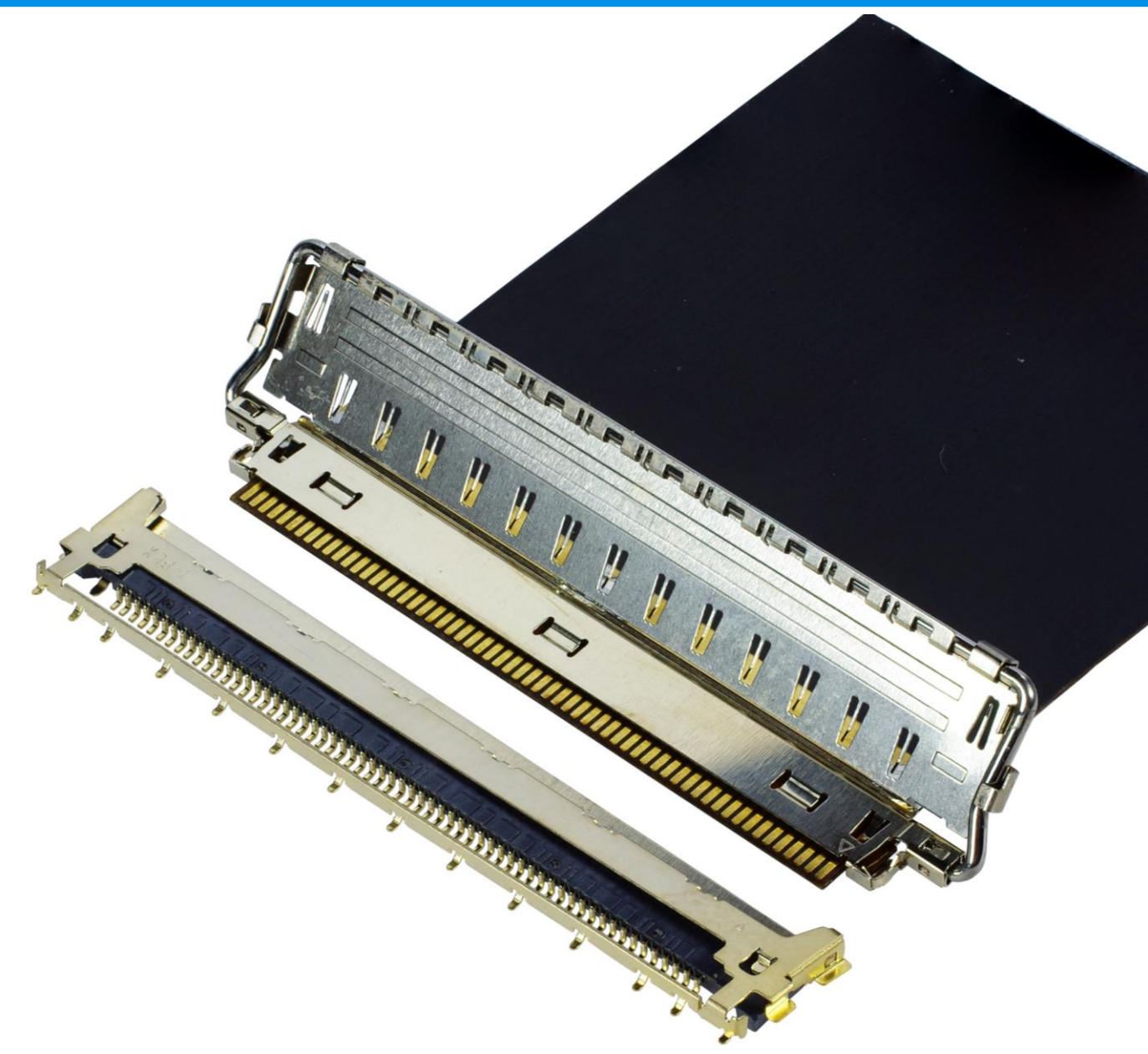


# CABLIN<sup>®</sup>-CA IIF PLUS

Fully-shielded with multi-point ground and mechanical lock, 0.4 mm pitch, Horizontal mating type FPC plug connector



**Product Specifications:**

Mating type	Horizontal	
Board Pitch (mm)	0.4	
Wiping Length (mm)	0.48	
Mated size (mm)	Height	1.2 max.
	Width	30.95
	Depth	7.24
Pin Counts	Range	60
	Available	60

**Applicable FPC**

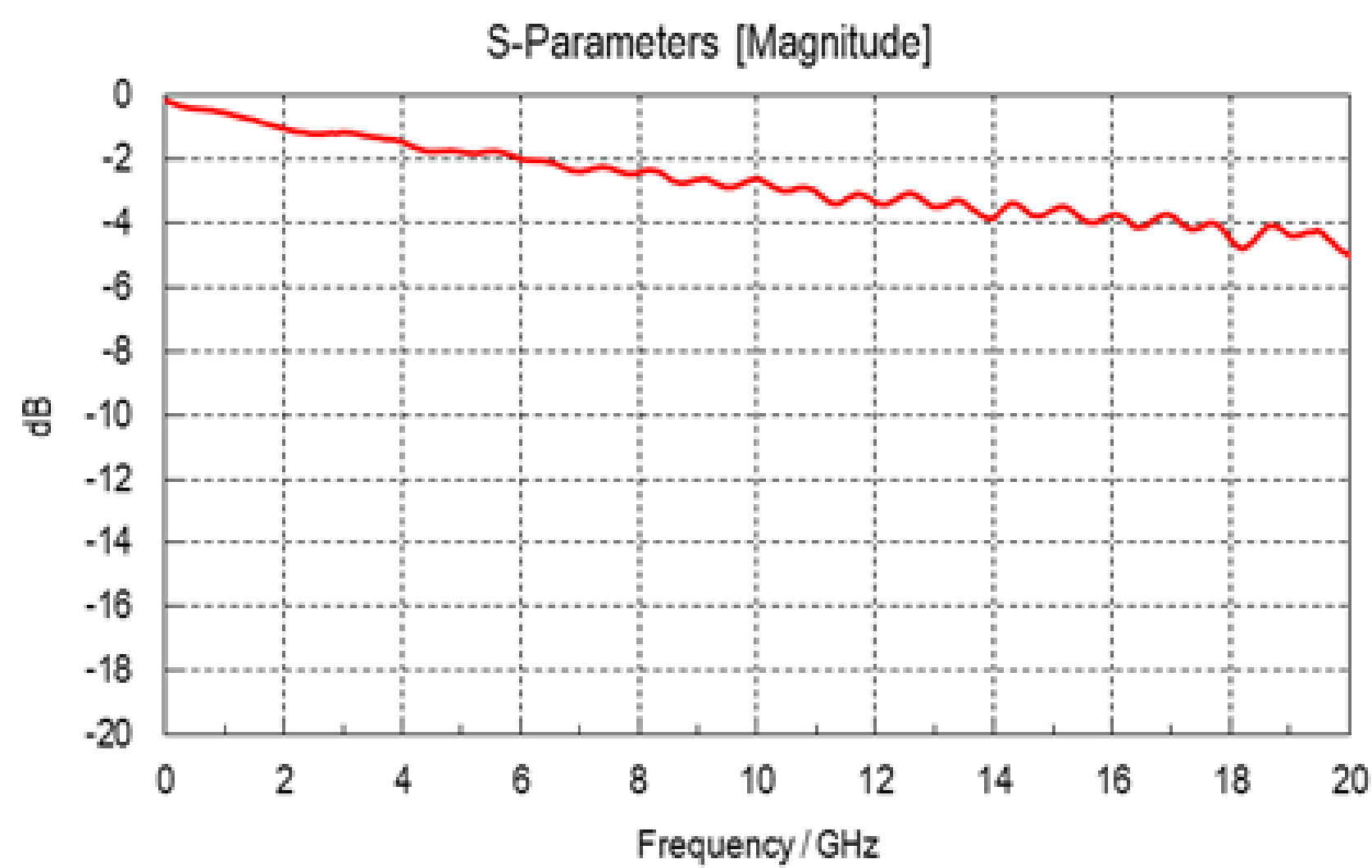
FPC Type	Shielded FPC
FPC Pitch (mm)	0.4
FPC Contact Point	Top
FPC Thickness (mm)	Contact Area: 0.25 +0.02/-0.03
	Ground Area: 0.37 +0.04/-0.06

**Applicable Standards (Reference Only):**

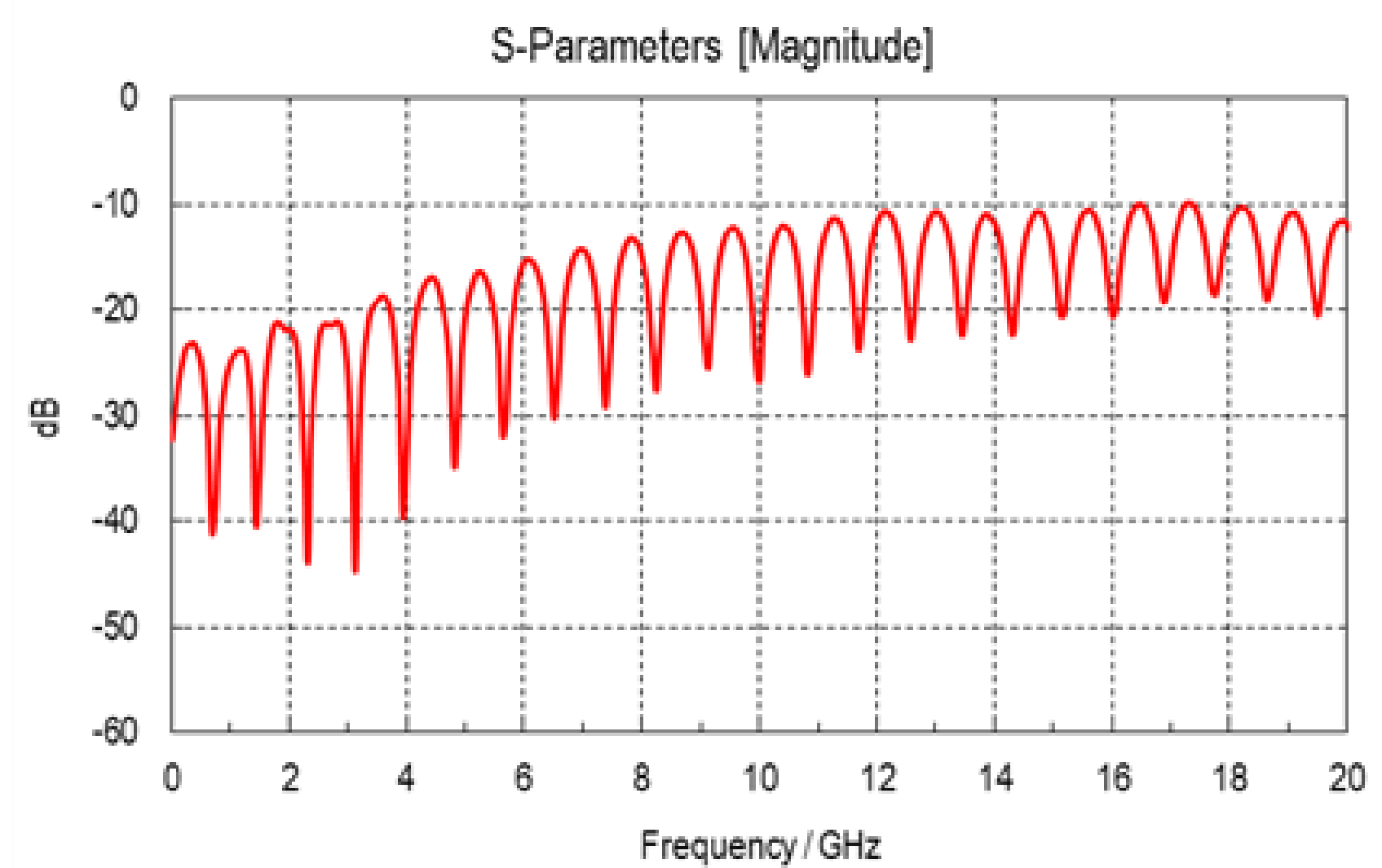
32 GT/s NRZ, USB4 Gen4 (40 Gbps/Lane PAM3), Display Port UHBR20 (20 Gbps/Lane)

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

## ▶ Excellent differential SI performance(32 Gbps/Lane)



Insertion Loss



Return Loss

FPC length : 100mm

Reference Impedance : 90 Ohms differential

Pin Assignment GSSGSSG

## ▶ ZenShield<sup>®</sup> 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<sup>®</sup> Connector

Connectors can be placed closer to antenna

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

Unable to lock

Mate

Locked

incomplete mating

complete mating

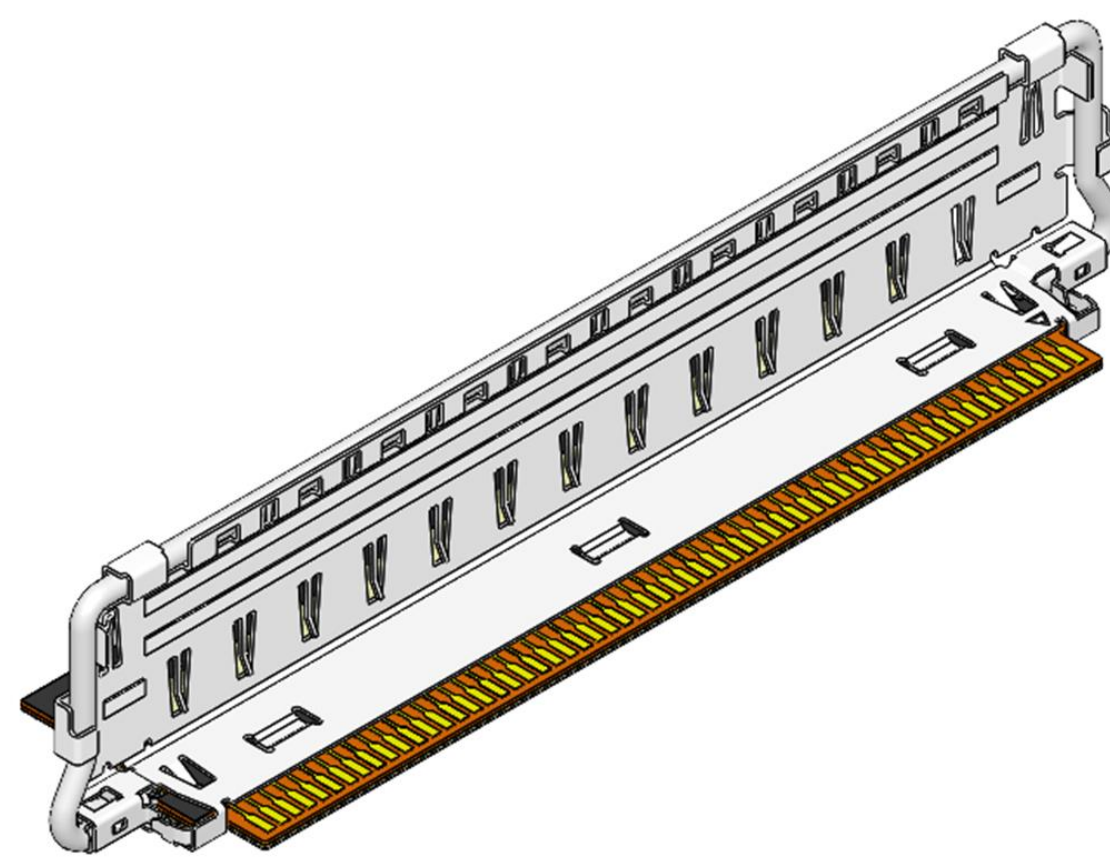
Can only be locked when mating is complete



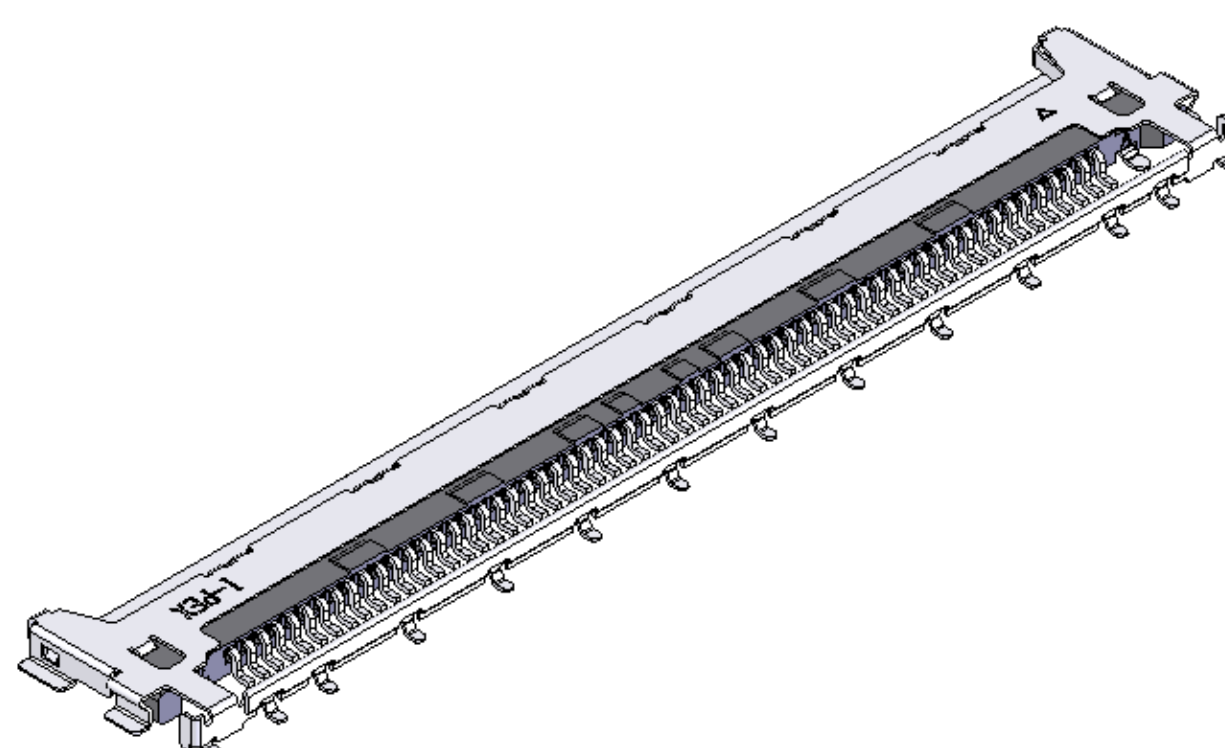
# Component Parts Details

## Component Parts

### Connector parts



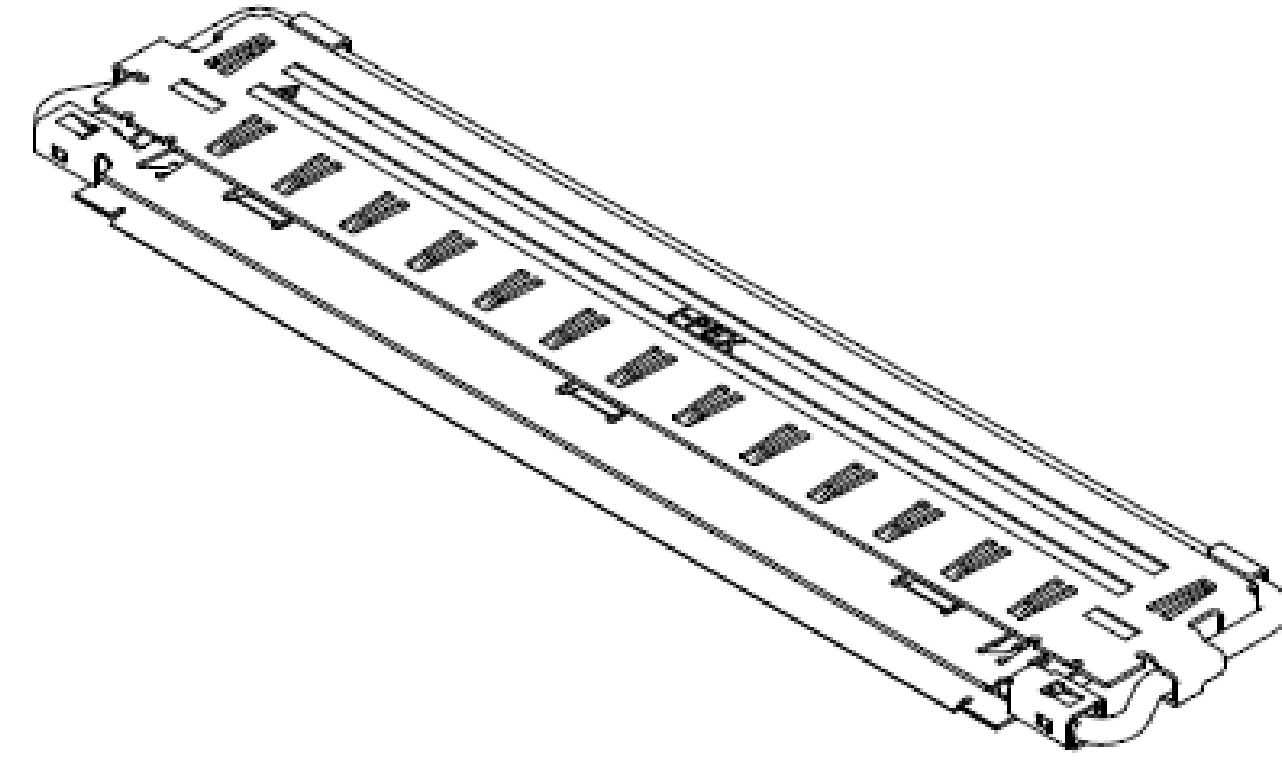
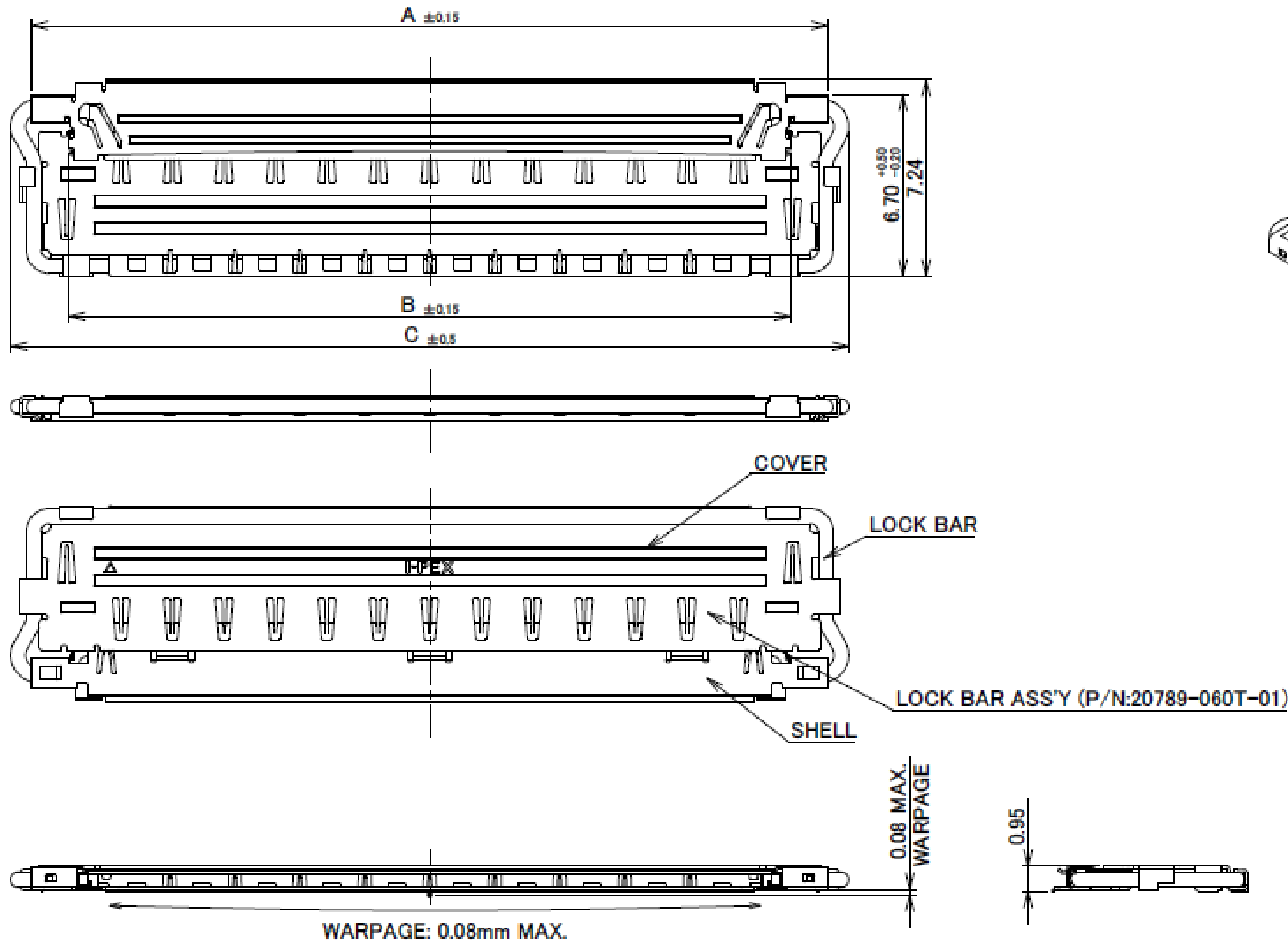
CABLINE-CA IIF PLUG with FPC



CABLINE-CA II PLUS RECEPTACLE

# Shell Assembly

Recommended P/N		20901-060T-01		
PART NO.	Pos.	A	B	C
20901-060T-01	60	29.40	26.66	30.95



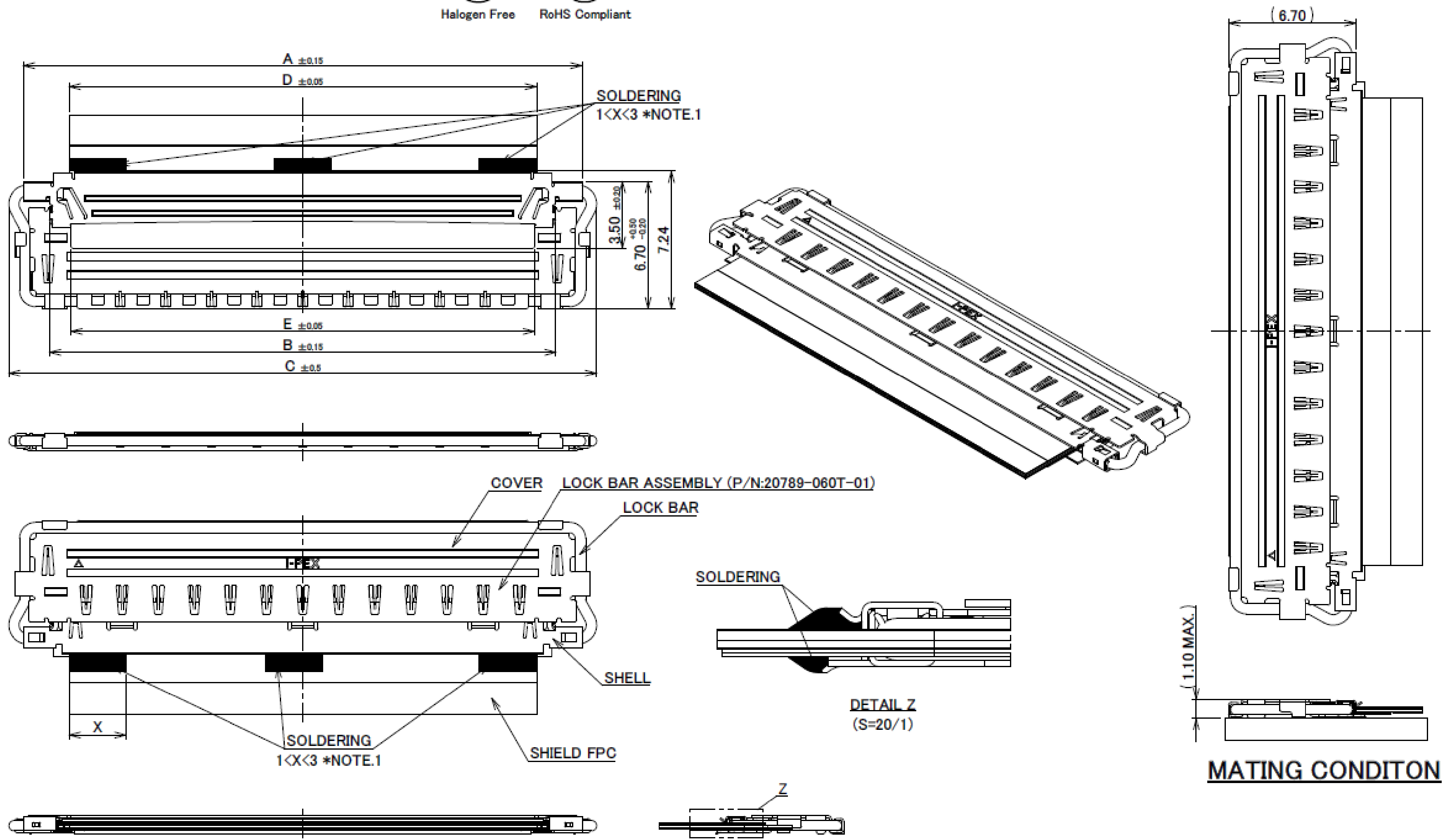
3	COVER	PHOSPHOR BRONZE	Ni PLATING
2	LOCK BAR	STAINLESS STEEL	-
1	SHELL	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
NO.	DESCRIPTION	MATERIAL	FINISH, REMARKS

Rev.1

Recommended P/N		20901-060T-01				
PART No.	A	B	C	D	E	
20901-060T-01	29.40	26.66	30.95	24.60	24.40	



## FPC ASSEMBLY STATE COVER CLOSE



NOTES.  
1.Soldering Area X is recommended dimension.  
It does not mater if it might be exceed the recommended dimension.

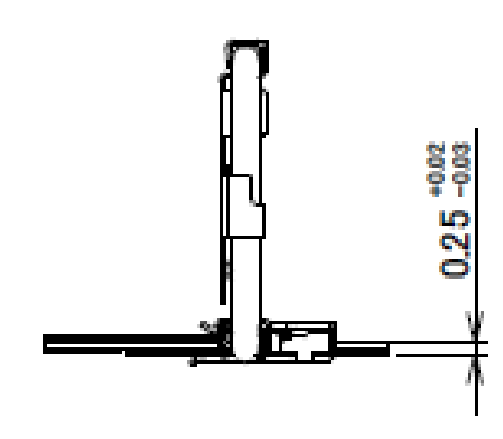
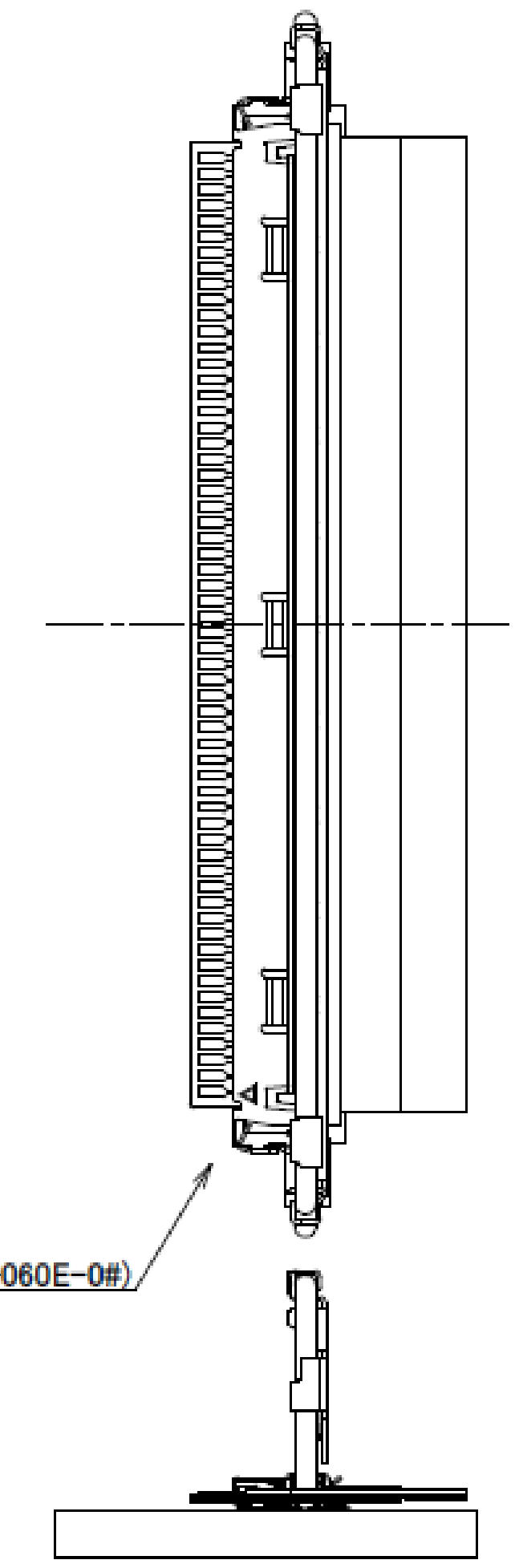
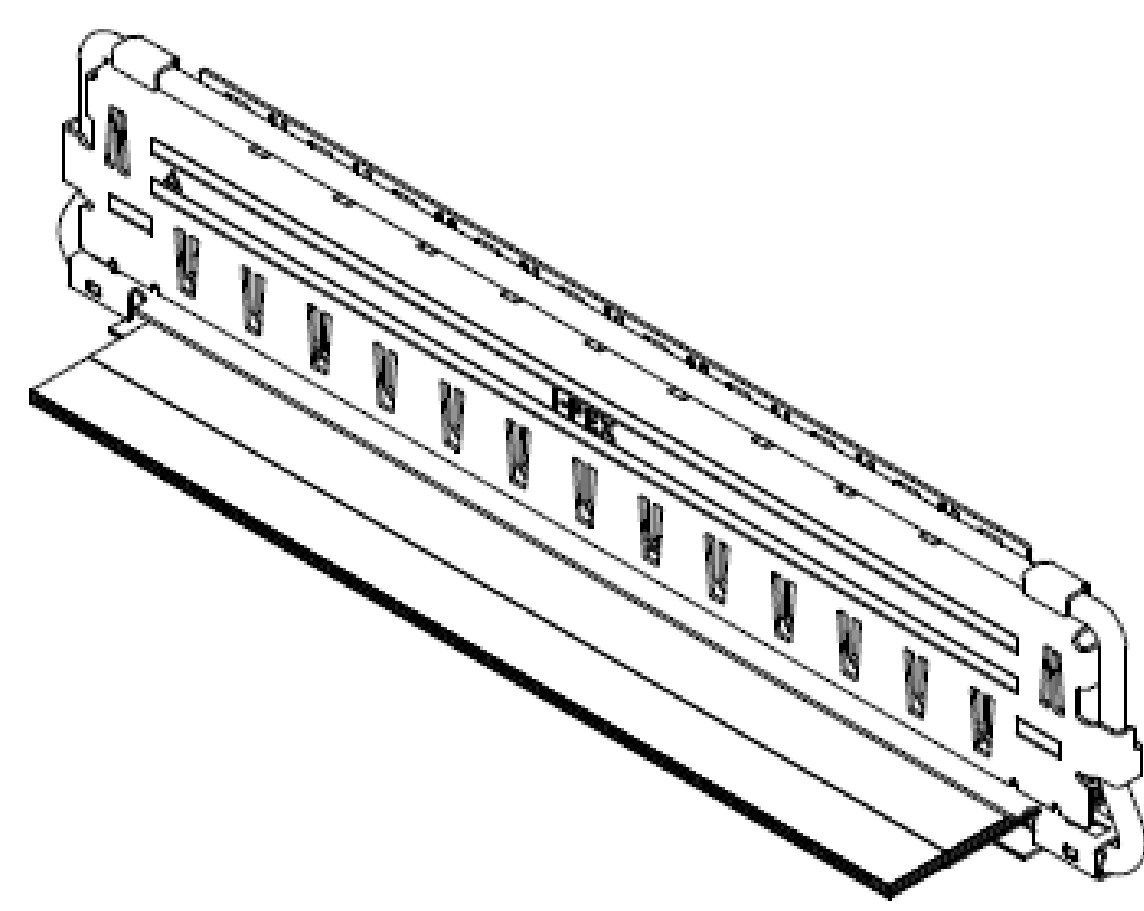
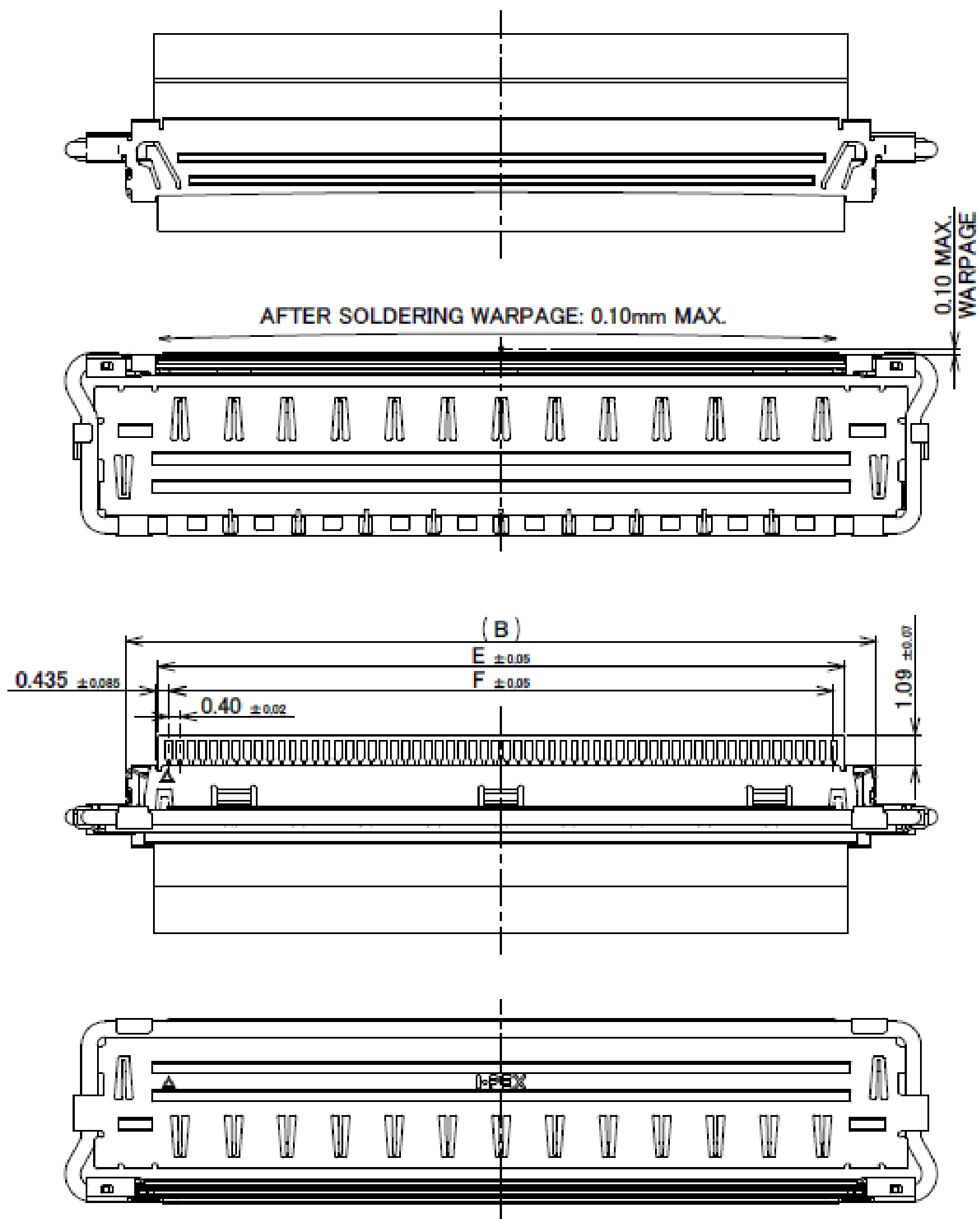
Rev.1

# Shell Assembly

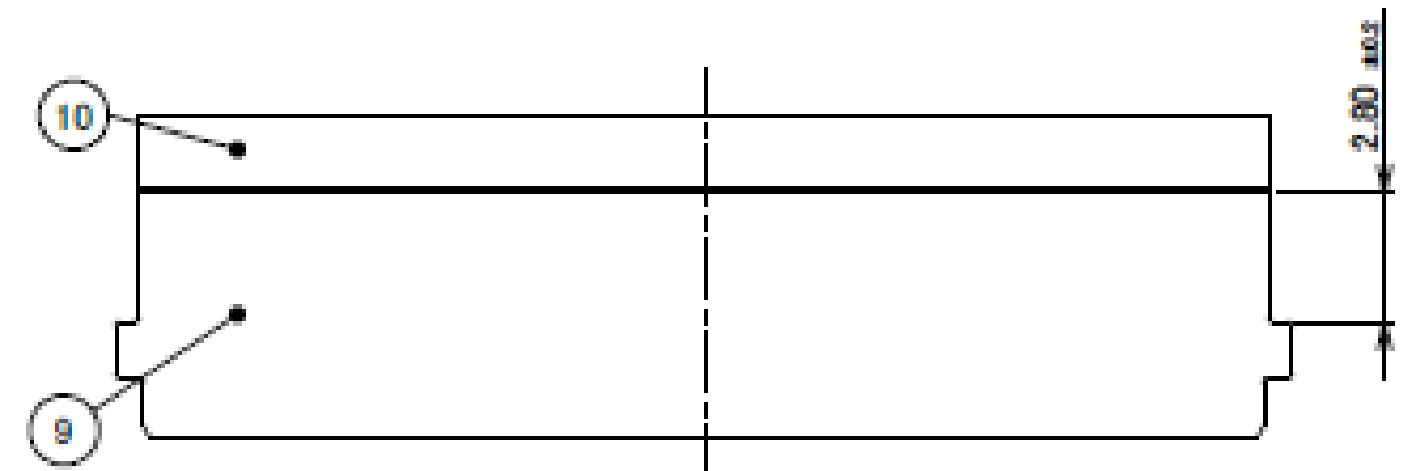
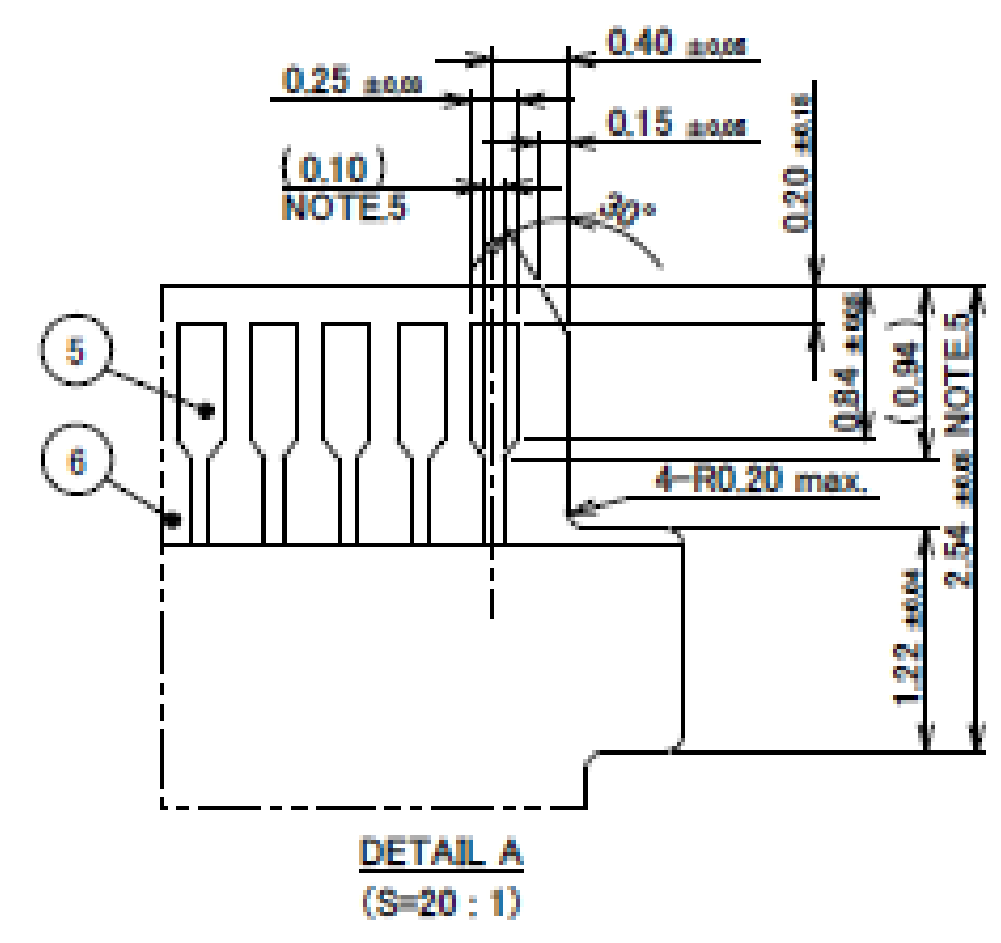
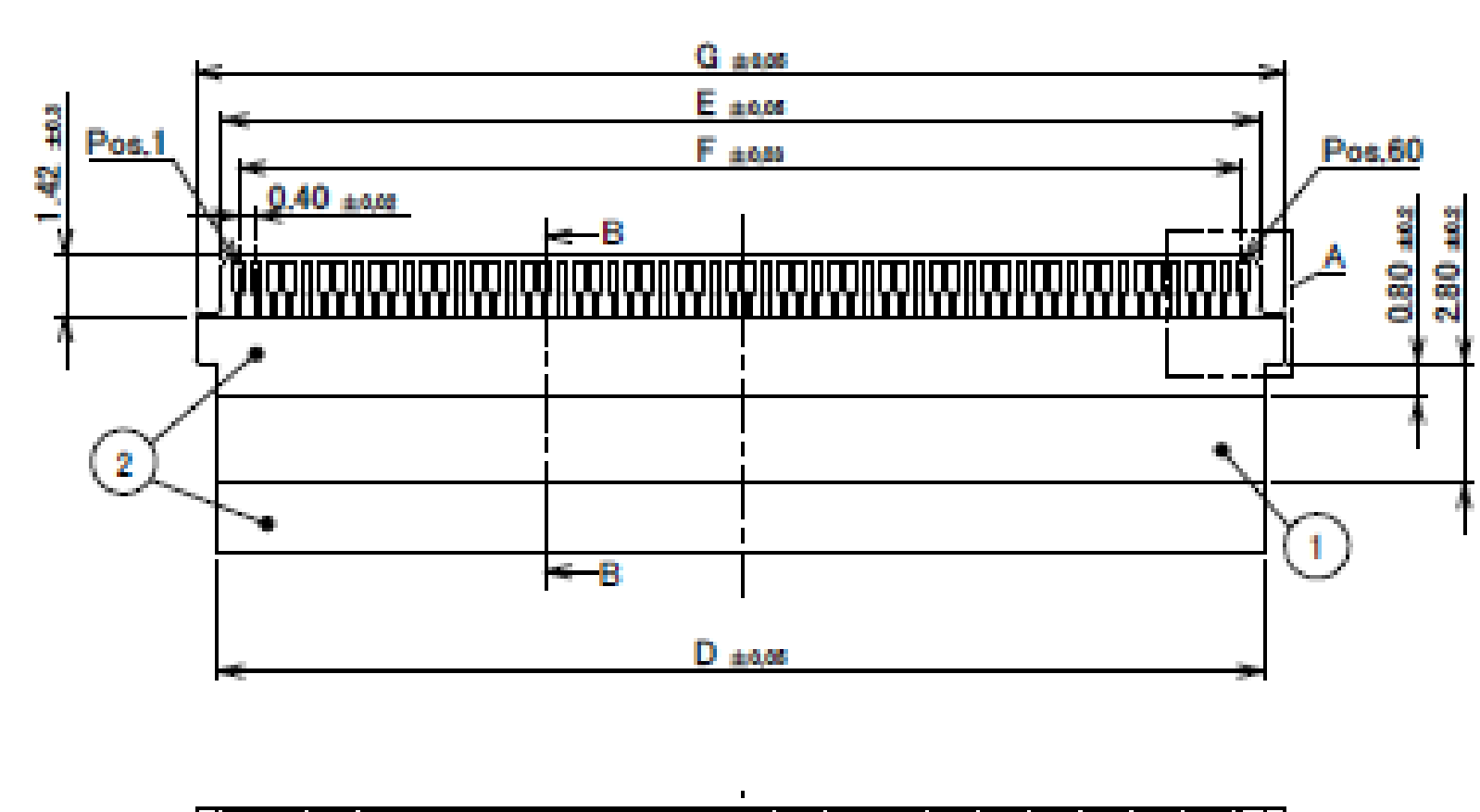
Recommended P/N	20901-060T-01		
PART No.	B	E	F
20901-060T-01	26.66	24.40	23.60



## FPC ASSEMBLY STATE COVER OPEN

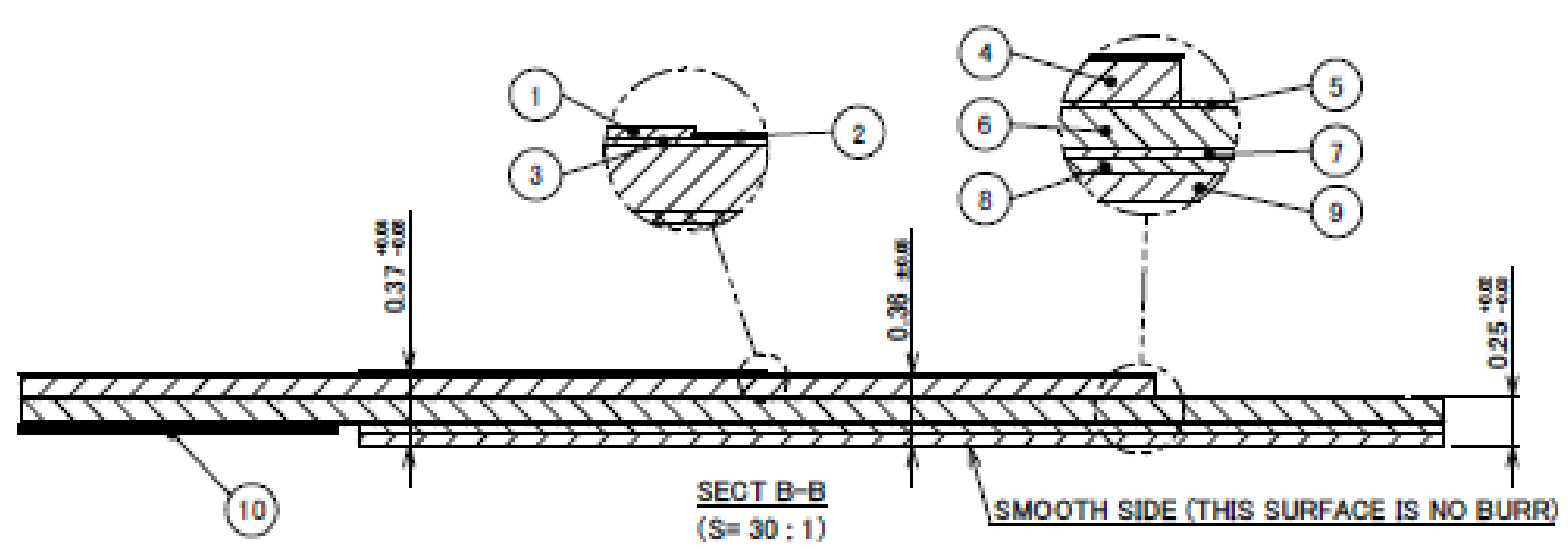


PART No.	D	E	F	G
20901-060T-01	24.60	24.40	23.60	25.66



- NOTES:
- No.1, 3, 7, 9 : CONDUCTOR (GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
  - No.5 : SIGNAL Pos. AND No.1, 3, 7, 9 : CONDUCTOR (GROUND) ARE NOT CONTACTING.
  - No.5 : GROUND Pos. AND No.1, 3, 7, 9 : CONDUCTOR (GROUND) ARE CARRYING OUT THE ELECTRICAL CONNECTION.
  - ADHESIVE SHOULD USE THERMOSETTING.
  - NUMBERS WITHIN PARENTHESES ARE ARBITRARY DIMENSIONS.
- CHANGE DIMENSIONS IN ACCORDANCE WITH CHARACTERISTIC IMPEDANCE VALUE.

No.	DESCRIPTION	MATERIAL	PLATING
1	CONDUCTOR(GROUND)	Cu	Ni, Au
2	INSULATOR	-	-
3	CONDUCTOR(GROUND)	Cu	-
4	INSULATOR	-	-
5	CONDUCTOR(SIGNAL GROUND)	Cu	Ni, Au
6	INSULATOR	-	-
7	CONDUCTOR(GROUND)	Cu	-
8	CONDUCTIVE ADHESIVE	-	-
9	REINFORCING TAPE & CONDUCTOR(GROUND)	SUS	Ni
10	INSULATOR	-	-
No.	DESCRIPTION	MATERIAL	PLATING



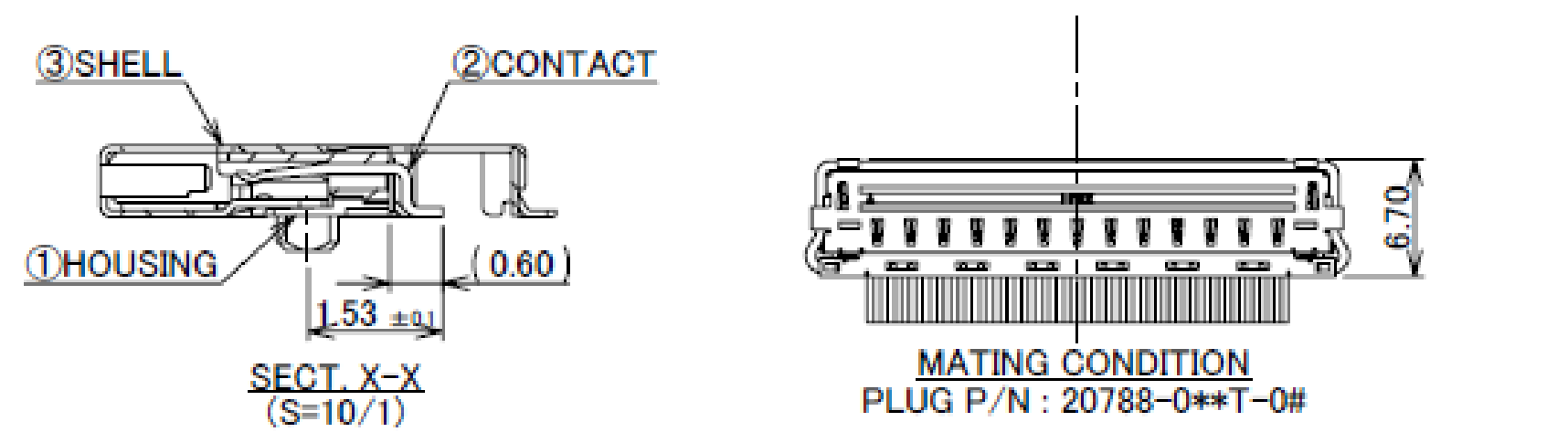
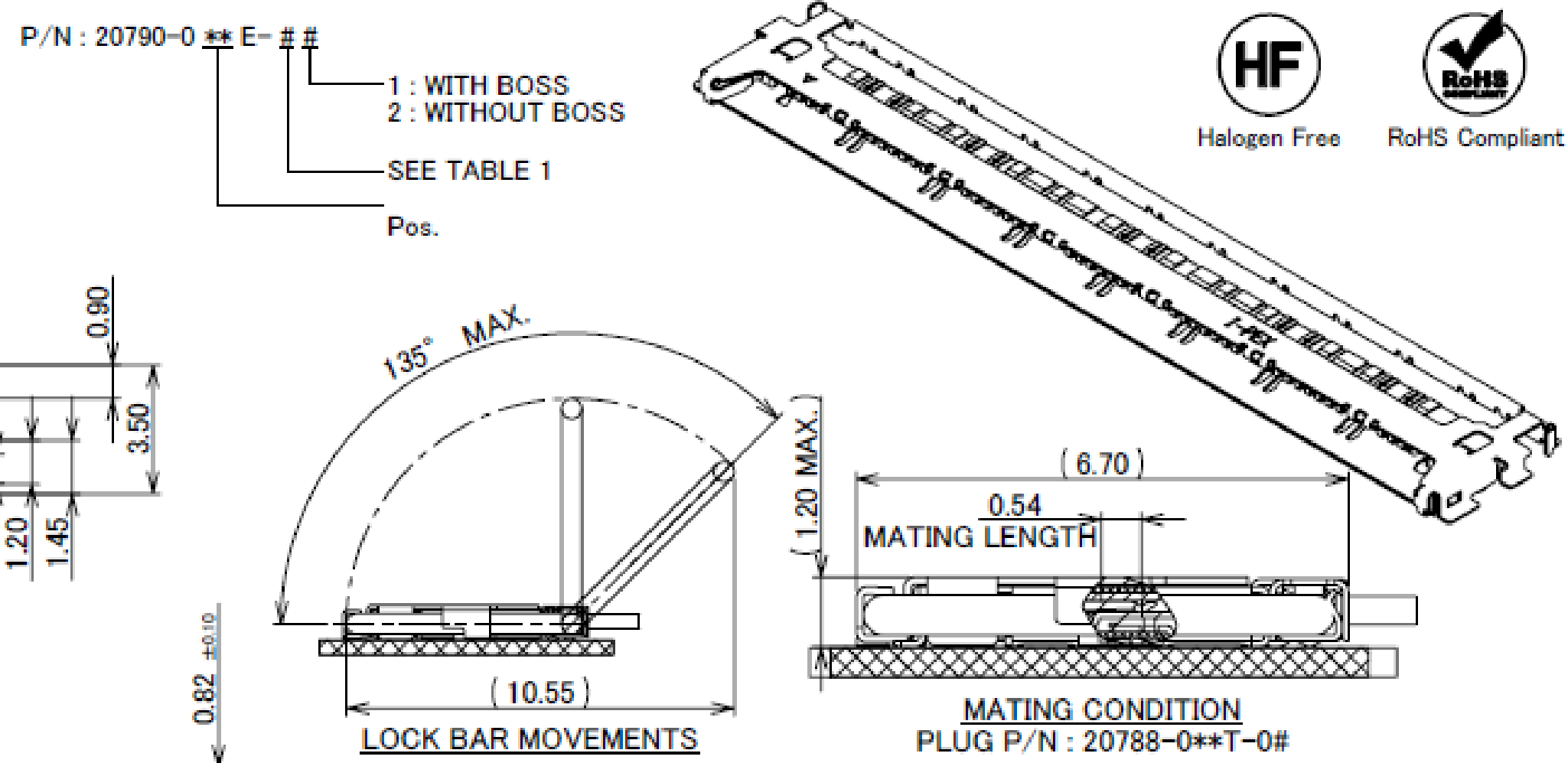
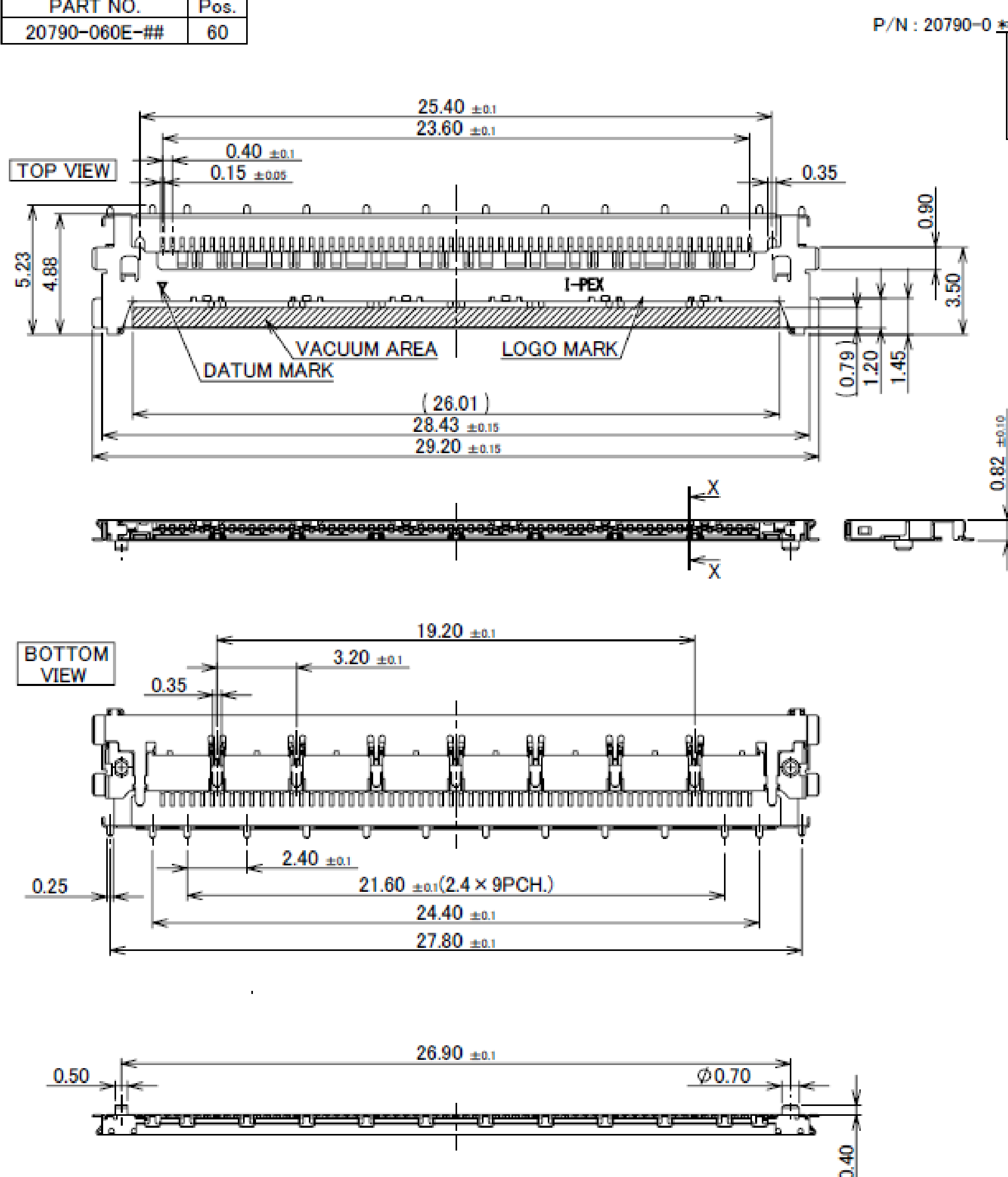
# Shell Assembly

ITEMS	SPECIFICATION
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.3A AC/DC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : $\triangle$ 40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 60mohm 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 TEST)	60P : 27.0N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	60P : 2.88N MIN.
PRODUCT SPECIFICATION	PRS-2893
TEST REPORT	TR-24034
PACKING STANDARD	PST-24023
INSTRUCTION MANUAL	HIM-24010
ASSEMBLY MANUAL	ASM-24004
APPEARANCE CRITERIA No.	QLS-A***

Rev.1

# Receptacle Assembly

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

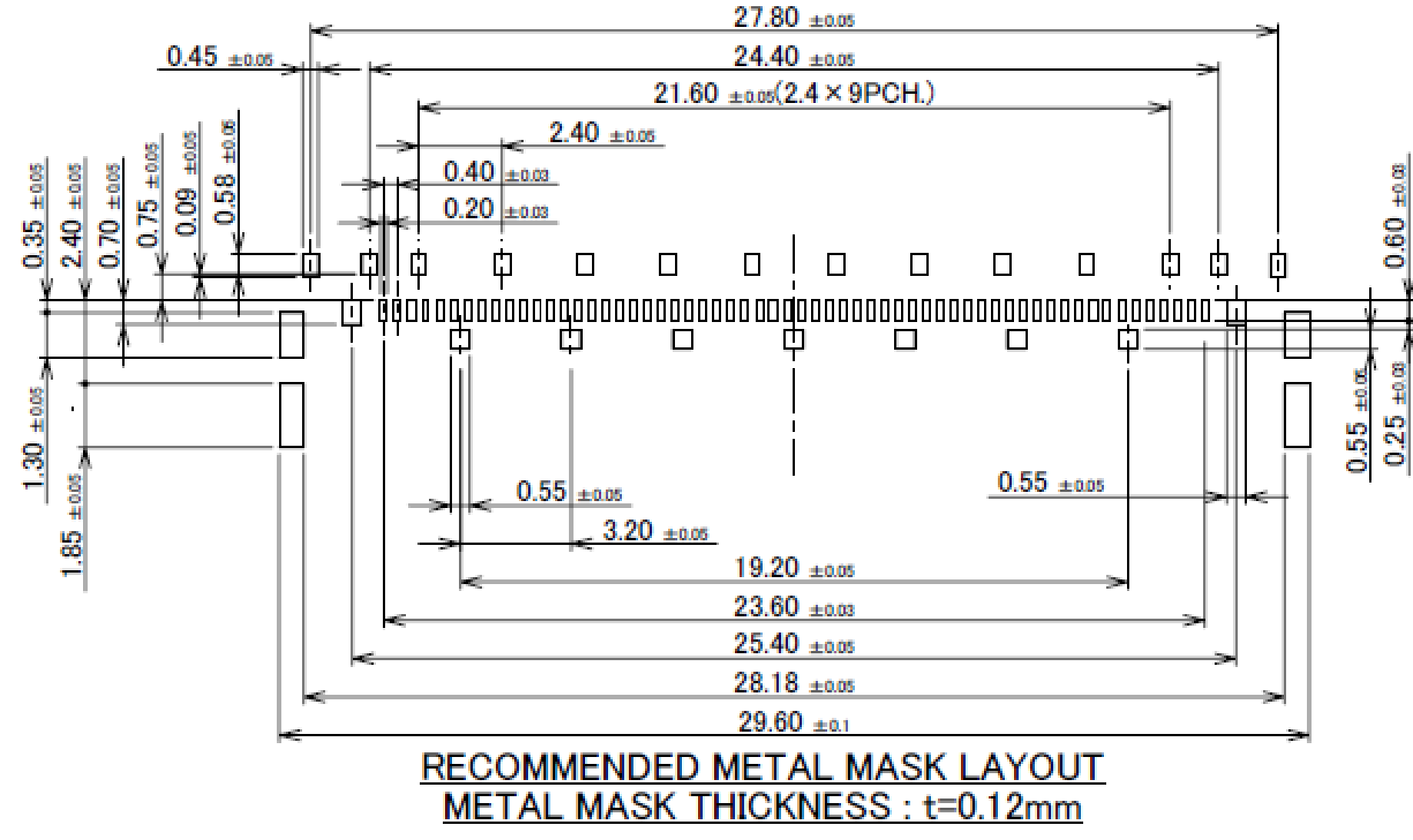
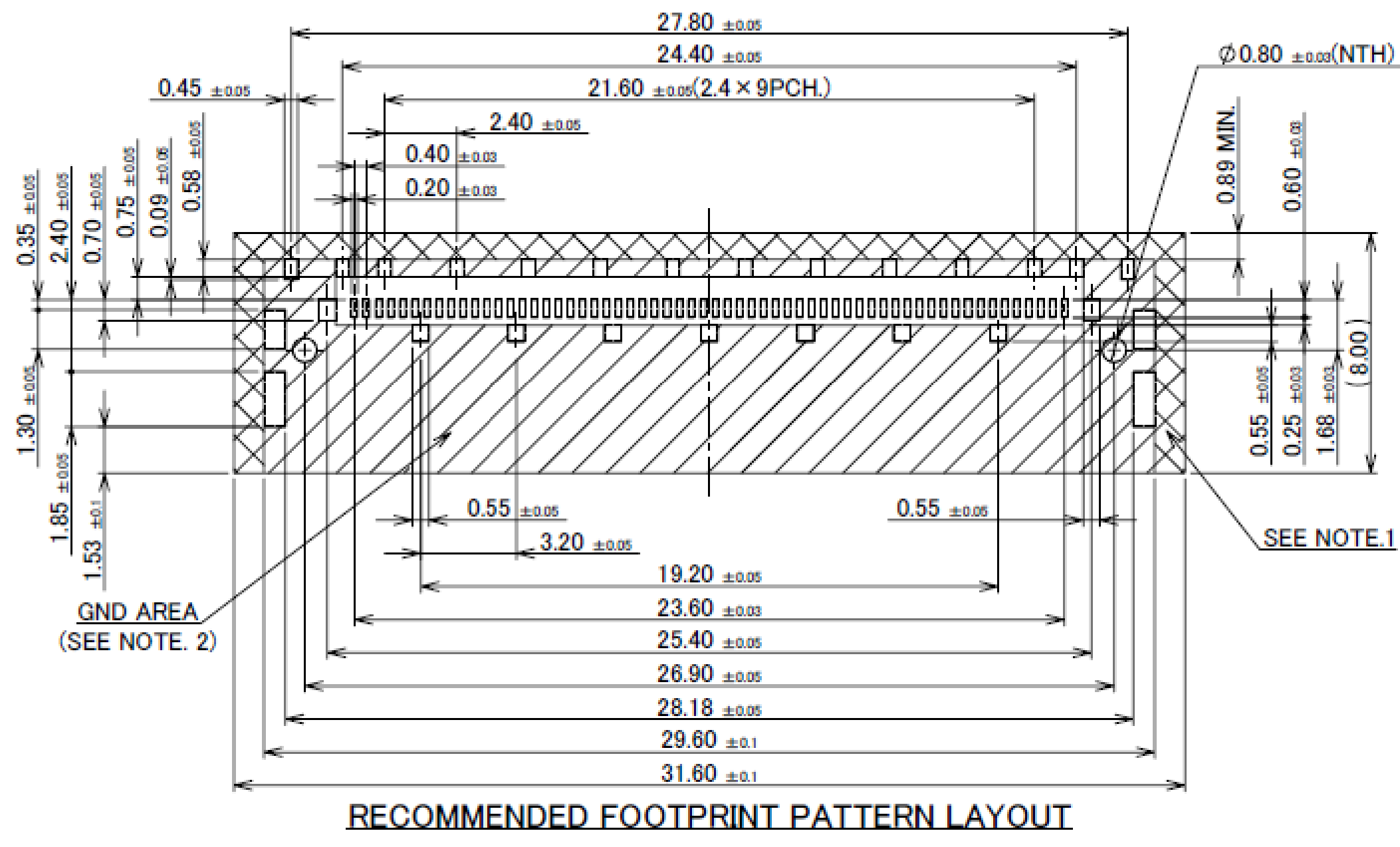


PART NO.	CONTACT FINISH
20790-0**E-0#	CONTACT & SOLDERING AREA: Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.
20790-0**E-1#	CONTACT AREA: Au 0.38 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN. SOLDERING AREA: Au 0.03 $\mu$ m MIN. OVER Ni 1.00 $\mu$ m MIN.

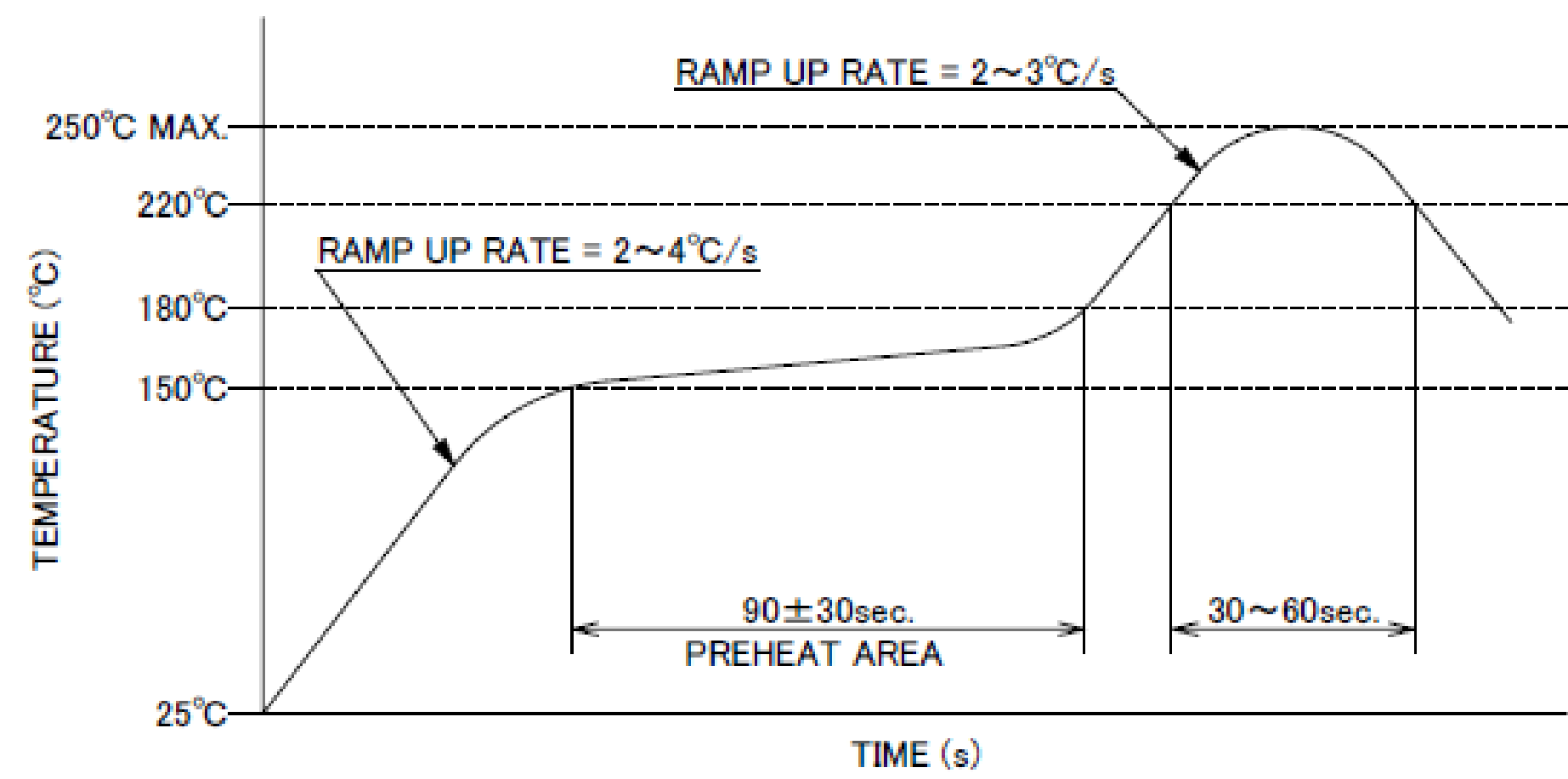
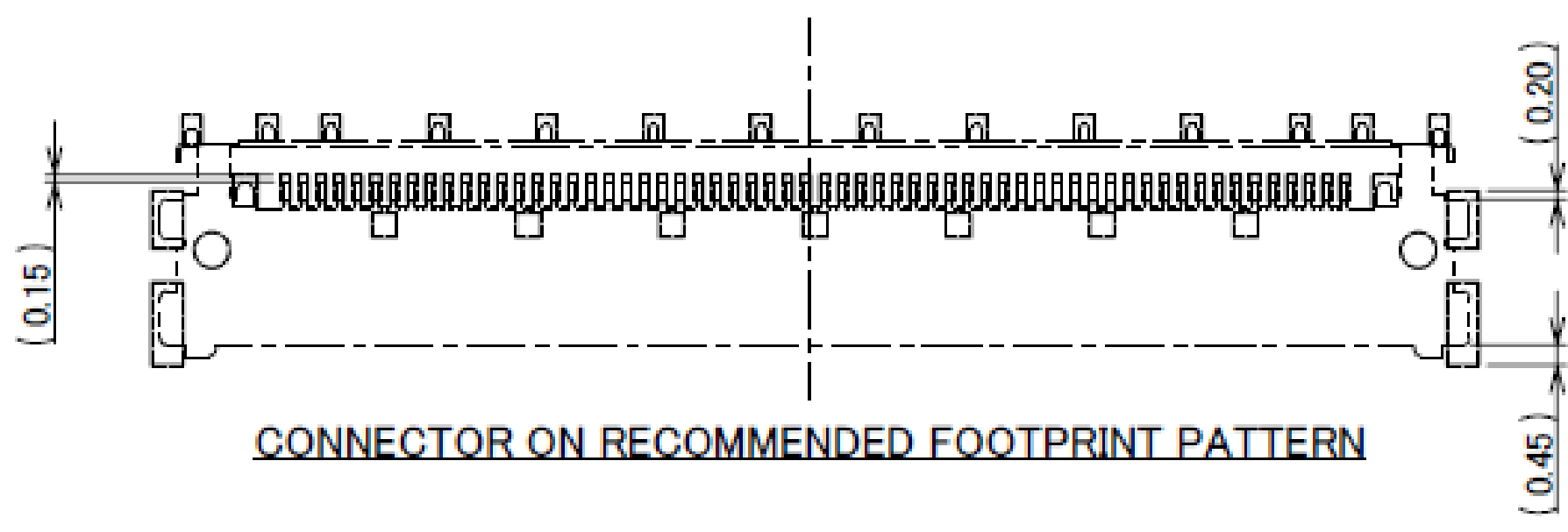
NO.	DISCRPTION	MATERIAL	FINISH, REMARKS
3	SHELL	PHOSPHOR BRONZE	ALL OVER Ni 1.00 $\mu$ m MIN. SOLDERING AREA: Au 0.03 $\mu$ m MIN.
2	CONTACT	PHOSPHOR BRONZE	SEE TABLE 1
1	HOUSING	LCP	UL94V-0, BLACK

Rev.14

# Receptacle Assembly



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



# Receptacle 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 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	233~378K(-40°C~105°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENDING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : <math>\triangleleft</math>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 : <math>\triangleleft</math>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.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2261
TEST REPORT	TR-16075, TR-23031
INSTRUCTION MANUAL	HIM-16028
PACKING STANDARD	PST-16078
APPEARANCE CRITERIA NO.	QLS-A***

Rev.14



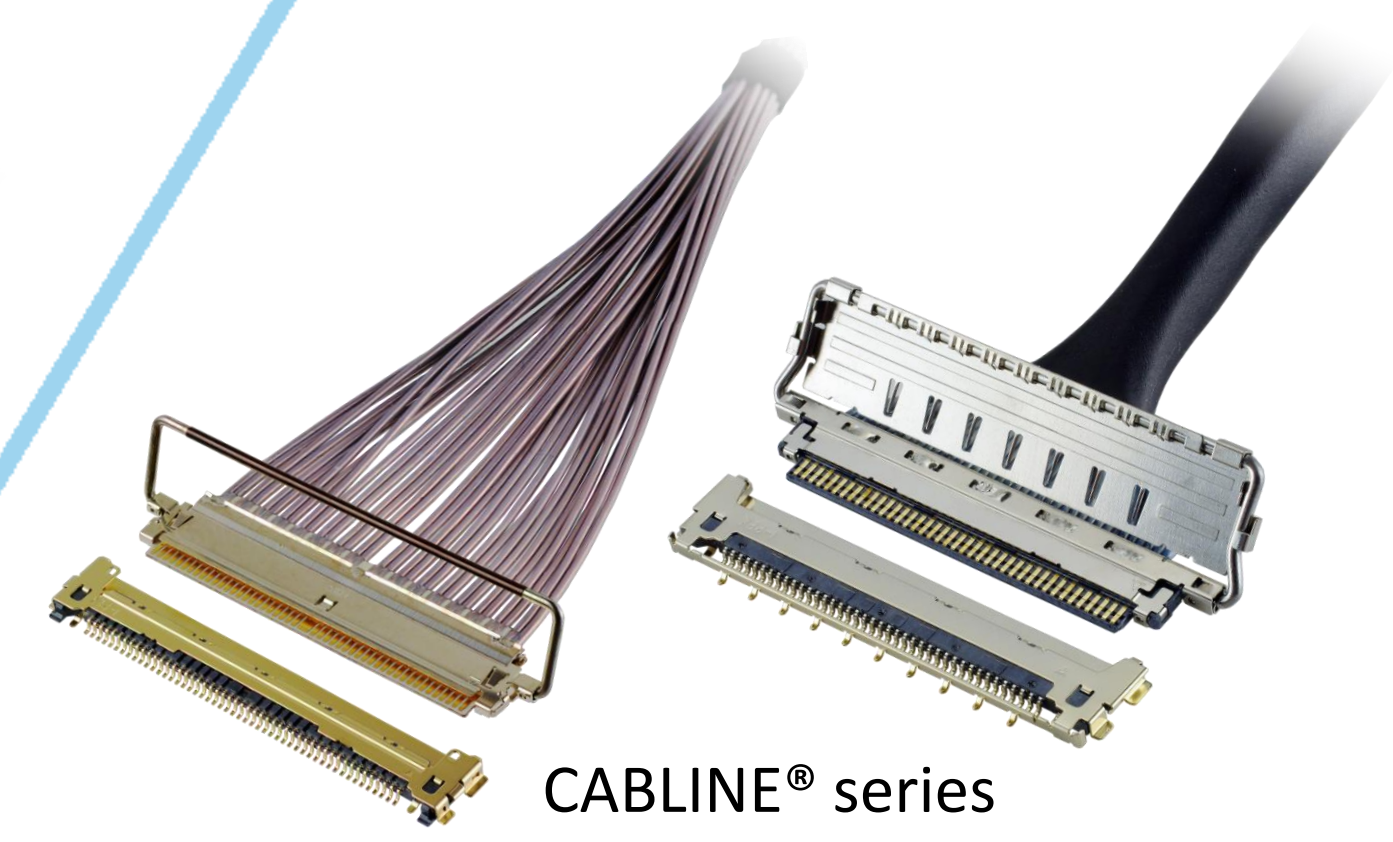
# Custom Connectors Available

 RF Connector

MHF® series



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



Optical Module

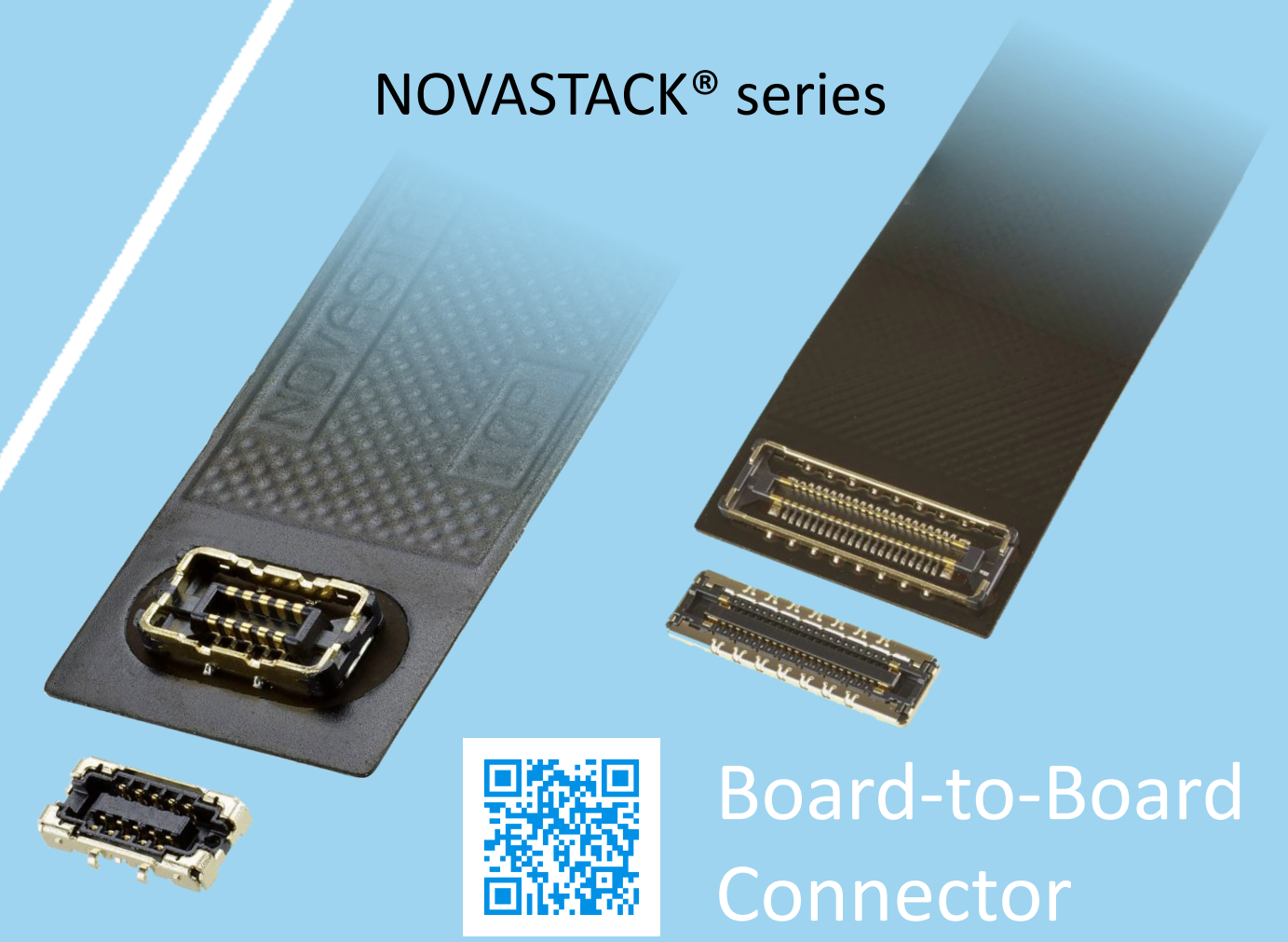
LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector



Power Connector/  
Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



FPC FFC Connector



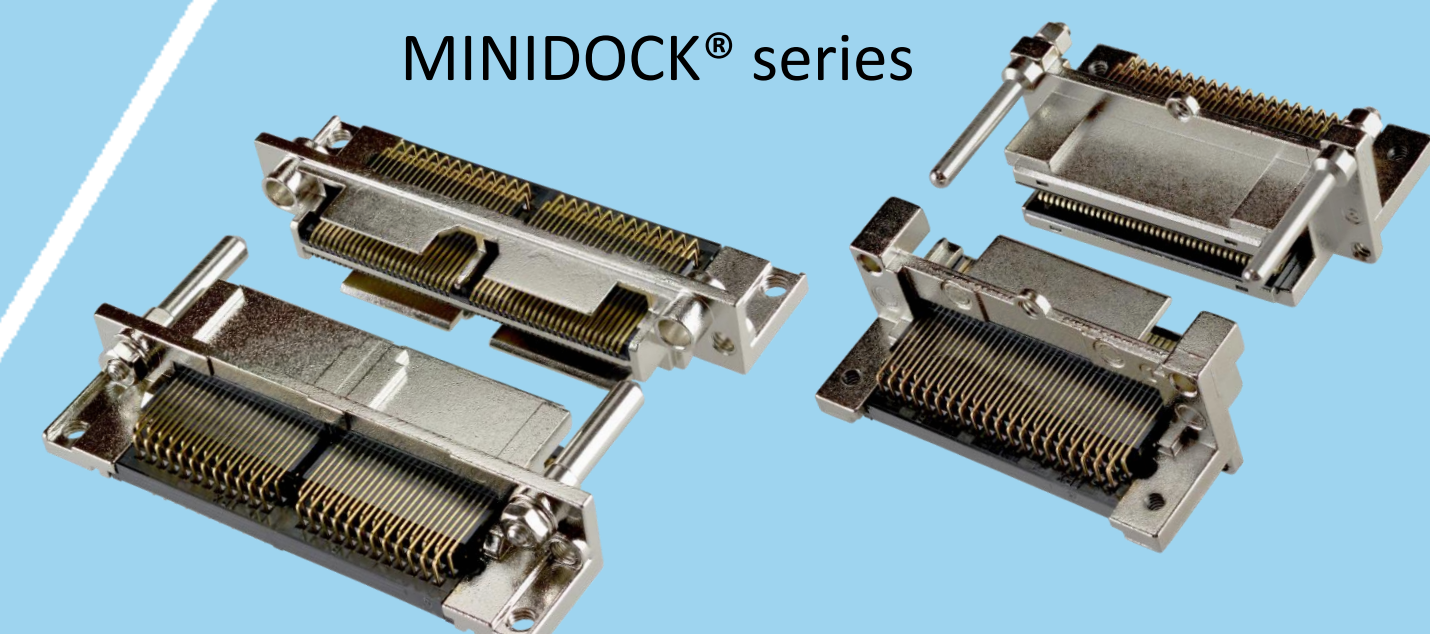
Inquiry



MINIDOCK® series



I/O Connector



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