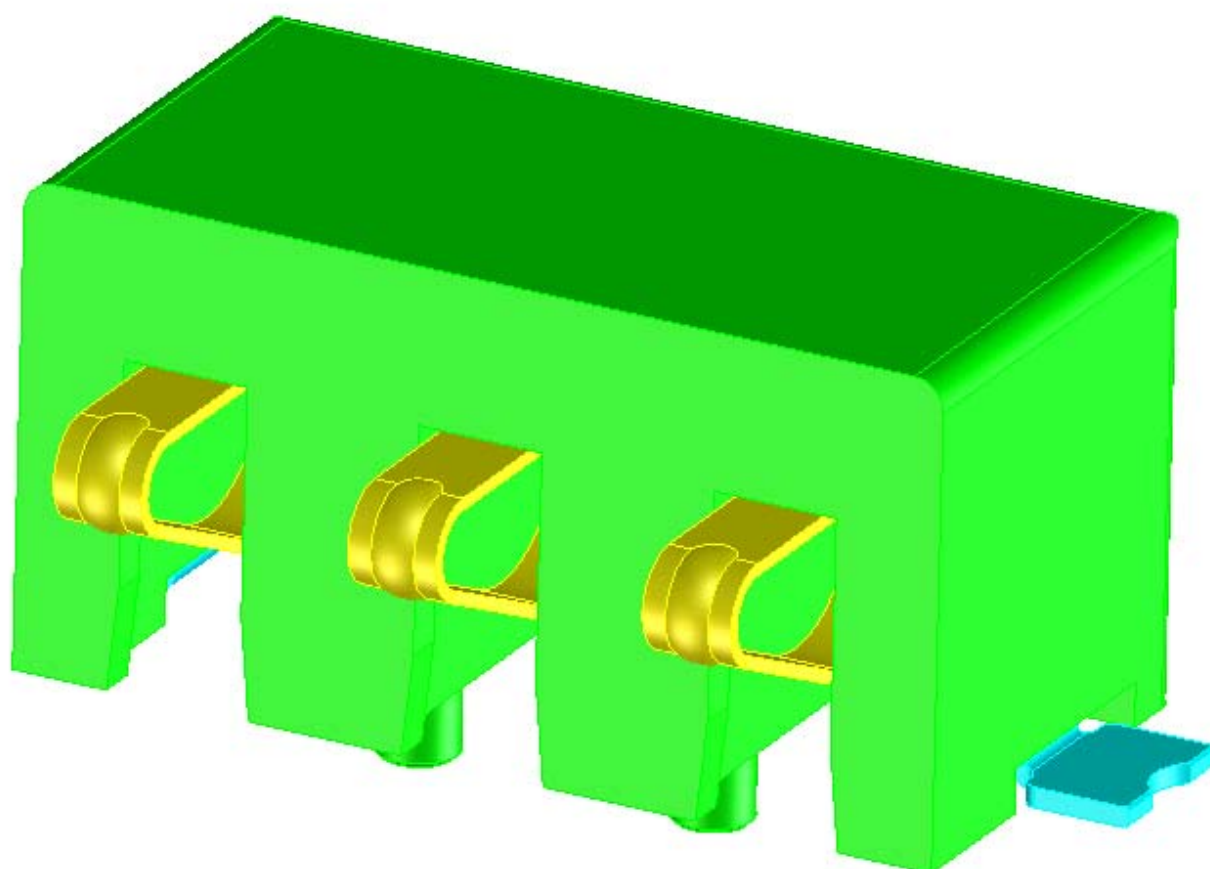


AcRON PRODUCT SPECIFICATION

PRODUCT NAME: 3 PIN 3.0mm PITCH BATTERY CONNECTOR

PRODUCT NO: BTM21 SERIES



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| A | EC No: | 3 PIN 3.0mm PITCH BATTERY CONNECTOR | 1 of 6 |
| | DATE: 2009/03/02 | | |
| DOCUMENT NUMBER: | CREATED / REVISED BY: | CHECKED BY: | APPROVED BY: |
| PS-BC-0022 | ANNE.YANG | KIMI.HSU | TONY.CHANG |



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the performance requirements for 3pin 3.00mm pitch battery connector series. .

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

3 pin 3.0mm pitch battery connector **BTM12** 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 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 | 100 gf / pin Min. | Apply a perpendicular force at 0.95mm from housing. |

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PRODUCT SPECIFICATION

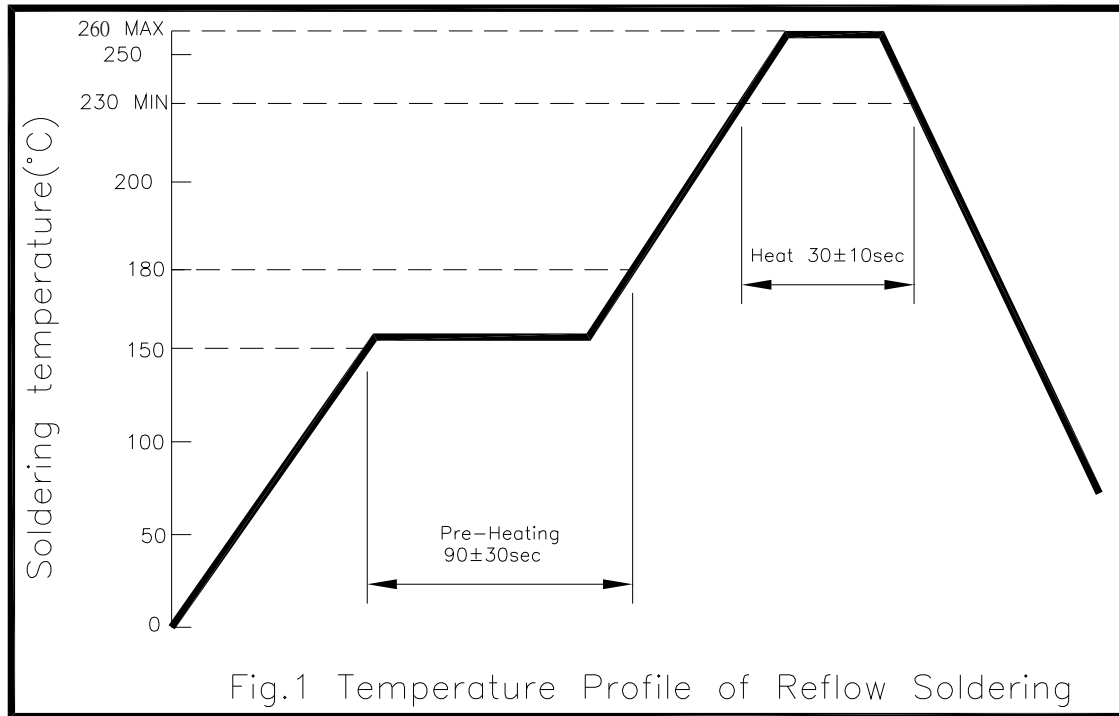
| | | | |
|---------------------------------|--|--|---|
| 10 | Terminal Retention Force (in Housing) | 300 gf / Pin Min. | Axial pullout force on the terminal and nail in the housing at a rate of 25 mm per minute. EIA 364-29 |
| Environment Requirements | | | |
| 11 | Thermal Shock | R: 20 milliohms 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 | 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. 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 | R: 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 | R: 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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