

SD CONNECTOR, SMT TYPE.**1. INTRODUCTION****1.1. Purpose**

Testing was performed on the **SD CONNECTOR, SMT TYPE** connector to determine its conformance to the requirements of Product Specification 108-57127 Rev B.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of **SD CONNECTOR, SMT TYPE** manufactured by the Digital Television Division.

1.3. Conclusion

SD CONNECTOR, SMT TYPE connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57127 Rev B.

1.4. Product Description

SD CONNECTOR, SMT TYPE connector is designed for printed circuit board applications. The contacts are copper alloy, gold plated on the contact interface and Tin-lead or Tin 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 samples were used for test:

Test Group	Quantity	Description
A, B, C, D, E, F, G, H, I, J	6 ea.	SD CONNECTOR, SMT TYPE

DR	DATE	APVD	DATE
Oblic Hu	29-Jun-2004	Ted Ke	29-Jun-2004
			FZ00-0145-04

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	1,9	1,8	1,5	1,7	1,6	1,5	1,5	1,9	1,9	1,9
Contact Resistance	2,6	2,7	2,4	2,5	2	2,4	2,4	2,6	2,6	2,6
Insulation Resistance	3,7			3,6				3,7	3,7	3,7
DWV	4,8							4,8	4,8	4,8
Pulling and Insertion Force		3,6								
Vibration			3							
Thermal Shock				4						
Contact Force					3					
Connector Intensity		4								
Wrestling Strength					4					
Durability Cycling		5								
Humidity	5									
Salt Spray						3				
Solderability					5					
Thermal Shock							3			
Moisture Resistance								5		
Temperature Life									5	
Resistance to Reflow Soldering Heat										5

Figure 1.

NOTE: (a) The numbers indicate sequence in which tests were performed.

**2. TEST RESULT
PUSH-PULL TYPE**

GP	TEST	SPEC.	DATA			
			Mean	σ	Max.	Min.
A	Contact Resistance	100m Ω Max.	29.12 m Ω	--	32.85m Ω	25.77m Ω
	Insulation Resistance	1000M Ω Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
	Humidity	No physical damage	OK	--	OK	OK
	Contact Resistance	100m Ω Max.	32.15 m Ω	--	34.97 m Ω	28.45 m Ω
	Insulation Resistance	100M Ω Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
	Appearance	No Damage	OK	--	OK	OK
B	Contact Resistance	100m Ω Max.	29.06 m Ω	--	32.97m Ω	25.75 m Ω
	Total Pulling and Insertion Force	2N~40N	9.27N	--	9.38N	8.07N
	Connector Intensity	No Damage (10N)	OK	--	OK	OK
	Durability Cycling	No physical damage	OK	--	OK	OK
	Total Pulling and Insertion Force	2N~40N	10.57N	--	12.83N	10.56N
	Contact Resistance	100m Ω Max.	34.15 m Ω	--	37.84 m Ω	26.98m Ω
	Appearance	No Damage	OK	--	OK	OK
C	Contact Resistance	100m Ω Max.	28.87m Ω	--	32.99 m Ω	26.74 m Ω
	Vibration	No physical damage	OK	--	OK	OK
	Contact Resistance	100m Ω Max.	45.88 m Ω	--	46.82 m Ω	39.78 m Ω
	Appearance	No Damage	OK	--	OK	OK
D	Contact Resistance	100m Ω Max.	29.78 m Ω	--	32.75 m Ω	26.53 m Ω
	Insulation Resistance	1000M Ω Min.	OK	--	OK	OK
	Physical Shock	No physical damage	OK	--	OK	OK
	Insulation Resistance	100M Ω Min.	OK	--	OK	OK
	Contact Resistance	100m Ω Max.	32.89m Ω	--	34.86 m Ω	26.55m Ω
	Appearance	No Damage	OK	--	OK	OK
E	Contact Resistance	100m Ω Max.	27.88 m Ω	--	32.02m Ω	26.18 m Ω
	Contact Force	0.2~0.4N	0.28N	--	0.37N	0.25N
	Wrestling Strength	No Damage (10N)	OK	--	OK	OK
	Solderability	Covered more than 95%	OK	--	OK	OK
	Appearance	No Damage	OK	--	OK	OK
F	Contact Resistance	100m Ω Max.	32.11 m Ω	--	35.20 m Ω	29.32 m Ω
	Salt Spray	35 $^{\circ}$ C,48hrs	OK	--	OK	OK
	Contact Resistance	100m Ω Max.	34.23m Ω	--	37.96 m Ω	32.44m Ω
	Appearance	No Damage	OK	--	OK	OK

G	Contact Resistance	100mΩ Max.	30.11 mΩ	--	34.45 mΩ	29.17mΩ
	Insulation Resistance	1000MΩ Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
	Thermal Shock	No physical damage s	OK	--	OK	OK
	Contact Resistance	100mΩ Max.	35.25 mΩ	--	39.97 mΩ	29.55 mΩ
	Insulation Resistance	100MΩ Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
H	Contact Resistance	100mΩ Max.	26.12 mΩ	--	31.86mΩ	22.33mΩ
	Insulation Resistance	1000MΩ Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
	Moisture Resistance	No physical damage	OK	--	OK	OK
	Contact Resistance	100mΩ Max.	32.41 mΩ	--	33.97 mΩ	26.21 mΩ
	Insulation Resistance	100MΩ Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
I	Contact Resistance	100mΩ Max.	30.87 mΩ	--	31.48mΩ	26.57mΩ
	Insulation Resistance	1000MΩ Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
	High Temperature Resistance	85°C,250hr	OK	--	OK	OK
	Contact Resistance	100mΩ Max.	37.15 mΩ	--	39.87 mΩ	30.45 mΩ
	Insulation Resistance	100MΩ Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
J	Contact Resistance	100mΩ Max.	30.11 mΩ	--	36.11 mΩ	30.28 mΩ
	Insulation Resistance	1000MΩ Min.	OK	--	OK	OK
	DWV	500V AC rms.	OK	--	OK	OK
	Resistance to Reflow Soldering Heat	No Damage	OK	--	OK	OK
	Contact Resistance	100mΩ Max.	31.15 mΩ	--	33.97 mΩ	29.35 mΩ
	Insulation Resistance	100MΩ Min.	OK	--	OK	OK

Figure 2