EMC
TEST REPORT

Report No.: TS13080045-EME
Model No.: BLACK 15S, BLACK18S
Issued Date: Aug. 28, 2013

Applicant:	**inMusic Brands, Inc** **200 Scenic View Drive, Suite 201, Cumberland, RI 02864, U.S.A.**
Test Method/ Standard:	**FCC Part 15 Subpart C Section §15.205、§15.207、§15.209、§15.247, DA 00-705 and ANSI C63.4/2003.**
Test By:	**Intertek Testing Services Taiwan Ltd.** **No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li,** **Shiang-Shan District, Hsinchu City, Taiwan**

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The test report was reviewed by:

Name Jimmy Yang
Title Engineer

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Summary of Tests

Test	Reference	Results
20dB Bandwidth test	15.247(a)(1)	Pass
Carrier Frequency Separation test	15.247(a)(1)	Pass
Number of hopping frequencies test	15.247(a)(1)(iii)	Pass
Time of Occupancy (dwell time) test	15.247(a)(1)(iii)	Pass
Maximum Output Power test	15.247(b)	Pass
RF Antenna Conducted Spurious test	15.247(d)	Pass
Radiated Spurious Emission test	15.205, 15.209	Pass
Emission on the Band Edge test	15.247(d)	Pass
AC Power Line Conducted Emission test	15.207	Pass

1. General information

1.1 Identification of the EUT

Product:	SPEAKER SYSTEM WITH WIRELESS CONTROL
Model No.:	BLACK 18S
FCC ID.:	Y4O-BLACKS
Frequency Range:	2402 MHz ~ 2480 MHz
Channel Number:	79 channels
Frequency of Each Channel:	2402 + k MHz; k = 0~78
Type of Modulation:	GFSK
Rated Power:	100-240 Vac, 50/60 Hz, 1200 W
Power Cord:	N/A
Sample Received:	Jul. 12, 2013
Test Date(s):	Jul. 12, 2013 ~ Aug. 26, 2013
Note 1:	This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
Note 2:	When determining the test conclusion, the Measurement Uncertainty of test has been considered.

1.2 Additional information about the EUT

The EUT is a SPEAKER SYSTEM WITH WIRELESS CONTROL, and was defined as information technology equipment.

The customer confirmed BLACK 15S is series model to BLACK 18S (EUT), and the different is in size.

For more detail features, please refer to User's manual as file name “Installation guide.pdf”

1.3 Antenna description

The antenna is affixed to the EUT using a unique connector, which allows for replacement of a broken antenna, but DOES NOT use a standard antenna jack or electrical connector.

Antenna Gain	: 2 dBi max
Antenna Type	: Dipole antenna
Connector Type	: I-PEX connector

1.4 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Description of Data Cable
Notebook PC	DELL	Latitude D610	2YWZK1S	LPT to5 Pins Cable 0.8 meter × 1

2. Test specifications

2.1 Test standard

The EUT was performed according to the procedures in FCC Part 15 Subpart C Section §15.205、§15.207、§15.209、§15.247, DA 00-705 and ANSI C63.4/2003.

The test of radiated measurements according to FCC Part15 Section 15.33(a) had been conducted and the field strength of this frequency band were all meet limit requirement, thus we evaluate the EUT pass the specified test.

2.2 Operation mode

The EUT was supplied with 120 Vac, 60 Hz and the transmission mode was running in control “Blue Test 3 software” program.

2.3 Test equipment

Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Test Receiver	Rohde&schwarz	ESCS30	833364/011	2013/06/11	2014/06/11
EMI Test Receiver	Rohde & Schwarz	ESCI	100018	2012/11/30	2013/11/29
Spectrum Analyzer	Rohde&schwarz	FSP30	100137	2013/06/21	2014/06/21
Spectrum Analyzer	Rohde&schwarz	FSEK30	100186	2013/01/23	2014/01/23
Horn Antenna (1-18G)	Schwarzbeck	BBHA 9120 D	9120D-456	2012/09/03	2014/09/03
Horn Antenna (14-42G)	SHWARZBECK	BBHA 9170	BBHA9170159	2012/09/05	2014/09/05
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2013/08/08	2015/08/08
Loop Antenna	RolfHeine	LA-285	02/10033	2012/03/20	2014/03/20
Pre-Amplifier	MITEQ	AFS44-00102650 --42-10P-44	1495287	2011/10/27	2013/10/26
Pre-Amplifier	MITEQ	JS4-26004000--2 7-8A	828825	2012/09/18	2014/09/18
Two-Line -V-Network	Rohde&schwarz	ESH3-Z5	825562/003	2012/10/29	2013/10/29
Power Meter	Anritsu	ML2495A	0844001	2012/10/09	2013/10/09
Power Senor	Anritsu	MA2411B	0738452	2012/10/09	2013/10/09

Note: The above equipments are within the valid calibration period.

3. 20dB Bandwidth test

3.1 Operating environment

Temperature:	23	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa

3.2 Test setup & procedure

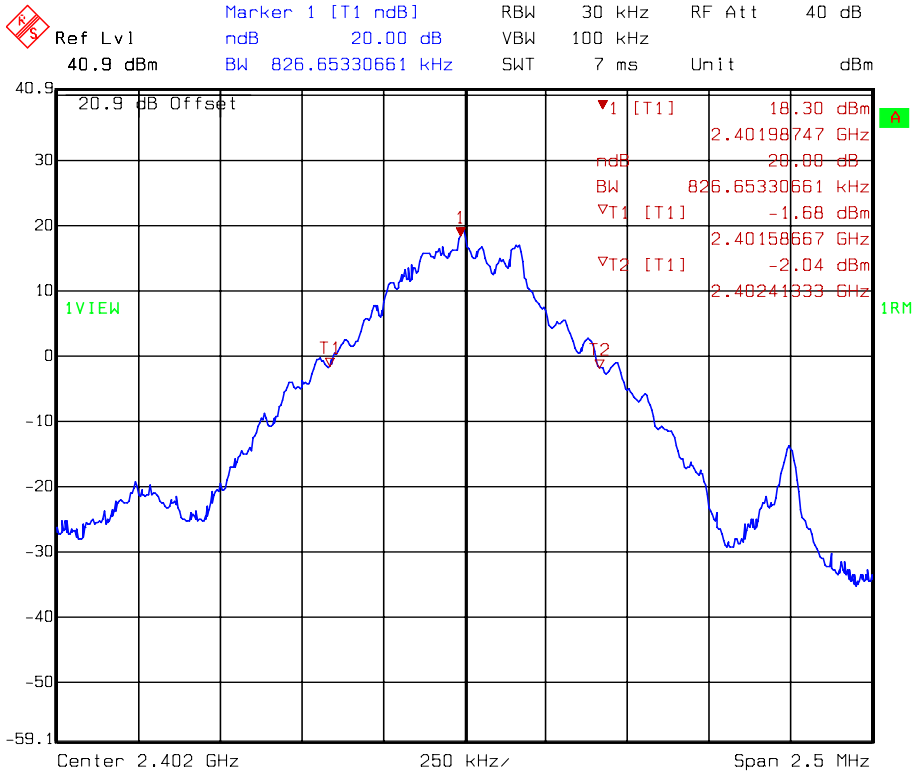
The test procedure was according to FCC measurement guidelines DA 00-705.
The 20dB bandwidth per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 100 kHz, the video bandwidth≧RBW, and the SPAN may equal to approximately 2 to 3 times the 20dB bandwidth. The test was performed at 3 channels (lowest, middle and highest channel). The maximum 20dB modulation bandwidth is in the following Table.

3.3 Measured data of modulated bandwidth test results

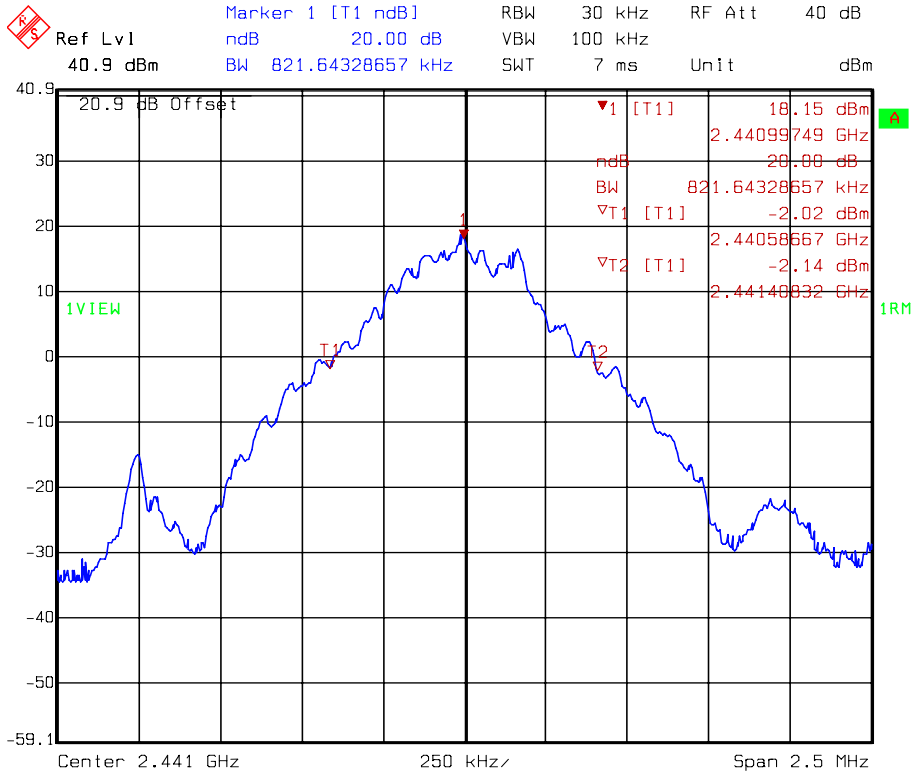
Mode	Channel	Frequency (MHz)	20dB down Bandwidth (MHz)
GFSK	0	2402	0.827
	39	2441	0.822
	78	2480	0.812

Please see the plot below.

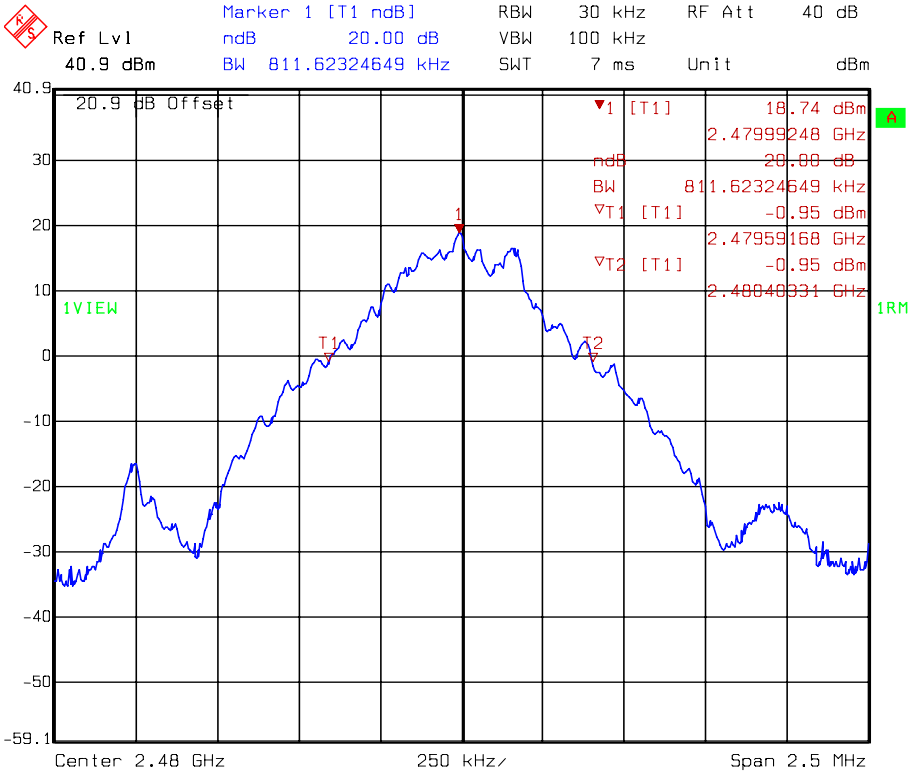
20 dB Bandwidth @ GFSK mode channel 0



20 dB Bandwidth @ GFSK mode channel 39



20 dB Bandwidth @ GFSK mode channel 78



4. Carrier Frequency Separation test

4.1 Operating environment

Temperature: 23 ℃
Relative Humidity: 55 %
Atmospheric Pressure: 1008 hPa

4.2 Test setup & procedure

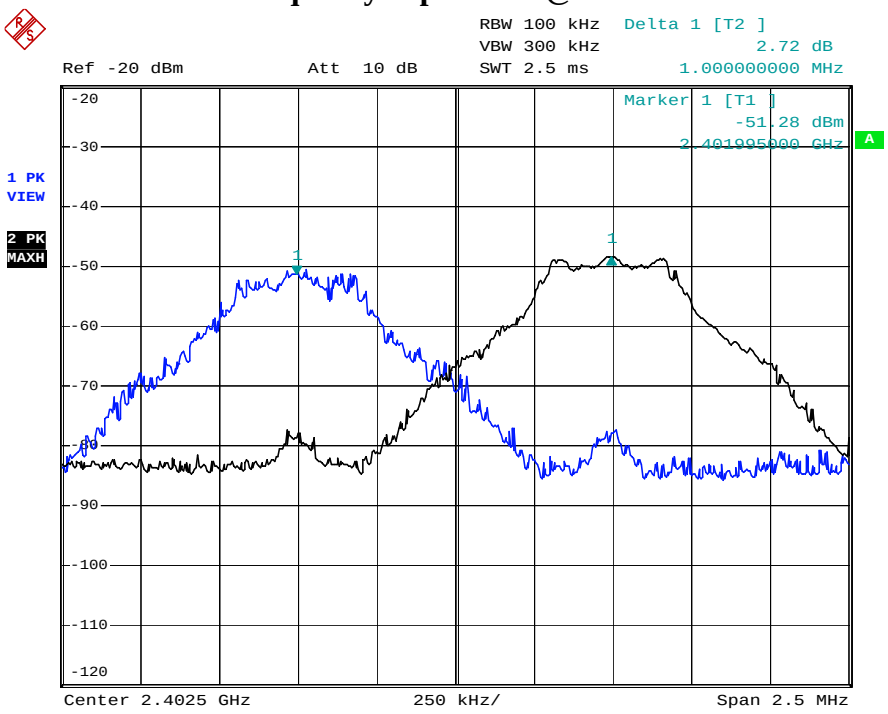
The test procedure was according to FCC measurement guidelines DA 00-705.
The carrier frequency separation per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at ≧1% of the span, the video bandwidth≧RBW, and the SPAN was wide enough to capture the peaks of two adjacent channels. The carrier frequency separation result is in the following Table.

4.3 Measured data of Carrier Frequency Separation test result

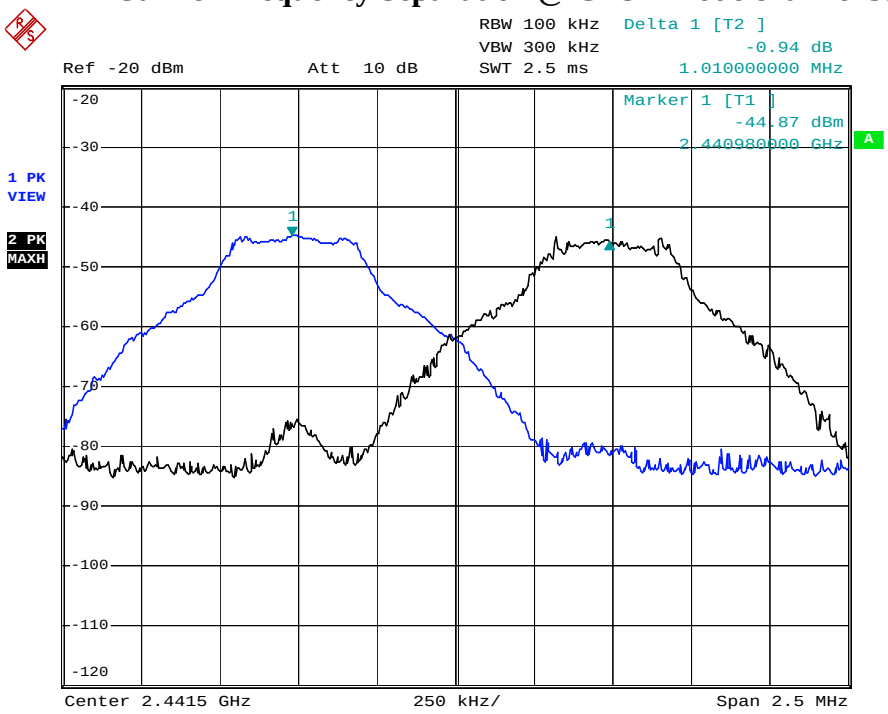
Mode	Channel	Frequency (MHz)	Adjacent channel separation (MHz)	20dB down Bandwidth (MHz)	Minimum limit 20dB BW*2/3 (kHz)	pass/fail
GFSK	0	2402	1.000	0.827	0.55	pass
	39	2441	1.010	0.822	0.55	pass
	78	2480	1.003	0.812	0.54	pass

Please see the plot below.

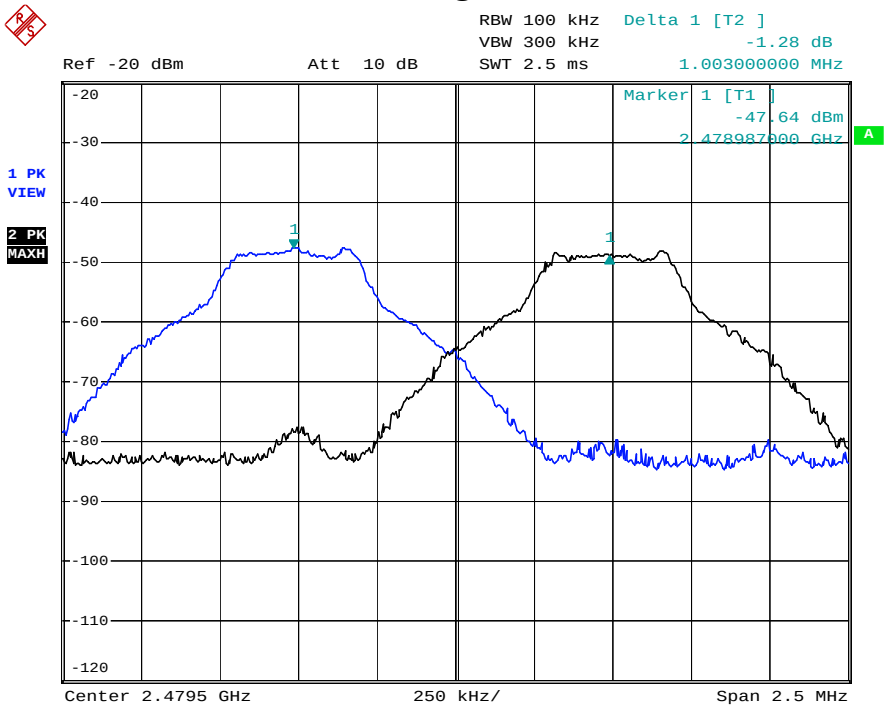
Carrier Frequency Separation @ GFSK mode channel 0



Carrier Frequency Separation @ GFSK mode channel 39



20 dB Bandwidth @ GFSK mode channel 78



5. Number of hopping frequencies test

5.1 Operating environment

Temperature:	25	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa

5.2 Test setup & procedure

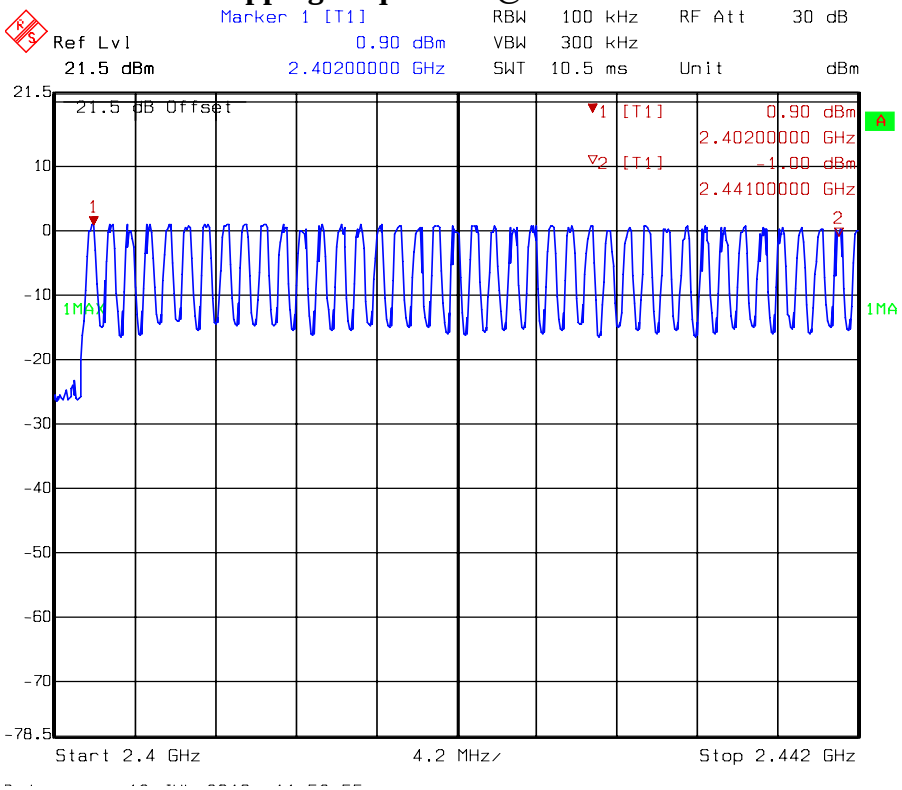
The test procedure was according to FCC measurement guidelines DA 00-705.
The number of hopping frequencies per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at ≧1% of the span, the video bandwidth≧RBW, and the SPAN was the frequency band of operation. The carrier frequency separation result is in the following Table.

5.3 Measured data of number of hopping frequencies test result

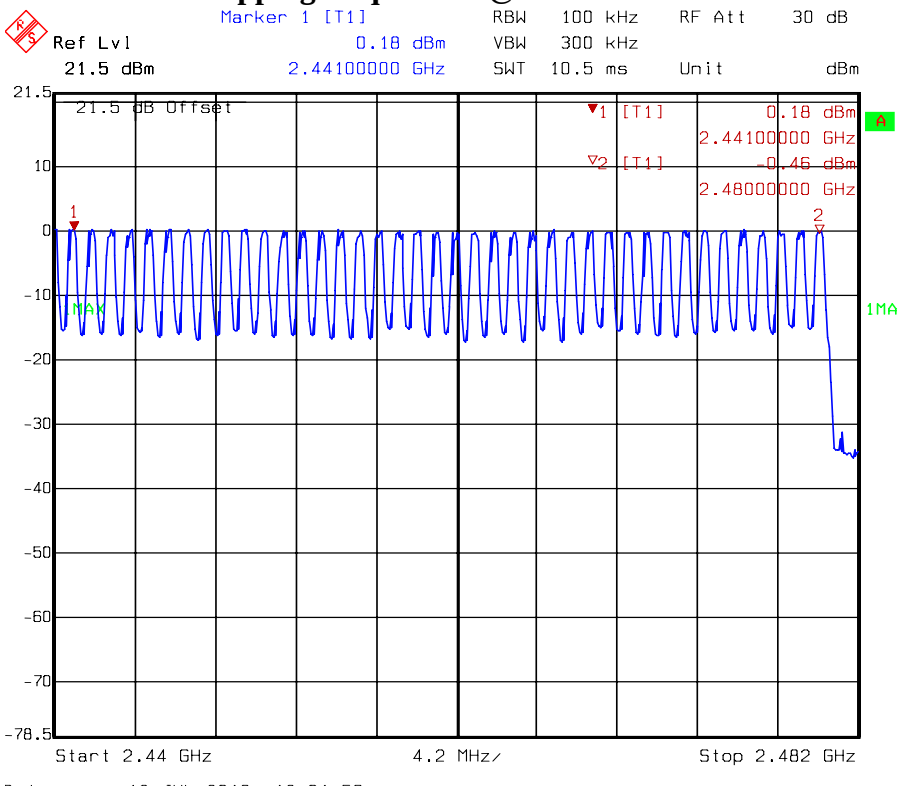
Frequency Range (MHz)	Total hopping channels
2400 ~ 2483.5	79

Please see the plot below.

Number of hopping frequencies @ GFSK mode ch 0~ch 39



Number of hopping frequencies @ GFSK mode ch 40~ch 78



6. Time of Occupancy (dwell time) & Duty Cycle Correction Factor test

6.1 Operating environment

Temperature: 23 ℃
Relative Humidity: 55 %
Atmospheric Pressure: 1008 hPa

6.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.
The time of occupancy (dwell time) per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 1MHz, the video bandwidth≧RBW, and the zero span function of spectrum analyzer was enable. The EUT has its hopping function enable.

The total sweep time is 0.4s × 79 ch = 31.6s, we determined to reduce the sweep time to 3.16s, to count the number of hops and multiplied by10. The total number of hops will be multiplied by the measured time of one pulse.

GFSK:

DH1Ch0: Number of Hope in 3.16s = 32(10)=320, Single Pluse Width = 0.397 ms
Dwell time = (Pulse Width × Total Number of Hops) 0.397ms × 320 =127.04ms ＜400ms

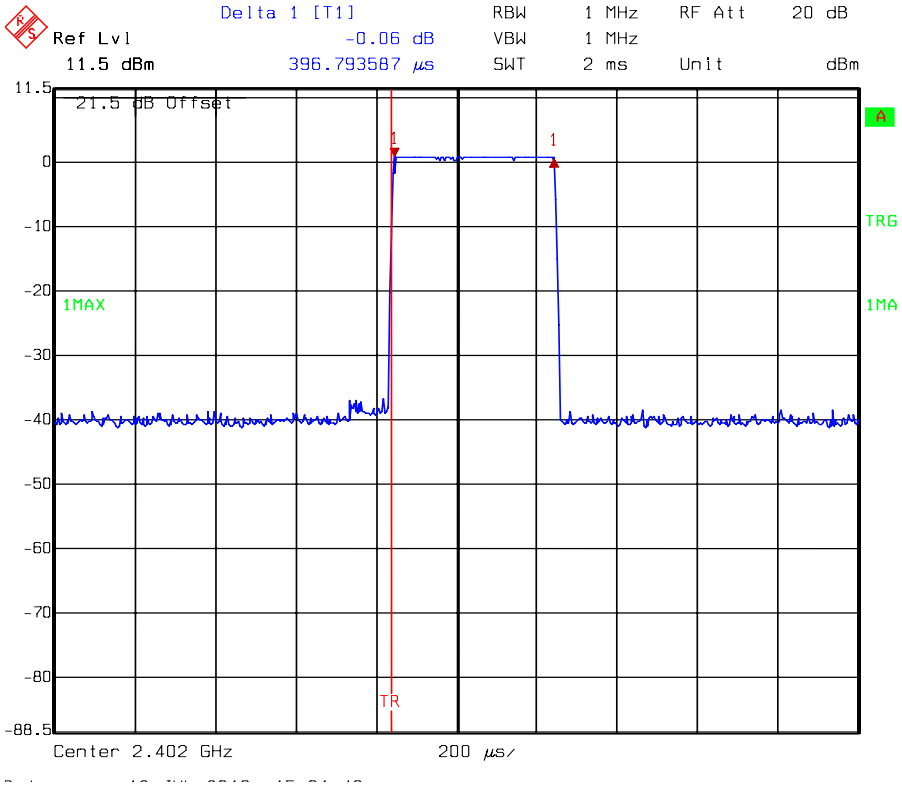
DH3Ch0: Number of Hope in 3.16s = 16(10)=160, Single Pluse Width = 1.67 ms
Dwell time = (Pulse Width × Total Number of Hops) 1.67ms × 160 =267.2ms ＜ 400ms

DH5Ch0: Number of Hope in 3.16s = 11(10)=110, Single Pluse Width = 2.93 ms
Dwell time = (Pulse Width × Total Number of Hops) 2.93ms × 110 =322.3ms ＜ 400ms

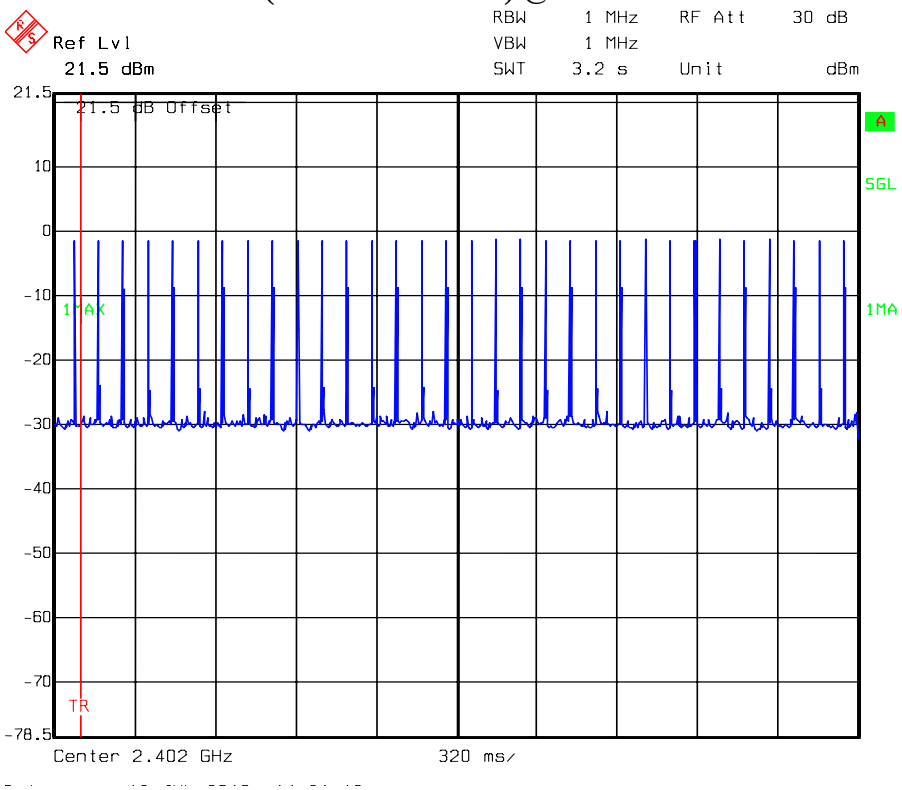
Mode	Packet type	Pulse duration (ms)	Number of pulse	Total measured time (s)	Dwell time (ms)	Limit (ms)	Result
GFSK	DH1	0.397	320	31.6	127.0	400	Pass
	DH3	1.67	160	31.6	267.2	400	Pass
	DH5	2.93	110	31.6	322.3	400	Pass

Please see the plot below.

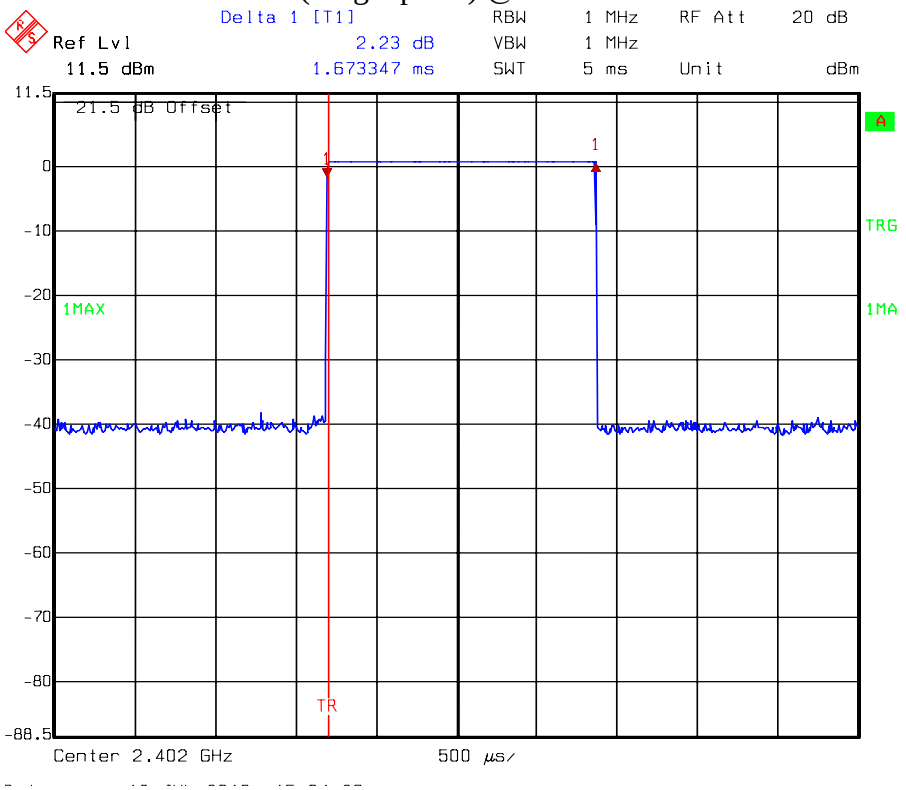
Dwell time (Single pulse) @ GFSK mode DH 1



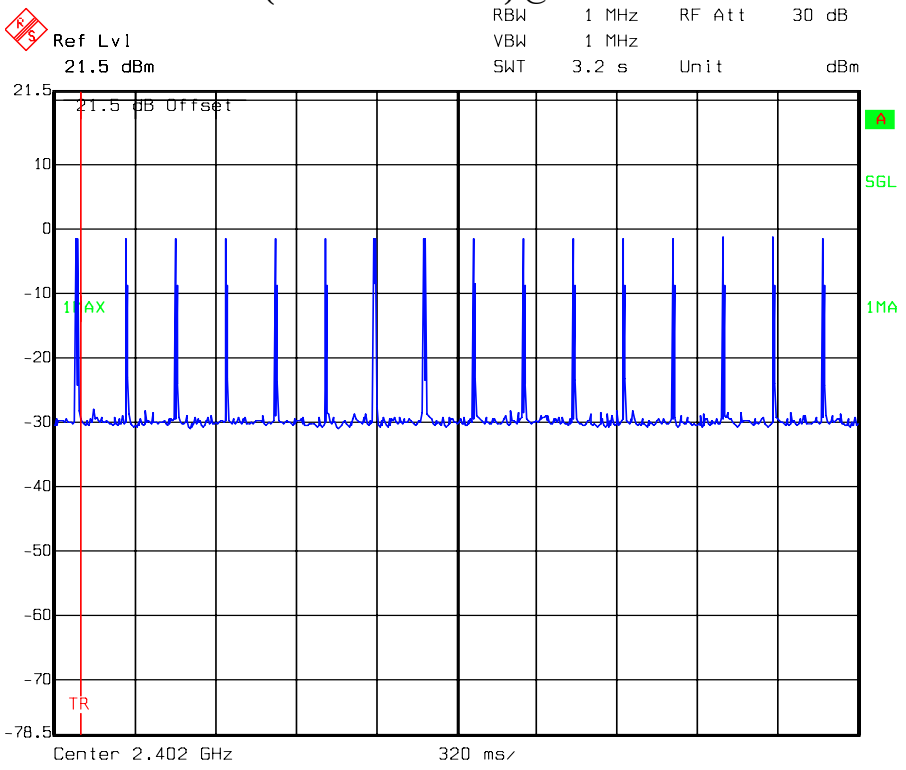
Dwell time (Number of Pulses) @ GFSK mode DH 1



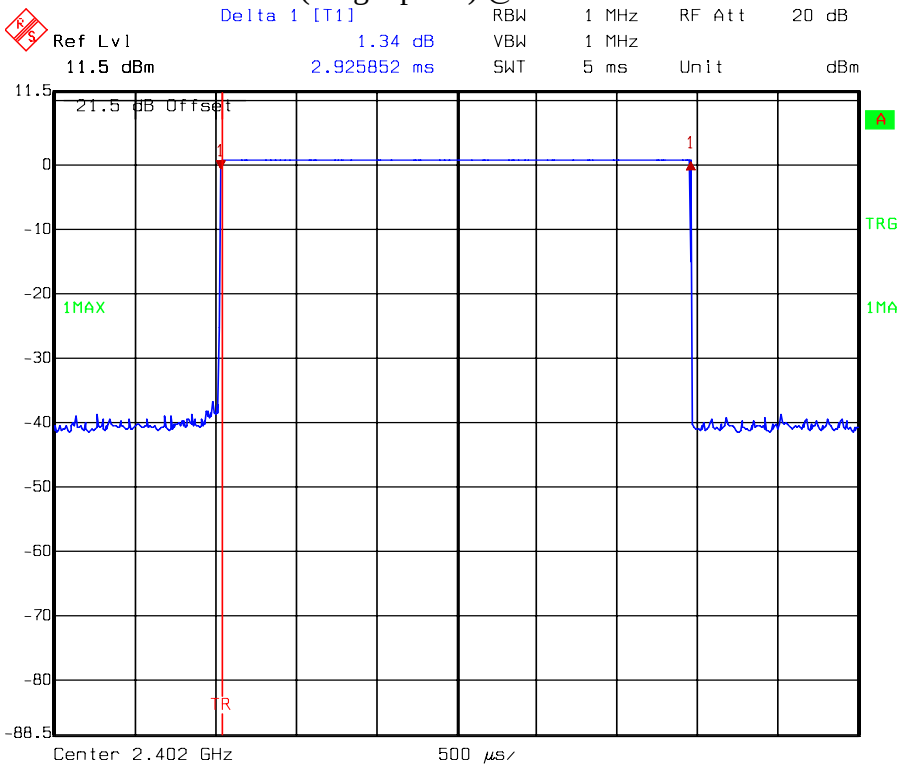
Dwell time (Single pulse) @ GFSK mode DH 3



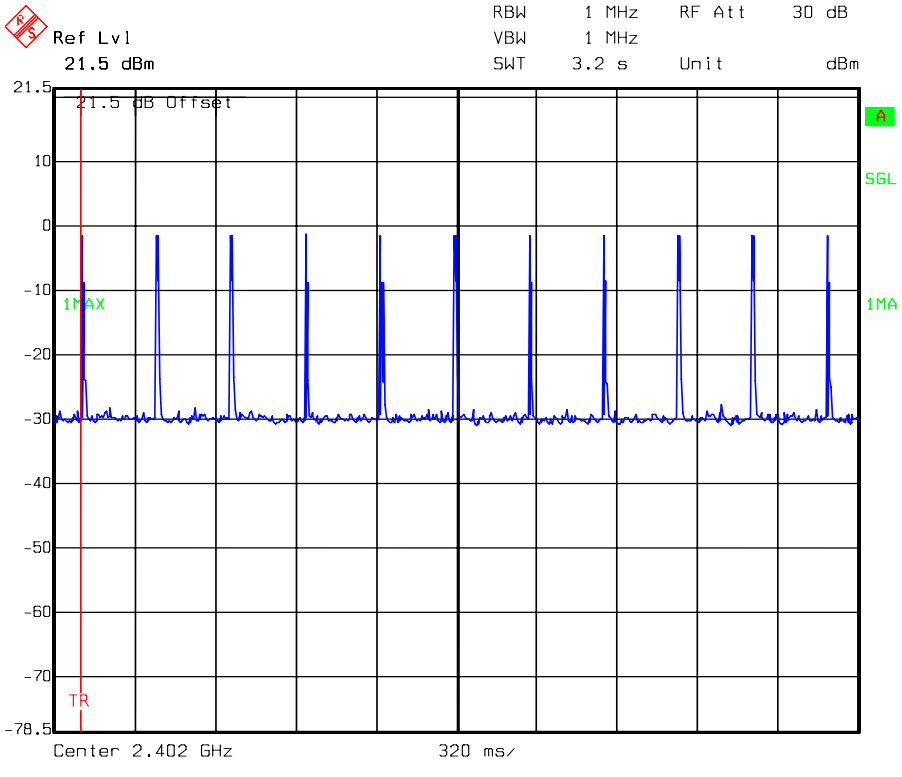
Dwell time (Number of Pulses) @ GFSK mode DH 3



Dwell time (Single pulse) @ GFSK mode DH 5



Dwell time (Number of Pulses) @ GFSK mode DH 5



7. Maximum Output Power test

7.1 Operating environment

Temperature:	23	℃
Relative Humidity:	50	%
Atmospheric Pressure:	1008	hPa

7.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.
The power output per FCC §15.247(b) was measured on the EUT using a 50 ohm SMA cable connected to peak power meter via power sensor. Power was read directly and cable loss correction (2 dB) was added to the reading to obtain power at the EUT antenna terminals. The test was performed at 3 channels (lowest, middle and highest channel).

7.3 Measured data of Maximum Output Power test results

Mode	Channel	Frequency (MHz)	Output Power (PK) (dBm)	Total Power (PK) (mw)	Limit (dBm)	Margin (dB)
GFSK	0	2402	2.04	1.60	21	-18.96
	39	2441	1.86	1.53	21	-19.14
	78	2480	1.57	1.44	21	-19.43

8. RF Antenna Conducted Spurious test

8.1 Operating environment

Temperature:	25	℃
Relative Humidity:	58	%

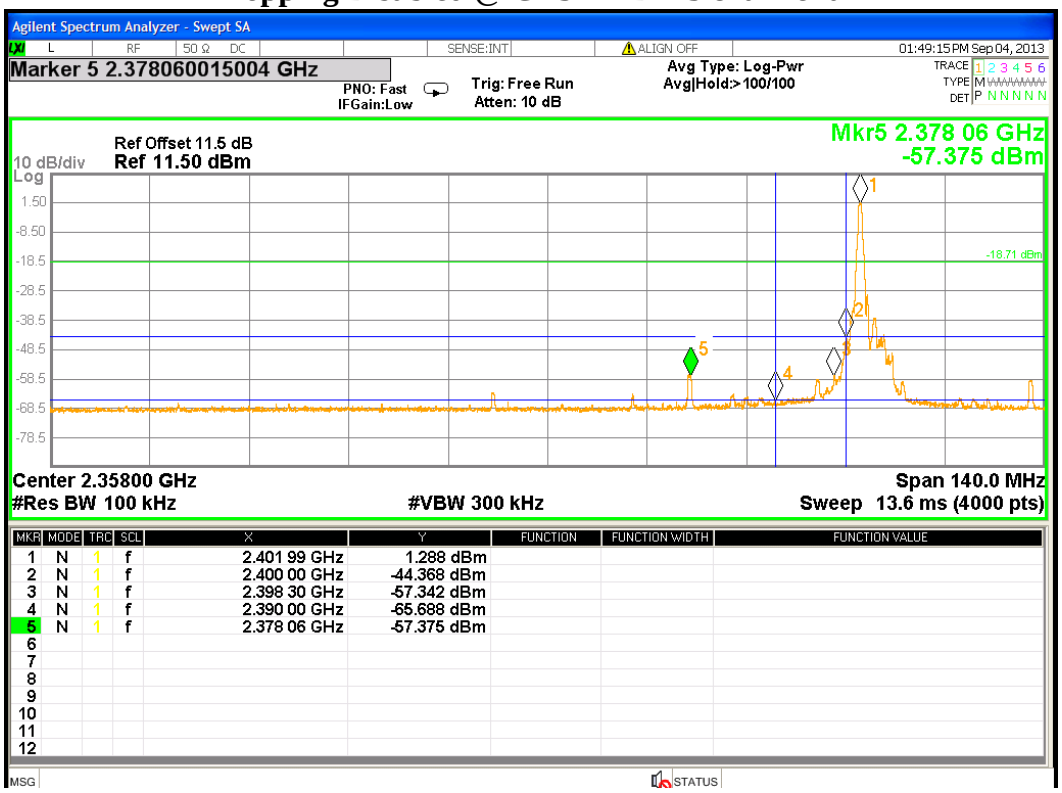
8.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.
The measurements were performed from lowest oscillator frequency to 10th fundamental frequency RF antenna conducted per FCC 15.247 (c) was measured from the EUT antenna port using a 50ohm spectrum analyzer with the resolution bandwidth set at 100 kHz, and the video bandwidth set at 100 kHz.
Harmonics and spurious noise must be at least 20dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. The band edges was measured and recorded.

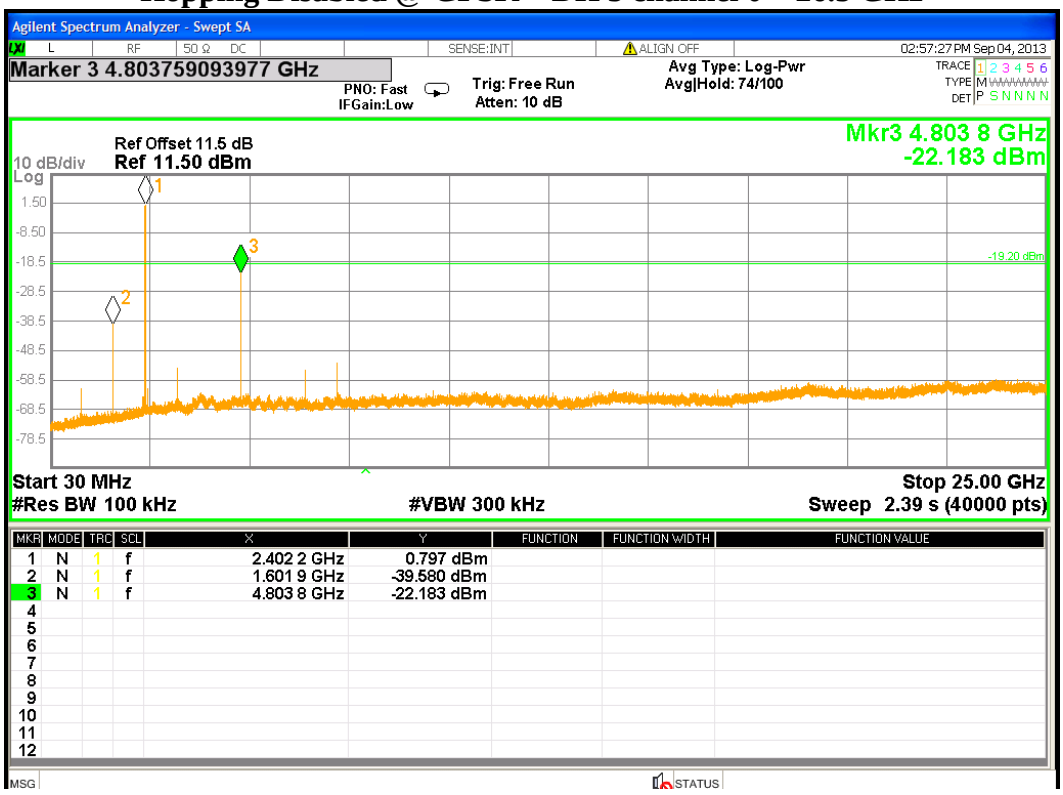
8.3 Measured data of the highest RF Antenna Conducted Spurious test result

The test results please see the plot below.

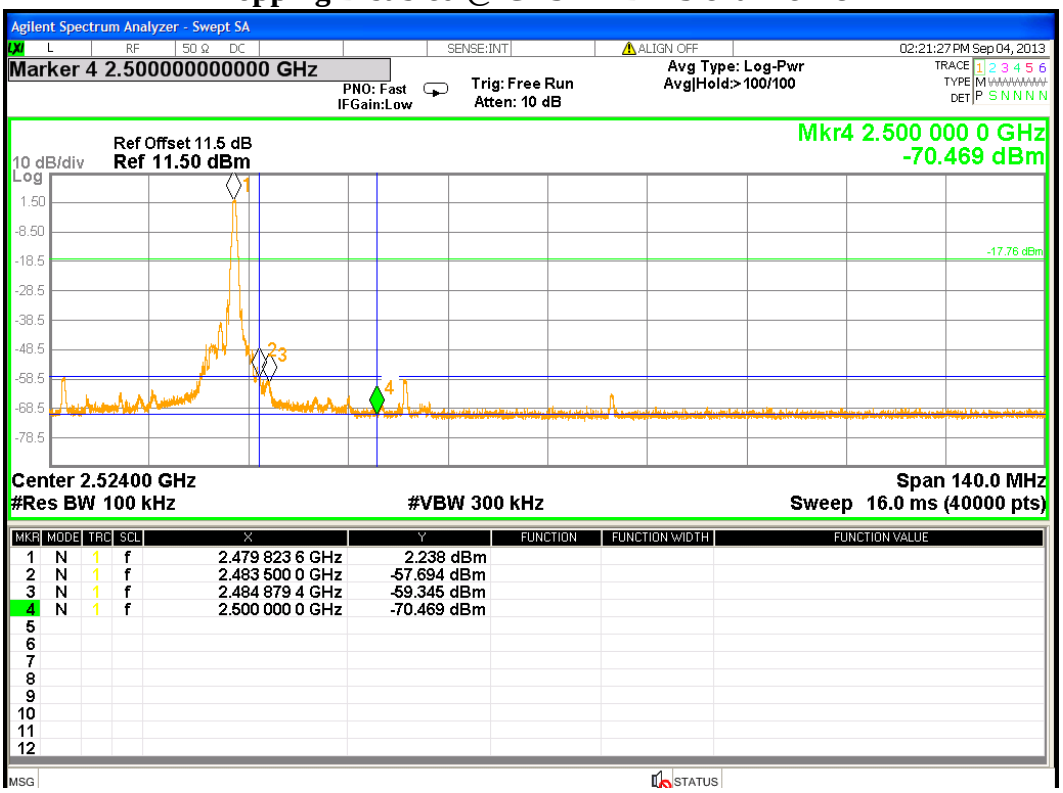
Hopping Disabled @ GFSK DH 5 channel 0



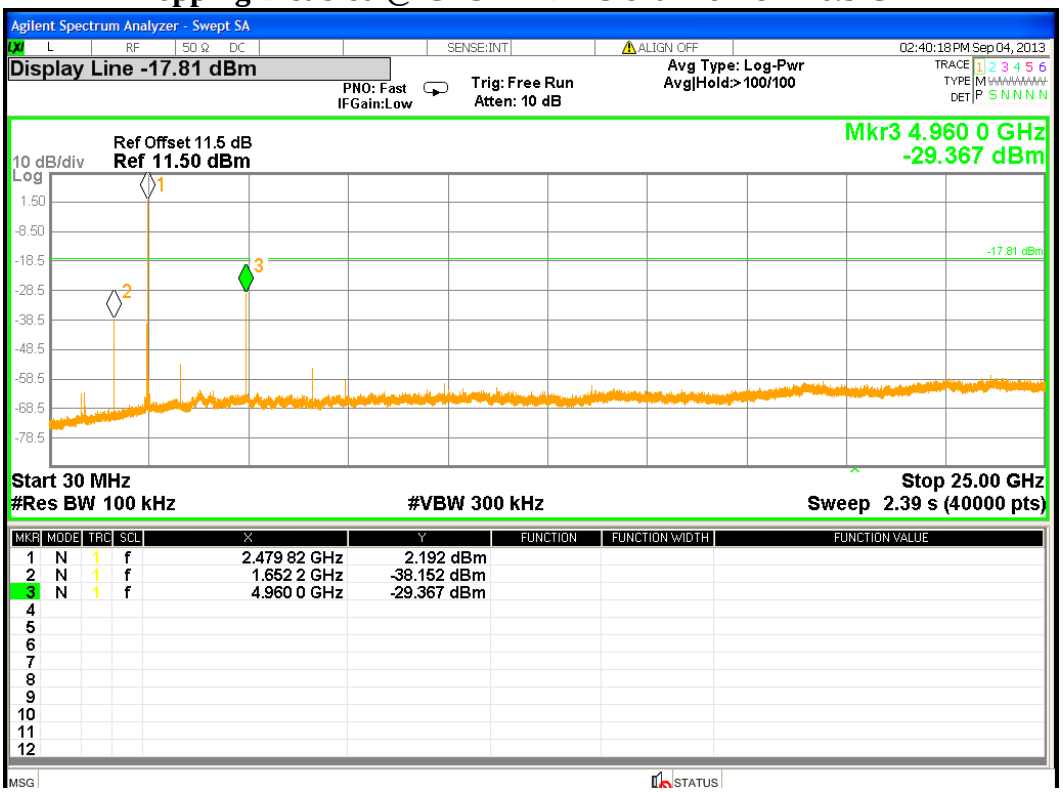
Hopping Disabled @ GFSK DH 5 channel 0 ~ 26.5 GHz



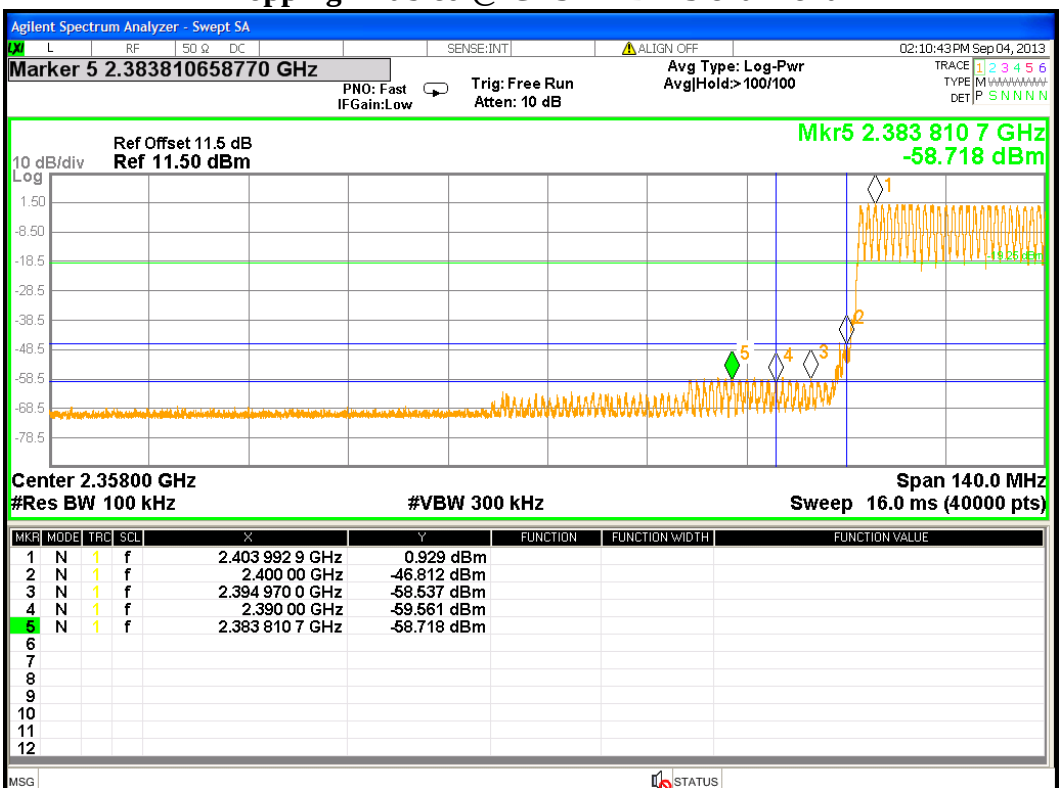
Hopping Disabled @ GFSK DH 5 channel 78



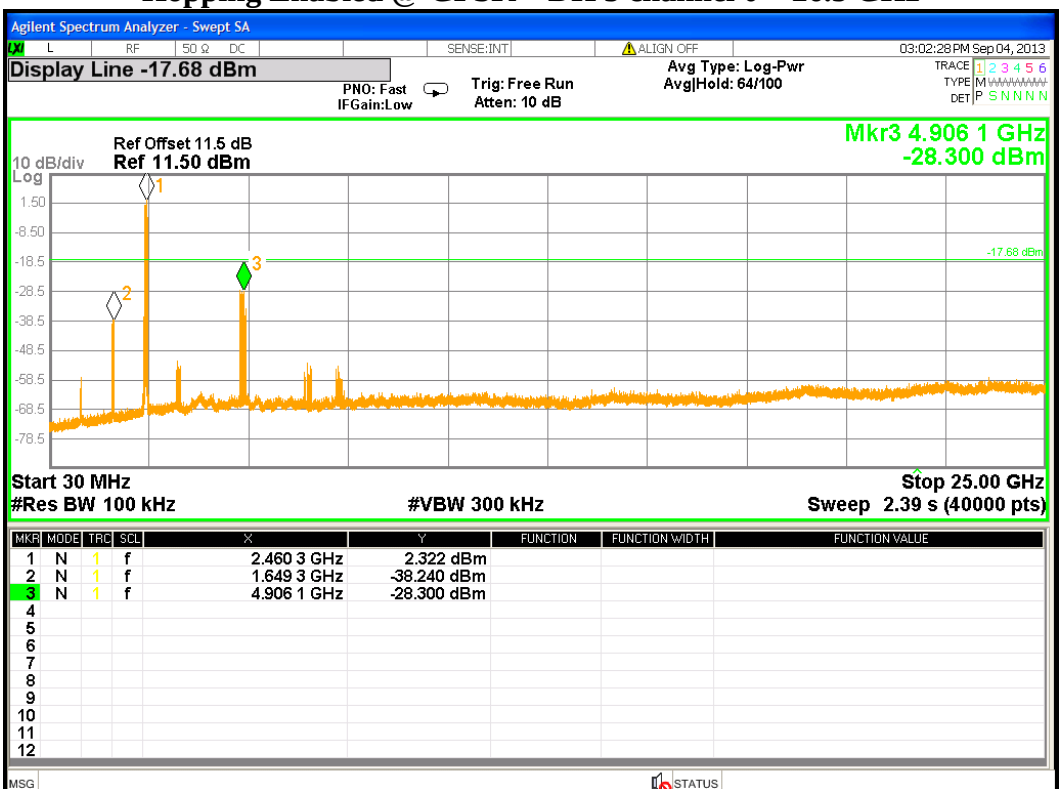
Hopping Disabled @ GFSK DH 5 channel 78 ~ 26.5 GHz



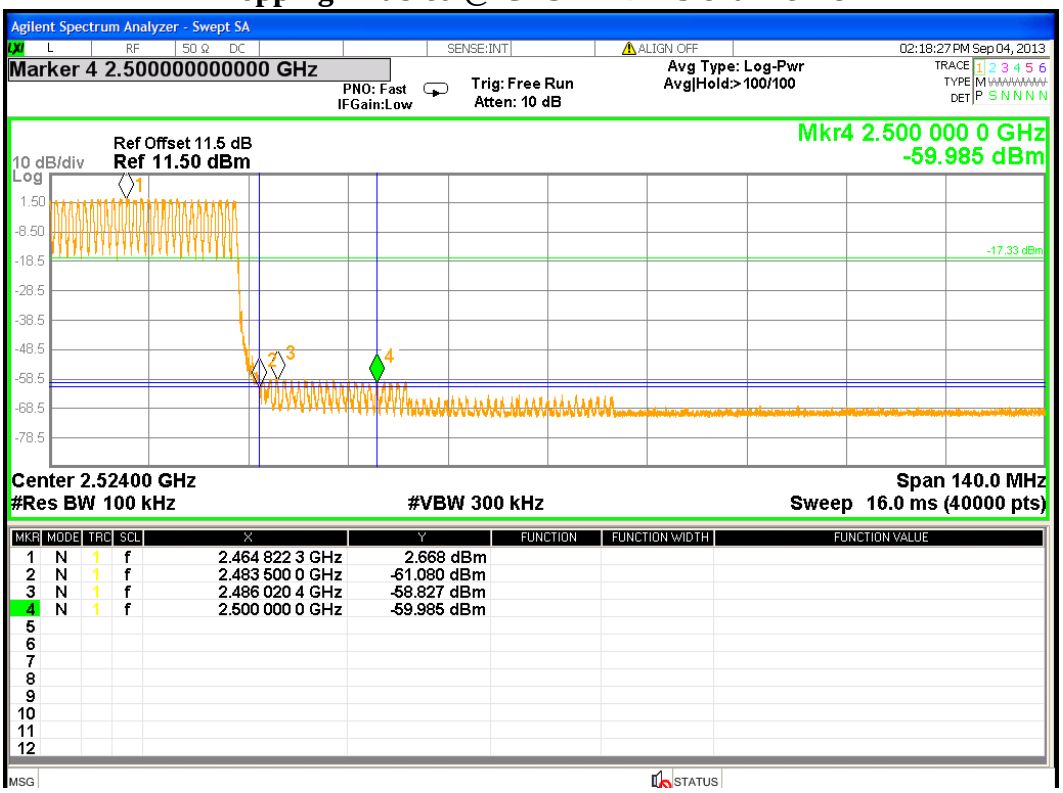
Hopping Enabled @ GFSK DH 5 channel 0



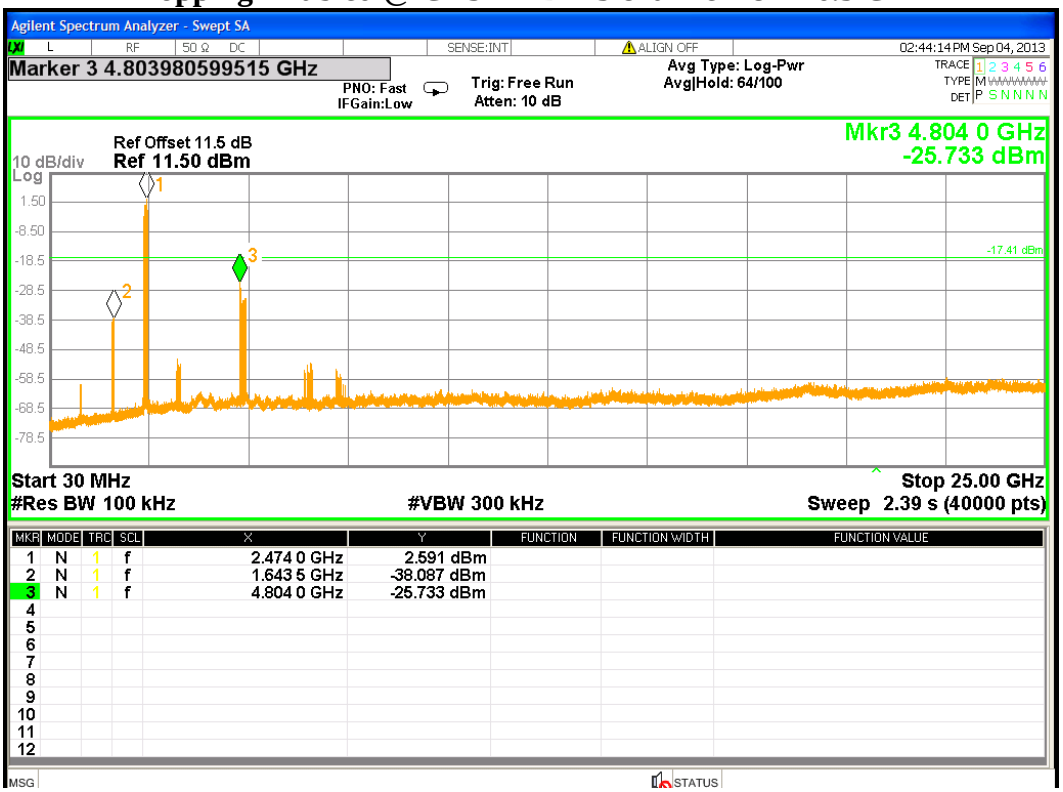
Hopping Enabled @ GFSK DH 5 channel 0 ~ 26.5 GHz



Hopping Enabled @ GFSK DH 5 channel 78



Hopping Enabled @ GFSK DH 5 channel 78 ~ 26.5 GHz



9. Radiated Emission test

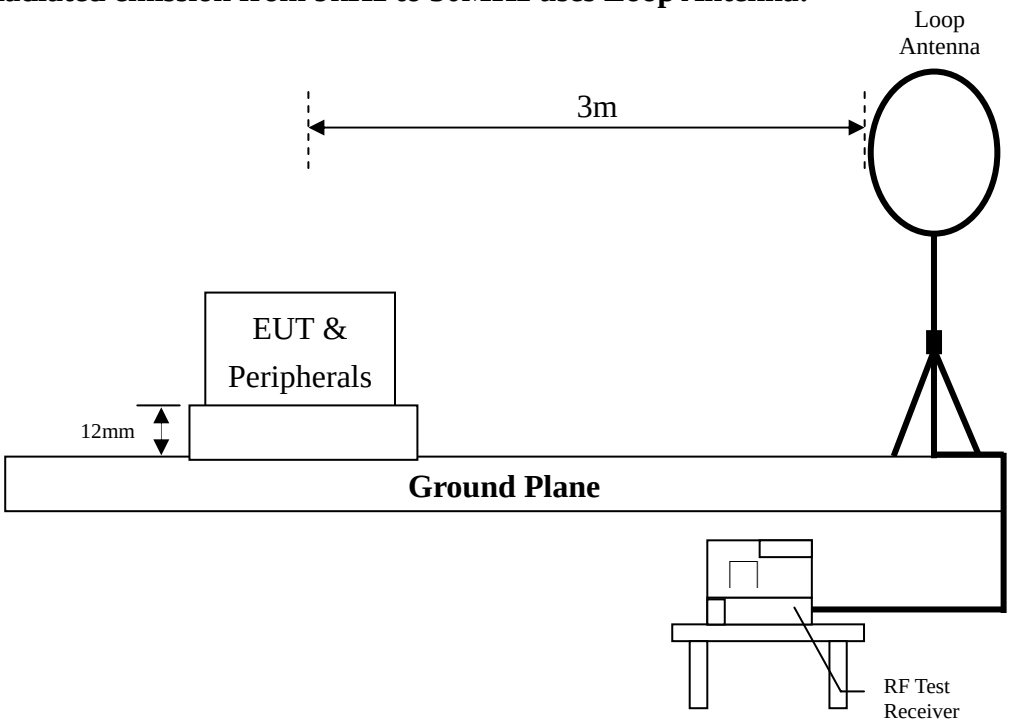
9.1 Operating environment

Temperature:	23	℃
Relative Humidity:	53	%
Atmospheric Pressure:	1008	hPa

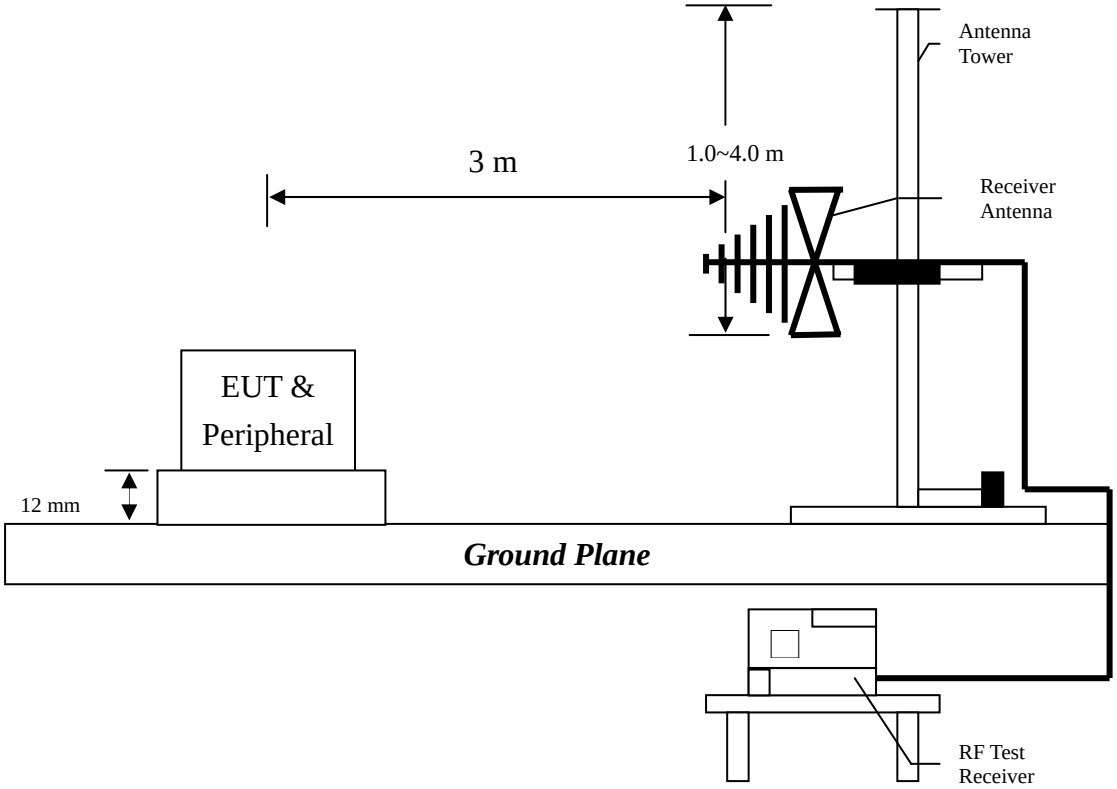
9.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705 and ANSI C63.4/2003.
The Diagram below shows the test setup, which is utilized to make these measurements.

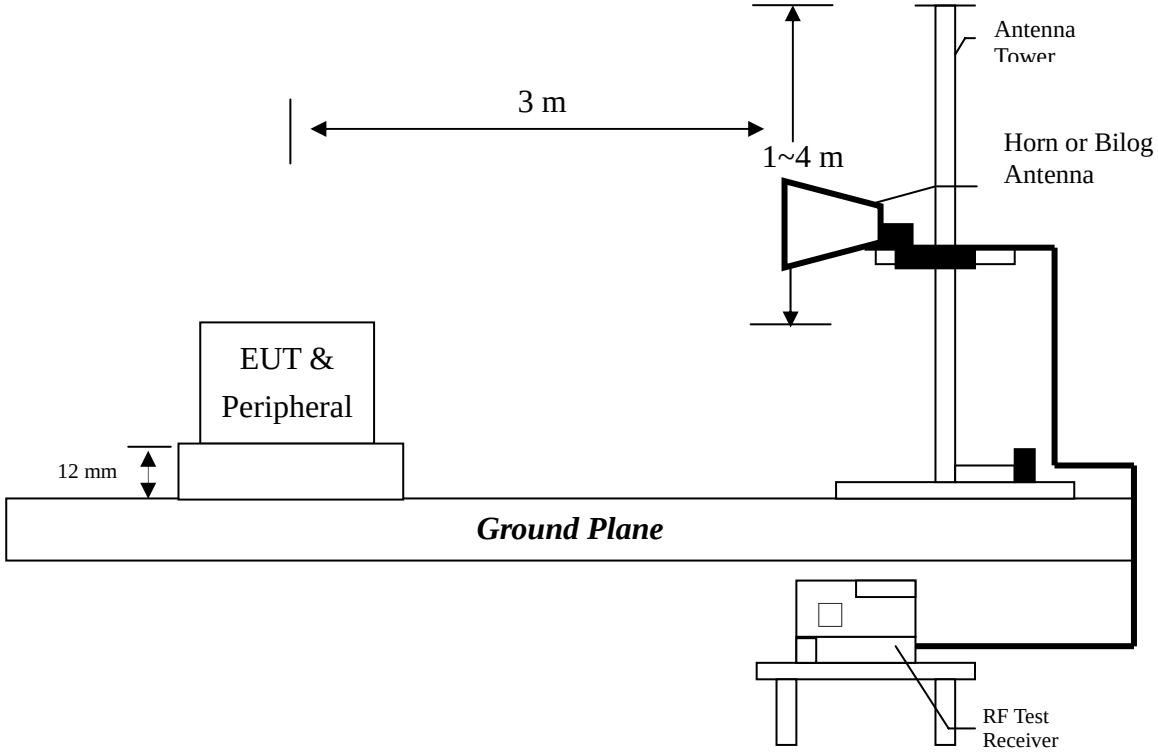
Radiated emission from 9kHz to 30MHz uses Loop Antenna:



Radiated emission from 30MHz to 1GHz uses Bilog Antenna:



Radiated emission above 1GHz uses Horn Antenna:



The signal is maximized through rotation and placement in the three orthogonal axes. According to §15.33(a), the spectrum shall be investigated from the lowest radio frequency signal generated in the device, to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Spectrum Analyzer Resolution Bandwidth is 100kHz or greater for frequencies 30MHz to 1GHz, 1MHz – for frequencies above 1GHz.

The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent 3 meter reading using inverse scaling with distance.

9.3 Emission limits

The spurious Emission shall test through the 10th harmonic. 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).

Frequency (MHz)	Field Strength (microvolts/meter)
0.009~0.490	2400/F(kHz)
0.490~1.705	2400/F(kHz)
1.705~30	30
30-88	100
88-216	150
216-960	200
Above 960	500

Remark:
1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Measurement Uncertainty:
Measurement uncertainty was calculated in accordance with TR 100 028-1.

Parameter	Uncertainty		
Radiated Emission	Below 1 GHz	Vertical	3.90 dB
		Horizontal	3.86 dB
	Above 1 GHz	Vertical	5.74 dB
		Horizontal	5.55 dB
Conducted Emission	2.08 dB		

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of *k*=2.

9.4 Radiated spurious emission test data

9.4.1 Measurement results: frequencies equal to or less than 1 GHz

The test was performed on EUT under GFSK continuously transmitting mode. The worst case occurred at GFSK Tx channel 78.

EUT : BLACK 18S
Worst Case : GFSK Channel 78

Antenna Polarization	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
Vertical	352.04	QP	15.06	22.40	37.46	46.00	-8.54
Vertical	359.80	QP	15.06	21.36	36.42	46.00	-9.58
Vertical	406.36	QP	16.47	16.42	32.89	46.00	-13.11
Vertical	450.98	QP	17.68	13.28	30.96	46.00	-15.04
Vertical	501.42	QP	18.56	11.69	30.24	46.00	-15.76
Vertical	522.76	QP	18.56	13.99	32.54	46.00	-13.46
Horizontal	344.28	QP	14.40	17.48	31.87	46.00	-14.13
Horizontal	392.78	QP	16.74	14.24	30.98	46.00	-15.02
Horizontal	423.82	QP	16.81	14.28	31.09	46.00	-14.91
Horizontal	439.34	QP	18.12	16.37	34.49	46.00	-11.51
Horizontal	513.06	QP	18.77	12.06	30.83	46.00	-15.17
Horizontal	586.78	QP	20.84	9.80	30.63	46.00	-15.37

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

Note: The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

9.4.2 Measurement results: frequency above 1GHz

EUT : BLACK 18S
Test Condition : GFSK at channel 0

Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4804.00	PK	V	35.1	38.54	59.53	62.97	74	-11.03
4804.00	AV	V	35.1	38.54	39.18	42.62	54	-11.38
4804.00	PK	H	35.1	38.54	50.46	53.90	54	-0.10

Remark:
1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor + Duty Cycle Correction Factor
3. The frequency measured ranges from 1GHz to 25GHz.

EUT : BLACK 18S
Test Condition : GFSK at channel 39

Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4882.00	PK	V	35.1	38.54	59.81	63.25	74	-10.75
4882.00	AV	V	35.1	38.54	40.2	43.64	54	-10.36
4882.00	PK	H	35.1	38.54	59.73	63.17	74	-10.83
4882.00	AV	H	35.1	38.54	40.14	43.58	54	-10.42

Remark:
1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor + Duty Cycle Correction Factor
3. The frequency measured ranges from 1GHz to 25GHz.

EUT : BLACK 18S
Test Condition : GFSK at channel 78

Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4960.00	PK	V	35.1	38.54	51.89	55.33	74	-18.67
4960.00	AV	V	35.1	38.54	36.11	39.55	54	-14.45
4960.00	PK	H	35.1	38.54	53.73	57.17	74	-16.83
4960.00	AV	H	35.1	38.54	36.79	40.23	54	-13.77

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor + Duty Cycle Correction Factor
3. The frequency measured ranges from 1GHz to 25GHz.

10. Emission on the band edge §FCC 15.247(d)

The frequency range from 30 MHz to 1000 MHz using Bilog Antenna.
The frequency range over 1 GHz using Horn Antenna.

Radiated emissions were invested cover the frequency range from 30 MHz to 1000 MHz using a receiver RBW of 120 kHz record QP reading, and the frequency over 1 GHz using a spectrum analyzer RBW of 1 MHz and 10 Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1 MHz RBW/VBW) recorded also on the report.

10.1 Test setup & procedure

Please refer to the clause 9.2 of this report.

Please see the result below.

10.2 Test Result

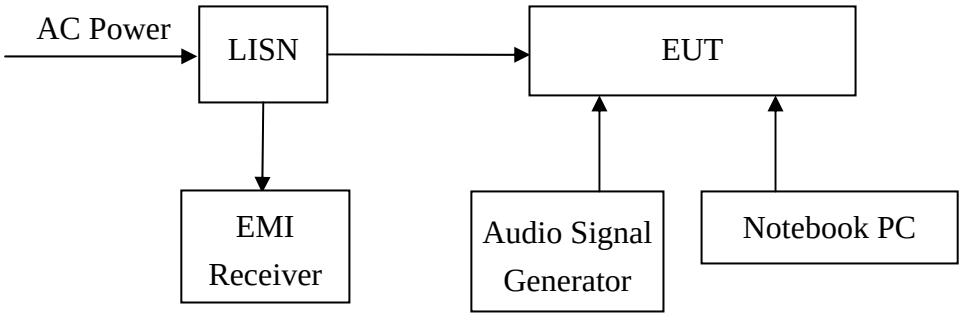
Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
2324.98	PK	V	38.00	31.54	64.76	58.30	74	-15.70
2337.46	AV	V	38.01	31.60	51.28	44.87	54	-9.13
2402.00	PK	V	38.02	31.91	102.25	96.13		96.13
2402.00	AV	V	38.02	31.91	69.16	63.04		63.04
2480.00	PK	V	38.04	32.28	106.13	100.36		100.36
2480.00	AV	V	38.04	32.28	69.76	63.99		63.99
2483.49	PK	V	38.05	32.29	68.65	62.90	74	-11.10
2483.49	AV	V	38.05	32.29	55.03	49.28	54	-4.72

11. Power Line Conducted Emission test §FCC 15.207

11.1 Operating environment

Temperature:	25	℃
Relative Humidity:	60	%
Atmospheric Pressure	1008	hPa

11.2 Test setup & procedure



The test procedure was according to ANSI C63.4/2003.

The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50 ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm/50uH coupling impedance with 50 ohm termination.
Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4/2003 on conducted measurement.
The bandwidth of the field strength meter (R & S Test Receiver ESCS 30) is set at 9 kHz.

The EUT configuration please refer to the “Conducted set-up photo.pdf”.

11.3 Emission limit

Freq. (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56*	56 – 46*
0.50~5.00	56	46
5.00~30.0	60	50

*Decreases with the logarithm of the frequency.

11.4 Uncertainty of Conducted Emission

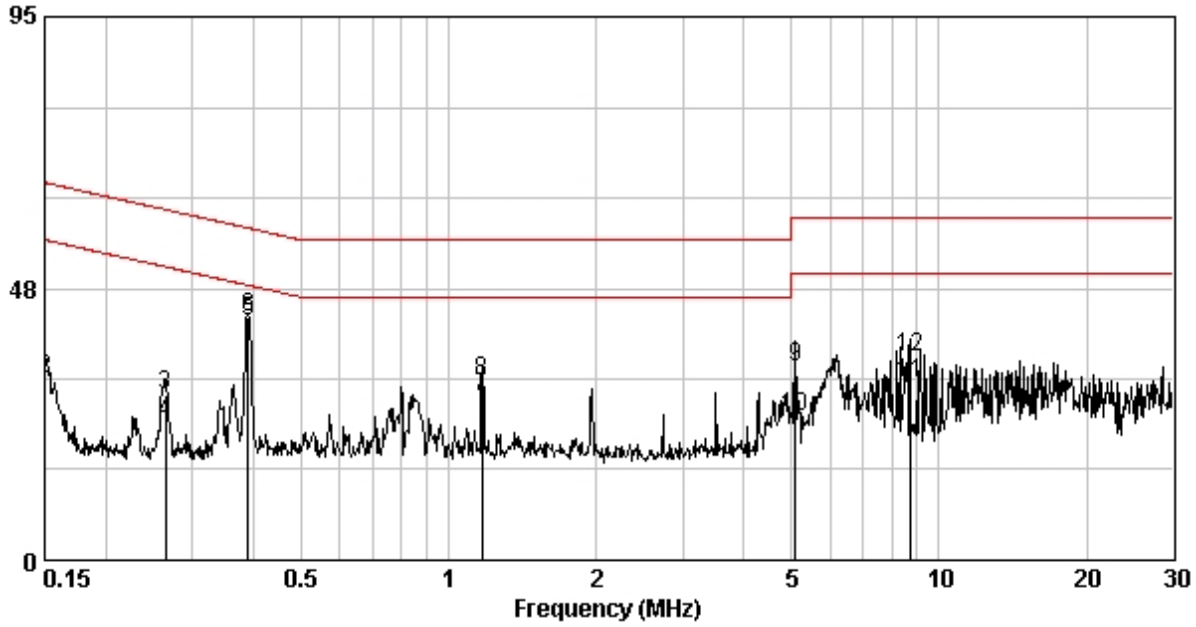
Expanded uncertainty (k=2) of conducted emission measurement is 2.08 dB.

11.5 Power Line Conducted Emission test data

Phase:	Live Line
Model No.:	BLACK 18S
Operating mode:	Normal operating mode

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Margin (dB) Qp	Margin (dB) Av
0.150	0.13	31.70	66.00	23.54	56.00	-34.30	-32.46
0.264	0.15	28.90	61.29	23.84	51.29	-32.39	-27.45
0.389	0.16	42.30	58.08	41.62	48.08	-15.78	-6.46
1.172	0.22	31.44	56.00	28.51	46.00	-24.56	-17.49
5.085	0.41	33.84	60.00	25.10	50.00	-26.16	-24.90
8.729	0.56	31.09	60.00	35.35	50.00	-28.91	-14.65

Remark:
1. Corr. Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)



Phase: Neutral Line
Model No.: BLACK 18S
Operating mode: Normal operating mode

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level Av (dBuV)	Limit Av (dBuV)	Margin (dB) Qp	Av
0.392	0.12	42.07	58.02	42.32	48.02	-15.95	-5.70
0.848	0.15	22.12	56.00	10.92	46.00	-33.88	-35.08
1.174	0.18	35.17	56.00	35.25	46.00	-20.83	-10.75
1.955	0.23	31.83	56.00	31.87	46.00	-24.17	-14.13
6.031	0.38	31.44	60.00	21.63	50.00	-28.56	-28.37
8.424	0.45	35.73	60.00	20.20	50.00	-24.27	-29.80

Remark:
1. Corr. Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)