BATTERY 8PIN H2.50

1. SCOPE

1.1 Contents

This specification covers the performance, tests and quality requirements for the Deren Electronics

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1.2 Qualification

When tests are performed on the subject product line, the procedures specified in Figure 1 shall be used. All inspections shall be performed using the applicable inspection plan and product drawing. Product Qualification or Requalification test should follow the test groups and test sequence defined in Figure 2.

2. APPLICABLE DOCUMENT

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

2.1 Industry Standard

EIA-364：Electrical Connector/Socket Test Procedures Including Environmental Classifications.

3. REQUIREMENTS

3.1 Design and Construction

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

3.2 Materials

Materials used in the construction of product shall be as specified on the applicable product drawing.

3.3 RATINGS

A. Rating Current: 7.0A Max /per contact.

B. Rating Voltage: DC30v /per contact.

C. Operating Temperature: -40 °C to +85°C

D. Storage Temperature: -10 °C to +60°C

3.4. Performance requeirement and test description

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified All tests shall be performed at ambient environmental conditions per Specification。

is responsible for the quality of the part as it is delivered to customer. failing lots will be return or other supplier corrective action.

3.5 Test Requirements and Procedures Summary

ITEMS	TEST METHODS	REQUIREMENTS
1 Examination of Product	Visually, dimensions and functionally inspected per applicable product drawing.(EIA-364-18)	Product shall be conforming to the requirements of applicable product drawing.
ELECTRICAL PERFORMANCE		
2 Contact Resistance (Low Level)	Mate connectors, Contact: measure by dry circuit, 20 mV Max. 100 mA (EIA-364-23B)	20 mΩ Max(initial). △R≤ 20mΩ (Final)
3 Dielectric withstanding Voltage	Unmated connector, apply 500V AC (rms.) for 1 minute between adjacent terminal or ground. (EIA 364-20B)	No Breakdown
4 Insulation Resistance	Unmated connector, apply 500V DC between adjacent terminal or ground. (EIA 364-21C)	1000 MΩ Min(initial). 800 MΩ Min(Final).
5 Temperature Rise	Contact series-wired, apply test current(7A) of loaded rating current to the circuit, and measure the temperature rising by probing on soldered areas of contacts, after the temperature becomes stabilized deduct ambient temperature from the measured value. (EIA-364-70)	the temperature Rise above ambient shall not exceed 30℃,
MECHANICAL PERFORMANCE		
6 Mating force	mate connector at speed of 25±3mm/ minute	2.5kgf Max.
7 Unmating force	Unmate connector at speed of 25±3mm/ minute	0.2 kgf Min
8 Durability	Connector should be mated and unmated at the rate of 500cycles per hour.(EIA-364-09)	5000cycles
9 Retention Force	Axial pull out the contact from housing at speed of 25±3mm/ minute EIA-364-29B	0.2kgf Min/per pin

10 Vibration	Subject mated connectors to 10-55-10 Hz traversed in 1 minute at 1.52mm amplitude. 2 hours each of 3 mutually perpendicular planes. 100 mA current applied. (EIA-364-28 Condition III)	No discontinuations of 1 micro second or longer duration
11 Mechanical shock	Subject mated specimens to 50g's half-sine shock pulses of 11 milliseconds duration three shocks in each direction applied along three mutually perpendicular planes (EIA-364-27)	No electrical discontinuity greater than 1 micro second
ENVIRONMENTAL PERFORMANCE		
12 Thermal shock	Mate connectors exposed to the following environmental condition Tem duration minutes -25℃±3℃ 25 25℃+10/-5℃ 5 85℃±2℃ 25 25℃+10/-5℃ 5 Number of cycles :5 cycles (EIA-364-32 Method A, Test condition I)	1.Contact Resistance: △R≤ 20mΩ (Final) 2. Dielectric withstanding voltage No flash over or breakdown 3.Insulation resistance: 800Mega-ohms Min(Final)
13 Humidity	Subject mated plug and connector , soldered to PC board to relative humidity 95%RH and a temperature of 40℃±2℃ relative humidity for 96hour . it shall be subject to standard atmospheric condition for 1hour after which measurement shall be made. EIA-364-31B Duration condition A.	1.Contact Resistance: △R≤ 20mΩ (Final) 2. Dielectric withstanding voltage No flash over or breakdown 3.Insulation resistance: 800Mega-ohms Min(Final)
14 High temperature	Expose mated connectors to a temperature of 85±2℃ for 96 hrs. (MIL-STD-202 method 108)	Contact Resistance: △R≤ 20mΩ (Final)
15 Solder ability	After dipped the pin in the flux of R type for 3-5seconds , immerse the solder pin of the connector in the solder bath 245±5℃ for 3-5seconds. EIA-364-52 flux condition grade 1.	Sold coverage 95% min .of the immersed area

16 Salt spray	Mate connector expose to 8 hrs. At 35±2℃ and density 5% in weight.after the test,specimens shall be washed with running water and dried naturally before the measurement of contact resistance.(EIA 364-26)	Contact Resistance △R≤ 20mΩ (Final)
17 Resistance to solder heats	Reflow soldering : Pre Heat : 150~180℃, 90±30sec. Heat : 230℃ Min., 30±10sec. Peak Temp. : 260±5℃, 10sec. Duration : 2 times. Manual soldering: Wattage of soldering iron :15 w Diameter of soldering iron tip: Ø1 mm Temperature of soldering iron tip: 350±5℃ Soldering time: 3-5s. Do not give power which causes the terminal the adverse effect as the Terminal side is suppressed with solder.	No physical damage to the samples Contact Resistance: △R≤ 20mΩ (Final)

Figure 1

3.6 Product Qualification and Requalification test

Test or Examination	A	B	C	D	E	F	G	H	I	J
Examination of Product	1,7	1,3	1,6	1,10	1,9		1,5	1,5	1,3	
Contact Resistance	2,6		2,5	2,9	2,8		2,4	2,4		
Dielectric withstanding Voltage				4,8	4,7					
Insulation Resistance				3,7	3,6					
Temperature Rise		2								
Mating Force& Unmating Force	3,5									
Durability	4									
Retention Force						1				
Vibration			3							
Mechanical Shock			4							
Thermal Shock				5						
High temperature				6						
Humidity					5					
Solder ability									2	
Resistance to Soldering Heat								3		
Salt Spray							3			
Samples Q'TY	5 set	5set	5set	5set	5set	5set	5set	5set	5set	

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

（b）Discontinuities shall not take place in this test group, during tests.

Figure 2

Figure 3. Contact Resistance

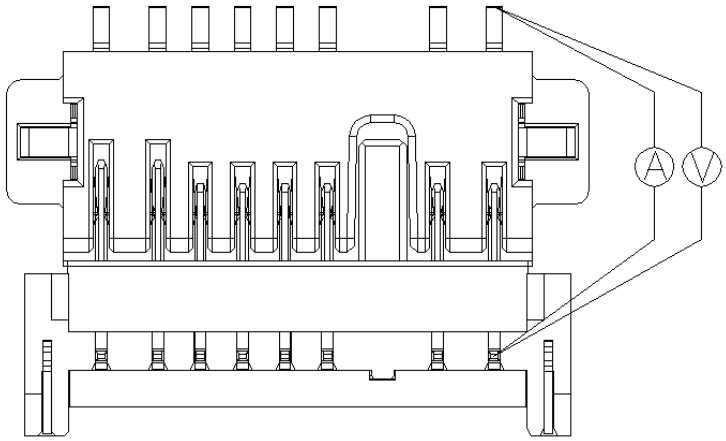

Figure 4. Resistance to flow solder heat