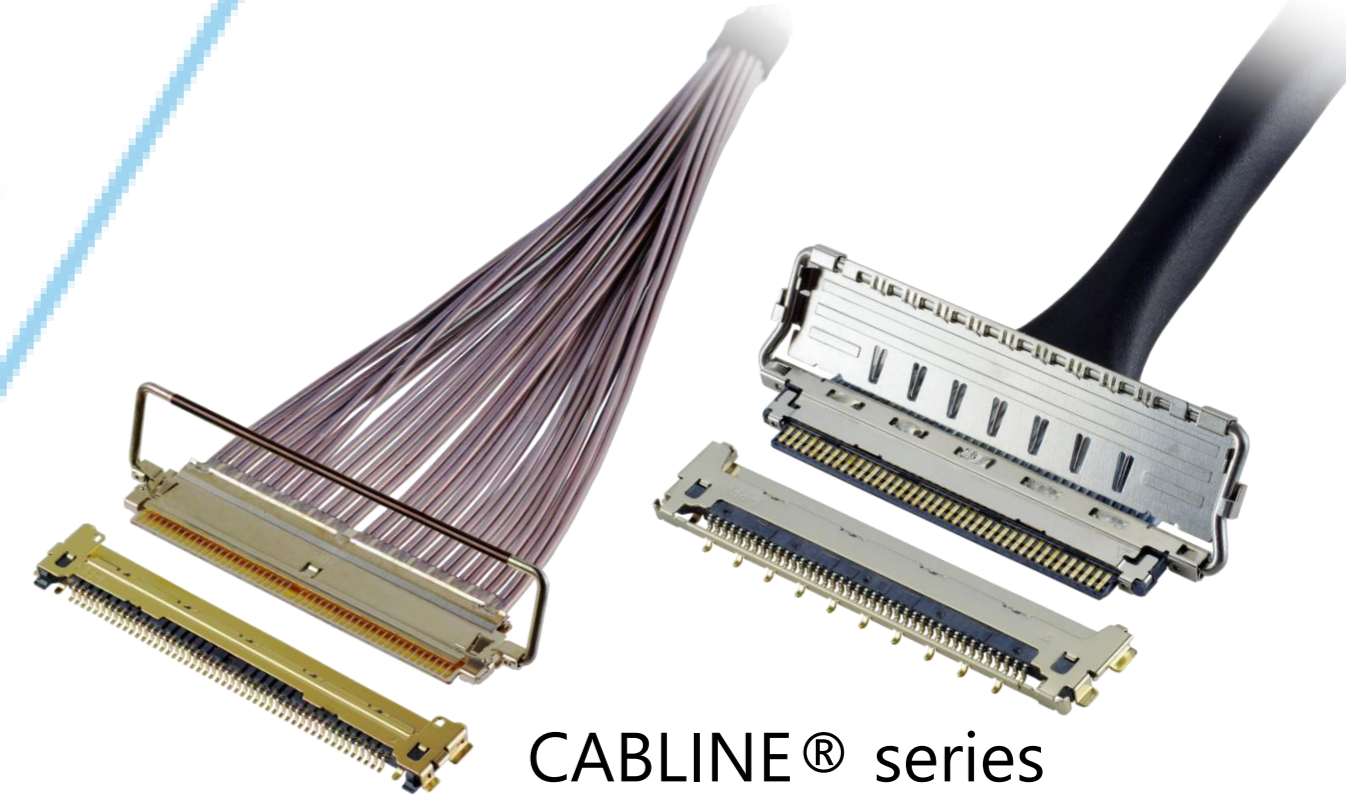
ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	21150-0**E-01
RATED VOLTAGE	60V AC (PER CONTACT PIN)
RATED AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)/ 12.0A AC/DC(TOTAL)
RATED AMPERAGE (FOR POWER CONTACT)	4.5A AC/DC (PER CONTACT PIN)/ 18.0A AC/DC(TOTAL)
OPERATING TEMPERATURE	233 TO 358K(-40°C TO +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 : 10mohm MAX. / AFTER TEST : \triangle 10mohm 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)	22P: 32.0 N MAX. 56P: 60.0 N MAX. 62P: 70.0 N MAX.
UNMATING FORCE (AFTER TEST)	22P: 3.2 N MIN. 56P: 6.0 N MIN. 62P: 7.0 N MIN.
COPLANARITY	0.08 MAX.
PRODUCT SPECIFICATION	PRS-3005
TEST REPORT	TR-26015
PACKING STANDARD	PST-26018
INSTRUCTION MANUAL	HIM-26010
APPEARANCE CRITERIA No.	QLS-A***

Rev.0

Custom Connectors Available

RF Connectors

MHF® series



CABLINE® series

Micro-Coaxial/Twinaxial Connectors



Wire-to-Board Connectors/Terminals

AP series

ISH® series



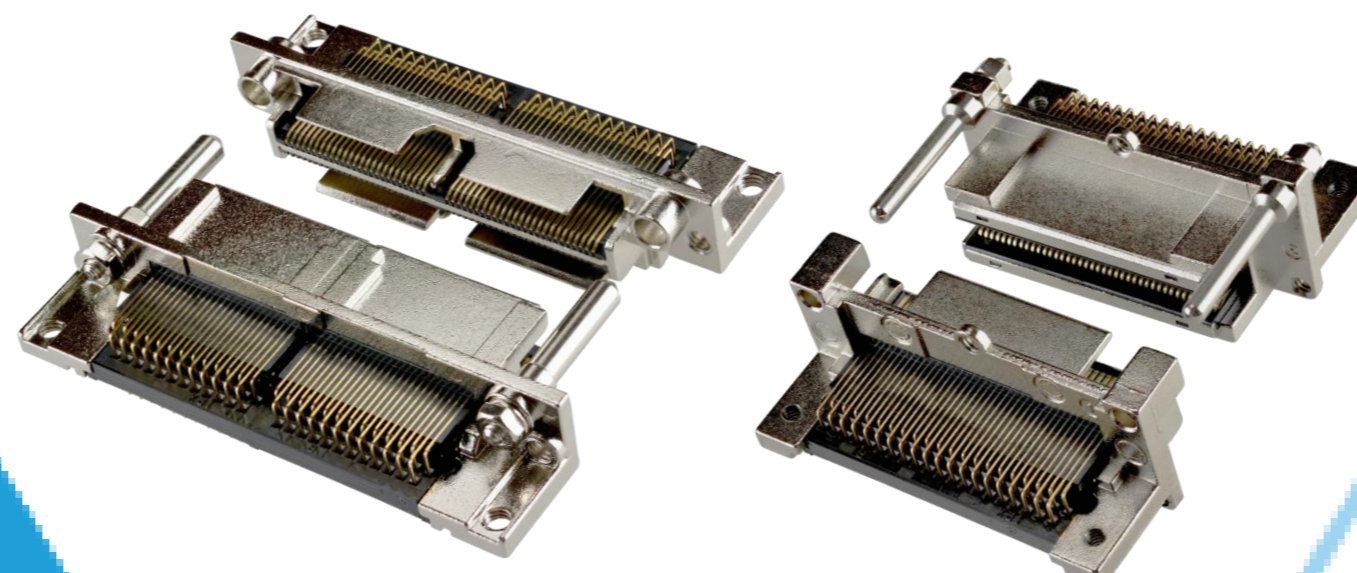
NOVASTACK® series



Board-to-Board Connectors



I/O Connectors



MINIDOCK™ series

MINIFLEX® series EVAFLEX® series



FPC/FFC Connectors



Inquiry



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Contact your sales representative or more detailed information.

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