SD MEMORY CARD Connector

1. INTRODUCTION

1.1. Purpose

Testing was performed on the Tyco SD MEMORY CARD Connector to determine its conformance to the requirements of Product Specification 108-57504 Rev. O.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of the SD MEMORY CARD Connector.

1.3. Conclusion

The SD MEMORY CARD Connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57504 Revision O.

1.4. Product Description

The SD MEMORY CARD Connector is designed for printed circuit board applications. The contacts are copper alloy, gold plated on the contact interface and tin plating on the soldertail, all over nickel under-plated. The housing material is glass filled insulating polymer, UL94V-0.

1.5. Test samples

The test samples were randomly selected from normal current production lots, and the following part numbers were used for test：

Test Group	Quantity	Description
A, B, C, D, E, F,	5EA.	SD MEMORY CARD Connector

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1.6. Qualification Test Sequence

Test or Examination	Test Group					
	A	B	C	D	E	F
	Test Sequence（a）					
Examination of Product	1, 7	1, 6	1, 5	1, 5	1	1, 3
Contact Resistance	2, 6	2, 5	2, 4	2, 4		
Dielectric Withstanding Voltage	4					
Insulation Resistance	3					
Mating Force		3				
Unmating Force		4				
Durability	5					
Contact Retention Force					3	
Solderability						2
Resistance to Reflow Soldering Heat					2	
Temperature Life				3		
Salt Spray			3			

Figure 1.

NOTE：（a）Numbers indicate sequence in which tests are performed.
（b）Discontinuities shall not take place in this test group, during tests.

2. TEST RESULT

GP	TEST	SPEC.	DATA			
			Mean	σ	Max.	Min.
A	Contact Resistance	80mΩ Max.	49.06	3.097	52.5	43.3
	Insulation Resistance	1,000MΩ Min.500VDC	$999x10^5$	--	$999x10^5$	$999x10^5$
	Dielectric Withstanding Voltage	500V AC for 1 minute	OK	--	OK	OK
	Durability	10,000 cycles	OK	--	OK	OK
	Contact Resistance	100mΩ Max	78.12	5.322	86.3	72.4
	Appearance	No Damaged	OK	--	OK	OK
B	Contact Resistance	80mΩ Max.	47.98	4.047	53.6	42.5
	Mating Force	4.2 kgf Max.	1.115	0.075	1.24	1.02
	Unmating Force	0.21kgf Min	0.693	0.052	0.78	0.62
	Contact Resistance	80mΩ Max	54.01	1.108	55.6	52.1
	Appearance	No Damaged	OK	--	OK	OK
C	Contact Resistance	80mΩ Max.	53.44	1.626	56.2	51.2
	Salt Spray	Exposing in a heat chamber at a temperature of 35℃ for 48 hour	OK	--	OK	OK
	Contact Resistance	100mΩ Max	60.95	1.272	63.2	59.2
	Appearance	No Damaged	OK	--	OK	OK
D	Contact Resistance	80mΩ Max.	54.3	0.612	55.2	53.3
	Temperature Life	Temperature 85℃ for 96 hours	OK	--	OK	OK
	Contact Resistance	100mΩ Max	56.56	0.744	57.6	55.3
	Appearance	No Damaged	OK	--	OK	OK
E	Resistance to Reflow Soldering Heat	No physical damage shall occur.	OK	--	OK	OK
	Contact Retention Force	0.25 kgf Min.	0.318	0.007	0.33	0.31
F	Solder ability	240℃ for 5 sec. Max.	OK	--	OK	OK
	Appearance	No Damaged	OK	--	OK	OK

Figure 2