
PCI EXPRESS CARD EDGE, 3GIO Connector

1. INTRODUCTION**1.1. Purpose**

Testing was performed on the PCI EXPRESS CARD EDGE, 3GIO Connector to determine its conformance to the requirements of Product Specification 108-57351 Rev O.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of PCI EXPRESS CARD EDGE, 3GIO Connector.

1.3. Conclusion

PCI EXPRESS CARD EDGE, 3GIO Connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57351 Rev O.

1.4. Product Description

PCI EXPRESS CARD EDGE, 3GIO 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 soldertails, 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	Part Number	Description
A, B, C, D, E	5 ea.	1470780	PCI EXPRESS CARD EDGE, 3GIO Connector

DR	DATE	APVD	DATE
Samuel Hou	20-Jun-2003	Jebb Wu	20-Jun-2003
FZ00-0138-03			

1.6. Qualification Test Sequence

Test or Examination	Test Group				
	A	B	C	D	E
	Test Sequence (a)				
Examination of Product	1,9	1,8	1,10	1,8	1,8
Contact Resistance	3,7	2,5,7	2,5,7,9	2,5,7	
Insulation Resistance					2,6
Dielectric Withstanding Voltage					3,7
Mating Force	2,6				
Unmating Force	4,8				
Durability	5	3	3	3	
Vibration				6	
Reseating (Manually unplug/plug the connector. Perform 3 such cycles)		6	8		
Temperature Life		4			
Temperature Life (Preconditioning)				4	
Thermal Shock			4		4
Humidity-Temperature Cycling			6		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	Mating Force	1.15N per pair Max	0.617	0.091	0.79	0.51
	Contact Resistance	30m Ω Max	10.272	0.780	11.49	8.81
	Unmating Force	0.15N per pair Min	0.278	0.055	0.41	0.21
	Durability	50 cycles	OK	—	OK	OK
	Mating Force	1.15N per pair Max	0.534	0.075	0.66	0.41
	Contact Resistance	30m Ω Max	11.013	0.789	12.45	9.99
	Unmating Force	0.15N per pair Min	0.246	0.040	0.34	0.20
	Appearance	No Damage	OK	—	OK	OK
B	Contact Resistance	30m Ω Max	10.656	0.626	11.65	9.42
	Durability	50 cycles	OK	—	OK	OK
	Temperature Life	105°C , 168hours	OK	—	OK	OK
	Contact Resistance	30m Ω Max	11.417	0.624	12.50	10.45
	Reseating	3 such cycles	OK	—	OK	OK
	Contact Resistance	30m Ω Max	12.102	0.832	13.02	10.96
	Appearance	No Damage	OK	—	OK	OK
C	Contact Resistance	30m Ω Max	10.772	0.469	11.65	10.22
	Durability	50 cycles	OK	—	OK	OK
	Thermal Shock	-55°C~85°C , 10 cycles	OK	—	OK	OK
	Contact Resistance	30m Ω Max	11.413	0.362	12.03	10.15
	Humidity	25/65 °C , 80 /50% RH,24cycles	OK	—	OK	OK
	Contact Resistance	30m Ω Max	12.194	0.366	13.01	11.55
	Reseating	3 cycles	OK	—	OK	OK
	Contact Resistance	30m Ω Max	13.119	0.490	13.81	12.39
	Appearance	No Damage	OK	—	OK	OK

Figure 2 (Cont.)

GP	TEST	SPEC.	DATA			
			Mean	σ	Max.	Min.
D	Contact Resistance	30m Ω Max	10.864	0.794	12.23	9.46
	Durability	50 cycles	OK	—	OK	OK
	Temperature Life (Preconditioning)	105°C , 92hrs	OK	—	OK	OK
	Contact Resistance	30m Ω Max	11.536	0.530	12.31	10.15
	Vibration	3.10G's, 15min/Axis	OK	—	OK	OK
	Contact Resistance	30m Ω Max	12.172	0.349	12.96	11.49
	Appearance	No Damage	OK	—	OK	OK
E	Insulation Resistance	1000M Ω Min. for 1min.	OK	—	OK	OK
	DWV	500V AC for 1 minute.	OK	—	OK	OK
	Thermal Shock	-55°C~85°C , 10 cycles	OK	—	OK	OK
	Humidity	25/65 °C , 80 /50 % RH,24cycles	OK	—	OK	OK
	Insulation Resistance	1000M Ω Min. for 1min.	OK	—	OK	OK
	DWV	500V AC for 1min.	OK	—	OK	OK
	Appearance	No Damage	OK	—	OK	OK

Figure 2 (End)