

MINIFLEX® 3-BFN LK

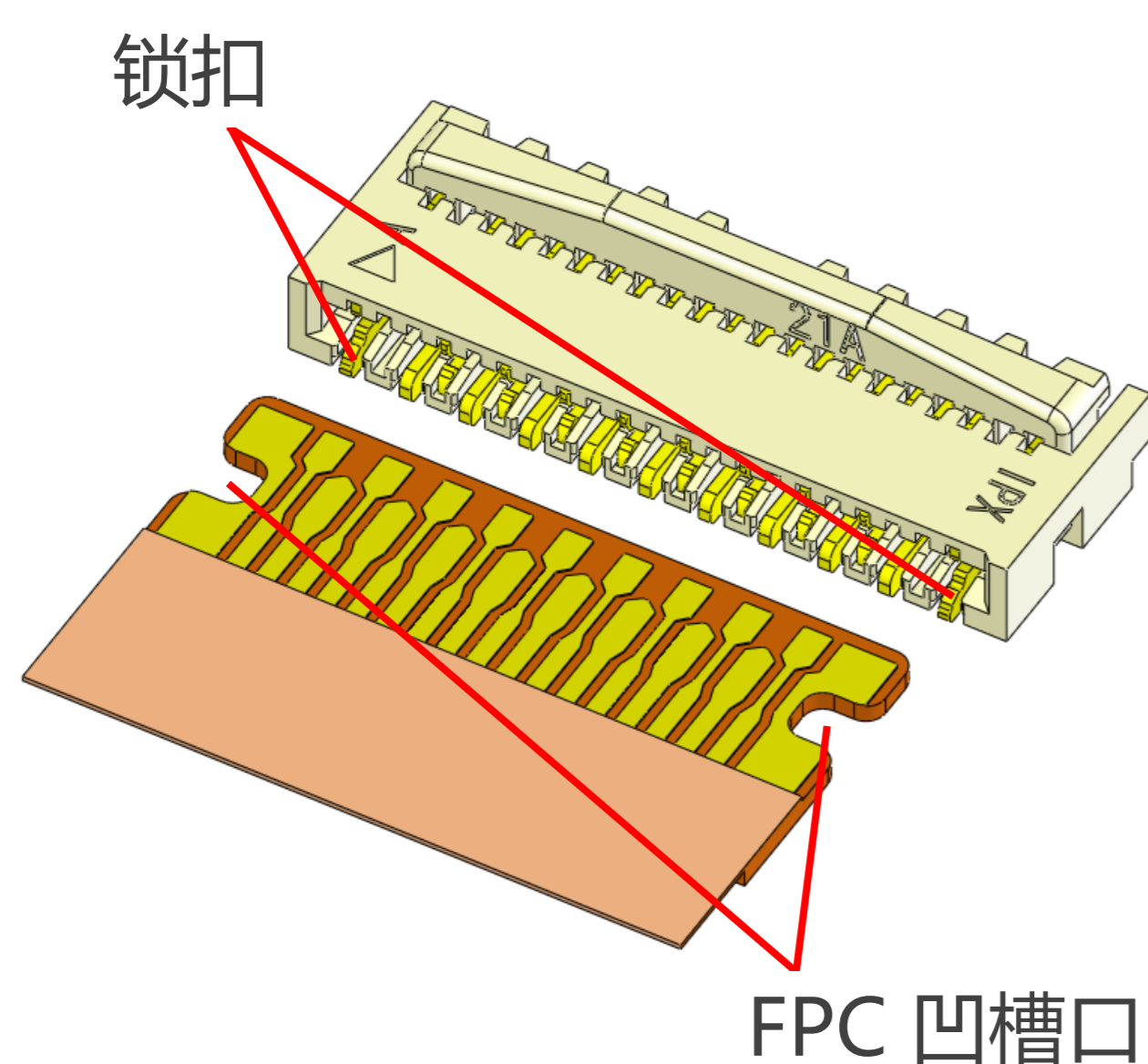
机械锁扣, 低背(高度 = 0.9 mm), 0.3 mm间距, 水平插拔, 后锁式

Product Specifications:		Short Actuator	Long Actuator	Applicable FPC/FFC:	
Board Pitch (mm)		0.3		FPC/FFC Contact Pitch	0.3
Wiping Length (mm)		Contact A: 0.9		FPC/FFC Contact Point	Top and Bottom
		Contact B: 0.45		FPC/FFC Thickness (mm)	0.2 +/- 0.03
Size (mm)	Height	0.90 +/- 0.10			
	Width	Formula: 2.1 + (0.3 * ?p)			
	Depth	Open: 2.55			
Close: 3		Close: 3.5			
Pin counts	Range	9-37 (odd)	29-71 (odd)		
	Available	9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37	51, 53, 57, 61, 71		

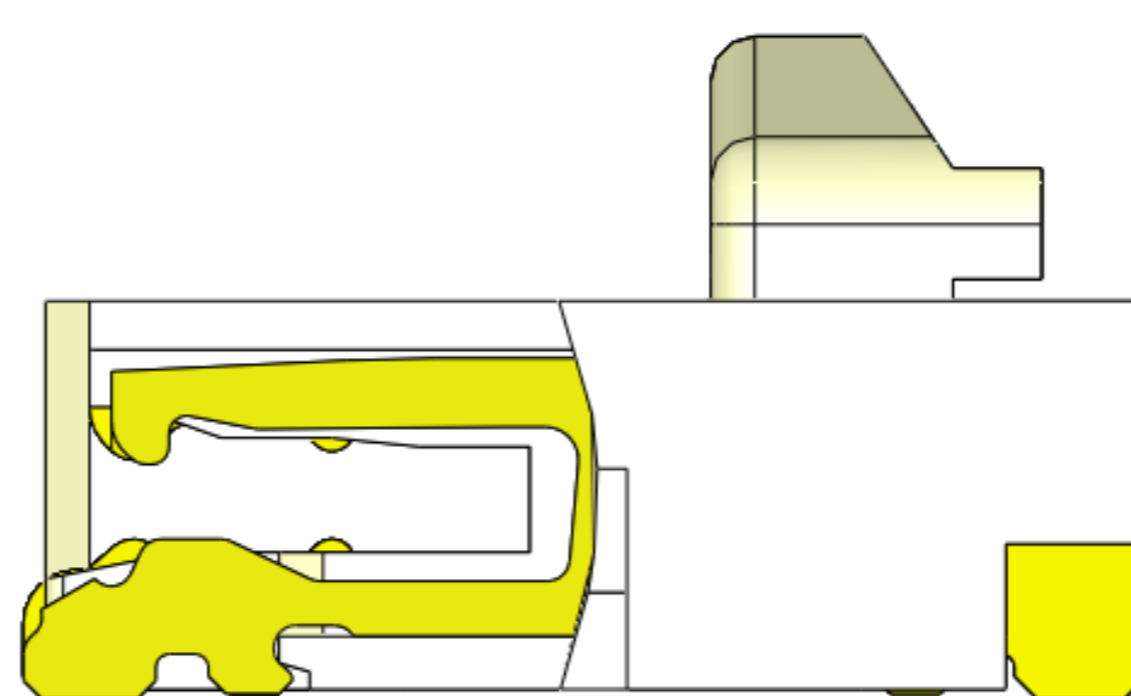
*如您需要了解未列出或不在范围内的Pin数, 请咨询我们。



▶ 特有机械锁扣提供更大FPC保持力



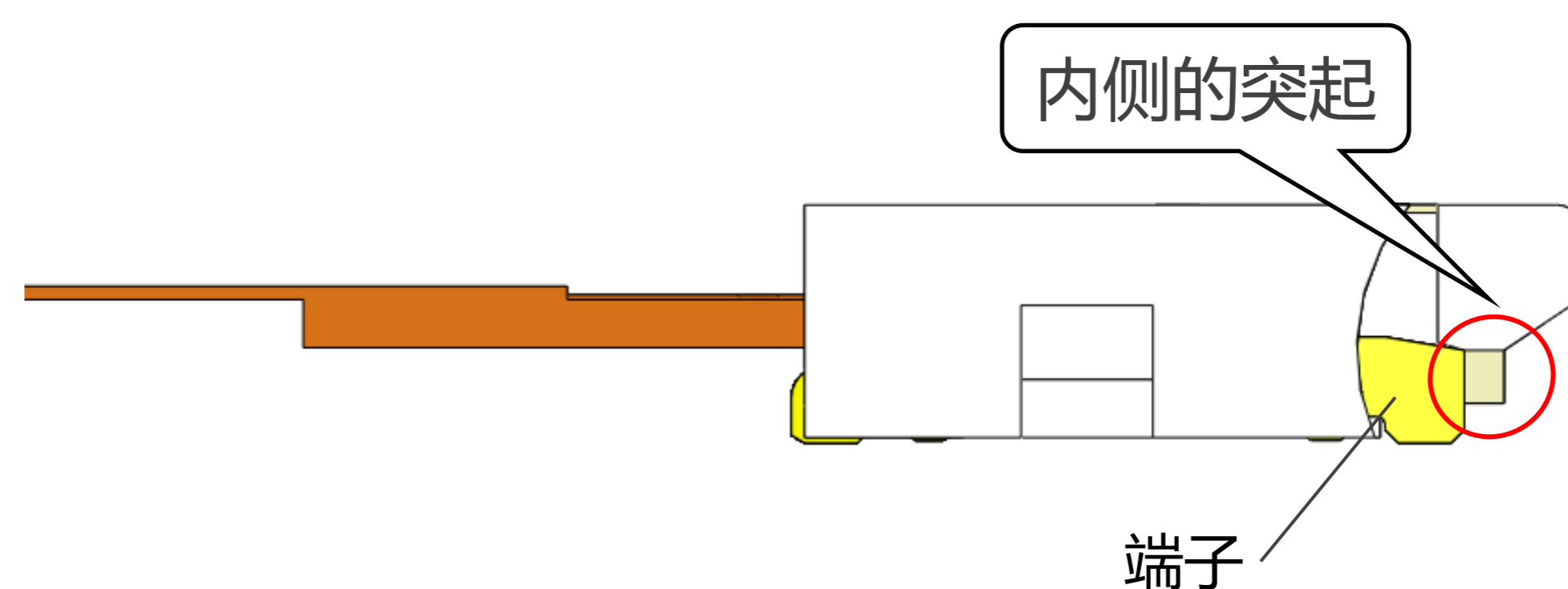
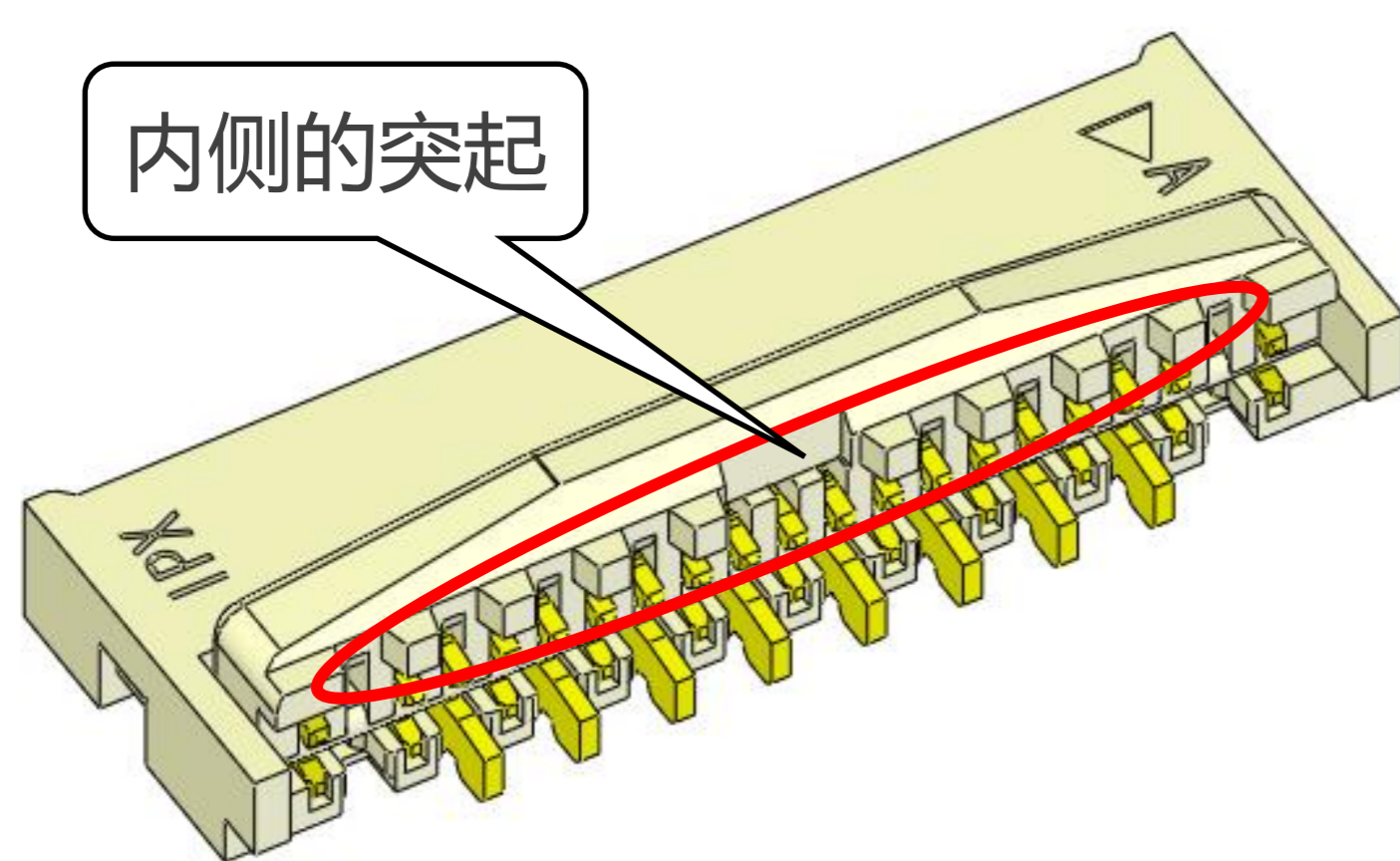
FPC 锁扣机制维持
FPC高保持力



FPC 保持力比较 (19 p)

MINIFLEX® 3-BFN LK	MINIFLEX® 3-BFN
11.34 N	6.7 N

▶ 独特的结构, 防止端子变形

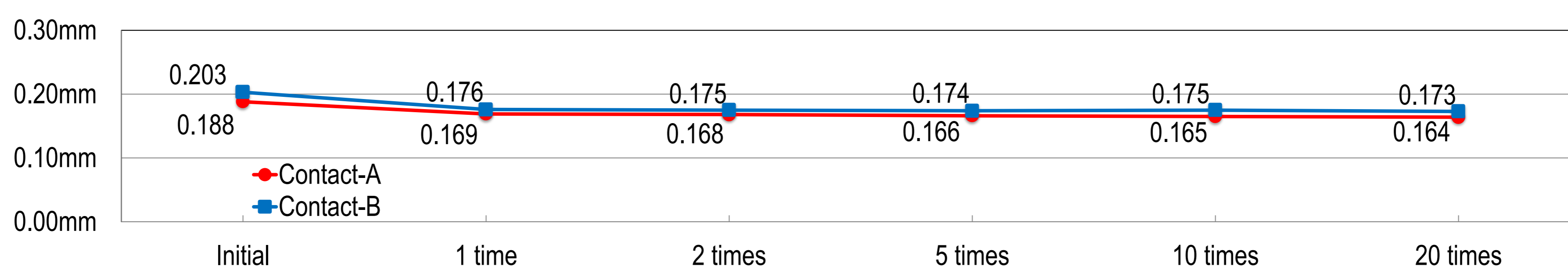


当钢琴盖被打开时,钢琴盖内侧的突起可以防止指甲碰触到端子而造成的变形

▶ 在没有插入 FPC 的情况下闭合钢琴盖, 连接器仍可使用

在 SMT 加工后, 如果钢琴盖在没有插入 FPC 的情况下意外闭合, 连接器仍可使用

- FPC未插入情况下闭合钢琴盖, 其前后的接点间距比较如图(图表为 MINIFLEX® 3-BFN LK 35 pins)



- FPC插入力上升
- FPC保持力无太大变化

MINIFLEX® 3-BFN LK

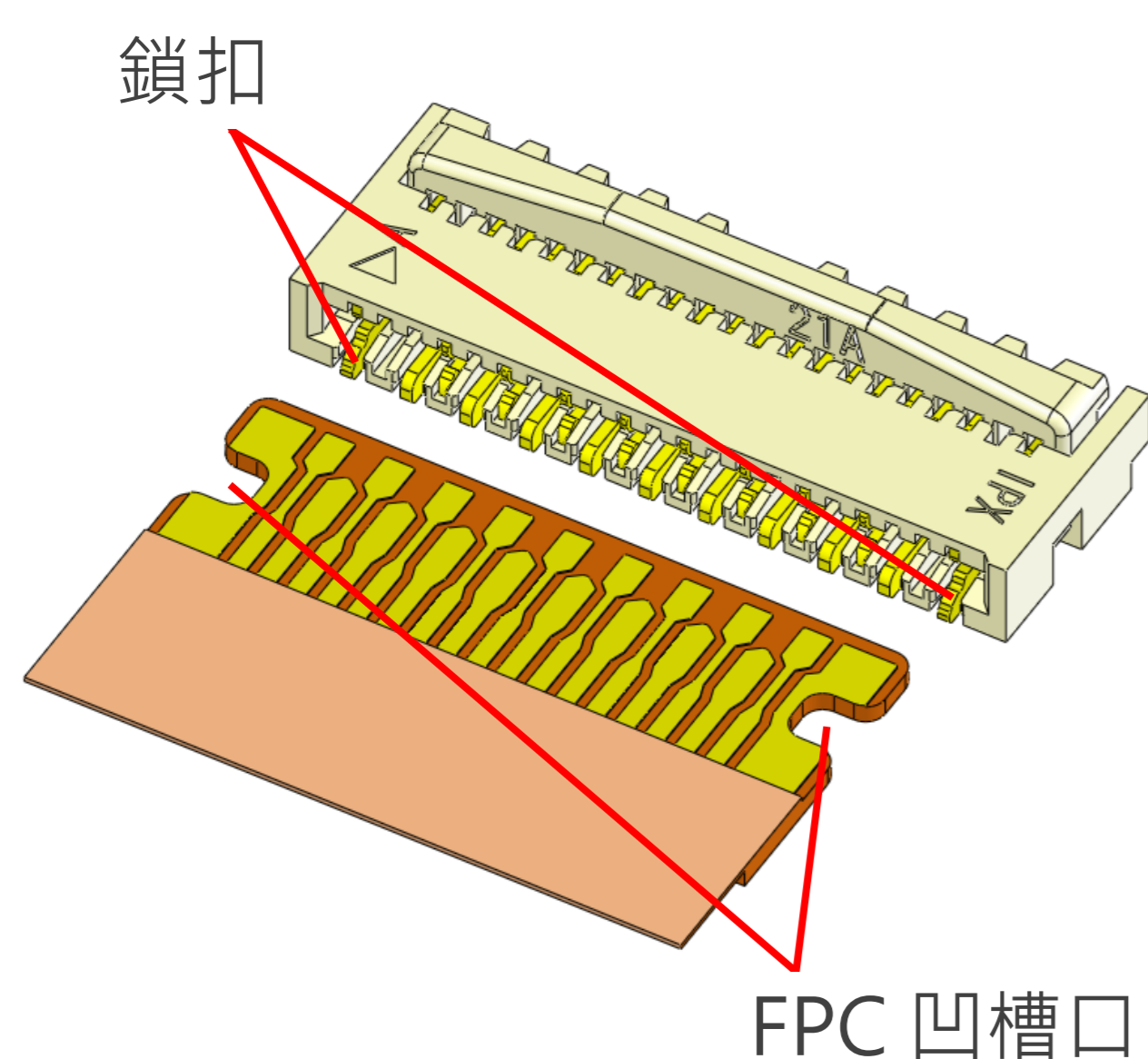
機械鎖扣 · 低背(高度 = 0.9 mm) · 0.3 mm間距, 水平插拔, 後鎖式

Product Specifications:		Short Actuator	Long Actuator	Applicable FPC/FFC:	
Board Pitch (mm)		0.3		FPC/FFC Contact Pitch	0.3
Wiping Length (mm)		Contact A: 0.9		FPC/FFC Contact Point	Top and Bottom
		Contact B: 0.45		FPC/FFC Thickness (mm)	0.2 +/- 0.03
Size (mm)	Height	0.90 +/- 0.10			
	Width	Formula: 2.1 + (0.3 * ?p)			
	Depth	Open: 2.55			
Close: 3		Close: 3.5			
Pin counts	Range	9-37 (odd)	29-71 (odd)		
	Available	9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37	51, 53, 57, 61, 71		

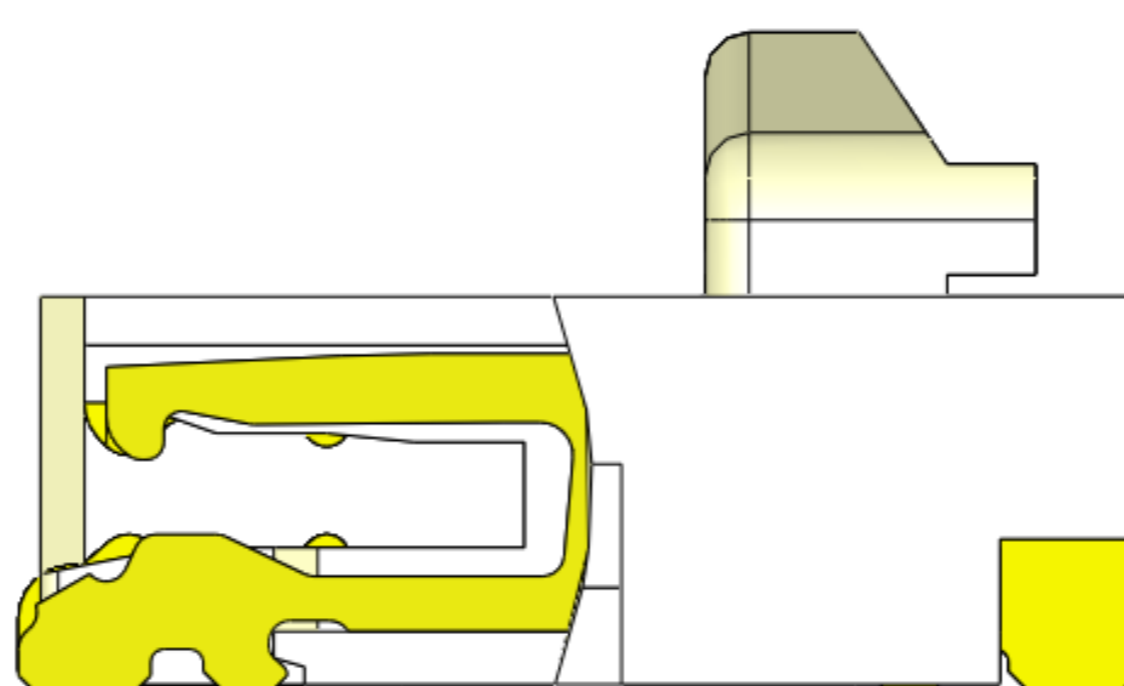
*若有規格外 Pin 數需求, 請與當地負責業務窗口聯繫。



▶ 附加機械鎖扣提高 FPC 保持力



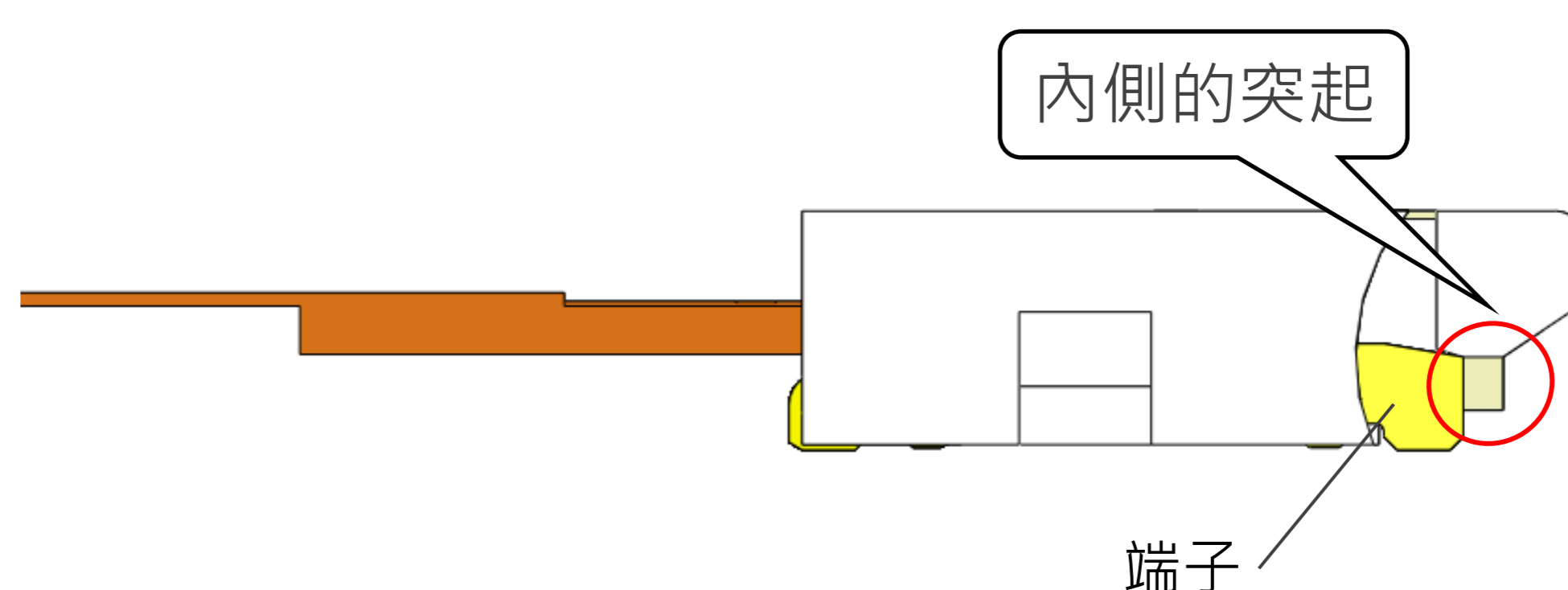
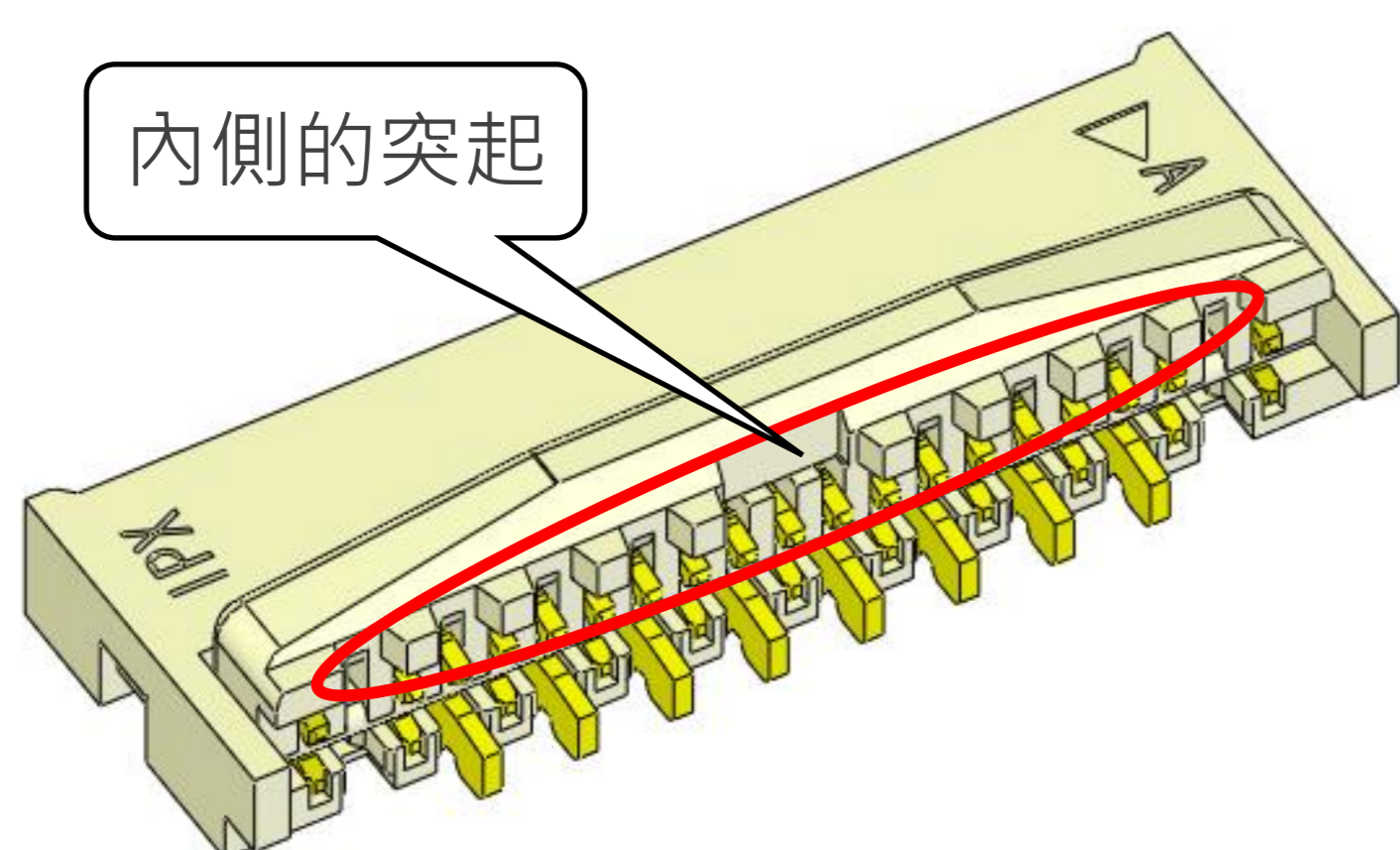
FPC 鎖扣機制維持 FPC 高保持力



FPC 保持力比較 (19 p)

MINIFLEX® 3-BFN LK	MINIFLEX® 3-BFN
11.34 N	6.7 N

▶ 防止端子變形的結構

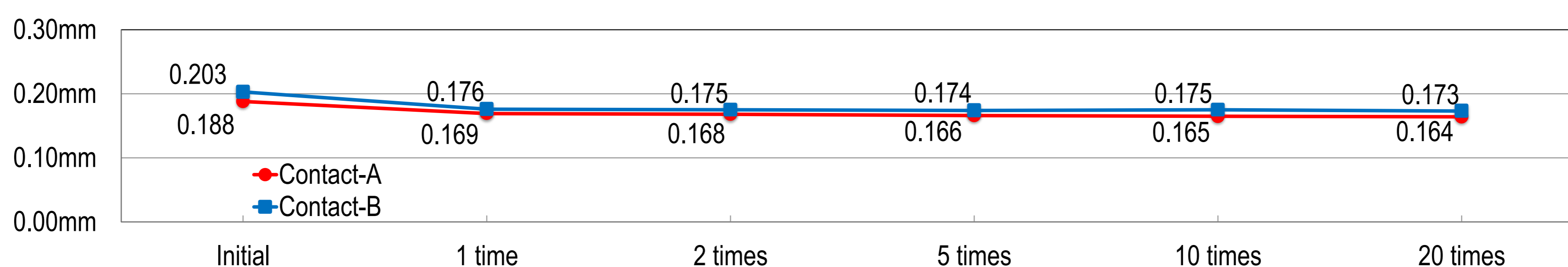


當鋼琴蓋被打開時, 鋼琴蓋內側的突起可以防止指甲碰觸到端子而造成的變形

▶ 在沒有插入FPC的情況下關閉鋼琴蓋，連接器仍可使用

在 SMT 加工後，如果鋼琴蓋在沒有插入 FPC 的情況下意外閉合，連接器仍可使用

- FPC未插入情況下閉合鋼琴蓋，其前後的接點間距比較如圖(圖表為 MINIFLEX® 3-BFN LK 35 pins)

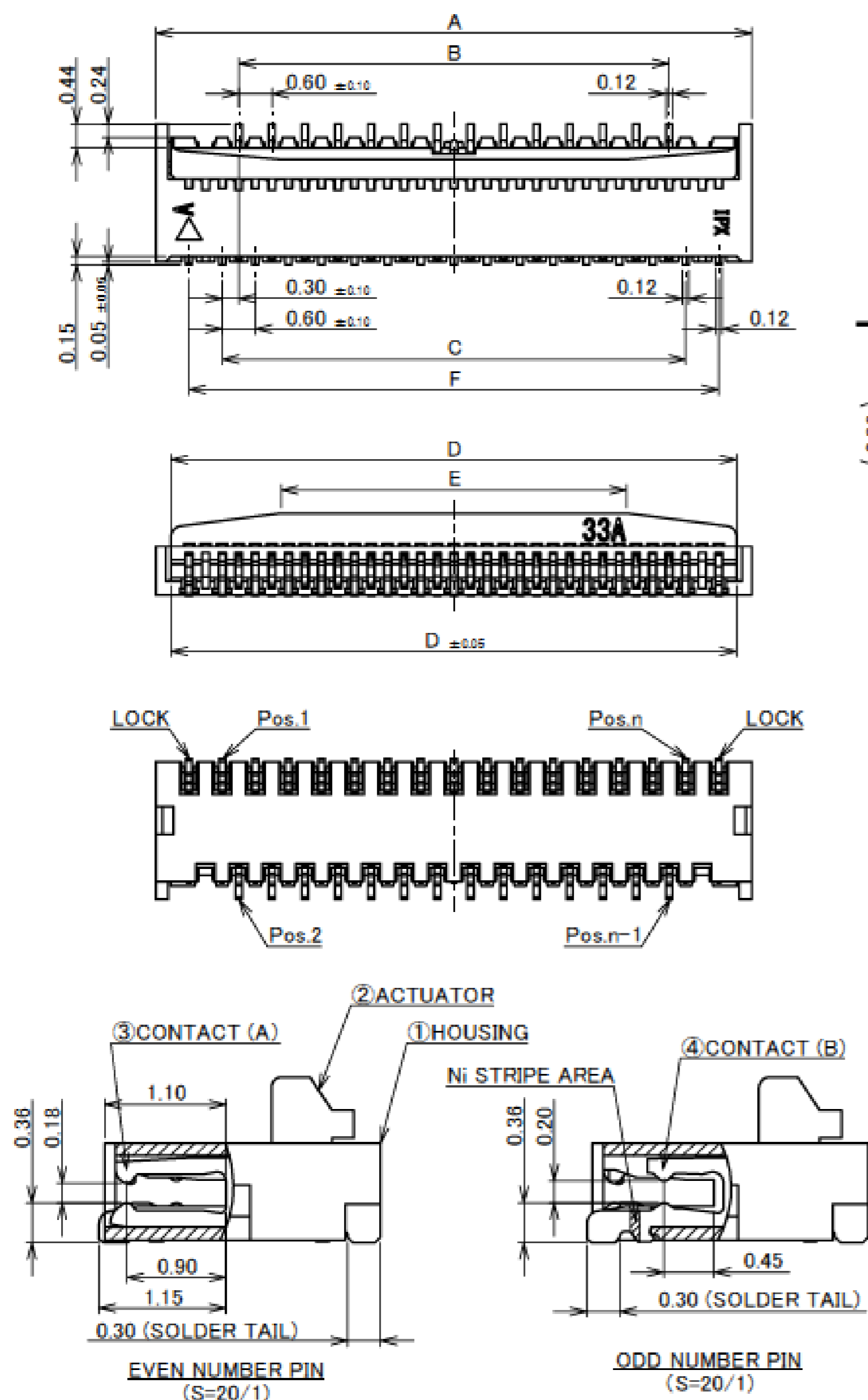


- FPC插入力上升
- FPC保持力無太大變化

Component Parts Details

Connector Assembly

Recommended P/N 20599-0**E-01



PART NO.	Pos.	A	B	C	D	E	F
20599-009E-01	9P	4.80	1.80	2.40	4.25	2.25	3.60
20599-011E-01	11P	5.40	2.40	3.00	4.85	2.85	4.20
20599-013E-01	13P	6.00	3.00	3.60	5.45	3.45	4.80
20599-015E-01	15P	6.60	3.60	4.20	6.05	4.05	5.40
20599-017E-01	17P	7.20	4.20	4.80	6.65	4.65	6.00
20599-019E-01	19P	7.80	4.80	5.40	7.25	5.25	6.60
20599-021E-01	21P	8.40	5.40	6.00	7.85	5.85	7.20
20599-023E-01	23P	9.00	6.00	6.60	8.45	6.45	7.80
20599-025E-01	25P	9.60	6.60	7.20	9.05	7.05	8.40
20599-027E-01	27P	10.20	7.20	7.80	9.65	7.65	9.00
20599-029E-01	29P	10.80	7.80	8.40	10.25	8.25	9.60
20599-031E-01	31P	11.40	8.40	9.00	10.85	8.85	10.20
20599-033E-01	33P	12.00	9.00	9.60	11.45	9.45	10.80
20599-035E-01	35P	12.60	9.60	10.20	12.05	10.05	11.40
20599-037E-01	37P	13.20	10.20	10.80	12.65	10.65	12.00

NOTES
1. CONTACT POINT: TOP AND BOTTOM CONTACT

CAUTION VISIT OUR WEBSITE FOR LATEST VERSIONS OF INSTRUCTION MANUAL NO. HIM-12007 TO HANDLE THE PRODUCT PROPERLY AND SAFELY.

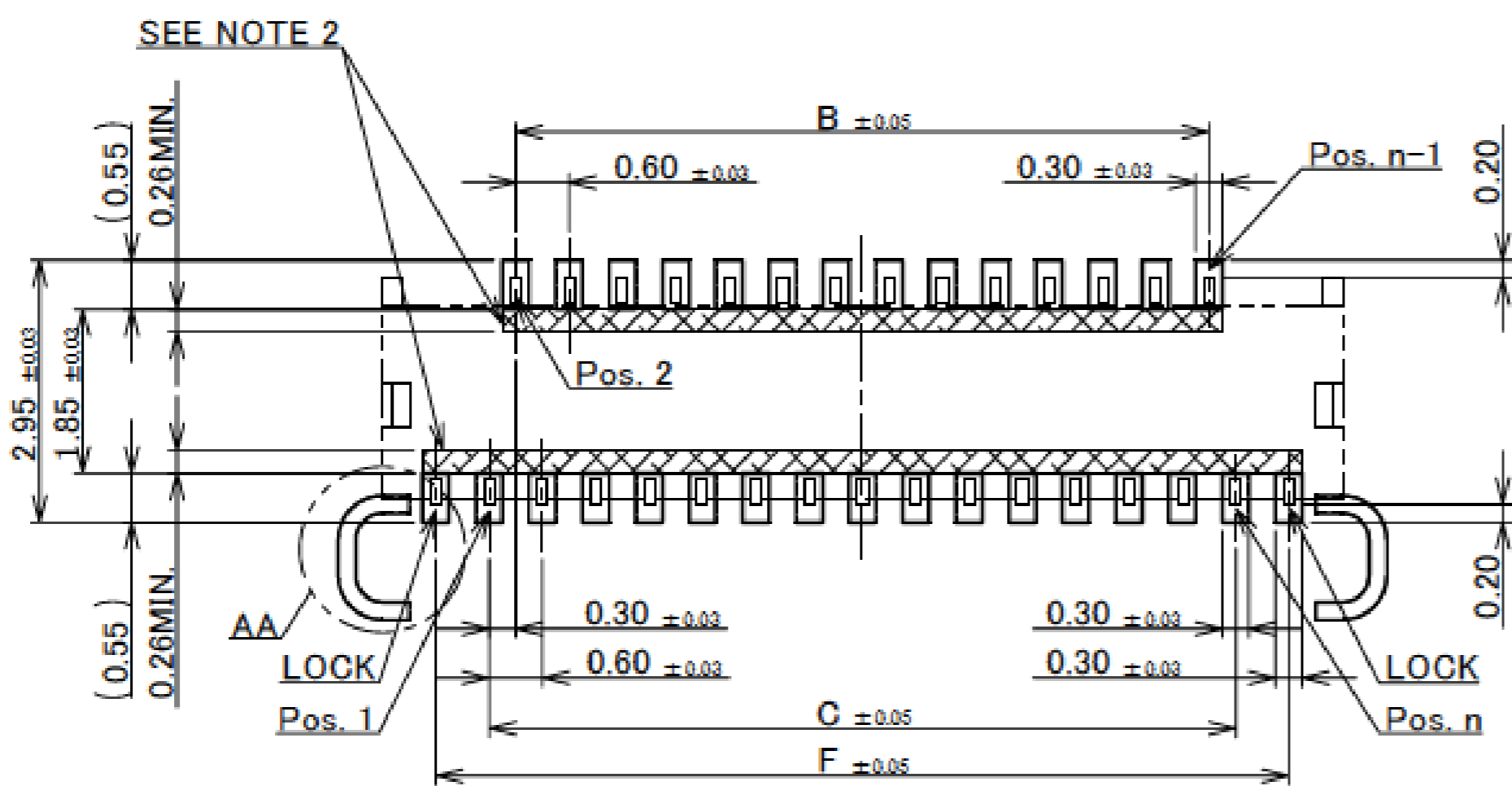
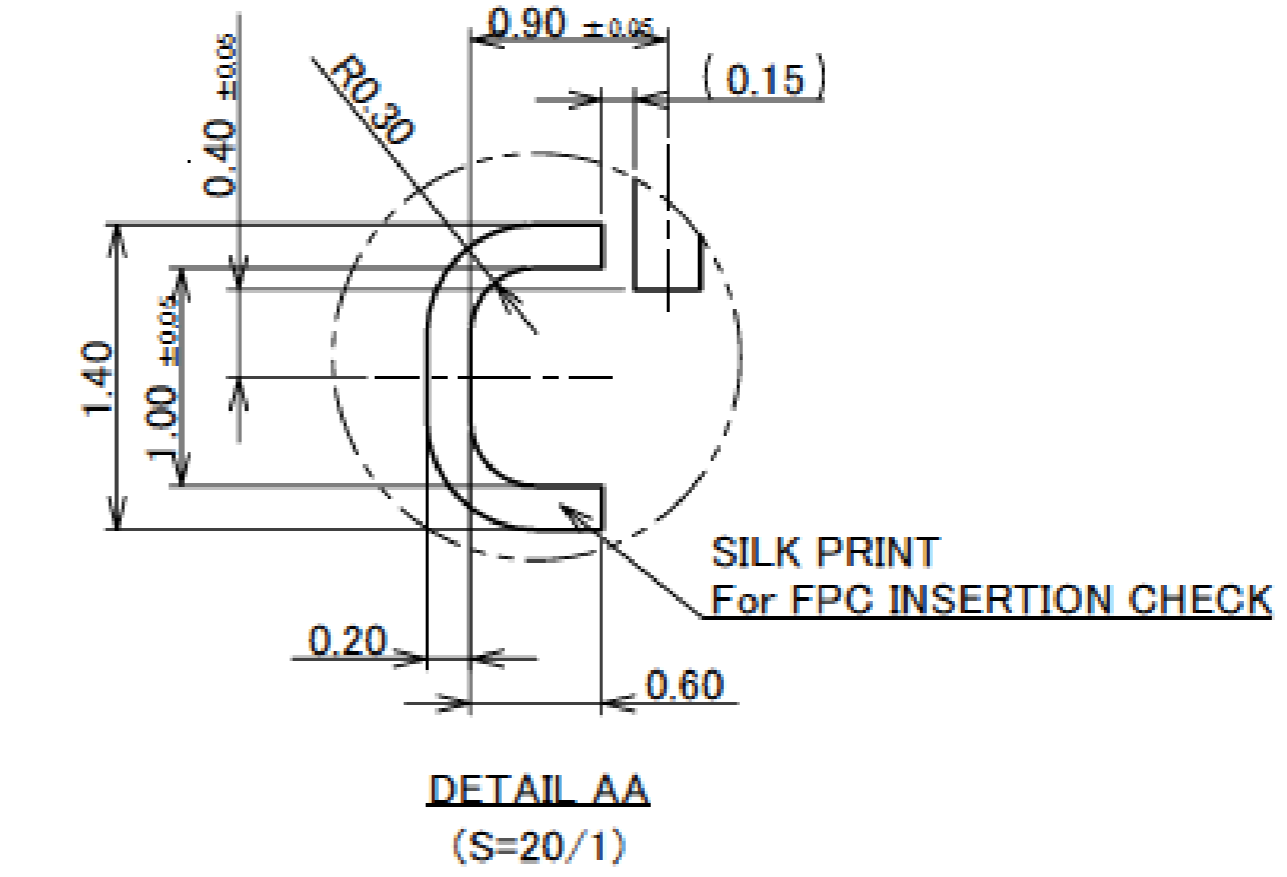
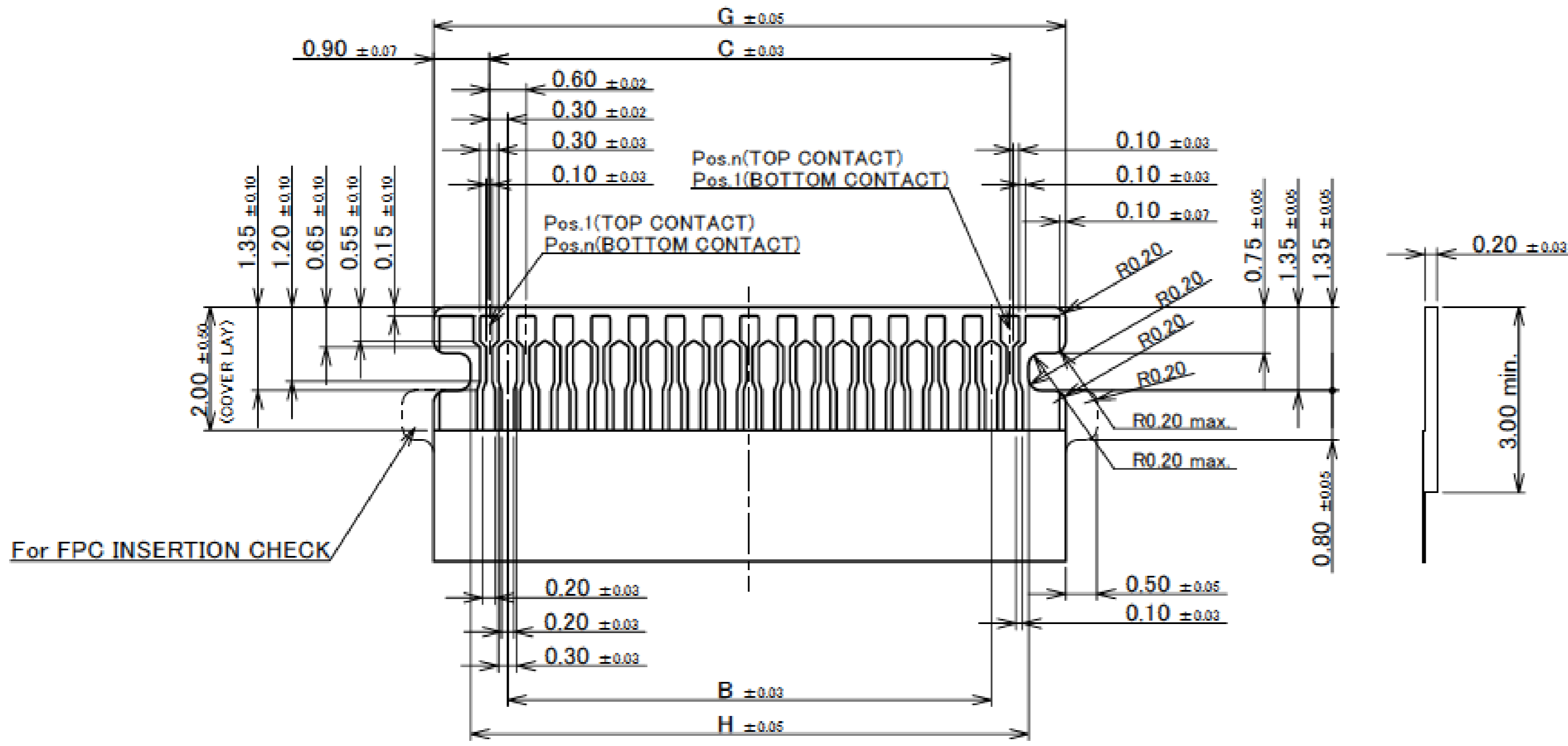
TABLE 1

PART NO.	FINISH		
20599-0**E-01	CONTACT AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.		
5	LOCK	PHOSPHOR BRONZE SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.	
4	CONTACT (B)	PHOSPHOR BRONZE SEE TABLE 1, WITH Ni STRIPE	
3	CONTACT (A)	PHOSPHOR BRONZE SEE TABLE 1	
2	ACTUATOR	LCP UL94V-0, BEIGE	
1	HOUSING	LCP UL94V-0, BEIGE	
NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS

Connector Assembly

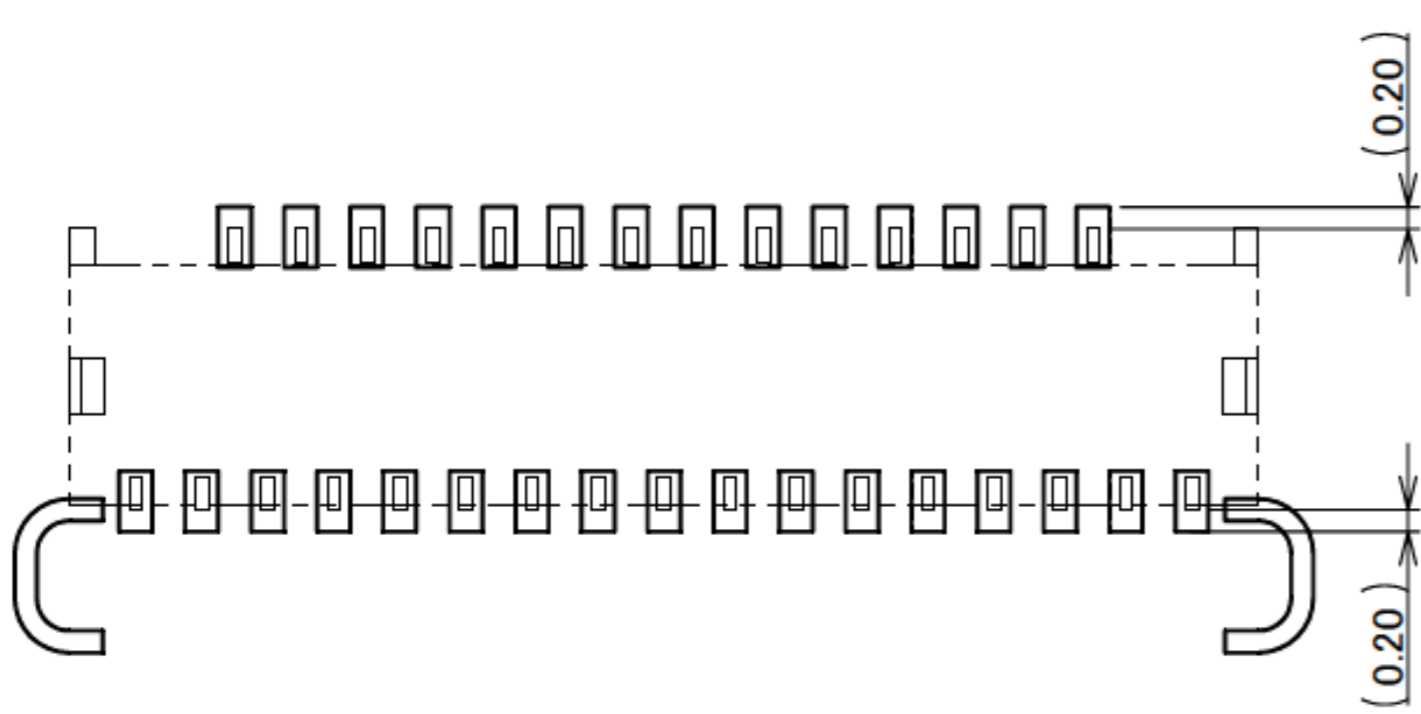
PART NO.	Pos.	B	C	F	G	H
20599-009E-01	9P	1.80	2.40	3.60	4.20	3.00
20599-011E-01	11P	2.40	3.00	4.20	4.80	3.60
20599-013E-01	13P	3.00	3.60	4.80	5.40	4.20
20599-015E-01	15P	3.60	4.20	5.40	6.00	4.80
20599-017E-01	17P	4.20	4.80	6.00	6.60	5.40
20599-019E-01	19P	4.80	5.40	6.60	7.20	6.00
20599-021E-01	21P	5.40	6.00	7.20	7.80	6.60
20599-023E-01	23P	6.00	6.60	7.80	8.40	7.20
20599-025E-01	25P	6.60	7.20	8.40	9.00	7.80
20599-027E-01	27P	7.20	7.80	9.00	9.60	8.40
20599-029E-01	29P	7.80	8.40	9.60	10.20	9.00
20599-031E-01	31P	8.40	9.00	10.20	10.80	9.60
20599-033E-01	33P	9.00	9.60	10.80	11.40	10.20
20599-035E-01	35P	9.60	10.20	11.40	12.00	10.80
20599-037E-01	37P	10.20	10.80	12.00	12.60	11.40

NOTES
 2. SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.

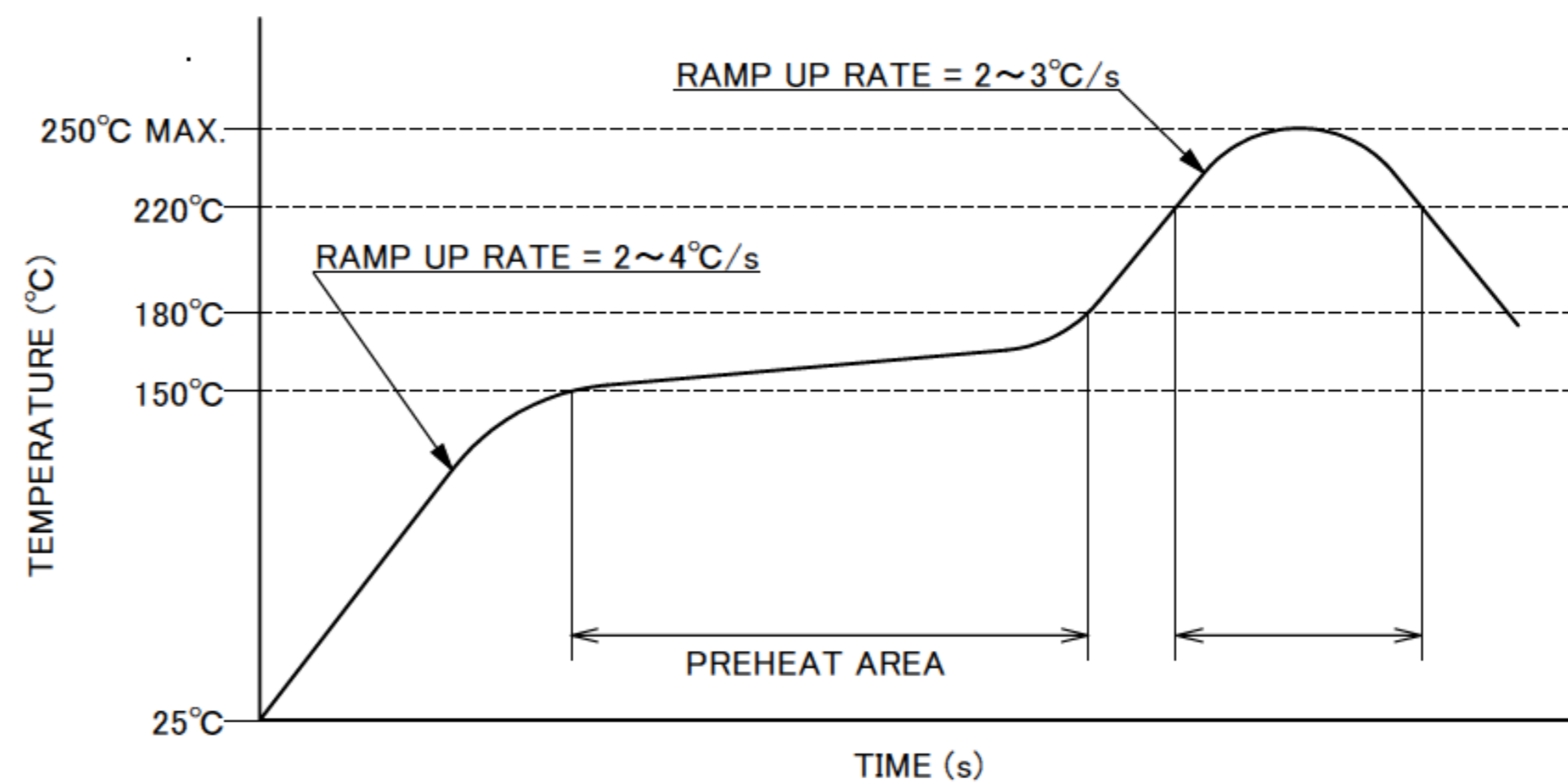


RECOMMENDED PCB LAYOUT & METAL MASK LAYOUT
 METAL MASK THICKNESS : $t=0.12\text{mm}$

Rev.13



CONNECTOR ON RECOMMENDED PCB LAYOUT



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

Rev.13

Connector Assembly

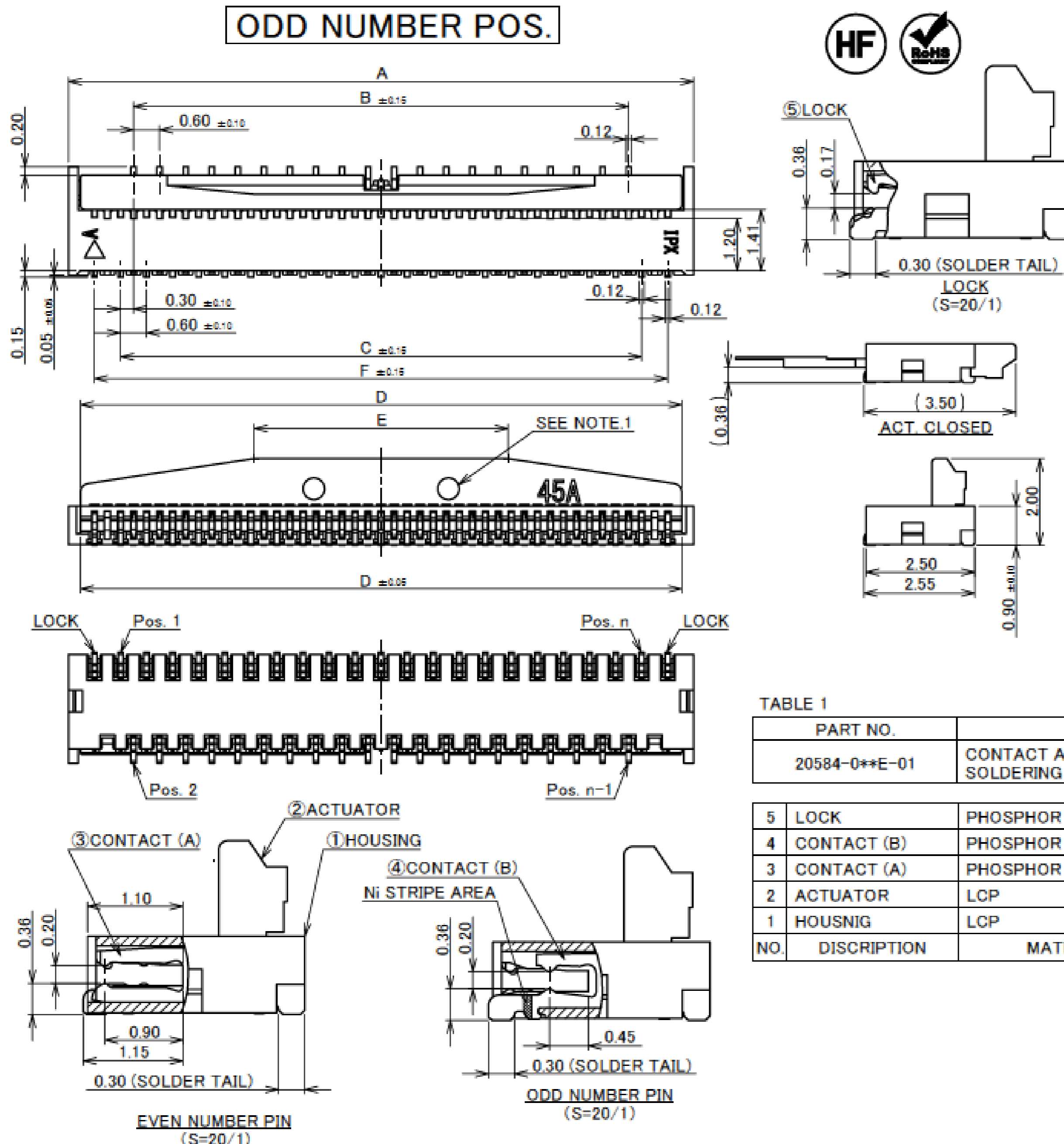
ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT)
RATING AMPERAGE	0.3A DC (PER CONTACT)
OPERATING TEMPERATURE	233~358K(-40°C~85°C)
OPERATING HUMIDITY	20~80%RH (NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : \triangleleft 40mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	20TH CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.3N(31gf) \times (n + 2) MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.02N(2gf) \times (n + 2) MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	INITIAL : 0.13N(13gf) \times n + 1.0N MIN. / AFTER TEST : 0.10N(10gf) \times n + 1.0N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1861
TEST REPORT	TR-13085
PACKING STANDARD	PST-13035
INSTRUCTION MANUAL	HIM-12007
APPEARANCE CRITERIA No.	QLS-A***

※ "n" IS THE NUMBER OF PIN

Rev.13

Recommended P/N 20584-0**E-01

ODD NUMBER POS.



PART NO.	Pos.	A	B	C	D	E	F
◆ 20584-029E-01	29P	10.80	7.80	8.40	10.25	6.25	9.60
◆ 20584-031E-01	31P	11.40	8.40	9.00	10.85	6.85	10.20
◆ 20584-035E-01	35P	12.60	9.60	10.20	12.05	8.05	11.40
◆ 20584-037E-01	37P	13.20	10.20	10.80	12.65	4.65	12.00
◆ 20584-039E-01	39P	13.80	10.80	11.40	13.25	5.25	12.60
◆ 20584-041E-01	41P	14.40	11.40	12.00	13.85	5.85	13.20
◆ 20584-045E-01	45P	15.60	12.60	13.20	15.05	7.05	14.40
◆ 20584-047E-01	47P	16.20	13.20	13.80	15.65	7.65	15.00
20584-051E-01	51P	17.40	14.40	15.00	16.85	8.85	16.20
20584-053E-01	53P	18.00	15.00	15.60	17.45	9.45	16.80
20584-057E-01	57P	19.20	16.20	16.80	18.65	10.65	18.00
20584-061E-01	61P	20.40	17.40	18.00	19.85	11.85	19.20
◆ 20584-063E-01	63P	21.00	18.00	18.60	20.45	8.45	19.80
20584-071E-01	71P	23.40	20.40	21.00	22.85	10.85	22.20

◆ MARK MEANS NOT AVAILABLE.

NOTES.

- THIS DENT SHAPE IS PURPOSED FOR GOOD INJECTION QUALITY. THIS DENT SHAPE WILL NOT AFFECT CONNECTR FUNCTION. DENT SHAPE SHOWN ON DRAWING IS JUST FOR REFERENCE. DENT SHAPE AND QUANTITY MIGHT CHABGE FROM DIFFERENT PIN COUNT AND DIFFERENT TOOLING.
- CONTACT POINT: TOP AND BOTTOM CONTACT

CAUTION VISIT OUR WEBSITE FOR LATEST VERSIONS OF INSTRUCTION MANUAL NO. HIM-12007 TO HANDLE THE PRODUCT PROPERLY AND SAFELY.

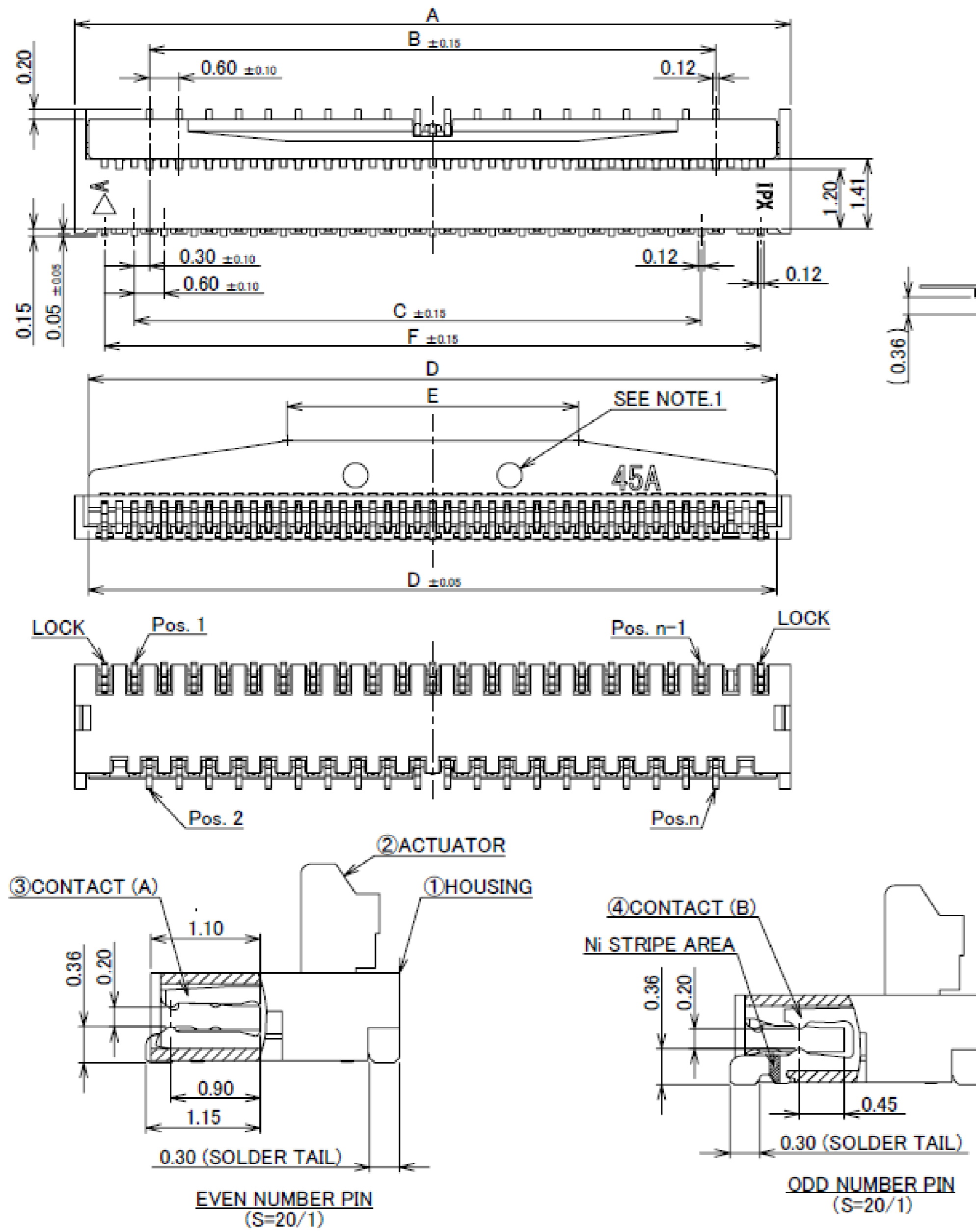
TABLE 1

PART NO.	FINISH		
20584-0**E-01	CONTACT AREA : Au 0.10 μ m MIN. OVER Ni 1.00 μ m MIN. SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.		
5	LOCK	PHOSPHOR BRONZE	SOLDERING AREA : Au 0.03 μ m MIN. OVER Ni 1.00 μ m MIN.
4	CONTACT (B)	PHOSPHOR BRONZE	SEE TABLE 1, WITH Ni STRIPE
3	CONTACT (A)	PHOSPHOR BRONZE	SEE TABLE 1
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSNIG	LCP	UL94V-0, BEIGE
NO.	DISCRIPTION	MATERIAL	FINISH . REMARKS

Rev.17

Connector Assembly

EVEN NUMBER POS.

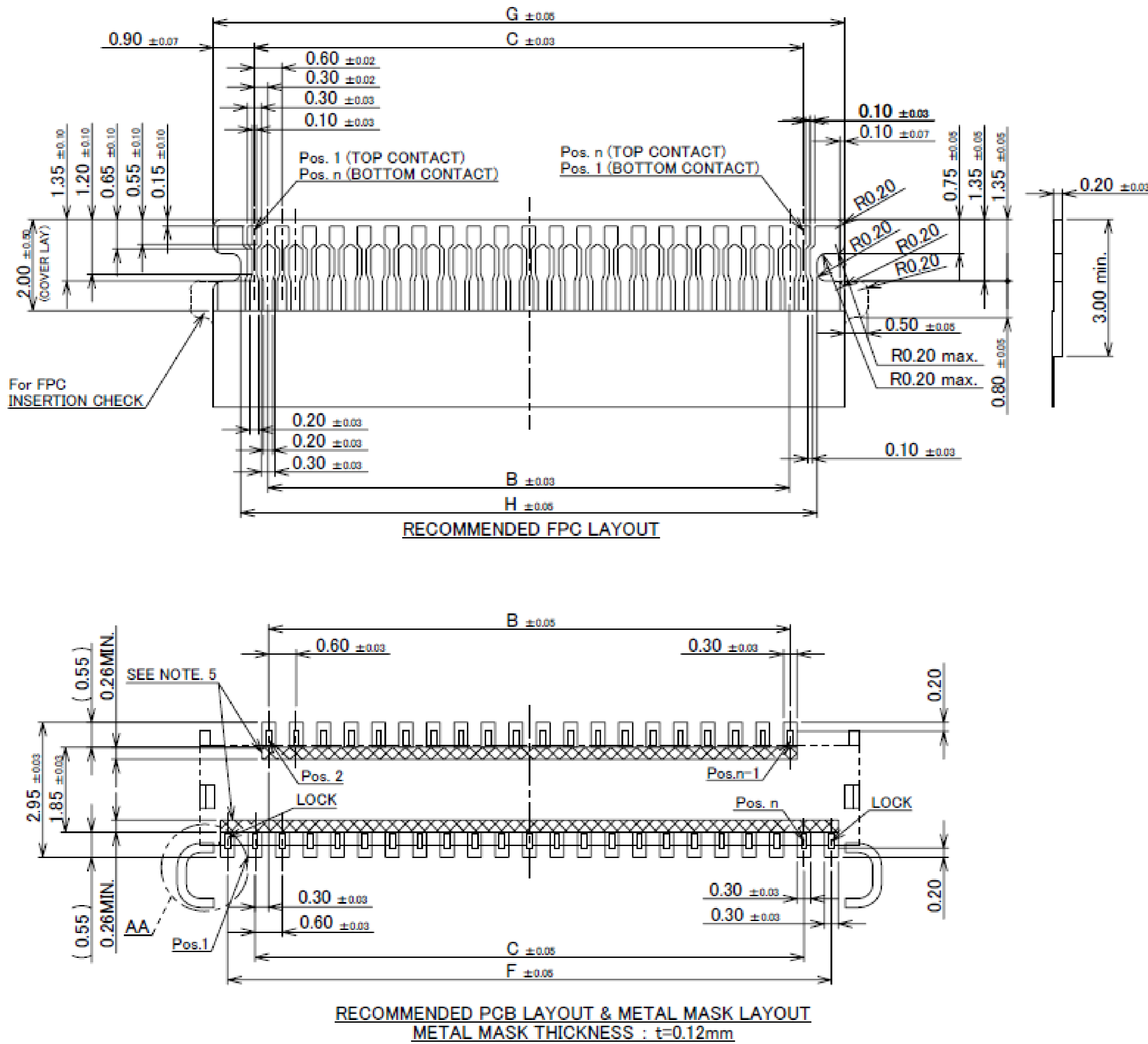


PART NO.	Pos.	A	B	C	D	E	F
◆ 20584-030E-01	30P	11.40	8.40	8.40	10.85	6.85	10.20
◆ 20584-034E-01	34P	12.60	9.60	9.60	12.05	8.05	11.40
◆ 20584-038E-01	38P	13.80	10.80	10.80	13.25	5.25	12.60
◆ 20584-040E-01	40P	14.40	11.40	11.40	13.85	5.85	13.20
◆ 20584-050E-01	50P	17.40	14.40	14.40	16.85	8.85	16.20
◆ 20584-056E-01	56P	19.20	16.20	16.20	18.65	10.65	18.00

◆ MARK MEANS NOT AVAILABLE.

Rev.17

ODD NUMBER POS.



PART NO.	Pos.	B	C	F	G	H
◆ 20584-029E-01	29P	7.80	8.40	9.60	10.20	9.00
◆ 20584-031E-01	31P	8.40	9.00	10.20	10.80	9.60
◆ 20584-035E-01	35P	9.60	10.20	11.40	12.00	10.80
◆ 20584-037E-01	37P	10.20	10.80	12.00	12.60	11.40
◆ 20584-039E-01	39P	10.80	11.40	12.60	13.20	12.00
◆ 20584-041E-01	41P	11.40	12.00	13.20	13.80	12.60
◆ 20584-045E-01	45P	12.60	13.20	14.40	15.00	13.80
◆ 20584-047E-01	47P	13.20	13.80	15.00	15.60	14.40
◆ 20584-051E-01	51P	14.40	15.00	16.20	16.80	15.60
◆ 20584-053E-01	53P	15.00	15.60	16.80	17.40	16.20
◆ 20584-057E-01	57P	16.20	16.80	18.00	18.60	17.40
◆ 20584-061E-01	61P	17.40	18.00	19.20	19.80	18.60
◆ 20584-063E-01	63P	18.00	18.60	19.80	20.40	19.20
◆ 20584-071E-01	71P	20.40	21.00	22.20	22.80	21.60

◆ MARK MEANS NOT AVAILABLE.

NOTES

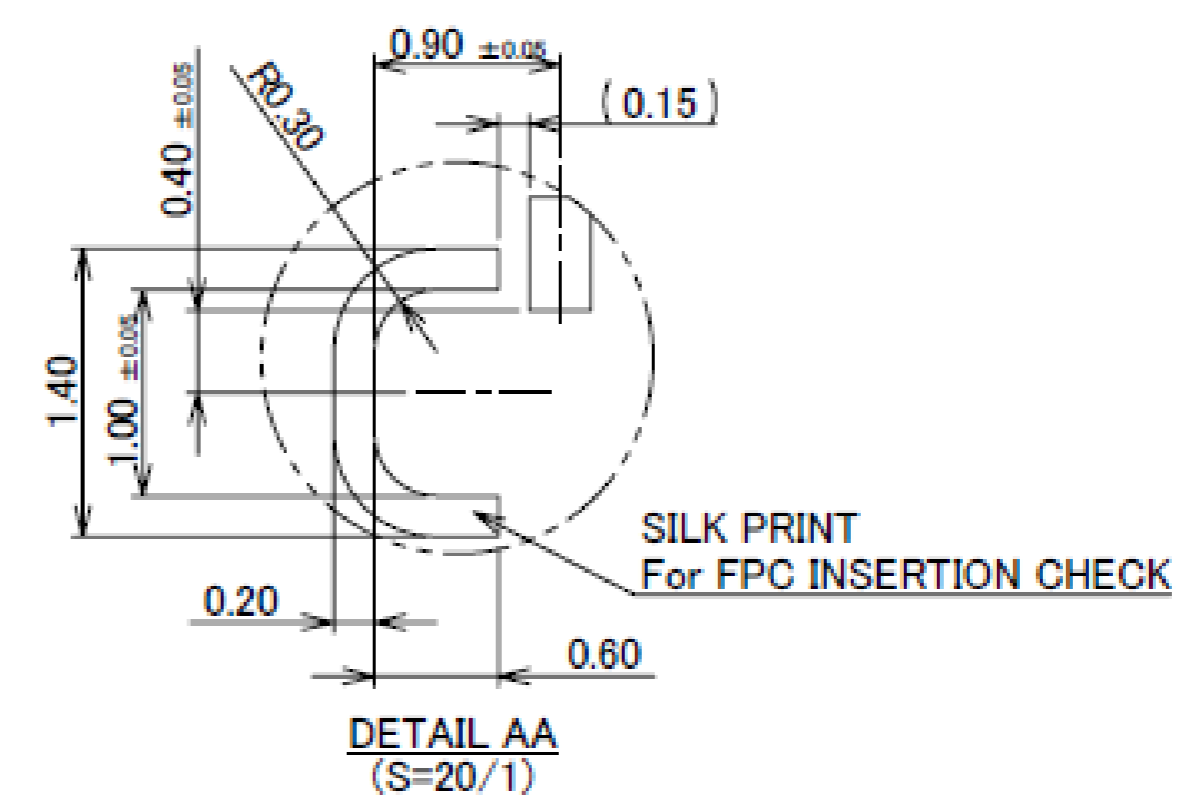
3. MATERIAL

COVER FILM : PI
 CONDUCTOR : COPPER(RARE)
 BASE FILM : PI
 STIFFENER : PI
 ADHESIVE : THERMOSETTING ADHESIVE

4. FINISH

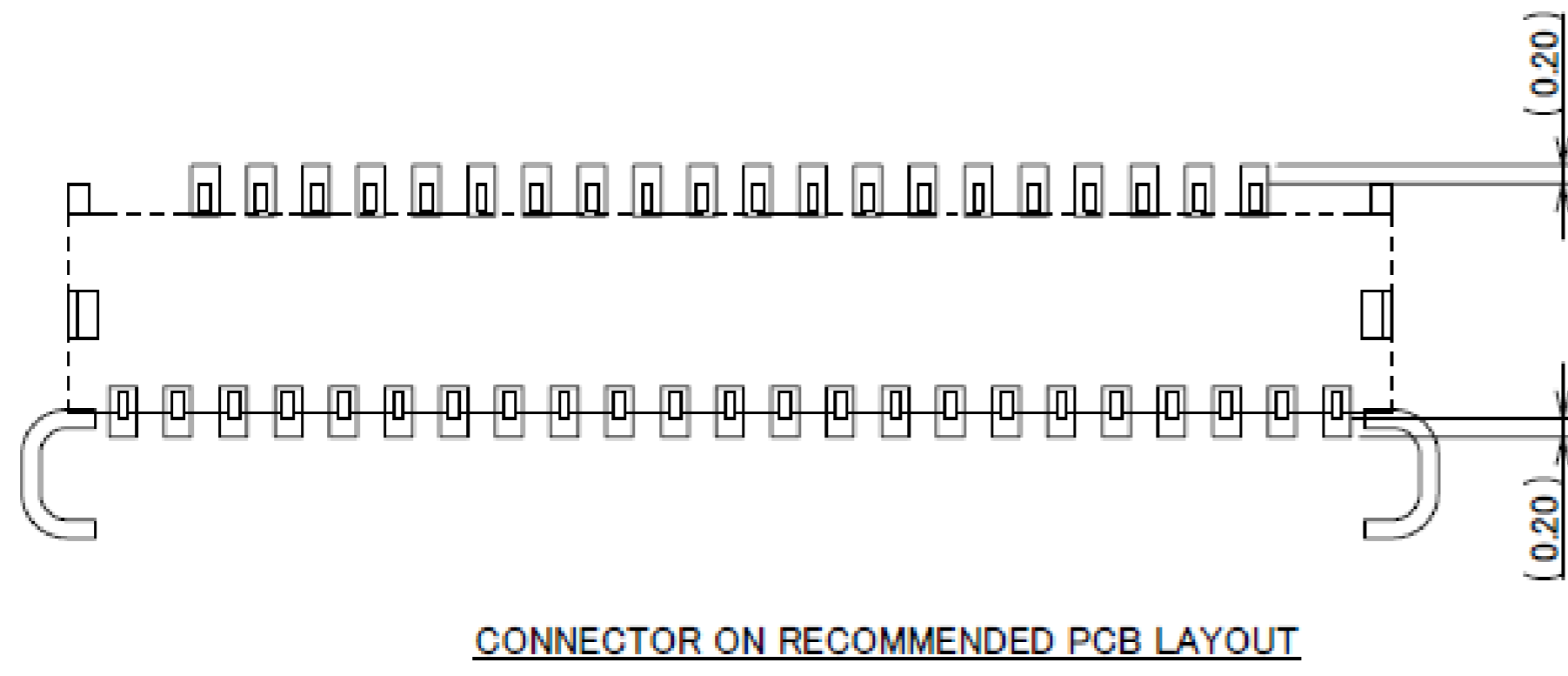
Au OVER Ni UNDER PLATING.

5. SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.

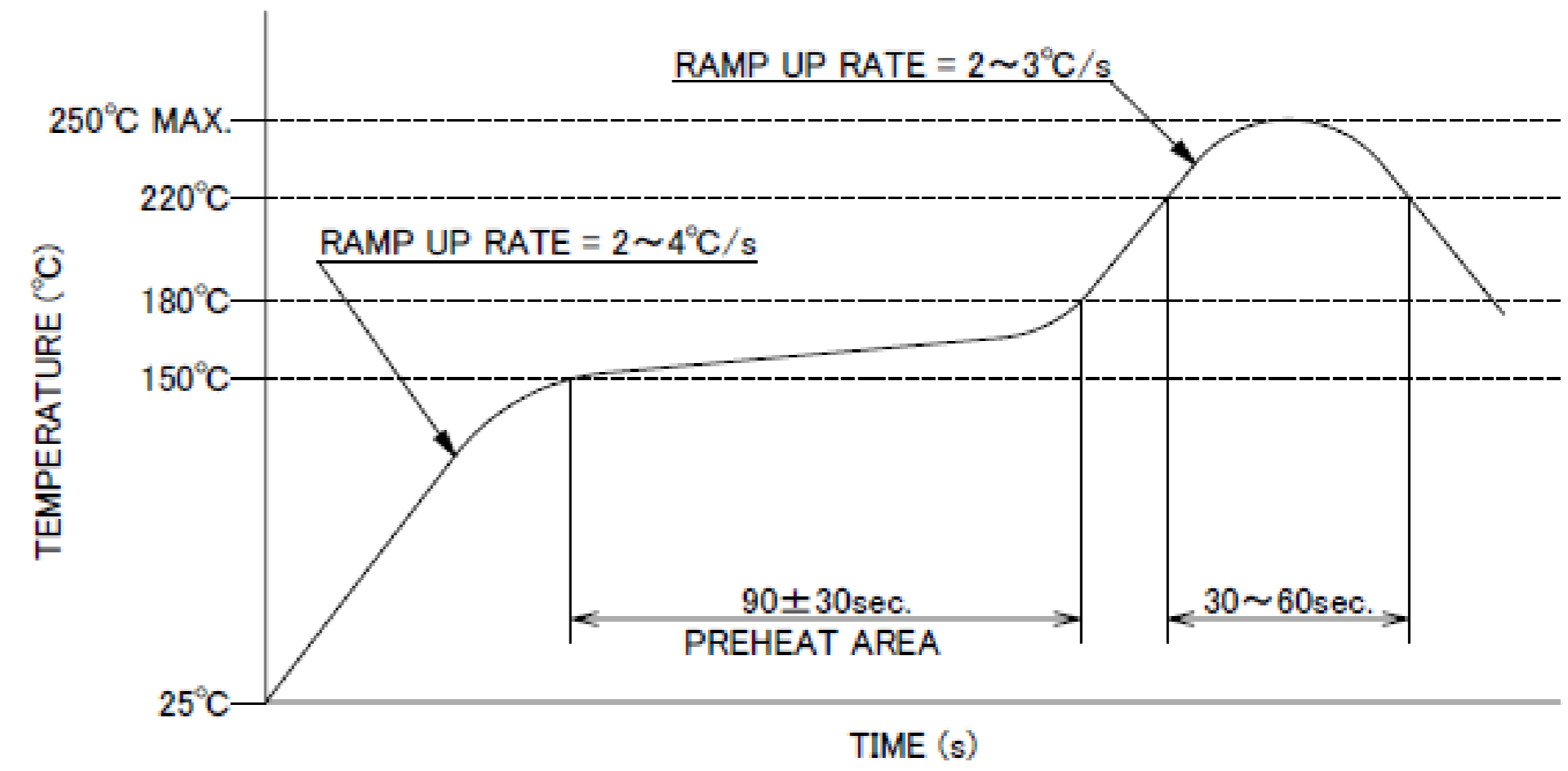


Rev.17

Connector Assembly



CONNECTOR ON RECOMMENDED PCB LAYOUT



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

Rev.17

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC (PER CONTACT)
RATING AMPERAGE	0.3A DC (PER CONTACT)
OPERATING TEMPERATURE	233~358K (-40°C~+85°C)
OPERATING HUMIDITY	20~80%RH (NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : \triangleleft 40mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	20 CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20 CYCLES)	INITIAL / 20 CYCLES 0.21N (21gf) \times (n + 2) MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20 CYCLES)	INITIAL / 20 CYCLES 0.014N (1.4gf) \times (n + 2) MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	INITIAL: 0.13N (13gf) \times n + 1.0N MIN. / AFTER TEST: 0.10N (10gf) \times n + 1.0N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1789
TEST REPORT	TR-13022
PACKING STANDARD	PST-13013
INSTRUCTION MANUAL	HIM-12007
APPEARANCE CRITERIA No.	QLS-A***

※ "n" IS THE NUMBER OF PIN

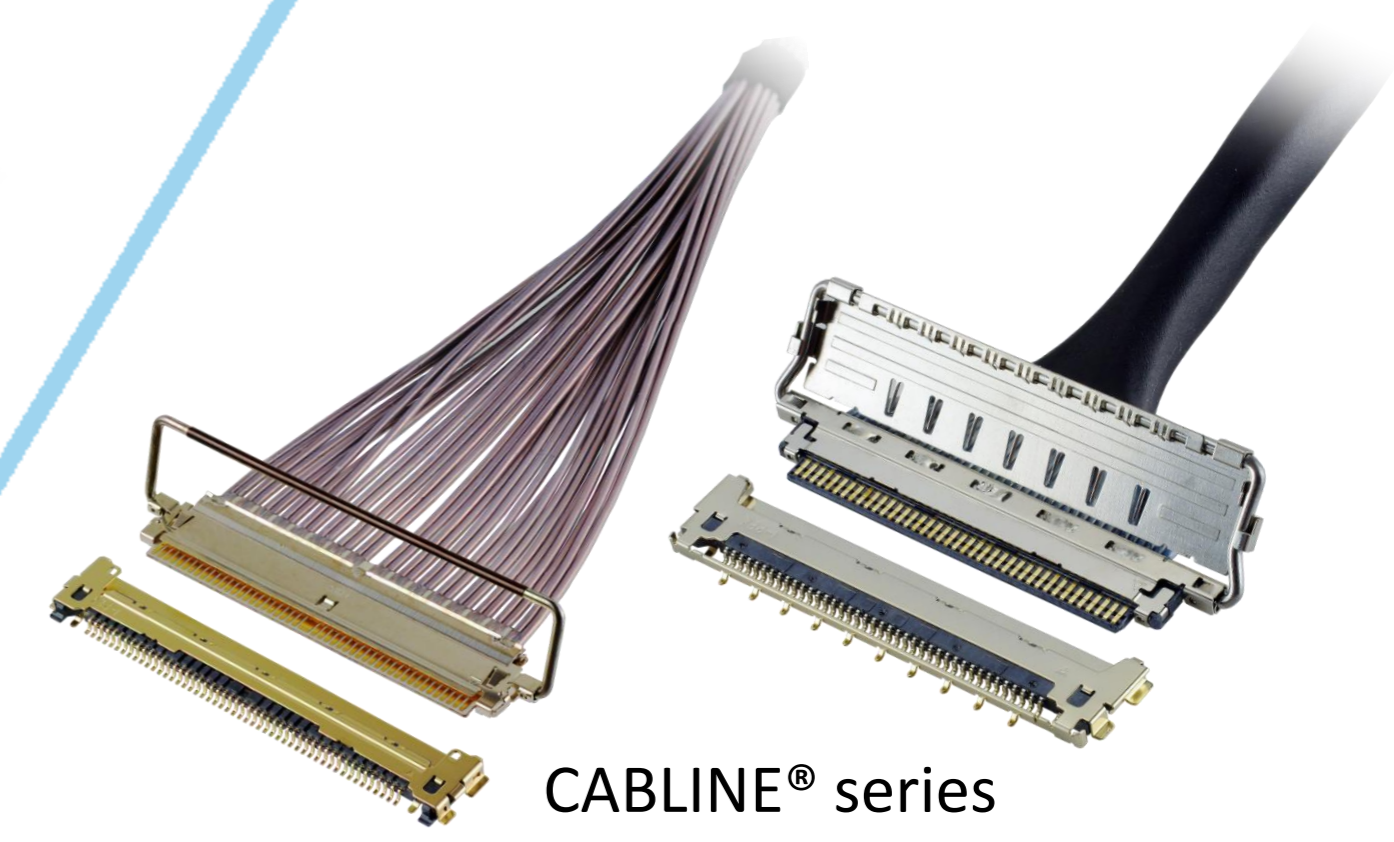
Custom Connectors Available

 RF Connector

MHF® series



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



Optical Module

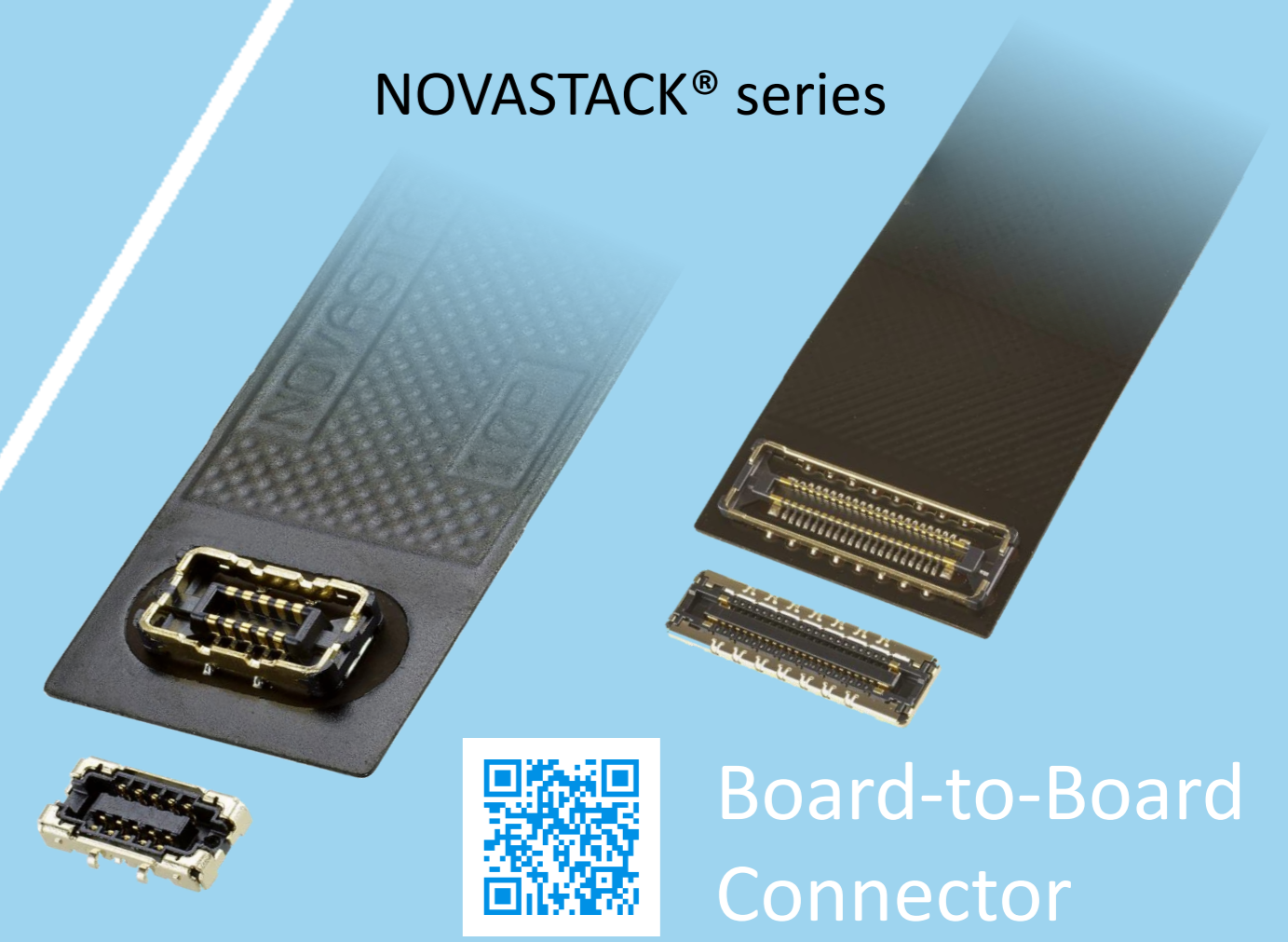
LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector



Power Connector/
Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



FPC FFC Connector



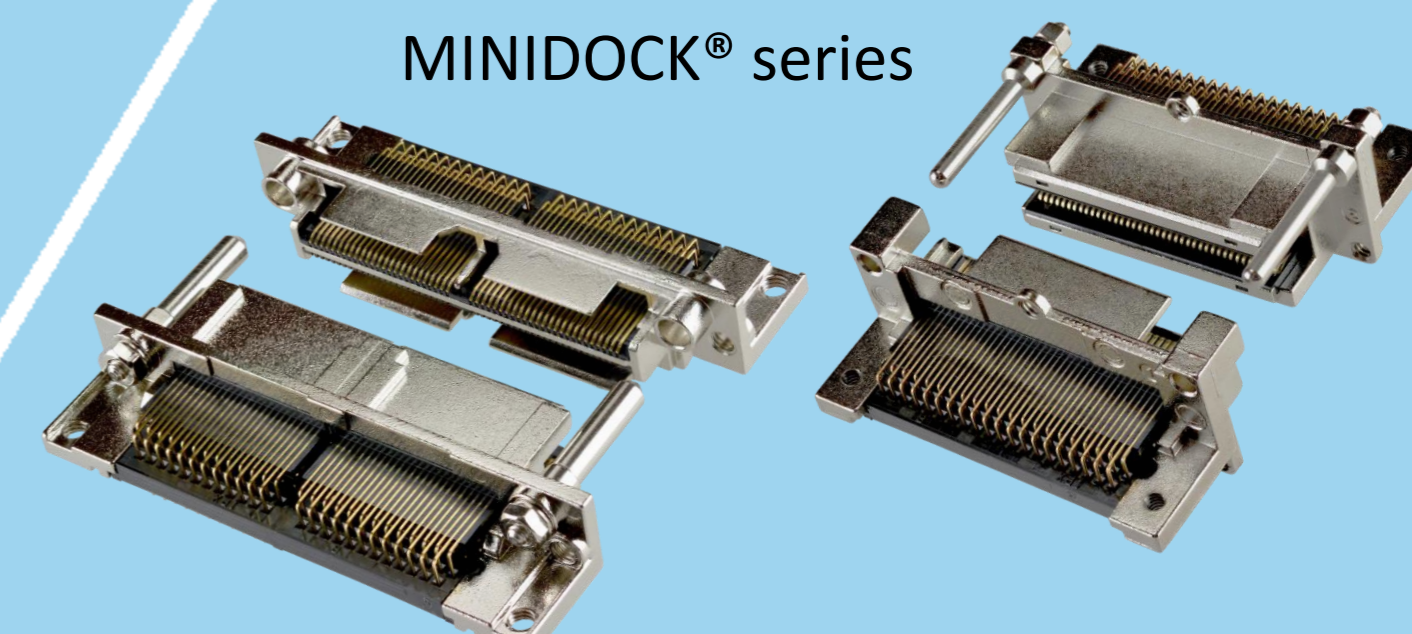
Inquiry



MINIDOCK® series



I/O Connector



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Contact your sales representative or more detailed information.

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