

APPLICATION CERTIFICATION

On Behalf of  
Gaoyi Tech Limited

Bluetooth Car Kit  
Model No.: B-328BT

FCC ID: X2FB-328BT

Prepared for : Gaoyi Tech Limited  
Address : 5th Floor, Building F2, Hua Feng Industrial Zone  
Hangcheng Road, Xi Xiang Town, Bao An District  
Shenzhen, China

Prepared by : ACCURATE TECHNOLOGY CO. LTD  
Address : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.  
Science & Industry Park, Nanshan, Shenzhen, Guangdong  
P.R. China

Tel: (0755) 26503290  
Fax: (0755) 26503396

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Date of Test : September 4-7, 2010  
Date of Report : September 8, 2010

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## Test Report Certification

Applicant : Gaoyi Tech Limited  
Manufacturer : Shenzhen Gaoyi Electronic Co., Ltd.  
EUT Description : Bluetooth Car Kit  
(A) MODEL NO.: B-328BT  
(B) SERIAL NO.: N/A  
(C) POWER SUPPLY: DC 12V

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247  
ANSI C63.4: 2003**

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 : September 4-7, 2010

Prepared by : Joe  
(Engineer)

Approved & Authorized Signer : Heunb  
(Manager)

# 1. GENERAL INFORMATION

## 1.1. Description of Device (EUT)

EUT	:	Bluetooth Car Kit
Model Number	:	B-328BT
Frequency Band	:	2402MHz-2480MHz
Number of Channels	:	79
Antenna Gain	:	0dBi
Power Supply	:	DC 12V
Applicant	:	Gaoyi Tech Limited
Address	:	5th Floor, Building F2, Hua Feng Industrial Zone Hangcheng Road, Xi Xiang Town, Bao An District Shenzhen, China
Manufacturer	:	Shenzhen Gaoyi Electronic Co., Ltd.
Address	:	5th Floor, Building F2, Part 1, Hua Feng Industrial Zone Hangcheng Road, Xi Xiang Town, Bao An District Shenzhen, China
Date of sample received	:	August 28, 2010
Date of Test	:	September 4-7, 2010

## 1.2. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC  
The Registration Number is 752051

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

## 1.3. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, 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)

## 2. MEASURING DEVICE AND TEST EQUIPMENT

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

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 9, 2011
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 9, 2011
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 9, 2011
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 9, 2011
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 9, 2011
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 9, 2011
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 9, 2011
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 9, 2011
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 9, 2011
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 9, 2011

### 3. OPERATION OF EUT DURING TESTING

#### 3.1. Operating Mode

The mode is used: Transmitting mode  
Low Channel: 2402MHz  
Middle Channel: 2441MHz  
High Channel: 2480MHz  
Hopping

#### 3.2. Configuration and peripherals



Setup: Transmitting mode

(EUT: Bluetooth Car Kit)

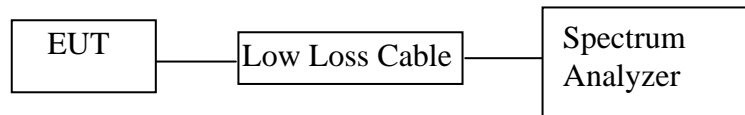


#### 4. TEST PROCEDURES AND RESULTS

<b>FCC Rules</b>	<b>Description of Test</b>	<b>Result</b>
Section 15.247(a)(1)	20dB Bandwidth Test	Compliant
Section 15.247(a)(1)	Carrier Frequency Separation Test	Compliant
Section 15.247(a)(1)(iii)	Number Of Hopping Frequency Test	Compliant
Section 15.247(a)(1)(iii)	Dwell Time Test	Compliant
Section 15.247(b)(1)	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 15.203	Antenna Requirement	Compliant

## 5. 20DB BANDWIDTH TEST

### 5.1. Block Diagram of Test Setup



(EUT: Bluetooth Car Kit)

### 5.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

### 5.3. 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.

#### 5.3.1. Bluetooth Car Kit (EUT)

Model Number : B-328BT  
 Serial Number : N/A  
 Manufacturer : Shenzhen Gaoyi Electronic Co., Ltd.

### 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(Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 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 30kHz and VBW to 100kHz.

5.5.3. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

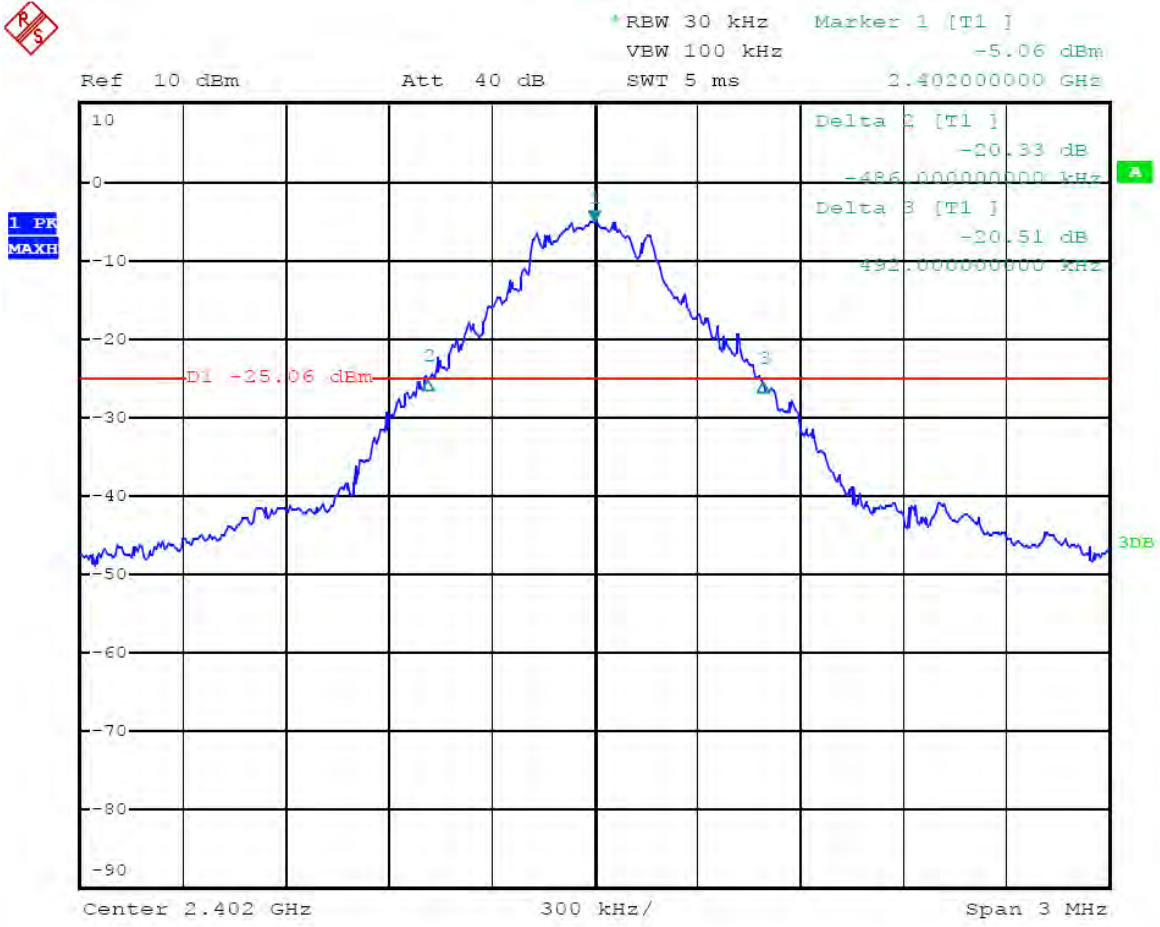
## 5.6. Test Result

**PASS.**

Date of Test:	<u>September 7, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>TX</u>	Test Engineer:	<u>Joe</u>

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)
Low	2402	0.978	---
Middle	2441	0.960	---
High	2480	0.972	---

The spectrum analyzer plots are attached as below.





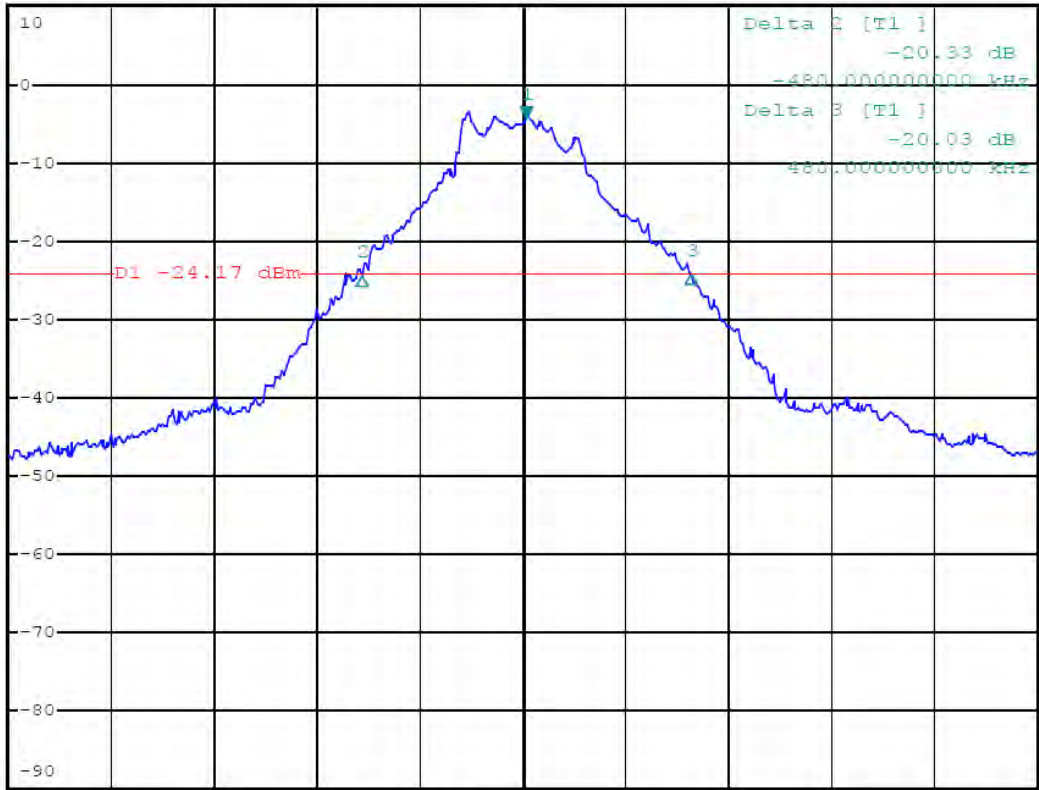
RBW 30 kHz Marker 1 [T1 ]  
VBW 100 kHz -4.17 dBm  
SWT 5 ms 2.441012000 GHz

Ref 10 dBm

Att 40 dB

2.441012000 GHz

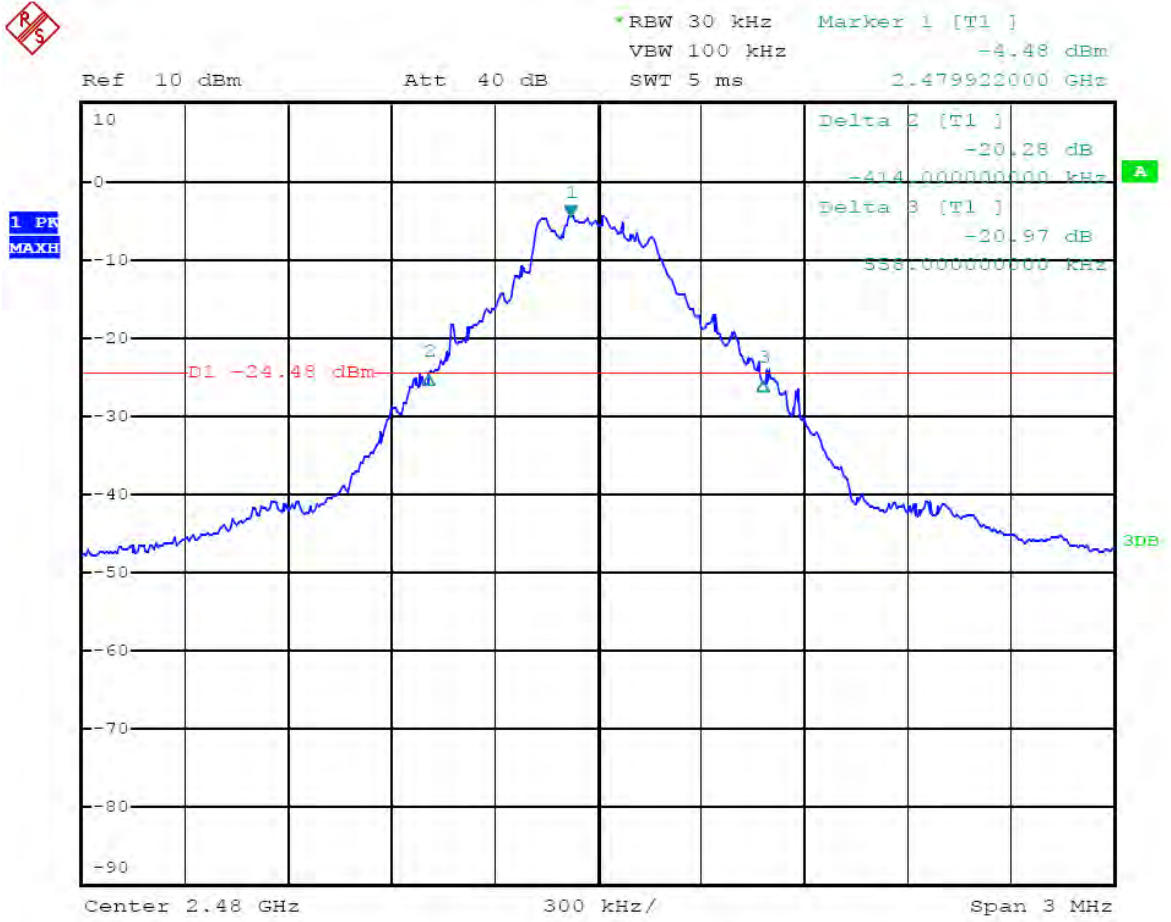
1 PK  
MAXH



Center 2.441 GHz

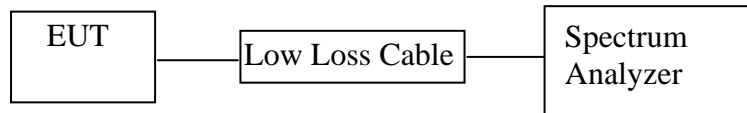
300 kHz/

Span 3 MHz



## 6. CARRIER FREQUENCY SEPARATION TEST

### 6.1. Block Diagram of Test Setup



(EUT: Bluetooth Car Kit)

### 6.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

### 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 Car Kit (EUT)

Model Number : B-328BT  
 Serial Number : N/A  
 Manufacturer : Shenzhen Gaoyi Electronic Co., Ltd.

### 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 (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 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. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz. Adjust Span to 3 MHz.

6.5.3. Set the adjacent channel of the EUT maxhold another trace.

6.5.4. Measurement the channel separation

## 6.6. Test Result

**PASS.**

Date of Test:	<u>September 7, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>Hopping</u>	Test Engineer:	<u>Joe</u>

Channel	Channel Frequency (MHz)	Channel separation (MHz)	Limit
Low	2402	1.002	> 25 kHz or two-thirds of the 20 dB bandwidth (whichever is greater)
Middle	2441	1.002	> 25 kHz or two-thirds of the 20 dB bandwidth (whichever is greater)
High	2480	1.002	> 25 kHz or two-thirds of the 20 dB bandwidth (whichever is greater)

The spectrum analyzer plots are attached as below.





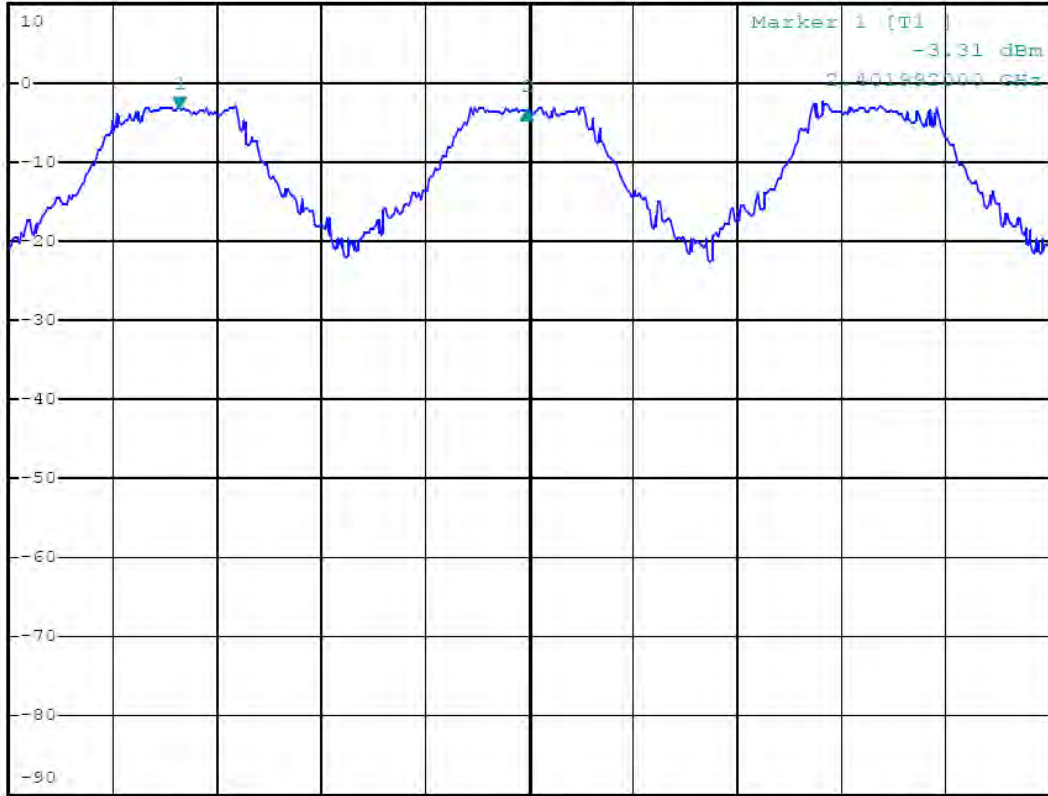
\* RBW 100 kHz Delta 2 (T1 )  
VBW 300 kHz -0.09 dB  
SWT 2.5 ms 1.002000000 MHz

Ref 10 dBm

Att 40 dB

1.002000000 MHz

1 PK  
MAXH



Marker 1 (T1 )  
-3.31 dBm  
2.401992000 GHz

A

3dB

Center 2.403 GHz

300 kHz/

Span 3 MHz

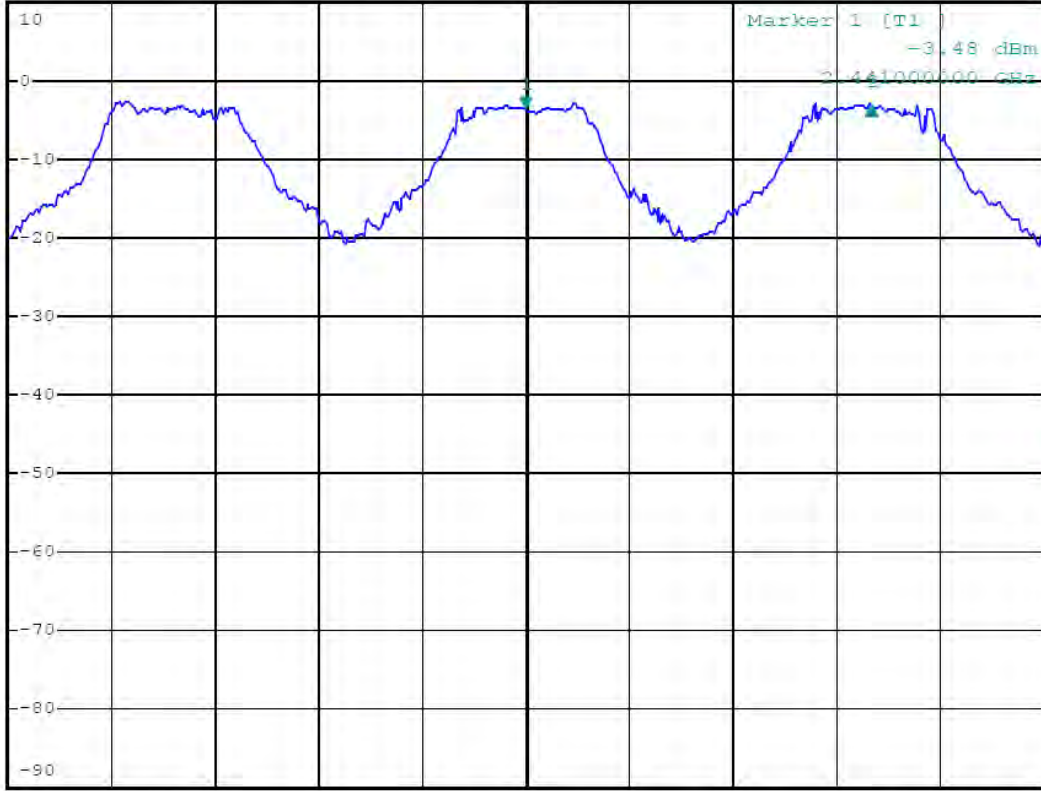


\*RBW 100 kHz Delta 2 (T1 )  
VBW 300 kHz 0.33 dB  
SWT 2.5 ms 1.002000000 MHz

Ref 10 dBm

Att 40 dB

1.002000000 MHz





\* RBW 100 kHz Delta 2 [T1 ]  
VEW 300 kHz -0.24 dB  
SWT 2.5 ms -1.002000000 MHz

Ref 10 dBm

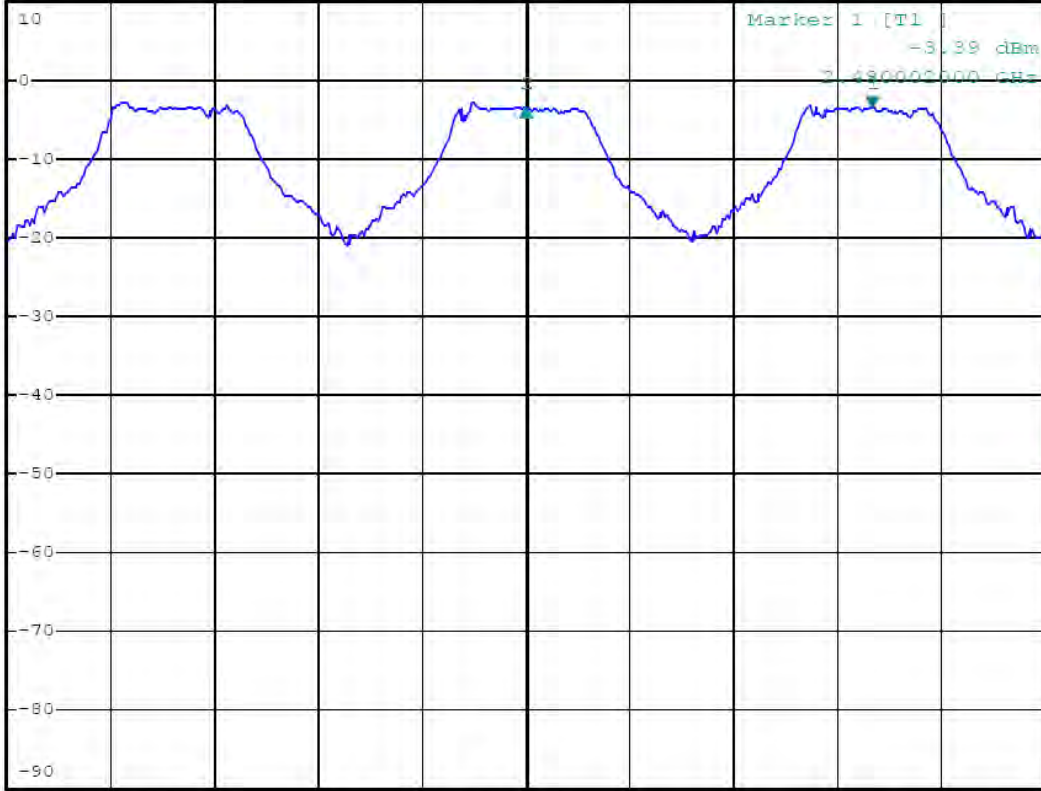
Att 40 dB

Marker 1 [T1 ]

-3.39 dBm

2.480000000 GHz

1 PK  
MAXH



3dB

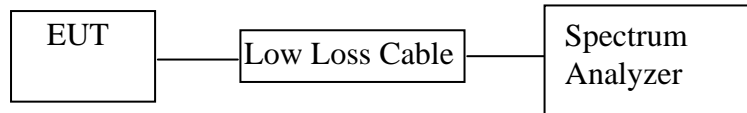
Center 2.479 GHz

300 kHz/

Span 3 MHz

## 7. NUMBER OF HOPPING FREQUENCY TEST

### 7.1. Block Diagram of Test Setup



(EUT: Bluetooth Car Kit)

### 7.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

### 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 Car Kit (EUT)

Model Number : B-328BT  
 Serial Number : N/A  
 Manufacturer : Shenzhen Gaoyi Electronic Co., Ltd.

### 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 (Hopping on) modes measure it.

## 7.5. Test Procedure

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

7.5.2. Set the spectrum analyzer as Span=30MHz, RBW=300kHz, VBW=300kHz.

7.5.3. Max hold, view and count how many channel in the band.

## 7.6. Test Result

**PASS.**

Date of Test:	<u>September 7, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>Hopping</u>	Test Engineer:	<u>Joe</u>

Total number of hopping channel	Measurement result (CH)	Limit (CH)
	79	>15

The spectrum analyzer plots are attached as below.

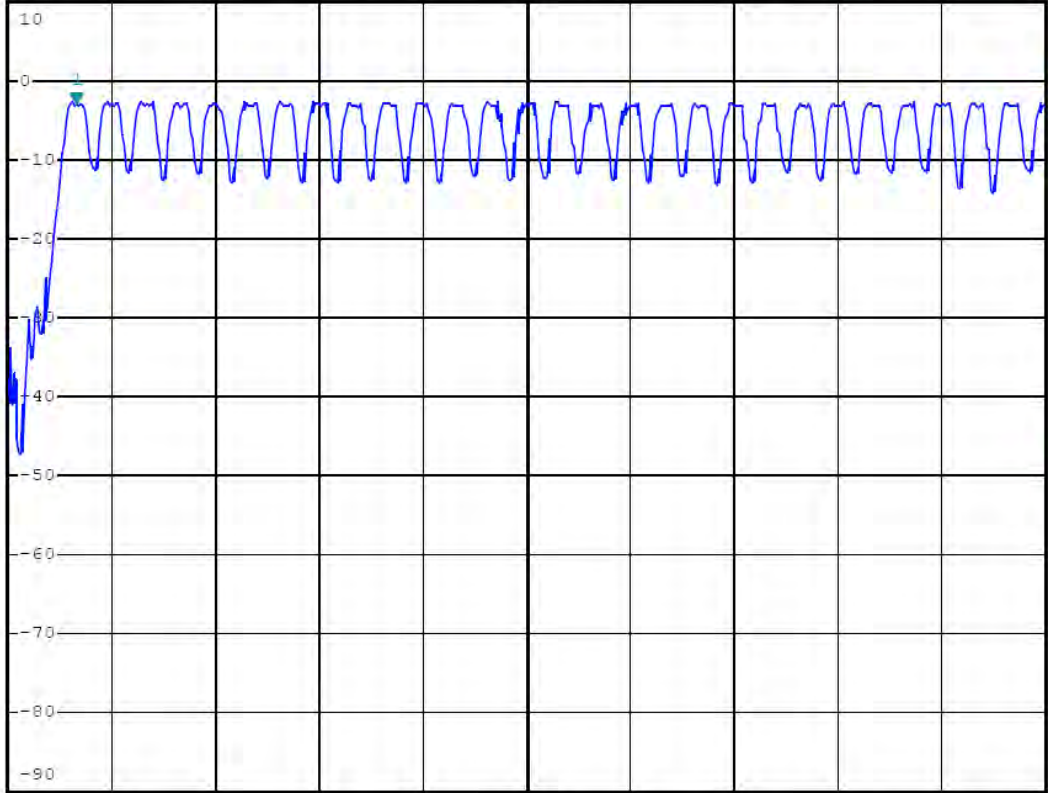


REW 300 kHz Marker 1 (T1 )  
VEW 300 kHz -3.08 dBm  
SWT 2.5 ms 2.401980000 GHz

Ref 10 dBm

Att 40 dB

1. PK  
MAXH



Start 2.4 GHz

3 MHz/

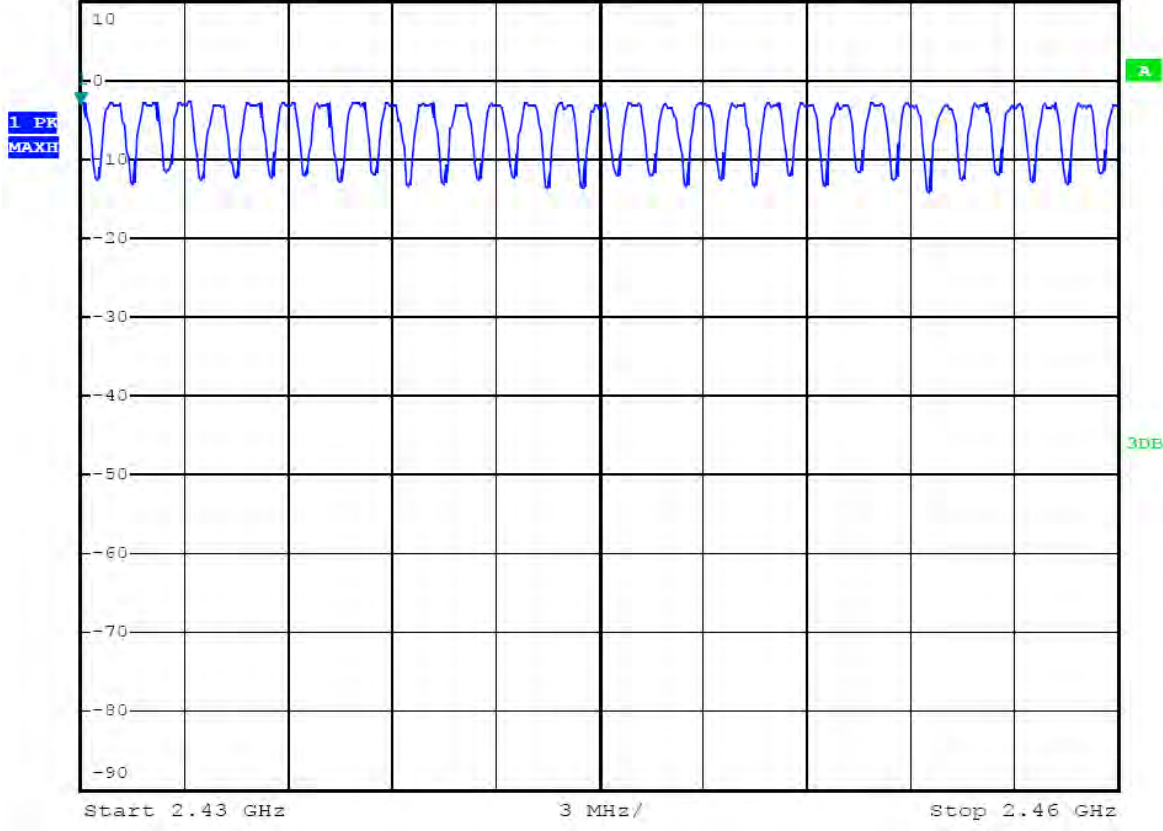
Stop 2.43 GHz



RBW 300 kHz Marker 1 [T1 ]  
VEW 300 kHz -3.01 dBm  
SWT 2.5 ms 2.430000000 GHz

Ref 10 dBm

Att 40 dB



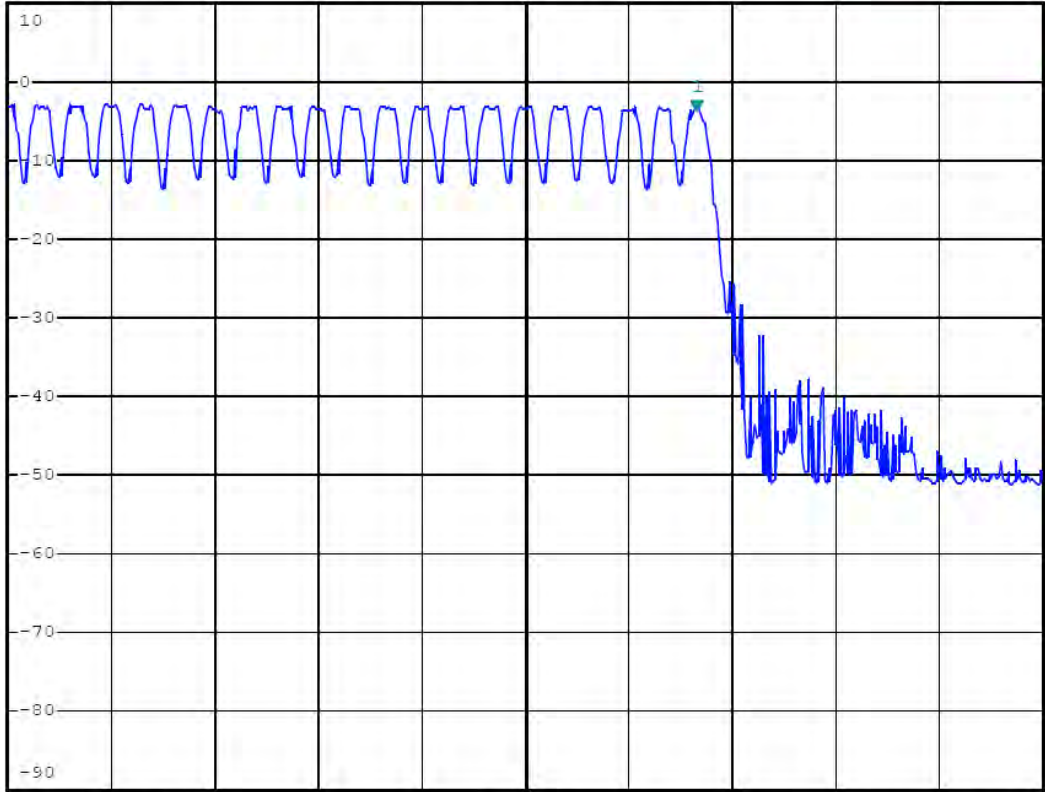


RBW 300 kHz Marker 1 [T1 ]  
VBW 300 kHz -3.80 dBm  
SWT 2.5 ms 2.479980000 GHz

Ref 10 dBm

Att 40 dB

1 PR  
MAXH



Start 2.46 GHz

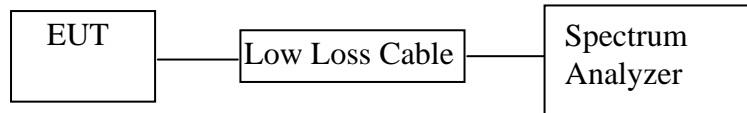
3 MHz

Stop 2.49 GHz



## 8. DWELL TIME TEST

### 8.1. Block Diagram of Test Setup



(EUT: Bluetooth Car Kit)

### 8.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

### 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 Car Kit (EUT)

Model Number	:	B-328BT
Serial Number	:	N/A
Manufacturer	:	Shenzhen Gaoyi Electronic Co., Ltd.

### 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 (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

8.5. Test Procedure

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

8.5.2. Set center frequency of spectrum analyzer = operating frequency.

8.5.3. Set the spectrum analyzer as RBW=100kHz, VBW=300kHz, Span=0Hz, Adjust Sweep=1s. Get the burst (in 1 sec.).

8.5.4. Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=2ms. Get the pulse time.

8.5.5. Repeat above procedures until all frequency measured were complete.

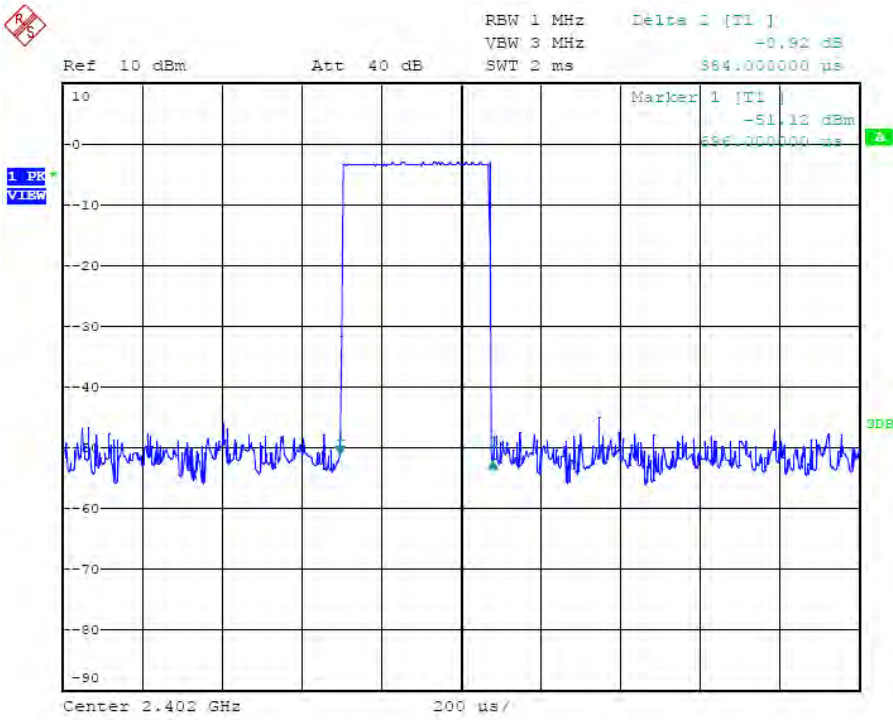
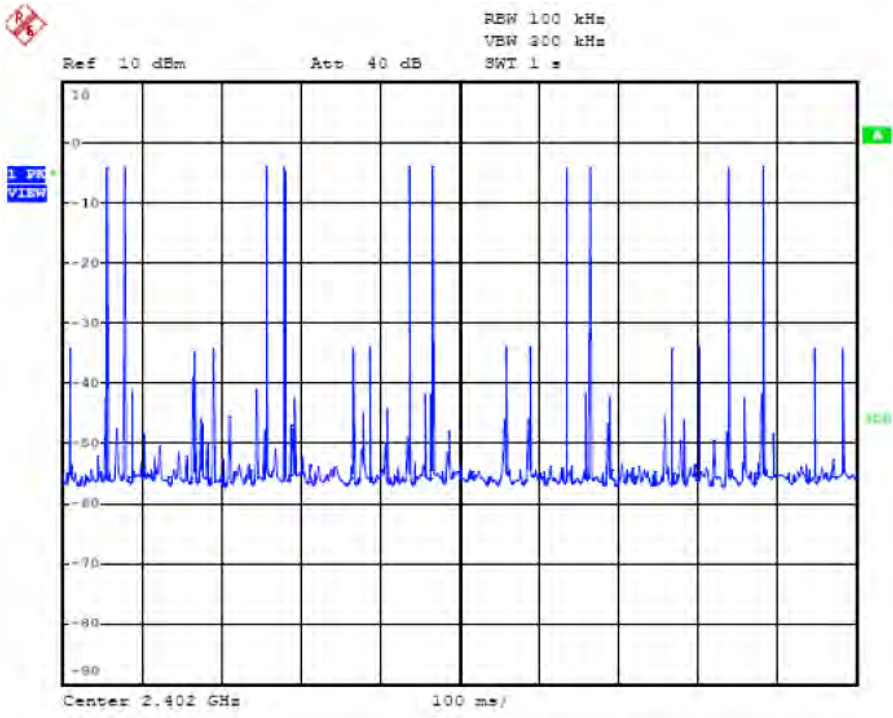
8.6. Test Result

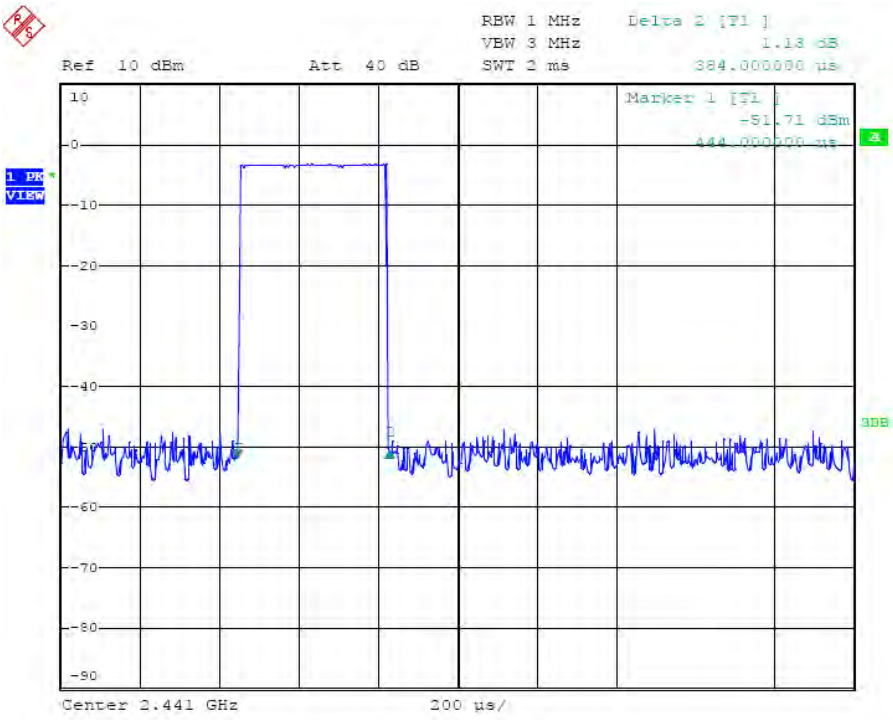
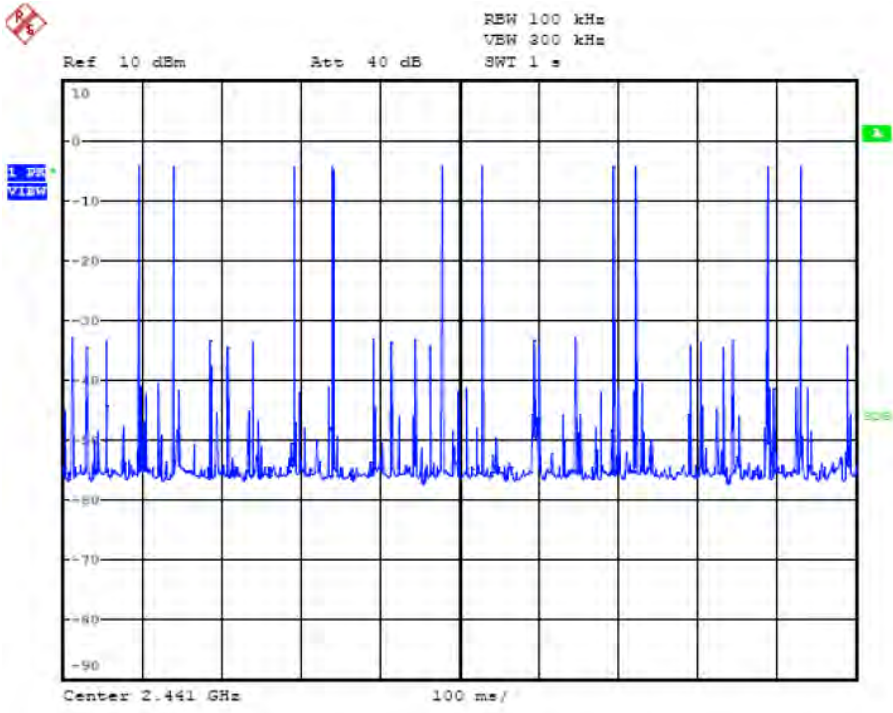
**PASS.**

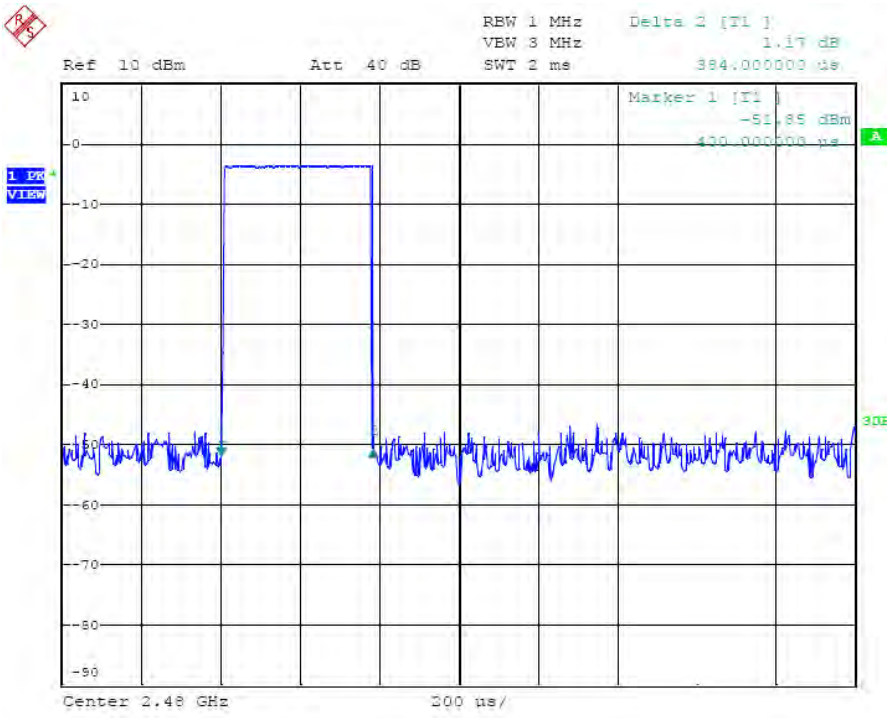
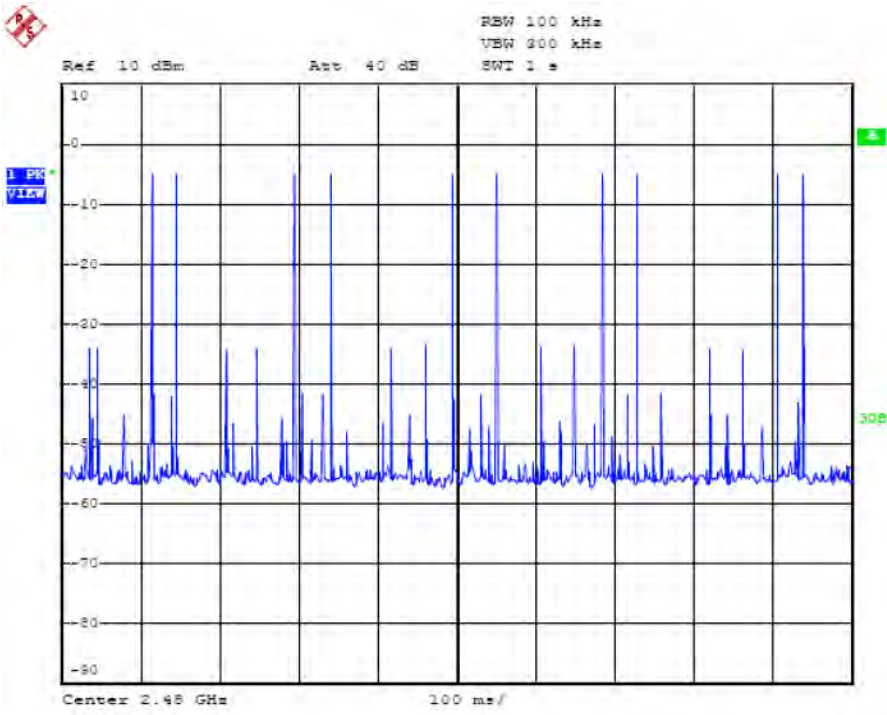
Date of Test:	<u>September 7, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>Hopping</u>	Test Engineer:	<u>Joe</u>

A period transmit time = $0.4 \times 79 = 31.6$					
Dwell time = pulse time $\times$ burst (in 1 sec.) $\times 31.6$					
Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 1 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.384	10	121.3	400
Middle	2441	0.384	10	121.3	400
High	2480	0.384	10	121.3	400

The spectrum analyzer plots are attached as below.

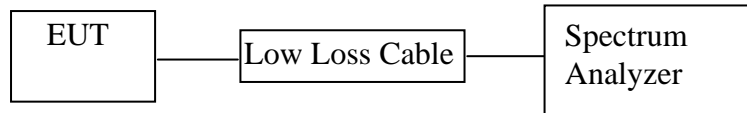






## 9. MAXIMUM PEAK OUTPUT POWER TEST

### 9.1. Block Diagram of Test Setup



(EUT: Bluetooth Car Kit)

### 9.2. The Requirement For Section 15.247(b)(1)

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

### 9.3. 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.

#### 9.3.1. Bluetooth Car Kit (EUT)

Model Number	:	B-328BT
Serial Number	:	N/A
Manufacturer	:	Shenzhen Gaoyi Electronic Co., Ltd.

### 9.4. Operating Condition of EUT

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

9.4.2. Turn on the power of all equipment.

9.4.3. Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

## 9.5. Test Procedure

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

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

9.5.3. Measurement the maximum peak output power.

## 9.6. Test Result

**PASS.**

Date of Test:	<u>September 7, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>TX</u>	Test Engineer:	<u>Joe</u>

Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2402	-3.02	0.499	30 dBm / 1 W
Middle	2441	-3.21	0.478	30 dBm / 1 W
High	2480	-3.47	0.450	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

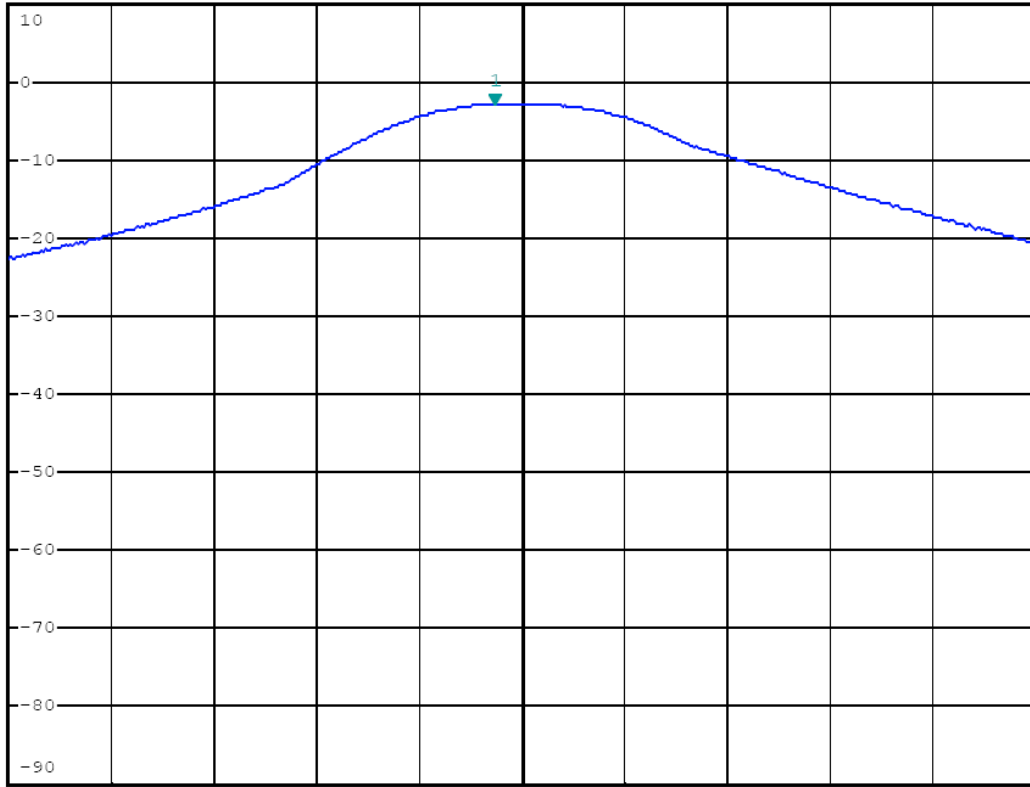


\*RBW 1 MHz      Marker 1 [T1 ]  
VBW 3 MHz      -3.02 dBm  
SWT 2.5 ms      2.401870000 GHz

Ref 10 dBm

Att 40 dB

1 PR  
MAXH



Center 2.402 GHz

500 kHz/

Span 5 MHz





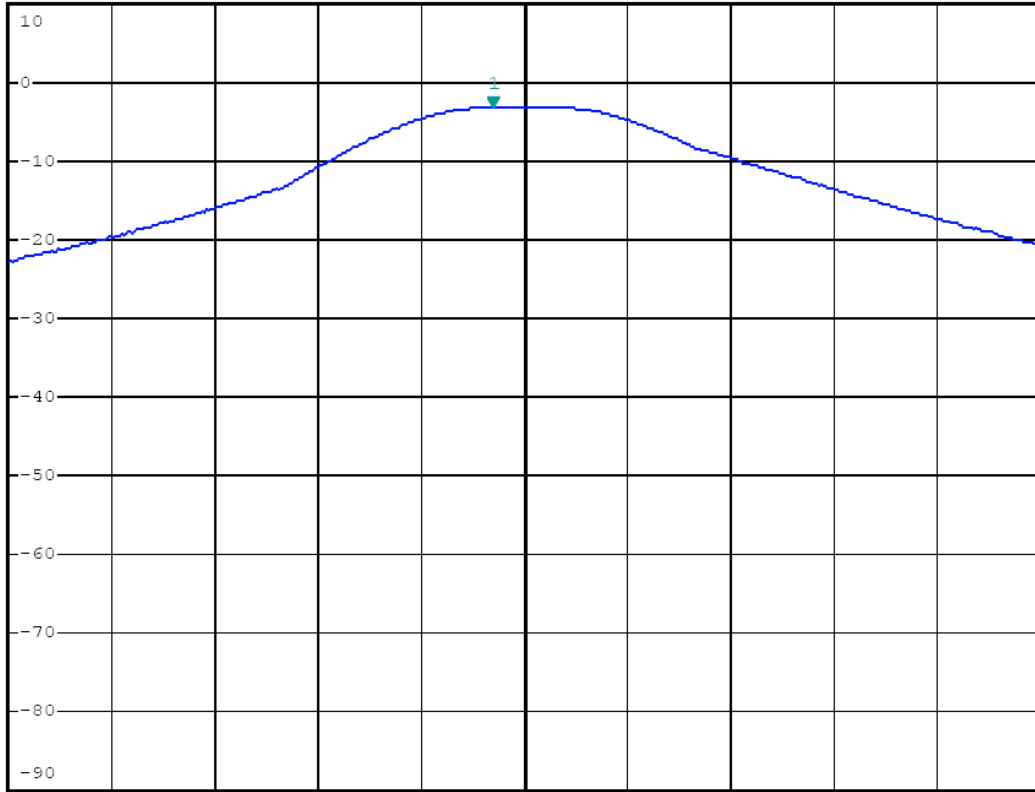
\*RBW 1 MHz      Marker 1 [T1 ]  
VBW 3 MHz      -3.21 dBm  
SWT 2.5 ms      2.440850000 GHz

Ref 10 dBm

Att 40 dB

2.440850000 GHz

1 PK  
MAXH



Center 2.441 GHz

500 kHz/

Span 5 MHz

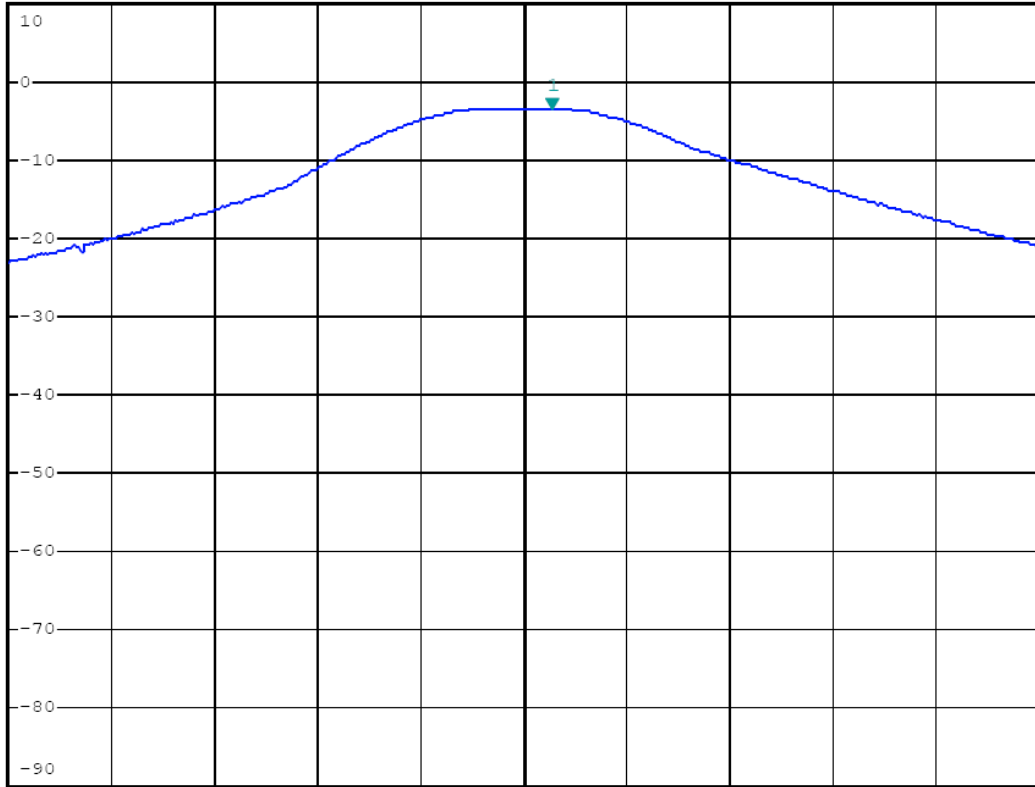


\*RBW 1 MHz      Marker 1 [T1 ]  
VBW 3 MHz      -3.47 dBm  
SWT 2.5 ms      2.480140000 GHz

Ref 10 dBm

Att 40 dB

1. PK  
MAXH



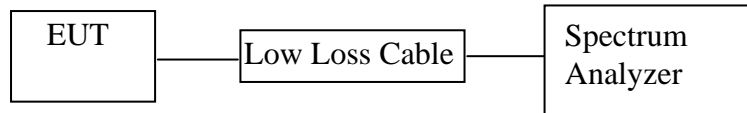
Center 2.48 GHz

500 kHz/

Span 5 MHz

## 10.BAND EDGE COMPLIANCE TEST

### 10.1.Block Diagram of Test Setup



(EUT: Bluetooth Car Kit)

### 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 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.

#### 10.3.1.Bluetooth Car Kit (EUT)

Model Number	:	B-328BT
Serial Number	:	N/A
Manufacturer	:	Shenzhen Gaoyi Electronic Co., Ltd.

## 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 (Hopping off, Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 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.

10.5.3. The band edges was measured and recorded.

## 10.6. Test Result

**Pass**

Date of Test:	<u>September 7, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>TX (Hopping off)</u>	Test Engineer:	<u>Joe</u>

## Conducted test

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	37.41	> 20dBc
2480	42.53	> 20dBc

Date of Test:	<u>September 7, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>TX (Hopping on)</u>	Test Engineer:	<u>Joe</u>

## Conducted test

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	38.63	> 20dBc
2480	43.41	> 20dBc

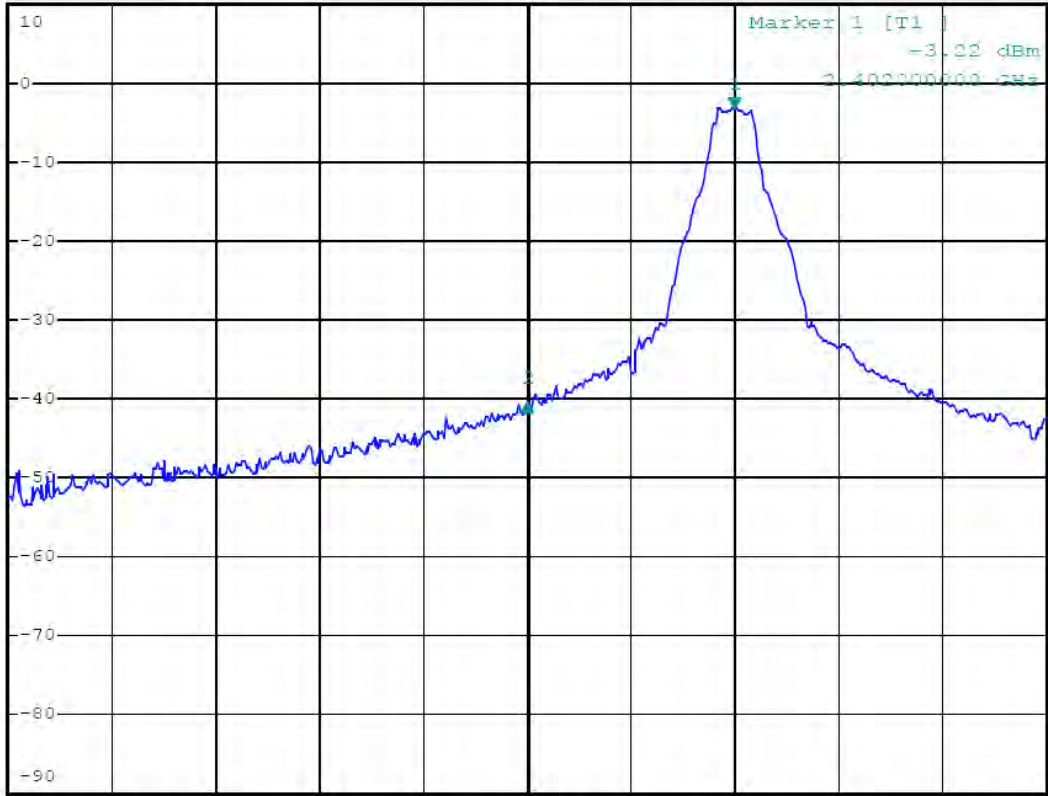


\*REW 100 kHz Delta 2 [T1 ]  
VBW 300 kHz -37.41 dB  
SWT 2.5 ms -2.000000000 MHz

Ref 10 dBm

Att 40 dB

-2.000000000 MHz



Center 2.4 GHz

1 MHz/

Span 10 MHz



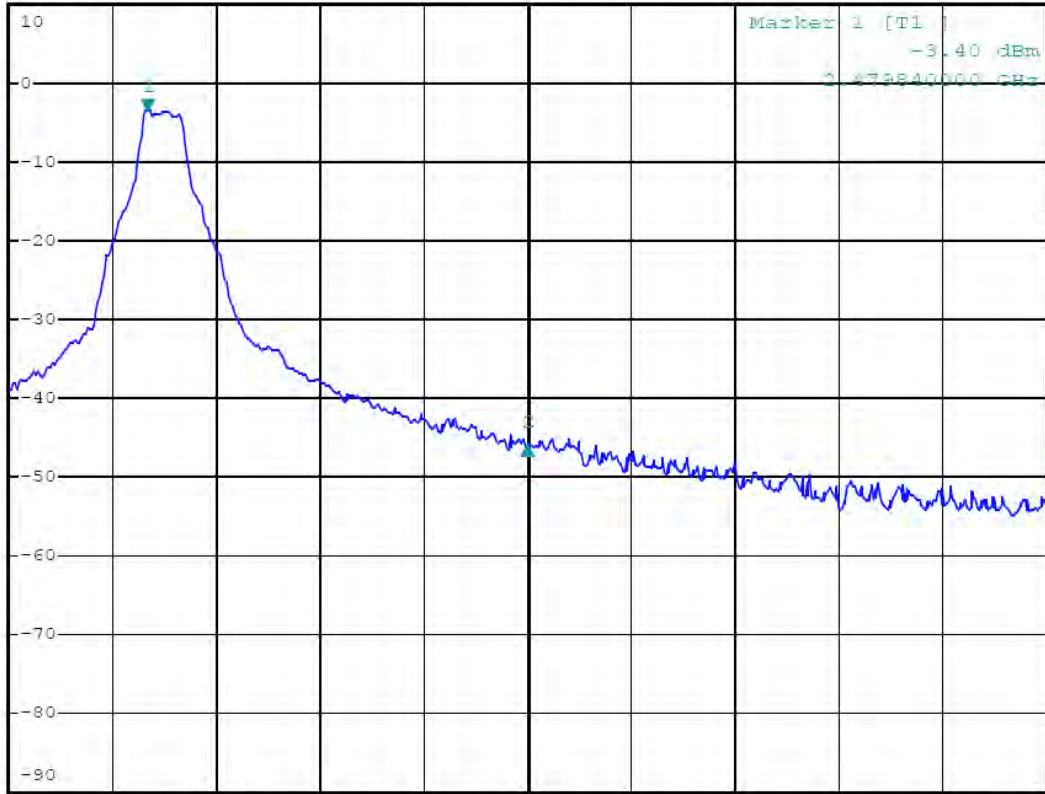
\*RBW 100 kHz Delta 2 [T1 ]  
VEW 300 kHz -42.53 dB  
SWT 2.5 ms 3.680000000 MHz

Ref 10 dBm

Att 40 dB

3.680000000 MHz

1 PK  
MAXH



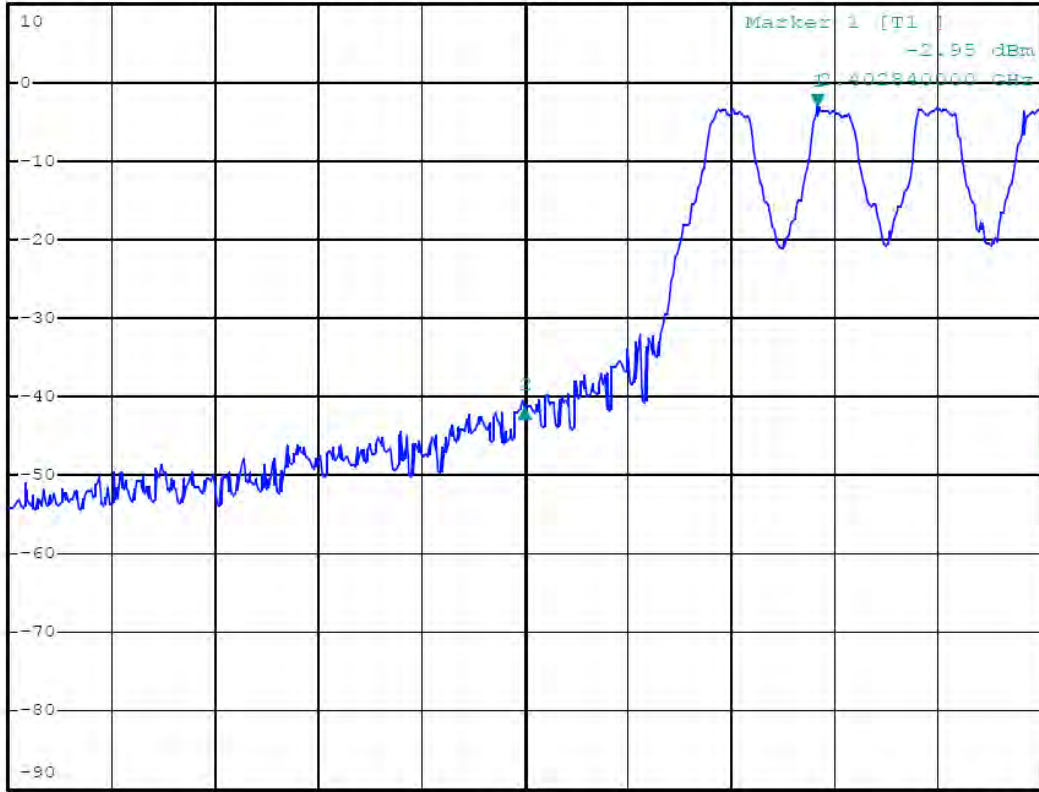


\*RBW 100 kHz Delta 2 [T1 ]  
VBW 300 kHz -38.63 dB  
SWT 2.5 ms -2.840000000 MHz

Ref 10 dBm

Att 40 dB

1 PR  
MAXH



Center 2.4 GHz

1 MHz/

Span 10 MHz





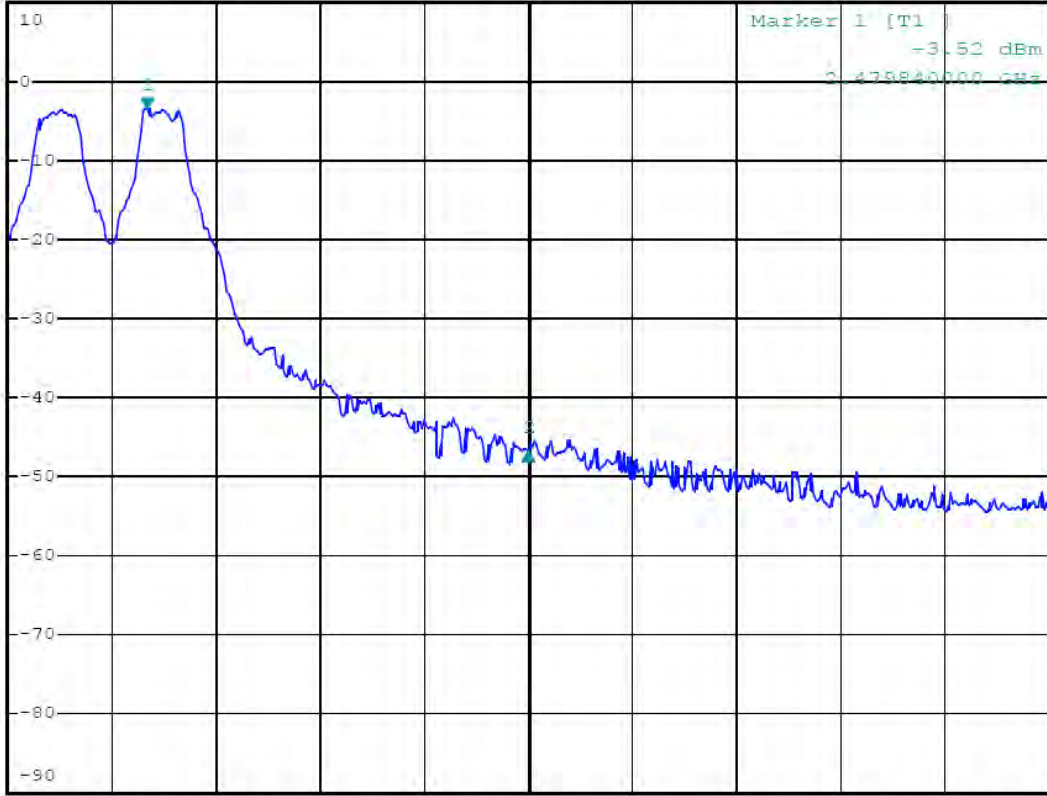
\* RBW 100 kHz Delta 2 [T1 ]  
VBW 300 kHz -43.41 dB  
SWT 2.5 ms 3.660000000 MHz

Ref 10 dBm

Att 40 dB

3.660000000 MHz

1 PK  
MAXH



Center 2.4835 GHz

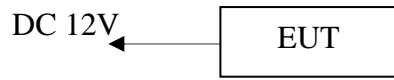
1 MHz/

Span 10 MHz

# 11.RADIATED SPURIOUS EMISSION TEST

## 11.1.Block Diagram of Test Setup

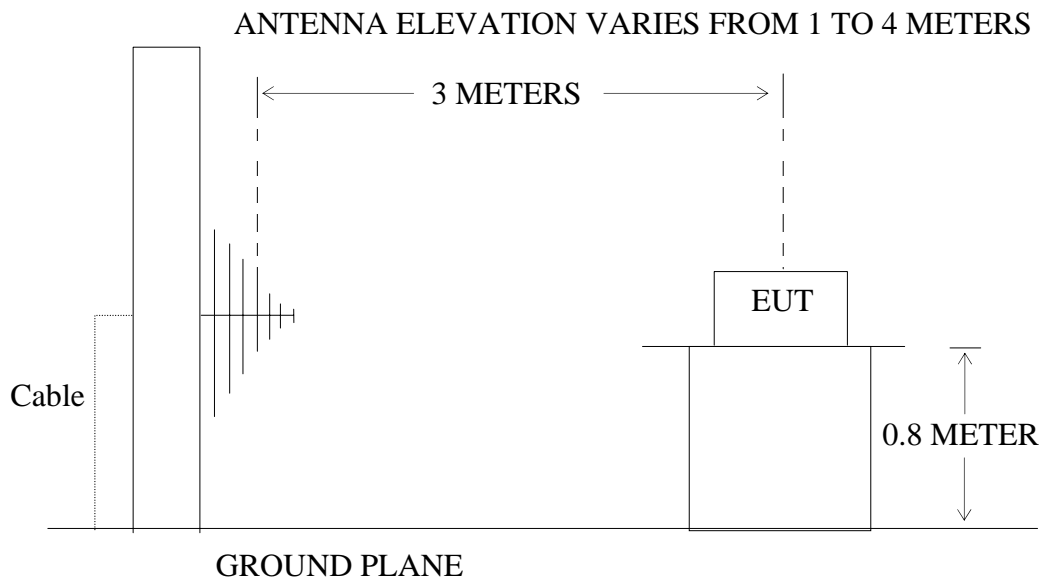
### 11.1.1.Block diagram of connection between the EUT and simulators



Setup: Transmitting mode

(EUT: Bluetooth Car Kit)

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



(EUT: Bluetooth Car Kit)

## 11.2.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).

## 11.3.Restricted bands of operation

### 11.3.1.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.

## 11.4. 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.

### 11.4.1. Bluetooth Car Kit (EUT)

Model Number : B-328BT  
 Serial Number : N/A  
 Manufacturer : Shenzhen Gaoyi Electronic Co., Ltd.

## 11.5. Operating Condition of EUT

11.5.1. Setup the EUT and simulator as shown as Section 11.1.

11.5.2. Turn on the power of all equipment.

11.5.3. Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

## 11.6. 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: 2003 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver (R&S ESI26) is set at 120kHz in 30-1000MHz. and set at 1MHz in above 1000MHz.

The frequency range from 30MHz to 25000MHz is checked.

The final measurement in band 9-90kHz, 110-490kHz 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

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

**PASS.**

Date of Test:	<u>September 4, 2010</u>	Temperature:	<u>25°C</u>
EUT:	<u>Bluetooth Car Kit</u>	Humidity:	<u>50%</u>
Model No.:	<u>B-328BT</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>TX (2402MHz)</u>	Test Engineer:	<u>Joe</u>

### 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
-	-		-	-		-		-		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	
2400.00	37.83	43.87	-7.46	30.37	36.41	54	74	-23.63	-37.59	Vertical
2402.010	102.37	108.40	-7.45	94.92	100.95	-	-	-	-	Vertical
*4804.016	49.12	55.15	-0.30	48.82	54.85	54	74	-5.18	-19.15	Vertical
2400.00	38.76	44.81	-7.46	31.30	37.35	54	74	-22.70	-36.65	Horizontal
2402.010	102.91	108.95	-7.45	95.46	101.50	-	-	-	-	Horizontal
*4804.016	49.64	55.65	-0.30	49.34	55.35	54	74	-4.66	-18.65	Horizontal

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

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

Date of Test:	September 4, 2010	Temperature:	25°C
EUT:	Bluetooth Car Kit	Humidity:	50%
Model No.:	B-328BT	Power Supply:	DC 12V
Test Mode:	TX (2441MHz)	Test Engineer:	Joe

**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
-	-	-	-	-	-	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	
2441.010	102.47	108.51	-7.35	95.12	101.16	-	-	-	-	Vertical
*4882.018	48.38	54.40	0.14	48.52	54.54	54	74	-5.48	-19.46	Vertical
2441.010	102.75	108.79	-7.35	95.40	101.44	-	-	-	-	Horizontal
*4882.018	49.04	55.08	0.14	49.18	55.22	54	74	-4.82	-18.78	Horizontal

**Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.****2. \*: Denotes restricted band of operation.**

Date of Test:	September 4, 2010	Temperature:	25°C
EUT:	Bluetooth Car Kit	Humidity:	50%
Model No.:	B-328BT	Power Supply:	DC 12V
Test Mode:	TX (2480MHz)	Test Engineer:	Joe

**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
-	-	-	-	-	-	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	
2480.009	103.02	109.08	-7.37	95.65	101.71	-	-	-	-	Vertical
2483.500	37.79	43.82	-7.37	30.42	36.45	54	74	-23.58	-37.55	Vertical
4960.015	48.28	54.32	0.52	48.80	54.84	54	74	-5.20	-19.16	Vertical
2480.009	103.50	109.56	-7.37	96.13	102.19	-	-	-	-	Horizontal
2483.500	38.20	44.22	-7.37	30.83	36.85	54	74	-23.17	-37.15	Horizontal
4960.015	49.10	55.13	0.52	49.62	55.65	54	74	-4.38	-18.35	Horizontal

**Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.****2. \*: Denotes restricted band of operation.**



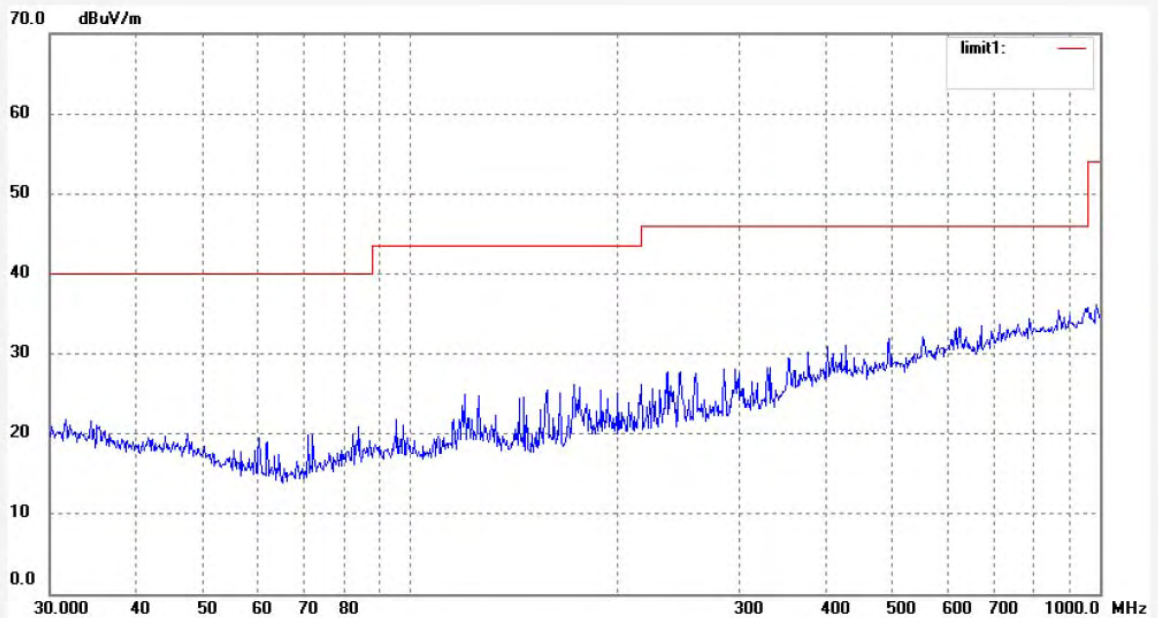
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #720	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:06:19
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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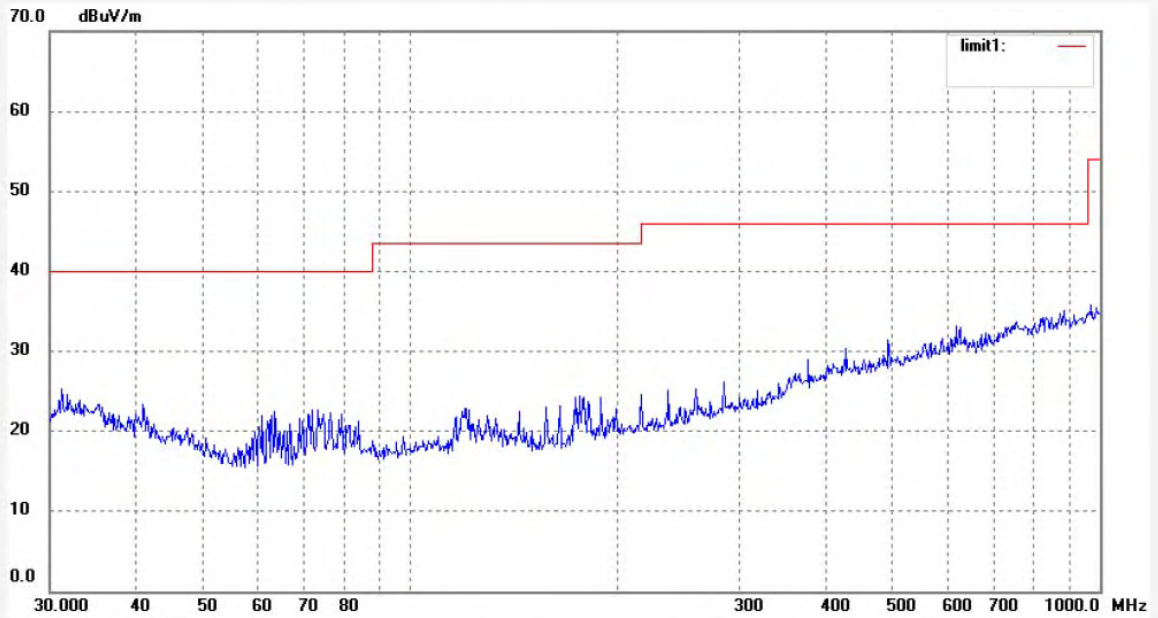
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: joe #721  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 50 %  
EUT: Bluetooth Car Kit  
Mode: TX 2402MHz  
Model: B-328BT  
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.

Polarization: Vertical  
Power Source: DC 12V  
Date: 2010/09/04  
Time: 9:09:52  
Engineer Signature: Joe  
Distance: 3m

Note: Sample No.:102146 Report No.:ATE20101908



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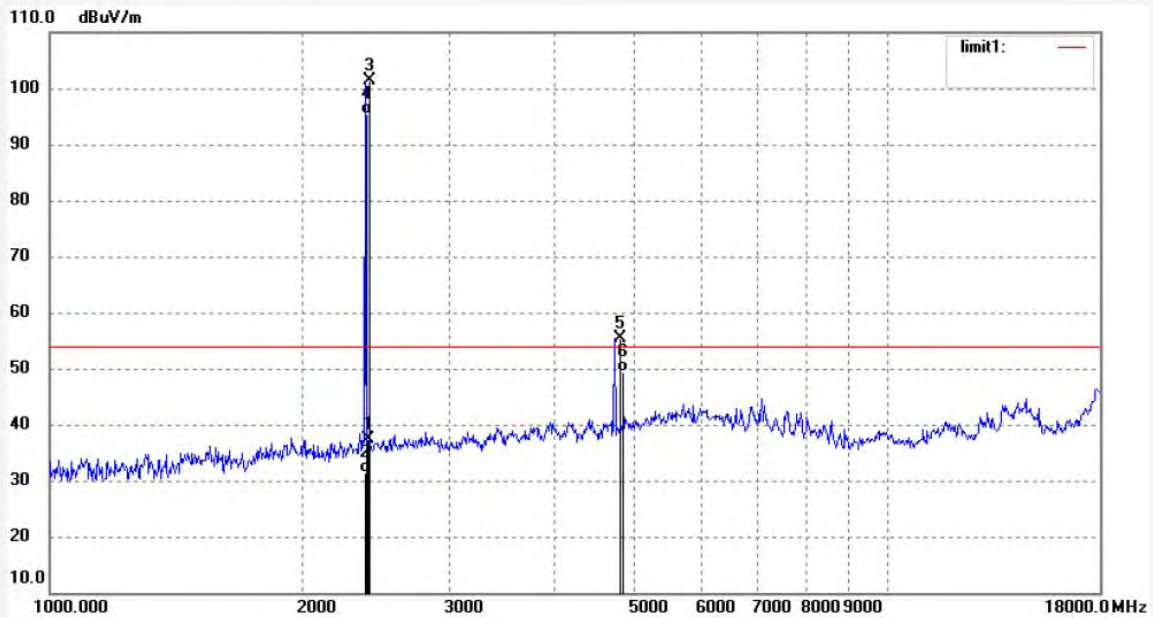
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: joe #726  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 50 %  
EUT: Bluetooth Car Kit  
Mode: TX 2402MHz  
Model: B-328BT  
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.

Polarization: Horizontal  
Power Source: DC 12V  
Date: 2010/09/04  
Time: 9:37:25  
Engineer Signature: Joe  
Distance: 3m

Note: Sample No.:102146 Report No.:ATE20101908



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2400.000	44.81	-7.46	37.35	74.00	-36.65	peak			
2	2400.000	38.76	-7.46	31.30	54.00	-22.70	AVG			
3	2402.010	108.95	-7.45	101.50	-	-	peak			
4	2402.010	102.91	-7.45	95.46	-	-	AVG			
5	4804.016	55.65	-0.30	55.35	74.00	-18.65	peak			
6	4804.016	49.64	-0.30	49.34	54.00	-4.66	AVG			



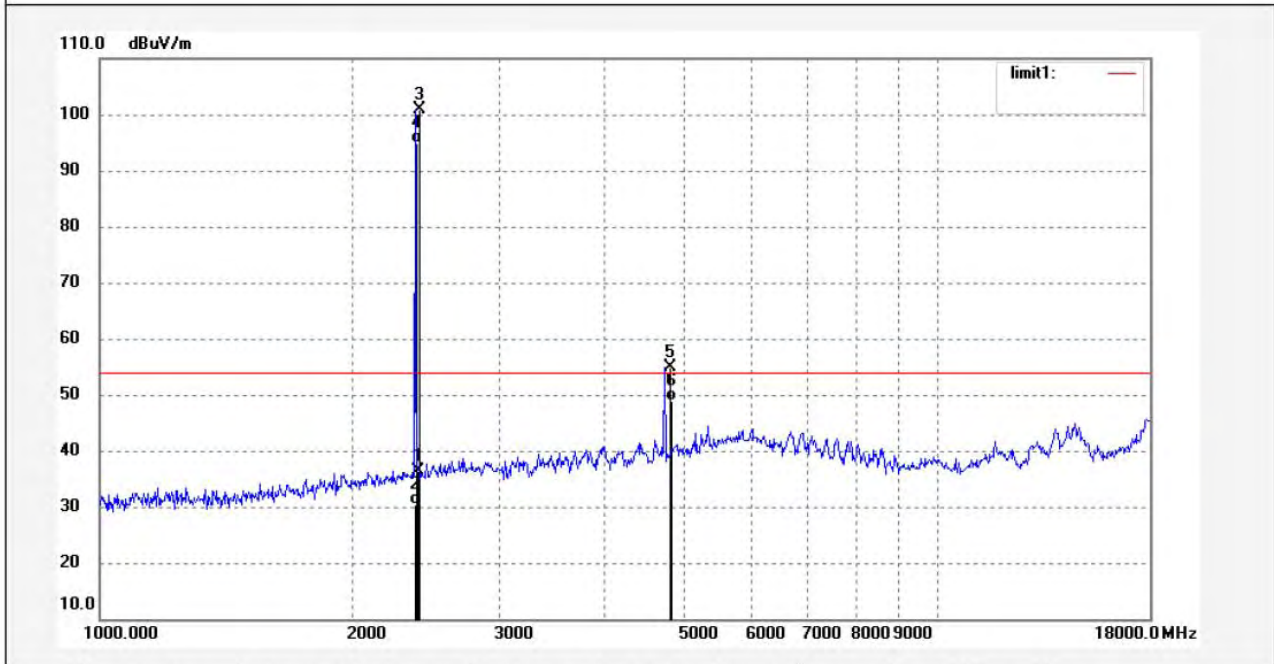
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #727	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:41:36
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Elctronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2400.000	43.87	-7.46	36.41	74.00	-37.59	peak			
2	2400.000	37.83	-7.46	30.37	54.00	-23.63	AVG			
3	2402.010	108.40	-7.45	100.95	-	-	peak			
4	2402.010	102.37	-7.45	94.92	-	-	AVG			
5	4804.016	55.15	-0.30	54.85	54.00	-19.15	peak			
6	4804.016	49.12	-0.30	48.82	54.00	-5.18	AVG			



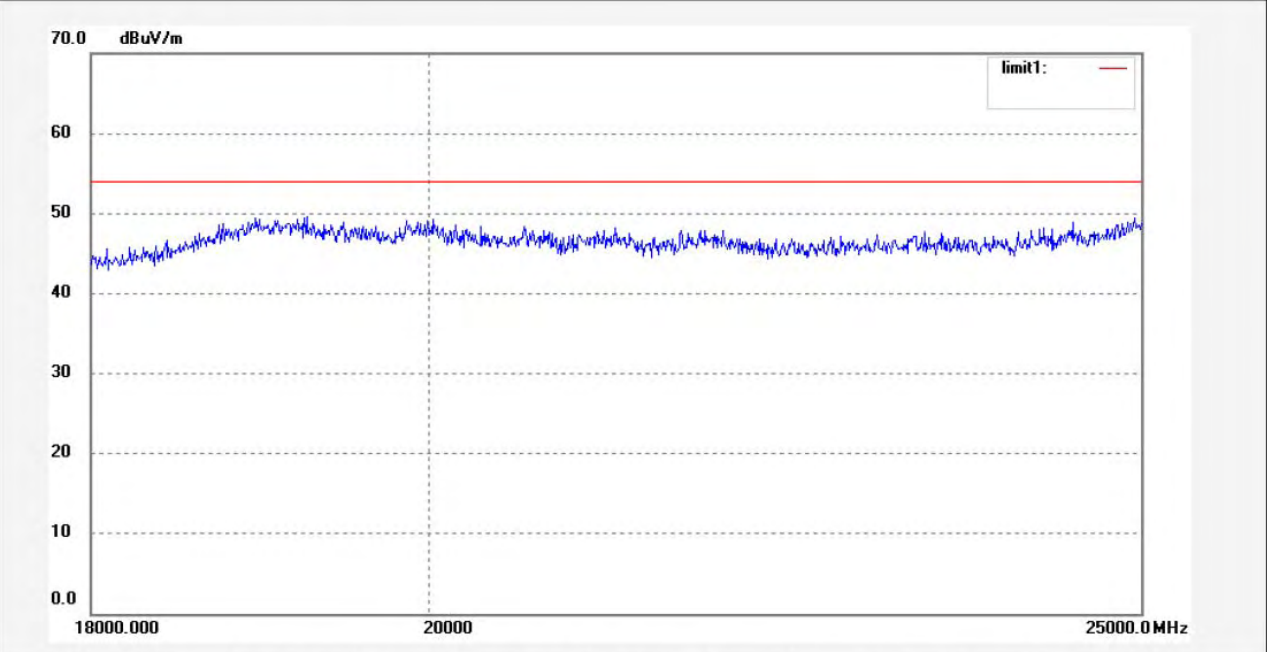
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: joe #732	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 10:06:38
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Elctronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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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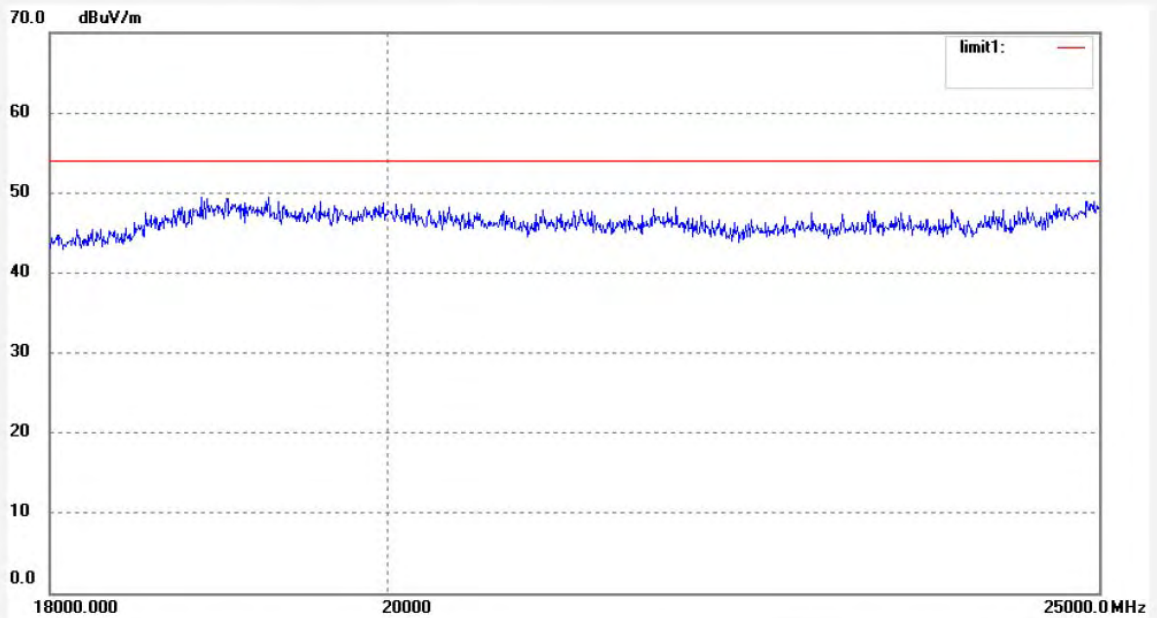
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #733	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 10:10:42
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2402MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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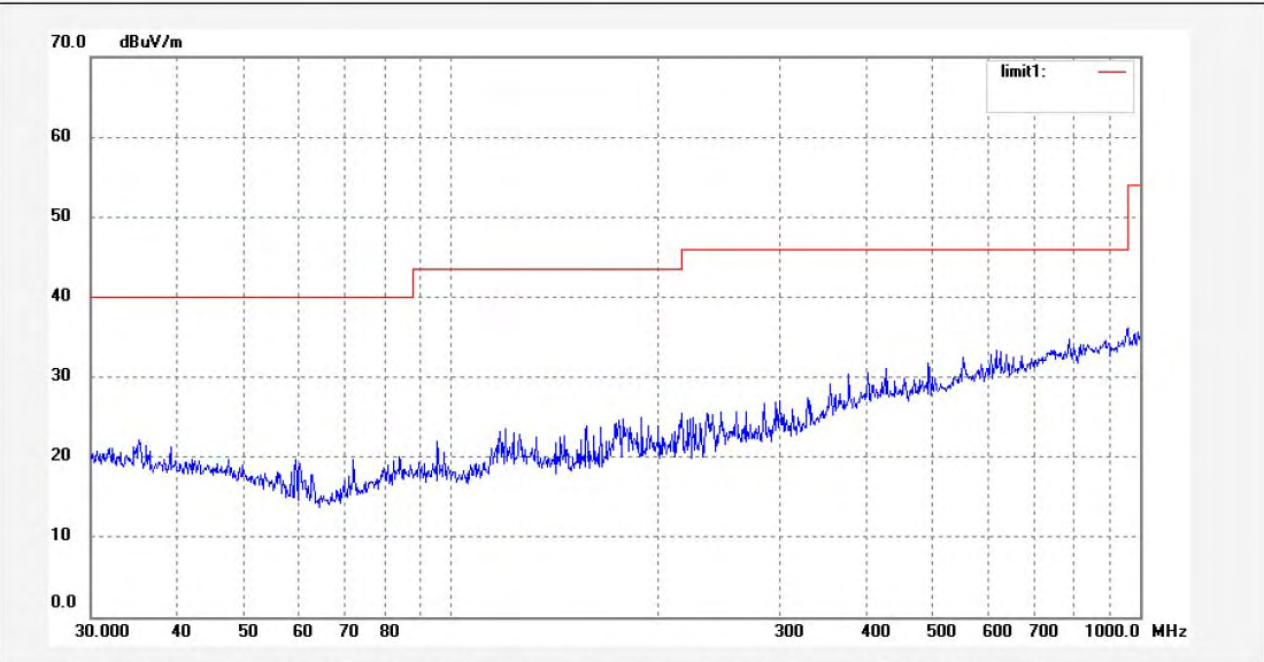
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: joe #723	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:17:59
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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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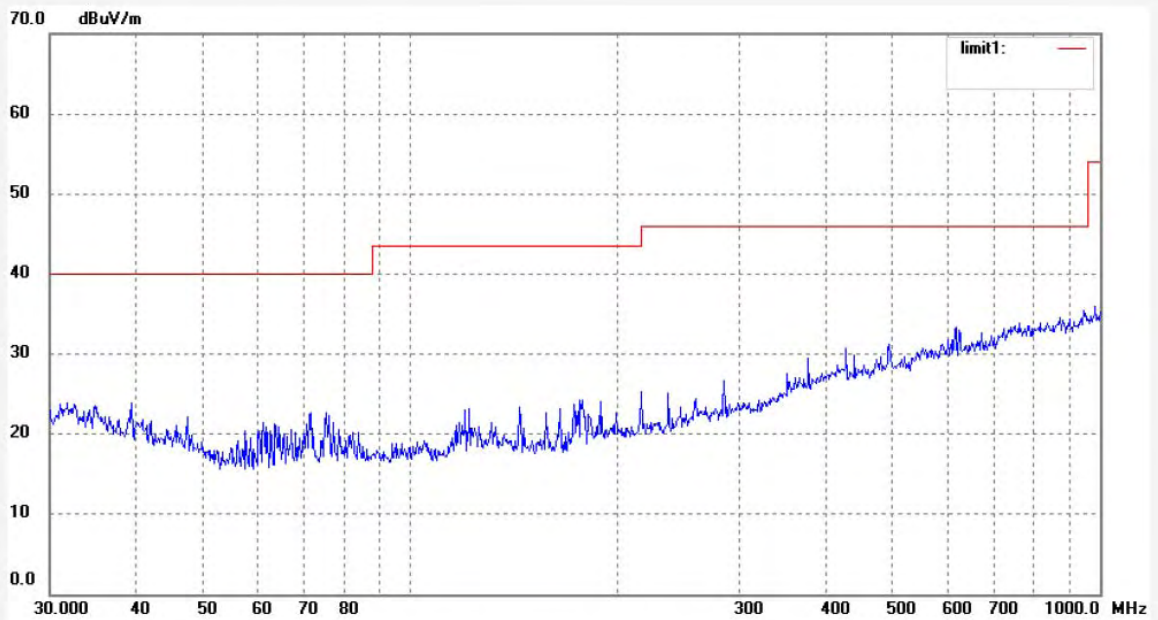
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #722	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:14:26
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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



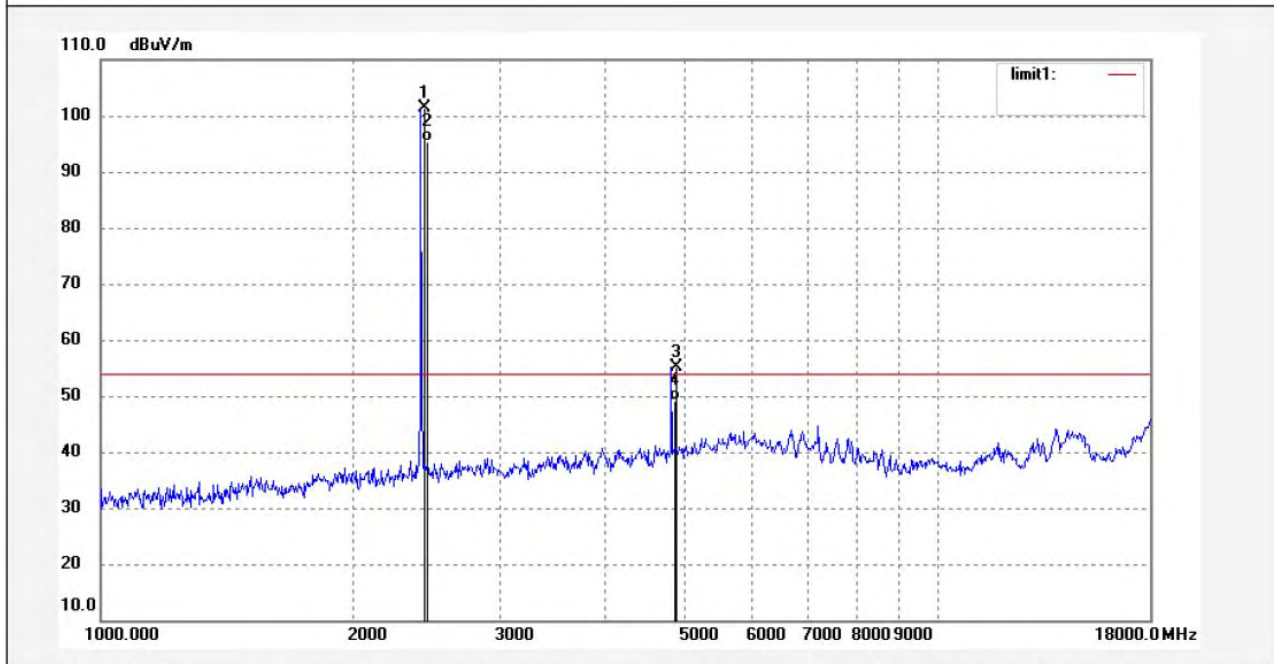
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #729	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:50:20
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.010	108.79	-7.35	101.44	-	-	peak			
2	2441.010	102.75	-7.35	95.40	-	-	AVG			
3	4882.018	55.08	0.14	55.22	74.00	-18.78	peak			
4	4882.018	49.04	0.14	49.18	54.00	-4.82	AVG			





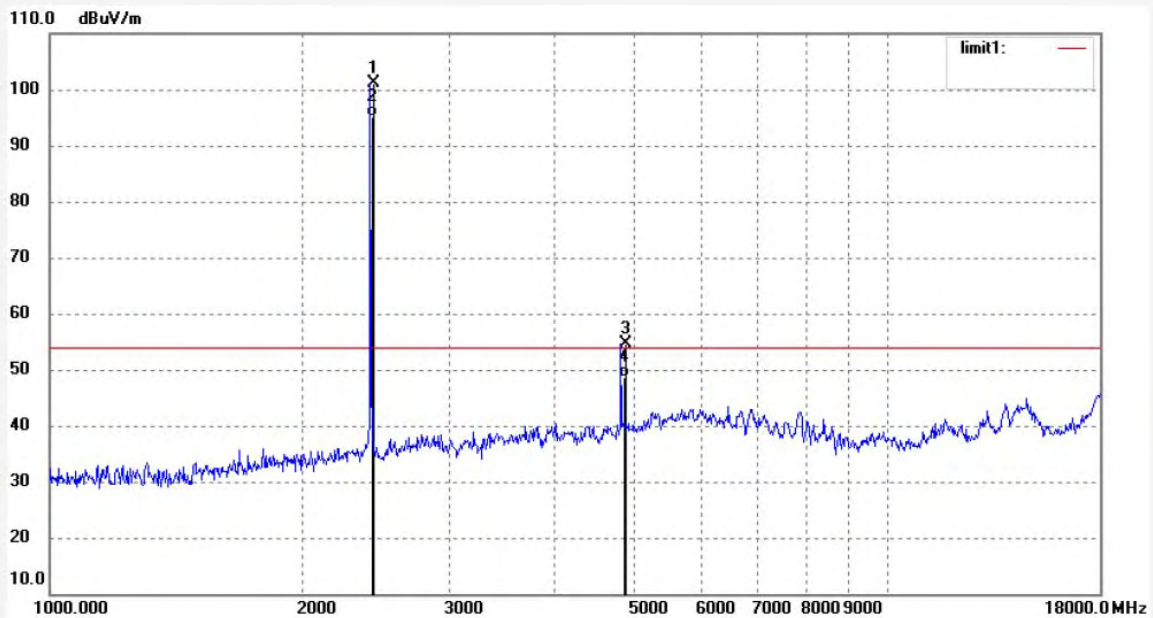
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #728	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:46:11
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Elctronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.010	108.51	-7.35	101.16	74.00	-	peak			
2	2441.010	102.47	-7.35	95.12	54.00	-	AVG			
3	4882.018	54.40	0.14	54.54	74.00	-19.46	peak			
4	4882.018	48.38	0.14	48.52	54.00	-5.48	AVG			



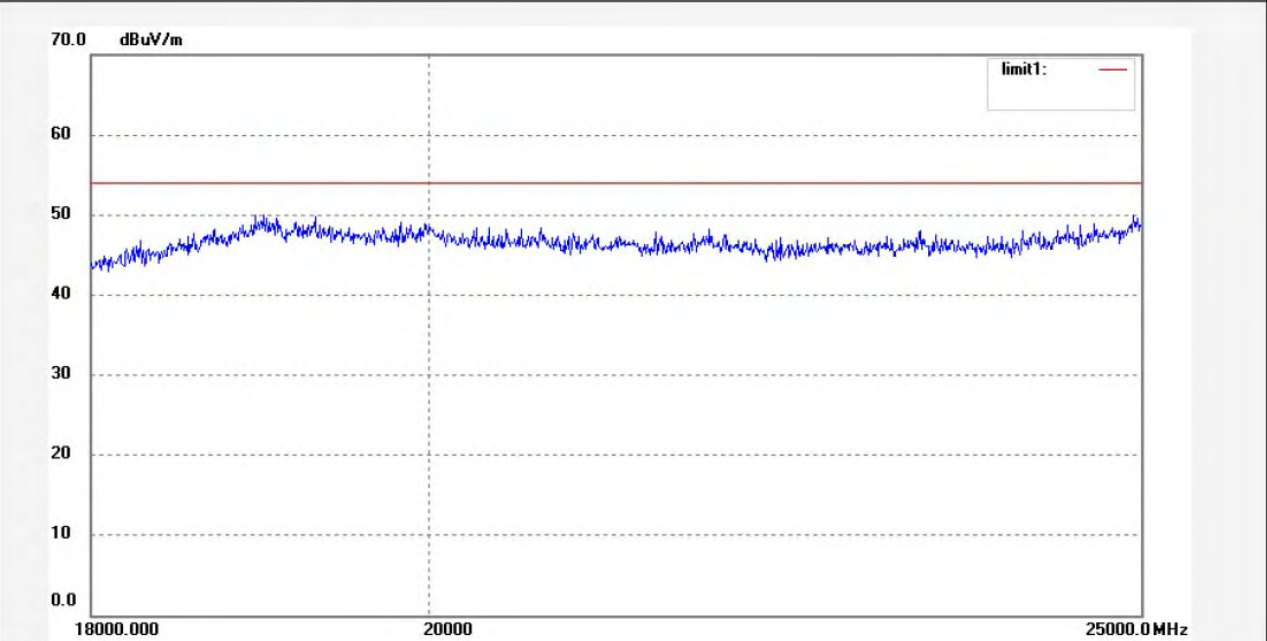
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #735	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 10:19:33
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Elctronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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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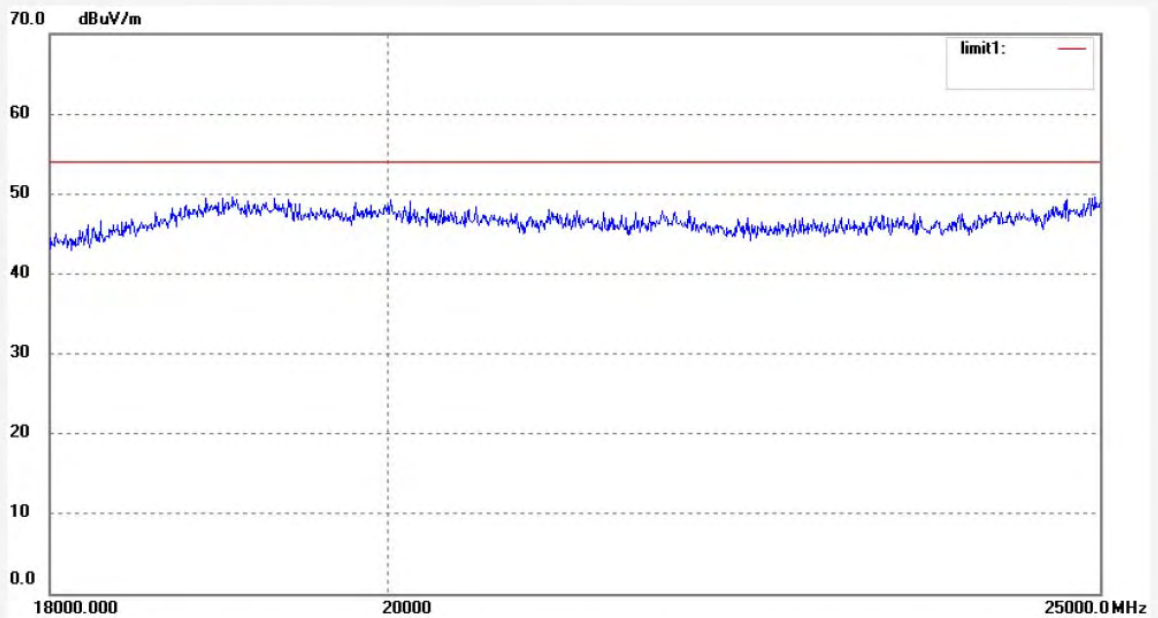
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #734	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 10:15:30
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2441MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Elctronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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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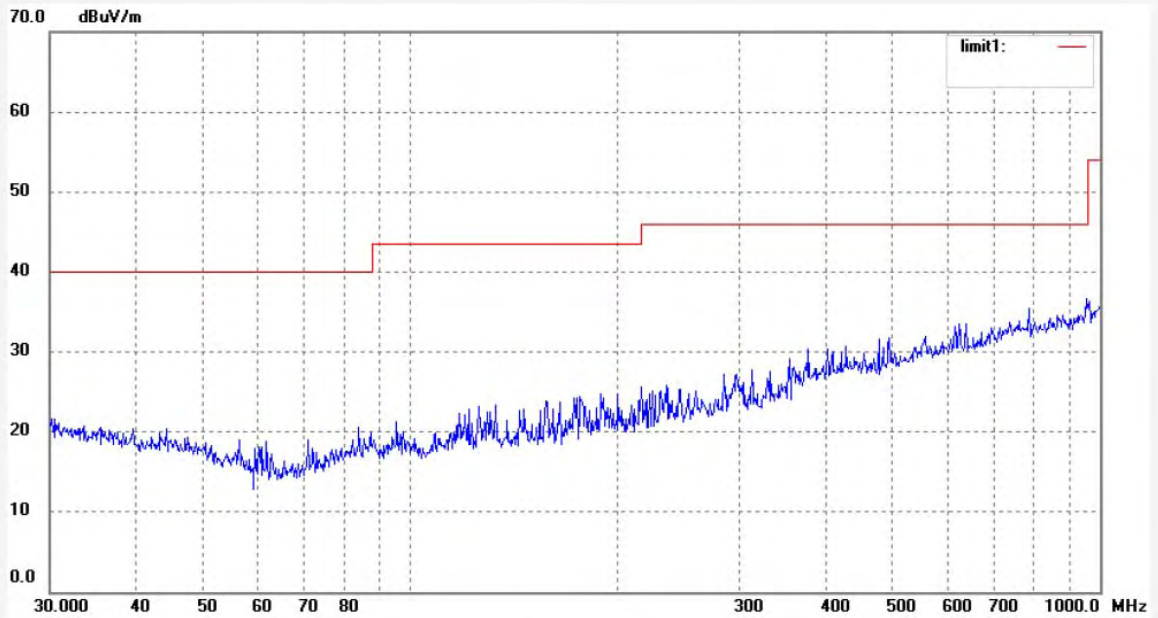
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #724	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:22:30
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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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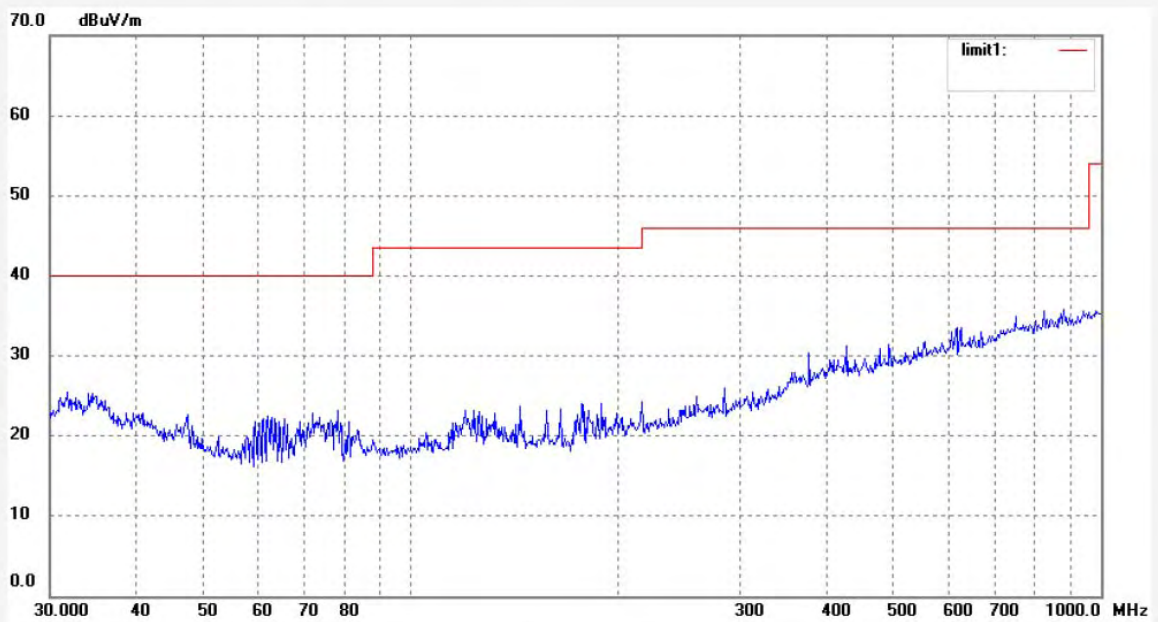
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #725	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:26:04
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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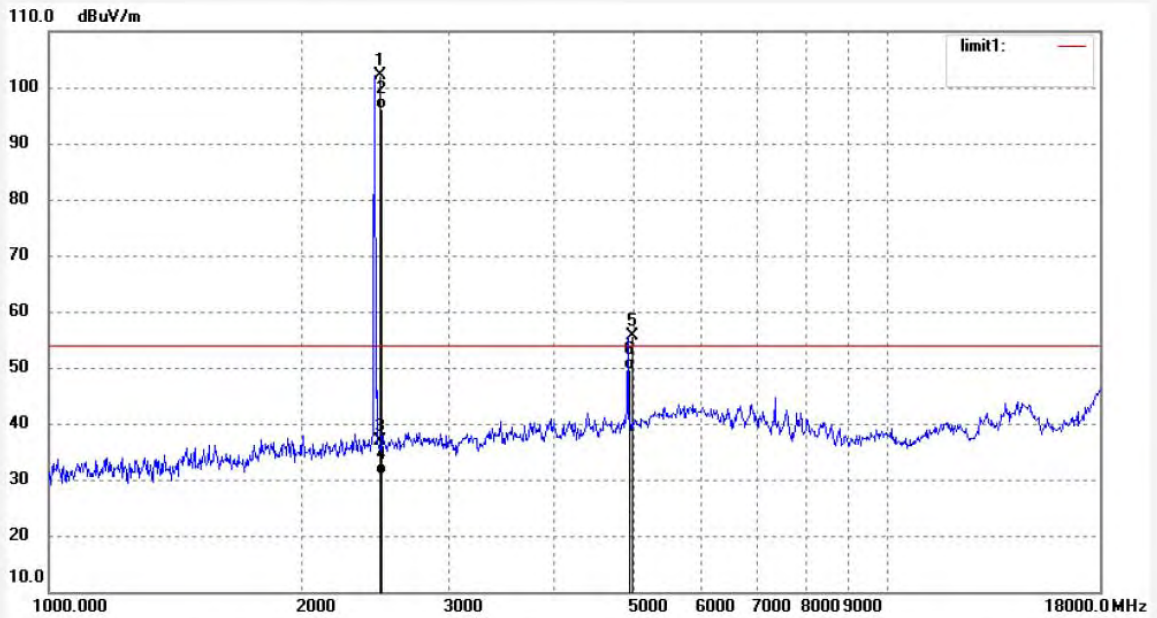
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: joe #730  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 50 %  
EUT: Bluetooth Car Kit  
Mode: TX 2480MHz  
Model: B-328BT  
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.

Polarization: Horizontal  
Power Source: DC 12V  
Date: 2010/09/04  
Time: 9:54:58  
Engineer Signature: Joe  
Distance: 3m

Note: Sample No.:102146 Report No.:ATE20101908



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.009	109.56	-7.37	102.19	-	-	peak			
2	2480.009	103.50	-7.37	96.13	-	-	AVG			
3	2483.500	44.22	-7.37	36.85	74.00	-37.15	peak			
4	2483.500	38.20	-7.37	30.83	54.00	-23.17	AVG			
5	4960.015	55.13	0.52	55.65	74.00	-18.35	peak			
6	4960.015	49.10	0.52	49.62	54.00	-4.38	AVG			



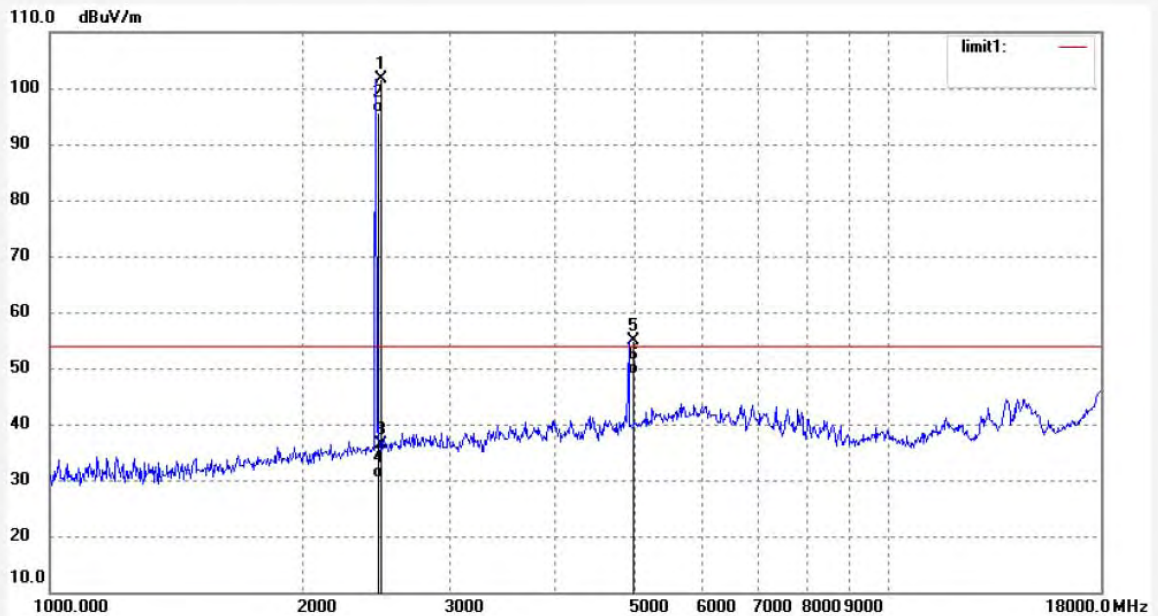
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #731	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 9:59:07
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.009	109.08	-7.37	101.71	-	-	peak			
2	2480.009	103.02	-7.37	95.65	-	-	AVG			
3	2483.500	43.82	-7.37	36.45	74.00	-37.55	peak			
4	2483.500	37.79	-7.37	30.42	54.00	-23.58	AVG			
5	4960.015	54.32	0.52	54.84	74.00	-19.16	peak			
6	4960.015	48.28	0.52	48.80	54.00	-5.20	AVG			



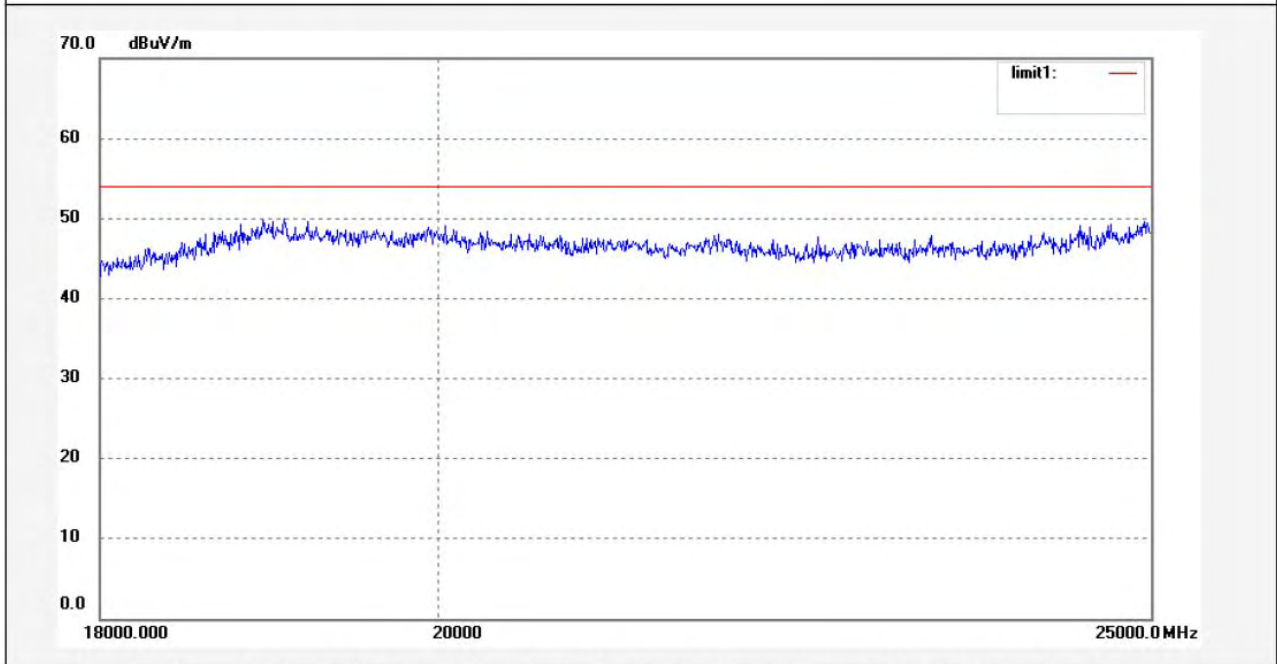
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #736	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 10:24:19
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Elctronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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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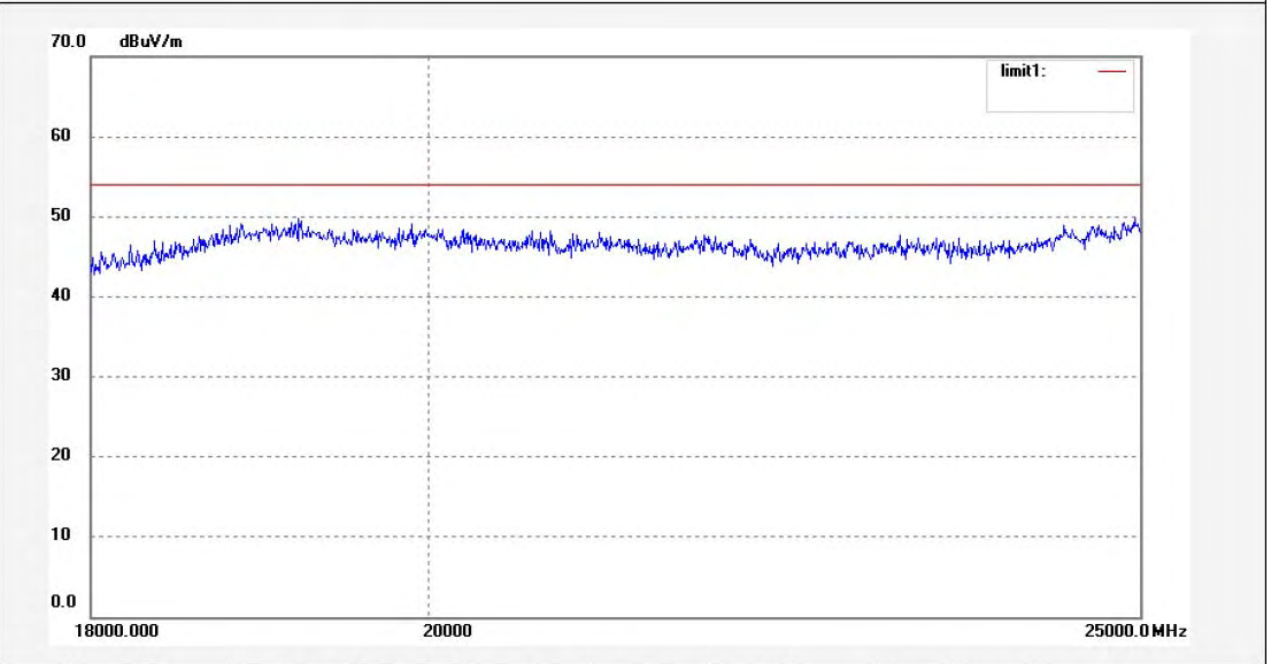
**ACCURATE TECHNOLOGY CO., LTD.**

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.: joe #737	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 12V
Test item: Radiation Test	Date: 2010/09/04
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 10:28:25
EUT: Bluetooth Car Kit	Engineer Signature: Joe
Mode: TX 2480MHz	Distance: 3m
Model: B-328BT	
Manufacturer: Shenzhen Gaoyi Electronic Co., Ltd.	

Note: Sample No.:102146 Report No.:ATE20101908



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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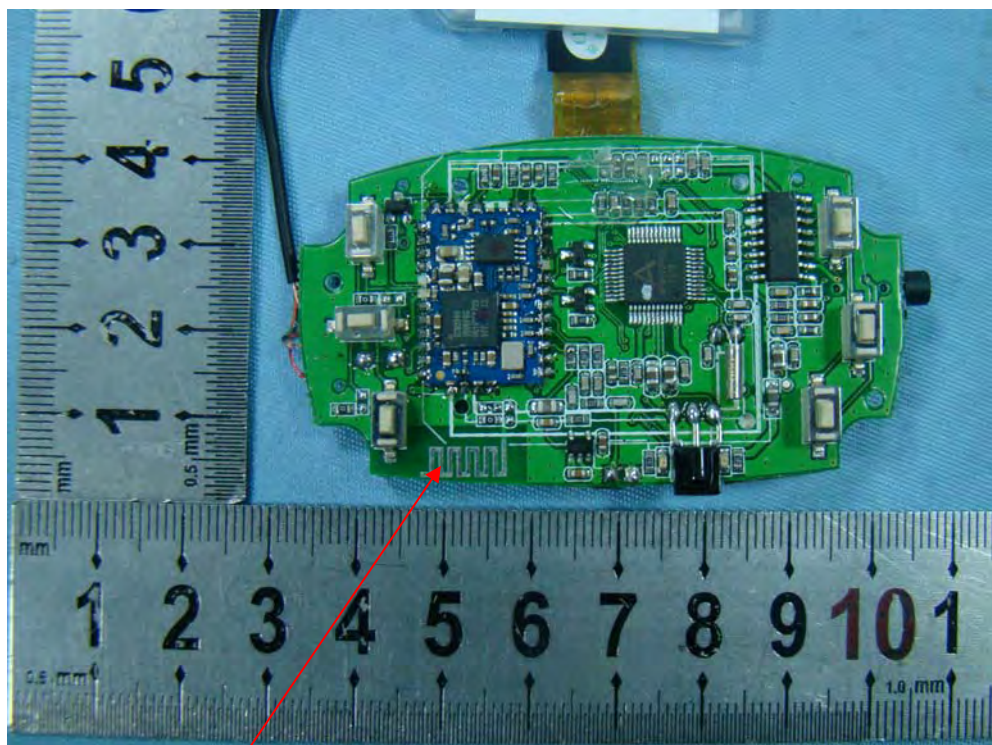
## 12. ANTENNA REQUIREMENT

### 12.1. 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.

### 12.2. Antenna Construction

Antenna is formed by a copper trace on the PCB. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna