APPLICATION CERTIFICATION
On Behalf of
Daza Electronics Company

Bluetooth speaker
Model No.: SP-21BT

FCC ID: Z8VSP-21BT

Prepared for	:	Daza Electronics Company
Address	:	Bldg G, Xinmusheng Low Carbon Industrial Park, NO.6 Xinmu Road Pinghu, Shenzhen, China
Prepared by	:	ACCURATE TECHNOLOGY CO. LTD
Address	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China Tel: (0755) 26503290 Fax: (0755) 26503396

Report Number	:	ATE20132076
Date of Test	:	September 26-30, 2013
Date of Report	:	October 8, 2013

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Description Page

Test Report Certification

Applicant	:	Daza Electronics Company
Manufacturer	:	Daza Electronics Company
EUT Description	:	Bluetooth speaker
		(A) MODEL NO.: SP-21BT
		(B) SERIAL NO.: N/A
		(C) POWER SUPPLY: DC 3.7V (Li-polymer battery) & DC 5V (Supplied from USB)

Measurement Procedure Used:

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

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determ ine the maximum emission levels em anating from the device. The m aximum emission levels are compared to the FCC Part 15 Subpart C S ection 15.247 lim its. The m easurement results are contained in this test report and A CCURATE TECHNOLOGY CO. LTD is assum ed full responsibility for the accuracy and com pleteness 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 sam ple only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : September 26-30, 2013

Prepared by : Bob Wang

(Engineer)

Approved & Authorized Signer : Sean Liu

(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Bluetooth speaker
Model Number	:	SP-21BT
Frequency Band	:	2402MHz-2480MHz
Number of Channels	:	79
Modulation type	:	GFSK
Antenna Gain	:	0dBi
Power Supply	:	DC 3.7V (Li-polymer battery) & DC 5V (Supplied from USB)
Applicant	:	Daza Electronics Company
Address	:	Bldg G, Xinmusheng Low Carbon Industrial Park, NO.6 Xinmu Road Pinghu, Shenzhen, China
Manufacturer	:	Daza Electronics Company
Address	:	Bldg G, Xinmusheng Low Carbon Industrial Park, NO.6 Xinmu Road Pinghu, Shenzhen, China
Date of sample received	:	September 25, 2013
Date of Test	:	September 26-30, 2013

1.2.Description of Test Facility

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

1.3.Measurement Uncertainty

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

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

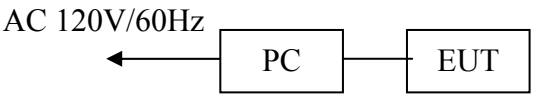
Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 12, 2013	Jan. 11, 2014
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 12, 2013	Jan. 11, 2014
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 12, 2013	Jan. 11, 2014
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 12, 2013	Jan. 11, 2014
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Feb. 06, 2013	Feb. 05, 2014
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Feb. 06, 2013	Feb. 05, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Feb. 06, 2013	Feb. 05, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Feb. 06, 2013	Feb. 05, 2014
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 12, 2013	Jan. 11, 2014
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 12, 2013	Jan. 11, 2014

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

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

3.2.Configuration and peripherals



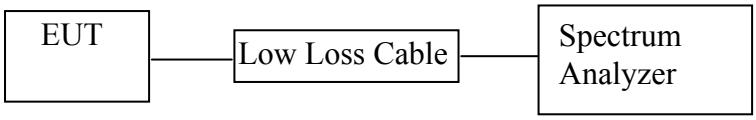
(EUT: Bluetooth speaker)

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: Bluetooth speaker)

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

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

5.3.EUT Configuration on Measurement

The following equipm ent are installed on the emission measurement to m eet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3.1.Bluetooth speaker (EUT)

Model Number	:	SP-21BT
Serial Number	:	N/A
Manufacturer	:	Daza Electronics Company

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.

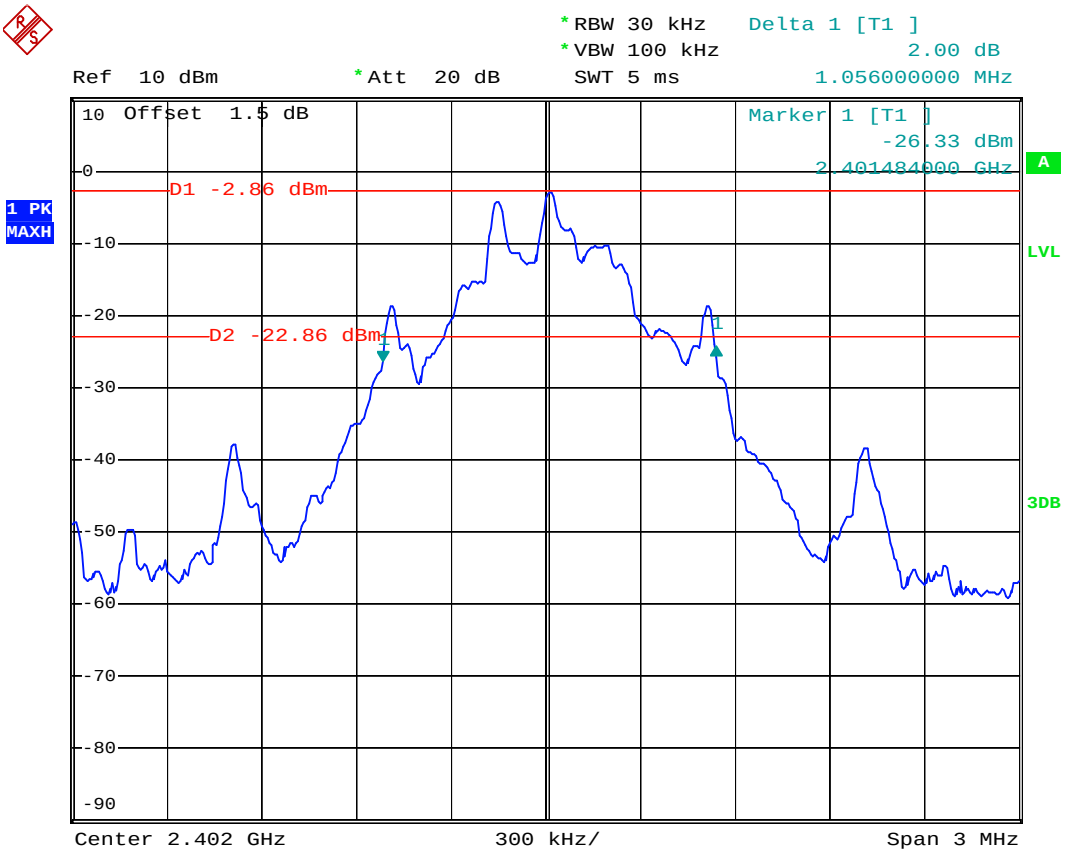
5.6.Test Result

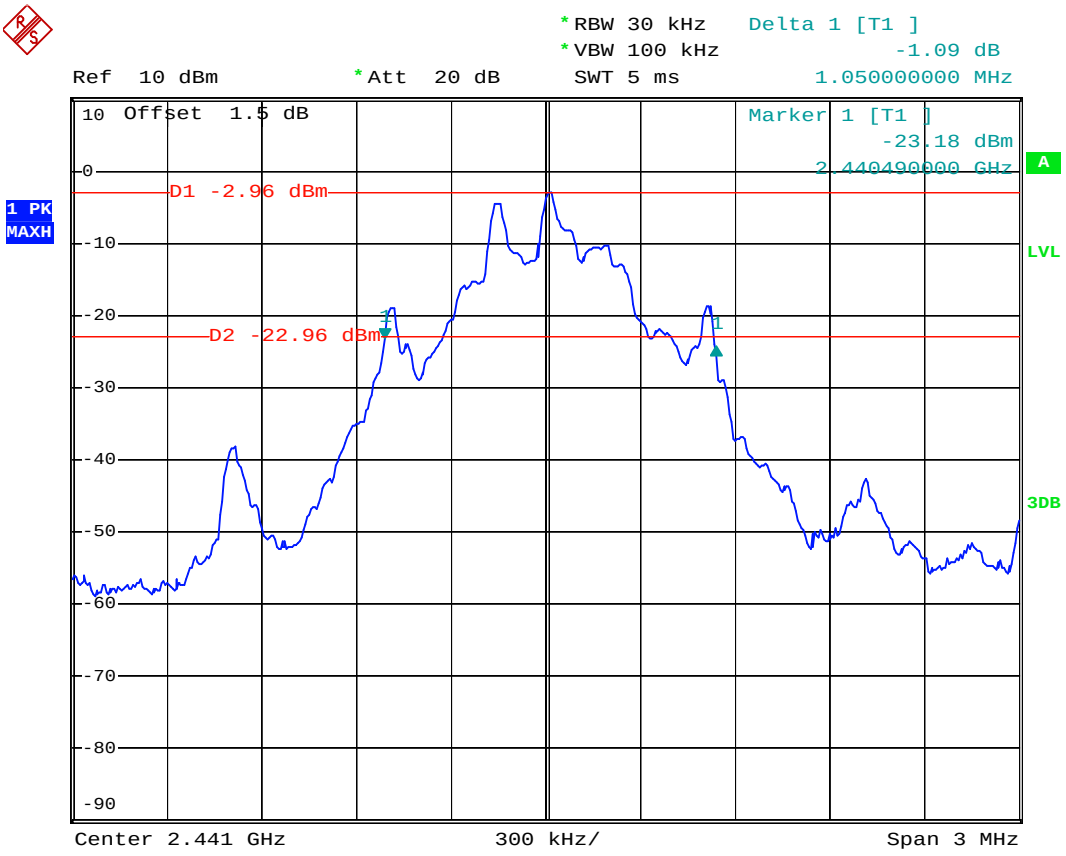
PASS.

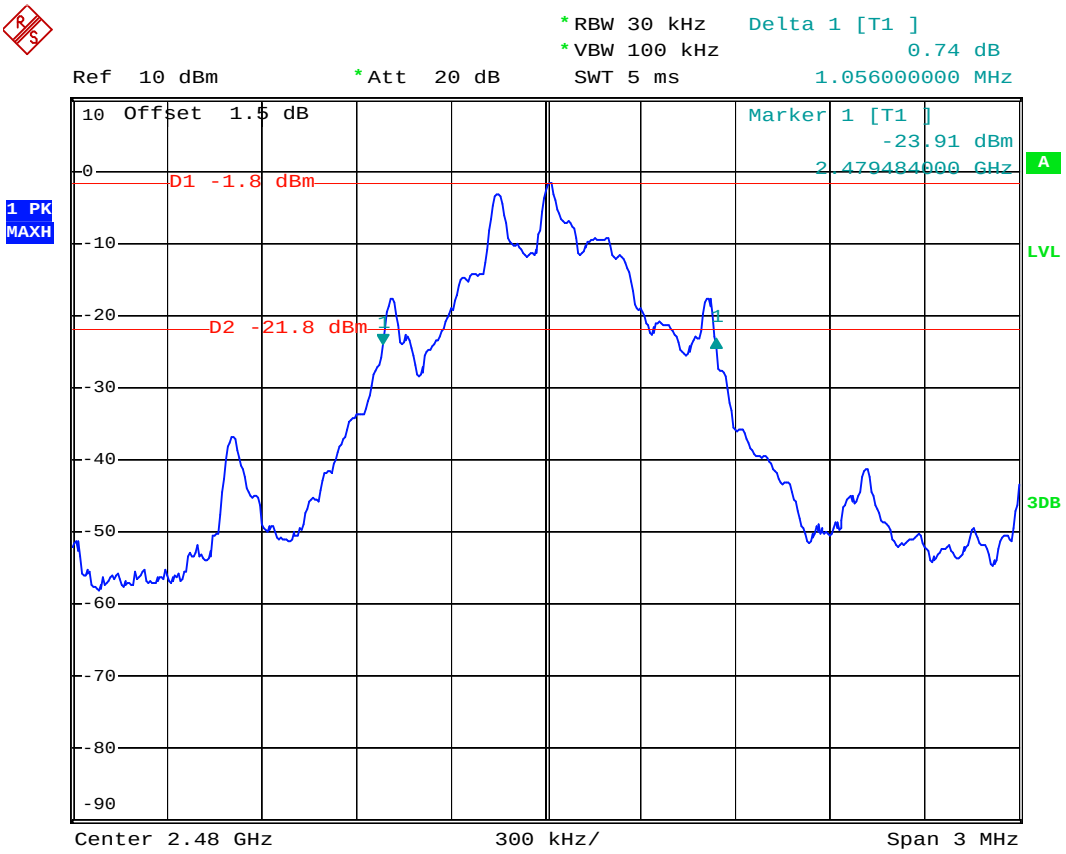
Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX	Test Engineer:	Rickey

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)
Low	2402	1.056	---
Middle	2441	1.050	---
High	2480	1.056	---

The spectrum analyzer plots are attached as below.

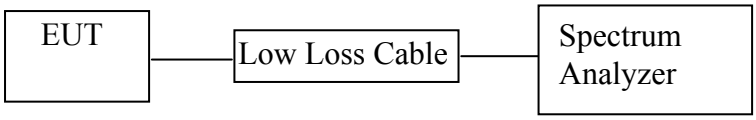

*RBW 30 kHz
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 5 ms
Delta 1 [T1]
2.00 dB
1.056000000 MHz
10 Offset 1.5 dB
Marker 1 [T1]
-26.33 dBm
2.401484000 GHz
D1 -2.86 dBm
D2 -22.86 dBm
1 PK
MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.402 GHz
300 kHz/
Span 3 MHz


*RBW 30 kHz
*VBW 100 kHz
Ref 10 dBm
*Att 20 dB
SWT 5 ms
Delta 1 [T1]
-1.09 dB
1.050000000 MHz
10 Offset 1.5 dB
Marker 1 [T1]
-23.18 dBm
2.440490000 GHz
D1 -2.96 dBm
D2 -22.96 dBm
1 PK
MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.441 GHz
300 kHz/
Span 3 MHz


*RBW 30 kHz
*VBW 100 kHz
Delta 1 [T1]
0.74 dB
1.056000000 MHz
Ref 10 dBm
*Att 20 dB
SWT 5 ms
10 Offset 1.5 dB
Marker 1 [T1]
-23.91 dBm
2.479484000 GHz
D1 -1.8 dBm
D2 -21.8 dBm
1 PK MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.48 GHz
300 kHz/
Span 3 MHz

6. CARRIER FREQUENCY SEPARATION TEST

6.1.Block Diagram of Test Setup



(EUT: Bluetooth speaker)

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

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

6.3.EUT Configuration on Measurement

The following equipm ent are installed on the emission measurement to m eet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.3.1.Bluetooth speaker (EUT)

Model Number	:	SP-21BT
Serial Number	:	N/A
Manufacturer	:	Daza Electronics Company

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 100 kHz and VBW to 300 kHz. Adjust Span to 3 MHz.

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

6.5.4.Measurement the channel separation

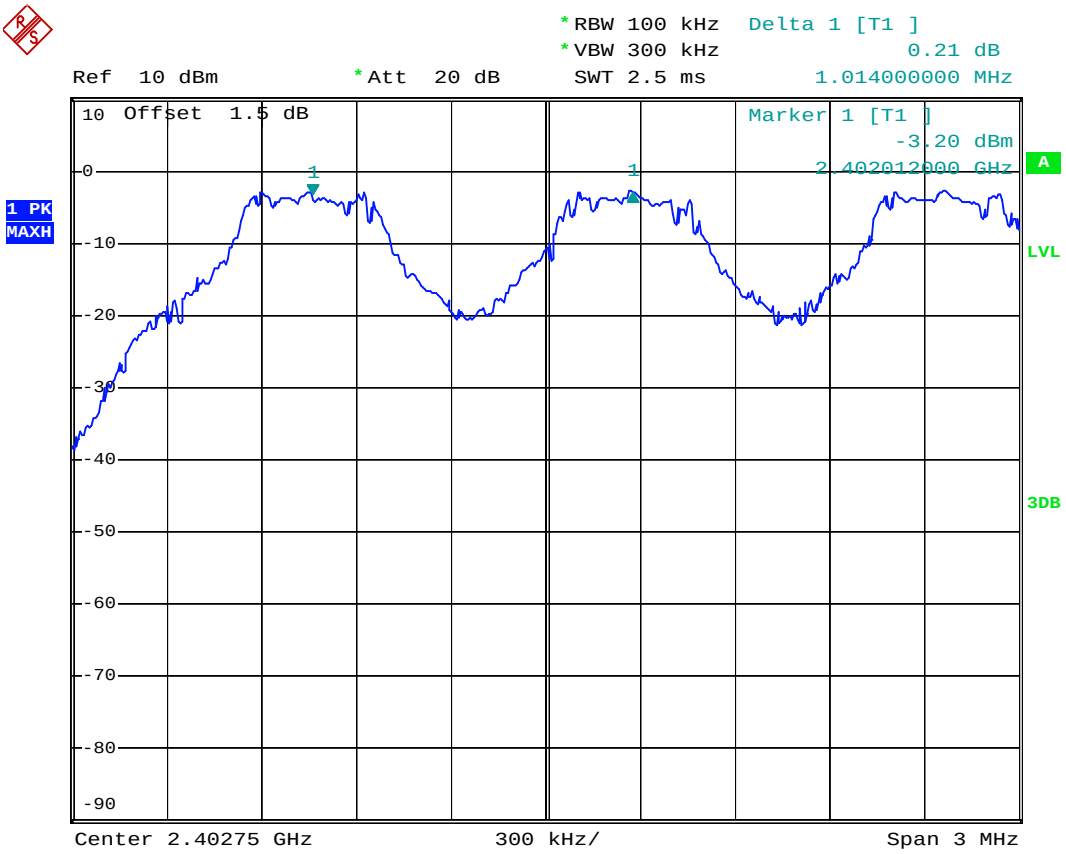
6.6.Test Result

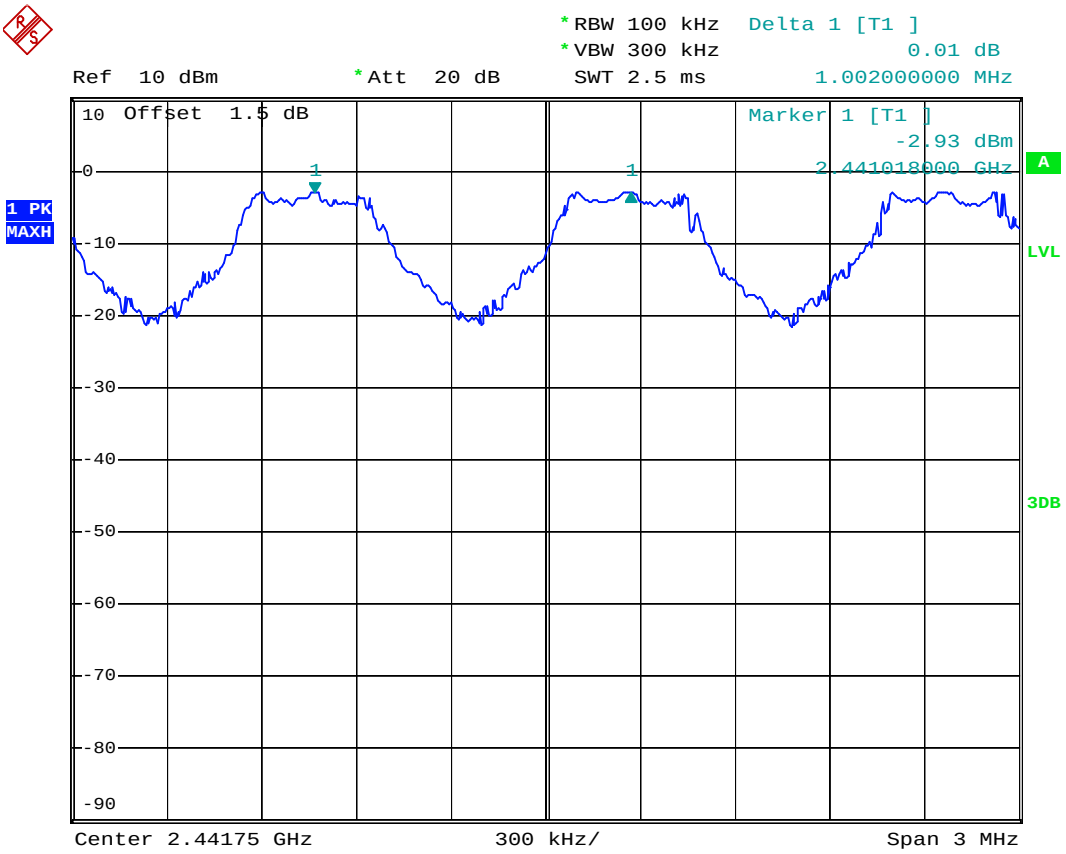
PASS.

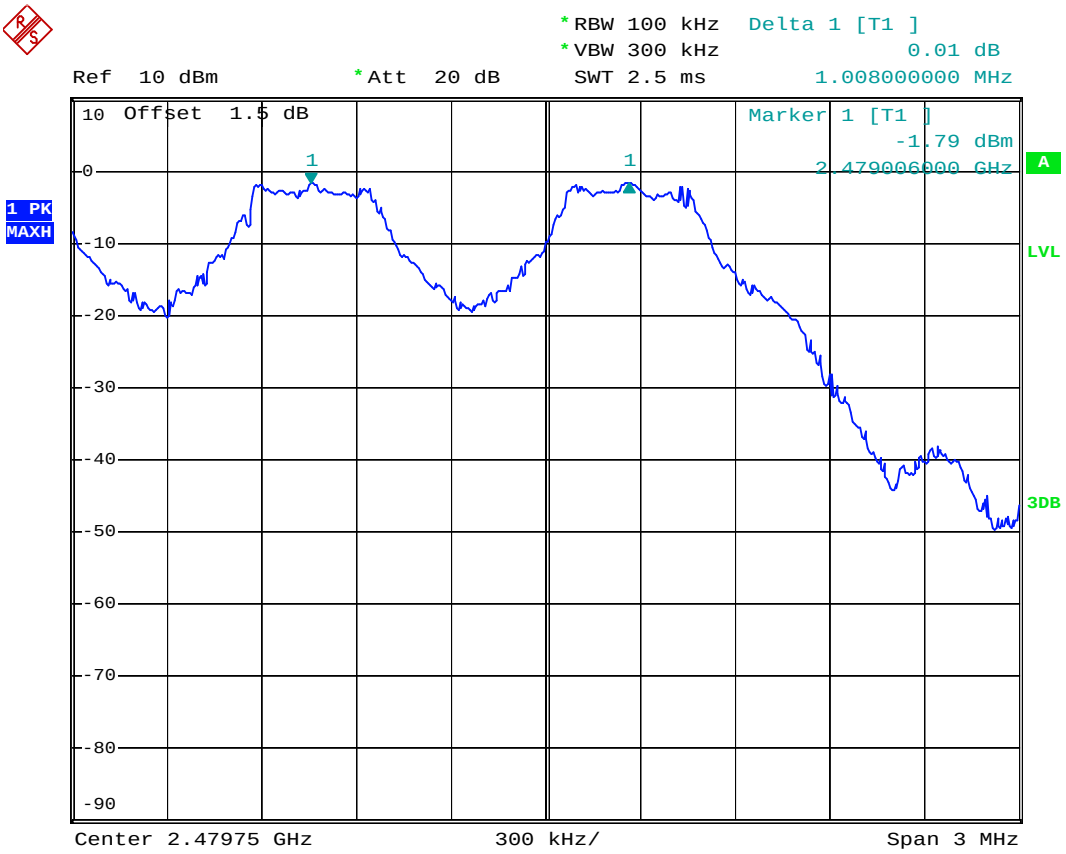
Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60Hz
Test Mode:	TX	Test Engineer:	Rickey

Channel	Channel Frequency (MHz)	Channel separation (MHz)	Limit (MHz)
Low	2402	1.014	0. 704
Middle	2441	1.002	0. 700
High	2480	1.008	0. 704

The spectrum analyzer plots are attached as below.

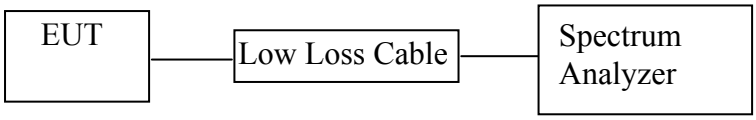

*RBW 100 kHz
*VBW 300 kHz
Ref 10 dBm
*Att 20 dB
SWT 2.5 ms
Delta 1 [T1]
0.21 dB
1.014000000 MHz
10 Offset 1.5 dB
Marker 1 [T1]
-3.20 dBm
2.402012000 GHz
1 PK
MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.40275 GHz
300 kHz/
Span 3 MHz


*RBW 100 kHz
*VBW 300 kHz
SWT 2.5 ms
Delta 1 [T1]
0.01 dB
1.002000000 MHz
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-2.93 dBm
2.441018000 GHz
1 PK
MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.44175 GHz
300 kHz/
Span 3 MHz


*RBW 100 kHz
*VBW 300 kHz
Ref 10 dBm
*Att 20 dB
SWT 2.5 ms
Delta 1 [T1]
0.01 dB
1.008000000 MHz
10 Offset 1.5 dB
Marker 1 [T1]
-1.79 dBm
2.479006000 GHz
1 PK
MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.47975 GHz
300 kHz/
Span 3 MHz

7. NUMBER OF HOPPING FREQUENCY TEST

7.1.Block Diagram of Test Setup



(EUT: Bluetooth 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.EUT Configuration on Measurement

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

7.3.1.Bluetooth speaker (EUT)

Model Number	:	SP-21BT
Serial Number	:	N/A
Manufacturer	:	Daza Electronics Company

7.4.Operating Condition of EUT

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

7.4.2.Turn on the power of all equipment.

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

7.5.Test Procedure

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

7.5.2.Set the spectrum analyzer as Span=83.5MHz, RBW=100 kHz, VBW=300 kHz.

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

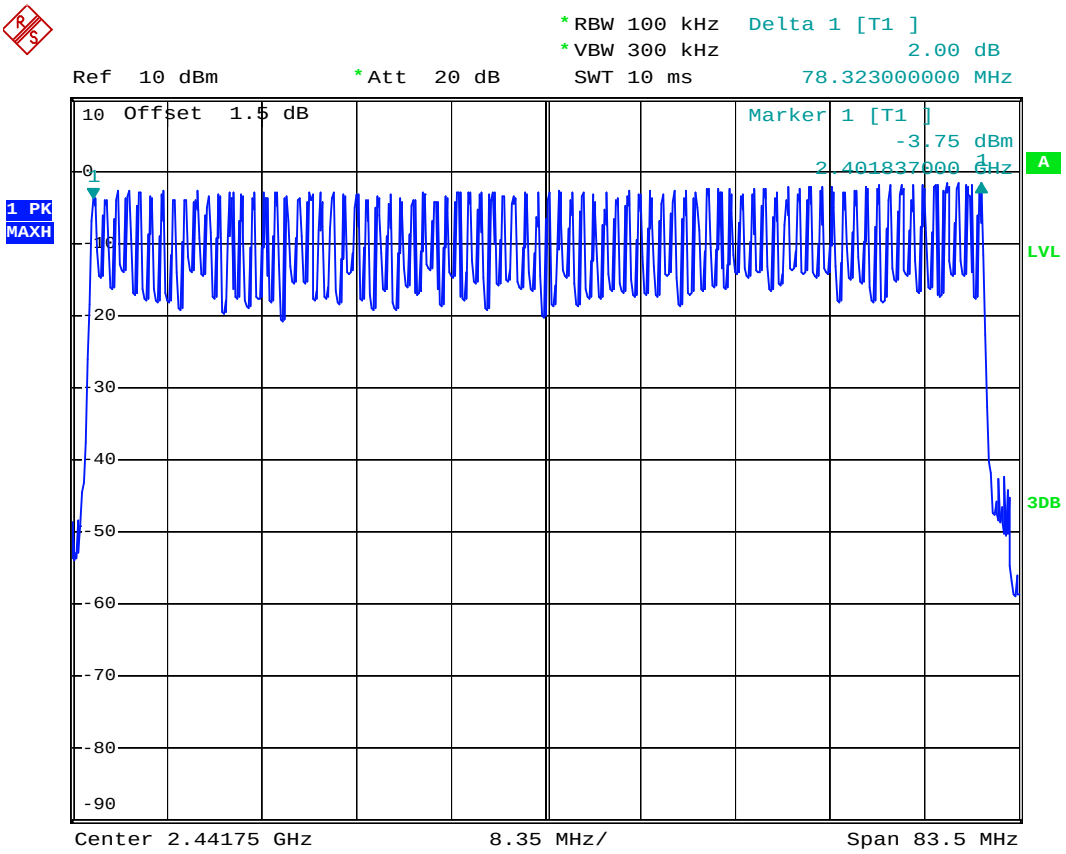
7.6.Test Result

PASS.

Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	Hopping	Test Engineer:	Rickey

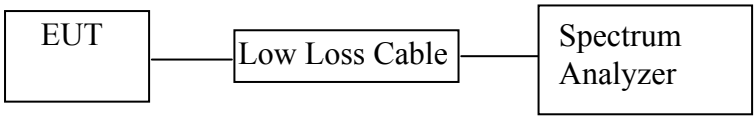
	Measurement result (CH)	Limit (CH)
Total number of hopping channel	79	>15

The spectrum analyzer plots are attached as below.


*RBW 100 kHz
*VBW 300 kHz
SWT 10 ms
Delta 1 [T1]
2.00 dB
78.323000000 MHz
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-3.75 dBm
2.401837000 GHz
1 PK
MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.44175 GHz
8.35 MHz/
Span 83.5 MHz

8. DWELL TIME TEST

8.1.Block Diagram of Test Setup



(EUT: Bluetooth 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.EUT Configuration on Measurement

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

8.3.1.Bluetooth speaker (EUT)

Model Number	:	SP-21BT
Serial Number	:	N/A
Manufacturer	:	Daza Electronics Company

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=100 kHz, VBW=300 kHz, Span=0Hz, Adjust Sweep=1s. Get the burst (in 1 sec.).

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

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

8.6.Test Result

PASS.

Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX	Test Engineer:	Rickey

DH1:

A period transmit time = 0.4 × 79 = 31.6

Dwell time = pulse time × (1600/(2*79))×31.6

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
Low	2402	0.534	170.88	400
Middle	2441	0.540	172.80	400
High	2480	0.534	170.88	400

DH3:

A period transmit time = 0.4 × 79 = 31.6

Dwell time = pulse time × (1600/(4*79))×31.6

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
Low	2402	1.797875	287.66	400
Middle	2441	1.815875	290.54	400
High	2480	1.815875	290.54	400

DH5:

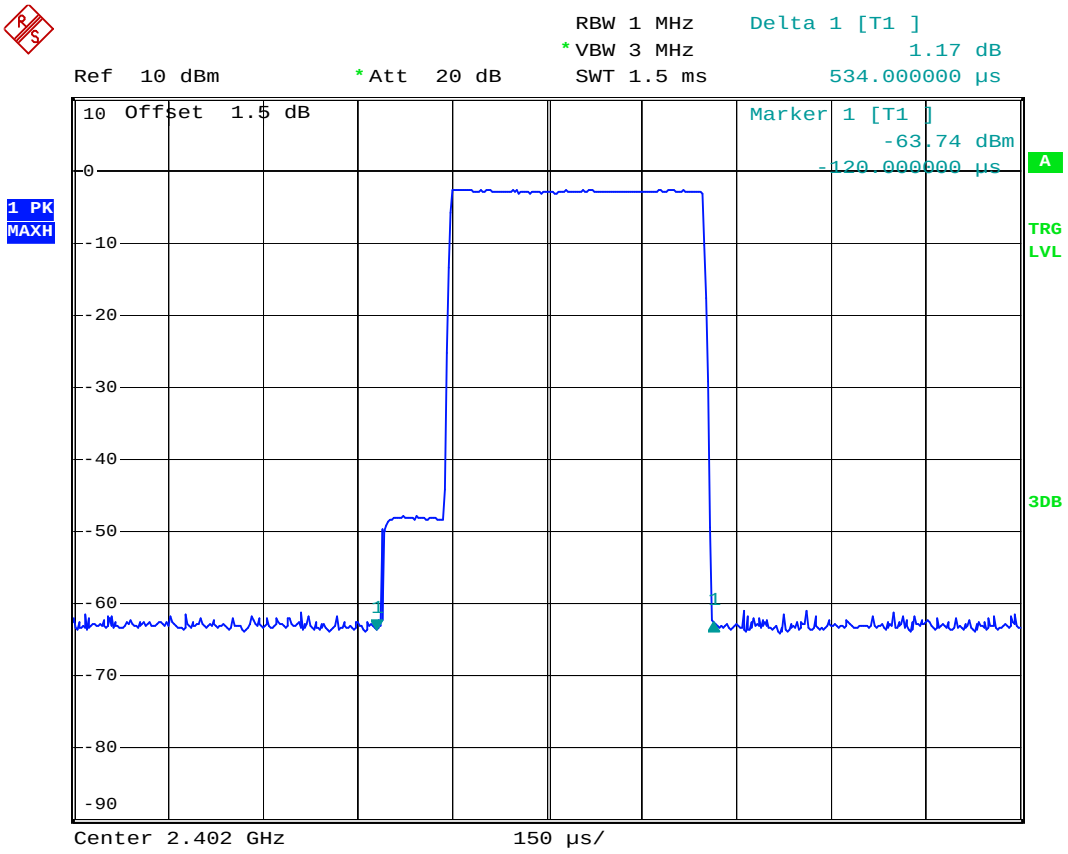
A period transmit time = 0.4 × 79 = 31.6

Dwell time = pulse time × (1600/(6*79))×31.6

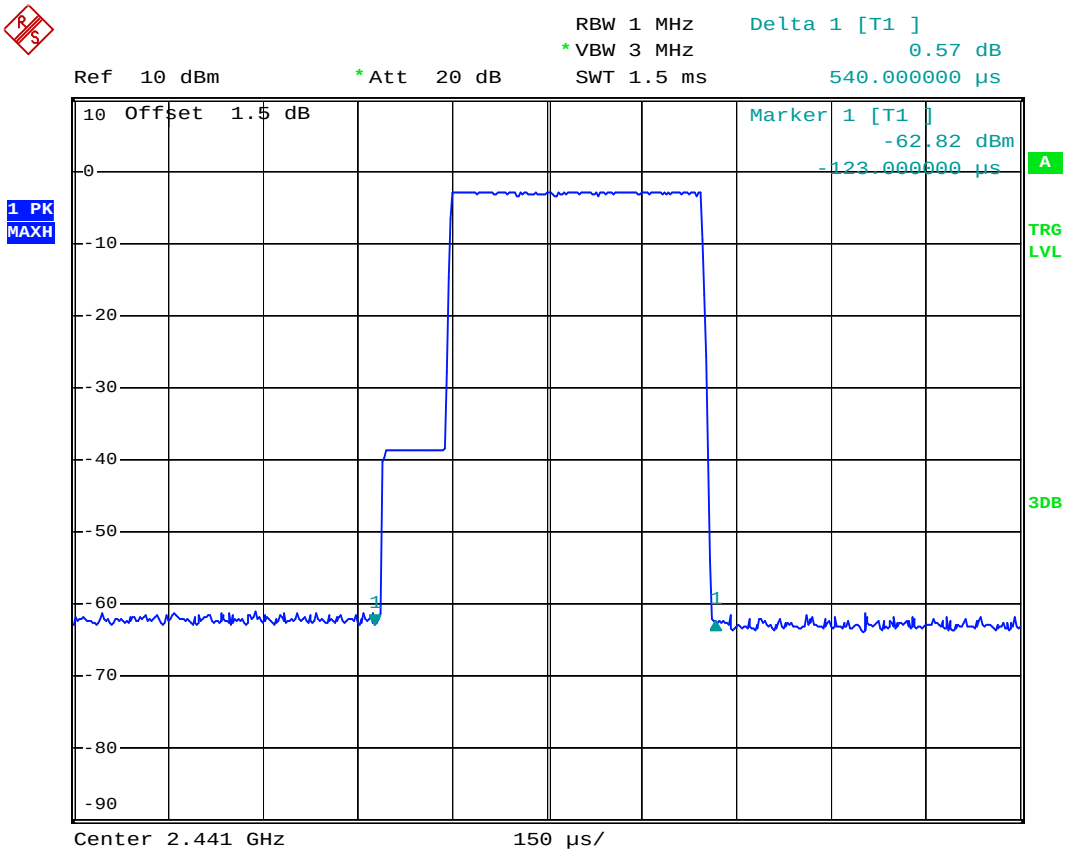
Channel	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
Low	2402	3.073	327.7867	400
Middle	2441	3.097	330.3467	400
High	2480	3.081	328.6400	400

The spectrum analyzer plots are attached as below.

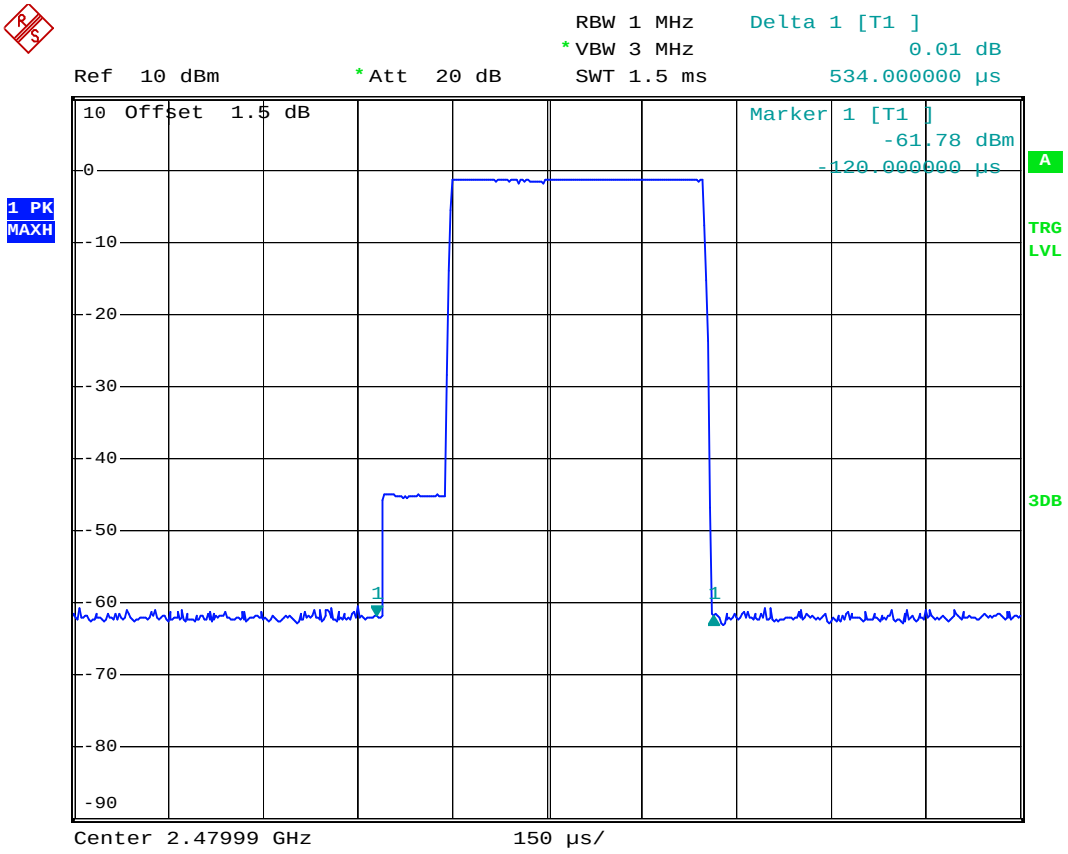
DH1:


RBW 1 MHz
*VBW 3 MHz
SWT 1.5 ms
Delta 1 [T1]
1.17 dB
534.000000 µs
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-63.74 dBm
-120.000000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.402 GHz
150 µs/

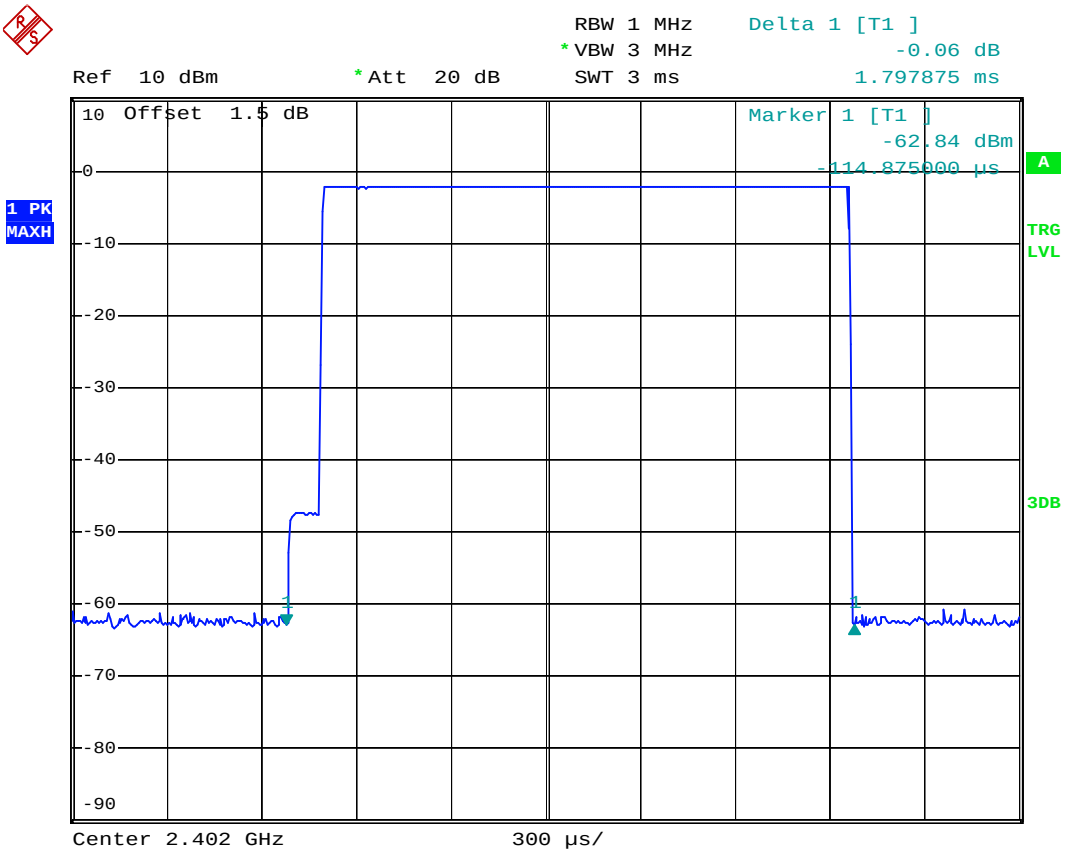
DH1:


RBW 1 MHz
*VBW 3 MHz
SWT 1.5 ms
Delta 1 [T1]
0.57 dB
540.000000 µs
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-62.82 dBm
-123.000000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.441 GHz
150 µs/

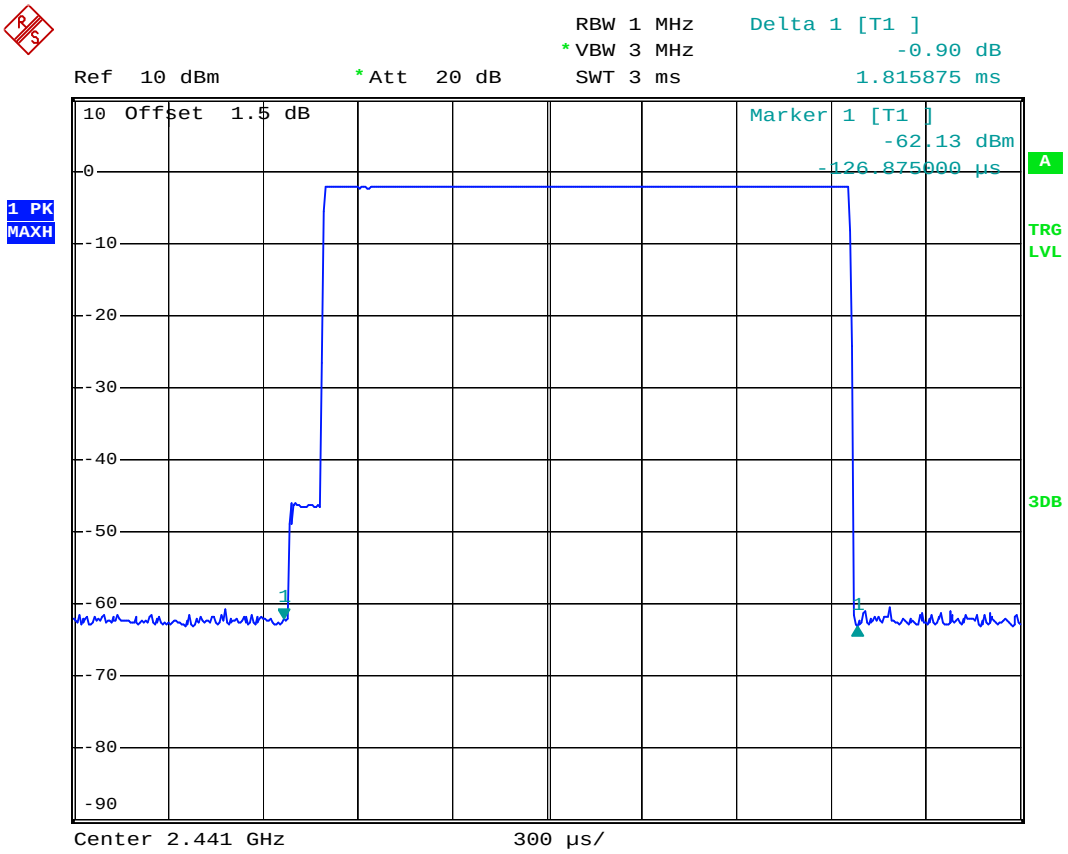
DH1:


RBW 1 MHz
Delta 1 [T1]
*VBW 3 MHz
0.01 dB
Ref 10 dBm
*Att 20 dB
SWT 1.5 ms
534.000000 µs
10 Offset 1.5 dB
Marker 1 [T1]
-61.78 dBm
-120.000000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.47999 GHz
150 µs/

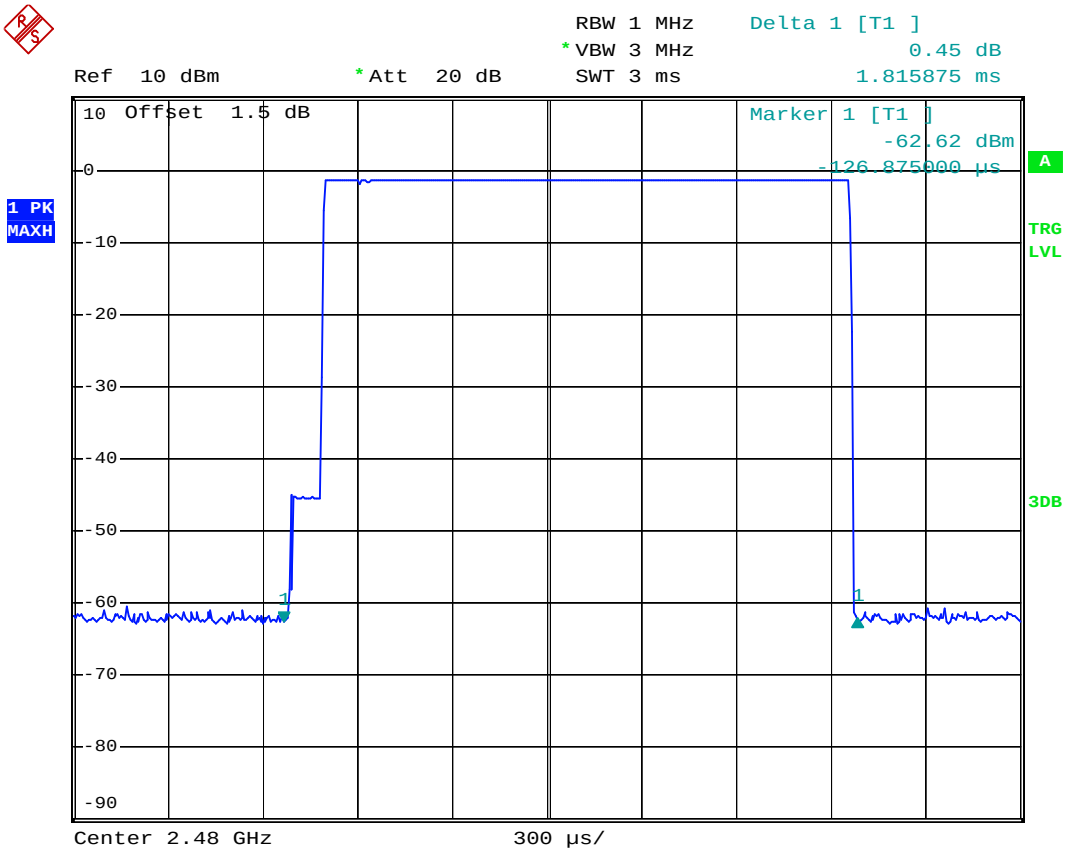
DH3:


RBW 1 MHz
*VBW 3 MHz
SWT 3 ms
Delta 1 [T1]
-0.06 dB
1.797875 ms
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-62.84 dBm
-114.875000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.402 GHz
300 µs/

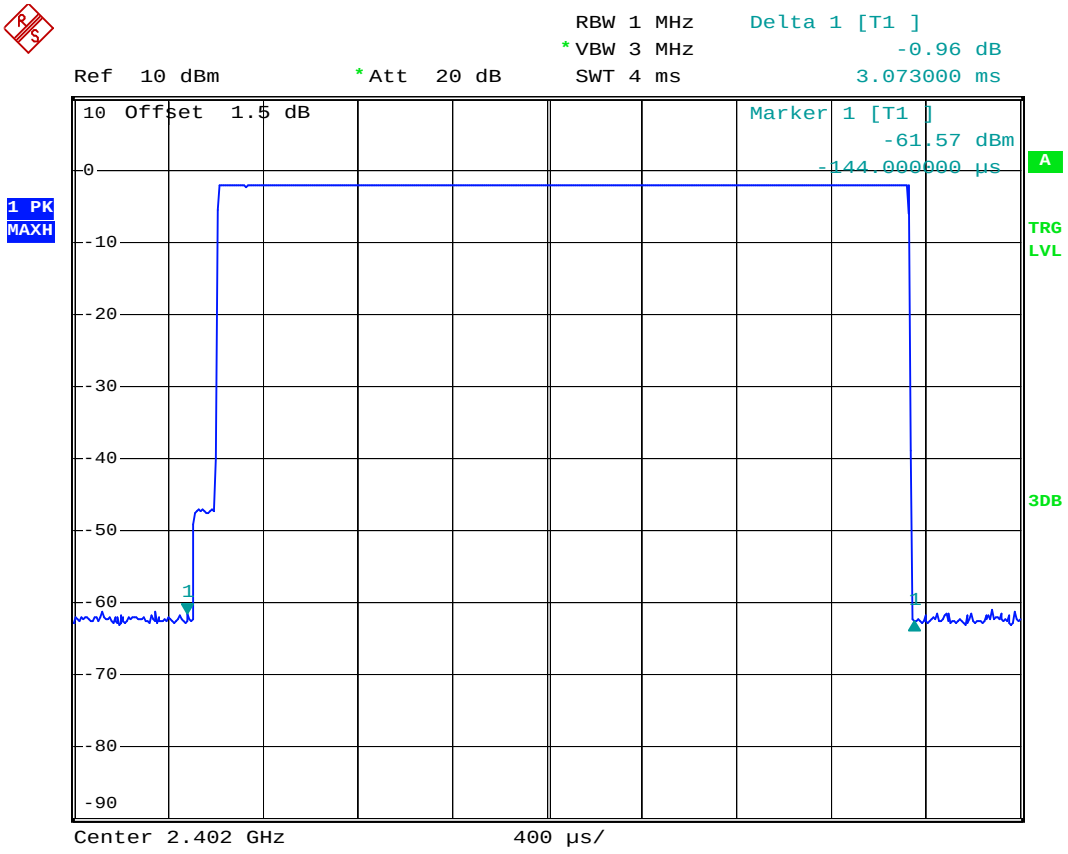
DH3:


RBW 1 MHz
*VBW 3 MHz
SWT 3 ms
Delta 1 [T1]
-0.90 dB
1.815875 ms
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-62.13 dBm
-126.875000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.441 GHz
300 µs/

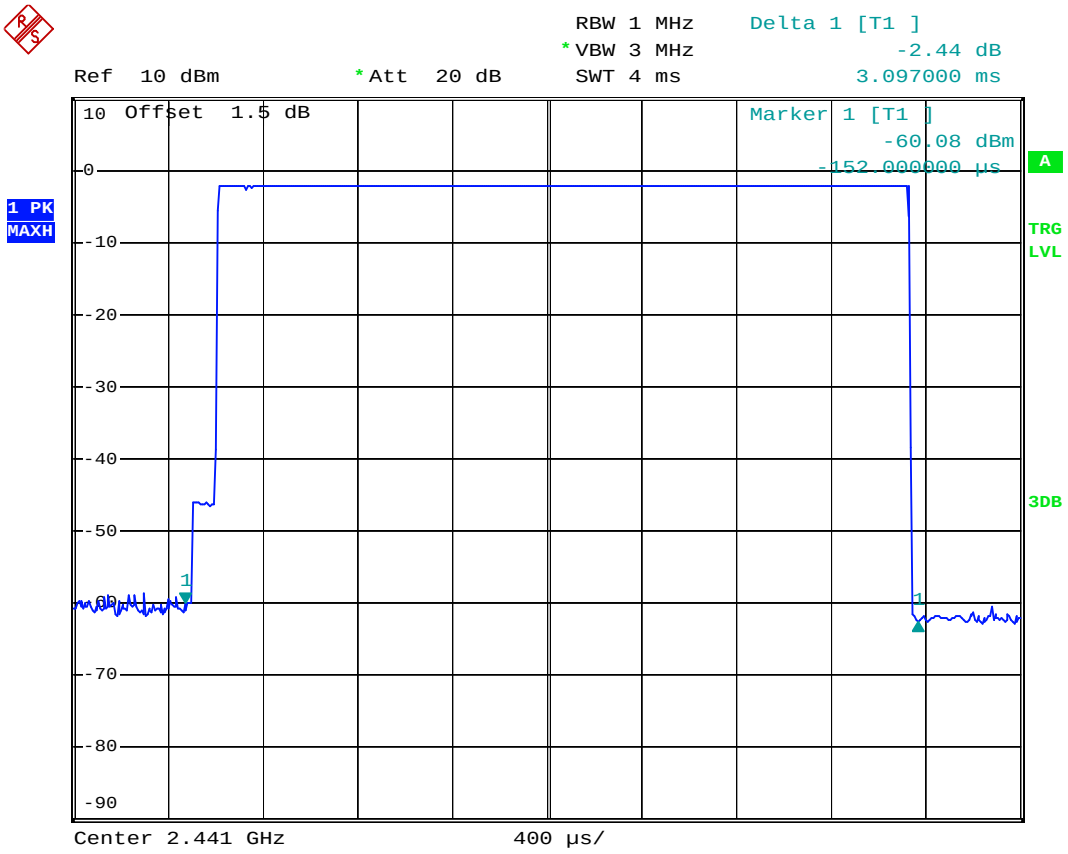
DH3:


RBW 1 MHz
*VBW 3 MHz
SWT 3 ms
Delta 1 [T1]
0.45 dB
1.815875 ms
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-62.62 dBm
-126.875000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.48 GHz
300 µs/

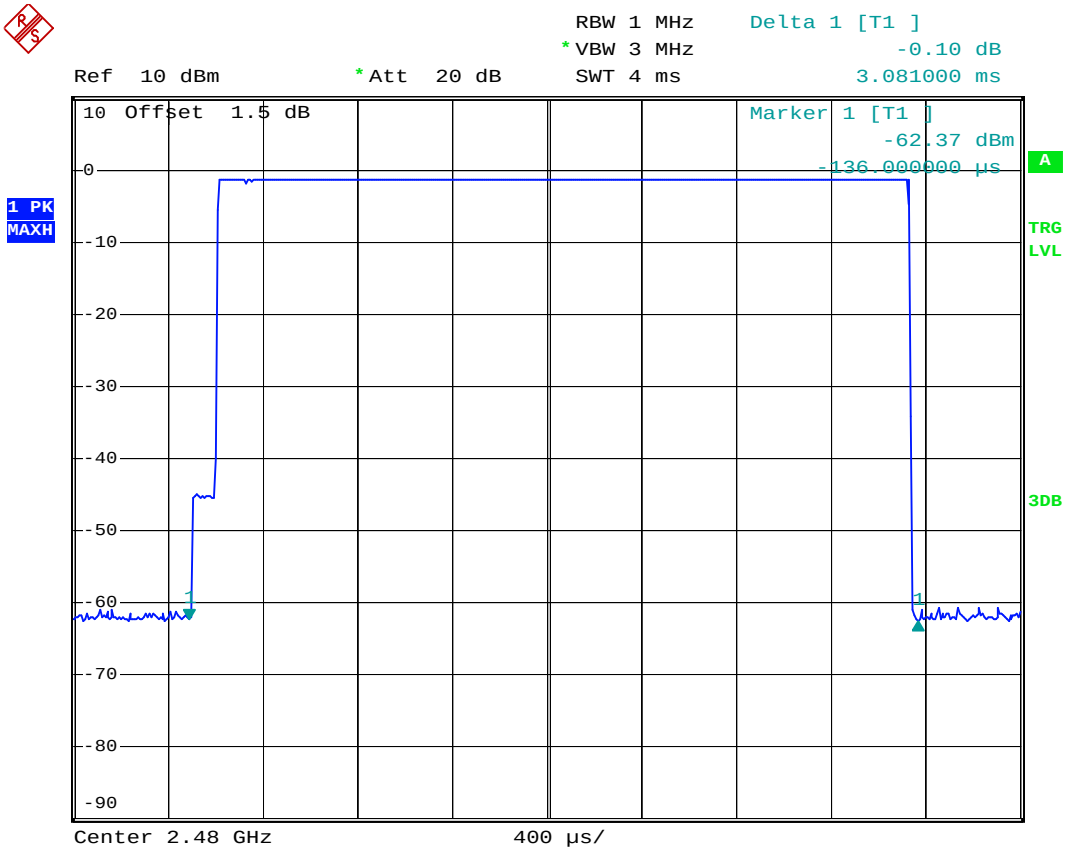
DH5:


RBW 1 MHz
*VBW 3 MHz
SWT 4 ms
Delta 1 [T1]
-0.96 dB
3.073000 ms
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-61.57 dBm
-144.000000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.402 GHz
400 µs/

DH5:

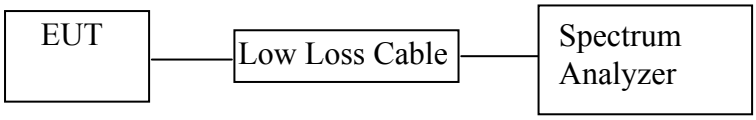

RBW 1 MHz
*VBW 3 MHz
SWT 4 ms
Delta 1 [T1]
-2.44 dB
3.097000 ms
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-60.08 dBm
-152.000000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.441 GHz
400 µs/

DH5:


RBW 1 MHz
*VBW 3 MHz
SWT 4 ms
Delta 1 [T1]
-0.10 dB
3.081000 ms
Ref 10 dBm
*Att 20 dB
10 Offset 1.5 dB
Marker 1 [T1]
-62.37 dBm
-136.000000 µs
1 PK
MAXH
A
TRG
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.48 GHz
400 µs/

9. MAXIMUM PEAK OUTPUT POWER TEST

9.1.Block Diagram of Test Setup



(EUT: Bluetooth 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.EUT Configuration on Measurement

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

9.3.1.Bluetooth speaker (EUT)

Model Number	:	SP-21BT
Serial Number	:	N/A
Manufacturer	:	Daza Electronics Company

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 3MHz and VBW to 3MHz.

9.5.3. Measurement the maximum peak output power.

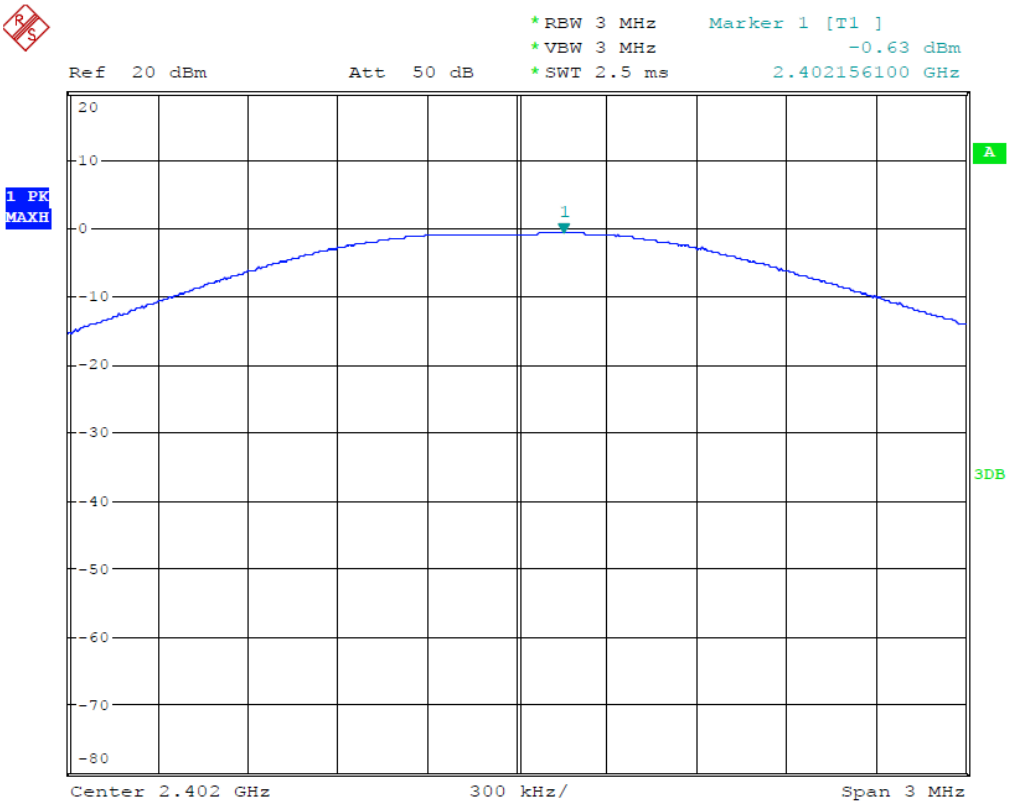
9.6. Test Result

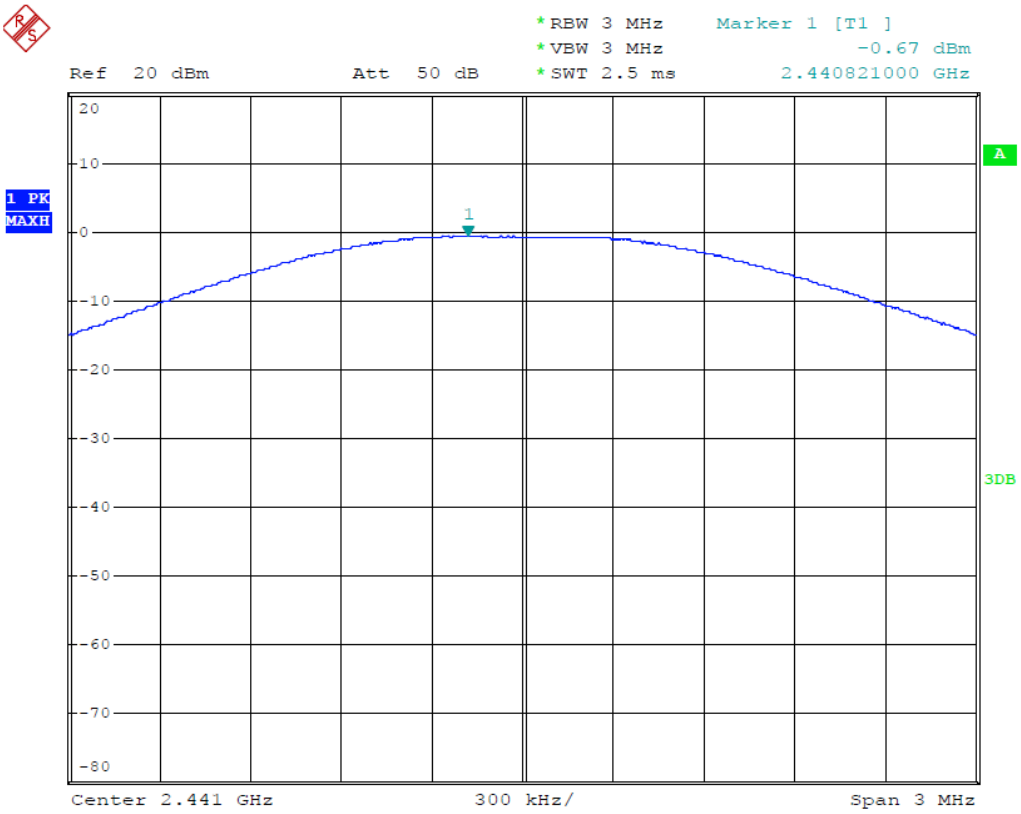
PASS.

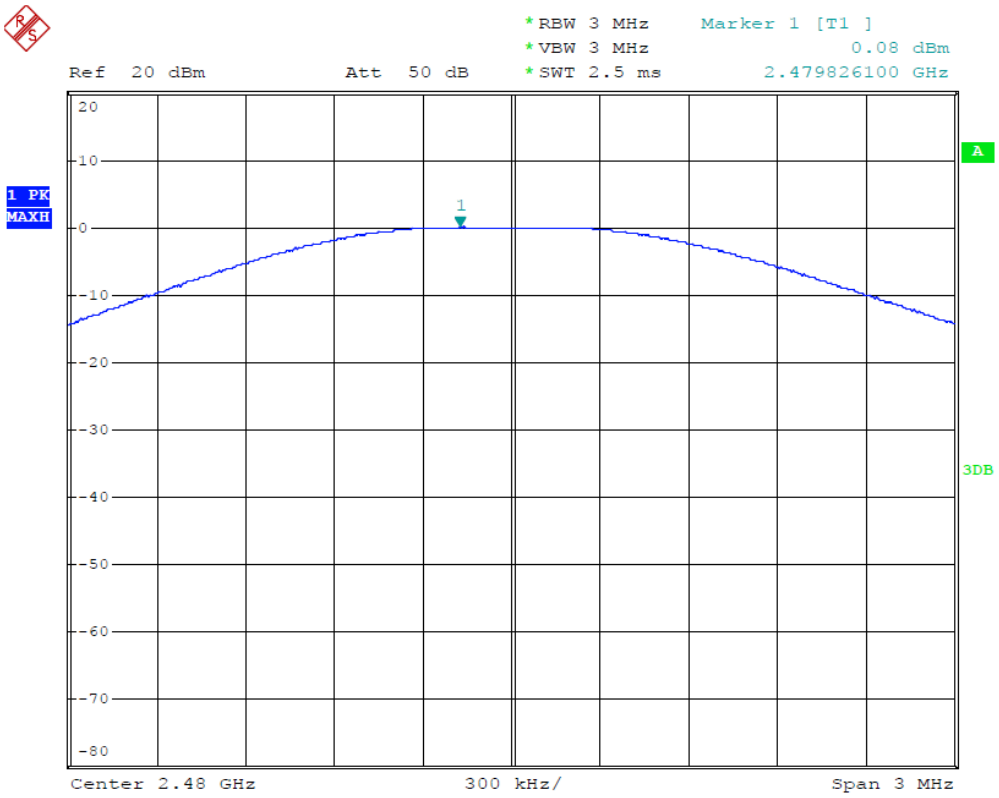
Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX	Test Engineer:	Rickey

Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / mW
Low	2402	-0.63	0.86	21 dBm / 125 mW
Middle	2441	-0.67	0.85	21 dBm / 125 mW
High	2480	0.08	1.01	21 dBm / 125 mW

The spectrum analyzer plots are attached as below.


*RBW 3 MHz
*VBW 3 MHz
*SWT 2.5 ms
Marker 1 [T1]
-0.63 dBm
2.402156100 GHz
Ref 20 dBm
Att 50 dB
1 PK
MAXH
A
3DB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.402 GHz
300 kHz/
Span 3 MHz

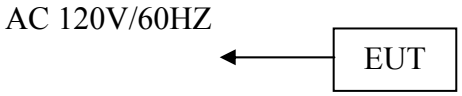

*RBW 3 MHz
*VBW 3 MHz
*SWT 2.5 ms
Marker 1 [T1]
-0.67 dBm
2.440821000 GHz
Ref 20 dBm
Att 50 dB
1 PK
MAXH
A
3DB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.441 GHz
300 kHz/
Span 3 MHz


*RBW 3 MHz
*VBW 3 MHz
*SWT 2.5 ms
Marker 1 [T1]
0.08 dBm
2.479826100 GHz
Ref 20 dBm
Att 50 dB
1 PK
MAXH
A
3DB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.48 GHz
300 kHz/
Span 3 MHz

10. RADIATED EMISSION TEST

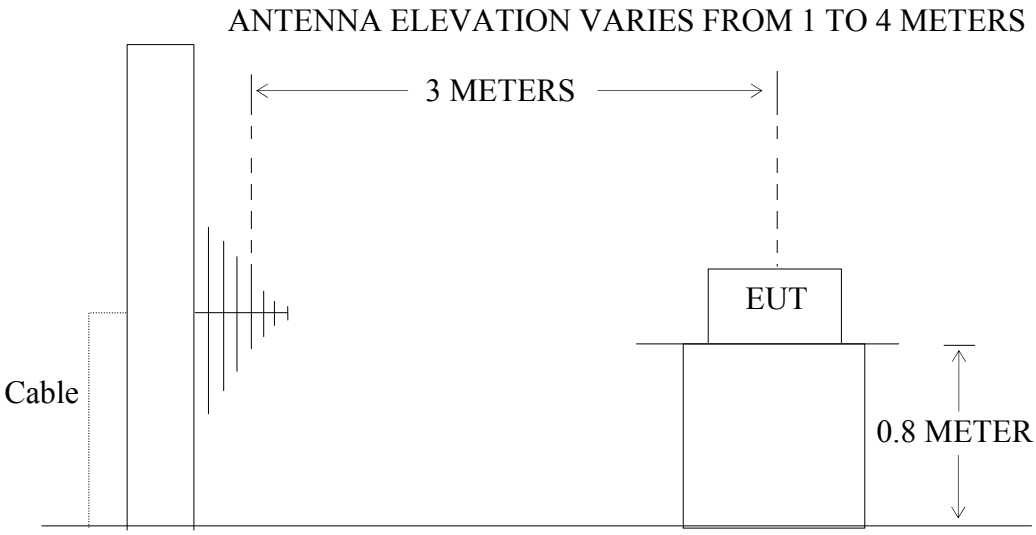
10.1. Block Diagram of Test Setup

10.1.1. Block diagram of connection between the EUT and simulators



(EUT: Bluetooth speaker)

10.1.2. Anechoic Chamber Test Setup Diagram



(EUT: Bluetooth speaker)

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 m odulated intentional radiator is operating, the radio frequency power that is produced by the intenti onal radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the ba nd that contains the highest level of the desired power, based on either an RF conducte d or a radiated m easurement, provided the transmitter demonstrates compliance with the peak conducted power lim its. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a tim e interval, as perm itted 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), m ust 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			

[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.

10.4.Configuration of EUT on Measurement

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

10.4.1.Bluetooth speaker (EUT)

Model Number : SP-21BT
Serial Number : N/A
Manufacturer : Daza Electronics Company

10.5.est Procedure

The EUT and its sim ulators are placed on a turntable, which is 0.8 m eter high above ground. The turntable can rotate 360 degrees to determine the position of the m aximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be m oved up and down between 1.0 m eter and 4 meters to find out the m aximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both hor izontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables m ust be m anipulated according to ANSI C63.4- 2009 on radiated emission measurement.

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

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

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

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

Result = Reading + Corrected Factor

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

10.6.The Field Strength of Radiation Emission Measurement Results

PASS.

Date of Test:	July 13, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX (2402MHz)	Test Engineer:	Rickey

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
239.9874	37.35	-19.80	17.55	46.00	-28.45	Horizontal
336.0352	35.54	-1.71	18.83	46.00	-27.17	Horizontal
668.1423	40.23	-10.32	29.91	46.00	-16.09	Horizontal
30.0000	38.99	-17.80	21.19	40.00	-18.81	Vertical
45.0583	37.35	-20.38	16.97	40.00	-23.03	Vertical
801.7863	37.35	-7.76	29.59	46.00	-16.41	Vertical

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

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

Note: 1.The emission emitted by the EUT is too low to be measured except the emission listed above.

2. *: Denotes restricted band of operation.

3. The fundamental radiated emissions were reduced by 2.4G Band Reject Filter in the attached plots.

Date of Test:	July 13, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX (2441MHz)	Test Engineer:	Rickey

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
239.9874	38.09	-19.80	18.29	46.00	-27.71	Horizontal
336.0352	36.20	-16.71	19.49	46.00	-26.51	Horizontal
668.1423	40.28	-10.32	29.96	46.00	-16.04	Horizontal
30.0000	38.21	-17.80	20.41	40.00	-19.59	Vertical
45.2165	37.54	-20.39	17.15	40.00	-22.85	Vertical
801.7862	37.89	-7.79	30.13	46.00	-15.87	Vertical

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

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

Note: 1.The emission emitted by the EUT is too low to be measured except the emission listed above.

2. *: Denotes restricted band of operation.

3. The fundamental radiated emissions were reduced by 2.4G Band Reject Filter in the attached plots.

Date of Test:	July 13, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX (2480MHz)	Test Engineer:	Rickey

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
239.9874	37.21	-19.80	17.41	46.00	-28.59	Horizontal
336.0352	37.07	-16.71	20.36	46.00	-25.64	Horizontal
668.1423	39.54	-10.32	29.22	46.00	-16.78	Horizontal
30.5306	40.34	-17.98	22.36	40.00	-17.64	Vertical
45.0583	37.65	-20.38	17.27	40.00	-22.73	Vertical
801.7863	39.01	-7.76	31.25	46.00	-14.75	Vertical

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

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

Note: 1.The emission emitted by the EUT is too low to be measured except the emission listed above.

2. *: Denotes restricted band of operation.

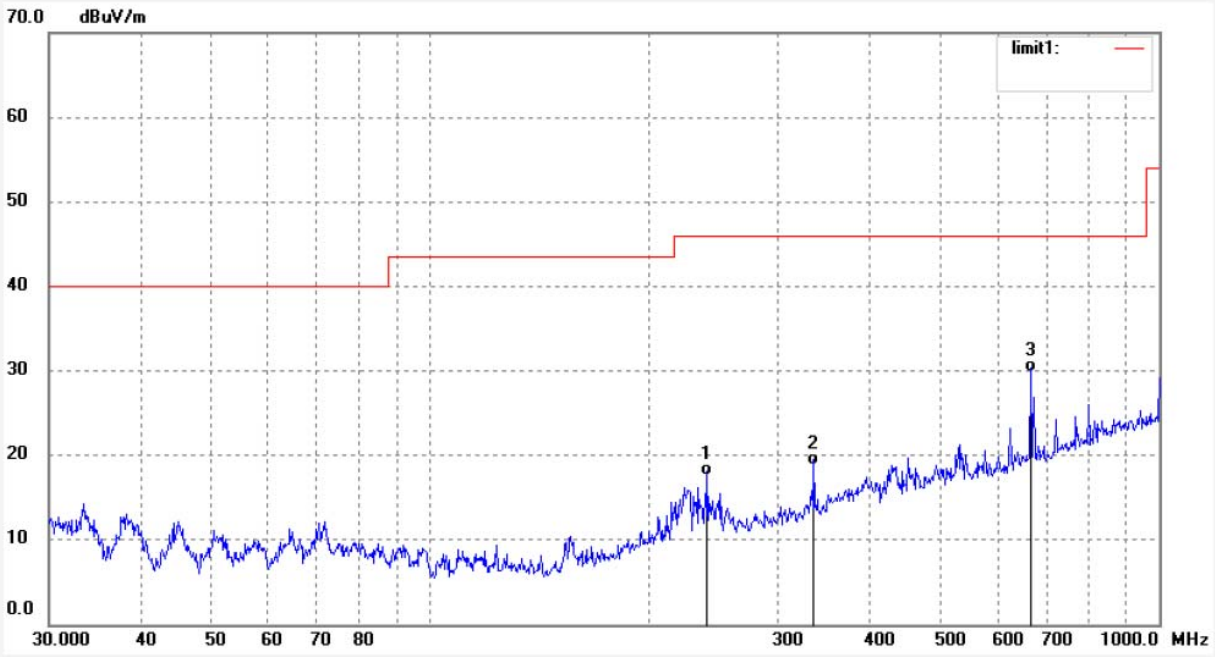
3. The fundamental radiated emissions were reduced by 2.4G Band Reject Filter in the attached plots.

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: alen #1987
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth speaker
Mode: TX 2402MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Horizontal
Power Source: DC 5V
Date: 2013-9-26
Time: 11/20/24
Engineer Signature:
Distance: 3m

Note: Report No:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	37.35	-19.80	17.55	46.00	-28.45	QP			
2	336.0352	35.54	-16.71	18.83	46.00	-27.17	QP			
3	668.1423	40.23	-10.32	29.91	46.00	-16.09	QP			

ACCURATE TECHNOLOGY CO., LTD.
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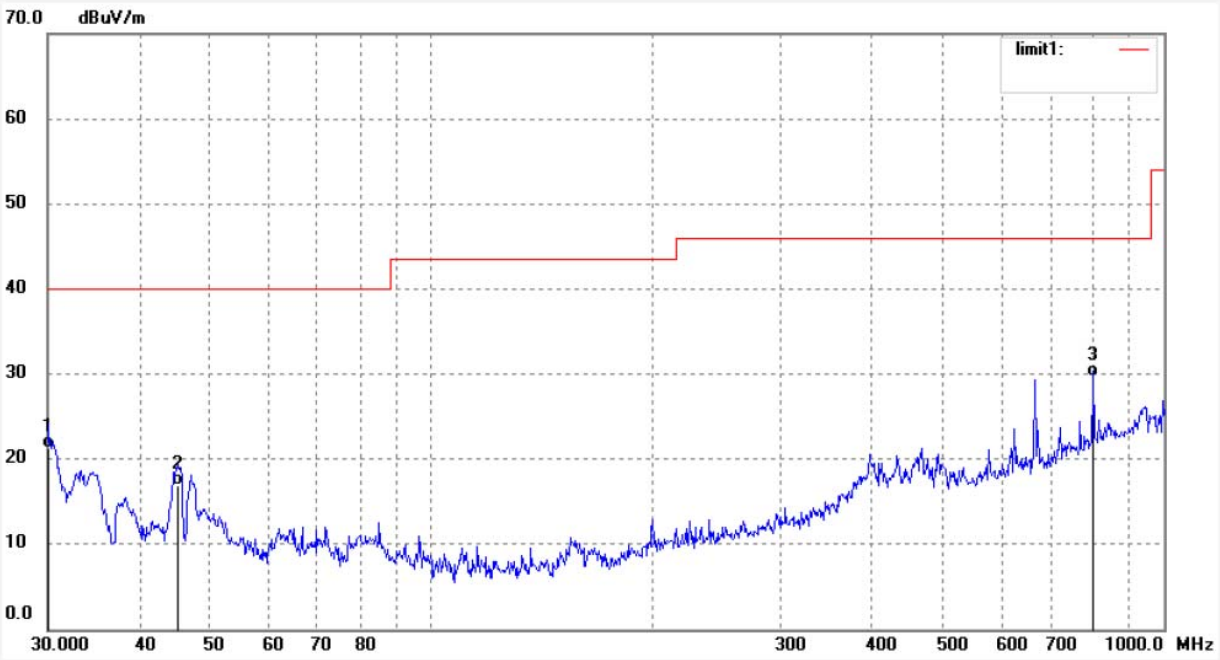
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: alen #1988
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth speaker
Mode: TX 2402MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Vertical
Power Source: DC 5V
Date: 2013-9-26
Time: 11/21/12
Engineer Signature:
Distance: 3m

Note: Report No:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.0000	38.99	-17.80	21.19	40.00	-18.81	QP			
2	45.0583	37.35	-20.38	16.97	40.00	-23.03	QP			
3	801.7863	37.35	-7.76	29.59	46.00	-16.41	QP			

ACCURATE TECHNOLOGY CO., LTD.
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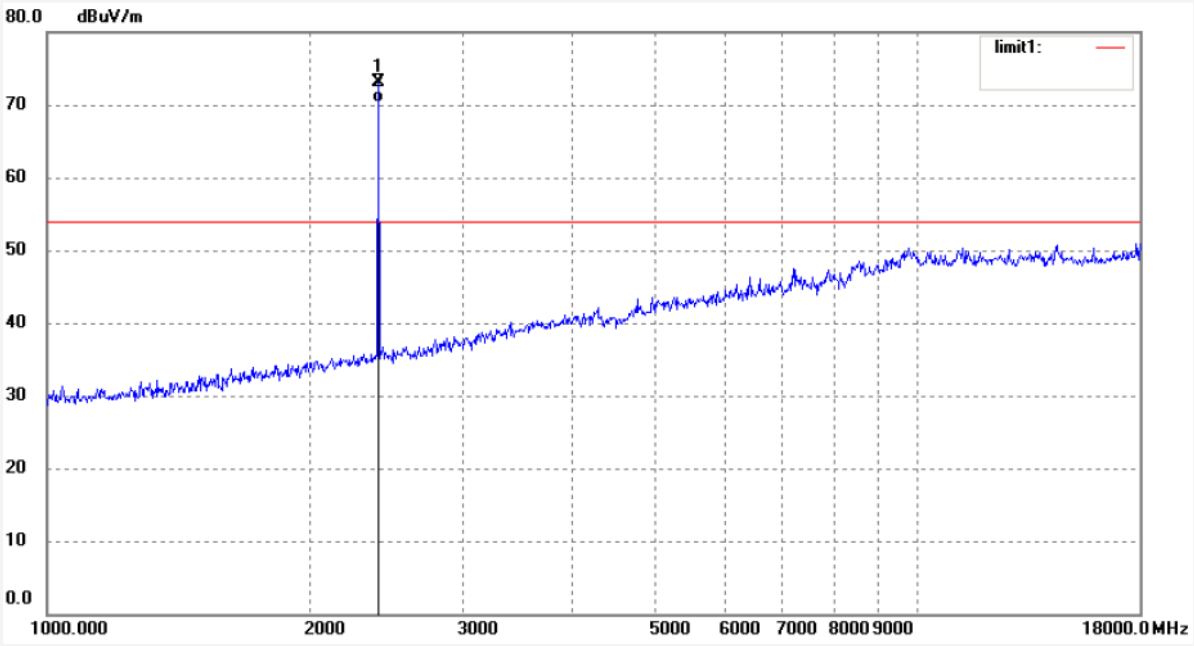
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: alen #1510	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/04/41
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



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	79.88	-6.76	73.12			peak			
2	2402.000	77.12	-6.76	70.36			AVG			

ACCURATE TECHNOLOGY CO., LTD.
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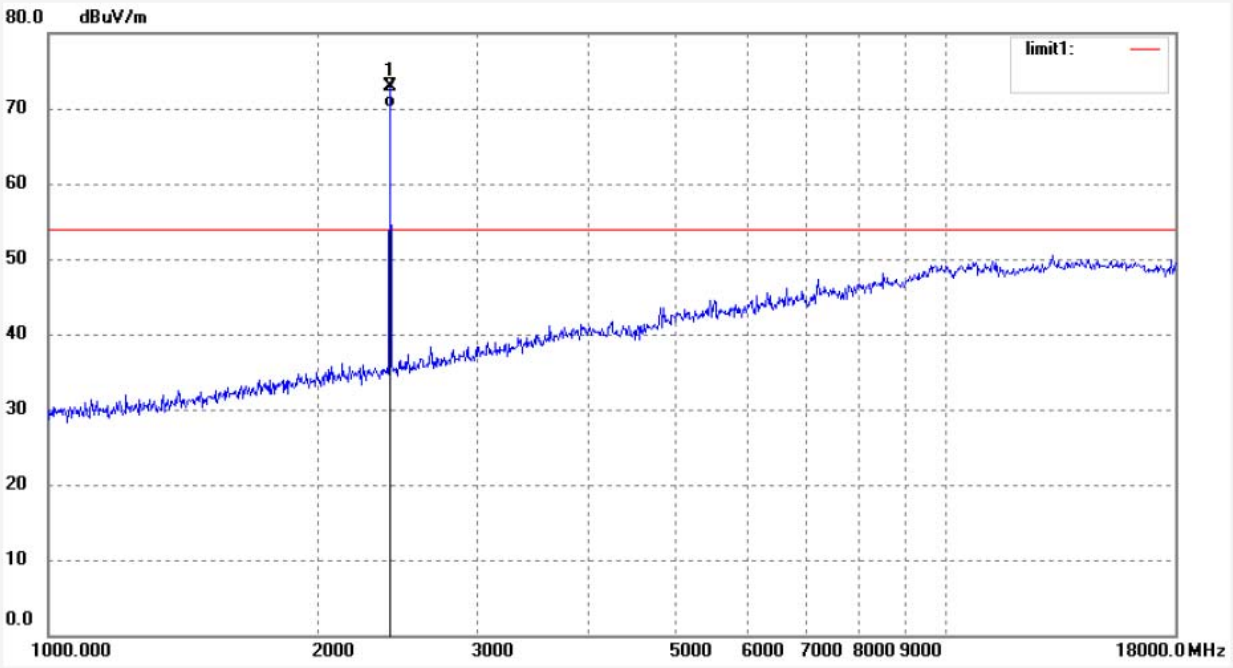
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: alen #1511	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/05/16
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



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	79.70	-6.76	72.94			peak			
2	2402.000	76.87	-6.76	70.11			AVG			

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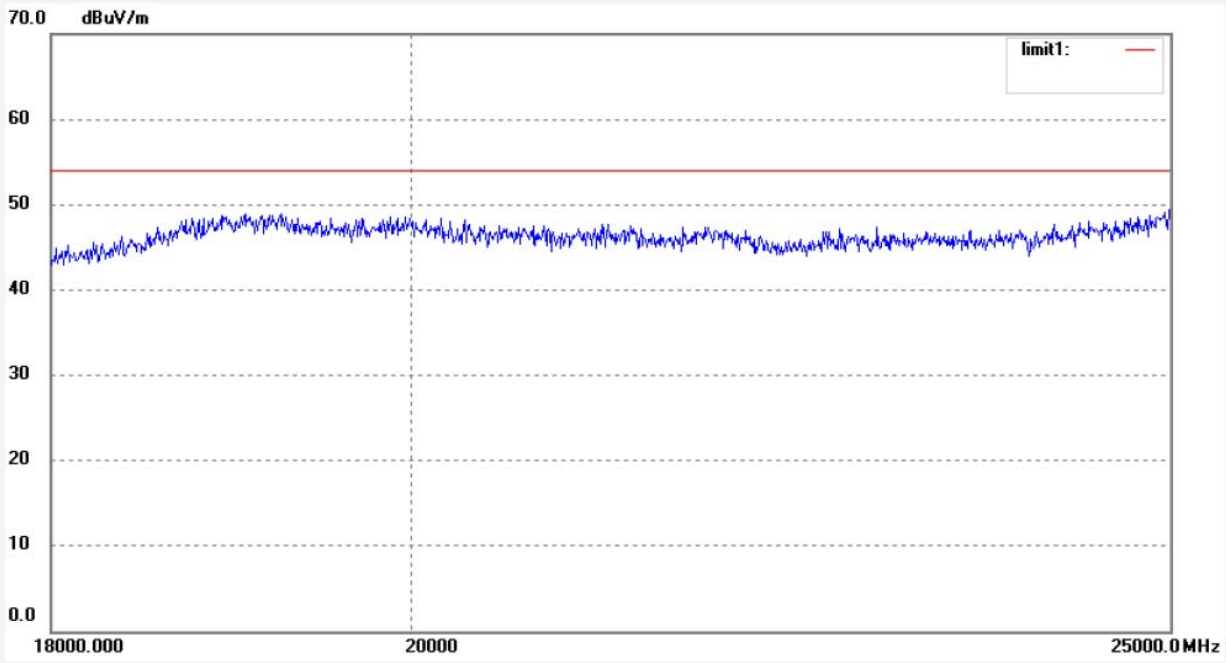
Fax:+86-0755-26503396

Job No.: Alen #651	Polarization: Vertical
Standard: FCC 15C	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/27/
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 11:41:05
EUT: Bluetooth speaker	Engineer Signature: Alen
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



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

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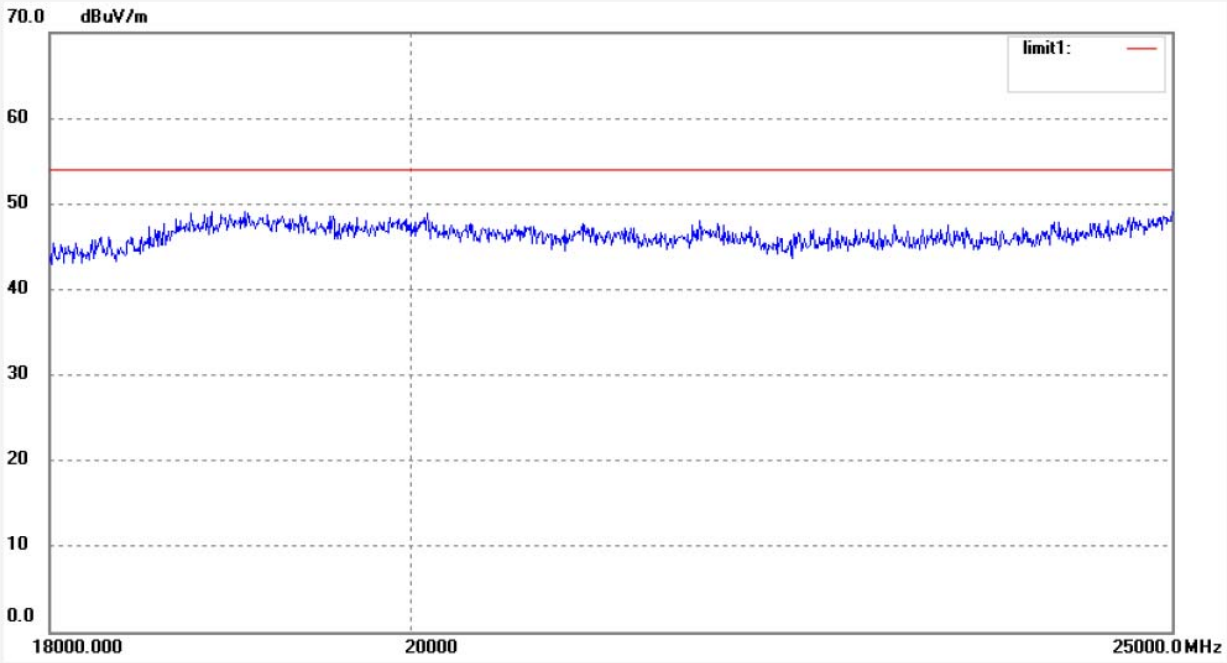
Job No.: Alen #652	Polarization: Horizontal
Standard: FCC 15C	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/27/
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 11:42:56
EUT: Bluetooth speaker	Engineer Signature: Alen
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



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

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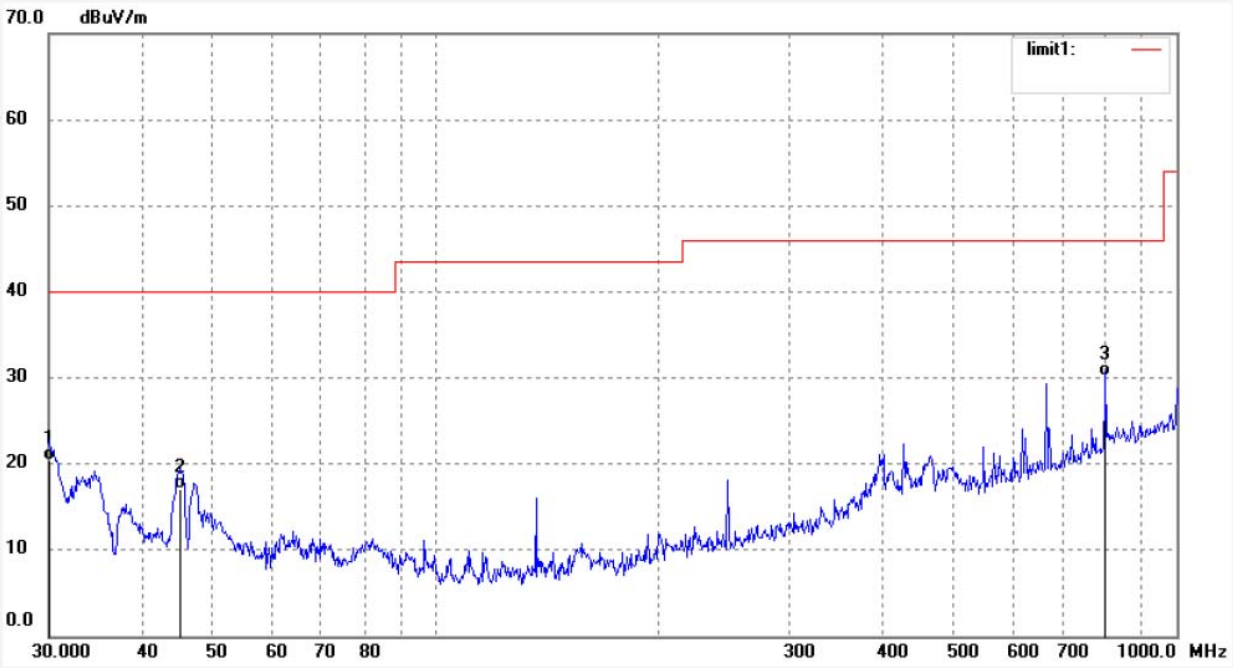
Fax:+86-0755-26503396

Job No.: alen #1989	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 2013-9-26
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 11/21/50
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2441MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.0000	38.21	-17.80	20.41	40.00	-19.59	QP			
2	45.2165	37.54	-20.39	17.15	40.00	-22.85	QP			
3	801.7862	37.89	-7.76	30.13	46.00	-15.87	QP			

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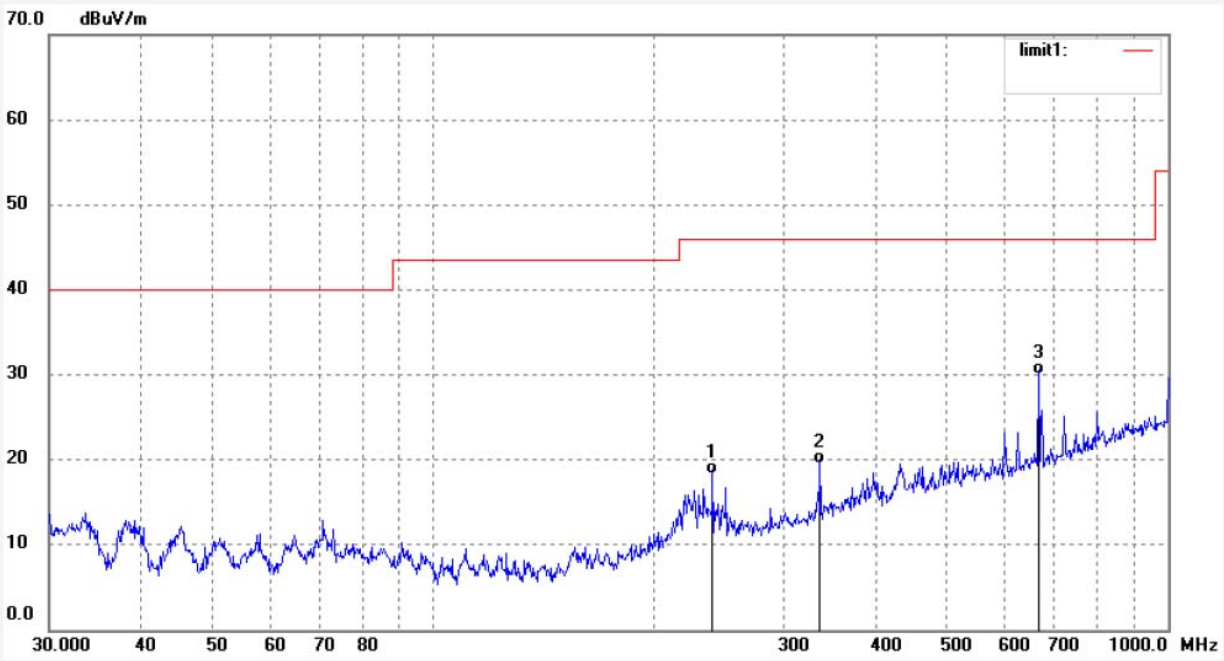
Fax:+86-0755-26503396

Job No.: alen #1990	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 2013-9-26
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 11/22/55
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2441MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	38.09	-19.80	18.29	46.00	-27.71	QP			
2	336.0352	36.20	-16.71	19.49	46.00	-26.51	QP			
3	668.1423	40.28	-10.32	29.96	46.00	-16.04	QP			

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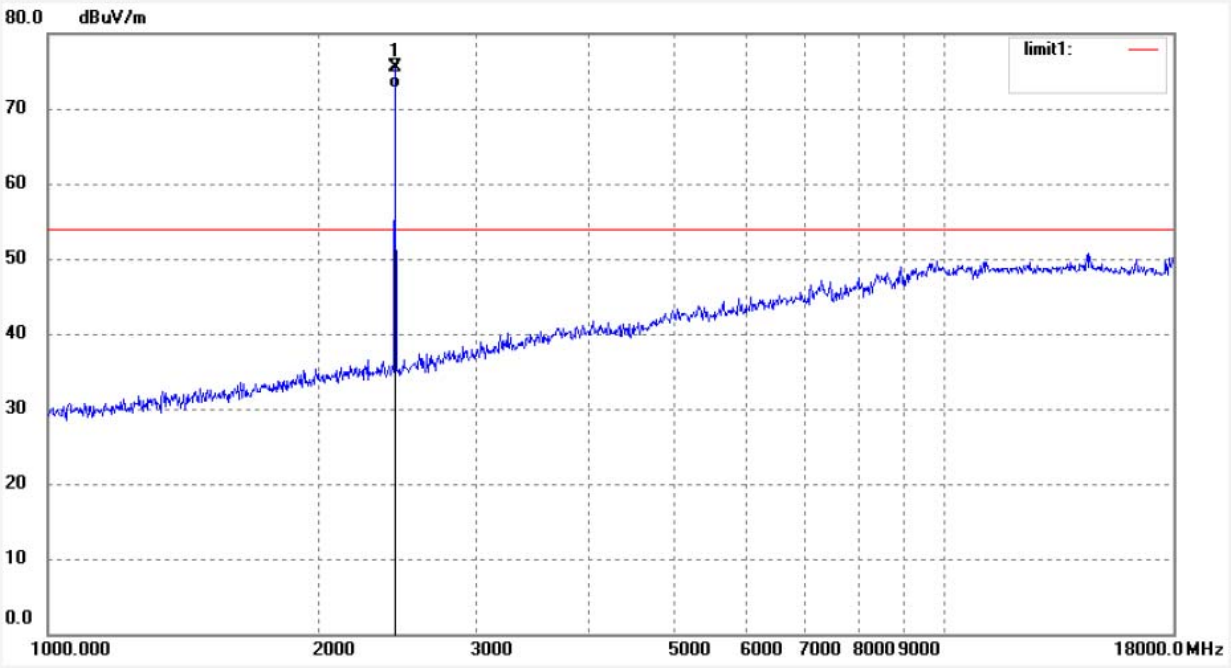
Job No.: alen #1512
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth speaker
Mode: TX 2441MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Horizontal
Power Source: DC 5V
Date: 13/09/30/
Time: 9/06/43
Engineer Signature:
Distance: 3m

Note: Report No.:ATE20132076



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	82.15	-6.67	75.48		peak				
2	2441.000	79.32	-6.67	72.65		AVG				

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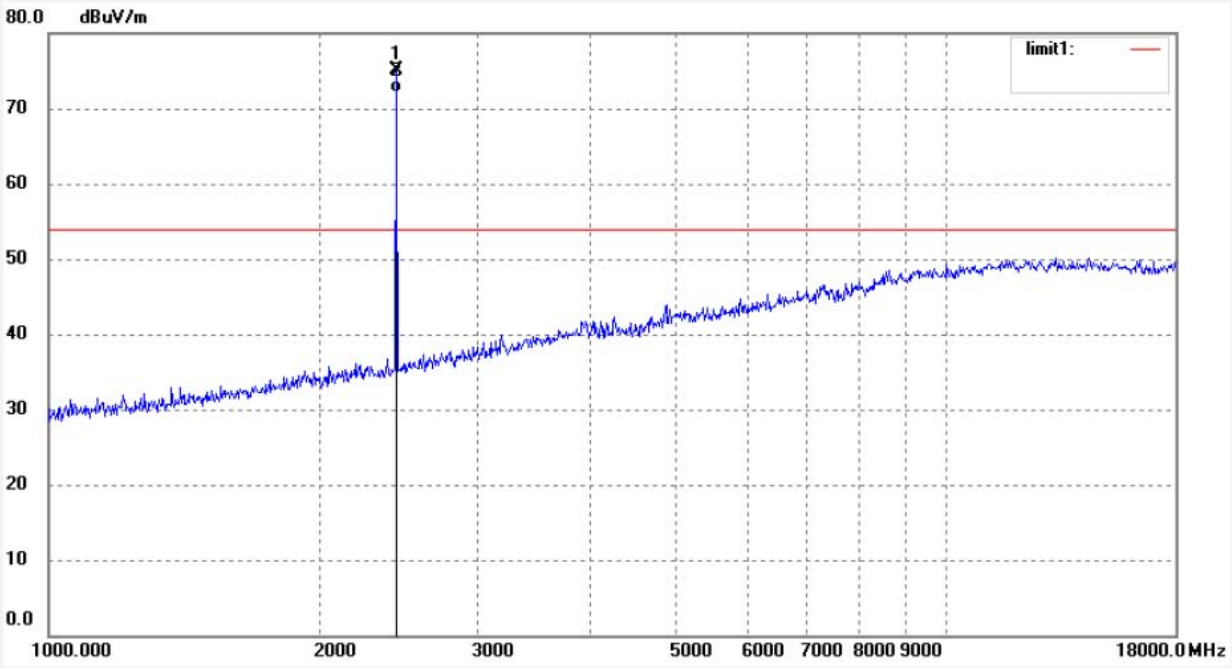
Job No.: alen #1513	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/07/21
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2441MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



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	81.78	-6.67	75.11			peak			
2	2441.000	78.86	-6.67	72.19			AVG			

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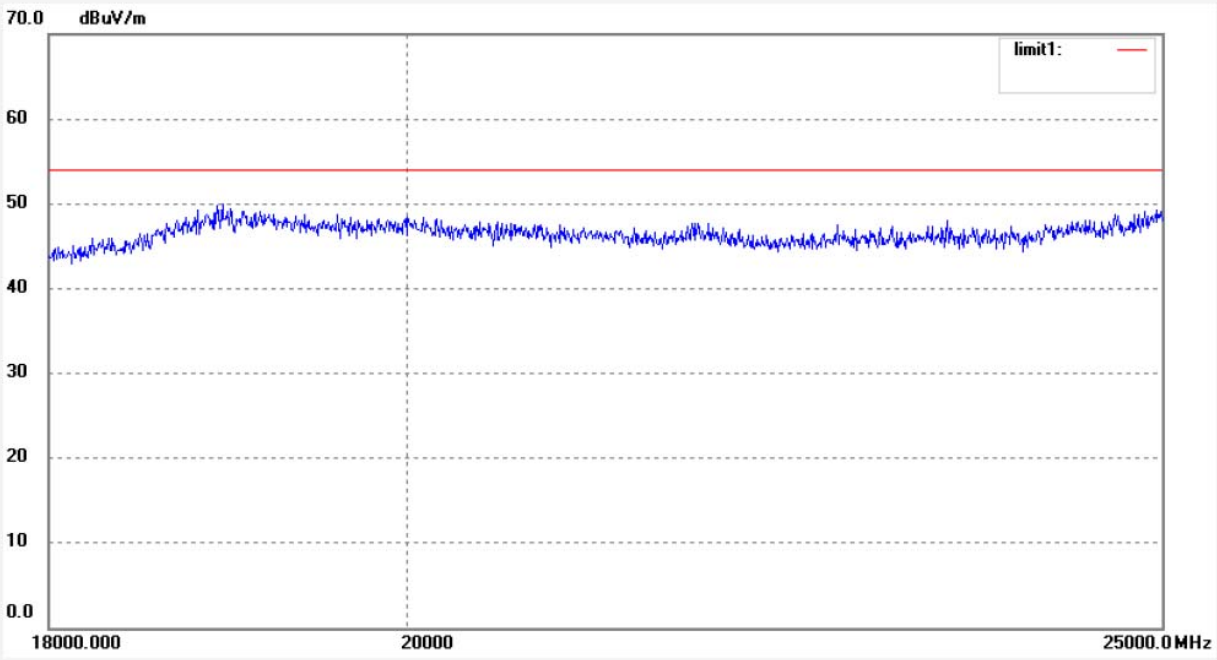
Job No.: Alen #653	Polarization: Horizontal
Standard: FCC 15C	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/27/
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 11:44:38
EUT: Bluetooth speaker	Engineer Signature: Alen
Mode: TX 2441MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



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

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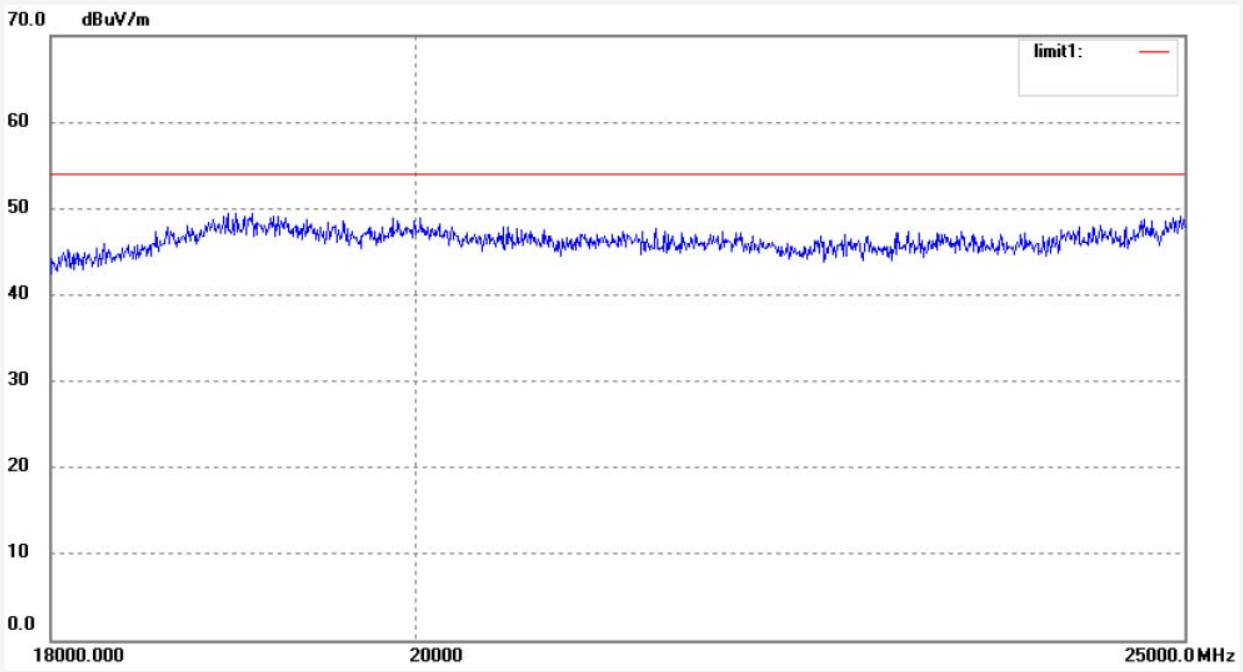
Job No.: Alen #654	Polarization: Vertical
Standard: FCC 15C	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/27/
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 11:45:42
EUT: Bluetooth speaker	Engineer Signature: Alen
Mode: TX 2441MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



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

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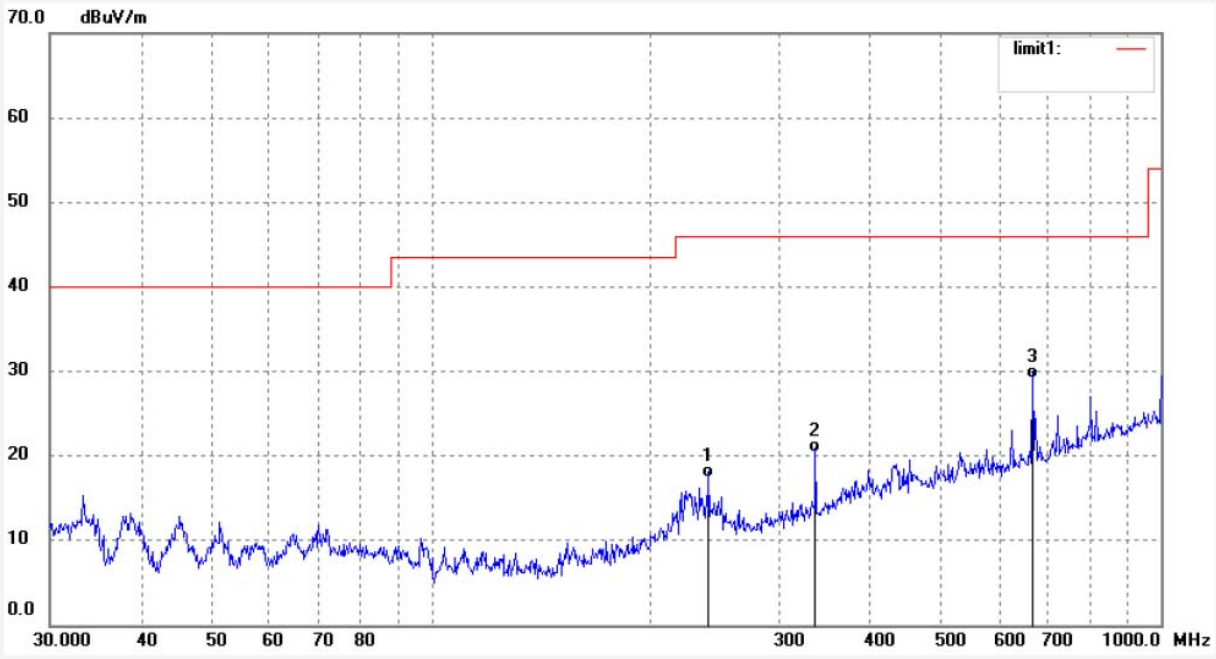
Job No.: alen #1991
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth speaker
Mode: TX 2480MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Horizontal
Power Source: DC 5V
Date: 2013-9-26
Time: 11/23/41
Engineer Signature:
Distance: 3m

Note: Report No:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	239.9874	37.21	-19.80	17.41	46.00	-28.59	QP			
2	336.0352	37.07	-16.71	20.36	46.00	-25.64	QP			
3	668.1423	39.54	-10.32	29.22	46.00	-16.78	QP			

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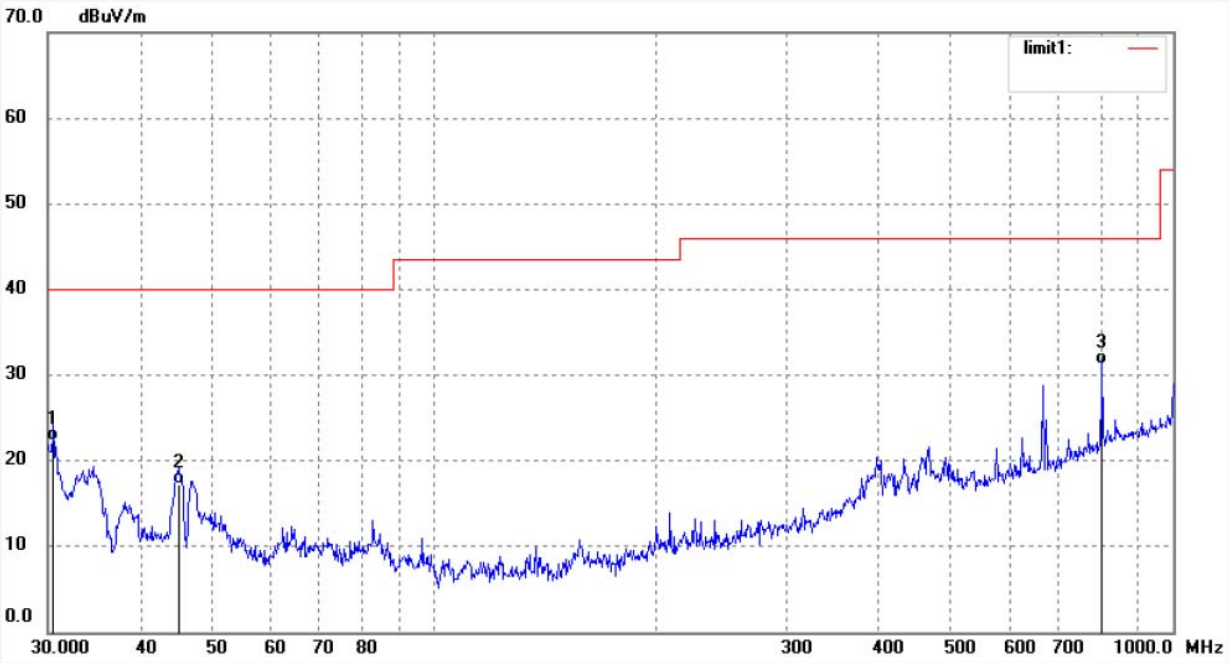
Job No.: alen #1992	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 2013-9-26
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 11/24/22
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.5306	40.34	-17.98	22.36	40.00	-17.64	QP			
2	45.0583	37.65	-20.38	17.27	40.00	-22.73	QP			
3	801.7863	39.01	-7.76	31.25	46.00	-14.75	QP			

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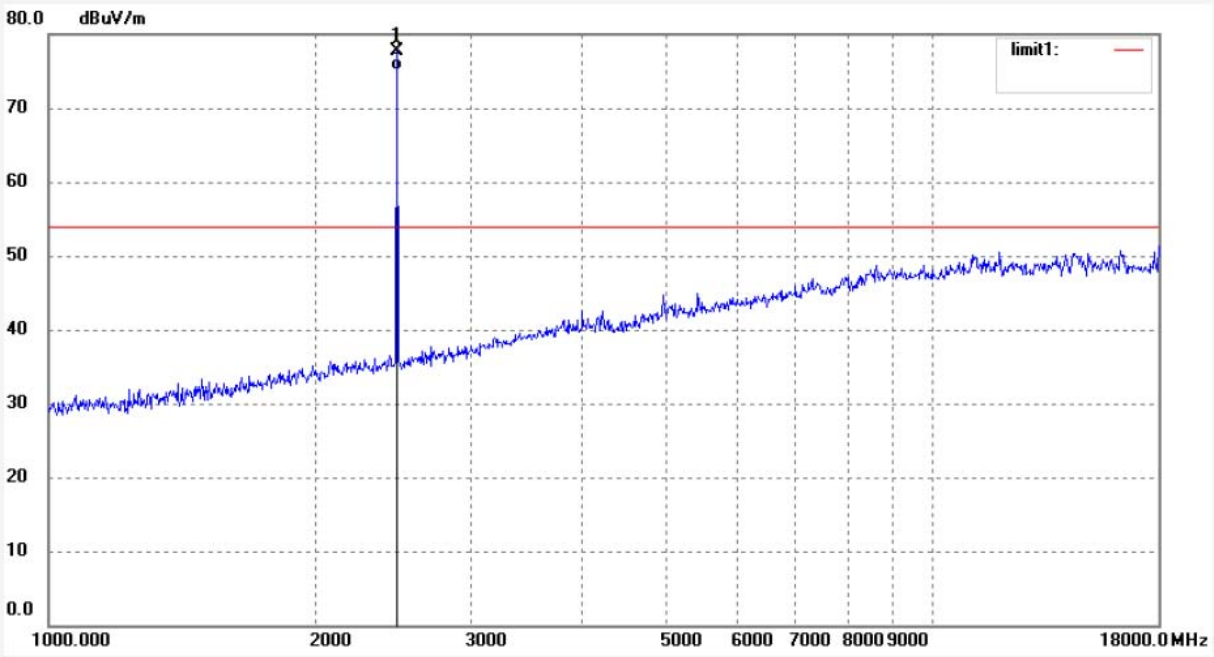
Job No.: alen #1514	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/08/57
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



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	84.35	-6.56	77.79			peak			
2	2480.000	81.65	-6.56	75.09			AVG			

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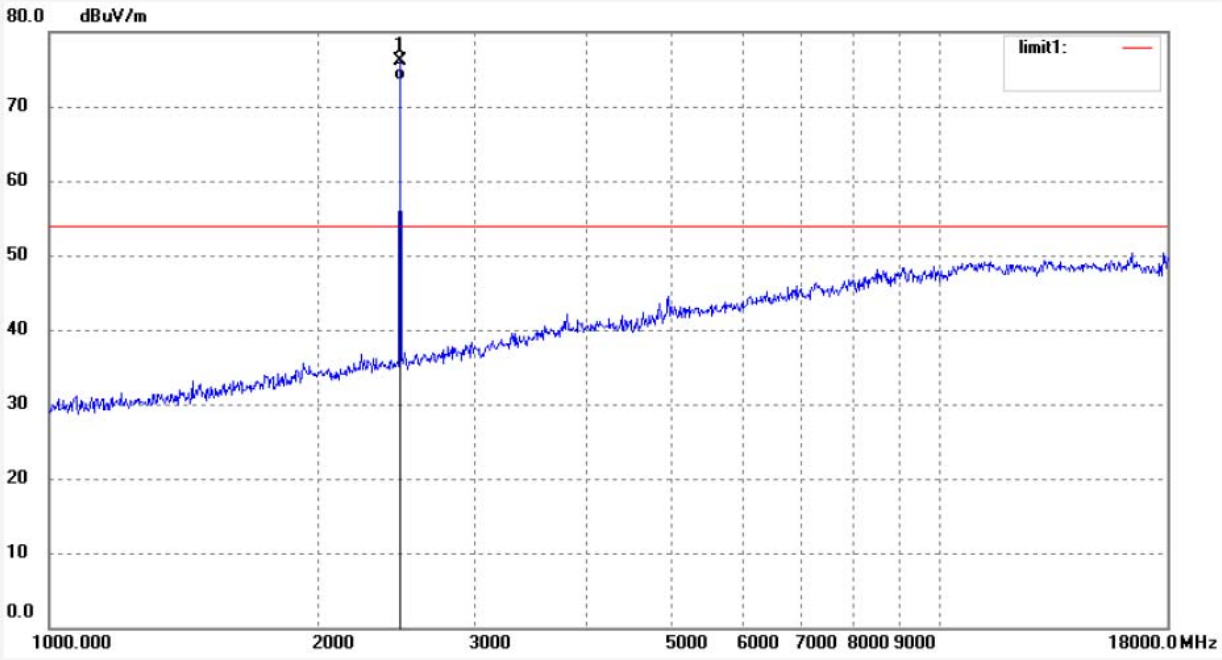
Job No.: alen #1515	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/09/37
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



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	82.62	-6.56	76.06			peak			
2	2480.000	80.03	-6.56	73.47			AVG			

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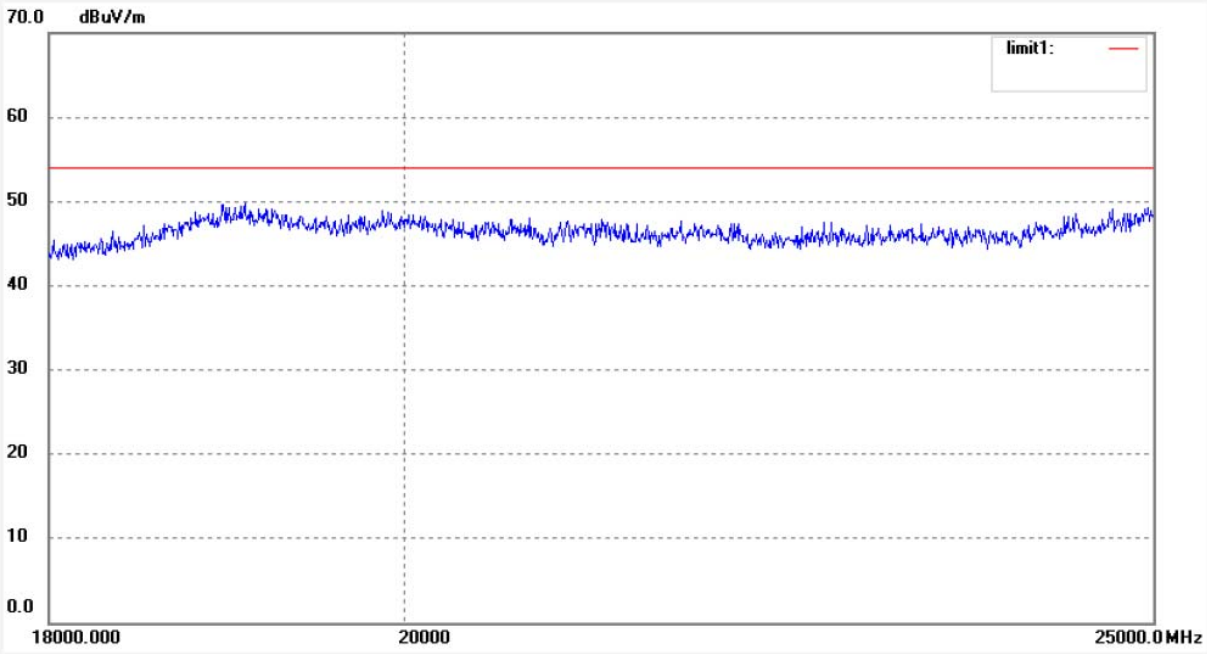
Job No.: Alen #655	Polarization: Vertical
Standard: FCC 15C	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/27/
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 11:48:59
EUT: Bluetooth speaker	Engineer Signature: Alen
Mode: TX 2480MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No:ATE20132076



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

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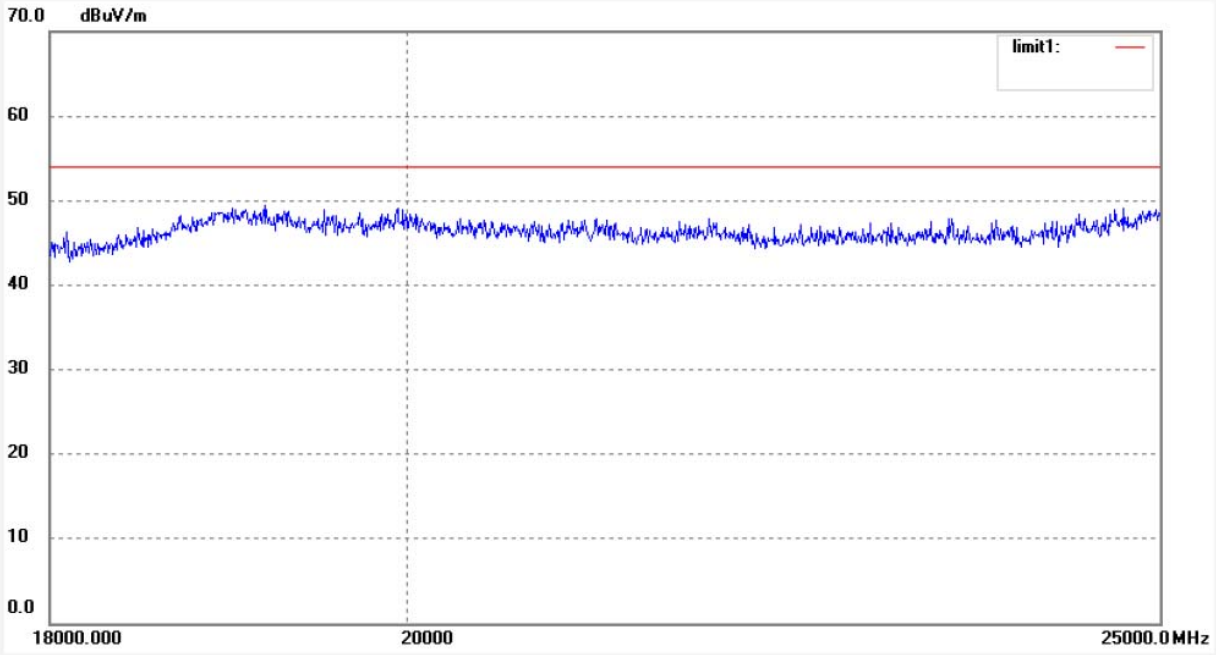
Job No.: Alen #656	Polarization: Horizontal
Standard: FCC 15C	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/27/
Temp.(C)/Hum.(%) 25 C / 50 %	Time: 11:52:35
EUT: Bluetooth speaker	Engineer Signature: Alen
Mode: TX 2480MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

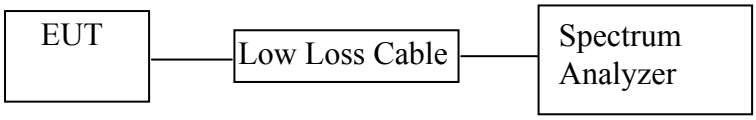
Note: Report No:ATE20132076



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

11. BAND EDGE COMPLIANCE TEST

11.1. Block Diagram of Test Setup



(EUT: Bluetooth speaker)

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 m odulated intentional radiator is operating, the radio frequency power that is produced by the intenti onal radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the ba nd that contains the highest level of the desired power, based on either an RF conducte d or a radiated m easurement, provided the transmitter demonstrates compliance with the peak conducted power lim its. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a tim e interval, as perm itted 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), m ust also comply with the radiated emission limits specified in Section 15.209(a).

11.3. EUT Configuration on Measurement

The following equipm ent are installed on the em ission Measurement to m eet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

11.3.1. Bluetooth speaker (EUT)

Model Number	:	SP-21BT
Serial Number	:	N/A
Manufacturer	:	Daza Electronics Company

11.4.Operating Condition of EUT

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

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

Conducted Band Edge:

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 300kHz and VBW to 1MHz.

Radiate Band Edge:

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

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

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

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

RBW=1MHz, VBW=1MHz

11.5.7.The band edges was measured and recorded.

11.6.Test Result

Pass

Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX (Hopping off)	Test Engineer:	Rickey

Conducted test

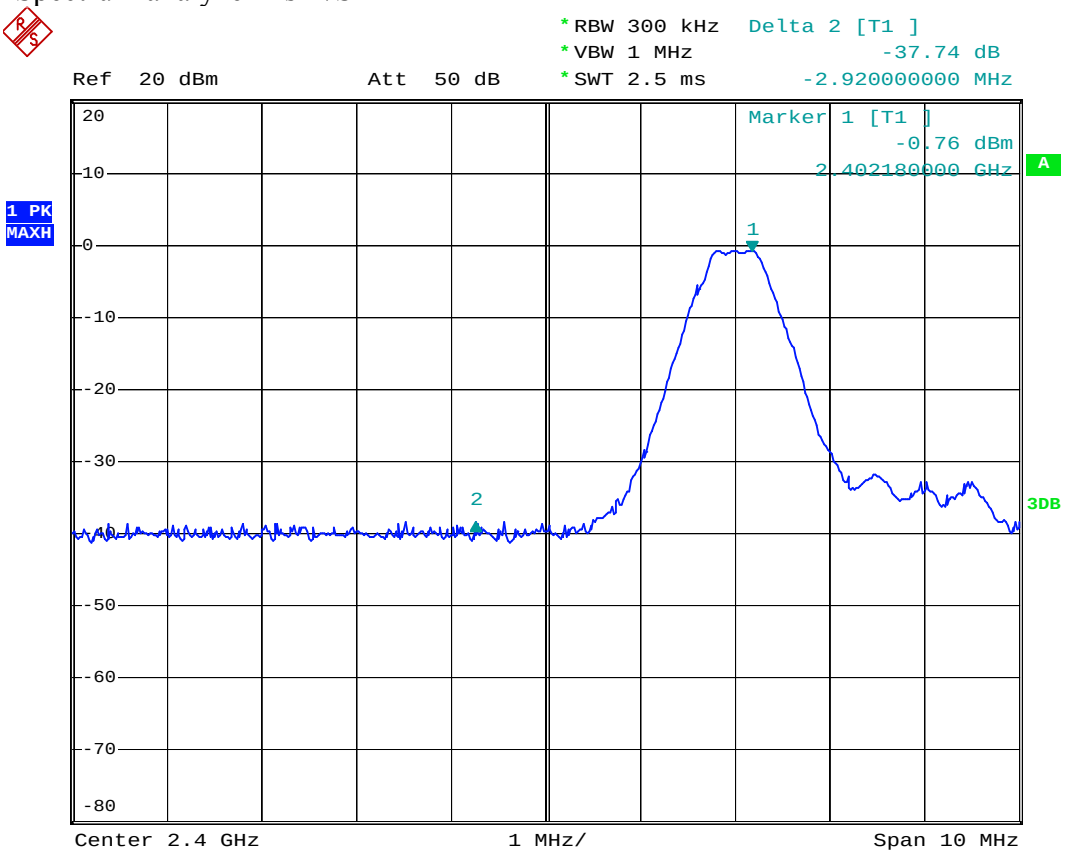
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	37.74	> 20dBc
2480	38.25	> 20dBc

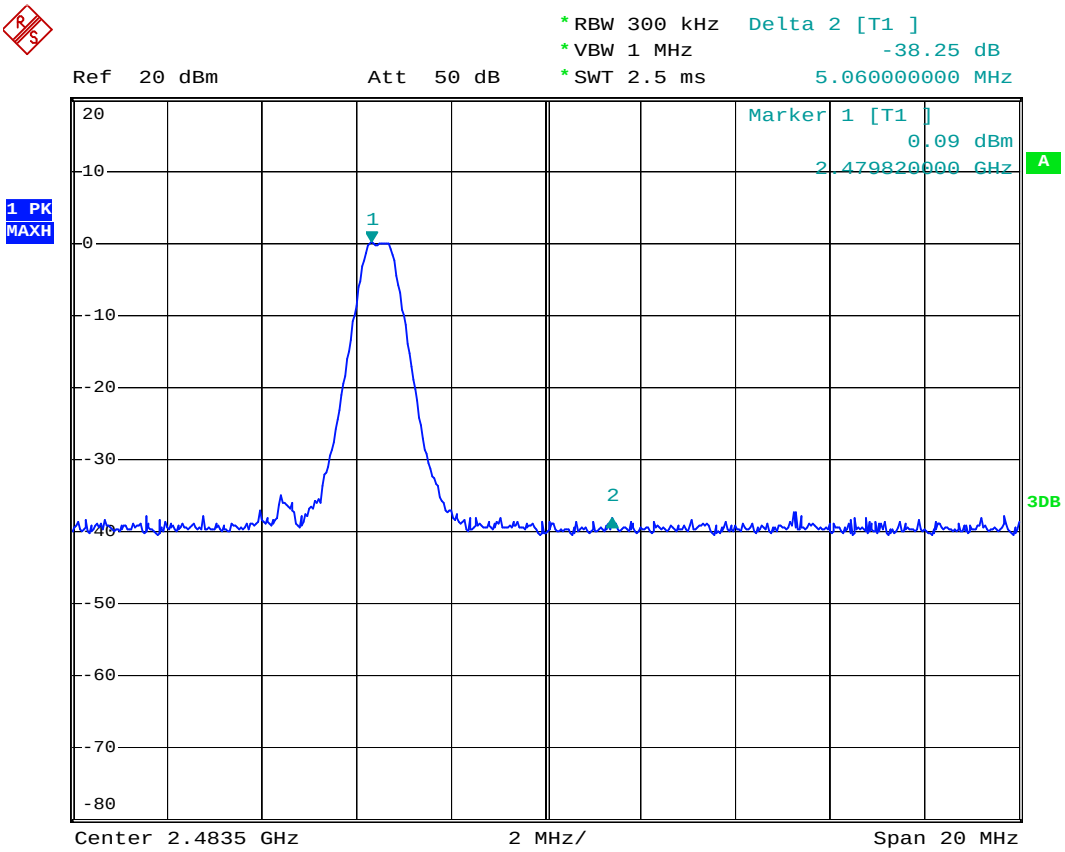
Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX (Hopping on)	Test Engineer:	Rickey

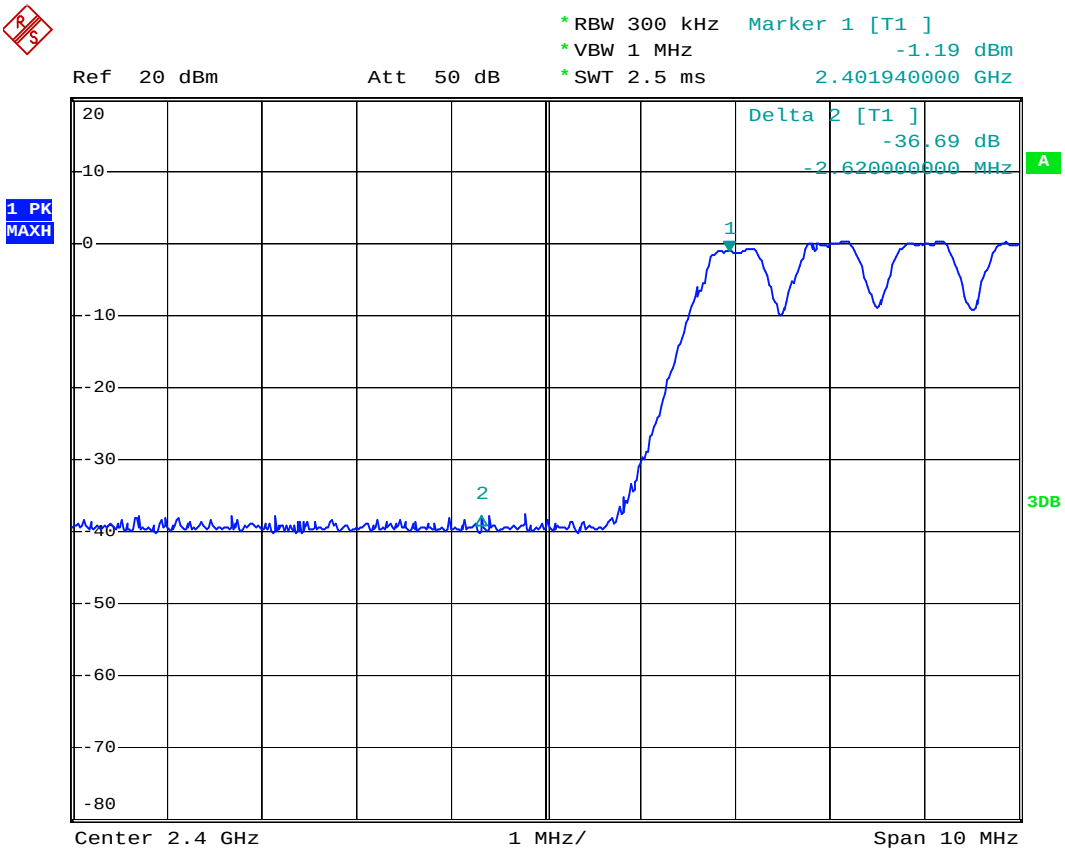
Conducted test

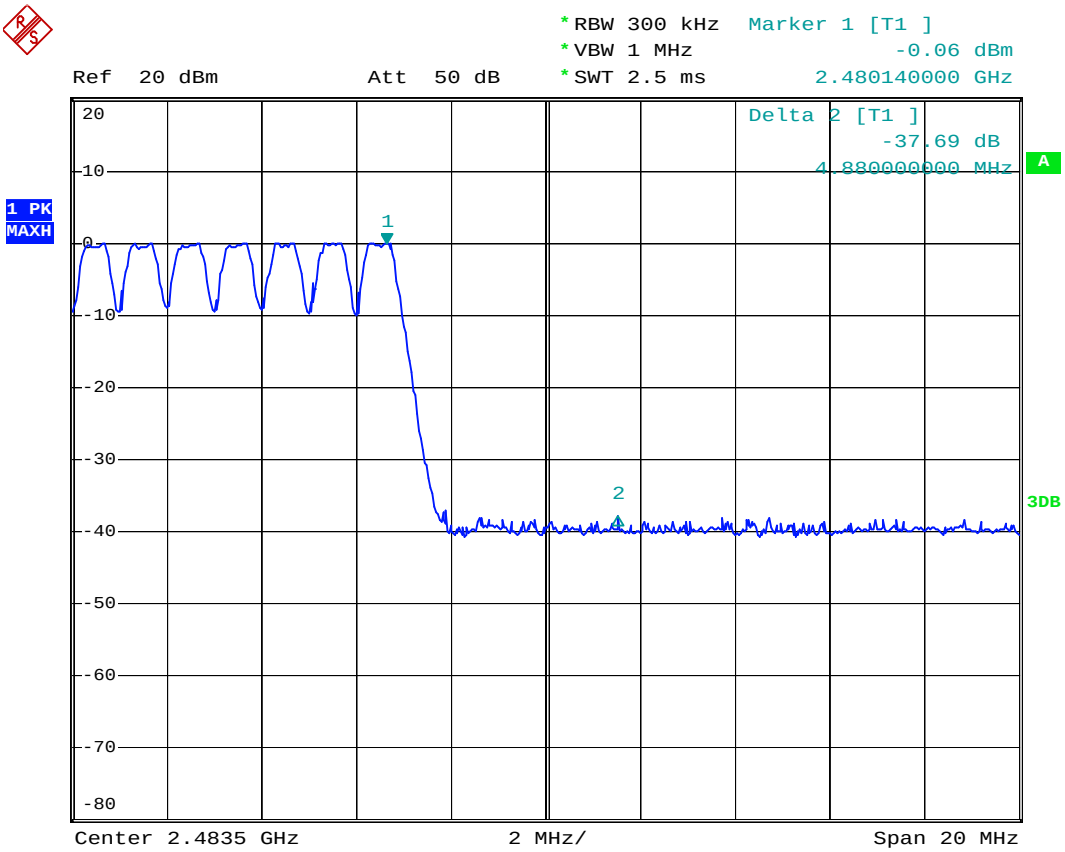
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	36.69	> 20dBc
2480	37.69	> 20dBc

"Spectrum analyzer" is R/S




*RBW 300 kHz
*VBW 1 MHz
*SWT 2.5 ms
Delta 2 [T1]
-38.25 dB
5.060000000 MHz
Ref 20 dBm
Att 50 dB
Marker 1 [T1]
0.09 dBm
2.479820000 GHz
1 PK
MAXH
A
3DB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.4835 GHz
2 MHz/
Span 20 MHz


*RBW 300 kHz
*VBW 1 MHz
*SWT 2.5 ms
Marker 1 [T1]
-1.19 dBm
2.401940000 GHz
Ref 20 dBm
Att 50 dB
Delta 2 [T1]
-36.69 dB
-2.620000000 MHz
1 PK
MAXH
A
3DB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.4 GHz
1 MHz/
Span 10 MHz


*RBW 300 kHz
*VBW 1 MHz
*SWT 2.5 ms
Marker 1 [T1]
-0.06 dBm
2.480140000 GHz
Ref 20 dBm
Att 50 dB
Delta 2 [T1]
-37.69 dB
4.880000000 MHz
1 PK
MAXH
A
3DB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.4835 GHz
2 MHz/
Span 20 MHz

Radiated Band Edge Result

Date of Test:	September 30, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX 2402MHz(Hopping off)	Test Engineer:	Rickey

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2397.120	43.45	46.31	-6.76	36.69	39.55	54.00	74.00	-17.31	-34.45	Vertical
2400.000	47.79	50.68	-6.76	41.03	43.92	54.00	74.00	-12.97	-30.08	Vertical
2396.900	43.87	46.75	-6.76	37.11	39.99	54.00	74.00	-29.52	-34.01	Horizontal
2400.000	48.37	51.24	-6.76	41.61	44.48	54.00	74.00	-12.39	-29.52	Horizontal

Note:

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

   Result = Reading + Corrected Factor
3. Display the measurement of peak values.

Date of Test:	September 30, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX 2480MHz (Hopping off)	Test Engineer:	Rickey

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2483.500	44.57	47.35	-6.54	38.03	40.81	54.00	74.00	-15.97	-33.19	Vertical
2485.720	45.71	48.57	-6.54	39.17	42.03	54.00	74.00	-14.83	-31.97	Vertical
2483.500	44.56	47.39	-6.54	38.02	40.85	54.00	74.00	-15.98	-33.15	Horizontal
2485.640	45.67	-48.44	-6.54	39.13	41.90	54.00	74.00	-14.87	-32.10	Horizontal

Note:

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

Date of Test:	September 30, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX 2402MHz(Hopping on)	Test Engineer:	Rickey

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2310.000	33.20	38.37	-7.81	25.39	30.56	54.00	74.00	-28.61	-43.44	Vertical
2390.000	31.30	38.74	-7.53	23.77	31.21	54.00	74.00	-30.23	-42.79	Vertical
2310.000	31.83	38.85	-7.81	24.02	31.04	54.00	74.00	-29.98	-42.96	Horizontal
2390.000	32.90	40.86	-7.53	25.37	33.33	54.00	74.00	-28.63	-40.67	Horizontal

Note:

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

   Result = Reading + Corrected Factor
3. Display the measurement of peak values.

Date of Test:	September 30, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	TX 2480MHz (Hopping on)	Test Engineer:	Rickey

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2483.500	41.02	48.96	-7.37	33.65	41.59	54.00	74.00	-20.35	-32.41	Vertical
2500.000	33.20	40.13	-7.40	25.80	32.73	54.00	74.00	-28.20	-41.27	Vertical
2483.500	39.79	47.35	-7.37	32.42	39.98	54.00	74.00	-21.58	-34.02	Horizontal
2500.000	31.00	40.85	-7.40	23.60	33.45	54.00	74.00	-30.40	-40.55	Horizontal

Note:

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

Non-hopping mode

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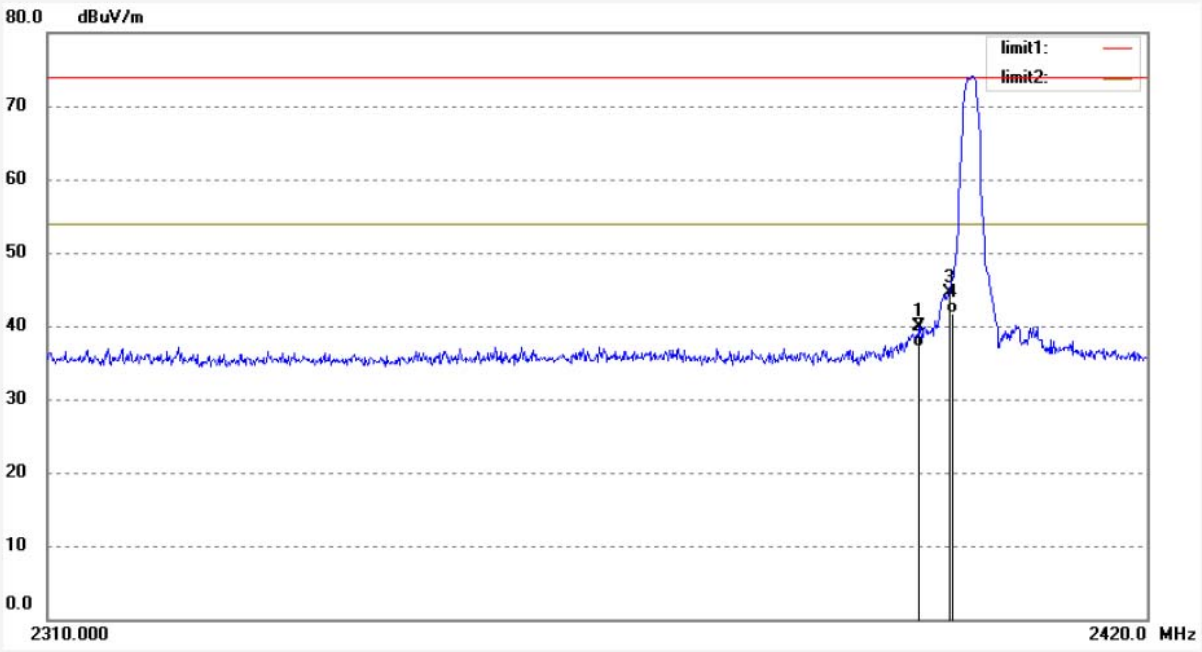
Job No.: alen #1508	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/00/48
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2396.900	46.75	-6.76	39.99	74.00	-34.01	peak			
2	2396.900	43.87	-6.76	37.11	54.00	-16.89	AVG			
3	2400.000	51.24	-6.76	44.48	74.00	-29.52	peak			
4	2400.000	48.37	-6.76	41.61	54.00	-12.39	AVG			

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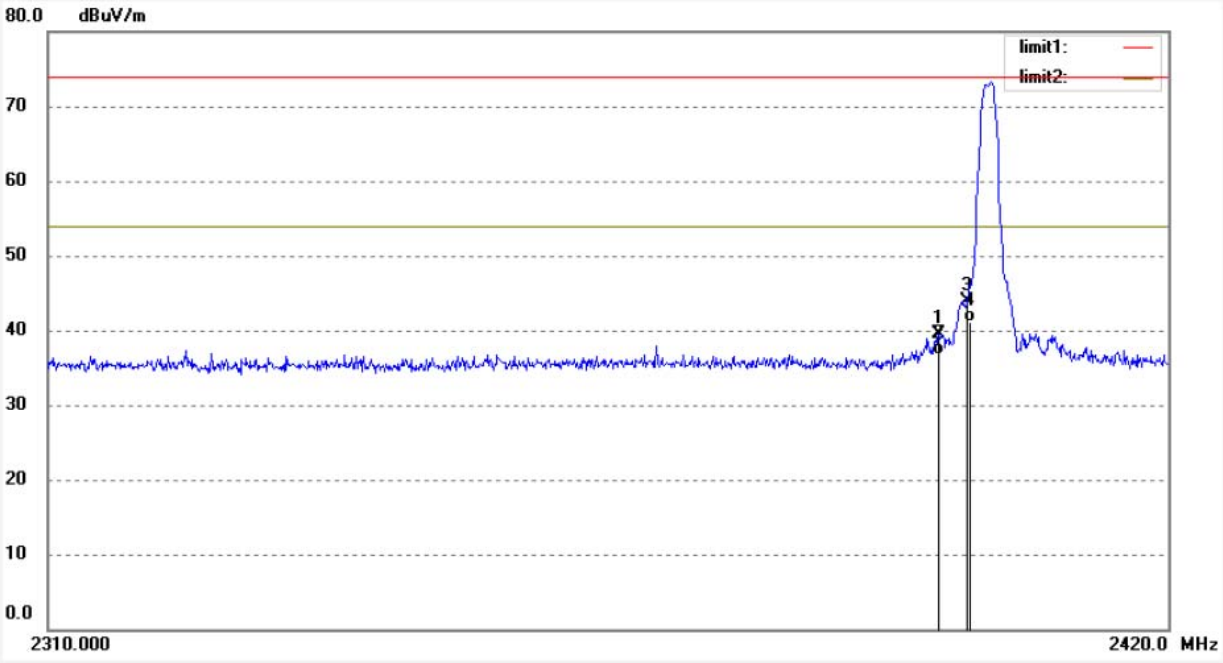
Job No.: alen #1509	Polarization: Vertical
Standard: FCC PK	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/01/31
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2397.120	46.31	-6.76	39.55	74.00	-34.45	peak			
2	2397.120	43.45	-6.76	36.69	54.00	-17.31	AVG			
3	2400.000	50.68	-6.76	43.92	74.00	-30.08	peak			
4	2400.000	47.79	-6.76	41.03	54.00	-12.97	AVG			

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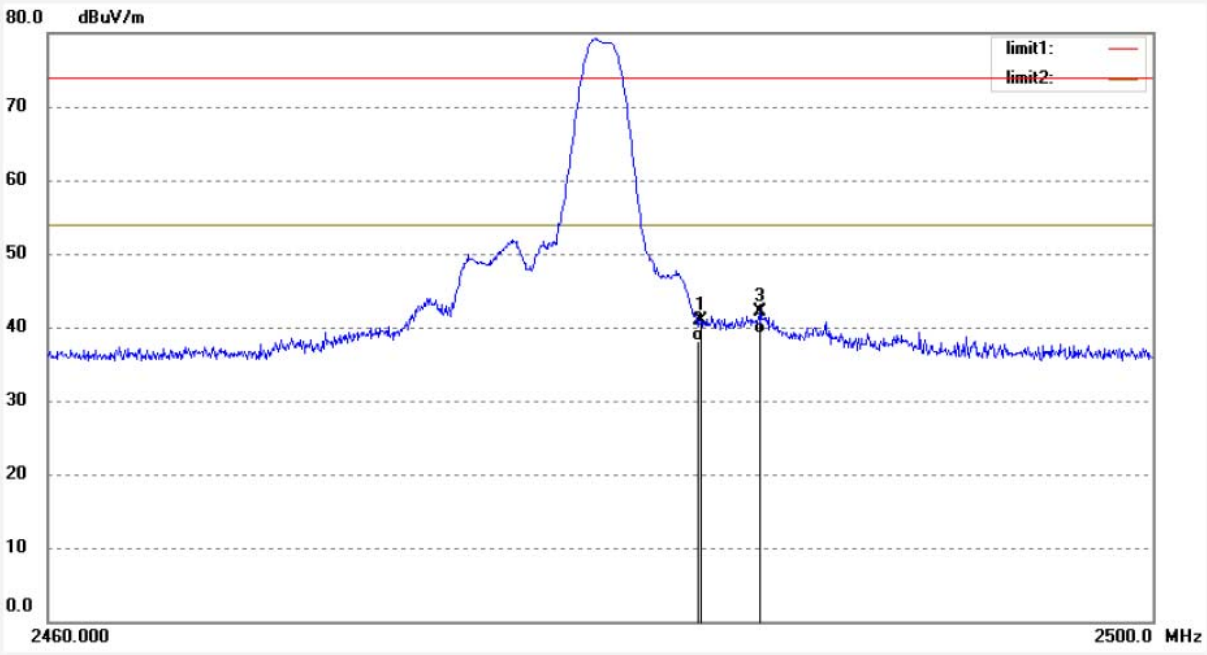
Job No.: alen #1506
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth speaker
Mode: TX 2480MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Vertical
Power Source: DC 5V
Date: 13/09/30/
Time: 8/56/44
Engineer Signature:
Distance: 3m

Note: Report No.:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	47.35	-6.54	40.81	74.00	-33.19	peak			
2	2483.500	44.57	-6.54	38.03	54.00	-15.97	AVG			
3	2485.720	48.57	-6.54	42.03	74.00	-31.97	peak			
4	2485.720	45.71	-6.54	39.17	54.00	-14.83	AVG			

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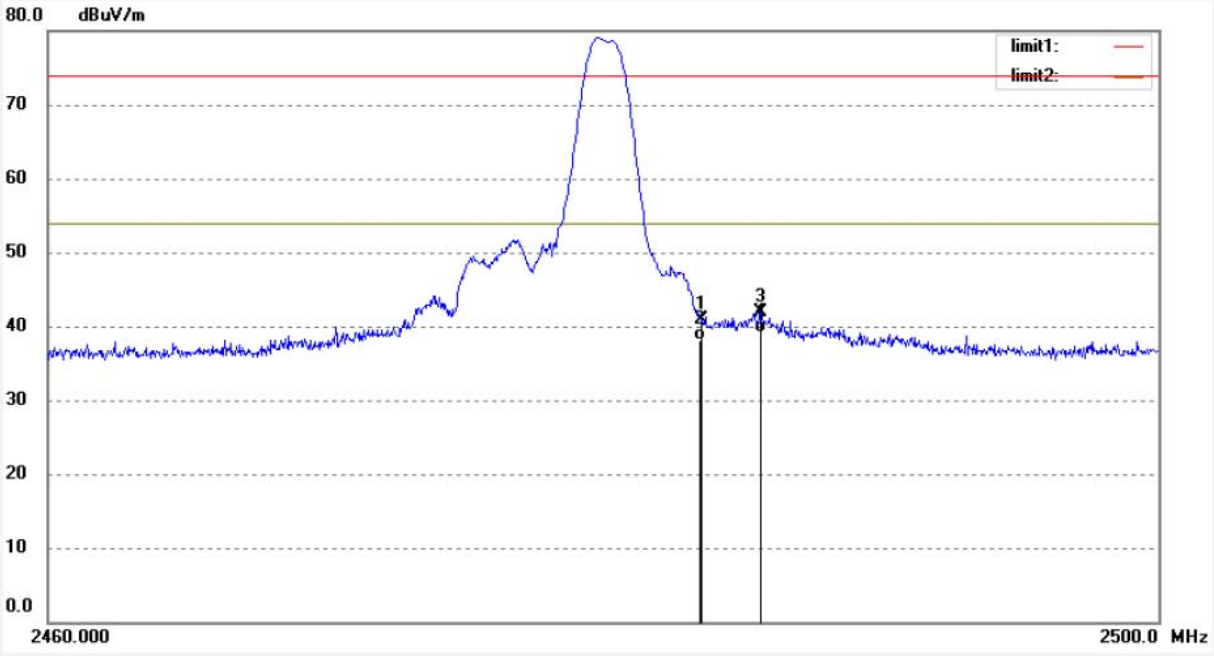
Job No.: alen #1507
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth speaker
Mode: TX 2480MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Horizontal
Power Source: DC 5V
Date: 13/09/30/
Time: 8/57/45
Engineer Signature:
Distance: 3m

Note: Report No.:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	47.39	-6.54	40.85	74.00	-33.15	peak			
2	2483.500	44.56	-6.54	38.02	54.00	-15.98	AVG			
3	2485.640	48.44	-6.54	41.90	74.00	-32.10	peak			
4	2485.640	45.67	-6.54	39.13	54.00	-14.87	AVG			

Hopping mode

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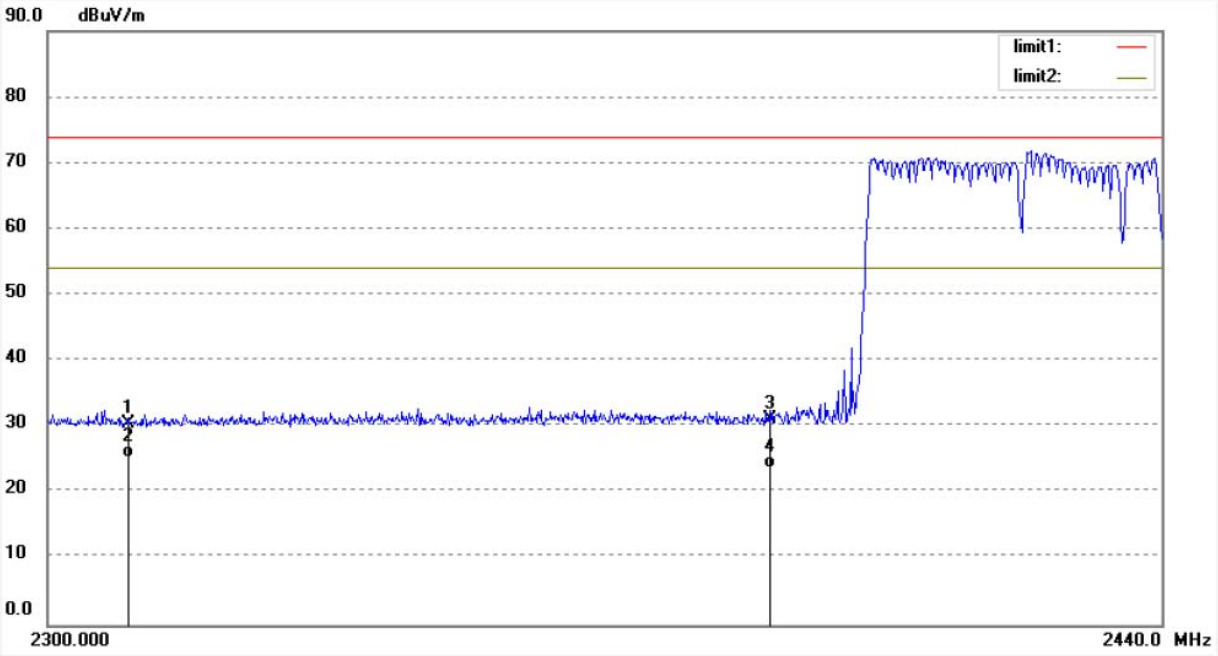
Job No.: star #5160	Polarization: Vertical
Standard: FCC PK	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/00/29
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	38.37	-7.81	30.56	74.00	-43.44	peak			
2	2310.000	33.20	-7.81	25.39	54.00	-28.61	AVG			
3	2390.000	38.74	-7.53	31.21	74.00	-42.79	peak			
4	2390.000	31.30	-7.53	23.77	54.00	-30.23	AVG			

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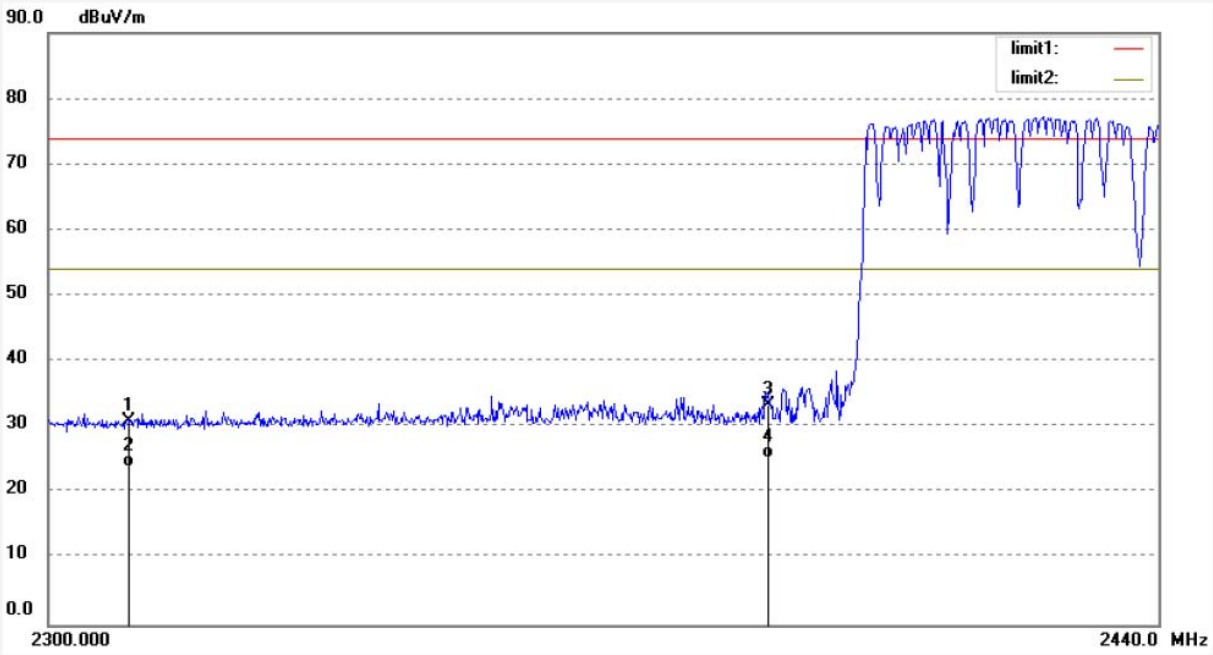
Job No.: star #5161	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 5V
Test item: Radiation Test	Date: 13/09/30/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/04/17
EUT: Bluetooth speaker	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: SP-21BT	
Manufacturer: Daza	

Note: Report No.:ATE20132076



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	38.85	-7.81	31.04	74.00	-42.96	peak			
2	2310.000	31.83	-7.81	24.02	54.00	-29.98	AVG			
3	2390.000	40.86	-7.53	33.33	74.00	-40.67	peak			
4	2390.000	32.90	-7.53	25.37	54.00	-28.63	AVG			

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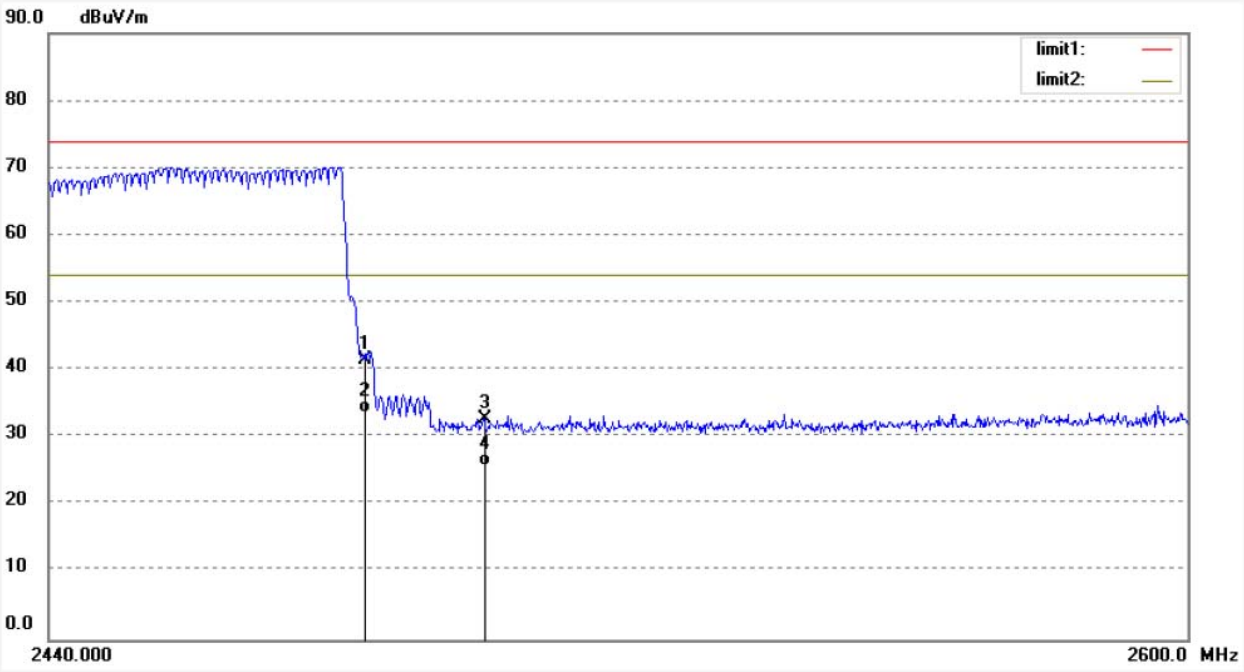
Job No.: star #5166
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: Bluetooth speaker
Mode: TX 2480MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Vertical
Power Source: DC 5V
Date: 13/09/30/
Time: 11/28/03
Engineer Signature:
Distance: 3m

Note: Report No.:ATE20132076



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	48.96	-7.37	41.59	74.00	-32.41	peak			
2	2483.500	41.02	-7.37	33.65	54.00	-20.35	AVG			
3	2500.000	40.13	-7.40	32.73	74.00	-41.27	peak			
4	2500.000	33.20	-7.40	25.80	54.00	-28.20	AVG			

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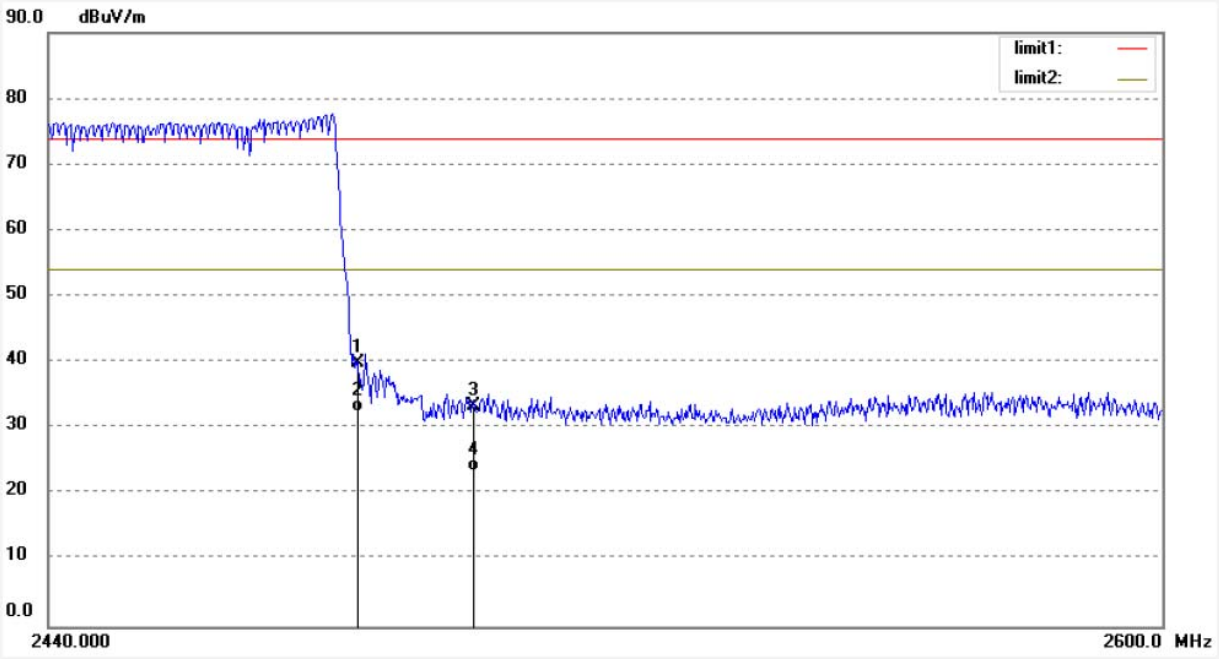
Job No.: star #5167
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: Bluetooth speaker
Mode: TX 2480MHz
Model: SP-21BT
Manufacturer: Daza

Polarization: Horizontal
Power Source: DC 5V
Date: 13/09/30/
Time: 11/35/33
Engineer Signature:
Distance: 3m

Note: Report No.:ATE20132076

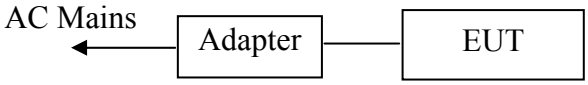


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	47.35	-7.37	39.98	74.00	-34.02	peak			
2	2483.500	39.79	-7.37	32.42	54.00	-21.58	AVG			
3	2500.000	40.85	-7.40	33.45	74.00	-40.55	peak			
4	2500.000	31.00	-7.40	23.60	54.00	-30.40	AVG			

12. AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

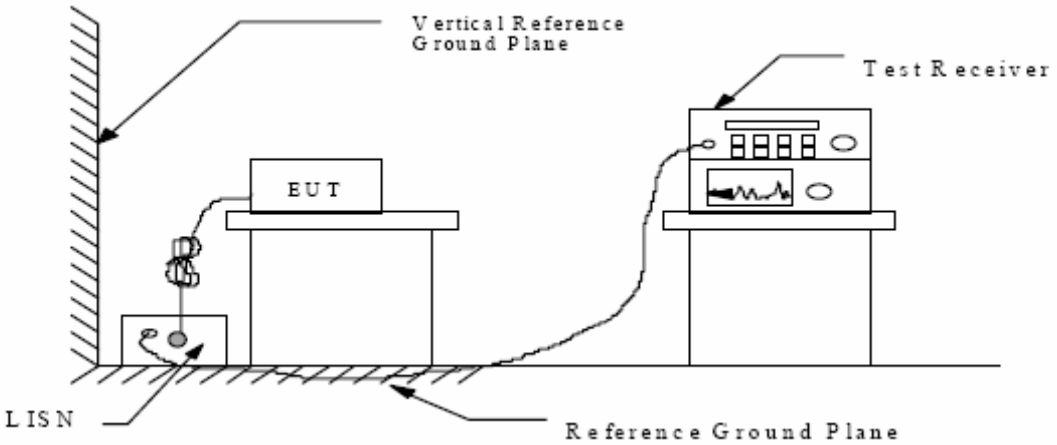
12.1. Block Diagram of Test Setup

12.1.1. Block diagram of connection between the EUT and simulators



(EUT: Bluetooth speaker)

12.1.2. Shielding Room Test Setup Diagram



(EUT: Bluetooth speaker)

12.2. The Emission Limit

12.2.1. Conducted Emission Measurement Limits According to Section 15.207(a)

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

* Decreases with the logarithm of the frequency.

12.3.Configuration of EUT on Measurement

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

12.3.1. Bluetooth speaker (EUT)

Model Number	:	SP-21BT
Serial Number	:	N/A
Manufacturer	:	Daza Electronics Company

12.4.Operating Condition of EUT

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

12.4.2.Turn on the power of all equipment.

12.4.3.Let the EUT work in TX (Operation) mode 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 C63.4- 2009 on Conducted Emission Measurement.

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

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

12.6.Power Line Conducted Emission Measurement Results

PASS.

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

Date of Test:	September 26, 2013	Temperature:	25°C
EUT:	Bluetooth speaker	Humidity:	50%
Model No.:	SP-21BT	Power Supply:	AC 120V/60HZ
Test Mode:	Charging	Test Engineer:	Rickey

Frequency (MHz)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector	Line
0.496827	49.60	56	-6.5	QP	Neutral
0.548969	45.30	56	-10.7	QP	
1.181465	40.10	56	-15.9	QP	
5.154195	37.80	60	-22.2	QP	
0.551165	37.90	46	-8.1	AV	
1.733234	33.40	46	-12.6	AV	
5.582581	31.80	50	-18.2	AV	
0.542434	45.40	56	-10.6	QP	Live
1.239440	38.40	56	-17.6	QP	
5.279139	35.40	60	-24.6	QP	
0.544604	38.80	46	-7.2	AV	
1.754116	31.40	46	-14.6	AV	
5.195511	30.70	50	-19.3	AV	

Emissions attenuated more than 20 dB below the permissible value are not reported.
The spectral diagrams are attached as below.

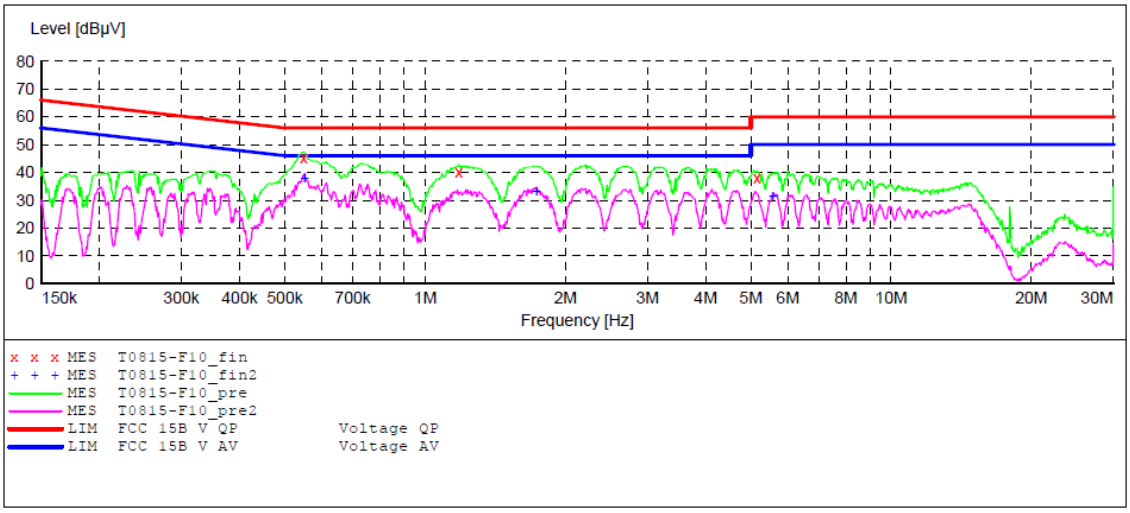
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

```
EUT:                Bluetooth speaker M/N:SP-21BT
Manufacturer:       Daza
Operating Condition: Charging
Test Site:          1#Shielding Room
Operator:           Alen
Test Specification: N 120V/60Hz
Comment:            Report No:ATE20132076
Start of Test:      9/26/2013 / 11:15:36AM
```

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: "T0815-F10_fin"

9/26/2013 11:18AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.548969	45.30	12.6	56	10.7	QP	N	GND
1.181465	40.10	12.5	56	15.9	QP	N	GND
5.154195	37.80	12.3	60	22.2	QP	N	GND

MEASUREMENT RESULT: "T0815-F10_fin2"

9/26/2013 11:18AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.551165	37.90	12.6	46	8.1	AV	N	GND
1.733234	33.40	12.4	46	12.6	AV	N	GND
5.582581	31.80	12.2	50	18.2	AV	N	GND

ACCURATE TECHNOLOGY CO.,LTD

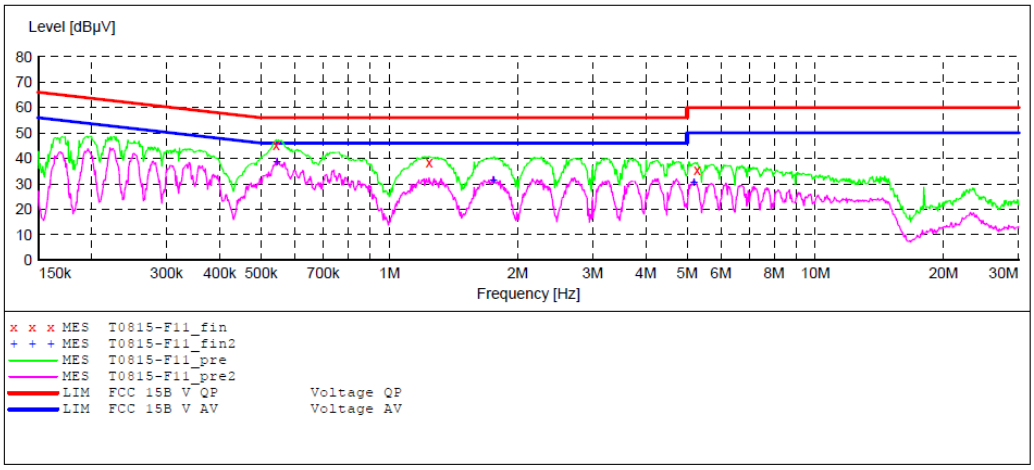
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth speaker M/N:SP-21BT
Manufacturer: Daza
Operating Condition: Charging
Test Site: 1#Shielding Room
Operator: Alen
Test Specification: L 120V/60Hz
Comment: Report No:ATE20132076
Start of Test: 9/26/2013 / 11:19:15AM

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

Short Description: _SUB_STD_VTERM2 1.70

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



MEASUREMENT RESULT: "T0815-F11_fin"

9/26/2013 11:21AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.542434	45.40	12.6	56	10.6	QP	L1	GND
1.239440	38.40	12.5	56	17.6	QP	L1	GND
5.279139	35.40	12.3	60	24.6	QP	L1	GND

MEASUREMENT RESULT: "T0815-F11_fin2"

9/26/2013 11:21AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.544604	38.80	12.6	46	7.2	AV	L1	GND
1.754116	31.40	12.4	46	14.6	AV	L1	GND
5.195511	30.70	12.3	50	19.3	AV	L1	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

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