| ENGINEERING | PRODUCT SPECIFICATION | SPEC．NO．：SPCD016B |
| :---: | :---: | :---: |
| DEPT． | For Board Mount Combination High Power D－Sub <br> Connector | PAGE： $1 / 3$ |

1．SCOPE：
This specification contains the test requirement of subject connectors when tested under the condition and below standards base on CviLux test procedure
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．：5W1，3W3，7W2，5W5，8W8，9W4，11W1，13W3，13W6，17W5，17W2， 21W1，21W4，24W7，25W3，27W2，36W4，43W2，3W3C，C3W3，C5W5， C7W2，C8W8，and CHPT Series
4．SHAPE，CONSTRUCTION AND DIMENSIONS
See attached drawings
5．MATERIALS
See attached drawings
6．ACCOMMODATED P．C．BOARD
$1.2 \mathrm{~mm}(.047$＂）～ 2.0 mm （．079＂）

REVIEWED ：Alex
APPROVED ：David
VERIFIED：Rita．

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7．ELECTRICAL PERFORMANCE：

|  | ITEM | TEST CONDITION | REQUIREMENT |
| :--- | :--- | :--- | :--- |
| 7.1 | Signal contact rated <br> current and voltage |  | 3A 250V AC（r．m．s．） |
| 7.2 | Signal contact resistance | Dry circuit of DC 20 mV max．， 100 mA max． | Less than $10 \mathrm{~m} \Omega$ |
| 7.3 | Dielectric strength <br> （Sea Level） | When applied AC 1000 V 1 minute between <br> adjacent terminal | No change |
| 7.4 | Insulation resistance | When applied DC 500 V between adjacent <br> terminal or ground | More than $5000 \mathrm{M} \Omega$ |
| 7.5 | High power contact <br> current rating |  | 20 Amps or 40 Amps |
| 7.6 | High power contact <br> resistance | Dry circuit of DC 20 mV max．， 100 mA max． | Less than $2.7 \mathrm{~m} \Omega$ |

8．MECHANICAL PERFORMANCE：

|  | ITEM | TEST CONDITION | REQUIREMENT |
| :--- | :--- | :--- | :--- |
| 8.1 | Contact retaining force <br> in insulator | Retention speed $25 \pm 3 \mathrm{~mm}$ per minute from <br> housing | More than 4．5 Kgf |
| 8.2 | Signal contact insertion <br> force | Measure force to insertion using $\varnothing 1.04 \mathrm{~mm}$ <br> test pin at speed $25 \pm 3 \mathrm{~mm}$ per minute | 340 gram max．Per <br> contact |
| 8.3 | Signal contact <br> withdrawal force | Measure force to withdrawal using $\varnothing 0.99$ <br> mm test pin at speed $25 \pm 3$ mm per minute | 28 gram min．Per contact |
| 8.4 | High power contact <br> insertion force | Measure force to insertion using plug <br> terminal at speed $25 \pm 3$ mm per minute | 1.2 Kgf max．Per contact |
| 8.5 | High power contact <br> withdrawal force | Measure force to withdrawal using plug <br> terminal at speed $25 \pm 3$ mm per minute | 0．2 Kgf min．Per contact |
| 8.6 | Mating and unmating <br> force | Speed $25 \pm 3$ mm per minute | 17.0 Kgf max． |
| 8.7 | Durability | Connector shall be subjected to 100 cycles of <br> insertion and withdrawal | Contact resistance： <br> Less than twice of initial |

9．ENVIRONMENTAL PERFORMANCE：

|  | ITEM | TEST CONDITION | REQUIREMENT |
| :--- | :--- | :--- | :--- |
| 9.1 | Temperature rise | Then carried the rated current | $30^{\circ} \mathrm{C}$ max． |
| 9.2 | Vibration | $1.5 \mathrm{~mm} 10-55-10 \mathrm{HZ} /$ minute each <br> 2 hours for $\mathrm{X}, \mathrm{Y}$ and Z directions | Appearance：No damage <br> Discontinuity： <br> 1 micro second max． |


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|  | ITEM | TEST CONDITION | REQUIREMENT |
| :---: | :---: | :---: | :---: |
| 9.3 | Solder ability | Soldering time： $5 \pm 0.5$ second Soldering pot： $230 \pm 5^{\circ} \mathrm{C}$ | Minimum： <br> 90\％of immersed area |
| 9.4 | Resistance to soldering heat | Soldering time： $5 \pm 0.5$ second <br> Soldering pot： $260 \pm 5^{\circ} \mathrm{C}$ | No damage |
| 9.5 | Heat aging | $125 \pm 2^{\circ} \mathrm{C}, 96$ hours | No damage |
| 9.6 | Humidity | $40 \pm 2^{\circ} \mathrm{C}, 90-95 \% \mathrm{RH}, 96$ hours measurement must be taken within 30 min ． after tested | Appearance：No damage <br> Contact resistance： <br> Less than twice of initial Dielectric strength： <br> To pass para 7－3 |
| 9.7 | Temperature cycling | One cycle consists of ： <br> （1）$-55_{-3}^{+0}{ }^{\circ} \mathrm{C}, 30 \mathrm{~min}$ ． <br> （2）Room temp．10－15 min． <br> （3） $85{ }_{-0}^{+3}{ }^{\circ} \mathrm{C}, 30 \mathrm{~min}$ ． <br> （4）Room temp．10－15 min． | Appearance：No damage <br> Contact resistance： <br> Less than twice of initial |
| 9.8 | Salt spray | Temperature： $35 \pm 3^{\circ} \mathrm{C}$ <br> Solution： $5 \pm 1 \%$ <br> Spray time： $48 \pm 4$ hours <br> Measurement must be taken after water rinse | Appearance：No damage <br> Contact resistance： <br> Less than twice of initial |

10 AMBIENT TEMPERATURE RANGE：-55 to $+125^{\circ} \mathrm{C}$

