



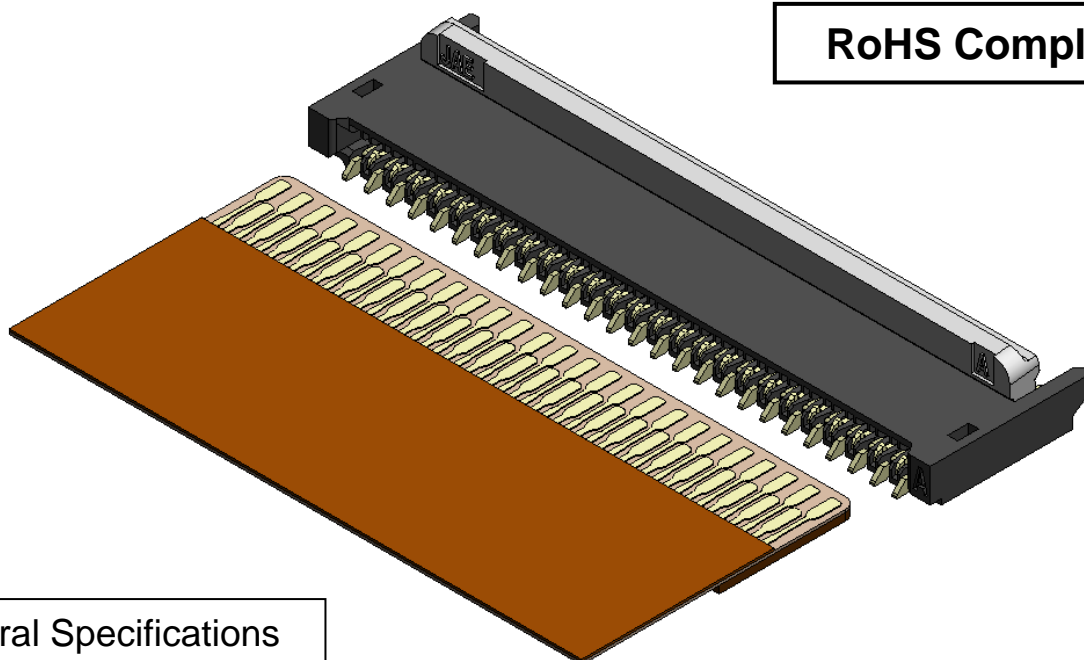
0.2 mm Pitch, 0.82mm Mating Height FPC Connector

CONNECTOR

MB-0269-1

August 2013

# FR02 Series

## General Specifications

The “FR02 Series” is a 0.2mm pitch, top-and-bottom surface connection type FPC connector for space-saving of hand-held devices such as smartphones and tablet PCs.

## Features

- 0.2mm pitch, 0.82mm height, and 3.0mm depth, space-saving FPC connector.
- Applicable FPC thickness 0.2mm  $\pm$  0.03mm, top-and-bottom surface connection type, rear flip type FPC connector.
- LIF (Low Insertion Force) structure temporarily holds FPC in place.
- Tapered guides in the insertion area for improved FPC insertion guidance.
- Good operational feeling is provided during actuator operation.
- Board pattern traces are possible under the connector excluding terminal area.
- With a structure that prevents the actuator from coming off during actuator operation.
- Pb-free, halogen-free compliant product.
- Ni barrier prevents solder wicking.

## General Specifications

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>■ No. of Contacts: 23, 41, 51, and 61 positions</li> <li>■ Contact Resistance (top connection, bottom connection):<br/>Odd pin count: initial 120m <math>\Omega</math> max., 140m <math>\Omega</math> max. after test<br/>Even pin count: initial 100m <math>\Omega</math> max., 120m <math>\Omega</math> max. after test</li> <li>■ Dielectric Withstanding Voltage:<br/>AC250V per minute max.</li> <li>■ Operating Temperature:<br/>-40 Deg. C + 85 Deg. C</li> <li>■ Durability: 20 mating cycles</li> </ul> | <ul style="list-style-type: none"> <li>■ Rated Current:<br/>AC, DC each 0.25A per terminal</li> <li>■ Rated Voltage:<br/>AC, DC each 50V per terminal</li> <li>■ Applicable FPC Thickness:<br/>0.2mm <math>\pm</math> 0.03mm</li> <li>■ Pitch:<br/>0.2mm staggered pitch</li> </ul> |
|---|---|

Materials and Finishes

Components	Material and Finish
Housing	Heat resistant plastic (Black, halogen-free)
Actuator	Heat resistant plastic (White, halogen-free)
Contact	Copper alloy, Au plating over Ni Au0.1μm min.

Ordering Information

FR02 C0\*\* JA1 - R 5000

Series			Reeled: 5000 pcs.
No. of Contacts		Modification Code	

No. of Contacts Developed

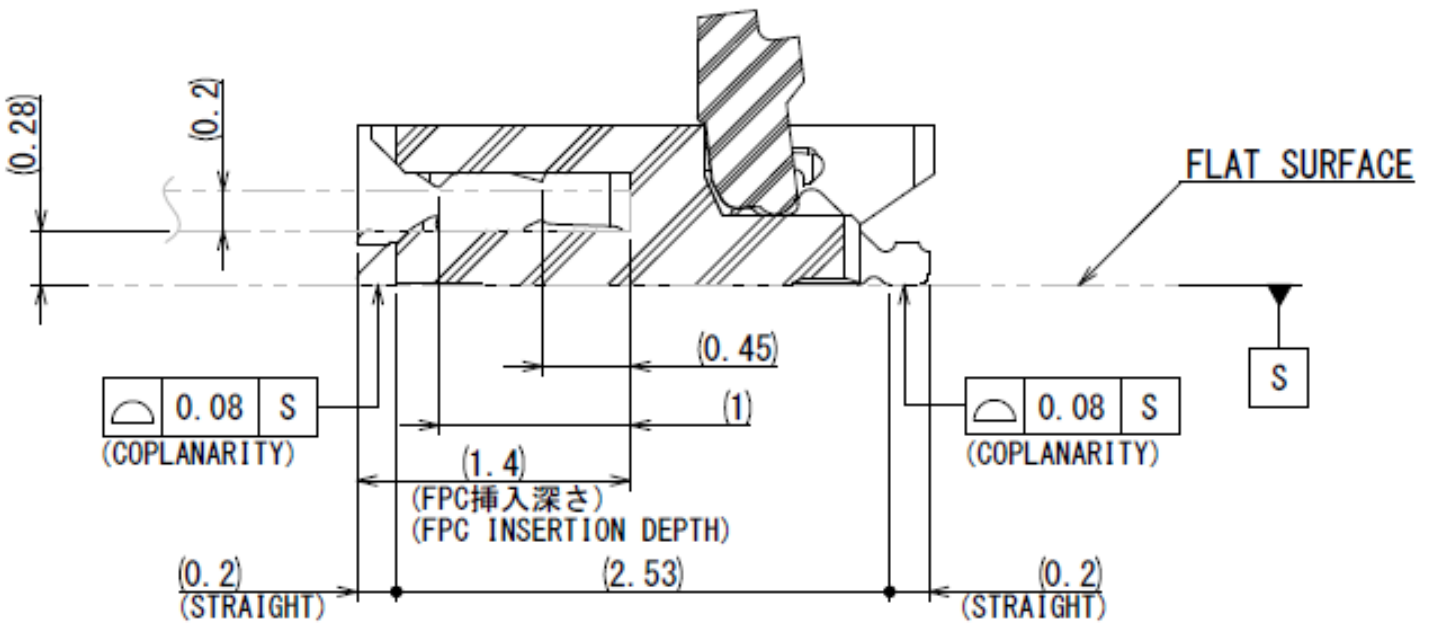
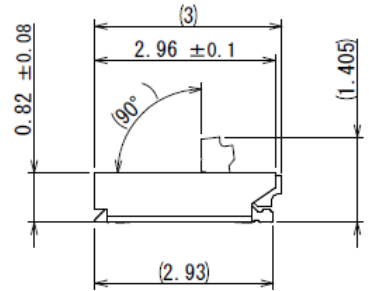
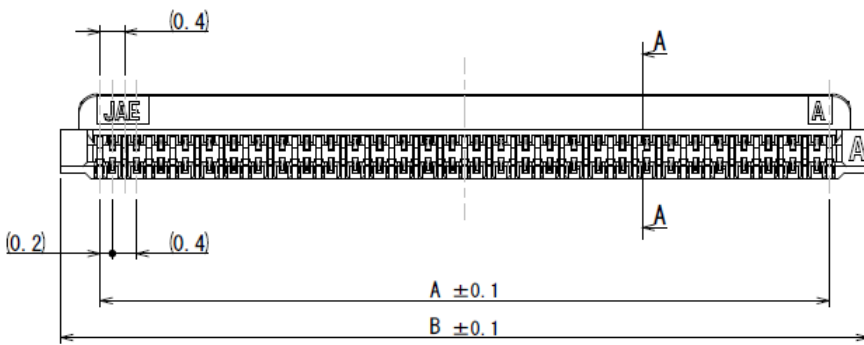
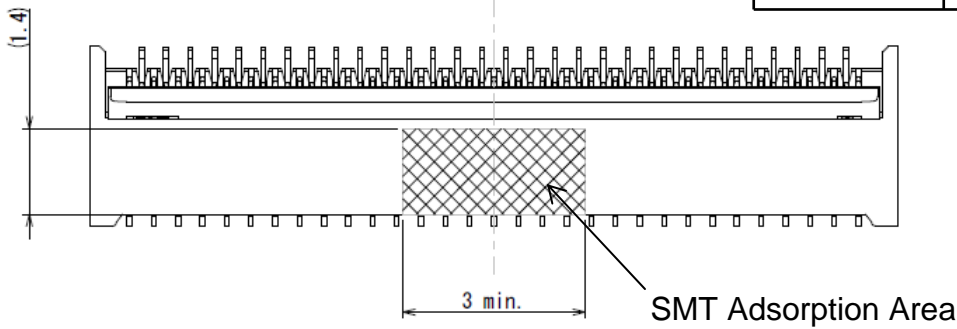
No. of Contacts	Development Status
23	Now in mass-production
41	Now in mass-production
51	Now in mass-production
61	Now in mass-production

Unit: mm

Connector Dimensions

Part Number	SJ Drawing
FR02C0**JA1	SJ113749

No. of Contacts	Dimension A	Dimension B
23	4.4	5.7
41	8.0	9.3
51	10.0	11.3
61	12.0	13.3



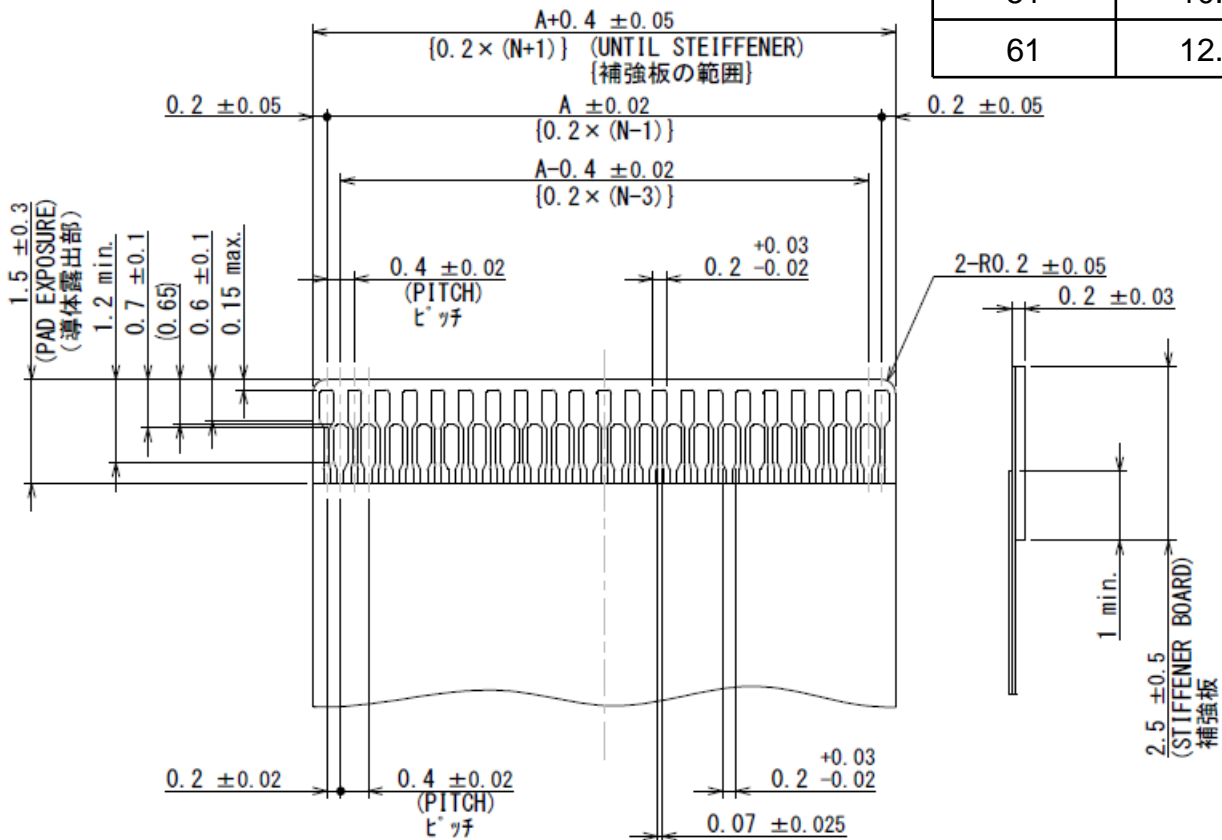
SECT A-A  
SCALE (20 : 1)

Applicable FPC Dimensions

Unit: mm

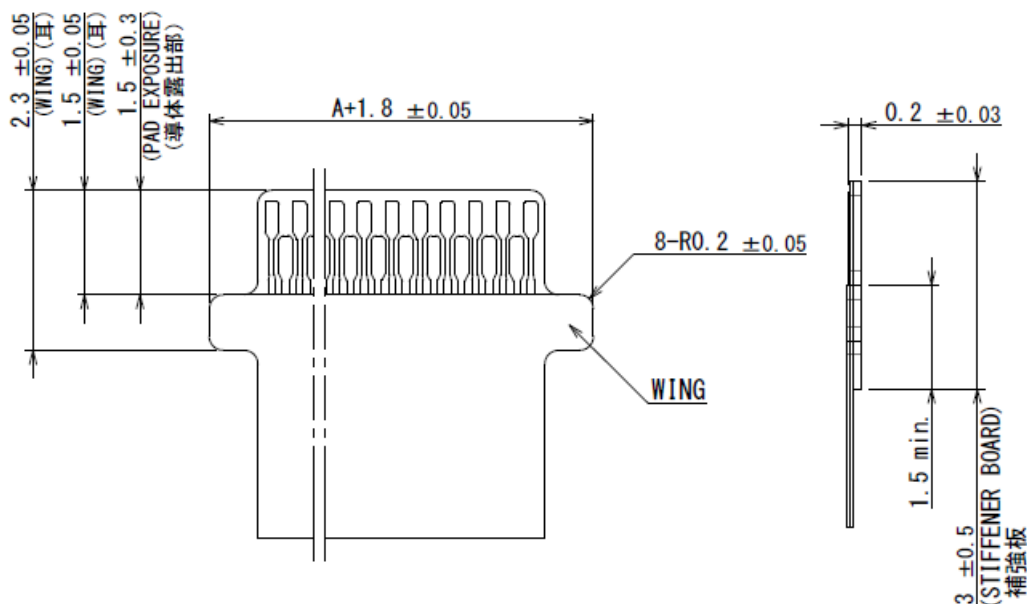
No. of Contacts	Dimension A
23	4.4
41	8.0
51	10.0
61	12.0

<Without Guides>



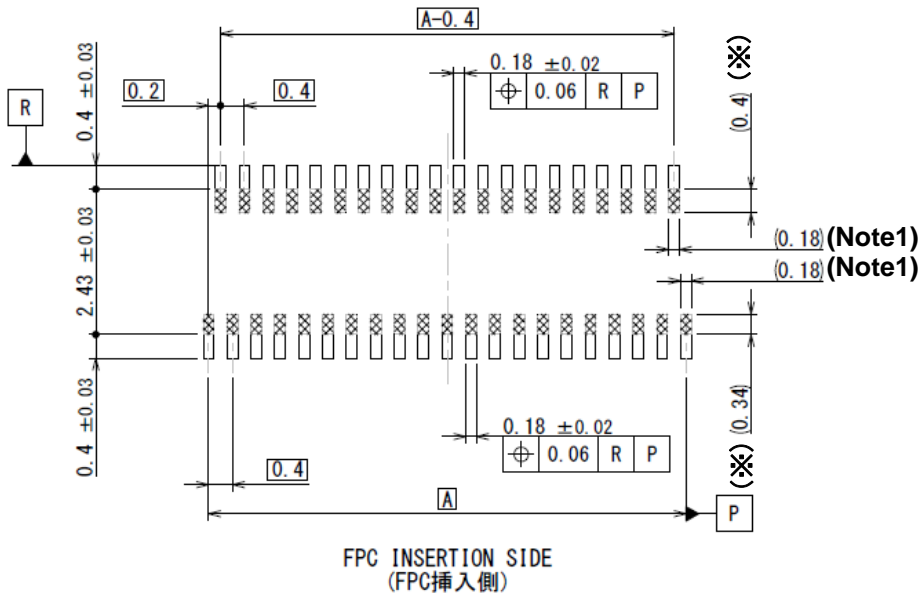
<With Guides>

The guide structure enables visual confirmation of complete FPC mating and prevents misaligned mating.



Applicable Board Dimensions

Unit: mm



No. of Contacts	Dimension A
23	4.4
41	8.0
51	10.0
61	12.0

(Note 1) Board pattern is prohibited in this area shown excluding the pad where each range touches and the pattern electrically connected.

**Related Documents**

Product Drawing	SJ113749
Packaging Drawing	SJ113750
Specifications	JACS-10807-0
Handling Instructions	J AHL-10807

**Notice:**

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  - (2) Recommended applications include:  
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\* The specifications in this brochure are subject to change without notice. Please contact JAE for information.