FCC ID TEST REPORT

According to

FCC Part 15 Subpart C, Intentional Radiators

EUT Type : Bluetooth Keyboard

Transmitter (TX) : 1) Model No.: PSK-3962, ASK-3962, ACK-540 BT, PSK-3952, ASK-3952, ACK-595 BT

2) FCC ID: RAC3962A01

Applicant Name: PRECISION SQUARED TECHNOLOGY CORPORATION

Address See the General Information for details.

Test Date : NOV. 06, 2007 Issued Date : NOV. 19, 2007

Test Engineer : JASON KUNG NVLAP Signature : M. Y. Tsui

M. Y. Tsui / Director

- The test report shall not be reproduced except in full, without the written approval of the “PEP”
- The report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States government.
- This report is applicable only for EUT Model which described in page 4 .
- The testing result in this report are traceable to national or international standard .

PEP TESTING LABORATORY

NO. 9-6, Huzi, Hubei Village, Linkou Shiang, Taipei Hsien, Taiwan 244, R. O. C.

Tel : 886-2-26021042 FAX : 886-2-26021045

Table of Contents

1. General Information

Measurement of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission under FCC Part 2 and 15.

Applicant Name/Address: PRECISION SQUARED TECHNOLOGY CORPORATION
5F-7, NO. 2, JIAN BA ROAD, CHUNG HO CITY, TAIPEI HSIENG, TAIWAN, R. O. C.

Contact Person: MICHAEL CHOW / R&D DEPT. DIRECTOR

Phone No.: 886-2-82280125 Fax No.: 886-2-82280105

Manufacturer Name/Address: GLOBAL LINK DIGITAL TECHNOLOGY CO., LTD.
QIBAOYDING INDUSTRIAL DISTRICT, LIUYONGWEI, WAN JIANG TOWN, DONGGUAN CITY, GUANGDONG PROVINCE, P. R. CHINA

- ✧ Regulation: FCC Part 2 and 15
- ✧ Limitation: Part 15, Section 15.249, 15.207 and 15.209
- ✧ Test Procedure: ANSI C63.4-2003
- ✧ Place of Test: PEP Testing Laboratory

  NO. 9-6, Huzi, Hubei Village, Linkou Shiang, Taipei Hsien, Taiwan 244, R. O. C.

  TEL : 886-2-26021042 FAX : 886-2-26021045

2. Product Information

a.	**EUT Type:**	**Bluetooth Keyboard**
b.	**Transmitter Model:**	**PSK-3962**
c.	**TX FCC ID:**	**RAC3962A01**
d.	**TX Channel No.：**	**79**
e.	**TX Working Freq.：**	**2.402 ~ 2.480 GHz**
f.	**TX Modulation：**	**FHSS**
g.	**TX Crystal / Osc.：**	**4 MHz, 26 MHz**
h.	**TX Port(s) ：**	**N/A**
i.	**Antenna Type:**	**Integral antenna**
j.	**TX Transmitting Power：**	**DC 3V**
k	**TX Power Supply：**	**Battery (DC 1.5V * 2)**
l.	**TX Case：**	**ABS**
m.	**EUT Condition :**	**☐ Prototype ☑ Engineering ☐ Production**
n.	**EUT Received Date :**	**NOV. 01, 2007**
o.	**Date(s) of performance of test:**	**NOV. 01, 2007 – NOV. 06, 2007**

3. EUT Description and Test Methods

(A) The EUT is Bluetooth Keyboard, FCC ID: RAC3962A01, model PSK-3962, ASK-3962, ACK-540 BT (has touch pad), PSK-3952, ASK-3952 and ACK-595 BT (no touch pad). These models have identical electrical design and construction except that they are different in model number for marketing purpose. The EUT consists of transmitter unit. The radio frequency of EUT is 2.402-2.480 GHz. DC 3V from two rechargeable batteries (size AAA, DC 1.5V). Additional USB interface power cord for EUT is attached for power charge. For more detail specification about the EUT, please refer to the user's manual.

(B) Test Method: According to the major function designed, the EUT placement on test table was arranged alone to proceed with test. The test was carried out on EUT operational condition of Tx-On mode: continuous transmission state. The worst-case test result of each test mode was recorded and provided in this report.

(C) At the frequencies where the peak values of the emission exceeded the quasi-peak limit, the emissions were also measured with the quasi-peak detectors. The average detector also measured the emission either (A) quasi-peak values were under quasi-peak limit but exceeded average limit, or (B) peak values were under quasi-peak limit but exceeded average limit.

4. Modification(s):

N/A

5. Test Software Used

(A) CSR BlueSuite: controlling the EUT through the dungle and choose the channel that testing requirement.

6. Support Equipment Used

Personal Computer (PC4)	**CPU :** Intel P4 3GHz **FCC ID**：Declaration of Conformity(DoC) **Manufacturer**：ACER **Model Number**：Aspire T650 **Power Supply**：Switching **Power Cord**：Non-Shielded, Detachable, 1.8m
LCD (LCD1 15")	**FCC ID**：Declaration of Conformity(DoC) **Manufacturer**：SAMSUNG **Model Number**：740B **Power Supply**：Switching **Power Cord**：Non-Shielded, Detachable, 1.8m **Data Cable**：**1 >** Shielded , Detachable,1.2m **2 >** Back Shell : Metal
Printer (PRN1)	**FCC ID**：B94C2642X **Manufacturer**：Hewlett-Packard **Model Number**：C2642E **Power Supply**：Linear, 30Vdc O/P **Power Cable**：Non-Shielded , Detachable,1.8m **Data Cable**：**1 >** Shielded , Detachable,1.2m **2 >** Back Shell : Metal
Mouse (MOUS/1 PS/2)	**FCC ID**：DZL211106 **Manufacturer**：LOGITECH **Model Number**：M-S43 **Power Supply**：+5Vdc from PS2 of PC **Power Cord**：N/A **Data Cable**：**1 >** Shielded , Non-detachable,1.8m **2 >** Back Shell : Metal
DUNGLE	**Manufacturer**：SANWA SUPPLY **Model Number**：MM-BTUDS

7. Description Field Strength of Fundamental and Harmonics Test

7.1 Field Strength of Fundamental and Harmonics Test

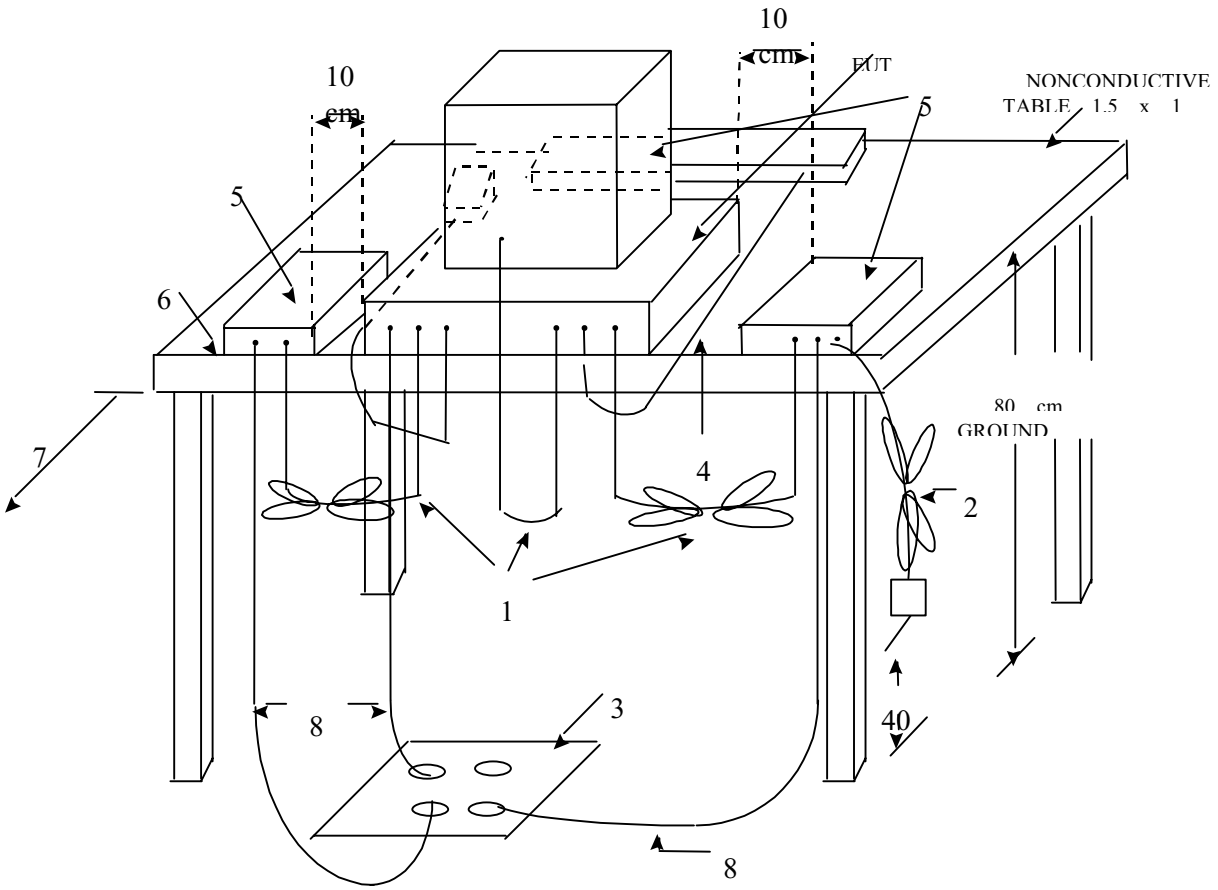
Field Strength of Fundamental and Harmonics Test were made indoor chamber at 3-meter test range using horn antenna. The test equipment was placed on a wooden bench situated on a 1.5x1 meter area adjacent to the measurement area. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The detector function was set to peak and average value, the bandwidth of the receiver was set to 1MHz.

The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission.

7.2 Field Strength of Fundamental and Harmonics Limits

Fundamental Frequency	Fundamental		Harmonics	
	（mV/m）	（dBμV/m）	（μV/m）	（dBμV/m）
902-928MHz	50	94	500	54
2400-2483.5MHz	50	94	500	54
5725-5875MHz	50	94	500	54
24.0-24.25GHz	250	108	2500	68

7.3 Test Configuration



8. Description of Conducted Emissions Test

8.1 Conducted Emissions

A 1m x1.5m wooden table 80 cm high is placed 40cm away from the vertical wall. Two AMN are bonded to the grounding plane. The EUT is powered from the designated AMN and the support equipment is powered from another designated AMN. Powers to the AMN are filtered by a high-current high insertion loss power line filters. All electrical cables are shielded by braided tinned copper zipper tubing with inner diameter of 1/2". All interconnecting cables more than 1 meter were shortened by non-inductive bundling (serpentine fashion) to a 1-meter length.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the AMN was connected to the spectrum analyzer to determine the frequency producing the maximum EME from the EUT.

The spectrum was scanned from 150kHz to 30 MHz with1.5 sec sweep time. The frequency producing the maximum level was re-examined using Quasi-Peak adapter. The detector function was set to CISPR quasi-peak mode. The bandwidth of the receiver was set to 10kHz. The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission. Each emission was maximized by: switching power lines; varying the mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and/or support equipment, and powering the monitor from the floor mounted outlet box and the computer aux AC outlet, if applicable; whichever determined the worst-case emission.

8.2 Conducted Emissions Limits

Frequency	**Maximum RF Line Voltage dB(uV)**			
	Class A		**Class B**	
MHz	**QUASI-PEAK**	**AVERAGE**	**QUASI-PEAK**	**AVERAGE**
0.15 - 0.50	79	66	66-56	56-46
0.50 - 5.0	73	60	56	46
5.0 - 30	73	60	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

9. Description of Radiated Emissions Test

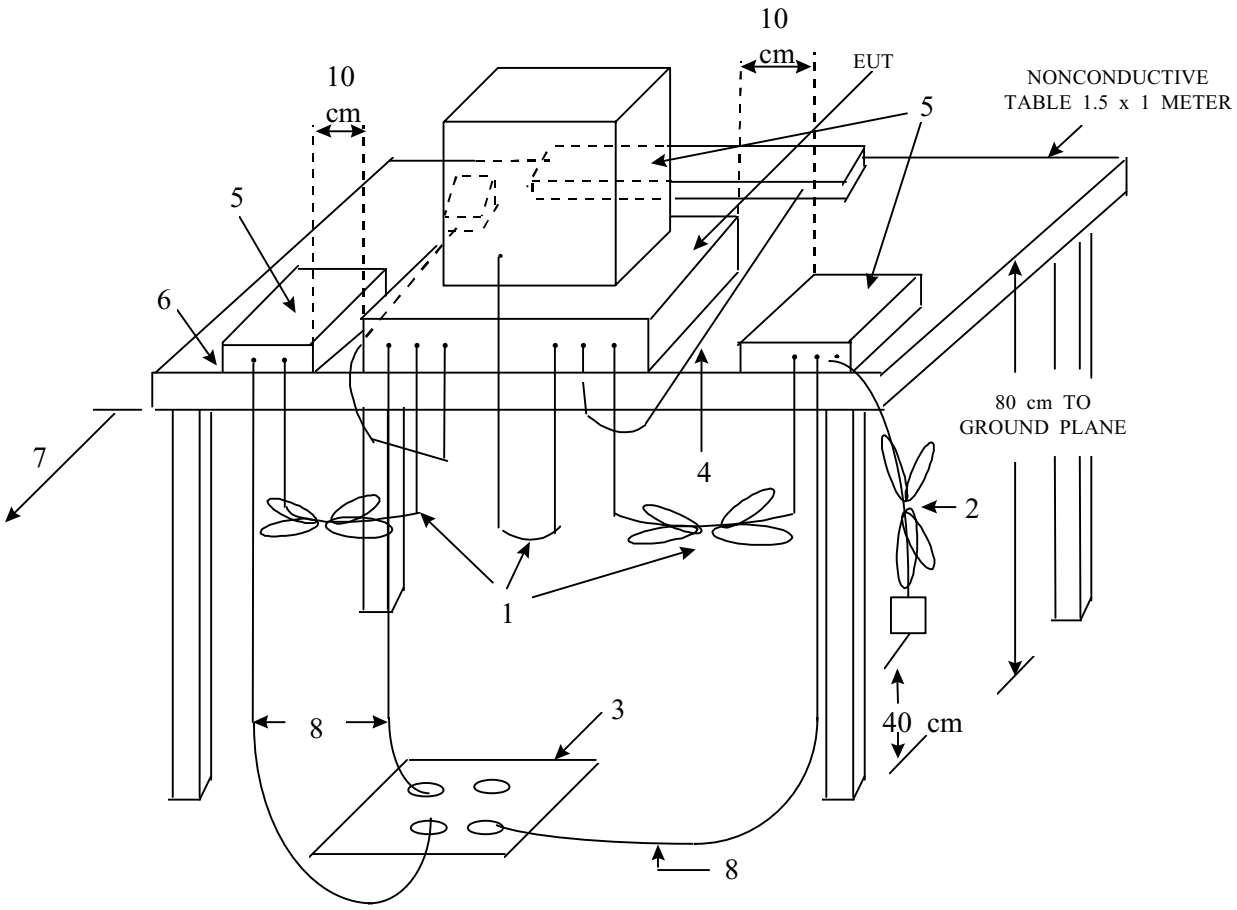
9.1 Radiated Emissions

Preliminary measurements were made indoors chamber at 3 meter using broadband antennas, broadband amplifier, and spectrum analyzer to determine the frequency producing the maximum EME. Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, turntable azimuth with respect to the antenna were noted for each frequency found. The spectrum was scanned from 30 to 1000 MHz using logbicon antenna. Above 1GHz, linearly polarized double ridge horn antenna was used.

Final measurements were made outdoors at 3-meter test range using logbicon antenna and horn antenna. The test equipment was placed on a wooden bench situated on a 1.5x1 meter area adjacent to the measurement area. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. Each frequency found during pre-scan measurements was re-examined and investigated using Quasi-Peak and Average Adapter. 30MHz-1GHz, the detector function was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 120kHz. Above 1GHz, the detector function was set to peak and average value, the bandwidth of the spectrum was set to 1MHz.

The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission. Each emission was maximized by: varying mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and/or support equipment, and powering the monitor from the floor mounted outlet box and the computer aux AC outlet , if applicable; and changing the polarity of the antenna, whichever determined the worst-case emission. Photographs of the worst-case emission can be seen in radiated emission test photo.

9.2 Test Configuration



9.3 Radiated Emission Limits

Limits for radiated disturbance of
Class B ITE or Intentional Radiator
At a measuring distance of 3 m

Frequency MHz	Field Strength dB μ V/m or uV/m
30 to 88	40 100
88 to 216	43.5 150
216 to 960	46 200
Above 960	56 500

NOTES
1 The lower limit shall apply at the transition frequency.
2 Additional provisions may be required for cases where interference occurs.

10. Field Strength of Fundamental and Harmonics Test Setup Photos

< FRONT VIEW >

< REAR VIEW >

11. Field Strength of Fundamental and Harmonics Test Data

Model No. : PSK-3962
Temperature : 26° C Humidity : 54 %
Memo : CH LOW MODE (2.402GHz)

Antenna polarization : HORIZONTAL ; Test distance : 3m ;

Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Detector	Remark
2402.030	85.95	-28.05	114	Peak	Fundamental
4803.980	50.17	-23.83	74	Peak	Harmonic
7205.950	50.12	-23.88	74	Peak	Harmonic
9608.000	---				
12010.000	---				
14412.000	---				
16814.000	---				
19216.000	---				
21618.000	---				
24020.000	---				

Antenna polarization : VERTICAL ; Test distance : 3m ;

Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Detector	Remark
2401.990	91.21	-22.79	114	Peak	Fundamental
4804.140	49.66	-24.34	74	Peak	Harmonic
7206.030	49.20	-24.80	74	Peak	Harmonic
9608.000	---				
12010.000	---				
14412.000	---				
16814.000	---				
19216.000	---				
21618.000	---				
24020.000	---				

(1) Over Limit = Level-Limit Line
(2) The above measurement of fundamental and harmonics testing data within the harmonics frequency level shown "---", it means that its harmonics frequency level is more than 20dB below the limit or its field strength is too small to be detected.

Model No. : PSK-3962
Temperature : 26° C Humidity : 54 %
Memo : CH MID MODE (2.441GHz)

Antenna polarization : HORIZONTAL ; Test distance : 3m ;

Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Detector	Remark
2441.020	87.84	-26.16	114	Peak	Fundamental
4882.140	51.16	-22.84	74	Peak	Harmonic
7322.950	48.63	-25.37	74	Peak	Harmonic
9764.000	---				
12205.000	---				
14646.000	---				
17087.000	---				
19528.000	---				
21969.000	---				
24410.000	---				

Antenna polarization : VERTICAL ; Test distance : 3m ;

Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Detector	Remark
2441.030	92.74	-21.26	114	Peak	Fundamental
4882.070	50.22	-23.78	74	Peak	Harmonic
7322.990	48.70	-25.30	74	Peak	Harmonic
9764.000	---				
12205.000	---				
14646.000	---				
17087.000	---				
19528.000	---				
21969.000	---				
24410.000	---				

(1) Over Limit = Level-Limit Line
(2) The above measurement of fundamental and harmonics testing data within the harmonics frequency level shown "---", it means that its harmonics frequency level is more than 20dB below the limit or its field strength is too small to be detected.

Model No. : PSK-3962
Temperature : 26° C Humidity : 54 %
Memo : CH HIGH MODE (2.480GHz)

Antenna polarization : HORIZONTAL ; Test distance : 3m ;

Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Detector	Remark
2479.990	90.82	-23.18	114	Peak	Fundamental
4959.940	46.58	-27.42	74	Peak	Harmonic
7439.900	48.64	-25.36	74	Peak	Harmonic
9920.000	---				
12400.000	---				
14880.000	---				
17360.000	---				
19840.000	---				
22320.000	---				
24800.000	---				

Antenna polarization : VERTICAL ; Test distance : 3m ;

Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Detector	Remark
2480.020	91.24	-22.76	114	Peak	Fundamental
4960.260	45.92	-28.08	74	Peak	Harmonic
7440.060	48.50	-25.50	74	Peak	Harmonic
9920.000	---				
12400.000	---				
14880.000	---				
17360.000	---				
19840.000	---				
22320.000	---				
24800.000	---				

(1) Over Limit = Level-Limit Line
(2) The above measurement of fundamental and harmonics testing data within the harmonics frequency level shown "---", it means that its harmonics frequency level is more than 20dB below the limit or its field strength is too small to be detected.

12. Conducted Emissions Test Setup Photos

N/A

13. Conducted Emissions Test Data

The EUT is supplied by DC power source from batteries. The conducted powerline test is not applicable to EUT.

14. Radiated Emissions Test Setup Photos

< FRONT VIEW >

< REAR VIEW >

15. Radiated Emissions Test Data

15.1 Field Strength of Fundamental and Harmonics Test Data

Model No.	**: PSK-3962**		
Frequency range	**: 30MHz to 1GHz**	**Detector**	**: Quasi-Peak Value**
Temperature	**: 23° C**	**Humidity**	**: 55 %**
Memo	**: TX ON MODE**		

Antenna polarization : HORIZONTAL ; Test distance : 3m ;

Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)
36.790	29.70	-10.30	40.00	38.25	10.97	0.65	20.17
141.550	32.76	-10.74	43.50	37.01	14.48	1.34	20.07
195.870	33.06	-10.44	43.50	40.13	11.24	1.57	19.88
268.620	34.80	-11.20	46.00	40.23	11.52	2.06	19.01
606.180	36.88	- 9.12	46.00	33.01	18.93	3.64	18.70
807.940	43.25	- 2.75	46.00	36.16	21.59	4.37	18.87

Antenna polarization : VERTICAL ; Test distance : 3m ;

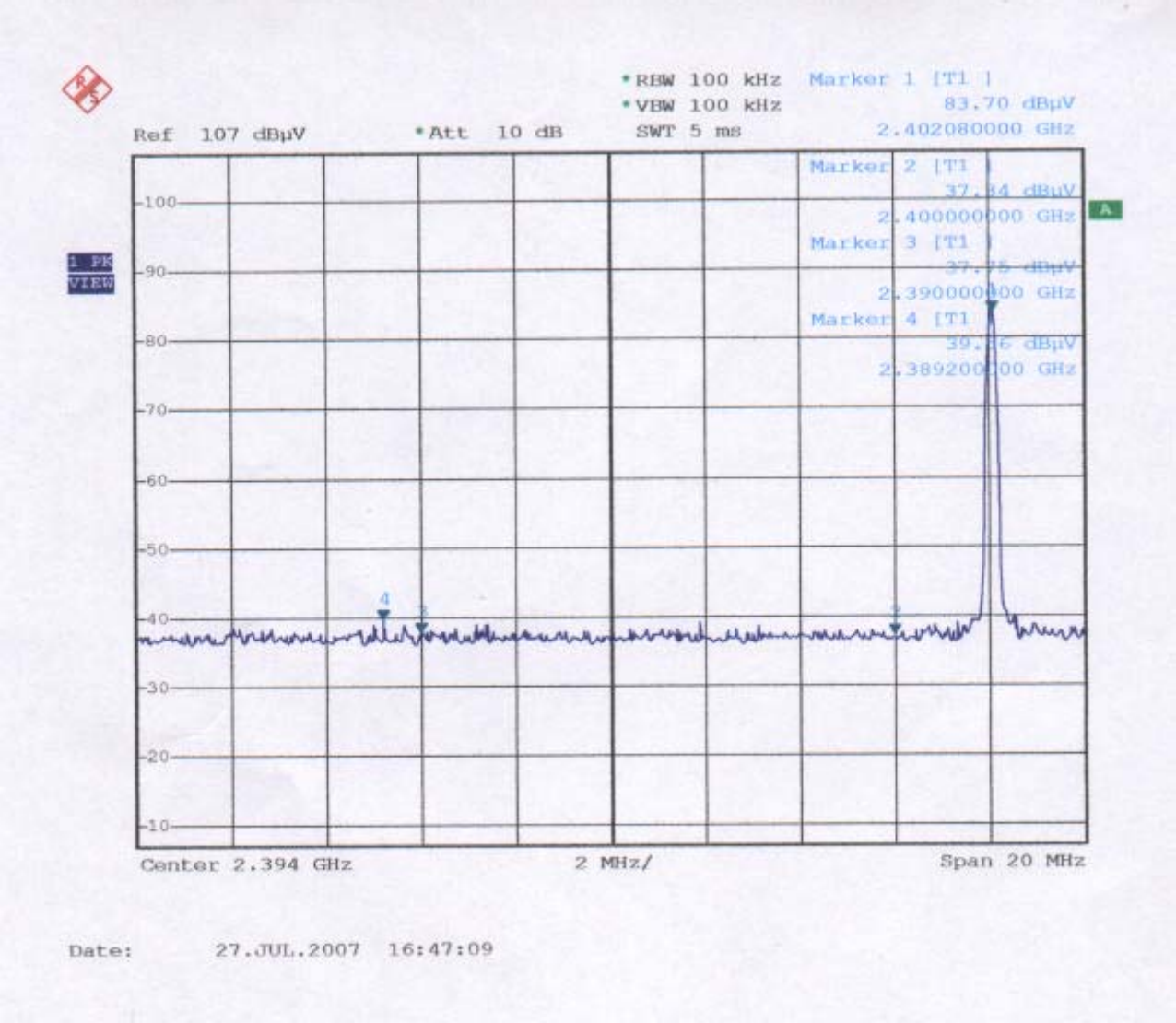
Freq. (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)
36.790	33.65	- 6.35	40.00	42.20	10.97	0.65	20.17
48.430	28.18	-11.82	40.00	36.12	11.46	0.80	20.20
470.380	35.84	-10.16	46.00	35.83	16.38	2.94	19.31
537.310	33.59	-12.41	46.00	32.01	17.50	3.25	19.17
606.180	35.51	-10.49	46.00	31.64	18.93	3.64	18.70
807.940	38.84	- 7.16	46.00	31.75	21.59	4.37	18.87

Note :

1. Level = Read Level + Antenna Factor + Cable Loss – Preamp Factor
2. Over Limit = Level – Limit Line

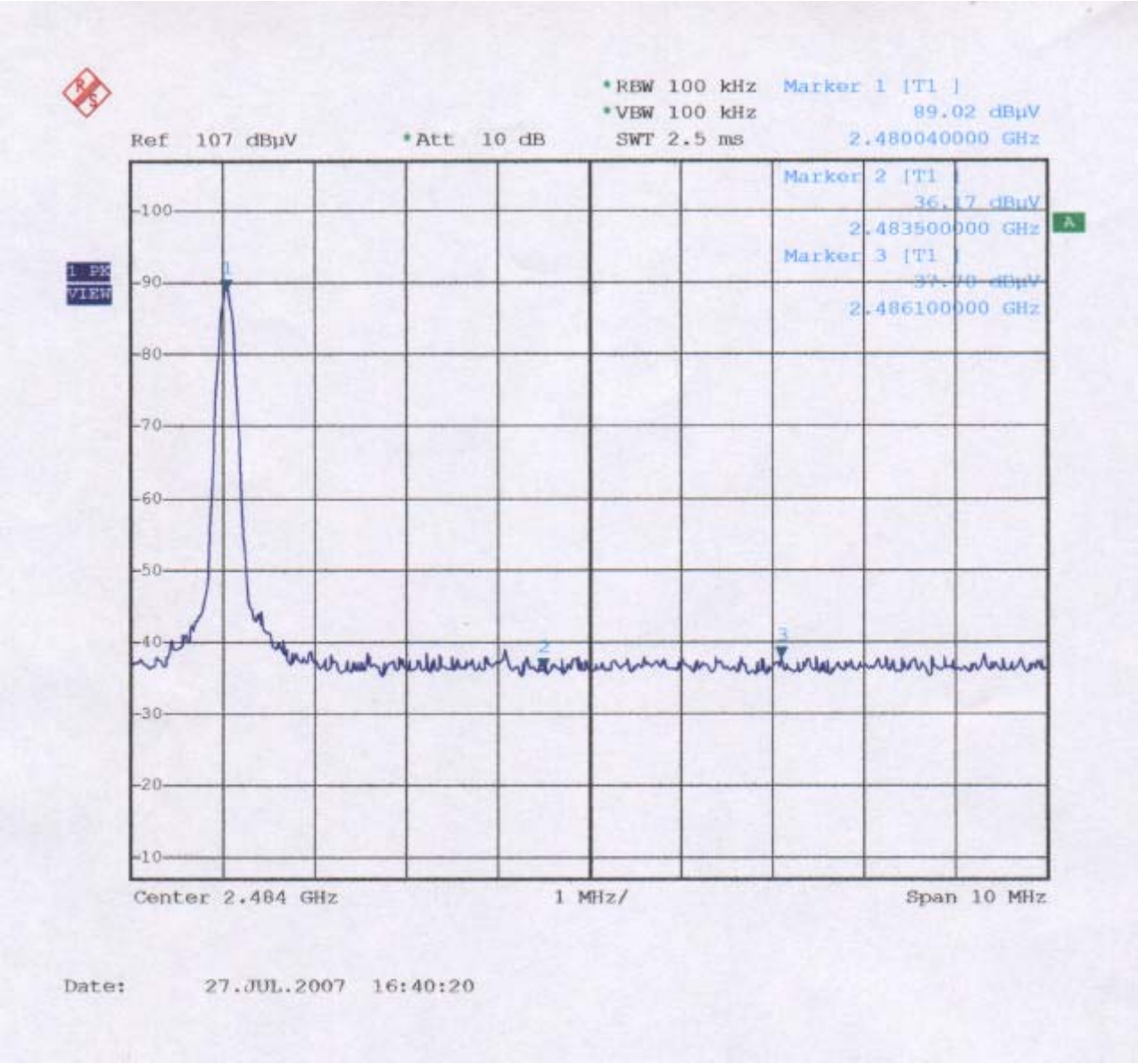
16. Band-edges Compliance

Channel : CH LOW
Polarity : Horizontal



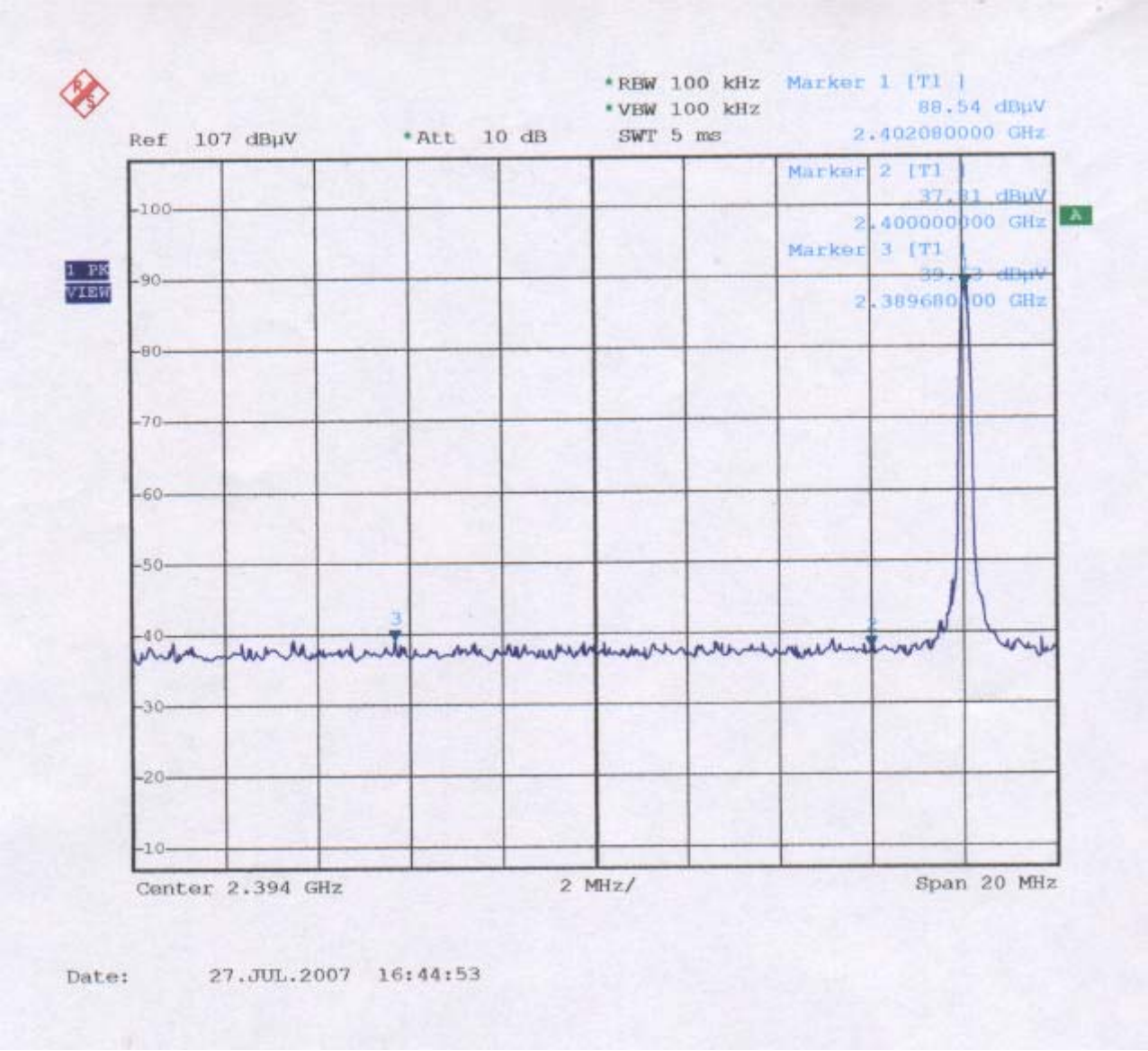
Test method : Public Notice DA 00-705
Detect : Peak Value
Marker-Delta method :
83.70dBuV/m-39.56 dBuV/m =44.14dBuV/m
85.95 dBuV/m-44.14 dBuV/m=41.81 dBuV/m
*41.81dBuV/m<Average Limit (54dBuV/m)

Channel : CH HIGH
Polarity : Horizontal



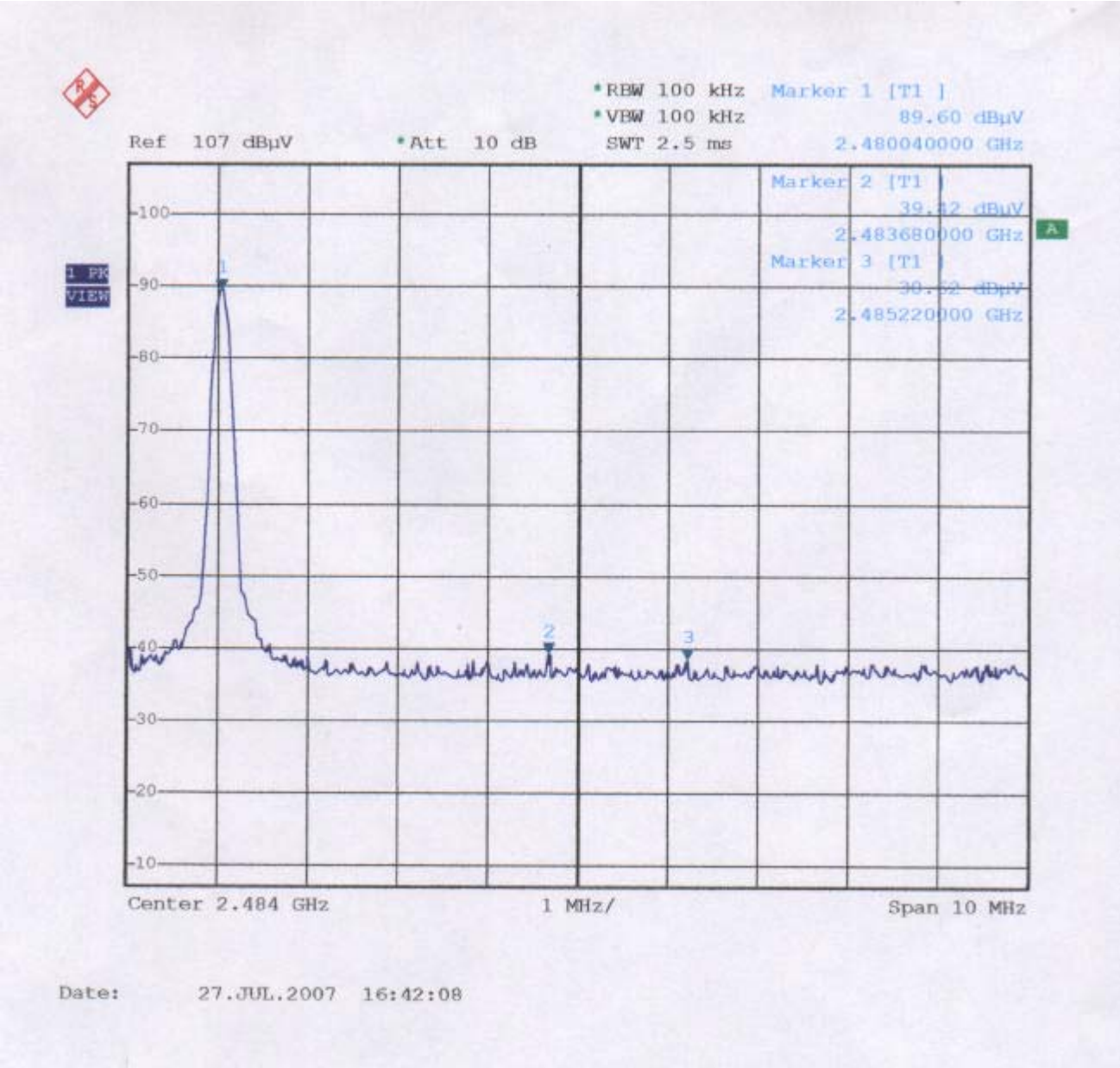
Test method : Public Notice DA 00-705
Detect : Peak Value
Marker-Delta method :
89.02dBuV/m-37.78 dBuV/m =51.24dBuV/m
90.82 dBuV/m-51.24 dBuV/m=39.58 dBuV/m
*39.58dBuV/m<Average Limit (54dBuV/m)

Channel : CH LOW
Polarity : Vertical



Test method : Public Notice DA 00-705
Detect : Peak Value
Marker-Delta method :
88.54dBuV/m-39.13 dBuV/m =49.14dBuV/m
91.21 dBuV/m-49.14 dBuV/m=41.80 dBuV/m
*41.80dBuV/m<Average Limit (54dBuV/m)

Channel : CH HIGH
Polarity : Vertical



Test method : Public Notice DA 00-705
Detect : Peak Value
Marker-Delta method :
89.60dBuV/m-39.42 dBuV/m =50.18dBuV/m
91.24 dBuV/m-50.18dBuV/m=41.06 dBuV/m
*41.06dBuV/m<Average Limit (54dBuV/m)

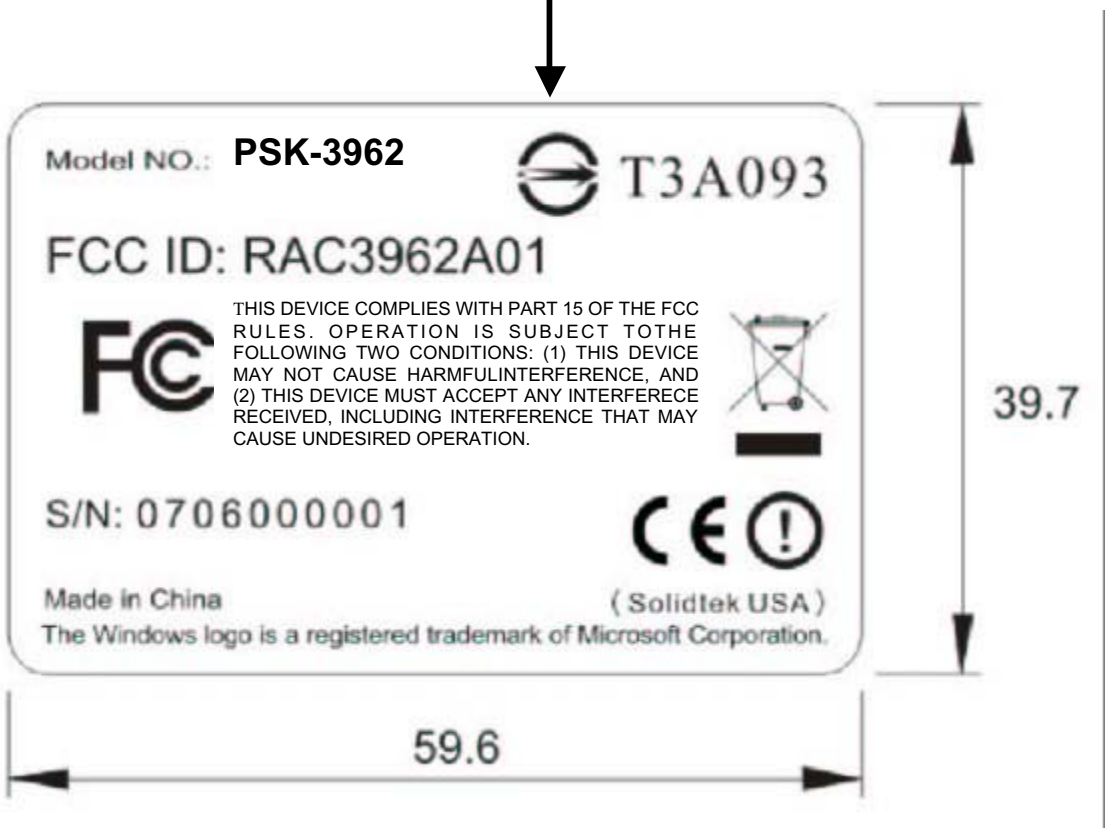
17. List of Measured Instruments

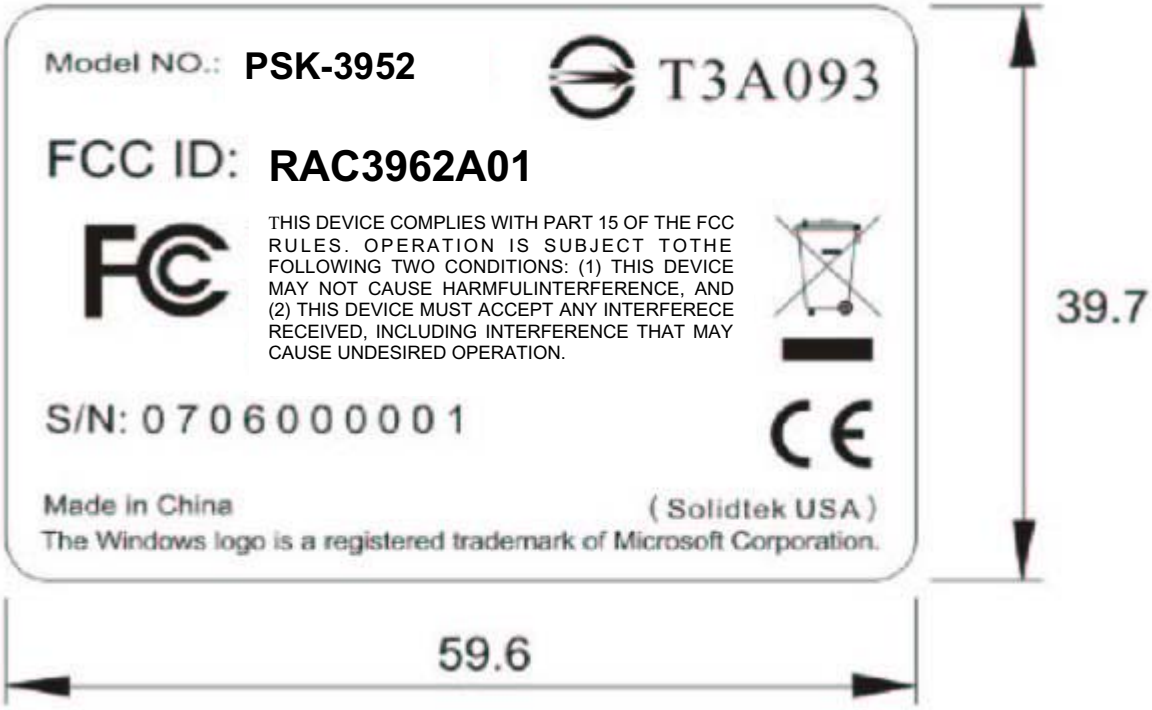
Test Site	Instrument	Model No.	S/N	Next Cal. Date	Cal. Interval
Radiation (OP No.3)	R & S Receiver	ESVS 30	863342/012	Aug. 19, 2008	1Year
	Schaffner Pre-Amp.	CPA-9232	1012	Jan. 02, 2008	1Year
	SCHWARZBECK Antenna	9161	9161-4077	July 22, 2008	1Year
	RF Cable	No.3	N/A	Jan. 02, 2008	1Year
	R & S Signal Generator	SMY02	829846/038	May 01, 2008	2Year
Chamber (No. 3)	R&S Spectrum Analyzer	FSP30	100157	Sep. 01, 2008	1Year
	Schaffner Pre-Amplifier	CPA-9232	1028	Jan. 02, 2008	1Year
	SCHWARZBECK Antenna	VULB9161	4078	July 21, 2008	1Year
	R & S Signal Generator	SMY02	830235/019	May 01, 2008	2Years
	30MHz~1GHz RF Cable	NO.3	N/A	Jan. 02, 2008	1Year
	COM POWER HORN ANTENNA	AH-118	10056	Oct. 01, 2008	2Years
	MITEQ Pre-Amplifier	JS4-00101800-28-5A	829013	Sep. 28, 2008	2Years
	1GHz~26.5GHz RF Cable	N/A	N/A	Sep. 28, 2008	2Years
	KSON Humidity Chamber	THS-COH+-150	2019	Mar. 11, 2008	1Year

18. FCC ID Label Sample

The sample label shown below shall be permanently affixed at a conspicuous location on the device, instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practicable, only the trade name, model number, and the FCC logo must be displayed on the device per Section §15.19 (b)(2).

EUT Label




Model NO.: PSK-3952
T3A093
FCC ID: RAC3962A01
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TOTHE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFULINTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERECE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.
S/N: 0706000001
Made in China
(Solidtek USA)
The Windows logo is a registered trademark of Microsoft Corporation.
39.7
59.6

19. Information To The User

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver .
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected .
- Consult the dealer or an experienced radio / TV technician for help .

20. EUT External Photos

PHOTO. 1. **EUT (TX) FRONT VIEW**

PHOTO. 2. **EUT (TX) REAR VIEW**

PHOTO. 3. **EUT (TX) FRONT VIEW**

PHOTO. 4. **EUT (TX) REAR VIEW**

21. EUT Internal Photos

PHOTO. 5. **EUT (TX) INSIDE VIEW**

PHOTO. 6. **EUT (TX) INSIDE VIEW**

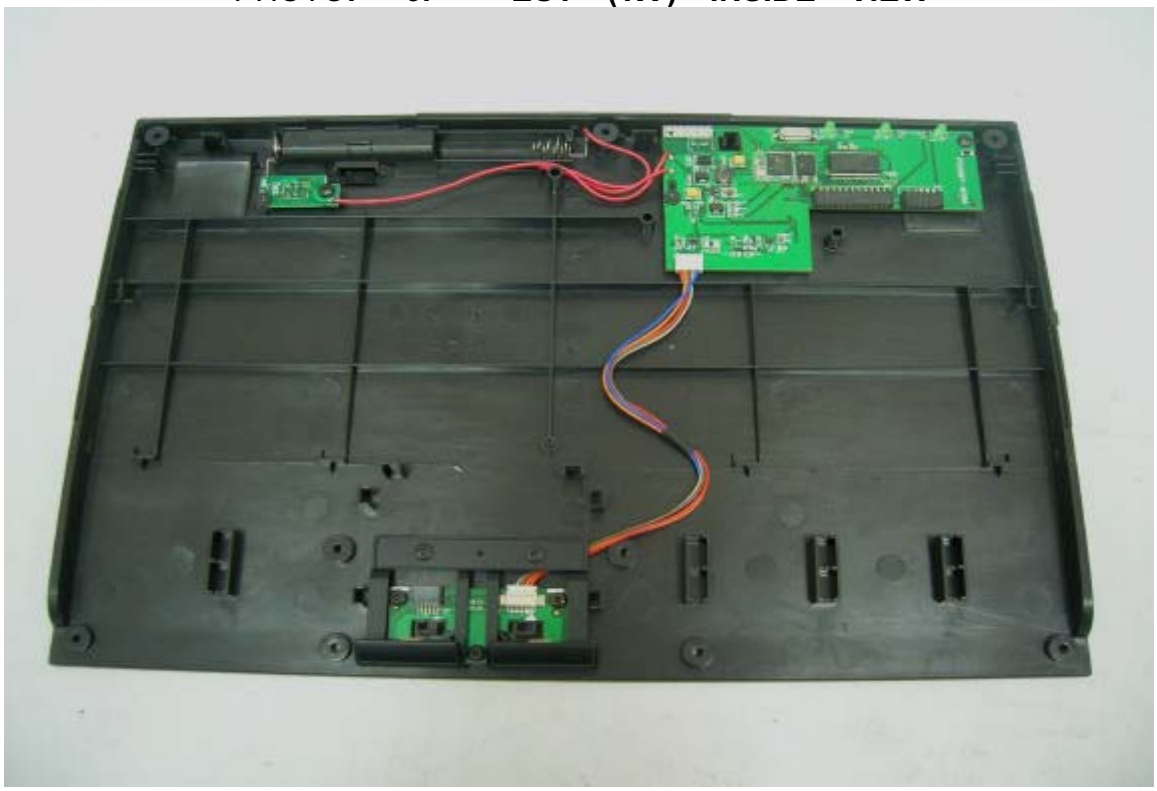


PHOTO. 7. **EUT (TX) COMPONENT SIDE VIEW**

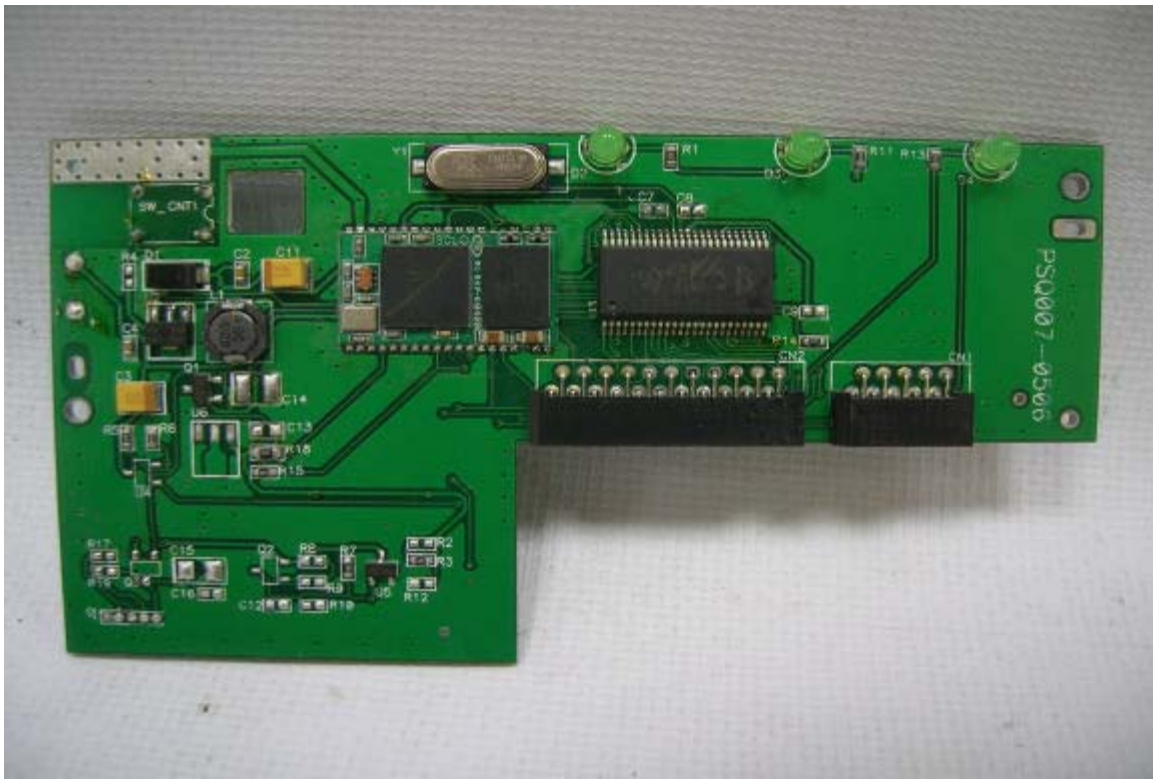


PHOTO. 8. **EUT (TX) COMPONENT SIDE VIEW**

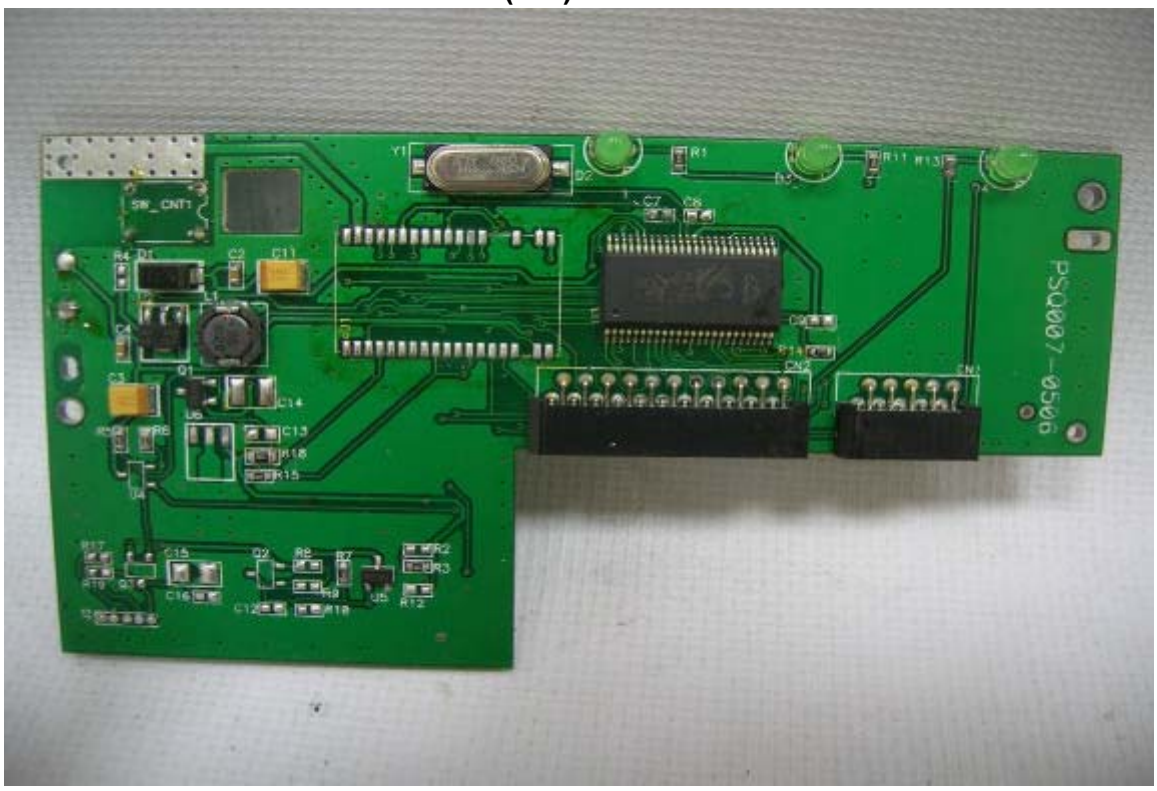


PHOTO. 9. **EUT (TX) SOLDERING SIDE VIEW**

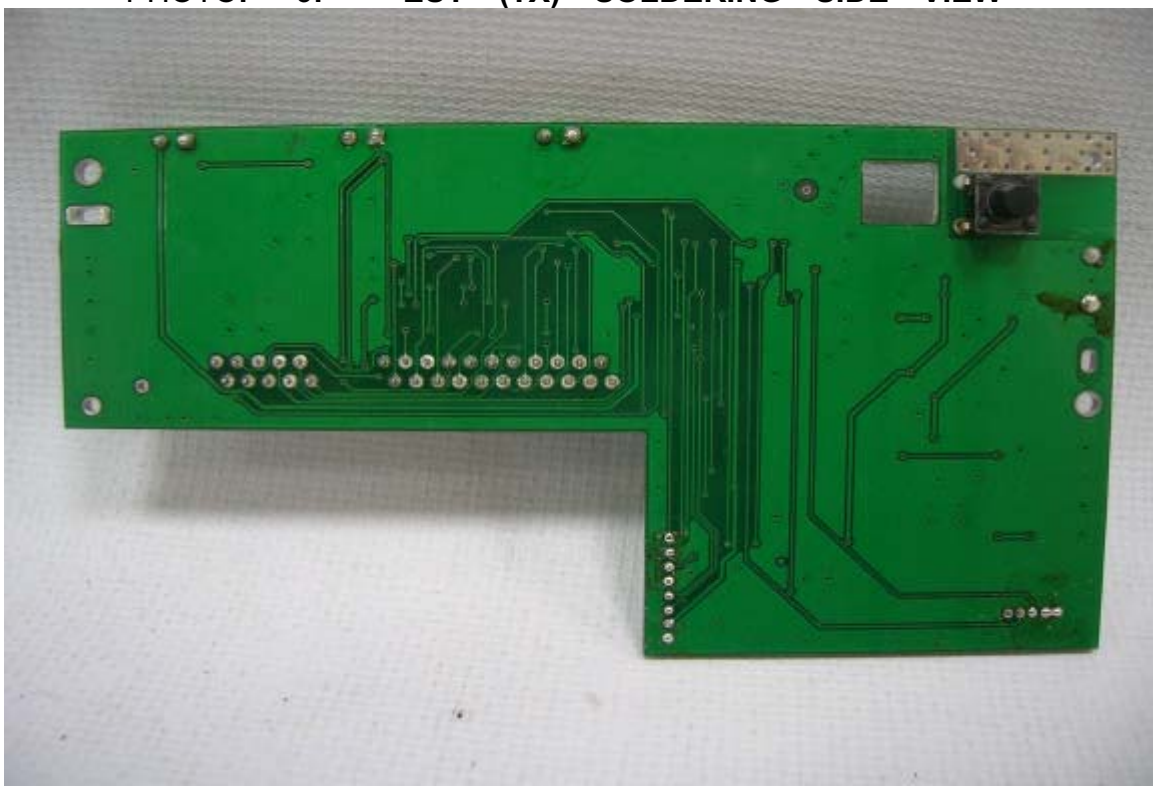


PHOTO. 10. **EUT (TX) COMPONENT SIDE VIEW**

PHOTO. 11. **EUT (TX) SOLDERING SIDE VIEW**

PHOTO. 12. **EUT (TX) SOLDERING SIDE VIEW**

PHOTO. 13. **EUT (TX) SOLDERING SIDE VIEW**

PHOTO. 14. **EUT (TX) SOLDERING SIDE VIEW**

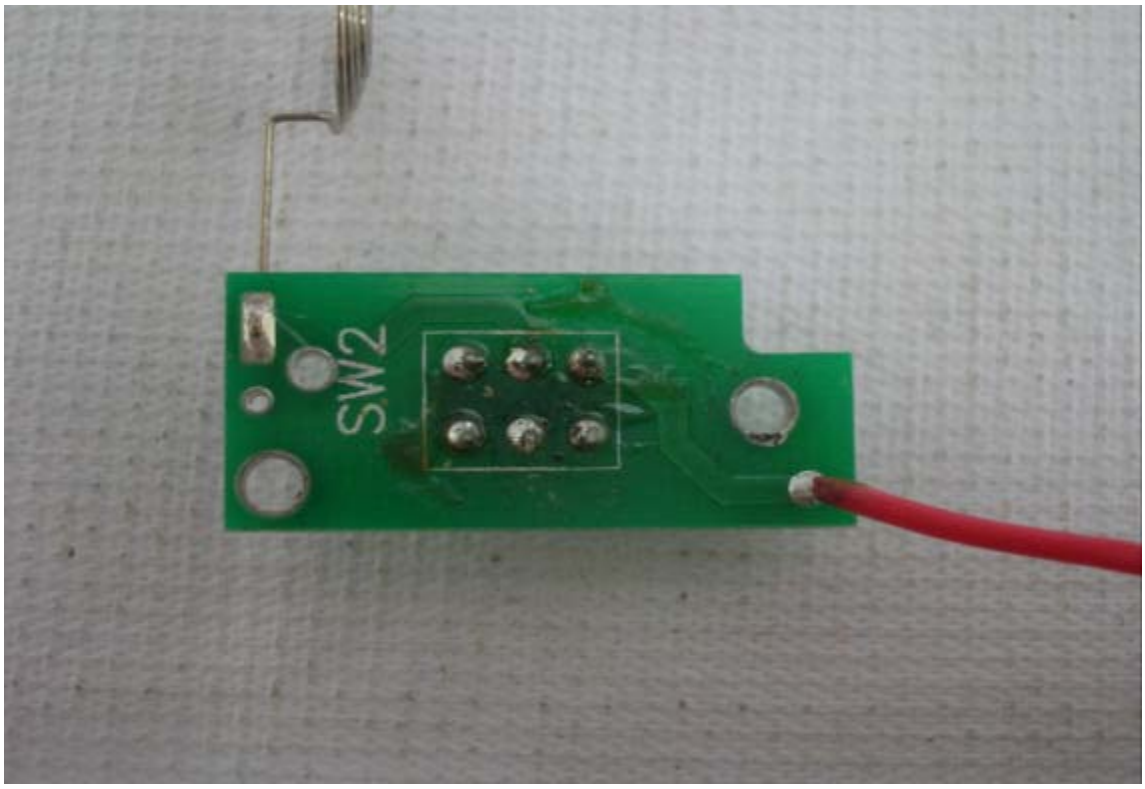


PHOTO. 15. **EUT (TX) COMPONENT SIDE VIEW**