瀚荃股份有限公司
CviLux Corporation

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCU001I
REVISIONS	ECNT120312	For CU01 Series USB Connector Plug & Receptacle	PAGE: 1/5

1. SCOPE:
   This specification covers performance, tests and quality requirements for Universal Serial Bus (USB) plug and receptacle connectors. These connectors are cable mounted plug and PC Board mounted receptacle connectors

2. APPLICABLE STANDARDS:
   EIA 364 Test methods for electrical connectors
   MIL - STD - 202 Methods for test of connectors for electronic equipment

3. APPLICABLE SERIES NO.: **CU01 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

CVILUX CORP
2021.03.25
ISSUED

REVIEWED : Eisley APPROVED : Sun VERIFIED : Eric .

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCU001I
REVISIONS	ECNT120312	For CU01 Series USB Connector Plug & Receptacle	PAGE: 2/5

7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1.5A 30V AC (r.m.s.)
7.2	Contact resistance	EIA 364 - 23 Subject mated contacts assembled in housing to 20 mV max. open circuit at 100 mA max.	30 mΩmax.
7.3	Dielectric strength	EIA 364 - 20 Test between adjacent contacts of mated and unmated connector assemblies	750 VAC at sea level
7.4	Insulation resistance	EIA 364 - 20 Test between adjacent contacts of mated and unmated connector assemblies	1000 MΩ min.
7.5	Capacitance	EIA 364 - 30 Test between adjacent circuits of unmated connectors at 1 KHz	2 pF max.

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG #20~#28
8.2	Terminal crimp tensile strength	When crimped AWG #20 size wire When crimped AWG #22 size wire When crimped AWG #24 size wire When crimped AWG #26 size wire When crimped AWG #28 size wire	More than 7.0 Kgf More than 5.0 Kgf More than 3.0 Kgf More than 2.0 Kgf More than 1.3 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into plug housing	Less than 800 gram
8.4	Contact retain force in insulator	Retention speed 25± 3 mm per minute from insulator	Plug: 1.0 Kgf min. Receptacle: 0.8 Kgf min.
8.5	Mating force	EIA 364 - 13 Measure force necessary to mate connector assemblies at maximum rate of 12.5 mm per minute	3.57 Kgf (35N) max.
8.6	Unmating force	EIA 364 - 13 Measure force necessary to unmate connector assemblies at maximum rate of 12.5 mm per minute	1.02 Kgf (10N) min.

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCU001I
REVISIONS	ECNT120312	For CU01 Series USB Connector Plug & Receptacle	PAGE: 3/5

	ITEM	TEST CONDITION	REQUIREMENT
8.7	Cable Retention	Apply axial load of 2.55 Kgf (25N) to the cable	Cable shall not dislodge
8.8	Durability	EIA 364 - 09 Mate and unmate connector assemblies for 1500 cycles at maximum rate of 200 cycles per hour	Appearance: No damage and shall meet para 9.1 , 9.2 , 7.2 , 8.6 & 8.7

9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Vibration	EIA 364 - 28 Condition V Test letter A Subject mated connectors to 5.35 G′s rms Fifteen minutes in each of	No discontinuities of 1 μs or longer duration
9.2	Physical shock	EIA 364 - 27 Condition H Subject mated connectors to 30 G′s half - sine shock pulses of 11 ms duration Three shocks in each direction applied along three mutually perpendicular planes , 18 total shocks	No discontinuities of 1 μs or longer duration
9.3	Solder ability	**Tin-Lead Process** Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C **Lead-Free Process** Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area
9.4	Resistance to soldering heat	**Tin-Lead Process** Soldering time: 5± 0.5 second Soldering pot: 260± 5°C **Lead-Free Process** Refer recommended IR temperature profile	No damage
9.5	Temperature life	EIA 364 - 17 Test Condition 3 Method A Subject mated connectors to temperature life at 85°C for 250 hours Precondition samples with 10 cycles durability	Appearence: No damage and shell meet para 7.2
9.6	Humidity	EIA 364 - 31 Method II Test Condition A Subject mated connectors to 96 hours at 40°C with 90 to 95% RH	Appearance: No damage and shell meet para 7.3 & 7.4

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCU001I
REVISIONS	ECNT120312	For CU01 Series USB Connector Plug & Receptacle	PAGE: 4/5

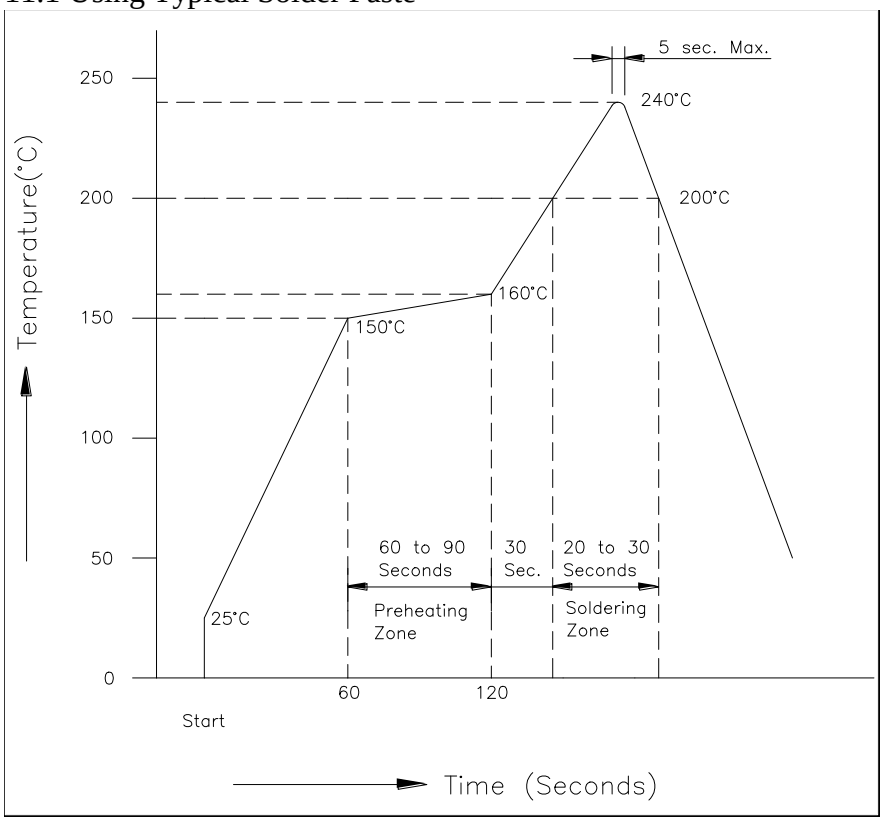
	ITEM	TEST CONDITION	REQUIREMENT
9.7	Thermal shock	EIA 364 - 32 Test Condition I Subject mated connectors to five cycles between -55°C and 85°C	Appearance: No damage and shell meet para 7.3 & 7.4
9.8	Salt spray	Temperature: 35 ± 3°C Solution: 5 ± 1% Spray time: 48 ± 4 hours (Stamping before plated) Spray 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 on function Contact resistance: Less than twice of initial

10. AMBIENT TEMPERATURE RANGE:
Storage Temperature: -40°C to 60°C ; Operating Temperature: 0°C to 85°C

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCU001I
REVISIONS	ECNT120312	For CU01 Series USB Connector Plug & Receptacle	PAGE: 5/5

11. Recommended IR Reflow Temperature Profile:

11.1 Using Typical Solder Paste



11.2 Using Lead-Free Solder Paste