

APPLICATION CERTIFICATION

On Behalf of
Swiss Tech Acquisitions, LLC

Portable Beacon System
Model No.: 50125R

FCC ID: ORH50125R

Prepared for : Swiss Tech Acquisitions, LLC

Address : 30725 Solon Industrial Parkway, Solon, Ohio, United States,
44139

Prepared by : Accurate Technology Co., Ltd.
Address : F1, Bldg. A&D, Changyuan New Material Port, Keyuan Rd.,
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Report No. : ATE20131230
Date of Test : June 18, 2013
Date of Report : June 26, 2013

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Test Report Certification

Applicant : Swiss Tech Acquisitions, LLC
Manufacturer : Provide Ltd.
EUT Description : Portable Beacon System
(A) MODEL NO.: 50125R
(B) SERIAL NO.: N/A
(C) POWER SUPPLY: DC 6V (lithium battery 3V×2)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B ANSI C63.4: 2009

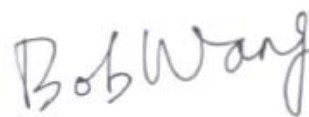
The device described above is tested by Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Accurate Technology Co., Ltd.

Date of Test :

June 18, 2013

Prepared by :



(Kelly Cheng, Engineer)

Approved & Authorized Signer :



(Sean Liu, Manager)


1. TEST RESULTS SUMMARY

Test Items	Test Standard	Test Results
Power Line Conducted Emission	FCC Part 15 Subpart B	N/A
Radiated Emission	FCC Part 15 Subpart B	Pass

Remark: "N/A" means "Not applicable"

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	Portable Beacon System
Model Number	:	50125R
Power Supply	:	DC 6V (lithium battery 3V × 2)
Operation Frequency	:	315MHz
Trade Name	:	
Applicant	:	Swiss Tech Acquisitions, LLC
Address	:	30725 Solon Industrial Parkway, Solon, Ohio, United States, 44139
Manufacturer	:	Provide Ltd.
Address	:	3D, Florida Mansion, 9-11 Cleveland Street, Causeway Bay, Hong Kong
Date of sample received	:	June 13, 2013
Date of Test	:	June 18, 2013

2.2. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC
The Registration Number is 253065
Listed by FCC
The Registration Number is 752051

Listed by Industry Canada
The Registration Number is 5077A-1
Listed by Industry Canada
The Registration Number is 5077A-2

Accredited by China National Accreditation Committee for
Laboratories
The Certificate Registration Number is L3193

Name of Firm : Accurate Technology Co., Ltd.
Site Location : F1, Bldg. A&D, Changyuan New Material Port, Keyuan Rd.
Science & Industry Park, Nanshan District, Shenzhen
518057, P.R. China

2.3. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Power Disturbance Expanded Uncertainty = 2.92 dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2
(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2
(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2
(Above 1GHz)

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	Dec. 10, 2012	1 Year
2.	Test Receiver	Rohde& Schwarz	ESPI3	100396/003	Jan. 12, 2013	1 Year
3.	Test Receiver	Rohde& Schwarz	ESPI3	101526/003	Jan. 12, 2013	1 Year
4.	Bilog Antenna	Schwarzbeck	VULB9163	9163-194	Feb. 06, 2013	1 Year
5.	Log.-Per.Antenna	Schwarzbeck	VUSLP 9111B	9111B-074	Dec.13, 2012	1 Year
6.	Biconical Broad Band Antenna	Schwarzbeck	VHBB 9124+BBA 9106	9124-617	Oct. 30, 2012	1 Year
7.	Horn Antenna	Schwarzbeck	BBHA9120 D	9120D-1067	Oct. 30, 2012	1 Year
8.	RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	Dec. 14, 2012	1 Year
9.	Pre-Amplifier	Agilent	8447D	294A10619	Jan. 12, 2013	1 Year
10.	50 Coaxial Switch	Anritsu Corp	MP59B	6200237248	Jan. 12, 2013	1 Year
11.	RF Coaxial Cable	Schwarzbeck	N-5m	No.1	Jan. 12, 2013	1 Year
12.	RF Coaxial Cable	Schwarzbeck	N-1m	No.6	Jan. 12, 2013	1 Year
13.	RF Coaxial Cable	Schwarzbeck	N-1m	No.7	Jan. 12, 2013	1 Year
14.	RF Coaxial Cable	SUHNER	N-3m	No.8	Jan. 12, 2013	1 Year
15.	RF Coaxial Cable	SUHNER	N-2m	No.13	Jan. 12, 2013	1 Year
16.	RF Coaxial Cable	SUHNER	N-0.5m	No.15	Jan. 12, 2013	1 Year
17.	RF Coaxial Cable	SUHNER	N-2m	No.16	Jan. 12, 2013	1 Year
18.	RF Coaxial Cable	RESENBERGER	N-6m	No.17	Jan. 12, 2013	1 Year

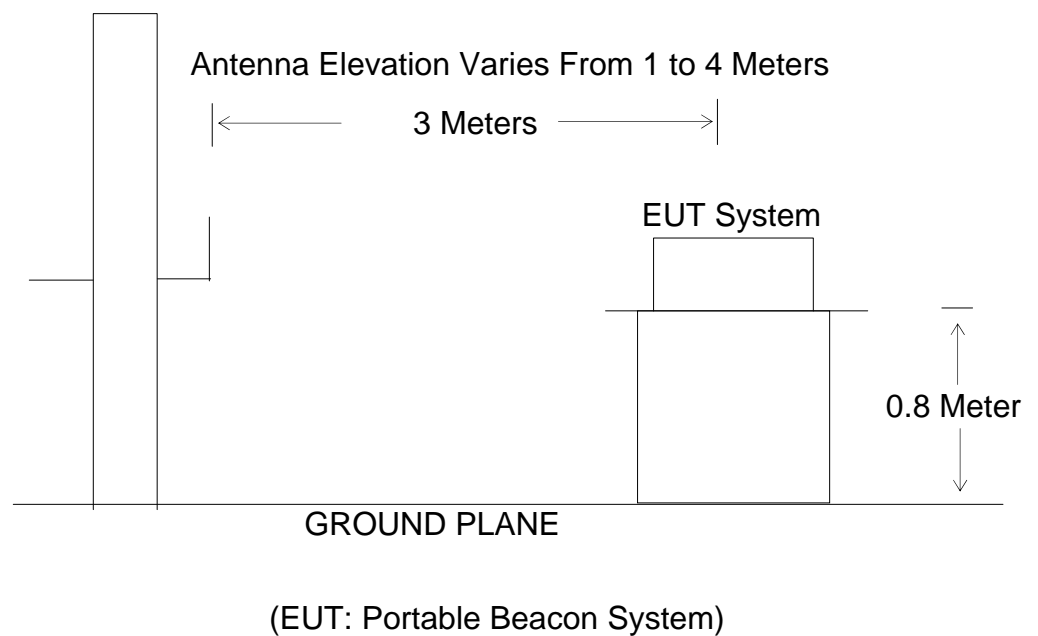
4. RADIATED EMISSION MEASUREMENT

4.1. Block Diagram of Test

4.1.1. Block diagram of connection between the EUT and simulators



4.1.2. Block diagram of test setup (In chamber)



4.2.Radiated Emission Limit (Class B)

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Frequency MHz	Distance Meters	Field Strengths Limit	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V/m})$
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

Remark: (1) Emission level $\text{dB}(\mu\text{V}) = 20 \log$ Emission level $\mu\text{V/m}$.
(2) The smaller limit shall apply at the cross point between two frequency bands. (3) Distance is the distance in meters between the measuring instrument antenna and the closest point of any part of the device or system.

4.3.EUT Configuration on Test

Test equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

4.3.1. Portable Beacon System (EUT)

Model Number : 50125R
Serial Number : N/A
Manufacturer : Provide Ltd.

4.4.Operating Condition of EUT

4.4.1.Setup the EUT and simulator as shown as Section 4.1.

4.4.2.Turn on the power of all equipment.

4.4.3.Let the EUT work in RX mode measure it.

4.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated emission measurement.

The bandwidth of test receiver is set at 120 kHz in 30-1000 MHz, and 1 MHz in 1000-4000 MHz.

The frequency range from 30 MHz to 4000 MHz is checked.

4.6.The Field Strength of Radiation Emission

PASS.

The frequency range 30MHz to 4000MHz is investigated.

Date of Test:	June 18, 2013	Temperature:	25°C
EUT:	Portable Beacon System	Humidity:	50%
Model No.:	50125R	Power Supply:	DC 6V
Test Mode:	RX	Test Engineer:	Pei

Results of Receive mode: PASS (<1000MHz)

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
112.1303	30.63	-22.25	8.38	43.50	-35.12	Vertical
694.8543	30.22	-15.68	14.54	46.50	-31.96	
768.7481	29.89	-8.30	21.59	46.50	-24.91	
113.7142	30.67	-22.29	8.38	43.50	-35.12	Horizontal
361.7139	32.42	-15.91	16.51	46.50	-29.99	
848.0562	29.95	-6.99	22.96	46.50	-23.54	

Results of Receive mode: PASS (>1000MHz)

Frequency (MHz)	Reading(dBμV/m)		Factor (dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2808.890	68.57	45.19	-5.57	33.00	39.62	54.00	74.00	-21.00	-34.38	Vertical
3386.981	38.89	45.17	-3.75	35.14	41.42	54.00	74.00	-18.86	-32.58	Vertical
3048.290	36.67	44.65	-4.84	31.83	39.81	54.00	74.00	-22.17	-34.19	Horizontal
3530.812	37.41	44.96	-3.32	34.09	41.64	54.00	74.00	-19.91	-32.36	Horizontal

The frequency range from 30MHz to 4000MHz is investigated.

Note: Emissions attenuated more than 20 dB below the permissible value are not reported.
The spectral diagrams are attached as below.

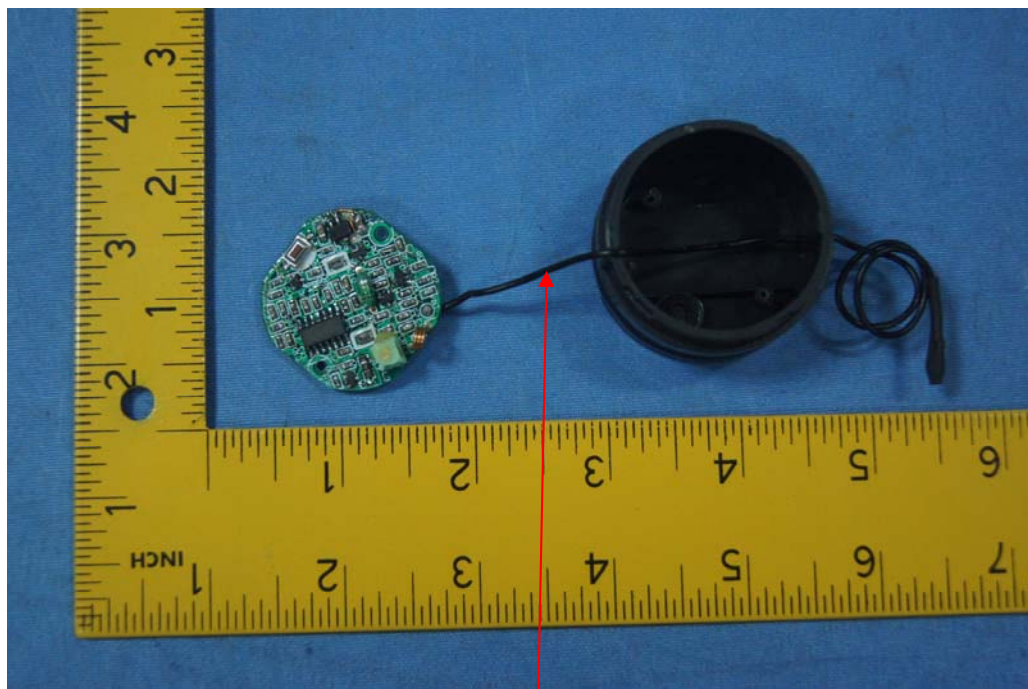
5. ANTENNA REQUIREMENT

5.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

5.2.Antenna Construction

Device is equipped with unique antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna

**ACCURATE TECHNOLOGY CO., LTD.**

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR #1284

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Portable Beacon System

Mode: RX

Model: 50125R

Manufacturer: Provide Ltd.

Polarization: Vertical

Power Source: DC 6V

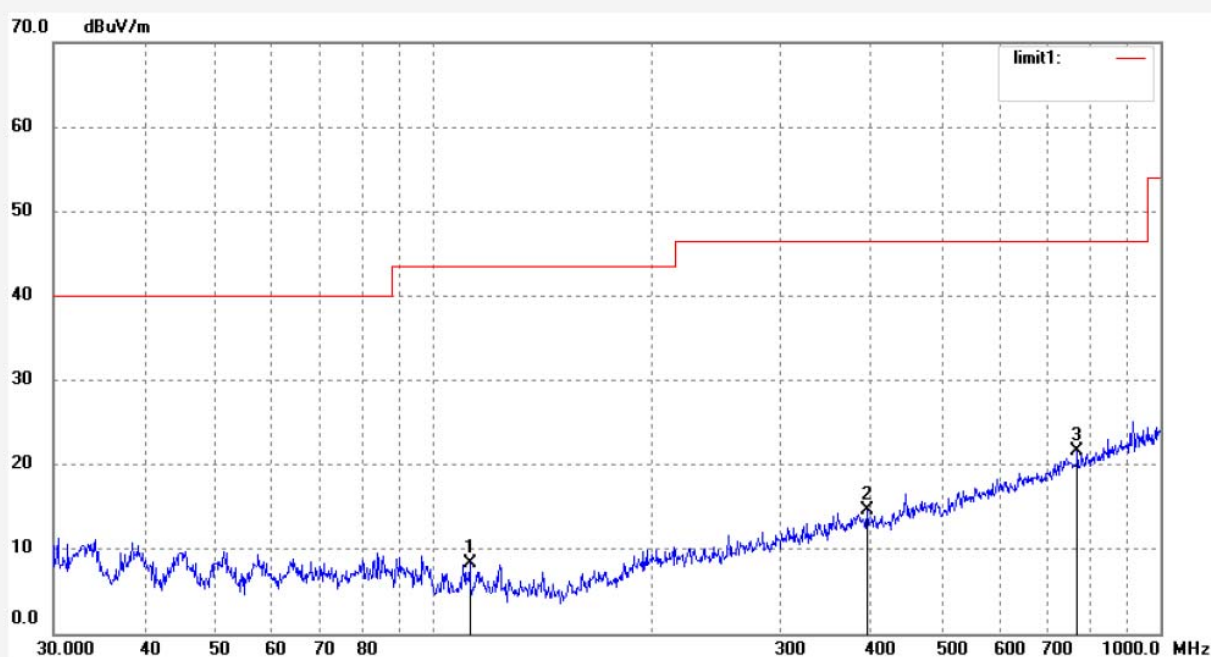
Date: 13/06/18/

Time: 14/51/38

Engineer Signature: STAR

Distance: 3m

Note: Report No.:ATE20131230



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	112.1303	30.63	-22.25	8.38	43.50	-35.12	QP			
2	394.8543	30.22	-15.68	14.54	46.50	-31.96	QP			
3	768.7481	29.89	-8.30	21.59	46.50	-24.91	QP			



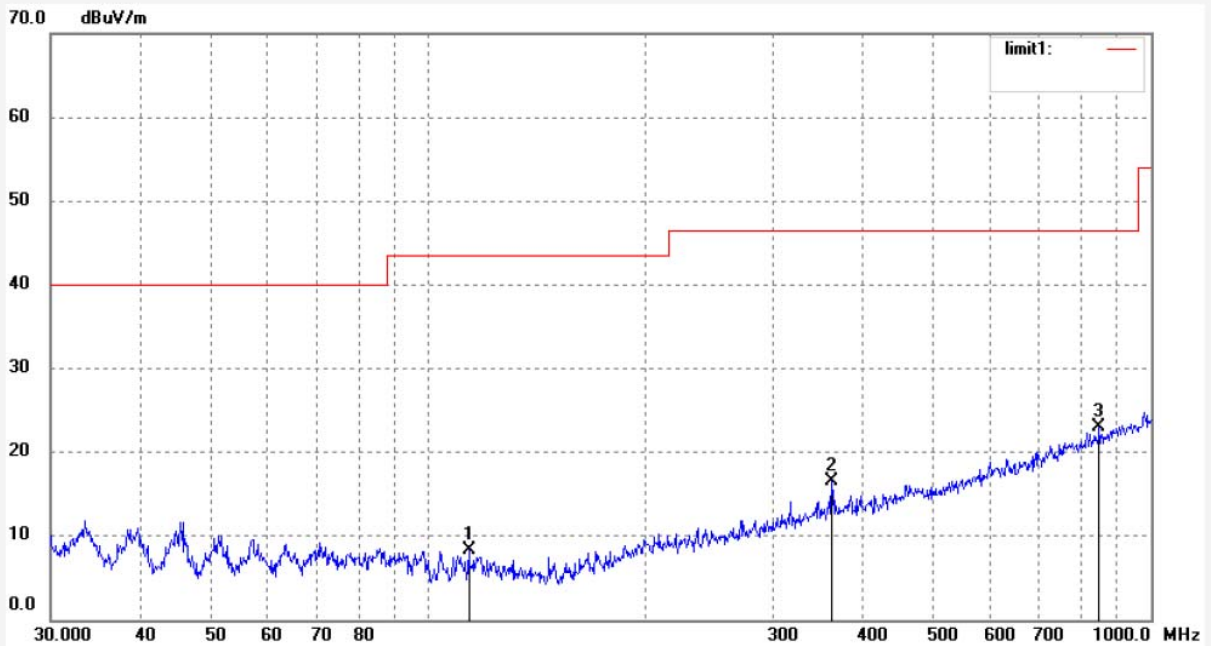
ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber
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Job No.: STAR #1285	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 6V
Test item: Radiation Test	Date: 13/06/18/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 14/55/14
EUT: Portable Beacon System	Engineer Signature: STAR
Mode: RX	Distance: 3m
Model: 50125R	
Manufacturer: Provide Ltd.	

Note: Report No.:ATE20131230



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	113.7142	30.67	-22.29	8.38	43.50	-35.12	QP			
2	361.7139	32.42	-15.91	16.51	46.50	-29.99	QP			
3	848.0562	29.95	-6.99	22.96	46.50	-23.54	QP			



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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR #1286

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Portable Beacon System

Mode: RX

Model: 50125R

Manufacturer: Provide Ltd.

Polarization: Vertical

Power Source: DC 6V

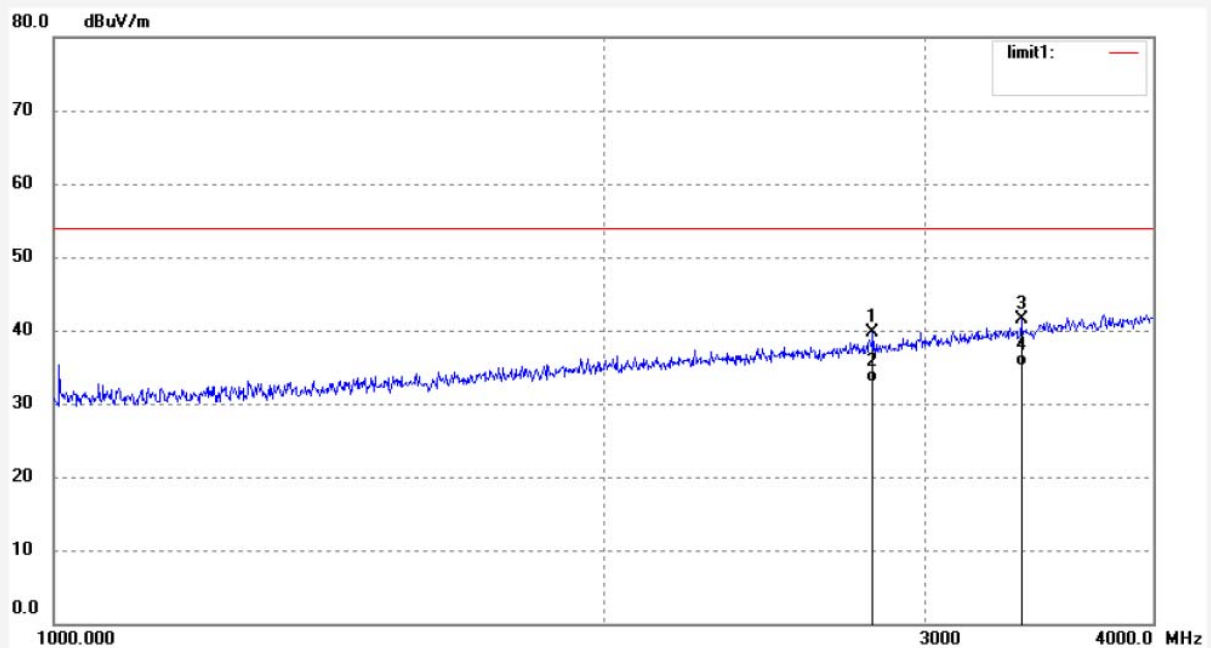
Date: 13/06/18/

Time: 14/54/11

Engineer Signature: STAR

Distance: 3m

Note: Report No.:ATE20131230



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2808.890	45.19	-5.57	39.62	74.00	-34.38	peak			
2	2808.890	38.57	-5.57	33.00	54.00	-21.00	AVG			
3	3386.981	45.17	-3.75	41.42	74.00	-32.58	peak			
4	3386.981	38.89	-3.75	35.14	54.00	-18.86	AVG			

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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR #1287

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Portable Beacon System

Mode: RX

Model: 50125R

Manufacturer: Provide Ltd.

Polarization: Horizontal

Power Source: DC 6V

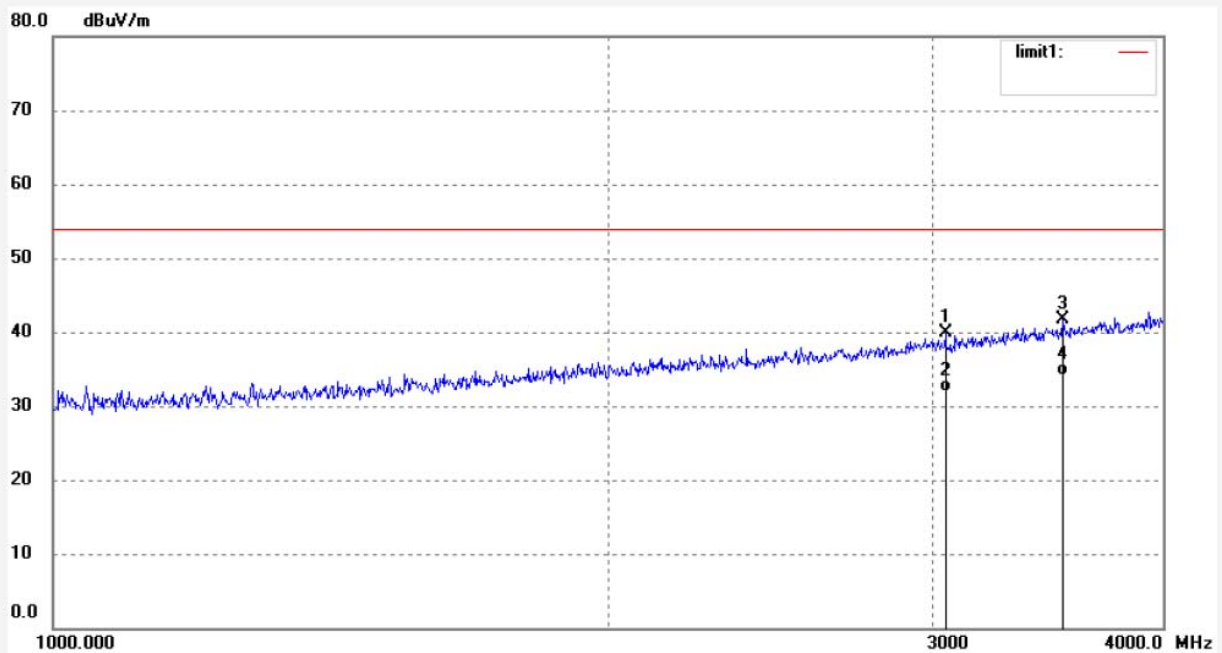
Date: 13/06/18/

Time: 14/54/27

Engineer Signature: STAR

Distance: 3m

Note: Report No.: ATE20131230



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3048.290	44.65	-4.84	39.81	74.00	-34.19	peak			
2	3048.290	36.67	-4.84	31.83	54.00	-22.17	AVG			
3	3530.812	44.96	-3.32	41.64	74.00	-32.36	peak			
4	3530.812	37.41	-3.32	34.09	54.00	-19.91	AVG			