瀚荃股份有限公司
CviLux Corporation

RELIABILITY TEST REPORT

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

SERIES NO. : CVS3 SERIES

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

DATE OF TESTING : 7/22/2011”

TEST DEPART : R&D TESTER : Sandy

CONTENT : ATTACHED

CVILUX CORP
2011.07.28
ISSUED

REVIEWED : Eisley APPROVED : Sun VERIFIED : Sandy .

瀚荃股份有限公司
CviLux Corporation

1. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Contact Resistance	Measured at 20 mV maximum open circuit at 100mA .Mated test contacts must be in a connector housing. Test as per EIA364-23	Less than 80 mΩ	Sample	80 mΩ. max.
				1	37.5 mΩ
				2	37.1 mΩ
				3	37.4 mΩ
				4	37.2 mΩ
				5	37.8 mΩ
1-2	Dielectric strength	Test between adjacent contacts with a voltage of 150 VAC for 1 minute at Sea level. Test as per EIA364-20 Method B	No Damage	Sample	150 V 1 minute
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
1-3	Insulation resistance	After 250 VDC for 1 minute , measure the insulation resistance between the adjacent contacts. Test as per EIA364-21	More than 100 MΩ	Sample	100 MΩ min
				1	＞100 MΩ
				2	＞100 MΩ
				3	＞100 MΩ
				4	＞100 MΩ
				5	＞100 MΩ

2. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Mating	Measure the force necessary to insert the connector between male and female at a maximum rate of 12.5 mm per minute. Test as per EIA364-13	5.0 Kgf max	Sample	5.0 Kgf max.
				1	4.553 Kgf
				2	3.598 Kgf
				3	4.045 Kgf
				4	4.548 Kgf
				5	4.387 Kgf
2-2	Unmating	Measure the force necessary to insert the connector between male and female at amaximum rate of 12.5 mm per minute. Test as per EIA364-13	0.8 Kgf min	Sample	0.8 Kgf min.
				1	1.487 Kgf
				2	1.281 Kgf
				3	1.301 Kgf
				4	1.397 Kgf
				5	1.447 Kgf

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-3	Durability	The connector shall be subject to 20 cycles for insertion and extraction .Test done at a maximum rate of 200 cycles per hour. Test as per EIA364-09	Appearance: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 100 mΩ	Sample	100 mΩ max.
				1	37.8 mΩ
				2	37.4 mΩ
				3	37.7 mΩ
				4	37.3 mΩ
				5	38.1 mΩ
			Mating: 5.0 Kgf max	Sample	5.0 Kgf max.
				1	3.829
				2	3.337
				3	3.698
				4	3.774
				5	3.693
			Unmating: 0.8 Kgf min	Sample	0.8 Kgf min.
				1	1.296
				2	1.241
				3	1.291
				4	1.357
				5	1.322

3. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Humidity	Subject unmated connectors to 96 hours at 40℃ with 90% to 95% RH. Test as per EIA 364 – 31 Method Ⅱ Test Condition A.	Appearance: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 100 mΩ	Sample	100 mΩ max.
				1	39.2 mΩ
				2	39.6 mΩ
				3	40.1 mΩ
				4	39.8 mΩ
				5	40.2 mΩ
			Dielectric strength: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK

			Insulation resistance: More than 100 MΩ	Sample	100 MΩ min.
				1	＞100 MΩ
				2	＞100 MΩ
				3	＞100 MΩ
				4	＞100 MΩ
				5	＞100 MΩ
3-2	Temperature cycling	Subject unmated connectors shall be tested in accordance with EIA364–32 Test Condition Ⅰ (1)-55℃,30 minute (2)+25℃,5 minute (3)+85℃,30 minute (4)+25℃,5 minute consecutive 5 cycles..	Appearance : No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 100 mΩ	Sample	100 mΩ max.
				1	38.2 mΩ
				2	39.3 mΩ
				3	39.1 mΩ
				4	39.8 mΩ
				5	38.9 mΩ
			Dielectric strength: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Insulation resistance: More than 100 MΩ	Sample	100 MΩ min.
				1	＞100 MΩ
				2	＞100 MΩ
				3	＞100 MΩ
				4	＞100 MΩ
				5	＞100 MΩ
3-3	Heat aging	Subject mated connectors to temperature life at 85℃±2℃ for 250 hours. Test as per EIA 364 – 17 Test Condition 3 Method A.	Appearance : No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 100 mΩ	Sample	100 mΩ max.
				1	38.6 mΩ
				2	39.1 mΩ
				3	39.7 mΩ
				4	39.5 mΩ
				5	37.4 mΩ

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-4	Salt Spray	Unmated connectors shall be tested in accordance with EIA364-26 Condition B. Temperature： 35℃ +1℃/-2℃ Density：5% in weight Duration：48 hours	Appearance of contact area shall be no rusted or erodent.	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 100 mΩ	Sample	100 mΩ max.
				1	39.6 mΩ
				2	40.1 mΩ
				3	40.5 mΩ
				4	40.4 mΩ
				5	39.8 mΩ
3-5	Solder ability	Steam age 1 hour at 90℃～96℃ Solder time to be 5±1 seconds at 245℃, using unactivated flux. Test as per EIA364-52	Minimum: 95% of immersed area	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
3-6	Vibration	Subject mated connectors to ： Power spectral density： 0.02 g^2/Hz Overall RMS .g：5.35 Duration：15 minute in each X.Y.Z. axis mutually perpendicular planes. Test as per EIA 364 – 28 Condition V Test letter A.	Appearance : No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Discontinuity: 1 micro second max.	Sample	1 micro sec. max.
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
3-7	Physical Shock	Subject mated connectors to 30 g's half-sine shock pulses of 11ms duration. Three shocks in each direction applied along three mutually perpendicular planes for a total of 18 shocks. Test as per EIA364-27 condition H	Appearance : No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Discontinuity: 1 micro second max.	Sample	1 micro sec. max.
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-8	Soldering Heat Withstanding	Reflow soldering (Infrared): Refer soldering method The conditions specified on paragraph 10 Shell be repeated twice.	Inspect dimension during the test, no physical damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK