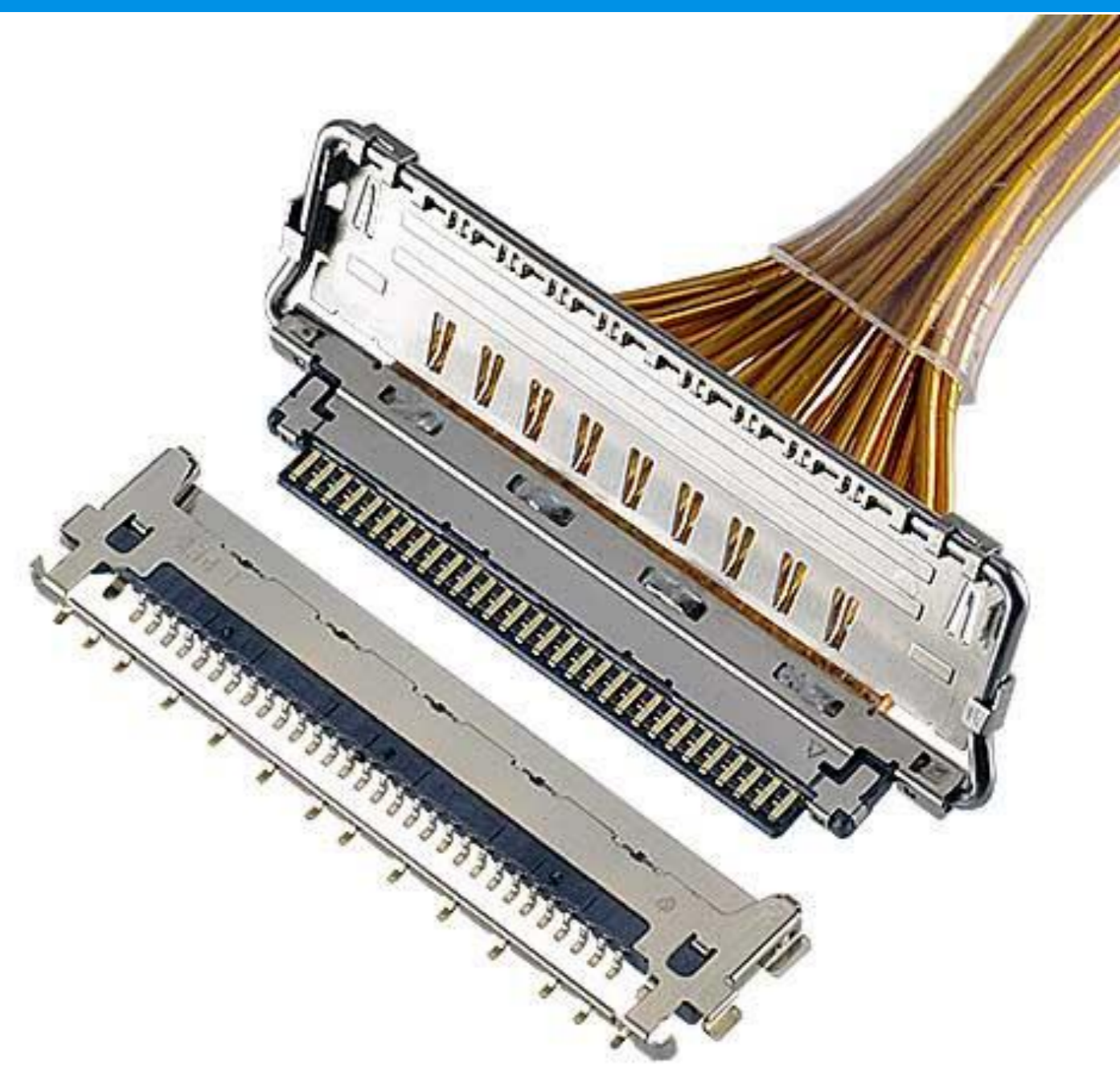


# CABLINE®-VS II

Fully-shielded with mechanical lock, Suitable for high-data-rate transfer (PCIe Gen5 32 GT/s/lane), 0.5 mm pitch, Horizontal mating type micro-coaxial connector



**Product Specifications:**

Mating type	Horizontal	
Board Pitch (mm)	0.5	
Wiping Length (mm)	0.54	
Mated size (mm)	Height	1.2 max. with cover
	Width	Formula: $6.85 + (0.5 * p)$
	Depth	6.70
Pin Counts	Range	Up to 60
	Available	20, 30, 40

**Applicable Cable Size:**

Maximum O.D. (mm)	0.5
Micro-Coaxial for Signal (AWG)	45 ohm: #36 or smaller 50 ohm: #38 or smaller
Twinaxial (AWG)	#40
Discrete (AWG)	#32 or smaller

**Applicable Standards (Reference Only):**

PCIe Gen5 (32 GT/s /Lane), USB4 Gen4 (40 Gbps/ Lane PAM3), DP UHBR20 (20 Gbps/ Lane), PCIe Gen 4 (16 GT/s)

\* 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

General Connector

ZenShield® Connector

Wi-Fi® Antenna

High-data-rate Signal Transfer

Connectors can be placed closer to antenna

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

Unable to lock

Mate

Locked

can only be locked when mating is complete

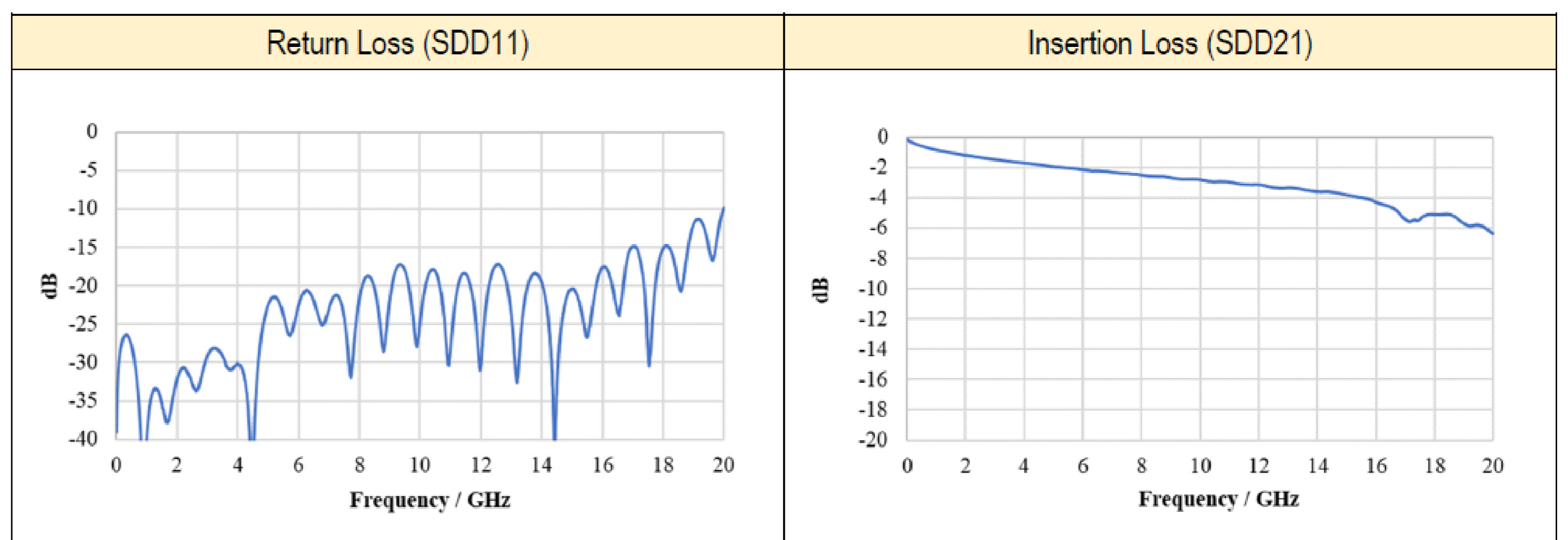
incomplete mating

complete mating

► **High-data-rate transfer, ideal for PCIe Gen5 (32 GT/s/lane) applications**

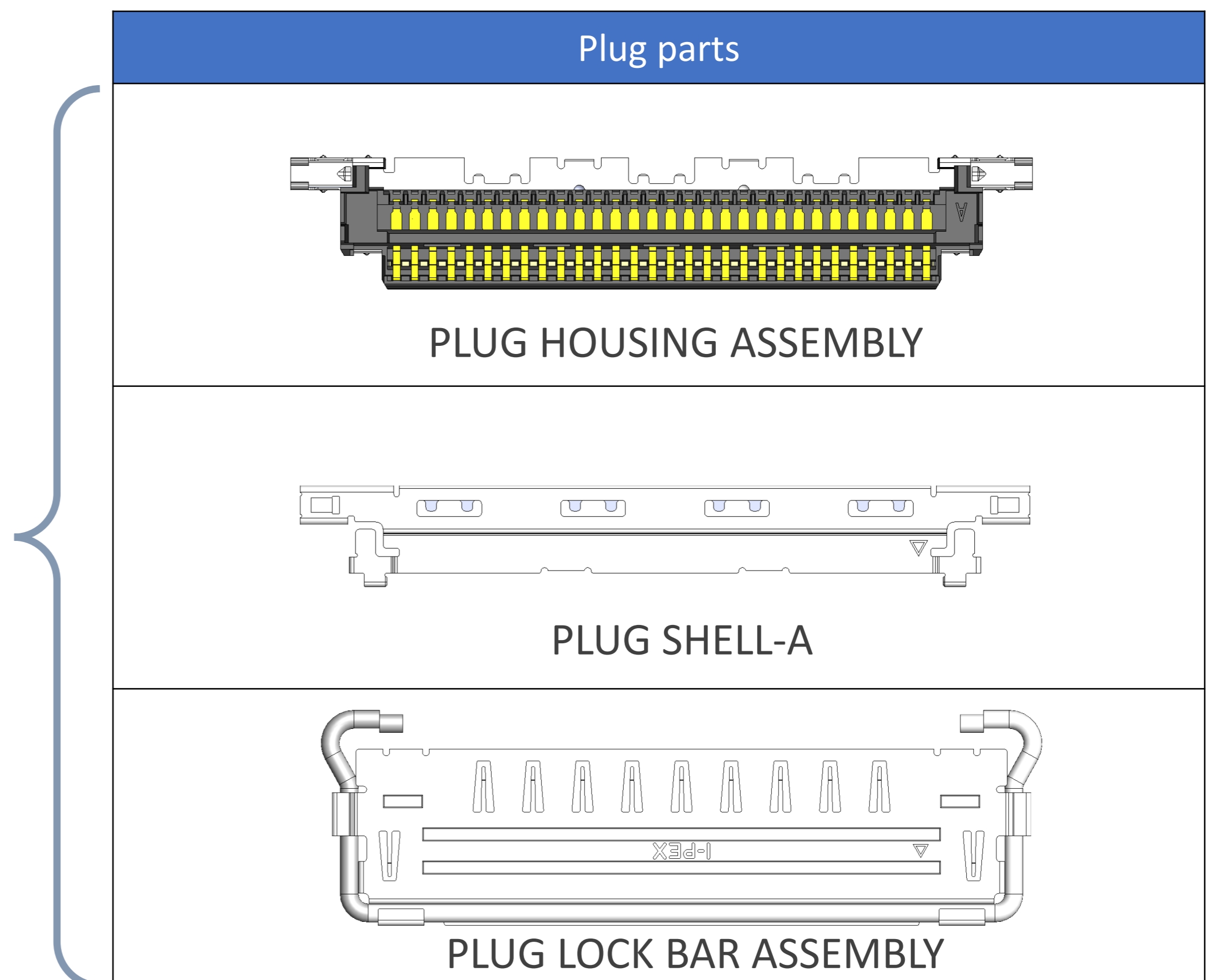
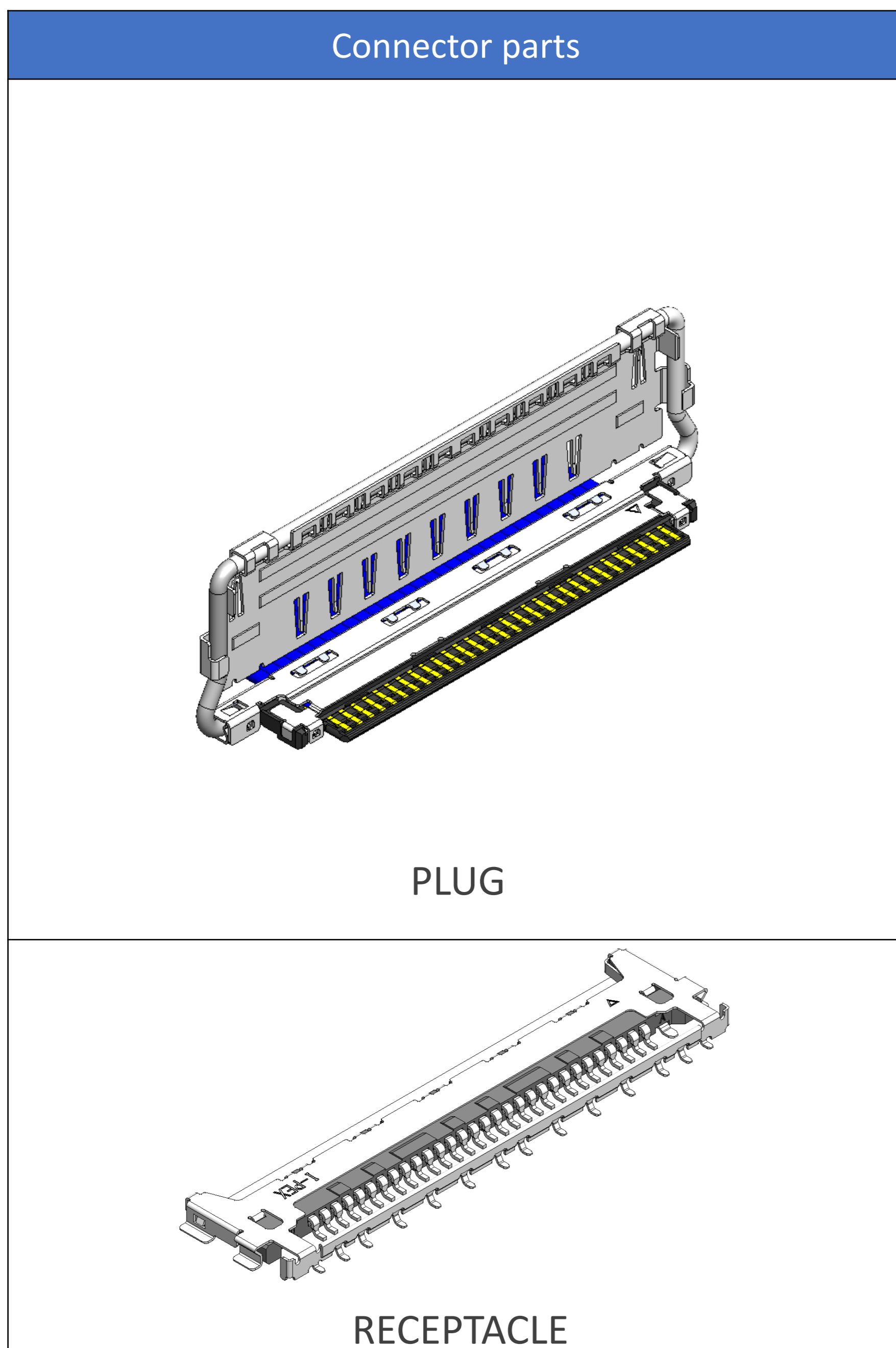
**Measurement results**

Connector: CABLINE-VS II 40P  
 Cable: Micro-coaxial cable  
 AWG #40, 45ohm, Length : 100 mm  
 Pin Assignment: GSSGSSG



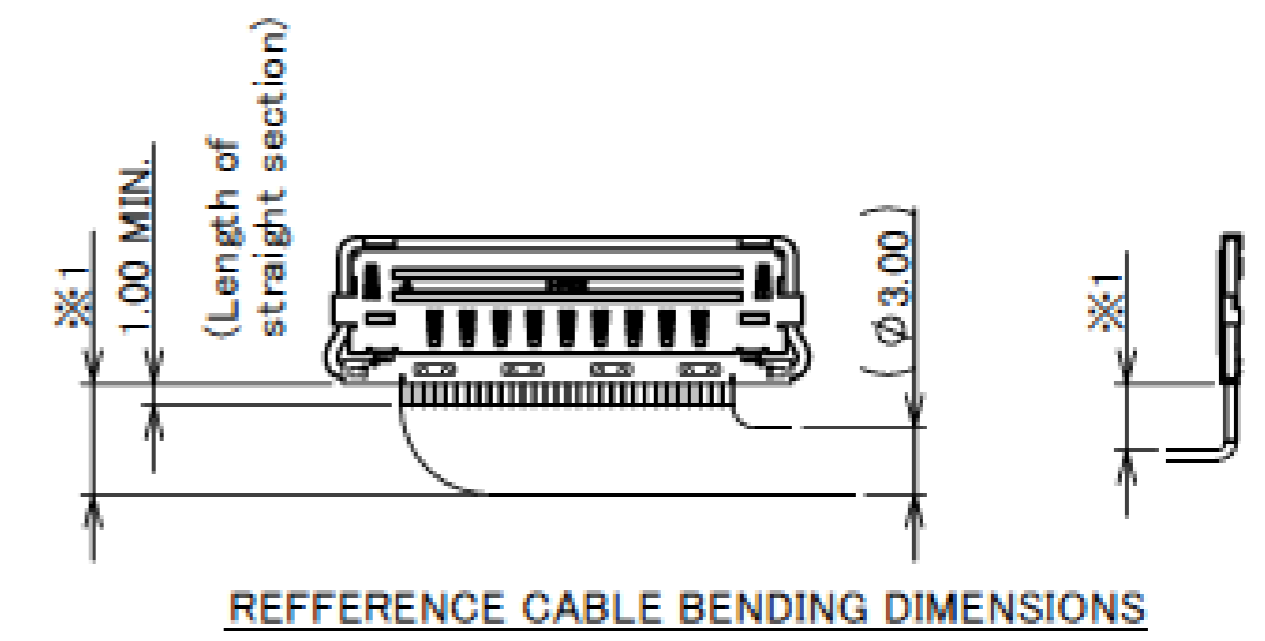
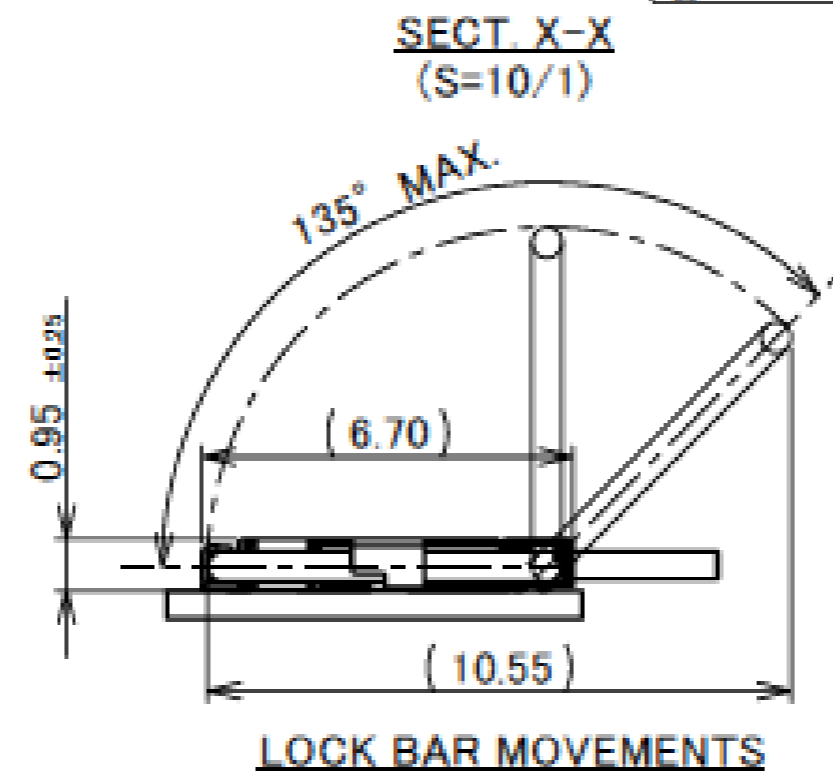
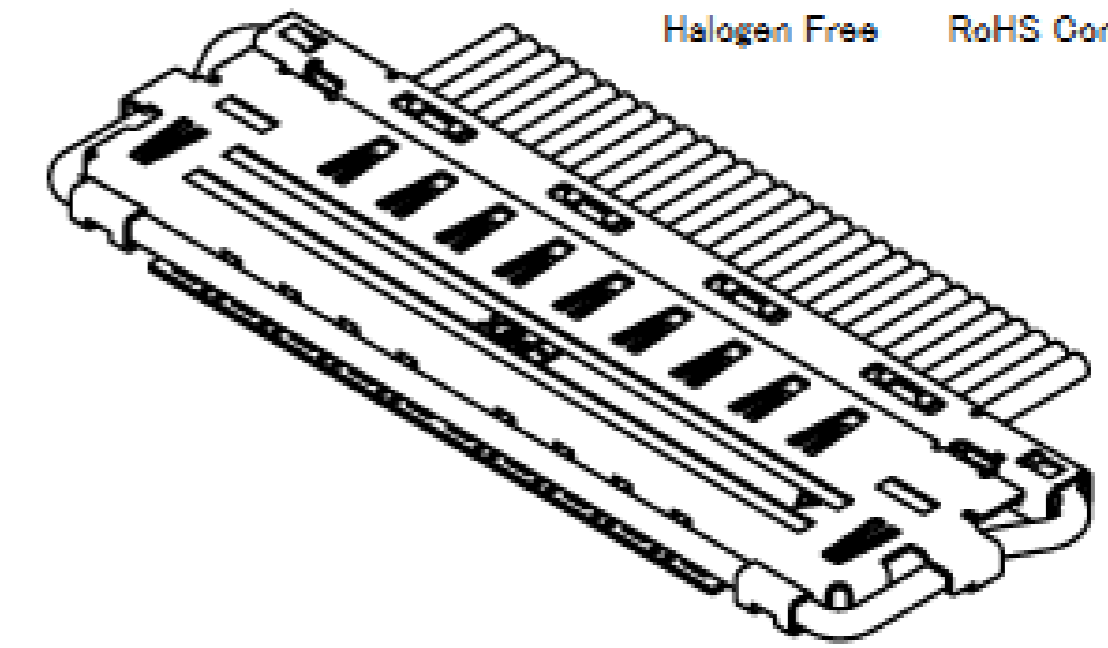
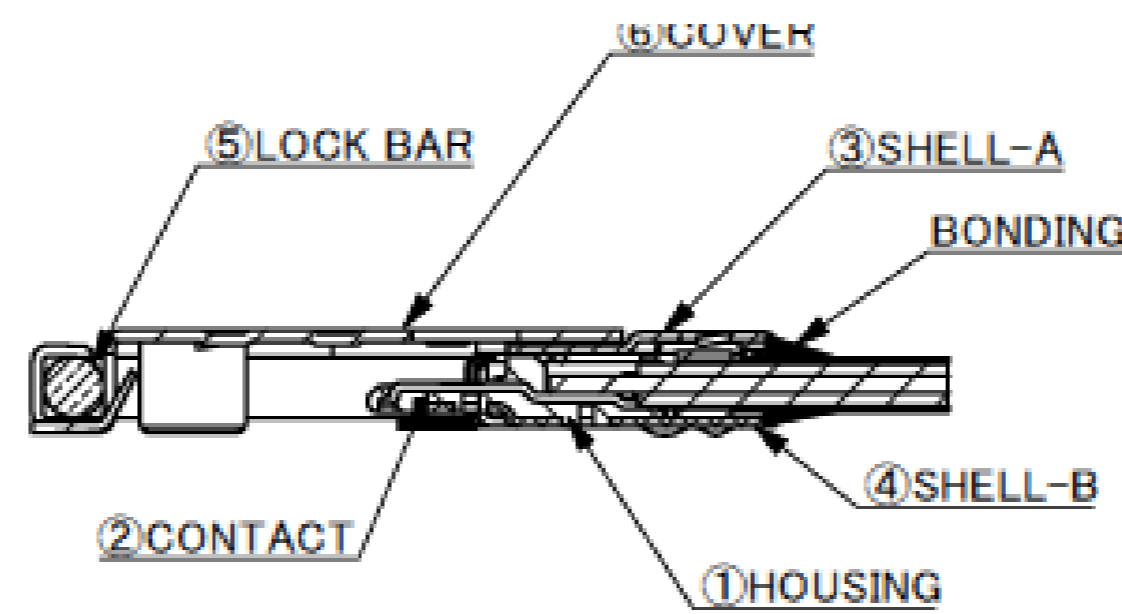
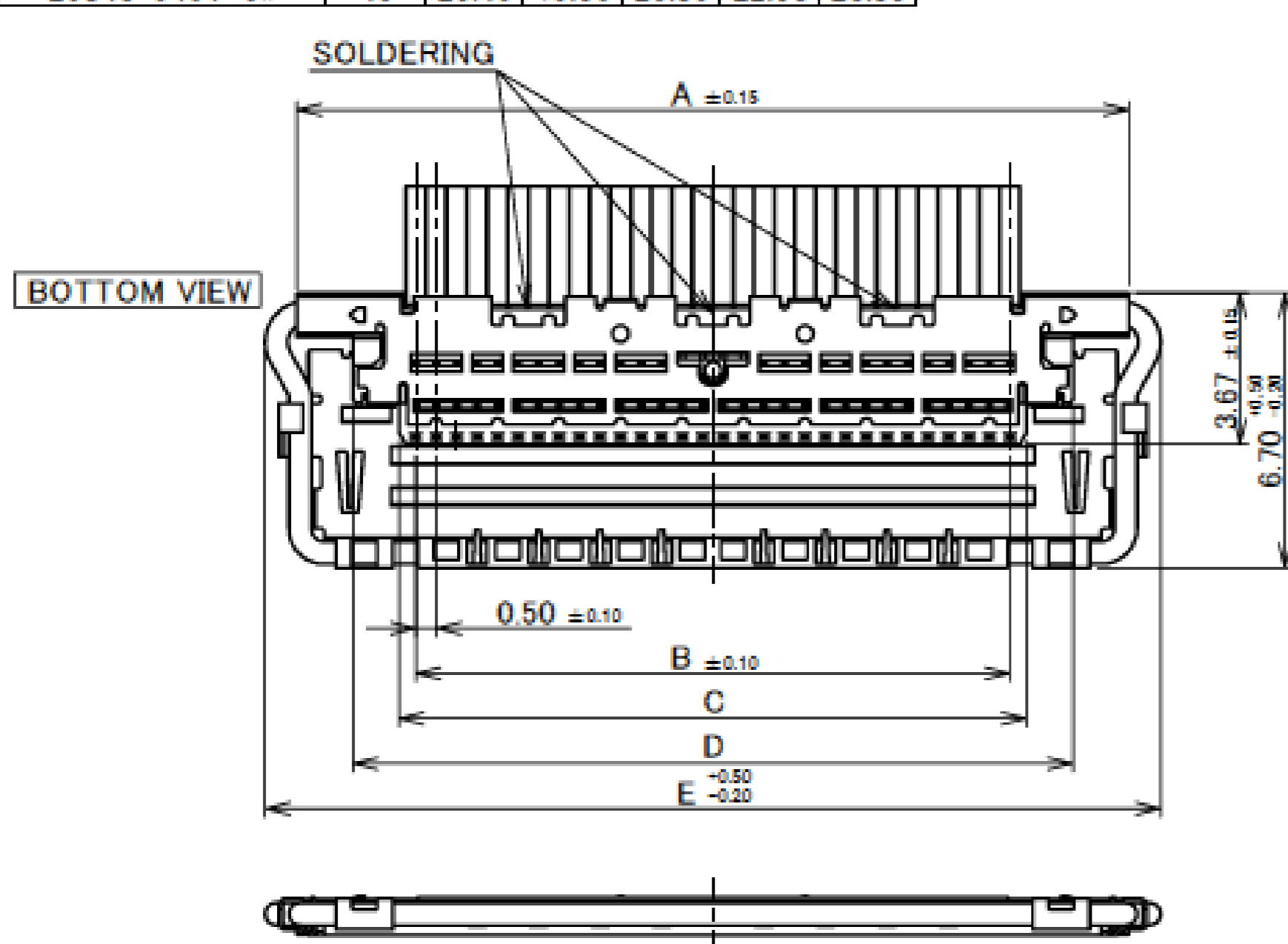
# Component Parts Details

## Component Parts



# Plug for Cable Assembly

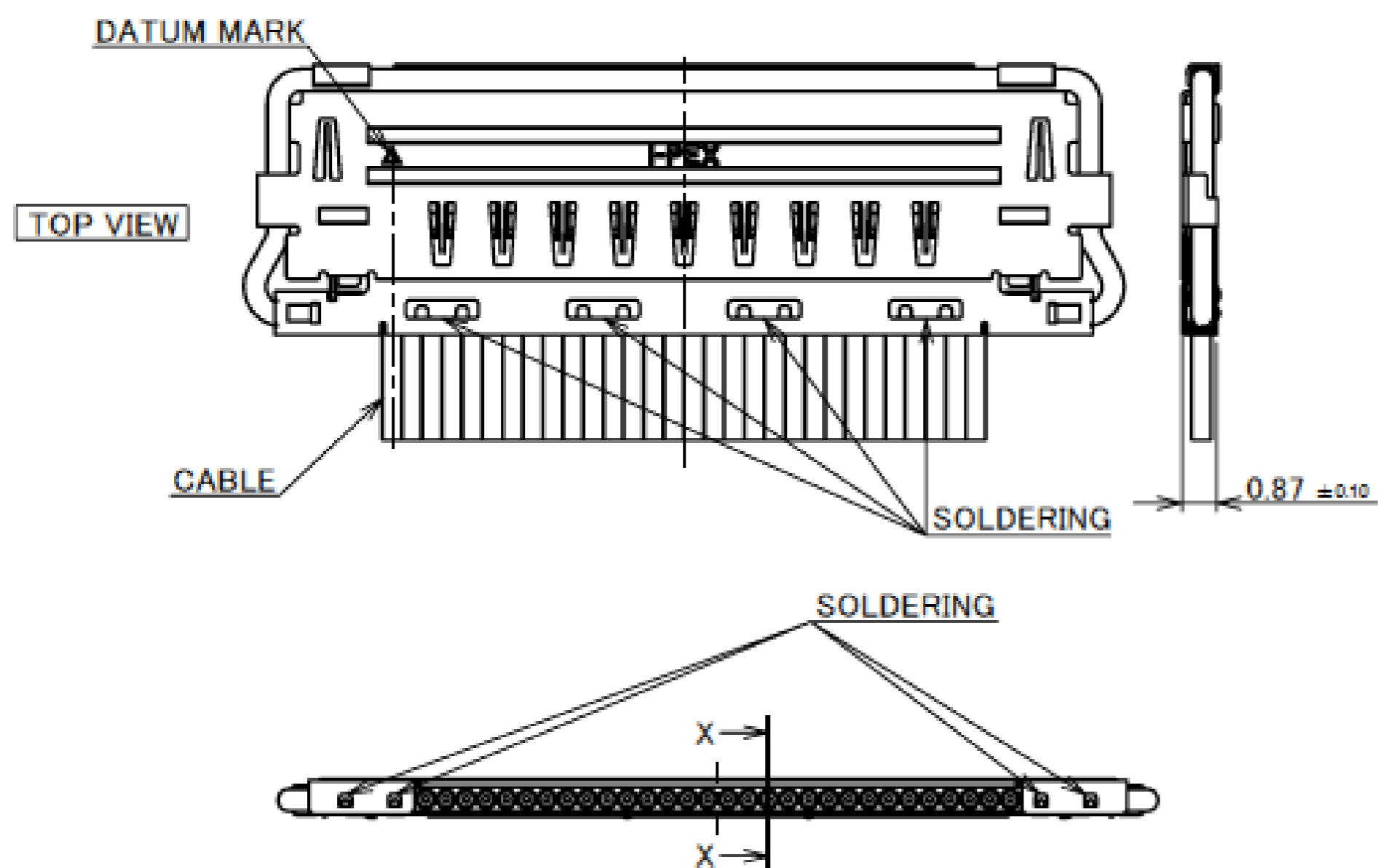
Recommended P/N		20846-0**T-01				
PART NO.	Pos.	A	B	C	D	E
20846-020T-0#	20	15.30	9.50	10.30	12.56	16.85
20846-030T-0#	30	20.30	14.50	15.30	17.56	21.85
20846-040T-0#	40	25.40	19.50	20.30	22.56	26.85



※1: THE BEND DIMENSIONS MAY VARY BASED ON THE SIZE AND QUANTITY OF CABLES. PLEASE CONFIRM THE MINIMUM BENDING RADIUS WITH I-PEX OR THE HARNESS MANUFACTURER.

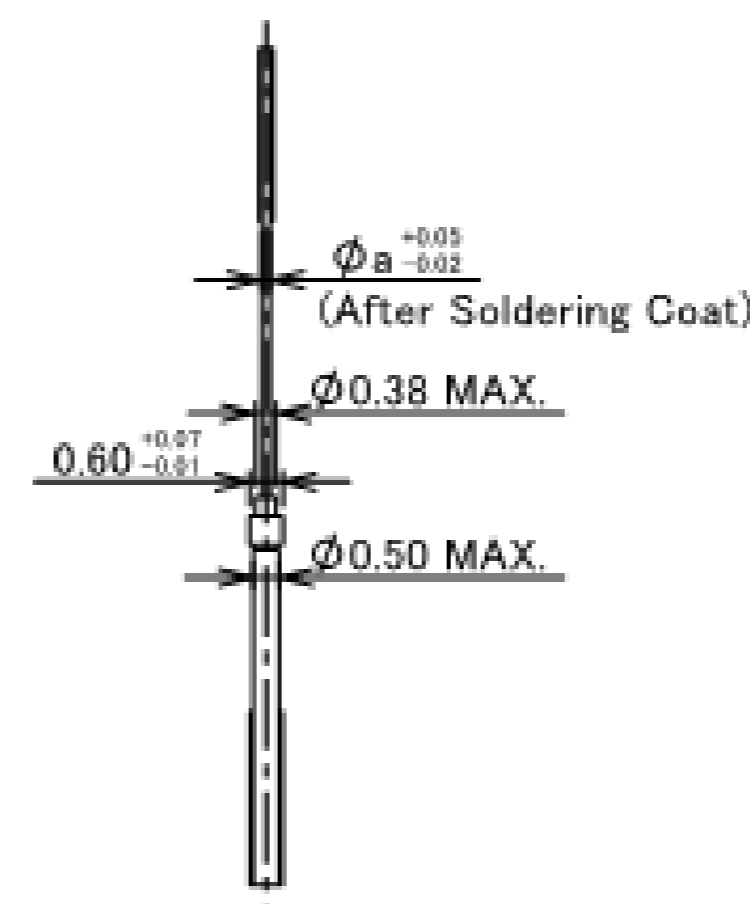
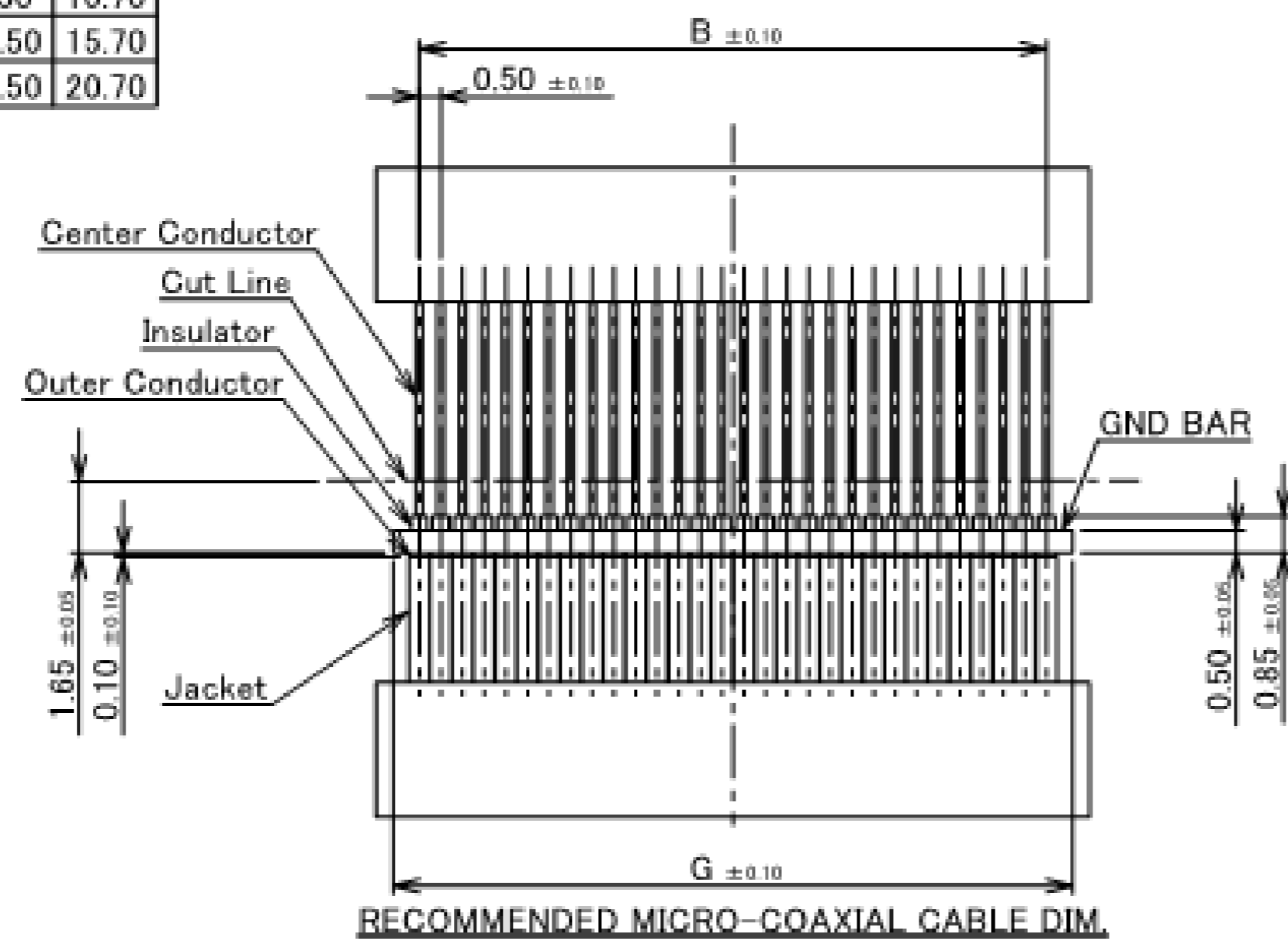
PART NO.	CONTACT FINISH
20846-0**T-01	CONTACT & SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
20846-0**T-02	CONTACT AREA : Au 0.38 μm MIN. OVER Ni 1.27 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.

NO	DISCRIPTION	MATERIAL	FINISH , REMARKS
6	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
5	LOCK BAR	SUS	-
4	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
3	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0. BLACK



Rev.13

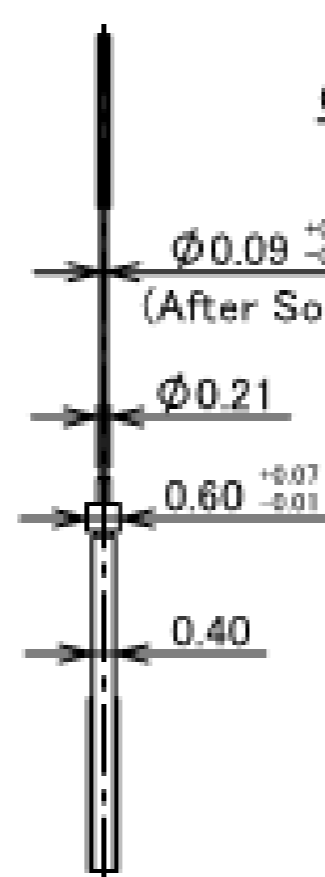
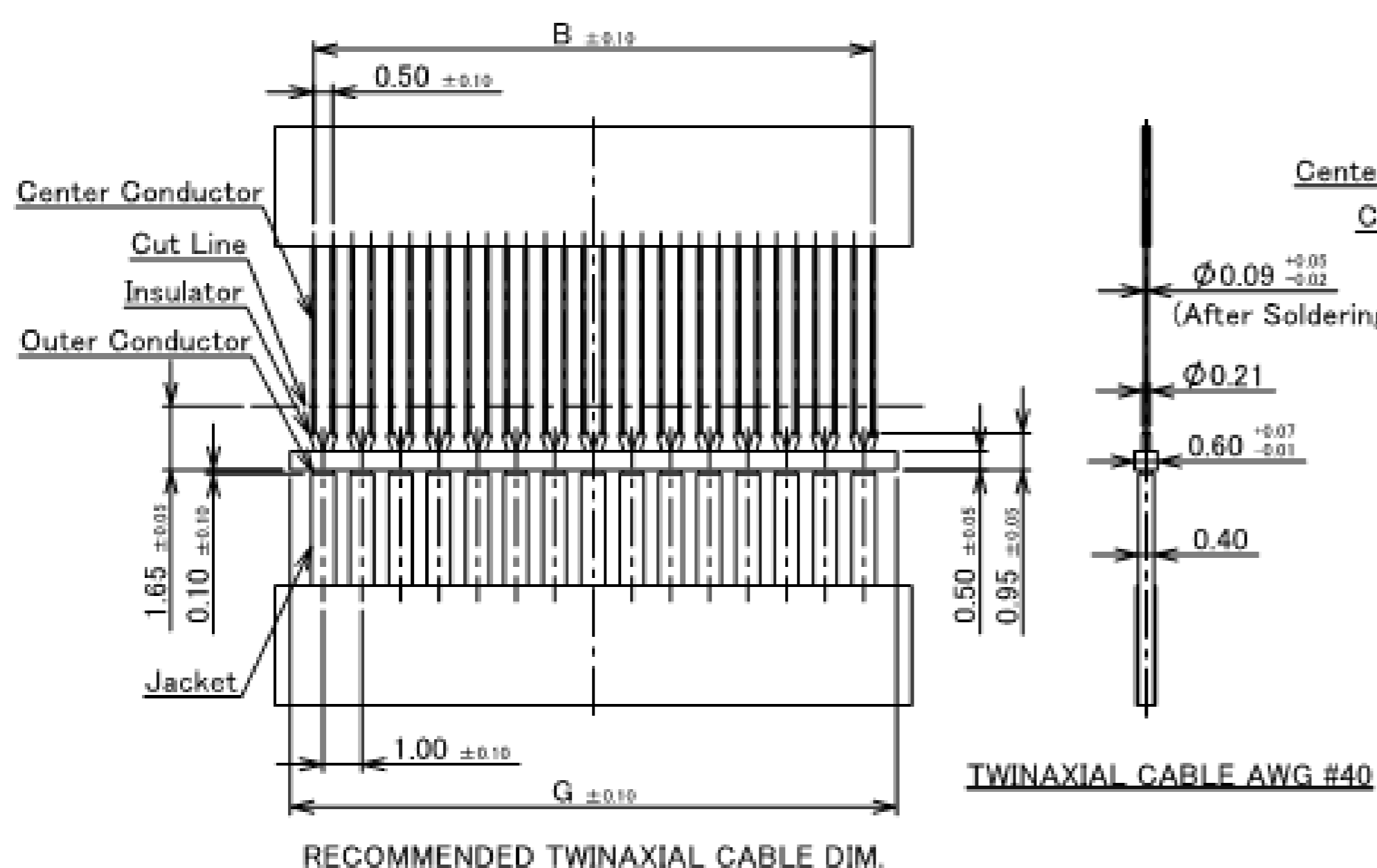
PART NO.	Pos.	B	G
20846-020T-0#	20	9.50	10.70
20846-030T-0#	30	14.50	15.70
20846-040T-0#	40	19.50	20.70



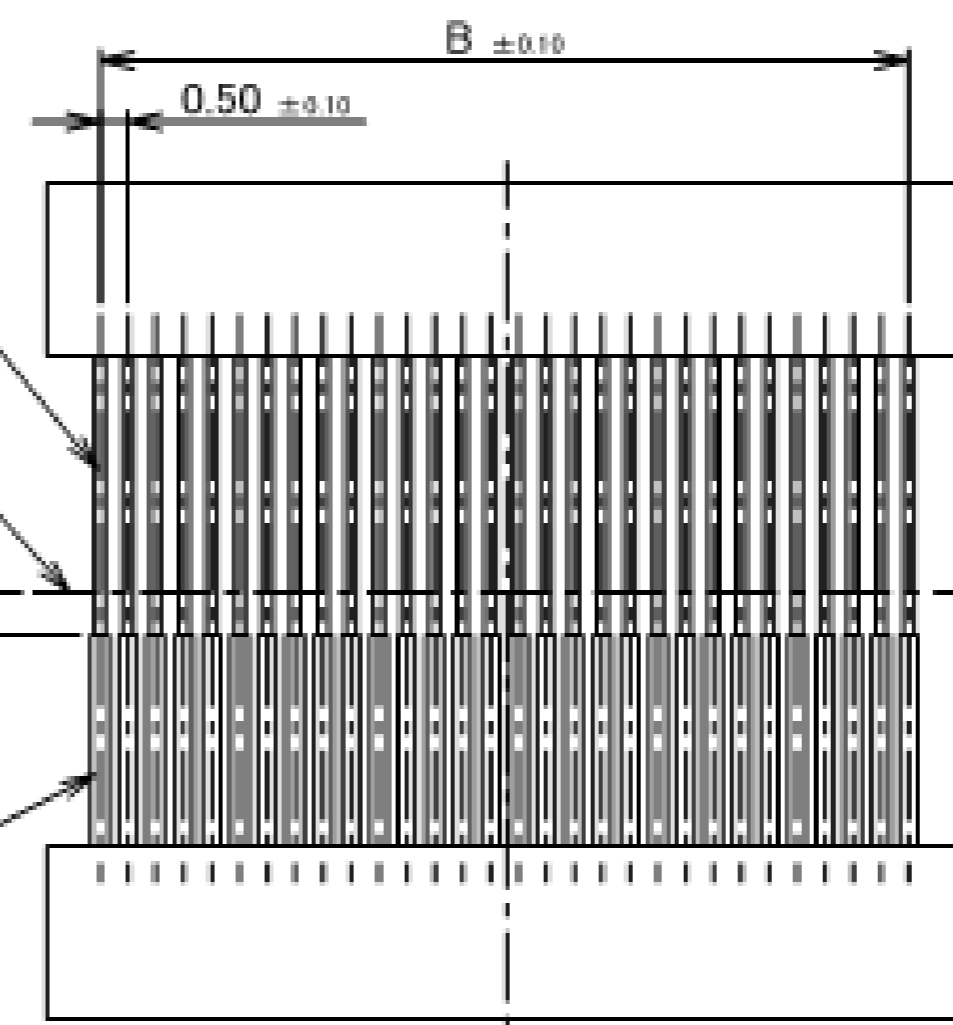
MICRO-COAXIAL CABLE DIMENSION

AWG	a
#36	0.15
#38	0.12
#40	0.09
#42	0.075
#44	0.063

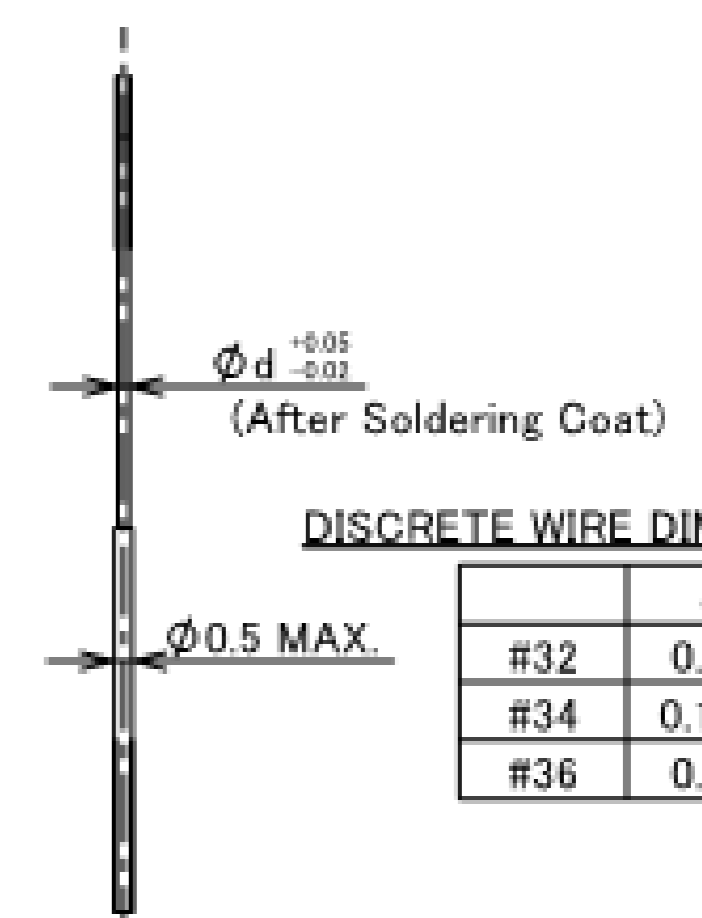
MICRO-COAXIAL CABLE AWG #\*\*



TWINAXIAL CABLE AWG #40



RECOMMENDED DISCRETE WIRE DIM.



DISCRETE WIRE DIMENSION

AWG	d
#32	0.24
#34	0.192
#36	0.15

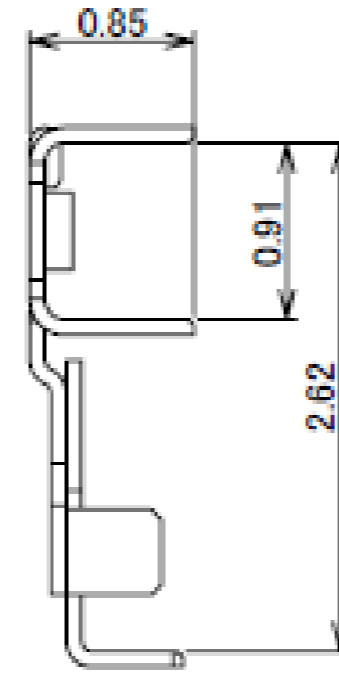
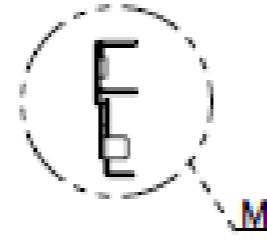
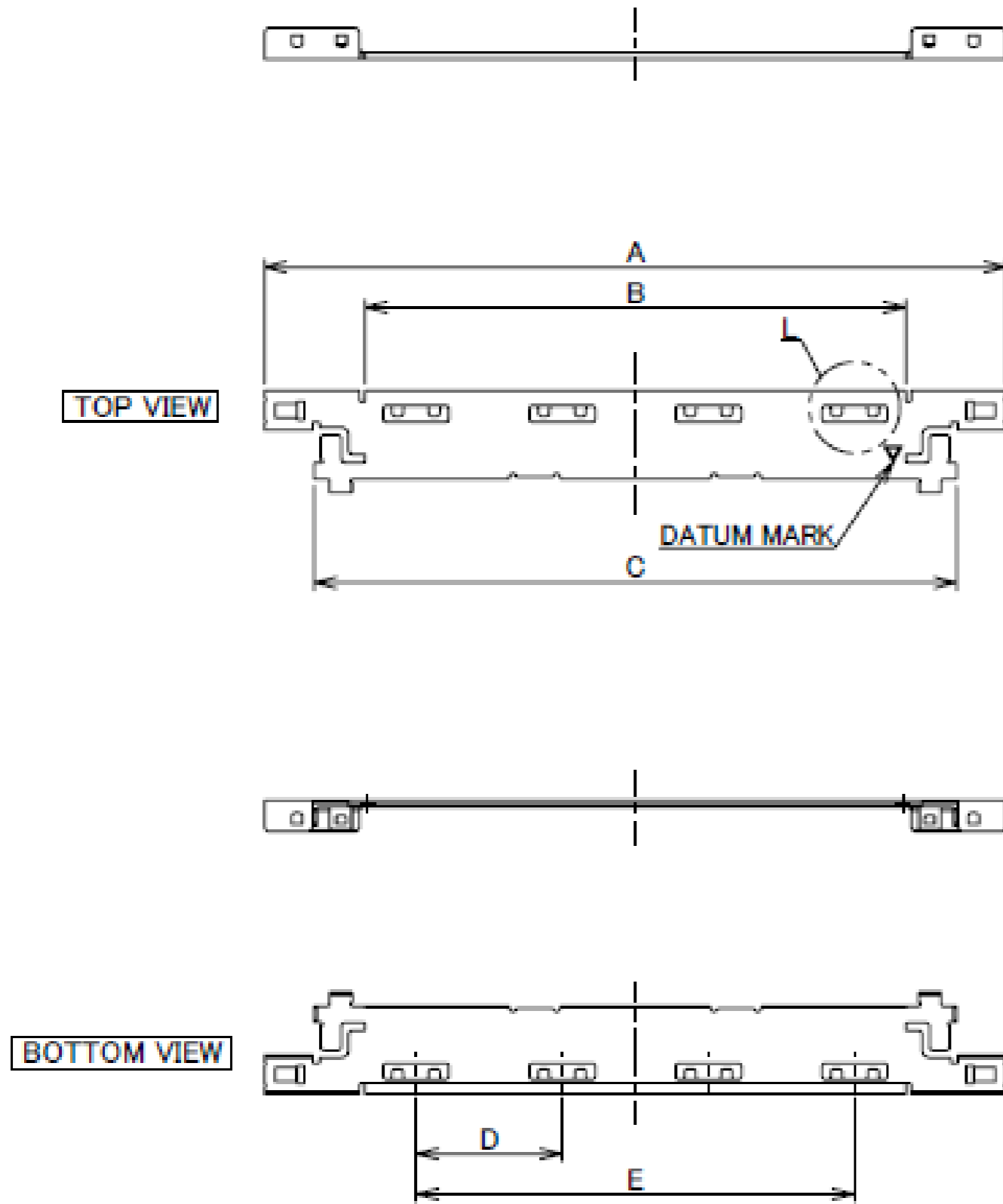
DISCRETE WIRE AWG #\*\*

Rev.14

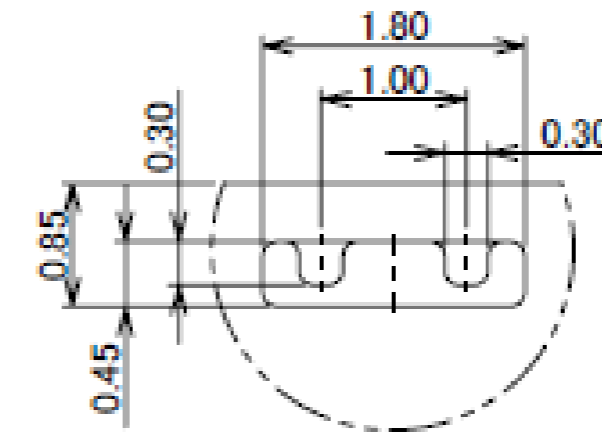
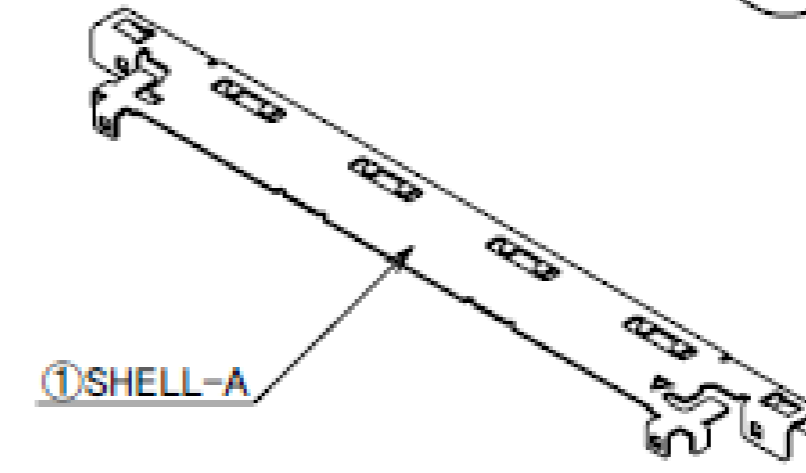


# Plug Shell-A

Recommended P/N		3427-0**1				
PART No.	Pos.	A	B	C	D	E
3427-0201	20	15.30	9.78	12.56	3.00	6.00
3427-0301	30	20.30	14.78	17.56	4.00	12.00
3427-0401	40	25.40	19.88	22.56	4.00	16.00



VIEW M  
(S=20/1)



DETAIL L  
(S=15/1)

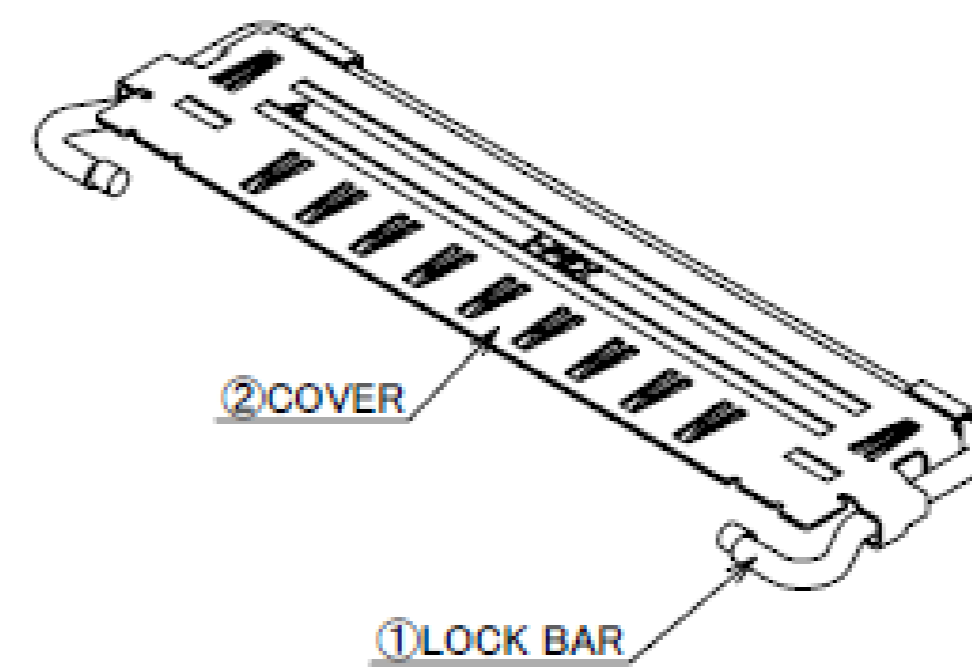
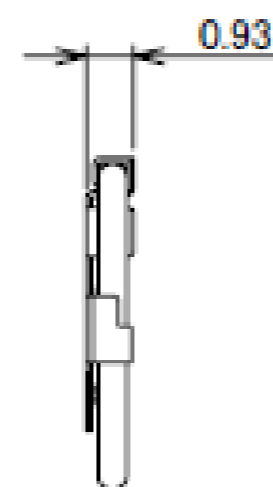
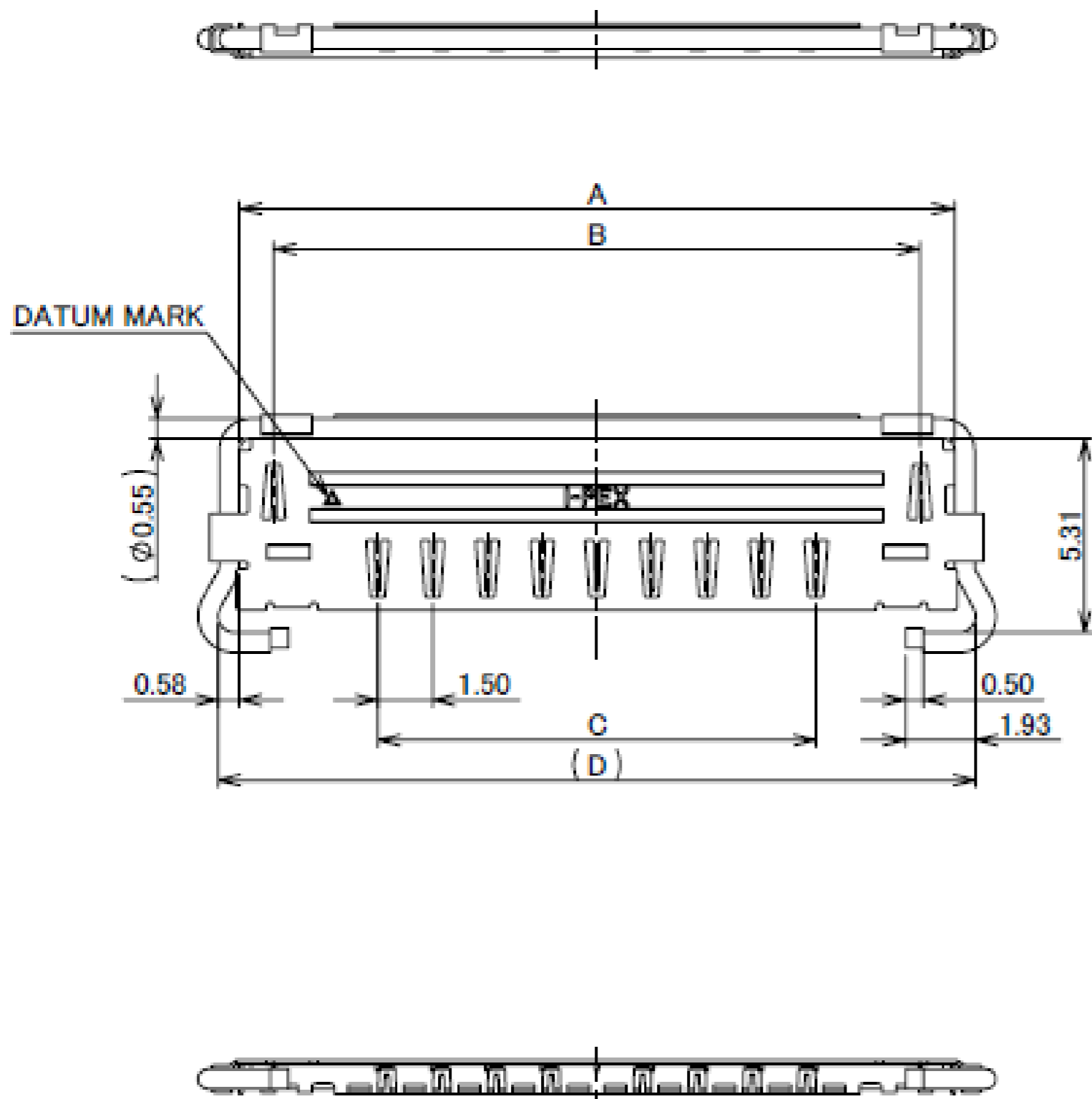
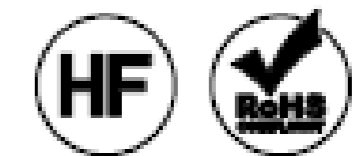
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
1	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.

Rev.3

# Plug Lock Bar Assembly

Recommended P/N		20848-0**T-01				
PART NO.	Pos.	A	B	C	D	E
20848-020T-01	20	14.59	12.70	7.50	15.75	7.00
20848-030T-01	30	19.59	17.70	12.00	20.75	12.00
20848-040T-01	40	24.59	22.70	18.00	25.75	17.00

20848-0\*\*T-01  
POS.



NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
2	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
1	LOCK BAR	SUS φ0.55	-

Rev.6

# 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.

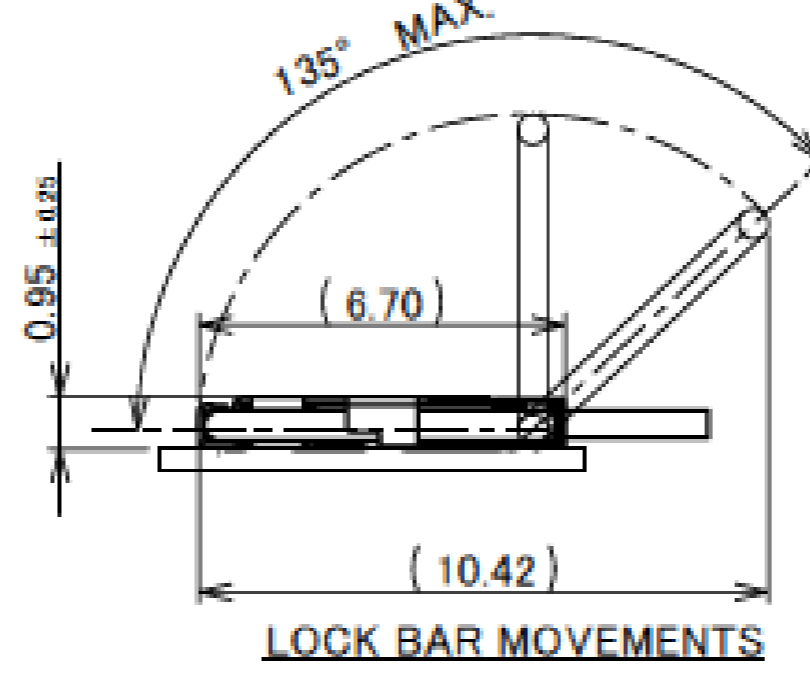
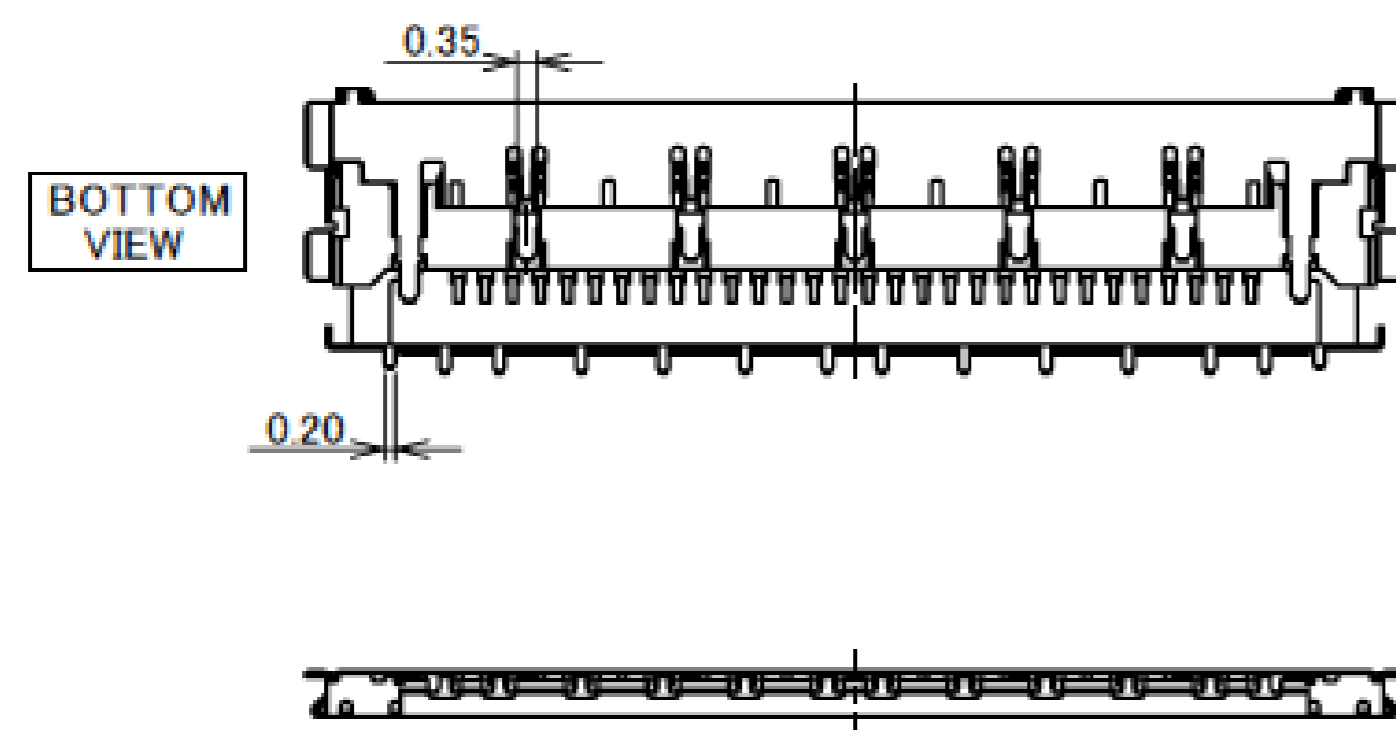
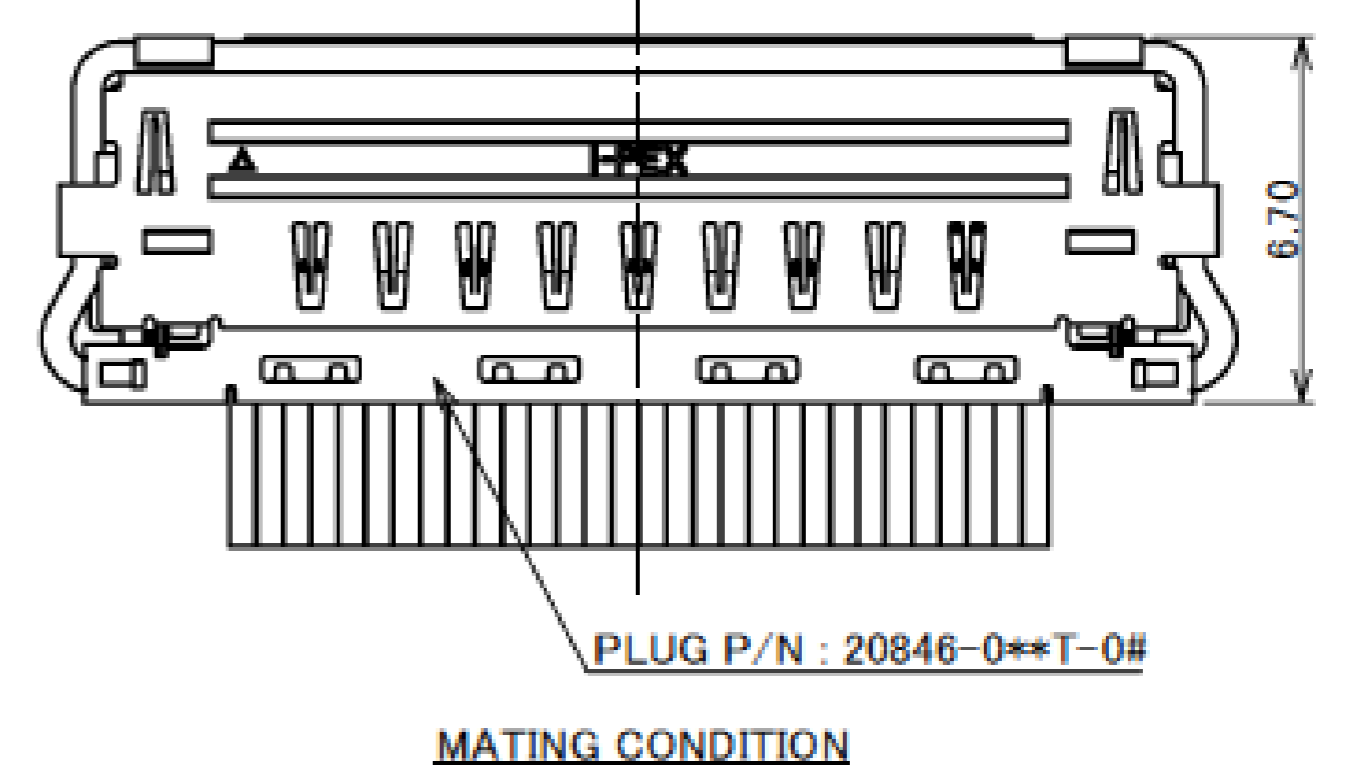
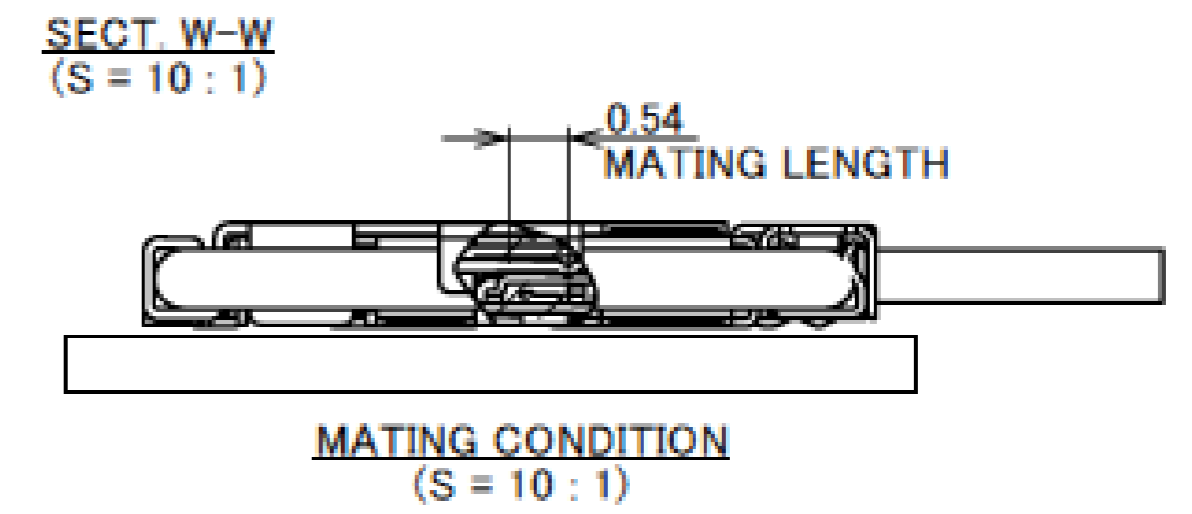
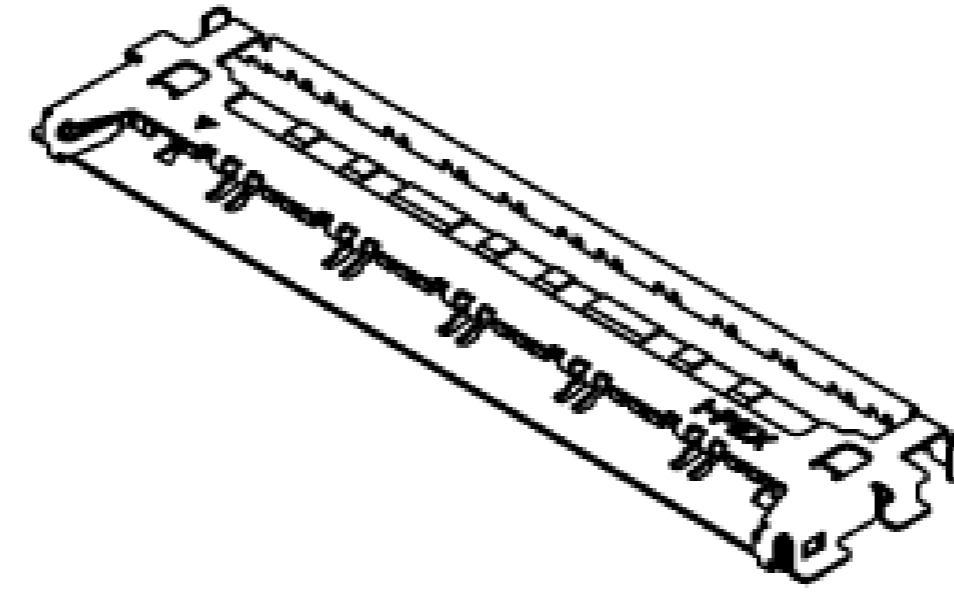
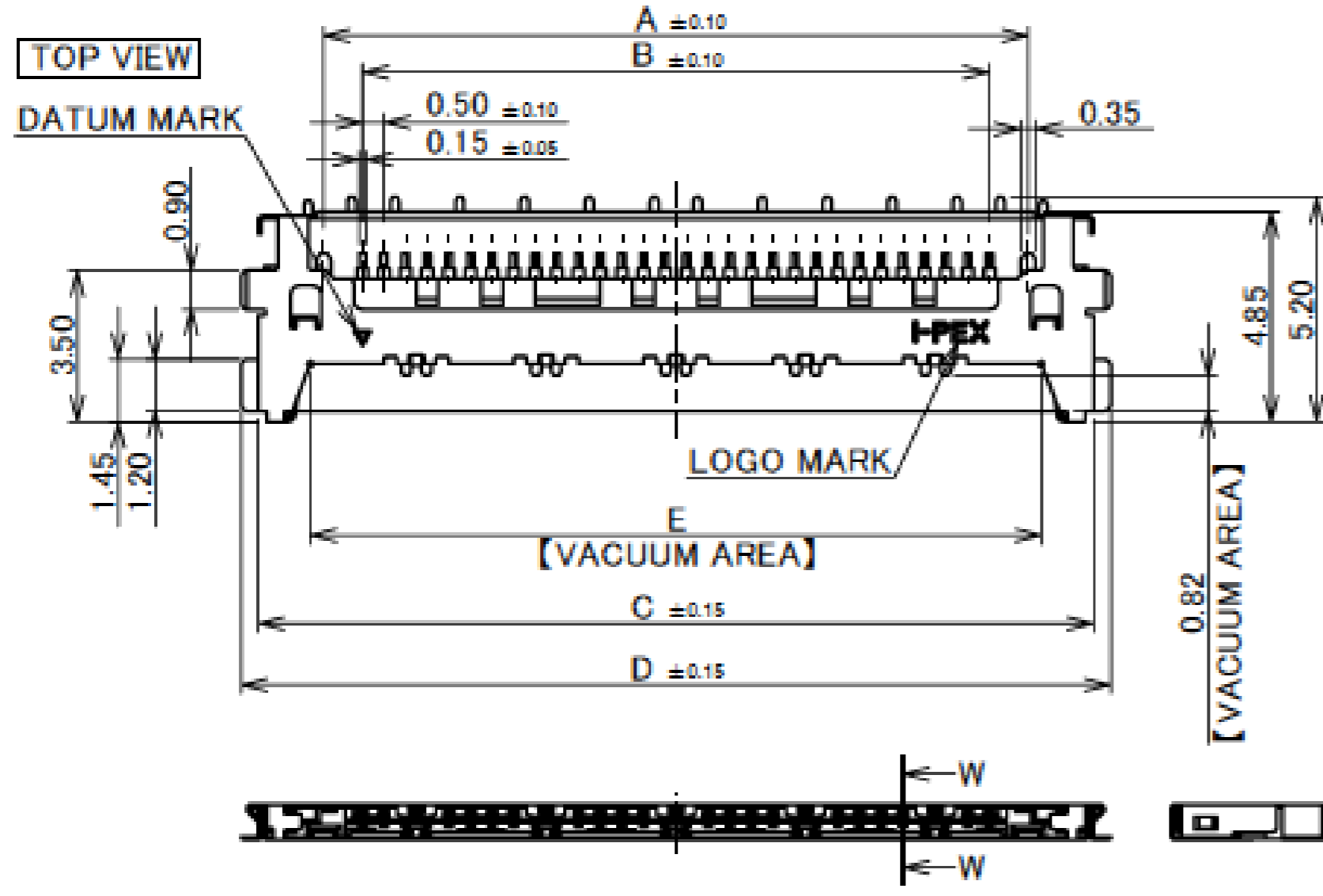
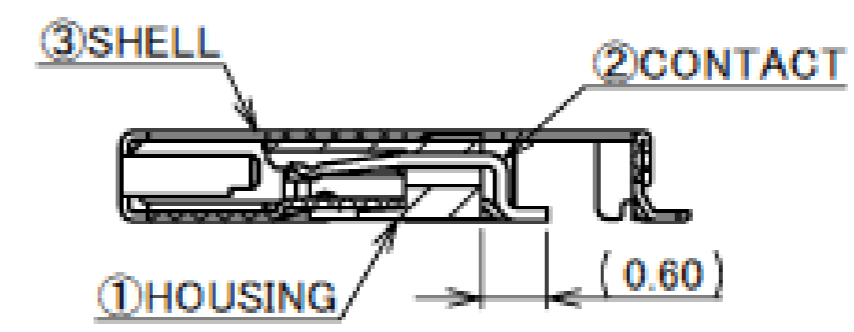
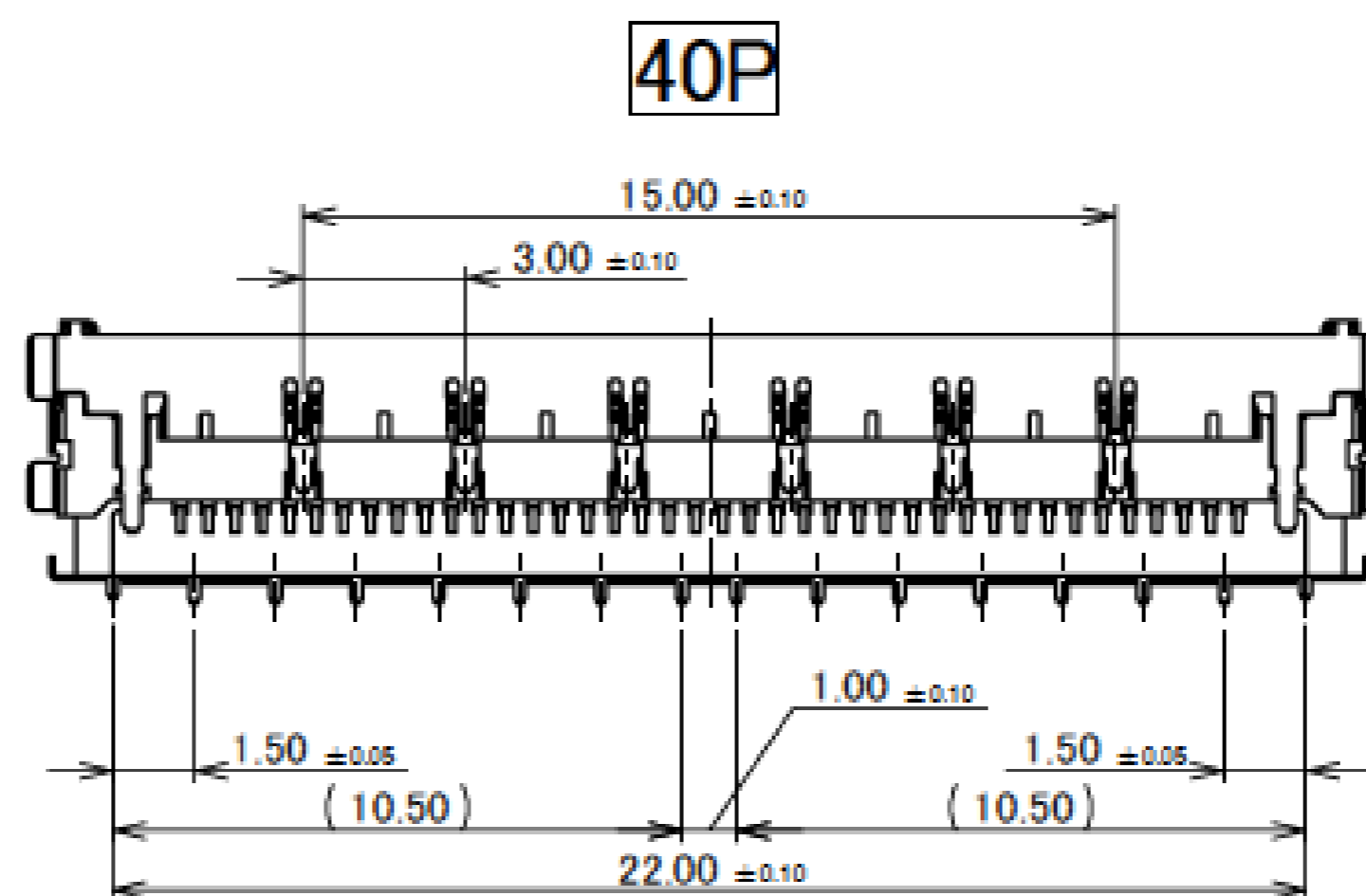
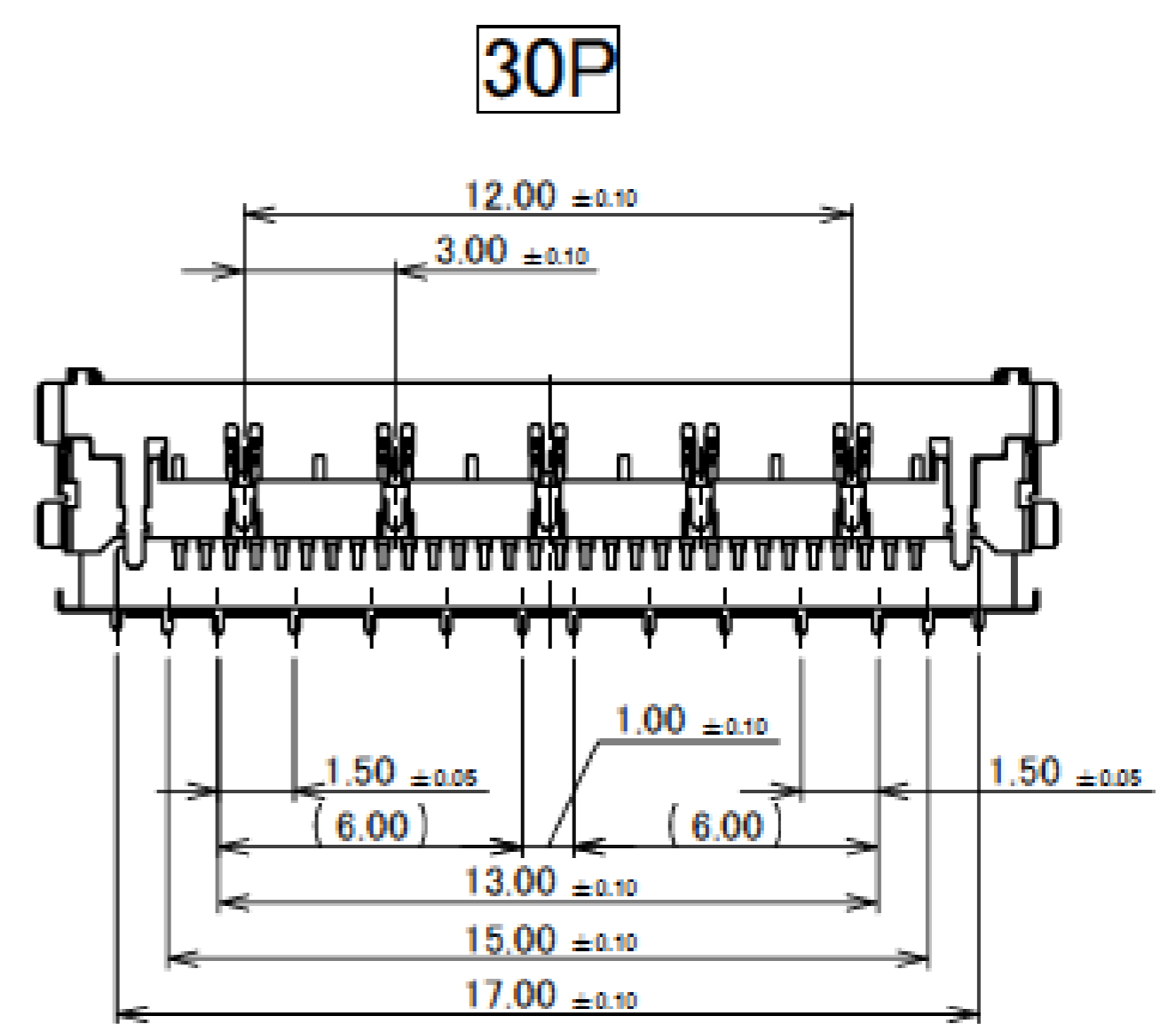
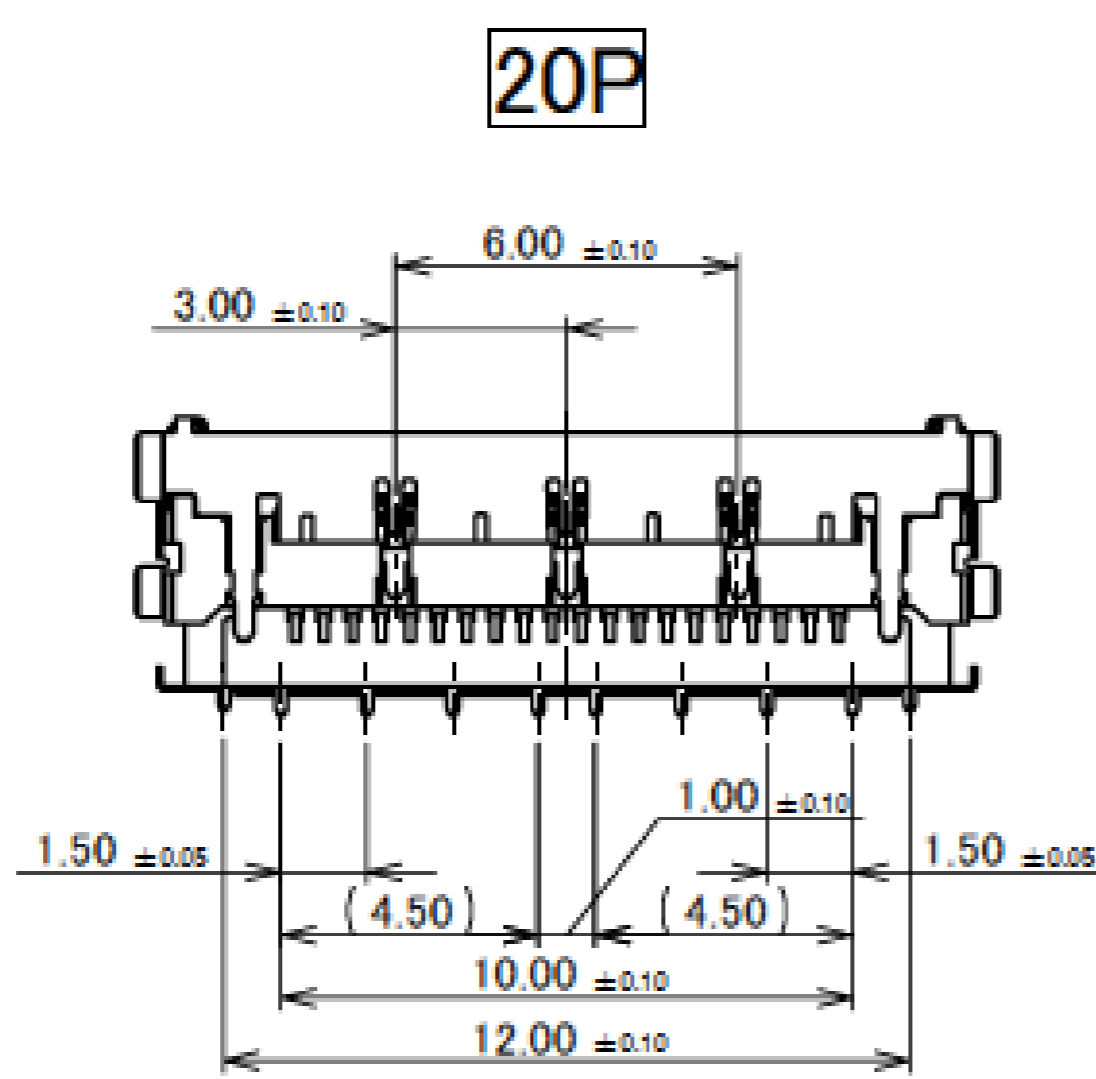


TABLE 1

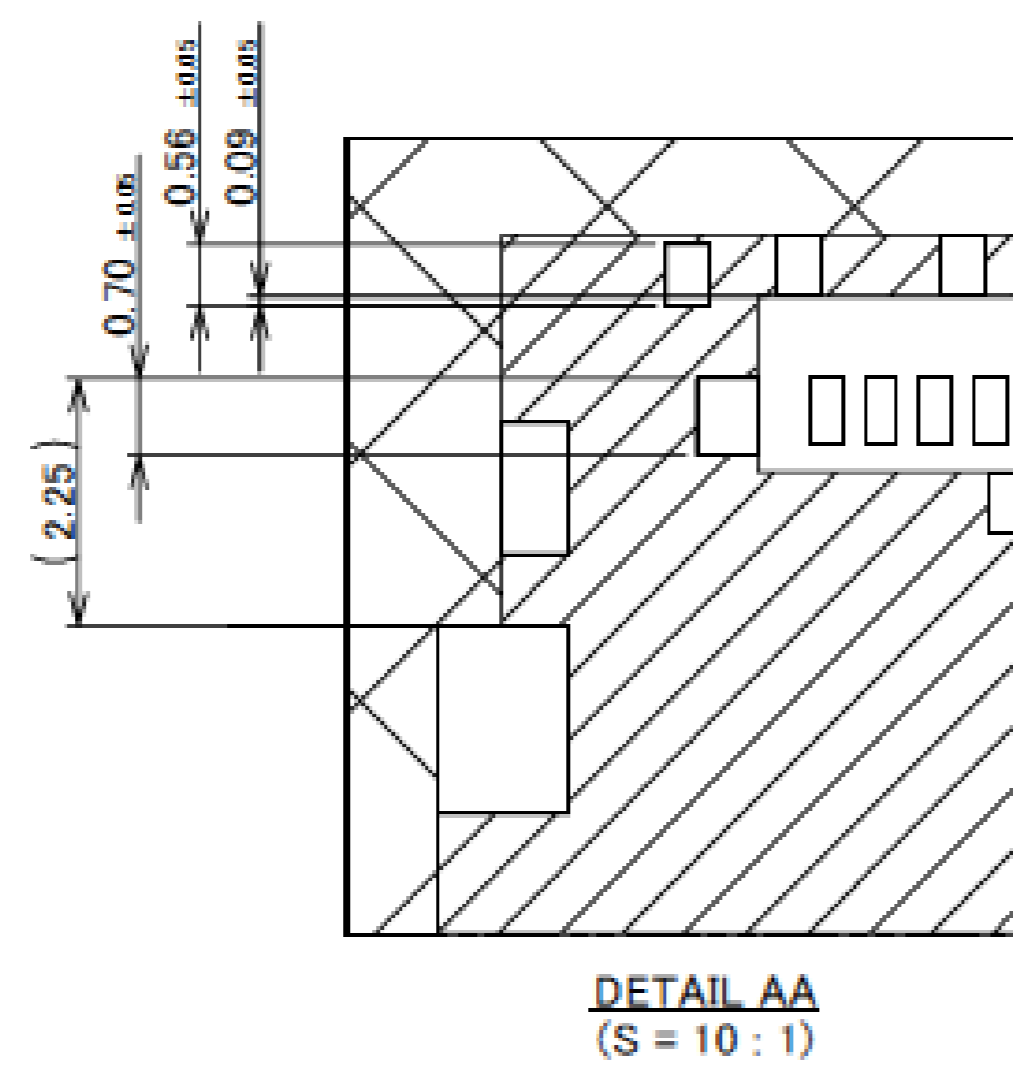
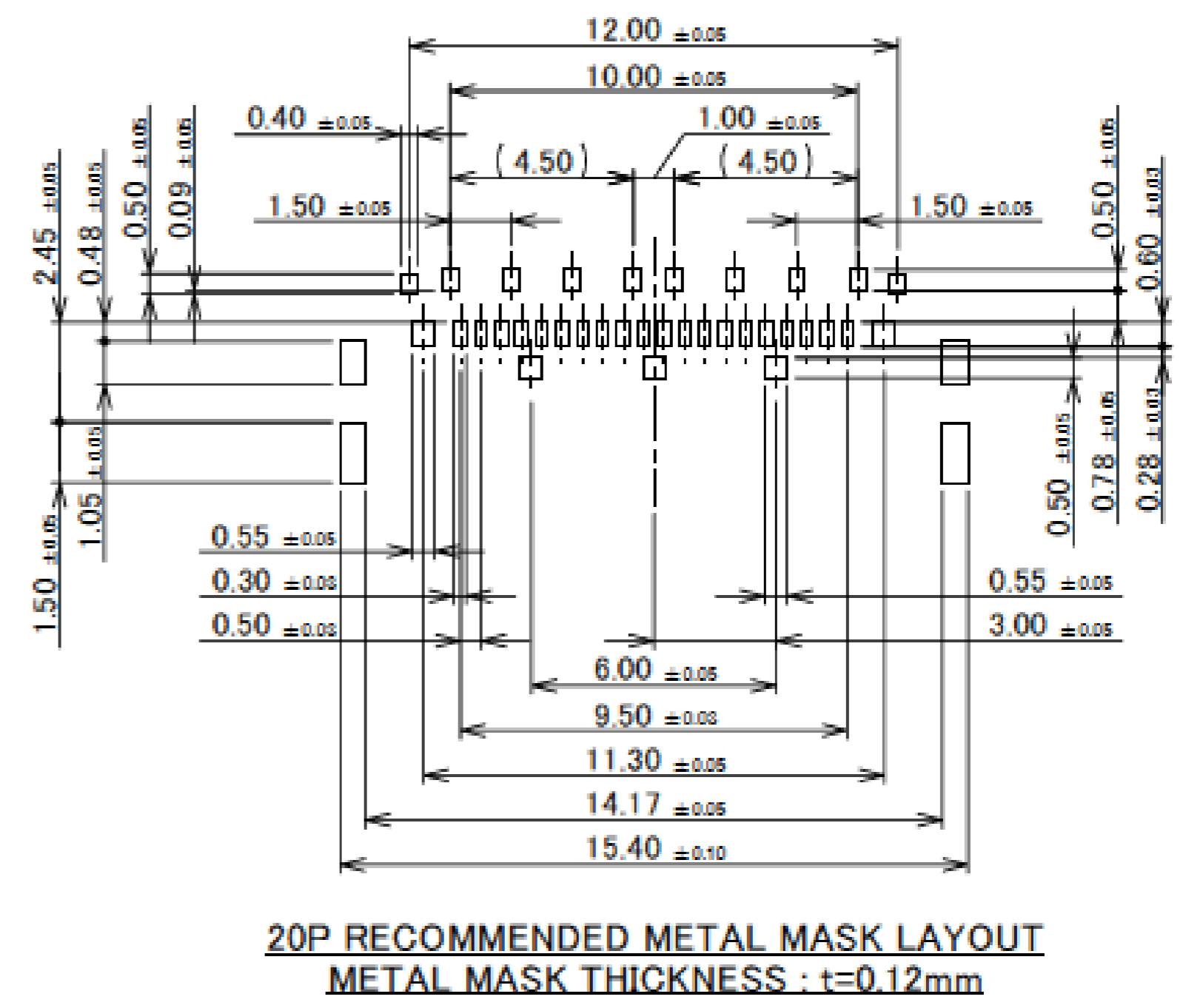
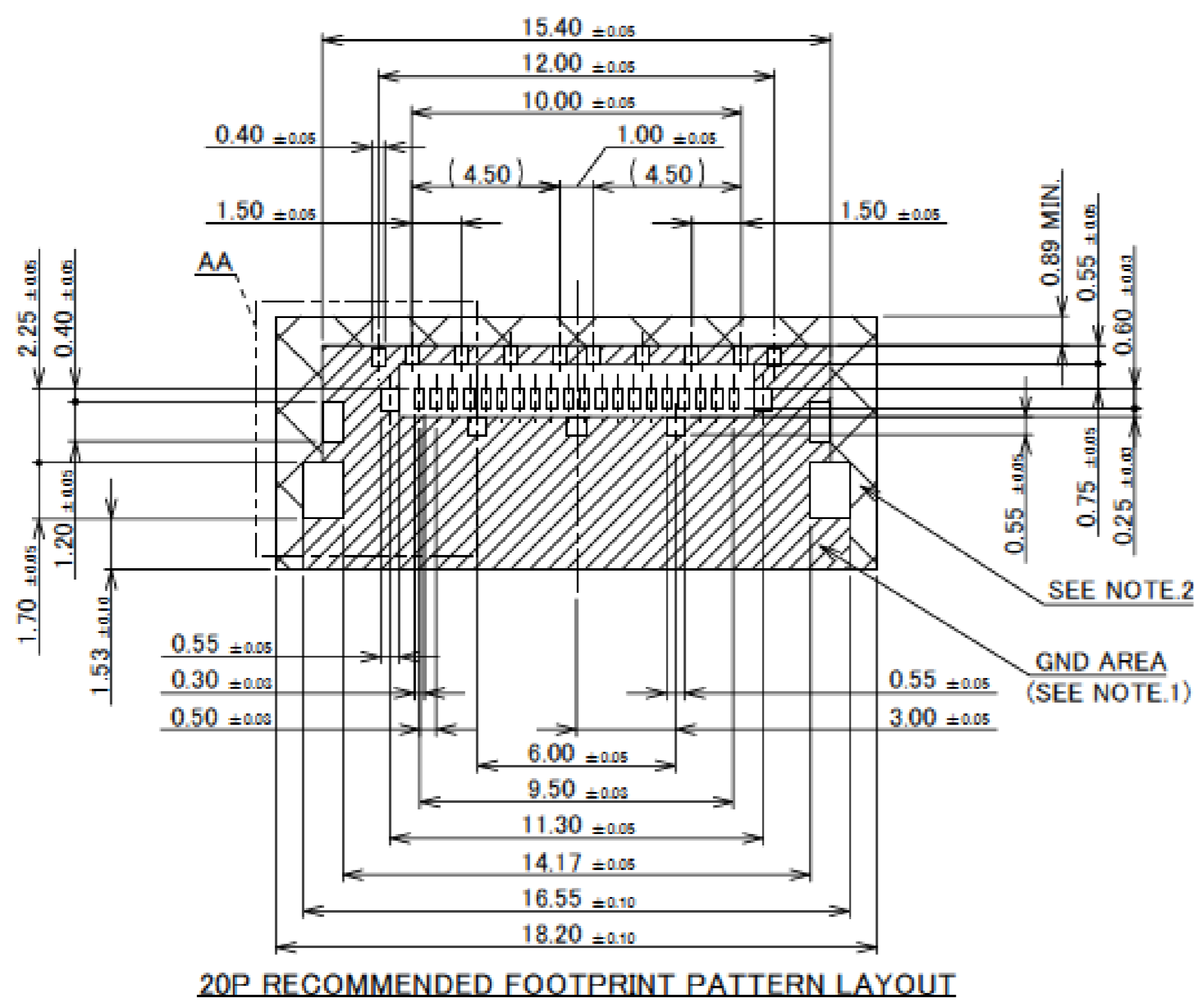
PART NO.	CONTACT FINISH	SHELL FINISH	
20849-0**E-01	CONTACT & SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.	ALL OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.02 μm MIN.	
20849-0**E-02	CONTACT AREA : Au 0.38 μm MIN. OVER Ni 1.27 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.		
3 SHELL	PHOSPHOR BRONZE	SEE TABLE 1	
2 CONTACT	PHOSPHOR BRONZE	SEE TABLE 1	
1 HOUSING	LCP	UL94V-0, BLACK	
NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS

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

## BOTTOM VIEW

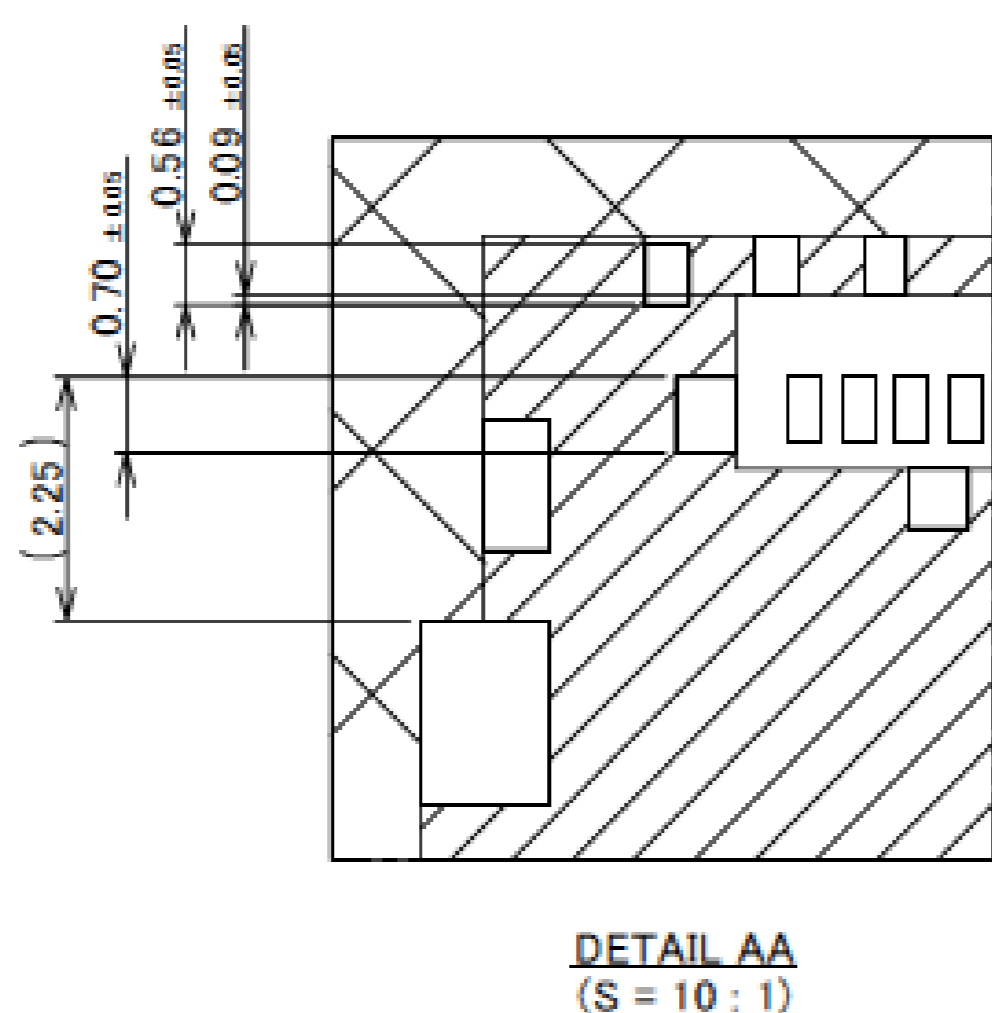
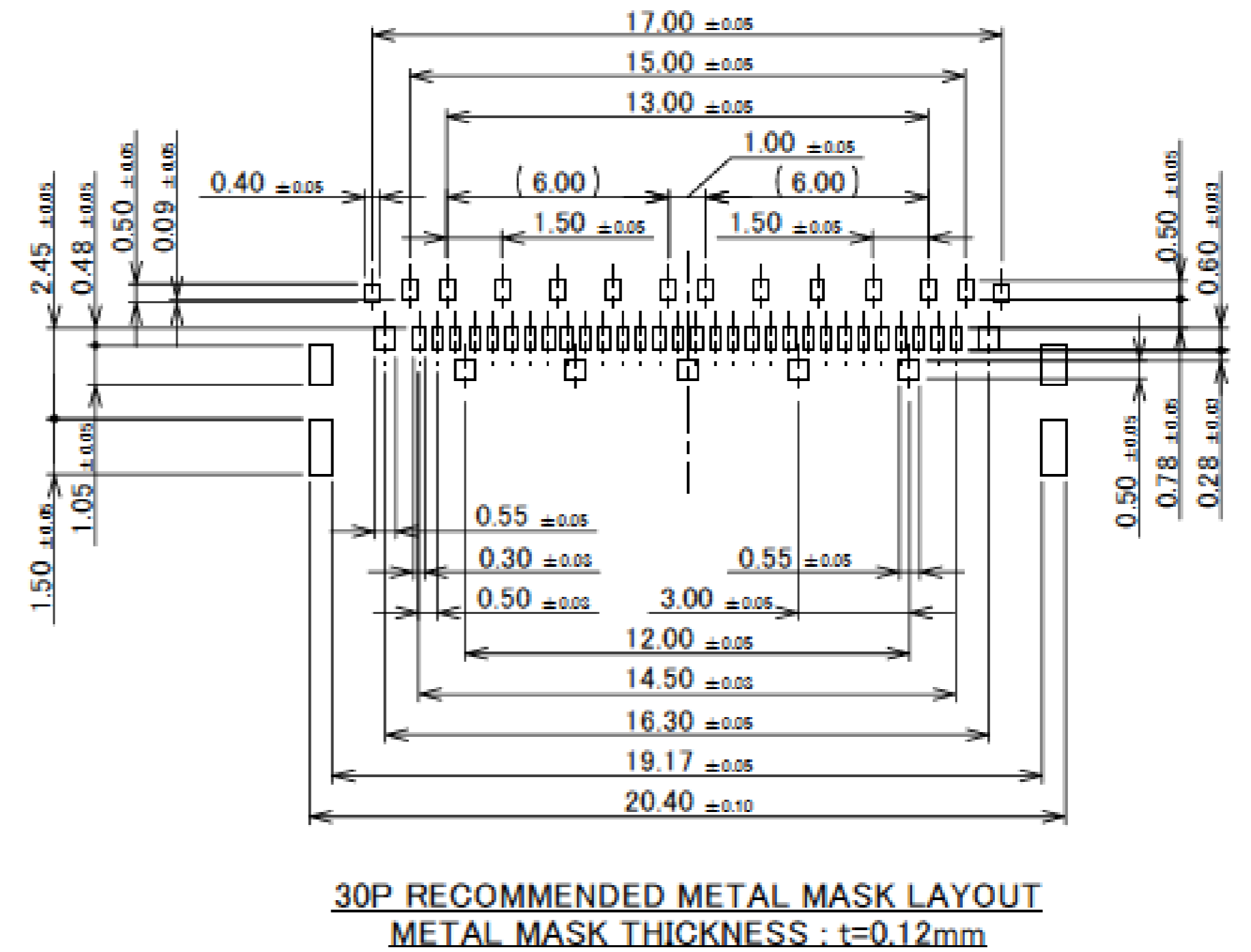
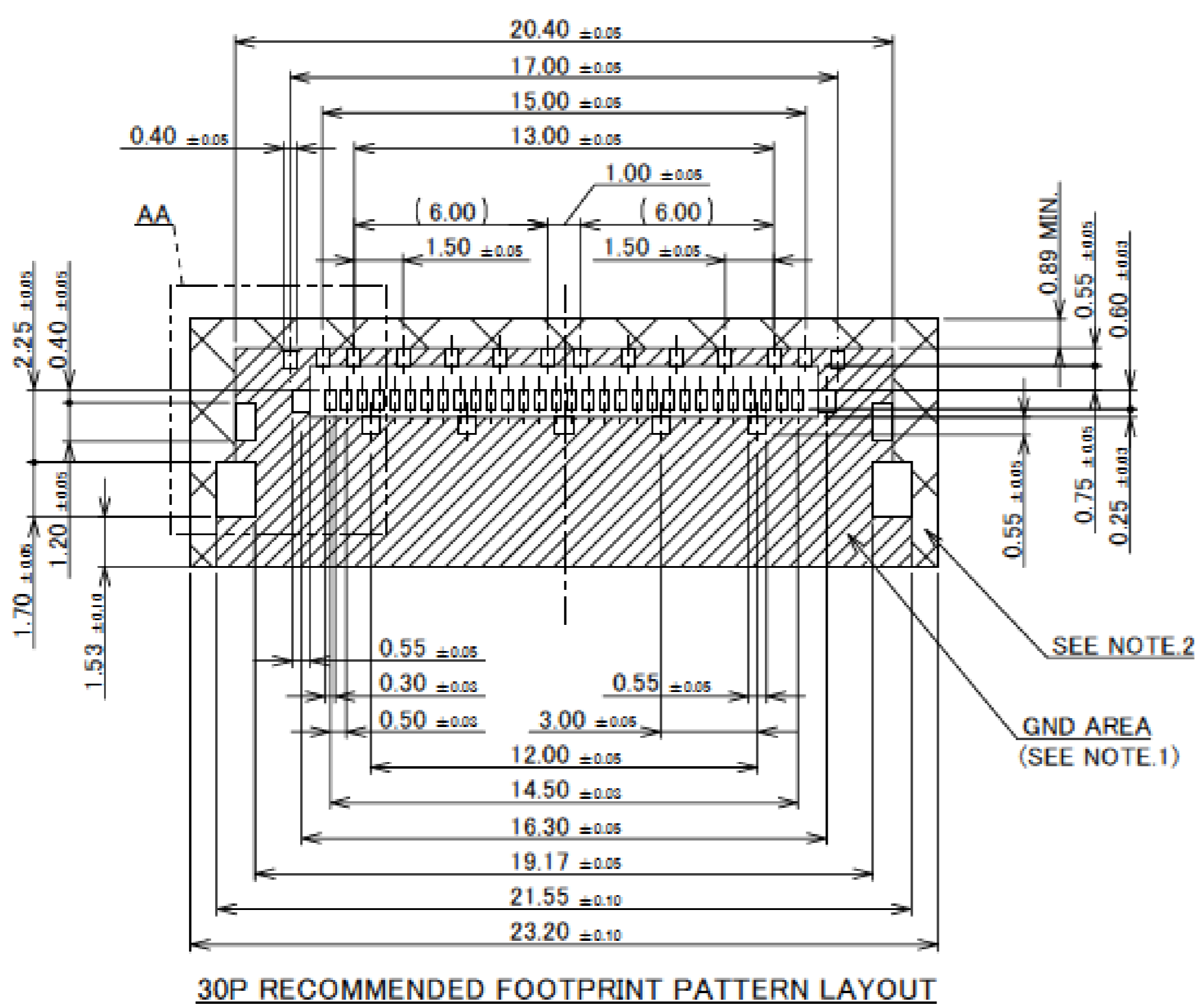


# Receptacle Assembly



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

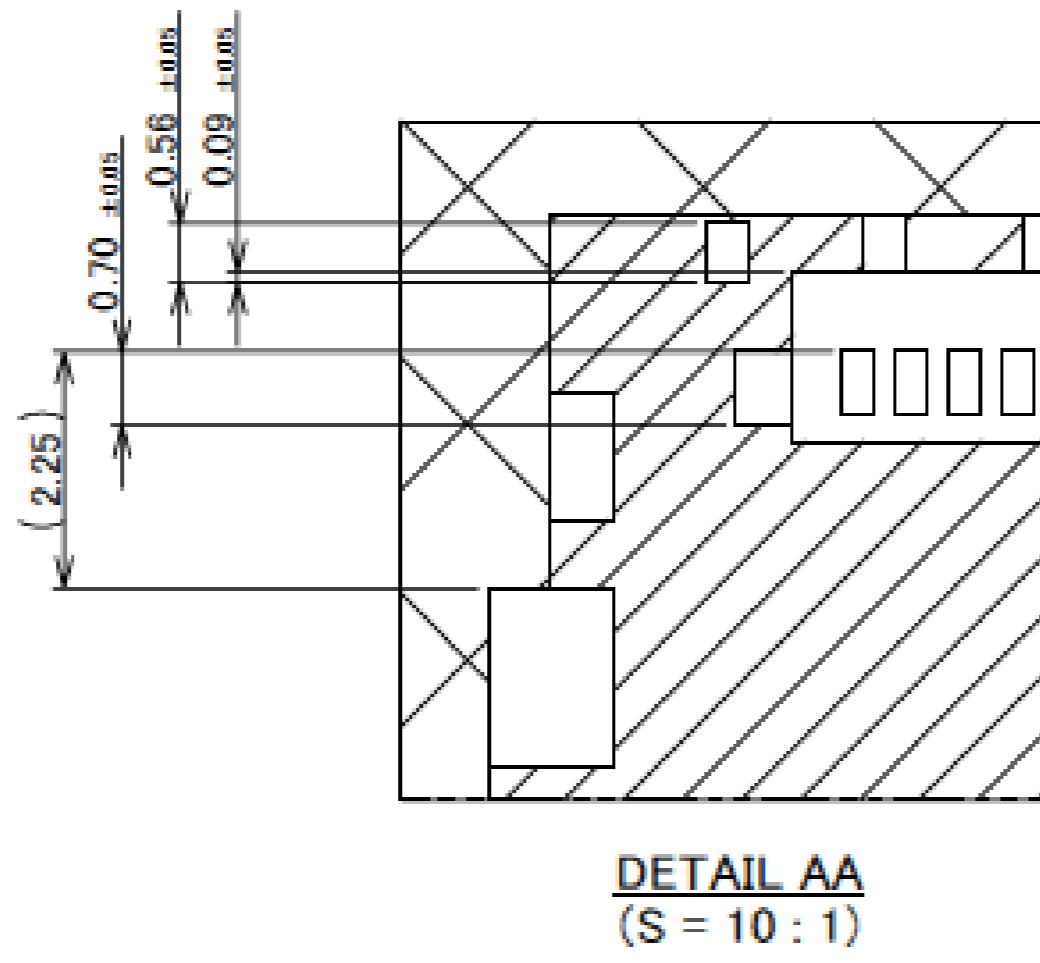
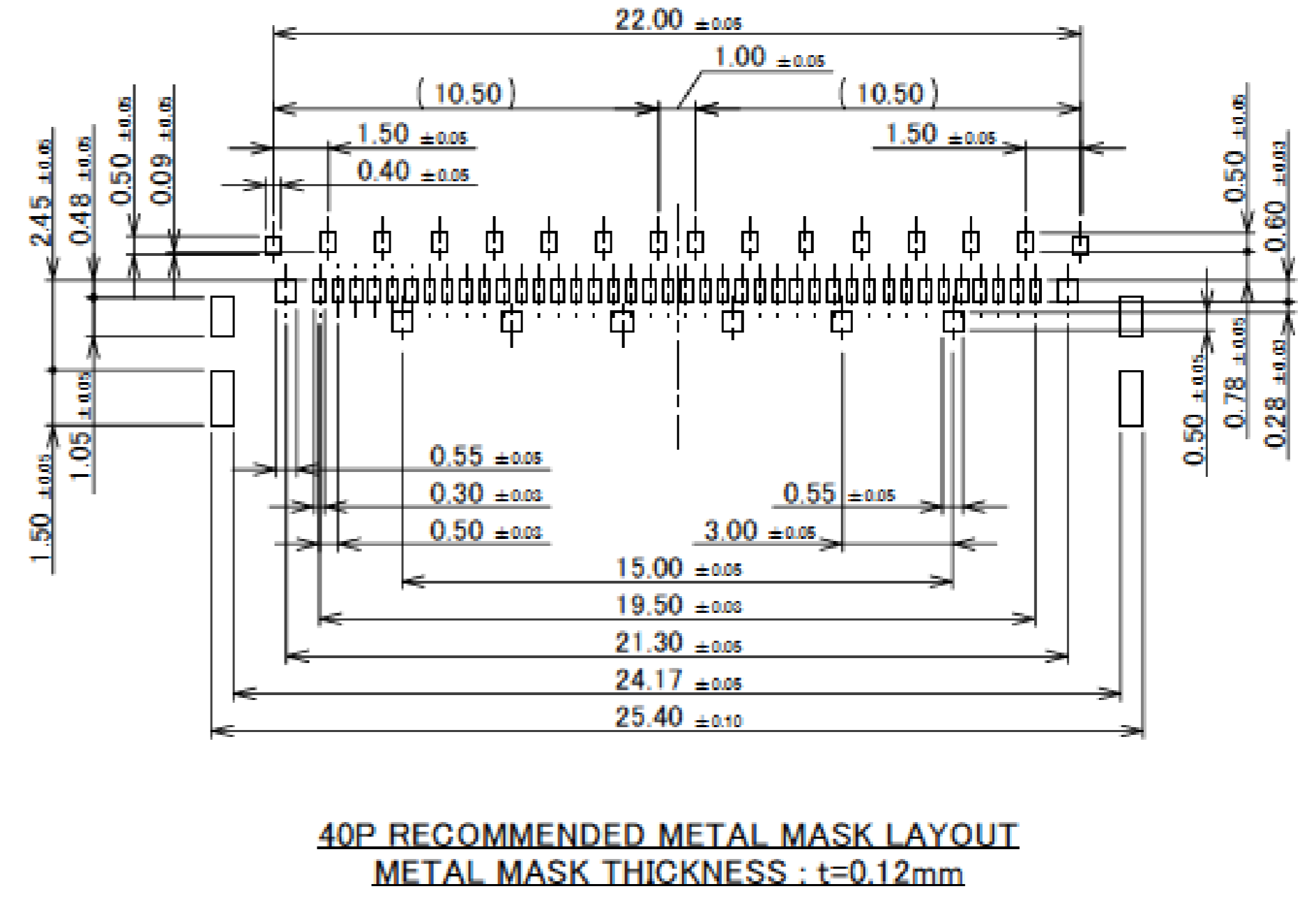
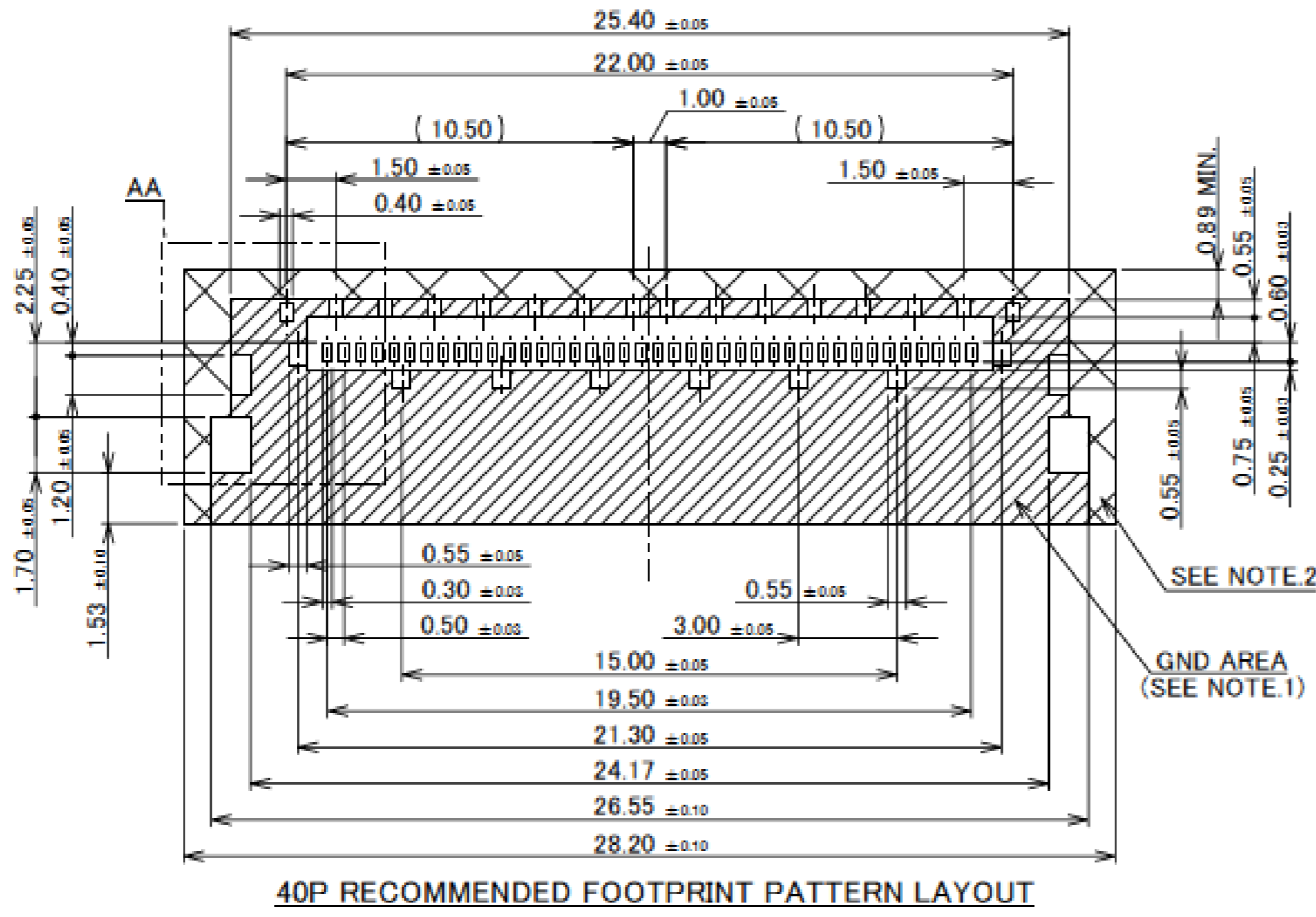
Rev.14



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

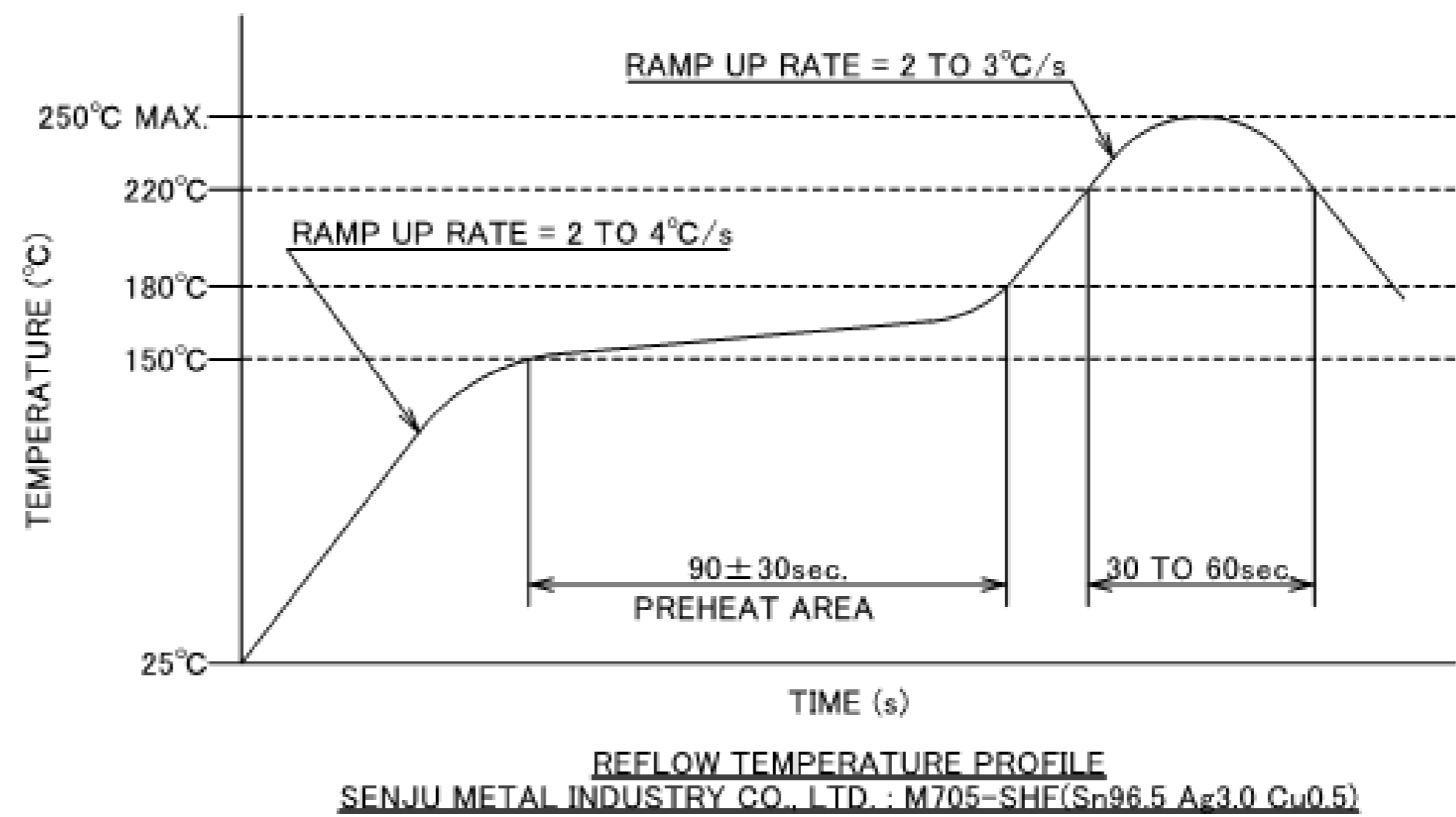
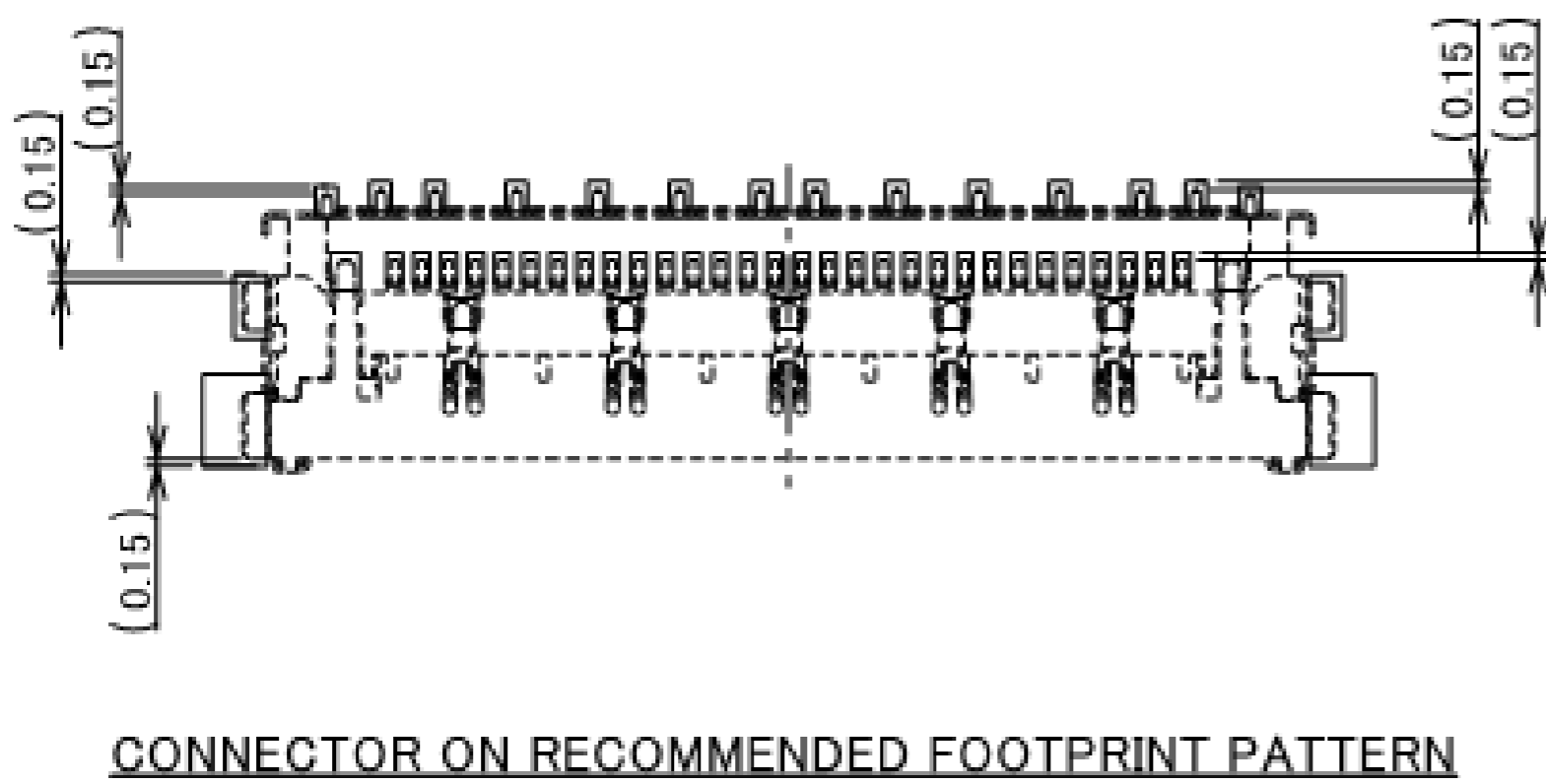
Rev.14

# Receptacle Assembly



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

Rev.14



# Receptacle Assembly

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

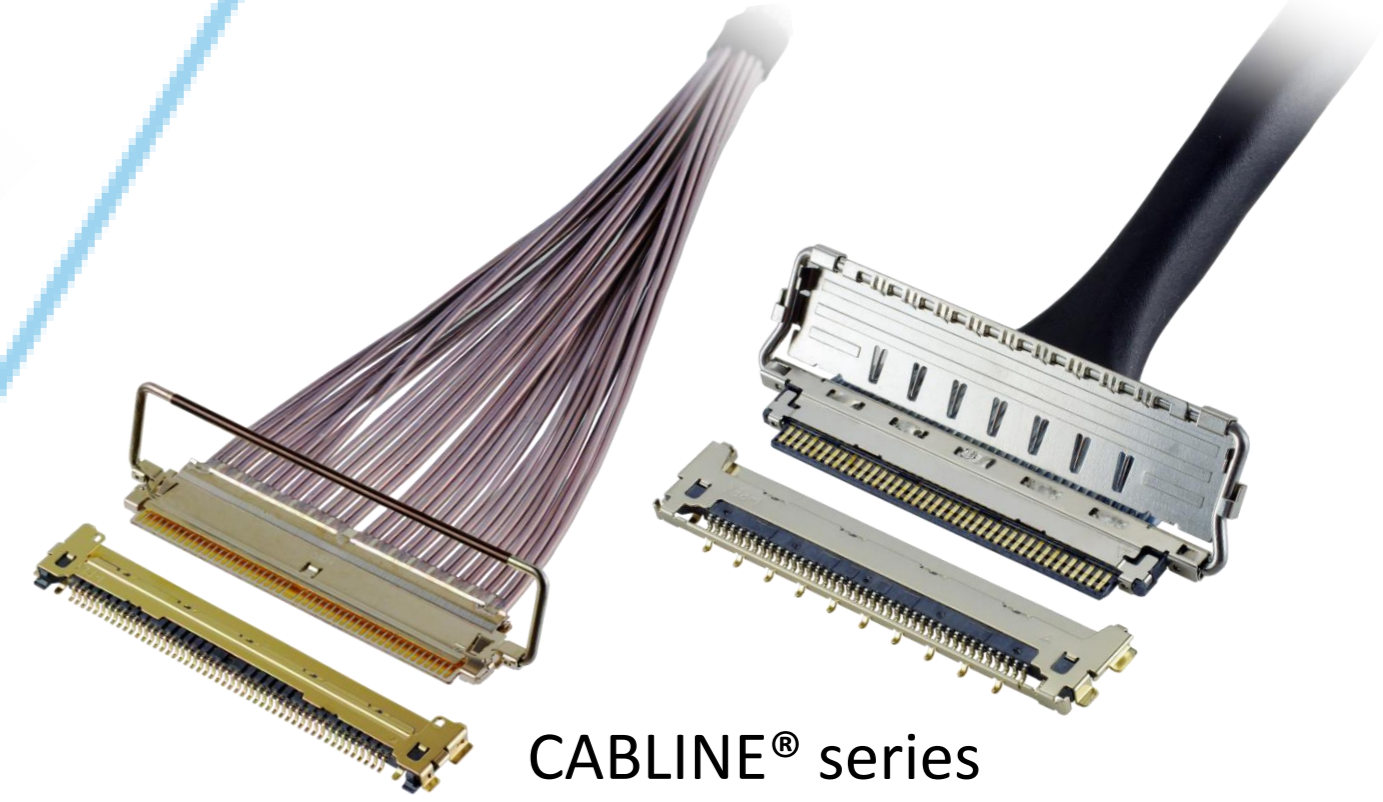
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG #44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG #36 , 34 , 32 TWINAXIAL CABLE : AWG #40
RATED VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATED 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 TO 378K (-40°C TO +105°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE	INITIAL : 140mohm MAX.(AWG #32) / AFTER TEST : <math>\triangleleft</math>140mohm 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 : <math>\triangleleft</math>140mohm 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***

Rev.15

# Custom Connectors Available

 RF Connectors

MHF® series



CABLIN® series

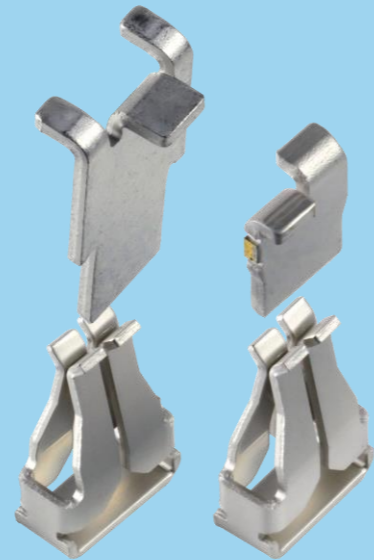


Micro-Coaxial/Twinaxial Connectors

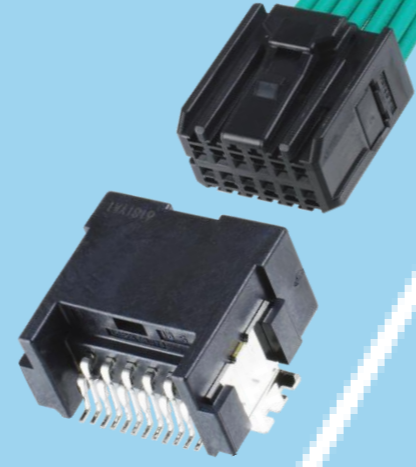


Wire-to-Board Connectors/Terminals

AP series



ISH® series



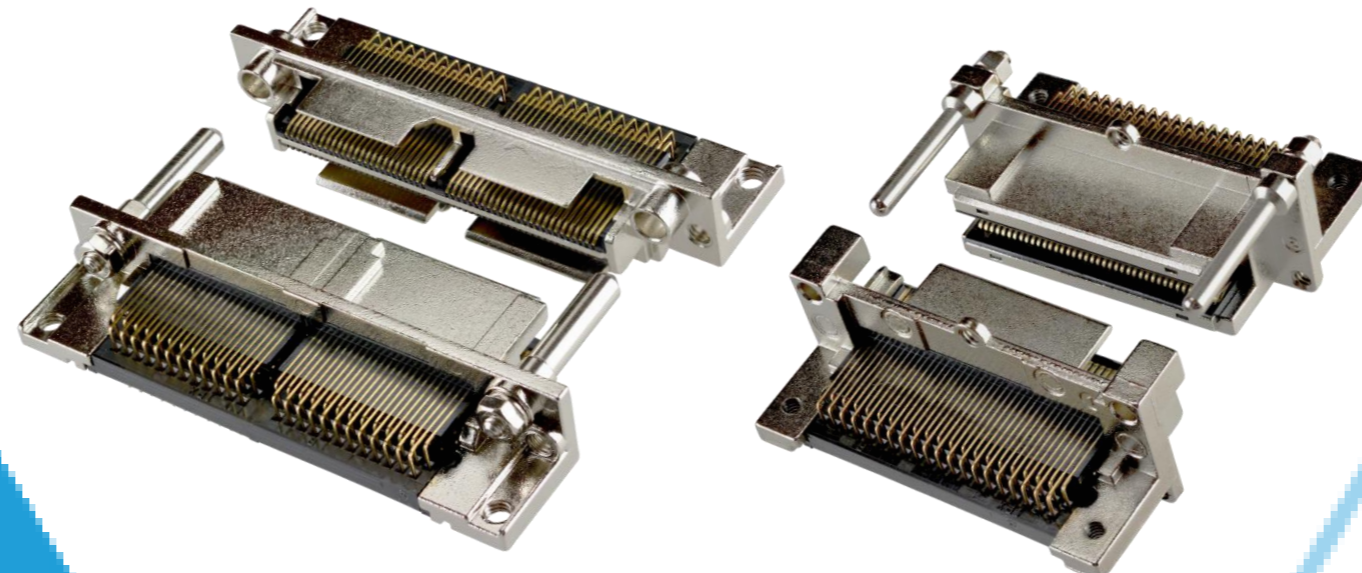
NOVASTACK® series



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.

[www.i-pex.com](http://www.i-pex.com)



# I-PEX

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