APPLICATION CERTIFICATION FCC & IC
On Behalf of
Edifier International Limited

Multimedia Speaker

Model No.: S3000, S3000 Pro

FCC ID: Z9G-EDF74
IC: 10004A-EDF74

Prepared for	:	Edifier International Limited
Address	:	P.O. Box 6264 General Post Office Hong Kong
Prepared by	:	Shenzhen Accurate Technology Co., Ltd.
Address	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.
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Report No.	:	ATE20181572
Date of Test	:	Aug. 04, 2018--Aug. 22, 2018
Date of Report	:	Aug. 24, 2018

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Description Page

Test Report Certification

Applicant	:	Edifier International Limited
Address	:	P.O. Box 6264 General Post Office Hong Kong
Product	:	Multimedia Speaker
Model No.	:	S3000, S3000 Pro
Trade name	:	EDIFIER

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247
FCC Rules and Regulations Part 15 Subpart E Section 15.407
KDB 789033 D02 General UNII Test Procedures New Rules v01r04
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10: 2013
RSS-247 Issue 2 February 2017
RSS-Gen Issue 5 April 2018

The device described above is tested by Shenzhen 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 and RSS-247 limits. The measurement results are contained in this test report and Shenzhen 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 & IC requirements.

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

Date of Test :	Aug. 04, 2018--Aug. 22, 2018
Date of Report:	Aug. 24, 2018
Prepared by :	(Tim Zhang, Engineer)
Approved & Authorized Signer :	(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

Technical Specification of Bluetooth (BDR & EDR mode)

Technical Specification	Value
Kind of Equipment	Multimedia Speaker
Type Designation	S3000, S3000 Pro
Operating Frequency band	2402~ 2480MHz
Number of Channels	79
Channel separation	1MHz
Operation Voltage	AC 100-240V～50/60Hz 800mA
Modulation	FHSS (GFSK, 8DPSK, π/4DQPSK)
Bluetooth version	4.1, BDR & EDR
Antenna Gain	-0.29dBi
Antenna Type	Internal Antenna

Technical Specification of 5.8GHz

Technical Specification	Value
Kind of Equipment	Multimedia Speaker
Type Designation	S3000, S3000 Pro
Operating Frequency band	5736MHz ~ 5814MHz
Operating Frequency	5736MHz, 5762MHz, 5814MHz
Number of Channel	3
Operation Voltage	AC 100-240V～50/60Hz 800mA
Modulation	QPSK
Antenna Gain	3.2dBi
Antenna Type	Internal Antenna
Number of Antenna	2 (Only 'one' antenna is selected for use at any one time)

HVIN : S3000, S3000 Pro

Applicant : Edifier International Limited
Address : P.O. Box 6264 General Post Office Hong Kong

1.2.Model difference declaration

S3000, S3000 Pro are identical in PCB motherboard, driver IC, RF module and Enclosure except the model number is different.

1.3.Accessory and Auxiliary Equipment

Notebook PC:	Manufacturer: Lenovo M/N: ThinkPad X240 S/N:n.a

1.4.Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358 Listed by Innovation, Science and Economic Development Canada (ISEDC) The Registration Number is 5077A-2 Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193 Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	:	Shenzhen Accurate Technology Co., Ltd.
Site Location	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.5.Measurement Uncertainty

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

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 06, 2018	Jan. 05, 2019
EMI Test Receiver	Rohde& Schwarz	ESR	101817	Jan. 06, 2018	Jan. 05, 2019
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 06, 2018	Jan. 05, 2019
Pre-Amplifier	Agilent	8447D	294A10619	Jan. 06, 2018	Jan. 05, 2019
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 06, 2018	Jan. 05, 2019
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 06, 2018	Jan. 05, 2019
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 06, 2018	Jan. 05, 2019
Open Switch and Control Unit	Rohde&Schwarz	OSP120 + OSP-B157	101244 + 100866	Jan. 06, 2018	Jan. 05, 2019
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 06, 2018	Jan. 05, 2019
Highpass Filter	Wainwright Instruments	WHKX3.6/18G-10SS	N/A	Jan. 06, 2018	Jan. 05, 2019
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2375/2510-60/11SS	N/A	Jan. 06, 2018	Jan. 05, 2019
Conducted Emission Measurement Software: ES-K1 V1.71					
Radiated Emission Measurement Software: EZ_EMC V1.1.4.2					

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

Test mode 1: **Transmitting mode**
Low Channel: 2402MHz
Middle Channel: 2441MHz
High Channel: 2480MHz
Hopping

Test mode 2: **Transmitting mode**
Low Channel: 5736MHz
Middle Channel: 5762MHz
High Channel: 5814MHz

3.2.Configuration and peripherals

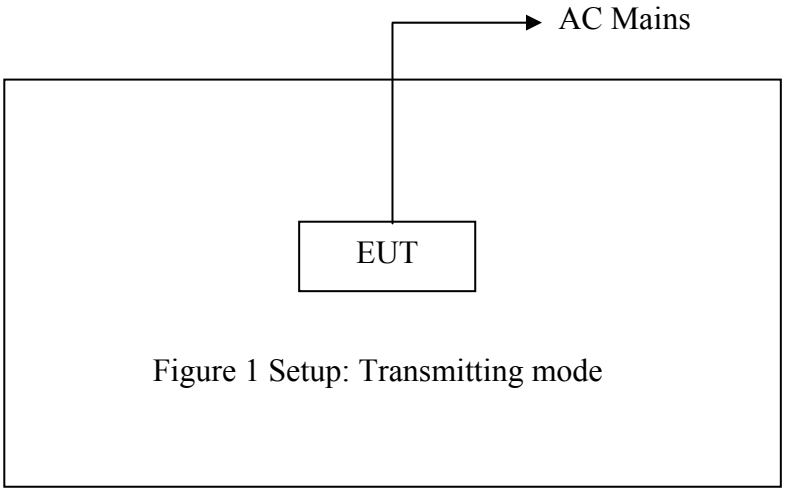


Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

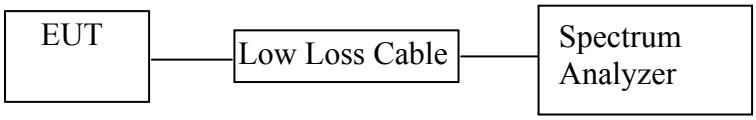
2.4G Bluetooth FCC & IC Rules	Description of Test	Result
Section 15.207 RSS-Gen Section 8.8	AC Power Line Conducted Emission Test	Compliant
Section 15.247(a)(1) RSS-247 Section 5.1(a)	20dB Bandwidth Test	Compliant
Section 15.247(a)(1) RSS-247 Section 5.1(b)	Carrier Frequency Separation Test	Compliant
Section 15.247(a)(1)(iii) RSS-247 Section 5.1(d)	Number Of Hopping Frequency Test	Compliant
Section 15.247(a)(1)(iii) RSS-247 Section 5.1(d)	Dwell Time Test	Compliant
Section 15.247(b)(1) RSS-247 Section 5.4(b)	Maximum Peak Output Power Test	Compliant
Section 15.247(d) Section 15.209 RSS-247 Section 5.5 RSS-Gen Section 6.13	Radiated Emission Test	Compliant
RSS-Gen Section 6.7	99% Occupied Bandwidth	Compliant
Section 15.247(d) RSS-247 Section 5.5	Band Edge Compliance Test	Compliant
Section 15.247(d) RSS-247 Section 5.5	Conducted Spurious Emission Test	Compliant
Section 15.203 RSS-Gen Section 6.8	Antenna Requirement	Compliant

5.8G FCC & IC Rules	Description of Test	Result
Section 15.207 RSS-Gen Section 8.8	AC power Line Conducted Emission	Compliant
Section 15.403(i), 15.407(e) RSS-247 Section 6.2.4.1	6dB Occupied Bandwidth	Reference to FCC ID: Z9G-EDF24 IC: 10004A- EDF24
---	Duty cycle	Reference to FCC ID: Z9G-EDF24 IC: 10004A- EDF24
KDB 789033 §D RSS-Gen Section 6.7	99% occupied Bandwidth	Reference to FCC ID: Z9G-EDF24 IC: 10004A- EDF24
Section 15.407(a)(3) RSS-247 Section 6.2.4.1	Maximum conducted (average) output power	Compliant
Section 15.407(a)(3) 15.407(a)(4) RSS-247 Section 6.2.4.1	Power Spectral Density	Reference to FCC ID: Z9G-EDF24 IC: 10004A- EDF24
Section 15.407(b)(4) Section 15.407(b)(6) Section 15.407(b)(7) Section 15.209 RSS-247 Section 6.2.4.2 RSS-Gen Section 8.9 RSS-Gen Section 8.10	Unwanted Emissions	Compliant
Section 15.407(b) RSS-Gen Section 8.9 RSS-Gen Section 8.10	Band Edge Compliance	Reference to FCC ID: Z9G-EDF24 IC: 10004A- EDF24
Section 15.407(g) RSS-Gen Section 6.11	Frequency Stability	Reference to FCC ID: Z9G-EDF24 IC: 10004A- EDF24
Section 15.203, Section 15.204(b), Section 15.204(c), Section 15.212(a), 2.929(b) RSS-Gen Section 6.8	Antenna Requirement	Reference to FCC ID: Z9G-EDF24 IC: 10004A- EDF24

Note: The product have 5G module, We only tested the Radiated Emission and Maximum conducted (average) output power, For other test data, please refer to the original report.

5. 20DB BANDWIDTH TEST FOR 2.4G BT

5.1. Block Diagram of Test Setup



(EUT: Multimedia Speaker)

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. The Requirement For RSS-247 Section 5.1

RSS-247 Section 5.1(a): The bandwidth of a frequency hopping channel is the 20dB emission bandwidth, measured with the hopping stopped. The system's radio frequency (RF) bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. 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.

5.4. EUT Configuration on Measurement

The 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.

5.5. Operating Condition of EUT

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

5.5.2. Turn on the power of all equipment.

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

5.6. Test Procedure

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

5.6.2. The RBW should be 1%~5% of OBW.

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

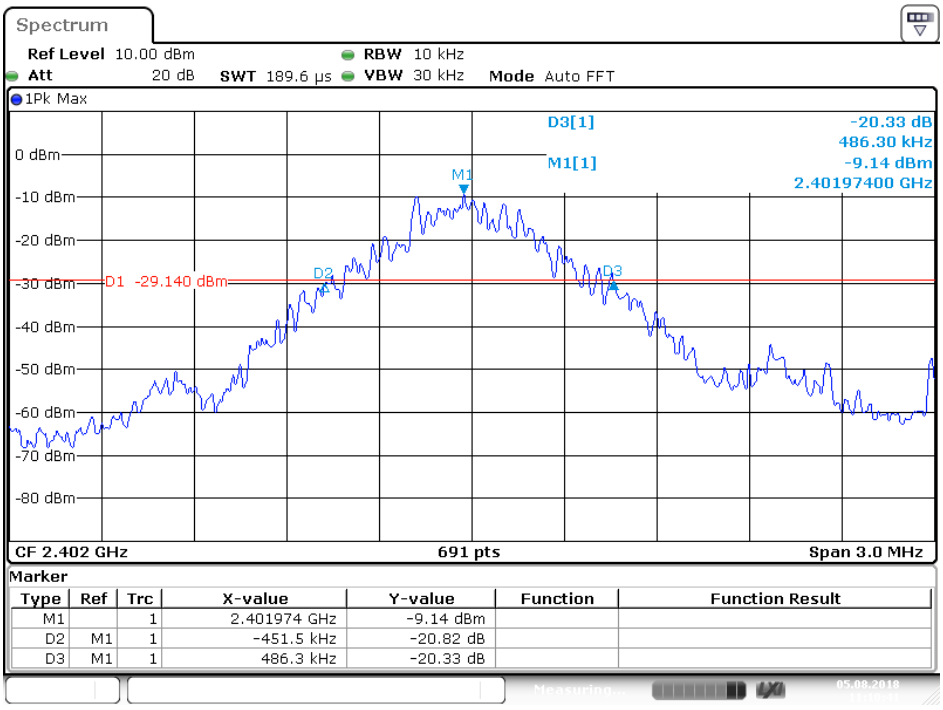
5.7. Test Result

Channel	Frequency (MHz)	BDR mode 20dB Bandwidth (MHz)	EDR mode 20dB Bandwidth (MHz)	Result
Low	2402	0.9378	1.2157	Pass
Middle	2441	0.9552	1.2287	Pass
High	2480	0.9595	1.2243	Pass

The spectrum analyzer plots are attached as below.

BDR Mode

Low channel



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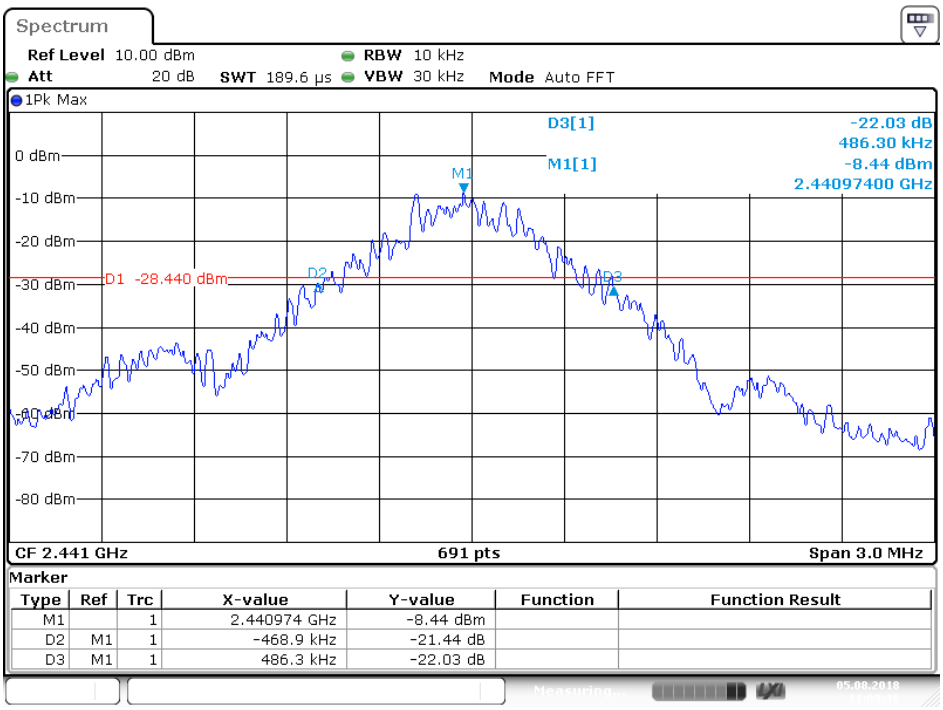
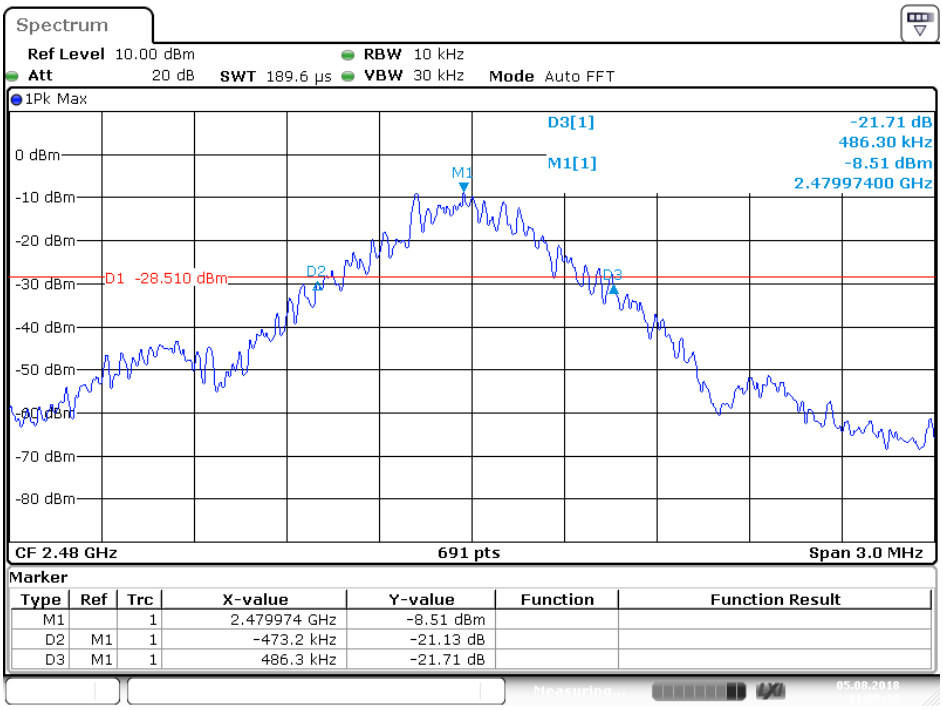
Middle channel



Date: 5.AUG.2018 11:09:36

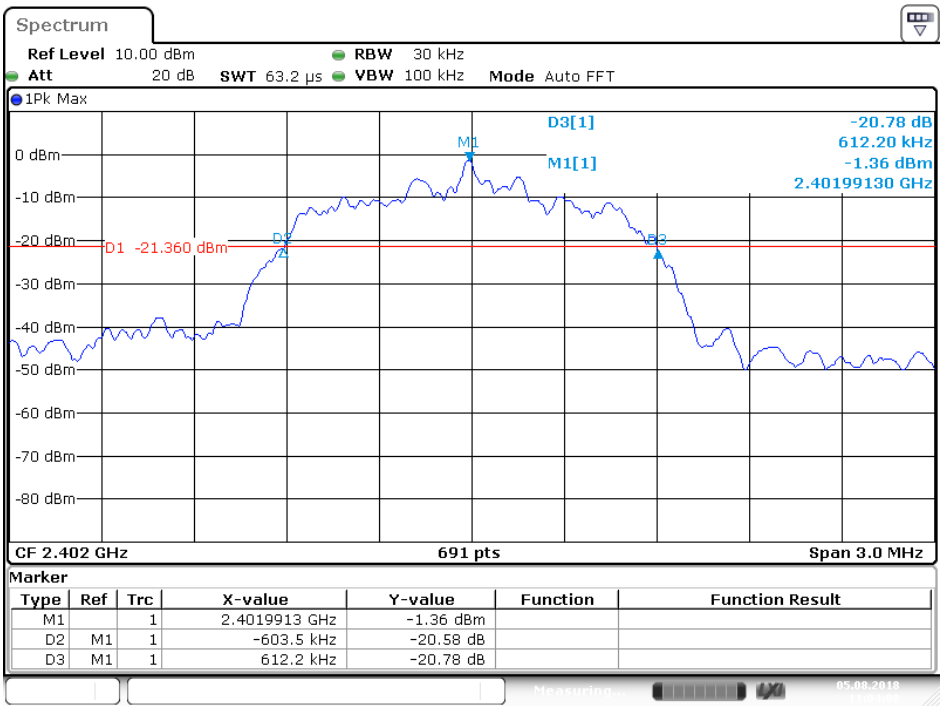
High channel



Date: 5.AUG.2018 11:08:30

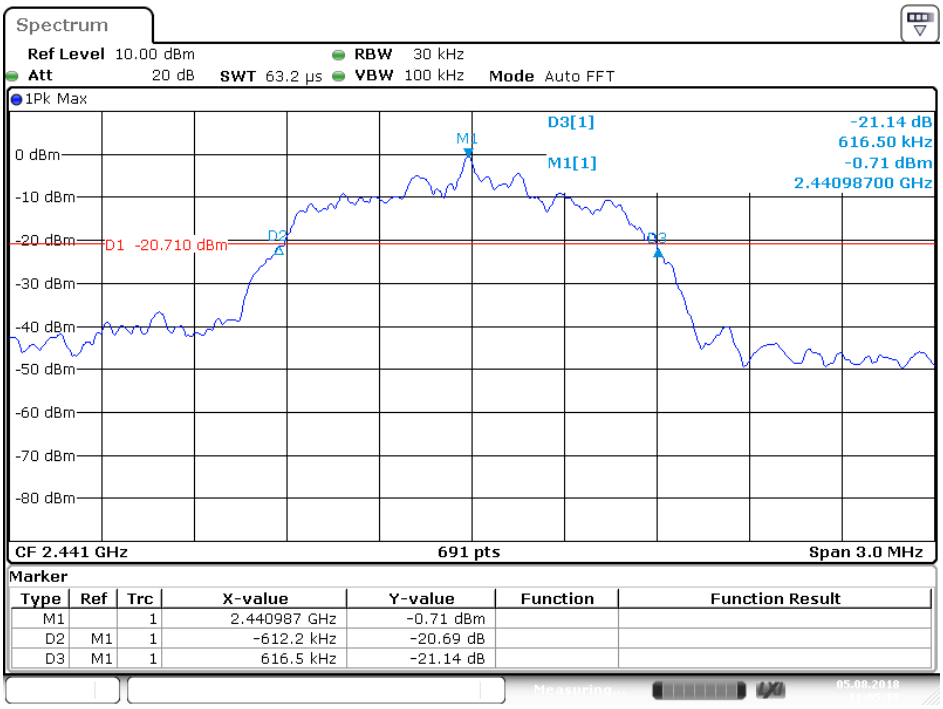
EDR Mode

Low channel



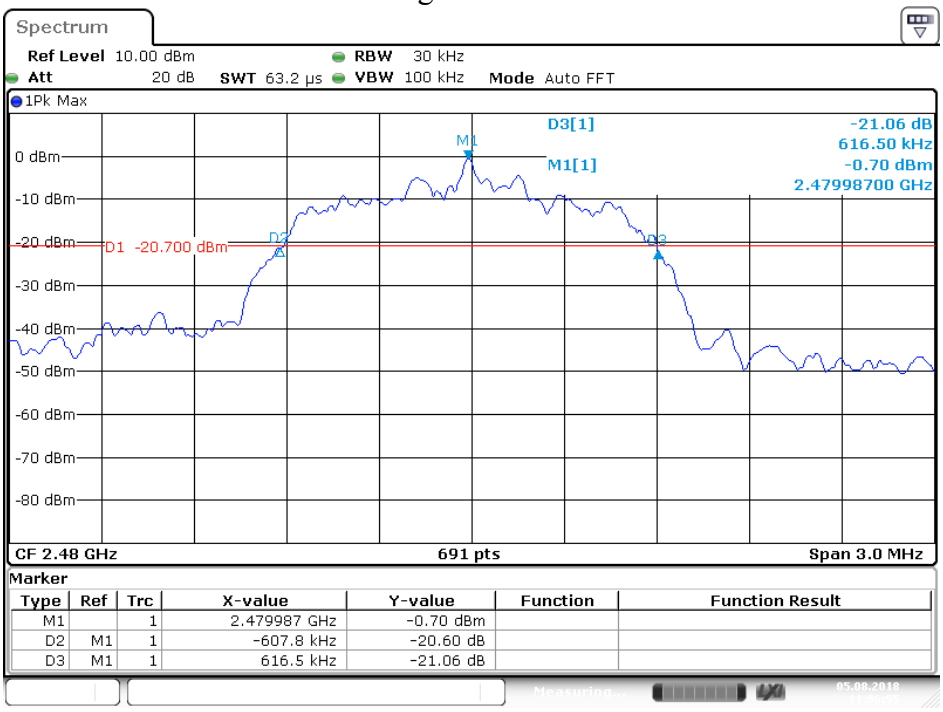
Date: 5.AUG.2018 11:04:08

Middle channel



Date: 5.AUG.2018 11:05:19

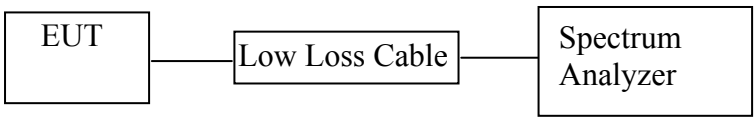
High channel



Date: 5.AUG.2018 11:06:55

6. CARRIER FREQUENCY SEPARATION TEST FOR 2.4G BT

6.1. Block Diagram of Test Setup



(EUT: Multimedia Speaker)

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. The Requirement For RSS-247 Section 5.1(b)

RSS-247 Section 5.1(b):FHSS 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, FHSs operating in the band 2400-2483.5 MHz 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

6.4. EUT Configuration on Measurement

The 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.

6.5.Operating Condition of EUT

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

6.5.2.Turn on the power of all equipment.

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

6.6.Test Procedure

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

6.6.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz. Adjust Span to 3MHz.

6.6.3.Set the adjacent channel of the EUT Maxhold another trace.

6.6.4.Measurement the channel separation

6.7.Test Result

BDR mode

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.0029	25KHz or 20dB bandwidth	PASS
	2403			
Middle	2440	1.0029	25KHz or20dB bandwidth	PASS
	2441			
High	2479	1.0029	25KHz or 20dB bandwidth	PASS
	2480			

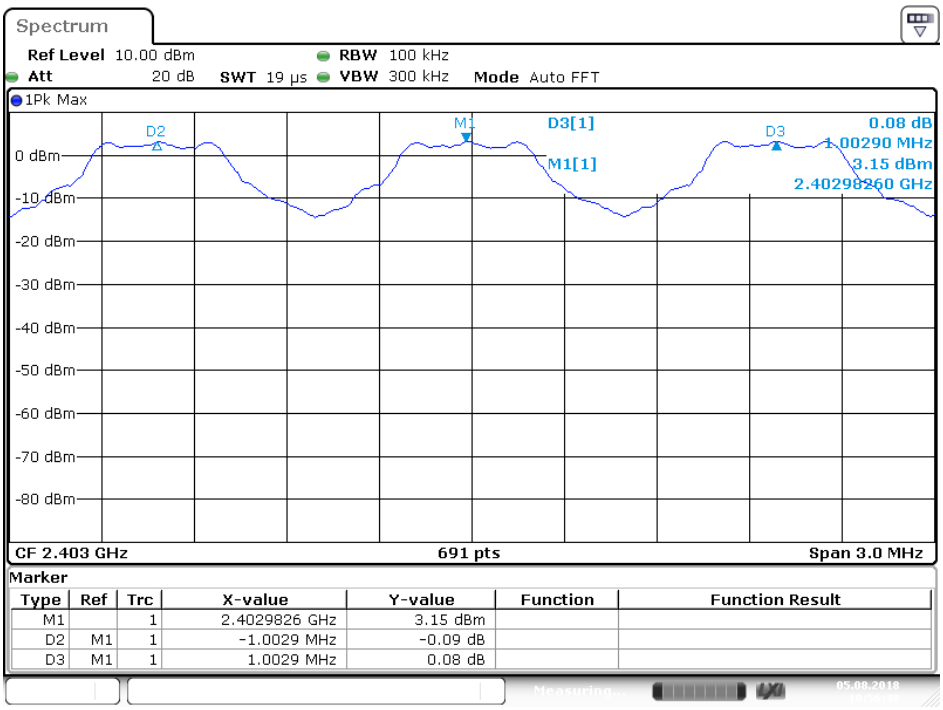
EDR mode

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.0029	25KHz or 20dB bandwidth	PASS
	2403			
Middle	2440	1.0029	25KHz or20dB bandwidth	PASS
	2441			
High	2479	1.0029	25KHz or 20dB bandwidth	PASS
	2480			

The spectrum analyzer plots are attached as below.

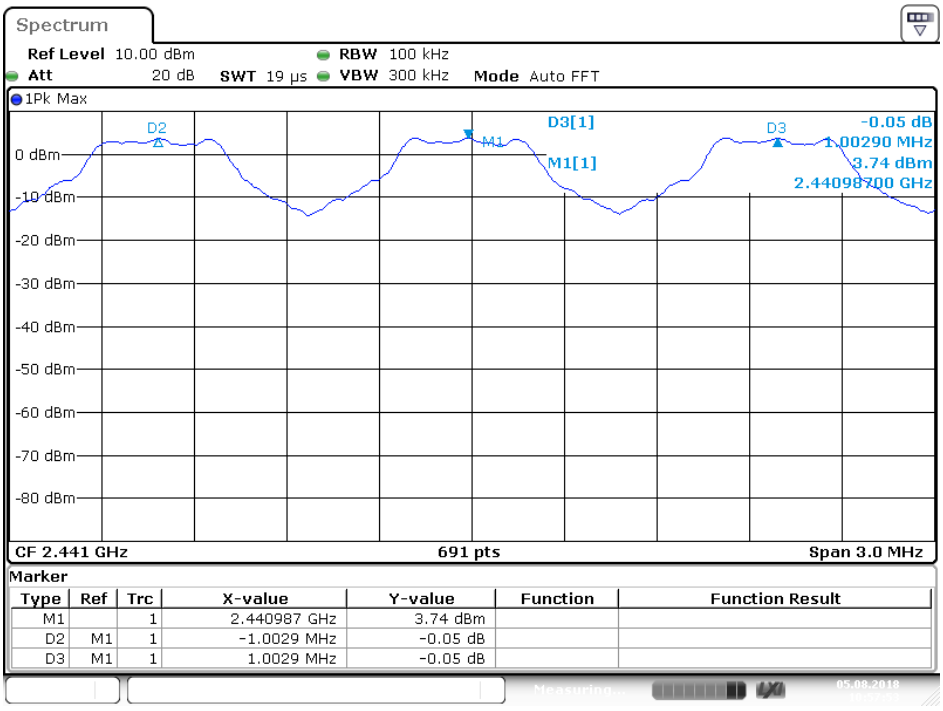
BDR Mode

Low channel



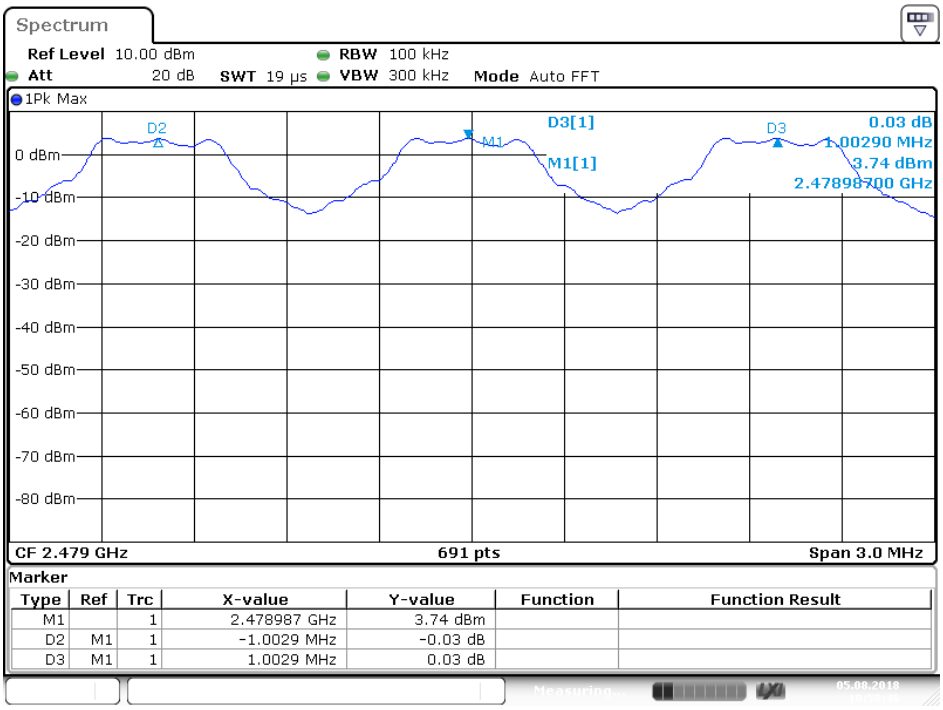
Date: 5.AUG.2018 10:56:48

Middle channel



Date: 5.AUG.2018 10:57:53

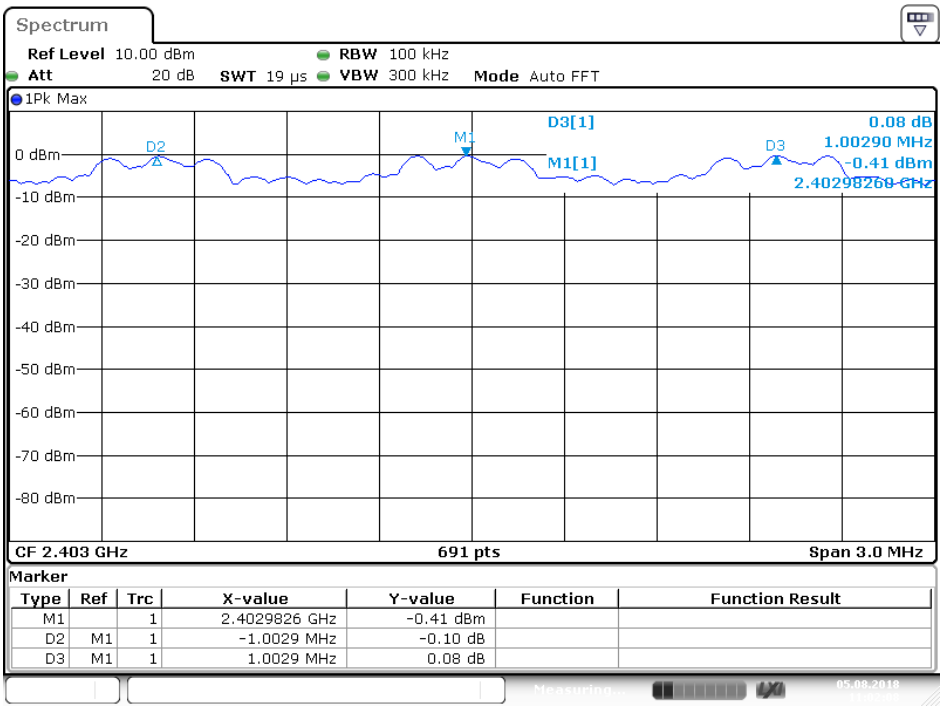
High channel



Date: 5.AUG.2018 10:58:46

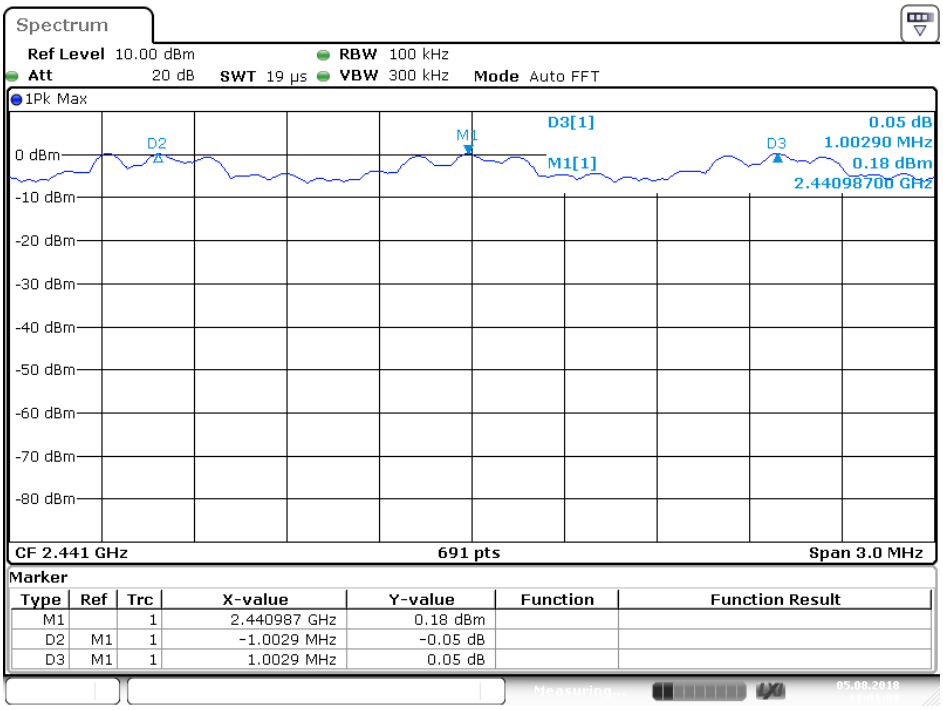
EDR Mode

Low channel



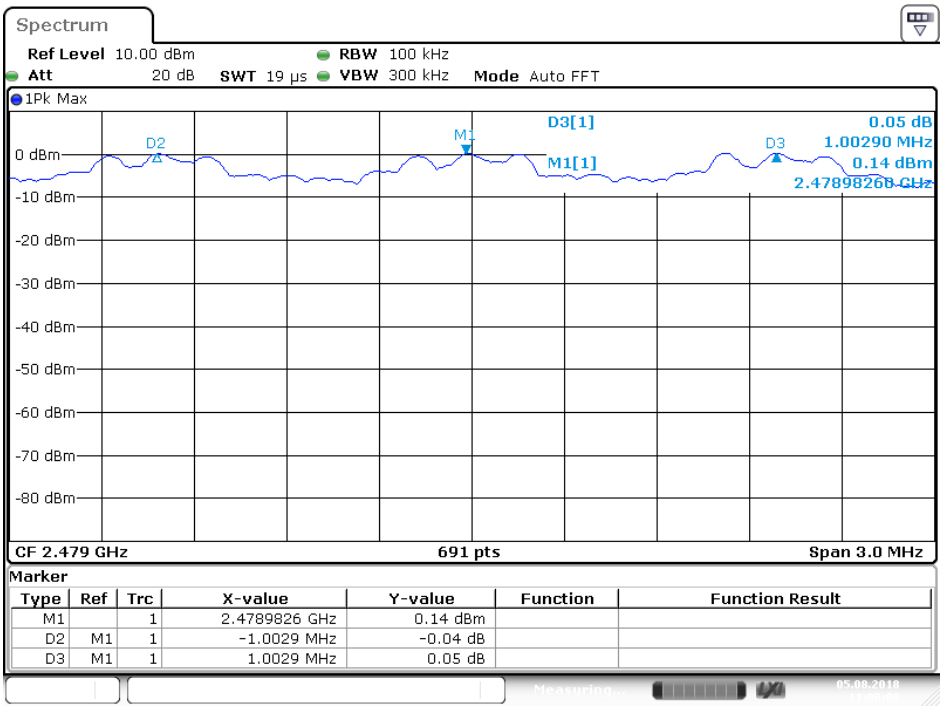
Date: 5.AUG.2018 11:02:08

Middle channel



Date: 5.AUG.2018 11:01:09

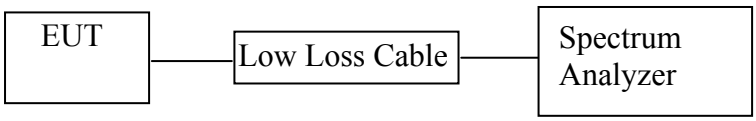
High channel



Date: 5.AUG.2018 10:59:59

7. NUMBER OF HOPPING FREQUENCY TEST FOR 2.4G BT

7.1. Block Diagram of Test Setup



(EUT: Multimedia Speaker)

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. The Requirement For RSS-247 Section 5.1(d)

RSS-247 Section 5.1(d): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

7.4. EUT Configuration on Measurement

The 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.

7.5. Operating Condition of EUT

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

7.5.2. Turn on the power of all equipment.

7.5.3. Let the EUT work in TX (Hopping on) modes measure it.

7.6. Test Procedure

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

7.6.2. Set the spectrum analyzer as Span=90MHz, RBW=100 kHz, VBW=300 kHz.

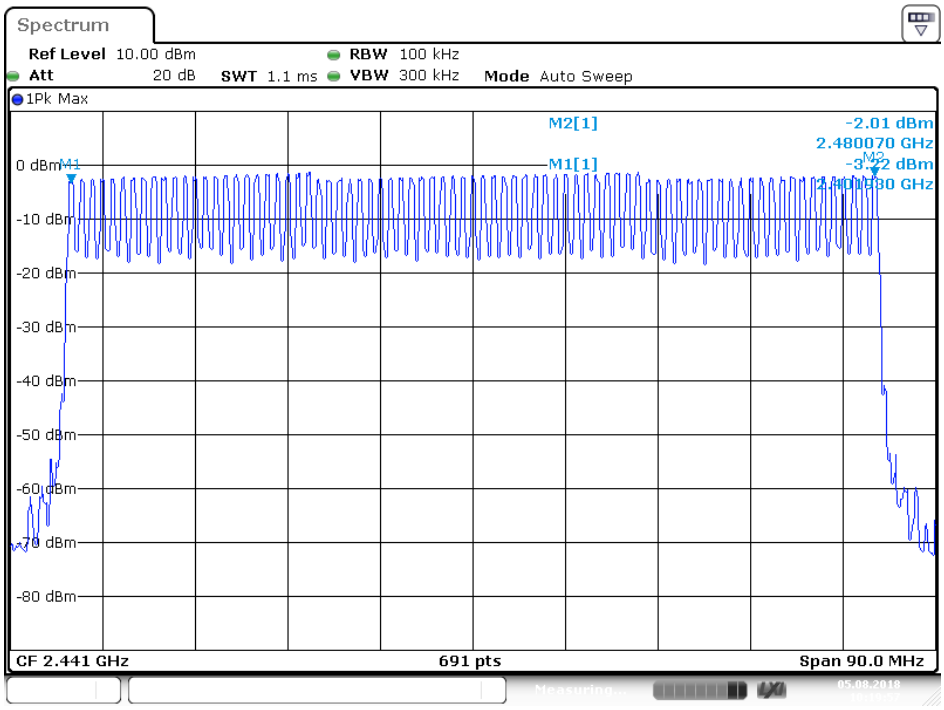
7.6.3. Max hold, view and count how many channel in the band.

7.7. Test Result

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

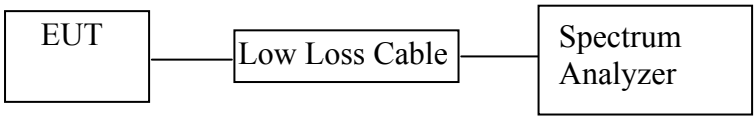
The spectrum analyzer plots are attached as below.

Number of hopping channels(GFSK)



8. DWELL TIME TEST FOR 2.4G BT

8.1. Block Diagram of Test Setup



(EUT: Multimedia Speaker)

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. The Requirement For Section RSS-247 Section 5.1(d)

RSS-247 Section 5.1(d): 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.

8.4. EUT Configuration on Measurement

The 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.

8.5.Operating Condition of EUT

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

8.5.2.Turn on the power of all equipment.

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

8.6.Test Procedure

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

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

8.6.3.Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=5ms, 10ms, 15ms. Get the pulse time.

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

8.7.Test Result

BDR Mode

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.44203	141.450	400
	2441	0.44203	141.450	400
	2480	0.43478	139.130	400
A period transmit time = 0.4 × 79 = 31.6 Dwell time = pulse time × (1600/(2*79))×31.6				
DH3	2402	1.7246	275.936	400
	2441	1.7101	273.616	400
	2480	1.7246	275.936	400
A period transmit time = 0.4 × 79 = 31.6 Dwell time = pulse time × (1600/(4*79))×31.6				
DH5	2402	2.9783	317.685	400
	2441	2.9565	315.360	400
	2480	2.9783	317.685	400
A period transmit time = 0.4 × 79 = 31.6 Dwell time = pulse time × (1600/(6*79))×31.6				

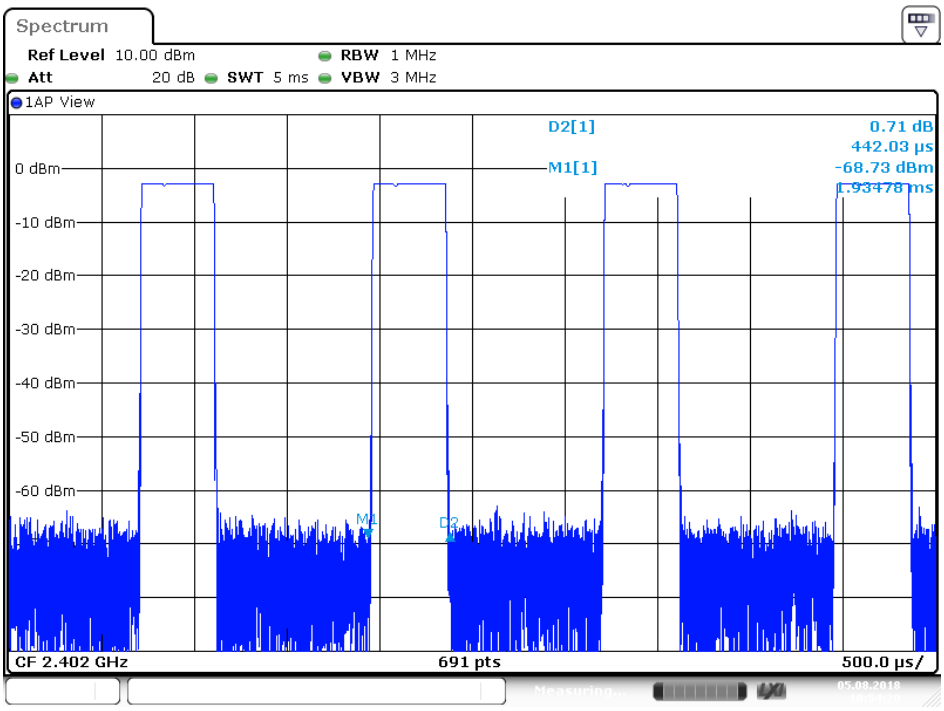
EDR Mode

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.44928	143.770	400
	2441	0.45652	146.086	400
	2480	0.45652	146.086	400
A period transmit time = 0.4 × 79 = 31.6 Dwell time = pulse time × (1600/(2*79))×31.6				
DH3	2402	1.7246	275.936	400
	2441	1.7246	275.936	400
	2480	1.7246	275.936	400
A period transmit time = 0.4 × 79 = 31.6 Dwell time = pulse time × (1600/(4*79))×31.6				
DH5	2402	2.9783	317.685	400
	2441	3.0000	320.000	400
	2480	3.0000	320.000	400
A period transmit time = 0.4 × 79 = 31.6 Dwell time = pulse time × (1600/(6*79))×31.6				

The spectrum analyzer plots are attached as below.

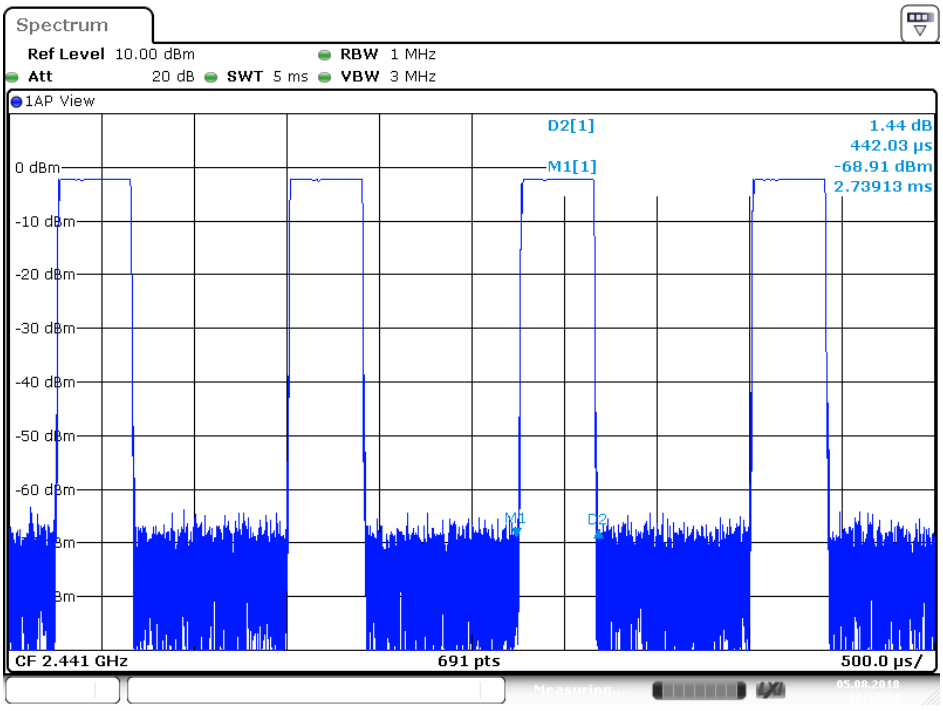
BDR Mode

DH1 Low channel



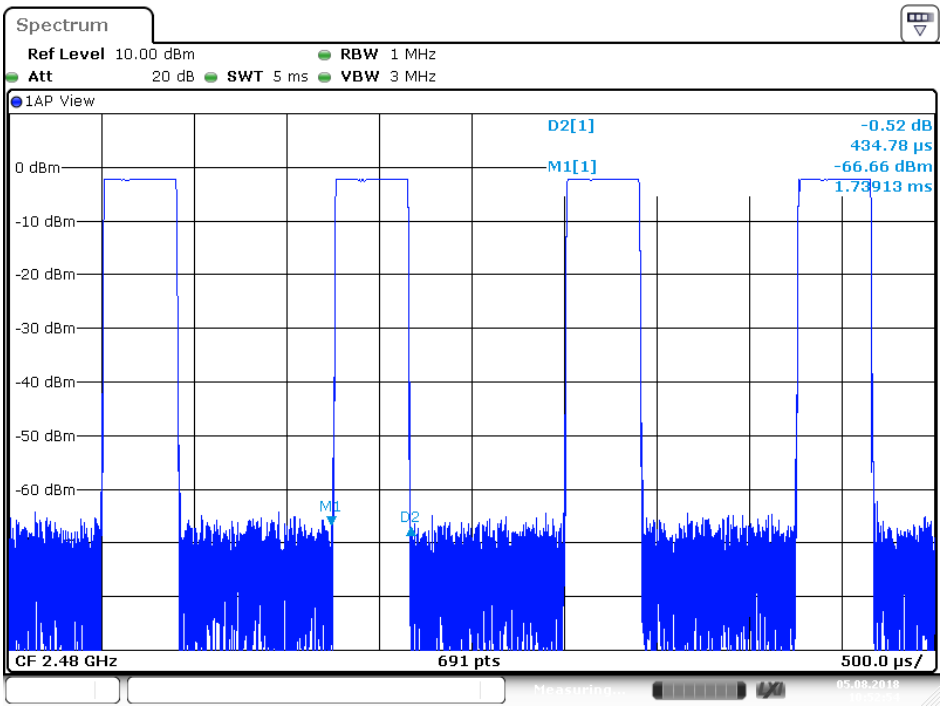
Date: 5.AUG.2018 10:54:20

DH1 Middle channel



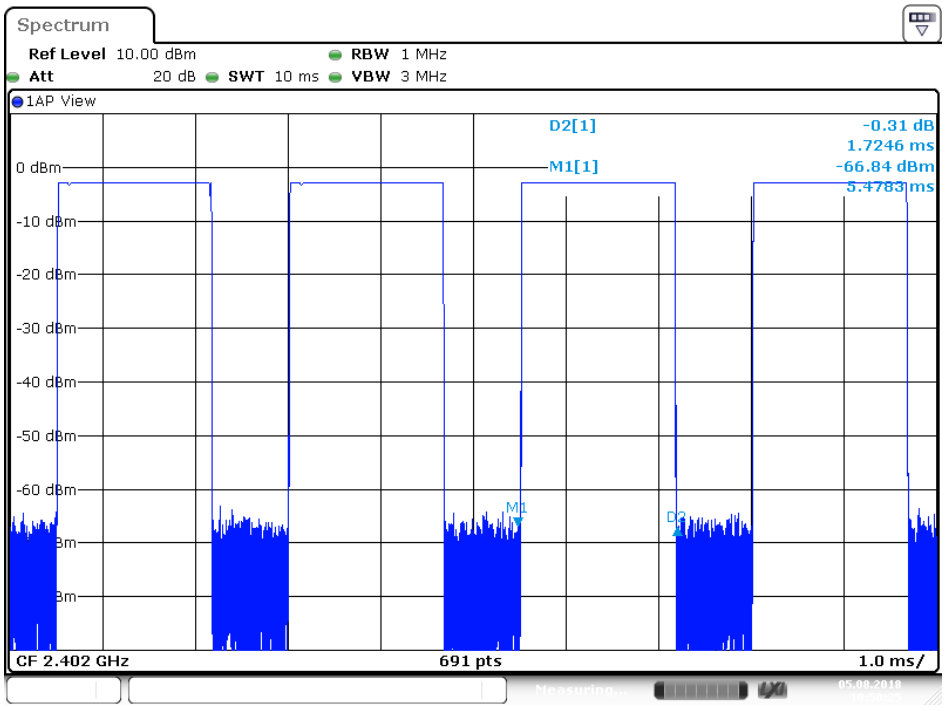
Date: 5.AUG.2018 10:53:34

DH1 High channel



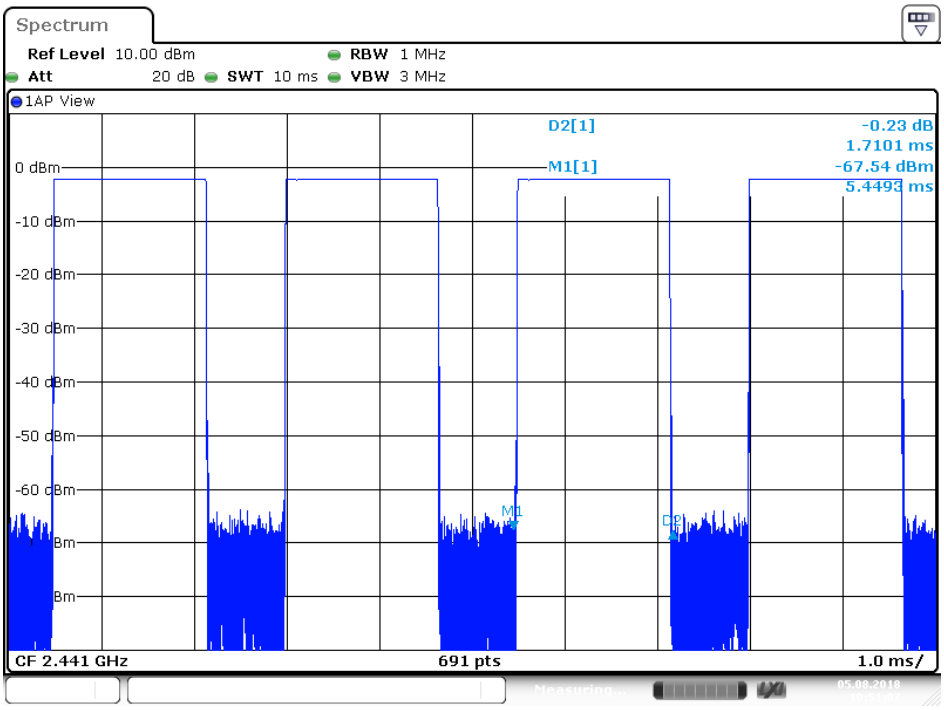
Date: 5.AUG.2018 10:52:54

DH3 Low channel



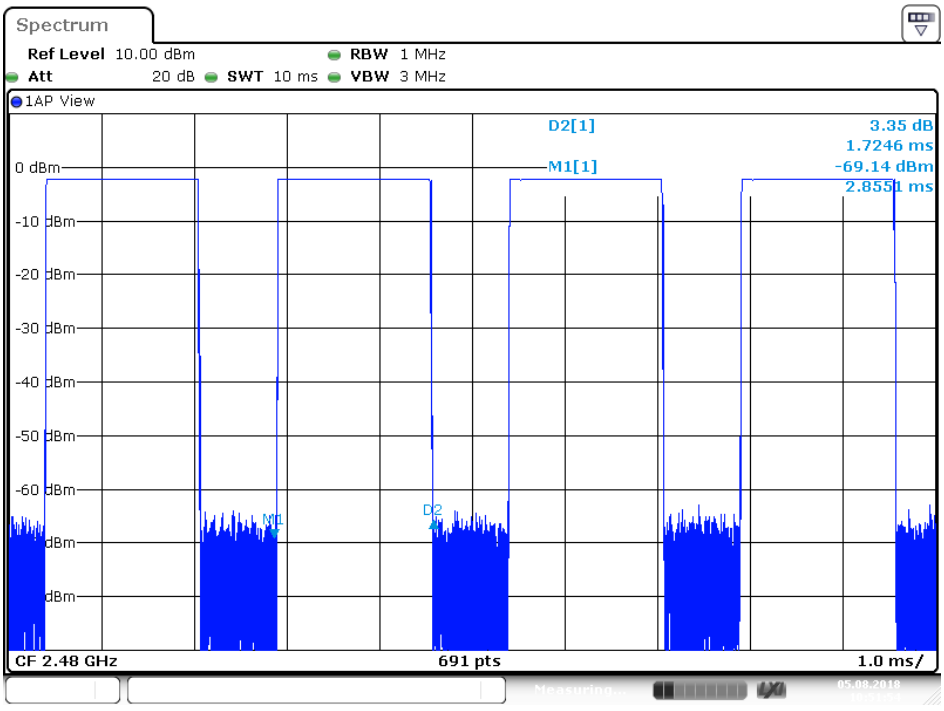
Date: 5.AUG.2018 10:50:25

DH3 Middle channel



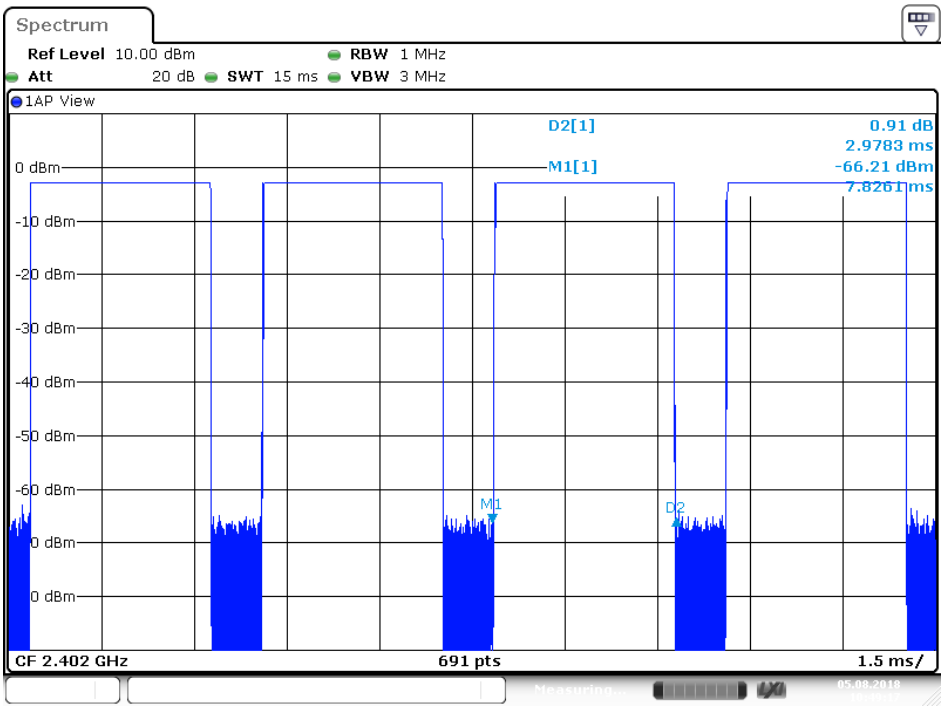
Date: 5.AUG.2018 10:51:07

DH3 High channel



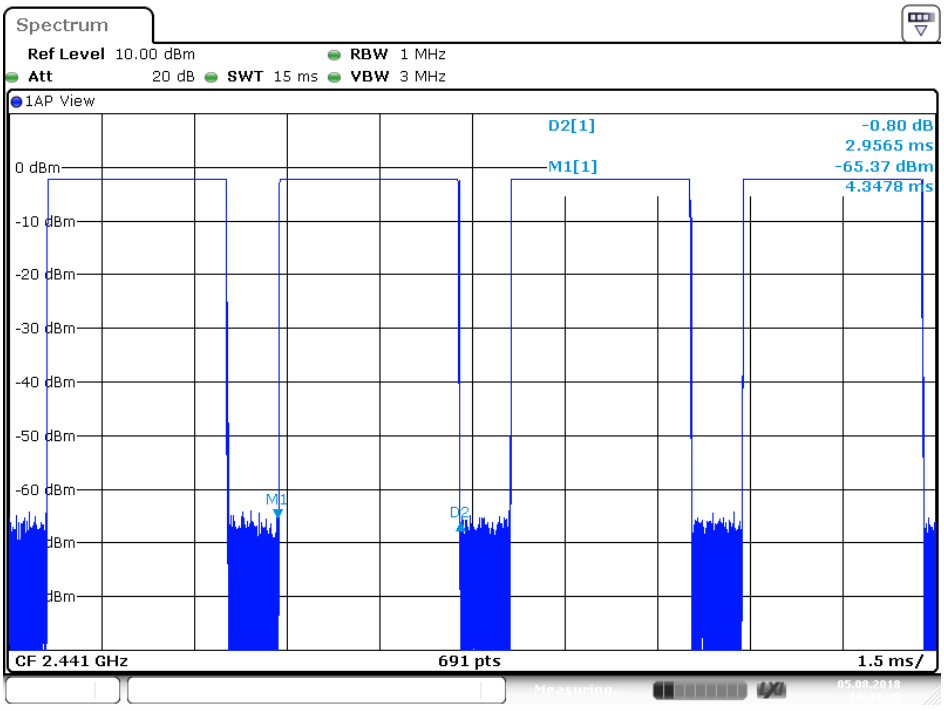
Date: 5.AUG.2018 10:51:54

DH5 Low channel



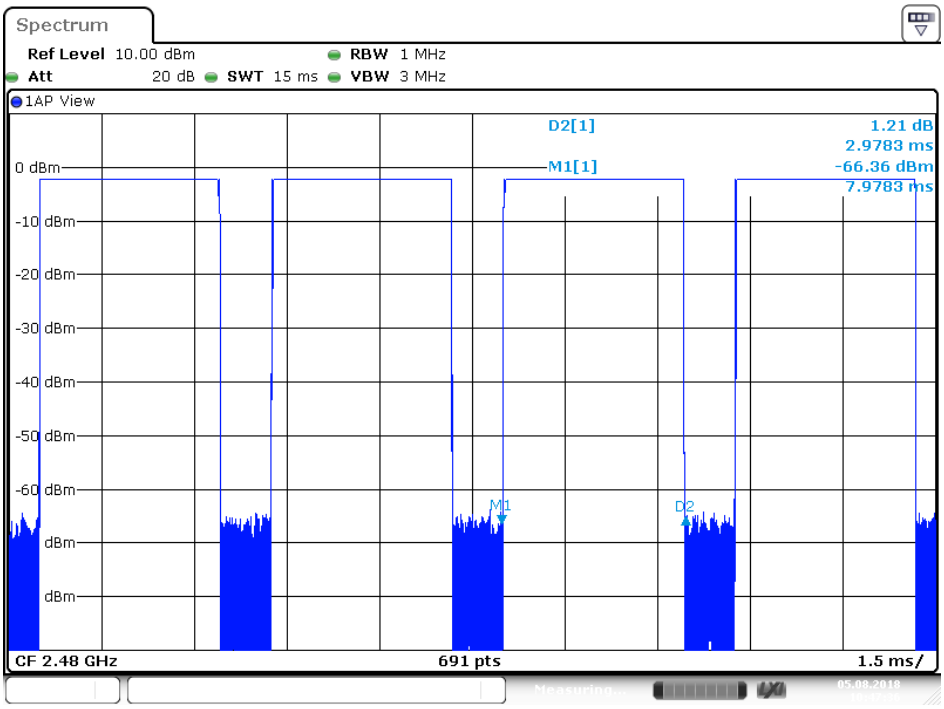
Date: 5.AUG.2018 10:49:17

DH5 Middle channel



Date: 5.AUG.2018 10:48:25

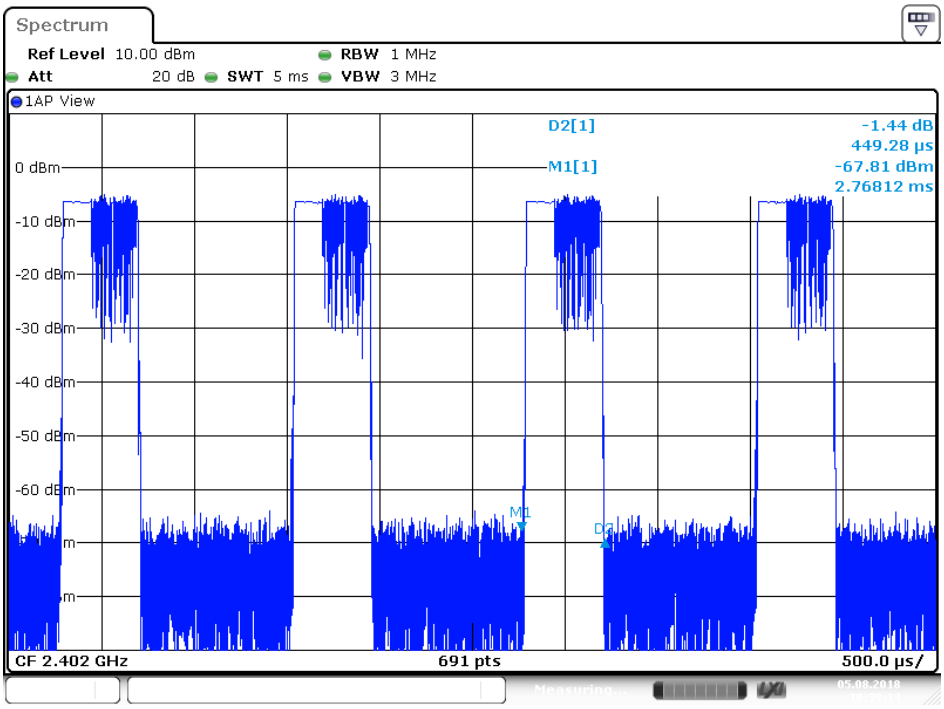
DH5 High channel



Date: 5.AUG.2018 10:47:36

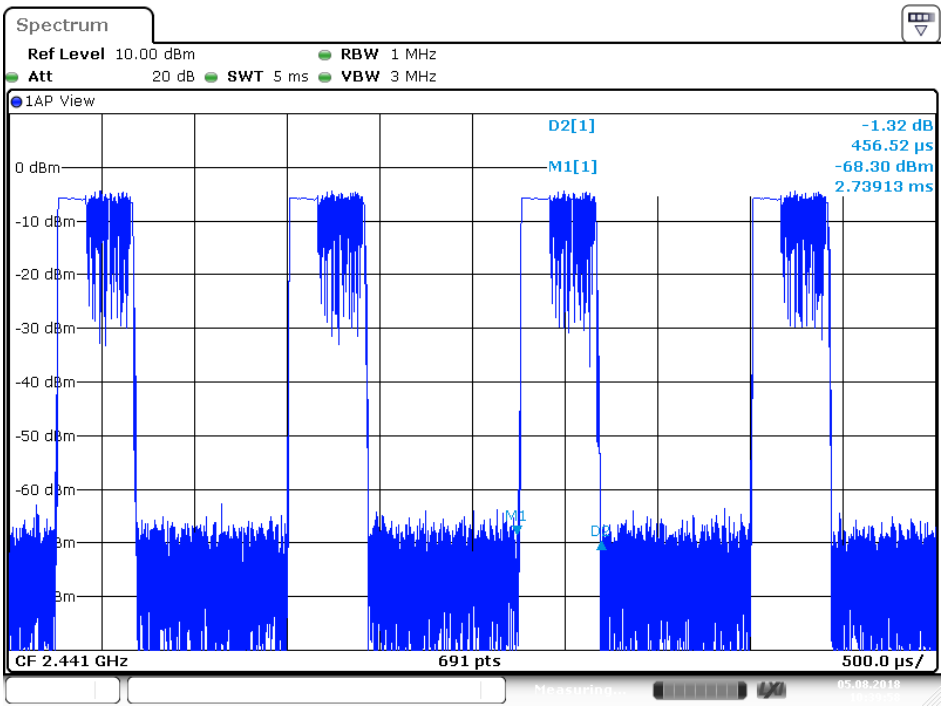
EDR Mode

3DH1 Low channel



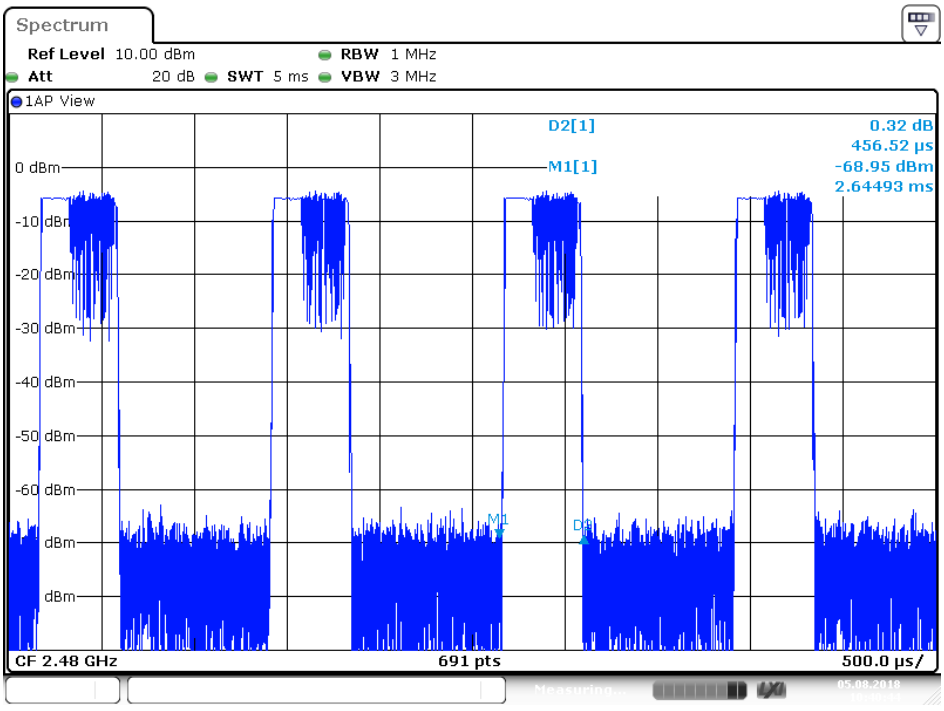
Date: 5.AUG.2018 10:39:14

3DH1 Middle channel



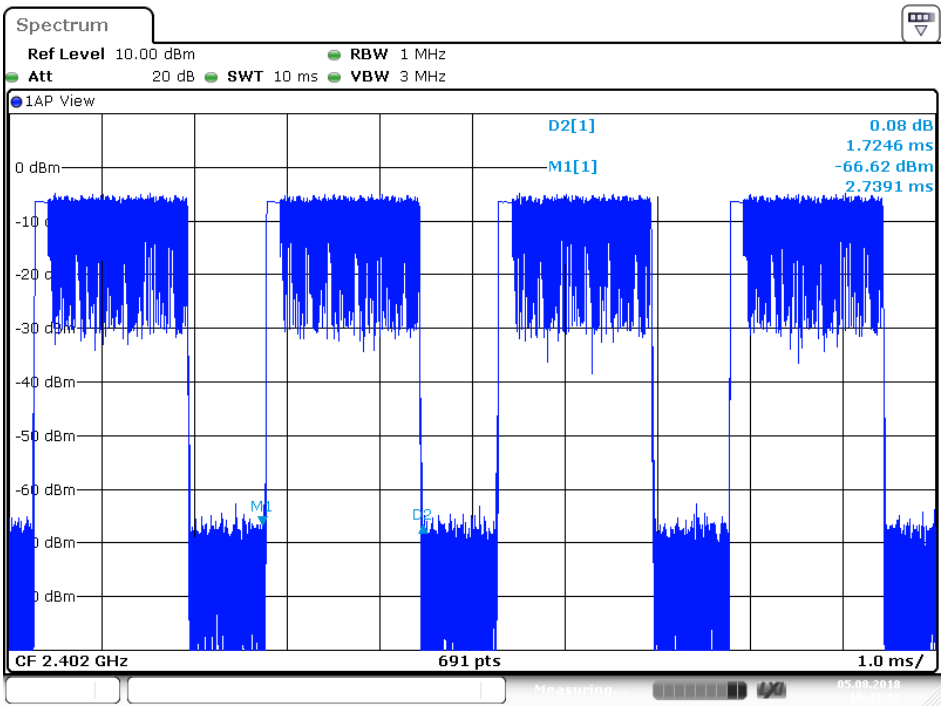
Date: 5.AUG.2018 10:39:58

3DH1 High channel



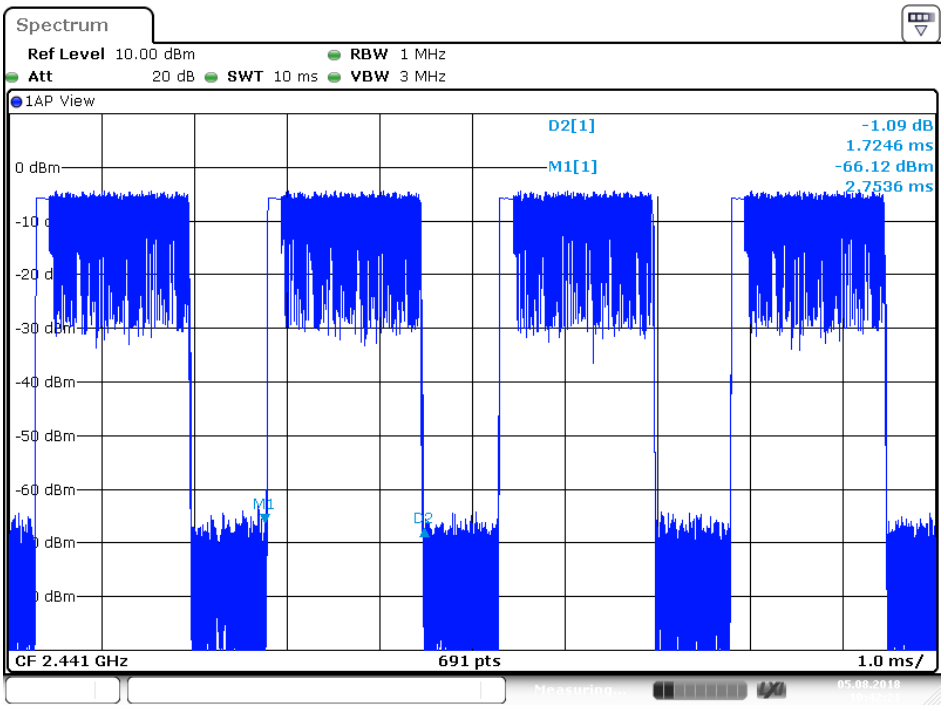
Date: 5.AUG.2018 10:40:44

3DH3 Low channel



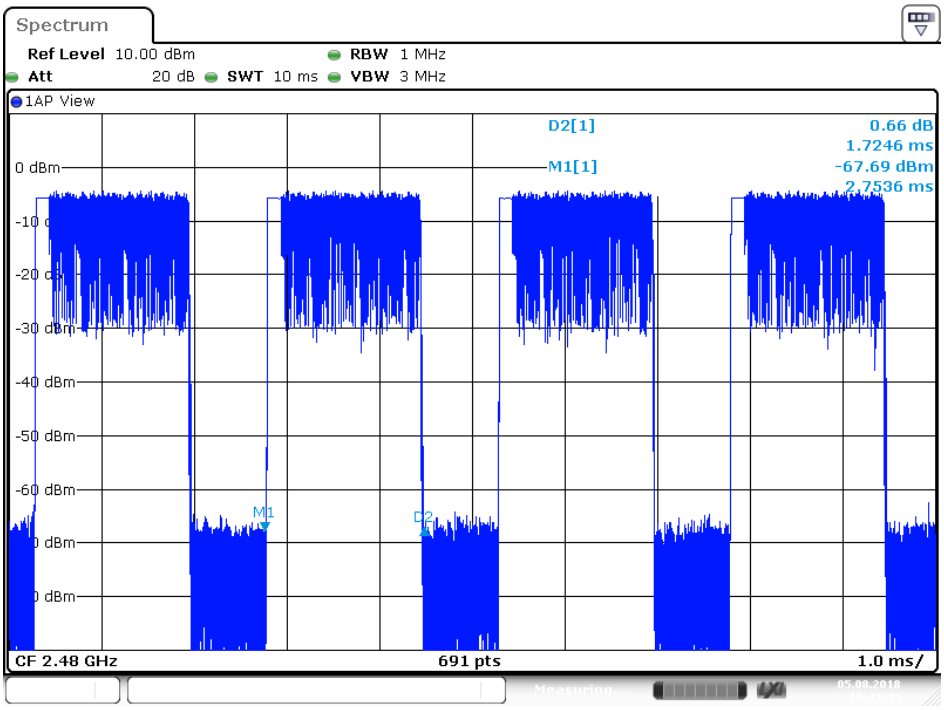
Date: 5.AUG.2018 10:43:13

3DH3 Middle channel



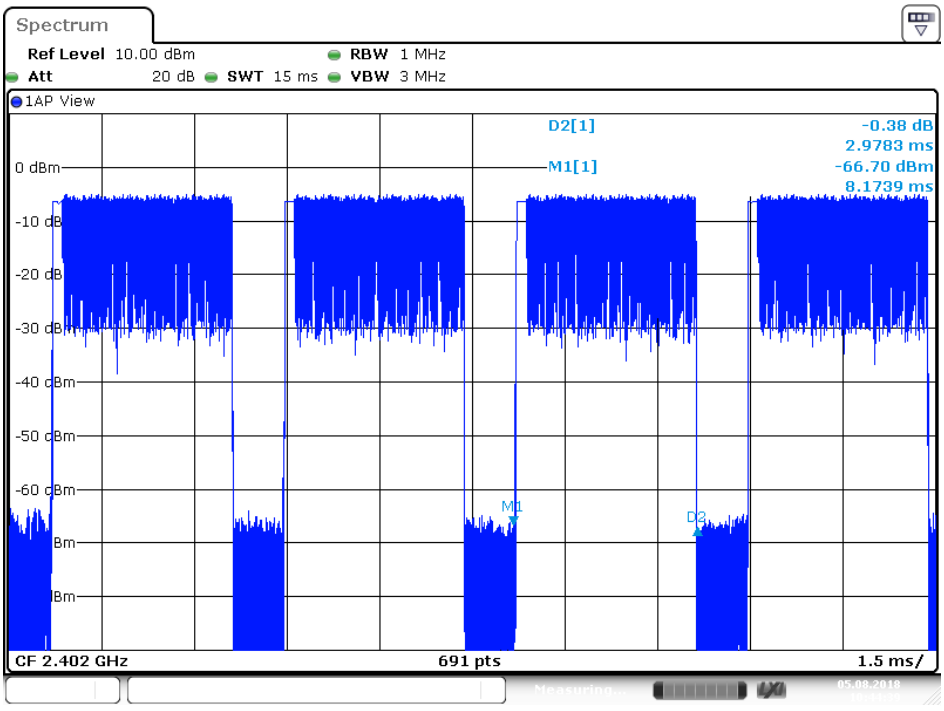
Date: 5.AUG.2018 10:42:21

3DH3 High channel



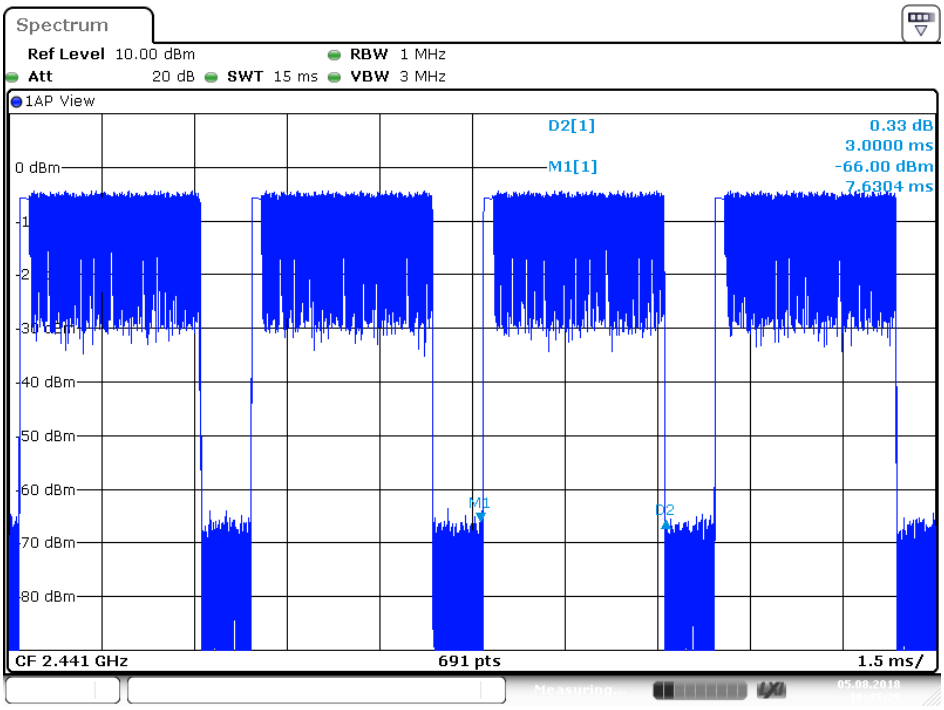
Date: 5.AUG.2018 10:41:44

3DH5 Low channel



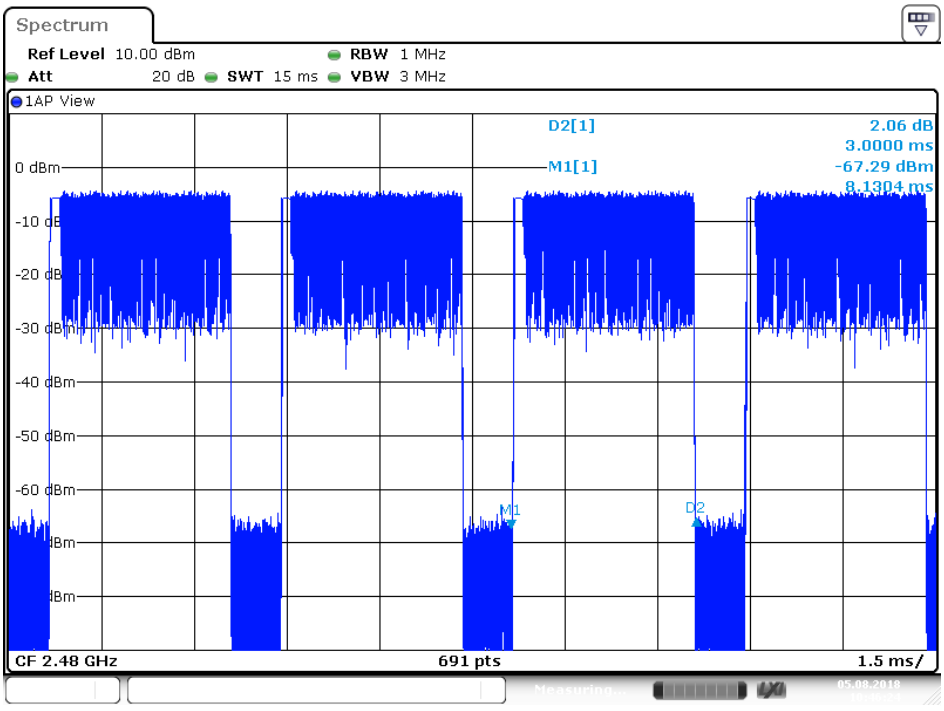
Date: 5.AUG.2018 10:44:39

3DH5 Middle channel



Date: 5.AUG.2018 10:45:29

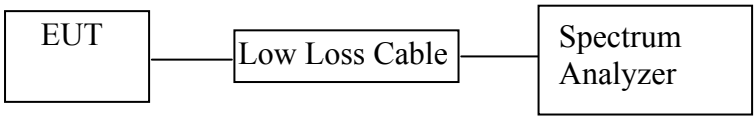
3DH5 High channel



Date: 5.AUG.2018 10:46:23

9. MAXIMUM PEAK OUTPUT POWER TEST FOR 2.4G BT

9.1. Block Diagram of Test Setup



(EUT: Multimedia Speaker)

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. The Requirement For RSS-247 Section 5.4(b)

RSS-247 Section 5.4(b): For FHSS operating in the band 2400-2483.5MHz,
the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels.
The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

9.4. EUT Configuration on Measurement

The 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.

9.5. Operating Condition of EUT

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

9.5.2. Turn on the power of all equipment.

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

9.6. Test Procedure

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

9.6.2. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz for BDR mode

9.6.3. Set RBW of spectrum analyzer to 3MHz and VBW to 10MHz for EDR mode

9.6.4. Measurement the maximum peak output power.

9.7. Test Result

BDR Mode

Frequency (MHz)	Maximum peak conducted output power (dBm/W)	e.i.r.p. (dBm/W)	Limits dBm / W
2402	-1.80/0.00066	-2.09/0.00062	30 / 1.0
2441	-1.18/0.00076	-1.47/0.00071	30 / 1.0
2480	-1.14/0.00077	-1.43/0.00072	30 / 1.0

EDR Mode

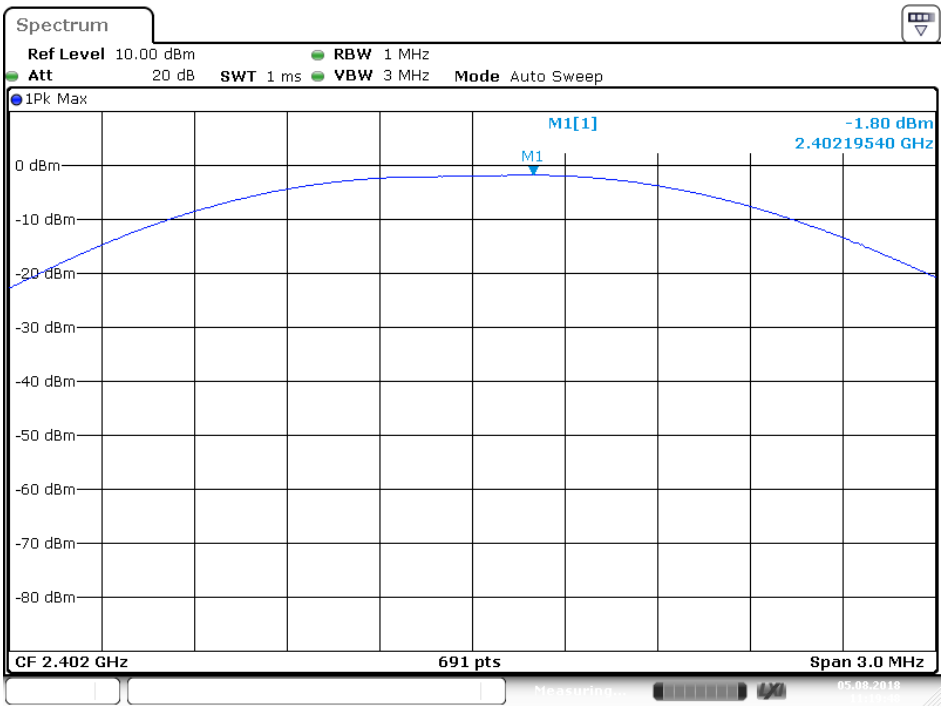
Frequency (MHz)	Maximum peak conducted output power (dBm/W)	e.i.r.p. (dBm/W)	Limits dBm / W
2402	1.57/0.00144	1.28/0.00134	21 / 0.125
2441	2.12/0.00163	1.83/0.00152	21 / 0.125
2480	2.17/0.00165	1.88/0.00154	21 / 0.125

Note: e.i.r.p= Maximum peak conducted output power+Antenna gain(-0.29dBi)

The spectrum analyzer plots are attached as below.

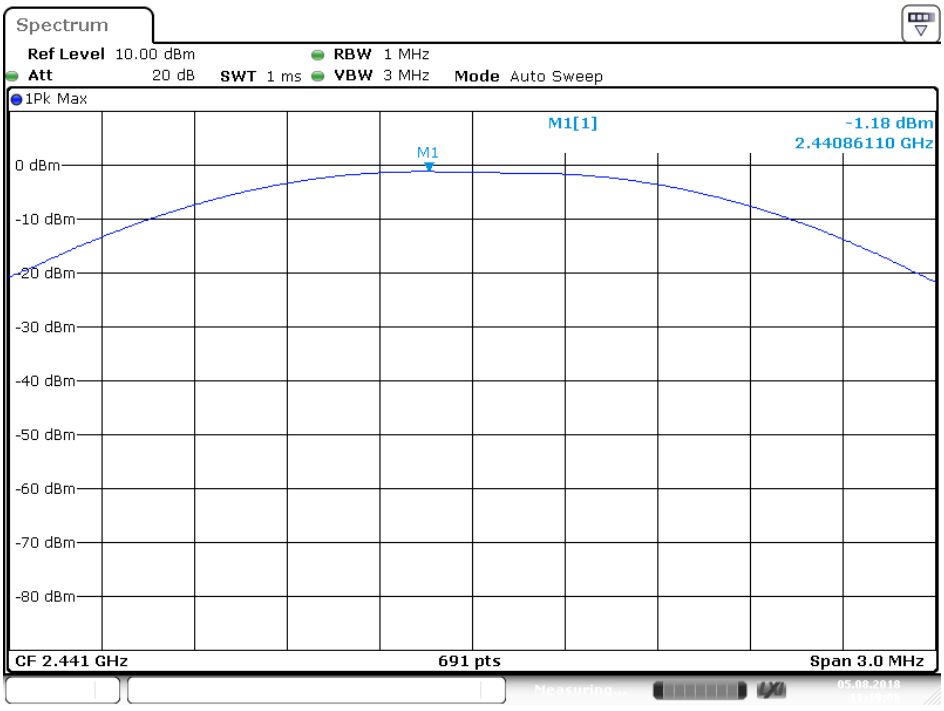
BDR Mode

Low channel



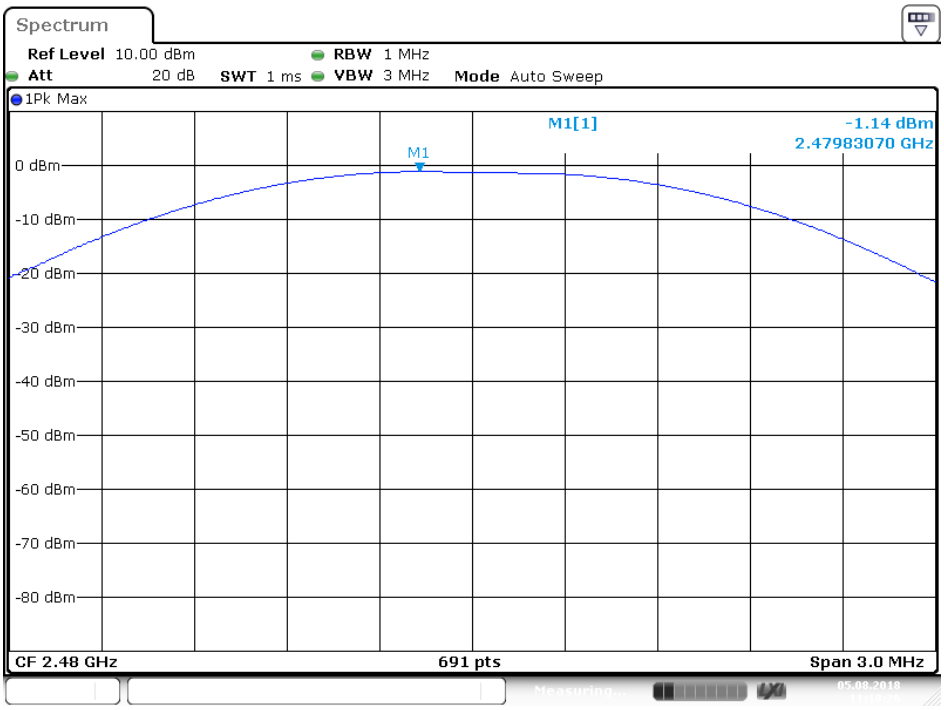
Date: 5.AUG.2018 11:19:48

Middle channel



Date: 5.AUG.2018 11:19:06

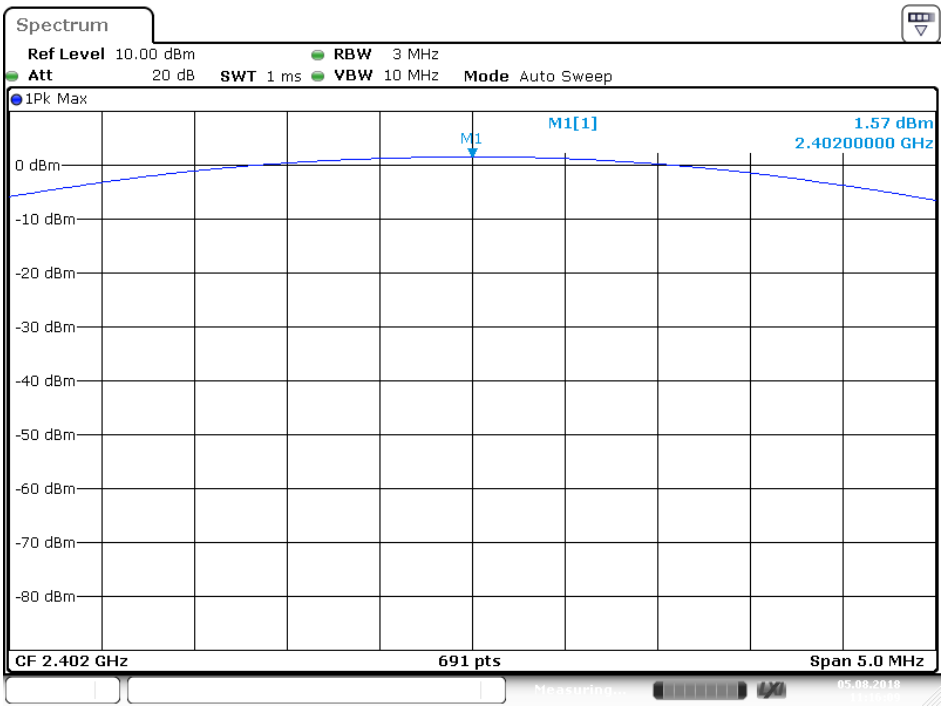
High channel



Date: 5.AUG.2018 11:18:26

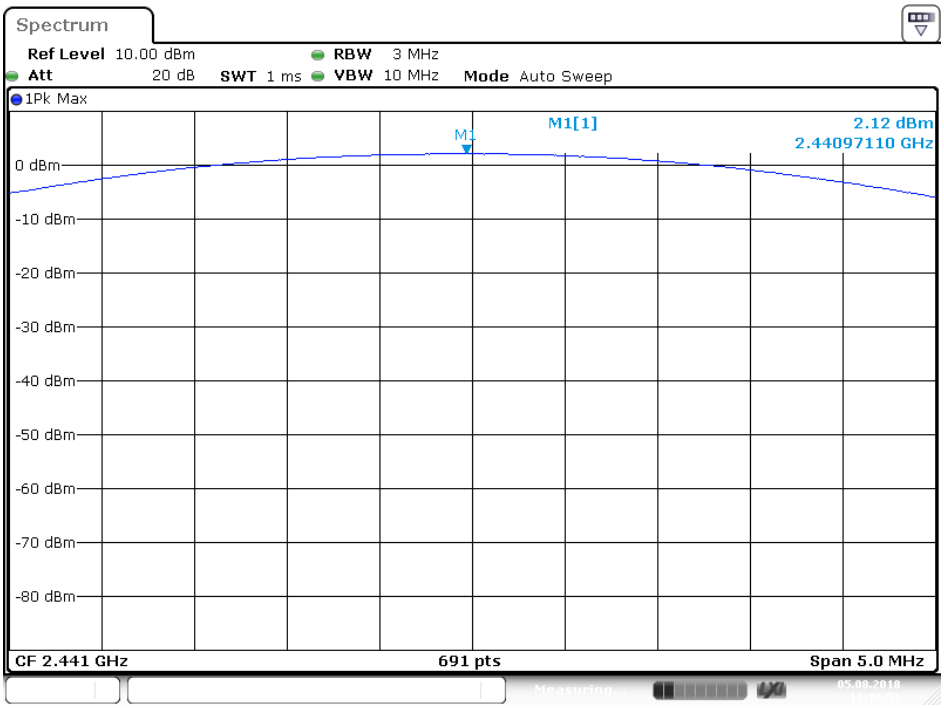
EDR Mode

Low channel



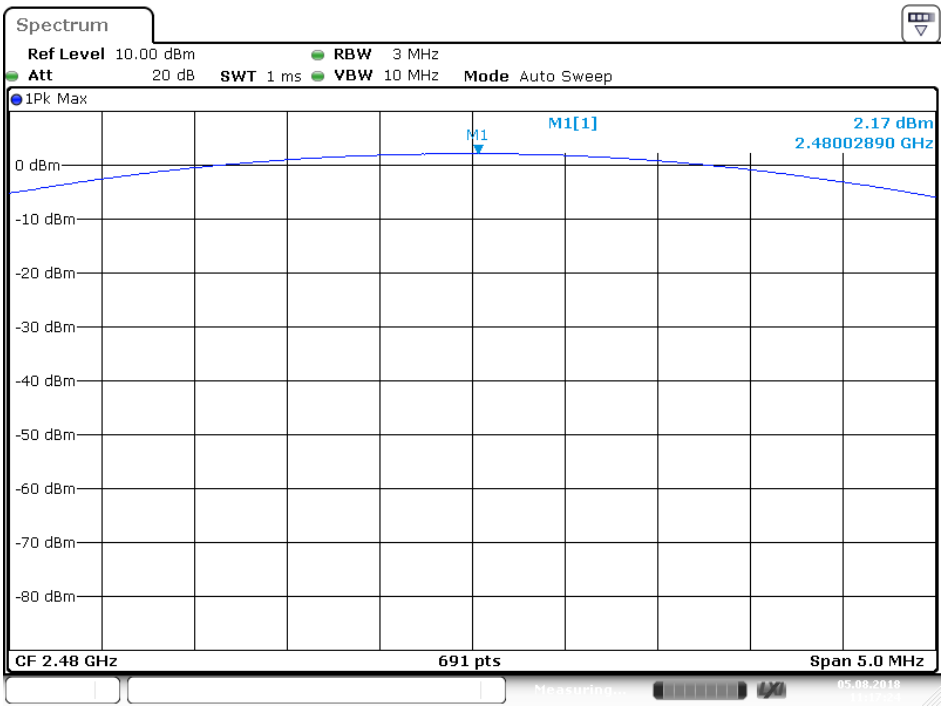
Date: 5.AUG.2018 11:16:08

Middle channel



Date: 5.AUG.2018 11:16:51

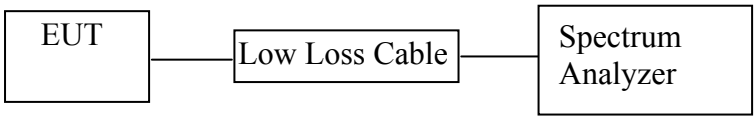
High channel



Date: 5.AUG.2018 11:17:24

10. MAXIMUM CONDUCTED OUTPUT POWER FOR 5.8G MODULE

10.1. Block Diagram of Test Setup



10.2. The Requirement For Section 15.407

Section 15.407(a)(1): For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

Section 15.407(a)(2): For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.

Section 15.407(a)(3): For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

10.3. The Requirement For RSS-247 Section 6.2.4.1

The maximum conducted output power shall not exceed 1 W.

10.4. EUT Configuration on Measurement

The 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.

10.5. Operating Condition of EUT

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

10.5.2. Turn on the power of all equipment.

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

TX frequency to transmit.

10.6.Test Procedure

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

10.6.2.Set RBW = 1-5% of the OBW, not to exceed 1 MHz, VBW ≥ 3 x RBW, Sweep time = auto, Set span to at least 1.5 times the OBW, Detector = RMS.

10.6.3. Measurement the Maximum conducted (average) output power.

10.7.Test Result

Final power= Ave output power+10log(1/ duty cycle)
e.i.r.p= Final power +Antenna gain(3.2dBi)

The test was performed with Ant.1						
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	E.I.R.P (dBm)	Limits dBm / W
Low	5736	4.85	0	4.85	8.05	30 dBm / 1 W
Middle	5762	5.86	0	5.86	9.06	30 dBm / 1 W
High	5814	8.24	0	8.24	11.44	30 dBm / 1 W

The test was performed with Ant.2						
Channel	Frequency (MHz)	Ave output power (dBm)	10log(1/ duty cycle)	Final power (dBm)	E.I.R.P (dBm)	Limits dBm / W
Low	5736	6.07	0	6.07	9.27	30 dBm / 1 W
Middle	5762	7.01	0	7.01	10.21	30 dBm / 1 W
High	5814	8.31	0	8.31	11.51	30 dBm / 1 W

11.RADIATED EMISSION TEST FOR 2.4G BT AND 5.8G MODULE

11.1.Block Diagram of Test Setup

11.1.1.Block diagram of connection between the EUT and peripherals

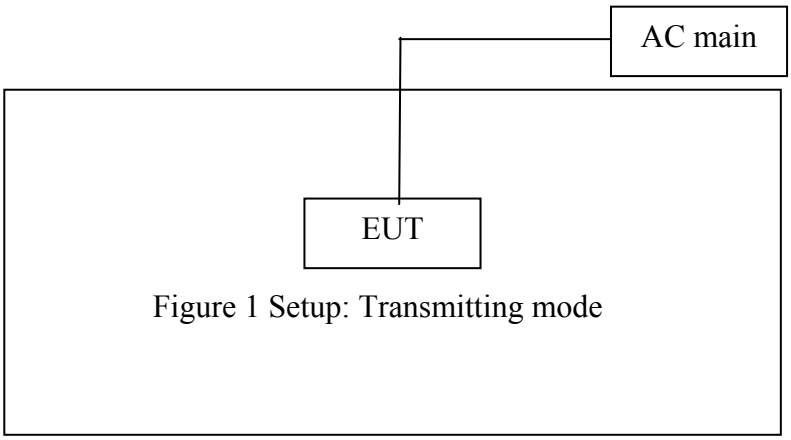
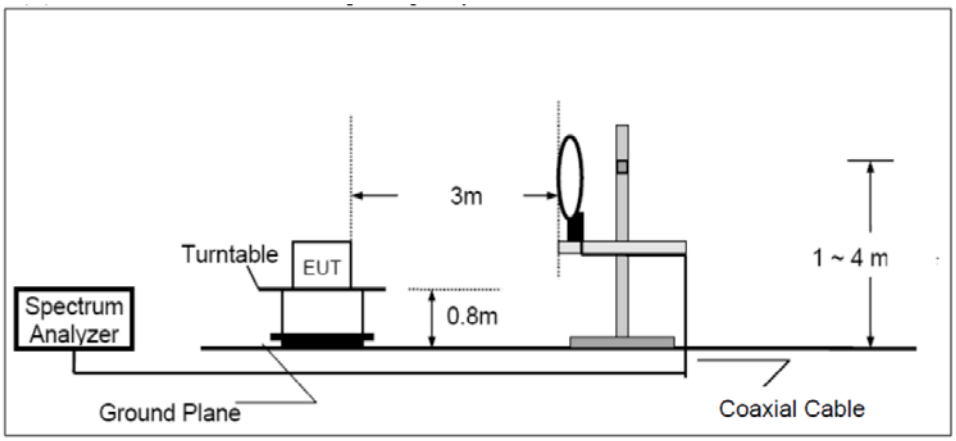


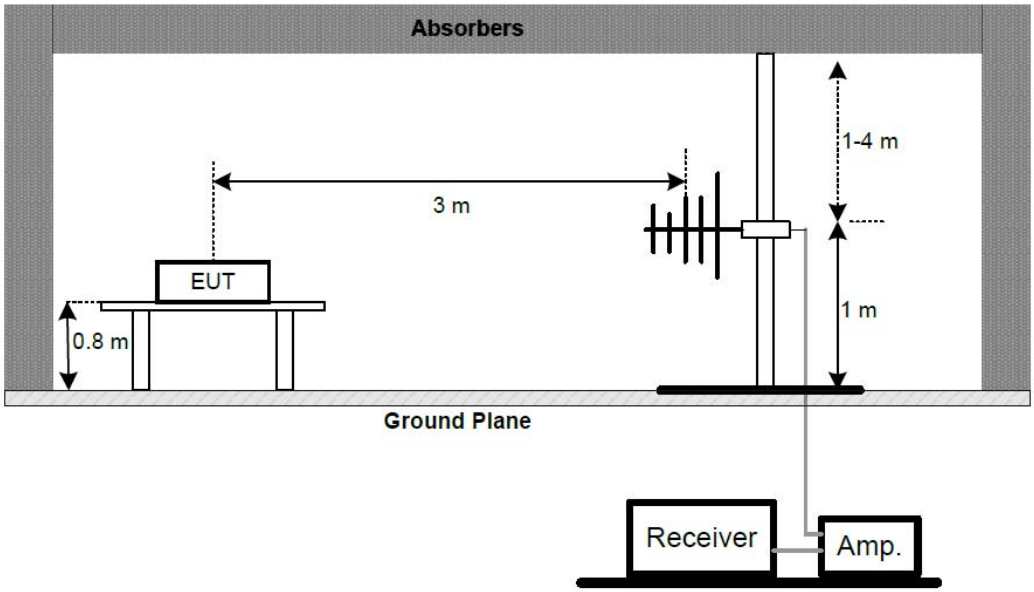
Figure 1 Setup: Transmitting mode

11.1.2.Semi-Anechoic Chamber Test Setup Diagram

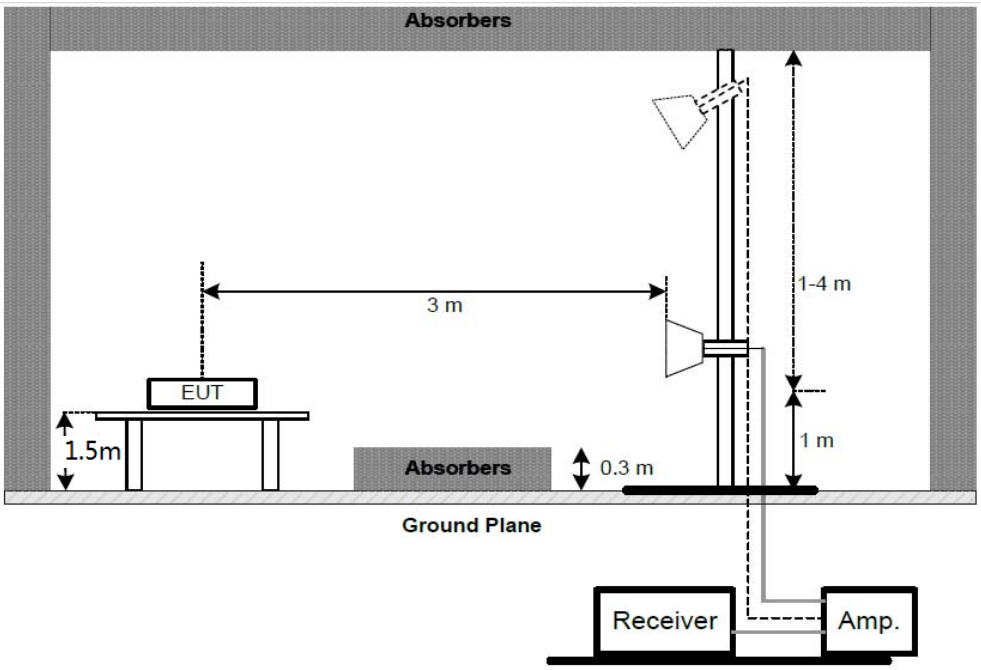
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1GHz



(C) Radiated Emission Test Set-Up, Frequency Above 1GHz



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.The Requirement For RSS-247 Section 5.5

Section 5.5: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the100 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

11.4.Transmitter Emission Limit

Radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Table 5 – General field strength limits at frequencies above 30 MHz

Frequency (MHz)	Field strength (μV/m at 3 m)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

Table 6 – General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) (μA/m)	Measurement distance (m)
9 - 490 kHz [1]	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

11.5.Restricted bands of operation

11.5.1.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			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510
[2]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 Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section

15.35 apply to these measurements.

11.5.2.RSS-Gen 8.10 Restricted bands of operation

Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following conditions related to the restricted frequency bands apply:

(a)The transmit frequency, including fundamental components of modulation, of licence-exempt radio apparatus shall not fall within the restricted frequency bands listed in table 7 except for apparatus compliant with RSS-287, *Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD).*

(b) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.

(c) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.

Table 7 – Restricted frequency bands*

MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

* Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

11.6.Configuration of EUT on Measurement

The equipment is 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.

11.7.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). 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 bi-log 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 EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

11.8.Data Sample

Frequency (MHz)	Reading (dBμv)	Factor (dB/m)	Result (dBμv/m)	Limit (dBμv/m)	Margin (dB)	Remark
X.XX	48.69	-13.35	35.34	46	-10.66	QP

Frequency(MHz) = Emission frequency in MHz
Reading(dBμv) = Uncorrected Analyzer/Receiver reading
Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain
Result(dBμv/m) = Reading(dBμv) + Factor(dB/m)
Limit (dBμv/m) = Limit stated in standard
Margin (dB) = Result(dBμv/m) - Limit (dBμv/m)
QP = Quasi-peak Reading

Calculation Formula:
Margin(dB) = Result (dBμV/m)–Limit(dBμV/m)
Result(dBμV/m)= Reading(dBμV)+ Factor(dB/m)

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

11.9.The Field Strength of Radiation Emission Measurement Results

PASS.

Note: 1.We tested GFSK mode, ∏/4-DQPSK Mode & 8QPSK mode and recorded the worst case data (GFSK mode) for all test mode.

Bluetooth module and 5.8G modules can work at the same time, so we need to test the status of both modules working together and the two modules working separately.

The 5.8G module has two transmittable antennas. The two antennas can only work independently and can not work simultaneously. Therefore, we need to test the state of the two antennas working independently.

The following test data are some of the worst test charts we have recorded. The spectrum analyzer plots are attached as below.

9kHz-30MHz test data(For 2.4G BT)

ACCURATE TECHNOLOGY CO.,LTD

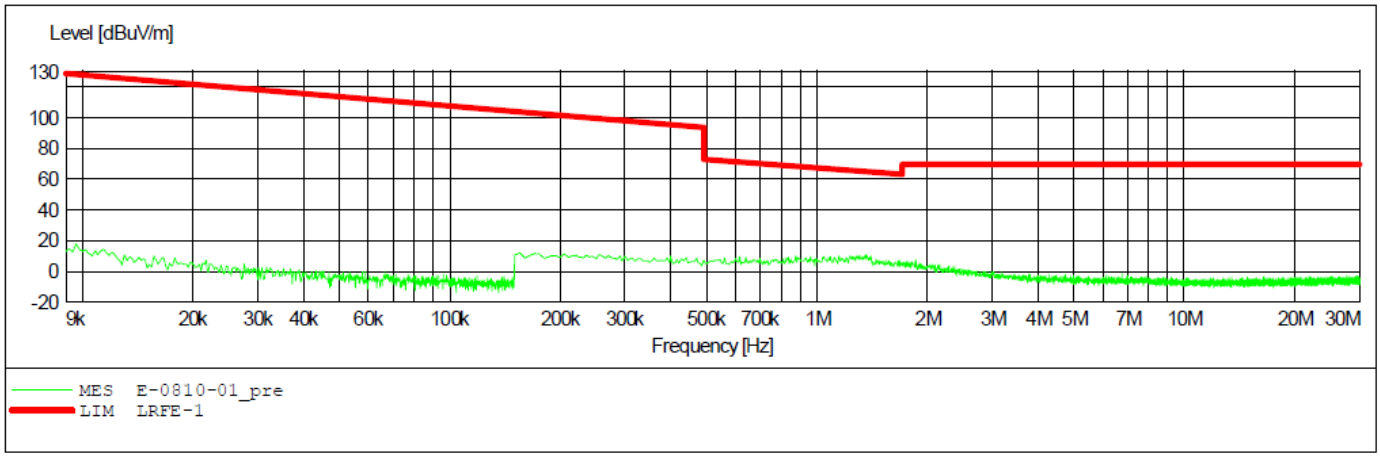
FCC Class B 3M Radiated

EUT:	Multimedia Speaker M/N:S3000 Pro
Applicant:	EDIFIER
Operating Condition:	TX 2402MHz
Test Site:	2# Chamber
Operator:	WADE
Test Specification:	AC 120V/60Hz
Comment:	X
Start of Test:	2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

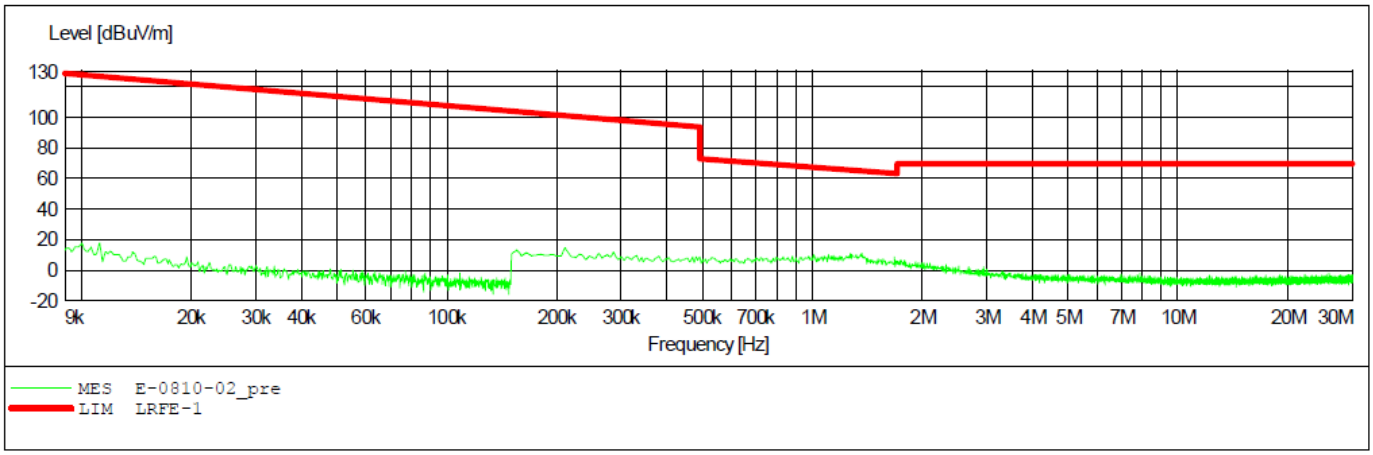
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

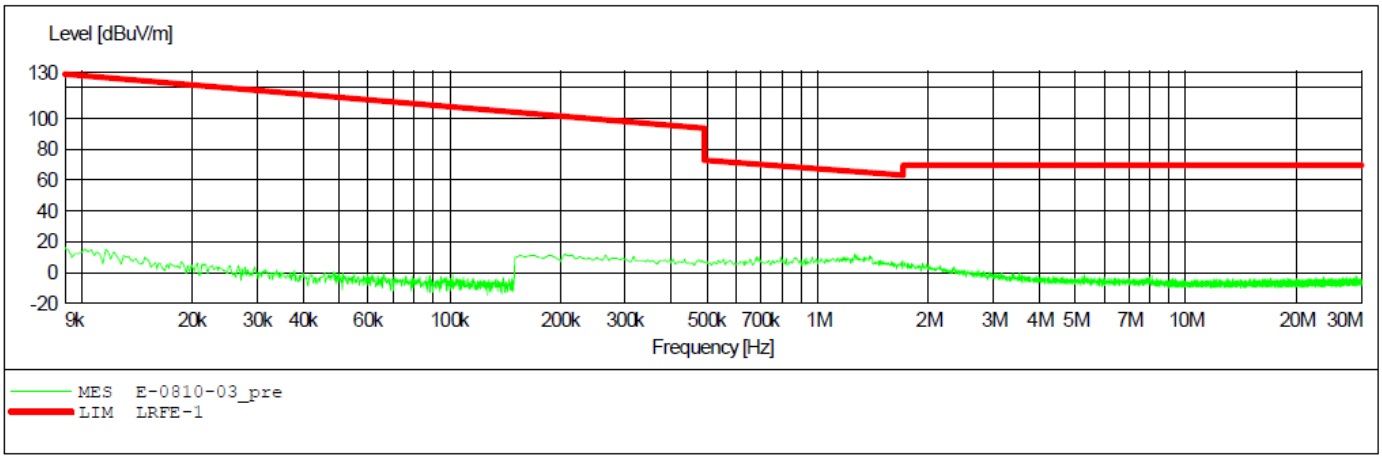
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Z
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

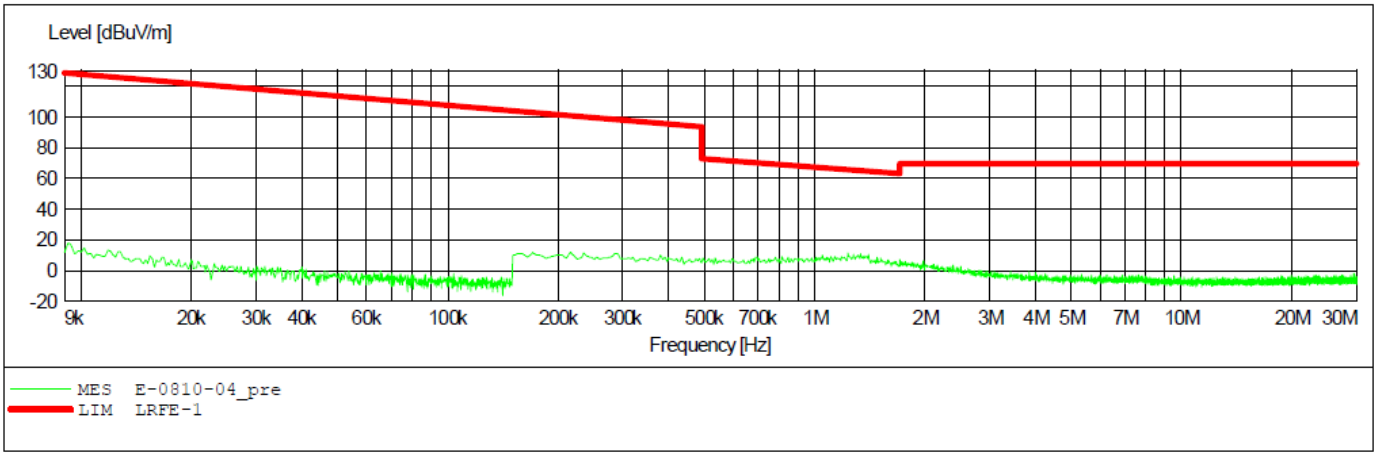
FCC Class B 3M Radiated

EUT:	Multimedia Speaker M/N:S3000 Pro
Applicant:	EDIFIER
Operating Condition:	TX 2441MHz
Test Site:	2# Chamber
Operator:	WADE
Test Specification:	AC 120V/60Hz
Comment:	X
Start of Test:	2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

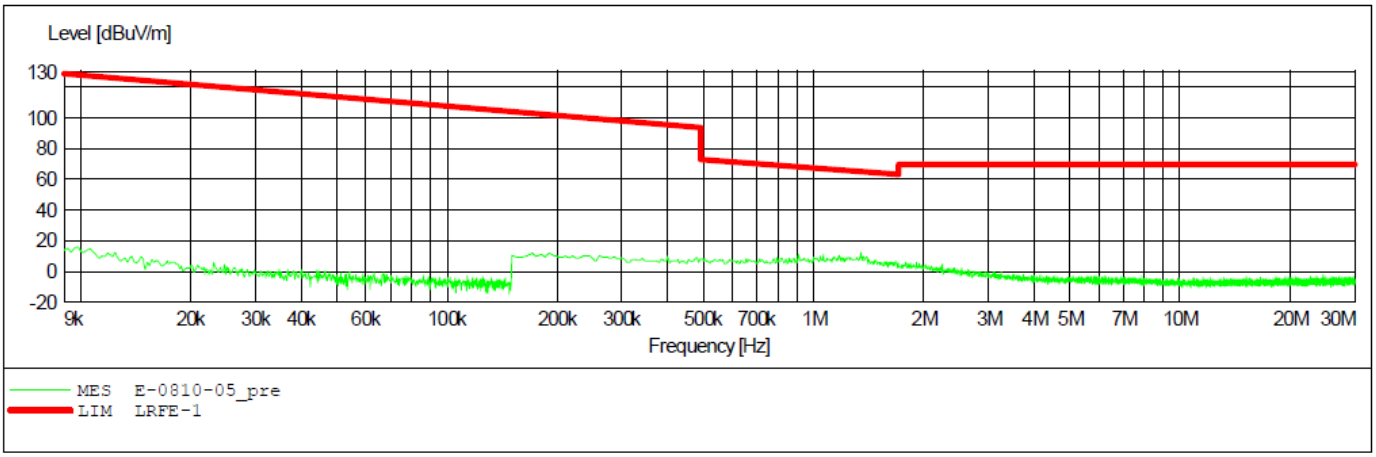
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 2441MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

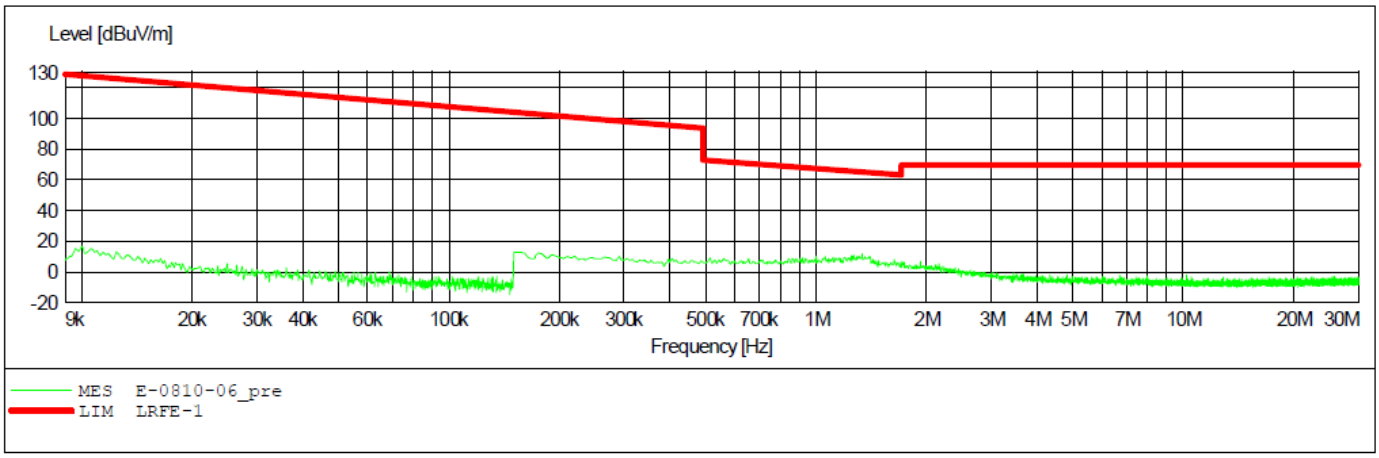
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 2441MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Z
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

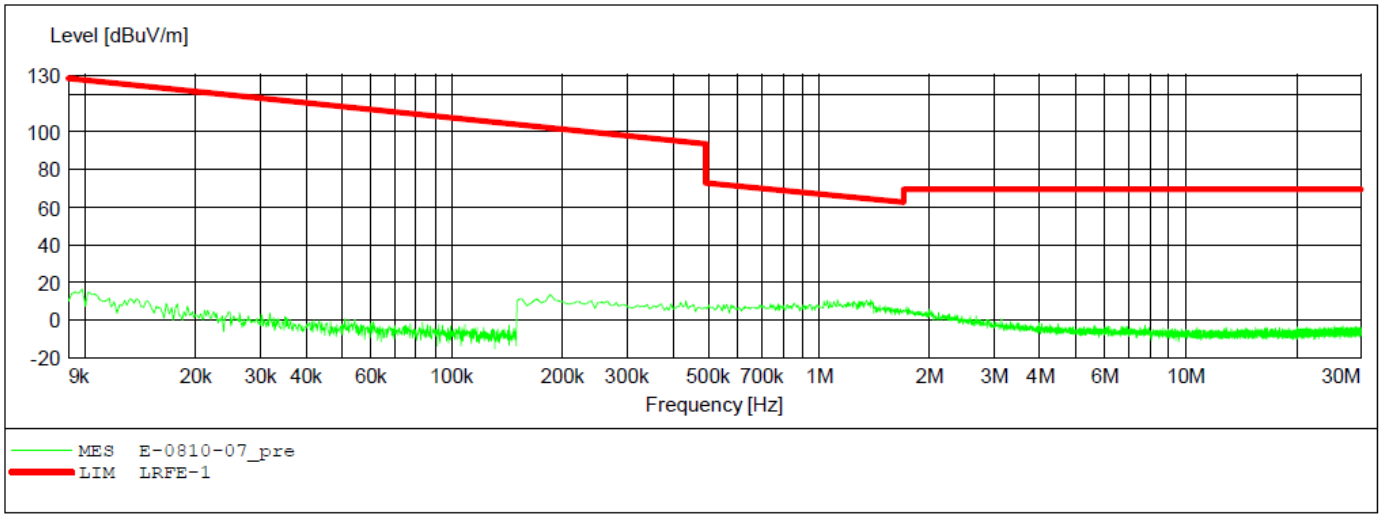
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 2480MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: X
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

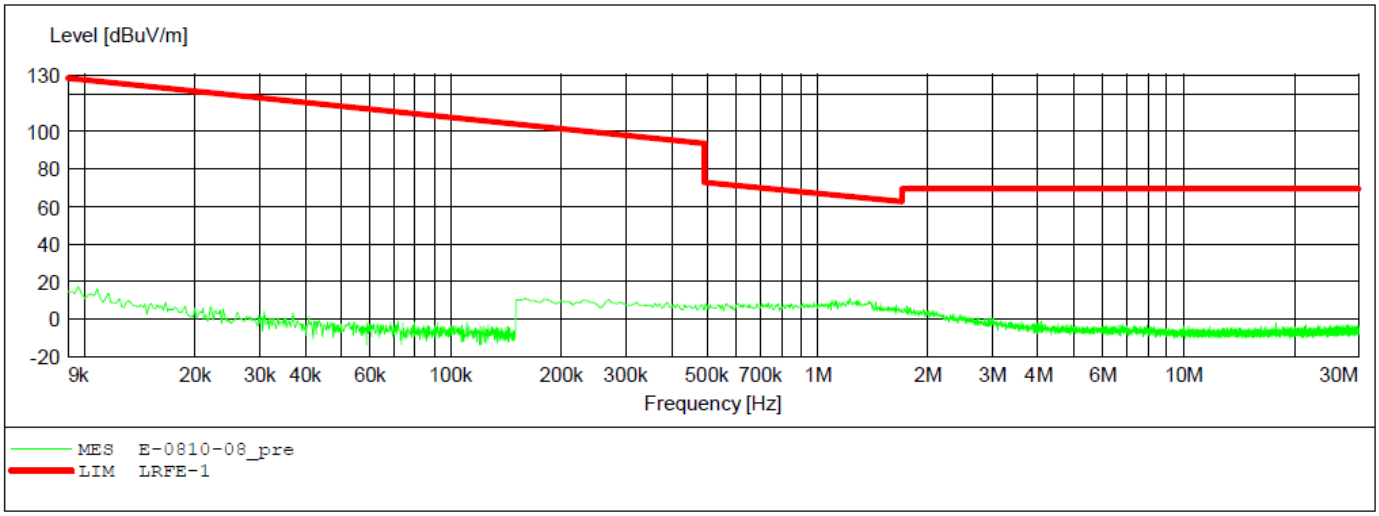
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 2480MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

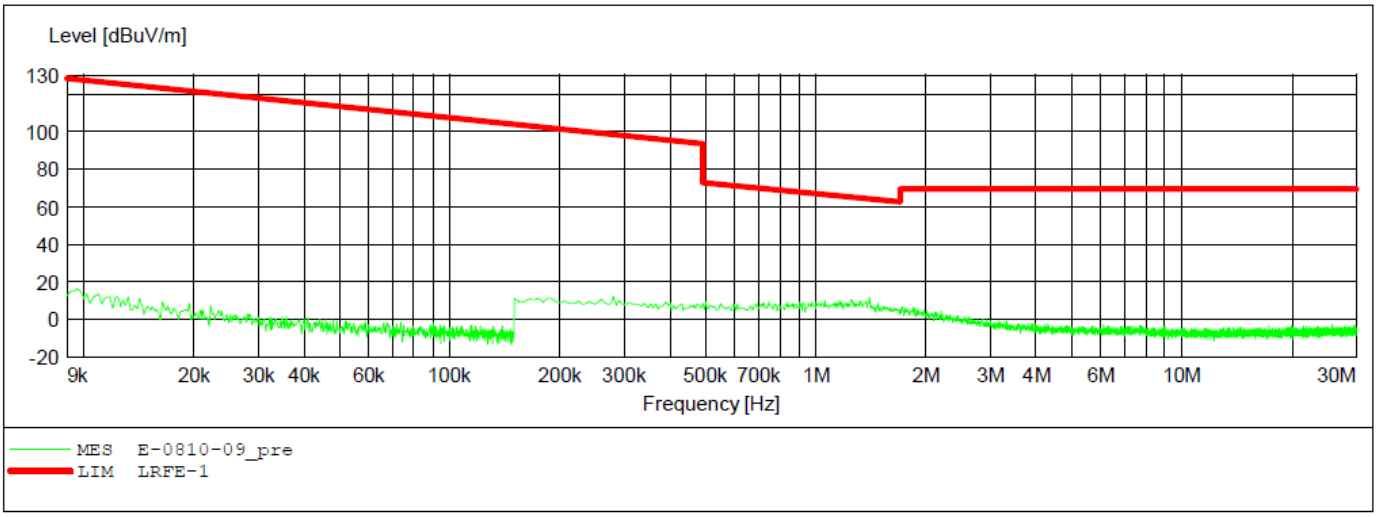
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 2480MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Z
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

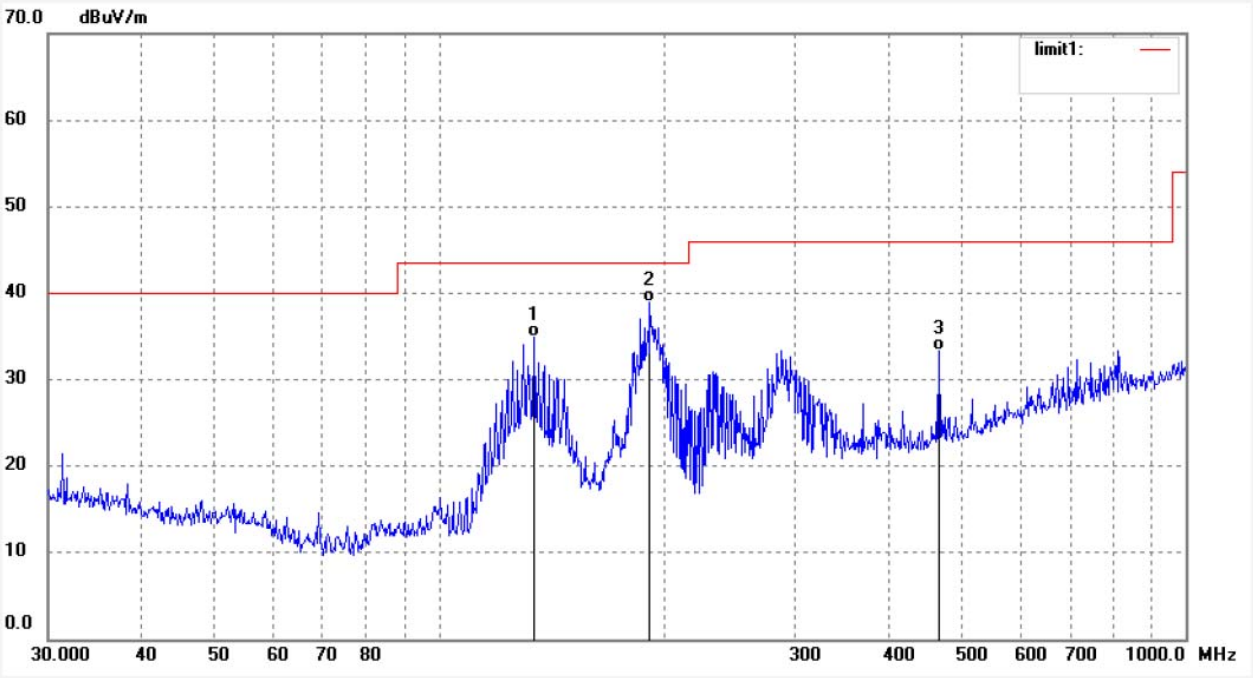


30MHz-1000MHz test data(For 2.4G BT)

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LGW2018 #2302	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2402MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:

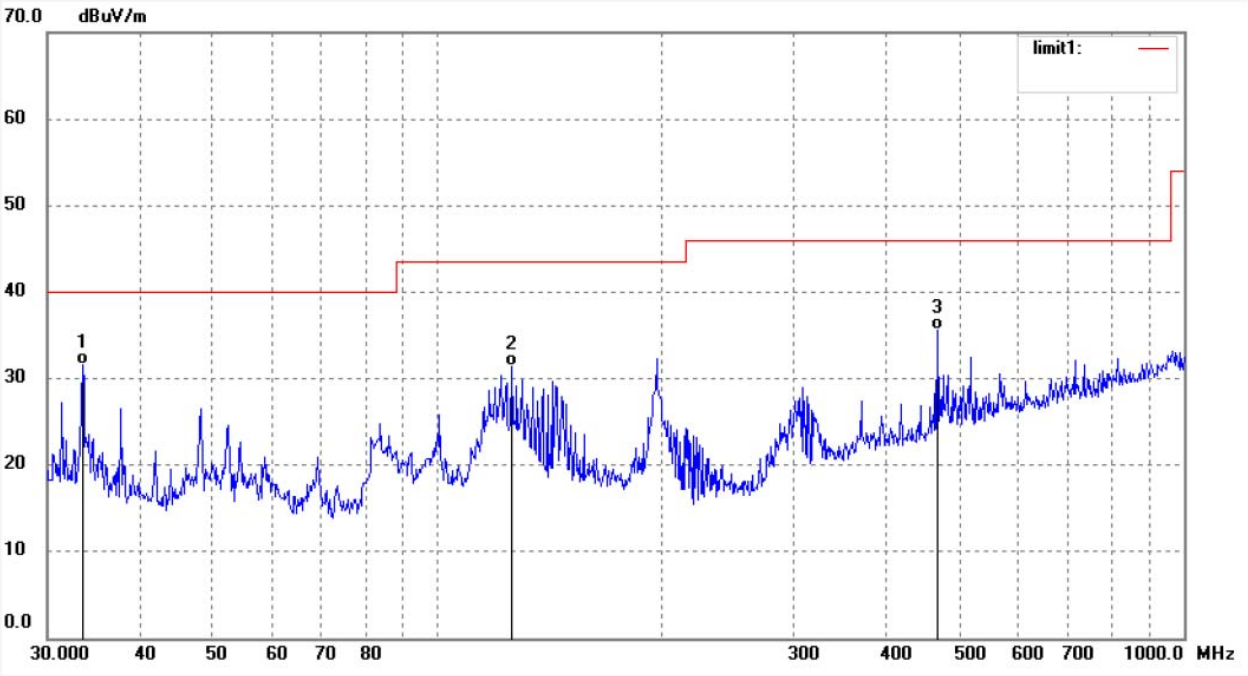


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	134.0882	48.78	-13.92	34.86	43.50	-8.64	QP			
2	191.7450	51.44	-12.42	39.02	43.50	-4.48	QP			
3	467.2348	38.40	-5.10	33.30	46.00	-12.70	QP			

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LGW2018 #2303	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2402MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:

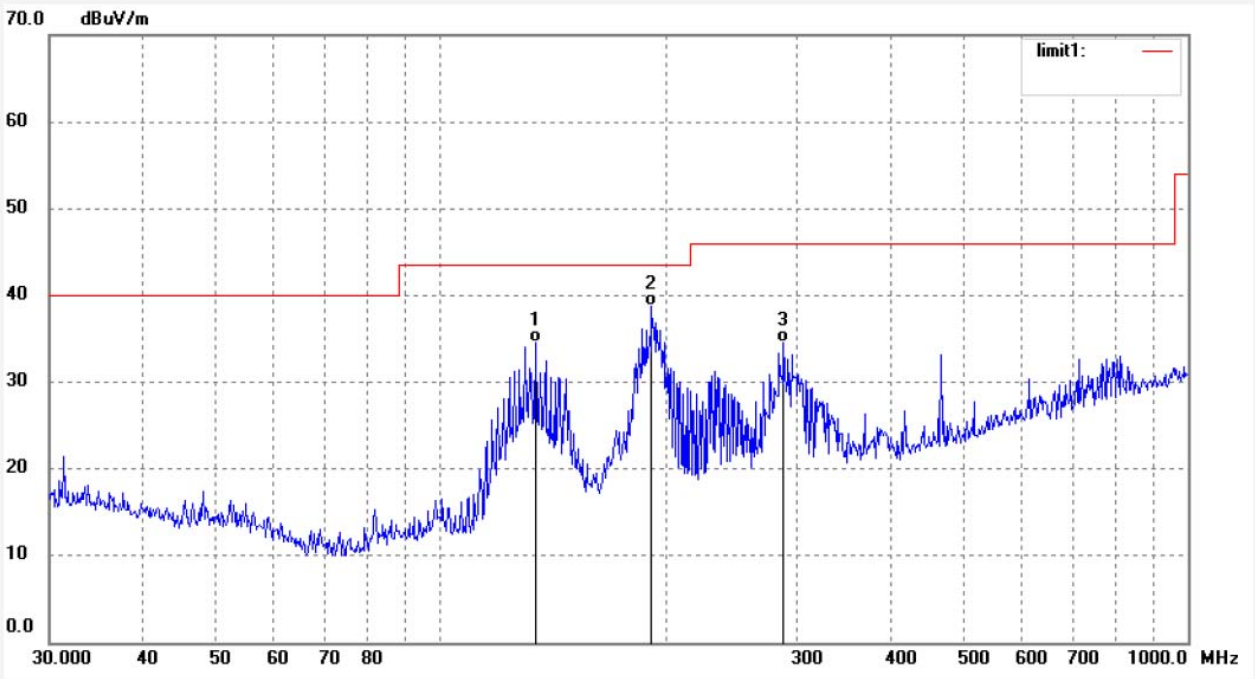


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.4448	41.46	-9.95	31.51	40.00	-8.49	QP			
2	125.8863	45.05	-13.66	31.39	43.50	-12.11	QP			
3	467.2348	40.78	-5.10	35.68	46.00	-10.32	QP			

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LGW2018 #2305	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2441MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:

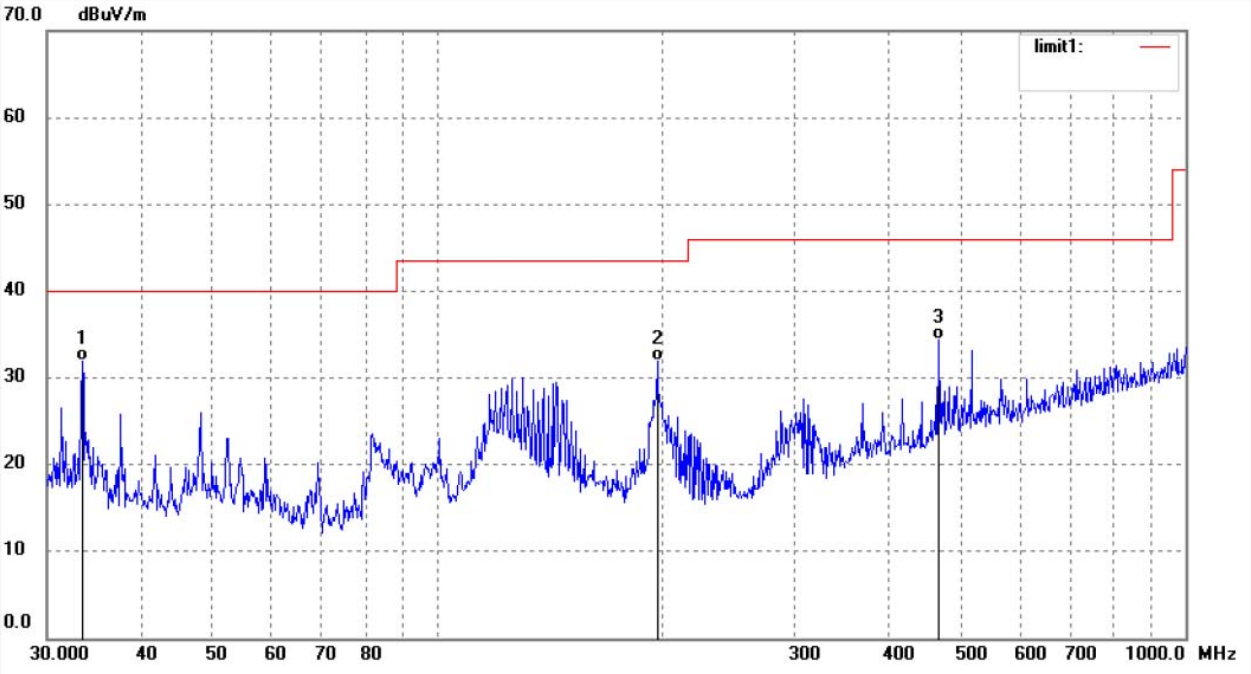


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	134.0882	48.51	-13.92	34.59	43.50	-8.91	QP			
2	191.7450	51.24	-12.42	38.82	43.50	-4.68	QP			
3	287.9904	43.92	-9.34	34.58	46.00	-11.42	QP			

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LGW2018 #2304	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2441MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:

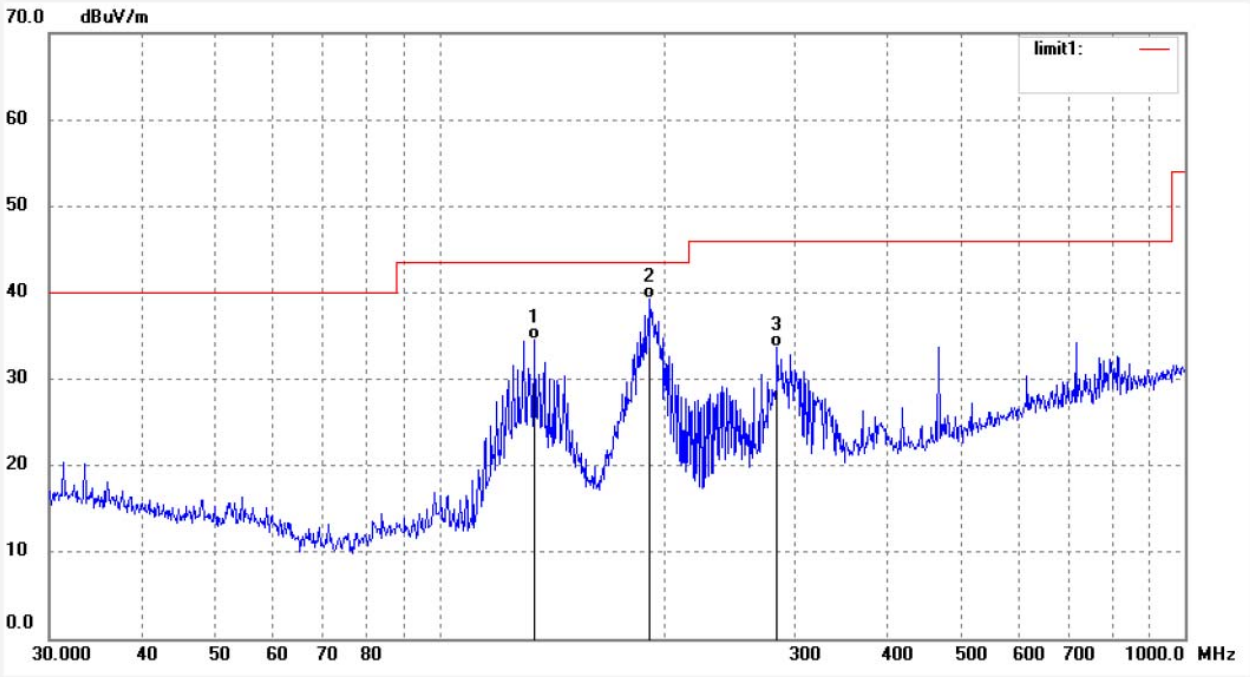


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.4448	41.89	-9.95	31.94	40.00	-8.06	QP			
2	196.5098	44.16	-12.30	31.86	43.50	-11.64	QP			
3	467.2348	39.54	-5.10	34.44	46.00	-11.56	QP			

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LGW2018 #2306	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2480MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:

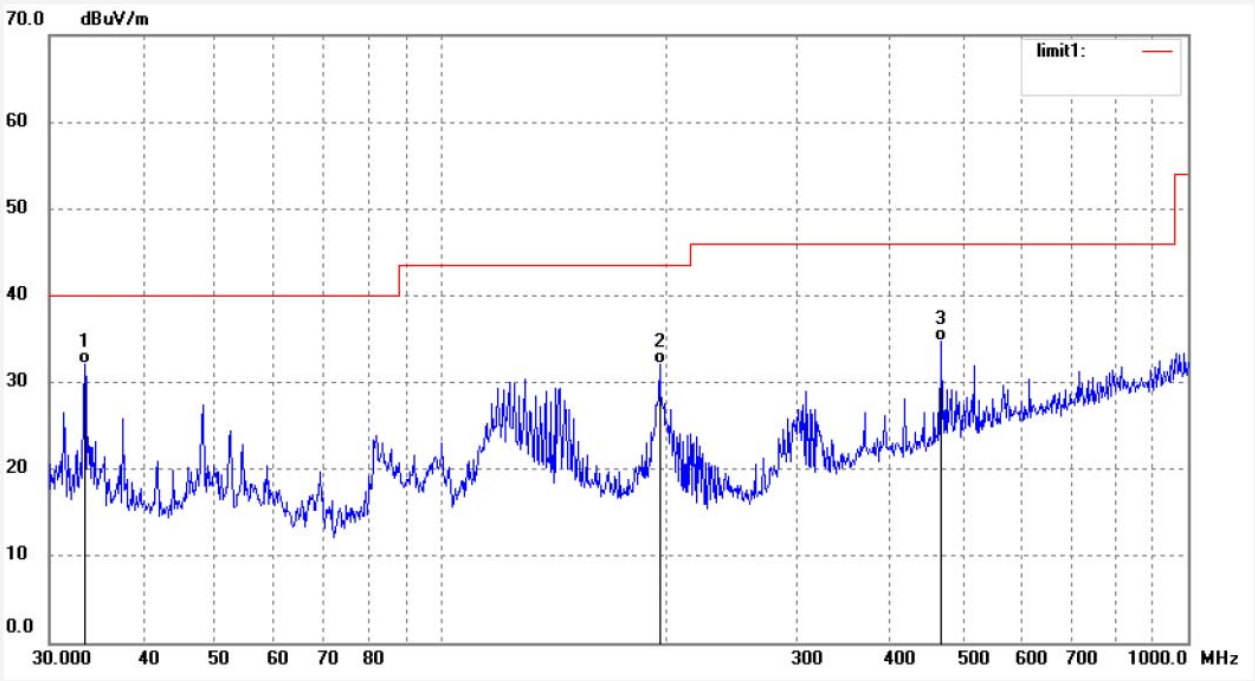


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	134.0882	48.51	-13.92	34.59	43.50	-8.91	QP			
2	191.7450	51.62	-12.42	39.20	43.50	-4.30	QP			
3	283.9791	43.08	-9.45	33.63	46.00	-12.37	QP			

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LGW2018 #2307	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2480MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



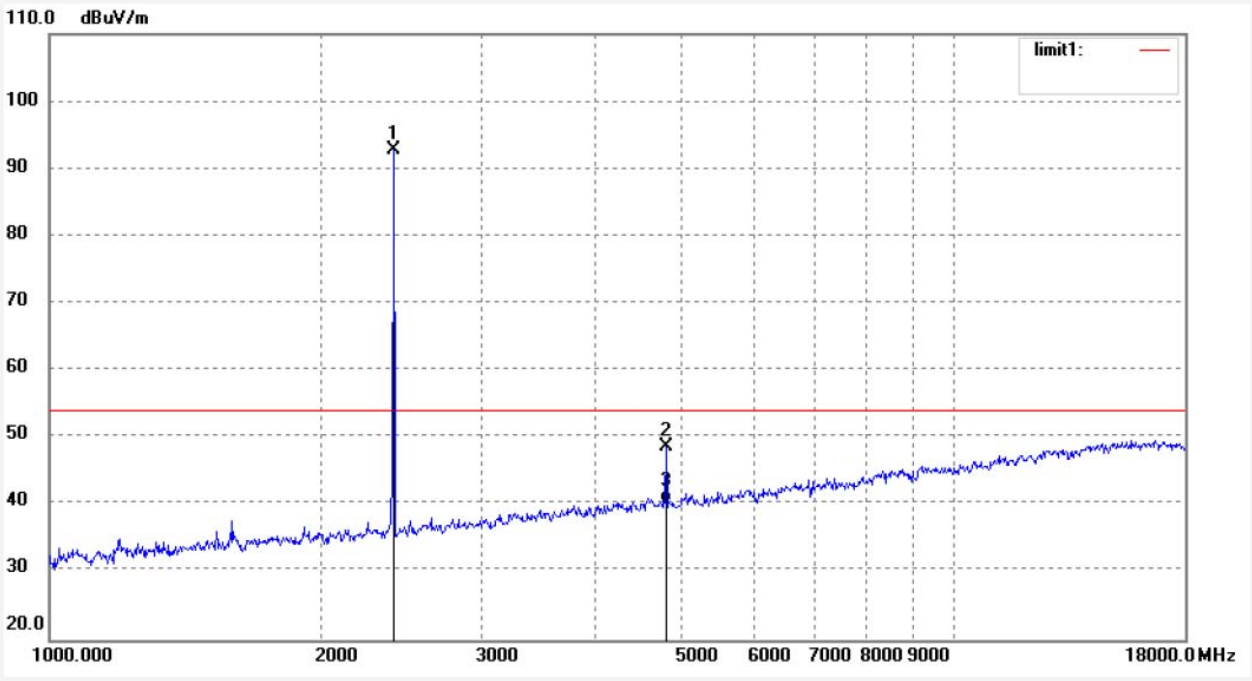
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.4448	42.10	-9.95	32.15	40.00	-7.85	QP			
2	196.5098	44.43	-12.30	32.13	43.50	-11.37	QP			
3	467.2348	39.88	-5.10	34.78	46.00	-11.22	QP			

1GHz-18GHz test data(For 2.4G BT)

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LGW2018 #2214	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2402MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	91.87	0.89	92.76	/	/	peak			
2	4804.024	41.25	7.40	48.65	74.00	-25.35	peak			
3	4804.024	32.95	7.40	40.35	54.00	-13.65	AVG			

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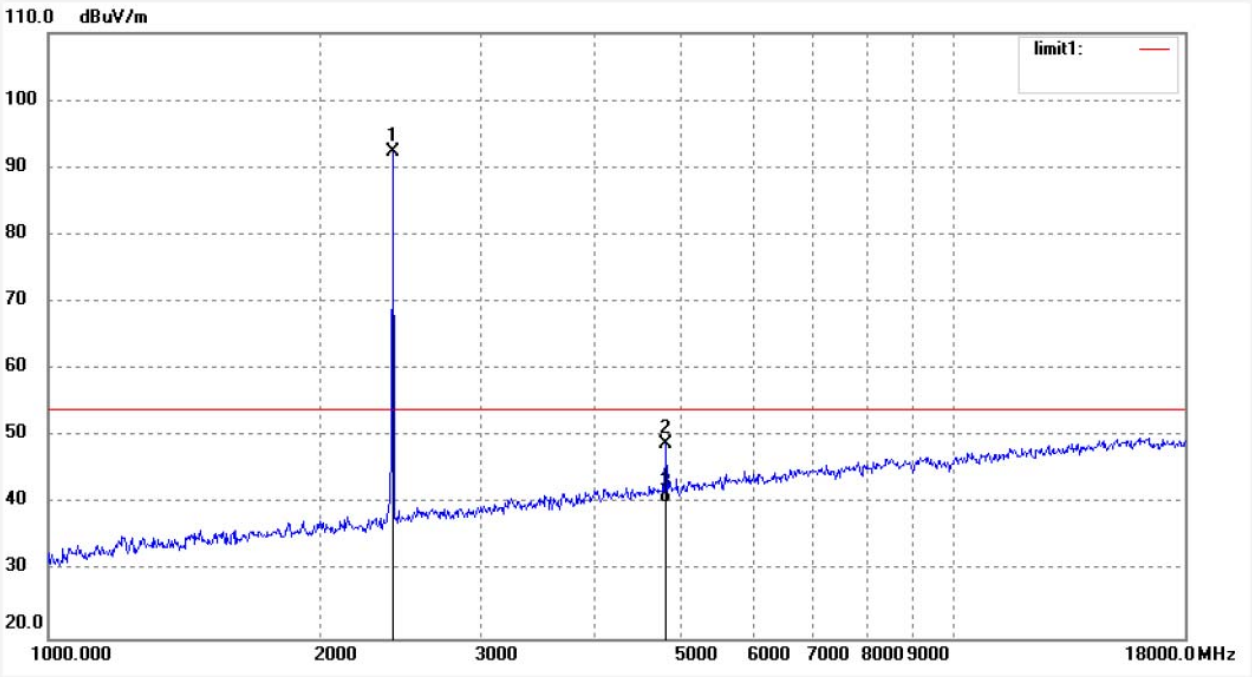
Job No.: LGW2018 #2215	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2402MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	91.37	0.89	92.26	/	/	peak			
2	4804.026	41.55	7.40	48.95	74.00	-25.05	peak			
3	4804.026	32.81	7.40	40.21	54.00	-13.79	AVG			

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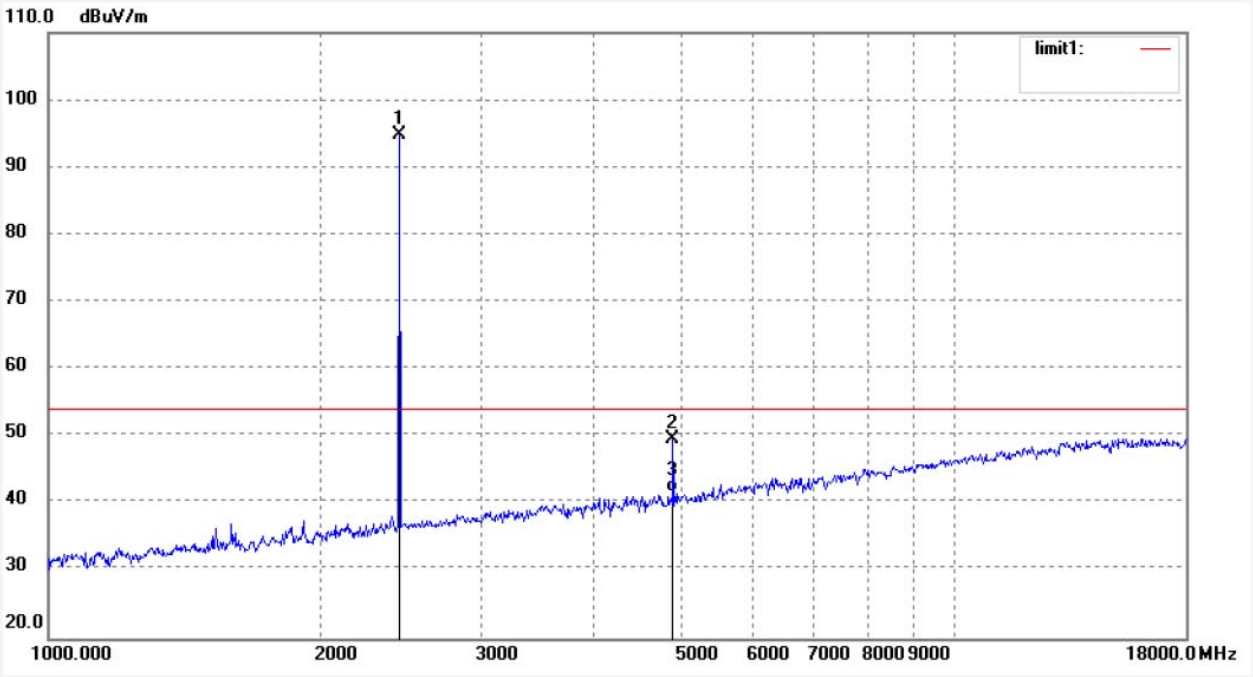
Job No.: LGW2018 #2218	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2441MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.000	93.76	1.06	94.82	/	/	peak			
2	4882.025	41.41	8.11	49.52	74.00	-24.48	peak			
3	4882.025	33.54	8.11	41.65	54.00	-12.35	AVG			

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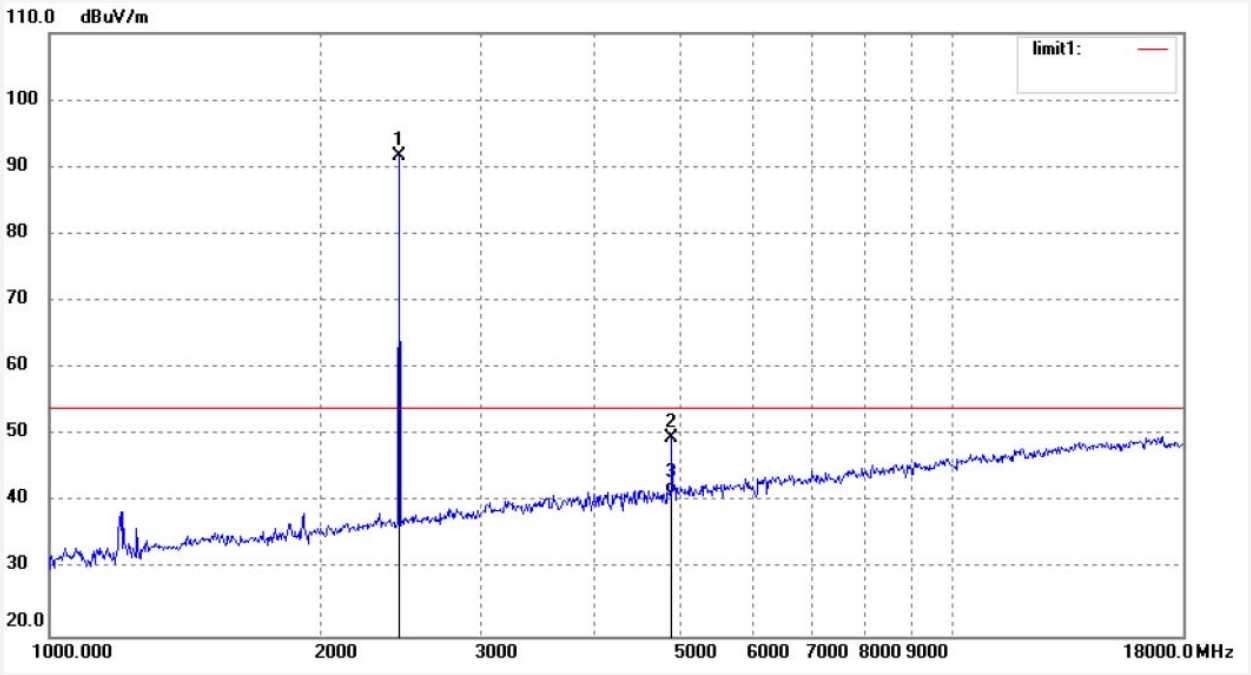
Job No.: LGW2018 #2219	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2441MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.000	90.55	1.06	91.61	/	/	peak			
2	4882.027	41.47	8.11	49.58	74.00	-24.42	peak			
3	4882.027	33.13	8.11	41.24	54.00	-12.76	AVG			

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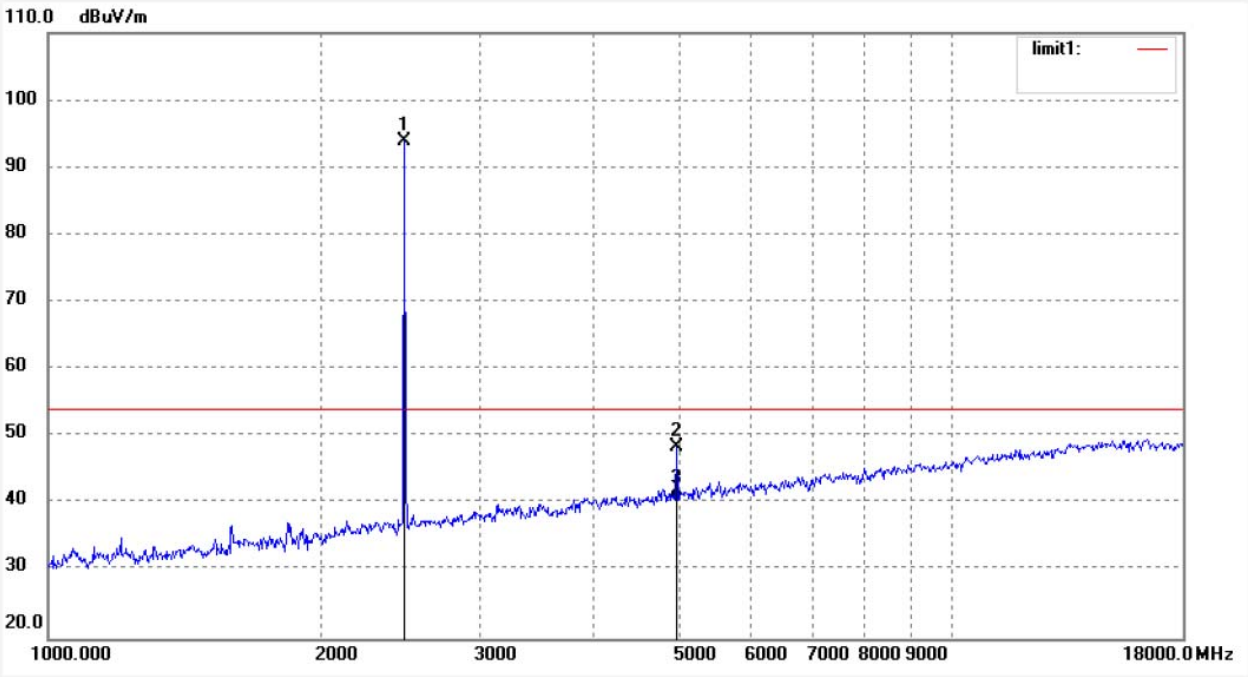
Job No.: LGW2018 #2221	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2480MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	92.92	1.10	94.02	/	/	peak			
2	4960.028	39.75	8.60	48.35	74.00	-25.65	peak			
3	4960.028	31.92	8.60	40.52	54.00	-13.48	AVG			

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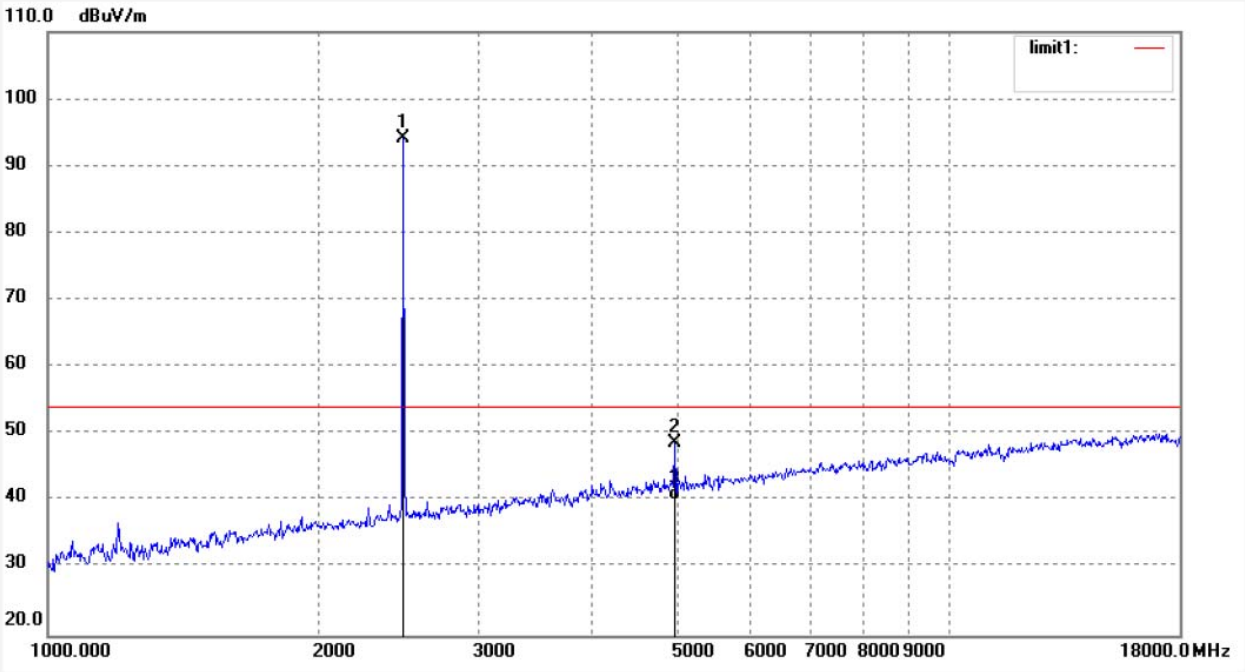
Job No.: LGW2018 #2220	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2480MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	93.05	1.10	94.15	/	/	peak			
2	4960.026	40.11	8.60	48.71	74.00	-25.29	peak			
3	4960.026	31.61	8.60	40.21	54.00	-13.79	AVG			

18GHz-26.5GHz test data(For 2.4G BT)

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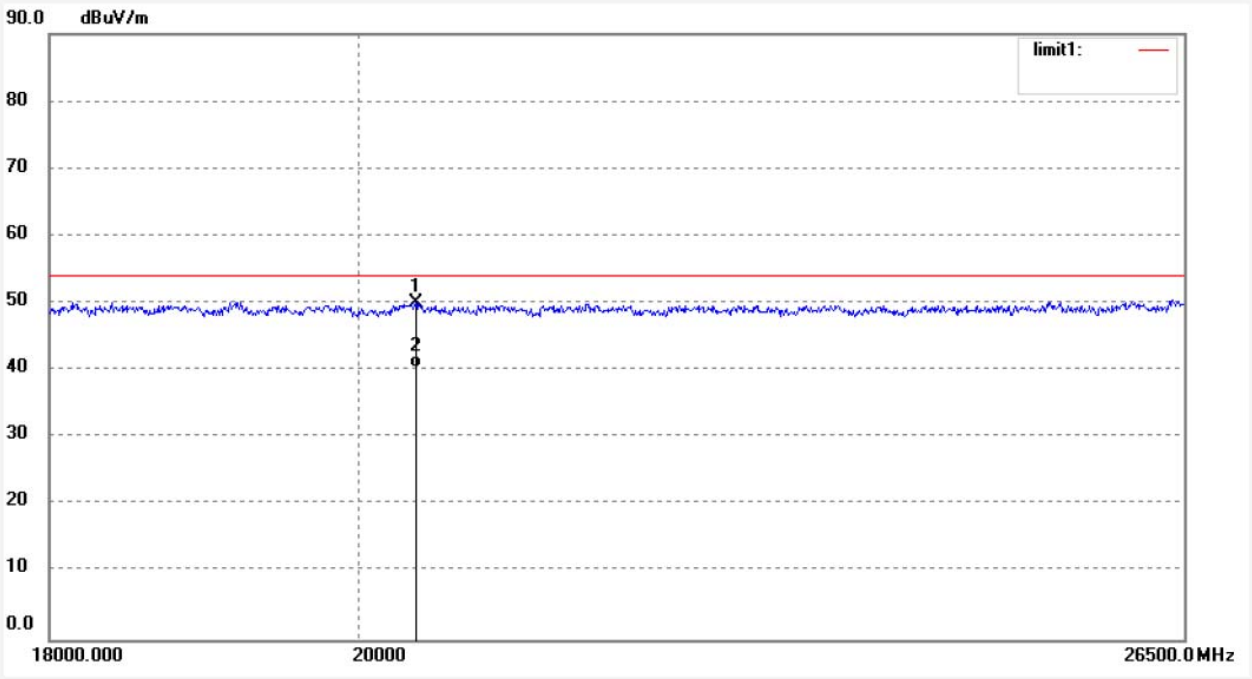
Job No.: LGW2018 #2225	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2402MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	20395.197	11.77	38.28	50.05	74.00	-23.95	peak			
2	20395.197	2.17	38.28	40.45	54.00	-13.55	AVG			

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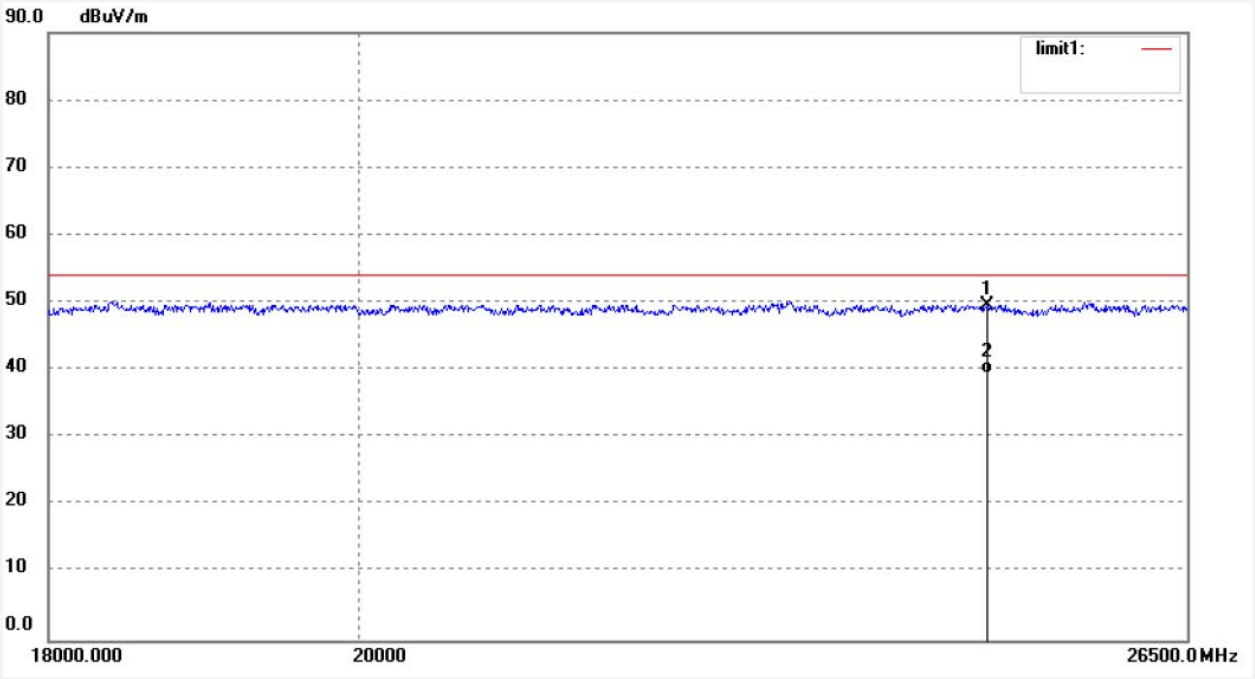
Job No.: LGW2018 #2224	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2402MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24765.696	8.91	40.69	49.60	74.00	-24.40	peak			
2	24765.696	-1.15	40.69	39.54	54.00	-14.46	AVG			

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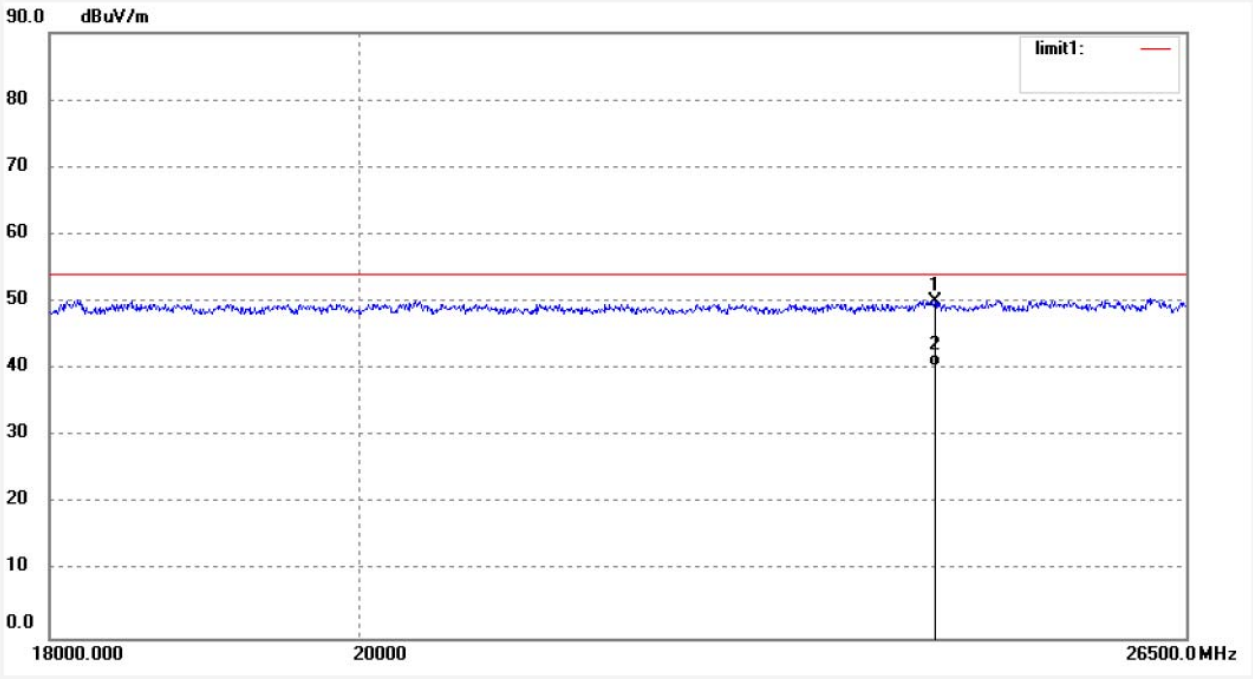
Job No.: LGW2018 #2226	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2441MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24328.972	10.05	40.02	50.07	74.00	-23.93	peak			
2	24328.972	0.33	40.02	40.35	54.00	-13.65	AVG			

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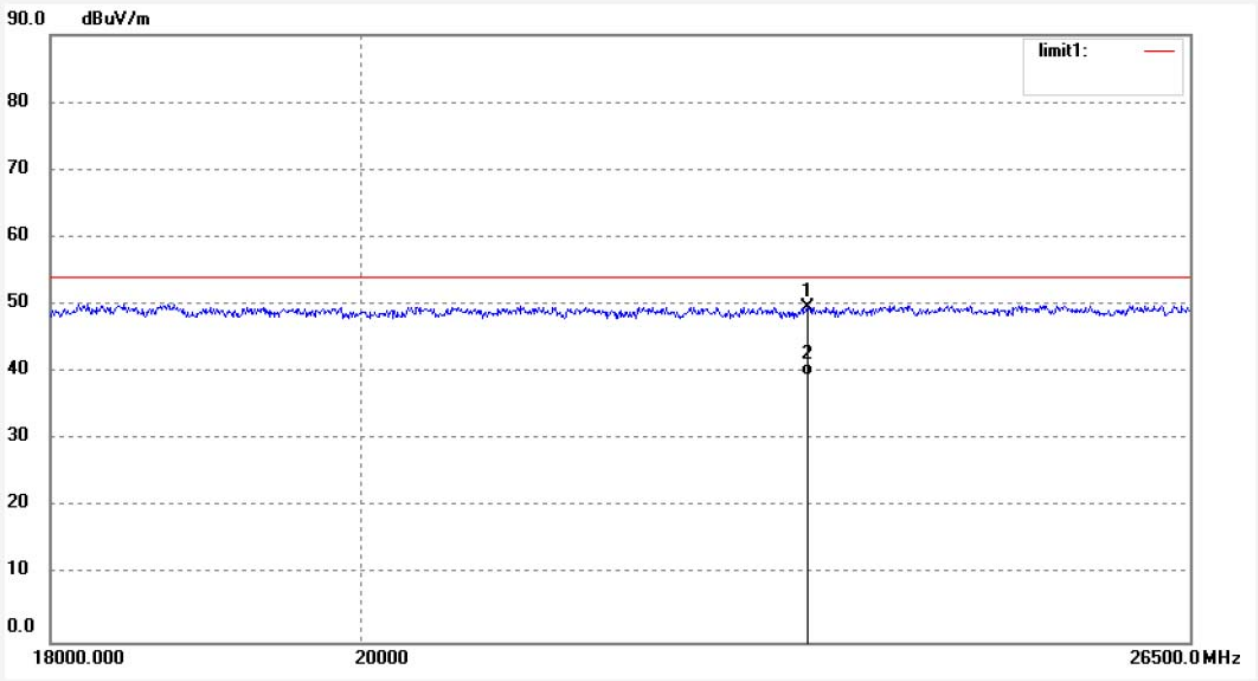
Job No.: LGW2018 #2227	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2441MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	23270.559	9.86	39.74	49.60	74.00	-24.40	peak			
2	23270.559	-0.20	39.74	39.54	54.00	-14.46	AVG			

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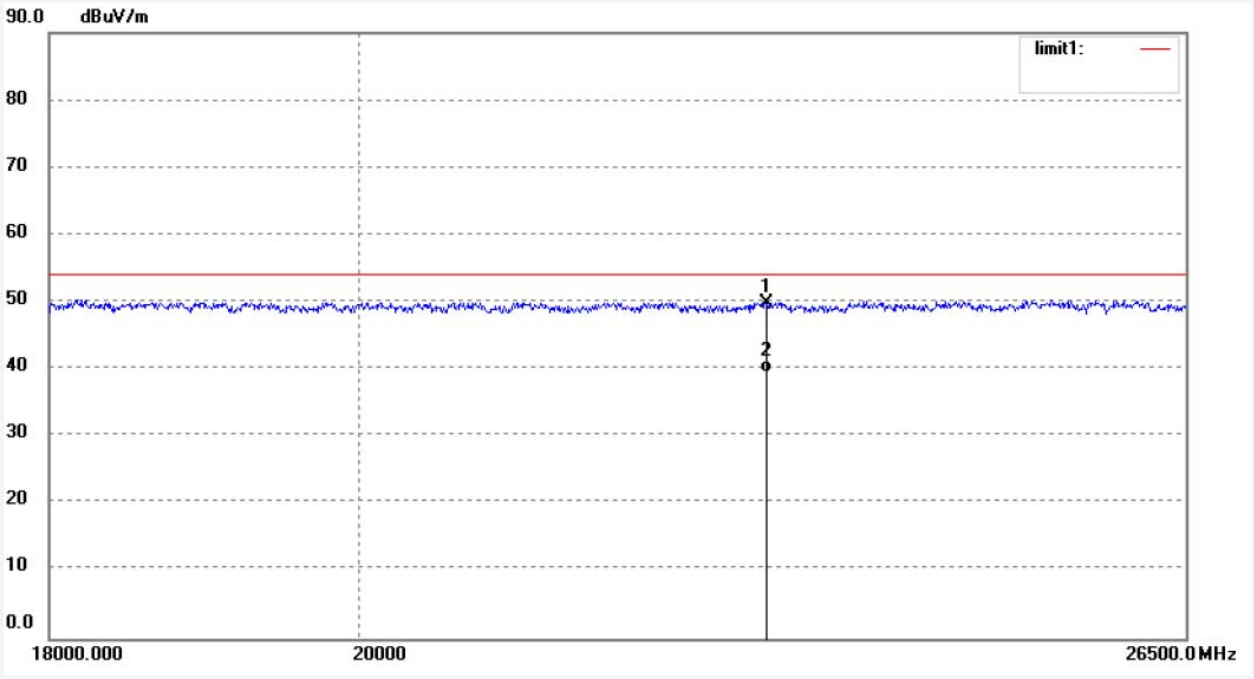
Job No.: LGW2018 #2229	Polarization: Horizontal
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2480MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	22975.433	10.33	39.59	49.92	74.00	-24.08	peak			
2	22975.433	-0.05	39.59	39.54	54.00	-14.46	AVG			

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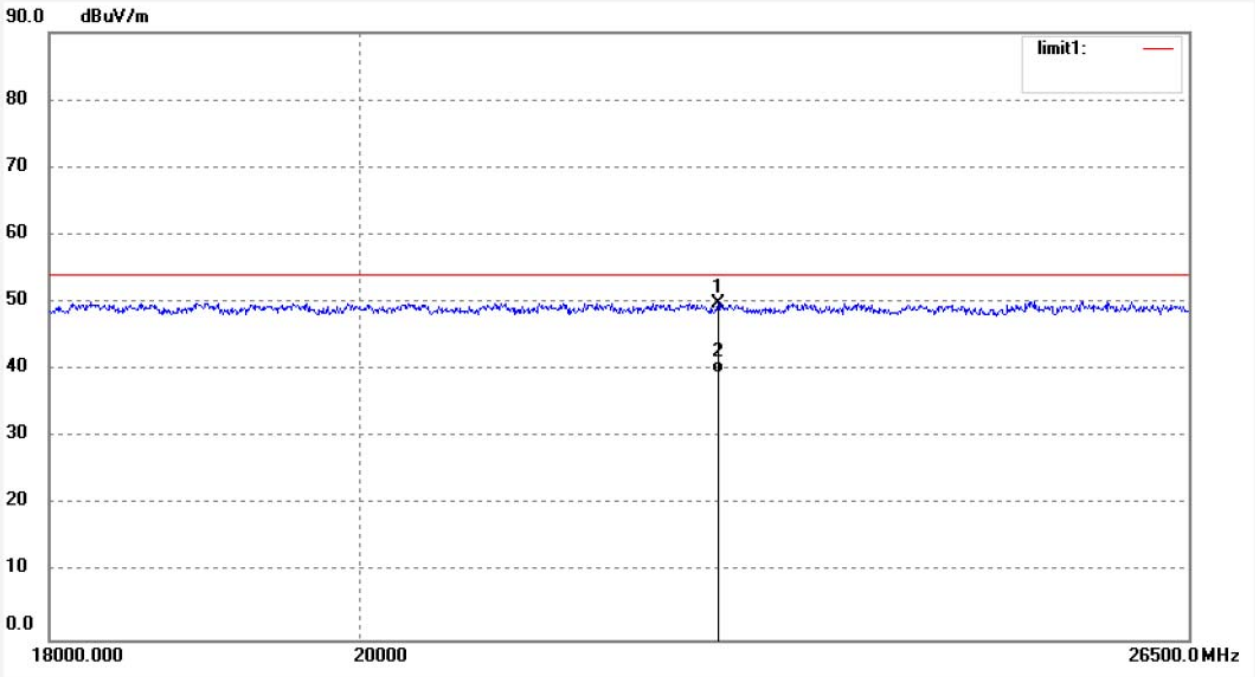
Job No.: LGW2018 #2228	Polarization: Vertical
Standard: FCC 15.247 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/05/
Temp.(C)/Hum.(%) 23 C / 48 %	Time:
EUT: Multimedia Speaker	Engineer Signature: WADE
Mode: TX 2480MHz	Distance: 3m
Model: S3000 Pro	
Applicant: EDIFIER	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	22587.745	10.33	39.45	49.78	74.00	-24.22	peak			
2	22587.745	0.09	39.45	39.54	54.00	-14.46	AVG			

9kHz-30MHz test data (For 5.8G)

ACCURATE TECHNOLOGY CO.,LTD

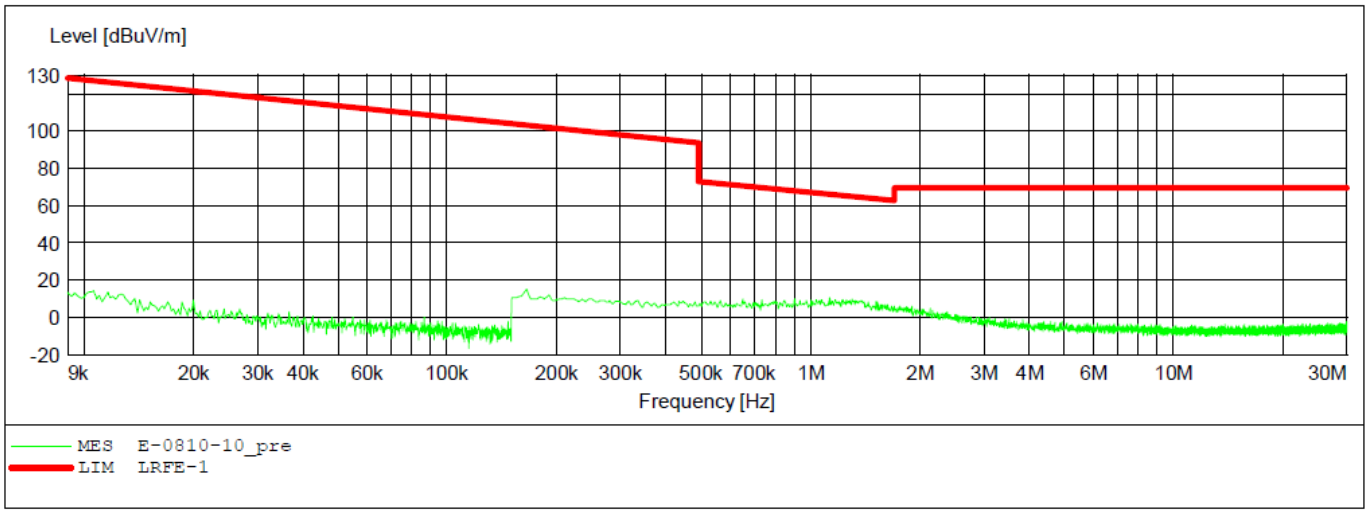
FCC Class B 3M Radiated

EUT:	Multimedia Speaker M/N:S3000 Pro
Applicant:	EDIFIER
Operating Condition:	TX 5736MHz
Test Site:	2# Chamber
Operator:	WADE
Test Specification:	AC 120V/60Hz
Comment:	X
Start of Test:	2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



ACCURATE TECHNOLOGY CO.,LTD

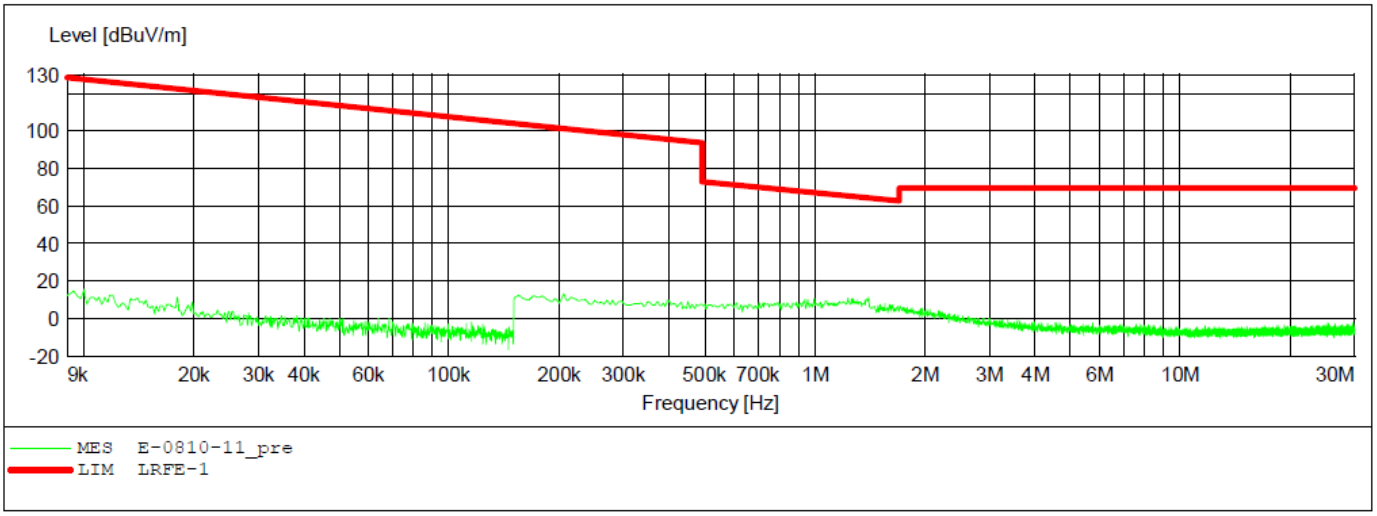
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 5736MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



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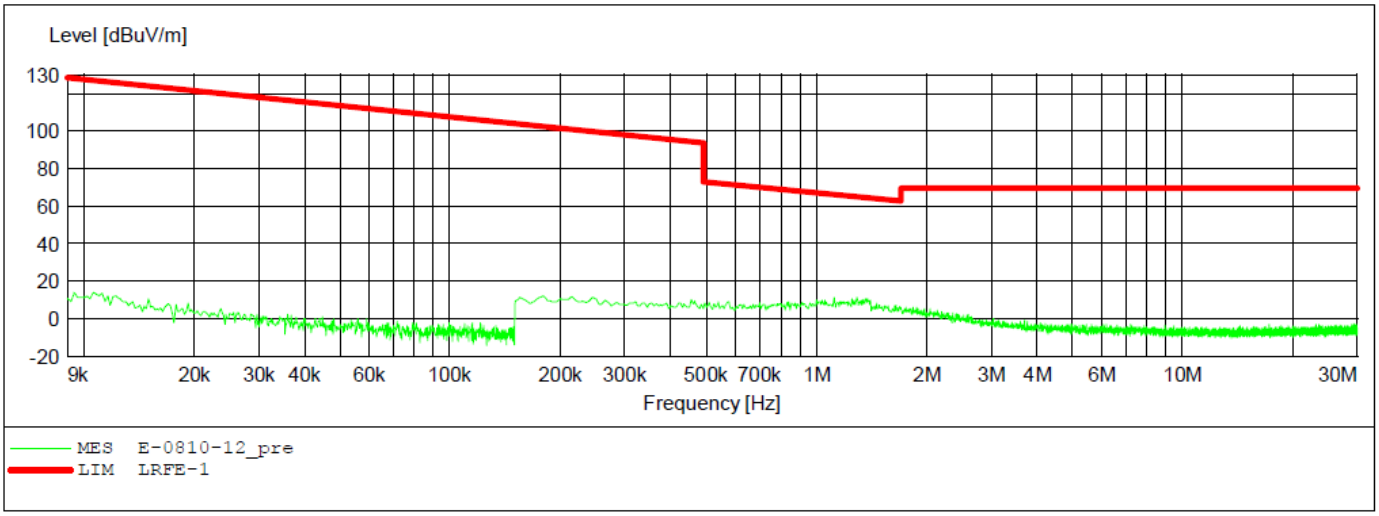
FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 5736MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Z
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



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FCC Class B 3M Radiated

EUT: Multimedia Speaker M/N:S3000 Pro
Applicant: EDIFIER
Operating Condition: TX 5762MHz
Test Site: 2# Chamber
Operator: WADE
Test Specification: AC 120V/60Hz
Comment: Y
Start of Test: 2018-8-10 /

SCAN TABLE: "LFRE Fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M