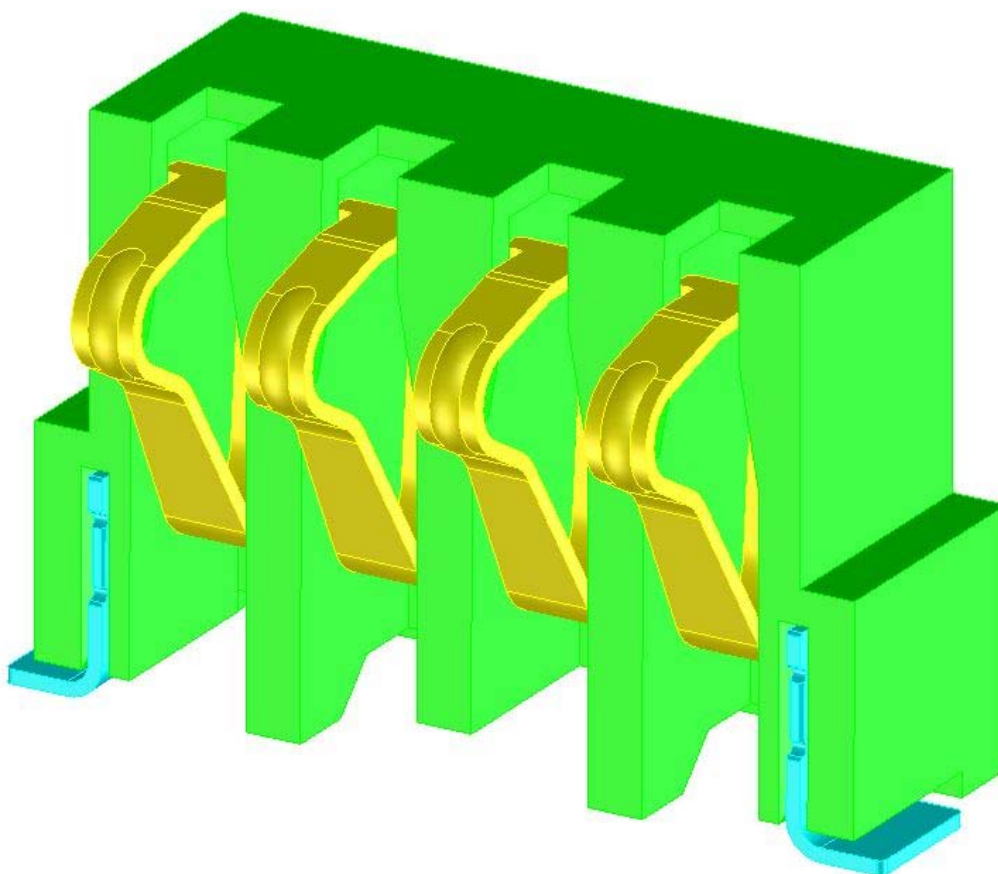




PRODUCT SPECIFICATION



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(NUCONN)

REVISION:	ECR/ECN INFORMATION:		PRODUCT NO	BTM33 series	SHEET No
A	EC No:	2010/09/10	PRODUCT NAME	4 PIN 2.5mm PITCH BATTERY CONNECTOR	1 of 6
DOCUMENT NUMBER: PS-BC-0041		CREATED / REVISED BY: KIMI.HSU		CHECKED BY: KENNY.CHEN	APPROVED BY: DEVIN.CHEN



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the performance requirements for 4pin 2.50mm Pitch Battery Connector series. .

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

4 pin 2.50mm Pitch Battery Connector **BTM33** 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

1.0 A Max.

4.3 TEMPERATURE

Operating Temperature Range: - 55°C to + 85°C

Storage Temperature Range: - 55°C to + 105°C

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PRODUCT SPECIFICATION

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)	40 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	ΔR : 20 milliohms Max (change from initial)	Operation Speed: 500 Cycles/hr. Durability Cycles: 5000 Cycles (From housing 1.0mm) EIA 364-09 .
7	Vibration	ΔR : 20 milliohms Max (change from initial) & No electrical discontinuity greater than 1 μ sec.	Subject mated connectors to 10-55-10 Hz traversed in 1minutes at 1.52mm amplitude for 2 Hour each of 3 mutually perpendicular planes. EIA 364-28 ; Test condition I
8	Mechanical	ΔR : 20 milliohms Max (change from initial) & No electrical discontinuity greater than 1 μ sec.	Accelerate Velocity: 980m/ s ² (100G) Waveform: Half-sine shock plus Duration: 6msec No. of Drops: 3 drops each to normal and reversed directions of X,Y and Z axes, totally 18 drops, passing DC1mA current during the test. EIA 364-27 ; Test Condition C
9	Normal Force	1N / pin Min.	Apply a perpendicular force at 1.0mm from housing.

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PRODUCT SPECIFICATION

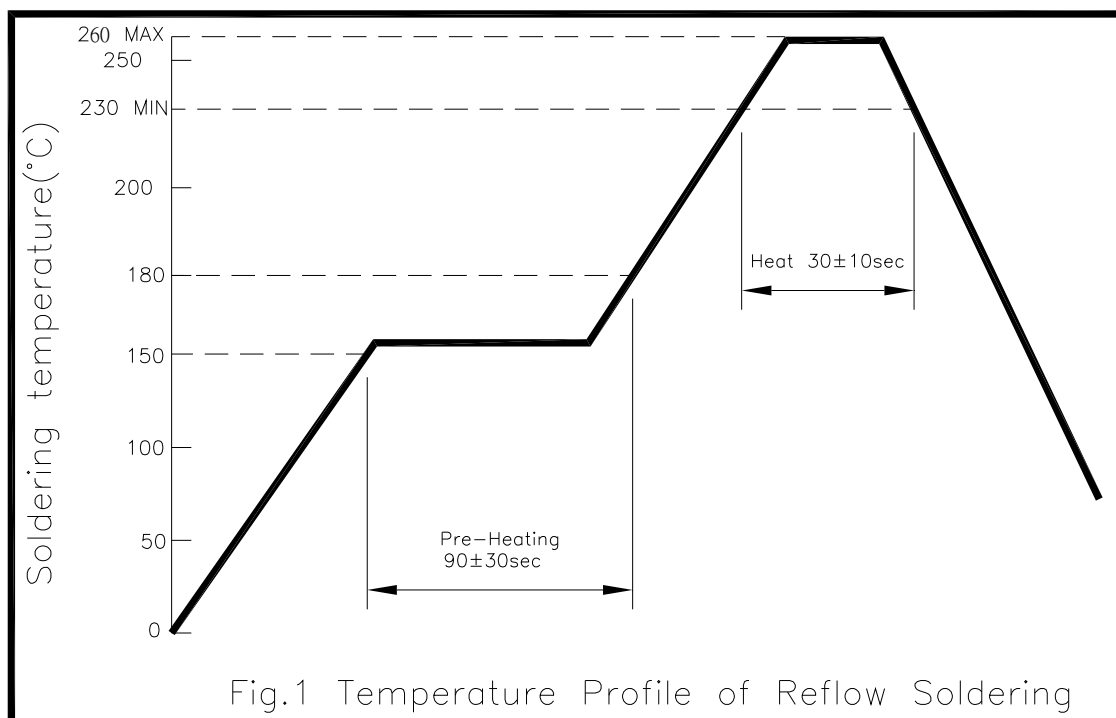
10	Terminal Retention Force (in Housing)	300 gf / Pin Min.	Axial pullout force on the terminal and nail in the housing at a rate of 25 mm per minute. EIA 364-29
Environment Requirements			
11	Thermal Shock	ΔR : 20 milliohms Max. (change from initial) & Appearance: no damage	Test the mated connector with 5 cycles. One duration: -55°C/(30min.) ~ 85°C/(30min.). EIA-364-32; Test condition I
12	Static Humidity	ΔR : 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. 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 on 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	ΔR : 20 milliohms Max. (change from initial) & Appearance: no damage	Duration: 48 hours exposure; Atmosphere: salt spray from a 5+/-1% solution. Temperature: 35 +1/-2°C EIA 364-26
16	Temperature Life	ΔR : 20 milliohms Max. (change from initial) & Appearance: no damage	Treat samples with 85°C for 250 hours EIA 364-17

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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



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PRODUCT SPECIFICATION

8.0 TEST GROUPINGS

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						✓			
Durability		7							
Vibration (Random)	5								
Mechanical Shock	4								
Normal Force	6	6,8							
Retention force						✓			
Thermal Shock			5						
Static Humidity			6						
Solder ability						✓			
Solder Heat Resistance	3	2	2	2	2				
Salt Spray				6					
Temperature Life					6				
Sample Size	3	3	3	3	3	5			

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