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| <b>ENGINEERING</b><br><br><b>DEPT.</b> | <b>PRODUCT SPECIFICATION</b><br><br><b>For CI14 SMT H Type Series Connector System</b> | <b>SPEC.NO.: SPCI077B</b><br><br><b>PAGE: 1/5</b> |
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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: CI14 SMT H Type Series

Header P/N:CI14\*\*M1HR\*-NH  
Housing P/N:CI14\*\*S\*000-NH  
Terminal P/N:CI14T011PE0

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 0.6 mm (.024") ~ 1.2 mm (.047"),1.6mm(.063")  
6.2 P.C. Board Layout: See attached drawings



REVIEWED :   Alex   APPROVED :   David   VERIFIED :   William

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**7. ELECTRICAL PERFORMANCE:**

|     | ITEM                      | TEST CONDITION   | REQUIREMENT  |
|-----|---------------------------|--|--|
| 7.1 | Rated current and voltage |  | 1.0A AC (r.m.s.)/DC<br>(AWG#28)<br>125V AC (r.m.s.)/DC |
| 7.2 | Contact resistance        | Dry circuit of DC 20 mV max. , 100 mA max.(JIS C5402 5.4)  | Less than 20 mΩ  |
| 7.3 | Dielectric strength       | When applied AC 500 V 1 minute between adjacent terminal(JIS C5402 5.2/MIL-STD 202 method 302 Cond. B) | No change  |
| 7.4 | Insulation resistance     | When applied DC 500 V between adjacent terminal or ground (JIS C5402 5.2/MIL-STD 202 method 301)       | 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<br>When crimped AWG#30 size wire<br>When crimped AWG#32 size wire                        | More than 1.3 Kgf<br>More than 0.8 Kgf<br>More than 0.6 Kgf |
| 8.3 | Terminal retaining force in insulator | Retention speed 25± 3 mm per minute from housing   | More than 0.60 Kgf  |
| 8.4 | Mating & Un-mating force              | Insert and withdraw connector at speed of 25 ± 3 mm per minute   | See Item 11   |
| 8.5 | Durability                            | Connector shall be subjected to 30 cycles of insertion and withdrawal (repeatedly by the rate of 10 cycles per minute) | Contact resistance:<br>Less than twice of initial           |
| 8.6 | Pin retention force                   | Push pin from insulator base at speed 25± 3 mm per minute  | More than 0.40 Kgf  |
| 8.7 | Locking force                         | While withdrawing plug & receptacle without terminal at speed 25±3 mm per minute                                       | More than 3 Kgf   |

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9. ENVIRONMENTAL PERFORMANCE:

|     | ITEM                         | TEST CONDITION  | REQUIREMENT  |
|-----|------------------------------|---|--|
| 9.1 | Temperature rise             | Then carried the rated current (UL 498)   | 30°C max.  |
| 9.2 | Vibration                    | 1.5 mm 10-55-10 HZ / minute each<br>2 hours for X , Y and Z directions<br>(MIL-STD-202,method 201A)   | Appearance: No damage<br>Discontinuity:<br>1 micro second max.   |
| 9.3 | Solder ability               | Lead-Free Process for SMT Type:<br>Soldering time: 3 ± 0.5 second<br>Soldering pot: 245 ± 5°C   | Minimum:<br>90% of immersed area   |
| 9.4 | Resistance to soldering heat | Refer Reflow temperature profile  | No damage  |
| 9.5 | Heat aging                   | 85 ± 2°C , 96 hours(JIS C0021/MIL-STD-202,method 108A,condition A)  | No damage<br>Contact resistance:<br>Less than twice of initial   |
| 9.6 | Humidity                     | 60 ± 2°C , 90-95% RH , 96 hours<br>measurement must be taken within 30 min.<br>after tested (JIS C0020/MIL-STD-202,<br>method 103 B, condition B)   | Appearance: No damage<br>Contact resistance:<br>Less than twice of initial<br>Insulation resistance:<br>To pass Para 7-4 |
| 9.7 | Temperature cycling          | Five cycle consists of :(JIS C0025)<br>(1)-55 <sup>+0</sup> / <sub>-3</sub> °C , 30 min.<br>(2)Room temp. 10-15 min.<br>(3) 85 <sup>+3</sup> / <sub>-0</sub> °C , 30 min.<br>(4)Room temp. 10-15 min. | Appearance: No damage<br>Contact resistance:<br>Less than twice of initial   |
| 9.8 | Salt spray                   | Temperature: 35 ± 2°C<br>Solution: 5 ± 1%<br>Spray time: 48 ± 4 hours<br>Measurement must be taken after water<br>rinse(JIS C5028/MIL-STD-202,<br>method 101 D, condition B)                          | Appearance: No damage<br>Contact resistance:<br>Less than twice of initial   |

10. AMBIENT TEMPERATURE RANGE: -25 to + 85°C



|                    |  |                           |
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11.Mating and Un-mating Force(Remove Latch):

| PIN No. | At Initial       |                     | At 30th             |
|---------|------------------|---------------------|---------------------|
|         | Mating(kgf max.) | Un-mating(kfg min.) | Un-mating(kfg min.) |
| 2       | 2.00             | 0.20                | 0.20                |
| 3       | 2.00             | 0.20                | 0.20                |
| 4       | 2.00             | 0.20                | 0.20                |
| 5       | 3.00             | 0.30                | 0.30                |
| 6       | 3.00             | 0.30                | 0.30                |
| 7       | 3.00             | 0.30                | 0.30                |
| 8       | 4.00             | 0.40                | 0.40                |
| 9       | 4.00             | 0.40                | 0.40                |
| 10      | 4.00             | 0.40                | 0.40                |
| 11      | 5.00             | 0.50                | 0.50                |
| 12      | 5.00             | 0.50                | 0.50                |
| 13      | 5.00             | 0.50                | 0.50                |
| 14      | 6.00             | 0.60                | 0.60                |
| 15      | 6.00             | 0.60                | 0.60                |
| 16      | 6.00             | 0.60                | 0.60                |
| 17      | 7.00             | 0.70                | 0.70                |
| 18      | 7.00             | 0.70                | 0.70                |
| 19      | 7.00             | 0.70                | 0.70                |
| 20      | 8.00             | 0.80                | 0.80                |

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12. Recommended IR Reflow Temperature Profile:  
 12.1 Using Lead-Free Solder Paste

