

APPLICATION CERTIFICATION FCC Part 15C

On Behalf of  
Care Electronic Co., Ltd.

Bluetooth Scale

Model No.: CR-3331BT, CR-3341BT, CR-6638BT, CR-6636BT, CR-8824BT, CR-8803BT,  
CR-2215BT, CR-2217BT, S200, S200F, S300, K100

FCC ID: SCHCR-3331BT

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Date of Test : March 4-17, 2013  
Date of Report : March 18, 2013

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## Test Report Certification

Applicant : Care Electronic Co., Ltd.

Manufacturer : Care Electronic Co., Ltd.

EUT Description : Bluetooth Scale

(A) MODEL NO.: CR-3331BT, CR-3341BT, CR-6638BT, CR-6636BT,  
CR-8824BT, CR-8803BT, CR-2215BT, CR-2217BT, S200,  
S200F, S300, K100

(B) TRADE NAME.: N/A

(C) POWER SUPPLY: DC 3V ("AAA" battery 2×)

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247**  
**ANSI C63.4: 2009**

The EUT was tested according to DTS test procedure of October 04, 2012 KDB558074 D01  
DTS Meas Guidance v02 for compliance to FCC 47CFR 15.247 requirements

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 C Section 15.247 limits. 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 : March 4-17, 2013

Prepared by :

Apple Lv

(Engineer)

Approved & Authorized Signer :

Heimle

(Manager)

# 1. GENERAL INFORMATION

## 1.1. Description of Device (EUT)

EUT	:	Bluetooth Scale
Model Number	:	CR-3331BT, CR-3341BT, CR-6638BT, CR-6636BT, CR-8824BT, CR-8803BT, CR-2215BT, CR-2217BT, S200, S200F, S300, K100 (Note: These samples are same except for the model number is difference. So we prepare the CR-3331BT for FCC test.)
Frequency Range	:	Bluetooth V4.0 BLE: 2402MHz-2480MHz
Number of Channels	:	40
Antenna Gain	:	2.5dBi
Power Supply	:	DC 3V (“AAA” battery 2×)
Data Rate	:	
Applicant	:	Care Electronic Co., Ltd.
Address	:	No. 19-23 Civilization Road, The Second Industrial Park, South Area, Zhongshan City, Guangdong, China
Manufacturer	:	Care Electronic Co., Ltd.
Address	:	No. 19-23 Civilization Road, The Second Industrial Park, South Area, Zhongshan City, Guangdong, China
Date of sample received	:	March 4, 2013
Date of Test	:	March 4-17, 2013

## 1.2.Carrier Frequency of Channels

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
01	2402	11	2422	21	2442	31	2462
02	2404	12	2424	22	2444	32	2464
03	2406	13	2426	23	2446	33	2466
04	2408	14	2428	24	2448	34	2468
05	2410	15	2430	25	2450	35	2470
06	2412	16	2432	26	2452	36	2472
07	2414	17	2434	27	2454	37	2474
08	2416	18	2436	28	2456	38	2476
09	2418	19	2438	29	2458	39	2478
10	2420	20	2440	30	2460	40	2480

## 1.3.Special Accessory and Auxiliary Equipment

N/A

## 1.4. Description of Test Facility

EMC Lab	:	<p>Accredited by TUV Rheinland Shenzhen</p> <p>Listed by FCC The Registration Number is 752051</p> <p>Listed by Industry Canada The Registration Number is 5077A-2</p> <p>Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L3193</p>
Name of Firm	:	ACCURATE TECHNOLOGY CO. LTD
Site Location	:	<p>F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science &amp; Industry Park, Nanshan, Shenzhen, Guangdong P.R. China</p>

## 1.5. Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

## 2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment**

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 12, 2013	Jan. 11, 2014
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 12, 2013	Jan. 11, 2014
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 12, 2013	Jan. 11, 2014
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 12, 2013	Jan. 11, 2014
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Feb. 6, 2013	Feb. 5, 2014
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Feb. 6, 2013	Feb. 5, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Feb. 6, 2013	Feb. 5, 2014
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Feb. 6, 2013	Feb. 5, 2014
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 12, 2013	Jan. 11, 2014
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 12, 2013	Jan. 11, 2014
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 12, 2013	Jan. 11, 2014
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 12, 2013	Jan. 11, 2014



### 3. OPERATION OF EUT DURING TESTING

#### 3.1.Operating Mode

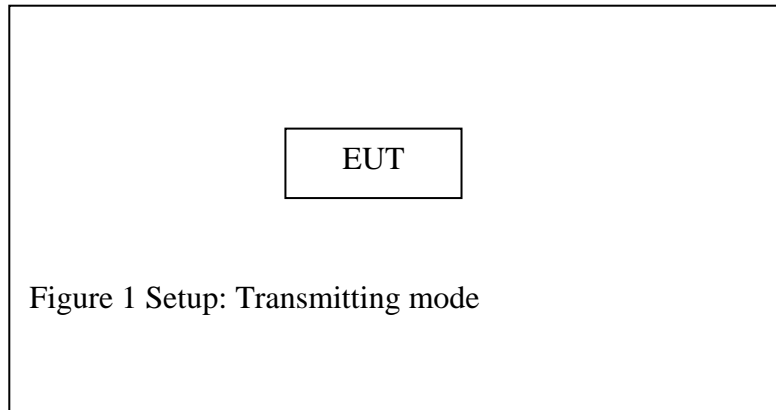
The mode is used: **BLE Transmitting mode**

Low Channel: 2402MHz

Middle Channel: 2440MHz

High Channel: 2480MHz

### 3.2.Configuration and peripherals

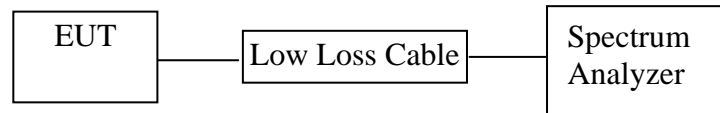


#### 4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.247(a)(2)	6dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.247(d)	Conducted Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	N/A
Section 15.203	Antenna Requirement	Compliant

## 5. 6DB BANDWIDTH MEASUREMENT

### 5.1. Block Diagram of Test Setup



(EUT: Bluetooth Scale)

### 5.2. The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 5.3. EUT Configuration on Measurement

The following equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 5.3.1. Bluetooth Scale (EUT)

Model Number : CR-3331BT  
Serial Number : N/A

### 5.4. Operating Condition of EUT

5.4.1. Setup the EUT and simulator as shown as Section 5.1.

5.4.2. Turn on the power of all equipment.

5.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

## 5.5. Test Procedure

5.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

5.5.2. Set RBW of spectrum analyzer to 10 kHz and VBW to 30 kHz.

5.5.3. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

## 5.6. Test Result

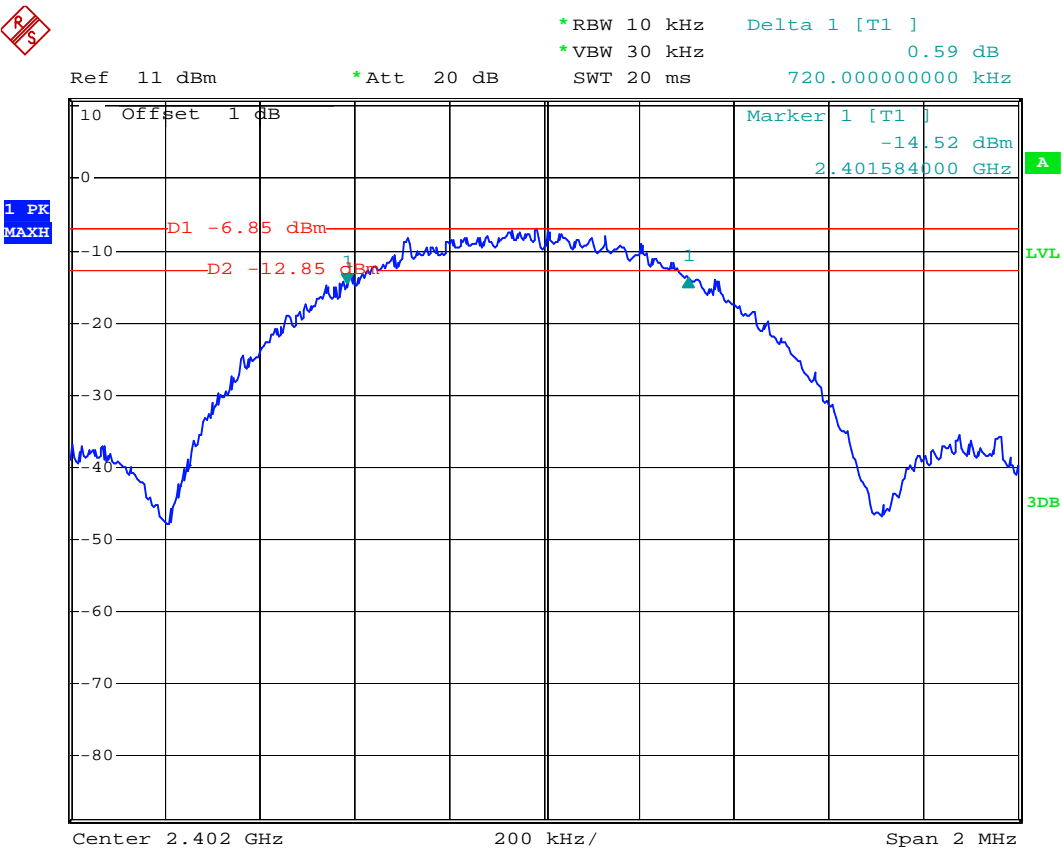
**PASS.**

Date of Test:	<u>March 8, 2013</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Scale</u>	Humidity:	<u>50%</u>
Model No.:	<u>CR-3331BT</u>	Power Supply:	<u>DC 3V</u>
Test Mode:	<u>TX</u>	Test Engineer:	<u>Alen</u>

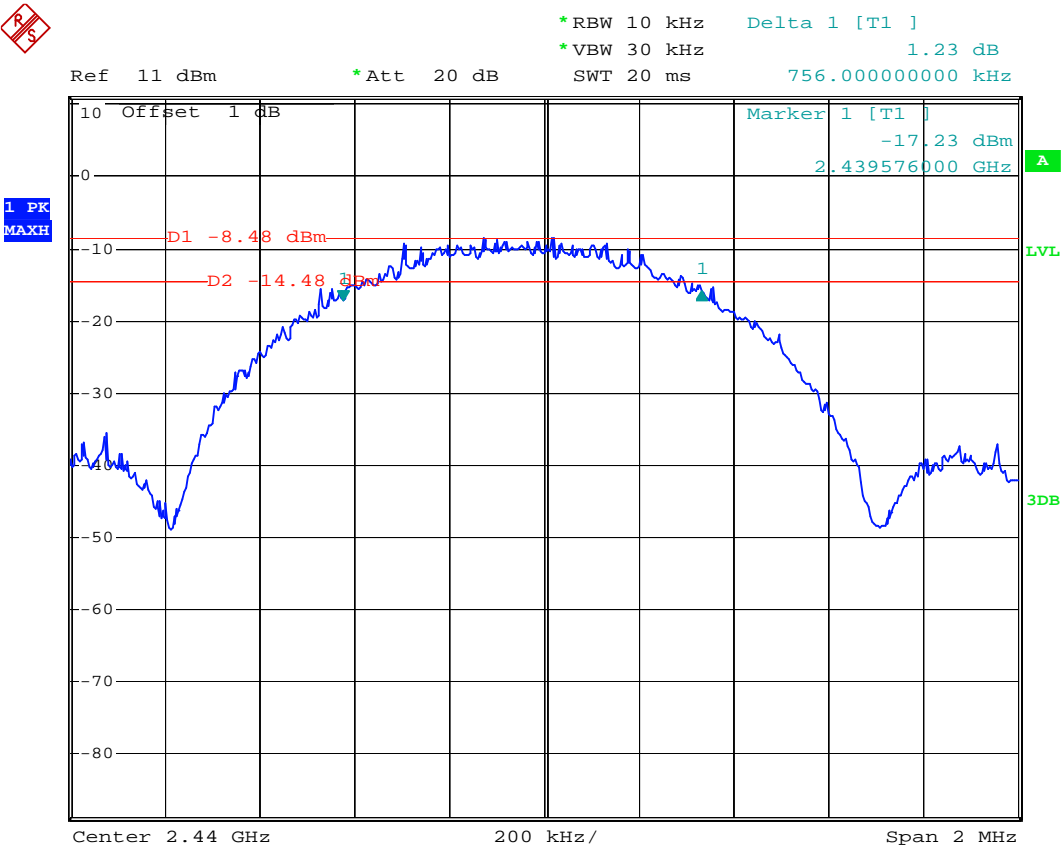
The test was performed with BLE			
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2402	0.720	> 0.5MHz
Middle	2440	0.756	> 0.5MHz
High	2480	0.752	> 0.5MHz

The spectrum analyzer plots are attached as below.

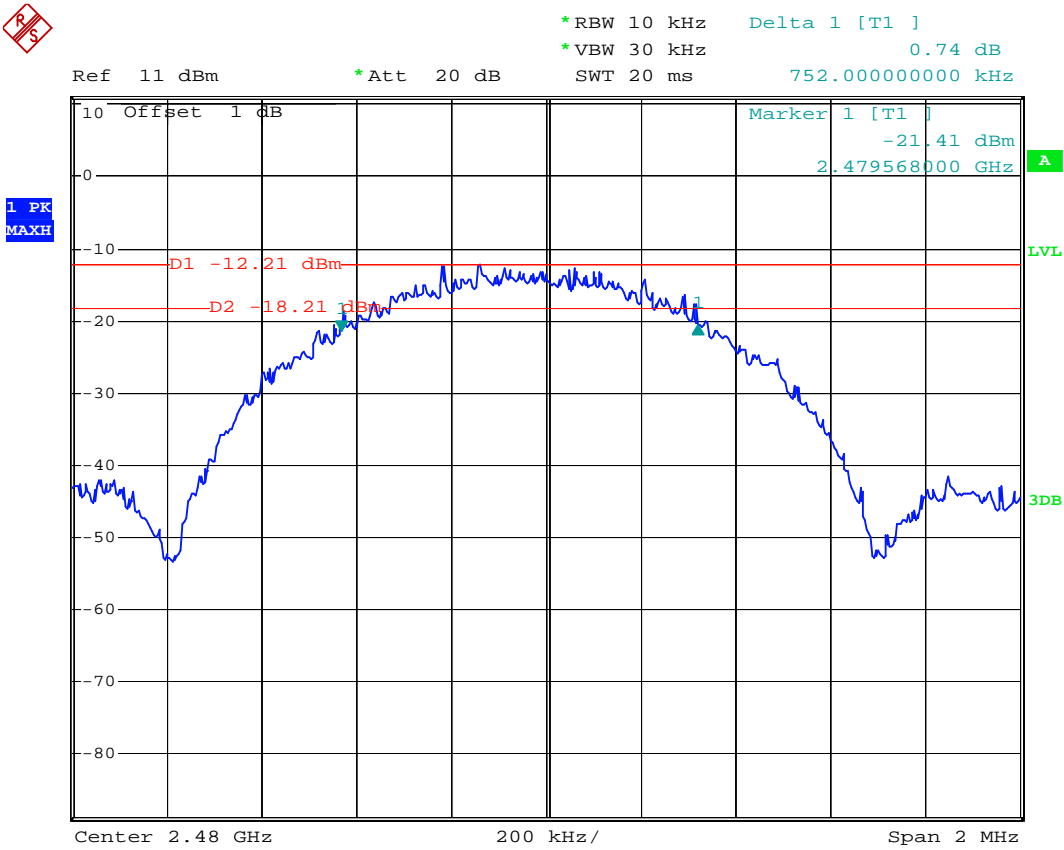
BLE Channel Low 2402MHz



BLE Channel Middle 2440MHz



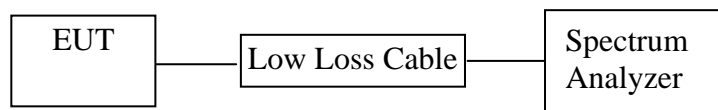
BLE Channel High 2480MHz





## 6. MAXIMUM PEAK OUTPUT POWER

### 6.1. Block Diagram of Test Setup



(EUT: Bluetooth Scale)

### 6.2. The Requirement For Section 15.247(b)(3)

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

### 6.3. EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 6.3.1. Bluetooth Scale (EUT)

Model Number : CR-3331BT

Serial Number : N/A

### 6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

## 6.5. Test Procedure

6.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

6.5.2. Test method is options 1 from KDB558074 D01 DTS Meas Guidance v02

6.5.3. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.

6.5.4. Measurement the maximum peak output power.

## 6.6. Test Result

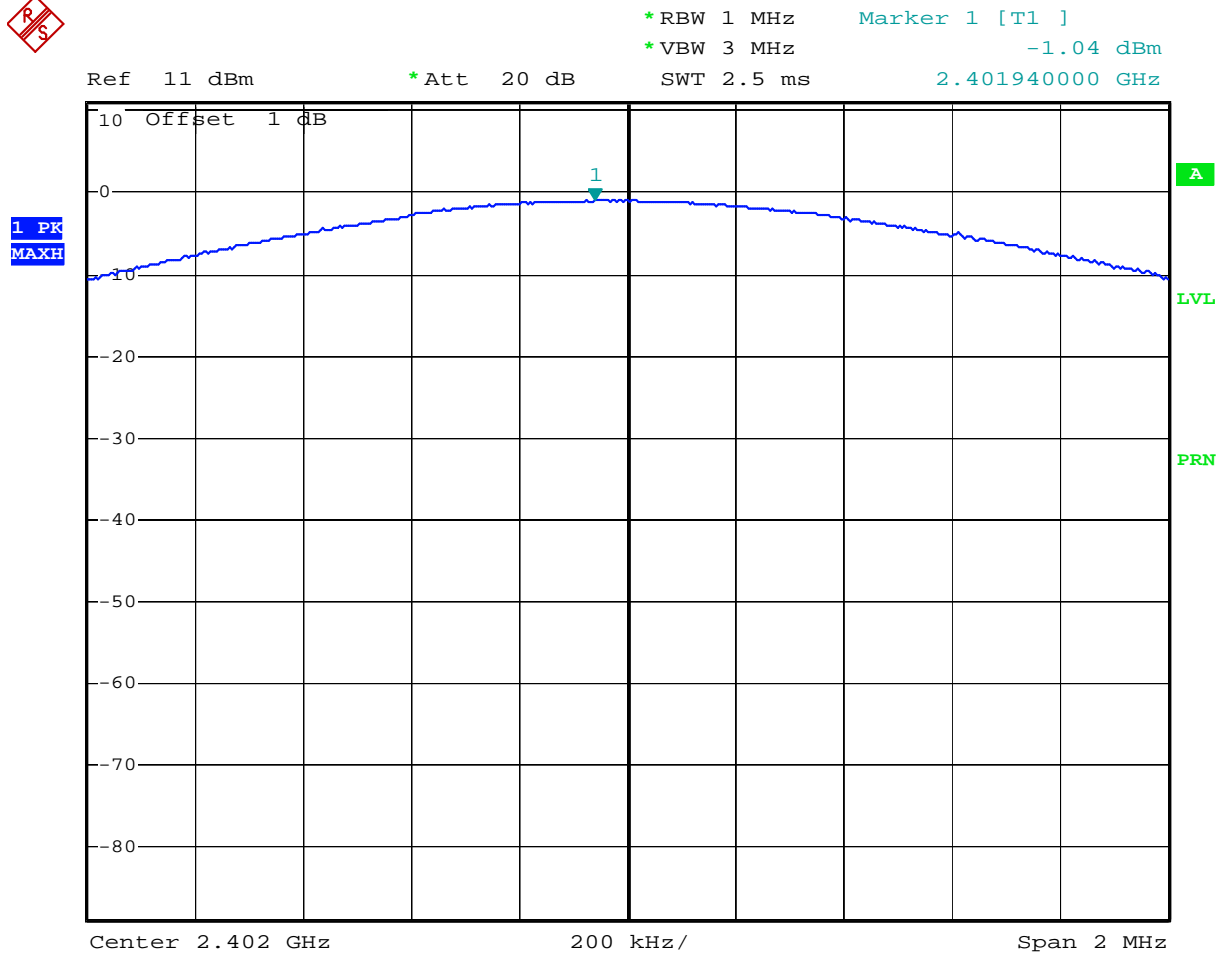
**PASS.**

Date of Test:	March 8, 2013	Temperature:	25°C
EUT:	Bluetooth Scale	Humidity:	50%
Model No.:	CR-3331BT	Power Supply:	DC 3V
Test Mode:	TX	Test Engineer:	Alen

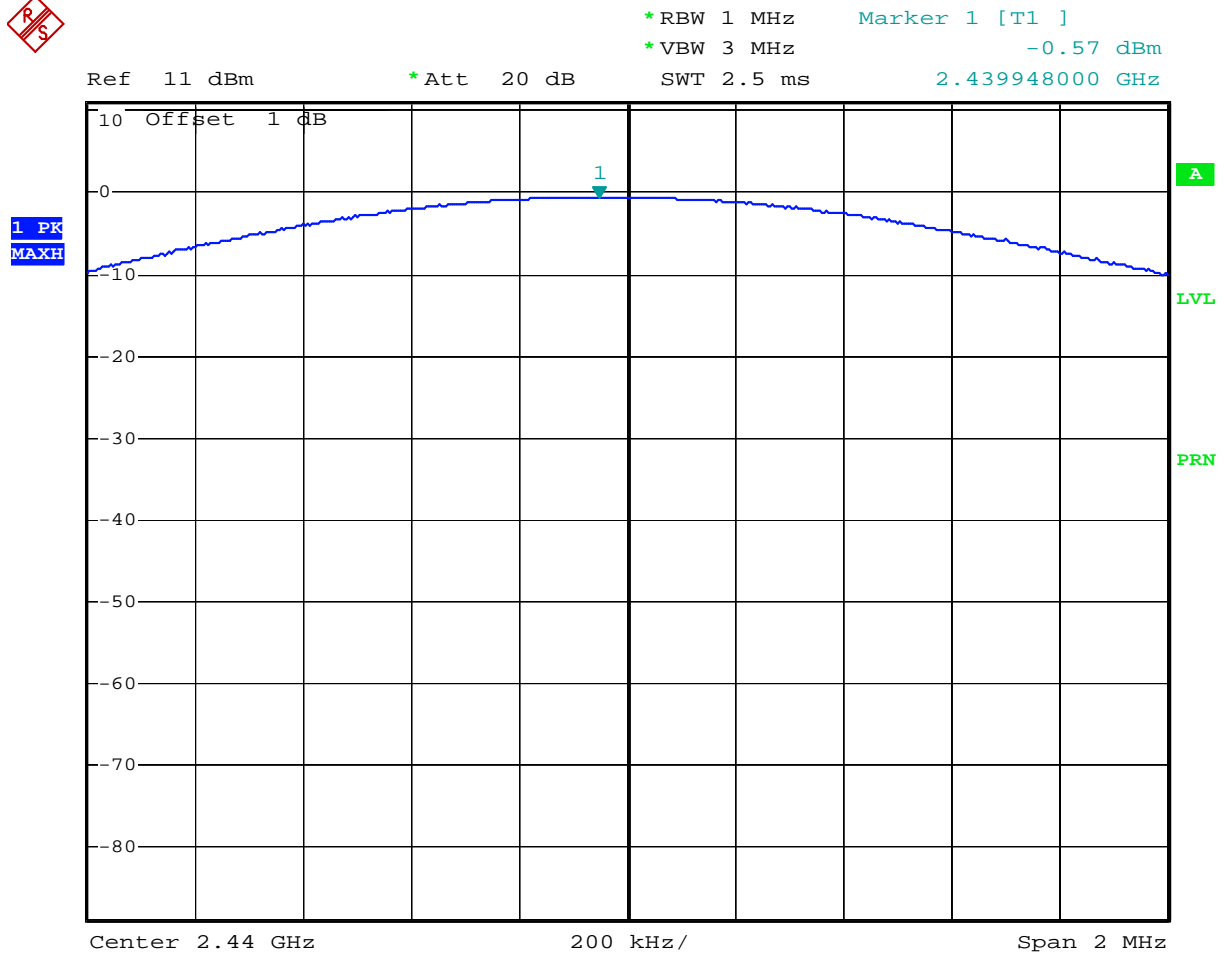
The test was performed with BLE				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2402	-1.04	0.79	30 dBm / 1 W
Middle	2440	-0.57	0.88	30 dBm / 1 W
High	2480	-0.40	0.91	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

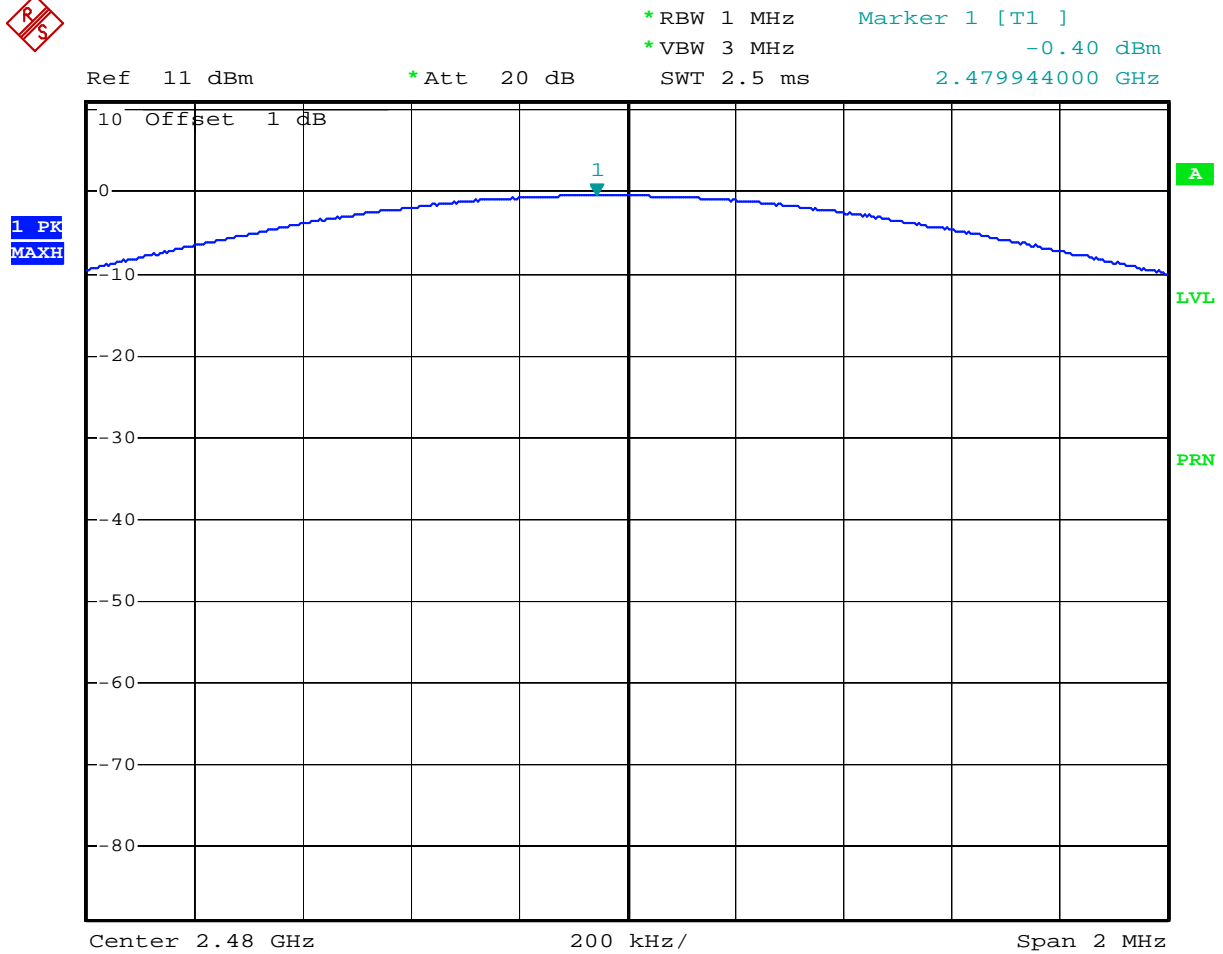
BLE Channel Low 2402MHz



BLE Channel Middle 2440MHz

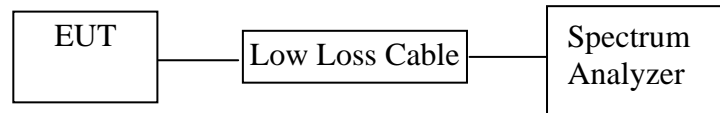


BLE Channel High 2480MHz



## 7. POWER SPECTRAL DENSITY MEASUREMENT

### 7.1. Block Diagram of Test Setup



(EUT: Bluetooth Scale)

### 7.2. The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 7.3. EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 7.3.1. Bluetooth Scale (EUT)

Model Number : CR-3331BT  
Serial Number : N/A

### 7.4. Operating Condition of EUT

7.4.1. Setup the EUT and simulator as shown as Section 7.1.

7.4.2. Turn on the power of all equipment.

7.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

## 7.5. Test Procedure

7.5.1. The EUT was tested according to DTS test procedure of October 04, 2012 KDB558074 D01 DTS Meas Guidance v02 for compliance to FCC 47CFR 15.247 requirements.

7.5.2. The transmitter output was connected to the spectrum analyzer through a low loss cable.

### 7.5.3. Measurement Procedure PKPSD:

This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW  $\geq 3$  kHz.
4. Set the VBW  $\geq 3 \times$  RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

7.5.4. Measurement the maximum power spectral density.

## 7.6. Test Result

**PASS.**

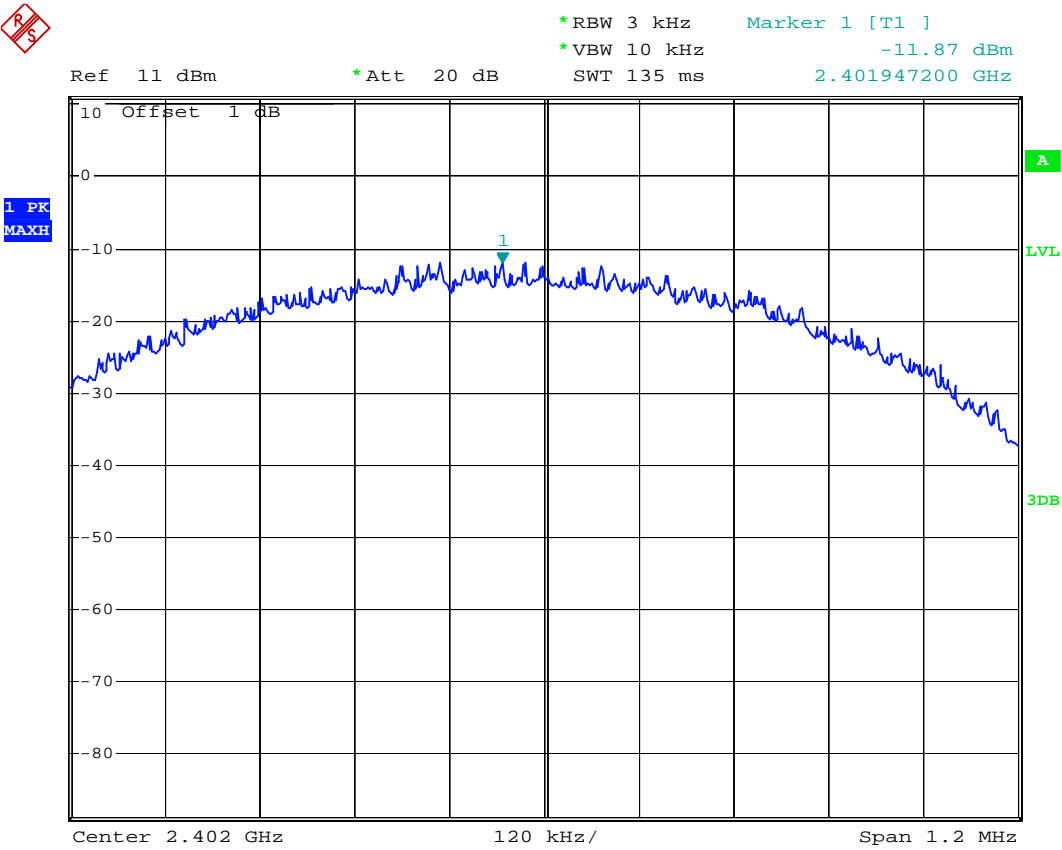
Date of Test:	March 8, 2013	Temperature:	25°C
EUT:	Bluetooth Scale	Humidity:	50%
Model No.:	CR-3331BT	Power Supply:	DC 3V
Test Mode:	TX	Test Engineer:	Alen

The test was performed with BLE			
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limits (dBm/3kHz)
Low	2402	-11.87	8 dBm
Middle	2440	-17.01	8 dBm
High	2480	-14.61	8 dBm

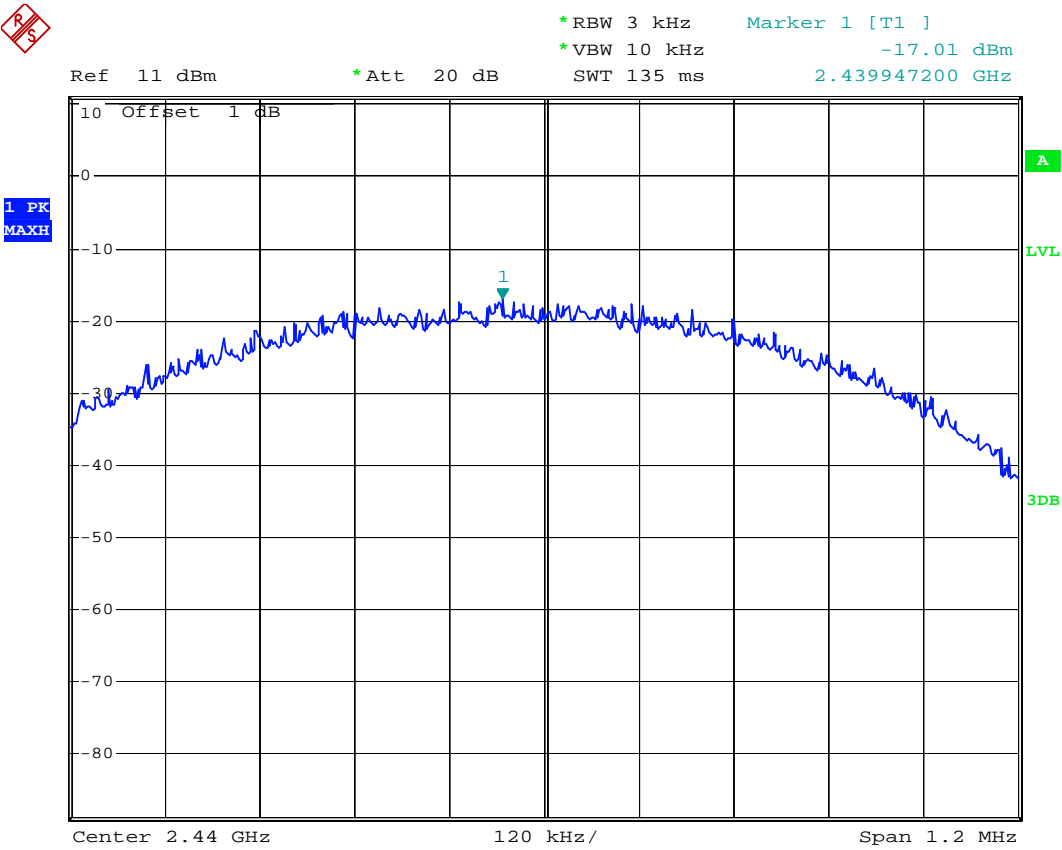
The spectrum analyzer plots are attached as below.



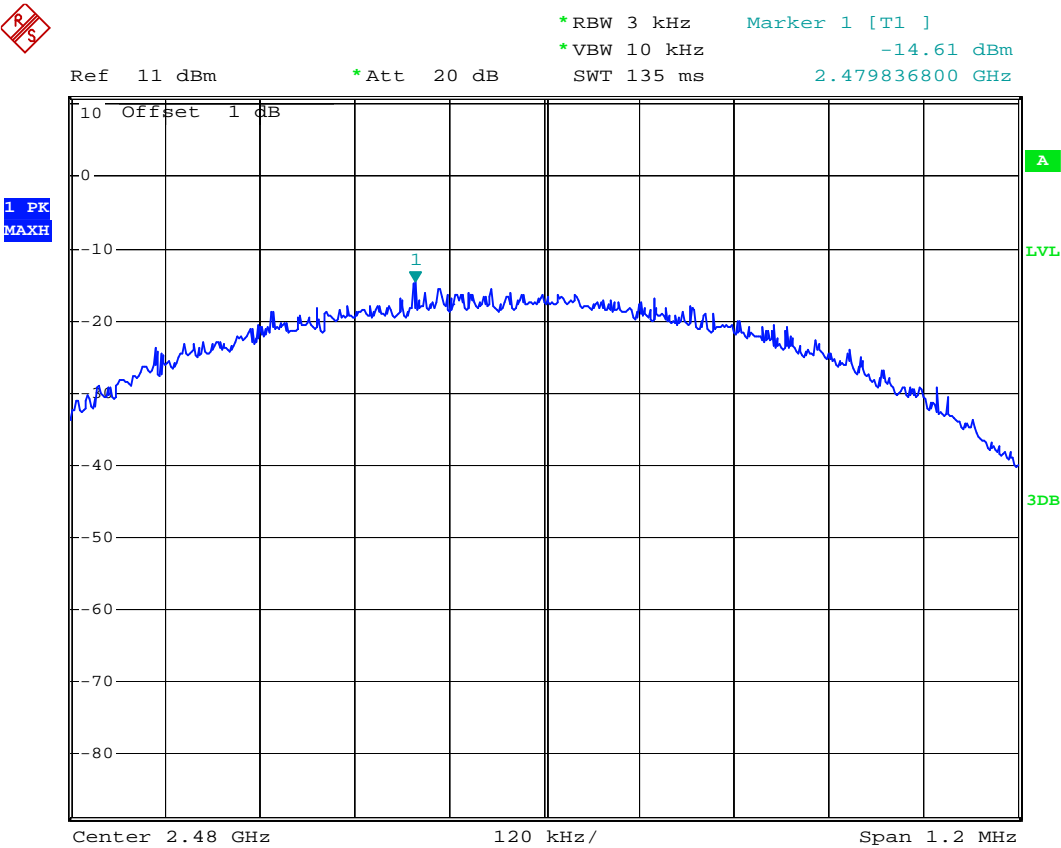
BLE Channel Low 2402MHz



BLE Channel Middle 2440MHz

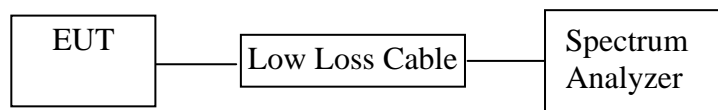


BLE Channel High 2480MHz



## 8. BAND EDGE COMPLIANCE TEST

### 8.1. Block Diagram of Test Setup



(EUT: Bluetooth Scale)

### 8.2. The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

### 8.3. EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 8.3.1. Bluetooth Scale (EUT)

Model Number : CR-3331BT  
 Serial Number : N/A

## 8.4. Operating Condition of EUT

8.4.1. Setup the EUT and simulator as shown as Section 8.1.

8.4.2. Turn on the power of all equipment.

8.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

## 8.5. Test Procedure

### Conducted Band Edge:

8.5.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

8.5.2. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.

### Radiate Band Edge:

8.5.3. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

8.5.4. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

8.5.5. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

8.5.6. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

RBW=1MHz, VBW=1MHz

8.5.7. The band edges was measured and recorded.

## 8.6. Test Result

**Pass****Conducted test**

Date of Test:	March 8, 2013	Temperature:	25°C
EUT:	Bluetooth Scale	Humidity:	50%
Model No.:	CR-3331BT	Power Supply:	DC 3V
Test Mode:	TX	Test Engineer:	Alen

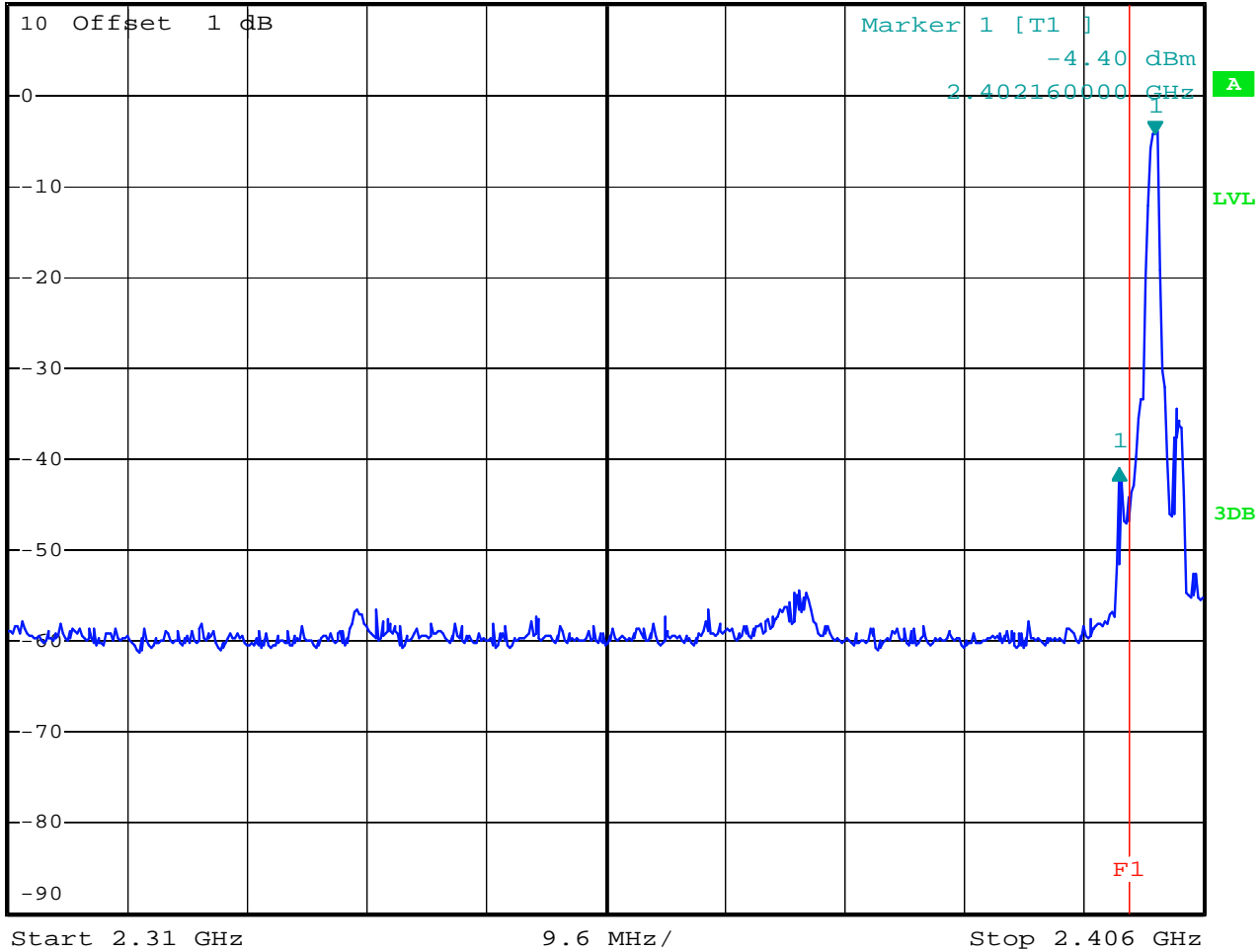
The test was performed with BLE		
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	36.71	> 20dBc
2480	42.61	> 20dBc

BLE Channel Low 2402MHz



1 PK  
MAXH

\*RBW 100 kHz    Delta 1 [T1 ]  
\*VBW 300 kHz        -36.71 dB  
Ref 10 dBm        \*Att 20 dB        SWT 10 ms        -2.880000000 MHz

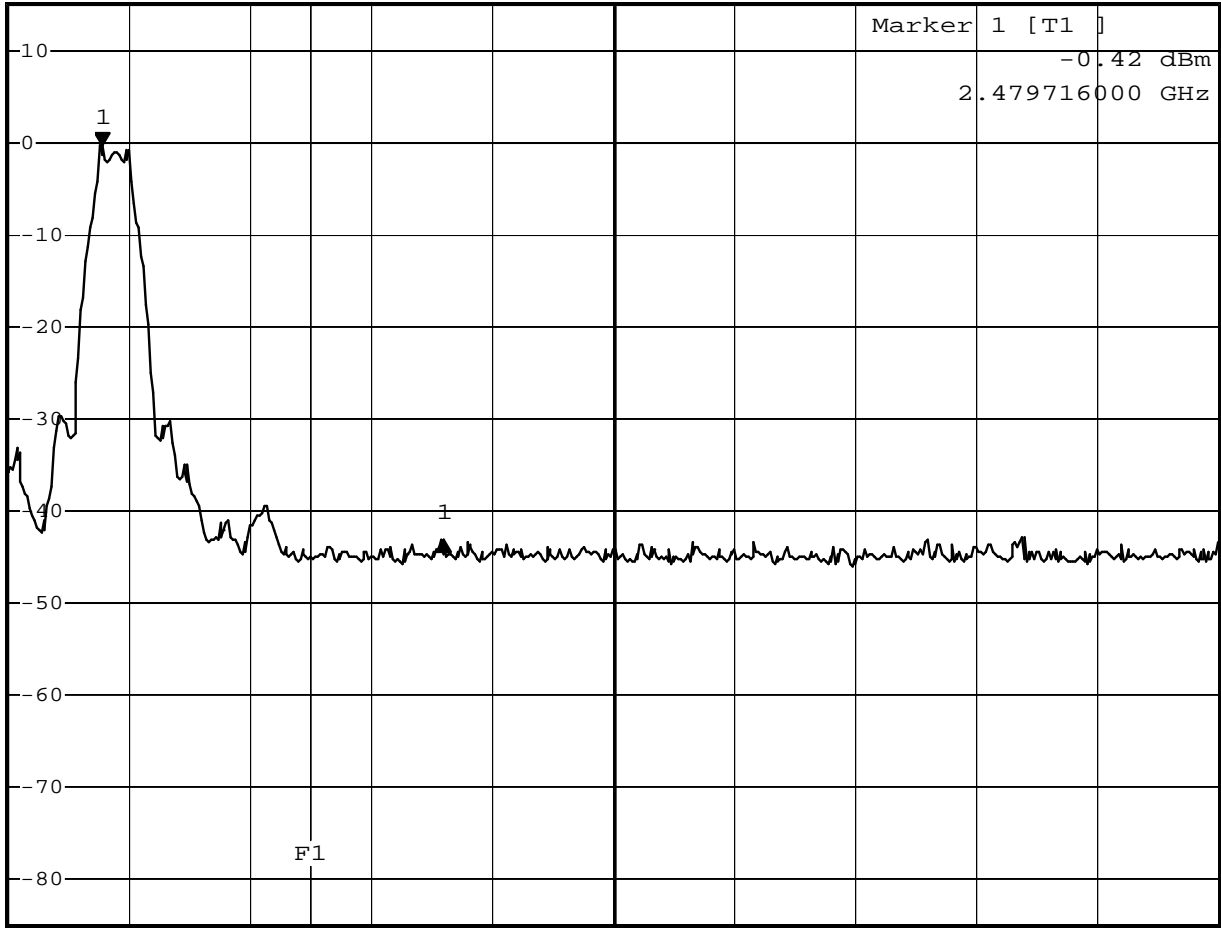


BLE Channel High 2480MHz



\*RBW 100 kHz    Delta 1 [T1 ]  
\*VBW 300 kHz        -42.61 dB  
Ref 15 dBm        Att 50 dB        SWT 2.5 ms        6.204000000 MHz

1 PK  
MAXH



Start 2.478 GHz                      2.2 MHz/                      Stop 2.5 GHz



**Radiated Band Edge Result**

Date of Test:	March 14, 2013	Temperature:	25°C
EUT:	Bluetooth Scale	Humidity:	50%
Model No.:	CR-3331BT	Power Supply:	DC 3V
Test Mode:	BLE Channel Low 2402MHz	Test Engineer:	Alen

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	
2310.000	32.00	45.00	-7.81	24.19	37.19	54.00	74.00	-29.81	-36.81	Vertical
2323.955	33.68	49.01	-7.81	25.87	41.20	54.00	74.00	-28.13	-32.80	Vertical
2390.000	32.28	43.99	-7.53	24.75	36.46	54.00	74.00	-29.25	-37.54	Vertical
2310.000	32.87	46.64	-7.81	25.06	38.83	54.00	74.00	-28.94	-35.17	Horizontal
2374.021	32.17	46.83	-7.63	24.54	39.20	54.00	74.00	-29.46	-34.80	Horizontal
2390.000	31.28	44.37	-7.53	23.75	36.84	54.00	74.00	-30.25	-37.16	Horizontal

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

3. Display the measurement of peak values.

Date of Test:	March 14, 2013	Temperature:	25°C
EUT:	Bluetooth Scale	Humidity:	50%
Model No.:	CR-3331BT	Power Supply:	DC 3V
Test Mode:	BLE Channel High 2480MHz	Test Engineer:	Alen

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	
2483.500	34.89	49.54	-7.37	27.52	42.17	54.00	74.00	-26.48	-31.83	Vertical
2487.191	33.91	47.38	-7.38	26.53	40.00	54.00	74.00	-27.47	-34.00	Vertical
2500.000	30.48	43.68	-7.40	23.08	36.28	54.00	74.00	-30.92	-37.72	Vertical
2483.500	34.62	47.38	-7.37	27.25	40.01	54.00	74.00	-26.75	-33.99	Horizontal
2487.032	33.94	47.36	-7.38	26.56	39.98	54.00	74.00	-27.44	-34.02	Horizontal
2500.000	30.44	44.87	-7.40	23.04	37.47	54.00	74.00	-30.96	-36.53	Horizontal

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:  
Result = Reading + Corrected Factor
3. Display the measurement of peak values.



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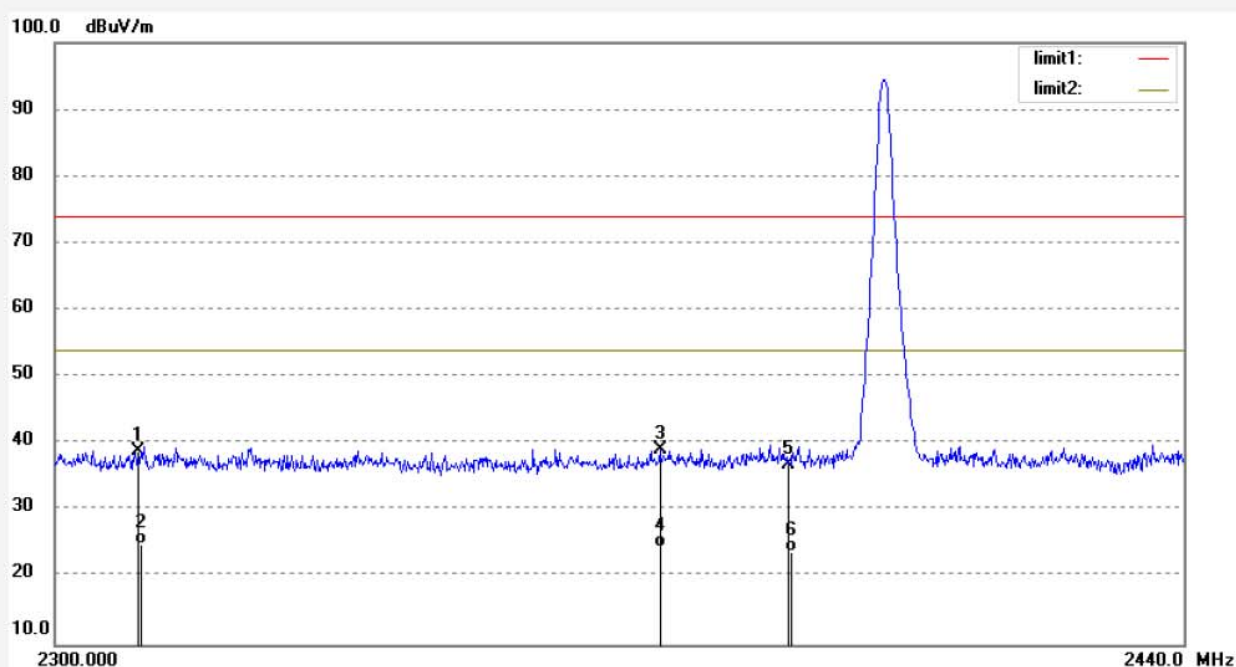
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: STAR #992  
Standard: FCC 15C PK  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 24 C / 48 %  
EUT: Bluetooth scale  
Mode: TX 2402MHz  
Model: CR-3331BT  
Manufacturer: Care

Polarization: Horizontal  
Power Source: DC 3V  
Date: 13/03/14/  
Time: 13:55:10  
Engineer Signature: Star  
Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	46.64	-7.81	38.83	74.00	-35.17	peak			
2	2310.000	32.87	-7.81	25.06	54.00	-28.94	AVG			
3	2374.021	46.83	-7.63	39.20	74.00	-34.80	peak			
4	2374.021	32.17	-7.63	24.54	54.00	-29.46	AVG			
5	2390.000	44.37	-7.53	36.84	74.00	-37.16	peak			
6	2390.000	31.28	-7.53	23.75	54.00	-30.25	AVG			



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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR #993

Standard: FCC 15C PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: Bluetooth scale

Mode: TX 2402MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

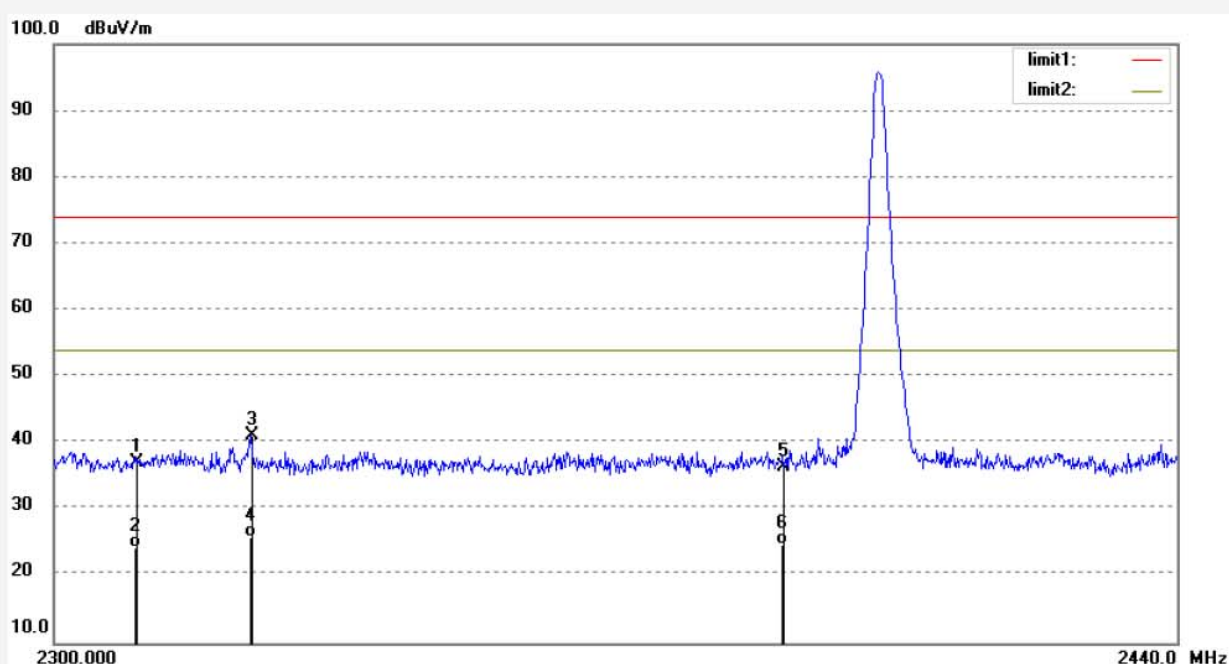
Date: 13/03/14/

Time: 14:01:32

Engineer Signature: Star

Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	45.00	-7.81	37.19	74.00	-36.81	peak			
2	2310.000	32.00	-7.81	24.19	54.00	-29.81	AVG			
3	2323.955	49.01	-7.81	41.20	74.00	-32.80	peak			
4	2323.955	33.68	-7.81	25.87	54.00	-28.13	AVG			
5	2390.000	43.99	-7.53	36.46	74.00	-37.54	peak			
6	2390.000	32.28	-7.53	24.75	54.00	-29.25	AVG			



# ACCURATE TECHNOLOGY CO., LTD.

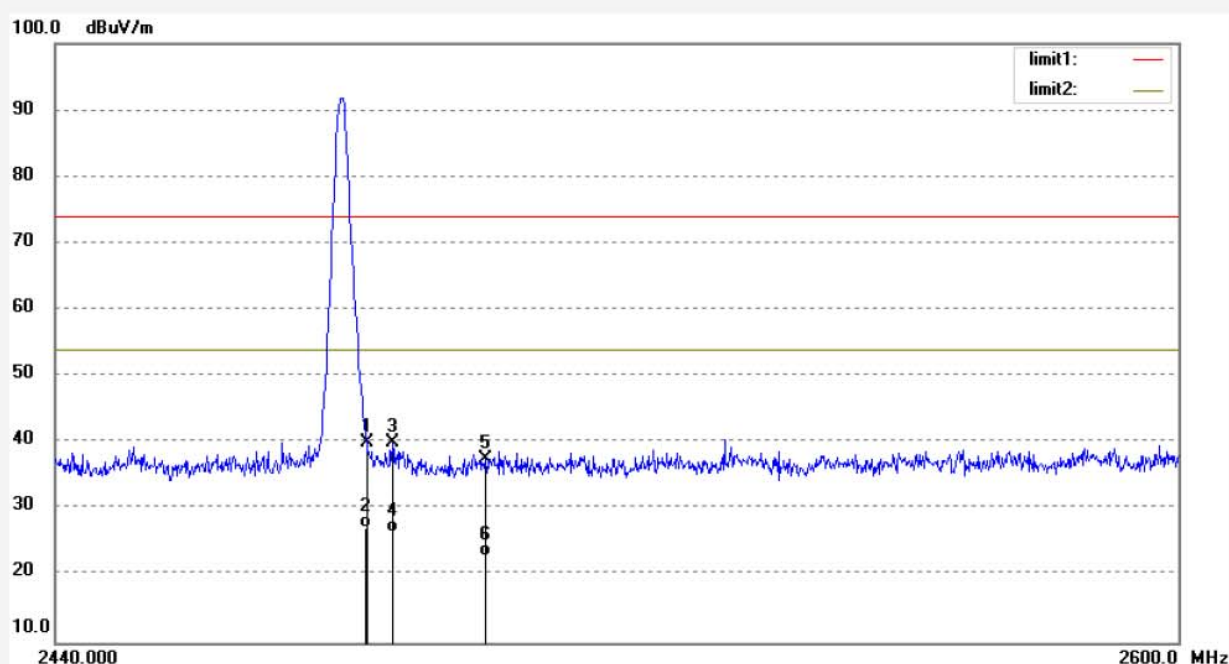
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: STAR #995  
Standard: FCC 15C PK  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 24 C / 48 %  
EUT: Bluetooth scale  
Mode: TX 2480MHz  
Model: CR-3331BT  
Manufacturer: Care

Polarization: Horizontal  
Power Source: DC 3V  
Date: 13/03/14/  
Time: 14:15:28  
Engineer Signature: Star  
Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	47.38	-7.37	40.01	74.00	-33.99	peak			
2	2483.500	34.62	-7.37	27.25	54.00	-26.75	AVG			
3	2487.032	47.36	-7.38	39.98	74.00	-34.02	peak			
4	2487.032	33.94	-7.38	26.56	54.00	-27.44	AVG			
5	2500.000	44.87	-7.40	37.47	74.00	-36.53	peak			
6	2500.000	30.44	-7.40	23.04	54.00	-30.96	AVG			




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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR #994

Standard: FCC 15C PK

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: Bluetooth scale

Mode: TX 2480MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

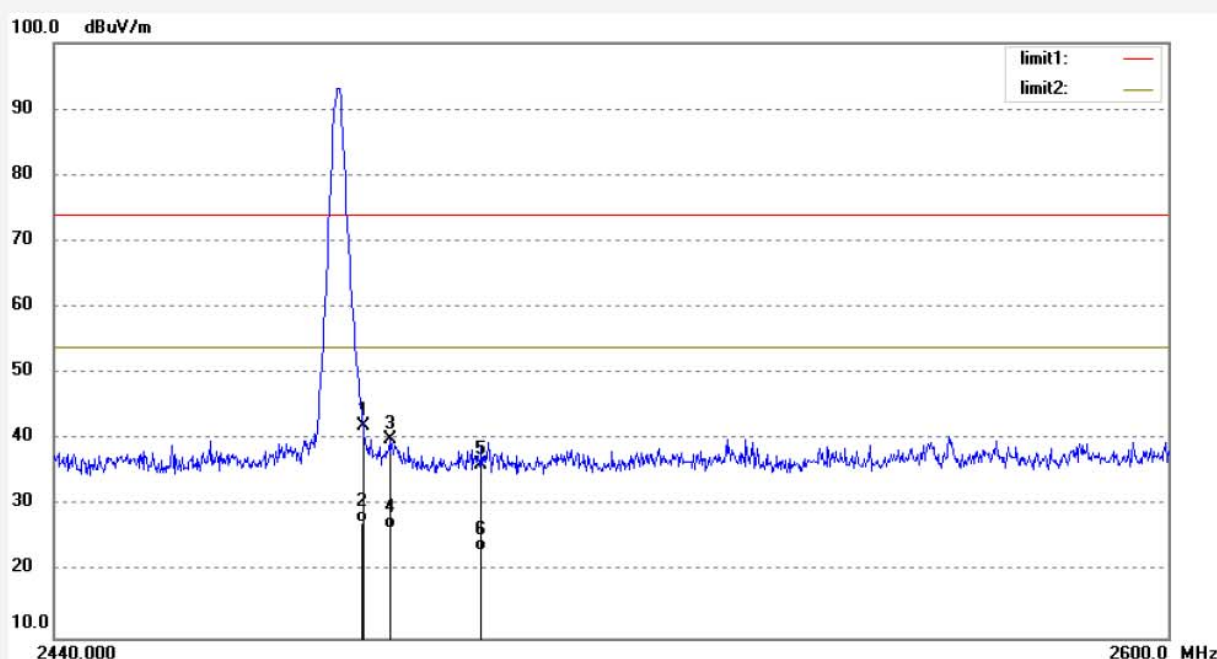
Date: 13/03/14/

Time: 14:09:00

Engineer Signature: Star

Distance: 3m

Note: Report No.:ATE20130312

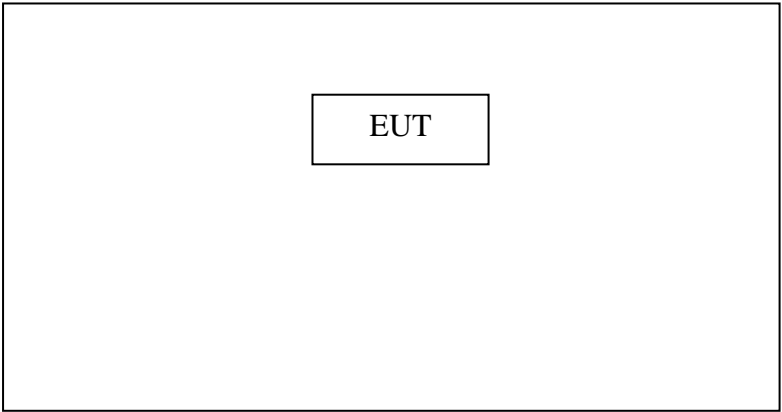


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	49.54	-7.37	42.17	74.00	-31.83	peak			
2	2483.500	34.89	-7.37	27.52	54.00	-26.48	AVG			
3	2487.191	47.38	-7.38	40.00	74.00	-34.00	peak			
4	2487.191	33.91	-7.38	26.53	54.00	-27.47	AVG			
5	2500.000	43.68	-7.40	36.28	74.00	-37.72	peak			
6	2500.000	30.48	-7.40	23.08	54.00	-30.92	AVG			

# 9. RADIATED SPURIOUS EMISSION TEST

## 9.1. Block Diagram of Test Setup

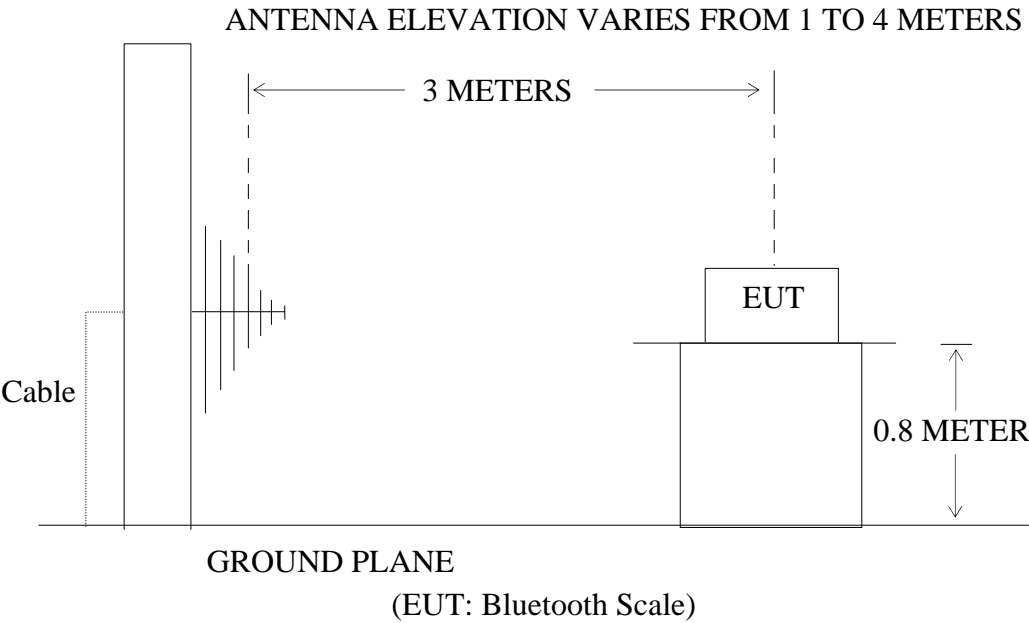
### 9.1.1. Block diagram of connection between the EUT and peripherals



Setup: Transmitting mode

(EUT: Bluetooth Scale)

### 9.1.2. Semi-Anechoic Chamber Test Setup Diagram



## 9.2.The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

## 9.3.Restricted bands of operation

### 9.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

<sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510

<sup>2</sup>Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.



## 9.4.Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 9.4.1. Bluetooth Scale (EUT)

Model Number : CR-3331BT  
Serial Number : N/A

## 9.5. Operating Condition of EUT

9.5.1. Setup the EUT and simulator as shown as Section 9.1.

9.5.2. Turn on the power of all equipment.

9.5.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

## 9.6. 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 EUT was tested in 3 orthogonal planes.

The worst-case data rate for this channel to be 1Mbps for 802.11b mode and 6Mbps for 802.11g mode and 300Mbps for 802.11n mode, based on previous with 802.11 WLAN product design architectures.

The bandwidth of test receiver is set at 9 kHz in below 30MHz. and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9 kHz to 25GHz is checked.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

## 9.7.The Field Strength of Radiation Emission Measurement Results

**PASS.**

Date of Test:	March 13-14, 2013	Temperature:	25°C
EUT:	Bluetooth Scale	Humidity:	50%
Model No.:	CR-3331BT	Power Supply:	DC 3V
Test Mode:	BLE Channel Low 2402MHz	Test Engineer:	Alen

### For Below 30MHz

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	X
-	-	-	-	-	-	Y
-	-	-	-	-	-	Z

### For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal

### For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	-	Vertical
-	-	-	-	-	-	-	-	-	-	Horizontal

**Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.**

**2. \*: Denotes restricted band of operation.**

**3. The fundamental radiated emissions were reduced by Band Reject Filter in the attached plots.**

Date of Test: March 13-14, 2013

Temperature: 25°C

EUT: Bluetooth Scale

Humidity: 50%

Model No.: CR-3331BT

Power Supply: DC 3V

Test Mode: BLE Channel Middle 2440MHz

Test Engineer: Bob

**For Below 30MHz**

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	X
-	-	-	-	-	-	Y
-	-	-	-	-	-	Z

**For 30MHz-1000MHz**

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal

**For 1GHz-25GHz**

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	-	Vertical
-	-	-	-	-	-	-	-	-	-	Horizontal

**Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.****2. \*: Denotes restricted band of operation.****3. The fundamental radiated emissions were reduced by Band Reject Filter in the attached plots.**

Date of Test: March 13-14, 2013

Temperature: 25°C

EUT: Bluetooth Scale

Humidity: 50%

Model No.: CR-3331BT

Power Supply: DC 3V

Test Mode: BLE Channel High 2480MHz

Test Engineer: Alen

**For Below 30MHz**

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	X
-	-	-	-	-	-	Y
-	-	-	-	-	-	Z

**For 30MHz-1000MHz**

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal

**For 1GHz-25GHz**

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	-	Vertical
-	-	-	-	-	-	-	-	-	-	Horizontal

**Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.****2. \*: Denotes restricted band of operation.****3. The fundamental radiated emissions were reduced by Band Reject Filter in the attached plots.**



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

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #224

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 60 %

EUT: Bluetooth scale

Mode: TX 2402MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

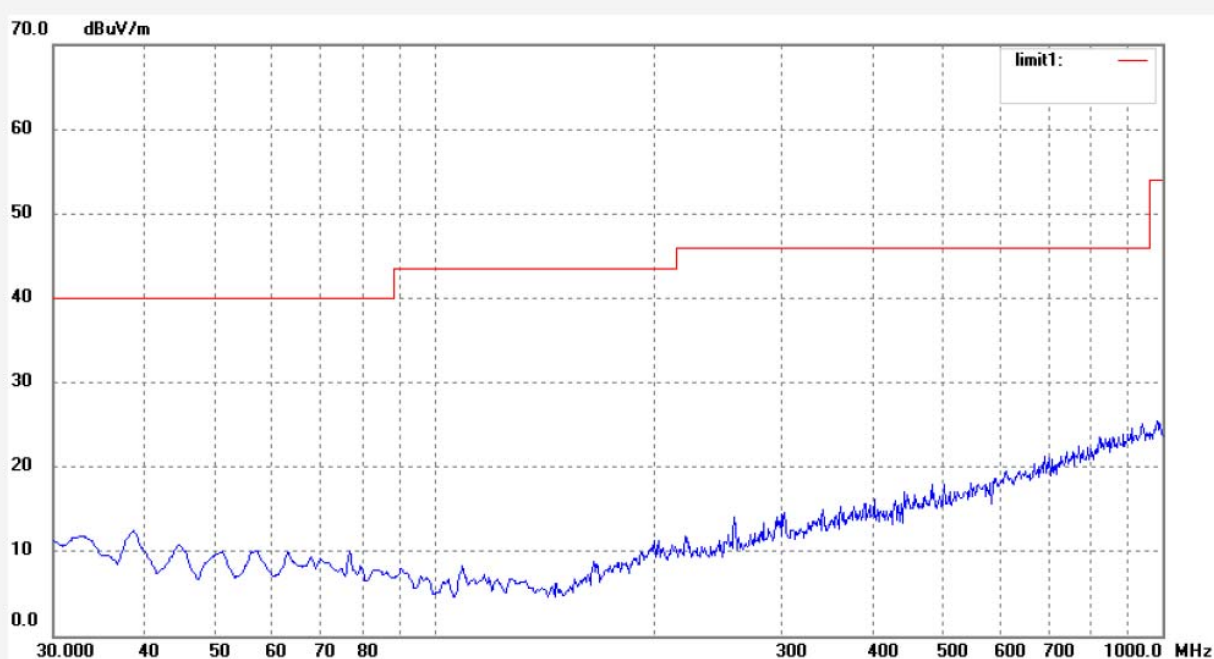
Date: 2013/03/13

Time: 16:44:18

Engineer Signature: STAR

Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
-----	----------------	---------------------	----------------	--------------------	-------------------	----------------	----------	----------------	------------------	--------


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

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #223

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 60 %

EUT: Bluetooth scale

Mode: TX 2402MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

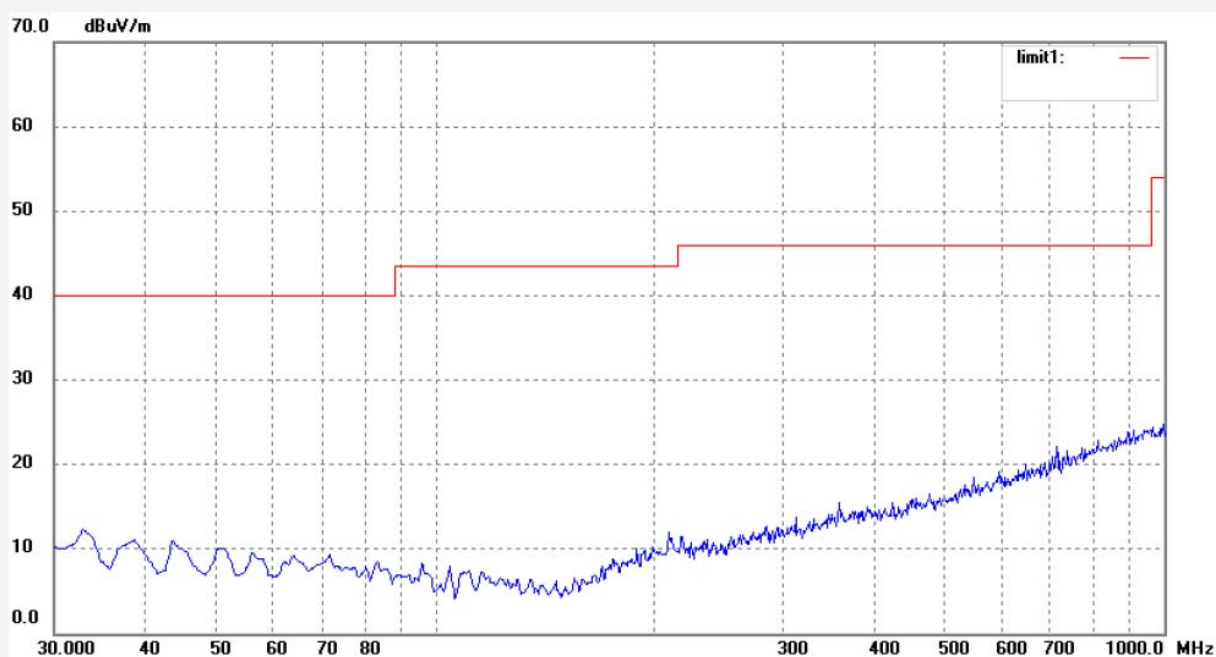
Date: 2013/03/13

Time: 16:40:25

Engineer Signature: STAR

Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
-----	----------------	---------------------	----------------	--------------------	-------------------	----------------	----------	----------------	------------------	--------


**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #832

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2402MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

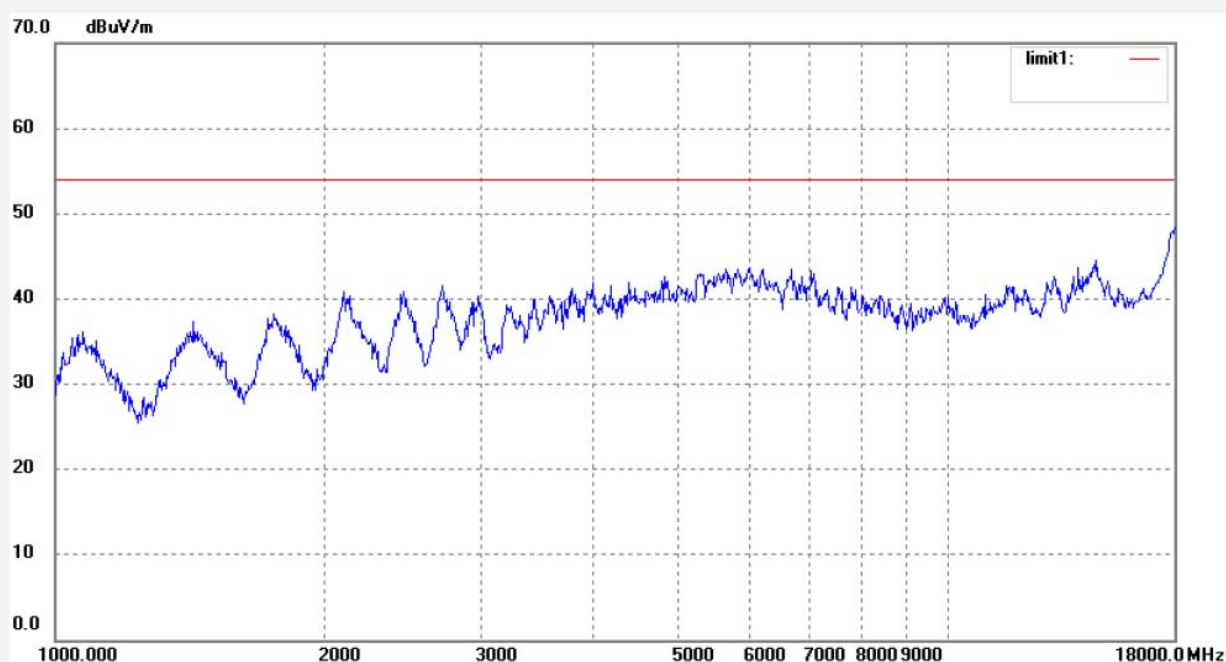
Date: 13/03/14/

Time: 8/35/43

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
-----	----------------	---------------------	----------------	--------------------	-------------------	----------------	----------	----------------	------------------	--------




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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #833

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2402MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

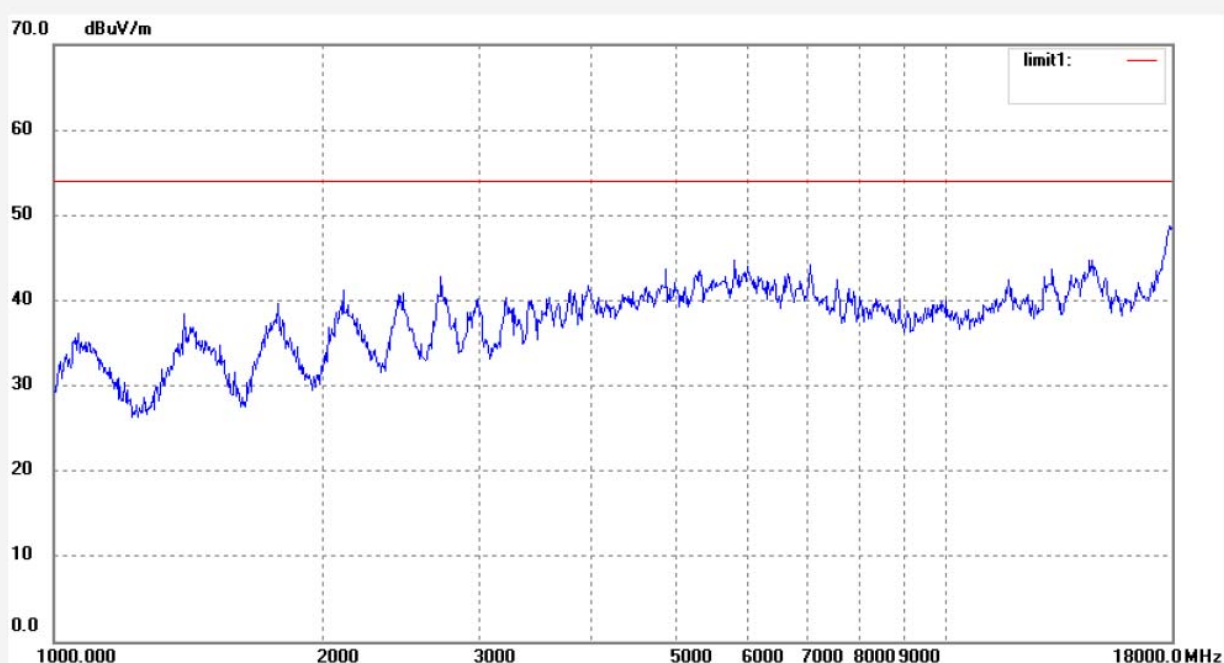
Date: 13/03/14/

Time: 8/38/00

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
-----	----------------	---------------------	----------------	--------------------	-------------------	----------------	----------	----------------	------------------	--------




**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #875

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2402MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

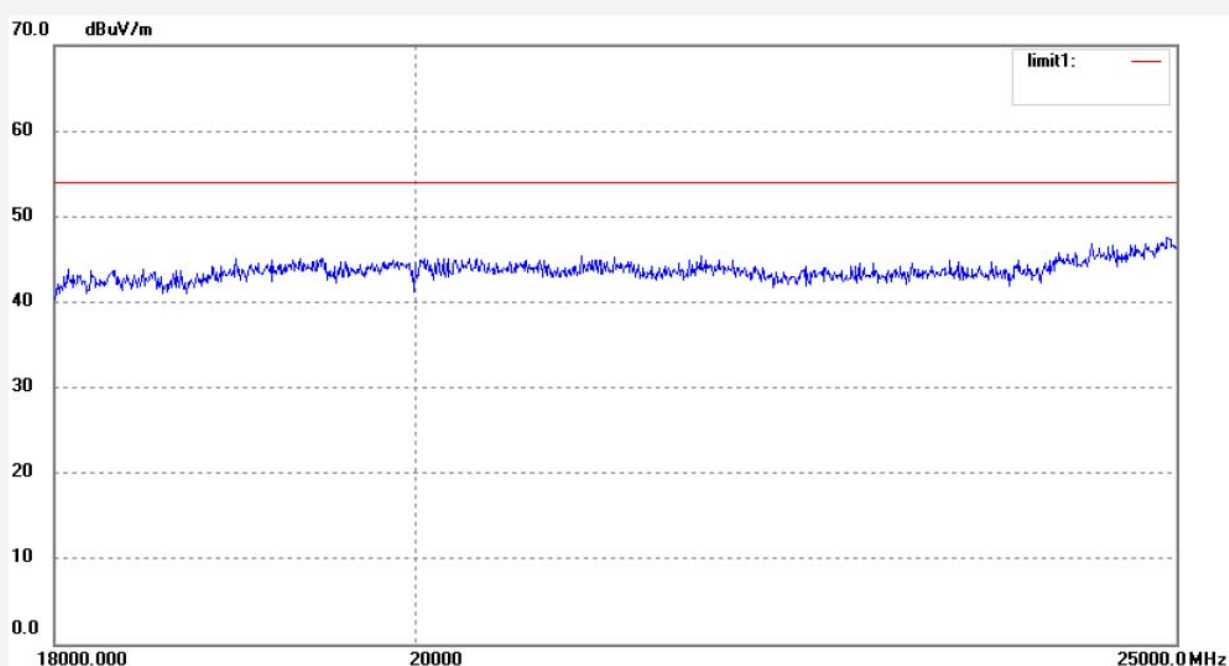
Date: 13/03/14/

Time: 20:01:24

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #874

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2402MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

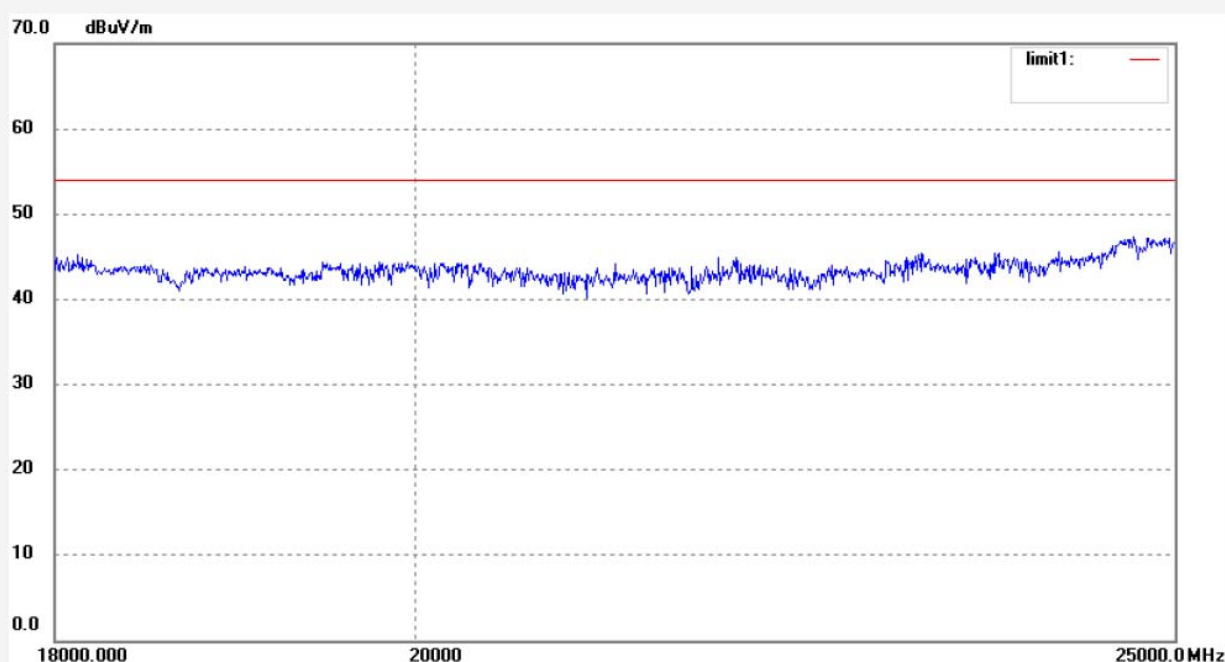
Date: 13/03/14/

Time: 19:57:01

Engineer Signature: Star

Distance:

Note: Report No.: ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #225

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 60 %

EUT: Bluetooth scale

Mode: TX 2440MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

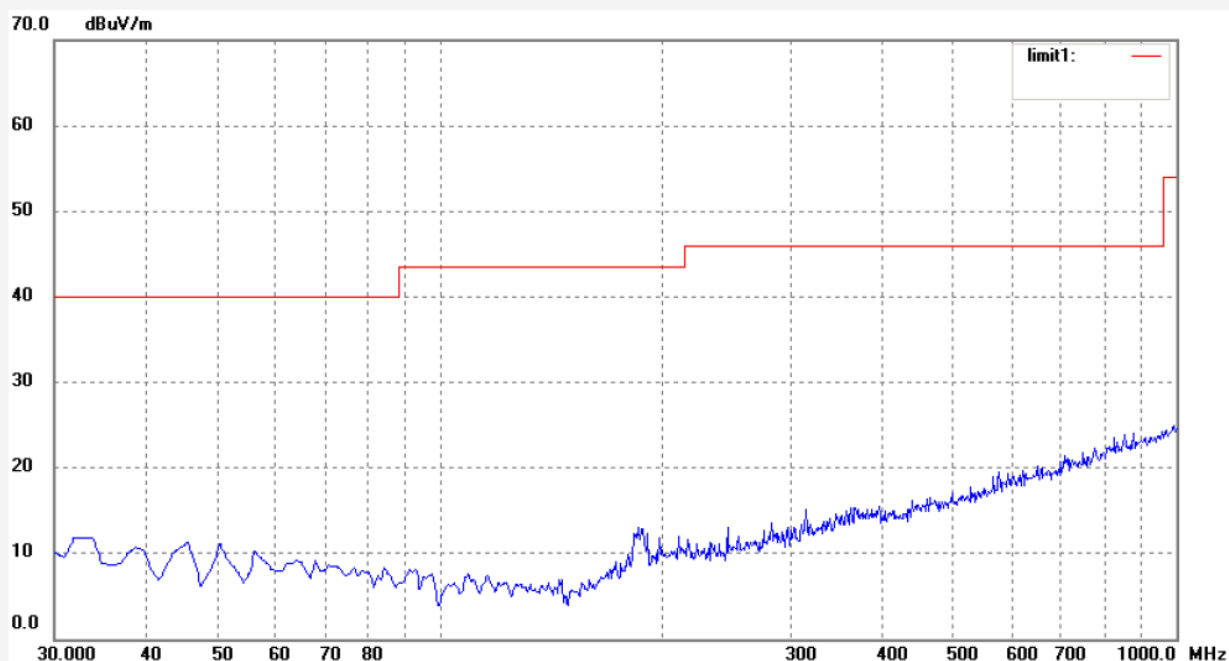
Date: 2013/03/13

Time: 16:48:23

Engineer Signature: STAR

Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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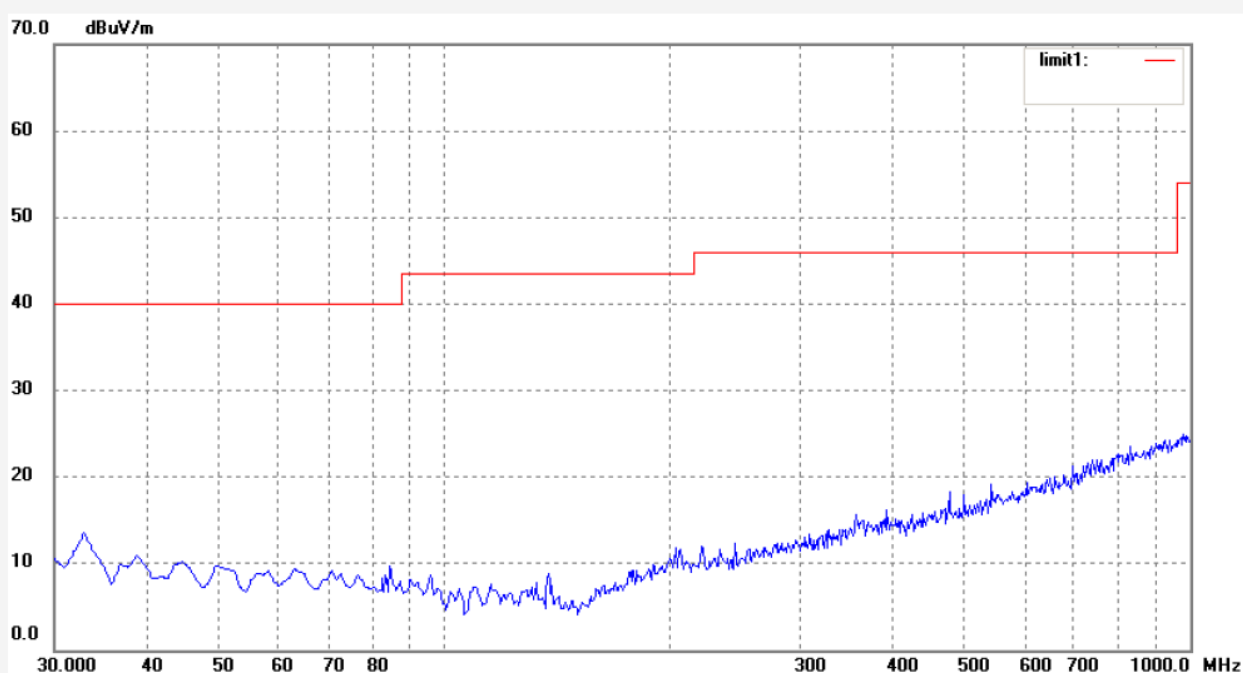
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #226  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 26 C / 60 %  
EUT: Bluetooth scale  
Mode: TX 2440MHz  
Model: CR-3331BT  
Manufacturer: Care

Polarization: Vertical  
Power Source: DC 3V  
Date: 2013/03/13  
Time: 16:52:04  
Engineer Signature: STAR  
Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #835

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2440MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

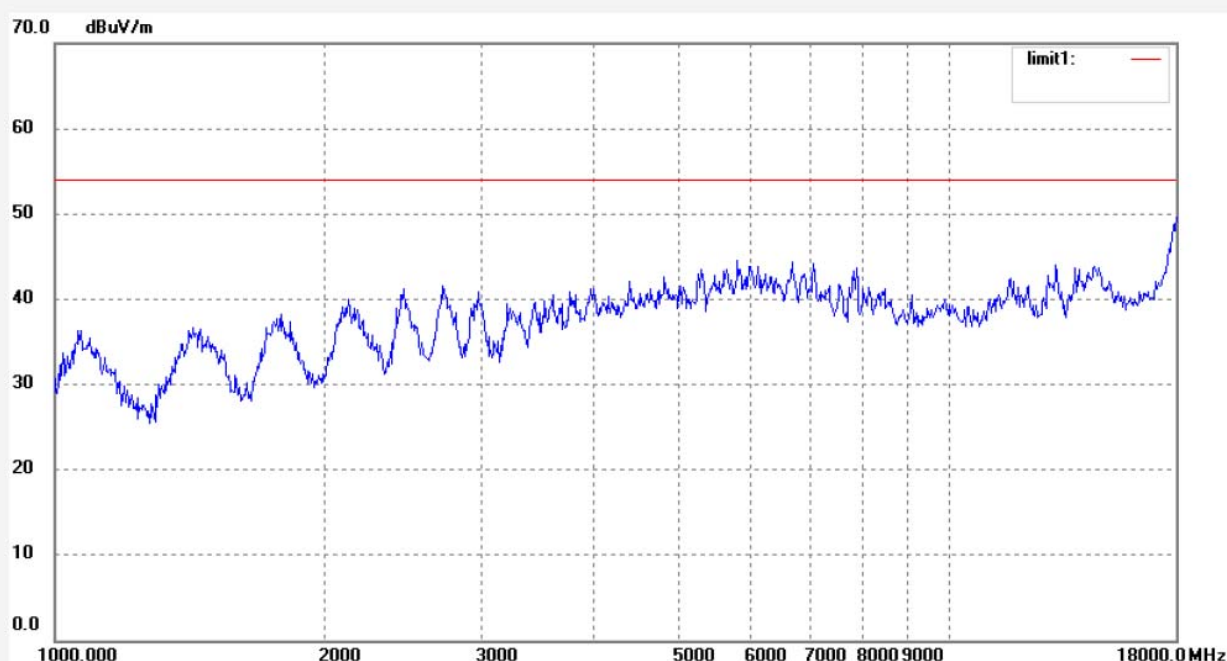
Date: 13/03/14/

Time: 8/45/16

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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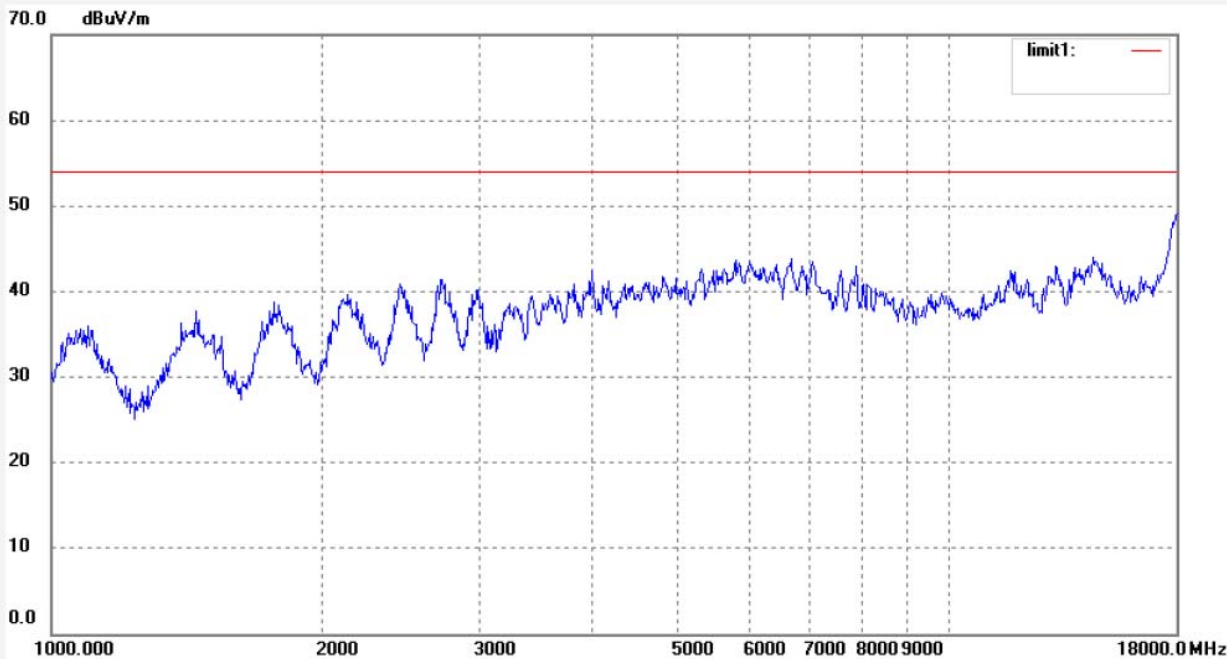
# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #834	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 13/03/14/
Temp.( C)/Hum.(%) 25 C / 51 %	Time: 8/41/24
EUT: Bluetooth scale	Engineer Signature: Star
Mode: TX 2440MHz	Distance:
Model: CR-3331BT	
Manufacturer: Care	

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #880

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2440MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

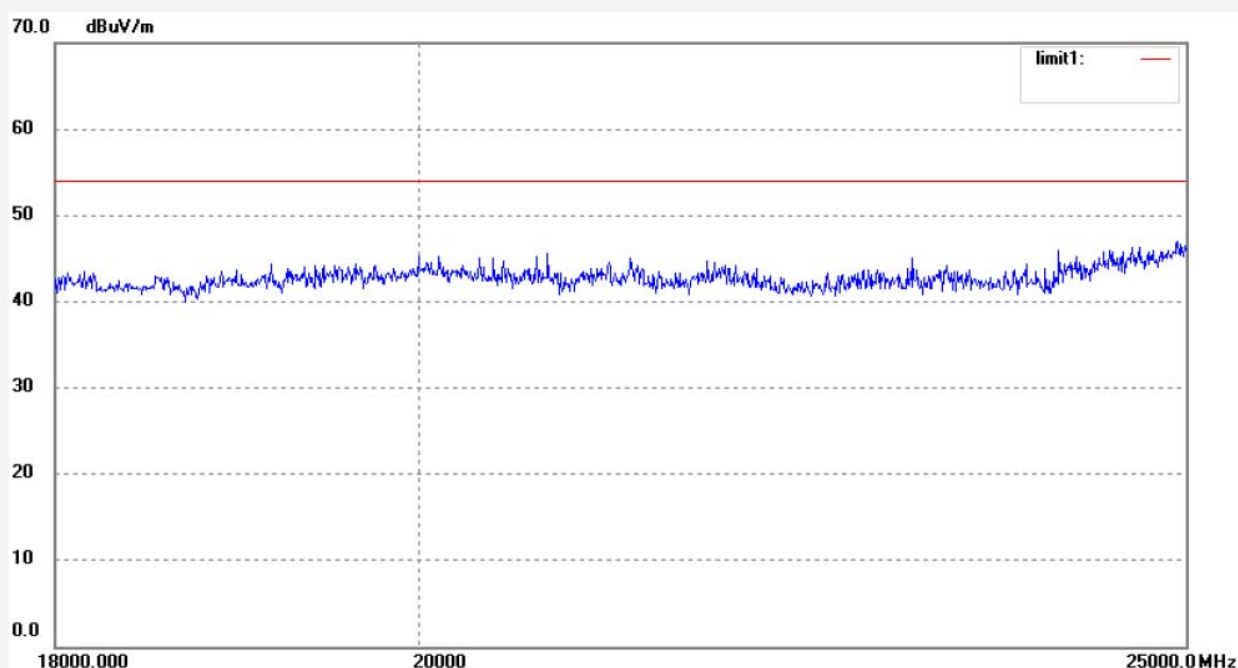
Date: 13/03/14/

Time: 20:20:32

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #881

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2440MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

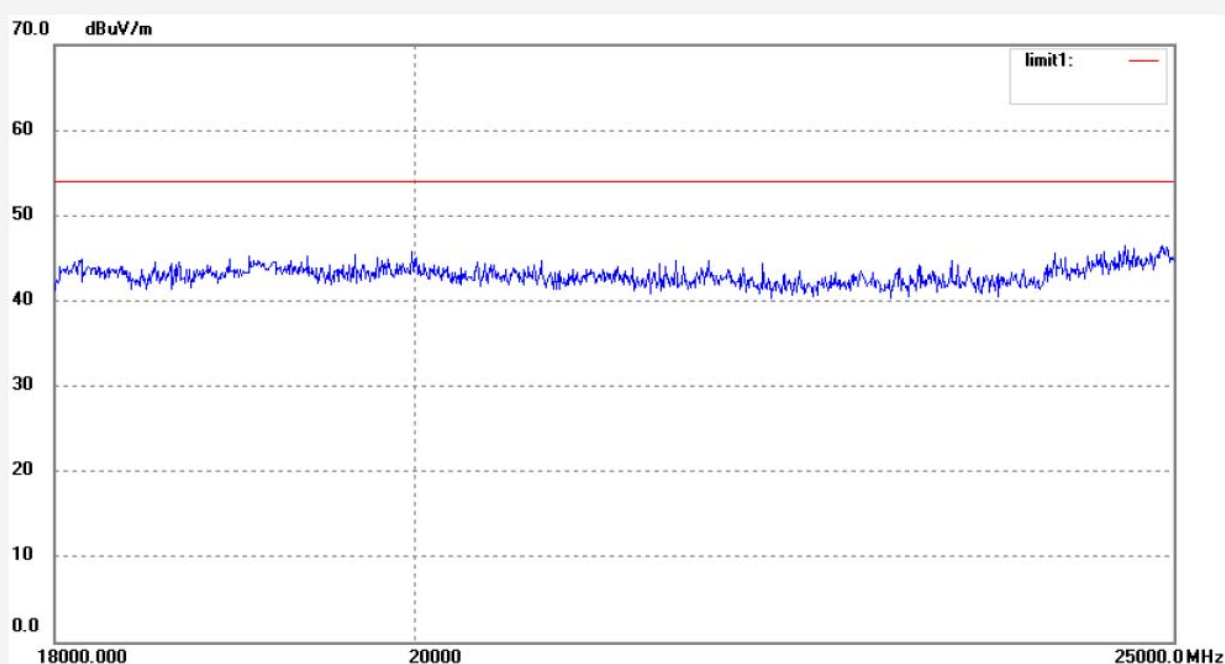
Date: 13/03/14/

Time: 20:23:43

Engineer Signature: Star

Distance:

Note: Report No.: ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #228

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 60 %

EUT: Bluetooth scale

Mode: TX 2480MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

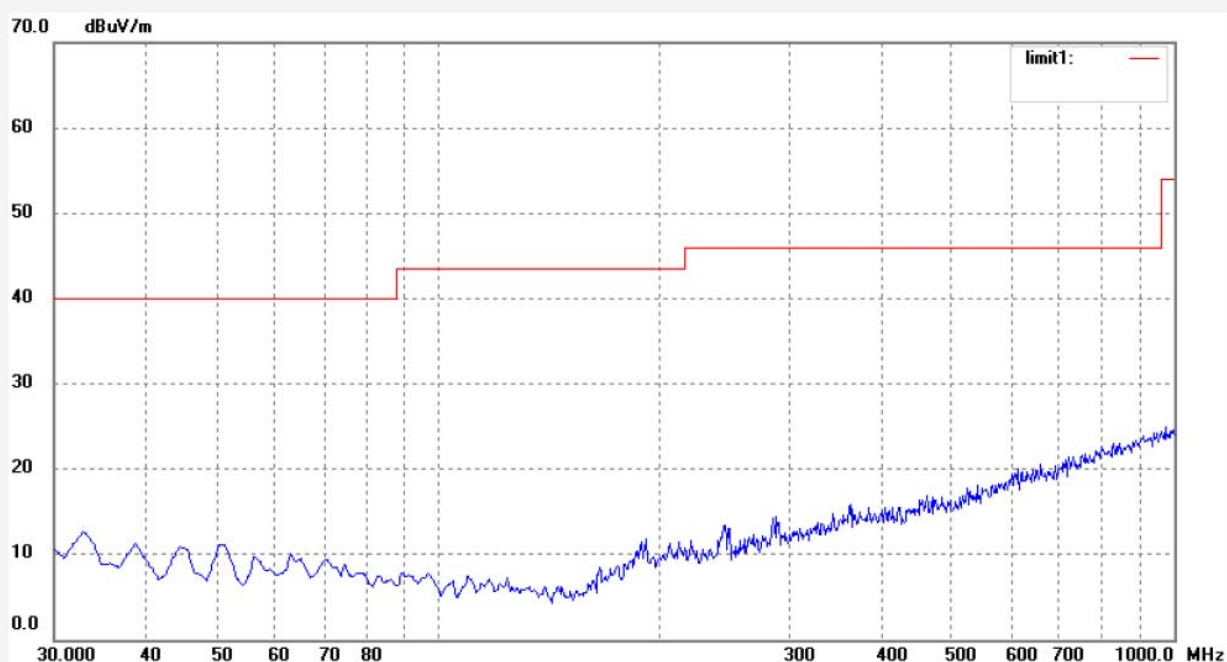
Date: 2013/03/13

Time: 17:01:33

Engineer Signature: STAR

Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #227

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 26 C / 60 %

EUT: Bluetooth scale

Mode: TX 2480MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

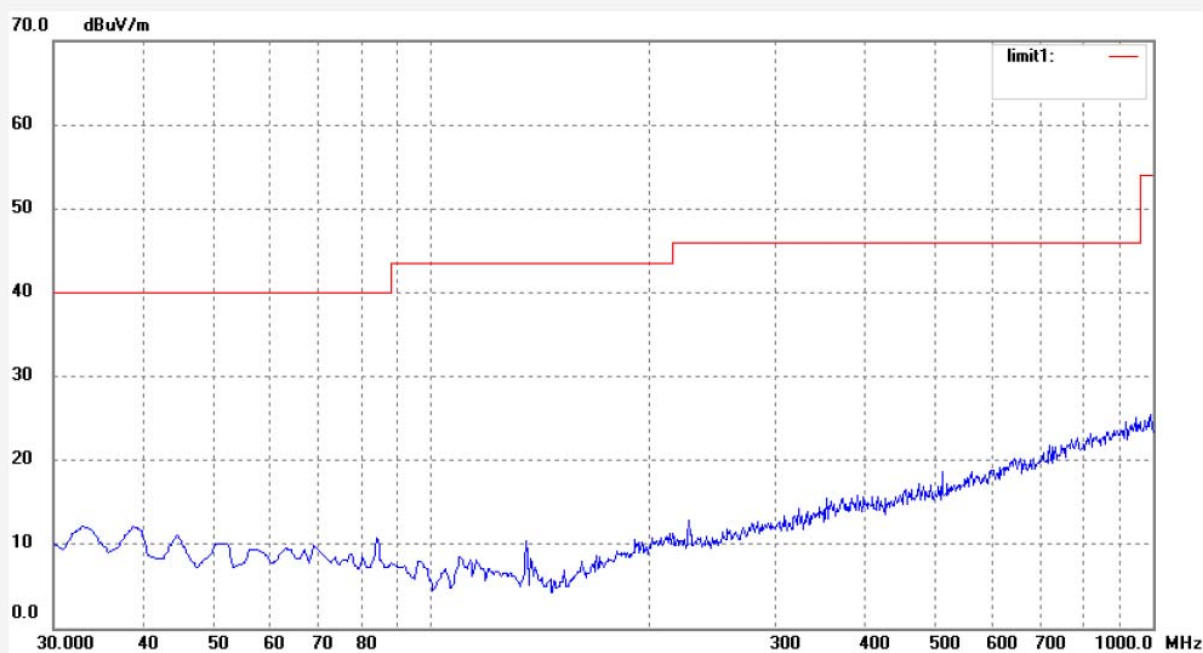
Date: 2013/03/13

Time: 16:56:51

Engineer Signature: STAR

Distance: 3m

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #836

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2480MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

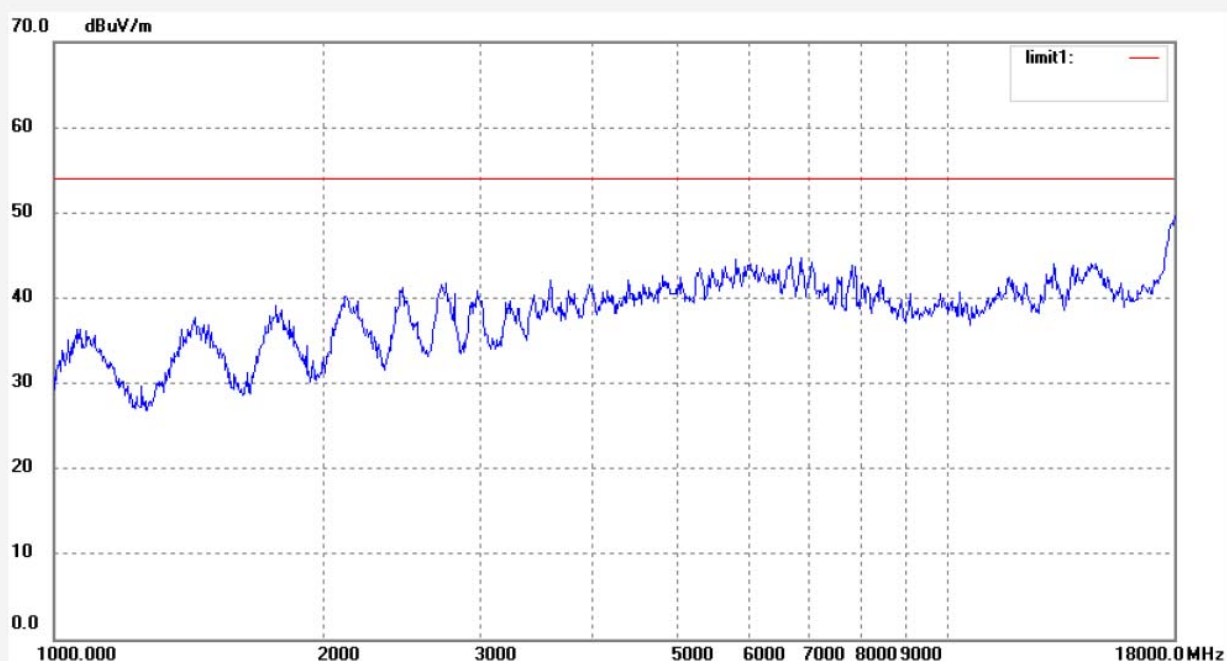
Date: 13/03/14/

Time: 8/49/09

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #837

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2480MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

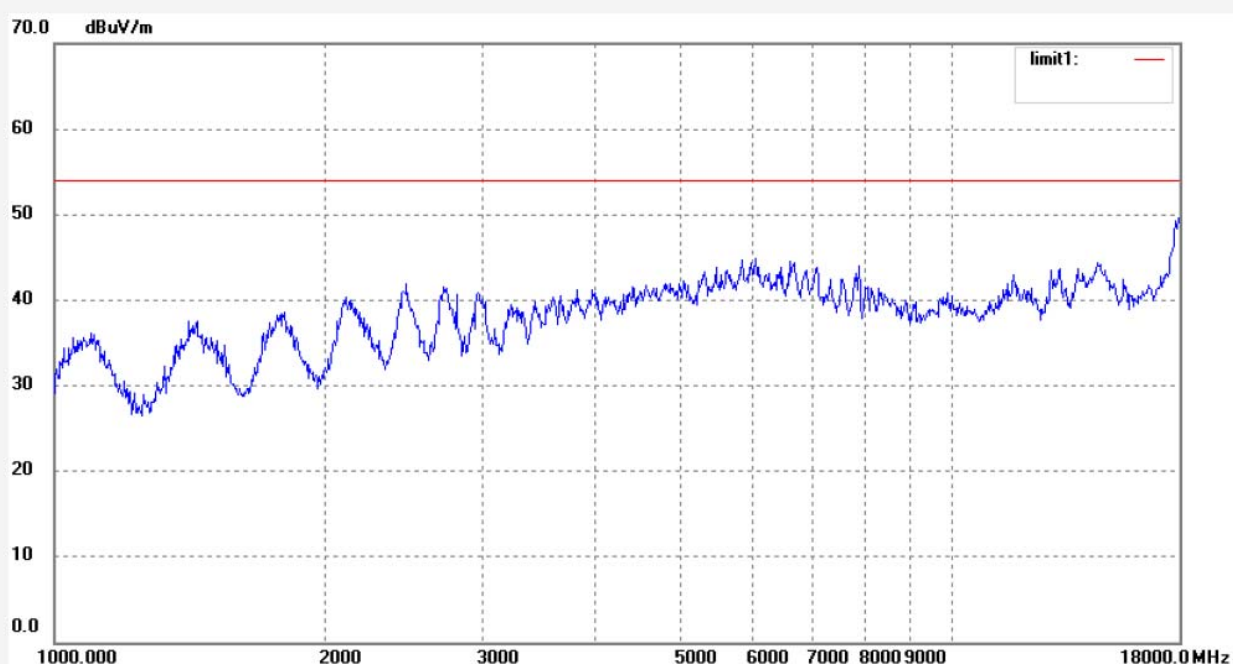
Date: 13/03/14/

Time: 8/52/30

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #887

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2480MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Horizontal

Power Source: DC 3V

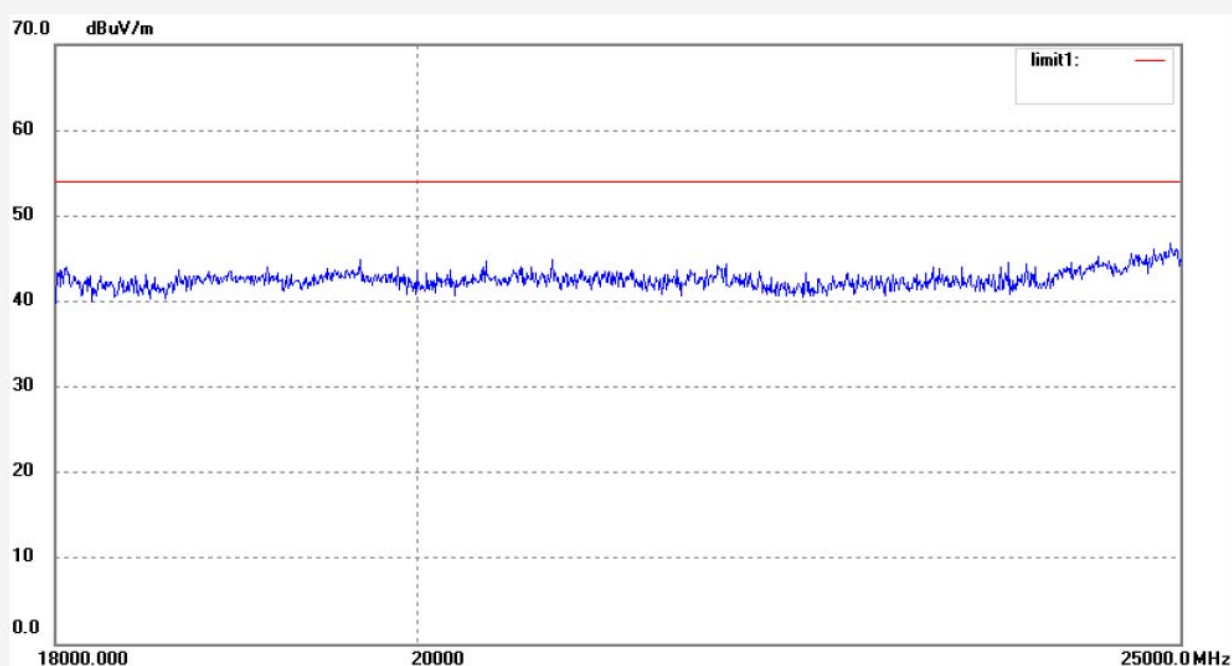
Date: 13/03/14/

Time: 20:45:16

Engineer Signature: Star

Distance:

Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star #886

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 51 %

EUT: Bluetooth scale

Mode: TX 2480MHz

Model: CR-3331BT

Manufacturer: Care

Polarization: Vertical

Power Source: DC 3V

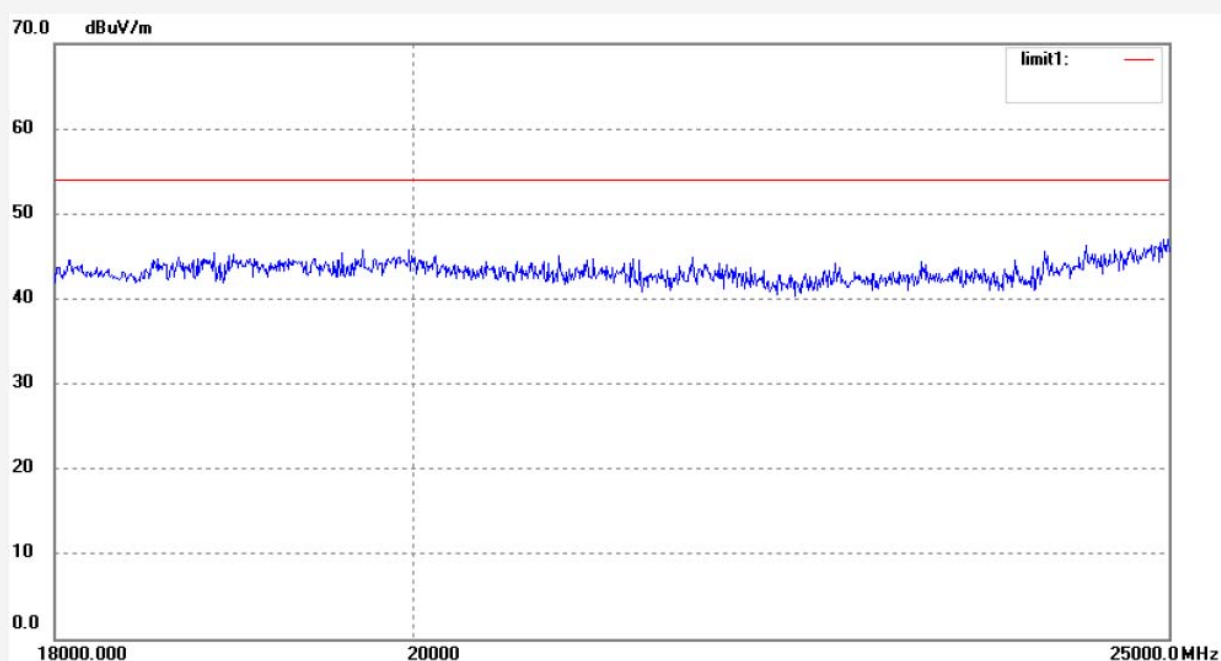
Date: 13/03/14/

Time: 20:41:55

Engineer Signature: Star

Distance:

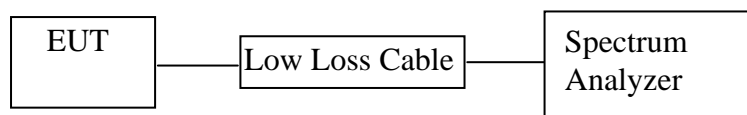
Note: Report No.:ATE20130312



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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## 10.CONDUCTED SPURIOUS EMISSION COMPLIANCE TEST

### 10.1.Block Diagram of Test Setup



(EUT: Bluetooth Scale)

### 10.2.The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

### 10.3.EUT Configuration on Measurement

The following equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 10.3.1. Bluetooth Scale (EUT)

Model Number : CR-3331BT  
 Serial Number : N/A

## 10.4.Operating Condition of EUT

10.4.1.Setup the EUT and simulator as shown as Section 10.1.

10.4.2.Turn on the power of all equipment.

10.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

## 10.5.Test Procedure

10.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

10.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz (below 1GHz).

10.5.3.Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz (above 1GHz).

10.5.4.The Conducted Spurious Emission was measured and recorded.

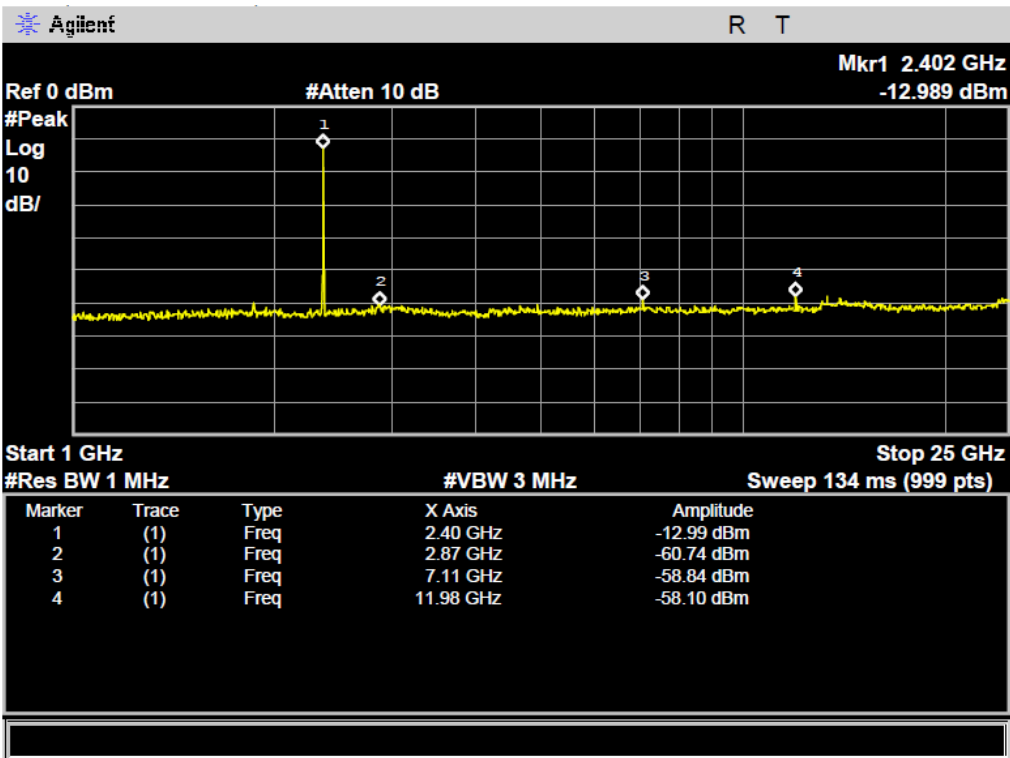
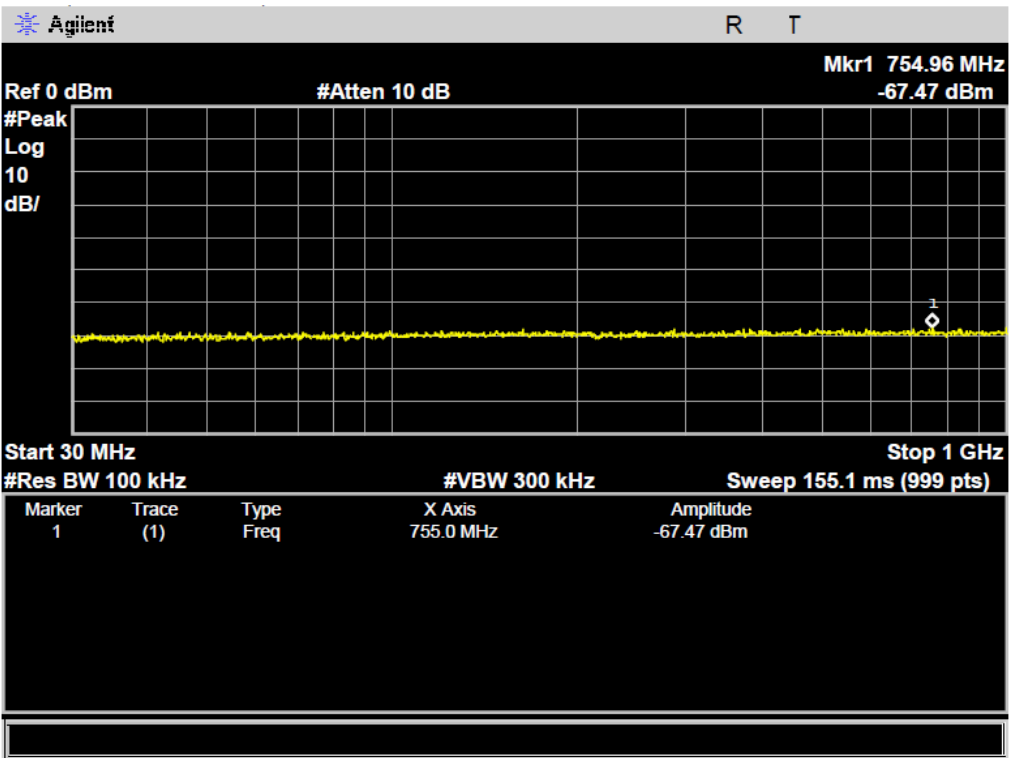
## 10.6.Test Result

**Pass.**

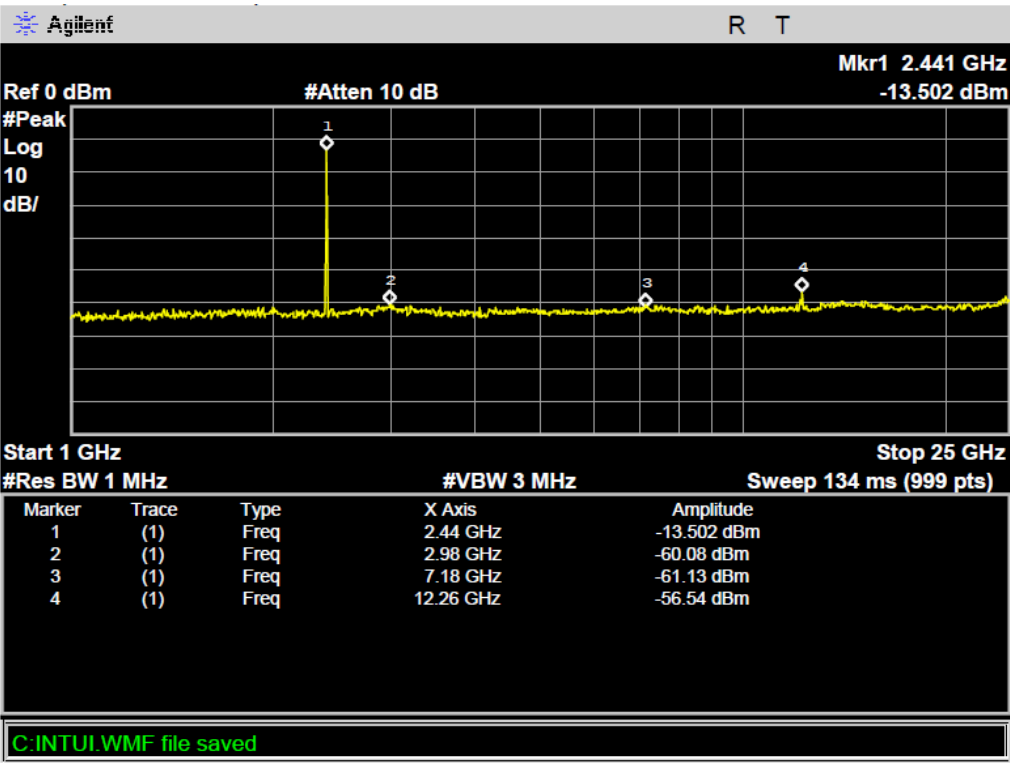
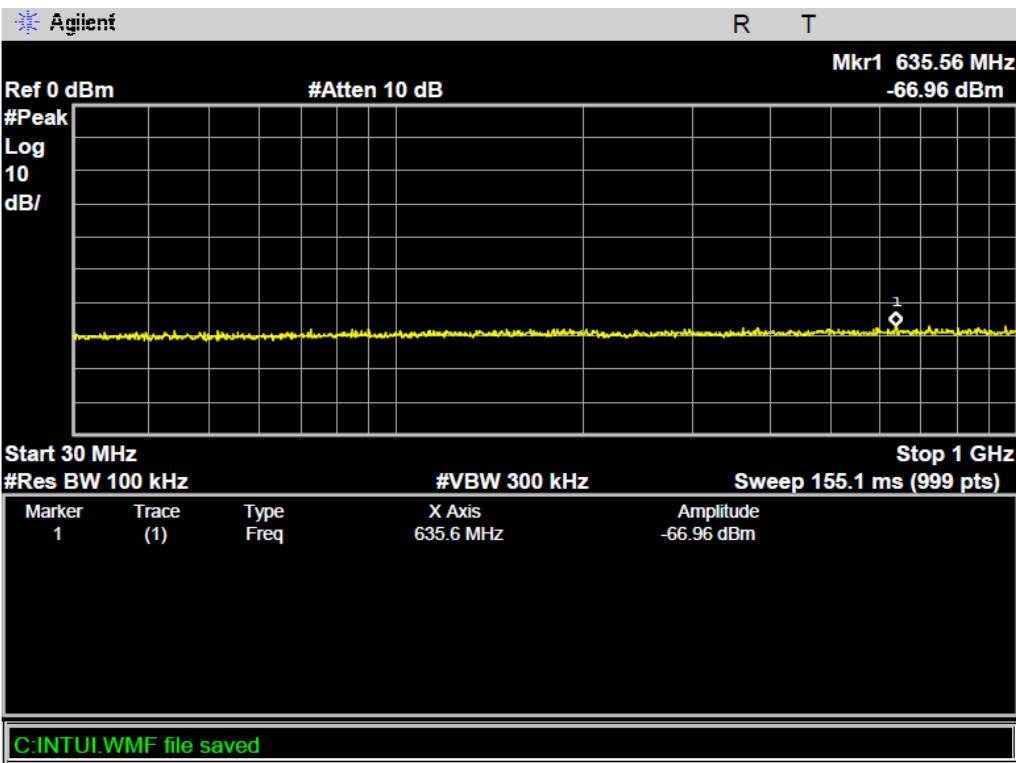
The spectrum analyzer plots are attached as below.



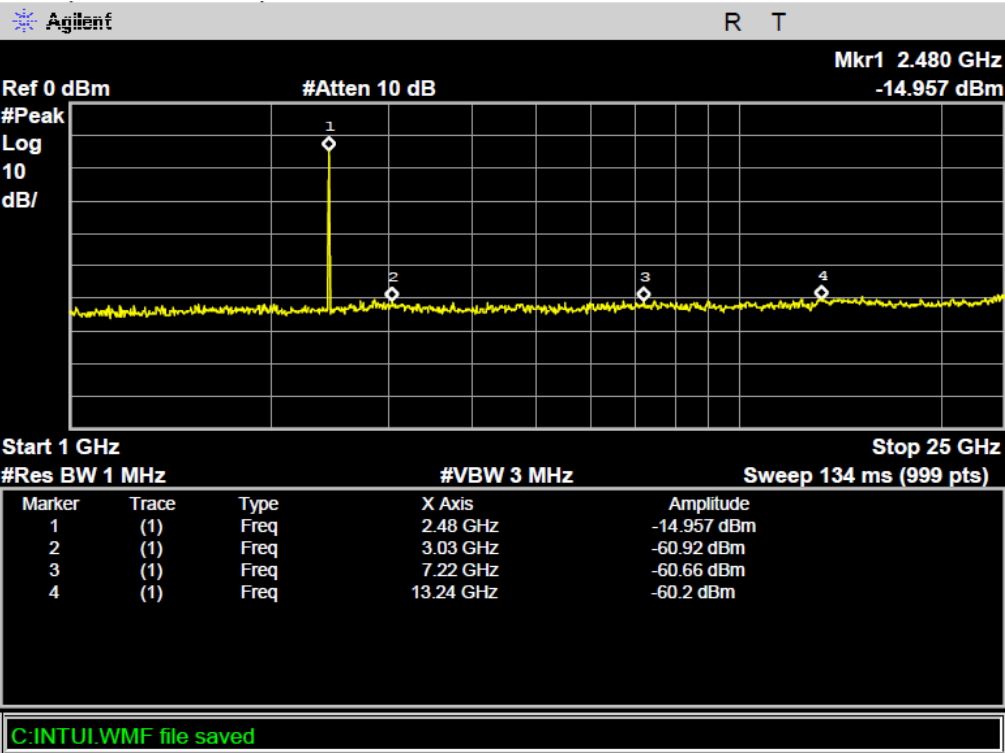
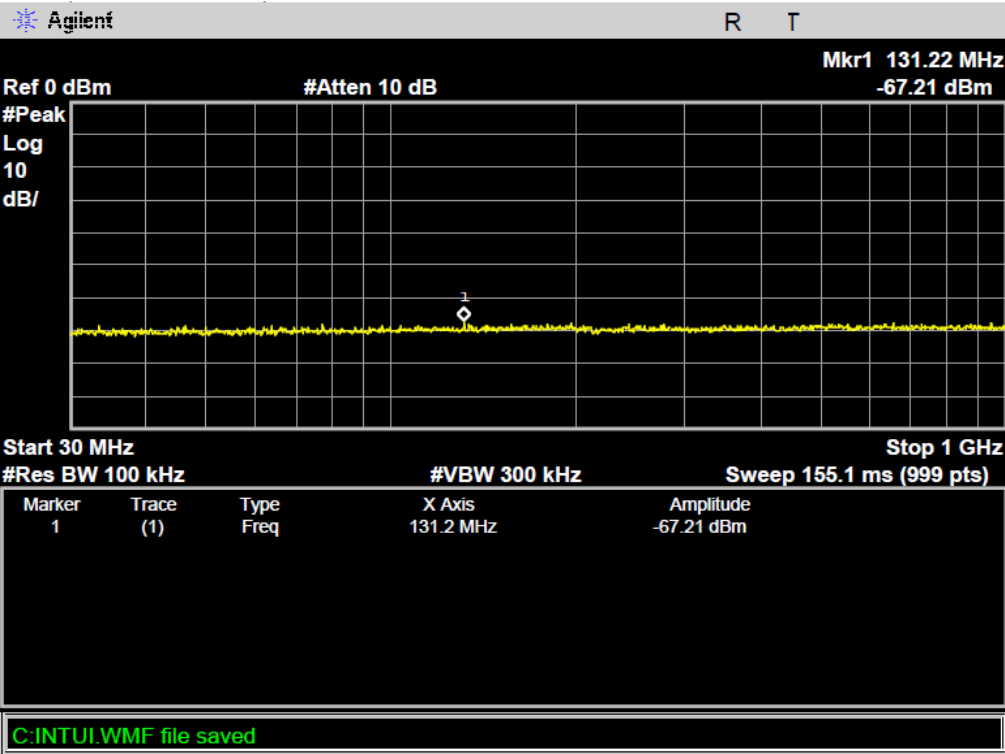
BLE Channel Low 2402MHz



BLE Channel Middle 2440MHz



BLE Channel High 2480MHz



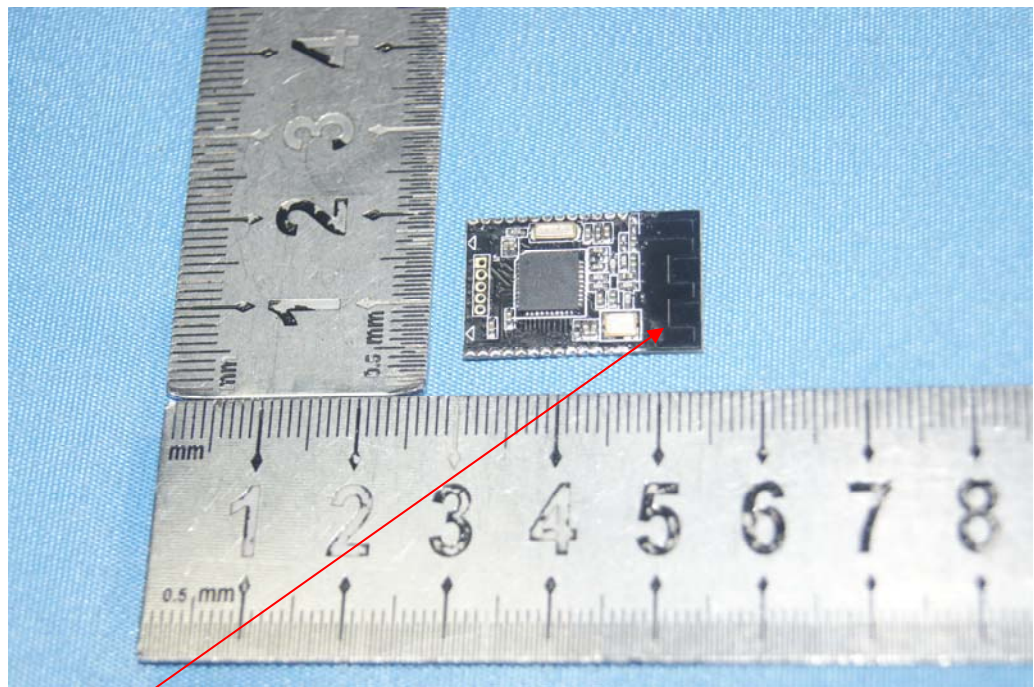
## 11.ANTENNA REQUIREMENT

### 11.1.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.

### 11.2.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