

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For CP20 2.50mm Pitch Battery Connector System</b>	<b>SPEC.NO.: SPCP013C</b>
<b>REVISIONS</b>	<b>ECN10052</b>		<b>PAGE: 1/3</b>

1. SCOPE:

This specification contains the test requirement of subject connectors when tested under the condition and below standards base on CviLux test procedure

2. APPLICABLE STANDARDS:

MIL - STD - 202	Methods for test of connectors for electronic equipment
MIL - STD - 1344	Test methods for electrical connectors
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES No. : CP20 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

5.1 Insulation: High temperature plastic UL 94V-0, Color Black  
5.2 Contact: Copper alloy

6. ACCOMMODATED P.C.BOARD

6.1 Thickness:1.6mm(.063")  
6.2 P.C. Board Layout: See attached drawings



REVIEWED : David APPROVED : Eisley VERIFIED : Sandy.

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**7. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		7A 125V AC (r.m.s.)
7.2	Contact resistance	Dry circuit of DC 20 mV max. 100 mA max.	40 mΩ max.
7.3	Dielectric strength	When applied AC 1000V 1 minute between adjacent terminal	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	100 MΩ min.

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 0.5 Kgf
8.2	Mating force	Speed 25± 3 mm per minute	(0.55 x No. of Contacts) kgf max.
8.3	Unmating force	Speed 25± 3 mm per minute	(0.05 x No. of Contacts) kgf min.
8.4	Durability	Connector shall be subjected to 5000 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial

**9. ENVIRONMENTAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Vibration	1.5mm 10-55-10 HZ/minute each 2hours for X , Y and Z directions	Appearance: No damage Discontinuity 1 micro second max.
9.2	Solder ability	<b>Lead-Free Process:</b> Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 95% of immersed area
9.3	Resistance to soldering heat	<b>Lead-Free Process</b> Soldering time: 5 ± 0.5 second Soldering pot: 260 ± 5°C	No damage
9.4	Heat aging	105± 2°C, 96 hours	No damage



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	ITEM	TEST CONDITION	REQUIREMENT
9.5	Humidity	40±2°C, 90-95% RH, 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: Less than twice of initial Dielectric strength: To pass Para 7-3
9.6	Temperature cycling	5 cycles consists of : (1) -55 <sup>+0</sup> <sub>-3</sub> °C , 30 min. (2)Room temp. 10-15 min. (3) 85 <sup>+3</sup> <sub>-0</sub> °C , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial
9.7	Salt spray	Temperature: 35± 3°C Solution: 5± 1% Spray time: 48± 4 hours Measurement must be taken after water rinse	Appearance: No damage Contact resistance: Less than twice of initial

10. AMBIENT TEMPERATURE RANGE: -40°C ~ +105°C