INTEGRATED SERVICE TECHNOLOGY

No.:T1091

ESD RELIABILITY TEST REPORT

TEST REPORT

Company : RAIO TECHNOLOGY INC.

Model Name : RA6963

Date Received : 2007.07.25

Date Tested : 2007.08.09

TESTING LABORATORY IS ACCREDITED BY:

IEC/IECQ 17025 certificate of independent test laboratory approval

Certificate No.：T1091

ISO 17025 accredited in respect of laboratory is approved by TAF

Certificate No.：L0835-060321

ISO 9001 certificate is approved by TUV CERT certification body of TUV NORD Cert GmbH

WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

	Name	Signature	Date
Test Engineer	Jay Fang	Reliability Test Engineer Jay Fang	2007/07/25
Section Manager	Kosa Lin	Reliability Test Engineer Kosa Lin	2007/08/09

Note：

1. This report will be invalid if reproduced in whole or in part.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used separately.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.

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ESD RELIABILITY TEST REPORT

Applicant/Department: RAIO TECHNOLOGY INC.		
Product	: RA6963	
Testing Item	: LATCH-UP	**Package/Pin Count** : LQFP-67
Test Condition	: JEDEC STANDARD NO.78 MARCH 1997	
Failure Criteria	< 25mA 10mA + I normal	
	> 25mA 1.4 x I normal	
Trigger Current	: 50mA ~100mA (±), Step: 50mA (±) 200mA ~1000mA (±), Step: 200mA (±)	
V_{supply} OVER VOLTAGE TEST : 5V~7V(+) , Step: 1V(+) 7.5V~8V(+) , Step: 0.5V(+)		

LATCH-UP Testing Report

Test Equipment:

KEYTEK ZAPMASTER #10-6066

Environmental Condition of Laboratory:

Temperature: 25ºC±5ºC
Humidity: 55%±10% RH

Test Condition:

POSITIVE I
NEGATIVE I
V_{supply} OVER VOLTAGE TEST

Test Result:

TRIGGER MODEL	TEST PIN	SAMPLE SIZE	TRIGGER SOURCE INDUCE LATCH-UP	**IT CLASS: 3**
+IT	I/P	3	PASS	**NOTE:** CLASS1: +IT:0mA~39mA -IT:0mA~ -39mA CLASS2: +IT: 40mA~+99mA -IT: -40mA~-99mA CLASS3: +IT:>100mA -IT:<-100mA
	O/P		PASS	
	I/O		PASS	
-IT	I/P	3	PASS	
	O/P		PASS	
	I/O		PASS	
V_{supply} OVER VOLTAGE TEST	VDD	3	PASS	

ALL:1-26,28-60,62,64-67
GND:63
I/O:10-17,22-26,28-30

I/P:1-9,18-21,54,62,64-66
O/P:31-53,55-60,67
VDD:27,61

POSITIVE I (UNIT::mA)							
Test Pin TRIGGER CURRENT	#1	#2	#3	Test Pin TRIGGER CURRENT	#1	#2	#3
1	PASS	PASS	PASS	34	PASS	PASS	PASS
2	PASS	PASS	PASS	35	PASS	PASS	PASS
3	PASS	PASS	PASS	36	PASS	PASS	PASS
4	PASS	PASS	PASS	37	PASS	PASS	PASS
5	PASS	PASS	PASS	38	PASS	PASS	PASS
6	PASS	PASS	PASS	39	PASS	PASS	PASS
7	PASS	PASS	PASS	40	PASS	PASS	PASS
8	PASS	PASS	PASS	41	PASS	PASS	PASS
9	PASS	PASS	PASS	42	PASS	PASS	PASS
10	PASS	PASS	PASS	43	PASS	PASS	PASS
11	PASS	PASS	PASS	44	PASS	PASS	PASS
12	PASS	PASS	PASS	45	PASS	PASS	PASS
13	PASS	PASS	PASS	46	PASS	PASS	PASS
14	PASS	PASS	PASS	47	PASS	PASS	PASS
15	PASS	PASS	PASS	48	PASS	PASS	PASS
16	PASS	PASS	PASS	49	PASS	PASS	PASS
17	PASS	PASS	PASS	50	PASS	PASS	PASS
18	PASS	PASS	PASS	51	PASS	PASS	PASS
19	PASS	PASS	PASS	52	PASS	PASS	PASS
20	PASS	PASS	PASS	53	PASS	PASS	PASS
21	PASS	PASS	PASS	54	PASS	PASS	PASS
22	PASS	PASS	PASS	55	PASS	PASS	PASS
23	PASS	PASS	PASS	56	PASS	PASS	PASS
24	PASS	PASS	PASS	57	PASS	PASS	PASS
25	PASS	PASS	PASS	58	PASS	PASS	PASS
26	PASS	PASS	PASS	59	PASS	PASS	PASS
28	PASS	PASS	PASS	60	PASS	PASS	PASS
29	PASS	PASS	PASS	62	PASS	PASS	PASS
30	PASS	PASS	PASS	64	PASS	PASS	PASS
31	PASS	PASS	PASS	65	PASS	PASS	PASS
32	PASS	PASS	PASS	66	PASS	PASS	PASS
33	PASS	PASS	PASS	67	PASS	PASS	PASS

NEGATIVE I (UNIT::mA)							
Test Pin TRIGGER CURRENT	#1	#2	#3	Test Pin TRIGGER CURRENT	#1	#2	#3
1	PASS	PASS	PASS	34	PASS	PASS	PASS
2	PASS	PASS	PASS	35	PASS	PASS	PASS
3	PASS	PASS	PASS	36	PASS	PASS	PASS
4	PASS	PASS	PASS	37	PASS	PASS	PASS
5	PASS	PASS	PASS	38	PASS	PASS	PASS
6	PASS	PASS	PASS	39	PASS	PASS	PASS
7	PASS	PASS	PASS	40	PASS	PASS	PASS
8	PASS	PASS	PASS	41	PASS	PASS	PASS
9	PASS	PASS	PASS	42	PASS	PASS	PASS
10	PASS	PASS	PASS	43	PASS	PASS	PASS
11	PASS	PASS	PASS	44	PASS	PASS	PASS
12	PASS	PASS	PASS	45	PASS	PASS	PASS
13	PASS	PASS	PASS	46	PASS	PASS	PASS
14	PASS	PASS	PASS	47	PASS	PASS	PASS
15	PASS	PASS	PASS	48	PASS	PASS	PASS
16	PASS	PASS	PASS	49	PASS	PASS	PASS
17	PASS	PASS	PASS	50	PASS	PASS	PASS
18	PASS	PASS	PASS	51	PASS	PASS	PASS
19	PASS	PASS	PASS	52	PASS	PASS	PASS
20	PASS	PASS	PASS	53	PASS	PASS	PASS
21	PASS	PASS	PASS	54	PASS	PASS	PASS
22	PASS	PASS	PASS	55	PASS	PASS	PASS
23	PASS	PASS	PASS	56	PASS	PASS	PASS
24	PASS	PASS	PASS	57	PASS	PASS	PASS
25	PASS	PASS	PASS	58	PASS	PASS	PASS
26	PASS	PASS	PASS	59	PASS	PASS	PASS
28	PASS	PASS	PASS	60	PASS	PASS	PASS
29	PASS	PASS	PASS	62	PASS	PASS	PASS
30	PASS	PASS	PASS	64	PASS	PASS	PASS
31	PASS	PASS	PASS	65	PASS	PASS	PASS
32	PASS	PASS	PASS	66	PASS	PASS	PASS
33	PASS	PASS	PASS	67	PASS	PASS	PASS

	V_{supply} OVERVOLTAGE TEST		(UNIT: V)
Test pin TRIGGER VOLTAGE	#1	#2	#3
27	PASS	PASS	PASS
61	PASS	PASS	PASS