瀚荃股份有限公司
CviLux Corporation

RELIABILITY TEST REPORT

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

SERIES NO. : 0.5mm Board to Board CBRE series

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

DATE OF TESTING : 12/08/10

TEST DEPART : R&D TESTER : Clark.Chen

CONTAINT : ATTACHED

CVILUX CORP
2012.01.11
ISSUED

REVIEWED : David APPROVED : David VERIFIED : Clark .

1.ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
1-1	Low-signal Level Contact resistance	Mate connectors, measure by dry circuit, 20 mV Max., 10 mA Max. (EIA-364-23)	40 mΩ Max. Change allowed	Sample	單位: mΩ	
				1	19.7	
				2	19.1	
				3	18.9	
				4	19.2	
				5	19.5	
1-2	Dielectric Withstanding Voltage	Test between adjacent contacts of Unmated connectors. (EIA-364-20)	250 V AC Min. at sea level for 1 minute, No discharge, flashover Or breakdown. Current leakage: 1mA Max.	Sample	250 V 1 minute	
					Male	Female
				1	OK	OK
				2	OK	OK
				3	OK	OK
				4	OK	OK
				5	OK	OK
1-3	Insulation resistance	Unmate connector, apply DV 500 V between adjacent terminals. (EIA-364-21)	1000 MΩ Min.	Sample	單位: MΩ	
					Male	Female
				1	5.0x10^{4}	5.0x10^{4}
				2	5.5x10^{4}	5.0x10^{4}
				3	5.0x10^{4}	5.0x10^{4}
				4	5.0x10^{4}	5.5x10^{4}
				5	5.5x10^{4}	5.0x10^{4}

2. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
2-1	Contact retaining force in insulator	Apply axial pull out force at the speed rate Of 25± 3 mm/min. On the terminal assembled in the housing. (EIA-364-29)	More than 0.4 Kgf	Sample	單位:Kgf	
					Male	Female
				1	0.512	0.723
				2	0.507	0.732
				3	0.501	0.728
				4	0.515	0.719
				5	0.508	0.729
2-2	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal (EIA-364-09)	Contact resistance: Less than twice of initial	Sample	單位:mΩ	
				1	22.5	
				2	23.2	
				3	22.8	
				4	23.1	
				5	23.2	

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
2-3	Mating and Unmating Force (Reference)	Speed 25± 3 mm per minute Measure the force required to Mate/unmate connector. (EIA-364-13)	Mating force : 100 gf Max./CKT. Unmating force: 12 gf Min./CKT.	30 PIN	Cvilux (P) Cvilux (S) 單位: gf	
					Mating	Unmating
				1	2511	3296
				2	2451	3271
				3	2415	3233
				4	2415	3243
				5	2421	3261
				30 PIN	Aces (P) Aces (S) 單位: gf	
					Mating	Unmating
				1	2942	1807
				2	2711	1862
				3	2698	1898
				4	2701	1916
				5	2726	1956
				30 PIN	Cvilux (P) Aces (S) 單位: gf	
					Mating	Unmating
				1	2661	1274
				2	2601	1257
				3	2597	1257
				4	2582	1252
				5	2577	1272
				30 PIN	Aces (P) Cvilux (S) 單位: gf	
					Mating	Unmating
				1	1882	2254
				2	1953	2318
				3	1918	2422
				4	1942	2283
				5	1929	2335

3.ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
3-1	Solder ability	Subject the test area of contacts into the flux for 5-10 sec. And then into solder bath, Temperature at 245 ± 5°C, for 4 – 5 second (EIA-364-52)	Minimum: 95% of solder coverage.	Sample	95%↑	
					Male	Female
				1	PASS	PASS
				2	PASS	PASS
				3	PASS	PASS
				4	PASS	PASS
				5	PASS	PASS
3-2	Resistance to Reflow soldering heat **(Lead Free)**	Soldering time: 10 second Max. Soldering pot: 255~260 °C, 2 times	No damage	Sample	No damage	
					Male	Female
				1	PASS	PASS
				2	PASS	PASS
				3	PASS	PASS
				4	PASS	PASS
				5	PASS	PASS
3-3	Temperature life	Subject mated connectors to temperature life at 85°C for 96 hours. Measure Signal. (EIA-364-17, Test condition A)	Contact resistance: Less than twice of initial	Sample	單位:mΩ	
				1	24.5	
				2	24.8	
				3	25.7	
				4	24.6	
				5	25.3	
			Dielectric strength: To pass para 1-2	Sample		
				1	PASS	
				2	PASS	
				3	PASS	
				4	PASS	
				5	PASS	
			Appearance: No damage	Sample		
				1	PASS	
				2	PASS	
				3	PASS	
				4	PASS	
				5	PASS	
3-4	Humidity- Temperature cycling	Mated Connector 25~65°C, 90-95% RH, 10 Cycles Reefer to Method IV. (EIA-364-31,Test condition A)	Contact resistance: Less than twice of initial	Sample	單位:mΩ	
				1	24.8	
				2	26.5	
				3	26.1	
				4	25.7	
				5	25.3	
			Appearance: No damage	Sample		
				1	PASS	
				2	PASS	
				3	PASS	
				4	PASS	
				5	PASS	

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-5	Salt Spray	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C for 48 hours. (EIA-364-26, Test condition B).	Contact resistance: Less than twice of initial	Sample	單位:mΩ
				1	28.2
				2	28.9
				3	29.3
				4	29.3
				5	28.5
			Appearance: No damage	Sample	
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS