

0.15 mm Pitch Ultra-low Profile FPC Back-lock Connector

RoHS2

FFA1W Series [Upper Contact]

DDK Ltd.

OUTLINE

FFA1W series is an ultra-low profile FPC connector with 0.15mm pitch, depth 3.0 mm and 0.55 mm connector height. FFA1W has a cable lock mechanism and is a dedicated connector for upper contact with high FPC holding.



FEATURES

- Original cam-type "Back-lock" system ensures a reliable connection and continued retention from inadvertent upward pulling of the FPC.
- The contact with our original cable lock mechanism can pass current as a signal contact, which makes it possible to miniaturize the connector.
- FFA1W has a pitch of 0.15 mm and a mounting height of 0.55 mm.
- The upper contact is used for electrical contact with the FPC circuit.
- Connectors are delivered unlocked so the lock lever does not need to be opened before operation.
- Supplied with emboss tape for automatic mounting
- Nickel barrier prevents solder wicking.
- Halogen Free
- The housing and the lock lever are made of heat-resistant resin making the FPC connector compatible with lead-free reflow soldering.

Note: ※ Please do not close the lock lever without inserting FPC.

APPLICATIONS

Smartphone, Wearable devices, other Portable devices

SPECIFICATIONS

Rated Voltage	50 V AC (r.m.s.)
Rated Current	0.2 A Signal contact
Dielectric Withstand Voltage	200V AC(r.m.s.) /1 minute
Insulation Resistance	50 M Ω min. at 250 V DC
Contact Resistance	100 m Ω max. Signal contact 40 m Ω max. Power contact

MATERIAL/FINISH



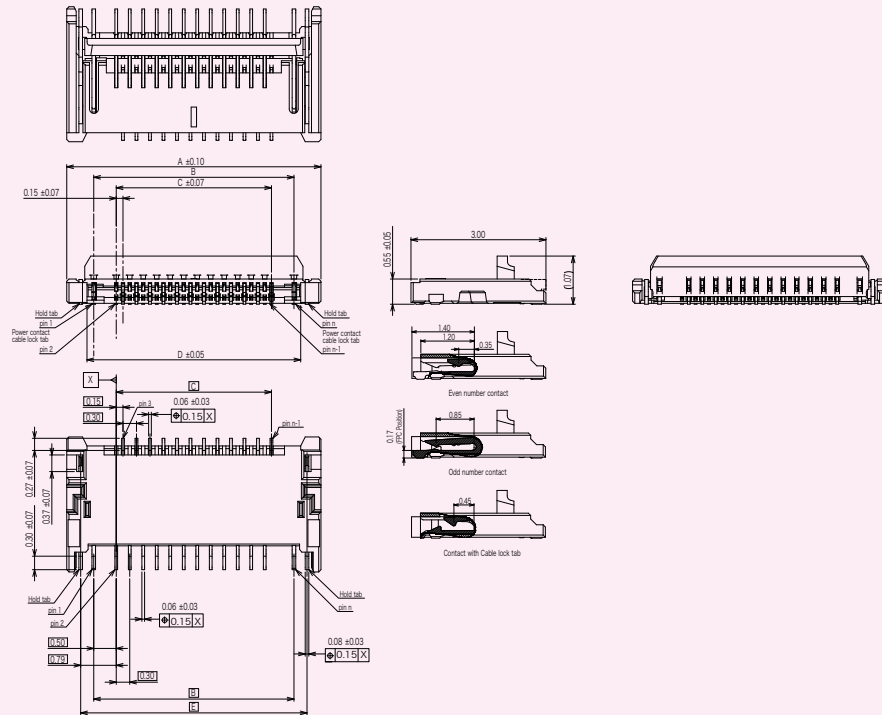
Item	Material / Finish
Contact	Copper Alloy / Au (Flash) over Ni
Housing	LCP Resin (UL94V-0) / Black
Lock Lever	PPS Resin (UL94V-0) / Black
Hold Tab	Copper Alloy / Au over Ni

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Please verify the latest specifications with our drawings.

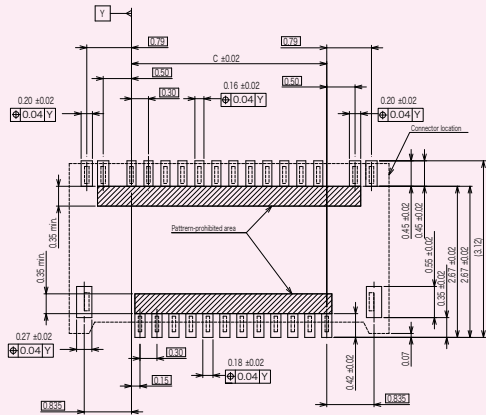
▶ 0.15mm Pitch FPC Connector

Even number of contacts

◆ Dimensions



◆ Recommended P.C.B. Lay out
Shall be located zig zag from No.1



◆ Applicable FPC Dimensions

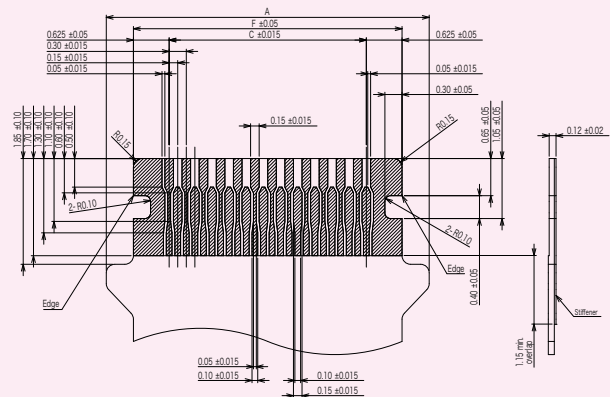


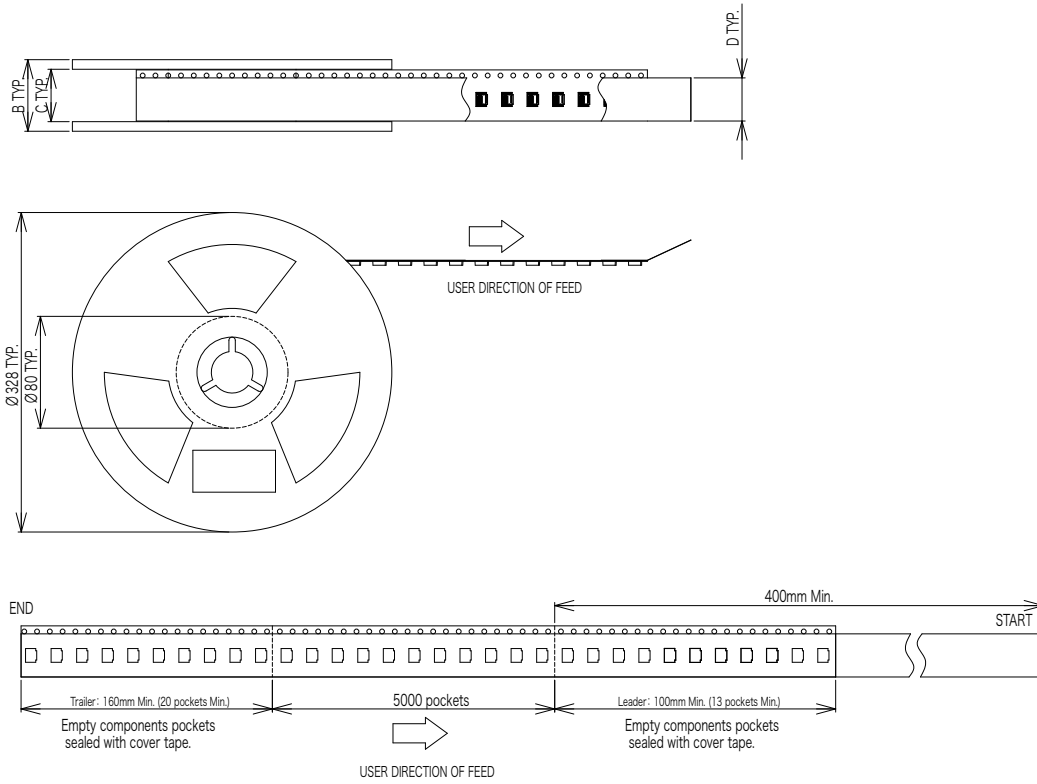
Table-1

Part Number	Number of Contacts	A	B	C	D	E	F
FFA1W-12A-R21A-B-3H	12	3.55	2.35	1.35	2.65	2.93	2.60
FFA1W-26A-R21A-B-3H	26	5.65	4.45	3.45	4.75	5.03	4.70

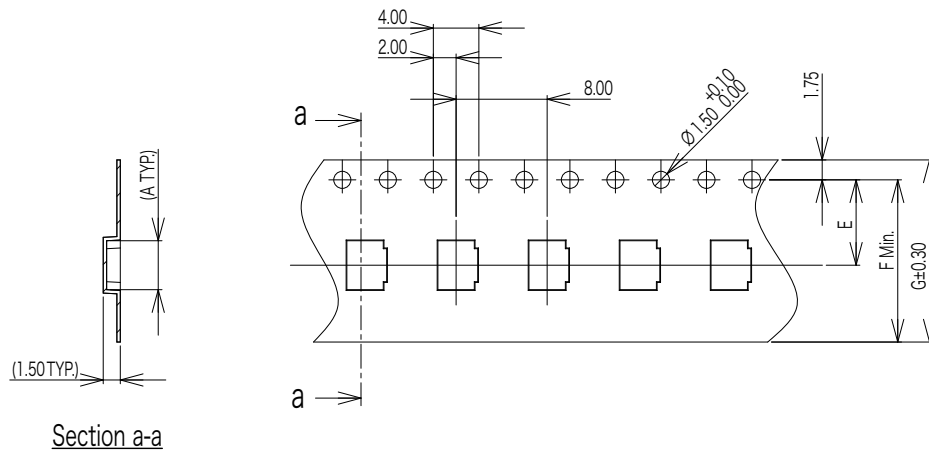
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▶ Packing Specifications

■ Reel Dimensions



■ Emboss Tape Dimensions



Part Number	Number of Contacts	A	B	C	D	E	F	G
FFA1W-12A-R21A-B-3H	12	3.70	22.40	16.40	13.30	7.50	14.25	16.00
FFA1W-26A-R21A-B-3H	26	5.80						

■ Package Quantity : 5,000pcs./Reel

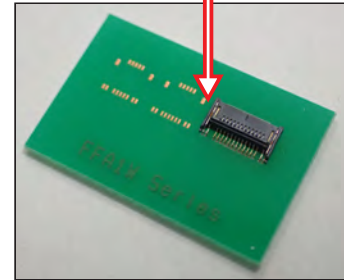
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▶ Operating Instruction and Cautions

1. Connector mounting Instruction

- Connectors are delivered with the lock lever opened. You do not have to operate the lock lever before inserting FPC. (picture ①)
- Please do not re-flow with the lock lever in the closed condition.
- Please do not close the lock lever without inserting FPC. Otherwise, the contact gap will become narrower and FPC insertion force will rise.
- Please do not load from the top of the lock lever. (figure ①)
And please do not load toward the opposite direction of the lock lever. (figure ②)
Otherwise, the lock lever may be broken or contacts may be deformed.

Lock lever is opened when delivery.



picture ①

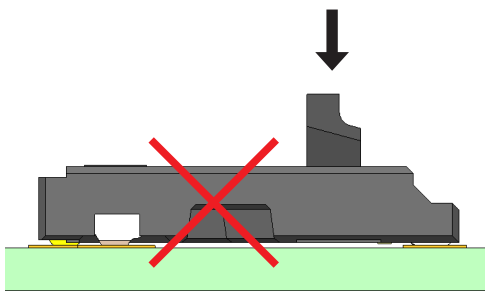


figure ①

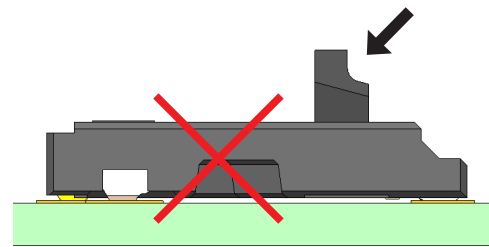


figure ②

- Please do not insert finger nail into the entry as it may damage the connector (figure ③)

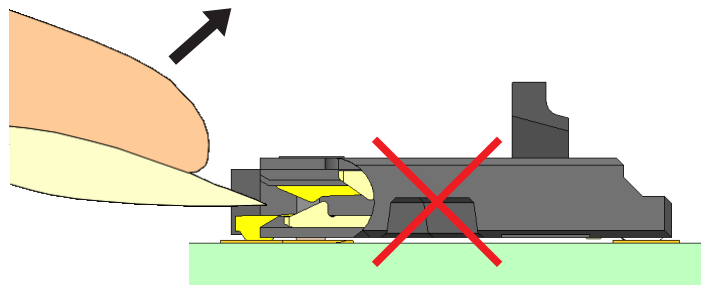
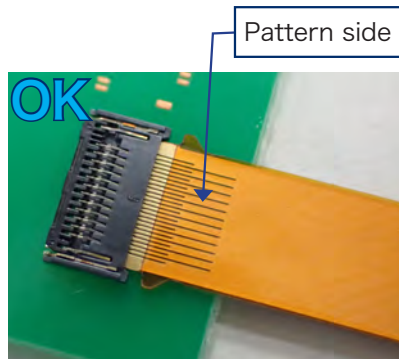


figure ③

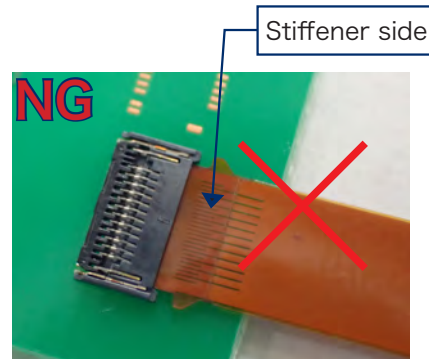
▶ Operating Instruction and Cautions

2. FPC Insertion

- Please insert the FPC with the pattern side up.(correct: picture ② , wrong : picture ③)
- Please insert the FPC straight into the connector.
Due to the semi-retaining mechanism, some insertion force is necessary when inserting FPC.
FPC insertion is completed when the edges of the FPC are ouching connector frange.(picture ⑤)



picture ②



picture ③

3. Correct FPC Insertion Position

- The frange position enables a visual verification of the mating position.(figure ④) .
It prevents shallow and diagonal insertion. (picture ⑤、⑥)

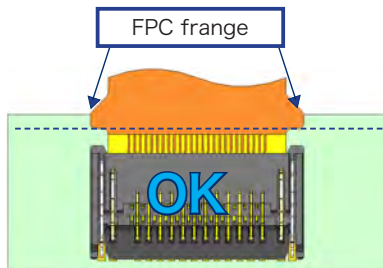


figure ④ : normal insersion

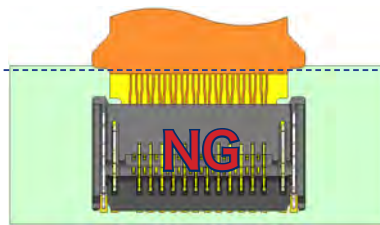


figure ⑤ : Shallow insertion

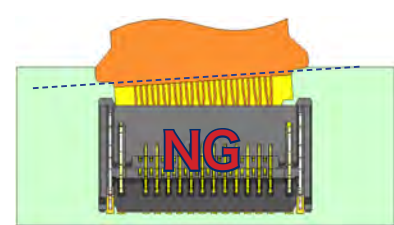


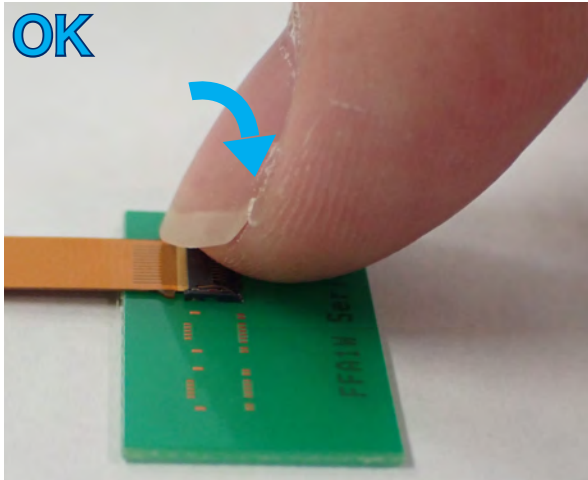
figure ⑥ : Diagonal insertion

- If cable lock tabs catch the FPC correctly, FPC patterns are not dislocated from contacts.

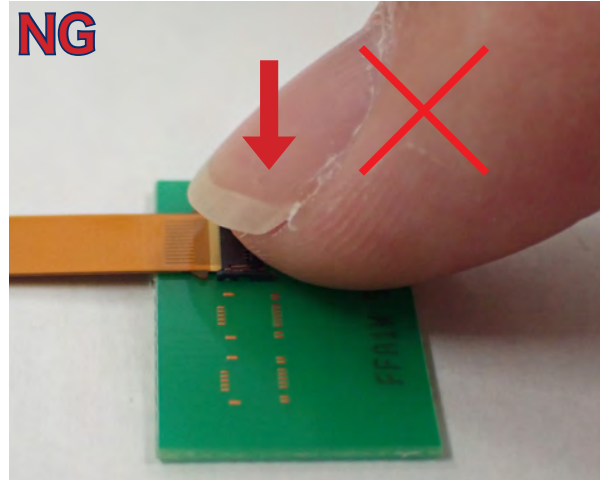
▶ Operating Instruction and Cautions

4. Closing Lock Lever

- Please rotate down the lock lever until firmly closed.(picture ④)
Please do not load excessive force on the housing.(picture ⑤)

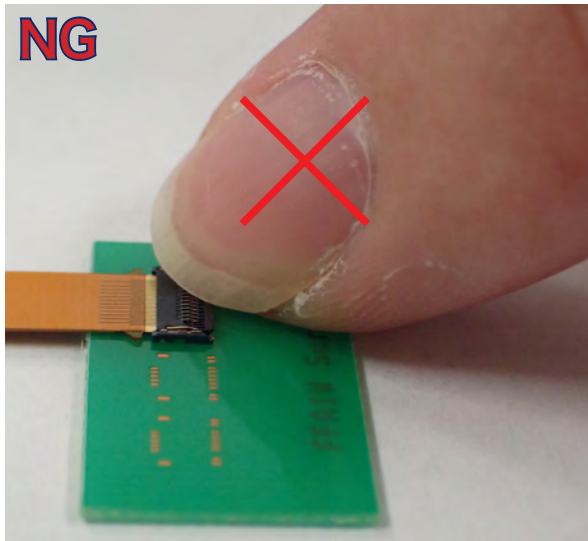


picture ④

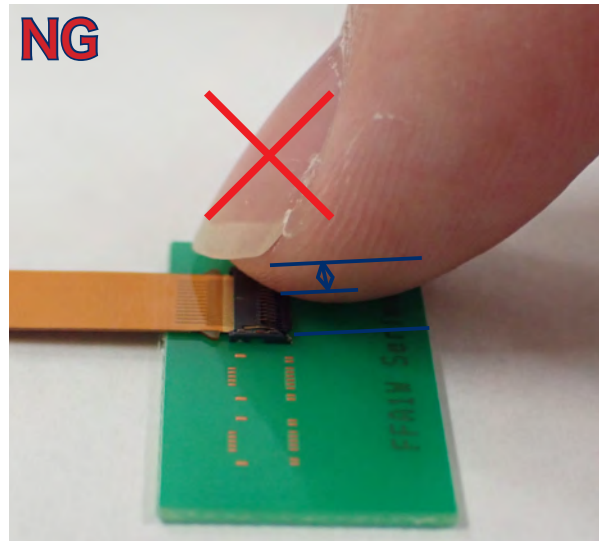


picture ⑤

- Please do not close the lock lever by tip of finger nail. (picture ⑥)
- Please hold the lock lever at least half width of it. (picture ⑦)



picture ⑥

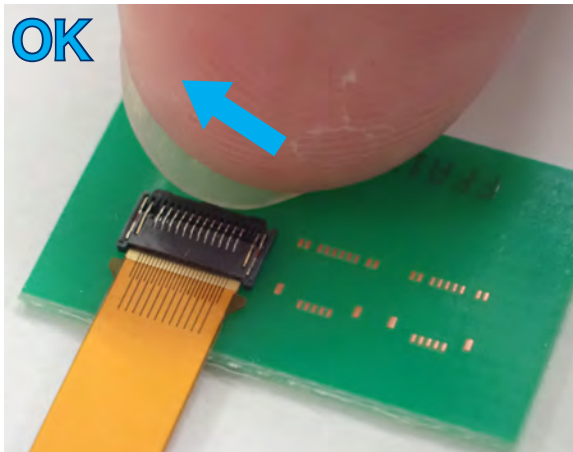


picture ⑦

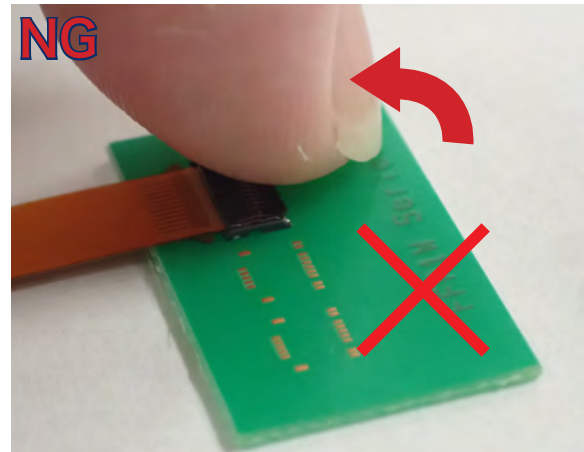
▶ Operating Instruction and Cautions

5. Removing FPC

- Please lift the lock lever by flipping up in the direction of arrow.(picture ⑧)
Please do not load excessive force on the lock lever.(picture ⑨)



picture ⑧



picture ⑨

6. Others

- In case of hand soldering, please do not heap excessive solder on the contact tails.
(above terminal 0.05mm max.) (figure ⑦)

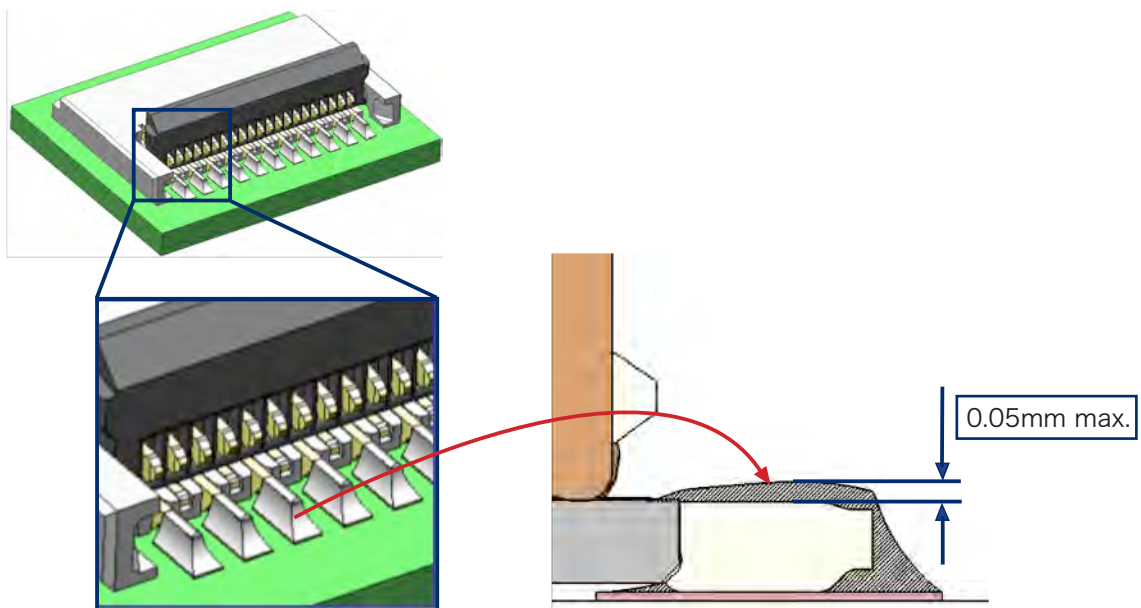


figure ⑦

7. ESD(Electrostatic Discharge)

This connector does not protect the circuit from ESD.

8. Disposal of connector

Please dispose the connector as industrial waste.

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