



瀚荃股份有限公司
CviLux Corporation

RELIABILITY TEST REPORT

TESTITEM : 1.ELECTRICAL
2.MECHANICAL
3.ENV IRONMENTAL

SERIES NO. : CBC3 & CHC3

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

DATE OF TESTING :

TEST DEPART : 4/9-03' TESTER : David

CONTAIN : ATTACHED

REVIEWED : AK APPROVED : David VERIFIED : David



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	13.5
				2	13.2
				3	14.0
				4	14.6
				5	13.5
				6	13.2
1-2	Dielectric strength	When applied AC 500V 1 minute between adjacent terminal	No Change	Sample	600 V 1 minute
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
				6	OK
1-3	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 1000 MΩ	Sample	1000 MΩ min.
				1	10x10 ⁶
				2	10x10 ⁶
				3	10x10 ⁶
				4	10x10 ⁶
				5	10x10 ⁶
				6	10x10 ⁶

2. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
				Sample	Male	Female
2-1	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 500 gram	Sample	Male	Female
				1	910	1090
				2	720	1150
				3	920	1450
				4	760	1350
				5	830	1120
				6	860	1090
2-2	Single contact withdrawal force	Measure force to withdrawal using mating square pin at speed 25±3 mm per minute	More than 30 gram	Sample	100 gram max.	
				1	130	
				2	140	
				3	130	
				4	130	
				5	170	
				6	130	
2-3	Mating force	Speed 25±3 mm per minute	350gram x (no. of Contacts) max.	Sample	12 Pin 4200gram max.	
				1	1340	
				2	1360	
				3	1270	
				4	1170	
				5	1030	
				6	1240	



	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
2-3	Mating force	Speed 25±3 mm per minute	350gram x (no. of Contacts) max.	Sample	30 Pin 10500gram max.	
				1	2840	
				2	2820	
				3	3330	
				4	4750	
				5	3400	
				6	2890	
2-4	Unmating force	Speed 25±3 mm per minute	50gram x (no. of Contacts) min.	Sample	12 Pin 600gram min.	
				1	1790	
				2	1840	
				3	1940	
				4	1870	
				5	1800	
				6	1890	
				Sample	30 Pin 1500gram min.	
				1	2210	
				2	2240	
				3	2190	
				4	2320	
				5	2290	
6	2310					
2-5	Durability	Connector shall be subjected to 100 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial	Sample	1st	100st
				1	13.1	14.2
				2	13.4	14.8
				3	13.7	15.1
				4	12.6	13.5
				5	12.8	13.9
				6	12.9	14.2

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Vibration	1.5mm 10-55-10 HZ/minute each 2 hours for X,Y and Z directions	Appearance: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
				6	OK



ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
			Sample	
3-1	Vibration 1.5mm 10-55-10 HZ/minute each 2 hours for X,Y and Z directions	Discontinuity: 1 micro second max	Sample	
			1	OK
			2	OK
			3	OK
			4	OK
			5	OK
			6	OK
3-2	Solderability Soldering time: $5\pm 0.5^{\circ}\text{C}$ second Soldering Pot: $230\pm 5^{\circ}\text{C}$	90% of immersed area	Sample	90% \uparrow
			1	ok
			2	ok
			3	ok
			4	ok
			5	ok
			6	ok
3-3	Resistance to soldering heat Soldering time: $5\pm 0.5^{\circ}\text{C}$ second Soldering Pot: $260\pm 5^{\circ}\text{C}$	No damage	Sample	No damage
			1	OK
			2	OK
			3	OK
			4	OK
			5	OK
			6	OK
3-4	Heat aging $85\pm 2^{\circ}\text{C}$, 96 hours	No damage	Sample	No damage
			1	OK
			2	OK
			3	OK
			4	OK
			5	OK
			6	OK
3-5	Humidity $40\pm 2^{\circ}\text{C}$, 90-95% RH, 96 hours measurement must be taken within 30 min. after tested	Contact resistance: Less than twice of initial	Sample	40 m Ω max.
			1	17.2
			2	17.7
			3	17.8
			4	17.2
			5	17.7
			6	17.2
		Dielectric strength: To pass para 1-2	Sample	600V 1 minute
			1	OK
			2	OK
			3	OK
			4	OK
			5	OK
			6	OK



	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-4	Temperature cycling	One cycle consists of : (1) -55 °C ₃ ⁺⁰ , 30 min. (2) Room temp. 10-15 min. (3) 105 °C ₀ ⁺³ , 30 min. (4) Room temp. 10-15 min.	Appearance : No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
				6	OK
			Contact resistance: Less than twice of initial	Sample	40 mΩ max.
				1	15.2
				2	16.7
				3	16.3
				4	16.5
				5	16.7
				6	16.7
3-5	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	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
				6	OK
			Contact resistance: Less than twice of initial	Sample	40 mΩ max.
				1	18.6
				2	18.9
				3	18.2
				4	18.4
				5	18.21
				6	18.4