



喬訊電子工業股份有限公司
CHYAO SHIUNN ELECTRONIC INDUSTRIAL LTD.
7FL., NO.17, LANE 3, SEC.1 CHUNG CHENG EAST RD.,
TAMSHUI, TAIPEI, TAIWAN, R.O.C.
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Type Document	Product Specification	Revised / Edition	C
Date Issued	2013/11/12	Data Revised	2015/03/30
Subject: JS-0511-XX JS-0512-XX Pitch 0.50mm SMT Series Board to Board Connector			Issued By: Engineering Dept.

This specification is referred to the 0.50mm SMT series board to board connector.

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1.0 Product Name/Part Number & Drawing Number:

	Product Name	Part Number	Drawing Number
Wafer	PLUG	JS-0511	JS-0511-XX
	RCPT	JS-0512	JS-0512-XX

Note: (xx) The number of the circuits.

2.0 Construction/Dimensions/Material & Surface Finish:

	Part Name	Material	Surface Finish
PLUG	Base	LCP	UL 94V-0
	Contact	Phosphor Bronze	Tin Plated / Gold Plated
RCPT	Base	LCP	UL 94V-0
	Contact	Phosphor Bronze	Tin Plated / Gold Plated



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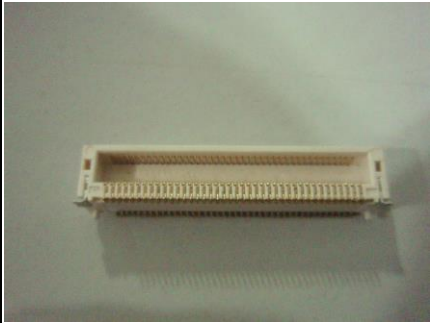
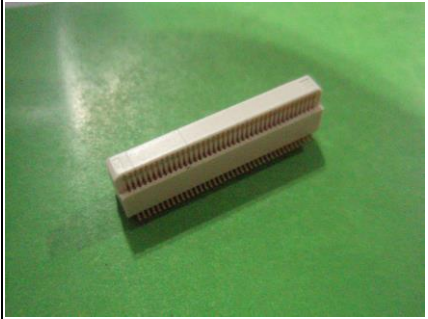
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3.0 Characteristic:

Item		Standard	
3.1	Rated Current	0.5A AC/DC (per pin)	
3.2	Rated Voltage	50V AC/DC	
3.3	Ambient Temperature Range	Operating Temp.: -55~+105 ; Including 30°C Terminal Temperature Rise at rated Current . Storage temp.: -55~+105 ;	
3.4	Applicable Printed Circuit Board (PCB)	3.5.1	SMT Layout: 0.50 ±0.05 mm per Pitch
		3.5.2	SMT Layout: 0.25X1.35±0.05 mm for Pin Post(PLUG)
			SMT Layout: 0.25X1.80±0.05 mm for Pin Post(RCPT)
		3.5.3	SMT Layout: ϕ 0.65±0.05 mm for pillar

4.0 Specimen:

Part Name/ Part Number/ Picture or Photograph			
PLUG JS-0511-XX		RCPT JS-0512-XX	

5.0 Applicable Standards:

- MIL-STD-202 Methods by test of connectors for electronic equipment.
- EIA 364 Testing method for electrical connectors.



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6.0 Mechanical Performance:

Item		Test Condition	Requirement
6.1	Insertion & Retention Force	Insert and withdraw with connectors at the speed rate of 25mm/minute. (EIA 364-13) (A housing lock shall be removed for the measurement.)	Refer to paragraph 9.1
6.2	Contact Retention Force (in Base)	Axial pullout force on the square pin in the base at the speed rate of 25 ± 6 mm per minute. (EIA 364-29C)	0.2Kgf min.



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7.0 Electrical Performance:

Item	Test Condition	Requirement
7.1 Contact Resistance	A maximum voltage of 20mV and a maximum current of 10mA are applied to the Mate connectors. (EIA 364-23)	Contact Resistance: 40 milliohms Max.
7.2 Current Continuity	Each circuit of the connector shall be connected in series continuity meter shall detect current discontinuity longer than 1 microsecond during the vibration test.	No discontinuity current is longer than 1 microsecond.
7.3 Insulation Resistance	Apply 250V D/C to any two adjacent contacts to measure the insulation resistance. (EIA 364-21)	Insulation Resistance: Initial 1000 megohms Min.
7.4 Withstanding Voltage	Apply 250V A/C (rms) for 1 minute and the leakage current shall not exceed 0.5mA to the adjacent terminal and ground of the Mate connectors. (EIA 364-20)	No breakdown or flashover.



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8.0 Environmental Performance:

Item	Test Condition	Requirement
8.1 Vibration	Frequency: 10~55~10 Hz/minute. Amplitude: 1.5 mm P-P. Direction: 1. Axis of up and down. 2. Axis of right the left. 3. Axis of front and back. Period: 2 hours for each direction. (EIA 364-28A-23)	Initial Contact Resistance : 40 milliohms Max. (After the test) Contact Resistance: 60 milliohms Max. No discontinuity current is longer than 1 microsecond.
8.2 Humidity Steady State	Temperature: 40±2°C. Humidity: 90%~95% (RH). Period: 96 hours continuously. (EIA 364-31)	(After the test) Contact Resistance: 60 milliohms Max. (After the test) Insulation Resistance: 1000 Megohms Min. (After the test) Withstanding Voltage : No breakdown or flashover
8.3 Thermal Shock	One Cycle Consists Of: -55 +0/-3°C for 30 minutes. → Room Temp.5 minutes 85+3/-0°C for 30 minutes. → Room Temp.5 minutes Total Cycles: 5 Cycles. (EIA 364-32)	Same as paragraph 8.2



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Item		Test Condition	Requirement
8.4	Heat Aging	Temperature: $85\pm 2^{\circ}\text{C}$. Period: 96 hours continuously. (EIA 364-17)	Contact Resistance: 60 milliohms Max. after the test.
8.5	Salt Spray	Temperature: $35\pm 2^{\circ}\text{C}$. Density: 5 % in weight. Period: Terminal or contact (Stamping after tin plated for 8 hours) ; Terminal or contact (Stamping before tin plated for 24 hours)	(After the test) Contact Resistance: 60 milliohms Max
8.6	Solder Ability	Solder Temperature: $245 \pm 5^{\circ}\text{C}$. Immersion Period: 3 ± 0.5 Seconds Method : 0.5mm From Terminal Tip and Solder Tab Tip (EIA 364-52)	Solder entirely 95% of immersed area must show no voids or pinholes.



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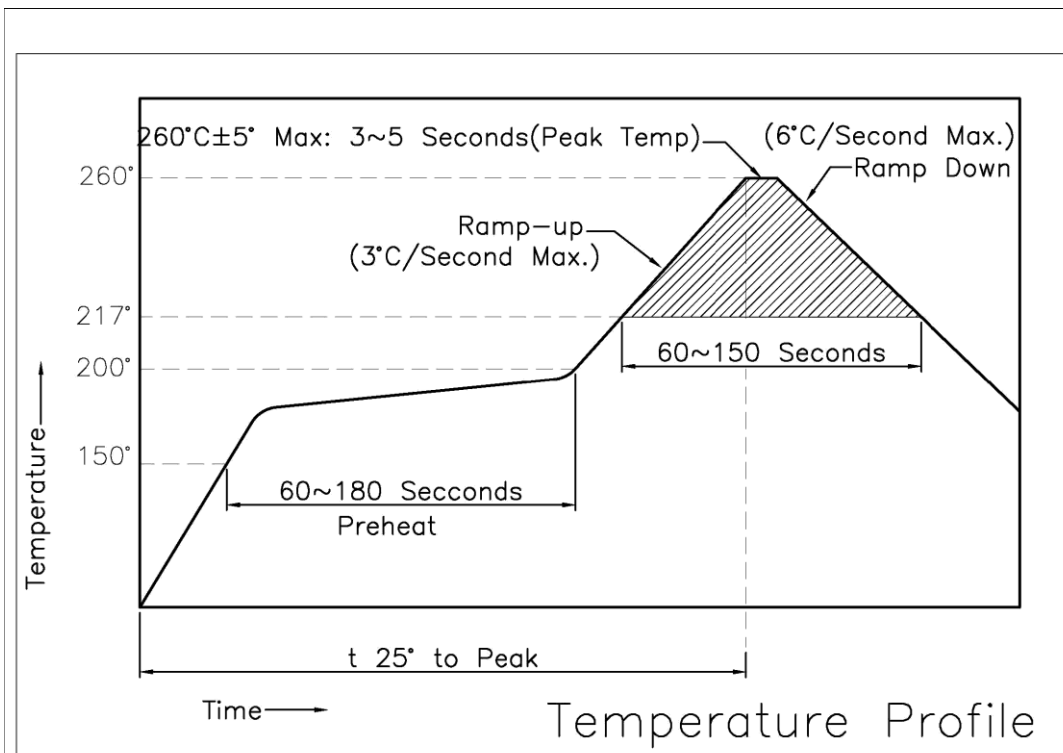


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Item	Test Condition	Requirement
8.7	<p>Resistance To Soldering Heat</p> <p>By reflow soldering: Refer to Temperature Profile 8.7.1</p> <p>By soldering iron: 350 ± 5°C 3±0.5 Seconds. Method : 0.5mm From Terminal Tip and Solder Tab Tip</p>	Not deformation or damage.

8.7.1 Temperature Profile:





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9.0 Insertion Force (I.F.) & Retention Force (R.F.)

9.1 Requirement:

No. Of Circuits	AT INITIAL		AT 30TH	No. Of Circuits	AT INITIAL		AT 30TH
	I.F. (MAX)	R.F. (MIN)	R.F. (MIN)		I.F. (MAX)	R.F. (MIN)	R.F. (MIN)
30	2.10	0.36	0.27	100	7.00	1.20	0.90
40	2.80	0.48	0.36	110	7.70	1.32	0.99
50	3.50	0.60	0.45	120	8.40	1.44	1.08
60	4.20	0.72	0.54				
70	4.90	0.84	0.63				
80	5.60	0.96	0.72				
90	6.30	1.08	0.81				

(Kg/f)

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