

# EVAFLEX® 5-HD

Fully-shielded, high-speed, auto-locking, horizontal mate, 0.5 mm pitch shielded FFC/FPC connector

## Product Specifications:

Board Pitch	0.5 mm	
Wiping Length	1 mm	
Size	Height	2.00 +/- 0.20 mm
	Width	5.2 + (0.5 x pin count) mm
	Depth	8.43 +/- 0.30 mm
Pin counts	Range	10 to 40
	Available	24

## Applicable FPC/FFC:

FPC/FFC Type	Shielded FFC & FPC
FPC/FFC Contact Point	Top
FPC/FFC Thickness	0.3 +/- 0.03 mm Contact
	0.5 +/- 0.03 mm Ground

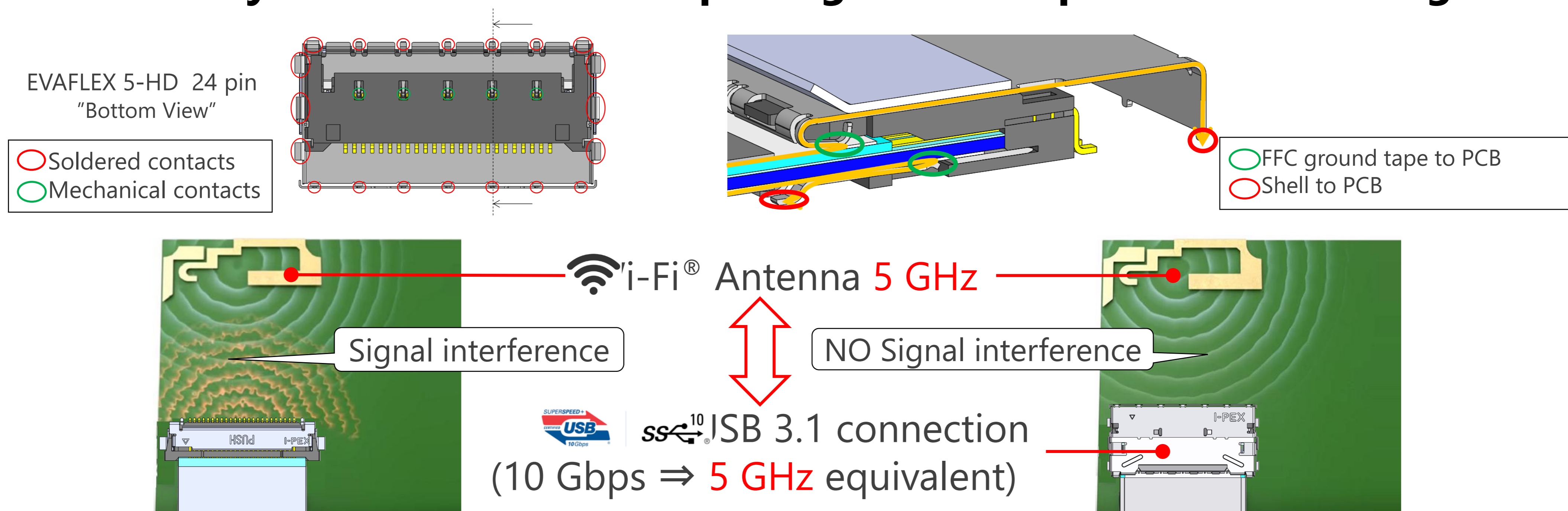
## Applicable Standards (Reference Only):

FPC: USB4 (20Gbps/lane) Thunderbolt3 (20Gbps/lane)  
 FFC: USB 3.2 Gen 2 (10 Gbps) USB 3.1 Gen 1 (5 Gbps) V-By-One HS 1.4 (4 Gbps)

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



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



## Designed for high-speed transmission up to 24 Gbps/lane

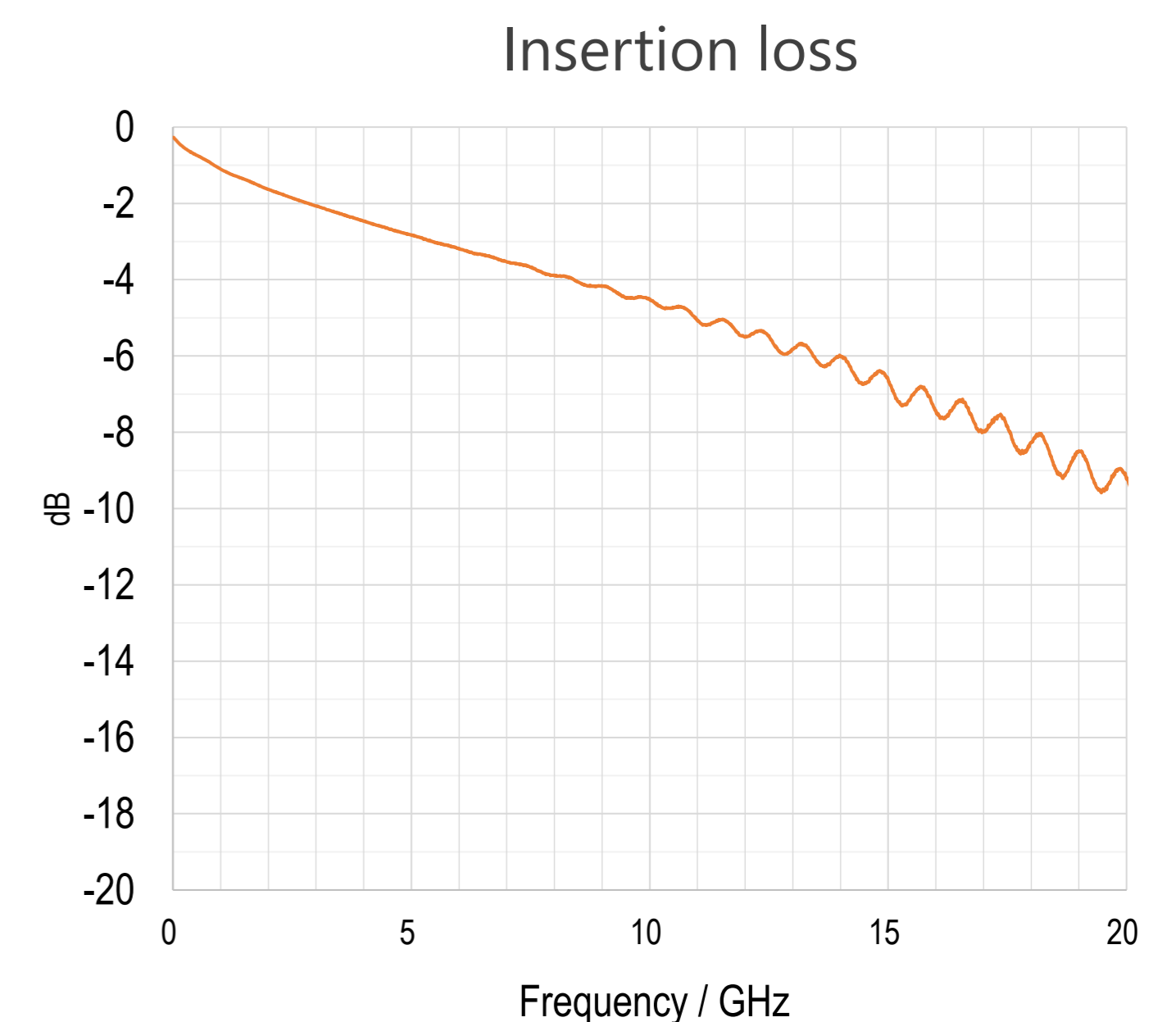
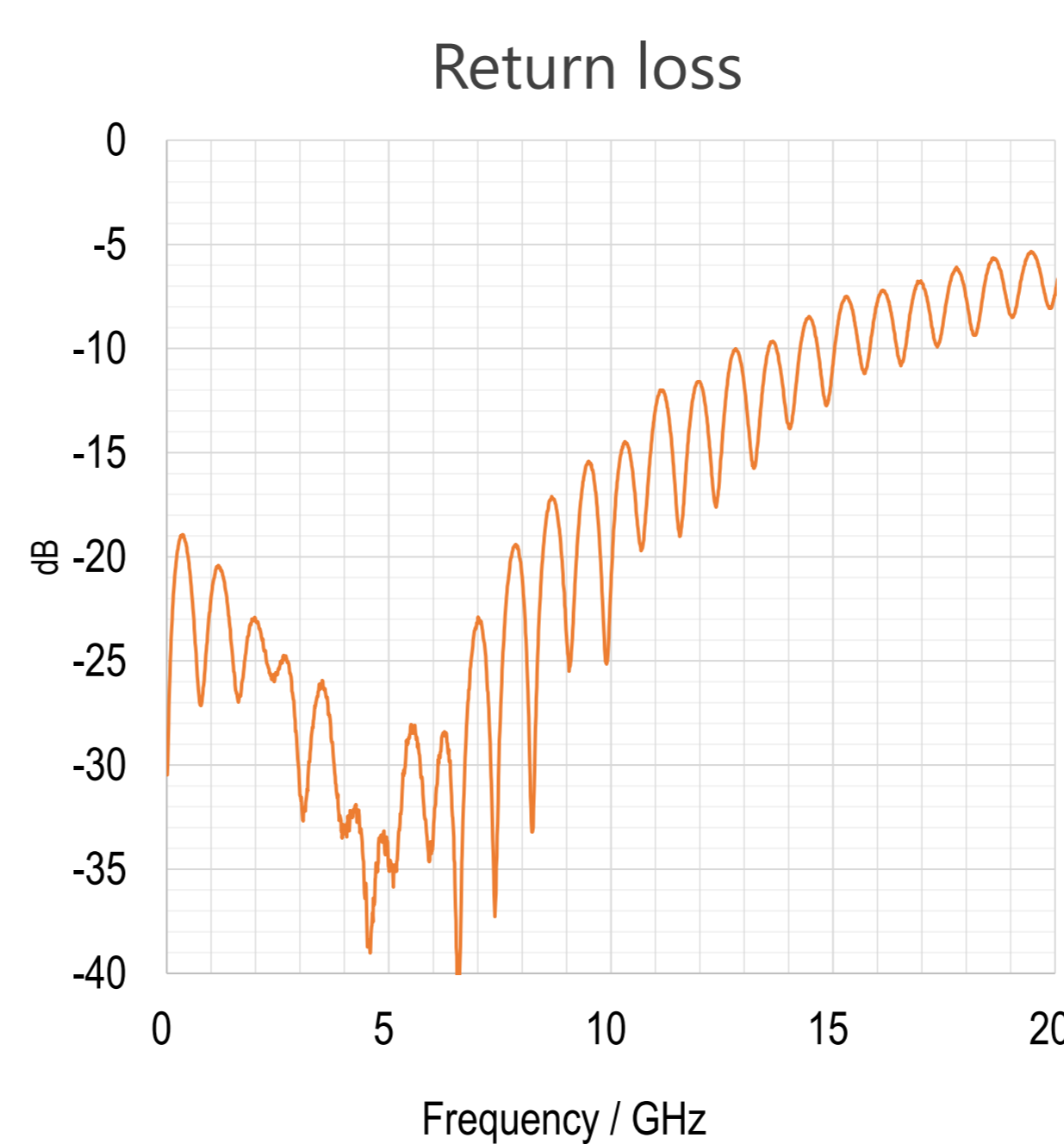
### Measurement results

Connector: EVAFLEX 5-HD

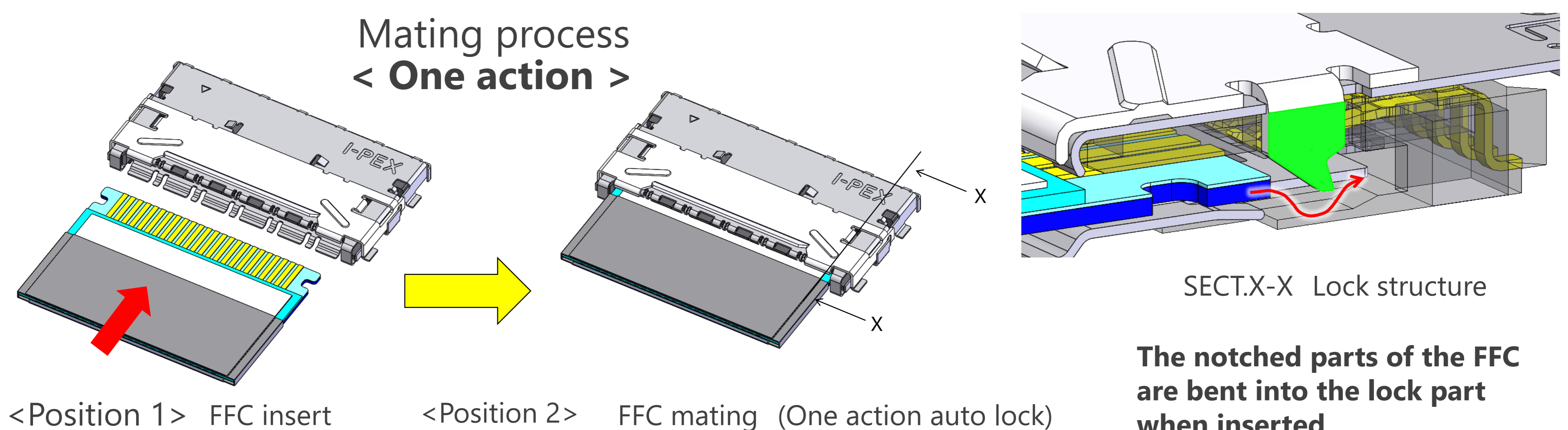
Cable: FPC  
 42.5 ohm (Differential 85 ohm)

Length: 100 mm

Pin assignment: GSSG



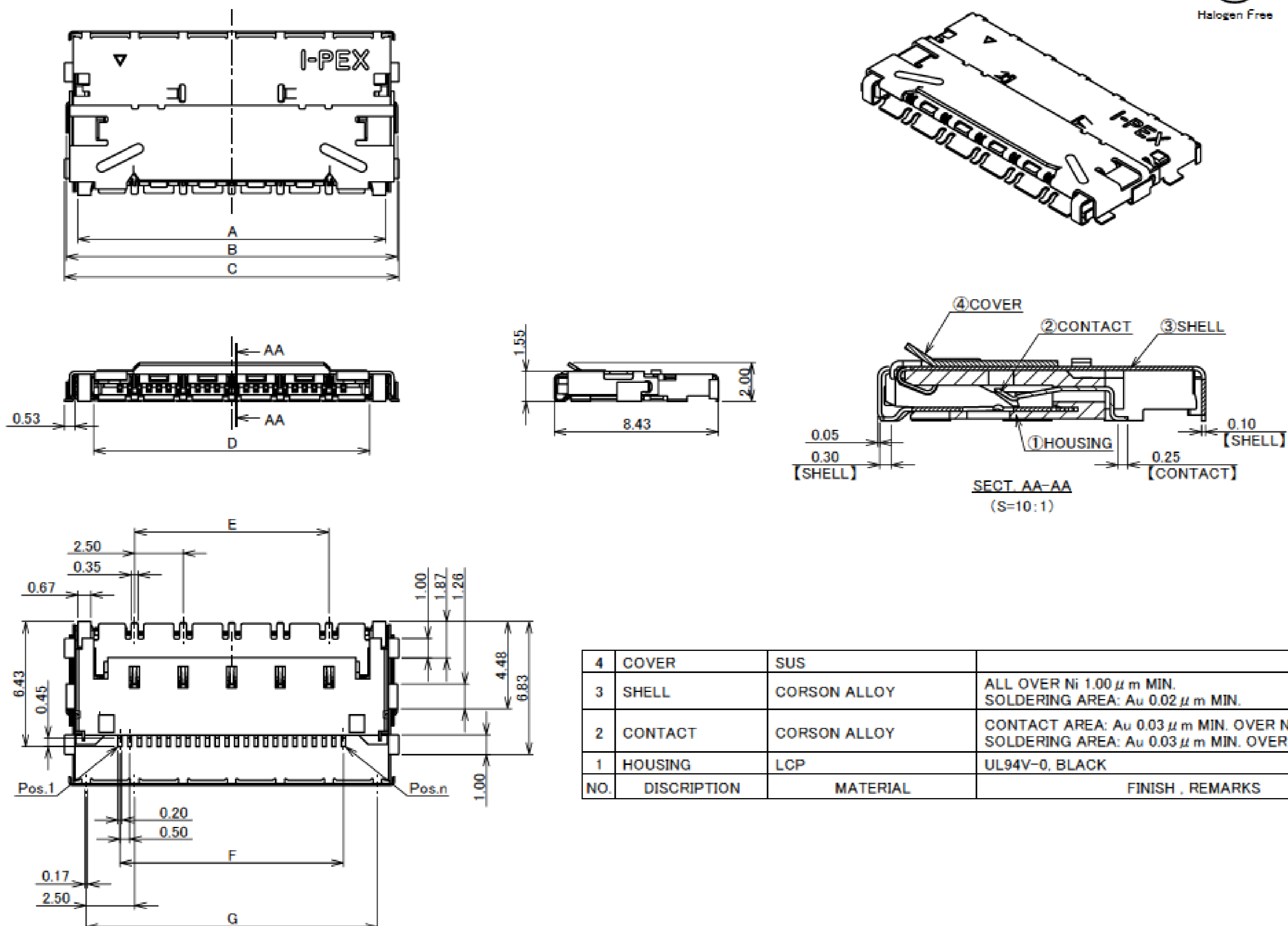
## Operator friendly auto-locking design, ideal for hand or robotic assembly



# Component Parts Details

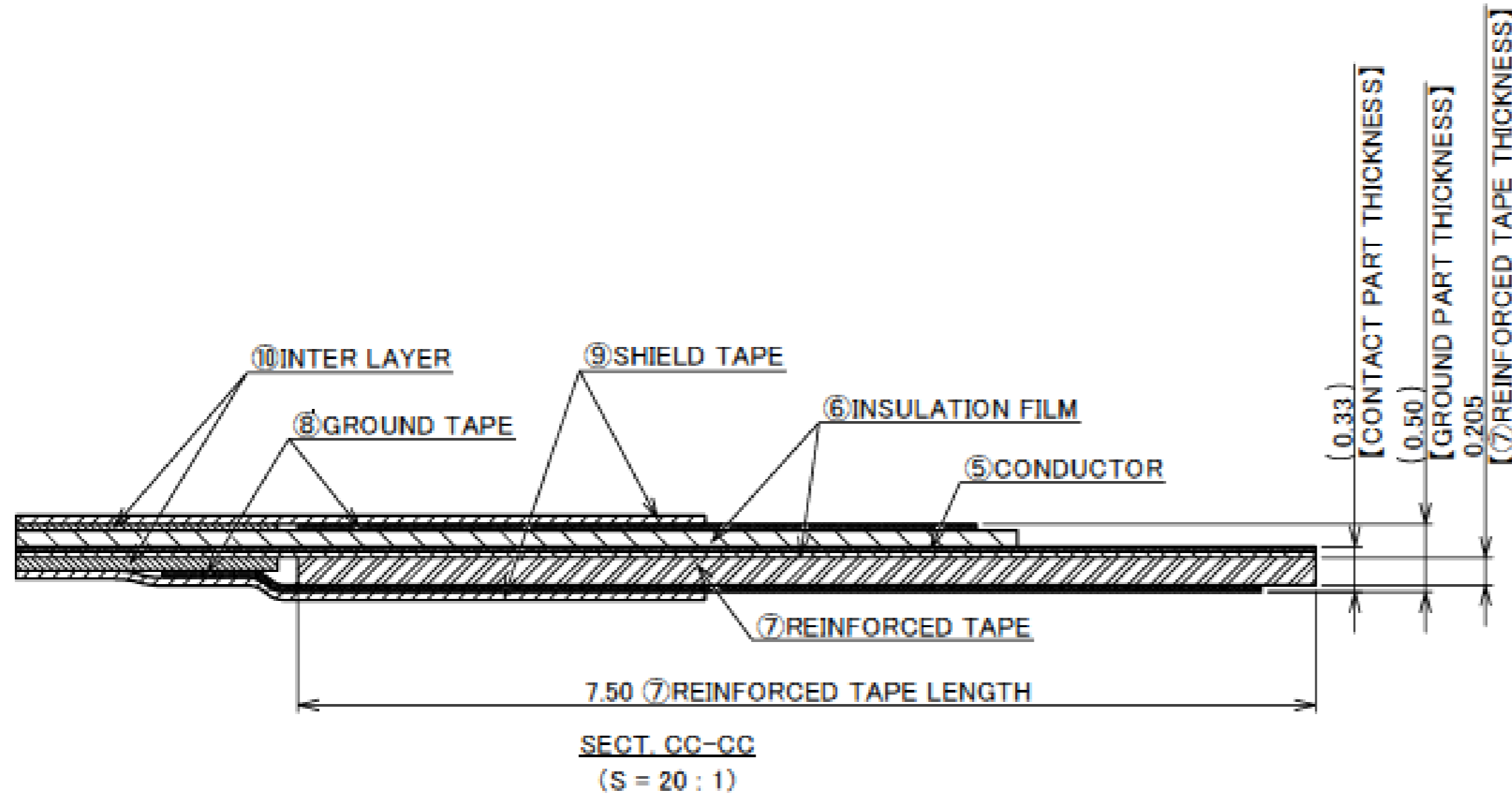
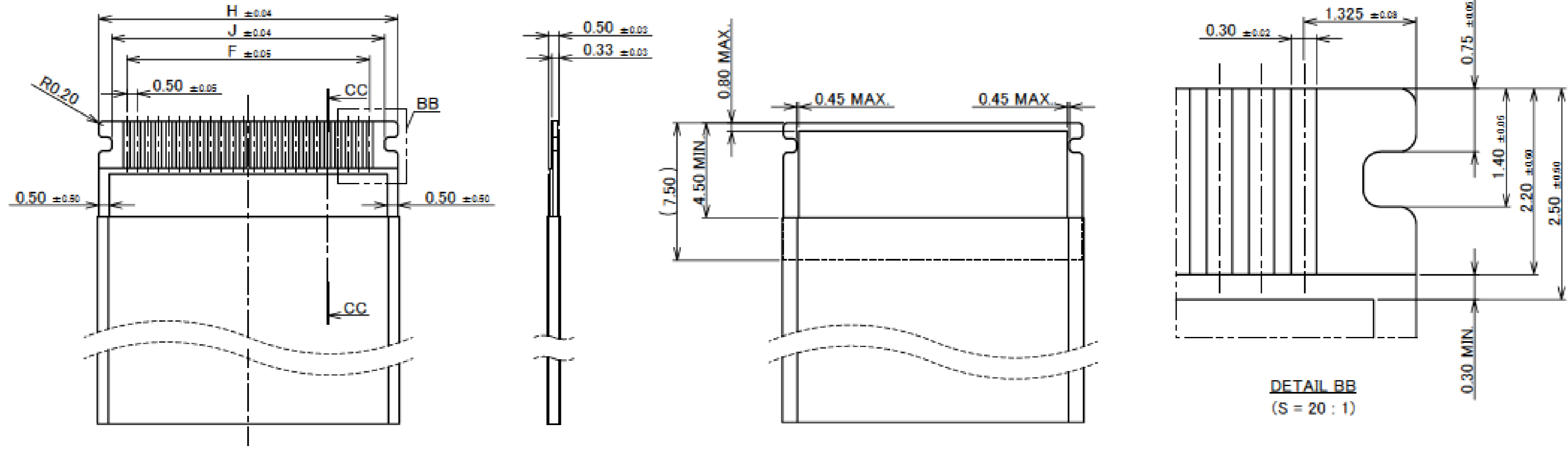
## Connector Assembly

Recommended P/N		20952-0**E-02						
PART NO.	Pos.	A	B	C	D	E	F	G
20952-024E-02	24	15.84	17.04	17.20	14.20	10.00	11.50	15.00



# Connector Assembly

PART NO.	Pos.	F	H	J
20952-024E-02	24	11.50	14.15	12.90



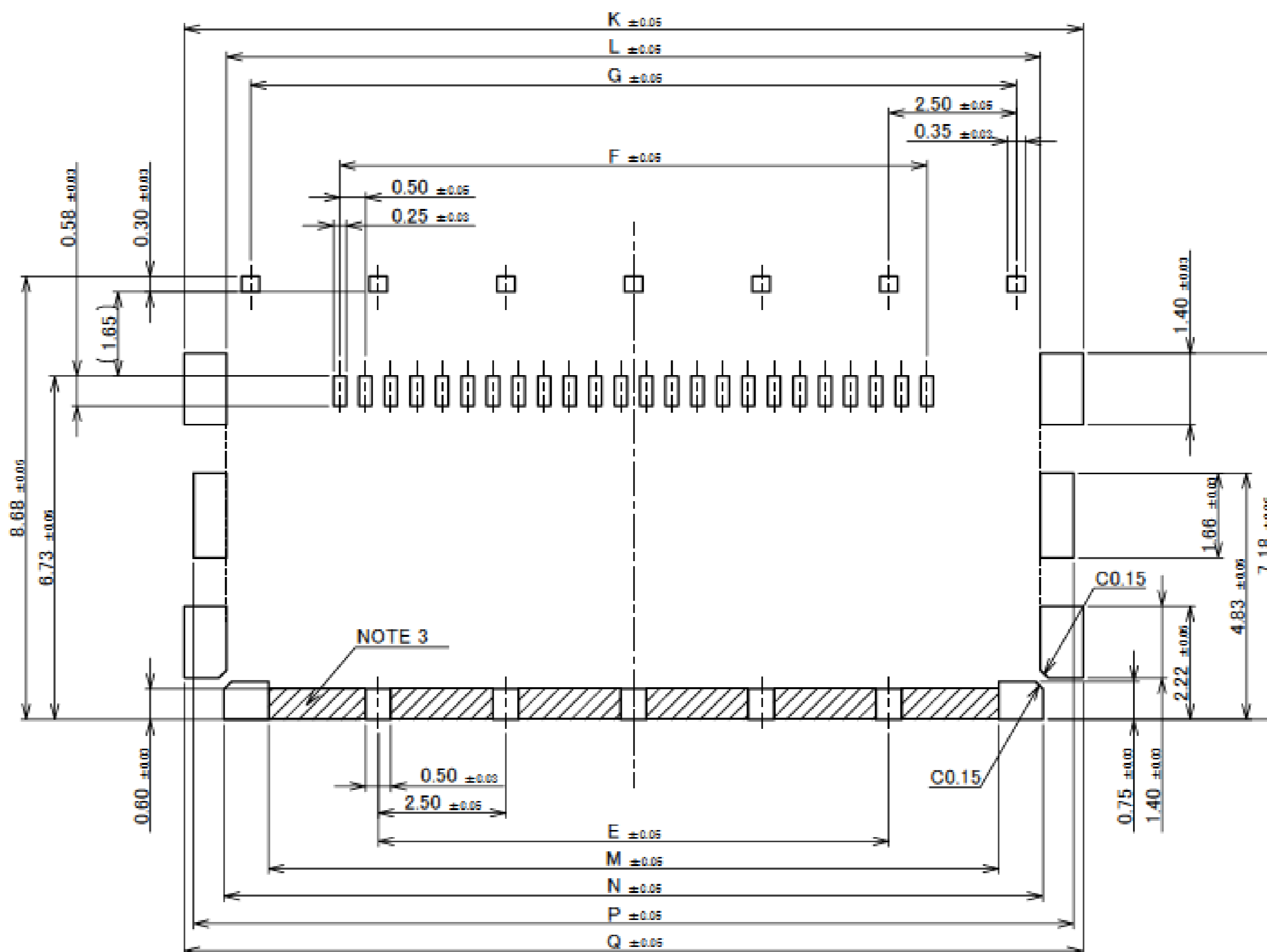
- NOTES.
- DIFFERENTIAL IMPEDANCE :  $90 \pm 10 \Omega$
  - SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF  $85^\circ\text{C}$  OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
10	INTER LAYER	ARBITRARY	
9	SHIELD TAPE	METALLIC FILM	
8	GROUND TAPE	METALLIC FILM	POLISH or HALF POLISH Sn PLATING
7	REINFORCED TAPE	ARBITRARY	
6	INSULATION FILM	ARBITRARY	
5	CONDUCTOR	COPPER ALLOY	CONTACT AREA : Au $0.05 \mu\text{m}$ MIN. OVER Ni $0.5 \mu\text{m}$ MIN.

Rev.5

# Plug Housing Assembly

PART NO.	Pos.	E	F	G	K	L	M	N	P	Q
20952-024E-02	24	10.00	11.50	15.00	17.60	15.94	14.30	16.04	17.24	17.60

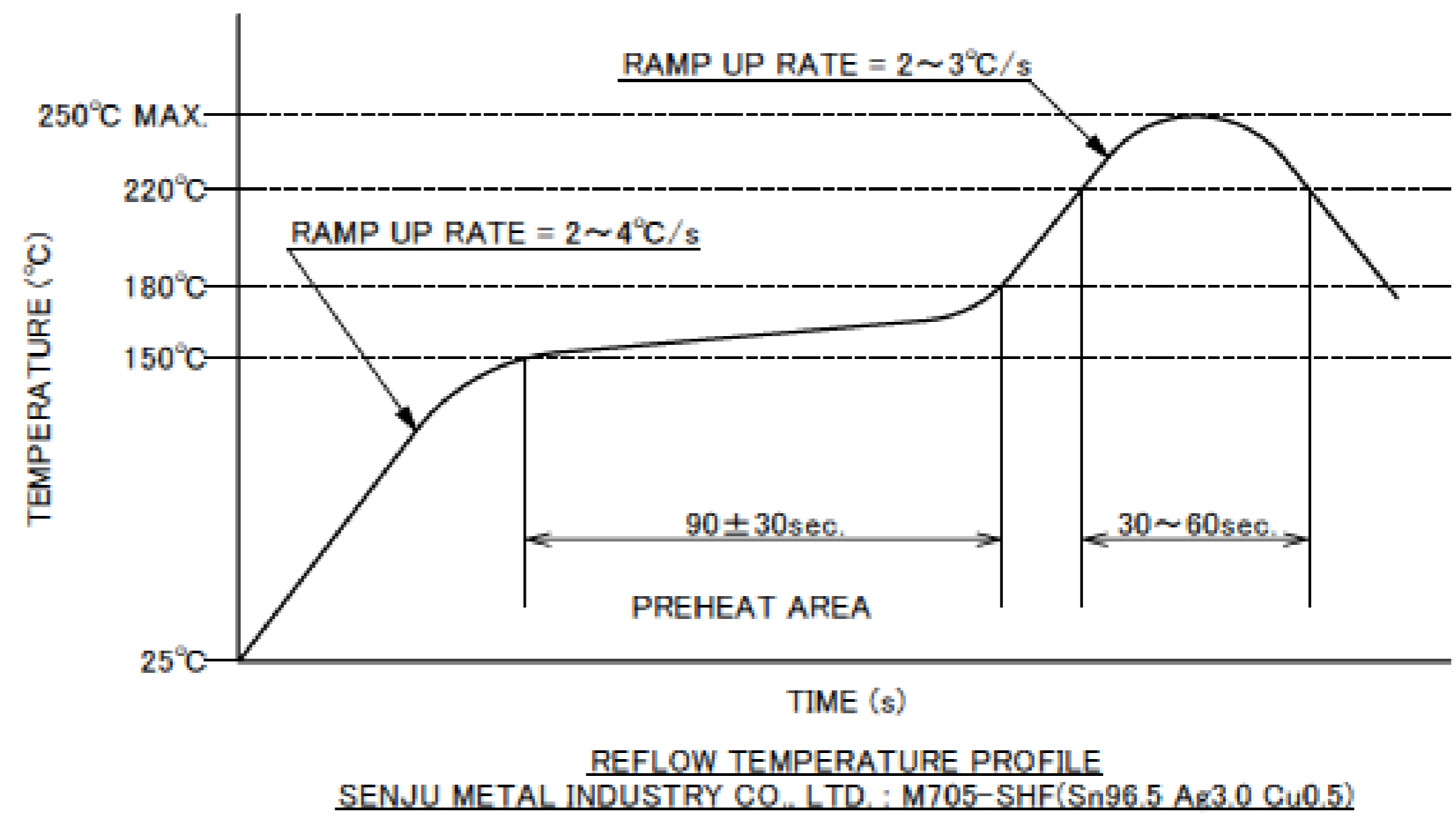
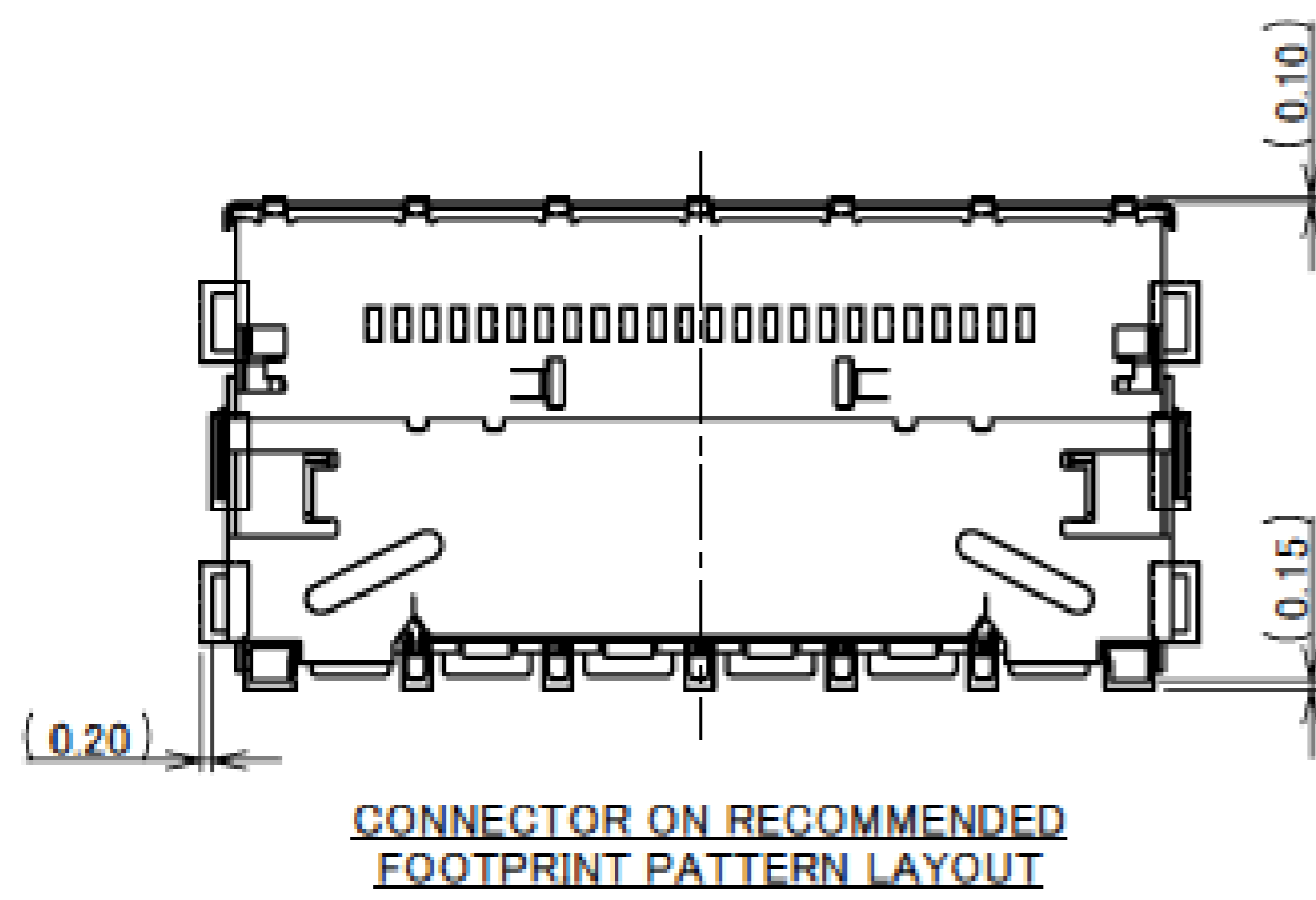


RECOMMENDED PCB & METALMASK LAYOUT  
THICKNESS t=0.12

- NOTES.
- SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.5

## Connector Assembly



Rev.5

## Plug Housing Assembly

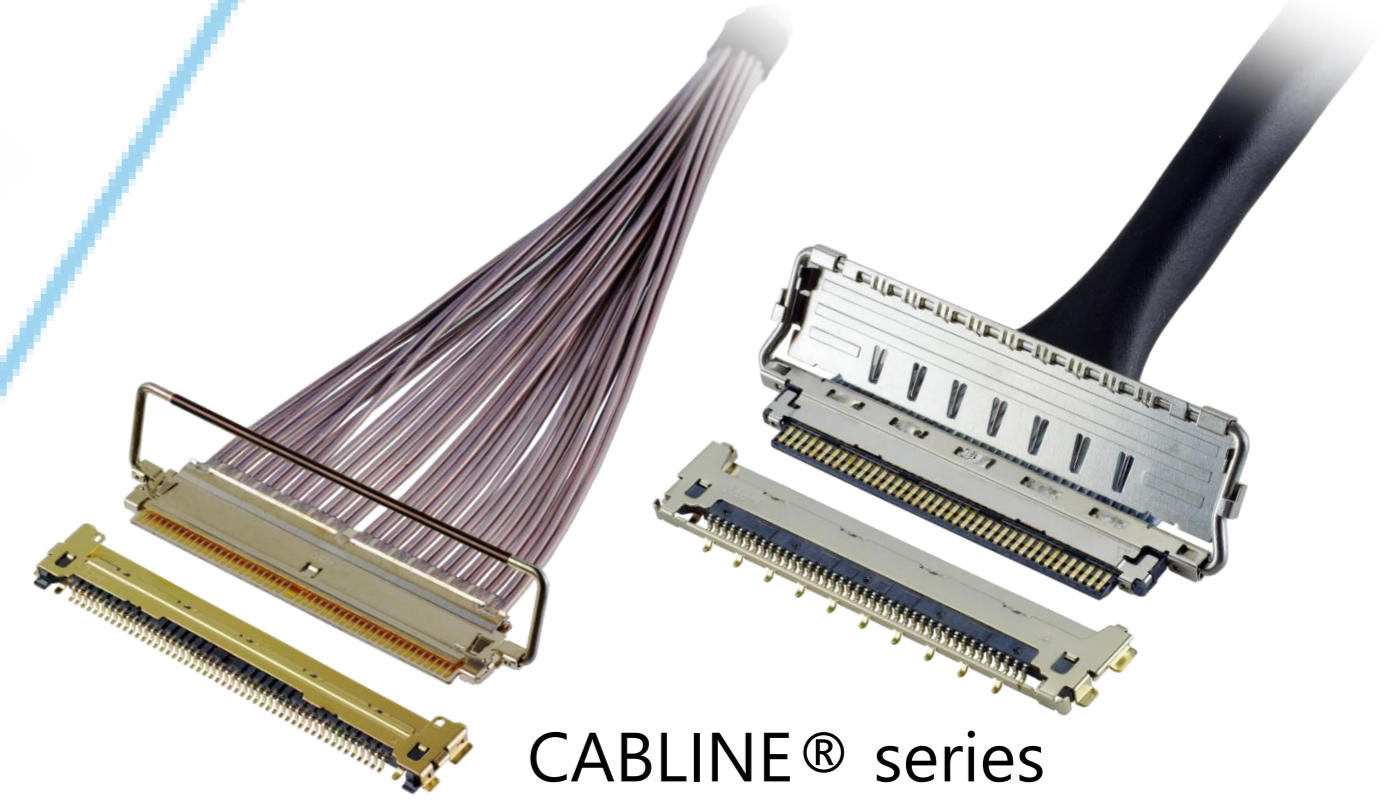
ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT PIN)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.30A AC/DC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K (-40°C~+85°C)
OPERATING HUMIDITY	85% RH. MAX. (NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : <math>\angle 140\text{mohm}</math> MAX.
INSULATION RESISTANCE	INITIAL : 500Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC 250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	24P : 22.00 N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	24P : 2.30 N MIN.
FFC/FPC RETENTION FORCE (INITIAL / AFTER TEST)	24P : 8.50 N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2645
TEST REPORT	TR-20006
PACKING STANDARD	PST-19012
INSTRUCTION MANUAL	HIM-19004
APPEARANCE CRITERIA No.	QLS-A***

Rev.5

# Custom Connectors Available

## RF Connectors

MHF® series



CABLINE® series

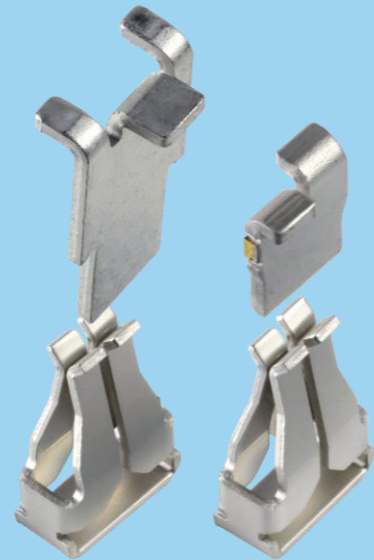
## Micro-Coaxial/Twinaxial Connectors



## Wire-to-Board Connectors/Terminals

AP series

ISH® series



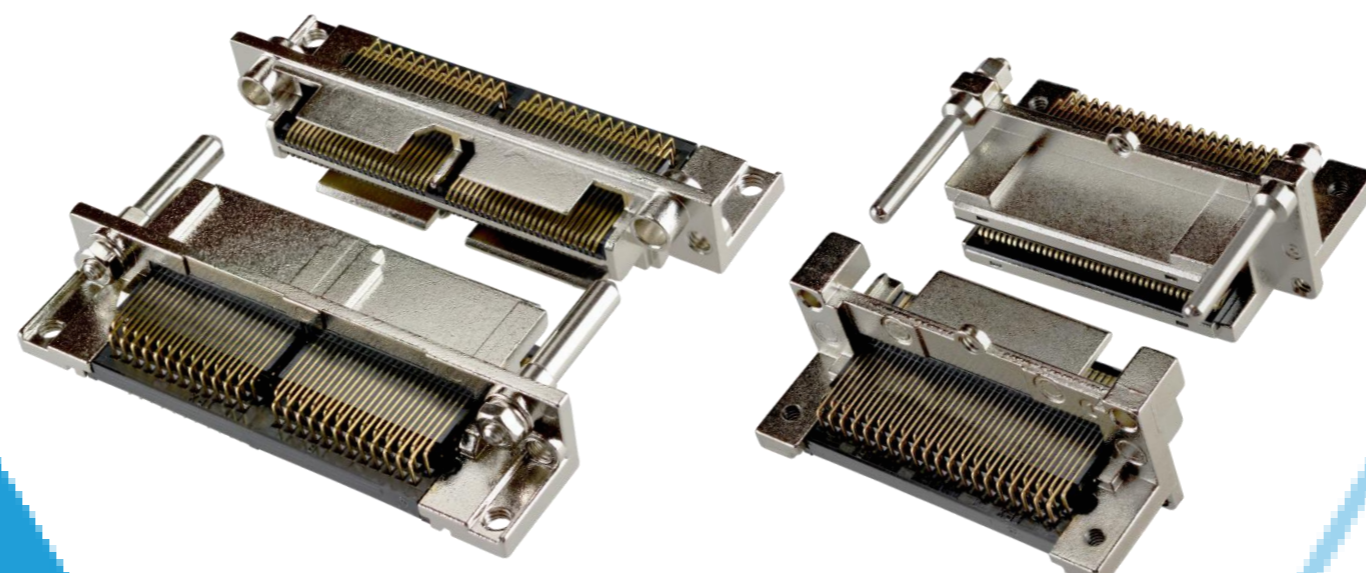
NOVASTACK® series



## Board-to-Board Connectors

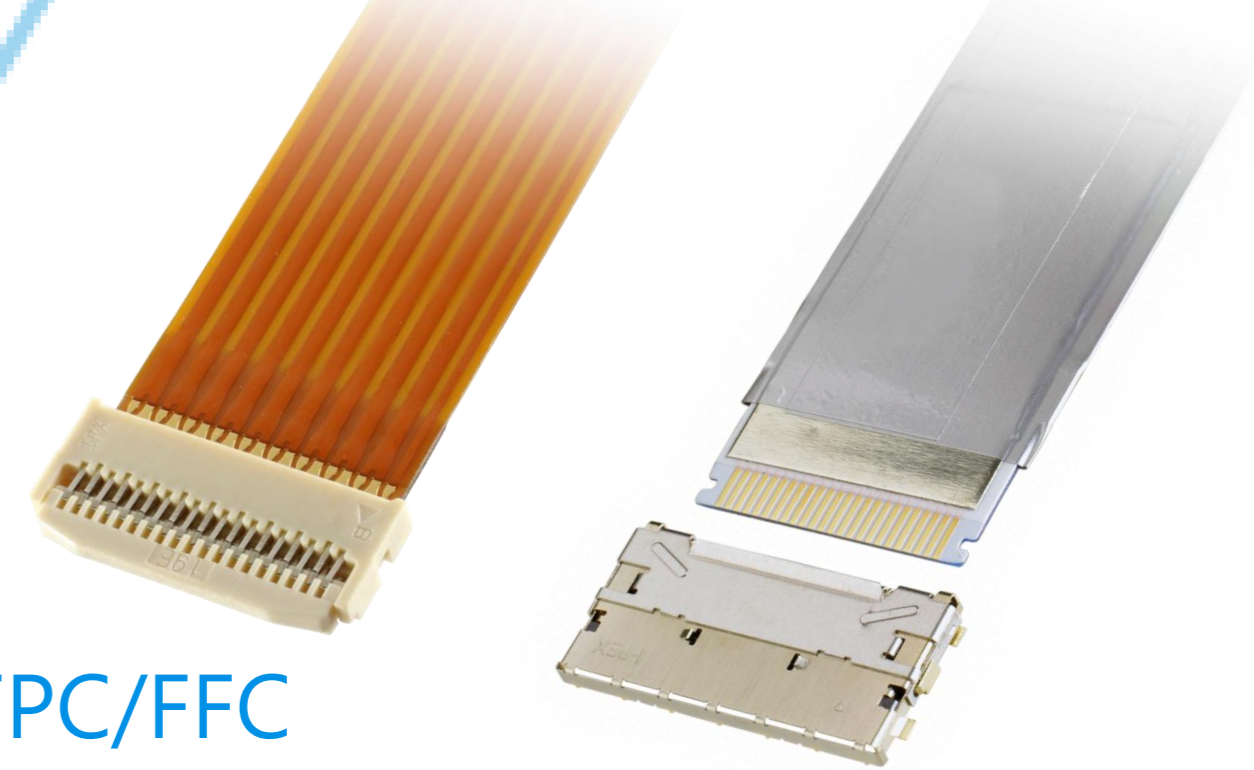


## I/O Connectors



MINIDOCK™ series

MINIFLEX® series EVAFLEX® series



## FPC/FFC Connectors



Inquiry



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