



宜特科技股份有限公司



No.:T1091

Integrated Service Technology Inc.

TEL : (03) 578-2266

RA No: 9600757-E

FAX : (03) 578-2299

Date : 03/14/2007

Email: esd@isti.com.tw

Test Site Address: 1F, No.22, Pu-Ding Rd., Hsin-Chu, Taiwan, R.O.C.

可靠度測試報告

RELIABILITY TEST REPORT

Applicant/Department: RAI0 TECHNOLOGY INC.	
Address	: 6F, No.21, Industry East 4th Road, Hsinchu Science Park, Hsinchu, Taiwan, R.O.C.
Product	: RA8835A
Testing Item	: LATCH-UP
	Package/Pin Count: QFP/60
Application Date	: 03/13/2007
	Date Finished : 03/14/2007
Test Condition	: JEDEC STANDARD NO.78 AUGUST 1997
Failure Criteria	< 25mA 10mA + I normal
	> 25mA 1.4 x I normal
Trigger Current	: 50mA ~ 100mA (±), Step:50mA (±) 100mA ~ 600mA (±), Step:100mA (±)
V_{supply} OVER VOLTAGE TEST	: 5V~8V(+), Step :0.5V(+)

Testing Item

Random LATCH-UP Test.....P2

Remark:

- Ground pins are not latch-up tested.
- The positive or negative current pulse (I-Test) or voltage pulse (V_{supply} overvoltage test) applied to any pin under test in an attempt to induce latch-up.
- This report refers only to the specimen submitted to testing, and be invalid as separately used.

Testing Engineer:	Reliability Test Engineer <i>Jay Fang</i>	
Report Review:	Reliability Test Engineer <i>Kosa Lin</i>	Laboratory Head: Manager <i>Kevin Tsui</i>



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LATCH-UP Testing Report

Test Equipment:

KEYTEK ZAPMASTER #12-6026

Environmental Condition of Laboratory:

Temperature: 25°C±5°C

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: <u>3</u>
+IT	I/O	3	PASS	NOTE: CLASS1: +IT:0mA~39mA -IT:0mA~ -39mA CLASS2: +IT: 40mA~+99mA -IT: -40mA~-99mA CLASS3: +IT:>100mA -IT:<-100mA
	I/P		PASS	
	O/P		PASS	
-IT	I/O	3	PASS	
	I/P		PASS	
	O/P		PASS	
V _{supply} OVER VOLTAGE TEST	VCC	3	PASS	

ALL:1-12,14-28,30-47,50-57,59-60

I/O:1-6,19-26,59-60

I/P:47,50-54,56-57

NC:29,48-49

O/P:7-12,14-18,27-28,30-46,55

VCC:58

VSS:13

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

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

V _{supply} OVERVOLTAGE TEST				(UNIT: V)
Test Pin	TRIGGER VOLTAGE	#1	#2	#3
58		PASS	PASS	PASS