
ATX Power Connector

1. INTRODUCTION

1.1. Purpose

Testing was performed on the ATX Power Connector to determine its conformance to the requirements of Product Specification 108-57560 Rev O.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of ATX Power Connector manufactured by the Global Personal Computer Division.

1.3. Conclusion

ATX Power Connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57560 Rev O.

1.4. Product Description

ATX Power Connector is designed for printed circuit board applications. The contacts are copper alloy, tin plating on the soldertail, all over nickel under-plated. The housing material is thermoplastic, UL94V-0.

1.5. Test Samples

The test samples were randomly selected from normal current production lots, and the following samples were used for test:

Test Group	Quantity	Description
A, B, C, D, E, F	5 ea.	ATX Power Connector

DWN	DATE	APVD	DATE
Angus Wu	01-JUN-2005	Wei-Jer Ke	01-JUN-2005

1.6. 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: (a) The numbers indicate sequence in which tests were performed.

2. TEST RESULT

GP	TEST	SPEC.	DATA			
			Mean	σ	Max.	Min.
A	Mating Force	0.45 kgf/per pin Max	0.236	0.007	0.25	0.23
	Contact Resistance	20 mO Max	3.829	0.268	4.12	3.45
	Unmating Force	0.15 kgf/per pin Min	0.236	0.007	0.25	0.23
	Durability	50 cycles	OK	---	OK	OK
	Mating Force	0.45 kgf/per pin Max	0.256	0.005	0.26	0.25
	Contact Resistance	30 mO Max	4.100	0.223	4.56	3.78
	Unmating Force	0.15 kgf/per pin Min	0.253	0.007	0.26	0.24
	Appearance	No damage	OK	---	OK	OK
B	Contact Resistance	20 mO Max	4.075	0.103	4.23	3.89
	Salt Spray	35°C for 48hrs	OK	---	OK	OK
	Contact Resistance	30 mO Max	4.121	0.073	4.23	3.99
	Appearance	No damage	OK	---	OK	OK
C	Insulation Resistance	1000 MO Min	OK	---	OK	OK
	Dielectric Withstand Voltage	1500 VAC for 1 minute	OK	---	OK	OK
	Thermal Shock	-55°C ~ 85°C for 5 cycles	OK	---	OK	OK
	Humidity Temp.	25 ~ 65°C / 90 ~ 95% / 96 hours	OK	---	OK	OK
	Insulation Resistance	1000 MO Min	OK	---	OK	OK
	Dielectric Withstand Voltage	1500 VACfor1 minute	OK	--	OK	OK
	Appearance	No damage	OK	---	OK	OK
D	Solderability	230±5°C ,for 5±0.5sec	OK	---	OK	OK
	Contact Retention Force	3.2 kgf/per pin Min	12.990	0.088	13.09	12.87
	Appearance	No damage	OK	---	OK	OK
E	Insulation Resistance	1000 MO Min	OK	---	OK	OK
	Dielectric Withstand Voltage	1500 VAC for 1 minute	OK	---	OK	OK
	Temperature Life	105°C for 96 hours	OK	---	OK	OK
	Insulation Resistance	1000 MO Min	OK	---	OK	OK
	Dielectric Withstand Voltage	1500 VAC for 1 minute	OK	---	OK	OK
	Appearance	No damage	OK	---	OK	OK
F	Resistance to wave soldering heat	265±5°C for 10±0.5 sec	OK	---	OK	OK
	Appearance	No damage	OK	---	OK	OK

Figure 2