

# 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

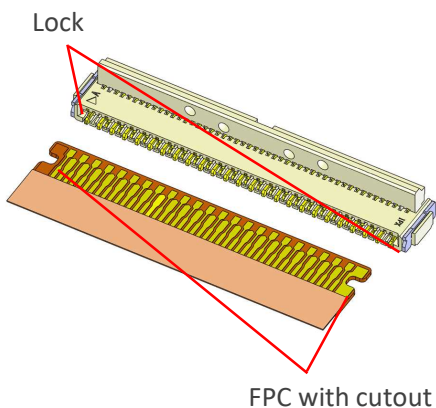
**Applicable FPC/FFC:**

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.

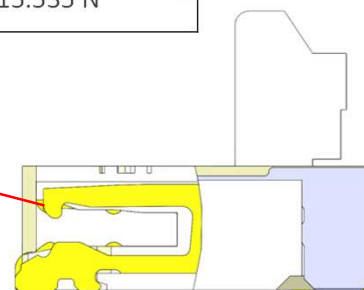
## High FPC retention force with additional mechanical lock

FPC retention force comparison (45 p)



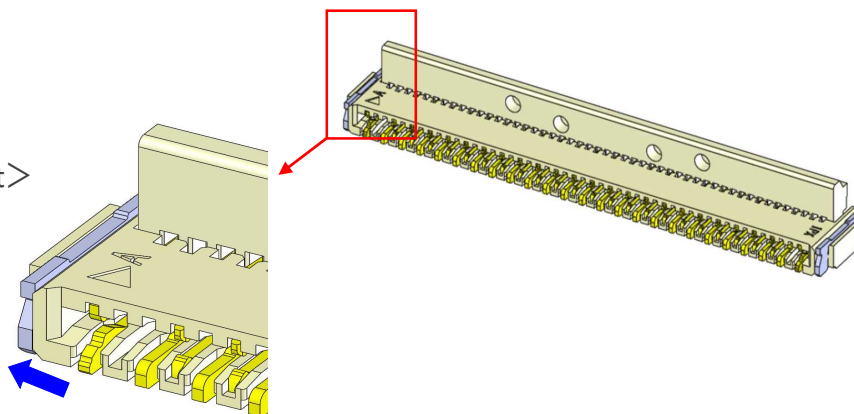
MINIFLEX® 3-BFN L-LK-HD	MINIFLEX® 3-BFN Long
20.710 N	15.535 N

FPC LOCK mechanism maintains high FPC retention force



## Hold down feature improves strength of side wall

<Strength improvement>

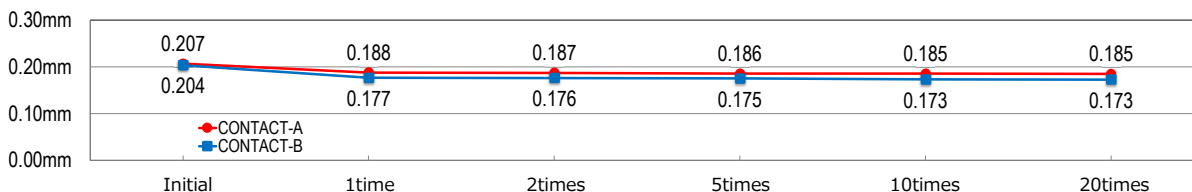


## Usability for closing actuator without FPC

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)



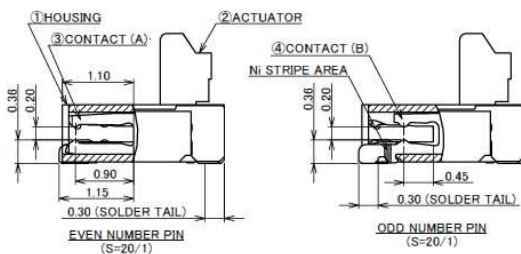
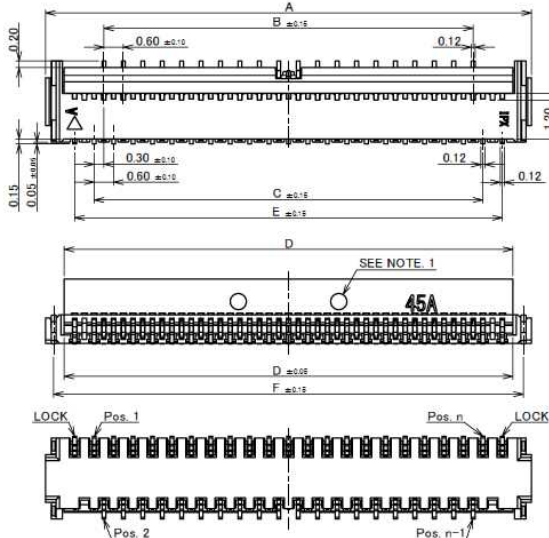
- Insertion force of connector goes up
- Retention force of connector does not change greatly

# Component Parts Details

## Connector Assembly

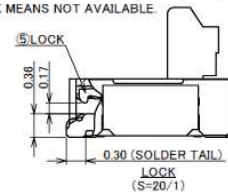
Recommended P/N 20655-0\*\*E-01

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 CONNECTOR FUNCTION. DENT SHAPE SHOWN ON DRAWING IS JUST FOR REFERENCE. DENT SHAPE AND QUANTITY MIGHT CHANGE 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.

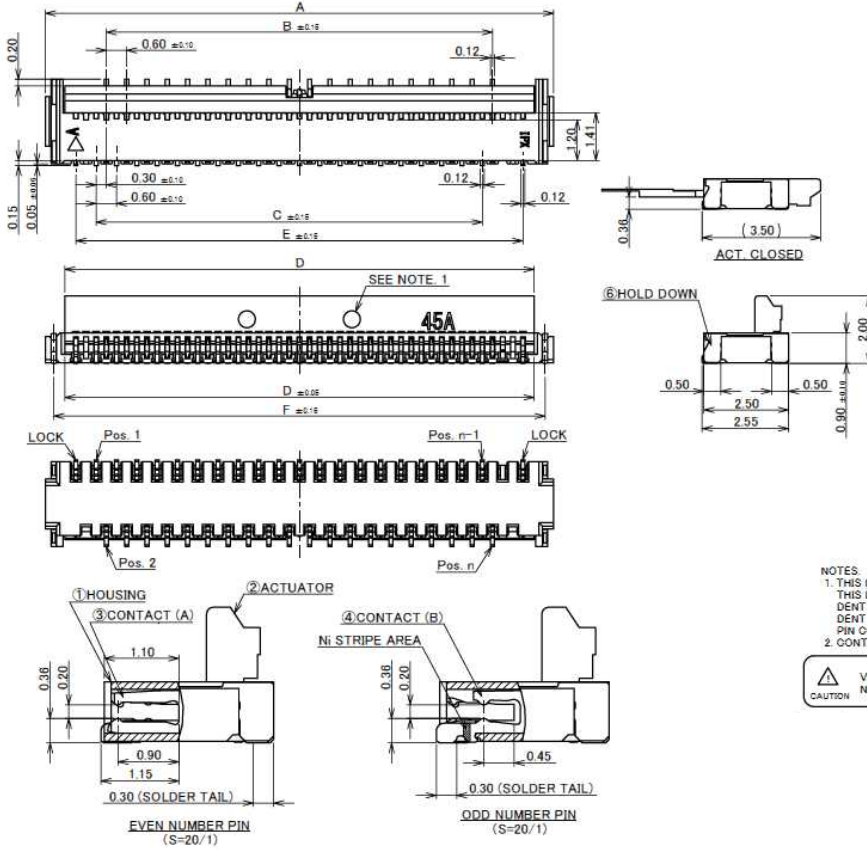
TABLE 1

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	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	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.

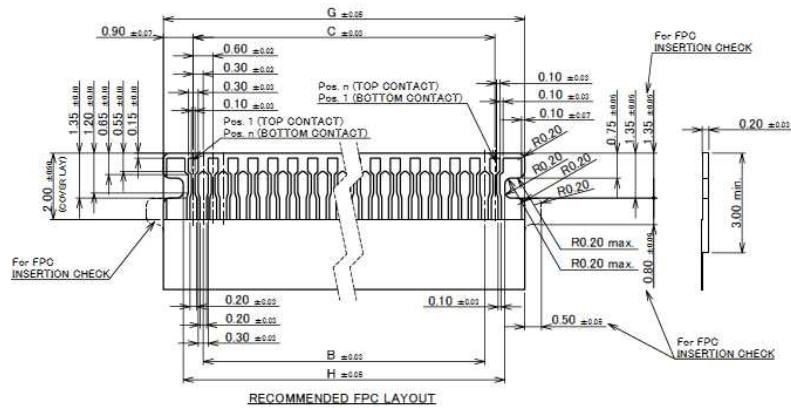
### NOTES

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## ODD NUMBER POS.

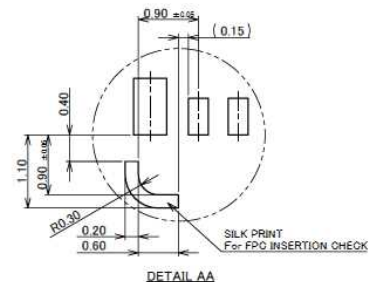
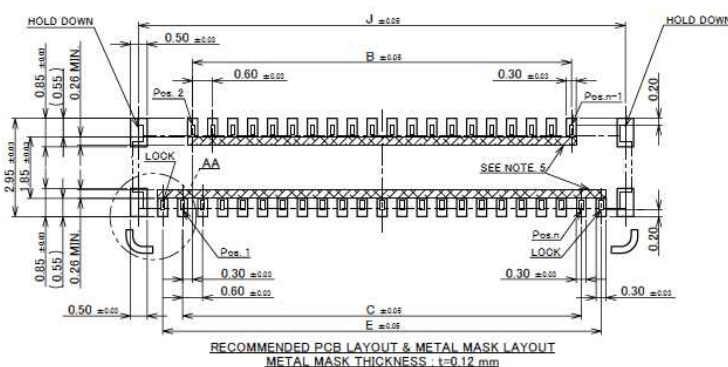


PART NO.	Pos.	B	C	E	G	H	J
20655-011E-01	11P	2.40	3.00	4.20	4.80	3.60	5.65
◆20655-029E-01	29P	7.80	8.40	9.60	10.20	9.00	11.05
◆20655-031E-01	31P	8.40	9.00	10.20	10.80	9.60	11.65
◆20655-035E-01	35P	9.60	10.20	11.40	12.00	10.80	12.85
◆20655-037E-01	37P	10.20	10.80	12.00	12.60	11.40	13.45
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◆20655-047E-01	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
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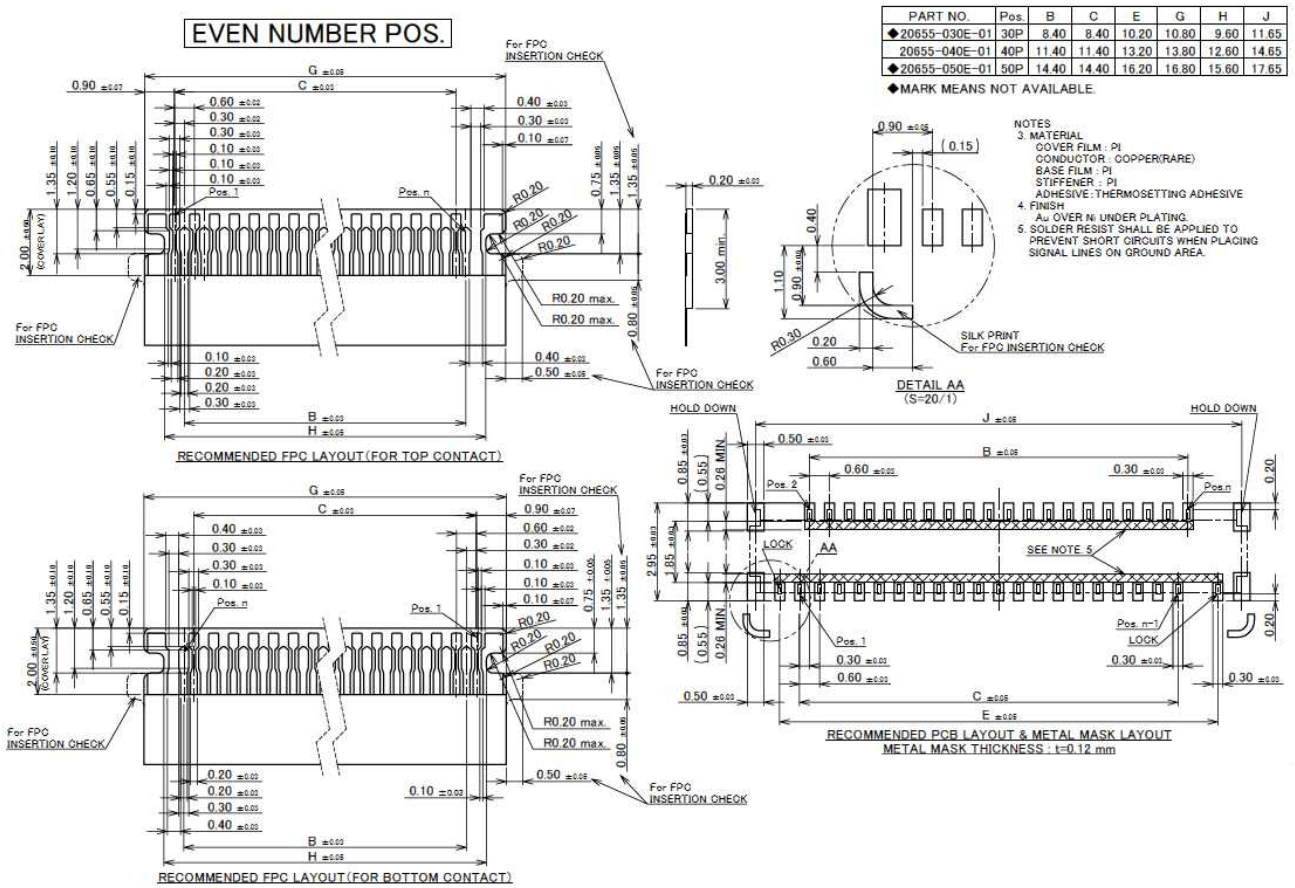
### NOTES

- 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.

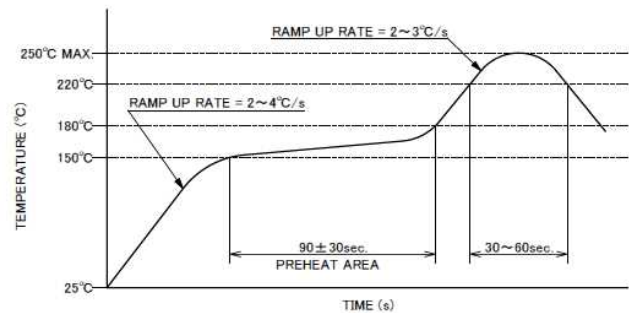
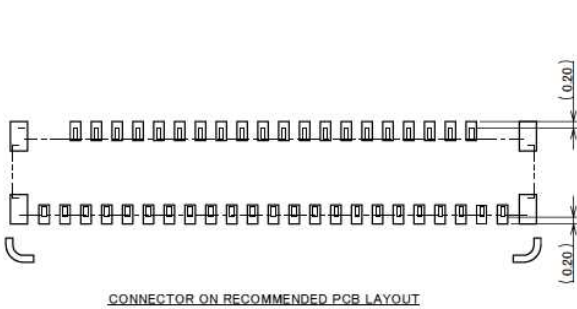


Rev.9

# Connector Assembly



Rev.9



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 : $\leq$ 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

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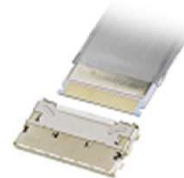
Board to Board



High-Density



Autolocking FPC/FFC



High-Density



FPC/FFC



Micro-Coaxial / Discrete Cable



High-Speed



RF



High-Frequency



Optical Module



High-Speed



Power



High-Power



I/O (Input/Output)



Quick charge

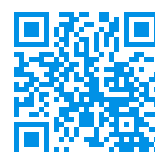


Effector



Custom Connectors Available

Inquiry



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