0.5mm Pitch FPC Connector, ZIF TYPE.

1. INTRODUCTION

1.1. Purpose

Testing was performed on the **0.5mm Pitch FPC Connector, ZIF TYPE** connector to determine its conformance to the requirements of Product Specification 108-57238 Rev O.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of **0.5mm Pitch FPC Connector, ZIF TYPE** manufactured by the Personal computer Division.

1.3. Conclusion

0.5mm Pitch FPC Connector, ZIF TYPE connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57238 Rev O.

1.4. Product Description

0.5mm Pitch FPC Connector, ZIF 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 soldertail, 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,D,E,F,G,H	4pcs ea.	**0.5mm Pitch FPC Connector, ZIF TYPE**

1.6. QUALIFICATION TEST SEQUENCE

Test or Examination	Test Group								
	A	B	C	D	E	F	G	H	
	Test Sequence (a)								
Examination of Product	1,9	1,9	1,9	1,9	1,4	1,6	1,4	1,6	
Low Level Contact Resistance	2,6	2,6	2,6	2,6				2,5	
Insulation Resistance	3,7	3,7	3,7	3,7					
Dielectric Withstanding Volt	4,8	4,8	4,8	4,8		2,4			
Temperature Rise Current					2				
Vibration								3	
Physical Shock								4	
FPC Retention Extraction Force					3				
Contact Retention Force						5			
Durability				5					
Solderability							2		
Resistance to soldering Heat							3		
Thermal Shock						3			
Humidity	5								
Salt Spray		5							
Temperature Life			5						

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	Contact Resistance	35 mΩ Max △20mΩ	20.0	—	21.4	18.6
	Insulation Resistance	100 MΩ Min.	OK	—	OK	OK
	DWV	250VAC for 1Minute.	OK	—	OK	OK
	Humidity	40°C RH 90% 240Hours	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK
B	Contact Resistance	35 mΩ Max △20mΩ	28.5	—	31.7	25.3
	Insulation Resistance	100 MΩ Min.	OK	—	OK	OK
	DWV	250VAC for 1Minute.	OK	—	OK	OK
	Salt Spray	35°C 48 Hours	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK
C	Contact Resistance	35 mΩ Max △20mΩ	23.9	—	26.5	21.3
	Insulation Resistance	100 MΩ Min.	OK	—	OK	OK
	DWV	250VAC for 1Minute.	OK	—	OK	OK
	Temperature Life	105°C 96 Hours	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK
D	Contact Resistance	35 mΩ Max △20mΩ	20.7	—	23.6	17.8
	Insulation Resistance	100 MΩ Min.	OK	—	OK	OK
	DWV	250VAC for 1Minute.	OK	—	OK	OK
	Durability	15 Cycles	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK
E	Temperature Rise Current	△35°C Max	OK	—	OK	OK
	FPC Retention Force	0.02Kg Min. Per PIN	0.82	—	0.84	0.80
	Appearance	No Damage	OK	—	OK	OK
F	DWV	250VAC for 1Minute.	OK	—	OK	OK
	Contact Retention Force	250g Min.	625	—	725	525
	Thermal Shock	-55 / 85 °Cat 5 Cycles	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK
G	Resistance to soldering heat	No Damage	OK	—	OK	OK
	Solderability	230°C 3 sec	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK

H	Contact Resistance	35 mΩ Max △20mΩ	18.4	—	20.4	17.1
	Vibration	10~500~10Hz for 9 Hours	OK	—	OK	OK
	Physical Shock	50G for 11ms of Half Sine	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK

Figure 2.