



FCC Test Report

Equipment : 802.11a/b/g/n/ac Wireless Access Point
Brand Name : CISCO
Model No. : MR53E-HW
FCC ID : UDX-60064010
Standard : 47 CFR FCC Part 15.247
Frequency : 2400 MHz – 2483.5 MHz
Function : ☒ Point-to-multipoint; ☐ Point-to-point
Applicant : Cisco Systems, Inc.
170 West Tasman Drive San Jose, CA 95134 USA
Manufacturer : Cisco Systems, Inc.
170 West Tasman Drive San Jose, CA 95134 USA

The product sample received on Jun. 16, 2017 and completely tested on Sep. 01, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.


Cliff Chang
SPORTON INTERNATIONAL INC.



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APPENDIX A. TEST PHOTOS

PHOTOGRAPHS OF EUT V02

Summary of Test Result

Conformance Test Specifications				
Report Clause	Ref. Std. Clause	Description	Limit	Result
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: >30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied



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FCC ID: UDX-60064010

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE	2402-2480	0-39 [40]

Band	Mode	BWch (MHz)	Nant
2.4G	BT-LE	1	1

Note:

- ♦ Bluetooth LE uses a GFSK (1Mbps) modulation for DSSS.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2, 3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Brand	Official Model Number	Antenna Type	Connector	Gain (dBi)
1	Cisco	MA-ANT-3-A	Dipole Antenna	I-PEX	Note
2	Cisco	MA-ANT-3-B	Dipole Antenna	I-PEX	
3	Cisco	MA-ANT-3-F	Patch Antenna	I-PEX	
4	Cisco	MA-ANT-3-E	Patch Antenna	I-PEX	
5	Cisco	MA-ANT-3-C	Omni Antenna	I-PEX	
6	Cisco	MA-ANT-3-D	Omni Antenna	I-PEX	

Note:

Radio 1 (2.4GHz)												
Set	Antenna Gain (dBi)				Cable Loss (dB)				True Gain (dBi)			
	Port 1	Port 2	Port 3	Port 4	Port 1 (175mm)	Port 2 (280mm)	Port 3 (285mm)	Port 4 (205mm)	Port 1	Port 2	Port 3	Port 4
1	5	5	5	5	0.77	0.93	0.92	0.75	4.23	4.07	4.08	4.25
2	3.7	3.7	3.7	3.7	0.77	0.93	0.92	0.75	2.93	2.77	2.78	2.95
3	11.55	11.55	11.55	11.55	0.77	0.93	0.92	0.75	10.78	10.62	10.63	10.8
4	6.7	6.7	6.7	6.7	0.77	0.93	0.92	0.75	5.93	5.77	5.78	5.95
5	5.1	5.1	5.1	5.1	0.77	0.93	0.92	0.75	4.33	4.17	4.18	4.35
6	3.16	3.16	3.16	3.16	0.77	0.93	0.92	0.75	2.39	2.23	2.24	2.41

Radio 2 (5GHz)												
Set	Antenna Gain (dBi)				Cable Loss (dB)				True Gain (dBi)			
	Port 1	Port 2	Port 3	Port 4	Port 1 (175mm)	Port 2 (280mm)	Port 3 (285mm)	Port 4 (205mm)	Port 1	Port 2	Port 3	Port 4
1	6.3	6.3	6.3	6.3	1.47	1.65	1.69	1.52	4.83	4.65	4.61	4.78
2	7.2	7.2	7.2	7.2	1.47	1.65	1.69	1.52	5.73	5.55	5.51	5.68
3	10.94	10.94	10.94	10.94	1.47	1.65	1.69	1.52	9.47	9.29	9.25	9.42
4	6.93	6.93	6.93	6.93	1.47	1.65	1.69	1.52	5.46	5.28	5.24	5.41
5	5.4	5.4	5.4	5.4	1.47	1.65	1.69	1.52	3.93	3.75	3.71	3.88
6	3.95	3.95	3.95	3.95	1.47	1.65	1.69	1.52	2.48	2.3	2.26	2.43

Radio 3 (2.4GHz + 5GHz)						
Set	Antenna Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
	Port 1		Port 1 (100mm)		Port 1	
	2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
1	5	6.3	0.54	0.83	4.46	5.47
2	3.7	7.2	0.54	0.83	3.16	6.37
3	11.55	10.94	0.54	0.83	11.01	10.11
4	6.7	6.93	0.54	0.83	6.16	6.1
5	5.1	5.4	0.54	0.83	4.56	4.57
6	3.16	3.95	0.54	0.83	2.62	3.12

Radio 4 (Bluetooth)			
Set	Antenna Gain (dBi)	Cable Loss (dB)	True Gain (dBi)
	Port 1	Port 1 (100mm)	Port 1
1	5	0.53	4.47
2	3.7	0.53	3.17
3	11.55	0.53	11.02
4	6.7	0.53	6.17
5	5.1	0.53	4.57
6	3.16	0.53	2.63



Correlated Composite Gain(dBi) for Radio 1 and Radio 2						
Set	Frequency (MHz)	4T1S Composite Gain(dBi)	4T2S Composite Gain(dBi)	Cable Loss (dB)	4T1S True Gain (dBi)	4T2S True Gain (dBi)
1	2.4GHz	6.47	3.48	0	6.47	3.48
3	2.4GHz	12.73	9.72	0.75	11.98	8.97
	5GHz Band 1	11.74	8.80	1.47	10.27	7.33
	5GHz Band 2	11.87	8.86	1.47	10.4	7.39
	5GHz Band 3	11.19	8.18	1.47	9.72	6.71
	5GHz Band 4	12.57	9.85	1.47	11.1	8.38
	80+80	-	-	-	-	8.38
4	2.4GHz	9.37	6.47	0.75	8.62	5.72
	5GHz Band 1	10.11	7.1	1.47	8.64	5.63
	5GHz Band 2	10.8	7.81	1.47	9.33	6.34
	5GHz Band 3	11.2	8.21	1.47	9.73	6.74
	5GHz Band 4	10.17	7.23	1.47	8.7	5.76
	80+80	-	-	-	-	6.74
5	2.4GHz	7.41	4.42	0.75	6.66	3.67
	5GHz Band 1	9.55	6.54	1.47	8.08	5.07
	5GHz Band 2	9.71	6.7	1.47	8.24	5.23
	5GHz Band 3	9.67	6.68	1.47	8.2	5.21
	5GHz Band 4	8.89	6.09	1.47	7.42	4.62
	80+80	-	-	-	-	5.23
6	2.4GHz	4.07	1.33	0.75	3.32	0.58
	5GHz Band 1	5.6	2.72	1.47	4.13	1.25
	5GHz Band 2	5.5	2.57	1.47	4.03	1.1
	5GHz Band 3	5.42	2.43	1.47	3.95	0.96
	5GHz Band 4	6.8	3.87	1.47	5.33	2.4
	80+80	-	-	-	-	2.4

Directional Gain (dBi) for Radio 2		
Set	4T1S	4T2S
2	11.64	8.63

Note: The EUT has six sets of antennas, and each set contains six antennas.

The EUT has four radios, Radio 1 supports WLAN 2.4GHz, Radio 2 supports WLAN 5GHz, Radio 3 supports WLAN 2.4GHz + 5GHz (scanning radio) and Radio 4 supports Bluetooth function.

Set 1 and Set 2 antennas are the same type antennas; only the higher gain antennas Set 1 for 2.4GHz, Set 2 for 5GHz were tested.

< Radio 1 (2.4GHz Functions) >

For 4TX/4RX:

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting/receive antennas.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

< Radio 2 (5GHz Functions) >

For 4TX/4RX:

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting/receive antennas.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

<For Radio 3 / 2.4GHz + 5GHz Functions>

Only Port 1 can be use as transmitting/receiving antenna.

<For Radio 4 / Bluetooth Functions>

Only Port 1 can be use as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
BT-LE(1Mbps)	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE
----------------	---------------------------

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 558074 D01 v04

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.	TEL : 886-3-327-3456	FAX : 886-3-318-0055
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.	TEL : 886-3-656-9065	FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Eddie Weng	22°C / 54%	Jul. 25, 2017
Radiated below 1GHz	03CH01-CB	Mars Lin & Joy Tseng & Paul Chen	22°C / 54%	Jul. 27, 2017
Radiated above 1GHz	03CH01-CB	Mars Lin & Joy Tseng & Paul Chen	22°C / 54%	Jun. 19, 2017 ~ Sep. 01, 2017
AC Conduction	CO01-CB	GN Hou	21°C / 62%	Jul. 20, 2017

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74 x10 ⁻⁸	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

For set 1 antenna

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	Default
2442MHz	Default
2480MHz	Default

For set 3 antenna

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	Default
2442MHz	Default
2480MHz	Default

For set 4 antenna

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	Default
2442MHz	Default
2480MHz	Default

For set 5 antenna

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	Default
2442MHz	Default
2480MHz	Default

For set 6 antenna

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	Default
2442MHz	Default
2480MHz	Default

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests					
Test Item	Antenna	Test Condition	Mode	Data Rate	TX No.
AC power-line conducted emissions	Set 3	AC power-line conducted measurement for line and neutral	CTX	-	1TX
DTS Bandwidth	Set 1 Set 3 Set 4 Set 5 Set 6	Conducted measurement at transmit chains	GFSK	1 Mbps	1TX
Maximum Conducted Output Power	Set 1 Set 3 Set 4 Set 5 Set 6	Conducted measurement at transmit chains	GFSK	1 Mbps	1TX
Power Spectral Density	Set 1 Set 3 Set 4 Set 5 Set 6	Conducted measurement at transmit chains	GFSK	1 Mbps	1TX
Emissions in Non-restricted Frequency Bands	Set 1 Set 3 Set 4 Set 5 Set 6	Conducted measurement at transmit chains	GFSK	1 Mbps	1TX
Emissions in Restricted Frequency Bands < 1GHz	Set 3	Radiated measurement	CTX	-	1TX
Emissions in Restricted Frequency Bands > 1GHz (Harmonic) (see the Note)	Set 3 Set 6	Radiated measurement	GFSK	1 Mbps	1TX
Emissions in Restricted Frequency Bands > 1GHz (Band Edge Emission)	Set 1 Set 3 Set 4 Set 5 Set 6	Radiated measurement	GFSK	1 Mbps	1TX
Note: 1.For Emissions in Restricted Frequency Bands > 1GHz (Harmonic) used higher gain and lowest gain antenna set collocate with maximum power setting to evaluated.					

The following test modes were performed all tests:

For Conducted Emission test:

Mode 1. CTX-Radio 1 (2.4G) + Adapter + set 3

Mode 2. CTX-Radio 2 (5G) + Adapter + set 3

Mode 3. CTX-Radio 3 (2.4G) + Adapter + set 3

Mode 4. CTX-Radio 3 (5G) + Adapter + set 3

Mode 5. CTX-Radio 4 (BT) + Adapter + set 3

Mode 4 is the worst case, so it was selected to record in this test report.

For Radiated Emission test below 1GHz:

The EUT was performed at X axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found for Radio 1 / Radio 2 / Radio 3 (5GHz) / Radio 4 at X axis and for Radio 3 (2.4GHz) at Z axis.

So the measurement will follow this same test configuration.

Mode 1. CTX- EUT in X axis Radio 1 (2.4G) + Adapter + set 3

Mode 2. CTX- EUT in X axis Radio 2 (5G) + Adapter + set 3

Mode 3. CTX- EUT in Z axis Radio 3 (2.4G) + Adapter + set 3

Mode 4. CTX- EUT in X axis Radio 3 (5G) + Adapter + set 3

Mode 5. CTX- EUT in X axis Radio 4 (BT) + Adapter + set 3

Mode 2 is the worst case, so it was selected to record in this test report.

For Radiated Emission test above 1GHz:

The EUT was performed at X axis and Z axis position for Radiated emission test, and the worst case was found for Radio 4 at X axis.

Mode 1. EUT in X axis (Radio 4, 1TX) with Dipole antenna (Set 1)

Mode 2. EUT in X axis (Radio 4, 1TX) with Patch antenna (Set 3)

Mode 3. EUT in X axis (Radio 4, 1TX) with Patch antenna (Set 4)

Mode 4. EUT in X axis (Radio 4, 1TX) with Omni antenna (Set 5)

Mode 5. EUT in X axis (Radio 4, 1TX) with Omni antenna (Set 6)

For Co-location MPE Test:

Mode 1. Radio 1 (2.4G) + Radio 2 (5G) + Radio 3 (2.4G)+ Radio 4 (BT) + Adapter

Mode 2. Radio 1 (2.4G) + Radio 2 (5G) + Radio 3 (5G)+ Radio 4 (BT) + Adapter

The Co-location Maximum Permissible Exposure result, please refer to FA760624

Note: The Adapter and PoE are for measurement only, would not be marketed.

Adapter and PoE information as below:

Power	Brand	Model
Adapter	CISCO	KSAS0361200250HU
PoE	CISCO	MA-INJ4
PoE	CISCO	MA-INJ5

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Wall-mounted rack*1

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	DoC
2	Adapter	CISCO	KSAS0361200250HU	DoC

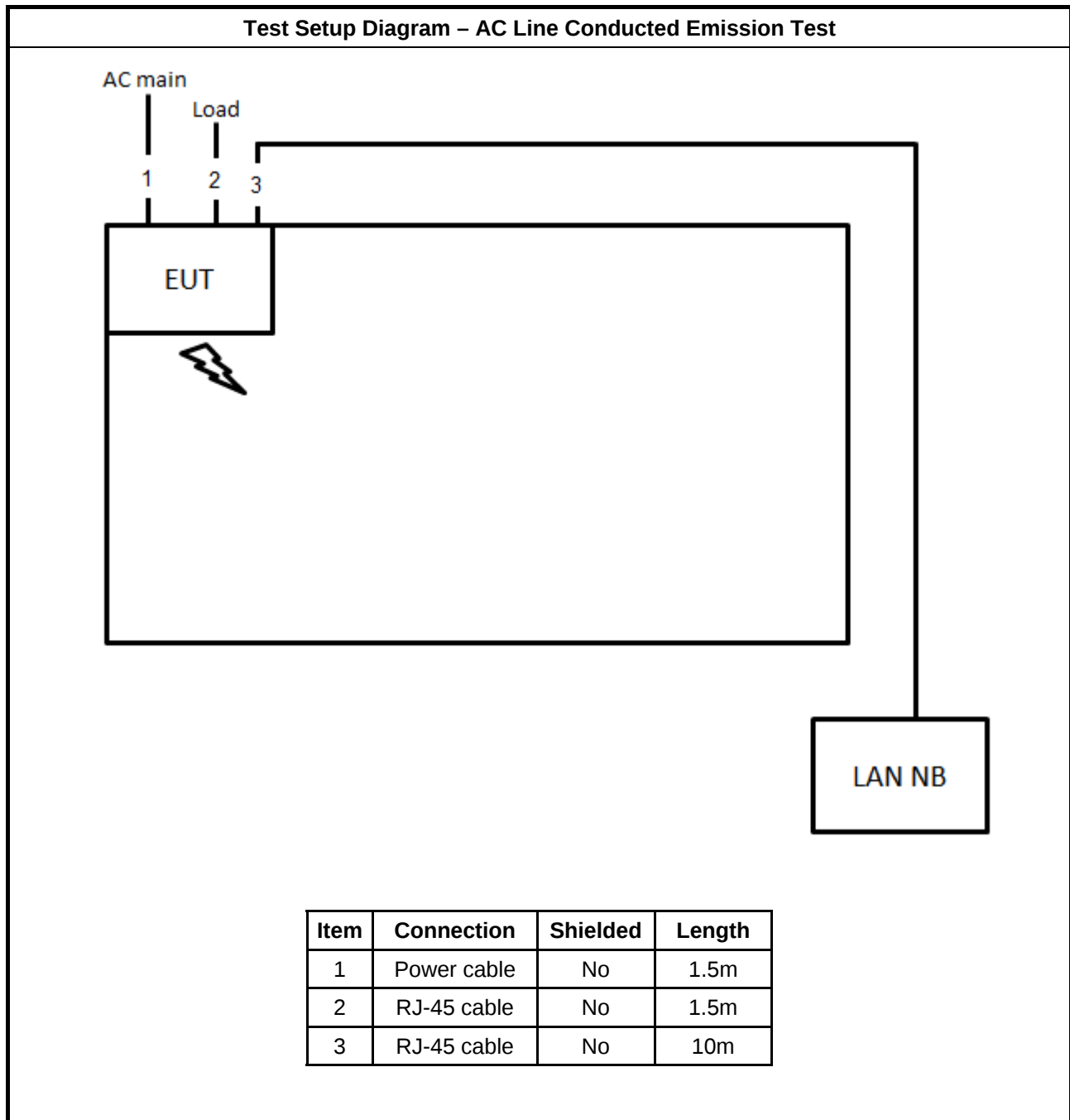
For Test Site No: 03CH01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	Adapter	CISCO	KSAS0361200250HU	DoC

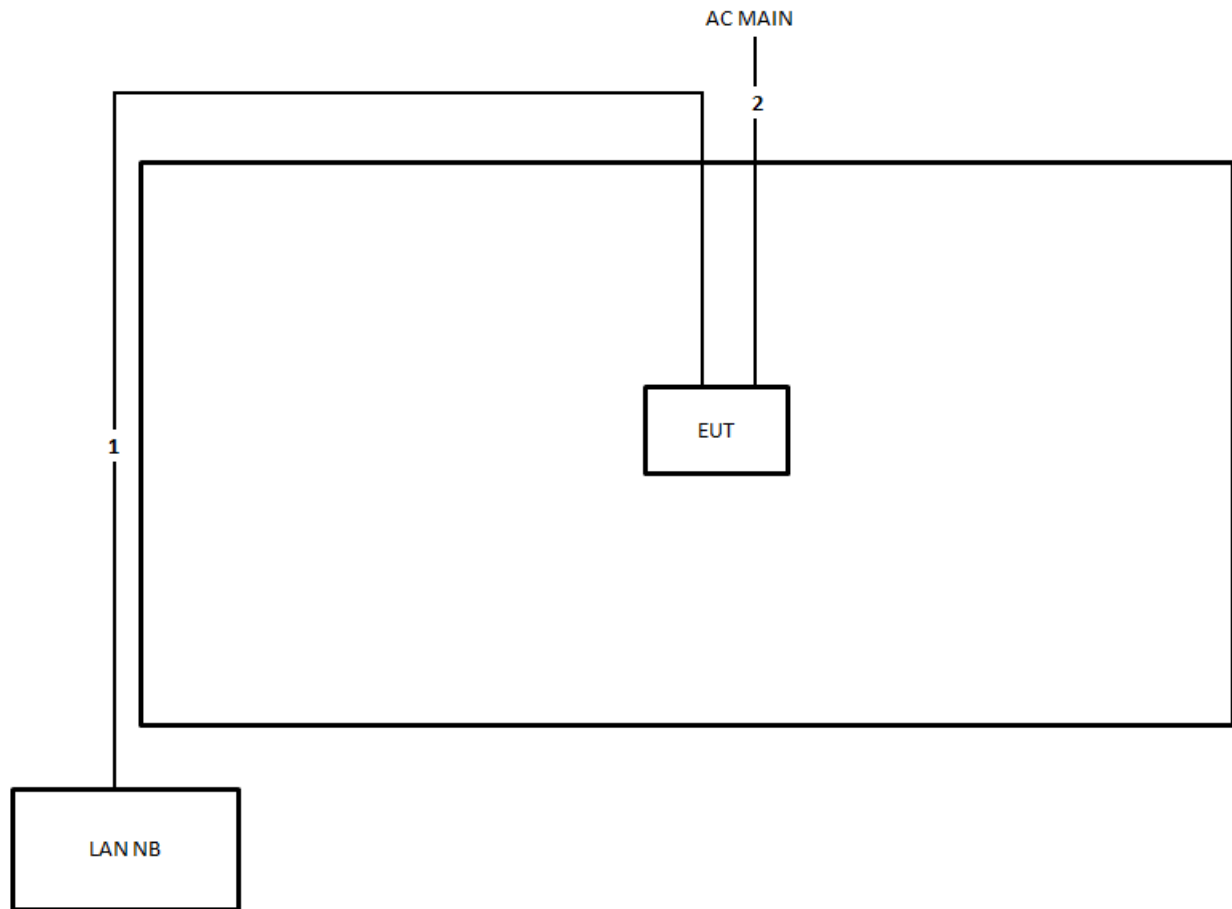
For Test Site No: TH01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	Adapter	CISCO	KSAS0361200250HU	DoC

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.5m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

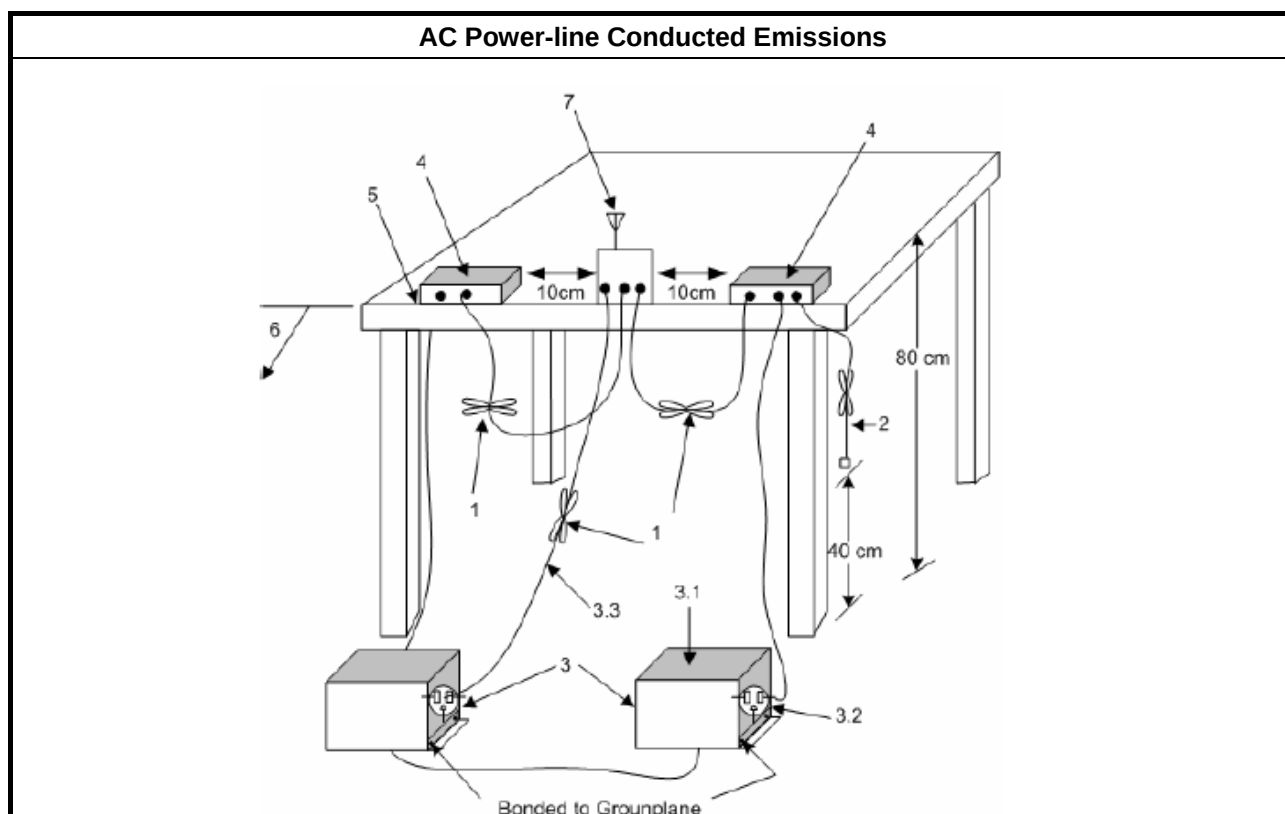
3.1.2 Measuring Instruments

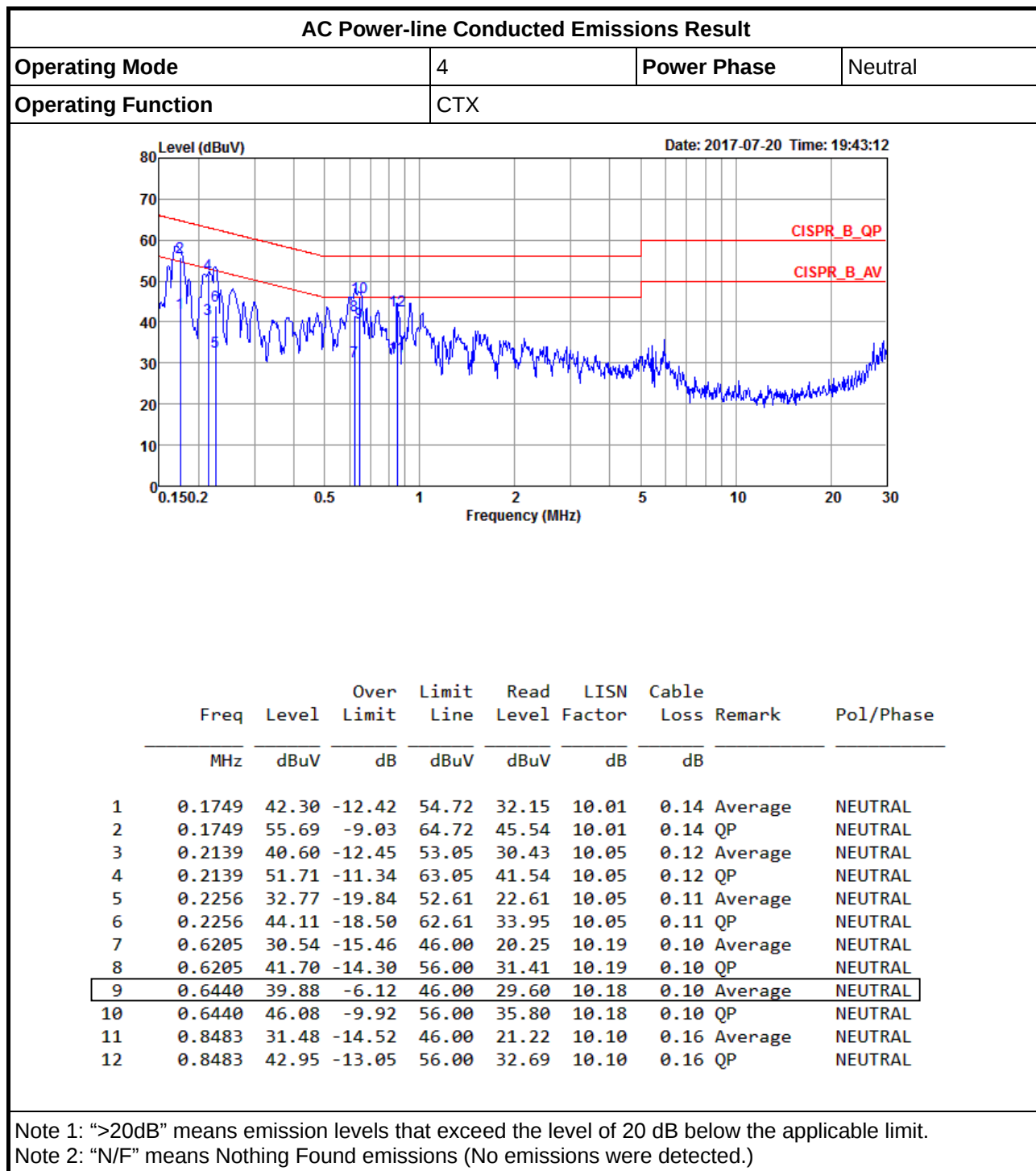
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

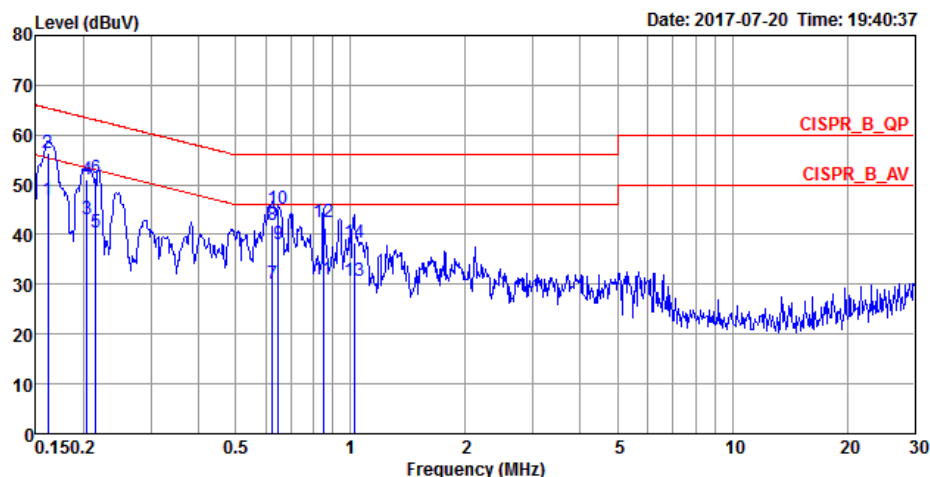
3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions


AC Power-line Conducted Emissions Result

Operating Mode	4	Power Phase	Line
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1616	46.91	-8.47	55.38	36.76	10.00	0.15	Average	LINE
2	0.1616	56.42	-8.96	65.38	46.27	10.00	0.15	QP	LINE
3	0.2040	43.16	-10.29	53.45	33.11	9.92	0.13	Average	LINE
4	0.2040	50.99	-12.46	63.45	40.94	9.92	0.13	QP	LINE
5	0.2152	40.31	-12.69	53.00	30.27	9.92	0.12	Average	LINE
6	0.2152	51.32	-11.68	63.00	41.28	9.92	0.12	QP	LINE
7	0.6238	30.10	-15.90	46.00	20.05	9.95	0.10	Average	LINE
8	0.6238	42.05	-13.95	56.00	32.00	9.95	0.10	QP	LINE
9	0.6474	38.06	-7.94	46.00	28.01	9.95	0.10	Average	LINE
10	0.6474	45.05	-10.95	56.00	35.00	9.95	0.10	QP	LINE
11	0.8483	31.07	-14.93	46.00	20.95	9.96	0.16	Average	LINE
12	0.8483	42.43	-13.57	56.00	32.31	9.96	0.16	QP	LINE
13	1.0211	30.57	-15.43	46.00	20.42	9.96	0.19	Average	LINE
14	1.0211	38.48	-17.52	56.00	28.33	9.96	0.19	QP	LINE

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
▪	6 dB bandwidth $\geq$ 500 kHz.

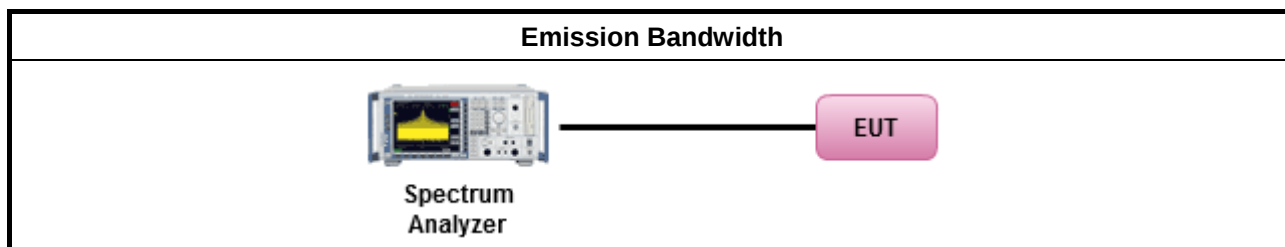
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
☐	Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

For set 1 antenna

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-	-
2.4-2.4835GHz	728.75k	1.069M	1M07F1D	697.5k	1.051M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	697.5k	1.052M
2442MHz	Pass	500k	706.25k	1.051M
2480MHz	Pass	500k	728.75k	1.069M

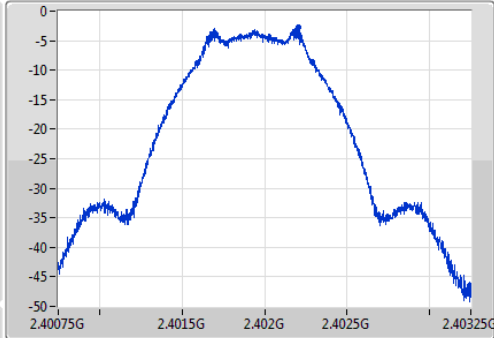
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

BT-LE(1Mbps)

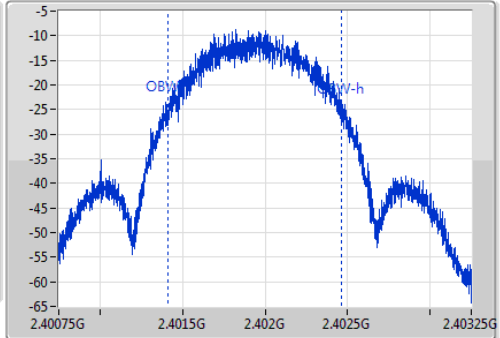
EBW

2402MHz

Ch Freq
2.402GHz
Span
2.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Ch Freq
2.402GHz
Span
2.5MHz
RBW
20kHz
VBW
100kHz
Sweep Time
100ms
Detector Type
Sample



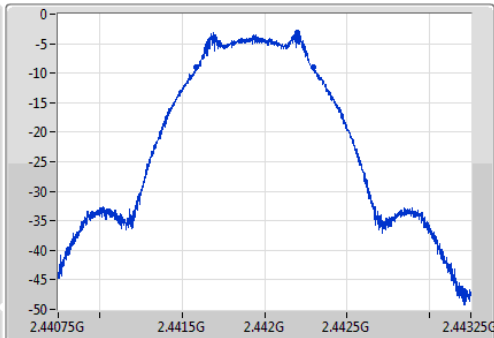
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
697.5k	2.401593G	2.40229G	1.052M	2.401413G	2.402465G	500k	1

BT-LE(1Mbps)

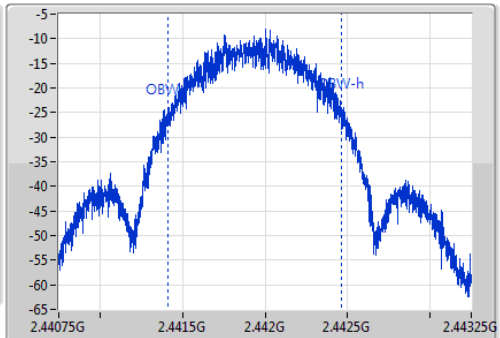
EBW

2442MHz

Ch Freq
2.442GHz
Span
2.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Ch Freq
2.442GHz
Span
2.5MHz
RBW
20kHz
VBW
100kHz
Sweep Time
100ms
Detector Type
Sample



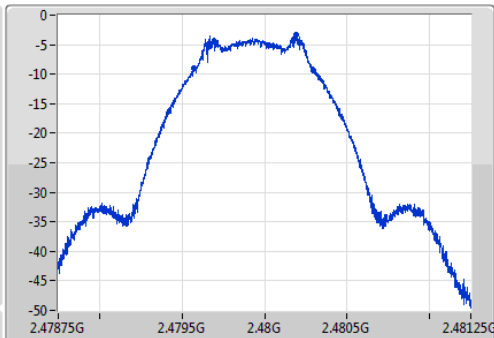
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
706.25k	2.441586G	2.442293G	1.051M	2.441414G	2.442465G	500k	1

BT-LE(1Mbps)

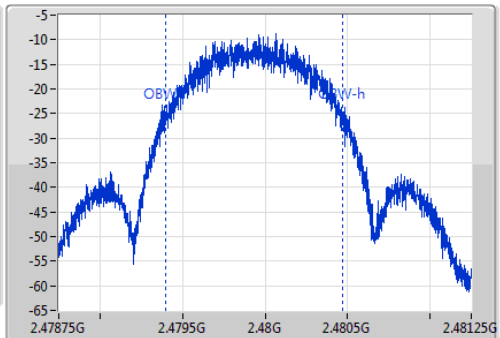
EBW

2480MHz

Ch Freq
2.48GHz
Span
2.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Ch Freq
2.48GHz
Span
2.5MHz
RBW
20kHz
VBW
100kHz
Sweep Time
100ms
Detector Type
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
728.75k	2.47957G	2.480299G	1.069M	2.4794G	2.48047G	500k	1

For set 3 antenna
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-	-
2.4-2.4835GHz	728.75k	1.069M	1M07F1D	697.5k	1.051M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

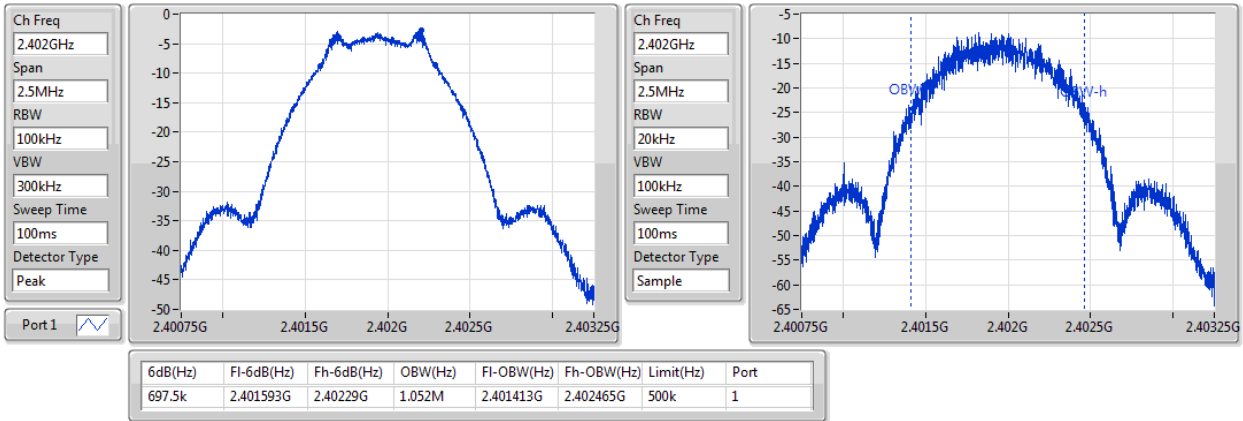
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	697.5k	1.052M
2442MHz	Pass	500k	706.25k	1.051M
2480MHz	Pass	500k	728.75k	1.069M

Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

BT-LE(1Mbps)

EBW

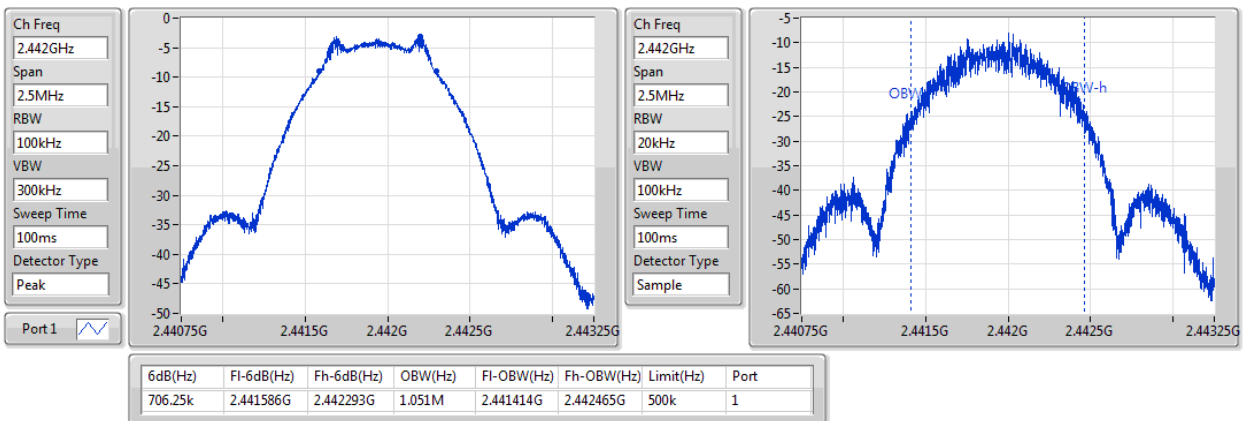
2402MHz



BT-LE(1Mbps)

EBW

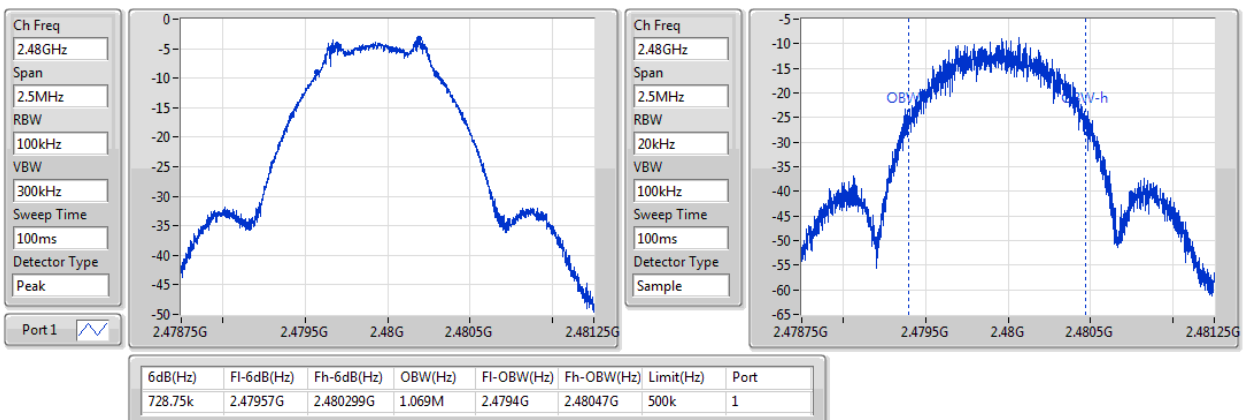
2442MHz



BT-LE(1Mbps)

EBW

2480MHz



For set 4 antenna
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-	-
2.4-2.4835GHz	728.75k	1.069M	1M07F1D	697.5k	1.051M

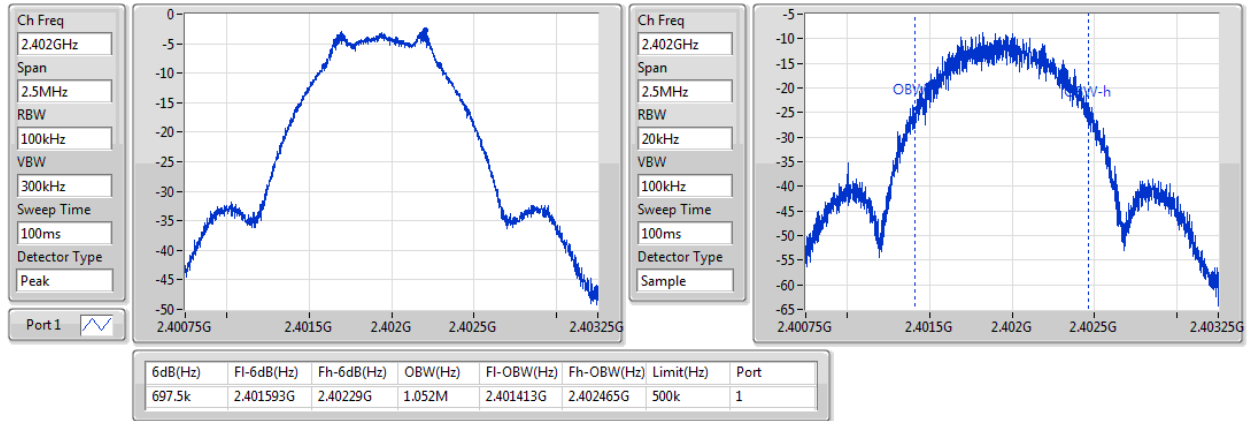
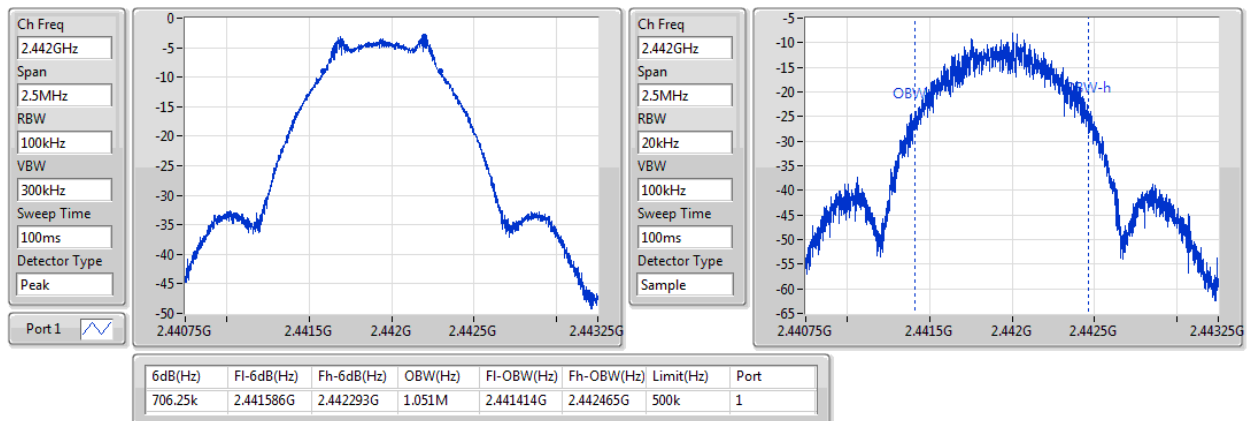
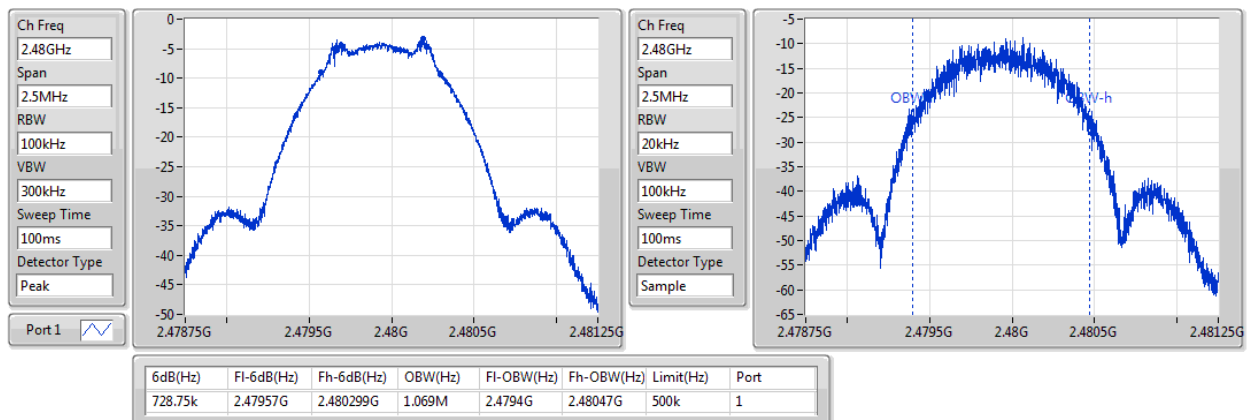
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	697.5k	1.052M
2442MHz	Pass	500k	706.25k	1.051M
2480MHz	Pass	500k	728.75k	1.069M

Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

BT-LE(1Mbps)
EBW
2402MHz

BT-LE(1Mbps)
EBW
2442MHz

BT-LE(1Mbps)
EBW
2480MHz


**For set 5 antenna****Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-	-
2.4-2.4835GHz	728.75k	1.069M	1M07F1D	697.5k	1.051M

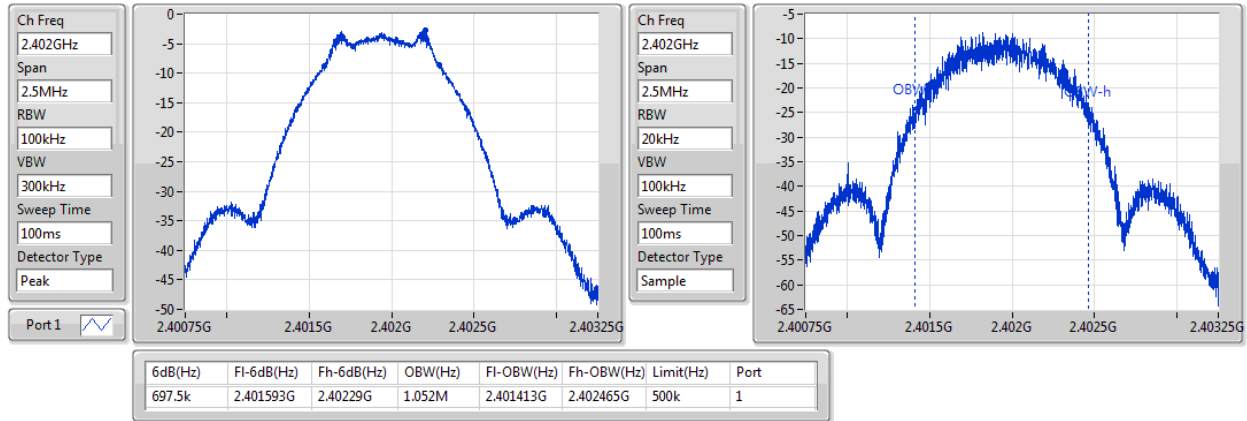
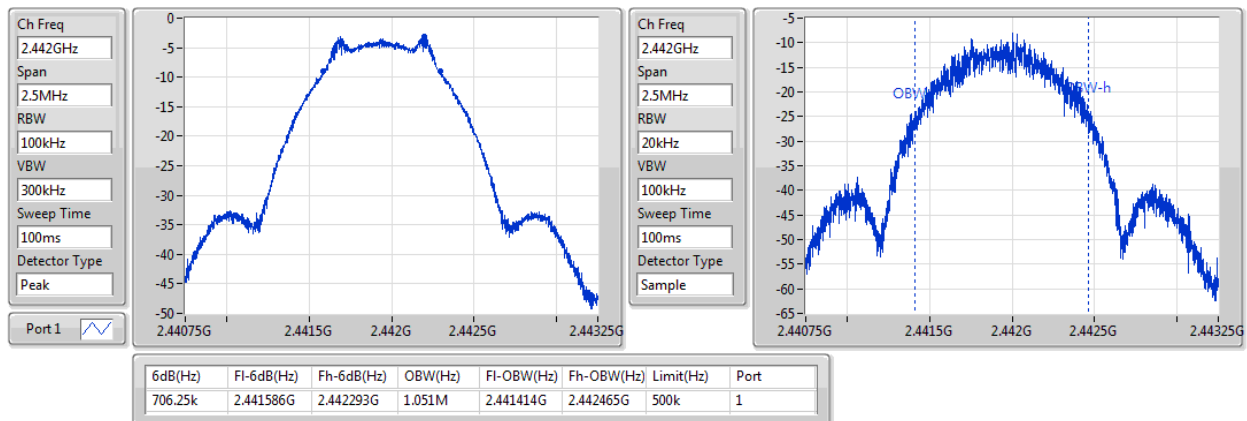
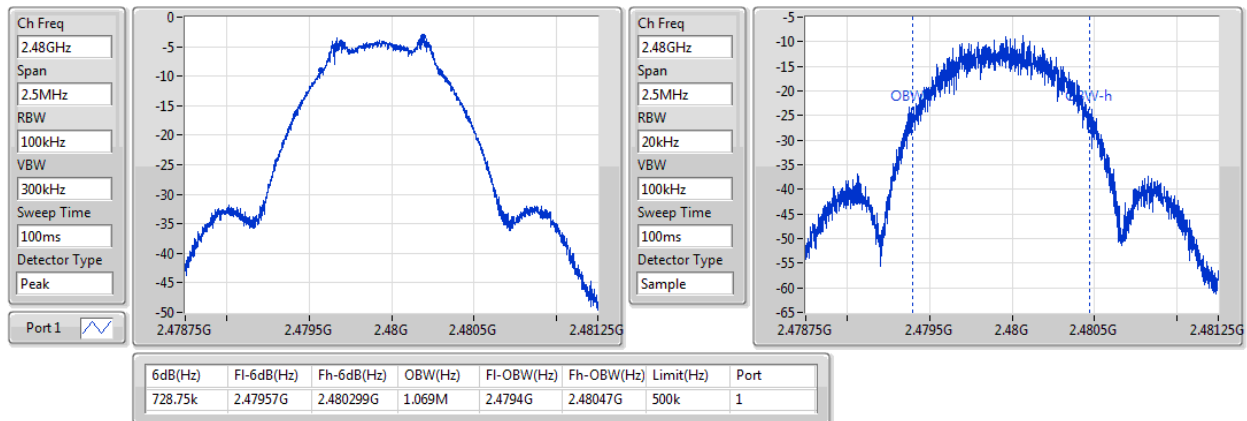
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	697.5k	1.052M
2442MHz	Pass	500k	706.25k	1.051M
2480MHz	Pass	500k	728.75k	1.069M

Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

BT-LE(1Mbps)
EBW
2402MHz

BT-LE(1Mbps)
EBW
2442MHz

BT-LE(1Mbps)
EBW
2480MHz


**For set 6 antenna****Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-	-
2.4-2.4835GHz	728.75k	1.069M	1M07F1D	697.5k	1.051M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;**Min-N dB** = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	697.5k	1.052M
2442MHz	Pass	500k	706.25k	1.051M
2480MHz	Pass	500k	728.75k	1.069M

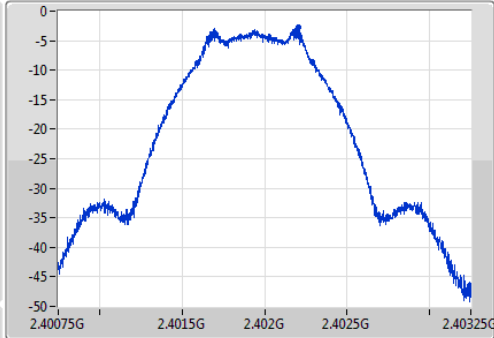
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

BT-LE(1Mbps)

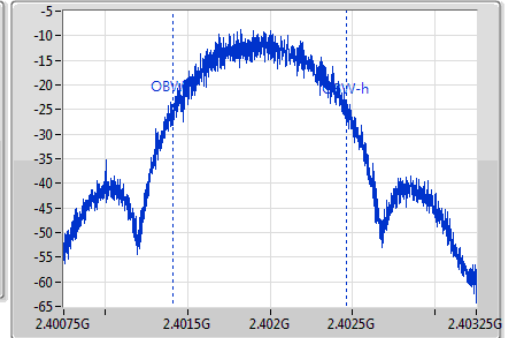
EBW

2402MHz

Ch Freq
2.402GHz
Span
2.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Ch Freq
2.402GHz
Span
2.5MHz
RBW
20kHz
VBW
100kHz
Sweep Time
100ms
Detector Type
Sample



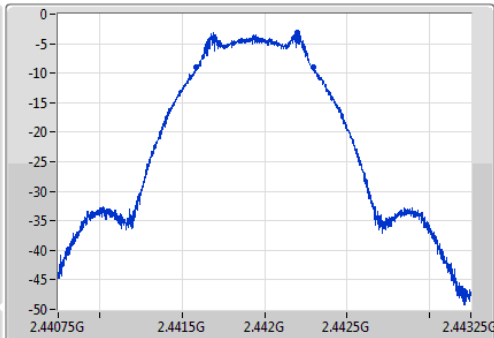
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
697.5k	2.401593G	2.40229G	1.052M	2.401413G	2.402465G	500k	1

BT-LE(1Mbps)

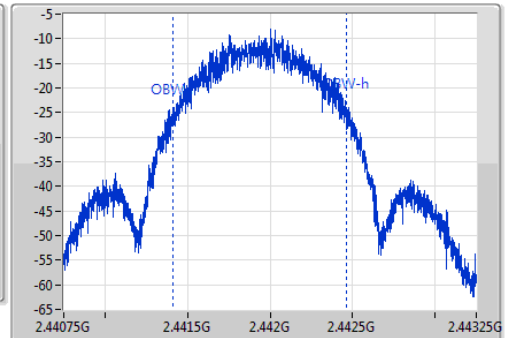
EBW

2442MHz

Ch Freq
2.442GHz
Span
2.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Ch Freq
2.442GHz
Span
2.5MHz
RBW
20kHz
VBW
100kHz
Sweep Time
100ms
Detector Type
Sample



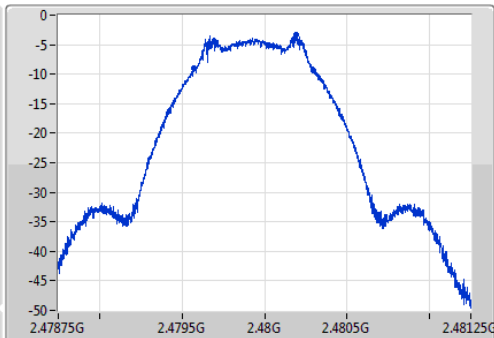
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
706.25k	2.441586G	2.442293G	1.051M	2.441414G	2.442465G	500k	1

BT-LE(1Mbps)

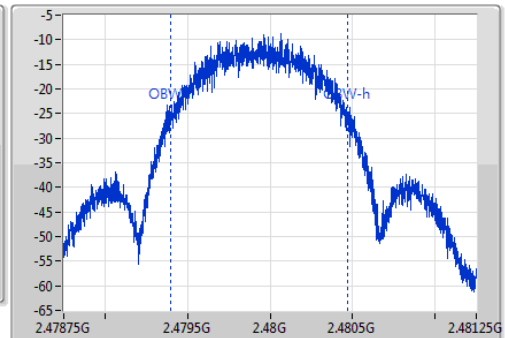
EBW

2480MHz

Ch Freq
2.48GHz
Span
2.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Ch Freq
2.48GHz
Span
2.5MHz
RBW
20kHz
VBW
100kHz
Sweep Time
100ms
Detector Type
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
728.75k	2.47957G	2.480299G	1.069M	2.4794G	2.48047G	500k	1

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	▪ Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

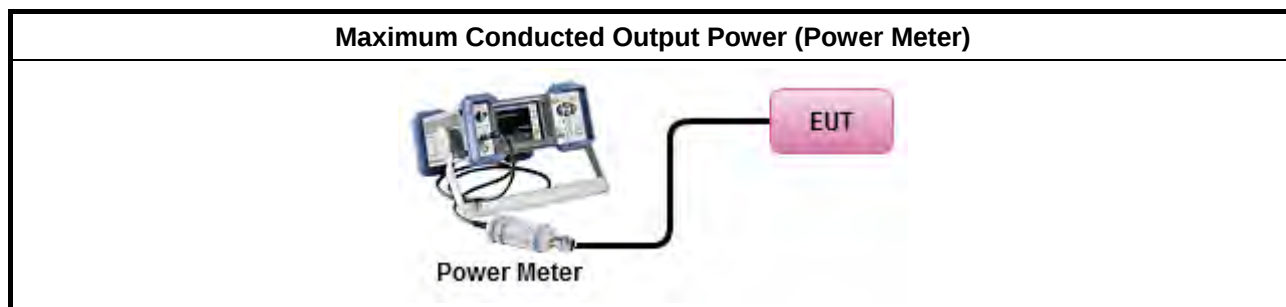
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
☐	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
Maximum Conducted Output Power	
[duty cycle ≥ 98% or external video / power trigger]	
☐	Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
RF power meter and average over on/off periods with duty factor or gated trigger	
☒	Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

For set 1 antenna

Summary

Mode	Power	Power
	(dBm)	(W)
BT-LE(1Mbps)	-	-
2.4-2.4835GHz	-2.68	0.00054

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.47	-2.68	30.00
2442MHz	Pass	4.47	-2.93	30.00
2480MHz	Pass	4.47	-3.32	30.00

For set 3 antenna

Summary

Mode	Power	Power
	(dBm)	(W)
BT-LE(1Mbps)	-	-
2.4-2.4835GHz	-2.68	0.00054

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	11.02	-2.68	24.98
2442MHz	Pass	11.02	-2.93	24.98
2480MHz	Pass	11.02	-3.32	24.98

**For set 4 antenna****Summary**

Mode	Power	Power
	(dBm)	(W)
BT-LE(1Mbps)	-	-
2.4-2.4835GHz	-2.68	0.00054

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.17	-2.68	29.83
2442MHz	Pass	6.17	-2.93	29.83
2480MHz	Pass	6.17	-3.32	29.83

For set 5 antenna**Summary**

Mode	Power	Power
	(dBm)	(W)
BT-LE(1Mbps)	-	-
2.4-2.4835GHz	-2.68	0.00054

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.57	-2.68	30.00
2442MHz	Pass	4.57	-2.93	30.00
2480MHz	Pass	4.57	-3.32	30.00

For set 6 antenna**Summary**

Mode	Power	Power
	(dBm)	(W)
BT-LE(1Mbps)	-	-
2.4-2.4835GHz	-2.68	0.00054

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.63	-2.68	30.00
2442MHz	Pass	2.63	-2.93	30.00
2480MHz	Pass	2.63	-3.32	30.00

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
Power Spectral Density (PSD) ≤ 8 dBm/3kHz

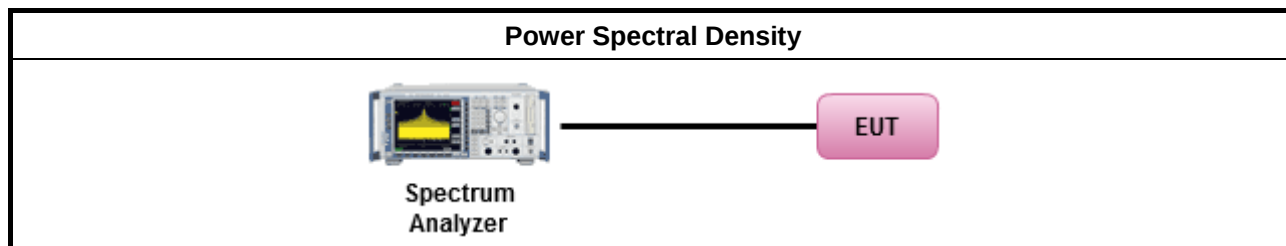
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method
Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
☒ Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak). [duty cycle $\geq 98\%$ or external video / power trigger]
☐ Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).
☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)
duty cycle $< 98\%$ and average over on/off periods with duty factor
☐ Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).
☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)
For conducted measurement.
If The EUT supports multiple transmit chains using options given below:
☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

For set 1 antenna
Summary

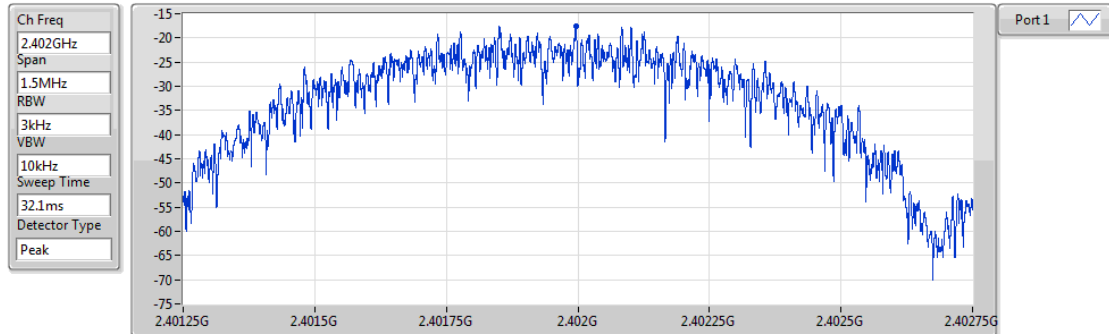
Mode	PD (dBm/RBW)
BT-LE(1Mbps)	-
2.4-2.4835GHz	-16.64

RBW=3kHz.

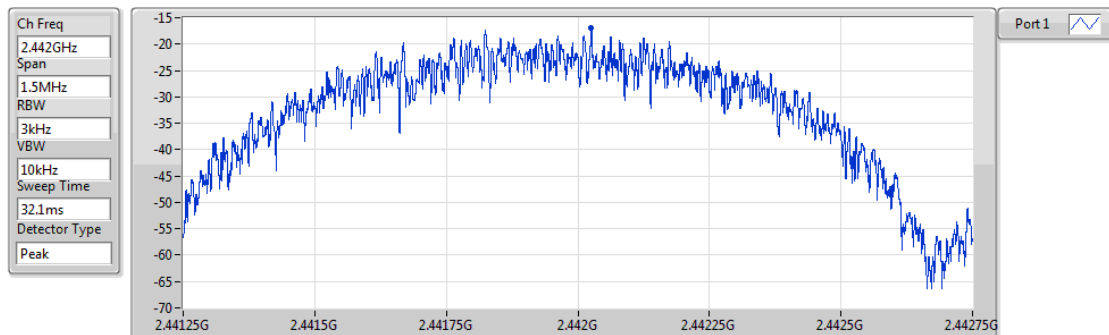
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.47	-17.54	8.00
2442MHz	Pass	4.47	-16.85	8.00
2480MHz	Pass	4.47	-16.64	8.00

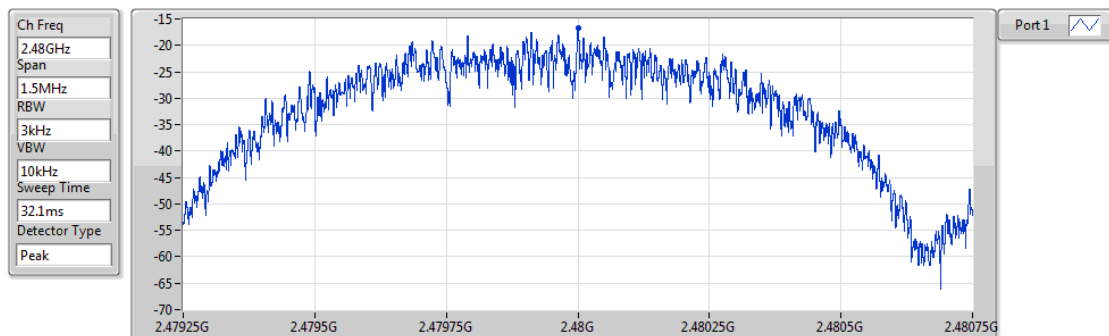
RBW=3kHz.

BT-LE(1Mbps)
PSD
2402MHz


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-17.54	-17.54	-17.54

BT-LE(1Mbps)
PSD
2442MHz


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-16.85	-16.85	-16.85

BT-LE(1Mbps)
PSD
2480MHz


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-16.64	-16.64	-16.64

**For set 3 antenna****Summary**

Mode	PD (dBm/RBW)
BT-LE(1Mbps)	-
2.4-2.4835GHz	-16.64

RBW=3kHz.

Result

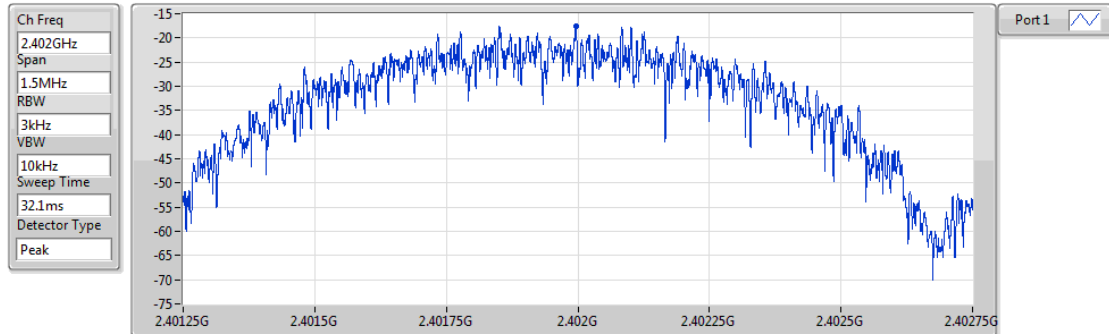
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	11.02	-17.54	2.98
2442MHz	Pass	11.02	-16.85	2.98
2480MHz	Pass	11.02	-16.64	2.98

RBW=3kHz.

BT-LE(1Mbps)

PSD

2402MHz

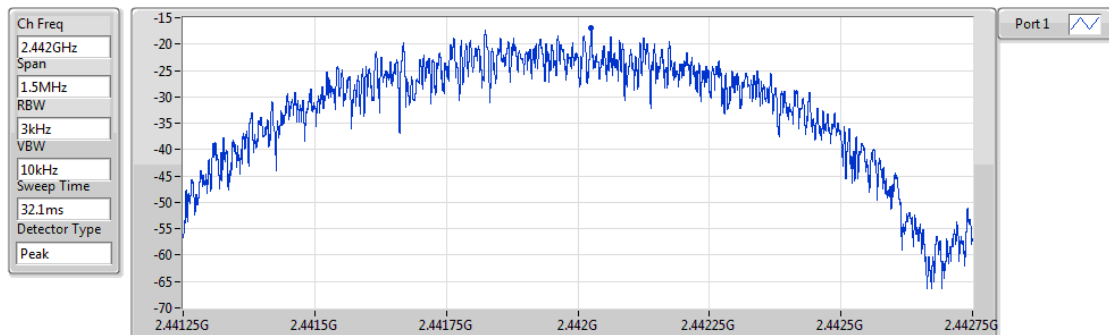


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-17.54	-17.54	-17.54

BT-LE(1Mbps)

PSD

2442MHz

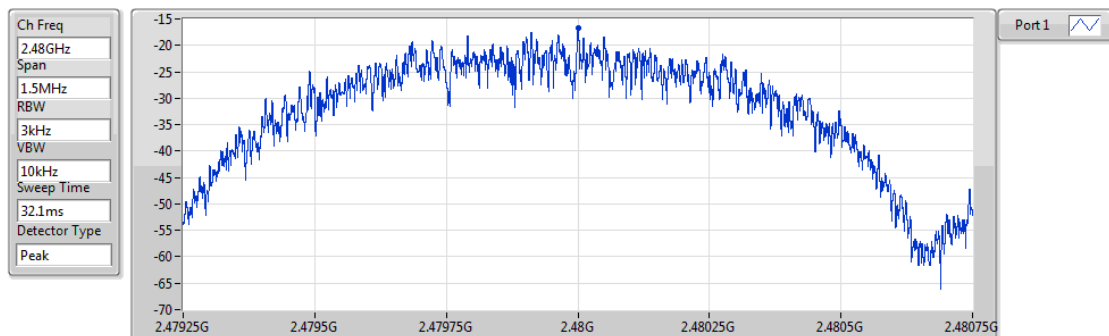


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-16.85	-16.85	-16.85

BT-LE(1Mbps)

PSD

2480MHz



Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-16.64	-16.64	-16.64

**For set 4 antenna****Summary**

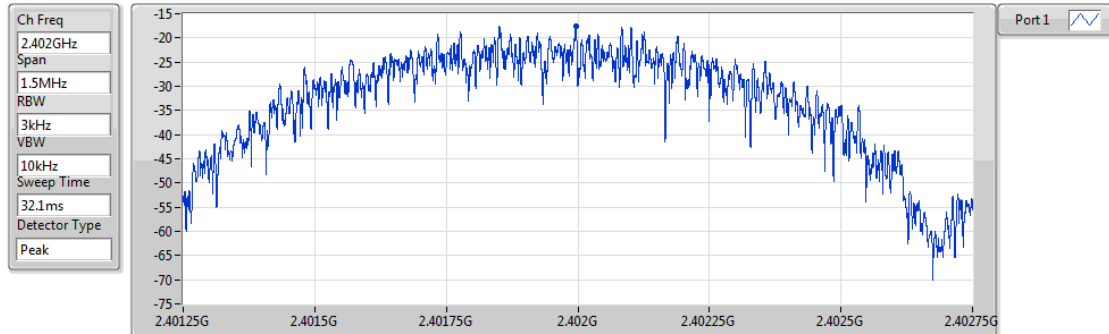
Mode	PD (dBm/RBW)
BT-LE(1Mbps)	-
2.4-2.4835GHz	-16.64

RBW=3kHz.

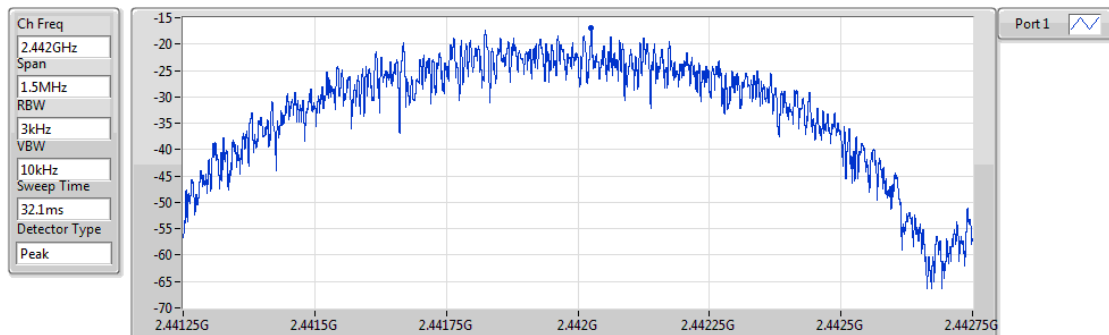
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	6.17	-17.54	7.83
2442MHz	Pass	6.17	-16.85	7.83
2480MHz	Pass	6.17	-16.64	7.83

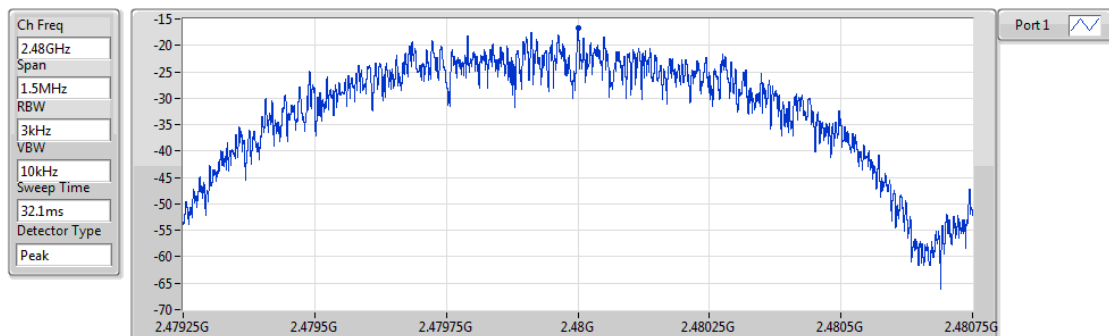
RBW=3kHz.

BT-LE(1Mbps)
PSD
2402MHz


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-17.54	-17.54	-17.54

BT-LE(1Mbps)
PSD
2442MHz


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.85	-16.85	-16.85

BT-LE(1Mbps)
PSD
2480MHz


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.64	-16.64	-16.64

**For set 5 antenna****Summary**

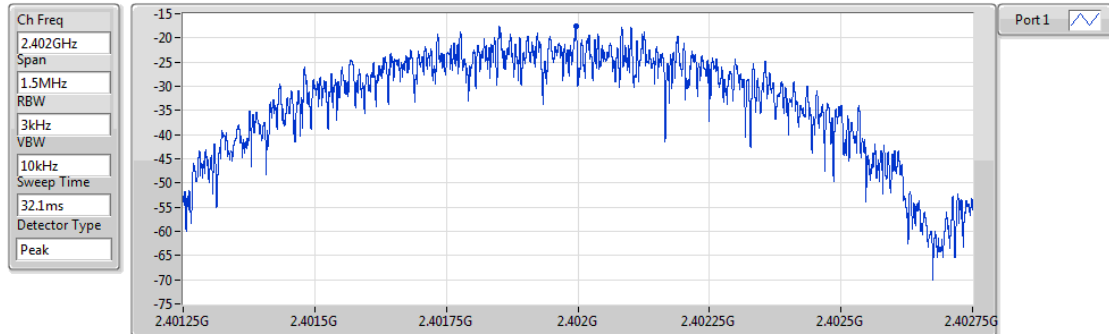
Mode	PD (dBm/RBW)
BT-LE(1Mbps)	-
2.4-2.4835GHz	-16.64

RBW=3kHz.

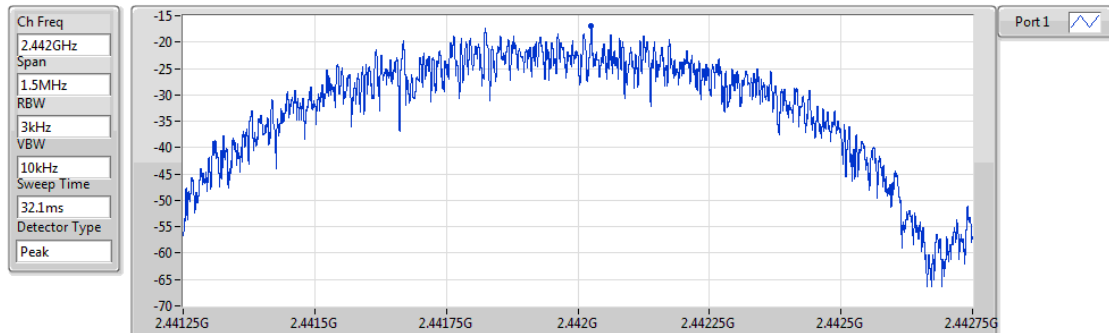
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.57	-17.54	8.00
2442MHz	Pass	4.57	-16.85	8.00
2480MHz	Pass	4.57	-16.64	8.00

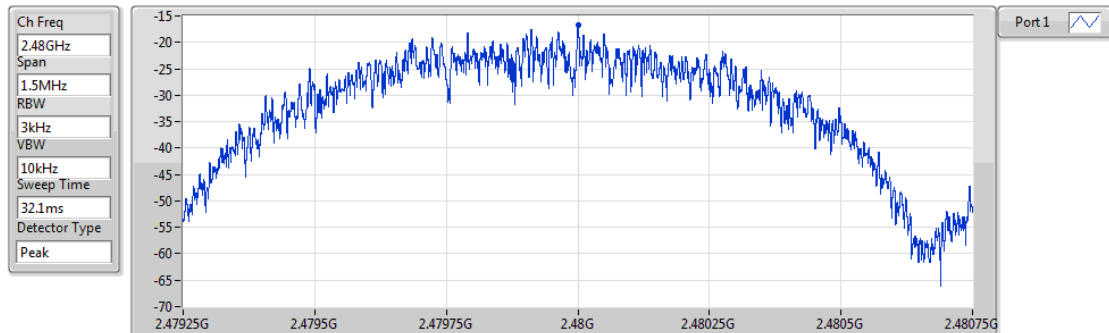
RBW=3kHz.

BT-LE(1Mbps)
PSD
2402MHz


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-17.54	-17.54	-17.54

BT-LE(1Mbps)
PSD
2442MHz


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.85	-16.85	-16.85

BT-LE(1Mbps)
PSD
2480MHz


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.64	-16.64	-16.64

**For set 6 antenna****Summary**

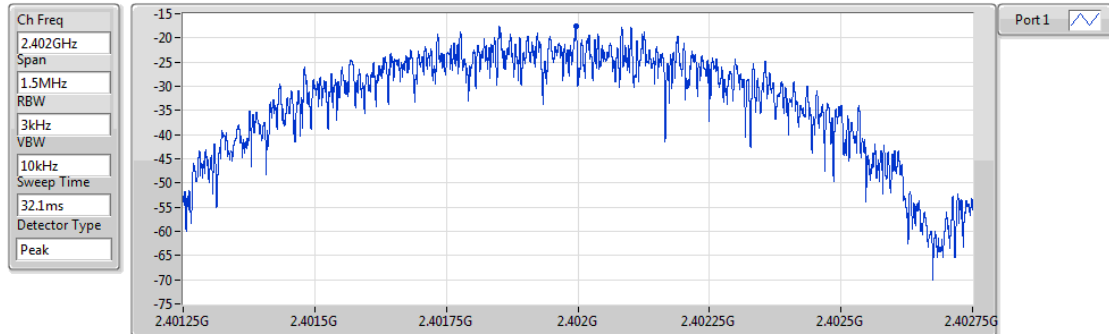
Mode	PD (dBm/RBW)
BT-LE(1Mbps)	-
2.4-2.4835GHz	-16.64

RBW=3kHz.

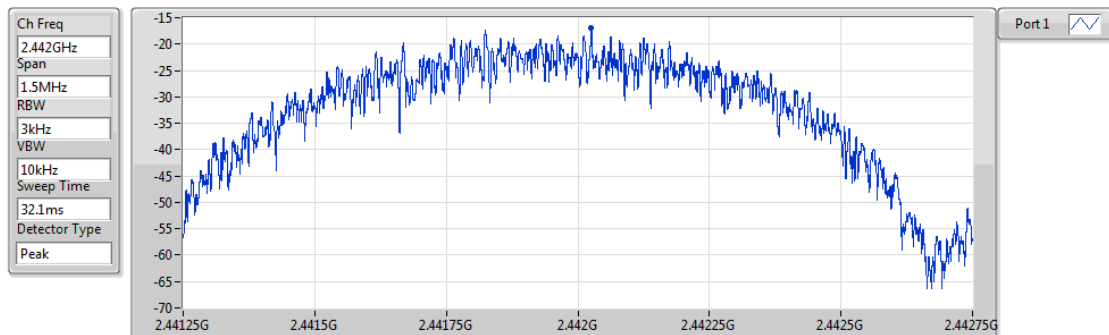
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.63	-17.54	8.00
2442MHz	Pass	2.63	-16.85	8.00
2480MHz	Pass	2.63	-16.64	8.00

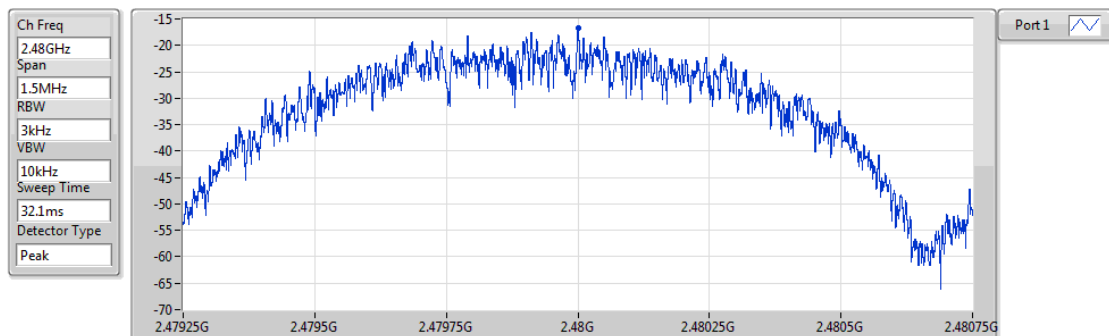
RBW=3kHz.

BT-LE(1Mbps)
PSD
2402MHz


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-17.54	-17.54	-17.54

BT-LE(1Mbps)
PSD
2442MHz


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-16.85	-16.85	-16.85

BT-LE(1Mbps)
PSD
2480MHz


Sum	PD	Port 1
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-16.64	-16.64	-16.64

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

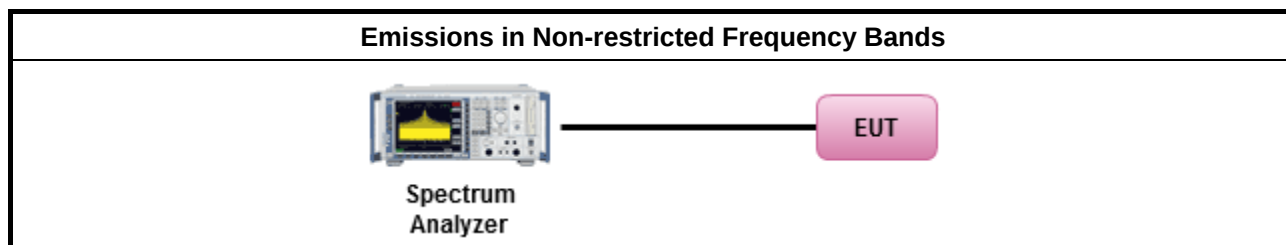
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

For set 1 antenna

Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1

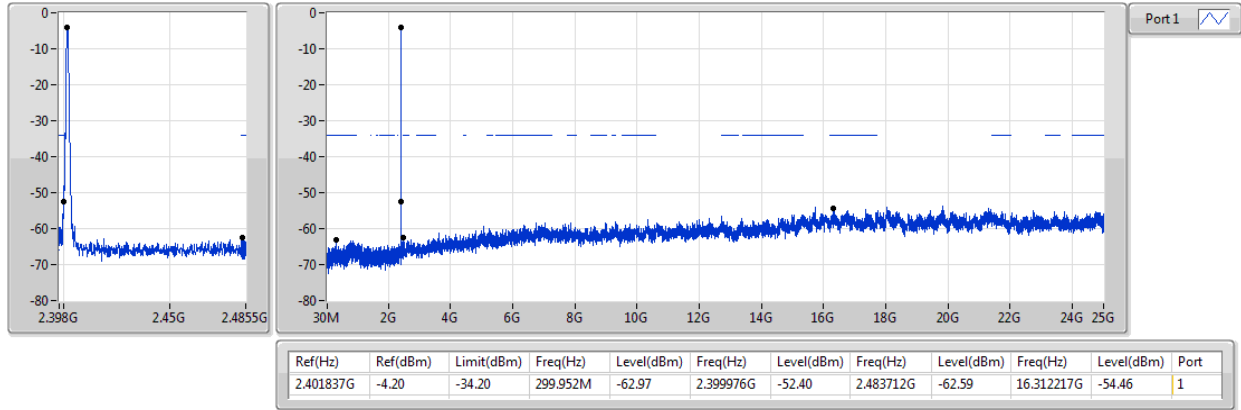
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1
2442MHz	Pass	2.442251G	-3.40	-33.40	823.28M	-62.45	2.398988G	-63.40	2.484924G	-62.36	17.052382G	-53.95	1
2480MHz	Pass	2.480327G	-4.61	-34.61	309.424M	-62.92	2.39938G	-63.85	2.483564G	-61.31	24.822698G	-53.94	1

BT-LE(1Mbps)

CSE NdB

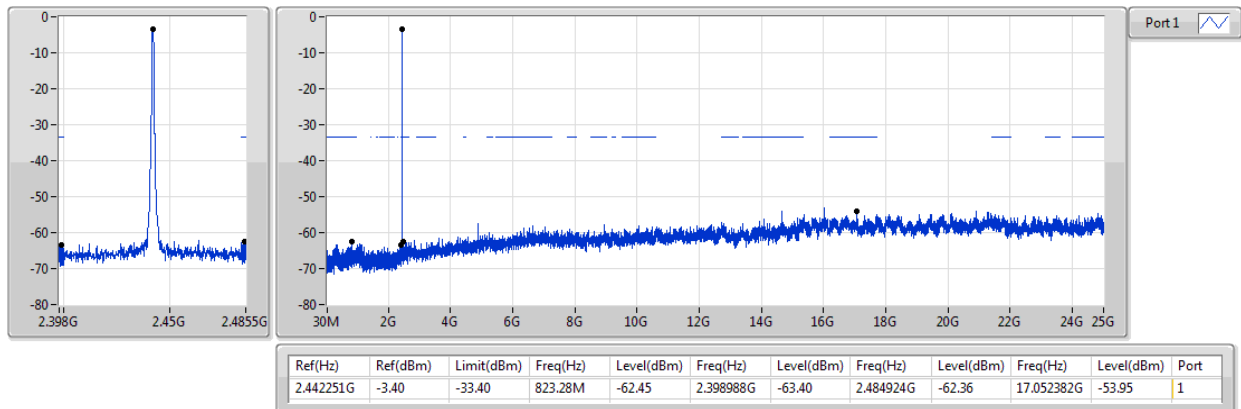
2402MHz



BT-LE(1Mbps)

CSE NdB

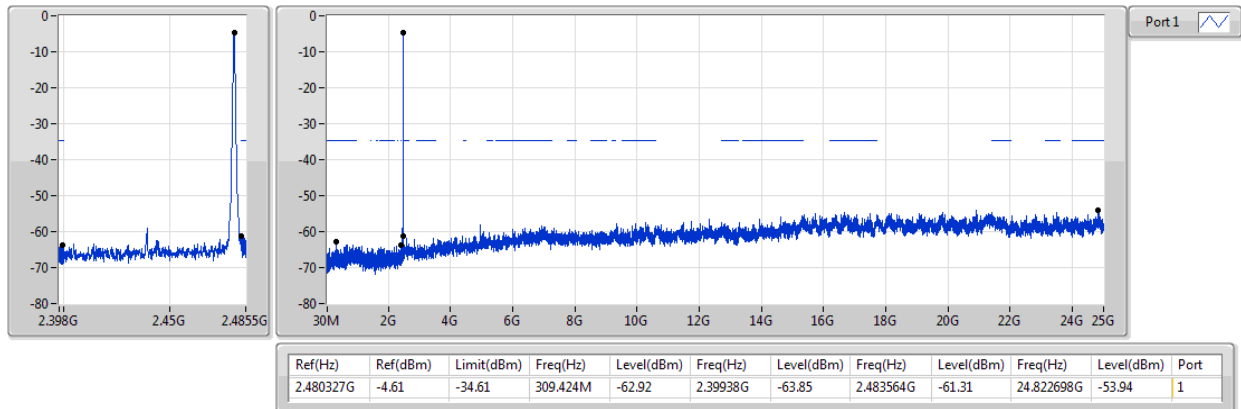
2442MHz



BT-LE(1Mbps)

CSE NdB

2480MHz



For set 3 antenna
Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1

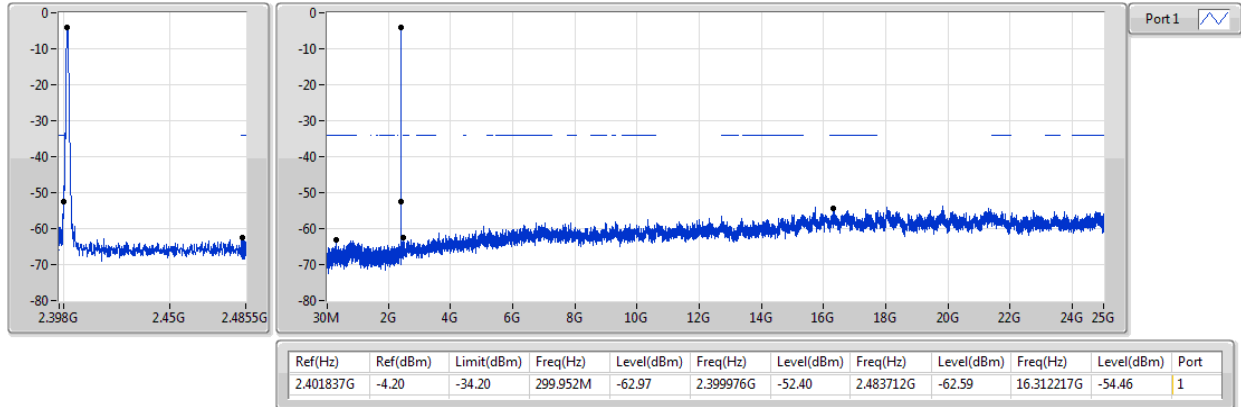
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1
2442MHz	Pass	2.442251G	-3.40	-33.40	823.28M	-62.45	2.398988G	-63.40	2.484924G	-62.36	17.052382G	-53.95	1
2480MHz	Pass	2.480327G	-4.61	-34.61	309.424M	-62.92	2.39938G	-63.85	2.483564G	-61.31	24.822698G	-53.94	1

BT-LE(1Mbps)

CSE NdB

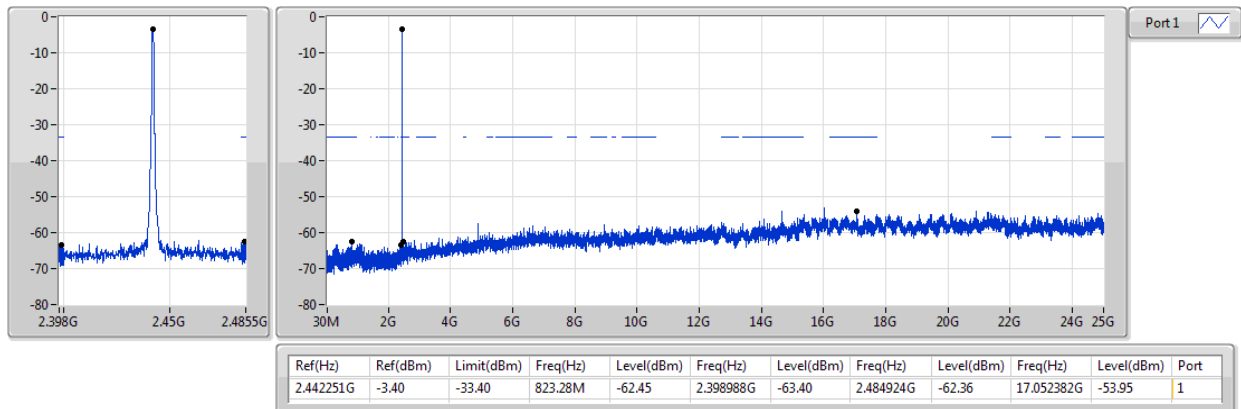
2402MHz



BT-LE(1Mbps)

CSE NdB

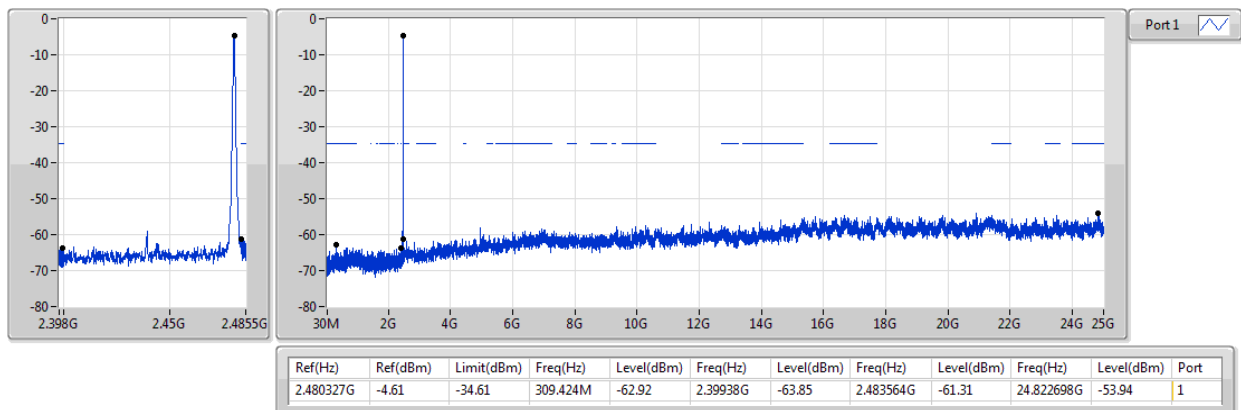
2442MHz



BT-LE(1Mbps)

CSE NdB

2480MHz



For set 4 antenna
Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1

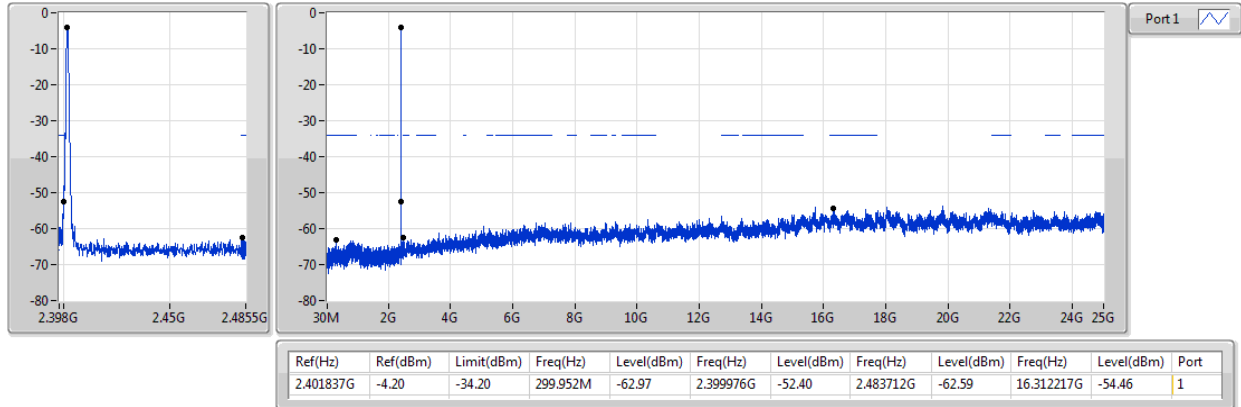
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1
2442MHz	Pass	2.442251G	-3.40	-33.40	823.28M	-62.45	2.398988G	-63.40	2.484924G	-62.36	17.052382G	-53.95	1
2480MHz	Pass	2.480327G	-4.61	-34.61	309.424M	-62.92	2.39938G	-63.85	2.483564G	-61.31	24.822698G	-53.94	1

BT-LE(1Mbps)

CSE NdB

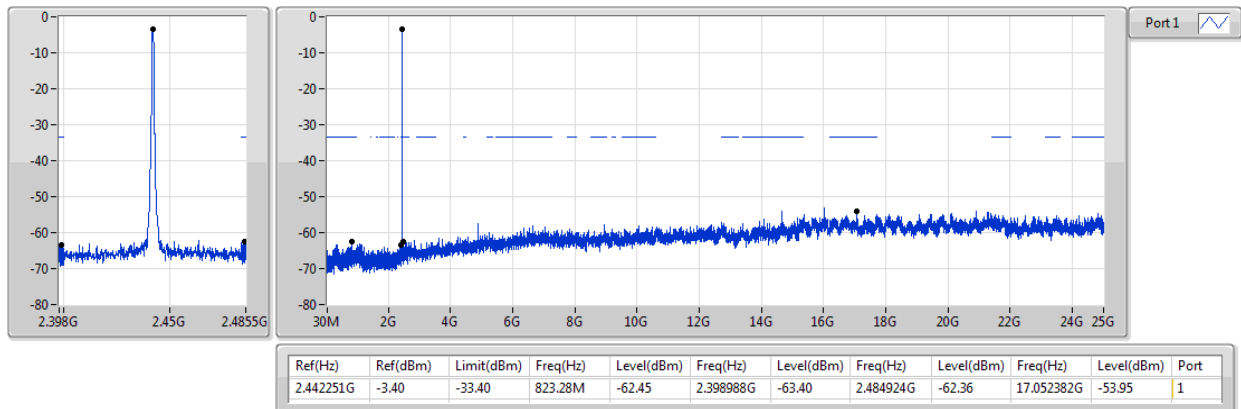
2402MHz



BT-LE(1Mbps)

CSE NdB

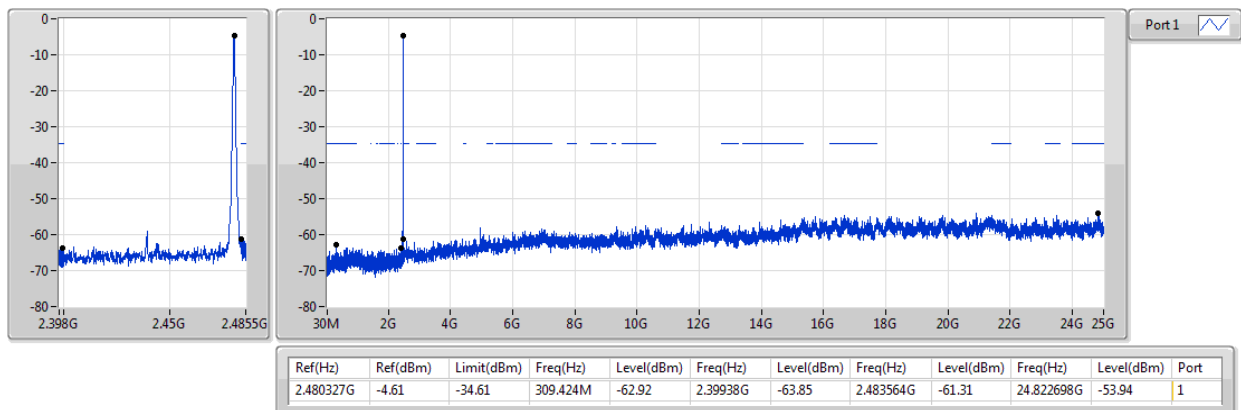
2442MHz



BT-LE(1Mbps)

CSE NdB

2480MHz



For set 5 antenna
Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1

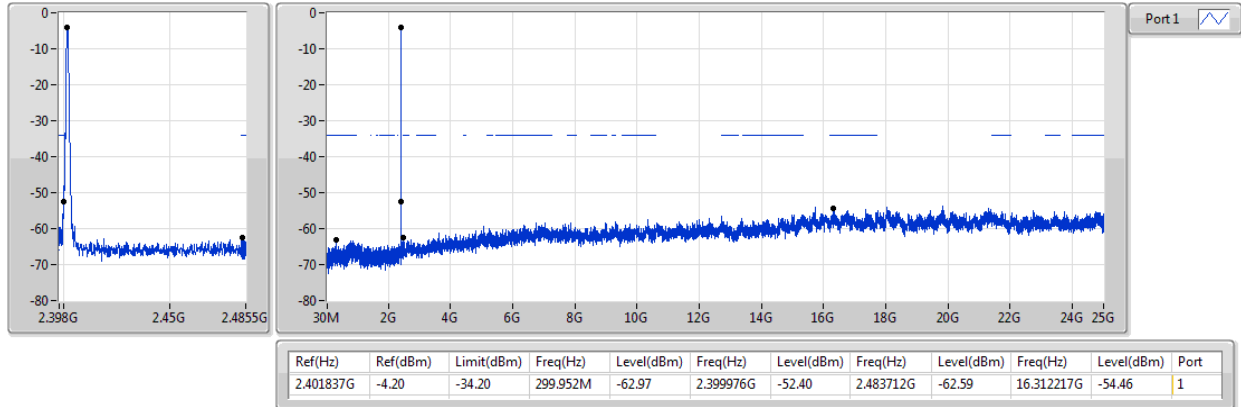
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1
2442MHz	Pass	2.442251G	-3.40	-33.40	823.28M	-62.45	2.398988G	-63.40	2.484924G	-62.36	17.052382G	-53.95	1
2480MHz	Pass	2.480327G	-4.61	-34.61	309.424M	-62.92	2.39938G	-63.85	2.483564G	-61.31	24.822698G	-53.94	1

BT-LE(1Mbps)

CSE NdB

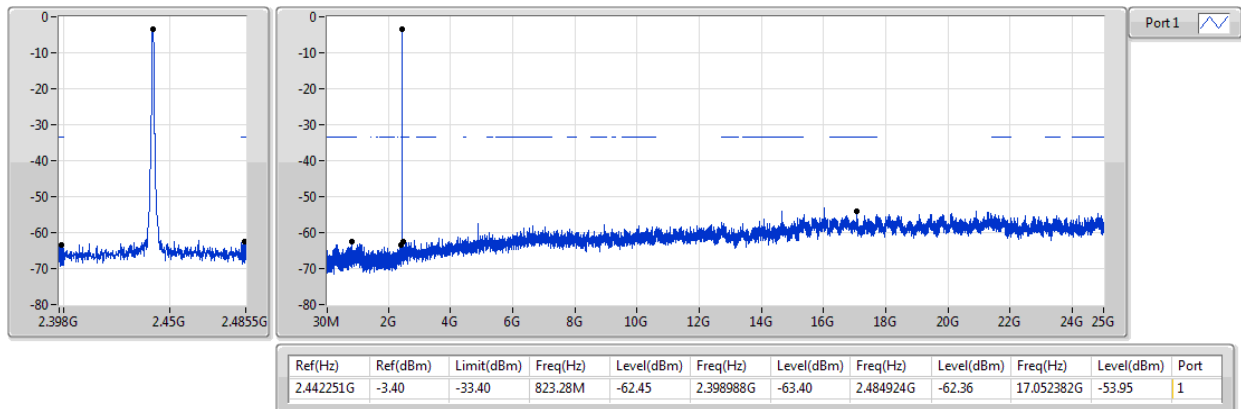
2402MHz



BT-LE(1Mbps)

CSE NdB

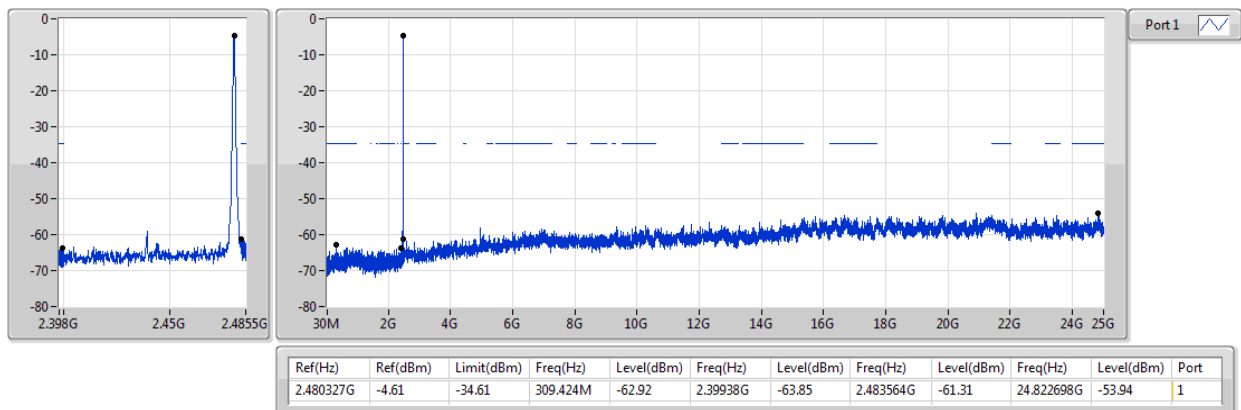
2442MHz



BT-LE(1Mbps)

CSE NdB

2480MHz



For set 6 antenna
Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1

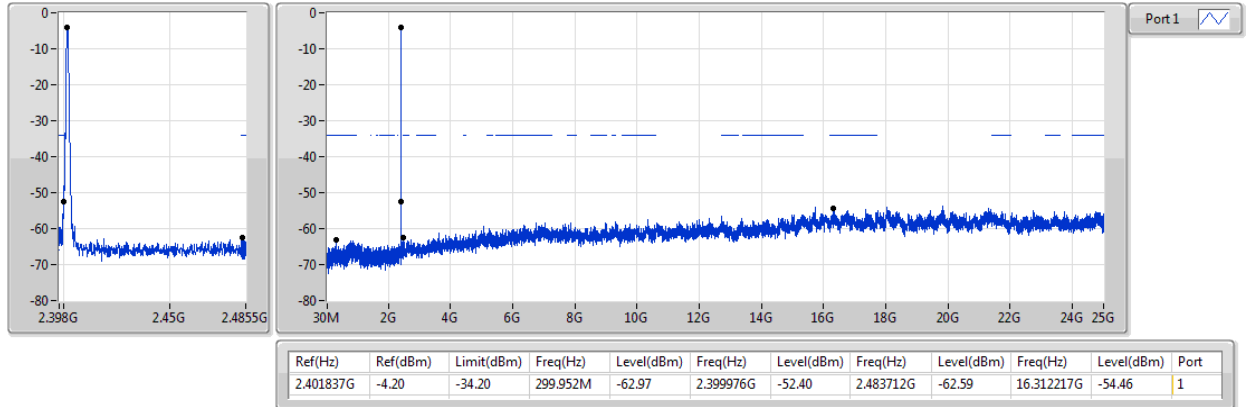
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.401837G	-4.20	-34.20	299.952M	-62.97	2.399976G	-52.40	2.483712G	-62.59	16.312217G	-54.46	1
2442MHz	Pass	2.442251G	-3.40	-33.40	823.28M	-62.45	2.398988G	-63.40	2.484924G	-62.36	17.052382G	-53.95	1
2480MHz	Pass	2.480327G	-4.61	-34.61	309.424M	-62.92	2.39938G	-63.85	2.483564G	-61.31	24.822698G	-53.94	1

BT-LE(1Mbps)

CSE NdB

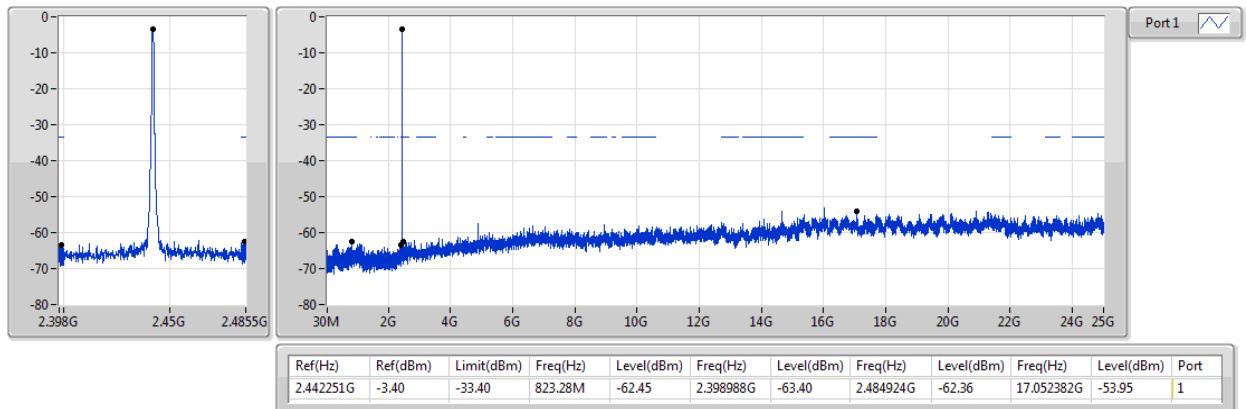
2402MHz



BT-LE(1Mbps)

CSE NdB

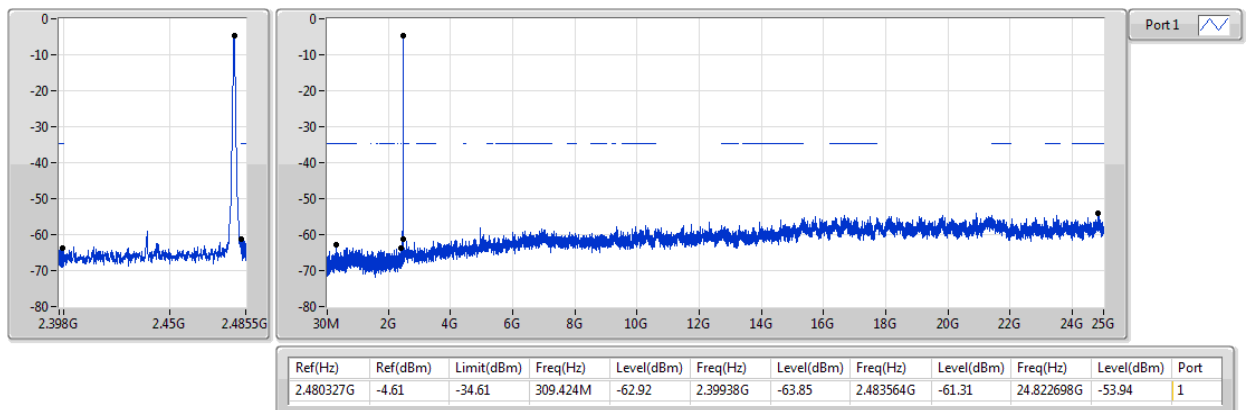
2442MHz



BT-LE(1Mbps)

CSE NdB

2480MHz



3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

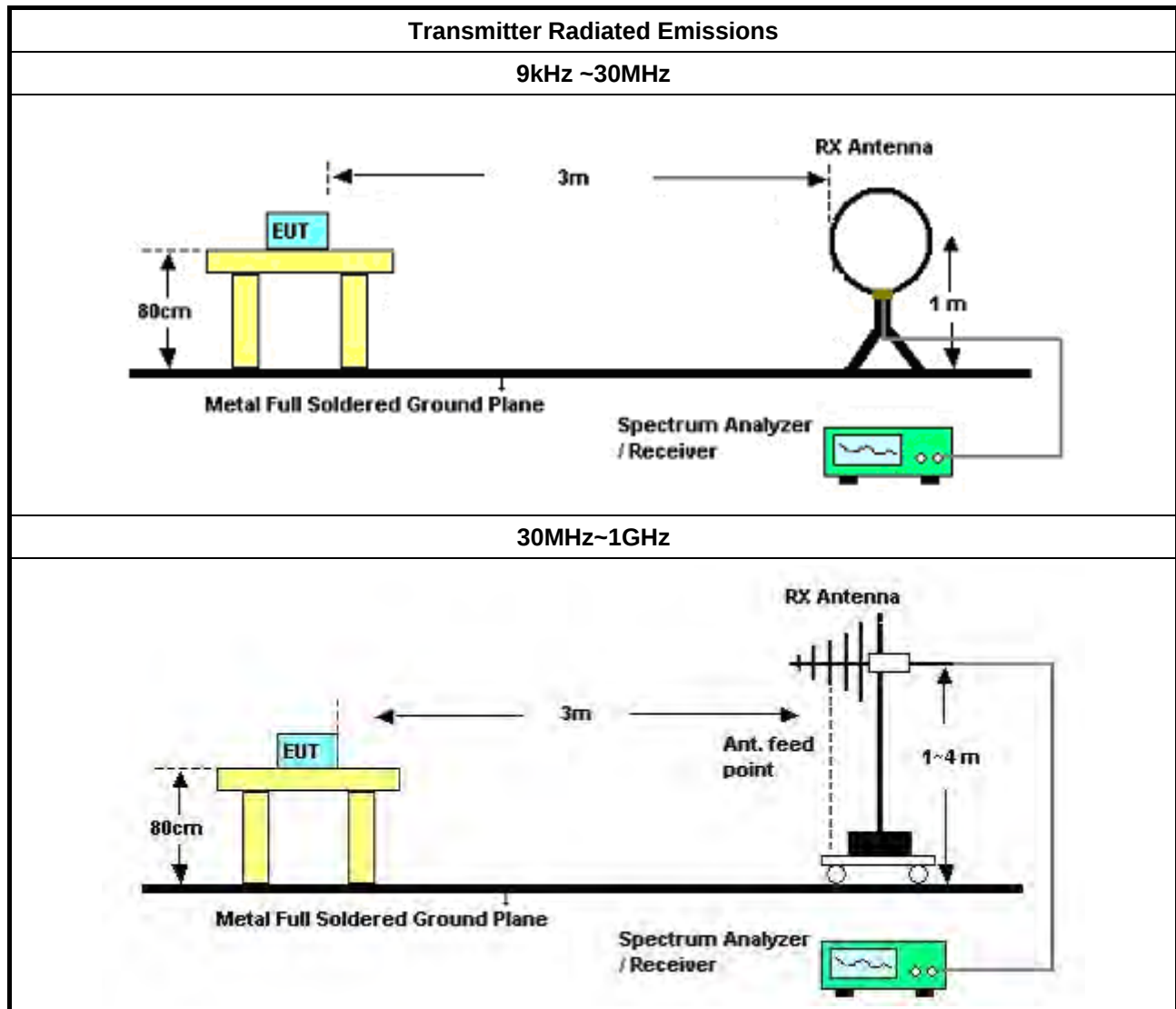
3.6.2 Measuring Instruments

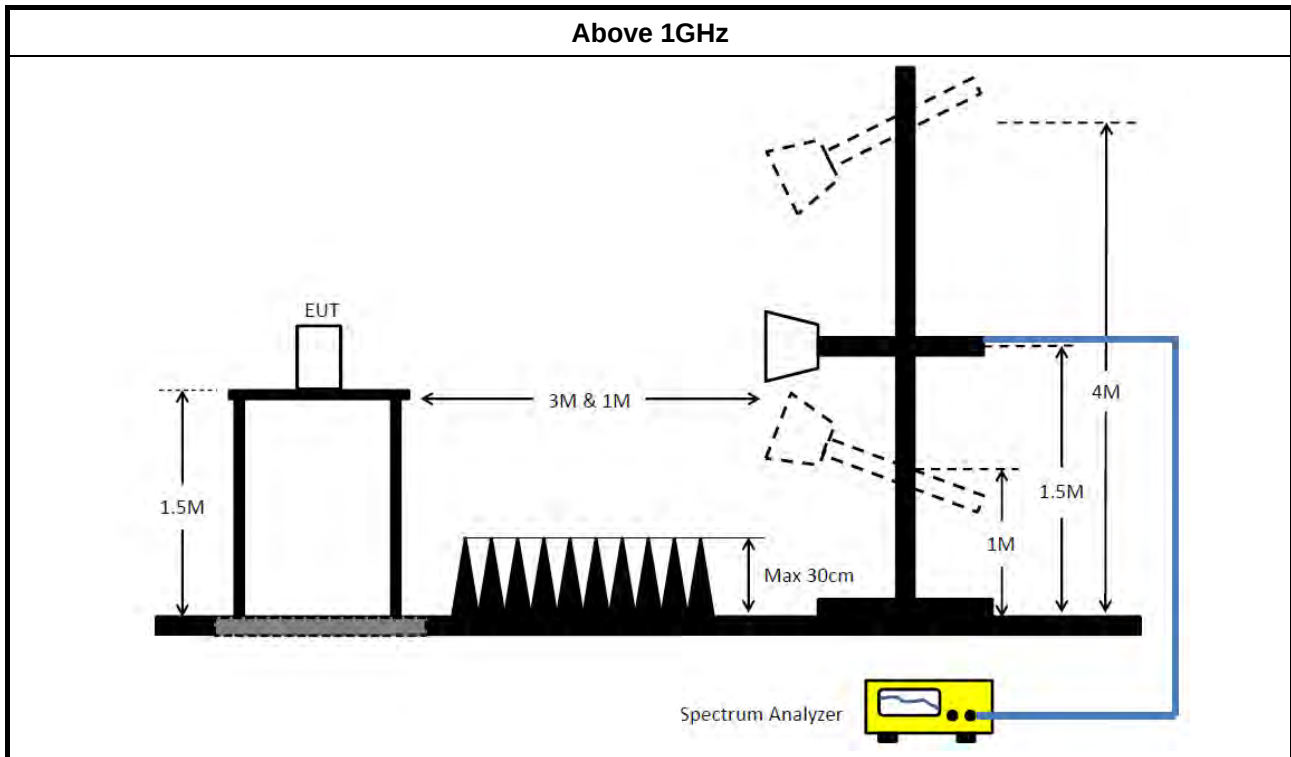
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$)
	☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	☒ Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.
	Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.	
	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add $10 \log(N)$ dB
	For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

3.6.4 Test Setup

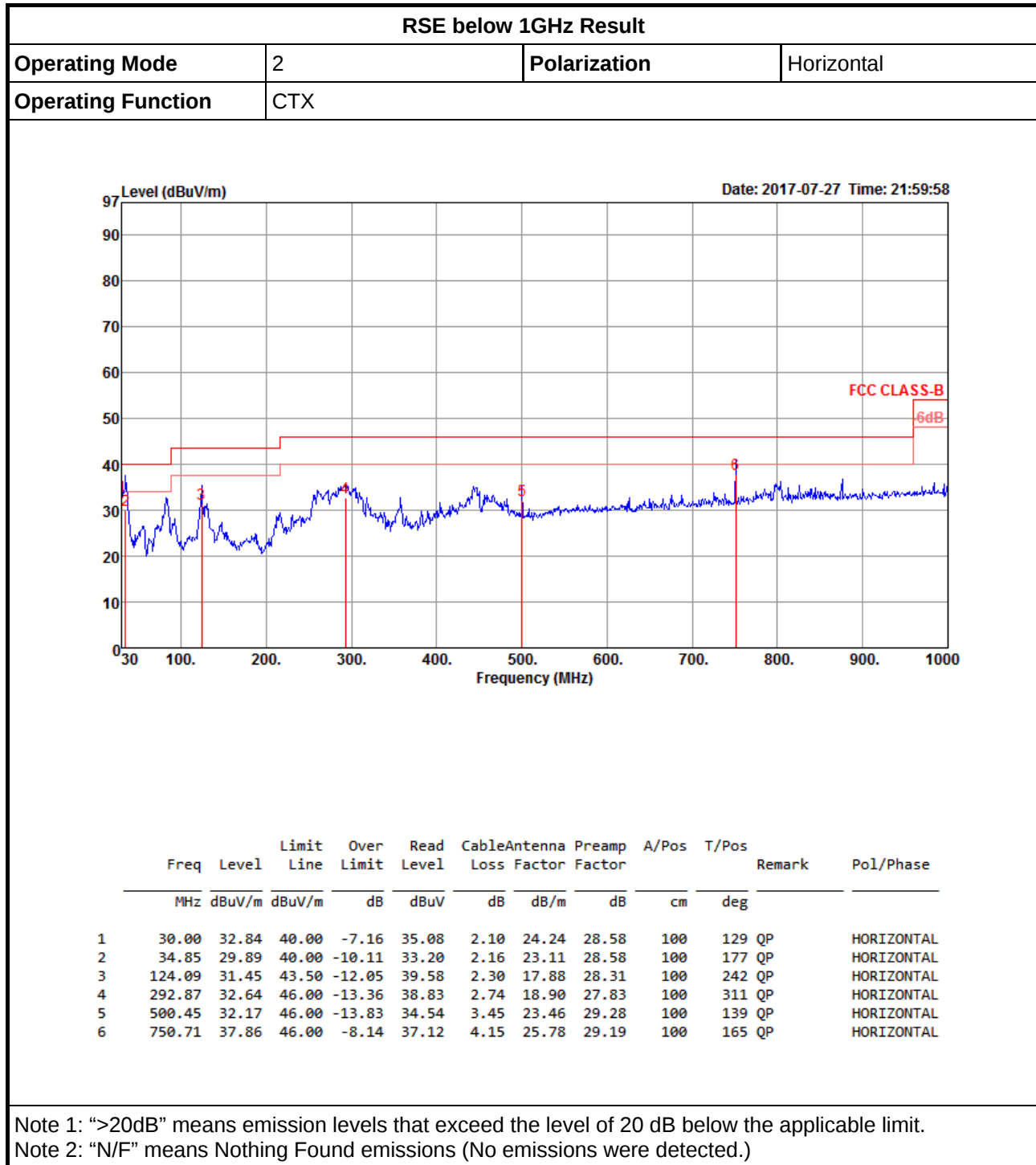




3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

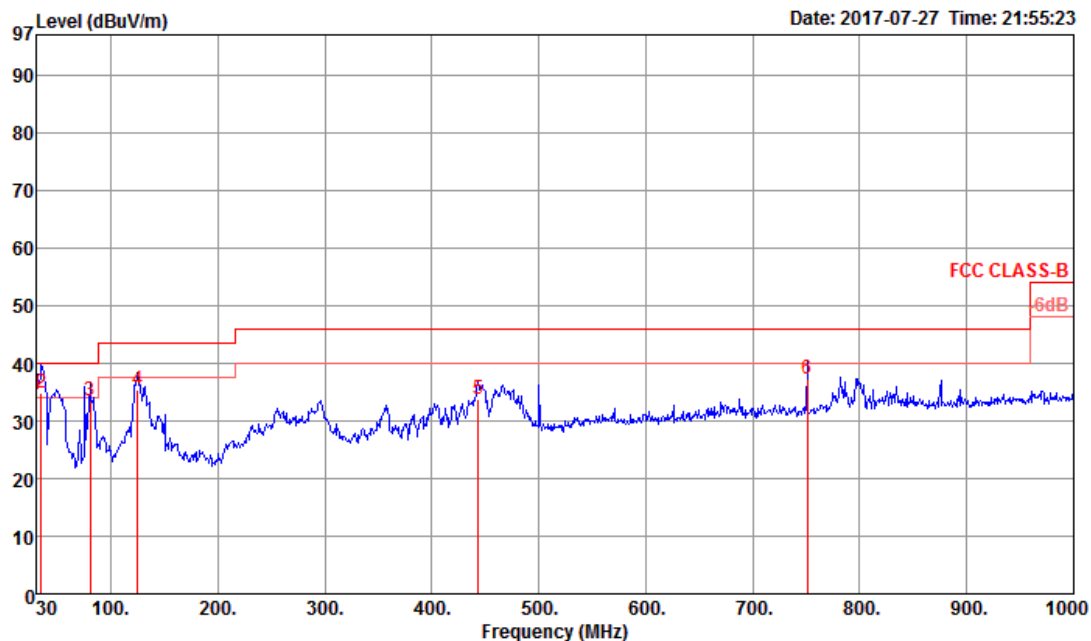
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.6.6 Transmitter Radiated Unwanted Emissions



RSE below 1GHz Result

Operating Mode	2	Polarization	Vertical
Operating Function	CTX		



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	Limit	Level	Loss	Factor	Factor	cm	deg	
1	30.00	34.56	40.00	-5.44	36.80	2.10	24.24	28.58	100	183 QP	VERTICAL
2	34.85	34.99	40.00	-5.01	38.30	2.16	23.11	28.58	100	133 QP	VERTICAL
3	80.44	33.44	40.00	-6.56	46.55	2.24	13.12	28.47	100	168 QP	VERTICAL
4	125.06	35.35	43.50	-8.15	43.49	2.30	17.86	28.30	100	298 QP	VERTICAL
5	443.22	33.84	46.00	-12.16	37.08	3.26	22.47	28.97	100	325 QP	VERTICAL
6	750.71	37.29	46.00	-8.71	36.55	4.15	25.78	29.19	100	264 QP	VERTICAL

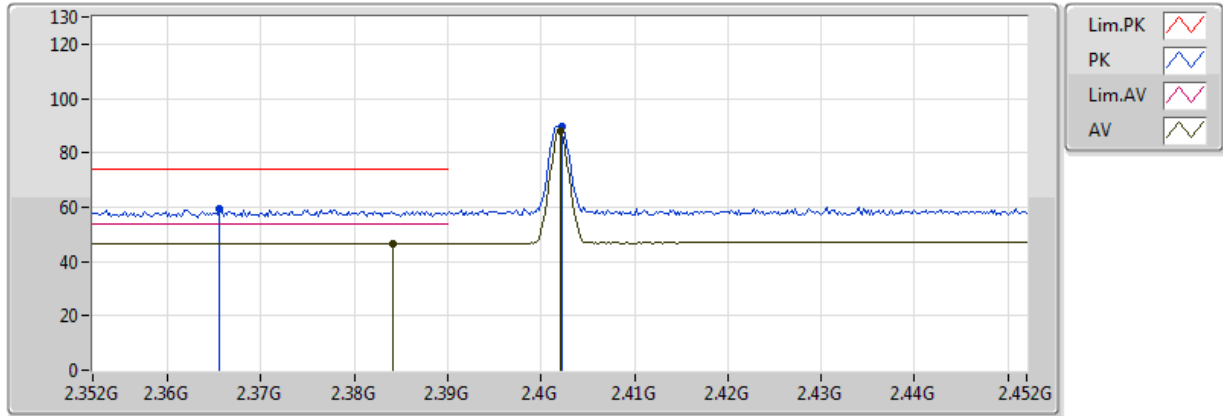
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

**RSE Above 1GHz Result****For set 1 antenna****Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.5G	47.33	54.00	-6.67	32.27	3	V	268	2.95	-

BT-LE(1Mbps)

2402MHz_TX

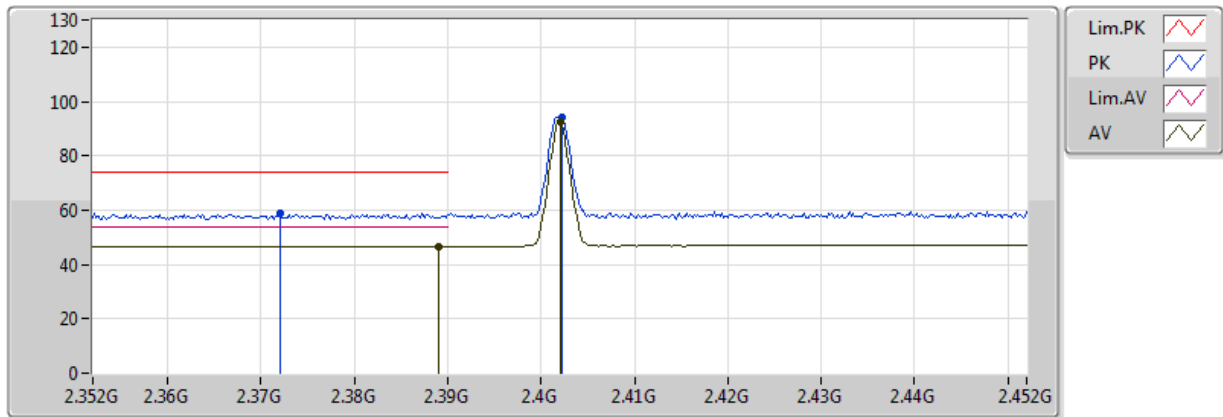


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Dipole Skynet-SD

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3842G	46.67	54.00	-7.33	31.92	3	V	136	1.01	-
AV	2.402G	87.92	Inf	-Inf	31.98	3	V	136	1.01	-
PK	2.3656G	59.24	74.00	-14.76	31.86	3	V	136	1.01	-
PK	2.4022G	89.58	Inf	-Inf	31.98	3	V	136	1.01	-

BT-LE(1Mbps)

2402MHz_TX

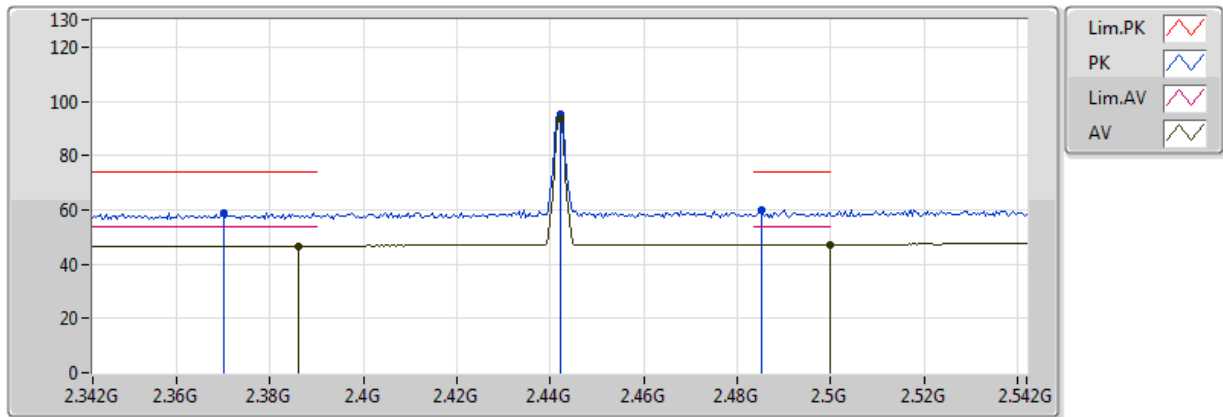


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Dipole Skynet-SD

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389G	46.68	54.00	-7.32	31.94	3	H	223	1.01	-
AV	2.402G	92.51	Inf	-Inf	31.98	3	H	223	1.01	-
PK	2.372G	58.92	74.00	-15.08	31.88	3	H	223	1.01	-
PK	2.4022G	94.11	Inf	-Inf	31.98	3	H	223	1.01	-

BT-LE(1Mbps)

2442MHz_TX

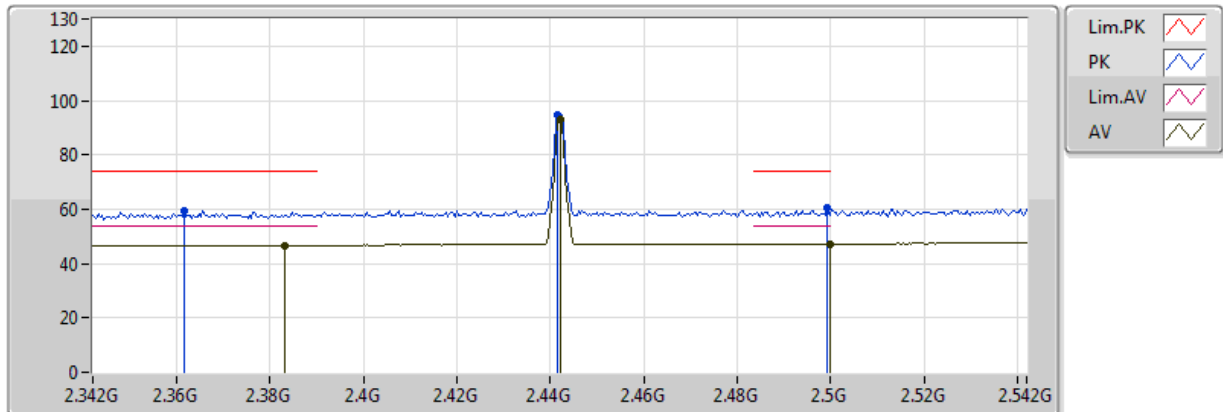


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Dipole Skynet-SD

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.386G	46.74	54.00	-7.26	31.93	3	V	268	2.95	-
AV	2.442G	93.79	Inf	-Inf	32.10	3	V	268	2.95	-
AV	2.5G	47.33	54.00	-6.67	32.27	3	V	268	2.95	-
PK	2.37G	58.94	74.00	-15.06	31.88	3	V	268	2.95	-
PK	2.442G	95.45	Inf	-Inf	32.10	3	V	268	2.95	-
PK	2.4852G	60.11	74.00	-13.89	32.23	3	V	268	2.95	-

BT-LE(1Mbps)

2442MHz_TX

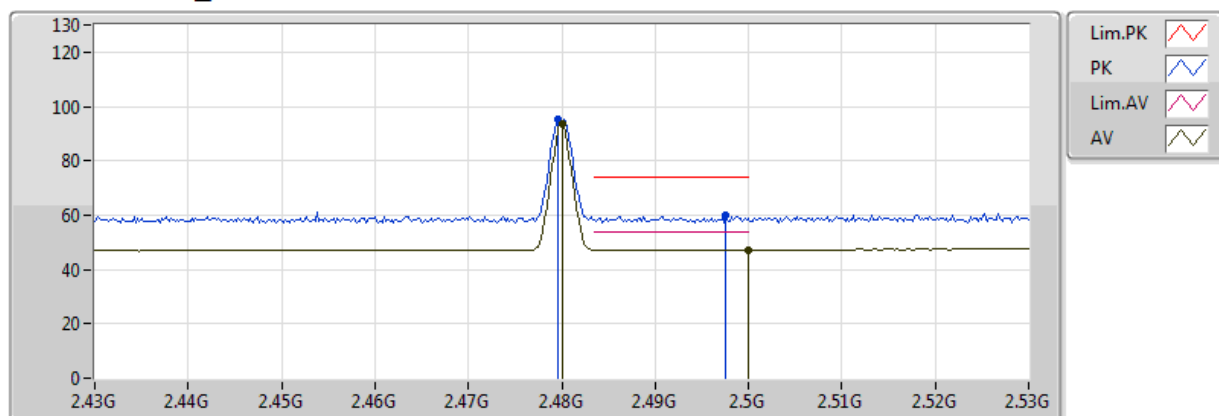


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Dipole Skynet-SD

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3832G	46.68	54.00	-7.32	31.92	3	H	228	1.31	-
AV	2.442G	93.06	Inf	-Inf	32.10	3	H	228	1.31	-
AV	2.5G	47.23	54.00	-6.77	32.27	3	H	228	1.31	-
PK	2.3616G	59.48	74.00	-14.52	31.85	3	H	228	1.31	-
PK	2.4416G	94.71	Inf	-Inf	32.09	3	H	228	1.31	-
PK	2.4992G	60.38	74.00	-13.62	32.27	3	H	228	1.31	-

BT-LE(1Mbps)

2480MHz_TX

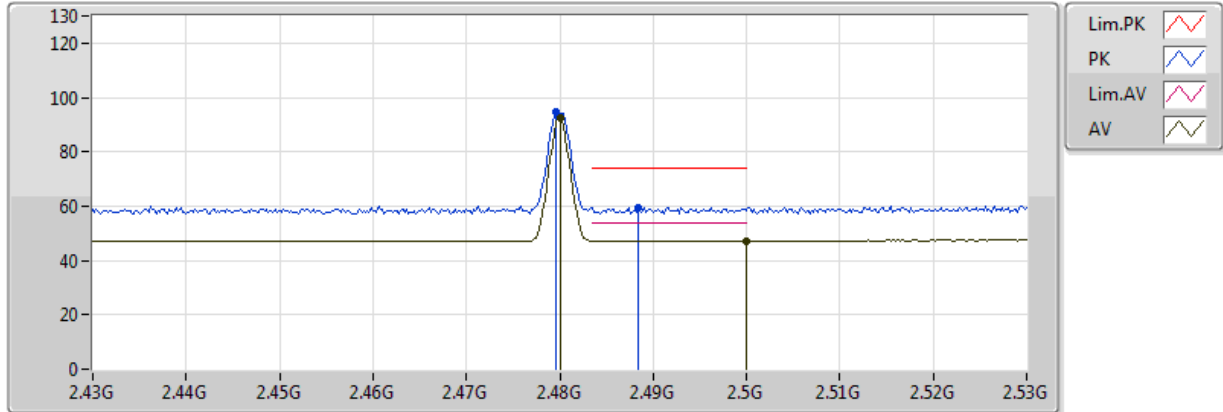


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Dipole Skynet-SD

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	93.49	Inf	-Inf	32.21	3	V	268	2.89	-
AV	2.5G	47.31	54.00	-6.69	32.27	3	V	268	2.89	-
PK	2.4796G	95.22	Inf	-Inf	32.21	3	V	268	2.89	-
PK	2.4976G	59.71	74.00	-14.29	32.26	3	V	268	2.89	-

BT-LE(1Mbps)

2480MHz_TX



20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Dipole Skynet-SD

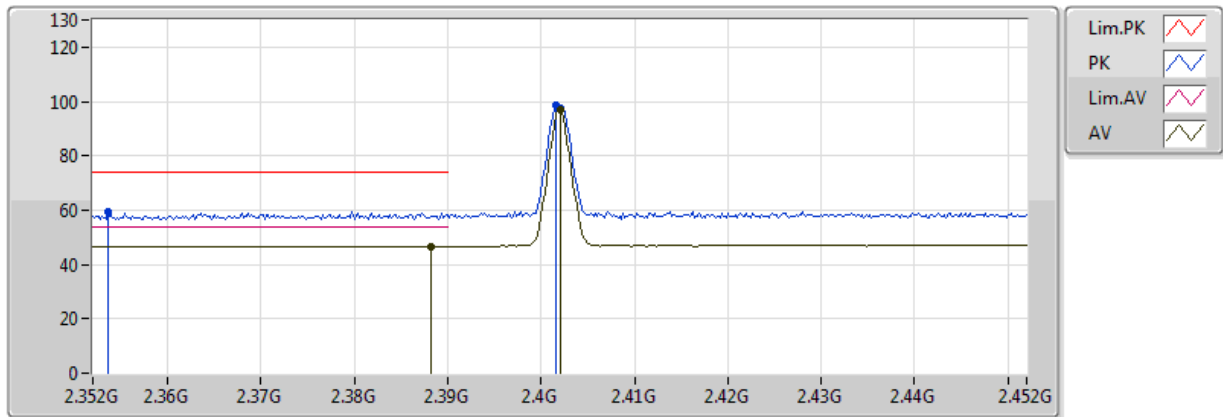
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	92.72	Inf	-Inf	32.21	3	H	301	1.29	-
AV	2.5G	47.33	54.00	-6.67	32.27	3	H	301	1.29	-
PK	2.4796G	94.42	Inf	-Inf	32.21	3	H	301	1.29	-
PK	2.4884G	59.67	74.00	-14.33	32.24	3	H	301	1.29	-

**For set 3 antenna****Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.483502G	47.40	54.00	-6.60	32.22	3	V	261	1.61	-

BT-LE(1Mbps)

2402MHz_TX

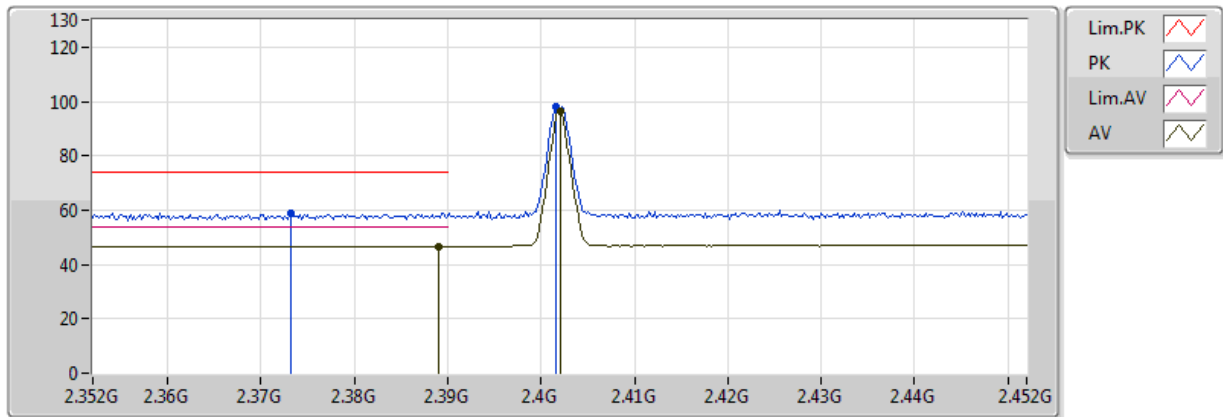


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3882G	46.72	54.00	-7.28	31.93	3	V	265	1.70	-
AV	2.402G	97.04	Inf	-Inf	31.98	3	V	265	1.70	-
PK	2.3536G	59.26	74.00	-14.74	31.83	3	V	265	1.70	-
PK	2.4016G	98.66	Inf	-Inf	31.97	3	V	265	1.70	-

BT-LE(1Mbps)

2402MHz_TX

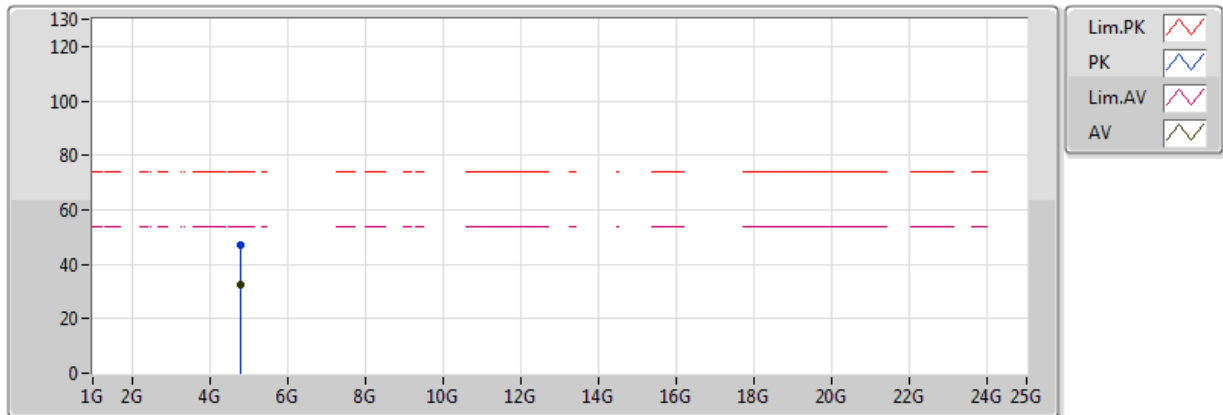


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389G	46.71	54.00	-7.29	31.94	3	H	278	1.92	-
AV	2.402G	96.32	Inf	-Inf	31.98	3	H	278	1.92	-
PK	2.3732G	58.88	74.00	-15.12	31.89	3	H	278	1.92	-
PK	2.4016G	97.90	Inf	-Inf	31.97	3	H	278	1.92	-

BT-LE(1Mbps)

2402MHz_TX

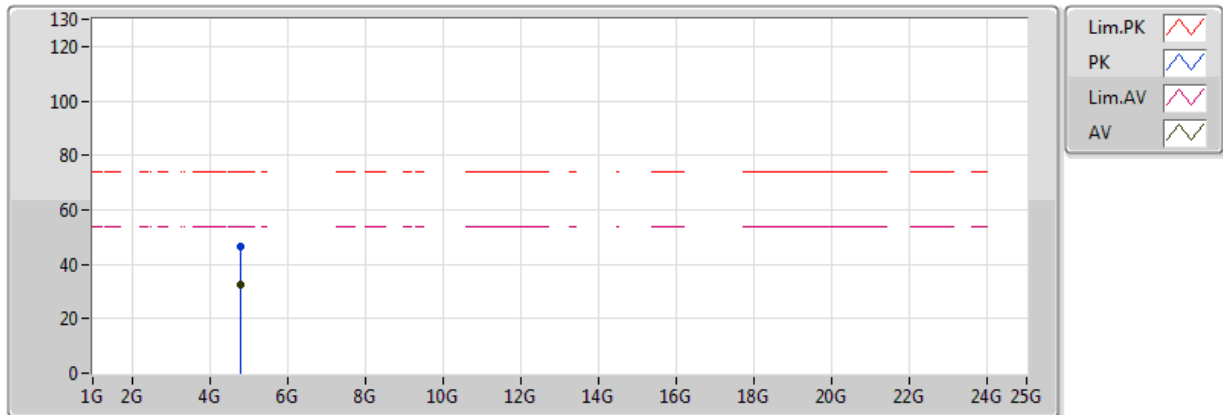


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.804636G	32.63	54.00	-21.37	8.02	3	V	82	1.49	-
PK	4.80412G	46.87	74.00	-27.13	8.02	3	V	82	1.49	-

BT-LE(1Mbps)

2402MHz_TX

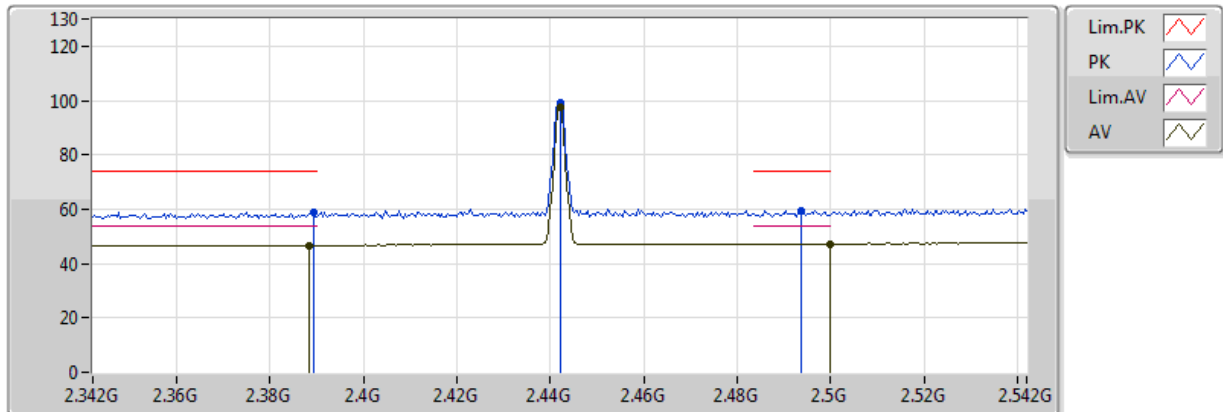


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.803732G	32.47	54.00	-21.53	8.02	3	H	68	2.06	-
PK	4.803184G	46.43	74.00	-27.57	8.02	3	H	68	2.06	-

BT-LE(1Mbps)

2442MHz_TX

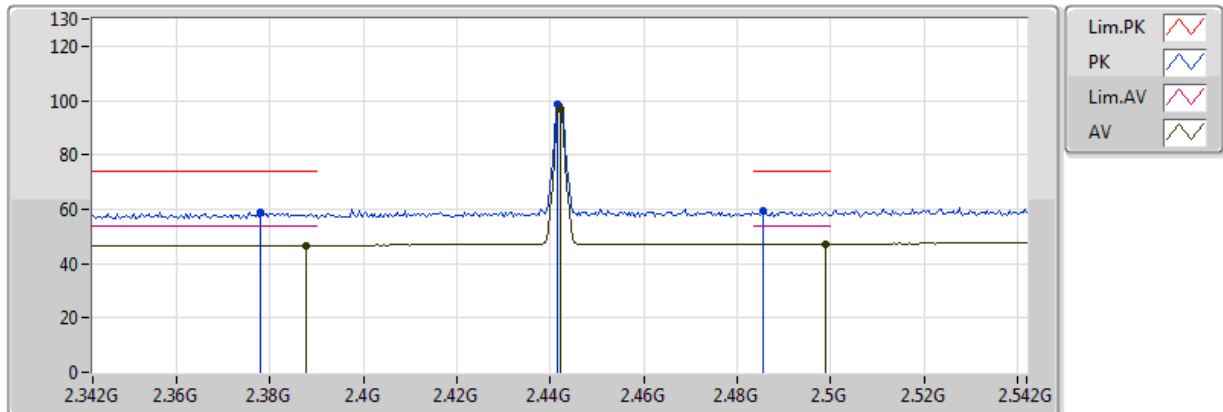


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3884G	46.71	54.00	-7.29	31.93	3	V	270	1.90	-
AV	2.442G	97.38	Inf	-Inf	32.10	3	V	270	1.90	-
AV	2.5G	47.31	54.00	-6.69	32.27	3	V	270	1.90	-
PK	2.3892G	58.87	74.00	-15.13	31.94	3	V	270	1.90	-
PK	2.442G	99.01	Inf	-Inf	32.10	3	V	270	1.90	-
PK	2.4936G	59.38	74.00	-14.62	32.25	3	V	270	1.90	-

BT-LE(1Mbps)

2442MHz_TX

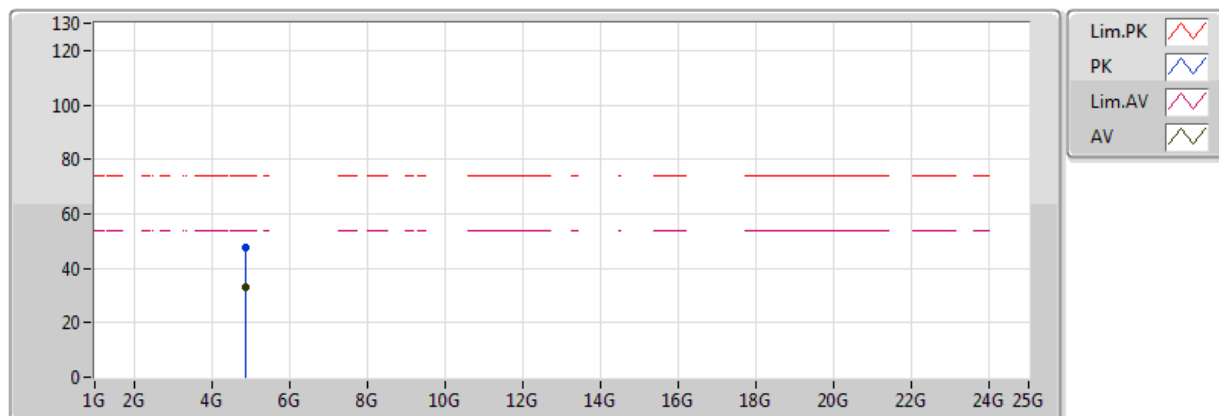


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3876G	46.72	54.00	-7.28	31.93	3	H	262	1.88	-
AV	2.442G	97.19	Inf	-Inf	32.10	3	H	262	1.88	-
AV	2.4988G	47.28	54.00	-6.72	32.27	3	H	262	1.88	-
PK	2.378G	59.07	74.00	-14.93	31.90	3	H	262	1.88	-
PK	2.4416G	98.85	Inf	-Inf	32.09	3	H	262	1.88	-
PK	2.4856G	59.57	74.00	-14.43	32.23	3	H	262	1.88	-

BT-LE(1Mbps)

2442MHz_TX

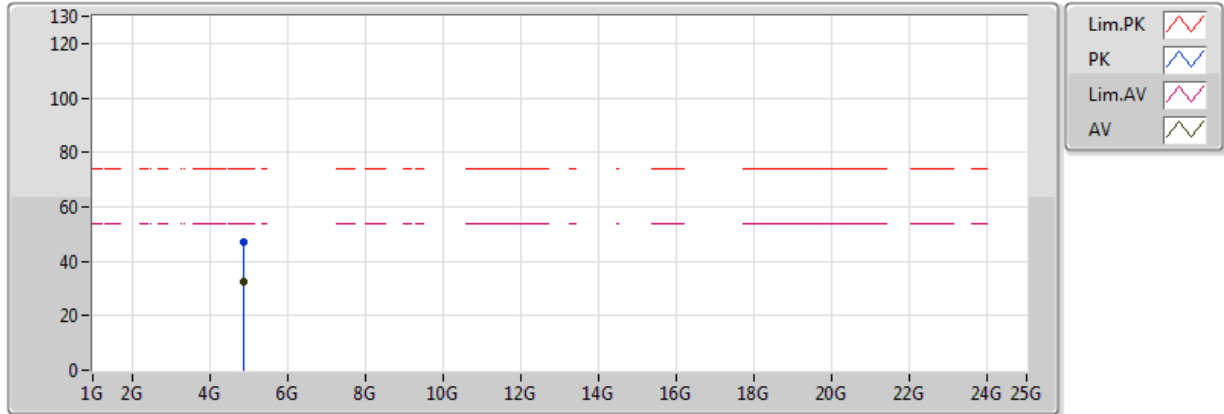


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88384G	33.16	54.00	-20.84	8.27	3	V	283	1.83	-
PK	4.884164G	47.52	74.00	-26.48	8.27	3	V	283	1.83	-

BT-LE(1Mbps)

2442MHz_TX

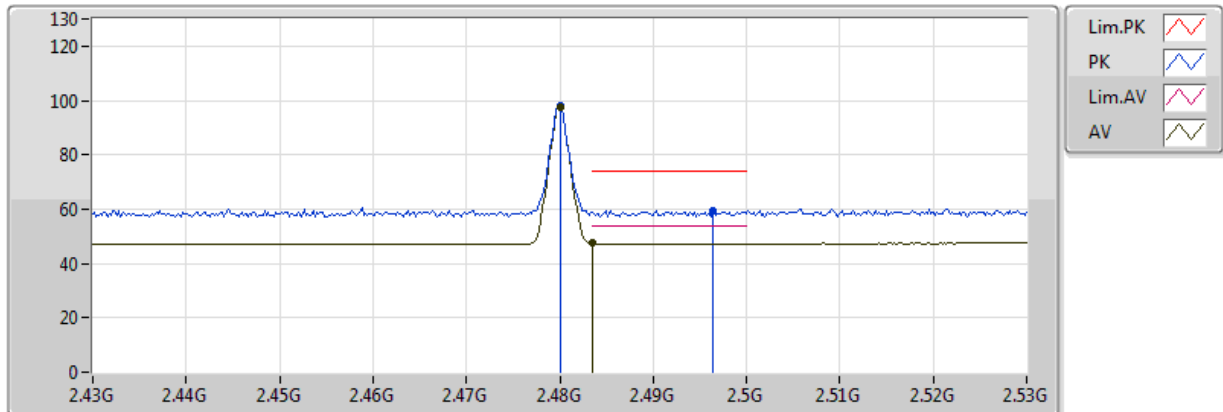


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.884324G	32.25	54.00	-21.75	8.27	3	H	168	2.19	-
PK	4.88454G	46.84	74.00	-27.16	8.27	3	H	168	2.19	-

BT-LE(1Mbps)

2480MHz_TX

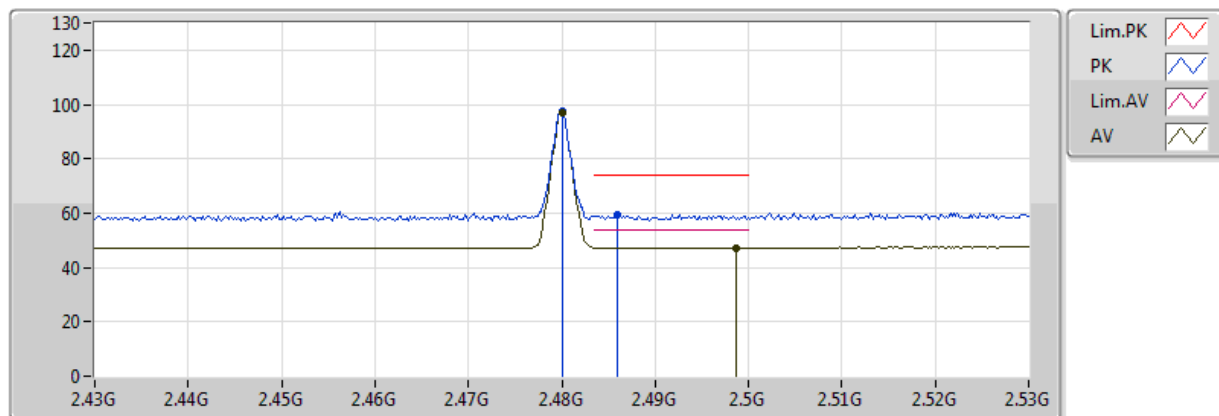


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	97.58	Inf	-Inf	32.21	3	V	261	1.61	-
AV	2.483502G	47.40	54.00	-6.60	32.22	3	V	261	1.61	-
PK	2.48G	98.02	Inf	-Inf	32.21	3	V	261	1.61	-
PK	2.4964G	59.46	74.00	-14.54	32.26	3	V	261	1.61	-

BT-LE(1Mbps)

2480MHz_TX

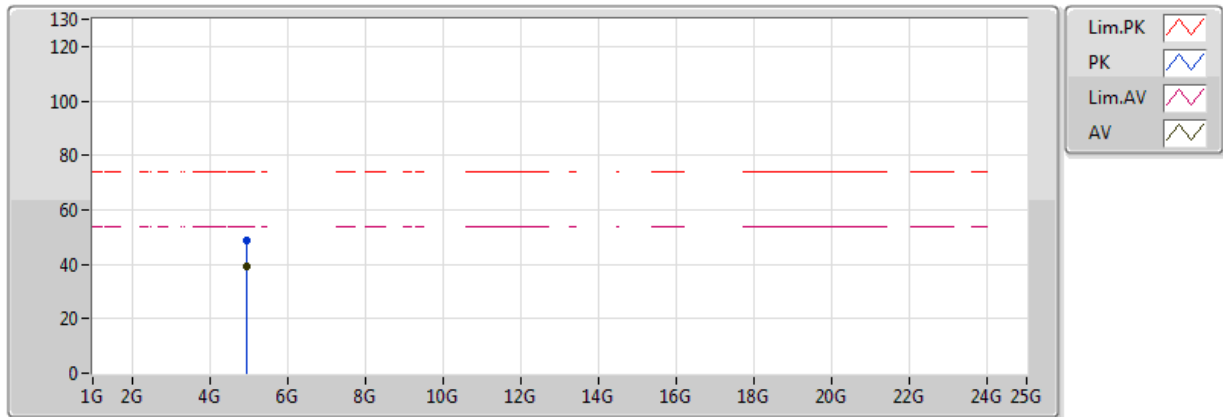


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	96.99	Inf	-Inf	32.21	3	H	265	1.60	-
AV	2.4986G	47.30	54.00	-6.70	32.27	3	H	265	1.60	-
PK	2.48G	97.46	Inf	-Inf	32.21	3	H	265	1.60	-
PK	2.486G	59.59	74.00	-14.41	32.23	3	H	265	1.60	-

BT-LE(1Mbps)

2480MHz_TX

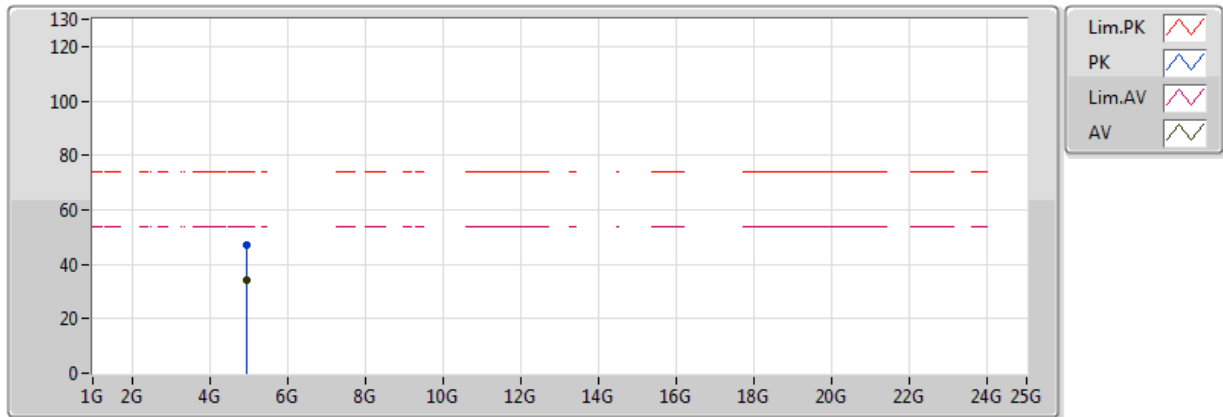


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.959904G	39.22	54.00	-14.78	8.51	3	V	268	2.36	-
PK	4.9598G	48.72	74.00	-25.28	8.51	3	V	268	2.36	-

BT-LE(1Mbps)

2480MHz_TX



20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-NP(Patch大方)

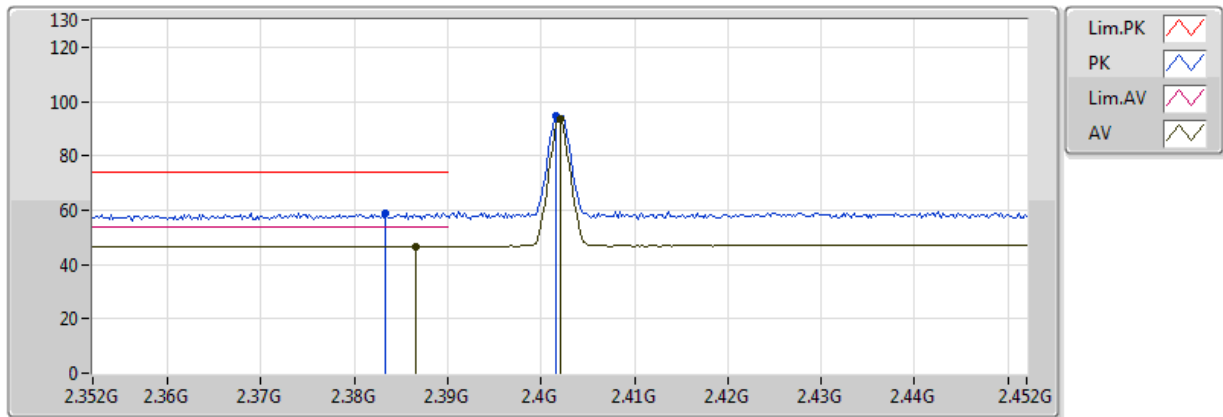
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.959852G	34.08	54.00	-19.92	8.51	3	H	269	1.21	-
PK	4.959768G	47.26	74.00	-26.74	8.51	3	H	269	1.21	-

**For set 4 antenna****Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.483502G	47.36	54.00	-6.64	32.22	3	H	281	1.89	-

BT-LE(1Mbps)

2402MHz_TX

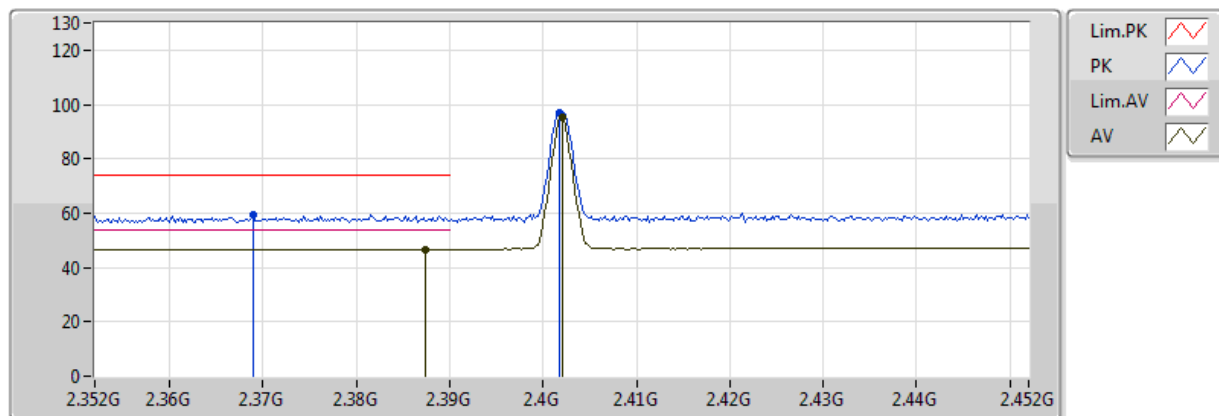


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-WP(Patch/小方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3866G	46.70	54.00	-7.30	31.93	3	V	264	1.49	-
AV	2.402G	93.40	Inf	-Inf	31.98	3	V	264	1.49	-
PK	2.3834G	58.99	74.00	-15.01	31.92	3	V	264	1.49	-
PK	2.4016G	94.96	Inf	-Inf	31.97	3	V	264	1.49	-

BT-LE(1Mbps)

2402MHz_TX

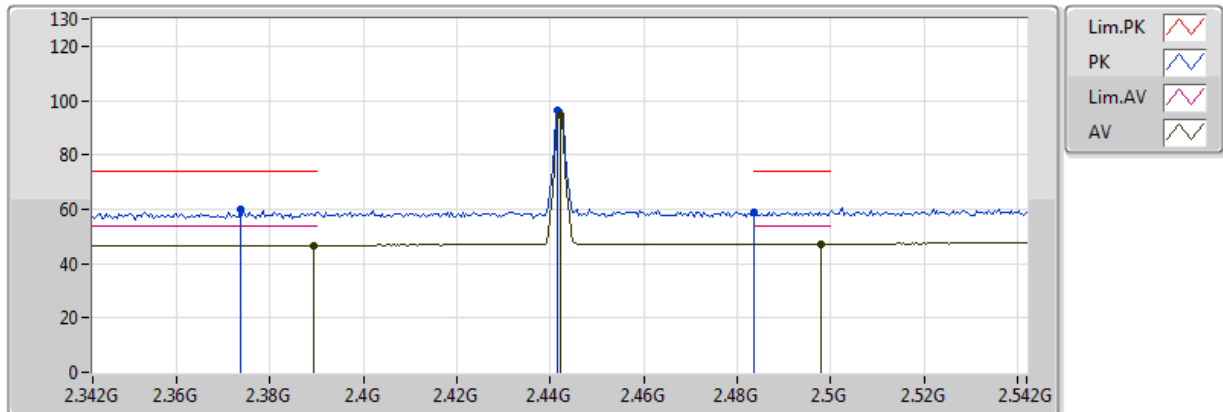


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-WP(Patch/小方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3874G	46.68	54.00	-7.32	31.93	3	H	274	1.06	-
AV	2.402G	95.28	Inf	-Inf	31.98	3	H	274	1.06	-
PK	2.369G	59.41	74.00	-14.59	31.87	3	H	274	1.06	-
PK	2.4018G	96.87	Inf	-Inf	31.98	3	H	274	1.06	-

BT-LE(1Mbps)

2442MHz_TX

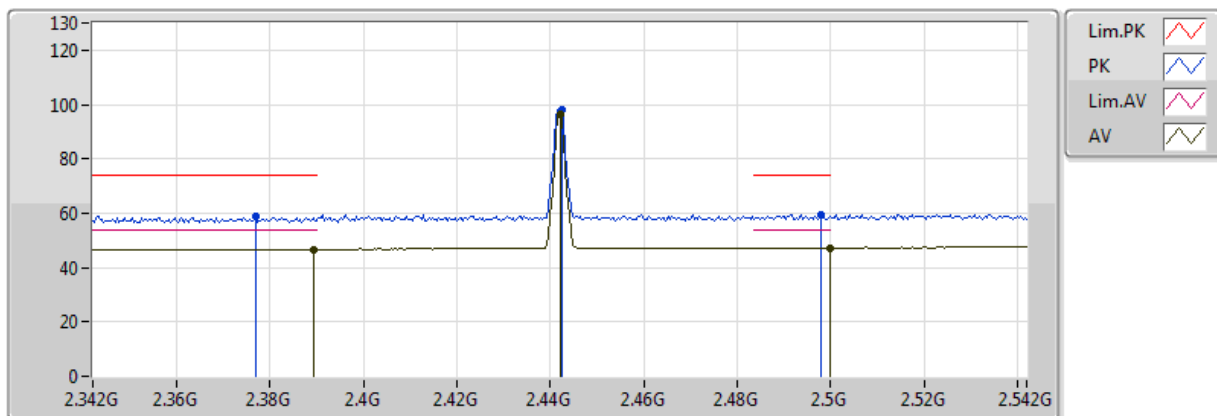


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-WP(Patch/小方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3892G	46.76	54.00	-7.24	31.94	3	V	267	1.16	-
AV	2.442G	94.74	Inf	-Inf	32.10	3	V	267	1.16	-
AV	2.498G	47.21	54.00	-6.79	32.26	3	V	267	1.16	-
PK	2.3736G	60.09	74.00	-13.91	31.89	3	V	267	1.16	-
PK	2.4416G	96.35	Inf	-Inf	32.09	3	V	267	1.16	-
PK	2.4836G	58.90	74.00	-15.10	32.22	3	V	267	1.16	-

BT-LE(1Mbps)

2442MHz_TX

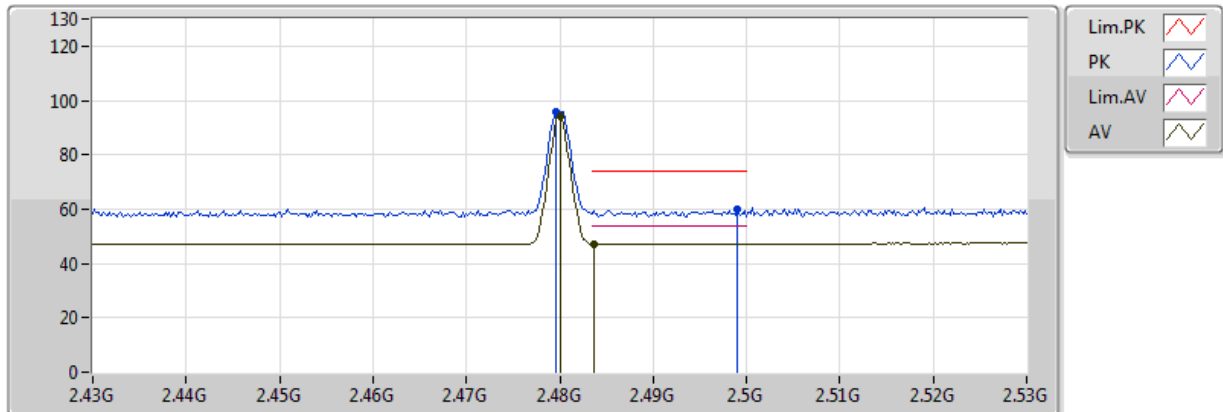


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-WP(Patch/小方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3892G	46.69	54.00	-7.31	31.94	3	H	277	1.73	-
AV	2.442G	96.43	Inf	-Inf	32.10	3	H	277	1.73	-
AV	2.5G	47.32	54.00	-6.68	32.27	3	H	277	1.73	-
PK	2.3768G	58.63	74.00	-15.37	31.90	3	H	277	1.73	-
PK	2.4424G	98.04	Inf	-Inf	32.10	3	H	277	1.73	-
PK	2.498G	59.42	74.00	-14.58	32.26	3	H	277	1.73	-

BT-LE(1Mbps)

2480MHz_TX

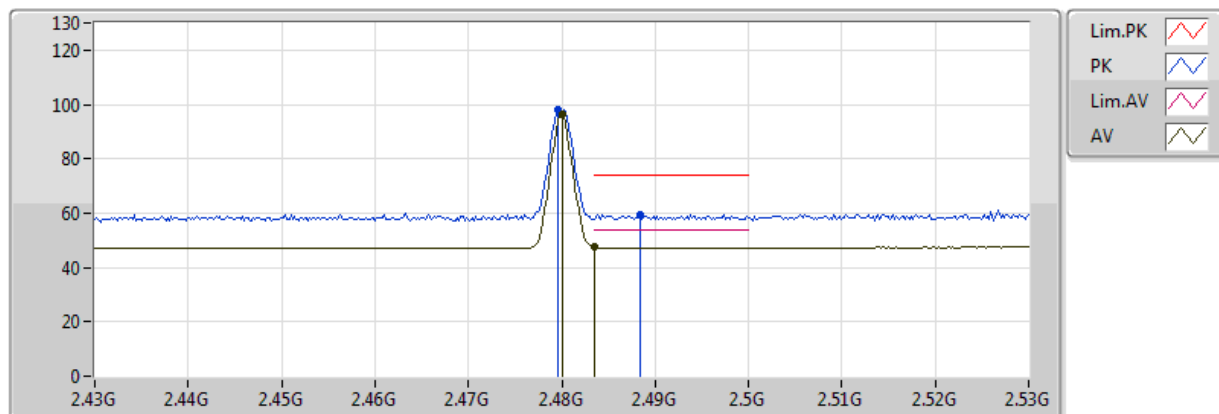


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-WP(Patch/小方)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	94.20	Inf	-Inf	32.21	3	V	269	1.83	-
AV	2.4836G	47.25	54.00	-6.75	32.22	3	V	269	1.83	-
PK	2.4796G	95.90	Inf	-Inf	32.21	3	V	269	1.83	-
PK	2.499G	60.09	74.00	-13.91	32.27	3	V	269	1.83	-

BT-LE(1Mbps)

2480MHz_TX



20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-WP(Patch/小方)

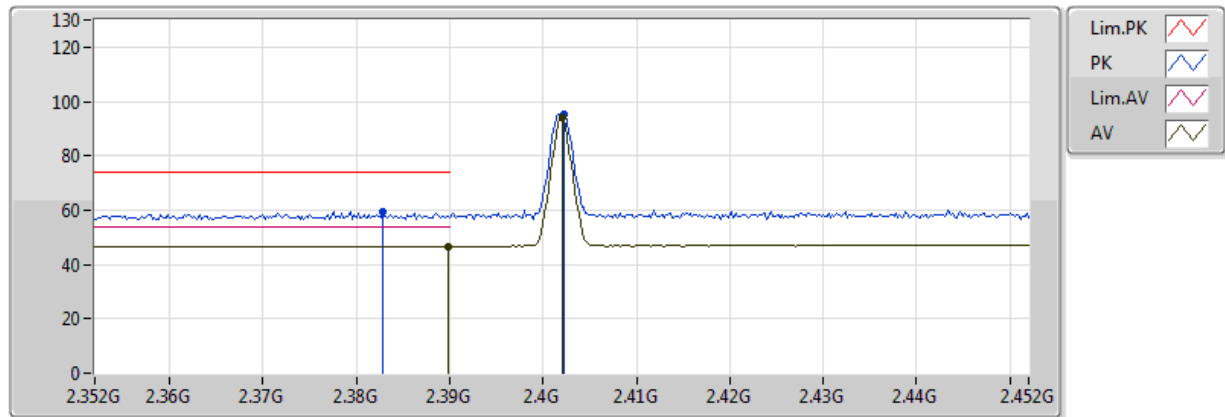
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	96.21	Inf	-Inf	32.21	3	H	281	1.89	-
AV	2.483502G	47.36	54.00	-6.64	32.22	3	H	281	1.89	-
PK	2.4796G	97.93	Inf	-Inf	32.21	3	H	281	1.89	-
PK	2.4884G	59.39	74.00	-14.61	32.24	3	H	281	1.89	-

**For set 5 antenna****Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.5G	47.37	54.00	-6.63	32.27	3	H	333	2.72	-

BT-LE(1Mbps)

2402MHz_TX

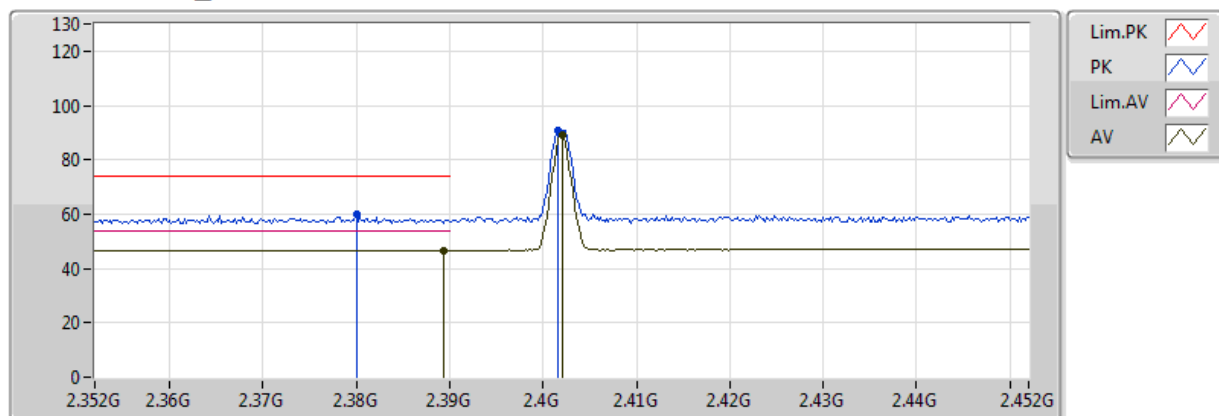


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT omni Skynet-CO

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	46.68	54.00	-7.32	31.94	3	V	11	2.71	-
AV	2.402G	93.86	Inf	-Inf	31.98	3	V	11	2.71	-
PK	2.3828G	59.34	74.00	-14.66	31.92	3	V	11	2.71	-
PK	2.4022G	95.43	Inf	-Inf	31.98	3	V	11	2.71	-

BT-LE(1Mbps)

2402MHz_TX

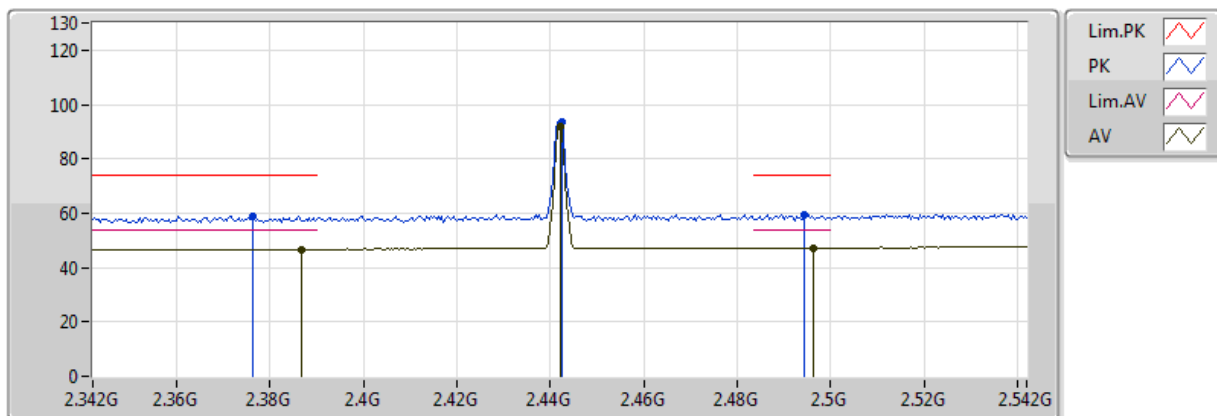


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT omni Skynet-CO

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3894G	46.66	54.00	-7.34	31.94	3	H	317	2.95	-
AV	2.402G	89.34	Inf	-Inf	31.98	3	H	317	2.95	-
PK	2.38G	59.87	74.00	-14.13	31.91	3	H	317	2.95	-
PK	2.4016G	91.05	Inf	-Inf	31.97	3	H	317	2.95	-

BT-LE(1Mbps)

2442MHz_TX

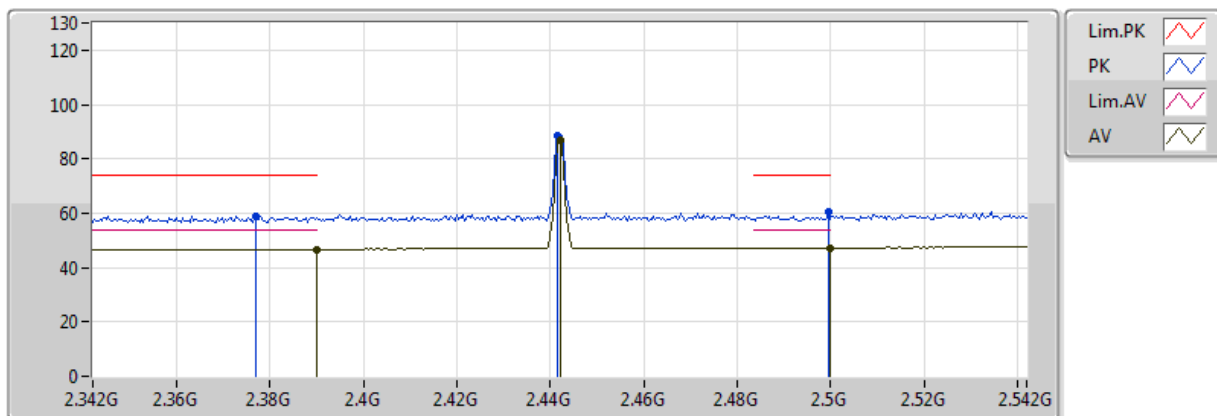


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT omni Skynet-CO

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3868G	46.69	54.00	-7.31	31.93	3	V	285	1.60	-
AV	2.442G	91.79	Inf	-Inf	32.10	3	V	285	1.60	-
AV	2.4964G	47.22	54.00	-6.78	32.26	3	V	285	1.60	-
PK	2.3764G	59.05	74.00	-14.95	31.90	3	V	285	1.60	-
PK	2.4424G	93.35	Inf	-Inf	32.10	3	V	285	1.60	-
PK	2.4944G	59.34	74.00	-14.66	32.25	3	V	285	1.60	-

BT-LE(1Mbps)

2442MHz_TX

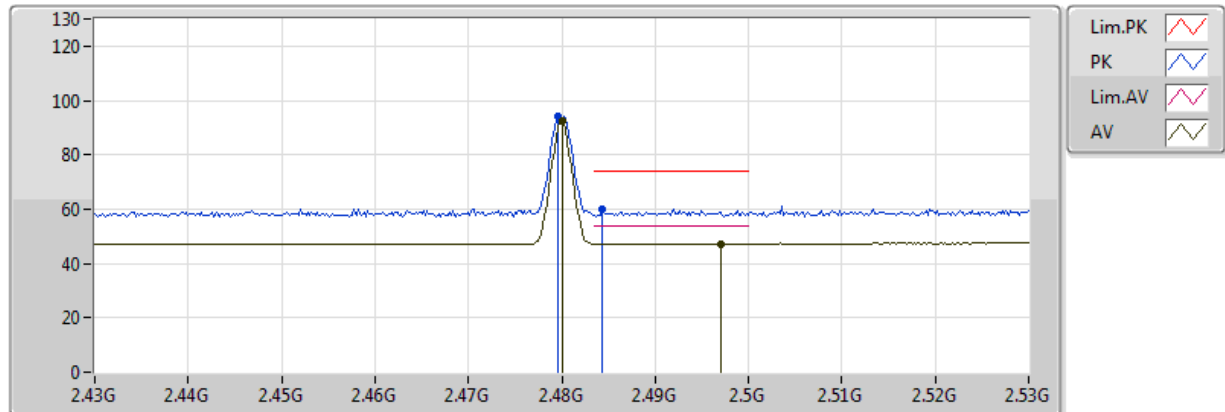


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT omni Skynet-CO

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	46.68	54.00	-7.32	31.94	3	H	190	1.02	-
AV	2.442G	86.75	Inf	-Inf	32.10	3	H	190	1.02	-
AV	2.5G	47.25	54.00	-6.75	32.27	3	H	190	1.02	-
PK	2.3768G	58.99	74.00	-15.01	31.90	3	H	190	1.02	-
PK	2.4416G	88.45	Inf	-Inf	32.09	3	H	190	1.02	-
PK	2.4996G	60.59	74.00	-13.41	32.27	3	H	190	1.02	-

BT-LE(1Mbps)

2480MHz_TX

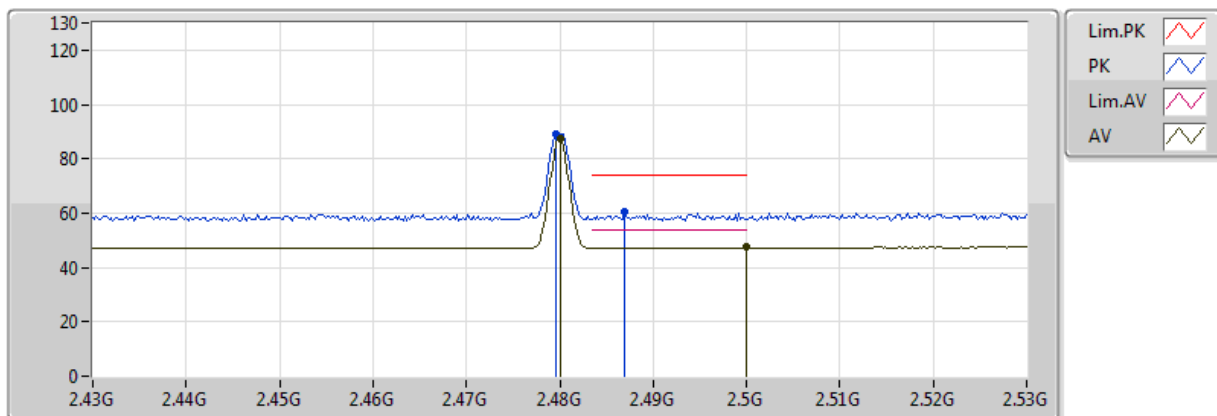


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT omni Skynet-CO

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	92.32	Inf	-Inf	32.21	3	V	292	1.41	-
AV	2.497G	47.27	54.00	-6.73	32.26	3	V	292	1.41	-
PK	2.4796G	94.02	Inf	-Inf	32.21	3	V	292	1.41	-
PK	2.4844G	60.08	74.00	-13.92	32.22	3	V	292	1.41	-

BT-LE(1Mbps)

2480MHz_TX



20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT omni Skynet-CO

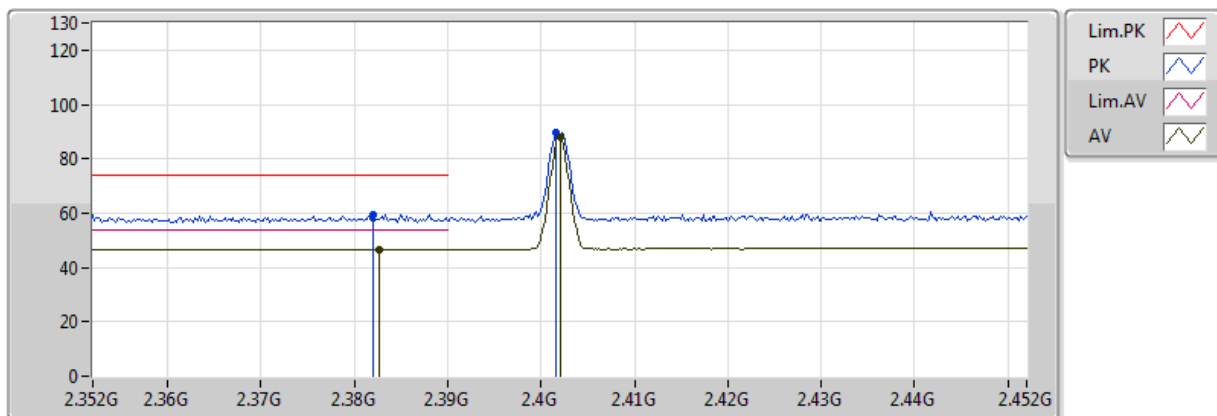
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	87.53	Inf	-Inf	32.21	3	H	333	2.72	-
AV	2.5G	47.37	54.00	-6.63	32.27	3	H	333	2.72	-
PK	2.4796G	89.31	Inf	-Inf	32.21	3	H	333	2.72	-
PK	2.487G	60.25	74.00	-13.75	32.23	3	H	333	2.72	-

**For set 6 antenna****Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.5G	47.34	54.00	-6.66	32.27	3	V	229	1.84	-

BT-LE(1Mbps)

2402MHz_TX

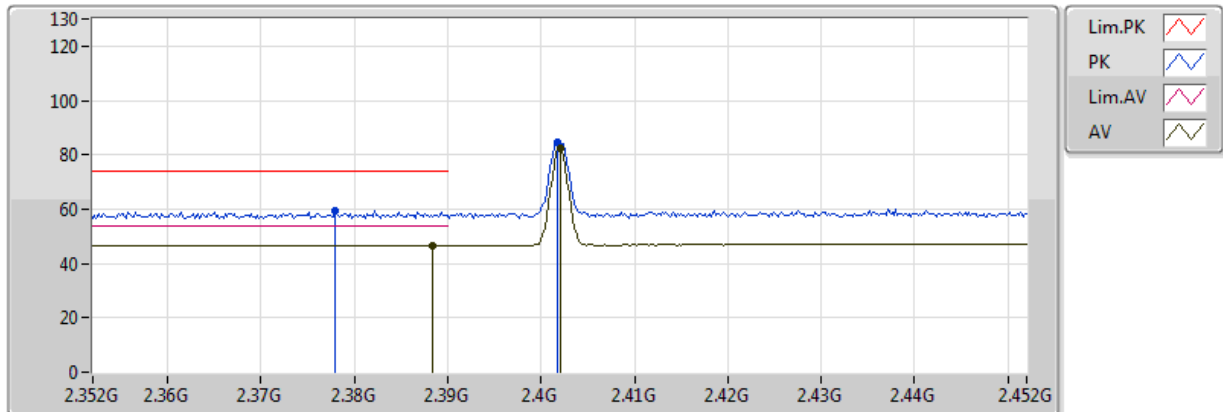


20170722
EUT X 1TX
Default Setting
02-W-3
FSU
ANT Skynet-DTO(Omni/小圖)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3826G	46.67	54.00	-7.33	31.92	3	V	217	2.67	-
AV	2.402G	87.88	Inf	-Inf	31.98	3	V	217	2.67	-
PK	2.382G	59.52	74.00	-14.48	31.91	3	V	217	2.67	-
PK	2.4016G	89.54	Inf	-Inf	31.97	3	V	217	2.67	-

BT-LE(1Mbps)

2402MHz_TX

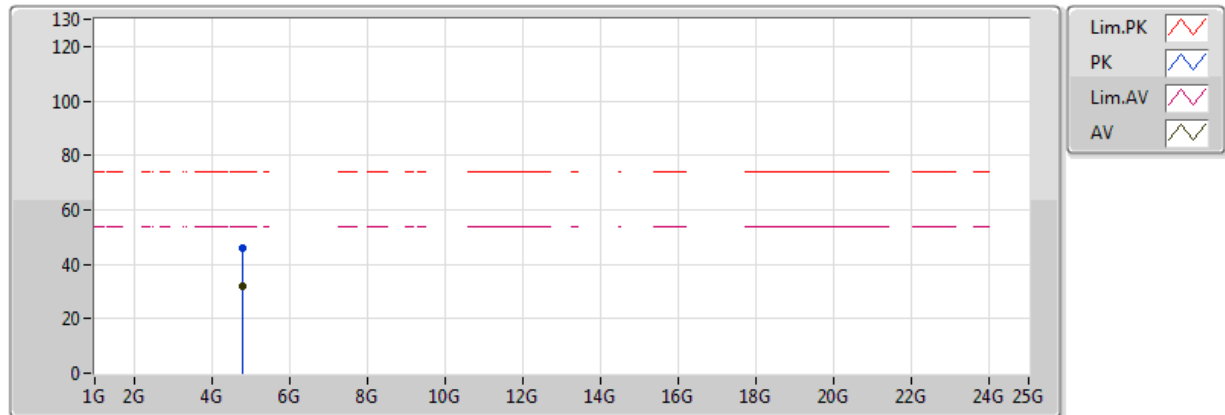


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3884G	46.66	54.00	-7.34	31.93	3	H	231	2.68	-
AV	2.402G	82.54	Inf	-Inf	31.98	3	H	231	2.68	-
PK	2.378G	59.41	74.00	-14.59	31.90	3	H	231	2.68	-
PK	2.4018G	84.34	Inf	-Inf	31.98	3	H	231	2.68	-

BT-LE(1Mbps)

2402MHz_TX

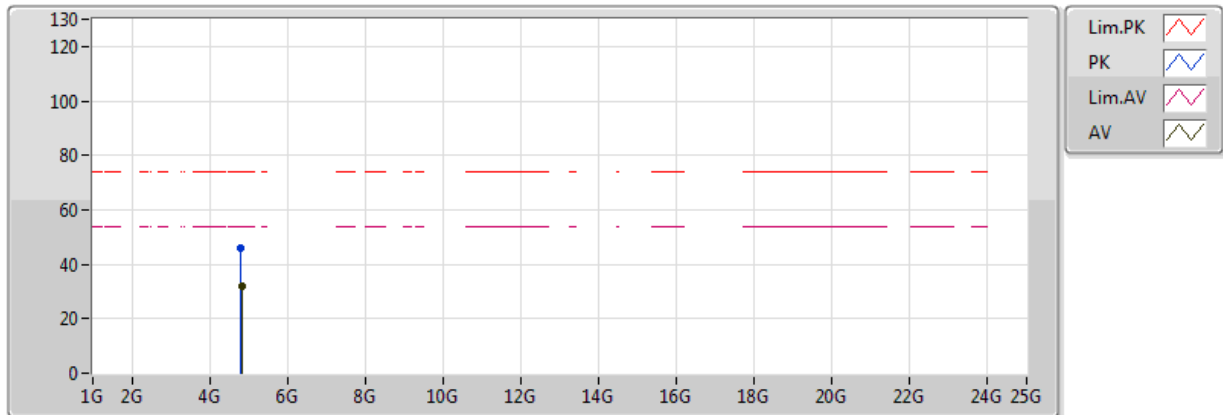


20170829
EUT X1TX
Default Setting
02-J-6
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.80166G	32.11	54.00	-21.89	8.02	3	V	198	1.24	-
PK	4.80664G	46.18	74.00	-27.82	8.03	3	V	198	1.24	-

BT-LE(1Mbps)

2402MHz_TX

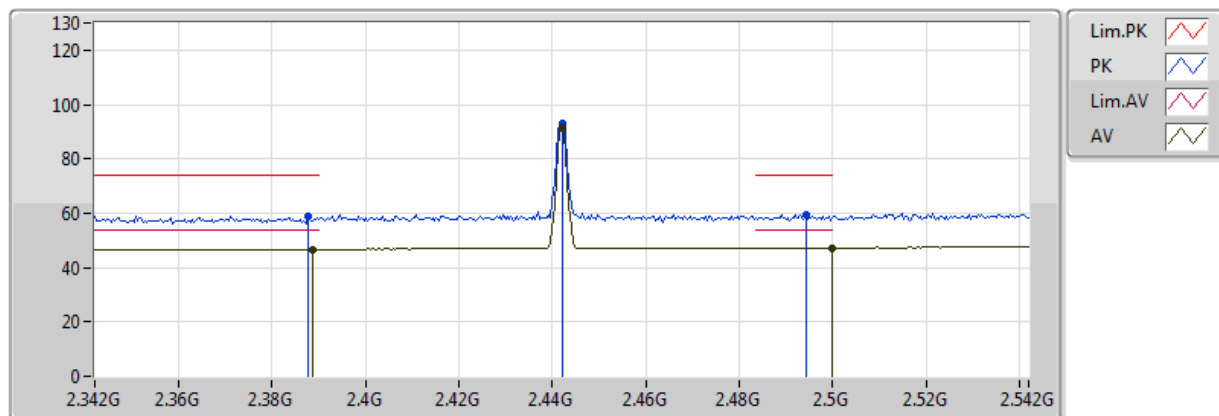


20170829
EUT X1TX
Default Setting
02-J-6
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81858G	32.06	54.00	-21.94	8.07	3	H	78	2.45	-
PK	4.80022G	45.71	74.00	-28.29	8.01	3	H	78	2.45	-

BT-LE(1Mbps)

2442MHz_TX

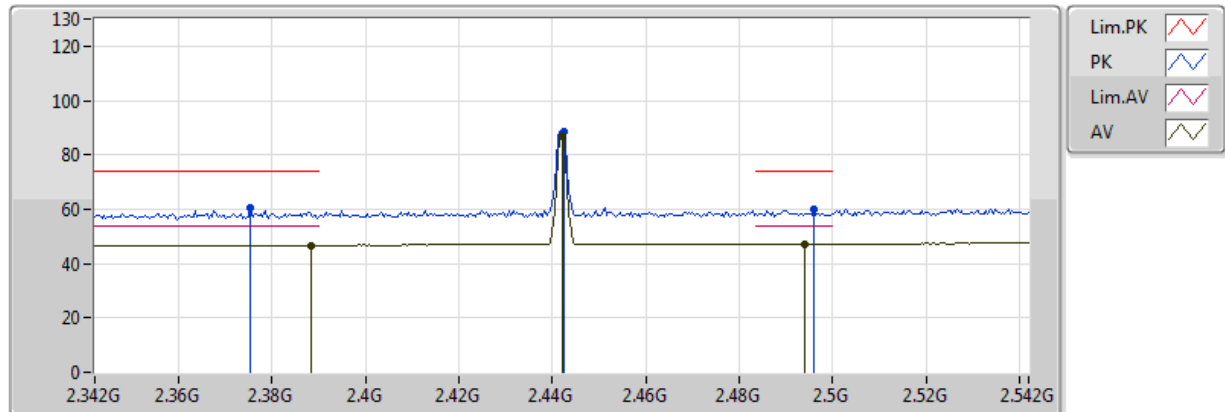


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3888G	46.76	54.00	-7.24	31.94	3	V	221	1.73	-
AV	2.442G	91.17	Inf	-Inf	32.10	3	V	221	1.73	-
AV	2.5G	47.25	54.00	-6.75	32.27	3	V	221	1.73	-
PK	2.3876G	59.10	74.00	-14.90	31.93	3	V	221	1.73	-
PK	2.442G	92.79	Inf	-Inf	32.10	3	V	221	1.73	-
PK	2.4944G	59.48	74.00	-14.52	32.25	3	V	221	1.73	-

BT-LE(1Mbps)

2442MHz_TX

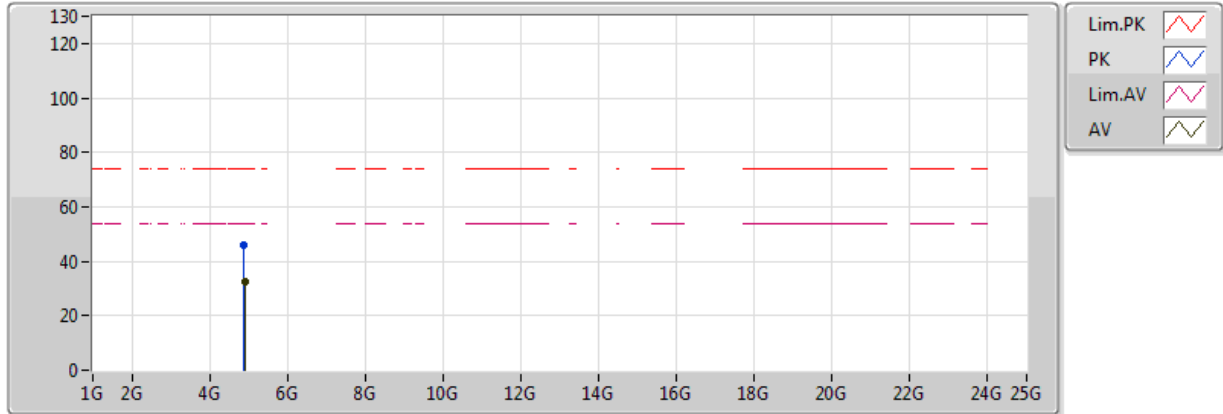


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3884G	46.65	54.00	-7.35	31.93	3	H	263	2.84	-
AV	2.442G	87.10	Inf	-Inf	32.10	3	H	263	2.84	-
AV	2.494G	47.23	54.00	-6.77	32.25	3	H	263	2.84	-
PK	2.3752G	60.72	74.00	-13.28	31.89	3	H	263	2.84	-
PK	2.4424G	88.79	Inf	-Inf	32.10	3	H	263	2.84	-
PK	2.496G	59.68	74.00	-14.32	32.26	3	H	263	2.84	-

BT-LE(1Mbps)

2442MHz_TX

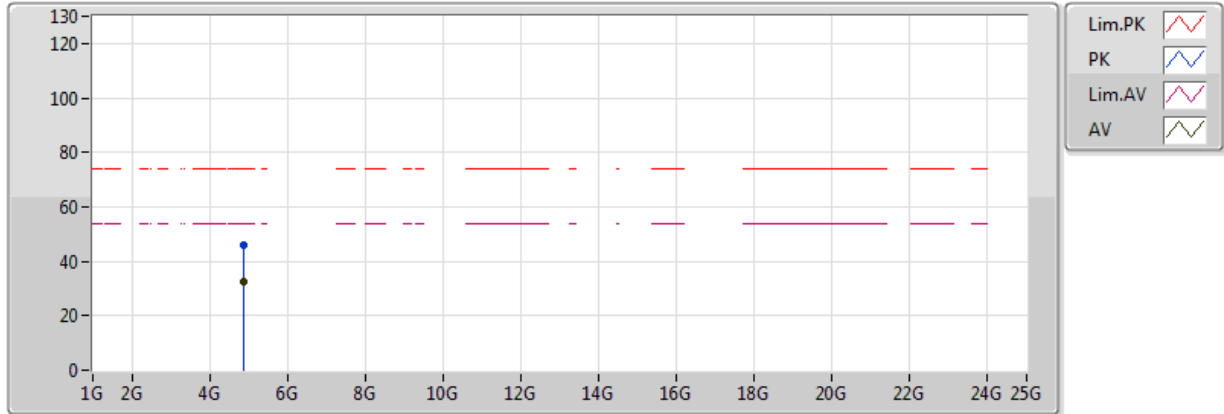


20170829
EUT X1TX
Default Setting
02-J-6
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.89594G	32.32	54.00	-21.68	8.31	3	V	105	2.45	-
PK	4.89222G	45.95	74.00	-28.05	8.30	3	V	105	2.45	-

BT-LE(1Mbps)

2442MHz_TX

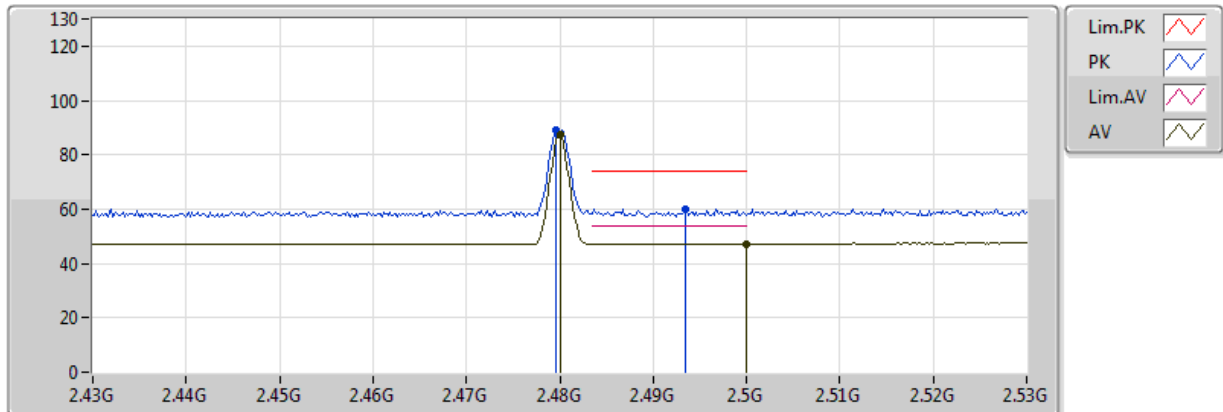


20170829
EUT X1TX
Default Setting
02-J-6
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87308G	32.36	54.00	-21.64	8.24	3	H	137	1.72	-
PK	4.88454G	46.06	74.00	-27.94	8.27	3	H	137	1.72	-

BT-LE(1Mbps)

2480MHz_TX

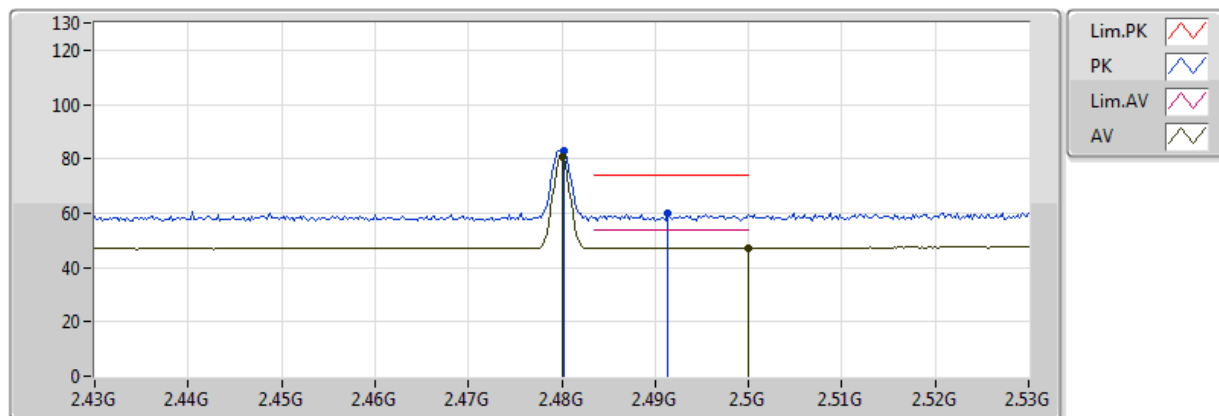


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	87.25	Inf	-Inf	32.21	3	V	229	1.84	-
AV	2.5G	47.34	54.00	-6.66	32.27	3	V	229	1.84	-
PK	2.4796G	89.04	Inf	-Inf	32.21	3	V	229	1.84	-
PK	2.4934G	60.20	74.00	-13.80	32.25	3	V	229	1.84	-

BT-LE(1Mbps)

2480MHz_TX

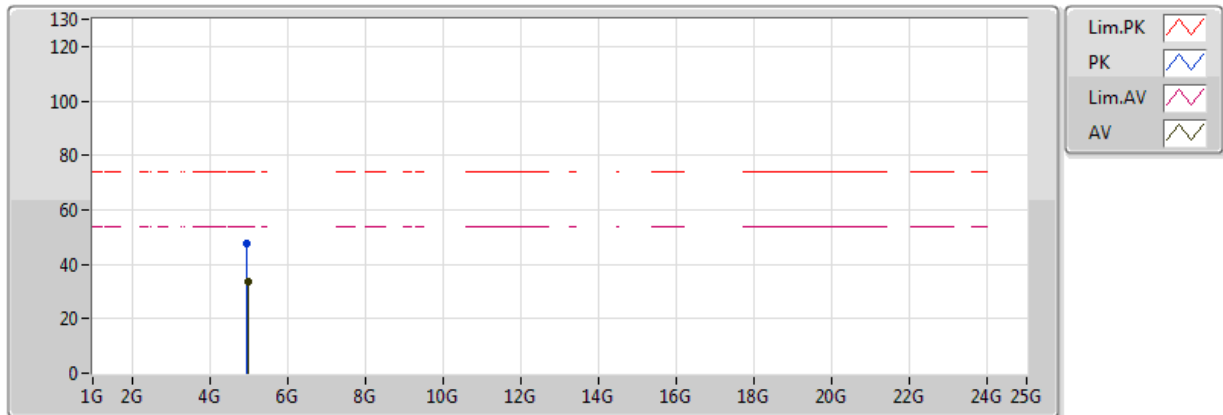


20170722
EUT X1TX
Default Setting
02-W-3
FSU
ANT Skynet-DTO(Omni/1)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	80.96	Inf	-Inf	32.21	3	H	232	2.51	-
AV	2.5G	47.27	54.00	-6.73	32.27	3	H	232	2.51	-
PK	2.4802G	82.94	Inf	-Inf	32.21	3	H	232	2.51	-
PK	2.4914G	59.79	74.00	-14.21	32.24	3	H	232	2.51	-

BT-LE(1Mbps)

2480MHz_TX

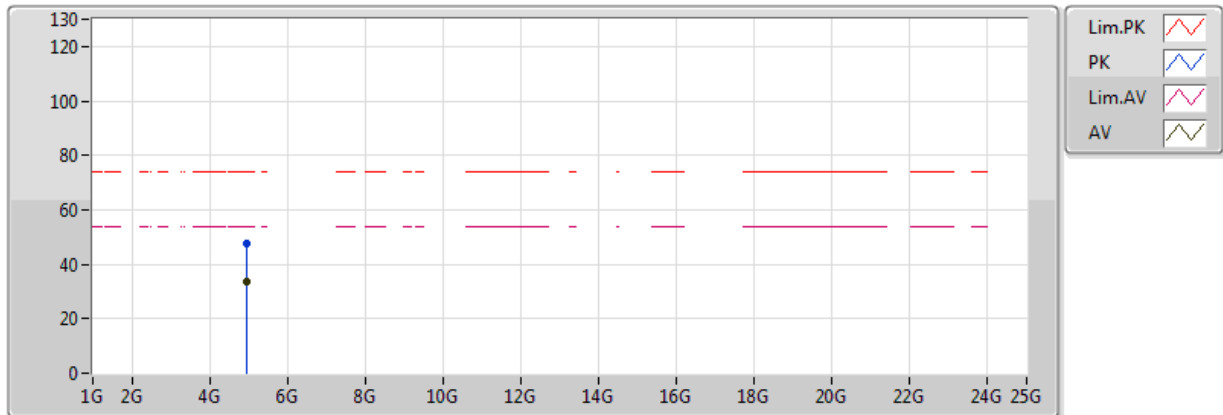


20170829
EUT X1TX
Default Setting
02-J-6
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.97488G	33.41	54.00	-20.59	8.55	3	V	208	1.21	-
PK	4.97308G	47.73	74.00	-26.27	8.55	3	V	208	1.21	-

BT-LE(1Mbps)

2480MHz_TX



20170829
EUT X1TX
Default Setting
02-J-6
FSU
ANT Skynet-DTO(Omni/小国)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.97356G	33.40	54.00	-20.60	8.55	3	H	107	1.77	-
PK	4.9738G	47.55	74.00	-26.45	8.55	3	H	107	1.77	-

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Jan. 22, 2018	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-1 6-2	04083	150kHz~ 00MHz	Dec. 14, 2016	Dec. 13, 2017	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Dec. 20, 2017	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	May 22, 2018	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Aug. 29, 2017	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Jul. 24, 2017	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Jun. 27, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Nov. 21, 2017	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz ~26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz ~26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz ~26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz ~26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Nov. 21, 2017	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

“*” Calibration Interval of instruments listed above is two years.

N.C.R. means Non-Calibration required.