

1.0mm Pitch FPC Connector, SMT Type.**1. INTRODUCTION****1.1. Purpose**

Testing was performed on the 1.0mm Pitch FPC Connector, SMT Type connector to determine its conformance to the requirements of Product Specification 108-57199 Rev O.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of 1.0mm Pitch FPC Connector, SMT Type manufactured by the Personal computer Division.

1.3. Conclusion

1.0mm Pitch FPC Connector, SMT Type connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57199 Rev O.

1.4. Product Description

1.0mm Pitch FPC Connector, SMT Type connector is designed for printed circuit board applications. The contacts are copper alloy, gold plated on the contact interface and tin-lead plating on the solder tail, all over nickel under-plated. The housing material is glass filled insulating polymer, UL94V-0.

1.5. Test Samples

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

Test Group	Quantity	Description
A, B, C	4 ea.	1.0mm Pitch FPC Connector, SMT Type

DR	DATE	APVD	DATE
Oblic Hu	20-Jan-2002	Jebb Wu	20-Jan-2002
FZ00-0004-02			

1.6. Qualification Test Sequence

Test or Examination	Test Group		
	A	B	C
	Test Sequence (a)		
Examination of Product	1,10	1,11	1,3
Contact Resistance	5,7,9		
Insulation Resistance		4,7,10	
Dielectric Withstanding Resistance		3,6,9	
Durability	4		
Slider Operating Force	2		
Humidity-Cycling Test	8	8	
Thermal Shock	6	5	
Solderability		2	
FPC Retention Force	3		
PIN Retention Force			2

Figure 1.

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

2. TEST RESULT

GP	TEST	SPEC.	DATA			
			Mean	σ	Max.	Min.
A	Slider Operating Force	0.2 Kgf Max.	0.067	--	0.082	0.057
	FPC Retention Force	0.05 Kgf Min.	0.105	--	0.131	0.085
	Durability	20 Cycles	OK	--	OK	OK
	Contact Resistance	40 m Ω max.	18.55	--	19.9	16.0
	Thermal Shock	-55°C/+80°C, 5 cycles	OK	--	OK	OK
	Contact Resistance	40 m Ω max.	13.67	--	20.1	11.0
	Humidity-Cycling	90~95%,40 \pm 2°C for 96hr	OK	--	OK	OK
	Contact Resistance	40 m Ω max.	18.72	--	20.3	16.5
	Appearance	No Damage	OK	--	OK	OK
B	Solderability	230 \pm 5° C for 3 \pm 0.5 sec	OK	--	OK	OK
	Dielectric Withstanding	500VAC, 60 sec	OK	--	OK	OK
	Insulation Resistance	50 M Ω min	OK	--	OK	OK
	Thermal Shock	-55°C/+80°C, 5 cycles	OK	--	OK	OK
	Dielectric Withstanding	500 VAC for 1Minute	OK	--	OK	OK
	Insulation Resistance	50 M Ω min	OK	--	OK	OK
	Humidity-Cycling	90~95%,40 \pm 2°C for 96hr	OK	--	OK	OK
	Dielectric Withstanding	500 VAC for 1Minute	OK	--	OK	OK
	Insulation Resistance	50 M Ω min	OK	--	OK	OK
	Appearance	No Damage	OK	--	OK	OK
	PIN Retention Force	0.5 Kgf Min.	1.67	--	2.09	1.15
	Appearance	No Damage	OK	--	OK	OK

Figure 2