

APPLICATION CERTIFICATION
On Behalf of
Zhejiang Dictory Electronic Technology Co., Ltd.

BLUETOOTH HANDS FREE CAR KIT
Model No.: DR03A

FCC ID: WVRDR03A

Prepared for : Zhejiang Dictory Electronic Technology Co., Ltd.
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District, Hangzhou City, Zhejiang Province, China

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Report Number : ATE20082254
Date of Test : November 26-29, 2008
Date of Report : December 1, 2008

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Test Report Certification

Applicant : Zhejiang Dictory Electronic Technology Co., Ltd.
Manufacturer : Zhejiang Dictory Electronic Technology Co., Ltd.
EUT Description : BLUETOOTH HANDS FREE CAR KIT
(A) MODEL NO.: DR03A
(B) SERIAL NO.: N/A
(C) POWER SUPPLY: 12V DC

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 : November 26-29, 2008

Prepared by : 
(Engineer)

Approved & Authorized Signer : 
(Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	BLUETOOTH HANDS FREE CAR KIT
Model Number	:	DR03A
Frequency Band	:	2400MHz-2483.5MHz
Number of Channels	:	79
Antenna Gain	:	0dBi
Power Supply	:	12V DC
Applicant	:	Zhejiang Dictory Electronic Technology Co., Ltd.
Address	:	23/F, Xingyao Building, No.518, Jiangnan Ave., Binjiang District, Hangzhou City, Zhejiang Province, China
Manufacturer	:	Zhejiang Dictory Electronic Technology Co., Ltd.
Address	:	23/F, Xingyao Building, No.518, Jiangnan Ave., Binjiang District, Hangzhou City, Zhejiang Province, China
Date of sample received	:	November 24, 2008
Date of Test	:	November 26-29, 2008

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	03.29.2009
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	03.29.2009
Spectrum Analyzer	Agilent	E7405A	MY45115511	03.29.2009
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	03.31.2009
Loop Antenna	Schwarzbeck	FMZB1516	1516131	03.28.2009
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	03.29.2009
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	12.20.2008
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	10.09.2009
LISN	Rohde&Schwarz	ESH3-Z5	100305	03.29.2009
LISN	Schwarzbeck	NSLK8126	8126431	03.29.2009

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

The mode is used: Transmitting mode

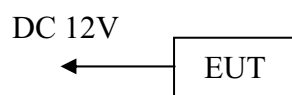
Low Channel: 2402MHz

Middle Channel: 2441MHz

High Channel: 2480MHz

Hopping

3.2. Configuration and peripherals



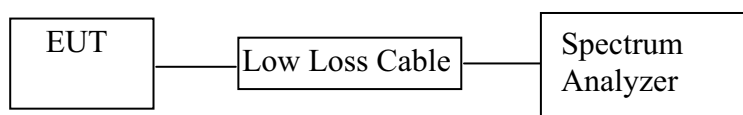
(EUT: BLUETOOTH HANDS FREE CAR KIT)

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.107	Conducted Emission Test	N/A
Section 15.109	Radiated Emission Test	N/A
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) Section 15.209	Radiated Emission Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. 20DB BANDWIDTH TEST

5.1. Block Diagram of Test Setup



(EUT: BLUETOOTH HANDS FREE 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 HANDS FREE CAR KIT (EUT)

Model Number	: DR03A
Serial Number	: N/A
Manufacturer	: Zhejiang Dictory Electronic Technology 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.

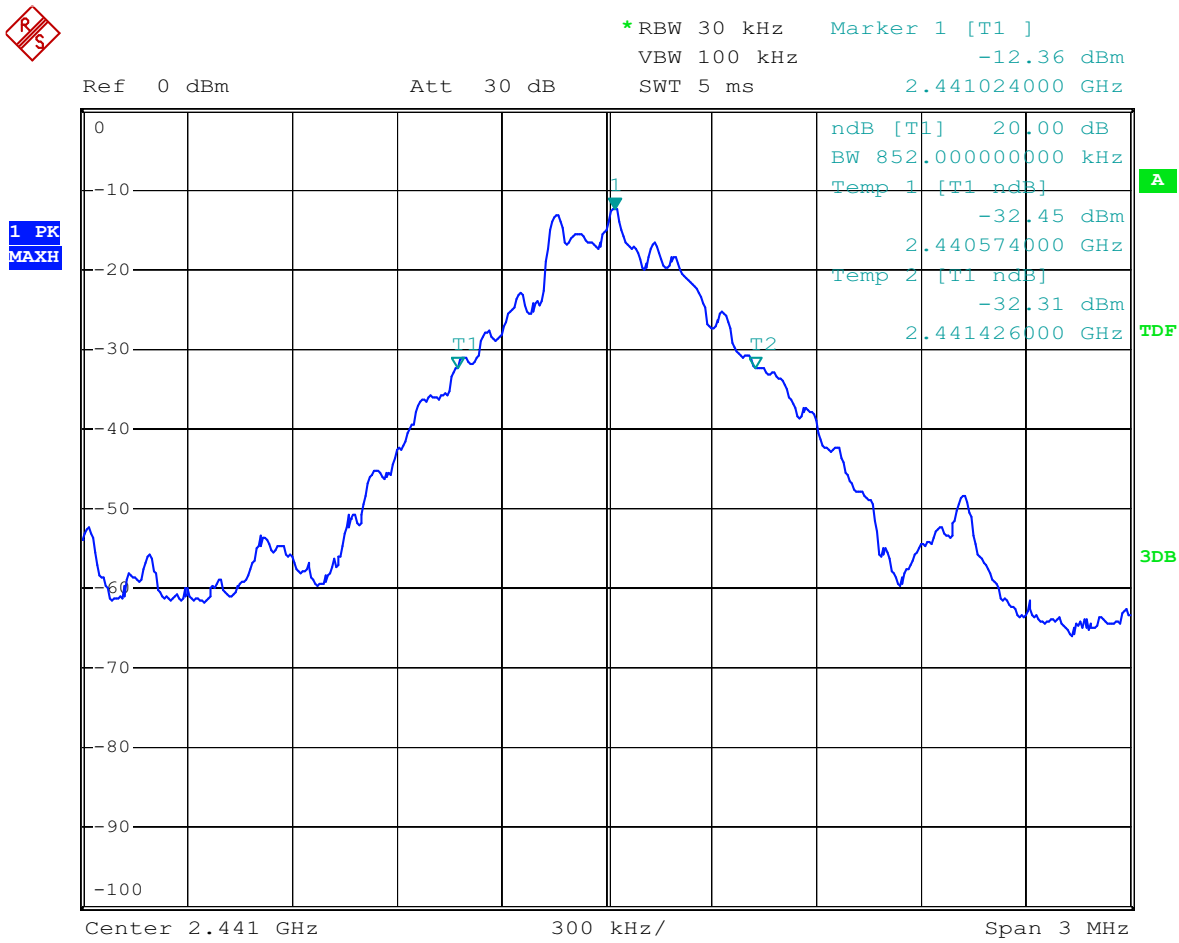
Date of Test:	November 29, 2008	Temperature:	25°C
EUT:	BLUETOOTH HANDS FREE	Humidity:	50%
Model No.:	CAR KIT	Power Supply:	DC 12V
Test Mode:	DR03A	Test Engineer:	Joe
	TX		

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)
Low	2402	0.852	---
Middle	2441	0.852	---
High	2480	0.858	---

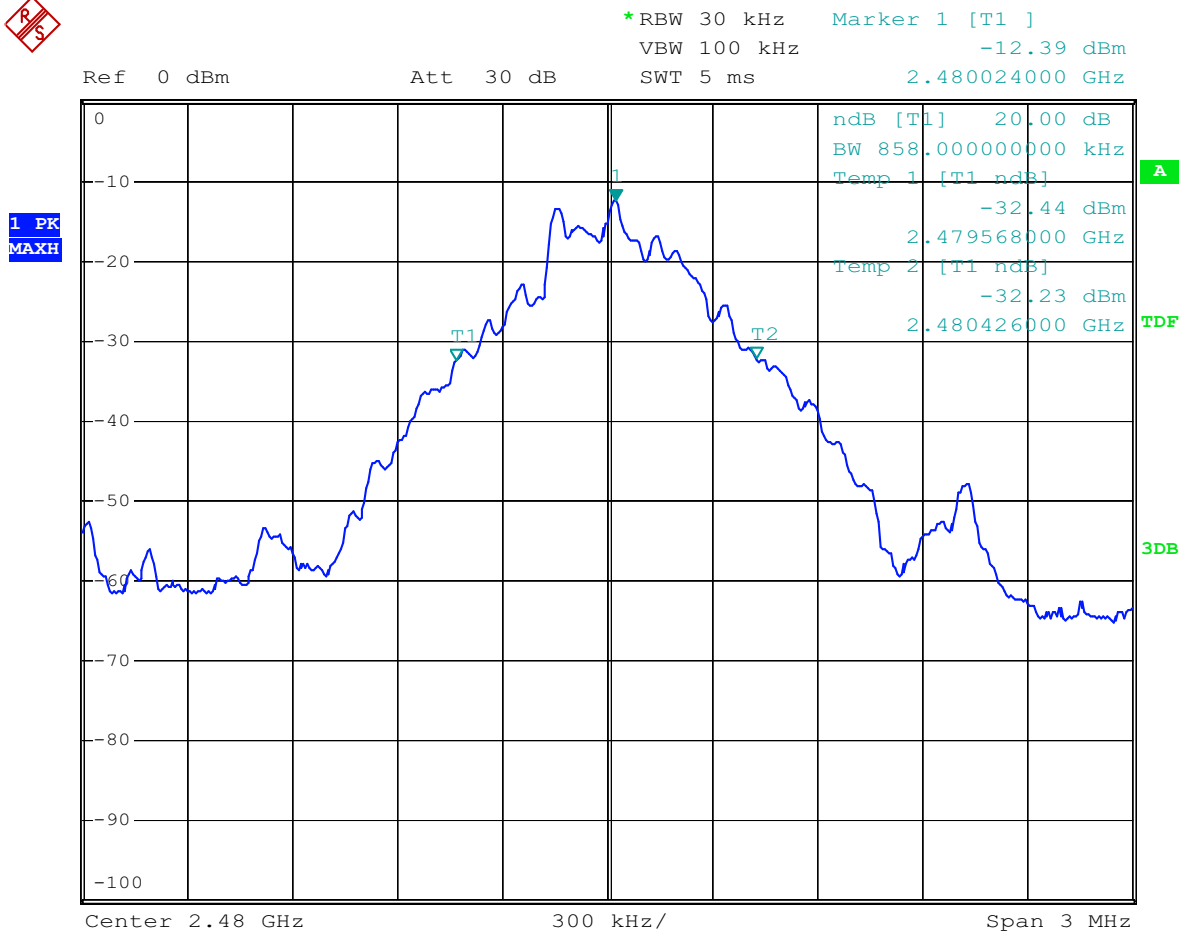
The spectrum analyzer plots are attached as below.



Date: 29.NOV.2008 09:47:43



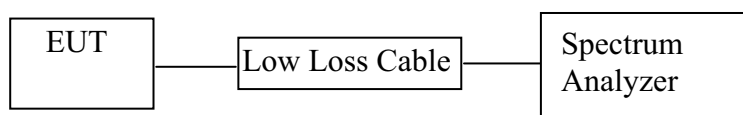
Date: 29.NOV.2008 09:52:07



Date: 29.NOV.2008 09:54:57

6. CARRIER FREQUENCY SEPARATION TEST

6.1. Block Diagram of Test Setup



(EUT: BLUETOOTH HANDS FREE 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 HANDS FREE CAR KIT (EUT)

Model Number	:	DR03A
Serial Number	:	N/A
Manufacturer	:	Zhejiang Dictory Electronic Technology 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

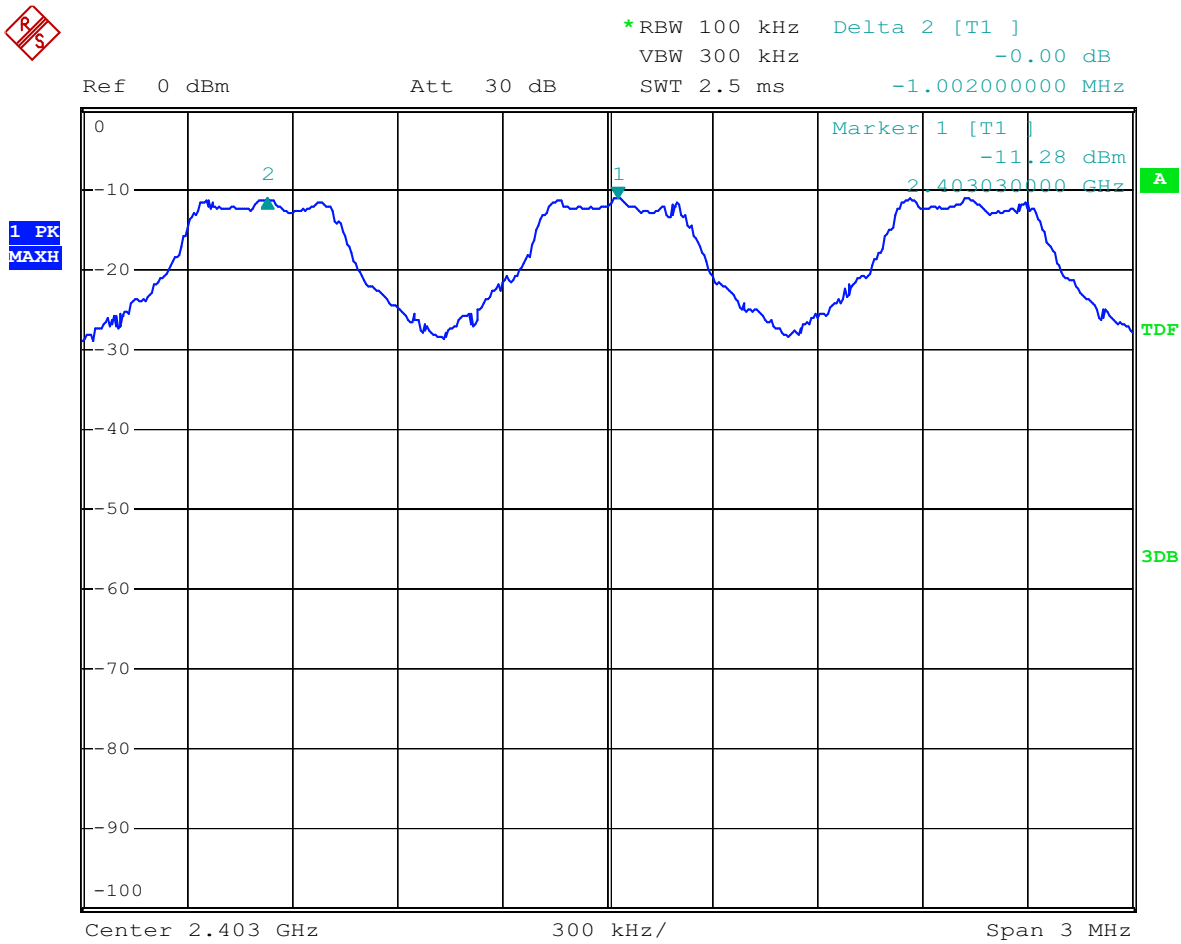
6.6. Test Result

PASS.

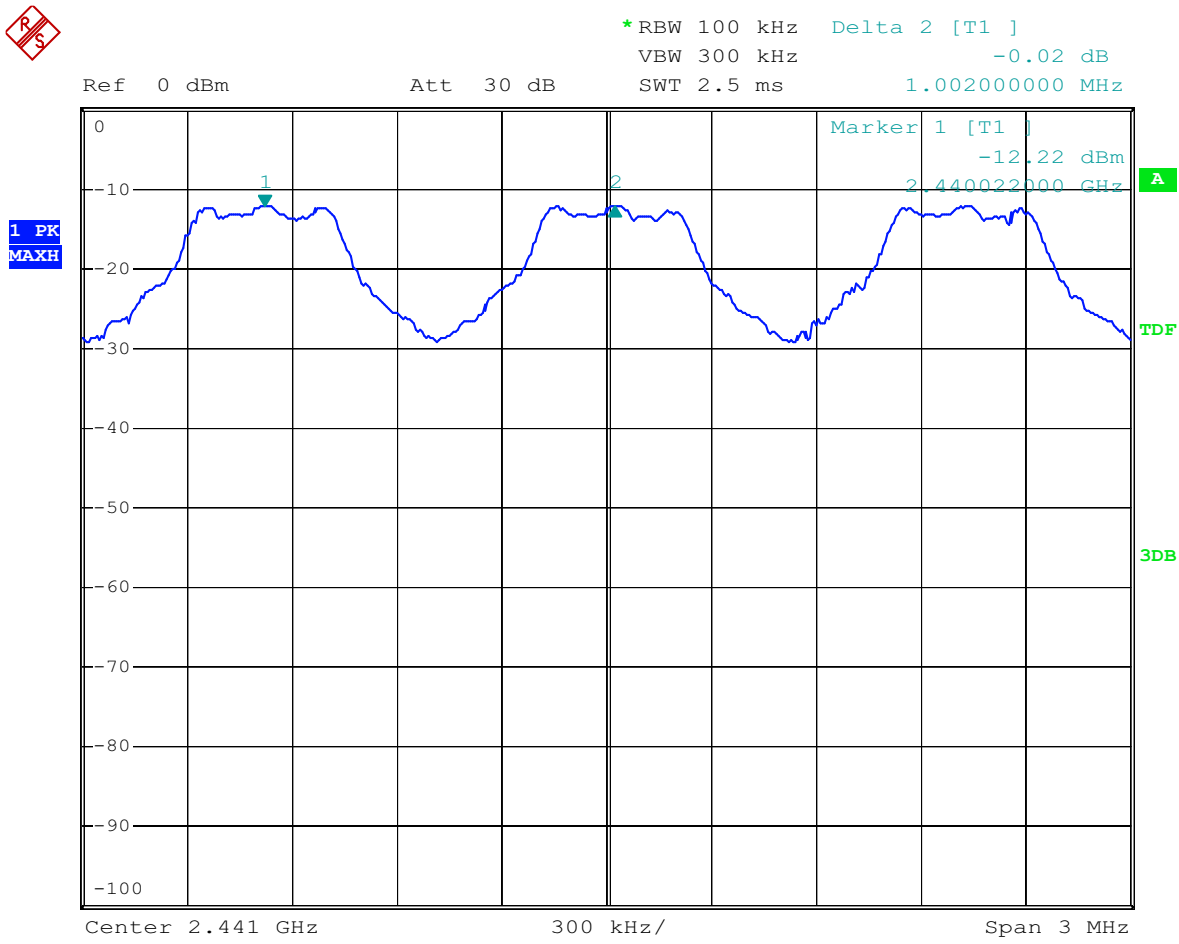
Date of Test:	<u>November 29, 2008</u>	Temperature:	<u>25°C</u>
	<u>BLUETOOTH HANDS FREE</u>		
EUT:	<u>CAR KIT</u>	Humidity:	<u>50%</u>
Model No.:	<u>DR03A</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>Hopping</u>	Test Engineer:	<u>Joe</u>

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

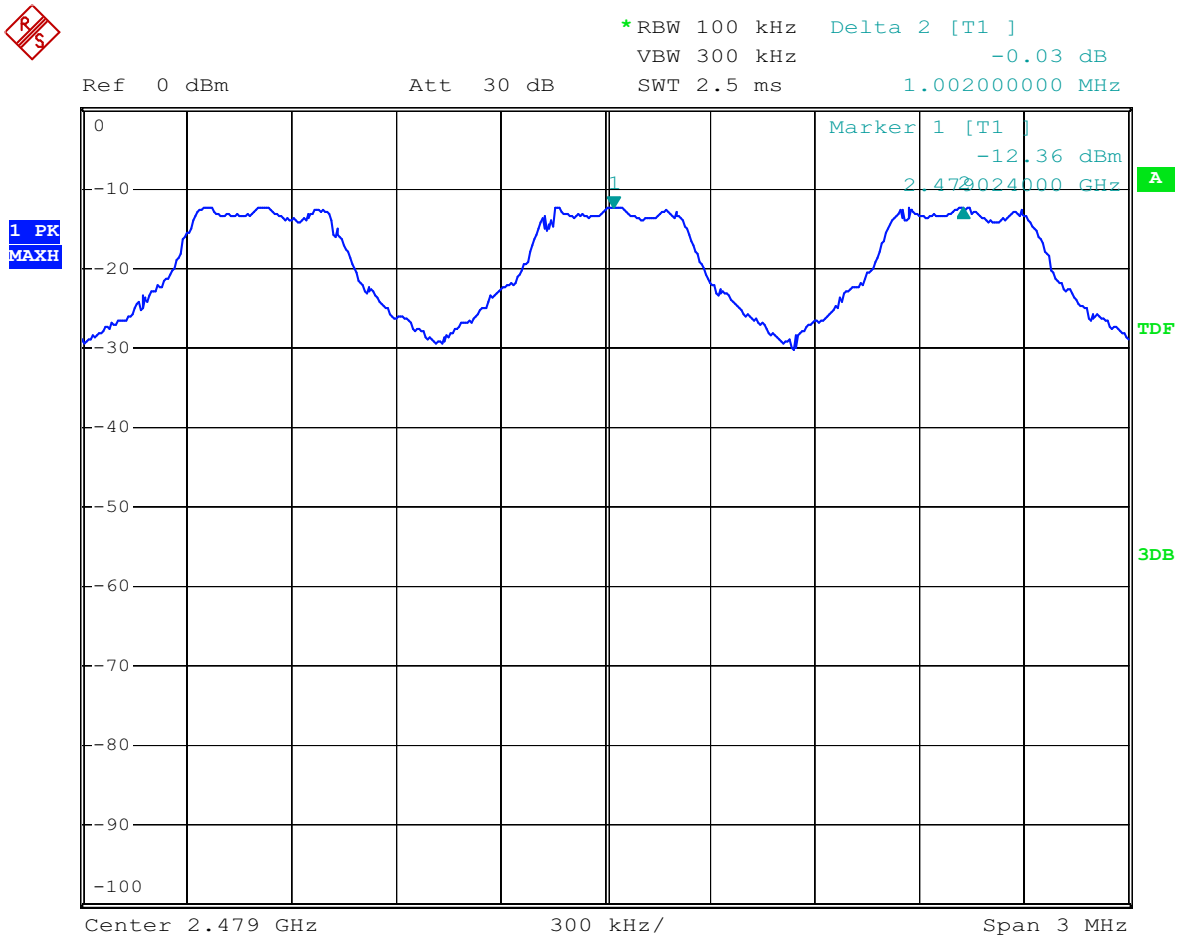
The spectrum analyzer plots are attached as below.



Date: 29.NOV.2008 09:13:34



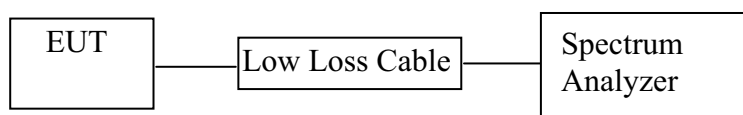
Date: 29.NOV.2008 09:18:20



Date: 29.NOV.2008 09:23:23

7. NUMBER OF HOPPING FREQUENCY TEST

7.1. Block Diagram of Test Setup



(EUT: BLUETOOTH HANDS FREE 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 HANDS FREE CAR KIT (EUT)

Model Number	:	DR03A
Serial Number	:	N/A
Manufacturer	:	Zhejiang Dictory Electronic Technology 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.

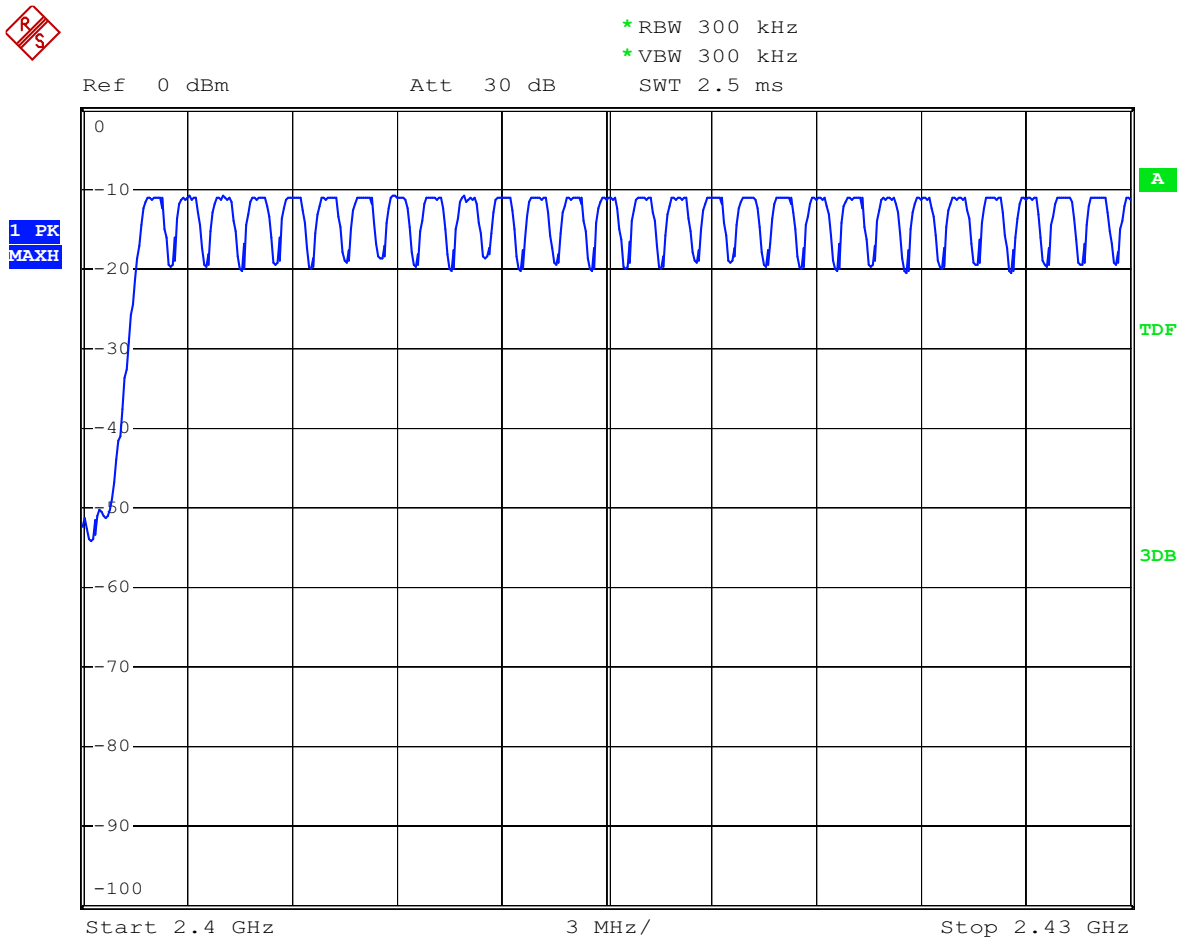
7.6. Test Result

PASS.

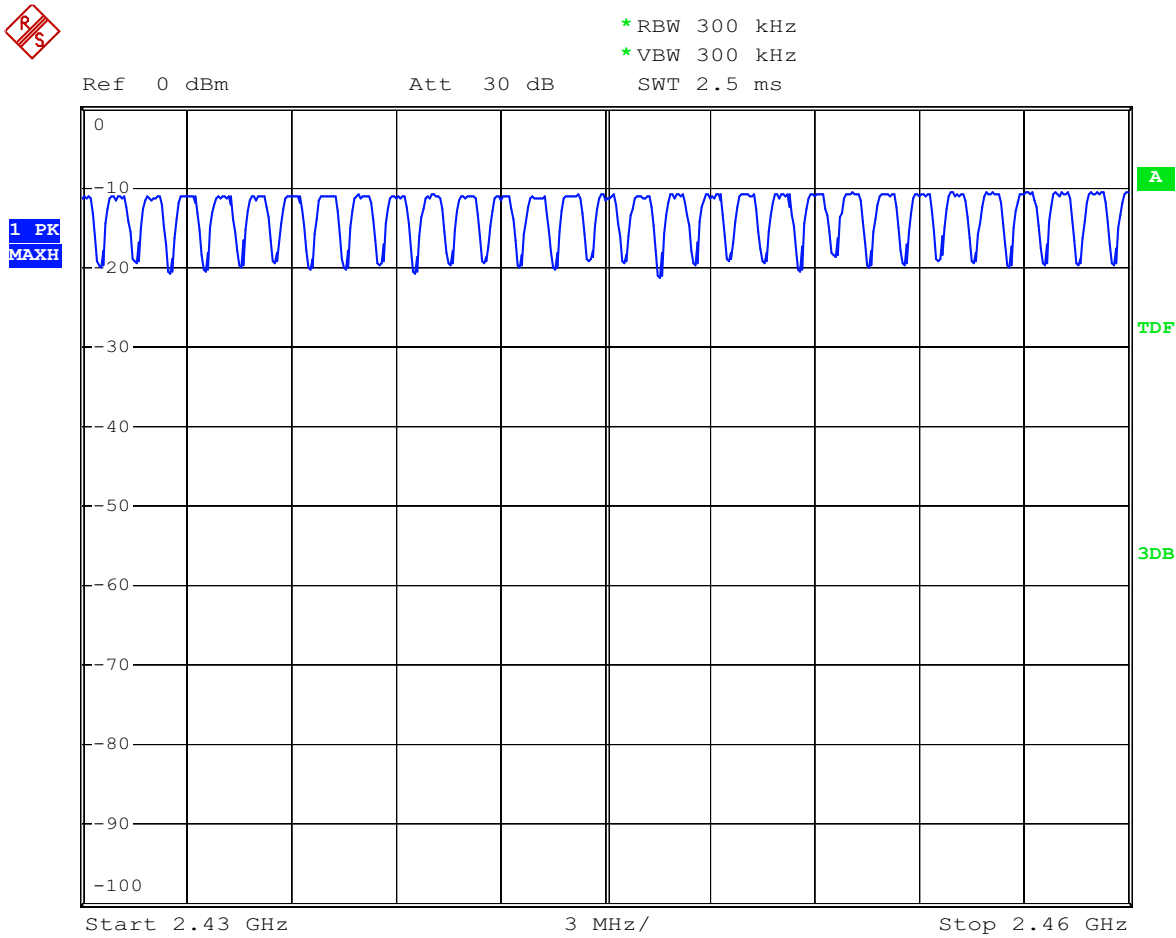
Date of Test:	<u>November 28, 2008</u>	Temperature:	<u>25°C</u>
	<u>BLUETOOTH HANDS</u>		
EUT:	<u>FREE CAR KIT</u>	Humidity:	<u>50%</u>
Model No.:	<u>DR03A</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>Hopping</u>	Test Engineer:	<u>Joe</u>

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

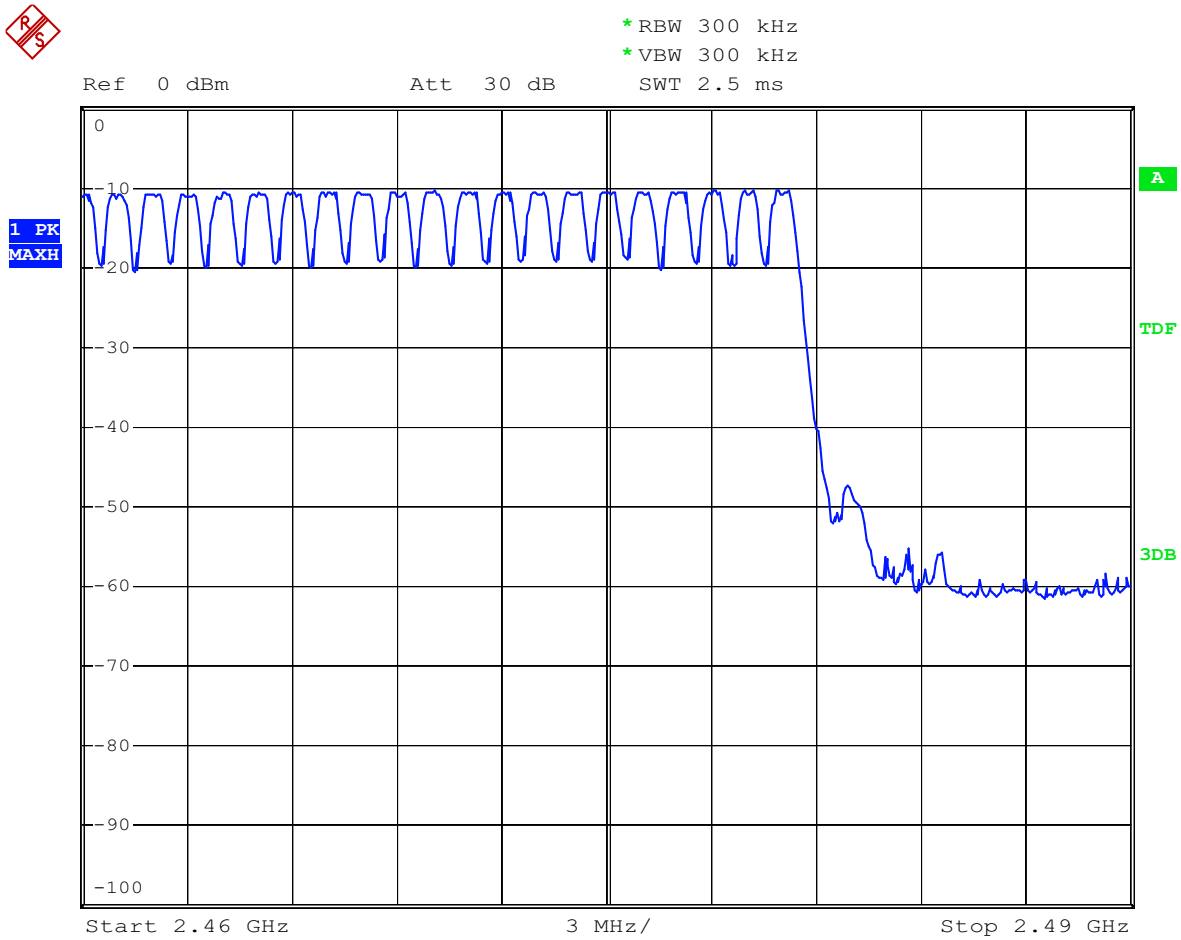
The spectrum analyzer plots are attached as below.



Date: 28.NOV.2008 17:12:26



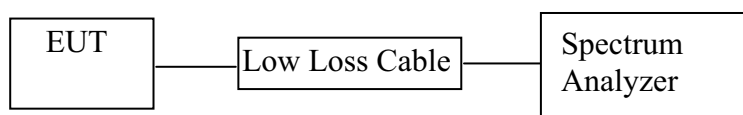
Date: 28.NOV.2008 17:14:43



Date: 28.NOV.2008 17:16:27

8. DWELL TIME TEST

8.1. Block Diagram of Test Setup



(EUT: BLUETOOTH HANDS FREE 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 HANDS FREE CAR KIT (EUT)

Model Number	:	DR03A
Serial Number	:	N/A
Manufacturer	:	Zhejiang Dictory Electronic Technology 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.

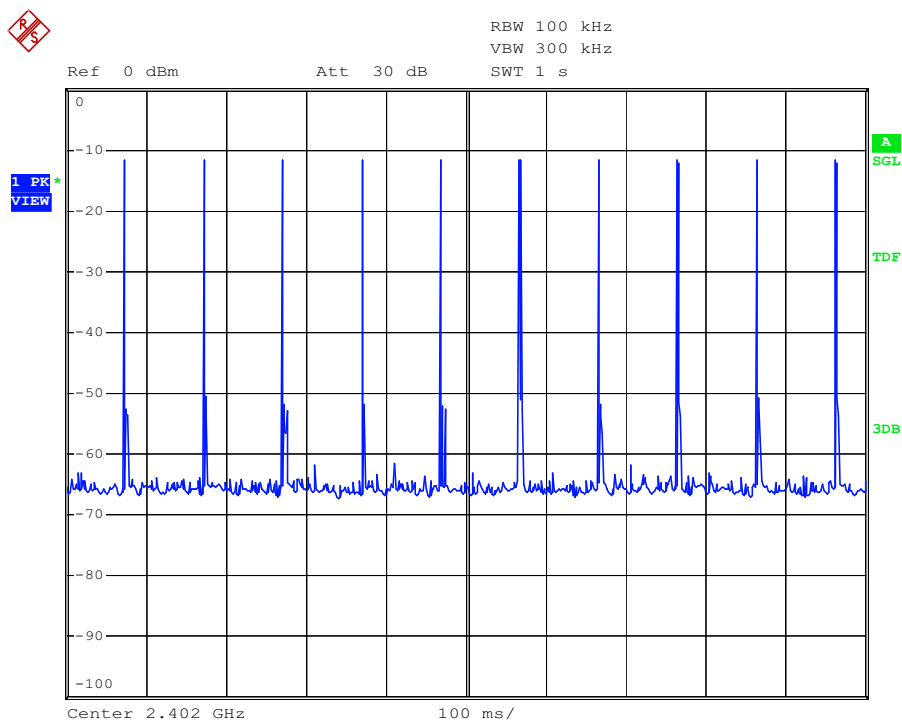
Date of Test:	November 29, 2008	Temperature:	25°C
	BLUETOOTH HANDS FREE		
EUT:	CAR KIT	Humidity:	50%
Model No.:	DR03A	Power Supply:	DC 12V
Test Mode:	Hopping	Test Engineer:	Joe

A period transmit time = $0.4 \times 79 = 31.6$

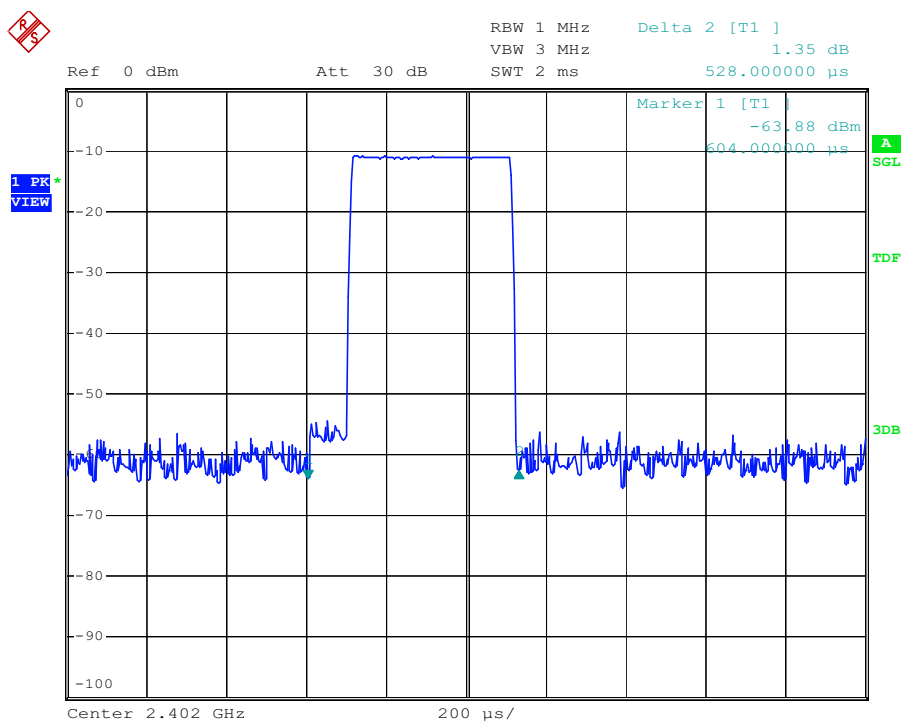
Dwell time = pulse time \times burst (in 1 sec.) $\times 31.6$

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 1 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.528	10	166.85	400
Middle	2441	0.524	10	165.58	400
High	2480	0.528	10	166.85	400

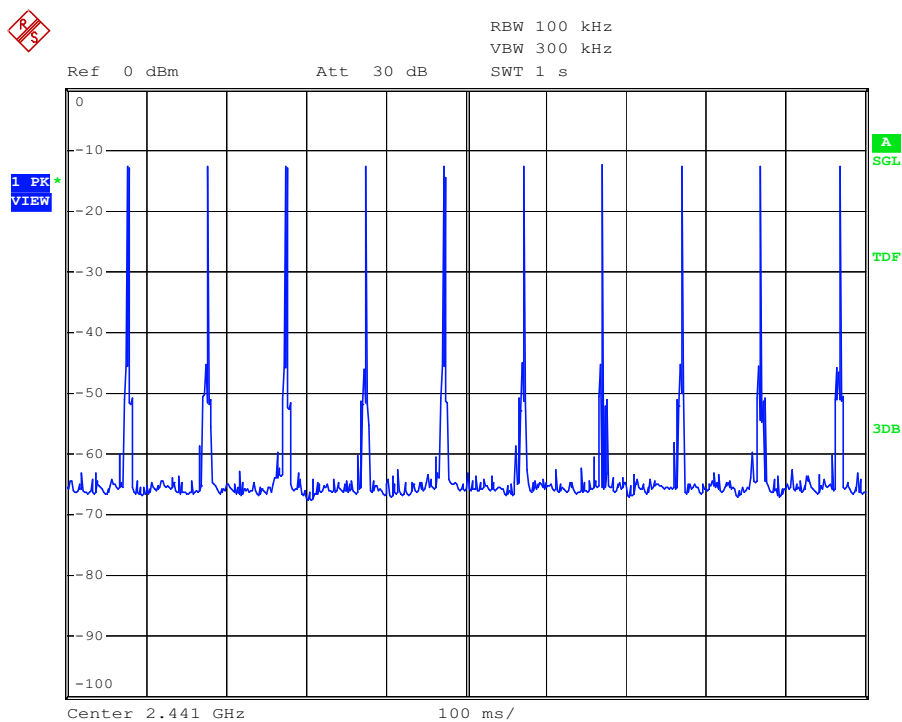
The spectrum analyzer plots are attached as below.



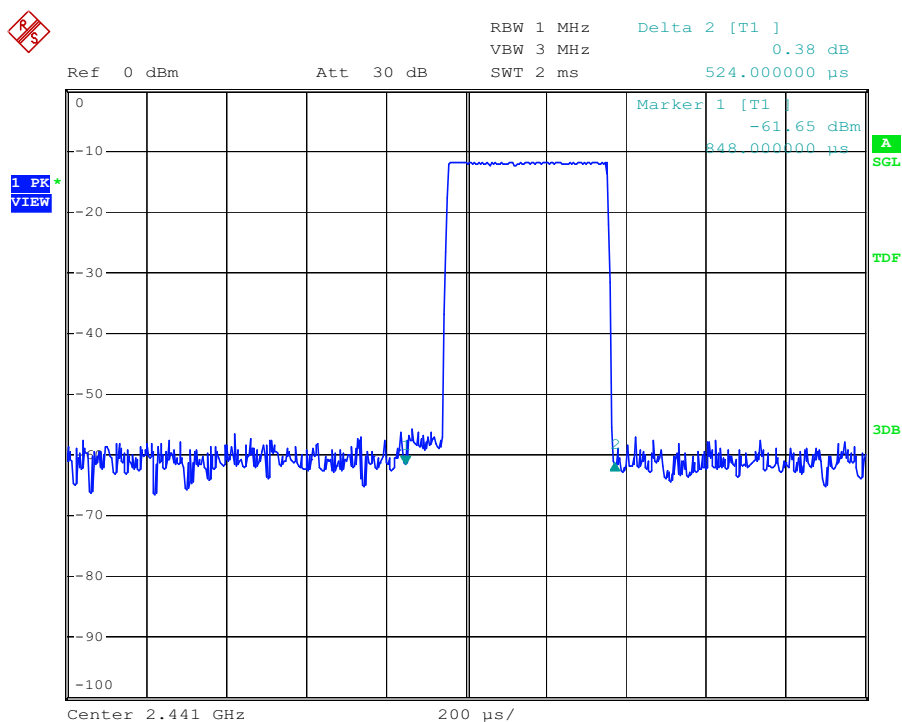
Date: 29.NOV.2008 09:25:44



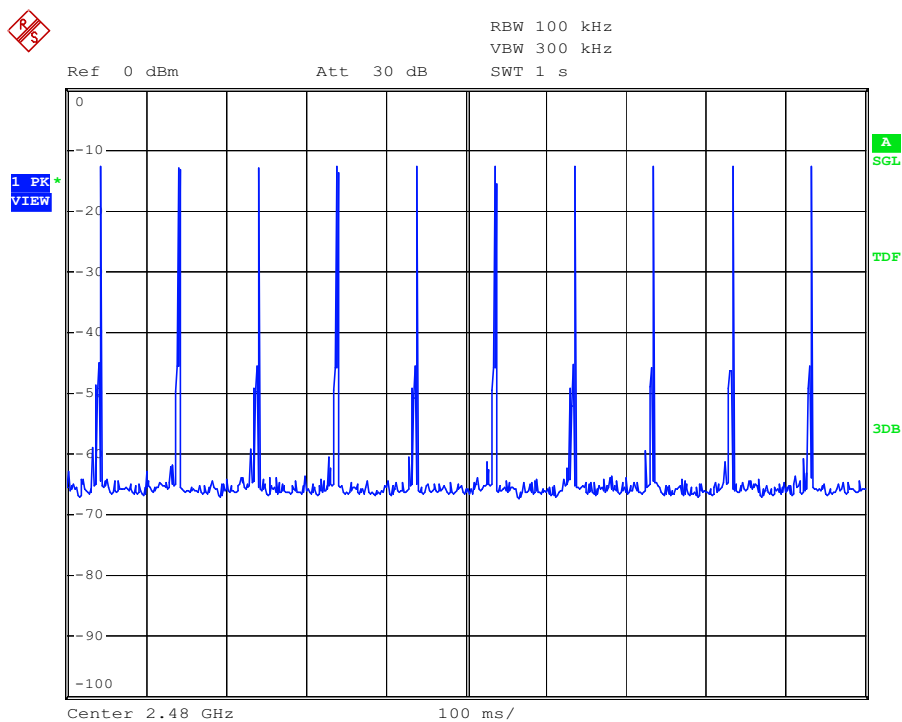
Date: 29.NOV.2008 09:35:13



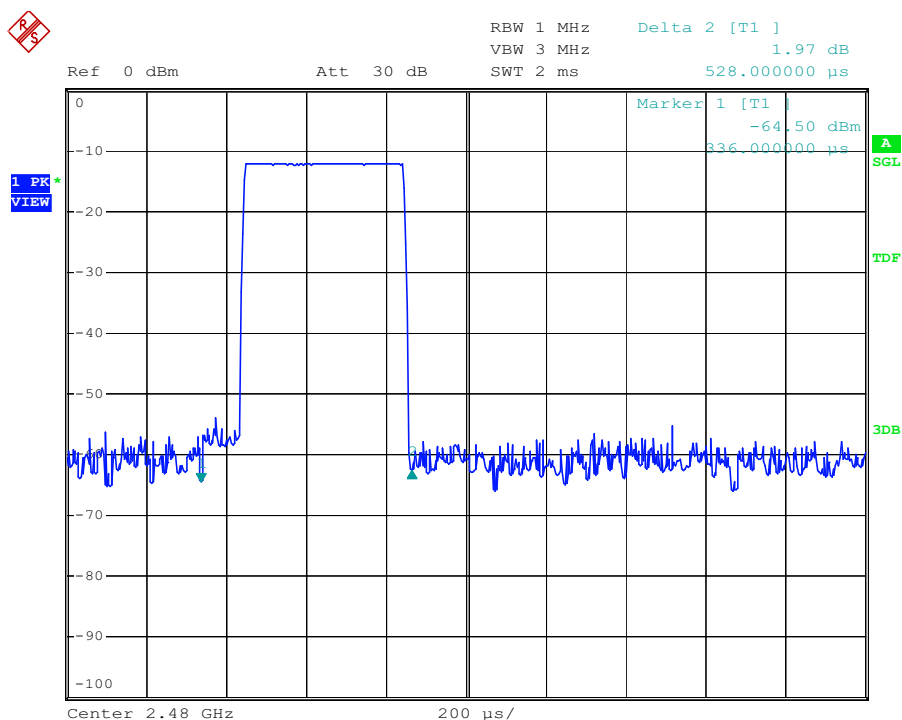
Date: 29.NOV.2008 09:28:26



Date: 29.NOV.2008 09:37:09



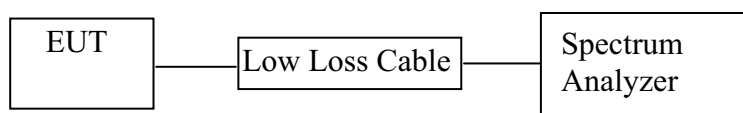
Date: 29.NOV.2008 09:27:38



Date: 29.NOV.2008 09:39:12

9. MAXIMUM PEAK OUTPUT POWER TEST

9.1. Block Diagram of Test Setup



(EUT: BLUETOOTH HANDS FREE 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 HANDS FREE CAR KIT (EUT)

Model Number	:	DR03A
Serial Number	:	N/A
Manufacturer	:	Zhejiang Dictory Electronic Technology 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.

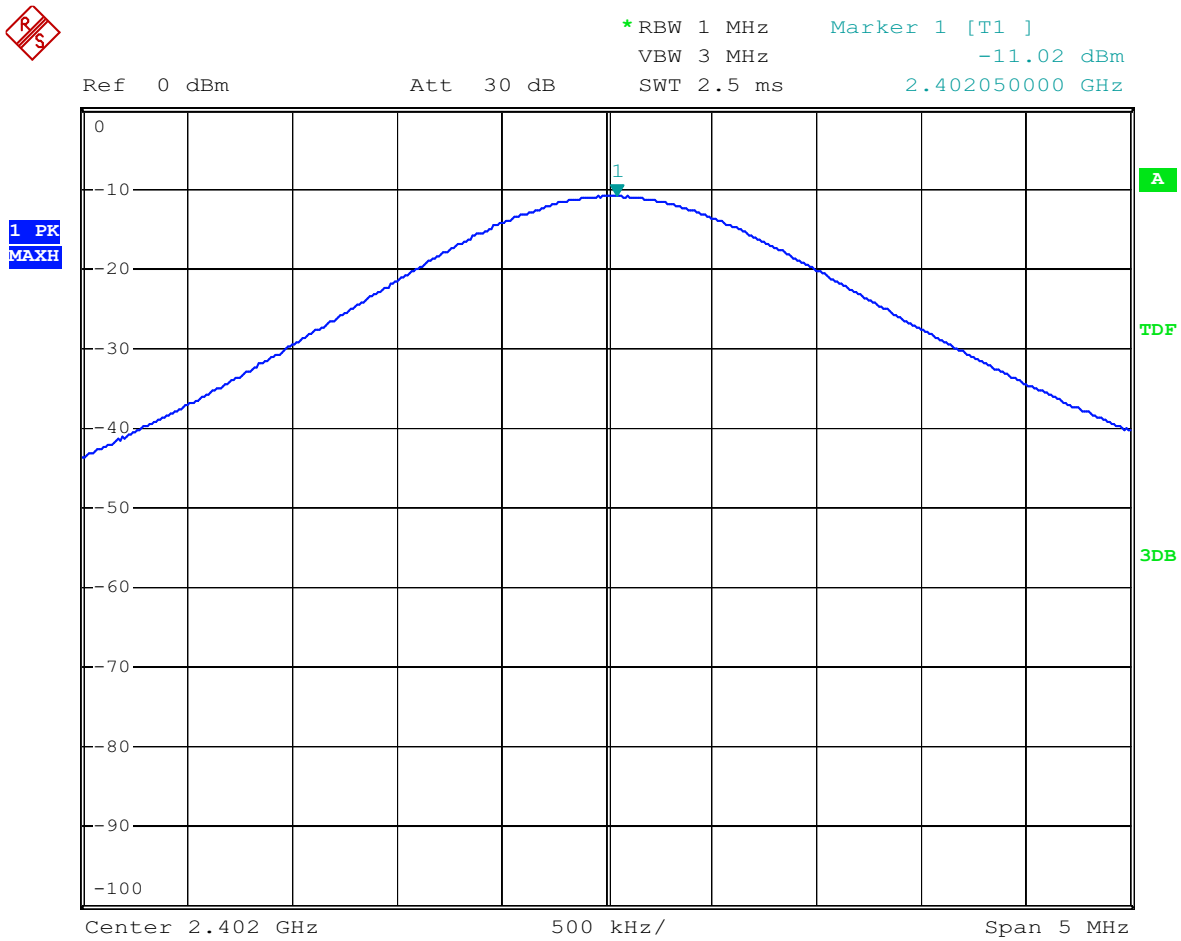
9.6. Test Result

PASS.

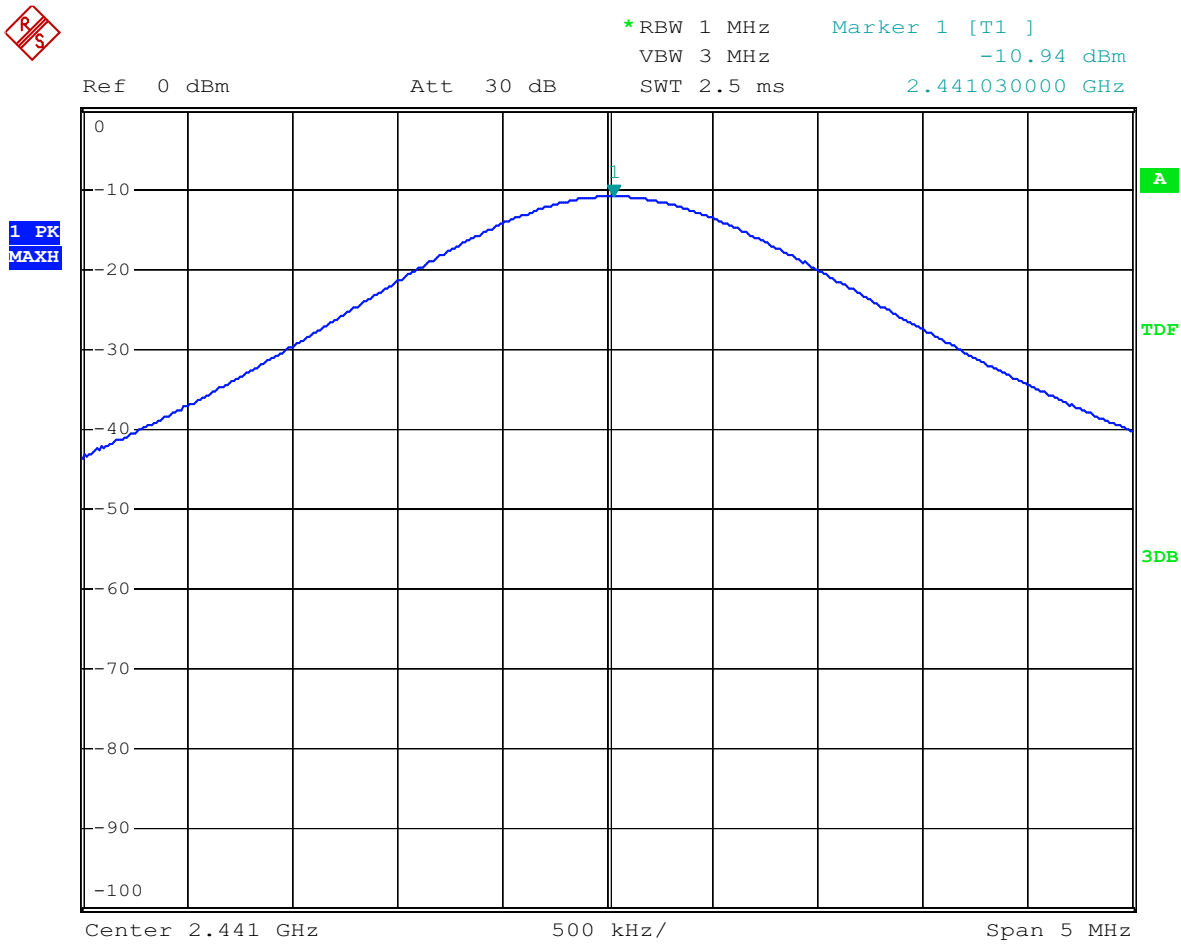
Date of Test:	November 28, 2008	Temperature:	25°C
EUT:	BLUETOOTH HANDS FREE	Humidity:	50%
Model No.:	CAR KIT	Power Supply:	DC 12V
Test Mode:	DR03A	Test Engineer:	Joe
	TX		

Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2402	-11.02	0.079	30 dBm / 1 W
Middle	2441	-10.94	0.081	30 dBm / 1 W
High	2480	-10.14	0.097	30 dBm / 1 W

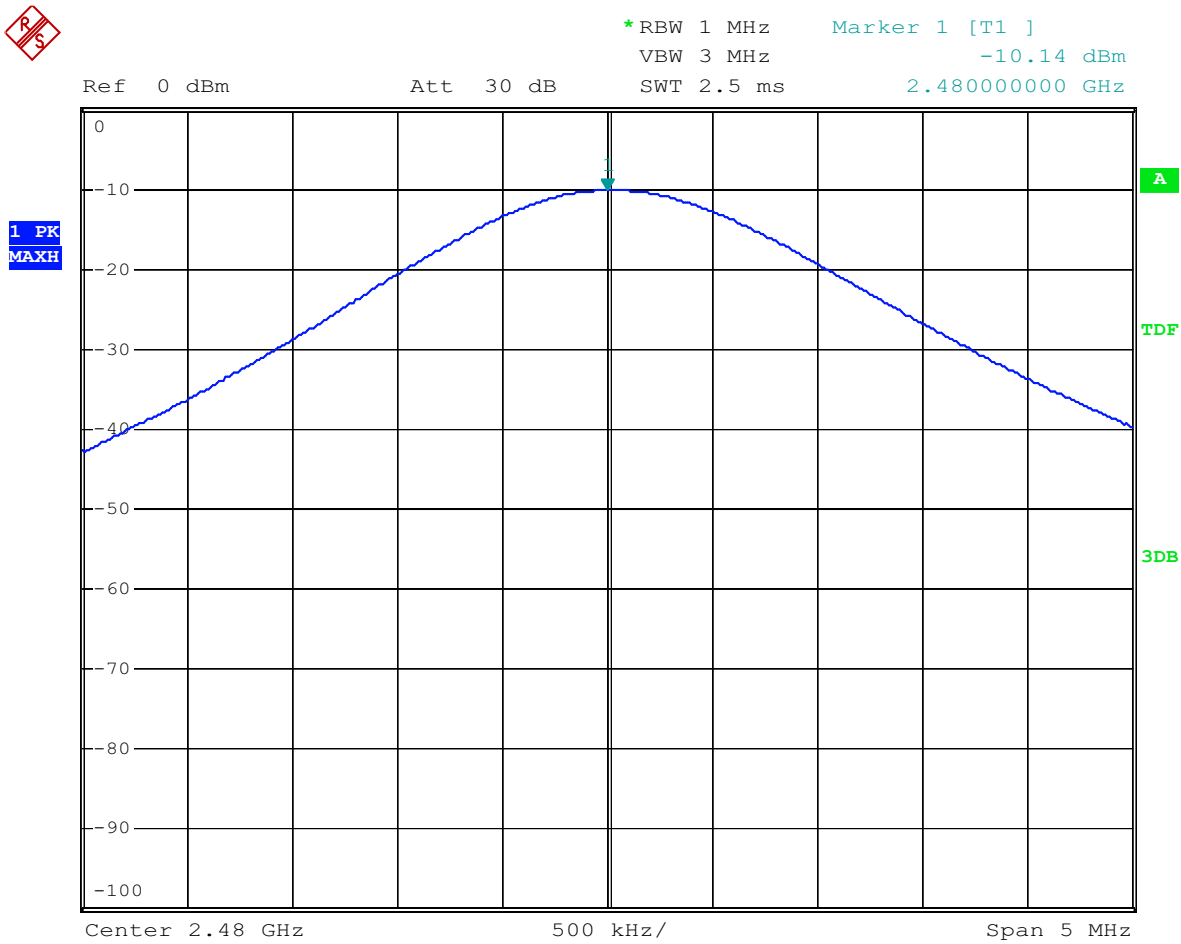
The spectrum analyzer plots are attached as below.



Date: 28.NOV.2008 17:03:19



Date: 28.NOV.2008 17:00:53

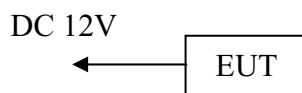


Date: 28.NOV.2008 17:05:16

10. RADIATED EMISSION TEST

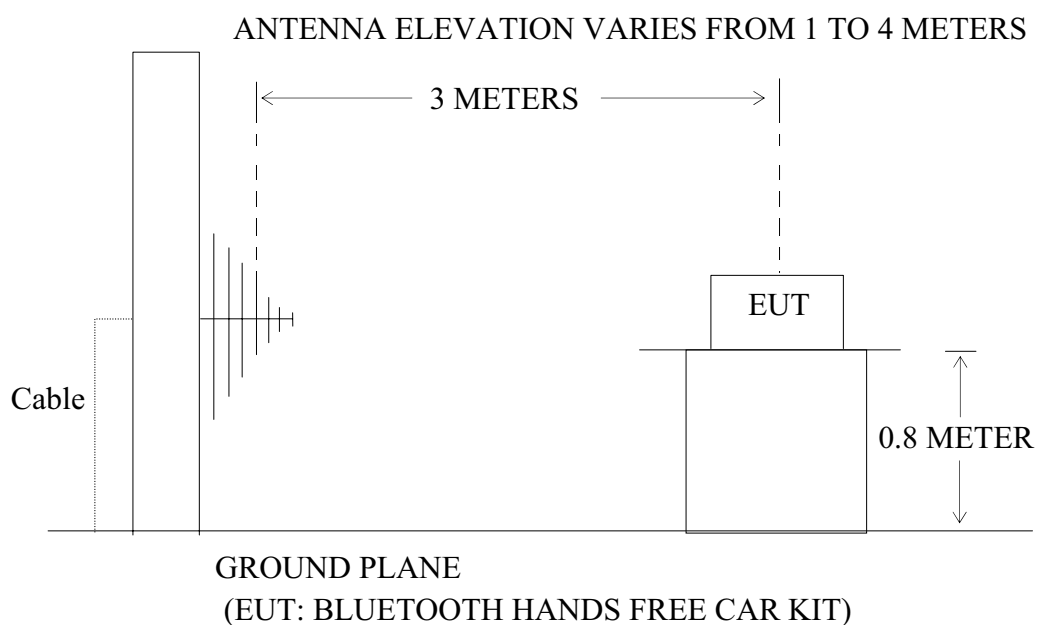
10.1. Block Diagram of Test Setup

10.1.1. Block diagram of connection between the EUT and simulators



(EUT: BLUETOOTH HANDS FREE CAR KIT)

10.1.2. Anechoic Chamber Test Setup Diagram



10.2. 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).

10.3.Restricted bands of operation

10.3.1.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
¹ 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	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

²Above 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.

10.4.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.

10.4.1.BLUETOOTH HANDS FREE CAR KIT (EUT)

Model Number : DR03A
 Serial Number : N/A
 Manufacturer : Zhejiang Dictory Electronic Technology Co., Ltd.

10.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

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

10.6.The Field Strength of Radiation Emission Measurement Results

PASS.

Date of Test:	November 26-27, 2008	Temperature:	25°C
	BLUETOOTH HANDS FREE		
EUT:	CAR KIT	Humidity:	50%
Model No.:	DR03A	Power Supply:	DC 12V
Test Mode:	TX (2402MHz)	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	
126.8058	19.72	15.01	34.73	43.50	-8.77	Vertical
144.7760	19.66	14.48	34.14	43.50	-9.36	Vertical
158.5289	19.51	14.59	34.10	43.50	-9.40	Vertical
144.7760	23.26	14.48	37.74	43.50	-5.76	Horizontal
173.5974	23.22	14.74	37.96	43.50	-5.54	Horizontal
190.2074	24.13	14.87	39.00	43.50	-4.50	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	
2400.000	44.36	46.24	-7.46	36.90	38.78	54	74	-17.10	-35.22	Vertical
2402.028	85.88	87.78	-7.45	78.43	80.33	-	-	-	-	Vertical
4804.041	50.76	53.21	-0.30	50.46	52.91	54	74	-3.54	-21.09	Vertical
7206.069	45.44	47.90	2.97	48.41	50.87	54	74	-5.59	-23.13	Vertical
2400.000	43.23	45.01	-7.46	35.77	37.55	54	74	-18.23	-36.45	Horizontal
2402.028	84.05	85.86	-7.45	76.60	78.41	-	-	-	-	Horizontal
4804.041	50.30	52.85	-0.30	50.00	52.55	54	74	-4.00	-21.54	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:	November 26-27, 2008	Temperature:	25°C
	BLUETOOTH HANDS FREE		
EUT:	CAR KIT	Humidity:	50%
Model No.:	DR03A	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	
126.8058	18.09	15.01	33.10	43.50	-10.40	Vertical
144.7760	19.68	14.48	34.16	43.50	-9.34	Vertical
190.1075	19.74	14.87	34.61	43.50	-8.89	Vertical
158.5288	23.56	14.59	38.15	43.50	-5.35	Horizontal
173.5974	23.28	14.74	38.02	43.50	-5.48	Horizontal
190.1074	23.97	14.87	38.84	43.50	-4.66	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	
2441.023	86.42	88.25	-7.35	79.07	80.90	-	-	-	-	Vertical
4882.041	49.40	51.44	0.14	49.54	51.58	54	74	-4.46	-22.42	Vertical
2441.023	84.38	86.23	-7.35	77.03	78.88	-	-	-	-	Horizontal
4882.041	49.78	52.06	0.14	49.92	52.20	54	74	-4.08	-21.80	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:	November 26-27, 2008	Temperature:	25°C
	BLUETOOTH HANDS FREE		
EUT:	CAR KIT	Humidity:	50%
Model No.:	DR03A	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	
126.8058	19.77	15.01	34.78	43.50	-8.72	Vertical
144.7760	20.57	14.48	35.05	43.50	-8.45	Vertical
173.5975	19.28	14.74	34.02	43.50	-9.48	Vertical
158.5288	23.61	14.59	38.20	43.50	-5.30	Horizontal
173.5974	23.67	14.74	38.41	43.50	-5.09	Horizontal
190.1074	24.41	14.87	39.28	43.50	-4.22	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	
2480.021	85.18	87.10	-7.37	77.81	79.73	-	-	-	-	Vertical
2483.500	41.14	42.96	-7.37	33.77	35.59	54	74	-20.23	-38.41	Vertical
4960.038	49.46	51.89	0.52	49.98	52.41	54	74	-4.02	-21.59	Vertical
7440.057	40.52	42.89	3.69	44.21	46.58	54	74	-9.79	-27.42	Vertical
2480.021	85.11	87.00	-7.37	77.74	79.63	-	-	-	-	Horizontal
2483.500	41.19	43.03	-7.37	33.82	35.66	54	74	-20.18	-38.34	Horizontal
4960.038	49.92	52.48	0.52	50.44	53.00	54	74	-3.56	-21.00	Horizontal
7440.057	42.89	45.28	3.69	46.58	48.97	54	74	-7.42	-25.03	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.

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

Job No.: RTTE #767

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2402MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

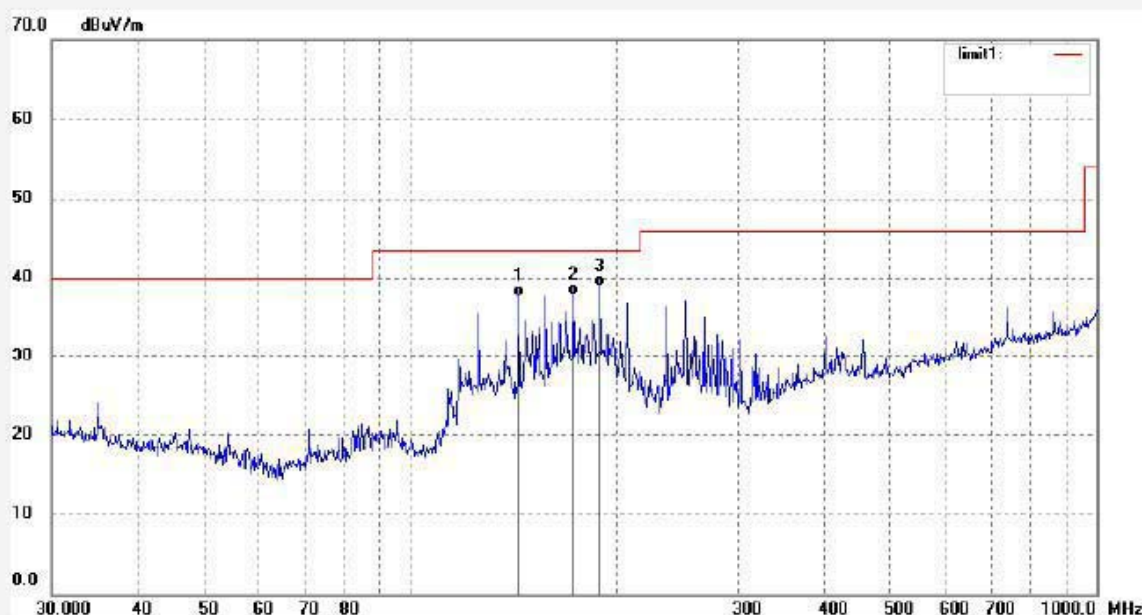
Date: 08/11/26/

Time: 16/54/33

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	144.7760	23.26	14.48	37.74	43.50	-5.76	QP	
2	173.5974	23.22	14.74	37.96	43.50	-5.54	QP	
3	190.2074	24.13	14.87	39.00	43.50	-4.50	QP	



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

Job No.: RTTE #768

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2402MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

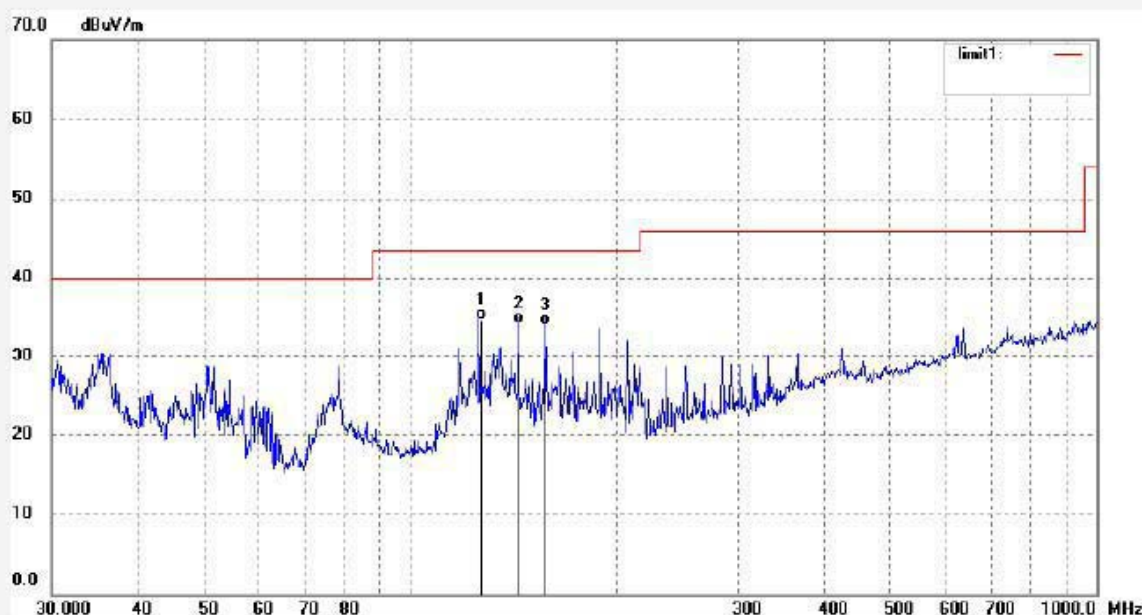
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Time: 16/56/35

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	126.8058	19.72	15.01	34.73	43.50	-8.77	QP	
2	144.7760	19.66	14.48	34.14	43.50	-9.36	QP	
3	158.5289	19.51	14.59	34.10	43.50	-9.40	QP	


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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: RTTE #803

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2402MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

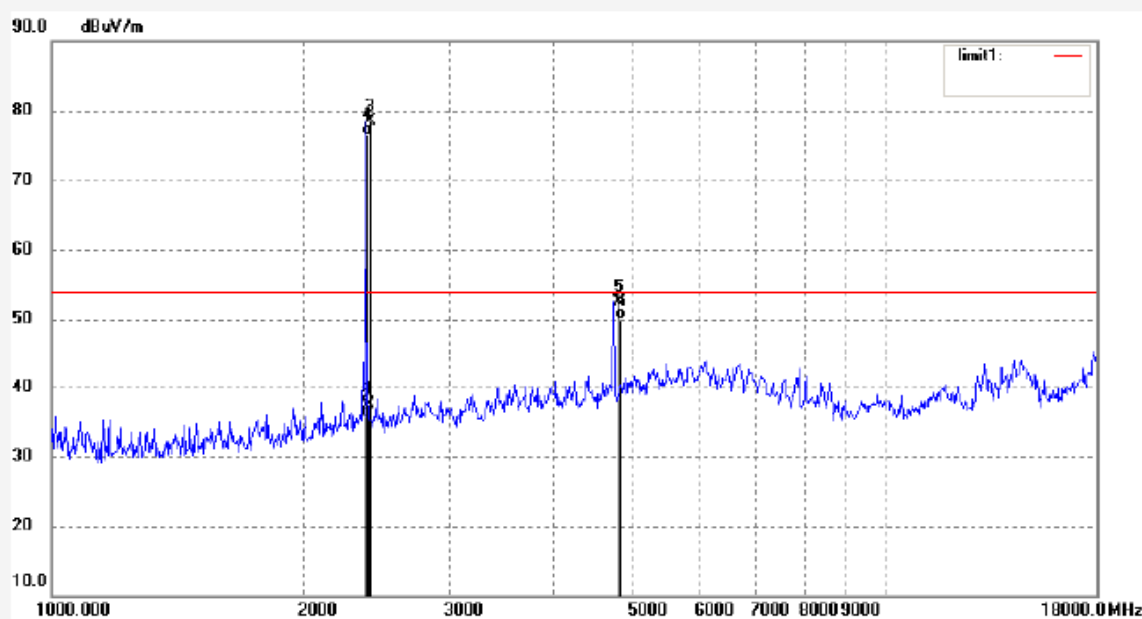
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Time: 10/25/18

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2400.000	45.01	-7.46	37.55	74.00	-36.45	peak	
2	2400.000	43.23	-7.46	35.77	54.00	-18.23	AVG	
3	2402.028	85.86	-7.45	78.41	-	-	peak	
4	2402.028	84.05	-7.45	76.60	-	-	AVG	
5	4804.041	52.85	-0.30	52.55	74.00	-21.45	peak	
6	4804.041	50.30	-0.30	50.00	54.00	-4.00	AVG	



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Fax:+86-0755-26503396

Job No.: RTTE #804

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2402MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

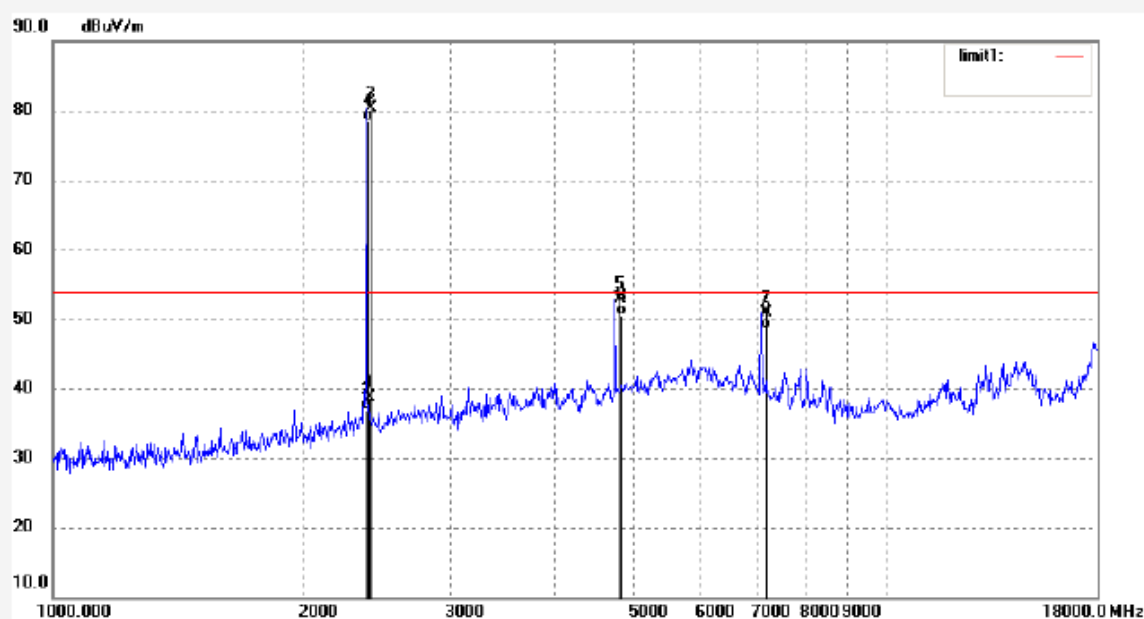
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Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2400.000	46.24	-7.46	38.78	74.00	-35.22	peak	
2	2400.000	44.36	-7.46	36.90	54.00	-17.10	AVG	
3	2402.028	87.78	-7.45	80.33	-	-	peak	
4	2402.028	85.88	-7.45	78.43	-	-	AVG	
5	4804.041	53.21	-0.30	52.91	74.00	-21.09	peak	
6	4804.041	50.76	-0.30	50.46	54.00	-3.54	AVG	
7	7206.069	47.90	2.97	50.87	74.00	-23.13	peak	
8	7206.069	45.44	2.97	48.41	54.00	-5.59	AVG	


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Tel:+86-0755-26503290
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Job No.: RTTE #810

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2402MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

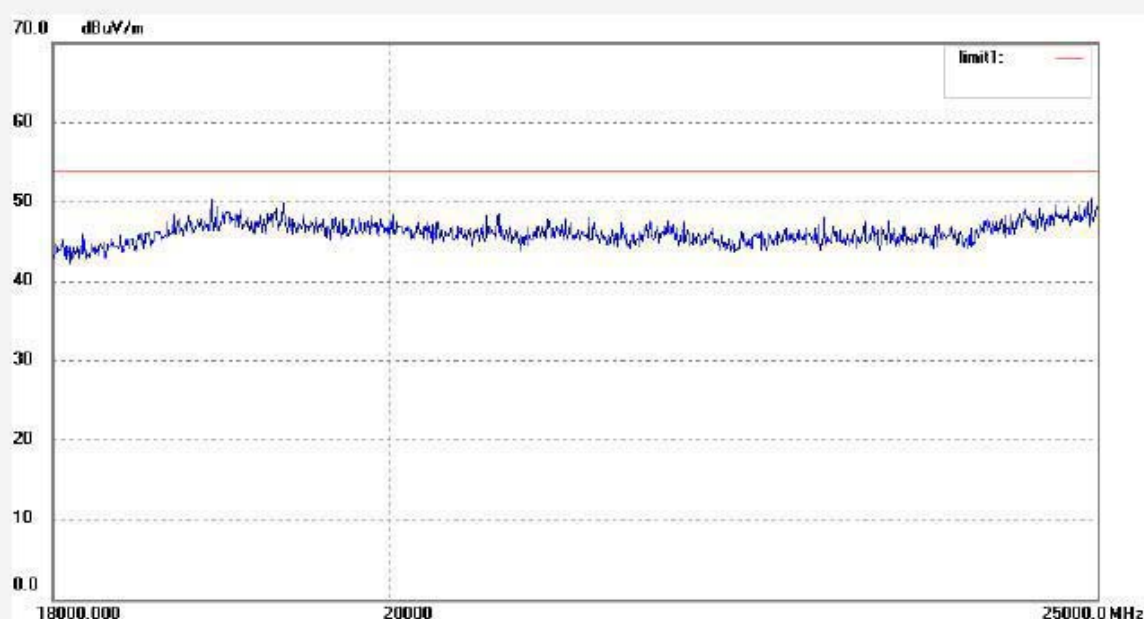
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Time: 10/50/21

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
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Job No.: RTTE #809

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2402MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

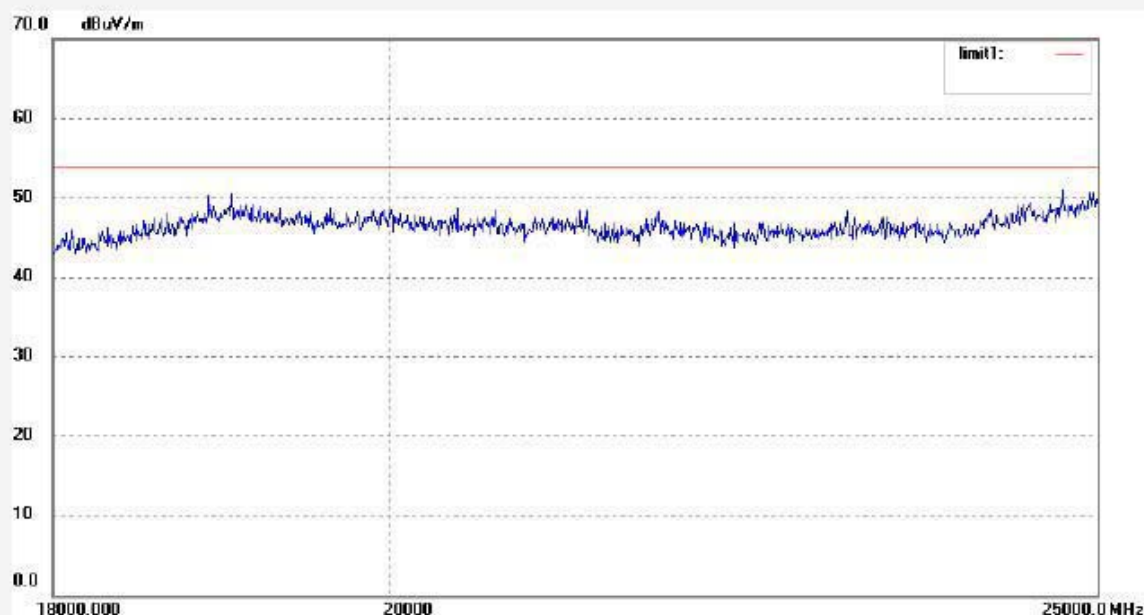
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Time: 10/47/38

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
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Site: 966 chamber
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Job No.: RTTE #770

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2441MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

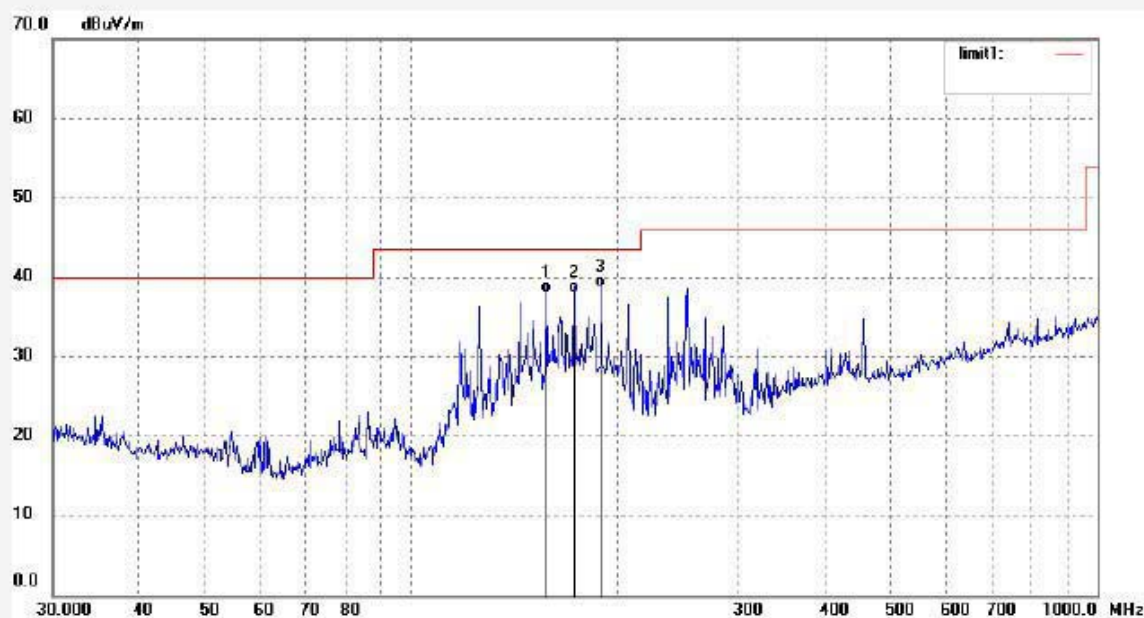
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Time: 17/00/35

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	158.5288	23.56	14.59	38.15	43.50	-5.35	QP	
2	173.5974	23.28	14.74	38.02	43.50	-5.48	QP	
3	190.1074	23.97	14.87	38.84	43.50	-4.66	QP	


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Site: 966 chamber
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Job No.: RTTE #769

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2441MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

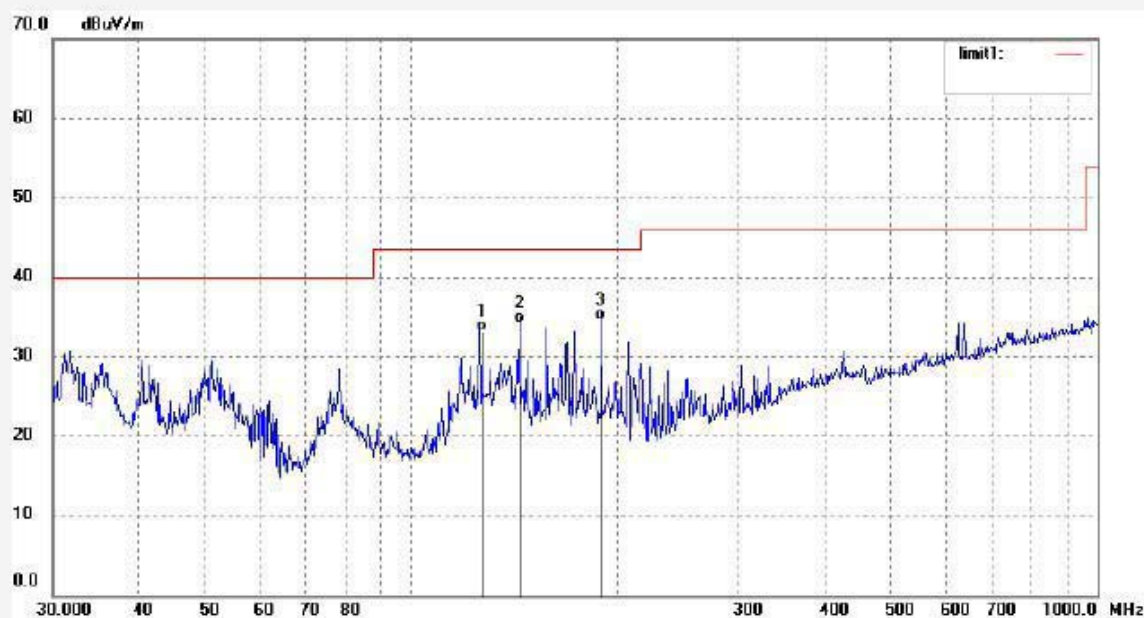
Date: 08/11/26/

Time: 16/58/58

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	126.8058	18.09	15.01	33.10	43.50	-10.40	QP	
2	144.7760	19.68	14.48	34.16	43.50	-9.34	QP	
3	190.1075	19.74	14.87	34.61	43.50	-8.89	QP	


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 Fax:+86-0755-26503396

Job No.: RTTE #806

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2441MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

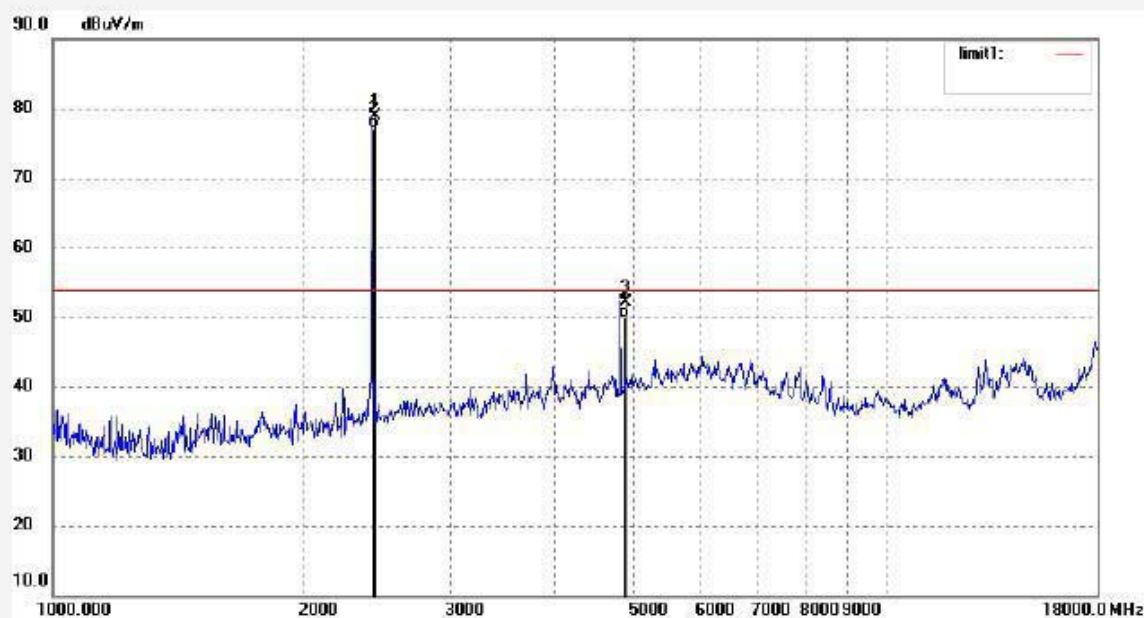
Date: 08/11/27/

Time: 10/35/06

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2441.023	86.23	-7.35	78.88	-	-	peak	
2	2441.023	84.38	-7.35	77.03	-	-	AVG	
3	4882.041	52.06	0.14	52.20	74.00	-21.80	peak	
4	4882.041	49.78	0.14	49.92	54.00	-4.08	AVG	



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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.: RTTE #805

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2441MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

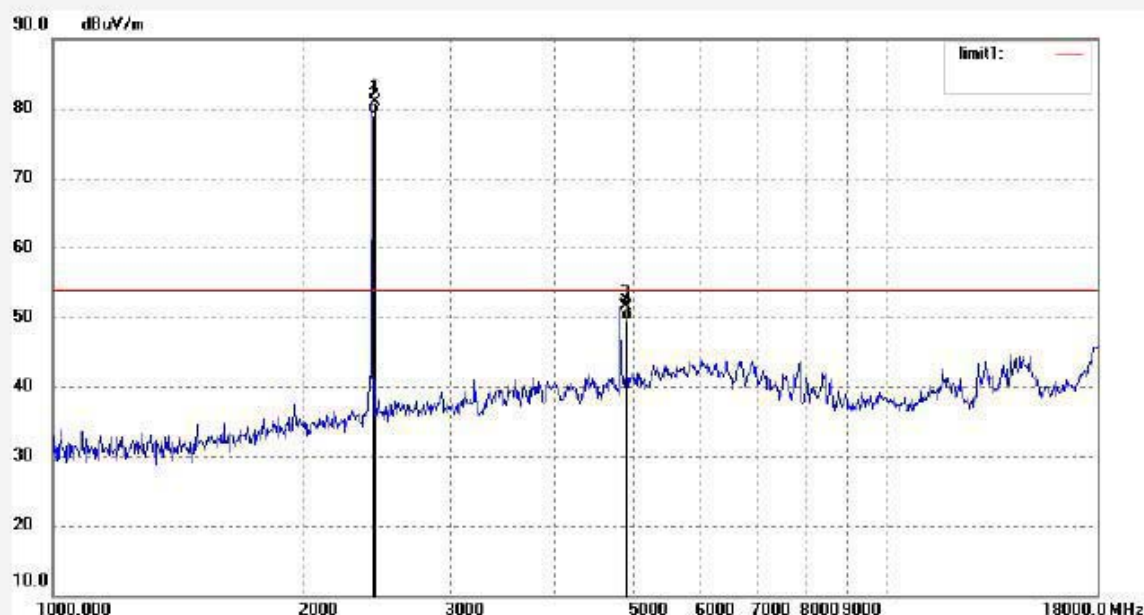
Date: 08/11/27/

Time: 10/31/57

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2441.023	88.25	-7.35	80.90	-	-	peak	
2	2441.023	86.42	-7.35	79.07	-	-	AVG	
3	4882.041	51.44	0.14	51.58	74.00	-22.42	peak	
4	4882.041	49.40	0.14	49.54	54.00	-4.46	AVG	


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

Job No.: RTTE #811

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2441MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

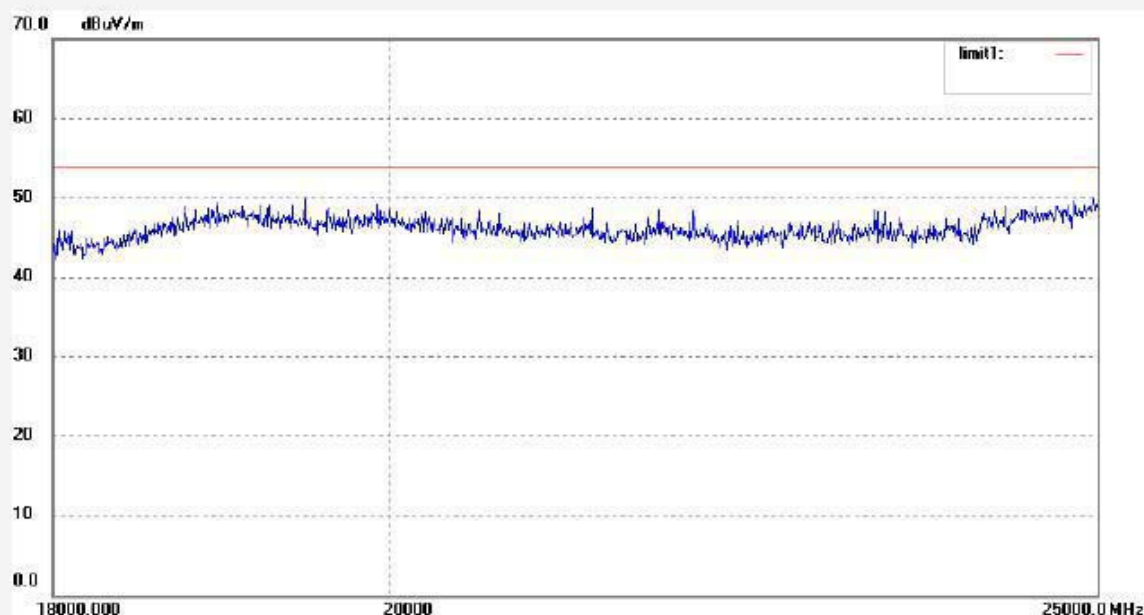
Date: 08/11/27/

Time: 10/53/39

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	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.: RTTE #812

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2441MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

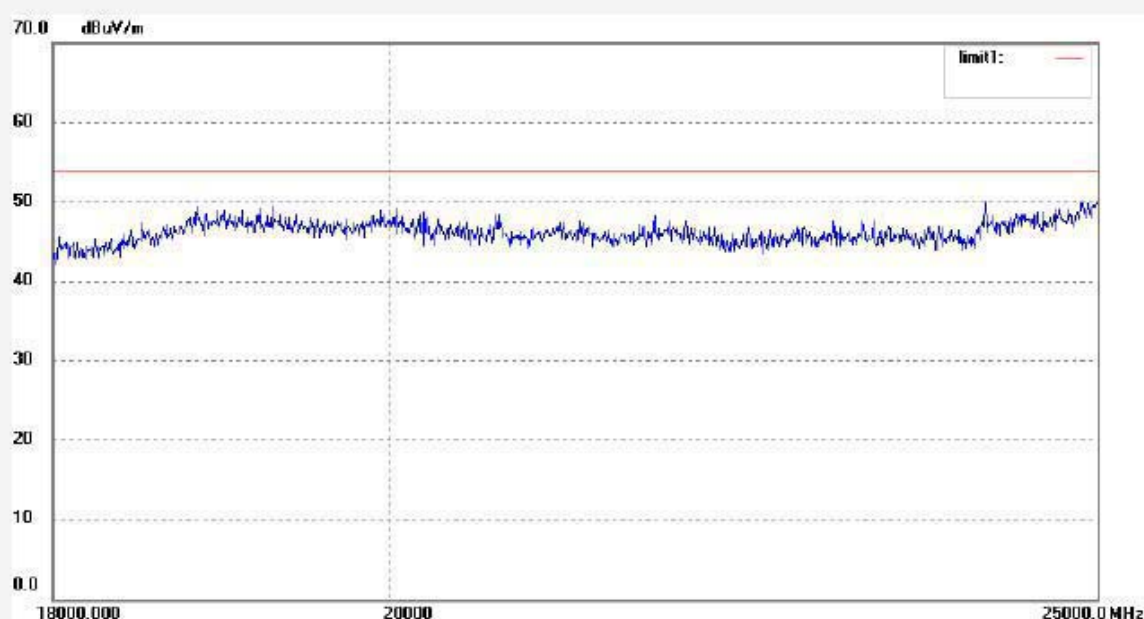
Date: 08/11/27/

Time: 10/56/23

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	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.: RTTE #771

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2480MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

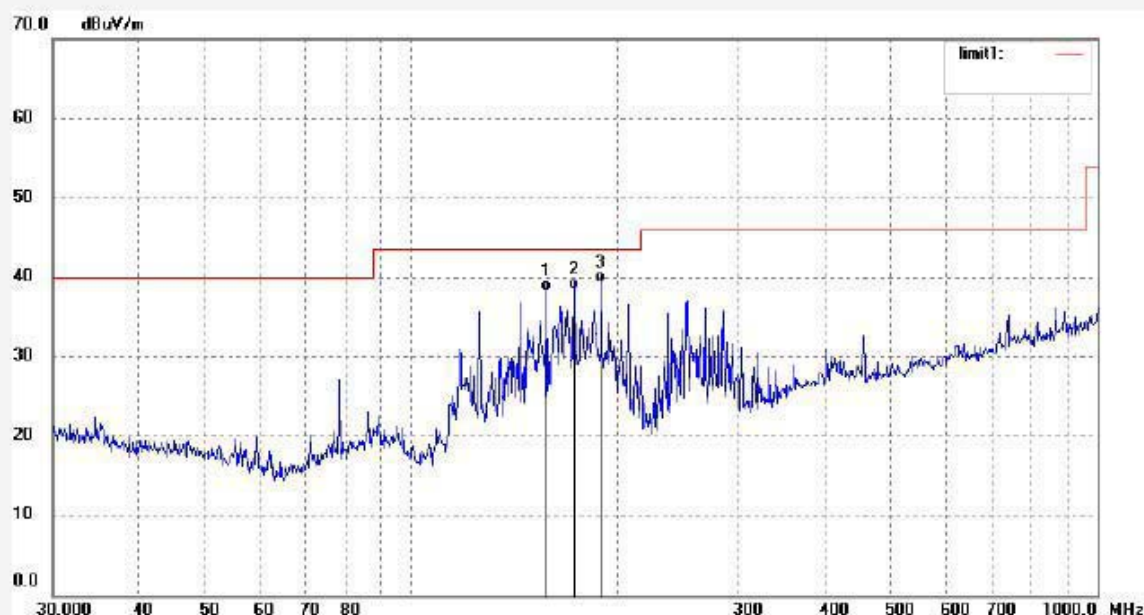
Date: 08/11/26/

Time: 17/03/24

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	158.5288	23.61	14.59	38.20	43.50	-5.30	QP	
2	173.5974	23.67	14.74	38.41	43.50	-5.09	QP	
3	190.1074	24.41	14.87	39.28	43.50	-4.22	QP	



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

Job No.: RTTE #772

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2480MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

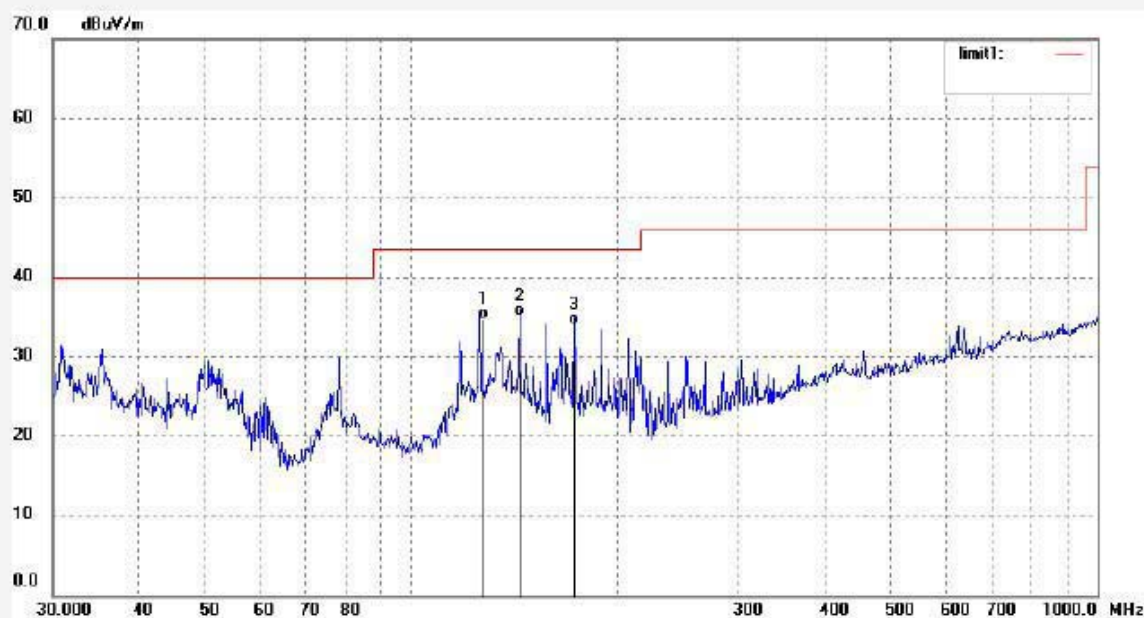
Date: 08/11/26/

Time: 17/07/02

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	126.8058	19.77	15.01	34.78	43.50	-8.72	QP	
2	144.7760	20.57	14.48	35.05	43.50	-8.45	QP	
3	173.5975	19.28	14.74	34.02	43.50	-9.48	QP	



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

Job No.: RTTE #807

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2480MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

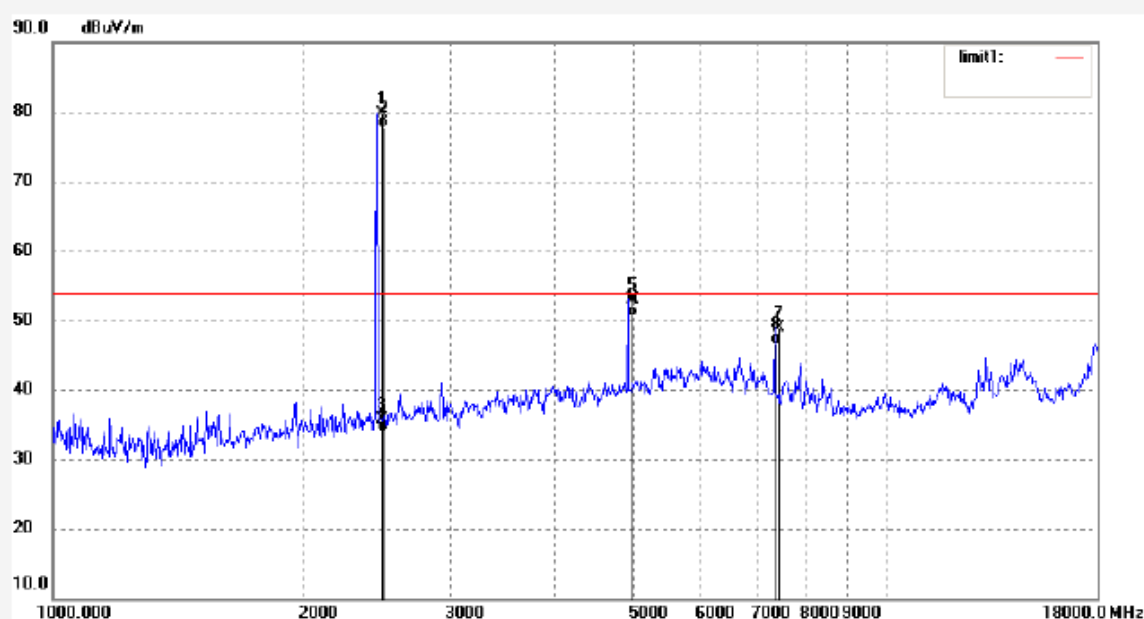
Date: 08/11/27/

Time: 10/38/37

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2480.021	87.00	-7.37	79.63	-	-	peak	
2	2480.021	85.11	-7.37	77.74	-	-	AVG	
3	2483.500	43.03	-7.37	35.66	74.00	-38.34	peak	
4	2483.500	41.19	-7.37	33.82	54.00	-20.18	AVG	
5	4960.038	52.48	0.52	53.00	74.00	-21.00	peak	
6	4960.038	49.92	0.52	50.44	54.00	-3.56	AVG	
7	7440.057	45.28	3.69	48.97	74.00	-25.03	peak	
8	7440.057	42.89	3.69	46.58	54.00	-7.42	AVG	


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

Job No.: RTTE #808

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2480MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

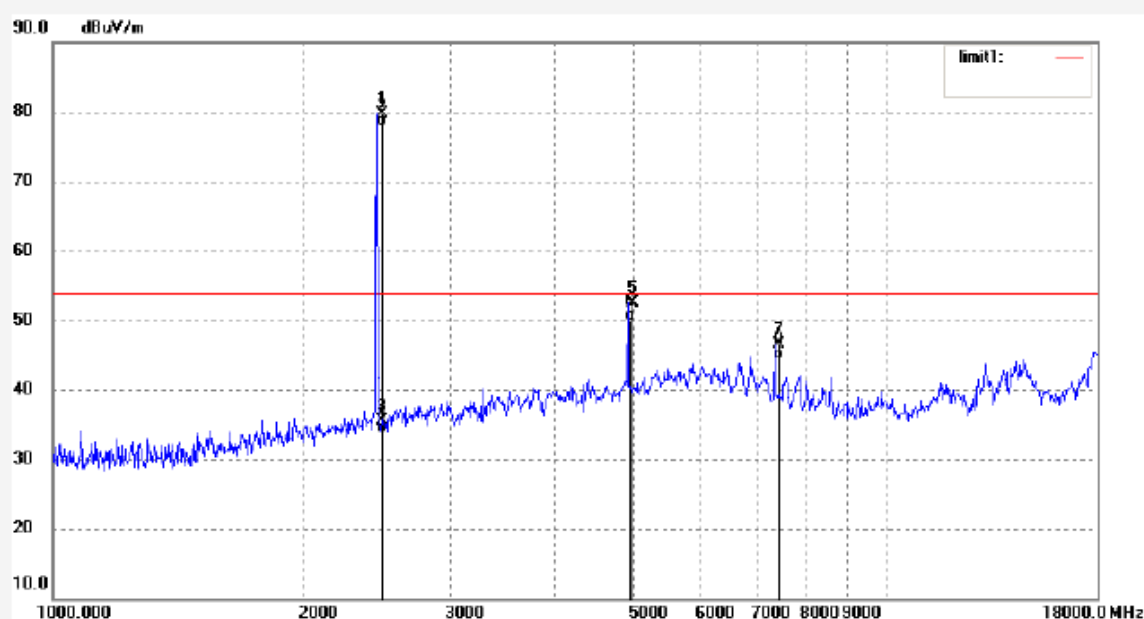
Date: 08/11/27/

Time: 10/41/44

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2480.021	87.10	-7.37	79.73	-	-	peak	
2	2480.021	85.18	-7.37	77.81	-	-	AVG	
3	2483.500	42.96	-7.37	35.59	74.00	-38.41	peak	
4	2483.500	41.14	-7.37	33.77	54.00	-20.23	AVG	
5	4960.038	51.89	0.52	52.41	74.00	-21.59	peak	
6	4960.038	49.46	0.52	49.98	54.00	-4.02	AVG	
7	7440.057	42.89	3.69	46.58	74.00	-27.42	peak	
8	7440.057	40.52	3.69	44.21	54.00	-9.79	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.: RTTE #814

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2480MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Horizontal

Power Source: DC 12V

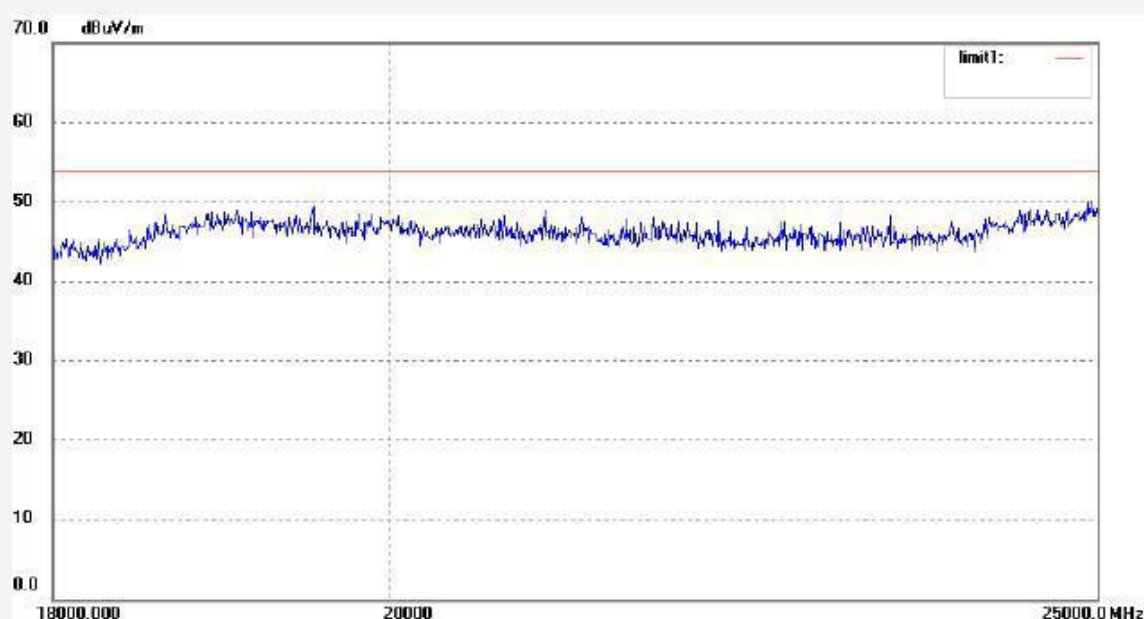
Date: 08/11/27/

Time: 11/03/10

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	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.: RTTE #813

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: BLUETOOTH HANDS FREE CAR KIT

Mode: TX 2480MHz

Model: DR03A

Manufacturer: Dictory

Polarization: Vertical

Power Source: DC 12V

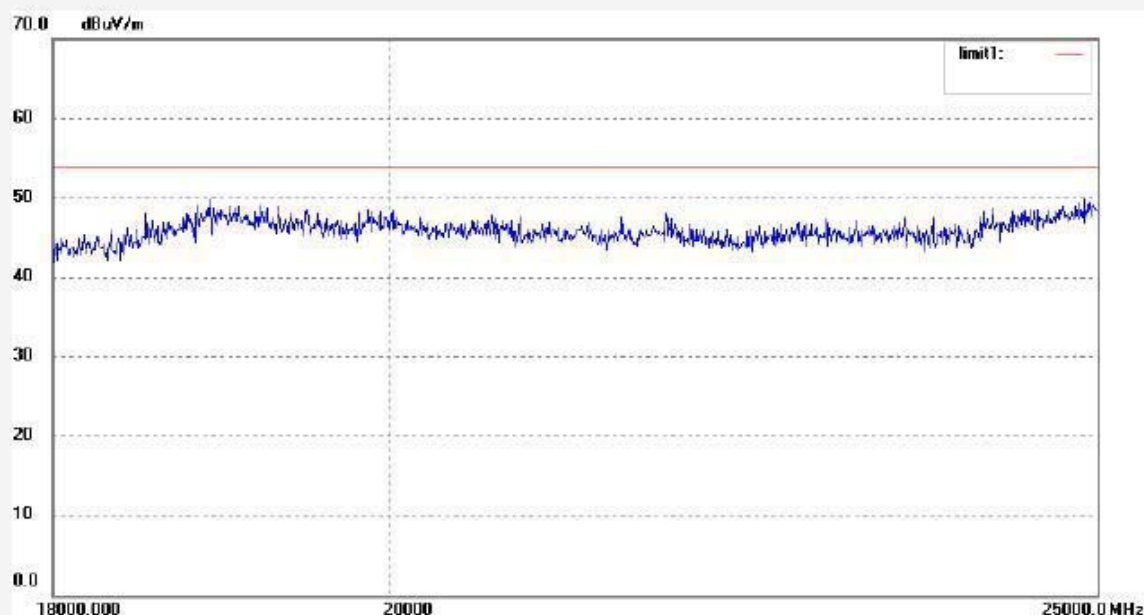
Date: 08/11/27/

Time: 10/59/39

Engineer Signature: Joe

Distance: 3m

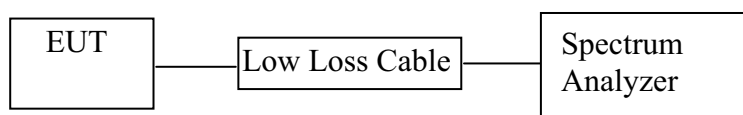
Note: Sample No.:084154 Report No.:ATE20082254



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
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11.BAND EDGE COMPLIANCE TEST

11.1.Block Diagram of Test Setup



(EUT: BLUETOOTH HANDS FREE CAR KIT)

11.2.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).

11.3.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.

11.3.1.BLUETOOTH HANDS FREE CAR KIT (EUT)

Model Number	:	DR03A
Serial Number	:	N/A
Manufacturer	:	Zhejiang Dictory Electronic Technology Co., Ltd.

11.4. Operating Condition of EUT

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

11.4.2. Turn on the power of all equipment.

11.4.3. 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.

11.5. Test Procedure

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

11.5.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz with convenient frequency span including 100kHz bandwidth from band edge.

11.5.3. The band edges was measured and recorded.

11.6. Test Result

Pass

Date of Test:	<u>November 29, 2008</u>	Temperature:	<u>25°C</u>
	<u>BLUETOOTH HANDS FREE CAR</u>		
EUT:	<u>KIT</u>	Humidity:	<u>50%</u>
Model No.:	<u>DR03A</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>TX (Hopping off)</u>	Test Engineer:	<u>Joe</u>

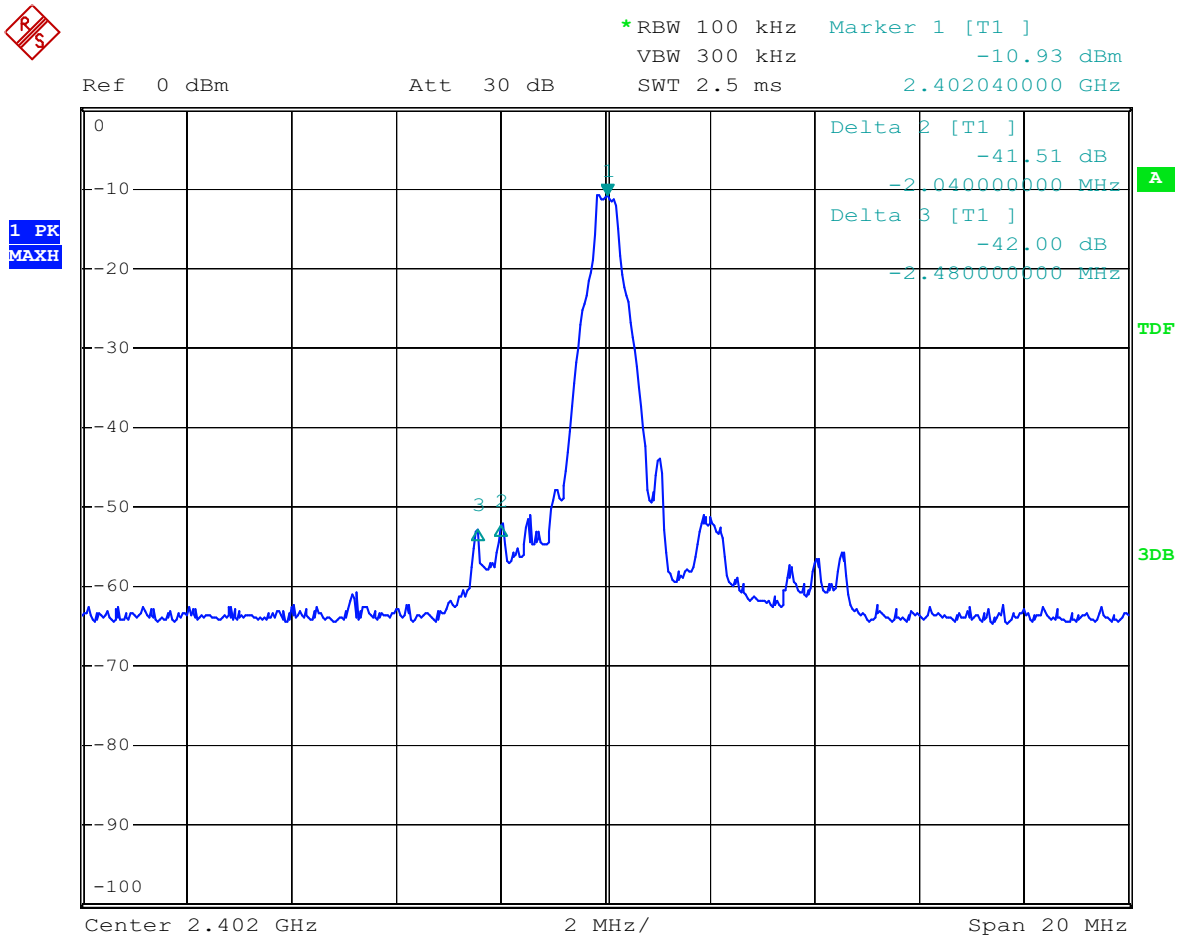
Conducted test

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	41.51	> 20dBc
2480	45.89	> 20dBc

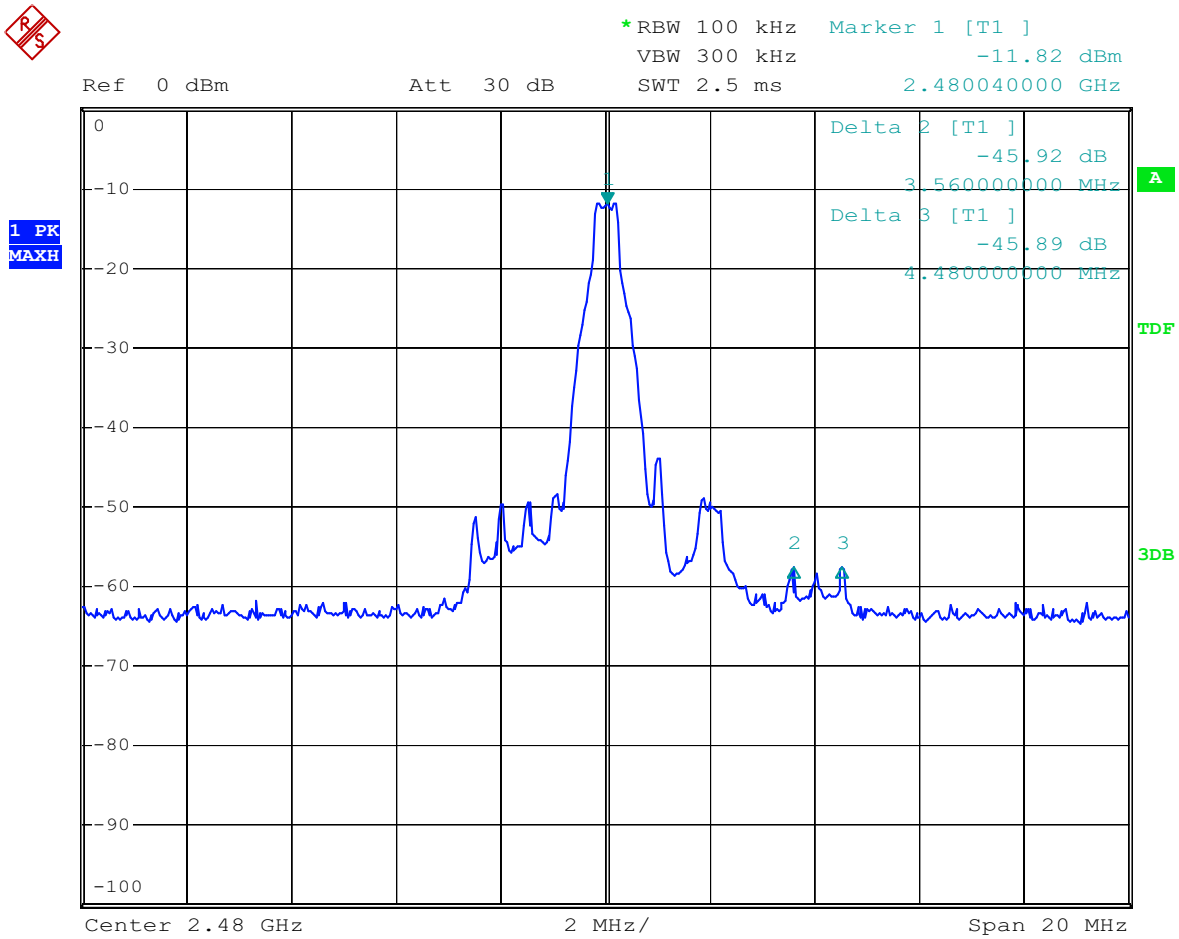
Date of Test:	<u>November 29, 2008</u>	Temperature:	<u>25°C</u>
	<u>BLUETOOTH HANDS FREE CAR</u>		
EUT:	<u>KIT</u>	Humidity:	<u>50%</u>
Model No.:	<u>DR03A</u>	Power Supply:	<u>DC 12V</u>
Test Mode:	<u>TX (Hopping on)</u>	Test Engineer:	<u>Joe</u>

Conducted test

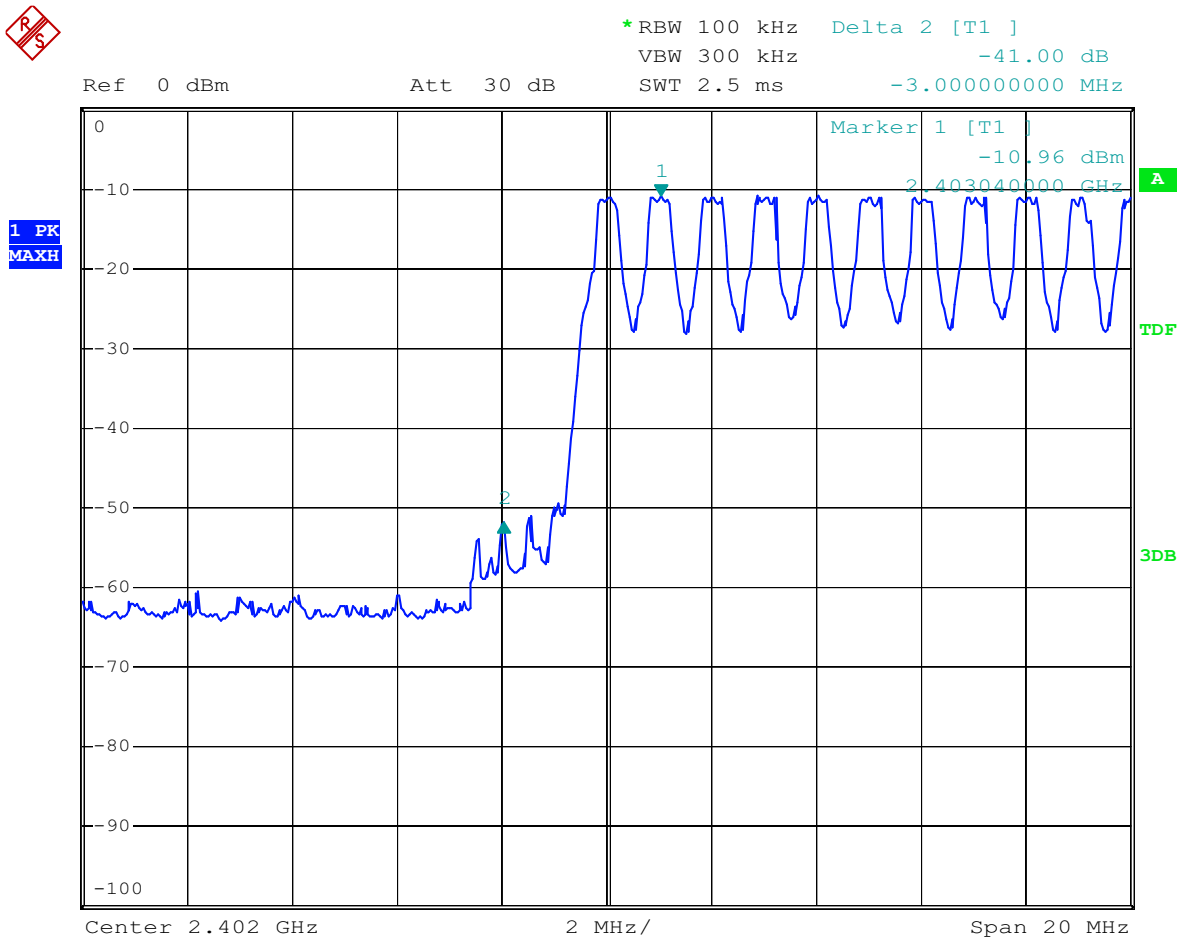
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	41.00	> 20dBc
2480	47.18	> 20dBc



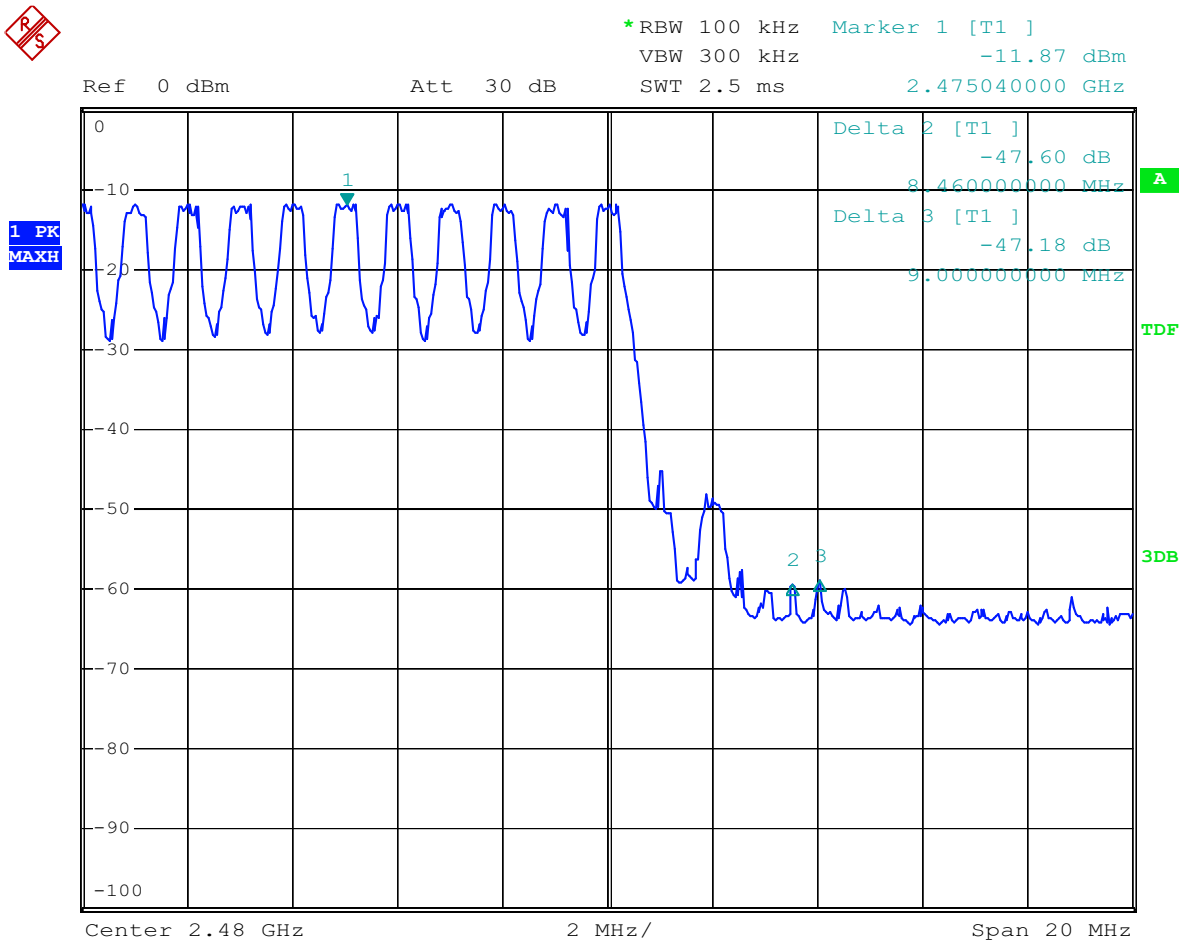
Date: 29.NOV.2008 10:05:07



Date: 29.NOV.2008 10:01:53



Date: 29.NOV.2008 10:30:31



Date: 29.NOV.2008 10:15:55

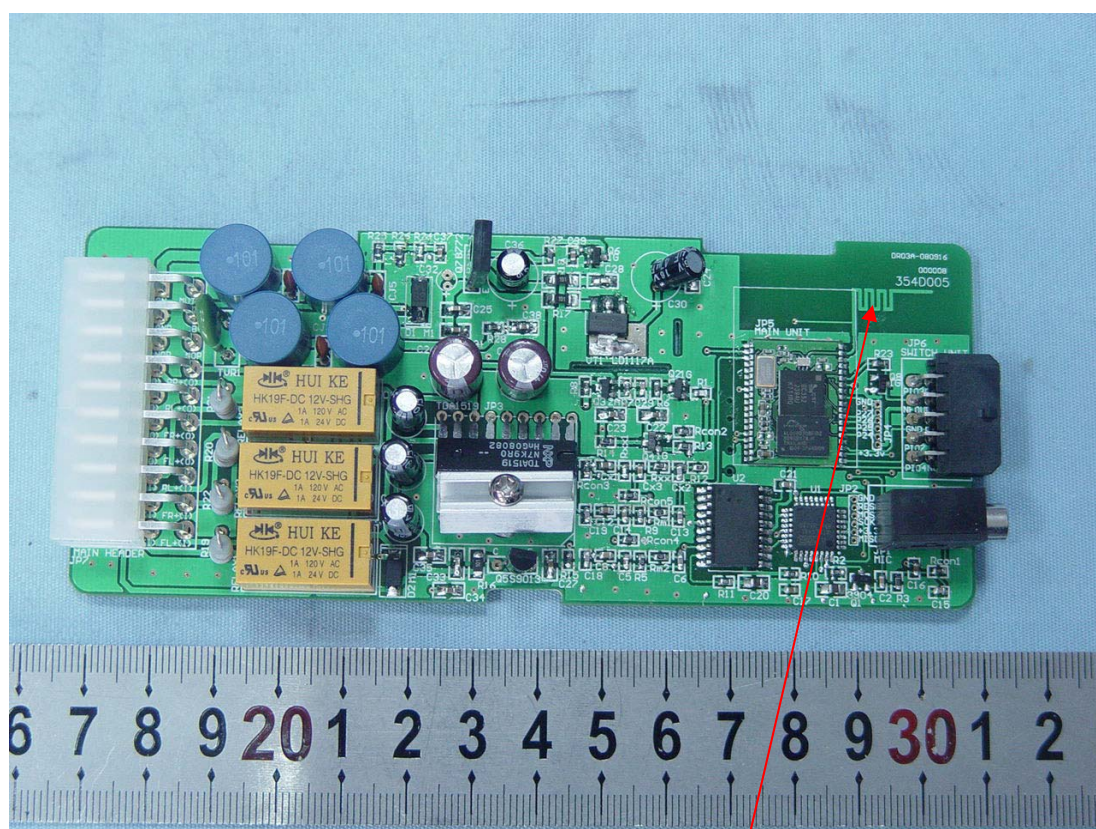
12.ANTENNA REQUIREMENT

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

The antenna is PCB Layout antenna, no consideration of replacement. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna