Report No.：HS1704050197A
RA No .：1701375-E
Version：A

ESD (HUMAN BODY MODE) TEST REPORT

Company ：RAIO Technology Inc.

Model Name ：RA8873M

Date Received ：APR 05, 2017

Date Tested ：APR 10, 2017

TESTING LABORATORY IS ACCREDITED BY:

IEC/IECQ 17025 certificate of independent test laboratory approval

Certificate No.：1.72.0031

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	Yenyu Liu		Apr 10, 2017
Manager	Even Lin		Apr 10, 2017

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 of all ESD tests should be based on the result of parametric and functional testing conducted by the customer, which follows the statement of international standards. Thus, the judgment of the curve traces provided in this report is for reference ONLY.

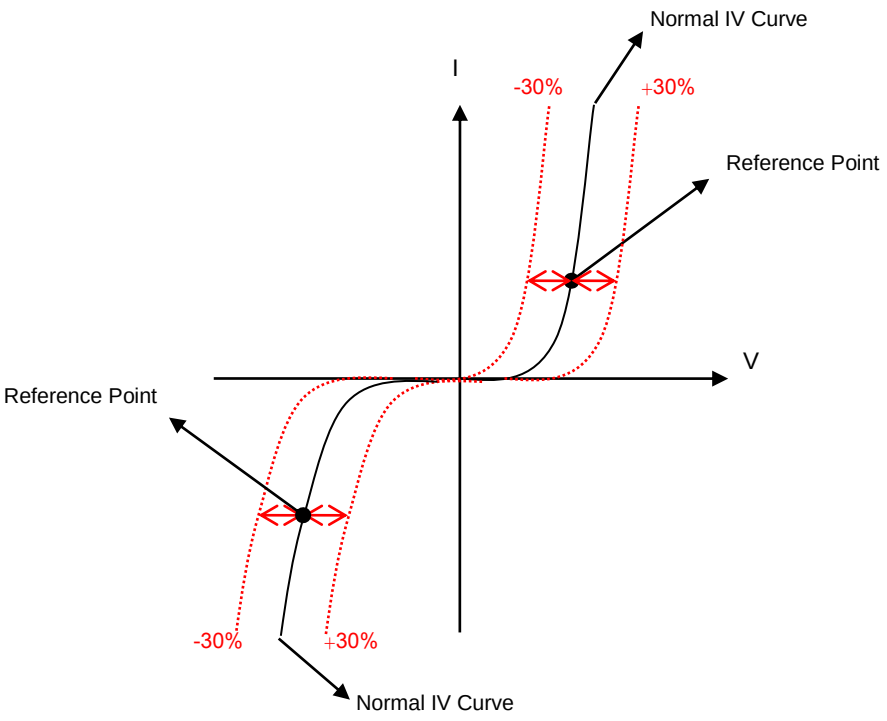
TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 DESCRIPTION OF UNIT

MANUFACTURER	: RAIO Technology Inc.
DEVICE NAME	: RA8873M
PACKAGE / PIN COUNT	: LQFP-128
REFERENCE DOCUMENT	: MIL-STD-883G Method 3015.7
TEST VOLTAGE	: 2000V ~ 5000V (±), Step: 1000V (±)
SAMPLE QUANTITY	: 18 ea
FAILURE CRITERIA (Reference Only)	: ±30% voltage shift at reference point before/after zapping

※ Failure Judgment: Voltage shift over ±30% at reference point.



2. ESD (HUMAN BODY MODE) TEST

2.1 TEST EQUIPMENT

Test Equipment	Equipment Number	Tester
KEYTEK ZAPMASTER	#5	02011

2.2 LABORATORY AMBIENCE CONDITION

Temperature：25 °C ± 5 °C

Relative humidity：55 % ± 10 % (RH)

2.3 REFERENCE DOCUMENT

The test method refers to MIL-STD-883G Method 3015.7

2.4 TEST CONDITION

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

2.5 SUMMARY OF TEST

Test Model : HBM	**ESD Sensitivity Passed: ±5000V**		**MIL-STD Classification Class : 3A**
Test condition	Sample Quantity	Passed Volts	Class 0 : ＜ 250V. Class 1A : ≧ 250V , ＜499V Class 1B : ≧ 500V , ＜999V Class 1C : ≧ 1000V , ＜1999V Class 2 : ≧ 2000V , ＜3999V Class 3A : ≧ 4000V , ＜7999V Class 3B : ≧ 8000V
ALL – VSS (+)	3	+5000V	
ALL – VSS (-)	3	-5000V	
ALL – VCC (+)	3	+5000V	
ALL – VCC (-)	3	-5000V	
VCC – VSS (+)	3	+5000V	
VCC – VSS (-)	3	-5000V	

ALL:1-2,6-22,25-41,90-96,99-108,112-120, 123-128
NC:44-61,65-74,77-87
VCC:3-4,23,42,62-63,75,88,97,109,111,121
VSS:5,24,43,64,76,89,98,110,122

2.6 CONTENTS OF TEST

ALL – VSS (+) (UNIT:V)

Test Pin	FAIL VOLTAGE	#1	#2	#3	Test Pin	FAIL VOLTAGE	#1	#2	#3
1		PASS	PASS	PASS	40		PASS	PASS	PASS
2		PASS	PASS	PASS	41		PASS	PASS	PASS
6		PASS	PASS	PASS	90		PASS	PASS	PASS
7		PASS	PASS	PASS	91		PASS	PASS	PASS
8		PASS	PASS	PASS	92		PASS	PASS	PASS
9		PASS	PASS	PASS	93		PASS	PASS	PASS
10		PASS	PASS	PASS	94		PASS	PASS	PASS
11		PASS	PASS	PASS	95		PASS	PASS	PASS
12		PASS	PASS	PASS	96		PASS	PASS	PASS
13		PASS	PASS	PASS	99		PASS	PASS	PASS
14		PASS	PASS	PASS	100		PASS	PASS	PASS
15		PASS	PASS	PASS	101		PASS	PASS	PASS
16		PASS	PASS	PASS	102		PASS	PASS	PASS
17		PASS	PASS	PASS	103		PASS	PASS	PASS
18		PASS	PASS	PASS	104		PASS	PASS	PASS
19		PASS	PASS	PASS	105		PASS	PASS	PASS
20		PASS	PASS	PASS	106		PASS	PASS	PASS
21		PASS	PASS	PASS	107		PASS	PASS	PASS
22		PASS	PASS	PASS	108		PASS	PASS	PASS
25		PASS	PASS	PASS	112		PASS	PASS	PASS
26		PASS	PASS	PASS	113		PASS	PASS	PASS
27		PASS	PASS	PASS	114		PASS	PASS	PASS
28		PASS	PASS	PASS	115		PASS	PASS	PASS
29		PASS	PASS	PASS	116		PASS	PASS	PASS
30		PASS	PASS	PASS	117		PASS	PASS	PASS
31		PASS	PASS	PASS	118		PASS	PASS	PASS
32		PASS	PASS	PASS	119		PASS	PASS	PASS
33		PASS	PASS	PASS	120		PASS	PASS	PASS
34		PASS	PASS	PASS	123		PASS	PASS	PASS
35		PASS	PASS	PASS	124		PASS	PASS	PASS
36		PASS	PASS	PASS	125		PASS	PASS	PASS
37		PASS	PASS	PASS	126		PASS	PASS	PASS
38		PASS	PASS	PASS	127		PASS	PASS	PASS
39		PASS	PASS	PASS	128		PASS	PASS	PASS

ALL – VSS (-) (UNIT:V)

Test Pin	FAIL VOLTAGE	#4	#5	#6	Test Pin	FAIL VOLTAGE	#4	#5	#6
1		PASS	PASS	PASS	40		PASS	PASS	PASS
2		PASS	PASS	PASS	41		PASS	PASS	PASS
6		PASS	PASS	PASS	90		PASS	PASS	PASS
7		PASS	PASS	PASS	91		PASS	PASS	PASS
8		PASS	PASS	PASS	92		PASS	PASS	PASS
9		PASS	PASS	PASS	93		PASS	PASS	PASS
10		PASS	PASS	PASS	94		PASS	PASS	PASS
11		PASS	PASS	PASS	95		PASS	PASS	PASS
12		PASS	PASS	PASS	96		PASS	PASS	PASS
13		PASS	PASS	PASS	99		PASS	PASS	PASS
14		PASS	PASS	PASS	100		PASS	PASS	PASS
15		PASS	PASS	PASS	101		PASS	PASS	PASS
16		PASS	PASS	PASS	102		PASS	PASS	PASS
17		PASS	PASS	PASS	103		PASS	PASS	PASS
18		PASS	PASS	PASS	104		PASS	PASS	PASS
19		PASS	PASS	PASS	105		PASS	PASS	PASS
20		PASS	PASS	PASS	106		PASS	PASS	PASS
21		PASS	PASS	PASS	107		PASS	PASS	PASS
22		PASS	PASS	PASS	108		PASS	PASS	PASS
25		PASS	PASS	PASS	112		PASS	PASS	PASS
26		PASS	PASS	PASS	113		PASS	PASS	PASS
27		PASS	PASS	PASS	114		PASS	PASS	PASS
28		PASS	PASS	PASS	115		PASS	PASS	PASS
29		PASS	PASS	PASS	116		PASS	PASS	PASS
30		PASS	PASS	PASS	117		PASS	PASS	PASS
31		PASS	PASS	PASS	118		PASS	PASS	PASS
32		PASS	PASS	PASS	119		PASS	PASS	PASS
33		PASS	PASS	PASS	120		PASS	PASS	PASS
34		PASS	PASS	PASS	123		PASS	PASS	PASS
35		PASS	PASS	PASS	124		PASS	PASS	PASS
36		PASS	PASS	PASS	125		PASS	PASS	PASS
37		PASS	PASS	PASS	126		PASS	PASS	PASS
38		PASS	PASS	PASS	127		PASS	PASS	PASS
39		PASS	PASS	PASS	128		PASS	PASS	PASS

ALL – VCC (+) (UNIT:V)

Test Pin	FAIL VOLTAGE	#7	#8	#9	Test Pin	FAIL VOLTAGE	#7	#8	#9
1		PASS	PASS	PASS	40		PASS	PASS	PASS
2		PASS	PASS	PASS	41		PASS	PASS	PASS
6		PASS	PASS	PASS	90		PASS	PASS	PASS
7		PASS	PASS	PASS	91		PASS	PASS	PASS
8		PASS	PASS	PASS	92		PASS	PASS	PASS
9		PASS	PASS	PASS	93		PASS	PASS	PASS
10		PASS	PASS	PASS	94		PASS	PASS	PASS
11		PASS	PASS	PASS	95		PASS	PASS	PASS
12		PASS	PASS	PASS	96		PASS	PASS	PASS
13		PASS	PASS	PASS	99		PASS	PASS	PASS
14		PASS	PASS	PASS	100		PASS	PASS	PASS
15		PASS	PASS	PASS	101		PASS	PASS	PASS
16		PASS	PASS	PASS	102		PASS	PASS	PASS
17		PASS	PASS	PASS	103		PASS	PASS	PASS
18		PASS	PASS	PASS	104		PASS	PASS	PASS
19		PASS	PASS	PASS	105		PASS	PASS	PASS
20		PASS	PASS	PASS	106		PASS	PASS	PASS
21		PASS	PASS	PASS	107		PASS	PASS	PASS
22		PASS	PASS	PASS	108		PASS	PASS	PASS
25		PASS	PASS	PASS	112		PASS	PASS	PASS
26		PASS	PASS	PASS	113		PASS	PASS	PASS
27		PASS	PASS	PASS	114		PASS	PASS	PASS
28		PASS	PASS	PASS	115		PASS	PASS	PASS
29		PASS	PASS	PASS	116		PASS	PASS	PASS
30		PASS	PASS	PASS	117		PASS	PASS	PASS
31		PASS	PASS	PASS	118		PASS	PASS	PASS
32		PASS	PASS	PASS	119		PASS	PASS	PASS
33		PASS	PASS	PASS	120		PASS	PASS	PASS
34		PASS	PASS	PASS	123		PASS	PASS	PASS
35		PASS	PASS	PASS	124		PASS	PASS	PASS
36		PASS	PASS	PASS	125		PASS	PASS	PASS
37		PASS	PASS	PASS	126		PASS	PASS	PASS
38		PASS	PASS	PASS	127		PASS	PASS	PASS
39		PASS	PASS	PASS	128		PASS	PASS	PASS

ALL – VCC (-) (UNIT:V)

Test Pin FAIL VOLTAGE	#10	#11	#12	Test Pin FAIL VOLTAGE	#10	#11	#12
1	PASS	PASS	PASS	40	PASS	PASS	PASS
2	PASS	PASS	PASS	41	PASS	PASS	PASS
6	PASS	PASS	PASS	90	PASS	PASS	PASS
7	PASS	PASS	PASS	91	PASS	PASS	PASS
8	PASS	PASS	PASS	92	PASS	PASS	PASS
9	PASS	PASS	PASS	93	PASS	PASS	PASS
10	PASS	PASS	PASS	94	PASS	PASS	PASS
11	PASS	PASS	PASS	95	PASS	PASS	PASS
12	PASS	PASS	PASS	96	PASS	PASS	PASS
13	PASS	PASS	PASS	99	PASS	PASS	PASS
14	PASS	PASS	PASS	100	PASS	PASS	PASS
15	PASS	PASS	PASS	101	PASS	PASS	PASS
16	PASS	PASS	PASS	102	PASS	PASS	PASS
17	PASS	PASS	PASS	103	PASS	PASS	PASS
18	PASS	PASS	PASS	104	PASS	PASS	PASS
19	PASS	PASS	PASS	105	PASS	PASS	PASS
20	PASS	PASS	PASS	106	PASS	PASS	PASS
21	PASS	PASS	PASS	107	PASS	PASS	PASS
22	PASS	PASS	PASS	108	PASS	PASS	PASS
25	PASS	PASS	PASS	112	PASS	PASS	PASS
26	PASS	PASS	PASS	113	PASS	PASS	PASS
27	PASS	PASS	PASS	114	PASS	PASS	PASS
28	PASS	PASS	PASS	115	PASS	PASS	PASS
29	PASS	PASS	PASS	116	PASS	PASS	PASS
30	PASS	PASS	PASS	117	PASS	PASS	PASS
31	PASS	PASS	PASS	118	PASS	PASS	PASS
32	PASS	PASS	PASS	119	PASS	PASS	PASS
33	PASS	PASS	PASS	120	PASS	PASS	PASS
34	PASS	PASS	PASS	123	PASS	PASS	PASS
35	PASS	PASS	PASS	124	PASS	PASS	PASS
36	PASS	PASS	PASS	125	PASS	PASS	PASS
37	PASS	PASS	PASS	126	PASS	PASS	PASS
38	PASS	PASS	PASS	127	PASS	PASS	PASS
39	PASS	PASS	PASS	128	PASS	PASS	PASS

VCC – VSS (+) (UNIT:V)							
Test Pin FAIL VOLTAGE	#13	#14	#15	Test Pin FAIL VOLTAGE	#13	#14	#15
3	PASS	PASS	PASS	75	PASS	PASS	PASS
4	PASS	PASS	PASS	88	PASS	PASS	PASS
23	PASS	PASS	PASS	97	PASS	PASS	PASS
42	PASS	PASS	PASS	109	PASS	PASS	PASS
62	PASS	PASS	PASS	111	PASS	PASS	PASS
63	PASS	PASS	PASS	121	PASS	PASS	PASS

VCC – VSS (-) (UNIT:V)							
Test Pin FAIL VOLTAGE	#16	#17	#18	Test Pin FAIL VOLTAGE	#16	#17	#18
3	PASS	PASS	PASS	75	PASS	PASS	PASS
4	PASS	PASS	PASS	88	PASS	PASS	PASS
23	PASS	PASS	PASS	97	PASS	PASS	PASS
42	PASS	PASS	PASS	109	PASS	PASS	PASS
62	PASS	PASS	PASS	111	PASS	PASS	PASS
63	PASS	PASS	PASS	121	PASS	PASS	PASS

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