

<b>ENGINEERING</b>	<b>PRODUCT SPECIFICATION</b>	<b>SPEC.NO.: SPCP037A</b>
<b>DEPT.</b>	<b>For CP05 Straight DIP Type 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
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.: CP05 Straight DIP Type Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 P.C. Board Layout: See attached drawings



REVIEWED :  Alex  APPROVED :  David  VERIFIED :  Hank  .



<b>ENGINEERING DEPT.</b>	<b>PRODUCT SPECIFICATION For CP05 Series Power Connector</b>	<b>SPEC.NO.: SPCP037A</b>
		<b>PAGE: 2 / 4</b>

7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1.0A (AWG #24) , 1400V AC/DC
7.2	Contact resistance	Dry circuit of DC 20mV max. , 100mA max., Wire resistance shall be removed from the measured value.	Less than 10 mΩ
7.3	Dielectric strength	When applied AC 3000 V 1 minute between adjacent terminal	No Breakdown
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 1000 MΩ

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	
8.1	Wire size	Specified wire size	Accepts AWG#24-#28	
8.2	Terminal crimp strength	When crimped AWG#24 size wire	More than 3 kgf.	
		When crimped AWG#26 size wire	More than 2 kgf	
		When crimped AWG#28 size wire	More than 1.3 kgf	
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 0.5 Kgf	
8.4	Terminal retaining force in insulator	Retention speed 25± 3 mm per minute from Wire to Wire Housing	More than 1.0 kgf	
8.5	Single contact insertion force	Measure force to insertion using mating square pin at speed 25± 3 mm per minute	500 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	Pin retention force in Board mount Header	Push Pin from insulator base at speed 25± 3 mm per minute	More than 0.7 kgf	
8.8	Mating and Unmating force	Speed 25± 3 mm per minute	Mating (Max.)	Unmating (Min.)
			2.5 kgf	0.5 kgf
8.9	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Contact resistance: Less than twice of initial	



<b>ENGINEERING</b> <b>DEPT.</b>	<b>PRODUCT SPECIFICATION</b>	<b>SPEC.NO.: SPCP037A</b>
	<b>For CP05 Series Power Connector</b>	<b>PAGE: 3 / 4</b>

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	85± 2°C, 96 hours	No damage
9.4	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
9.5	Temperature cycling	One cycle 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. Total cycle: 5 cycle	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	Lead-Free Process Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area



<b>ENGINEERING</b>	<b>PRODUCT SPECIFICATION</b>	<b>SPEC.NO.: SPCP037A</b>
<b>DEPT.</b>	<b>For CP05 Series Power Connector</b>	<b>PAGE: 4 / 4</b>

	ITEM	TEST CONDITION	REQUIREMENT
9.8	Resistance to soldering heat	<b>DIP Type Lead-Free Process:</b> Soldering time: $5 \pm 0.5$ second Soldering pot: $260 \pm 5^{\circ}\text{C}$	No damage

10. AMBIENT TEMPERATURE RANGE:  $-25$  to  $+85^{\circ}$