



RELIABILITY TEST REPORT

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

SERIES NO.: CH31 Series

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

DATE OF TESTING: 10/ 16 / 03

TEST DEPART: QA

TESTER:

CONTAIN: ATTACHED

REVIEWED : APPROVED : VERIFIED :

1. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
				Sample	
1-1	Contact resistance	Dry circuit of DC 20mV max.100mA max.	Less than 20 mΩ	Sample	20 mΩ max.
				1	6.19 mΩ
				2	5.89 mΩ
				3	5.23 mΩ
				4	5.08 mΩ
				5	5.67 mΩ
1-2	Dielectric strength	When applied AC 1000V 1 minute between adjacent terminal	No change	Sample	1000 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 1000 MΩ	Sample	1000 MΩ min.
				1	45*10 ⁵ MΩ
				2	40*10 ⁵ MΩ
				3	50*10 ⁵ MΩ
				4	50*10 ⁵ MΩ
				5	40*10 ⁵ MΩ

2. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
				Sample	
2-1	Pin retention force	Push pin from insulator base at speed 25±3mm per minute	More than 0.8 Kgf	Sample	0.8Kgf min.
				1	1.31 Kgf
				2	1.21 Kgf
				3	1.19 Kgf
				4	1.42 Kgf
				5	1.22 Kgf

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
				Sample	
3-1	Solderability	Soldering time: 5 ±0.5 sec. Soldering pot:230 ±5	Minimum: 90% of immersed area	Sample	90% of Immersed area
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-2	Resistance to soldering heat	Insulator: Glass filled polyester UL 94V-0 Soldering time: 5 ±0.5 sec. Soldering pot:260 ±5	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass

		Insulator: Nylon 6T Max. Infrared Reflow Soldering temperature & time : 230 for 60 sec 260 for 10 sec	Appearance: No damage	Sample 1 2 3 4 5	No damage Pass Pass Pass Pass
3-3	Heat aging	105 ± , 96 hours	Appearance: No damage	Sample 1 2 3 4 5	No damage Pass Pass Pass Pass
3-4	Humidity	40 ± , 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	6.22 mΩ
				2	5.92 mΩ
				3	5.26 mΩ
				4	5.11 mΩ
			Dielectric strength: To pass Para 1-2	Sample	Pass para 1-2
				1	Pass
2	Pass				
3	Pass				
4	Pass				
5	Pass				
3-5	Temperature cycling	One cycle consists of: 1. -55 ⁻⁰ ₋₃ , 30 min 2. Room temp. 10-15 min 3. 85 ⁺³ ₋₀ , 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	6.21 mΩ
				2	5.90 mΩ
				3	5.24 mΩ
				4	5.09 mΩ
			5	5.68 mΩ	

3-6	Salt spray	Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ 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	6.22 m Ω
				2	5.93 m Ω
				3	5.24 m Ω
4	5.11 m Ω				
5	5.68 m Ω				