

ESD (MACHINE MODE) TEST REPORT

Company : RAIO TECHNOLOGY INC.

Model Name : RA8875

Date Received : JAN 12, 2011

Date Tested : JAN 17, 2011

TESTING LABORATORY IS ACCREDITED BY:

IEC/IECQ 17025 certificate of independent test laboratory approval

 Certificate No. : T1091

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	Nelly Hsieh	<i>Nelly Hsieh</i>	Jan 17, 2011
Manager	Even Lin	<i>Even Lin</i>	Jan 17, 2011

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.
5. The failure criteria should be based on parametric and functional testing; the curve trace provided in this report is for reference only.





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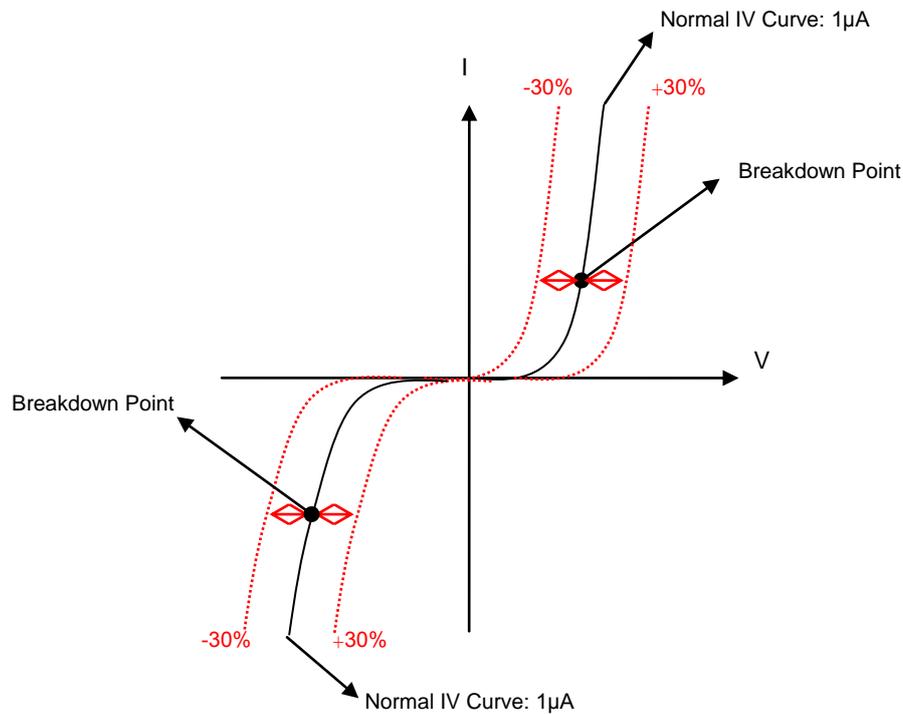
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1. GENERAL INFORMATION

1.1 DESCRIPTION OF UNIT

MANUFACTURER : RAI0 TECHNOLOGY INC.S
DEVICE NAME : RA8875
PACKAGED / PIN COUNT : LQFP-100
REFERENCE DOCUMENT : JEDEC EIA/JESD22-A115
TEST VOLTAGE : 200V ~ 400V (\pm), Step: 100V (\pm)
SAMPLE QUANTITY : 18 ea
FAILURE CRITERIA : FOR V CHANGE AT $1\mu\text{A} \pm 30\%$

※ Failure Judgment: IV curve shift over $1\mu\text{A} \pm 30\%$ at breakdown point.



2. ESD (MACHINE MODE) TEST

2.1 TEST EQUIPMENT

Test Equipment	Equipment Number	Tester
KEYTEK ZAPMASTER	#11	10047

2.2 LABORATORY AMBIENCE CONDITION

Temperature : 23±5°C

Relative humidity : 55%±10% (RH)

2.3 REFERENCE DOCUMENT

The test method refers to JEDEC EIA/JESD22-A115

2.4 TEST CONDITION

ALL – VSS (+)
ALL – VSS (-)
ALL – VCC (+)
ALL – VCC (-)
VCC – VSS (+)
VCC – VSS (-)

2.5 SUMMARY OF TEST

Test Model : MM	ESD Sensitivity Passed : <u>±300V</u>		JEDEC Classification Class : <u> B </u>
Test condition	Sample Quantity	Passed Volts	Class A : < 200V.
ALL – VSS (+)	3	+300V	Class B : ≥ 200V , < 400V
ALL – VSS (-)	3	-400V	Class C : ≥ 400V
ALL – VCC (+)	3	+300V	
ALL – VCC (-)	3	-400V	
VCC – VSS (+)	3	+300V	
VCC – VSS (-)	3	-400V	

ALL:3-4,7-12,14-15,18-25,27-37,41-59,63-69,71-75,77 VSS:1,6,16,26,39,61,70,85
-84,88-100

VCC:2,5,13,17,38,40,60,62,76,86-87

2.6 CONTENTS OF TEST

ALL – VSS (+)									
(UNIT:V)									
Test Pin	FAIL VOLTAGE	#1	#2	#3	Test Pin	FAIL VOLTAGE	#1	#2	#3
3		PASS	400	400	53		PASS	PASS	PASS
4		PASS	PASS	PASS	54		PASS	PASS	PASS
7		PASS	PASS	PASS	55		PASS	PASS	PASS
8		PASS	PASS	PASS	56		PASS	PASS	PASS
9		PASS	PASS	PASS	57		PASS	PASS	PASS
10		PASS	PASS	PASS	58		PASS	PASS	PASS
11		PASS	PASS	PASS	59		PASS	PASS	PASS
12		PASS	PASS	PASS	63		PASS	PASS	PASS
14		PASS	PASS	PASS	64		PASS	PASS	PASS
15		PASS	PASS	PASS	65		PASS	PASS	PASS
18		PASS	PASS	PASS	66		PASS	PASS	PASS
19		PASS	PASS	PASS	67		PASS	PASS	PASS
20		PASS	PASS	PASS	68		PASS	PASS	PASS
21		PASS	PASS	PASS	69		PASS	PASS	PASS
22		PASS	PASS	PASS	71		PASS	PASS	PASS
23		PASS	PASS	PASS	72		PASS	PASS	PASS
24		PASS	PASS	PASS	73		PASS	PASS	PASS
25		PASS	PASS	PASS	74		PASS	PASS	PASS
27		PASS	PASS	PASS	75		PASS	PASS	PASS
28		PASS	PASS	PASS	77		PASS	PASS	PASS
29		PASS	PASS	PASS	78		PASS	PASS	PASS
30		PASS	PASS	PASS	79		PASS	PASS	PASS
31		PASS	PASS	PASS	80		PASS	PASS	PASS
32		PASS	PASS	PASS	81		PASS	PASS	PASS
33		PASS	PASS	PASS	82		PASS	PASS	PASS
34		PASS	PASS	PASS	83		PASS	PASS	PASS
35		PASS	PASS	PASS	84		PASS	PASS	PASS
36		PASS	PASS	PASS	88		PASS	PASS	PASS
37		PASS	PASS	PASS	89		PASS	PASS	PASS
41		PASS	PASS	PASS	90		PASS	PASS	PASS
42		PASS	PASS	PASS	91		PASS	PASS	PASS
43		PASS	PASS	PASS	92		PASS	PASS	PASS
44		PASS	PASS	PASS	93		PASS	PASS	PASS
45		PASS	PASS	PASS	94		PASS	PASS	PASS
46		PASS	PASS	PASS	95		PASS	PASS	PASS
47		PASS	PASS	PASS	96		PASS	PASS	PASS
48		PASS	PASS	PASS	97		PASS	PASS	PASS
49		PASS	PASS	PASS	98		PASS	PASS	PASS
50		PASS	PASS	PASS	99		PASS	PASS	PASS
51		PASS	PASS	PASS	100		PASS	PASS	PASS
52		PASS	PASS	PASS					

ALL – VSS (-)									
(UNIT:V)									
Test Pin	FAIL VOLTAGE	#1	#2	#3	Test Pin	FAIL VOLTAGE	#1	#2	#3
3		PASS	PASS	PASS	53		PASS	PASS	PASS
4		PASS	PASS	PASS	54		PASS	PASS	PASS
7		PASS	PASS	PASS	55		PASS	PASS	PASS
8		PASS	PASS	PASS	56		PASS	PASS	PASS
9		PASS	PASS	PASS	57		PASS	PASS	PASS
10		PASS	PASS	PASS	58		PASS	PASS	PASS
11		PASS	PASS	PASS	59		PASS	PASS	PASS
12		PASS	PASS	PASS	63		PASS	PASS	PASS
14		PASS	PASS	PASS	64		PASS	PASS	PASS
15		PASS	PASS	PASS	65		PASS	PASS	PASS
18		PASS	PASS	PASS	66		PASS	PASS	PASS
19		PASS	PASS	PASS	67		PASS	PASS	PASS
20		PASS	PASS	PASS	68		PASS	PASS	PASS
21		PASS	PASS	PASS	69		PASS	PASS	PASS
22		PASS	PASS	PASS	71		PASS	PASS	PASS
23		PASS	PASS	PASS	72		PASS	PASS	PASS
24		PASS	PASS	PASS	73		PASS	PASS	PASS
25		PASS	PASS	PASS	74		PASS	PASS	PASS
27		PASS	PASS	PASS	75		PASS	PASS	PASS
28		PASS	PASS	PASS	77		PASS	PASS	PASS
29		PASS	PASS	PASS	78		PASS	PASS	PASS
30		PASS	PASS	PASS	79		PASS	PASS	PASS
31		PASS	PASS	PASS	80		PASS	PASS	PASS
32		PASS	PASS	PASS	81		PASS	PASS	PASS
33		PASS	PASS	PASS	82		PASS	PASS	PASS
34		PASS	PASS	PASS	83		PASS	PASS	PASS
35		PASS	PASS	PASS	84		PASS	PASS	PASS
36		PASS	PASS	PASS	88		PASS	PASS	PASS
37		PASS	PASS	PASS	89		PASS	PASS	PASS
41		PASS	PASS	PASS	90		PASS	PASS	PASS
42		PASS	PASS	PASS	91		PASS	PASS	PASS
43		PASS	PASS	PASS	92		PASS	PASS	PASS
44		PASS	PASS	PASS	93		PASS	PASS	PASS
45		PASS	PASS	PASS	94		PASS	PASS	PASS
46		PASS	PASS	PASS	95		PASS	PASS	PASS
47		PASS	PASS	PASS	96		PASS	PASS	PASS
48		PASS	PASS	PASS	97		PASS	PASS	PASS
49		PASS	PASS	PASS	98		PASS	PASS	PASS
50		PASS	PASS	PASS	99		PASS	PASS	PASS
51		PASS	PASS	PASS	100		PASS	PASS	PASS
52		PASS	PASS	PASS					

ALL – VCC (+)									
(UNIT:V)									
Test Pin	FAIL VOLTAGE	#1	#2	#3	Test Pin	FAIL VOLTAGE	#1	#2	#3
3	PASS	PASS	PASS	PASS	53	PASS	PASS	PASS	PASS
4	PASS	PASS	PASS	PASS	54	PASS	PASS	PASS	PASS
7	PASS	PASS	PASS	PASS	55	PASS	PASS	PASS	PASS
8	PASS	PASS	PASS	PASS	56	PASS	PASS	PASS	PASS
9	PASS	PASS	PASS	PASS	57	PASS	PASS	PASS	PASS
10	PASS	PASS	PASS	PASS	58	PASS	PASS	PASS	PASS
11	PASS	400	400	400	59	PASS	PASS	PASS	PASS
12	PASS	400	400	400	63	400	400	400	PASS
14	PASS	400	400	400	64	PASS	400	400	PASS
15	PASS	PASS	PASS	PASS	65	PASS	PASS	PASS	PASS
18	PASS	PASS	PASS	PASS	66	PASS	PASS	PASS	PASS
19	PASS	PASS	PASS	PASS	67	PASS	PASS	PASS	PASS
20	PASS	PASS	PASS	PASS	68	PASS	PASS	PASS	PASS
21	PASS	PASS	PASS	PASS	69	PASS	PASS	PASS	PASS
22	PASS	PASS	PASS	PASS	71	PASS	PASS	PASS	PASS
23	PASS	PASS	PASS	PASS	72	PASS	PASS	PASS	PASS
24	PASS	PASS	PASS	PASS	73	PASS	PASS	PASS	PASS
25	PASS	PASS	PASS	PASS	74	PASS	PASS	PASS	PASS
27	PASS	PASS	PASS	PASS	75	PASS	PASS	PASS	PASS
28	PASS	PASS	PASS	PASS	77	PASS	PASS	PASS	PASS
29	PASS	PASS	PASS	PASS	78	PASS	PASS	PASS	PASS
30	PASS	PASS	PASS	PASS	79	PASS	PASS	PASS	PASS
31	PASS	PASS	PASS	PASS	80	PASS	PASS	PASS	PASS
32	PASS	PASS	PASS	PASS	81	PASS	PASS	PASS	PASS
33	PASS	PASS	PASS	PASS	82	PASS	PASS	PASS	PASS
34	PASS	PASS	PASS	PASS	83	PASS	PASS	PASS	PASS
35	PASS	PASS	PASS	PASS	84	PASS	PASS	PASS	PASS
36	PASS	PASS	PASS	PASS	88	PASS	PASS	PASS	PASS
37	PASS	PASS	PASS	PASS	89	PASS	PASS	PASS	PASS
41	PASS	PASS	PASS	PASS	90	PASS	PASS	PASS	PASS
42	PASS	PASS	PASS	PASS	91	PASS	PASS	PASS	PASS
43	PASS	PASS	PASS	PASS	92	PASS	PASS	PASS	PASS
44	PASS	PASS	PASS	PASS	93	PASS	PASS	PASS	PASS
45	PASS	PASS	PASS	PASS	94	PASS	PASS	PASS	PASS
46	PASS	PASS	PASS	PASS	95	PASS	PASS	PASS	PASS
47	PASS	PASS	PASS	PASS	96	PASS	PASS	PASS	PASS
48	PASS	PASS	PASS	PASS	97	PASS	PASS	PASS	PASS
49	PASS	PASS	PASS	PASS	98	PASS	PASS	PASS	PASS
50	PASS	PASS	PASS	PASS	99	PASS	PASS	PASS	PASS
51	PASS	PASS	PASS	PASS	100	PASS	PASS	PASS	PASS
52	PASS	PASS	PASS	PASS					

ALL – VCC (-)									
(UNIT:V)									
Test Pin	FAIL VOLTAGE	#1	#2	#3	Test Pin	FAIL VOLTAGE	#1	#2	#3
3		PASS	PASS	PASS	53		PASS	PASS	PASS
4		PASS	PASS	PASS	54		PASS	PASS	PASS
7		PASS	PASS	PASS	55		PASS	PASS	PASS
8		PASS	PASS	PASS	56		PASS	PASS	PASS
9		PASS	PASS	PASS	57		PASS	PASS	PASS
10		PASS	PASS	PASS	58		PASS	PASS	PASS
11		PASS	PASS	PASS	59		PASS	PASS	PASS
12		PASS	PASS	PASS	63		PASS	PASS	PASS
14		PASS	PASS	PASS	64		PASS	PASS	PASS
15		PASS	PASS	PASS	65		PASS	PASS	PASS
18		PASS	PASS	PASS	66		PASS	PASS	PASS
19		PASS	PASS	PASS	67		PASS	PASS	PASS
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21		PASS	PASS	PASS	69		PASS	PASS	PASS
22		PASS	PASS	PASS	71		PASS	PASS	PASS
23		PASS	PASS	PASS	72		PASS	PASS	PASS
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27		PASS	PASS	PASS	75		PASS	PASS	PASS
28		PASS	PASS	PASS	77		PASS	PASS	PASS
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50		PASS	PASS	PASS	99		PASS	PASS	PASS
51		PASS	PASS	PASS	100		PASS	PASS	PASS
52		PASS	PASS	PASS					

VCC – VSS (+)									
(UNIT:V)									
Test Pin	FAIL VOLTAGE	#1	#2	#3	Test Pin	FAIL VOLTAGE	#1	#2	#3
	2	400	400	400	60	PASS	PASS	PASS	
	5	PASS	PASS	PASS	62	PASS	PASS	PASS	
	13	PASS	PASS	PASS	76	PASS	PASS	PASS	
	17	PASS	PASS	PASS	86	PASS	PASS	PASS	
	38	PASS	PASS	PASS	87	PASS	PASS	PASS	
	40	PASS	PASS	PASS					

VCC – VSS (-)									
(UNIT:V)									
Test Pin	FAIL VOLTAGE	#1	#2	#3	Test Pin	FAIL VOLTAGE	#1	#2	#3
	2	PASS	PASS	PASS	60	PASS	PASS	PASS	
	5	PASS	PASS	PASS	62	PASS	PASS	PASS	
	13	PASS	PASS	PASS	76	PASS	PASS	PASS	
	17	PASS	PASS	PASS	86	PASS	PASS	PASS	
	38	PASS	PASS	PASS	87	PASS	PASS	PASS	
	40	PASS	PASS	PASS					