

CRS Precision electronic Co., LTD		Control NO	EI053
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1. SCOPE

This Product Specification covers the 2.50 mm (pitch) printed circuit board (PCB) connector series used to provide electrical connection between the battery and the PCB of mobile phone

2. PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

PRODUCT NAME: 2 circuits battery connector

SERIES NUMBER(S): WB2515H-XXXXXX

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

WB2515H-XXXXX			
NO	DIMENSIONS	MATERIAL	PLATING&COLOR
1	Housing	LCP	UL94V-0 NATURAL
4	terminal	copper alloy	MATTE TIN or Au PLATING

3. APPLICABLE DOCUMENTS AND SPECIFICATIONS

EIA-364.

MIL-STD-202.

MIL-STD-1344A

4. RATINGS

4.1 VOLTAGE

20 Volts RMS at sea level

4.2 CURRENT

3 A PER PIN

4.3 TEMPERATURE

Operating: - 40° C to + 85° C

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5. PERFORMANCE

5.1 APPEARANCE REQUIREMENTS

5.2 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Visual and dimensional inspections	Visual, dimensional and functional per applicable quality inspection plan. EIA 364-18	Meets requirements of product drawing. No physical damage.
2	Contact Resistance	Mate connectors: apply a maximum voltage of 20 mV and a current of 100mA. MIL-STD-1344A, Method 3002.1	40 milliohms MAXIMUM [Initial]
3	Insulation Resistance	Un-mate & un-mount connectors: apply a voltage of 500 VDC for 1 minute between adjacent terminals and between terminals to ground. MIL-STD-202F, Method 302	100 M Ω MINIMUM
4	Withstanding Voltage	Un-mate connectors: apply a voltage of 100 VAC for 1 minute between adjacent terminals and between terminals to ground. MIL-STD-202F, Method 301	No breakdown
5	Temperature Rise	Mate battery and measure the temperature rise of contact, when rated current is passed. Per EIA-364-70 method 1	30°C Max

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5.3 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
6	Durability	Mate connectors up to 3000 cycles at a maximum rate of 200 cycles per hour prior to Environmental Tests. EIA-364-09	Contact Resistance :40 milliohms MAXIMUM
7	Vibration (Sinusoidal) IEC68-2-6Fc	Mate connectors and subject to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes. Frequency: 10-55-10Hz Displacement: 1.52mm(peak-peak) EIA 364-28	Contact Resistance :40 milliohms MAXIMUM Discontinuity < 1 μ S
8	Mechanical Shock	Mate connectors and subject to the following shock conditions. 3 shocks shall be applied along 3 mutually perpendicular axes, passing DC 1mA current during the test. (Total of 18shocks) Test Pulse : Half Sine Peak Value: 490m/s ² (50G) Duration : 11ms MIS-STD-202 Method 213B	Contact Resistance :40 milliohms MAXIMUM Discontinuity < 1 μ S
9	Normal Force (Per Terminal)	Apply a perpendicular force a 0.80 mm deflection	80g Min

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5.4 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
10	Terminal Retention Force	Axial pullout force on the terminal in the housing at a rate of 25 ± 3 mm per minute.	0.2Kgf/PIN Minimum retention force
11	Thermal Shock Thermal Shock	The card shall be mated and exposed to the following condition for 25 cycles. 1 cycle: a) $-40 \pm 3^{\circ}\text{C}$ for 30 minutes b) $+85 \pm 2^{\circ}\text{C}$ for 30 minutes Transit time shall be within 3 minutes, Recovery time 1~2 hours EIA-364-32	Contact Resistance :40 milliohms & Visual: No Damage
12	Humidity	Mate connectors: At a temperature of 25°C ~ 55°C and relative humidity of 90%~95% for 240hrs(10 cycles). (6 hours dwell at the low temperature, 6 hours ramp from the low temperature to high temperature, 6 hours dwell at the high temperature, 6 hours ramp from the high temperature to low temperature.) EIA-364-31	Contact Resistance :40 milliohms & Dielectric Withstanding Voltage: No Breakdown at 100 VAC & Insulation Resistance: 100 Meg-ohms MINIMUM & Visual: No Damage
13	Solder Ability	SMT solder tails into the molten solder (held at $245 \pm 5^{\circ}\text{C}$)up to 0.5 mm from the tip of tails for 3 ± 0.5 seconds.	Contact solder Pad shall have a Min. 95% solder coverage
14	Salt Spray Test	Mated and exposed to the following salt mist conditions. At the completion of the exposure period, salt deposits shall be removed by agentle wash or dip in running water.NaCl solution: Concentration : $5 \pm 1\%$ Spray time : 48h Temperature : $35 \pm 2^{\circ}\text{C}$ EIA-364-26 condition B	Appearance: no damage Contact resistance: Contact Resistance :40 milliohms maximum

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15	Solder Resistance	<p style="text-align: center;">INFRARED REFLOW CONDITIONS</p> <p style="text-align: center;">Preheat temperature : 150~200°C, 120±30sec Peak temperature : 250±5°C, 10±5sec</p>	<p>Visual: No Damage to insulator material</p>
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6. PACKAGING

See packaging specification and package assembly drawing. Parts shall be packaged to protect against damage during handing, transit and storage.

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7. OTHER INFORMATION

Test or Examination	Test Group								
	A	B	C	D	E	F	G	H	I
	Test Sequence (a)								
Examination of Product	1,7	1,7	1,6	1,3	1,3	1,5	1,3	1,5	1,5
Contact Resistance (Low Level)		2,6	2,5			2,4		2,4	2,4
Insulation Resistance	2,5								
Withstanding Voltage	3,6								
Temperature Rise				2					
Durability		4							
Vibration			3						
Mechanical Shock			4						
Normal Force		3,5							
Thermal Shock						3			
Humidity (Cycling Test)	4							3	
Solder-ability							2		
Salt Spray Test									3
Solder Resistance					2				
Sample Size	5	5	5	5	5	5	5	5	5

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