

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

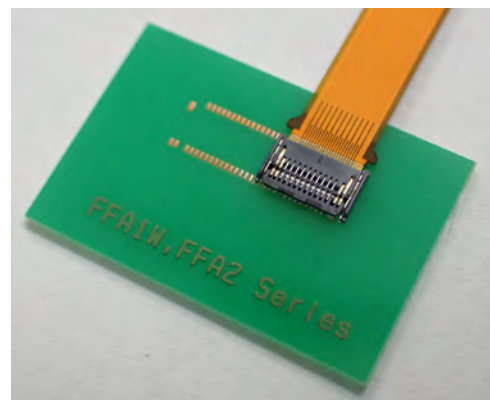
RoHS2

FFA2 Series 【Upper Contact】

第一电子工业株式会社

OUTLINE

FFA2 series is an ultra-low profile FPC connector with 0.15mm pitch, depth 3.0 mm and 0.55 mm connector height. FFA2 connector mates with a FPC circuit of 0.12 mm thick. FFA2 series has two terminals which can handle high currents and can also be used as a power supply terminal.



FEATURES

- Original cam-type "Back-lock" system ensures a reliable connection and continued retention from inadvertent upward pulling of the FPC.
- FFA2 series has two terminals which can handle high currents and can allow current to flow up to 2A.
- FFA2 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 2.0 A Power 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

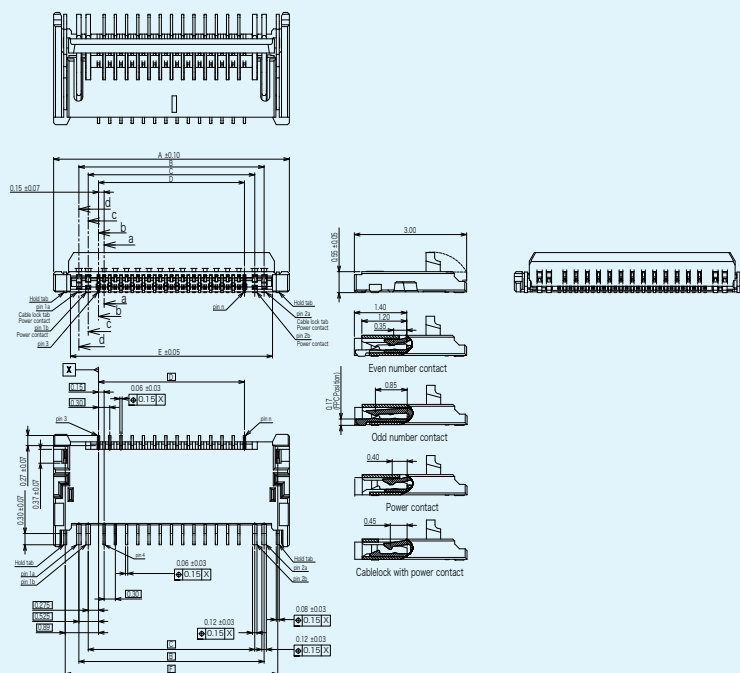
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Please verify the latest specifications with our drawings.

FFA2 - A-R21 A-B-3H

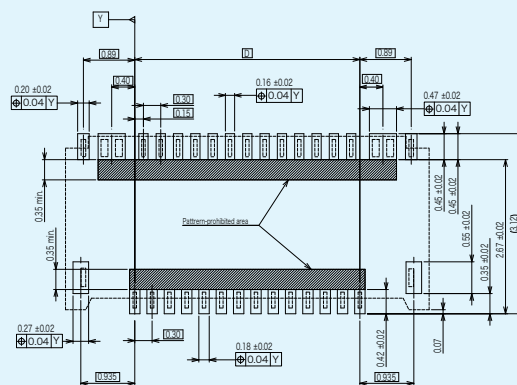
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Series	FFA2
② Number of Contacts	Refer to Table-1
③ Contact Position	A : Upper contact Applicable FPC : 0.12±0.02 mm
④ Connector Style	R : Right Angle
⑤ Contact Material	2 : Corson Copper Alloy
⑥ Contact Plating/Finish	1 : Au(Flash) over Ni plating
⑦ Lock Lever	A : Standard
⑧ Housing	B : Black
⑨ Material	3H : Halogen-free

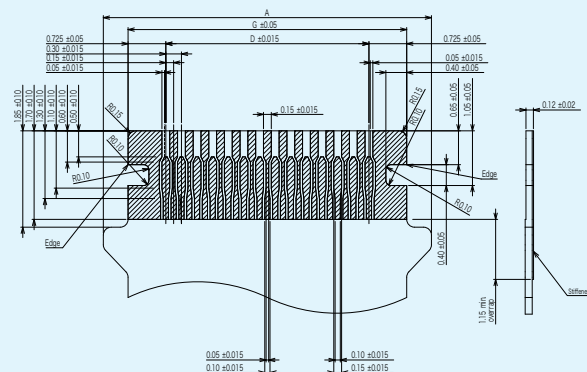
◆ Dimensions



Shall be located zig zag from No.1



◆ Applicable FPC Dimensions

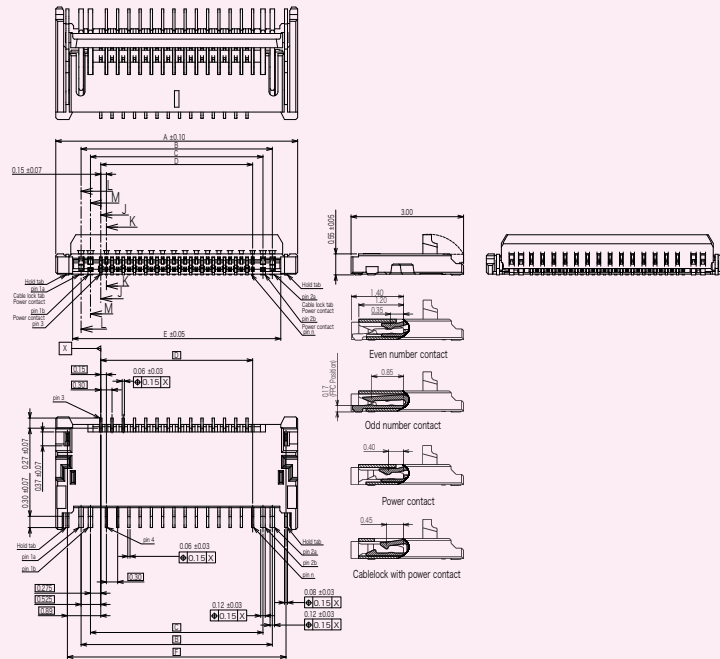


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▶ 0.15mm Pitch FPC Connector

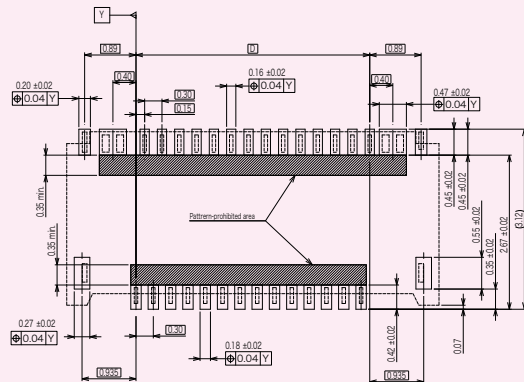
Even number
of contacts

◆ Dimensions



◆ Recommended P.C.B. Lay out

Shall be located zig zag from No.1



◆ Applicable FPC Dimensions

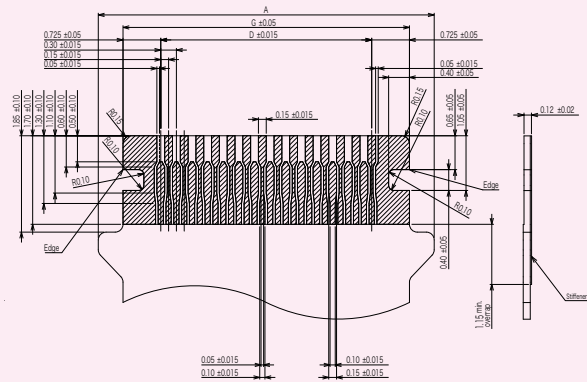
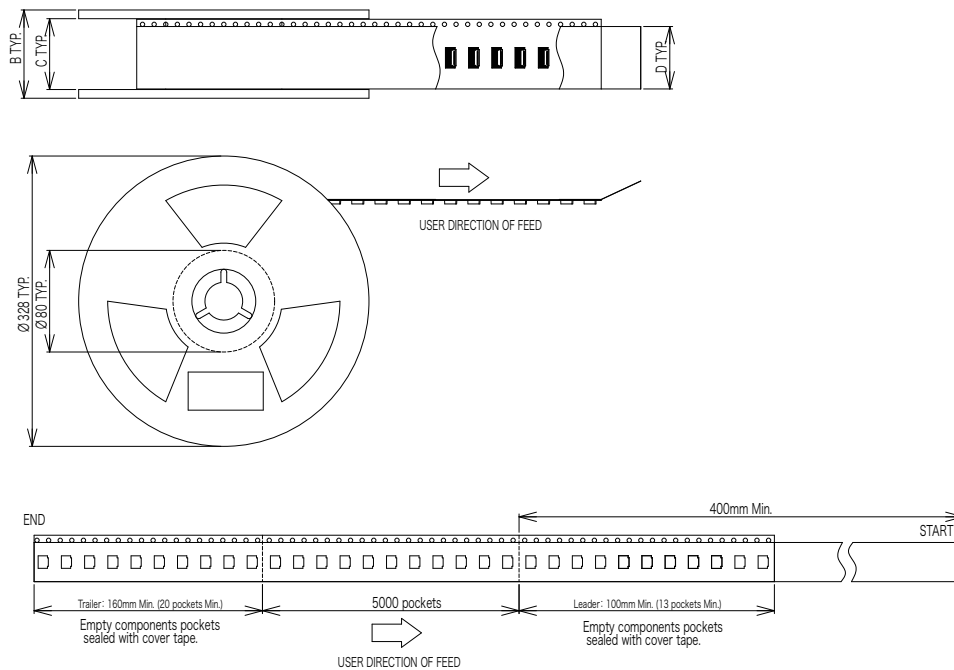


Table-1

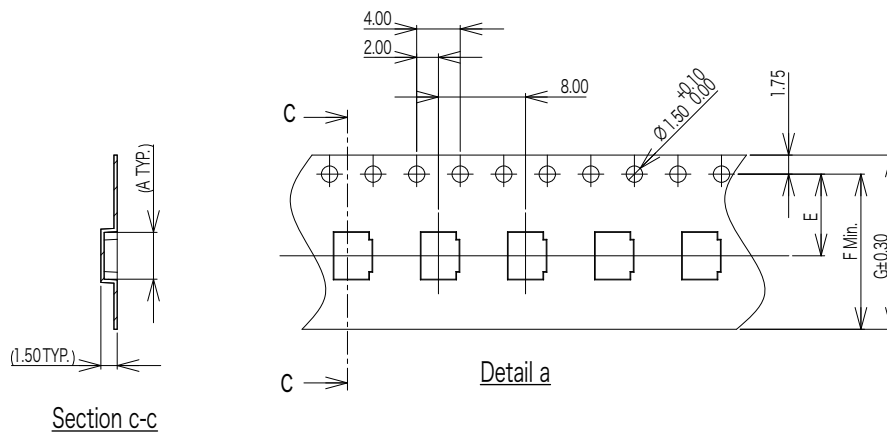
Part Number	Number of Contacts	A	B	C	D	E	F	G
FFA2-6A-R21A-B-3H	6	2.85	1.50	1.00	0.45	1.95	2.23	1.90
FFA2-22A-R21A-B-3H	22	5.25	3.90	3.40	2.85	4.35	4.63	4.30

▶ Packing Specifications

■ Reel Dimensions



■ Emboss Tape Dimensions



Part Number	Number of Contacts	A	B	C	D	E	F	G
FFA2-6A-R21A-B-3H	6	3.0	22.4	16.4	13.3	7.5	14.25	16.0
FFA2-22A-R21A-B-3H	22	5.4						

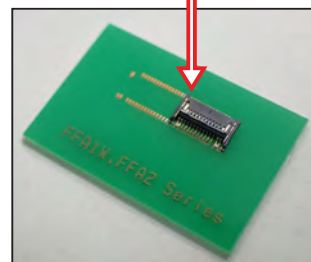
■ Package Quantity : 5,000pcs./Reel

▶ 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)

Lock lever is opened when delivery.



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.

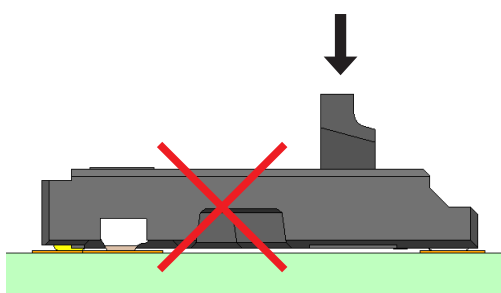


figure ①

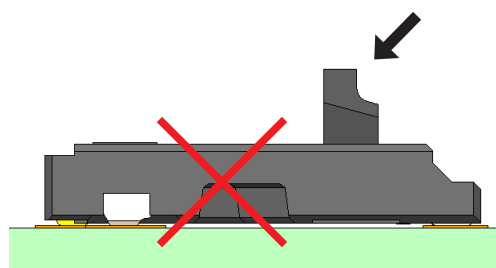


figure ②

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

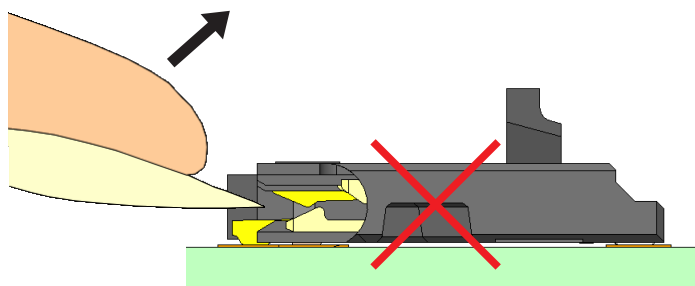
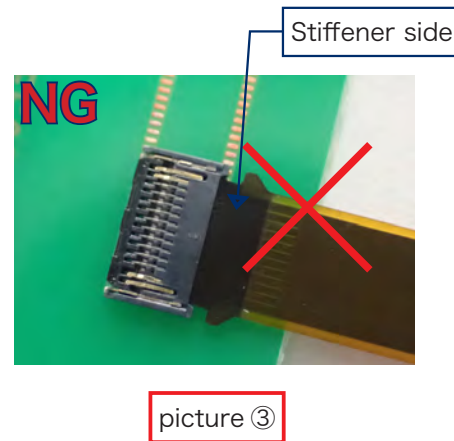
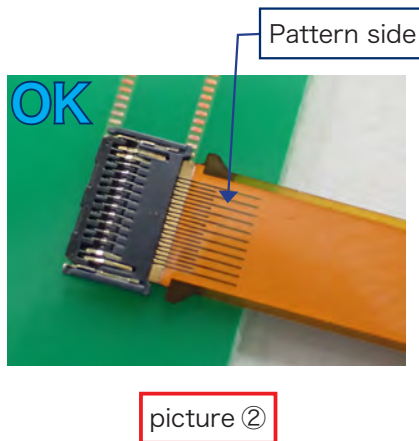


figure ③

▶ Operating Instruction and Cautions

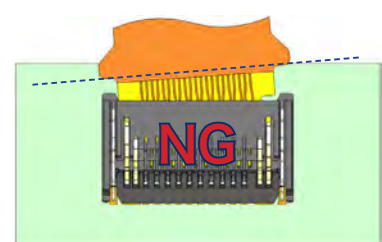
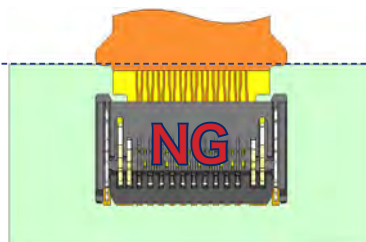
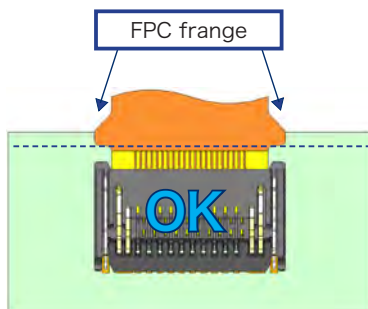
2. FPC Insertion

- 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)



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)

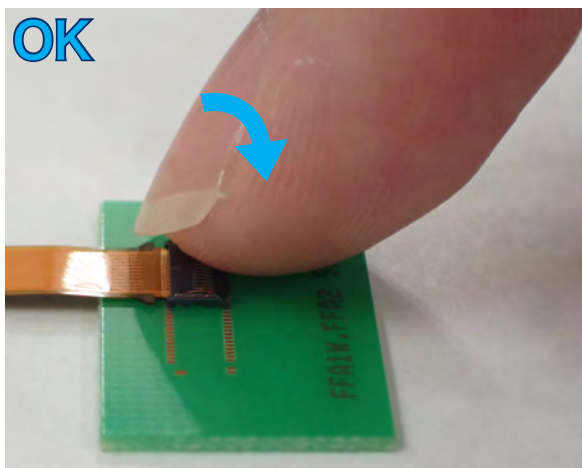


- If cable lock tabs catch the FPC correctly, FPC patterns are not dislocated from contacts.

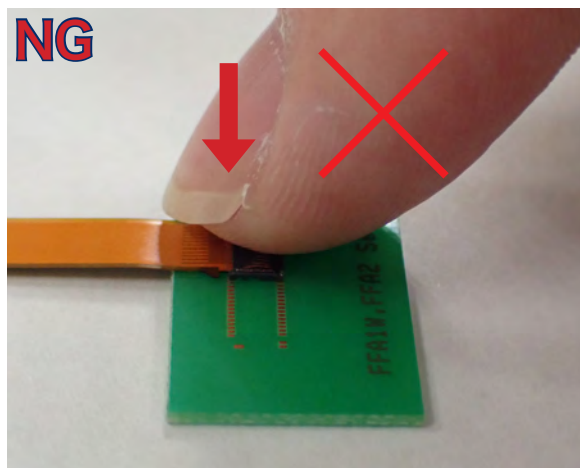
▶ Operating Instruction and Cautions

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)

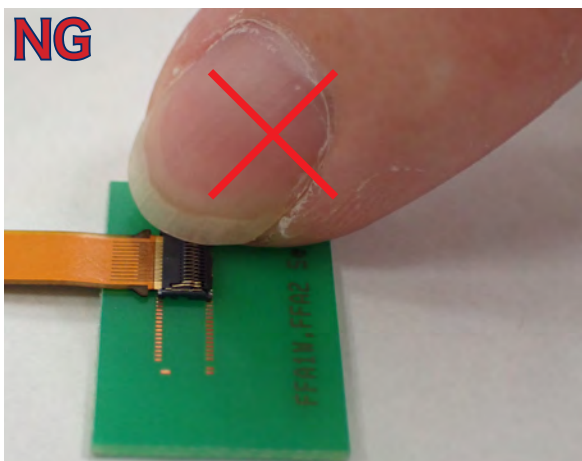


picture ④

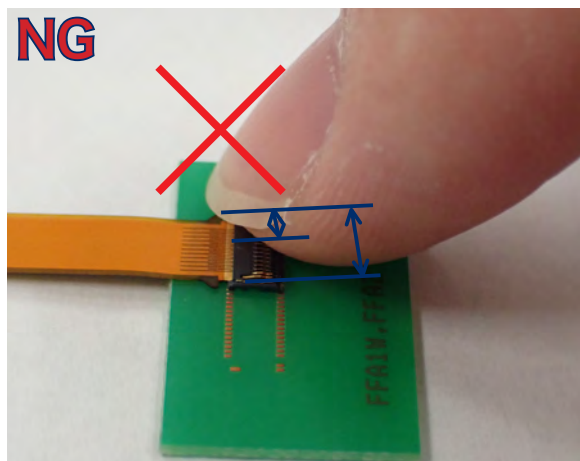


picture ⑤

- 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

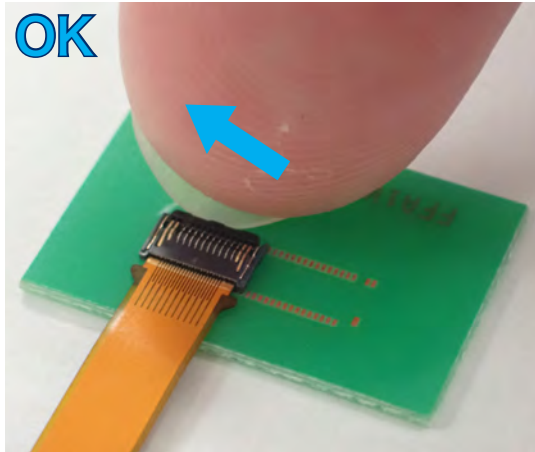


picture ⑦

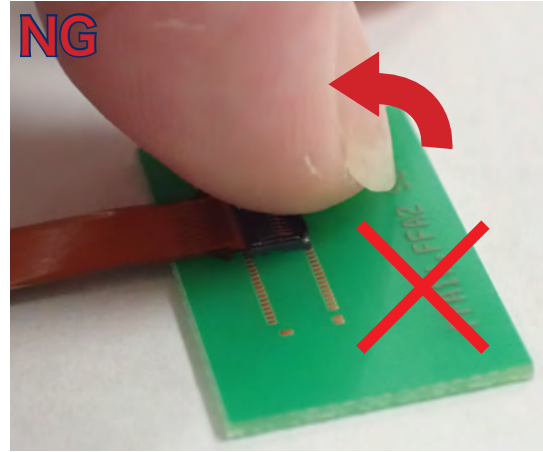
▶ Operating Instruction and Cautions

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)

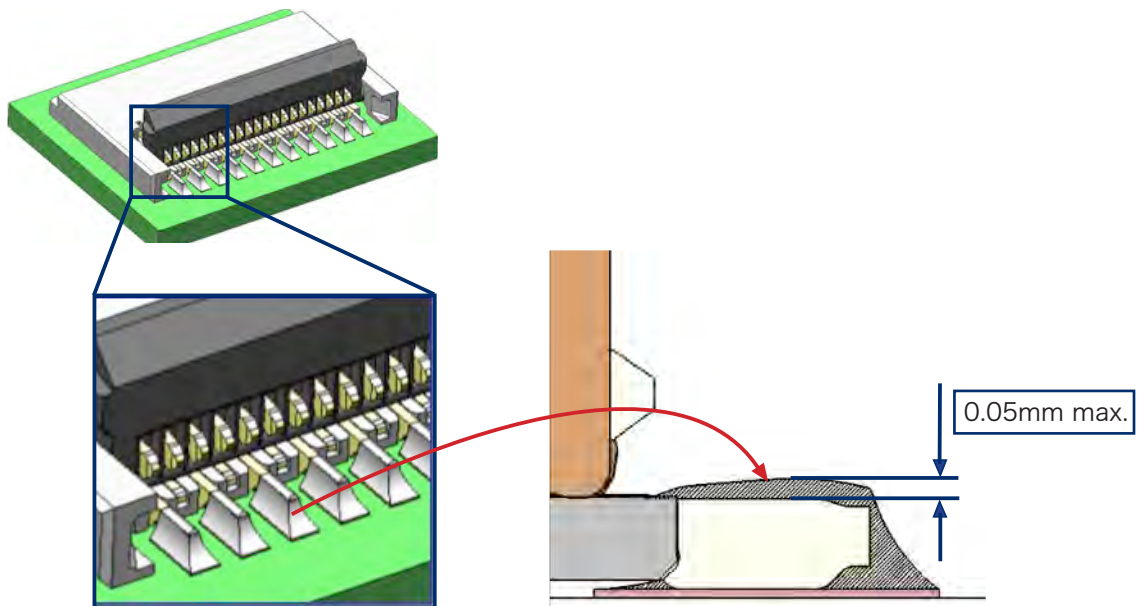


figure ⑦

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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