7 Pin Header Serial ATA II Connector

1. INTRODUCTION

1.1. Purpose

Testing was performed on the Tyco Electronics 7 Pin Serial ATA II connector to determine its conformance to the requirements of Product Specification 108-57469, Revision B.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of the 7 Pin Serial ATA II connector.

1.3. Conclusion

The 7 Pin Serial ATA II connector listed in paragraph 1.5. conformed to the electrical, mechanical, and environmental performance requirements of Product Specification 108-57469, Revision B.

1.4. Product Description

The 7 Pin Serial ATA II connector is a high-speed serial link replacement for the parallel ATA attachment of mass storage devices.

1.5. Test Specimens

Test specimens were representative of normal production lots. The following specimens were used for test.

Test Group	Quantity	Description
A, B, C, D, E, F	5 ea.	7 Pin Serial ATA II connector DIP
A, B, C, D, F, G	5 ea.	7 Pin Serial ATA II connector SMT

1.6. Qualification Test Sequence

Test or Examination	Test Group						
	A	B	C	D	E	F	G
	Test Sequence (a)						
Examination of the connector	1, 5	1, 9	1, 5	1, 8	1, 3	1, 3	1, 3
Low Level Contact Resistance	2, 4	3, 7	2, 4				
Insulation Resistance				2, 6			
Dielectric Withstanding Voltage				3, 7			
Mating Force		2					
Unmating Force		8					
Durability	3(b)	4(b)					
Physical Shock		6					
Vibration		5					
Humidity				5			
Temperature Life			3				
Thermal Shock				4			
Resistance to Wave Soldering Heat					2		
Solderability						2	
Resistance to Reflow Soldering Heat							2

NOTE
(a) Numbers indicate sequence in which test are performed.
(b) Preconditioning, 20cycles for the 50-durability cycles requirement, 50cyles for the 500-durability cycles requirement. The insertion and removal cycle is at the maximum rate of 200cycles per hours.
(c) Discontinuities shall not take place in this test group, during tests.

Figure 1

tyco Electronics

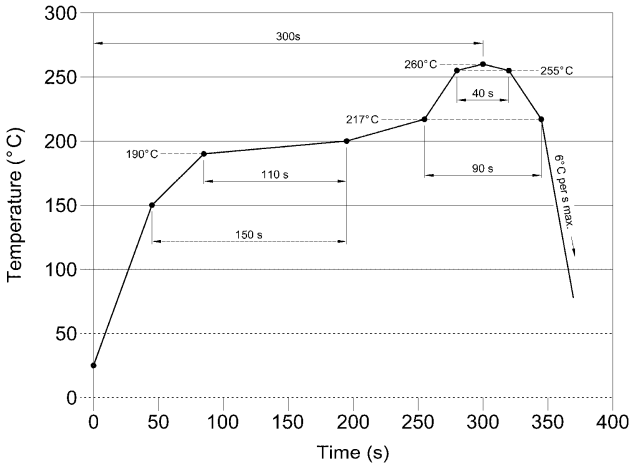
Tyco Holdings (Bermuda) VII LTD.
Taiwan Branch
3F, No. 45, Dongsing Road,
Taipei 11070, Taiwan. ROC.
TEL: 886-2-8768-2788

* Trademark
| Indicates change

2. TEST RESULT

Test Group	Test Description	Requirement	Test Result				Judgment
			Max.	Min.	Ave.	σ	
A	Contact Resistance	30 mΩ Max.	15.10	12.50	13.788	0.986	Accepted
	Durability	No damage.	PASSED				Accepted
	Contact Resistance	30 mΩ Max.	15.30	13.60	14.563	0.609	Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
B	Mating Force	20 N Max.	10.35	10.19	10.268	0.060	Accepted
	Contact Resistance	30 mΩ Max.	15.20	13.50	14.375	0.643	Accepted
	Durability	No damage.	PASSED				Accepted
	Vibration	No discontinuities or damage.	PASSED				Accepted
	Physical Shock	No discontinuities or damage.	PASSED				Accepted
	Contact Resistance	30 mΩ Max.	15.20	13.80	14.688	0.567	Accepted
	Un-mating Force	4 N Min.	10.60	10.39	10.499	0.069	Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
C	Contact Resistance	30 mΩ Max.	15.20	13.60	14.438	0.621	Accepted
	Temperature Life	No damage.	PASSED				Accepted
	Contact Resistance	30 mΩ Max.	15.10	12.50	13.638	0.950	Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
D	Insulation Resistance	1000 MΩ minimum.	PASSED				Accepted
	Dielectric Withstanding Voltage	No breakdown or flashover.	PASSED				Accepted
	Thermal Shock	No Damage	PASSED				Accepted
	Humidity	No Damage	PASSED				Accepted
	Insulation Resistance	1000 MΩ minimum.	PASSED				Accepted
	Dielectric Withstanding Voltage	No breakdown or flashover.	PASSED				Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
E	Resistance to Wave Soldering Heat	No Damage	PASSED				Accepted
	Examination of product.	Meets requirements of product drawing.	PASSED				Accepted
F	Solderability	95% solder coverage min.	PASSED				Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted
G	Resistance to Reflow Soldering Heat	No Damage	PASSED				Accepted
	Examination of product.	Meets product drawing.	PASSED				Accepted

Figure 2 (end)



Temperature Profile of Reflow Soldering
Figure 3