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

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A2010HC WVC WRC SERIES

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			APPROVED	CHECKED	WRITTEN
A3	REVISE	2020.09.08	BY	BY	BY
A2	REVISE	2007.06.26	*Jack Yin*	*Diankui Wan*	*Dengchun Yi*
A1	REVISE	2007.01.09			
A0	NEW RELEASE	2006.06.27			
REV.	DESCRIPTION	DATE	DOCUMENT NO: PS-2010-002		

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1.SCOPE:

This specification covers the requirements for product performance of 2.00 mm pitch wire to board connector series.

2.PART NAME & PART NUMBERS

Part name	Part number
Housing	A2010HC
Terminal	A2010-T A2010-T-H
Wafer	A2010WVC-S A2010WRC-S

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	UL94V-0
Terminal		Phosphor bronze	Gold over Nickel/Tin over Nickel
Wafer	Post	Brass	Gold over Nickel/Tin over Nickel
	Body	Nylon 9T	UL94V-0

4. RATINGS & APPLICABLE WIRES

Item	Standard		
Rated Voltage (max.)	250V AC DC		Insulation O.D. 1.40mm (max.)
Rated Current (max.) and Applicable Wires	AWG #22	3.0A AC DC	
	AWG #24	2.0A AC DC	
	AWG #26	1.5A AC DC	
	AWG #28	1.0A AC DC	
	AWG #30	0.5A AC DC	
Ambient Temperature Range	-40℃~105℃*		

*: Including terminal temperature rise

5. PERFORMANCE

5.1 ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
5-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV max. 10mA. (Based upon JIS C5402 5.4)	10mΩ max.
5-1-2	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)	1000MΩ min.
5-1-3	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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5.2 MECHANICAL PERFORMANCE

Test Description		Procedure		Requirement
5-2-1	Insertion & Withdrawal Force	Insert and withdraw connectors at the speed rate of 25 ± 3mm/minute.		Mating Force: 1.2kgf Max per circuit Unmating Force: 0.05 Kgf Min per circuit
5-2-2	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 #22	39.2N/4.0kgf min.
			AWG #24	29.4N/3.0kgf min.
			AWG #26	19.6N/2.0kgf min.
			AWG #28	9.8N/1.0kgf min.
			AWG #30	4.9N/0.5kgf min.
5-2-3	Terminal Insertion Force	Insert the crimped terminal into the housing at a constant speed of 25±3mm per minute.		9.8N/1.0kgf max.
5-2-4	Terminal/Housing Retention Force	Apply axial pull out force at the speed rate of 25 ± 3mm/minute on the terminal assembled in the housing.		9.8N/1.0kgf min.
5-2-5	Pin Retention Force	Apply axial push force at the speed rate of 25 ± 3mm/minute.		9.8N/1.0kgf min.
5-2-6	Durability	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.	Contact Resistance	20mΩ max.
5-2-7	Vibration	Acceleration: 44m/s2 Sweep time: 20-200-20Hz in 3minutes Duration : 3hours in each X, Y, Z axes Open circuit voltage: 20mV max. Short circuit current: 10mA max. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A))	Appearance	No Damage
			Contact Resistance	20mΩ max.
			Discontinuity	1μsec. max.
5-2-8	Physical Shock	981m/s2 (100G), 3 strokes in each X, Y, Z axes. Operation time: 6ms (Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond. A)	Appearance	No Damage
			Contact Resistance	20mΩ max.
			Discontinuity	1μsec. max.

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5.3 ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
5-3-1	Temperature Rise	Carrying rated current load. (Based upon UL 498)	Temperatur e Rise	30°C max.
5-3-2	Heat Resistance	105 ± 2°C, 96 hours (Based upon JIS C0021/MIL-STD-202 Method 108A Cond. A)	Appearance	No Damage
			Contact Resistance	20mΩ max.
5-3-3	Cold Resistance	-40 ± 3°C, 96 hours (Based upon JIS C0020)	Appearance	No Damage
			Contact Resistance	20mΩ max.
5-3-4	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	20mΩ max.
			Insulation Resistance	500MΩ min.
			Dielectric Withstandin	Must meet 4-1-3
5-3-5	Temperature Cycling	5 cycles of: a) - 55°C 30 minutes b) +85°C 30 minutes (Based upon JIS C0025)	Appearance	No Damage
			Contact Resistance	20mΩ max.
5-3-6	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	20mΩ max.
5-3-7	Solderability	Soldering Time: 3~5 sec. Solder Temperature: 240 ± 5°C	Solder Wetting	95% of immersed area must show no voids, pin holes
5-3-8	Resistance to Soldering Heat	<u>Normal materials</u> Soldering Time: 3~5 sec. Solder Temperature: 250 ± 5°C <u>High temperature resistant materials</u> Soldering Time:3~5 sec. Solder Temperature: 260 ± 5°C	Appearance	No Damage