JAPAN AVIATION ELECTRONICS IND., LTD. 3-1-1 MUSASHINO, AKISHIMA-CITY TOKYO, JAPAN	SPECIFICATION TABLE	NO. JACS-1597-3-E	1/3
		CONNECTOR/SERIES FI-X**M(FPC Side)	
		APPLICABLE DWG NO. ⚠2 SJ033464, SJ034703	

STANDARD DATA		Rev.	Date	Description	DRAWN BY	CHK'D BY	APP'D BY
Applicable Connector (PCB Side) ⚠2	FI-X(B)**S-HF** SJ033461, SJ033462 SJ034508, SJ034509 SJ034696, SJ034697	1	7. Jun. 1999	—	K. HAYASHI	K. HISATOMI	H. AMEMIYA
		2	3. Feb. 2000	DCN-45546	M. TAKAKU	—	H. Amemiya
Applicable Cable	$0.14^{\pm 0.03}$thick FPC (NOTE2)						
Current	1A AC/DC per contact						
Voltage	200V AC/DC per contact						
Operating Temperature	-40℃ to +80℃						

REMARK: Note 1. This specification covers the requirements for FPC relay connector mated with a pin header and a FPC.
Note 2. The thickness of the contact part of FPC must be in the allowance, when you add the load of 1.96N by a point hemisphere(R=0.2) probe to the contact part of FPC.

Grade
C

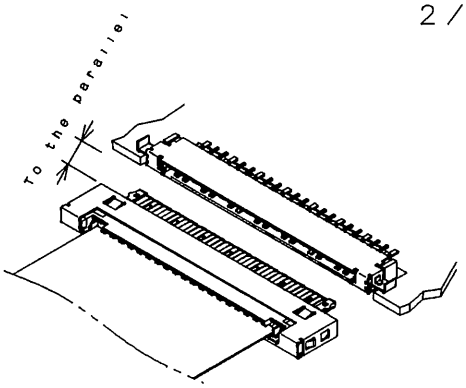
ITEM \ REQUIREMENT		TEST METHOD	REQUIREMENT
Mechanical	Construction		As specified in the drawing
	Materials, finishes		As specified in the drawing
	Connector mating force	Mate the counterpart connector.	MAX 1.96N×n (n : pin) ⚠2
	Connector unmating force	Unmate the counterpart connector.	MIN 0.25N×n (n : pin) ⚠2
	Slider operating force	After FPC is inserted, depress slider.	MAX 1.96N×n (n : pin) ⚠2
	Cable holding force	Measured after FPC is inserted and slider is depressed.	MIN 0.74N×n (n : pin) ⚠2
	Contact retention	Measured by the tensile tester.	MIN 2.9N
	Contact durability	Mate and unmate connectors for 50 times.	Contact resistance : 80m Ω max.
	Vibration	Amplitude ±1.5mm, 10～55Hz 3axes 2hours per each.	No electrical discontinuities more than 1 micro second during test. No mechanical damage during/after test
	Shock	MIL-STD-202 METHOD 202, 490m/s² 3axes. An appropriate holder may be used for mounting in case of vibration and shock tests.	
Electrical	Voltage proof	Apply specified voltage between adjacent contacts.	500VACr.m.s. for 1 minute No damage
	Insulation resistance	Apply 100VDC between adjacent contacts and measure within 1 minute.	100M Ω min.
	Contact resistance	To measure with voltage drop method. (20mV, 1mA)	40m Ω max.
Environmental	Thermal shock	-55℃～+85℃ 5 cycles	a) Contact resistance : 80m Ω max. b) Insulation resistance : 50M Ω min. c) Voltage proof : 250VACr.m.s. for 1 minute
	Damp heat	Expose at 90～95%RH and 60℃ temperature for 96 hours.	
	Corrosion	Salt splay test : Salt concentration : 5% at 35℃ for 48 hours	There shall be no corrosion that will affect performance. Contact resistance : 80m Ω max.
	Resistance to solder heat	260±5℃ for 2 minutes	No damage
	Solderbility-wetting	Dip in Sn/Pb solder, (60/40), 230±5℃ for 3±0.5 seconds.	Solder was covered with more than 95% area dipped.

Handling Notes

(Please refer to JAHL-1597 for details)

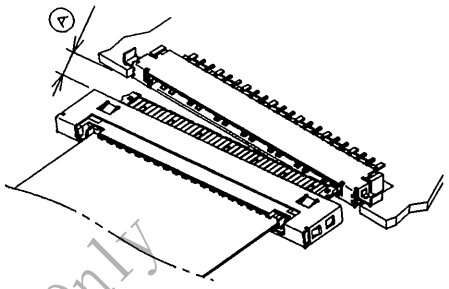
A. When to mate/unmate connectors

1. In general, please hold the connector body and then mate/unmate parallely to the other connector.



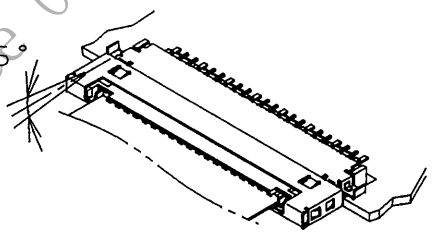
2. Mating Connectors

Please make sure to give a certain amount of space (A) when the other side of connectors are begun mating.



When the both sides are guided to the other connector, please mate them parallely.

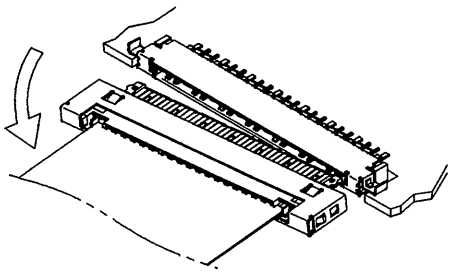
Slant mating (in top and bottom way) must be allowed within 5°



3. Unmating connectors

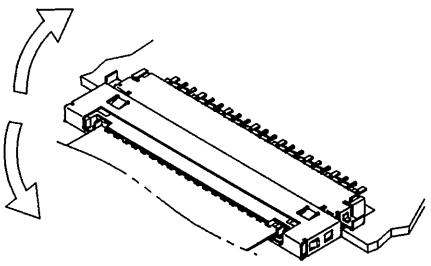
As you see ⇨ on the drawing, piase don't hold one side of the connector and unmate.

Ingeneral, please shake it right and left in unmating direction to unmate.



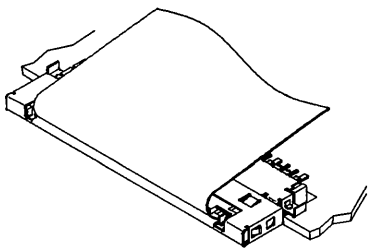
4. Absolute Prohibitation

Please don't put an excessive stress to ⇨ directions



5. FPC Handling

Please don't turn up or down a FPC at the connector's fulcrum because it may cut off or break the FPC pattern.



6. Soldering by a Soldering Iron (PCB SIDE)

When you use a Soldering Iron, please don't take more than 3 seconds.

(Tenperature of Soldering Iron:30wattes and 350℃ or less)

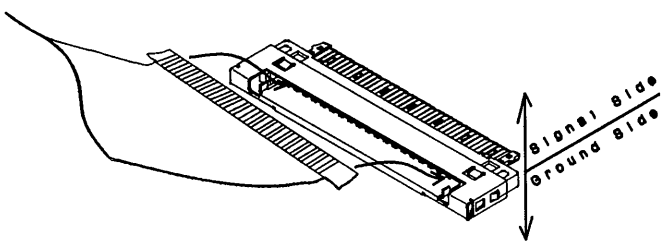
Bend attention of FPC

B. Operation Manual (FPC SIDE)

1. When to Insert FPC

Please make sure the signal and ground side direction before insert the FPC.

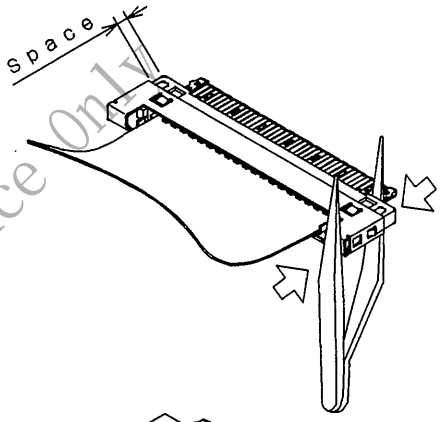
Please hold the both sides of edge of the connector, and then slide the FPC slant ways until it touches to the end.



2. When to Insert Shell

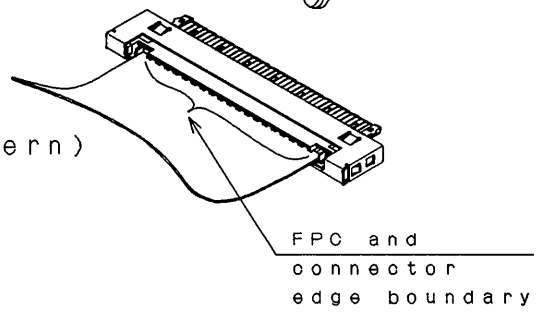
Please make sure the FPC is properly set, and then use a pair of tweezers to push it in.

After the insertion, please make sure no space there as shown on the drawing.



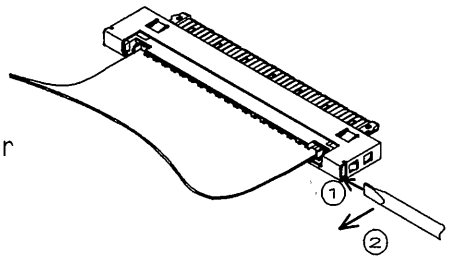
3. Handling After Mating

Please don't put excessive force between the FPC and connector. (It may cut off or break the FPC pattern)



4. When to Remove FPC

①Put in a 1.2mm screw driver to the "unlock hole" till the end, and then②hold that condition to pull out the shell.
After pulling out the shell, please remove the FPC slan ways.
Once the FPC is remove, that connector is prohibited to reuse.
Remove FPC can be reuse once only if there is no external damage (especially near mating area).



Please refer to JAHL-1597 for detailed content of the handling notes above.