

SP170002

BATTERY HOLDER Connector

(RoHS)

SEP-27-2006

Rev A0X1

1. SCOPE

1.1. CONTENTS

Holder Connector. This specification covers the performance, tests and quality requirements for the Battery

2. APPLICABLE DOCUMENT

conflict between the requirements of this specification and the product drawing, the product specification and the referenced documents, this specification shall take precedence drawing shall take precedence. In the event of conflict between the requirements herein. Unless otherwise specified, the latest edition of the document applies. In the event of The following Top Yang documents form a part of this specification to the extent specified

3. REQUIREMENTS

3.1. DESIGN AND CONSTRUCTION

applicable product drawing. Product shall be of the design, construction and physical dimensions specified on the

3.2. MATERIALS

Housing : Thermoplastic with G.F., UL 94V-0 rated

B. Contact Material: Copper Alloy or Stainless steel.

Contact plated : (a) Gold plated on mating end over Nickel,

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Sn only plated on soldering end over Nickel under-plated.

(b) Sn only plated over Nickel under-plated

3.3. RATINGS

A. Voltage: 250 VAC rms.

B. Current: 1 A Max.

C.Temperature: -55 °C ~ 105°C

3.4. PERFOMANCE REQUEIREMENT AND TEST DESCRIPTION

performance requirements specified in Figure 1. The product shall be designed to meet the electrical, mechanical and environmental

3.5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

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Retention force	Solder ability	Mechanical Shock	Vibration	Durability		Insulation Resistance	Dielectric withstanding Voltage	Contact Resistance		Examination of Product	TEST ITEM
More than 1 kg Min.	The inspected area of each lead must have 95% solder coverage minimum.	No electrical discontinuity greater than 0.1μ sec shall occur. See Note.	No electrical discontinuity greater than 1µ sec shall occur. See Note.	No defects. Contact resistance shall be 30 m Ohm Max.	MECHANICAL REQUIREMENT	5000 M Ohm Min.	No change	30 m Ohm Max.(Initial) 40 m Ohm Max.(Final)	ELECTRICAL REQUIREMENT	Meets requirements of product drawing. No physical damage.	REQUIREMENT
Measure total extraction force(initial value) by using accommodated conductor specified in clause < Method 208 of MIL-STD-1344A >	Steam Aging Preconditioning: 93 +3/- 5 °C \ 100%HR \ 8hrs. <j-std-002 3="" aging="" category=""> Immerse in the flux for a period of 10 sec.</j-std-002> Solder pot temperature: 245 +/- 5°C, 5sec	Accelerate Velocity: 490m/s² (50G) Waveform: Half-sine shock plus Duration: 11 m sec No. of Drops: 3 drops each to normal and reversed directions of X,Y and Z axes, totally 18 drops, passing DC 1mA current during the test. <method 2004.1="" mil-std-1344a="" of=""></method>	1.5mm 10-55-10HZ / minute each 2 hours for X, Y and Z direction < Method 2005.1 of MIL-STD-1344A>	Connector shall be subject to 50 cycles of insertion and withdrawal. <pre><method 2016.1="" mil-std-1344a="" of=""></method></pre>	EMENT	When applied DC 500V between adjacent terminal or ground. , method 3003.1>	When applied AC 500V 1 minute between adjacent terminal. , method 3001.1>	Dry circuit of DC 6V 1A max. <method 3004.1="" mil-std-1344a="" of=""></method>	EMENT	Visual inspection.	NENT PROCEDURE

14	13	12	11	10		
14 Salt Spray	13 Humidity	Thermal Shock	Leaching	Resistance to Soldering Heat	TEST ITEM	
No detrimental corrosion allowed in contact area and base metal exposed.	See Note	See Note	External visible using 10X optical microscope and components meet electrical performance criteria.	Verify components meet their specified electrical performance criteria and no physical damage has occurred.	REQUIREMENT	ENVIRONMENTAL REQUIREMENTS
Subject mated connectors to 35 +/- 2°C and 5 +/- 1% salt condition for 48hours. After test, rinse the sample with water and recondition the room temperature for 1 hour. Method 1001.1 of MIL-STD-1344A>	The unmated connector shall be tested in accordance. Temperature: 40 +/- 2°C Humidity: 90 ~ 95% (RH) Period: 48 hours. <method 1002.1="" mil-std-1344a="" of=""></method>	Mated Connector -55 +/- 3°C (30 minutes), +105 +/- 2°C (30 minutes) Perform this a cycle, repeat 5 cycles <method 107g="" b="" condition="" mil-std-202g="" of=""></method>	Solder pot temperature : 260 +/- 5°C, 30 sec.	Wave Solder for Through-Hole Component: Solder pot temperature: 150°C preheat and 260°C, 10 sec. < Method 202F of MIL-STD-202G> Total Number of Solder Temperature Cycles: Must withstand 3 temperature cycles. Solder Iron: Iron tip temperature: 400°C, 5 sec. < Method 202F of MIL-STD-202G>	PROCEDURE	REMENTS

Figure 1

NOTE: Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2

3.6. PRODUCT QUALIFICATION AND REQUALIFICATION TEST

				Te	Test Group	þ			
Test or Examination	Α	В	С	D	Е	F	G	I	_
				Test Se	Test Sequence	e (a)			
Examination of Product	1, 8	1, 6	1, 6	1, 6	1, 5	1, 3	1, 9	1, 3	1, 3
Contact Resistance		2, 5	2, 5	2, 5	2, 4		2, 6		
Dielectric withstanding Voltage	2, 7						4, 7		
Insulation Resistance	3, 6						3, 8		
Durability			3	3					
Vibration		3							
Mechanical Shock		4							
Solder ability								2	
Retention force									2
Resistance to Soldering Heat							5		
Leaching						2			
Thermal Shock	4		4						
Humidity	5			4					
Salt Spray					3				

Figure 2

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

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