

| | | | |
|-------------------|------------|--|--------------------|
| ENGINEERING DEPT. | | PRODUCT SPECIFICATION For Solder & Straight Dip D-Sub Connector of system CD53 | SPEC.NO.: SPCD029C |
| REVISIONS | ECNT120078 | | PAGE: 1/4 |

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

EIA - 364

Test methods for electrical connectors

SS-00254

Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO.: **CD53 Series**

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

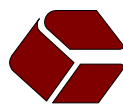
5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

1.6 mm (.063")

REVIEWED : Eisley APPROVED : Sun VERIFIED : Michelle .



| | | | |
|-------------------|------------|--|--------------------|
| ENGINEERING DEPT. | | PRODUCT SPECIFICATION For Solder & Straight Dip D-Sub Connector of system CD53 | SPEC.NO.: SPCD029C |
| REVISIONS | ECNT120078 | | PAGE: 2/4 |

7. ELECTRICAL PERFORMANCE:

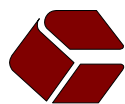
| | ITEM | TEST CONDITION | REQUIREMENT |
|-----|---------------------------|---|---------------------|
| 7.1 | Rated current and voltage | | 3A 250V AC (r.m.s.) |
| 7.2 | Contact resistance | Dry circuit of DC 20 mV max. , 100 mA max. | Less than 20 mΩ |
| 7.3 | Dielectric strength | When applied AC 1000 V 1 minute between adjacent terminal | No change |
| 7.4 | Insulation resistance | When applied DC 500 V between adjacent terminal or ground | More than 5000 MΩ |

8. MECHANICAL PERFORMANCE:

| | ITEM | TEST CONDITION | REQUIREMENT |
|-----|--------------------------------------|--|---|
| 8.1 | Contact retaining force in insulator | Retention speed 25 ± 3 mm per minute from housing | More than 4.0 Kgf |
| 8.2 | Single contact insertion force | Measure force to insertion using $\varnothing 1.04$ mm test pin at speed 25 ± 3 mm per minute | 340 gram max. |
| 8.3 | Single contact withdrawal force | Measure force to withdrawal using $\varnothing 0.99$ mm test pin at speed 25 ± 3 mm per minute | 28 gram min. |
| 8.4 | Durability | Connector shall be subjected to 100 cycles of insertion and withdrawal | Contact resistance: Less than twice of initial |

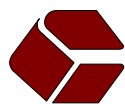
9. ENVIRONMENTAL PERFORMANCE:

| | 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 | Tin-Lead Process: Soldering time: 5 ± 0.5 second Soldering pot: $230 \pm 5^{\circ}\text{C}$ Lead-Free Process: Soldering time: 3 ± 0.5 second Soldering pot: $245 \pm 5^{\circ}\text{C}$ | Minimum: 90% of immersed area |



| | | | |
|-------------------|------------|--|--------------------|
| ENGINEERING DEPT. | | PRODUCT SPECIFICATION For Solder & Straight Dip D-Sub Connector of system CD53 | SPEC.NO.: SPCD029C |
| REVISIONS | ECNT120078 | | PAGE: 3/4 |

| | ITEM | TEST CONDITION | REQUIREMENT |
|-----|------------------------------|---|--|
| 9.4 | Resistance to soldering heat | Tin-Lead Process: Soldering time: 5 ± 0.5 second Soldering pot: $240 \pm 5^{\circ}\text{C}$ Lead-Free Process Soldering time: 5 ± 0.5 second Soldering pot: $260 \pm 5^{\circ}\text{C}$ | No damage |
| 9.5 | Heat aging | $105 \pm 2^{\circ}\text{C}$, 96 hours | No damage |
| 9.6 | Humidity | $40 \pm 2^{\circ}\text{C}$, 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 |
| 9.7 | Temperature cycling | One cycle consists of : (1) -55^{+0}_{-3} $^{\circ}\text{C}$, 30 min. (2) Room temp. 10-15 min. (3) 85^{+3}_{-0} $^{\circ}\text{C}$, 30 min. (4) Room temp. 10-15 min. | Appearance: No damage Contact resistance: Less than twice of initial |
| 9.8 | Salt spray | Temperature: $35 \pm 3^{\circ}\text{C}$ Solution: $5 \pm 1\%$ Spray time: 48 ± 4 hours (Stamping before plated) Spray time: 24 ± 4 hours (Stamping after plated) 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. The specimens shall be suspended from the top using waxed twine, string or nylon thread. The test only define the plating area, without plating area (as copper cross section) will not be defined. (EIA 364-26B / MIL-STD-202 Method 101) | Appearance: No damage Contact resistance: Less than twice of initial |



| | | | |
|-------------------|------------|--|--------------------|
| ENGINEERING DEPT. | | PRODUCT SPECIFICATION For Solder & Straight Dip D-Sub Connector of system CD53 | SPEC.NO.: SPCD029C |
| REVISIONS | ECNT120078 | | PAGE: 4/4 |

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

11. MATING FORCE AND UNMATING FORCE:

Unit: Kgf

| No. of Circuits | Mating Force (Initial max.) | Unmaking Force (Initial max.) |
|-----------------|-------------------------------|---------------------------------|
| 9 | 4.6 | 3.5 |
| 15 | 8.1 | 6.4 |
| 25 | 10.5 | 7.7 |
| 37 | 14.1 | 9.9 |
| 50 | 18.5 | 12.8 |

CviLux