

TEST REPORT
On behalf of

Johnson Industries (Shanghai) Co., Ltd.

Product Name: Console

Model No.: XIR

FCC ID: 2AOTTXIR

Prepared For: Johnson Industries (Shanghai) Co., Ltd.
A1 No.4500 Baoqian Road, Zhuqiao Town, Jiading District,
Shanghai

Prepared By: Audix Technology (Shanghai) Co., Ltd.
3F and 4F, 34Bldg, 680 Guiping Rd., Caohejing Hi-Tech
Park, Shanghai 200233, China

Tel: +86-21-64955500
Fax: +86-21-64955491



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Date of Test : 2018.03.24 - 30
Date of Report : 2018.04.02

The statement is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

TABLE OF CONTENTS

	Page
1 SUMMARY OF STANDARDS AND RESULTS	5
1.1 Description of Standards and Results.....	5
2 GENERAL INFORMATION	6
2.1 Description of Equipment Under Test.....	6
2.2 Description of Test Facility	7
2.3 Measurement Uncertainty	7
3 CONDUCTED EMISSION MEASUREMENT	8
3.1 Test Equipment.....	8
3.2 Block Diagram of Test Setup	8
3.3 Conducted Emission Limits (§15.207).....	8
3.4 Operating Condition of EUT	9
3.5 Test Procedures	9
3.6 Test Results	9
4 RADIATED EMISSION MEASUREMENT	15
4.1 Test Equipment.....	15
4.2 Block Diagram of Test Setup	15
4.3 Radiated Emission Limit (§15.209)	16
4.4 Test Configuration.....	16
4.5 Operating Condition of EUT	17
4.6 Test Procedures	17
4.7 Test Results	18
5 20 DB BANDWIDTH MEASUREMENT	38
5.1 Test Equipment.....	38
5.2 Block Diagram of Test Setup	38
5.3 Specification Limits (§15.247(a)(1)).....	38
5.4 Operating Condition of EUT	38
5.5 Test Procedure.....	38
5.6 Test Results	39
6 CARRIER FREQUENCY SEPARATION MEASUREMENT	49
6.1 Test Equipment.....	49
6.2 Block Diagram of Test Setup	49
6.3 Specification Limits (§15.247(a)(1)).....	49
6.4 Operating Condition of EUT	49
6.5 Test Procedure.....	49
6.6 Test Results	50
7 NUMBER OF HOPPING FREQUENCIES MEASUREMENT	60
7.1 Test Equipment.....	60
7.2 Block Diagram of Test Setup	60
7.3 Specification Limits (§15.247(a)(1)(iii)).....	60
7.4 Operating Condition of EUT	60
7.5 Test Procedure.....	60
7.6 Test Results	61
8 DWELL TIME MEASUREMENT	65
8.1 Test Equipment.....	65

- 8.2 Block Diagram of Test Setup 65
- 8.3 Specification Limits (§15.247(a)(1)(iii))..... 65
- 8.4 Operating Condition of EUT 65
- 8.5 Test Procedure..... 65
- 8.6 Test Results 66
- 9 MAXIMUM PEAK OUTPUT POWER MEASUREMENT..... 73**
- 9.1 Test Equipment..... 73
- 9.2 Block Diagram of Test Setup 73
- 9.3 Specification Limits (§15.247(b)(1)) 73
- 9.4 Operating Condition of EUT 73
- 9.5 Test Procedure..... 73
- 9.6 Test Results 74
- 10 BAND EDGE MEASUREMENT 84**
- 10.1 Test Equipment..... 84
- 10.2 Block Diagram of Test Setup 84
- 10.3 Specification Limits (§15.247(d)) 84
- 10.4 Operating Condition of EUT 84
- 10.5 Test Procedure..... 84
- 10.6 Test Results 86
- 11 EMISSION LIMITATIONS MEASUREMENT..... 99**
- 11.1 Test Equipment..... 99
- 11.2 Block Diagram of Test Setup 99
- 11.3 Specification Limits (§15.247(d)) 99
- 11.4 Operating Condition of EUT 99
- 11.5 Test Procedure..... 99
- 11.6 Test Results 100
- 12 DEVIATION TO TEST SPECIFICATIONS..... 137**

TEST REPORT

Applicant : Johnson Industries (Shanghai) Co., Ltd.
 EUT Description : Console
 (A) Model No. : Refer to Sec.2.1
 (B) Power Supply : AC 120V/60Hz (via adapter)
 (C) Test Voltage : AC 120V/60Hz (via adapter)

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART C
 AND ANSI C63.10-2013 AND FCC PUBILC NOTICE DA 00-705, Mar.2000*

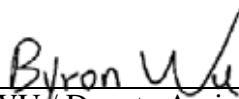
The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits.


The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT to be technically compliance with the FCC limits.

This report applies to above tested Sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

Date of Test : 2018.03.24 - 30 Date of Report : 2018.04.02

Producer : 
 JAREY LU / Supervisor

Reviewer : 
 BYRON WU / Deputy Assistant Manager

 For and on behalf of
 Audix Technology (Shanghai) Co., Ltd.

Signatory : 
 Authorized Signature(s) BYRON KWO/Assistant General Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Conducted Emission Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.207
Radiated Emission Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.209(a) 15.205(a)(c)
20 dB Bandwidth Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.247(a)(1)
Carrier Frequency Separation Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.247(a)(1)
Number of Hopping Frequencies Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.247(a)(1)(iii)
Dwell Time Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.247(a)(1)(iii)
Maximum Peak Output Power Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.247(b)(1)
Band Edge Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.247(d)
Emission Limitations Measurement	FCC Rules And Regulations Part 15 Subpart C And ANSI C63.10:2013 And FCC Public Notice DA 00-705, Mar.2000	Pass	15.247(d)
N/A is an abbreviation for Not Applicable.			

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : Console

Type of EUT : Production Pre-product Pro-type

Model Number : XIR

RF Module : AP6210 + WLT2564M

Note : Contains FCC ID: 2AKDB-WLT2564M

Test RF Module : AP6210

Radio Tech : IEEE 802.11b/g/n + BT 4.0

Test Tech : BT 4.0

Channel Freq. : 2402MHz - 2480MHz

Tested Freq. : 2402MHz, 2441MHz, 2480MHz

Modulation : FHSS,GFSK,DPSK,DQPSK

Antenna Type : SMA interface Small antenna(Cu)
Note: According to KDB 353028 D01 A 2) b) ii) (3)
antenna connector comply with 15.203

Connector Type : SMA Connector

Antenna Gain : 2 dBi

Test Mode : The EUT was set at continuous TX with duty cycle
100% during all the test in the report

Applicant : Johnson Industries (Shanghai) Co., Ltd.
A1 No.4500 Baoqian Road, Zhuqiao Town, Jiading
District, Shanghai

Manufacturer : same as Applicant

Factory : same as Applicant

2.2 Description of Test Facility

Name of Firm	: Audix Technology (Shanghai) Co., Ltd.
Site Location	: 3F and 4F, 34Bldg, 680 Guiping Rd., Caohejing Hi-Tech Park, Shanghai 200233, China.
Accredited by NVLAP, Lab Code	: 200371-0
FCC Designation Number	: CN5027
Test Firm Registration Number	: 954668

2.3 Measurement Uncertainty

Conducted Disturbance Expanded Uncertainty (0.15-30MHz):	U = 3.4dB
Radiated Emission Expanded Uncertainty (30-1000MHz):	U = 3.99dB
Radiated Emission Expanded Uncertainty (1000M-26.5GHz):	U = 4.98dB
6 dB Bandwidth Expanded Uncertainty	: U = 6×10^{-8} MHz
Maximum Peak Output Power Expanded Uncertainty	: U = 0.84 dB
Power Spectral Density Expanded Uncertainty	: U = 0.38 dB

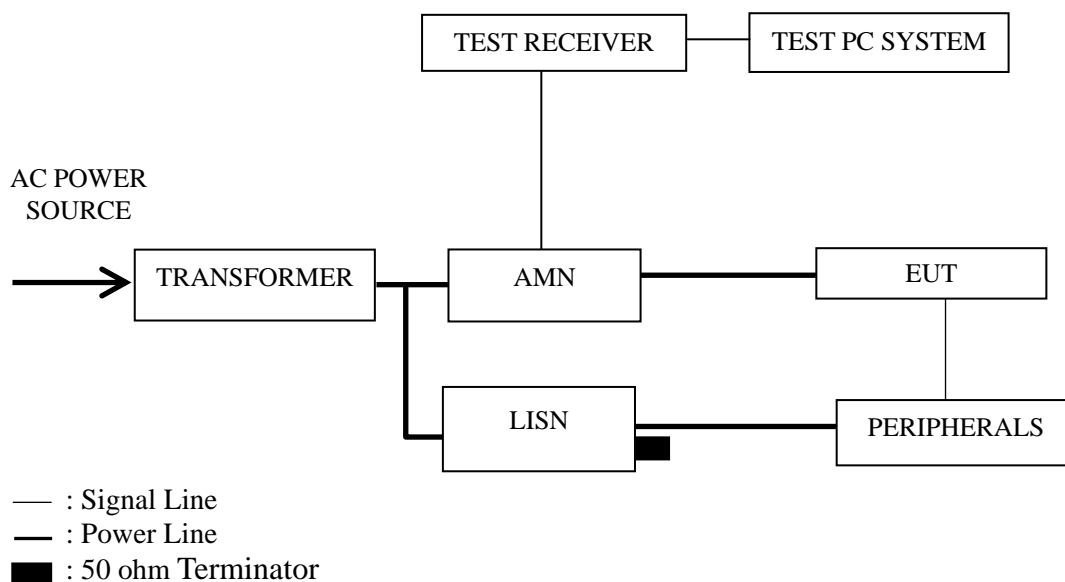
3 CONDUCTED EMISSION MEASUREMENT

3.1 Test Equipment

The following test equipment are used during the conducted emission test in a shielded room.

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Apr 27, 2017	Apr 26, 2018
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 24, 2017	Jun 23, 2018
3.	Software	Audix	E3	6.2009-1-15	--	--

3.2 Block Diagram of Test Setup



3.3 Conducted Emission Limits (§15.207)

Frequency (MHz)	Conducted limits (db μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE 1 - *Decreases with the logarithm of the frequency.
 NOTE 2 - Emission Level dB (μ V/m) = 20 log Emission Level (μ V/m)
 NOTE 3 - The tighter limit applies at the band edges.

3.4 Operating Condition of EUT

3.4.1 Setup the EUT as shown in Sec. 3.2.

3.4.2 Turn on the power of all equipment.

3.4.3 Turn the EUT on the test mode, and then test.

3.5 Test Procedures

The EUT was placed upon a non-metallic table, which is 0.8 m above the horizontal conducting ground plane and 0.4 m from a vertical reference plane. The EUT was connected to the power mains through an Artificial Mains Network (AMN) to provide a 50 Ω coupling impedance for the measuring equipment. Both sides of AC line (Line & Neutral) were checked to find out the maximum conducted emission according to FCC Part 15 Subpart C and ANSI C63.10: 2013 requirements during conducted disturbance test.

The I.F. bandwidth of Test Receiver ESCI was set at 9 kHz.

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

Test with a dummy load in lieu of the antenna to determine compliance with Section 15.207 limits within the transmitter's fundamental emission band. (According to KDB 174176 D01 Line Conducted FAQ)

3.6 Test Results

<PASS>

The frequency and amplitude of the highest conducted emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Worst case emission:

No.	Operation	Modulation	Channel	Frequency (MHz)	Data Page
1.	Transmitting	BT DH1	00	2402	P10
2.		BT 3DH1	00	2402	P11
3.		BT DH5	00	2402	P12
3.		BT 3DH5	00	2402	P13
4.	Receiving	BT	--	--	P14

NOTE 1 – Level = Read Level + AMN Factor + Cable Loss

NOTE 2 – “QP” means “Quasi-Peak” values

NOTE 3 – The emission levels which not reported are too low against the official limit.

Worst case emission

EUT : Console Temperature : 22

Model No. : XIR Humidity : 51%RH

Test Mode : Transmitting Date of Test : 2018.03.24

BT DH1:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	AMN Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Line	0.5112	31.3	10.34	0.05	41.69	56	14.31	QP
	0.5112	25.6	10.34	0.05	35.99	46	10.01	Average
	0.537	32.3	10.34	0.05	42.69	56	13.31	QP
	0.537	26.5	10.34	0.05	36.89	46	9.11	Average
	0.9135	23.7	10.32	0.07	34.09	56	21.91	QP
	0.9135	17.9	10.32	0.07	28.29	46	17.71	Average
	2.001	20.1	10.32	0.09	30.51	56	25.49	QP
	2.001	14	10.32	0.09	24.41	46	21.59	Average
	8.414	24.41	10.31	0.17	34.89	60	25.11	QP
	8.414	17.21	10.31	0.17	27.69	50	22.31	Average
	22.6	22.99	10.12	0.29	33.4	60	26.6	QP
	22.6	14.39	10.12	0.29	24.8	50	25.2	Average
Neutral	0.5201	28.6	10.33	0.05	38.98	56	17.02	QP
	0.5201	21.3	10.33	0.05	31.68	46	14.32	Average
	0.5316	28.8	10.33	0.05	39.18	56	16.82	QP
	0.5316	22.1	10.33	0.05	32.48	46	13.52	Average
	0.9092	19.3	10.32	0.07	29.69	56	26.31	QP
	0.9092	13.3	10.32	0.07	23.69	46	22.31	Average
	2.489	14	10.33	0.1	24.43	56	31.57	QP
	2.489	8.3	10.33	0.1	18.73	46	27.27	Average
	7.444	19.51	10.33	0.16	30	60	30	QP
	7.444	13.31	10.33	0.16	23.8	50	26.2	Average
	23.08	23.6	10.18	0.29	34.07	60	25.93	QP
	23.08	15.1	10.18	0.29	25.57	50	24.43	Average

BT DH5:

Polarization	Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Line	0.4644	30	10.35	0.05	40.4	56.61	16.21	QP
	0.4644	23.7	10.35	0.05	34.1	46.61	12.51	Average
	0.5358	32	10.34	0.05	42.39	56	13.61	QP
	0.5358	26.3	10.34	0.05	36.69	46	9.31	Average
	0.9074	23.9	10.32	0.07	34.29	56	21.71	QP
	0.9074	17.7	10.32	0.07	28.09	46	17.91	Average
	1.579	21.4	10.32	0.08	31.8	56	24.2	QP
	1.579	15.8	10.32	0.08	26.2	46	19.8	Average
	8.426	25.01	10.31	0.17	35.49	60	24.51	QP
	8.426	17.31	10.31	0.17	27.79	50	22.21	Average
	23.04	23.5	10.11	0.29	33.9	60	26.1	QP
	23.04	14.7	10.11	0.29	25.1	50	24.9	Average
Neutral	0.5046	28	10.33	0.05	38.38	56	17.62	QP
	0.5046	21.7	10.33	0.05	32.08	46	13.92	Average
	0.531	28.9	10.33	0.05	39.28	56	16.72	QP
	0.531	22	10.33	0.05	32.38	46	13.62	Average
	0.9091	19.5	10.32	0.07	29.89	56	26.11	QP
	0.9091	13	10.32	0.07	23.39	46	22.61	Average
	3.481	14.9	10.34	0.11	25.35	56	30.65	QP
	3.481	9.4	10.34	0.11	19.85	46	26.15	Average
	9.381	19.9	10.32	0.18	30.4	60	29.6	QP
	9.381	13.8	10.32	0.18	24.3	50	25.7	Average
	23.32	24	10.18	0.29	34.47	60	25.53	QP
	23.32	15.2	10.18	0.29	25.67	50	24.33	Average

BT 3DH1:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	AMN Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Line	0.5088	31.4	10.34	0.05	41.79	56	14.21	QP
	0.5088	26.2	10.34	0.05	36.59	46	9.41	Average
	0.5341	31.9	10.34	0.05	42.29	56	13.71	QP
	0.5341	26.4	10.34	0.05	36.79	46	9.21	Average
	0.9111	23.6	10.32	0.07	33.99	56	22.01	QP
	0.9111	18	10.32	0.07	28.39	46	17.61	Average
	2.702	19.31	10.32	0.1	29.73	56	26.27	QP
	2.702	14.11	10.32	0.1	24.53	46	21.47	Average
	9.115	24.9	10.31	0.18	35.39	60	24.61	QP
	9.115	17.5	10.31	0.18	27.99	50	22.01	Average
	23.11	23.6	10.11	0.29	34	60	26	QP
	23.11	14.9	10.11	0.29	25.3	50	24.7	Average
Neutral	0.5072	28.3	10.33	0.05	38.68	56	17.32	QP
	0.5072	22	10.33	0.05	32.38	46	13.62	Average
	0.5317	28.8	10.33	0.05	39.18	56	16.82	QP
	0.5317	22.1	10.33	0.05	32.48	46	13.52	Average
	0.9146	19.4	10.32	0.07	29.79	56	26.21	QP
	0.9146	13.2	10.32	0.07	23.59	46	22.41	Average
	2.774	14.31	10.33	0.1	24.74	56	31.26	QP
	2.774	9.01	10.33	0.1	19.44	46	26.56	Average
	8.915	19.7	10.32	0.18	30.2	60	29.8	QP
	8.915	13.9	10.32	0.18	24.4	50	25.6	Average
	23.08	23.7	10.18	0.29	34.17	60	25.83	QP
	23.08	15.3	10.18	0.29	25.77	50	24.23	Average

BT 3DH5:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	AMN Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Line	0.5128	30.6	10.34	0.05	40.99	56	15.01	QP
	0.5128	25.4	10.34	0.05	35.79	46	10.21	Average
	0.5357	32	10.34	0.05	42.39	56	13.61	QP
	0.5357	26.5	10.34	0.05	36.89	46	9.11	Average
	0.9346	22.3	10.32	0.07	32.69	56	23.31	QP
	0.9346	14.9	10.32	0.07	25.29	46	20.71	Average
	1.59	22.5	10.32	0.08	32.9	56	23.1	QP
	1.59	16	10.32	0.08	26.4	46	19.6	Average
	8.846	25.1	10.31	0.18	35.59	60	24.41	QP
	8.846	17.8	10.31	0.18	28.29	50	21.71	Average
	23.69	23.9	10.11	0.29	34.3	60	25.7	QP
	23.69	15.2	10.11	0.29	25.6	50	24.4	Average
Neutral	0.5099	28.5	10.33	0.05	38.88	56	17.12	QP
	0.5099	22.2	10.33	0.05	32.58	46	13.42	Average
	0.5362	28.6	10.33	0.05	38.98	56	17.02	QP
	0.5362	22.6	10.33	0.05	32.98	46	13.02	Average
	0.9094	19.2	10.32	0.07	29.59	56	26.41	QP
	0.9094	13.2	10.32	0.07	23.59	46	22.41	Average
	1.975	15	10.33	0.09	25.42	56	30.58	QP
	1.975	9.5	10.33	0.09	19.92	46	26.08	Average
	7.549	20.7	10.33	0.17	31.2	60	28.8	QP
	7.549	13.5	10.33	0.17	24	50	26	Average
	23.8	23.7	10.17	0.29	34.16	60	25.84	QP
	23.8	15.1	10.17	0.29	25.56	50	24.44	Average

TEST ENGINEER: Jarey

EUT : Console Temperature : 22

Model No. : XIR Humidity : 51%RH

Test Mode : Receiving Date of Test : 2018.03.24

BT:

Polarization	Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Line	0.5117	31.2	10.34	0.05	41.59	56	14.41	QP
	0.5117	25.8	10.34	0.05	36.19	46	9.81	Average
	0.5384	32.2	10.34	0.05	42.59	56	13.41	QP
	0.5384	26.5	10.34	0.05	36.89	46	9.11	Average
	0.9088	23.8	10.32	0.07	34.19	56	21.81	QP
	0.9088	18	10.32	0.07	28.39	46	17.61	Average
	3.281	18.3	10.33	0.11	28.74	56	27.26	QP
	3.281	13.3	10.33	0.11	23.74	46	22.26	Average
	8.97	25.3	10.31	0.18	35.79	60	24.21	QP
	8.97	17.9	10.31	0.18	28.39	50	21.61	Average
	23.48	24	10.11	0.29	34.4	60	25.6	QP
	23.48	15.2	10.11	0.29	25.6	50	24.4	Average
Neutral	0.5114	28.6	10.33	0.05	38.98	56	17.02	QP
	0.5114	22	10.33	0.05	32.38	46	13.62	Average
	0.5316	29	10.33	0.05	39.38	56	16.62	QP
	0.5316	22.1	10.33	0.05	32.48	46	13.52	Average
	0.9092	19.3	10.32	0.07	29.69	56	26.31	QP
	0.9092	12.8	10.32	0.07	23.19	46	22.81	Average
	2.004	14.9	10.33	0.09	25.32	56	30.68	QP
	2.004	8.7	10.33	0.09	19.12	46	26.88	Average
	8.155	19.5	10.33	0.17	30	60	30	QP
	8.155	13.3	10.33	0.17	23.8	50	26.2	Average
	23.33	23.8	10.18	0.29	34.27	60	25.73	QP
	23.33	15.3	10.18	0.29	25.77	50	24.23	Average

TEST ENGINEER: Jarey

4 RADIATED EMISSION MEASUREMENT

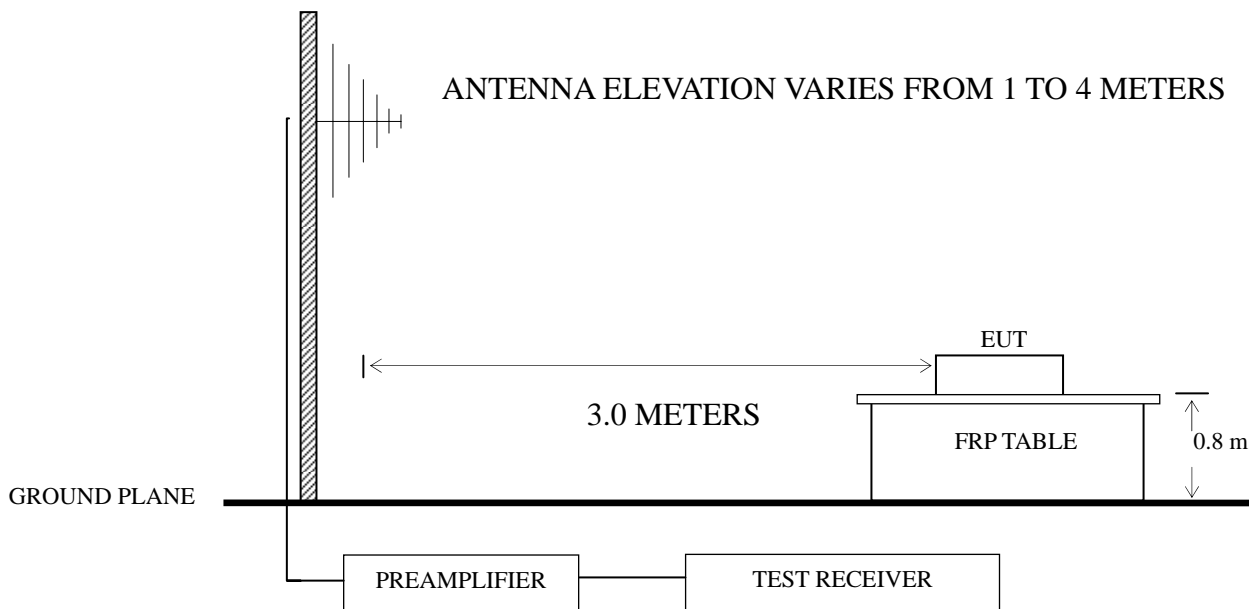
4.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

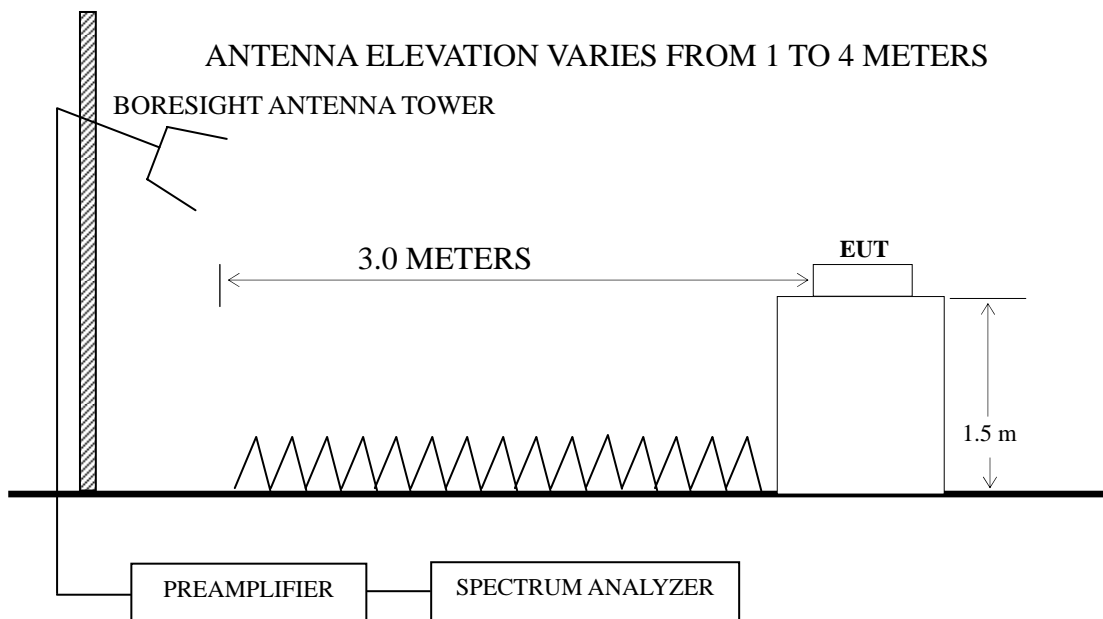
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8447D	2944A06664	Apr 27, 2017	Apr 26, 2018
2.	Preamplifier	HP	8449B	3008A00864	Mar 8, 2018	Mar 7, 2019
3.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 12, 2017	Jun 11, 2018
4.	Test Receiver	R&S	ESCI	101303	May 07, 2017	May 06, 2018
5.	Bi-log Antenna	Schwarz beck	VULB 9168	708	Jul 20, 2017	Jul 19, 2018
6.	Horn Antenna	EMCO	3115	9607-4878	Jun 02, 2017	Jun 01, 2018
7.	Horn Antenna	EMCO	3116	00062643	Sep 08, 2017	Sep 08, 2019
8.	Software	Audix	E3	SET00200 9912M295-2	--	--

4.2 Block Diagram of Test Setup

4.2.1 Below 1GHz



4.2.2 Above 1GHz



4.3 Radiated Emission Limit (§15.209)

Frequency (MHz)	Distance (m)	Field strength limits (µV/m)	
		(µV/m)	dB(µV/m)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB (µV/m) = 20 log Emission Level (µV/m)

NOTE 2 - The tighter limit applies at the band edges.

NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.

NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The EUT (listed in Sec.2.1) and the simulators (listed in Sec.2.2) were installed as shown on Sec.4.2 to meet FCC requirements and operating in a manner that tends to maximize its emission level in a normal application.

4.5 Operating Condition of EUT

4.5.1 Setup the EUT as shown in Sec. 4.2.

4.5.2 Turn on the power of all equipment.

4.5.3 Turn the EUT on the test mode, and then test.

4.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a turntable. Below 1 GHz, the table height is 80 cm above the reference ground plane. Above 1 GHz, the table height is 1.5 m. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bi-log Antenna) or Horn antenna was used as receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.10: 2013 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of the VBW was set at 1MHz and RBW was set at 1MHz for peak emission measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emission above 1GHz for Spectrum Agilent N9010A.

The frequency range from 30 MHz to 25 GHz (Up to 10th harmonics from fundamental frequency) was checked.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Frequency range: below 1G (Worst case emission)

No.	Operation	Modulation	Channel	Frequency (MHz)	Data Page
1.	Transmitting	BT DH1	00	2402	P20
2.		BT DH5	00	2402	P20
3.		BT 3DH1	00	2402	P21
4.		BT 3DH5	00	2402	P21
5.	Receiving	BT	00	2402	P22

Frequency range: above 1G

No.	Operation	Modulation	Channel	Frequency (MHz)	Data Page
1.	Transmitting	BT DH1	00	2402	P23
2.			39	2441	P23
3.			78	2480	P24
4.		BT DH3	00	2402	P24
5.			39	2441	P25
6.			78	2480	P25
7.		BT DH5	00	2402	P26
8.			39	2441	P26
9.			78	2480	P27
10.		BT 3DH1	00	2402	P27
11.			39	2441	P28
12.			78	2480	P28
13.		BT 3DH3	00	2402	P29
14.			39	2441	P29
15.			78	2480	P30
16.		BT 3DH5	00	2402	P30
17.			39	2441	P31
18.			78	2480	P31
19.	Receiving	BT	--	--	P32

Restricted Frequency bands:

No.	Operation	Modulation	Channel	Frequency	Data Page
1.	Transmitting	BT DH1	Cabinet Emission		P33
2.		BT DH3	Cabinet Emission		P34
3.		BT DH5	Cabinet Emission		P34
4.		BT 3DH1	Cabinet Emission		P35
5.		BT 3DH3	Cabinet Emission		P35
6.		BT 3DH5	Cabinet Emission		P36

Additional Radiated emission (Mixed worst modulation): below 1G

No.	Operation	Modulation	Channel	Frequency	Data Page
1.	Transmitting	AP6210: 802.11b	1	2412 MHz	P37
		AP6210: BT 3DH5	00	2402 MHz	
		WLT2564M: BLE	39	2480 MHz	

Additional Radiated emission (Mixed worst modulation): above 1G

No.	Operation	Modulation	Channel	Frequency	Data Page
1.	Transmitting	AP6210: 802.11b	1	2412 MHz	P37
		AP6210: BT 3DH1	39	2441 MHz	
		WLT2564M: BT	39	2480 MHz	

NOTE 1 – Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

NOTE 2 – “QP” means “Quasi-Peak” values

NOTE 3 – 0 ° was the table front facing the antenna. Degree is calculated from 0 ° clockwise facing the antenna.

NOTE 4 – The emission levels which not reported are too low against the official limit.

NOTE 5 – The emission levels recorded below is data of EUT configured in Lying direction, for Lying direction was the maximum emission direction during the test. The data of Side & Standing direction are too low against the official limit to be reported.

NOTE 6 – All reading are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

For above 1GHz test, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

NOTE 7 – The frequency range 2310-2390MHz & 2483.5-2500MHz were tested for Restricted bands.

NOTE 8 – The EUT with AP6210 and WLT2564M can transmit at the same time. The Additional Radiated emission (Mixed worst modulation) is tested for the simultaneous radiated spurious emission.

Worst case emission < 1GHz

EUT : Console Temperature : 22

Model No. : XIR Humidity : 51%RH

Test Mode : Transmitting Date of Test : 2018.03.28

BT DH1:

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	155.91	7.98	19.36	1.31	28.65	43.5	14.85	QP
	191.745	15.95	16.24	1.46	33.65	43.5	9.85	QP
	239.147	22.35	17.72	1.61	41.68	46	4.32	QP
	287.99	10.17	18.82	1.74	30.73	46	15.27	QP
	333.687	9.24	20.47	1.87	31.58	46	14.42	QP
	612.064	4.83	25.64	2.53	33	46	13	QP
Vertical	30.531	12.85	18.86	0.55	32.26	40	7.74	QP
	61.346	8.79	19.01	0.78	28.58	40	11.42	QP
	80.362	13.93	14.28	0.86	29.07	40	10.93	QP
	119.436	12.04	17.44	1.12	30.6	43.5	12.9	QP
	239.147	12.26	17.72	1.61	31.59	46	14.41	QP
	625.078	5.48	25.82	2.55	33.85	46	12.15	QP

BT DH5:

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	67.913	2.55	18.09	0.81	21.45	40	18.55	QP
	155.91	4.98	19.36	1.31	25.65	43.5	17.85	QP
	191.745	16.37	16.24	1.46	34.07	43.5	9.43	QP
	239.147	22.42	17.72	1.61	41.75	46	4.25	QP
	333.687	9.57	20.47	1.87	31.91	46	14.09	QP
	672.845	3.28	26.49	2.64	32.41	46	13.59	QP
Vertical	30.853	12.61	18.89	0.56	32.06	40	7.94	QP
	63.313	9.81	18.72	0.79	29.32	40	10.68	QP
	82.071	16.57	14.13	0.87	31.57	40	8.43	QP
	120.277	10.85	17.52	1.13	29.5	43.5	14	QP
	239.147	13.27	17.72	1.61	32.6	46	13.4	QP
	625.078	5.38	25.82	2.55	33.75	46	12.25	QP

BT 3DH1:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	68.872	2.39	17.96	0.81	21.16	40	18.84	QP
	166.651	6.17	18.96	1.35	26.48	43.5	17.02	QP
	191.745	16.23	16.24	1.46	33.93	43.5	9.57	QP
	239.147	22.25	17.72	1.61	41.58	46	4.42	QP
	287.99	10.53	18.82	1.74	31.09	46	14.91	QP
	672.845	4.4	26.49	2.64	33.53	46	12.47	QP
Vertical	30.745	13.35	18.88	0.56	32.79	40	7.21	QP
	63.092	9.1	18.75	0.79	28.64	40	11.36	QP
	80.644	14.15	14.25	0.86	29.26	40	10.74	QP
	121.976	10.6	17.59	1.14	29.33	43.5	14.17	QP
	287.99	10.06	18.82	1.74	30.62	46	15.38	QP
	601.427	4.09	25.69	2.52	32.3	46	13.7	QP

BT 3DH5:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	69.357	2.62	17.9	0.82	21.34	40	18.66	QP
	151.067	5.54	19.05	1.29	25.88	43.5	17.62	QP
	191.745	16.23	16.24	1.46	33.93	43.5	9.57	QP
	239.147	22.63	17.72	1.61	41.96	46	4.04	QP
	287.99	10.59	18.82	1.74	31.15	46	14.85	QP
	599.321	3.98	25.7	2.5	32.18	46	13.82	QP
Vertical	30.853	12.97	18.89	0.56	32.42	40	7.58	QP
	63.759	9.92	18.66	0.79	29.37	40	10.63	QP
	80.927	13.77	14.23	0.86	28.86	40	11.14	QP
	119.018	10.89	17.38	1.12	29.39	43.5	14.11	QP
	287.99	10.97	18.82	1.74	31.53	46	14.47	QP
	672.845	2.4	26.49	2.64	31.53	46	14.47	QP

TEST ENGINEER: Jarey

EUT : Console Temperature : 22

Model No. : XIR Humidity : 51%RH

Test Mode : Receiving Date of Test : 2018.03.28

BT:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	69.357	1.91	17.9	0.82	20.63	40	19.37	QP
	151.067	4.91	19.05	1.29	25.25	43.5	18.25	QP
	191.745	16.26	16.24	1.46	33.96	43.5	9.54	QP
	239.147	22.49	17.72	1.61	41.82	46	4.18	QP
	287.99	11.16	18.82	1.74	31.72	46	14.28	QP
	672.845	3.33	26.49	2.64	32.46	46	13.54	QP
Vertical	31.18	13	18.92	0.56	32.48	40	7.52	QP
	62.871	8.56	18.79	0.79	28.14	40	11.86	QP
	81.212	14.48	14.2	0.87	29.55	40	10.45	QP
	120.277	11.23	17.52	1.13	29.88	43.5	13.62	QP
	287.99	10.27	18.82	1.74	30.83	46	15.17	QP
	597.223	2.46	25.64	2.5	30.6	46	15.4	QP

TEST ENGINEER: Jarey

Radiated Emission > 1GHzEUT : Console Temperature : 22Model No. : XIR Humidity : 51%RHTest Mode : Transmitting Date of Test : 2018.03.30**BT DH1: CH00 (2402 MHz):**

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1398.336	43.79	25.42	3.9	35.87	37.24	74	36.76	Peak
	1899.636	43.13	27.46	4.52	35.38	39.73	74	34.27	Peak
	2930.633	42.43	30.28	5.67	35.21	43.17	74	30.83	Peak
	4845.948	38.23	34.08	7.66	33.94	46.03	74	27.97	Peak
	7242.052	39.38	37.45	9.14	35.45	50.52	74	23.48	Peak
	10636.85	37.94	39.05	11.06	35.49	52.56	74	21.44	Peak
Vertical	1406.443	43.38	25.46	3.9	35.86	36.88	74	37.12	Peak
	2018.511	42.42	27.84	4.64	35.3	39.6	74	34.4	Peak
	3280.326	39.69	31.2	6.06	34.89	42.06	74	31.94	Peak
	5392.918	37.82	34.67	8.06	34.02	46.53	74	27.47	Peak
	7390.07	38.68	37.65	9.28	35.53	50.08	74	23.92	Peak
	10423.8	37.89	38.95	10.86	35.42	52.28	74	21.72	Peak

BT DH1: CH39 (2441 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1414.597	43.42	25.5	3.92	35.85	36.99	74	37.01	Peak
	1921.727	42.74	27.53	4.55	35.37	39.45	74	34.55	Peak
	2973.293	42.02	30.42	5.71	35.2	42.95	74	31.05	Peak
	4916.49	37.97	34.14	7.72	33.92	45.91	74	28.09	Peak
	7497.646	38.04	37.8	9.34	35.61	49.57	74	24.43	Peak
	10484.23	37.6	38.98	10.96	35.44	52.1	74	21.9	Peak
Vertical	1422.798	43.11	25.54	3.92	35.84	36.73	74	37.27	Peak
	2036.09	41.32	27.88	4.68	35.3	38.58	74	35.42	Peak
	3347.371	38.92	31.36	6.11	34.81	41.58	74	32.42	Peak
	5455.631	36.9	34.75	8.11	34.04	45.72	74	28.28	Peak
	7541.114	37.83	37.88	9.34	35.64	49.41	74	24.59	Peak
	10545.01	36.53	39.01	10.96	35.47	51.03	74	22.97	Peak

BT DH1: CH78 (2480 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1431.047	43.41	25.58	3.92	35.83	37.08	74	36.92	Peak
	1883.236	43.04	27.4	4.49	35.4	39.53	74	34.47	Peak
	2913.74	41.92	30.23	5.63	35.21	42.57	74	31.43	Peak
	4776.419	37.62	34.03	7.59	33.96	45.28	74	28.72	Peak
	7347.474	38.94	37.6	9.21	35.52	50.23	74	23.77	Peak
	10423.8	37.13	38.95	10.86	35.42	51.52	74	22.48	Peak
Vertical	1394.3	42.96	25.4	3.9	35.88	36.38	74	37.62	Peak
	2053.822	41.5	27.92	4.68	35.29	38.81	74	35.19	Peak
	3252.005	39.33	31.13	6.01	34.92	41.55	74	32.45	Peak
	5599.412	37.12	34.88	8.22	34.09	46.13	74	27.87	Peak
	7221.15	38.04	37.42	9.14	35.43	49.17	74	24.83	Peak
	10822.92	37.13	39.12	11.15	35.55	51.85	74	22.15	Peak

BT DH3: CH00 (2402 MHz)

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1390.276	42.77	25.38	3.87	35.88	36.14	74	37.86	Peak
	1866.977	42.62	27.34	4.49	35.41	39.04	74	34.96	Peak
	2896.945	41.48	30.18	5.63	35.21	42.08	74	31.92	Peak
	5031.499	37.83	34.24	7.79	33.91	45.95	74	28.05	Peak
	7096.999	37.9	37.25	9.08	35.36	48.87	74	25.13	Peak
	10215.02	36.69	38.82	10.76	35.36	50.91	74	23.09	Peak
Vertical	1358.498	42.73	25.22	3.84	35.92	35.87	74	38.13	Peak
	1966.68	42.24	27.69	4.58	35.33	39.18	74	34.82	Peak
	3415.787	38.56	31.52	6.16	34.75	41.49	74	32.51	Peak
	5503.143	37.74	34.8	8.11	34.06	46.59	74	27.41	Peak
	7096.999	37.82	37.25	9.08	35.36	48.79	74	25.21	Peak
	10215.02	36.95	38.82	10.76	35.36	51.17	74	22.83	Peak

BT DH3: CH39 (2441 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1354.577	43.47	25.2	3.84	35.92	36.59	74	37.41	Peak
	1792.937	42.65	27.08	4.4	35.48	38.65	74	35.35	Peak
	3150.237	40.03	30.88	5.9	35.03	41.78	74	32.22	Peak
	4721.515	37.9	33.98	7.52	33.98	45.42	74	28.58	Peak
	7829.86	38.19	38.41	9.54	35.8	50.34	74	23.66	Peak
	10980.47	37.47	39.19	11.25	35.59	52.32	74	21.68	Peak
Vertical	1456.081	42.17	25.7	3.98	35.8	36.05	74	37.95	Peak
	2114.052	41.79	28.05	4.76	35.29	39.31	74	34.69	Peak
	3177.672	38.64	30.95	5.9	35	40.49	74	33.51	Peak
	5830.64	37.38	35.07	8.32	34.15	46.62	74	27.38	Peak
	6914.763	37.31	36.96	8.96	35.21	48.02	74	25.98	Peak
	9952.717	36.75	38.71	10.57	35.31	50.72	74	23.28	Peak

BT DH3: CH78 (2480 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1319.794	43.46	25.02	3.78	35.96	36.3	74	37.7	Peak
	1834.878	42.36	27.23	4.46	35.44	38.61	74	35.39	Peak
	2847.139	42.13	30.01	5.59	35.21	42.52	74	31.48	Peak
	5119.517	37.14	34.35	7.84	33.94	45.39	74	28.61	Peak
	7650.888	37.92	38.09	9.41	35.7	49.72	74	24.28	Peak
	10010.42	36.84	38.7	10.67	35.3	50.91	74	23.09	Peak
Vertical	1490.142	42.93	25.86	4.01	35.77	37.03	74	36.97	Peak
	2169.767	41.19	28.16	4.84	35.28	38.91	74	35.09	Peak
	3105.037	38.49	30.77	5.85	35.08	40.03	74	33.97	Peak
	5730.396	36.97	34.99	8.27	34.12	46.11	74	27.89	Peak
	7695.244	38.32	38.17	9.41	35.72	50.18	74	23.82	Peak
	10698.51	37.6	39.08	11.06	35.51	52.23	74	21.77	Peak

BT DH5: CH00 (2402 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1342.882	43.58	25.14	3.81	35.93	36.6	74	37.4	Peak
	1955.344	42.3	27.65	4.58	35.34	39.19	74	34.81	Peak
	2806.288	41.59	29.88	5.55	35.22	41.8	74	32.2	Peak
	4640.339	37.95	33.92	7.46	34	45.33	74	28.67	Peak
	7562.942	38.2	37.92	9.34	35.64	49.82	74	24.18	Peak
	9809.916	36.31	38.74	10.53	35.32	50.26	74	23.74	Peak
Vertical	1378.273	43	25.32	3.87	35.89	36.3	74	37.7	Peak
	2077.705	42.05	27.97	4.72	35.29	39.45	74	34.55	Peak
	3078.229	38.82	30.7	5.8	35.11	40.21	74	33.79	Peak
	5932.638	36.84	35.15	8.43	34.18	46.24	74	27.76	Peak
	7829.86	38.3	38.41	9.54	35.8	50.45	74	23.55	Peak
	10948.78	36.7	39.17	11.25	35.58	51.54	74	22.46	Peak

BT DH5: CH39 (2441 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1378.273	42.95	25.32	3.87	35.89	36.25	74	37.75	Peak
	1989.55	41.74	27.76	4.61	35.31	38.8	74	35.2	Peak
	3051.653	39.71	30.64	5.8	35.14	41.01	74	32.99	Peak
	5209.075	37.89	34.45	7.95	33.97	46.32	74	27.68	Peak
	7015.42	38.13	37.13	9.01	35.3	48.97	74	25.03	Peak
	10126.82	37.15	38.77	10.67	35.33	51.26	74	22.74	Peak
Vertical	1520.598	42.27	25.99	4.07	35.74	36.59	74	37.41	Peak
	2220.523	41.62	28.27	4.92	35.27	39.54	74	34.46	Peak
	3495.691	37.34	31.7	6.26	34.67	40.63	74	33.37	Peak
	5284.902	36.51	34.55	8	33.99	45.07	74	28.93	Peak
	7989.893	37.01	38.7	9.61	35.89	49.43	74	24.57	Peak
	9838.312	36.24	38.73	10.53	35.32	50.18	74	23.82	Peak

BT DH5: CH78 (2480 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1304.623	44.02	24.94	3.75	35.98	36.73	74	37.27	Peak
	1813.786	43.44	27.15	4.43	35.46	39.56	74	34.44	Peak
	3105.037	38.85	30.77	5.85	35.08	40.39	74	33.61	Peak
	5269.649	37.62	34.53	7.95	33.99	46.11	74	27.89	Peak
	7920.911	38.62	38.58	9.54	35.84	50.9	74	23.1	Peak
	10822.92	37.33	39.12	11.15	35.55	52.05	74	21.95	Peak
Vertical	1335.141	42.68	25.1	3.81	35.94	35.65	74	38.35	Peak
	2194.998	41.81	28.22	4.88	35.28	39.63	74	34.37	Peak
	3034.063	38.99	30.59	5.75	35.15	40.18	74	33.82	Peak
	5164.102	36.11	34.4	7.9	33.95	44.46	74	29.54	Peak
	6795.879	37.49	36.74	8.9	35.09	48.04	74	25.96	Peak
	11108.16	36.86	39.24	11.39	35.61	51.88	74	22.12	Peak

BT 3DH1: CH00 (2402 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1282.193	44.67	24.82	3.72	36.01	37.2	74	36.8	Peak
	2030.214	42.47	27.86	4.68	35.3	39.71	74	34.29	Peak
	3214.623	40.2	31.04	5.95	34.96	42.23	74	31.77	Peak
	5330.928	37.43	34.6	8	34.01	46.02	74	27.98	Peak
	6934.778	37.08	36.99	8.96	35.23	47.8	74	26.2	Peak
	9923.991	37.17	38.72	10.57	35.31	51.15	74	22.85	Peak
Vertical	1327.446	42.76	25.06	3.78	35.95	35.65	74	38.35	Peak
	2246.344	41.67	28.32	4.96	35.27	39.68	74	34.32	Peak
	3556.843	38.64	31.83	6.31	34.61	42.17	74	31.83	Peak
	5104.741	37.06	34.33	7.84	33.93	45.3	74	28.7	Peak
	8082.804	37.88	38.53	9.69	35.86	50.24	74	23.76	Peak
	11302.48	37.61	39.32	11.52	35.63	52.82	74	21.18	Peak

BT 3DH1: CH39 (2441 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1477.276	43.18	25.8	4.01	35.78	37.21	74	36.79	Peak
	2059.767	41.72	27.93	4.72	35.29	39.08	74	34.92	Peak
	3177.672	38.84	30.95	5.9	35	40.69	74	33.31	Peak
	4586.999	38.36	33.88	7.39	34.01	45.62	74	28.38	Peak
	7200.309	38.64	37.39	9.14	35.42	49.75	74	24.25	Peak
	11108.16	37.49	39.24	11.39	35.61	52.51	74	21.49	Peak
Vertical	1289.627	43.43	24.86	3.72	36	36.01	74	37.99	Peak
	1944.073	40.56	27.61	4.58	35.35	37.4	74	36.6	Peak
	3629.54	38.01	31.98	6.41	34.54	41.86	74	32.14	Peak
	6018.999	37.3	35.24	8.43	34.22	46.75	74	27.25	Peak
	7305.122	38.41	37.54	9.21	35.49	49.67	74	24.33	Peak
	11400.91	37.7	39.36	11.66	35.64	53.08	74	20.92	Peak

BT 3DH1: CH78 (2480 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1267.454	44.14	24.74	3.69	36.03	36.54	74	37.46	Peak
	2089.751	42.46	27.99	4.76	35.29	39.92	74	34.08	Peak
	2782.06	42.23	29.8	5.51	35.22	42.32	74	31.68	Peak
	5424.184	37.26	34.71	8.06	34.03	46	74	28	Peak
	8013.02	38.31	38.66	9.61	35.9	50.68	74	23.32	Peak
	9697.151	37.48	38.76	10.49	35.33	51.4	74	22.6	Peak
Vertical	1278.492	43.31	24.8	3.72	36.01	35.82	74	38.18	Peak
	2279.044	40.99	28.38	5	35.27	39.1	74	34.9	Peak
	3671.746	38.26	32.06	6.41	34.5	42.23	74	31.77	Peak
	5031.499	37.16	34.24	7.79	33.91	45.28	74	28.72	Peak
	7411.461	38.61	37.68	9.28	35.55	50.02	74	23.98	Peak
	9725.221	35.69	38.76	10.53	35.33	49.65	74	24.35	Peak

BT 3DH3: CH00 (2402 MHz)

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1490.142	43.26	25.86	4.01	35.77	37.36	74	36.64	Peak
	1777.458	43.36	27.02	4.37	35.49	39.26	74	34.74	Peak
	2742.143	42.43	29.66	5.47	35.22	42.34	74	31.66	Peak
	5471.422	37.71	34.76	8.11	34.05	46.53	74	27.47	Peak
	6894.806	37.69	36.92	8.96	35.18	48.39	74	25.61	Peak
	9613.43	36.94	38.78	10.49	35.34	50.87	74	23.13	Peak
Vertical	1538.281	42.7	26.07	4.07	35.72	37.12	74	36.88	Peak
	2036.09	41.32	27.88	4.68	35.3	38.58	74	35.42	Peak
	3366.778	38.27	31.41	6.11	34.8	40.99	74	33.01	Peak
	4973.662	37.76	34.18	7.72	33.91	45.75	74	28.25	Peak
	7035.727	37.12	37.16	9.01	35.31	47.98	74	26.02	Peak
	11667.6	37	39.27	11.79	35.67	52.39	74	21.61	Peak

BT 3DH3: CH39 (2441 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1516.21	43.18	25.98	4.04	35.74	37.46	74	36.54	Peak
	1782.602	43.6	27.04	4.4	35.49	39.55	74	34.45	Peak
	2922.174	41.48	30.26	5.67	35.21	42.2	74	31.8	Peak
	4680.751	37.13	33.95	7.46	33.99	44.55	74	29.45	Peak
	7138.144	37.87	37.3	9.08	35.39	48.86	74	25.14	Peak
	10068.45	37.71	38.74	10.67	35.32	51.8	74	22.2	Peak
Vertical	1569.721	42.33	26.2	4.13	35.68	36.98	74	37.02	Peak
	1921.727	39.85	27.53	4.55	35.37	36.56	74	37.44	Peak
	3735.978	37.75	32.19	6.52	34.44	42.02	74	31.98	Peak
	5060.668	37.02	34.27	7.84	33.92	45.21	74	28.79	Peak
	7242.052	38.16	37.45	9.14	35.45	49.3	74	24.7	Peak
	10274.24	36.98	38.86	10.76	35.38	51.22	74	22.78	Peak

BT 3DH3: CH78 (2480 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1473.013	43.05	25.78	3.98	35.79	37.02	74	36.98	Peak
	1850.858	41.99	27.29	4.46	35.42	38.32	74	35.68	Peak
	2863.645	42.41	30.07	5.59	35.21	42.86	74	31.14	Peak
	5164.102	37.35	34.4	7.9	33.95	45.7	74	28.3	Peak
	7497.646	38.04	37.8	9.34	35.61	49.57	74	24.43	Peak
	10698.51	37.53	39.08	11.06	35.51	52.16	74	21.84	Peak
Vertical	1300.858	42.42	24.92	3.75	35.98	35.11	74	38.89	Peak
	2126.308	42.08	28.07	4.8	35.29	39.66	74	34.34	Peak
	3396.098	38.7	31.47	6.16	34.77	41.56	74	32.44	Peak
	5551.069	37.23	34.84	8.16	34.07	46.16	74	27.84	Peak
	7650.888	37.95	38.09	9.41	35.7	49.75	74	24.25	Peak
	10393.71	37.38	38.93	10.86	35.41	51.76	74	22.24	Peak

BT 3DH5: CH00 (2402 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1358.498	43.49	25.22	3.84	35.92	36.63	74	37.37	Peak
	1866.977	42.62	27.34	4.49	35.41	39.04	74	34.96	Peak
	3252.005	38.93	31.13	6.01	34.92	41.15	74	32.85	Peak
	5583.251	37.82	34.87	8.16	34.08	46.77	74	27.23	Peak
	7284.038	38.24	37.51	9.21	35.48	49.48	74	24.52	Peak
	10948.78	37.43	39.17	11.25	35.58	52.27	74	21.73	Peak
Vertical	1315.985	42.28	25	3.78	35.96	35.1	74	38.9	Peak
	2298.892	41.6	28.42	5	35.27	39.75	74	34.25	Peak
	3141.145	38.4	30.86	5.9	35.04	40.12	74	33.88	Peak
	6106.616	37.67	35.41	8.48	34.32	47.24	74	26.76	Peak
	7096.999	37.82	37.25	9.08	35.36	48.79	74	25.21	Peak
	10514.58	37.34	39	10.96	35.46	51.84	74	22.16	Peak

BT 3DH5: CH39 (2441 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1319.794	43.46	25.02	3.78	35.96	36.3	74	37.7	Peak
	2107.95	41.44	28.03	4.76	35.29	38.94	74	35.06	Peak
	2758.041	41.59	29.72	5.51	35.22	41.6	74	32.4	Peak
	4973.662	37.58	34.18	7.72	33.91	45.57	74	28.43	Peak
	7695.244	38.78	38.17	9.41	35.72	50.64	74	23.36	Peak
	10333.8	37.07	38.89	10.86	35.4	51.42	74	22.58	Peak
Vertical	1362.43	42.96	25.24	3.84	35.91	36.13	74	37.87	Peak
	2006.877	41.58	27.81	4.64	35.3	38.73	74	35.27	Peak
	3435.59	38.83	31.56	6.21	34.72	41.88	74	32.12	Peak
	5239.274	37.15	34.49	7.95	33.98	45.61	74	28.39	Peak
	7898.049	37.18	38.54	9.54	35.84	49.42	74	24.58	Peak
	10010.42	36.51	38.7	10.67	35.3	50.58	74	23.42	Peak

BT 3DH5: CH78 (2480 MHz):

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1339.006	43.72	25.12	3.81	35.94	36.71	74	37.29	Peak
	1905.135	42.49	27.48	4.52	35.38	39.11	74	34.89	Peak
	3299.344	39.08	31.25	6.06	34.87	41.52	74	32.48	Peak
	4653.771	37.67	33.93	7.46	34	45.06	74	28.94	Peak
	8082.804	37.63	38.53	9.69	35.86	49.99	74	24.01	Peak
	10423.8	37.13	38.95	10.86	35.42	51.52	74	22.48	Peak
Vertical	1274.802	43.1	24.78	3.72	36.02	35.58	74	38.42	Peak
	1983.808	40.65	27.74	4.61	35.32	37.68	74	36.32	Peak
	3425.675	37.79	31.54	6.21	34.73	40.81	74	33.19	Peak
	5239.274	37.15	34.49	7.95	33.98	45.61	74	28.39	Peak
	7200.309	37.54	37.39	9.14	35.42	48.65	74	25.35	Peak
	11500.2	37.58	39.4	11.66	35.65	52.99	74	21.01	Peak

TEST ENGINEER: Jarey

EUT : Console Temperature : 22

Model No. : XIR Humidity : 51%RH

Test Mode : Receiving Date of Test : 2018.03.30

BT:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1374.295	43.22	25.3	3.87	35.9	36.49	74	37.51	Peak
	1883.236	43.04	27.4	4.49	35.4	39.53	74	34.47	Peak
	2973.293	42.02	30.42	5.71	35.2	42.95	74	31.05	Peak
	4902.3	38.28	34.12	7.66	33.93	46.13	74	27.87	Peak
	7347.474	37.94	37.6	9.21	35.52	49.23	74	24.77	Peak
	9530.432	36.73	38.79	10.45	35.35	50.62	74	23.38	Peak
Vertical	1386.264	42.9	25.36	3.87	35.88	36.25	74	37.75	Peak
	1983.808	40.65	27.74	4.61	35.32	37.68	74	36.32	Peak
	3060.486	39.53	30.66	5.8	35.13	40.86	74	33.14	Peak
	5519.072	37.47	34.81	8.16	34.06	46.38	74	27.62	Peak
	7454.429	38.2	37.74	9.28	35.58	49.64	74	24.36	Peak
	10185.53	36.47	38.81	10.76	35.35	50.69	74	23.31	Peak

TEST ENGINEER: Jarey

Emissions in restricted frequency bands:

EUT : Console Temperature : 22

Model No. : XIR Humidity : 51%RH

Test Mode : Transmitting Date of Test : 2018.03.28

BT DH1:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2315.394	38.56	28.45	5.04	35.26	36.79	74	37.21	Peak
	2315.394	24.59	28.45	5.04	35.26	22.82	54	31.18	Average
	2355.115	38.1	28.53	5.08	35.26	36.45	74	37.55	Peak
	2355.115	24.18	28.53	5.08	35.26	22.53	54	31.47	Average
	2485.865	38.38	28.77	5.23	35.25	37.13	74	36.87	Peak
	2485.865	24.23	28.77	5.23	35.25	22.98	54	31.02	Average
	2493.962	37.72	28.79	5.23	35.25	36.49	74	37.51	Peak
2493.962	23.17	28.79	5.23	35.25	21.94	54	32.06	Average	
Vertical	2317.711	38.67	28.46	5.04	35.26	36.91	74	37.09	Peak
	2317.711	24.23	28.46	5.04	35.26	22.47	54	31.53	Average
	2355.508	38.46	28.53	5.08	35.26	36.81	74	37.19	Peak
	2355.508	24.43	28.53	5.08	35.26	22.78	54	31.22	Average
	2486.28	38.12	28.77	5.23	35.25	36.87	74	37.13	Peak
	2486.28	24.15	28.77	5.23	35.25	22.9	54	31.1	Average
	2496.042	38.13	28.79	5.23	35.25	36.9	74	37.1	Peak
2496.042	25.24	28.79	5.23	35.25	24.01	54	29.99	Average	

BT DH3:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2323.129	39.01	28.48	5.04	35.26	37.27	74	36.73	Peak
	2323.129	25.33	28.48	5.04	35.26	23.59	54	30.41	Average
	2354.33	38.57	28.53	5.08	35.26	36.92	74	37.08	Peak
	2354.33	24.34	28.53	5.08	35.26	22.69	54	31.31	Average
	2486.28	38.56	28.77	5.23	35.25	37.31	74	36.69	Peak
	2486.28	24.35	28.77	5.23	35.25	23.1	54	30.9	Average
	2495.002	37.64	28.79	5.23	35.25	36.41	74	37.59	Peak
	2495.002	23.55	28.79	5.23	35.25	22.32	54	31.68	Average
Vertical	2318.485	38.4	28.46	5.04	35.26	36.64	74	37.36	Peak
	2318.485	24.42	28.46	5.04	35.26	22.66	54	31.34	Average
	2354.33	38.23	28.53	5.08	35.26	36.58	74	37.42	Peak
	2354.33	25.25	28.53	5.08	35.26	23.6	54	30.4	Average
	2486.073	38.55	28.77	5.23	35.25	37.3	74	36.7	Peak
	2486.073	24.56	28.77	5.23	35.25	23.31	54	30.69	Average
	2497.916	37.73	28.8	5.23	35.25	36.51	74	37.49	Peak
	2497.916	23.74	28.8	5.23	35.25	22.52	54	31.48	Average

BT DH5:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2318.098	38.2	28.46	5.04	35.26	36.44	74	37.56	Peak
	2318.098	25.32	28.46	5.04	35.26	23.56	54	30.44	Average
	2356.097	38.34	28.54	5.08	35.26	36.7	74	37.3	Peak
	2356.097	25.35	28.54	5.08	35.26	23.71	54	30.29	Average
	2487.317	38.24	28.77	5.23	35.25	36.99	74	37.01	Peak
	2487.317	24.26	28.77	5.23	35.25	23.01	54	30.99	Average
	2496.251	38.13	28.79	5.23	35.25	36.9	74	37.1	Peak
	2496.251	25.14	28.79	5.23	35.25	23.91	54	30.09	Average
Vertical	2322.548	38.31	28.48	5.04	35.26	36.57	74	37.43	Peak
	2322.548	25.62	28.48	5.04	35.26	23.88	54	30.12	Average
	2353.544	38.56	28.53	5.08	35.26	36.91	74	37.09	Peak
	2353.544	25.25	28.53	5.08	35.26	23.6	54	30.4	Average
	2489.599	38.22	28.79	5.23	35.25	36.99	74	37.01	Peak
	2489.599	25.23	28.79	5.23	35.25	24	54	30	Average
	2495.626	38.68	28.79	5.23	35.25	37.45	74	36.55	Peak
	2495.626	24.26	28.79	5.23	35.25	23.03	54	30.97	Average

BT 3DH1:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2322.354	38.57	28.48	5.04	35.26	36.83	74	37.17	Peak
	2322.354	25.52	28.48	5.04	35.26	23.78	54	30.22	Average
	2361.801	39.03	28.54	5.08	35.26	37.39	74	36.61	Peak
	2361.801	25.23	28.54	5.08	35.26	23.59	54	30.41	Average
	2488.354	38.59	28.77	5.23	35.25	37.34	74	36.66	Peak
	2488.354	25.55	28.77	5.23	35.25	24.3	54	29.7	Average
	2497.916	38.46	28.8	5.23	35.25	37.24	74	36.76	Peak
	2497.916	25.35	28.8	5.23	35.25	24.13	54	29.87	Average
Vertical	2320.612	38.12	28.46	5.04	35.26	36.36	74	37.64	Peak
	2320.612	25.14	28.46	5.04	35.26	23.38	54	30.62	Average
	2357.079	38.35	28.54	5.08	35.26	36.71	74	37.29	Peak
	2357.079	25.33	28.54	5.08	35.26	23.69	54	30.31	Average
	2484.622	38.03	28.77	5.23	35.25	36.78	74	37.22	Peak
	2484.622	24.37	28.77	5.23	35.25	23.12	54	30.88	Average
	2493.546	38.03	28.79	5.23	35.25	36.8	74	37.2	Peak
	2493.546	25.18	28.79	5.23	35.25	23.95	54	30.05	Average

BT 3DH3:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2320.031	38.12	28.46	5.04	35.26	36.36	74	37.64	Peak
	2320.031	25.32	28.46	5.04	35.26	23.56	54	30.44	Average
	2359.046	37.92	28.54	5.08	35.26	36.28	74	37.72	Peak
	2359.046	24.63	28.54	5.08	35.26	22.99	54	31.01	Average
	2484.829	38.22	28.77	5.23	35.25	36.97	74	37.03	Peak
	2484.829	25.35	28.77	5.23	35.25	24.1	54	29.9	Average
	2498.75	38.39	28.8	5.23	35.25	37.17	74	36.83	Peak
	2498.75	25.35	28.8	5.23	35.25	24.13	54	29.87	Average
Vertical	2319.645	37.6	28.46	5.04	35.26	35.84	74	38.16	Peak
	2319.645	24.23	28.46	5.04	35.26	22.47	54	31.53	Average
	2362.195	38.02	28.54	5.08	35.26	36.38	74	37.62	Peak
	2362.195	25.23	28.54	5.08	35.26	23.59	54	30.41	Average
	2485.243	37.71	28.77	5.23	35.25	36.46	74	37.54	Peak
	2485.243	24.64	28.77	5.23	35.25	23.39	54	30.61	Average
	2495.002	38.29	28.79	5.23	35.25	37.06	74	36.94	Peak
	2495.002	25.35	28.79	5.23	35.25	24.12	54	29.88	Average

BT DH5:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2316.552	38.07	28.46	5.04	35.26	36.31	74	37.69	Peak
	2316.552	25.03	28.46	5.04	35.26	23.27	54	30.73	Average
	2357.866	38.33	28.54	5.08	35.26	36.69	74	37.31	Peak
	2357.866	25.32	28.54	5.08	35.26	23.68	54	30.32	Average
	2487.939	37.92	28.77	5.23	35.25	36.67	74	37.33	Peak
	2487.939	24.95	28.77	5.23	35.25	23.7	54	30.3	Average
	2495.418	38.92	28.79	5.23	35.25	37.69	74	36.31	Peak
	2495.418	25.33	28.79	5.23	35.25	24.1	54	29.9	Average
Vertical	2321.386	38.24	28.46	5.04	35.26	36.48	74	37.52	Peak
	2321.386	25.52	28.46	5.04	35.26	23.76	54	30.24	Average
	2358.456	38.29	28.54	5.08	35.26	36.65	74	37.35	Peak
	2358.456	25.52	28.54	5.08	35.26	23.88	54	30.12	Average
	2487.524	37.86	28.77	5.23	35.25	36.61	74	37.39	Peak
	2487.524	24.66	28.77	5.23	35.25	23.41	54	30.59	Average
	2498.75	37.67	28.8	5.23	35.25	36.45	74	37.55	Peak
	2498.75	24.33	28.8	5.23	35.25	23.11	54	30.89	Average

Additional Radiated emission (Mixed worst modulation):

EUT : Console Temperature : 22

Model No. : XIR Humidity : 51%RH

Test Mode : Transmitting Date of Test : 2018.03.28

Below 1G

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	78.413	32.77	14.85	0.85	27.77	20.7	40	19.3	Peak
	119.436	30.6	17.44	1.12	27.49	21.67	43.5	21.83	Peak
	191.745	43.32	16.24	1.46	26.94	34.08	43.5	9.42	Peak
	239.147	48.86	17.72	1.61	26.86	41.33	46	4.67	Peak
	333.687	36.24	20.47	1.87	26.98	31.6	46	14.4	Peak
	595.133	31.63	25.59	2.5	28.2	31.52	46	14.48	Peak
Vertical	30.853	41.35	18.89	0.56	27.93	32.87	40	7.13	Peak
	63.313	37.65	18.72	0.79	27.83	29.33	40	10.67	Peak
	81.212	43.04	14.2	0.87	27.76	30.35	40	9.65	Peak
	120.277	38.46	17.52	1.13	27.48	29.63	43.5	13.87	Peak
	239.147	39.62	17.72	1.61	26.86	32.09	46	13.91	Peak
	625.078	33.26	25.82	2.55	28.17	33.46	46	12.54	Peak

Above 1G

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	1289.627	43.49	24.86	3.72	36	36.07	74	37.93	Peak
	2053.822	42.02	27.92	4.68	35.29	39.33	74	34.67	Peak
	2656.331	42.3	29.37	5.39	35.23	41.83	74	32.17	Peak
	5224.153	36.66	34.47	7.95	33.97	45.11	74	28.89	Peak
	7497.646	38.04	37.8	9.34	35.61	49.57	74	24.43	Peak
	10514.58	37.86	39	10.96	35.46	52.36	74	21.64	Peak
Vertical	1547.199	42.41	26.11	4.1	35.71	36.91	74	37.09	Peak
	2151.034	42.15	28.12	4.84	35.28	39.83	74	34.17	Peak
	3270.858	38.45	31.18	6.01	34.89	40.75	74	33.25	Peak
	5361.833	37.04	34.64	8.06	34.01	45.73	74	28.27	Peak
	7717.518	37.68	38.21	9.48	35.74	49.63	74	24.37	Peak
	11302.48	37.61	39.32	11.52	35.63	52.82	74	21.18	Peak

TEST ENGINEER: Jarey

5 20 DB BANDWIDTH MEASUREMENT

5.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 12, 2017	Jun 11, 2018

5.2 Block Diagram of Test Setup



5.3 Specification Limits (§15.247(a)(1))

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

5.4 Operating Condition of EUT

The switch ON/OFF was used to enable the EUT to change the channel one by one.

5.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

Use the following spectrum analyzer settings:

- a) Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel
- b) RBW \geq 1% of the 20 dB bandwidth
- c) VBW \geq RBW
- d) Sweep = auto
- e) Detector function = peak
- f) Trace = max hold

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

The test procedure is defined in FCC Public Notice DA 00-705, Mar.2000 (the Procedure “ 20 dB Bandwidth” was used).

5.6 Test Results

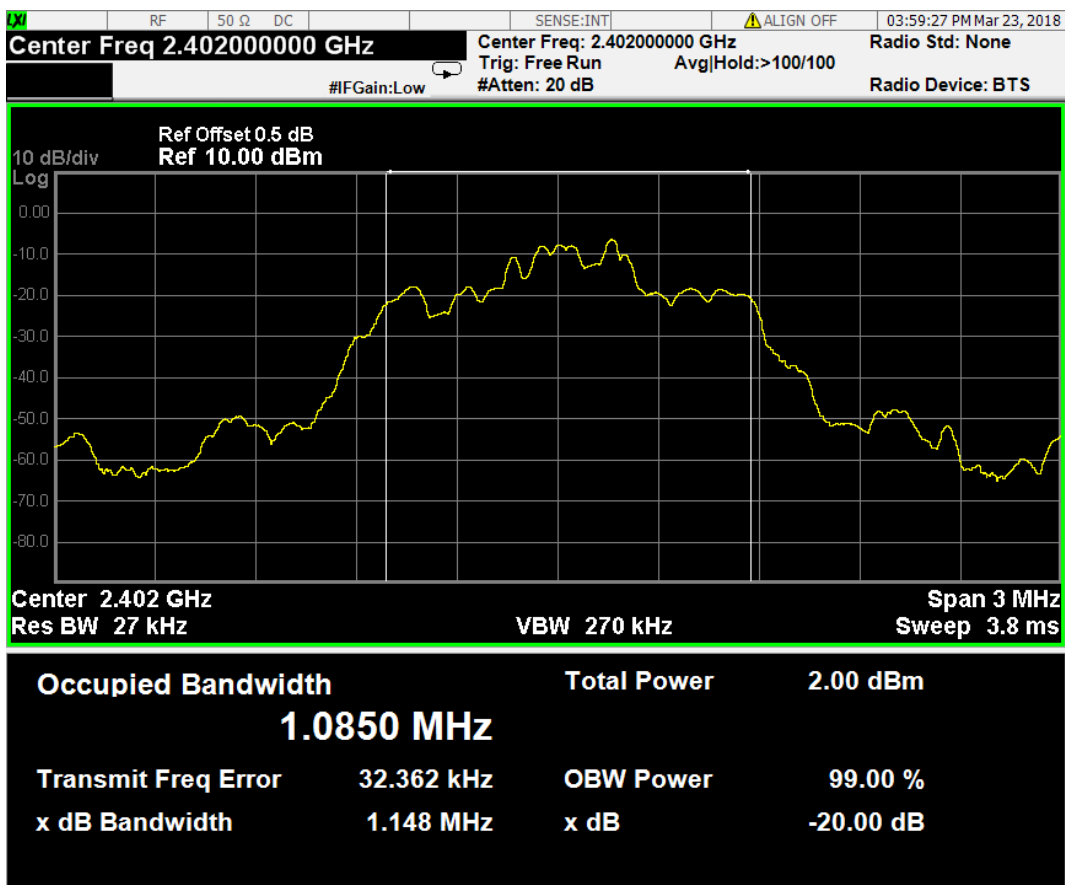
PASSED.

All the test results are attached in next pages.

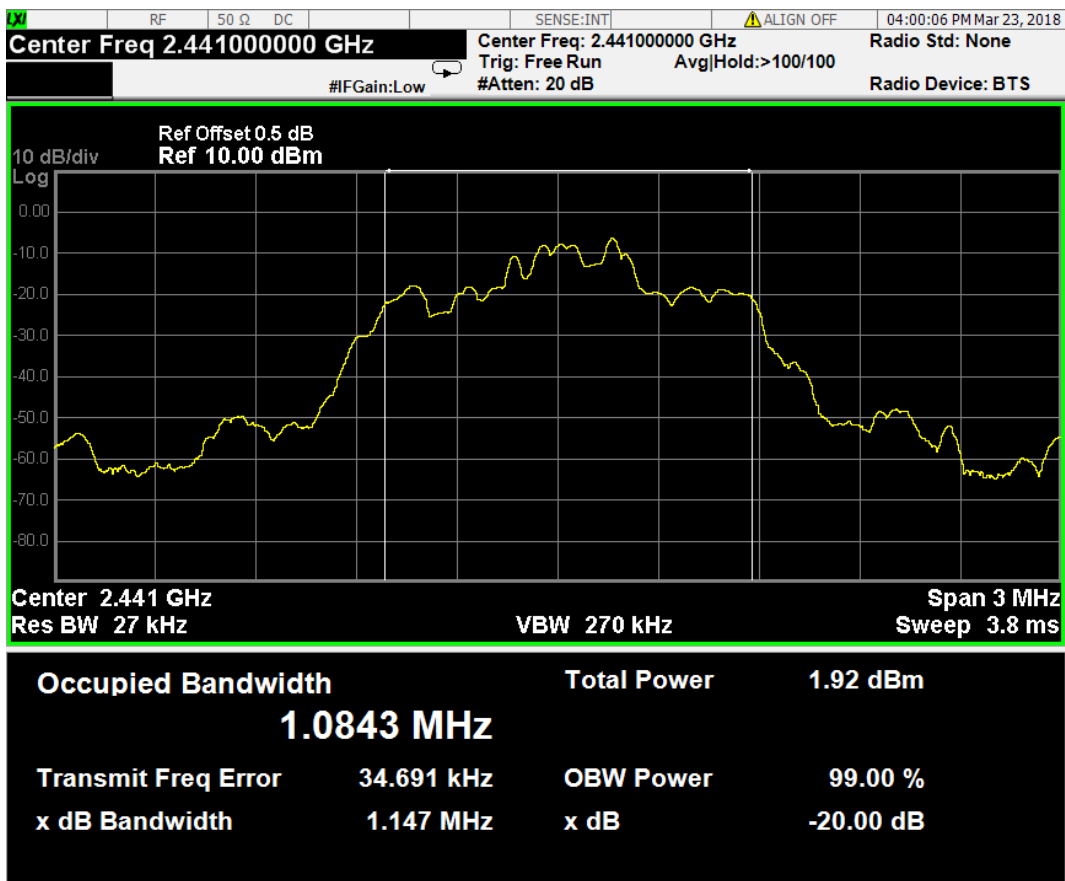
(Test Date: 2018.03.23 Temperature: 23 Humidity: 51 %)

Modulation	Channel	Frequency (MHz)	20dB Bandwidth (MHz)	2/3 20dB Bandwidth (MHz)
BT DH1	00	2402	1.148	0.765
	39	2441	1.147	0.765
	78	2480	1.146	0.764
BT DH3	00	2402	1.162	0.775
	39	2441	1.162	0.775
	78	2480	1.161	0.774
BT DH5	00	2402	1.162	0.775
	39	2441	1.162	0.775
	78	2480	1.163	0.775
BT 3DH1	00	2402	1.158	0.772
	39	2441	1.158	0.772
	78	2480	1.158	0.772
BT 3DH3	00	2402	1.124	0.749
	39	2441	1.124	0.749
	78	2480	1.123	0.749
BT 3DH5	00	2402	1.112	0.741
	39	2441	1.109	0.739
	78	2480	1.106	0.737

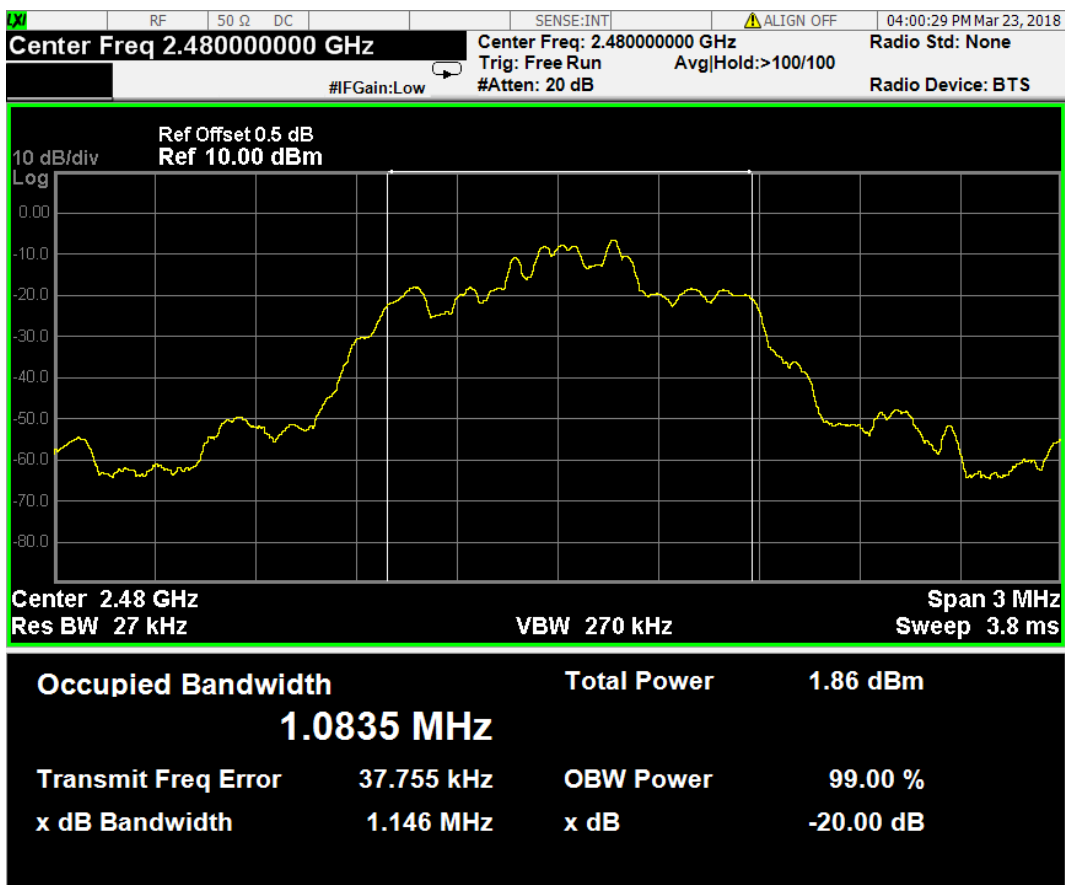
BT DH1: CH00 (2402 MHz)



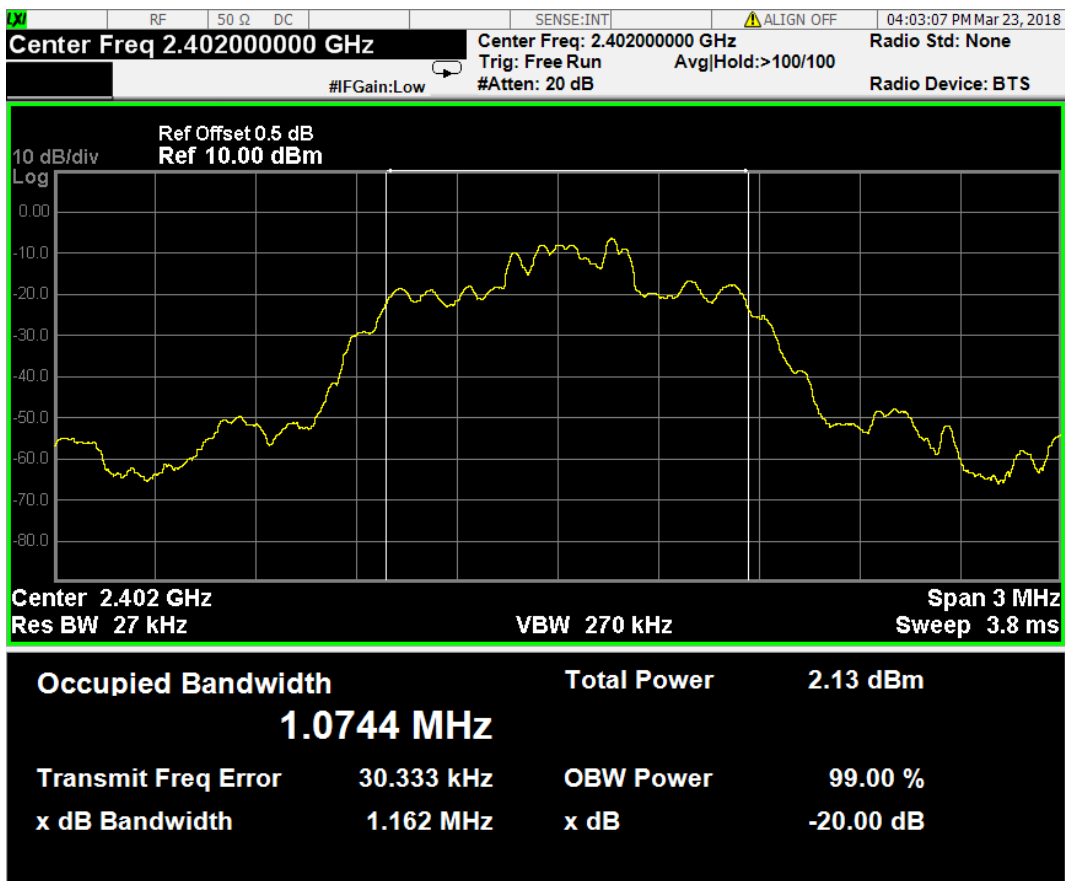
BT DH1: CH39 (2441 MHz)



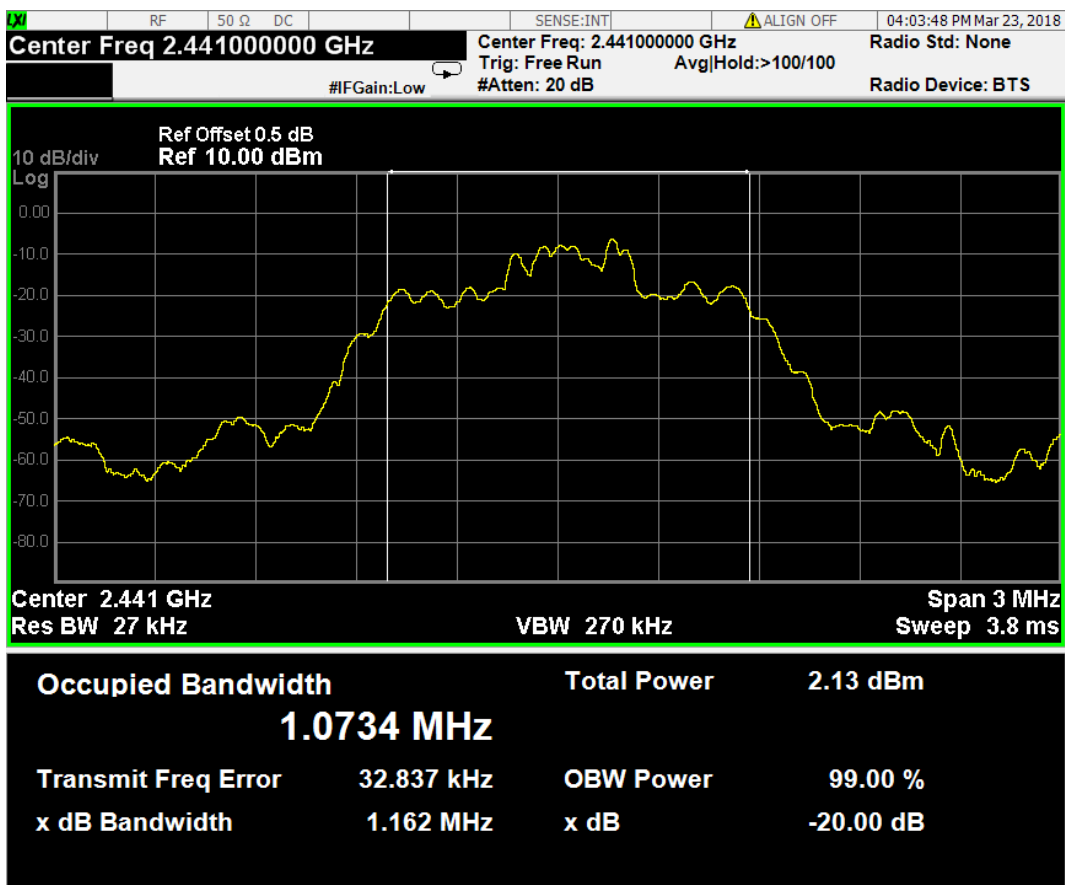
BT DH1: CH78 (2480 MHz)



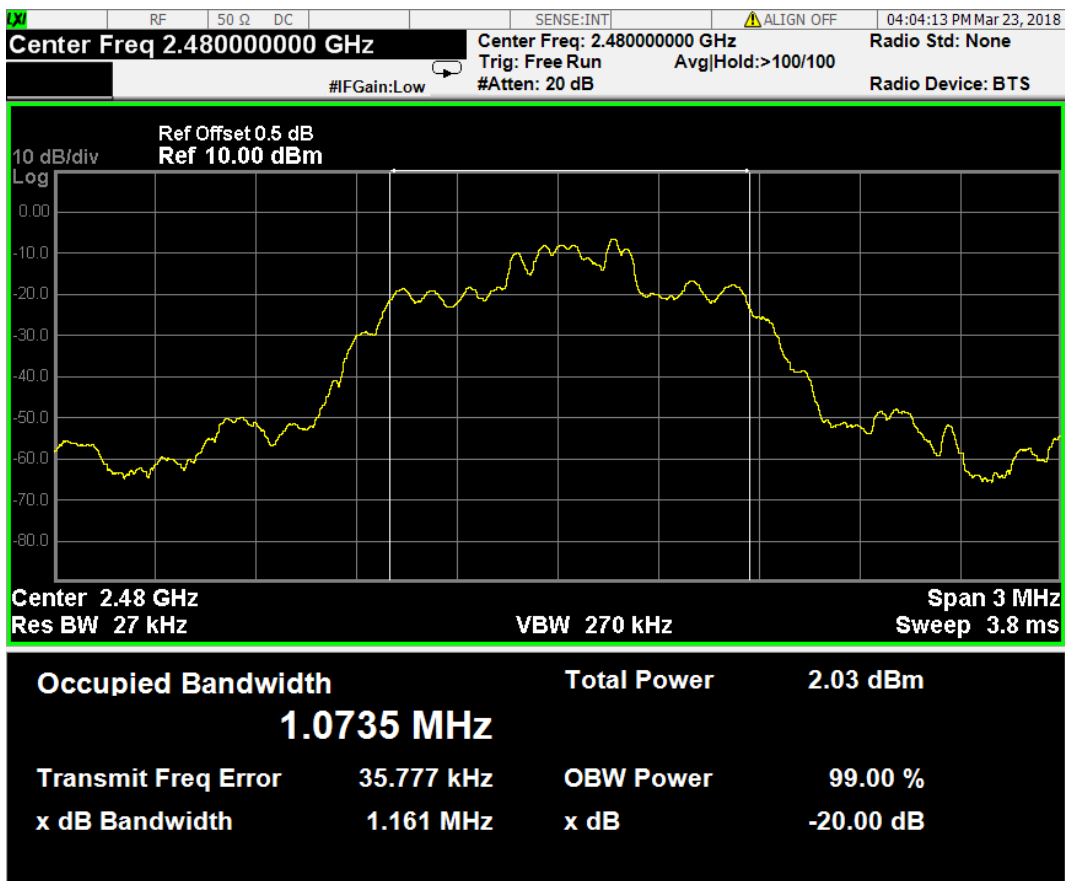
BT DH3: CH00 (2402 MHz)



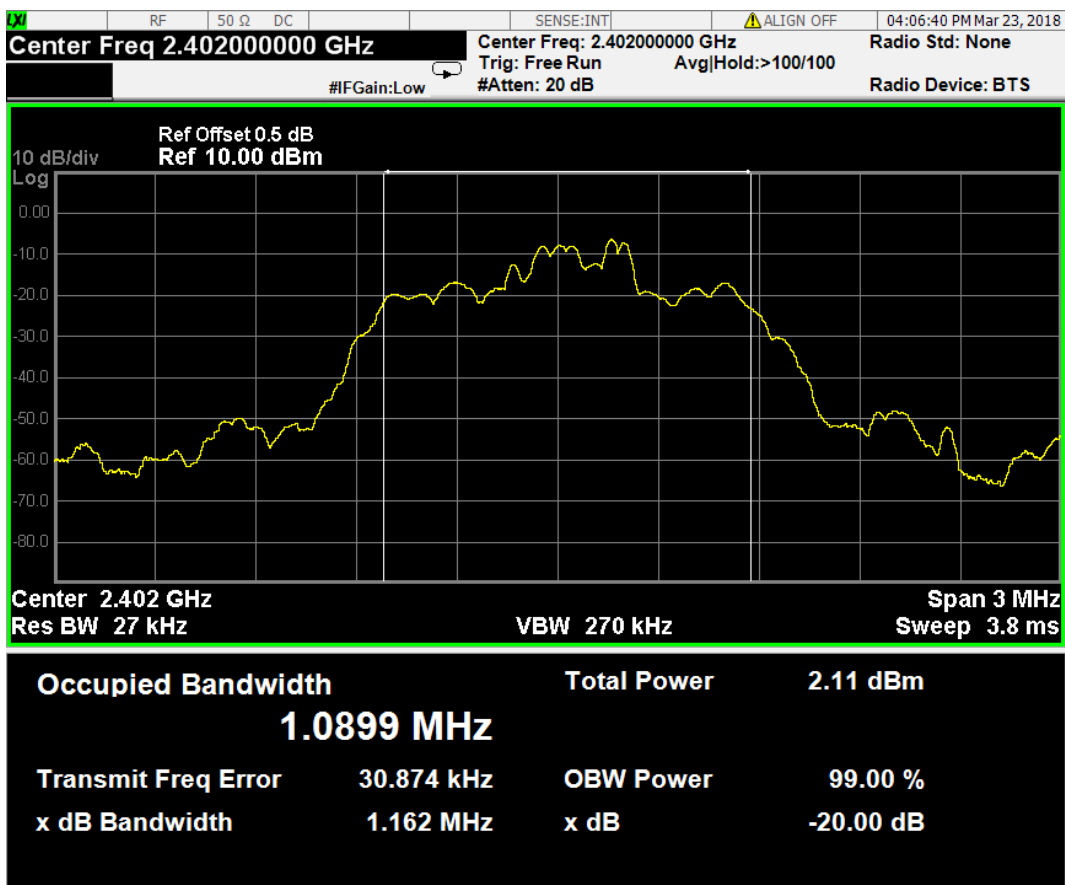
BT DH3: CH39 (2441 MHz)



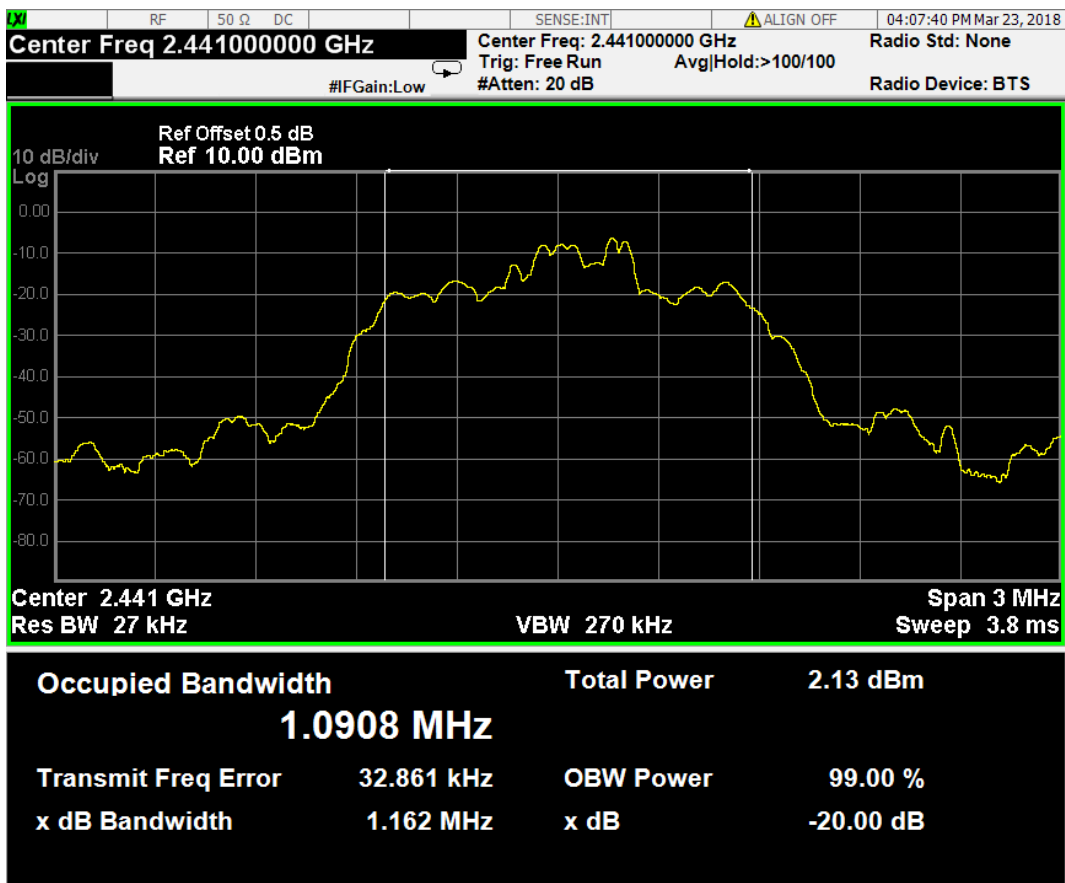
BT DH3: CH78 (2480 MHz)



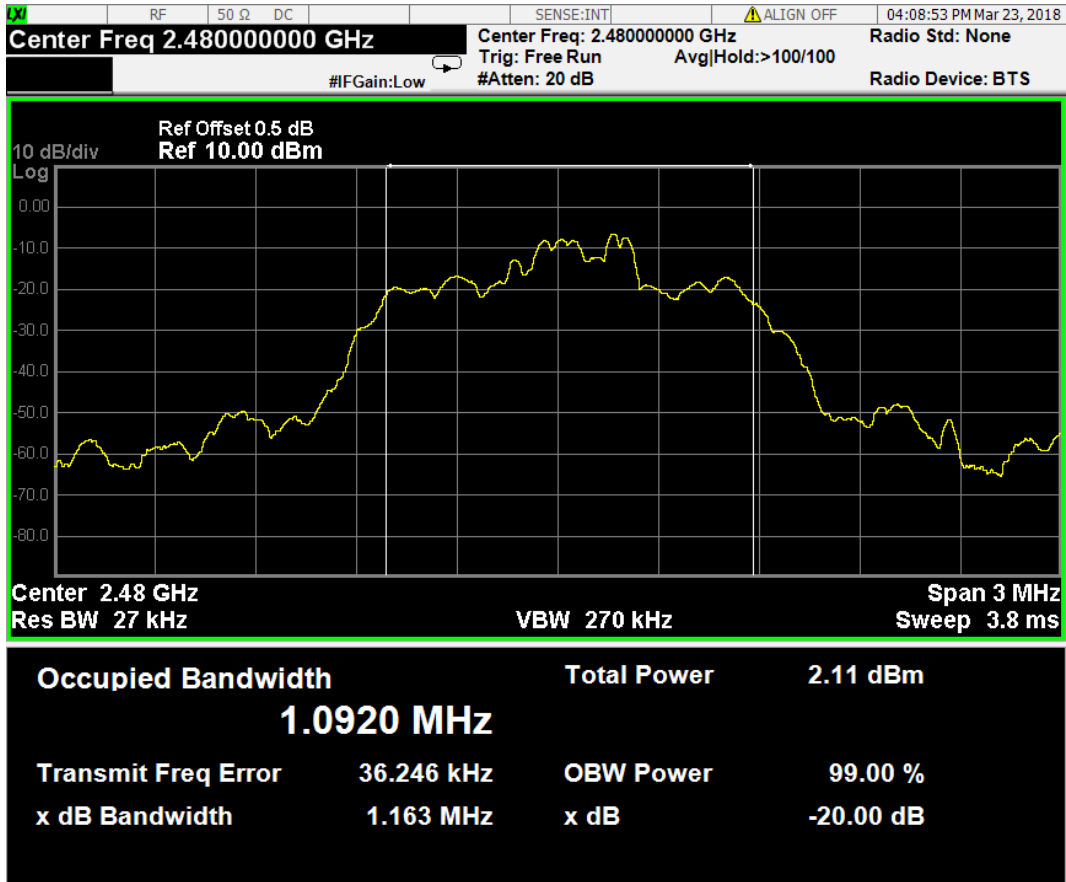
BT DH5: CH00 (2402 MHz)



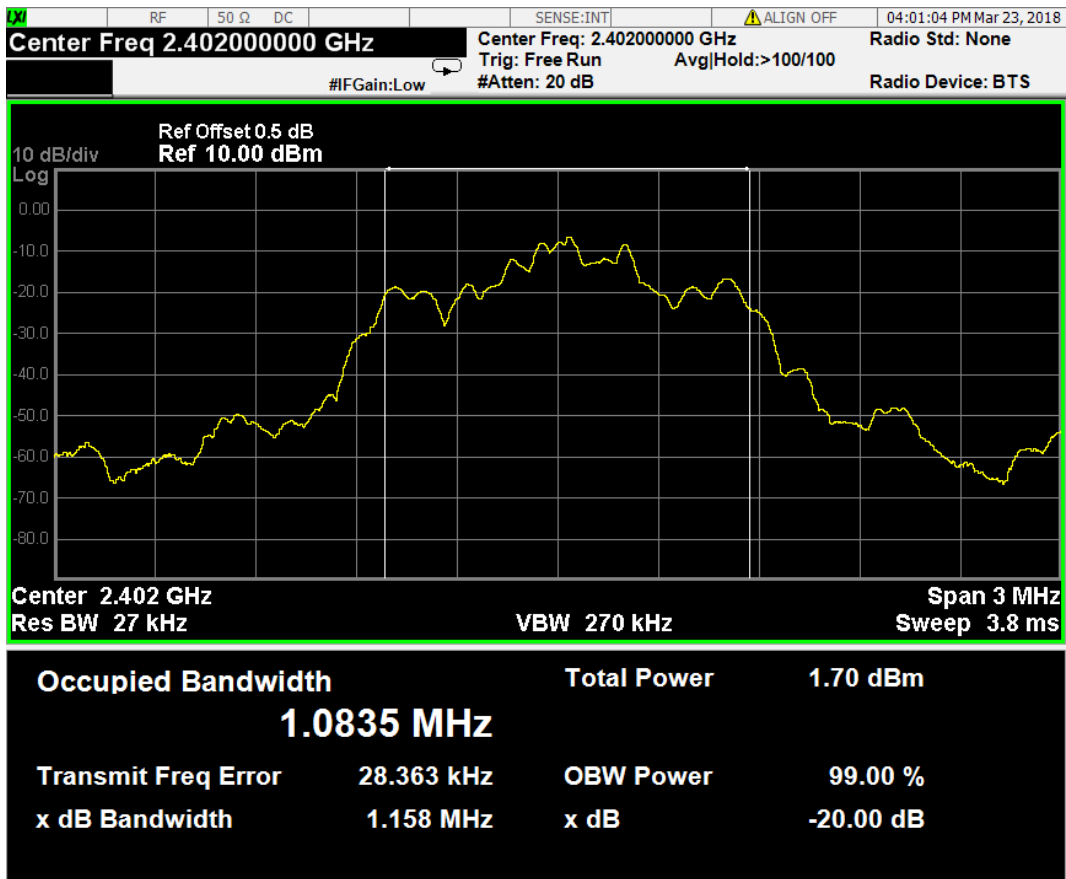
BT DH5: CH39 (2441 MHz)



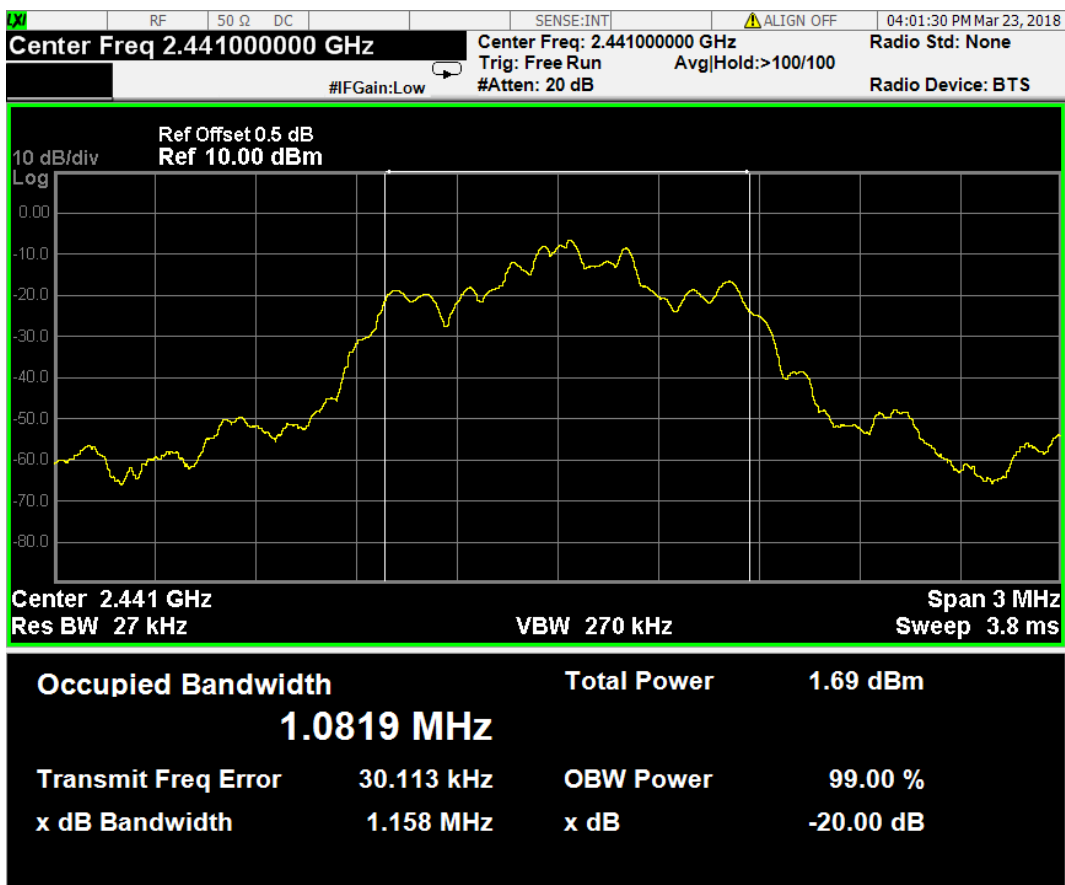
BT DH5: CH78 (2480 MHz)



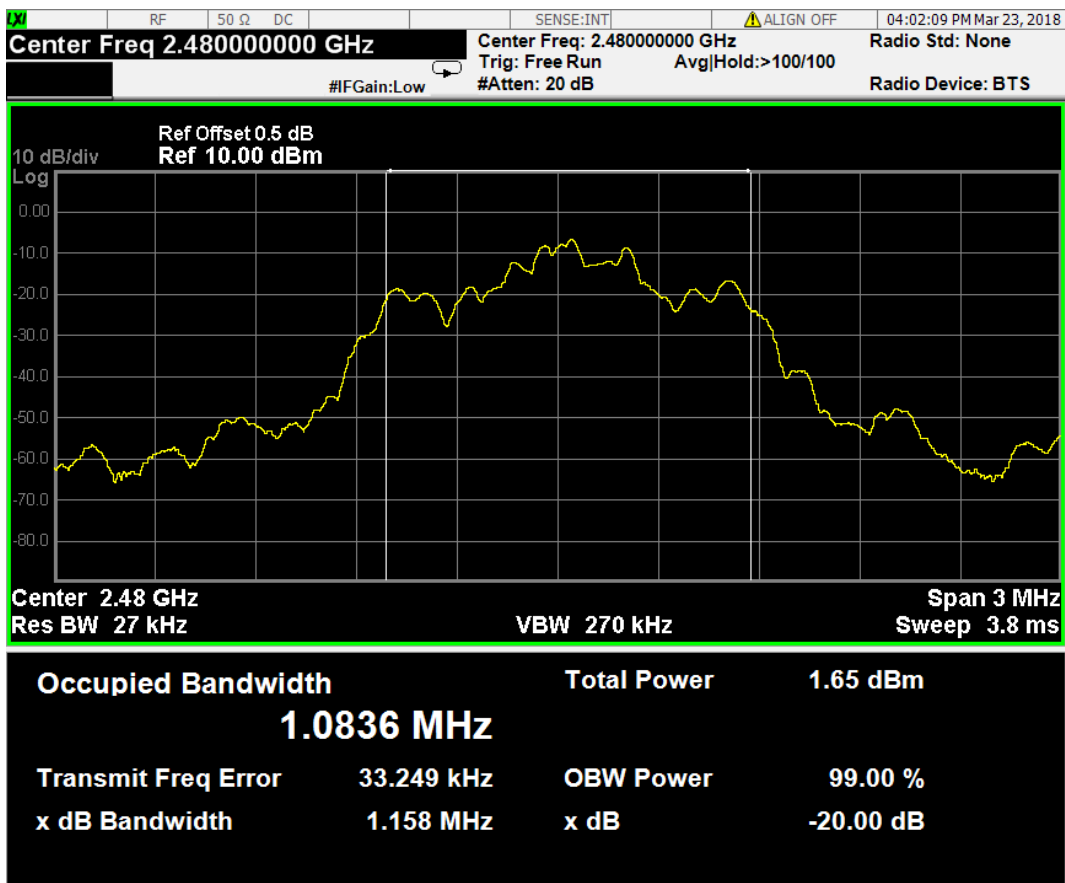
BT 3DH1: CH00 (2402 MHz)



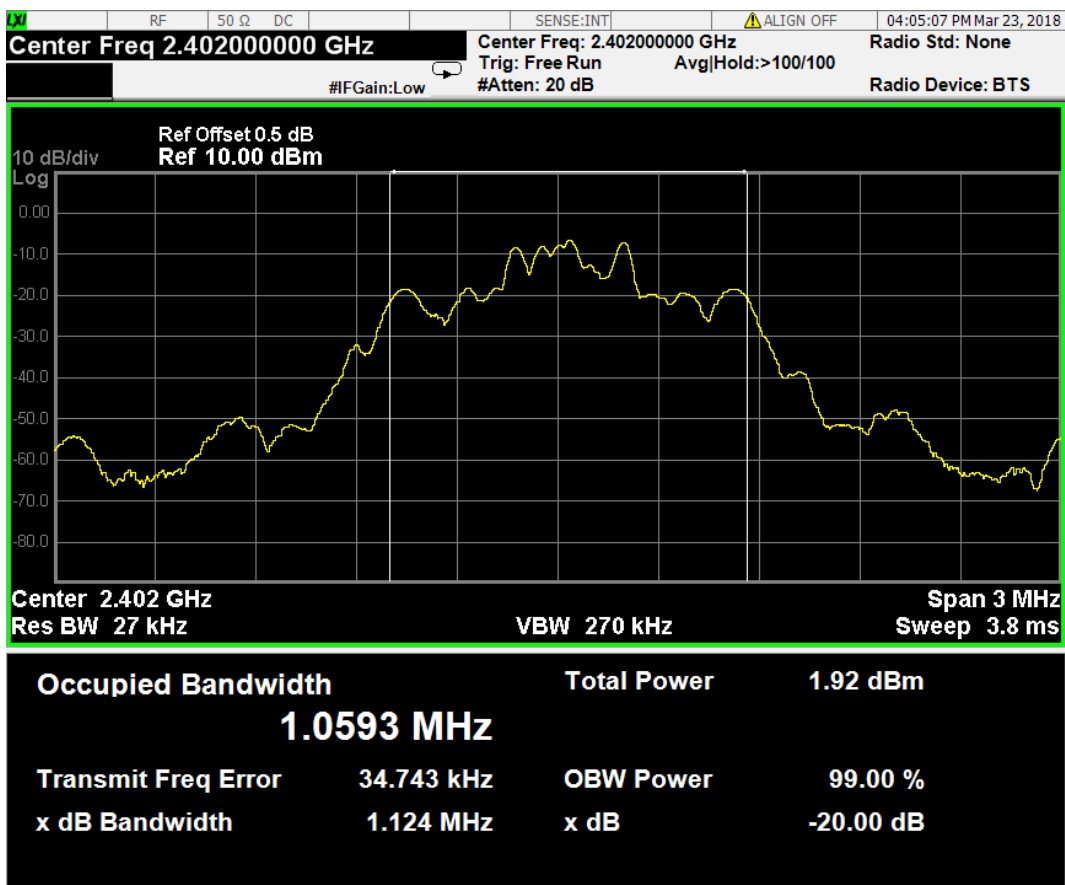
BT 3DH1: CH39 (2441 MHz)



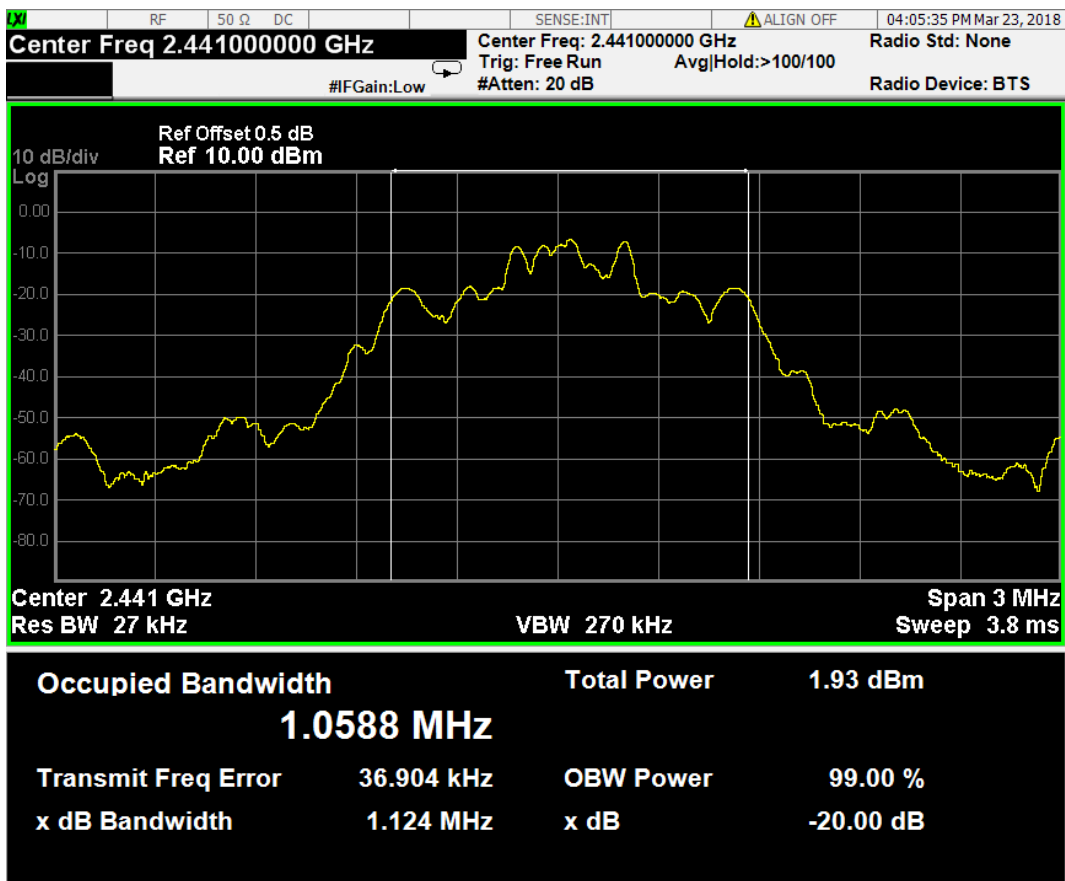
BT 3DH1: CH78 (2480 MHz)



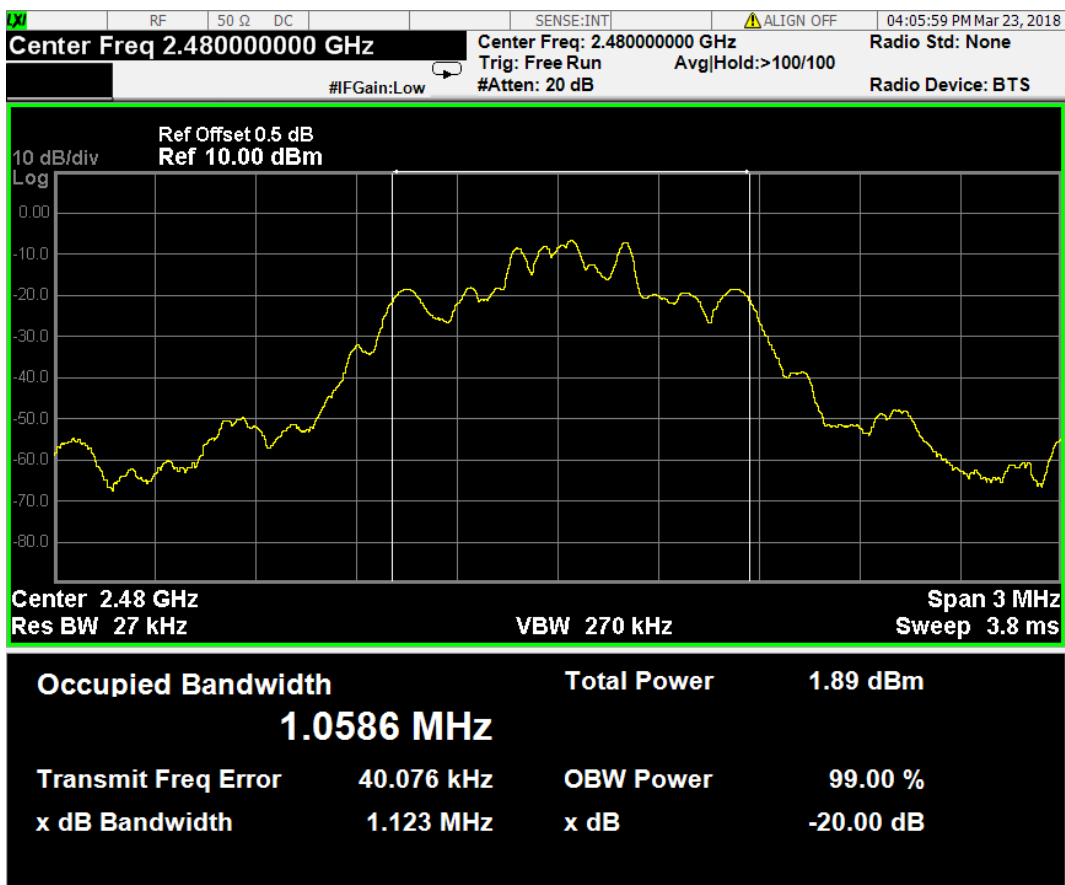
BT 3DH3: CH00 (2402 MHz)



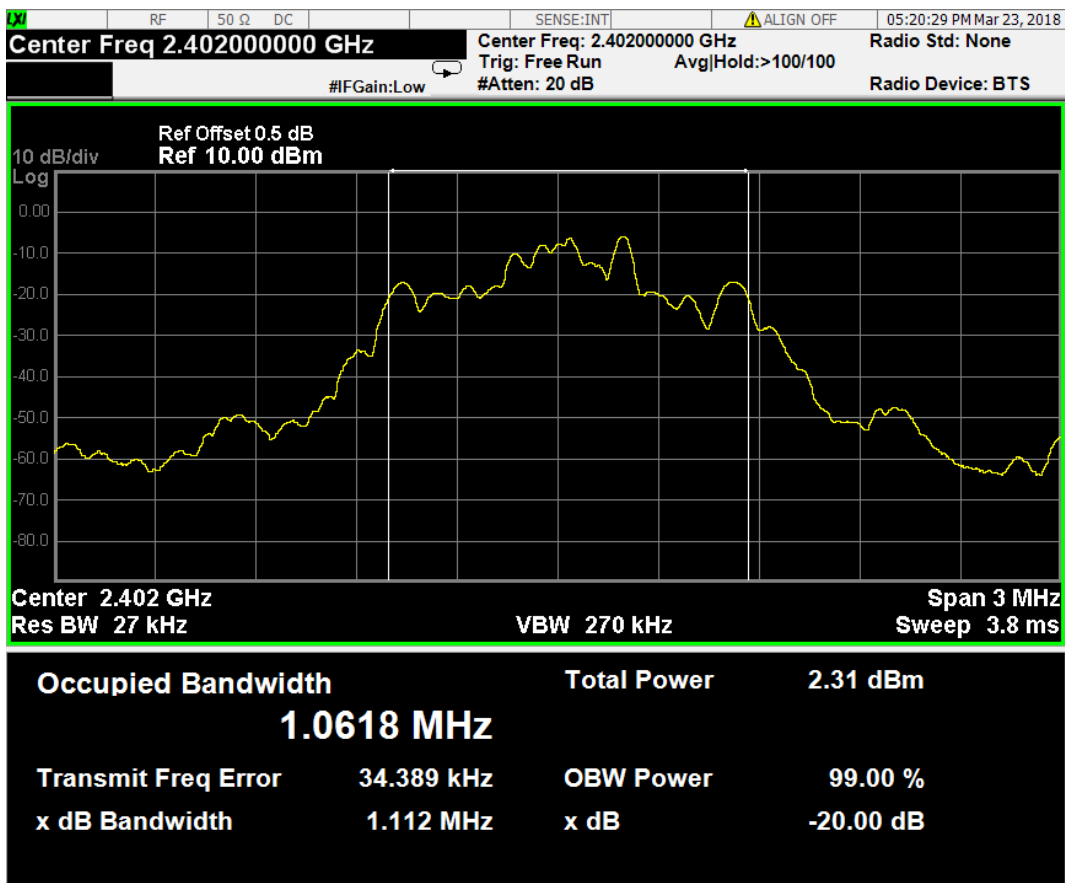
BT 3DH3: CH39 (2441 MHz)



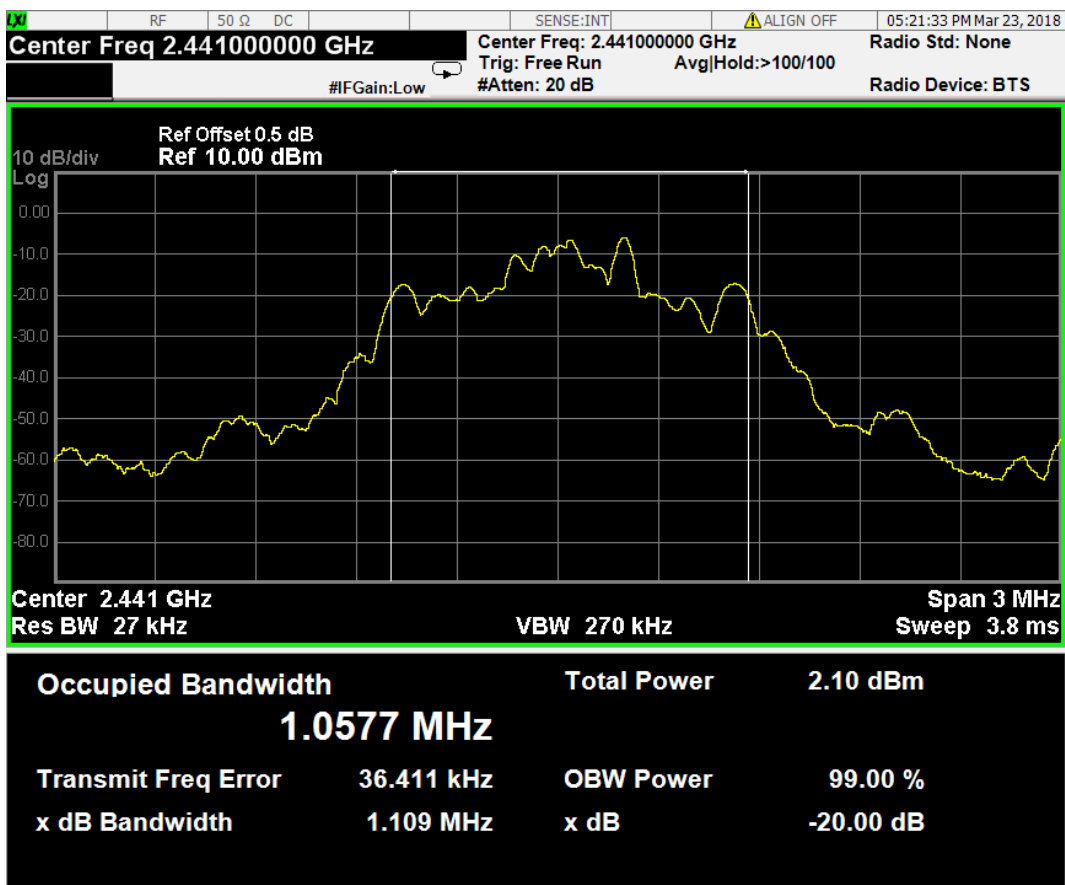
BT 3DH3: CH78 (2480 MHz)



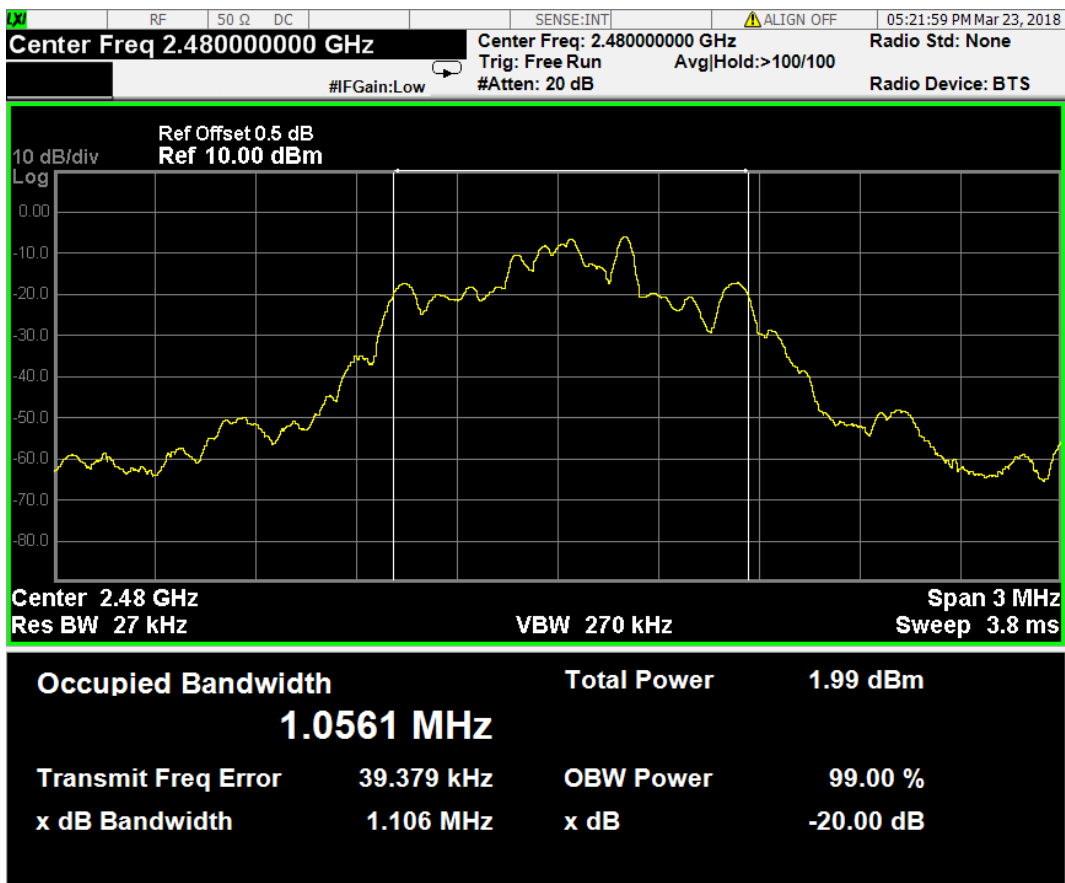
BT 3DH5: CH00 (2402 MHz)



BT 3DH5: CH39 (2441 MHz)



BT 3DH5: CH78 (2480 MHz)



6 CARRIER FREQUENCY SEPARATION

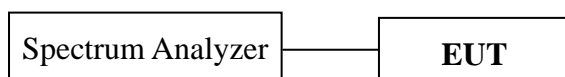
MEASUREMENT

6.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 12, 2017	Jun 11, 2018

6.2 Block Diagram of Test Setup



6.3 Specification Limits (§15.247(a)(1))

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

6.4 Operating Condition of EUT

The switch ON/OFF was used to enable the EUT to have its hopping function enabled.

6.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span = wide enough to capture the peaks of two adjacent channels
- b) RBW \geq 1% of the span
- c) VBW \geq RBW
- d) Sweep = auto
- e) Detector function = peak
- f) Trace = max hold
- g) Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Submit this plot.

The test procedure is defined in FCC Public Notice DA 00-705, Mar.2000 (the Procedure “Carrier Frequency Separation” was used).

6.6 Test Results

PASSED.

All the test results are attached in next pages.

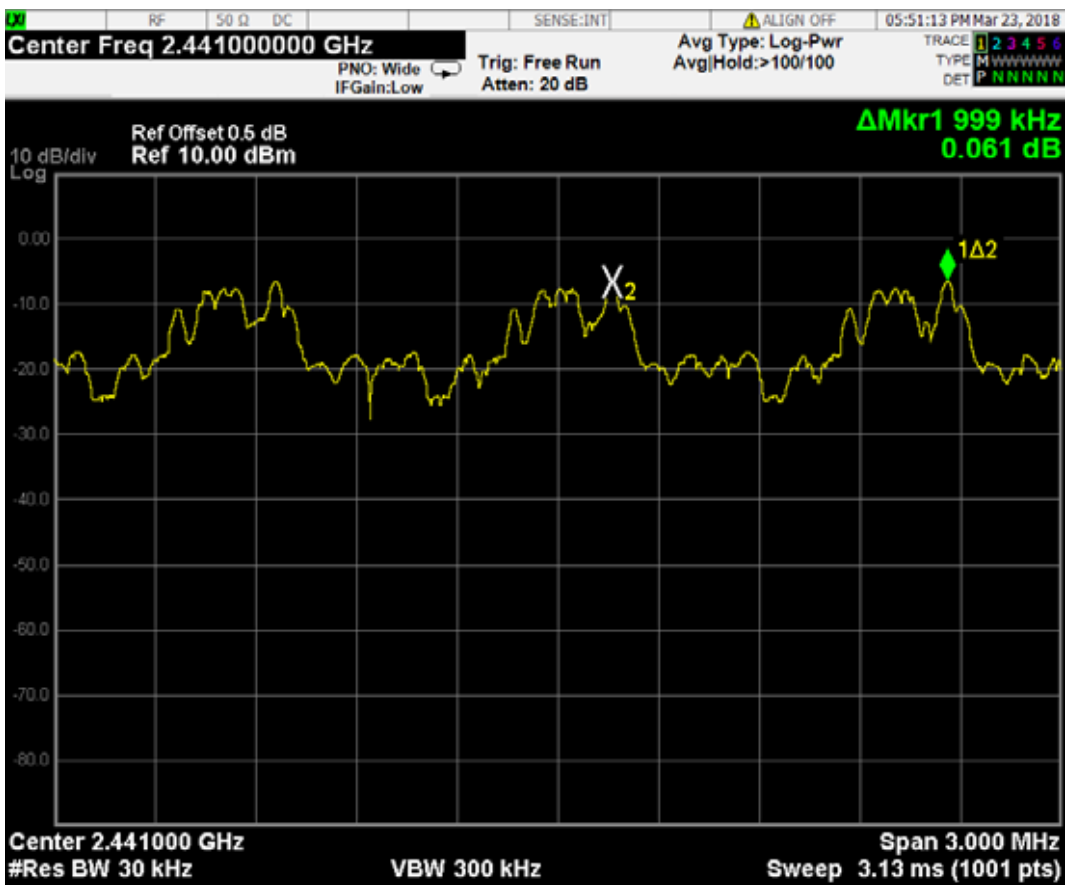
(Test Date: 2018.03.23 Temperature: 23 Humidity: 51 %)

Modulation	Channel	Frequency (MHz)	Separation (MHz)	2/3 20dB Bandwidth (MHz)
BT DH1	00	2402	1.002	0.765
	39	2441	0.999	0.765
	78	2480	0.999	0.764
BT DH3	00	2402	1.002	0.775
	39	2441	0.999	0.775
	78	2480	0.999	0.774
BT DH5	00	2402	1.002	0.775
	39	2441	0.999	0.775
	78	2480	0.999	0.775
BT 3DH1	00	2402	0.999	0.772
	39	2441	0.999	0.772
	78	2480	1.002	0.772
BT 3DH3	00	2402	0.999	0.749
	39	2441	1.002	0.749
	78	2480	0.999	0.749
BT 3DH5	00	2402	1.002	0.741
	39	2441	1.002	0.739
	78	2480	0.999	0.737

BT DH1: CH00 (2402 MHz)



BT DH1: CH39 (2441 MHz)



BT DH1: CH78 (2480 MHz)



BT DH3: CH00 (2402 MHz)



BT DH3: CH39 (2441 MHz)



BT DH3: CH78 (2480 MHz)



BT DH5: CH78 (2480 MHz)



BT 3DH1: CH00 (2402 MHz)



BT 3DH1: CH39 (2441 MHz)



BT 3DH1: CH78 (2480 MHz)



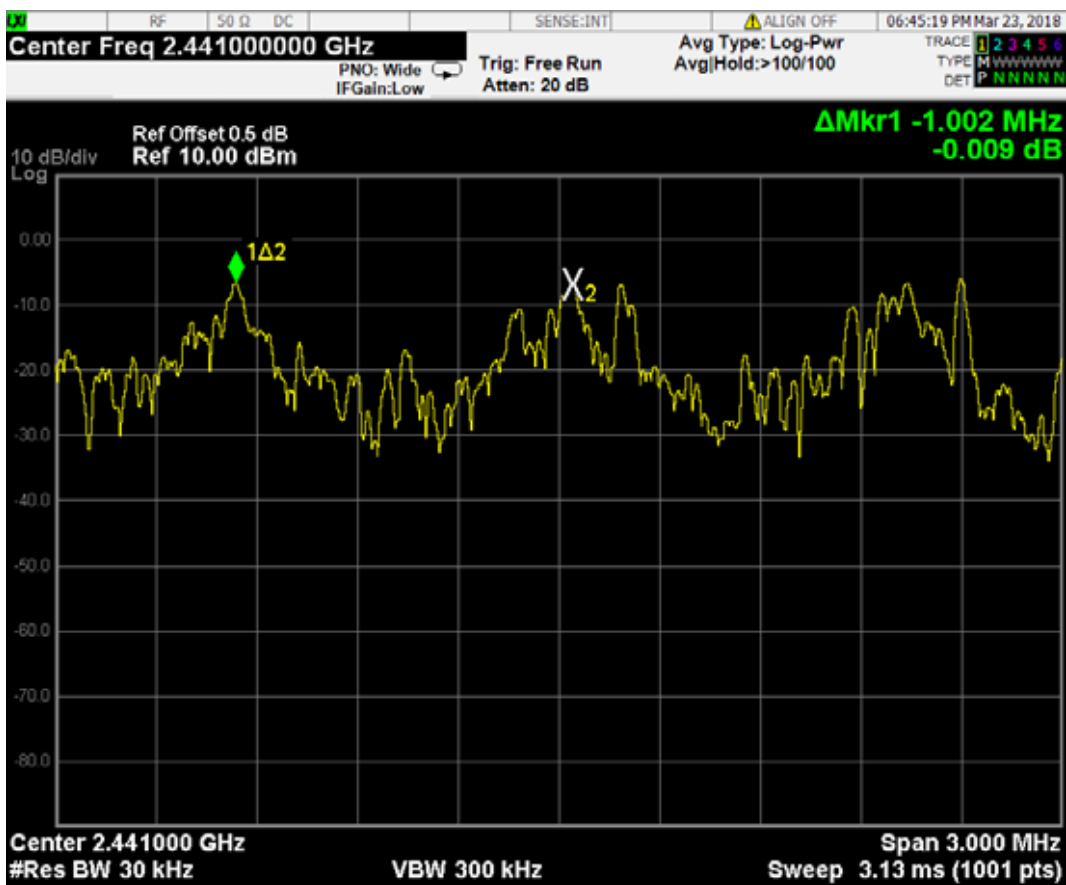
BT 3DH3: CH78 (2480 MHz)



BT 3DH5: CH00 (2402 MHz)



BT 3DH5: CH39 (2441 MHz)



BT 3DH5: CH78 (2480 MHz)



7 NUMBER OF HOPPING FREQUENCIES

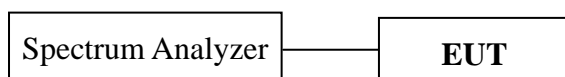
MEASUREMENT

7.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 12, 2017	Jun 11, 2018

7.2 Block Diagram of Test Setup



7.3 Specification Limits (§15.247(a)(1)(iii))

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

7.4 Operating Condition of EUT

The switch ON/OFF was used to enable the EUT to have its hopping function enabled.

7.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span = the frequency band of operation
- b) RBW \geq 1% of the span
- c) VBW \geq RBW
- d) Sweep = auto
- e) Detector function = peak
- f) Trace = max hold
- g) Allow the trace to stabilize. It may prove necessary to break the span up to sections, in order to clearly show all of the hopping frequencies. Submit this plot(s).

The test procedure is defined in FCC Public Notice DA 00-705, Mar.2000 (the Procedure “Number of Hopping Frequencies” was used).

7.6 Test Results

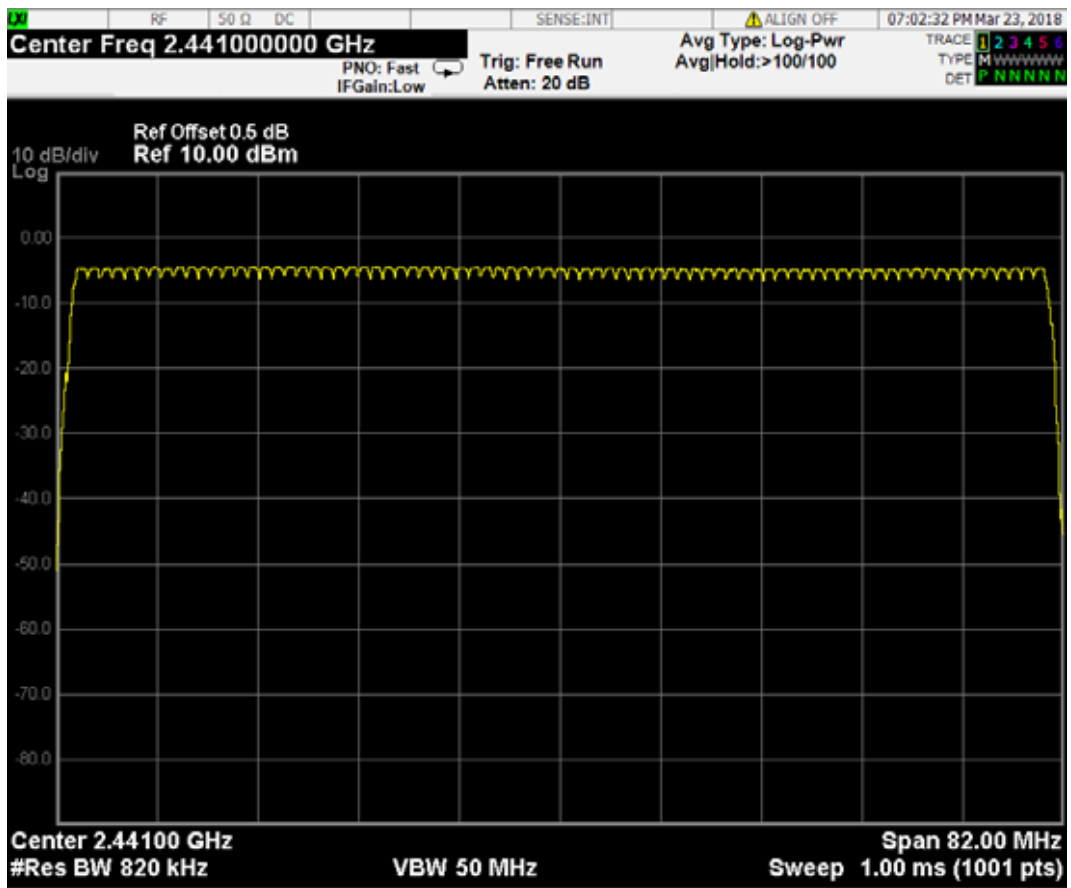
PASSED.

All the test results are attached in next pages.

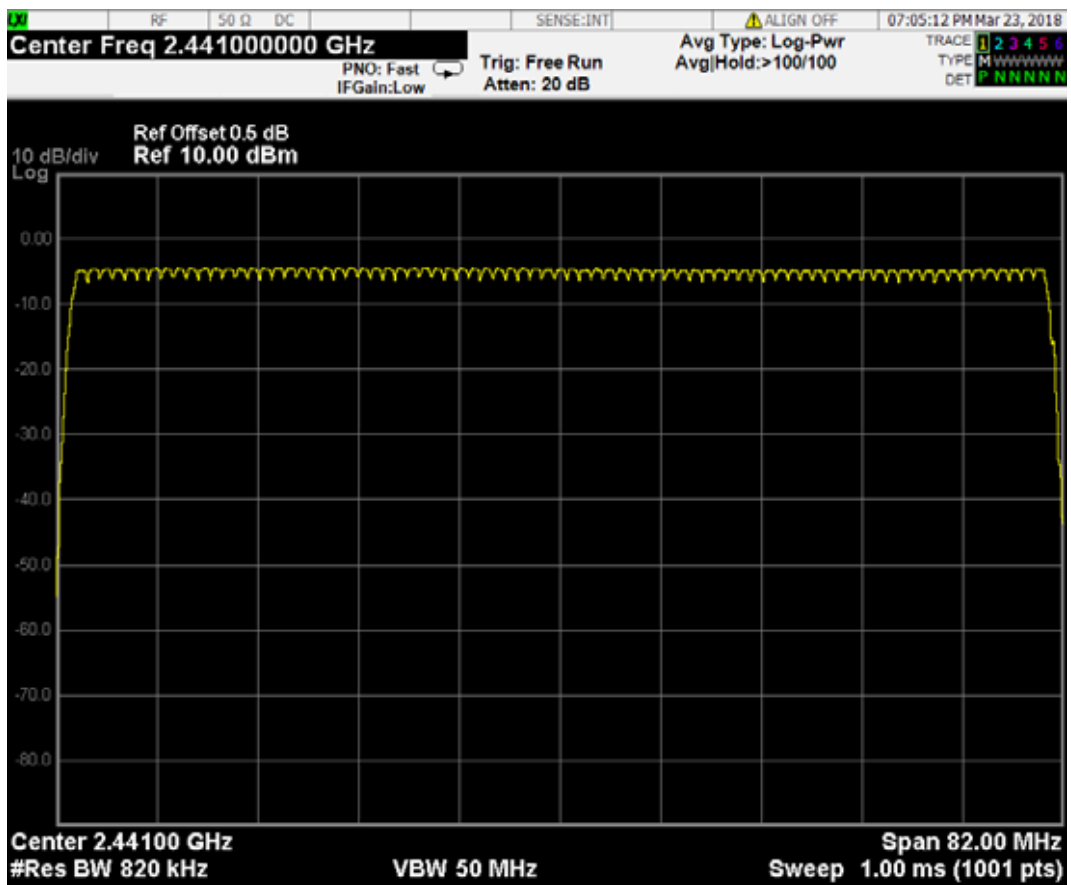
(Test Date: 2018.03.23 Temperature: 23 Humidity: 51 %)

Modulation	Number of Hopping Frequencies
BT DH1	79
BT DH3	79
BT DH5	79
BT 3DH1	79
BT 3DH3	79
BT 3DH5	79

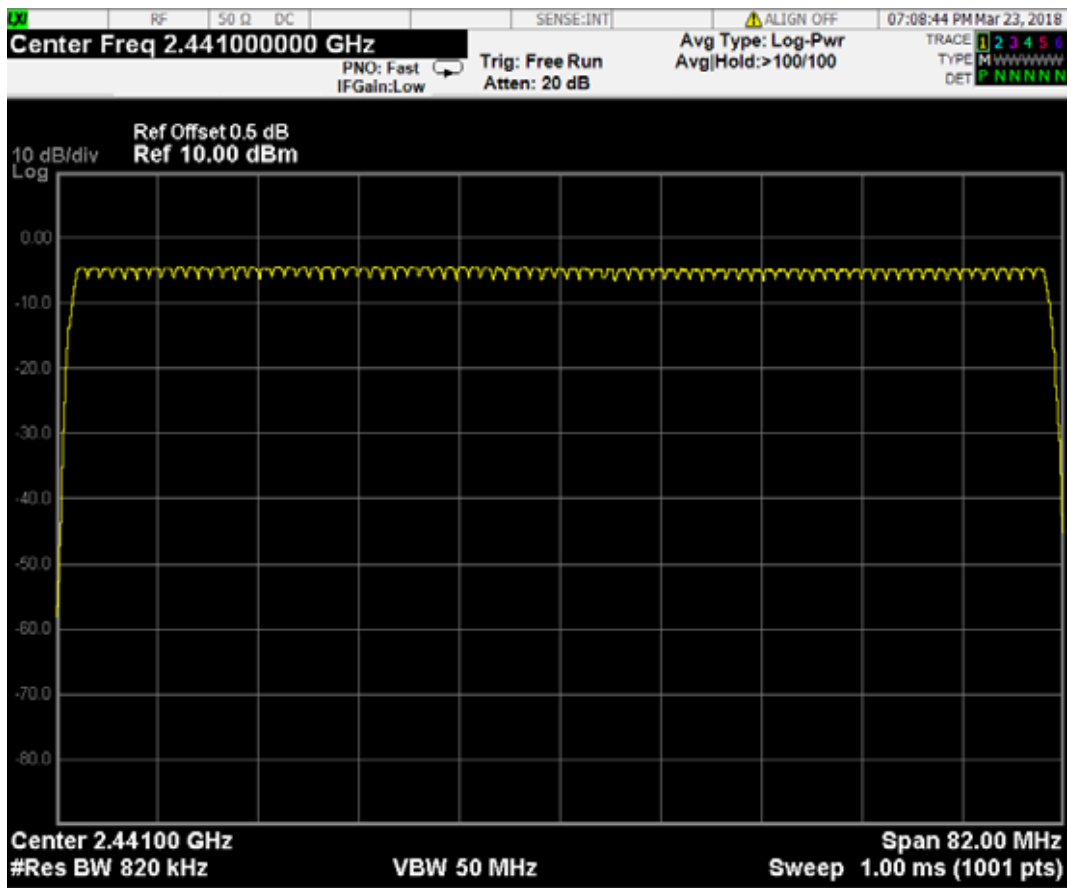
BT DH1



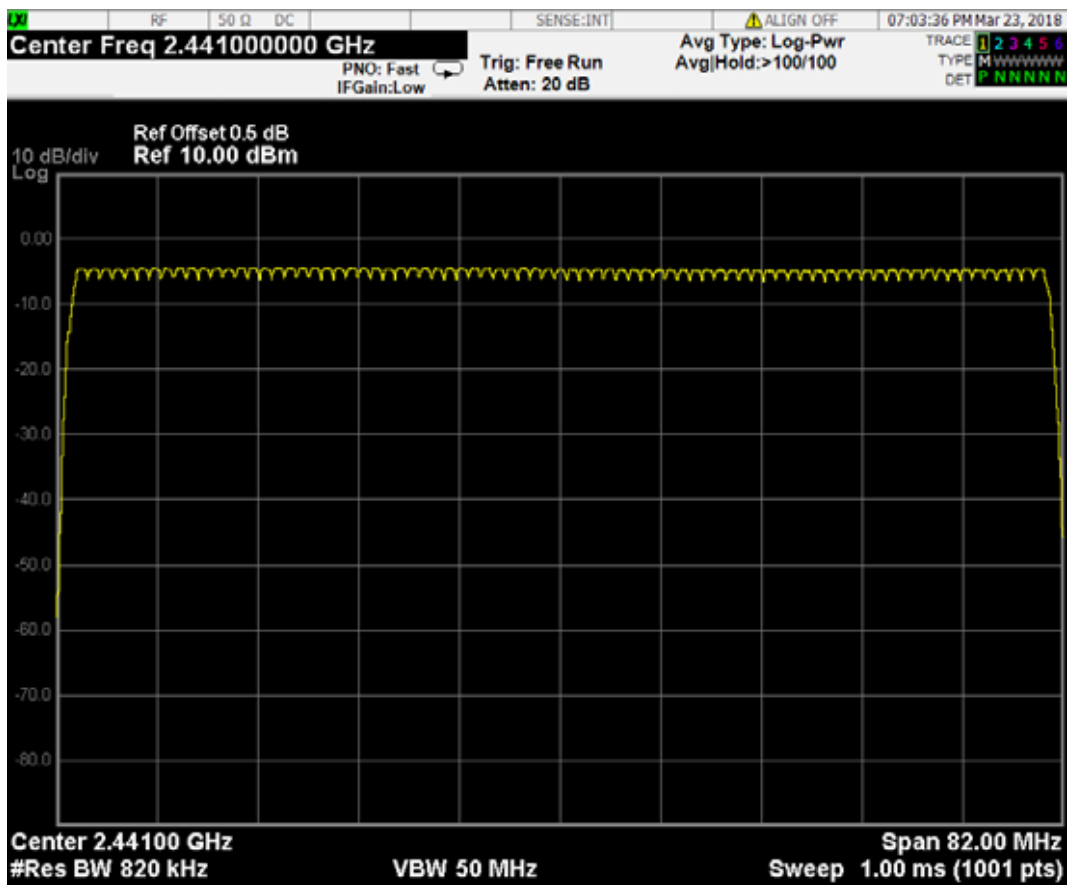
BT DH3



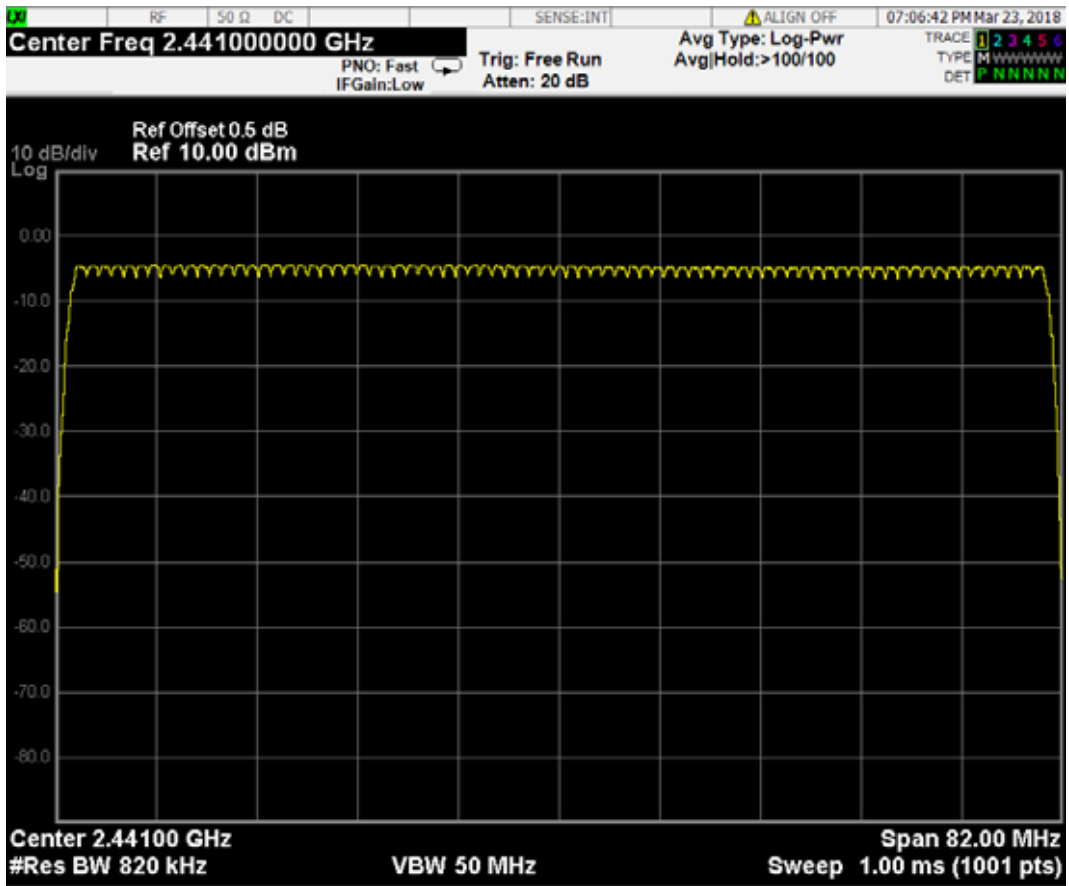
BT DH5



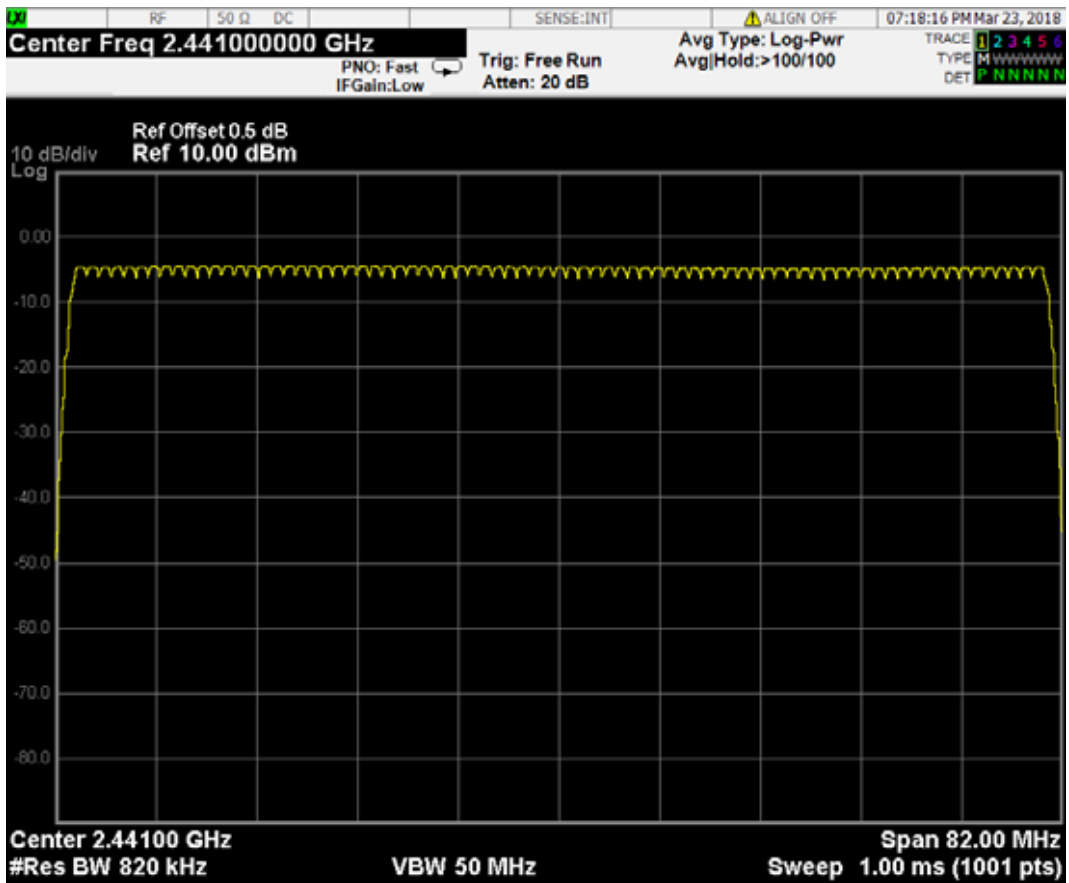
BT 3DH1



BT 3DH3



BT 3DH5



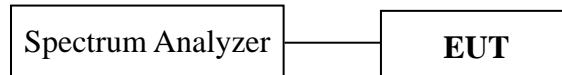
8 DWELL TIME MEASUREMENT

8.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 12, 2017	Jun 11, 2018

8.2 Block Diagram of Test Setup



8.3 Specification Limits (§15.247(a)(1)(iii))

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

8.4 Operating Condition of EUT

The switch ON/OFF was used to enable the EUT to have its hopping function enabled.

8.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span = zero span, centered on a hopping channel
- b) RBW = 1 MHz
- c) VBW \geq RBW
- d) Sweep = as necessary to capture the entire dwell time per hopping channel
- e) Detector function = peak
- f) Trace = max hold

The test procedure is defined in FCC Public Notice DA 00-705, Mar.2000 (the Procedure “Time of Occupancy (Dwell Time)” was used).