

CHYAO SHIUNN ELECTRONIC INDUSTRIAL LTD. 7FL., NO.17, LANE 3, SEC.1 CHUNG CHENG EAST RD., TAMSHUI, TAIPEI, TAIWAN, R.O.C. TEL: 886-2-2629-9955 (REP) FAX: 886-2-2626-6677



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Туре [	Document	<b>Product Specification</b>	Revised / Edition	Α	
Date	e Issued	2010/11/25	Data Revised	2010/11/25	
	Subject: JS-1007V-XX Issued By:				
	Pitch F	PC Series Connector S	stem	Engineering Dept.	
	This specification is referred to the FPC series connector System <u>-INDEX-</u>				
1.0	Product Na	me/Part Number & Drav	ving Number.		
2.0	Constructio	on/Dimensions/Material	& Surface Finish.		
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Approve	ed by	Checked by	Pre	pared by	



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### 1.0 Product Name/Part Number & Drawing Number:

Product Name	Part Number
FPC CONNECTOR	JS-1007V-XX

Note: (xx) The number of the circuits.

### 2.0 Construction/Dimensions/Material & Surface Finish:

Construction and dimensions shall be in accordance with the referenced drawing. Material and surface finish shall be specified as listing.

Part Name	Material	Surface Finish
Base	NYLON	UL 94V-0
Actuator	NYLON	UL 94V-0
Terminal	Phos.Bronze	Sn/Matte sn /Gold Plated

### 3.0 Characteristic:

ltem		Standard
3.1	Rated Current	1.0A Max.
3.2	Rated Voltage	125V AC/DC Max.
3.3	Temperature Range	<b>-40</b> ℃~+85℃
3.5	Accommodated FFC thickness	0.30±0.03mm

### 4.0 Specimen:

Part Name	Part Number	Picture or Photograph
FPC	JS-1007V-XX	



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#### 5.0 Applicable Standards:

MIL-STD-202 Methods by test of connectors for electronic equipment. MIL-STD-1344 Test methods for electrical connectors.

#### 6.0 Appearance

ltem		Test Method	Requirement
6.1	Appearance	Visual inspection.	There shall be no creak, no deformation or discoloration which may affect the performance specified in this specification.

#### 7.0 Mechanical Performance:

ltem		Test Method	Requirement
7.1	Actuator Insertion/ Withdrawal Force	Mate applicable FFC and insert and Withdrawal actuator. (Testing speed: 25.4 mm/min.)	Refer to paragraph 11.
7.2	FFC/FPC Withdrawal Force	A 0.30mm thickness FFC and a FPC connector shall be unmated on the mating axis. Initial withdrawal forces and also the force at 30 <sup>th</sup> shall be measured. (Testing speed: 25.4 mm/min.)	Refer to paragraph 11.



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ltem		Test Method	Requirement
7.3	Terminal Retention Force	The contact (fitting nail) mounted in a FPC shall be pushed in the mating axis direction. The load required to pull the contact out of the FPC shall be measured. (Testing speed: 25.4 mm/min.)	<mark>0.5Kg</mark> Min. (Terminal)

### 8.0 Electrical Performance:

	ltem	Test Method	Requirement
8.1	Contact Resistance	Contact resistance between points A and B of the specimen assembled for actual use shown in the figure on the right side shall be measured under the following conditions. Test current: 10mA(DC) Open voltage: 20mV max.	<mark>20 m</mark> Ω Max.
8.2	Insulation Resistance	500V DC shall be applied between adjacent contacts of a mated specimen to measure insulation resistance.	100 M Ω Min.
8.3	Dielectric Withstanding Voltage	500V AC Min. shall be applied between adjacent contacts of a mated specimen for one minute.	There shall be no breakdown or flashover.



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### 9.0 Environmental Performance:

Item		Test Method	Requirement
9.1	Durability	Insert and withdraw the FPC up to 30 cycles at the speed rate of less than 10 cycles/ minute.	Contact Resistance: 40 m Ω Max
9.2	Temperature Rise	Carrying rated current load. (UL498)	Temperature Rise: <mark>30℃</mark> Max.
9.3	Heat Resistance	The specimen shall be placed in a heat oven of the following conditions. After the test contact resistance shall be measured. Temperature: 85±2℃ Period: 96 hours	Appearance: no damage Contact Resistance: 40 m Ω Max
9.4	Cold Resistance	The specimen shall be placed in a heat oven of the following conditions. After the test contact resistance shall be measured. Temperature: -40±2°C Period: 96 hours	Appearance: no damage Contact Resistance: 40 m Ω Max
9.5	Vibration	The specimen shall be mounted on a PCB and subjected to a vibration test of the following conditions. During the test, current continuity shall be checked. After the test contact resistance shall be measured. Frequency: 10~55~10 Hz/minute. Amplitude: 1.52 mm. Direction: Each of X,Y,Z-axis directions Period: 2 hours for each direction.	Appearance: no damage Contact resistance: 40 m Ω Max. There shall be no current discontinuity
9.6	Shock	490m/s <50G>, 3 storks in each X.Y.Z axes. (EIA-364-27B)	during the test.



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	ltem	Requirement					
9.7	Humidity	The specimen shall b chamber of the follow After test, contact res resistance and dielec voltage shall be meas Temperature: 4 Humidity: 9 Period: 9	he specimen shall be placed in a humidity hamber of the following conditions. fter test, contact resistance, insulation esistance and dielectric withstanding oltage shall be measured. Temperature: $40\pm2^{\circ}$ C. Humidity: $90\%\sim95\%$ (RH). Period: $96$ hours he specimen shall be subjected to a hermal shock test of the following onditions. After test, contact resistance, isulation resistance and dielectric ithstanding voltage shall be measured. One Cycle Consists Of: $-55\pm3^{\circ}$ for 30 minutes. $+85\pm2^{\circ}$ for 30 minutes. Time of Cycles: 5 Cycles.				
9.8	Thermal Shock	The specimen shall b thermal shock test of conditions. After test insulation resistance withstanding voltage One Cycle −55 ± 3℃ fo +85 ± 2℃ fo Time of Cyc					
9.9	Salt Spray	The specimen shall b spray test of the follo the test, it shall be wa water and dried natur measurement of cont Temperature: 35 Density: 5± Period: 48	e subjected to a salt wing conditions. After ashed with running cally before the cact resistance. ±2℃. 1% in weight. hours.	Appearance: no damage Contact Resistance: 40 m Ω Max.			



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	Item	m Test Condition					
9.10	Steam Aging	Steam Aging Temperature:98±2℃Period:8 hoursSolder Temperature:245±5℃Soldering Time:3±0.5 sec	Appearance: no damage Plating surface				
9.11	Solder ability	Fluxed soldering section of the specimen shall be dipped in solder of the following conditions Solder: Sn-3Ag-0.5Cu Flux: Activation flux Temperature: 245 ± 5°C. Immersion Period : 3 ± 0.5 Seconds	of solder dripping section of a specimen shall be covered with smooth solder (over 95%).				
9.12	Resistance To Soldering Heat	By reflow soldering: The specimen shall be subjected to a reflow soldering of the condition shown in the graph below. After the test, the appearance shall be observed.	There shall be no deformation or damage which may affect the performance.				



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Please check the reflow soldering condition by your own devices beforehand. Because the condition changes by the soldering devices, P.C.Boards, and so on. No moisture treatment before reflow process.

### 10.0 Note:

- 1. ROHS Compliant
- 2. Please use it promptly after opening a package. The recommendation is within at 48 hours.



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# 11.0 ACTUATOR INSERTION/WITHDRAWAL FORCE AND FFC RETENTION FORCE (Unit: kgf)

No. of	INSE	INSERTION FORCE			RAWAL	FORCE	FFC RET	ENTION
		(Max.)			(Max.)		FORCE	E (Min.)
ONI	1st	6th	30th	1st	6th	30th	1st	10th
6	3.1	2.9	2.9	4.0	3.6	3.6	0.70	0.60
7	3.2	3.0	3.0	4.1	3.7	3.7	0.75	0.65
8	3.3	3.1	3.1	4.2	3.8	3.8	0.80	0.70
9	3.4	3.2	3.2	4.3	3.9	3.9	0.85	0.75
10	3.5	3.3	3.3	4.4	4.0	4.0	0.90	0.80
11	3.6	3.4	3.4	4.5	4.1	4.1	0.95	0.85
12	3.7	3.5	3.5	4.6	4.2	4.2	1.00	0.90
13	3.8	3.6	3.6	4.7	4.3	4.3	1.05	0.95
14	3.9	3.7	3.7	4.8         4.4         4.           4.9         4.5         4.	4.4	1.10	1.00	
15	4.0	3.8	3.8		4.5	4.5 4.5	1.15	1.05
16	4.1	3.9	3.9	5.0	4.6	4.6	1.20	1.10
17	4.2	4.0	4.0	5.1	4.7	4.7	1.25	1.15.
18	4.3	4.1	4.1	5.2	4.8	4.8	1.30	1.20
19	4.4	4.2	4.2	5.3	4.9	4.9	1.35	1.25
20	4.5	4.3	4.3	5.4	5.45.05.55.1	5.0	1.40	1.30
21	4.6	4.4	4.4	5.5		5.1	1.45	1.35
22	4.7	4.5	4.5	5.6	5.2	5.2	1.50	1.40
23	4.8	4.6	4.6	5.7	5.7 5.3 5.3	5.3	1.55	1.45
24	4.9	4.7	4.7	5.8	5.4	5.4	1.60	1.50
25	5.0	4.8	4.8	5.9	5.5	5.5	1.65	1.55
26	5.1	4.9	4.9	6.0	5.6	5.6	1.70	1.60
27	5.2	5.0	5.0	6.1	5.7	5.7	1.75	1.65
28	5.3	5.1	5.1	6.2	5.8	5.8	1.80	1.70
29	5.4	5.2	5.2	6.3	5.9	5.9	1.85	1.75
30	5.5	5.3	5.3	6.4	6.0	6.0	1.90	1.80



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#### **12.0 Test Sequence and Sample Quantity:**

Test Items Vibration	Group												
		В	С	D	Е	F	G	Н	I	J	К	L	М
Appearance	1,9	1,11	1,5	1,5	1,5	1,5	1,5	1,5	1,3	1	1,3	1,3	1,4
Contact Resistance	2,6	3,8	2,4	2,4	2,4	2,4	2,4	2,4					
Insulation Resistance	3,7												
D.W. Voltage	4,8												
FFC Retention Force		5,9											
Actuator Insertion Force		2,7											
ActuatorWithdrawalForce		4,10											
Terminal Retention Force									2				
Durability		6											
Vibration			3										
Shock (Mechanical)				3									
Heat Resistance					3								
Cold Resistance						3							
Salt Spray							3						
Thermal Shock								3					
Humidity	5												
Temperature Rise										2			
Steam Aging													2
Solder Ability											2		3
Soldering Heat Resist												2	
Sample QTY.													



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13.0 Remark: Any change or revision for the product specification will not be announced in advance. Please contact our sales representative for the latest information.