瀚荃股份有限公司
CviLux Corporation

RELIABILITY TEST REPORT

TESTITEM: 1.ELECTRICAL
2.MECHANICAL
3.ENVIRONMENTAL

SERIES NO.: CI44 Series

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

DATE OF TESTING: 10 / 7 / 03

TEST DEPART: QA TESTER: Yi

CONTAINT: ATTACHED

REVIEWED : Smith APPROVED : Jackal VERIFIED : Yi .

1.ELECTRICAL PERFORMANCE：

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Contact resistance	Dry circuit of DC 20mV max. ,10mA max.	Less than 20 mΩ	Sample	20 mΩ max.
				1	7.64 mΩ
				2	7.62 mΩ
				3	7.59 mΩ
				4	7.61 mΩ
				5	7.59 mΩ
1-2	Dielectric strength	When applied AC 250V 1 minute between adjacent terminal	No change	Sample	250 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	6×10^5 MΩ
				2	5×10^5 MΩ
				3	8×10^5 MΩ
				4	7×10^5 MΩ
				5	6×10^5 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	2.10 Kgf
				2	2.05 Kgf
				3	2.12 Kgf
				4	1.98 Kgf
				5	2.04 Kgf
		When crimped AWG# 30 size wire	More than 0.8 Kgf	Sample	> 0.8 Kgf
				1	1.64 Kgf
				2	1.57 Kgf
				3	1.52 Kgf
				4	1.60 Kgf
				5	1.59 Kgf

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
		When crimped AWG# 32 size wire	More than 0.6 Kgf	Sample	> 0.6 Kgf
				1	1.24 Kgf
				2	1.26 Kgf
				3	1.10 Kgf
				4	1.32 Kgf
				5	1.09 Kgf
2-2	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 400 gram	Sample	< 400 gram
				1	250 gram
				2	253 gram
				3	284 gram
				4	214 gram
				5	218 gram
2-3	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 0.7 Kgf	Sample	> 0.7 Kgf
				1	1.98 Kgf
				2	2.24 Kgf
				3	2.12 Kgf
				4	2.08 Kgf
				5	2.19 Kgf
2-4	Single contact insertion force	Measure force to insertion using pin of header at speed 25±3 mm per minute	600 gram max.	Sample	600 gram max.
				1	182 gram
				2	177 gram
				3	172 gram
				4	186 gram
				5	184 gram
2-5	Single contact withdrawal force	Measure force to withdrawal using pin of header at speed 25±3 mm per minute	70 gram min.	Sample	70 gram min.
				1	117 gram
				2	109 gram
				3	121 gram
				4	116 gram
				5	113 gram
2-6	Durability	Connector shall be subjected to 100 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial	Sample	< twice of initial
				1	7.68 mΩ
				2	7.68 mΩ
				3	7.67 mΩ
				4	7.66 mΩ
				5	7.69 mΩ

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-7	Pin retention force	Push pin from insulator base at speed 25±3mm per minute	Straight DIP Type: More than 0.4 Kgf	Sample	> 0.4 Kgf
				1	0.86 Kgf
				2	0.91 Kgf
				3	0.87 Kgf
				4	0.81 Kgf
				5	0.83 Kgf
			Other Type: More than 1.0 Kgf	Sample	> 1.0 Kgf
				1	1.28 Kgf
				2	1.31 Kgf
				3	1.38 Kgf
				4	1.35 Kgf
				5	1.32 Kgf

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Temperature rise	Then carried the rated current	30 ℃ max.	Sample	30 ℃ 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: 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
3-4	Resistance to soldering heat	Soldering time: 5±0.5 sec. Soldering pot: 260±5℃	No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-5	Heat aging	85 ± 2°C , 96 hours	No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-6	Humidity	60 ± 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	7.60 mΩ
				2	7.63 mΩ
				3	7.62 mΩ
				4	7.64 mΩ
				5	7.63 mΩ
			Dielectric strength: To pass Para 1-2	Sample	Pass para 1-2
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass
3-7	Temperature cycling	One cycle consists of: 1. -55^{+0}_{-3} °C, 30 min 2. Room temp. 10-15 min 3. 105^{+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	7.63 mΩ
				2	7.64 mΩ
				3	7.65 mΩ
				4	7.63 mΩ
				5	7.66 mΩ

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-8	Salt spray	Temperature: 35 ± 2°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	7.68 mΩ
				2	7.65 mΩ
				3	7.67 mΩ
				4	7.68 mΩ
				5	7.67 mΩ