

RELIABILITY TEST REPORT

TEST ITEM: 1.ELECTRICAL
2.MECHANICAL
3.ENVIRONMENTAL

TEST SAMPLE : CI11 Dual Row Series

TEST EQUIPMENT: 1.INSERTION & REMOVAL APPARATUS
2.ELECTRONIC MEASURING APPARATUS
3.ENVIRONMENTAL APPARATUS

DATE OF TESTING: 12/ 04/06”

TEST DEPART: QA TESTER: Scott.Lien

CONTAIN: ATTACHED

SPEC.NO:SPCI038B

REVIEWED : Jackal APPROVED : Rita VERIFIED : Scott.Lien .

1.ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Contact resistance	Dry circuit of DC 20 mV max.100 mA max.	Less than 20 mΩ	Sample	20 mΩ max.
				1	5.87 mΩ
				2	5.96 mΩ
				3	6.14 mΩ
				4	6.12 mΩ
				5	6.09 mΩ
1-2	Dielectric strength	When applied AC 50V 1 minute between adjacent terminal	No change	Sample	800 V 1 minute
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
1-3	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 100 MΩ	Sample	100 MΩ min.
				1	55×10 ⁵ MΩ
				2	60×10 ⁵ MΩ
				3	50×10 ⁵ MΩ
				4	65×10 ⁵ MΩ
				5	55×10 ⁵ MΩ

2. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Terminal crimp tensile strength	When crimped AWG# 28 size wire	More than 1.3 Kgf	Sample	> 1.3 Kgf
				1	2.98 Kgf
				2	3.22 Kgf
				3	3.19 Kgf
				4	3.09 Kgf
				5	3.11 Kgf
		When crimped AWG# 30 size wire	More than 0.8 Kgf	Sample	> 0.8 Kgf
				1	1.83 Kgf
				2	1.96 Kgf
				3	1.74 Kgf
				4	1.85 Kgf
		When crimped AWG# 32 size wire	More than 0.6 Kgf	Sample	> 0.6 Kgf
				1	1.14 Kgf
				2	1.55 Kgf
				3	1.63 Kgf
4	1.59 Kgf				
5	1.47 Kgf				



	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-2	Terminal retaining force in insulator	Insertion speed 25± 3 mm per minute into housing	More than 0.70 Kgf	Sample	>0.7 Kgf
				1	1.16 Kgf
				2	1.14 Kgf
				3	1.02 Kgf
				4	1.18 Kgf
2-6	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	11.66 mΩ
				2	11.71 mΩ
				3	11.34 mΩ
				4	11.42 mΩ
2-7	Pin retention force	Push pin from insulator base at speed 25±3 mm per minute	More than 0.5 Kgf	Sample	> 0.5 Kgf
				1	1.20 Kgf
				2	1.19 Kgf
				3	1.17 Kgf
				4	1.15 Kgf
				5	1.18 Kgf

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Temperature rise	Then carried the rated current	30 °C max.	Sample	30 °C max.
3-2	Vibration	1.5 mm 10-55-10 HZ/minute each 2 hours for X, Y and Z directions	Appearance: No damage	Sample	No damage
			Discontinuity: 1 micro second max.	Sample	1 micro second max.
3-3	Solderability	Soldering time:3 ± 0.5 sec. Soldering pot:245 ± 5°C	Minimum: 90% of immersed area	Sample	90% of Immersed area
				1	Pass
				2	Pass
				3	Pass
				4	Pass
3-4	Resistance to soldering heat	Lead-Free Process for SMT Type: Refer Reflow temperature profile(5.2)	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
3-5	Heat aging	85±2°C , 96 hours	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass



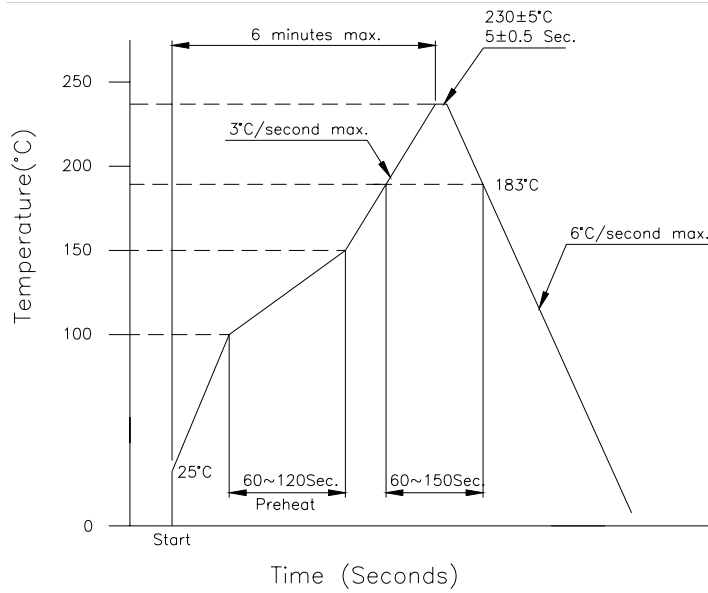
ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT			
3-6 Humidity	40±2°C, 90-95%RH, 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage	Sample	No damage		
			1	Pass		
			2	Pass		
			3	Pass		
			4	Pass		
		5	Pass			
		Contact resistance: Less than twice of initial	Sample	< twice of initial		
			1	6.37 mΩ		
			2	6.48 mΩ		
			3	6.57 mΩ		
			4	6.62 mΩ		
		Dielectric strength: To pass Para 1-2	Sample	Pass para 1-2		
			1	Pass		
			2	Pass		
			3	Pass		
4	Pass					
3-7 Temperature cycling	One cycle consists of: 1.-55 ⁺⁰ ₋₃ °C, 30 min 2.Room temp. 10-15 min 3.85 ⁺³ ₀ °C, 30 min 4.Room temp. 10-15 min	Appearance: No damage	Sample	No damage		
			1	Pass		
			2	Pass		
			3	Pass		
			4	Pass		
		5	Pass			
		Contact resistance: Less than twice of initial	Sample	< twice of initial		
			1	6.33 mΩ		
			2	6.42 mΩ		
			3	6.66 mΩ		
			4	6.73 mΩ		
		3-8 Salt spray	Temperature:35±3°C Solution:5±1% Spray time:48±4 hours Measurement must be taken after water rinse	Appearance: No damage	Sample	No damage
					1	Pass
					2	Pass
					3	Pass
4	Pass					
5	Pass					
Contact resistance: Less than twice of initial	Sample			< twice of initial		
	1			6.94 mΩ		
	2			7.03 mΩ		
	3			6.88 mΩ		
	4			7.05 mΩ		
5	6.97 mΩ					

4. AMBIENT TEMPERATURE RANGE:-25 to +85°C



5. Recommended IR Reflow Temperature Profile:

5.1 Using Typical Solder Paste



5.2 Using Lead-Free Solder Paste

