



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	E
Date Issued	2013/01/22	Data Revised	2016/05/25
Subject: JS-2504-XX JS-2504H-XX JS-2504-T JS-2503-XX JS-2503A-XX JS-2503R-XX JS-2503RA-XX Pitch 2.50mm DIP Series Wire to Board Connector			Issued By: Engineering Dept.

This specification is referred to the 2.50mm Disconnectable Crimp style connector.

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1.0 Product Name/Part Number & Drawing Number:

Product Name		Part Number	Drawing Number
Crimp Terminal		JS-2504-T	JS-2504-T
Housing		JS-2504	JS-2504-XX
		JS-2504H	JS-2504H-XX
Wafer	Straight	JS-2503 (without Boss)	JS-2503-XX
		JS-2503A (with Boss)	JS-2503A-XX
	Right Angle	JS-2503R (without Hook)	JS-2503R-XX
		JS-2503RA (with Hook)	JS-2503RA-XX

Note: (xx) The number of the circuits.

2.0 Construction/Dimensions/Material & Surface Finish:

Part Name		Material	Surface Finish
Crimp Terminal		Copper Alloy	Tin-Plated
Housing		PA66	UL 94V-0
Wafer	Contacts	Brass	Tin Plated/Matte Sn
	Base	PA66(G.F.)	UL 94V-0
MEET IEC 60335-1, Section 30.2.3			



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3.0 Characteristic:

Item		Standard	
3.1	Rated Current	3A AC/DC (With AWG #22 is applied)	
3.2	Rated Voltage	250V AC/DC	
3.3	Ambient Temperature Range	Operating Temp.: -25°C ~ +85°C ; (Including 30°C Terminal Temperature Rise at rated Current .) Storage temp.: -25°C ~ +85°C ;	
3.4	Applicable Wire	3.4.1	Conductor Construction Size: AWG #28~#22
		3.4.2	Wire Insulation O.D.: 1.20mm~1.90mm
3.5	Applicable Printed Circuit Board (PCB)	3.5.1	Applicable P.C.B : Thickness 1.6mm
		3.5.2	For Tine : 0.9+0.10/-0 mm, pitch 2.5mm
		3.5.3	For Boss : 1.2+0.10/-0 mm

4.0 Specimen:

Part Name/ Part Number/ Picture or Photograph			
Crimp Contact JS-2504-T		Wafer JS-2503-XX	
Housing JS-2504-XX		Wafer JS-2503A-XX	

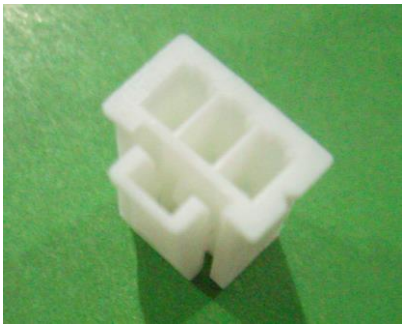
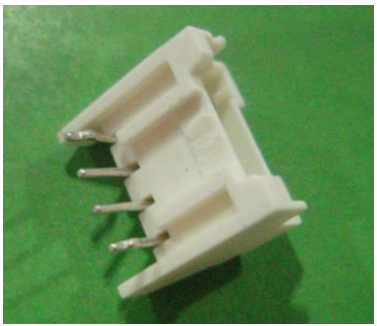

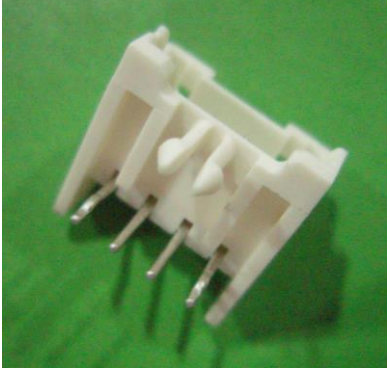


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Part Name/ Part Number/ Picture or Photograph			
Housing JS-2504H-XX		Wafer JS-2503R-XX	
Housing JS-2504H-XXCV		Wafer JS-2503RA-XX	



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5.0 Applicable Standards:

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

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 removed before the measurement.)	Refer to paragraph 9.1
6.2	Crimp Tensile Strength(Axial)	AWG#28 size wire	1.0Kgf min.
		AWG#26 size wire	2.0Kgf min.
		AWG#24 size wire	3.0Kgf min.
		AWG#22 size wire	4.0Kgf min.
6.3	Contact Retention Force (in Housing)	Axial pullout force on the terminal in the housing at the speed rate of 25 ± 6 mm per minute.	1.5Kgf min.
6.4	Post 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)	Per Contact 2.0kgf/Min.
			After Soldering Heat Per Contact 1.0kgf/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: 10 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 500V 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 1000V 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	Durability	Mate Connectors up 50 Cycles at a Maximun rate of 10 cycles Per minute prior to environmental test (EIA/ECA 364-09C)	(After the test) Contact Resistance: 20 milliohms Max.
8.2	Temperature Rise (Via Current Cycling)	Mate connector . measure the temperature rise of contact when the maximum rated current is passed (EIA 364-70B	Mate connectors Temperature Rise: +30°C/Max.
8.3	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)	(After the test) Contact Resistance: 20 milliohms Max.
			No discontinuity current is longer than 1 microsecond.
8.4	Humidity Steady State	Temperature: 40±2°C. Humidity: 90%~95% (RH). Period: 96 hours continuously. (EIA 364-31)	(After the test) Contact Resistance: 20 milliohms Max.
			(After the test) Insulation Resistance: 500 Megohms Min.
			(After the test) Withstanding Voltage : No breakdown or flashover



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Item		Test Condition	Requirement
8.5	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 8.4
8.6	Heat Aging	Temperature: 85±2°C. Period: 96 hours continuously. (EIA 364-17)	(After the test) Contact Resistance: 20 milliohms Max.
8.7	Salt Spray	Temperature: 35±2°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) (EIA 364-26)	(After the test) Contact Resistance: 20 milliohms Max
8.8	Solder Ability	Solder Temperature: 245 ± 5°C. Immersion Period: 3±0.5 Seconds Method : 1.5mm From Square Pin Tip. (EIA 364-52)	Solder entirely 95% of immersed area must show no voids or pinholes.
8.9	Resistance To Soldering Heat	Resistance to soldering heat when using PA66(G.F.): Solder Temperature: 260 ± 5°C. Immersion Period : 3~5±0.5 Seconds (The part can't suitable to pass the IR reflow)	Not deformation or damage.
		By soldering iron: 350 ± 5°C 3±0.5 Seconds. Method : 0.5mm From Terminal Tip and Solder Tab Tip	

Notes : Flowing Mixed Gas (EIA 364-65A) shall be conduct by Customer request



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

9.1 Requirement:

No. Of Circuits	AT INITIAL		AT 50TH	No. Of Circuits	AT INITIAL		AT 50TH
	I.F. (MAX)	R.F. (MIN)	R.F. (MIN)		I.F. (MAX)	R.F. (MIN)	R.F. (MIN)
02	2.0	0.10	0.08	09	5.5	0.45	0.35
03	2.5	0.15	0.10	10	6.0	0.50	0.40
04	3.0	0.20	0.12	11	6.5	0.55	0.45
05	3.5	0.25	0.15	12	7.0	0.60	0.50
06	4.0	0.30	0.20	13	7.5	0.65	0.55
07	4.5	0.35	0.25	14	8.0	0.70	0.60
08	5.0	0.40	0.30	15	8.5	0.75	0.65

(Kgf)

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.