CJTconn 長江連接器有限公司 CHANGJIANG CONNECTORS CO.,LTD.

PRODUCT SPECIFICATION

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			APPROVED	CHECKED	WRITTEN
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A0	NEW RELEASE	2009.06.14			
REV.	DESCRIPTION	DATE	DOCUMENT NO: PS-A1006-002		

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1.SCOPE:

This specification covers the requirements for product performance of 1.00 mm pitch wire to board connector series.

2.PART NAME & PART NUMBERS

Part name	Part number
Housing	A1006H-2
Terminal	A1006-T
Wafer	A1006WV-S-2 A1006WR-S-2

3. CONSTRUCTION. DIMENSIONS . MATERIAL & SURFACE FINISH

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

Part name		Material	Surface finish
Housing		PBT/Nylon 66	UL94V-0
Terminal		Phosphor bronze	Tin over Nickel/Gold over Nickel
Wafer	Post	Brass/Phosphor bronze	Tin over Nickel/Gold over Nickel
	Body	Nylon 9T/LCP	UL94V-0

4. RATINGS & APPLICABLE WIRES

Item	Standard		
Rated Voltage (Max.)	50V AC DC		Insulation O.D. 0.40~0.80mm.
Rated Current (Max.) and Applicable Wires	AWG #28	1A AC DC	
	AWG #30	0.9A AC DC	
	AWG #32	0.8A AC DC	
Ambient Temperature Range	-40℃~105℃*		

*: Including terminal temperature rise

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5. CONDITIONS：

The conditions shall be in accordance with the referenced data of next table.

Number	Item	Requirement
(1)	Bend up	2°Max.
	Bend down	3°Max.
	Twisting	2°Max.
	Rolling	5°Max.
(2)	Bell mouth (flare)	0.05-0.25 mm
(3)	Cut-off tab length	0.3 mm Max.
(4)	Extruded wire length	0.2-0.6 mm
(5)	Seam	Seam shall not be opened and no wire allowed out of crimping area
(6)	Wire strip length	1.5 mm ref.
(7)	Lance height	/

After crimping，the crimped areas [(5)、(6)] should be as follows.

Wire Size (AWG)	Terminal Part Number	Conductor(mm)		Insulation(mm)		Crimp Strength (kgf)
		Crimp Width	Crimp Height	Crimp Width	Crimp Height	
#28	A1006-T	0.70	0.43~0.47	0.80 Max.	1.00	1.00(Min.)
#30			0.40~0.44		0.95	0.50(Min.)
#32			0.38~0.42		0.90	0.30(Min.)

The crimp width at the conductor part、crimp width & crimp height at the insulation part is a reference value, so adjust it according to a wire to be used。

6. PERFORMANCE

6.1 ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
6-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV Max. 10mA. (Based upon JIS C5402 5.4)	30mΩ Max.
6-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon JIS C5402 5.2/MIL-STD-202 Method 302 Cond. B)	100MΩ Min.
6-1-3	Dielectric Withstanding Voltage	Mate connectors, apply 500V AC (rms) for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301)	No Breakdown

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6.2 MECHANICAL PERFORMANCE

Test Description		Procedure		Requirement
6-2-1	Insertion & Withdrawal Force	Insert and withdraw connectors at the speed rate of 25 ± 3mm/minute.		0.20kgf per circuit MAX mate force & 0.025kgf per circuit MIN unmate force
6-2-2	Crimping Pull Out Force	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25 ± 3mm/minute. (Based upon JIS C5402 6.8)	AWG #28	10N/1kgf Min.
			AWG #30	5N/0.5kgf Min.
			AWG #32	3N/0.3kgf Min.
6-2-3	Crimp Terminal Insertion Force	Insert the crimped terminal into the housing. Testing speed: 25 ± 3mm/minute.		N/A
6-2-4	Terminal/Housing Retention Force	Apply axial pull out force at the speed rate of 25 ± 3mm/minute on the terminal assembled in the housing		0.5kgf Min.
6-2-5	Locking Strength	A socket housing and a header (A plug housing and receptacle housing) shall be mated. A load shall be applied between them.The load to come them off etch other shall be measured. Testing speed: 25 ± 3mm/minute.		2.0kgf Min.
6-2-6	Header Terminal Retention Force	Apply axial push force at the speed rate of 25 ± 3mm/minute.		N/A
6-2-7	Durability	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute	Contact Resistance	40mΩ Max.
6-2-8	Vibration	Amplitude: 1.52mm P-P Sweep time: 10-55-10 Hz in 1 minute Duration: 2 hours in each X.Y.Z. axes (Based upon JIS C 60068-2-6/MIL-STD-202 Method 201)	Appearance	No Damage
			Contact Resistance	40mΩ Max.
			Discontinuity	1μsec. Max.

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6.3 ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
6-3-1	Temperature Rise	Carrying rated current load. (Based upon UL 498)	Temperature Rise	30°C Max.
6-3-2	Heat Resistance	85 ± 2°C, 250 hours (Based upon JIS C0021/MIL-STD-202 Method 108A Cond. A)	Appearance	No Damage
			Contact Resistance	40mΩ Max.
6-3-3	Humidity	Temperature: 40 ± 2°C Relative Humidity: 90 ~ 95% Duration: 96 hours (Based upon JIS C0022/MIL-STD-202 Method 103B Cond. B)	Appearance	No Damage
			Contact Resistance	40mΩ Max.
			Insulation Resistance	100MΩ Min.
			Dielectric Withstanding Voltage	Must meet 6-1-3
6-3-4	Temperature Cycling	25 cycles of: a) - 55°C 30 minutes b) +85°C 30 minutes (Based upon MIL-STD-202 Method 107 Cond. A-1)	Appearance	No Damage
			Contact Resistance	40mΩ Max.
6-3-5	Salt Spray	24 hours exposure to a salt spray from the 5 % solution at 35 ± 2°C. (Based upon JIS C0023/MIL-STD-202 Method 101D Cond. B)	Appearance	No Damage
			Contact Resistance	40mΩ Max.
6-3-6	Hydrogen Sulfide Gas	Concentration: 3 ± 1ppm. Temperature: 40 ± 2°C Relative Humidity: 80±5% 96 hours	Appearance	No Damage
			Contact Resistance	40mΩ Max.
6-3-7	NH_3 Gas	40 minutes exposure to NH3 gas evaporating from 28% Ammonia solution.	Appearance	No Damage
			Contact Resistance	40mΩ Max.
6-3-8	Solderability	Soldering Time: 3~5 sec. Solder Temperature: 240 ± 5°C	Solder Wetting	95% of immersed area must show no voids, pin holes
6-3-19	Resistance to Soldering Heat	<u>High temperature resistant materials</u> Soldering Time:3~5 sec. Solder Temperature: 250+5/-0 °C <u>Iron soldering</u> Soldering Time:3 sec. Solder Temperature: 340 ± 5°C	Appearance	No Damage