

JAPAN AVIATION ELECTRONICS IND., LTD. 3-1-1 MUSASHINO, AKISHIMA-CITY TOKYO, JAPAN	SPECIFICATION TABLE	NO. JACS-1513-0-E	1/3
		CONNECTOR/SERIES FI SERIES	
		APPLICABLE DWG NO. Cf. FI SERIES CONNECTOR COMBINATION.	

STANDARD DATA		Rev.	Date	Description	DRAWN BY	CHK'D BY	APP'D BY
Applicable Connector	FI-SE**P-HF } FI-SEB**P-HF** } FI-S**P-HF/-S**S (Without Shell)	1	5. DEC. 97	—	K. HISAMATSU H. OBIKANE	Z. Haruki	M. Morin
Applicable Wire And Cable	Wire : AWG#28~32 (*Note 1) FPC Cable : 0.14 <sup>±0.03</sup> thick FPC						
Current	1A AC/DC per contact						
Voltage	200V AC/DC per contact						
Operating Temperature	-40°C to +80°C						

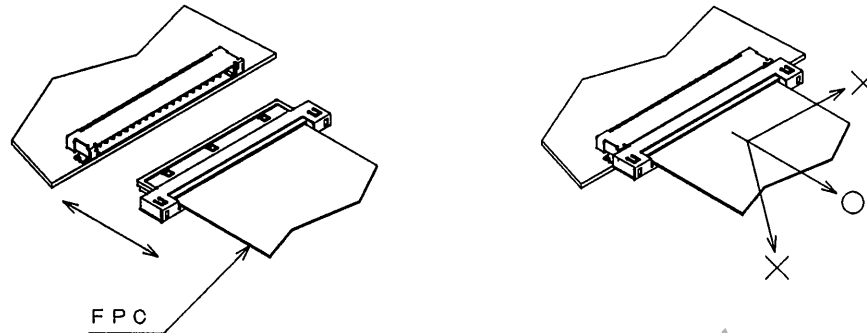
**REMARK:**  
 Note2 : Unless otherwise specified, place a crimp socket contact in a housing for mating with a pin header. (FI-S\*\*S)  
 Note3 : This specification covers the requirements for FPC relay connector mated with a pin header and a FPC. (FI-SE\*\*M(R))  
 Note4 : Special jig is necessary to extract the slider covered with shell. (FI-SE\*\*M(R))  
 \*Note5 : These items are specified only for applicable pin header,

Grade	C
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ITEM	REQUIREMENT	TEST METHOD	REQUIREMENT							
Mechanical	Construction		As specified in the drawing							
	Materials, finishes		As specified in the drawing							
	Connector mating force	FI-SE**P-HF, FI-SEB**P-HF**/-SE**M(R)	1. 96N(0.2kgf) × n max.	n : pin						
		FI-SE**P-HF, FI-SEB**P-HF**/-S**S	2. 94N(0.3kgf) × n max.	n : pin						
		FI-S**P-HF/-S**S								
	Connector unmating force	FI-SE**P-HF, FI-SEB**P-HF**/-SE**M(R)	0. 245N(0.025kgf) × n min.	n : pin						
		FI-SE**P-HF, FI-SEB**P-HF**/-S**S	0. 29N(0.03kgf) × n min.	n : pin						
		FI-S**P-HF/-S**S								
	Slider operating force	After FPC is inserted, depress slider (FI-SE**M(R))	2. 45N(0.25kgf) × n max.	n : pin						
	Cable holding force	Measured after FPC is inserted and slider is depressed. (FI-SE**M(R))	0. 39N(0.04kgf) × n min.	n : pin						
Crimp strength	Measured of tensile strength at conductor crimp of socket contact using tensile tester (No crimp at covered part) (FI-S**S)	<table border="1"> <tr> <td>AWG#</td> <td>28</td> <td>30</td> <td>32</td> </tr> <tr> <td>Spec. N (kgf) MIN.</td> <td>13.7(1.4)</td> <td>9.8(1.0)</td> <td>5.8(0.6)</td> </tr> </table> *Note1 : For wires which are not contained here, size specification shall be determined through consultation with customers.	AWG#	28	30	32	Spec. N (kgf) MIN.	13.7(1.4)	9.8(1.0)	5.8(0.6)
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Spec. N (kgf) MIN.	13.7(1.4)	9.8(1.0)	5.8(0.6)							
Contact retention	FI-SE**P-HF, FI-SEB**P-HF**	4. 9N(0.5kgf) min.								
	FI-S**P-HF	2. 94N(0.3kgf) min.								
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.								
Shock	MIL-STD-202 METHOD 202, 490m/s <sup>2</sup> (50G), 3axes. An appropriate holder may be used for mounting in case of vibration and shock tests.	No mechanical damage during/after test								
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 one minute	100M Ω min.							
	Contact resistance	To measure with voltage drop method (20mV, 1mA)	40m Ω max.							
Environmental	Resistance to solder heat *Note5	260±5°C for 2 minutes	No damage							
	Solder ability-wetting *Note5	Dip in Sn/Pb solder, (60/40), 230±5°C for 3±0.5 seconds	Solder was covered with more than 95% area dipped							
	Thermal shock	-55°C~+85°C 5 cycles.	a) Contact resistance : 80m Ω max.							
	Damp heat	Expose at 90~95%RH and 60°C temperature for 96 hours	b) Insulation resistance : 50M Ω min. c) Voltage proof : 250VACr.m.s. for 1 minute							
	Corrosion	Salt spray test : Salt concentration : 5% at 35°C for 48 hours	There shall be no corrosion that will affect performance. Contact resistance : 80m Ω max.							

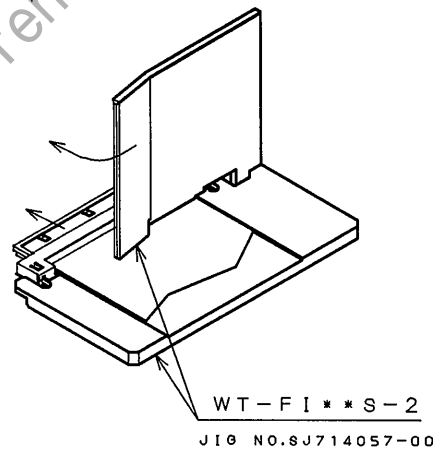
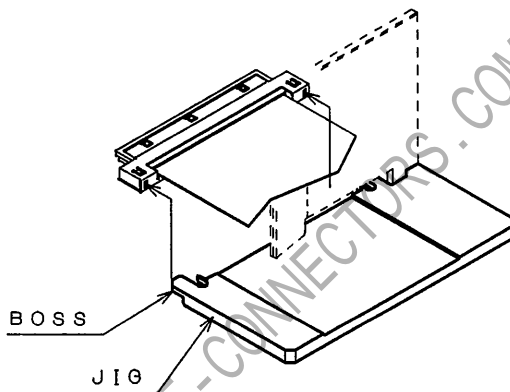
OPERATION MANUAL

1. When you handle this connector, please hold the connector body and then mate/unmate horizontally. Even if you can pull out the connector by holding FPC, because the cable retention force is larger than its total unmating force, it should be prohibited so as not to put an excessive stress on the FPC. And it is not proper to mate/unmate the connectors in an off-set position, either.

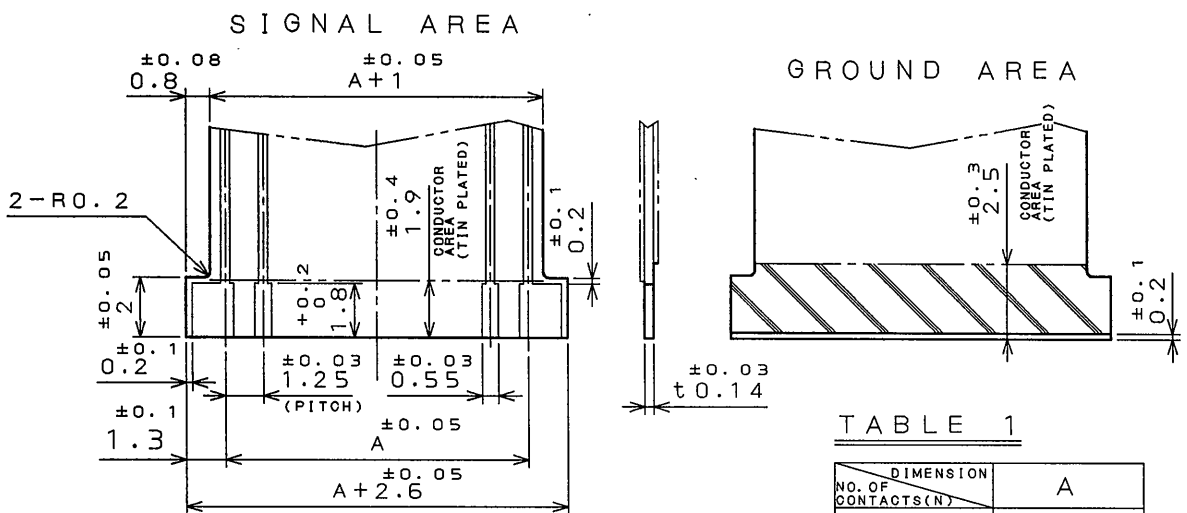


2. In order to take the slider apart (removing FPC), please use a special jig as follows:

- 1) Unmate the connector
- 2) Insert bosses of the jig into the square holes of the shell
- 3) Push bosses of the jig through the holes until they stop to the end
- 4) Pinch both the FPC and the jig
- 5) Withdraw FPC from the insulator on each side in turn



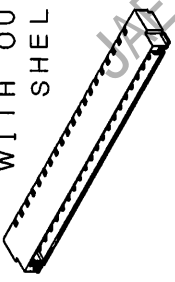
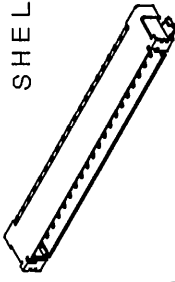
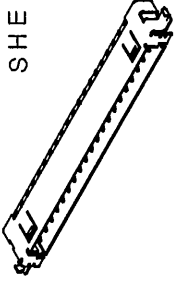
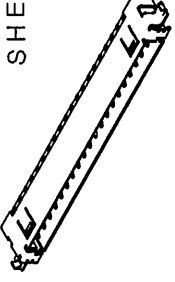
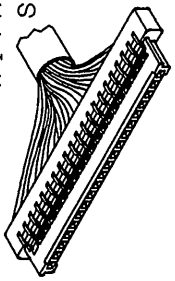
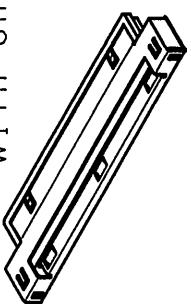
FPC PATTERN DIMENTION



**FI SERIES CONNECTOR COMBINATION**

O: Available

X: Not Available

PWB SIDE CABLE SIDE	BOTTOM TYPE			
	(FI-S**P-HF) WITH OUT SHELL  No. of contact SJ031427 (2~6) SJ031428 (8~30) SJ031429 (-E1500)	(FI-SE**P-HF) WITH SHELL 	(FI-SEB**P-HF) WITH SHELL 	(FI-SEB**P-HF13) WITH SHELL 
FOR TWIST PAIR CABLE (FI-S**S-L***) WITH OUT SHELL  HOUSING: No. of contact SJ031450 (2~6) SJ031451 (8~30) CONTACT: SJ030670	O	O	O	O
FOR FPC (FI-SE**M(R)) WITH SHELL  SJ031738 REVERSE: SJ032273	X	O	O	O