ATX Power Connector

1. SCOPE

This specification covers performance, tests and quality requirements for ATX POWER Connector.

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: 501-57652

3. REQUIREMENT

3.1. DESIGN AND CONSTRUCTION

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

3.2. MATERIAL

A. Contact: Copper Alloy, Tin plated over Nickel all over.

B. Housing: High temperature plastic material UL94V-0

3.3. RATINGS

A. Current Rating: 9 amps

B. Voltage Rating: 250 VAC

C. Insulator resistance: 1000 MΩ min

D. Operating temperature: -25℃ to +85℃

3.4. TEST CONDDITION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure1.

3.5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST DESCRIPTION	REQUIREMENT	PROCEDURE
Examination of product	Meets requirements of product drawing specification	Visual dimensional and functional per applicable quality inspection plan
ELECTRICAL		
Termination Resistance	20 mΩ Max initial 30 mΩ Max final	EIA-364-23B Subject mated contacts assembled in housing to 20 mV max open circuit at 100 mV max
Insulation Resistance	1000 MΩ Min	EIA-364-21C After 500 VDC for I minute, measure the insulation resistance between the adjacent contacts of mated and unmated connector assemblies
Dielectric Withstanding Voltage	No creeping discharge or Flashover shall occur.	EIA-364-20B Test between adjacent contacts of mated and unmated connector assemblies, apply 1500 VAC for 1minute
MECHANICAL		
Mating Force	4.41 N (0.45 kgf)/per pin Max	EIA-364-13B Measure the force necessary to mate the connector assemblies at rate of 25.4mm/min
Unmating Force	1.47 N (0.15kgf)/per pin Min	EIA-364-13B Measure the force necessary to mate the connector assemblies at rate of 25.4mm/min
Contact Retention Force	3.2 kgf / per pin Min	EIA-364-29B Apply axial load at a rate of 25.4mm/min
Durability	See Note	EIA-364-09C Connector were mated and unmated 50 cycles at a rate of travel at 25.4mm/minute
ENVIRONMENTAL		
Thermal Shock	See Note	EIA-364-32C Subject mated connectors to 5 cycles between -55℃ and 85℃ in 30 minutes each
Humidity	See Note	EIA-364-31B Subject mated connectors to between25℃ at and 65℃at 90~95% RH for 96hours.
Salt Spray	See Note	EIA-364-26B Subject mated samples to 5% slat spray at 35℃ for 48 hours
Solderability	See Note	Soldering time:5±0.5sec. Solder Temperature: 230±5℃,0.5mm from terminal tip and fitting nail tip
Temperature Life	See Note	EIA-364-17B Subject mated samples to 105℃ for 96 hours
Resistance to Wave Soldering Heat	See Note	Tyco spec.109-202 Solder Temp. : 265±5℃ for 10±0.5 sec

Figure 1

NOTE: Shall meet visual requirements, show no physical damage.

3.6. QUALIFICATION TEST SEQUENCE

Test of Examination	Test Group					
	A	B	C	D	E	F
	Test Sequence (a)					
Examination of Product	1, 9	1, 5	1, 8	1, 4	1, 7	1, 3
Contact Resistance	3, 7	2, 4				
Insulation Resistance			2, 6		2, 5	
Dielectric Withstand Voltage			3, 7		3, 6	
Mating Force	2, 6					
Unmating Force	4, 8					
Contact Retention Force				3		
Durability	5					
Solderability				2		
Thermal Shock			4			
Humidity Temp. Cycling			5			
Temperature Life					4	
Salt Spray		3				
Resistance to Wave Soldering Heat						2

Figure 2

NOTE: The numbers indicate sequence in which tests are performed.