

MINIFLEX® 5-BFN II

Robust design with hold-down feature, high temperature resistance (125°C), low profile (height 1.0 mm), 0.5 mm pitch, horizontal, backflip

Product Specifications:		Short Actuator	Long Actuator
Board Pitch		0.5 mm	
Wiping Length		1 mm	
Size	Height	1.0 +/- 0.1 mm	
	Width	1.7 + (0.5 x pin count) mm	
	Depth	Open: 3 mm Close: 3.5 mm	
Pin Counts	Range	4 to 30	32 to 60
	Available	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	32, 34, 40, 50, 54

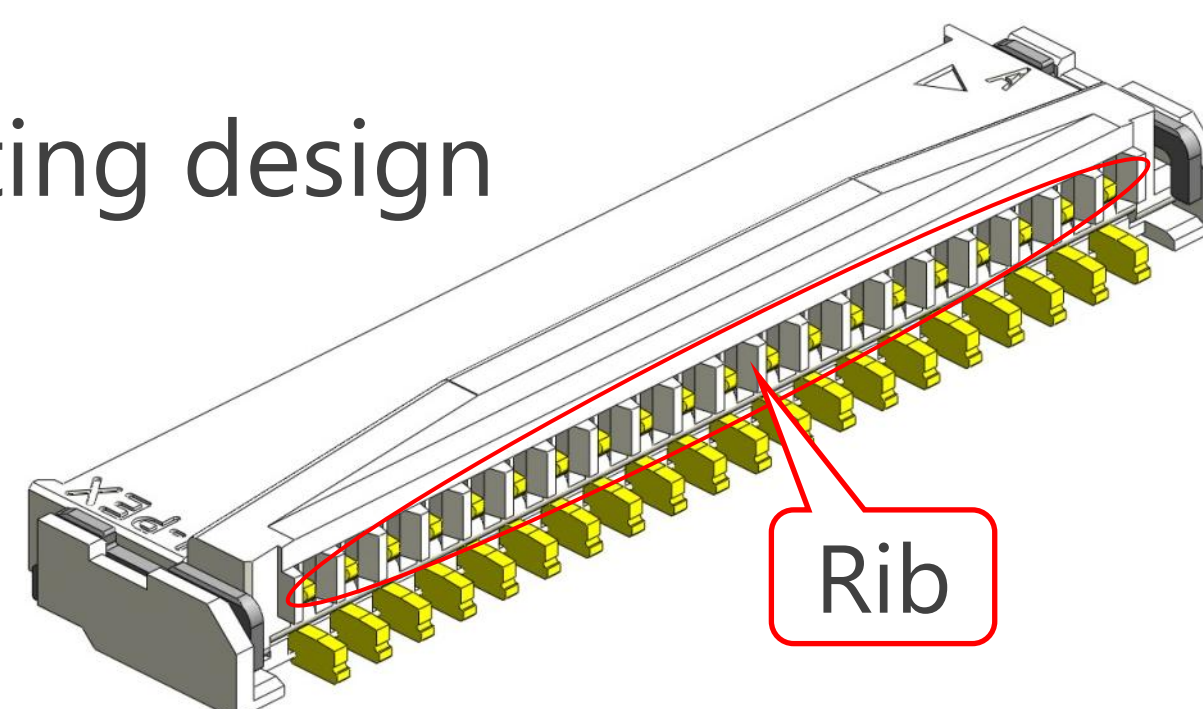
Applicable FPC/FFC:

FPC/FFC Contact Pitch	0.5
FPC/FFC Contact Point	Top and Bottom
FPC/FFC Thickness	0.3 +/- 0.03 mm

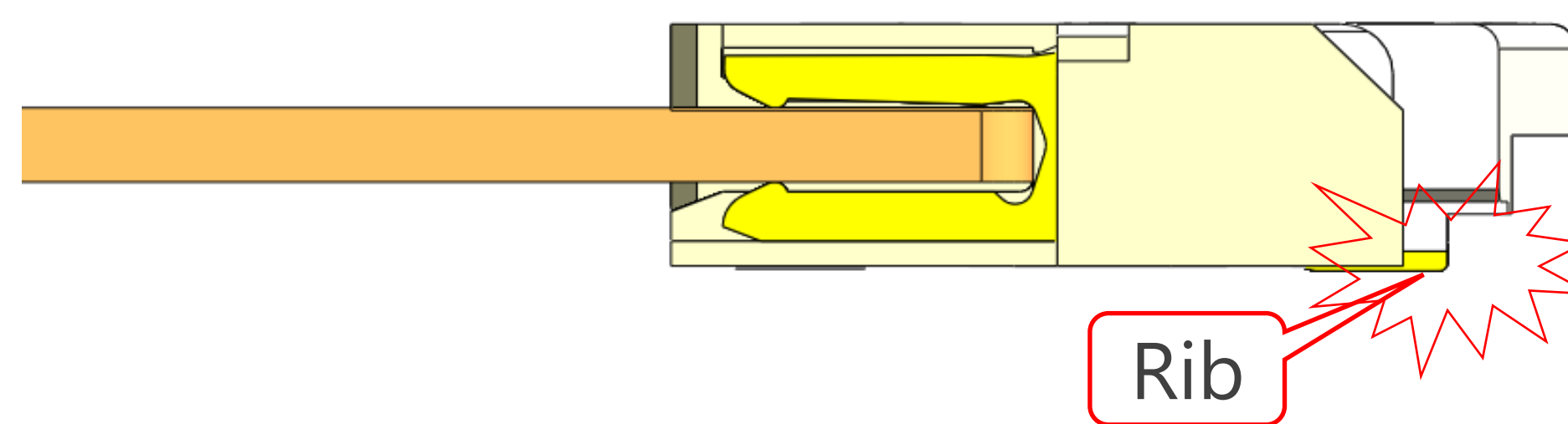


► Designed to prevent contact distortion

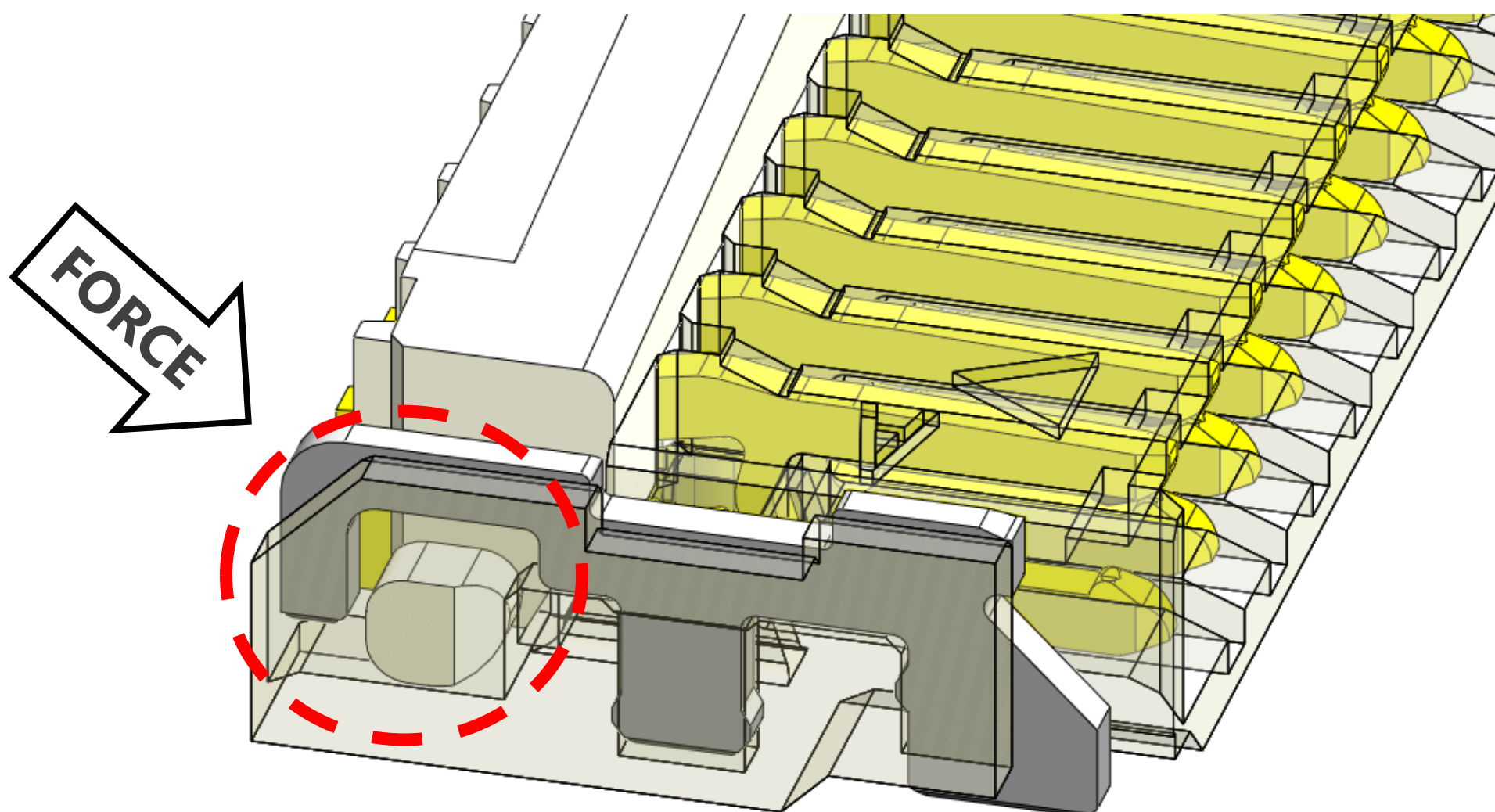
Contact distortion preventing design



When opening the actuator, the rib will prevent the contacts being pulled up



► Unique actuator holder design prevents actuator drop-off



Actuator will not fall-off even at 100 N force

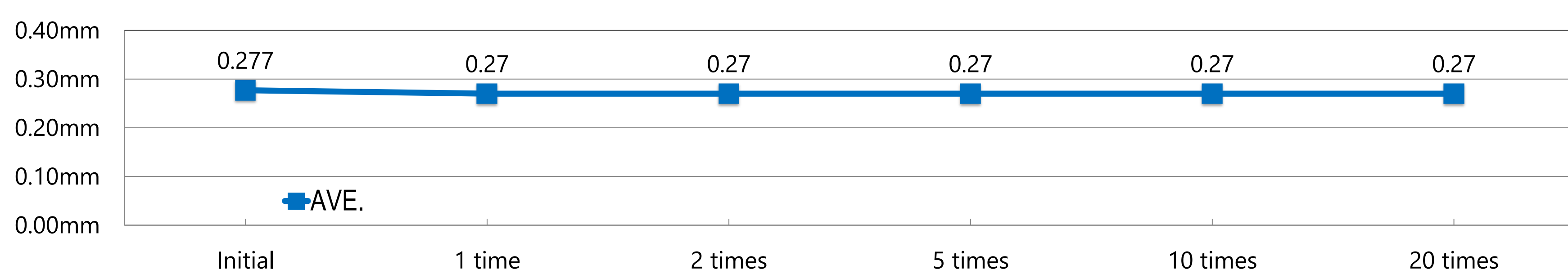
*Housing destruction occurs first

*Force applied from 30 degrees backwards

► Usability for closing actuator without FPC

The connector will still function even if the actuator is accidentally closed without the FPC being inserted after the SMT process

■ Connector will still function reliably (contact gap graph 22 pins before and after operating actuator without FPC inserted)



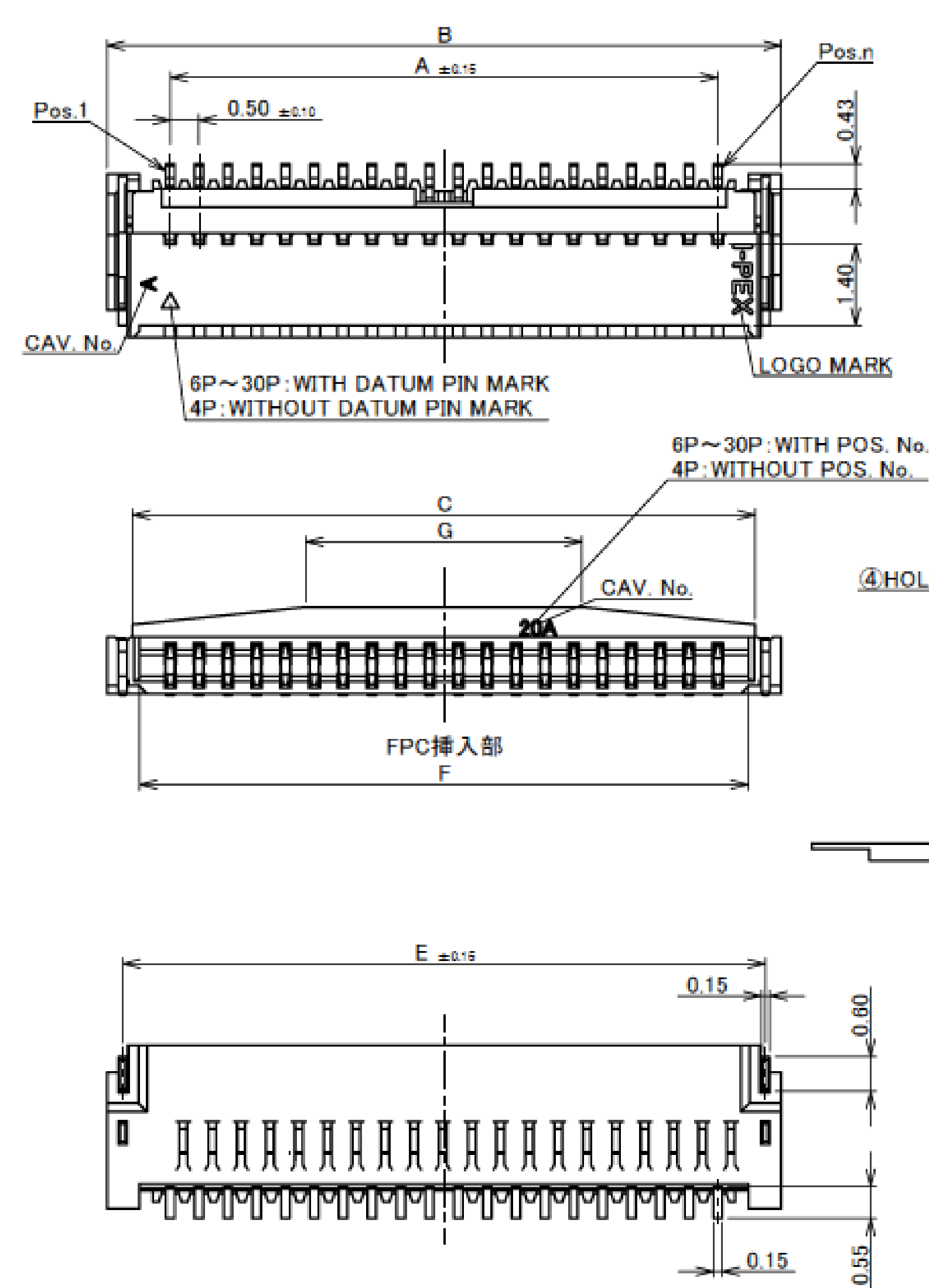
■ Insertion force of connector goes up

■ Retention force of connector does not change significantly

Component Parts Details

Connector Assembly

Recommended P/N 20542-0**E-01



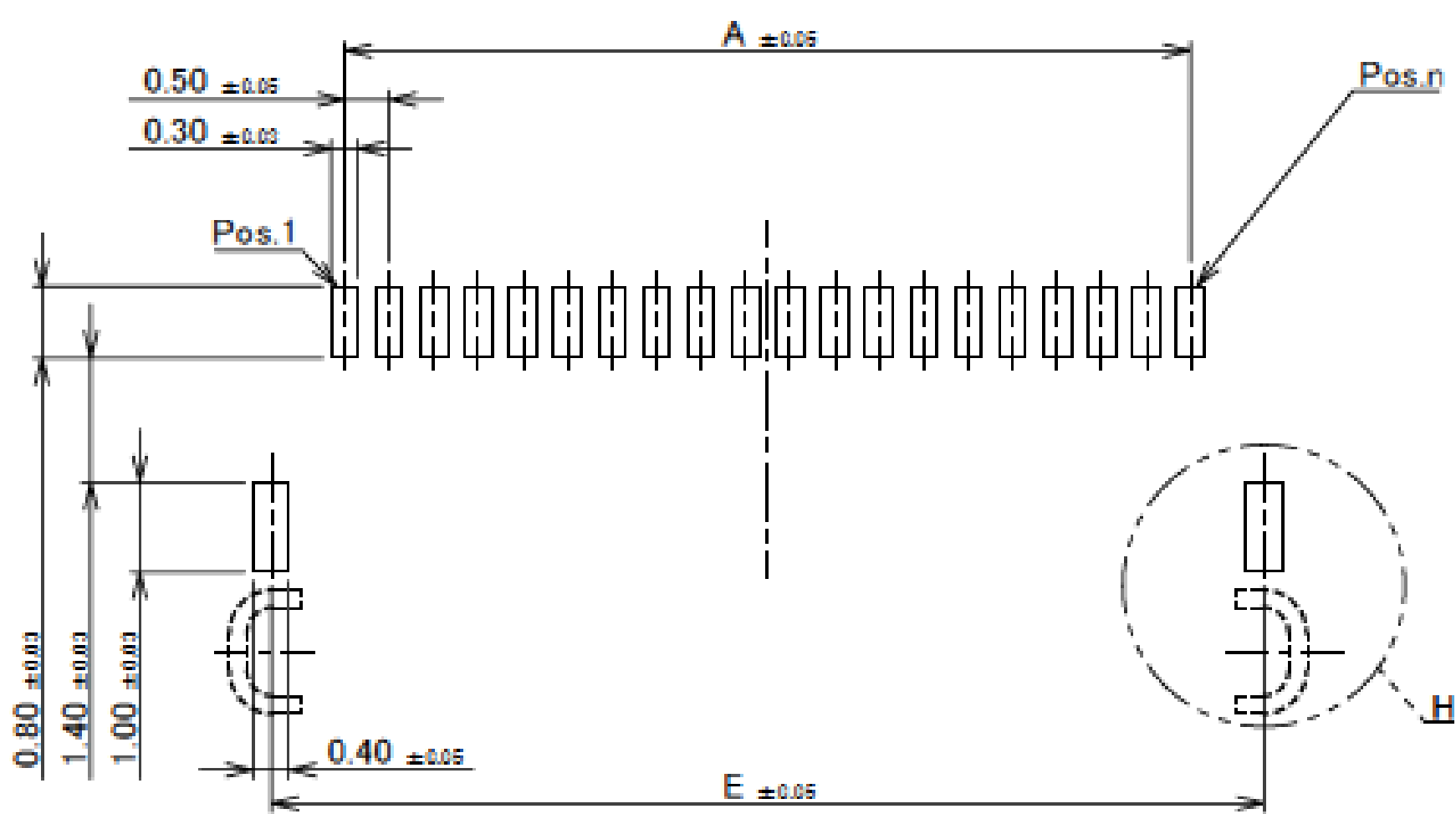
PART No.	POS.	A	B	C	D	E	F	G
20542-004E-01	4	1.50	3.70	2.80	2.50	3.15	2.56	1.80
20542-006E-01	6	2.50	4.70	3.80	3.50	4.15	3.56	2.80
20542-008E-01	8	3.50	5.70	4.80	4.50	5.15	4.56	3.80
20542-010E-01	10	4.50	6.70	5.80	5.50	6.15	5.56	4.80
20542-012E-01	12	5.50	7.70	6.80	6.50	7.15	6.56	5.80
20542-014E-01	14	6.50	8.70	7.80	7.50	8.15	7.56	6.80
20542-016E-01	16	7.50	9.70	8.80	8.50	9.15	8.56	7.80
20542-018E-01	18	8.50	10.70	9.80	9.50	10.15	9.56	8.80
20542-020E-01	20	9.50	11.70	10.80	10.50	11.15	10.56	9.80
20542-022E-01	22	10.50	12.70	11.80	11.50	12.15	11.56	10.80
20542-024E-01	24	11.50	13.70	12.80	12.50	13.15	12.56	11.80
20542-026E-01	26	12.50	14.70	13.80	13.50	14.15	13.56	12.80
20542-028E-01	28	13.50	15.70	14.80	14.50	15.15	14.56	13.80
20542-030E-01	30	14.50	16.70	15.80	15.50	16.15	15.56	14.80

4	PHOSPHOR BRONZE	HOLD DOWN	Sn 2~6 μm MIN.OVER Ni 1.00 μm MIN.
3	PHOSPHOR BRONZE	CONTACT	CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.0 μm MIN.
2	LCP	ACTUATOR	SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.0 μm MIN.
1	LCP	HOUSING	UL94V-0, BEIGE
NO.	MATERIAL	DISCRIPTION	FINISH , REMARKS

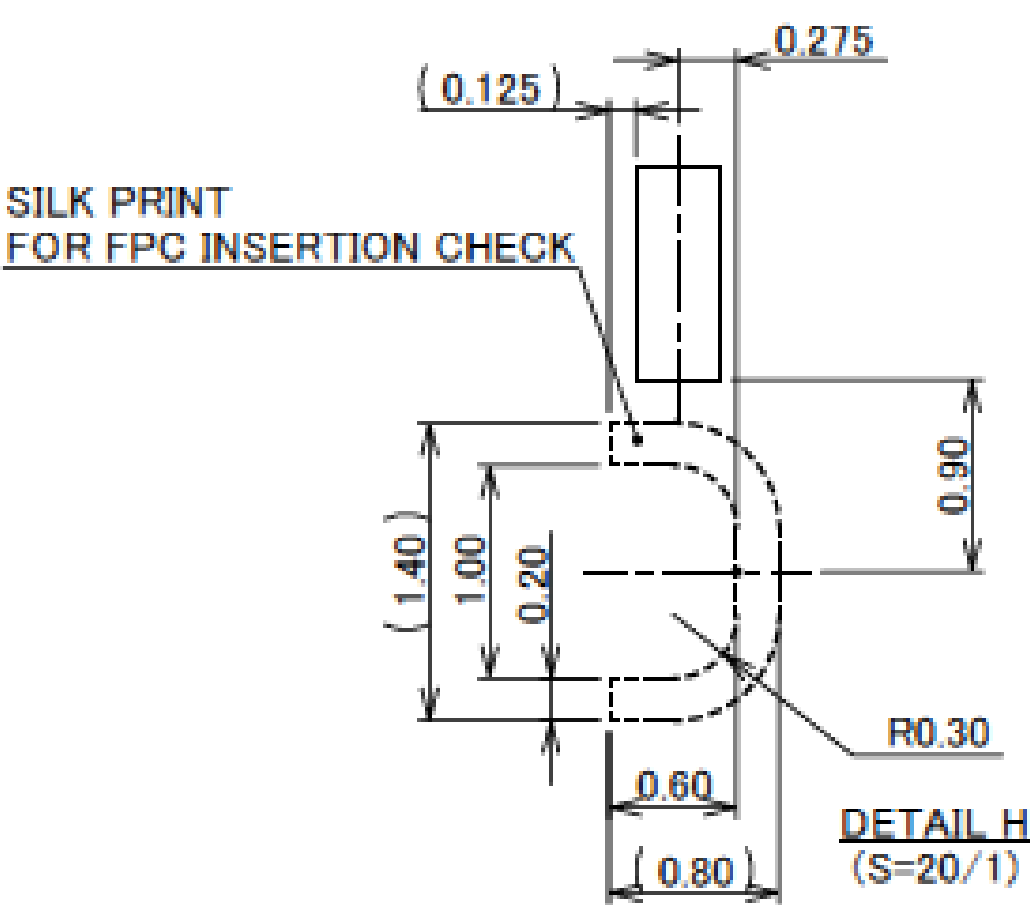
CAUTION VISIT OUR WEBSITE FOR LATEST VERSIONS OF INSTRUCTION MANUAL NO. HIM-12019 TO HANDLE THE PRODUCT PROPERLY AND SAFELY.

NOTES 1. CONTACT TAIL IS PROJECTION FROM HOUSING IN THE + DIRECTION. (0~0.06)

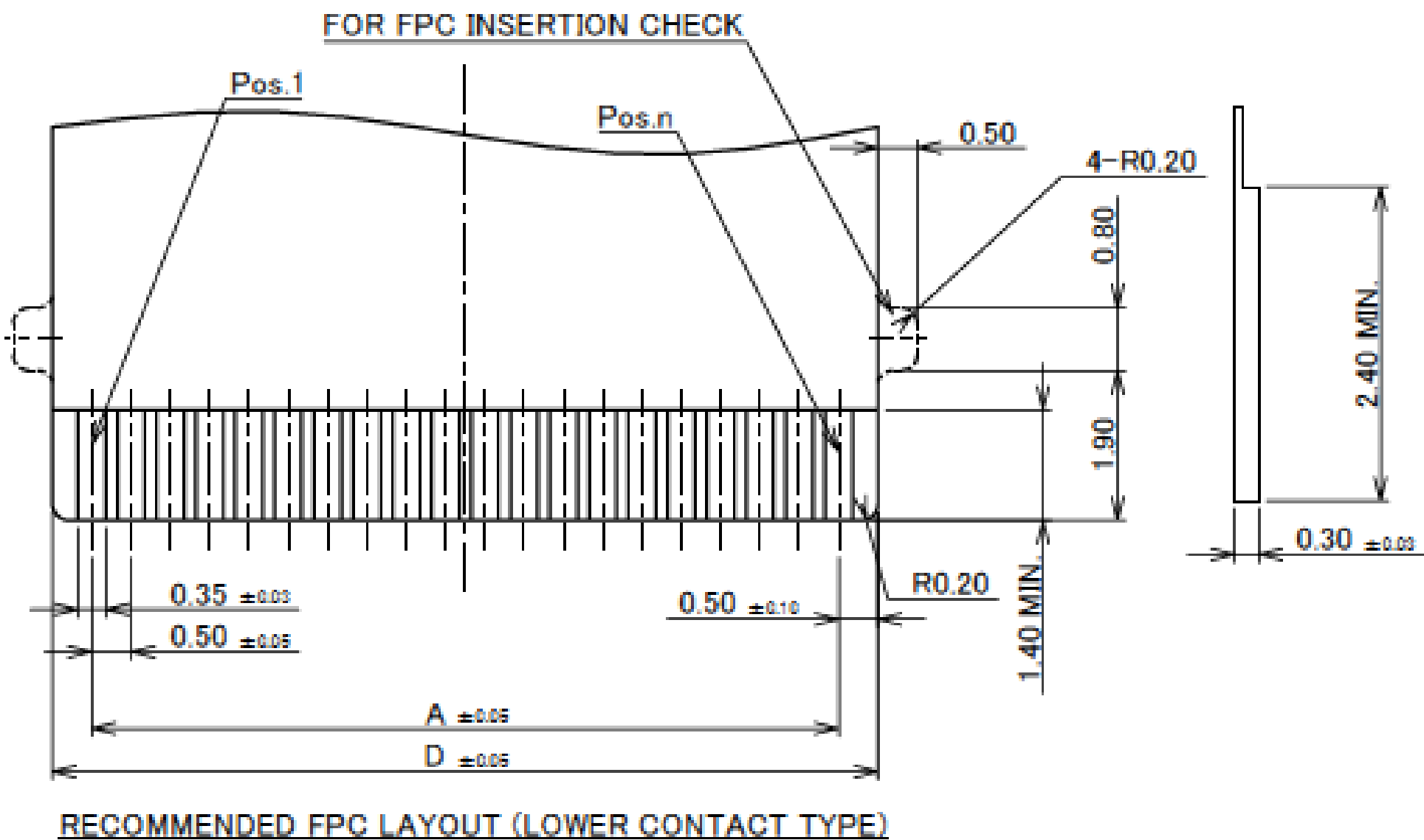
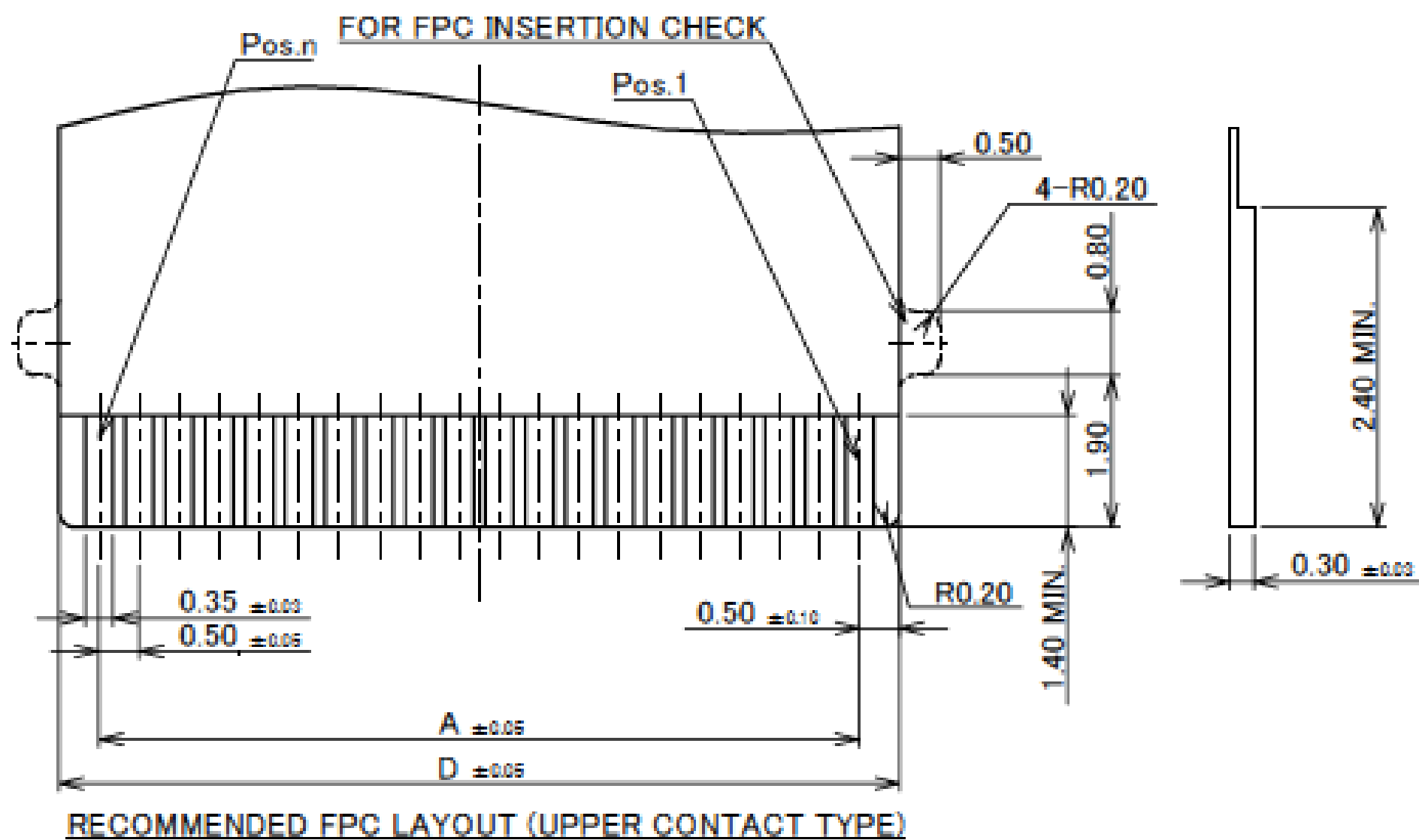
Connector Assembly



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

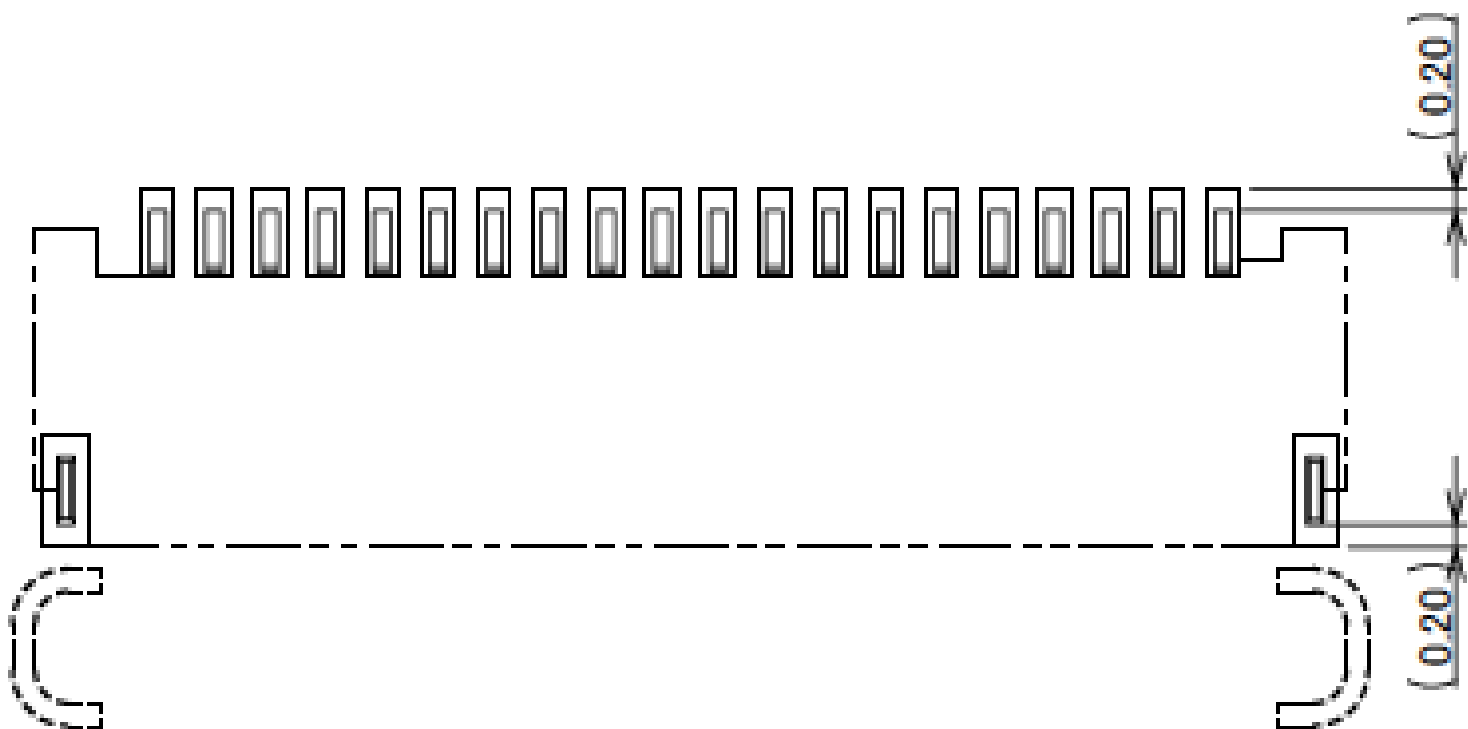


PART No.	POS.	A	D	E
20542-004E-01	4	1.50	2.50	3.15
20542-006E-01	6	2.50	3.50	4.15
20542-008E-01	8	3.50	4.50	5.15
20542-010E-01	10	4.50	5.50	6.15
20542-012E-01	12	5.50	6.50	7.15
20542-014E-01	14	6.50	7.50	8.15
20542-016E-01	16	7.50	8.50	9.15
20542-018E-01	18	8.50	9.50	10.15
20542-020E-01	20	9.50	10.50	11.15
20542-022E-01	22	10.50	11.50	12.15
20542-024E-01	24	11.50	12.50	13.15
20542-026E-01	26	12.50	13.50	14.15
20542-028E-01	28	13.50	14.50	15.15
20542-030E-01	30	14.50	15.50	16.15

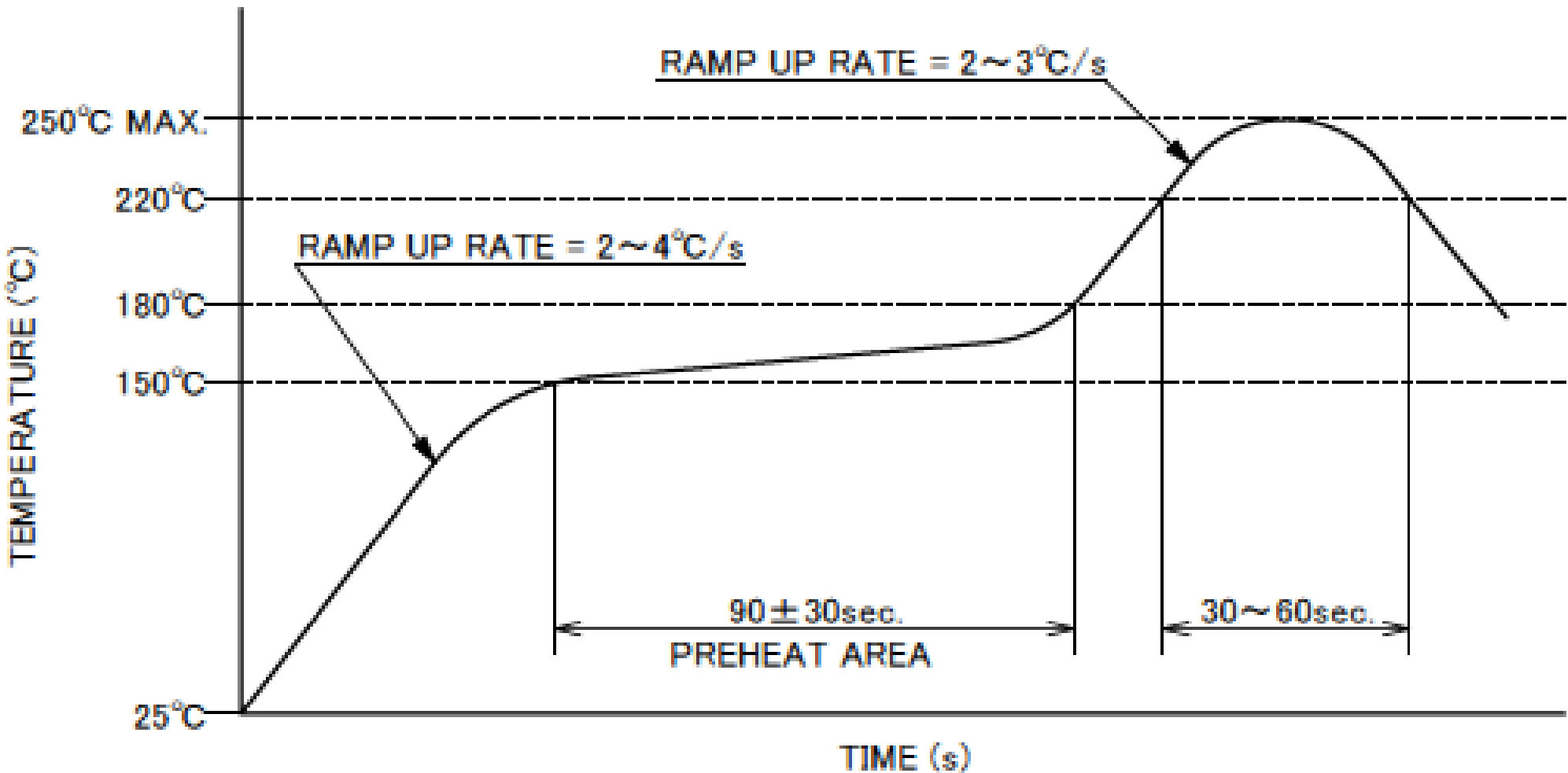


- NOTES
- 2.MATERIAL
- COVER FILM : PI
 - CONDUCTOR : COPPER(RARE)
 - BASE FILM : PI
 - STIFFENER : PI
 - ADHESIVE : THERMOSETTING ADHESIVE
- 3.FINISH
- Au OVER Ni PLATING.

Rev.9



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

Rev.9

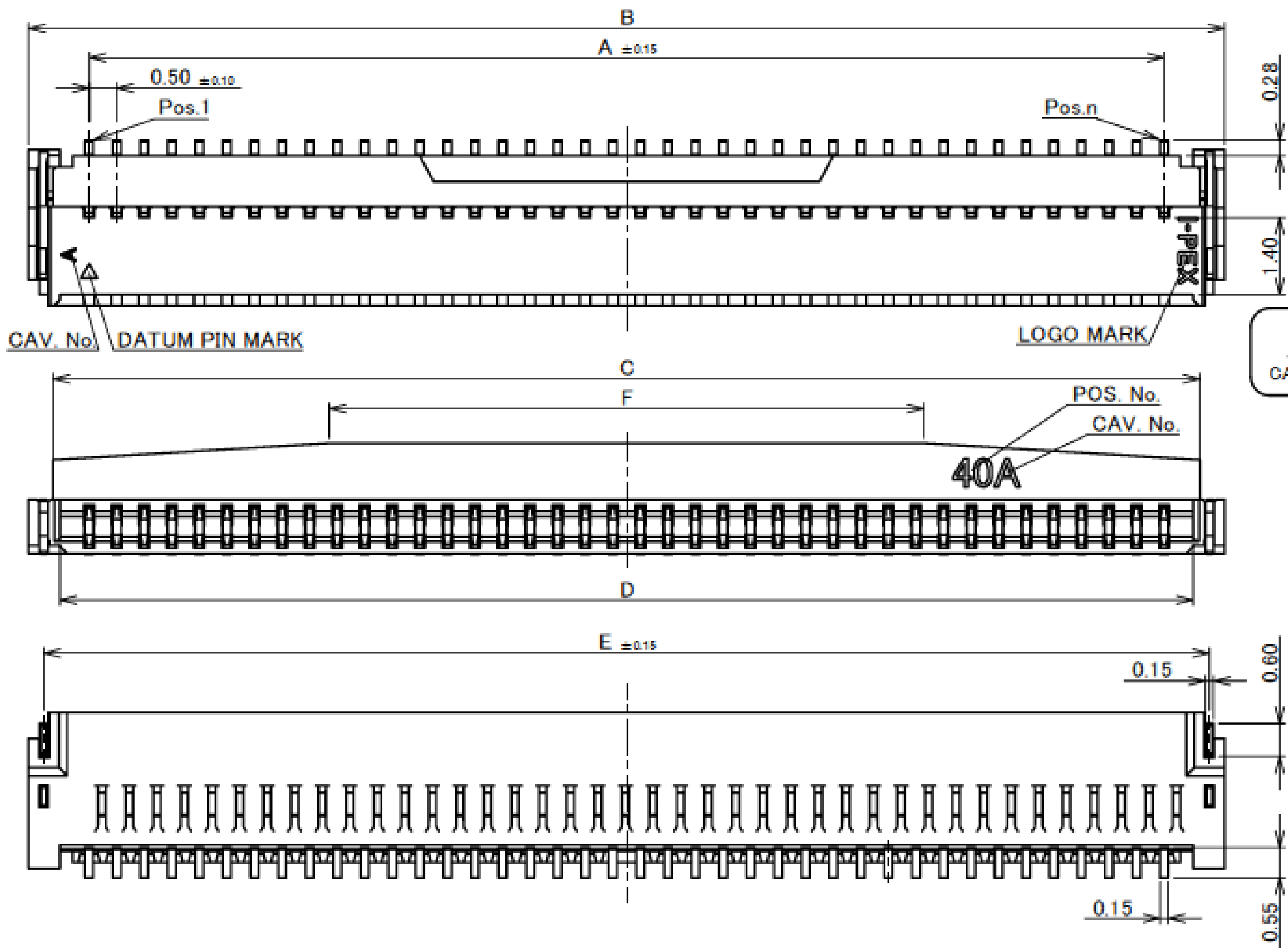
Connector Assembly

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC (PER CONTACT PIN)
RATING AMPERAGE	0.5A DC (PER CONTACT PIN) 7.0A DC (PER CONNECTOR)
OPERATING TEMPERATURE	233~398K(-40°C~125°C)
OPERATING HUMIDITY	80% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 40mohm MAX. / AFTER TEST : 120mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC200V 1min
DURABILITY	20TH CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.6N(61gf) × n MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.05N(5gf) × n MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	INITIAL / AFTER TEST : 0.15N(15gf) × n MIN.
COPLANARITY	0.08 MAX.
PRODUCT SPECIFICATION	PRS-1619
TEST REPORT	TR-12124
PACKING STANDARD	300-963
INSTRUCTION MANUAL	HIM-12019
APPEARANCE CRITERIA No.	QLS-A***

※ “n” IS THE NUMBER OF PIN

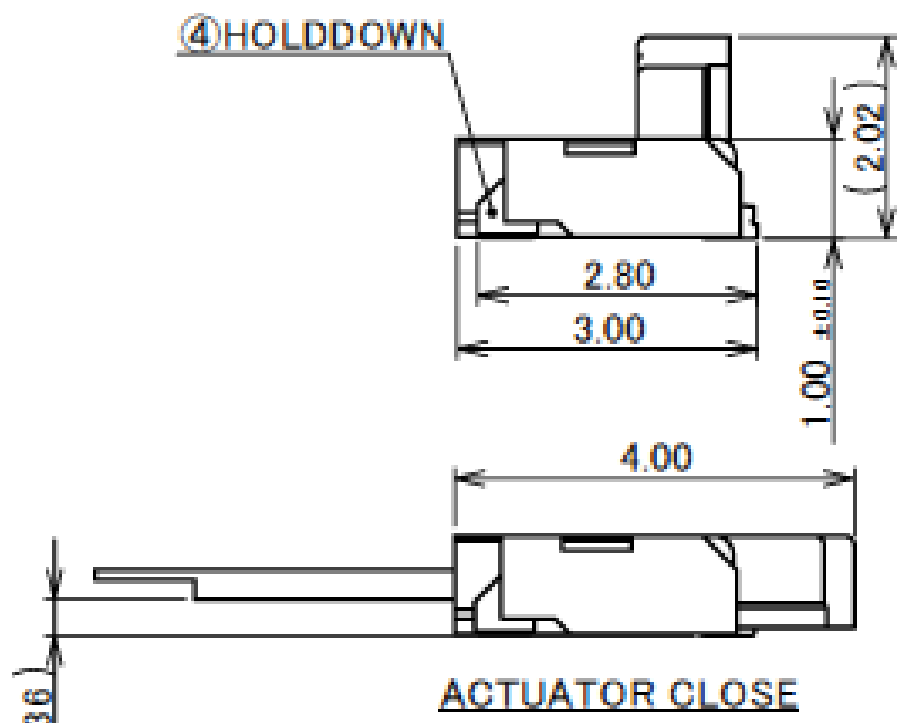
Rev.9

Recommended P/N 20586-0**E-01

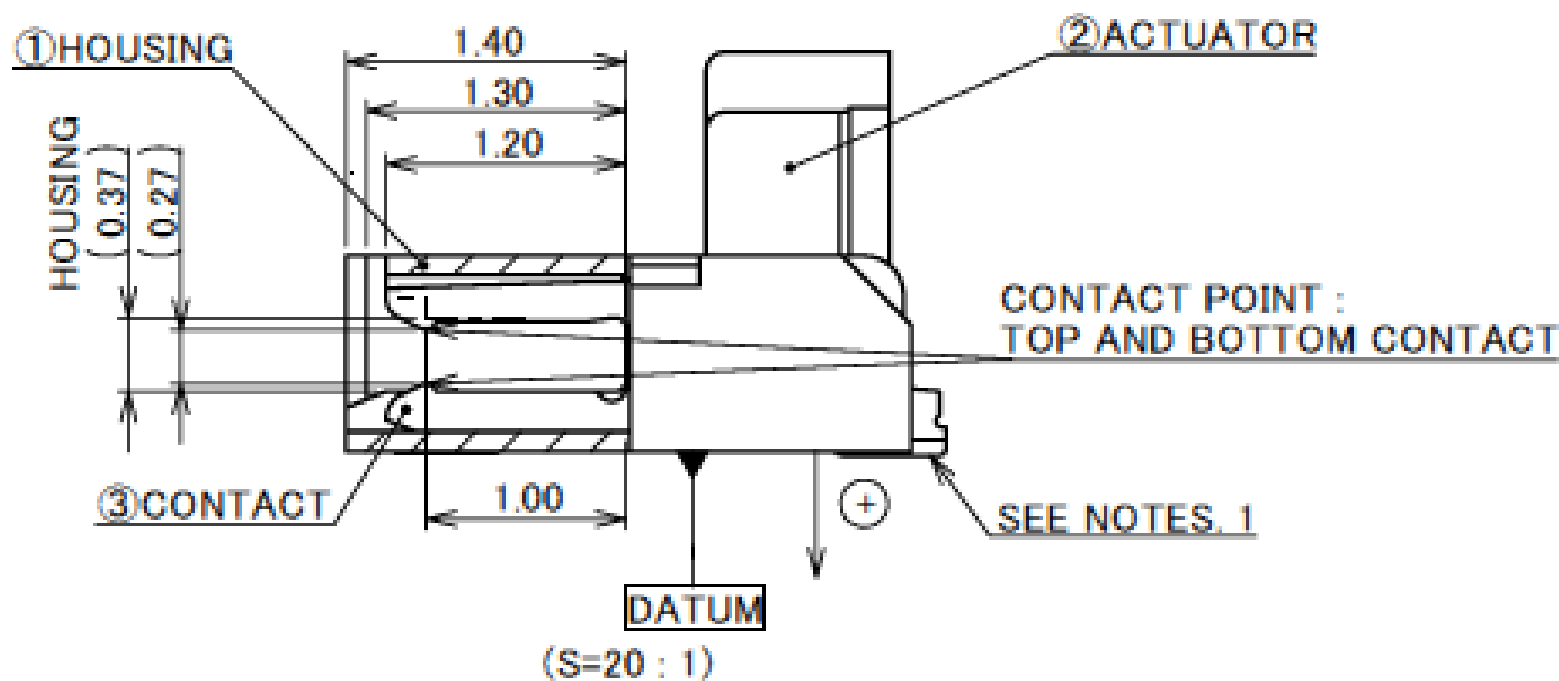


PART No.	POS.	A	B	C	D	E	F
20586-032E-01	32	15.50	17.70	16.80	16.56	17.15	10.80
20586-034E-01	34	16.50	18.70	17.80	17.56	18.15	11.80
◆20586-036E-01	36	17.50	19.70	18.80	18.56	19.15	8.80
20586-040E-01	40	19.50	21.70	20.80	20.56	21.15	10.80
◆20586-044E-01	44	21.50	23.70	22.80	22.56	23.15	12.80
◆20586-048E-01	48	23.50	25.70	24.80	24.56	25.15	9.80
20586-050E-01	50	24.50	26.70	25.80	25.56	26.15	10.80
20586-054E-01	54	26.50	28.70	27.80	27.56	28.15	12.80
◆20586-060E-01	60	29.50	31.70	30.80	30.56	31.15	15.80

CAUTION VISIT OUR WEBSITE FOR LATEST VERSIONS OF INSTRUCTION MANUAL NO. HIM-12019 TO HANDLE THE PRODUCT PROPERLY AND SAFELY.



Halogen Free RoHS Compliant



4	HOLD DOWN	PHOSPHOR BRONZE	Sn 2~6 μ m MIN.OVER Ni 1.00 μ m MIN.
3	CONTACT	PHOSPHOR BRONZE	CONTACT AREA : Au 0.1 μ m MIN. OVER Ni 1.0 μ m MIN. SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.0 μ m MIN.
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSING	LCP	UL94V-0, BEIGE
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

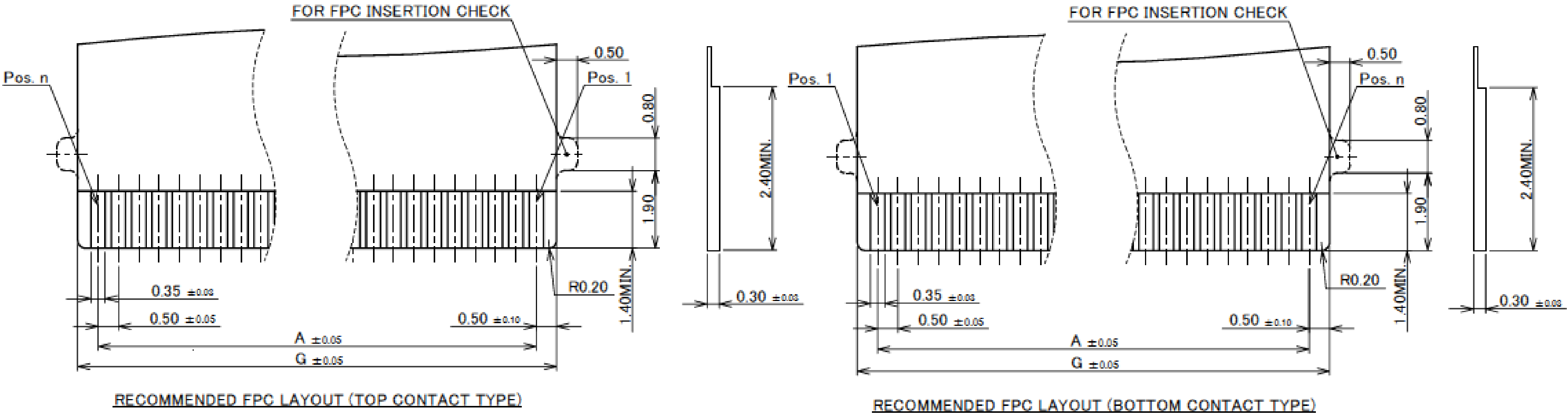
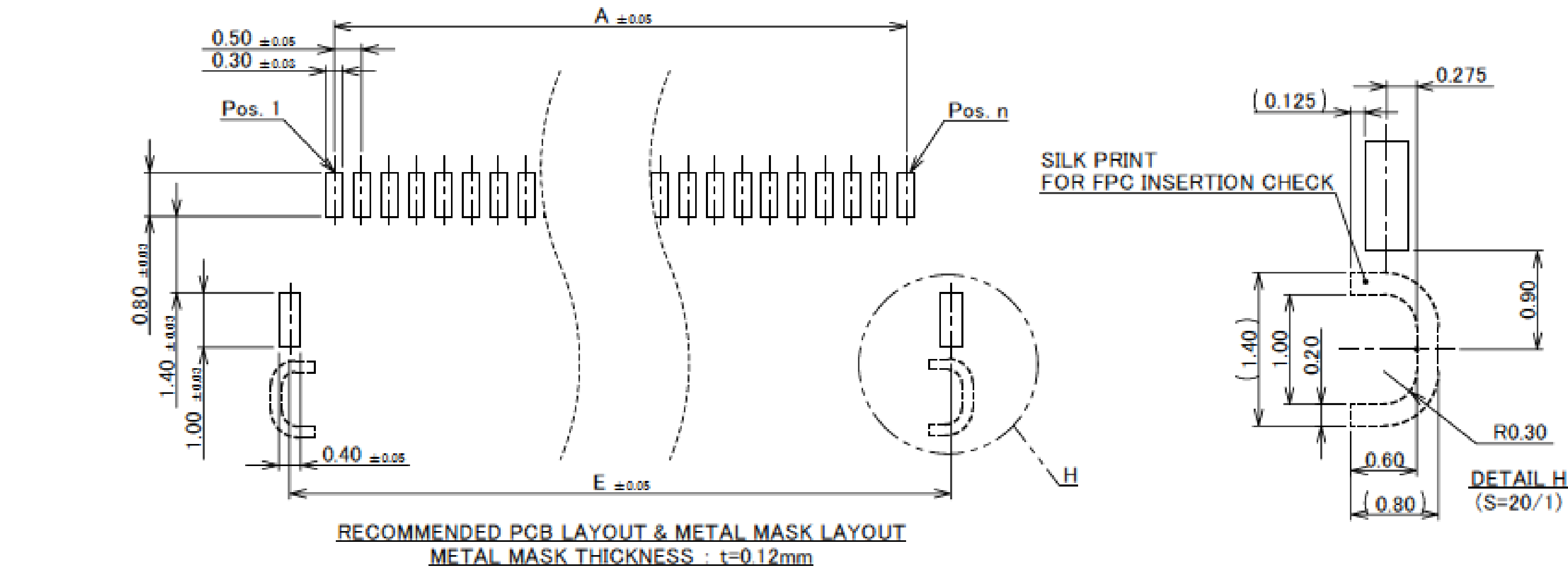
NOTES
1. CONTACT TAIL IS PROJECTION FROM HOUSING IN THE + DIRECTION. (0~0.06)

Rev.10

Connector Assembly

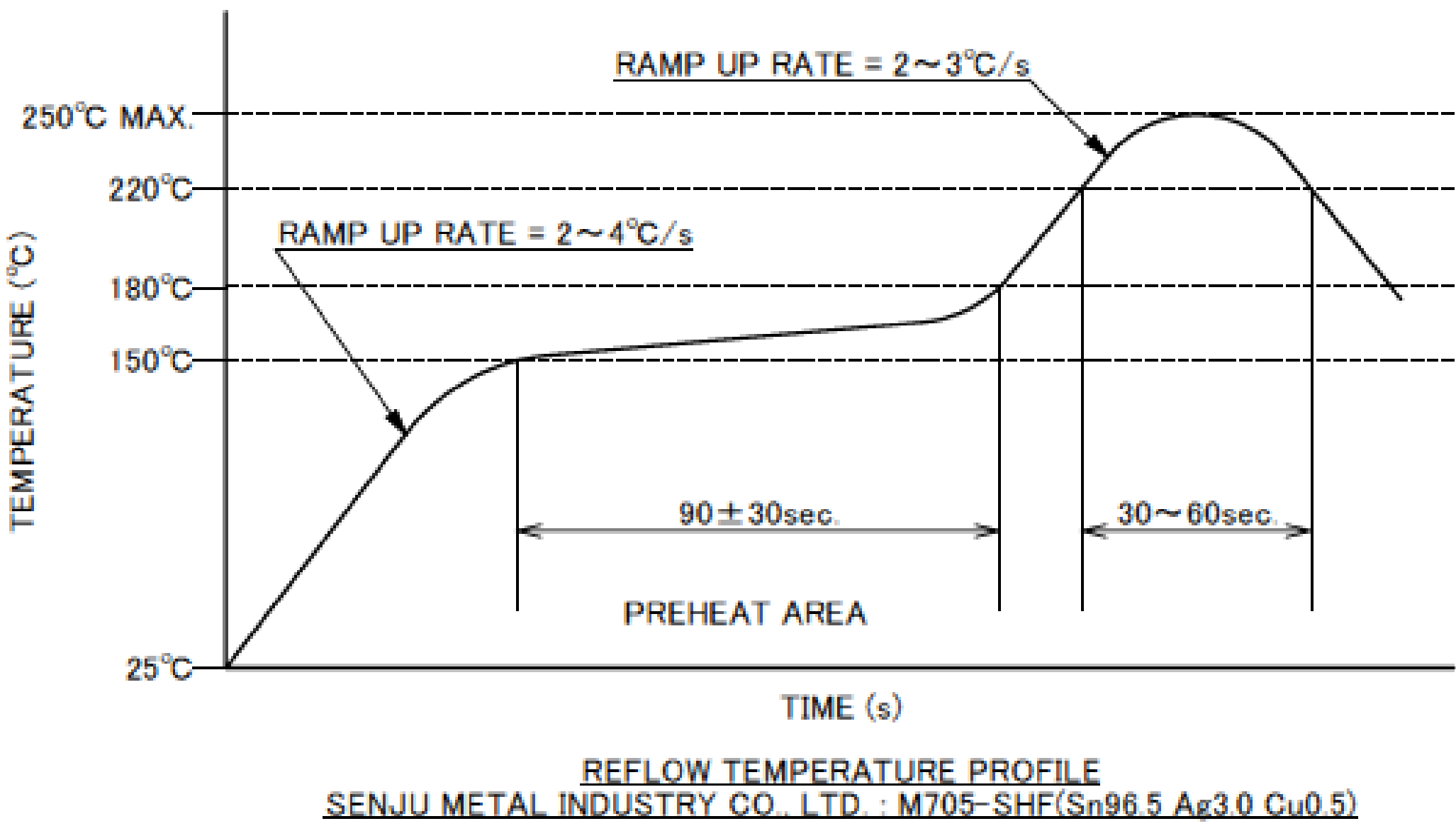
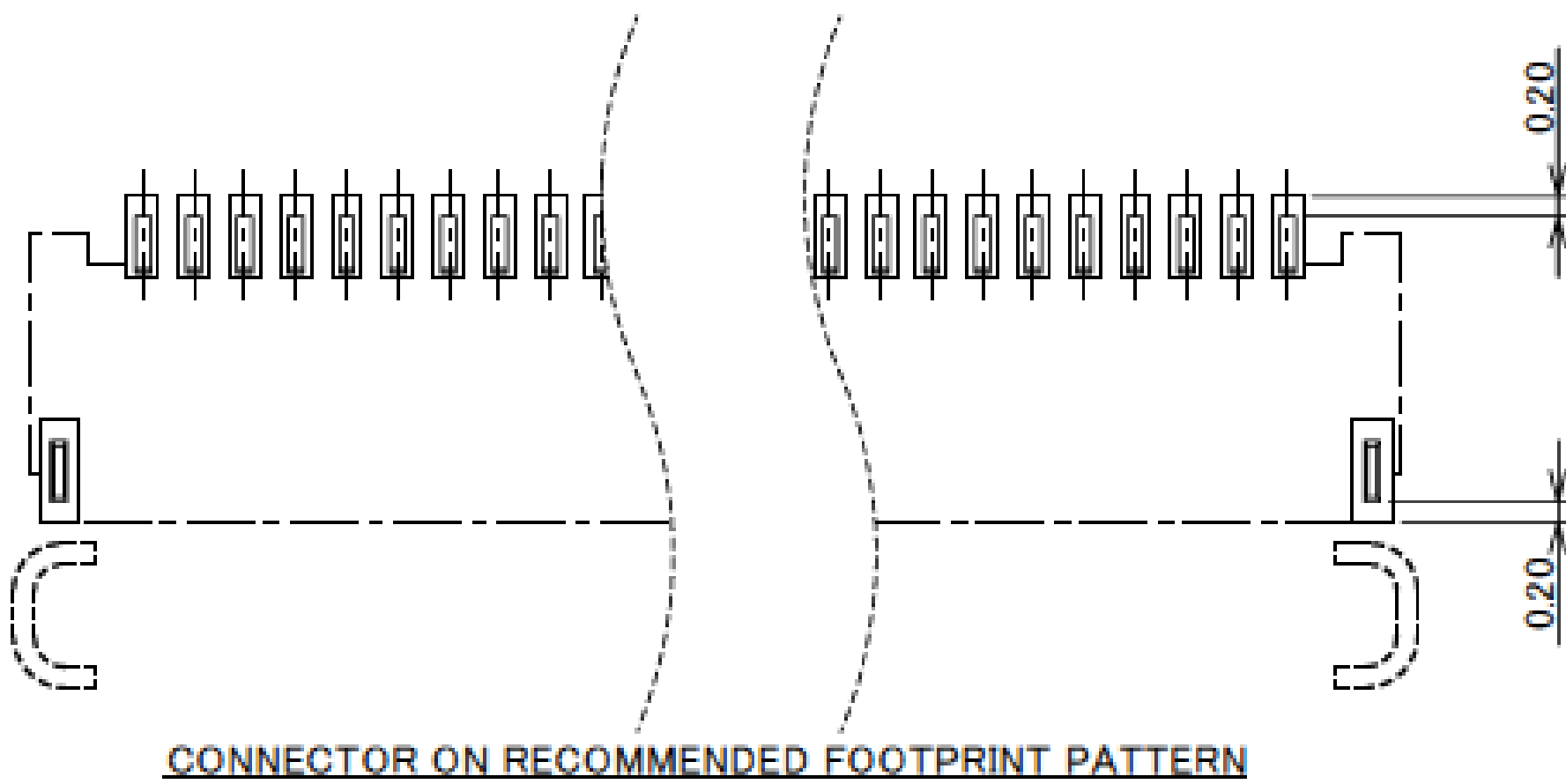
PART No.	POS.	A	E	G
20586-032E-01	32	15.50	17.15	16.50
20586-034E-01	34	16.50	18.15	17.50
◆20586-036E-01	36	17.50	19.15	18.50
20586-040E-01	40	19.50	21.15	20.50
◆20586-044E-01	44	21.50	23.15	22.50
◆20586-048E-01	48	23.50	25.15	24.50
20586-050E-01	50	24.50	26.15	25.50
20586-054E-01	54	26.50	28.15	27.50
◆20586-060E-01	60	29.50	31.15	30.50

◆ MARK MEANS NOT AVAILABLE



- NOTES
- 2.MATERIAL
COVER FILM : PI
CONDUCTOR : COPPER(RARE)
BASE FILM : PI
STIFFENER : PI
ADHESIVE : THERMOSETTING ADHESIVE
- 3.FINISH
Au OVER Ni PLATING.

Rev.10



Rev.10

Connector Assembly

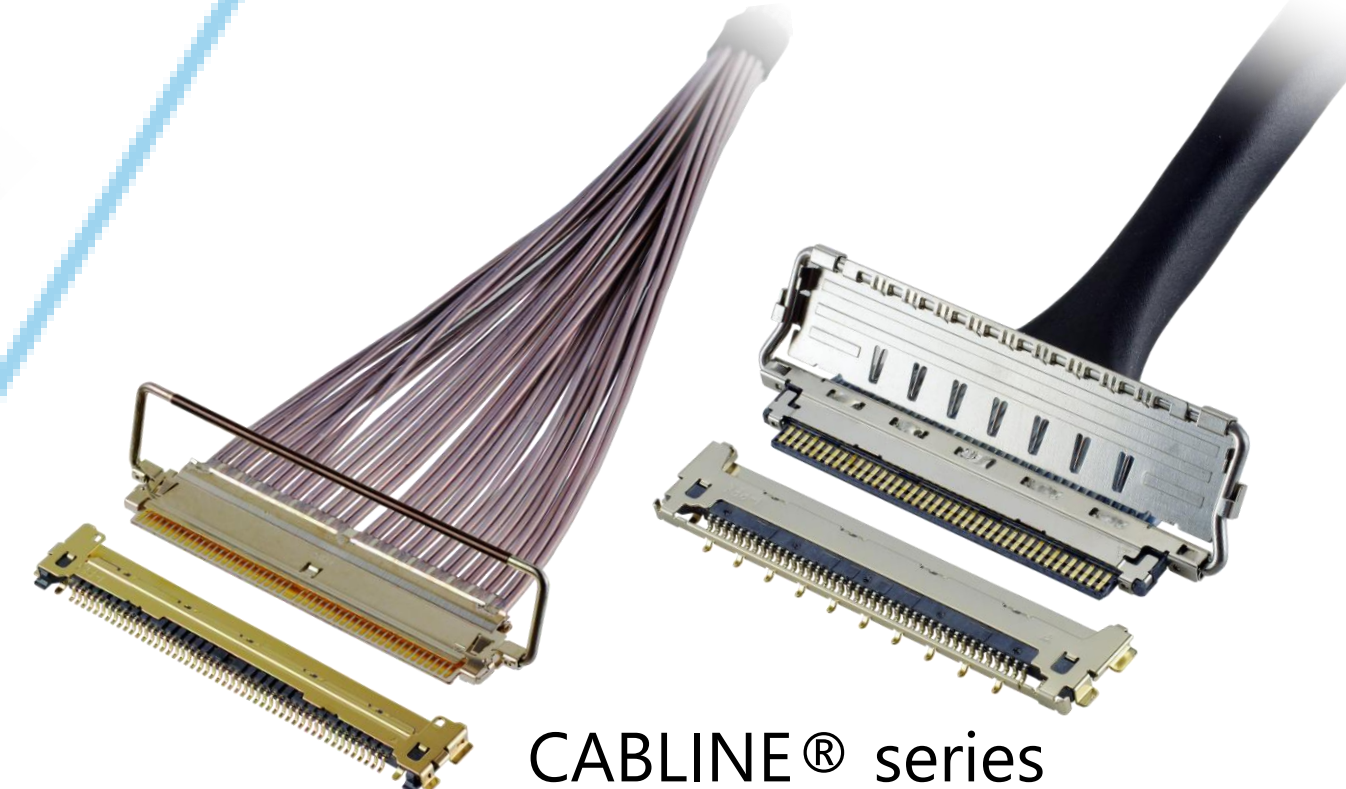
ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC (PER CONTACT PIN)
RATING AMPERAGE	0.5A DC (PER CONTACT PIN) 7.0A DC (PER CONNECTOR)
OPERATING TEMPERATURE	233~398K(−40°C~125°C)
OPERATING HUMIDITY	80% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 40mohm MAX. / AFTER TEST : $\leq$ 120mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC200V 1min
DURABILITY	20TH CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.43N (44gf) × n MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.025N (2.5gf) × n MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	INITIAL / AFTER TEST : 0.15N (15gf) × n MIN.
COPLANARITY	0.08 MAX.
PRODUCT SPECIFICATION	PRS-2056
TEST REPORT	TR-15070
PACKING STANDARD	PST-13064
INSTRUCTION MANUAL	HIM-12019
APPEARANCE CRITERIA No.	QLS-A***

※ “n” IS THE NUMBER OF PIN

Custom Connectors Available

RF Connectors

MHF® series



CABLINE® series

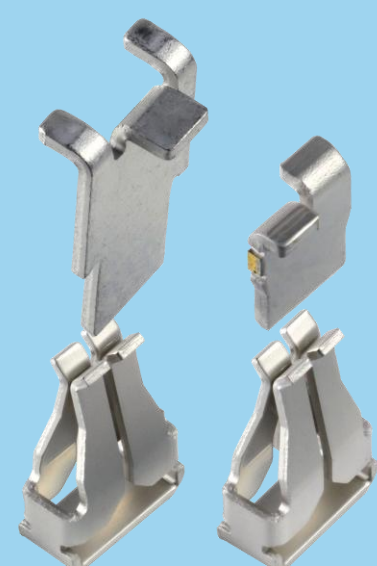


Micro-Coaxial/Twinaxial Connectors

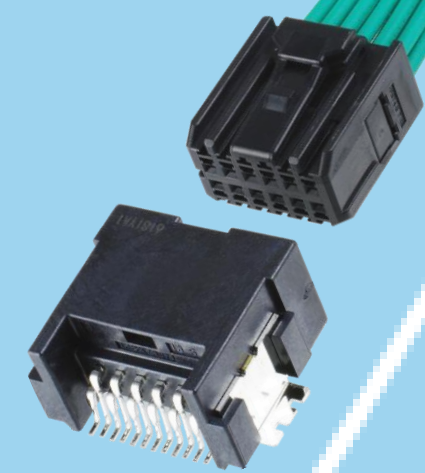


Wire-to-Board Connectors/ Terminals

AP series



ISH® series



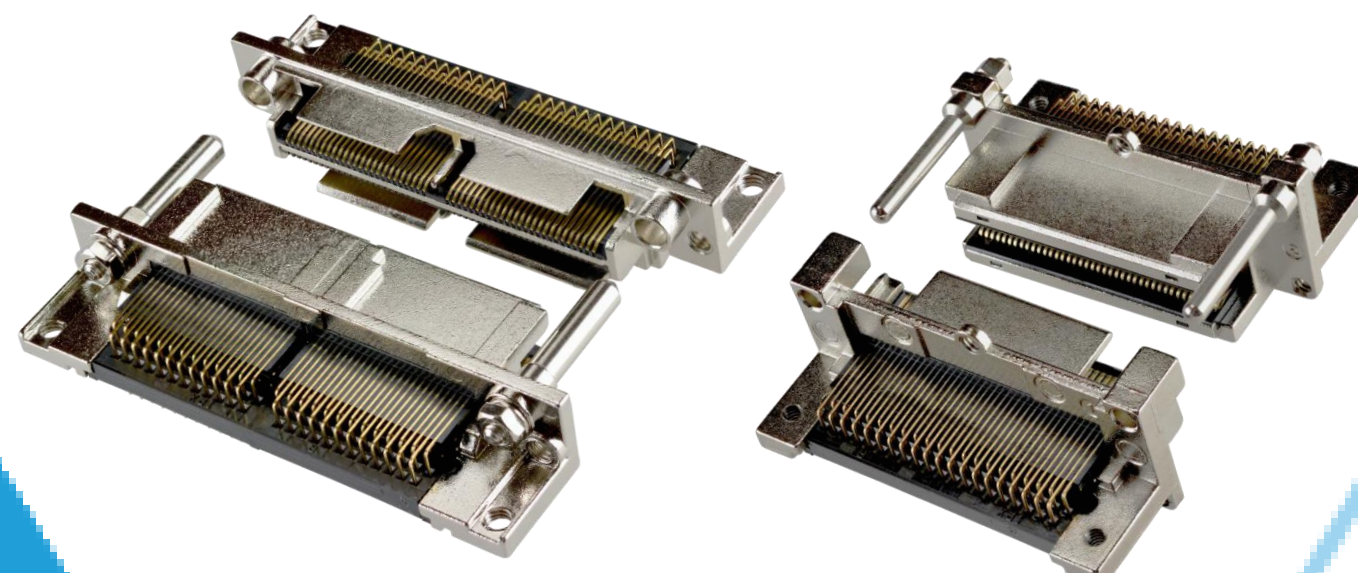
NOVASTACK® series



Board-to-Board Connectors

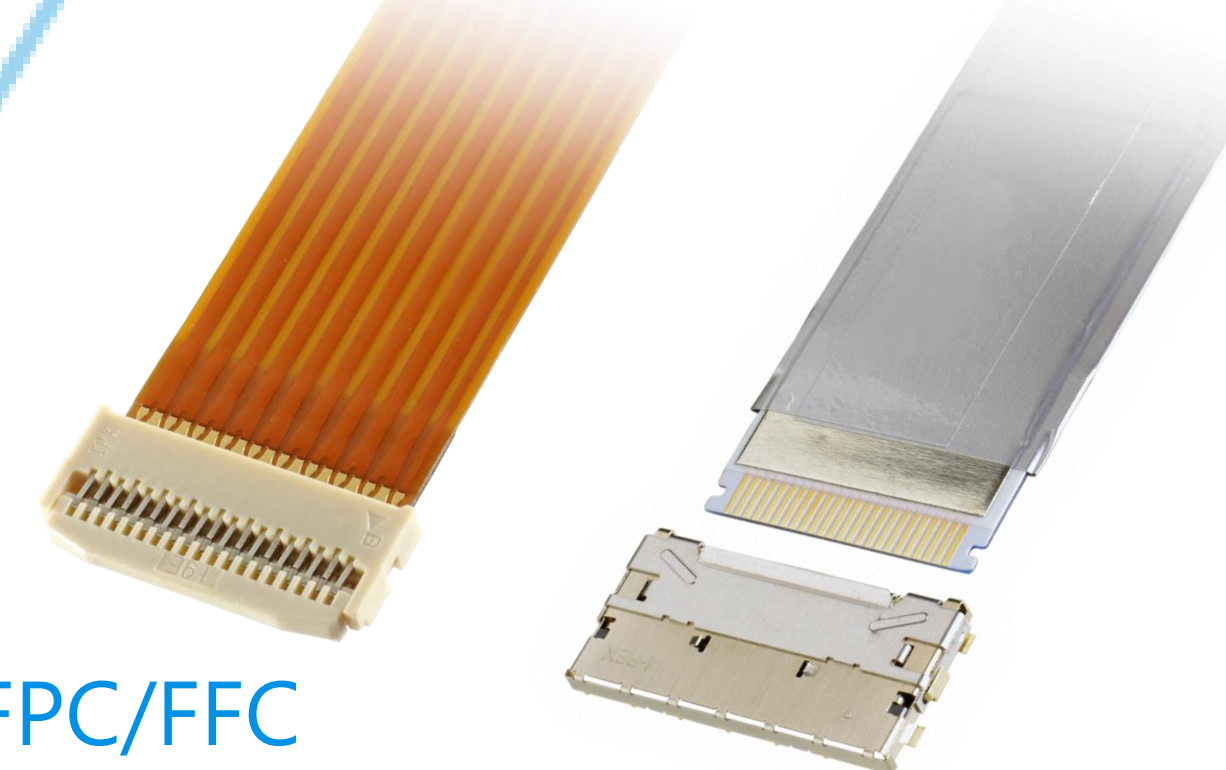


I/O Connectors



MINIDOCK™ series

MINIFLEX® series EVAFLEX® series



FPC/FFC Connectors



Inquiry



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