

CABLINE®-CA II

Fully-shielded with mechanical lock, high-data-rate transfer, 0.4 mm pitch, horizontal mating type micro-coaxial connector

Product Specifications:

Mating type		Horizontal
Board Pitch (mm)		0.4
Wiping Length (mm)		0.54
Mated size (mm)	Height	1.1 max. with cover
	Width	Formula: 6.95 + (0.4*?p)
	Depth	6.2
Pin Counts	Range	Up to 60
	Available	20, 30, 40, 50

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

* 60p is also available with CABLINE®-CA II PLUS (wider space type).

Applicable Cable Size:

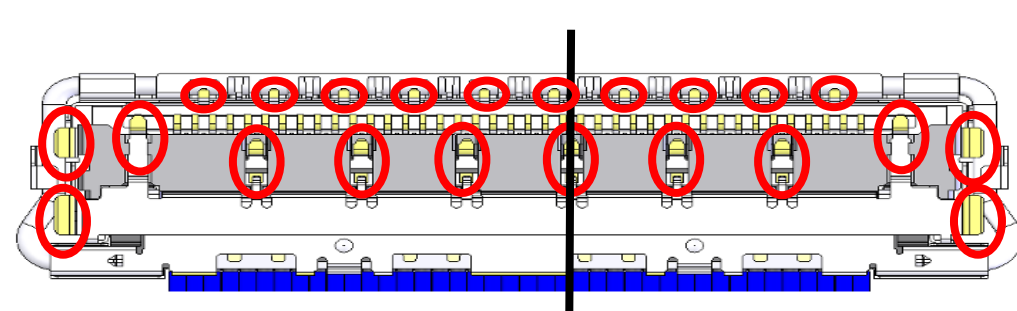
Maximum O.D. (mm)	0.4
Micro-Coaxial for Signal (AWG)	45 ohm: #38 or smaller 50 ohm: #40 or smaller
Twinax (AWG)	#40, #42
Discrete (AWG)	#34 or smaller

Applicable Standards (Reference Only):

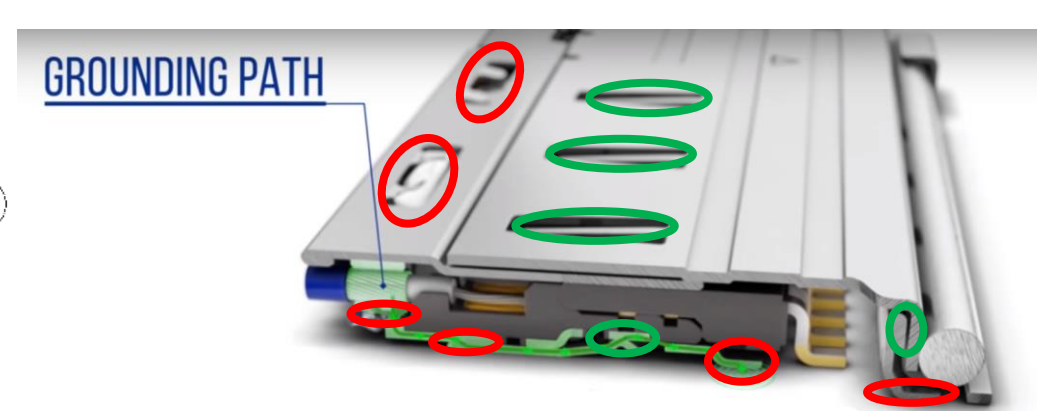
USB4/Thunderbolt 4 (20 Gbps/lane), PCIe® Gen 4 (16 GT/s), eDP HBR 3 (8.1 Gbps)



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

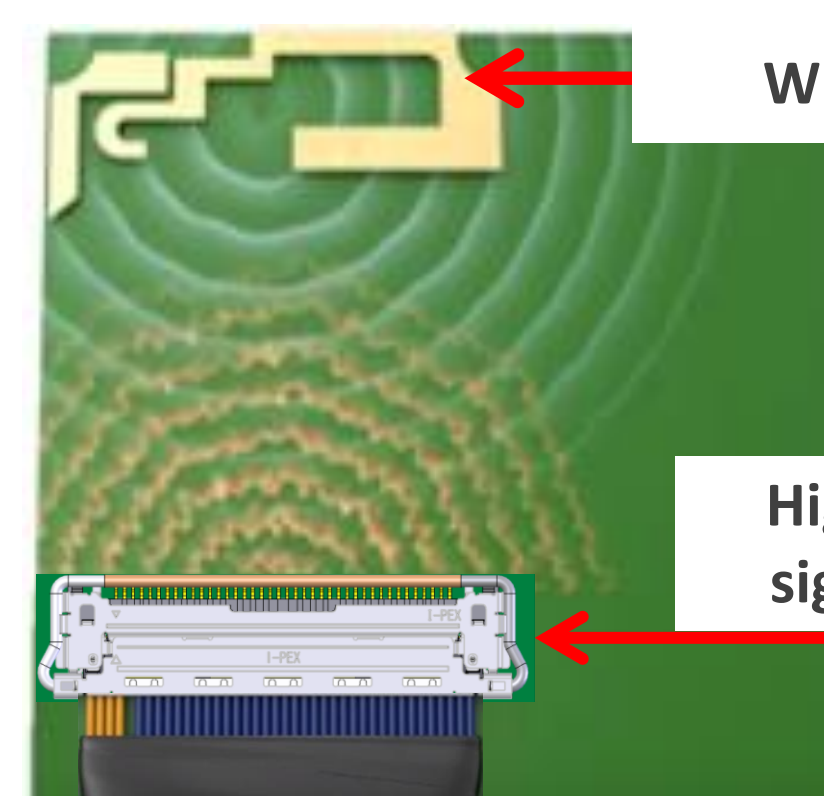


View From Back



- Soldered contacts
- Mechanical contacts

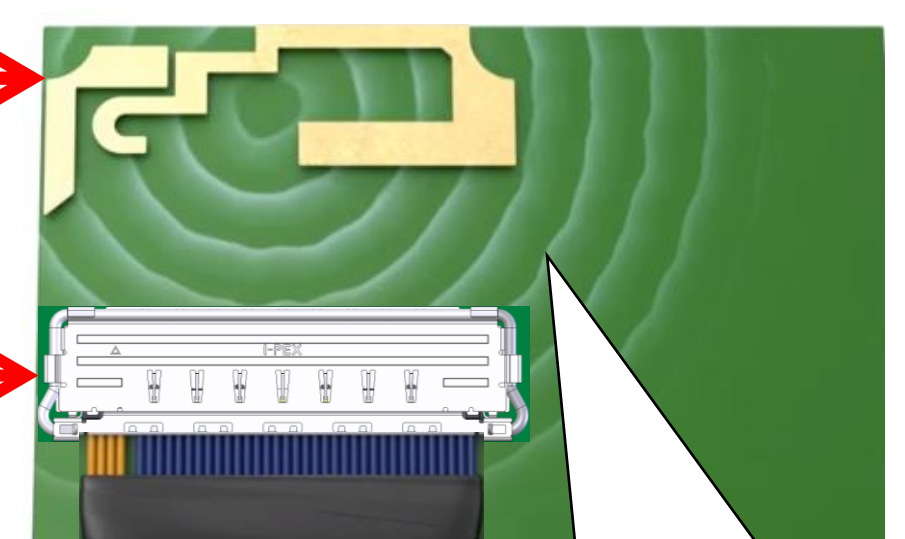
General Connector



Wi-Fi Antenna

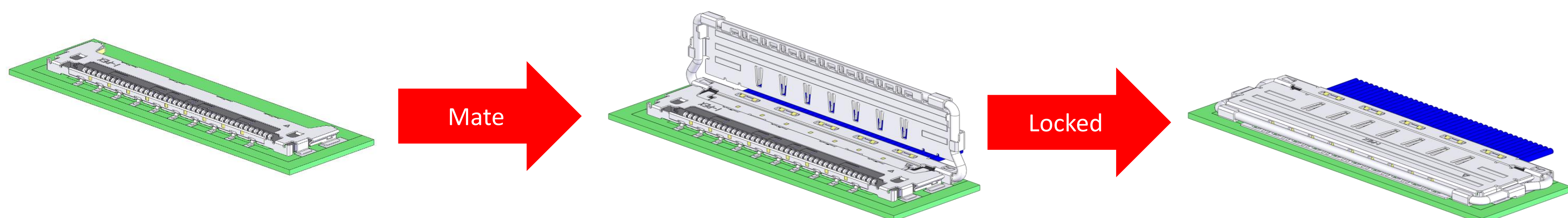
High-data-rate signal transfer

ZenShield® Connector



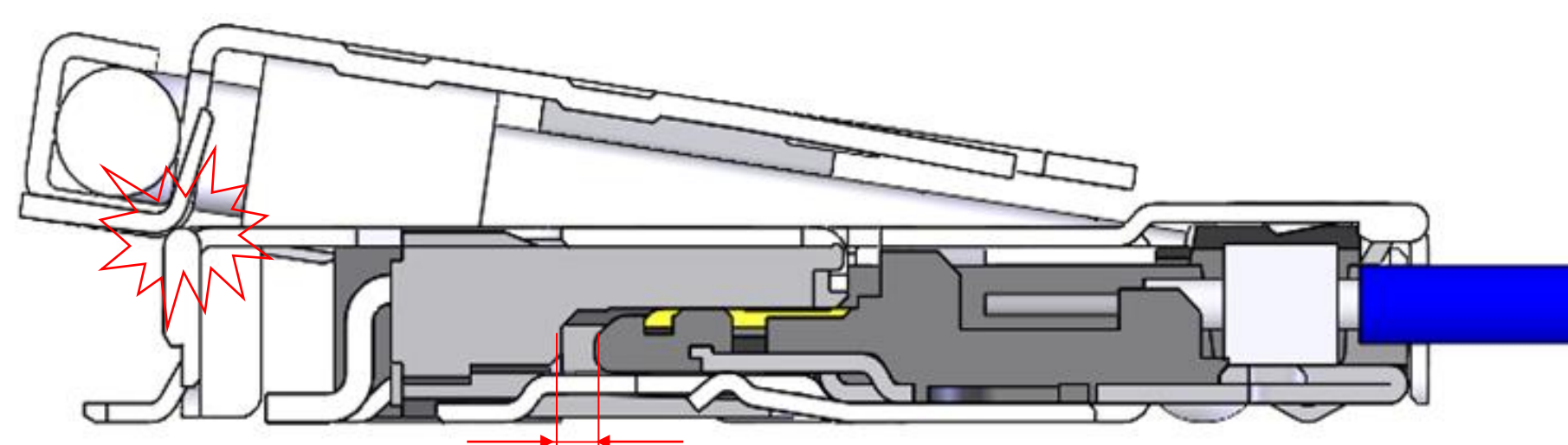
Connectors can be placed closer to antenna

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

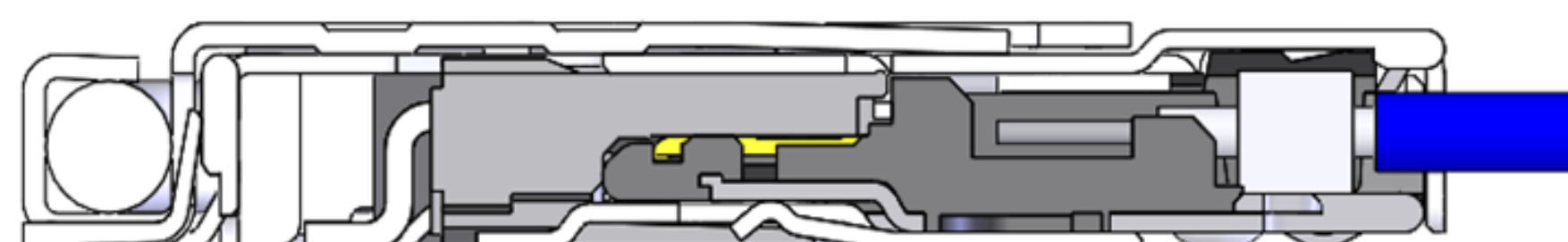


Unable to lock

can only be locked when mating is complete



incomplete mating



complete mating

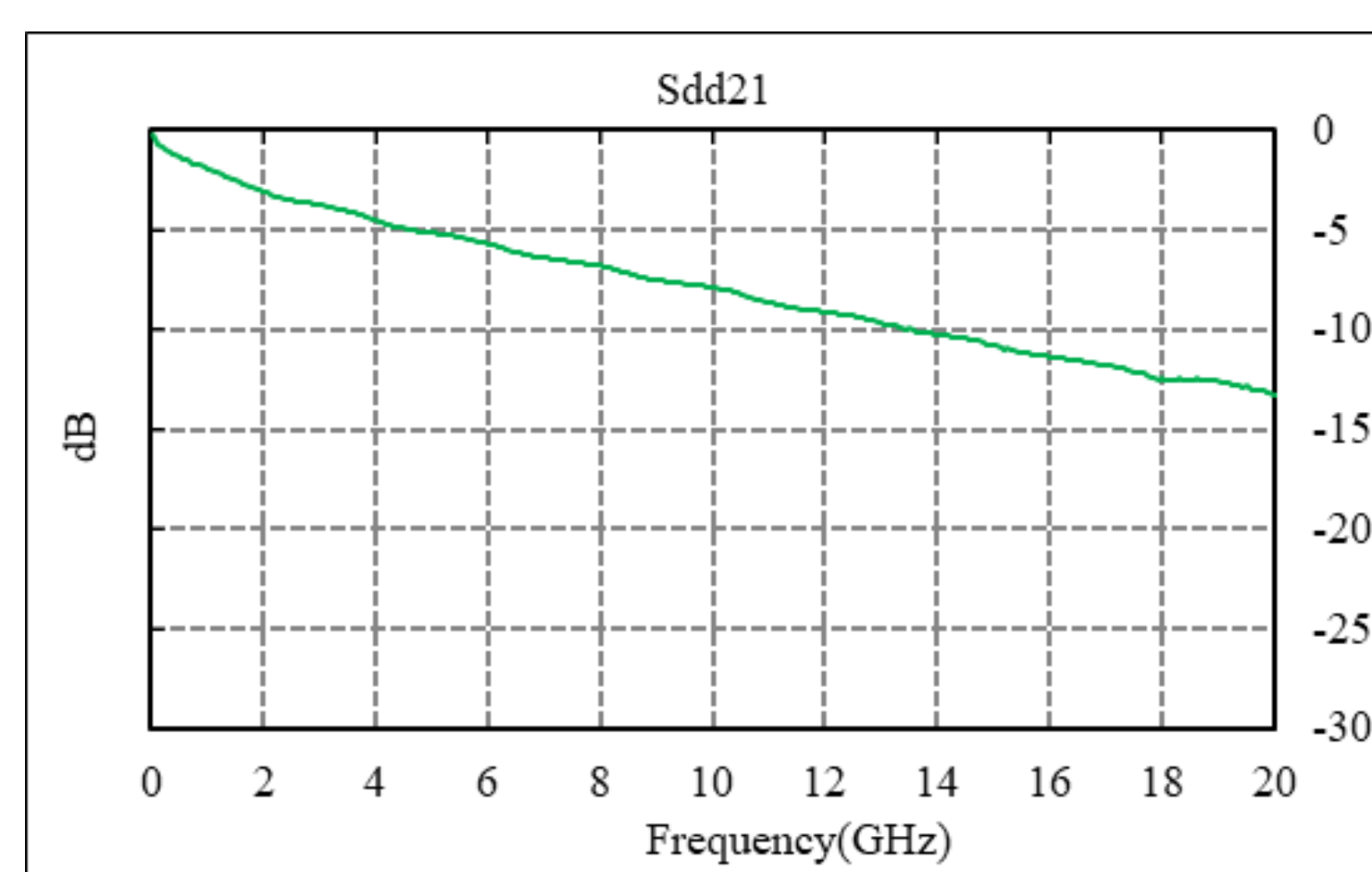
► Excellent differential SI performance

Test material:

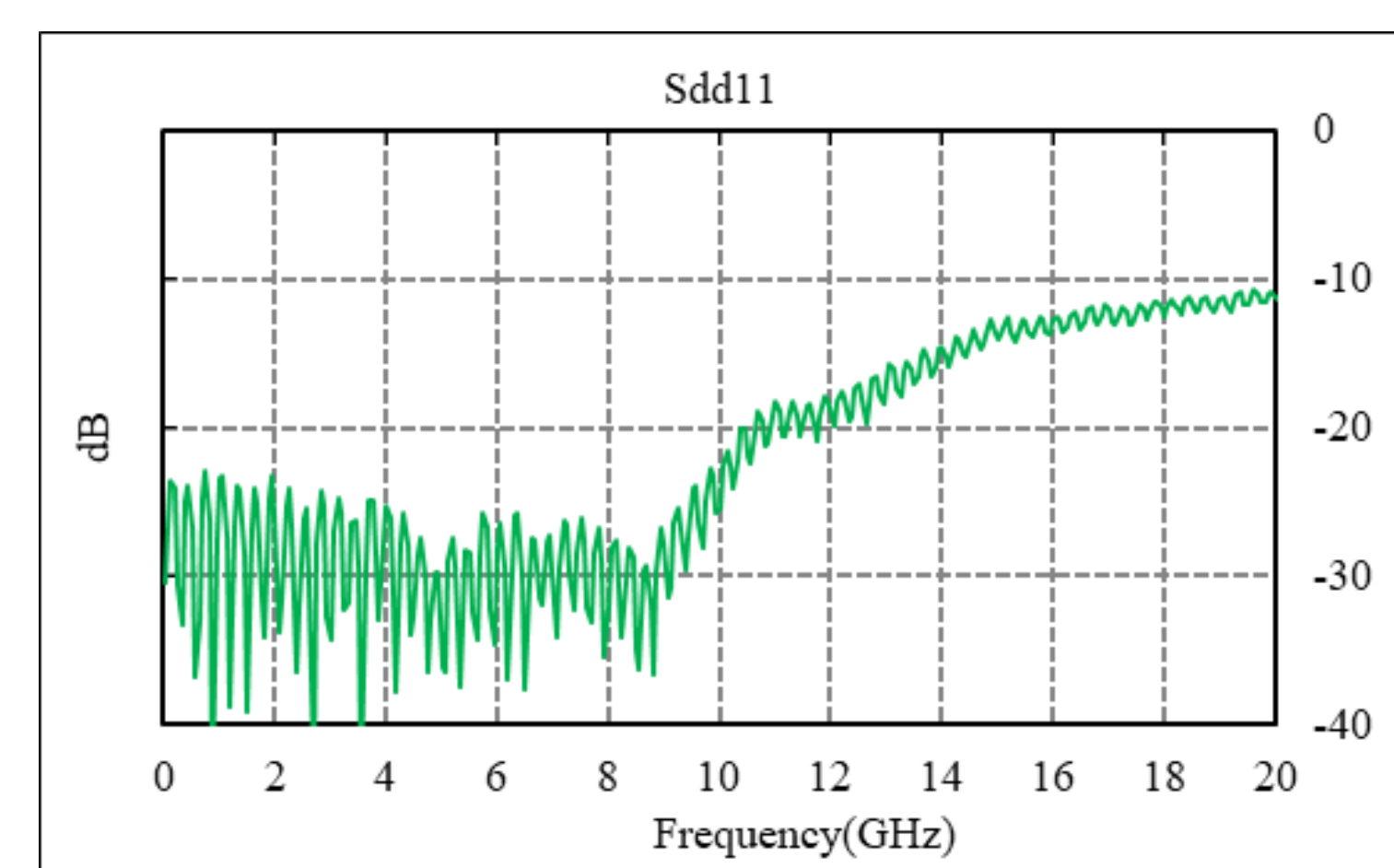
CABLINE-CA II harness (GND finger type)

Cable: Micro-coaxial AWG #38 45Ω

Cable Length: 320mm



Insertion Loss

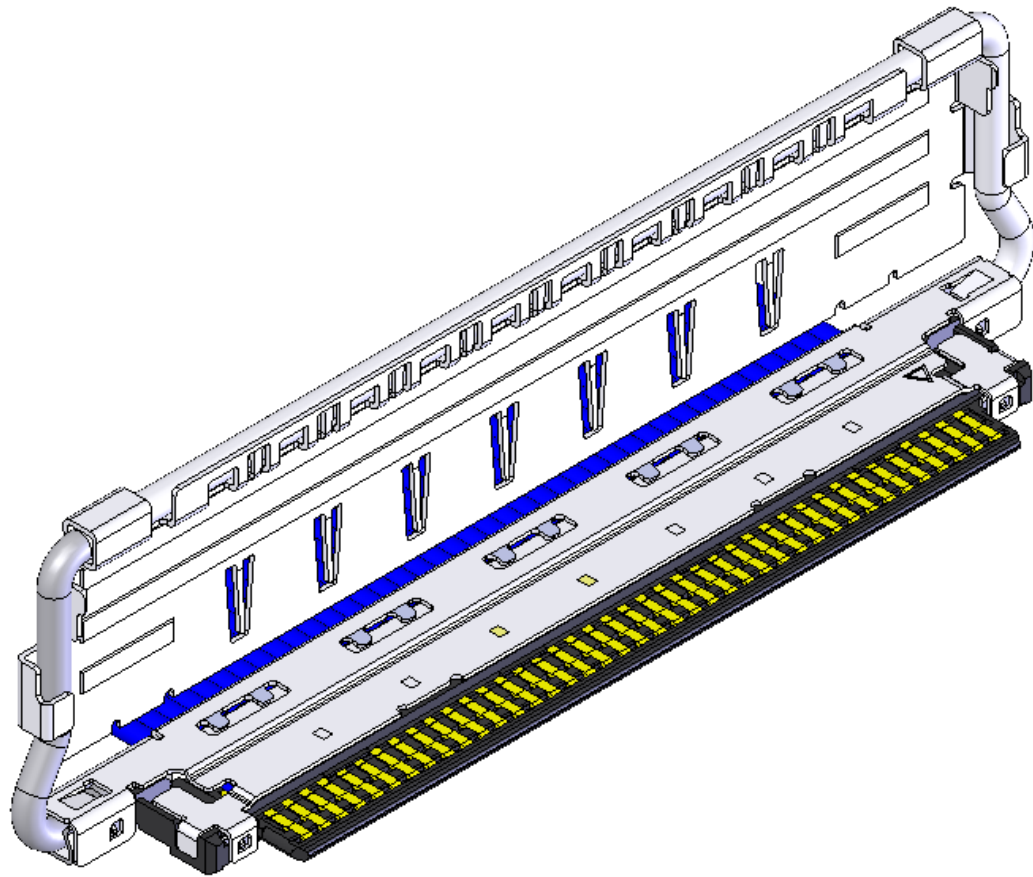


Return Loss

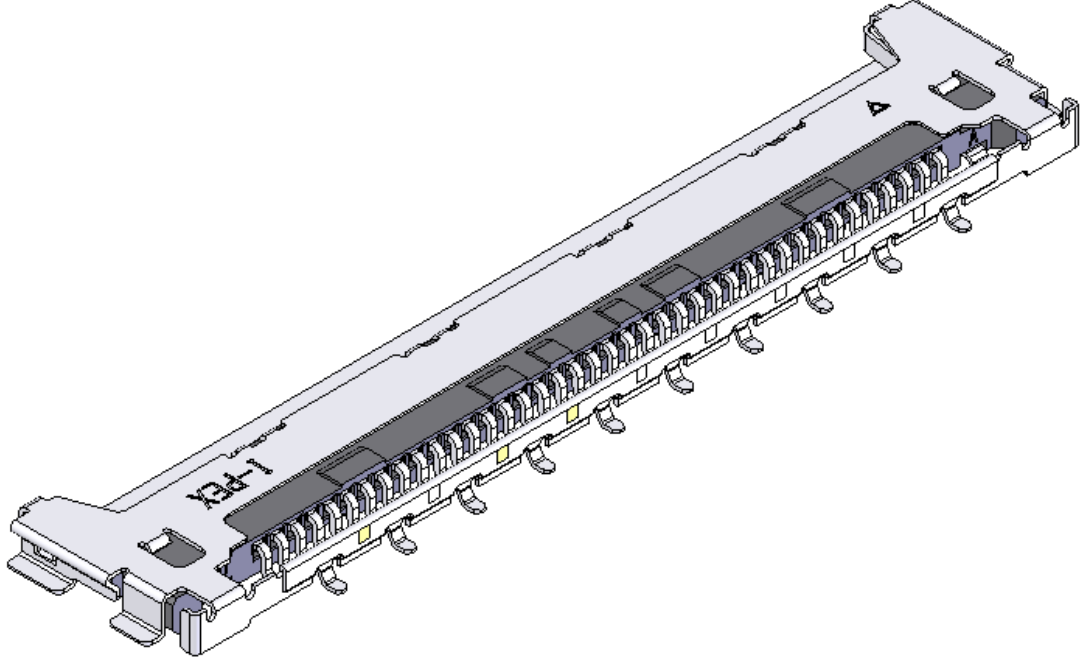
Component Parts Details

Component Parts

Connector parts

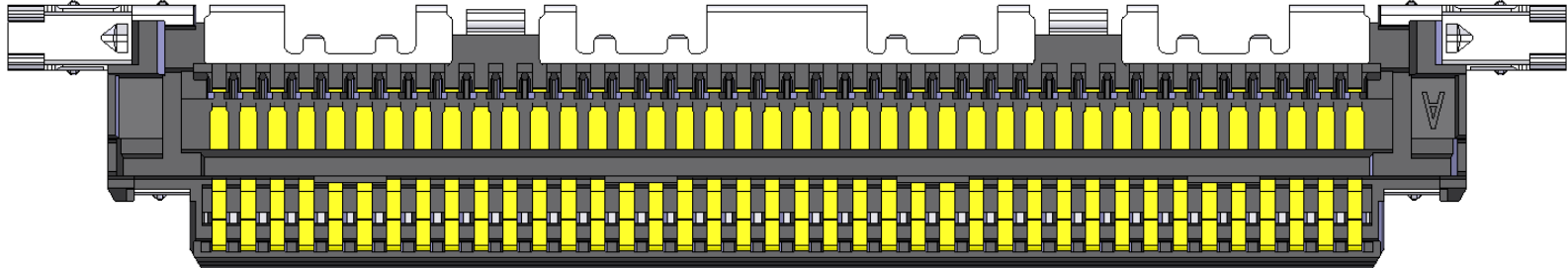


PLUG

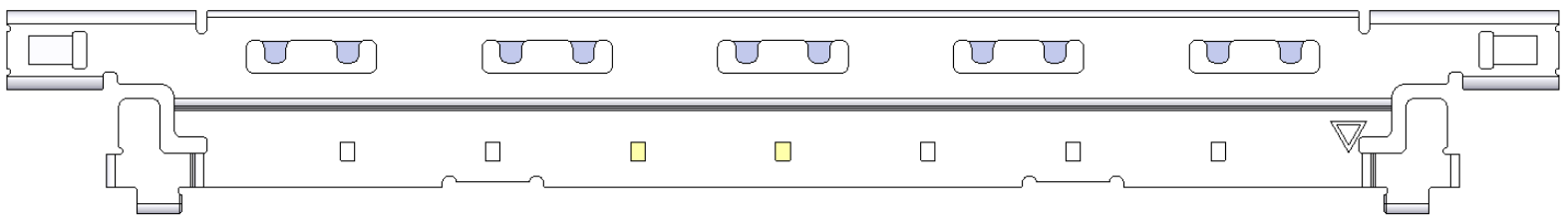


RECEPTACLE

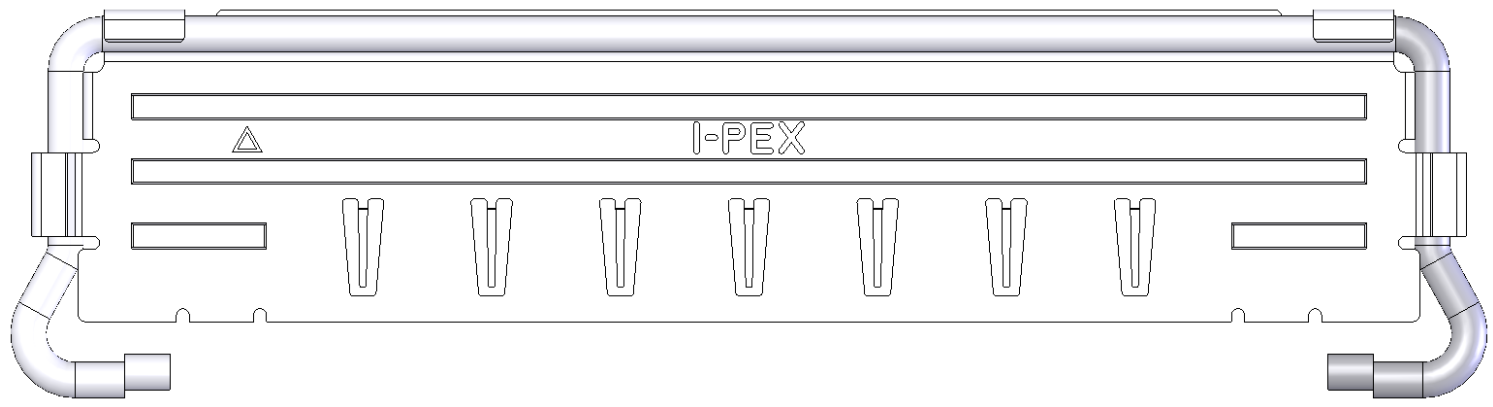
Plug parts



PLUG HOUSING ASSEMBLY



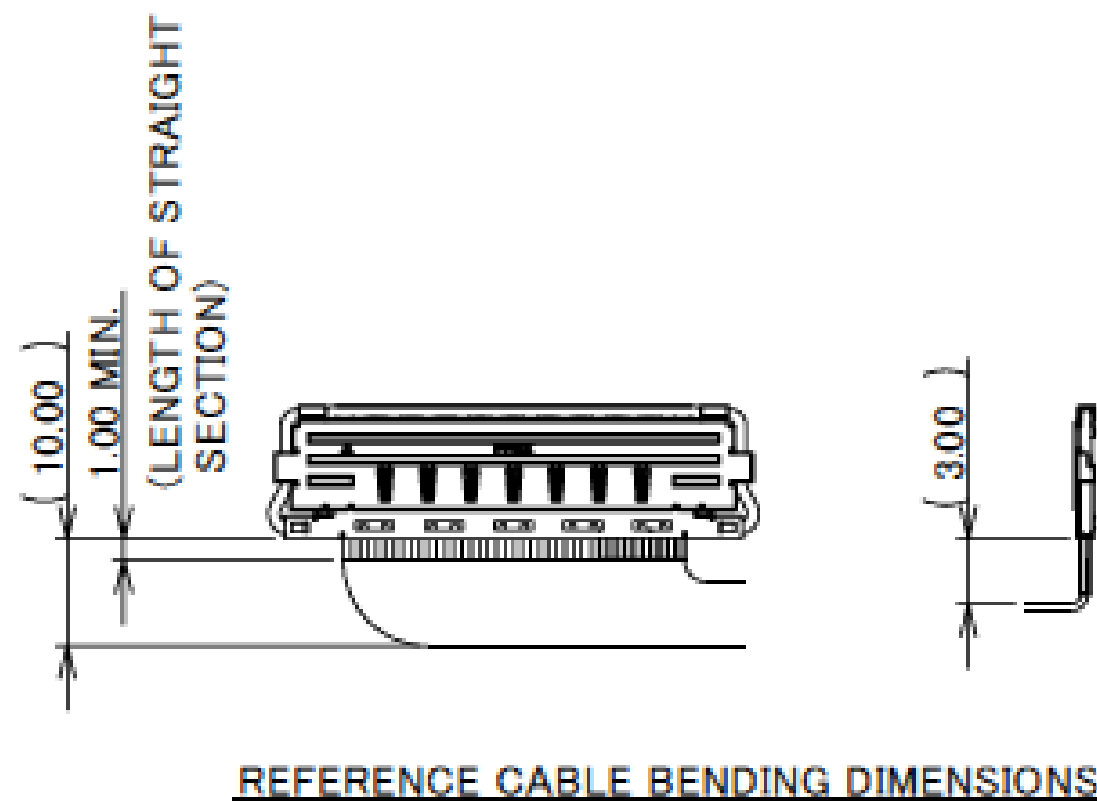
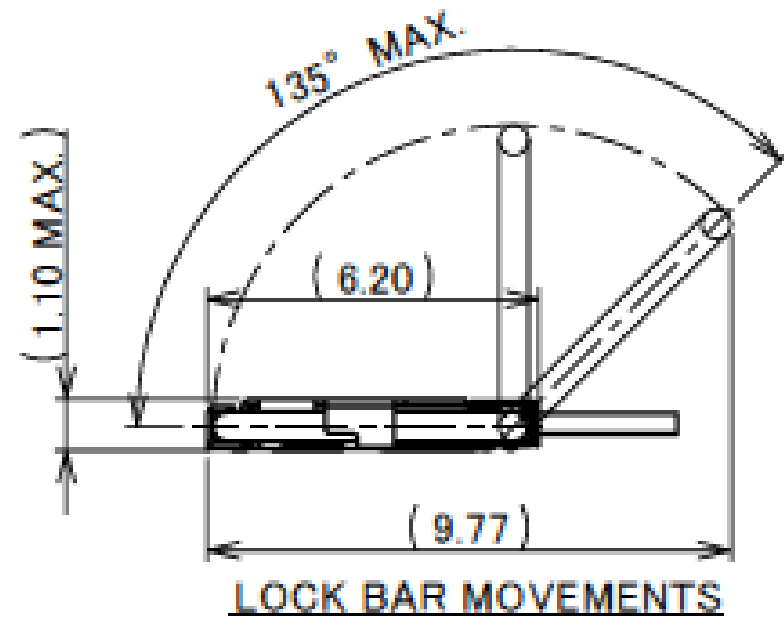
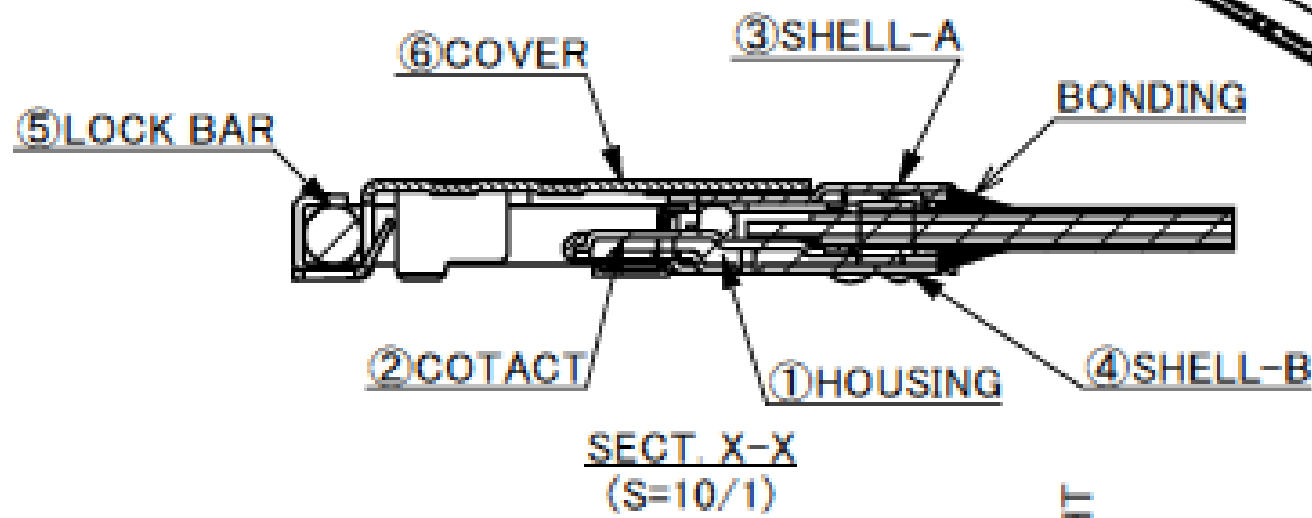
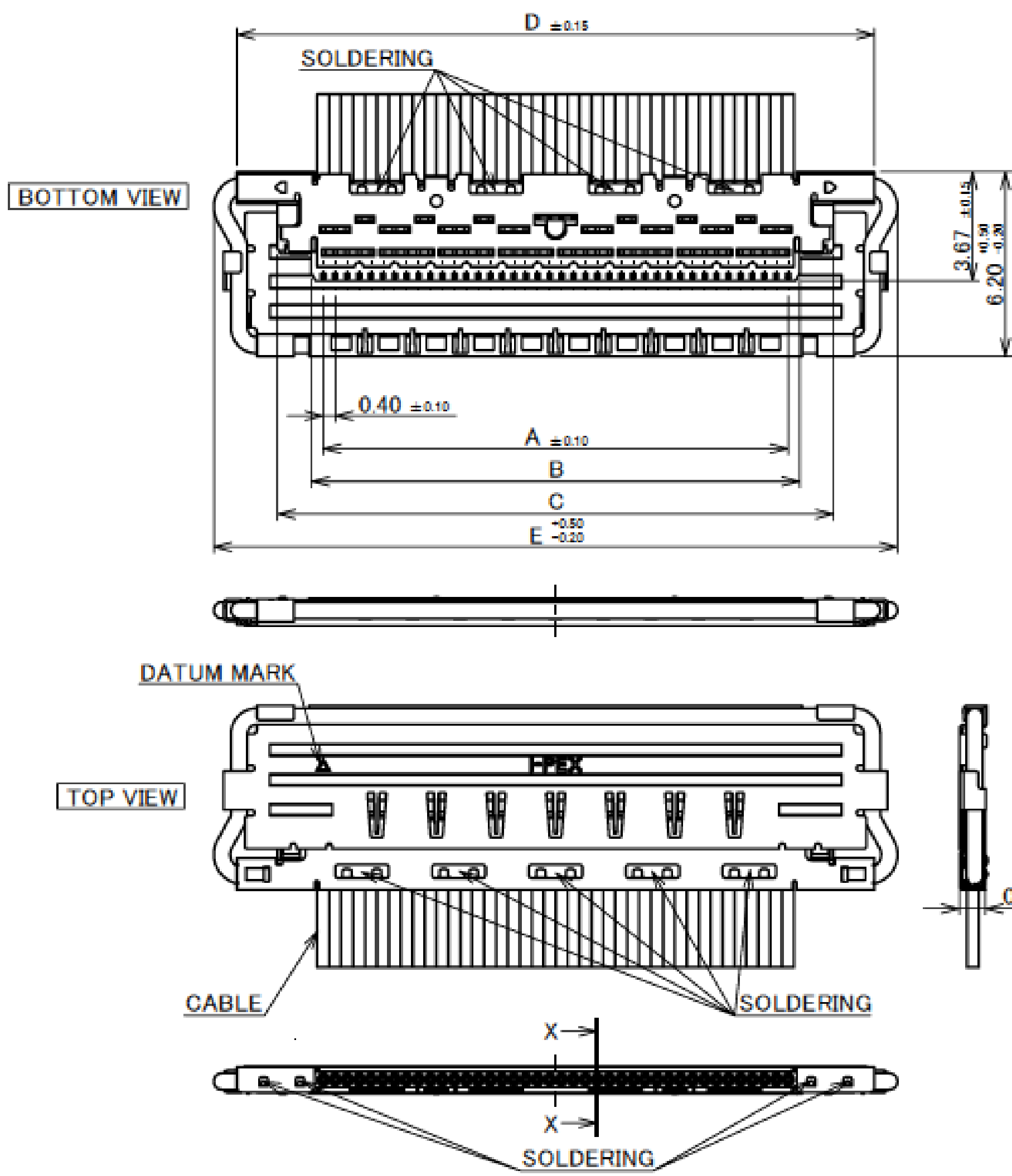
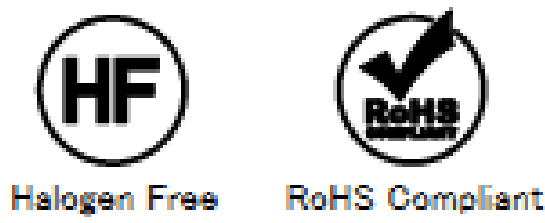
PLUG SHELL-A



PLUG LOCK BAR ASSEMBLY

Plug for Cable Assembly

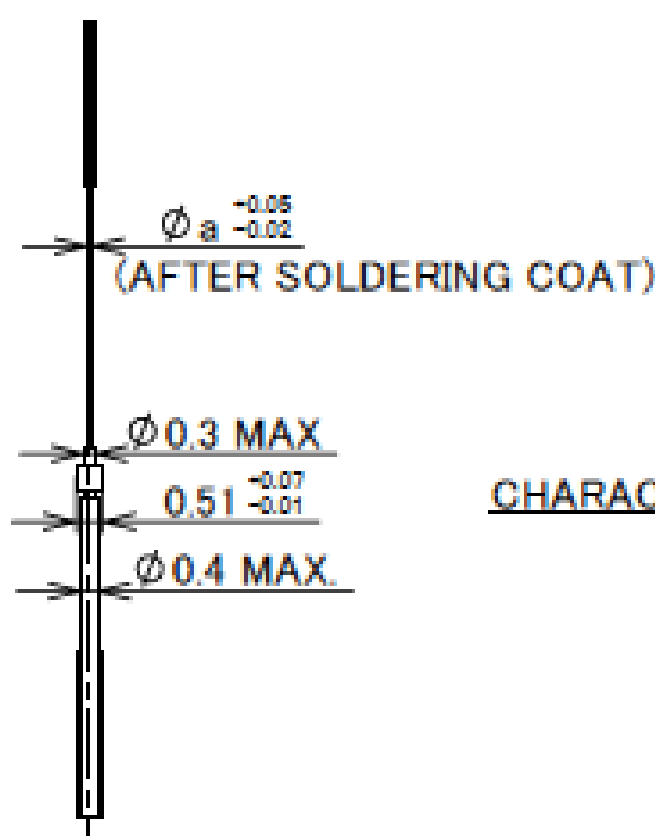
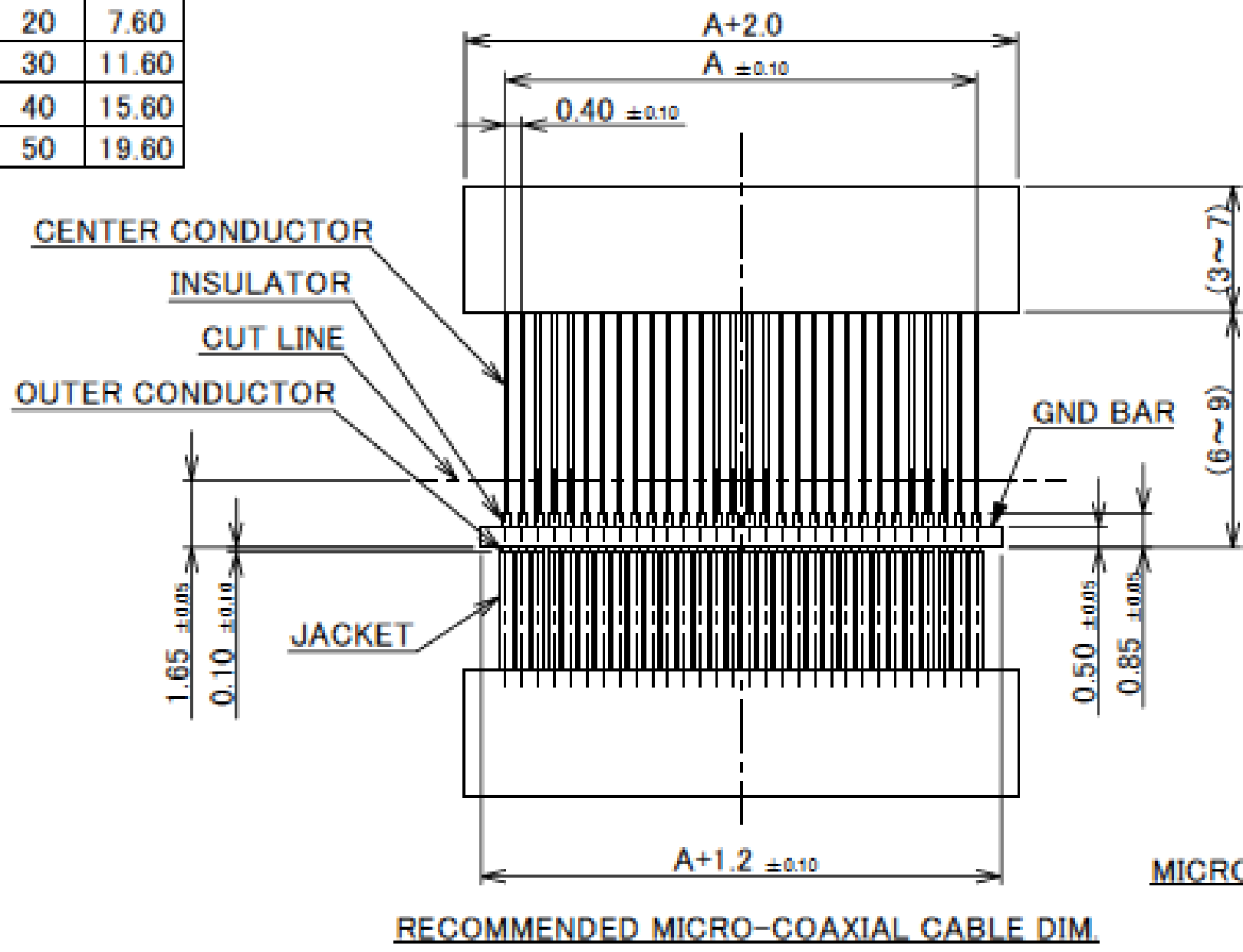
Recommended P/N		20679-0**T-01				
PART NO.	Pos.	A	B	C	D	E
20679-020T-01	20	7.60	8.40	10.66	13.40	14.95
20679-030T-01	30	11.60	12.40	14.66	17.40	18.95
20679-040T-01	40	15.60	16.40	18.66	21.40	22.95
20679-050T-01	50	19.60	20.40	22.66	25.40	26.95



NO	DISCRIPTION	MATERIAL	FINISH , REMARKS
6	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN.
5	LOCK BAR	SUS	-
4	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.00 μ m MIN.
3	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.00 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT & SOLDERING AREA : Au 0.03 μ m MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

Rev.10

PART NO.	Pos.	A
20679-020T-01	20	7.60
20679-030T-01	30	11.60
20679-040T-01	40	15.60
20679-050T-01	50	19.60



CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

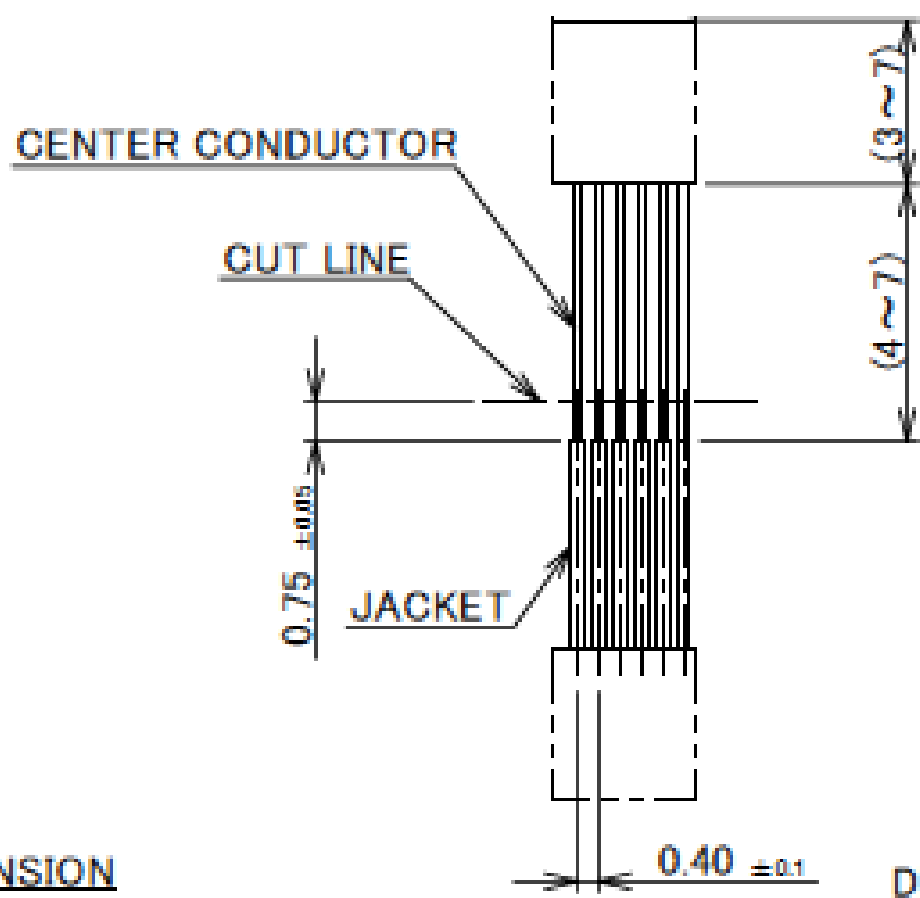
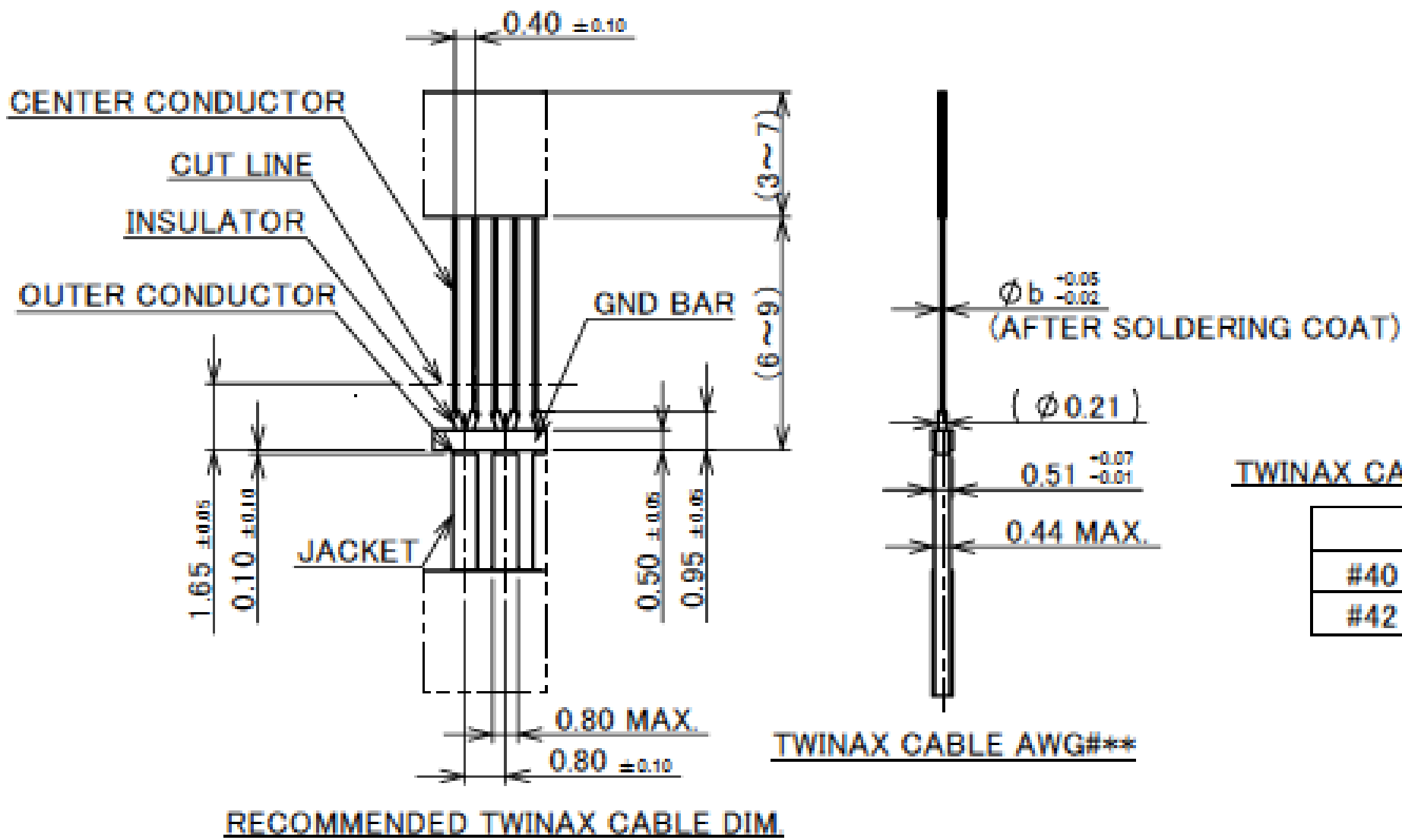
	a
#38	0.12
#40	0.09
#42	0.075
#44	0.063

CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE

	a
#36	0.15

MICRO-COAXIAL CABLE #36 : NOT RECOMMENDED FOR HIGH SPEED SIGNAL TRANSFER

MICRO-COAXIAL CABLE AWG***



DISCRETE WIRE DIMENSION

	c
#34	0.192
#36	0.15

DISCRETE WIRE AWG***

TWINAX CABLE DIMENSION

	b
#40	0.09
#42	0.075

RECOMMENDED DISCRETE WIRE DIM.

Rev.10

Plug for Cable Assembly

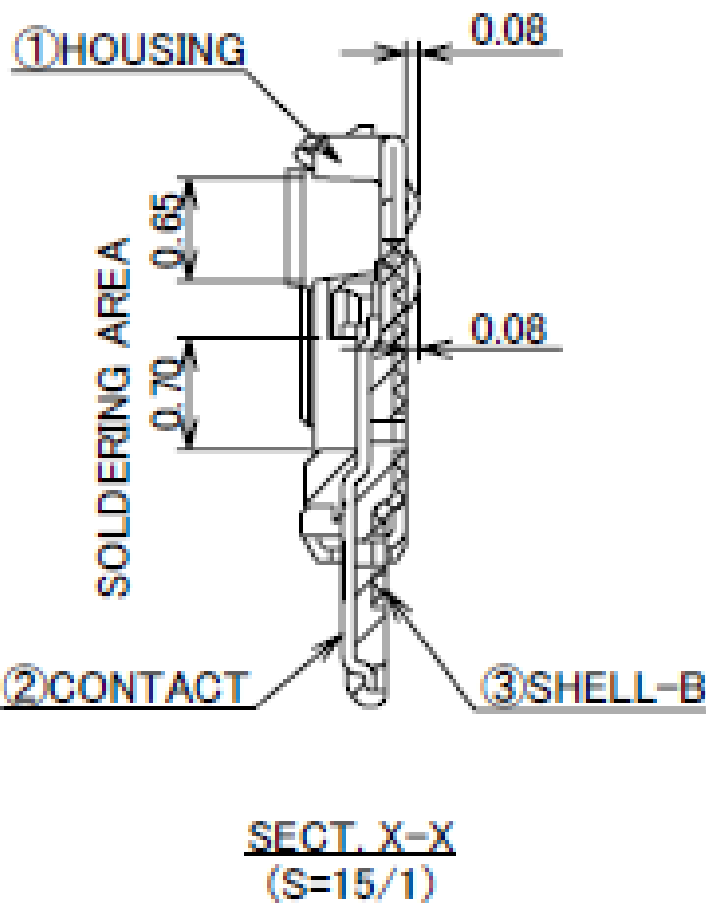
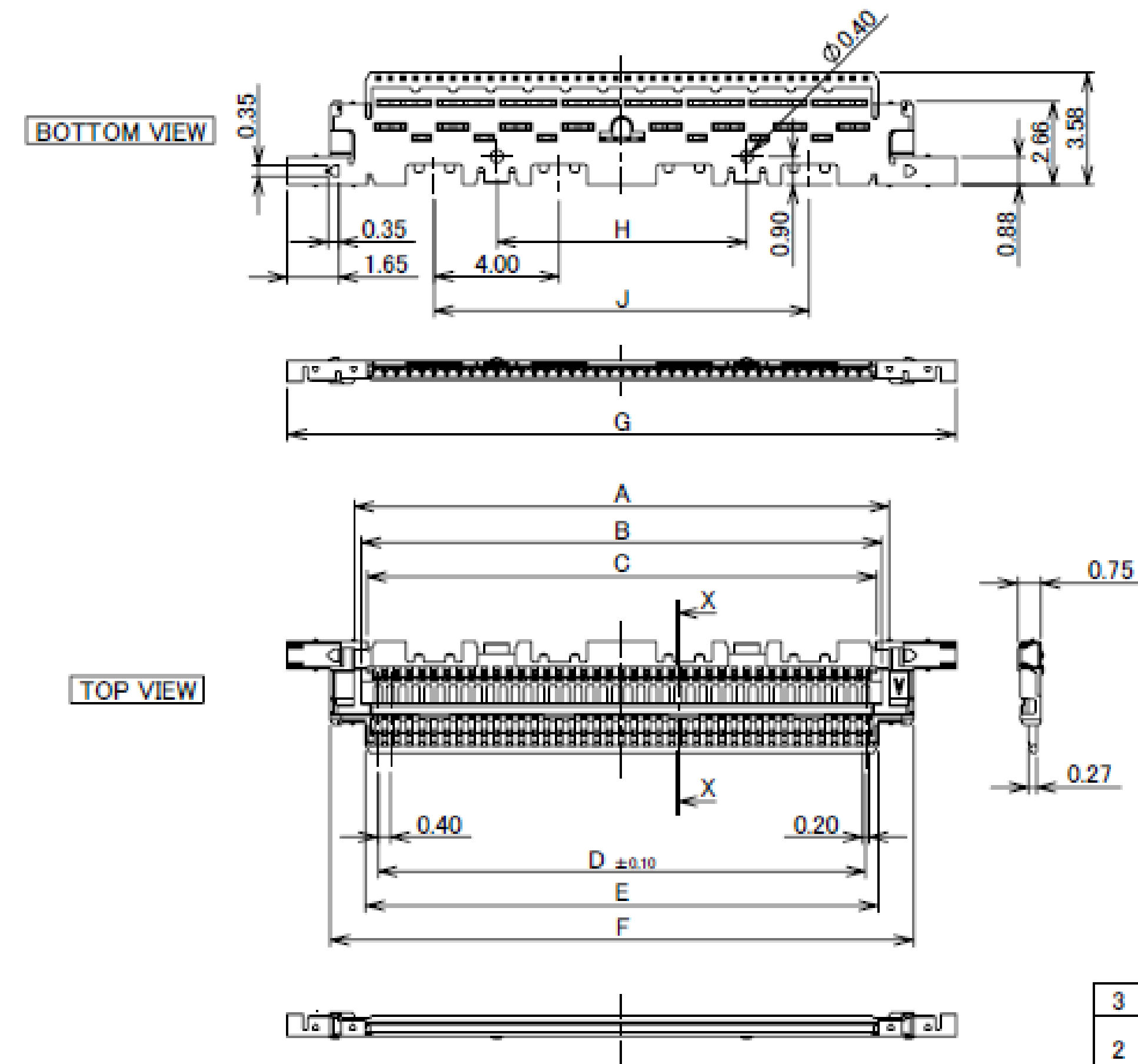
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG# 36 , 34 TWINAX CABLE : AWG# 40 , 42
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT PIN/UP TO 50 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 50 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN/UP TO 50 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT PIN/UP TO 18 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT PIN/UP TO 6 CONTACTS 1.0A AC/DC [AWG#34] PER CONTACT PIN/UP TO 6 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION
OPERATING TEMPERATURE	248~378K(-40℃~105℃)
OPERATING HUMIDITY	85% MAX.(NON-CONDENDING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : ≦140mohm MAX. 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 : ≦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. 50P : 24.25N MAX.
UN-MATING FORCE (INITIAL / AFTER 30 CYCLES)	20P : 2.0N MIN. 30P : 3.0N MIN. 40P : 4.0N MIN. 50P : 5.0N MIN.
CABLE RETENTION FORCE	20P : 9.80N MIN. 30P : 14.70N MIN. 40P : 19.60N MIN. 50P : 24.50N MIN.
PRODUCT SPECIFICATION	PRS-2163
TEST REPORT	TR-15103
INSTRUCTION MANUAL	HIM-15033
ASSEMBLY MANUAL	ASM-15005
APPEARANCE CRITERIA NO.	QLS-A***

Rev.10

Plug Housing Assembly

Recommended P/N 20680-0**T-01

PART NO.	Pos.	A	B	C	D	E	F	G	H	J
20680-020T-01	20	9.10	8.65	8.30	7.60	8.40	10.66	13.40	-	5.00
20680-030T-01	30	13.10	12.65	12.30	11.60	12.40	14.66	17.40	4.00	8.00
20680-040T-01	40	17.10	16.65	16.30	15.60	16.40	18.66	21.40	8.00	12.00
20680-050T-01	50	21.10	20.65	20.30	19.60	20.40	22.66	25.40	12.00	16.00
20680-060T-01	60	25.10	24.65	24.30	23.60	24.40	26.66	29.40	16.00	20.00



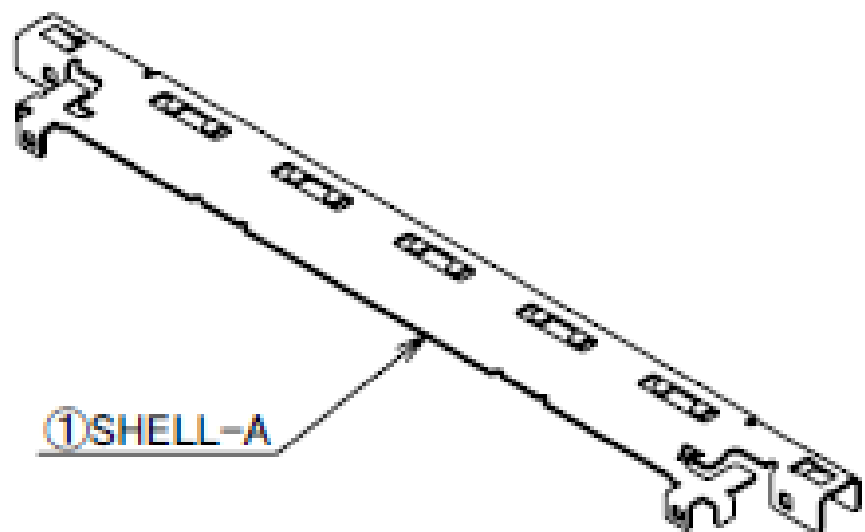
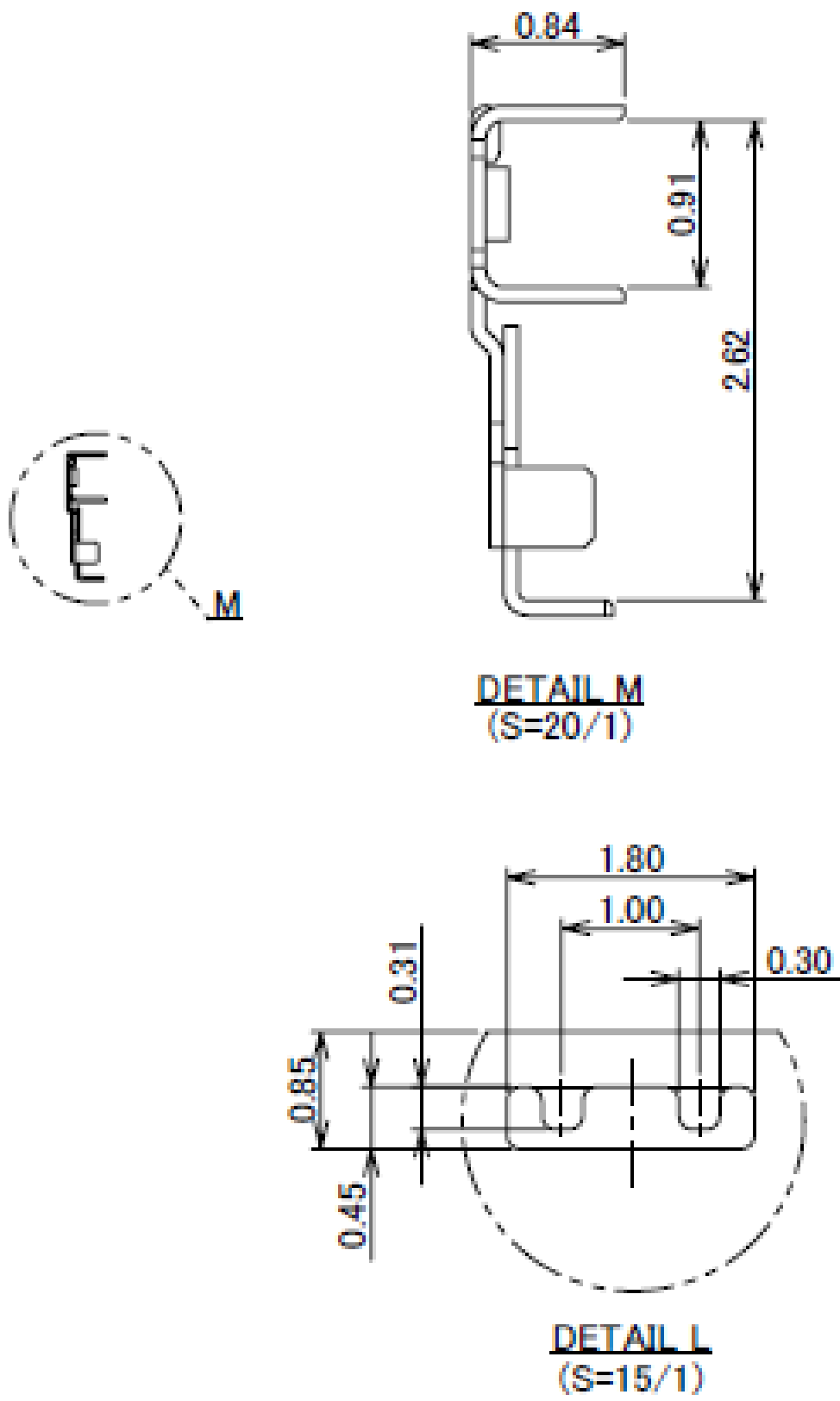
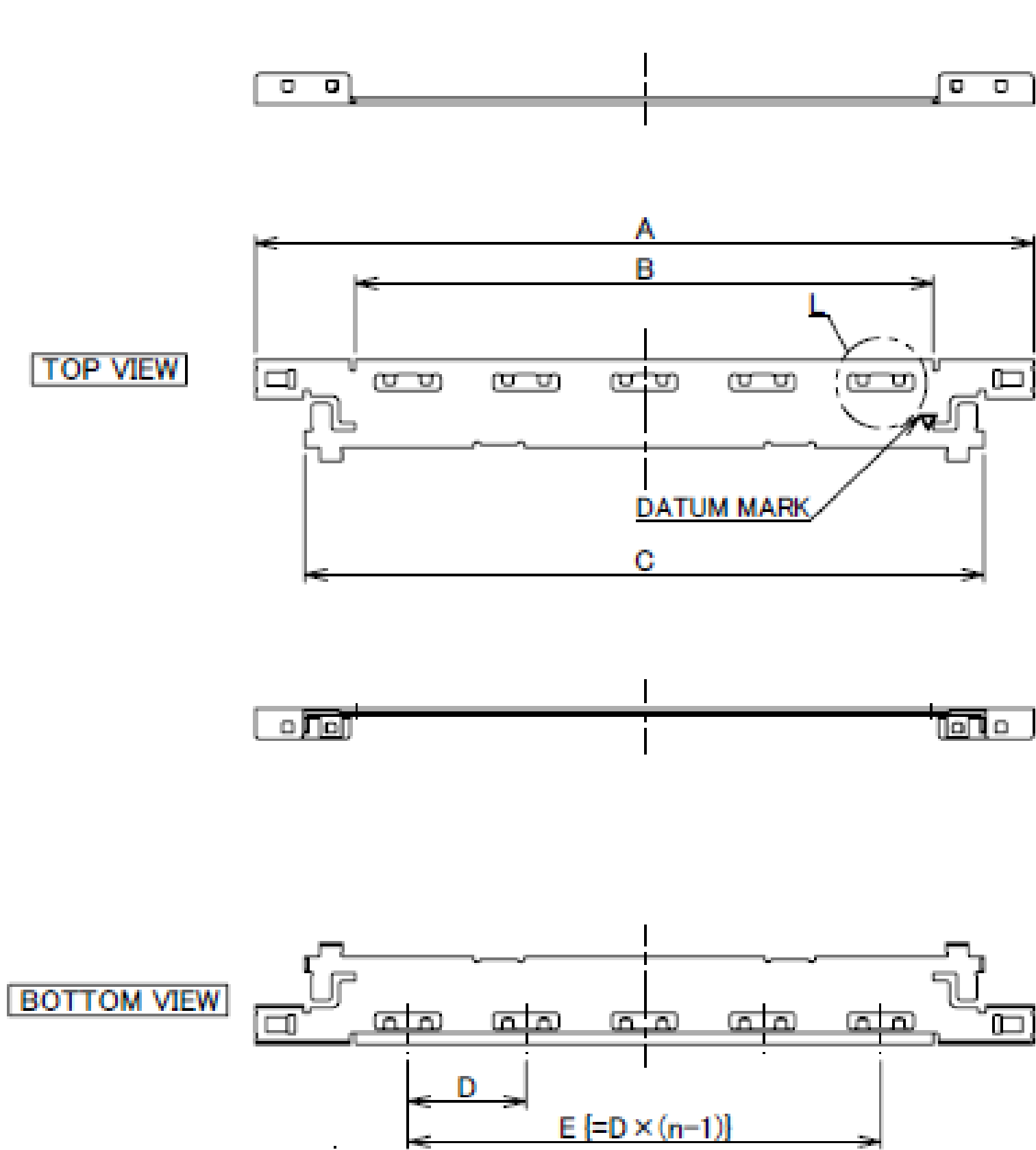
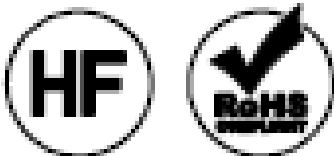
- NOTES.
- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20681-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20679-0**T-01
 - THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20789-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20788-0**T-01

3	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.7

Plug Shell-A

Recommended P/N		3204-0**1				
PART NO.	Pos.	A	B	C	D	E
3204-0201	20	13.40	7.88	10.66	2.50	5.00
3204-0301	30	17.40	11.88	14.66	3.00	9.00
3204-0401	40	21.40	15.88	18.66	3.25	13.00
3204-0501	50	25.40	19.88	22.66	3.40	17.00
3204-0601	60	29.40	23.88	26.66	4.00	20.00

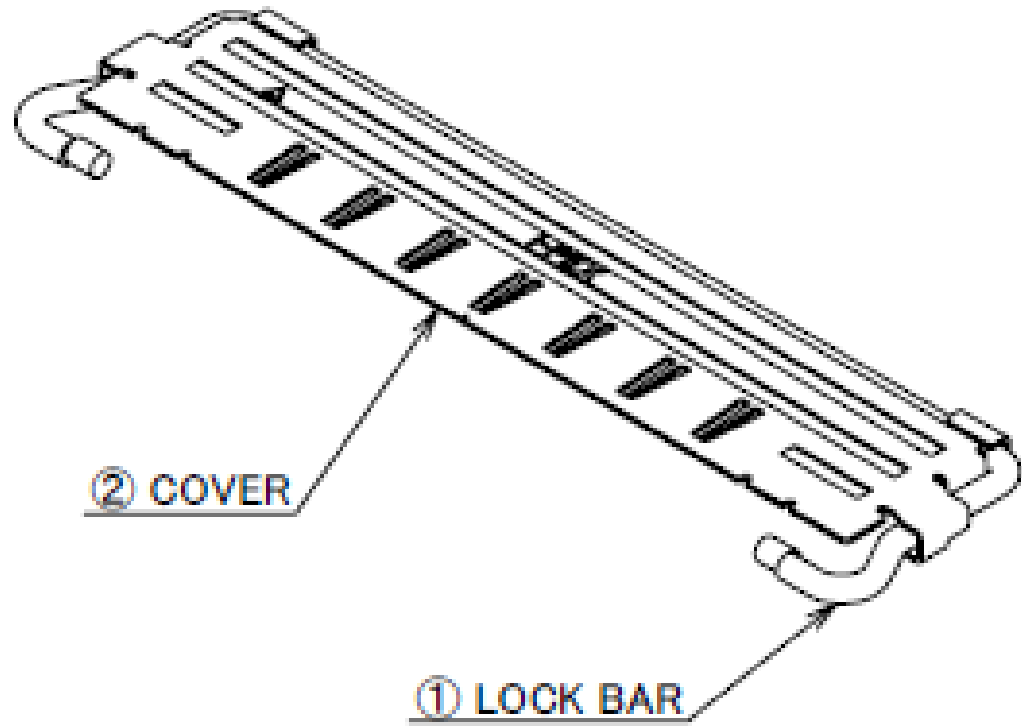
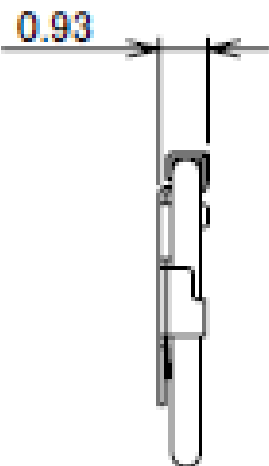
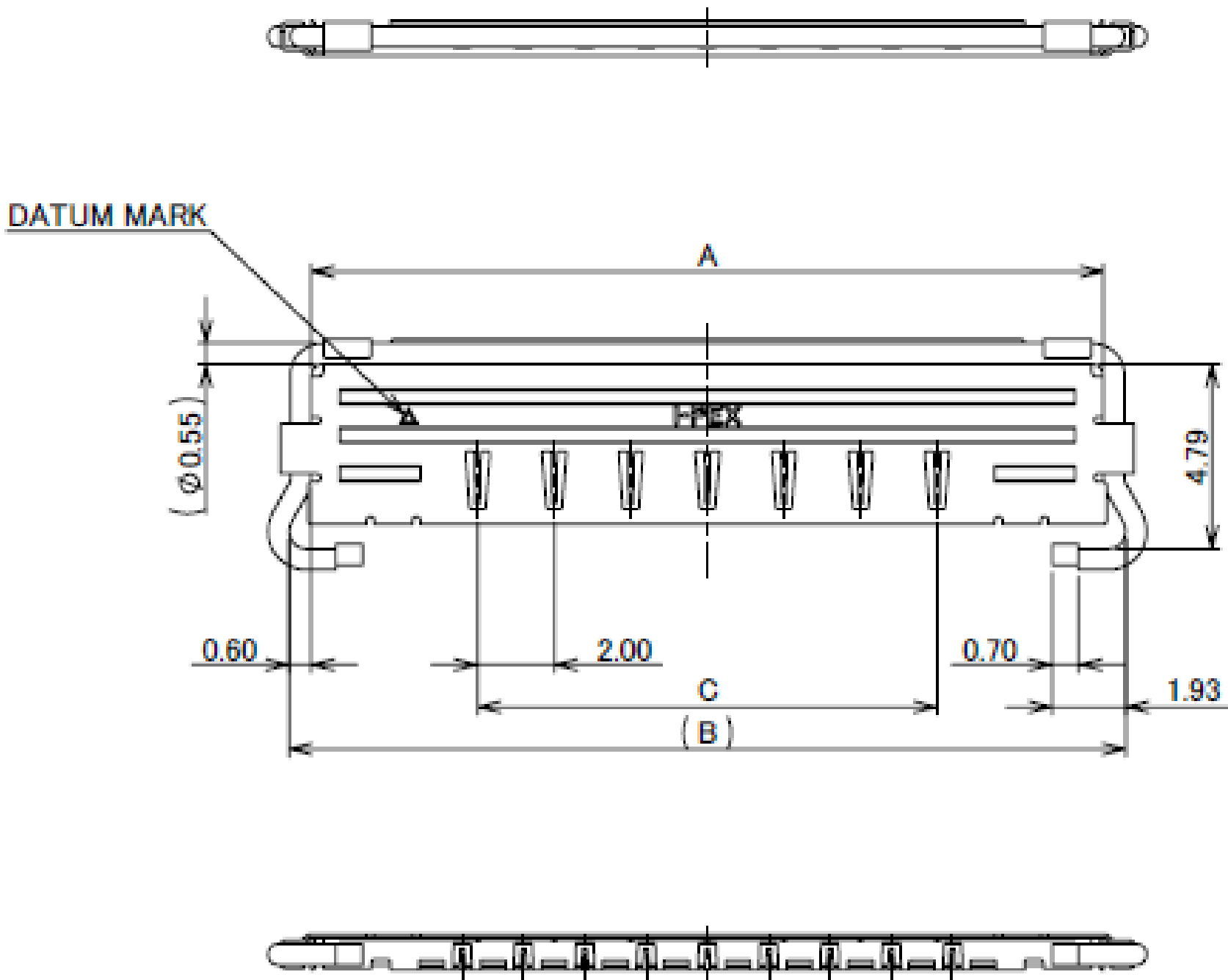
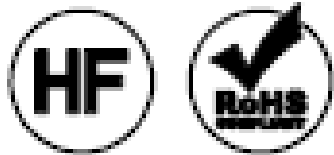


1	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.7

Lock Bar Assembly

Recommended P/N		20681-0**T-01		
PART NO.	Pos.	A	B	C
20681-020T-01	20	12.65	13.85	4.00
20681-030T-01	30	16.65	17.85	8.00
20681-040T-01	40	20.65	21.85	12.00
20681-050T-01	50	24.65	25.85	16.00



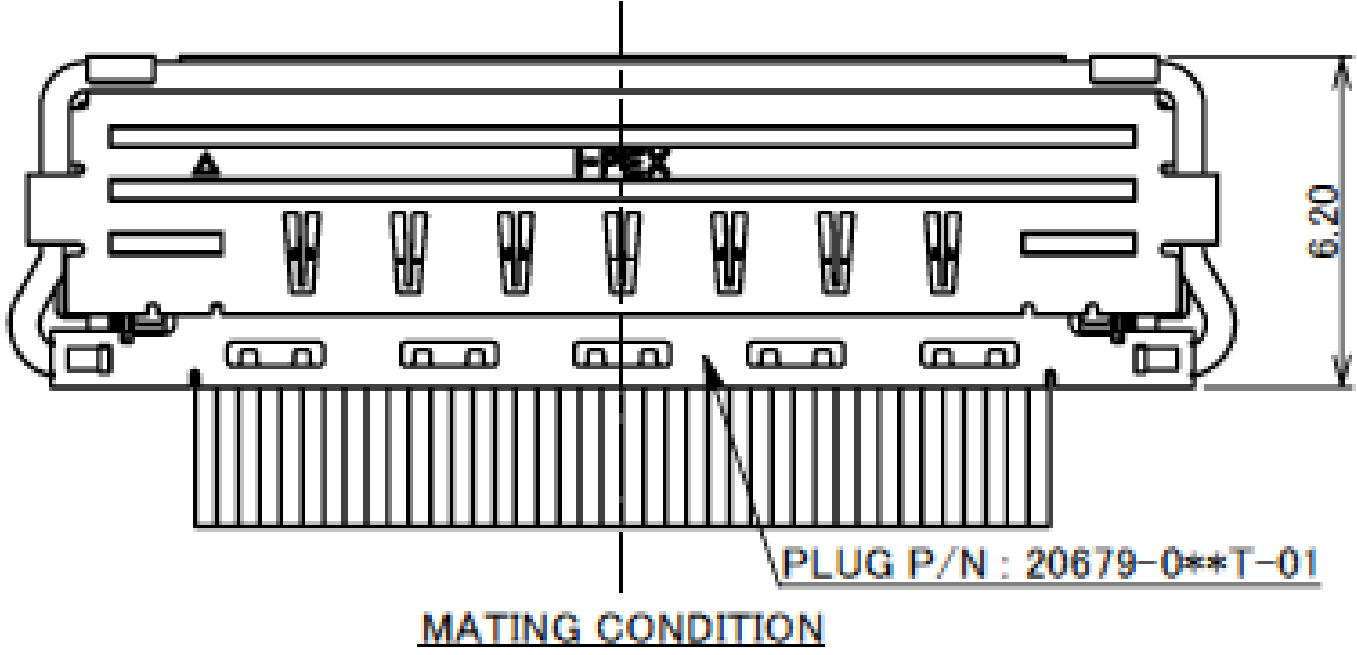
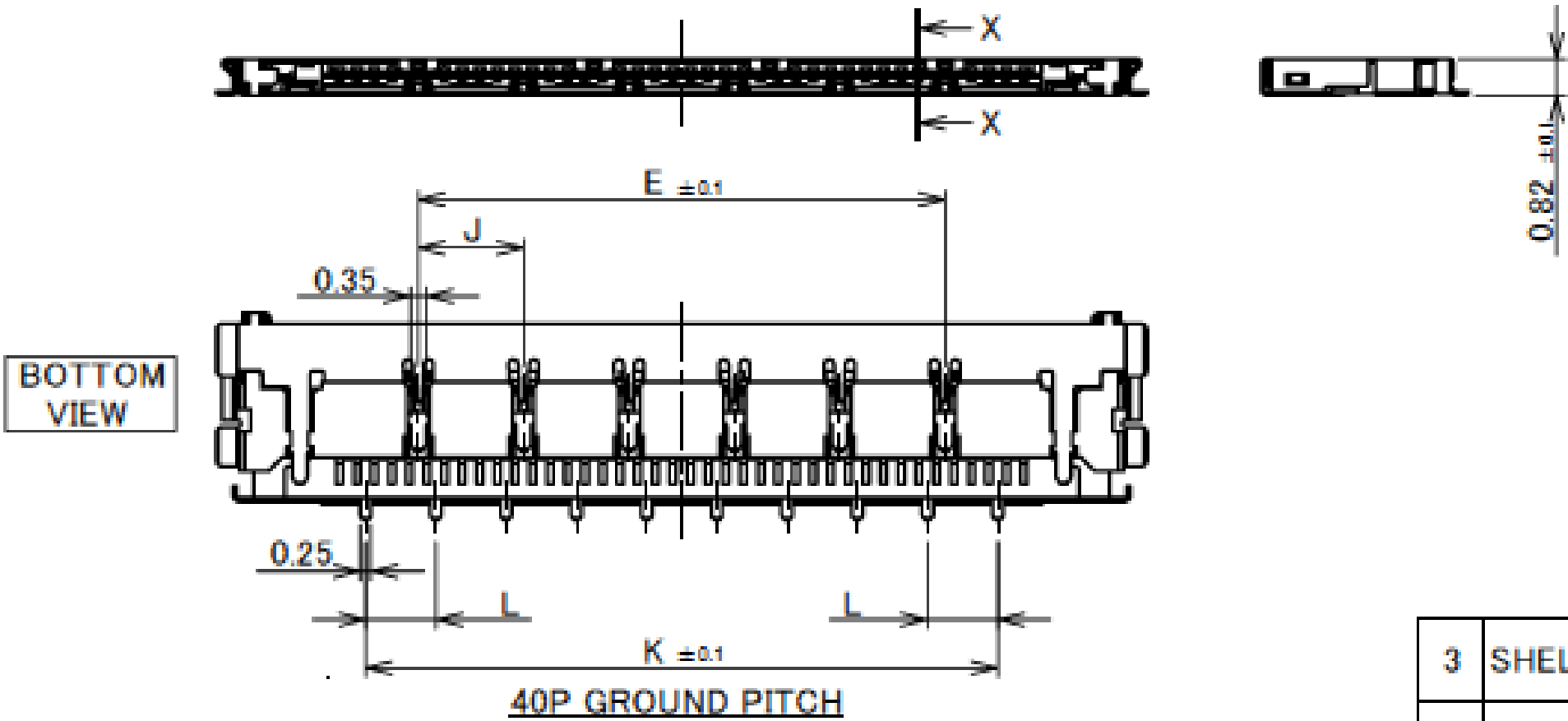
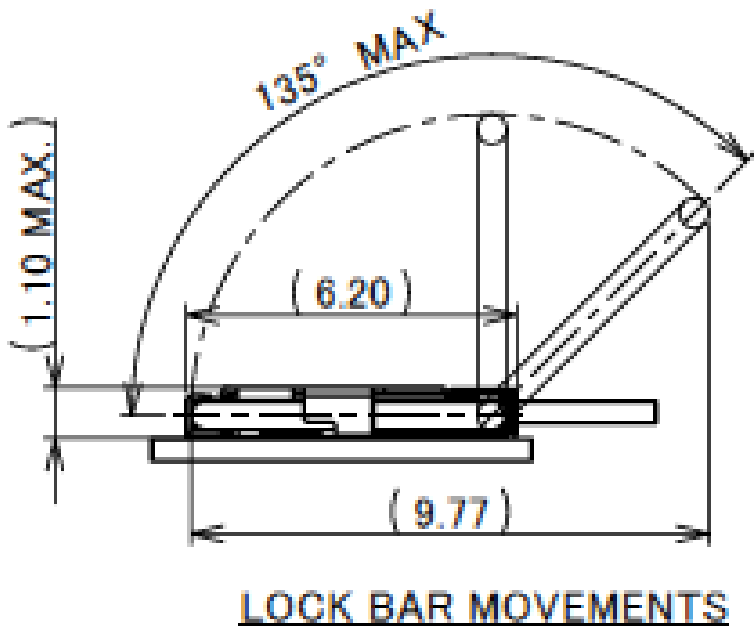
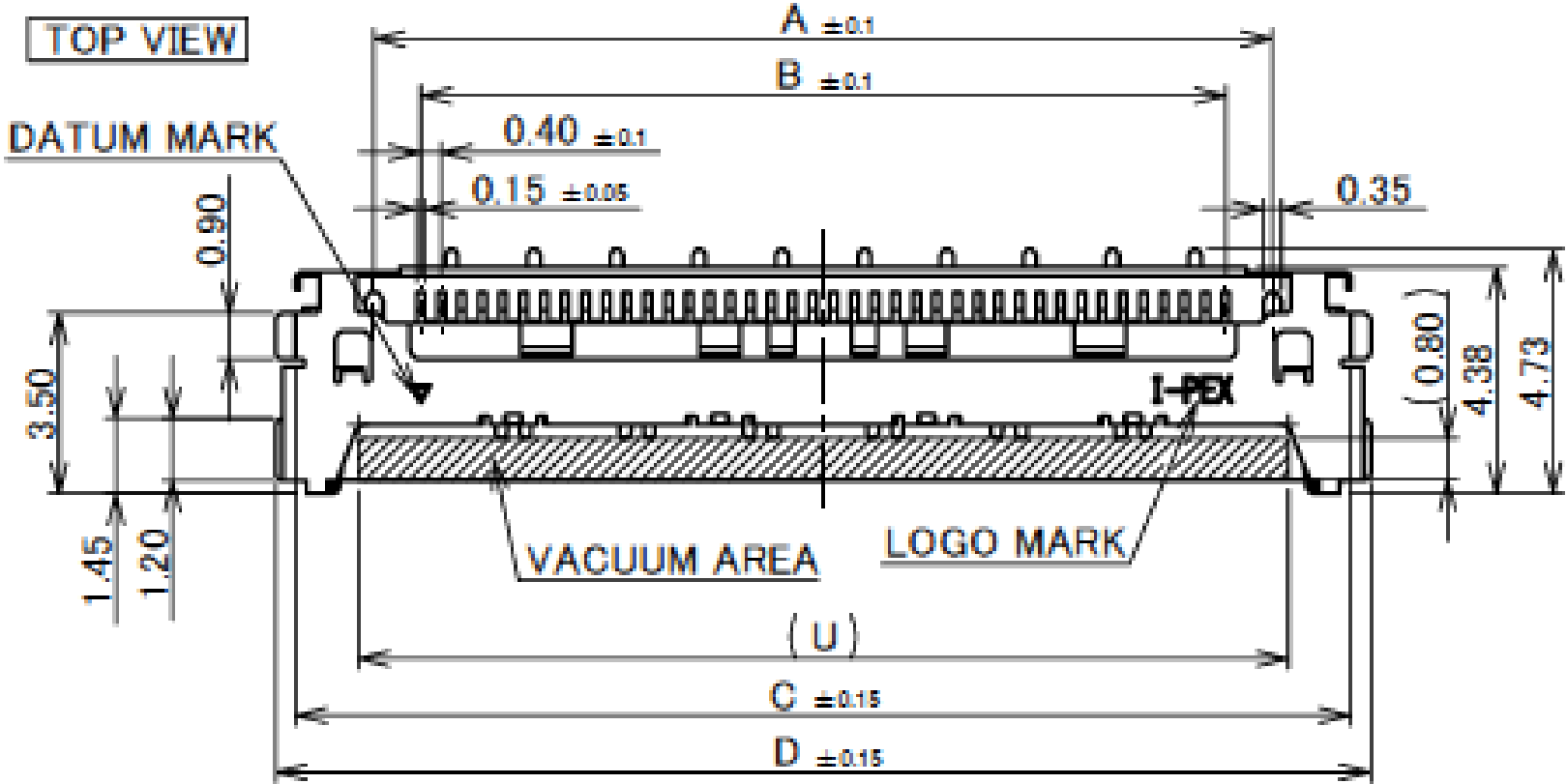
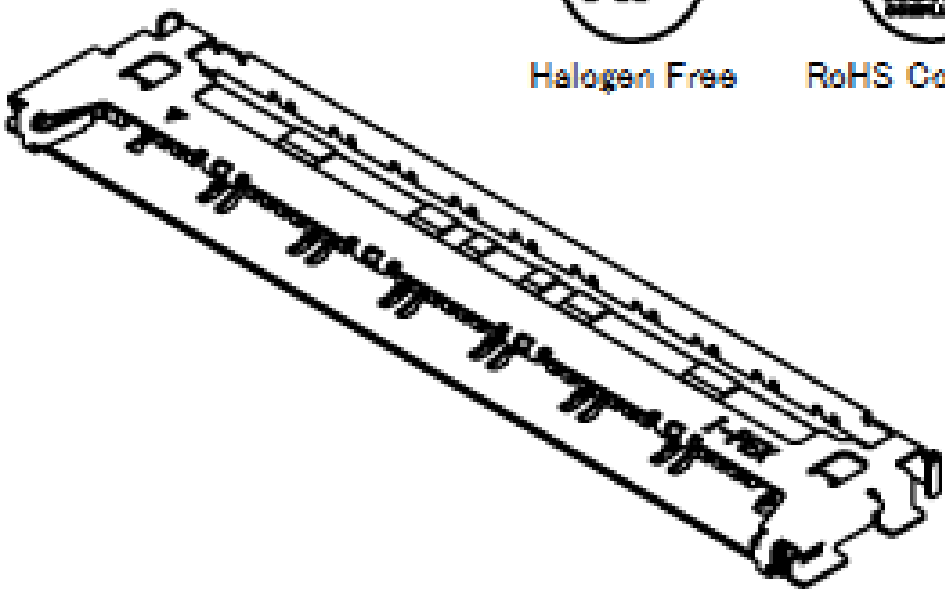
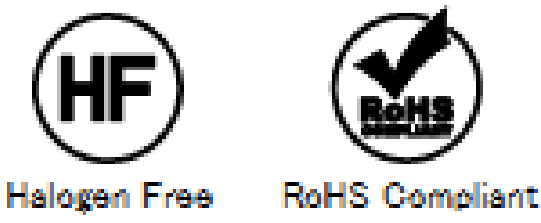
2	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
1	LOCK BAR	SUS φ0.55	-
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.5

Receptacle Assembly

Recommended P/N		20682-0**E-02									
PART NO.	Pos.	A	B	C	D	E	J	K	L	U	
20682-020E-02	20	9.40	7.60	12.43	13.20	4.80	2.40	5.60	2.00	10.01	
20682-030E-02	30	13.40	11.60	16.43	17.20	9.60	2.40	12.00	1.60	14.01	
20682-040E-02	40	17.40	15.60	20.43	21.20	12.00	2.40	14.40	1.60	18.01	
20682-050E-02	50	21.40	19.60	24.43	25.20	16.80	2.80	18.40	1.60	22.01	

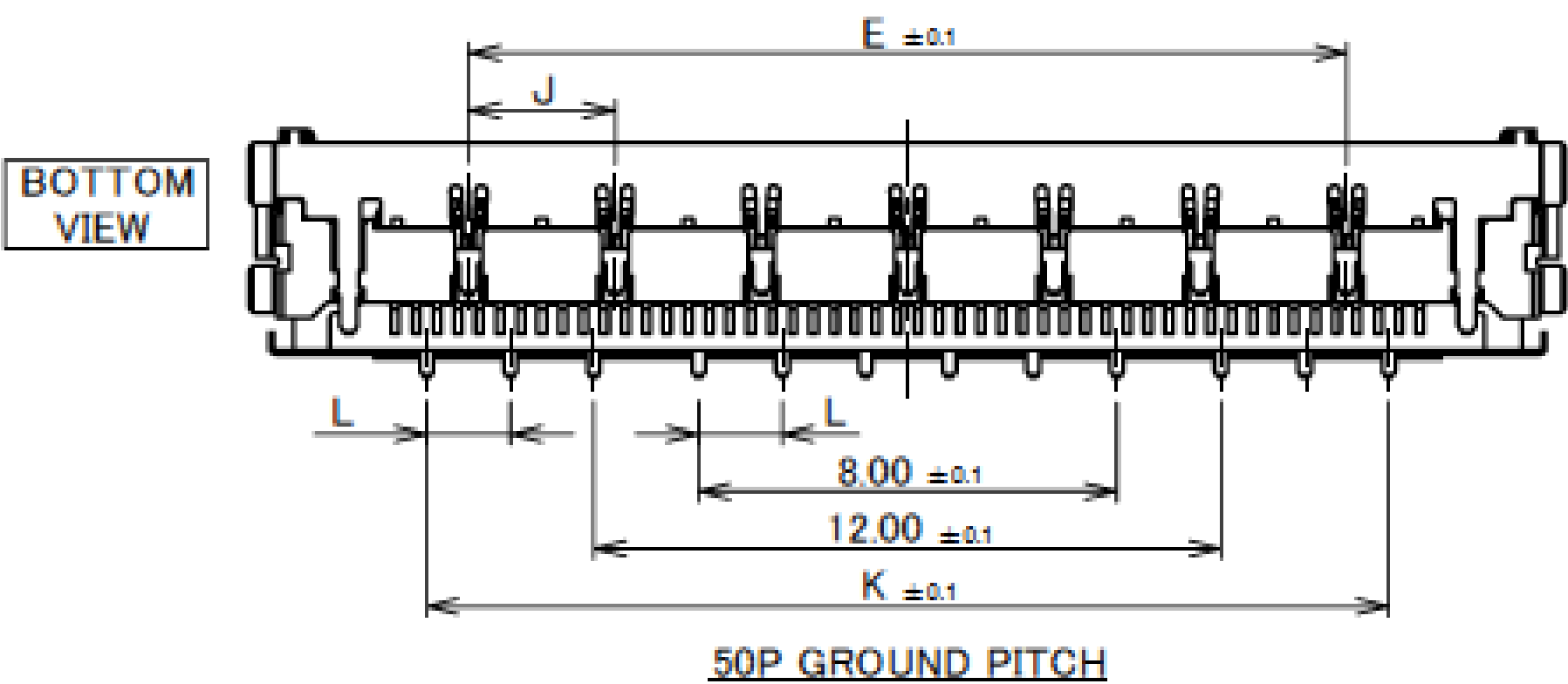
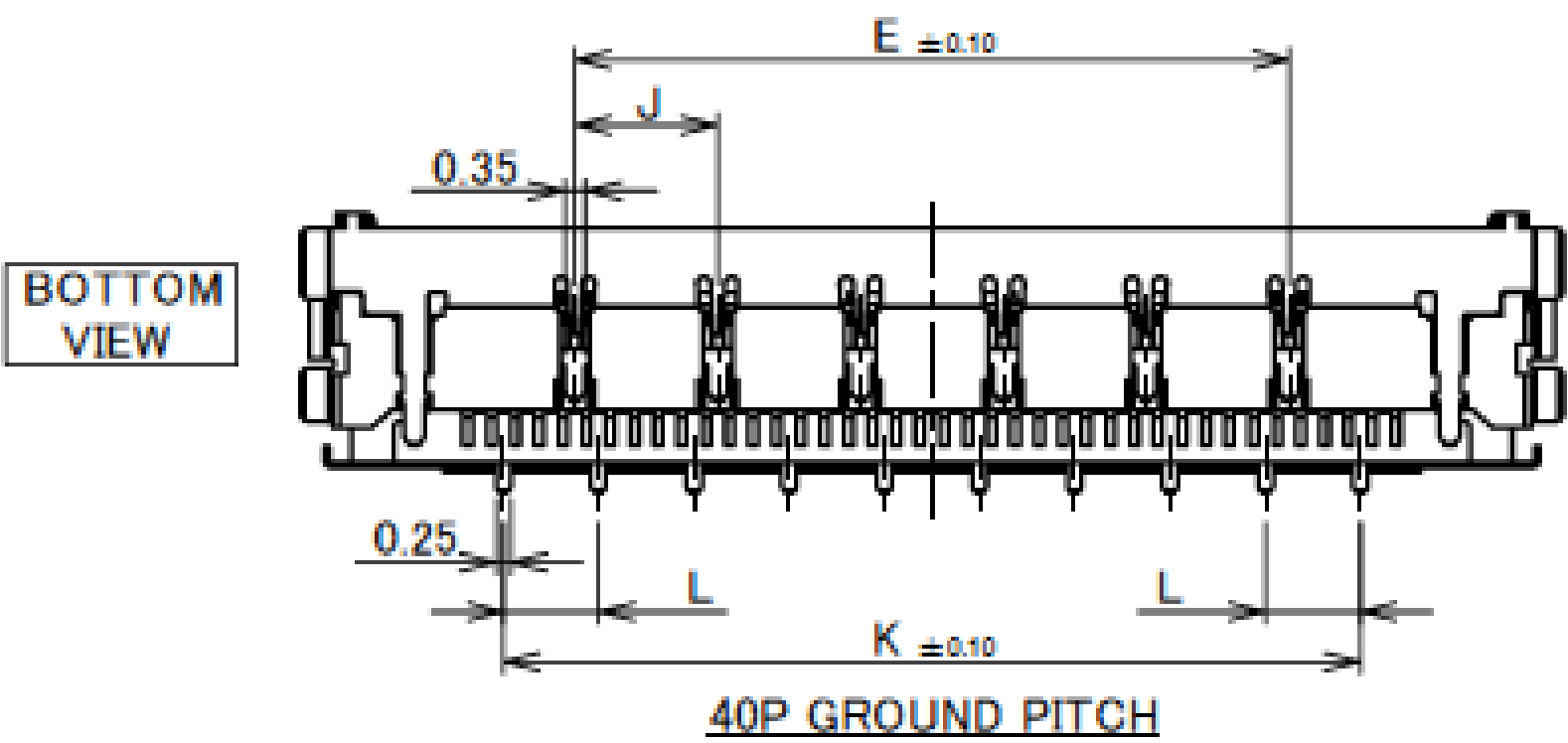
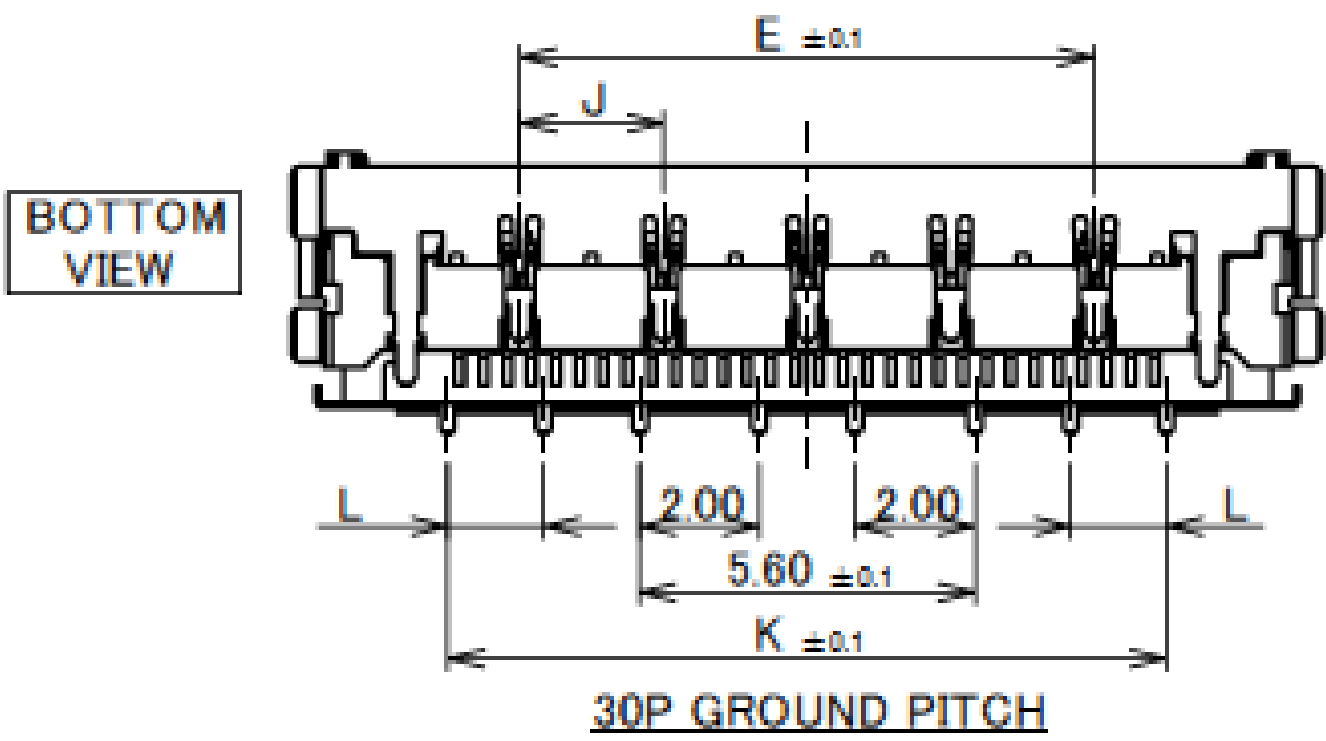
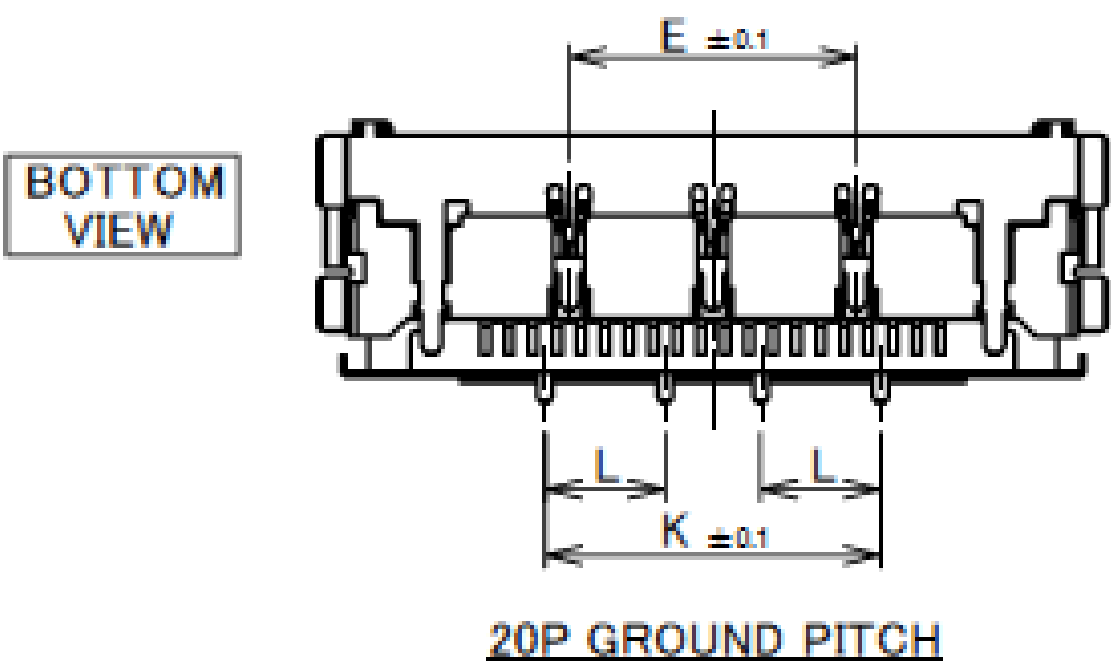
P/N : 20682-0 ** E= 02
Pos.



3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. SOLDERING AREA : Au 0.03 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT & SOLDERING AREA : Au 0.03 μ m MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

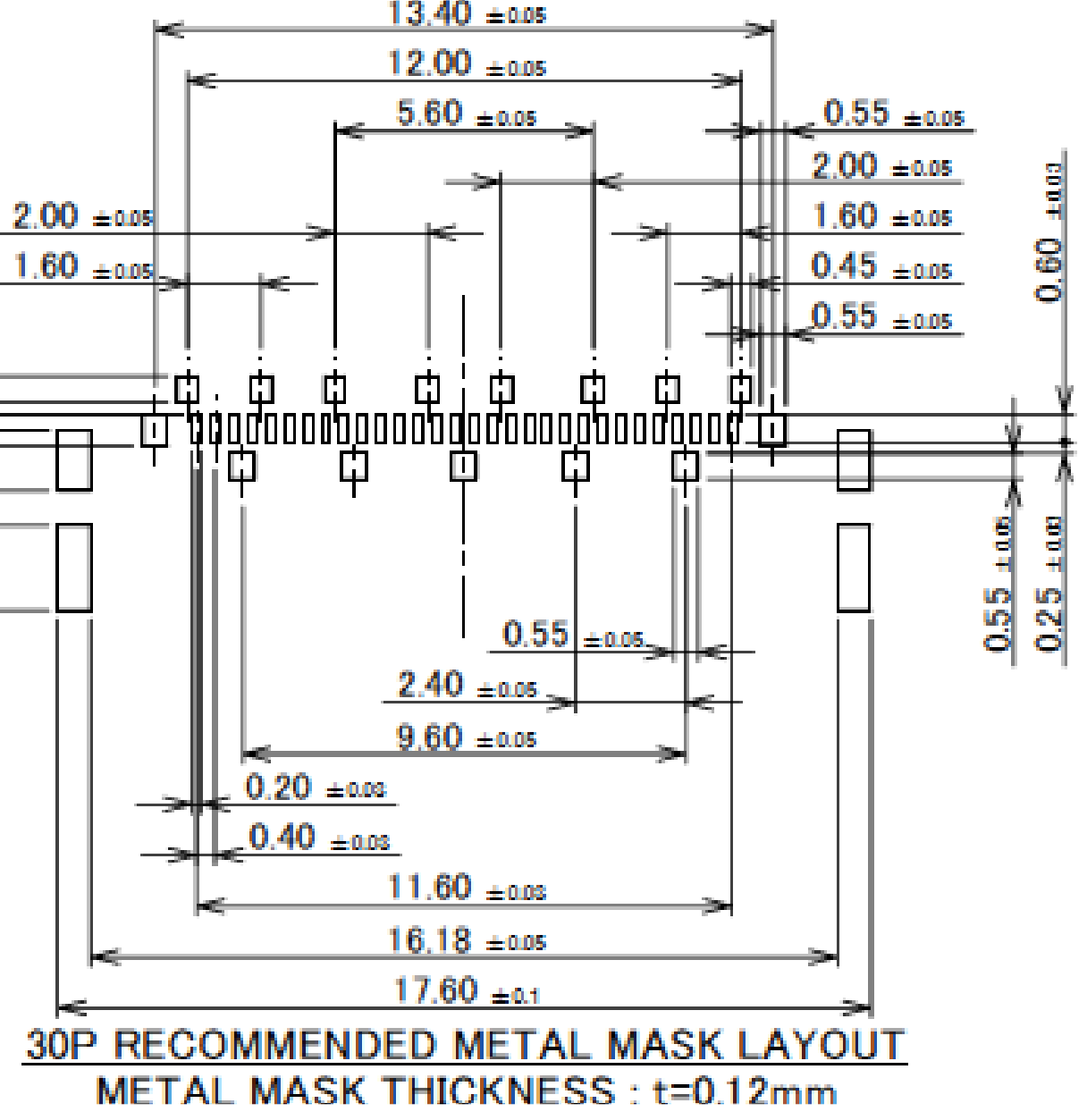
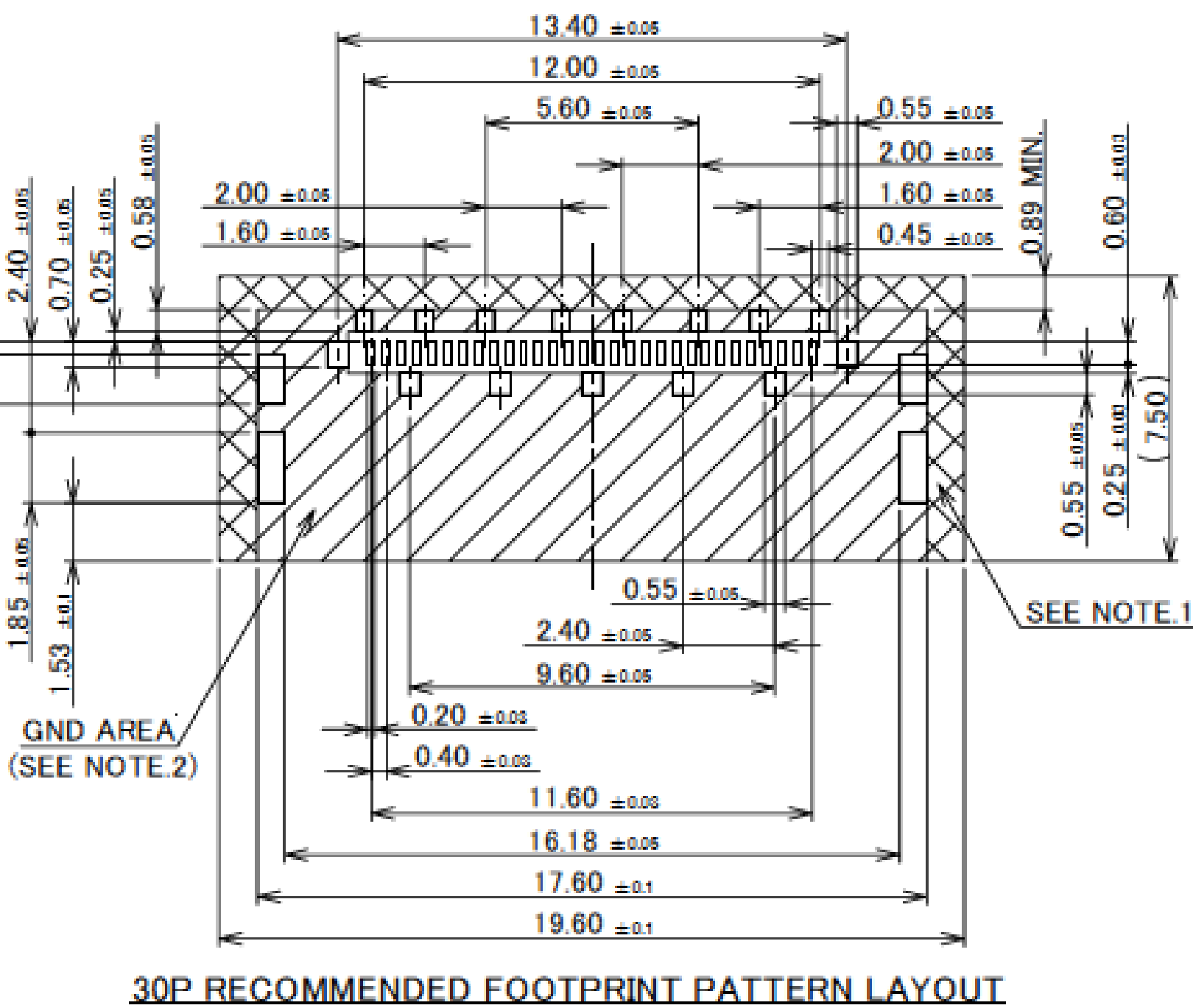
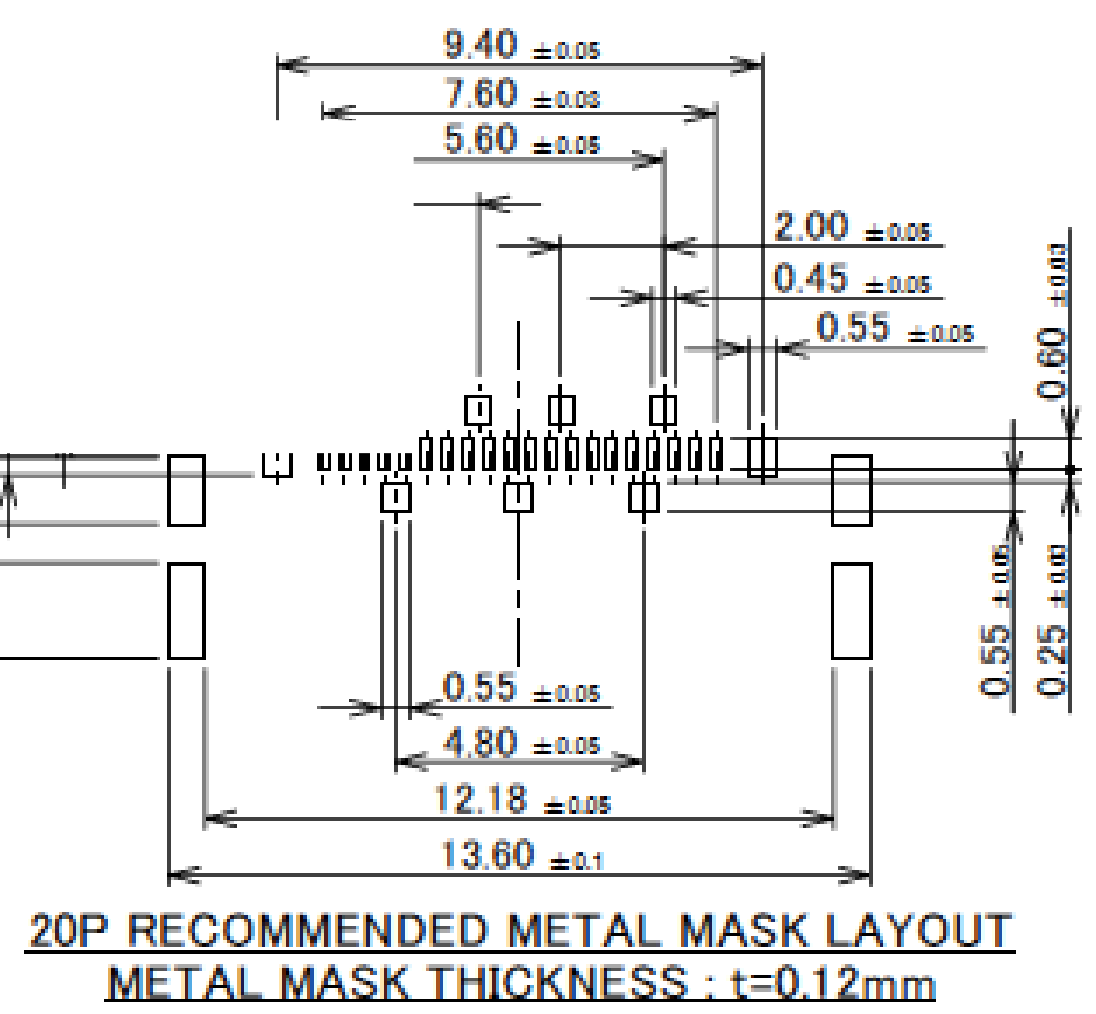
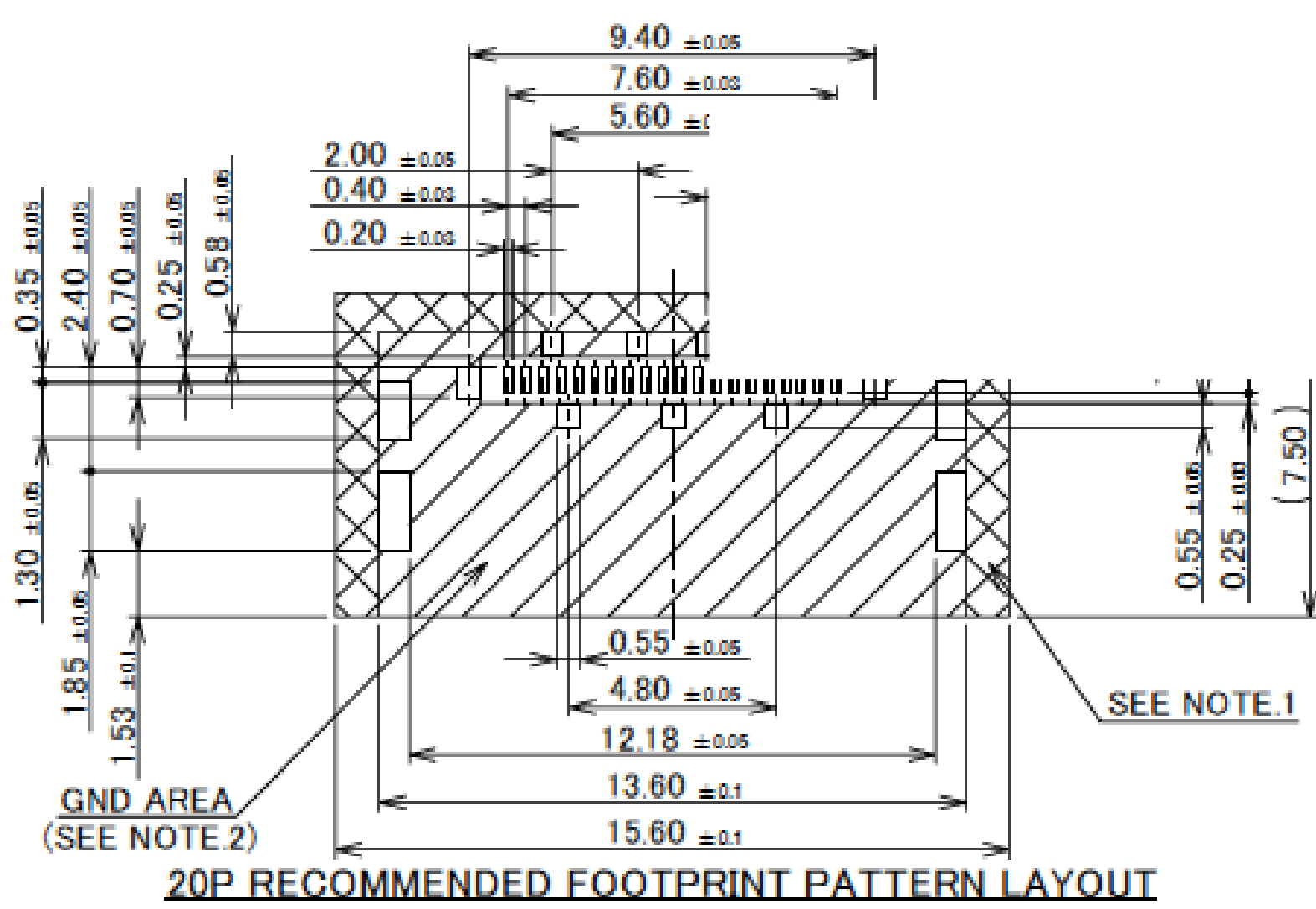
Rev.14

PART NO.	Pos.	E	J	K	L
20682-020E-02	20	4.80	2.40	5.60	2.00
20682-030E-02	30	9.60	2.40	12.00	1.60
20682-040E-02	40	12.00	2.40	14.40	1.60
20682-050E-02	50	16.80	2.80	18.40	1.60



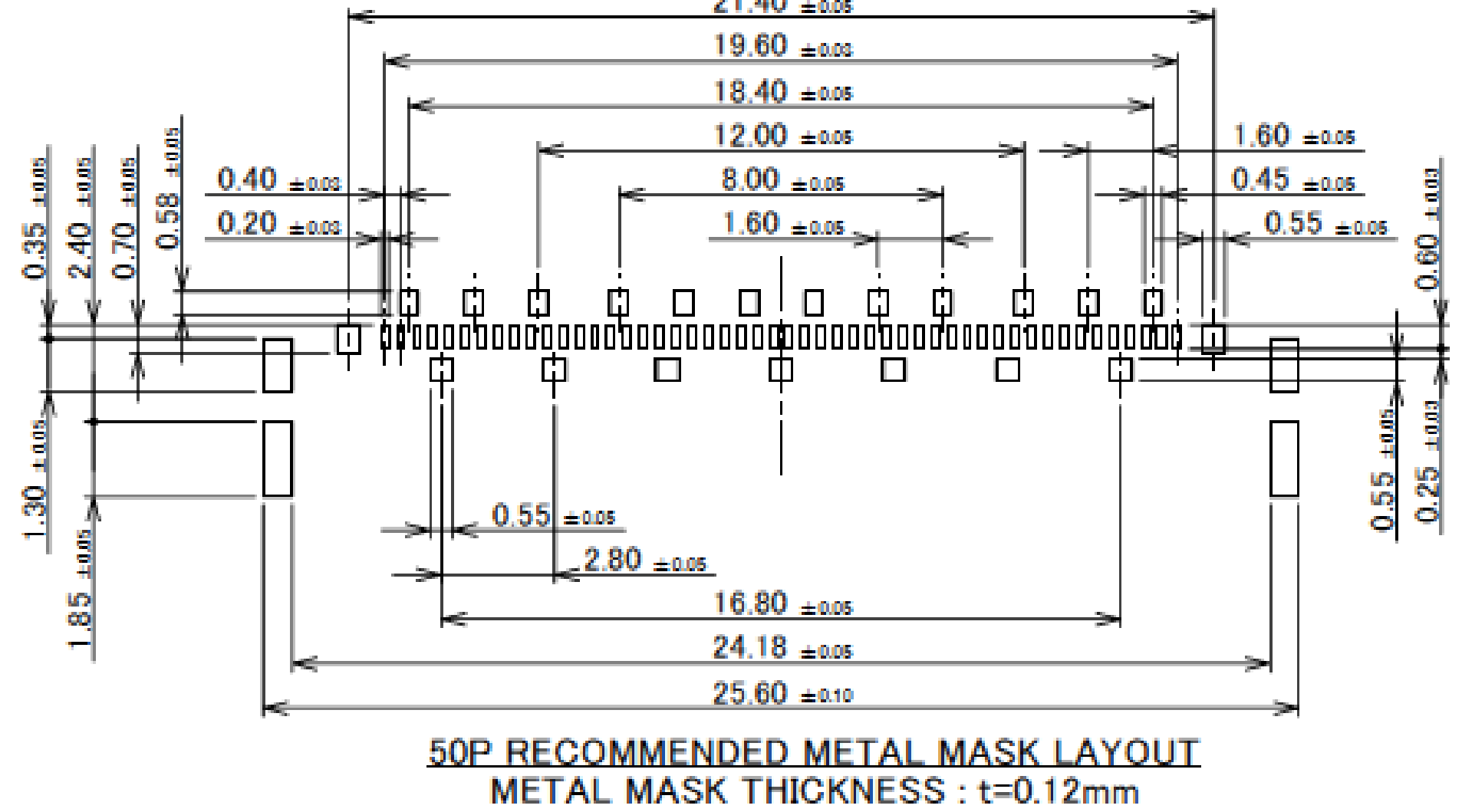
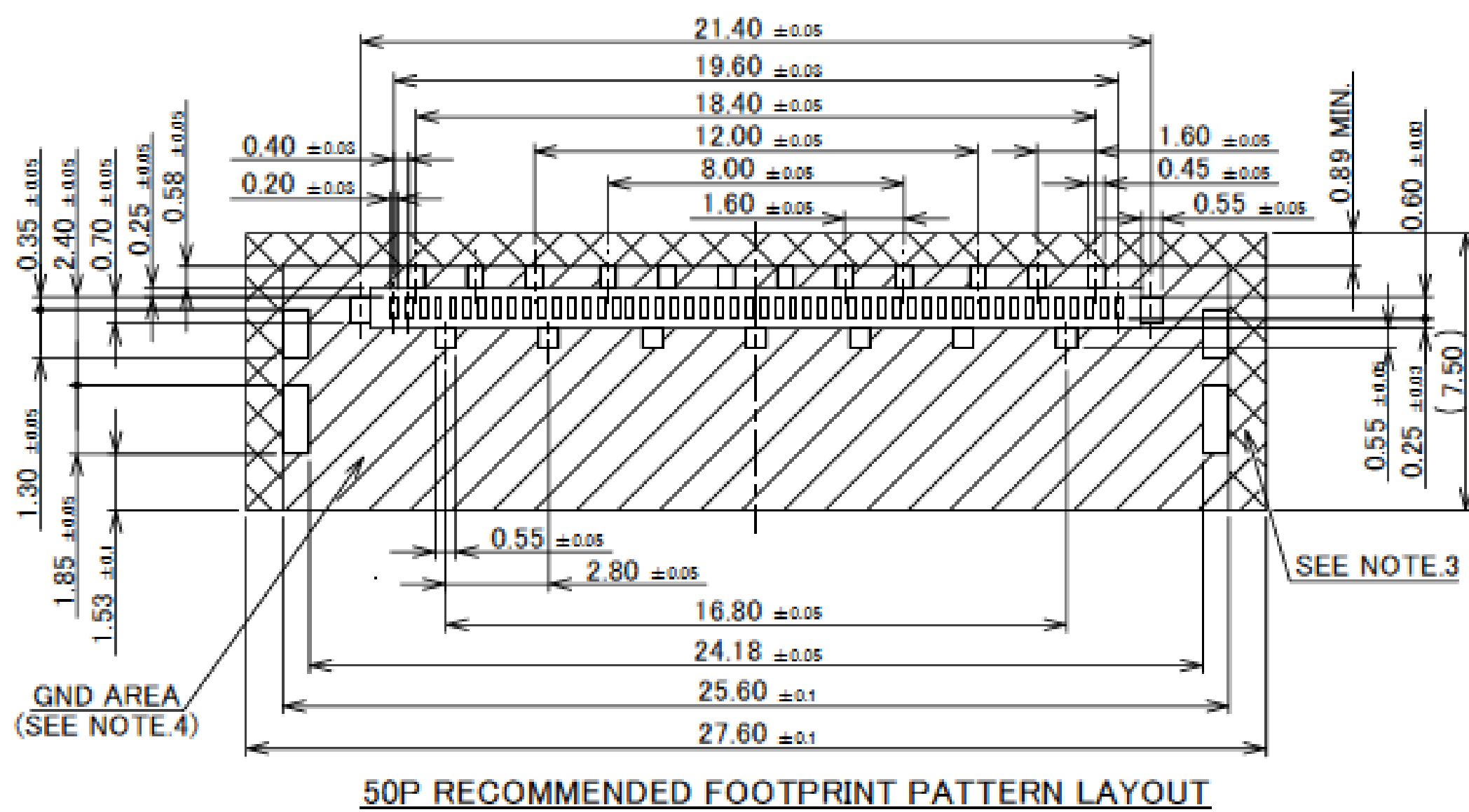
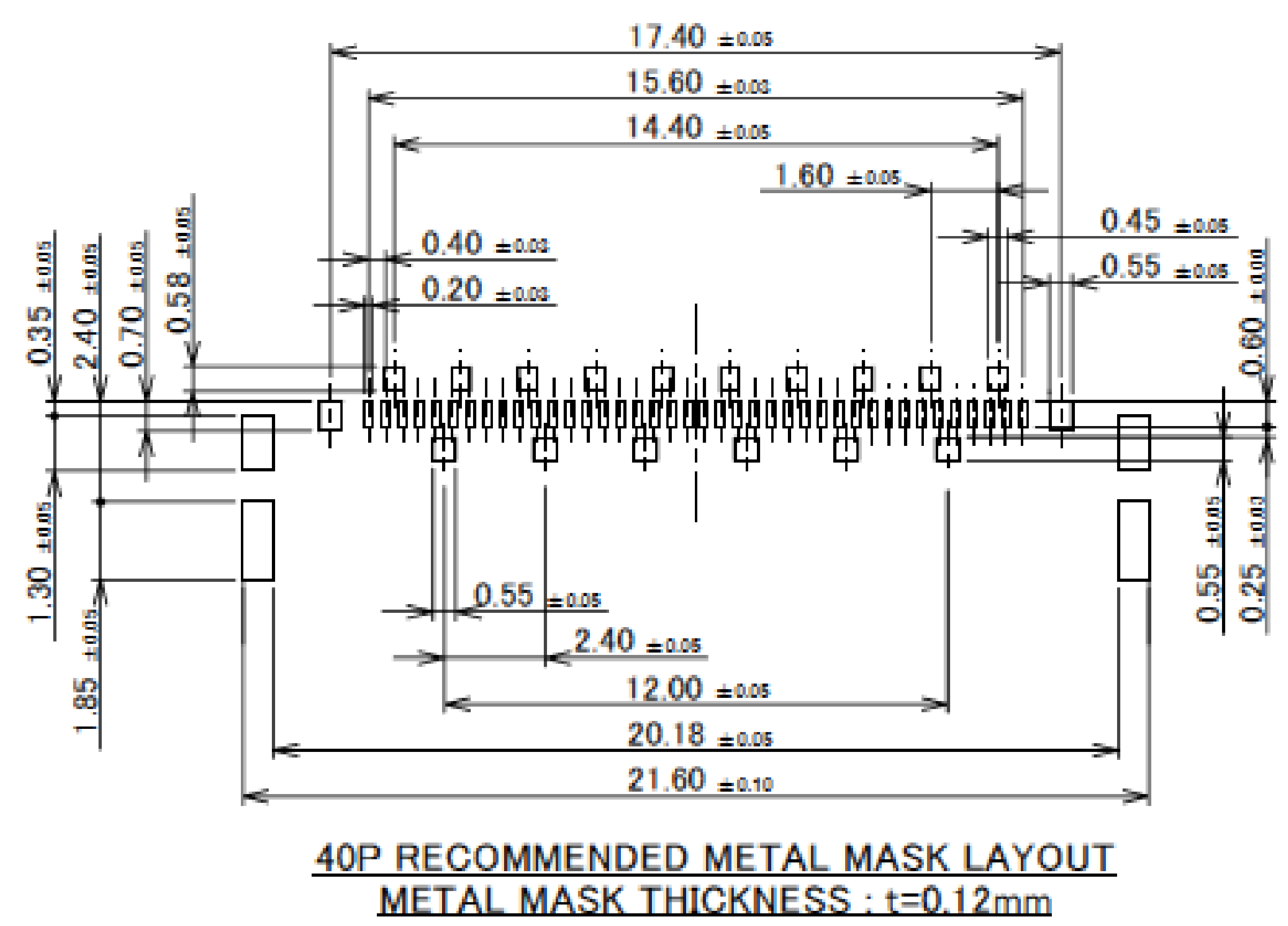
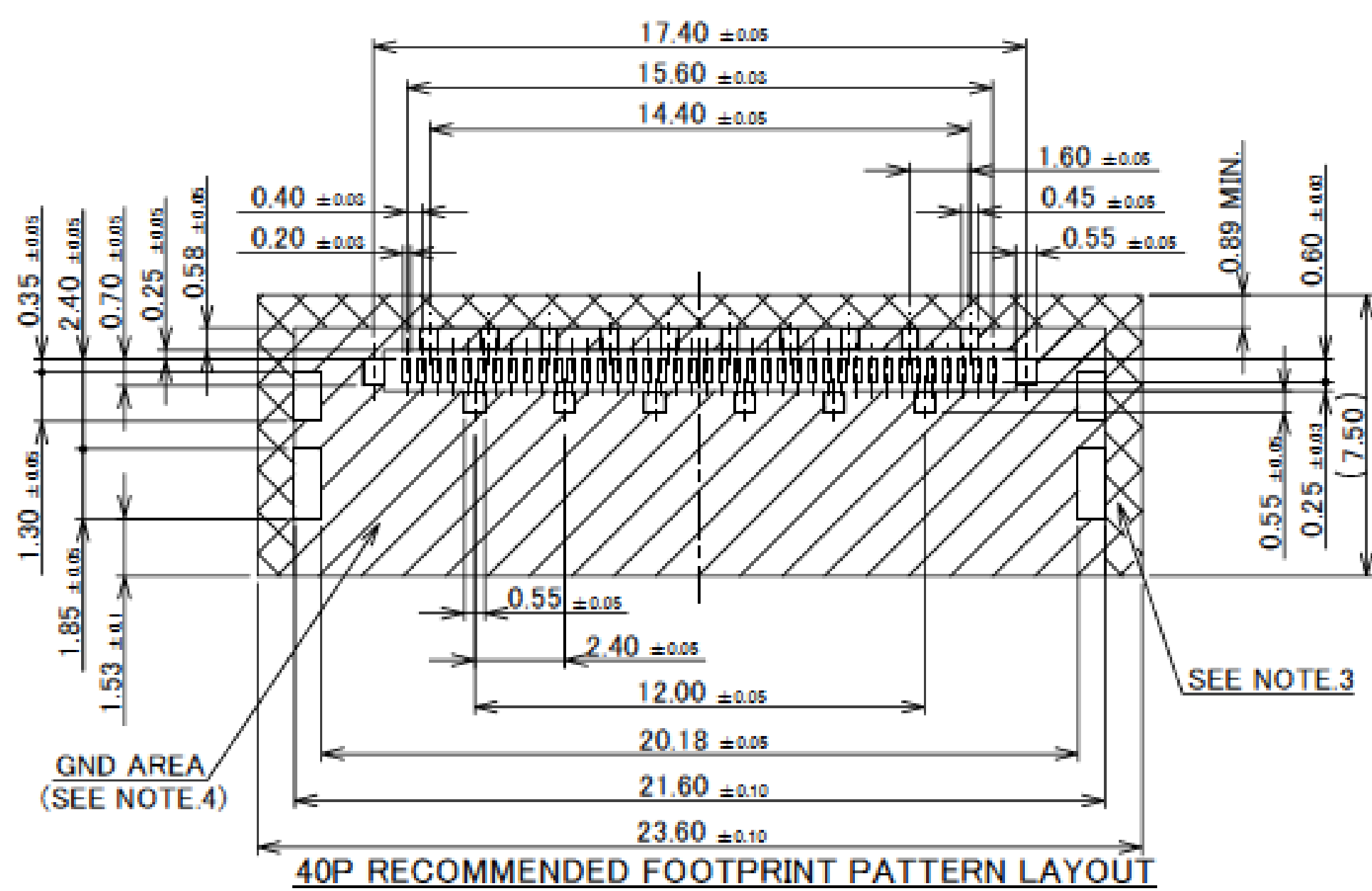
Rev.14

Receptacle Assembly



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

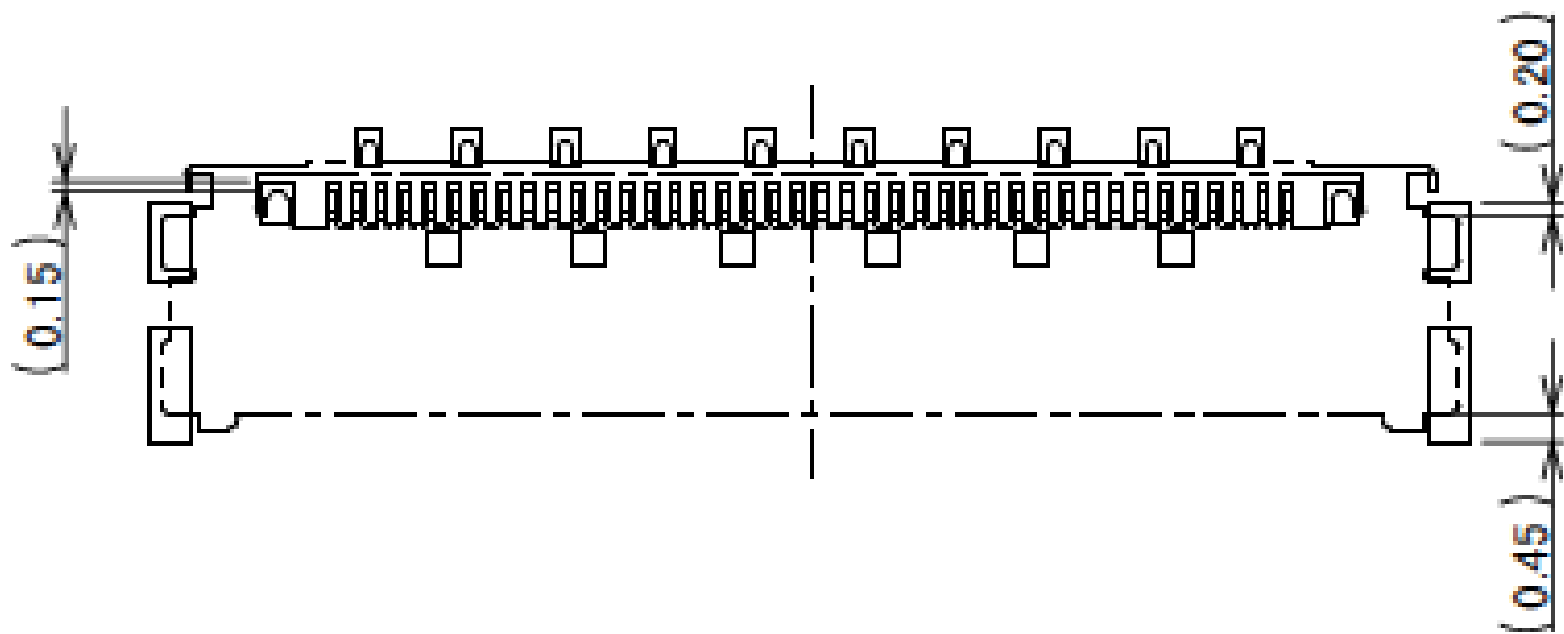
Rev.14



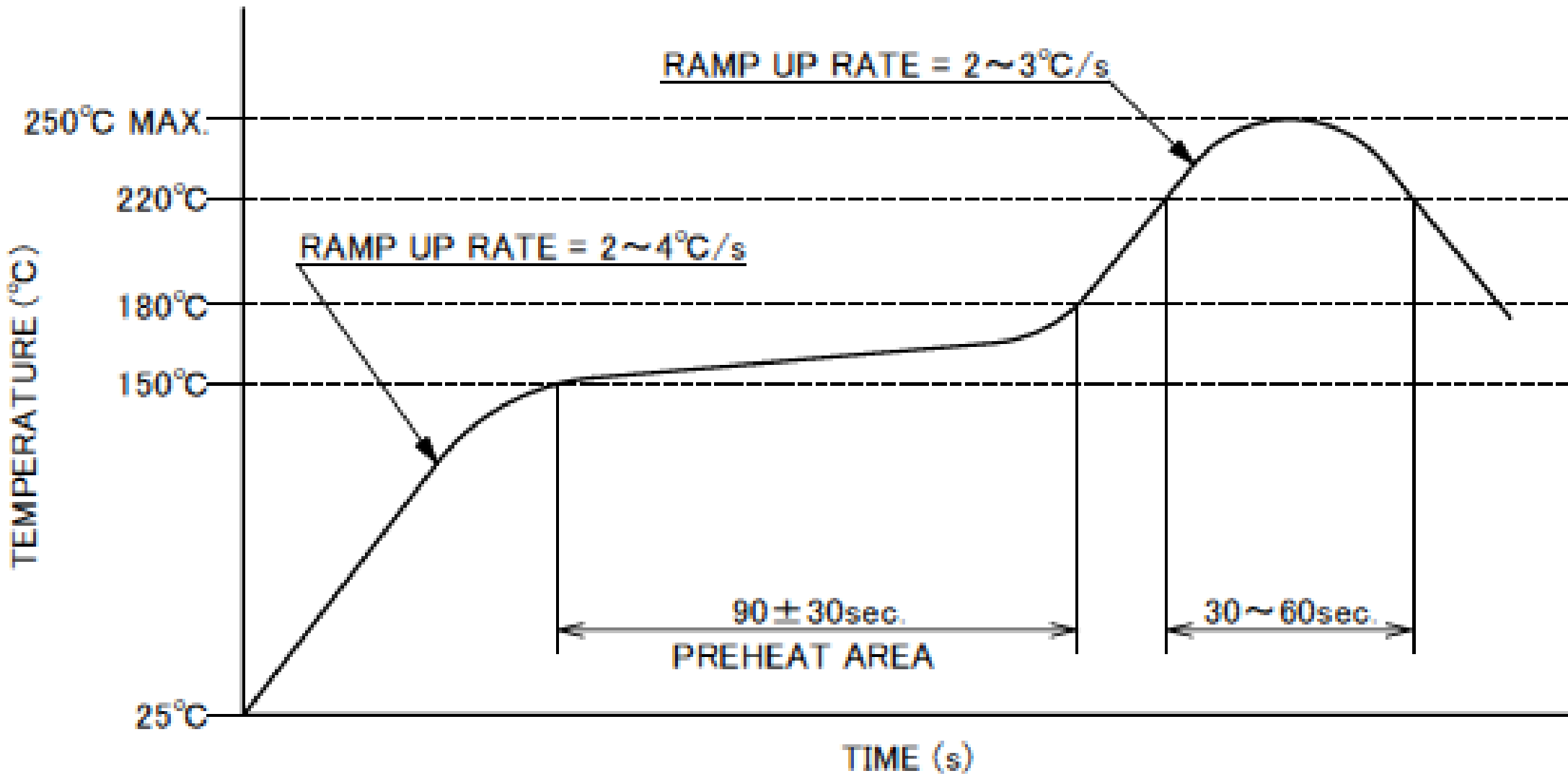
NOTES.
3. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.
4. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.14

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

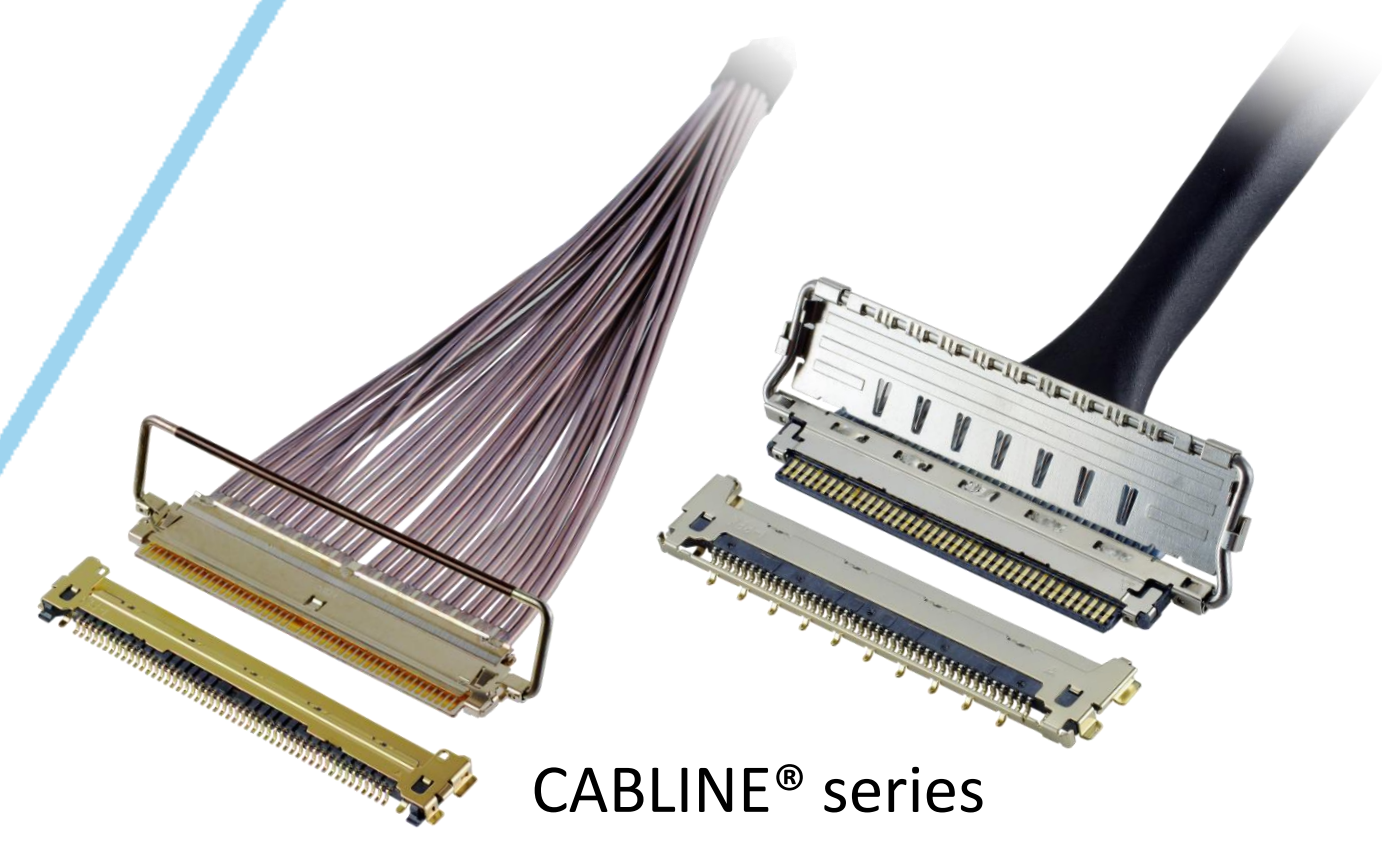
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG# 36 , 34 TWINAX CABLE : AWG# 40 , 42
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT PIN/UP TO 50 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 50 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN/UP TO 50 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT PIN/UP TO 18 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT PIN/UP TO 6 CONTACTS 1.0A AC/DC [AWG#34] PER CONTACT PIN/UP TO 6 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.(NON-CONDENDING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : ≦140mohm MAX. 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 : ≦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. 50P : 24.25N MAX.
UN-MATING FORCE (INITIAL / AFTER 30 CYCLES)	20P : 2.0N MIN. 30P : 3.0N MIN. 40P : 4.0N MIN. 50P : 5.0N MIN.
CABLE RETENTION FORCE	20P : 9.80N MIN. 30P : 14.55N MIN. 40P : 19.40N MIN. 50P : 24.25N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2163
TEST REPORT	TR-15103
INSTRUCTION MANUAL	HIM-15033
PACKING STANDARD	PST-15027
APPEARANCE CRITERIA No.	QLS-A***

Rev.14

Custom Connectors Available

RF Connector

MHF® series



CABLINE® series

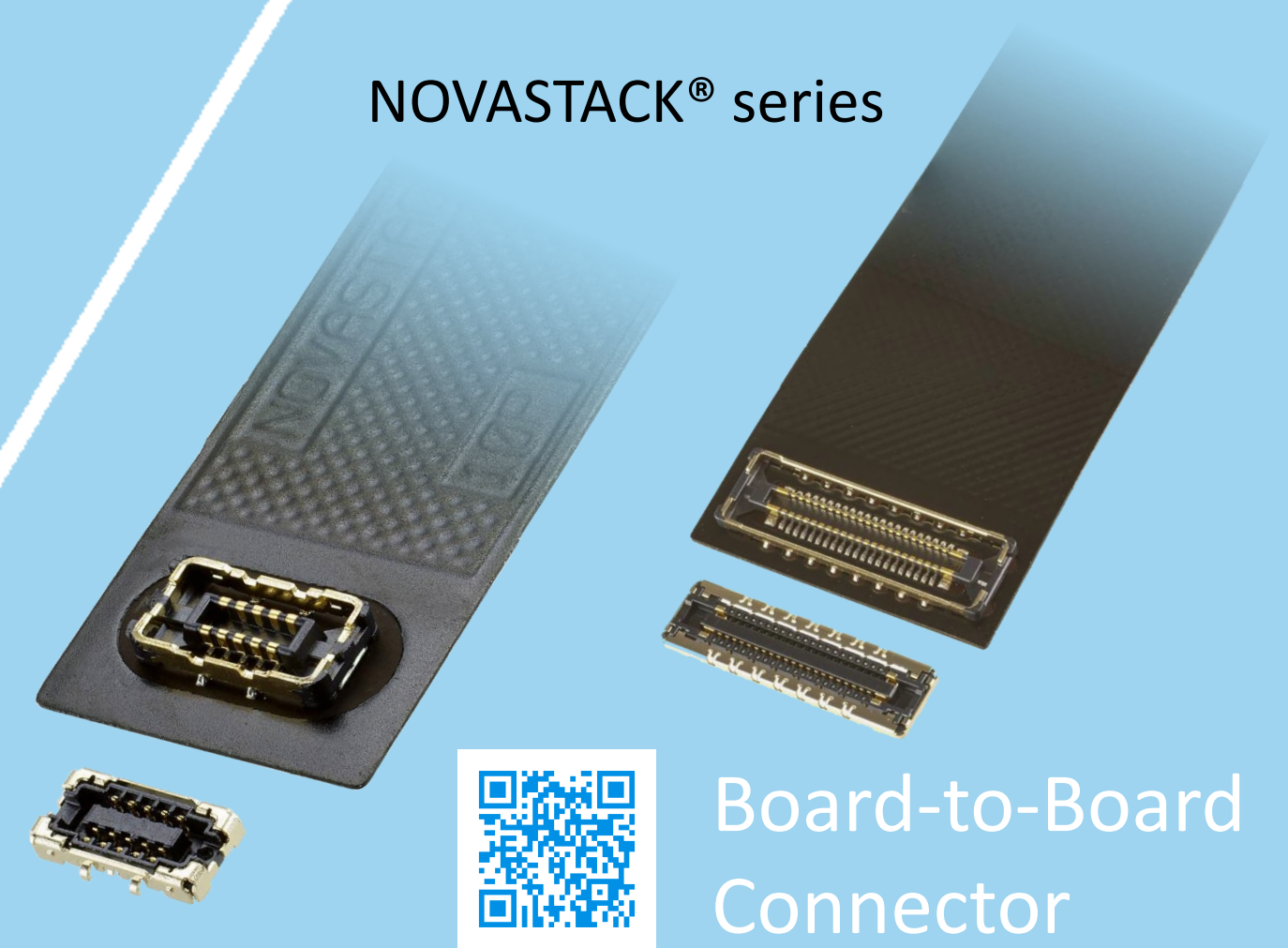
Micro-coaxial/Twinax/Discrete Wire Connector

Optical Module

LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector

Power Connector/Terminal

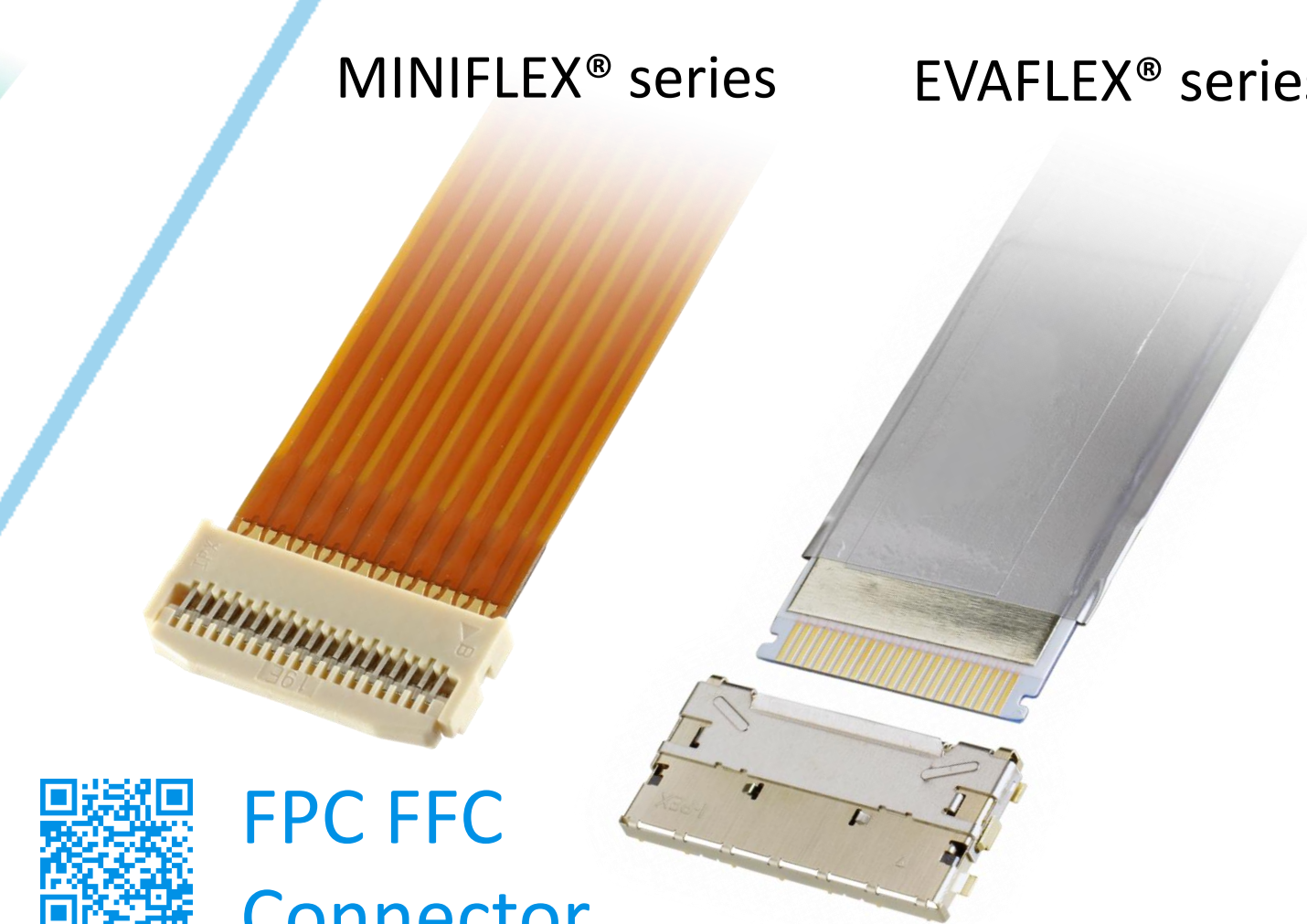
AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



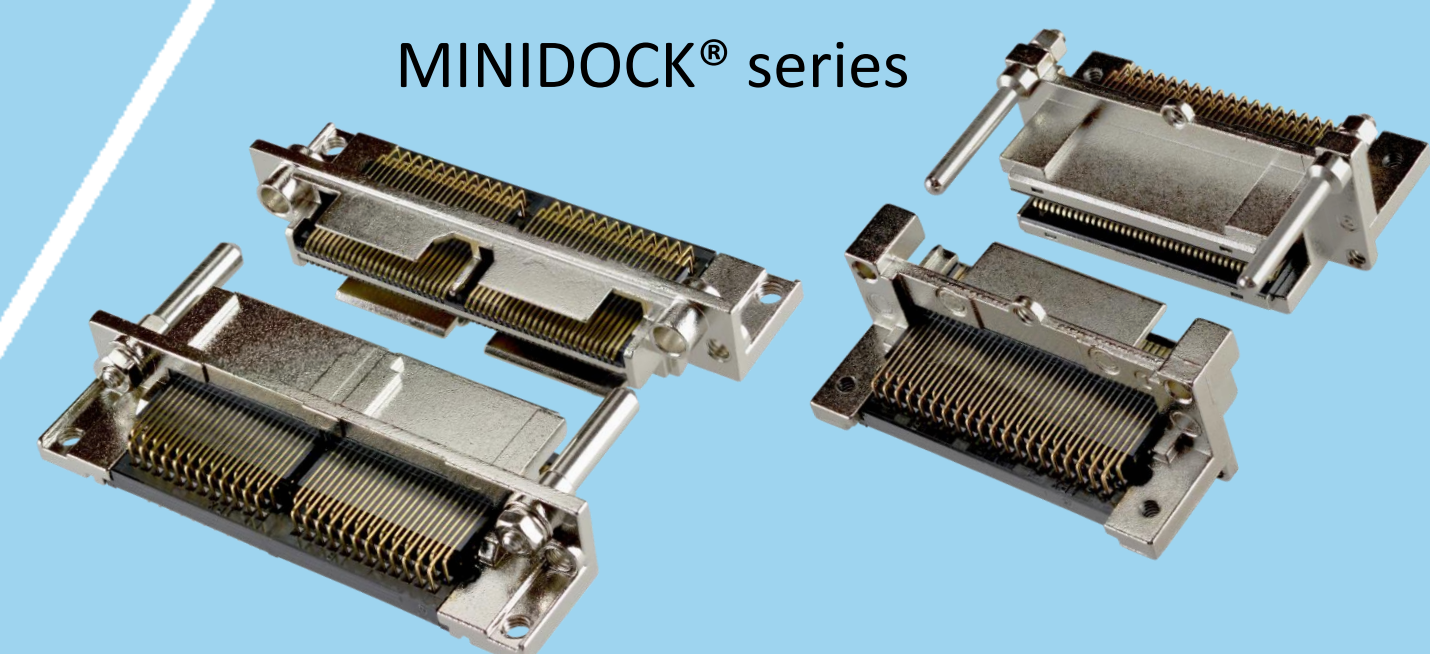
FPC FFC Connector



Inquiry



MINIDOCK® series



I/O Connector

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