

CABLINE®-CA II PLUS

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

*For higher data rate up to 64 Gbps PAM4, please review [CABLINE-CA IIP PLUS harness solution](#) that mates to current CABLINE-CA II PLUS receptacle (20790-060E-01/-02).

Product Specifications:

Mating type	Horizontal	
Board Pitch (mm)	0.4	
Wiping Length (mm)	0.54	
Mated size (mm)	Height	1.2 max. with cover
	Width	Formula: 6.95 + (0.4*?p)
	Depth	6.7
Pin Counts	Range	Up to 60
	Available	60

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

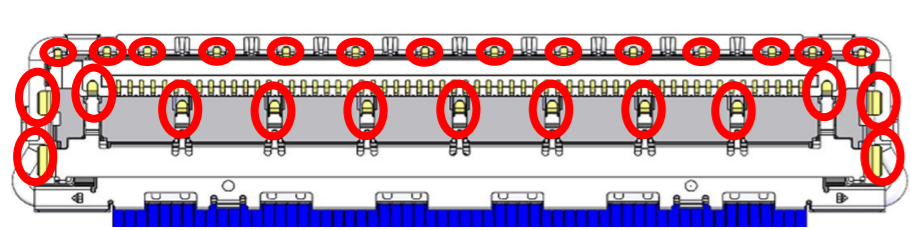
Applicable Standards (Reference Only):

USB4 Gen3/Thunderbolt 4 (20 Gbps/lane), PCIe® Gen 4 (16 GT/s), eDP HBR 3 (8.1 Gbps)

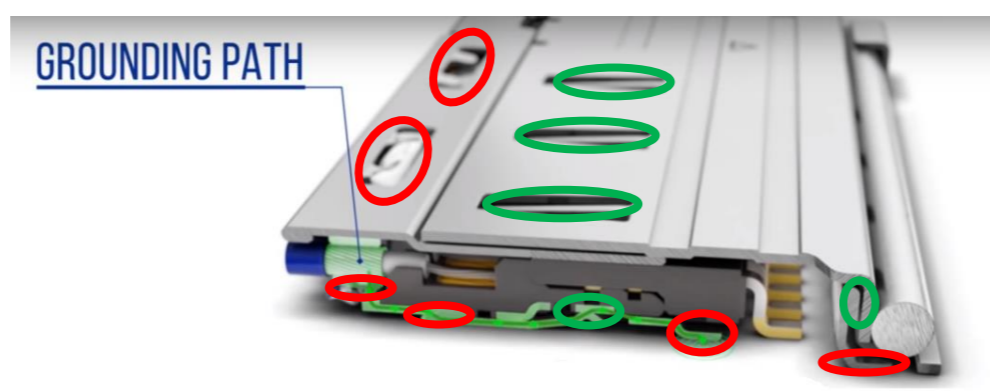


* Please inquire for pin counts not listed or outside of the pin count range.
*20, 30, 40, 50p are also available with CABLINE®-CA II (narrow space type).

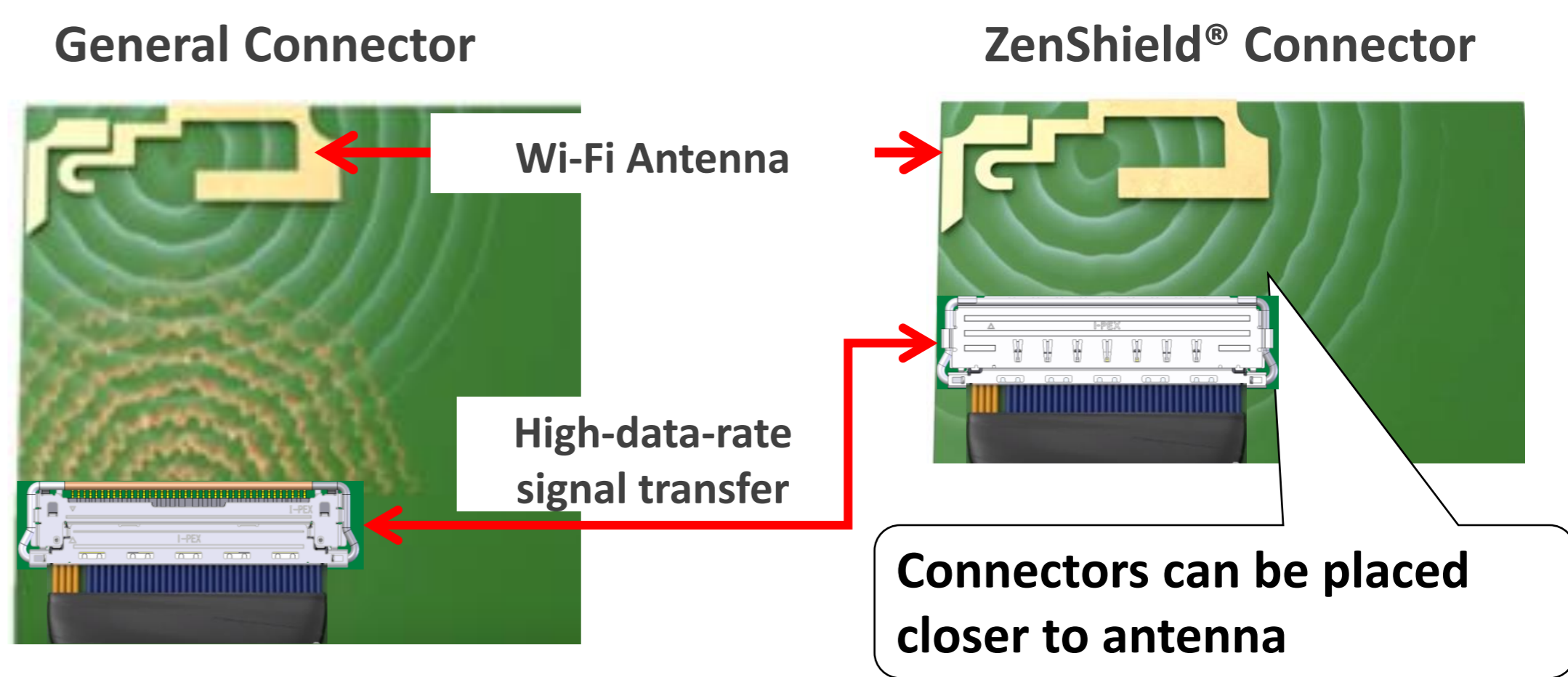
▶ ZenShield® fully-shielded with multi-point grounds to prevent EMI leakage



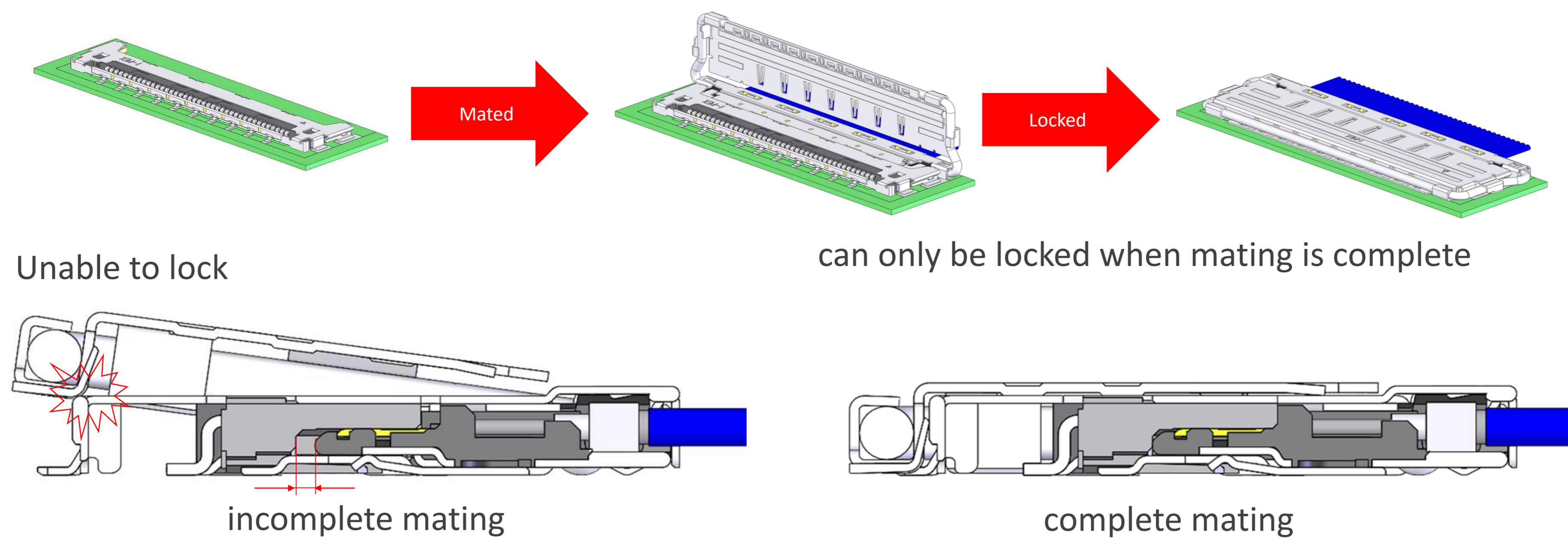
View From Back



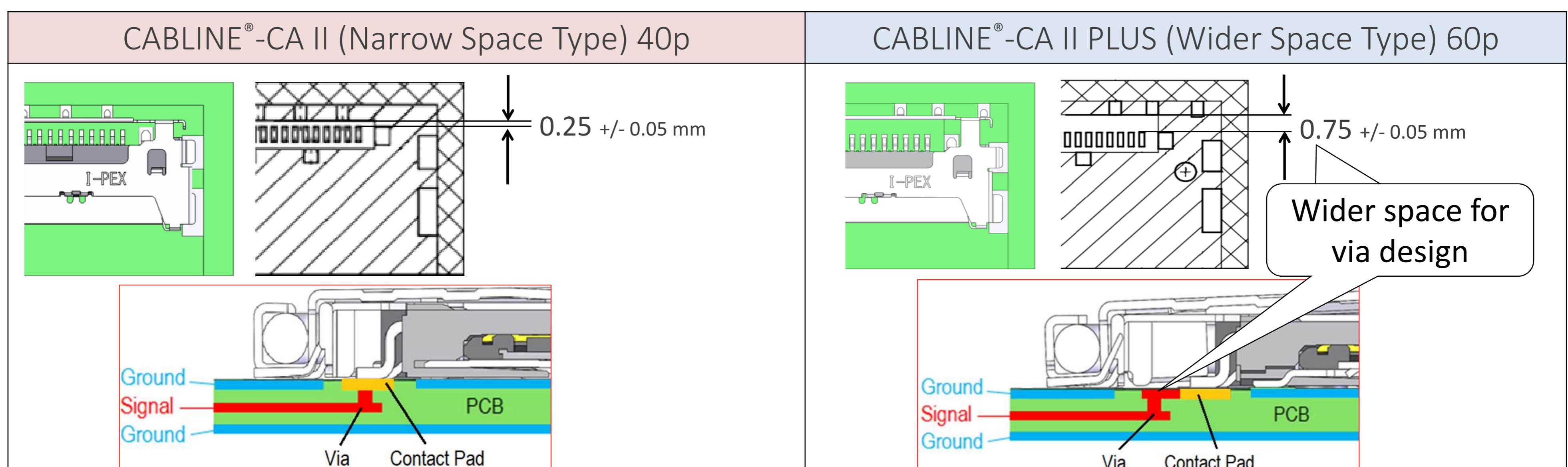
- Soldered contacts
- Mechanical contacts



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

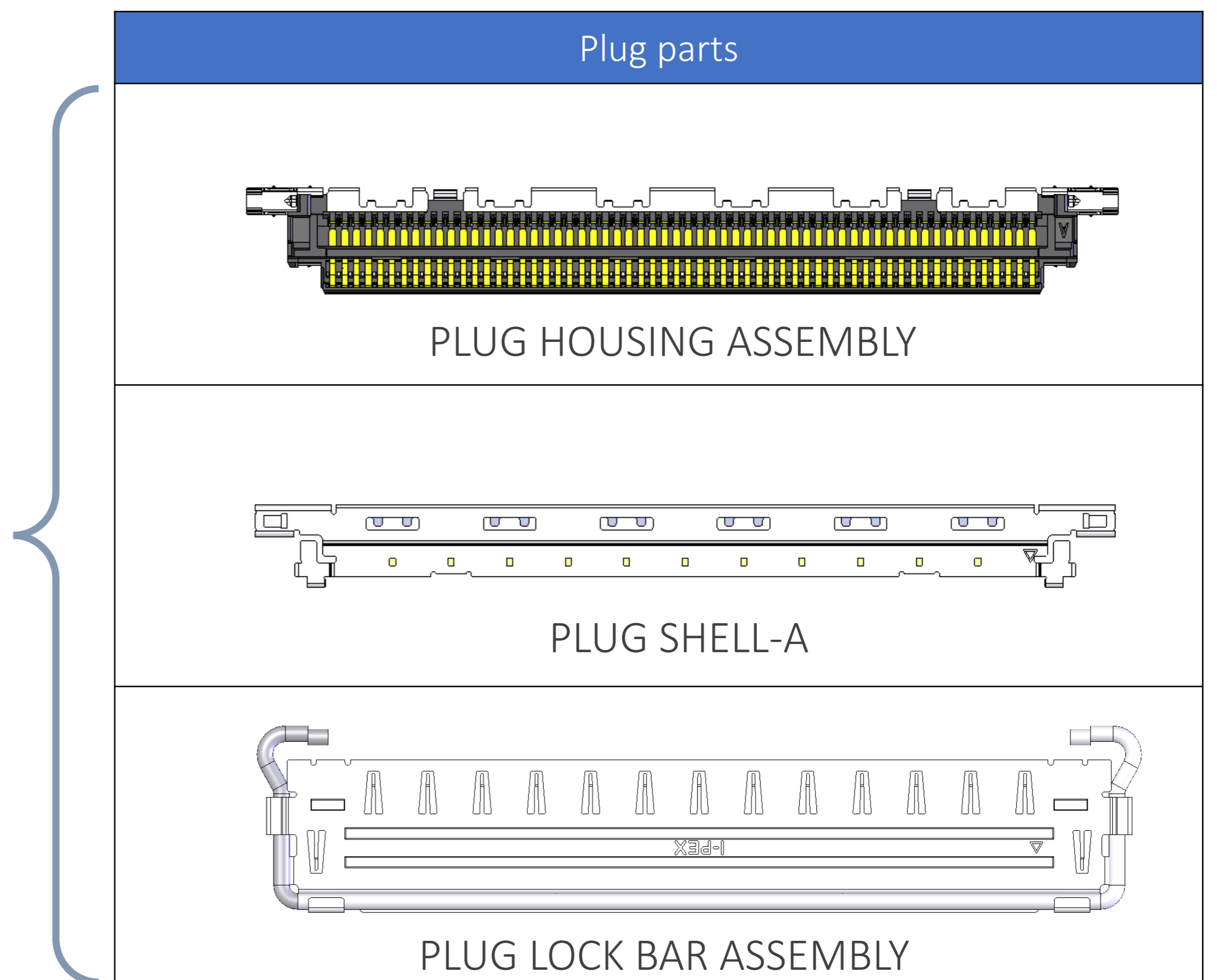
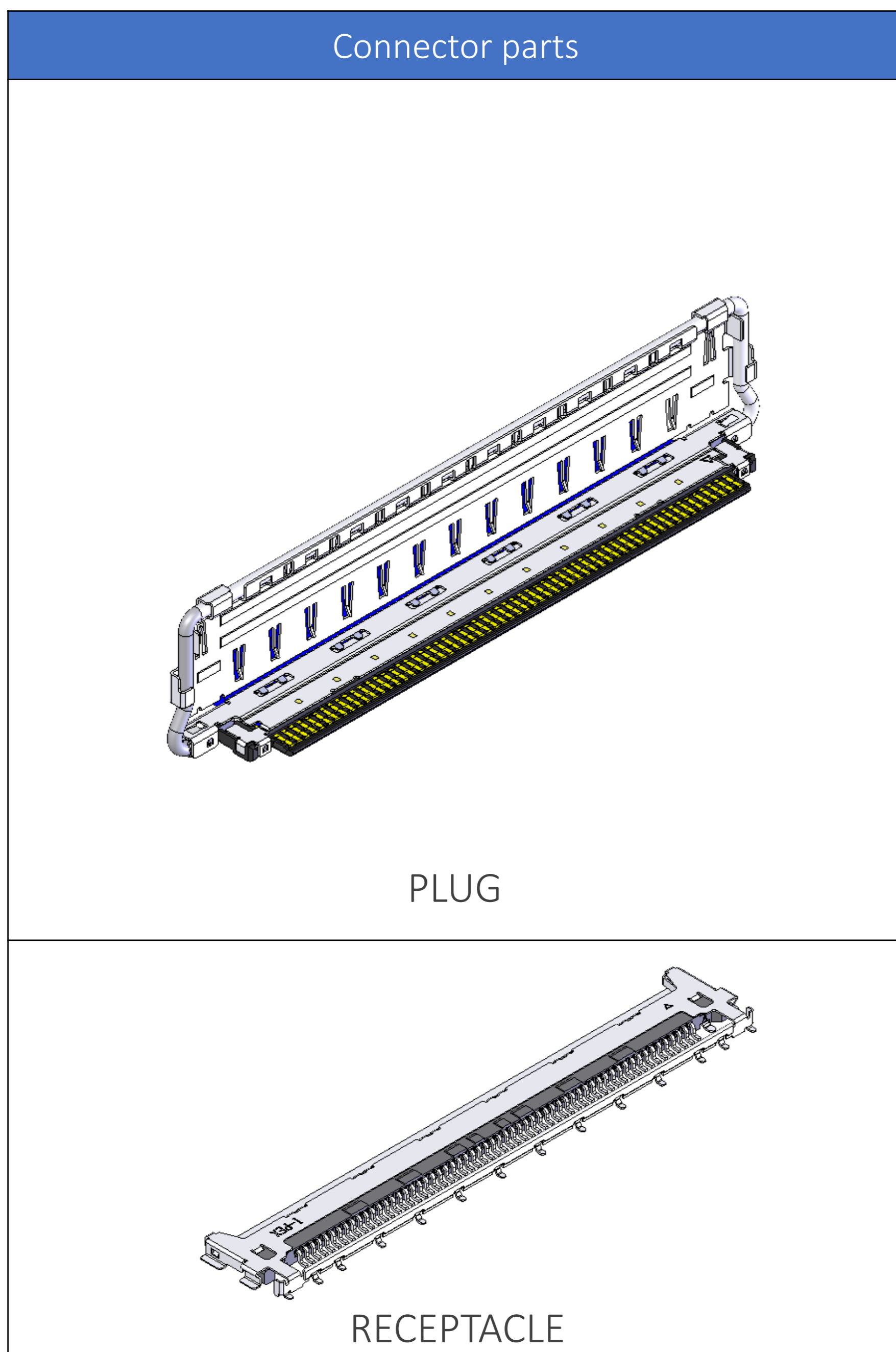


▶ Wider space for vias on PCB (for Non-Via-In-Pad type PCB trace design)



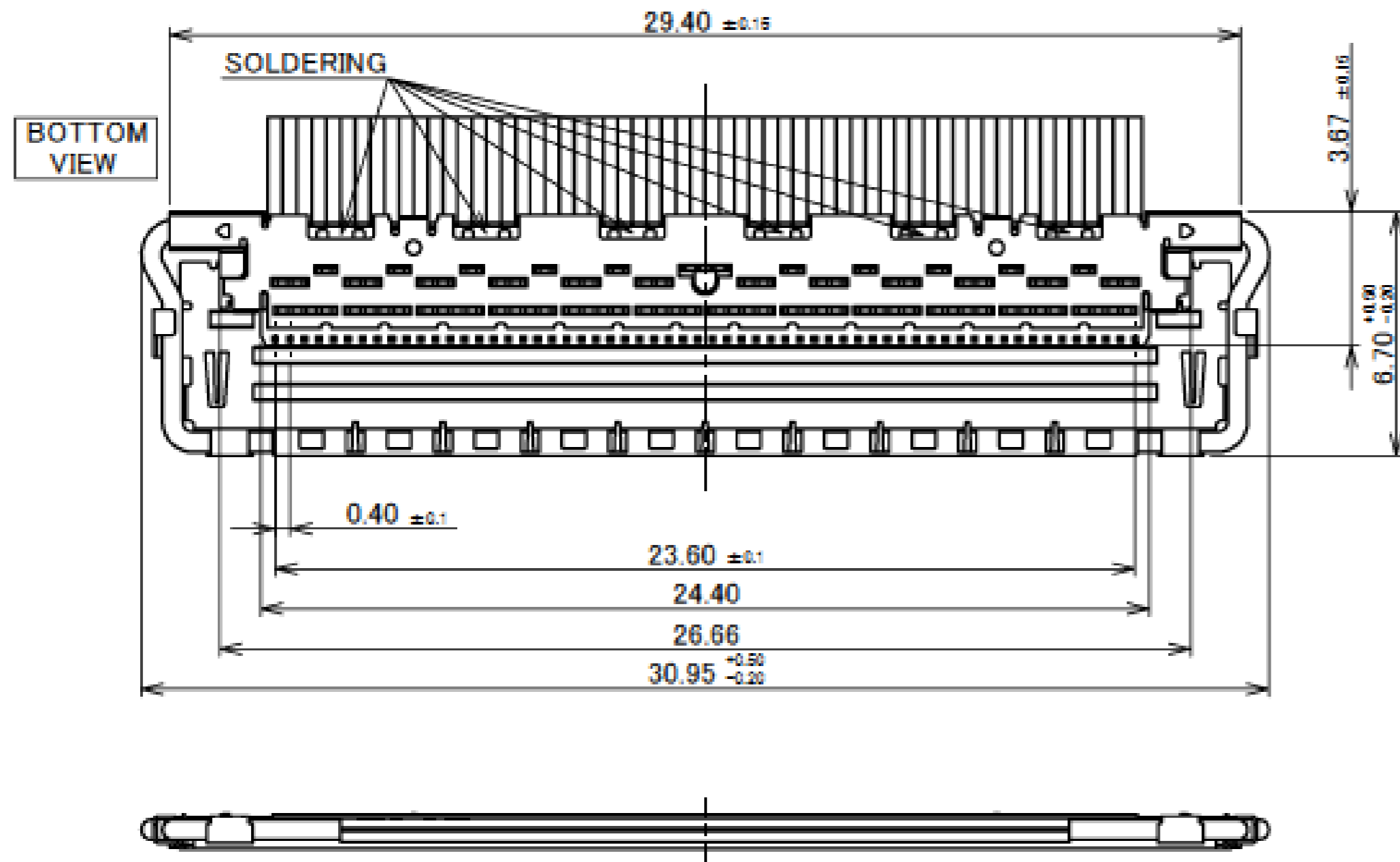
Component Parts Details

Component Parts

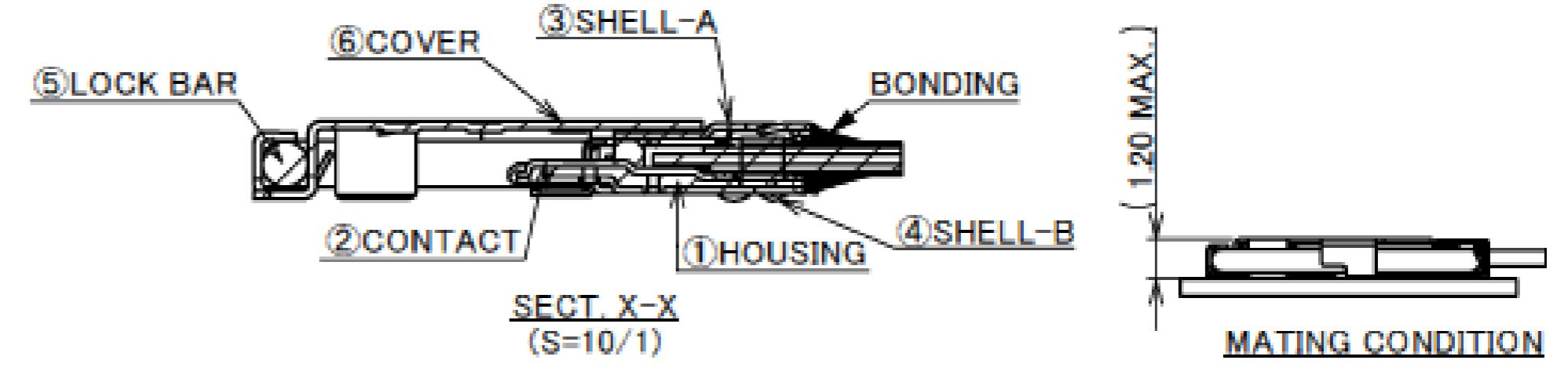
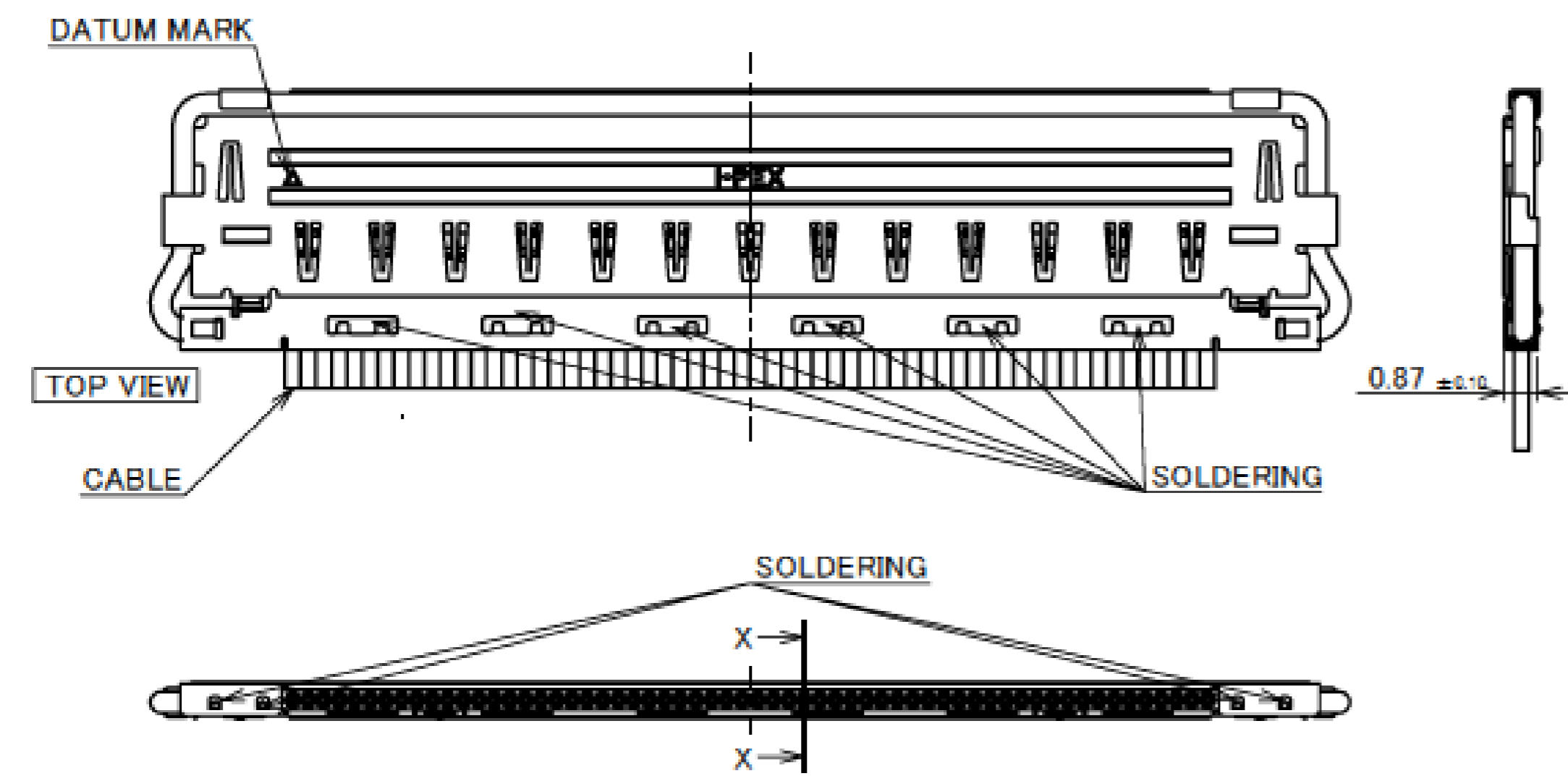
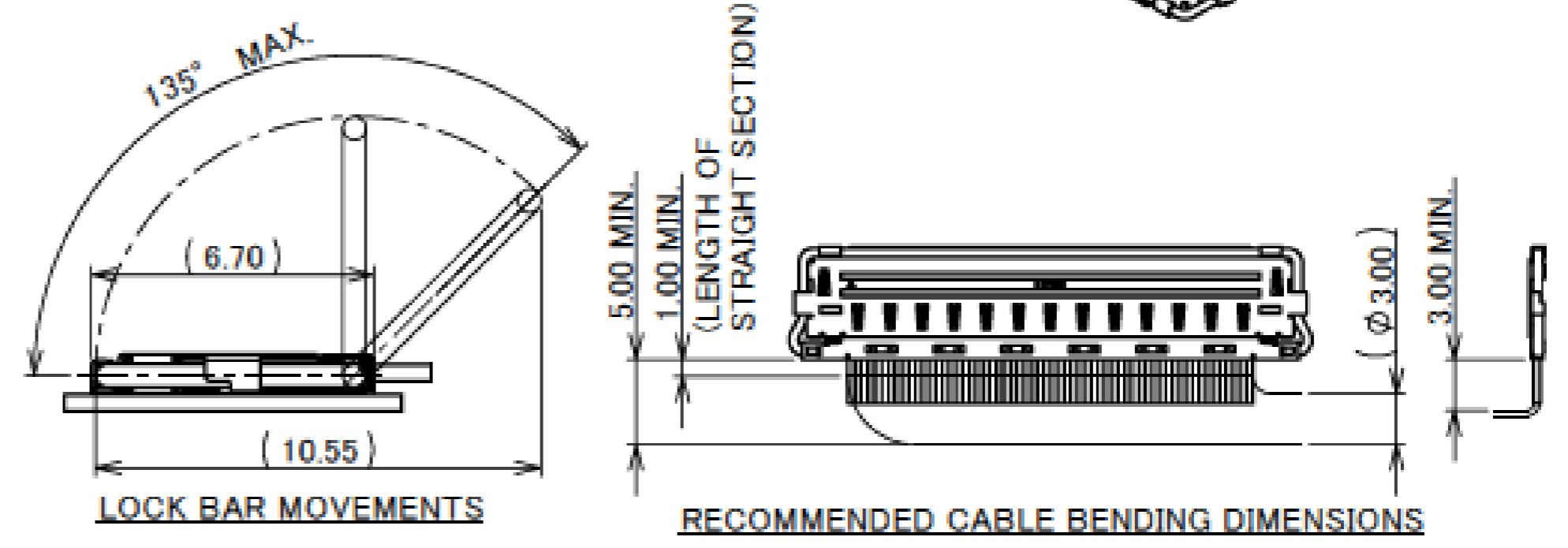


Plug for Cable Assembly

Recommended P/N	20788-0**T-01
PART NO.	Pos.
20788-060T-01	60



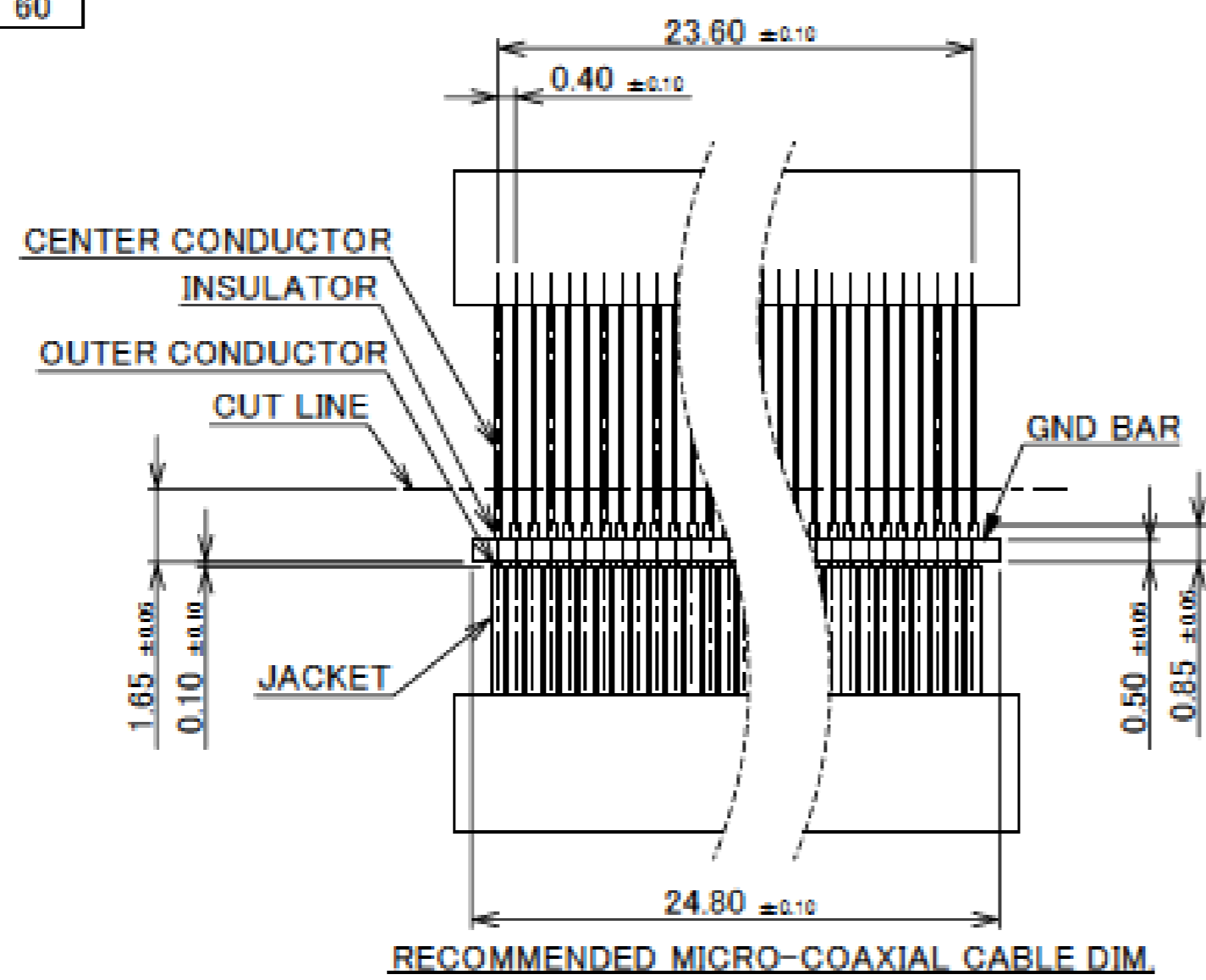
P/N : 20788-0**T-01
Pos.



NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
6	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
5	LOCK BAR	SUS φ 0.55	-
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.11

PART NO.	Pos.
20788-060T-01	60



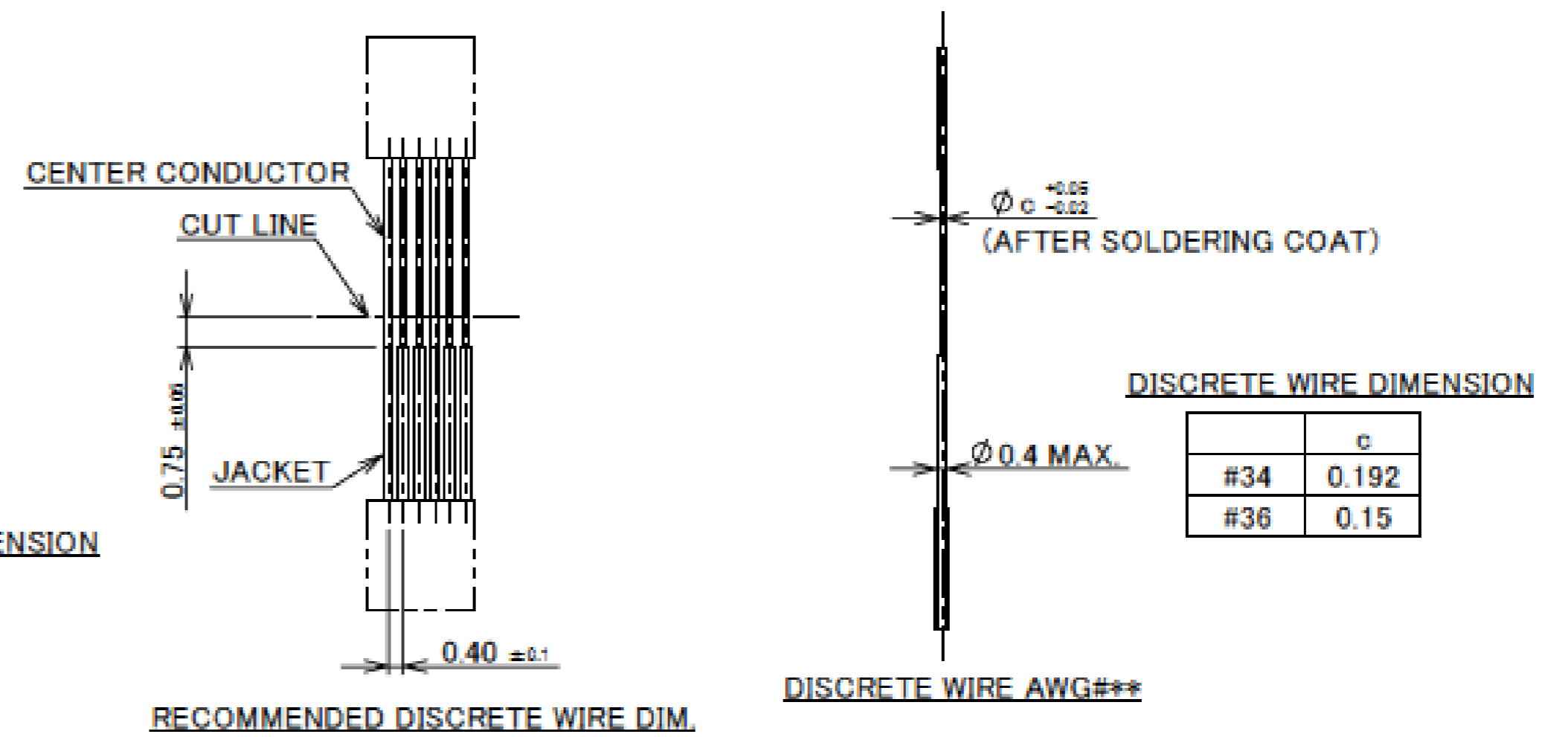
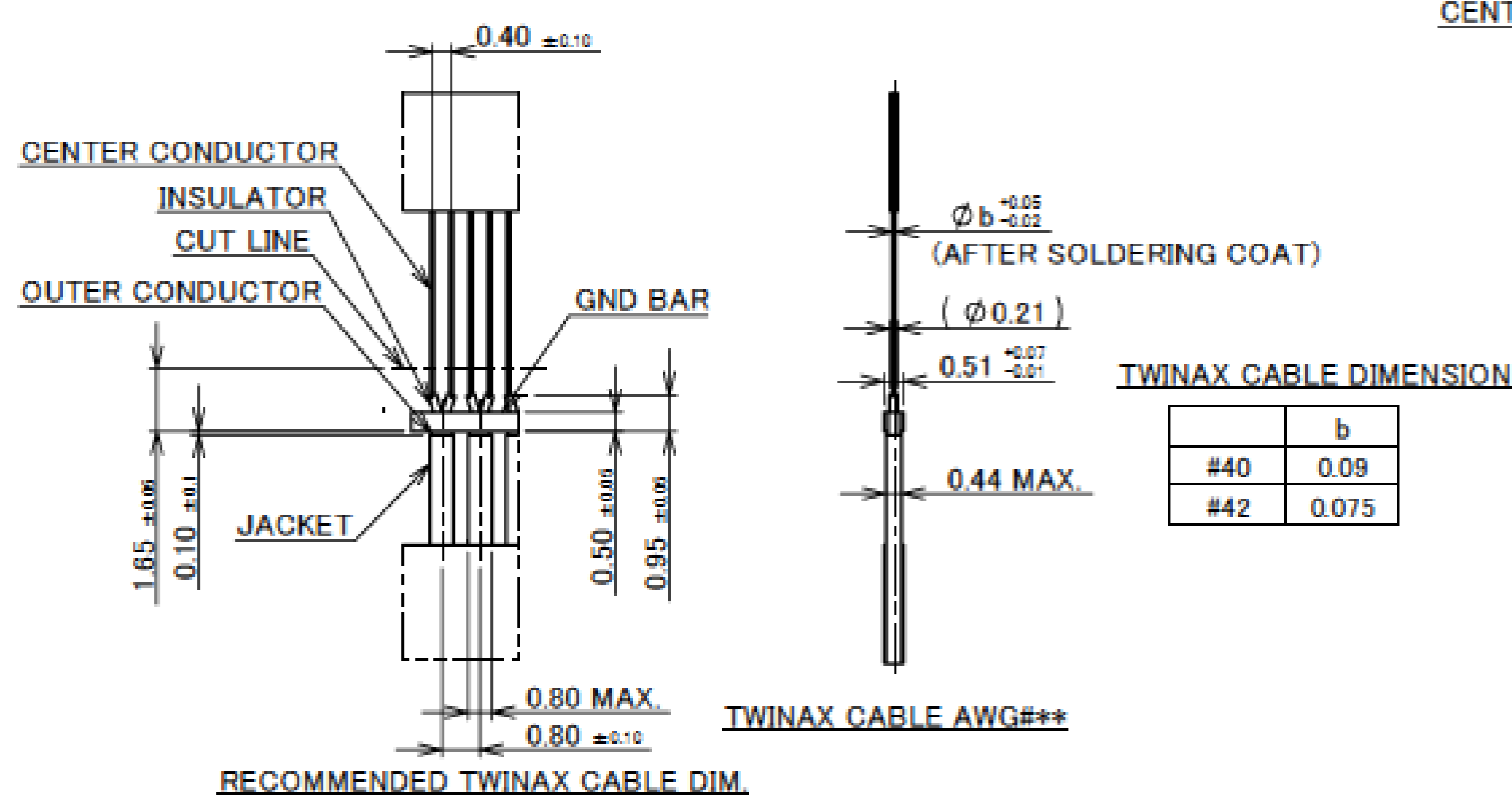
CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

	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

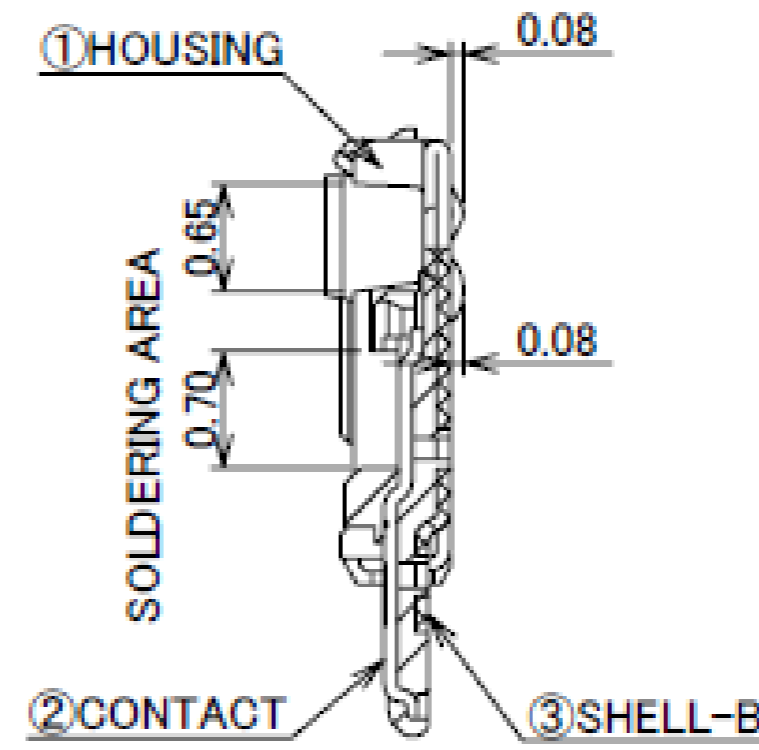
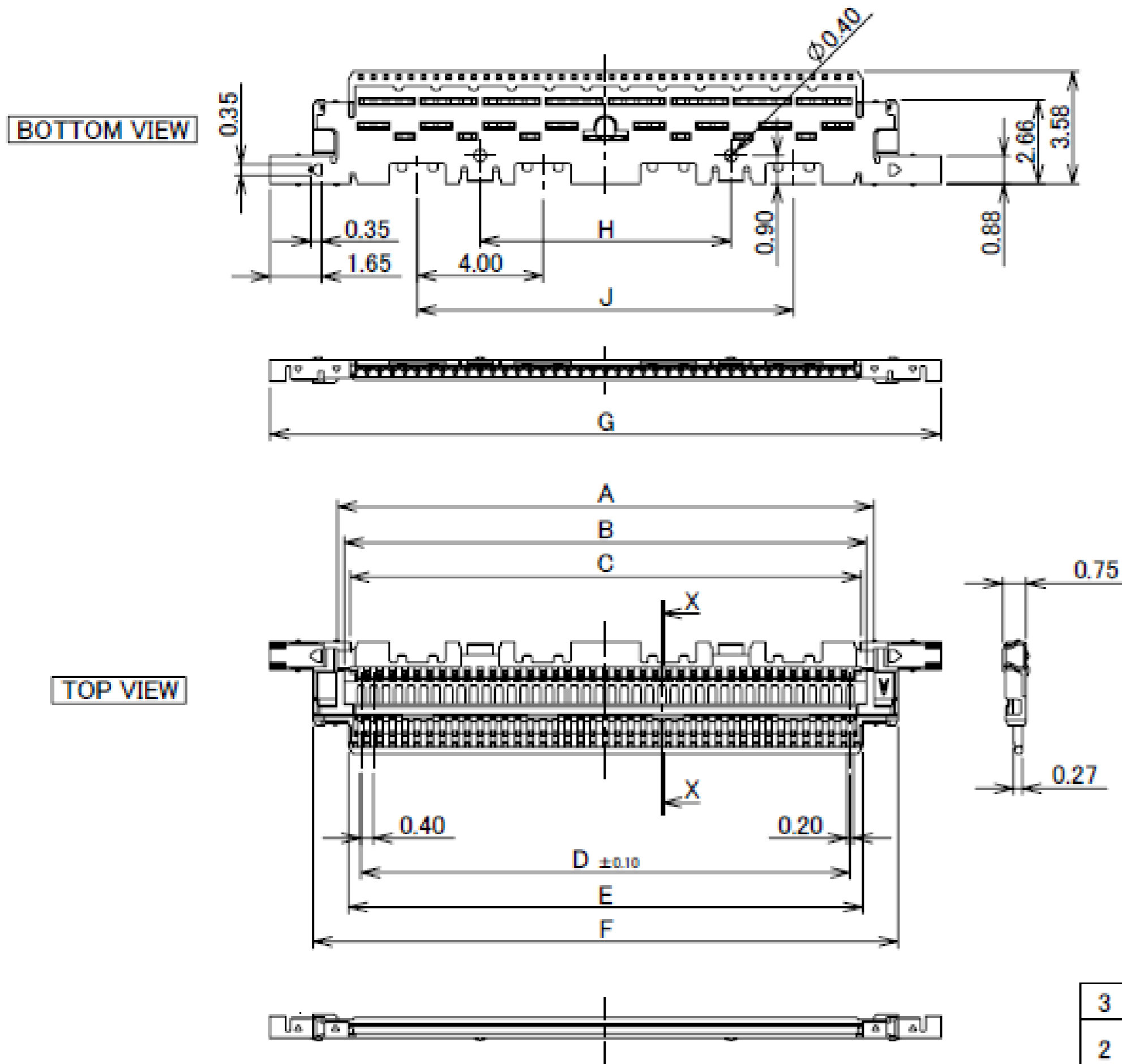
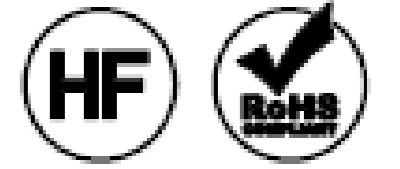


Rev.11

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



SECT. X-X
(S=15/1)

NOTES.

- THIS PART IS ASSEMBLED WITH SHELL A(P/N 3204-0**1) AND LOCK BAR ASSY(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 ASSY(P/N 20789-0**T-01) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N 20788-0**T-01

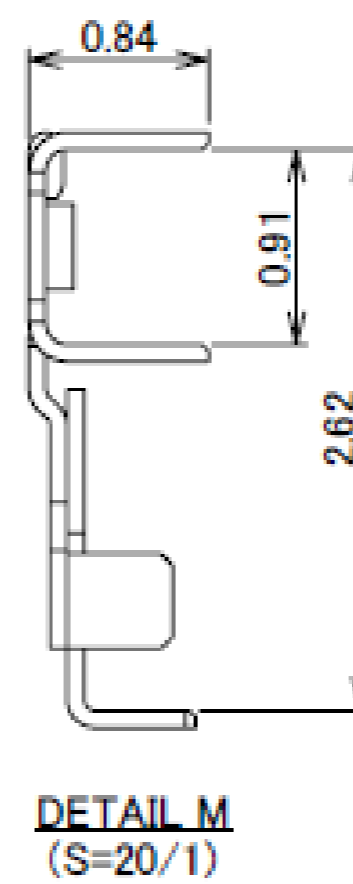
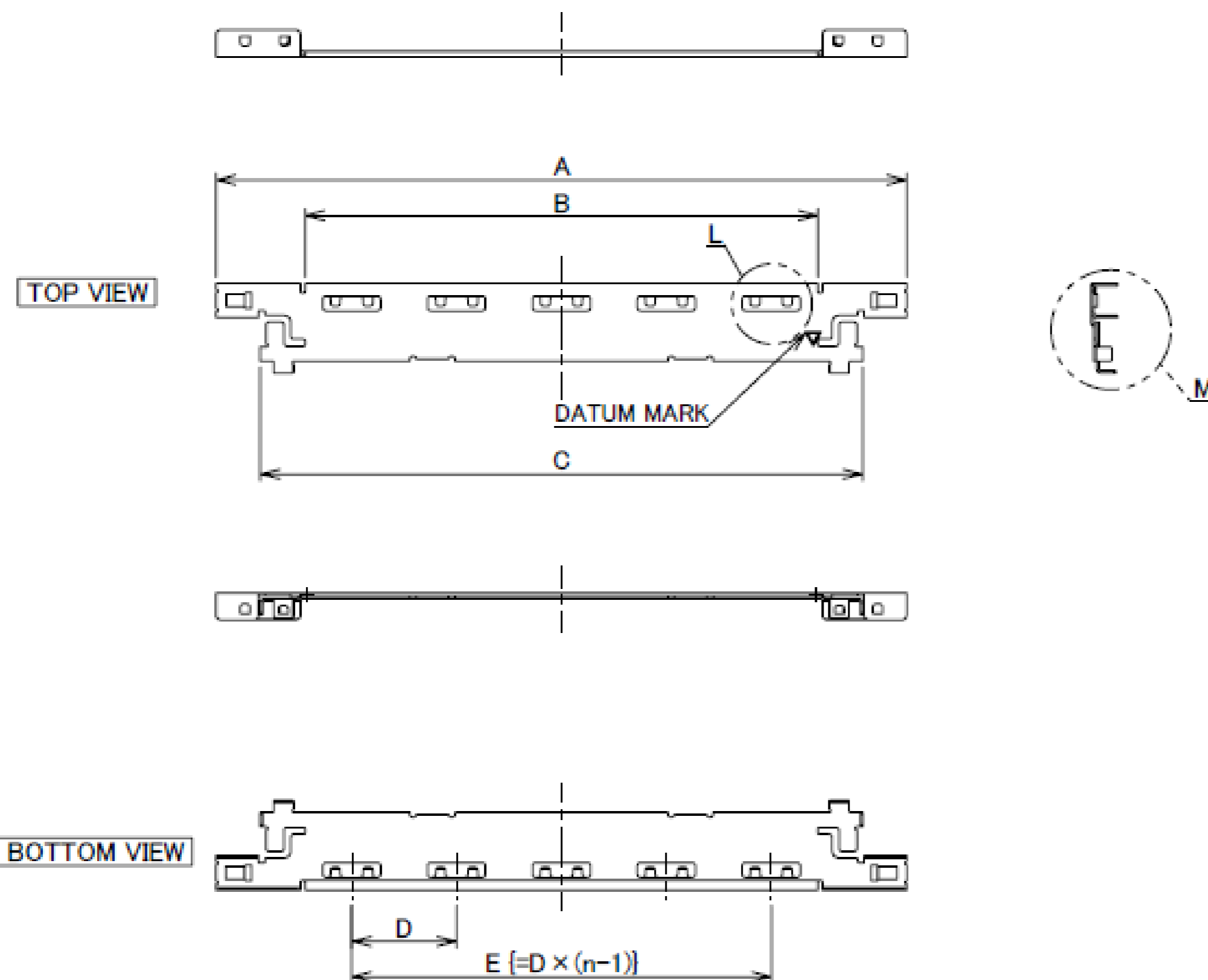
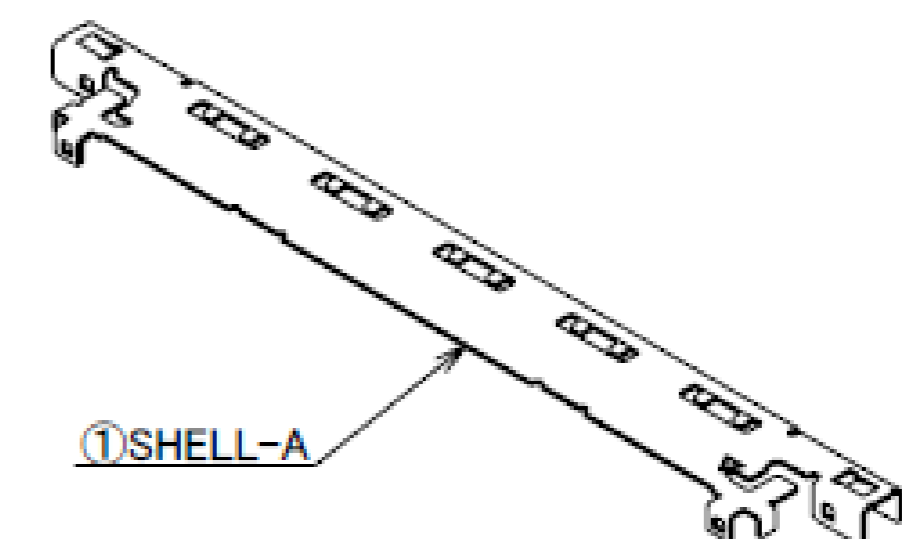
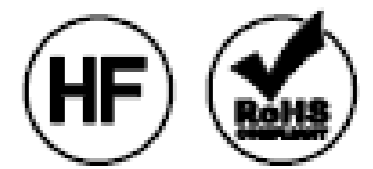
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL-B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μ m MIN. OVER Ni 1.00 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT & SOLDERING AREA : Au 0.03 μ m MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

Rev.7

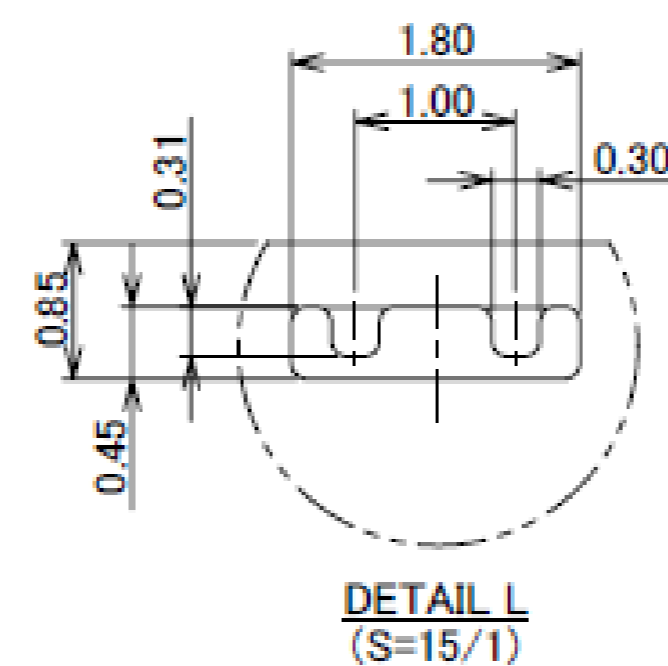
Plug Shell-A

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



DETAIL M
(S=20/1)



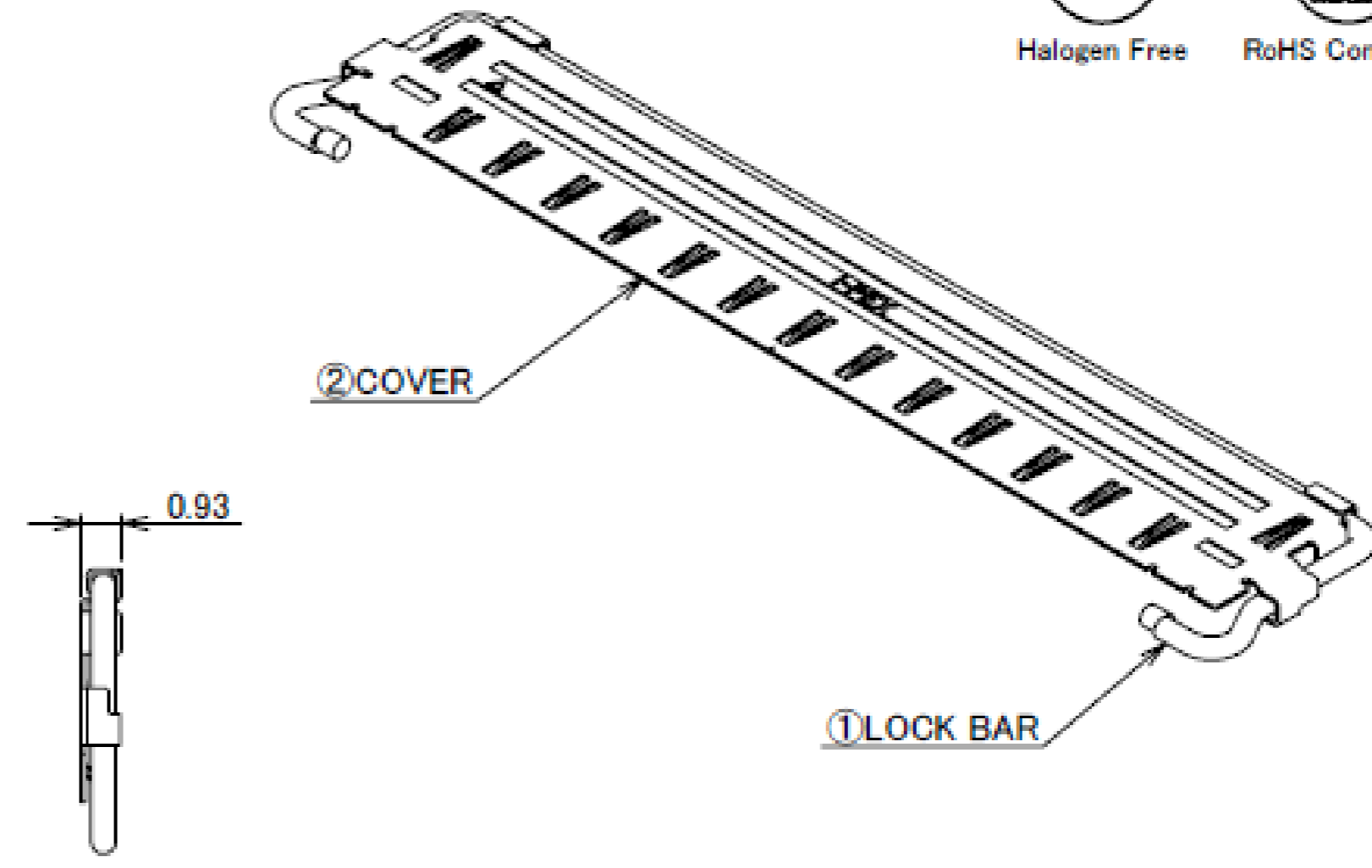
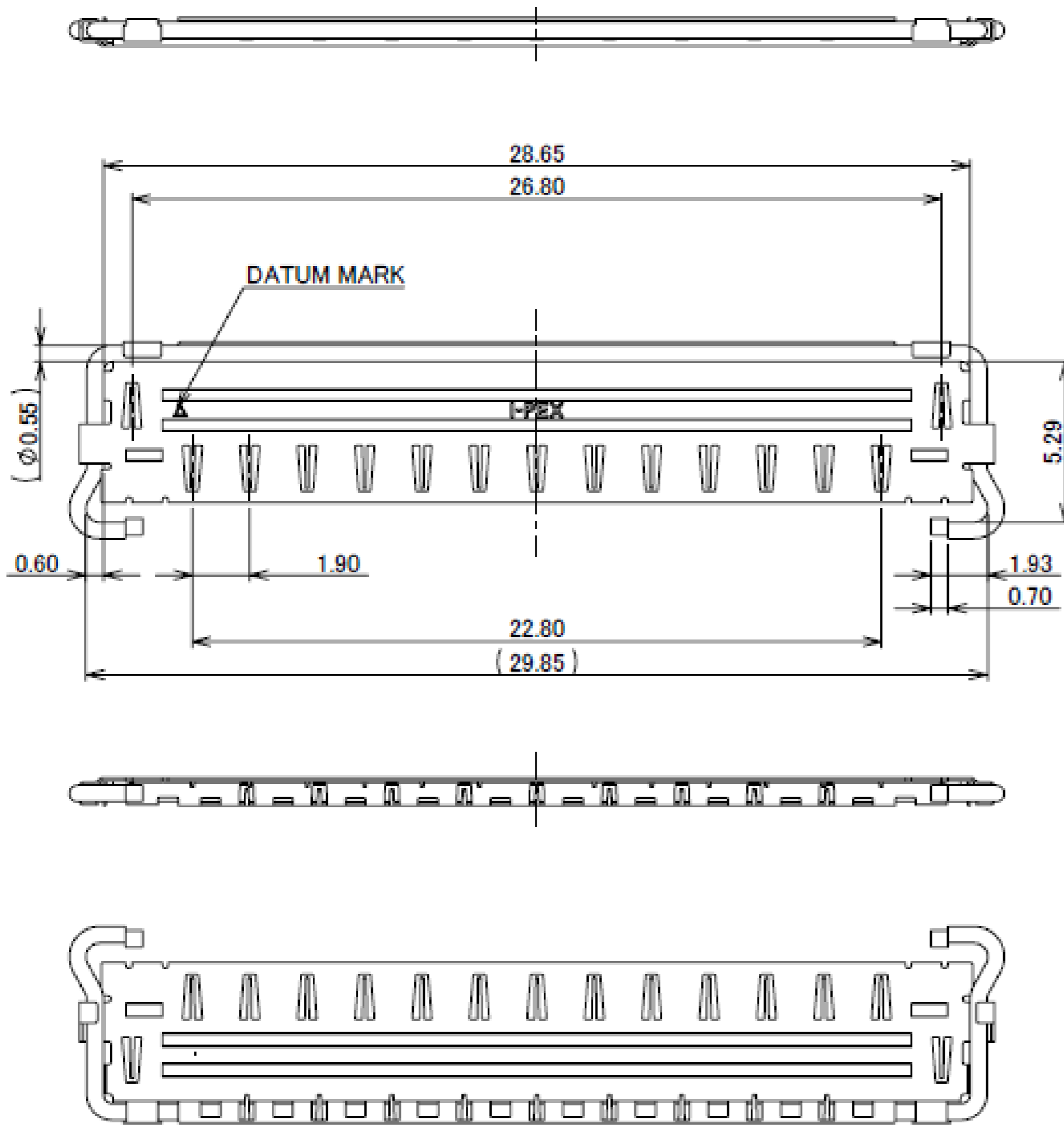
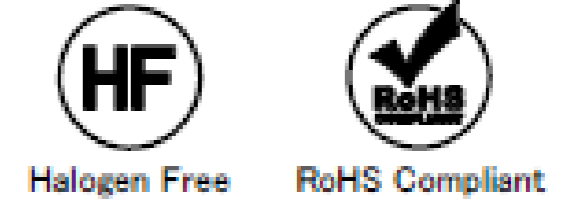
DETAIL L
(S=15/1)

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

Rev.7

Lock Bar Assembly

Recommended P/N	20789-0**T-01
PART NO.	Pos.
20789-060T-01	60

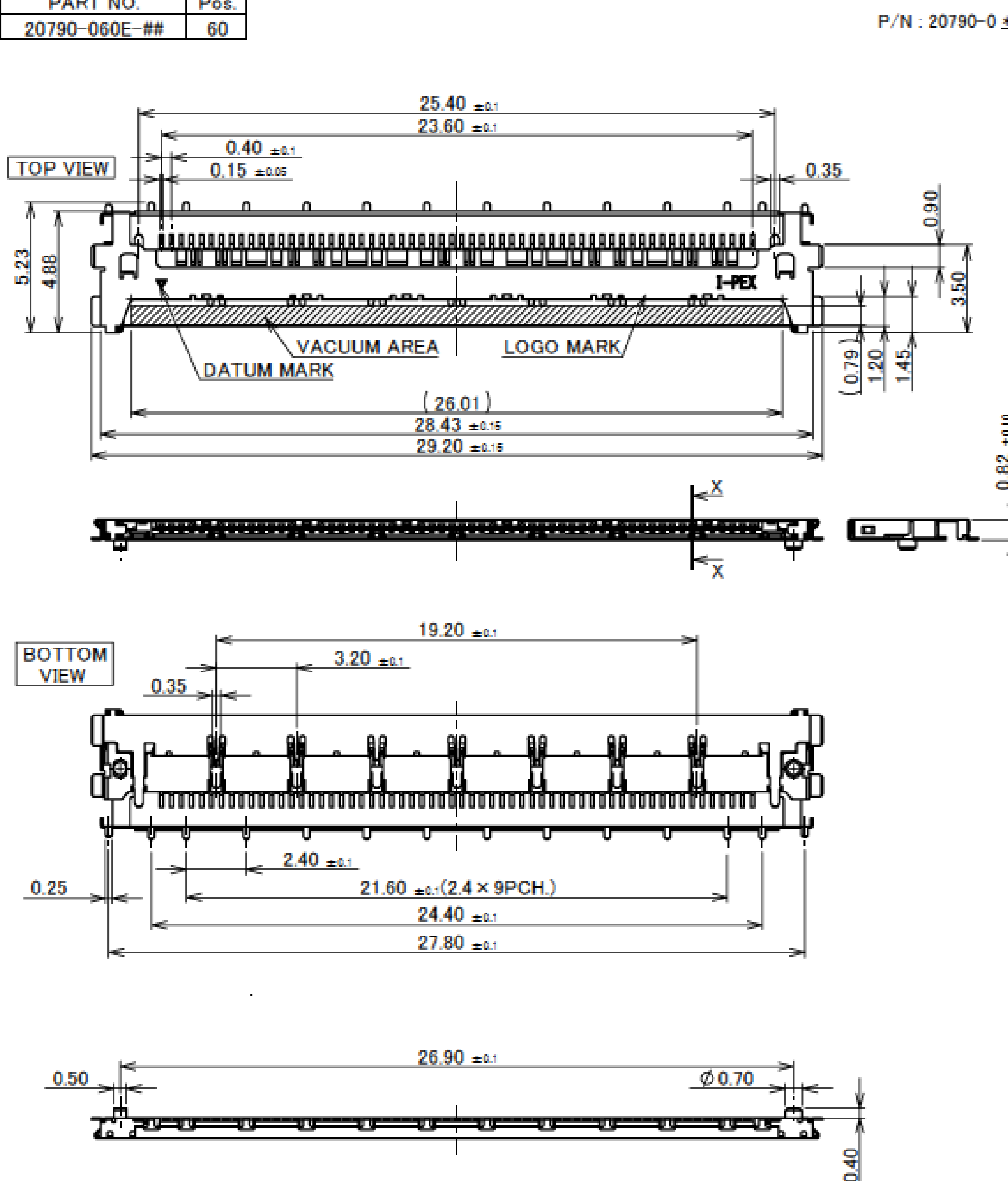


2	COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN.
1	LOCK BAR	SUS $\phi 0.55$	-
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

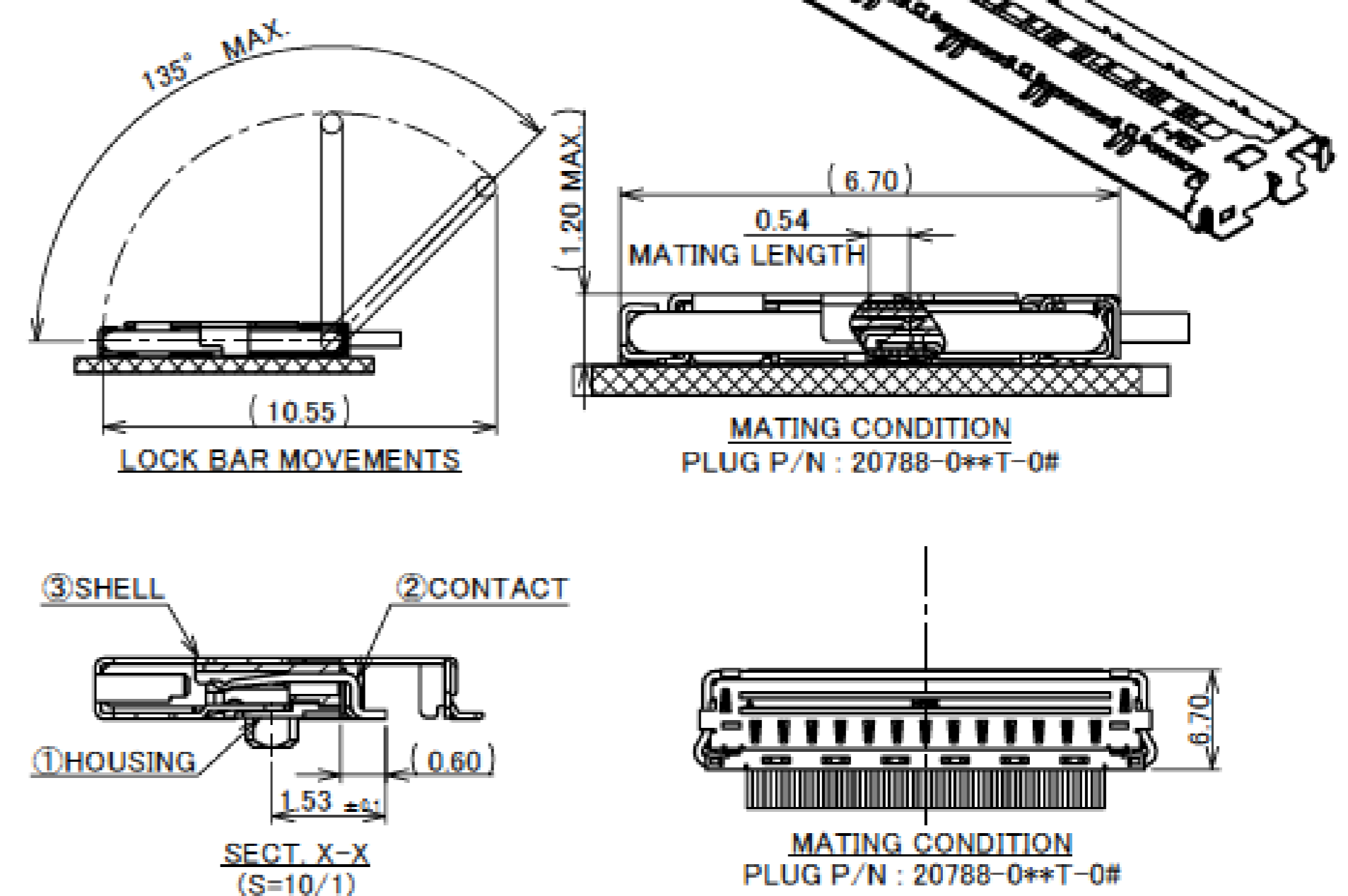
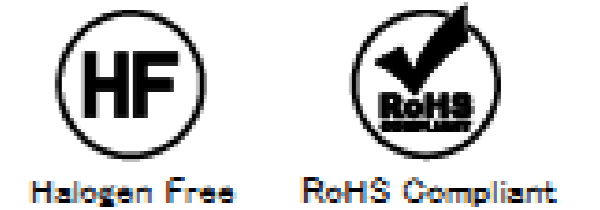
Rev.9

Receptacle Assembly

Recommended P/N	20790-0**E-02
PART NO.	Pos.
20790-060E-##	60



P/N : 20790-0**E-##
 1 : WITH BOSS
 2 : WITHOUT BOSS
 SEE TABLE 1
 Pos.

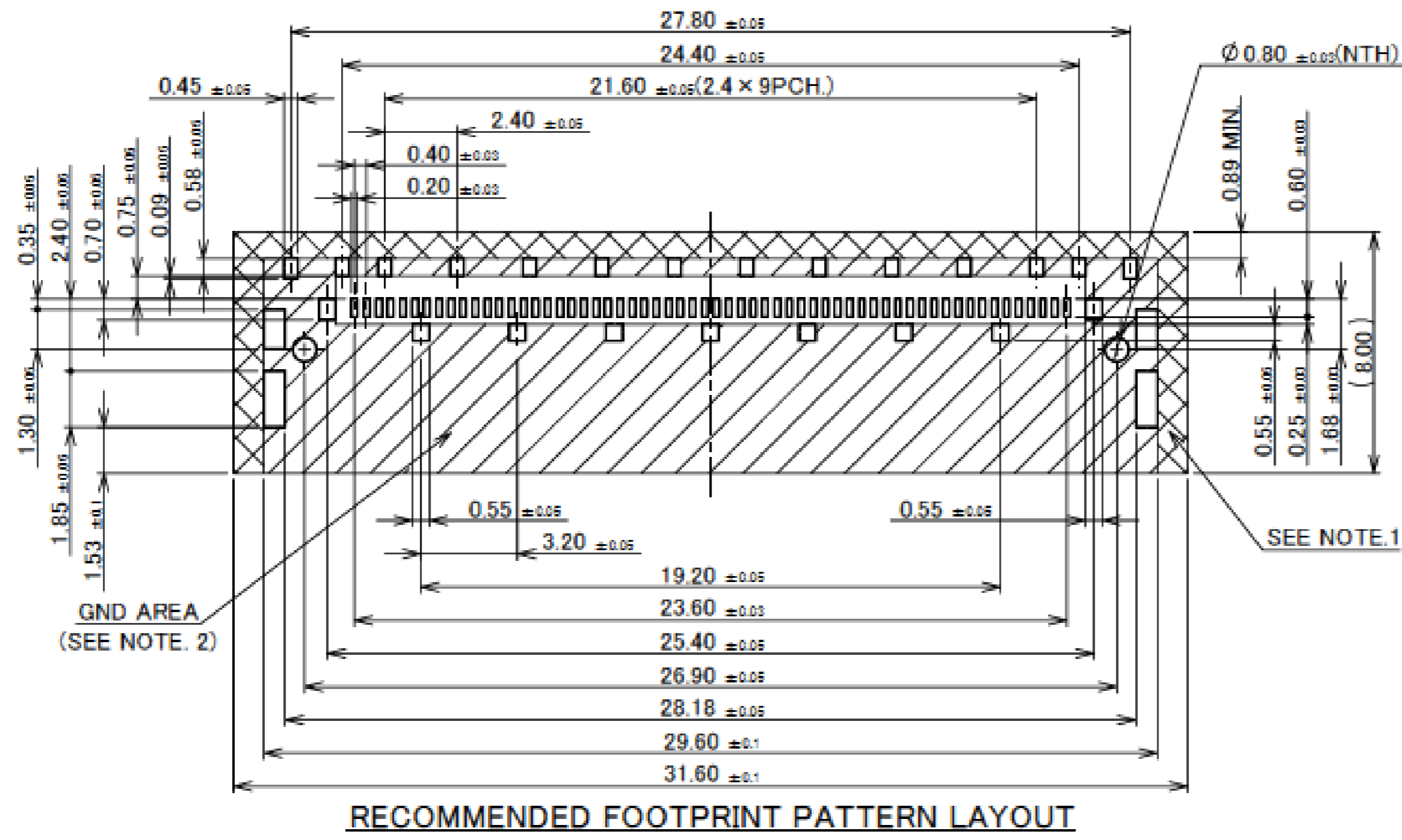


PART NO.	CONTACT FINISH
20790-0**E-0#	CONTACT & SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.
20790-0**E-1#	CONTACT AREA : Au 0.38 μ m MIN. OVER Ni 1.00 μ m MIN. SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.

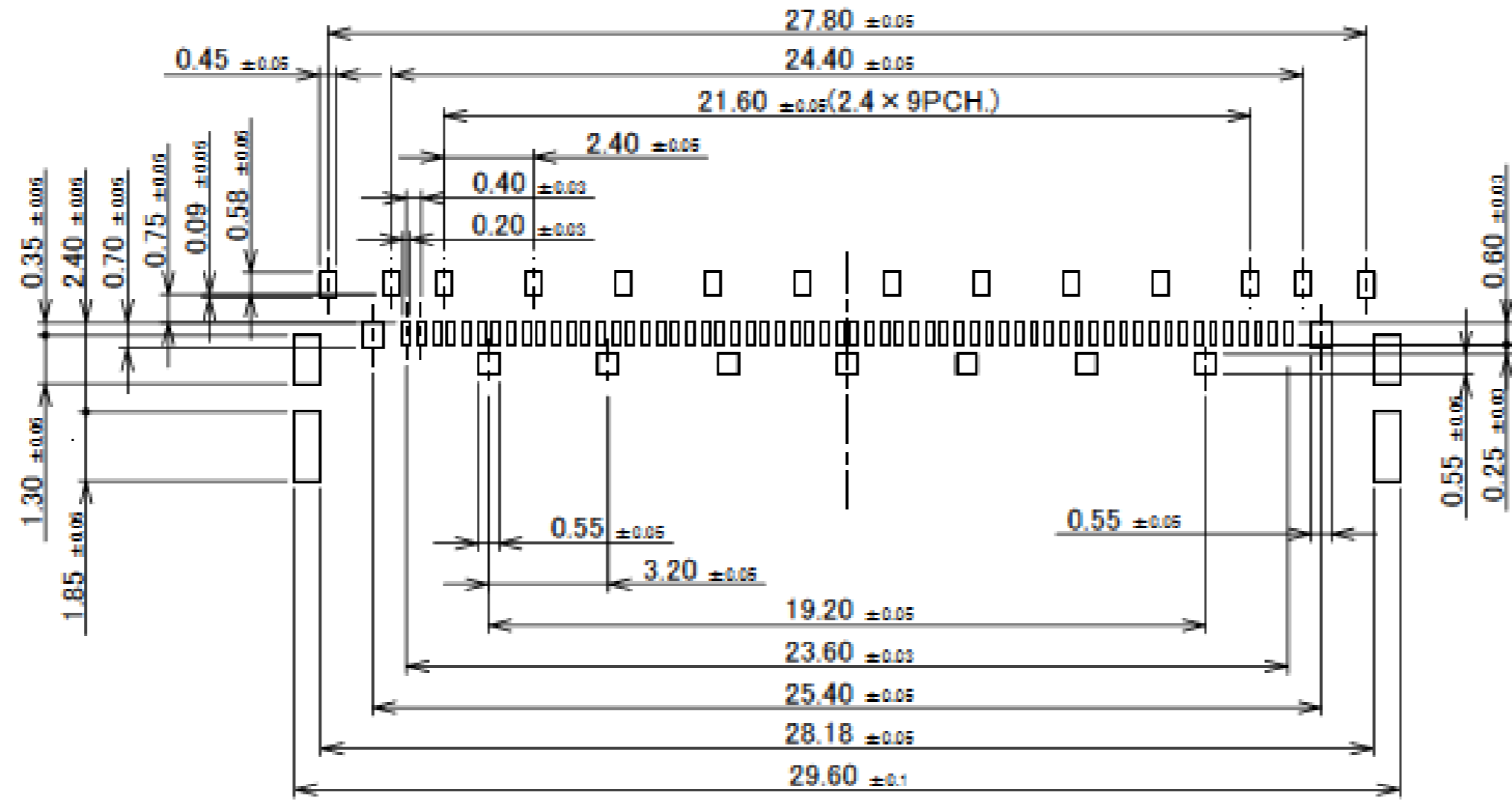
3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. SOLDERING AREA : Au 0.03 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0 .BLACK
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.13

Receptacle Assembly

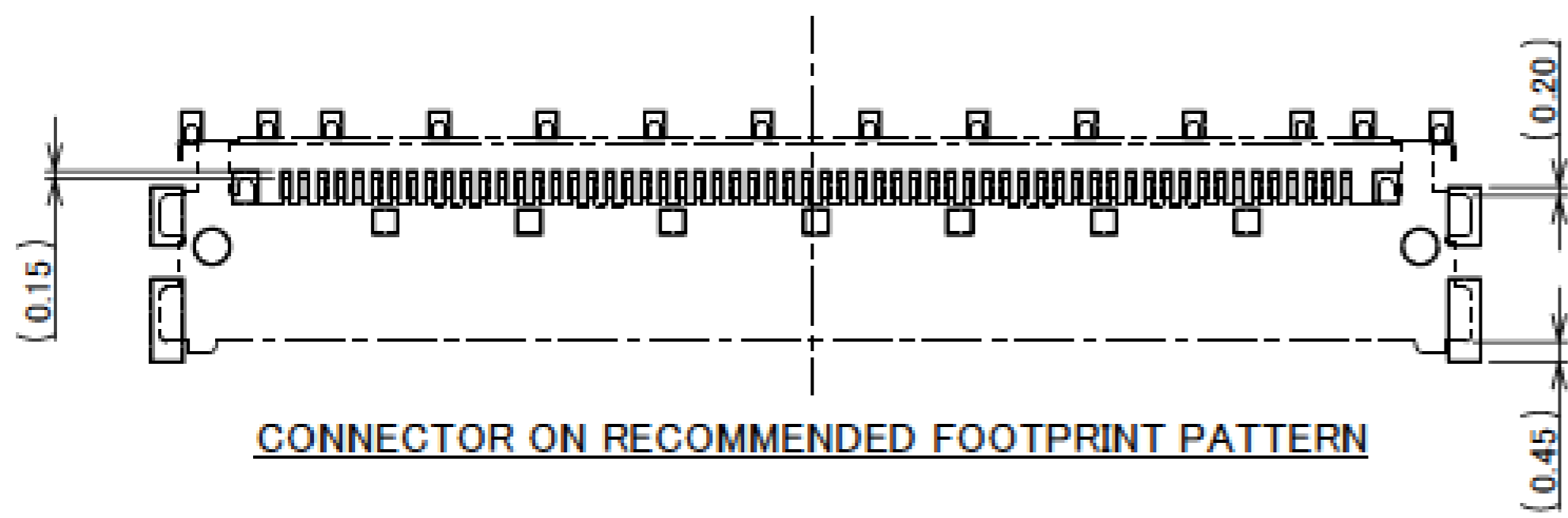


RECOMMENDED FOOTPRINT PATTERN LAYOUT

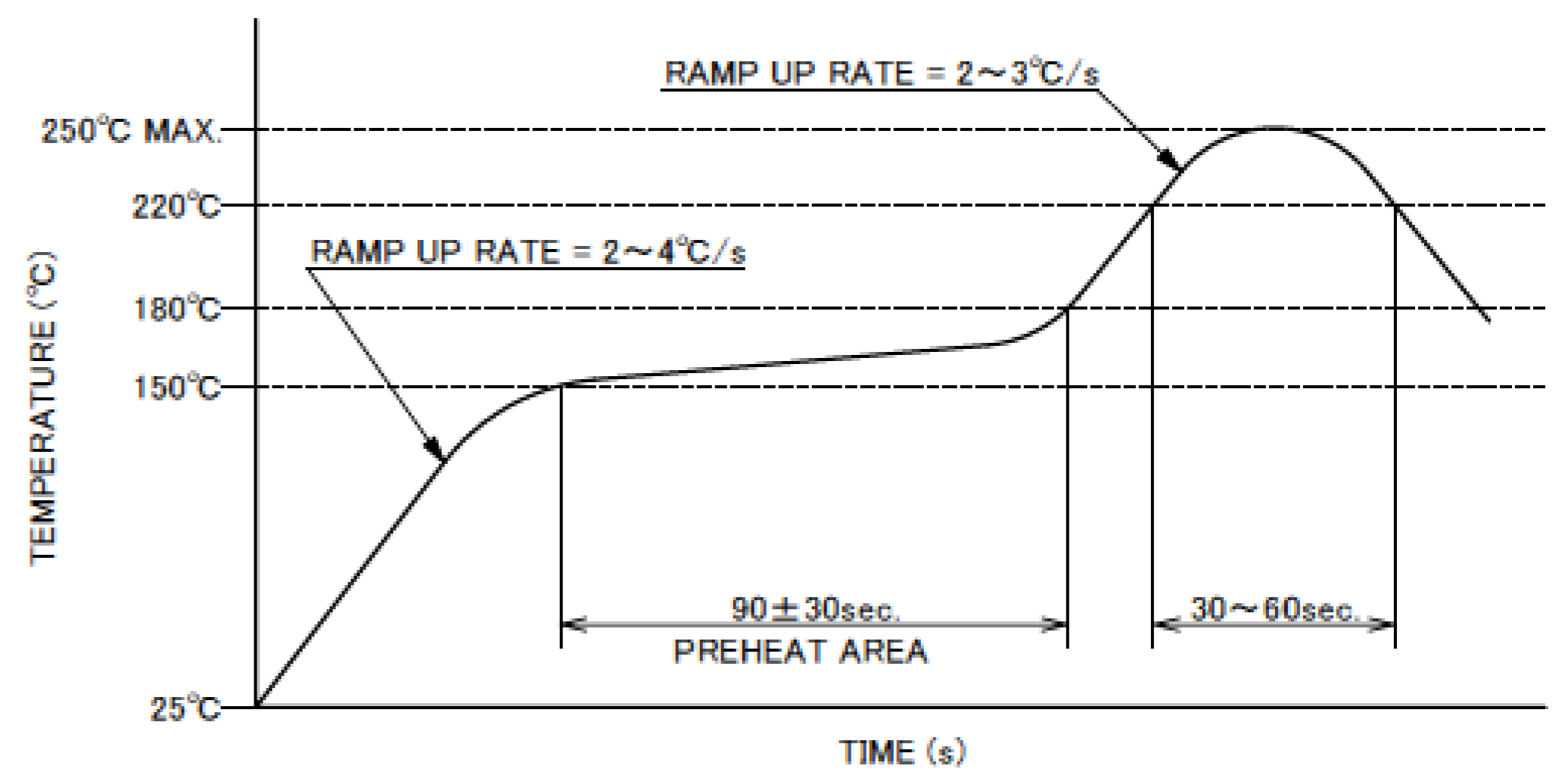


RECOMMENDED METAL MASK LAYOUT
METAL MASK THICKNESS : t=0.12mm

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



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.13

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)
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT PIN / UP TO 60 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN / UP TO 60 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN / UP TO 60 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 REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION
OPERATING TEMPERATURE	248~378K(-40°C~105°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENDING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : \triangle 40mohm 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 : \triangle 40mohm MAX.
INSULATION RESISTANCE	INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER 30 CYCLES)	29.10N MAX.
UN-MATING FORCE (INITIAL / AFTER 30 CYCLES)	6.0N MIN.
CABLE RETENTION FORCE	29.40N MIN.
PRODUCT SPECIFICATION	PRS-2261
TEST REPORT	TR-16075, TR-23031
INSTRUCTION MANUAL	HIM-16028
ASSEMBLY MANUAL	ASM-16004
APPEARANCE CRITERIA NO.	QLS-A***

Rev.13

Custom Connectors Available

 RF Connector

MHF® series



CABLINÉ® series
Micro-coaxial/Twinax/
Discrete Wire Connector



Optical Module

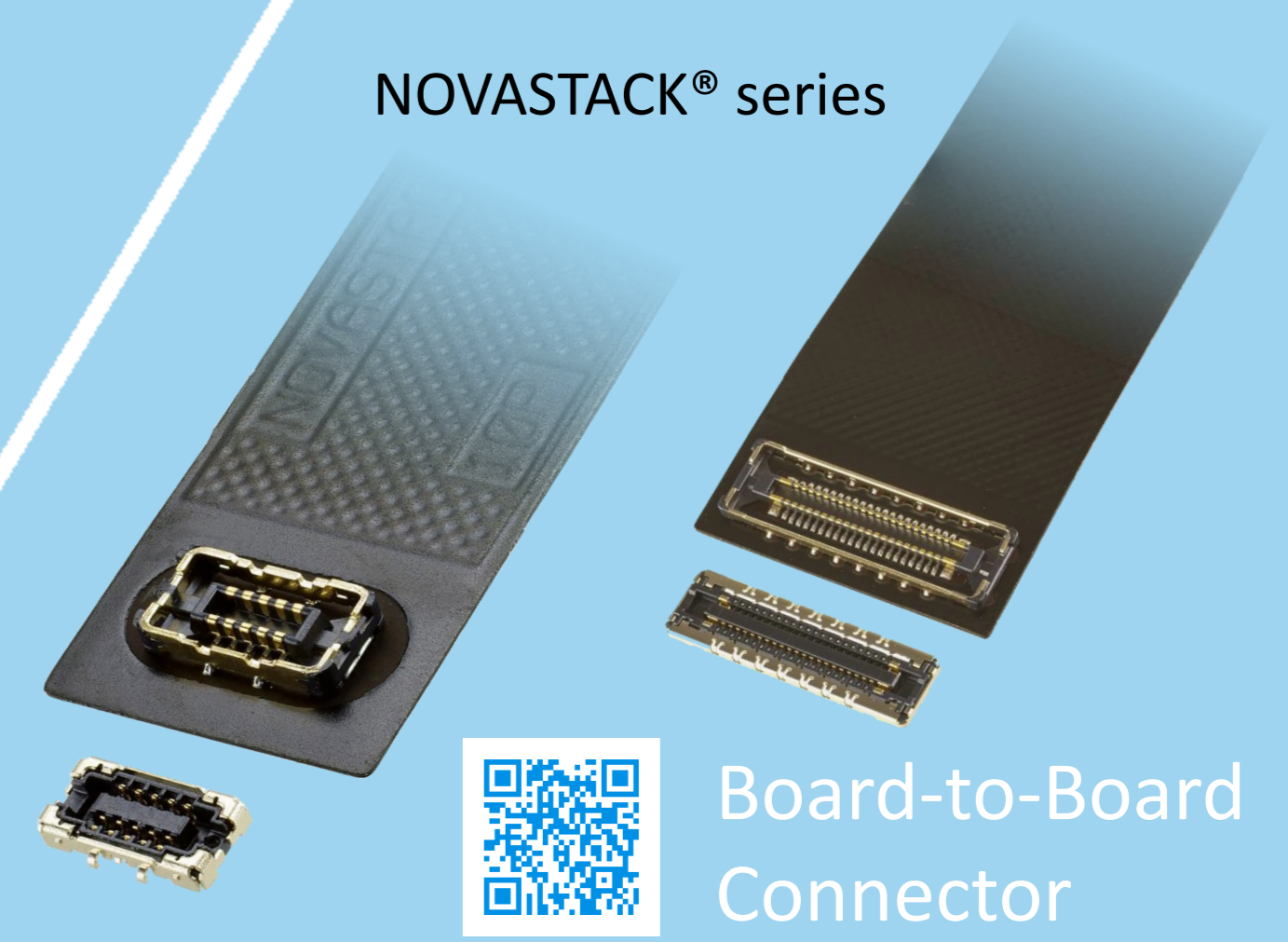
LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector



Power Connector/
Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



FPC FFC Connector



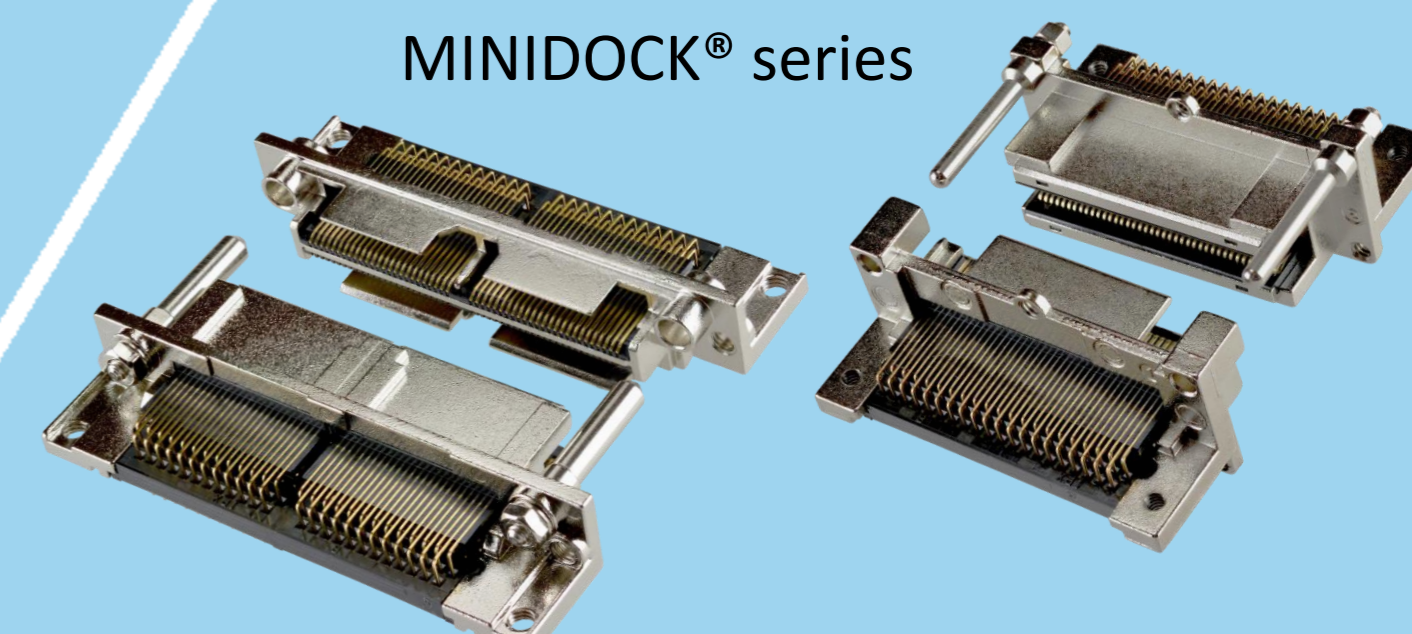
Inquiry



MINIDOCK® series



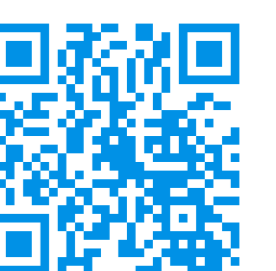
I/O Connector



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Contact your sales representative or more detailed information.

www.i-pex.com



I-PEX

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