
Battery Holder Connector

1. INTRODUCTION

1.1. Purpose

Testing was performed on the Tyco Battery Holder Connector to determine its conformance to the requirements of Product Specification 108-57542.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of the Battery Holder Connector.

1.3. Conclusion

The Battery Holder Connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57542.

1.4. Product Description

The Battery Holder Connector is designed for printed circuit board applications. The contacts are copper alloy, Tin plated on the contact interface and 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, G, H	5EA.	Battery Holder Connector

DR	DATE	APVD	DATE
Joseph Lee	27-Dec-2005	Wei-Jer Ke	27-Dec-2005

1.6. Qualification Test Sequence

Test or Examination	Test Group							
	A	B	C	D	E	F	G	H
	Test Sequence (a)							
Examination of Product	1, 7	1, 5	1, 6	1, 5	1, 5	1, 5	1, 5	1, 3
Contact Resistance		2, 4	2, 5	2, 4	2, 4	2, 4		
Dielectric withstanding Voltage	3, 6							
Insulation Resistance	2, 5							
Durability		3						
Vibration			3					
Mechanical Shock			4					
Solderability								2
Retention Force							2, 4	
Resistance to Soldering Heat							3	
Thermal Shock				3				
Humidity-Temperature Cycle	4				3			
Salt Spray						3		

NOTE : (a) Numbers indicate sequence in which tests are performed.

2. TEST RESULT

GP	TEST	SPEC.	DATA			
			Max.	Min.	Mean	σ
A	Insulation Resistance	5000 M Ω Min.	OK	OK	OK	OK
	Dielectric withstanding Voltage	500 VAC 1 Minute	OK	OK	OK	OK
	Humidity-Temperature Cycle	25-65 $^{\circ}$ C ,95%,10cycle	OK	OK	OK	OK
	Insulation Resistance	5000 M Ω Min.	OK	OK	OK	OK
	Dielectric withstanding Voltage	500 VAC 1 Minute	OK	OK	OK	OK
	Appearance	No Damaged	OK	OK	OK	OK
B	Contact Resistance	30 m Ω Max.	15.23	12.51	13.86	0.69
	Durability	50 Cycle	OK	OK	OK	OK
	Contact Resistance	30 m Ω Max.	16.37	13.22	14.79	0.80
	Appearance	No Damaged	OK	OK	OK	OK
C	Contact Resistance	30 m Ω Max.	14.18	11.58	12.88	0.66
	Vibration	10-55-10 Hz	OK	OK	OK	OK
	Mechanical Shock	50G, 11mSec	OK	OK	OK	OK
	Contact Resistance	30 m Ω Max.	15.22	12.58	13.90	0.67
	Appearance	No Damaged	OK	OK	OK	OK
D	Contact Resistance	30 m Ω Max.	14.35	11.32	12.83	0.77
	Thermal Shock	-55 $^{\circ}$ C , +105 $^{\circ}$ C , 5 Cycle	OK	OK	OK	OK
	Contact Resistance	30 m Ω Max.	15.31	12.20	13.75	0.79
	Appearance	No Damaged	OK	OK	OK	OK
E	Contact Resistance	30 m Ω Max.	14.27	11.39	12.82	0.73
	Humidity-Temperature Cycle	25-65 $^{\circ}$ C ,95%,10cycle	OK	OK	OK	OK
	Contact Resistance	30 m Ω Max.	15.28	12.28	13.77	0.76
	Appearance	No Damaged	OK	OK	OK	OK

Figure 2 (Cont.)

GP	TEST	SPEC.	DATA			
			Max.	Min.	Mean	σ
F	Contact Resistance	30 m Ω Max.	14.33	11.59	12.94	0.70
	Salt Spray	35°C, 5%Salt, 48hours	OK	OK	OK	OK
	Contact Resistance	30 m Ω Max.	15.29	12.48	13.87	0.72
	Appearance	No Damaged	OK	OK	OK	OK
G	Retention Force	1.0 kgf/ pin Min.	1.56	1.22	1.28	0.21
	Resistance to Wave Solder Heat	Peak 265 \pm 5°C, 10 \pm 0.5sec. (Tyco spec 109-202, Condt. B)	OK	OK	OK	OK
	Retention Force	1.0 kgf/ pin Min.	1.17	1.05	1.09	0.07
	Appearance	No Damaged	OK	OK	OK	OK
H	Solderbility	245 \pm 5°C, 5sec 95% Min. solder coverage.	OK	OK	OK	OK
	Appearance	No Damaged	OK	OK	OK	OK

Figure 2 (End)