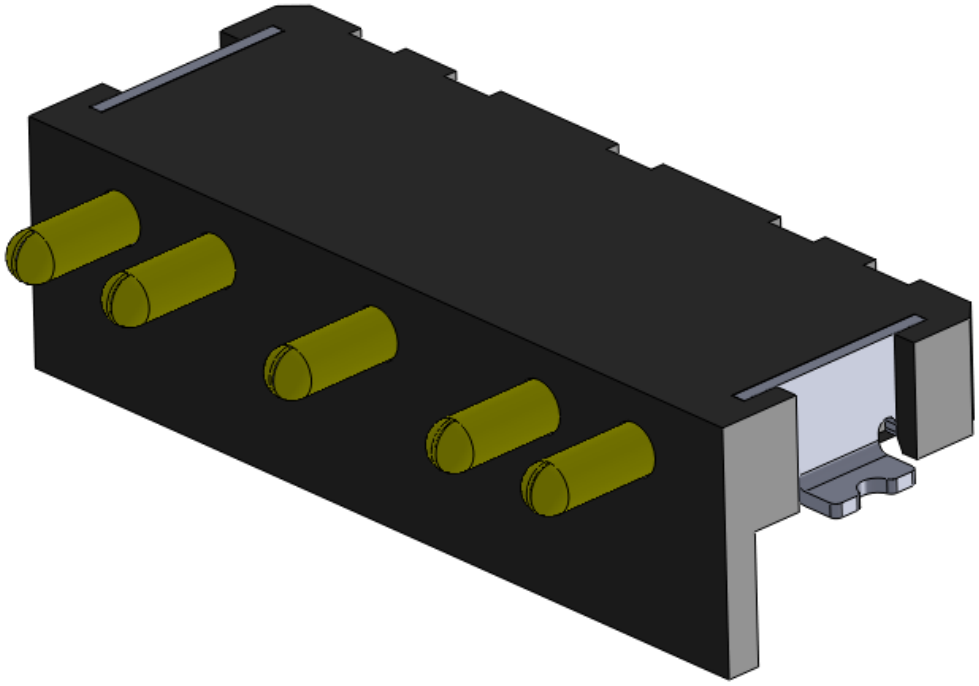
PRODUCT SPECIFICATION



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REVISION:	ECR/ECN INFORMATION:		PRODUCT NO	BTM47 SERIES	SHEET No
2	EC No: / DATE:	RDT-130039 / 2013/03/26	PRODUCT NAME	5 PIN 2.90mm PITCH BATTERY CONNECTOR	1 of 6

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-BC-0073	JEFF	Allen	KIMI

PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the performance requirements for 5pin 2.90mm pitch battery connector series. .

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

5 pin 2.90mm pitch battery connector **BTM47** series

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See appropriate sales drawings for details on dimensions ,materials , plating and markings.

2.3 SAFETY AGENCY APPROVALS

See appropriate sales drawings

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Please refer to the Sales Drawings , and other sections of this Specification for specific references to applicable documents and specifications. In cases where the Product Specification differs from the Sales Drawings, the Sales Drawing will take precedence

EIA-364 TEST METHODS FOR ELECTRICAL CONNECTORS

4.0 RATINGS

4.1 VOLTAGE

15 Volts DC

4.2 CURRENT

2.0 A Max.

4.3 TEMPERATURE

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

5.0 PERFORMANCE

Item	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		
2	**Contact Resistance (LLCR)**	20 milliohms Max(Initial)	Subject mated contacts assembled in housing to 20mV maximum open circuit at 100mA maximum. EIA 364-23;
3	**Insulation Resistance**	1000 Mega Ohm Min.	After 500 VDC for 1 minute, measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies. EIA 364-21
4	**Dielectric Withstanding Voltage**	No breakdown; current leakage < 5mA	Apply a voltage 500 V DC for 1 minute between adjacent terminals and between terminals to ground. EIA 364-20
5	**Current Rating**	Temperature rise: 30°C Max.	Apply the rated current to connector, EIA 364-70
	Mechanical Requirements		
6	**Durability**	△R: 10 milliohms Max (change from initial)	Operation Speed：500 cycles/hr. Durability Cycles：5000 Cycles (Compress pin until Maximum displacement) EIA 364-09.
7	**Vibration**	△R: 10 milliohms Max (change from initial) & No electrical discontinuity greater than 1μsec.	Subject mated connectors to 10-200-500 Hz traversed in 1minutes at 1.52mm amplitude for 0.5 Hour each of 3 mutually perpendicular planes.1.67Grms EIA 364-28; Test condition I
8	**Mechanical Shock**	△R: 10 milliohms Max (change from initial) & No electrical discontinuity greater than 1μsec.	Accelerate Velocity：490m/ s2 (50G) Waveform：11ms Half-sine shock Velocity Change: 3.4m/s No. of Drops：3 drops each to normal and reversed directions of X,Y and Z axes, totally 18 drops, passing 1mA current during the test. EIA 364-27;Test Condition C
9	**Normal Force**	0.8N Min/pin	Apply a perpendicular force at 0.75mm from housing.

10	**Terminal Retention Force (in Housing)**	500 gf/Pin Min.	Axial pullout force on the terminal and nail in the housing at a rate of 25 mm per minute. EIA 364-29
11	**Latch Retention Force (in Housing)**	300 gf/Pin Min.	Axial pullout force on the terminal and nail in the housing at a rate of 25 mm per minute. EIA 364-29
Environment Requirements			
12-1	**Thermal Shock**	△R: 10 milliohms Max. (change from initial) & Appearance: no damage	Place free situation samples in chamber with 10 cycles, and one duration is -40℃/(1.5h)~ 85℃/(1.5h). EIA-364-32
12-2	**Static Humidity**	△R: 10 milliohms Max. (change from initial) & Appearance: no damage	Test mated connector in chamber and expose to a temperature of 60 ± 2°C with a relative humidity of 95% for 240 hours. Note: Remove surface moisture and air dry for 1 hour prior to measurements. EIA 364-31
13	**Solder ability**	Solder coverage: **95**% MINIMUM	Dip solder tails into the molten solder(held at 245±5°C for 3 ±0.5 sec. 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. EIA 364-56; Refer to Fig.1
15	**Salt Spray**	△R: 10 milliohms Max. (change from initial) & Appearance: no damage	Duration: 48 hours exposure; Atmosphere:salt spray from a 5% solution. Temperature: 35 +1/-2°C EIA 364-26
16	**Heat Temperature Life**	△R: 10 milliohms Max. (change from initial) & Appearance: no damage	Simulate mated situation samples at 70°C for 240 hours. EIA 364-17
17	**Cold Temperature Life**	△R: 10 milliohms Max. (change from initial) & Appearance: no damage	Simulate mated situation samples at -20°C for 240 hours EIA 364-17

Customer Application Requirements			
18	**Fully compression**	Appearance: no damage	compress connector to 0mm from housing by hand for 10sec

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. See packaging appropriate drawings

7.0 RECOMMENDED REFLOW PROFILE

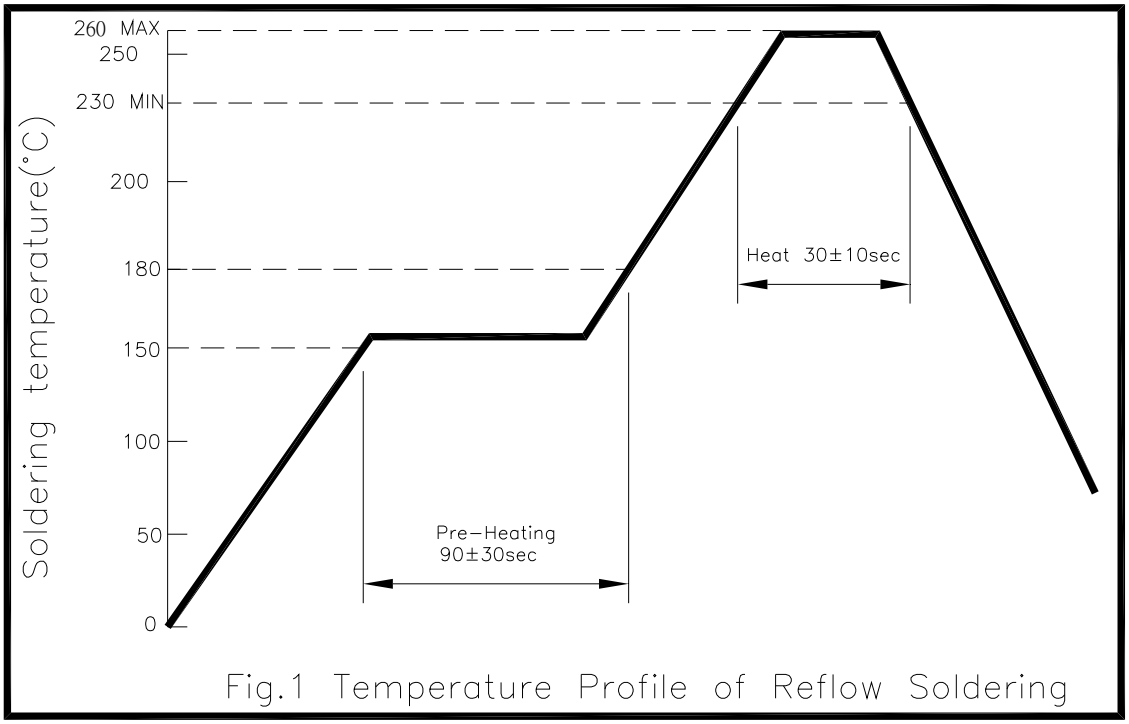

Fig.1 Temperature Profile of Reflow Soldering

8.0 TEST GROUPINGS

Test Items	Test Group											
	1	2	3	4	5	6	7	8	9	10	11	12
	Test Sequence											
Examination of product	1,8	1,12	1,9	1,7	1,10	1,10	1,10	1,6	1,5	1,5	1,5	
Contact Resistance (LLCR)	2,7	3,11	3,8	3,6	3,9	3,9	3,9	2,5	2,4	2,4	2,4	
Insulation Resistance		4,10	4	4	4,8	4,8	4,8					
Dielectric Withstanding Voltage		5,9	7	5	5,7	5,7	5,7					
Current Rating												V
Durability		7										
Vibration								4				
Mechanical Shock	5										4	
Normal Force	6	6,8										
Terminal Retention Force (in Housing)												V
Latch Retention Force (in Housing)												V
Thermal Shock			5									
Static Humidity			6									
Solder ability												V
Solder Heat Resistance	3	2	2	2	2	2	2	3	3	3	3	
Salt Spray					6							
Heat Temperature Life						6						
Cold Temperature Life							6					
Fully compression	4											
Sample Size	4	4	4	4	4	4	4	4	4	4	4	5

文件制訂、修訂、廢止申請單

文件編號	PS-RC-0073	文件名稱	BTM的 Series 規格書		
申請部門	業務部 工程部	申請人	Nathan	日 期	3/26
制訂單位		制訂人	Linda	日 期	3/26

□制訂 ☑修訂 □廢止原因說明

ECN No. RDT-130039

變更Spec.內容，刪除7-2, 7-3, 8-2, 12->, 16->, 17-2, 18

因非HTC，打Spec.變更正常規範

相關單位審查

Check OK! Apr. 15th 2013

Jeff 3/27

核准

Limi 4/3