

RELIABILITY TEST REPORT

TESTITEM: 1.ELECTRICAL
2.MECHANICAL
3.ENVIRONMENTAL

SERIES NO.: CH01 Series

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

DATE OF TESTING: 11 / 17 / 03

TEST DEPART: QA TESTER:

CONTAIN: ATTACHED

REVIEWED : _____ APPROVED : _____ VERIFIED : _____.

I. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Contact resistance	Dry circuit of DC 20mV max.100mA max.	Less than 20 mΩ	Sample	20 mΩ max.
				1	6.86 mΩ
				2	6.72 mΩ
				3	7.01 mΩ
				4	6.89 mΩ
				5	6.96 mΩ
1-2	Dielectric strength	When applied AC 600V 1 minute between adjacent terminal	No change	Sample	600 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	30*10 ⁴ MΩ
				2	40*10 ⁴ MΩ
				3	30*10 ⁴ MΩ
				4	30*10 ⁴ MΩ
				5	30*10 ⁴ MΩ

2. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Pin retention force	Push pin from insulator base at speed 25±3mm per minute	More than 200 gram	Sample	200 gram min.
				1	499 gram
				2	497 gram
				3	462 gram
				4	512 gram
				5	508 gram

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
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	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-3	Heat aging	105 ±2 , 96 hours	Appearance: No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-4	Humidity	40 ±2 , 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	6.88 mΩ
				2	6.70 mΩ
				3	7.03 mΩ
				4	6.93 mΩ
				5	6.92 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	6.87 mΩ
				2	6.74 mΩ
				3	7.02 mΩ
				4	6.91 mΩ
				5	6.98 mΩ

3-6	Salt spray	Temperature:35±3° C Solution:5±1% Spray time:48±4hours 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	6.88 mΩ
				2	6.73 mΩ
				3	7.06 mΩ
4	6.95 mΩ				
5	6.97 mΩ				

4. AMBIENT TEMPERATURE RANGE

-40 to + 105°C ; + 215°C intermittent (Vapor Phase Solder Reflow) for SMT type.