

**USB CONNECTOR, RECEPTACLE, A TYPE, R/A,
DIP TYPE**

1. INTRODUCTION

1.1. Purpose

Testing was performed on the **USB CONNECTOR, RECEPTACLE, A TYPE, R/A, DIP TYPE** to determine its conformance to the requirements of Product Specification 108-57322 Rev A.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of **USB CONNECTOR, RECEPTACLE, A TYPE, R/A, DIP TYPE** manufactured by the Personal Computer Division.

1.3. Conclusion

USB CONNECTOR, RECEPTACLE, A TYPE, R/A, DIP TYPE connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57322 Rev A.

1.4. Product Description

USB CONNECTOR, RECEPTACLE, A TYPE, R/A, DIP 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	8 ea.	USB CONNECTOR, RECEPTACLE, A TYPE, R/A, DIP TYPE.

DR	DATE	APVD	DATE
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1.6. Qualification Test Sequence

Test or Examination	Test Group			
	A	B	C	D
	Test Sequence (a)			
Examination of product	1,10	1,5	1,9	1,4
Low Level Contact Resistance	3,8	2,4		
Insulation Resistance			3,7	
Dielectric Withstanding Voltage			4,8	
Contact Capacitance			2	
Contact Current Rating				2
Random Vibration	6			
Physical Shock	7			
Durability	5			
Connector Mating Force	2			
Connector Unmating Force	4,9			
Thermal Shock			5	
Humidity			6	
Temperature Life		3		
Solderability				3

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	Mating Force	35N max	17.8	2.81	22.4	14.6
	Contact Resistance	30m Ω max	17.66	0.70	21.63	18.26
	Unmating Force	10N min	15.5	0.7	16.8	14.6
	Durability	1500 Cycles	OK	--	OK	OK
	Random Vibration	No discontinuities of 1 μ s or longer duration during vibration test.	OK	--	OK	OK
	Physical Shock	no discontinuities of 1 μ s or longer duration during physical test.	OK	--	OK	OK
	Mating Force	35N max	11.0	1.37	12.8	9.3
	Contact Resistance	30m Ω max	18.65	3.35	26.64	15.01
	Unmating Force	10N min	13.3	1.67	15.8	13.3
	Examination of product	No physical damage	OK	--	OK	OK
B	Contact Resistance	30m Ω max	18.66	0.76	21.67	17.10
	Temp. Life	85°C 250hrs	OK	--	OK	OK
	Contact Resistance	30M Ω max	18.66	1.04	21.67	17.10
	Examination of product	No physical damage	OK	--	OK	OK
C	Contact Capacitance	2pF max	0.79	0.37	1.88	0.06
	Insulation Resistance	1000M Ω min	OK	--	OK	OK
	Dielectric Withstanding Voltage	500VAC/1 minute	OK	--	OK	OK
	Thermal Shock	No evidence of damage	OK	--	OK	OK
	Humidity-Cycling	No evidence of damage	OK	--	OK	OK
	Insulation Resistance	1000M Ω min	OK	--	OK	OK
	Dielectric Withstanding Voltage	500VAC/1 minute	OK	--	OK	OK
	Examination of product	No physical damage	OK	--	OK	OK
D	Solderability	Covered 95%	OK	--	OK	OK
	Examination of product	No physical damage	OK	--	OK	OK

Figure 2