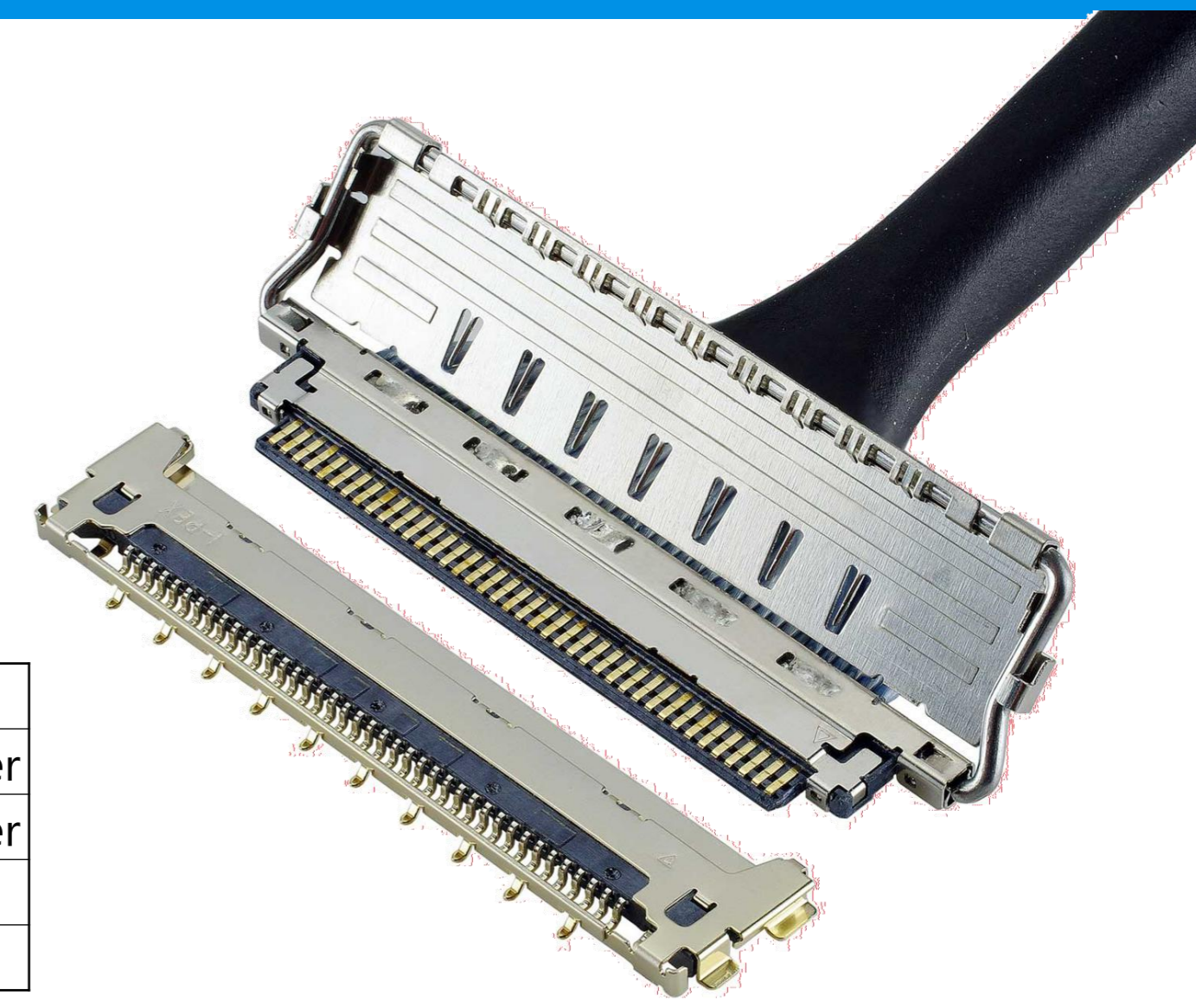


CABLINE® -CA II

Fully-shielded with mechanical lock, suitable for high-data-rate transfer (32 Gbps/lane), 0.4 mm pitch, horizontal mating type micro-coaxial connector



Product Specifications:

Mating type	Horizontal	
Board Pitch	0.4 mm	
Wiping Length	0.54 mm	
Mated Size	Height	1.1 mm max. with cover
	Width	6.95 + (0.4 x pin count) mm
	Depth	6.2 mm
Pin Counts	Range	Up to 60
	Available	20, 30, 40, 50

Applicable Cable Size:

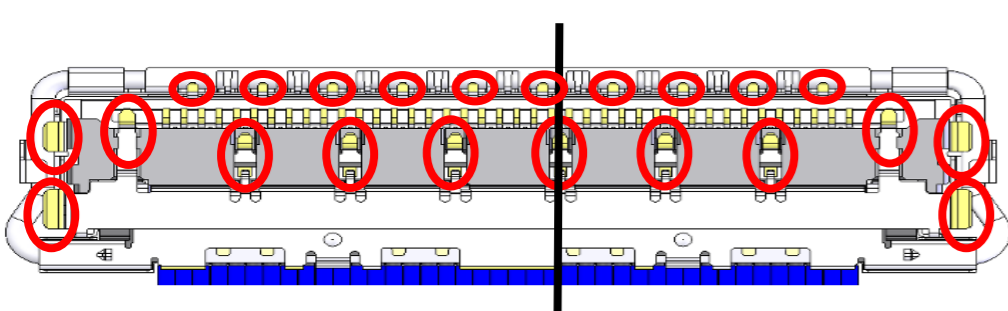
Maximum O.D.	0.4 mm
Micro-Coaxial for Signal	45 ohm: AWG 38 or smaller
	50 ohm: AWG 40 or smaller
Twinaxial	AWG 40, 42
Discrete	AWG 34 or smaller

Applicable Standards (Reference Only):

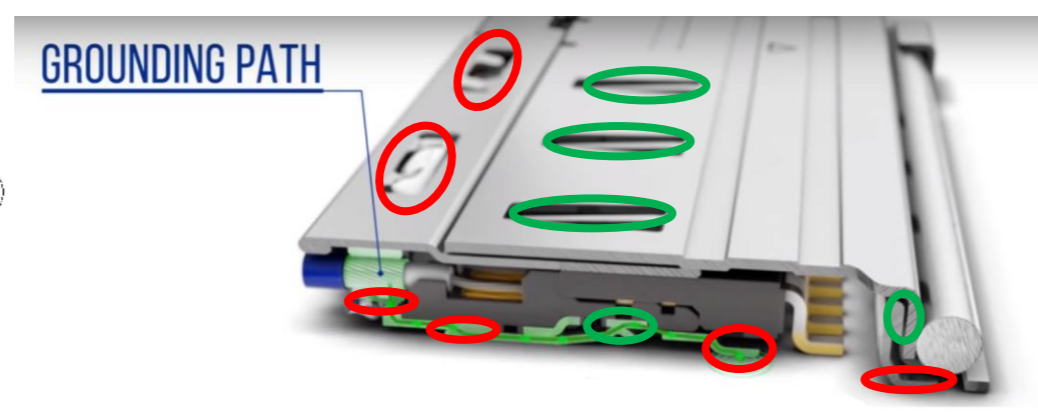
32 Gbps/ Lane, USB4 Gen4 (40 Gbps/ Lane PAM3)
Display Port UHBR20 (20 Gbps/Lane)

* Please inquire for pin counts not listed or outside of the pin count range.
* 60 pin is also available with CABLINE®-CA II PLUS (wider space type).

▶ ZenShield® fully-shielded with multi-point grounds is ideal for EMC solutions

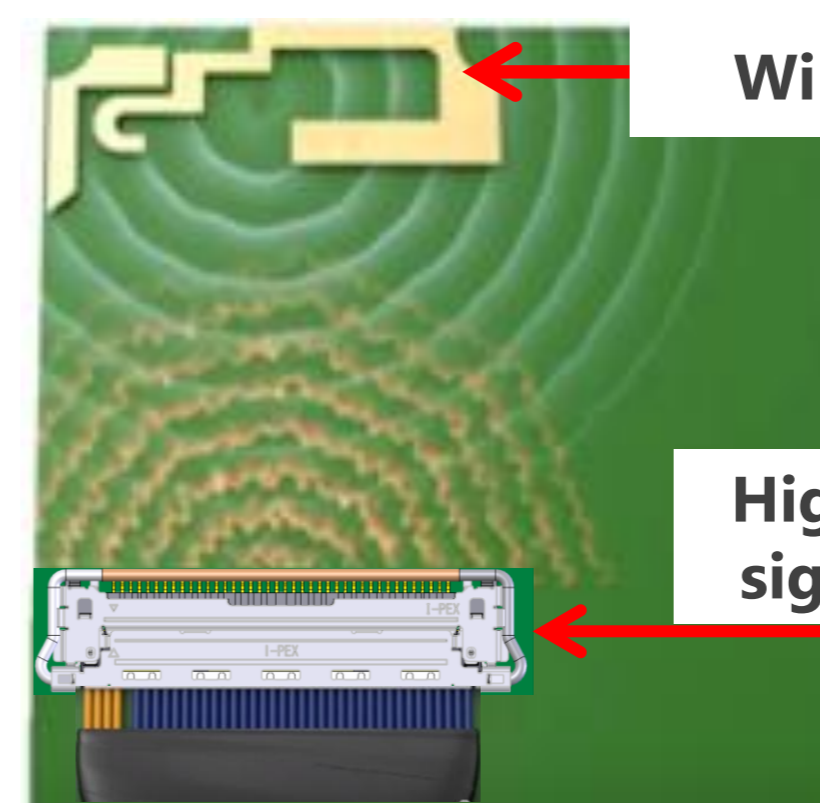


View From Back



- Soldered contacts
- Mechanical contacts

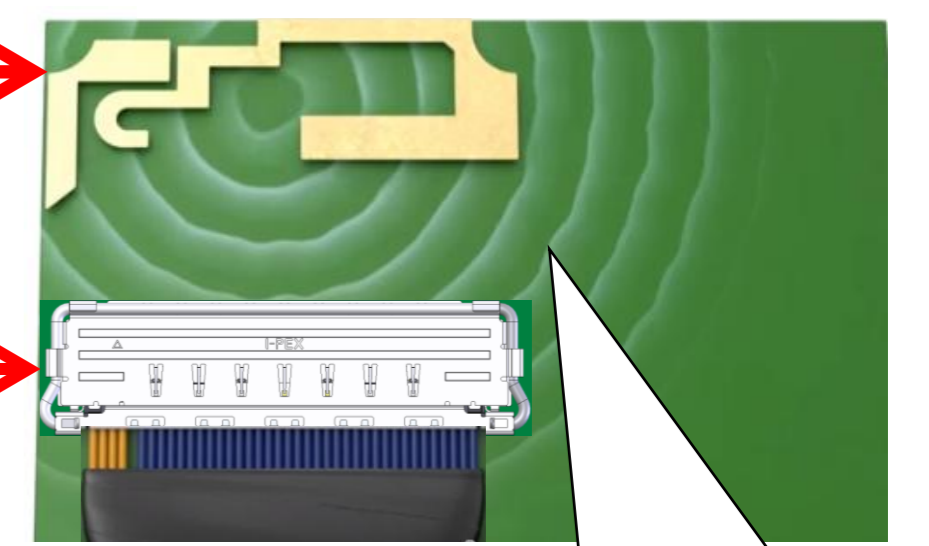
General Connector



Wi-Fi Antenna

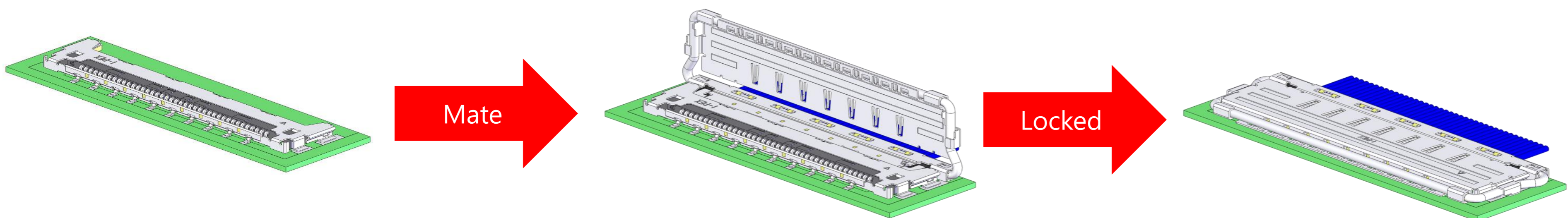
High-data-rate signal transfer

ZenShield® Connector



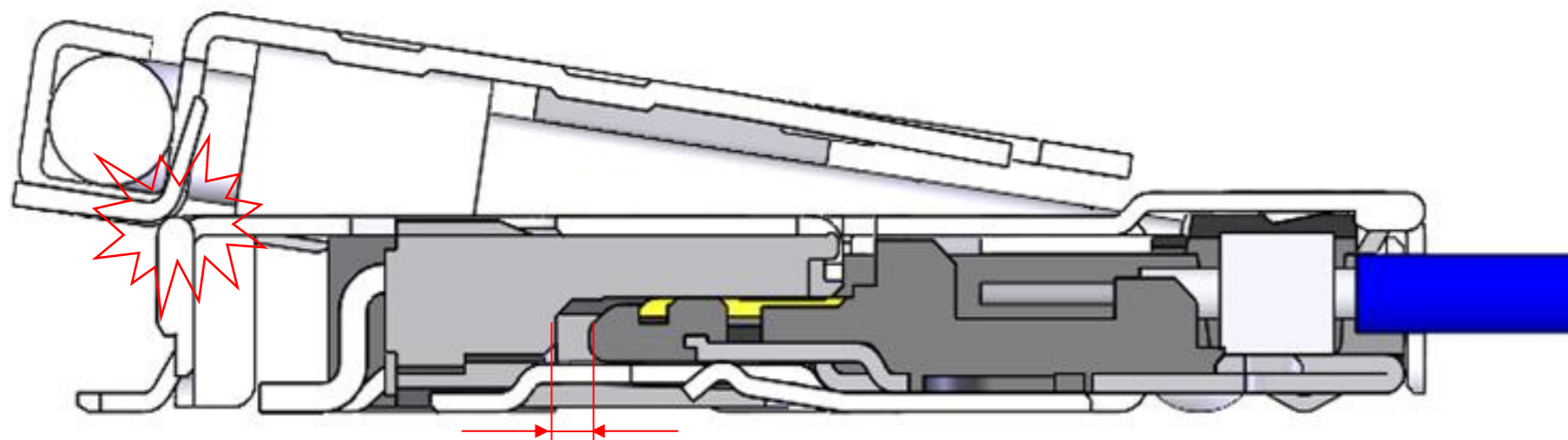
Connectors can be placed closer to antenna

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

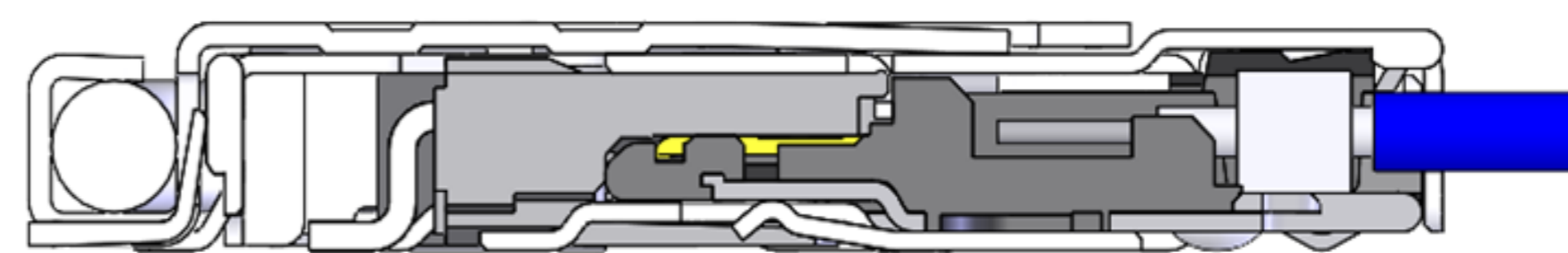


Unable to lock

can only be locked when mating is complete



incomplete mating



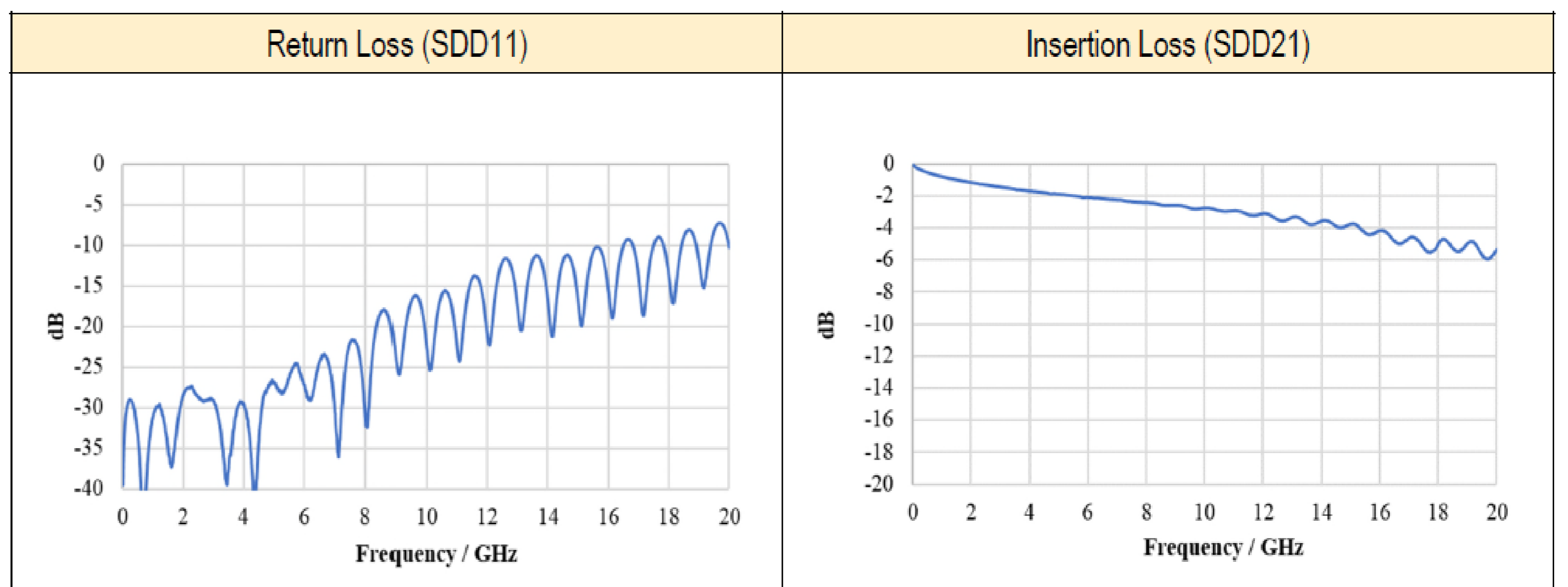
complete mating

▶ High-data-rate transfer, ideal for 32 Gbps/lane applications

Measurement results

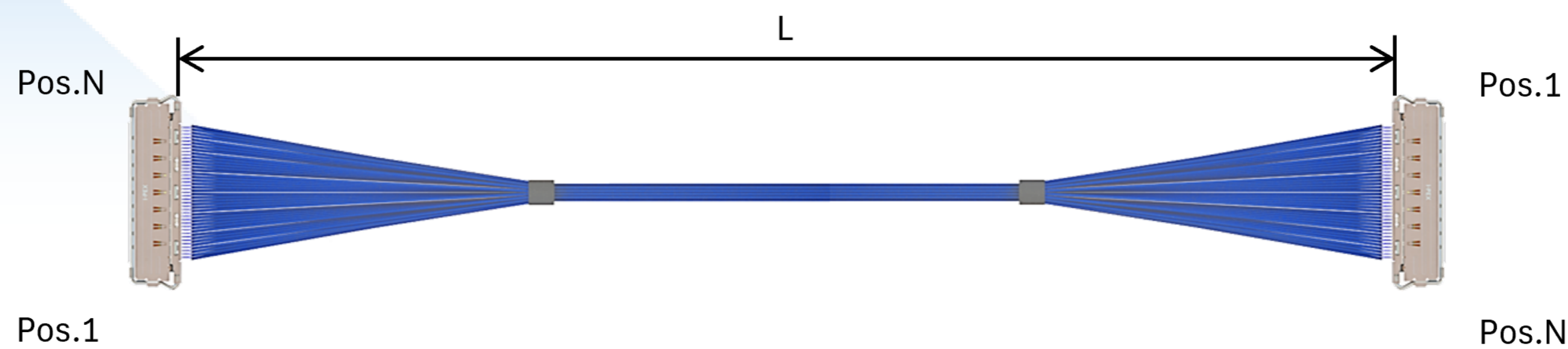
Connector: CABLINE-CA II 40 pin
Cable: Micro-coaxial cable
AWG 40, 45ohm, Length: 100 mm

Pin Assignment: GSSGSSG

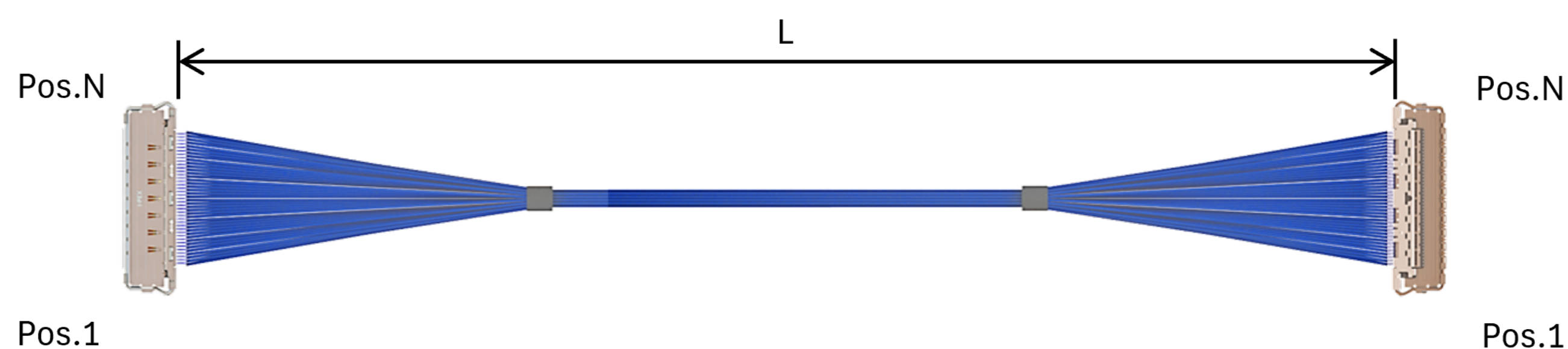


CABLINE® -CA II standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.



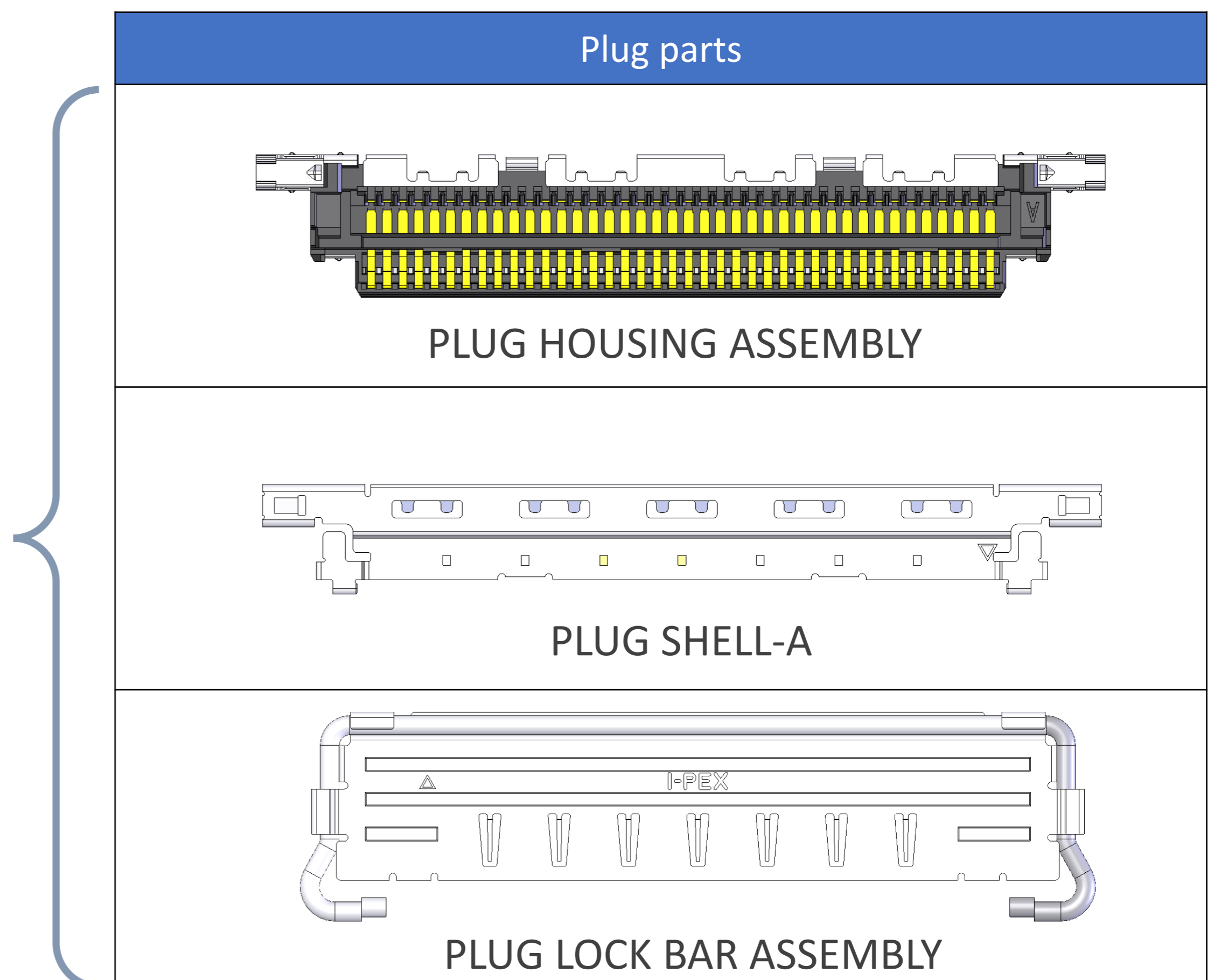
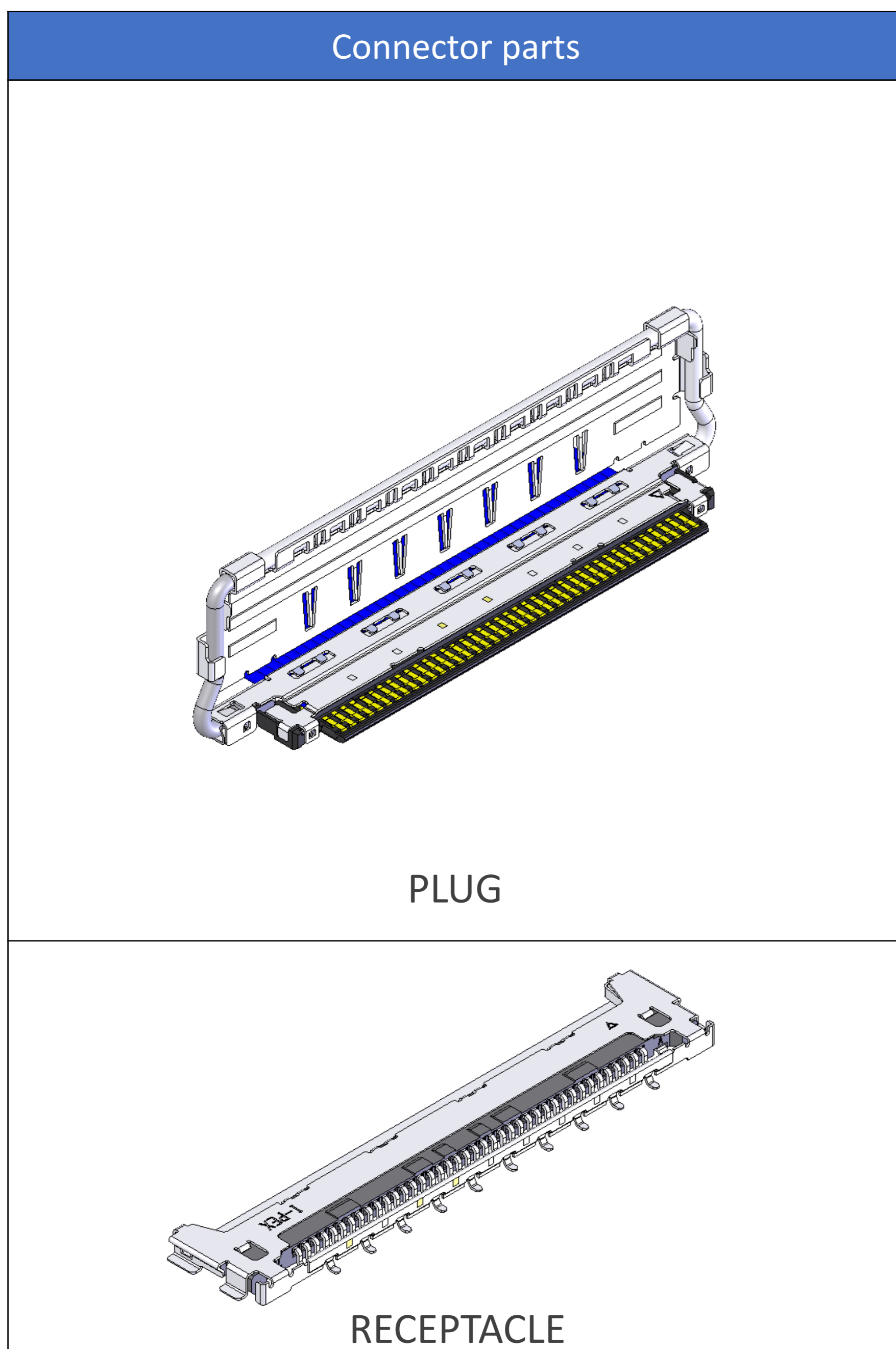
Part Number Description	Part Number (Link to Drawing)	Sample available
CABLINE-CA II harness 20pin micro-coaxial 40AWG L=200mm 1-N	82435-100B-02-D	Buy from Digikey
CABLINE-CA II harness 30pin micro-coaxial 40AWG L=100mm 1-N	82287-100B-02-D	Buy from Digikey
CABLINE-CA II harness 30pin micro-coaxial 40AWG L=200mm 1-N	81461-100B-02-D	Buy from Digikey
CABLINE-CA II harness 30pin micro-coaxial 40AWG L=300mm 1-N	82288-100B-02-D	Buy from Digikey
CABLINE-CA II harness 40pin micro-coaxial 40AWG L=100mm 1-N	82654-100B-02-D	Buy from Digikey
CABLINE-CA II harness 40pin micro-coaxial 40AWG L=200mm 1-N	81462-100B-02-D	Buy from Digikey
CABLINE-CA II harness 40pin micro-coaxial 40AWG L=300mm 1-N	82655-100B-02-D	Buy from Digikey
CABLINE-CA II harness 50pin micro-coaxial 40AWG L=200mm 1-N	82436-100B-02-D	Buy from Digikey



Part Number Description	Part Number (Link to Drawing)	Sample available
CABLINE-CA II harness 30pin micro-coaxial 40AWG L=100mm 1-1	82668-100B-01-D	Contact us
CABLINE-CA II harness 30pin micro-coaxial 40AWG L=200mm 1-1	82669-100B-01-D	Contact us
CABLINE-CA II harness 30pin micro-coaxial 40AWG L=300mm 1-1	82670-100B-01-D	Contact us
CABLINE-CA II harness 40pin micro-coaxial 40AWG L=100mm 1-1	82671-100B-01-D	Contact us
CABLINE-CA II harness 40pin micro-coaxial 40AWG L=200mm 1-1	82672-100B-01-D	Contact us
CABLINE-CA II harness 40pin micro-coaxial 40AWG L=300mm 1-1	82673-100B-01-D	Contact us

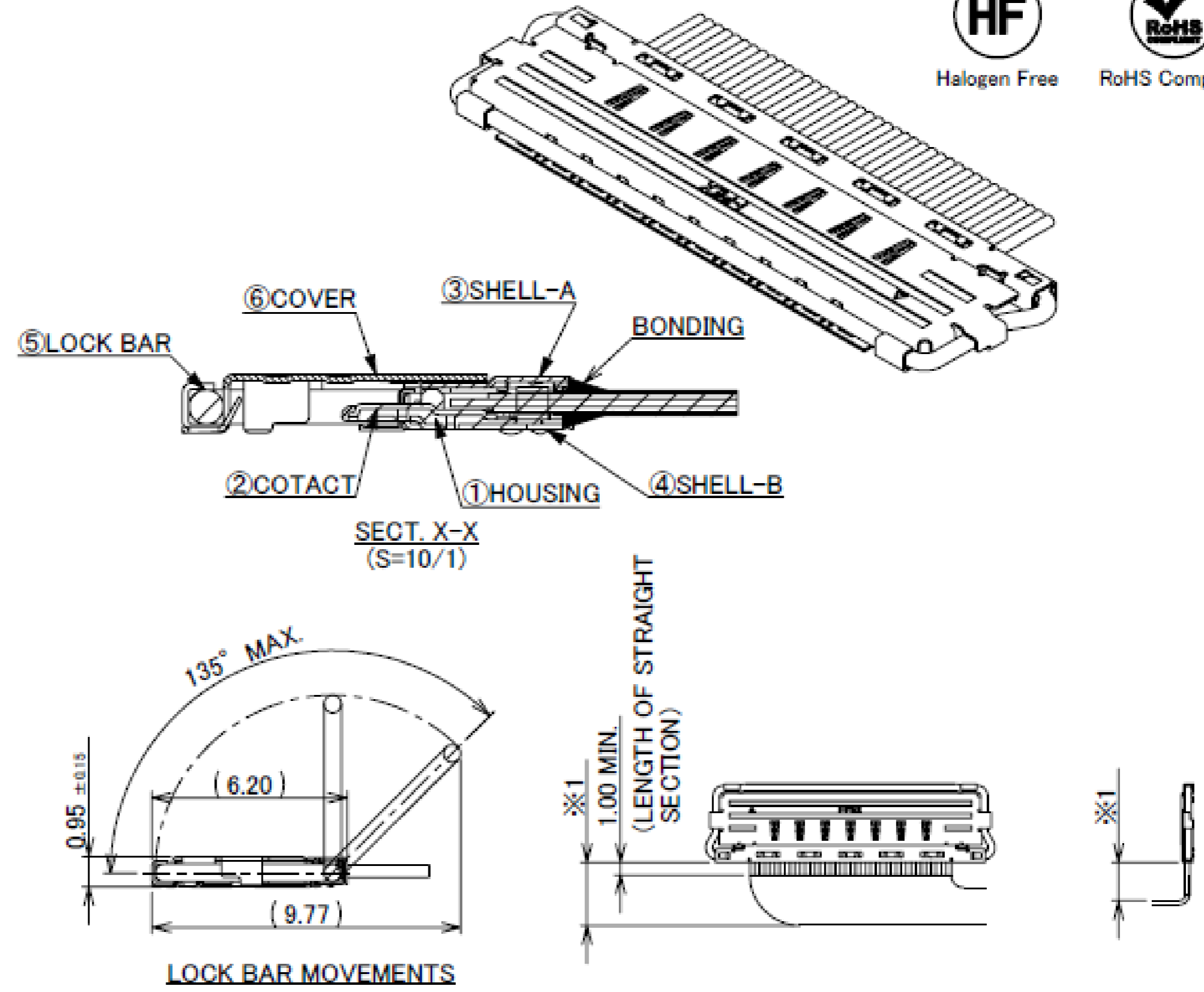
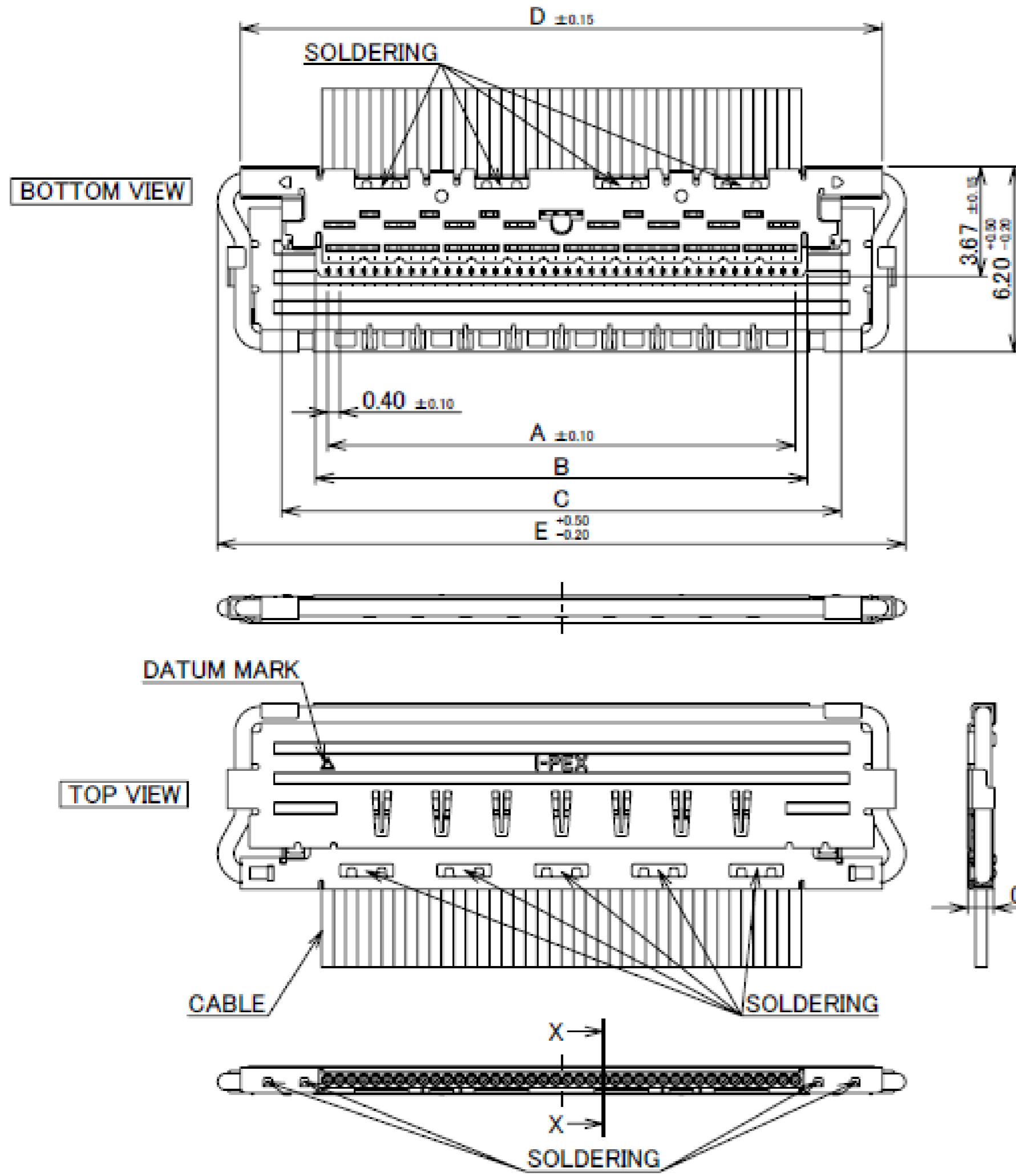
Component Parts Details

Component Parts



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

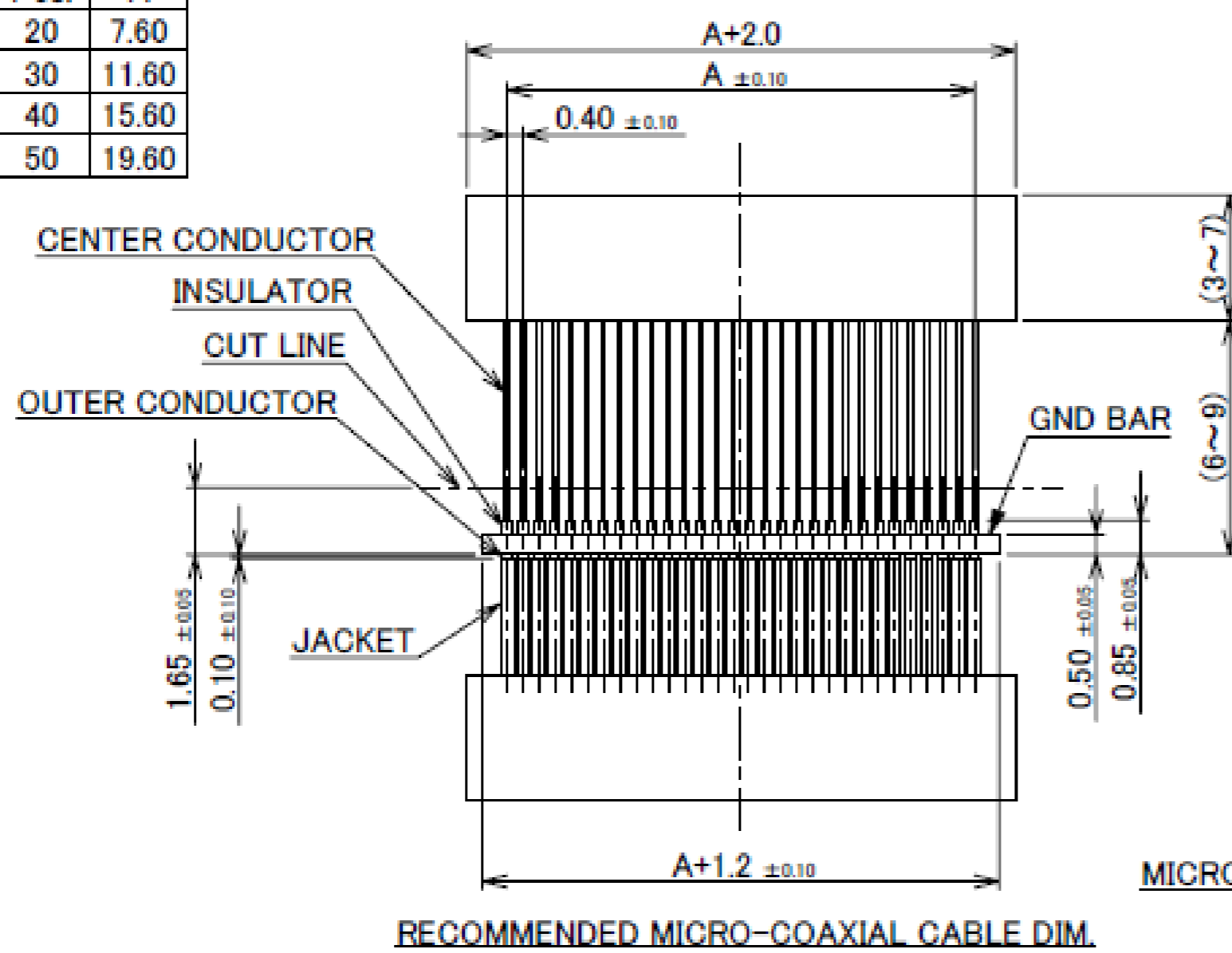


※1: THE BEND DIMENSIONS MAY VARY BASED ON THE SIZE AND QUANTITY OF CABLES. PLEASE CONFIRM THE MINIMUM BENDING RADIUS WITH I-PEX OR THE HARNESS MANUFACTURER.

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	ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

Rev.14

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



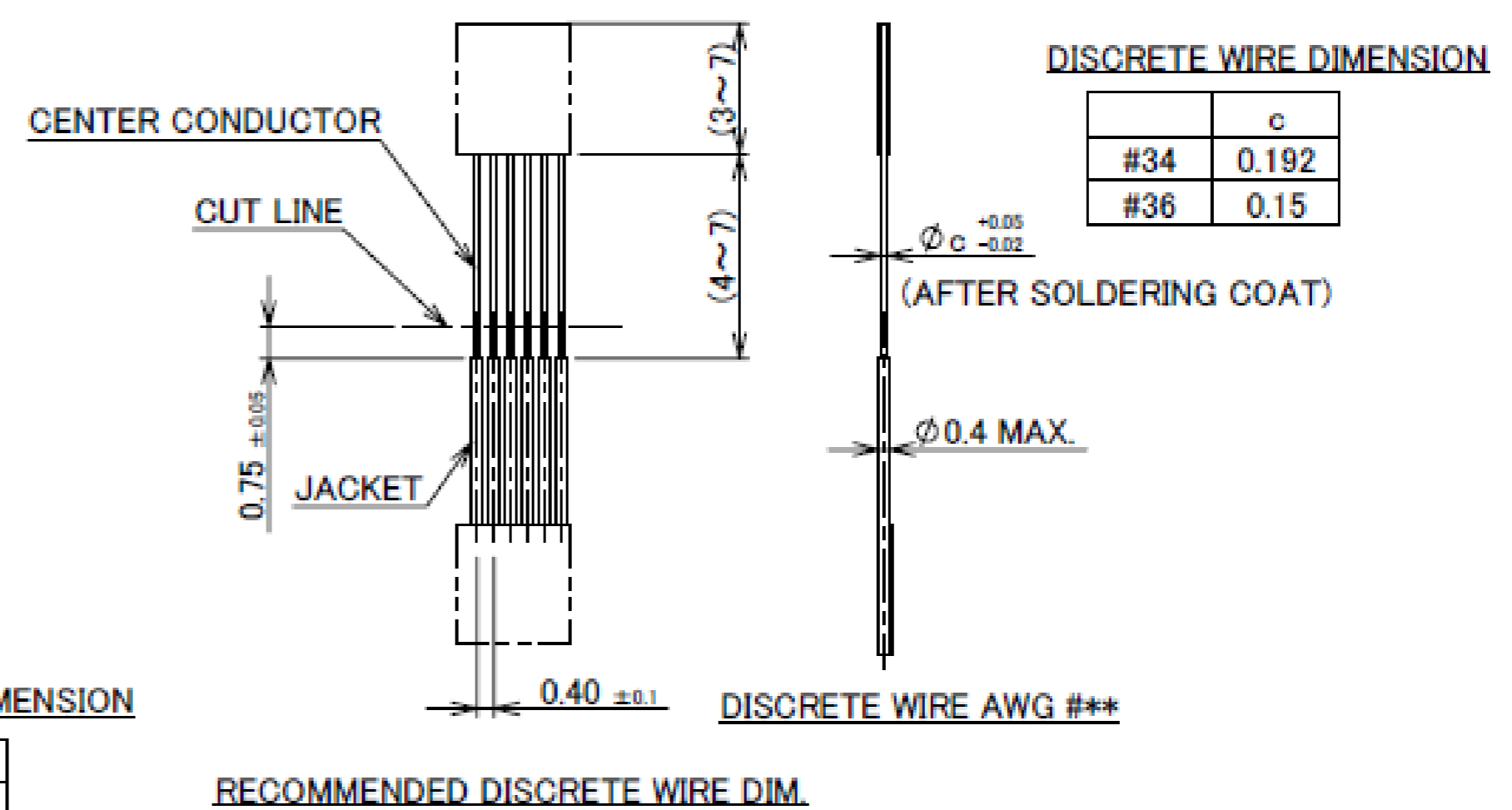
CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

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

CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE

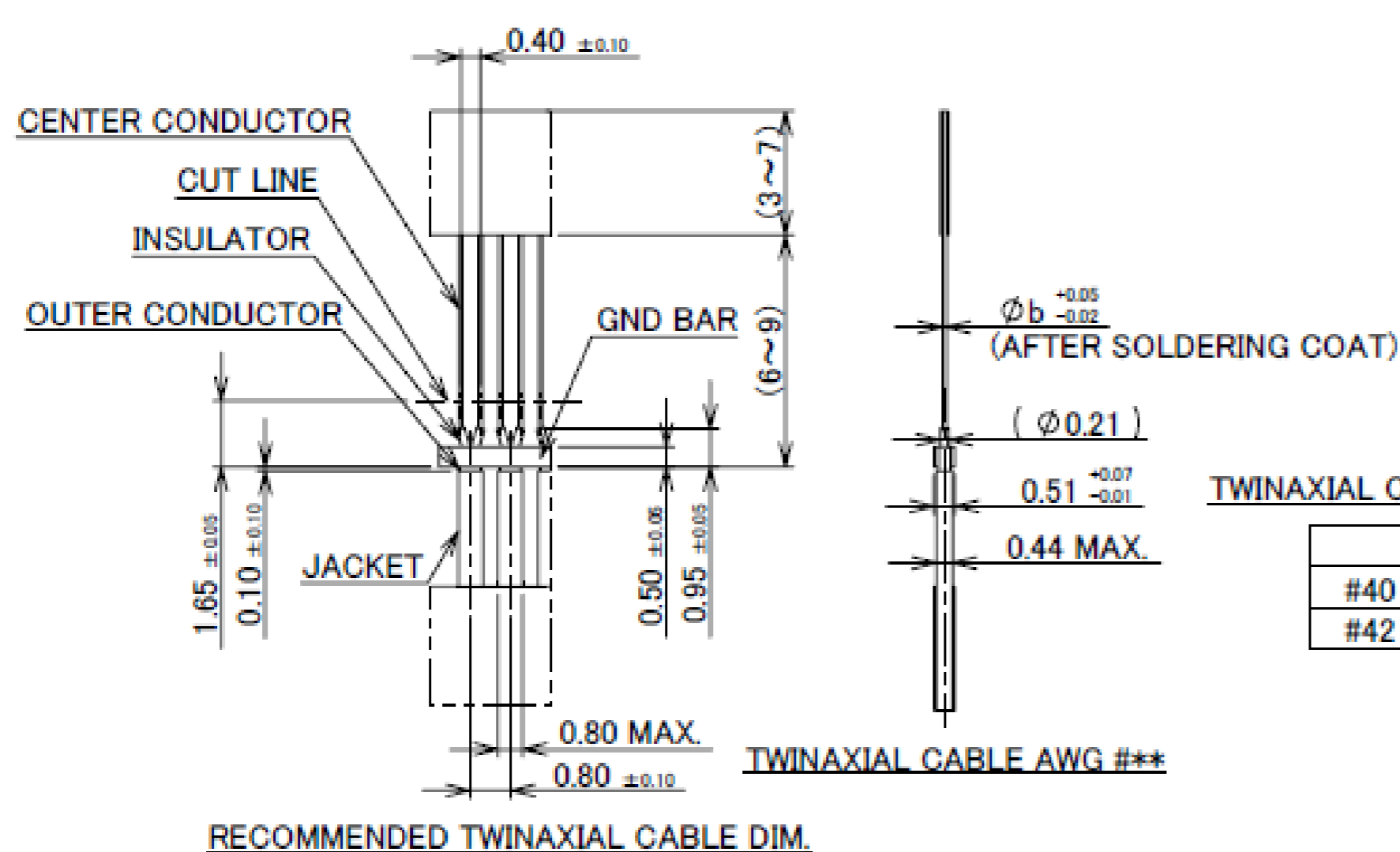
	a
#36	0.15

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



	c
#34	0.192
#36	0.15

RECOMMENDED DISCRETE WIRE DIM.



	b
#40	0.09
#42	0.075

RECOMMENDED TWINAXIAL CABLE DIM.

Rev.14

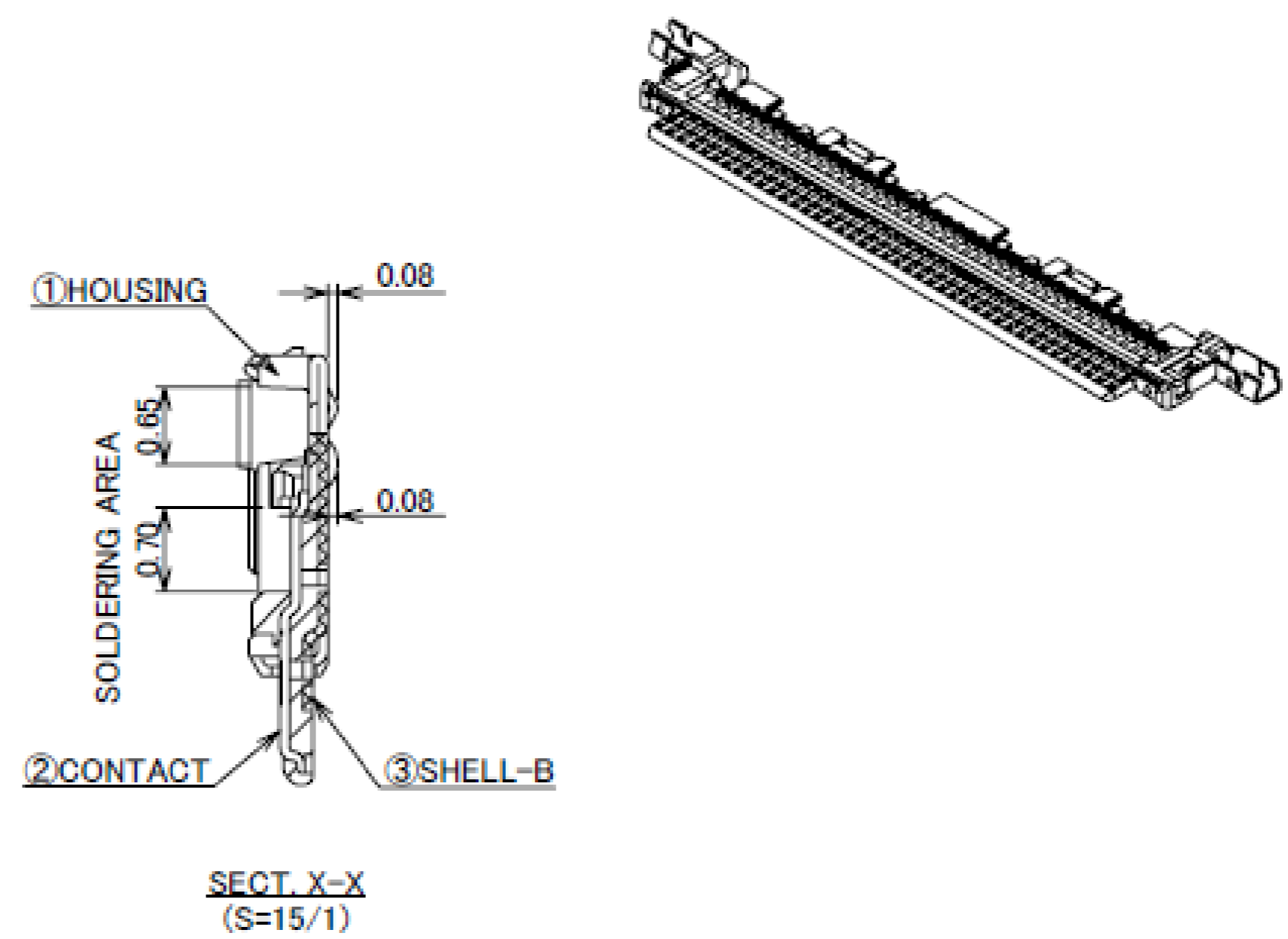
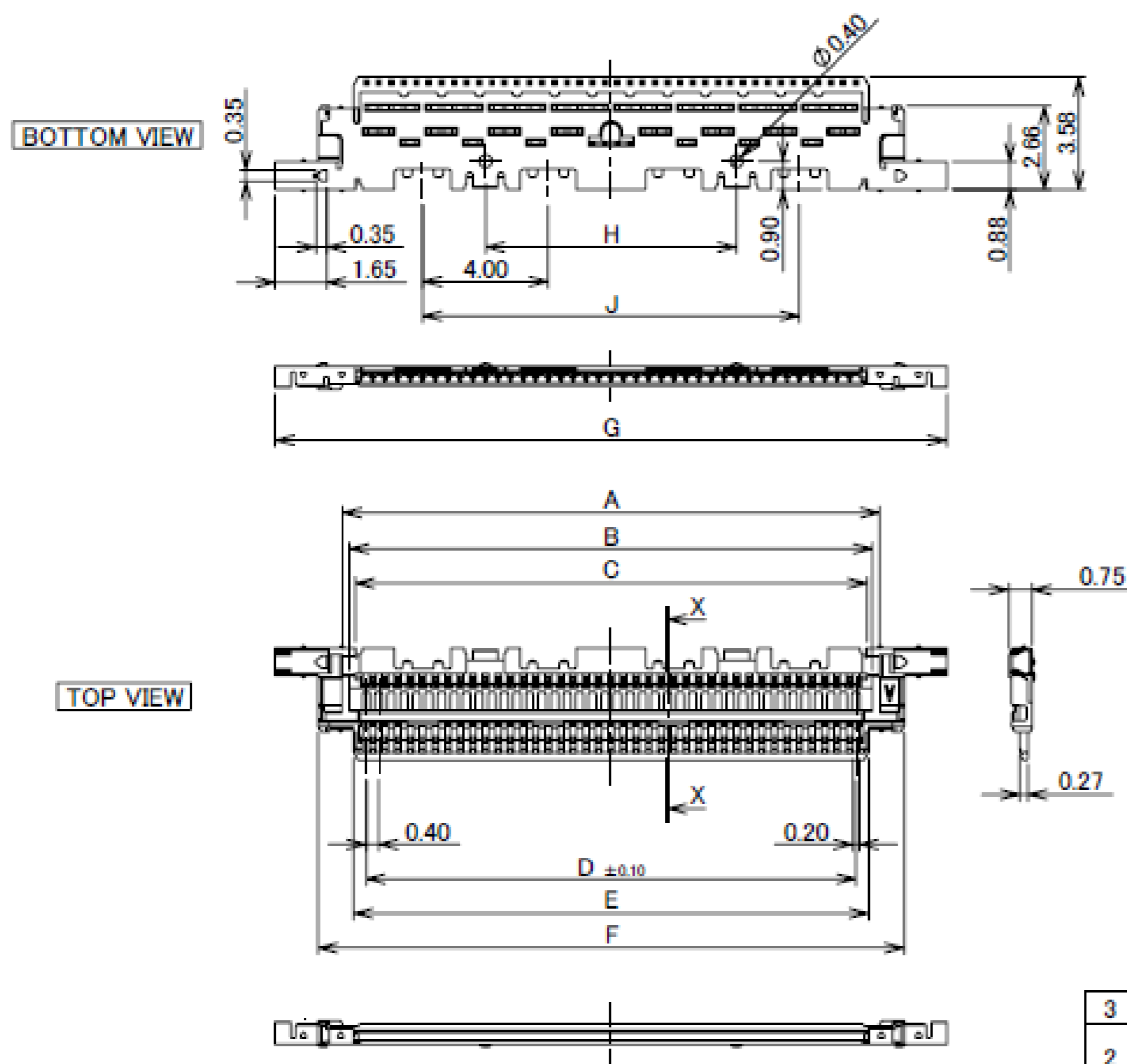
Plug for Cable Assembly

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG #44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG #36 , 34 TWINAXIAL CABLE : AWG #40 , 42
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 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 TO 378K(-40°C TO 105°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG #34) / AFTER TEST : \triangleleft40mohm 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 : \triangleleft40mohm 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.14

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



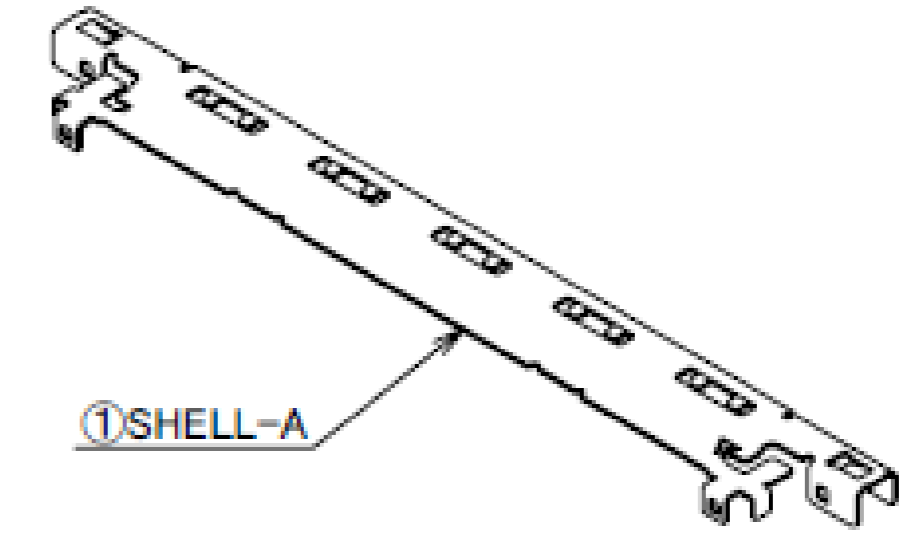
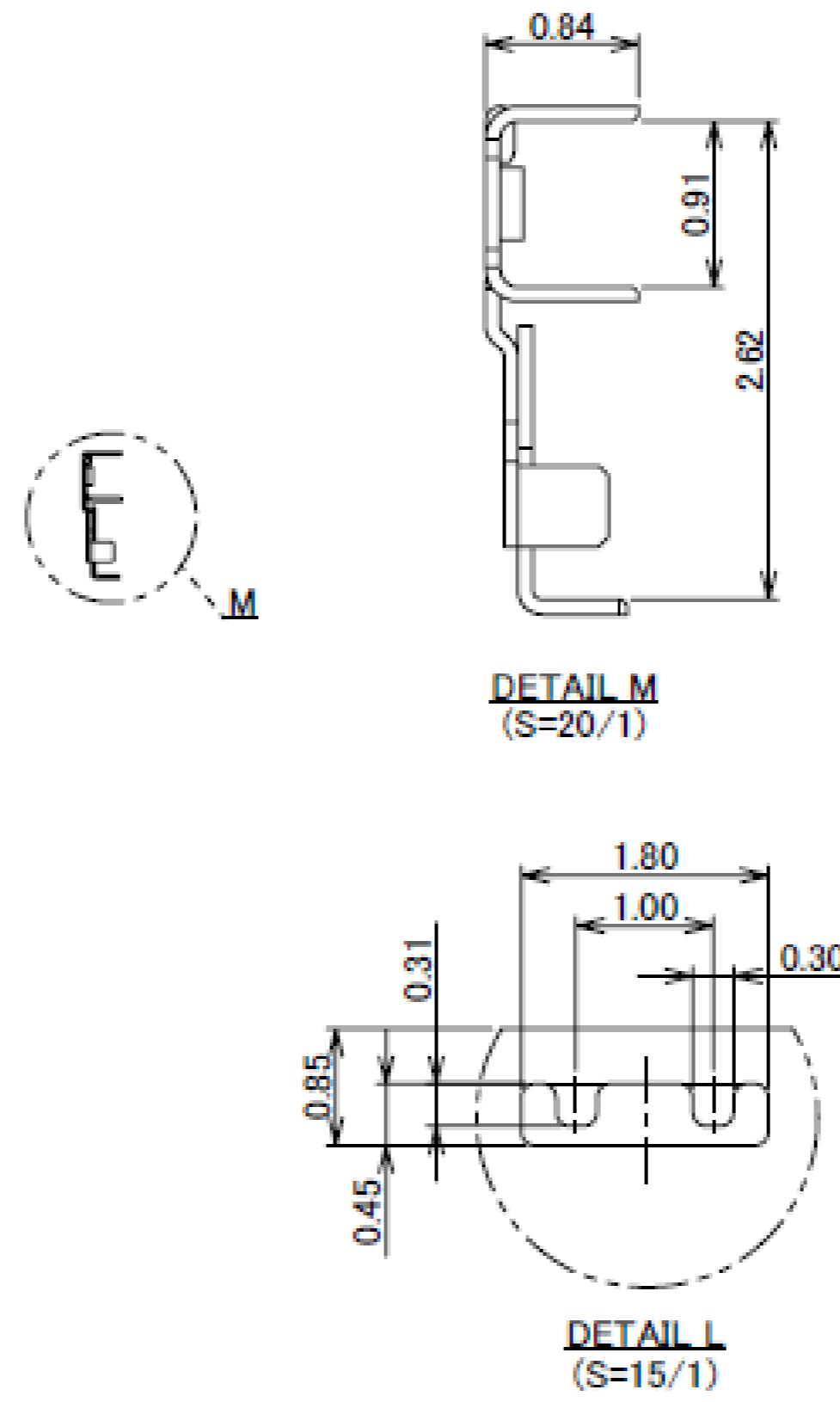
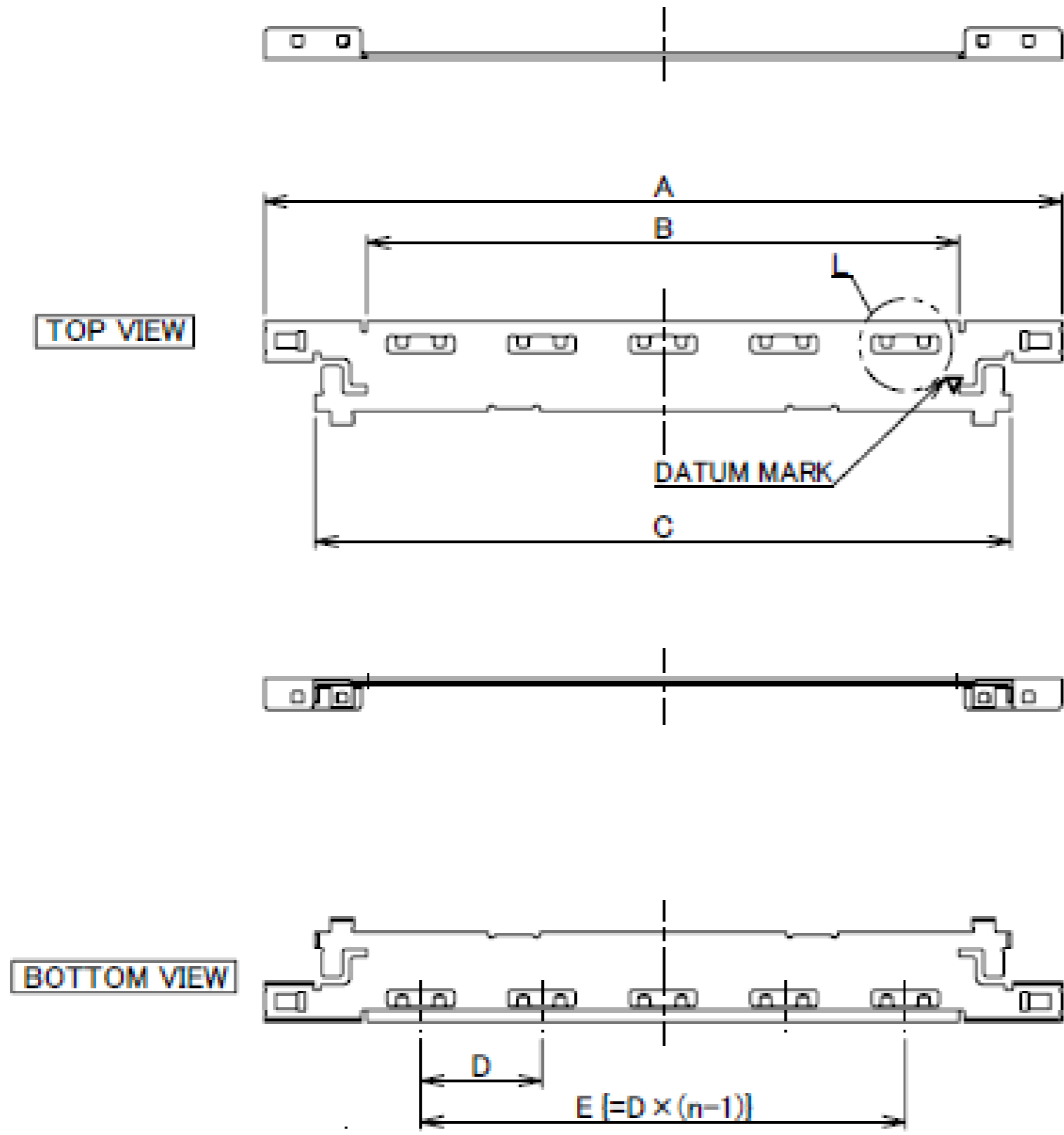
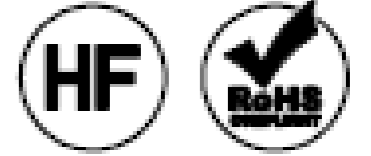
- NOTES.
- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20681-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20679-0**T-01
 - THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASS'Y(P/N 20789-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20788-0**T-01

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL-B	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.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

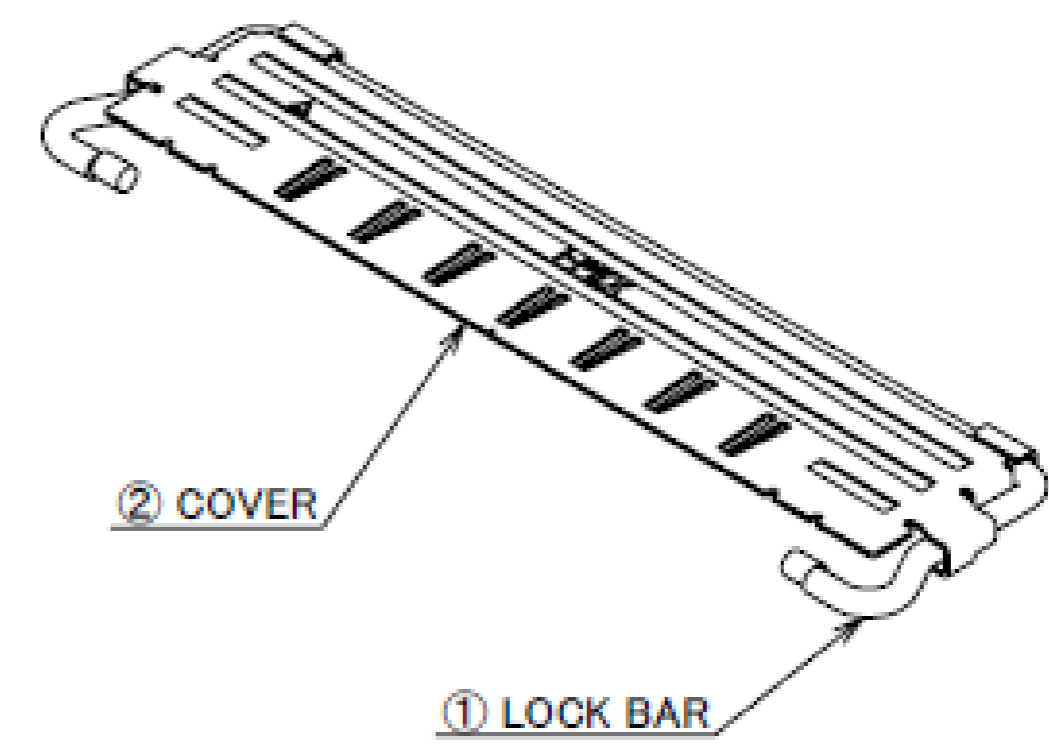
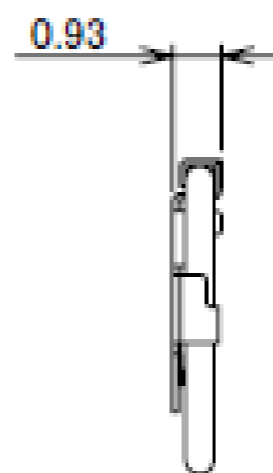
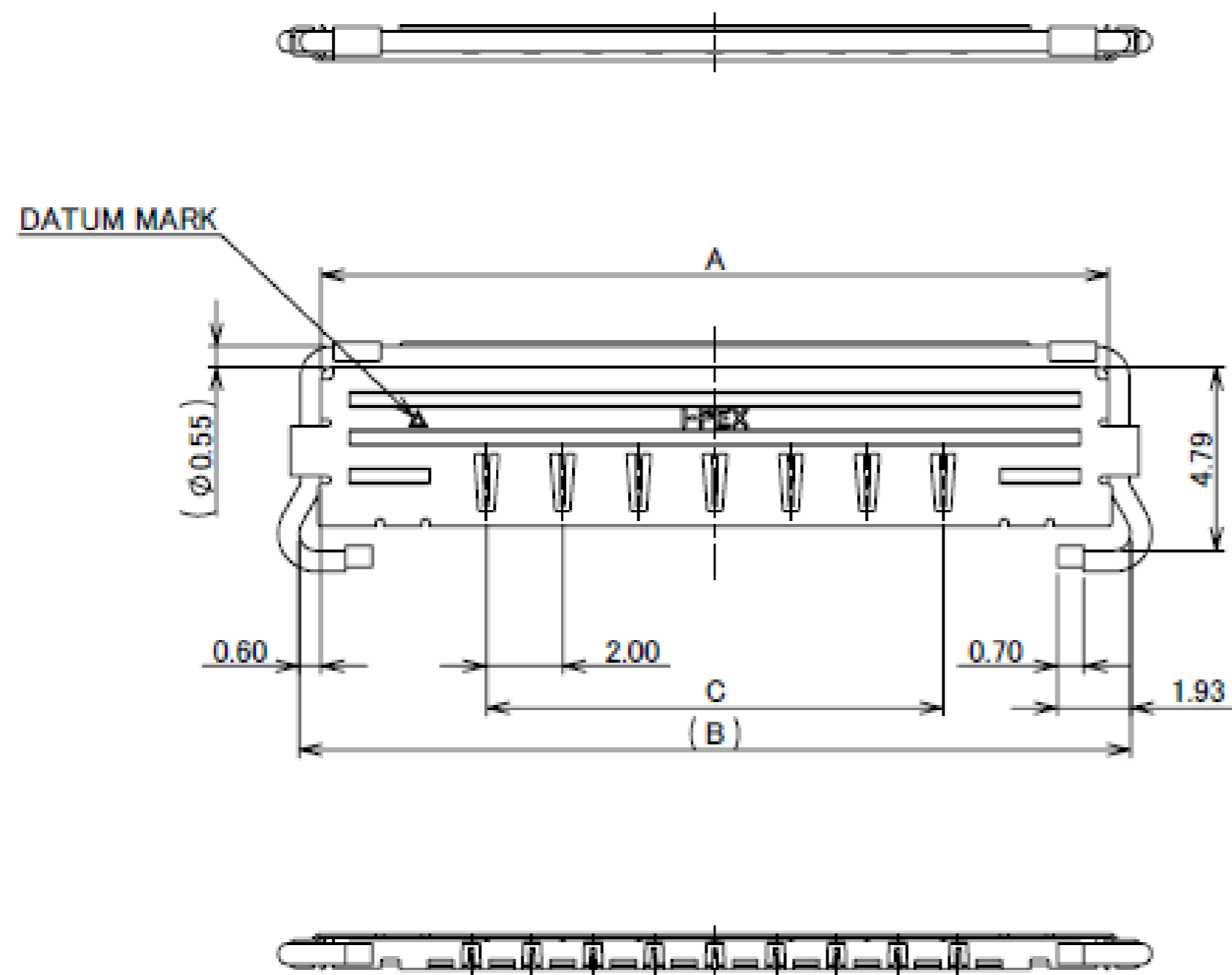


NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
1	SHELL-A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.

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



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

Rev.5

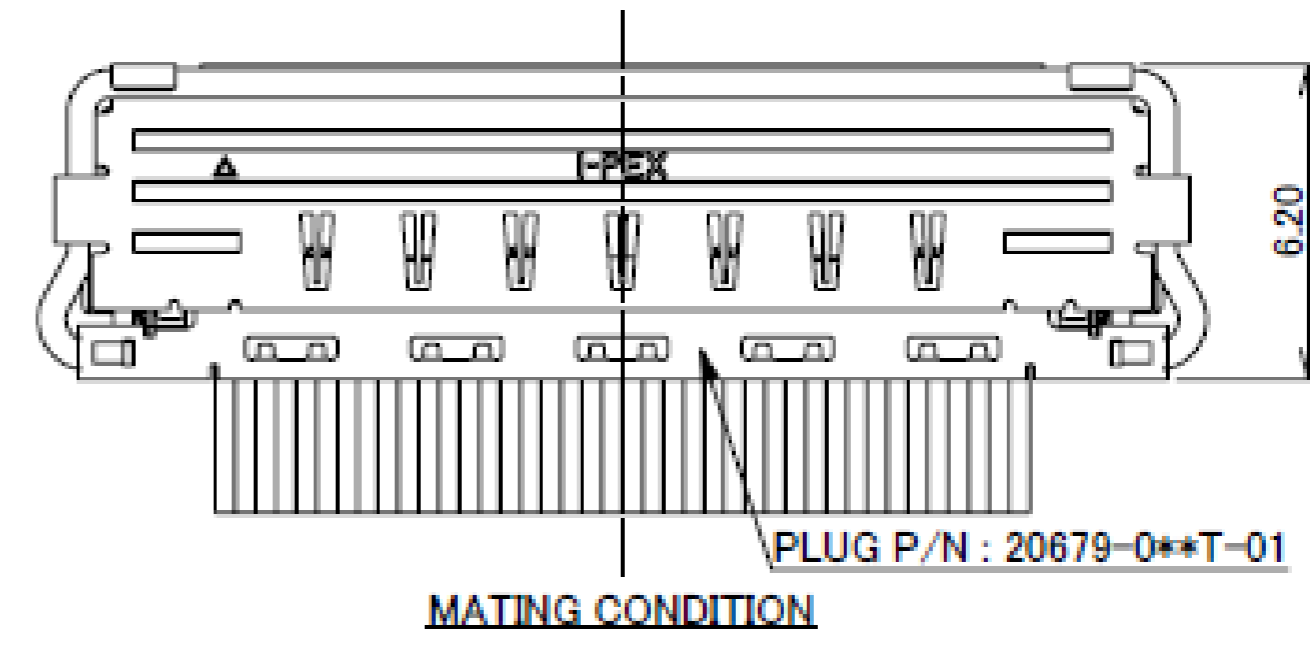
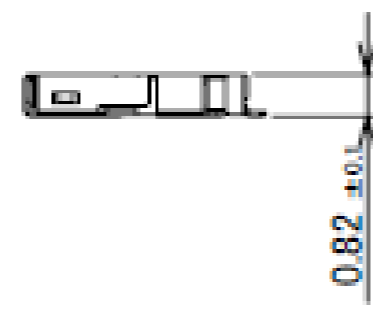
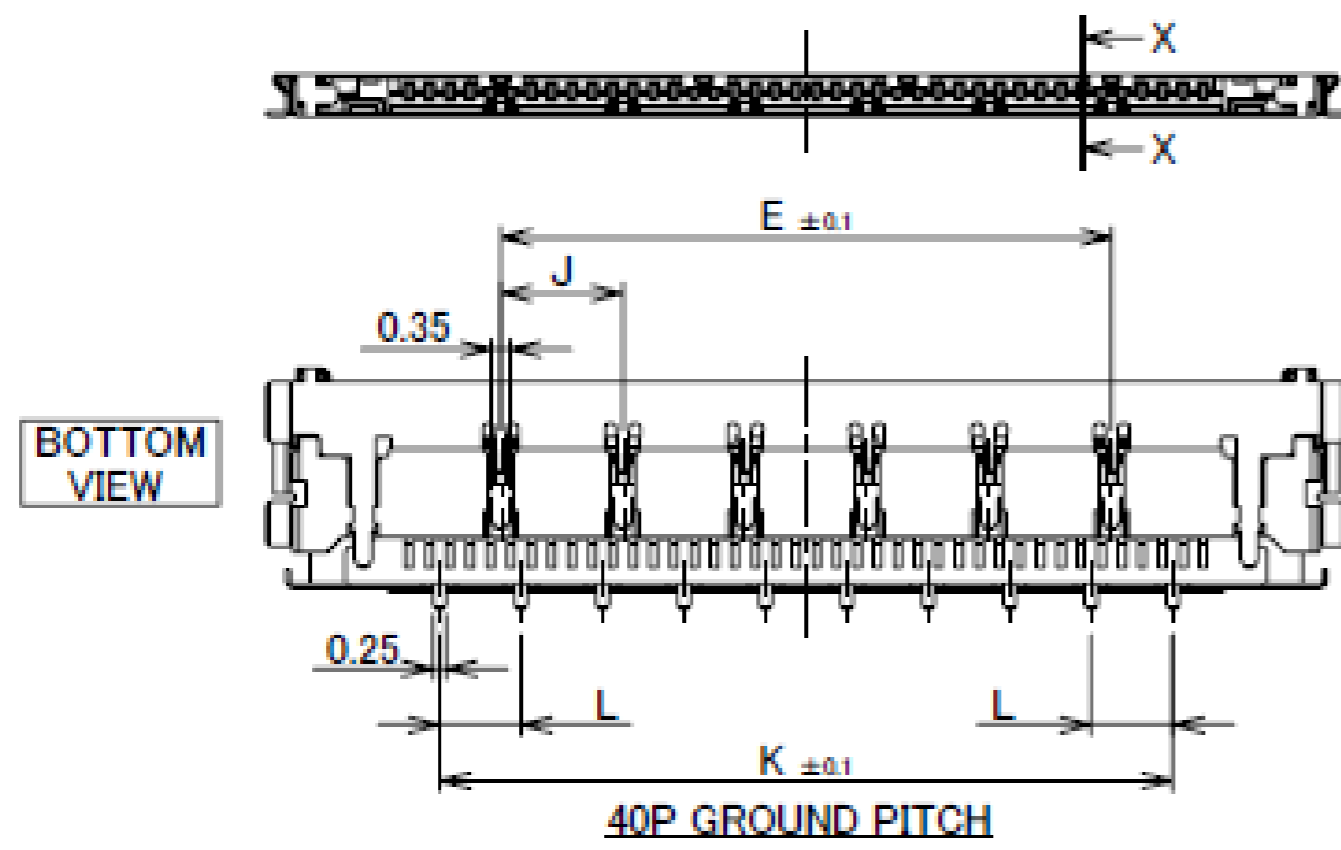
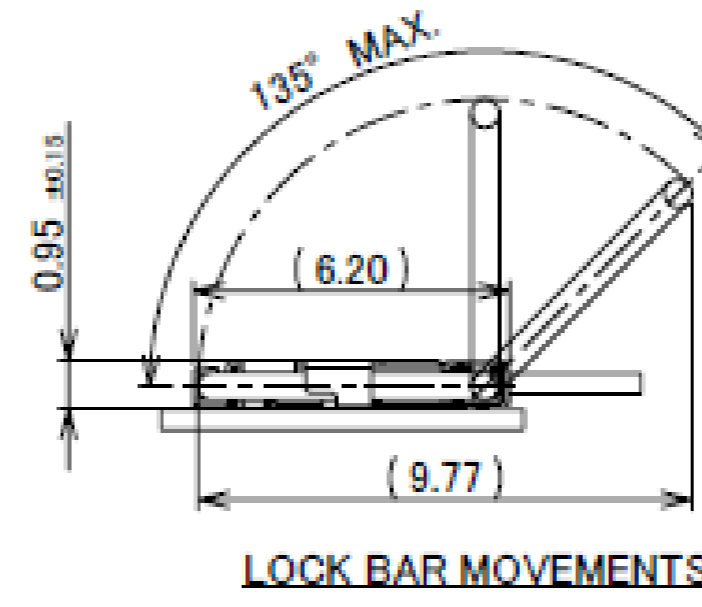
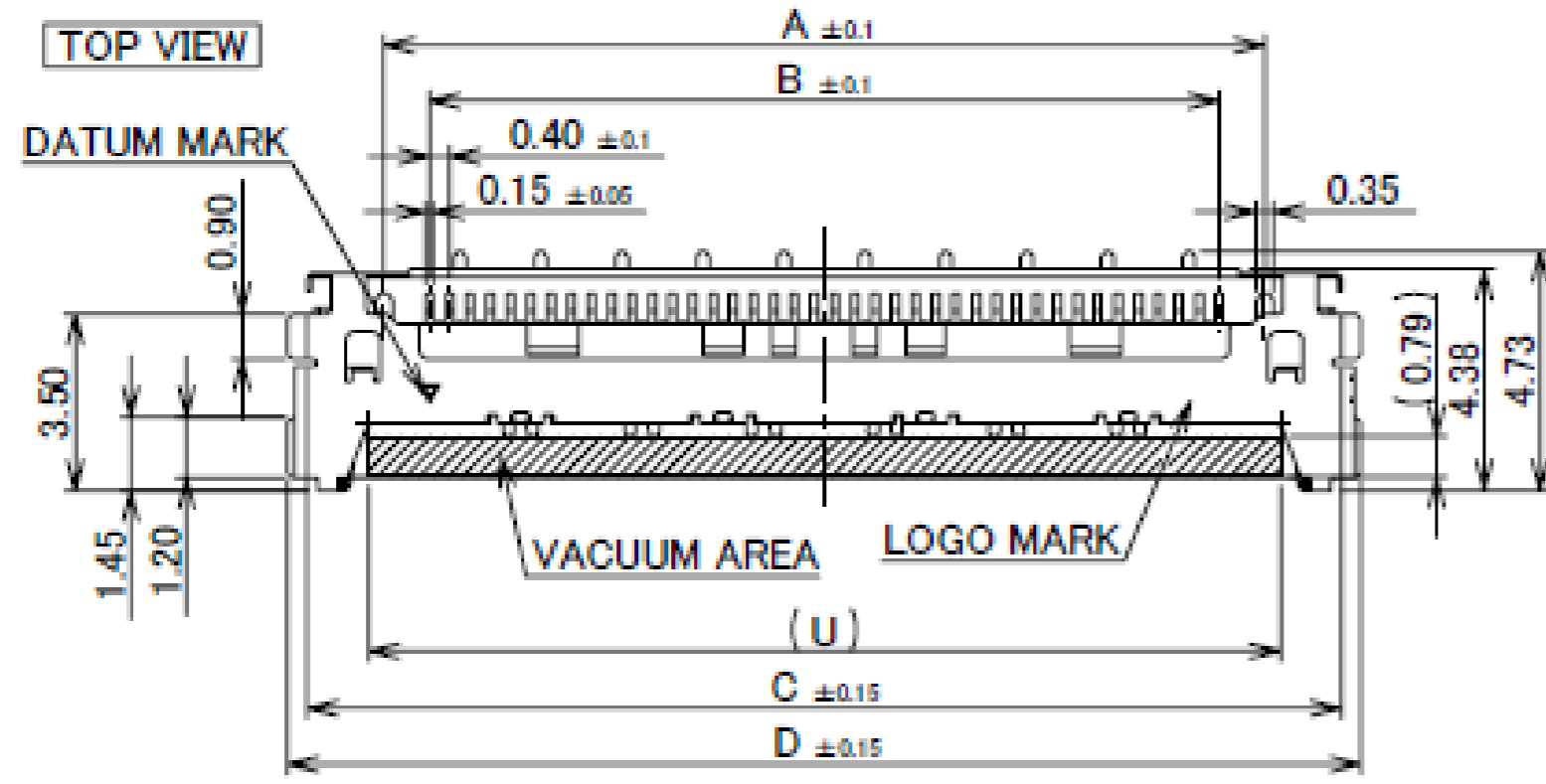
Receptacle Assembly

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.

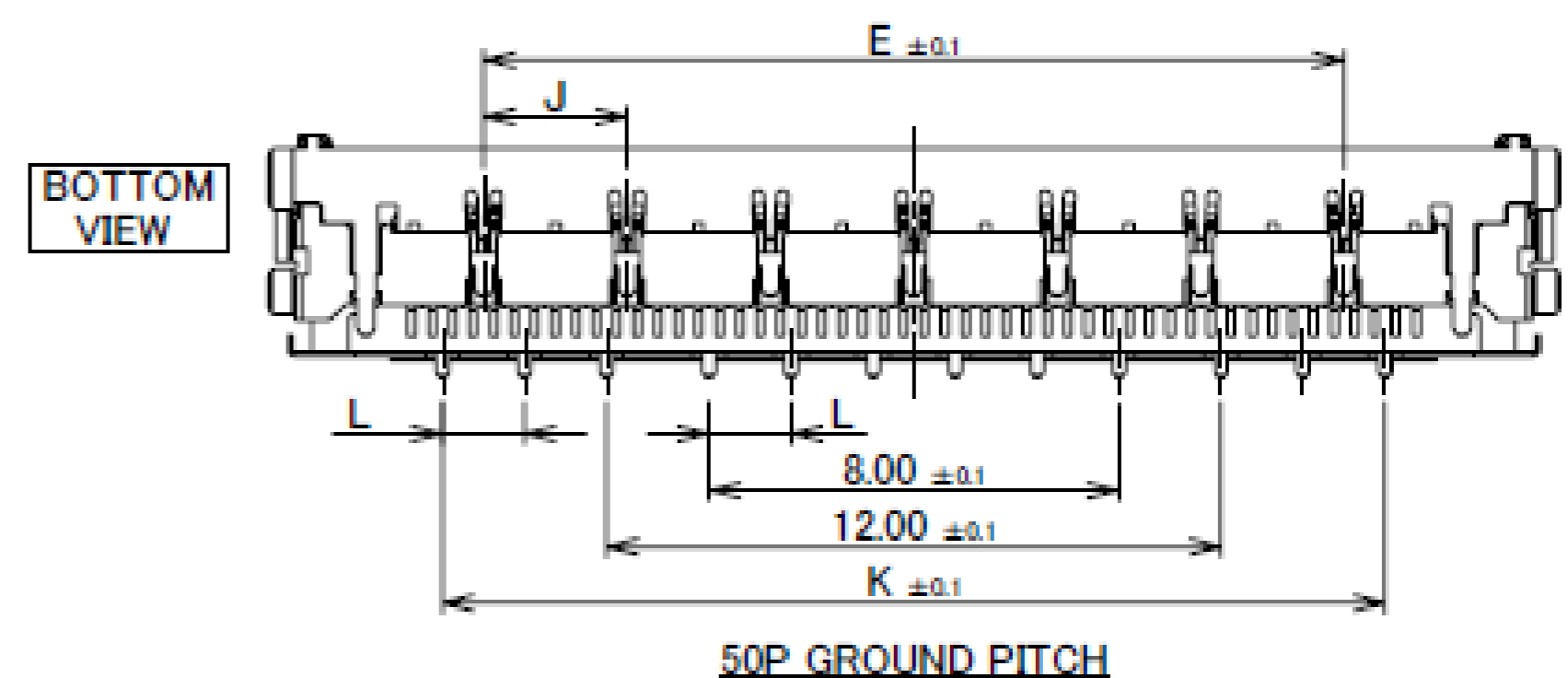
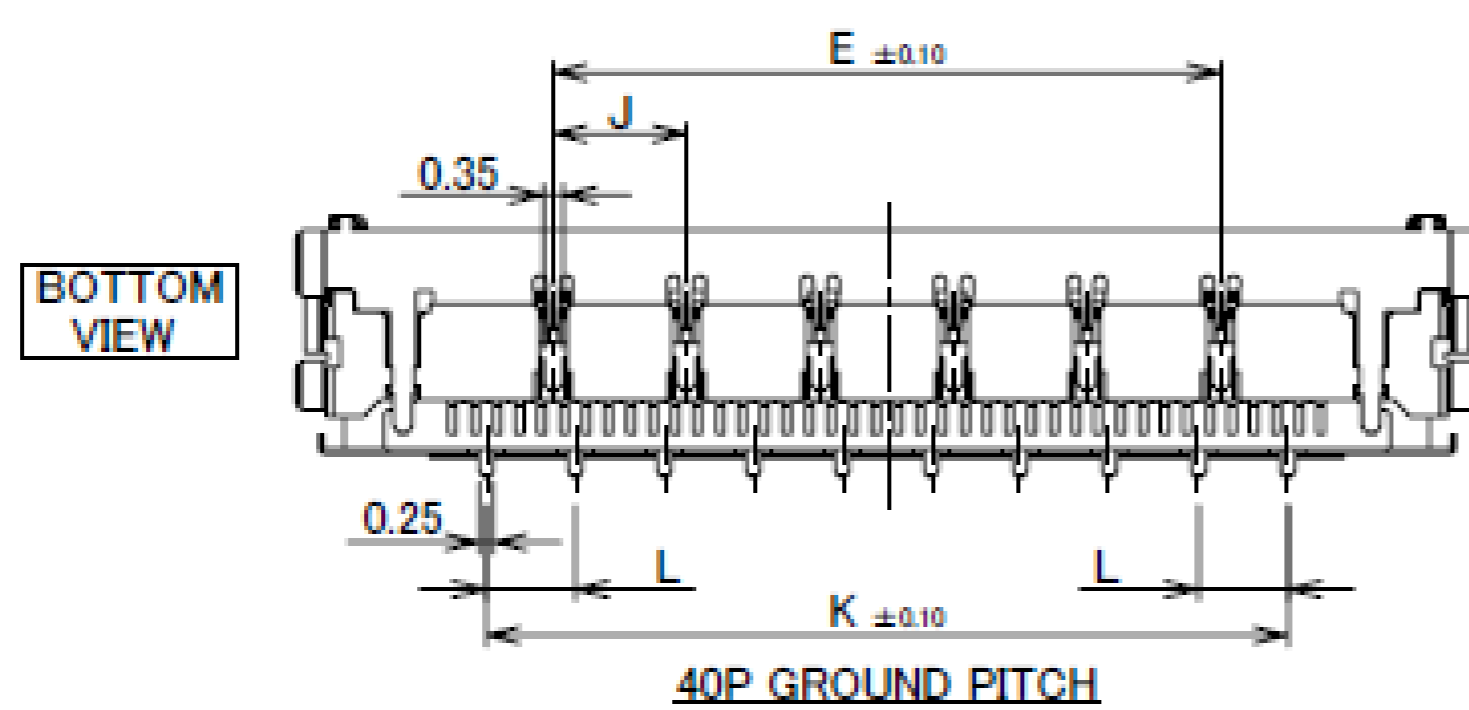
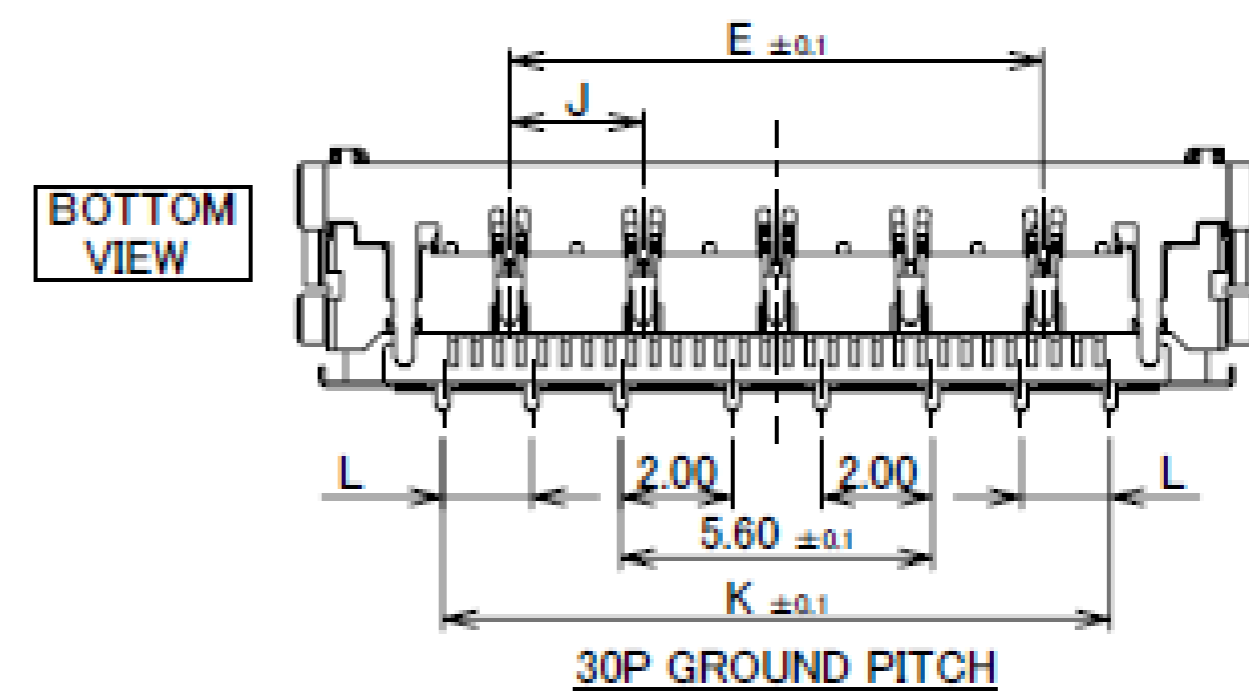
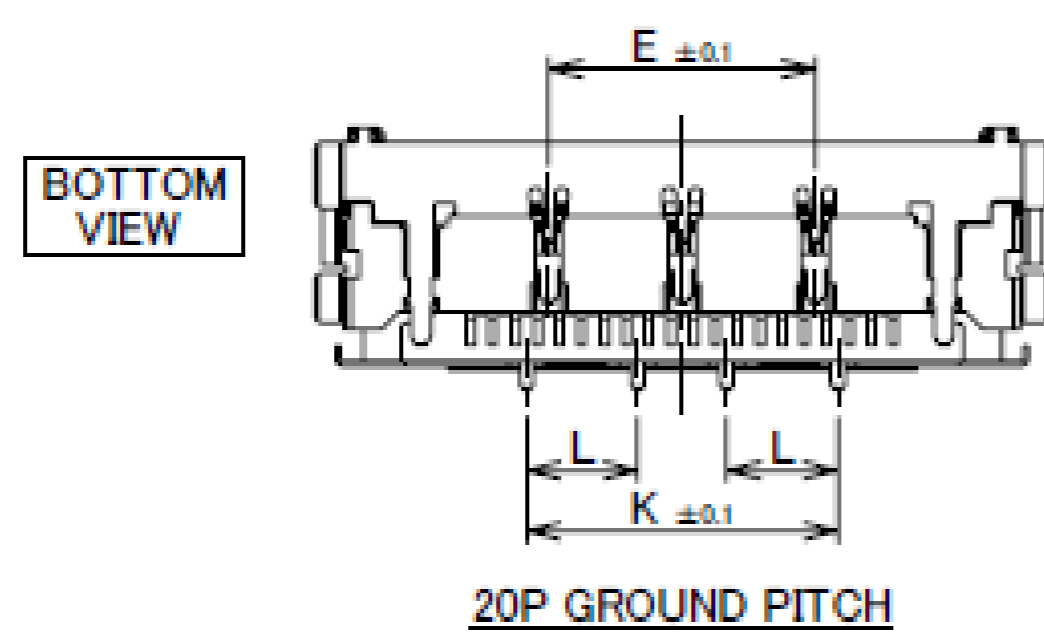


Halogen Free RoHS Compliant



NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 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

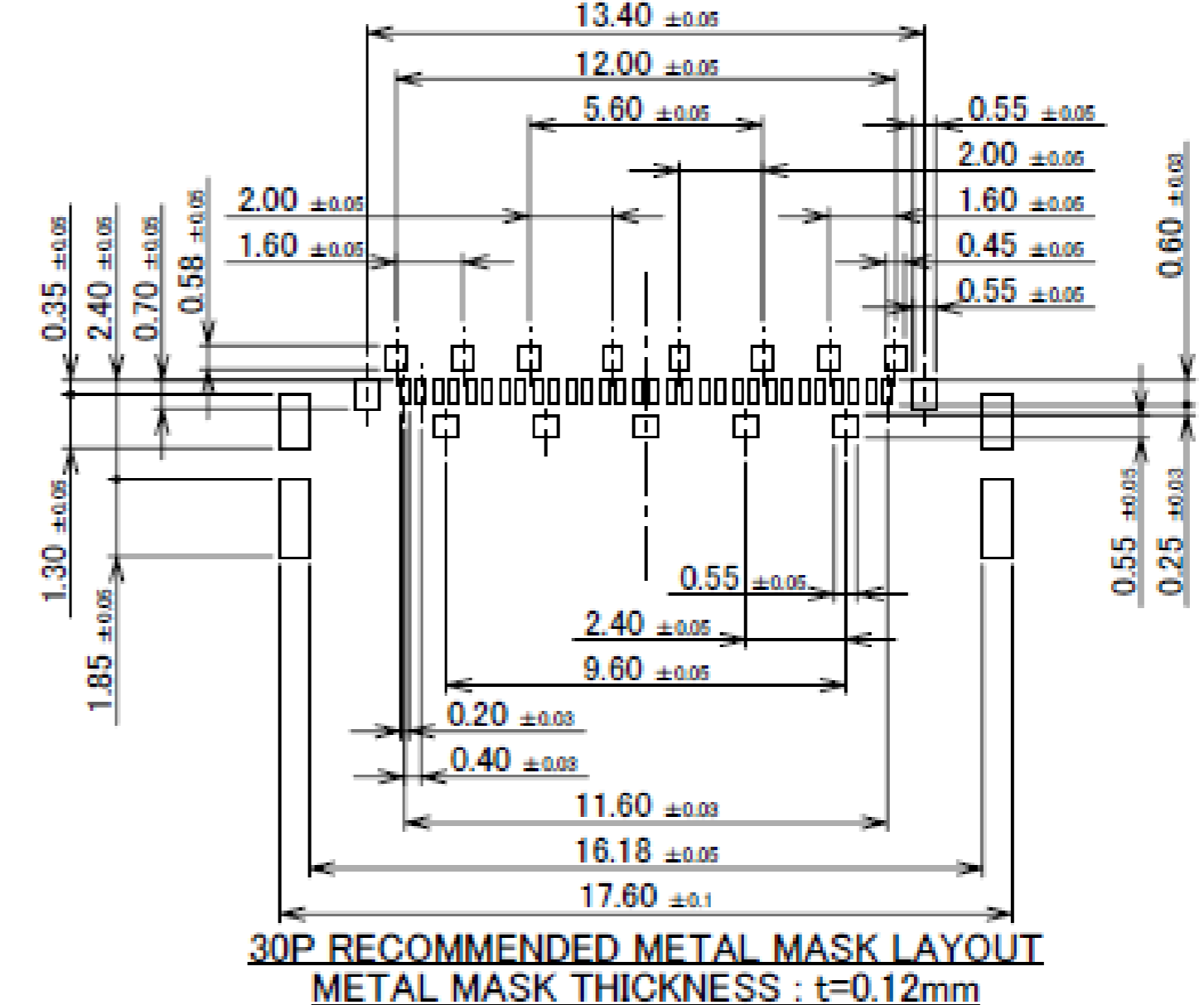
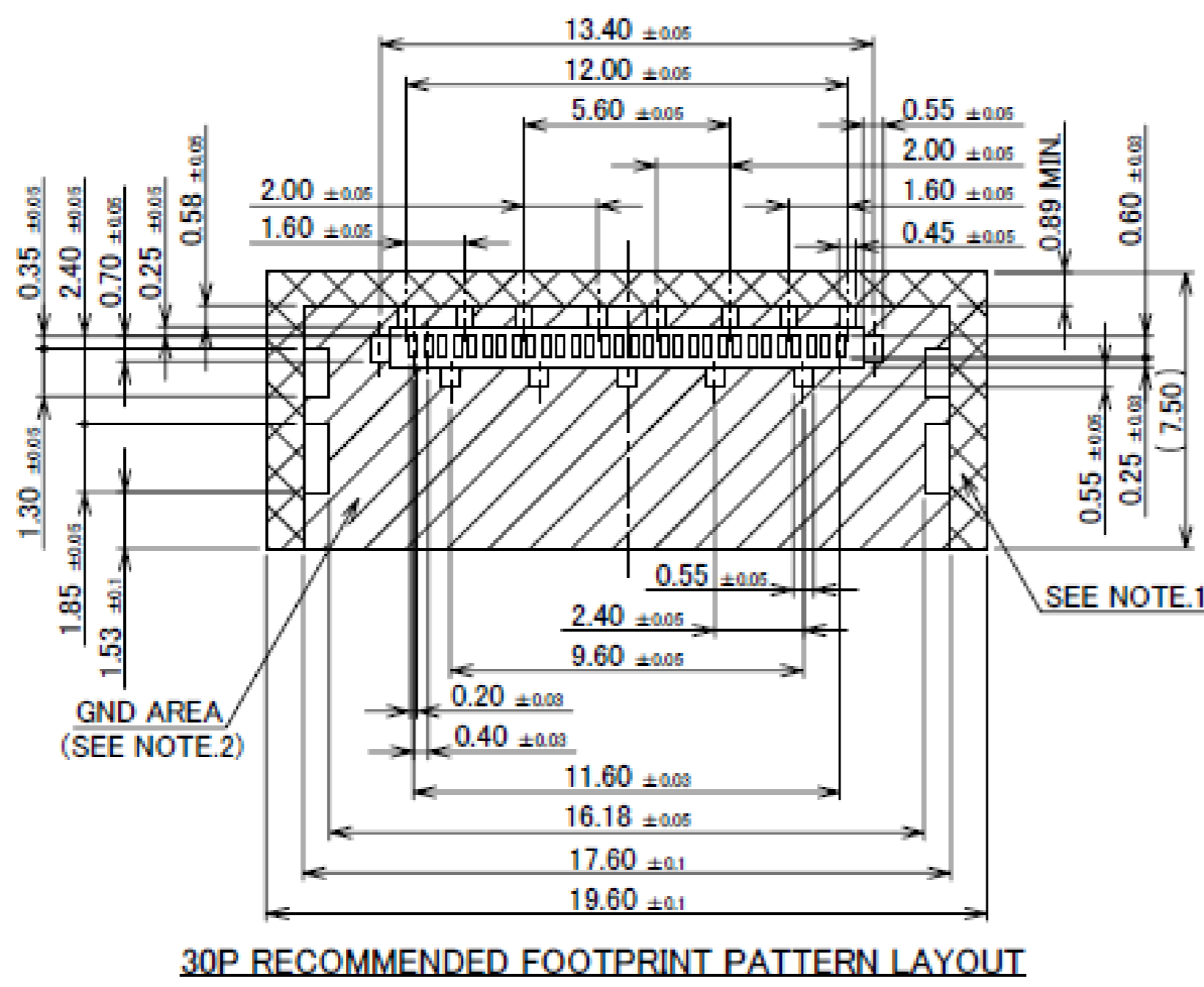
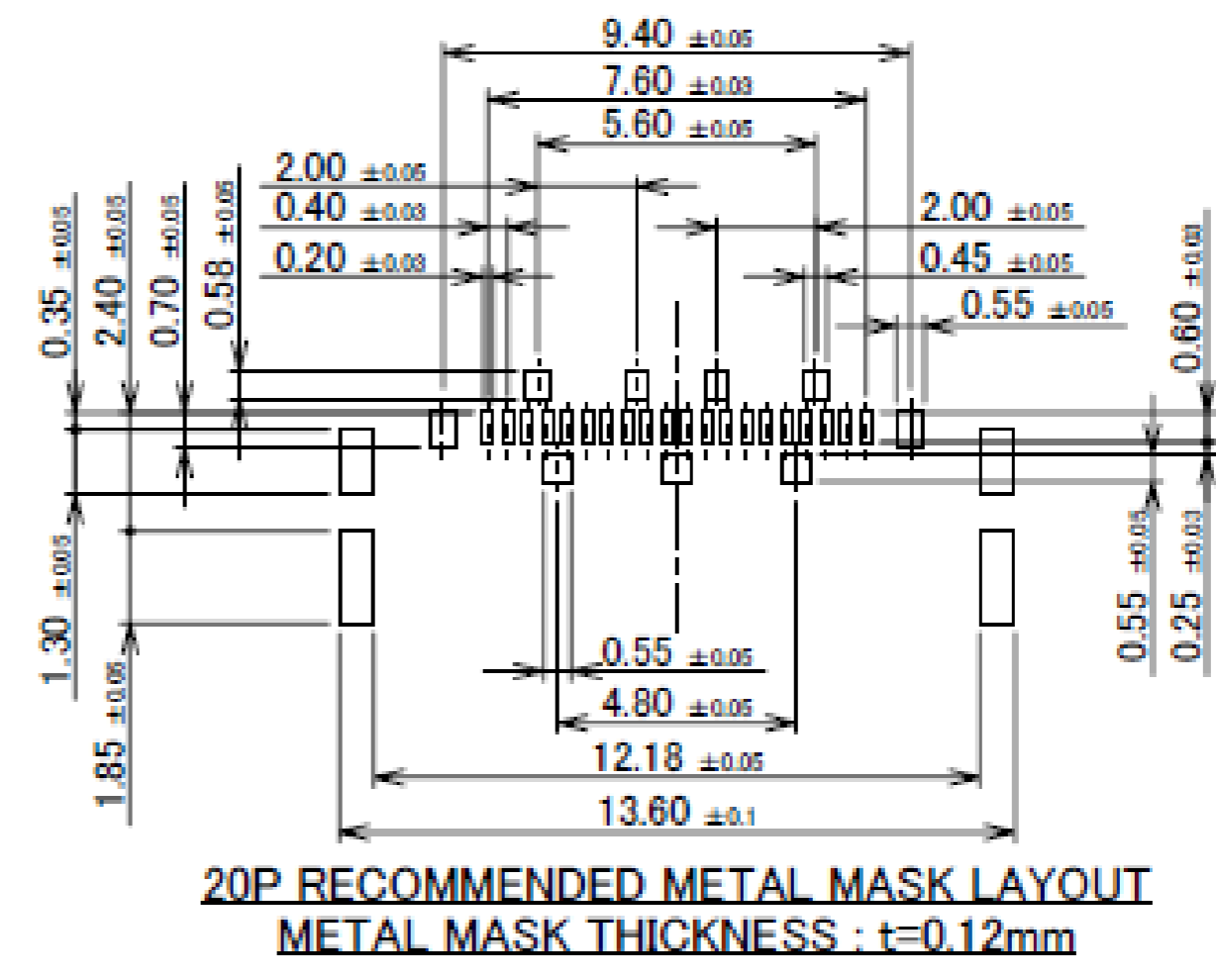
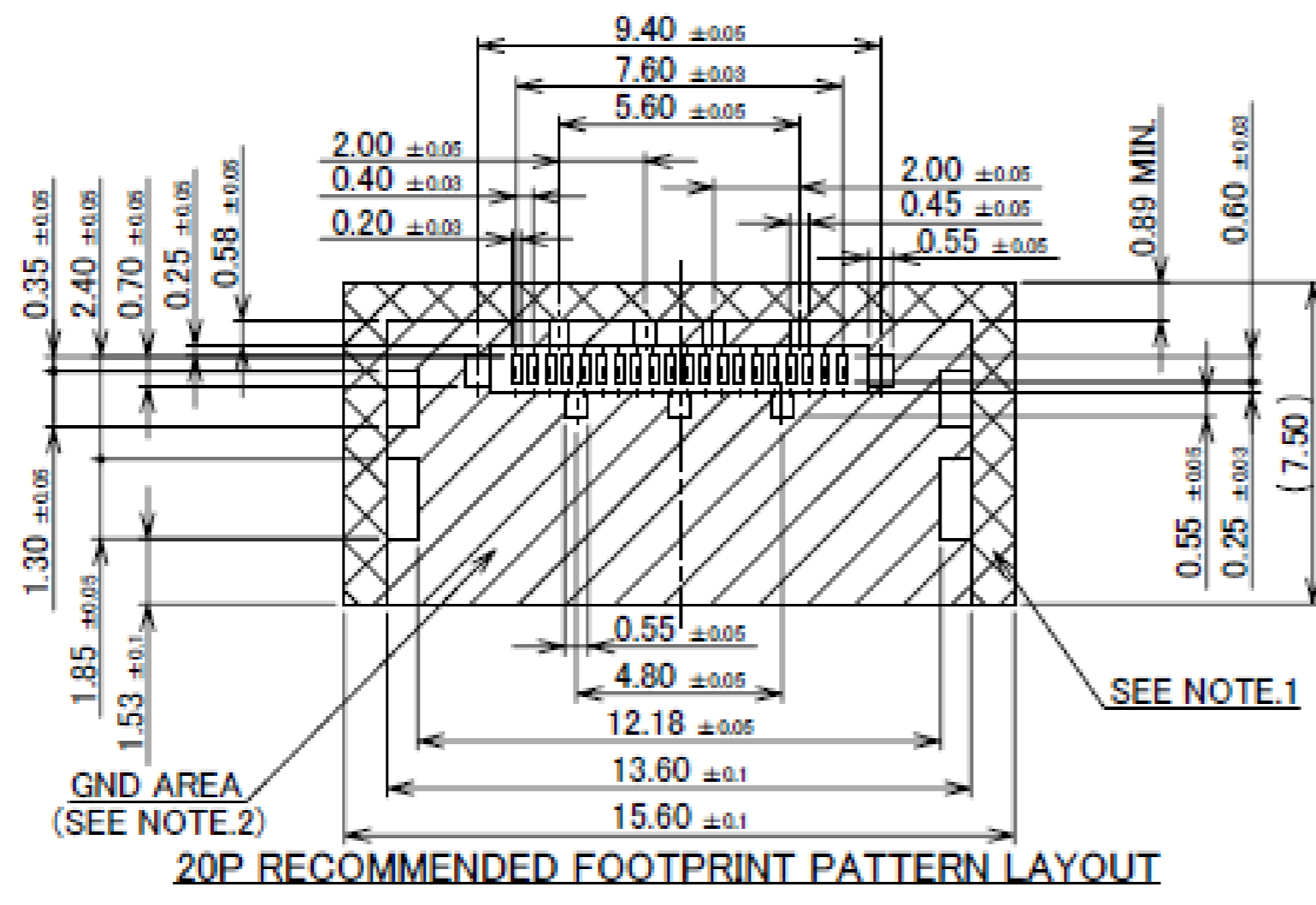
PART NO.	Pos.	E	J	K	L
20682-020E-02	20	4.80	2.40	5.60	2.00
20682-030E-02	30	9.60	2.40	12.00	1.60
20682-040E-02	40	12.00	2.40	14.40	1.60
20682-050E-02	50	16.80	2.80	18.40	1.60



Rev.17

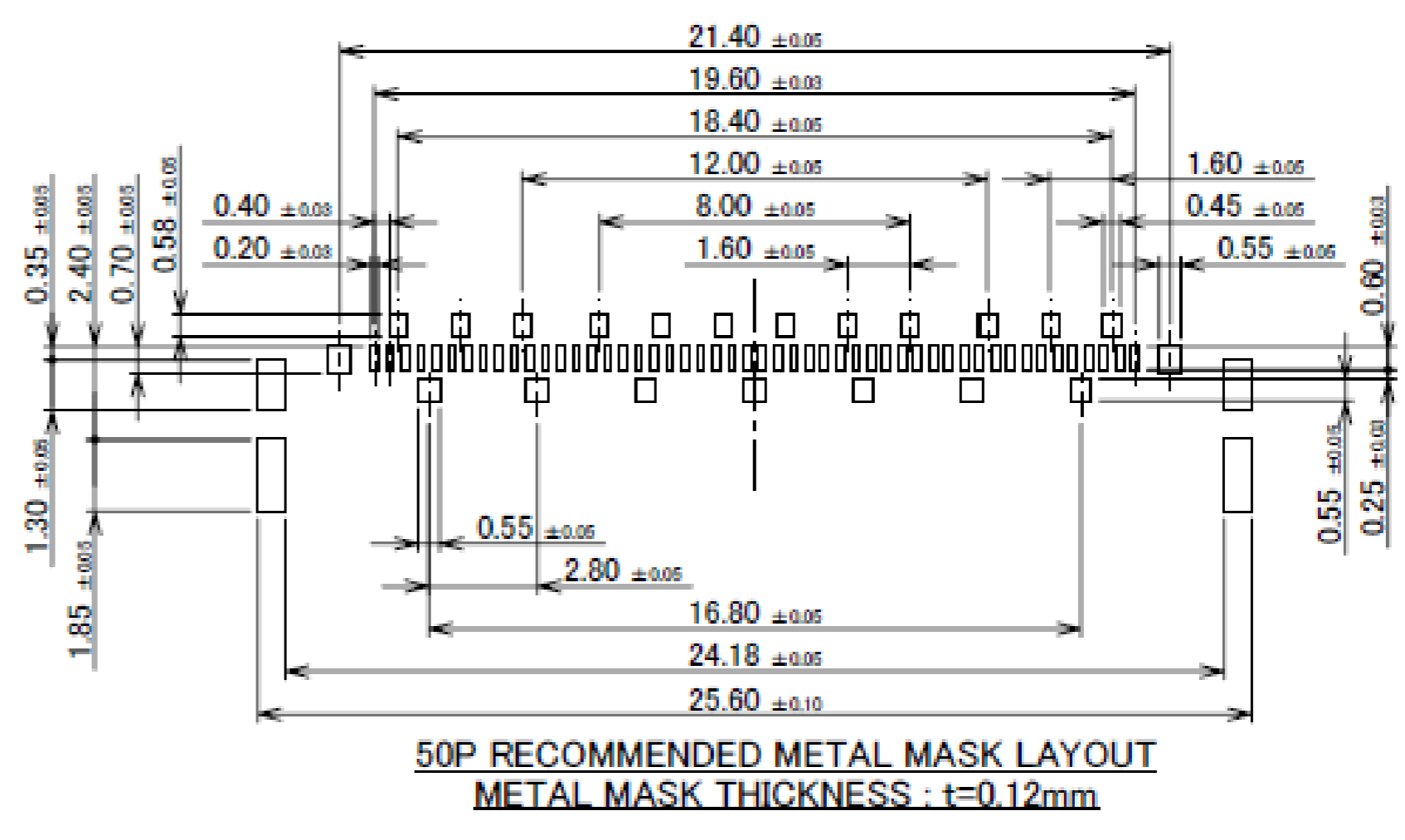
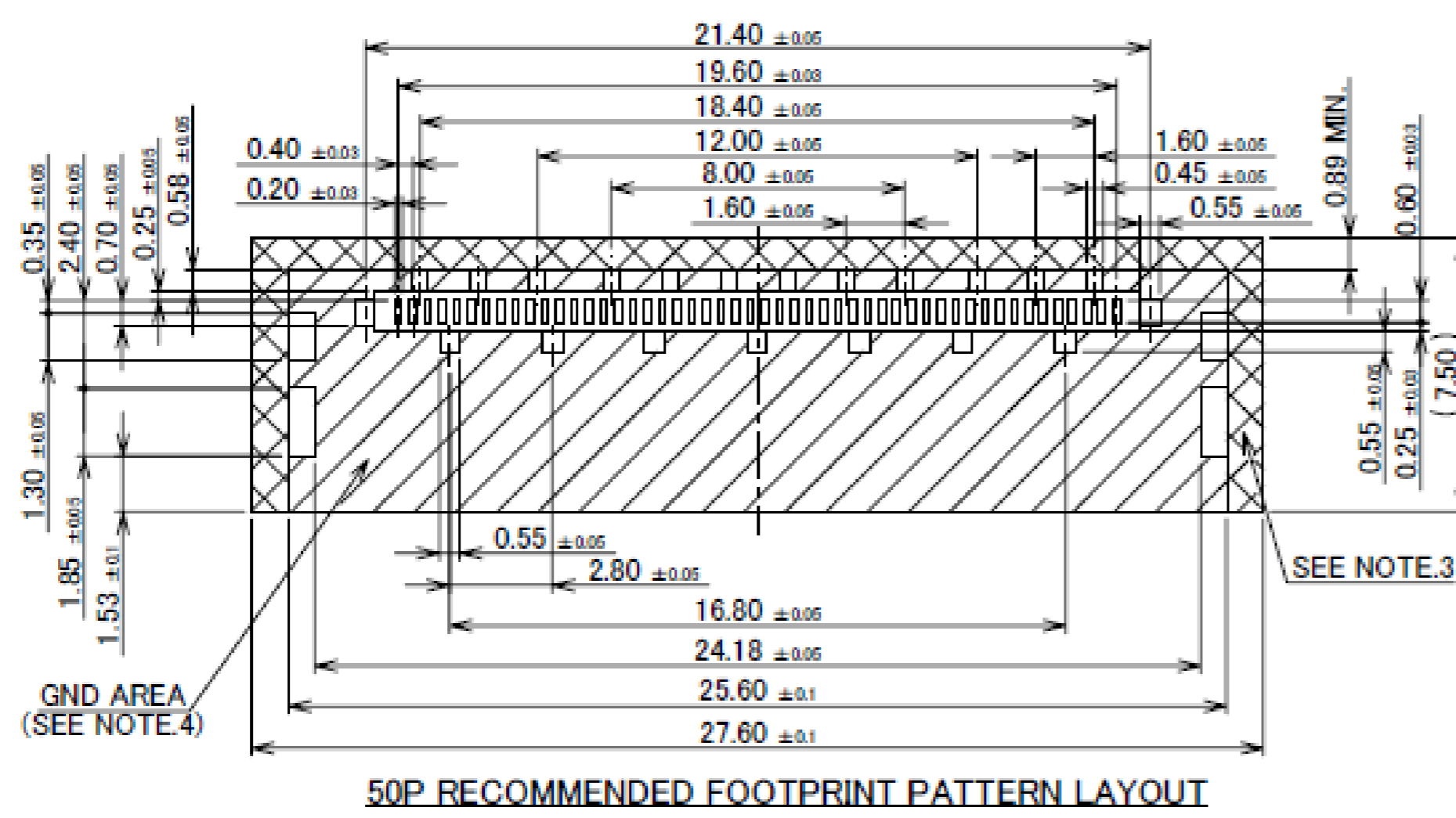
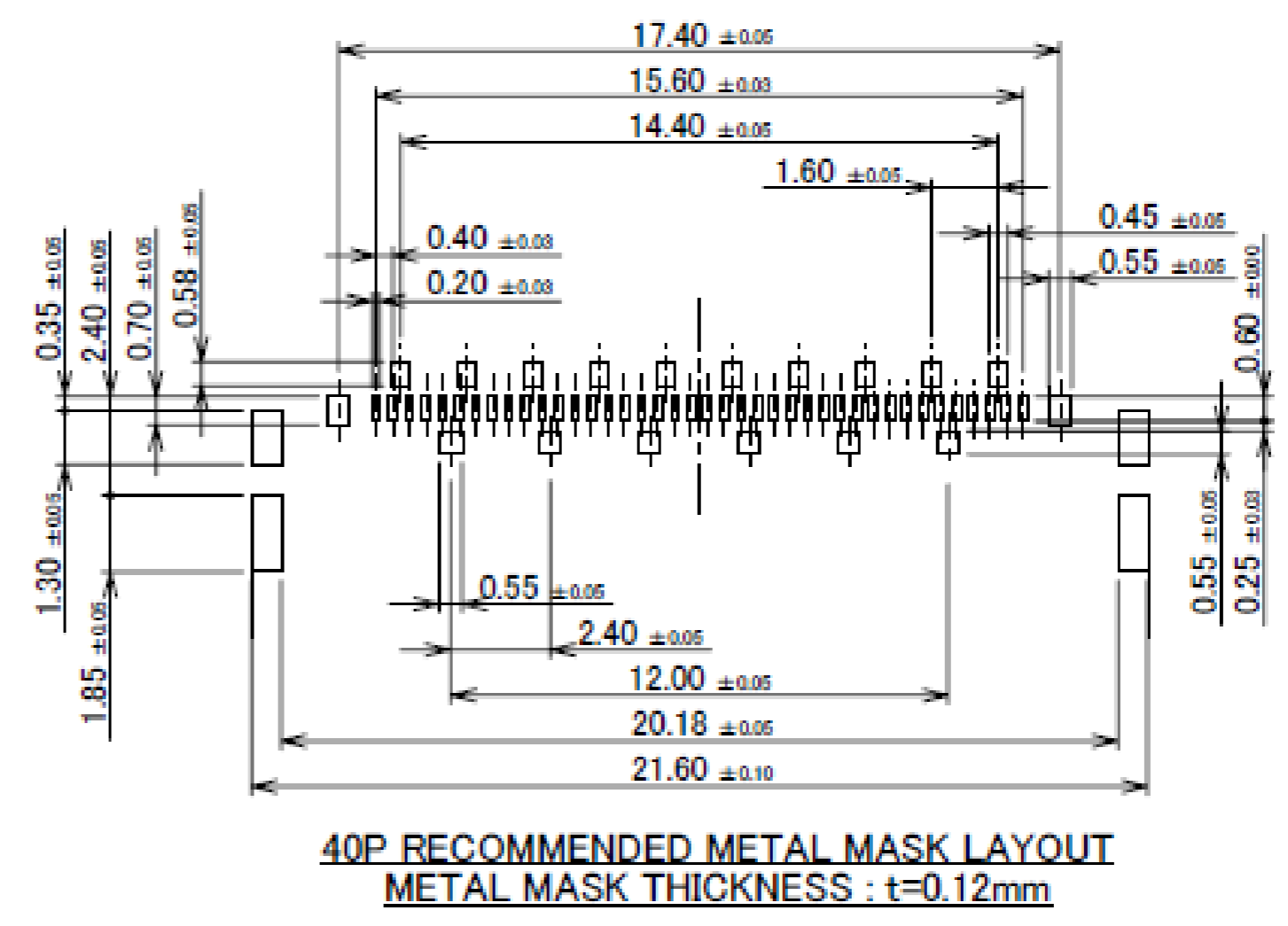
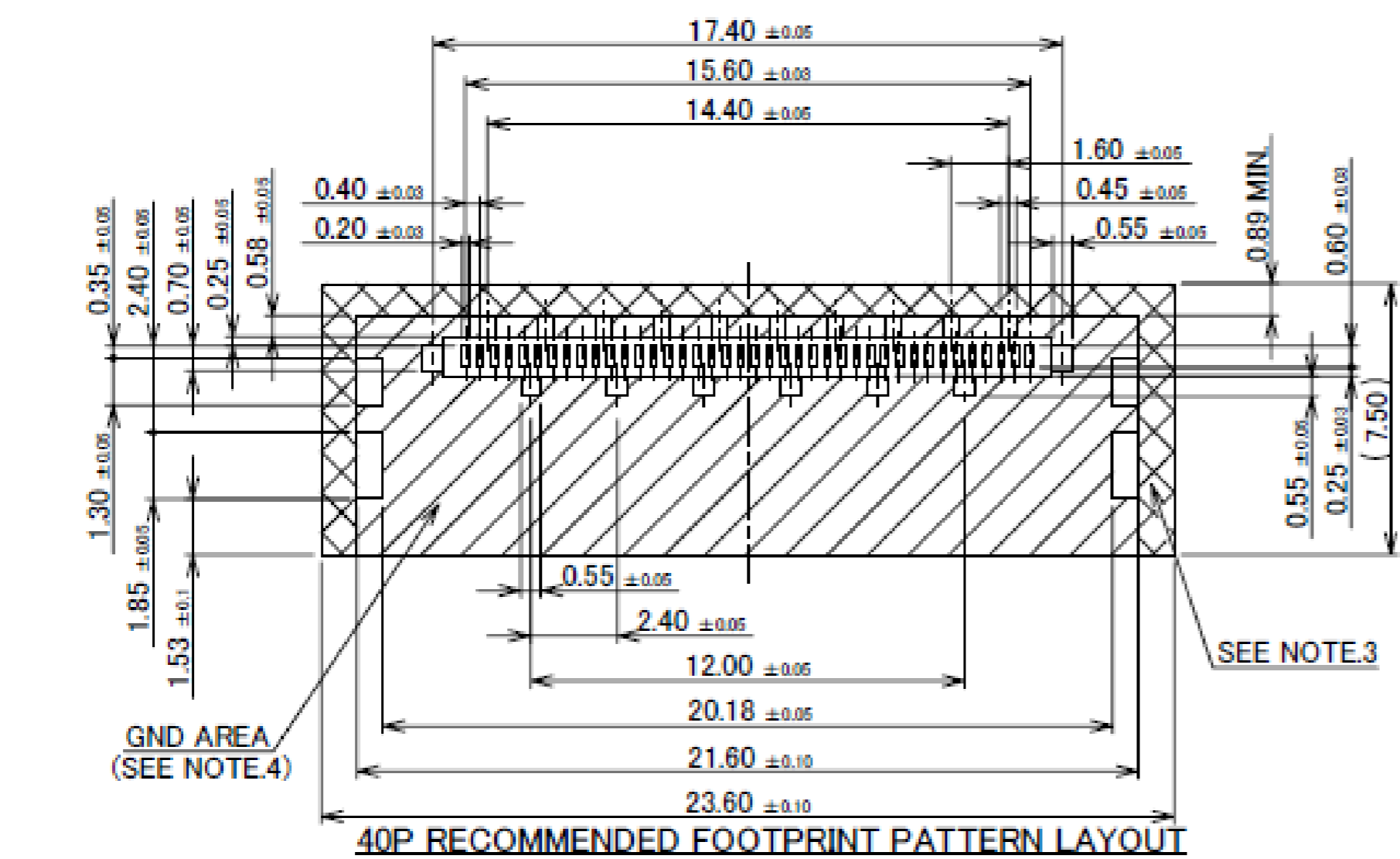
Rev.17

Receptacle Assembly



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

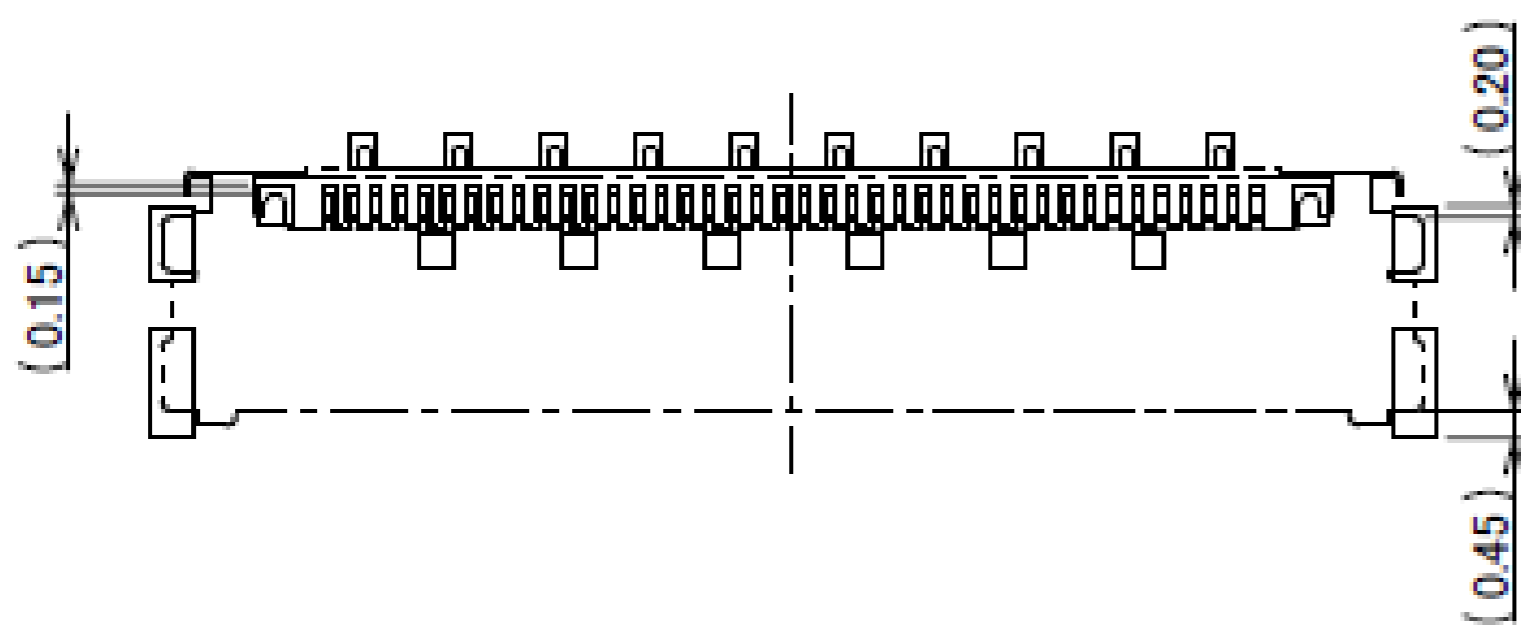
Rev.17



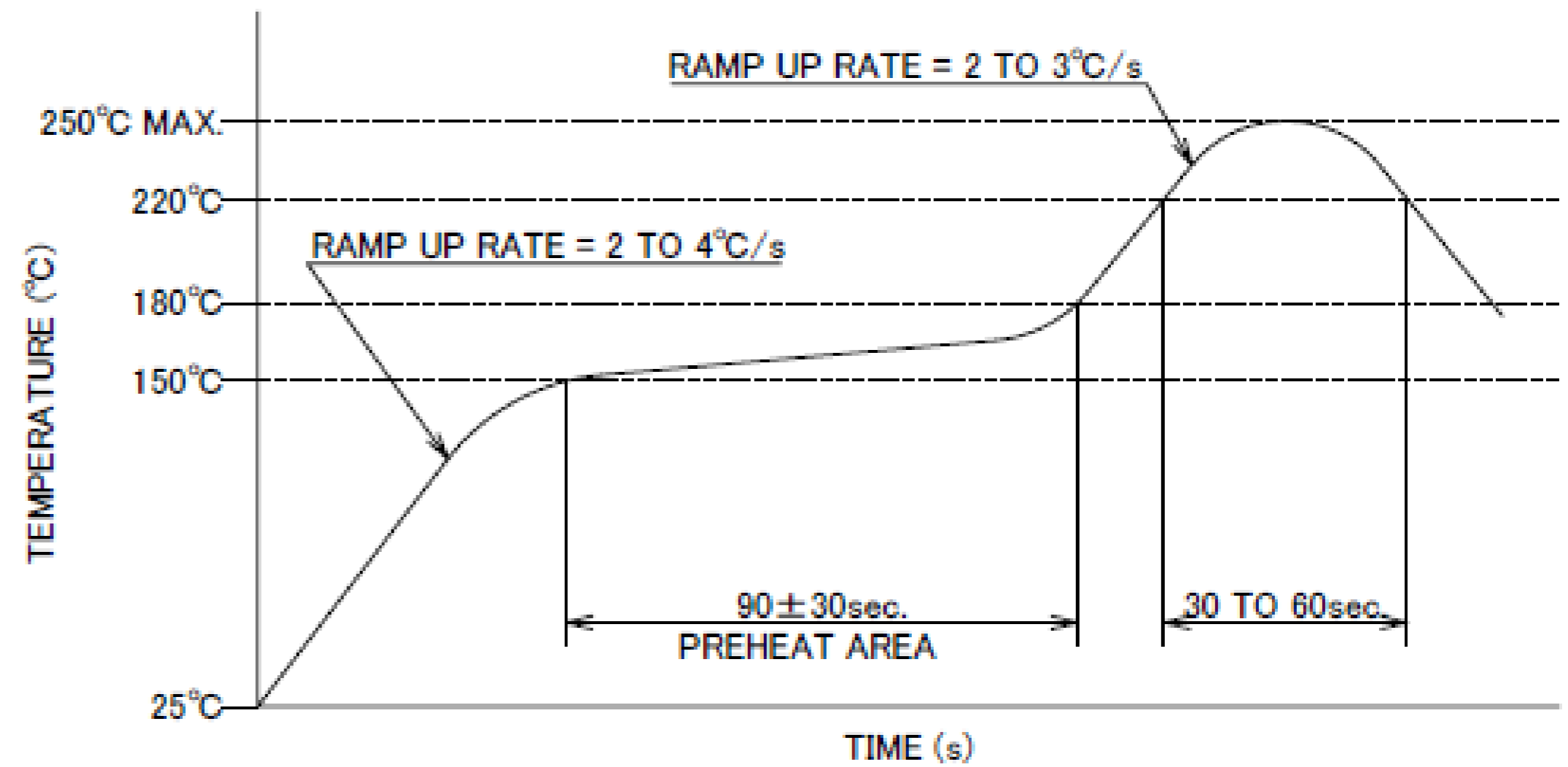
NOTES:
3. DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.
4. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.17

Receptacle Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.17

FOR CABLINE-CA II PLUG CABLE ASSEMBLY (DWG. NO. 20679)

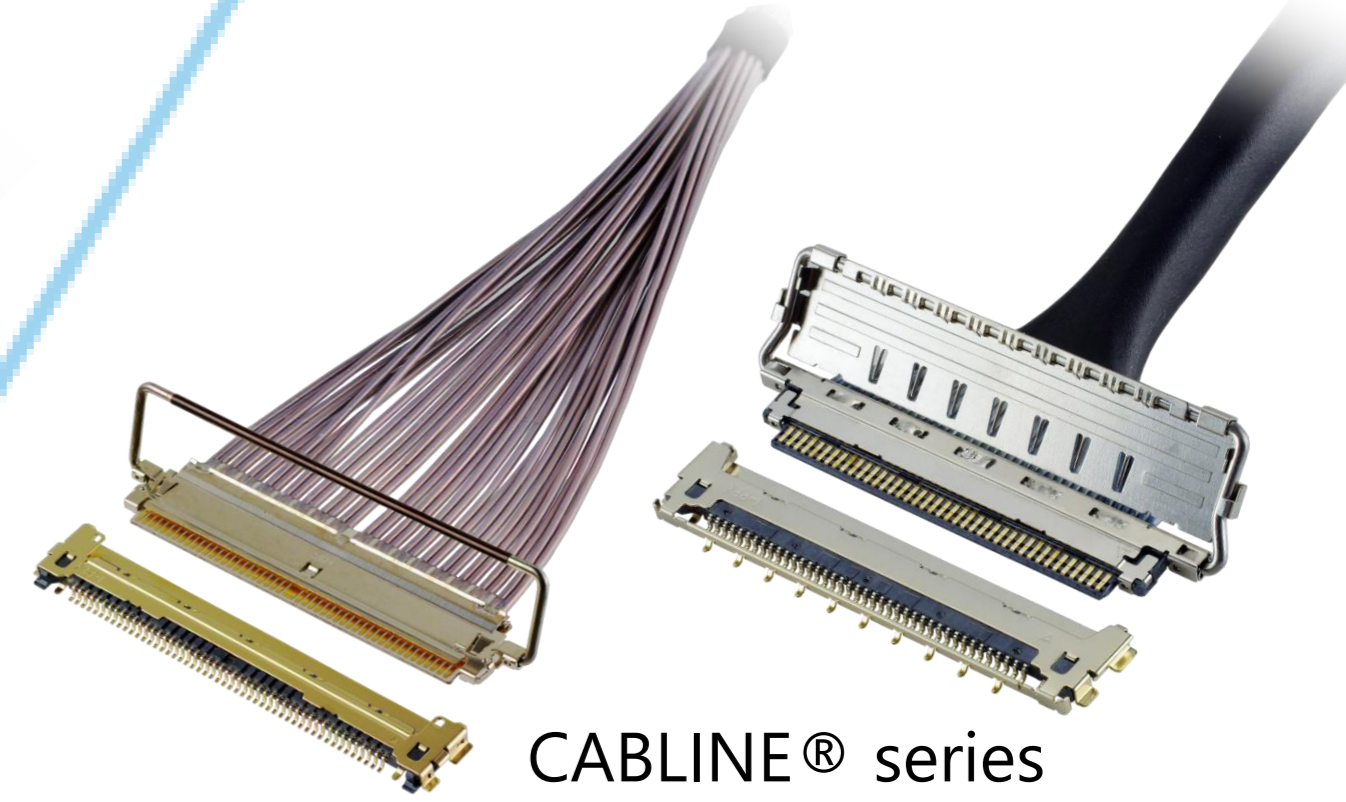
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL : AWG #44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG #36 , 34 TWINAXIAL CABLE : AWG #40 , 42
RATED VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATED AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG #44] PER CONTACT PIN/UP TO 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 TO 378K (-40°C TO 105°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG #34) / AFTER TEST : \triangleleft140mohm 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 : \triangleleft140mohm 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***

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Custom Connectors Available

RF Connectors

MHF® series



CABLINE® series

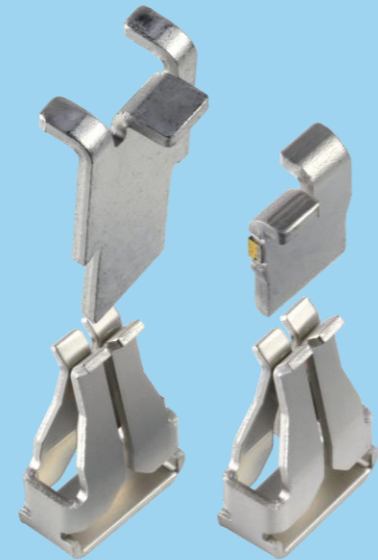
Micro-Coaxial/Twinaxial Connectors



Wire-to-Board Connectors/Terminals

AP series

ISH® series



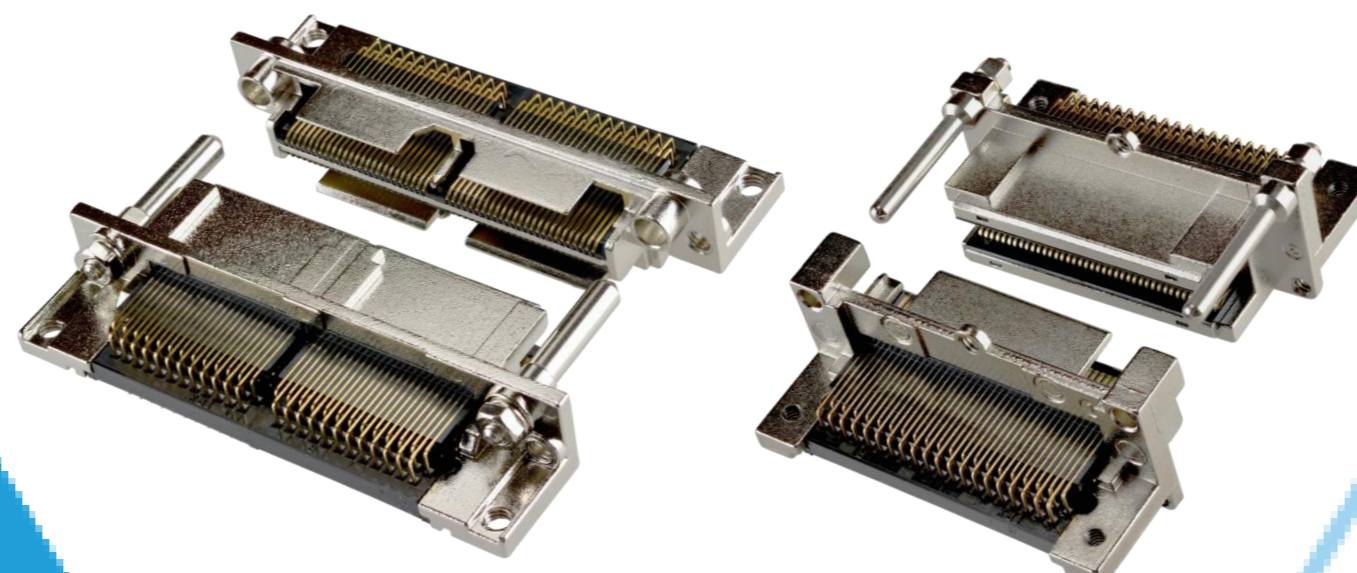
NOVASTACK® series



Board-to-Board Connectors



I/O Connectors



MINIDOCK™ series

MINIFLEX® series EVAFLEX® series



FPC/FFC Connectors



Inquiry



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