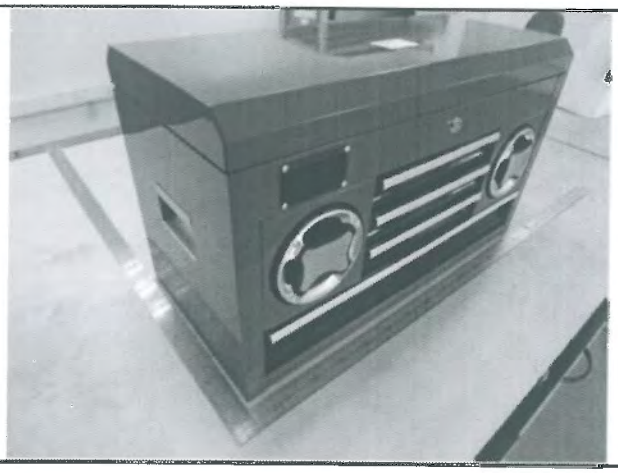
Prüfbericht-Nr.: *Test Report No.:*	**50055823 001**	**Auftrags-Nr.:** *Order No.:*	**154185091**	**Seite 1 von 75** *Page 1 of 75*
Kunden-Referenz-Nr.: *Client Reference No.:*	**414321**	**Auftragsdatum:** *Order date:*	**2016.07.28**	
Auftraggeber: *Client:*	**Meridian International Co., Ltd.** 1886 Laiyin Road, Songjiang, Shanghai, China			
Prüfgegenstand: *Test item:*	**26" (66 cm) 2-IN-1 BLUETOOTH® SPEAKER CHEST & CABINET COMBO**			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	**326600** **FCC ID: 2AI7L-326600** **IC: 21626-326600**			
Auftrags-Inhalt: *Order content:*	**Complete test**			
Prüfgrundlage: *Test specification:*	**FCC CFR47 Part 15, Subpart C Section 15.247** **RSS-Gen Issue 4, November 2014** **RSS-247 Issue 1, May 2015** **ANSI C63.10: 2013** **KDB 558074 D01 DTS Meas Guidance v03r05**			
Wareneingangsdatum: *Date of receipt:*	**2016.08.07**			
Prüfmuster-Nr.: *Test sample No.:*	**A000405477-001**			
Prüfzeitraum: *Testing period:*	**2016.08.12 to 2016.08.29**			
Ort der Prüfung: *Place of testing:*	**MRT Technology(Suzhou) Co., Ltd.**			
Prüflaboratorium: *Testing laboratory:*	**TÜV Rheinland (Shanghai) Co., Ltd.**			
Prüfergebnis*: *Test result*:*	**Pass**			



geprüft von / *tested by:*

2016.09.12	Tino Pan / Project Engineer	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

kontrolliert von / *reviewed by:*

2016.09.12	Shi Li / Section Manager	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other*

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: ***Pass***

5.1.2 PEAK OUTPUT POWER
RESULT: ***Pass***

5.1.3 20 DB BANDWIDTH AND 99% BANDWIDTH
RESULT: ***Pass***

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED
RESULT: ***Pass***

5.1.5 SPURIOUS EMISSION
RESULT: ***Pass***

5.1.6 FREQUENCY SEPARATION
RESULT: ***Pass***

5.1.7 NUMBER OF HOPPING FREQUENCY
RESULT: ***Pass***

5.1.8 TIME OF OCCUPANCY
RESULT: ***Pass***

5.1.9 CONDUCTED EMISSIONS
RESULT: ***Pass***

5.1.10 RADIATED EMISSIONS
RESULT: ***Pass***

Contents

1. General Remarks

1.1 Complementary Materials

None.

2. Test Sites

2.1 Test Facilities

MRT Technology (Suzhou) Co., Ltd.

D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China

The used test equipment is in accordance with CISPR 16 for measurement of radio interference.

The Federal Communications Commission has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance with the requirements of section 2.948 of the FCC rules. The description of the test facility is listed under FCC registration number 809388.

The Industry Canada has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance. The description of the test facility is listed under chambers filing number 11384A.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Conducted Emissions

Instrument	Manufacturer	Type No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	1 year	2016.11.03
Two-Line V-Network	R&S	ENV216	1 year	2016.11.03
Two-Line V-Network	R&S	ENV216	1 year	2016.11.03
Temperature/Humidity Meter	Ouleinuo	N/A	1 year	2016.11.20

Radiated Emissions

Instrument	Manufacturer	Type No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	E4447A	1 year	2016.12.08
EMI Test Receiver	R&S	ESR7	1 year	2016.11.03
Preamplifier	Agilent	83017A	1 year	2017.03.29
Preamplifier	Schwarzbeck	BBV9721	1 year	2017.04.16
Loop Antenna	Schwarzbeck	FMZB1519	1 year	2016.11.07
TRILOG Antenna	Schwarzbeck	VULB9162	1 year	2016.11.07
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	1 year	2016.11.07
Broadband Horn Antenna	Schwarzbeck	BBHA9170	1 year	2017.01.05
Temperature/Humidity Meter	Ouleinuo	N/A	1 year	2016.11.20

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	1 year	2016.05.08
USB Wideband Power Sensor	Boonton	55006	1 year	2016.05.08
Temperature/Humidity Meter	Ouleinuo	N/A	1 year	2016.11.20

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

Table 2: Measurement Uncertainty

Measurement Type	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Radiated Emission	30MHz - 1GHz	±5.34dB
	> 1GHz	±5.40dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a 26" (66 cm) 2-IN-1 BLUETOOTH® SPEAKER CHEST & CABINET COMBO supports Bluetooth Classic Only.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Kind of Equipment	26" (66 cm) 2-IN-1 BLUETOOTH® SPEAKER CHEST & CABINET COMBO
Type Designation	326600
Bluetooth version	Bluetooth 2.1+ EDR
Operating Frequency band	2402 – 2480MHz
Channel separation	1MHz
Modulation	GFSK, 8DPSK, $\pi/4$-DQPSK
Antenna Type	PCB Antenna
Antenna Gain	0 dBi
Extreme Temperature Range	0~+50℃
Operation Voltage	DC 3.6-4.2V

3.3 Independent Operation Modes

The basic operation modes are:

A. On
   1. Bluetooth mode (Classic mode)
      a. Transmitting
         i. Low Channel
         ii. Middle Channel
         iii. High Channel
      b. Receiving
B. Standby
C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- Circuit Diagram
- PCB Layout
- Instruction Manual
- Photo Document
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Description	Manufacturer	Part No.	S/N
Laptop	DELL	PP11L	QDS-BRCM1017

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

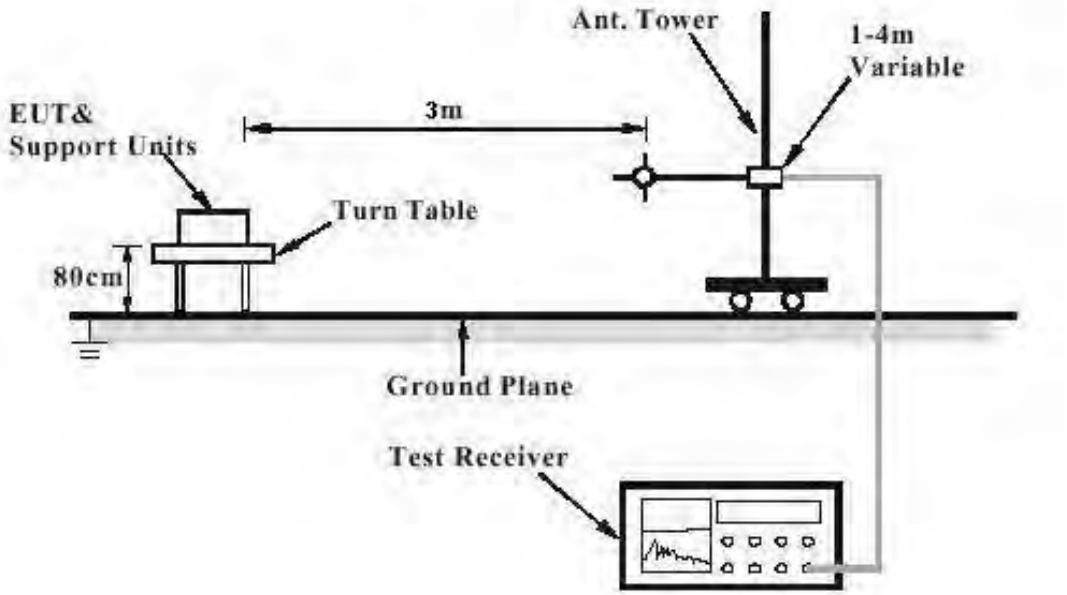


Diagram of Measurement Equipment Configuration for Conduction Measurement

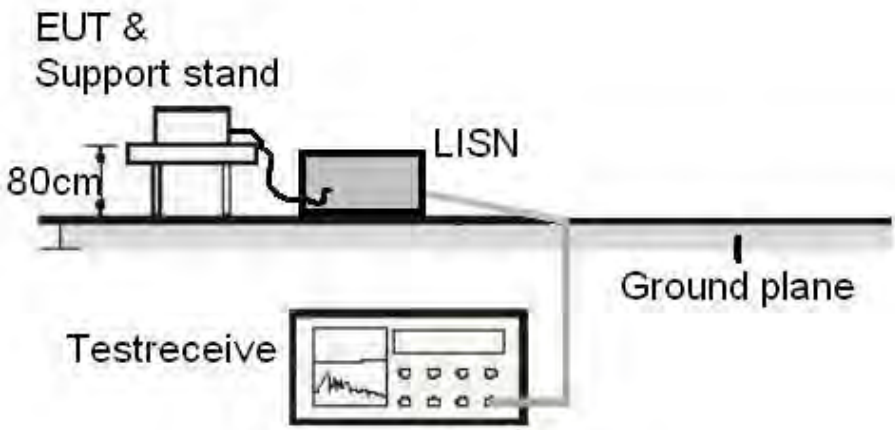
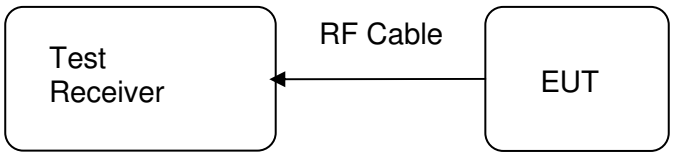


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen 6.3 & 8.3
Limit		The use of antennas with directional gains that do not exceed 6dBi

According to the manufacturer declared, the EUT has one PCB antenna, the directional gain of antenna is 0 dBi the PCB antenna is designed with permanent attachment and no consideration of replacement.Therefore the EUT is considered sufficient to comply with the provision.

Table 3: Antenna Requirement

FCC 15.203 – Antenna Requirement 1		
Requirement:	No antenna other than that furnished by the responsible party shall be used with the device. ☉ Use of a permanently attached antenna, or ○ Use an antenna that uses a unique coupling to the intentional radiator.	
Results:	Antenna type:	PCB Antenna
Verdict:	PASS	

FCC 15.204 – Antenna Requirement 2	
Requirement:	An intentional radiator may be operated only with the antenna with which it is authorized. If an antenna is marketed with the intentional radiator, it shall be of a type which is authorized with the intentional radiator.
Results:	Only one type intergrated antenna can be used.
Verdict:	PASS

RSS-Gen 6.3 – External Control	
Requirement:	The device shall not have any external controls accessible to the user that enable it to be adjusted, selected or programmed to operate in violation of the limits prescribed in the applicable RSS.
Results:	The device does not have any transmitter external controls accessible to the user that can be adjusted and operated in violation of the limits of this standard.
Verdict:	PASS

RSS-Gen 8.3 – Antenna Requirement		
Requirement:	When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on measurement or on data from the antenna manufacture.	
Results:	a) Aennta type:	PCB Antenna
	b) Manufacture:	N/A
	c) Model No.:	N/A
	d) Gain with reference to an isotropic radiator:	0 dBi
Verdict:	PASS	

5.1.2 Peak Output Power

RESULT: **Pass**

Test date	:	2016-08-12
Test standard	:	FCC Part 15.247(b)(1) Clause 5.4(2) of RSS-247 Issue 1 May 2015
Basic standard	:	ANSI C63.10: 2013 Clause 9.1 of KDB 558074 D01 v03r05
Limit	:	125mW
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1.a
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

Table 4: Test result of Peak Output Power of Classic Buletooth （Hopping-DH5 ）

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)
Low Channel	**2402**	**-0.113**	21
Middle Channel	2441	-0.596	21
High Channel	2480	-1.227	21

Table 5: Test result of Peak Output Power of Classic Bluetooth (Hopping-2DH5)

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)
Low Channel	2402	-1.709	21
Middle Channel	2441	-2.103	21
High Channel	2480	-2.783	21

Table 6: Test result of Peak Output Power of Classic Bluetooth (Hopping-3DH5)

Channel	Channel Frequency (MHz)	Peak Output Power (dBm)	Limit (dBm)
Low Channel	2402	-1.213	21
Middle Channel	2441	-1.591	21
High Channel	2480	-2.256	21

Test Plot of Peak Output Power (DH5)

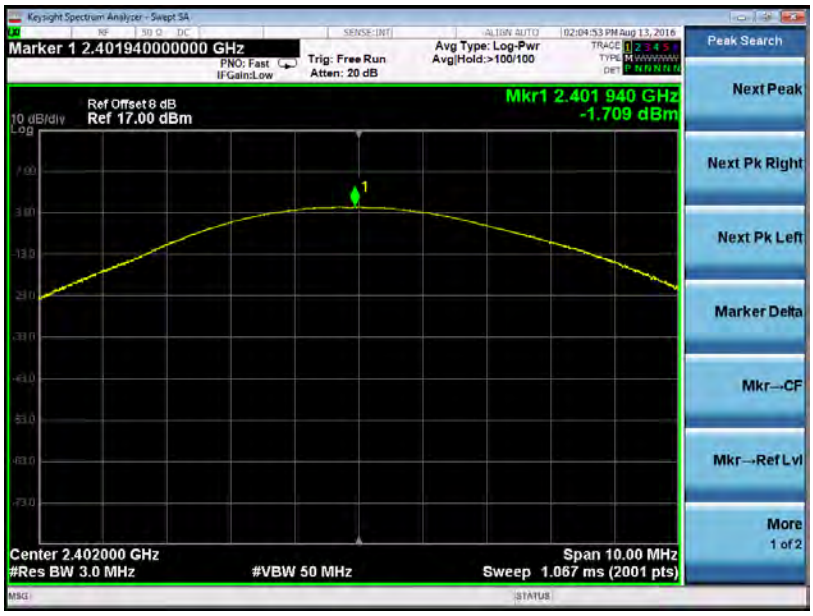
Low Channel

Middle Channel

High Channel

Test Plot of Peak Output Power (2DH5)

Low Channel



Middle Channel

High Channel

Test Plot of Peak Output Power (3DH5)

Low Channel

Middle Channel

High Channel

5.1.3 20dB Bandwidth and 99% Bandwidth

RESULT: **Pass**

Date of testing	:	2016-08-15
Test standard	:	FCC Part 15.247(a)(1) Clause 5.4(2) of RSS-247 Issue 1 May 2015
Test procedure	:	ANSI C63.10: 2013 Clause 8 of KDB 558074 D01 v03r05 Clause 6.6 of RSS-Gen issue 4 November 2014
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1.a
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

Table 7: Test result of 20dB Bandwidth （DH5 ）

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Low Channel	2402	946.9	957.87
Mid Channel	2441	946.3	962.66
High Channel	2480	948.1	961.84

Table 8: Test result of 20dB Bandwidth (2DH5)

Channel	Channel Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2402	1.255	1.1689
Mid Channel	2441	1.260	1.1688
High Channel	2480	1.254	1.1675

Table 9: Test result of 20dB Bandwidth (3DH5)

Channel	Channel Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2402	1.265	1.1758
Mid Channel	2441	1.276	1.1772
High Channel	2480	1.265	1.1741

For details refer to following test plot.

Test Plot of Bandwidth measured 20dB Bandwidth (DH5)

Low Channel

Middle Channel

High Channel

Test Plot of Bandwidth measured 20dB Bandwidth (2DH5)

Low Channel

Middle Channel

High Channel

Test Plot of Bandwidth measured 20dB Bandwidth (3DH5)

Low Channel

Middle Channel

High Channel

5.1.4 Conducted Spurious Emissions measured

RESULT: **Pass**

Date of testing	:	2016-08-16
Test standard	:	FCC part 15.247(d) Clause 5.5 of RSS-247 Issue 1 May 2015
Basic standard	:	ANSI C63.10: 2013 Clause 11&12 of KDB 558074 D01 v03r05
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power);
Kind of test site	:	Shielded room

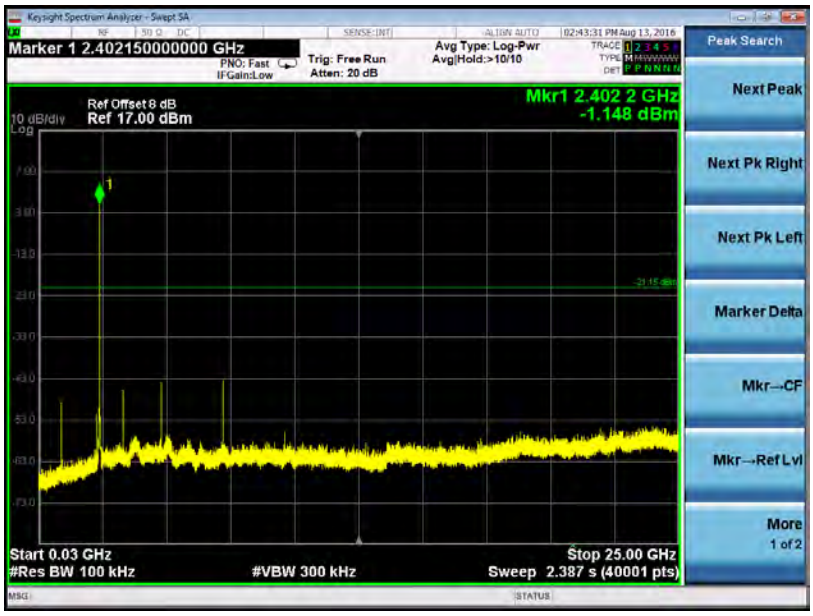
Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A.1.a
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

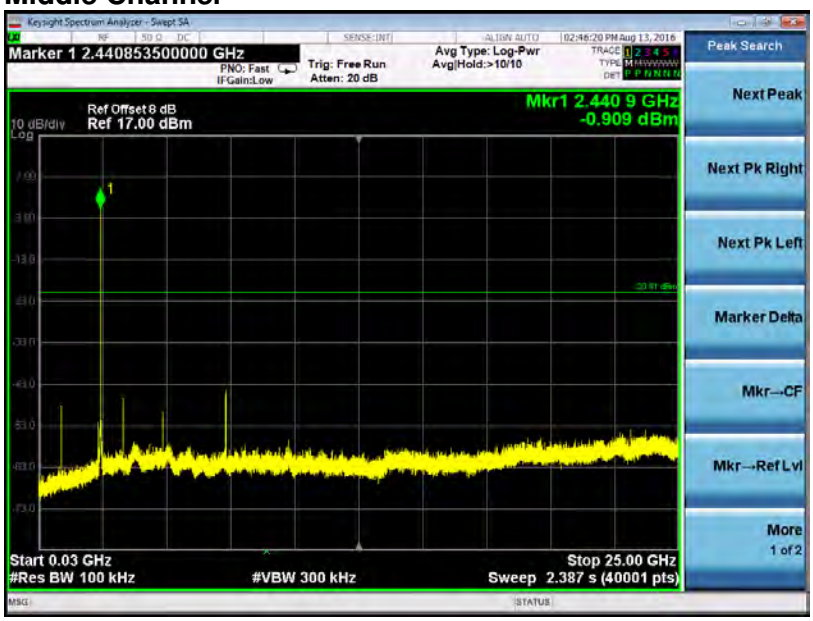
For details refer to following test plot.

Test Plot of Conducted spurious emissions measured in 100kHz Bandwidth of Classic Bluetooth （DH5）

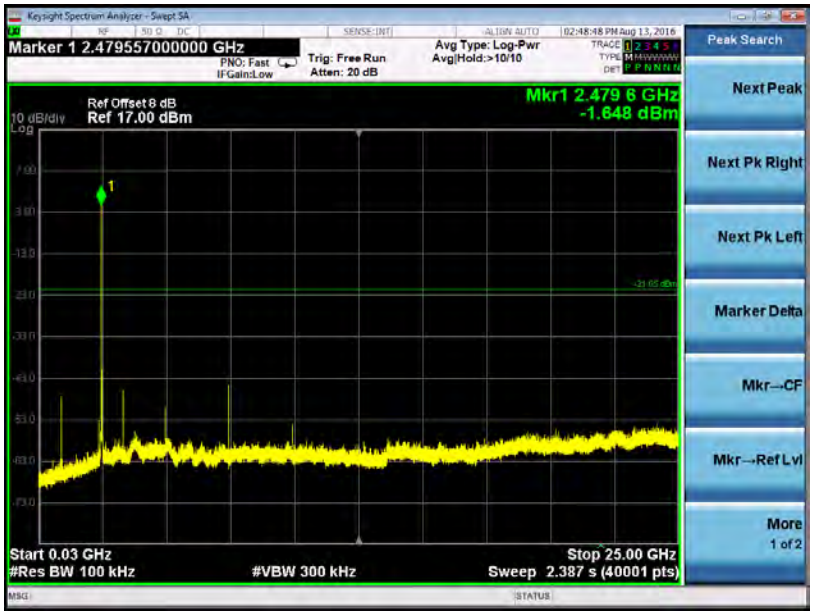
Low Channel



Middle Channel

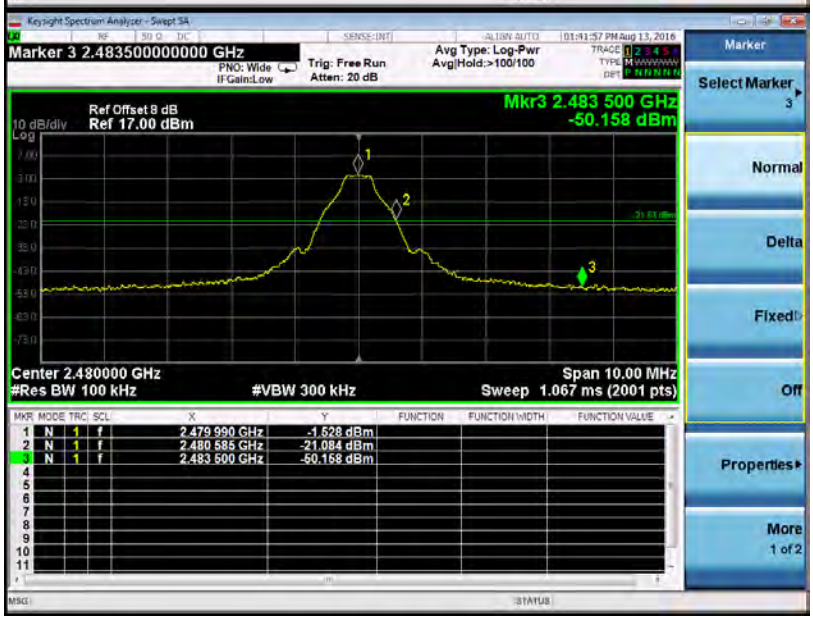


High Channel

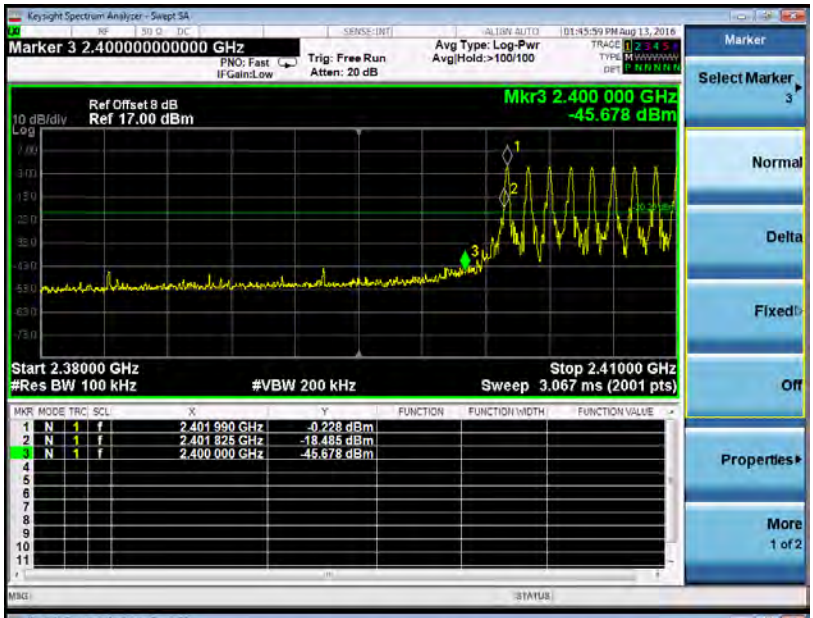


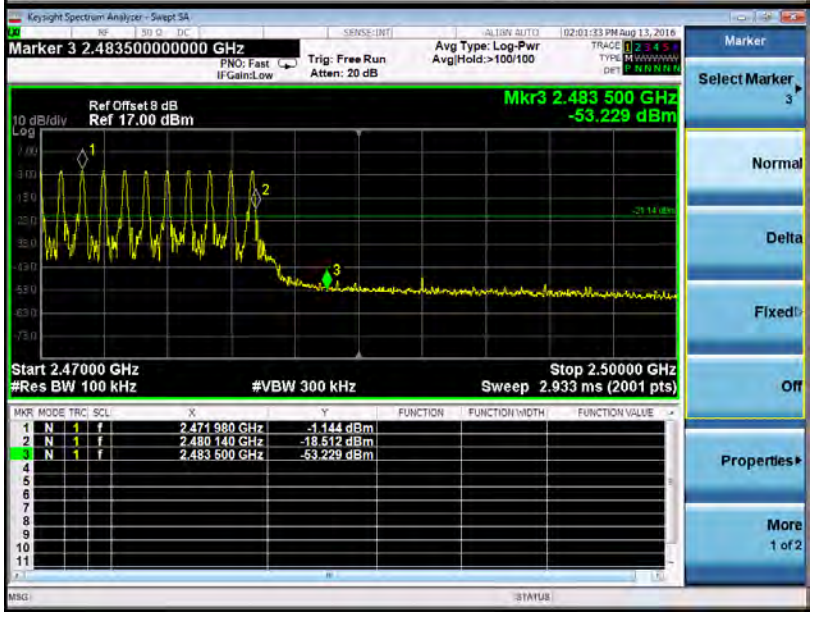
Band Edge


Keysight Spectrum Analyzer - Swept SA
Marker 3 2.400000000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
01:31:16 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Log
Mkr3 2.400 000 0 GHz
-44.708 dBm
Center 2.402000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 5.000 MHz
Sweep 1.067 ms (2001 pts)
1 N 1 f 2.402 045 0 GHz -0.844 dBm
2 N 1 f 2.401 392 5 GHz -20.827 dBm
3 N 1 f 2.400 00 GHz -44.708 dBm
Marker
Select Marker
3
Normal
Delta
Fixed
Off
Properties
More
1 of 2


Keysight Spectrum Analyzer - Swept SA
Marker 3 2.483500000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
01:41:57 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Log
Mkr3 2.483 500 GHz
-50.158 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
1 N 1 f 2.479 990 GHz -1.528 dBm
2 N 1 f 2.480 585 GHz -21.084 dBm
3 N 1 f 2.483 500 GHz -50.158 dBm
Marker
Select Marker
3
Normal
Delta
Fixed
Off
Properties
More
1 of 2

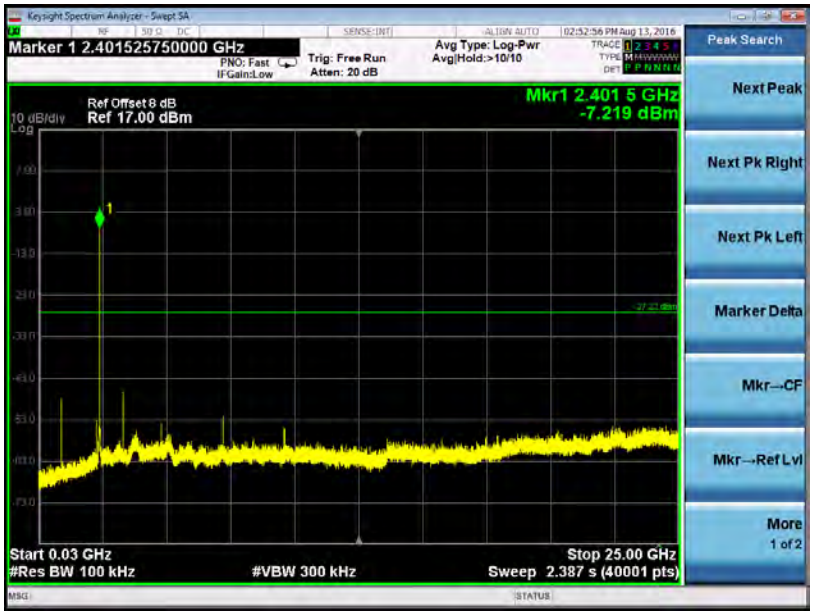
Hooping Band Edge



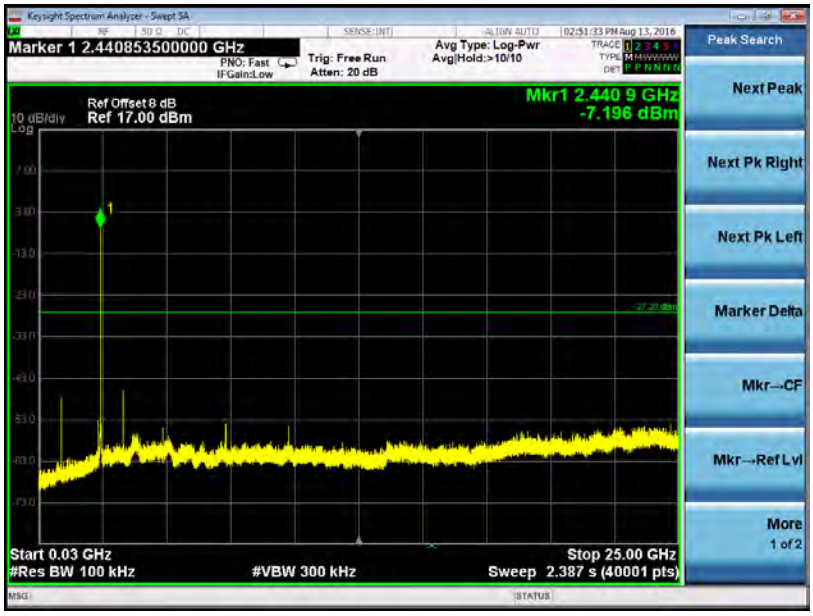


Test Plot of Conducted spurious emissions measured in 100kHz Bandwidth of Classic Bluetooth （2DH5）

Low Channel

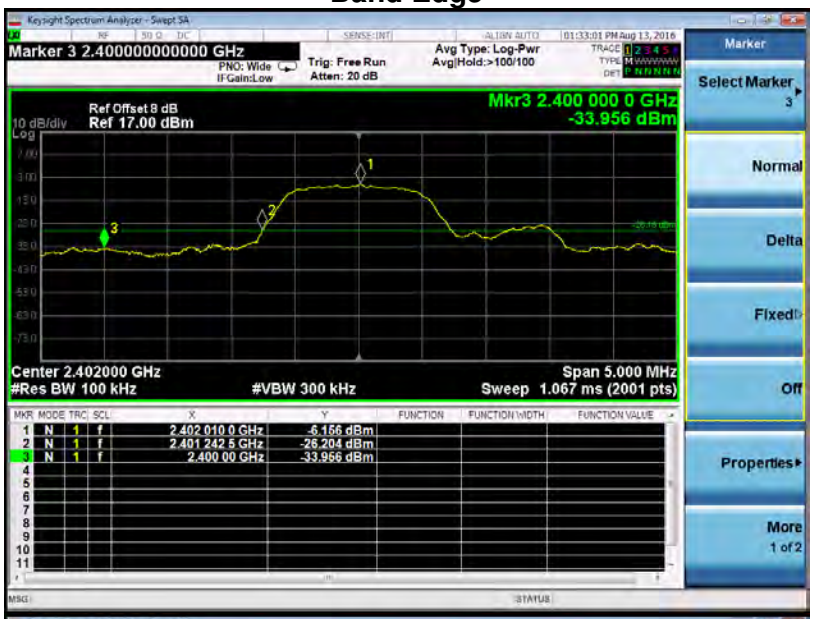


Middle Channel



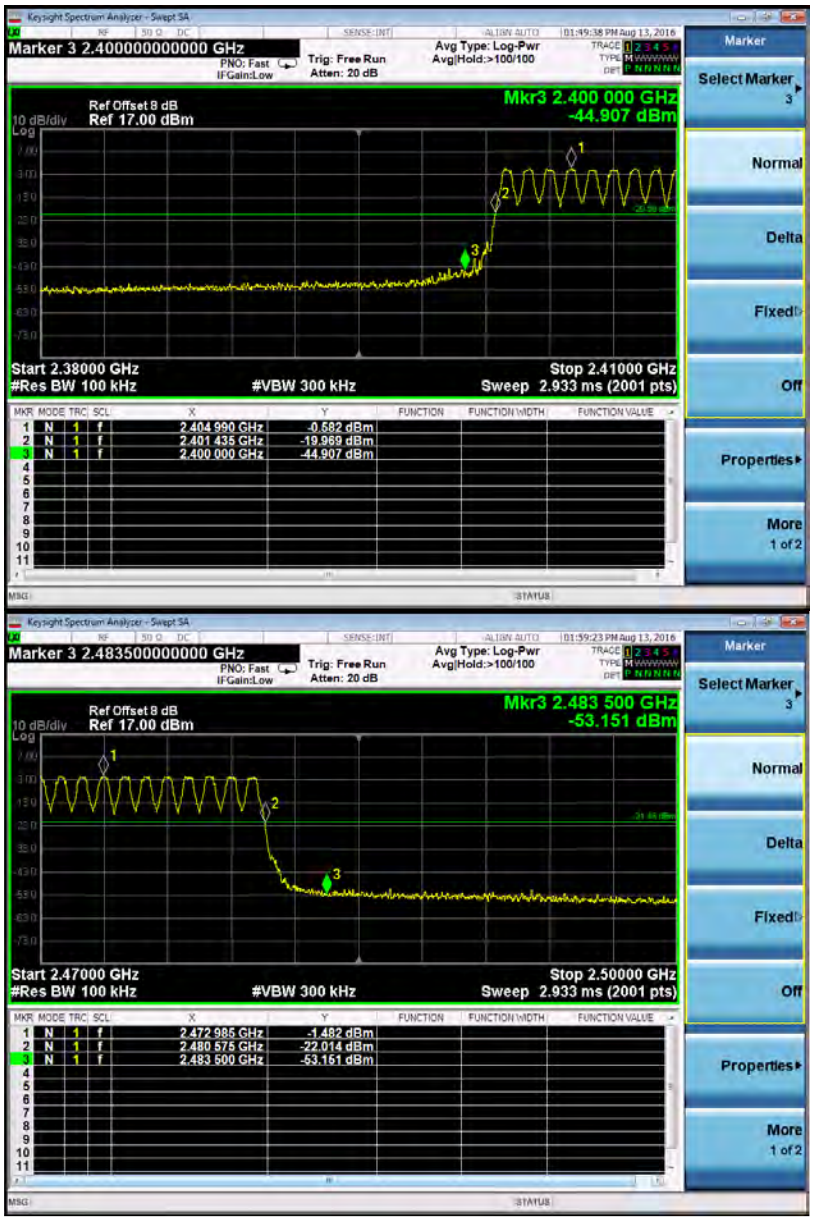
High Channel

Band Edge


Keysight Spectrum Analyzer - Swept SA
Marker 3 2.400000000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
01:33:01 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Log
Mkr3 2.400 000 0 GHz
-33.956 dBm
Center 2.402000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 5.000 MHz
Sweep 1.067 ms (2001 pts)
1 N 1 f 2.402 010 0 GHz -6.156 dBm
2 N 1 f 2.401 242 5 GHz -26.204 dBm
3 N 1 f 2.400 00 GHz -33.956 dBm
Marker
Select Marker
3
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS

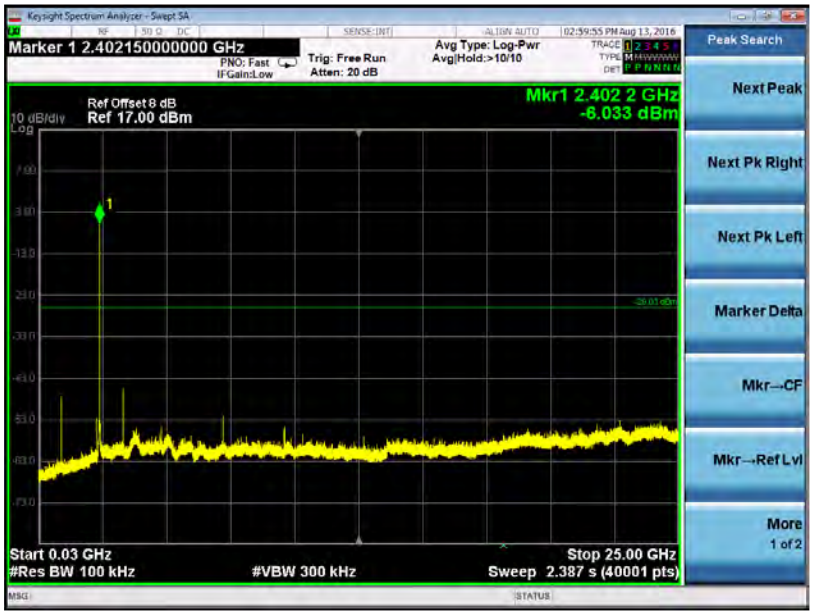

Keysight Spectrum Analyzer - Swept SA
Marker 3 2.483500000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
01:39:39 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Log
Mkr3 2.483 500 GHz
-44.625 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
1 N 1 f 2.480 020 GHz -7.080 dBm
2 N 1 f 2.480 725 GHz -27.022 dBm
3 N 1 f 2.483 500 GHz -44.625 dBm
Marker
Select Marker
3
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS

Hooping Band Edge

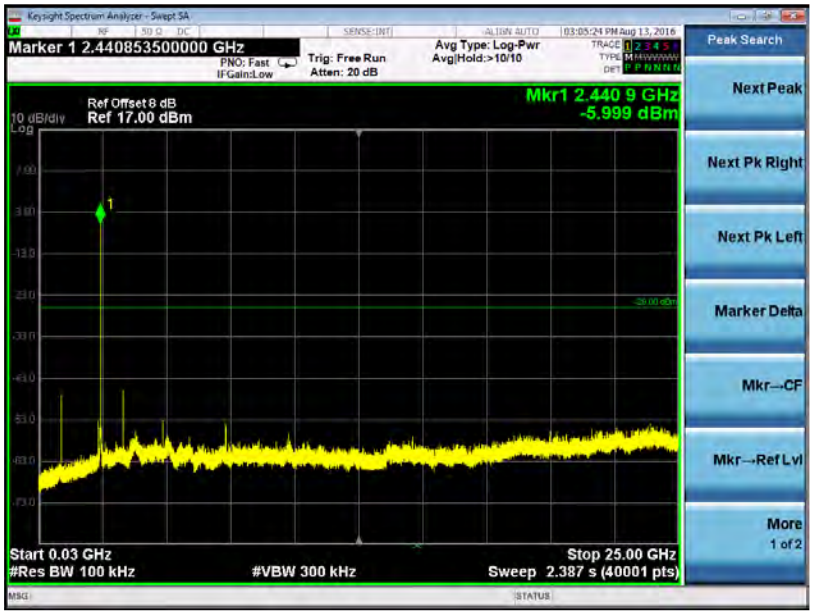


Test Plot of Conducted spurious emissions measured in 100kHz Bandwidth of Classic Bluetooth （3DH5）

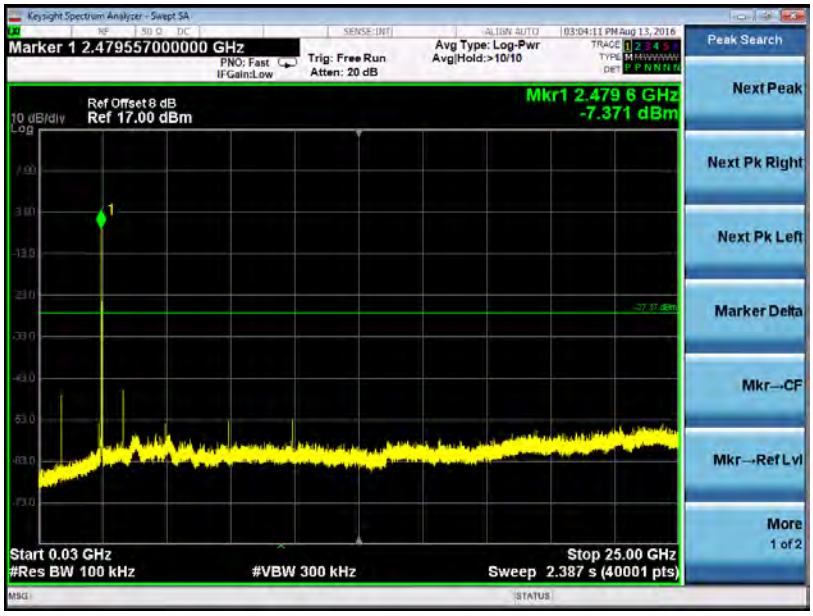
Low Channel



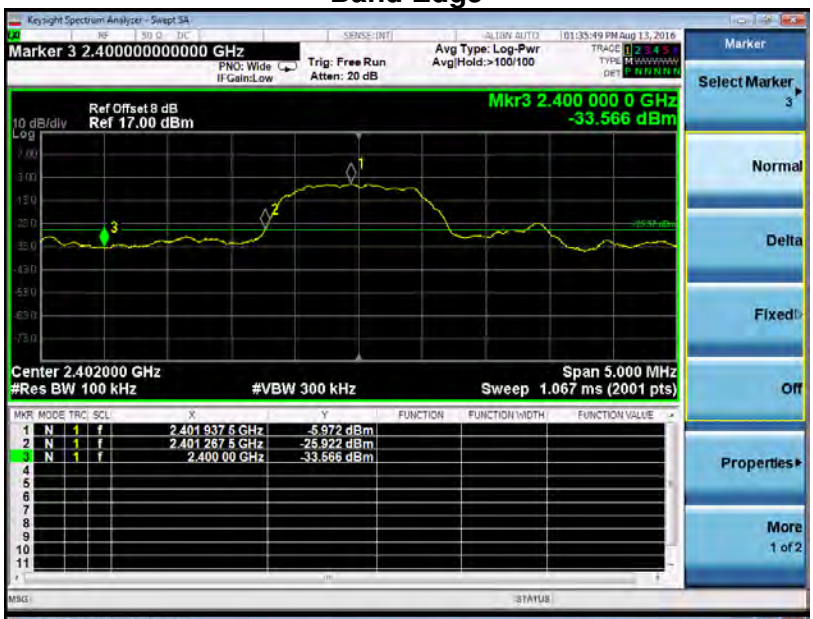
Middle Channel



High Channel



Band Edge


Keysight Spectrum Analyzer - Swept SA
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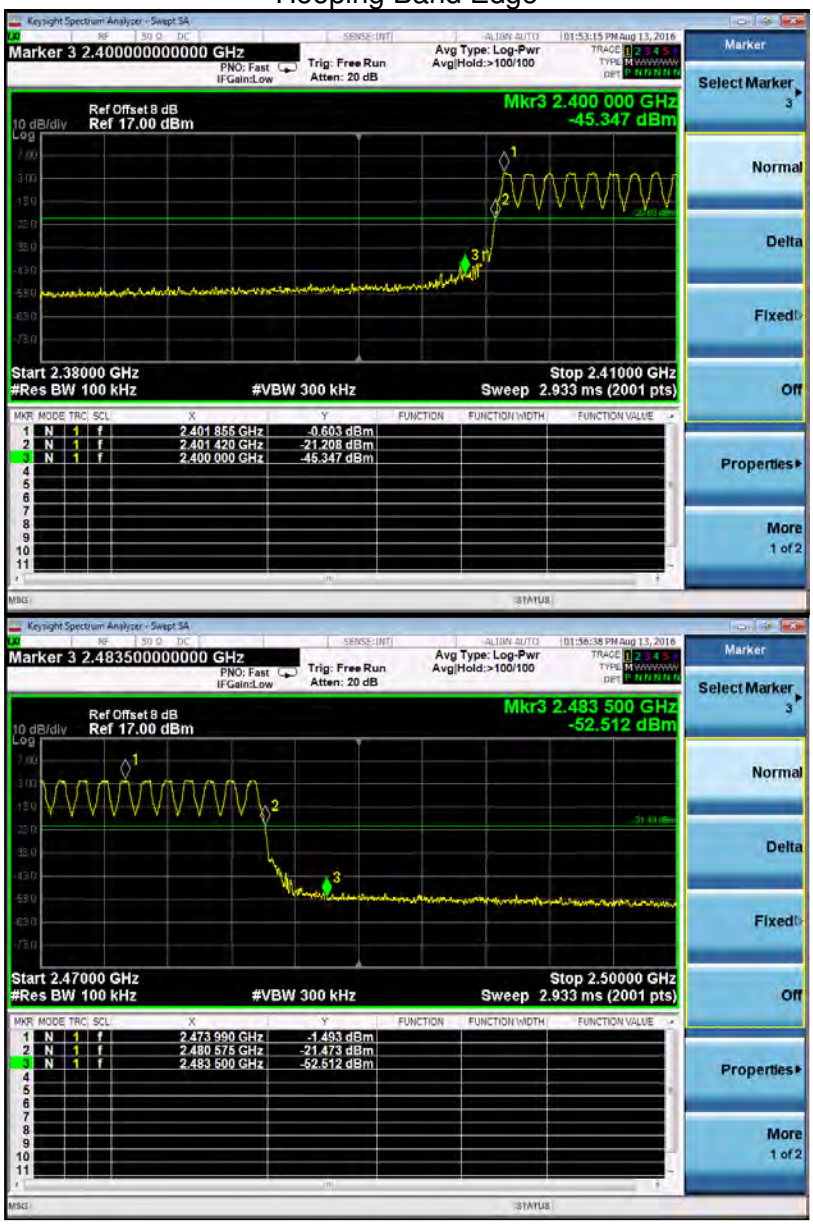
Avg Type: Log-Pwr
Avg|Hold:>100/100
01:35:49 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Log
Mkr3 2.400 000 0 GHz
-33.566 dBm
Center 2.402000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 5.000 MHz
Sweep 1.067 ms (2001 pts)
1 N 1 f 2.401 937 5 GHz -5.972 dBm
2 N 1 f 2.401 267 5 GHz -25.922 dBm
3 N 1 f 2.400 00 GHz -33.566 dBm
Marker
Select Marker
3
Normal
Delta
Fixed
Off
Properties
More
1 of 2


Keysight Spectrum Analyzer - Swept SA
Marker 3 2.483500000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
01:38:17 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Log
Mkr3 2.483 500 GHz
-38.267 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
1 N 1 f 2.479 945 GHz -6.768 dBm
2 N 1 f 2.480 725 GHz -26.946 dBm
3 N 1 f 2.483 500 GHz -38.267 dBm
Marker
Select Marker
3
Normal
Delta
Fixed
Off
Properties
More
1 of 2

Hooping Band Edge



5.1.5 Spurious Emission

RESULT: **Pass**

Date of testing	:	2016-08-17
Test standard	:	FCC Part 15.247(d) Clause 5.5 of RSS-247 Issue 1 May 2015 ANSI C63.10: 2013 Clause 11&12 of KDB 558074 D01 v03r05
Test procedure	:	FCC Part 15.247(d) FCC Part 15.209(a) Clause 5.5 of RSS-247 Issue 1 May 2015 Clause 8.9 of RSS-Gen Issue 4 November 2014
Limits	:	FCC Part 15.247(d) Clause 5.5 of RSS-247 Issue 1 May 2015
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A.1
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

Table 10: Test result of Spurious Emission of transmitting of Bluetooth (DH5)

Channel	Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Polar
Low	70.255	27.692	16.848	-12.308	40.000	10.844	H
	145.430	31.295	21.844	-12.205	43.500	9.451	
	3992.000	36.220	36.705	-37.780	74.000	-0.485	
	4808.000	44.227	41.568	-29.773	74.000	2.660	
	6567.500	40.630	33.106	-33.370	74.000	7.524	
	7859.500	42.363	31.924	-31.637	74.000	10.440	
	145.430	21.964	12.513	-21.536	43.500	9.451	V
	346.220	33.368	17.573	-12.632	46.000	15.795	
	4060.000	36.001	36.105	-37.999	74.000	-0.104	
	4799.500	44.394	41.610	-29.606	74.000	2.784	
	6797.000	41.970	34.104	-32.030	74.000	7.867	
	7205.000	45.512	34.998	-28.488	74.000	10.513	
Middle	150.765	31.865	22.351	-11.635	43.500	9.514	H
	270.075	36.242	22.174	-9.758	46.000	14.068	
	4884.500	45.519	42.834	-28.481	74.000	2.685	
	7324.000	52.606	41.967	-21.394	74.000	10.639	
	7808.500	41.711	31.341	-32.289	74.000	10.370	
	8837.000	41.744	30.109	-32.256	74.000	11.635	
	134.760	21.708	11.977	-21.792	43.500	9.731	V
	197.810	20.595	8.358	-22.905	43.500	12.237	
	4884.500	48.665	45.980	-25.335	74.000	2.685	
	7324.000	55.032	44.393	-18.968	74.000	10.639	
	7324.560	51.598	40.964	-2.402	54.000	10.634	
	7885.000	42.645	32.217	-31.355	74.000	10.428	
	8675.500	42.792	31.580	-31.208	74.000	11.213	
High	134.760	31.961	22.230	-11.539	43.500	9.731	H
	186.655	34.914	23.395	-8.586	43.500	11.519	
	4961.000	44.399	41.728	-29.601	74.000	2.671	
	7443.000	51.350	40.611	-22.650	74.000	10.739	
	7800.000	41.879	31.594	-32.121	74.000	10.285	
	8862.500	42.078	30.495	-31.922	74.000	11.584	
	93.050	20.357	8.359	-23.143	43.500	11.998	V
	145.430	23.231	13.780	-20.269	43.500	9.451	
	4961.000	48.640	45.969	-25.360	74.000	2.671	
	7443.000	51.038	40.299	-22.962	74.000	10.739	
	8514.000	42.800	32.046	-31.200	74.000	10.755	
	9916.500	48.030	34.611	-25.970	74.000	13.419	

Notes:
1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported.
2. Due to the peak measure values also meet the average limit (54dBm), the average measurement is not tested based on technical judgment.

Table 11: Test result of Spurious Emission of transmitting of Buletooth (2DH5)

Channel	Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Polar
Low	145.430	32.804	23.353	-10.696	43.500	9.451	H
	270.560	36.383	22.308	-9.617	46.000	14.075	
	4799.500	47.311	44.527	-26.689	74.000	2.784	
	5386.000	37.076	33.919	-36.924	74.000	3.156	
	7205.000	48.396	37.882	-25.604	74.000	10.513	
	9610.500	45.849	33.316	-28.151	74.000	12.533	
	134.760	24.067	14.336	-19.433	43.500	9.731	V
	271.045	22.158	8.076	-23.842	46.000	14.082	
	4799.500	46.498	43.714	-27.502	74.000	2.784	
	5411.500	37.015	33.859	-36.985	74.000	3.156	
	7205.000	48.726	38.212	-25.274	74.000	10.513	
	9610.500	47.883	35.350	-26.117	74.000	12.533	
Middle	150.765	30.190	20.676	-13.310	43.500	9.514	H
	270.560	36.242	22.167	-9.758	46.000	14.075	
	4884.500	45.892	43.207	-28.108	74.000	2.685	
	7324.000	48.342	37.703	-25.658	74.000	10.639	
	7808.500	41.950	31.580	-32.050	74.000	10.370	
	9763.500	47.744	34.916	-26.256	74.000	12.828	
	145.430	25.095	15.644	-18.405	43.500	9.451	V
	404.420	24.686	7.869	-21.314	46.000	16.816	
	4884.500	45.140	42.455	-28.860	74.000	2.685	
	7324.000	48.866	38.227	-25.134	74.000	10.639	
	8599.000	42.296	31.256	-31.704	74.000	11.041	
	9763.500	47.763	34.935	-26.237	74.000	12.828	
High	69.770	31.959	20.992	-8.041	40.000	10.967	H
	302.570	40.851	26.209	-5.149	46.000	14.642	
	4961.000	47.194	44.523	-26.806	74.000	2.671	
	7443.000	44.971	34.232	-29.029	74.000	10.739	
	8718.000	42.603	31.177	-31.397	74.000	11.426	
	9916.500	46.302	32.883	-27.698	74.000	13.419	
	91.110	20.487	8.970	-23.013	43.500	11.517	V
	253.585	20.003	6.233	-25.997	46.000	13.770	
	4961.000	48.490	45.819	-25.510	74.000	2.671	
	7443.000	46.892	36.153	-27.108	74.000	10.739	
	8599.000	42.771	31.731	-31.229	74.000	11.041	
	9916.500	48.297	34.878	-25.703	74.000	13.419	

Notes:
1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported.
2. Due to the peak measure values also meet the average limit (54dBm), the average measurement is not tested based on technical judgment.

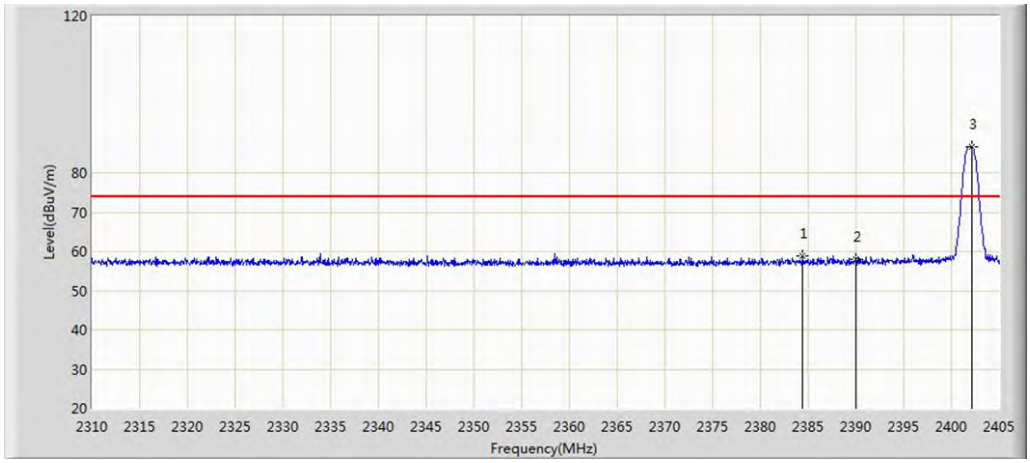
Table 12: Test result of Spurious Emission of transmitting of Buletooth (3DH5)

Channel	Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Polar
Low	145.430	33.018	23.567	-10.482	43.500	9.451	H
	270.075	35.583	21.515	-10.417	46.000	14.068	
	3992.000	36.220	36.705	-37.780	74.000	-0.485	
	4808.000	44.227	41.568	-29.773	74.000	2.660	
	6567.500	40.630	33.106	-33.370	74.000	7.524	
	7859.500	42.363	31.924	-31.637	74.000	10.440	
	70.255	19.250	8.406	-20.750	40.000	10.844	V
	134.760	25.296	15.565	-18.204	43.500	9.731	
	4060.000	36.001	36.105	-37.999	74.000	-0.104	
	4799.500	44.394	41.610	-29.606	74.000	2.784	
	6797.000	41.970	34.104	-32.030	74.000	7.867	
	7205.000	45.512	34.998	-28.488	74.000	10.513	
Middle	70.255	32.681	21.837	-7.319	40.000	10.844	H
	270.075	36.037	21.969	-9.963	46.000	14.068	
	4884.500	45.519	42.834	-28.481	74.000	2.685	
	7324.000	52.606	41.967	-21.394	74.000	10.639	
	7808.500	41.711	31.341	-32.289	74.000	10.370	
	8837.000	41.744	30.109	-32.256	74.000	11.635	
	150.765	26.264	16.750	-17.236	43.500	9.514	V
	307.905	23.709	8.933	-22.291	46.000	14.777	
	4884.500	48.665	45.980	-25.335	74.000	2.685	
	7324.000	55.032	44.393	-18.968	74.000	10.639	
	7324.560	51.598	40.964	-2.402	54.000	10.634	
	7885.000	42.645	32.217	-31.355	74.000	10.428	
	8675.500	42.792	31.580	-31.208	74.000	11.213	
High	70.255	30.727	19.883	-9.273	40.000	10.844	H
	150.765	37.326	27.812	-6.174	43.500	9.514	
	4961.000	44.399	41.728	-29.601	74.000	2.671	
	7443.000	51.350	40.611	-22.650	74.000	10.739	
	7800.000	41.879	31.594	-32.121	74.000	10.285	
	8862.500	42.078	30.495	-31.922	74.000	11.584	
	37.760	24.406	10.998	-15.594	40.000	13.408	V
	134.760	25.166	15.435	-18.334	43.500	9.731	
	4961.000	48.640	45.969	-25.360	74.000	2.671	
	7443.000	51.038	40.299	-22.962	74.000	10.739	
	8514.000	42.800	32.046	-31.200	74.000	10.755	
	9916.500	48.030	34.611	-25.970	74.000	13.419	

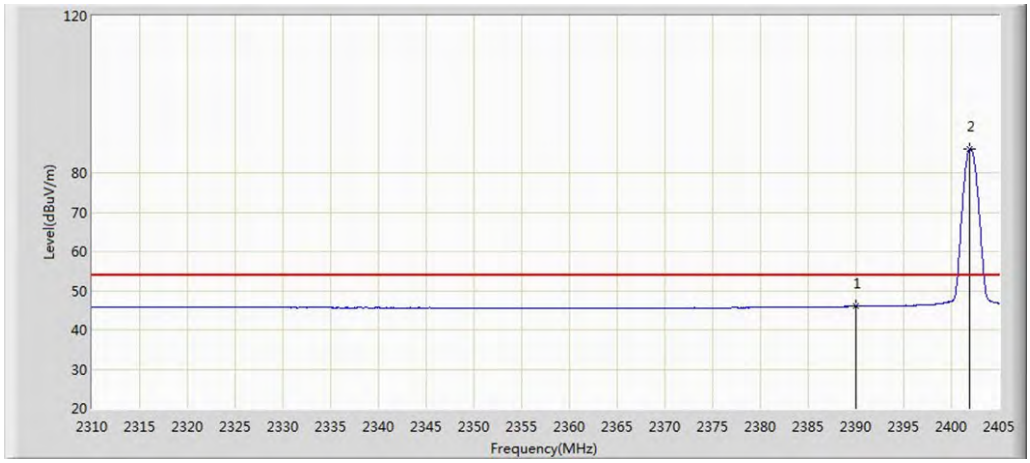
Notes:
1. For 9 kHz ~ 30 MHz, the amplitude of spurious emissions that are attenuated by more than 20dB below the permissible. The value has no need to be reported.
2. Due to the peak measure values also meet the average limit (54dBm), the average measurement is not tested based on technical judgment.

Test Plot of Frequency Band Edge of Bluetooth （DH5）

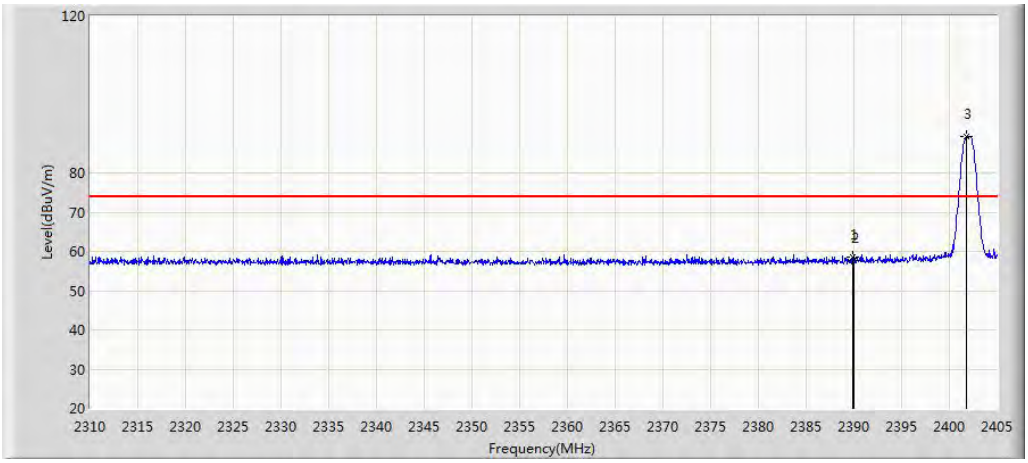
Low Channel



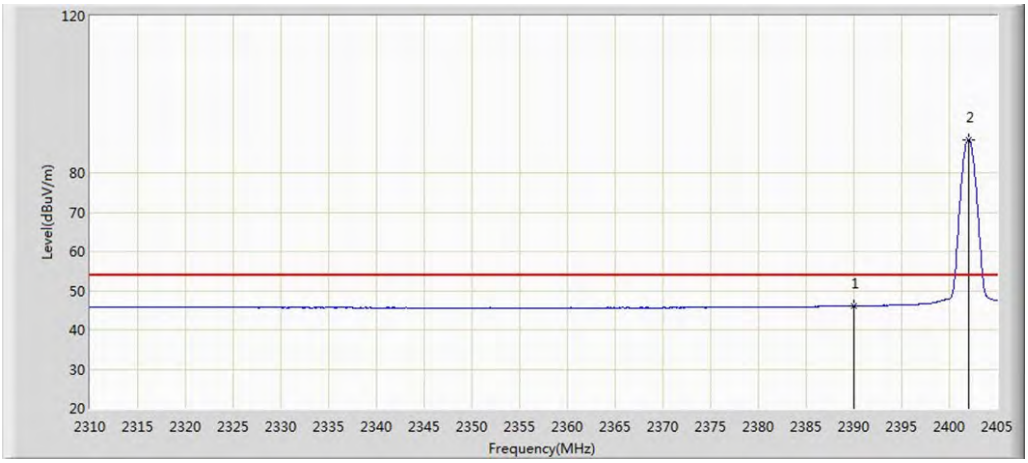
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2384.433	58.896	26.649	-15.104	74.000	32.247	PK	H
2390.000	57.846	25.568	-16.154	74.000	32.278	PK	
2402.150	86.629	54.356	N/A	N/A	32.273	PK	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	45.964	13.686	-8.036	54.000	32.278	AV	H
2401.960	86.055	53.781	N/A	N/A	32.274	AV	

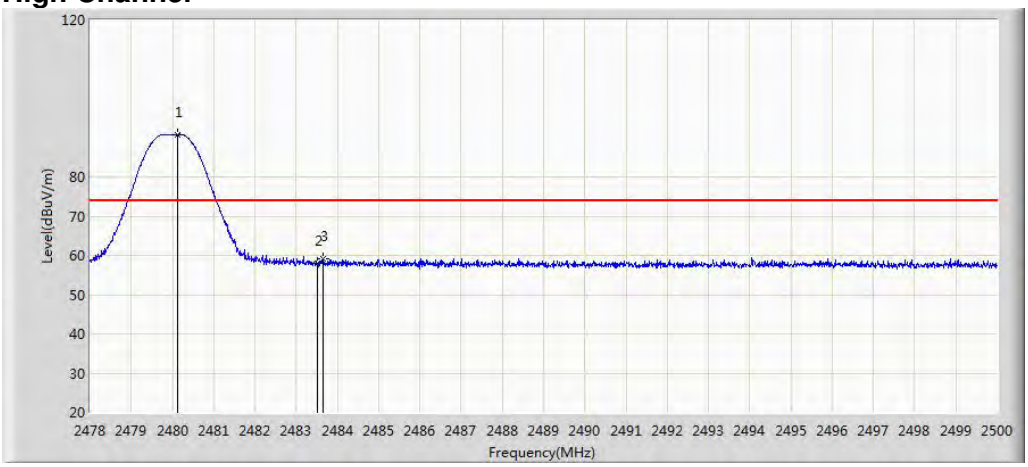


Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Margin (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2389.847	58.431	26.154	-15.569	74.000	32.277	PK	V
2390.000	57.664	25.386	-16.336	74.000	32.278	PK	
2401.770	89.233	56.958	N/A	N/A	32.274	PK	



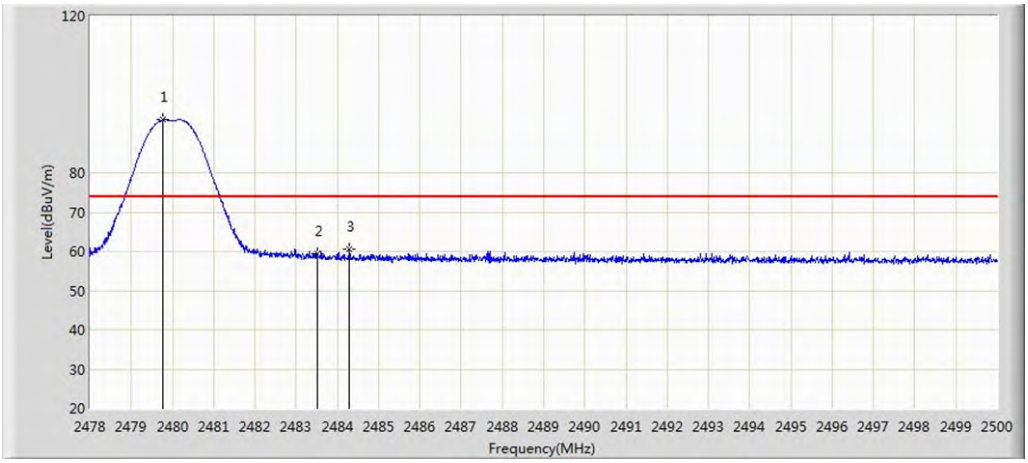
Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Margin (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	46.062	13.784	-7.938	54.000	32.278	AV	V
2402.008	88.481	56.207	N/A	N/A	32.274	AV	

High Channel

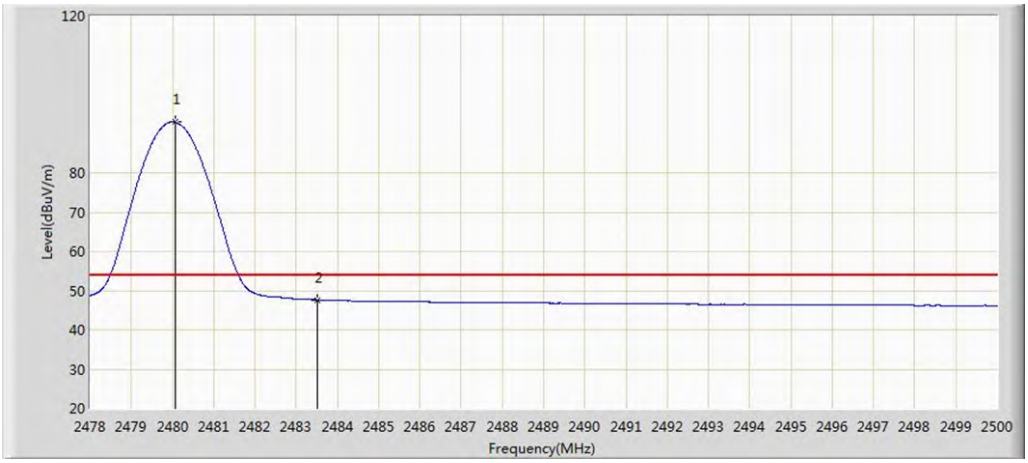


Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2480.134	90.856	58.586	N/A	N/A	32.270	PK	H
2483.500	57.898	25.617	-16.102	74.000	32.282	PK	
2483.665	59.253	26.971	-14.747	74.000	32.282	PK	

Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2480.002	90.354	58.085	N/A	N/A	32.269	AV	H
2483.500	46.884	14.603	-7.116	54.000	32.282	AV	



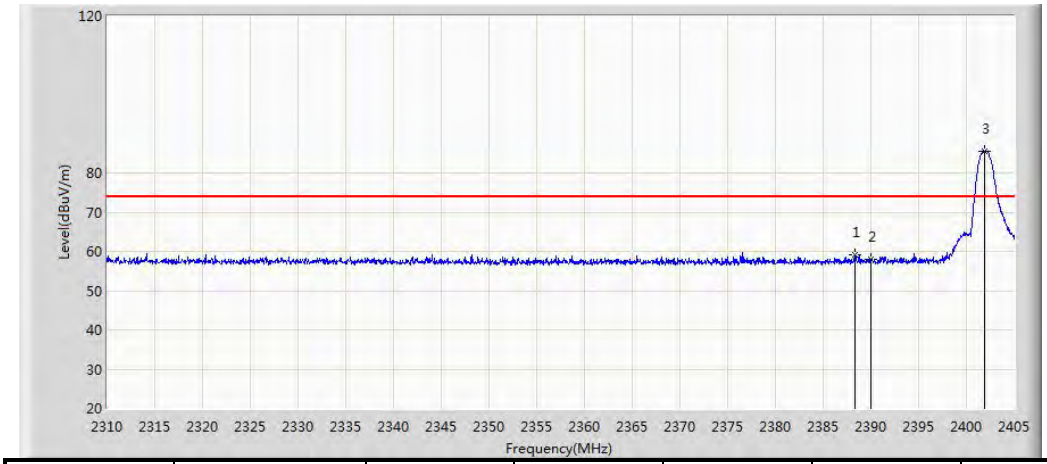
Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Margin (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2479.760	93.490	61.222	N/A	N/A	32.268	PK	V
2483.500	59.413	27.132	-14.587	74.000	32.282	PK	
2484.292	60.636	28.352	-13.364	74.000	32.284	PK	



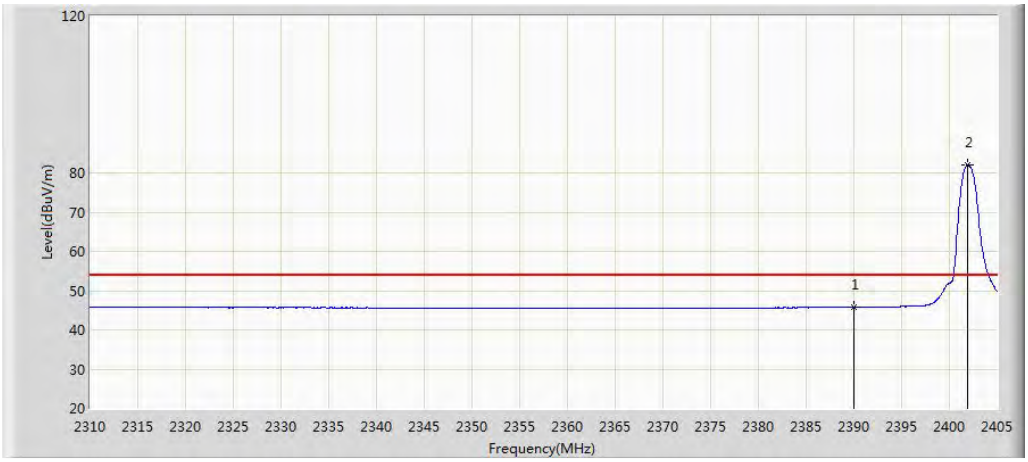
Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Margin (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2480.068	92.909	60.640	N/A	N/A	32.269	AV	V
2483.500	47.646	15.365	-6.354	54.000	32.282	AV	

Test Plot of Frequency Band Edge of Bluetooth （2DH5）

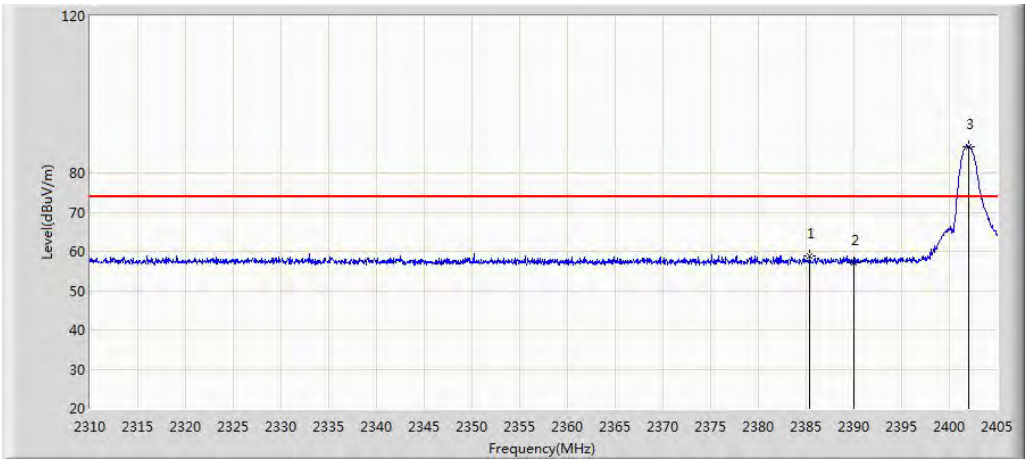
Low Channel



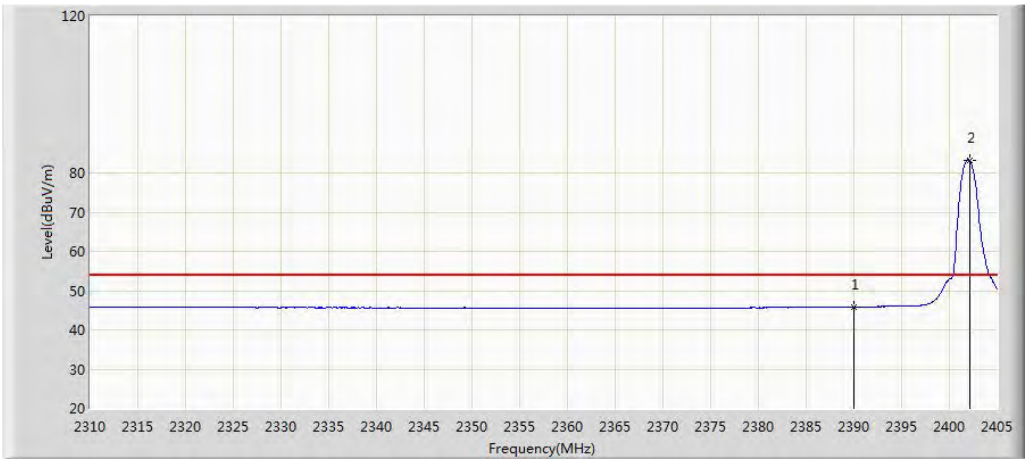
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2388.280	59.061	26.793	-14.939	74.000	32.268	PK	H
2390.000	57.869	25.591	-16.131	74.000	32.278	PK	
2401.913	85.486	53.212	N/A	N/A	32.274	PK	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	45.765	13.487	-8.235	54.000	32.278	AV	H
2401.865	82.012	49.738	N/A	N/A	32.274	AV	

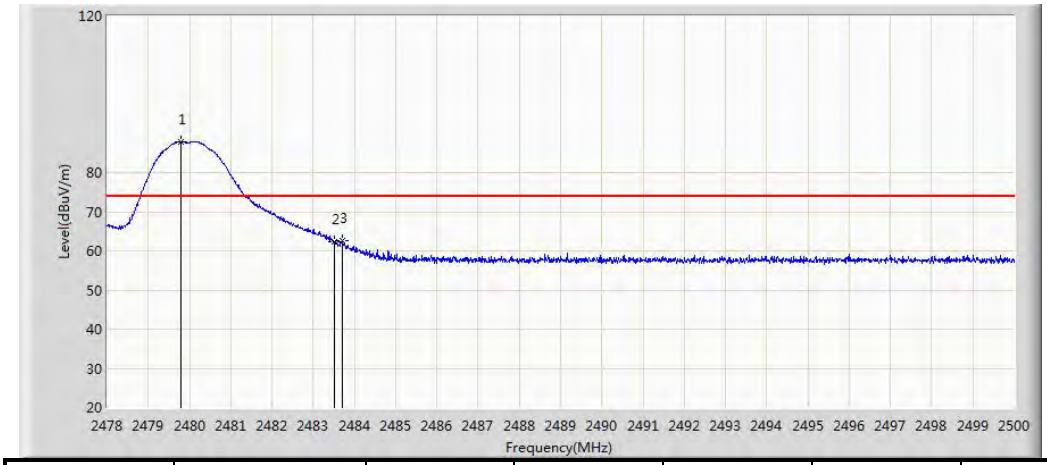


Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2385.383	58.917	26.665	-15.083	74.000	32.253	PK	V
2390.000	57.090	24.812	-16.910	74.000	32.278	PK	
2402.055	86.699	54.425	N/A	N/A	32.273	PK	

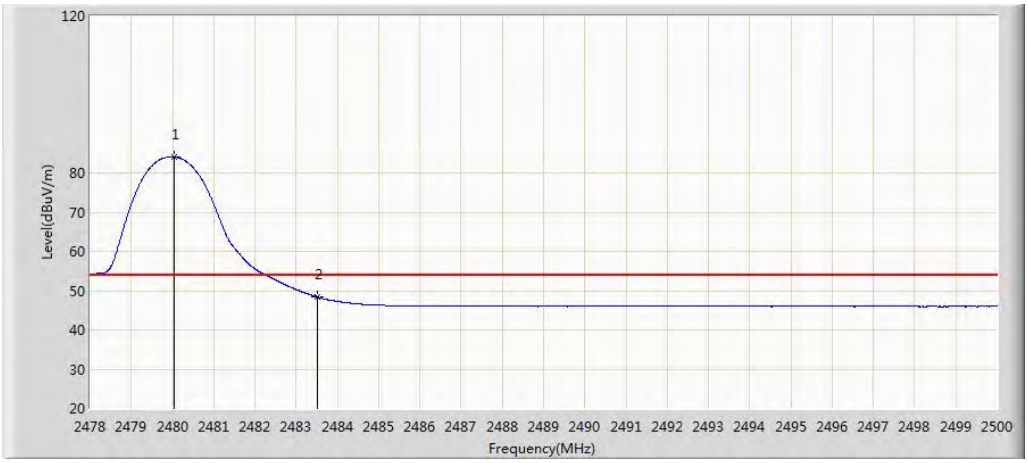


Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	45.939	13.661	-8.061	54.000	32.278	AV	V
2402.103	83.214	50.941	N/A	N/A	32.273	AV	

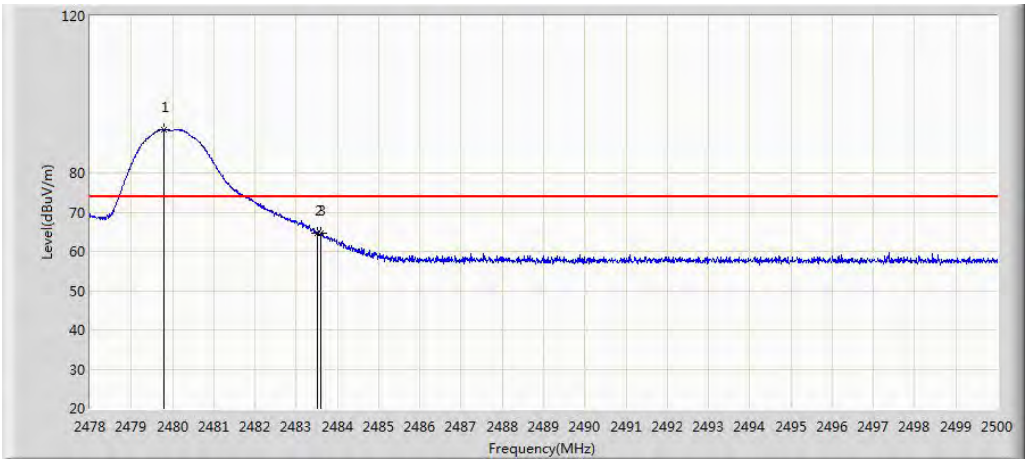
High Channel



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2479.793	87.905	55.637	N/A	N/A	32.269	PK	H
2483.500	62.275	29.994	-11.725	74.000	32.282	PK	
2483.698	62.537	30.255	-11.463	74.000	32.282	PK	



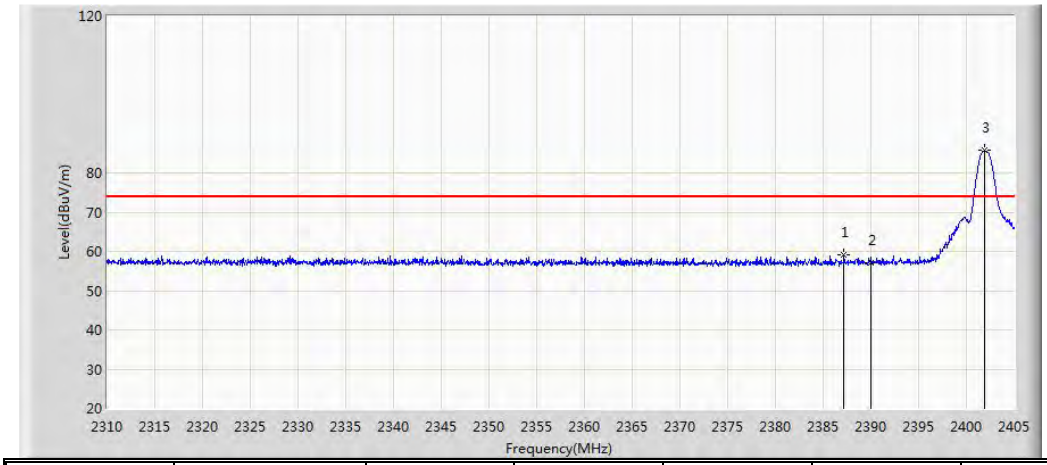
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2480.035	84.071	51.802	N/A	N/A	32.269	AV	H
2483.500	48.398	16.117	-5.602	54.000	32.282	AV	



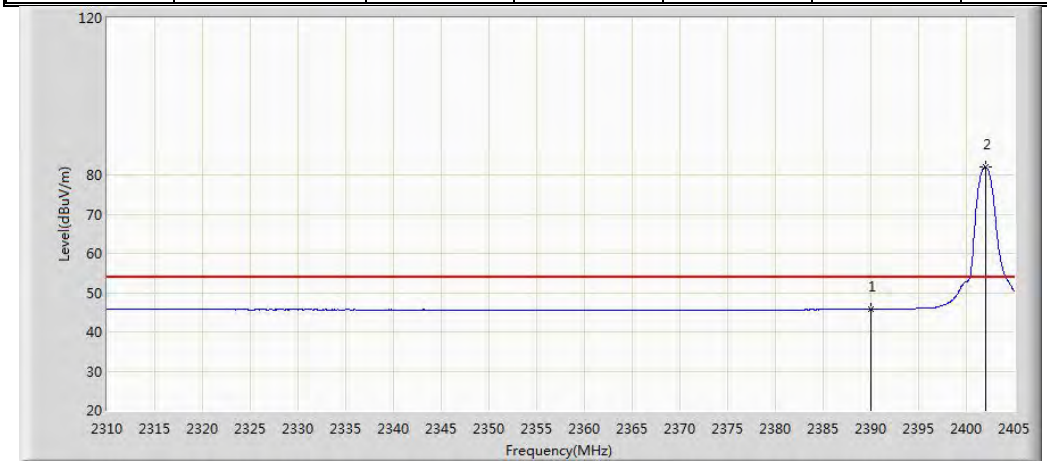
Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Margin (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2479.793	91.044	58.776	N/A	N/A	32.269	PK	V
2483.500	64.755	32.474	-9.245	74.000	32.282	PK	
2483.610	64.738	32.456	-9.262	74.000	32.282	PK	

Freq. (MHz)	Measure Level (dB µ V/m)	Reading (dB µ V)	Margin (dB)	Limit (dB µ V/m)	Correct Factor (dB)	Detector	Polar
2479.969	87.497	55.228	N/A	N/A	32.269	AV	V
2483.500	49.923	17.642	-4.077	54.000	32.282	AV	

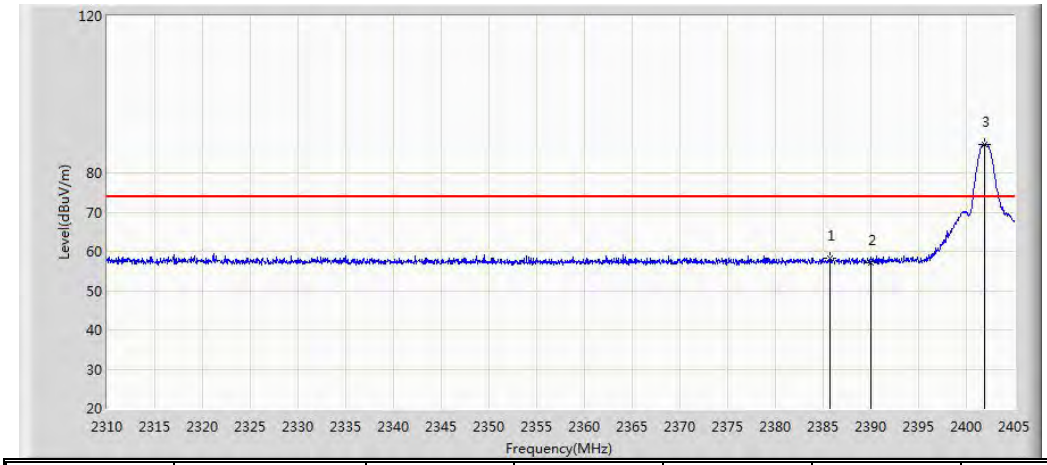
Test Plot of Frequency Band Edge of Bluetooth (3DH5)
Low Channel



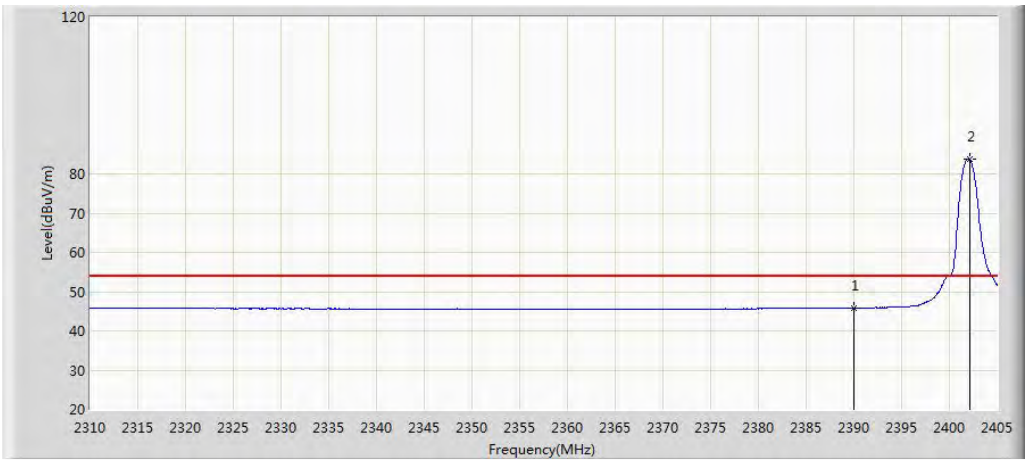
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2387.187	59.169	26.907	-14.831	74.000	32.262	PK	H
2390.000	57.166	24.888	-16.834	74.000	32.278	PK	
2401.865	85.774	53.500	N/A	N/A	32.274	PK	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	45.835	13.557	-8.165	54.000	32.278	AV	H
2402.008	81.955	49.681	27.955	54.000	32.274	AV	

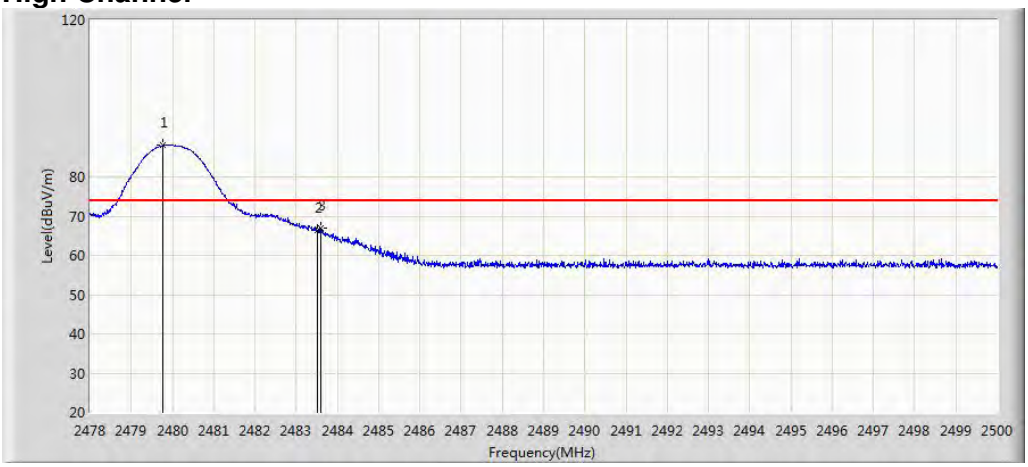


Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2385.667	58.364	26.110	-15.636	74.000	32.254	PK	V
2390.000	57.147	24.869	-16.853	74.000	32.278	PK	
2401.865	87.354	55.080	N/A	N/A	32.274	PK	

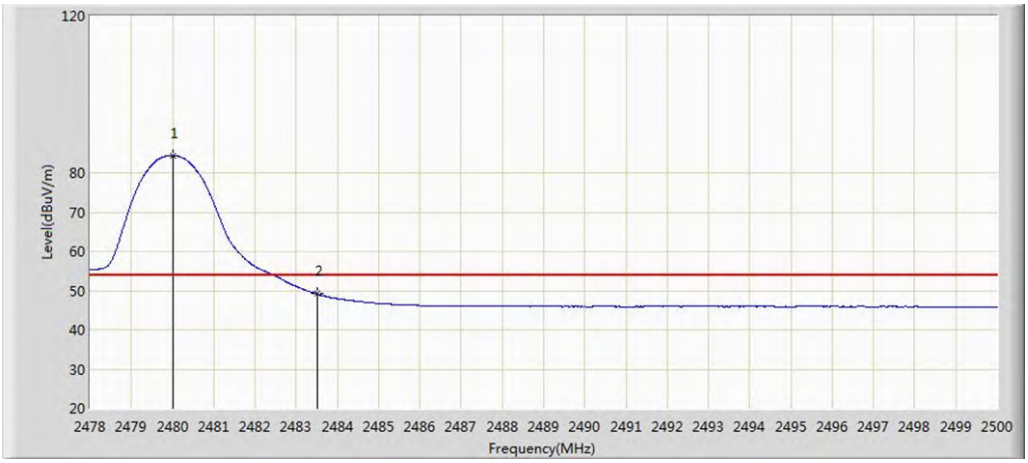


Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2390.000	45.866	13.588	-8.134	54.000	32.278	AV	V
2402.103	83.639	51.366	N/A	N/A	32.273	AV	

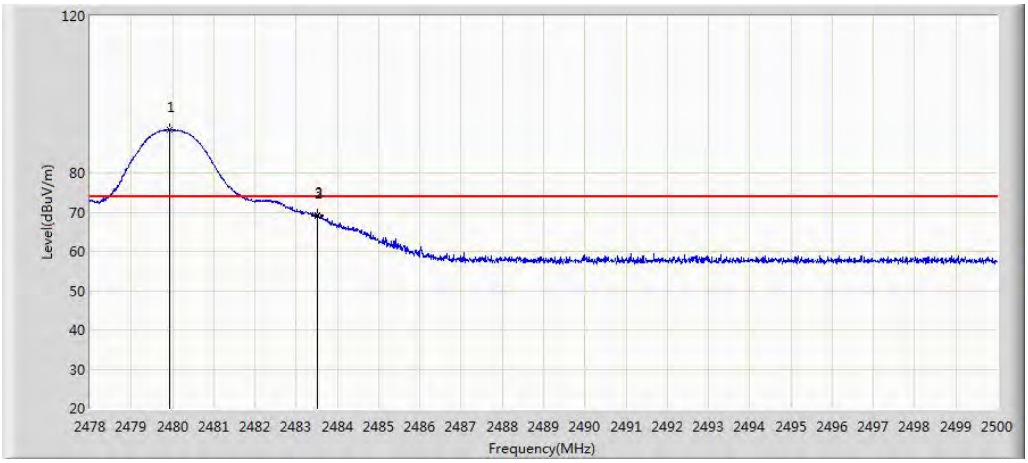
High Channel



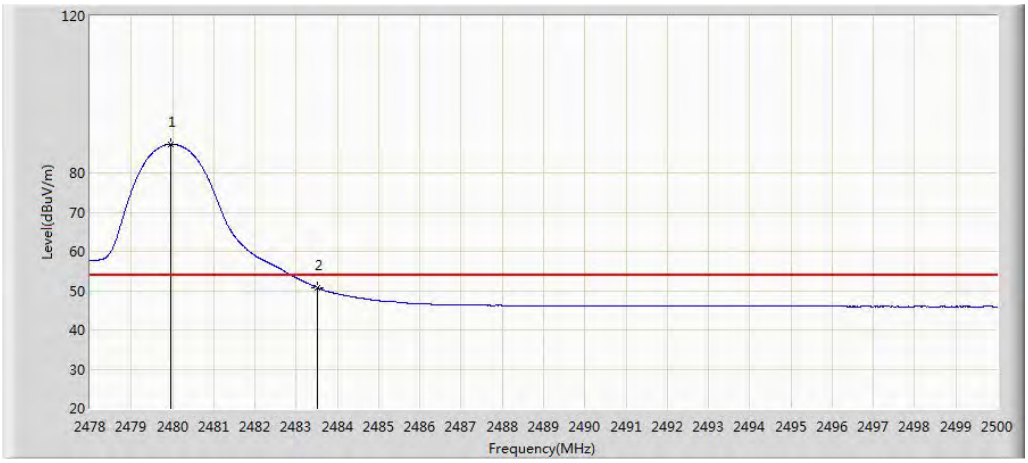
Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2479.760	87.989	55.721	N/A	N/A	32.268	PK	H
2483.500	66.238	33.957	-7.762	74.000	32.282	PK	
2483.610	67.005	34.723	-6.995	74.000	32.282	PK	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2480.002	84.413	52.144	N/A	N/A	32.269	AV	H
2483.500	49.191	16.910	-4.809	54.000	32.282	AV	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2479.936	91.021	58.752	N/A	N/A	32.269	PK	V
2483.500	68.859	36.578	-5.141	74.000	32.282	PK	
2483.522	69.322	37.041	-4.678	74.000	32.282	PK	



Freq. (MHz)	Measure Level (dB μ V/m)	Reading (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Correct Factor (dB)	Detector	Polar
2479.969	87.305	55.036	N/A	N/A	32.269	AV	V
2483.500	50.838	18.557	-3.162	54.000	32.282	AV	

5.1.6 Frequency Separation

RESULT: **Pass**

Date of testing	:	2016-08-18
Test standard	:	FCC part 15.247(a)(1) Clause 5.1(2) of RSS-247 Issue 1 May 2015
Basic standard	:	ANSI C63.4: 2009 Clause 8.1 of RSS-Gen Issue 4 November 2014
Limit	:	≥ 25kHz or two-thirds of 20dB bandwidth, whichever is greater
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A.1.a
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

Table 13: Test result of Frequency Separation(DH5/2DH5/3DH5)

Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1.000	≥ 25kHz or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2403			
Mid Channel	2441	1.000	≥ 25kHz or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2442			
High Channel	2479	1.000	≥ 25kHz or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2480			

For details refer to following test plot.

Test Plot of Frequency Separation

DH5

2DH5


Marker 1 Δ 1.000000000 MHz
Ref Offset 8 dB
Ref 17.00 dBm
ΔMkr1 1.000 MHz
0.003 dB
Center 2.402000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
Marker 1 Δ 1.000000000 MHz
ΔMkr1 1.000 MHz
0.016 dB
Center 2.441000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
Marker 1 Δ -1.000000000 MHz
ΔMkr1 -1.000 MHz
0.039 dB
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

3DH5


Marker 1 Δ 1.000000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
ΔMkr1 1.000 MHz
-0.020 dB
1Δ2
Center 2.402000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
Marker 1 Δ 1.000000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
ΔMkr1 1.000 MHz
-0.019 dB
1Δ2
Center 2.441000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
Marker 1 Δ -995.000000 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
ΔMkr1 -995 kHz
0.023 dB
1Δ2
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 10.00 MHz
Sweep 1.067 ms (2001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

5.1.7 Number of hopping frequency

RESULT: **Pass**

Date of testing	:	2016-08-19
Test standard	:	FCC part 15.247(a)(1)(iii) Clause 5.1 (4) of RSS-247 Issue 1 May 2015
Test procedure	:	ANSI C63.10: 2013 Clause 11&12 of KDB 558074 D01 v03r05 Clause 8.1 of RSS-Gen Issue 4 November 2014
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shielded room

Test setup

Test Channel	:	79
Operation Mode	:	A.1.a
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

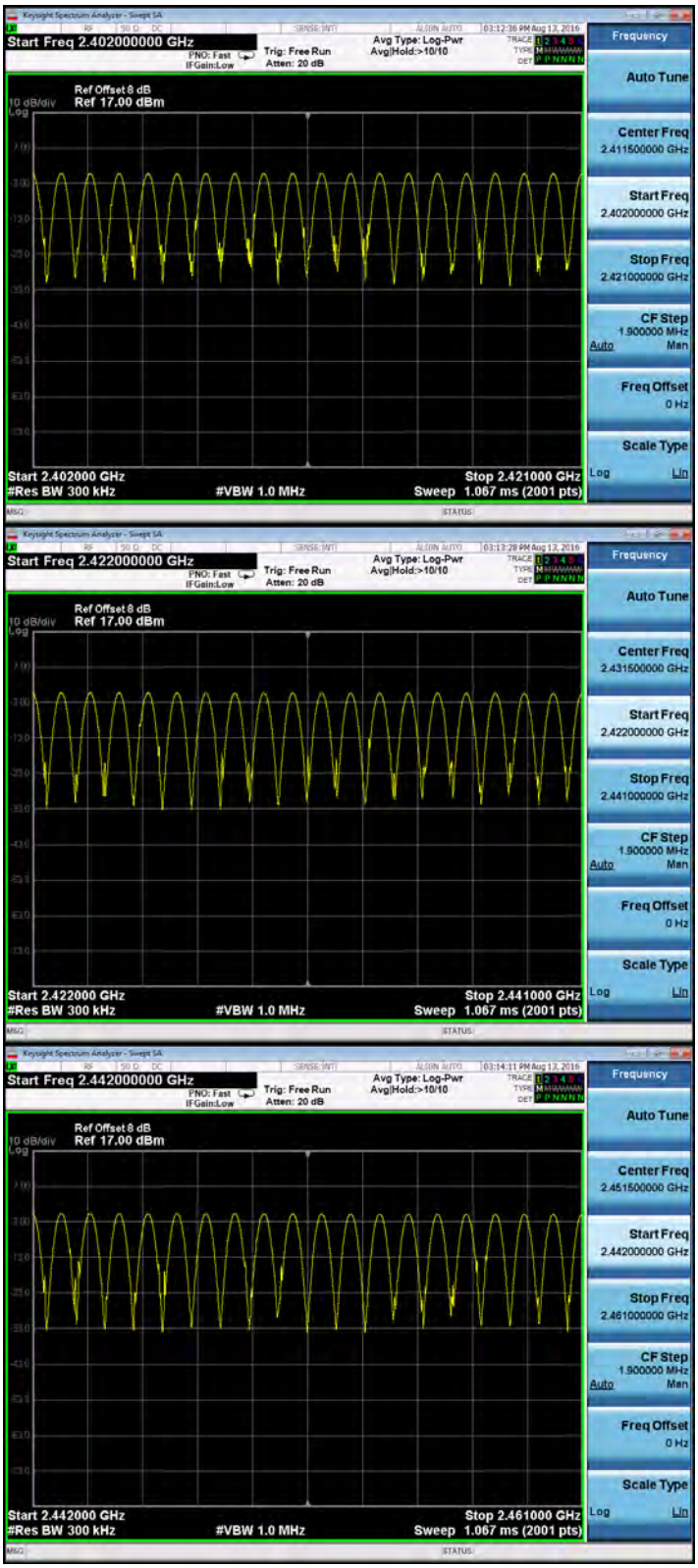
Table 14: Test result of Number of hopping frequency

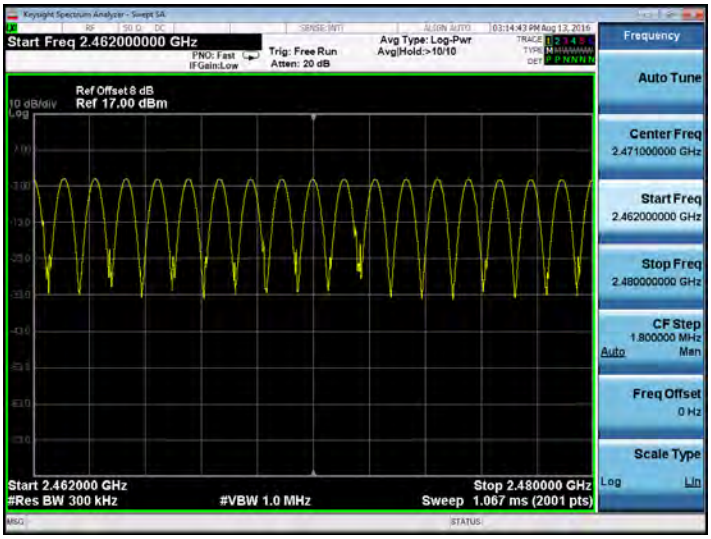
Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2402 to 2480MHz	79	≥15	Pass

For details refer to following test plot.

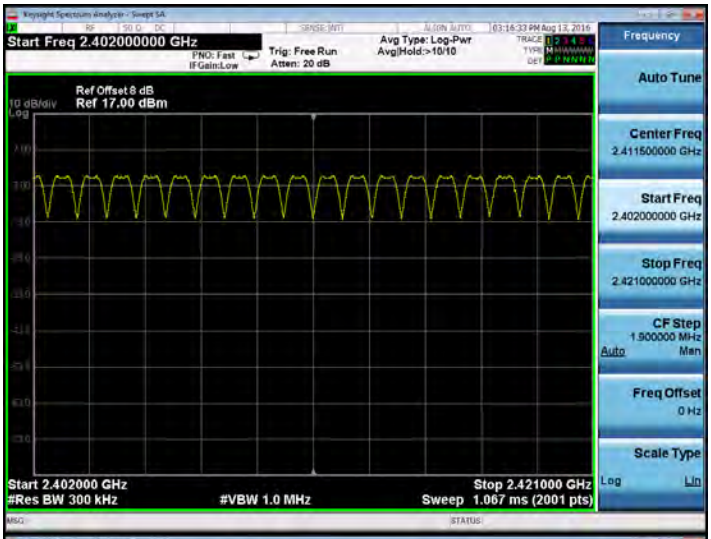
Test Plot of Number of hopping frequency

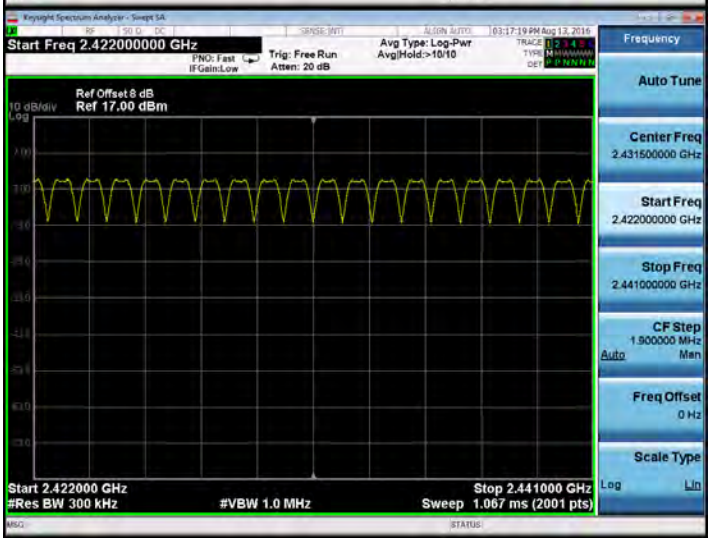
DH5

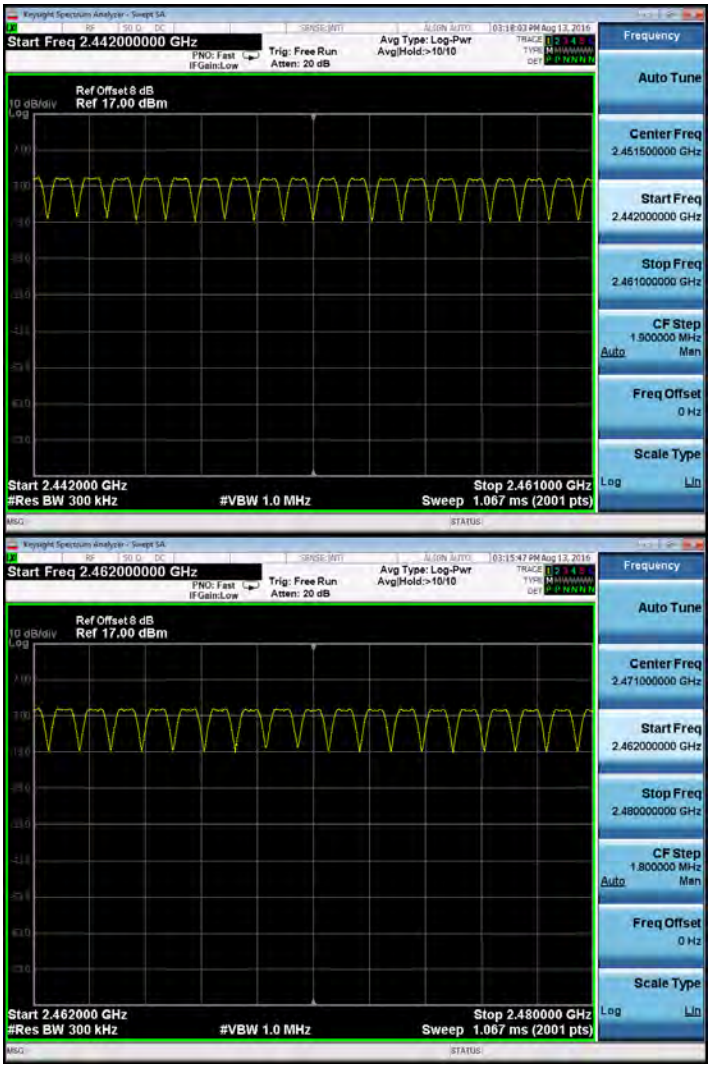



Start Freq 2.462000000 GHz
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Start 2.462000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Stop 2.480000 GHz
Sweep 1.067 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.471000000 GHz
Start Freq
2.462000000 GHz
Stop Freq
2.480000000 GHz
CF Step
1.800000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

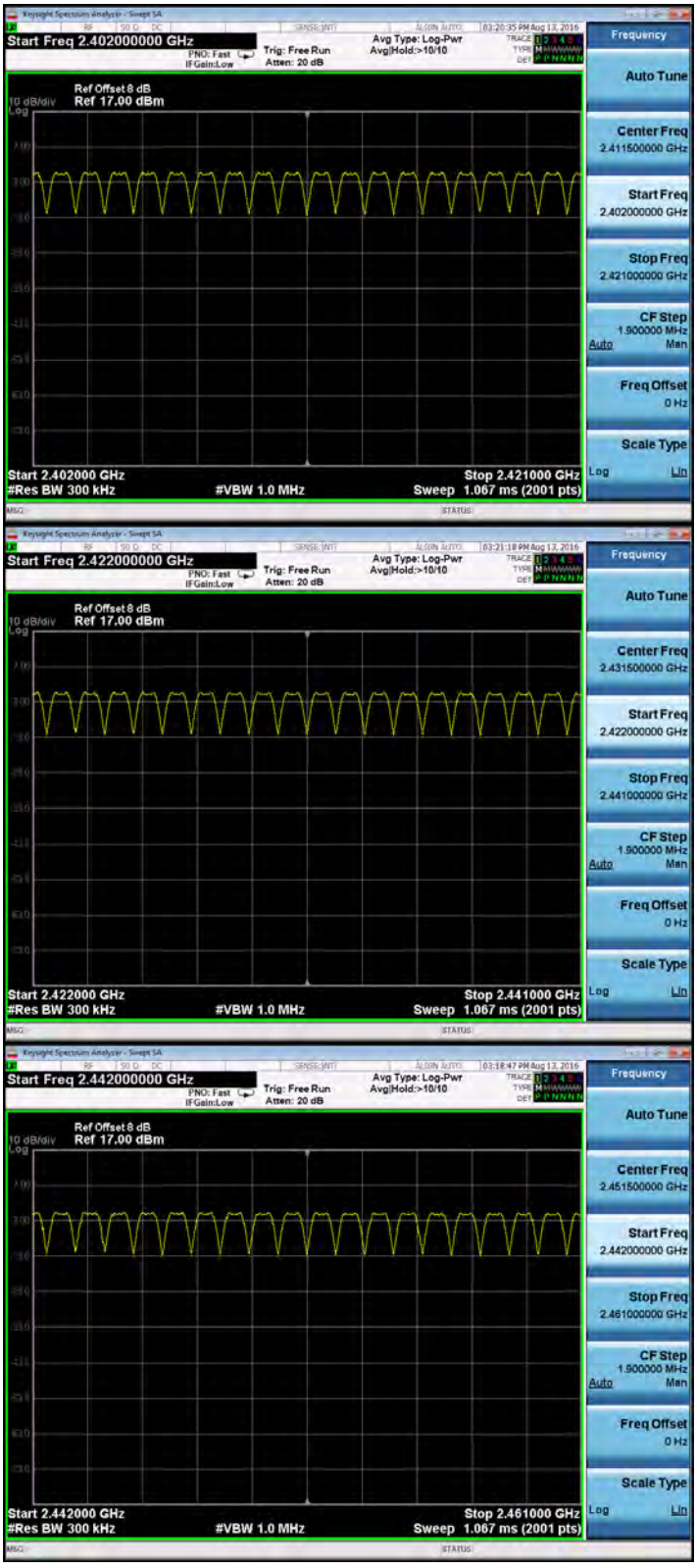
2DH5

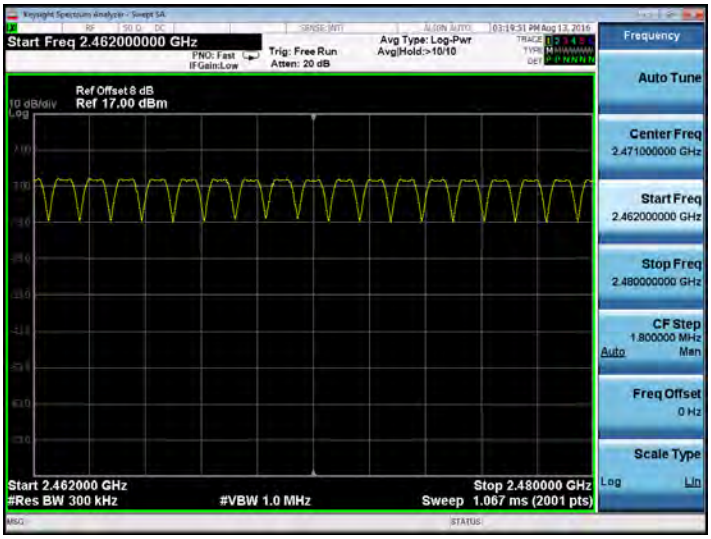

Start Freq 2.402000000 GHz
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Start 2.402000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Stop 2.421000 GHz
Sweep 1.067 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.411500000 GHz
Start Freq
2.402000000 GHz
Stop Freq
2.421000000 GHz
CF Step
1.900000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin


Start Freq 2.422000000 GHz
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Start 2.422000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Stop 2.441000 GHz
Sweep 1.067 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.431500000 GHz
Start Freq
2.422000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.900000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin


Start Freq 2.442000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Start 2.442000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Stop 2.461000 GHz
Sweep 1.067 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.451500000 GHz
Start Freq
2.442000000 GHz
Stop Freq
2.461000000 GHz
CF Step
1.900000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin
Start Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Start 2.462000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Stop 2.480000 GHz
Sweep 1.067 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.471000000 GHz
Start Freq
2.462000000 GHz
Stop Freq
2.480000000 GHz
CF Step
1.800000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

3DH5


Start Freq 2.402000000 GHz
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Start 2.402000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Stop 2.421000 GHz
Sweep 1.067 ms (2001 pts)
Start Freq 2.422000000 GHz
Start 2.422000 GHz
Stop 2.441000 GHz
Start Freq 2.442000000 GHz
Start 2.442000 GHz
Stop 2.461000 GHz
Frequency
Auto Tune
Center Freq
Start Freq
Stop Freq
CF Step
1.900000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin


Start Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Start 2.462000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Stop 2.480000 GHz
Sweep 1.067 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.471000000 GHz
Start Freq
2.462000000 GHz
Stop Freq
2.480000000 GHz
CF Step
1.800000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

5.1.8 Time of Occupancy

RESULT: **Pass**

Date of testing	:	2016-08-19
Test standard	:	FCC part 15.247(a)(1)(iii) Clause 5.1(4) of RSS-247 Issue 1 May 2015
Test procedure	:	ANSI C63.10: 2013 Clause 11&12 of KDB 558074 D01 v03r05 Clause 8.1 of RSS-Gen Issue 4 November 2014
Limits	:	0.4s
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Middle
Operation Mode	:	A.1.a
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

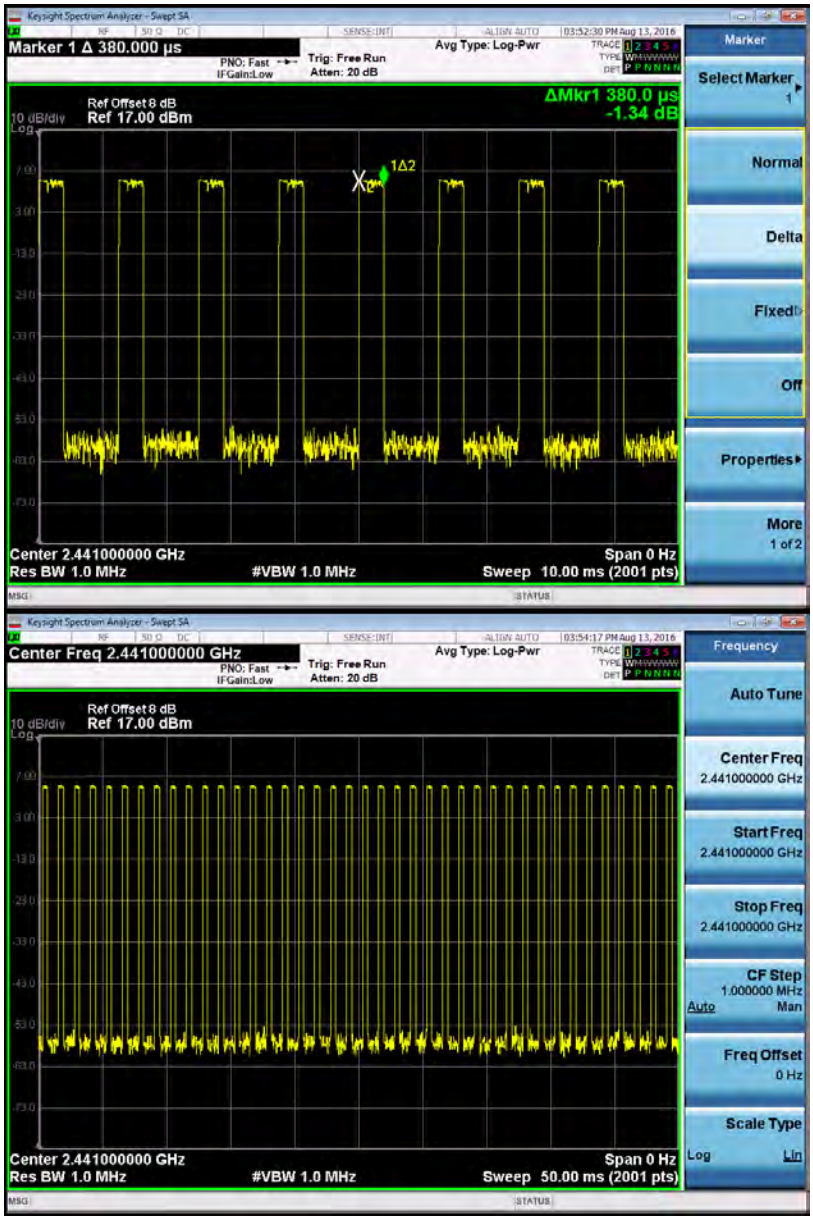
Table 15: Test result of Time of Occupancy

Mode	Packet Type	Channel Frequency (MHz)	Packet Duration [ms]	Number of Hops per Channel	Dwell Time (ms)	Limit (ms)
Classic BT	DH1	2441	0.38	40	15.2	400
	DH3	2441	1.625	20	32.5	400
	DH5	2441	2.880	14	40.32	400

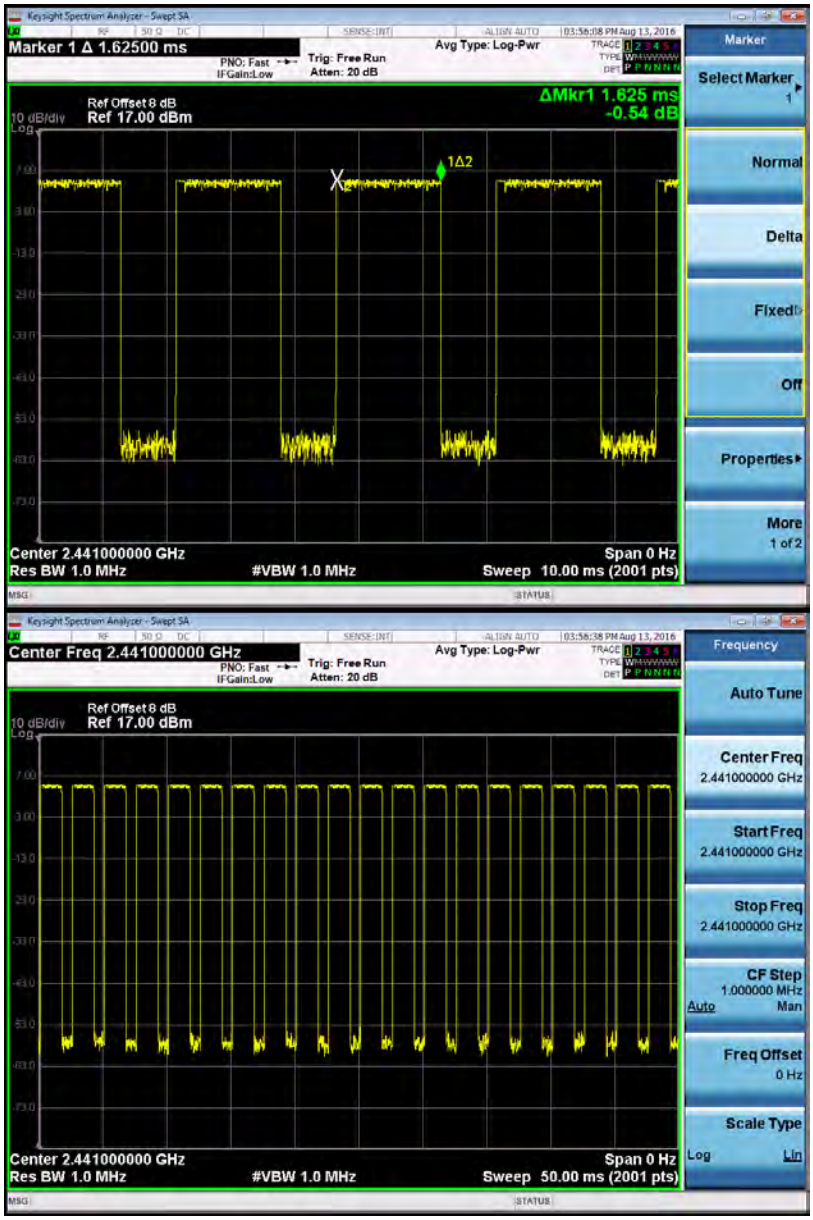
For details refer to following test plot.

Test Plot of Number of hopping frequency

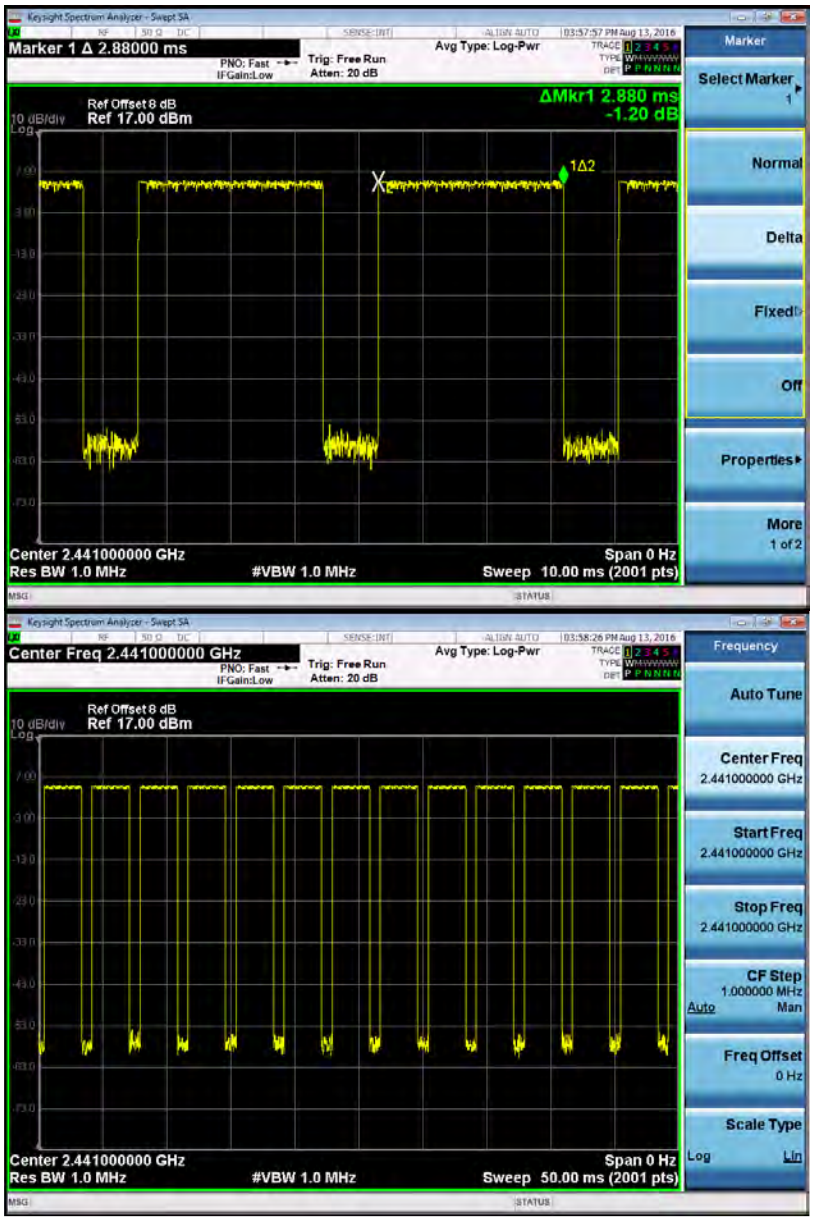
DH1



DH3


Keysight Spectrum Analyzer - Swept SA
Marker 1 Δ 1.62500 ms
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
03:56:08 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
ΔMkr1 1.625 ms
-0.54 dB
1Δ2
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 10.00 ms (2001 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2
Keysight Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
03:56:38 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 50.00 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

DH5


Keysight Spectrum Analyzer - Swept SA
Marker 1 Δ 2.88000 ms
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
03:57:57 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
ΔMkr1 2.880 ms
-1.20 dB
1Δ2
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 10.00 ms (2001 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS
Keysight Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
03:58:26 PM Aug 13, 2016
Ref Offset 8 dB
10 dB/div
Ref 17.00 dBm
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 50.00 ms (2001 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin
MSG
STATUS

5.1.9 Conducted emissions

RESULT: **Pass**

Date of testing	:	2016-08-29
Test standard	:	FCC Part 15.207 Clause 8.8 of RSS-Gen Issue 4 November 2014
Basic standard	:	ANSI C63.4: 2014
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207 Clause 8.8 of RSS-Gen Issue 4 November 2014
Kind of test site	:	Shielded room

Test setup

Input Voltage	:	AC 120V, 60Hz
Operation Mode	:	A.1, A.2
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

Table 16: Test result of Conducted Emission of Buletooth

L Phase

Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type	Comment
0.158	42.427	32.116	-23.141	65.568	10.311	QP	PASS
0.158	34.363	24.052	-21.205	55.568	10.311	AV	PASS
0.402	36.292	26.206	-21.520	57.812	10.087	QP	PASS
0.402	28.855	18.769	-18.957	47.812	10.087	AV	PASS
0.758	34.198	24.165	-21.802	56.000	10.033	QP	PASS
0.758	20.999	10.966	-25.001	46.000	10.033	AV	PASS
1.630	31.709	21.825	-24.291	56.000	9.884	QP	PASS
1.630	17.790	7.906	-28.210	46.000	9.884	AV	PASS
2.902	34.474	24.624	-21.526	56.000	9.850	QP	PASS
2.902	20.640	10.790	-25.360	46.000	9.850	AV	PASS
11.450	26.922	16.825	-33.078	60.000	10.097	QP	PASS
11.450	15.775	5.677	-34.225	50.000	10.097	AV	PASS

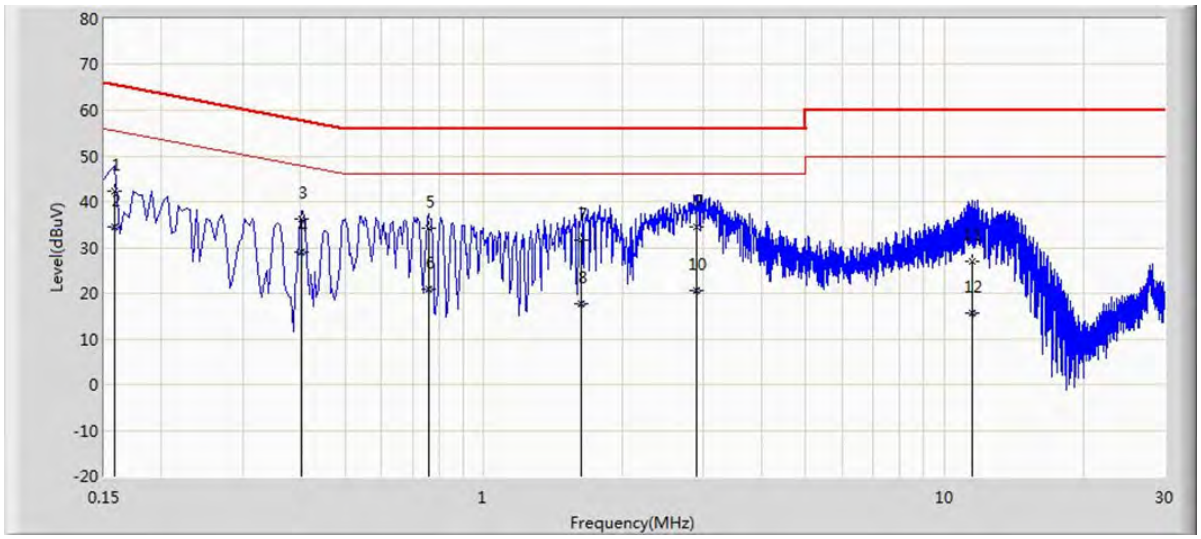
N Phase

Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type	Comment
0.150	39.902	28.760	-26.098	66.000	11.142	QP	PASS
0.150	17.703	6.561	-38.297	56.000	11.142	AV	PASS
0.162	39.320	29.242	-26.041	65.361	10.078	QP	PASS
0.162	24.266	14.188	-31.095	55.361	10.078	AV	PASS
0.402	41.086	30.972	-16.726	57.812	10.114	QP	PASS
0.402	34.650	24.536	-13.162	47.812	10.114	AV	PASS
2.770	44.237	34.385	-11.763	56.000	9.852	QP	PASS
2.770	31.098	21.246	-14.902	46.000	9.852	AV	PASS
3.006	43.434	33.565	-12.566	56.000	9.869	QP	PASS
3.006	30.690	20.821	-15.310	46.000	9.869	AV	PASS
11.346	39.538	29.413	-20.462	60.000	10.125	QP	PASS
11.346	25.660	15.535	-24.340	50.000	10.125	AV	PASS

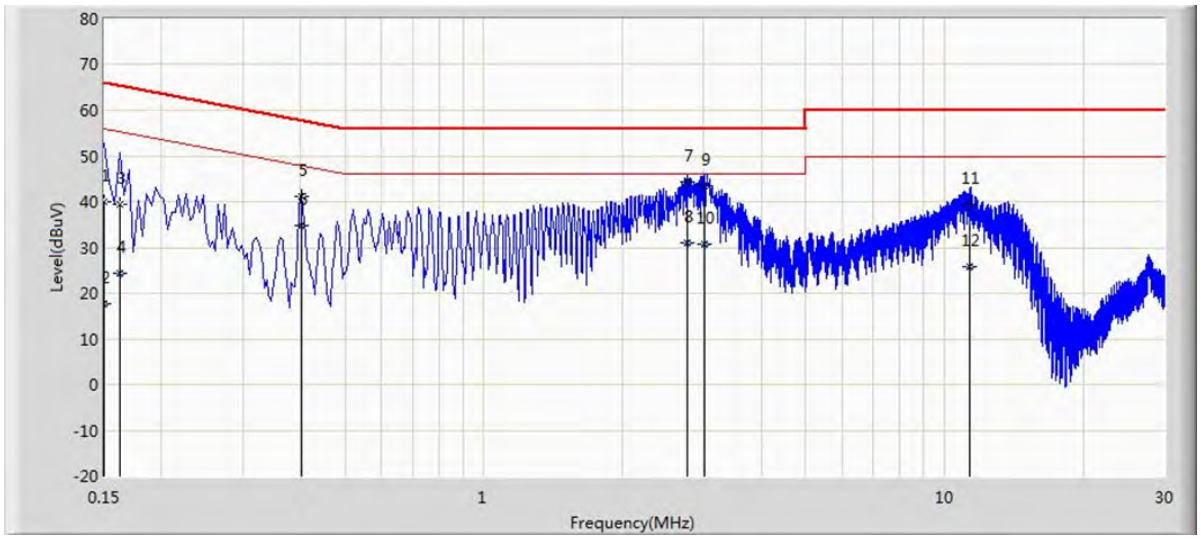
Note: All modes are tested, and we just show the worst data as above.

Test Plot of Conducted Emission

L Phase



N Phase



5.1.10 Radiated emissions

RESULT: **Pass**

Date of testing	:	2016-08-29
Test standard	:	FCC Part 15.209 Clause 8.8 of RSS-Gen Issue 4 November 2014
Test Procedure	:	ANSI C63.4: 2014
Frequency range	:	30MHz – 1GHz
Limits	:	FCC Part 15.209 Clause 8.8 of RSS-Gen Issue 4 November 2014
Kind of test site	:	Shielded room

Test setup

Input Voltage	:	AC 120V, 60Hz
Operation Mode	:	A.1, A.2
Ambient temperature	:	25℃
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

Table 17: Test result of Radiated Emission of Buletooth

Horizontal

Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type	Comment
53.765	26.956	13.161	-13.044	40.000	13.795	PK	PASS
128.455	39.746	26.112	-3.754	43.500	13.634	QP	PASS
187.140	31.943	19.969	-11.557	43.500	11.974	PK	PASS
236.610	37.541	24.865	-8.459	46.000	12.676	QP	PASS
316.624	39.423	24.668	-6.577	46.000	14.755	QP	PASS
355.435	39.238	23.663	-6.762	46.000	15.575	PK	PASS

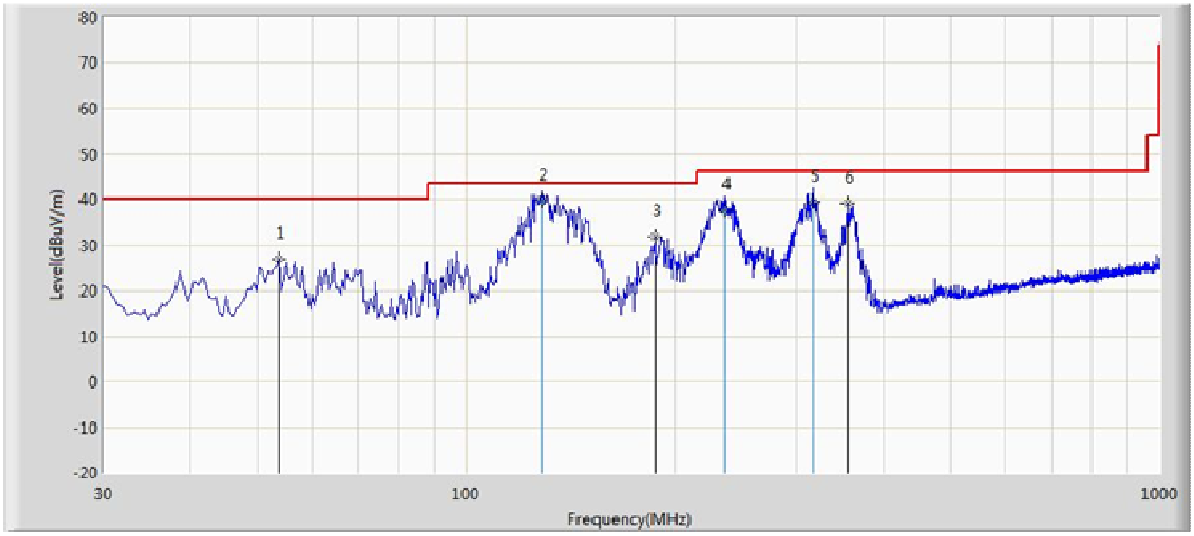
Vertical

Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type	Comment
42.610	35.951	21.600	-4.049	40.000	14.351	QP	PASS
51.340	35.273	21.324	-4.727	40.000	13.949	QP	PASS
129.910	35.750	22.024	-7.750	43.500	13.726	QP	PASS
142.035	37.853	23.225	-5.647	43.500	14.628	QP	PASS
236.610	42.337	29.661	-3.663	46.000	12.676	QP	PASS
257.950	39.453	26.358	-6.547	46.000	13.095	QP	PASS

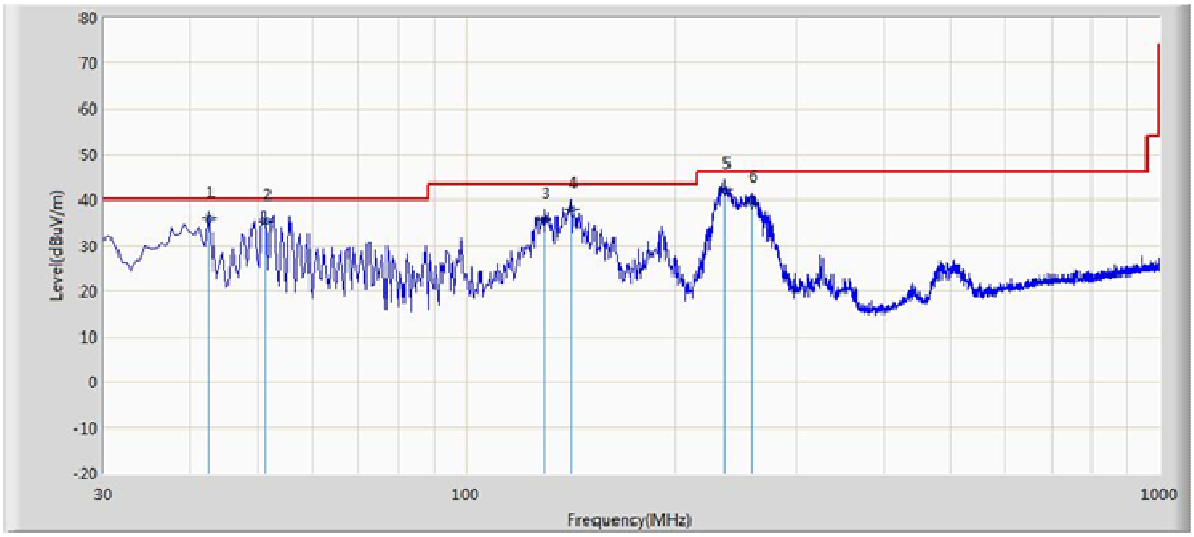
Note: All modes are tested, and we just show the worst data as above.

Test Plot of Radiated Emission

Horizontal



Vertical



6. List of Tables