RECEPT ASSY, VERTICAL, 4 POSITION, THRU-HOLE, TYPE A, USB

1. INTRODUCTION

1.1. Purpose

Testing was performed on the **RECEPT ASSY, VERTICAL, 4 POSITION, THRU-HOLE, TYPE A, USB** connector to determine its conformance to the requirements of Product Specification 108-57547 Rev O.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of **RECEPT ASSY, VERTICAL, 4 POSITION, THRU-HOLE, TYPE A, USB** manufactured by the Global Personal Computer Division.

1.3. Conclusion

RECEPT ASSY, VERTICAL, 4 POSITION, THRU-HOLE, TYPE A, USB connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57547 Rev O.

1.4. Product Description

RECEPT ASSY, VERTICAL, 4 POSITION, THRU-HOLE, TYPE A, USB connector is designed for printed circuit board applications. The contacts are copper alloy, gold plated on the contact interface and Tin-Cu 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, D, E	5 ea.	**RECEPT ASSY, VERTICAL, 4 POSITION, THRU-HOLE, TYPE A, USB**

1.6. Qualification Test Sequence

Test or Examination	Test Group (a)				
	A	B	C	D	E
	Test Sequence (b)				
Examination of Product	1,9	1,5	1,9	1,3	1,3
Termination Resistance (Low Level)	3,7	2,4			
Insulation Resistance			3,7		
Dielectric Withstanding Voltage			4,8		
Connector Mating Force	2				
Connector Unmating Force	8				
Durability	4				
Capacitance			2		
Vibration	5				
Physical Shock	6				
Thermal Shock			5		
Humidity Test			6		
Temperature Life		3 (c)			
Solderability				2	
Resistance to Soldering Heat					2

Figure 1

Notes: (a) The numbers indicate sequence in that tests were performed.
(b) Numbers indicate sequence in which tests are performed.
(c) Precondition samples with 10 cycles durability.

2. TEST RESULT

GP	TEST	SPEC.	DATA			
			Max.	Min.	Mean	σ
A	Mating force	35N Max.	22.4	16.0	19.43	6.4
	Termination resistance	30 MΩ Max	15.76	11.78	13.04	3.98
	Durability	1500 Cycle	OK	OK	OK	OK
	Vibration	5.35 G,	OK	OK	OK	OK
	Physical shock	30G, 11mSec	OK	OK	OK	OK
	Termination resistance	40 MΩ Max	18.14	11.14	14.02	7.00
	Unmating force	10N Min.	22.33	13.1	19.37	9.23
	Appearance	No physical damage	OK	OK	OK	OK
B	Termination resistance	30 mΩ Max	14.6	10.84	12.68	3.76
	Temperature life	85℃±5℃ 250 h	OK	OK	OK	OK
	Termination resistance	40 mΩ Max	19.4	13.27	16.44	6.13
	Appearance	No physical damage	OK	OK	OK	OK
C	Capacitance	2pF Max	0.85	0.7	0.775	0.15
	Insulation Resistance	1000 MΩ Min	OK	OK	OK	OK
	Dielectric Withstanding Voltage	750 VAC 1Minute.	OK	OK	OK	OK
	Thermal shock	-55℃/30min,+85/30min 5 Cycle	OK	OK	OK	OK
	Humidity Test	40℃, 90-95%RH 96h	OK	OK	OK	OK
	Insulation Resistance	1000 MΩ Min	OK	OK	OK	OK
	Dielectric Withstanding Voltage	750 VAC 1Minute.	OK	OK	OK	OK
	Appearance	No physical damage	OK	OK	OK	OK
D	Resistance to soldering heat	265℃±5℃ for10±0.5 sec	OK	OK	OK	OK
	Appearance	No physical damage	OK	OK	OK	OK
E	Solderability	95% solder coverage.	OK	OK	OK	OK
	Appearance	No physical damage	OK	OK	OK	OK

Figure 2.