

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For 1.25mm Pitch</b> <b>Wire to Board Connector of CI42 System</b>	<b>SPEC.NO.: SPCI073C</b>
<b>REVISIONS</b>	<b>ECNT121010</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
EIA - 364	Test methods for electrical connectors
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO.: CI42 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:   Sun   VERIFIED:   Eric   .

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For 1.25mm Pitch</b> <b>Wire to Board Connector of CI42 System</b>	<b>SPEC.NO.: SPCI073C</b>
<b>REVISIONS</b>	<b>ECNT121010</b>		<b>PAGE: 2/4</b>

**7. ELECTRICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1A 200V AC (r.m.s.)
7.2	Contact resistance	Dry circuit of DC 20 mV max. , 10 mA max.	Less than 20 mΩ
7.3	Dielectric strength	When applied AC 500 V 1 minute between adjacent terminal	No change
7.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 100 MΩ

**8. MECHANICAL PERFORMANCE:**

	ITEM	TEST CONDITION	REQUIREMENT																		
8.1	Wire size	Specified wire size	Accepts AWG#28~#32																		
8.2	Terminal crimp Tensile strength	When crimped AWG#28 size wire When crimped AWG#30 size wire When crimped AWG#32 size wire	More than 1.3 Kgf More than 0.8 Kgf More than 0.6 Kgf																		
8.3	Pin retention force	Push pin from insulator base at speed 25± 3 mm per minute	More than 0.4 Kgf																		
8.4	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 0.5 Kgf																		
8.5	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 0.5 Kgf																		
8.6	Mating & Unmating Force	Measure the force required to mating & unmating connector at speed 25± 3 mm per minute(Used ACES Housing & Terminal)	<table border="1"> <thead> <tr> <th colspan="2">Mating force</th> </tr> </thead> <tbody> <tr> <td>2~3P</td> <td>0.8 kgf Max.</td> </tr> <tr> <td>4~8P</td> <td>1.5 kgf Max.</td> </tr> <tr> <td>9P</td> <td>2.0 kgf Max.</td> </tr> <tr> <td>10P</td> <td>4.0 kgf Max.</td> </tr> <tr> <th colspan="2">Unmating force</th> </tr> <tr> <td>2~5P</td> <td>0.5 kgf Min.</td> </tr> <tr> <td>6~9P</td> <td>0.8 kgf Min.</td> </tr> <tr> <td>10P</td> <td>1.0 kgf Min.</td> </tr> </tbody> </table>	Mating force		2~3P	0.8 kgf Max.	4~8P	1.5 kgf Max.	9P	2.0 kgf Max.	10P	4.0 kgf Max.	Unmating force		2~5P	0.5 kgf Min.	6~9P	0.8 kgf Min.	10P	1.0 kgf Min.
Mating force																					
2~3P	0.8 kgf Max.																				
4~8P	1.5 kgf Max.																				
9P	2.0 kgf Max.																				
10P	4.0 kgf Max.																				
Unmating force																					
2~5P	0.5 kgf Min.																				
6~9P	0.8 kgf Min.																				
10P	1.0 kgf Min.																				
8.7	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal (repeatedly by the rate of 10 cycles per minute)	Contact resistance: Less than twice of initial																		

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For 1.25mm Pitch</b> <b>Wire to Board Connector of CI42 System</b>	<b>SPEC.NO.: SPCI073C</b>
<b>REVISIONS</b>	<b>ECNT121010</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	Solder ability	<b>Lead-Free Process:</b> Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5° C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	<b>Lead-Free Process for SMT Type:</b> Refer Reflow temperature profile(11.1)	Appearance: No damage Contact resistance: To pass para 7-2
9.5	Heat aging	85 ± 2° C , 96 hours	Appearance: No damage Dielectric strength: To pass para 7-3 Insulation resistance: More than 100 MΩ Contact resistance: Less than twice of initial
9.6	Humidity	40 ± 2° C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Dielectric strength: To pass para 7-3 Insulation resistance: More than 100 MΩ Contact resistance: Less than twice of initial
9.7	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.	Appearance: No damage Dielectric strength: To pass para 7-3 Insulation resistance: More than 100 MΩ Contact resistance: Less than twice of initial

<b>ENGINEERING DEPT.</b>		<b>PRODUCT SPECIFICATION</b> <b>For 1.25mm Pitch</b> <b>Wire to Board Connector of CI42 System</b>	<b>SPEC.NO.: SPCI073C</b>
<b>REVISIONS</b>	<b>ECNT121010</b>		<b>PAGE: 4/4</b>

	ITEM	TEST CONDITION	REQUIREMENT
9.8	Salt spray	<p>Temperature: <math>35 \pm 3^\circ\text{C}</math>            Solution: <math>5 \pm 1\%</math>            Spray time: <math>48 \pm 4</math> hours            (Stamping before plated)            Spray time: <math>24 \pm 4</math> hours            (Stamping after plated)</p> <p>Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water and dried naturally, after which the specified measurements shall be performed.</p> <p>The specimens shall be suspended from the top using waxed twine, string or nylon thread.</p> <p>The test only define the plating area, without plating area (as copper cross section) will not be defined.</p> <p>(EIA 364-26B / MIL-STD-202 Method 101)</p>	<p>Appearance: No damage            Contact resistance:            Less than twice of initial</p>

10. AMBIENT TEMPERATURE RANGE:  $-55$  to  $+85^\circ\text{C}$

11. Recommended IR Reflow Temperature Profile:

11.1 Using Lead-Free Solder Paste

