FCC Test Report

FCC ID	:	**U4G-Q10W**
Equipment	:	**PDA**
Brand Name	:	**DATALOGIC**
Model Name	:	**MEMOR 20**
Applicant	:	**Datalogic S.r.l. Via S. Vitalino, 13 40012, Lippo di Calderara di Reno (BO) ITALY**
Manufacturer	:	**Datalogic S.r.l. Via S. Vitalino, 13 40012, Lippo di Calderara di Reno (BO) ITALY**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Dec. 17, 2018, and testing was started from Dec. 25, 2018 and completed on May 14, 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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PHOTOGRAPHS OF EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FR872411-01AL	01	Initial issue of report	Sep. 25, 2019

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: Jackson Tsai

Report Producer: Ann Hou

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	-	-	PIFA	N/A
2	-	-	Monopole with couple	I-PEX

Ant.	Port	Gain (dBi)		
		2.4G	5G	BT
1	1	2.93	4.16	2.93
2	2	2.93	4.16	-

Note 1: The EUT has two antennas.

For 2.4GHz function:

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

Support diversity function and pre-tested on each single chain, the worst case was Ant. 1(port 1) and it was record in this test report.

For IEEE 802.11 b/g/n mode (2TX/2RX)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/HT20(Band1) mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 1(port 1) and it was record in this test report.

For IEEE 802.11 a/n/ac mode (2TX/2RX)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

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

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From AC Adapter			
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) ≥ 1/T
BT-LE(1Mbps)	0.628	2.02	392.5u	3k
BT-LE(2Mbps)	0.336	4.737	210u	10k

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

1.1.5 Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

Brand Name	Model Name	Cover	Description
DATALOGIC	MEMOR 20	White	There are two enclousres for EUT. All samples are identical, only the color is different.
		Black	

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 v05r02
- KDB 414788 D01 v01r01

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	CO01-HY	Jeff	23.2~25.8°C / 51.2~56.1%	14/May/2019
RF Conducted	TH01-HY	Barry	23.1~24.1°C / 61~69%	29/Dec/2018~ 22/Apr/2019
Radiated	03CH09-HY	Daniel	21.3~24.4°C / 52.4~55.9%	25/Dec/2018~ 28/Dec/2018

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	120V

2.2 Test Channel Mode

Test Software Version	QDART_WIN_4_8

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	Adapter mode (1Mbps)
2	Adapter mode (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	Adapter mode (1Mbps)		
2	Adapter mode (2Mbps)		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
			
Worst Planes of EUT	V		

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	Normal link
1	Bluetooth+WLAN 5GHz
Refer to Sporton Test Report No.: Appendix G for Radiated Emission Co-location	

2.4 Accessories and Support Equipment

Accessories				
Battery	Brand Name	DATALOGIC	Model Name	Memor 20
	Power Rating	3.85Vdc, 4100mAh	Type	Li-ion
USB Cable	Power Cord	1.2 meter, shielded cable, w/o ferrite core		

Reminder: Regarding to more detail and other information, please refer to user manual.

Support Equipment – AC Conduction				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	AC adapter	Channel Well	2ACP0183	N/A

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

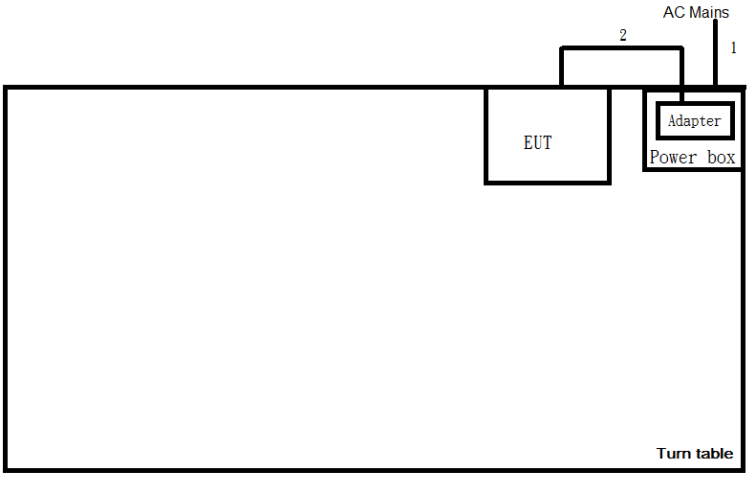
Support Equipment – RF Conducted				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC

Support Equipment – Radiated Emission				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	AC adapter	Channel Well	2ACP0183	N/A

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

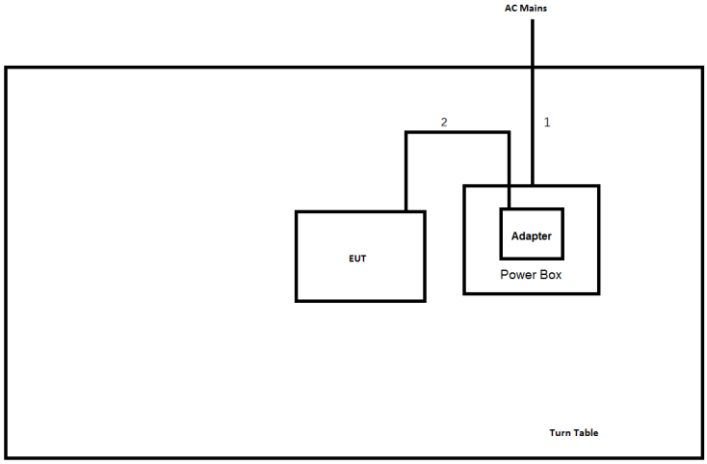
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	AC Power line	No	1.5m
2	USB Cable	No	1.2m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	AC Power line	No	1.8m
2	USB Cable	No	1.2m

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

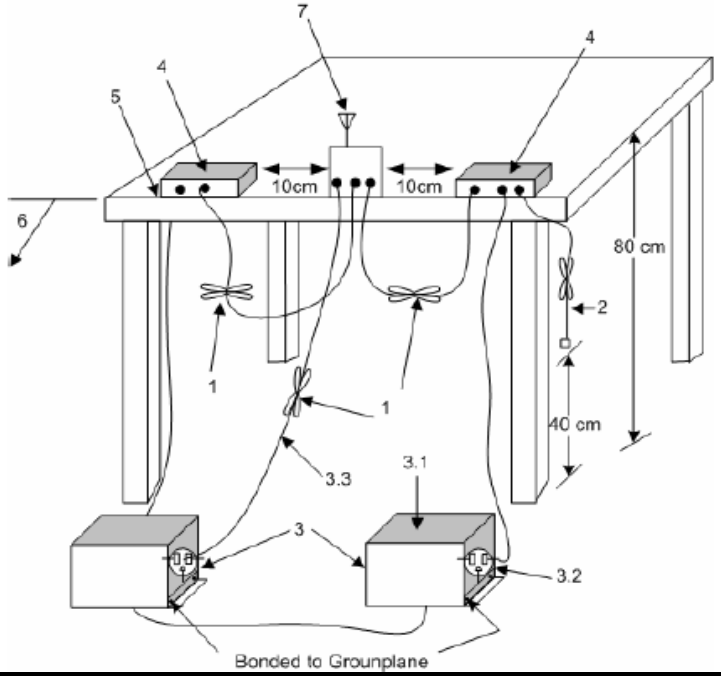
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



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 ≥ 500 kHz.

3.2.2 Measuring Instruments

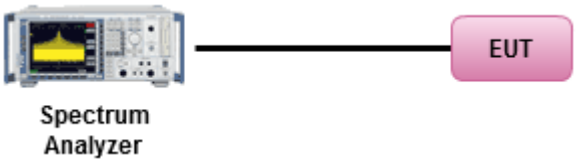
Refer a test equipment and calibration data table in this test report.

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 for occupied bandwidth testing.
	☐ Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth



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} ≤ 6 dBi, then P_{Out} ≤ 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 + 8dB dBm	
e.i.r.p. Power Limit:			
▪ 2400-2483.5 MHz Band			
	▪ Point-to-multipoint systems (P2M): P_{eirp} ≤ 36 dBm (4 W)		
	▪ Point-to-point systems (P2P): P_{eirp} ≤ MAX(36, [P_{Out} + G_{TX}]) dBm		
	▪ Smart antenna system (SAS)		
		- Single beam: P_{eirp} ≤ MAX(36, P_{Out} + G_{TX}) dBm	
		- Overlap beam: P_{eirp} ≤ MAX(36, P_{Out} + G_{TX}) dBm	
		- Aggregate power on all beams: P_{eirp} ≤ 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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


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

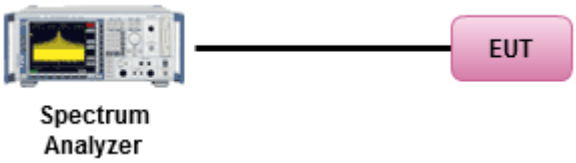
3.4.2 Measuring Instruments

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

Power Spectral Density


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.	

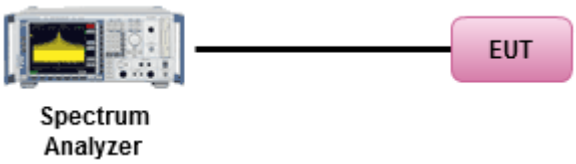
3.5.2 Measuring Instruments

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

Emissions in Non-restricted Frequency Bands


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 below30 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.

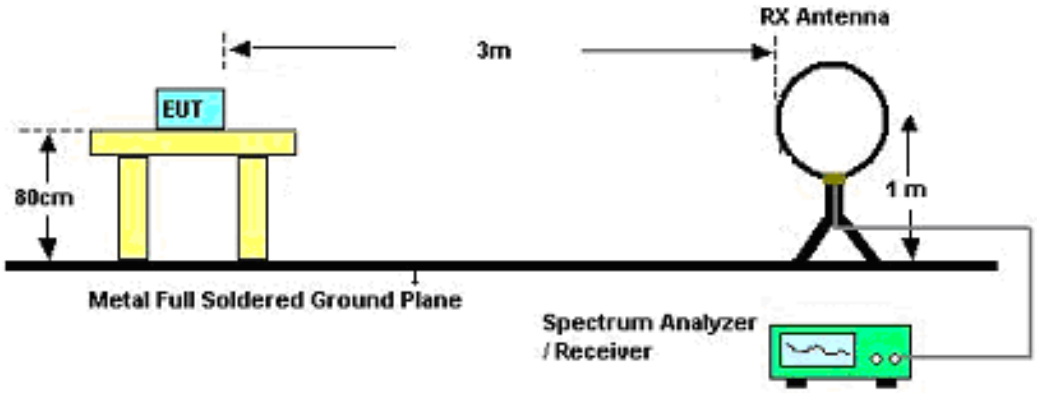
3.6.3 Test Procedures

Test Method
▪ The average emission levels shall be measured in [duty cycle ≥ 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.
▪ 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 ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.
▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.
▪ Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

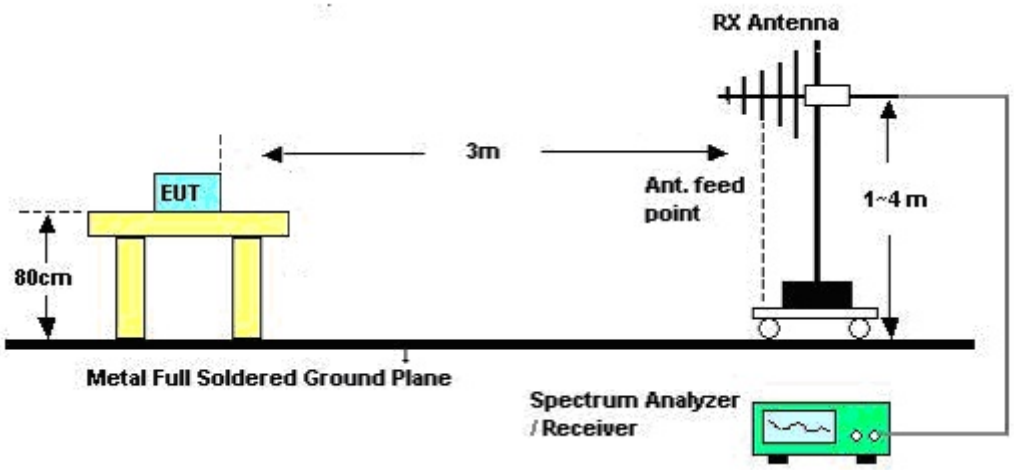
3.6.4 Test Setup

Emissions in Restricted Frequency Bands

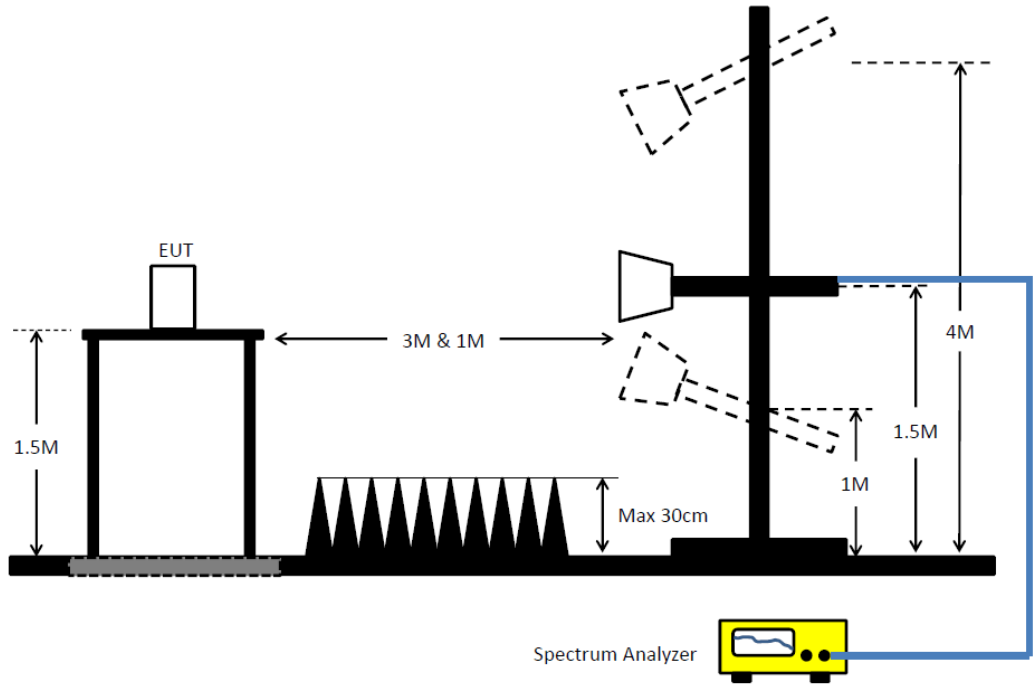
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



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 AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	09/Apr/2019	08/Apr/2020
LISN	R&S	ENV 216	101274	9kHz ~ 30MHz	12/Jun/2018	11/Jun/2019
RF Cable-CON	MTJ	RG142	CB001-CO	9kHz ~ 30MHz	17/Sep/2018	16/Sep/2019
AC POWER	APC	AFC-11003G	F308010045	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561F	9495	9kHz ~ 30MHz	11/Oct/2018	10/Oct/2019

NCR : Non-Calibration Require

Instrument for Conducted Test

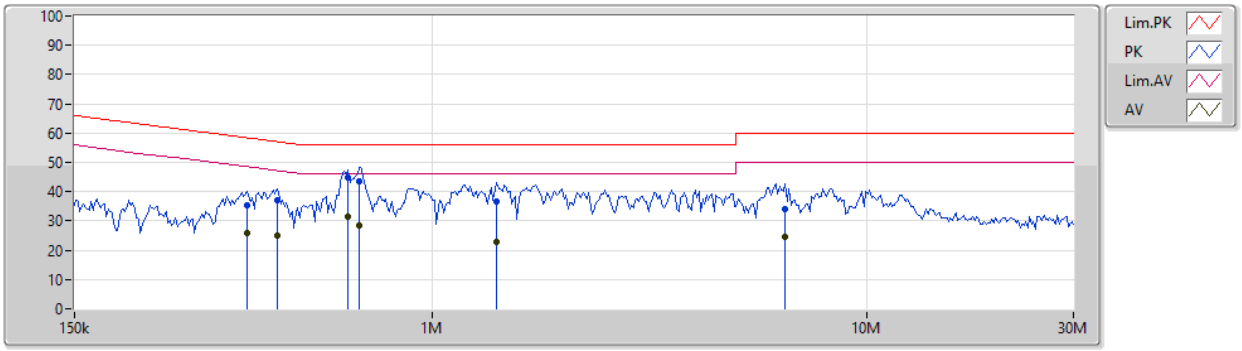
Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101029	10Hz~40GHz	11/Sep/2018	10/Sep/2019
Power Sensor	Anritsu	MA2411B	1339407	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019
Power Meter	Anritsu	ML2495A	1517010	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz ~18G	11/Jan/2018	10/Jan/2019
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz ~18G	10/Jan/2019	09/Jan/2020
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz ~18G	11/Jan/2018	10/Jan/2019
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz ~18G	10/Jan/2019	09/Jan/2020
Cable 0.5m	HUBER	MY10714/4	RF Cable – 05	1G~18G	11/Jan/2018	10/Jan/2019
Cable 0.5m	HUBER	MY10714/4	RF Cable – 05	1G~18G	10/Jan/2019	09/Jan/2020
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	10/Nov/2020

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	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz ~ 40GHz	12/Mar/2018	11/Mar/2019
Preamplifier	MITEQ	TTA1840-35-H G	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

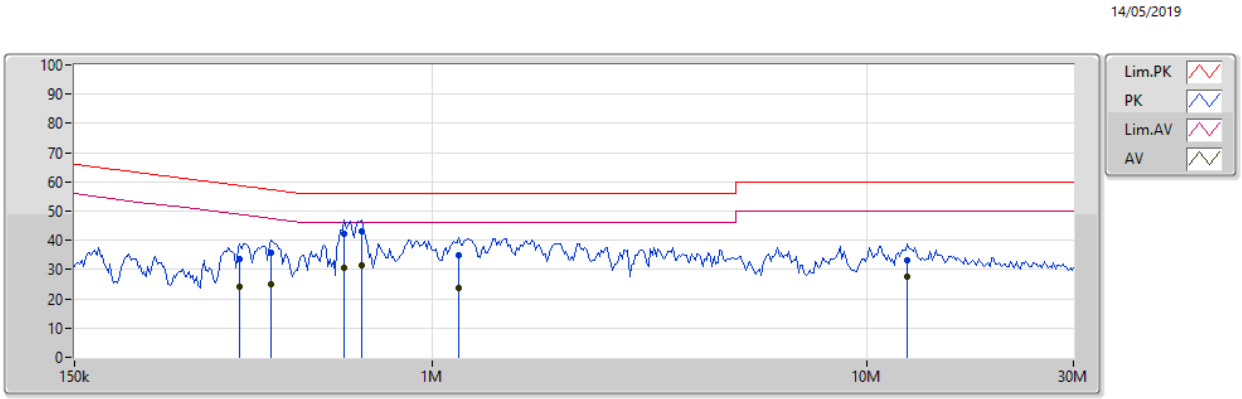
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Adapter mode		

14/05/2019



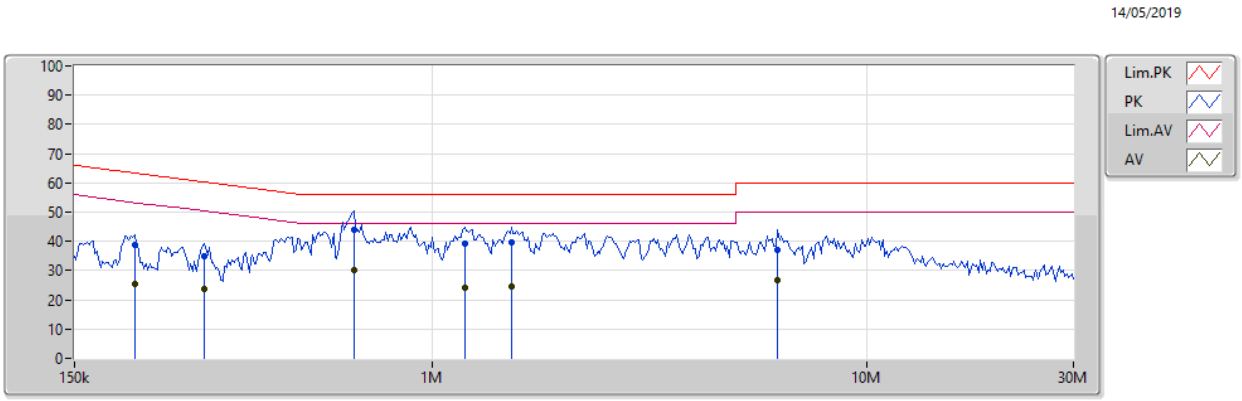
Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	374.678k	35.21	58.39	-23.18	19.51	Neutral	-	15.70	9.64	0.01	9.86
AV	374.678k	25.72	48.39	-22.67	19.51	Neutral	-	6.21	9.64	0.01	9.86
QP	439.339k	36.87	57.07	-20.20	19.51	Neutral	-	17.36	9.64	0.01	9.86
AV	439.339k	25.01	47.07	-22.06	19.51	Neutral	-	5.50	9.64	0.01	9.86
QP	641.227k	44.66	56.00	-11.34	19.51	Neutral	"Worst"	25.15	9.64	0.01	9.86
AV	641.227k	31.50	46.00	-14.50	19.51	Neutral	-	11.99	9.64	0.01	9.86
QP	680.675k	43.60	56.00	-12.40	19.51	Neutral	-	24.09	9.64	0.01	9.86
AV	680.675k	28.49	46.00	-17.51	19.51	Neutral	-	8.98	9.64	0.01	9.86
QP	1.407M	36.83	56.00	-19.17	19.53	Neutral	-	17.30	9.64	0.03	9.86
AV	1.407M	22.74	46.00	-23.26	19.53	Neutral	-	3.21	9.64	0.03	9.86
QP	6.515M	34.17	60.00	-25.83	19.64	Neutral	-	14.53	9.69	0.06	9.89
AV	6.515M	24.57	50.00	-25.43	19.64	Neutral	-	4.93	9.69	0.06	9.89

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Adapter mode		



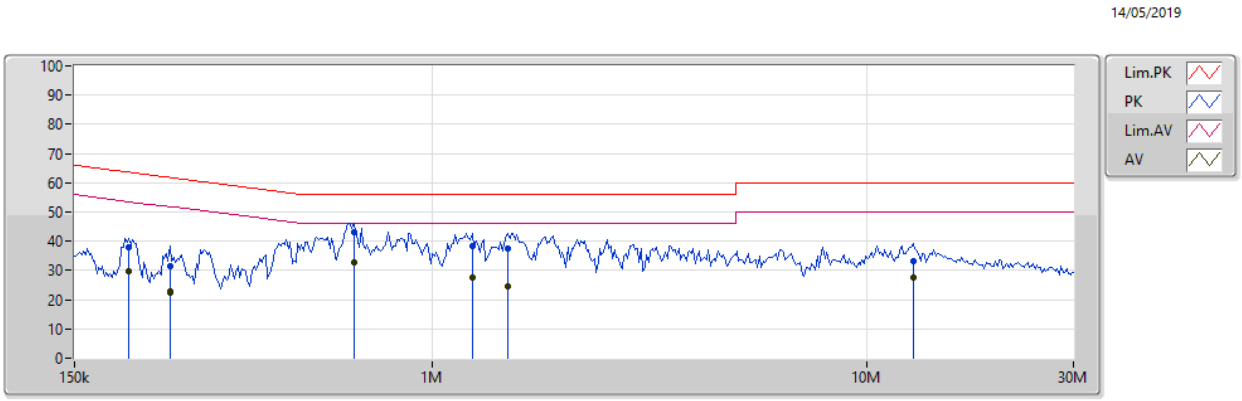
Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	360.058k	33.46	58.73	-25.27	19.48	Line	-	13.98	9.61	0.01	9.86
AV	360.058k	23.93	48.73	-24.80	19.48	Line	-	4.45	9.61	0.01	9.86
QP	426.418k	35.60	57.32	-21.72	19.48	Line	-	16.12	9.61	0.01	9.86
AV	426.418k	24.84	47.32	-22.48	19.48	Line	-	5.36	9.61	0.01	9.86
QP	628.592k	42.19	56.00	-13.81	19.48	Line	-	22.71	9.61	0.01	9.86
AV	628.592k	30.77	46.00	-15.23	19.48	Line	-	11.29	9.61	0.01	9.86
QP	687.482k	43.00	56.00	-13.00	19.48	Line	"Worst"	23.52	9.61	0.01	9.86
AV	687.482k	31.59	46.00	-14.41	19.48	Line	-	12.11	9.61	0.01	9.86
QP	1.153M	34.97	56.00	-21.03	19.49	Line	-	15.48	9.61	0.02	9.86
AV	1.153M	23.74	46.00	-22.26	19.49	Line	-	4.25	9.61	0.02	9.86
QP	12.439M	33.08	60.00	-26.92	19.65	Line	-	13.43	9.65	0.08	9.92
AV	12.439M	27.76	50.00	-22.24	19.65	Line	-	8.11	9.65	0.08	9.92

AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Neutral
Operating Function	Adapter mode		



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	206.241k	38.69	63.36	-24.67	19.51	Neutral	-	19.18	9.64	0.01	9.86
AV	206.241k	25.40	53.36	-27.96	19.51	Neutral	-	5.89	9.64	0.01	9.86
QP	298.034k	34.95	60.30	-25.35	19.51	Neutral	-	15.44	9.64	0.01	9.86
AV	298.034k	23.86	50.30	-26.44	19.51	Neutral	-	4.35	9.64	0.01	9.86
QP	660.657k	44.09	56.00	-11.91	19.51	Neutral	"Worst"	24.58	9.64	0.01	9.86
AV	660.657k	30.21	46.00	-15.79	19.51	Neutral	-	10.70	9.64	0.01	9.86
QP	1.188M	39.35	56.00	-16.65	19.52	Neutral	-	19.83	9.64	0.02	9.86
AV	1.188M	24.28	46.00	-21.72	19.52	Neutral	-	4.76	9.64	0.02	9.86
QP	1.524M	39.57	56.00	-16.43	19.55	Neutral	-	20.02	9.65	0.03	9.87
AV	1.524M	24.51	46.00	-21.49	19.55	Neutral	-	4.96	9.65	0.03	9.87
QP	6.26M	37.25	60.00	-22.75	19.63	Neutral	-	17.62	9.68	0.06	9.89
AV	6.26M	26.71	50.00	-23.29	19.63	Neutral	-	7.08	9.68	0.06	9.89

AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Line
Operating Function	Adapter mode		



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	200.176k	37.92	63.61	-25.69	19.48	Line	-	18.44	9.61	0.01	9.86
AV	200.176k	29.53	53.61	-24.08	19.48	Line	-	10.05	9.61	0.01	9.86
QP	249.162k	31.27	61.79	-30.52	19.48	Line	-	11.79	9.61	0.01	9.86
AV	249.162k	22.54	51.79	-29.25	19.48	Line	-	3.06	9.61	0.01	9.86
QP	660.657k	43.16	56.00	-12.84	19.48	Line	"Worst"	23.68	9.61	0.01	9.86
AV	660.657k	32.67	46.00	-13.33	19.48	Line	-	13.19	9.61	0.01	9.86
QP	1.237M	38.35	56.00	-17.65	19.49	Line	-	18.86	9.61	0.02	9.86
AV	1.237M	27.80	46.00	-18.20	19.49	Line	-	8.31	9.61	0.02	9.86
QP	1.494M	37.47	56.00	-18.53	19.52	Line	-	17.95	9.62	0.03	9.87
AV	1.494M	24.62	46.00	-21.38	19.52	Line	-	5.10	9.62	0.03	9.87
QP	12.816M	33.25	60.00	-26.75	19.66	Line	-	13.59	9.65	0.08	9.93
AV	12.816M	27.80	50.00	-22.20	19.66	Line	-	8.14	9.65	0.08	9.93

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)	672.5k	1.028M	1M03F1D	666.25k	1.027M
BT-LE(2Mbps)	1.143M	2.041M	2M04F1D	1.133M	2.036M

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;

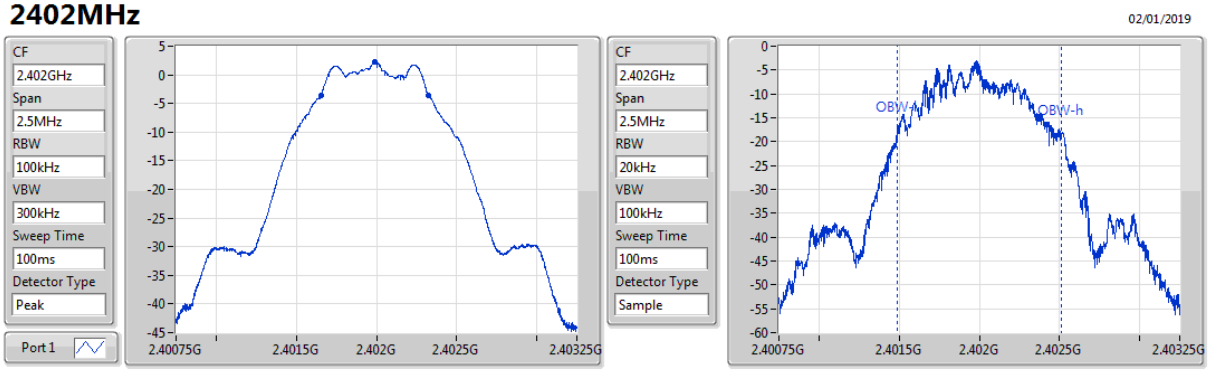
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	667.5k	1.027M
2440MHz	Pass	500k	672.5k	1.028M
2480MHz	Pass	500k	666.25k	1.028M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.133M	2.036M
2440MHz	Pass	500k	1.143M	2.041M
2480MHz	Pass	500k	1.133M	2.039M

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

BT-LE(1Mbps) **EBW**

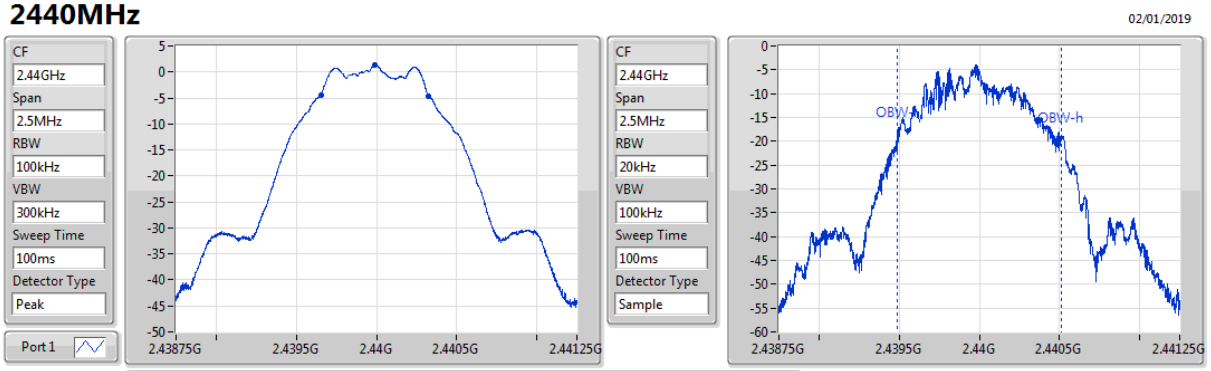
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
667.5k	2.401655G	2.402323G	1.027M	2.401488G	2.402515G	500k	1

BT-LE(1Mbps) **EBW**

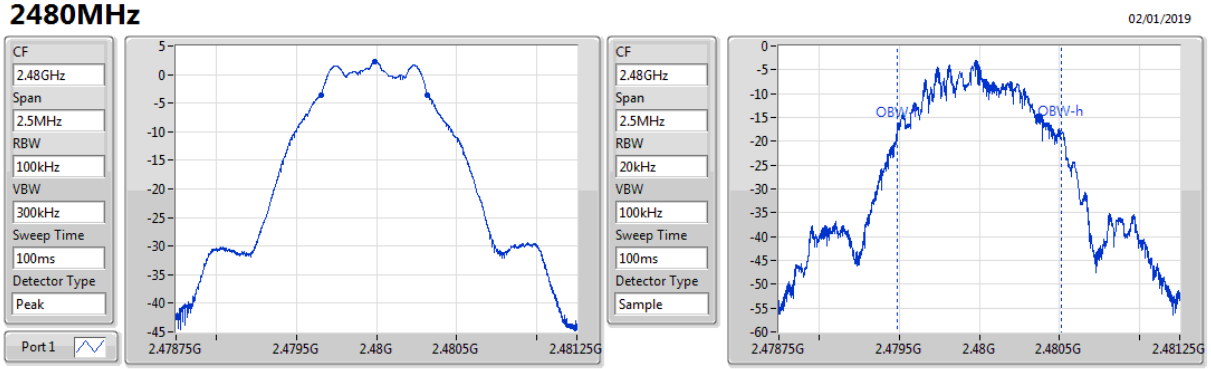
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
672.5k	2.439654G	2.440326G	1.028M	2.439487G	2.440515G	500k	1

BT-LE(1Mbps) **EBW**

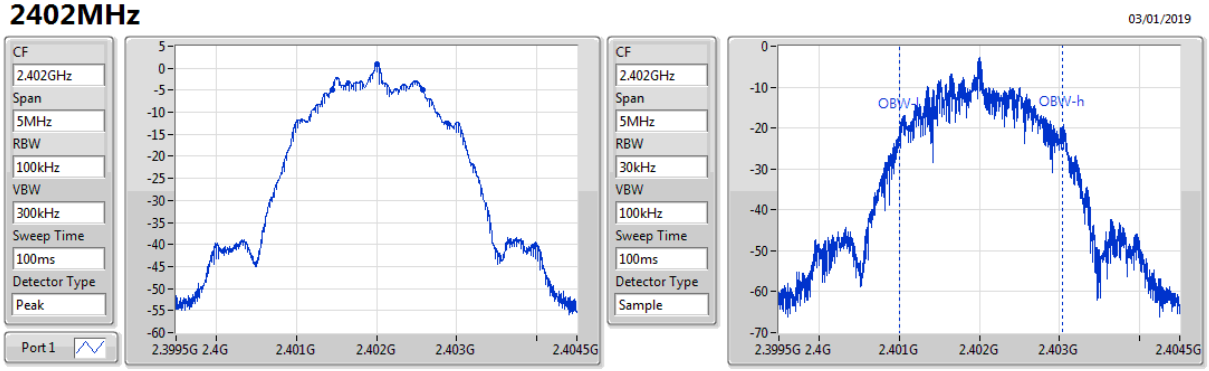
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
666.25k	2.479653G	2.480319G	1.028M	2.479485G	2.480513G	500k	1

BT-LE(2Mbps) **EBW**

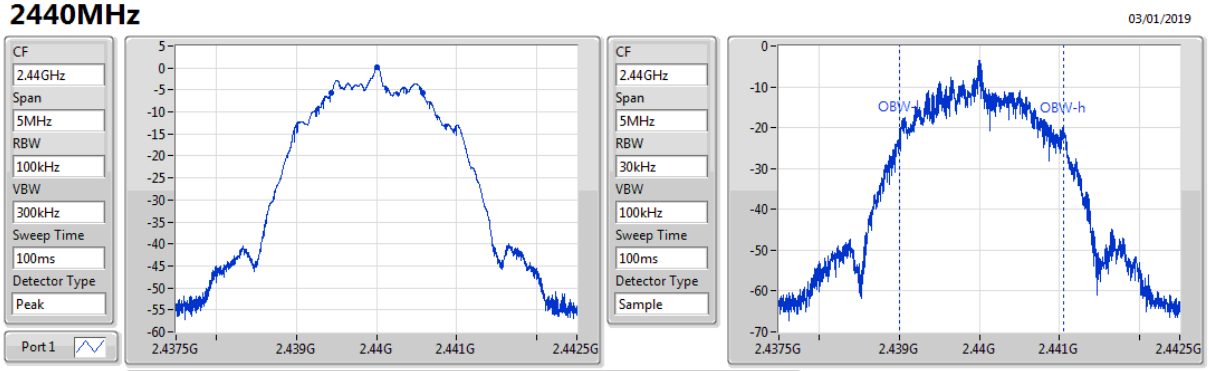
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.133M	2.401448G	2.40258G	2.036M	2.401008G	2.403044G	500k	1

BT-LE(2Mbps) **EBW**

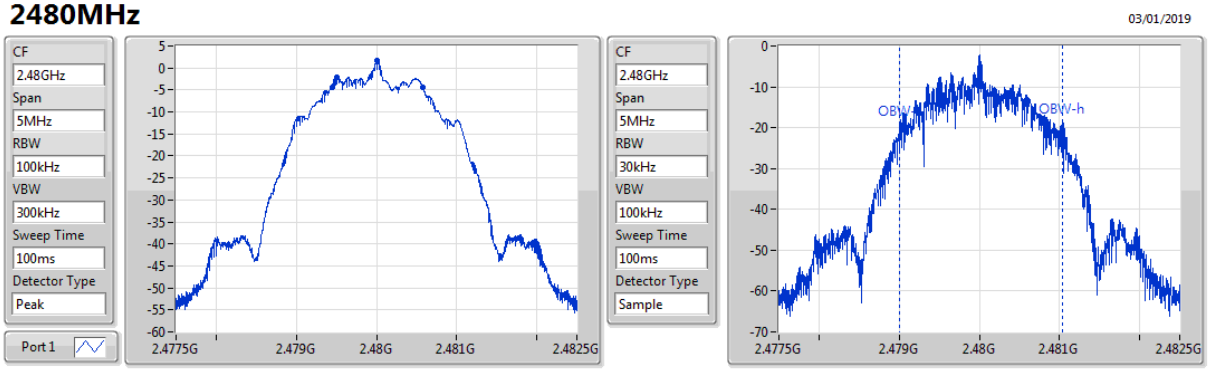
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.143M	2.439438G	2.44058G	2.041M	2.439008G	2.441049G	500k	1

BT-LE(2Mbps) **EBW**

2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.133M	2.479445G	2.480578G	2.039M	2.479G	2.481039G	500k	1

Summary

Mode	Power	Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	1.81	0.00152
BT-LE(2Mbps)	1.31	0.00135

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.93	1.79	30.00
2440MHz	Pass	2.93	0.90	30.00
2480MHz	Pass	2.93	1.81	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.93	1.27	30.00
2440MHz	Pass	2.93	0.29	30.00
2480MHz	Pass	2.93	1.31	30.00

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	2.28
BT-LE(2Mbps)	2.22

RBW=3kHz.

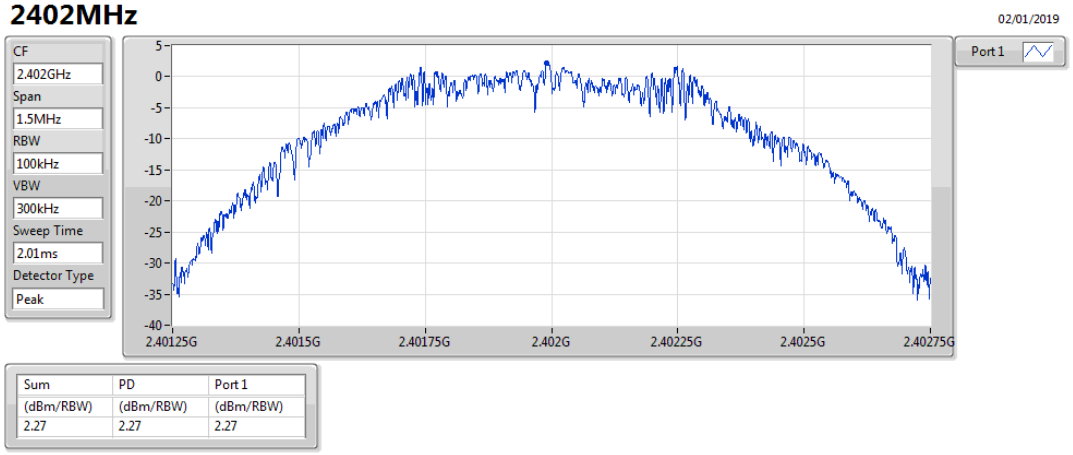
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.93	2.27	8.00
2440MHz	Pass	2.93	1.33	8.00
2480MHz	Pass	2.93	2.28	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.93	2.22	8.00
2440MHz	Pass	2.93	1.16	8.00
2480MHz	Pass	2.93	1.58	8.00

RBW=3kHz.

BT-LE(1Mbps) **PSD**

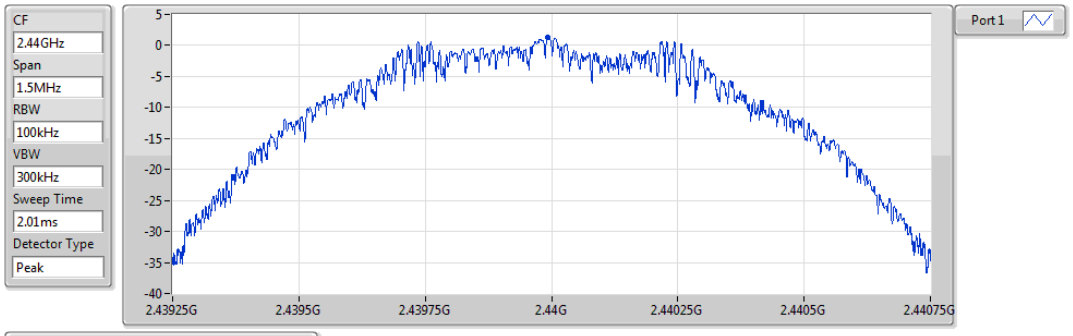
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.27	2.27	2.27

BT-LE(1Mbps) **PSD**

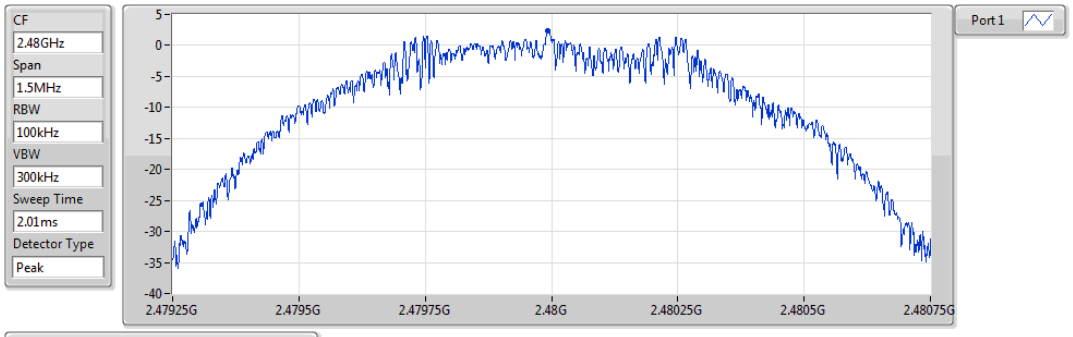
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.33	1.33	1.33

BT-LE(1Mbps) **PSD**

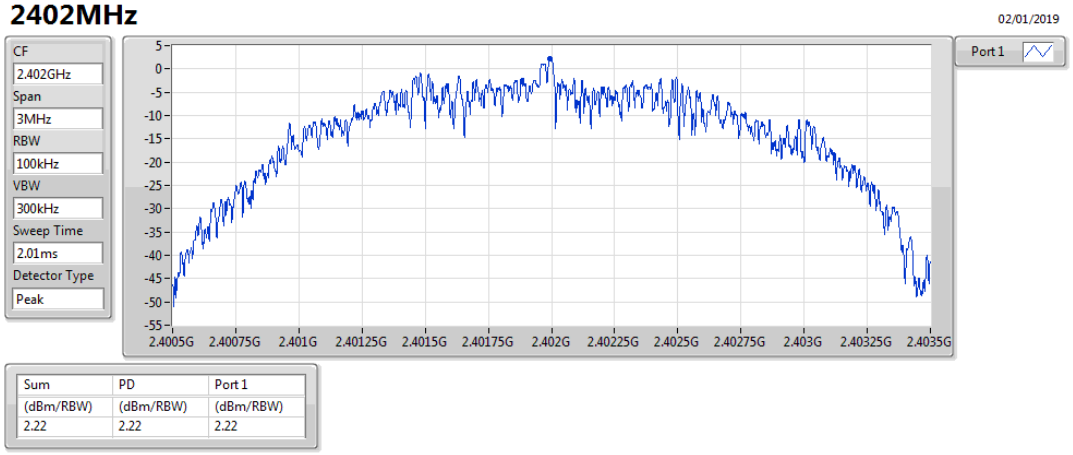
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.28	2.28	2.28

BT-LE(2Mbps) **PSD**

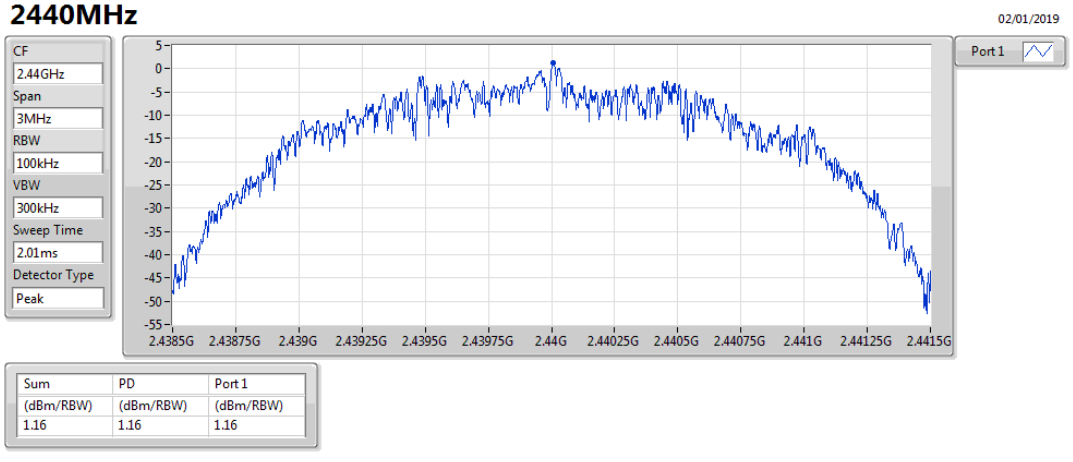
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.22	2.22	2.22

BT-LE(2Mbps) **PSD**

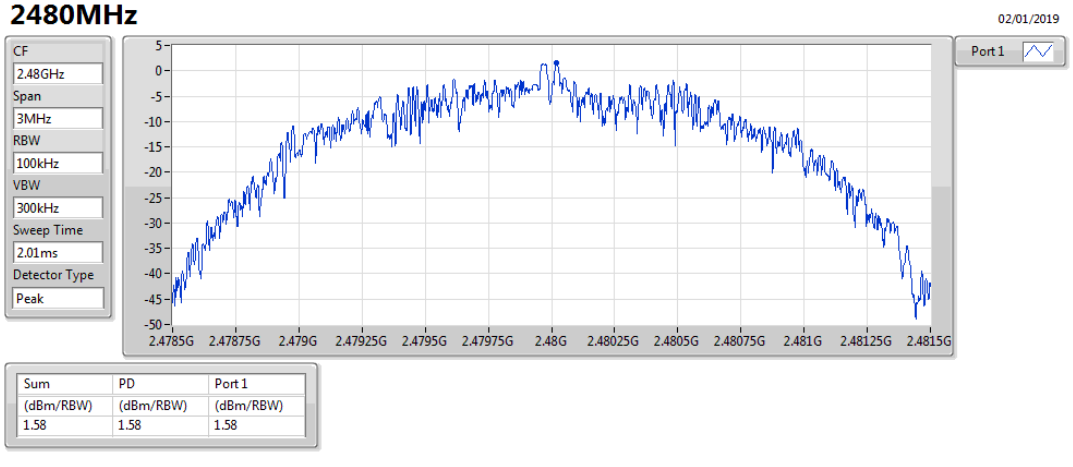
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.16	1.16	1.16

BT-LE(2Mbps) **PSD**

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.58	1.58	1.58

Summary

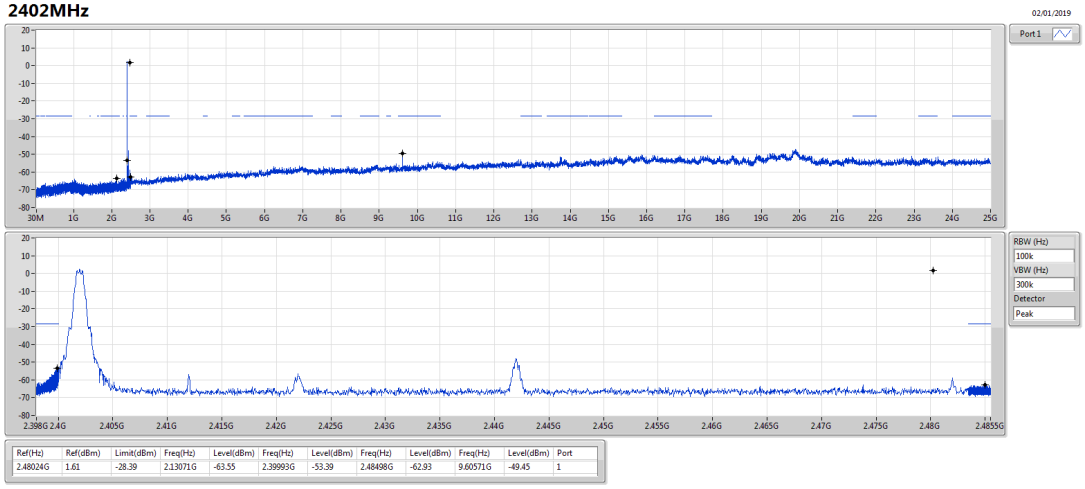
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.48024G	1.61	-28.39	2.13071G	-63.55	2.39993G	-53.39	2.48498G	-62.93	9.60571G	-49.45	1
BT-LE(2Mbps)	Pass	2.48003G	1.98	-28.02	2.01261G	-62.93	2.39999G	-37.90	2.48533G	-62.69	15.04859G	-50.64	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	2.48024G	1.61	-28.39	2.13071G	-63.55	2.39993G	-53.39	2.48498G	-62.93	9.60571G	-49.45	1
2440MHz	Pass	2.48024G	1.61	-28.39	2.05257G	-64.17	2.39997G	-63.46	2.48505G	-62.51	17.20435G	-50.81	1
2480MHz	Pass	2.48024G	1.61	-28.39	1.92351G	-64.62	2.39942G	-63.68	2.48362G	-62.19	17.46609G	-50.34	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.48003G	1.98	-28.02	2.01261G	-62.93	2.39999G	-37.90	2.48533G	-62.69	15.04859G	-50.64	1
2440MHz	Pass	2.48003G	1.98	-28.02	1.94364G	-64.55	2.39939G	-63.05	2.48388G	-62.75	17.56459G	-50.58	1
2480MHz	Pass	2.48003G	1.98	-28.02	2.30446G	-63.91	2.39976G	-63.25	2.48355G	-61.69	16.20246G	-50.65	1

BT-LE(1Mbps) **CSE NdB**

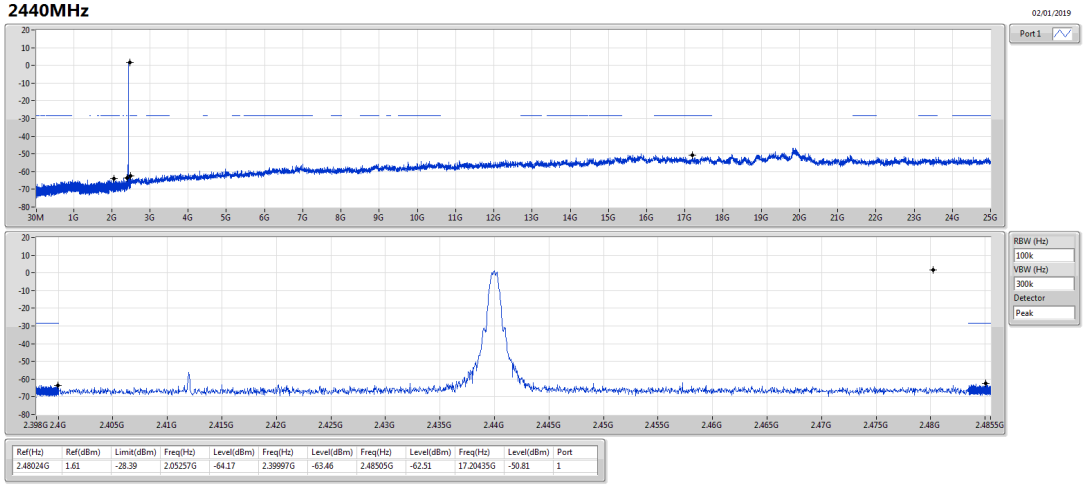
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48024G	1.61	-28.39	2.13071G	-63.55	2.39993G	-53.39	2.48498G	-62.93	9.60571G	-49.45	1

BT-LE(1Mbps) **CSE NdB**

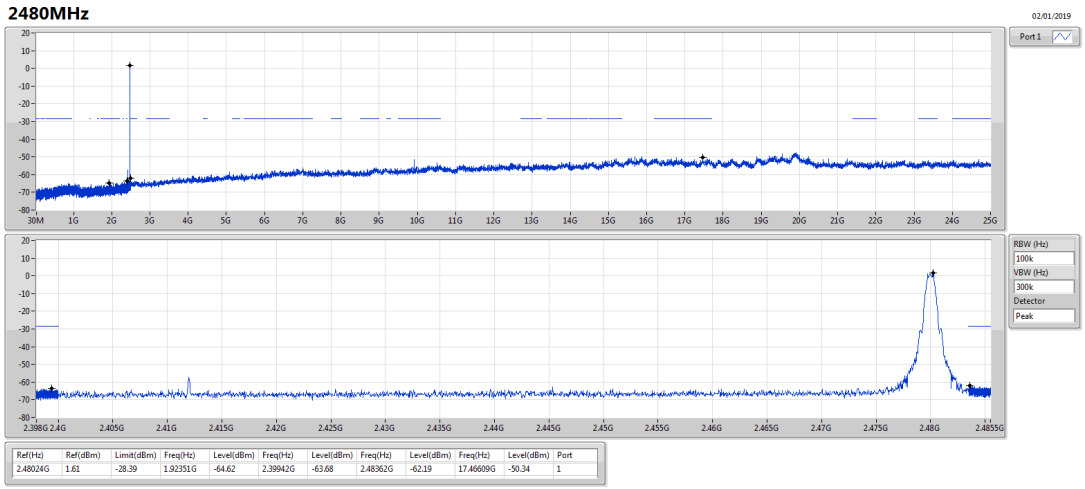
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48024G	1.61	-28.39	2.05257G	-64.17	2.39997G	-63.46	2.48505G	-62.51	17.20435G	-50.81	1

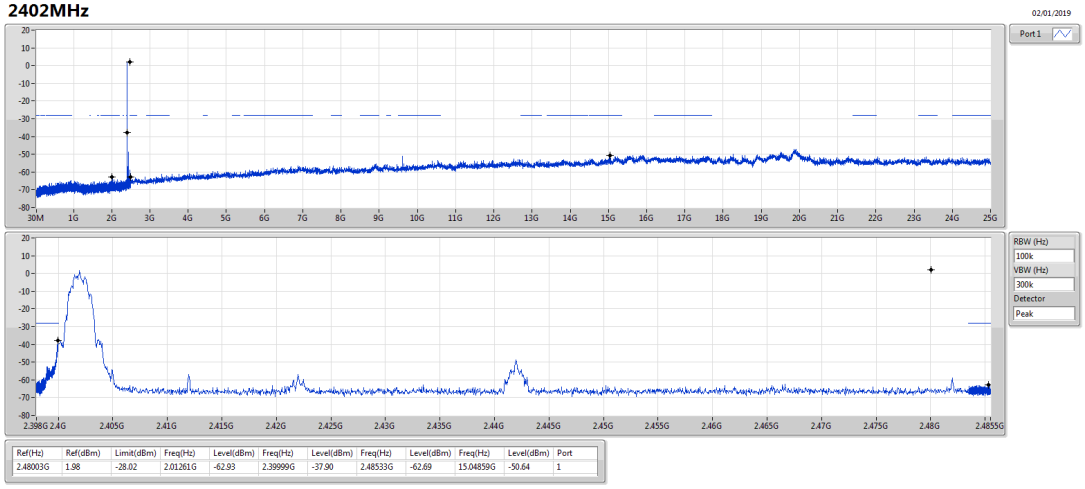
BT-LE(1Mbps) **CSE NdB**

2480MHz



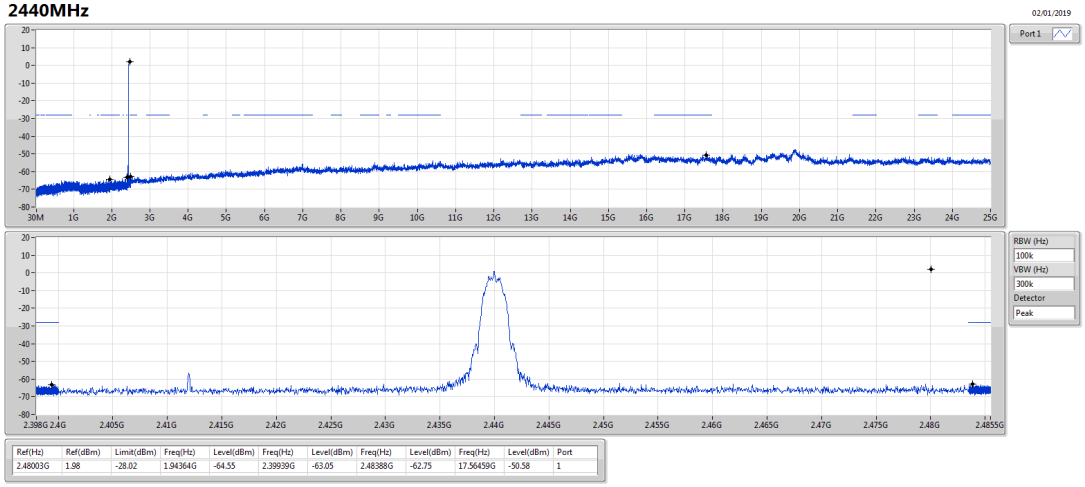
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48024G	1.61	-28.39	1.92351G	-64.62	2.39942G	-63.68	2.48362G	-62.19	17.46609G	-50.34	1

BT-LE(2Mbps)
2402MHz
CSE NdB



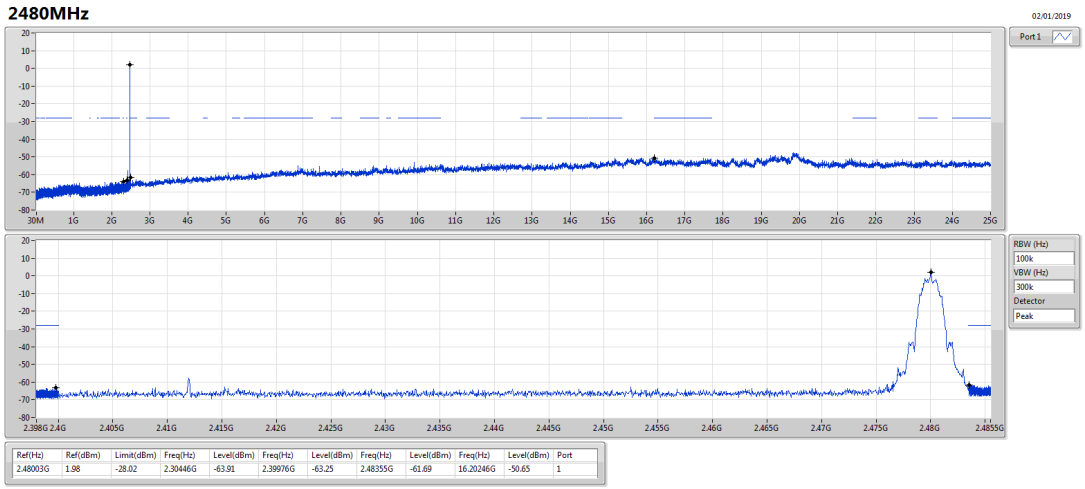
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48003G	1.98	-28.02	2.01261G	-62.93	2.39999G	-37.90	2.48533G	-62.69	15.04859G	-50.64	1

BT-LE(2Mbps)
2440MHz
CSE NdB



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48003G	1.98	-28.02	1.94364G	-64.55	2.39939G	-63.05	2.48388G	-62.75	17.56459G	-50.58	1

BT-LE(2Mbps)
2480MHz
CSE NdB



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48003G	1.98	-28.02	2.30446G	-63.91	2.39976G	-63.25	2.48355G	-61.69	16.20246G	-50.65	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	33.88M	36.04	40.00	-3.96	-15.32	3	Vertical	0	3.00	-
BT-LE(2Mbps)	Pass	PK	30M	35.61	40.00	-4.39	-13.40	3	Vertical	360	3.00	-

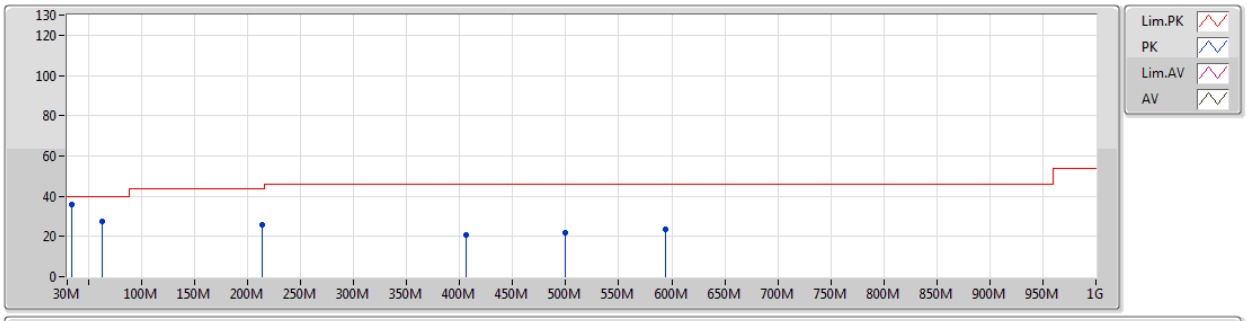
Result

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	33.88M	36.04	40.00	-3.96	-15.32	3	Vertical	0	3.00	-
2440MHz	Pass	PK	62.98M	27.26	40.00	-12.74	-25.58	3	Vertical	0	3.00	-
2440MHz	Pass	PK	214.3M	25.97	43.50	-17.53	-20.93	3	Vertical	0	3.00	-
2440MHz	Pass	PK	406.36M	20.57	46.00	-25.43	-13.77	3	Vertical	0	3.00	-
2440MHz	Pass	PK	499.48M	22.09	46.00	-23.91	-12.10	3	Vertical	0	3.00	-
2440MHz	Pass	PK	594.54M	23.63	46.00	-22.37	-10.92	3	Vertical	0	3.00	-
2440MHz	Pass	PK	62.98M	22.99	40.00	-17.01	-25.58	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	163.86M	30.66	43.50	-12.84	-20.25	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	208.48M	31.17	43.50	-12.33	-20.97	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	449.04M	21.56	46.00	-24.44	-12.89	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	474.26M	22.38	46.00	-23.62	-12.47	3	Horizontal	360	3.00	-
2440MHz	Pass	PK	571.26M	23.18	46.00	-22.82	-10.68	3	Horizontal	360	3.00	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	35.61	40.00	-4.39	-13.40	3	Vertical	360	3.00	-
2440MHz	Pass	PK	136.7M	24.86	43.50	-18.64	-19.23	3	Vertical	360	3.00	-
2440MHz	Pass	PK	216M	26.29	43.50	-17.21	-20.94	3	Vertical	360	3.00	-
2440MHz	Pass	PK	450.98M	21.99	46.00	-24.01	-12.85	3	Vertical	360	3.00	-
2440MHz	Pass	PK	561.56M	23.33	46.00	-22.67	-10.33	3	Vertical	360	3.00	-
2440MHz	Pass	PK	652.74M	24.25	46.00	-21.75	-9.96	3	Vertical	360	3.00	-
2440MHz	Pass	PK	61.04M	23.08	40.00	-16.92	-25.64	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	165.8M	30.55	43.50	-12.95	-20.40	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	214.3M	31.40	43.50	-12.10	-20.93	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	412.18M	21.54	46.00	-24.46	-13.54	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	497.54M	22.08	46.00	-23.92	-12.12	3	Horizontal	0	3.00	-
2440MHz	Pass	PK	567.38M	23.05	46.00	-22.95	-10.54	3	Horizontal	0	3.00	-

BT-LE(1Mbps)

2440MHz_Adapter

28/12/2018

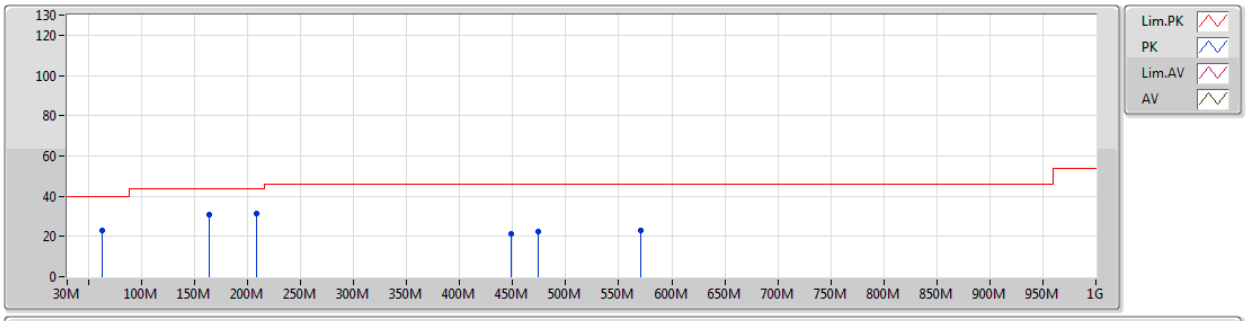


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	33.88M	36.04	40.00	-3.96	-15.32	3	Vertical	0	3.00	-
PK	62.98M	27.26	40.00	-12.74	-25.58	3	Vertical	0	3.00	-
PK	214.3M	25.97	43.50	-17.53	-20.93	3	Vertical	0	3.00	-
PK	406.36M	20.57	46.00	-25.43	-13.77	3	Vertical	0	3.00	-
PK	499.48M	22.09	46.00	-23.91	-12.10	3	Vertical	0	3.00	-
PK	594.54M	23.63	46.00	-22.37	-10.92	3	Vertical	0	3.00	-

BT-LE(1Mbps)

2440MHz_Adapter

28/12/2018

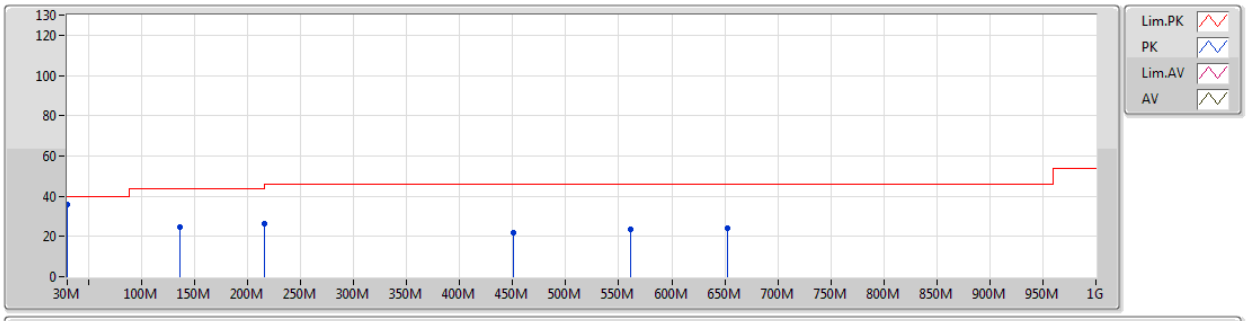


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	62.98M	22.99	40.00	-17.01	-25.58	3	Horizontal	360	3.00	-
PK	163.86M	30.66	43.50	-12.84	-20.25	3	Horizontal	360	3.00	-
PK	208.48M	31.17	43.50	-12.33	-20.97	3	Horizontal	360	3.00	-
PK	449.04M	21.56	46.00	-24.44	-12.89	3	Horizontal	360	3.00	-
PK	474.26M	22.38	46.00	-23.62	-12.47	3	Horizontal	360	3.00	-
PK	571.26M	23.18	46.00	-22.82	-10.68	3	Horizontal	360	3.00	-

BT-LE(2Mbps)

2440MHz_Adapter

28/12/2018

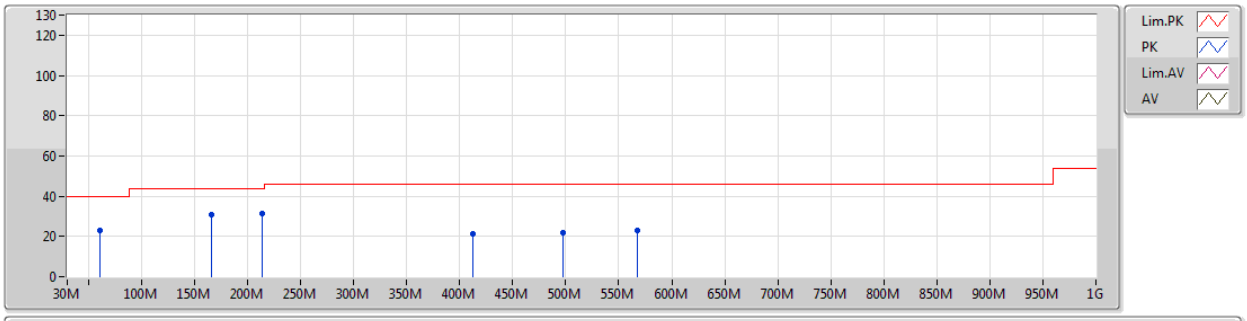


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	30M	35.61	40.00	-4.39	-13.40	3	Vertical	360	3.00	-
PK	136.7M	24.86	43.50	-18.64	-19.23	3	Vertical	360	3.00	-
PK	216M	26.29	43.50	-17.21	-20.94	3	Vertical	360	3.00	-
PK	450.98M	21.99	46.00	-24.01	-12.85	3	Vertical	360	3.00	-
PK	561.56M	23.33	46.00	-22.67	-10.33	3	Vertical	360	3.00	-
PK	652.74M	24.25	46.00	-21.75	-9.96	3	Vertical	360	3.00	-

BT-LE(2Mbps)

2440MHz_Adapter

28/12/2018



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	61.04M	23.08	40.00	-16.92	-25.64	3	Horizontal	0	3.00	-
PK	165.8M	30.55	43.50	-12.95	-20.40	3	Horizontal	0	3.00	-
PK	214.3M	31.40	43.50	-12.10	-20.93	3	Horizontal	0	3.00	-
PK	412.18M	21.54	46.00	-24.46	-13.54	3	Horizontal	0	3.00	-
PK	497.54M	22.08	46.00	-23.92	-12.12	3	Horizontal	0	3.00	-
PK	567.38M	23.05	46.00	-22.95	-10.54	3	Horizontal	0	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	2.4912G	44.74	54.00	-9.26	31.14	3	Horizontal	232	1.57	-
BT-LE(2Mbps)	Pass	AV	2.4892G	46.36	54.00	-7.64	31.13	3	Vertical	292	1.38	-

Result

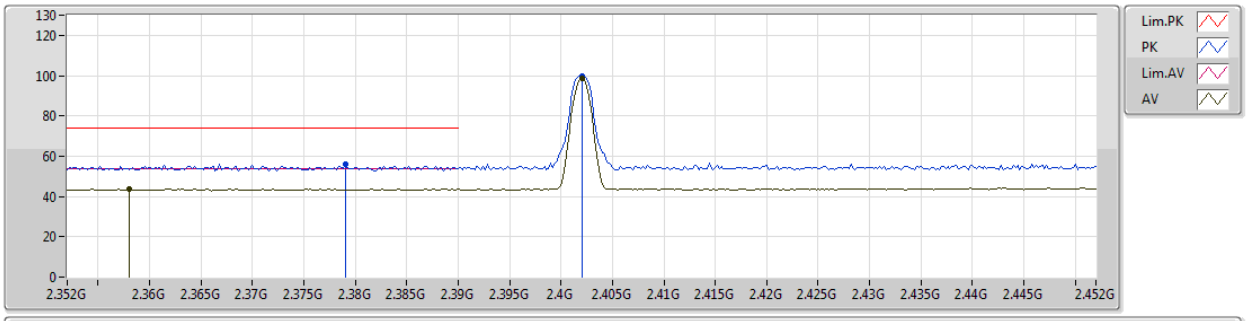
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.358G	43.77	54.00	-10.23	30.66	3	Vertical	288	1.22	-
2402MHz	Pass	AV	2.402G	98.63	Inf	-Inf	30.82	3	Vertical	288	1.22	-
2402MHz	Pass	PK	2.379G	56.23	74.00	-17.77	30.74	3	Vertical	288	1.22	-
2402MHz	Pass	PK	2.402G	99.56	Inf	-Inf	30.82	3	Vertical	288	1.22	-
2402MHz	Pass	AV	2.3838G	43.86	54.00	-10.14	30.75	3	Horizontal	114	1.55	-
2402MHz	Pass	AV	2.402G	95.74	Inf	-Inf	30.82	3	Horizontal	114	1.55	-
2402MHz	Pass	PK	2.3532G	55.55	74.00	-18.45	30.65	3	Horizontal	114	1.55	-
2402MHz	Pass	PK	2.402G	96.66	Inf	-Inf	30.82	3	Horizontal	114	1.55	-
2402MHz	Pass	AV	4.80226G	30.86	54.00	-23.14	2.07	3	Vertical	157	1.30	-
2402MHz	Pass	PK	4.804G	42.84	74.00	-31.16	2.08	3	Vertical	157	1.30	-
2402MHz	Pass	AV	4.8109G	30.12	54.00	-23.88	2.10	3	Horizontal	341	2.30	-
2402MHz	Pass	PK	4.81084G	42.49	74.00	-31.51	2.10	3	Horizontal	341	2.30	-
2440MHz	Pass	AV	2.3576G	43.81	54.00	-10.19	30.66	3	Vertical	289	1.37	-
2440MHz	Pass	AV	2.44G	97.69	Inf	-Inf	30.95	3	Vertical	289	1.37	-
2440MHz	Pass	AV	2.4988G	44.56	54.00	-9.44	31.17	3	Vertical	289	1.37	-
2440MHz	Pass	PK	2.3536G	55.86	74.00	-18.14	30.65	3	Vertical	289	1.37	-
2440MHz	Pass	PK	2.4404G	98.83	Inf	-Inf	30.95	3	Vertical	289	1.37	-
2440MHz	Pass	PK	2.4908G	56.05	74.00	-17.95	31.13	3	Vertical	289	1.37	-
2440MHz	Pass	AV	2.3532G	43.90	54.00	-10.10	30.65	3	Horizontal	232	1.57	-
2440MHz	Pass	AV	2.44G	96.16	Inf	-Inf	30.95	3	Horizontal	232	1.57	-
2440MHz	Pass	AV	2.4912G	44.74	54.00	-9.26	31.14	3	Horizontal	232	1.57	-
2440MHz	Pass	PK	2.3736G	55.66	74.00	-18.34	30.72	3	Horizontal	232	1.57	-
2440MHz	Pass	PK	2.4396G	97.19	Inf	-Inf	30.95	3	Horizontal	232	1.57	-
2440MHz	Pass	PK	2.4948G	55.84	74.00	-18.16	31.16	3	Horizontal	232	1.57	-
2440MHz	Pass	AV	4.88036G	31.16	54.00	-22.84	2.27	3	Vertical	182	1.50	-
2440MHz	Pass	PK	4.8749G	43.39	74.00	-30.61	2.25	3	Vertical	182	1.50	-
2440MHz	Pass	AV	4.89104G	31.00	54.00	-23.00	2.30	3	Horizontal	300	1.91	-
2440MHz	Pass	PK	4.89242G	42.61	74.00	-31.39	2.31	3	Horizontal	300	1.91	-
2480MHz	Pass	AV	2.48G	97.57	Inf	-Inf	31.09	3	Vertical	290	1.36	-
2480MHz	Pass	AV	2.4878G	44.48	54.00	-9.52	31.13	3	Vertical	290	1.36	-
2480MHz	Pass	PK	2.4798G	98.62	Inf	-Inf	31.09	3	Vertical	290	1.36	-
2480MHz	Pass	PK	2.498G	56.19	74.00	-17.81	31.16	3	Vertical	290	1.36	-
2480MHz	Pass	AV	2.48G	96.36	Inf	-Inf	31.09	3	Horizontal	234	1.28	-
2480MHz	Pass	AV	2.4878G	44.58	54.00	-9.42	31.13	3	Horizontal	234	1.28	-
2480MHz	Pass	PK	2.4798G	97.39	Inf	-Inf	31.09	3	Horizontal	234	1.28	-
2480MHz	Pass	PK	2.4852G	56.90	74.00	-17.10	31.12	3	Horizontal	234	1.28	-
2480MHz	Pass	AV	4.9672G	31.26	54.00	-22.74	2.49	3	Vertical	120	1.22	-
2480MHz	Pass	PK	4.9672G	42.54	74.00	-31.46	2.49	3	Vertical	120	1.22	-
2480MHz	Pass	AV	4.94692G	31.08	54.00	-22.92	2.44	3	Horizontal	322	2.10	-
2480MHz	Pass	PK	4.94626G	43.48	74.00	-30.52	2.43	3	Horizontal	322	2.10	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3756G	45.34	54.00	-8.66	30.72	3	Vertical	294	1.25	-
2402MHz	Pass	AV	2.402G	97.37	Inf	-Inf	30.82	3	Vertical	294	1.25	-
2402MHz	Pass	PK	2.3538G	56.21	74.00	-17.79	30.65	3	Vertical	294	1.25	-
2402MHz	Pass	PK	2.402G	99.66	Inf	-Inf	30.82	3	Vertical	294	1.25	-
2402MHz	Pass	AV	2.3776G	45.73	54.00	-8.27	30.73	3	Horizontal	120	1.55	-
2402MHz	Pass	AV	2.402G	94.47	Inf	-Inf	30.82	3	Horizontal	120	1.55	-

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	2.3548G	55.66	74.00	-18.34	30.65	3	Horizontal	120	1.55	-
2402MHz	Pass	PK	2.402G	96.77	Inf	-Inf	30.82	3	Horizontal	120	1.55	-
2402MHz	Pass	AV	4.80934G	32.22	54.00	-21.78	2.09	3	Vertical	26	2.43	-
2402MHz	Pass	PK	4.79764G	43.03	74.00	-30.97	2.07	3	Vertical	26	2.43	-
2402MHz	Pass	AV	4.79308G	31.82	54.00	-22.18	2.06	3	Horizontal	2	1.50	-
2402MHz	Pass	PK	4.80262G	42.64	74.00	-31.36	2.07	3	Horizontal	2	1.50	-
2440MHz	Pass	AV	2.388G	45.84	54.00	-8.16	30.77	3	Vertical	292	1.38	-
2440MHz	Pass	AV	2.44G	96.76	Inf	-Inf	30.95	3	Vertical	292	1.38	-
2440MHz	Pass	AV	2.4892G	46.36	54.00	-7.64	31.13	3	Vertical	292	1.38	-
2440MHz	Pass	PK	2.35G	55.40	74.00	-18.60	30.63	3	Vertical	292	1.38	-
2440MHz	Pass	PK	2.4404G	99.08	Inf	-Inf	30.95	3	Vertical	292	1.38	-
2440MHz	Pass	PK	2.4932G	56.02	74.00	-17.98	31.14	3	Vertical	292	1.38	-
2440MHz	Pass	AV	2.3712G	45.41	54.00	-8.59	30.71	3	Horizontal	122	1.28	-
2440MHz	Pass	AV	2.44G	94.27	Inf	-Inf	30.95	3	Horizontal	122	1.28	-
2440MHz	Pass	AV	2.4916G	46.14	54.00	-7.86	31.14	3	Horizontal	122	1.28	-
2440MHz	Pass	PK	2.3704G	55.40	74.00	-18.60	30.71	3	Horizontal	122	1.28	-
2440MHz	Pass	PK	2.4404G	96.56	Inf	-Inf	30.95	3	Horizontal	122	1.28	-
2440MHz	Pass	PK	2.4904G	55.90	74.00	-18.10	31.13	3	Horizontal	122	1.28	-
2440MHz	Pass	AV	4.87982G	32.13	54.00	-21.87	2.27	3	Vertical	56	2.22	-
2440MHz	Pass	PK	4.87526G	43.02	74.00	-30.98	2.26	3	Vertical	56	2.22	-
2440MHz	Pass	AV	4.8923G	32.01	54.00	-21.99	2.31	3	Horizontal	357	1.48	-
2440MHz	Pass	PK	4.8875G	43.05	74.00	-30.95	2.29	3	Horizontal	357	1.48	-
2480MHz	Pass	AV	2.48G	96.11	Inf	-Inf	31.09	3	Vertical	291	1.37	-
2480MHz	Pass	AV	2.4928G	45.95	54.00	-8.05	31.14	3	Vertical	291	1.37	-
2480MHz	Pass	PK	2.4794G	98.62	Inf	-Inf	31.09	3	Vertical	291	1.37	-
2480MHz	Pass	PK	2.4836G	56.25	74.00	-17.75	31.11	3	Vertical	291	1.37	-
2480MHz	Pass	AV	2.48G	94.97	Inf	-Inf	31.09	3	Horizontal	232	1.27	-
2480MHz	Pass	AV	2.4886G	45.90	54.00	-8.10	31.13	3	Horizontal	232	1.27	-
2480MHz	Pass	PK	2.4796G	97.44	Inf	-Inf	31.09	3	Horizontal	232	1.27	-
2480MHz	Pass	PK	2.484G	56.46	74.00	-17.54	31.12	3	Horizontal	232	1.27	-
2480MHz	Pass	AV	4.9651G	32.72	54.00	-21.28	2.48	3	Vertical	32	1.91	-
2480MHz	Pass	PK	4.96732G	43.08	74.00	-30.92	2.49	3	Vertical	32	1.91	-
2480MHz	Pass	AV	4.94632G	32.14	54.00	-21.86	2.43	3	Horizontal	17	1.65	-
2480MHz	Pass	PK	4.9513G	43.02	74.00	-30.98	2.45	3	Horizontal	17	1.65	-

BT-LE(1Mbps)

2402MHz_TX

26/12/2018

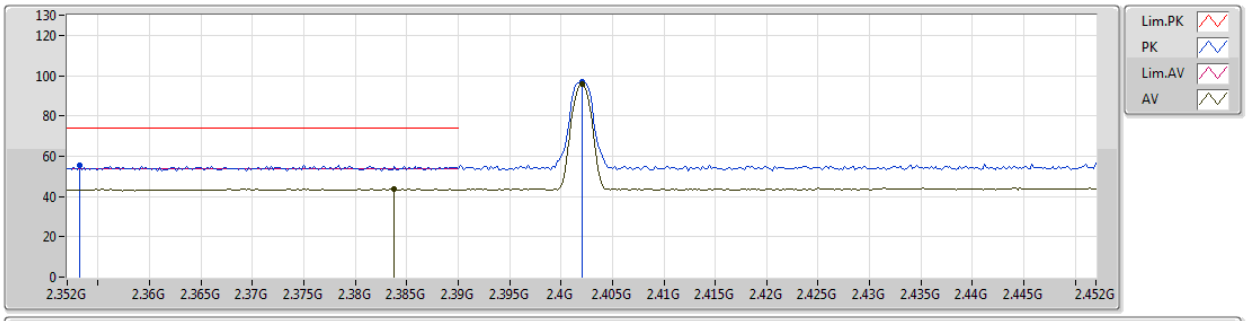


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.358G	43.77	54.00	-10.23	30.66	3	Vertical	288	1.22	-
AV	2.402G	98.63	Inf	-Inf	30.82	3	Vertical	288	1.22	-
PK	2.379G	56.23	74.00	-17.77	30.74	3	Vertical	288	1.22	-
PK	2.402G	99.56	Inf	-Inf	30.82	3	Vertical	288	1.22	-

BT-LE(1Mbps)

2402MHz_TX

26/12/2018

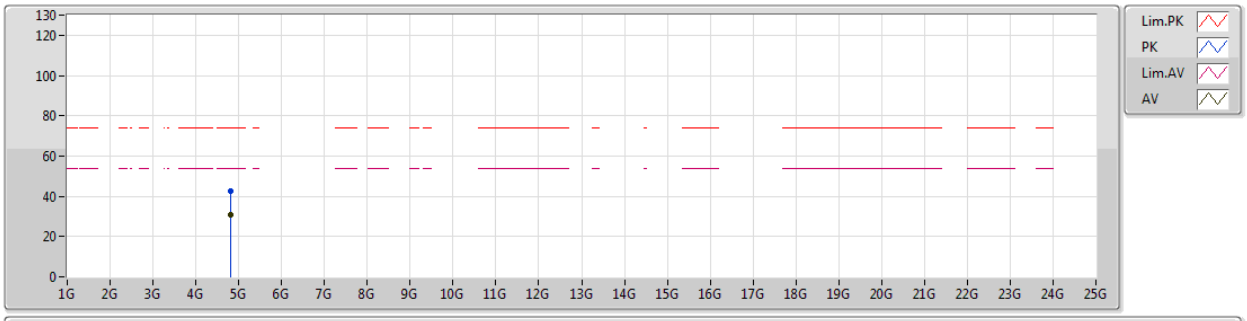


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3838G	43.86	54.00	-10.14	30.75	3	Horizontal	114	1.55	-
AV	2.402G	95.74	Inf	-Inf	30.82	3	Horizontal	114	1.55	-
PK	2.3532G	55.55	74.00	-18.45	30.65	3	Horizontal	114	1.55	-
PK	2.402G	96.66	Inf	-Inf	30.82	3	Horizontal	114	1.55	-

BT-LE(1Mbps)

2402MHz_TX

26/12/2018

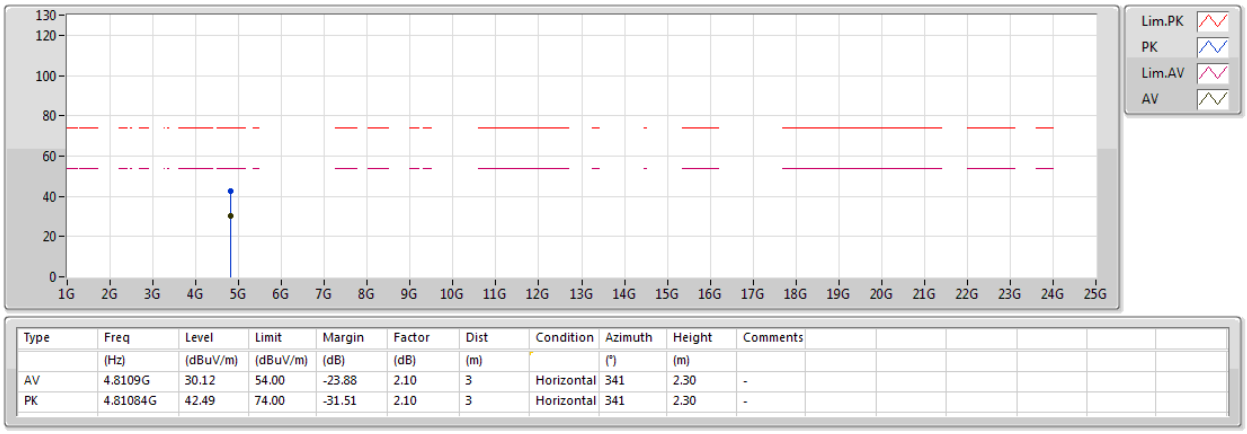


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.80226G	30.86	54.00	-23.14	2.07	3	Vertical	157	1.30	-
PK	4.804G	42.84	74.00	-31.16	2.08	3	Vertical	157	1.30	-

BT-LE(1Mbps)

2402MHz_TX

26/12/2018

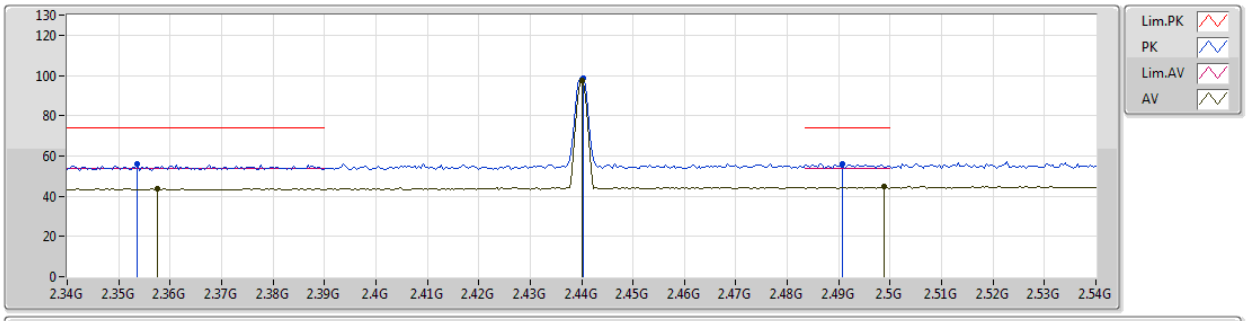


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.8109G	30.12	54.00	-23.88	2.10	3	Horizontal	341	2.30	-
PK	4.81084G	42.49	74.00	-31.51	2.10	3	Horizontal	341	2.30	-

BT-LE(1Mbps)

2440MHz_TX

26/12/2018

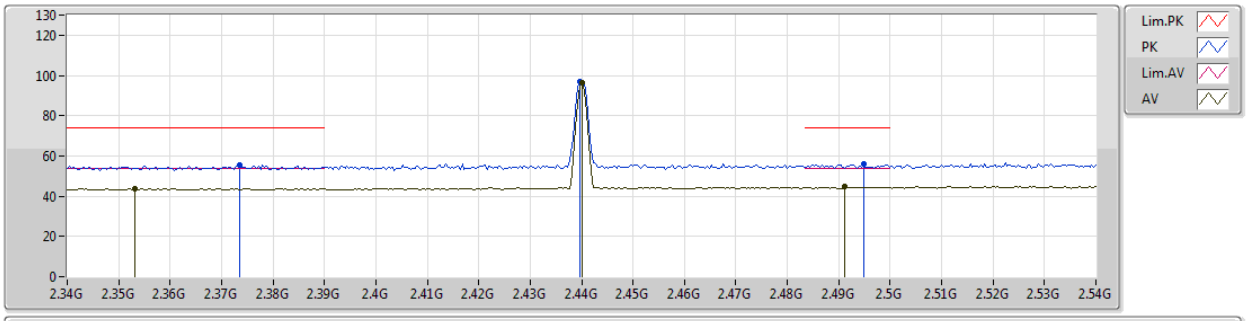


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3576G	43.81	54.00	-10.19	30.66	3	Vertical	289	1.37	-
AV	2.44G	97.69	Inf	-Inf	30.95	3	Vertical	289	1.37	-
AV	2.4988G	44.56	54.00	-9.44	31.17	3	Vertical	289	1.37	-
PK	2.3536G	55.86	74.00	-18.14	30.65	3	Vertical	289	1.37	-
PK	2.4404G	98.83	Inf	-Inf	30.95	3	Vertical	289	1.37	-
PK	2.4908G	56.05	74.00	-17.95	31.13	3	Vertical	289	1.37	-

BT-LE(1Mbps)

2440MHz_TX

26/12/2018

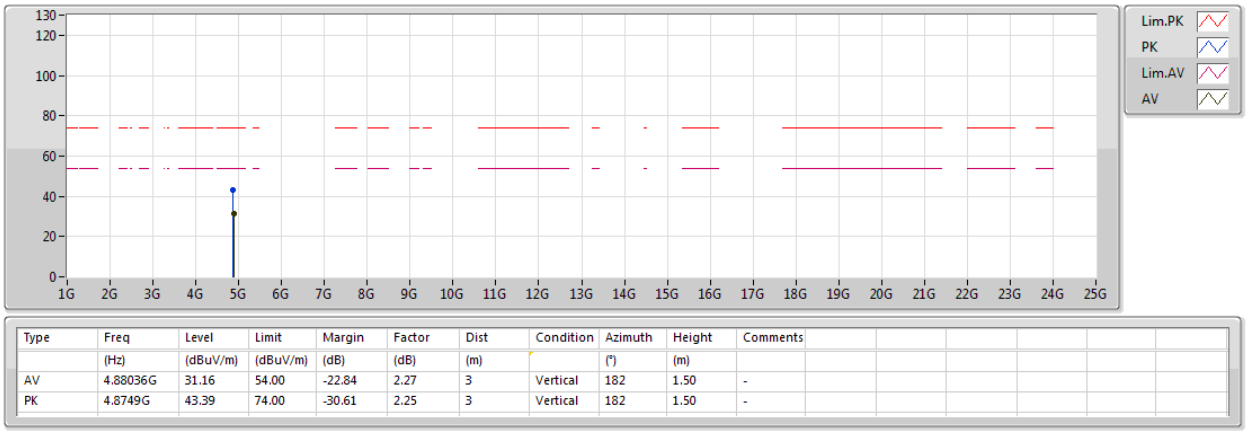


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3532G	43.90	54.00	-10.10	30.65	3	Horizontal	232	1.57	-
AV	2.44G	96.16	Inf	-Inf	30.95	3	Horizontal	232	1.57	-
AV	2.4912G	44.74	54.00	-9.26	31.14	3	Horizontal	232	1.57	-
PK	2.3736G	55.66	74.00	-18.34	30.72	3	Horizontal	232	1.57	-
PK	2.4396G	97.19	Inf	-Inf	30.95	3	Horizontal	232	1.57	-
PK	2.4948G	55.84	74.00	-18.16	31.16	3	Horizontal	232	1.57	-

BT-LE(1Mbps)

2440MHz_TX

26/12/2018

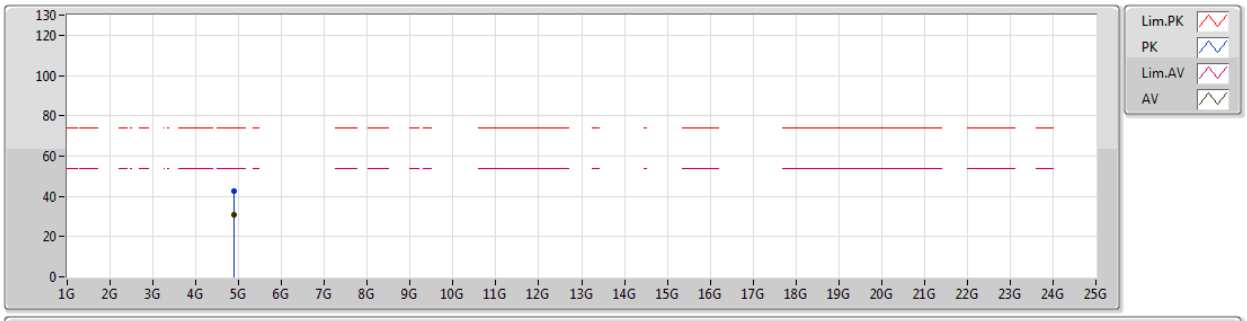


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.88036G	31.16	54.00	-22.84	2.27	3	Vertical	182	1.50	-
PK	4.8749G	43.39	74.00	-30.61	2.25	3	Vertical	182	1.50	-

BT-LE(1Mbps)

2440MHz_TX

26/12/2018

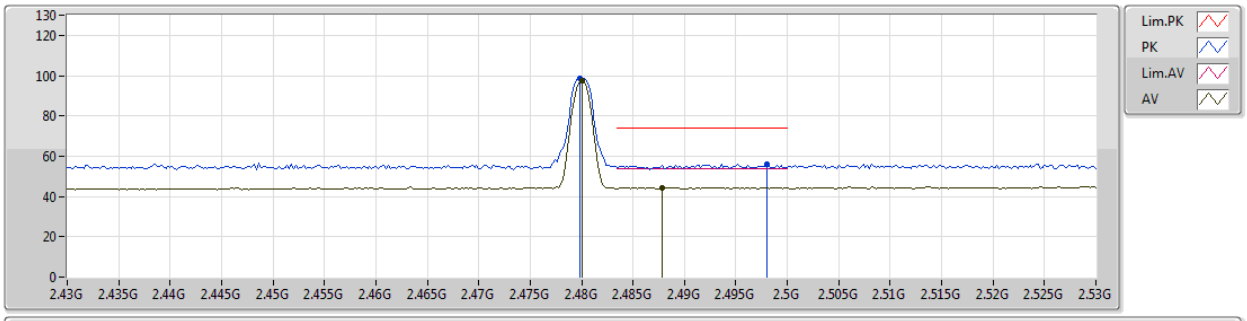


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.89104G	31.00	54.00	-23.00	2.30	3	Horizontal	300	1.91	-
PK	4.89242G	42.61	74.00	-31.39	2.31	3	Horizontal	300	1.91	-

BT-LE(1Mbps)

2480MHz_TX

26/12/2018

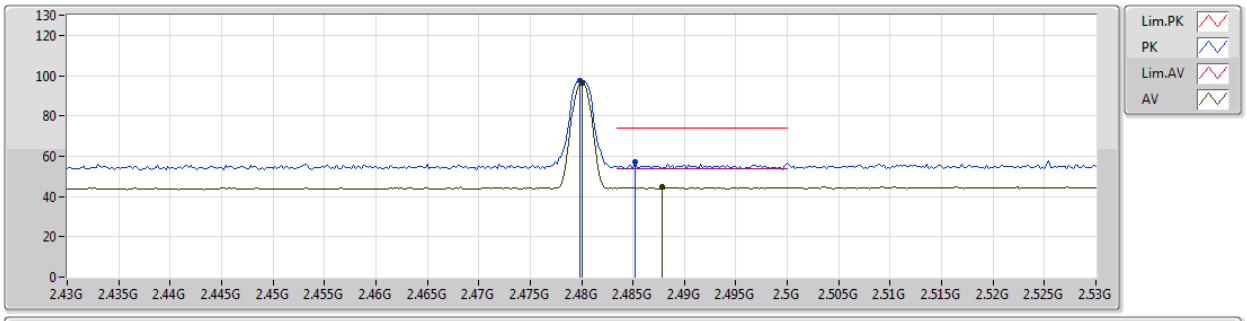


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.48G	97.57	Inf	-Inf	31.09	3	Vertical	290	1.36	-
AV	2.4878G	44.48	54.00	-9.52	31.13	3	Vertical	290	1.36	-
PK	2.4798G	98.62	Inf	-Inf	31.09	3	Vertical	290	1.36	-
PK	2.498G	56.19	74.00	-17.81	31.16	3	Vertical	290	1.36	-

BT-LE(1Mbps)

2480MHz_TX

26/12/2018

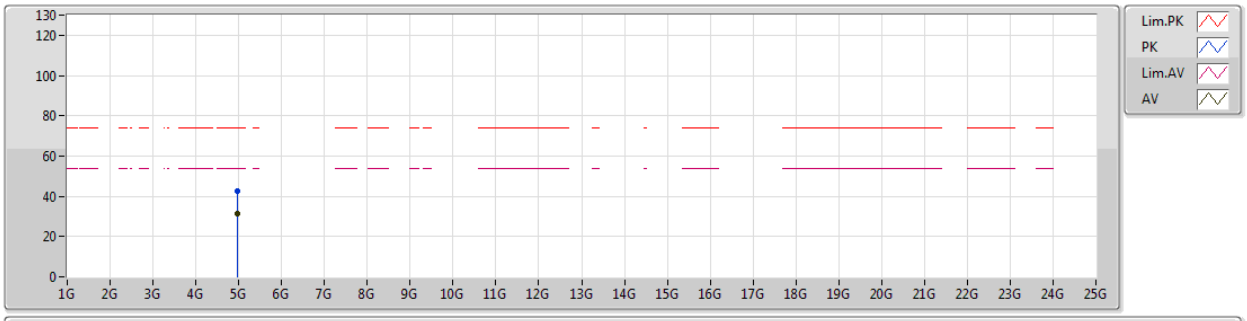


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.48G	96.36	Inf	-Inf	31.09	3	Horizontal	234	1.28	-
AV	2.4878G	44.58	54.00	-9.42	31.13	3	Horizontal	234	1.28	-
PK	2.4798G	97.39	Inf	-Inf	31.09	3	Horizontal	234	1.28	-
PK	2.4852G	56.90	74.00	-17.10	31.12	3	Horizontal	234	1.28	-

BT-LE(1Mbps)

2480MHz_TX

26/12/2018

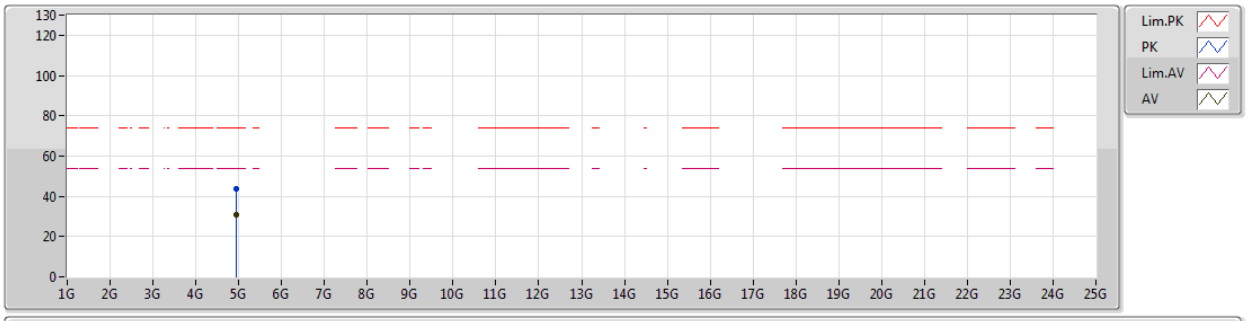


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.9672G	31.26	54.00	-22.74	2.49	3	Vertical	120	1.22	-
PK	4.9672G	42.54	74.00	-31.46	2.49	3	Vertical	120	1.22	-

BT-LE(1Mbps)

2480MHz_TX

26/12/2018

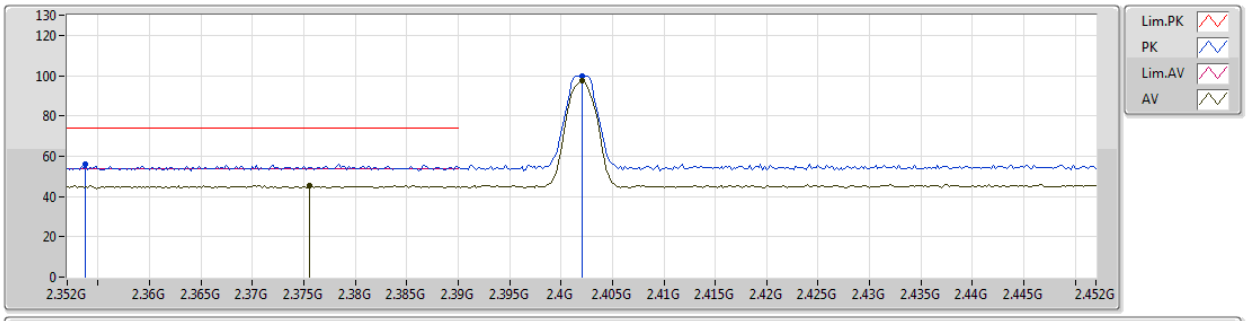


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.94692G	31.08	54.00	-22.92	2.44	3	Horizontal	322	2.10	-
PK	4.94626G	43.48	74.00	-30.52	2.43	3	Horizontal	322	2.10	-

BT-LE(2Mbps)

2402MHz_TX

26/12/2018

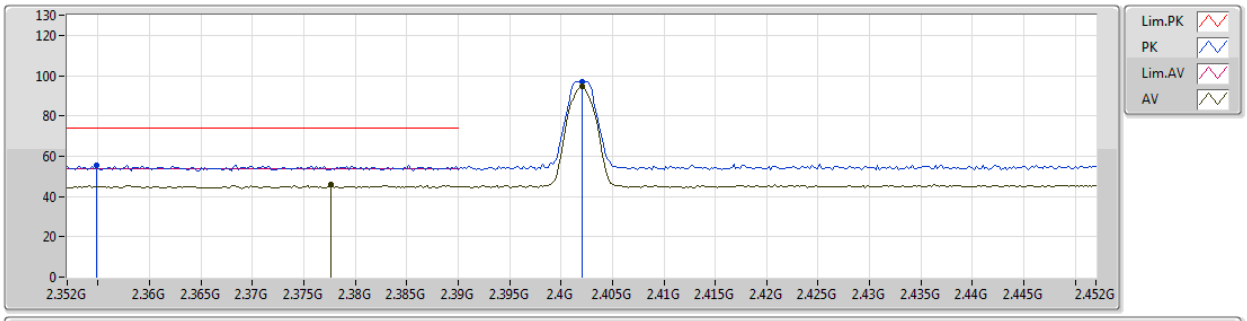


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3756G	45.34	54.00	-8.66	30.72	3	Vertical	294	1.25	-
AV	2.402G	97.37	Inf	-Inf	30.82	3	Vertical	294	1.25	-
PK	2.3538G	56.21	74.00	-17.79	30.65	3	Vertical	294	1.25	-
PK	2.402G	99.66	Inf	-Inf	30.82	3	Vertical	294	1.25	-

BT-LE(2Mbps)

2402MHz_TX

26/12/2018

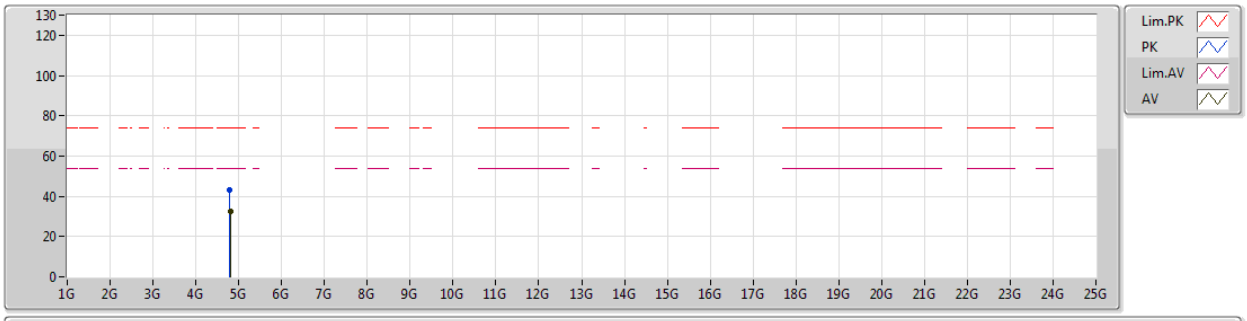


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3776G	45.73	54.00	-8.27	30.73	3	Horizontal	120	1.55	-
AV	2.402G	94.47	Inf	-Inf	30.82	3	Horizontal	120	1.55	-
PK	2.3548G	55.66	74.00	-18.34	30.65	3	Horizontal	120	1.55	-
PK	2.402G	96.77	Inf	-Inf	30.82	3	Horizontal	120	1.55	-

BT-LE(2Mbps)

2402MHz_TX

26/12/2018

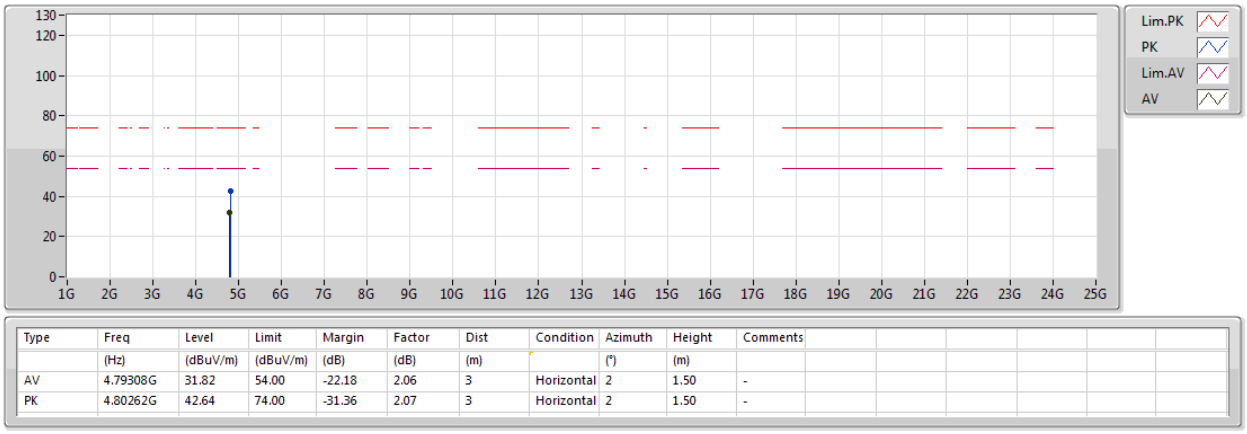


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.80934G	32.22	54.00	-21.78	2.09	3	Vertical	26	2.43	-
PK	4.79764G	43.03	74.00	-30.97	2.07	3	Vertical	26	2.43	-

BT-LE(2Mbps)

2402MHz_TX

26/12/2018

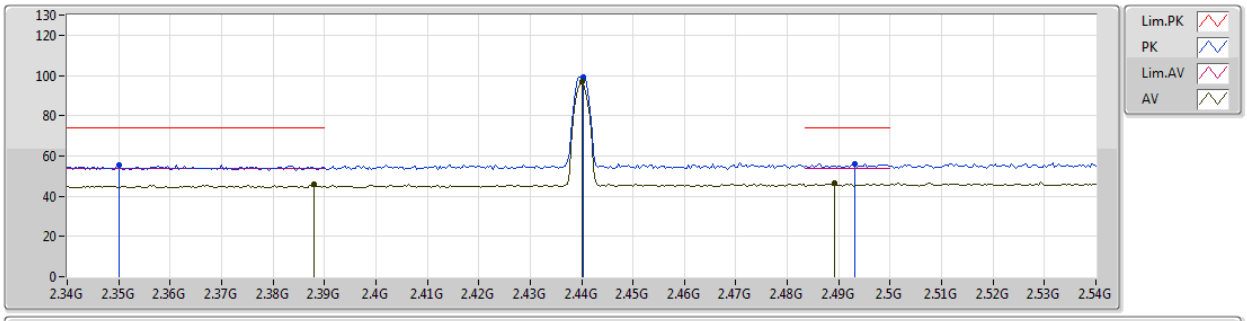


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.79308G	31.82	54.00	-22.18	2.06	3	Horizontal	2	1.50	-
PK	4.80262G	42.64	74.00	-31.36	2.07	3	Horizontal	2	1.50	-

BT-LE(2Mbps)

2440MHz_TX

26/12/2018

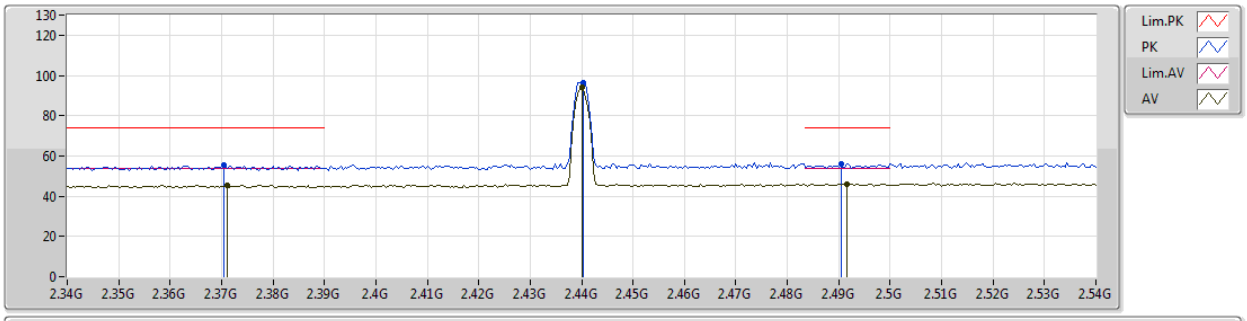


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.388G	45.84	54.00	-8.16	30.77	3	Vertical	292	1.38	-
AV	2.44G	96.76	Inf	-Inf	30.95	3	Vertical	292	1.38	-
AV	2.4892G	46.36	54.00	-7.64	31.13	3	Vertical	292	1.38	-
PK	2.35G	55.40	74.00	-18.60	30.63	3	Vertical	292	1.38	-
PK	2.4404G	99.08	Inf	-Inf	30.95	3	Vertical	292	1.38	-
PK	2.4932G	56.02	74.00	-17.98	31.14	3	Vertical	292	1.38	-

BT-LE(2Mbps)

2440MHz_TX

26/12/2018

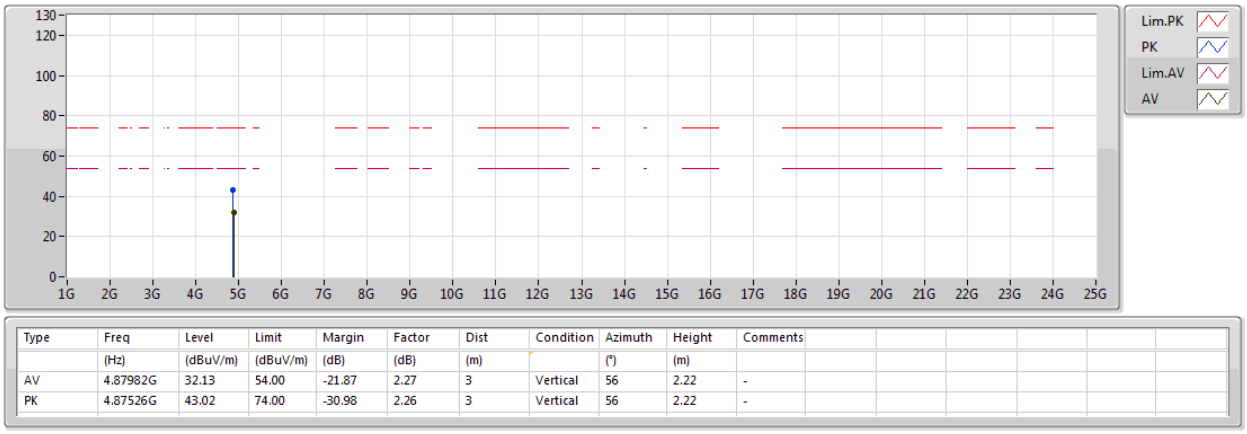


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3712G	45.41	54.00	-8.59	30.71	3	Horizontal	122	1.28	-
AV	2.44G	94.27	Inf	-Inf	30.95	3	Horizontal	122	1.28	-
AV	2.4916G	46.14	54.00	-7.86	31.14	3	Horizontal	122	1.28	-
PK	2.3704G	55.40	74.00	-18.60	30.71	3	Horizontal	122	1.28	-
PK	2.4404G	96.56	Inf	-Inf	30.95	3	Horizontal	122	1.28	-
PK	2.4904G	55.90	74.00	-18.10	31.13	3	Horizontal	122	1.28	-

BT-LE(2Mbps)

2440MHz_TX

26/12/2018

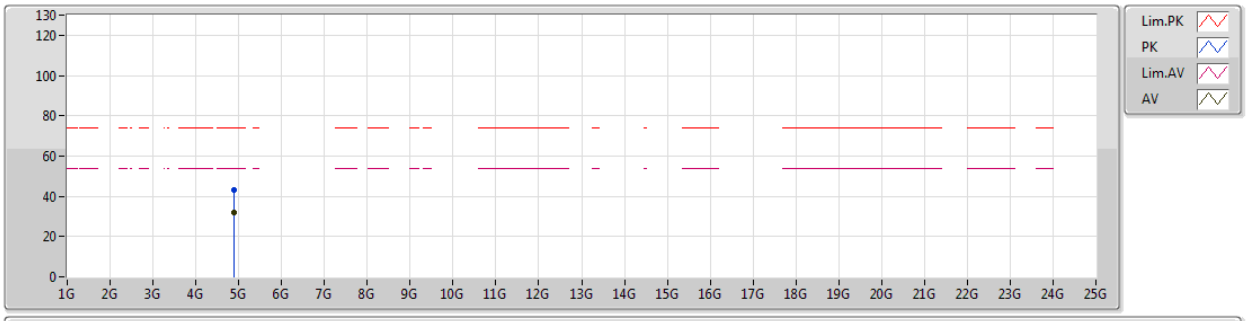


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87982G	32.13	54.00	-21.87	2.27	3	Vertical	56	2.22	-
PK	4.87526G	43.02	74.00	-30.98	2.26	3	Vertical	56	2.22	-

BT-LE(2Mbps)

2440MHz_TX

26/12/2018

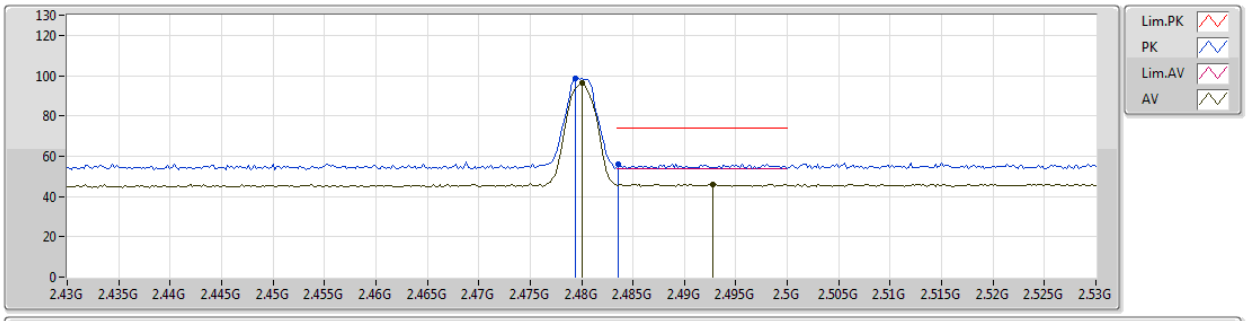


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.8923G	32.01	54.00	-21.99	2.31	3	Horizontal	357	1.48	-
PK	4.8875G	43.05	74.00	-30.95	2.29	3	Horizontal	357	1.48	-

BT-LE(2Mbps)

2480MHz_TX

26/12/2018

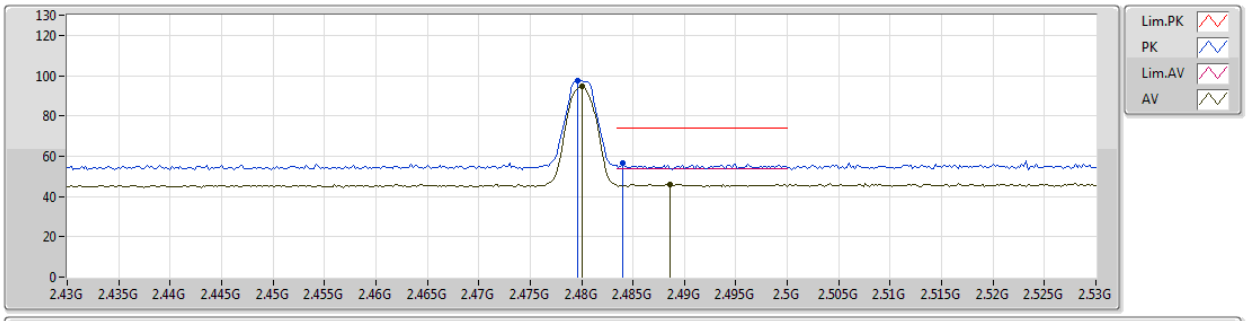


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.48G	96.11	Inf	-Inf	31.09	3	Vertical	291	1.37	-
AV	2.4928G	45.95	54.00	-8.05	31.14	3	Vertical	291	1.37	-
PK	2.4794G	98.62	Inf	-Inf	31.09	3	Vertical	291	1.37	-
PK	2.4836G	56.25	74.00	-17.75	31.11	3	Vertical	291	1.37	-

BT-LE(2Mbps)

2480MHz_TX

26/12/2018

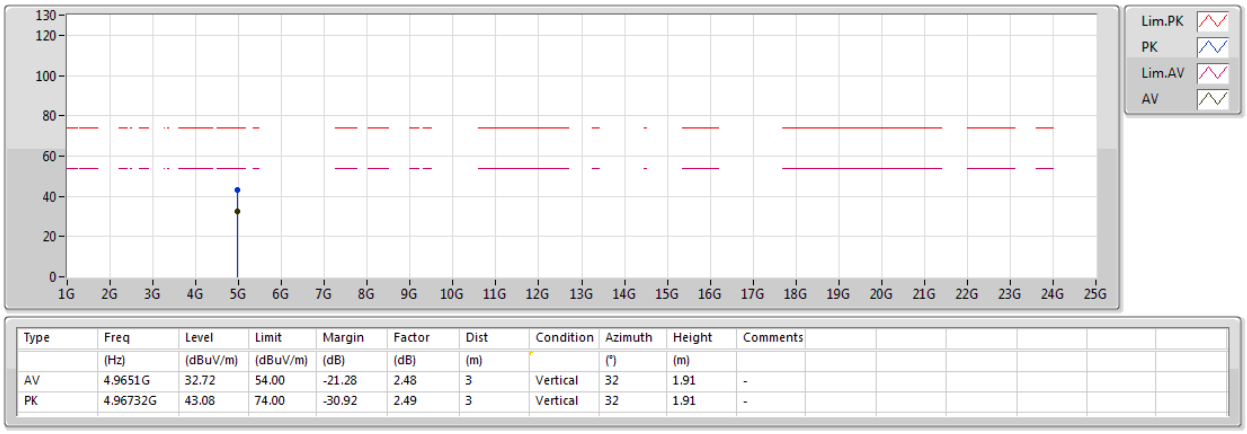


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.48G	94.97	Inf	-Inf	31.09	3	Horizontal	232	1.27	-
AV	2.4886G	45.90	54.00	-8.10	31.13	3	Horizontal	232	1.27	-
PK	2.4796G	97.44	Inf	-Inf	31.09	3	Horizontal	232	1.27	-
PK	2.484G	56.46	74.00	-17.54	31.12	3	Horizontal	232	1.27	-

BT-LE(2Mbps)

2480MHz_TX

26/12/2018

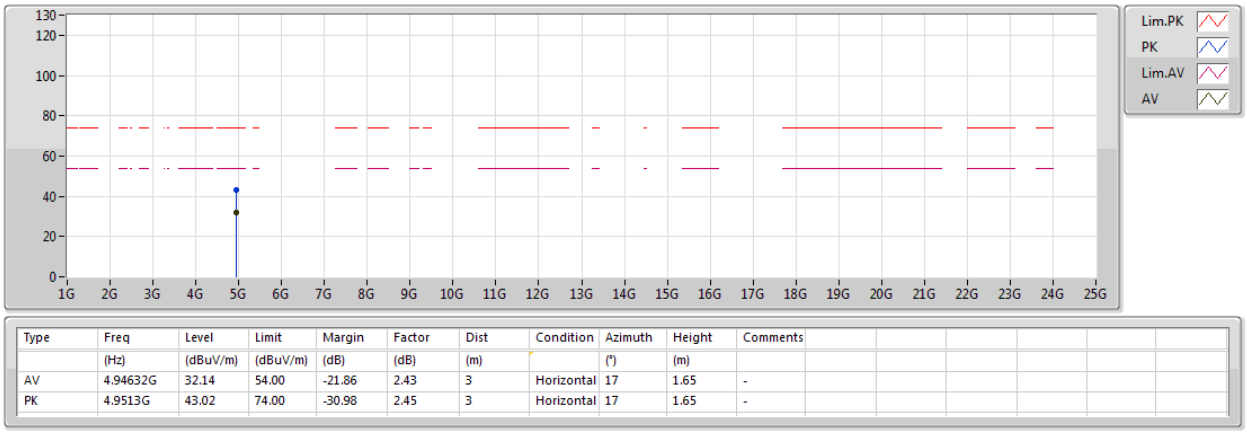


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.9651G	32.72	54.00	-21.28	2.48	3	Vertical	32	1.91	-
PK	4.96732G	43.08	74.00	-30.92	2.49	3	Vertical	32	1.91	-

BT-LE(2Mbps)

2480MHz_TX

26/12/2018



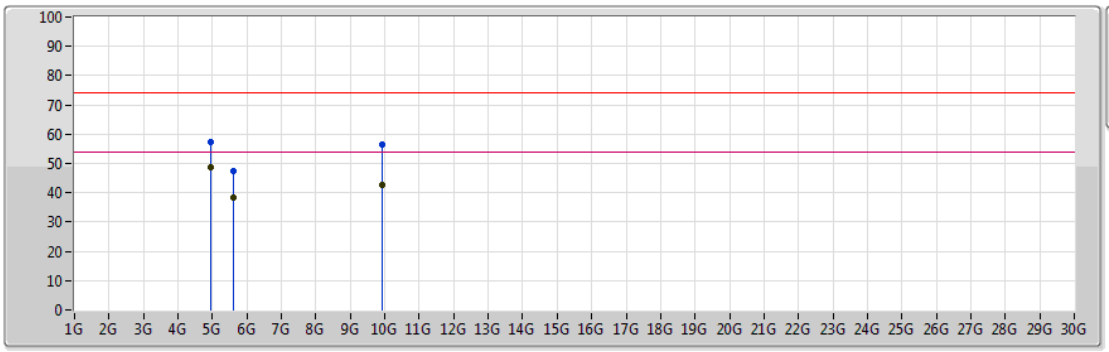
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.94632G	32.14	54.00	-21.86	2.43	3	Horizontal	17	1.65	-
PK	4.9513G	43.02	74.00	-30.98	2.45	3	Horizontal	17	1.65	-

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.95998G	49.42	54.00	-4.58	3.71	3	Horizontal	328	1.00	-

Mode 1

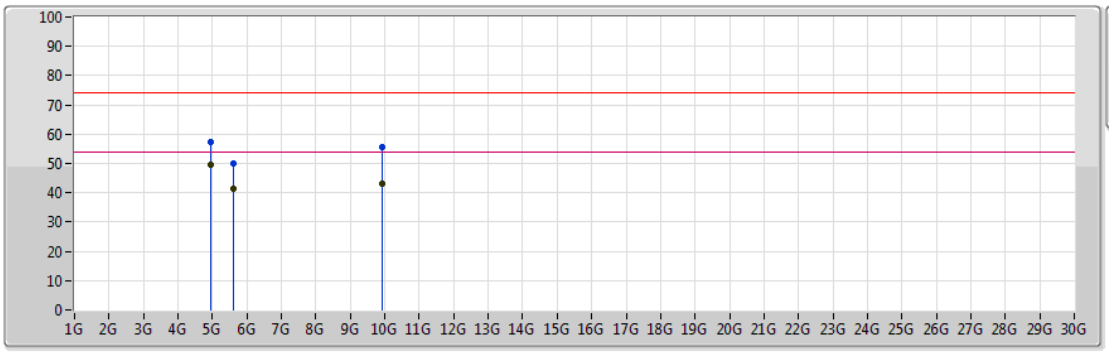
25/12/2018



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.96001G	48.68	54.00	-5.32	3.71	3	Vertical	259	2.96	-
AV	5.61996G	38.23	54.00	-15.77	4.68	3	Vertical	211	1.06	-
AV	9.91998G	42.69	54.00	-11.31	12.80	3	Vertical	123	2.58	-
PK	4.95968G	57.15	74.00	-16.85	3.71	3	Vertical	259	2.96	-
PK	5.62G	47.46	74.00	-26.54	4.68	3	Vertical	211	1.06	-
PK	9.92384G	56.54	74.00	-17.46	12.81	3	Vertical	123	2.58	-

Mode 1

25/12/2018



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.95998G	49.42	54.00	-4.58	3.71	3	Horizontal	328	1.00	-
AV	5.62008G	41.38	54.00	-12.62	4.68	3	Horizontal	328	1.50	-
AV	9.91998G	43.12	54.00	-10.88	12.80	3	Horizontal	326	2.87	-
PK	4.95976G	57.32	74.00	-16.68	3.71	3	Horizontal	328	1.00	-
PK	5.61999G	50.09	74.00	-23.91	4.68	3	Horizontal	328	1.50	-
PK	9.9202G	55.45	74.00	-18.55	12.80	3	Horizontal	326	2.87	-