

EVAFLEX® 5-SE-G VT

One-handed auto-locking feature, high temperature resistance (125°C), high-speed, vertical mate, 0.5 mm pitch shielded FFC/FPC connector



Product Specifications:

Board Pitch		0.5 mm
Wiping Length		1.2 mm
Size	Height	6.6 +/- 0.30 mm
	Width	8.00 + (0.5 x pin count) mm
	Depth	3.90 +/- 0.20 mm
Pin counts	Range	20 to 60
	Available	20, 30, 40, 50, 60

Applicable FPC/FFC:

FPC/FFC Type	Shielded FFC, Non-shielded FFC/FPC
FPC/FFC Contact Point	Signal contact tail side
FPC/FFC Thickness	0.30 +/- 0.03 mm

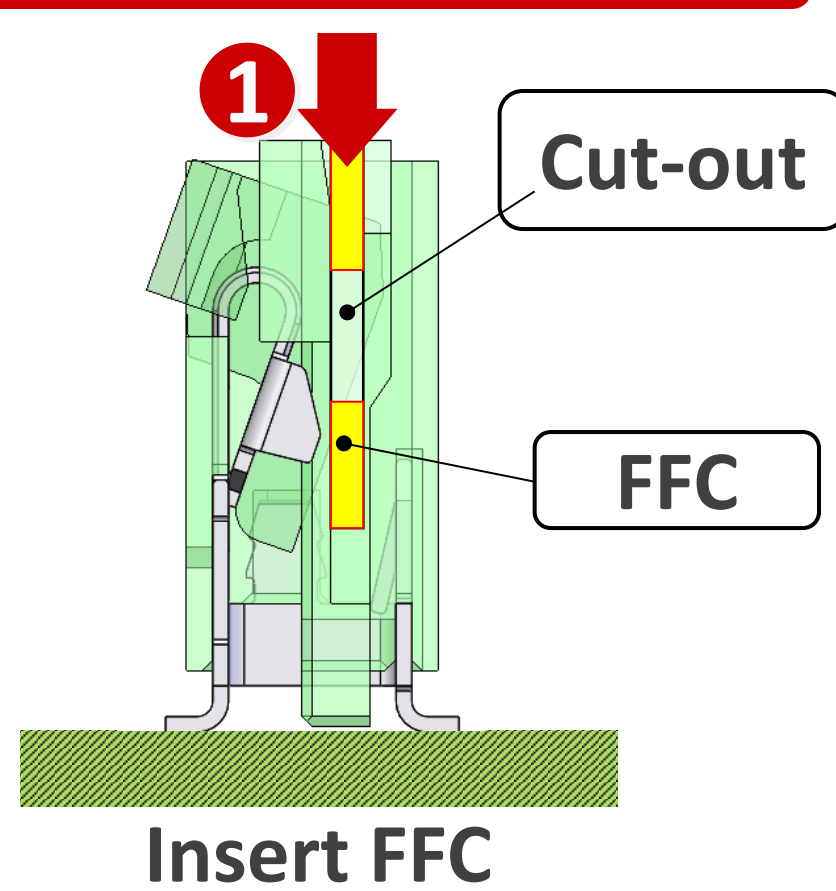
Applicable Standards (Reference Only):

eDP (2.7 Gbps) V-By-One HS 1.4 (4 Gbps)
USCAR II Vibration & Shock V1

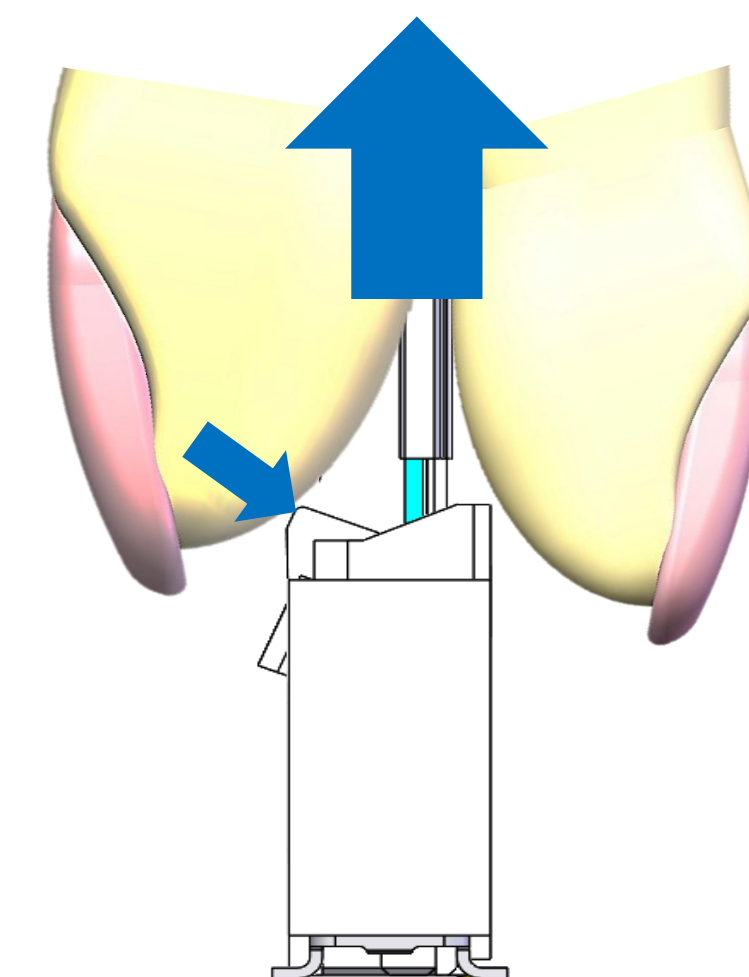
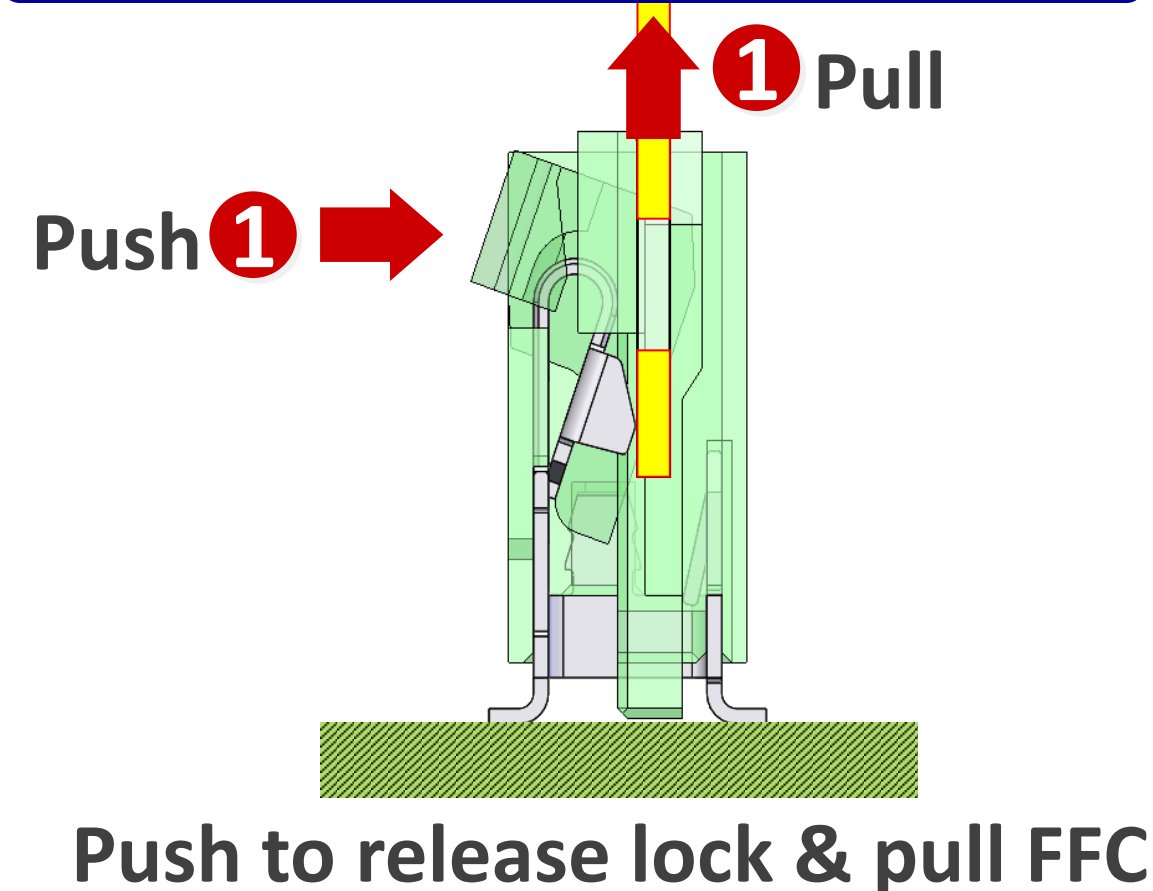
* Please inquire for pin counts not listed or outside of the pin count range.

▶ One-handed operational auto-lock design, ideal for hand or robotic assembly

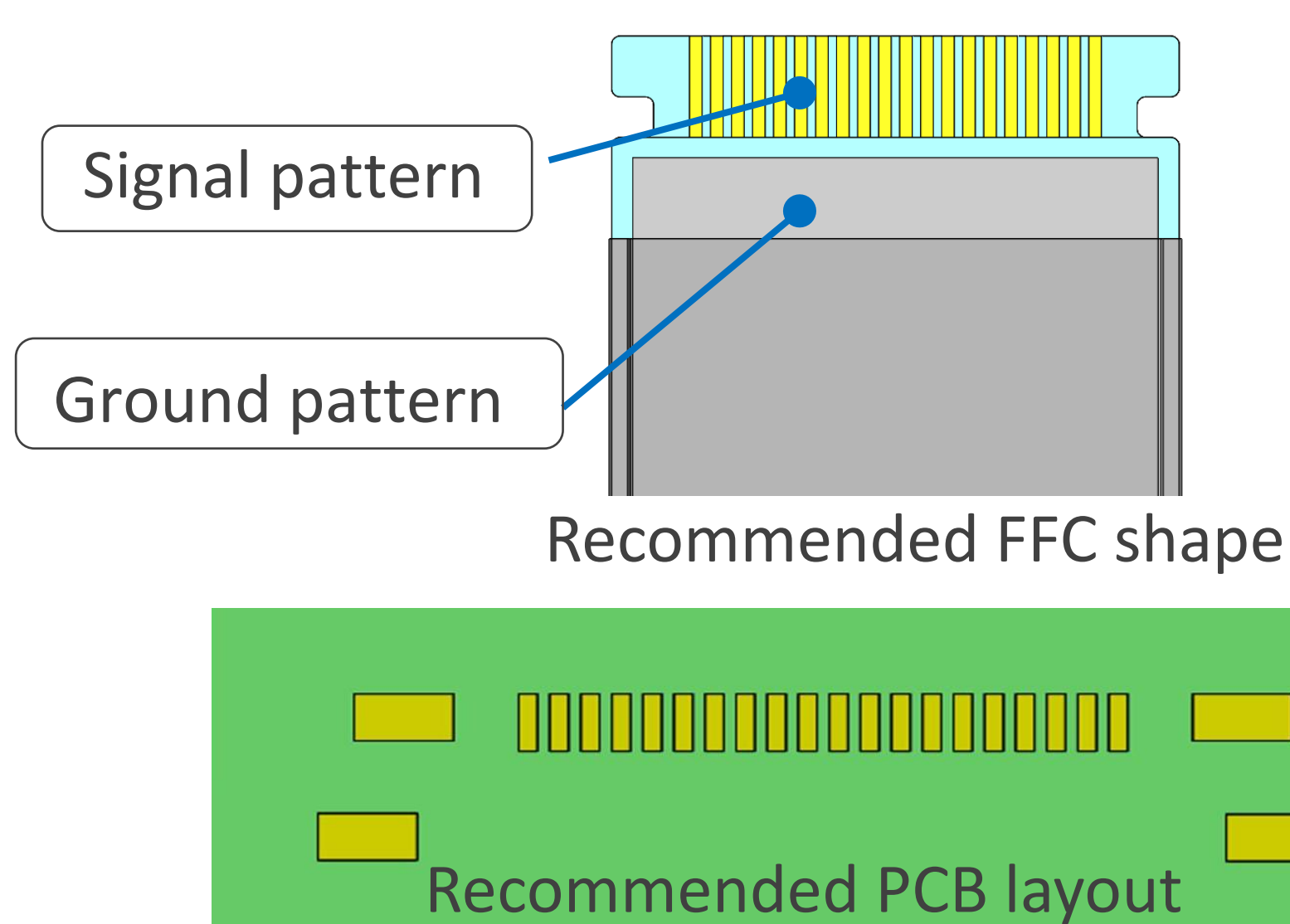
One action FFC mating



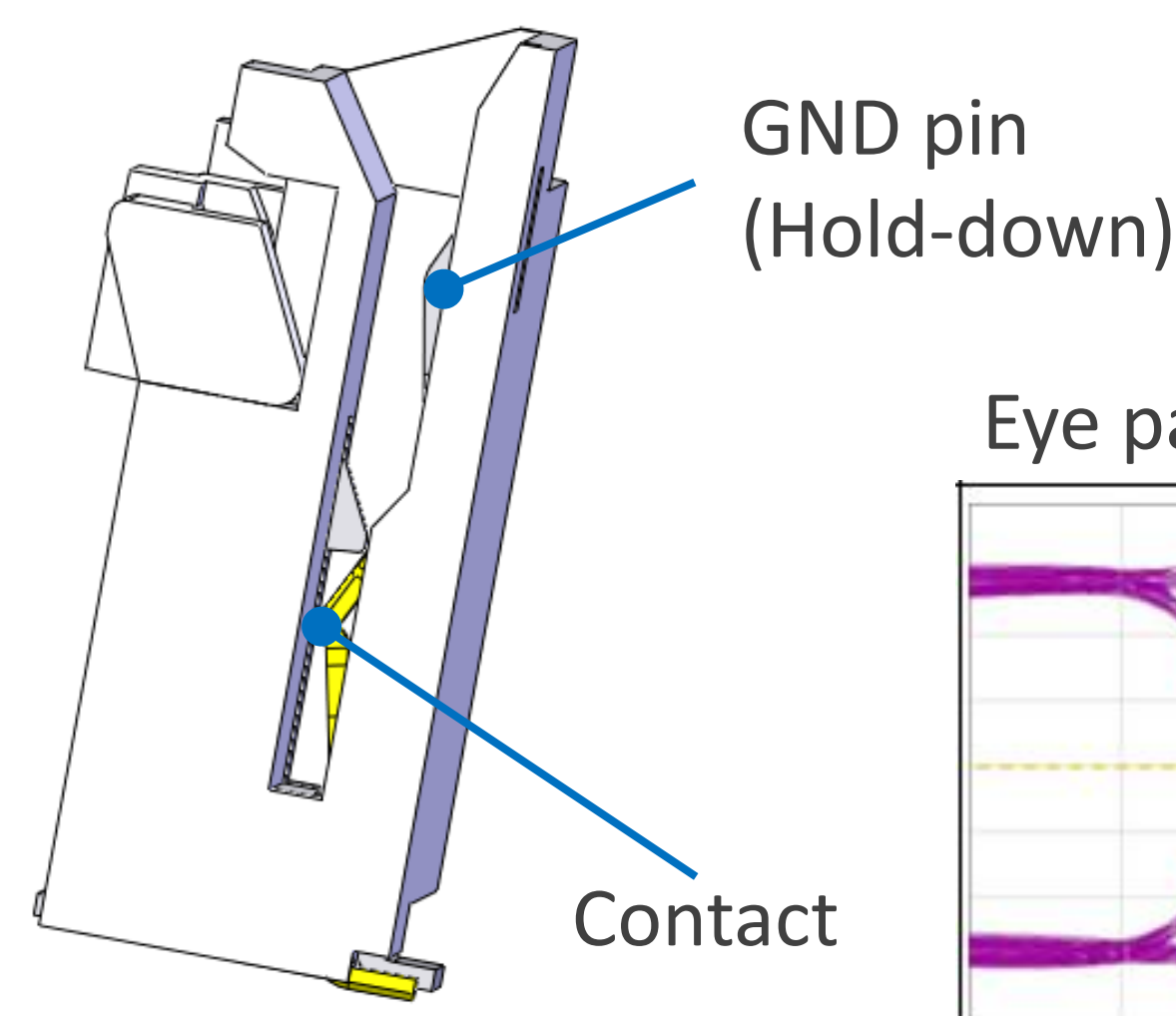
One action FFC removal



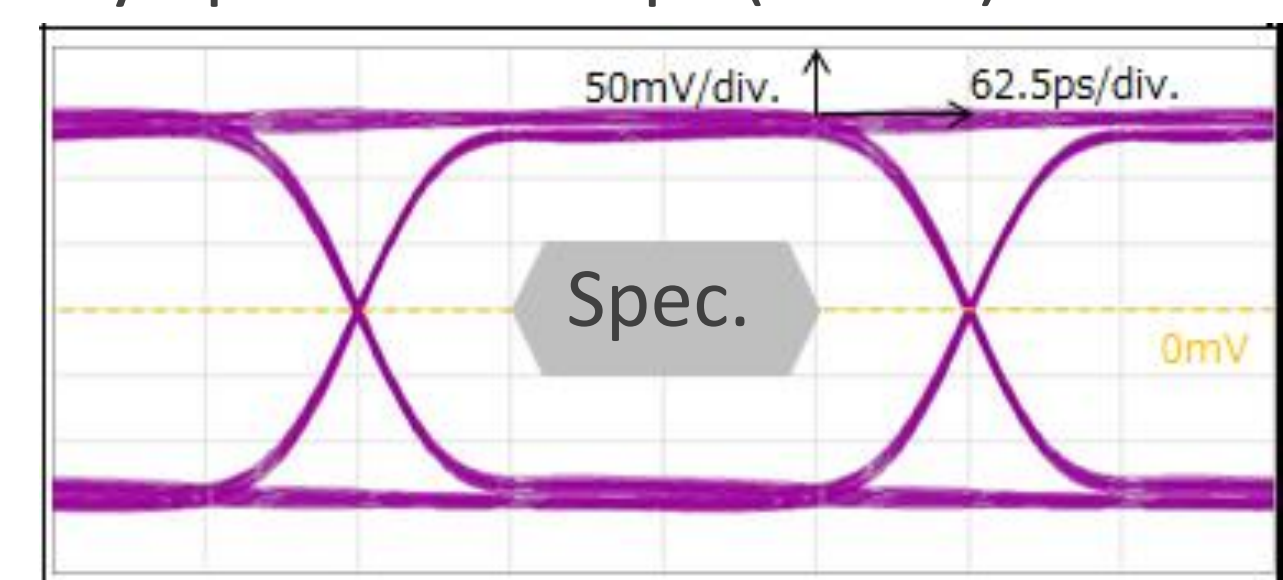
▶ Designed for high-speed transmission with grounding contacts (4+ Gbps V-By-One® HS)



Extended hold down with GND pin for GND connection
Target speed : up to 4+ Gbps (V-By-One® HS)



Eye pattern 4 Gbps (actual)

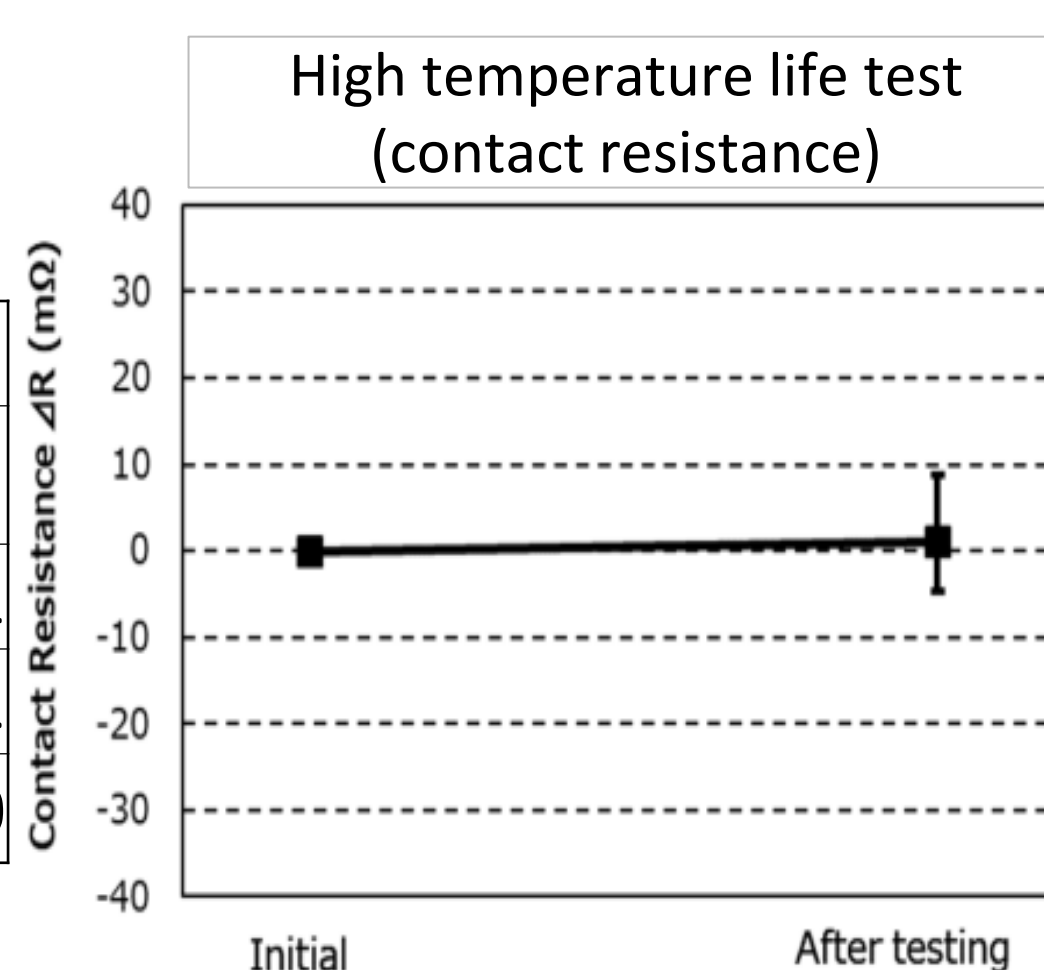


▶ High-Heat and High-Durability Connectors for Automotive and Industrial Applications

It is a capable of delivering stable performance even under harsh environmental conditions and supports a wide range of applications.

High temperature life test (contact resistance)
Test condition : 398±2 k (125±2°C)
Test hours : 1000 h

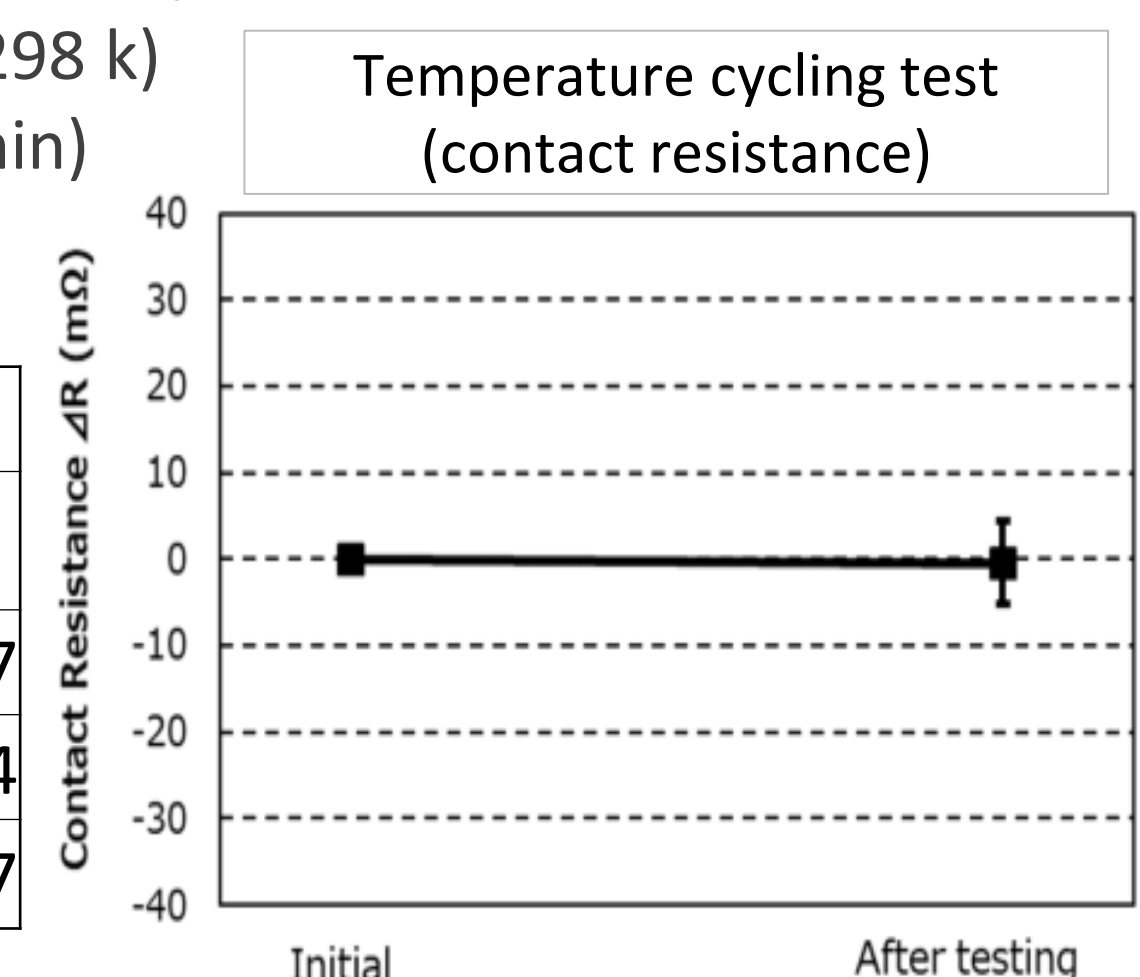
N=5	unit/mΩ		
	Initial	After Testing	
SPEC	60mΩ max.	ΔR=40mΩ max.	
Ave.	6.616	1.101	
Max.	8.80	8.72	
Min.	4.18	-4.70	



Temperature cycling test (Contact resistance)
Test condition -55°C(218 k)⇔+125°C(298 k)
(30 min) (30 min)

Test hour:100 cycle

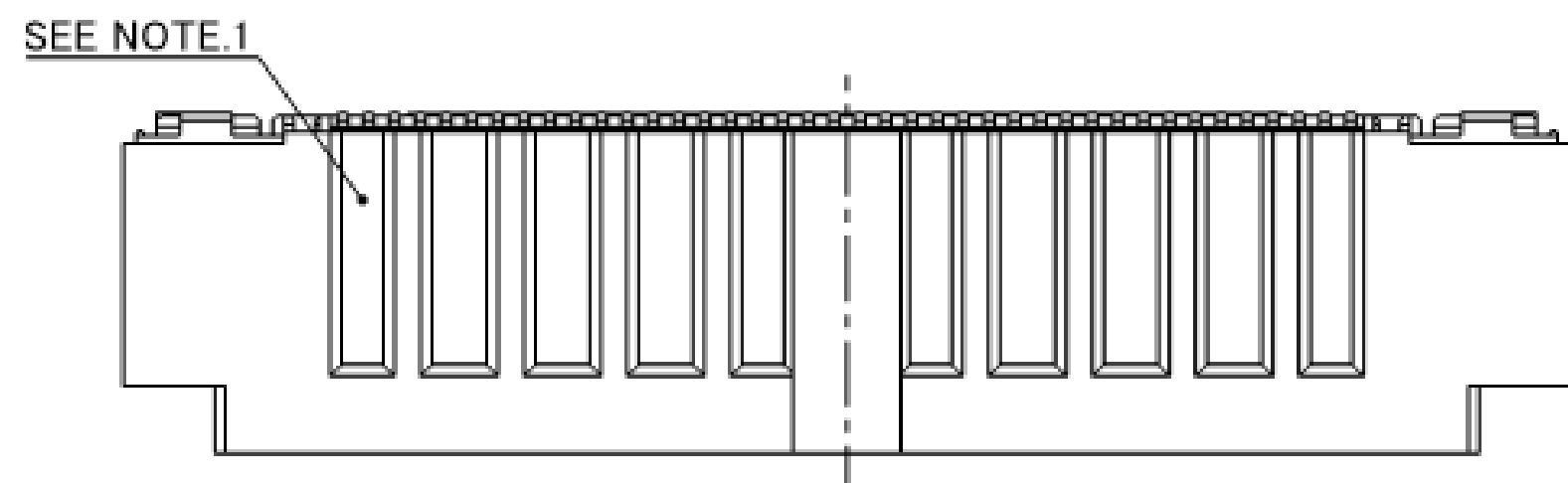
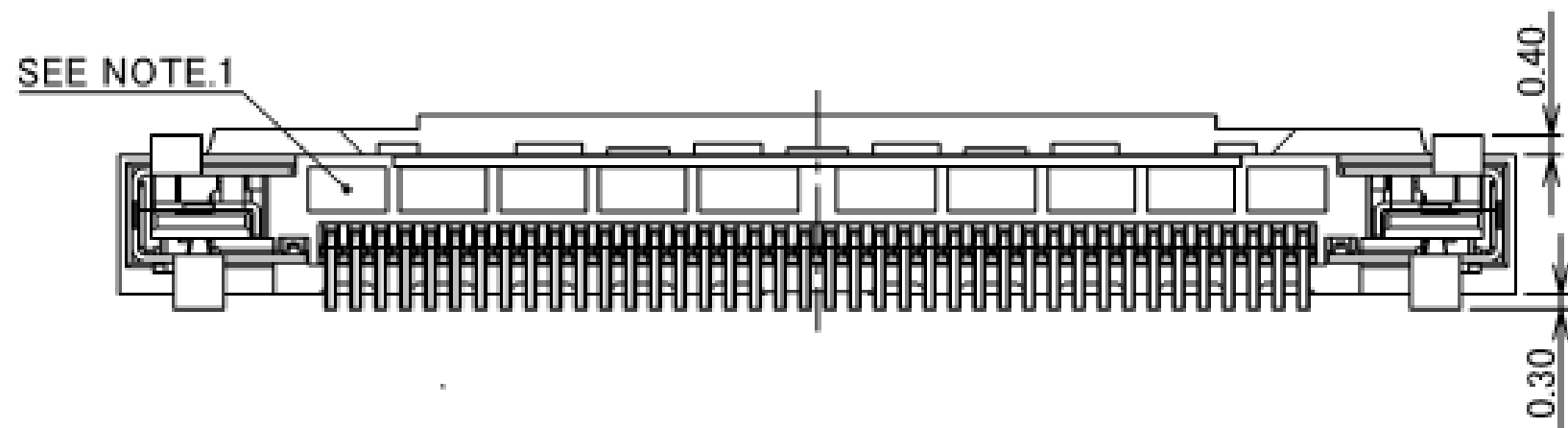
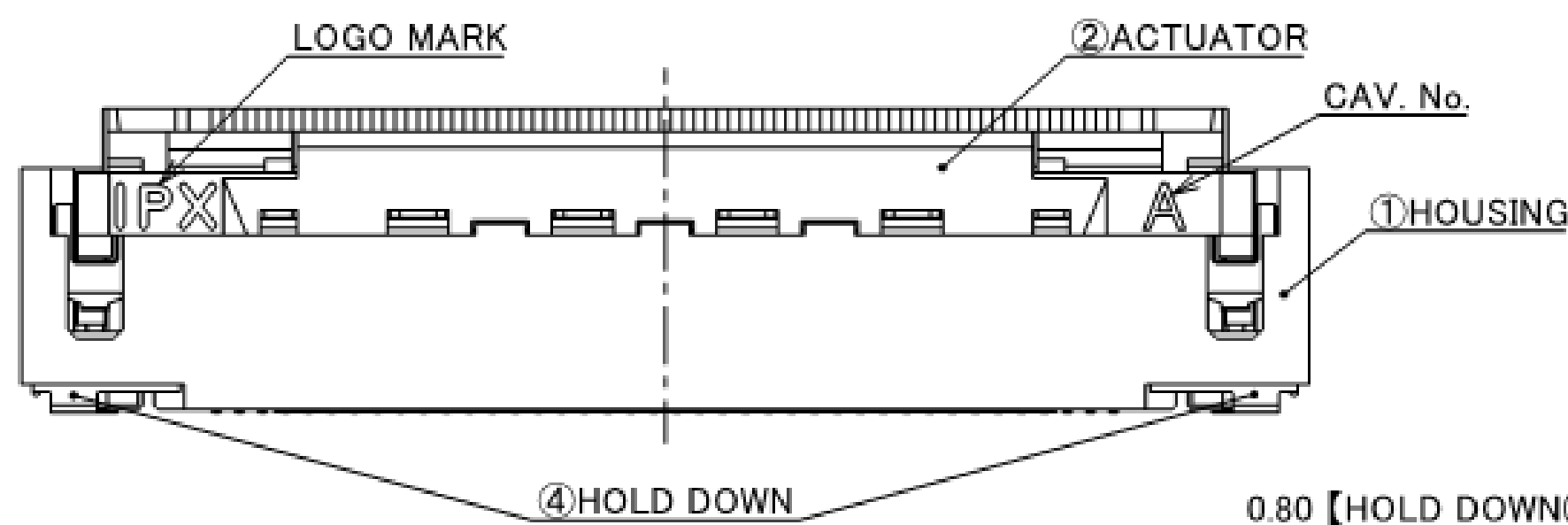
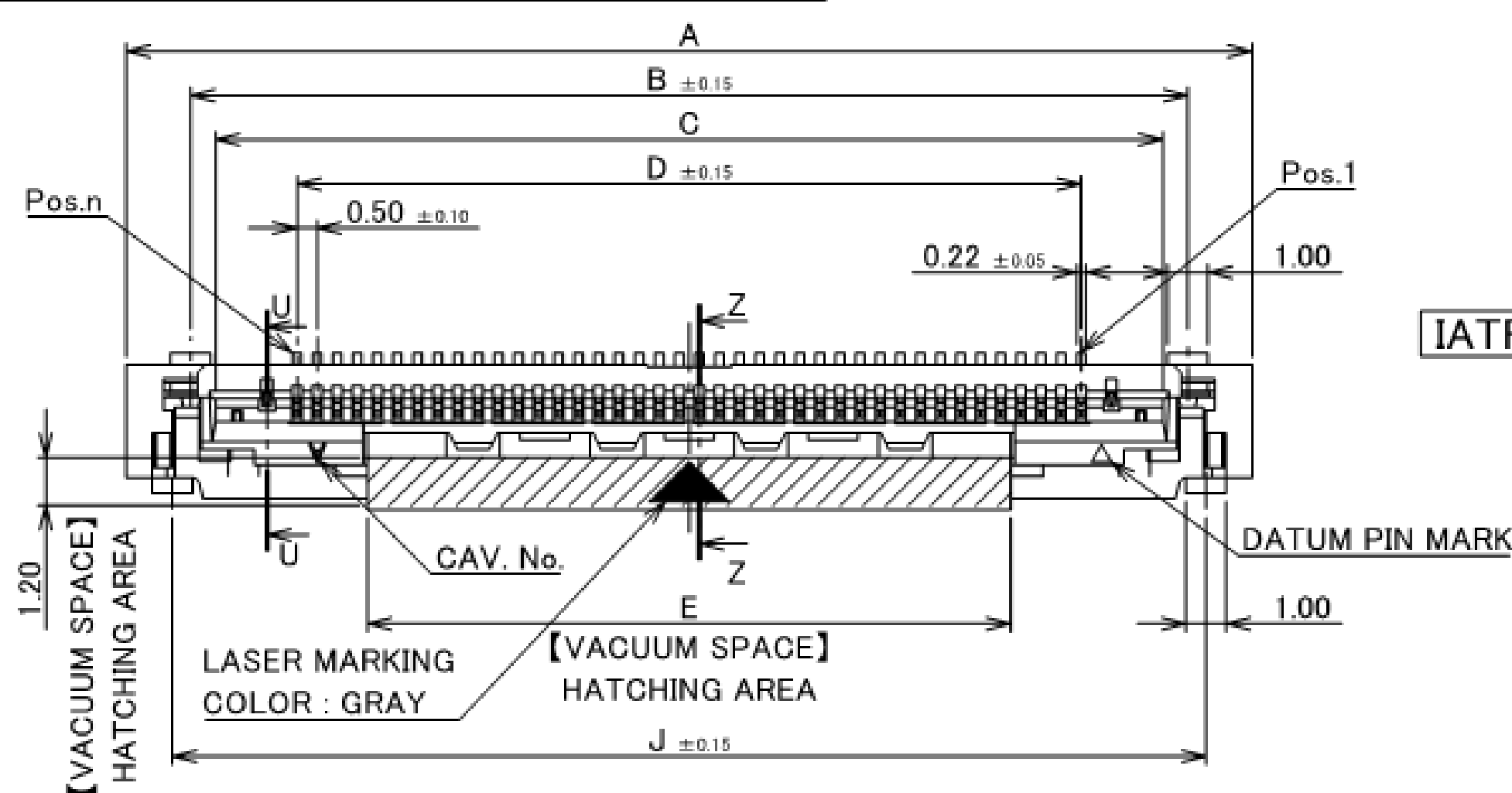
N=5	unit/mΩ		
	Initial	After Testing	
SPEC	60mΩ max.	ΔR=40mΩ max.	
Ave.	6.704	-0.477	
Max.	9.03	4.54	
Min.	4.05	-5.17	



Component Parts Details

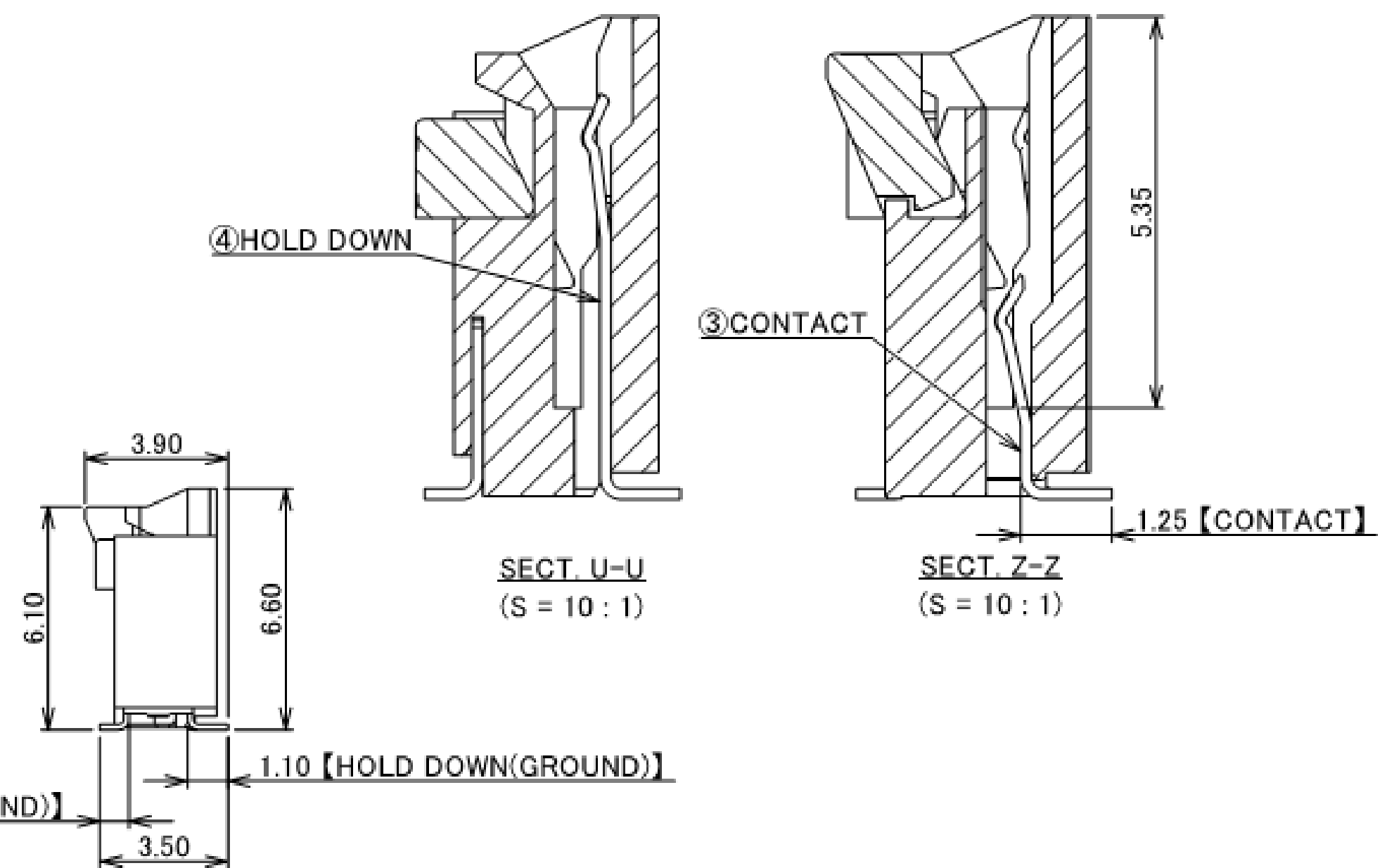
Connector Assembly

Recommended P/N 20799-0**E-01



PART No.	A	B	C	D	E	J
20799-020E-01	18.00	14.80	13.56	9.50	6.00	15.70
20799-030E-01	23.00	19.80	18.56	14.50	11.00	20.70
20799-040E-01	28.00	24.80	23.56	19.50	16.00	25.70
20799-050E-01	33.00	29.80	28.56	24.50	21.00	30.70
20799-060E-01	38.00	34.80	33.56	29.50	26.00	35.70

IATF 16949 CERTIFIED [PLANNED]



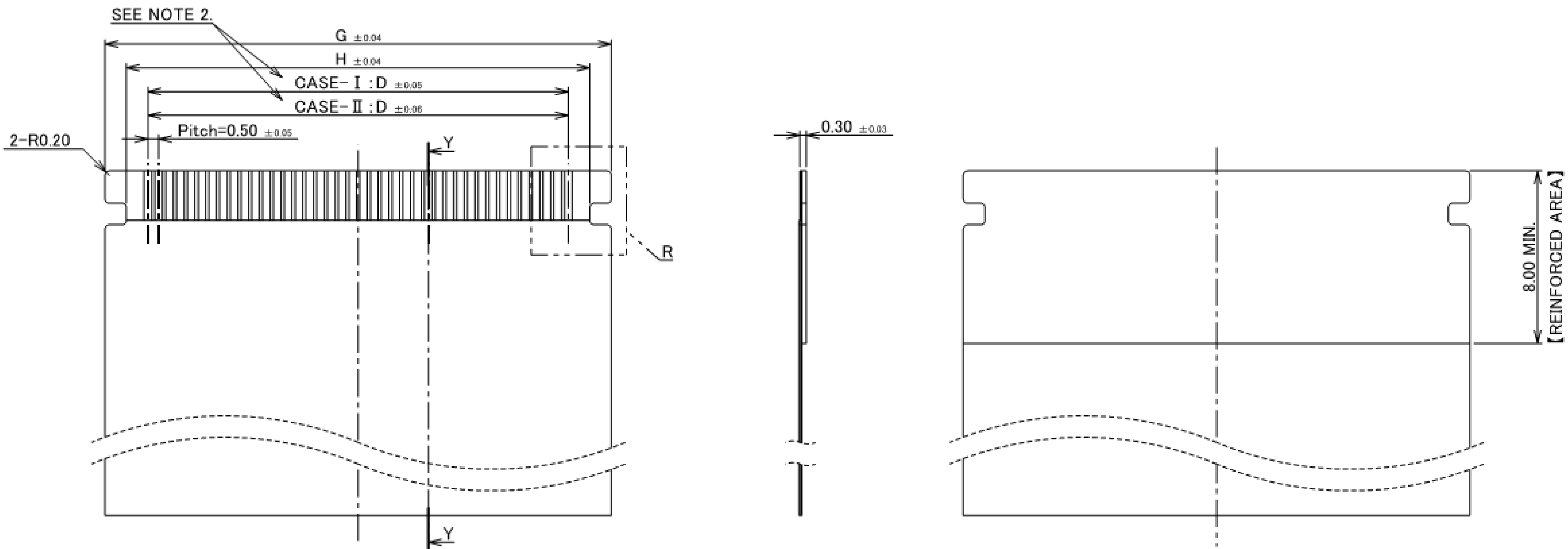
NOTES.
1. DENT SHAPE SHOWN ON DRAWING IS JUST FOR REFERENCE.
DENT SHAPE AND QUANTITY MIGHT CHANGE FROM DIFFERENT PIN COUNT AND DIFFERENT TOOLING.

4	HOLD DOWN	CORSON ALLOY	SOLDERING AREA : Au 0.03μm MIN. OVER Ni 1.00μm MIN.
3	CONTACT	CORSON ALLOY	CONTACT AREA AND SOLDERING AREA : Au 0.03μm MIN. OVER Ni 1.00μm MIN.
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSING	LCP	UL94V-0, BEIGE
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Connector Assembly

PART No.	D	G	H
20799-020E-01	9.50	13.50	11.50
20799-030E-01	14.50	18.50	16.50
20799-040E-01	19.50	23.50	21.50
20799-050E-01	24.50	28.50	26.50
20799-060E-01	29.50	33.50	31.50

RECOMMENDED FFC LAYOUT
【NON SHIELDED TYPE】



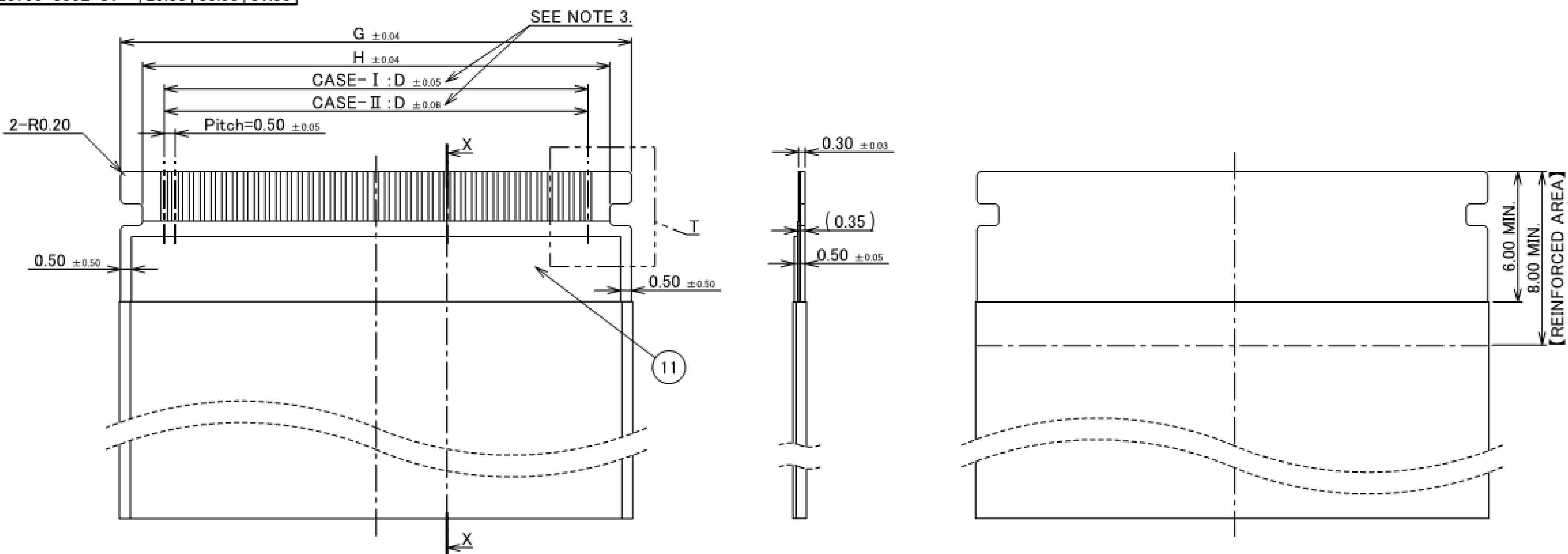
- NOTES.
- 2. MANUFACTURE CASE- I or II
 - 3. SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF 85°C OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

7	REINFORCED TAPE	ARBITRARY	
6	INSULATION FILM	ARBITRARY	
5	CONDUCTOR	COPPER ALLOY	CONTACT AREA : Au 0.05 μ m MIN. OVER Ni 0.5 μ m MIN.
NO.	COMPONENTS	MATERIAL	FINISH

Rev.12

PART No.	D	G	H
20799-020E-01	9.50	13.50	11.50
20799-030E-01	14.50	18.50	16.50
20799-040E-01	19.50	23.50	21.50
20799-050E-01	24.50	28.50	26.50
20799-060E-01	29.50	33.50	31.50

RECOMMENDED FFC LAYOUT
【SHIELDED TYPE】



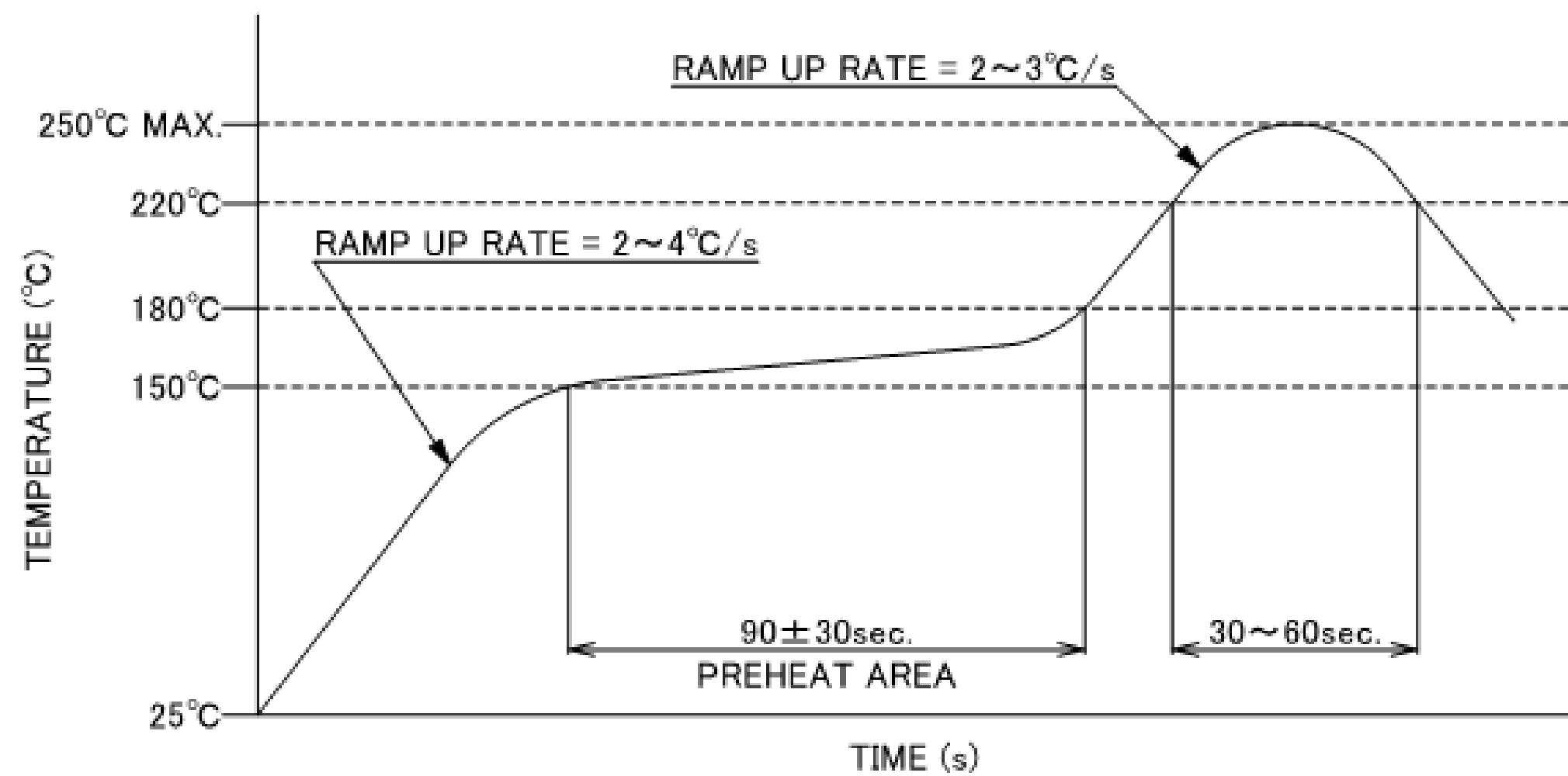
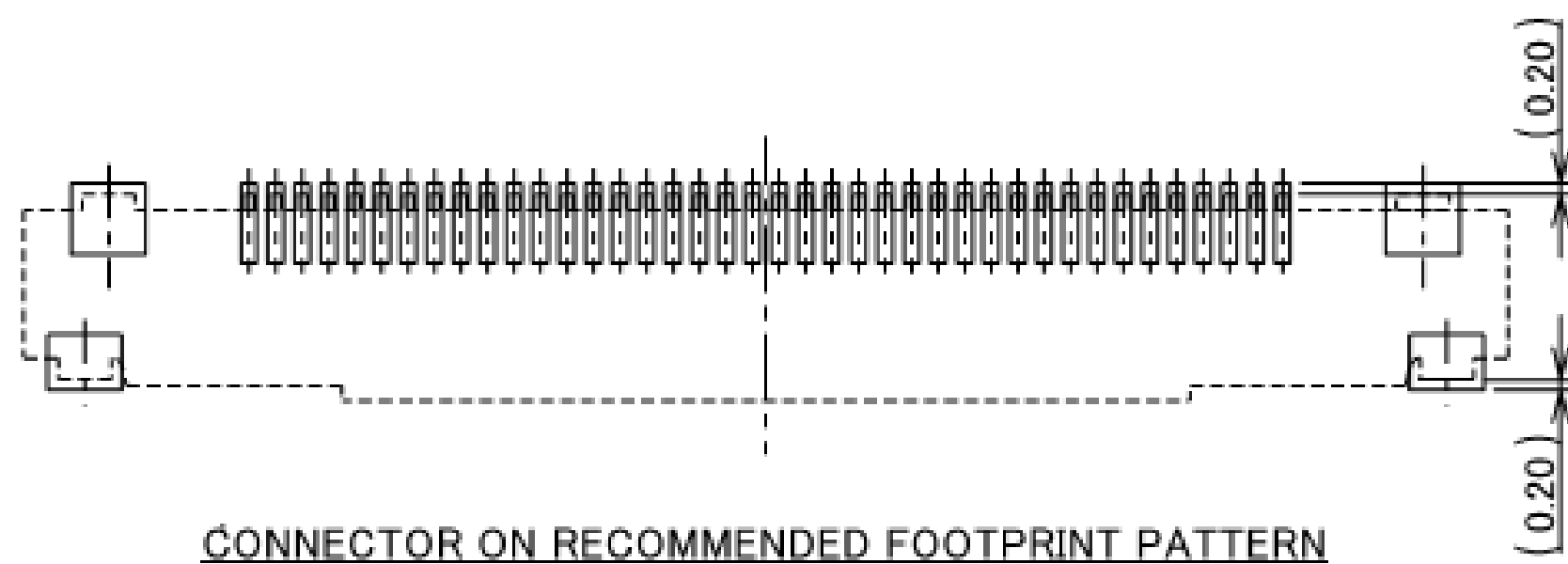
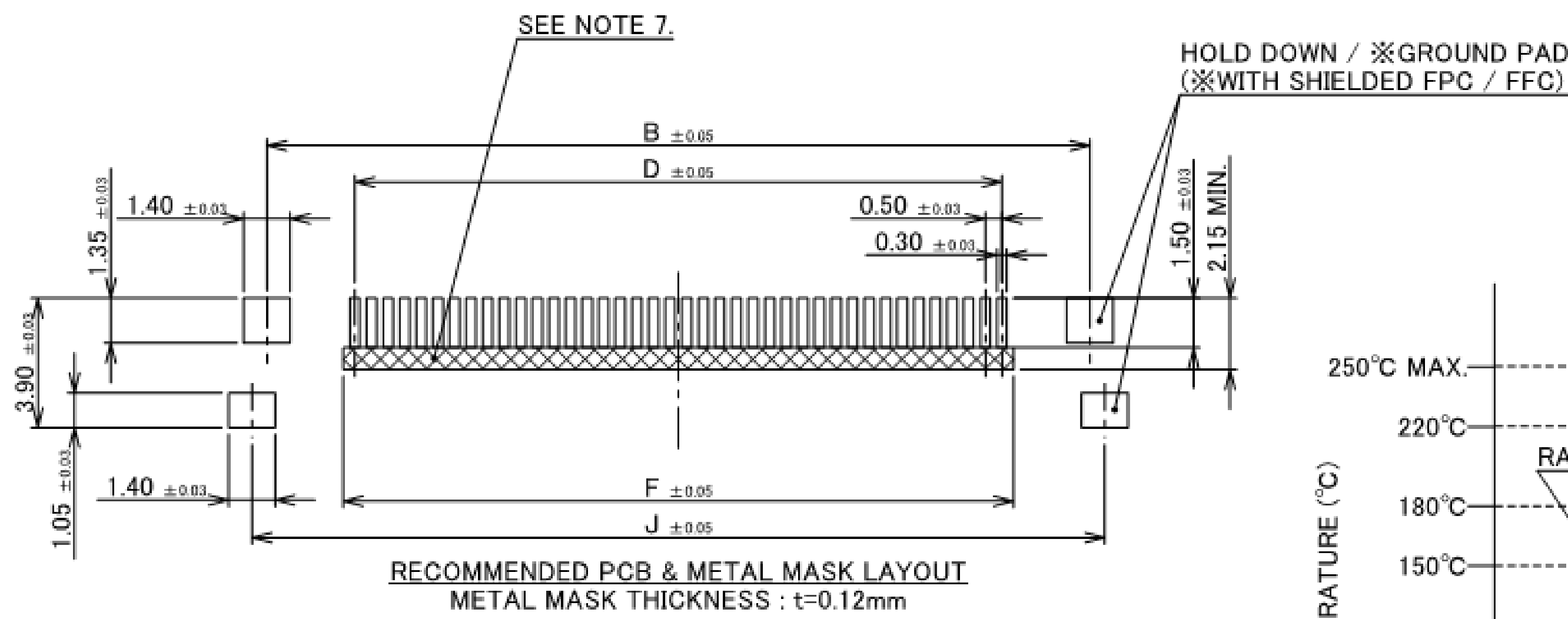
- NOTES.
- 4. MANUFACTURE CASE- I or II
 - 5. DIFFERENTIAL IMPEDANCE : 100 \pm 10 Ω
 - 6. SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF 85°C OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

13	SHIELD TAPE	METALLIC FILM	
12	INTERLAYER	ARBITRARY	
11	GROUND PLATE	METALLIC FILM	POLISH or HALF POLISH Sn PLATING
10	REINFORCED TAPE	ARBITRARY	
9	INSULATION FILM	ARBITRARY	
8	CONDUCTOR	COPPER ALLOY	CONTACT AREA : Au 0.05 μ m MIN. OVER Ni 0.5 μ m MIN.
NO.	COMPONENTS	MATERIAL	FINISH

Rev.12

Connector Assembly

PART No.	B	D	F	J
20799-020E-01	14.80	9.50	10.20	15.70
20799-030E-01	19.80	14.50	15.20	20.70
20799-040E-01	24.80	19.50	20.20	25.70
20799-050E-01	29.80	24.50	25.20	30.70
20799-060E-01	34.80	29.50	30.20	35.70



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

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

Rev.12

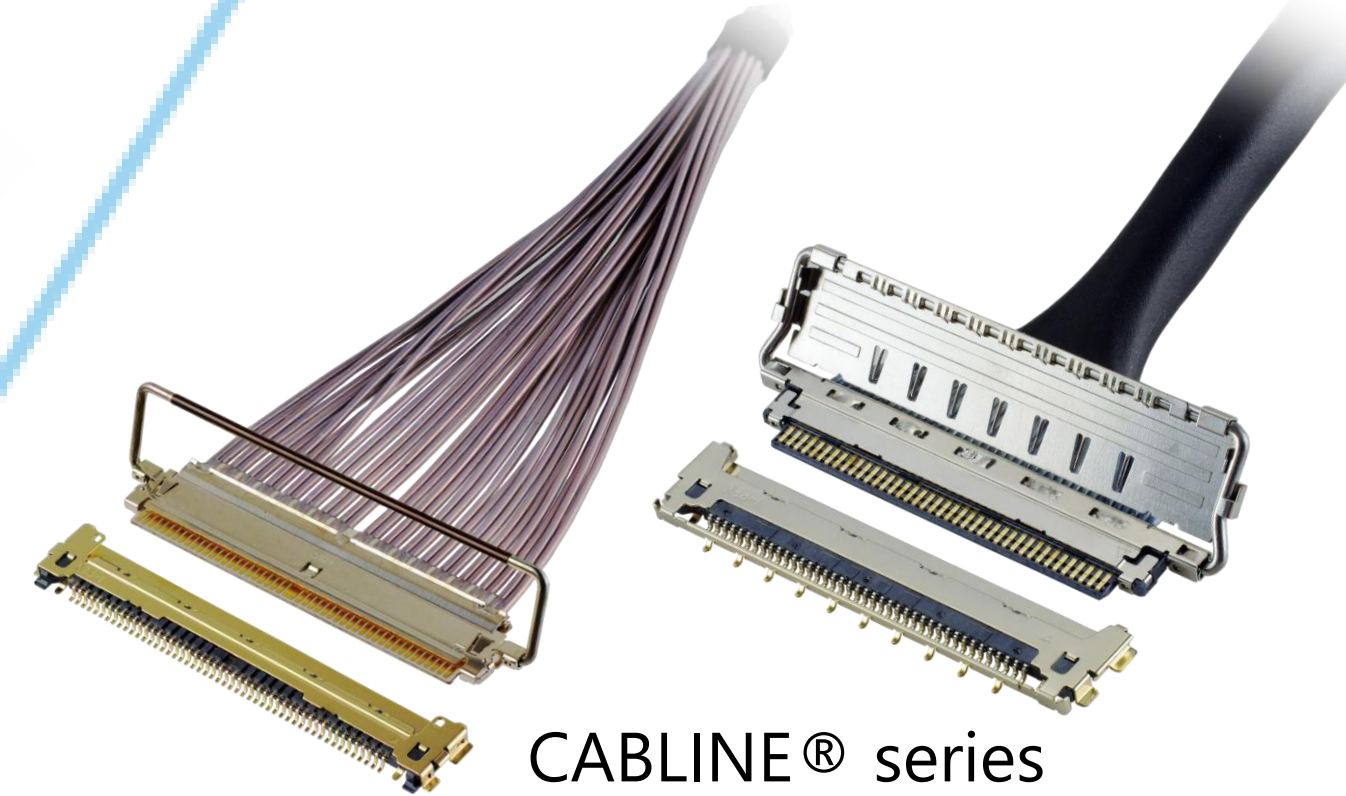
ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT PIN)
RATING AMPERAGE	0.35A AC/DC (PER CONTACT PIN) AVAILABLE FOR ALL CONTACTS 0.5A AC/DC (PER CONTACT PIN) AVAILABLE UP TO 15 CONTACTS
OPERATING TEMPERATURE	233~398K(-40°C~+125°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : ≦40mohm MAX.
INSULATION RESISTANCE	500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	50TH CYCLES
FPC/FFC MATING FORCE (INITIAL / 50TH CYCLES)	20P : 15.00 N MAX. 30P : 22.00 N MAX. 40P : 29.00 N MAX. 50P : 36.00 N MAX. 60P : 43.00 N MAX.
FPC/FFC UNMATING FORCE (INITIAL / 50TH CYCLES)	20P : 2.00 N MIN. 30P : 2.70 N MIN. 40P : 3.40 N MIN. 50P : 4.10 N MIN. 60P : 4.80 N MIN.
FPC/FFC RETENTION FORCE (INITIAL / AFTER TEST)	20P : 11.00 N MIN. 30P : 11.70 N MIN. 40P : 12.40 N MIN. 50P : 13.10 N MIN. 60P : 13.80 N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2305
TEST REPORT	TR-17100
PACKING STANDARD	PST-18002
INSTRUCTION MANUAL	HIM-16039
APPEARANCE CRITERIA No.	QLS-A***

Rev.12

Custom Connectors Available

RF Connectors

MHF® series



CABLINE® series

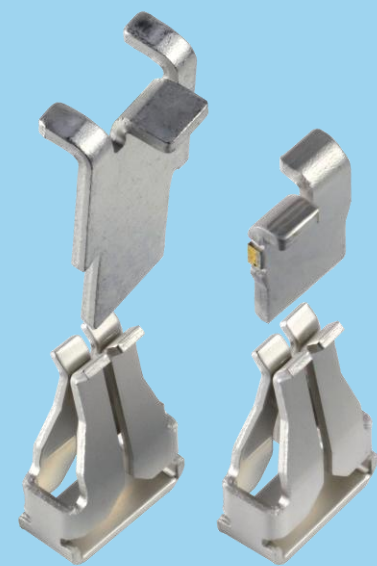


Micro-Coaxial/Twinaxial Connectors

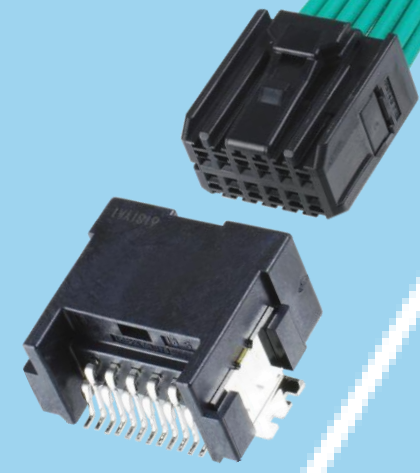


Wire-to-Board Connectors/ Terminals

AP series



ISH® series



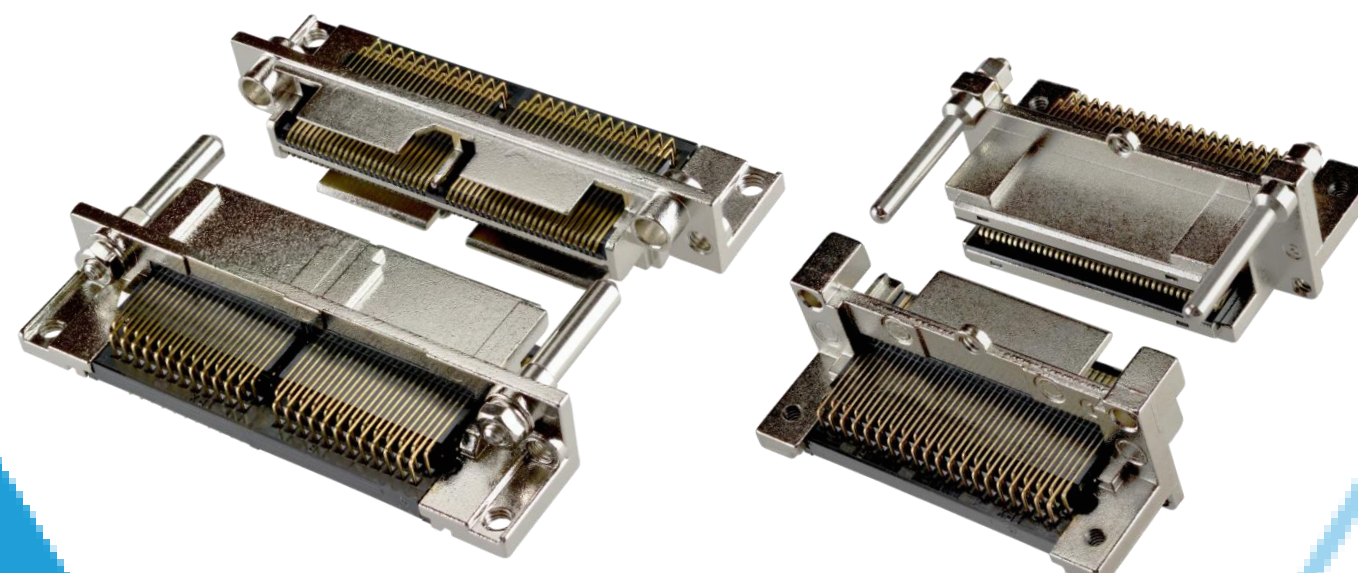
NOVASTACK® series



Board-to-Board Connectors



I/O Connectors



MINIDOCK™ series

MINIFLEX® series EVAFLEX® series



FPC/FFC Connectors



Inquiry



I-PEX, MHF, CABLINE, NOVASTACK, ISH, IARPB, MINIFLEX, EVAFLEX, MINIDOCK, i-Fit and ZenShield are registered trademarks of I-PEX Inc. Please note that the contents in the catalog might be changed without prior notification. I-PEX Inc. assumes no responsibility for any inaccuracies or obligation to update Information on these documents. Please be sure to read and understand the latest "Precautions for Use" and "Instruction Manual" before you use our products. We shall not be responsible for any defects, damages or troubles in case you use our products without following the precautions for use. Please feel free to contact our sales representatives when you use our products for any applications that require very high reliability and safety, or that relate to human life (ex. nuclear power control, aerospace, transportation, medical equipment, safety equipment etc.).

Contact your sales representative
or more detailed information.

www.i-pex.com



I-PEX

© I-PEX Inc. 2025
All rights reserved