

**BOX HEADER SYSTEM****1. INTRODUCTION****1.1. PURPOSE**

Testing was performed on the Tyco **BOX HEADER SYSTEM** connector to determine its conformance to the requirements of Product Specification 108-57101 Revision B.

**1.2. SCOPE**

This report covers the electrical, mechanical, and environmental performance of the **BOX HEADER SYSTEM** connector.

**1.3. CONCLUSION**

The **BOX HEADER SYSTEM** connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57101 Revision B.

**1.4. PRODUCT DESCRIPTION**

The **BOX HEADER SYSTEM** connector is designed for printed circuit board applications. The contacts are copper alloy, Gold plated on the contact interface and gold 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, I, J	5EA.	<b>BOX HEADER SYSTEM</b>

DR	DATE	APVD	DATE
Oblic Hu	08-July-2005	Wei-Jei Ke	08-July-2005
			P-05-000077

**1.6. Qualification Test Sequence**

Test or Examination	Test Group									
	A	B	C	D	E	F	G	H	I	J
	Test Sequence (a)									
Examination of Product	1, 7	1, 9	1, 6	1, 5	1, 5	1, 5	1, 5	1, 3	1, 3	1, 3
Contact Resistance		2, 8	2, 5	2, 4	2, 4	2, 4	2, 4			
Dielectric withstanding Voltage	3, 6									
Insulation Resistance	2, 5									
Temperature Rising								2		
Mating Force		3, 7								
Unmating Force		4, 6								
Durability		5								
Vibration			3							
Mechanical Shock			4							
Contact Retention Force									4	
Solderability										2
Resistance to Soldering Heat									2	
Thermal Shock				3						
Humidity Temperature Cycling	4				3					
Temperature Life						3				
Salt Spray							3			

**Figure 1.**

**NOTE :** (a) Numbers indicate sequence in which tests are performed.

**2. TEST RESULT**

GP	TEST	SPEC.	DATA			
			Max.	Min.	Mean	$\sigma$
A	Insulation Resistance	1000 M $\Omega$ Min.	1650	1203	1452	447
	Dielectric withstanding Voltage	125 VAC 1Minute	OK	OK	OK	OK
	Humidity Temperature Cycling	25-65 $^{\circ}$ C ,95%,10cycle	OK	OK	OK	OK
	Insulation Resistance	1000M $\Omega$ Min.	1440	1005	1243	435
	Dielectric withstanding Voltage	125 VAC 1Minute	OK	OK	OK	OK
	Appearance	No Damaged	OK	OK	OK	OK
	Durability	500 Cycle	OK	OK	OK	OK
	Contact Resistance	30 m $\Omega$ Max.	22.5	16.4	19.4	6.1
	Appearance	No Damaged	OK	OK	OK	OK
C	Contact Resistance	30 m $\Omega$ Max.	21.5	17.2	19.3	4.3
	Vibration	10-55-10 Hz	OK	OK	OK	OK
	Mechanical Shock	50G, 11mSec	OK	OK	OK	OK
	Contact Resistance	30 m $\Omega$ Max.	24.7	18.3	21.5	6.4
	Appearance	No Damaged	OK	OK	OK	OK
D	Contact Resistance	30 m $\Omega$ Max.	23.5	17.3	20.4	6.2
	Thermal Shock	-55 $^{\circ}$ C , +85 $^{\circ}$ C 5 Cycle	OK	OK	OK	OK
	Termination Resistance	30 m $\Omega$ Max.	26.8	19.7	23.2	7.1
	Appearance	No Damaged	OK	OK	OK	OK
E	Contact Resistance	30 m $\Omega$ Max.	19.6	13.3	16.4	6.3
	Humidity Temperature Cycling	25-65 $^{\circ}$ C , 95%, 10cycle	OK	OK	OK	OK
	Contact Resistance	30 m $\Omega$ Max.	25.4	19.4	22.4	6.0
	Appearance	No Damaged	OK	OK	OK	OK
F	Contact Resistance	30m $\Omega$ Max.	21.5	15.1	18.3	6.4
	Temperature Life	85 $^{\circ}$ C 250Hr	OK	OK	OK	OK
	Contact Resistance	30 m $\Omega$ Max.	24.3	17.2	20.7	7.1
	Appearance	No Damaged	OK	OK	OK	OK
G	Contact Resistance	30 m $\Omega$ Max.	19.5	13.4	16.4	6.1
	Salt Spray	35 $^{\circ}$ C , 5%Salt, 48hours	OK	OK	OK	OK
	Contact Resistance	30 m $\Omega$ Max.	OK	OK	OK	OK
	Appearance	No Damaged	OK	OK	OK	OK
H	Temperature Rising	30 $^{\circ}$ C Max/ xxA	26.4	20.2	23.3	6.2
	Appearance	No Damaged	OK	OK	OK	OK
I	Resistance to Solder Heat	No Damaged	OK	OK	OK	OK
	Appearance	No Damaged	OK	OK	OK	OK
	Contact Retention Force	800 g MIN.	1080	800	940	200
J	Solderbility	235 $^{\circ}$ C , 5sec	OK	OK	OK	OK
	Appearance	No Damaged	OK	OK	OK	OK

Figure 2 ( End )