

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 (mm)	0.5	
Wiping Length (mm)	1.2	
Size (mm)	Height	6.6 +/- 0.30
	Width	Formula: 8.00 + (0.5*?p)
	Depth	3.90 +/- 0.20
Pin counts	Range	20 - 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 (mm)	0.30 +/- 0.03

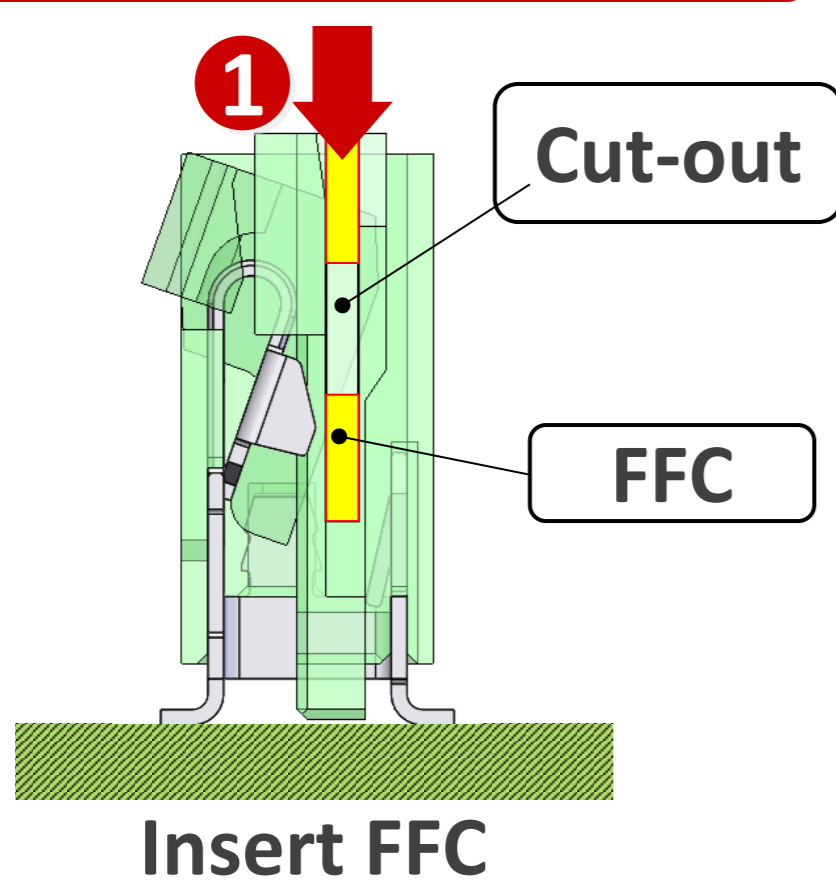
Applicable Standards (Reference Only):

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

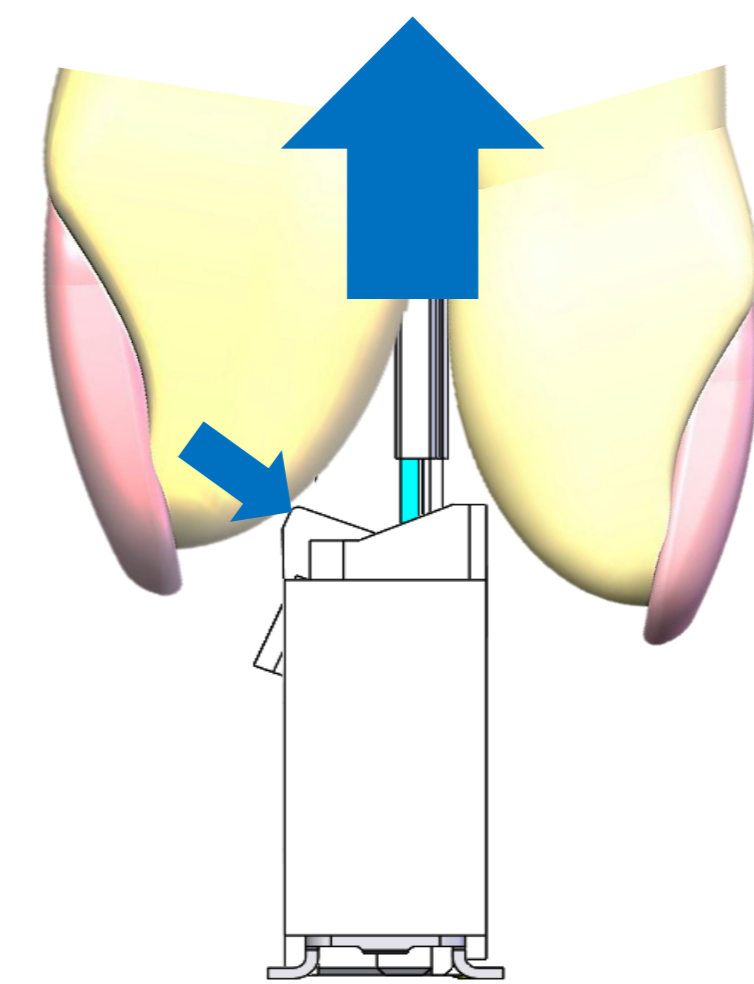
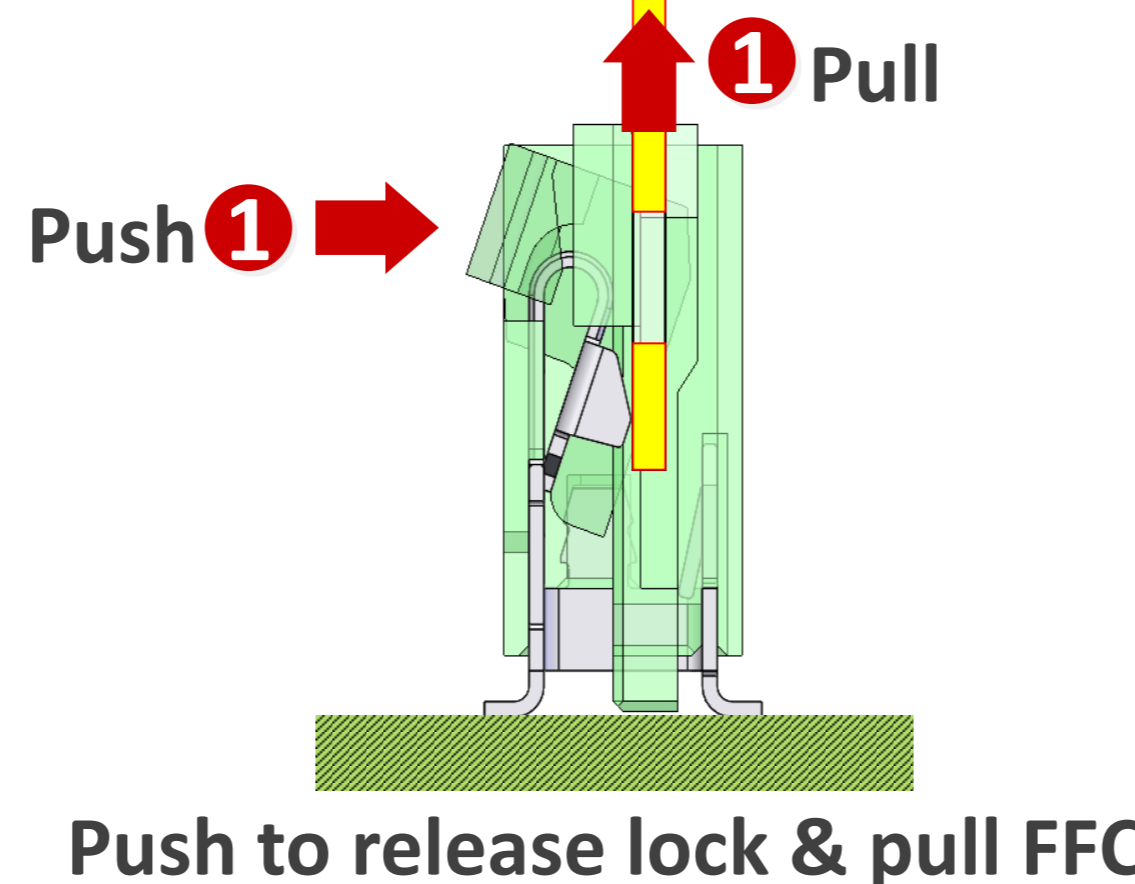
* Please inquire for pin counts not listed or outside of the pin count range.

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

One action FFC mating



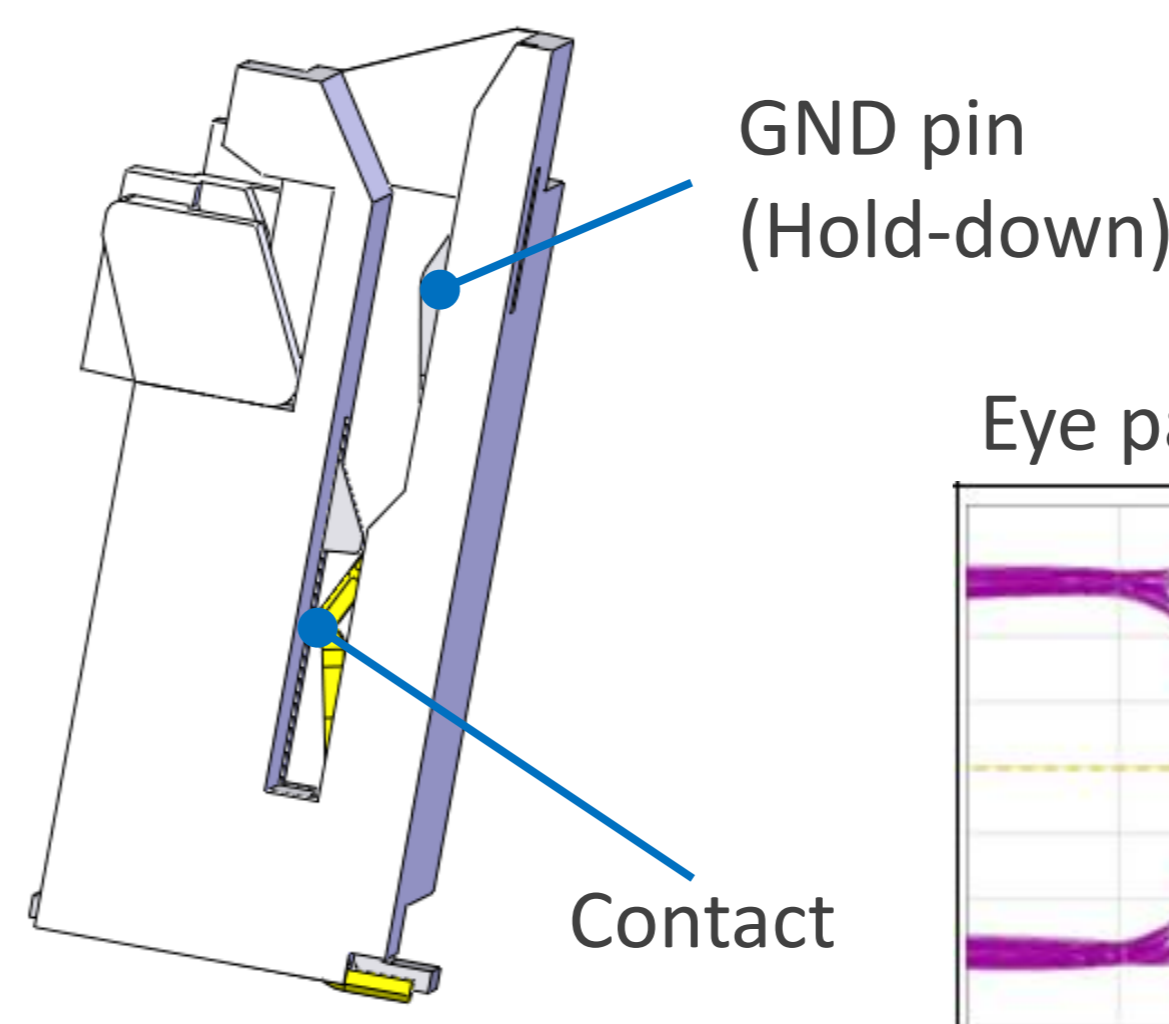
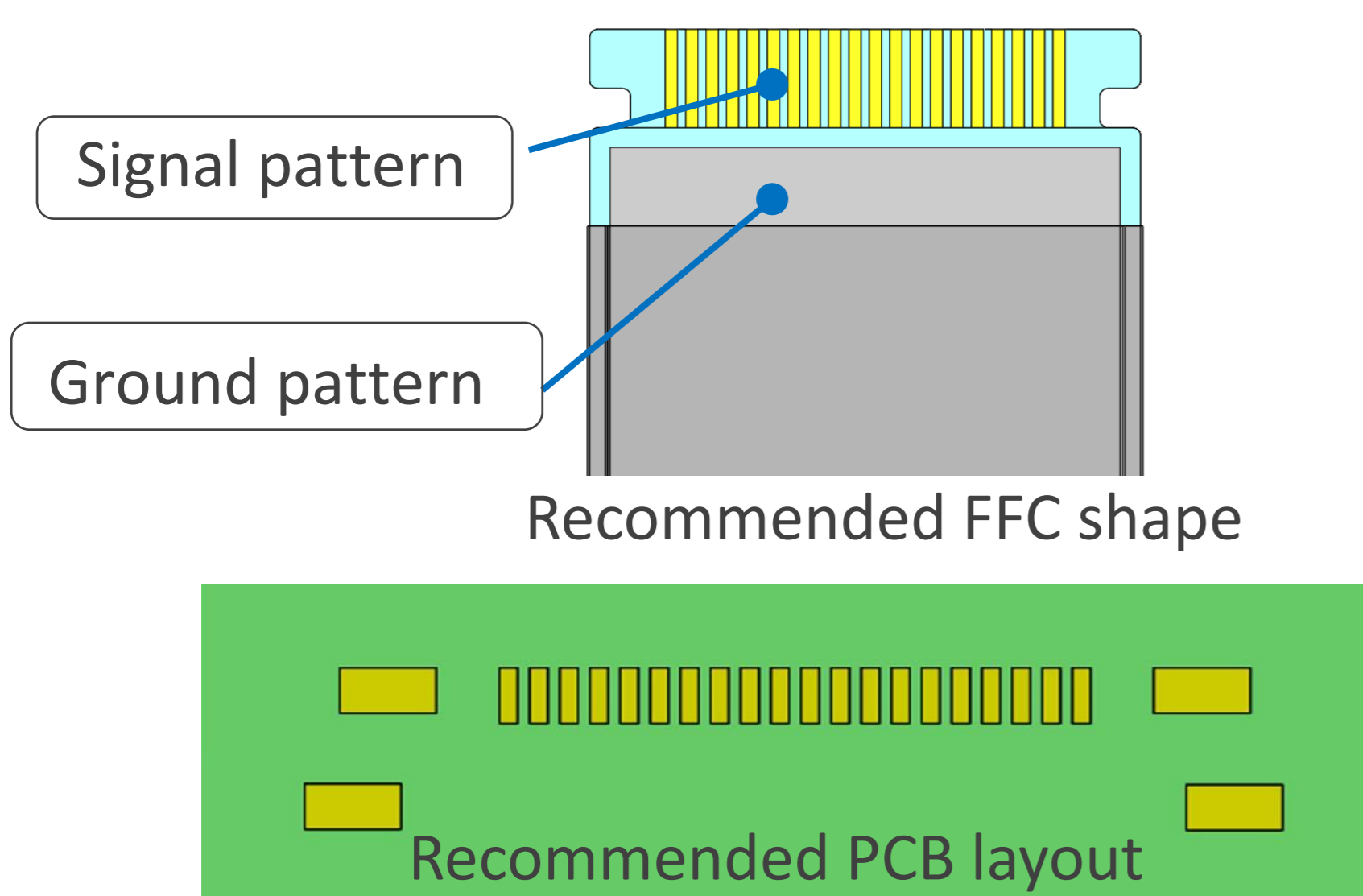
One action FFC removal



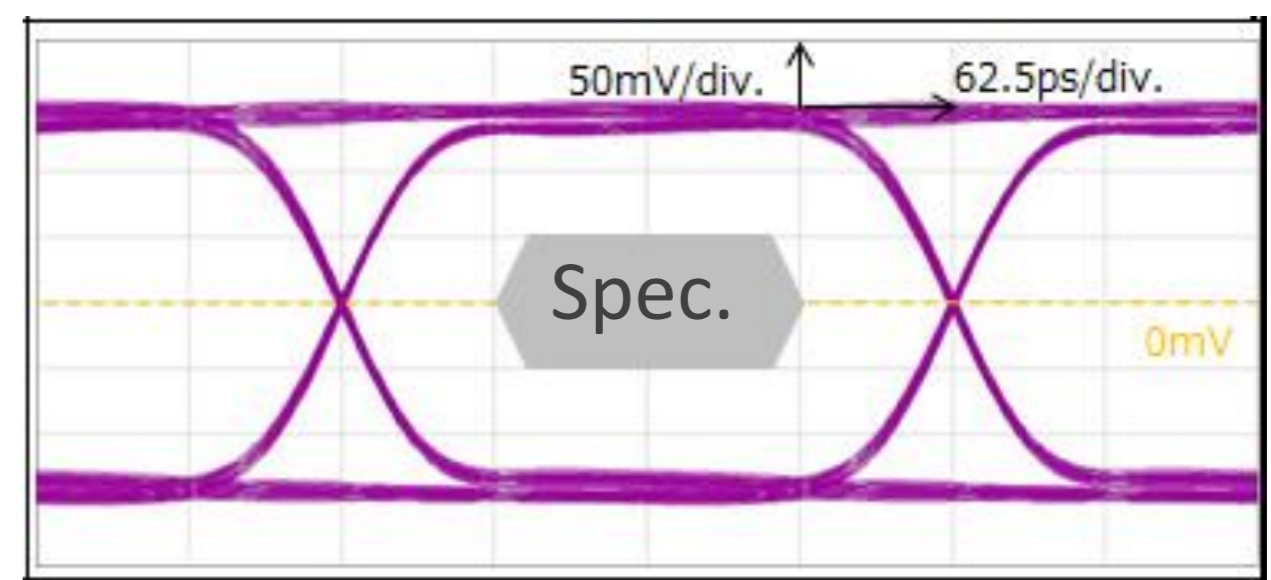
Release lock and pull FFC at same time for one-hand operation.

▶ 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)

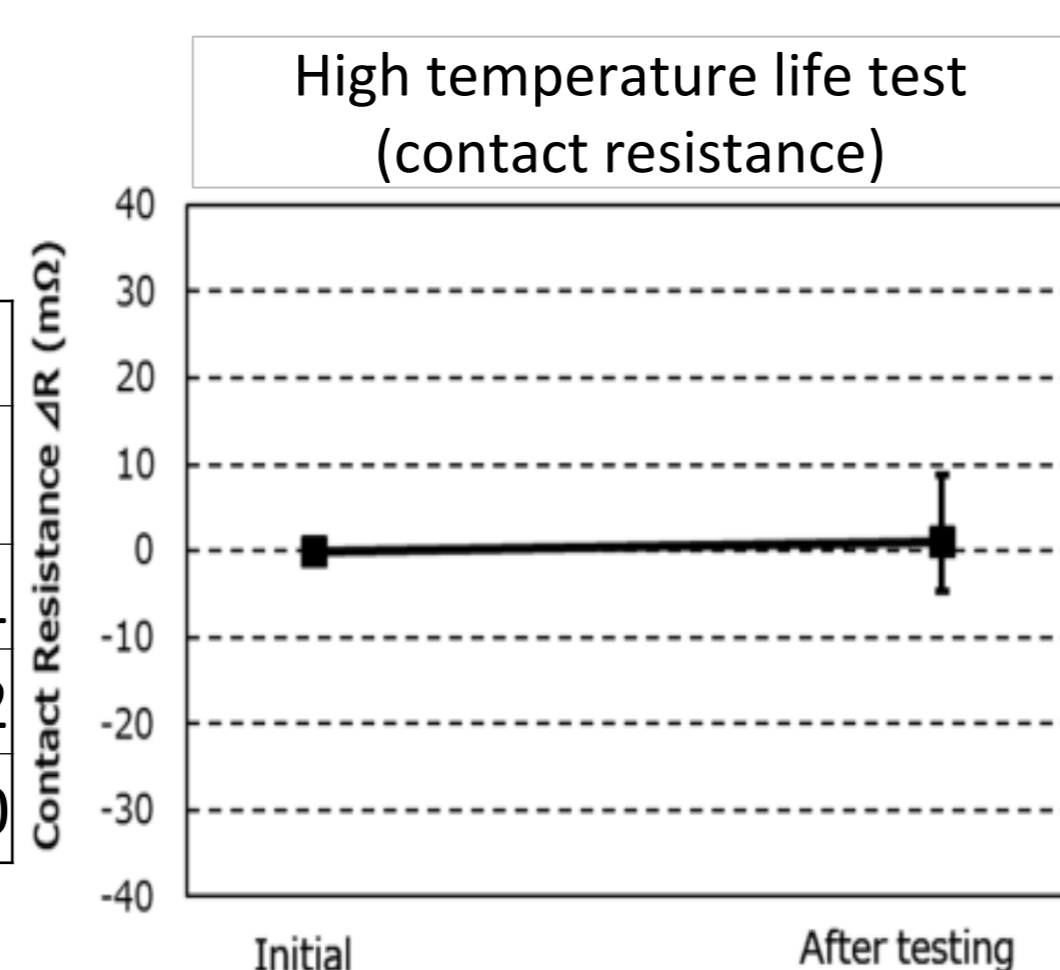


▶ High-Heat and High-Durability Connectors for Automotive and Industrial Applications

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±2k (125±2°C)
Test hours : 1000h

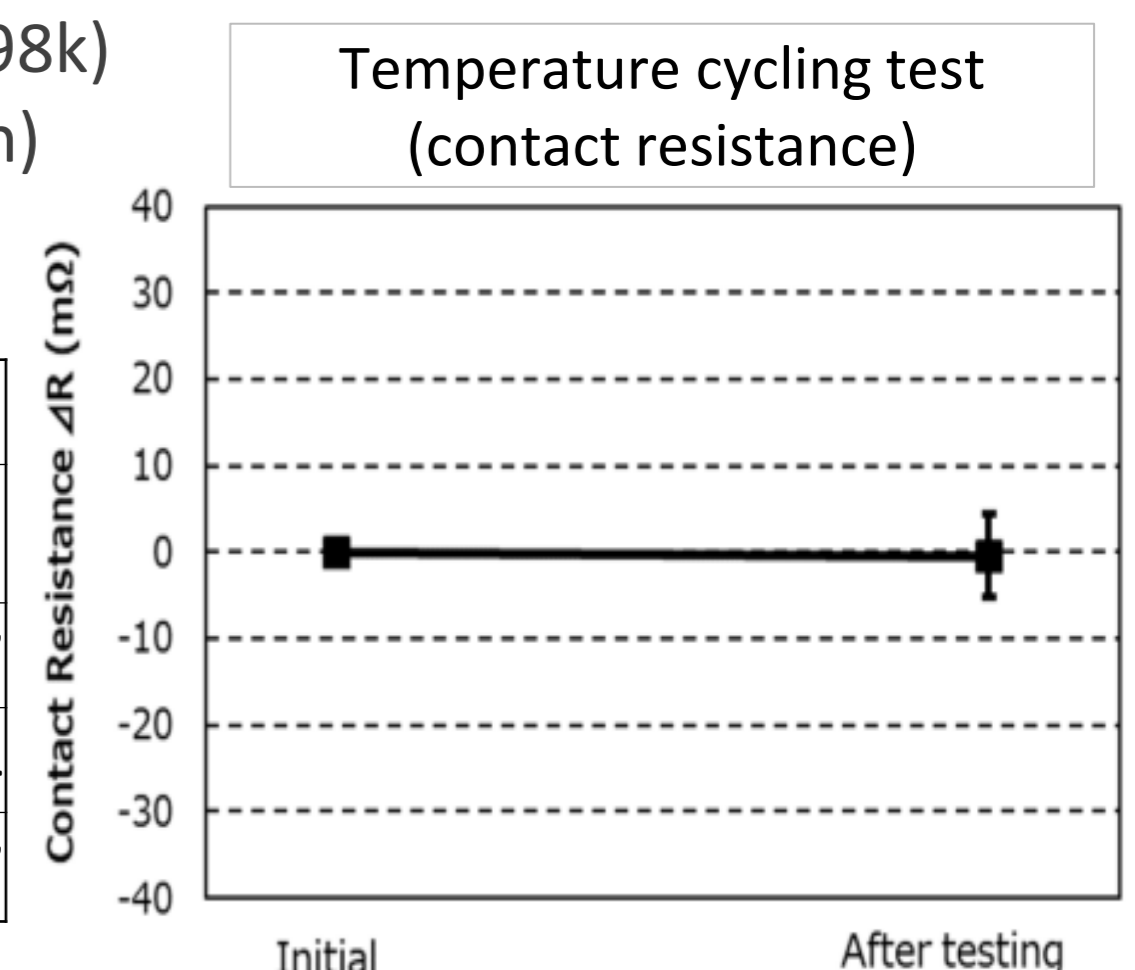
	Initial	After Testing
SPEC	60mΩ MAX.	ΔR=40mΩ MAX.
Ave.	6.616	1.101
Max	8.80	8.72
Min.	4.18	-4.70



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

Test hour:100 cycle

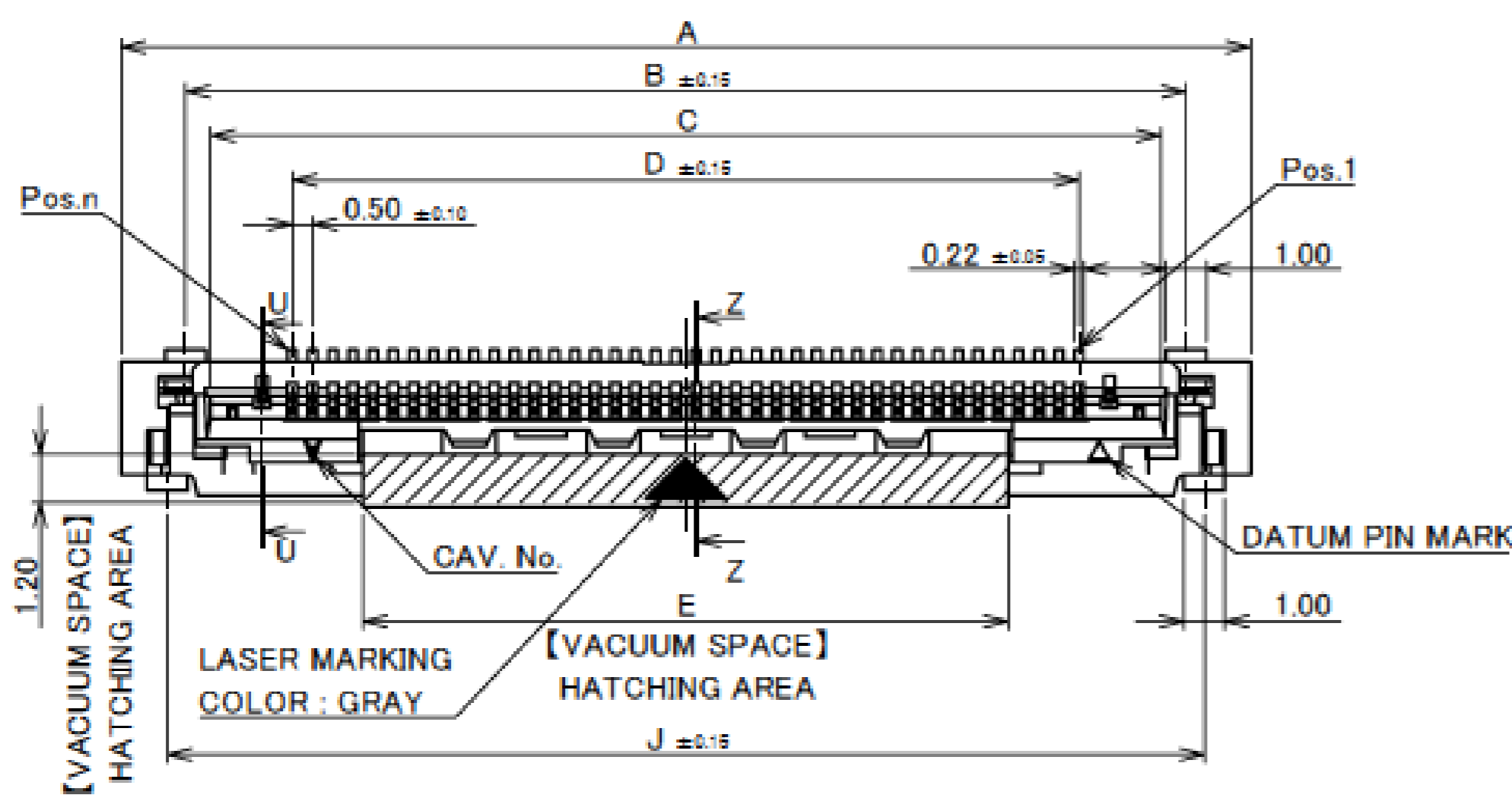
	Initial	After Testing
SPEC	60mΩ MAX.	ΔR=40mΩ MAX.
Ave.	6.704	-0.477
Max	9.03	4.54
Min.	4.05	-5.17



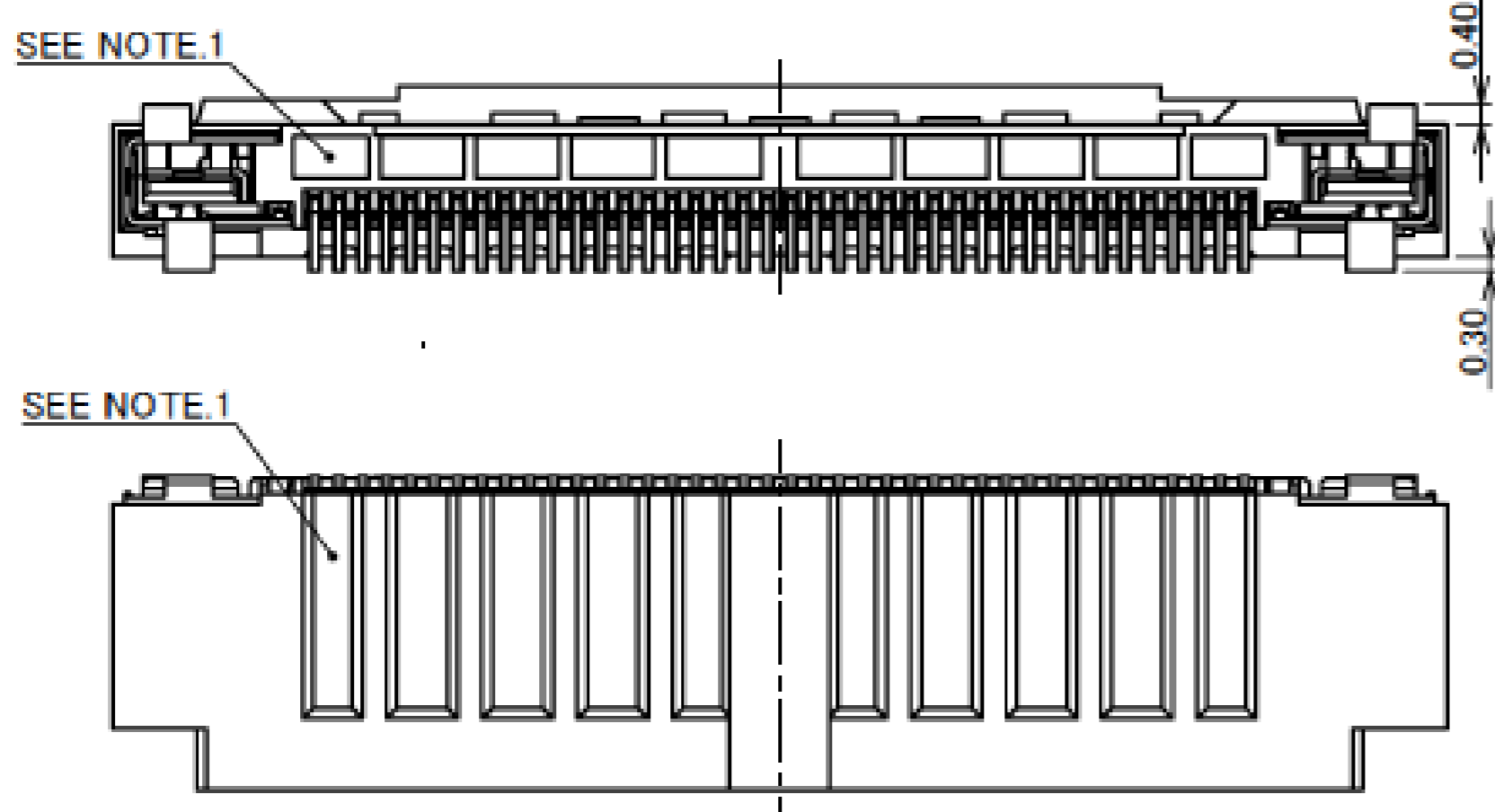
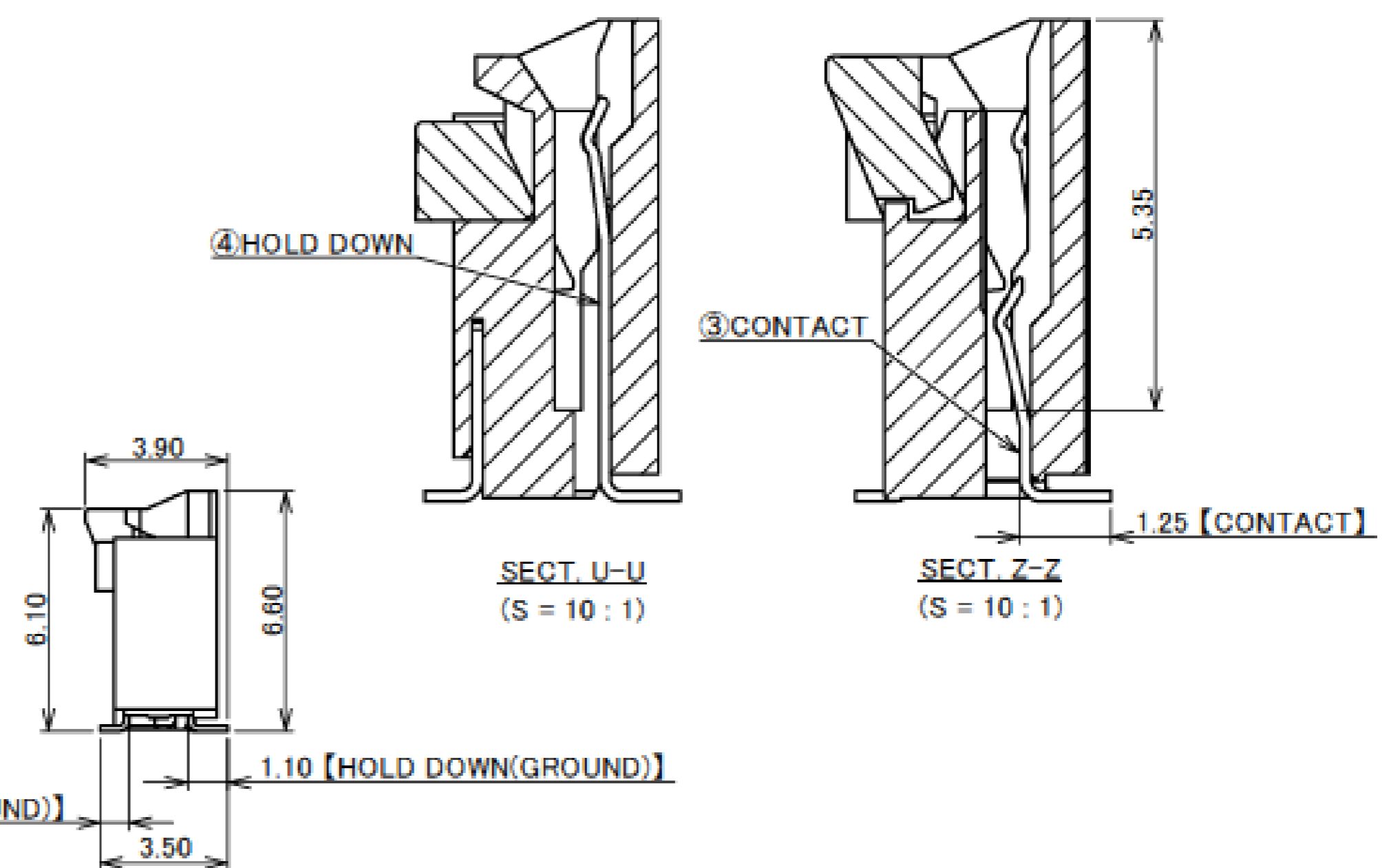
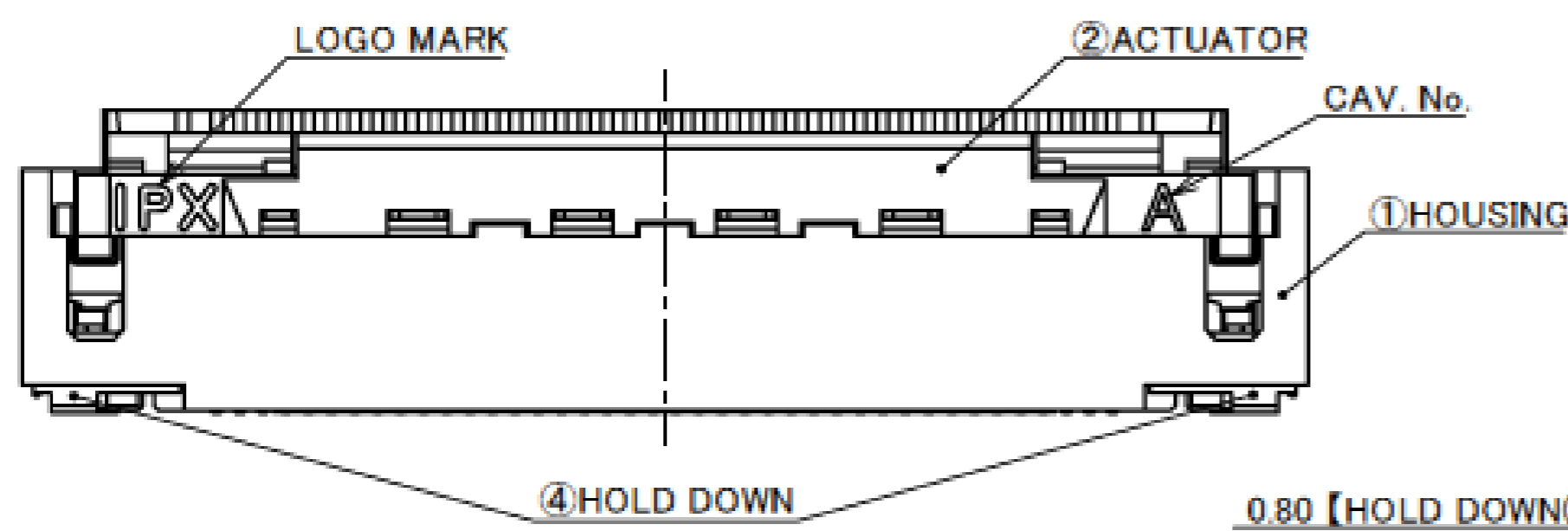
Component Parts Details

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



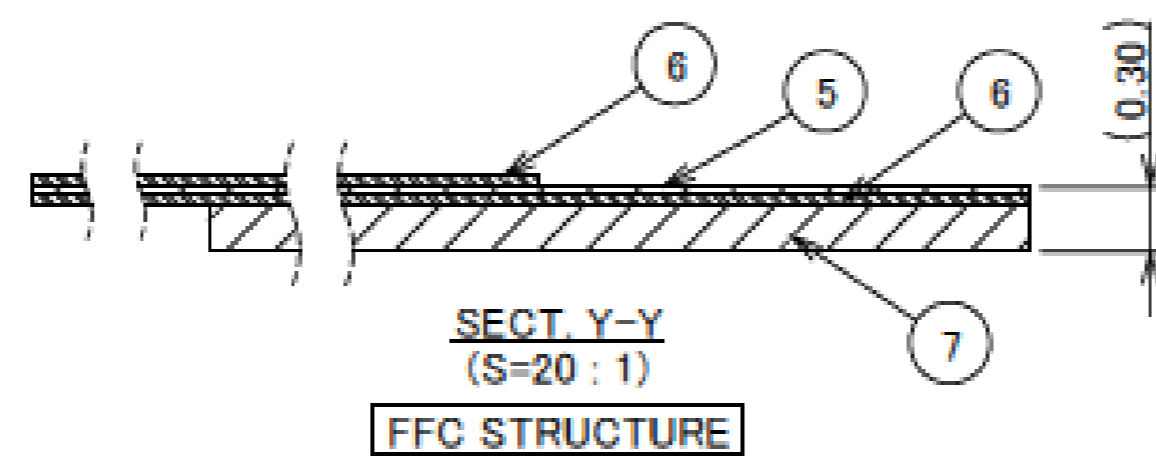
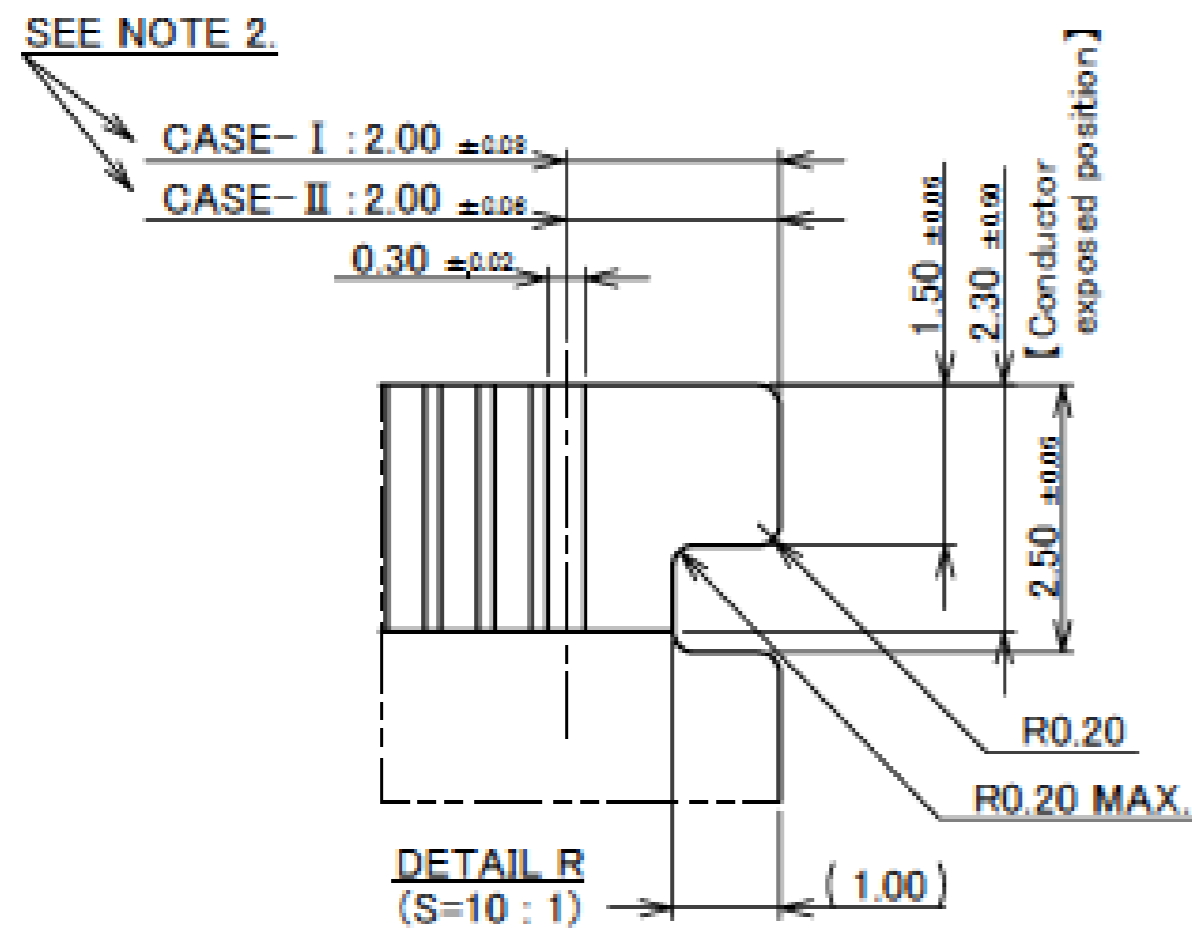
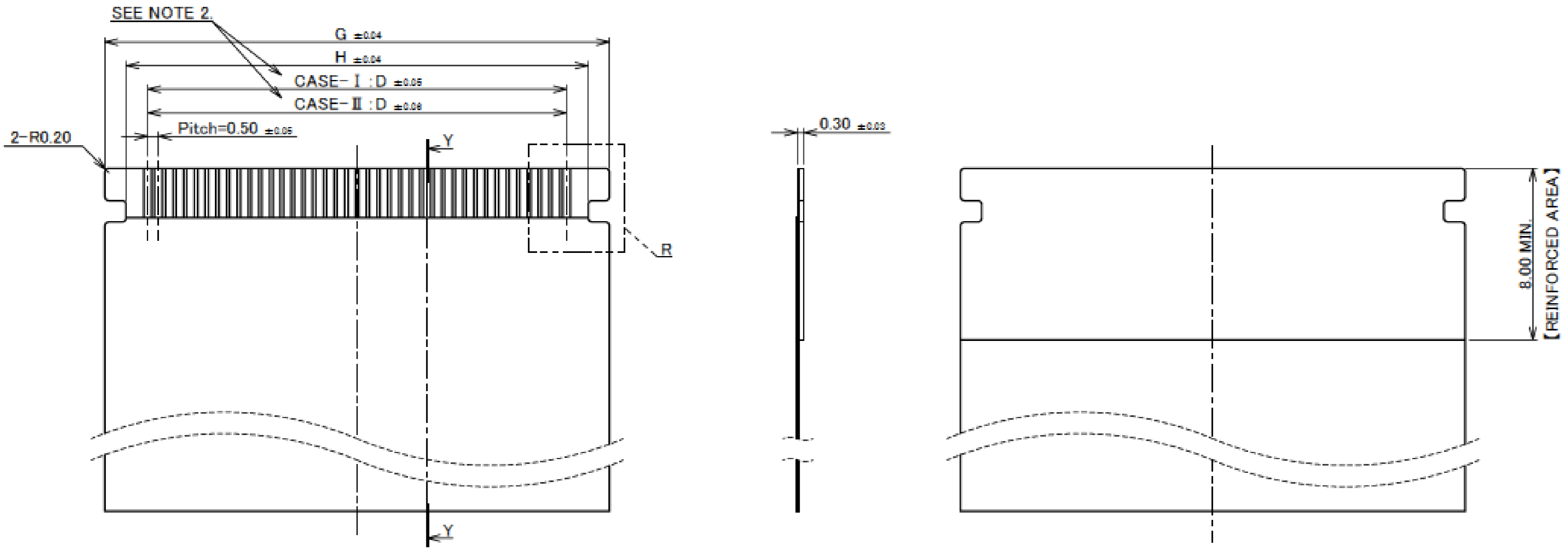
NOTES.
1. DENT SHAPE SHOWN ON DRAWING IS JUST FOR REFERENCE.
DENT SHAPE AND QUANTITY MIGHT CHANGE FROM DIFFERENT PIN COUNT AND DIFFERENT TOOLING.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
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

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】



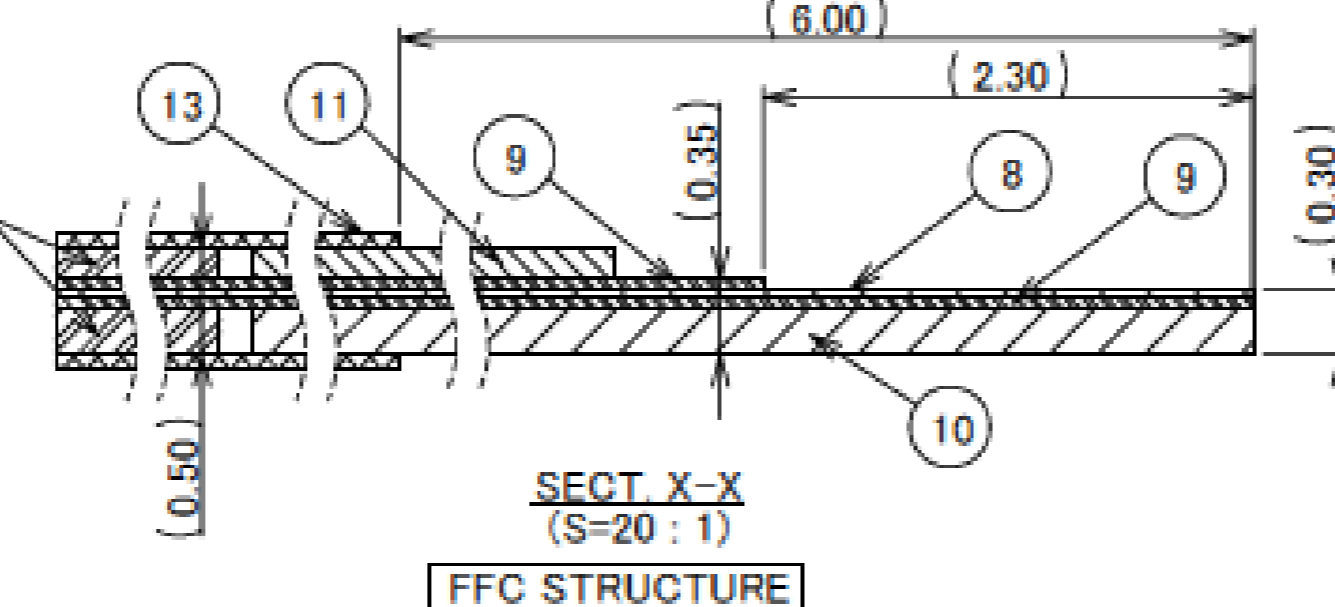
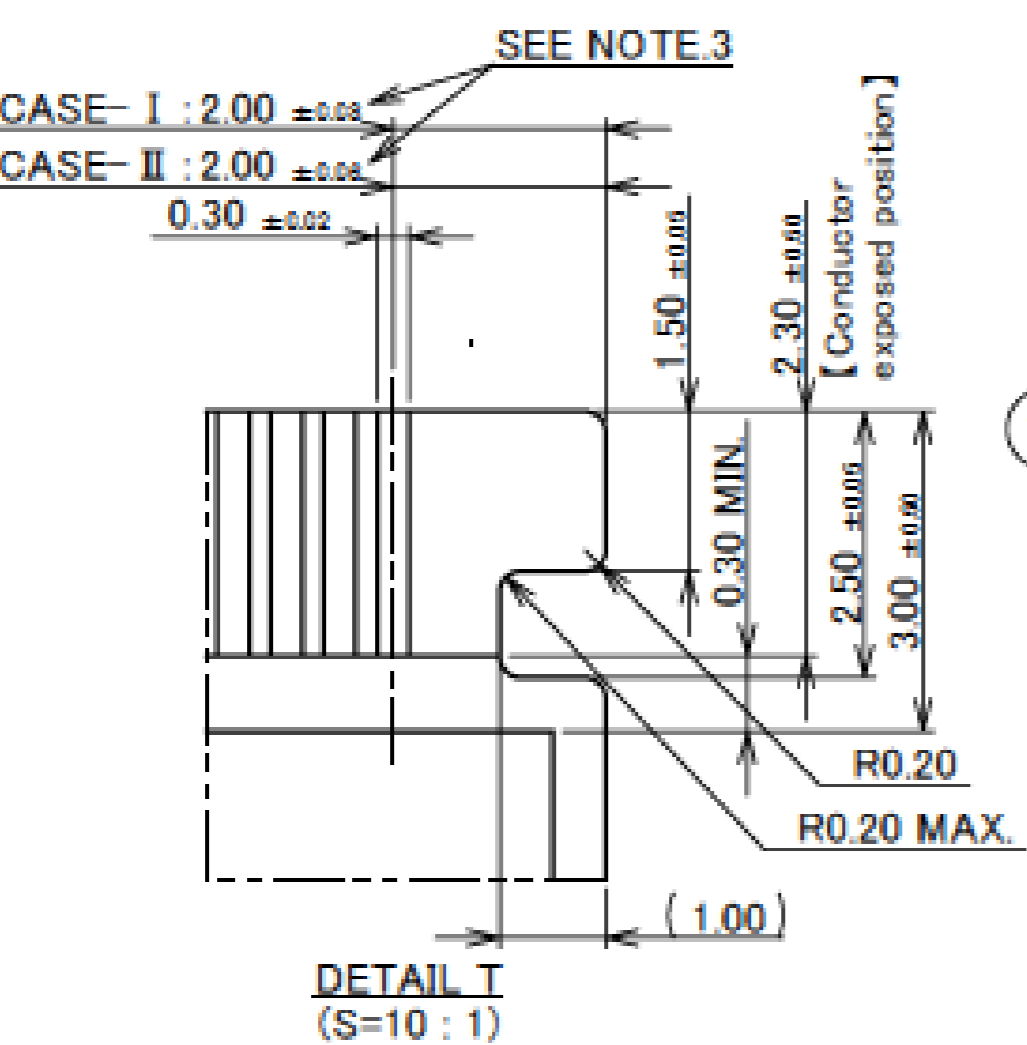
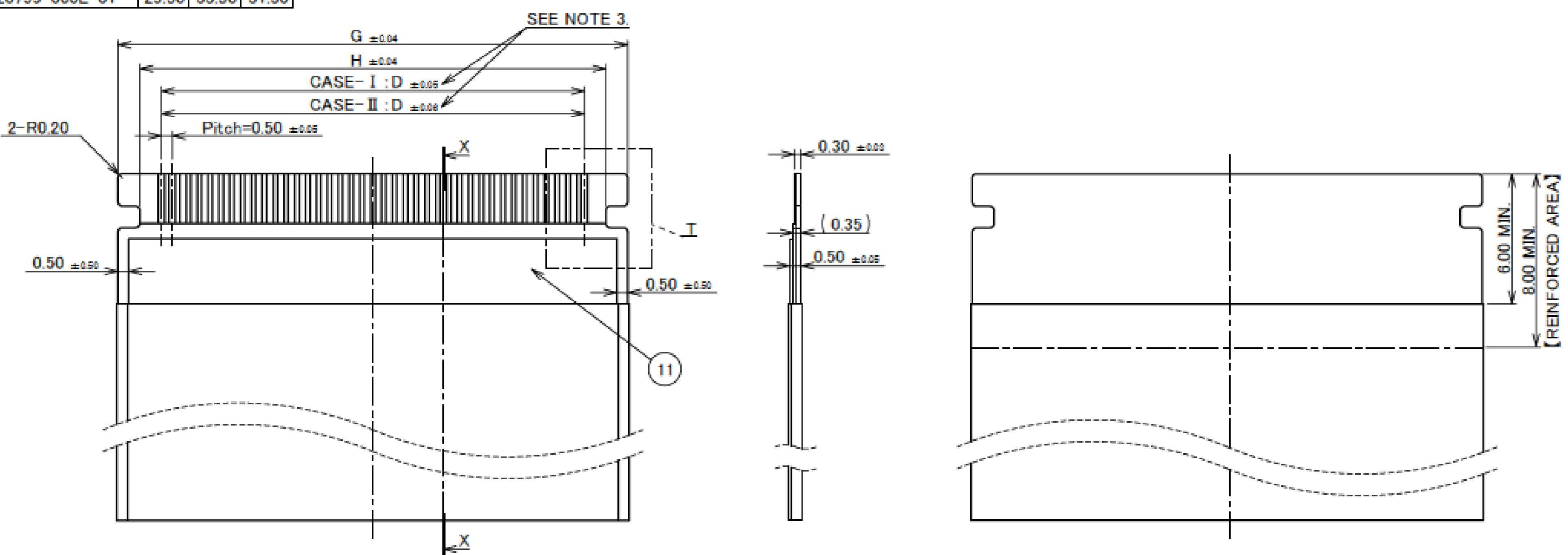
NOTES.
2. MANUFACTURE CASE- I or II
3. SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF 85°C OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

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

Rev.11

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】



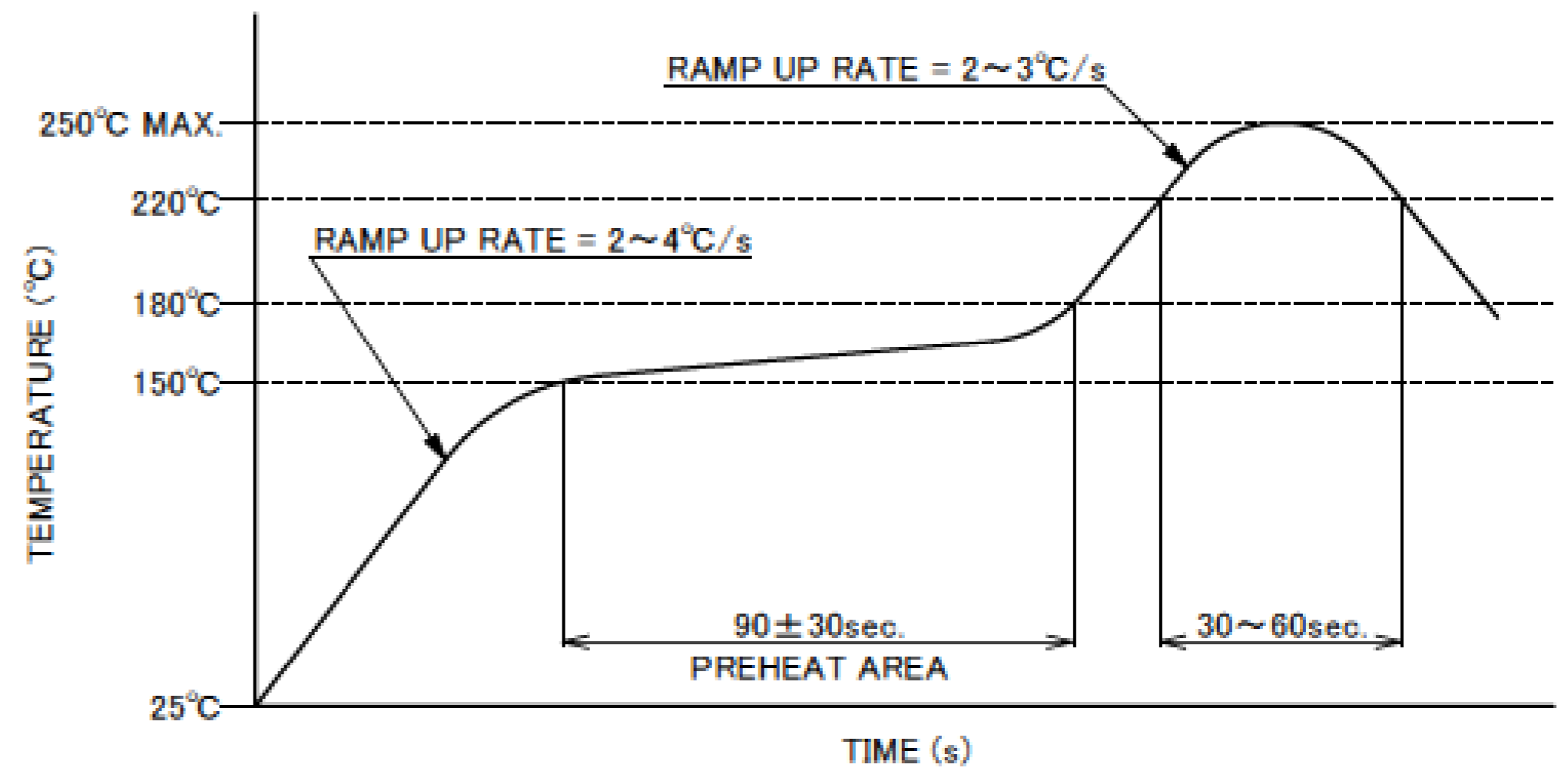
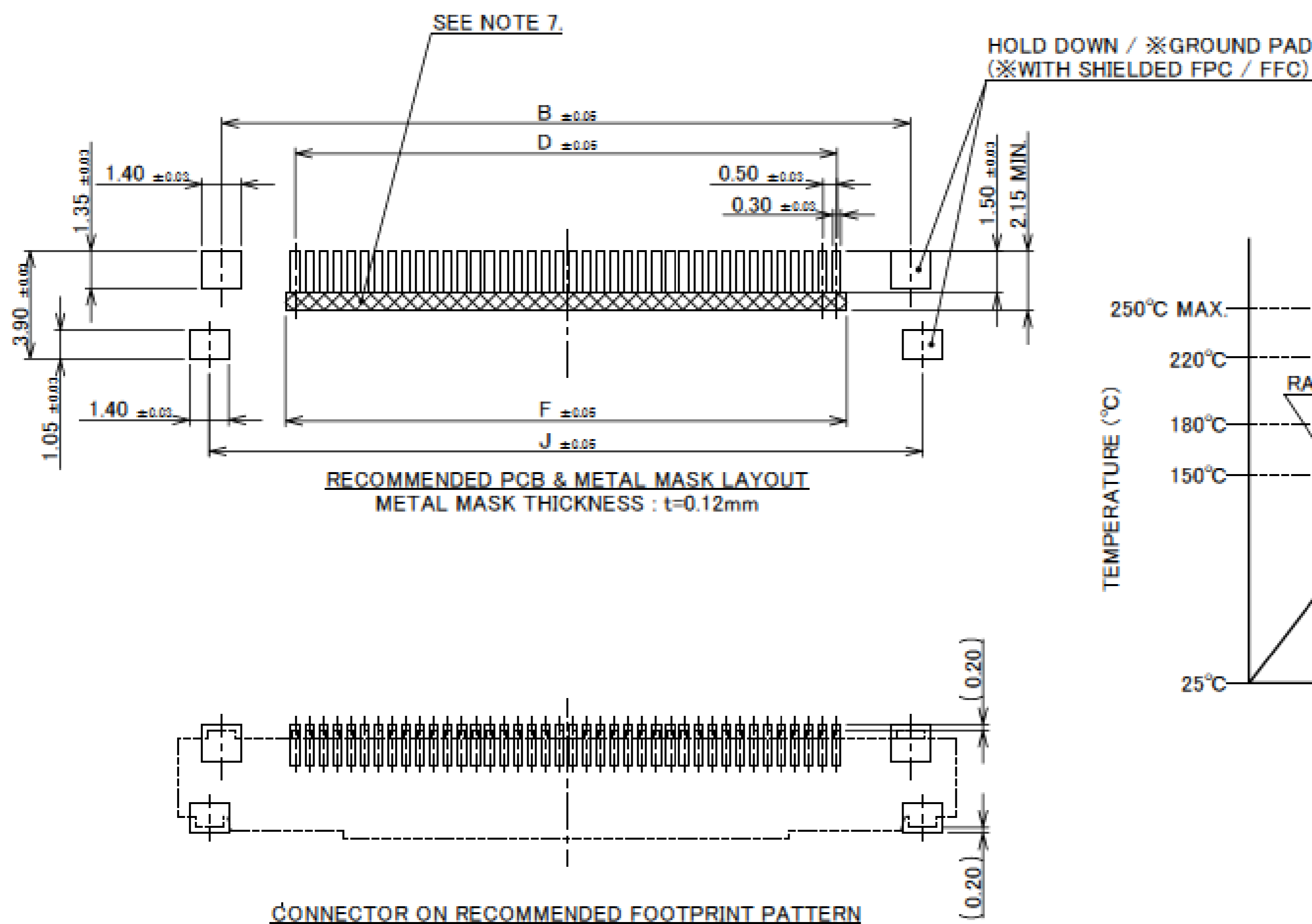
NOTES.
4. MANUFACTURE CASE- I or II
5. DIFFERENTIAL IMPEDANCE : 100±10Ω
6. SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF 85°C OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

NO.	COMPONENTS	MATERIAL	FINISH
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 μm MIN. OVER Ni 0.5 μm MIN.

Rev.11

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.11

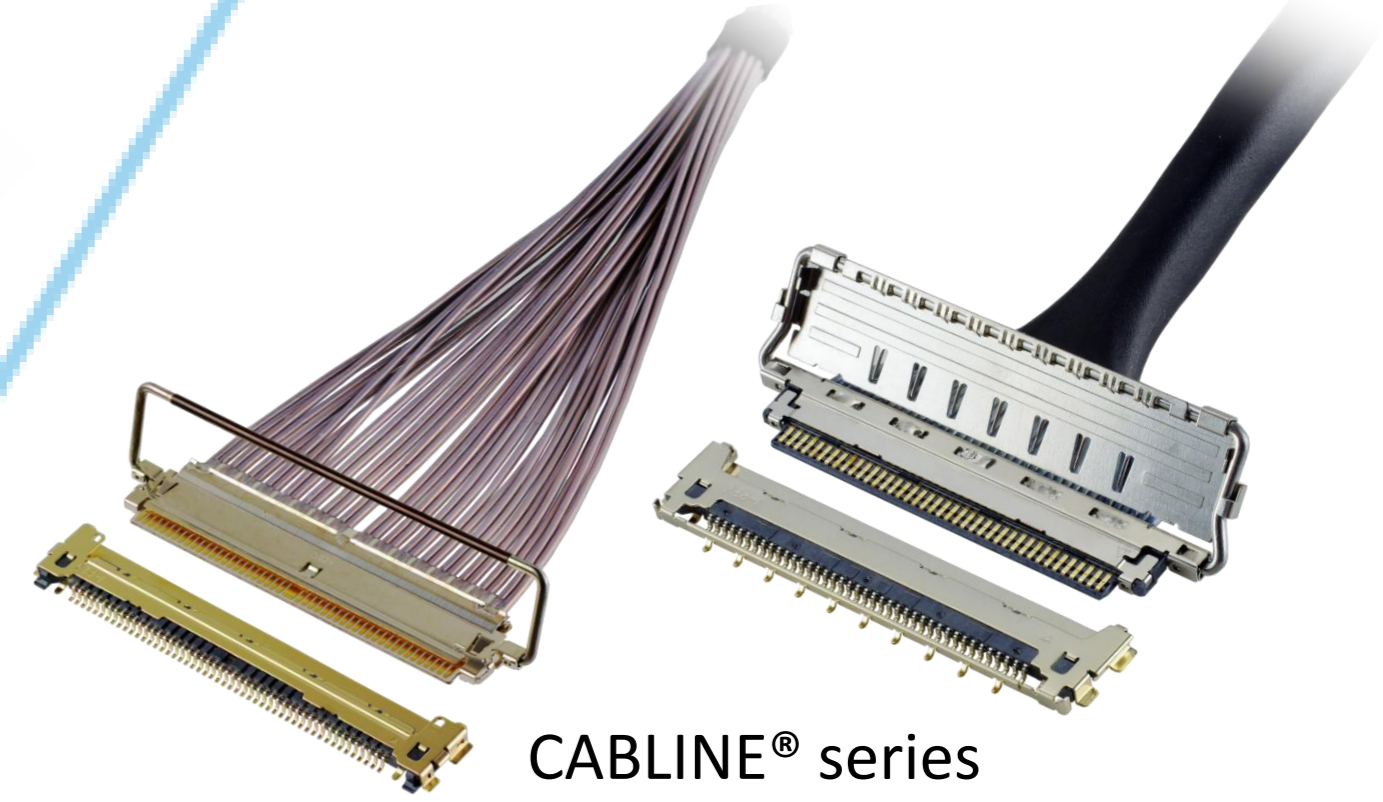
ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT PIN)
RATING AMPERAGE	0.35A AC/DC (PER CONTACT PIN) AVAILABLE FOR ALL CONTACTS 0.5A AC/DC (PER CONTACT PIN) AVAILABLE UP TO 15 CONTACTS
OPERATING TEMPERATURE	233~398K(-40°C~+125°C)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : \triangle40mohm 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.11

Custom Connectors Available

 RF Connectors

MHF® series



CABLIN® series

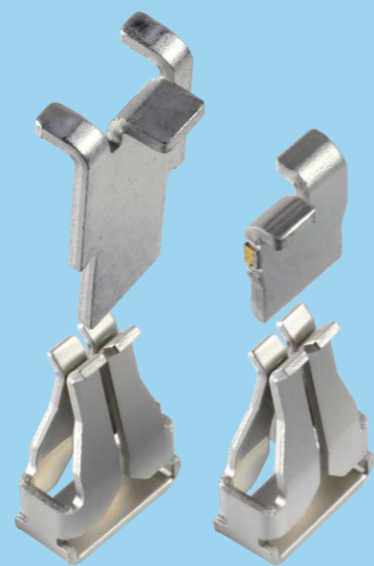


Micro-Coaxial/Twinaxial Connectors

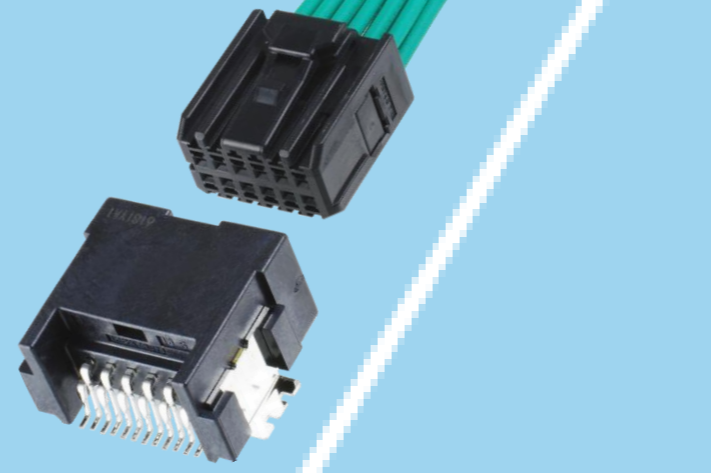


Wire-to-Board Connectors/Terminals

AP series



ISH® series



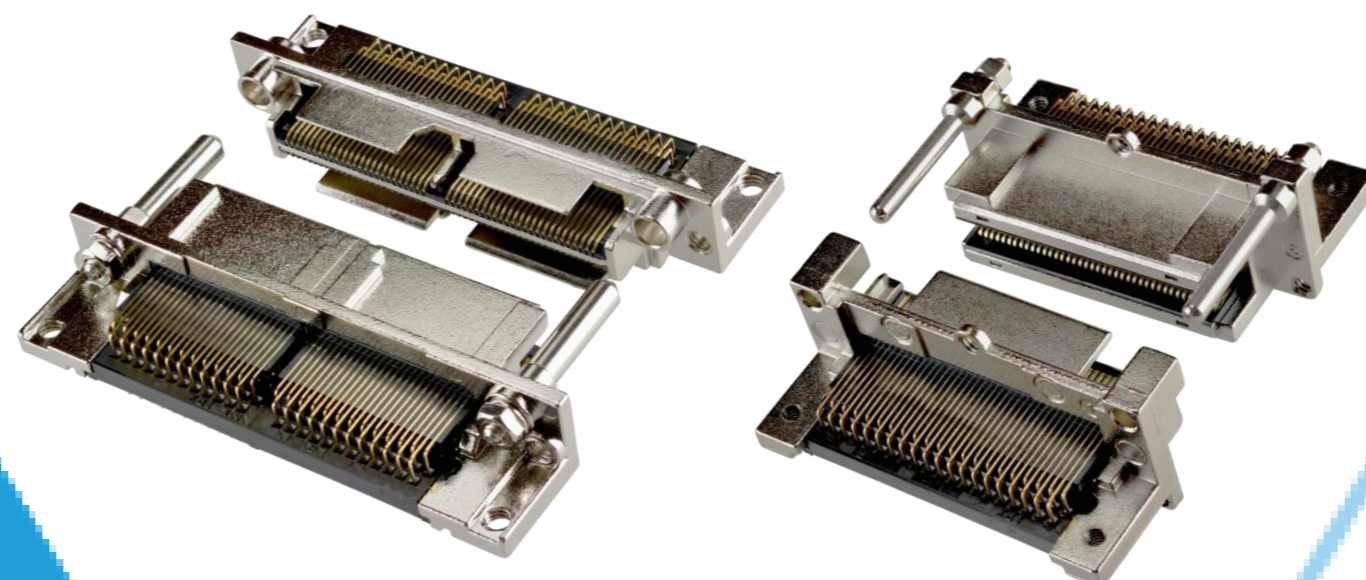
NOVASTACK® series



Board-to-Board Connectors



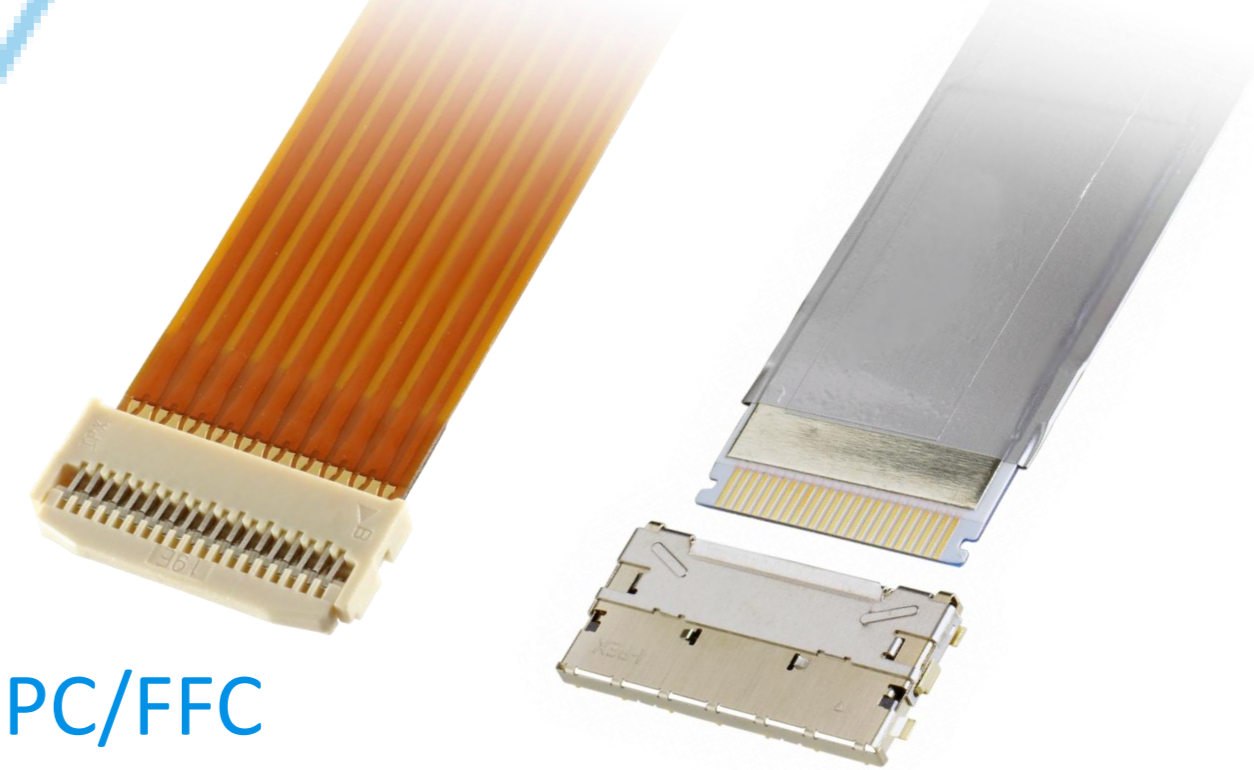
I/O Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC Connectors



Inquiry



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