
USB CONNECTOR, A SERIES, STACKED.

1. SCOPE

This specification covers performance, tests and quality requirements for **USB CONNECTOR, A SERIES, STACKED.**

2. APPLICABLE DOCUMENT

The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

Test Report : 501-57557.

3. REQUIREMENTS**3.1. DESIGN AND CONSTRUCTION**

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2. MATERIALS

- A. Housing: Thermoplastic Glass fiber filled UL 94V-0 rated.
- B. Contact: Copper Alloy, Gold plating on contact area, Tin plated on soldertails, Nickel underplated all over.
- C. Shell: Brass, Nickel plated over Cu underplated all over.

3.3. RATINGS

- A. Current Rating: 1.5 A
- B. Voltage Rating: 250 VDC
- C. Operating temperature: -55°C to +85°C.

3.4. TEST CONDITION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1.

DR	DATE	APVD	DATE
Justin Chen	12-Nov-2010	William Kodama	12-Nov-2010

3.5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST DESCRIPTION	REQUIREMENT	PROCEDURED
Examination of product	Meets requirements of product drawing and AMP Specification.	Visual inspection No physical damage
ELECTRICAL		
Contact Resistance	30mΩ Max.	EIA- 364-23A
Insulation Resistance	500MΩ Min.	EIA- 364-21B
Dielectric Withstanding Voltage	No creeping discharge or flashes occur.	EIA- 364-20A 500VAC for 1 minute applied between adjacent contacts.
Contact Capacitance	2PF Max	EIA 364-30 1 KHz.
MECHANICAL		
Durability	No mechanical defects after 5000 cycles.	EIA- 364-09 Mated and unmated connector assemblies for 5000 cycles at maximum rate of 200 cycles per hour.
Mating Force	35 N Max	EIA- 364-13A The test speed should be 20mm/min.
Unmating Force	10N Min	EIA- 364-13A The test speed should be 20mm/min.
Random Vibration	10~2000 Hz no current interruption greater than 1 microsecond discontinuity.	EIA 364-28 Test Condition V Test Letter A
Physical Shock	No current interruption greater than 1 microsecond discontinuity	EIA 364-27 Test Condition H
Cable Pull-out Force	40 Newton to the cable for 1 minute.	EIA 364-38
ENVIRONMENTAL		
Humidity	See note 1.	EIA 364-31 test condition A method III, 168hours minimum (seven complete cycles)
Thermal Shock	See note 1.	EIA- 364-32, 10 cycles -55°C to +85°C.
Temperature Life	See note 1.	EIA 364-17 Test Condition 3 Method A, 85°C for 250hours
PHYSICAL		
Solderability	See note 1. 95% Min coverage.	MIL-STD-202F Method 208G. Test temperature : 245±5°C. Dip tails into flux for 5 second, drain, and then dip into the solder pot and keep for 5 seconds.
Resistance To Soldering Heat	See note 1.	MIL-STD-202F METHOD 210B Product on board test temperature: 260±5°C for 10 seconds.
Mixed Flowing Gas	See note 1.	EIA 364-65 Class II Exposures

Figure 1

NOTE1: Shall meet visual requirements, show no physical damages.

3.6. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE

Test or Examination	Test Group					
	A	B	C	D	E	F
	Test Sequence (a)					
Examination of Product	1,10	1,5	1,7	1,9	1,3	1,3
Contact Resistance	3,7	2,4	2,4,6			
Insulation Resistance				3,7		
Dielectric Withstanding Voltage				4,8		
Contact Capacitance				2		
Durability	4					
Mating Force	2					
Unmating Force	8					
Random Vibration	6					
Physical Shock	5					
Cable Pull-out Force	9					
Humidity				6		
Thermal Shock				5		
High Temperature Life		3				
Solderability					2	
Resistance to Soldering Heat						2
Mixed Flowing Gas			3,5			

Figure 2

NOTE : (a) Numbers indicate sequence in which tests are performed.