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1. SCOPE

1.1 Contents

This specification covers the performance, tests and quality requirements for the FPC Connector

1.2 Qualification

When tests are performed on the subject product line, the procedures specified in CRS Electronics Co., ltd. inspection plan and product drawings.

2. ORDERING INFORMATION

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3. CONNECTOR DIMENSIONS

See attached drawings.

4. MATERIAL

	FP0515H-XXXXX					
NO	DIMENSIONS	MATERIAL	PLATING&COLOR			
1	Housing	HIGHT-TEMP PLASTIC	UL94V-0			
2	PEG	Brass	TIN or Au PLATING			
3	terminal	Phosphor Bronze	TIN or Au PLATING			

5. ACCOMMODATED P.C.B. LAYOUT

See attached drawings

6. RATING

ITEM	STANDARD
Operating Voltage (Max.)	50V AC/DC
Current Rating (Max.)	0.5 A AC/DC
Operating Temperature	-25°C ~ +85°C (Including terminal temperature rise)

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7. PERFORMAN	CE		
ITEM	TEST CONDITION	REG	UIRMENT
Examination of	Visual inspection. No physical damage.	Mee	s requirements
Product			oduct drawing.
	ELECTRICAL PERFORMANCE	I	
Contact Resistance	Mate applicable FPC/FFC and measure by	20m!	ΩMax
	dry circuit, 20mV Max, 10mA.		
	(JIS C5402 5.4)		
	Mate applicable FPC/FFC and apply 500V D	DC 500N	IΩ Min.
Insulation	between adjacent terminal or ground.,(JIS C	5402	
Resistance	5.2/MIL-STD-202 Method 302)		
	Mate applicable FPC/FFC and apply 200V A	C(rms) for No e	vidence of
	1 minute between adjacent terminal or groun	d., breal	k-down and
Dielectric Strength	(JIS C5402 5.1/MIL-STD-202 Method 301)	flash	over
	MECHANICAL PERFORMANCE	E	
	Apply axial pull out force at the speed rate o	f Pos.z	x0.04kgf(0.4N)
FPC/FFC Retention	25±3 mm/Min. on the terminal assembled in	MIN	
Force	the housing		
	Apply axial pull out force at the speed rate o	f	
Contact Retention	25±3 mm/Min. on the terminal assembled in	Pos.2	x0.08kgf(0.8N)
Force	the housing	MIN	
	ENVIRONMENTAL PERFORMANCE AND	OTHERS	

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Temperature Rise	Measure the temperature rise of contactwhen the maximum AC rated current ispassed. (UL498)	Tem	perature rise	30°C M	lax.

ITEM	TEST CONDITION	REQU	IRMENT
Life test	When mated up to 30cycles repeatedly (the rate is 10 cycles per minute).	Contact Resistance	40 mΩ Max.
	Amplitude : 1.5mm P-P Frequency: 10~55~10 Hz in 1 minute. Duration: 2 hours in each of X, Y, Z axes.	Appearance	No Damage
Vibration	(MIL-STD-202 Method 201)	Contact Resistance	40 mΩ Max.
		Discontinuity	1 μ sec Max.
	Subject to the following shock conditions. 3	Appearance	No Damage
Shock	times of shocks shall be applied for each 6 directions along 3 mutually perpendicular	Contact Resistance	40 mΩ Max.
	axes. Peak value : 490m/s2 {50G} (JIS C0041 / MIL-STD-202 Method 213)	Discontinuity	1 μ sec Max.
	Expose to 85±2°C for 96 hours. Upon completion of the exposure period, the test	Appearance	No Damage
	specimens shall be conditioned at ambient		
Heat Resistance	room conditions for 1 to 2 hours, after which the specified measurements shall be	Contact Resistance	40 mΩ Max.

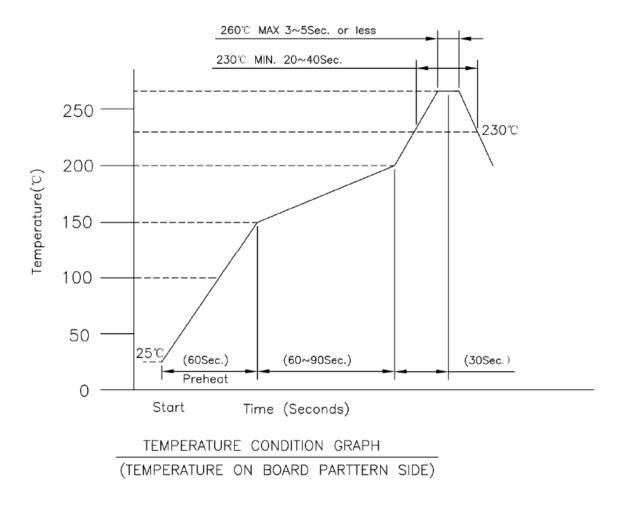
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	performed. (JIS C0021 / MIL-STD-202 Method 108)		
Cold Resistance	Expose to -25±2°C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall	Appearance Contact Resistance	No Damage 40 mΩ Max.
	be performed. (JIS C0020)		

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ITEM	TEST CONDITION	REQUI	RMENT
	Expose to $60 \pm 2^{\circ}$ C, relative humidity 90 to 95% for 96 hours.	Contact Resistance	40 mΩ Max.
Humidity	Upon completion of the exposure period, the test specimens shall be conditioned at	Dielectric Strength	No Breakdown
	ambient room conditions for 1 to 2 hours, after which the specified measurements shall	Insulation Resistance	250 MΩ Min
	be performed. (JIS C0022 / MIL-STD-202 Method 103)	Appearance	No Damage
	Subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be	Contact Resistance	40 mΩ Max.
Temperature Cycling	conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 1 cycle a) -25±2°C 30minutes b)+85±2°C 30minutes (Transit time shall be with in 3 minutes) (JIS C0025)	or Appearance	No Damage
	Expose to the following salt mist conditions. Upon completion of the exposure period, salt	Contact Resistance	40 mΩ Max
Salt Spray	deposits shall be removed by a gentle was or dip in running water, after which the specified measurements shall be performed. NaCl solution Concentration : $5 \pm 1\%$	h Appearance	No Damage

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		Spray time : 24 ± 2 hours		
		Ambient temperature : $35 \pm 2^{\circ}C$		
		(JIS C0023 / MIL-STD-202 Method 101)		
		When reflowingRefer to paragraph 8.	Appearance	No Damage
	Resistance to	Soldering iron method		
	Soldering Heat	Soldering time: 3 ±0.5 seconds Max.		
		Solder temperature : 260±5°C		
			The test area shal	l be covered
		Solder Temperature: 245 ±5°C	more than 95%	
	Solder ability	Immersion Period: 5±0.5sec	of immersed area	with fresh
			solder.	

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8. NFRARED REFLOW CONDITION



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9. Product Qualification and Requalification test

Test or Examination	Test Group										
	Α	В	С	D	Е	F	G	Н	I	J	K
	Test Sequence (a)										
Examination of Product	1, 7	1, 7	1,5	1, 5	1, 5	1, 5	1, 5	1, 3		1, 3	
Contact Resistance		2, 6	2, 4	2, 4	2, 4	2, 4	2, 4				
Dielectric withstanding Voltage	3, 6										
Insulation Resistance	2, 5										
Contact/ Peg Retention Force											1
FPC/FFC Retention Force		3, 5									
Durability		4									
Vibration			3								
Shock							3				
Temperature Rise								2			
Solder ability										2	
Resistance to Soldering Heat									2		
Heat Resistance				3							
Cold Resistance					3						
Humidity						3					
Temperature Cycling	4										
Salt Spray							3				
Sample Size	5	5	5	5	5	5	5	2	5	5	5