ENGINEERING	PRODUCT SPECIFICATION	SPEC.NO.:	SPCP084B
DEPT.	For CP-01 Series Power Connector	PAGE:	1/4

#### 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.: P/N: CP-013\*\*\*WR-NH

P/N: CP-013\*\*\*Z0-R0-NH P/N: CP-013\*\*1\*0-NH P/N: CP-013\*\*15A

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: Eisley APPROVED: Eisley VERIFIED: Hank.



ENGINEERING	PRODUCT SPECIFICATION	SPEC.NO.: SPCP084B
DEPT.	For CP-01 Series Power Connector	PAGE: 2/4

# 7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	F	REQUIF	REMEN	ΙΤ
7.1	Rated voltage(max.)		(	500V A	C (r.m.s	s.)
		Circuits/Wire gage	2	4-6	8-10	12-24
		AWG#16~#18 wire gage	9A	8A	7A	6A
	Rated Current(max.)	AWG#20 wire gage	7A	6A	5A	5A
	and Applicable Wire	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 shell be removed from the measured value.	Less than $10 \text{ m}\Omega$			
7.3	Dielectric strength	When applied AC 1500 V 1 minute between adjacent terminal	No change			
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than $1000 \text{ M}\Omega$		2	

## 8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#16-#26
8.2	Terminal crimp strength	When crimped AWG#16 size wire	More than 11.0 Kgf
		When crimped AWG#18 size wire	More than 9.0 Kgf
		When crimped AWG#20 size wire	More than 7.0 Kgf
		When crimped AWG#22 size wire	More than 5.0 Kgf
		When crimped AWG#24 size wire	More than 3.0 Kgf
		When crimped AWG#26 size wire	More than 2.0 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.5 Kgf
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 5.0 Kgf
8.5	Single contact insertion force	Measure force to insertion using mating square pin at speed 25± 3 mm per minute	700 gram max.
8.6	Single contact withdrawal force	Measure force to withdrawal using mating square pin at speed 25± 3 mm per minute	100 gram min.
8.7	Durability	Connector shall be subjected to 100 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial



ENGINEERING	PRODUCT SPECIFICATION	SPEC.NO.:	SPCP084B
DEPT.	For CP-01 Series Power Connector	PAGE:	3/4

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

# 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	Solderability	Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	Soldering time: 5± 0.5 second Soldering pot: 260± 5°C	No damage
9.5	Heat aging	105± 2°C, 96 hours	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	Five cycle consists of  (1)-55 +0 °C, 30 min.  (2)Room temp. 10-15 min.  (3) 85 +3 °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

10. AMBIENT TEMPERATURE RANGE: -25 to + 105°C



ENGINEERING	PRODUCT SPECIFICATION	SPEC.NO.:	SPCP084B
DEPT.	For CP-01 Series Power Connector	PAGE:	4/4

Unit: Kgf

## 11. MATING FORCE AND UNMATING FORCE:

Number of	Mating Force	Unmating Force
Circuits	(Max.)	( 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