

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For CP60 Series Power Connector</b>	<b>SPEC.NO.:</b>	<b>SPCP0981</b>
<b>REVISIONS</b>	-		<b>PAGE:</b>	<b>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
EIA - 364	Test methods for electrical connectors
J-STD-020	Resistance to soldering Temperature for through hole Mounted Devices
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO.: CP60 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

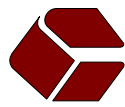
6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 1.6 mm (.063")

6.2 P.C. Board Layout: See attached drawings



REVIEWED : Eisley APPROVED : Clark VERIFIED : Clark .



ENGINEERING DEPT.		PRODUCT SPECIFICATION For CP60 Series Power Connector	SPEC.NO.:	SPCP0981
REVISIONS	-		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	12
	AWG#12 wire gage, 4.00 mm <sup>2</sup>	23A	20A	18A	16A
	AWG#14 wire gage, 2.50 mm <sup>2</sup>	21A	17A	15A	13A
	AWG#16 wire gage, 1.50 mm <sup>2</sup>	17A	15A	13A	12A
<b>Suggestion</b>	<b>Highly suggest using Cvilux wire and board side together, it can secure the application safety.</b>				
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 2200 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#12 or 4.00mm <sup>2</sup>
		When crimped AWG#14 or 2.50mm <sup>2</sup>
		When crimped AWG#16 or 1.50mm <sup>2</sup>
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing
8.4	Terminal retaining force in insulator	Retention speed 25± 3 mm per minute from Wire to Wire 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



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<b>REVISIONS</b>	-		<b>PAGE:</b>	<b>3/4</b>

	ITEM	TEST CONDITION	REQUIREMENT
8.7	Pin retention force in Board mount Header	Push Pin for insulator base at speed 25± 3 mm per minute	Right Angle type: More than 1.0 Kgf (9.81 N) Straight type: More than 9.078 Kgf (89 N)
8.8	Durability	Connector shall be subjected to 25 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial
8.9	Locking force	While with drawing plug & receptacle without terminal at speed 25± 3 mm per minute	More than 6.936 Kgf (68 N)

8.10 Insertion Force and Withdrawal Force :

NO. OF CIRCUITS	INSERTION FORCE (Max.)	WITHDRAWAL FORCE (Latch disabled)
2	1.224 kgf (12.0 N)	0.30~1.142 kgf (2.9~11.2 N)
4	2.448 kgf (24.0 N)	0.60~2.285 kgf (5.9~22.4 N)
6	3.672 kgf (36.0 N)	0.90~3.427 kgf (8.8~33.6 N)
8	4.896 kgf (48.0 N)	1.20~4.570 kgf (11.8~44.8 N)
10	6.120 kgf (60.0 N)	1.50~5.712 kgf (14.7~56.0 N)
12	7.344 kgf (72.0 N)	1.80~6.854 kgf (17.6~67.2 N)

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	Heat aging	105± 2°C, 240 hours	No damage
9.4	Cyclic Temperature & Humidity test	25°C 80% RH to 65°C 50% RH Total cycles: 24 cycles	Appearance: No damage Contact resistance: Less than twice of initial



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<b>REVISIONS</b>	-		<b>PAGE:</b>	<b>4/4</b>

	ITEM	TEST CONDITION	REQUIREMENT
9.5	Temperature cycling	One cycle consists of : (1) -55 +0/-3 °C , 30 min. (2) Room temp. 10-15 min. (3) 85 +3/-0 °C , 30 min. (4) Room temp. 10-15 min. Total cycles: 10 cycles	Appearance: No damage Contact resistance: Less than twice of initial
9.6	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
9.7	Solder ability	Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area
9.8	Resistance to soldering heat	Soldering time: 5 ± 0.5 second Soldering pot: 260 ± 5°C	No damage

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