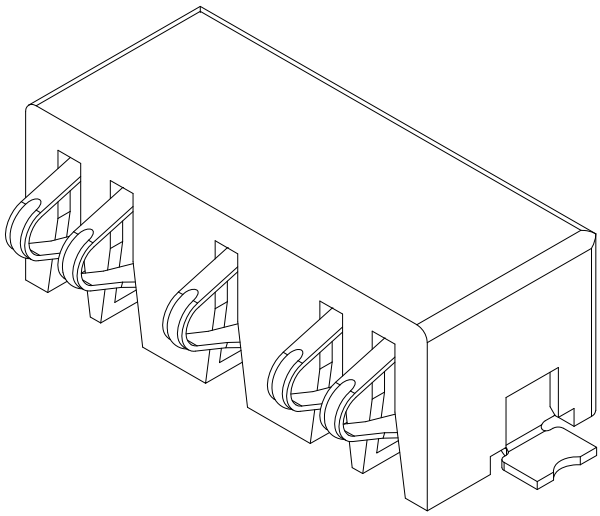
PRODUCT SPECIFICATION



育鼎精密工業股份有限公司

ACRON PRECISION INDUSTRIAL CO., LTD

桃園縣八德市廣德里新興路 55 號

No.55, SinSing Road., Bade City, Taoyuan County 334, Taiwan(R.O.C)

TEL : 886-3-3629889 FAX : 886-3-3664917

☐東莞睦永電子五金廠			☐東莞育鼎電子五金廠		■東莞愷興電子科技電子有限公司
REVISION:	ECR/ECN INFORMATION:		PRODUCT NO	BTM11-A4-R00x0	SHEET No
A	EC No: DATE:	**2009/11/25**	PRODUCT NAME	5PIN BATTERY CONNECTOR	**1** of **6**

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-BC-0029	**RYAN.WU**	**JAMES**	**TONY.CHANG**

PRODUCT SPECIFICATION

1. SCOPE

This specification defines the performances for 5 pin battery connector.

2. PRODUCT DESCRIPTION:

This product consists of well performance cu-alloy terminals, board-lock, and thermoplastic housing. The product covers Au plating on contact position.

3. APPLICABLE DOCUMENTS AND SPECIFICATIONS

See product drawing and other sections of this specification for the relevant reference documents and specifications. In cases where the specification differs from the product drawings, the product drawings take precedence.

4. MATERIALS

A. Contact: Ti-Cu alloy, 30u"Min. Au plating on contact area； Tin plating on solder tail
B. Retainer: Brass, 100u'' Min. Tin plating on solder tail ; Nickel plating all over.
C. Housing: LCP, Black, UL94V-0.

5. RATINGS

VOLTAGE:
12 VOLTS RMS AT SEA LEVEL

CURRENT:
1.0 AMPS

TEMPERATURE:
Operating Temperature Range: - 40°C to + 85°C
Storage Temperature Range: - 40°C to + 85°C

6. PERFORMANCE (Test Requirements and procedures Summary)

	Test Items	Requirement	Procedures
1	**Examination of Product**	Meets requirements of product drawing. No physical damage.	Specimens shall be investigated by 10x (or higher)microscope.

Electrical Requirements			
	Test Items	**Requirement**	**Procedures**
2	**Contact Resistance (Low Level)**	40 milliohms Max (initial) △R: 20 milliohms Max (change from initial)	Subject mated contacts assembled in housing to 20mV maximum open circuit at 100mA maximum. PER EIA 364-23
3	**Insulation Resistance**	**500**Megohms MIN	After 500 VDC for 1 minute, measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies. PER EIA 364-20
4	**Dielectric Withstanding Voltage**	No breakdown; current leakage < **5**mA	Apply a voltage **1000** VAC for **1** minute between adjacent terminals and between terminals to ground. PER EIA 364-21
5	**Current Rating**	Temperature rise: **+30**°C maximum	Apply the rated current to connector, PER EIA 364-70

Mechanical Requirements			
	Test Items	**Requirement**	**Procedures**
6.	**Durability**	△R: 20 milliohms Max (change from initial)	Mate connectors up to **10000** cycles at a maximum rate of **30** cycles per minute. At 0.50mm from housing surface. (See fig1.) PER EIA 364-09
7.	**Vibration (Random)**	△R: 20 milliohms Max (change from initial) & Discontinuity < **1** microsecond	Mate connectors up to **10~55~10** HZ ,**3** mutually perpendicular planes,**20** minute per cycle (Random) PER EIA 364-28; Test condition I
8.	**Shock (Mechanical)**	△R: 20 milliohms Max (change from initial) & Discontinuity < **1** microsecond	Mate connectors and shock at **100** g's with ½ sine wave (6 milliseconds) shocks in the ±X,±Y,±Z axes (**18** shocks total). PER EIA 364-27;Test Condition C
9.	**Normal Force**	**100+/-20g per pin.** at 0.50mm from housing.	Apply a perpendicular force at 0.50mm from housing.

10.	**Terminal Retention Force (in Housing)**	**0.3** Kgf Minimum retention force	Axial pullout force on the terminal and nail in the housing at a rate of **25 ± 3** mm per minute. PER EIA 364-29

Environment Requirements			
	Test Items	**Requirement**	**Procedures**
11.	**Shock (Thermal)**	No physical damage	Test the mated connector with 5 cycles. One duration: -55℃/1.5hours. 85℃/1.5hours. Per EIA-364-32
12.	**Static Humidity**	△R: 20 milliohms Max (change from initial) & Appearance: no damage	Expose to a temperature of **50 ± 2°**C with a relative humidity of **90-95**% for **96** hours. Note: Remove surface moisture and air dry for **1** hour prior to measurements. PER EIA 364-31
13.	**Solderability**	Solder coverage: **95**% MINIMUM	Dip solder tails into the molten solder(held at **245±5°**C for 3 **±**0.5 sec. PER EIA 364-52
14.	**Solder Heat Resistance**	Visual: No Damage to insulator material	Place connector o applicable P.C.B footprint and float on solder bath at **260±5 °C** for **10±2** seconds. (See Fig 2),PER EIA 364-56
15.	**Salt Spray**	△R: 20 milliohms Max (change from initial) & Appearance: no damage	Duration: **48** hours exposure; Atmosphere: salt spray from a **5**% solution. Temperature: **35 +1/-2°**C PER EIA 364-26
16.	**Temperature Life (Steady State)**	△R: 20 milliohms Max (change from initial) & Appearance: no damage	85**°**C for 240 hours PER EIA 364-17

7. PRODUCT QUALIFICATION TEST SEQUENCE

Test Items	Test Group								
	1	2	3	4	5	6			
	Test Sequence								
Examination of product	1,8	1,12	1,9	1,10	1,10				
Contact Resistance (LLCR)	2,7	3,11	3,8	3,9	3,9				
Insulation Resistance		4,10	4	4,8	4,8				
Dielectric Withstanding Voltage		5,9	7	5,7	5,7				
Current Rating						ˇ			
Durability		7							
Vibration (Random)	5								
Shock (Mechanical)	4								
Normal Force	6	6,8							
Retention force						ˇ			
Shock (Thermal)			5						
Static Humidity			6						
Solderability						ˇ			
Solder Heat Resistance	3	2	2	2	2				
Salt Spray				6					
Temperature Life					6				
Sample Size	**3**	**3**	**3**	**3**	**3**	**5**			

8. APPENDIX 1

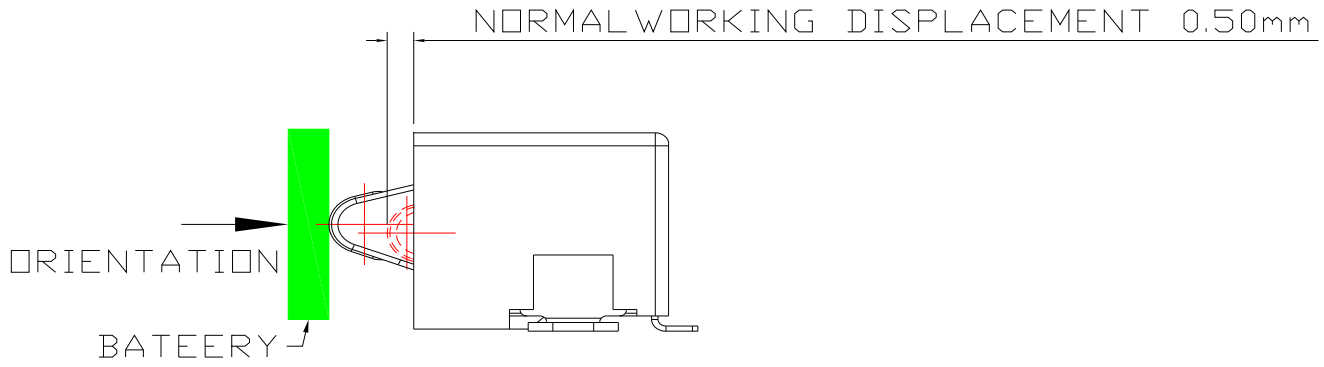


Fig1

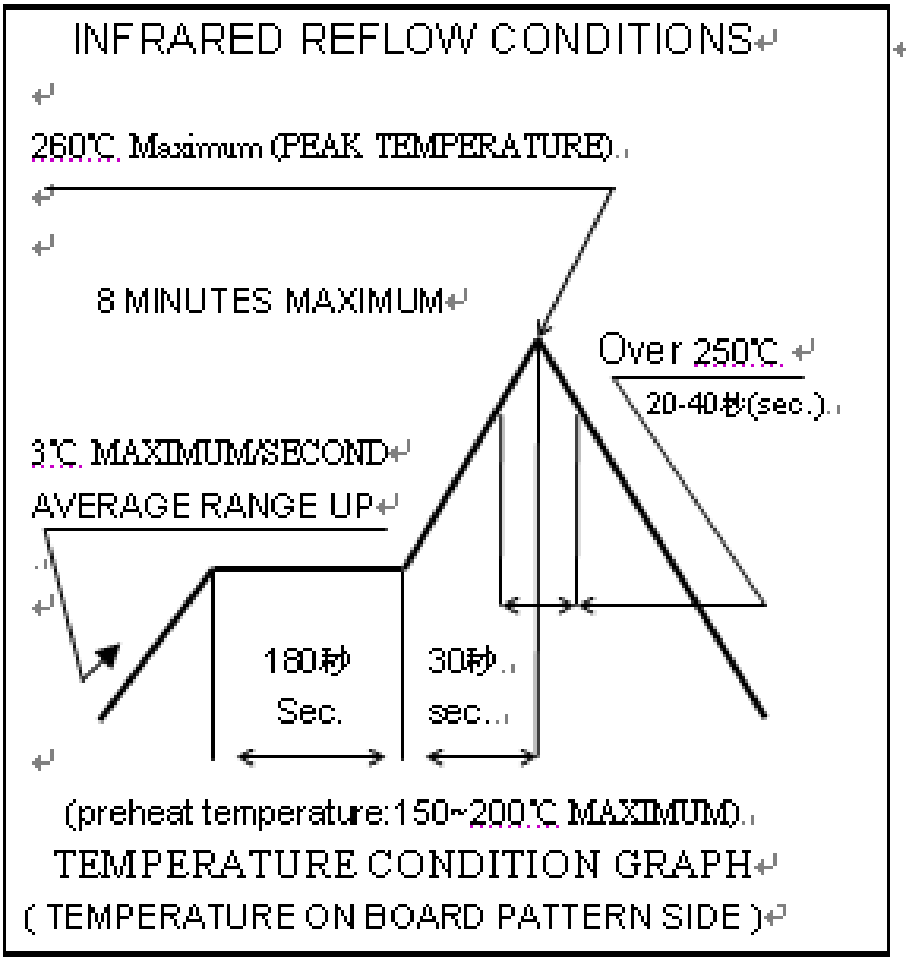


Fig2