



瀚荃股份有限公司
CviLux Corporation

RELIABILITY TEST REPORT

TESTITEM : 1.ELECTRICAL
2.MECHANICAL
3.ENVIRONMENTAL

SERIES NO. : CF27***H0**-NH (for 4P~20P)

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

DATE OF TESTING : 4/23/10'

TEST DEPART : R & D

TESTER : Hank.Wang

CONTAIN : ATTACHED



REVIEWED : David APPROVED : Clark VERIFIED : Hank .



1. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Dielectric strength	When applied AC 500V 1 minute between adjacent terminal	No Change	Sample	500 V 1 minute
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
1-2	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 50 MΩ	Sample	1000 MΩ min.
				1	50x10 ⁵
				2	50x10 ⁵
				3	50x10 ⁵
				4	50x10 ⁵
				5	50x10 ⁵
1-3	Contact Resistance	Dry circuit of DC 20mV max.,10mA max.	20 mΩ Max. Initial	Sample	20 mΩ Max.
				1	10.16
				2	10.37
				3	10.61
				4	10.59
				5	10.48

2. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 0.05 Kg _f	Sample	0.05 Kg _f min.
				1	0.62
				2	0.60
				3	0.61
				4	0.64
				5	0.63

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-2	FFC / FPC insert force (Reference data)	Measure force to insert using 0.30 mm thickness FPC / FFC at speed 25± 3 mm per minute per minute	(0.1x no. of Contacts) Kgf max. For 4 Pin less than 0.4 Kgf	Sample	0.4 Kgf max.
				1	0.396
				2	0.324
				3	0.401
				4	0.383
				5	0.382
			(0.1 x no. of Contacts) Kgf max. For 20 Pin less than 2.0 Kgf	Sample	2.0 Kgf max.
				1	1.498
				2	1.409
				3	1.414
				4	1.387
				5	1.451
2-3	FFC / FPC withdrawal force (Reference data)	Measure force to withdrawal using 0.30mm Thickness FPC/FFC at speed 25±3 mm per minute	(0.035 x no. of Contacts) Kgf min. For 4 Pin more than 0.14 Kgf	Sample	0.14 Kgf min.
				1	0.292
				2	0.225
				3	0.243
				4	0.281
				5	0.258
			(0.035 x no. of Contacts) Kgf min. For 20 Pin more than 0.70 Kgf	Sample	0.70 Kgf min.
				1	1.892
				2	1.991
				3	1.984
				4	1.825
				5	1.812
2-4	Durability	Connector shall be subjected to 20 cycles of insertion and withdrawal	Contact resistance: Less than 40 mΩ	Sample	40 MΩ max.
				1	11.41 mΩ
				2	11.58 mΩ
				3	11.68 mΩ
				4	11.34 mΩ
				5	11.27 mΩ

3.ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Heat aging	85± 2°C, 96 hours	Appearance: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 40 mΩ	Sample	40 mΩ max.
				1	12.21 mΩ
				2	12.38 mΩ
				3	12.87 mΩ
				4	12.25 mΩ
				5	12.56 mΩ



	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
				Sample	
3-2	Cold Resistance	$-40 \pm 3^{\circ}\text{C}$, 96 hours	Appearance: No damage	1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than $40\text{ m}\Omega$	Sample	$40\text{ m}\Omega$ max.
				1	$12.46\text{ m}\Omega$
				2	$12.89\text{ m}\Omega$
				3	$12.47\text{ m}\Omega$
				4	$12.68\text{ m}\Omega$
				5	$12.69\text{ m}\Omega$
3-3	Humidity	$60 \pm 2^{\circ}\text{C}$, 90-95% RH , 96 hours measurement must be taken within 60 min. after tested	Appearance: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than $40\text{ m}\Omega$	Sample	$40\text{ m}\Omega$ max.
				1	$13.21\text{ m}\Omega$
				2	$13.45\text{ m}\Omega$
				3	$13.96\text{ m}\Omega$
				4	$12.67\text{ m}\Omega$
				5	$12.87\text{ m}\Omega$
			Dielectric strength: To pass para 1-1	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Insulation resistance: More than $20\text{ M}\Omega$	Sample	$20\text{ M}\Omega$ min.
				1	$10 \times 10^5\text{ M}\Omega$
				2	$10 \times 10^5\text{ M}\Omega$
				3	$10 \times 10^5\text{ M}\Omega$
				4	$10 \times 10^5\text{ M}\Omega$
				5	$10 \times 10^5\text{ M}\Omega$



	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
				Sample	
3-4	Temperature cycling	One cycle consists of : (1) -55^{+0}_{-3} °C , 30 min. (2) Room temp. 10-15 min. (3) 85^{+3}_{-0} °C , 30 min. (4) Room temp. 10-15 min. Connector shall be mated with applicable FPC/FFC, and subjected to the conditions for 5 cycles.	Appearance : No damage		
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 40 mΩ	Sample	40 mΩ max.
				1	12.31 mΩ
				2	12.48 mΩ
				3	13.04 mΩ
				4	12.85 mΩ
				5	12.67 mΩ
3-5	Salt spray	Temperature: $35 \pm 2^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: 48 hours Measurement must be taken after water rinse	Appearance: No damage	Sample	
				1	OK
				2	OK
				3	OK
				4	OK
				5	OK
			Contact resistance: Less than 40 mΩ	Sample	40 mΩ max.
				1	13.42 mΩ
				2	13.69 mΩ
				3	13.48 mΩ
				4	13.82 mΩ
				5	13.76 mΩ