

# MINIFLEX® 3-BFN L-LK-HD

Mechanical lock, robust design with hold-down feature, long actuator, low profile (Height = 0.9 mm) 0.3 mm pitch, horizontal, backflip

**Product Specifications:**

Board Pitch (mm)	0.3	
Wiping Length (mm)	Contact A:0.9	
	Contact B:0.45	
Size (mm)	Height	0.90 +/- 0.10
	Width	Formula: Even no pos: 3.0+(0.3*?p). Odd no pos: 2.7+(0.3*?p)
	Depth	Open:2.55 Close:3.5
Pin counts	Range	11-57 (odd)
	Available	11, 40, 45

**Applicable FPC/FFC:**

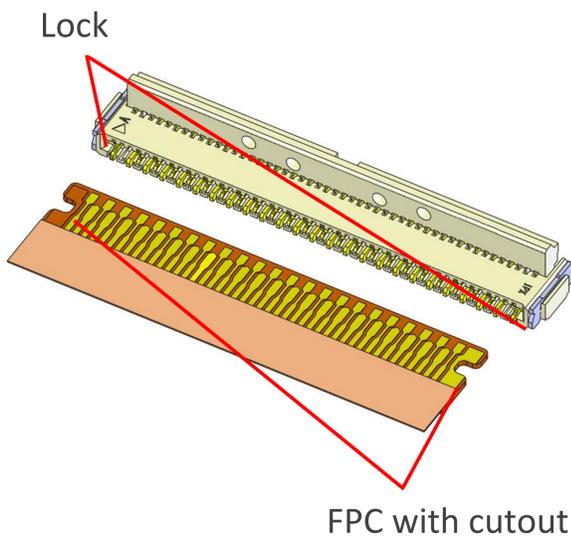
FPC/FFC Contact Pitch	0.3
FPC/FFC Contact Point	Top and Bottom
FPC/FFC Thickness (mm)	0.2 +/- 0.03



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

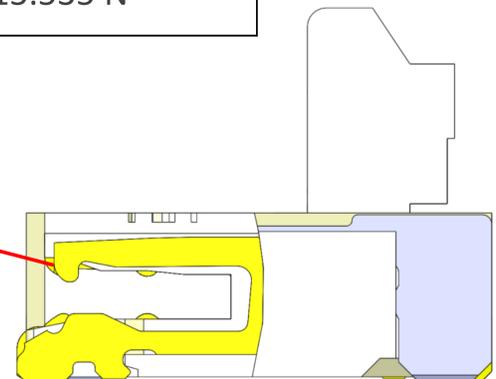
## ▶ High FPC retention force with additional mechanical lock

FPC retention force comparison (45 p)

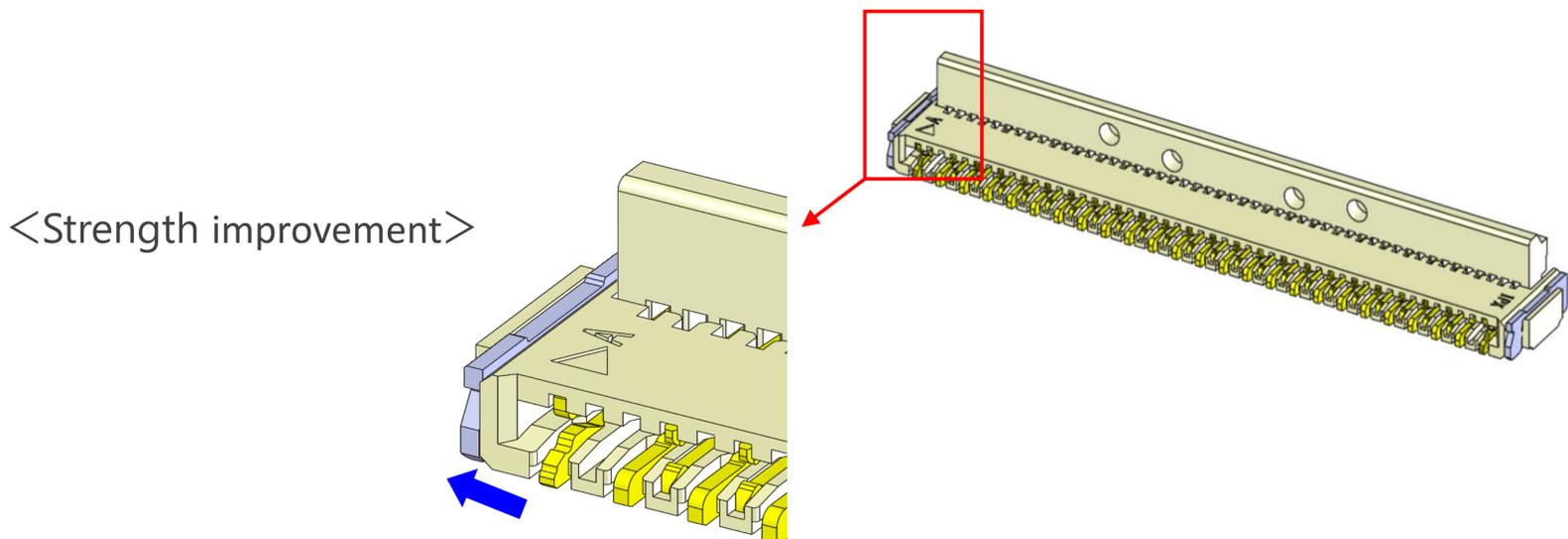


MINIFLEX® 3-BFN L-LK-HD	MINIFLEX® 3-BFN Long
20.710 N	15.535 N

FPC LOCK mechanism maintains high FPC retention force



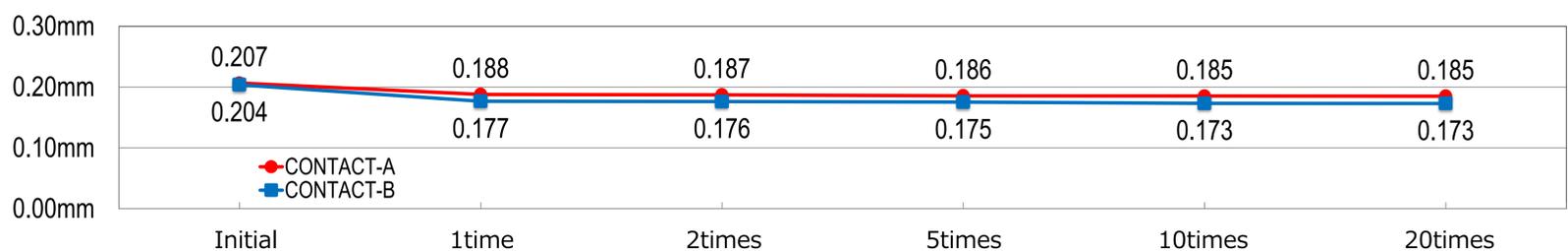
## ▶ Hold down feature improves strength of side wall



## ▶ 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 MINIFLEX® 3-BFN L-LK-HD 51 pins before and after operating actuator without FPC inserted)



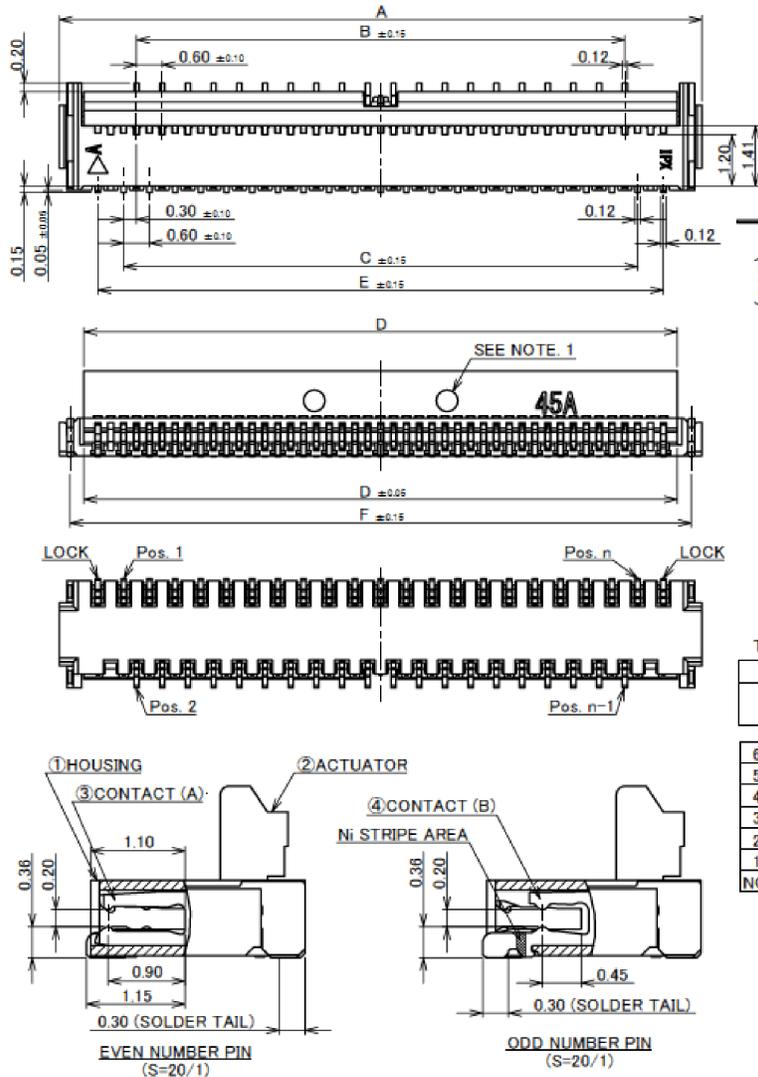
- Insertion force of connector goes up
- Retention force of connector does not change greatly

# Component Parts Details

## Connector Assembly

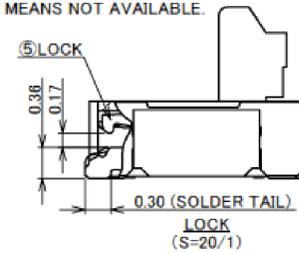
Recommended P/N 20655-0\*\*E-01

ODD NUMBER POS.



PART NO.	Pos.	A	B	C	D	E	F
20655-011E-01	11P	6.00	2.40	3.00	4.85	4.20	5.50
◆20655-029E-01	29P	11.40	7.80	8.40	10.25	9.60	10.90
◆20655-031E-01	31P	12.00	8.40	9.00	10.85	10.20	11.50
◆20655-035E-01	35P	13.20	9.60	10.20	12.05	11.40	12.70
◆20655-037E-01	37P	13.80	10.20	10.80	12.65	12.00	13.30
◆20655-041E-01	41P	15.00	11.40	12.00	13.85	13.20	14.50
20655-045E-01	45P	16.20	12.60	13.20	15.05	14.40	15.70
◆20655-047E-01	47P	16.80	13.20	13.80	15.65	15.00	16.30
◆20655-051E-01	51P	18.00	14.40	15.00	16.85	16.20	17.50
◆20655-053E-01	53P	18.60	15.00	15.60	17.45	16.80	18.10
◆20655-057E-01	57P	19.80	16.20	16.80	18.65	18.00	19.30

◆ MARK MEANS NOT AVAILABLE.



NOTES:  
 1. 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.  
 2. 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.

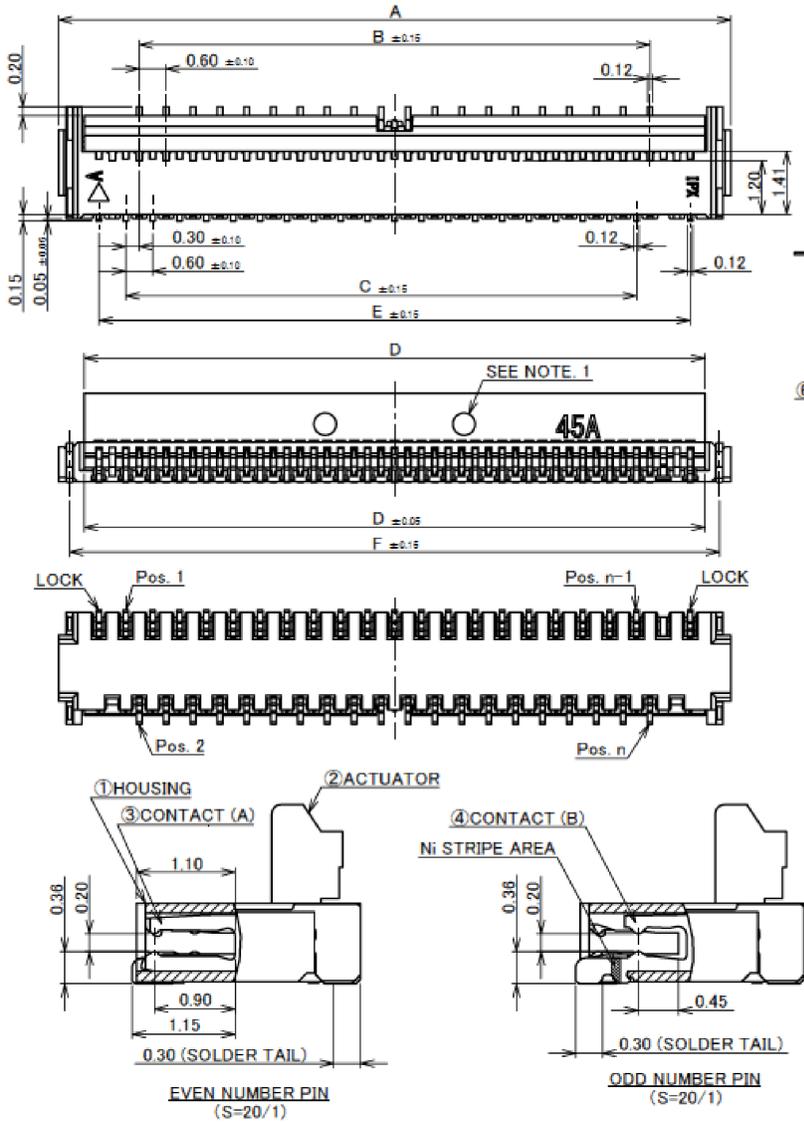
TABLE 1

PART NO.	FINISH		
20655-0**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.		
6	HOLD DOWN	PHOSPHOR BRONZE Sn 2~6 μm OVER Ni 1.00 μm MIN.	
5	LOCK	PHOSPHOR BRONZE SOLDERLING 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	HOUSNIG	LCP UL94V-0, BEIGE	
NO.	DISCRPTION	MATERIAL	FINISH, REMARKS

# Connector Assembly

Recommended P/N 20655-0\*\*E-01

## EVEN NUMBER POS.



PART NO.	Pos.	A	B	C	D	E	F
◆20655-030E-01	30P	12.00	8.40	8.40	10.85	10.20	11.50
◆20655-040E-01	40P	15.00	11.40	11.40	13.85	13.20	14.50
◆20655-050E-01	50P	18.00	14.40	14.40	16.85	16.20	17.50

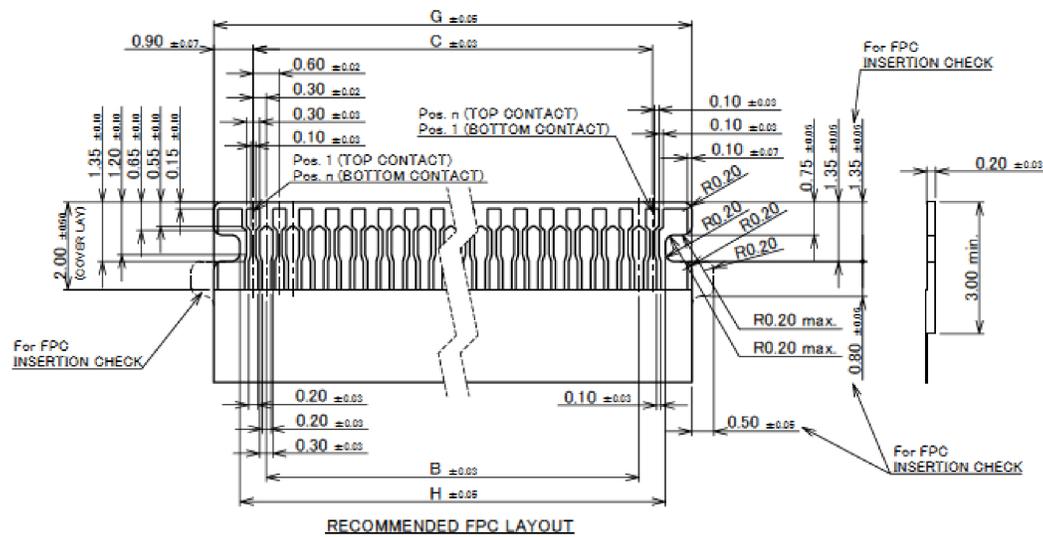
◆MARK MEANS NOT AVAILABLE.

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

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Rev.9

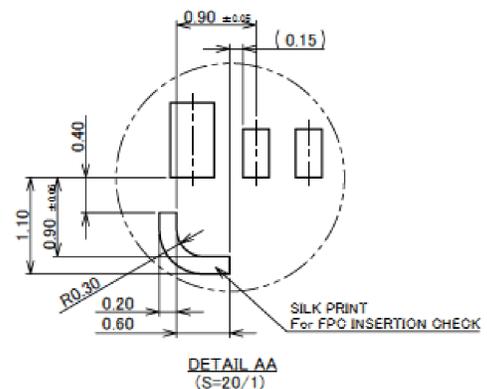
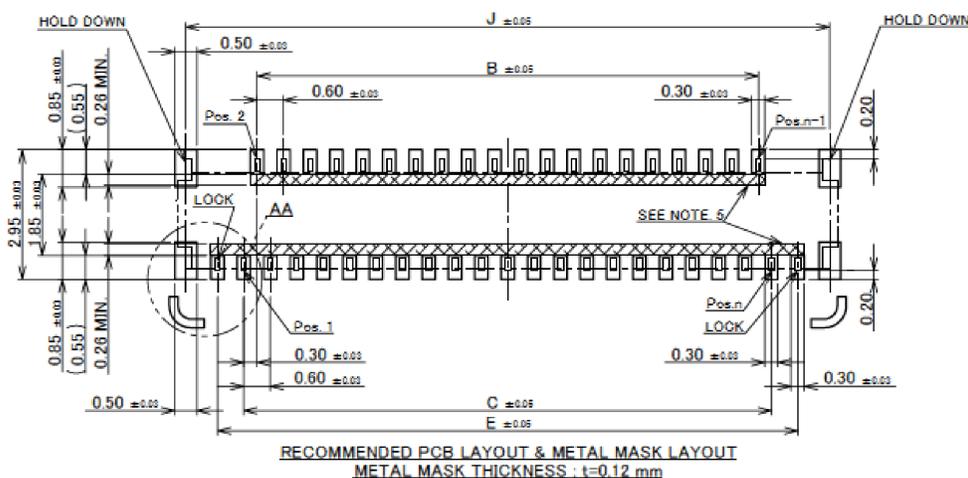
## ODD NUMBER POS.



PART NO.	Pos.	B	C	E	G	H	J
20655-011E-01	11P	2.40	3.00	4.20	4.80	3.60	5.65
◆20655-029E-01	29P	7.80	8.40	9.60	10.20	9.00	11.05
◆20655-031E-01	31P	8.40	9.00	10.20	10.80	9.60	11.65
◆20655-035E-01	35P	9.60	10.20	11.40	12.00	10.80	12.85
◆20655-037E-01	37P	10.20	10.80	12.00	12.60	11.40	13.45
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20655-045E-01	45P	12.60	13.20	14.40	15.00	13.80	15.85
◆20655-047E-01	47P	13.20	13.80	15.00	15.60	14.40	16.45
◆20655-051E-01	51P	14.40	15.00	16.20	16.80	15.60	17.65
◆20655-053E-01	53P	15.00	15.60	16.80	17.40	16.20	18.25
◆20655-057E-01	57P	16.20	16.80	18.00	18.60	17.40	19.45

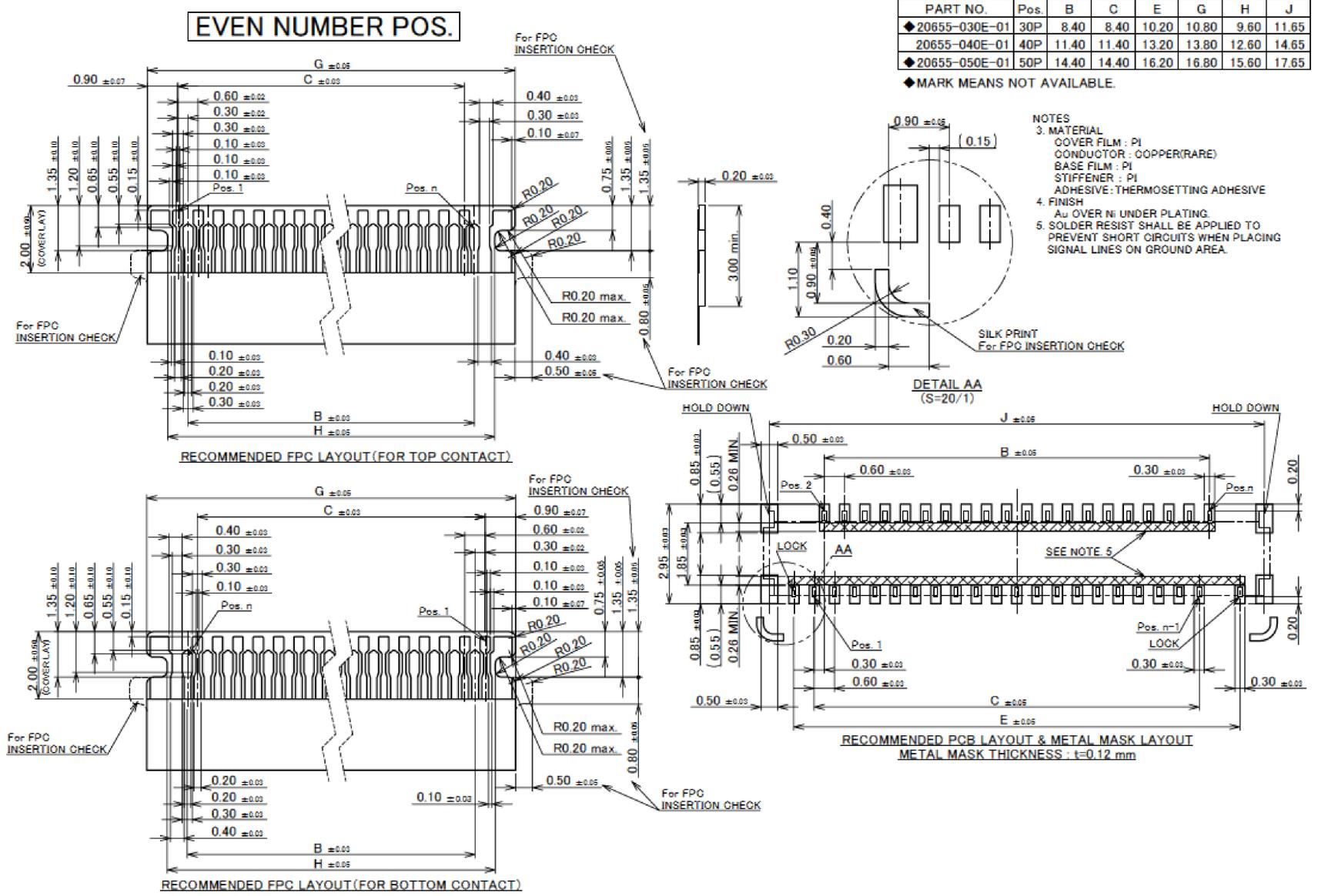
◆MARK MEANS NOT AVAILABLE.

- NOTES:
- MATERIAL  
COVER FILM : PI  
CONDUCTOR : COPPER(RARE)  
BASE FILM : PI  
STIFFENER : PI  
ADHESIVE : THERMOSETTING ADHESIVE
  - FINISH  
Au OVER Ni UNDER PLATING.
  - SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.

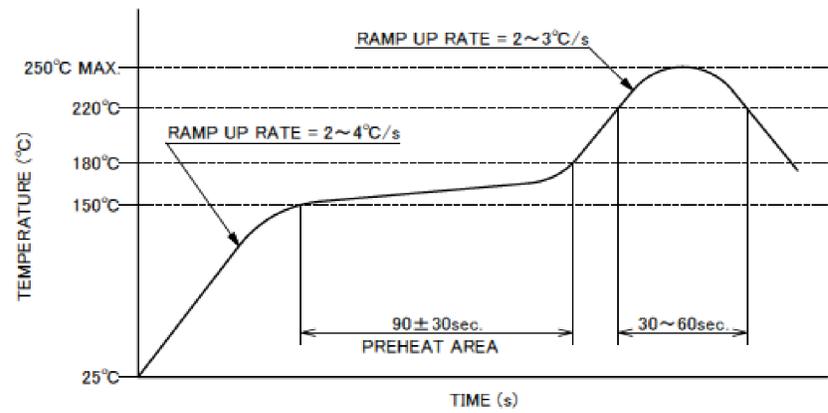
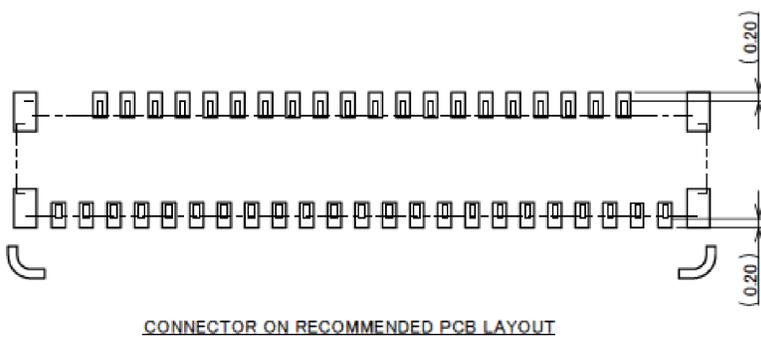


Rev.9

# Connector Assembly



Rev.9



# 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	20 CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20 CYCLES 0.21N (21gf) $\times$ (n + 2) MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20TH 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-2077
TEST REPORT	TR-15027
PACKING STANDARD	PST-15018
INSTRUCTION MANUAL	HIM-12007
APPEARANCE CRITERIA No.	QLS-A***

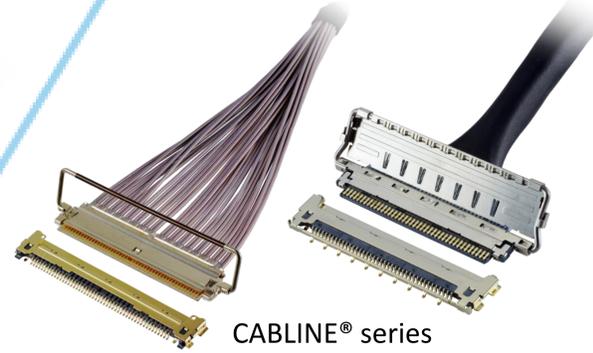
※ "n" IS THE NUMBER OF PIN

Rev.9

# Custom Connectors Available

 RF Connectors

MHF® series



CABLINA® series



Micro-coaxial/Twinax Connectors



Wire-to-Board Connectors/Terminals

AP series



ISH® series



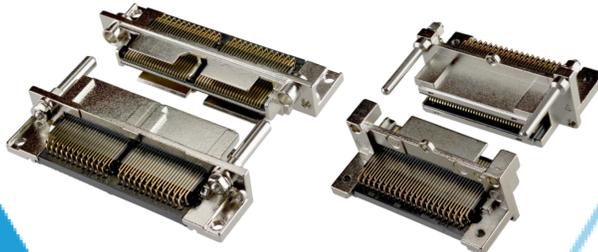
NOVASTACK® series



Board-to-Board Connectors



I/O Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC Connectors



Inquiry



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