

<b>ENGINEERING</b>	<b>PRODUCT SPECIFICATION</b>	<b>SPEC.NO.: SPCP001Q</b>
<b>DEPT.</b>	<b>For CP-01 Series Power Connector</b>	<b>PAGE: 1/4</b>

1. SCOPE:

This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size wire

2. APPLICABLE STANDARDS:

MIL - STD - 202                      Methods for test of connectors for electronic equipment  
MIL - STD - 1344                    Test methods for electrical connectors

3. APPLICABLE SERIES NO.: CP-01 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIAL

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 1.6 mm (.063")

6.2 P.C. Board Layout: See attached drawings



REVIEWED :  Alex  APPROVED :  David  VERIFIED :  Sandy  .



ENGINEERING DEPT.	PRODUCT SPECIFICATION For CP-01 Series Power Connector	SPEC.NO.: SPCP001Q			
		PAGE: 2/4			

7. ELECTRICAL PERFORMANCE:

ITEM	TEST CONDITION	REQUIREMENT			
7.1	Rated voltage(max.)	600V AC (r.m.s.)			
Rated Current(max.) and Applicable Wire	Circuits/Wire gage	2	4-6	8-10	12-24
	AWG#16~#18 wire gage	9A	8A	7A	6A
	AWG#20 wire gage	7A	6A	5A	5A
	AWG#22 wire gage	5A	4A	4A	4A
	AWG#24 wire gage	4A	3A	3A	3A
	AWG#26 wire gage	3A	2A	2A	2A
7.2	Contact resistance	Dry circuit of DC 20mV max. , 100mA max., Wire resistance shall be removed from the measured value.			
7.3	Dielectric strength	When applied AC 1500 V 1 minute between adjacent terminal			
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground			

8. MECHANICAL PERFORMANCE:

ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size
8.2	Terminal crimp strength	When crimped AWG#16 size wire
	When crimped AWG#18 size wire	When crimped AWG#20 size wire
	When crimped AWG#22 size wire	When crimped AWG#24 size wire
	When crimped AWG#26 size wire	
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing
8.5	Single contact insertion force	Measure force to insertion using mating square pin at speed 25± 3 mm per minute
8.6	Single contact withdrawal force	Measure force to withdrawal using mating square pin at speed 25± 3 mm per minute
8.7	Durability	Connector shall be subjected to 100 cycles of insertion and withdrawal

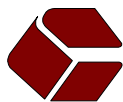


ENGINEERING DEPT.	PRODUCT SPECIFICATION For CP-01 Series Power Connector	SPEC.NO.: SPCP001Q
		PAGE: 3/4

8.8	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 1.0 Kgf
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9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Temperature rise	Then carried the rated current	30°C max.
9.2	Vibration	1.5 mm 10-55-10 HZ/minute each 2 hours for X, Y and Z directions	Appearance: No damage Discontinuity: 1 micro second max.
9.3	Solder ability	<b>Tin-Lead Process:</b> Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	<b>Tin-Lead Process:</b> Soldering time: 5 ± 0.5 second Soldering pot: 240 ± 5°C	No damage
9.5	Heat aging	105± 2°C, 96 hours ( UL 94V-0 ) 85± 2°C, 96 hours ( UL 94V-2 )	No damage
9.6	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
9.7	Temperature cycling	One cycle consists of (UL 94V-0): (1)-40 <sup>+0</sup> <sub>-3</sub> °C , 30 min. (2)Room temp. 10-15 min. (3) 105 <sup>+3</sup> <sub>-0</sub> °C , 30 min. (4)Room temp. 10-15 min.  One cycle consists of (UL 94V-2): (1)-25 <sup>+0</sup> <sub>-3</sub> °C , 30 min. (2)Room <sup>-3</sup> 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
9.8	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



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<b>DEPT.</b>	<b>For CP-01 Series Power Connector</b>	<b>PAGE: 4/4</b>

10. AMBIENT TEMPERATURE RANGE: -40 to + 105°C (UL 94V-0)  
-25 to + 85°C (UL 94V-2)

11. MATING FORCE AND UNMATING FORCE: Unit: Kgf

Number of Circuits	Mating Force ( Max. )	Unmating Force ( Min. )
2	1.8	0.25
4	2.6	0.5
6	4.1	0.8
8	5.5	1.2
10	6.8	1.6
12	8.3	2.0
14	9.7	2.4
16	11.0	2.8
18	12.5	3.2
20	13.8	3.6
22	15.2	4.1
24	16.5	4.6