

FCC Test Report

FCC ID : COFHOOKREV3
Equipment : 802.11b/g/n + BT 5.0 IOT Module
Brand Name : USI
Model Name : HOOK-REV3.0
Applicant : Universal Global Scientific Industrial Co., Ltd
141, Lane 351, Sec. 1, Taiping Road., Tsao-tuen,
Nantou 54261, Taiwan
Manufacturer : Universal Global Scientific Industrial Co., Ltd
141, Lane 351, Sec. 1, Taiping Road., Tsao-tuen,
Nantou 54261, Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Nov. 15, 2018, and testing was started from Jan. 24, 2019 and completed on Jan. 25, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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Summary of Test Result

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

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and explanations:

None

Reviewed by: Sam Tsai

Report Producer: Debby Hung

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
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:

- Bluetooth LE uses a GFSK (1Mbps/2Mbps) modulation for DSSS.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	Linx	ANT-2.4-CW-RAH	Monopole Antenna	Reversed-SMA

Ant.	Port	Gain (dBi)	
		2.4G	BT
1	1	-2.4	-2.4

For 2.4 GHz function:

For IEEE 802.11b/g/n mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive simultaneously.

For Bluetooth function:

For Bluetooth mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition			
EUT Power Type	DC Power Source		
EUT Function	☒ Point-to-multipoint	☐ Point-to-point	
Type of EUT			
☒	Stand-alone		
☐	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:		...
☐	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:		...
☐	Other:		

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
BT-LE(1Mbps)	0.632	1.993	395u	3k
BT-LE(2Mbps)	0.594	2.262	1.091m	1k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

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
- ♦ KDB 558074 D01 v05r01

1.3 Testing Location Information

Testing Location			
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	
		TEL : 886-3-327-3456	FAX : 886-3-327-0973
Test site Designation No. TW1190 with FCC.			
☐	JHUBEI	ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.)	
		TEL : 886-3-656-9065	FAX : 886-3-656-9085
Test site Designation No. TW0006 with FCC.			

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Lego	23°C / 54%	25/Jan/2019
RF Conducted	TH01-HY	Clara	22.5°C / 65%	24/Jan/2019
Radiated	03CH09-HY	Kevin	20.4°C / 47%	24/Jan/2019

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)	3.54 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	1.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%
Temperature	0.7 °C	Confidence levels of 95%
Humidity	4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	3.8V

2.2 Test Channel Mode

Test Software	cmd
---------------	-----

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default
BT-LE(2Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	DC Mode ; BT LE(1Mbps)
2	DC Mode ; BT LE(2Mbps)

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	DC Mode ; BT LE(1Mbps)
2	DC Mode ; BT LE(2Mbps)
Operating Mode > 1GHz	CTX
Orthogonal Planes of EUT	Z Plane
	
Worst Planes of EUT	V

2.4 Support Equipment

Support Equipment – AC Conduction				
No.	Equipment	Brand Name	Model Name	FCC ID
1	DC power supply	GW	GPS-3030DD	-
2	Test Fixture	-	-	-
3	Antenna	-	-	-

Note.Support equipment No.3 was provided by customer.

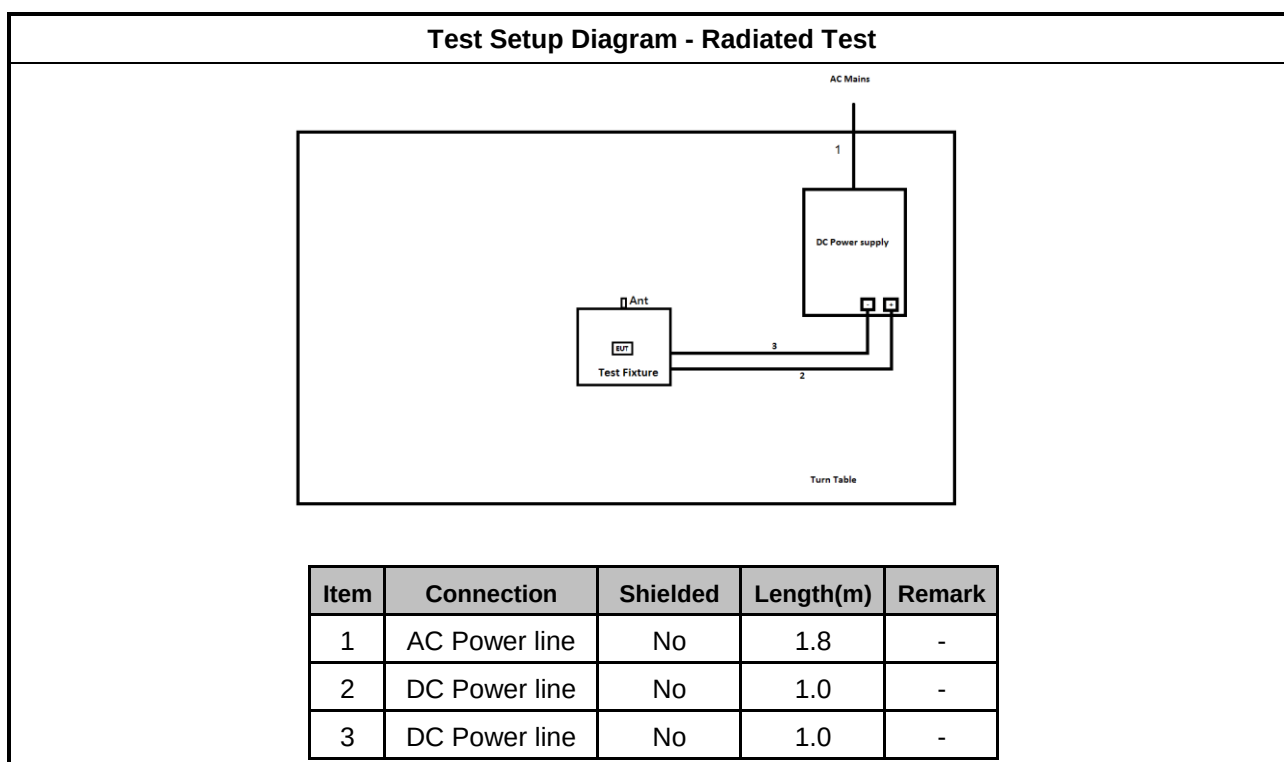
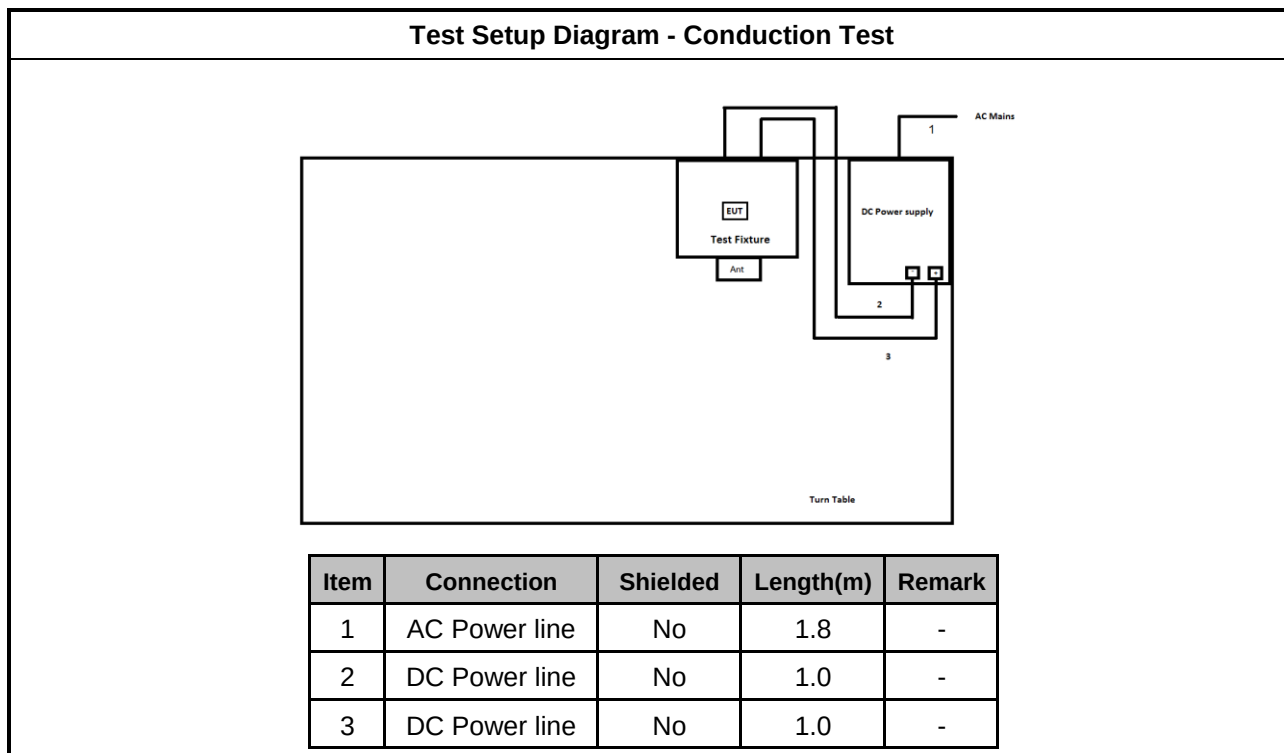
Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	PC	ASUS	D302MT	-
2	Monitor	DELL	VCDTS21553-3P	R35737 / DOC
3	DC Power Supply	GW	GPS-3030DD	-
4	Test Fixture	-	-	-

Note.Support equipment No.1 was provided by customer.

Support Equipment – Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	DC Power Supply	GW	GPS-3030DD	-
2	Test Fixture	-	-	-
3	Antenna	-	-	-

Note.Support equipment No.3 was provided by customer.

2.5 Test Setup Diagram



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.

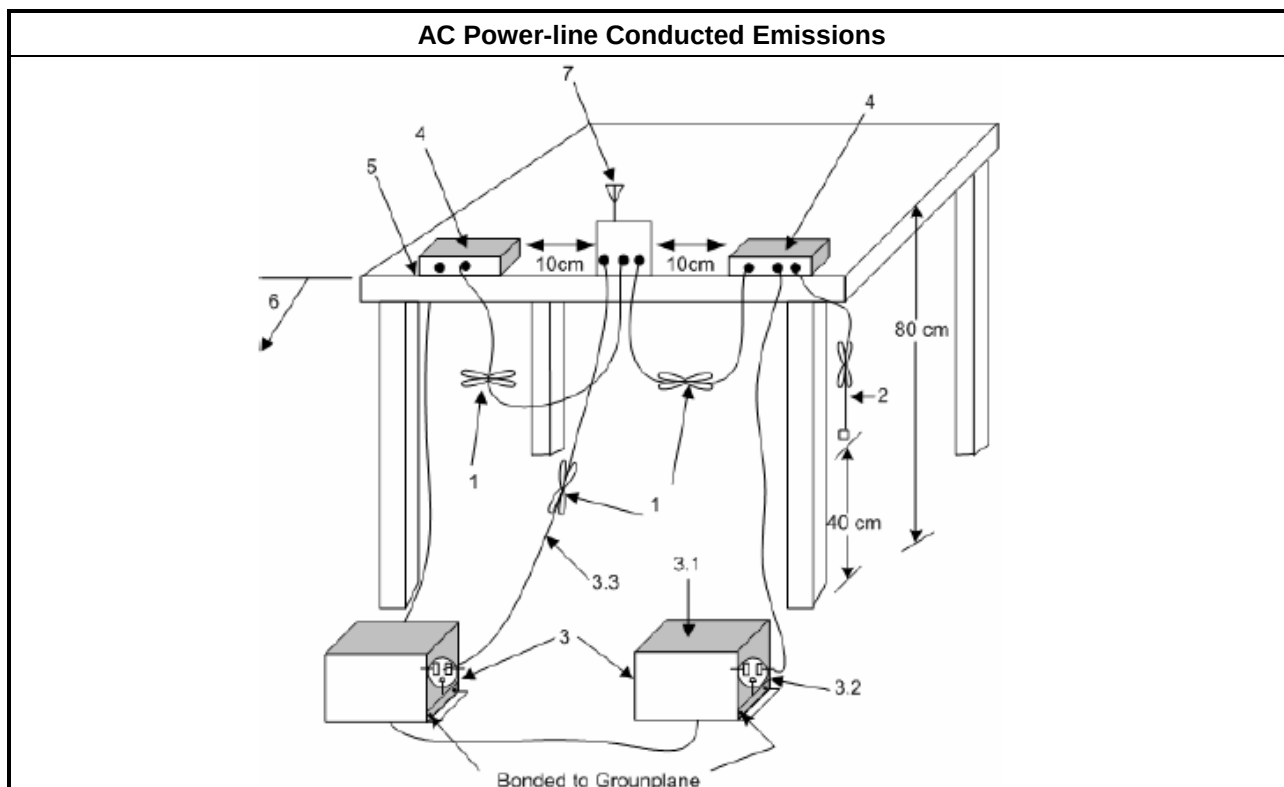
3.1.2 Measuring Instruments

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

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

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

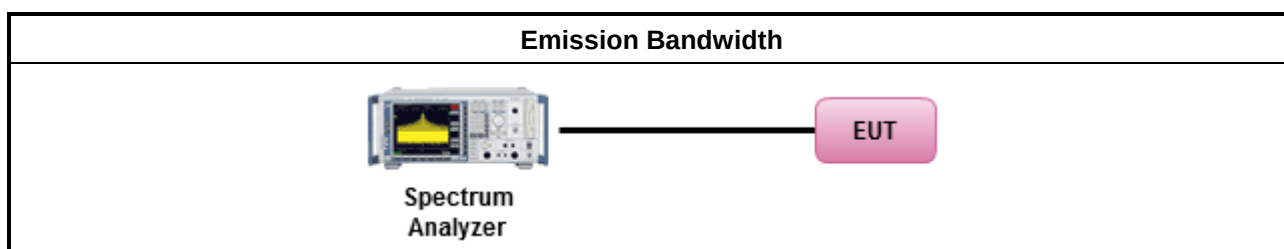
3.2.2 Measuring Instruments

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 KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
☐	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
☐	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

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
e.i.r.p. Power Limit:	
	2400-2483.5 MHz Band
	Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	Smart antenna system (SAS)
	- Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ 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.	

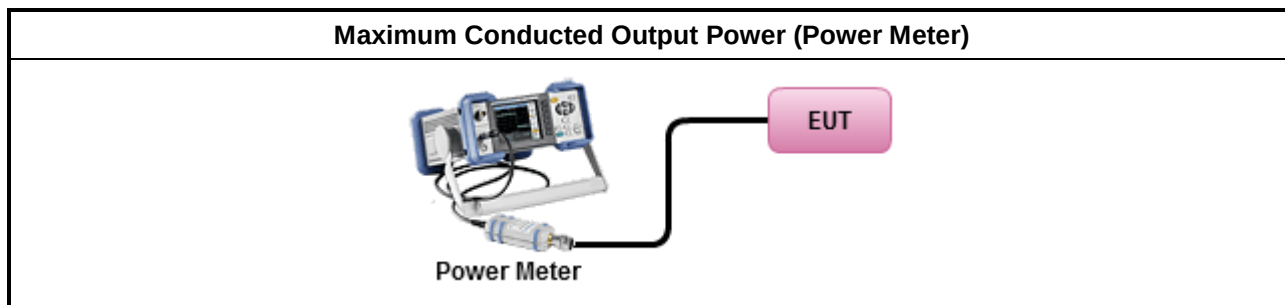
3.3.2 Measuring Instruments

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 KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
☐	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as 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

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

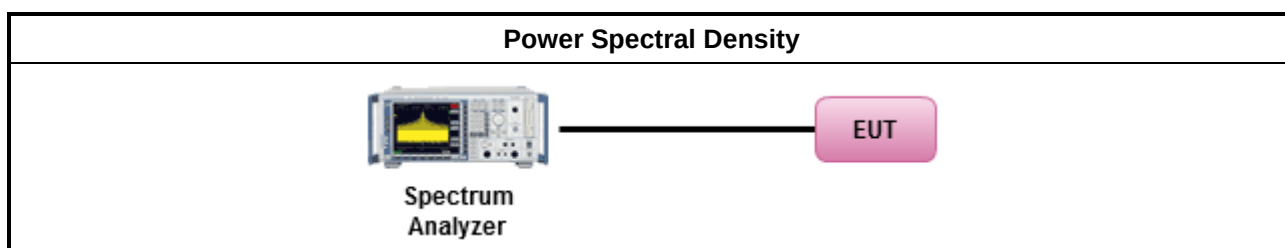
3.4.2 Measuring Instruments

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 KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Method PKPSD.
▪	For conducted measurement.
▪	If The EUT supports multiple transmit chains using options given below:
▪	Measure and sum the spectra across the outputs. Refer as 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.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

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.	

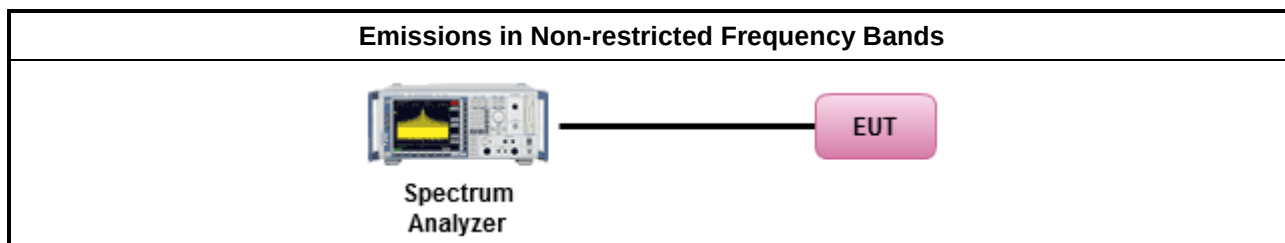
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

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.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

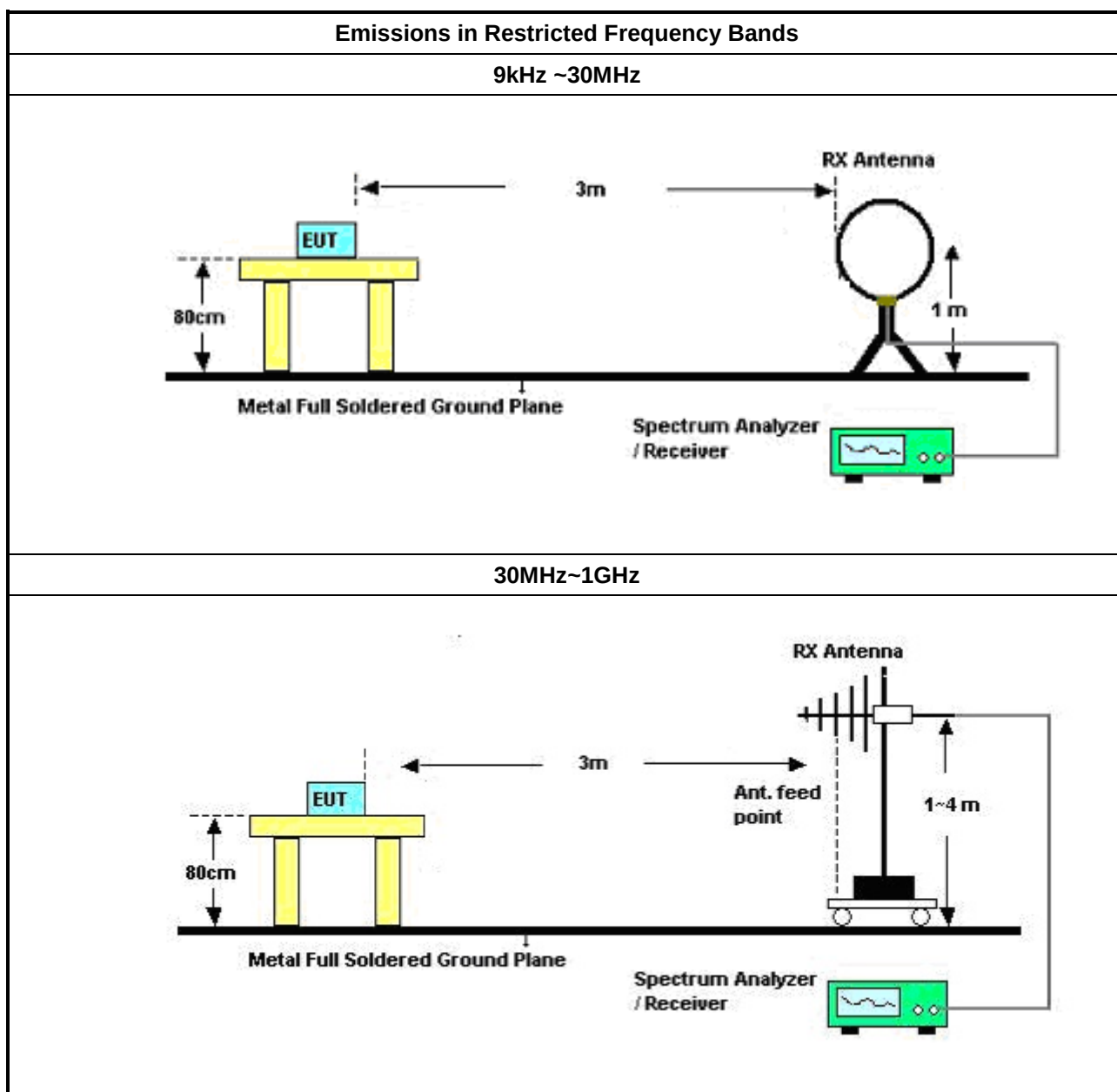
3.6.2 Measuring Instruments

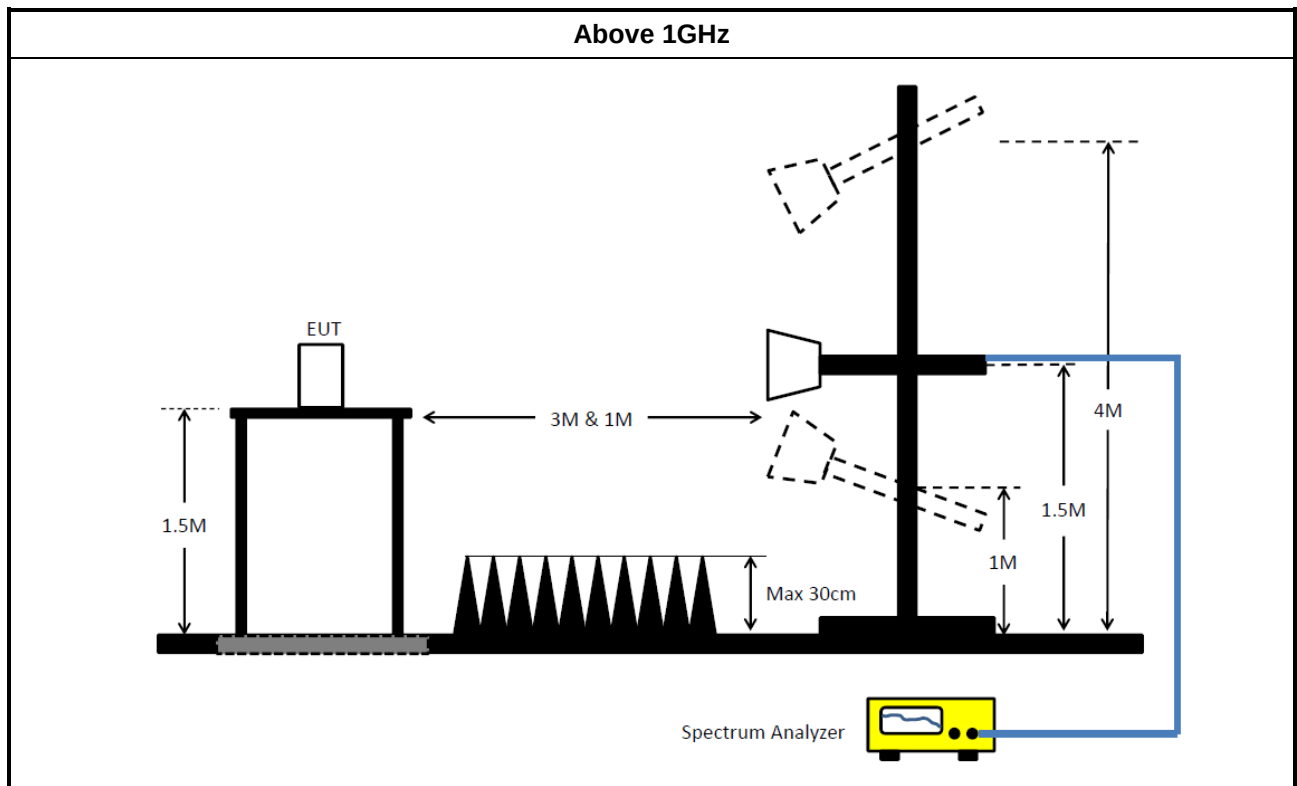
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 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 KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as KDB 558074 clause 8.7.1, 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 KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.

3.6.4 Test Setup





3.6.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV40	101500	10Hz ~ 40GHz	18/Jul/2018	17/Jul/2019
Power Sensor	Anritsu	MA2411B	1339407	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019
Power Meter	Anritsu	ML2495A	1517010	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY12585/4	30MHz ~ 26.5GHz	26/Jan/2018	25/Jan/2019
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10710/4	30MHz ~ 26.5GHz	26/Jan/2018	25/Jan/2019
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30MHz ~ 26.5GHz	26/Jan/2018	25/Jan/2019
Signal Generator	R&S	SMB100A	175727	100kHz~40GHz	26/Oct/2018	25/Oct/2019

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	23/Apr/2018	22/Apr/2019
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	14/Jun/2018	13/Jun/2019
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	10/May/2018	09/May/2019
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	27/Apr/2018	26/Apr/2019
EMI Test Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	10/Apr/2018	09/Apr/2019
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	31/Jul/2018	30/Jul/2019
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D & MTJ6102-05	35418 / 3	30MHz~1GHz	02/Oct/2018	03/Oct/2019
Double Ridged Guide Horn Antenna	SCHWARZBEC K	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBEC K	BBHA 9170	BBHA9170614	18GHz~40GHz	09/Feb/2018	08/Feb/2019
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz ~ 40GHz	24/Aug/2018	23/Aug/2019
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	29/Mar/2018	28/Mar/2019
RF Cable-R03m	Jye Bao	RG142	CB031	9kHz ~ 1GHz	01/Feb/2018	31/Jan/2019
RF Cable-high	HUBER+SUHNER	SUCOFLEX104	SN 556626/4 + 556627	1GHz ~ 40GHz	14/Mar/2018	13/Mar/2019
RF Cable-high	SUHNER	SUCOFLEX104	MY34918/4	1GHz ~ 40GHz	02/Feb/2018	01/Feb/2019

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR	102051	9KHz ~ 3.6GHz	03/May/2018	02/May/2019
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	08/Nov/2018	07/Nov/2019
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	17/Sep/2018	16/Sep/2019
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Puls e Limiter	SCHWARZBEC K	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2018	11/Oct/2019

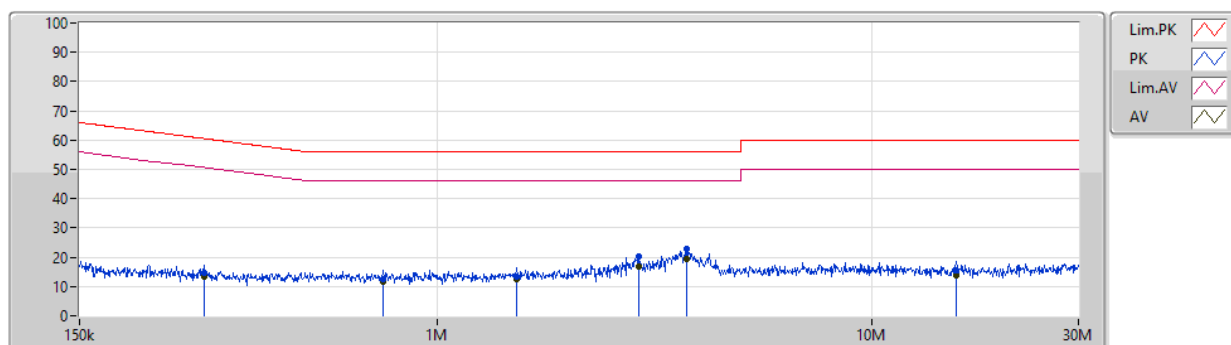
NCR : Non-Calibration Require

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	DC mode_TX LE-1M		

DC Conduction

25/01/2019



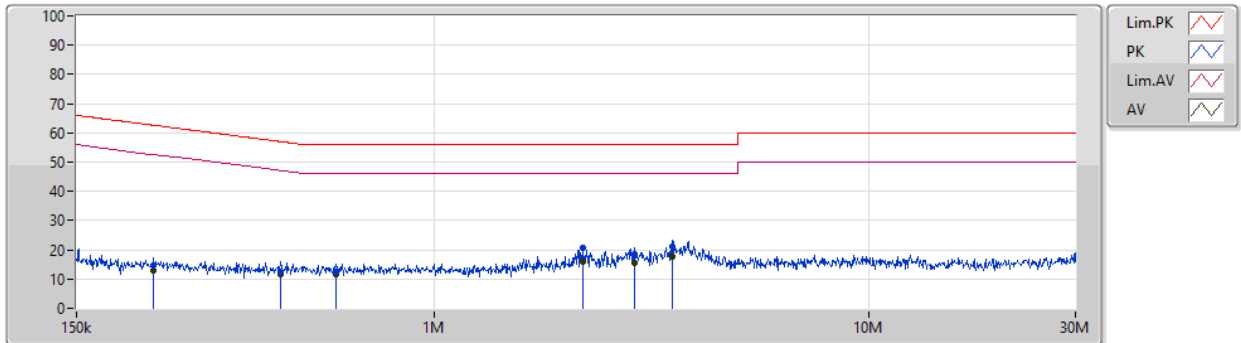
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	289.837k	14.71	60.53	-45.82	19.48	Neutral	-	-4.77	9.59	0.01	9.88			
AV	289.837k	13.21	50.53	-37.32	19.48	Neutral	-	-6.27	9.59	0.01	9.88			
QP	752.508k	12.48	56.00	-43.52	19.49	Neutral	-	-7.01	9.59	0.02	9.88			
AV	752.508k	11.49	46.00	-34.51	19.49	Neutral	-	-8.00	9.59	0.02	9.88			
QP	1.525M	13.35	56.00	-42.65	19.52	Neutral	-	-6.17	9.60	0.03	9.89			
AV	1.525M	12.29	46.00	-33.71	19.52	Neutral	-	-7.23	9.60	0.03	9.89			
QP	2.912M	20.43	56.00	-35.57	19.54	Neutral	-	0.89	9.61	0.04	9.89			
AV	2.912M	16.85	46.00	-29.15	19.54	Neutral	-	-2.69	9.61	0.04	9.89			
QP	3.76M	22.85	56.00	-33.15	19.54	Neutral	-	3.31	9.61	0.04	9.89			
AV	3.76M	19.29	46.00	-26.71	19.54	Neutral	"Worst"	-0.25	9.61	0.04	9.89			
QP	15.699M	15.41	60.00	-44.59	19.67	Neutral	-	-4.26	9.68	0.09	9.90			
AV	15.699M	13.99	50.00	-36.01	19.67	Neutral	-	-5.68	9.68	0.09	9.90			

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	DC mode_TX LE-1M		

DC Conduction

25/01/2019



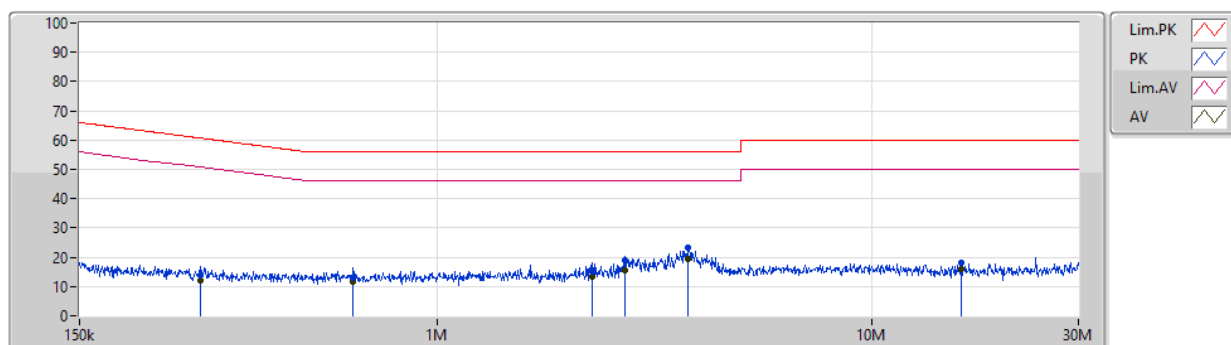
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	225.388k	14.69	62.62	-47.93	19.48	Line	-	-4.79	9.60	0.01	9.87			
AV	225.388k	13.01	52.62	-39.61	19.48	Line	-	-6.47	9.60	0.01	9.87			
QP	442.514k	12.55	57.01	-44.46	19.48	Line	-	-6.93	9.59	0.01	9.88			
AV	442.514k	11.76	47.01	-35.25	19.48	Line	-	-7.72	9.59	0.01	9.88			
QP	592.227k	12.50	56.00	-43.50	19.48	Line	-	-6.98	9.59	0.01	9.88			
AV	592.227k	11.59	46.00	-34.41	19.48	Line	-	-7.89	9.59	0.01	9.88			
QP	2.202M	20.50	56.00	-35.50	19.54	Line	-	0.96	9.62	0.03	9.89			
AV	2.202M	15.84	46.00	-30.16	19.54	Line	-	-3.70	9.62	0.03	9.89			
QP	2.901M	18.65	56.00	-37.35	19.56	Line	-	-0.91	9.63	0.04	9.89			
AV	2.901M	15.72	46.00	-30.28	19.56	Line	-	-3.84	9.63	0.04	9.89			
QP	3.542M	20.95	56.00	-35.05	19.56	Line	-	1.39	9.63	0.04	9.89			
AV	3.542M	17.87	46.00	-28.13	19.56	Line	"Worst"	-1.69	9.63	0.04	9.89			

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	DC mode_TX LE-2M		

DC Conduction

25/01/2019



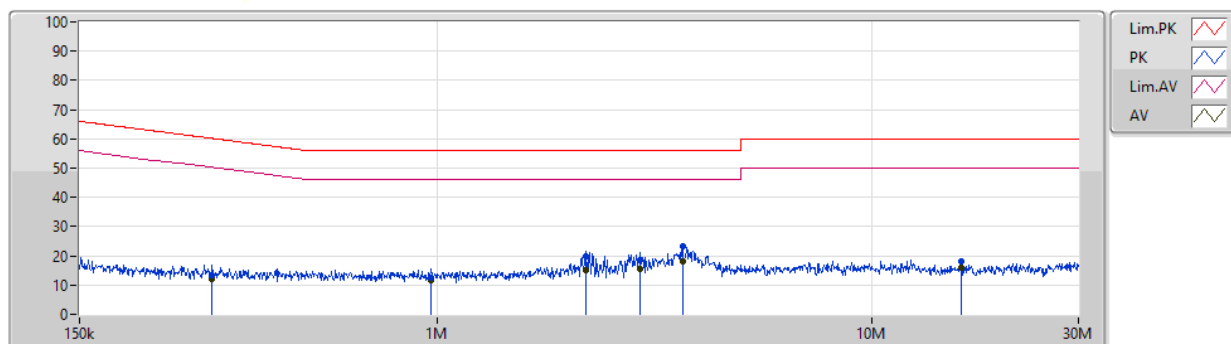
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	284.109k	13.61	60.70	-47.09	19.48	Neutral	-	-5.87	9.59	0.01	9.88			
AV	284.109k	12.14	50.70	-38.56	19.48	Neutral	-	-7.34	9.59	0.01	9.88			
QP	641.45k	12.90	56.00	-43.10	19.48	Neutral	-	-6.58	9.59	0.01	9.88			
AV	641.45k	11.70	46.00	-34.30	19.48	Neutral	-	-7.78	9.59	0.01	9.88			
QP	2.274M	14.89	56.00	-41.11	19.54	Neutral	-	-4.65	9.61	0.04	9.89			
AV	2.274M	13.20	46.00	-32.80	19.54	Neutral	-	-6.34	9.61	0.04	9.89			
QP	2.71M	18.81	56.00	-37.19	19.54	Neutral	-	-0.73	9.61	0.04	9.89			
AV	2.71M	15.65	46.00	-30.35	19.54	Neutral	-	-3.89	9.61	0.04	9.89			
QP	3.79M	23.35	56.00	-32.65	19.54	Neutral	-	3.81	9.61	0.04	9.89			
AV	3.79M	19.31	46.00	-26.69	19.54	Neutral	"Worst"	-0.23	9.61	0.04	9.89			
QP	16.144M	18.00	60.00	-42.00	19.68	Neutral	-	-1.68	9.68	0.10	9.90			
AV	16.144M	15.94	50.00	-34.06	19.68	Neutral	-	-3.74	9.68	0.10	9.90			

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	DC mode_TX LE-2M		

DC Conduction

25/01/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	302.848k	13.33	60.17	-46.84	19.48	Line	-	-6.15	9.59	0.01	9.88			
AV	302.848k	12.06	50.17	-38.11	19.48	Line	-	-7.42	9.59	0.01	9.88			
QP	967.688k	12.58	56.00	-43.42	19.50	Line	-	-6.92	9.60	0.02	9.88			
AV	967.688k	11.56	46.00	-34.44	19.50	Line	-	-7.94	9.60	0.02	9.88			
QP	2.202M	19.71	56.00	-36.29	19.54	Line	-	0.17	9.62	0.03	9.89			
AV	2.202M	15.30	46.00	-30.70	19.54	Line	-	-4.24	9.62	0.03	9.89			
QP	2.936M	18.45	56.00	-37.55	19.56	Line	-	-1.11	9.63	0.04	9.89			
AV	2.936M	15.69	46.00	-30.31	19.56	Line	-	-3.87	9.63	0.04	9.89			
QP	3.671M	23.40	56.00	-32.60	19.56	Line	-	3.84	9.63	0.04	9.89			
AV	3.671M	18.28	46.00	-27.72	19.56	Line	"Worst"	-1.28	9.63	0.04	9.89			
QP	16.144M	18.03	60.00	-41.97	19.64	Line	-	-1.61	9.64	0.10	9.90			
AV	16.144M	16.12	50.00	-33.88	19.64	Line	-	-3.52	9.64	0.10	9.90			

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	1.06M	1.084M	1M08F1D	1.059M	1.073M
BT-LE(2Mbps)	1.108M	2.104M	2M10F1D	1.098M	2.061M

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;

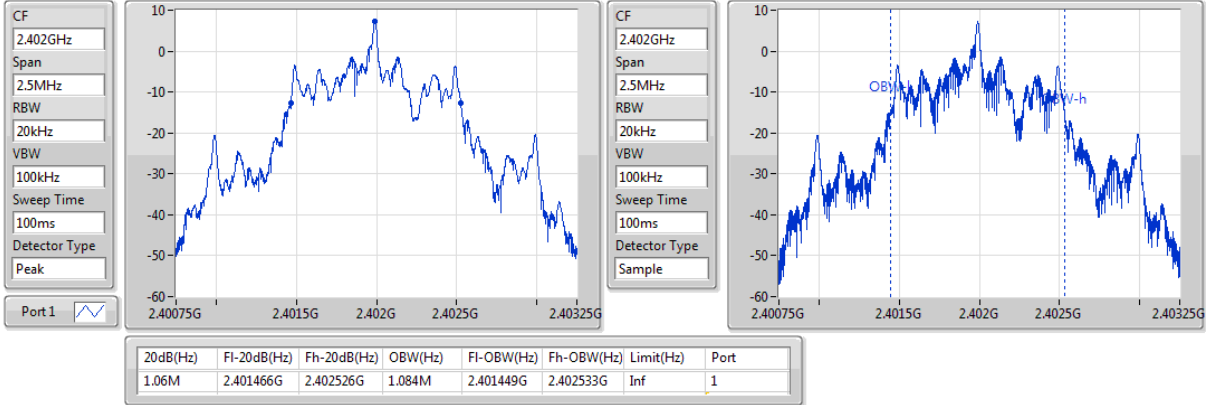
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.06M	1.084M
2440MHz	Pass	Inf	1.06M	1.078M
2480MHz	Pass	Inf	1.059M	1.073M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.108M	2.061M
2440MHz	Pass	500k	1.098M	2.101M
2480MHz	Pass	500k	1.098M	2.104M

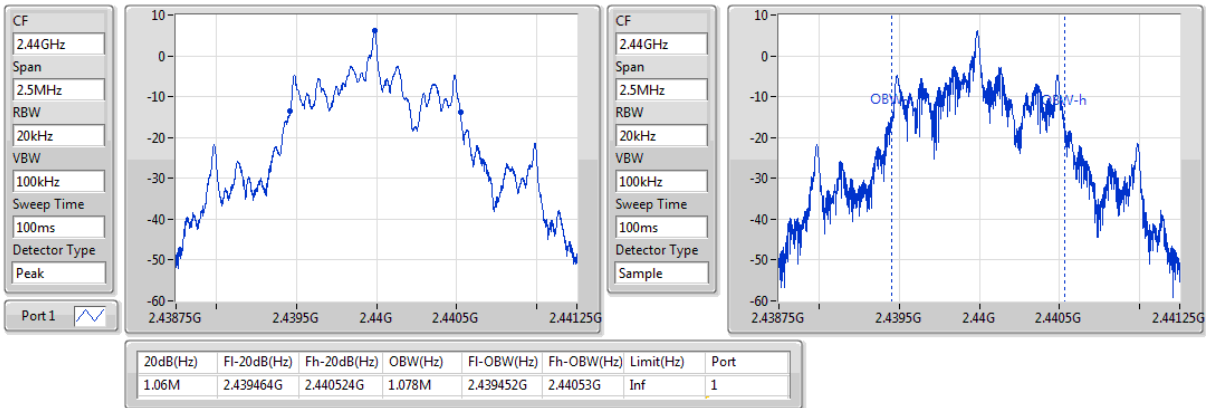
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

BT-LE(1Mbps)
EBW
2402MHz

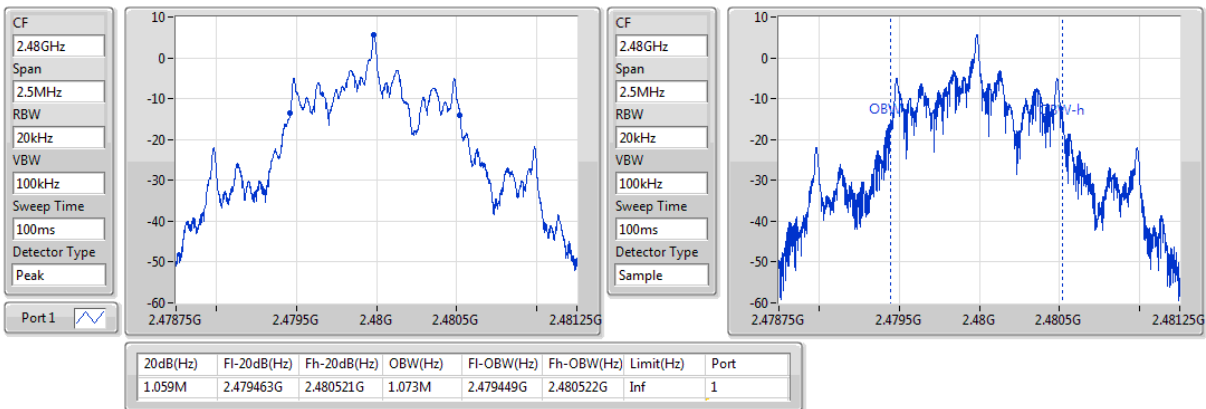
23/11/2018


BT-LE(1Mbps)
EBW
2440MHz

23/11/2018


BT-LE(1Mbps)
EBW
2480MHz

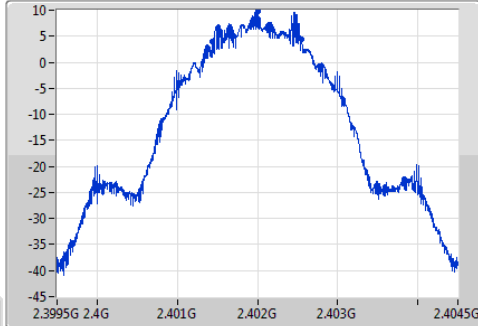
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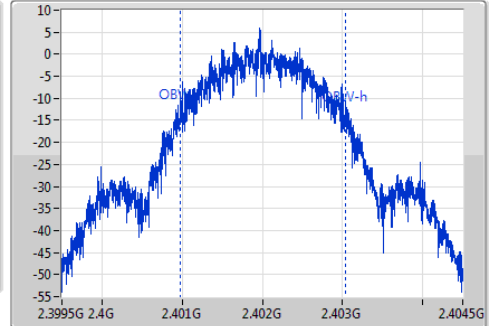
BT-LE(2Mbps)
EBW
2402MHz

23/11/2018

CF
2.402GHz
Span
5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1



CF
2.402GHz
Span
5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Sample
Port 1

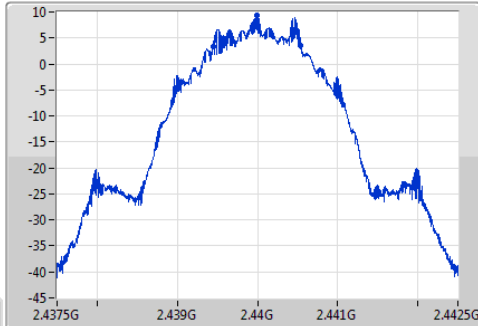


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.108M	2.40144G	2.402548G	2.061M	2.400973G	2.403034G	500k	1

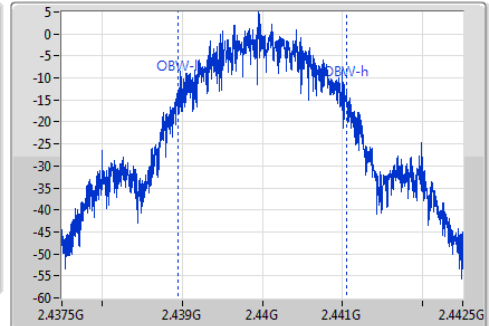
BT-LE(2Mbps)
EBW
2440MHz

23/11/2018

CF
2.44GHz
Span
5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1



CF
2.44GHz
Span
5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Sample
Port 1

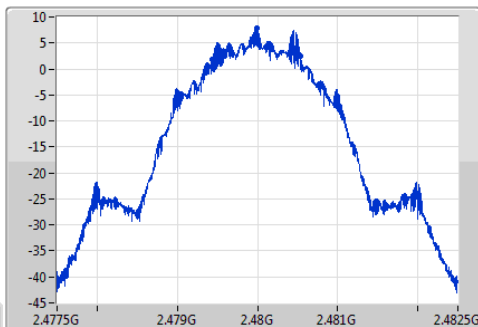


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.098M	2.439445G	2.440543G	2.101M	2.438946G	2.441047G	500k	1

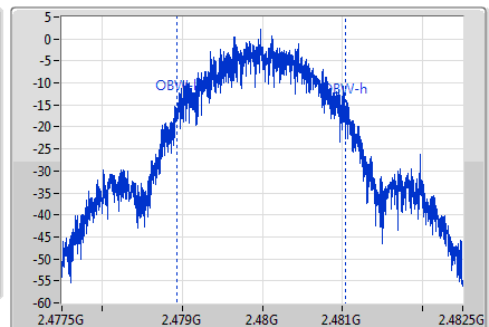
BT-LE(2Mbps)
EBW
2480MHz

23/11/2018

CF
2.48GHz
Span
5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1



CF
2.48GHz
Span
5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Sample
Port 1



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.098M	2.479443G	2.48054G	2.104M	2.478938G	2.481042G	500k	1

**Summary**

Mode	Power	Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	11.34	0.01361
BT-LE(2Mbps)	11.69	0.01476

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	-2.40	11.34	30.00
2440MHz_TnomVnom	Pass	-2.40	9.66	30.00
2480MHz_TnomVnom	Pass	-2.40	10.95	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	-2.40	11.69	30.00
2440MHz_TnomVnom	Pass	-2.40	10.89	30.00
2480MHz_TnomVnom	Pass	-2.40	9.55	30.00

**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	6.10
BT-LE(2Mbps)	-6.35

RBW=3kHz.

Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	-2.40	6.10	8.00
2440MHz	Pass	-2.40	4.94	8.00
2480MHz	Pass	-2.40	4.71	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	-2.40	-6.35	8.00
2440MHz	Pass	-2.40	-7.80	8.00
2480MHz	Pass	-2.40	-10.22	8.00

RBW=3kHz.

BT-LE(1Mbps)

PSD

2402MHz

23/11/2018



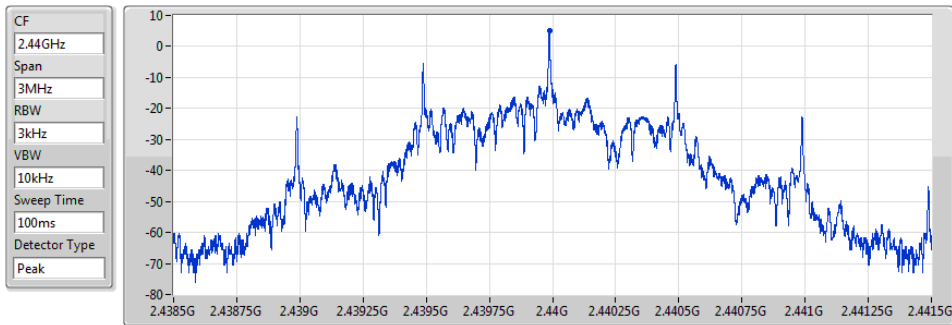
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.10	6.10	6.10

BT-LE(1Mbps)

PSD

2440MHz

23/11/2018



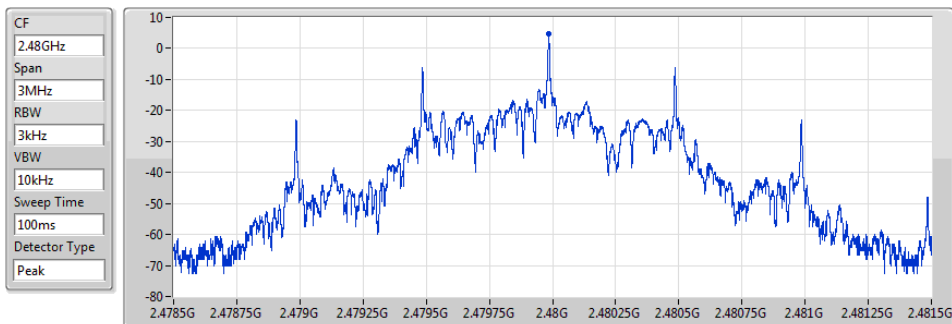
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.94	4.94	4.94

BT-LE(1Mbps)

PSD

2480MHz

23/11/2018



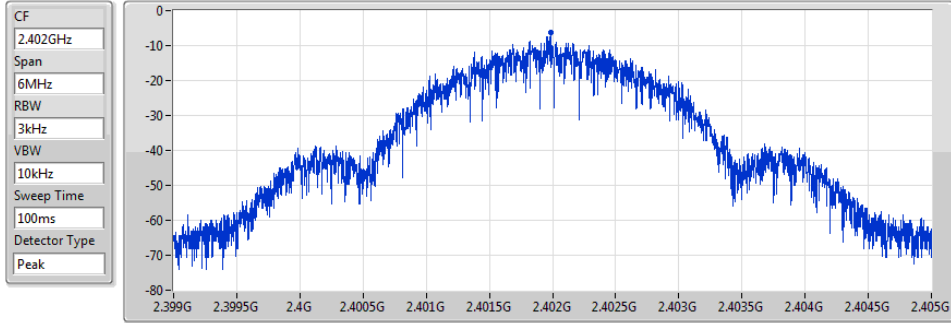
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.71	4.71	4.71

BT-LE(2Mbps)

PSD

2402MHz

23/11/2018



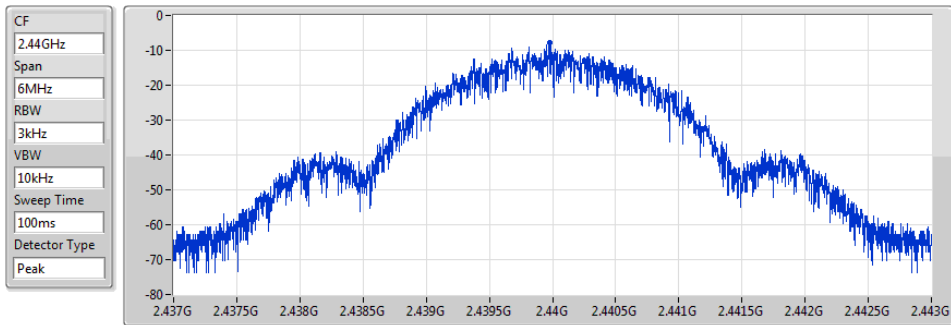
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-6.35	-6.35	-6.35

BT-LE(2Mbps)

PSD

2440MHz

23/11/2018



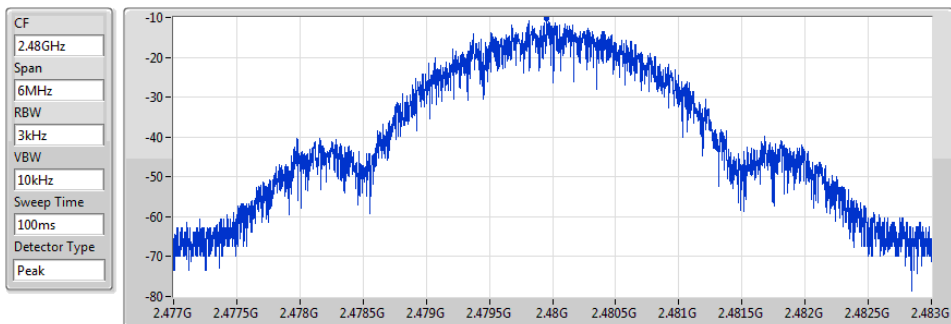
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-7.80	-7.80	-7.80

BT-LE(2Mbps)

PSD

2480MHz

23/11/2018



Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-10.22	-10.22	-10.22

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
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40196G	9.64	-20.36	2.39622G	-51.07	2.39999G	-49.58	2.48401G	-65.24	7.2051G	-53.18	1
BT-LE(2Mbps)	Pass	2.40196G	10.23	-19.77	2.396G	-58.88	2.39998G	-19.85	2.48652G	-65.61	16.44525G	-53.79	1

Result

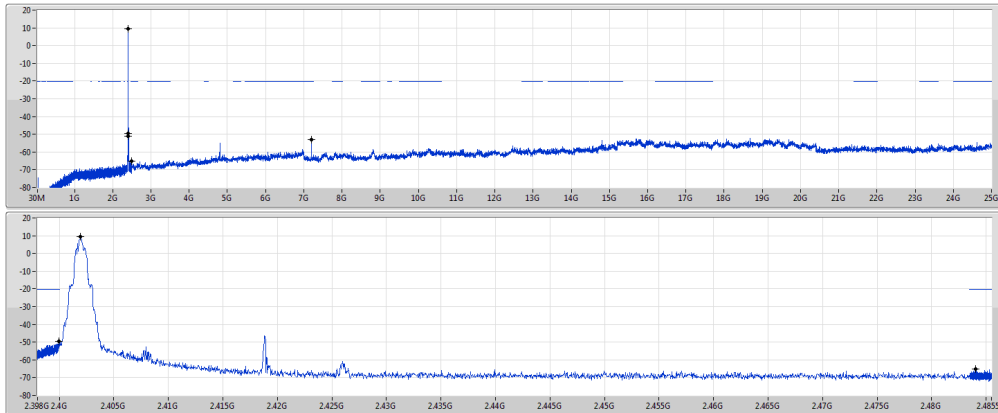
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	9.64	-20.36	2.39622G	-51.07	2.39999G	-49.58	2.48401G	-65.24	7.2051G	-53.18	1
2440MHz	Pass	2.40196G	9.64	-20.36	2.39208G	-66.16	2.39864G	-65.34	2.4837G	-64.34	17.14244G	-52.64	1
2480MHz	Pass	2.40196G	9.64	-20.36	2.17896G	-67.49	2.3992G	-65.34	2.48374G	-55.95	16.4276G	-52.99	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	10.23	-19.77	2.396G	-58.88	2.39998G	-19.85	2.48652G	-65.61	16.44525G	-53.79	1
2440MHz	Pass	2.40196G	10.23	-19.77	49.82M	-67.59	2.39881G	-65.57	2.4839G	-65.21	16.46213G	-53.13	1
2480MHz	Pass	2.40196G	10.23	-19.77	2.07275G	-67.33	2.39864G	-66.68	2.48631G	-54.95	15.26334G	-53.10	1

BT-LE(1Mbps)
2402MHz

CSE NdB

23/11/2018

Port 1



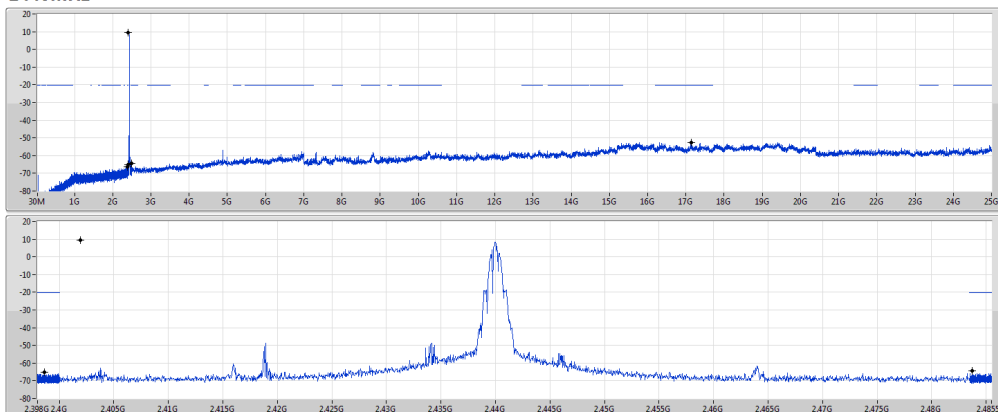
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
240196G	9.64	-20.36	239622G	-51.07	239999G	-49.58	248401G	-65.24	7.2051G	-53.18	1

BT-LE(1Mbps)
2440MHz

CSE NdB

23/11/2018

Port 1



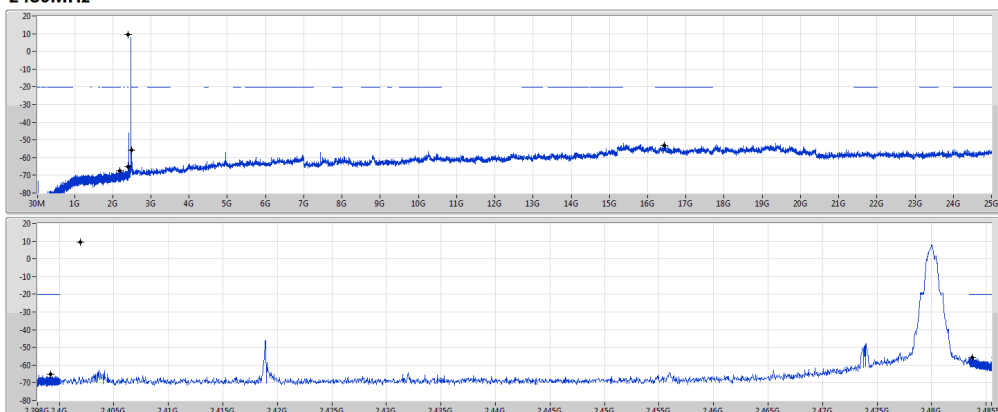
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
240196G	9.64	-20.36	239208G	-66.16	239864G	-65.34	24837G	-64.34	17.14244G	-52.64	1

BT-LE(1Mbps)
2480MHz

CSE NdB

23/11/2018

Port 1



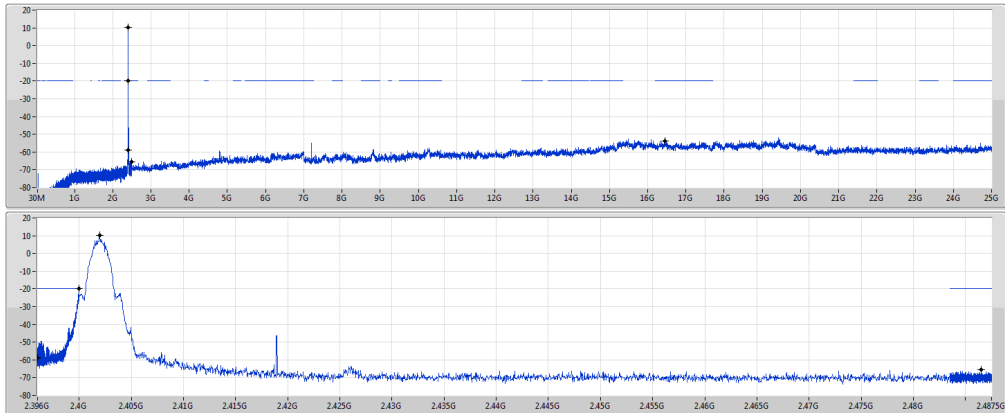
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
240196G	9.64	-20.36	237896G	-67.49	23992G	-65.34	248374G	-55.95	16.4276G	-52.99	1

BT-LE(2Mbps)

2402MHz

CSE NdB

23/11/2018



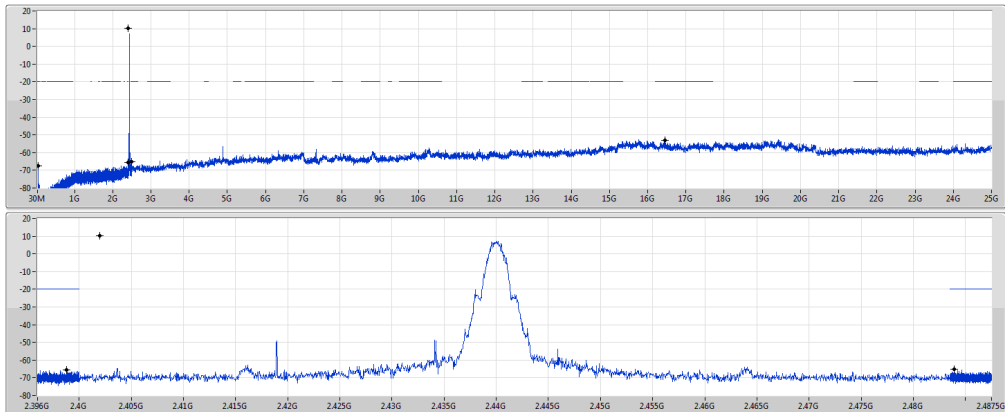
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
240196G	10.23	-19.77	2396G	-88.88	239998G	-19.85	248052G	-65.61	16.44525G	-53.79	1

BT-LE(2Mbps)

2440MHz

CSE NdB

23/11/2018



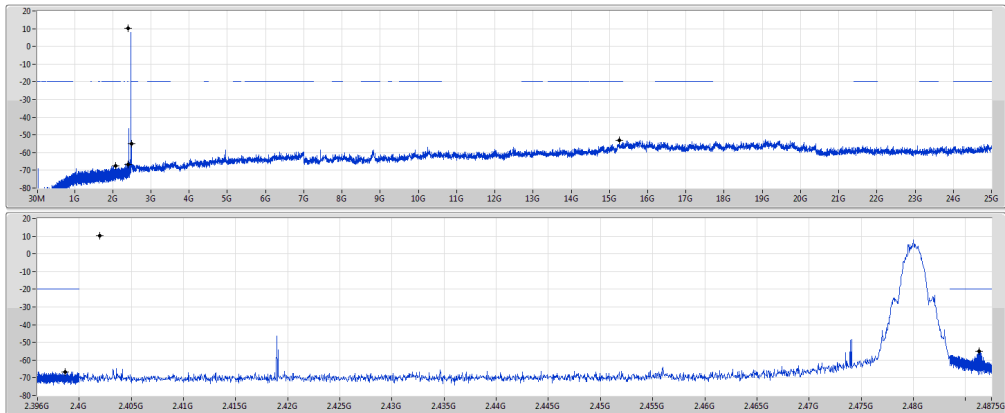
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
240196G	10.23	-19.77	49.82M	-67.59	239881G	-65.57	24839G	-65.21	16.46213G	-53.13	1

BT-LE(2Mbps)

2480MHz

CSE NdB

23/11/2018



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
240196G	10.23	-19.77	207275G	-67.33	239864G	-66.68	248631G	-54.95	15.26334G	-53.10	1

**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	PK	51.34M	22.48	40.00	-17.52	-23.90	3	Vertical	360	3.00	-
BT-LE(2Mbps)	Pass	PK	30M	22.01	40.00	-17.99	-13.40	3	Vertical	0	3.00	-

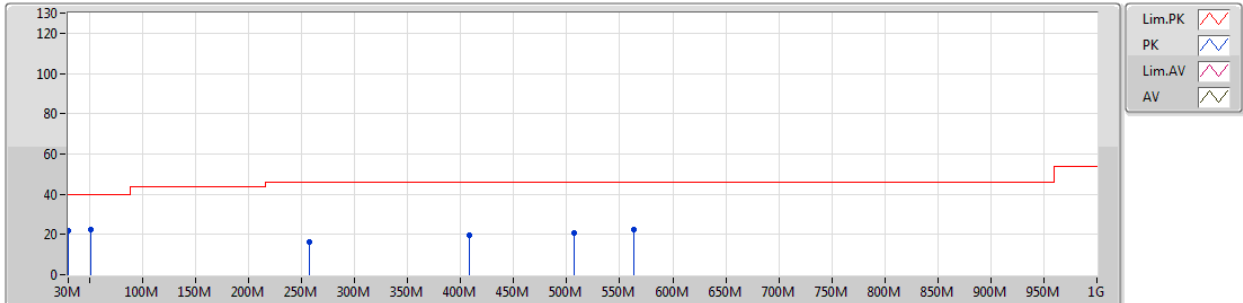
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	21.74	40.00	-18.26	-13.40	3	Vertical	360	3.00	-
2440MHz	Pass	PK	51.34M	22.48	40.00	-17.52	-23.90	3	Vertical	360	3.00	-
2440MHz	Pass	PK	256.98M	16.05	46.00	-29.95	-16.11	3	Vertical	360	3.00	-
2440MHz	Pass	PK	408.3M	19.79	46.00	-26.21	-13.68	3	Vertical	360	3.00	-
2440MHz	Pass	PK	507.24M	20.72	46.00	-25.28	-12.11	3	Vertical	360	3.00	-
2440MHz	Pass	PK	563.5M	22.46	46.00	-23.54	-10.41	3	Vertical	360	3.00	-
2440MHz	Pass	PK	30M	20.18	40.00	-19.82	-13.40	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	152.22M	12.95	43.50	-30.55	-19.58	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	258.92M	16.28	46.00	-29.72	-15.81	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	421.88M	18.74	46.00	-27.26	-13.21	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	544.1M	22.22	46.00	-23.78	-11.68	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	625.58M	23.47	46.00	-22.53	-10.19	3	Horizontal	0	3.00	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	22.01	40.00	-17.99	-13.40	3	Vertical	0	3.00	-
2440MHz	Pass	PK	55.22M	21.18	40.00	-18.82	-25.17	3	Vertical	0	3.00	-
2440MHz	Pass	PK	249.22M	17.40	46.00	-28.60	-17.26	3	Vertical	0	3.00	-
2440MHz	Pass	PK	412.18M	19.94	46.00	-26.06	-13.54	3	Vertical	0	3.00	-
2440MHz	Pass	PK	509.18M	21.22	46.00	-24.78	-12.12	3	Vertical	0	3.00	-
2440MHz	Pass	PK	625.58M	22.77	46.00	-23.23	-10.19	3	Vertical	0	3.00	-
2440MHz	Pass	PK	30M	19.28	40.00	-20.72	-13.40	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	128.94M	13.16	43.50	-30.34	-19.18	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	266.68M	16.29	46.00	-29.71	-16.12	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	388.9M	18.38	46.00	-27.62	-14.43	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	516.94M	20.59	46.00	-25.41	-12.12	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	590.66M	22.36	46.00	-23.64	-10.94	3	Horizontal	360	3.00	-

BT-LE(1Mbps)

23/01/2019

2440MHz_DC Power Supply

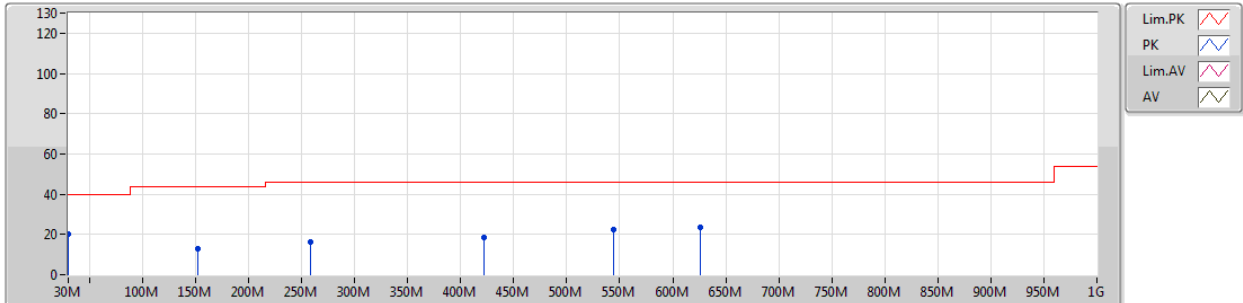


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	30M	21.74	40.00	-18.26	-13.40	3	Vertical	360	3.00	-
PK	51.34M	22.48	40.00	-17.52	-23.90	3	Vertical	360	3.00	-
PK	256.98M	16.05	46.00	-29.95	-16.11	3	Vertical	360	3.00	-
PK	408.3M	19.79	46.00	-26.21	-13.68	3	Vertical	360	3.00	-
PK	507.24M	20.72	46.00	-25.28	-12.11	3	Vertical	360	3.00	-
PK	563.5M	22.46	46.00	-23.54	-10.41	3	Vertical	360	3.00	-

BT-LE(1Mbps)

23/01/2019

2440MHz_DC Power Supply

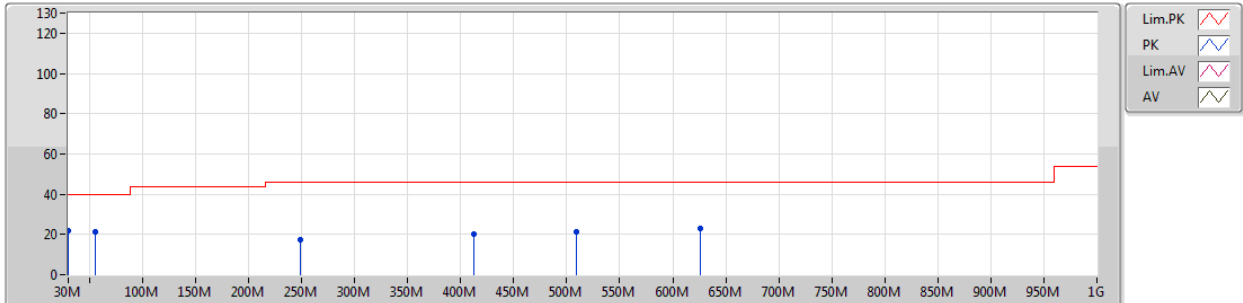


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	30M	20.18	40.00	-19.82	-13.40	3	Horizontal	0	3.00	-
PK	152.22M	12.95	43.50	-30.55	-19.58	3	Horizontal	0	3.00	-
PK	258.92M	16.28	46.00	-29.72	-15.81	3	Horizontal	0	3.00	-
PK	421.88M	18.74	46.00	-27.26	-13.21	3	Horizontal	0	3.00	-
PK	544.1M	22.22	46.00	-23.78	-11.68	3	Horizontal	0	3.00	-
PK	625.58M	23.47	46.00	-22.53	-10.19	3	Horizontal	0	3.00	-

BT-LE(2Mbps)

2440MHz_DC Power Supply

23/01/2019

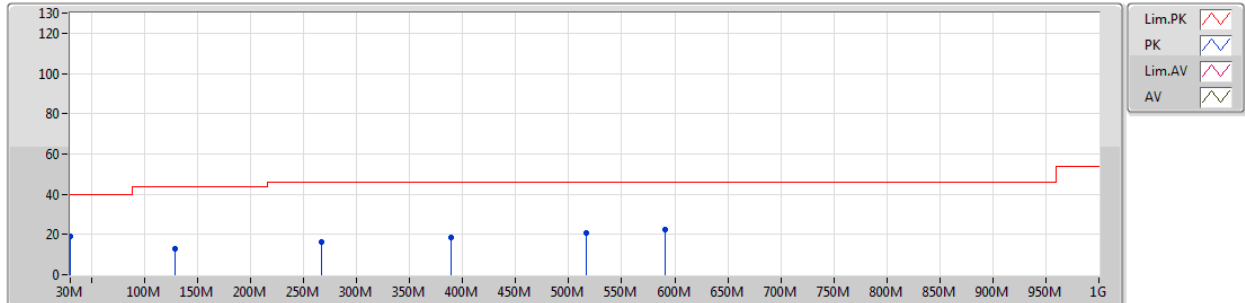


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	30M	22.01	40.00	-17.99	-13.40	3	Vertical	0	3.00	-
PK	55.22M	21.18	40.00	-18.82	-25.17	3	Vertical	0	3.00	-
PK	249.22M	17.40	46.00	-28.60	-17.26	3	Vertical	0	3.00	-
PK	412.18M	19.94	46.00	-26.06	-13.54	3	Vertical	0	3.00	-
PK	509.18M	21.22	46.00	-24.78	-12.12	3	Vertical	0	3.00	-
PK	625.58M	22.77	46.00	-23.23	-10.19	3	Vertical	0	3.00	-

BT-LE(2Mbps)

23/01/2019

2440MHz_DC Power Supply



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	30M	19.28	40.00	-20.72	-13.40	3	Horizontal	360	3.00	-
PK	128.94M	13.16	43.50	-30.34	-19.18	3	Horizontal	360	3.00	-
PK	266.68M	16.29	46.00	-29.71	-16.12	3	Horizontal	360	3.00	-
PK	388.9M	18.38	46.00	-27.62	-14.43	3	Horizontal	360	3.00	-
PK	516.94M	20.59	46.00	-25.41	-12.12	3	Horizontal	360	3.00	-
PK	590.66M	22.36	46.00	-23.64	-10.94	3	Horizontal	360	3.00	-

**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4854G	44.69	54.00	-9.31	31.12	3	Vertical	197	2.99	-
BT-LE(2Mbps)	Pass	AV	2.4835G	44.81	54.00	-9.19	31.11	3	Vertical	207	2.99	-

Result

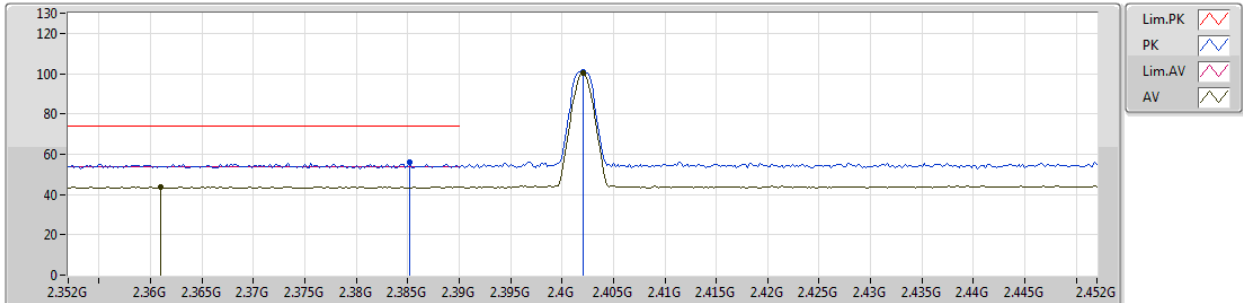
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.361G	43.98	54.00	-10.02	30.67	3	Vertical	342	1.50	-
2402MHz	Pass	AV	2.402G	100.11	Inf	-Inf	30.82	3	Vertical	342	1.50	-
2402MHz	Pass	PK	2.3852G	55.97	74.00	-18.03	30.76	3	Vertical	342	1.50	-
2402MHz	Pass	PK	2.402G	100.70	Inf	-Inf	30.82	3	Vertical	342	1.50	-
2402MHz	Pass	AV	2.388G	44.04	54.00	-9.96	30.77	3	Horizontal	211	1.30	-
2402MHz	Pass	AV	2.402G	96.27	Inf	-Inf	30.82	3	Horizontal	211	1.30	-
2402MHz	Pass	PK	2.3742G	56.54	74.00	-17.46	30.72	3	Horizontal	211	1.30	-
2402MHz	Pass	PK	2.4022G	96.88	Inf	-Inf	30.82	3	Horizontal	211	1.30	-
2402MHz	Pass	AV	4.79542G	32.14	54.00	-21.86	2.06	3	Vertical	16	1.50	-
2402MHz	Pass	PK	4.7929G	43.63	74.00	-30.37	2.06	3	Vertical	16	1.50	-
2402MHz	Pass	AV	4.79866G	32.70	54.00	-21.30	2.07	3	Horizontal	156	1.50	-
2402MHz	Pass	PK	4.80316G	45.75	74.00	-28.25	2.08	3	Horizontal	156	1.50	-
2440MHz	Pass	AV	2.386G	43.84	54.00	-10.16	30.76	3	Vertical	343	1.49	-
2440MHz	Pass	AV	2.44G	97.71	Inf	-Inf	30.95	3	Vertical	343	1.49	-
2440MHz	Pass	AV	2.4952G	44.64	54.00	-9.36	31.16	3	Vertical	343	1.49	-
2440MHz	Pass	PK	2.3808G	55.38	74.00	-18.62	30.75	3	Vertical	343	1.49	-
2440MHz	Pass	PK	2.44G	98.33	Inf	-Inf	30.95	3	Vertical	343	1.49	-
2440MHz	Pass	PK	2.4952G	55.65	74.00	-18.35	31.16	3	Vertical	343	1.49	-
2440MHz	Pass	AV	2.39G	43.86	54.00	-10.14	30.77	3	Horizontal	207	1.04	-
2440MHz	Pass	AV	2.44G	95.13	Inf	-Inf	30.95	3	Horizontal	207	1.04	-
2440MHz	Pass	AV	2.486G	44.52	54.00	-9.48	31.12	3	Horizontal	207	1.04	-
2440MHz	Pass	PK	2.3568G	55.93	74.00	-18.07	30.66	3	Horizontal	207	1.04	-
2440MHz	Pass	PK	2.44G	95.73	Inf	-Inf	30.95	3	Horizontal	207	1.04	-
2440MHz	Pass	PK	2.4908G	55.47	74.00	-18.53	31.13	3	Horizontal	207	1.04	-
2440MHz	Pass	AV	4.88942G	32.26	54.00	-21.74	2.29	3	Vertical	154	1.72	-
2440MHz	Pass	PK	4.89482G	44.30	74.00	-29.70	2.31	3	Vertical	154	1.72	-
2440MHz	Pass	AV	4.88762G	31.29	54.00	-22.71	2.29	3	Horizontal	310	1.62	-
2440MHz	Pass	PK	4.89386G	43.10	74.00	-30.90	2.31	3	Horizontal	310	1.62	-
2480MHz	Pass	AV	2.48G	102.60	Inf	-Inf	31.09	3	Vertical	197	2.99	-
2480MHz	Pass	AV	2.4854G	44.69	54.00	-9.31	31.12	3	Vertical	197	2.99	-
2480MHz	Pass	PK	2.4802G	103.22	Inf	-Inf	31.09	3	Vertical	197	2.99	-
2480MHz	Pass	PK	2.4846G	57.02	74.00	-16.98	31.12	3	Vertical	197	2.99	-
2480MHz	Pass	AV	2.48G	95.20	Inf	-Inf	31.09	3	Horizontal	140	1.50	-
2480MHz	Pass	AV	2.4906G	44.53	54.00	-9.47	31.13	3	Horizontal	140	1.50	-
2480MHz	Pass	PK	2.4802G	95.82	Inf	-Inf	31.09	3	Horizontal	140	1.50	-
2480MHz	Pass	PK	2.495G	56.06	74.00	-17.94	31.16	3	Horizontal	140	1.50	-
2480MHz	Pass	AV	4.969G	32.63	54.00	-21.37	2.49	3	Vertical	169	1.45	-
2480MHz	Pass	PK	4.97098G	43.78	74.00	-30.22	2.49	3	Vertical	169	1.45	-
2480MHz	Pass	AV	4.94632G	31.41	54.00	-22.59	2.43	3	Horizontal	357	1.80	-
2480MHz	Pass	PK	4.9663G	42.35	74.00	-31.65	2.49	3	Horizontal	357	1.80	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.39G	43.47	54.00	-10.53	30.77	3	Vertical	339	1.49	-
2402MHz	Pass	AV	2.402G	99.28	Inf	-Inf	30.82	3	Vertical	339	1.49	-
2402MHz	Pass	PK	2.3662G	56.13	74.00	-17.87	30.70	3	Vertical	339	1.49	-
2402MHz	Pass	PK	2.402G	101.97	Inf	-Inf	30.82	3	Vertical	339	1.49	-
2402MHz	Pass	AV	2.3594G	43.02	54.00	-10.98	30.67	3	Horizontal	207	1.27	-
2402MHz	Pass	AV	2.402G	95.10	Inf	-Inf	30.82	3	Horizontal	207	1.27	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2402MHz	Pass	PK	2.3894G	55.58	74.00	-18.42	30.77	3	Horizontal	207	1.27	-
2402MHz	Pass	PK	2.402G	97.96	Inf	-Inf	30.82	3	Horizontal	207	1.27	-
2402MHz	Pass	AV	4.80424G	31.26	54.00	-22.74	2.08	3	Vertical	2	1.50	-
2402MHz	Pass	PK	4.79692G	43.71	74.00	-30.29	2.07	3	Vertical	2	1.50	-
2402MHz	Pass	AV	4.7971G	32.45	54.00	-21.55	2.07	3	Horizontal	188	2.55	-
2402MHz	Pass	PK	4.79152G	51.08	74.00	-22.92	2.05	3	Horizontal	188	2.55	-
2440MHz	Pass	AV	2.3852G	42.97	54.00	-11.03	30.76	3	Vertical	339	1.50	-
2440MHz	Pass	AV	2.44G	96.96	Inf	-Inf	30.95	3	Vertical	339	1.50	-
2440MHz	Pass	AV	2.4876G	43.67	54.00	-10.33	31.13	3	Vertical	339	1.50	-
2440MHz	Pass	PK	2.3488G	56.01	74.00	-17.99	30.63	3	Vertical	339	1.50	-
2440MHz	Pass	PK	2.44G	99.59	Inf	-Inf	30.95	3	Vertical	339	1.50	-
2440MHz	Pass	PK	2.4864G	55.78	74.00	-18.22	31.12	3	Vertical	339	1.50	-
2440MHz	Pass	AV	2.3796G	43.02	54.00	-10.98	30.74	3	Horizontal	206	1.04	-
2440MHz	Pass	AV	2.44G	94.00	Inf	-Inf	30.95	3	Horizontal	206	1.04	-
2440MHz	Pass	AV	2.4996G	43.74	54.00	-10.26	31.17	3	Horizontal	206	1.04	-
2440MHz	Pass	PK	2.3628G	55.53	74.00	-18.47	30.68	3	Horizontal	206	1.04	-
2440MHz	Pass	PK	2.4396G	96.68	Inf	-Inf	30.95	3	Horizontal	206	1.04	-
2440MHz	Pass	PK	2.4928G	55.93	74.00	-18.07	31.14	3	Horizontal	206	1.04	-
2440MHz	Pass	AV	4.89014G	31.06	54.00	-22.94	2.29	3	Vertical	52	1.10	-
2440MHz	Pass	PK	4.8773G	43.68	74.00	-30.32	2.26	3	Vertical	52	1.10	-
2440MHz	Pass	AV	4.88066G	31.03	54.00	-22.97	2.27	3	Horizontal	344	2.00	-
2440MHz	Pass	PK	4.88828G	43.55	74.00	-30.45	2.29	3	Horizontal	344	2.00	-
2480MHz	Pass	AV	2.48G	97.80	Inf	-Inf	31.09	3	Vertical	207	2.99	-
2480MHz	Pass	AV	2.4835G	44.81	54.00	-9.19	31.11	3	Vertical	207	2.99	-
2480MHz	Pass	PK	2.4796G	100.56	Inf	-Inf	31.09	3	Vertical	207	2.99	-
2480MHz	Pass	PK	2.4932G	56.65	74.00	-17.35	31.14	3	Vertical	207	2.99	-
2480MHz	Pass	AV	2.48G	91.67	Inf	-Inf	31.09	3	Horizontal	139	1.50	-
2480MHz	Pass	AV	2.4974G	43.90	54.00	-10.10	31.16	3	Horizontal	139	1.50	-
2480MHz	Pass	PK	2.48G	94.36	Inf	-Inf	31.09	3	Horizontal	139	1.50	-
2480MHz	Pass	PK	2.4992G	56.40	74.00	-17.60	31.17	3	Horizontal	139	1.50	-
2480MHz	Pass	AV	4.96672G	32.84	54.00	-21.16	2.49	3	Vertical	1	1.77	-
2480MHz	Pass	PK	4.9546G	43.62	74.00	-30.38	2.46	3	Vertical	1	1.77	-
2480MHz	Pass	AV	4.97176G	31.73	54.00	-22.27	2.49	3	Horizontal	256	1.50	-
2480MHz	Pass	PK	4.94584G	43.92	74.00	-30.08	2.43	3	Horizontal	256	1.50	-

BT-LE(1Mbps)

2402MHz_TX

23/01/2019

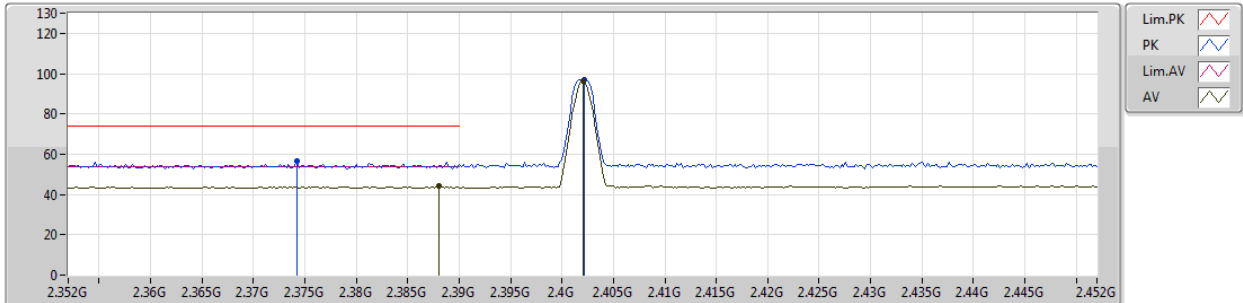


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.361G	43.98	54.00	-10.02	30.67	3	Vertical	342	1.50	-								
AV	2.402G	100.11	Inf	-Inf	30.82	3	Vertical	342	1.50	-								
PK	2.3852G	55.97	74.00	-18.03	30.76	3	Vertical	342	1.50	-								
PK	2.402G	100.70	Inf	-Inf	30.82	3	Vertical	342	1.50	-								

BT-LE(1Mbps)

2402MHz_TX

23/01/2019

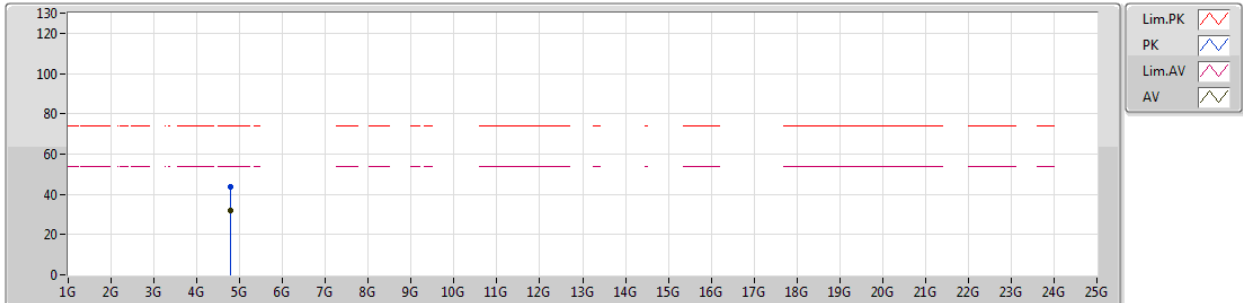


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.388G	44.04	54.00	-9.96	30.77	3	Horizontal	211	1.30	-								
AV	2.402G	96.27	Inf	-Inf	30.82	3	Horizontal	211	1.30	-								
PK	2.3742G	56.54	74.00	-17.46	30.72	3	Horizontal	211	1.30	-								
PK	2.4022G	96.88	Inf	-Inf	30.82	3	Horizontal	211	1.30	-								

BT-LE(1Mbps)

2402MHz_TX

23/01/2019

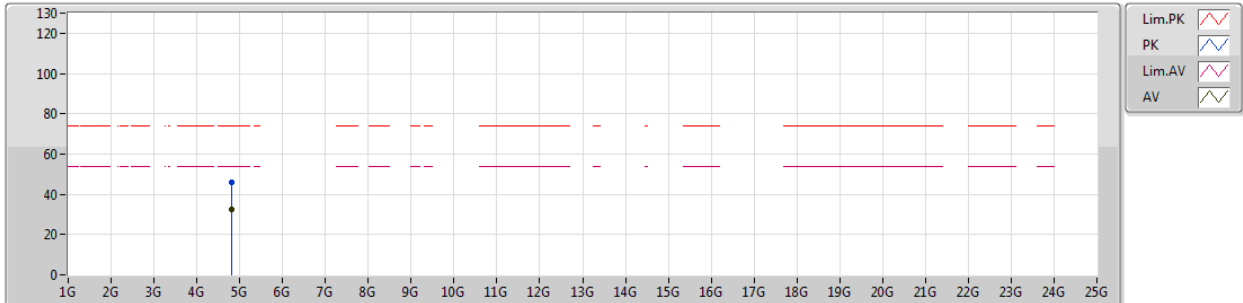


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.79542G	32.14	54.00	-21.86	2.06	3	Vertical	16	1.50	-
PK	4.7929G	43.63	74.00	-30.37	2.06	3	Vertical	16	1.50	-

BT-LE(1Mbps)

2402MHz_TX

23/01/2019

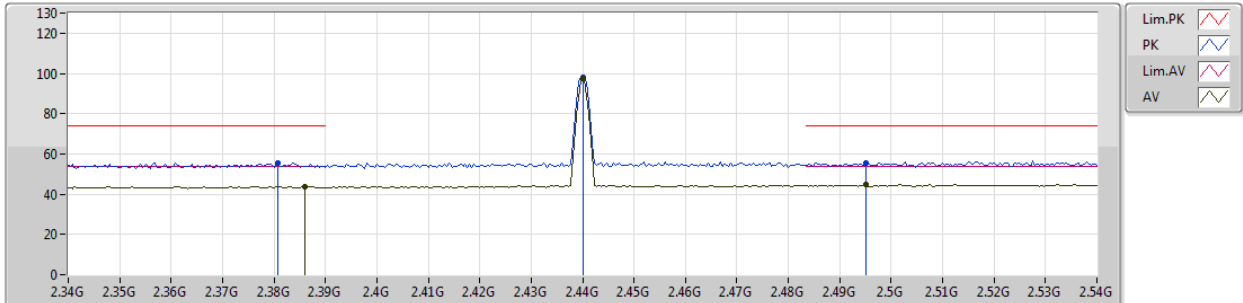


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.79866G	32.70	54.00	-21.30	2.07	3	Horizontal	156	1.50	-
PK	4.80316G	45.75	74.00	-28.25	2.08	3	Horizontal	156	1.50	-

BT-LE(1Mbps)

2440MHz_TX

23/01/2019

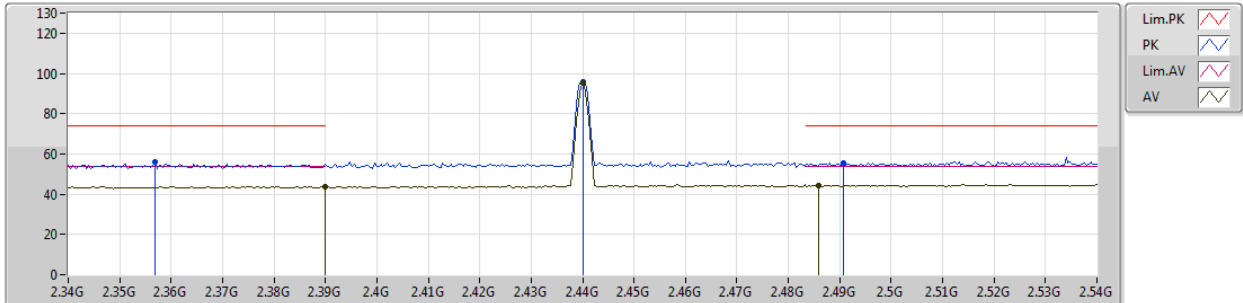


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.386G	43.84	54.00	-10.16	30.76	3	Vertical	343	1.49	-
AV	2.44G	97.71	Inf	-Inf	30.95	3	Vertical	343	1.49	-
AV	2.4952G	44.64	54.00	-9.36	31.16	3	Vertical	343	1.49	-
PK	2.3808G	55.38	74.00	-18.62	30.75	3	Vertical	343	1.49	-
PK	2.44G	98.33	Inf	-Inf	30.95	3	Vertical	343	1.49	-
PK	2.4952G	55.65	74.00	-18.35	31.16	3	Vertical	343	1.49	-

BT-LE(1Mbps)

2440MHz_TX

23/01/2019

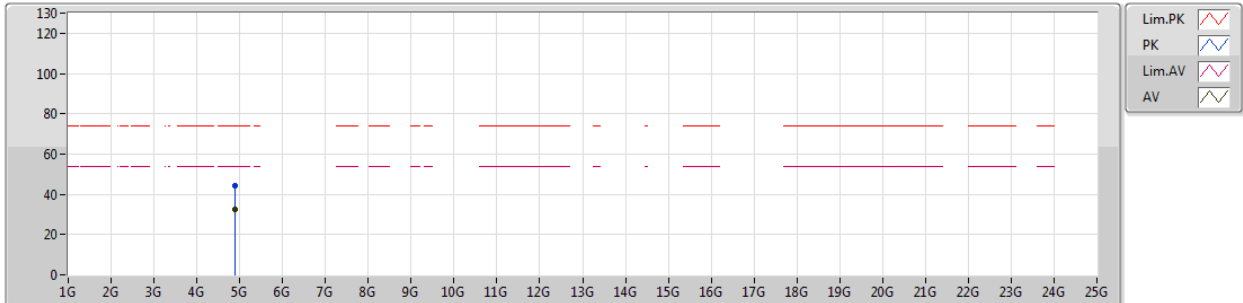


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.39G	43.86	54.00	-10.14	30.77	3	Horizontal	207	1.04	-
AV	2.44G	95.13	Inf	-Inf	30.95	3	Horizontal	207	1.04	-
AV	2.486G	44.52	54.00	-9.48	31.12	3	Horizontal	207	1.04	-
PK	2.3568G	55.93	74.00	-18.07	30.66	3	Horizontal	207	1.04	-
PK	2.44G	95.73	Inf	-Inf	30.95	3	Horizontal	207	1.04	-
PK	2.4908G	55.47	74.00	-18.53	31.13	3	Horizontal	207	1.04	-

BT-LE(1Mbps)

2440MHz_TX

23/01/2019

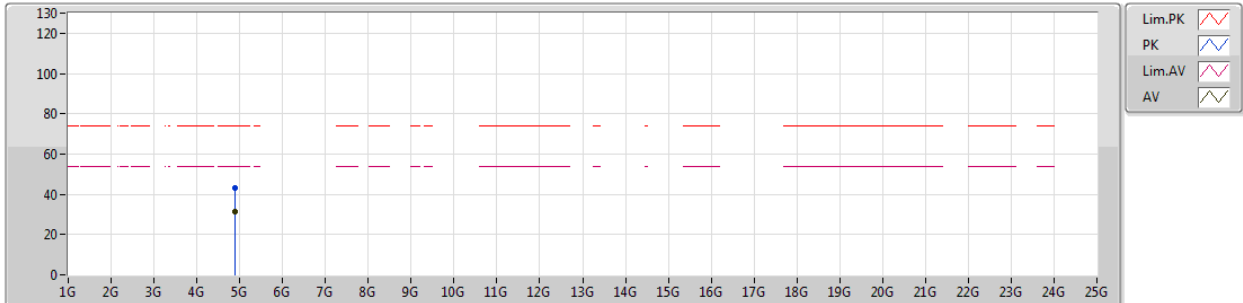


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments								
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)									
AV	4.88942G	32.26	54.00	-21.74	2.29	3	Vertical	154	1.72	-								
PK	4.89482G	44.30	74.00	-29.70	2.31	3	Vertical	154	1.72	-								

BT-LE(1Mbps)

2440MHz_TX

23/01/2019

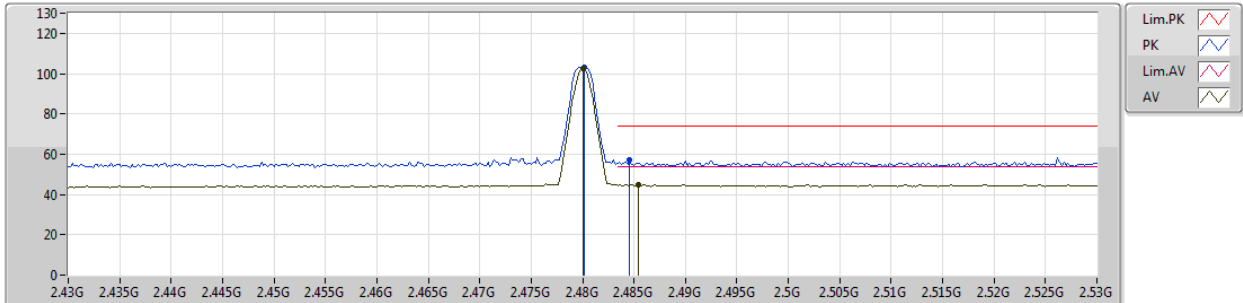


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88762G	31.29	54.00	-22.71	2.29	3	Horizontal	310	1.62	-
PK	4.89386G	43.10	74.00	-30.90	2.31	3	Horizontal	310	1.62	-

BT-LE(1Mbps)

2480MHz_TX

23/01/2019

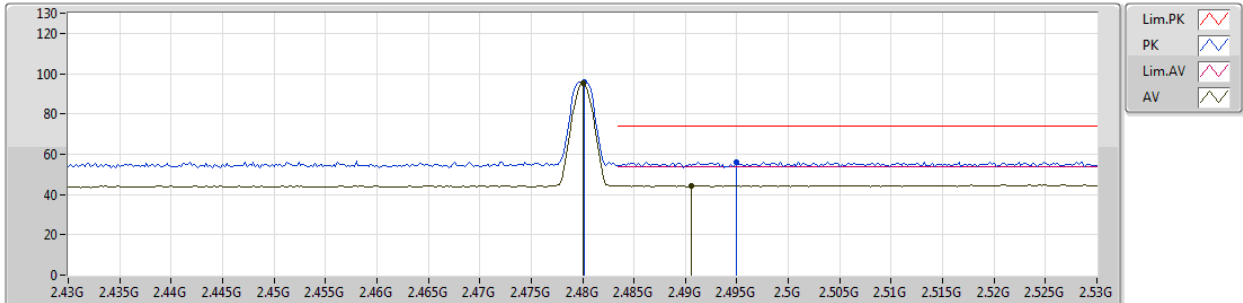


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	102.60	Inf	-Inf	31.09	3	Vertical	197	2.99	-
AV	2.4854G	44.69	54.00	-9.31	31.12	3	Vertical	197	2.99	-
PK	2.4802G	103.22	Inf	-Inf	31.09	3	Vertical	197	2.99	-
PK	2.4846G	57.02	74.00	-16.98	31.12	3	Vertical	197	2.99	-

BT-LE(1Mbps)

2480MHz_TX

23/01/2019

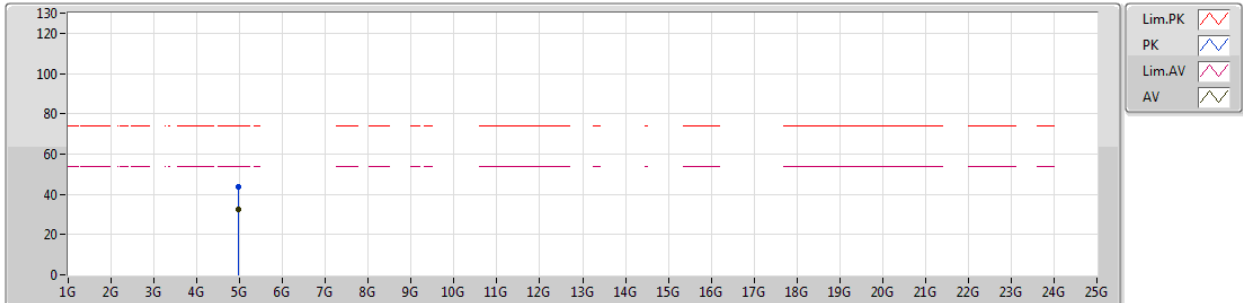


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	95.20	Inf	-Inf	31.09	3	Horizontal	140	1.50	-
AV	2.4906G	44.53	54.00	-9.47	31.13	3	Horizontal	140	1.50	-
PK	2.4802G	95.82	Inf	-Inf	31.09	3	Horizontal	140	1.50	-
PK	2.495G	56.06	74.00	-17.94	31.16	3	Horizontal	140	1.50	-

BT-LE(1Mbps)

2480MHz_TX

23/01/2019

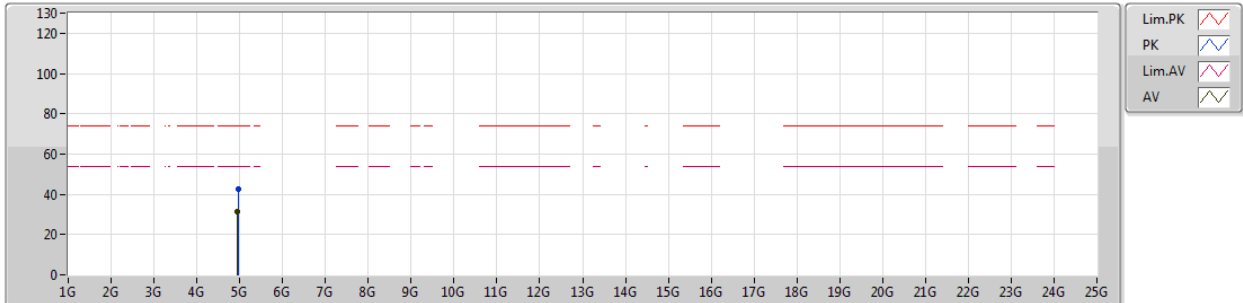


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments								
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)									
AV	4.969G	32.63	54.00	-21.37	2.49	3	Vertical	169	1.45	-								
PK	4.97098G	43.78	74.00	-30.22	2.49	3	Vertical	169	1.45	-								

BT-LE(1Mbps)

2480MHz_TX

23/01/2019

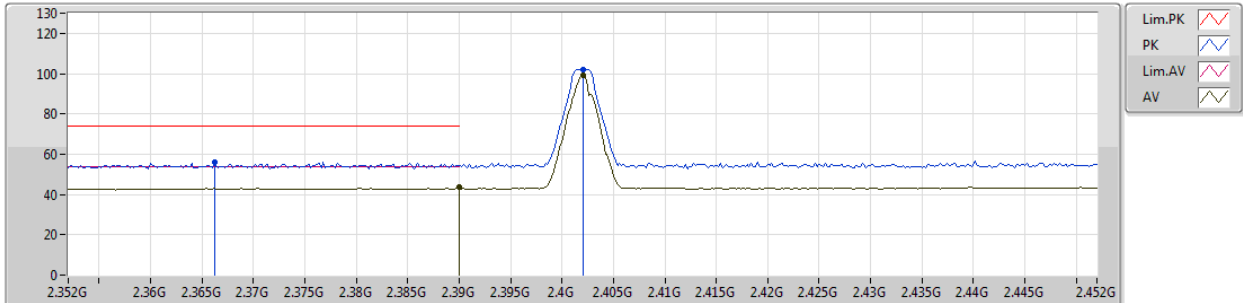


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.94632G	31.41	54.00	-22.59	2.43	3	Horizontal	357	1.80	-
PK	4.9663G	42.35	74.00	-31.65	2.49	3	Horizontal	357	1.80	-

BT-LE(2Mbps)

2402MHz_TX

23/01/2019

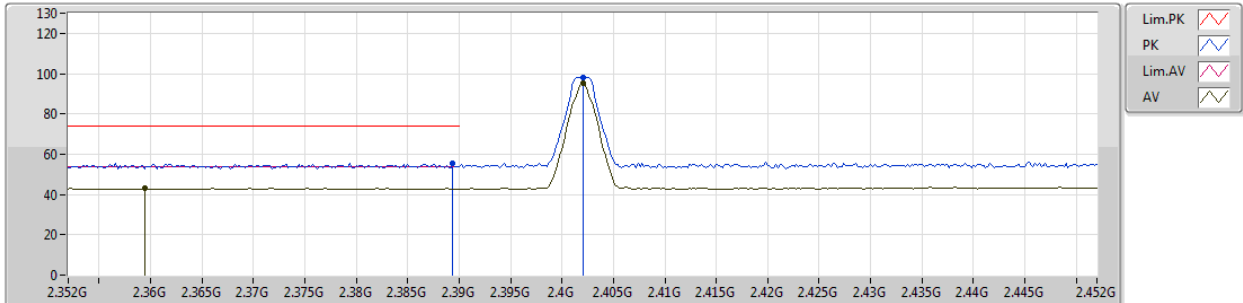


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.39G	43.47	54.00	-10.53	30.77	3	Vertical	339	1.49	-
AV	2.402G	99.28	Inf	-Inf	30.82	3	Vertical	339	1.49	-
PK	2.3662G	56.13	74.00	-17.87	30.70	3	Vertical	339	1.49	-
PK	2.402G	101.97	Inf	-Inf	30.82	3	Vertical	339	1.49	-

BT-LE(2Mbps)

2402MHz_TX

23/01/2019

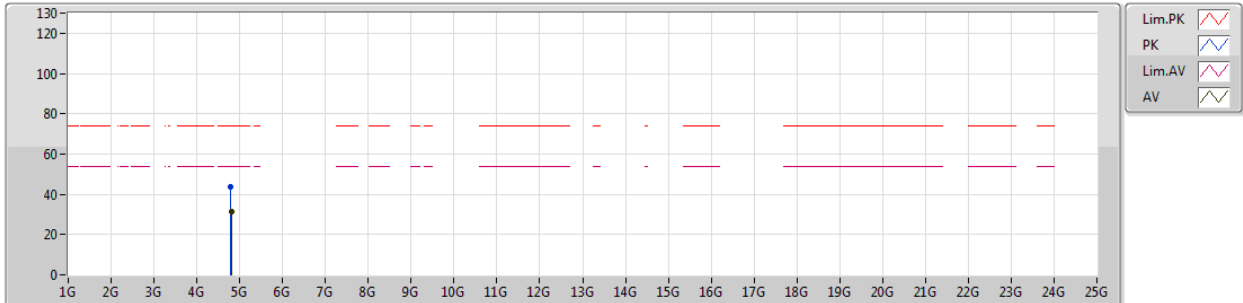


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3594G	43.02	54.00	-10.98	30.67	3	Horizontal	207	1.27	-
AV	2.402G	95.10	Inf	-Inf	30.82	3	Horizontal	207	1.27	-
PK	2.3894G	55.58	74.00	-18.42	30.77	3	Horizontal	207	1.27	-
PK	2.402G	97.96	Inf	-Inf	30.82	3	Horizontal	207	1.27	-

BT-LE(2Mbps)

2402MHz_TX

23/01/2019

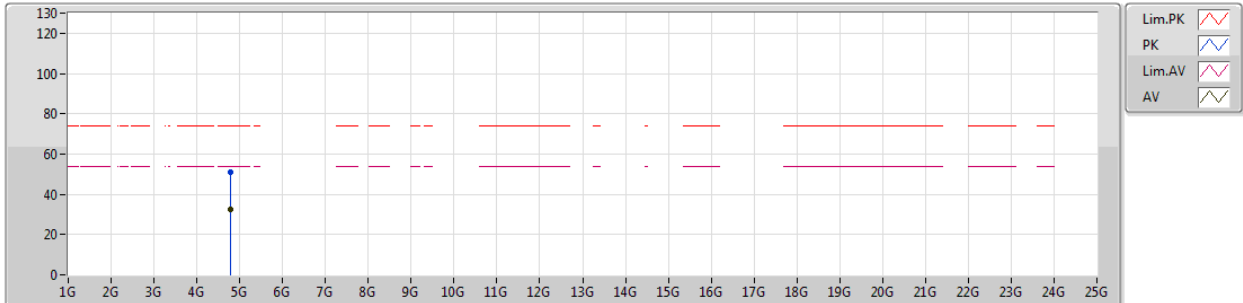


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	4.80424G	31.26	54.00	-22.74	2.08	3	Vertical	2	1.50	-								
PK	4.79692G	43.71	74.00	-30.29	2.07	3	Vertical	2	1.50	-								

BT-LE(2Mbps)

2402MHz_TX

23/01/2019

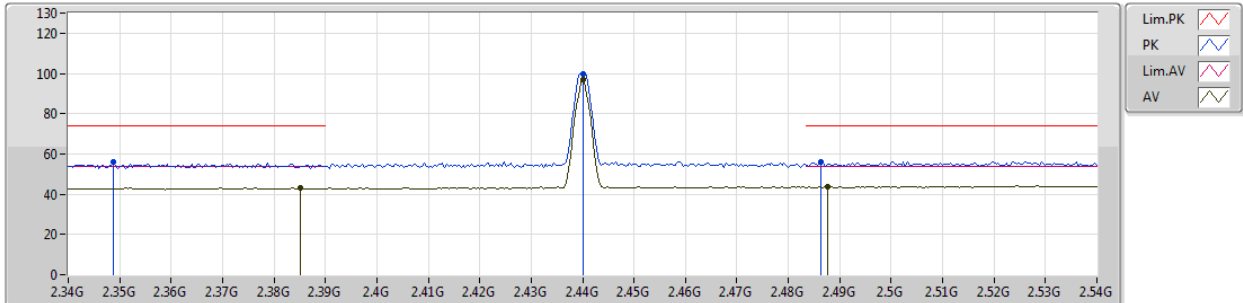


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.7971G	32.45	54.00	-21.55	2.07	3	Horizontal	188	2.55	-
PK	4.79152G	51.08	74.00	-22.92	2.05	3	Horizontal	188	2.55	-

BT-LE(2Mbps)

23/01/2019

2440MHz_TX

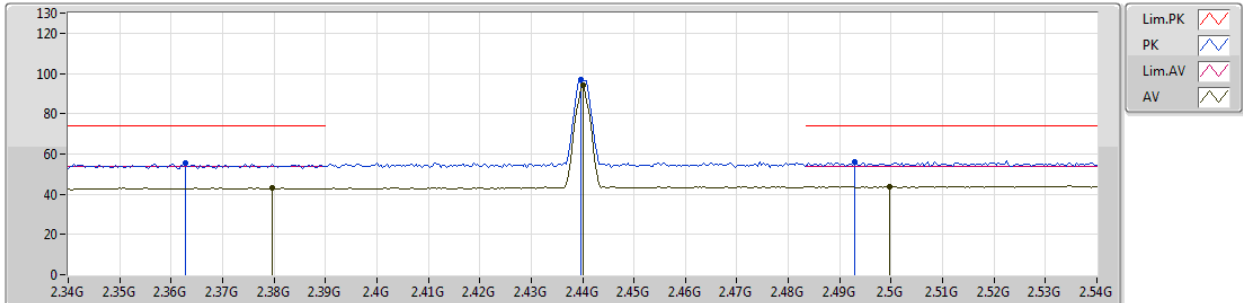


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3852G	42.97	54.00	-11.03	30.76	3	Vertical	339	1.50	-
AV	2.44G	96.96	Inf	-Inf	30.95	3	Vertical	339	1.50	-
AV	2.4876G	43.67	54.00	-10.33	31.13	3	Vertical	339	1.50	-
PK	2.3488G	56.01	74.00	-17.99	30.63	3	Vertical	339	1.50	-
PK	2.44G	99.59	Inf	-Inf	30.95	3	Vertical	339	1.50	-
PK	2.4864G	55.78	74.00	-18.22	31.12	3	Vertical	339	1.50	-

BT-LE(2Mbps)

2440MHz_TX

23/01/2019

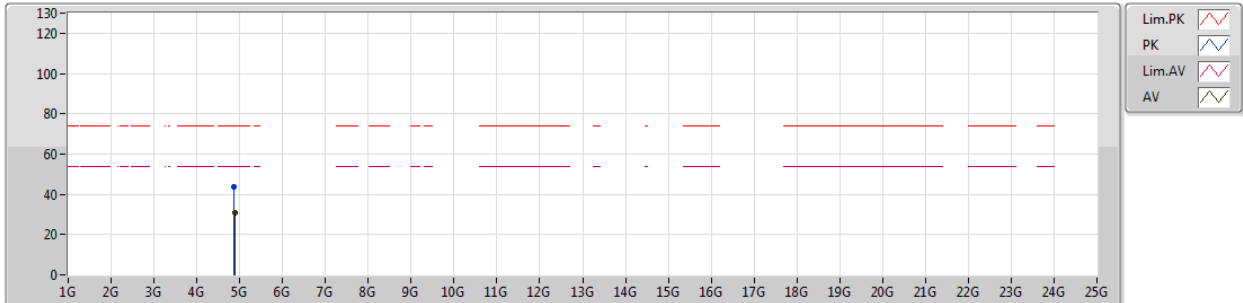


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3796G	43.02	54.00	-10.98	30.74	3	Horizontal	206	1.04	-
AV	2.44G	94.00	Inf	-Inf	30.95	3	Horizontal	206	1.04	-
AV	2.4996G	43.74	54.00	-10.26	31.17	3	Horizontal	206	1.04	-
PK	2.3628G	55.53	74.00	-18.47	30.68	3	Horizontal	206	1.04	-
PK	2.4396G	96.68	Inf	-Inf	30.95	3	Horizontal	206	1.04	-
PK	2.4928G	55.93	74.00	-18.07	31.14	3	Horizontal	206	1.04	-

BT-LE(2Mbps)

2440MHz_TX

23/01/2019

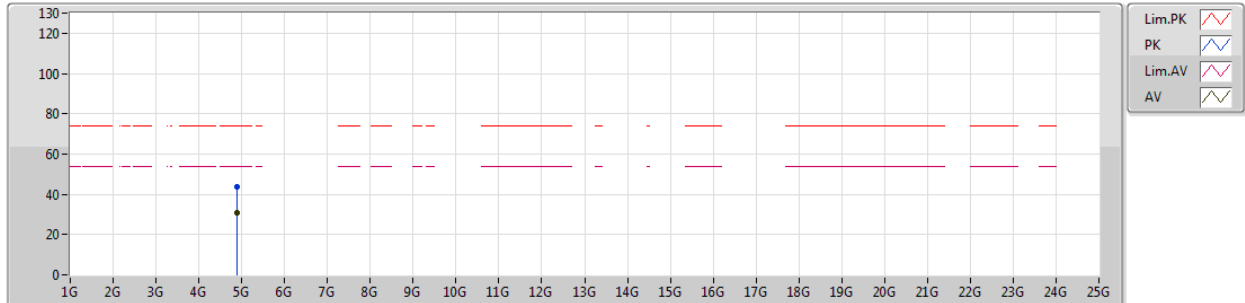


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.89014G	31.06	54.00	-22.94	2.29	3	Vertical	52	1.10	-
PK	4.8773G	43.68	74.00	-30.32	2.26	3	Vertical	52	1.10	-

BT-LE(2Mbps)

2440MHz_TX

23/01/2019

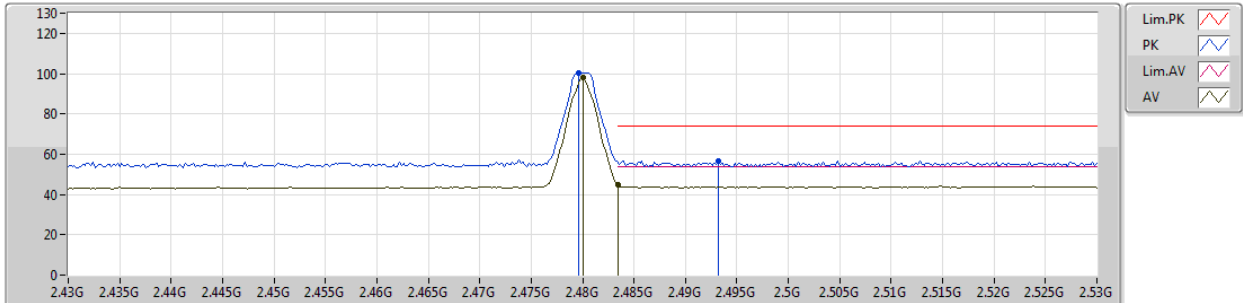


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88066G	31.03	54.00	-22.97	2.27	3	Horizontal	344	2.00	-
PK	4.88828G	43.55	74.00	-30.45	2.29	3	Horizontal	344	2.00	-

BT-LE(2Mbps)

2480MHz_TX

23/01/2019

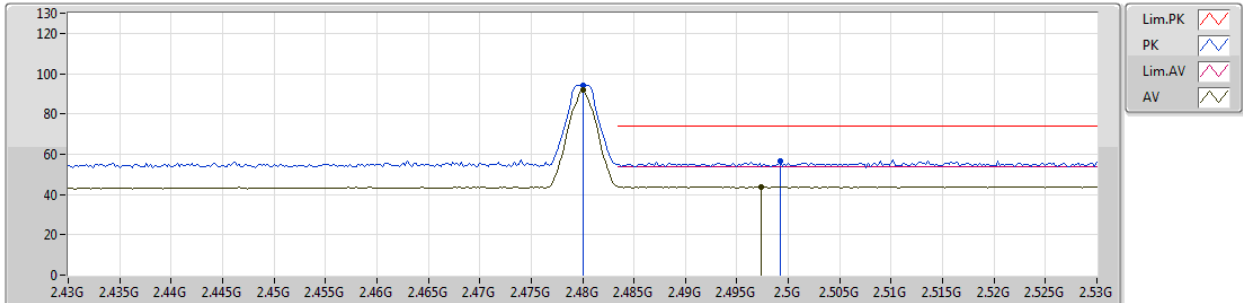


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	97.80	Inf	-Inf	31.09	3	Vertical	207	2.99	-
AV	2.4835G	44.81	54.00	-9.19	31.11	3	Vertical	207	2.99	-
PK	2.4796G	100.56	Inf	-Inf	31.09	3	Vertical	207	2.99	-
PK	2.4932G	56.65	74.00	-17.35	31.14	3	Vertical	207	2.99	-

BT-LE(2Mbps)

2480MHz_TX

23/01/2019

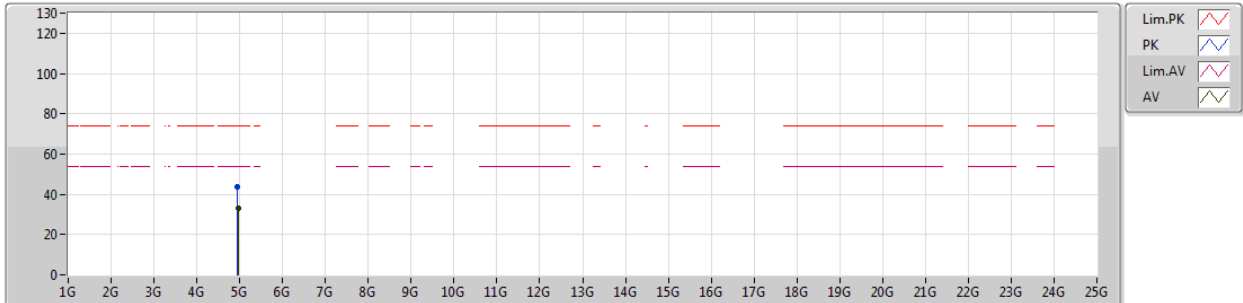


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	91.67	Inf	-Inf	31.09	3	Horizontal	139	1.50	-
AV	2.4974G	43.90	54.00	-10.10	31.16	3	Horizontal	139	1.50	-
PK	2.48G	94.36	Inf	-Inf	31.09	3	Horizontal	139	1.50	-
PK	2.4992G	56.40	74.00	-17.60	31.17	3	Horizontal	139	1.50	-

BT-LE(2Mbps)

2480MHz_TX

23/01/2019

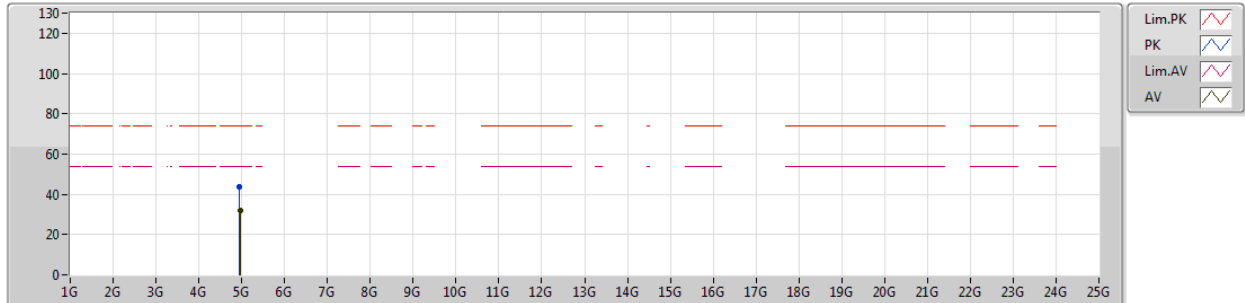


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.96672G	32.84	54.00	-21.16	2.49	3	Vertical	1	1.77	-
PK	4.9546G	43.62	74.00	-30.38	2.46	3	Vertical	1	1.77	-

BT-LE(2Mbps)

2480MHz_TX

23/01/2019



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	4.97176G	31.73	54.00	-22.27	2.49	3	Horizontal	256	1.50	-								
PK	4.94584G	43.92	74.00	-30.08	2.43	3	Horizontal	256	1.50	-								