

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of

SHENZHEN SADES DIGITAL TECHNOLOGY CO., LTD.

Supsoo Bluetooth headset

Model No.: B103, B101, B102, B104, B105, B106, B107

FCC ID: 2AMDN-B103

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Date of Test : June 20-July 1, 2017
Date of Report : July 7, 2017

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Test Report Certification

Applicant : SHENZHEN SADES DIGITAL TECHNOLOGY CO., LTD.

Manufacturer : DONGGUAN HUAYE ELECTRONICS TECHNOLOGY CO., LTD.

EUT Description : Supsoo Bluetooth headset

Model No. : B103, B101, B102, B104, B105, B106, B107

(Note: We hereby state that these models are identical in interior structure, electrical circuits and components, just model appearance and color are different . Therefore, only model B103 is tested for EMC tests.)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247:2015 ANSI C63.10: 2013

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 :

June 20-July 1, 2017

Date of Report:

July 7, 2017

Prepared by :

(Star Yang, Engineer)

Approved & Authorized Signer :

(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Model Number	: B103, B101, B102, B104, B105, B106, B107 (Note: We hereby state that these models are identical in interior structure, electrical circuits and components, just model appearance and color are different . Therefore, only model B103 is tested for EMC tests.)
Bluetooth version	: BT V4.1 Single mode This report is for BT classic mode
Frequency Range	: 2402MHz-2480MHz
Number of Channels	: 79 for BT classic mode
Antenna Gain(Max)	: 0dBi
Antenna type	: PCB Antenna
Trade Name	: Supsoo
Adapter Input Voltage	: DC 3.7V (Power by Lithium battery) or DC 5.0V (Power by USB port)
Modulation mode	: GFSK, $\pi/4$ DQPSK, 8DPSK
Applicant	: SHENZHEN SADES DIGITAL TECHNOLOGY CO., LTD.
Address	: Floor 16, Building 2, Tongjian Building, Yuanling Str, Shenzhen City, China 518000
Manufacturer	: DONGGUAN HUAYE ELECTRONICS TECHNOLOGY CO., LTD.
Address	: Heyiwei Industrial Park, Cunzheng Road, Renzhou, Shatian Town, Dongguan City, China.

1.2. Accessory and Auxiliary Equipment

PC :	Manufacturer: LENOVO M/N: 4290-RT8 S/N: R9-FW93G 11/08
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1.3. 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 (ISED) 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	: ACCURATE TECHNOLOGY CO. LTD
Site Location	: F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

1.4. 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. 07, 2017	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 07, 2017	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 07, 2017	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 07, 2017	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 13, 2017	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 13, 2017	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 07, 2017	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 07, 2017	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 07, 2017	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 07, 2017	1 Year

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: Transmitting mode

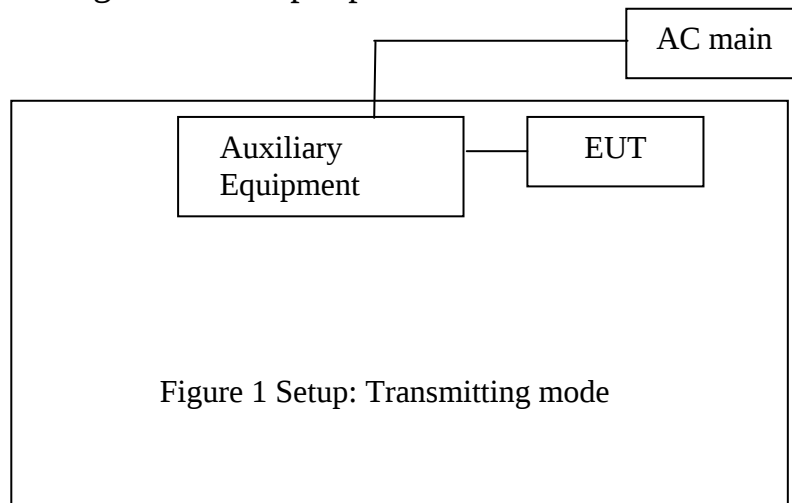
Low Channel: 2402MHz

Middle Channel: 2441MHz

High Channel: 2480MHz

Hopping

3.2.Configuration and peripherals

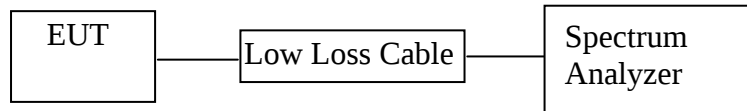


4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission Test	Compliant
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: Supsoo Bluetooth headset)

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 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.

5.4. 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, and 2480MHz TX frequency to transmit.

5.5. Test Procedure

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

5.5.2. Set RBW of spectrum analyzer to 30 kHz and VBW to 100 kHz.

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

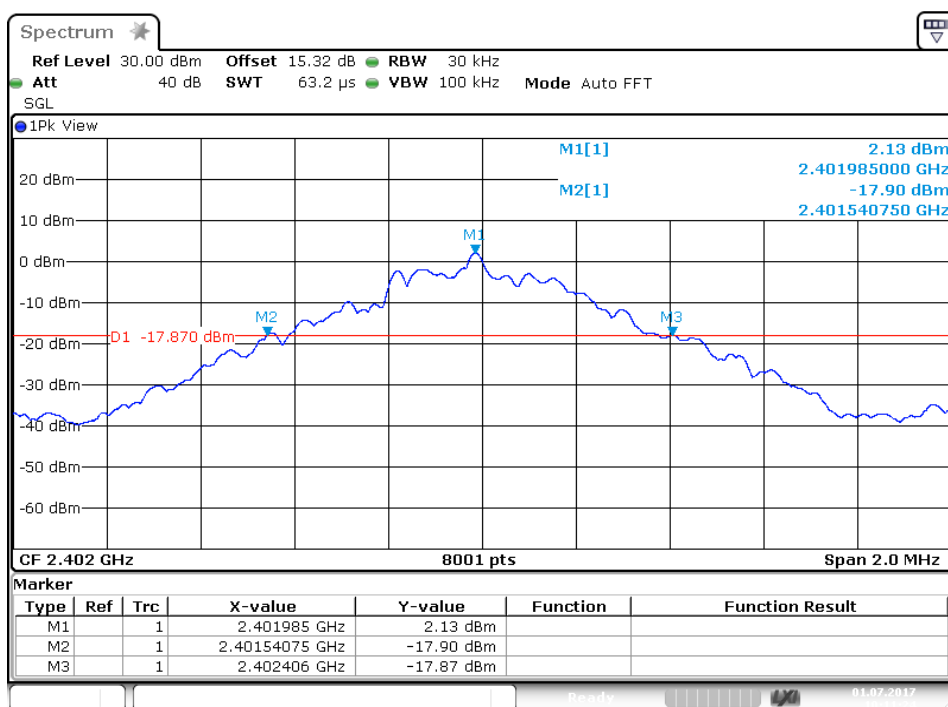
5.6. Test Result

Channel	Frequency (MHz)	GFSK 20dB Bandwidth (MHz)	$\Pi/4$ -DQPSK 20dB Bandwidth (MHz)	8DPSK 20dB Bandwidth (MHz)	Result
Low	2402	0.865	1.220	1.210	Pass
Middle	2441	0.832	1.218	1.211	Pass
High	2480	0.825	1.220	1.211	Pass

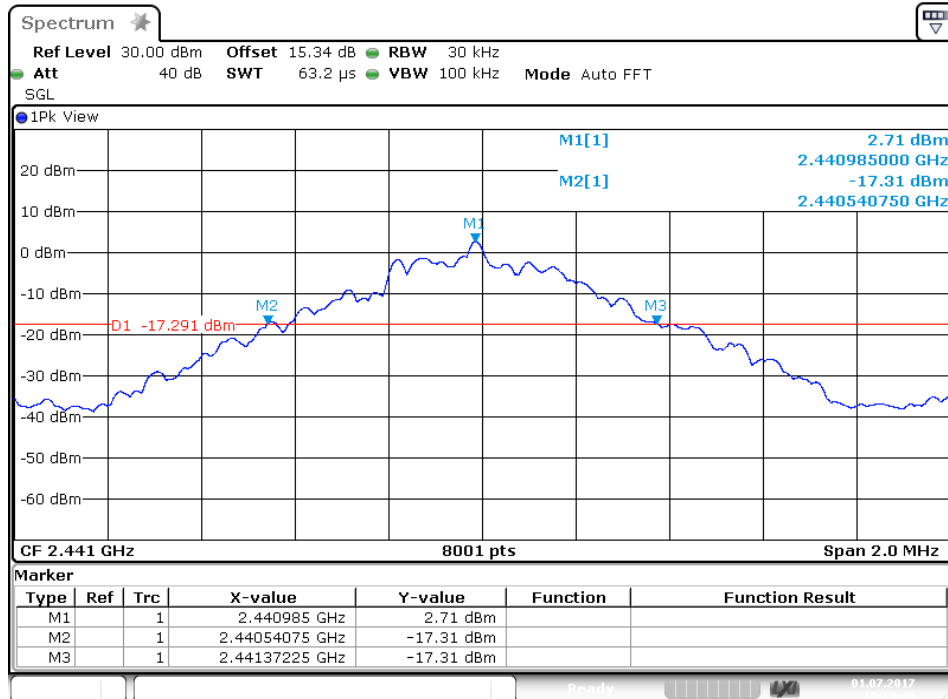
The spectrum analyzer plots are attached as below.

GFSK Mode

Low channel

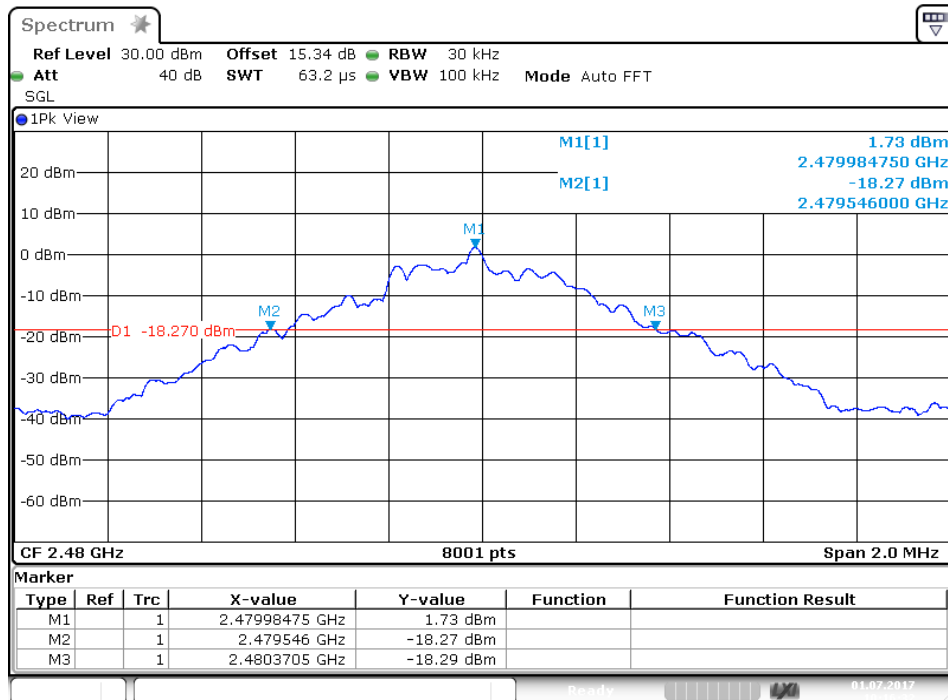


Middle channel



Date: 1.JUL.2017 10:14:46

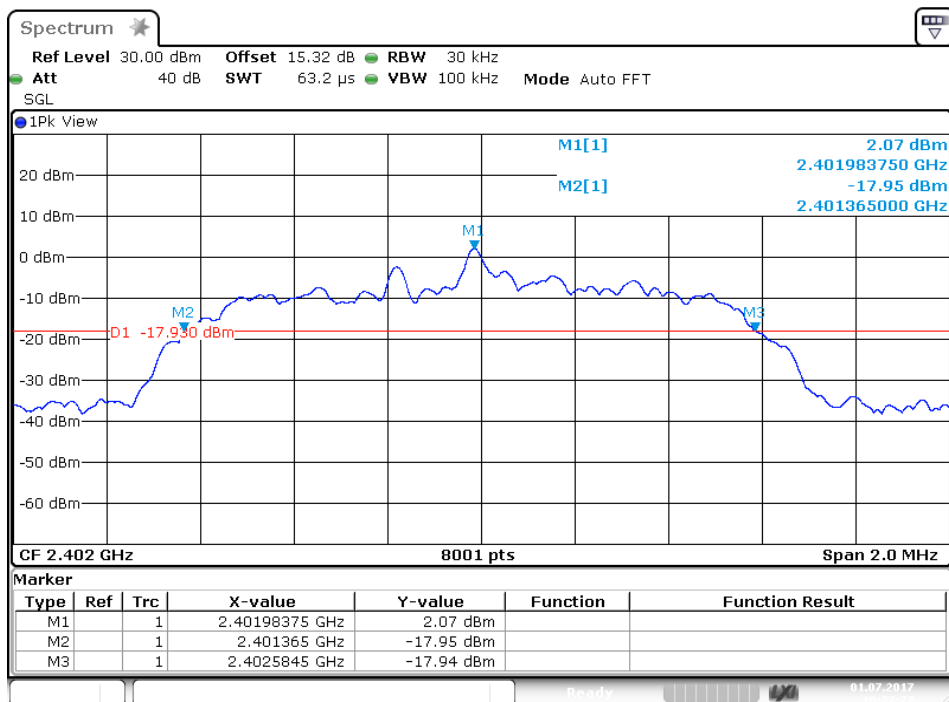
High channel



Date: 1.JUL.2017 10:16:32

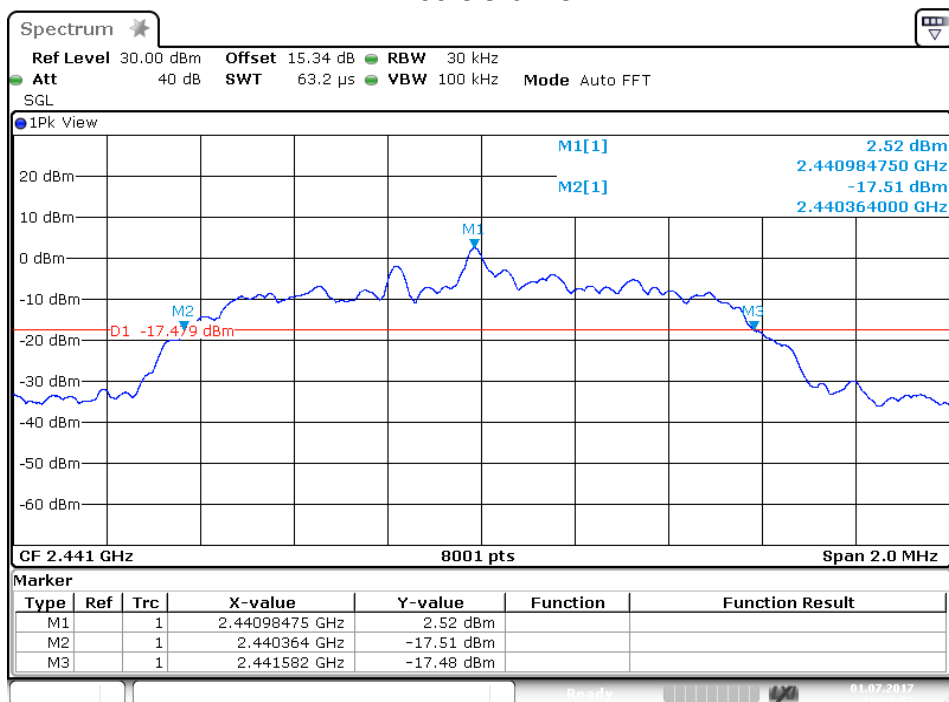
Π/4-DQPSK Mode

Low channel



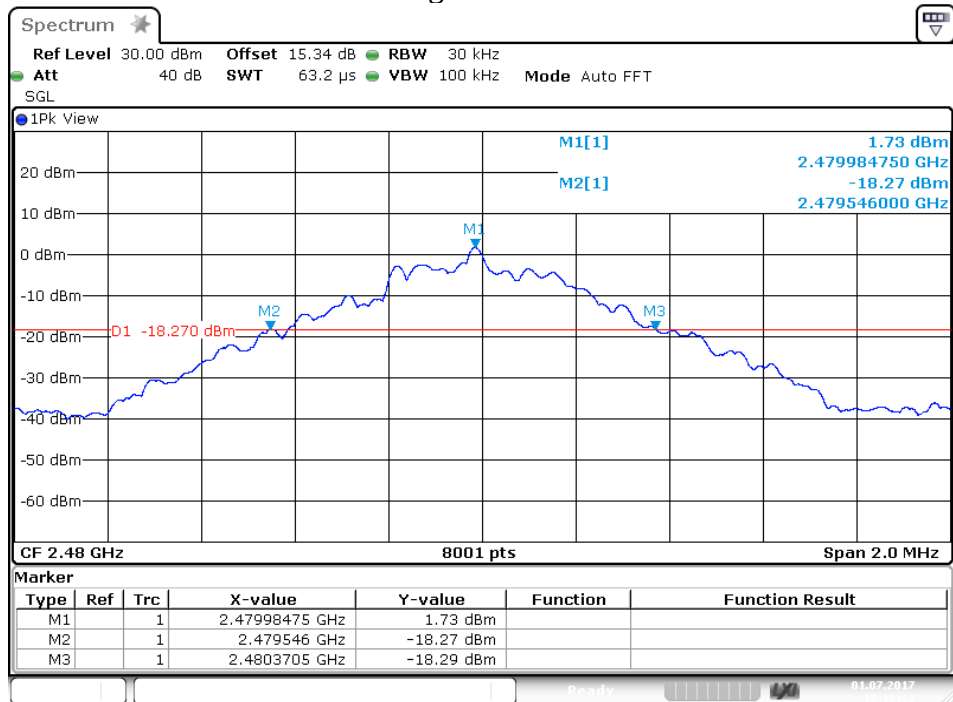
Date: 1.JUL.2017 10:22:27

Middle channel



Date: 1.JUL.2017 10:20:53

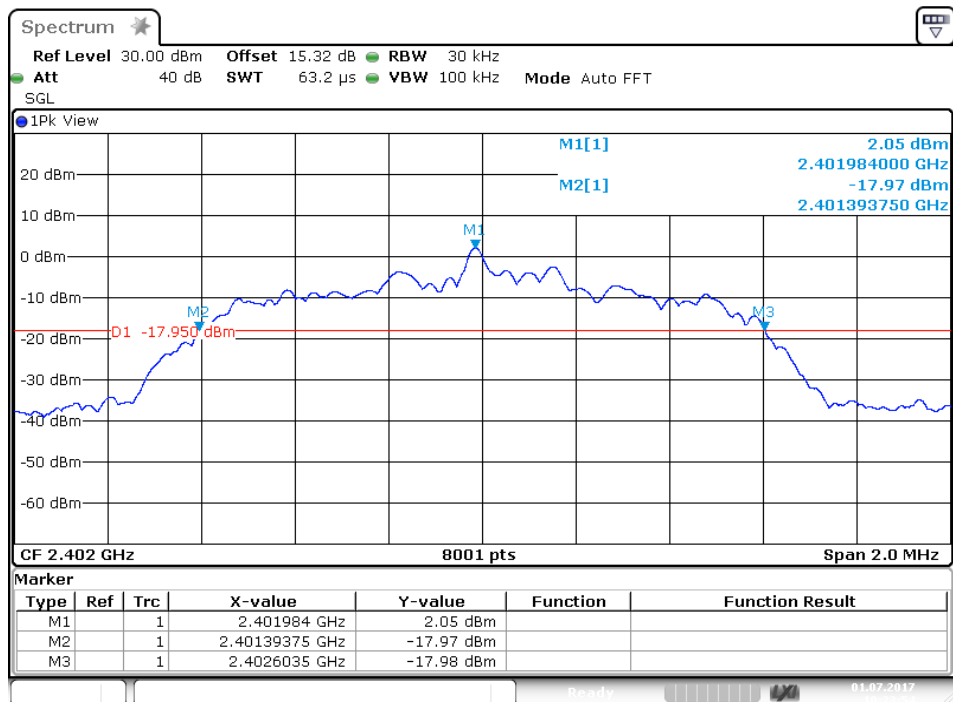
High channel



Date: 1.JUL.2017 10:16:32

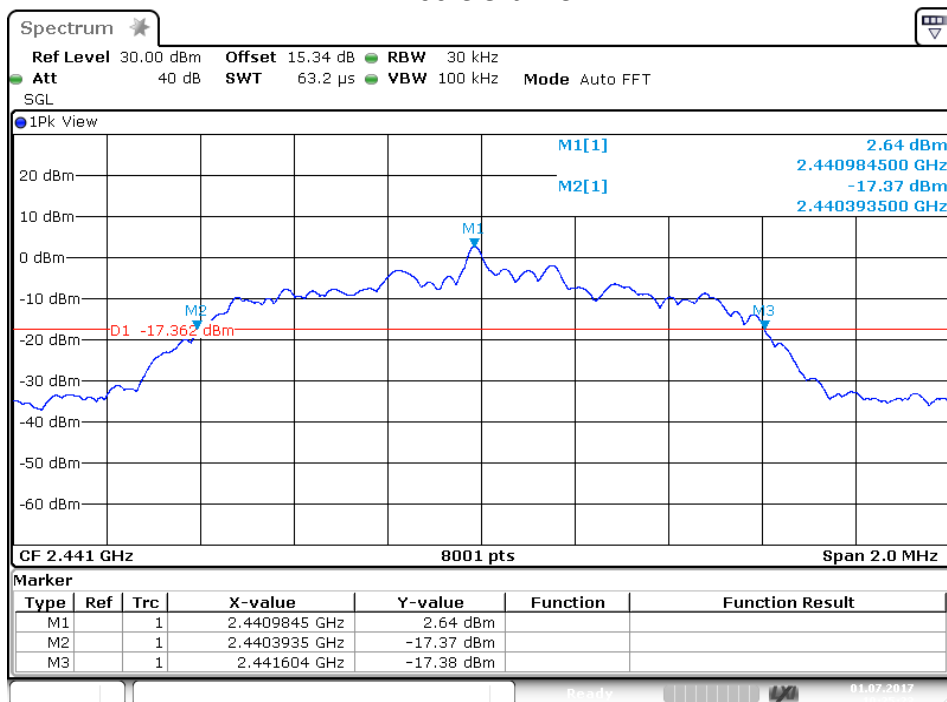
8DPSK Mode

Low channel



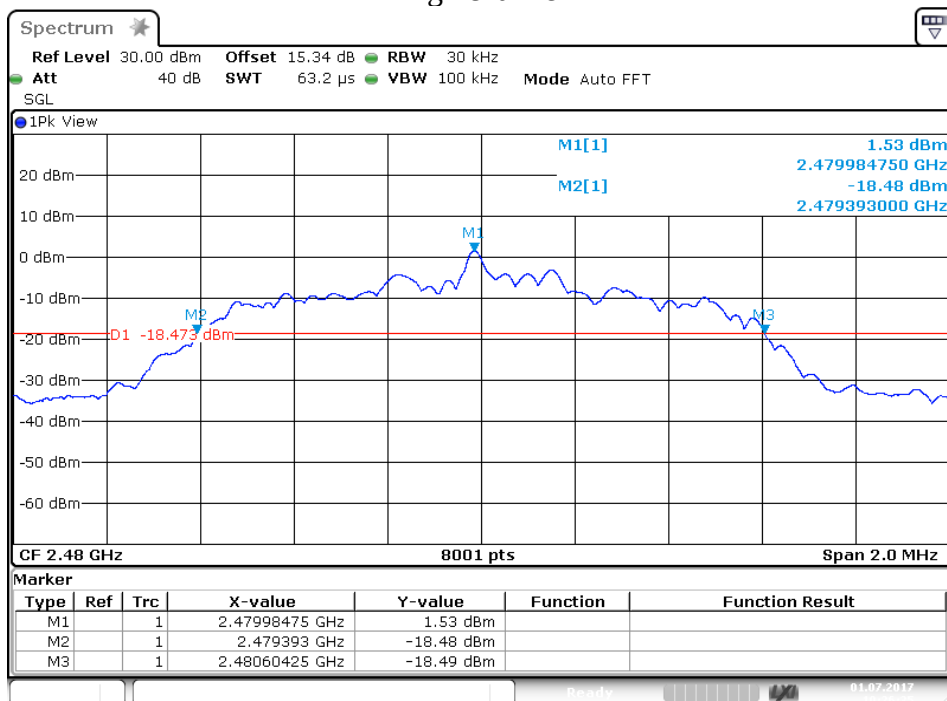
Date: 1.JUL.2017 10:23:54

Middle channel



Date: 1.JUL.2017 10:25:23

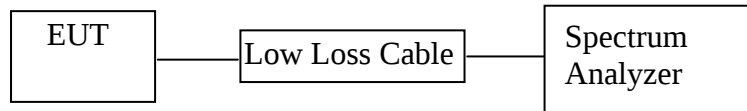
High channel



Date: 1.JUL.2017 10:26:35

6. CARRIER FREQUENCY SEPARATION TEST

6.1. Block Diagram of Test Setup



(EUT: Supsoo Bluetooth headset)

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 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.

6.4. 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, and 2480MHz TX frequency to transmit.

6.5. Test Procedure

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

6.5.2. Set RBW of spectrum analyzer to 30 kHz and VBW to 100 kHz. Adjust Span to 2MHz.

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

6.5.4. Measurement the channel separation

6.6. Test Result

GFSK

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.000	25KHz or 20dB bandwidth	PASS
	2403			
Middle	2440	1.004	25KHz or 20dB bandwidth	PASS
	2441			
High	2479	1.004	25KHz or 20dB bandwidth	PASS
	2480			

Π/4-DQPSK

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2403			
Middle	2440	1.008	25KHz or 2/3*20dB bandwidth	PASS
	2441			
High	2479	1.004	25KHz or 2/3*20dB bandwidth	PASS
	2480			

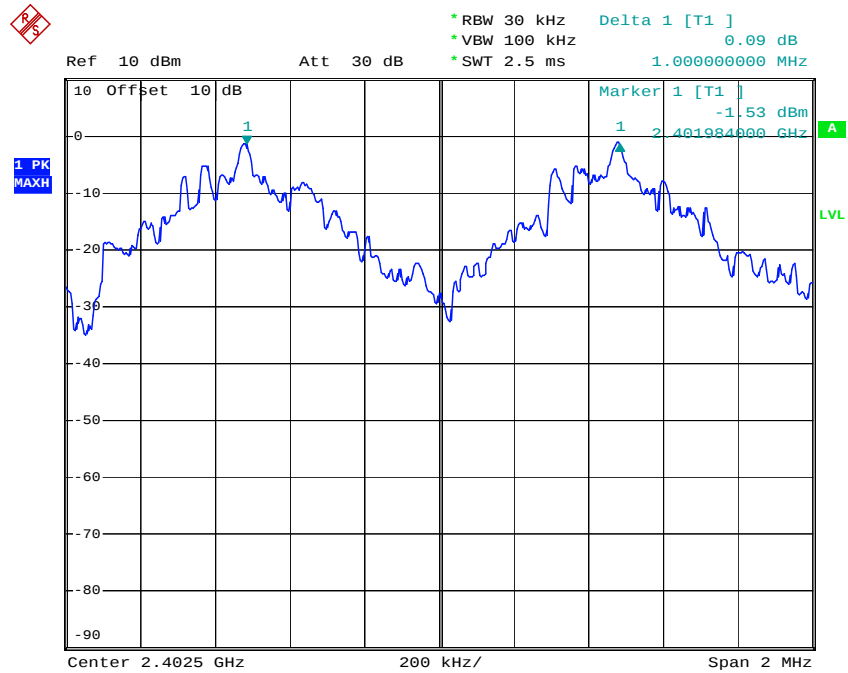
8DPSK

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2403			
Middle	2440	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2441			
High	2479	1.008	25KHz or 2/3*20dB bandwidth	PASS
	2480			

The spectrum analyzer plots are attached as below.

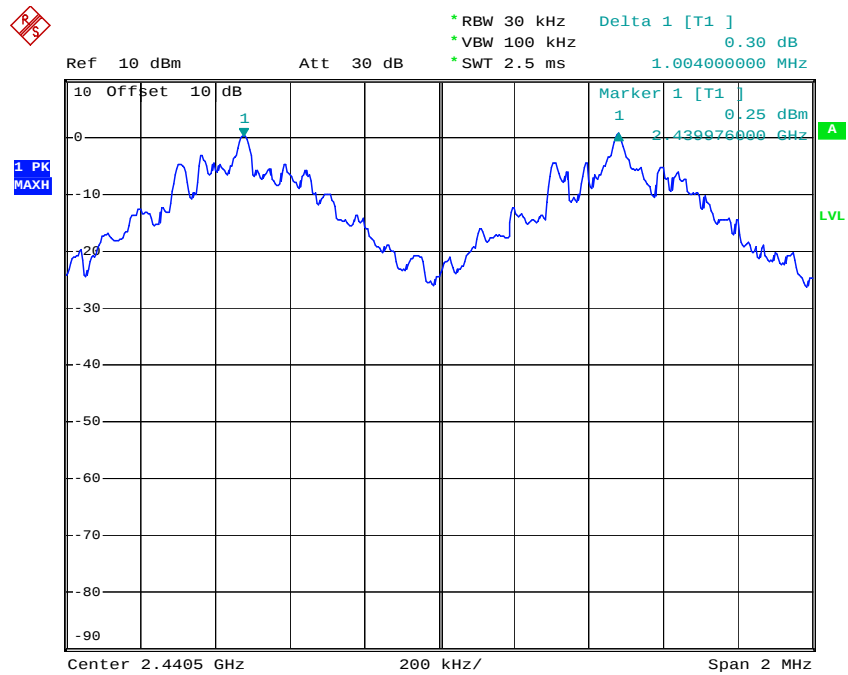
GFSK Mode

Low channel



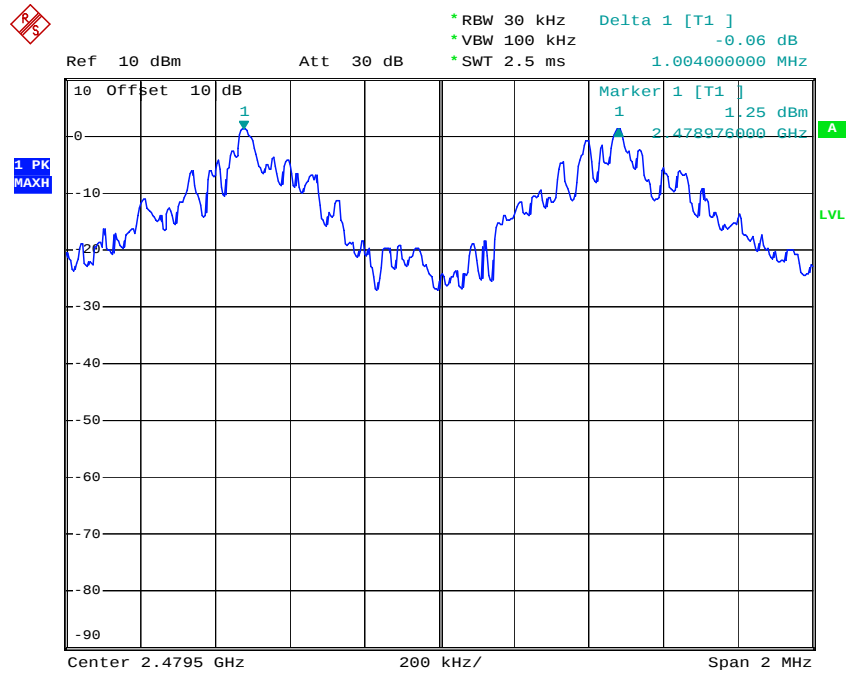
Comment A:
Date: 8.JUL.2017 11:43:27

Middle channel



Comment A:
Date: 8.JUL.2017 11:46:52

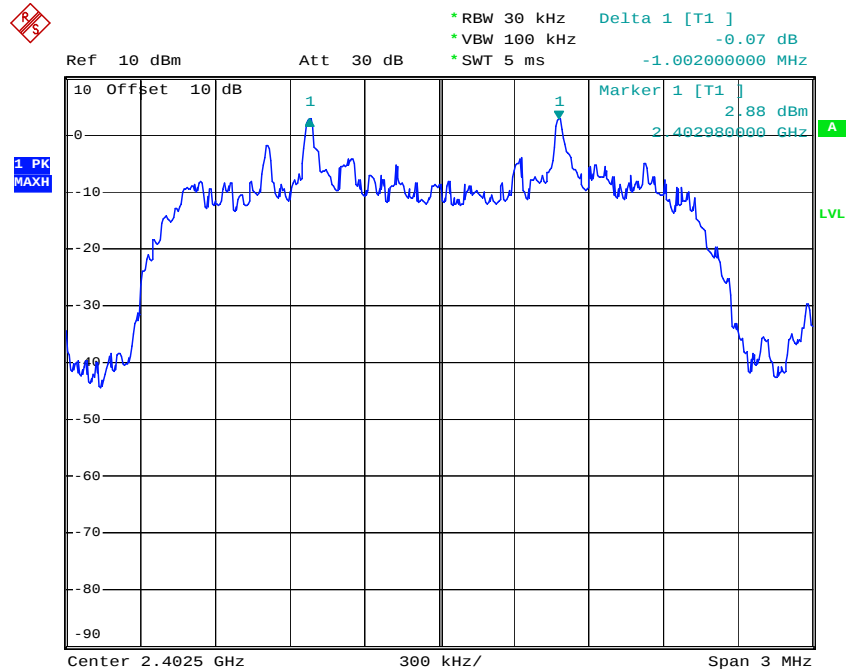
High channel



Comment A:
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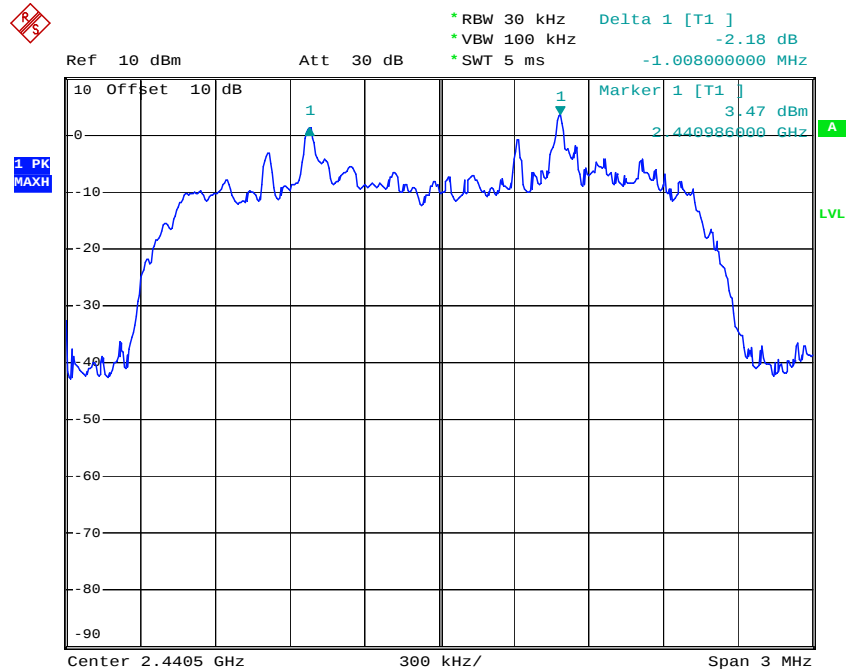
Π/4-DQPSK Mode

Low channel



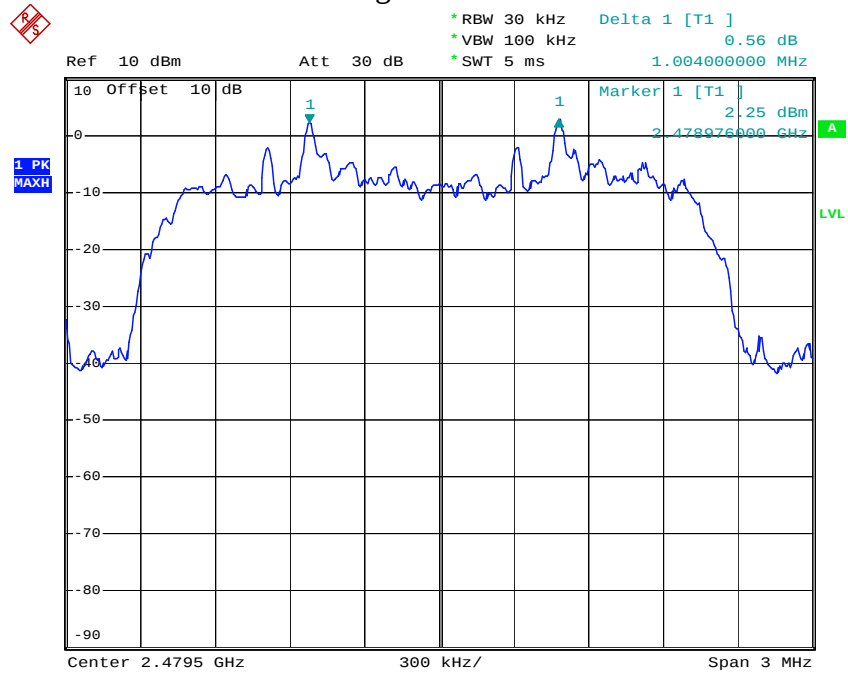
Comment A:
Date: 8.JUL.2017 11:59:46

Middle channel



Comment A:
Date: 8.JUL.2017 11:58:40

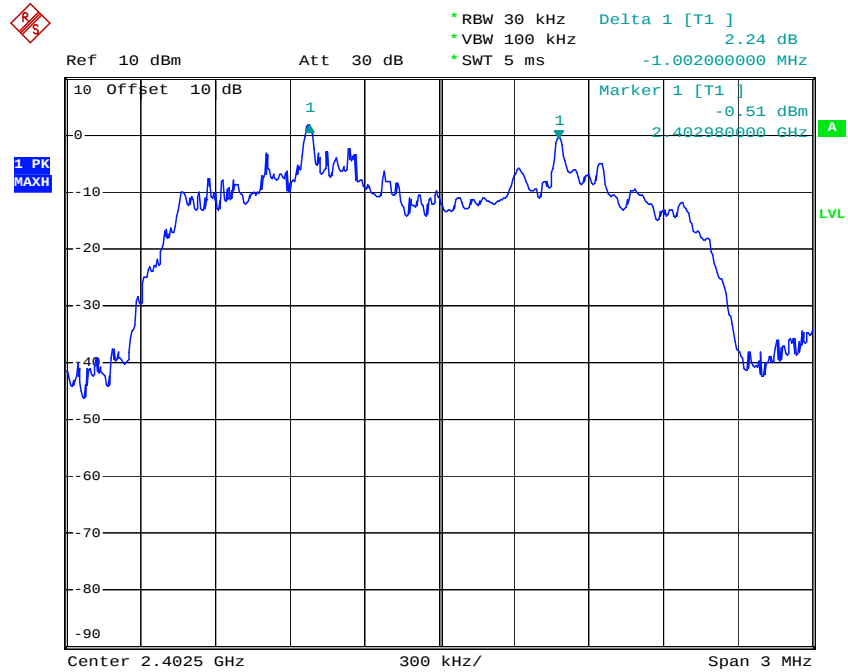
High channel



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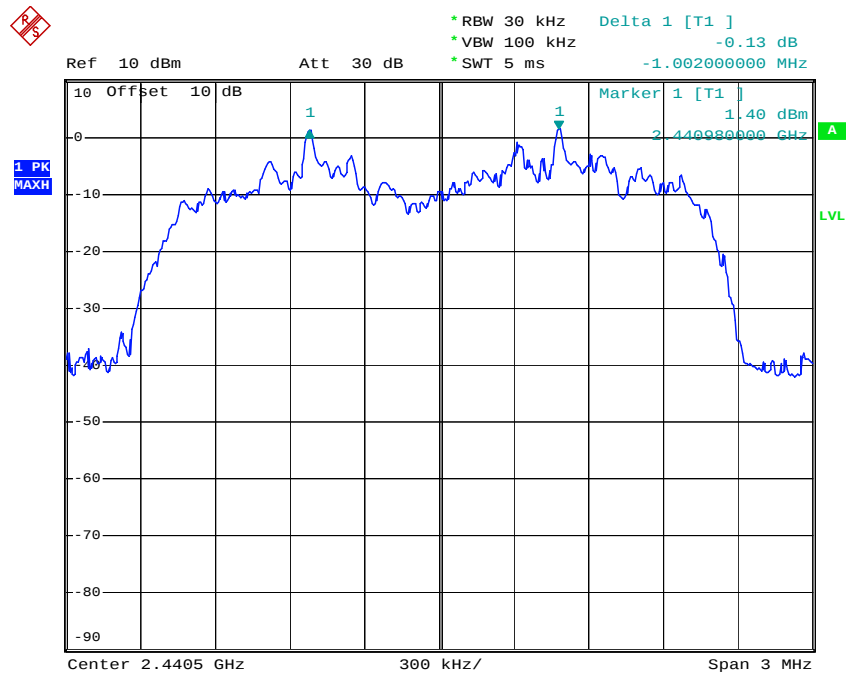
8DPSK Mode

Low channel



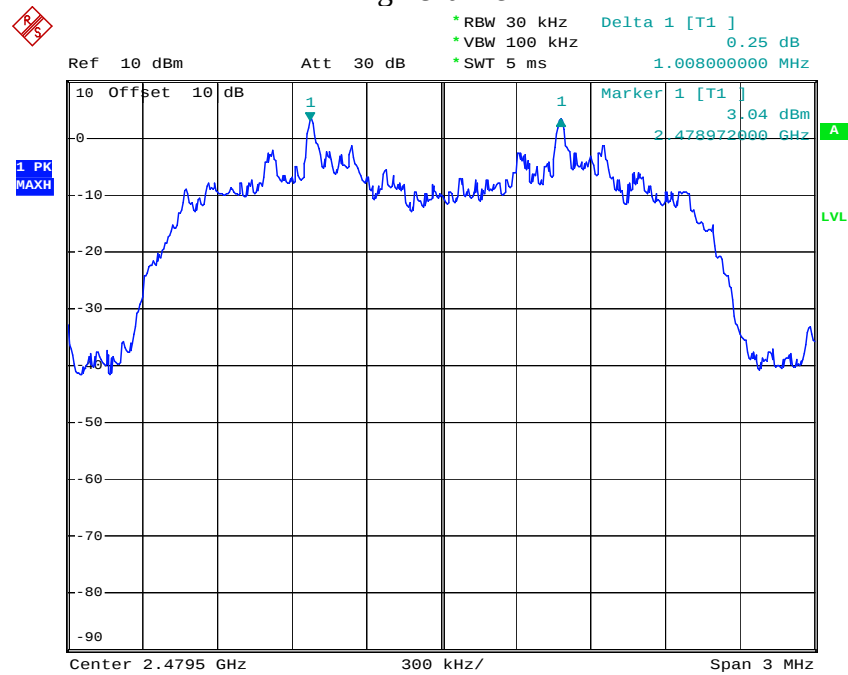
Comment A:
 Date: 8.JUL.2017 12:00:26

Middle channel



Comment A:
 Date: 8.JUL.2017 12:01:16

High channel



Comment A:
Date: 8.JUL.2017 12:02:50

7. NUMBER OF HOPPING FREQUENCY TEST

7.1. Block Diagram of Test Setup



(EUT: Supsoo Bluetooth headset)

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 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.

7.4. 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 RBW=100 kHz, VBW=300 kHz.

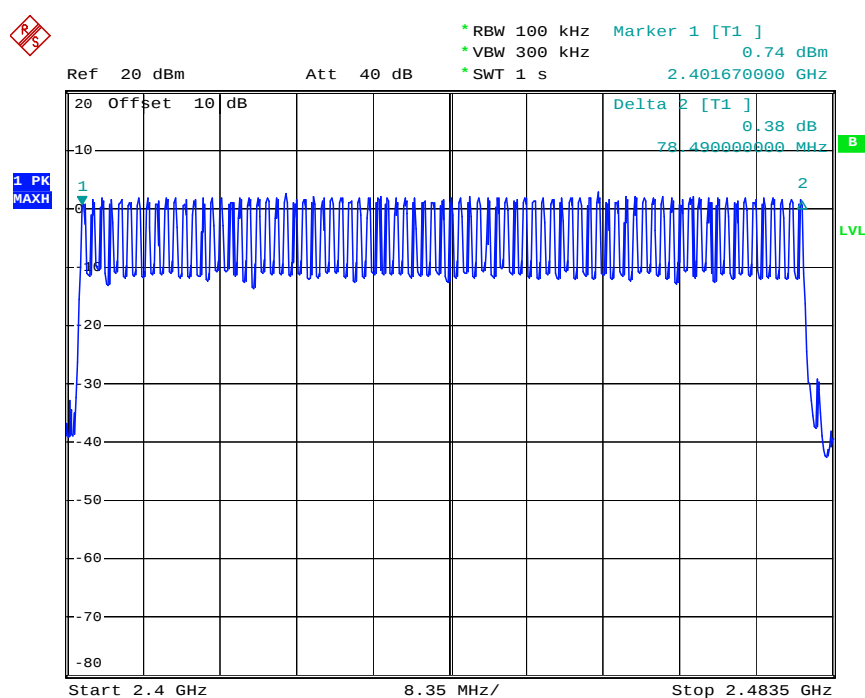
7.5.3. Max hold, view and count how many channel in the band.

7.6.Test Result

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

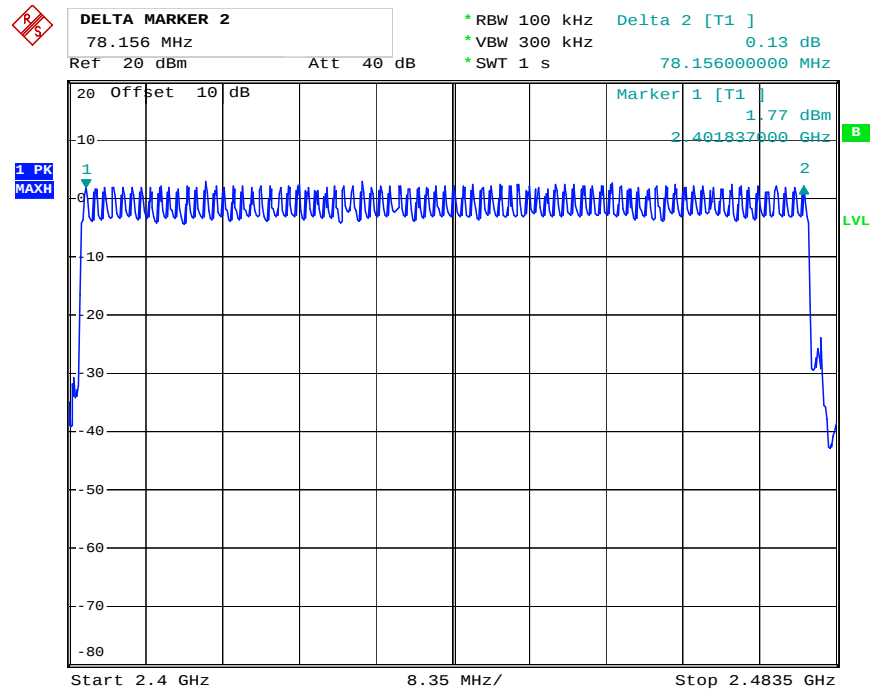
The spectrum analyzer plots are attached as below.

Number of hopping channels(GFSK)



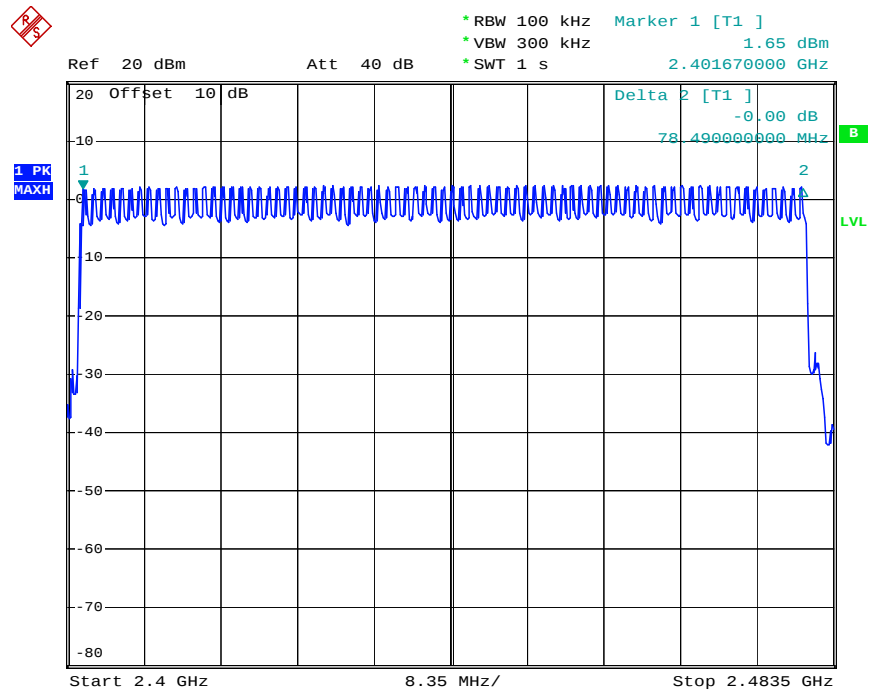
Date: 1.JUL.2017 15:49:17

Number of hopping channels($\pi/4$ -DQPSK)



Date: 1.JUL.2017 15:54:44

Number of hopping channels(8DPSK)



Date: 1.JUL.2017 16:09:45

8. DWELL TIME TEST

8.1. Block Diagram of Test Setup



(EUT: Supsoo Bluetooth headset)

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 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.

8.4. 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, and 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=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=5ms, 10ms, 15ms. Get the pulse time.

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

8.6.Test Result

GFSK Mode

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.440	140.80	400
	2441	0.440	140.80	400
	2480	0.440	140.80	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2*79)) \times 31.6$				
DH3	2402	1.720	275.20	400
	2441	1.720	275.20	400
	2480	1.700	272.00	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4*79)) \times 31.6$				
DH5	2402	3.000	320.00	400
	2441	3.000	320.00	400
	2480	2.960	315.73	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6*79)) \times 31.6$				

Π/4-DQPSK

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.450	144.00	400
	2441	0.450	144.00	400
	2480	0.460	147.20	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2*79)) \times 31.6$				
DH3	2402	1.700	272.00	400
	2441	1.720	275.20	400
	2480	1.720	275.20	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4*79)) \times 31.6$				
DH5	2402	3.020	322.13	400
	2441	3.020	322.13	400
	2480	3.020	322.13	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6*79)) \times 31.6$				

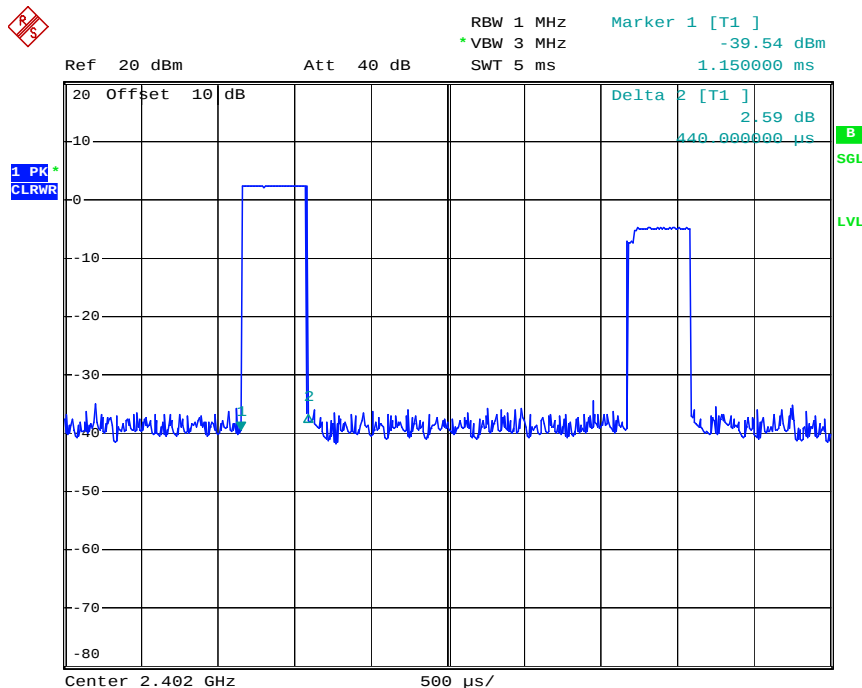
8DPSK Mode

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.460	147.20	400
	2441	0.450	144.00	400
	2480	0.460	147.20	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2 \times 79)) \times 31.6$				
DH3	2402	1.720	275.20	400
	2441	1.720	275.20	400
	2480	1.720	275.20	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4 \times 79)) \times 31.6$				
DH5	2402	3.040	318.51	400
	2441	3.040	318.51	400
	2480	3.000	320.00	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6 \times 79)) \times 31.6$				

The spectrum analyzer plots are attached as below.

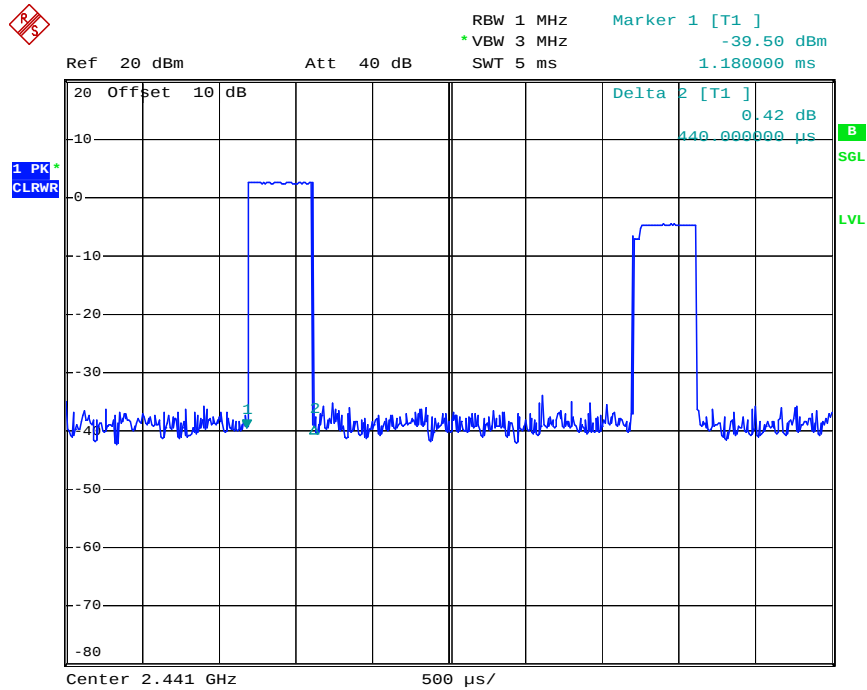
GFSK Mode

DH1 Low channel



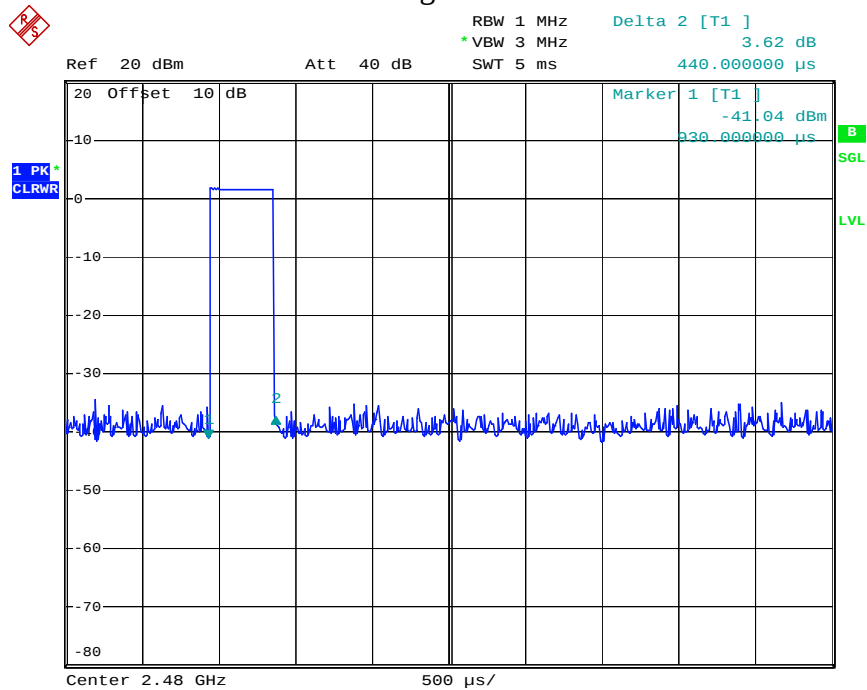
Date: 1. JUL. 2017 12:57:44

DH1 Middle channel



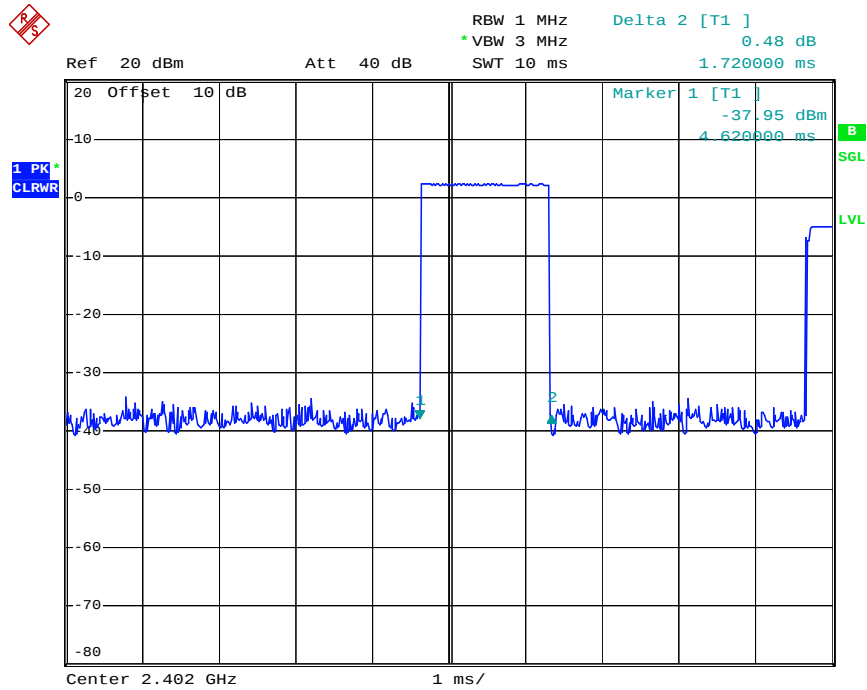
Date: 1.JUL.2017 12:59:53

DH1 High channel



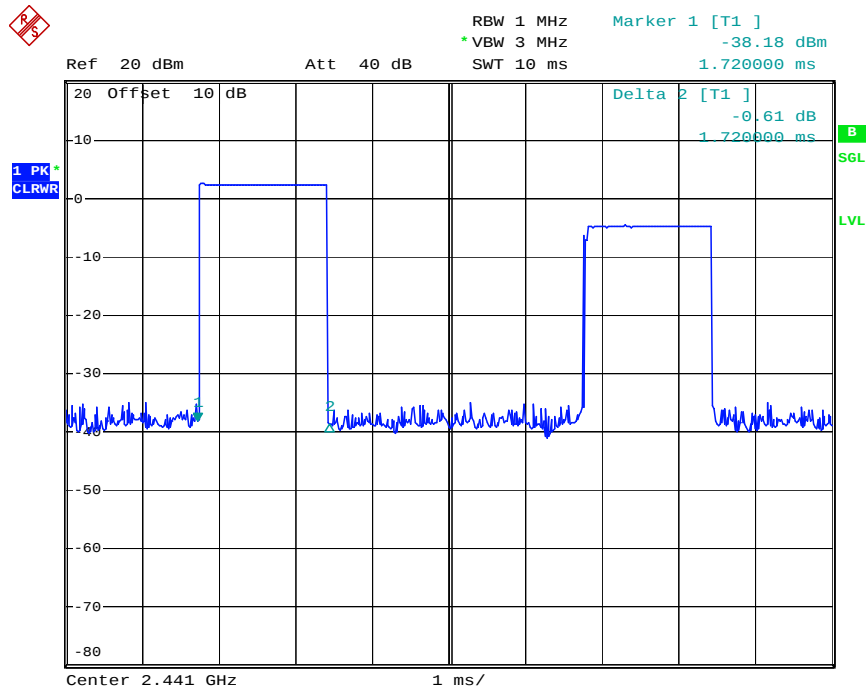
Date: 1.JUL.2017 13:02:17

DH3 Low channel



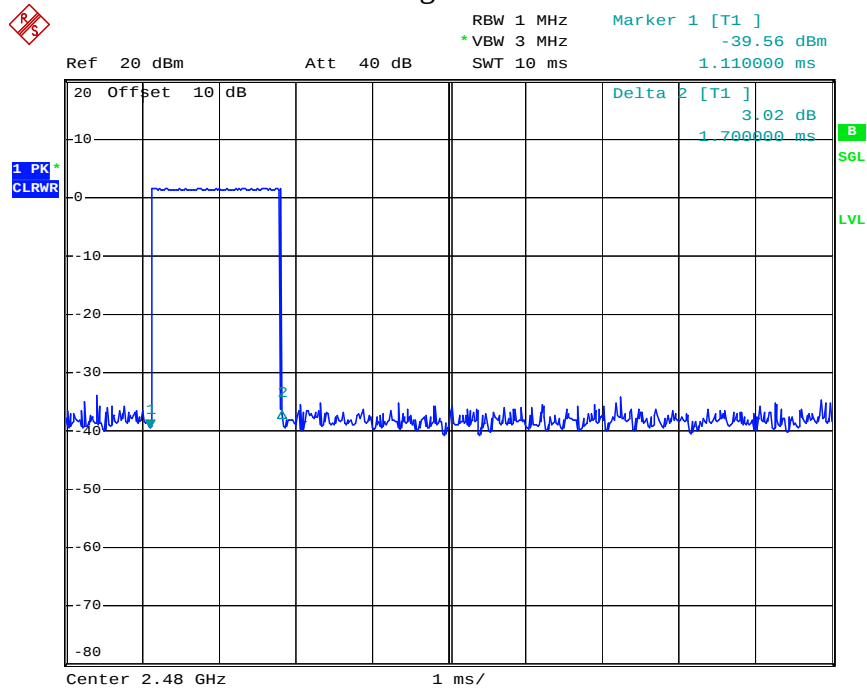
Date: 1.JUL.2017 14:54:03

DH3 Middle channel



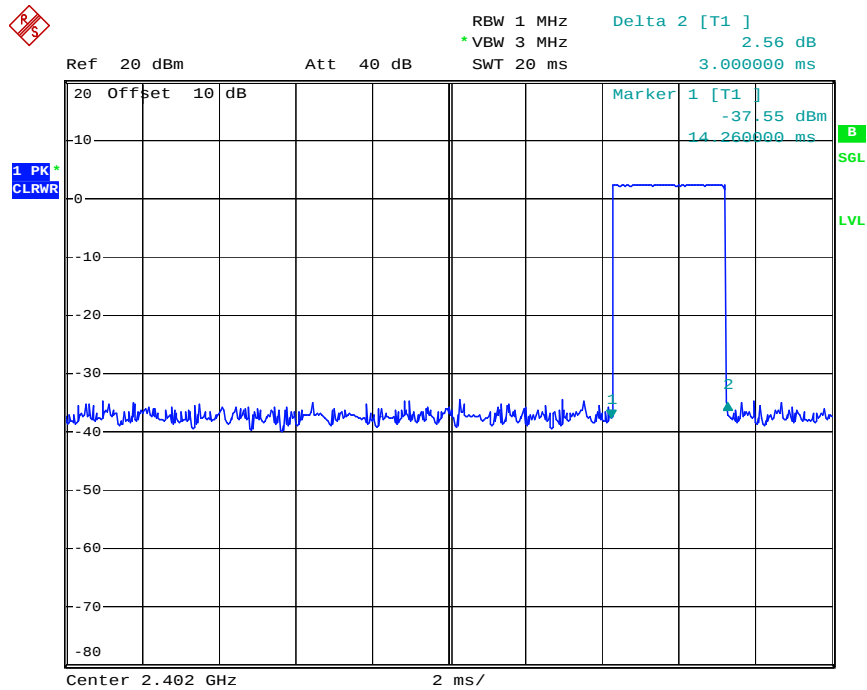
Date: 1.JUL.2017 14:52:53

DH3 High channel



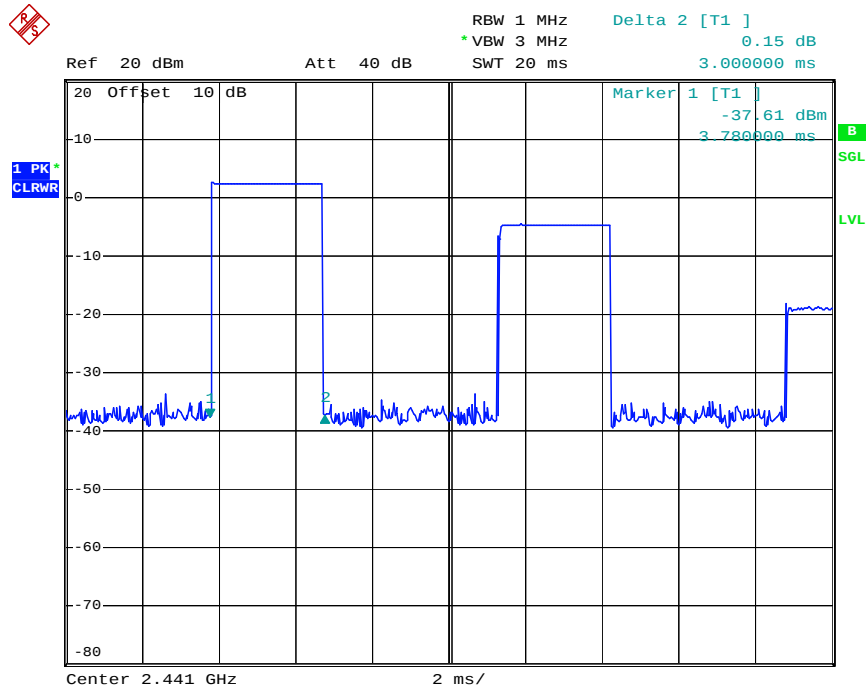
Date: 1.JUL.2017 14:48:24

DH5 Low channel



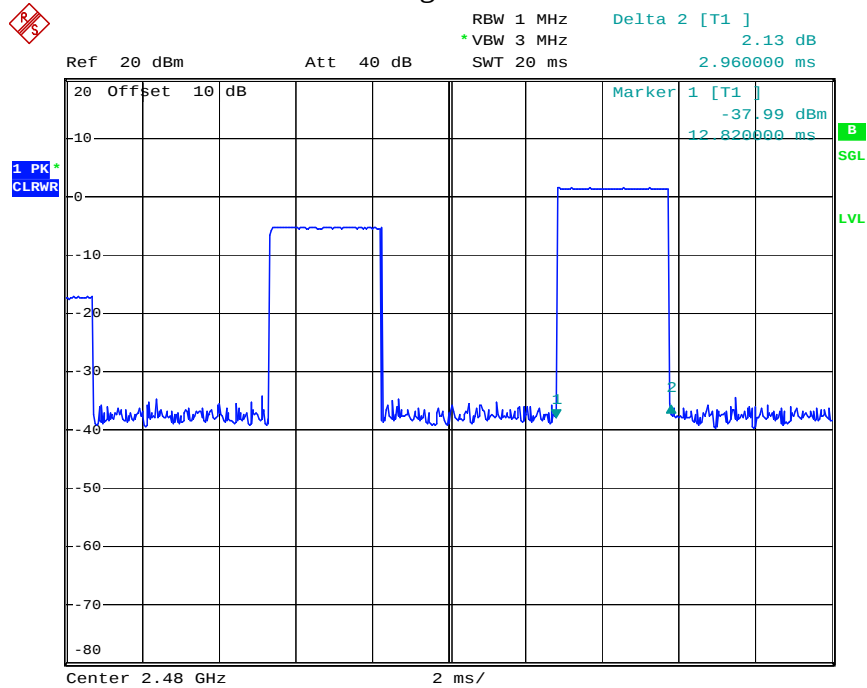
Date: 1.JUL.2017 14:57:41

DH5 Middle channel



Date: 1. JUL. 2017 15:00:57

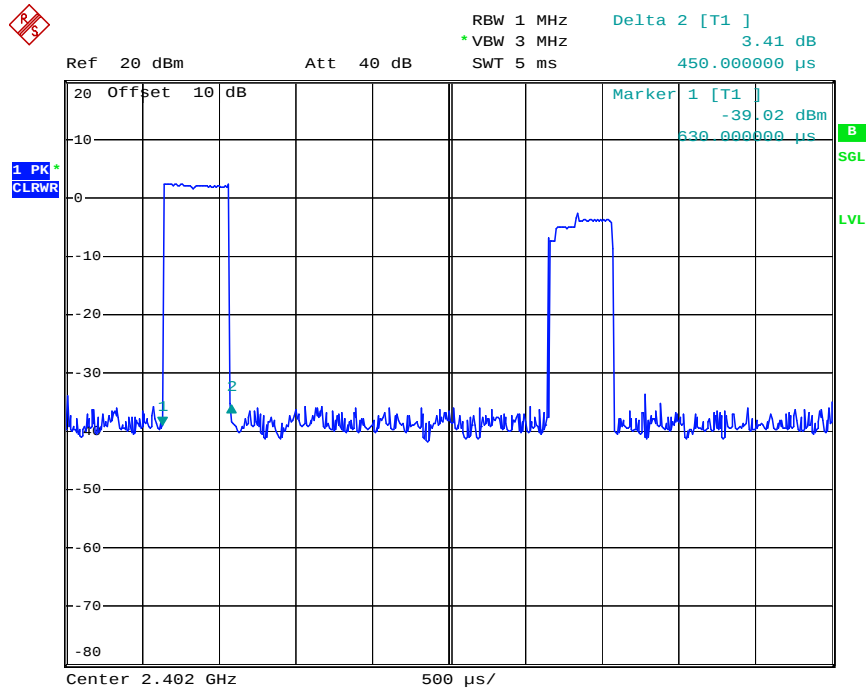
DH5 High channel



Date: 1. JUL. 2017 15:02:40

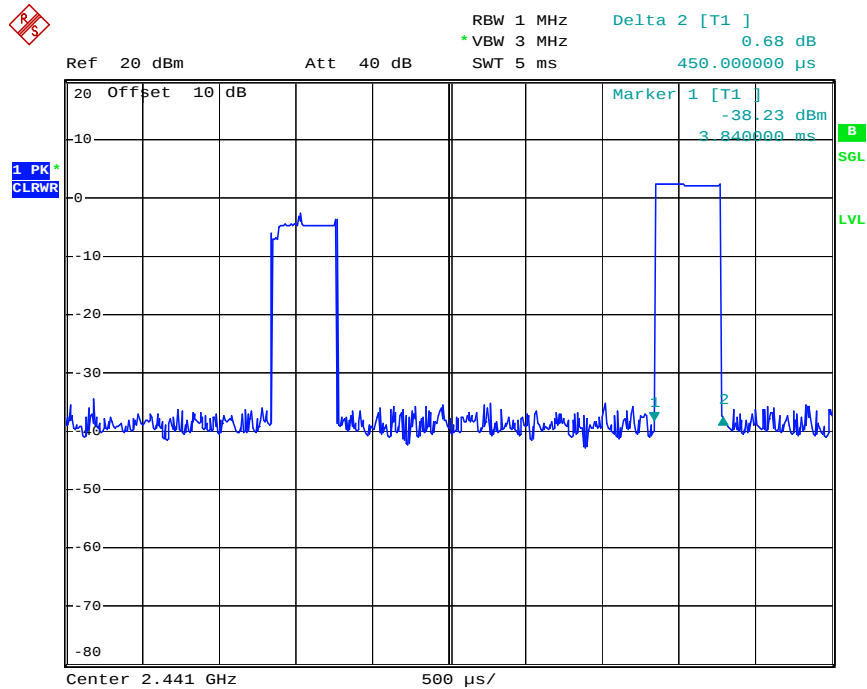
Π/4-DQPSK

2DH1 Low channel



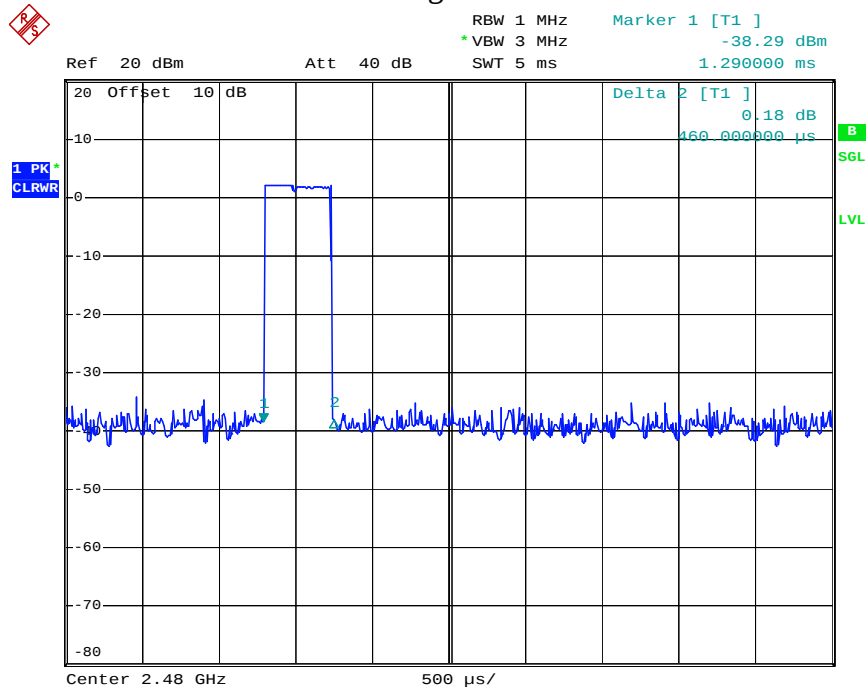
Date: 1. JUL. 2017 15:04:43

2DH1 Middle channel



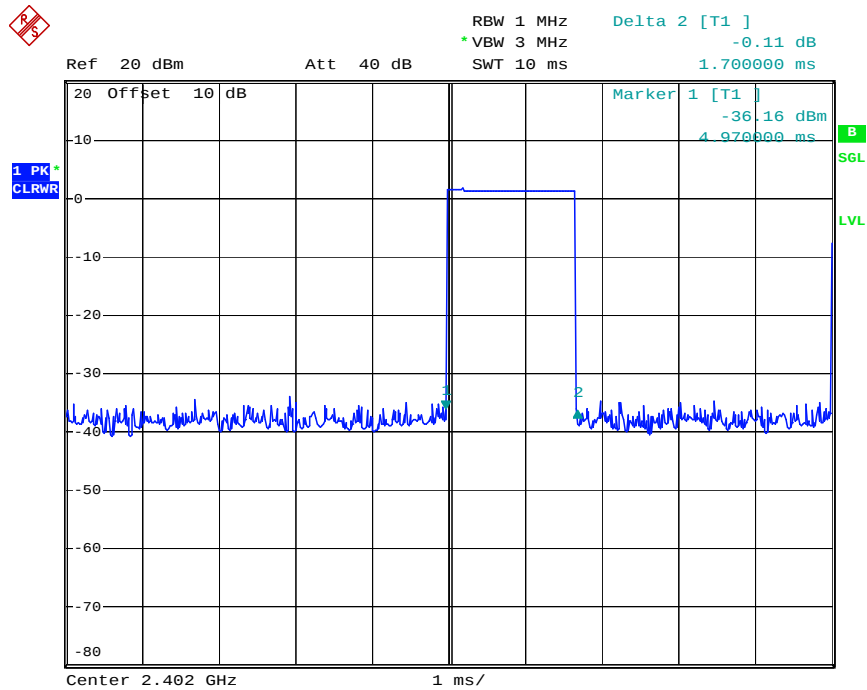
Date: 1. JUL. 2017 15:07:40

2DH1 High channel



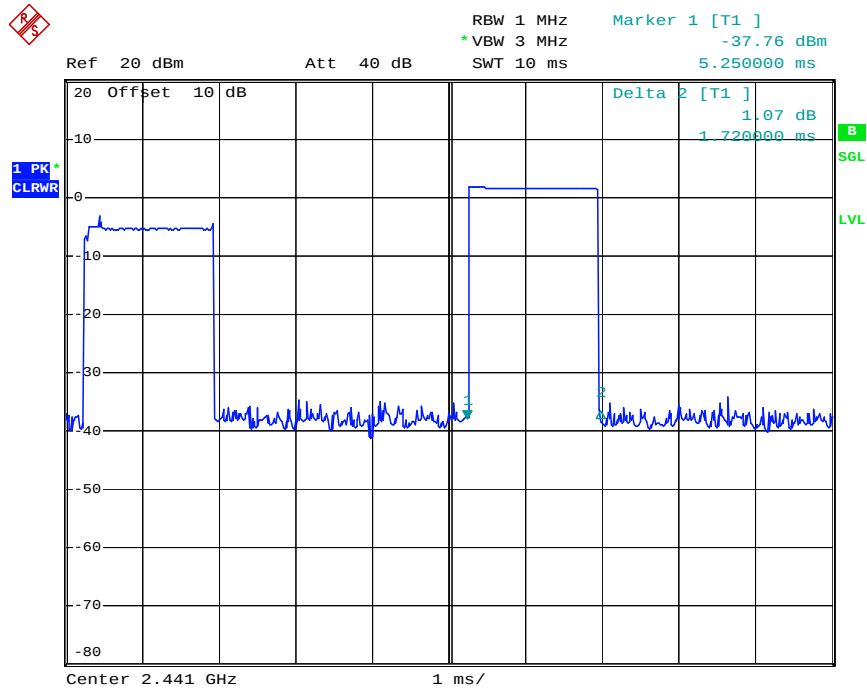
Date: 1.JUL.2017 15:11:08

2DH3 Low channel



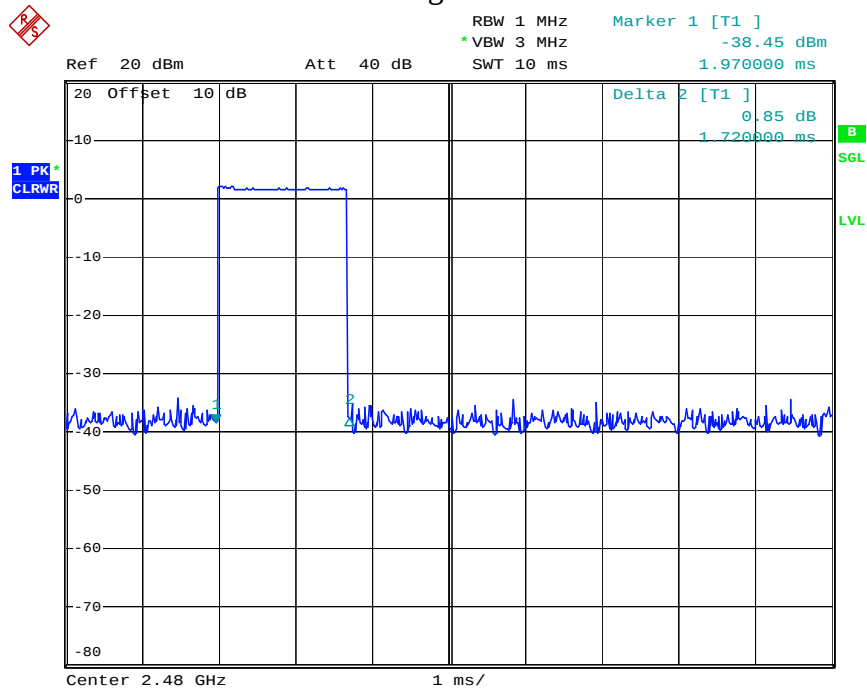
Date: 1.JUL.2017 15:14:33

2DH3 Middle channel



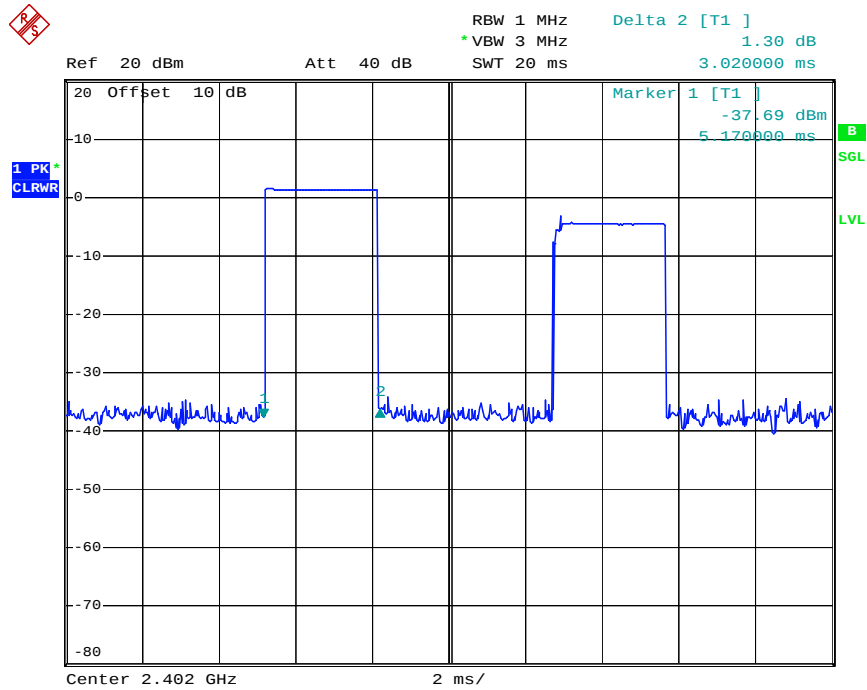
Date: 1.JUL.2017 15:13:42

2DH3 High channel



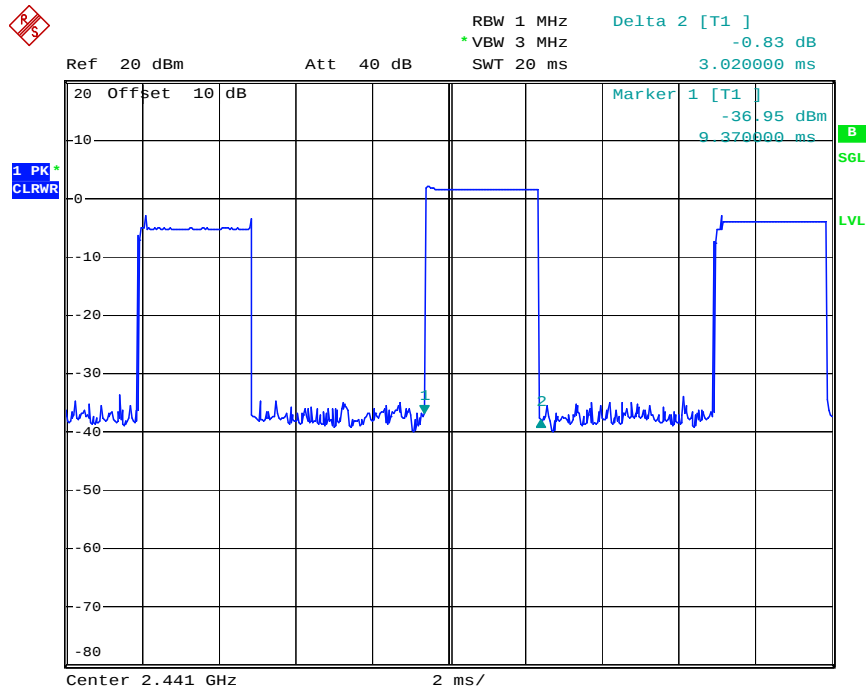
Date: 1.JUL.2017 15:12:03

2DH5 Low channel

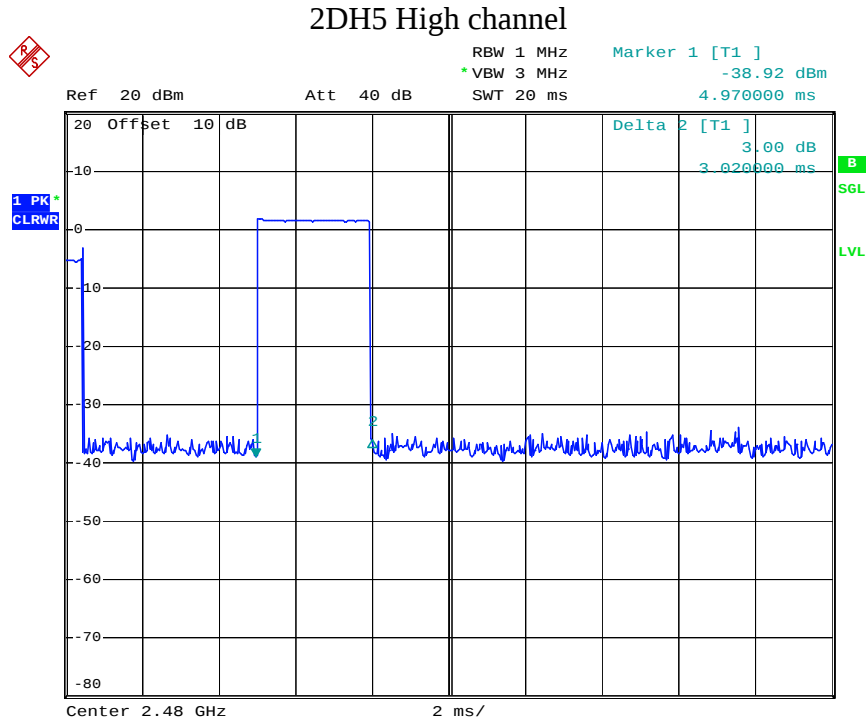


Date: 1.JUL.2017 15:15:58

2DH5 Middle channel

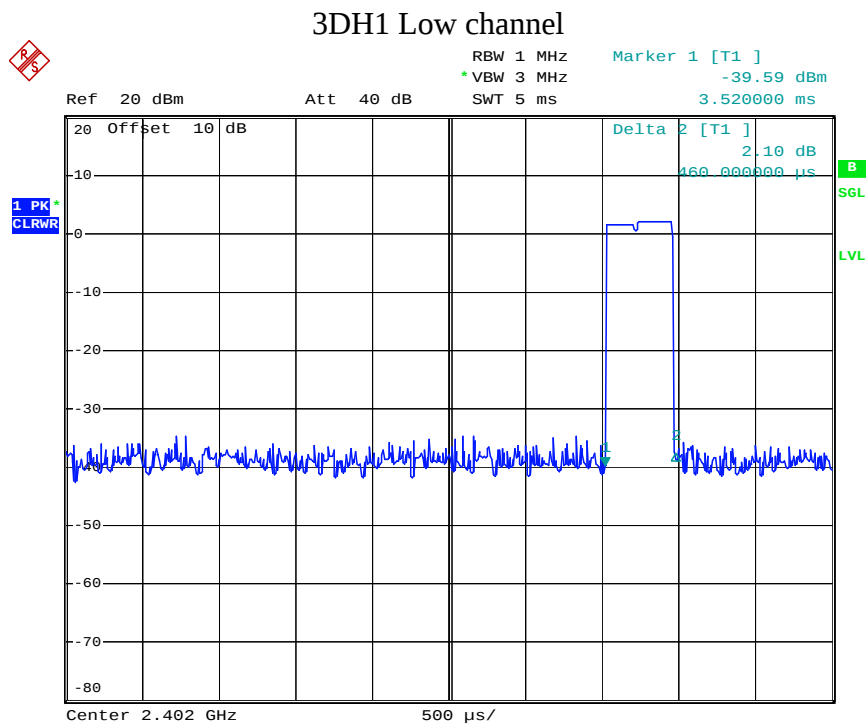


Date: 1.JUL.2017 15:16:51



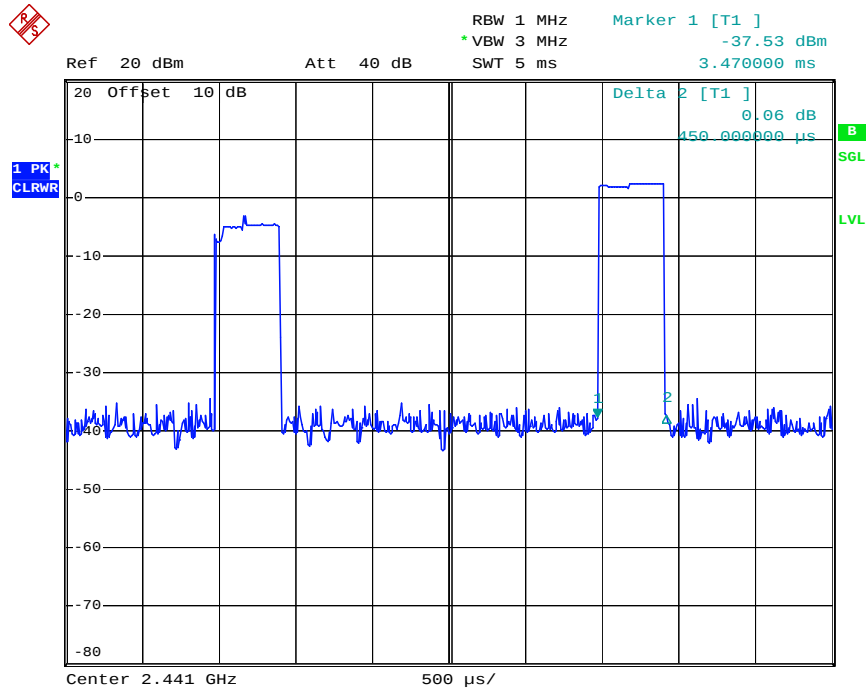
Date: 1.JUL.2017 15:18:26

8DPSK Mode



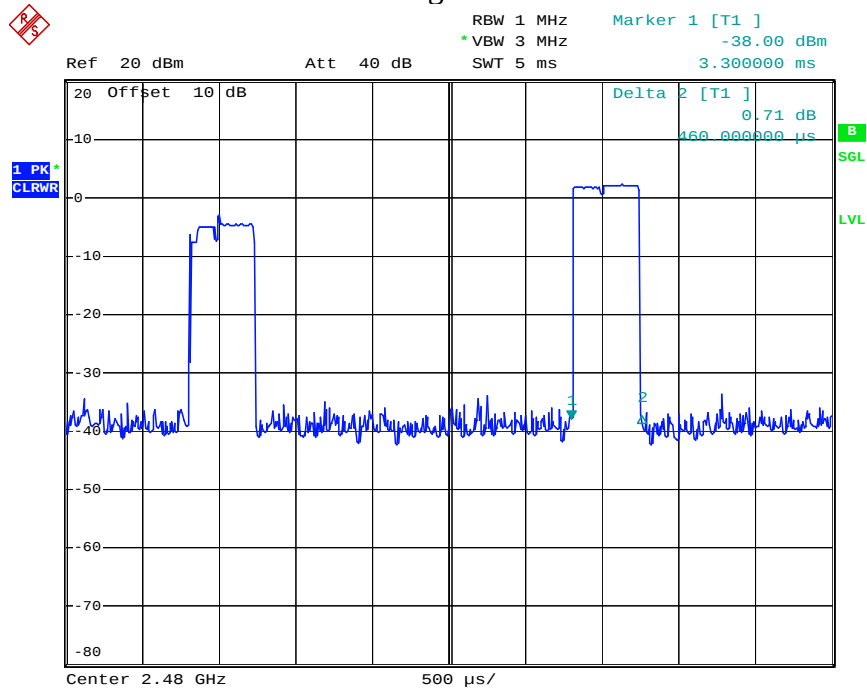
Date: 1.JUL.2017 15:21:25

3DH1 Middle channel



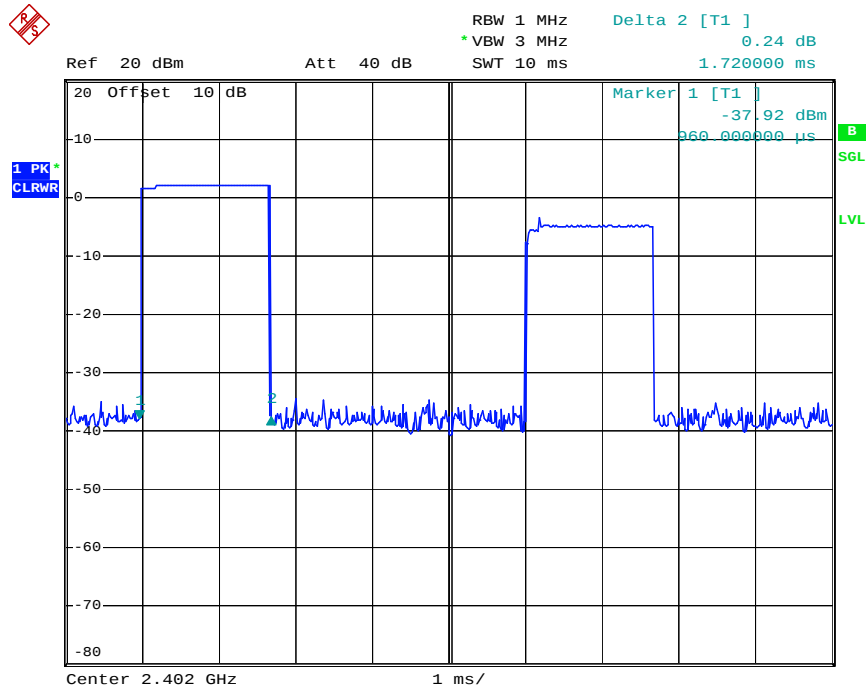
Date: 1.JUL.2017 15:20:39

3DH1 High channel



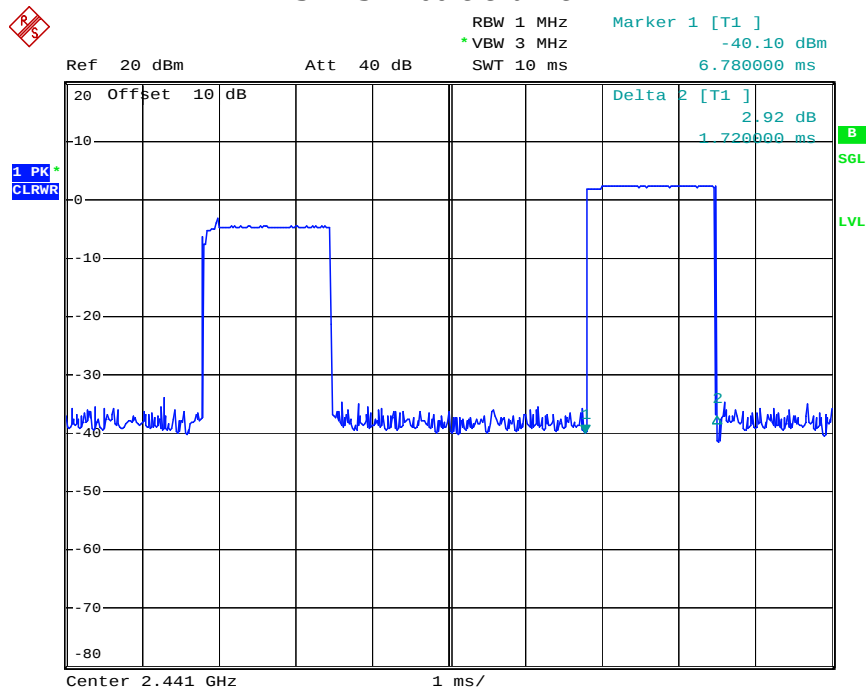
Date: 1.JUL.2017 15:19:31

3DH3 Low channel



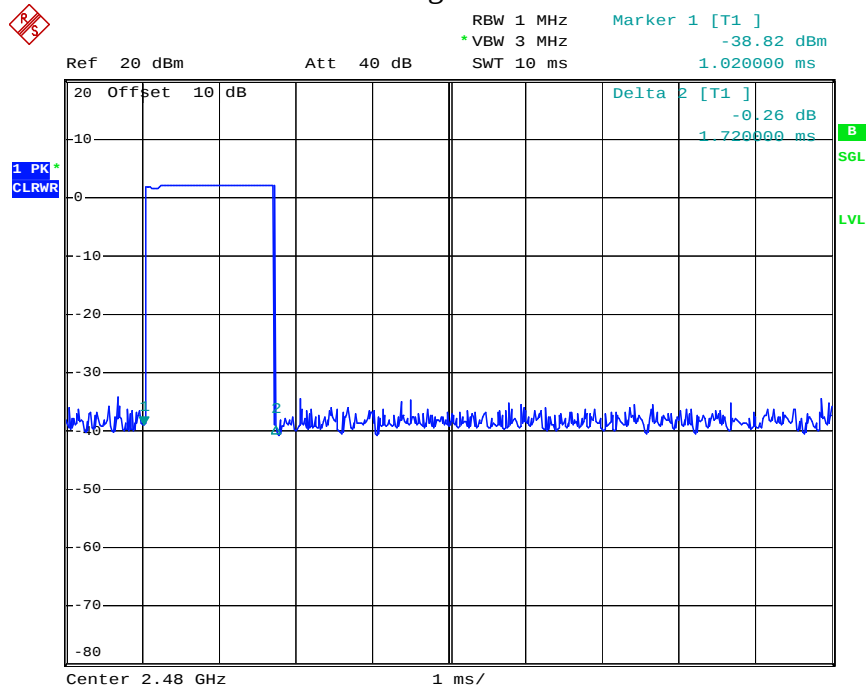
Date: 1.JUL.2017 15:22:37

3DH3 Middle channel



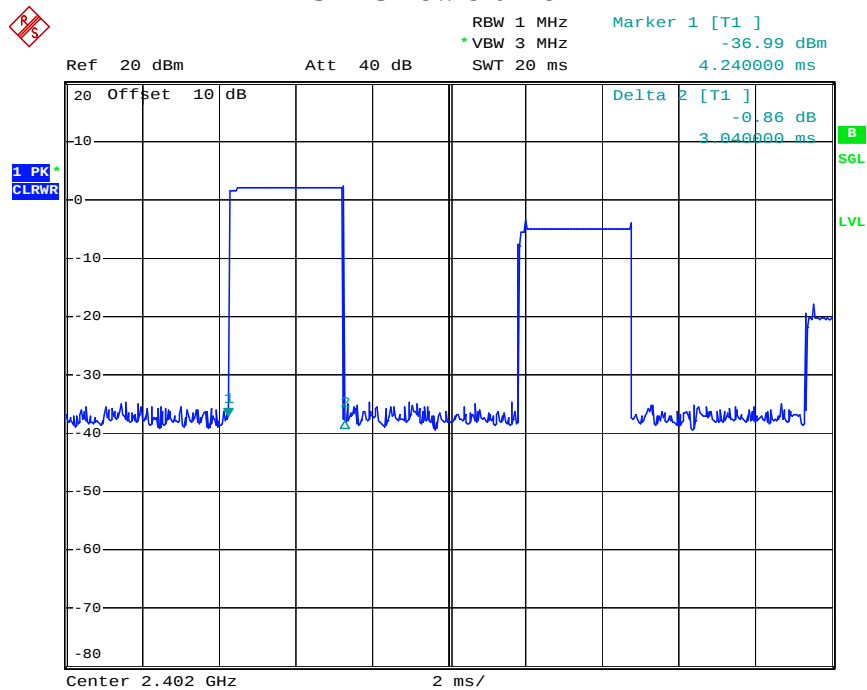
Date: 1.JUL.2017 15:24:09

3DH3 High channel



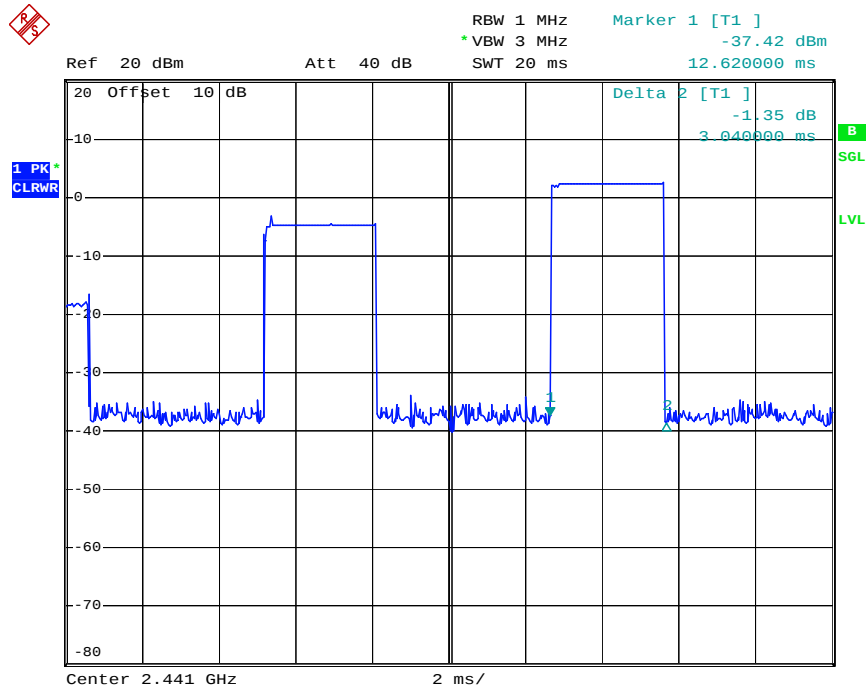
Date: 1.JUL.2017 15:25:28

3DH5 Low channel



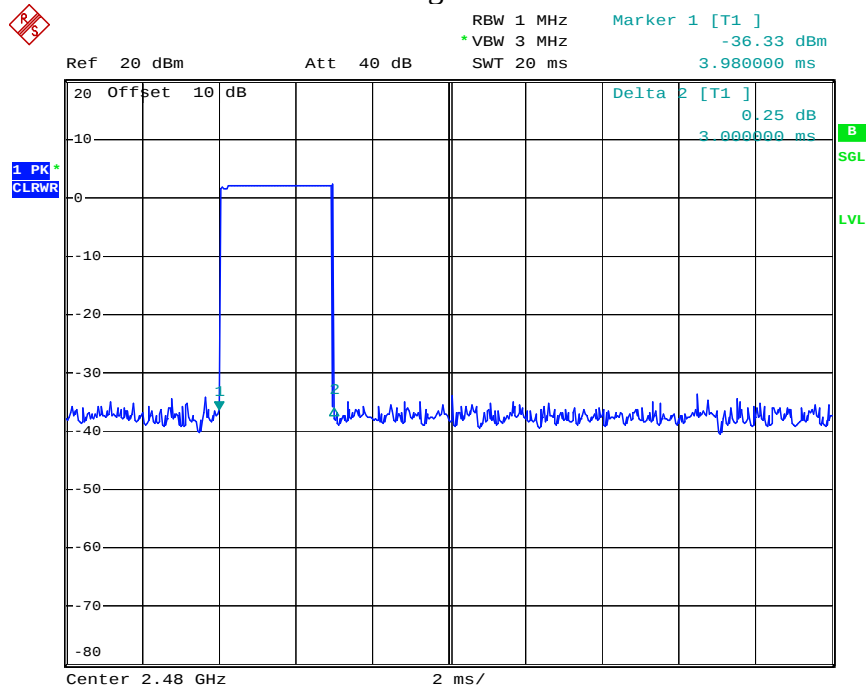
Date: 1.JUL.2017 15:30:42

3DH5 Middle channel



Date: 1.JUL.2017 15:27:54

3DH5 High channel



Date: 1.JUL.2017 15:27:00

9. MAXIMUM PEAK OUTPUT POWER TEST

9.1. Block Diagram of Test Setup



(EUT: Supsoo Bluetooth headset)

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 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.

9.4. 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, and 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 for GFSK mode

9.5.3. Set RBW of spectrum analyzer to 3MHz and VBW to 3MHz for other mode

9.5.4. Measurement the maximum peak output power.

9.6. Test Result

GFSK Mode

Channel	Frequency (MHz)	Peak Output Power (dBm/W)	Limits dBm / W
Low	2402	-1.40/0.0007	30 / 1.0
Middle	2441	0.75/0.0012	30 / 1.0
High	2480	0.29/0.0011	30 / 1.0

II/4-DQPSK Mode

Channel	Frequency (MHz)	Peak Output Power (dBm/W)	Limits dBm / W
Low	2402	-0.49/0.0009	21 / 0.125
Middle	2441	1.28/0.0013	21 / 0.125
High	2480	0.75/0.0012	21 / 0.125

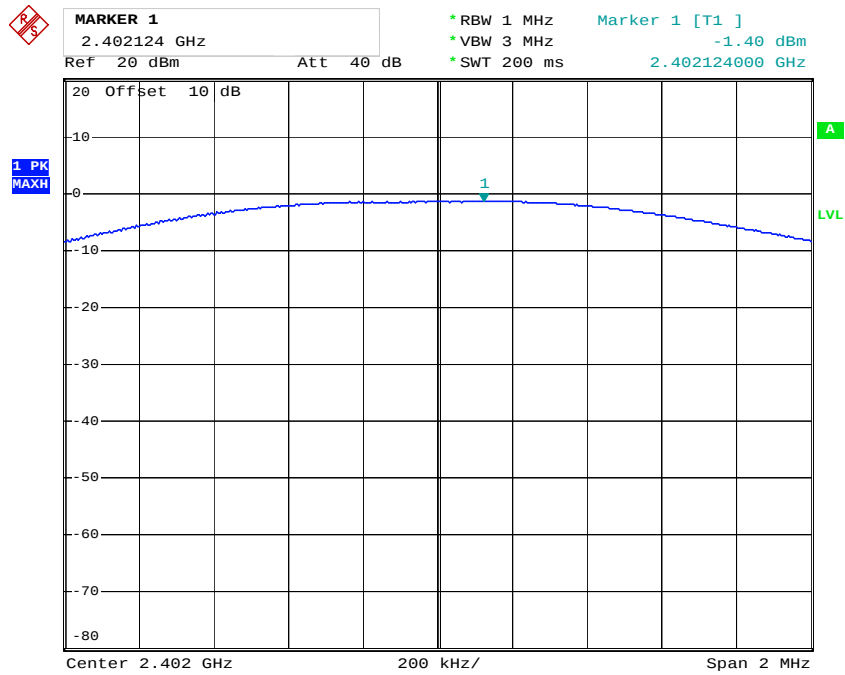
8DPSK Mode

Channel	Frequency (MHz)	Peak Output Power (dBm/W)	Limits dBm / W
Low	2402	-0.32/0.0009	21 / 0.125
Middle	2441	1.10/0.0013	21 / 0.125
High	2480	0.53/0.0011	21 / 0.125

The spectrum analyzer plots are attached as below.

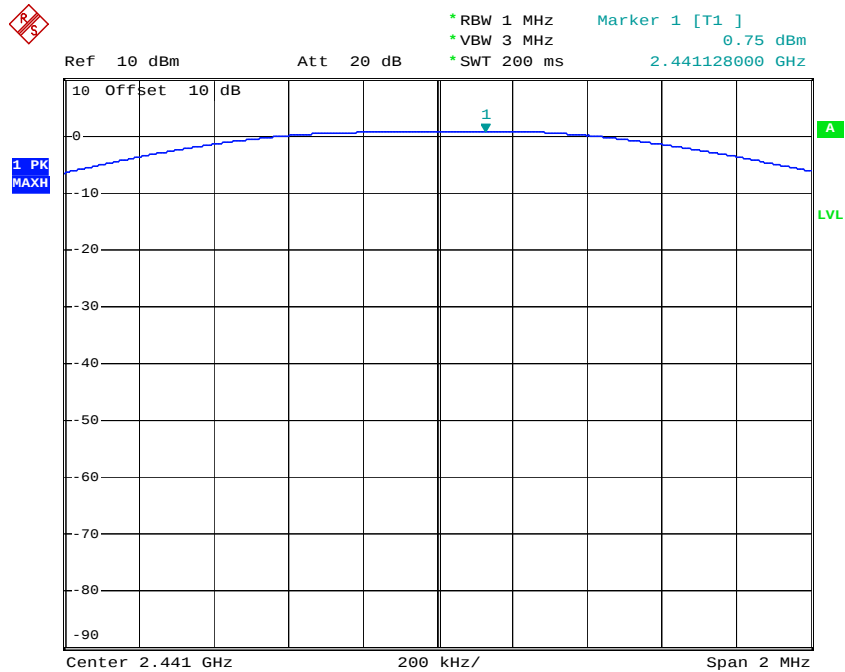
GFSK Mode

Low channel



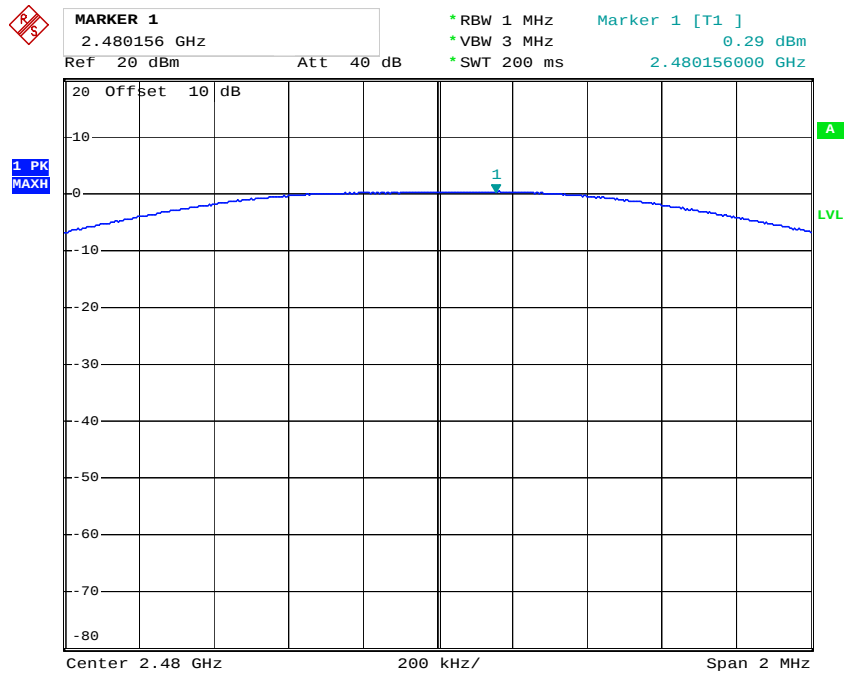
Comment A:
Date: 8.JUL.2017 11:06:31

Middle channel



Comment A:
Date: 8.JUL.2017 15:37:45

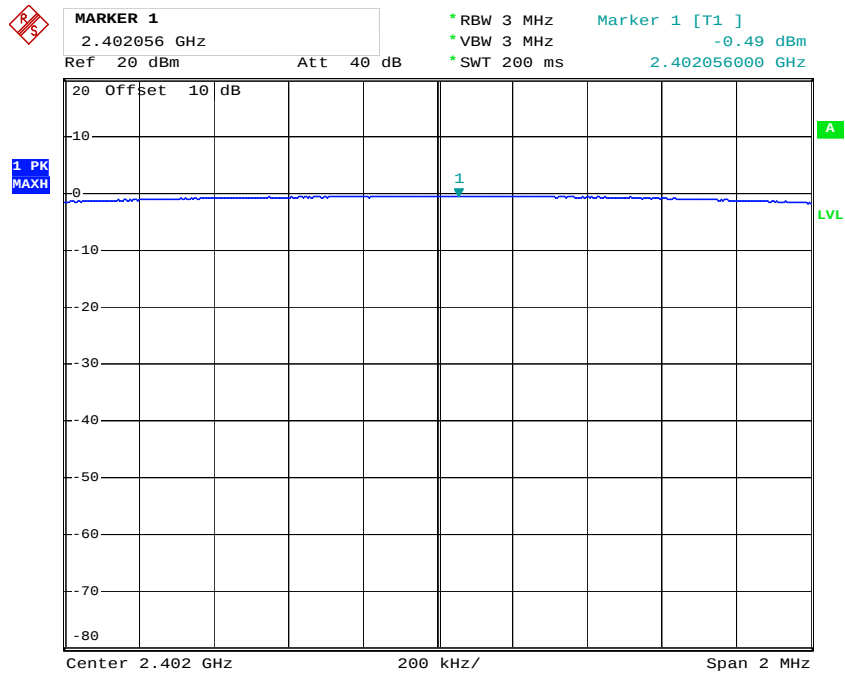
High channel



Comment A:
Date: 8.JUL.2017 11:09:49

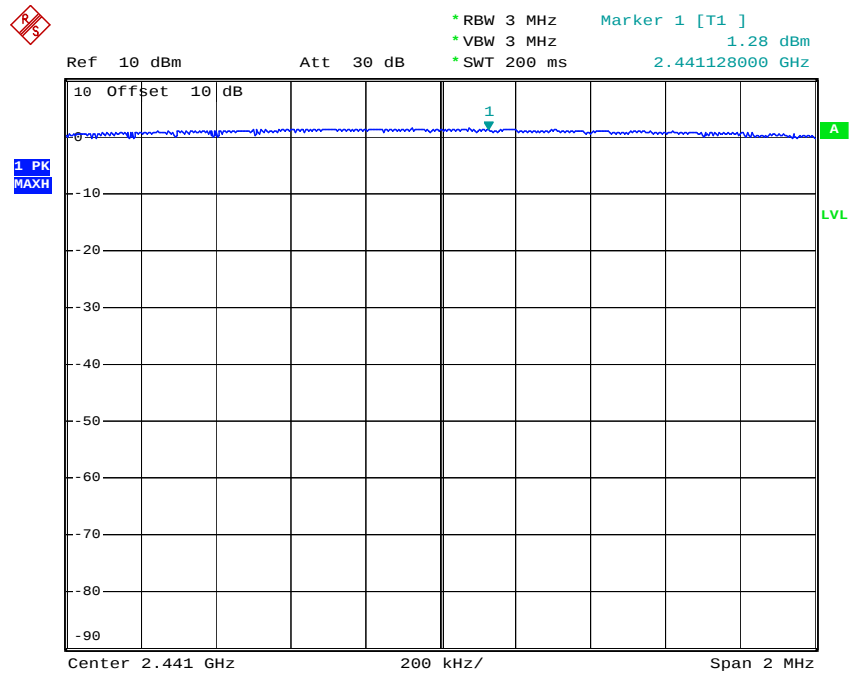
II/4-DQPSK Mode

Low channel



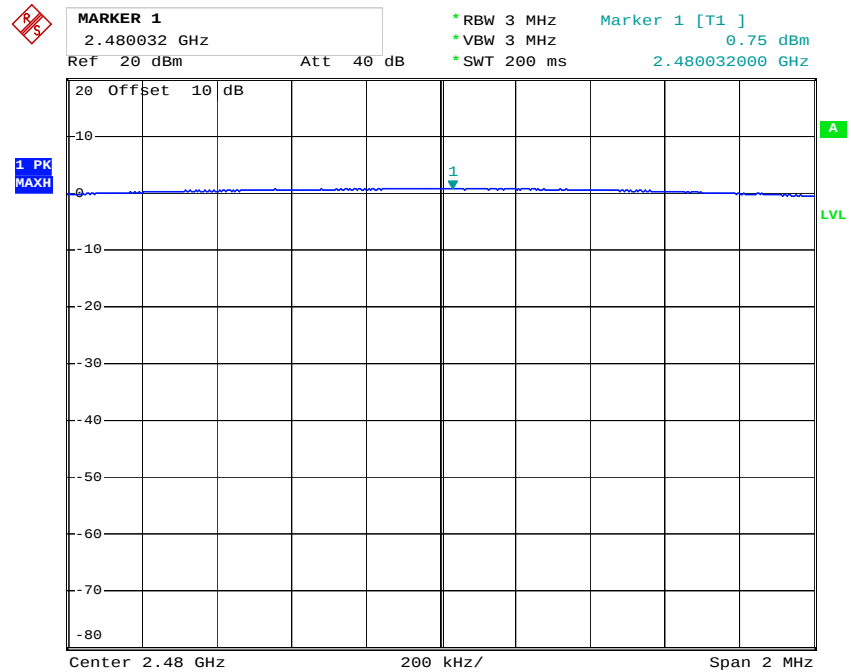
Comment A:
Date: 8.JUL.2017 11:16:01

Middle channel



Comment A:
Date: 8.JUL.2017 15:46:11

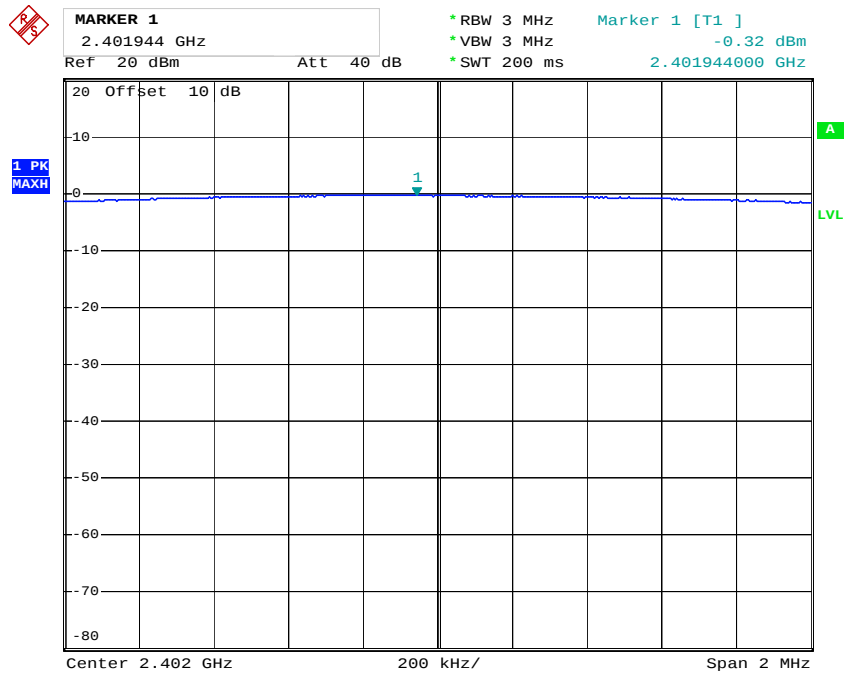
High channel



Comment A:
Date: 8.JUL.2017 11:10:59

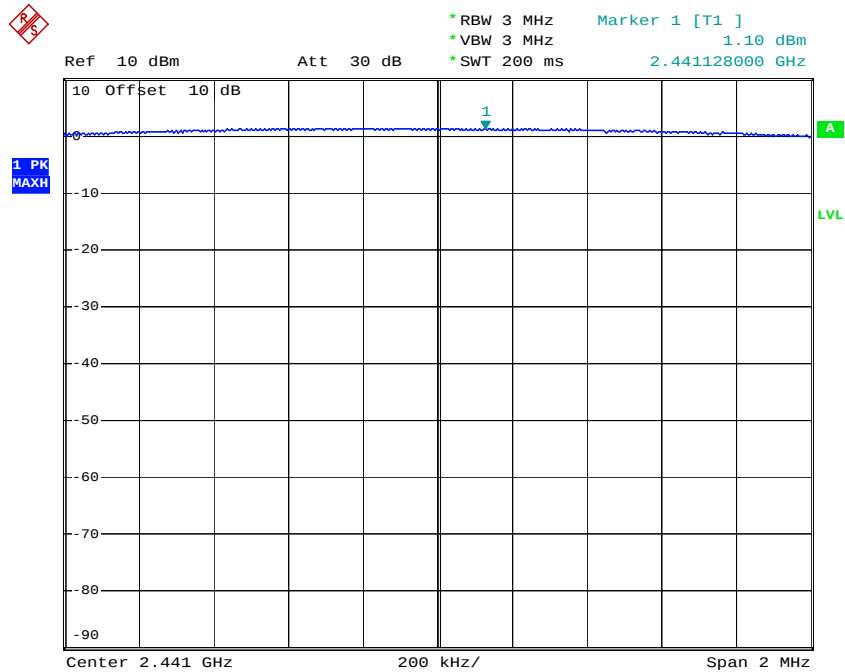
8DPSK Mode

Low channel



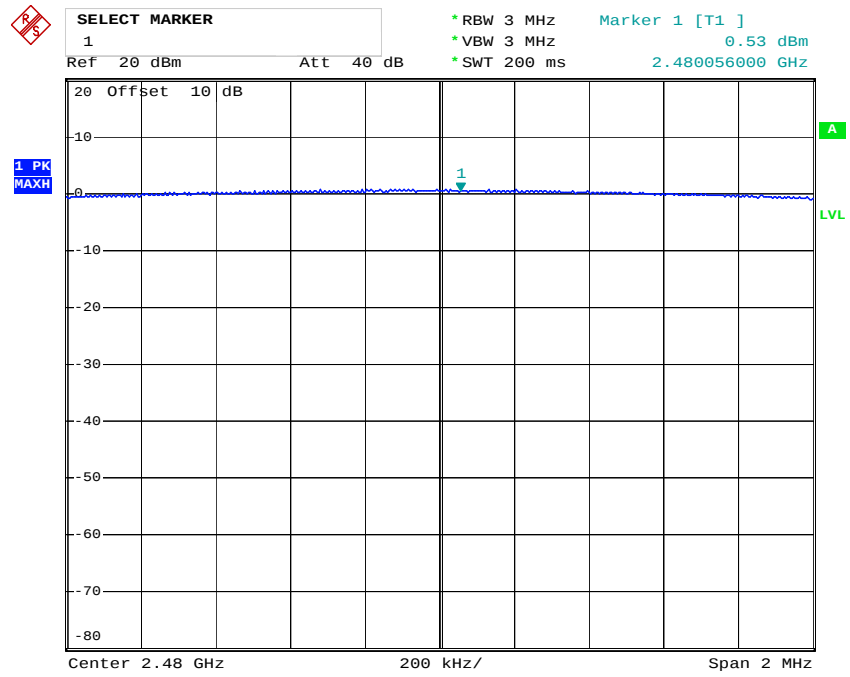
Comment A:
Date: 8.JUL.2017 11:16:50

Middle channel



Comment A:
Date: 8.JUL.2017 15:47:39

High channel

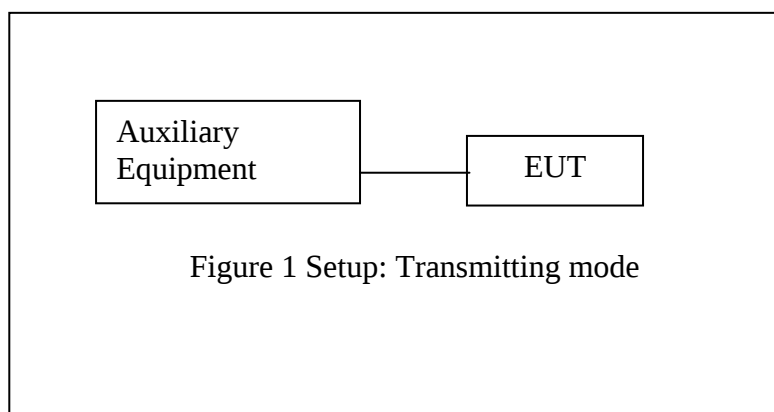


Comment A:
Date: 8.JUL.2017 11:17:57

10.RADIATED EMISSION TEST

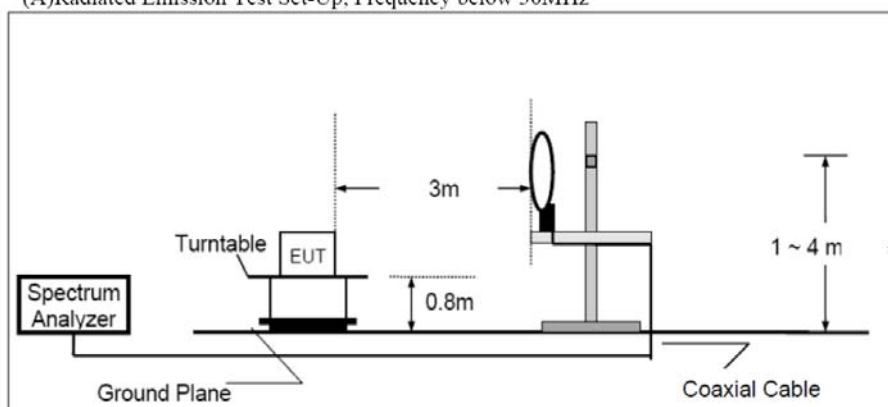
10.1.Block Diagram of Test Setup

10.1.1.Block diagram of connection between the EUT and peripherals

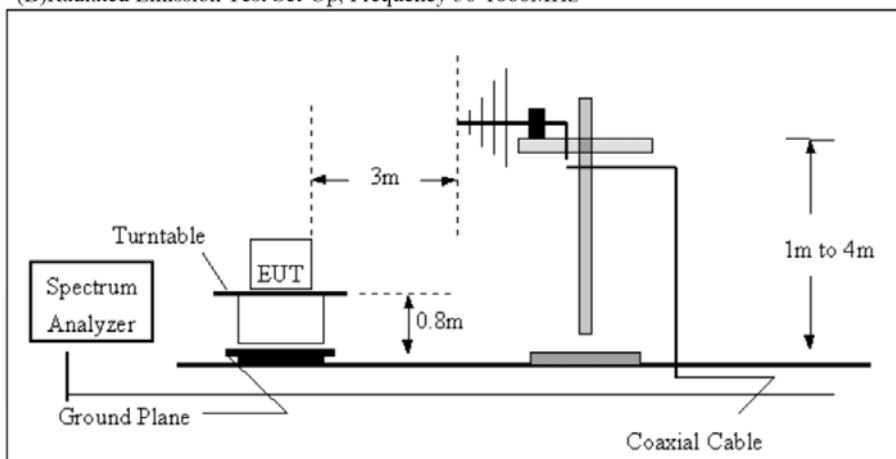


10.1.2.Semi-Anechoic Chamber Test Setup Diagram

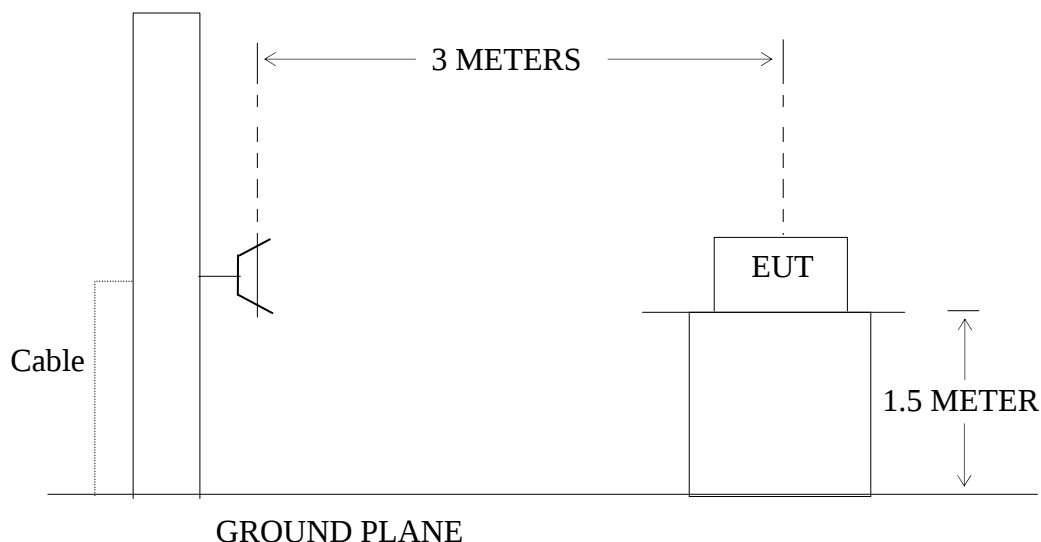
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30-1000MHz



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



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 Section15.209 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 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.

10.5. 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. The EUT was tested in 3 orthogonal planes.

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.

10.6. The Field Strength of Radiation Emission Measurement Results

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

2. The test frequency is from 30MHz to 25GHz, The 18-25GHz emissions are not reported, because the levels are too low against the limit.

Below 1GHz



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Site: 1# Chamber

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Fax:+86-0755-26503396

Job No.: Frank2017 #100

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

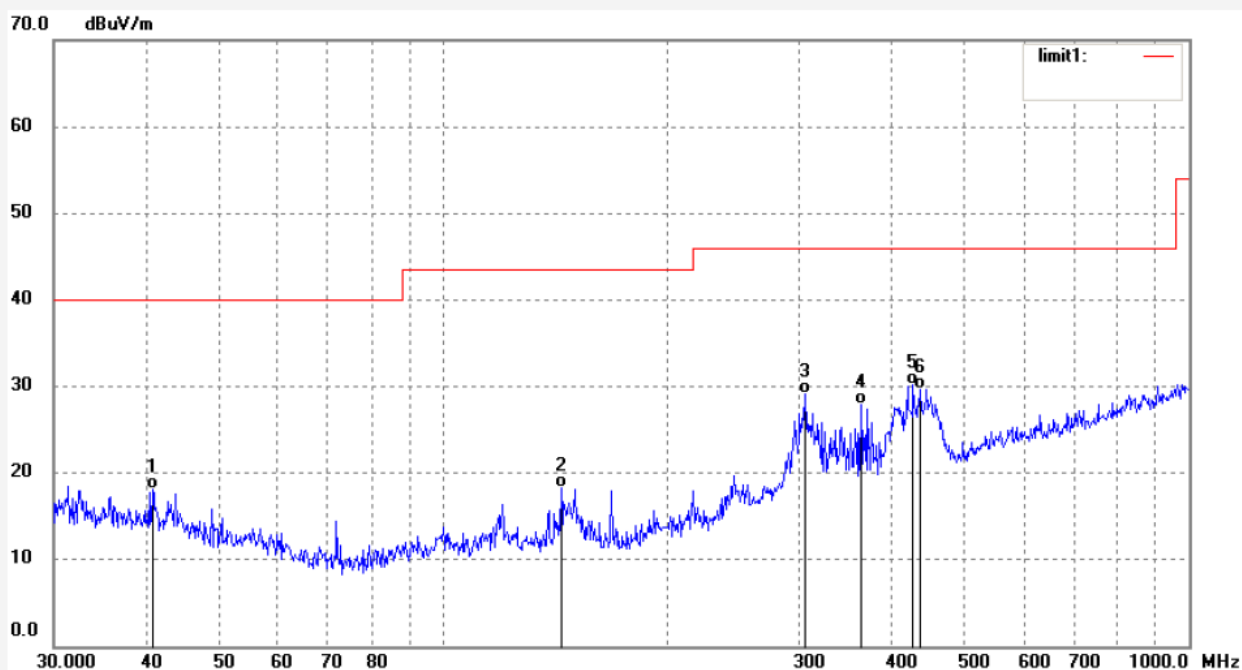
Date: 17/06/16/

Time: 10/40/28

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	40.7014	29.79	-11.69	18.10	40.00	-21.90	QP			
2	143.8294	33.38	-15.11	18.27	43.50	-25.23	QP			
3	305.6800	38.00	-8.90	29.10	46.00	-16.90	QP			
4	362.9844	35.14	-7.24	27.90	46.00	-18.10	QP			
5	426.5210	35.85	-5.73	30.12	46.00	-15.88	QP			
6	435.5898	35.21	-5.51	29.70	46.00	-16.30	QP			



ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Frank2017 #99

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

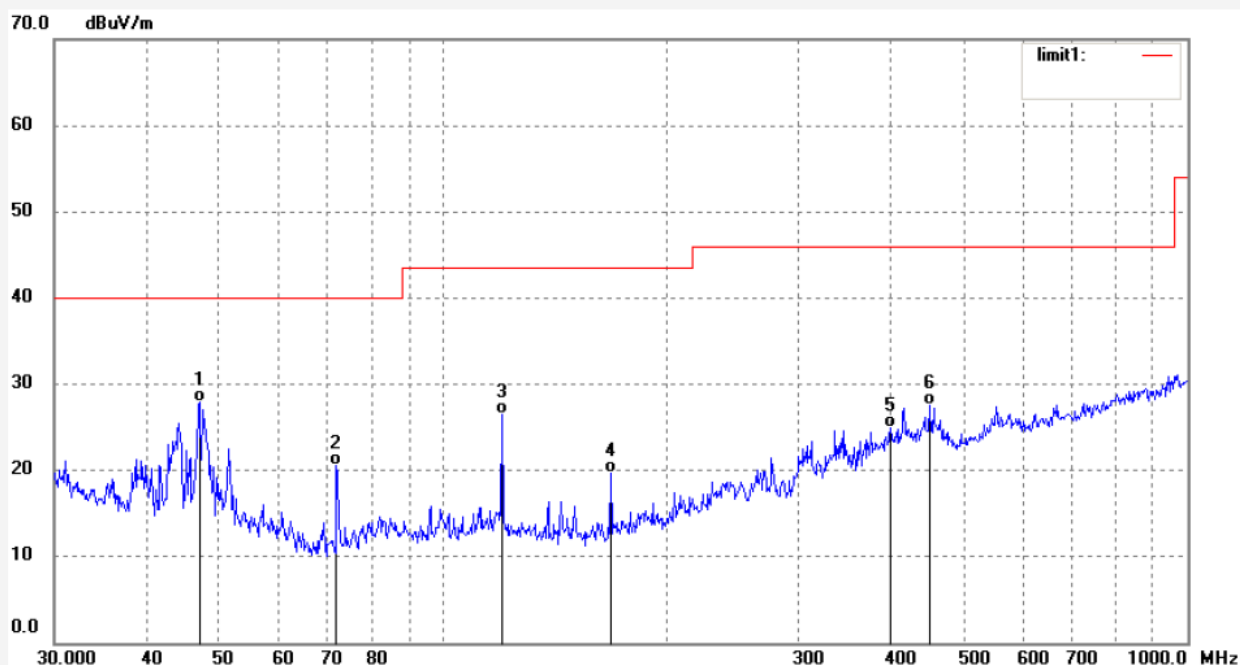
Date: 17/06/16/

Time: 10/40/07

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	46.9947	40.47	-12.60	27.87	40.00	-12.13	QP			
2	71.8319	36.83	-16.30	20.53	40.00	-19.47	QP			
3	119.8555	39.51	-13.06	26.45	43.50	-17.05	QP			
4	167.8242	33.50	-13.88	19.62	43.50	-23.88	QP			
5	399.0300	31.38	-6.48	24.90	46.00	-21.10	QP			
6	449.5557	32.95	-5.35	27.60	46.00	-18.40	QP			

Job No.: Frank2017 #104

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Supsoo Bluetooth headset

Mode: TX2441MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

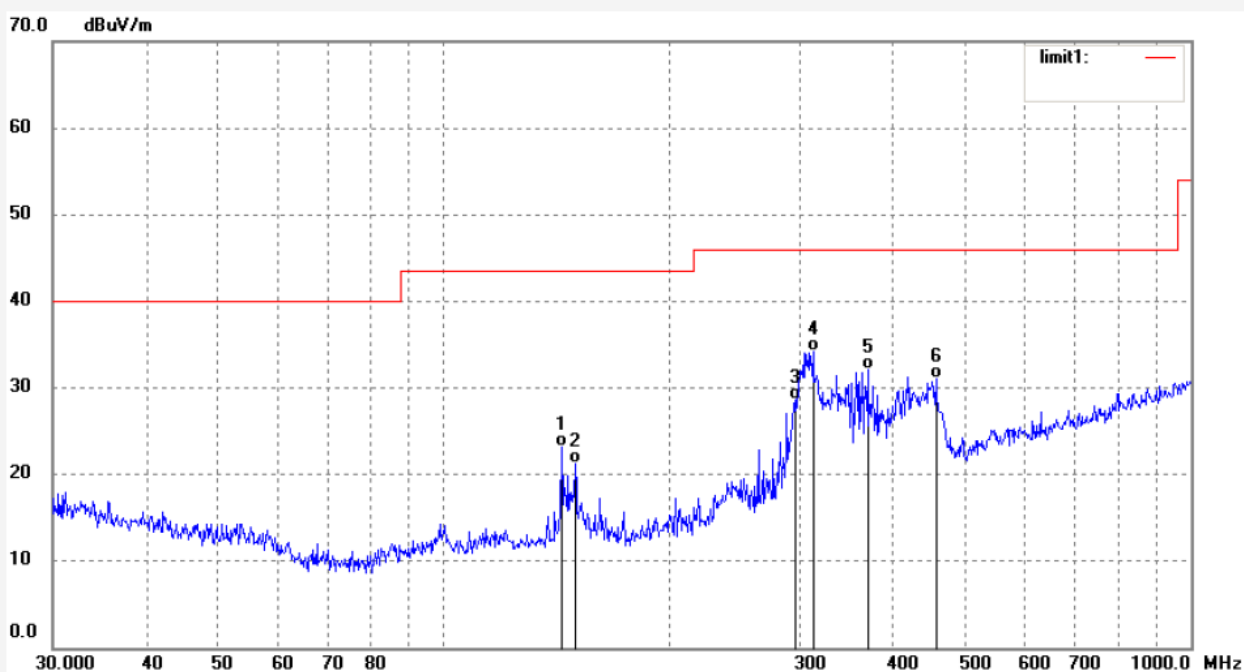
Date: 17/06/16/

Time: 10/44/45

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	143.8295	38.37	-15.11	23.26	43.50	-20.24	QP			
2	150.0108	36.22	-15.04	21.18	43.50	-22.32	QP			
3	295.1469	37.71	-9.10	28.61	46.00	-17.39	QP			
4	312.1794	42.85	-8.66	34.19	46.00	-11.81	QP			
5	369.4047	39.28	-7.16	32.12	46.00	-13.88	QP			
6	455.9058	36.29	-5.25	31.04	46.00	-14.96	QP			



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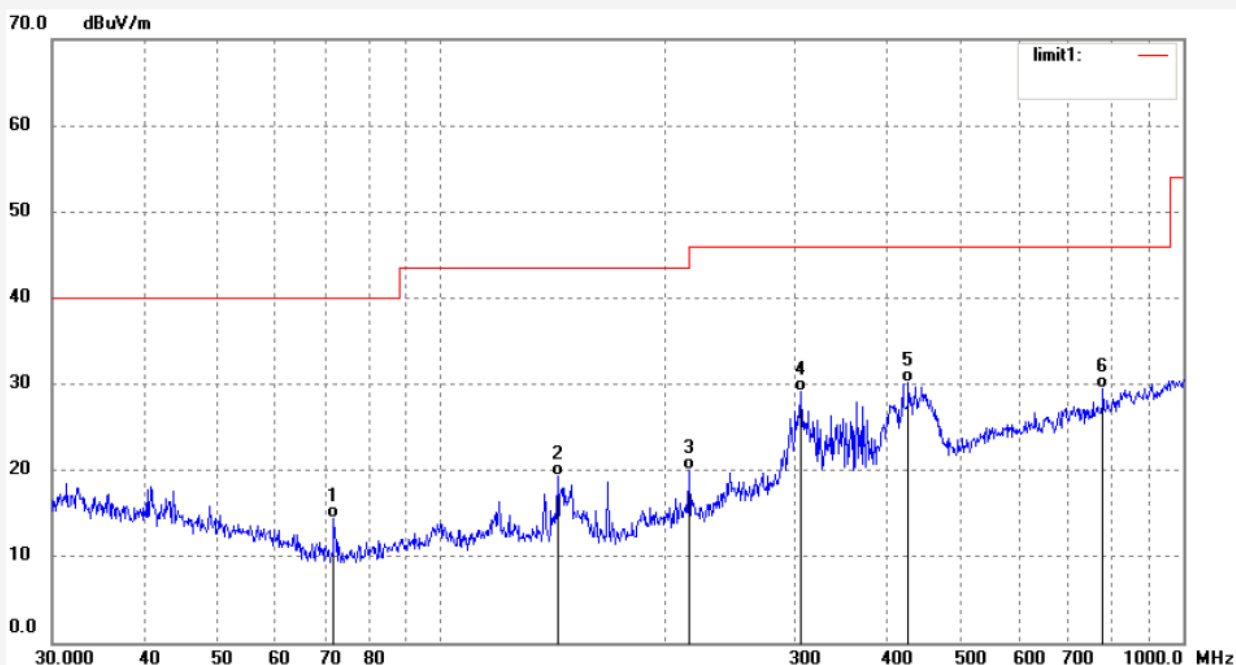
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Frank2017 #101
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: Supsoo Bluetooth headset
Mode: TX2441MHz
Model: B103

Polarization: Vertical
Power Source: DC 5V
Date: 17/06/16/
Time: 10/40/44
Engineer Signature:
Distance: 3m

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Note: Report NO.:ATE20170963





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Site: 1# Chamber

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Job No.: Frank2017 #103

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

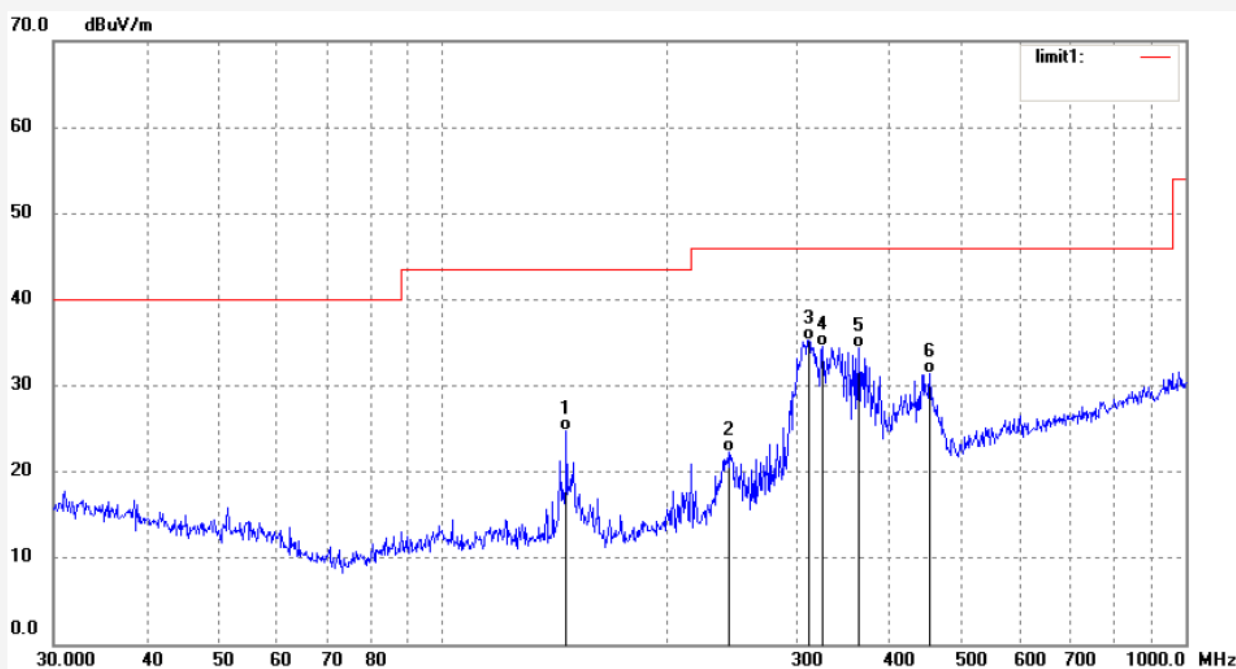
Date: 17/06/16/

Time: 10/44/18

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	146.8877	39.92	-15.08	24.84	43.50	-18.66	QP			
2	242.5253	32.87	-10.60	22.27	46.00	-23.73	QP			
3	311.0867	44.04	-8.70	35.34	46.00	-10.66	QP			
4	324.4561	42.85	-8.26	34.59	46.00	-11.41	QP			
5	362.9844	41.71	-7.24	34.47	46.00	-11.53	QP			
6	452.7197	36.72	-5.31	31.41	46.00	-14.59	QP			



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Job No.: Frank2017 #102

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

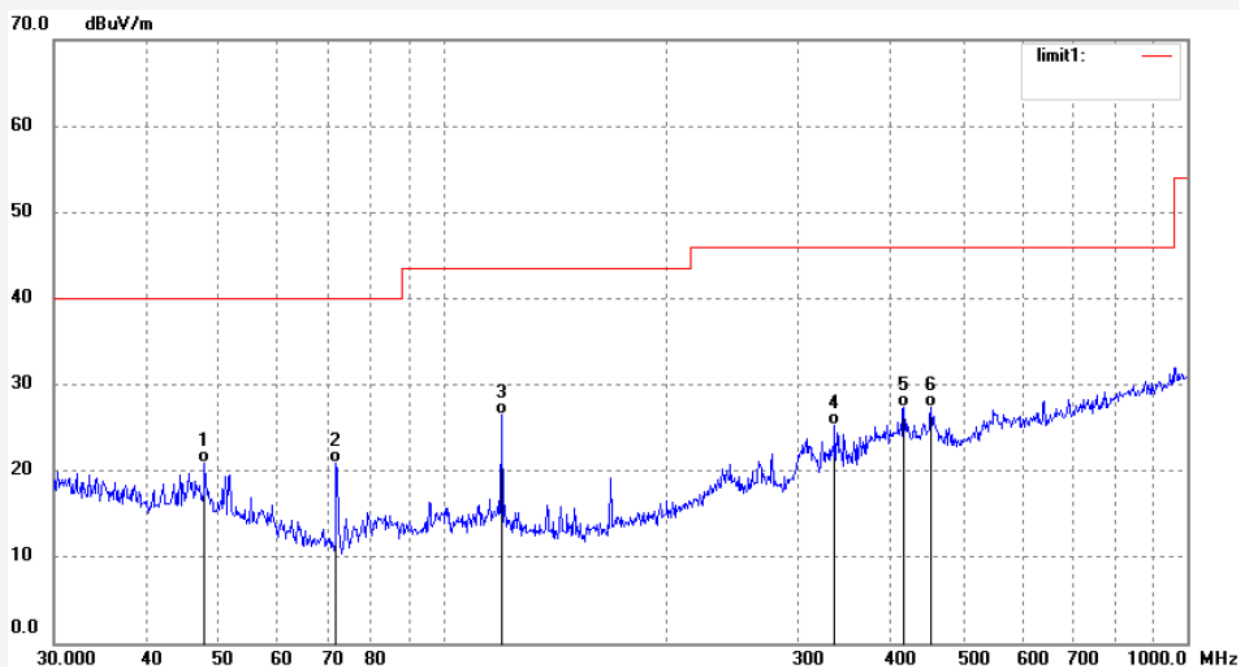
Date: 17/06/16/

Time: 10/42/50

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	47.8260	33.47	-12.60	20.87	40.00	-19.13	QP			
2	71.8319	37.25	-16.30	20.95	40.00	-19.05	QP			
3	119.8555	39.59	-13.06	26.53	43.50	-16.97	QP			
4	336.0351	33.13	-7.91	25.22	46.00	-20.78	QP			
5	416.1791	33.34	-5.95	27.39	46.00	-18.61	QP			
6	452.7196	32.76	-5.31	27.45	46.00	-18.55	QP			

Above 1GHz



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Job No.: Frank2017 #125

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

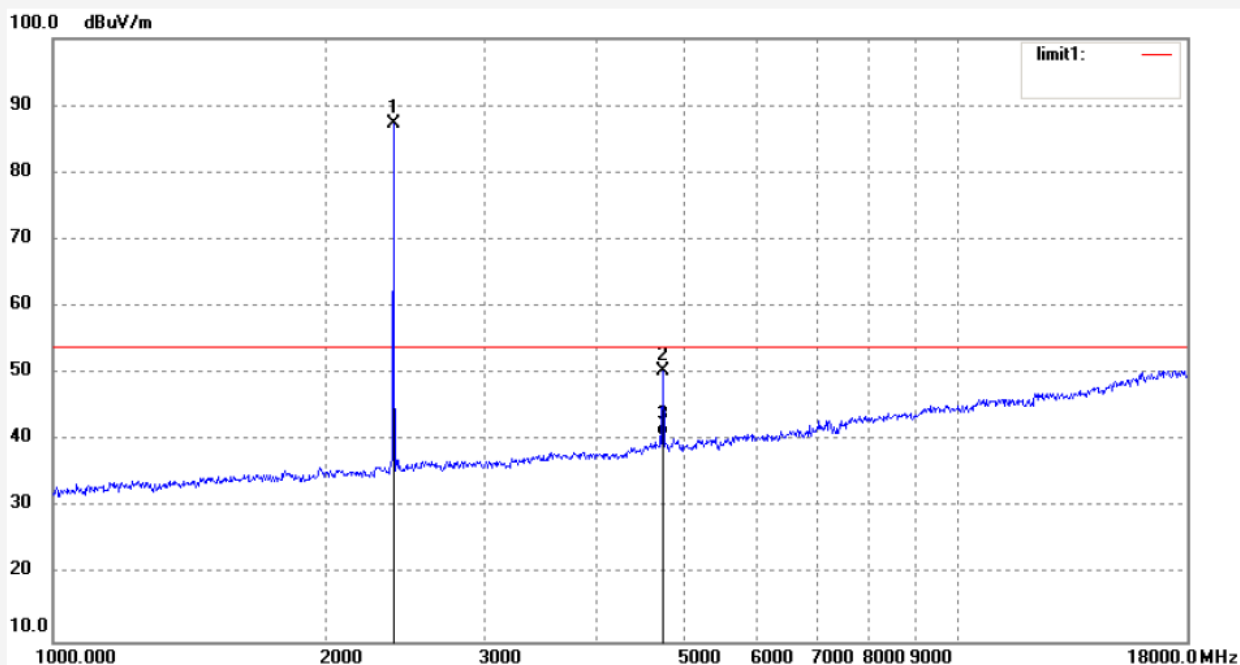
Date: 2017/06/20

Time: 19:47:37

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.719	91.37	-4.01	87.36			peak			
2	4803.957	46.89	3.46	50.35	54.00	-3.65	peak			
3	4803.957	37.23	3.46	40.69	54.00	-13.31	AVG			

Note: Average measurement with peak detection at No.3



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Job No.: Frank2017 #126

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

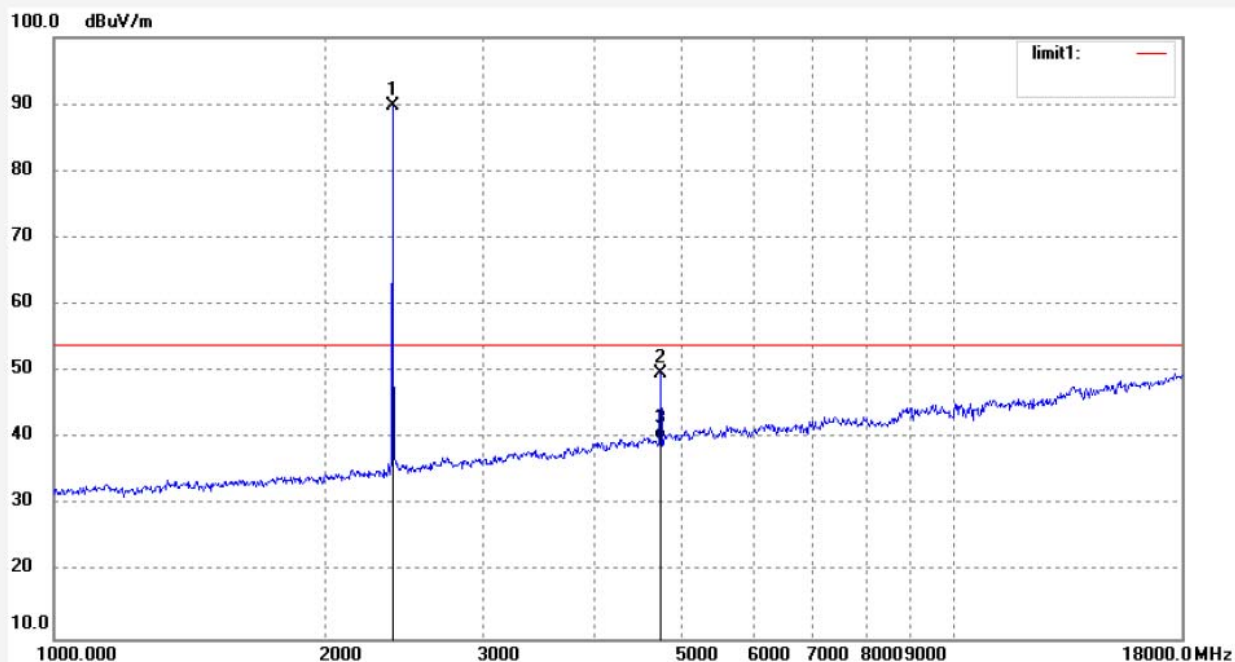
Date: 2017/06/20

Time: 19:48:27

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.719	93.87	-4.01	89.86			peak			
2	4803.957	46.24	3.46	49.70	54.00	-4.30	peak			
3	4803.957	36.45	3.46	39.91	54.00	-14.09	AVG			

Note: Average measurement with peak detection at No.3



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Job No.: Frank2017 #128

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2441MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

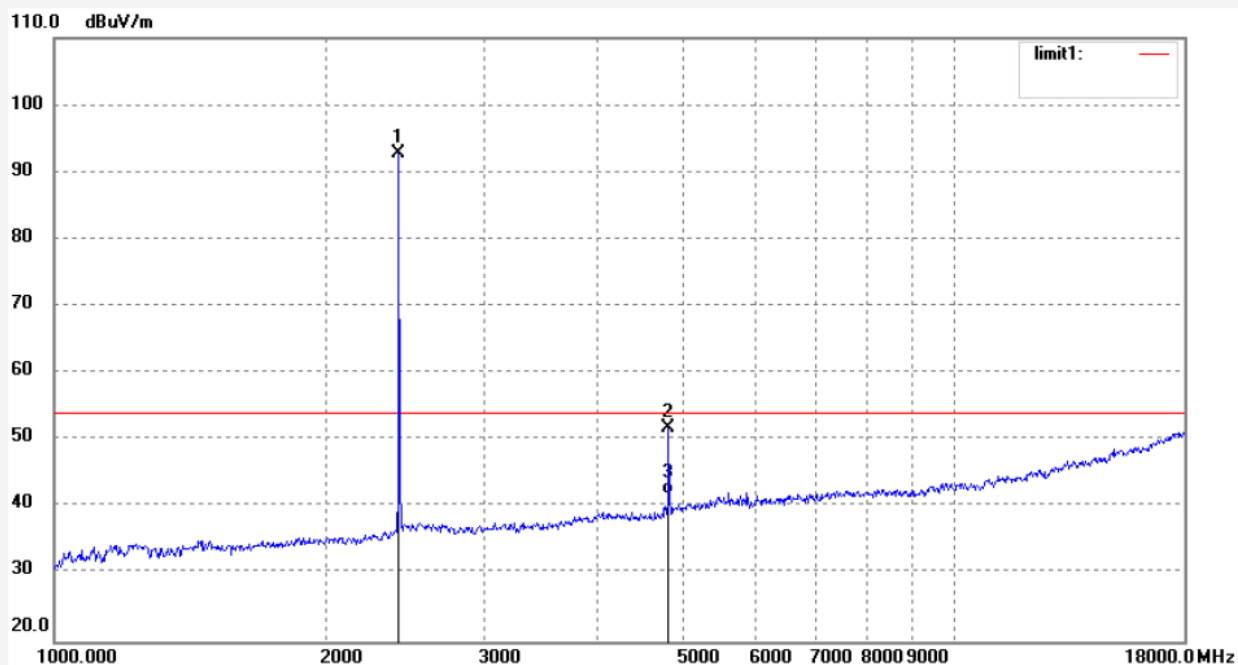
Date: 2017/06/20

Time: 19:52:09

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.621	96.51	-3.83	92.68			peak			
2	4882.324	47.98	3.82	51.80	54.00	-2.20	peak			
3	4882.324	38.12	3.82	41.94	54.00	-12.06	AVG			

Note: Average measurement with peak detection at No.3



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Job No.: Frank2017 #127

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2441MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

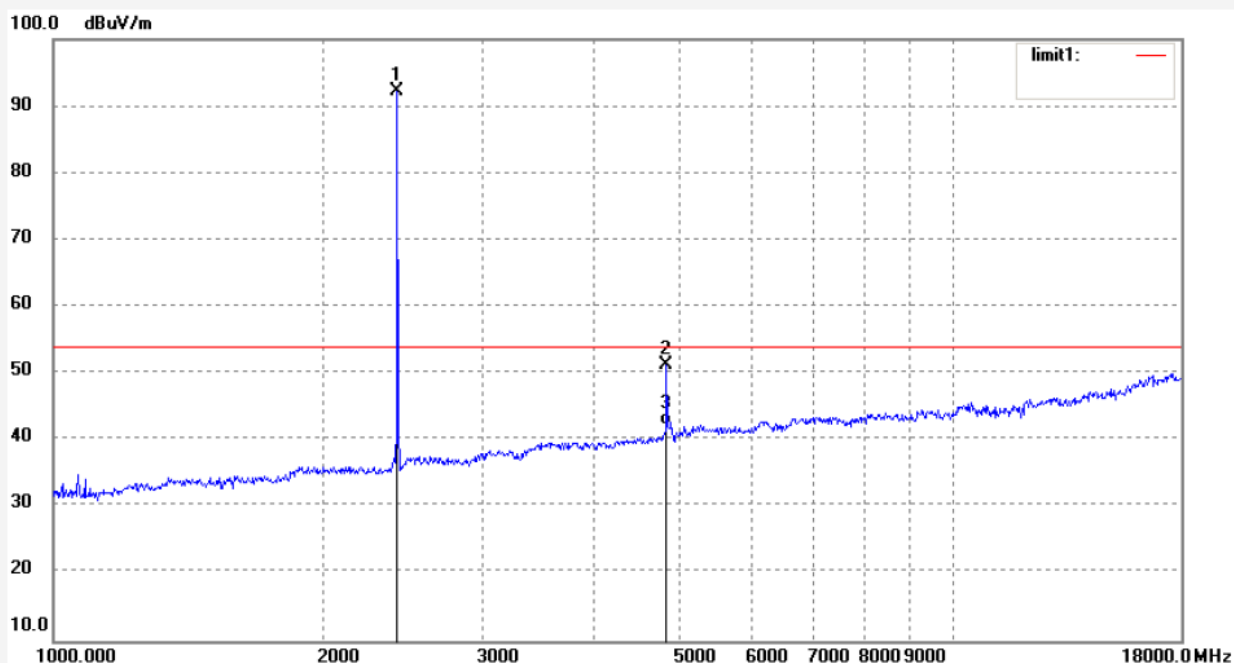
Date: 2017/06/20

Time: 19:51:44

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.621	96.01	-3.83	92.18			peak			
2	4882.324	47.48	3.82	51.30	54.00	-2.70	peak			
3	4882.324	38.42	3.82	42.24	54.00	-11.76	AVG			

Note: Average measurement with peak detection at No.3

Job No.: Frank2017 #129

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

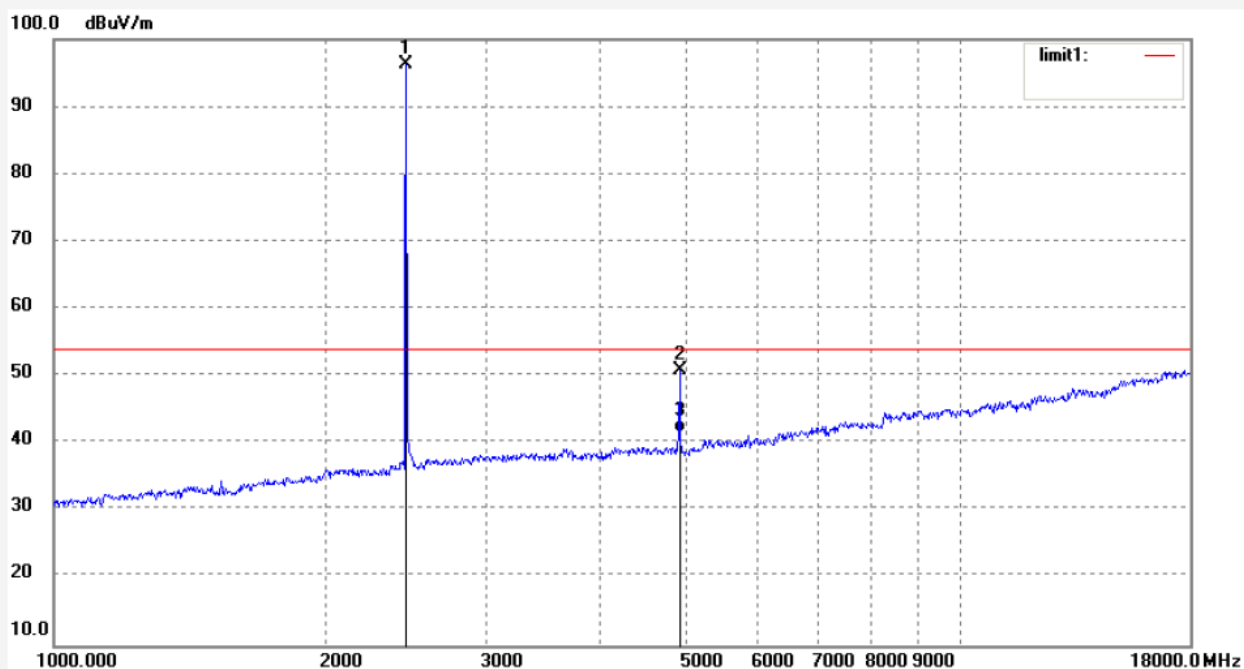
Date: 2017/06/21

Time: 18:36:42

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	99.89	-3.67	96.22			peak			
2	4960.444	46.48	4.25	50.73	54.00	-3.27	peak			
3	4960.444	37.28	4.25	41.53	54.00	-12.47	AVG			

Note: Average measurement with peak detection at No.3



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Job No.: Frank2017 #130

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

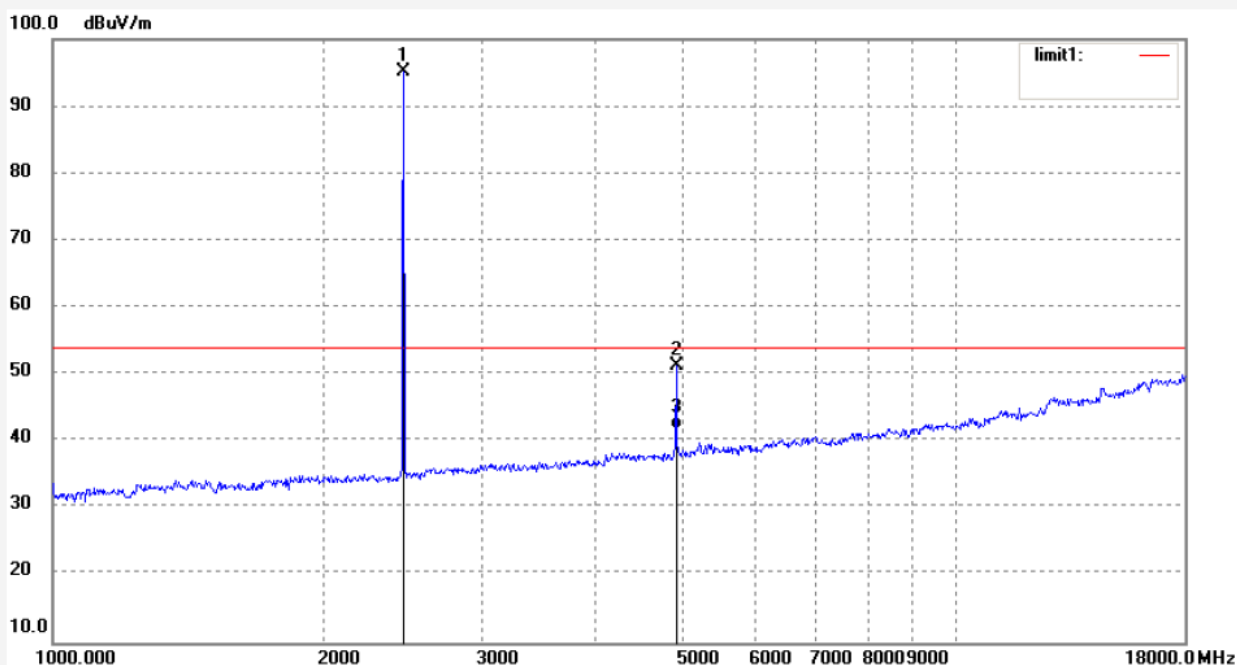
Date: 2017/06/21

Time: 18:37:07

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	98.91	-3.67	95.24			peak			
2	4960.444	46.98	4.25	51.23	54.00	-2.77	peak			
3	4960.444	37.54	4.25	41.79	54.00	-12.21	AVG			

Note: Average measurement with peak detection at No.3

11.BAND EDGE COMPLIANCE TEST

11.1.Block Diagram of Test Setup



(EUT: Supsoo Bluetooth headset)

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 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.

11.4.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.

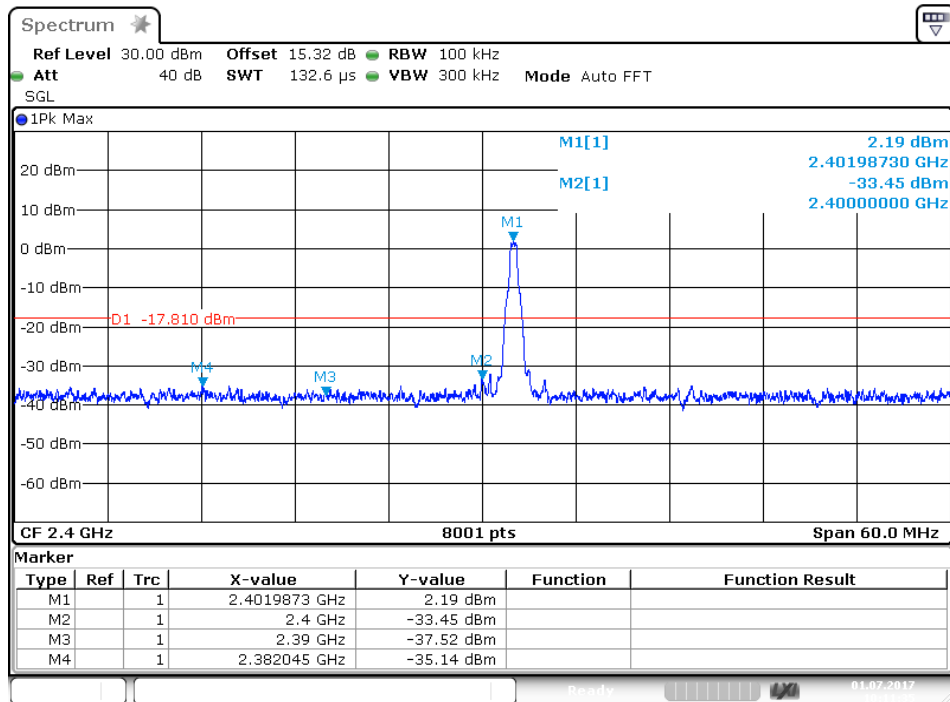
11.5.2. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz with convenient frequency span including 100 kHz bandwidth from band edge.

11.5.3. The band edges was measured and recorded.

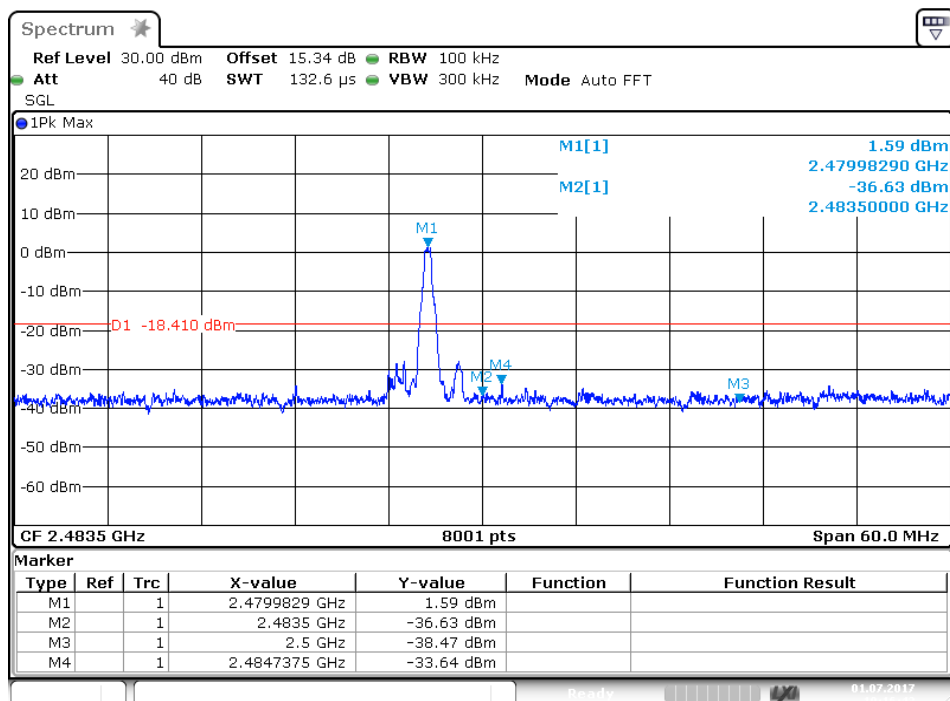
11.6. Test Result

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
GFSK		
2400.00	31.26	> 20dBc
2483.50	35.04	> 20dBc
Π/4-DQPSK Mode		
2400.00	31.14	> 20dBc
2483.50	35.92	> 20dBc
8DPSK		
2400.00	30.74	> 20dBc
2483.50	36.87	> 20dBc

GFSK

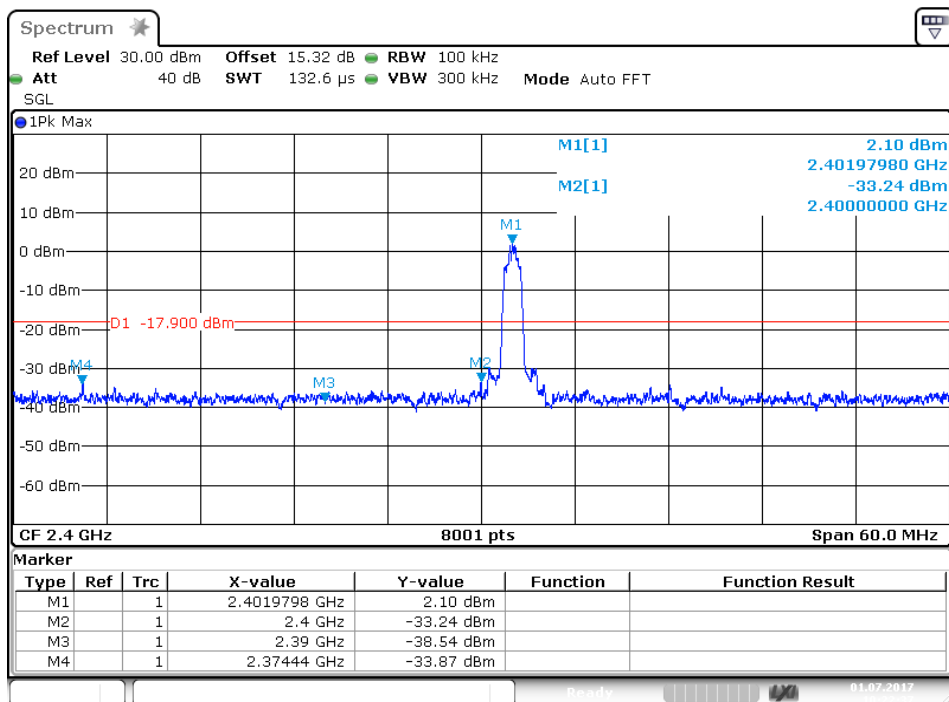


Date: 1.JUL.2017 10:11:35

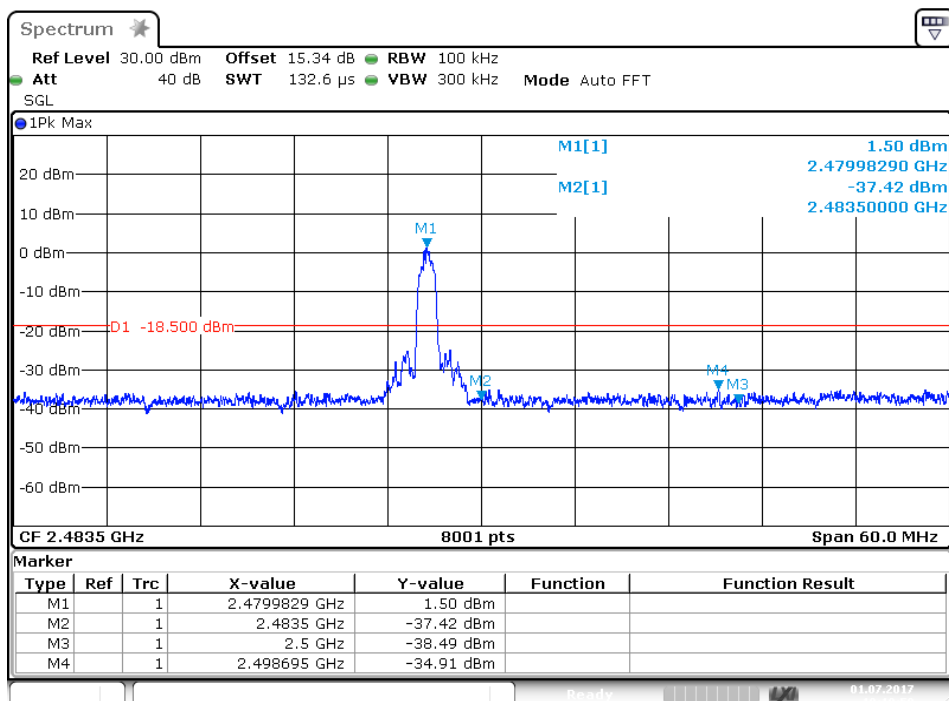


Date: 1.JUL.2017 10:16:43

Π/4-DQPSK Mode

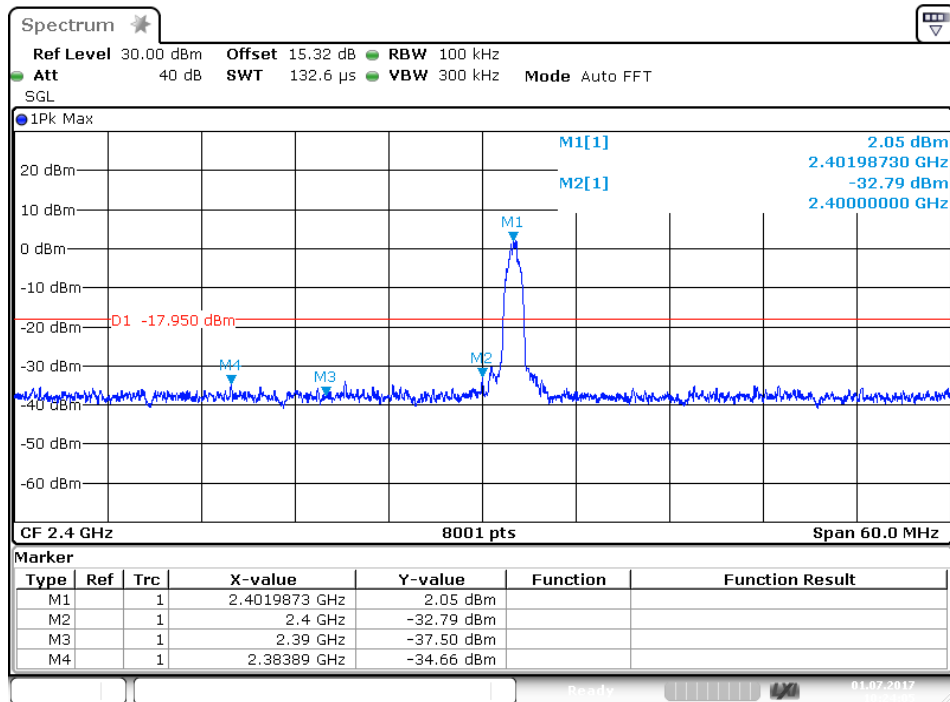


Date: 1.JUL.2017 10:22:37

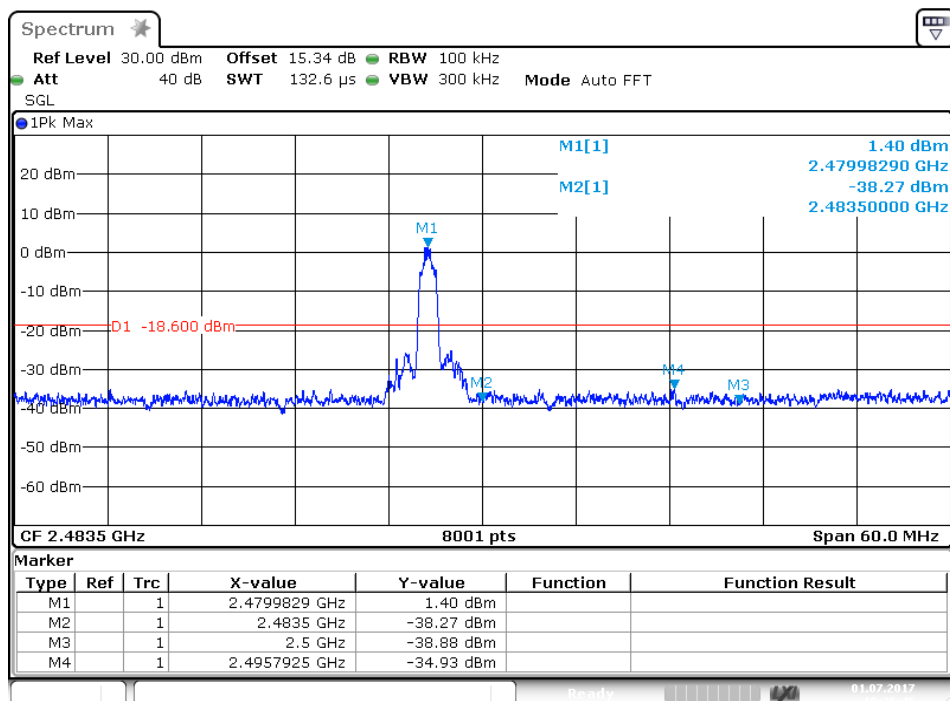


Date: 1.JUL.2017 10:18:59

8DPSK



Date: 1.JUL.2017 10:24:05



Date: 1.JUL.2017 10:26:46

Radiated Band Edge Result

Note:

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

Result = Reading + Corrected Factor

3. Display the measurement of peak values.

Test Procedure:

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. The EUT was tested in 3 orthogonal planes.

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

We select 2402MHz, 2480MHz TX frequency to transmit(Hopping off mode).

We select 2402-2480MHz TX frequency to transmit(Hopping on mode).

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

- 1.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.
- 2.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.
- 3.All modes of operation were investigated and the worst-case emissions are reported.

Non-hopping mode



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Job No.: Frank2017 #149

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz GFSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

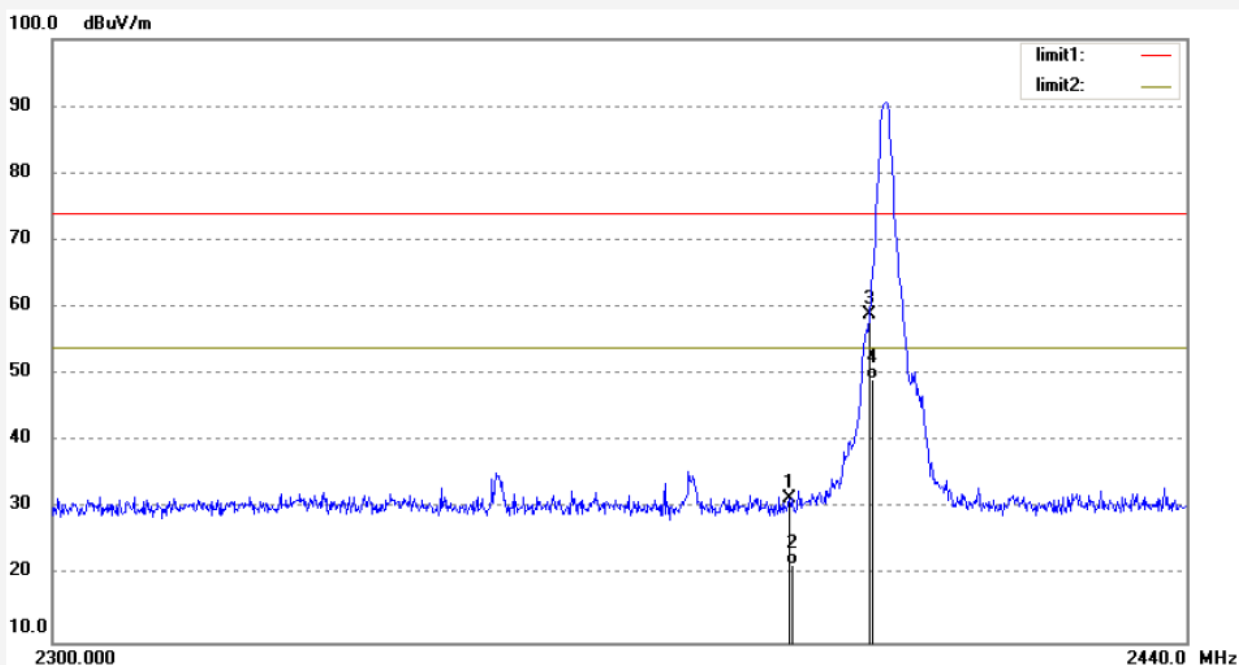
Date: 2017/06/21

Time: 19:44:35

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	35.34	-3.96	31.38	74.00	-42.62	peak			
2	2390.000	25.45	-3.96	21.49	54.00	-32.51	AVG			
3	2400.000	62.95	-3.91	59.04	74.00	-14.96	peak			
4	2400.000	53.12	-3.91	49.21	54.00	-4.79	AVG			

Note: Average measurement with peak detection at No.2&4



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Job No.: Frank2017 #150

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz GFSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

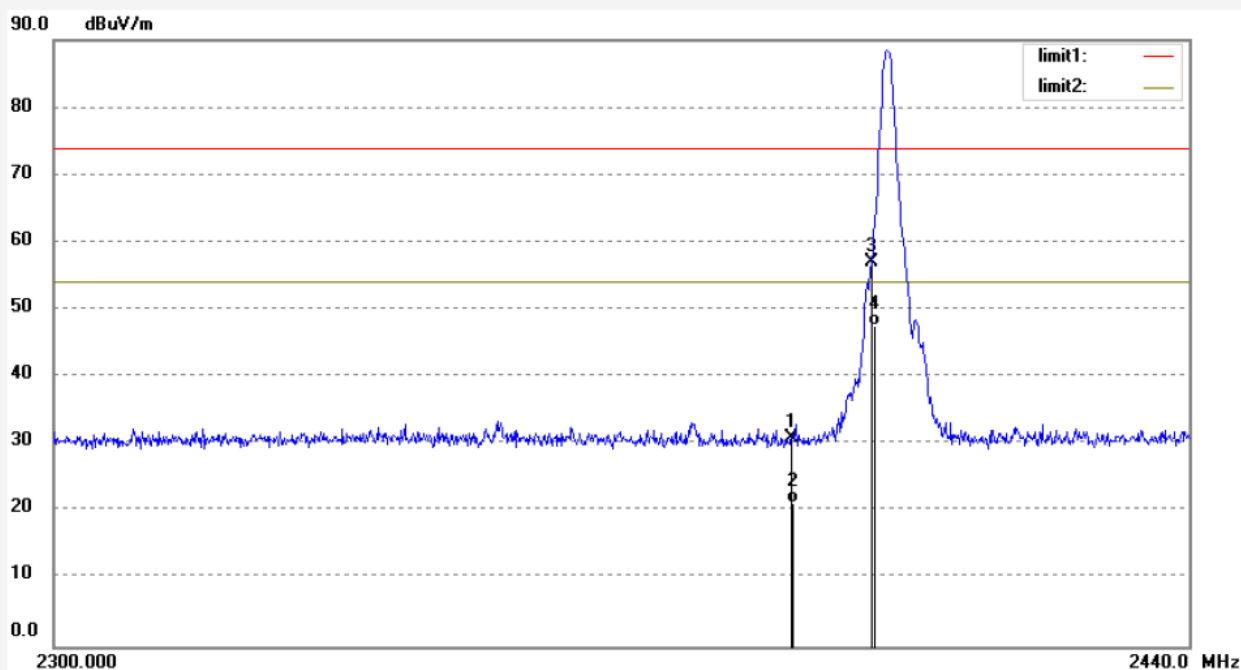
Date: 2017/06/21

Time: 19:46:30

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	34.90	-3.96	30.94	74.00	-43.06	peak			
2	2390.000	25.12	-3.96	21.16	54.00	-32.84	AVG			
3	2400.000	60.84	-3.91	56.93	74.00	-17.07	peak			
4	2400.000	51.54	-3.91	47.63	54.00	-6.37	AVG			

Note: Average measurement with peak detection at No.2&4



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Job No.: Frank2017 #152

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz GFSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

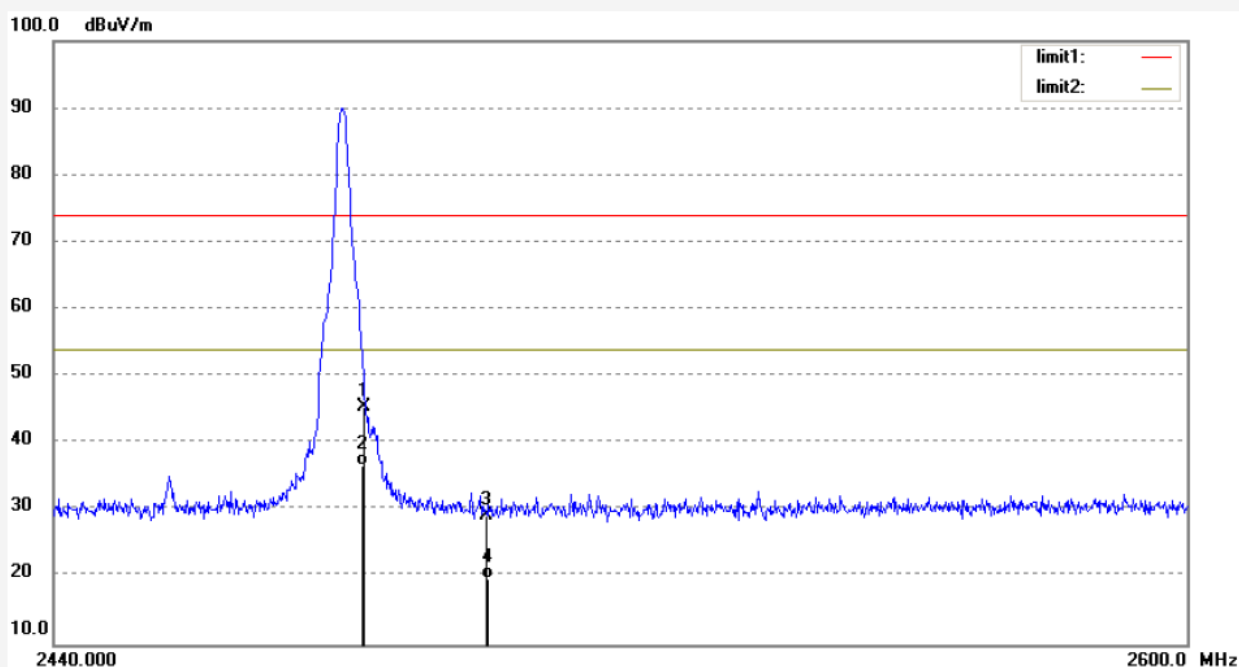
Date: 2017/06/21

Time: 19:49:26

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	49.04	-3.50	45.54	74.00	-28.46	peak			
2	2483.500	40.12	-3.50	36.62	54.00	-17.38	AVG			
3	2500.000	32.72	-3.42	29.30	74.00	-44.70	peak			
4	2500.000	23.15	-3.42	19.73	54.00	-34.27	AVG			

Note: Average measurement with peak detection at No.2&4



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Job No.: Frank2017 #151

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz GFSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

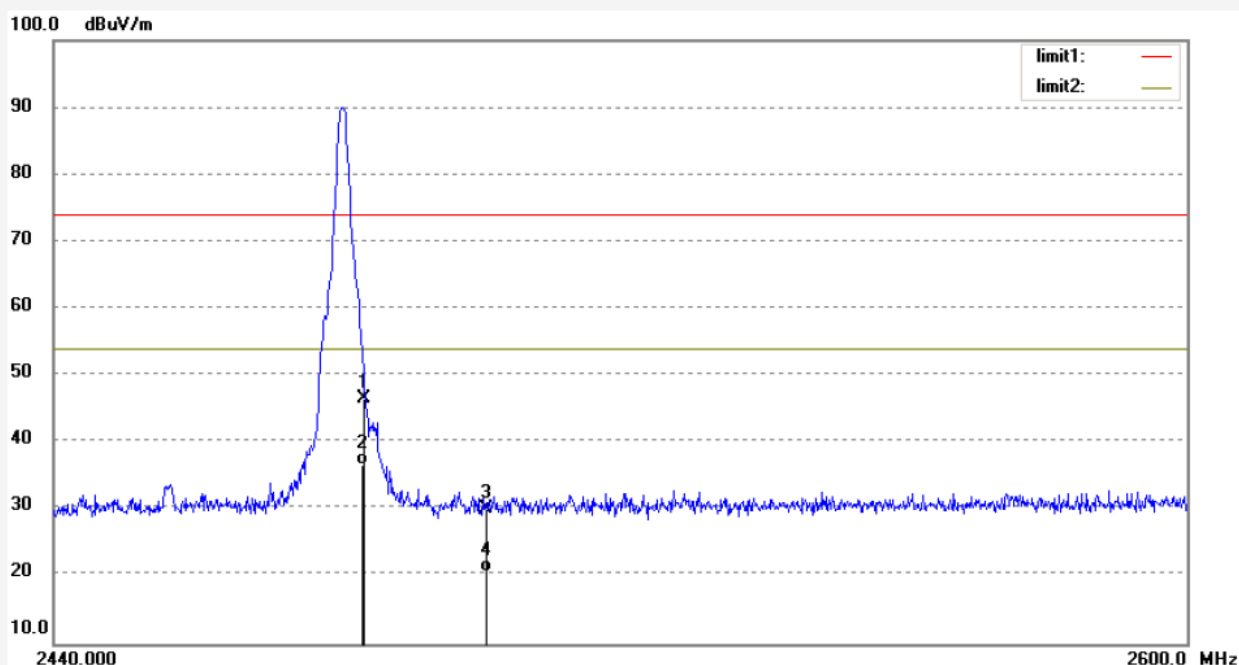
Date: 2017/06/21

Time: 19:48:33

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	50.00	-3.50	46.50	74.00	-27.50	peak			
2	2483.500	40.11	-3.50	36.61	54.00	-17.39	AVG			
3	2500.000	33.64	-3.42	30.22	74.00	-43.78	peak			
4	2500.000	24.12	-3.42	20.70	54.00	-33.30	AVG			

Note: Average measurement with peak detection at No.2&4



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Job No.: Frank2017 #145

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz $\pi/4$ -DQPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

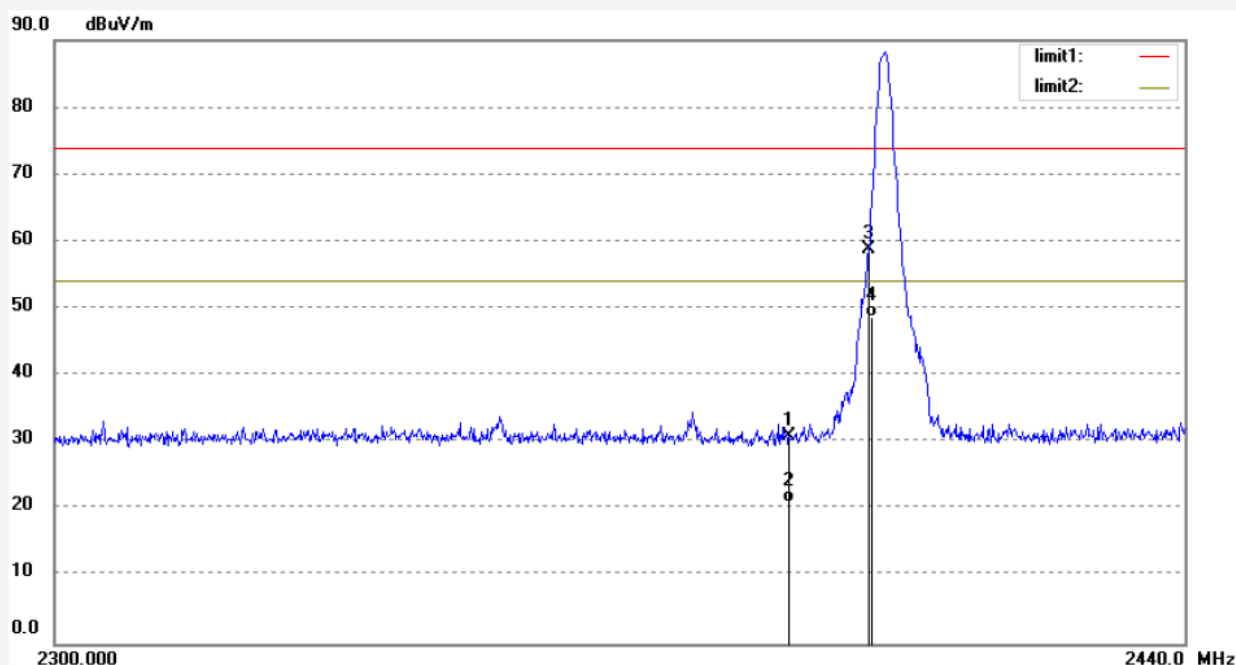
Date: 2017/06/21

Time: 19:37:00

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	34.96	-3.96	31.00	74.00	-43.00	peak			
2	2390.000	24.96	-3.96	21.00	54.00	-33.00	AVG			
3	2400.000	62.72	-3.91	58.81	74.00	-15.19	peak			
4	2400.000	52.72	-3.91	48.81	54.00	-5.19	AVG			

Note: Average measurement with peak detection at No.2&4

Job No.: Frank2017 #146

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz □/4-DQPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

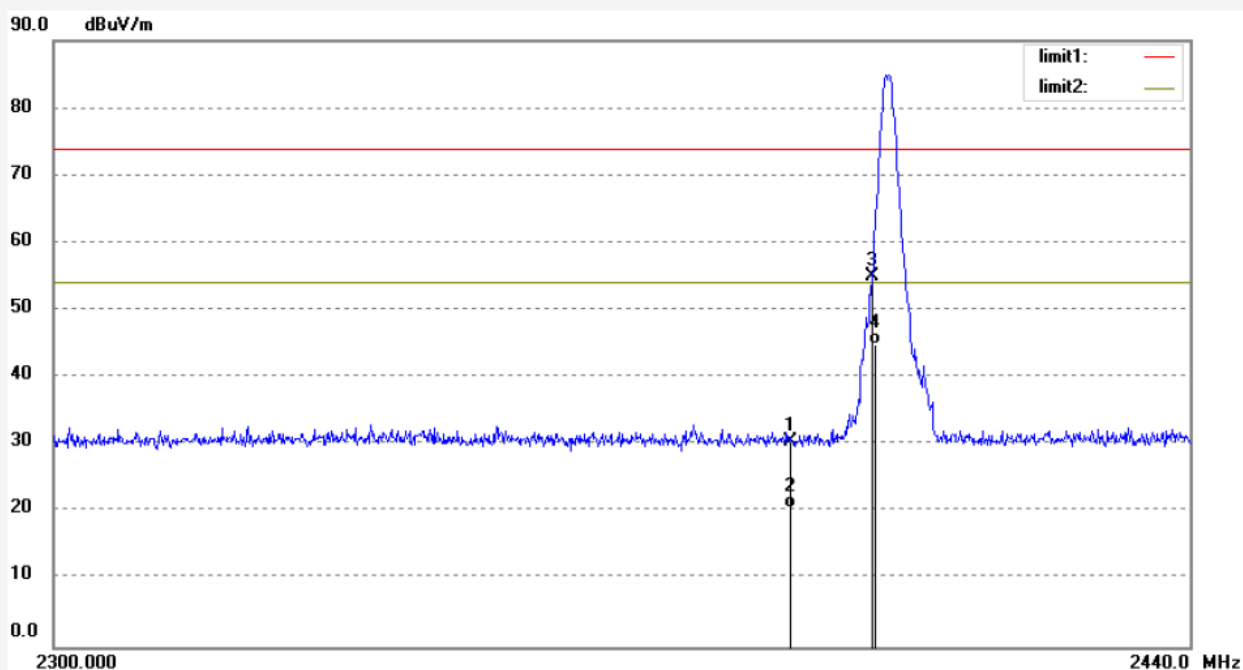
Date: 2017/06/21

Time: 19:39:36

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	34.54	-3.96	30.58	74.00	-43.42	peak			
2	2390.000	24.54	-3.96	20.58	54.00	-33.42	AVG			
3	2400.000	58.83	-3.91	54.92	74.00	-19.08	peak			
4	2400.000	48.83	-3.91	44.92	54.00	-9.08	AVG			

Note: Average measurement with peak detection at No.2&4

Job No.: Frank2017 #156

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz □/4-DQPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

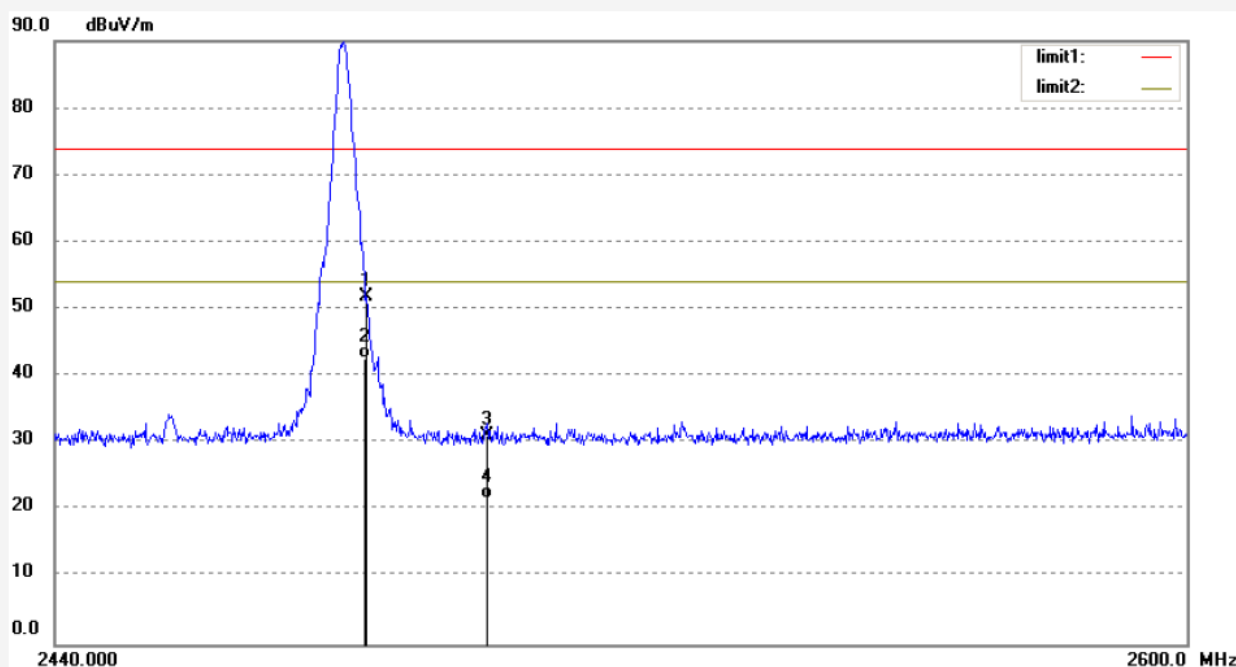
Date: 2017/06/21

Time: 19:54:48

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	55.47	-3.50	51.97	74.00	-22.03	peak			
2	2483.500	46.12	-3.50	42.62	54.00	-11.38	AVG			
3	2500.000	34.52	-3.42	31.10	74.00	-42.90	peak			
4	2500.000	25.12	-3.42	21.70	54.00	-32.30	AVG			

Note: Average measurement with peak detection at No.2&4

Job No.: Frank2017 #155

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz $\pi/4$ -DQPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

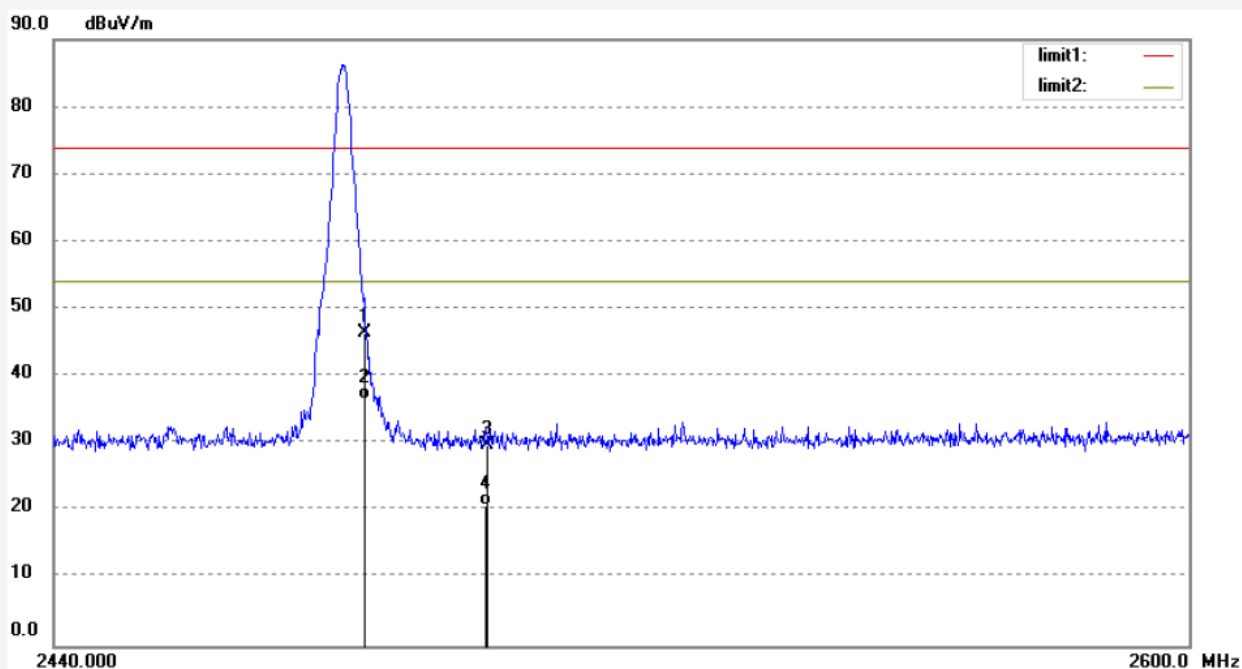
Date: 2017/06/21

Time: 19:54:28

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	49.89	-3.50	46.39	74.00	-27.61	peak			
2	2483.500	40.12	-3.50	36.62	54.00	-17.38	AVG			
3	2500.000	33.31	-3.42	29.89	74.00	-44.11	peak			
4	2500.000	24.21	-3.42	20.79	54.00	-33.21	AVG			

Note: Average measurement with peak detection at No.2&4



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Job No.: Frank2017 #148

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz 8DPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

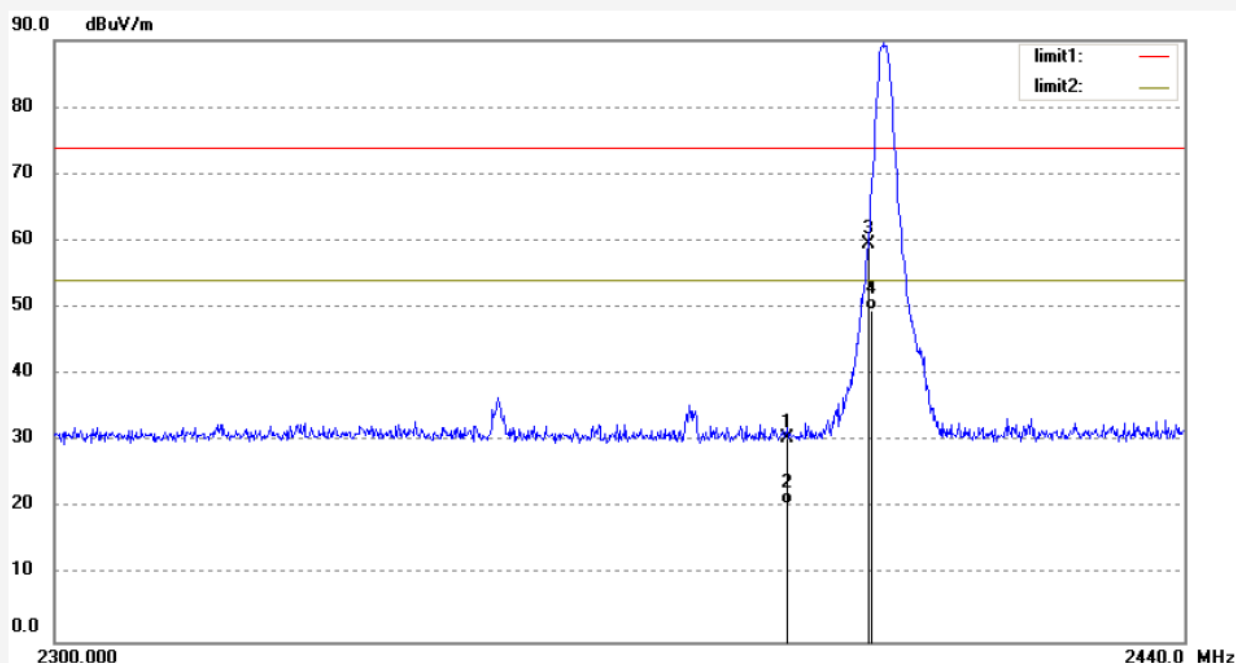
Date: 2017/06/21

Time: 19:43:07

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	34.50	-3.96	30.54	74.00	-43.46	peak			
2	2390.000	24.54	-3.96	20.58	54.00	-33.42	AVG			
3	2400.000	63.36	-3.91	59.45	74.00	-14.55	peak			
4	2400.000	53.45	-3.91	49.54	54.00	-4.46	AVG			

Note: Average measurement with peak detection at No.2&4



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Job No.: Frank2017 #147

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2402MHz 8DPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

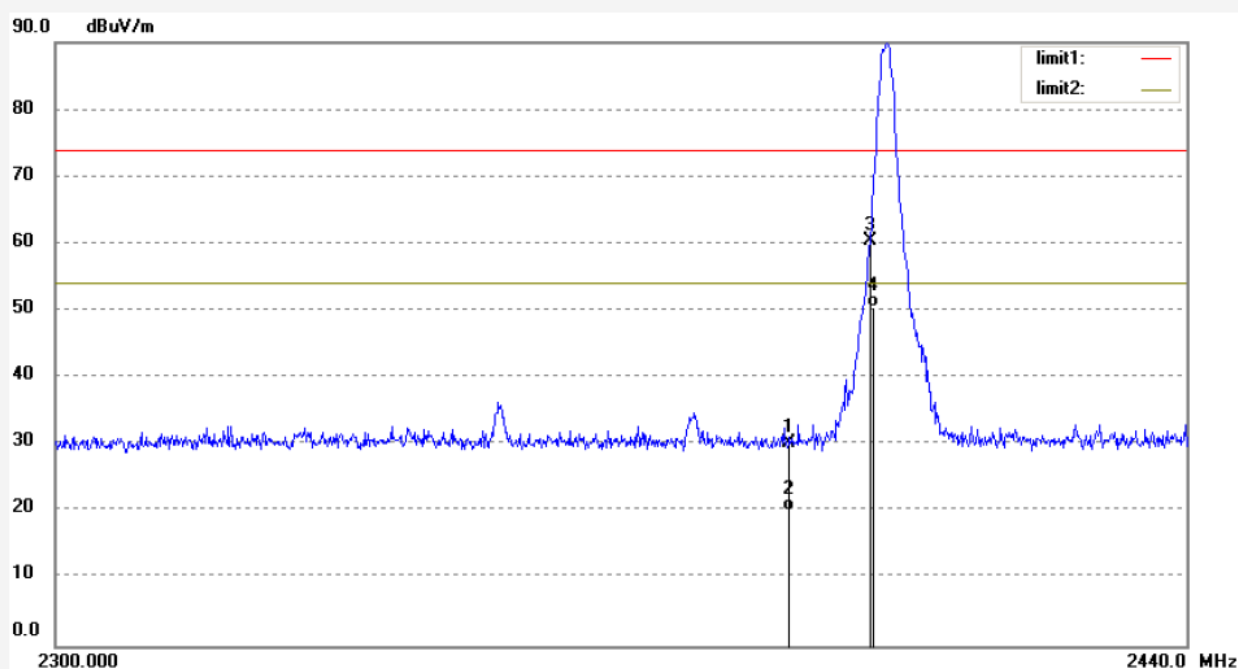
Date: 2017/06/21

Time: 19:41:31

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	34.18	-3.96	30.22	74.00	-43.78	peak			
2	2390.000	24.18	-3.96	20.22	54.00	-33.78	AVG			
3	2400.000	64.36	-3.91	60.45	74.00	-13.55	peak			
4	2400.000	54.36	-3.91	50.45	54.00	-3.55	AVG			

Note: Average measurement with peak detection at No.2&4



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Job No.: Frank2017 #153

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz 8DPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

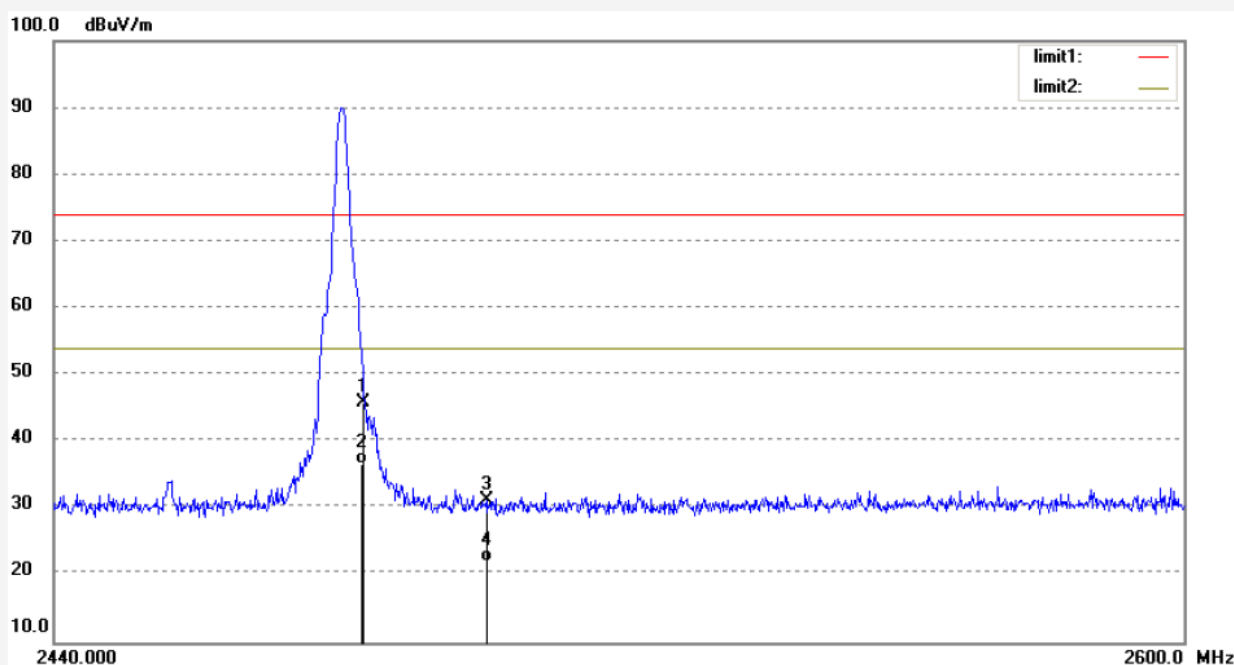
Date: 2017/06/21

Time: 19:50:31

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	49.49	-3.50	45.99	74.00	-28.01	peak			
2	2483.500	40.15	-3.50	36.65	54.00	-17.35	AVG			
3	2500.000	34.76	-3.42	31.34	74.00	-42.66	peak			
4	2500.000	25.45	-3.42	22.03	54.00	-31.97	AVG			

Note: Average measurement with peak detection at No.2&4

Job No.: Frank2017 #154

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: TX2480MHz 8DPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

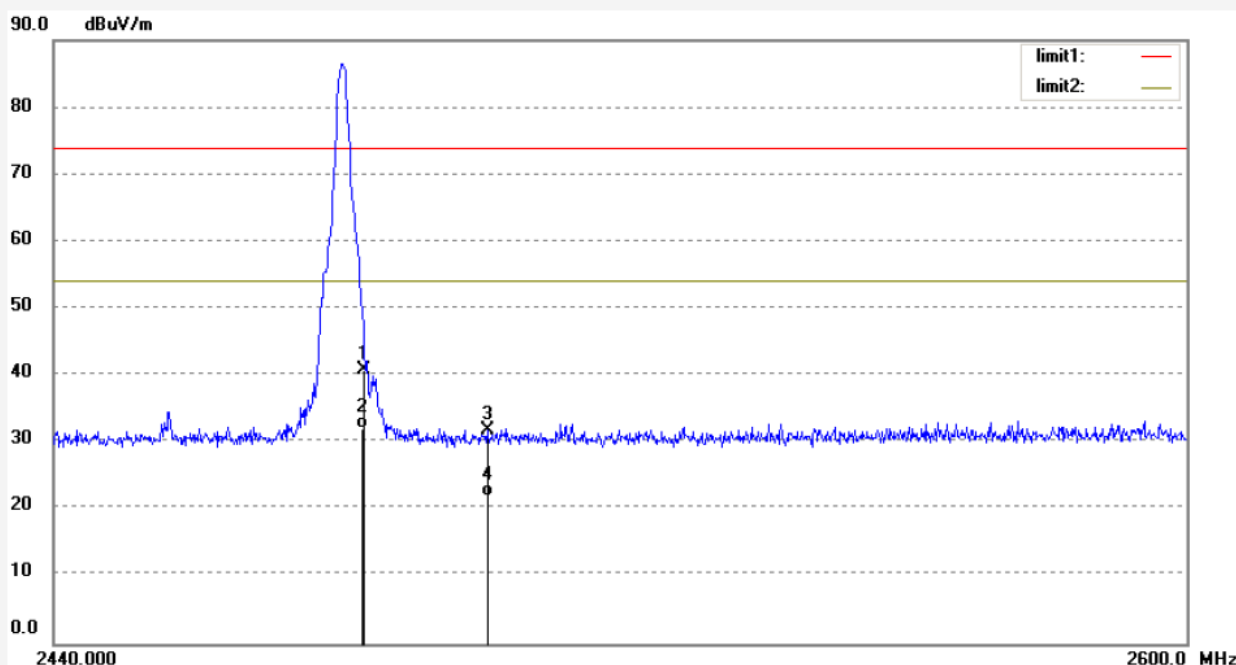
Date: 2017/06/21

Time: 19:52:59

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	44.31	-3.50	40.81	74.00	-33.19	peak			
2	2483.500	35.64	-3.50	32.14	54.00	-21.86	AVG			
3	2500.000	35.26	-3.42	31.84	74.00	-42.16	peak			
4	2500.000	25.45	-3.42	22.03	54.00	-31.97	AVG			

Note: Average measurement with peak detection at No.2&4

Hopping mode



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Job No.: Frank2017 #160

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: HOPPING GFSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

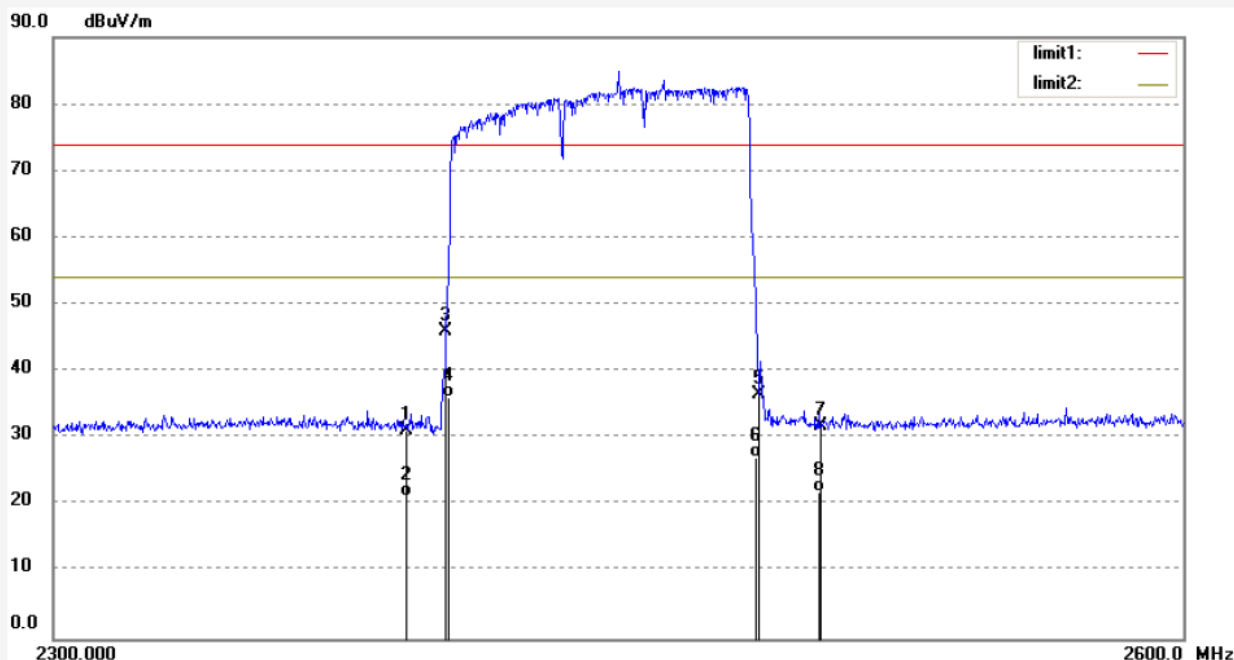
Date: 2017/06/21

Time: 20:14:10

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	35.17	-3.96	31.21	74.00	-42.79	peak			
2	2390.000	25.30	-3.96	21.34	54.00	-32.66	AVG			
3	2400.000	49.99	-3.91	46.08	74.00	-27.92	peak			
4	2400.000	40.12	-3.91	36.21	54.00	-17.79	AVG			
5	2483.000	39.97	-3.50	36.47	74.00	-37.53	peak			
6	2483.000	30.53	-3.50	27.03	54.00	-26.97	AVG			
7	2500.000	35.15	-3.42	31.73	74.00	-42.27	peak			
8	2500.000	25.32	-3.42	21.90	54.00	-32.10	AVG			

Note: Average measurement with peak detection at No.2&4&6&8



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Job No.: Frank2017 #159

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: HOPPING GFSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

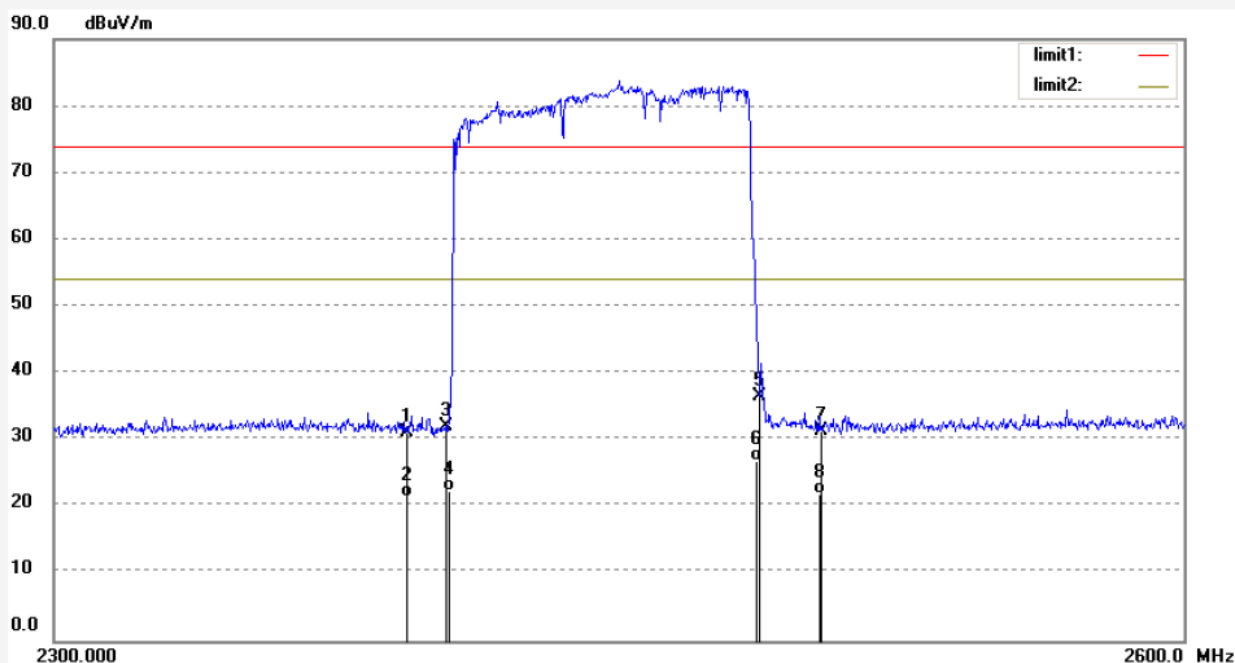
Date: 2017/06/21

Time: 20:12:29

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	35.17	-3.96	31.21	74.00	-42.79	peak			
2	2390.000	25.45	-3.96	21.49	54.00	-32.51	AVG			
3	2400.000	35.92	-3.91	32.01	74.00	-41.99	peak			
4	2400.000	26.23	-3.91	22.32	54.00	-31.68	AVG			
5	2483.000	39.97	-3.50	36.47	74.00	-37.53	peak			
6	2483.000	30.41	-3.50	26.91	54.00	-27.09	AVG			
7	2500.000	34.81	-3.42	31.39	74.00	-42.61	peak			
8	2500.000	25.42	-3.42	22.00	54.00	-32.00	AVG			

Note: Average measurement with peak detection at No.2&4&6&8

Job No.: Frank2017 #157

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: HOPPING $\pi/4$ -DQPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

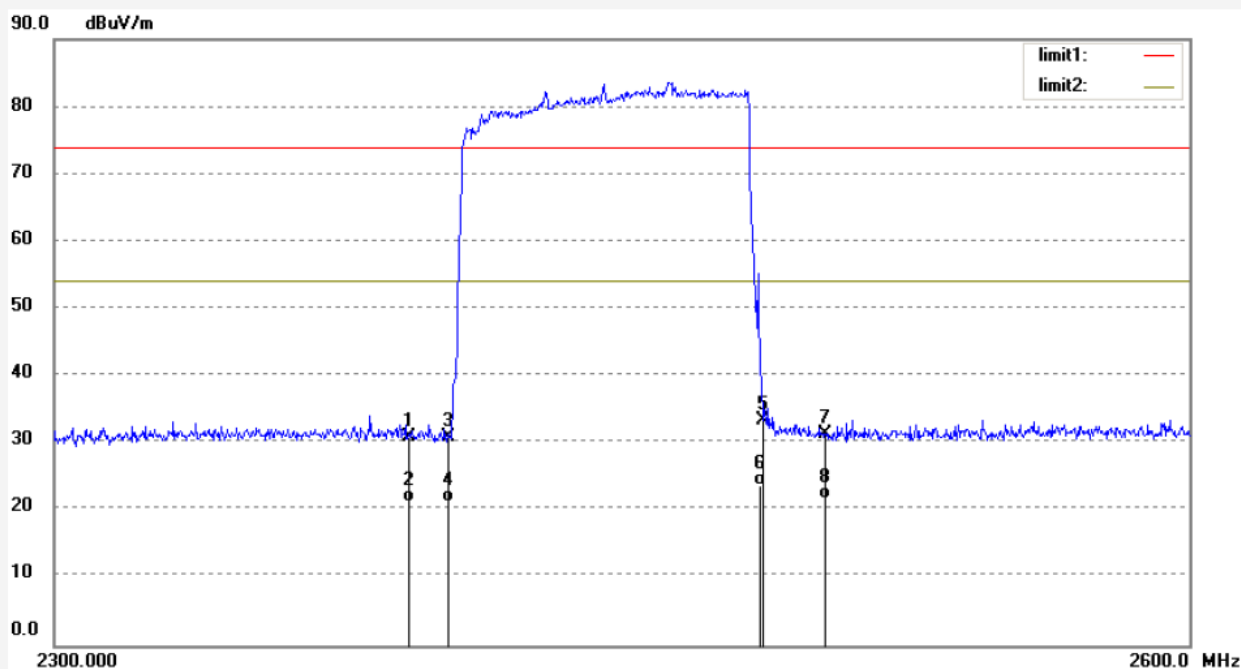
Date: 2017/06/21

Time: 20:07:09

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	35.01	-3.96	31.05	74.00	-42.95	peak			
2	2390.000	25.12	-3.96	21.16	54.00	-32.84	AVG			
3	2400.000	34.76	-3.91	30.85	74.00	-43.15	peak			
4	2400.000	25.10	-3.91	21.19	54.00	-32.81	AVG			
5	2483.000	36.95	-3.50	33.45	74.00	-40.55	peak			
6	2483.000	27.13	-3.50	23.63	54.00	-30.37	AVG			
7	2500.000	34.81	-3.42	31.39	74.00	-42.61	peak			
8	2500.000	25.14	-3.42	21.72	54.00	-32.28	AVG			

Note: Average measurement with peak detection at No.2&4&6&8

Job No.: Frank2017 #158

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: HOPPING $\pi/4$ -DQPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

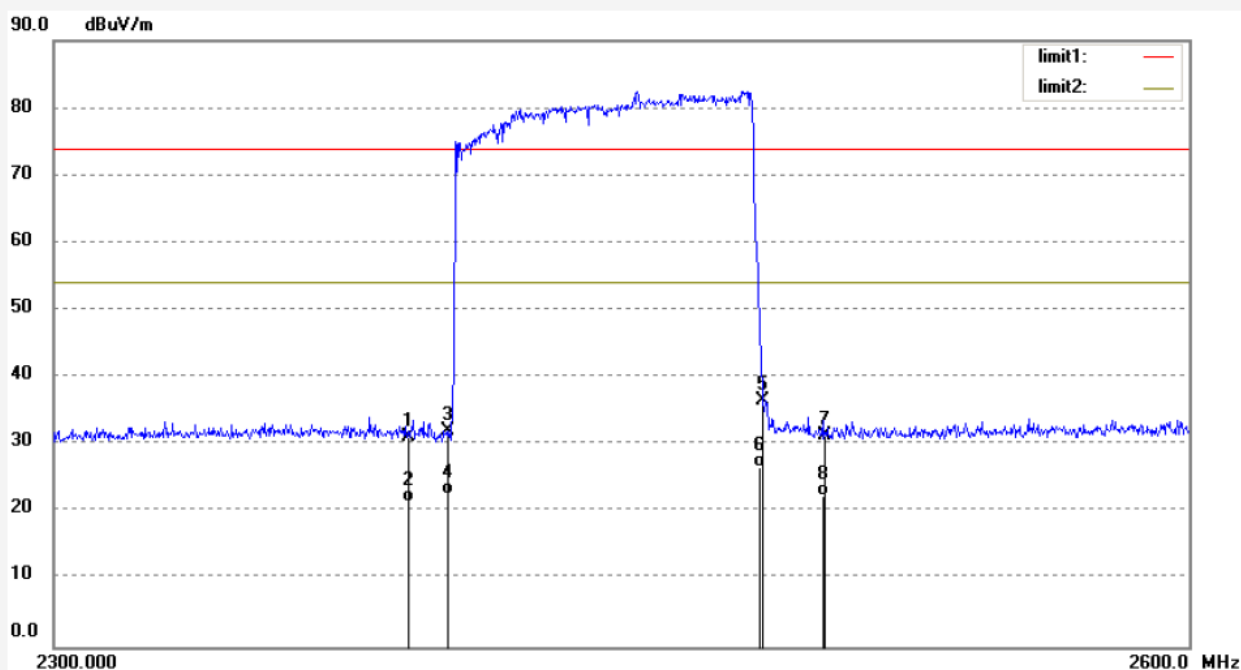
Date: 2017/06/21

Time: 20:09:42

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	35.17	-3.96	31.21	74.00	-42.79	peak			
2	2390.000	25.53	-3.96	21.57	54.00	-32.43	AVG			
3	2400.000	35.92	-3.91	32.01	74.00	-41.99	peak			
4	2400.000	26.42	-3.91	22.51	54.00	-31.49	AVG			
5	2483.000	39.97	-3.50	36.47	74.00	-37.53	peak			
6	2483.000	30.15	-3.50	26.65	54.00	-27.35	AVG			
7	2500.000	34.81	-3.42	31.39	74.00	-42.61	peak			
8	2500.000	25.80	-3.42	22.38	54.00	-31.62	AVG			

Note: Average measurement with peak detection at No.2&4&6&8

Job No.: Frank2017 #161

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: HOPPING 8DPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Horizontal

Power Source: DC 5V

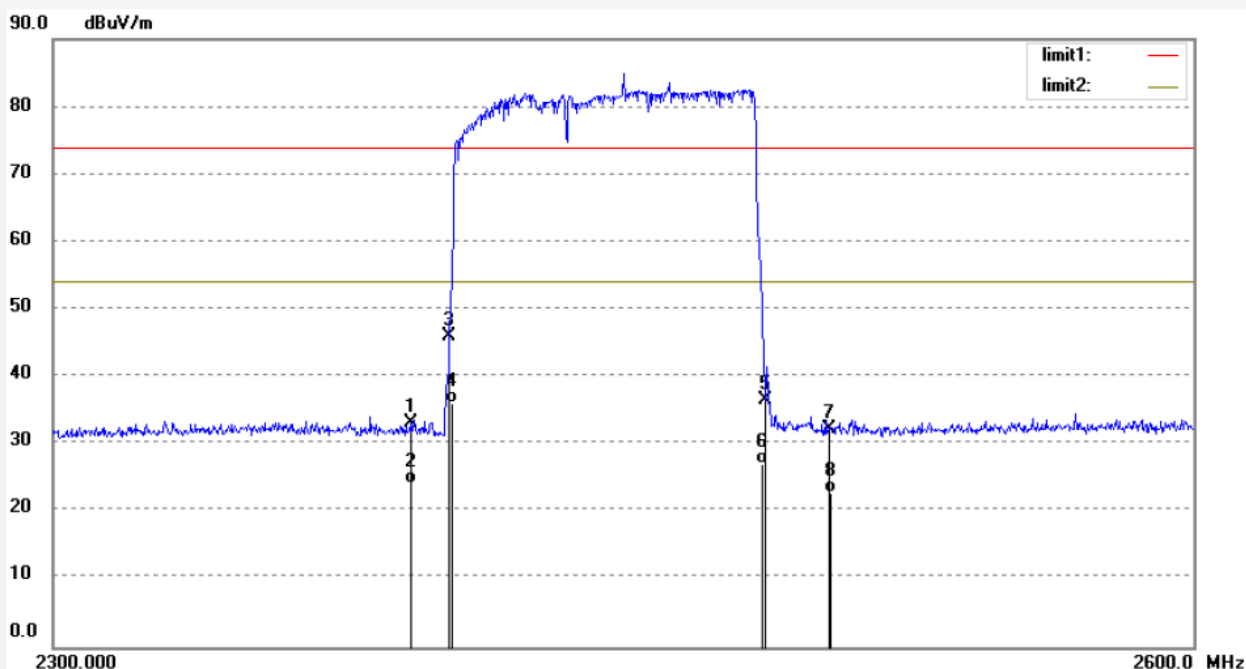
Date: 2017/06/21

Time: 20:15:21

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	37.09	-3.96	33.13	74.00	-40.87	peak			
2	2390.000	28.21	-3.96	24.25	54.00	-29.75	AVG			
3	2400.000	49.99	-3.91	46.08	74.00	-27.92	peak			
4	2400.000	40.12	-3.91	36.21	54.00	-17.79	AVG			
5	2483.000	39.97	-3.50	36.47	74.00	-37.53	peak			
6	2483.000	30.52	-3.50	27.02	54.00	-26.98	AVG			
7	2500.000	35.69	-3.42	32.27	74.00	-41.73	peak			
8	2500.000	26.32	-3.42	22.90	54.00	-31.10	AVG			

Note: Average measurement with peak detection at No.2&4&6&8

Job No.: Frank2017 #162

Standard: FCC PK

Test item: Radiation Test

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

EUT: Supsoo Bluetooth headset

Mode: HOPPING 8DPSK

Model: B103

Manufacturer: DONGGUANG HUAYE ELECTRONICS

Polarization: Vertical

Power Source: DC 5V

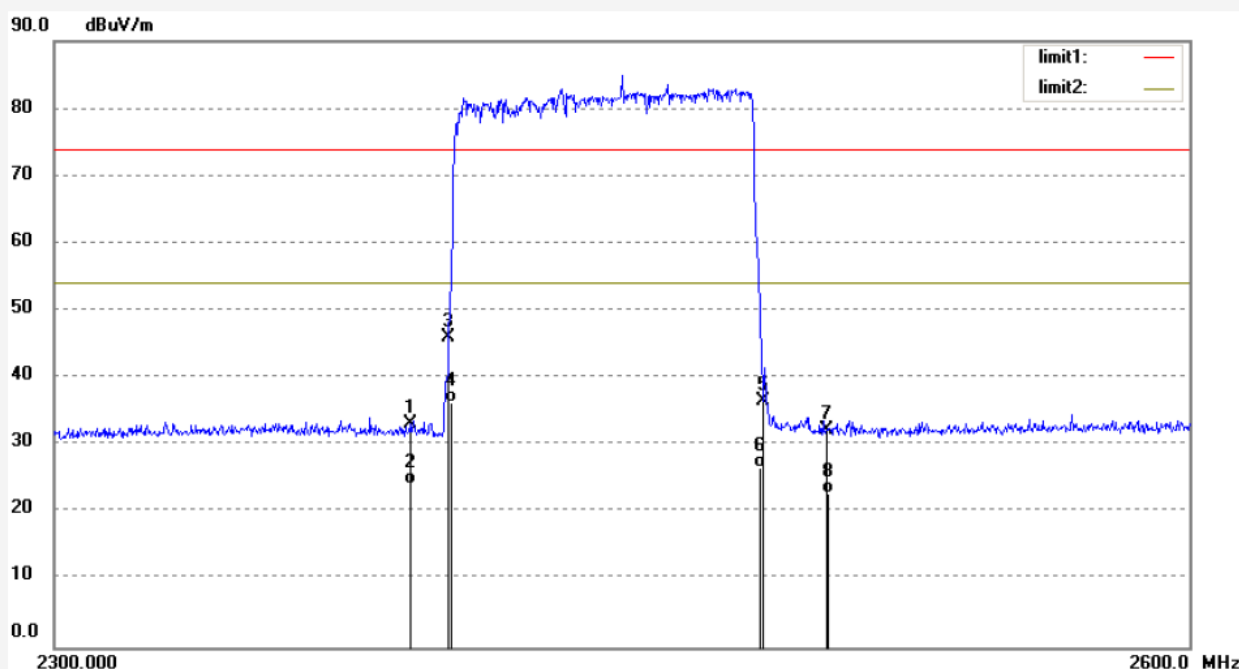
Date: 2017/06/21

Time: 20:16:25

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20170963



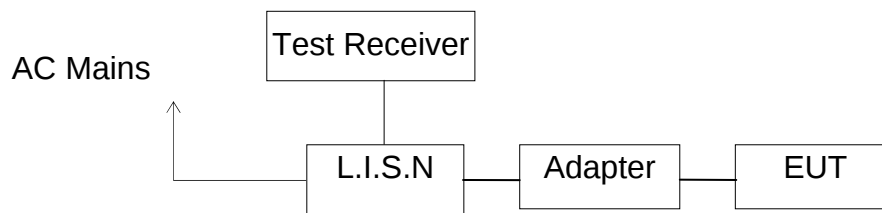
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	37.09	-3.96	33.13	74.00	-40.87	peak			
2	2390.000	28.12	-3.96	24.16	54.00	-29.84	AVG			
3	2400.000	49.99	-3.91	46.08	74.00	-27.92	peak			
4	2400.000	40.23	-3.91	36.32	54.00	-17.68	AVG			
5	2483.000	39.97	-3.50	36.47	74.00	-37.53	peak			
6	2483.000	30.12	-3.50	26.62	54.00	-27.38	AVG			
7	2500.000	35.69	-3.42	32.27	74.00	-41.73	peak			
8	2500.000	26.21	-3.42	22.79	54.00	-31.21	AVG			

Note: Average measurement with peak detection at No.2&4&6&8

12.AC POWER LINE CONDUCTED EMISSION FOR FCC PART

15 SECTION 15.207(A)

12.1.Block Diagram of Test Setup



(EUT: Supsoo Bluetooth headset)

12.2.Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0
NOTE1: The lower limit shall apply at the transition frequencies.		
NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

12.3.Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

12.4.Operating Condition of EUT

12.4.1.Setup the EUT and simulator as shown as Section 12.1.

12.4.2.Turn on the power of all equipment.

12.4.3.Let the EUT work in test mode and measure it.

12.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

12.6.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Test mode : BT communicating(AC 120V/60Hz)

MEASUREMENT RESULT: "0963-1_fin"

6/20/2017 7:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.155000	47.00	10.5	66	18.7	QP	L1	GND
0.495000	42.60	10.7	56	13.5	QP	L1	GND
1.935000	34.80	11.0	56	21.2	QP	L1	GND
3.670000	31.40	11.1	56	24.6	QP	L1	GND
5.190000	30.20	11.2	60	29.8	QP	L1	GND
24.190000	25.00	11.5	60	35.0	QP	L1	GND

MEASUREMENT RESULT: "0963-1_fin2"

6/20/2017 7:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.155000	33.80	10.5	56	21.9	AV	L1	GND
0.495000	38.10	10.7	46	8.0	AV	L1	GND
2.070000	27.20	11.0	46	18.8	AV	L1	GND
2.570000	25.50	11.0	46	20.5	AV	L1	GND
5.150000	21.80	11.2	50	28.2	AV	L1	GND
16.840000	15.30	11.4	50	34.7	AV	L1	GND

MEASUREMENT RESULT: "0963-2_fin"

6/20/2017 8:04PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	50.20	10.5	66	15.8	QP	N	GND
0.495000	42.30	10.7	56	13.8	QP	N	GND
1.835000	32.20	11.0	56	23.8	QP	N	GND
2.400000	32.10	11.0	56	23.9	QP	N	GND
7.100000	23.60	11.2	60	36.4	QP	N	GND
23.710000	25.30	11.5	60	34.7	QP	N	GND

MEASUREMENT RESULT: "0963-2_fin2"

6/20/2017 8:04PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	36.10	10.5	56	19.9	AV	N	GND
0.495000	38.20	10.7	46	7.9	AV	N	GND
1.690000	27.70	10.9	46	18.3	AV	N	GND
2.400000	26.50	11.0	46	19.5	AV	N	GND
7.040000	17.80	11.2	50	32.2	AV	N	GND
23.695000	19.70	11.5	50	30.3	AV	N	GND

Test mode : BT communicating(AC 240V/60Hz)

MEASUREMENT RESULT: "0963-3_fin"

2017-6-20 10:46

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.426000	42.70	10.6	57	14.6	QP	L1	GND
0.676000	42.50	10.7	56	13.5	QP	L1	GND
1.064000	40.90	10.8	56	15.1	QP	L1	GND
4.635000	40.80	11.1	56	15.2	QP	L1	GND
6.115000	41.00	11.1	60	19.0	QP	L1	GND
17.110000	38.50	11.3	60	21.5	QP	L1	GND

MEASUREMENT RESULT: "0963-3_fin2"

2017-6-20 10:46

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.426000	33.80	10.6	47	13.5	AV	L1	GND
0.672000	33.10	10.7	46	12.9	AV	L1	GND
1.064000	31.60	10.8	46	14.4	AV	L1	GND
4.655000	32.30	11.1	46	13.7	AV	L1	GND
6.115000	31.90	11.1	50	18.1	AV	L1	GND
17.145000	29.50	11.3	50	20.5	AV	L1	GND

MEASUREMENT RESULT: "0963-4_fin"

2017-6-20 10:49

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.174000	33.50	10.4	65	31.3	QP	N	GND
0.414000	33.60	10.6	58	24.0	QP	N	GND
0.634000	33.60	10.7	56	22.4	QP	N	GND
0.926000	32.50	10.8	56	23.5	QP	N	GND
6.185000	35.50	11.1	60	24.5	QP	N	GND
16.265000	28.80	11.3	60	31.2	QP	N	GND

MEASUREMENT RESULT: "0963-4_fin2"

2017-6-20 10:49

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.182000	21.80	10.4	54	32.6	AV	N	GND
0.420000	24.80	10.6	47	22.6	AV	N	GND
0.638000	25.50	10.7	46	20.5	AV	N	GND
0.930000	24.80	10.8	46	21.2	AV	N	GND
6.185000	28.20	11.1	50	21.8	AV	N	GND
16.290000	21.70	11.3	50	28.3	AV	N	GND

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

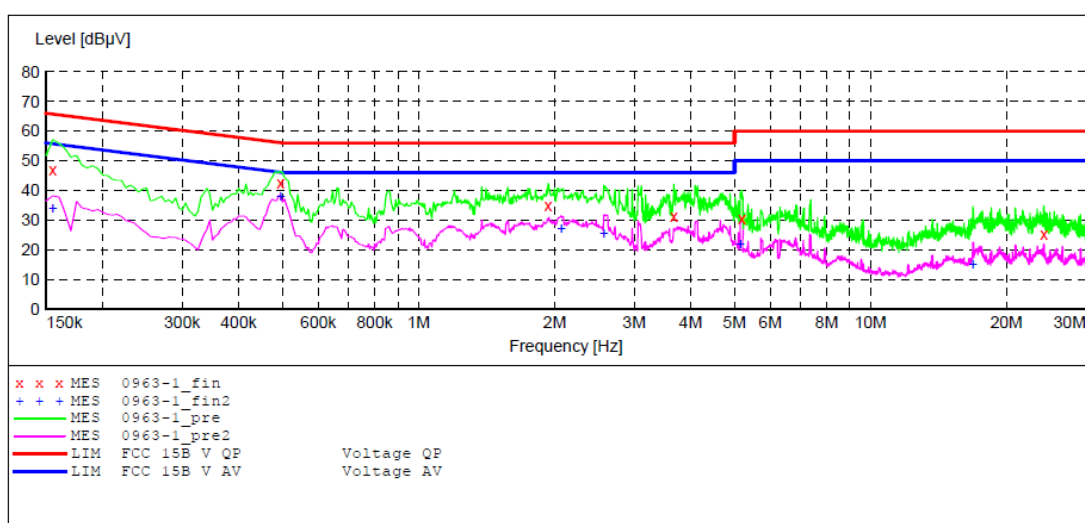
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Supsoo Bluetooth headset M/N:B103
 Manufacturer: DONGGUANG HUAYE ELECTRONICS TECHNOLOGY CO.,LTD
 Operating Condition: BT communicating
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20170963
 Start of Test: 6/20/2017 / 7:55:41PM

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008
 Average
 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "0963-1_fin"

6/20/2017 7:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.155000	47.00	10.5	66	18.7	QP	L1	GND
0.495000	42.60	10.7	56	13.5	QP	L1	GND
1.935000	34.80	11.0	56	21.2	QP	L1	GND
3.670000	31.40	11.1	56	24.6	QP	L1	GND
5.190000	30.20	11.2	60	29.8	QP	L1	GND
24.190000	25.00	11.5	60	35.0	QP	L1	GND

MEASUREMENT RESULT: "0963-1_fin2"

6/20/2017 7:59PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.155000	33.80	10.5	56	21.9	AV	L1	GND
0.495000	38.10	10.7	46	8.0	AV	L1	GND
2.070000	27.20	11.0	46	18.8	AV	L1	GND
2.570000	25.50	11.0	46	20.5	AV	L1	GND
5.150000	21.80	11.2	50	28.2	AV	L1	GND
16.840000	15.30	11.4	50	34.7	AV	L1	GND

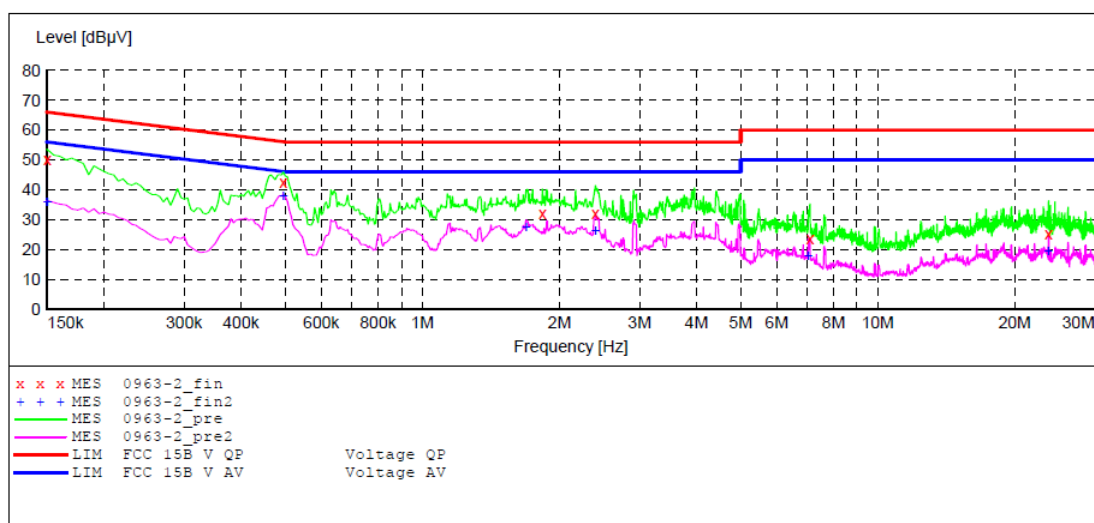
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Supsoo Bluetooth headset M/N:B103
 Manufacturer: DONGGUANG HUAYE ELECTRONICS TECHNOLOGY CO.,LTD
 Operating Condition: BT communicating
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20170963
 Start of Test: 6/20/2017 / 8:01:08PM

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008
 Average
 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "0963-2_fin"

6/20/2017 8:04PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	50.20	10.5	66	15.8	QP	N	GND
0.495000	42.30	10.7	56	13.8	QP	N	GND
1.835000	32.20	11.0	56	23.8	QP	N	GND
2.400000	32.10	11.0	56	23.9	QP	N	GND
7.100000	23.60	11.2	60	36.4	QP	N	GND
23.710000	25.30	11.5	60	34.7	QP	N	GND

MEASUREMENT RESULT: "0963-2_fin2"

6/20/2017 8:04PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	36.10	10.5	56	19.9	AV	N	GND
0.495000	38.20	10.7	46	7.9	AV	N	GND
1.690000	27.70	10.9	46	18.3	AV	N	GND
2.400000	26.50	11.0	46	19.5	AV	N	GND
7.040000	17.80	11.2	50	32.2	AV	N	GND
23.695000	19.70	11.5	50	30.3	AV	N	GND

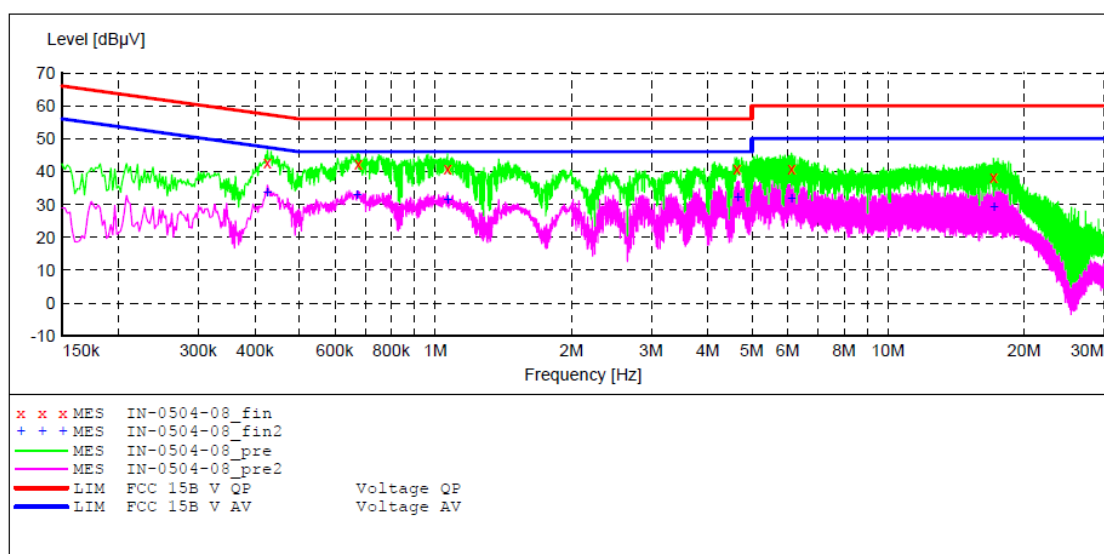
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Supsoo Bluetooth headset M/N:B103
 Manufacturer: DONGGUANG HUAYE ELECTRONICS
 Operating Condition: BT communicating
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: L 240V/60Hz
 Comment: Report NO.:ATE20170963
 Start of Test: 2017-6-20 / 10:43:53

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "0963-3_fin"

2017-6-20 10:46

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.426000	42.70	10.6	57	14.6	QP	L1	GND
0.676000	42.50	10.7	56	13.5	QP	L1	GND
1.064000	40.90	10.8	56	15.1	QP	L1	GND
4.635000	40.80	11.1	56	15.2	QP	L1	GND
6.115000	41.00	11.1	60	19.0	QP	L1	GND
17.110000	38.50	11.3	60	21.5	QP	L1	GND

MEASUREMENT RESULT: "0963-3_fin2"

2017-6-20 10:46

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.426000	33.80	10.6	47	13.5	AV	L1	GND
0.672000	33.10	10.7	46	12.9	AV	L1	GND
1.064000	31.60	10.8	46	14.4	AV	L1	GND
4.655000	32.30	11.1	46	13.7	AV	L1	GND
6.115000	31.90	11.1	50	18.1	AV	L1	GND
17.145000	29.50	11.3	50	20.5	AV	L1	GND

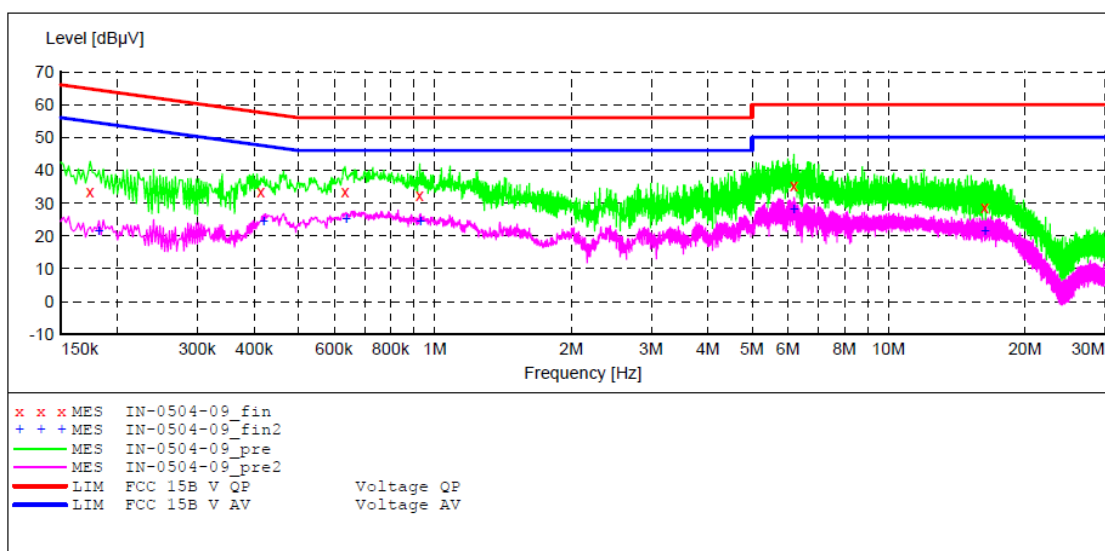
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Supsoo Bluetooth headset M/N:B103
 Manufacturer: DONGGUANG HUAYE ELECTRONICS
 Operating Condition: BT communicating
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: N 240V/60Hz
 Comment: Report NO.:ATE20170963
 Start of Test: 2017-6-20 / 10:46:48

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "0963-4_fin"

2017-6-20 10:49

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.174000	33.50	10.4	65	31.3	QP	N	GND
0.414000	33.60	10.6	58	24.0	QP	N	GND
0.634000	33.60	10.7	56	22.4	QP	N	GND
0.926000	32.50	10.8	56	23.5	QP	N	GND
6.185000	35.50	11.1	60	24.5	QP	N	GND
16.265000	28.80	11.3	60	31.2	QP	N	GND

MEASUREMENT RESULT: "0963-4_fin2"

2017-6-20 10:49

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.182000	21.80	10.4	54	32.6	AV	N	GND
0.420000	24.80	10.6	47	22.6	AV	N	GND
0.638000	25.50	10.7	46	20.5	AV	N	GND
0.930000	24.80	10.8	46	21.2	AV	N	GND
6.185000	28.20	11.1	50	21.8	AV	N	GND
16.290000	21.70	11.3	50	28.3	AV	N	GND

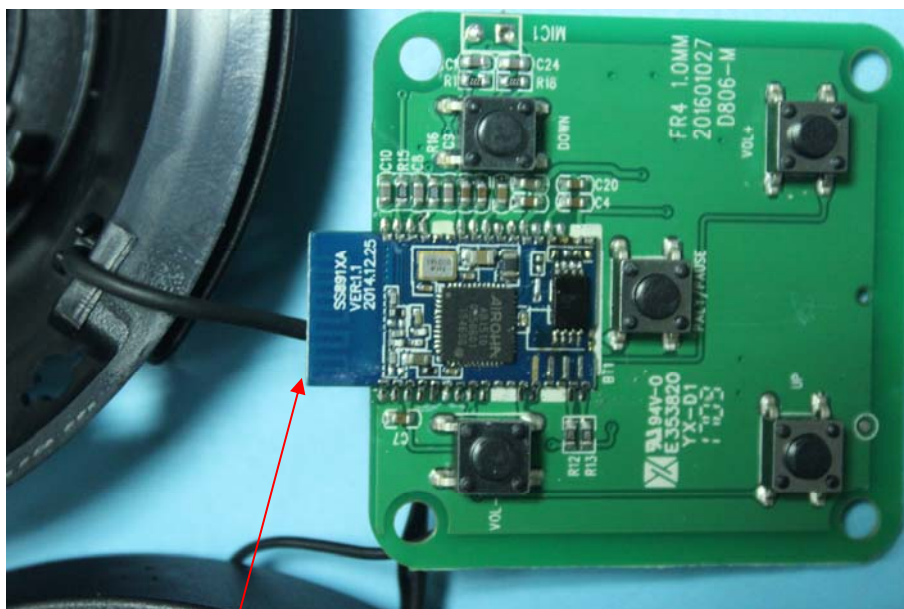
13.ANTENNA REQUIREMENT

13.1.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.

13.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Max Antenna gain of EUT is 0dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna