



FCC - TEST REPORT

Report Number : **65.920.13.006.01** Date of Issue: January 7, 2014

Model : BT100x/yy(x can from A-Z or blank standard for difference color; yy can be 00-99 used for difference shipping country)

Product Type : Wireless Portable Speaker

Applicant : WOOX Innovations Limited.

Address : 5/F, Philips Electronics Building, 5 Science Park East Avenue,
Hong Kong Science Park, Shatin, New Territories,
HONG KONG.

Production Facility : Zhejiang Luckyfaith Digital Technology Co., Ltd.

Address : No. 188, Zheduan Road, Pukou District, Economic
Development Zone, 312400 Shengzhou City, Zhejiang
Province, PEOPLE'S REPUBLIC OF CHINA

Test Result : **Positive** **Negative**

Total pages including Appendices : 42

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
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Telephone: 86 755 8828 6998

Fax: 86 755 828 5299

Test Site 2

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Dongguan City,
Guangdong,
China

Telephone: 086-769-22022444

Fax: 086-769-22022799



3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product:	Wireless Portable Speaker
Model no.:	BT100W/37
FCC ID:	2AANU-BT100WV37
Brand Name:	Philips
Options and accessories:	NIL
Rating:	3.7VDC (Supplied by Li-ion rechargeable battery) 5VDC (Charged by PC USB Port)
RF Transmission Frequency:	2402-2480MHz
No. of Operated Channel:	79
Modulation:	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Description of the EUT:	The Equipment Under Test (EUT) is a wireless speaker with Bluetooth function operating at 2.4GHz.



4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2013 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

All the test methods were according to Public Notice DA 00-705 -Frequency Hopper Spread Spectrum Test Procedure released by FCC on March 30, 2000 and C63.10 (2009).

5 Summary of Test Results

Technical Requirements				
FCC Part 15 Subpart C				
Test Condition		Pages	Test Site	Test Result
§15.207	Conducted emission AC power port	10	Site 2	Pass
§15.247(b)(1)	Conducted peak output power	13	Site 2	Pass
§15.247(a)(2)	6dB bandwidth	---	---	N/A
§15.247(a)(1)	20dB bandwidth and 99% Occupied Bandwidth	15	Site 2	Pass
§15.247(a)(1)	Carrier frequency separation	22	Site 2	Pass
§15.247(a)(1)(iii)	Number of hopping frequencies	24	Site 2	Pass
§15.247(a)(1)(iii)	Dwell Time	26	Site 2	Pass
§15.247(e)	Power spectral density*	---	---	N/A
§15.247(d)	Spurious RF conducted emissions	29	Site 2	Pass
§15.247(d)	Band edge	33	Site 2	Pass
§15.247(d) & §15.209	Spurious radiated emissions for transmitter and receiver	38	Site 2	Pass
§15.203	Antenna requirement	See note 2		Pass

Note 1: N/A=Not Applicable.

Note 2: The EUT uses a permanently PCB antenna, which gain is 0dBi. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2AANU-BT100WV37, complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: December 10, 2013

Testing Start Date: December 16, 2013

Testing End Date: December 27, 2013

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Reviewed by:

Prepared by:

Tested by:



Ken Li
EMC Project Manager



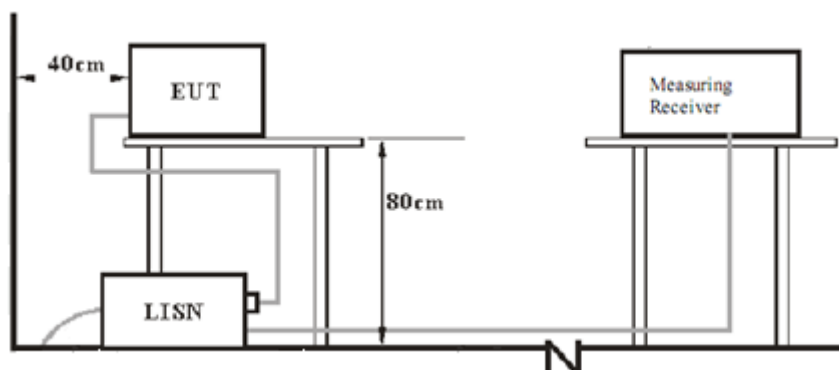
Felix Li
EMC Project Engineer



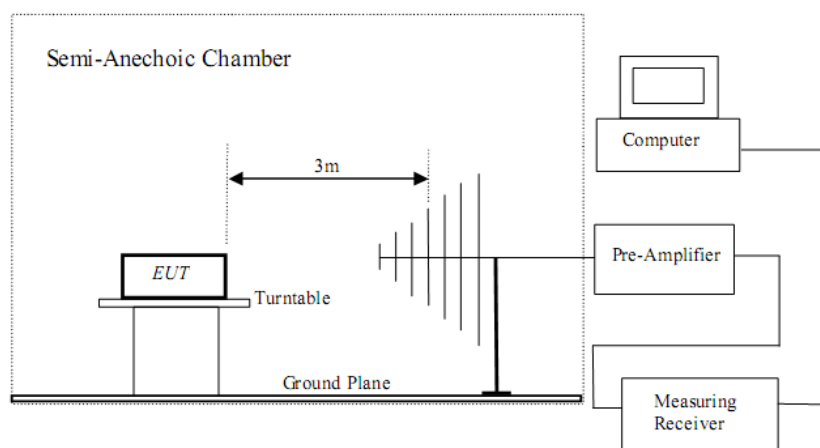
Jees.hong
EMC Test Engineer

7 Test Setups

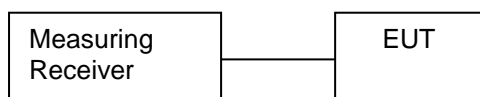
7.1 AC Power Line Conducted Emission test setups



7.2 Radiated test setups



7.3 Conducted RF test setups



8 Systems test configuration

Auxiliary Equipment Used during Test:

Name	Manufacturer	M/N	S/N	Cal Date	Cal Interval (month)
PC	HP	G7060cx	4CV110D8FK	-	-
LCD Monitor	LENOVO	L2061WD	3M04769B1102 083	-	-
Mouse	HP	MODGUO	PSA1104008298	-	-
Keyboard	HP	PR1101U	BAUWT0AHHZX 8BC	-	-
iPhone	APPLE	MD128ZP	DNQGQNDXDP 0N	-	-

Test software: ASTTestTool.exe, which used to control the EUT in continues transmitting mode

The system was configured to hopping mode and non-hopping mode.

Hopping mode: typical working mode (normal hopping status).

Non-hopping mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power

9 Technical Requirement

9.1 Conducted Emission

Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

Limit

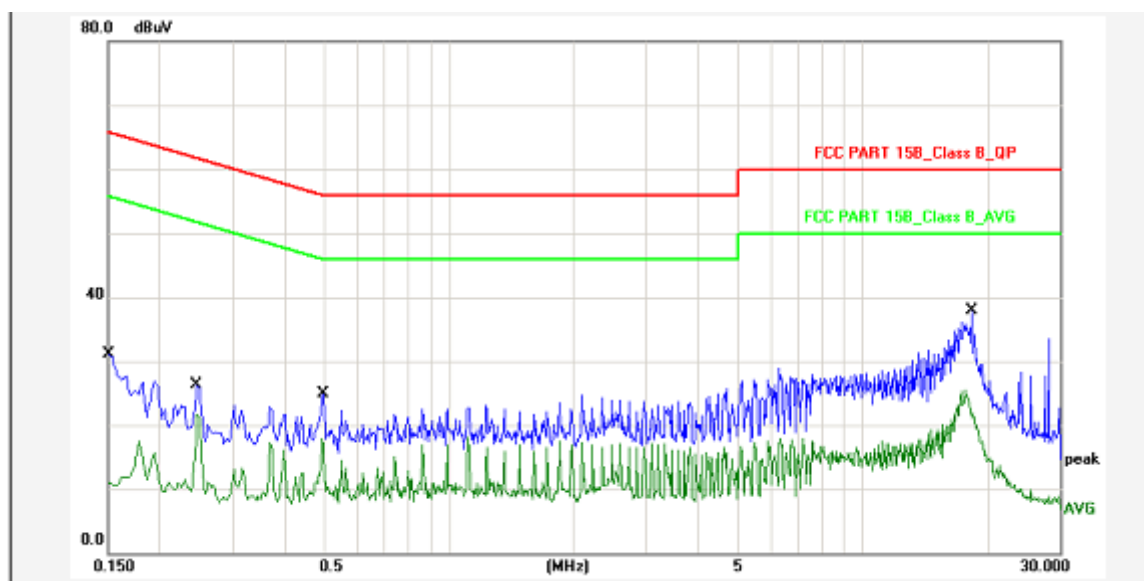
According to §15.207, conducted emissions limit as below:

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linearly with logarithm of the frequency

Conducted Emission

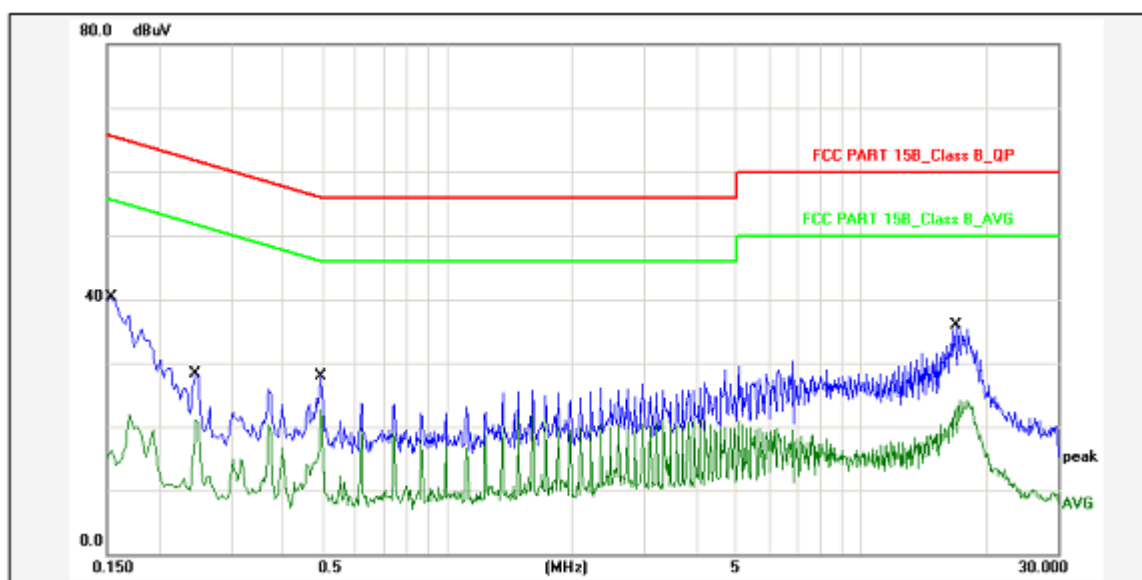
Product Type : Wireless Portable Speaker
 M/N : BT100W/37
 Operating Condition : Charging & Tx
 Test specification : Live
 Comment : AC 120V/60Hz



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1500	10.80	17.40	28.20	65.99	-37.79	QP	P	
2	0.1500	10.80	6.80	17.60	55.99	-38.39	AVG	P	
3	0.2460	10.80	12.40	23.20	61.89	-38.69	QP	P	
4	0.2460	10.80	10.80	21.60	51.89	-30.29	AVG	P	
5	0.4980	10.80	11.00	21.80	56.03	-34.23	QP	P	
6	0.4980	10.80	7.10	17.90	46.03	-28.13	AVG	P	
7	18.3380	10.80	24.00	34.80	60.00	-25.20	QP	P	
8	18.3380	10.80	14.70	25.50	50.00	-24.50	AVG	P	

Conducted Emission

Product Type : Wireless Portable Speaker
 M/N : BT100W/37
 Operating Condition : Charging & Tx
 Test specification : Neutral
 Comment : AC 120V/60Hz



No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1539	10.80	26.60	37.40	65.78	-28.38	QP	P	
2	0.1539	10.80	5.50	16.30	55.78	-39.48	AVG	P	
3	0.2460	10.80	14.50	25.30	61.89	-36.59	QP	P	
4	0.2460	10.80	10.30	21.10	51.89	-30.79	AVG	P	
5	0.4940	10.80	14.00	24.80	56.10	-31.30	QP	P	
6	0.4940	10.80	11.80	22.60	46.10	-23.50	AVG	P	
7	17.0100	10.80	22.10	32.90	60.00	-27.10	QP	P	
8	17.0100	10.80	13.40	24.20	50.00	-25.80	AVG	P	

9.2 Conducted peak output power

Test Method

1. Use the following spectrum analyzer settings:
Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel
RBW > the 20 dB bandwidth of the emission being measured, VBW ≥ RBW,
Sweep = auto, Detector function = peak, Trace = max hold.
2. Add a correction factor to the display.
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power.

Limits

According to §15.247 (b) (1), conducted peak output power limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

Conducted peak output power

Bluetooth Mode GFSK modulation Test Result

Frequency	Conducted Peak	Result
MHz	Output Power	
	dBm	
Low channel 2402MHz	-1.52	Pass
Middle channel 2441MHz	-2.47	Pass
High channel 2480MHz	-3.96	Pass

Bluetooth Mode $\pi/4$ -DQPSK modulation Test Result

Frequency	Conducted Peak	Result
MHz	Output Power	
	dBm	
Low channel 2402MHz	-0.91	Pass
Middle channel 2441MHz	-1.83	Pass
High channel 2480MHz	-3.31	Pass

Bluetooth Mode 8DPSK modulation Test Result

Frequency	Conducted Peak	Result
MHz	Output Power	
	dBm	
Low channel 2402MHz	-0.75	Pass
Middle channel 2441MHz	-1.65	Pass
High channel 2480MHz	-3.09	Pass

9.3 20 dB bandwidth and 99% Occupied Bandwidth

Test Method

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Limit

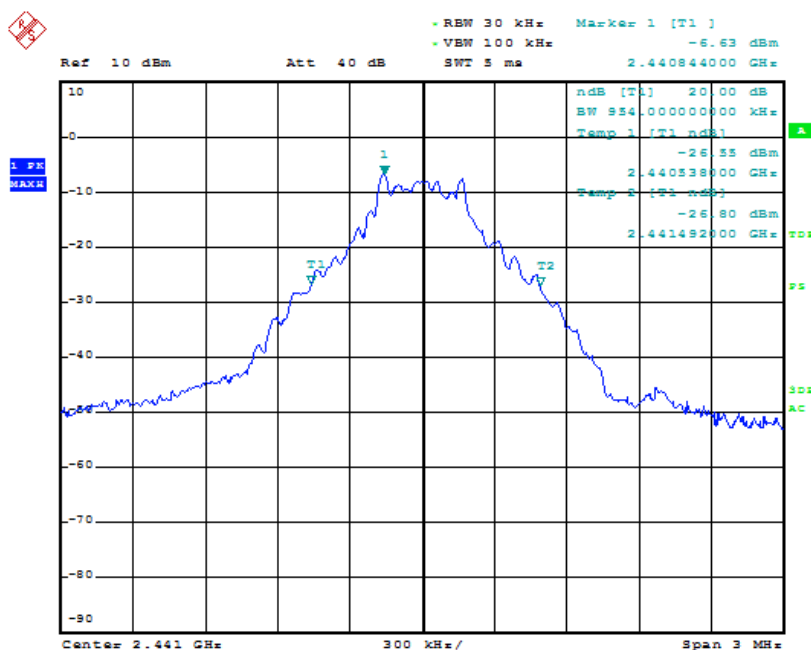
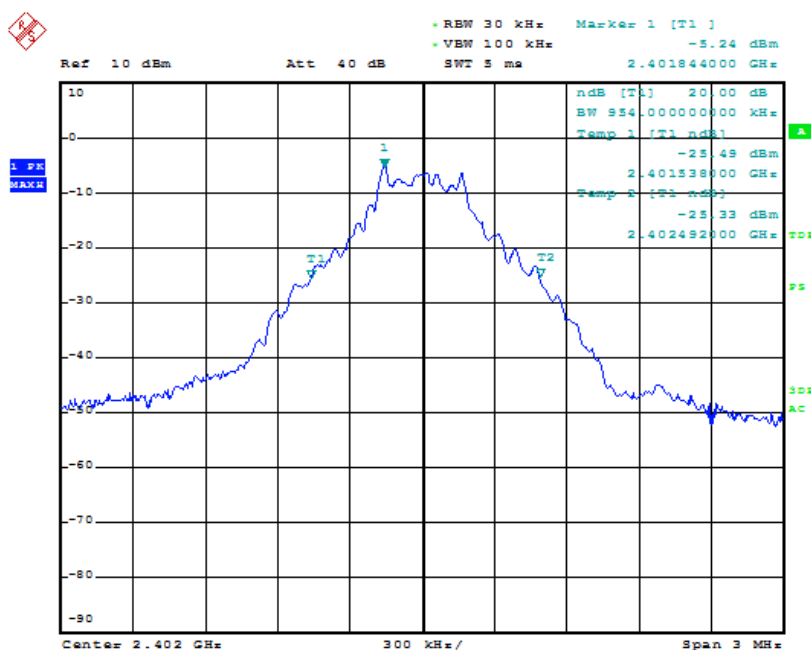
Limit [kHz]

N/A

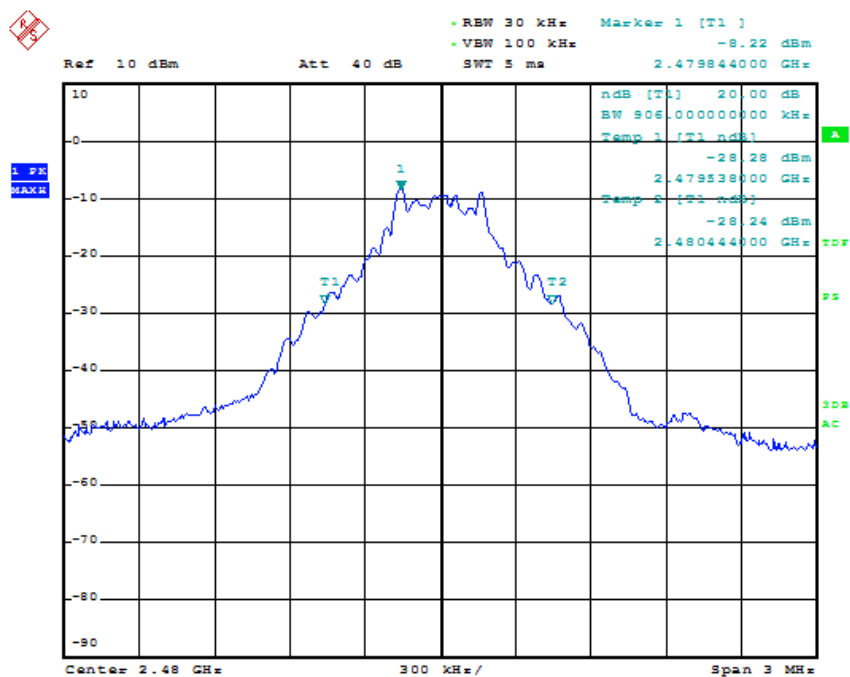
20 dB Bandwidth

Bluetooth Mode GFSK Modulation test result

Frequency MHz	20 dB Bandwidth kHz	Limit kHz	Result
2402	954	--	Pass
2441	954	--	Pass
2480	906	--	Pass



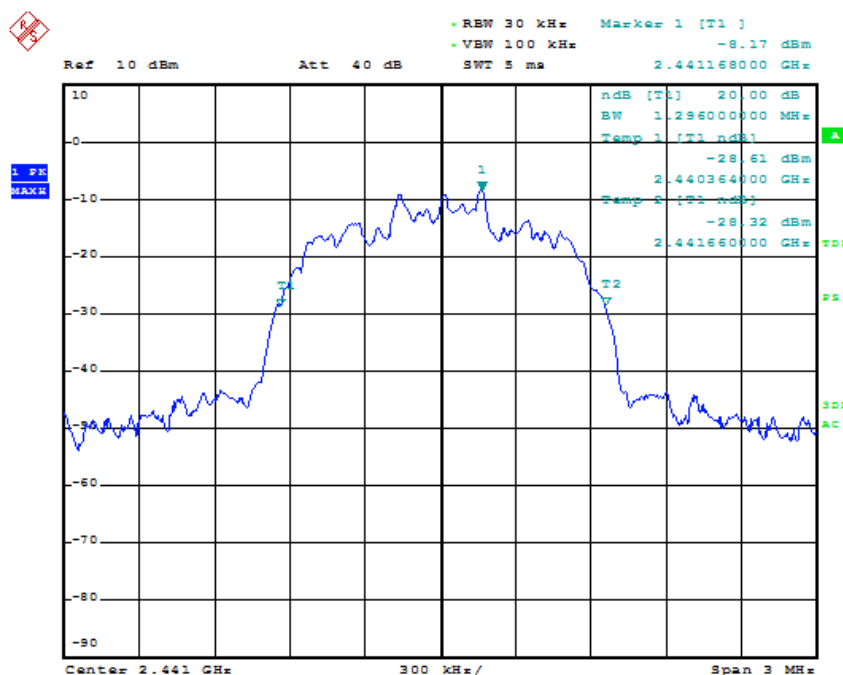
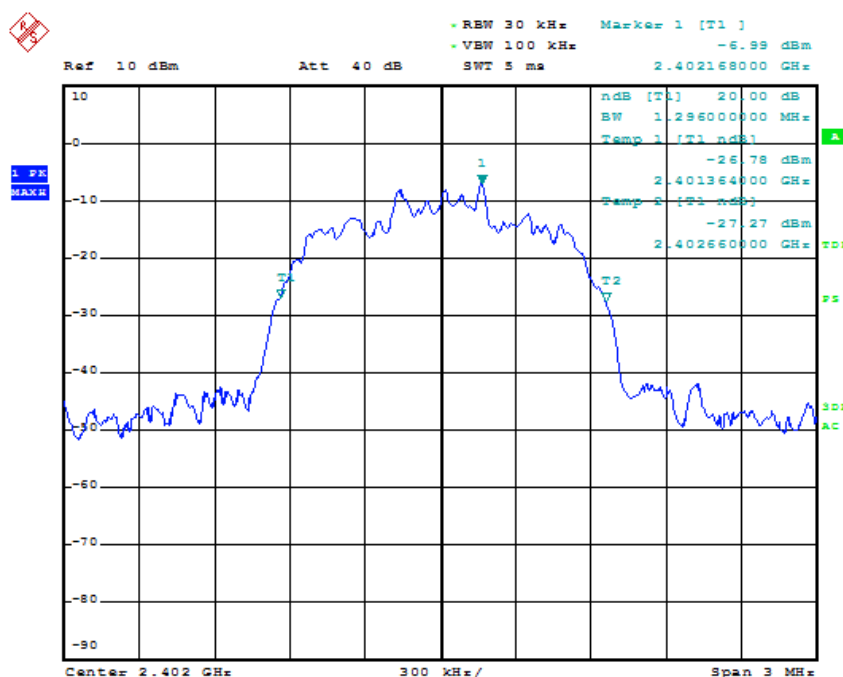
20 dB Bandwidth



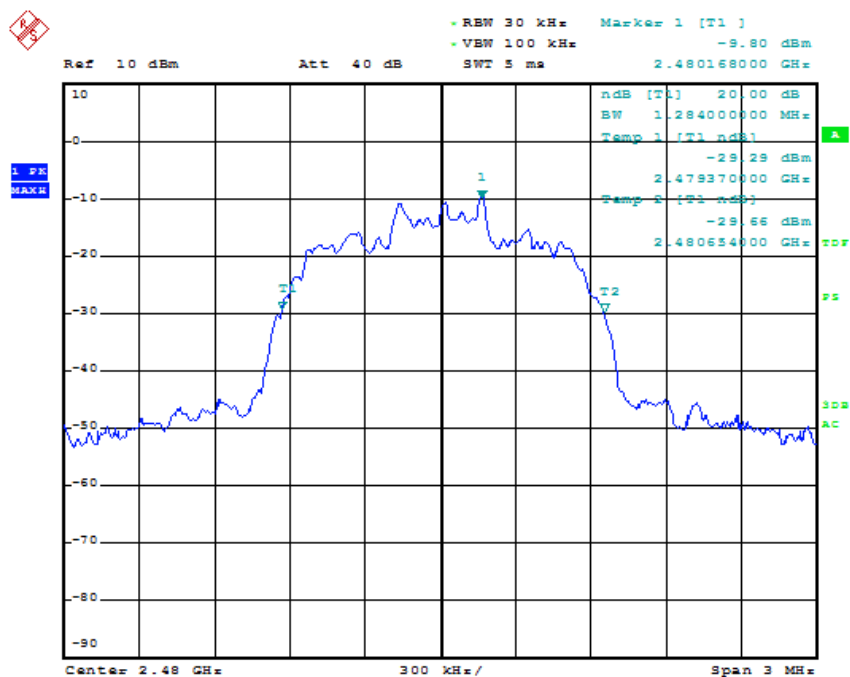
20 dB Bandwidth

Bluetooth Mode $\pi/4$ -DQPSK Modulation test result

Frequency MHz	20 dB Bandwidth kHz	Limit kHz	Result
2402	1296	--	Pass
2441	1296	--	Pass
2480	1284	--	Pass



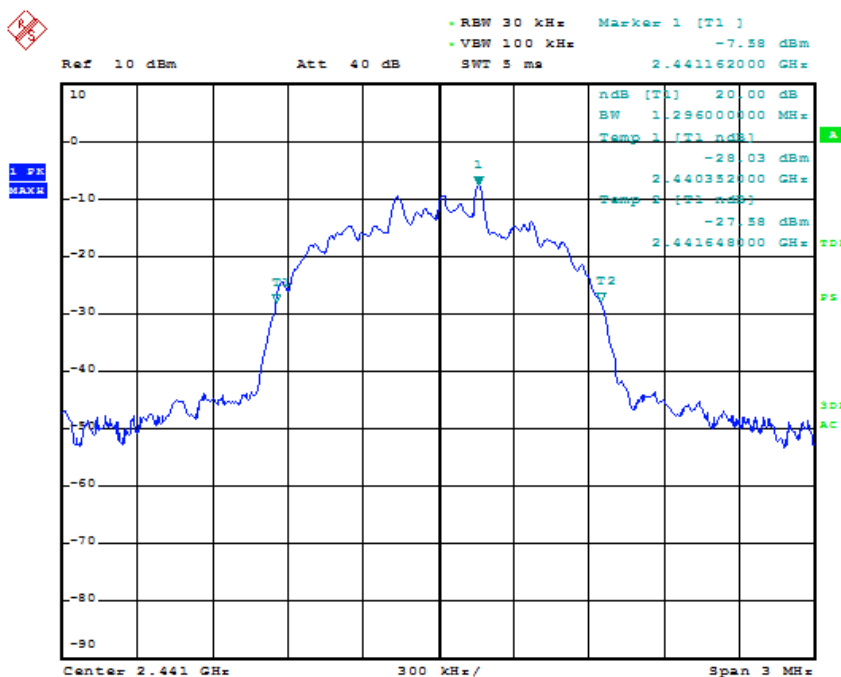
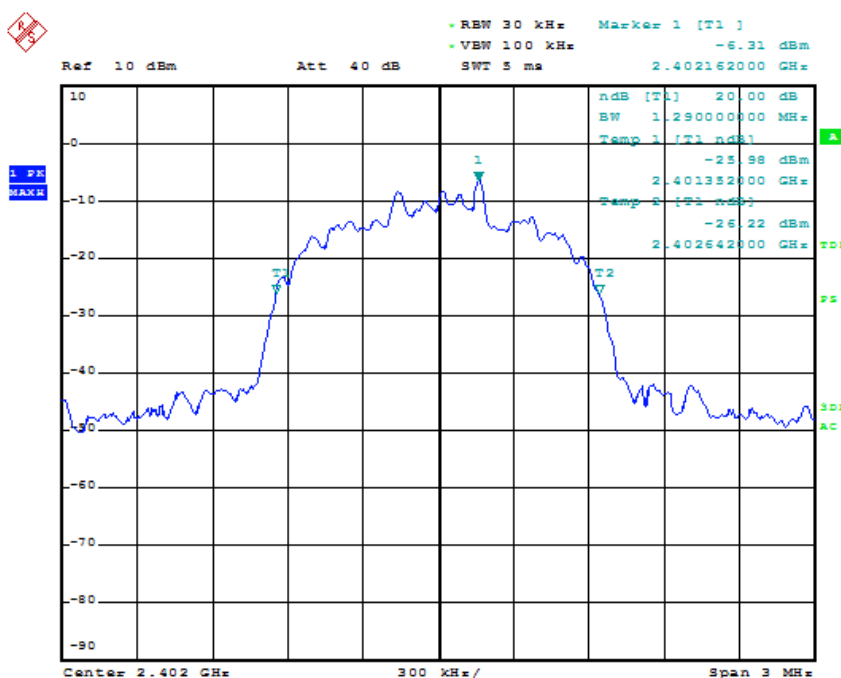
20 dB Bandwidth



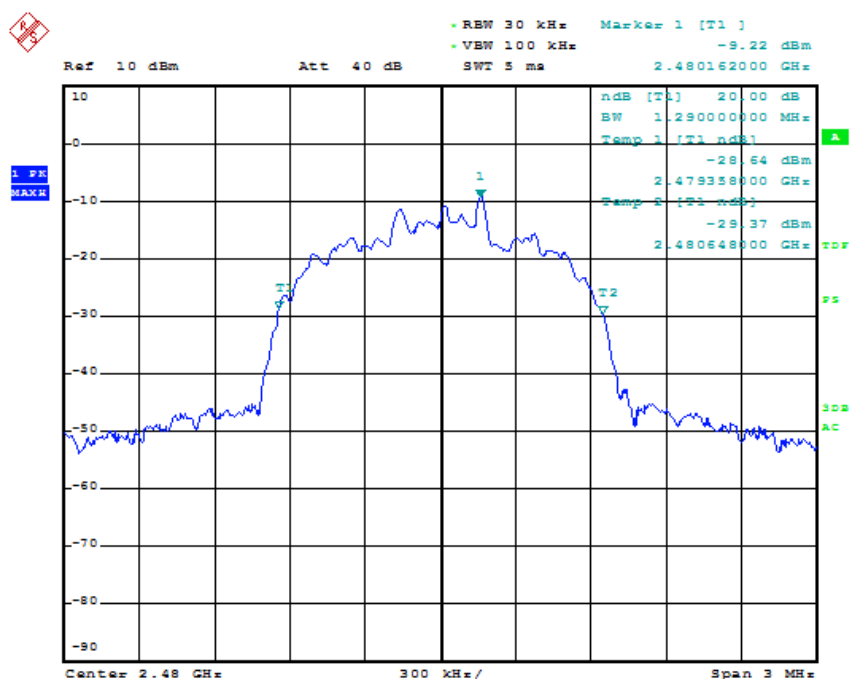
20 dB Bandwidth

Bluetooth Mode 8DPSK Modulation test result

Frequency MHz	20 dB Bandwidth kHz	Limit kHz	Result
2402	1290	--	Pass
2441	1296	--	Pass
2480	1290	--	Pass



20 dB Bandwidth



9.4 Carrier Frequency Separation

Test Method

1. Use the following spectrum analyzer settings:
Span = wide enough to capture the peaks of two adjacent channels, $RBW \geq 1\%$ of the span, $VBW \geq RBW$, Sweep = auto, Detector function = peak.
2. By using the Max-Hold function record the separation of two adjacent channels.
3. Measure the frequency difference of these two adjacent channels by spectrum analyzer marker function.
4. Repeat above procedures until all frequencies measured were complete.

Limit

Limit

kHz

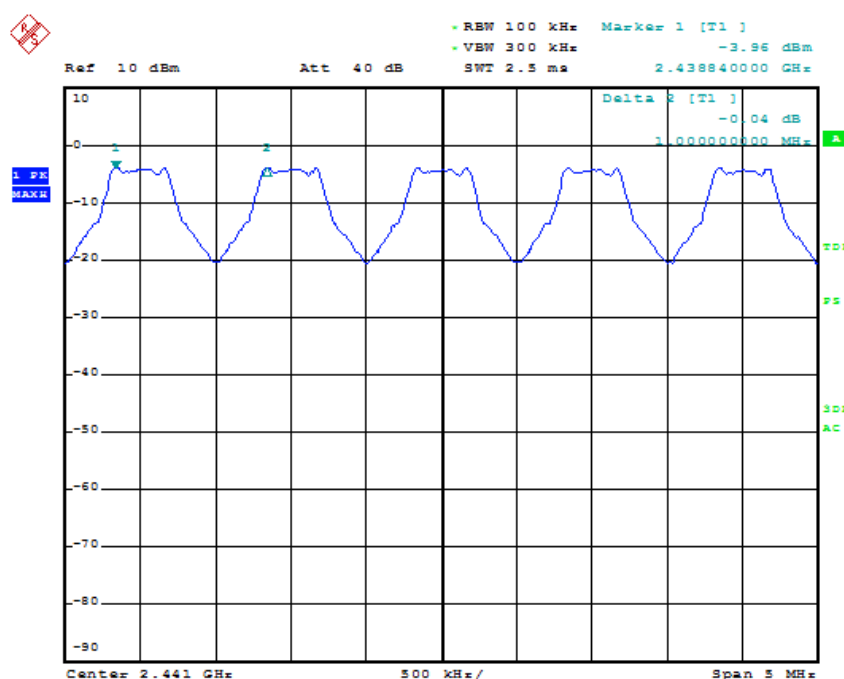
$\geq 25\text{kHz}$ or $2/3$ of the 20 dB bandwidth which is greater

Carrier Frequency Separation

Test result: The measurement was performed with the typical configuration (normal hopping status), here GFSK modulation mode was used to show compliance.

GFSK Modulation test result

Frequency MHz	Carrier Frequency Separation kHz	Result
2402	1000	Pass
2441	1000	Pass
2480	1000	Pass



9.5 Number of hopping frequencies

Test Method

1. Use the following spectrum analyzer settings:
Span = wide enough to capture the peaks of two adjacent channels, $RBW \geq 1\%$ of the span, $VBW \geq RBW$, Sweep = auto, Detector function = peak
2. Set the spectrum analyzer on Max-Hold Mode, and then keep the EUT in hopping mode.
3. Record all the signals from each channel until each one has been recorded.
4. Repeat above procedures until all frequencies measured were complete.

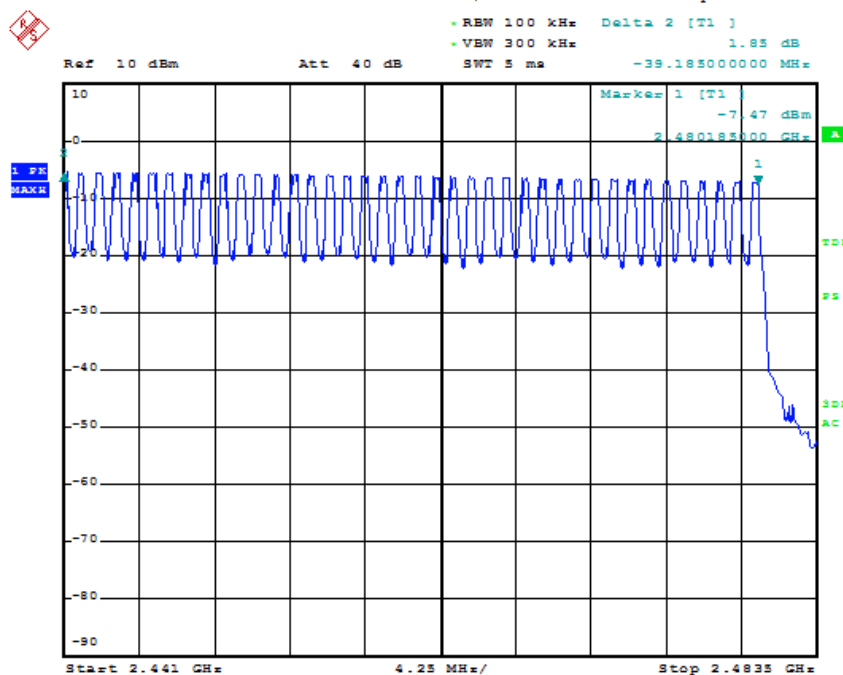
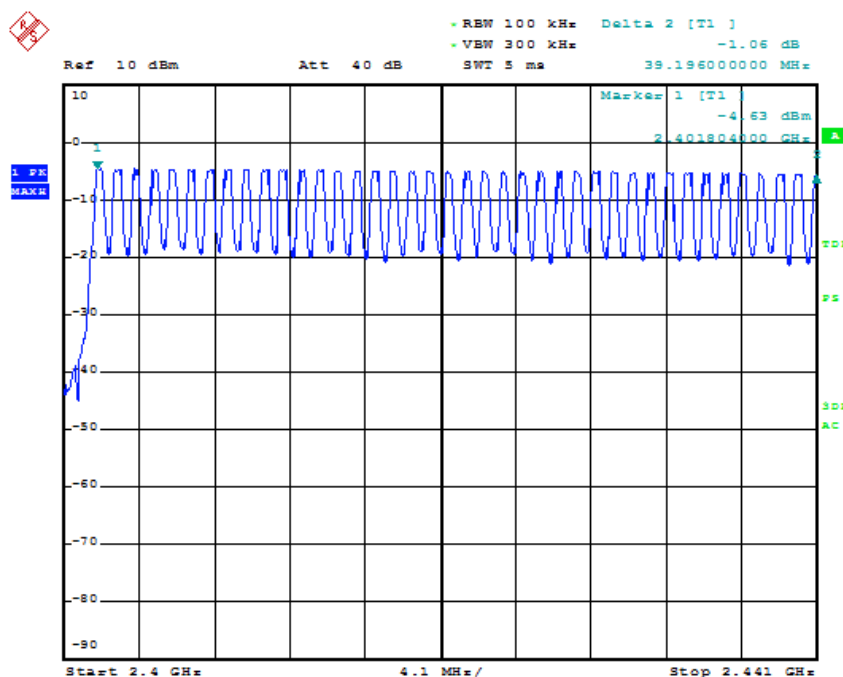
Limit

$$\frac{\text{Limit number}}{\geq 15}$$

Number of hopping frequencies

Test result: The measurement was performed with the typical configuration (normal hopping status), and the total hopping channels is constant for the all modulation mode according with the Bluetooth Core Specification. Here GFSK modulation mode was used to show compliance.

Number of hopping frequencies	Result
79	Pass



9.6 Dwell Time

Test Method

1. Connect EUT antenna terminal to the spectrum analyzer with a low loss cable.
Equipment mode: Spectrum analyzer.
2. RBW: 1MHz; VBW: 1MHz; SPAN: Zero Span.
3. Adjust the center frequency of spectrum analyzer on any frequency be measured.
4. Measure the Dwell Time by spectrum analyzer Marker function.
5. Repeat above procedures until all frequencies measured were complete.

Limit

According to §15.247(a)(1)(iii), the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

Dwell Time

Dwell time

The maximum dwell time shall be 0,4 s.

According to the Bluetooth Core Specification, the worse result (DH5 mode) was reported to show compliance.

The Dwell Time = Burst Width * Total Hops. The detailed calculations are showed as follows:
 The duration for dwell time calculation: 0.4 [s] * hopping number = 0.4 [s] * 79 [ch] = 31.6 [s*ch];

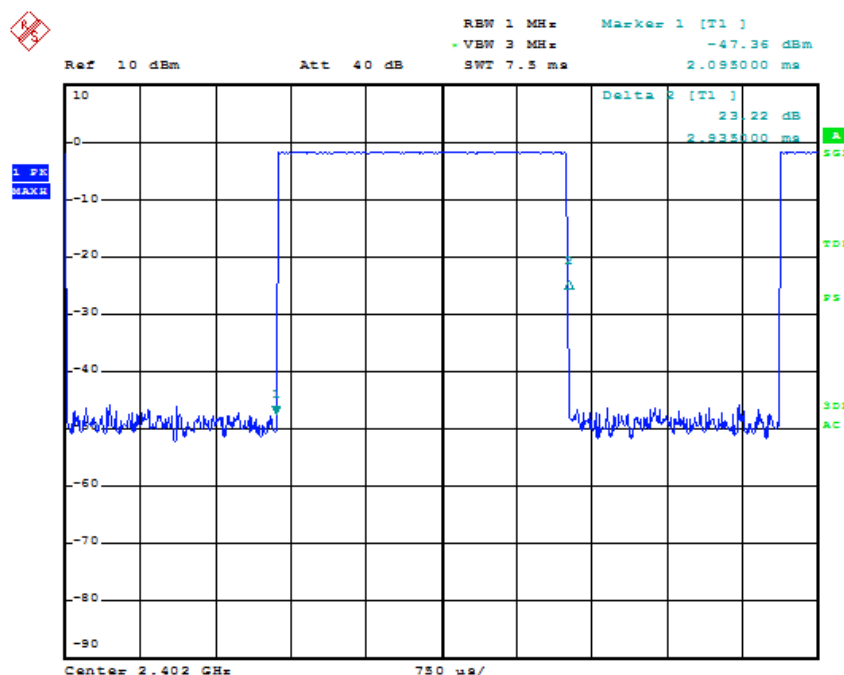
The burst width, which is directly measured, refers to the duration on one channel hop.

The maximum number of hopping channels in 31.6s for DH5=1600 / 6 / 79 *31.6=106.67

Test Result

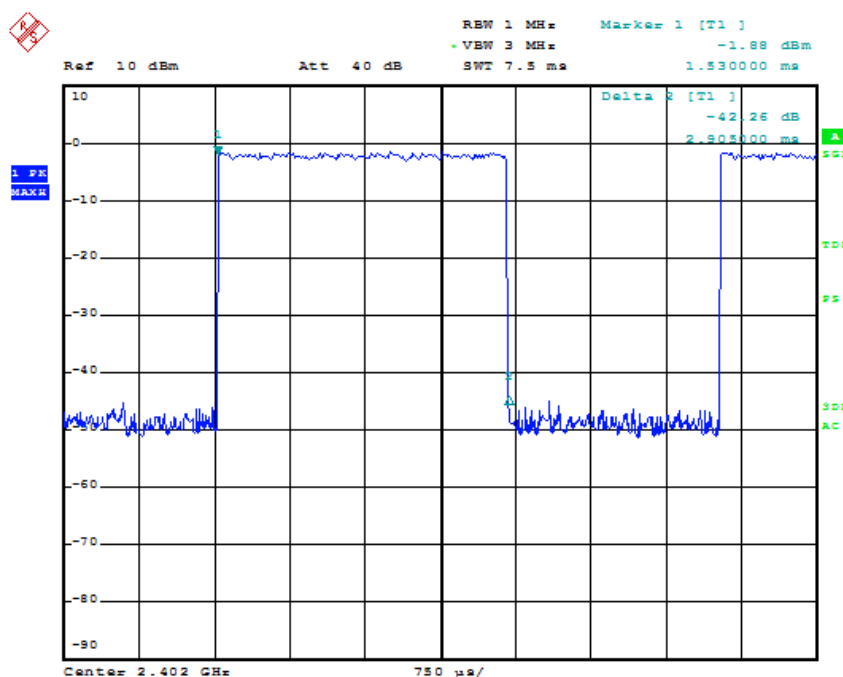
Mode	Reading (µs)	Total Hops	Test Result (ms)	Limit (ms)	Result
DH5	2935	106.67	313.08	< 400	Pass
2DH5	2905	106.67	309.88	< 400	Pass
3DH5	2910	106.67	310.41	< 400	Pass

GFSK Modulation



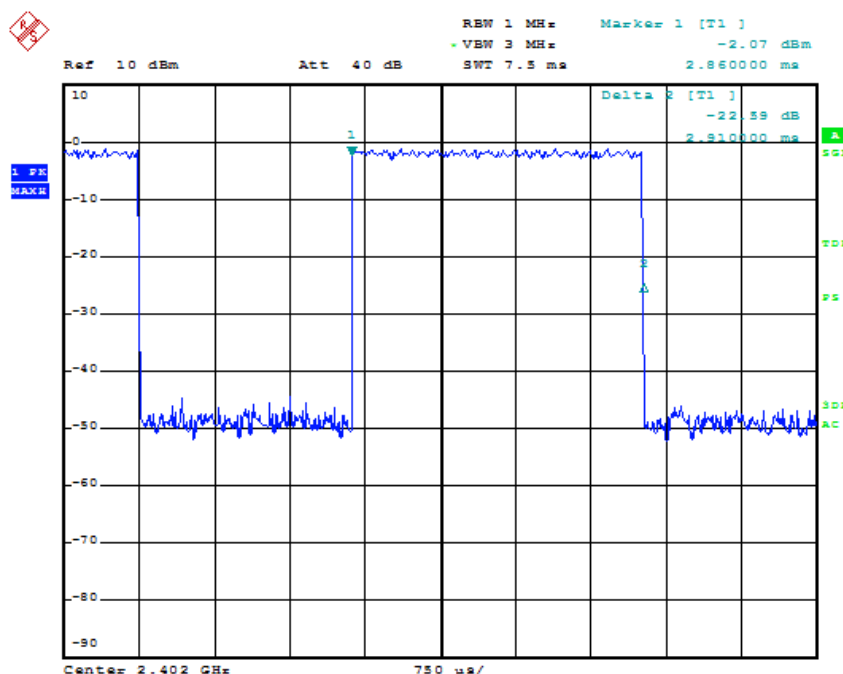
DH5

$\pi/4$ -DQPSK Modulation



2DH5

8DPSK Modulation



3DH5

9.7 Spurious RF conducted emissions

Test Method

1. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz, VBW ≥ RBW, Sweep = auto, Detector function = peak, Trace = max hold
2. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
3. The level displayed must comply with the limit specified in this Section. Submit these plots.
4. Repeat above procedures until all frequencies measured were complete.

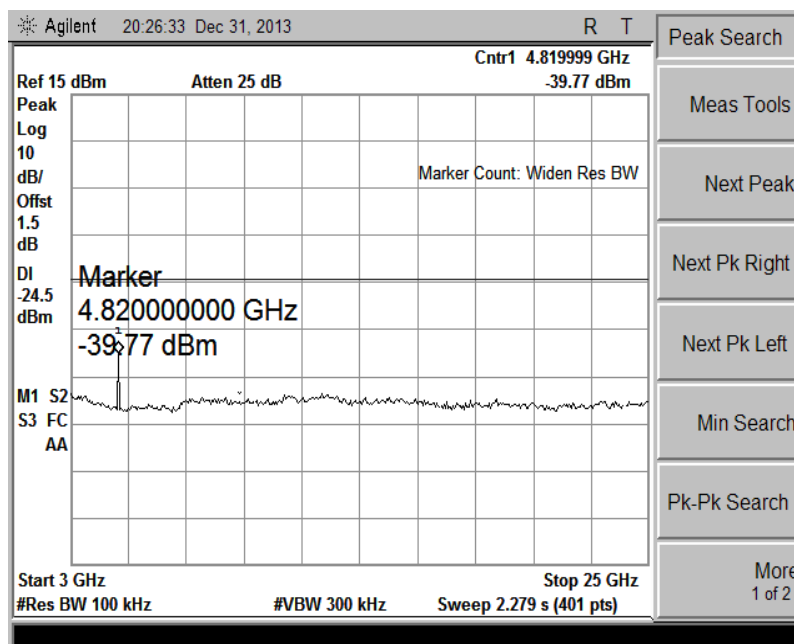
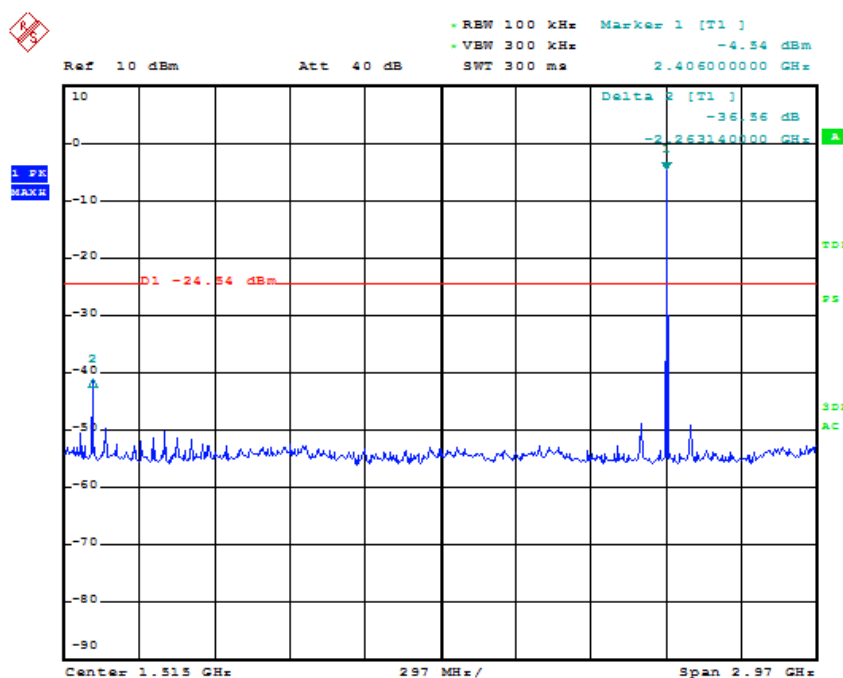
Limit

Frequency Range MHz	Limit (dBc)
30-25000	-20

Spurious RF conducted emissions

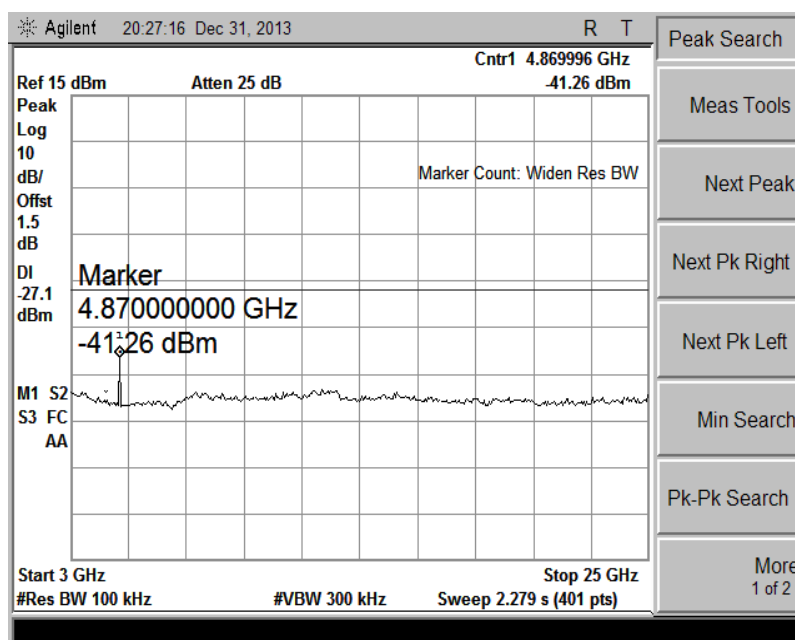
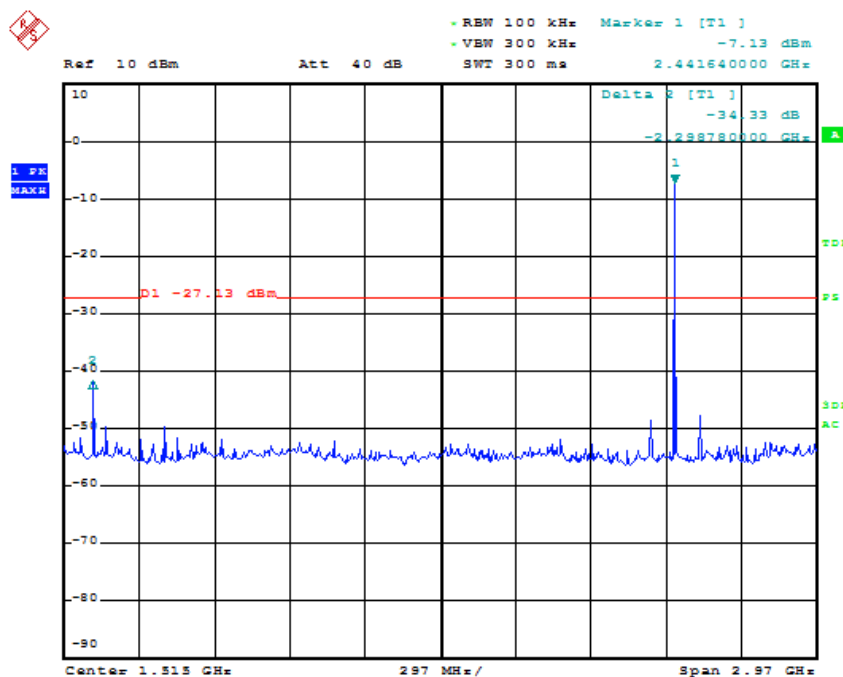
Only the worse case (which is subject to the maximum EIRP, 8DPSK mode) test result is listed in the report.

2402MHz



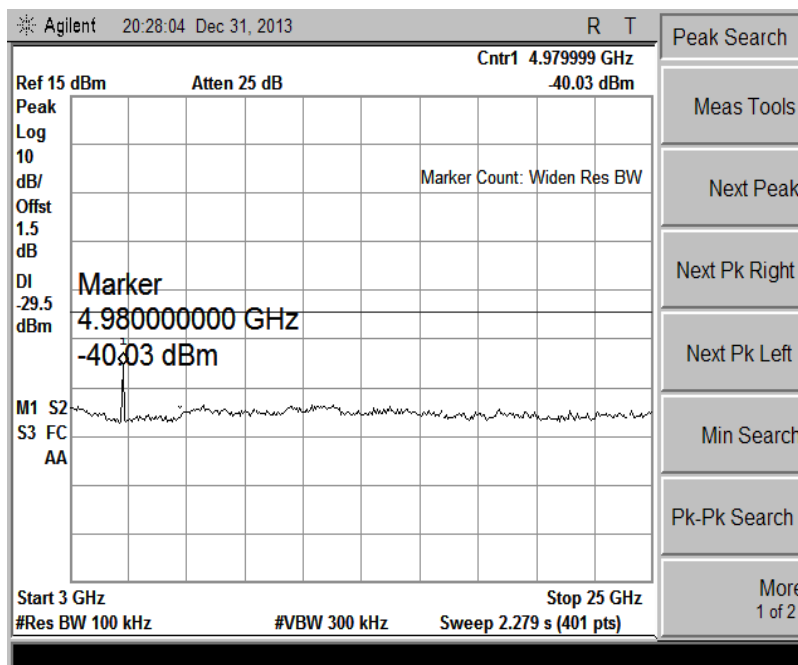
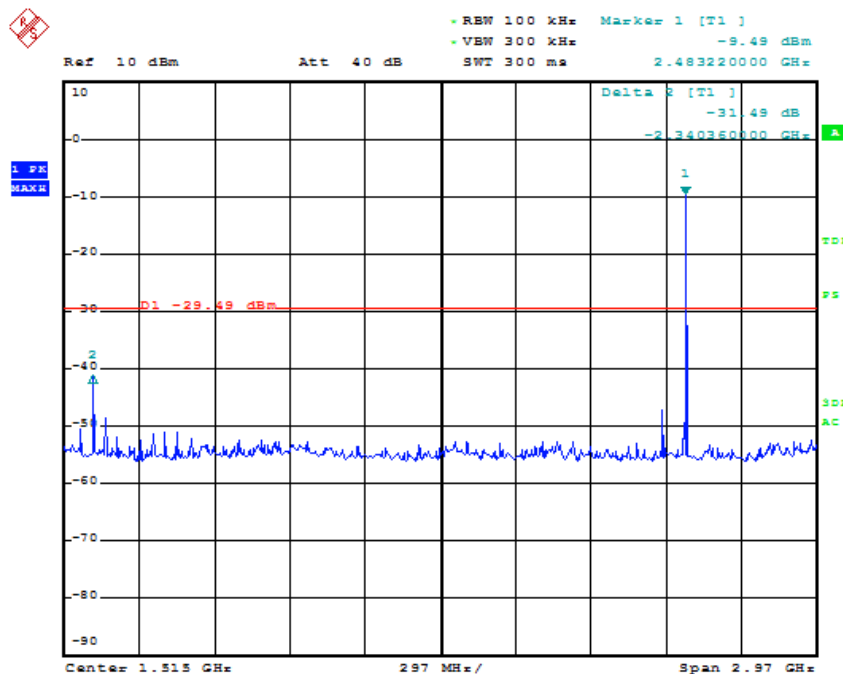
Spurious RF conducted emissions

2441MHz



Spurious RF conducted emissions

2480MHz



9.8 Band edge testing

Test Method

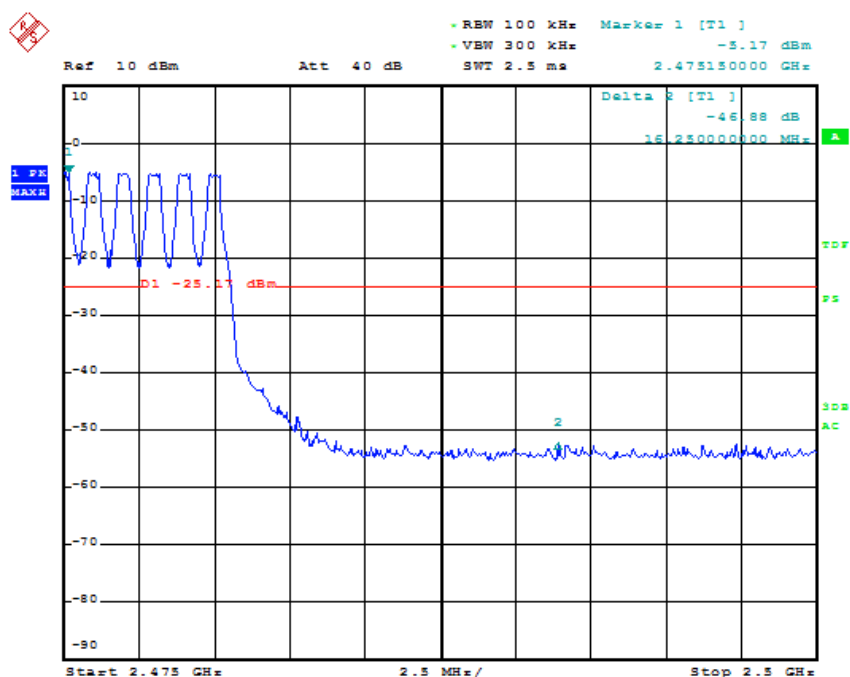
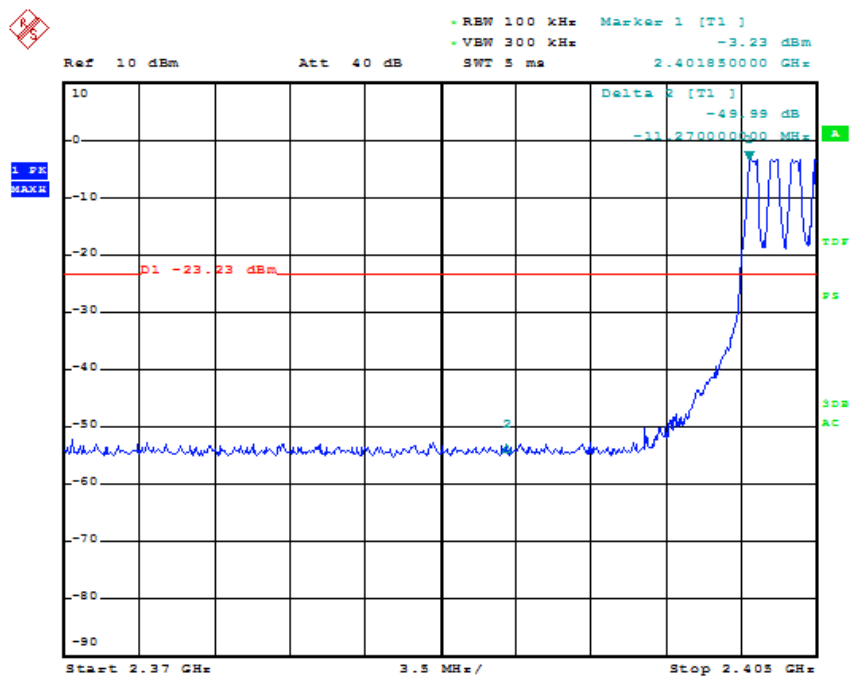
- 1 Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW \geq RBW, Sweep = auto, Detector function = peak, Trace = max hold
- 2 Allow the trace to stabilize, use the peak and delta measurement to record the result.
- 3 The level displayed must comply with the limit specified in this Section. .
- 4 Repeat the test at the hopping off and hopping on mode, submit all the plots.

Limit:

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

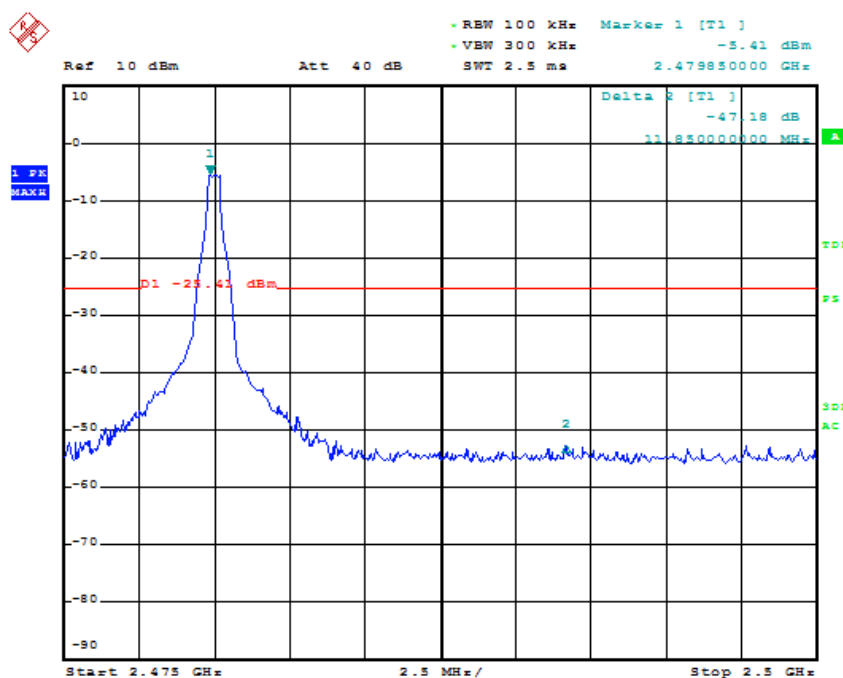
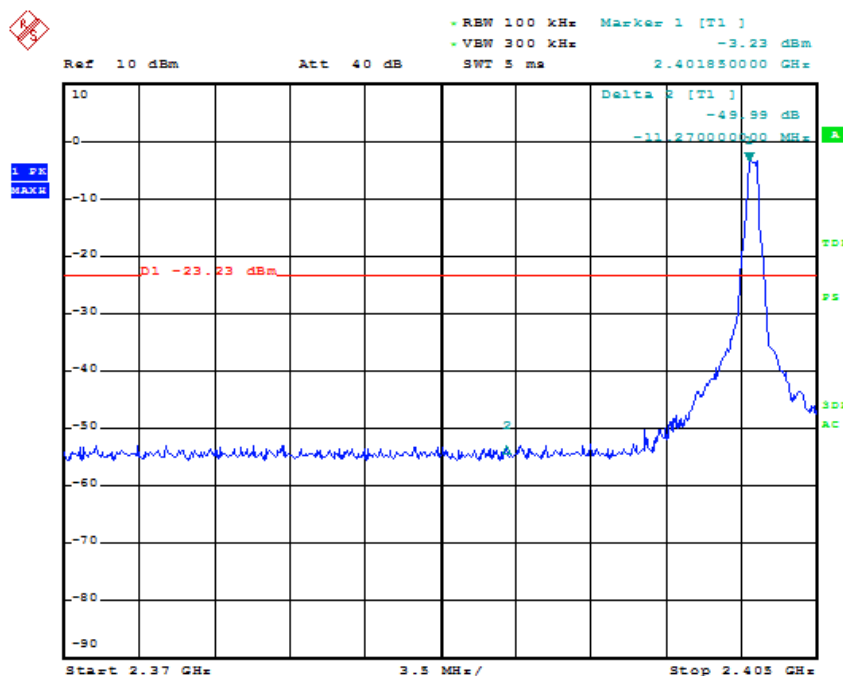
Band edge testing

GFSK Modulation Test Result:
Hopping on mode:



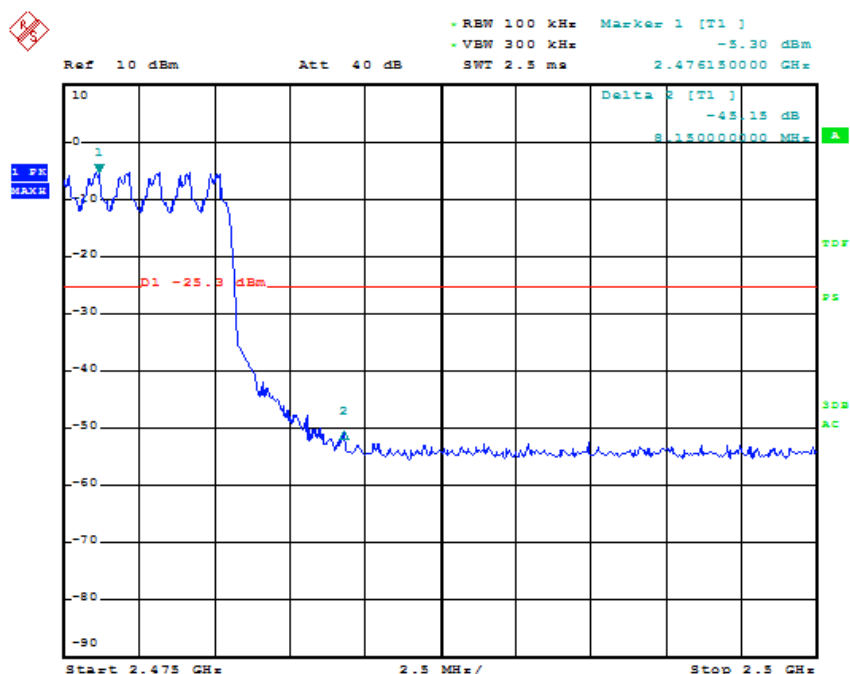
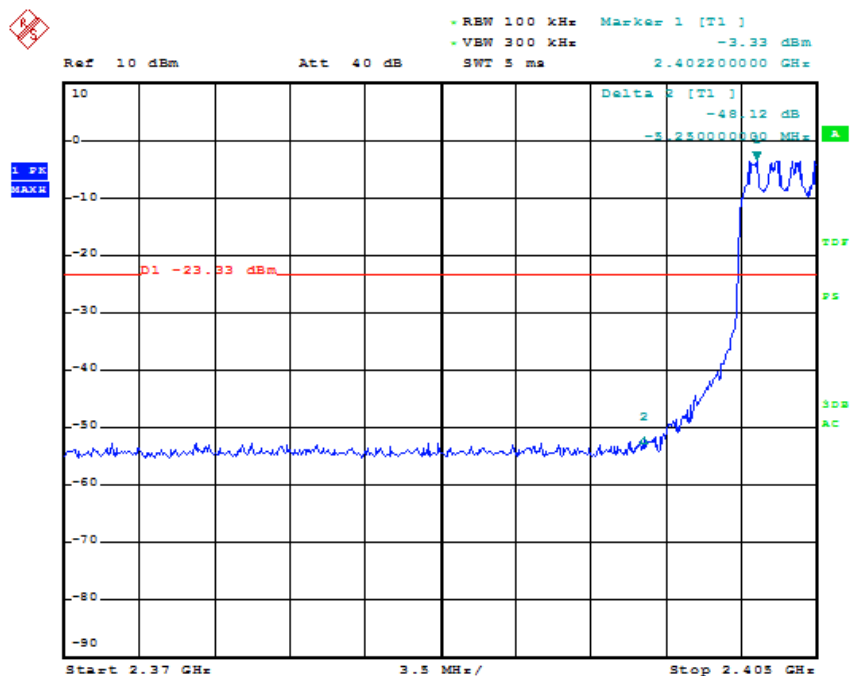
Band edge testing

Hopping off mode:



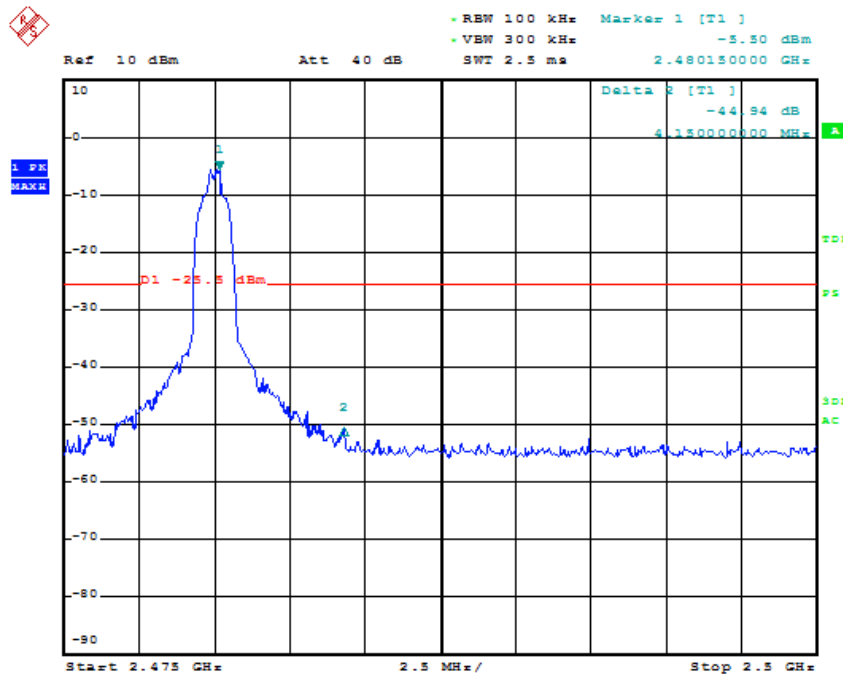
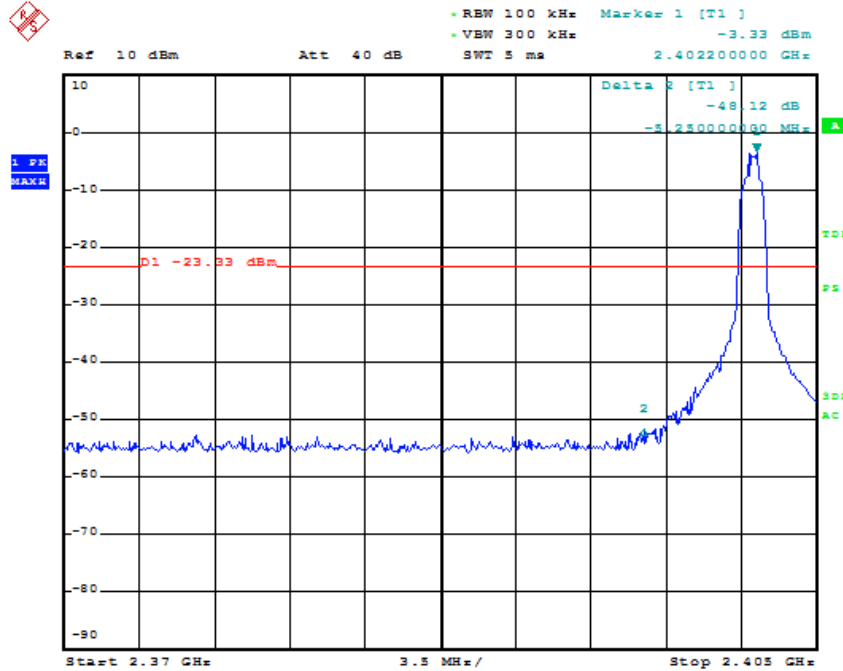
Band edge testing

8DPSK Modulation Test Result:
Hopping on mode:



Band edge testing

Hopping off mode:



9.9 Spurious radiated emissions for transmitter

Test Method

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
3. Use the following spectrum analyzer settings:
Span = wide enough to fully capture the emission being measured, RBW = 1 MHz for $f \geq 1\text{GHz}$, 100 kHz for $f < 1\text{GHz}$, VBW \geq RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Follow the guidelines in ANSI C63.4-1992 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc.
The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the duty cycle per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{duty cycle}/100\text{ ms})$, in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

Limit

According to part 15.247(d), the radio emission outside the operating frequency band shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

Frequency MHz	Field Strength uV/m	Field Strength dB μ V/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

Spurious radiated emissions for transmitter and receiver

The only worse case (which is subject to the maximum EIRP, 8DPSK mode) test result is listed in the report.

Bluetooth Mode 8DPSK Modulation 2402MHz Test Result

Frequency MHz	Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
117.3	-16.46	49.35	32.89	Vertical	43.5	QP	Pass
116.33	-13.25	47.33	34.08	Horizontal	43.5	QP	Pass
2399.98	8.09	45.05	53.14	Vertical	74.0	PK	Pass
2399.98	8.09	15.95	24.04	Vertical	54.0	AV	Pass
2399.98	8.09	44.08	52.17	Horizontal	74.0	PK	Pass
2399.98	8.09	14.98	23.07	Horizontal	54.0	AV	Pass
*4804.00	14.63	44.58	59.21	Vertical	74.0	PK	Pass
*4804.00	14.63	15.48	30.11	Vertical	54.0	AV	Pass
*4804.00	14.63	41.68	56.31	Horizontal	74.0	PK	Pass
*4804.00	14.63	12.58	27.21	Horizontal	54.0	AV	Pass
*7206.00	20.68	42.65	63.33	Vertical	74.0	PK	Pass
*7206.00	20.68	13.55	34.23	Vertical	54.0	AV	Pass
*7206.00	20.68	43.37	64.05	Horizontal	74.0	PK	Pass
*7206.00	20.68	14.27	34.95	Horizontal	54.0	AV	Pass

Bluetooth Mode 8DPSK Modulation 2441MHz Test Result

Frequency MHz	Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
*4882.00	14.97	45.78	60.75	Vertical	74.0	PK	Pass
*4882.00	14.97	16.68	31.65	Vertical	54.0	AV	Pass
*4882.00	14.97	41.62	56.59	Horizontal	74.0	PK	Pass
*4882.00	14.97	26.65	41.62	Horizontal	54.0	AV	Pass
*7323.00	20.91	43.79	64.70	Vertical	74.0	PK	Pass
*7323.00	20.91	14.69	35.60	Vertical	54.0	AV	Pass
*7323.00	20.91	42.64	63.55	Horizontal	74.0	PK	Pass
*7323.00	20.91	13.54	34.45	Horizontal	54.0	AV	Pass

Bluetooth Mode 8DPSK Modulation 2480MHz Test Result

Frequency MHz	Antenna Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBμV/m	Detector	Result
2483.99	8.38	45.26	53.64	Vertical	74.0	PK	Pass
2483.99	8.38	16.16	24.54	Vertical	54.0	AV	Pass
*4960.00	15.30	41.50	56.80	Vertical	74.0	PK	Pass
*4960.00	15.30	12.40	27.70	Vertical	54.0	AV	Pass
*4960.00	8.38	45.26	53.64	Horizontal	74.0	PK	Pass
*4960.00	8.38	16.16	24.54	Horizontal	54.0	AV	Pass
*7440.00	21.61	42.50	63.66	Vertical	74.0	PK	Pass
*7440.00	21.61	12.95	34.56	Vertical	54.0	AV	Pass
*7440.00	21.16	43.71	64.87	Horizontal	74.0	PK	Pass
*7440.00	21.16	14.61	35.77	Horizontal	54.0	AV	Pass

Remark:

- (1) QP/PK/AV Emission Level= Factor + Reading
- (2) "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.

10 Test Equipment List

List of Test Instruments

	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE	
CE	Test Receiver	Rohde & Schwarz	ESCI	101152	Nov. 25, 2014	<input checked="" type="checkbox"/>
	L.I.S.N	Rohde & Schwarz	ENV 216	101317	Nov. 09, 2014	<input checked="" type="checkbox"/>
	RF Switching Unit	Compliance Direction Systems Inc.	RSU-M2	38311	Nov. 09, 2014	<input checked="" type="checkbox"/>
	Pulse Limiter	MTS-systemtechnik	MTS-IMP-136	261115-010-0022	Nov. 09, 2014	<input checked="" type="checkbox"/>
C	Test Receiver	Rohde & Schwarz	ESCI7	100837	Nov. 25, 2014	<input checked="" type="checkbox"/>
	Spectrum Analyzer	Agilent	E4408B	MY414407D	Jul. 12, 2014	<input checked="" type="checkbox"/>
RE	Test Receiver	Rohde & Schwarz	ESCI7	100837	Nov. 25, 2014	<input checked="" type="checkbox"/>
	Antenna	Schwarzbeck	VULB9162	9162-010	Jan. 18, 2014	<input checked="" type="checkbox"/>
	Positioning Controller	UC	UC 3000	N/A	N/A	<input checked="" type="checkbox"/>
	Color Monitor	SUNSP0	SP-140A	N/A	N/A	<input checked="" type="checkbox"/>
	Single Phase Power Line Filter	SAEMC	PF201A-32	110210	N/A	<input checked="" type="checkbox"/>
	3 Phase Power Line Filter	SAEMC	PF401A-200	110318	N/A	<input checked="" type="checkbox"/>
	DC Power Filter	SAEMC	PF301A-200	110245	N/A	<input checked="" type="checkbox"/>
	Cable	Huber+Suhner	CBL2-NN-9M	22390001	Nov. 09, 2014	<input checked="" type="checkbox"/>
	Cable	Huber+Suhner	CIL02	N/A	Nov. 09, 2014	<input checked="" type="checkbox"/>
	Power Amplifier	HP	HP 8447D	1145A00203	Nov. 09, 2014	<input checked="" type="checkbox"/>
	Spectrum Analyzer	Agilent	E4408B	MY414407D	Jul. 12, 2014	<input checked="" type="checkbox"/>
	Horn Antenna	COM-Power	AH-118	071078	Jun. 29, 2014	<input checked="" type="checkbox"/>
	Pre-Amplifier	COM-Power	PAM-118	443007	Jul. 12, 2014	<input checked="" type="checkbox"/>

C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth
- 20dB bandwidth and 99% Occupied Bandwidth
- Carrier frequency separation
- Number of hopping frequencies
- Dwell Time
- Power spectral density*
- Spurious RF conducted emissions
- Band edge

11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items	Extended Uncertainty
Radiated spurious emission	3.40dB (30MHz-1GHz) 4.58dB (1GHz -25GHz)
Conducted emission	2.7dB