PRODUCT SPECIFICATION

PRODUCT SERIES NAME: C3031/2 SERIES-SINGLE ROW WIRE TO WIRE TYPE PAGE: 1/4

1.SCOPE:

This specification covers the requirements for product performance of 3.00mm pitch wire to wire connector series.

2.CONSTRUCTION、DIMENSIONS 、 MATERIAL & PLATING:

See the attached drawings

3.RATINGS & APPLICABLE WIRES:

Item	Standard		
Rated Voltage (max.)	250V AC, DC		Insulation O.D. 1.85mm (max.)
Rated Current (max.) and Applicable Wires	AWG #20	5.0A AC, DC	
	AWG #22	5.0A AC, DC	
	AWG #24	4.0A AC, DC	
Ambient Temperature Range	-25°C ~ +85°C*		

*: Including terminal temperature rise

4.PERFORMANCE:

4-1.ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
4-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV max. 10mA. (Based upon JIS C5402 5.4)	10mΩ max.
4-1-2	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.
4-1-3	Dielectric Withstanding Voltage	Mate connectors, apply 1500V AC (rms) for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301)	No Breakdown
4-1-4	Contact Resistance on Crimped Portion	Crimp the applicable wire on to the terminal, measure by dry circuit, 20mV max., 10mA.	5mΩ max.

			APPROVED	CHECKED	WRITTEN
			BY	BY	BY
A2	REVISE	2007.06.30	Wu Yu Chun	Lui Can Zhu	Bo Bo Chu
A1	REVISE	2007.02.13			
A0	NEW RELEASE	2006.08.17			
REV.	DESCRIPTION	DATE	DOCUMENT NO: PS-3031-003		

4-2-1	Insertion & Withdrawal Force			
4-2-2	Crimping Pull Out Force			
4-2-3	Terminal Insertion Force			
4-2-4	Terminal/ Housing Retention Force			
4-2-5	Latch Yield Strength	Mate connectors and pull apart until latch break at the speed rate of 25 ± 3mm/minute.		7.0kgf min.
4-2-6	Panel Mount Retention Force	Insert the housing into panel cut out, push housing opposite the way it was assembled until the locking barbs break at the speed rate of 25 ± 3mm/minute.		8.0kgf min.
4-2-7	Durability		Contact Resistance	20mΩ max.
4-2-8	Vibration	Amplitude: 1.5mm P-P Sweep time: 10-55-10 Hz in 1 minute X (Based upon MIL-STD-202 Method 201A)	Appearance Contact Resistance	No Damage
4-2-9	Physical Shock		Contact Resistance	

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4-3.ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
4-3-1	Temperature Rise	Carrying rated current load. (Based upon UL 498)	Temperature Rise	30°C max.
4-3-2	Heat Resistance	85 ± 2°C, 96 hours (Based upon JIS C0021/MIL-STD-202 Method 108A Cond. A)	Appearance	No Damage
			Contact Resistance	20mΩ max.
4-3-3	Cold Resistance	-25 ± 3°C, 96 hours (Based upon JIS C0020)	Appearance	No Damage
			Contact Resistance	20mΩ max.
4-3-4	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	100MΩ min.
			Dielectric Withstanding Voltage	Must meet 4-1-3
4-3-5	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.
4-3-6	Salt Spray	24 ± 4 hours exposure to a salt spray from the 5 ± 1% solution at 35 ± 2°C. (Based upon JIS C0023/MIL-STD-202 Method 101D Cond. B)	Appearance	No Damage
			Contact Resistance	20mΩ max.
4-3-7	SO_2 Gas	24 hours exposure to 50 ± 5ppm. SO_2 gas at 40 ± 2°C.	Appearance	No Damage
			Contact Resistance	20mΩ max.
4-3-8	NH_3 Gas	40 minutes exposure to NH_3 gas evaporating from 28% Ammonia solution.	Appearance	No Damage
			Contact Resistance	20mΩ max.

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5.INSERTION/WITHDRAWAL FORCE:

No. of circuits	Insertion (kgf max.)	Withdrawal (kgf min.)
Single	0.8	0.35
2	1.6	0.50
3	2.4	0.75
4	3.2	1.00
5	4.0	1.25
6	4.8	1.50
7	5.6	1.75
8	6.4	2.00
9	7.2	2.25
10	8.0	2.50
11	8.8	2.75
12	9.6	3.00