

RELIABILITY TEST REPORT

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

SERIES NO. : CF34 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 : Sun

CONTENT : ATTACHED



REVIEWED : Eisley APPROVED : Eisley VERIFIED : Sun



1. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Dielectric strength	Test between adjacent contacts with a voltage of 500 VAC for 1 minute at Sea level. Test as per EIA364-20 Method B	No Damage	Sample	500 V 1 minute
				1	OK
				2	OK
				3	OK
				4	OK
1-2	Insulation resistance	After 500 VDC for 1 minute , measure the insulation resistance between the adjacent contacts. Test as per EIA364-21	More than 500 MΩ	Sample	500 MΩ min
				1	> 500 MΩ
				2	> 500 MΩ
				3	> 500 MΩ
				4	> 500 MΩ
1-3	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 20 mΩ	Sample	20 mΩ. max.
				1	11.3 mΩ
				2	10.9 mΩ
				3	11.1 mΩ
				4	10.3 mΩ
5	10.7 mΩ				

2. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	FFC/FPC Retention Force	Apply axial load to FFC/FPC by operating at the speed rate of 25 mm per minute.	0.03 Kgf /Pin min.	Sample	0.03Kgf/Pin min.
				1	0.063 Kgf
				2	0.070 Kgf
				3	0.070 Kgf
				4	0.066 Kgf
5	0.066 Kgf				

ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
			Sample	
2-2 Durability	Mate applicable FFC/FPC and insert and withdraw actuator at the speed rate of 25 mm per minute. Times :Up to 30 cycles.	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	10.1 mΩ
			2	10.6 mΩ
			3	9.7 mΩ
			4	10.3 mΩ
		5	10.8 mΩ	
		FFC/FPC Retention Force	Sample	0.03Kgf/Pin min.
			1	0.061 Kgf
			2	0.058 Kgf
3	0.059 Kgf			
4	0.063 Kgf			
5	0.059 Kgf			

### 3.ENVIRONMENTAL PERFORMANCE:

ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
			Sample	
3-1 Temperature rise	The object of this test procedure is to detail a standard method to assess the current carrying capacity of mated battery connector contact. Test as per EIA364-70 Method B	30°C max.	Sample	30 °C max.
			1	27 °C
			2	28 °C
			3	26 °C
			4	27 °C
			5	27 °C
3-2 Heat aging	Subject unmated connectors to temperature life at 85°C±2°C for 96 hours. Test as per EIA 364 – 17 Test Condition III Method A.	Appearance: No damage	Sample	
			1	OK
			2	OK
			3	OK
			4	OK
		5	OK	
		Contact resistance: 20 mΩ change from initial.	Sample	
			1	10.6 mΩ
			2	10.5 mΩ
			3	9.3 mΩ
			4	10.2 mΩ
5	9.7 mΩ			



ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
			Sample	
3-3	Humidity Subject unmated connectors to 96 hours at 40°C 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 40 mΩ	Sample	40 mΩ max.
			1	9.9 mΩ
			2	9.6 mΩ
			3	9.8 mΩ
			4	10.4 mΩ
		Insulation resistance More than 500 MΩ	Sample	500 MΩ min.
			1	> 500 MΩ
			2	> 500 MΩ
			3	> 500 MΩ
4	> 500 MΩ			
3-4	Solderability Steam age 1 hour at 90°C ~96°C Solder time to be 5±1 seconds at 245°C, using unactivated flux. Test as per EIA364-52	Minimum: 95% of immersed area	Sample	
			1	OK
			2	OK
			3	OK
			4	OK
			5	OK
3-5	Temperature cycling Subject unmated connectors shall be tested in accordance with EIA364–32 Test Condition I (1)-55°C,30 minute (2)+25°C,5 minute (3)+85°C,30 minute (4)+25°C,5 minute consecutive 10 cycles..	Appearance : No damage	Sample	
			1	OK
			2	OK
			3	OK
			4	OK
		Contact resistance: 20 mΩ change from initial.	Sample	
			1	13.6 mΩ
			2	12.9 mΩ
			3	12.2 mΩ
			4	13.7 mΩ
			5	13.1 mΩ



ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT		
			Sample		
3-6	Solderability	Steam age 1 hour at 90°C ~96°C Solder time to be 5±1 seconds at 245°C, using unactivated flux. Test as per EIA364-52	Minimum: 95% of immersed area		
				1	OK
				2	OK
				3	OK
				4	OK
5	OK				
3-7	Resistance to soldering heat	Soldering time: 10 second Soldering pot: 260°C max. Reflow soldering (Infrared): Refer soldering method The conditions specified on the recommended temperature profile Shall be repeated twice.	Appearance : No damage		
				1	OK
				2	OK
				3	OK
				4	OK
5	OK				