

FCC Test Report

FCC ID : E2K-N03G001
Equipment : Internet of Things Gateway
Brand Name : DELL
Model Name : N03G001
Applicant/ : Dell Inc.
Manufacturer : One Dell Way, Round Rock, Texas 78682, USA
Standard : 47 CFR FCC Part 15.247

The product was received on Jan. 26, 2017, and testing was started from Mar. 06, 2017 and completed on Feb. 01, 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 variant 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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TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C9 Ver3.4
FCC ID: E2K-N03G001

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(b)	Maximum Conducted Output Power	PASS	15.247(b)
3.3	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: Jenny Yang

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Version	Ch. Frequency (MHz)	Channel Number
2400-2483.5	BR / EDR	2402-2480	0-78 [79]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-BR(1Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(2Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(3Mbps)	1	1TX

Note:

- ♦ Bluetooth BR uses a GFSK (1Mbps).
- ♦ Bluetooth EDR uses a combination of $\pi/4$ -DQPSK (2Mbps) and 8DPSK (3Mbps).
- ♦ Bluetooth BR/EDR uses as a system using FHSS modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	parsec	PTA WIFI Blade	blade antenna	SMA

Ant.	Port	Peak Gain (dBi)	
		2.4G	BT
1	1	4.7	4.7

For 2.4GHz function:

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

Ant. 1 (port 1) 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 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR712529-01AD

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Antenna was added	AC Power-line Conducted Emissions Maximum Conducted Output Power Emissions in Restricted Frequency Bands

1.1.5 Table for Multiple Listing

SKU		Description
1	Base	The only difference among these SKUs is I/O port.
2	GPA	
3	Media	

Note. SKU 3 configuration was pretested and found to be the worst case and measured during the test.

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
- ♦ KDB 558074 D01 v05r01
- ♦ ANSI C63.10-2013

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%	24/Jan/2019
RF Conducted	TH01-HY	Gary	21.5°C / 62%	06/Mar/2017
	TH01-HY	Barry	24.6°C / 69%	01/Feb/2019
Radiated	03CH09-HY	Kevin	22.9°C / 47%	31/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	120V

2.2 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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Maximum Conducted Output Power
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	CTX		
1	Adapter Mode		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		

2.3 Accessories

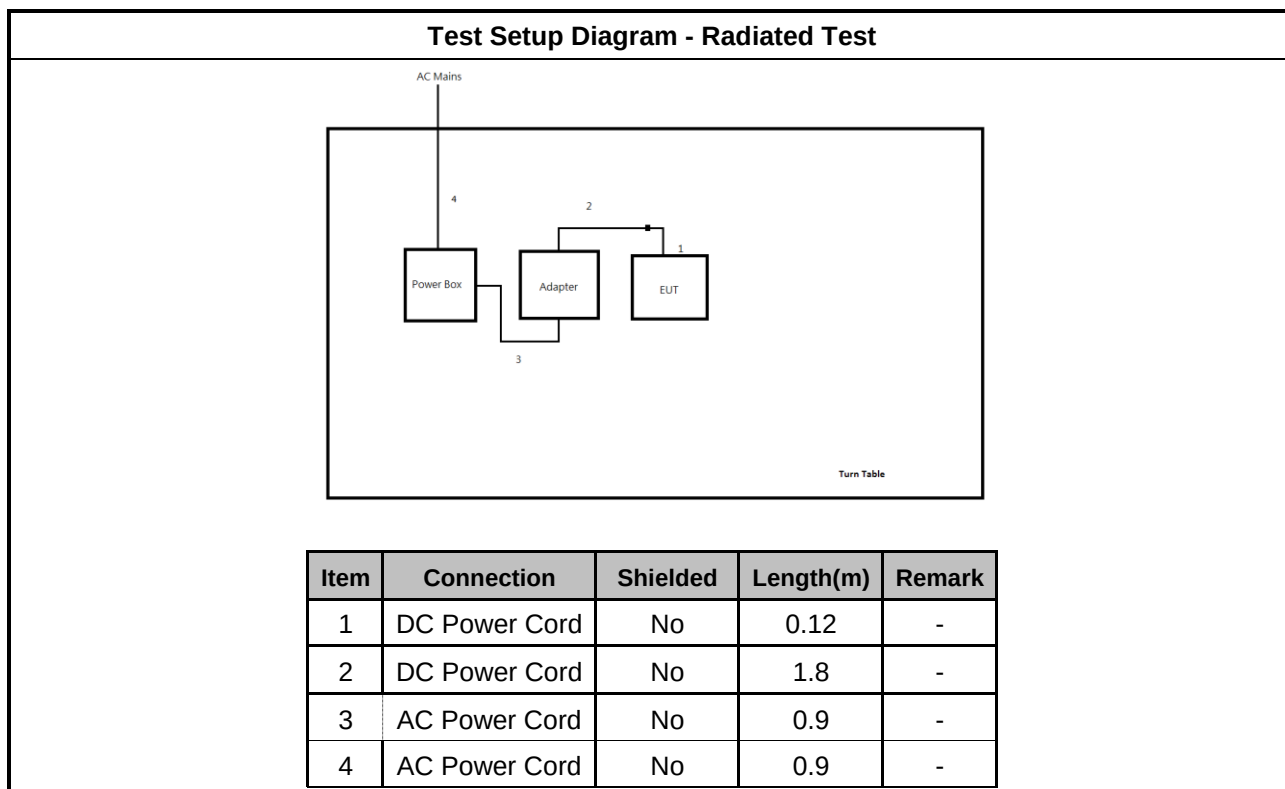
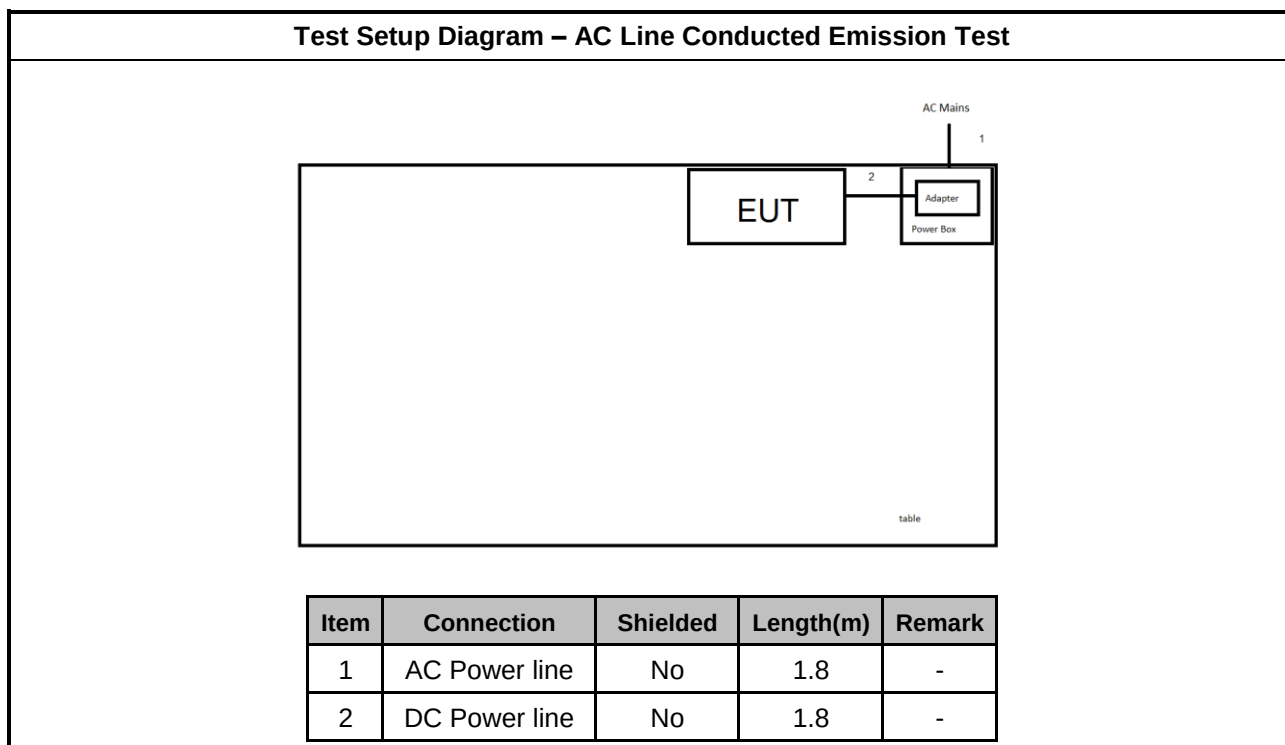
Accessories				
AC Adapter	Brand Name	DELL	Model Name	DA65NM130
	Manufacturer	DELTA	SN	
	Power Rating	I/P: 100 - 240Vac, 1.7A, O/P: 19.5 Vdc, 3.34A		
	Power Cord	0.9 meter, non-shielded cable, w/o ferrite core 1.8 meter, non-shielded cable, w/o ferrite core(DC output cable) 0.12 meter, non-shielded cable, w/o ferrite core(DC to DC cable)		

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

2.4 Support Equipment

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

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.

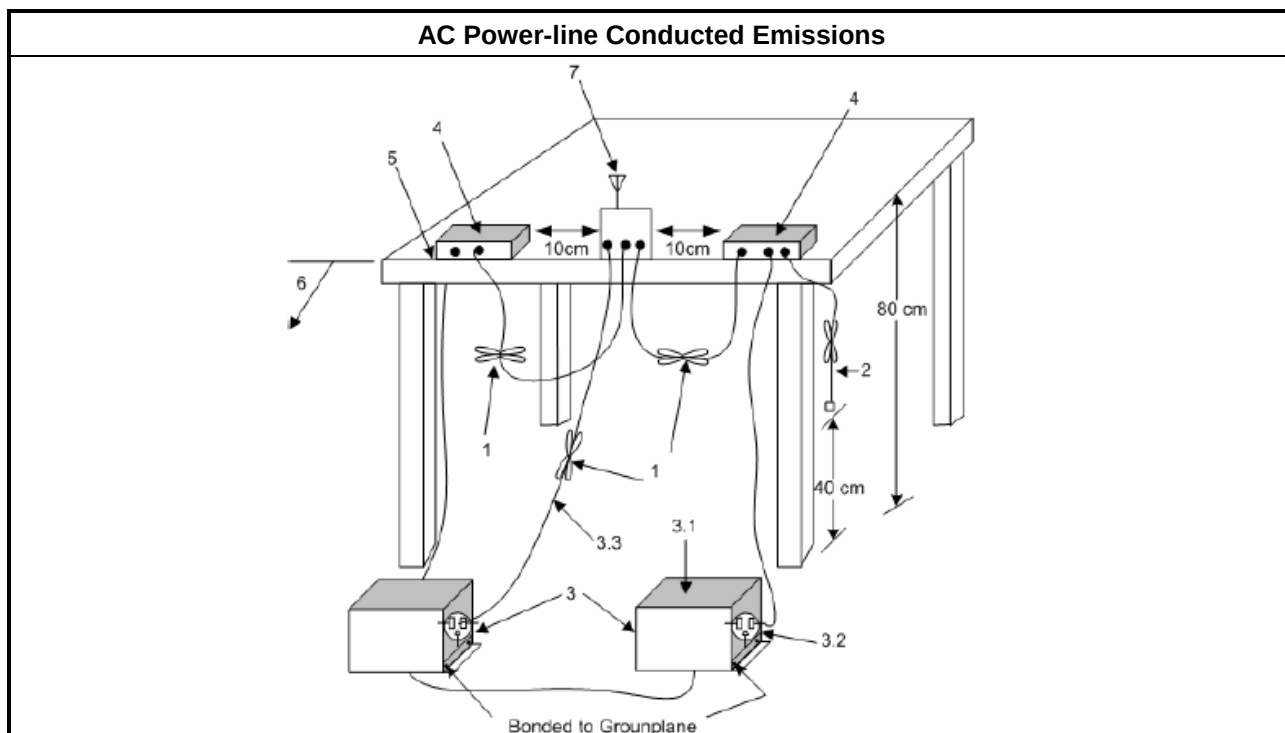
3.1.2 Measuring Instruments

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 foray 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 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
2400-2483.5 MHz Band:	
	$N \geq 75$; Power 30dBm; EIRP 36dBm
	$75 > N \geq 15$; Power 21dBm; EIRP 27dBm
N: Number of Hopping Frequencies	

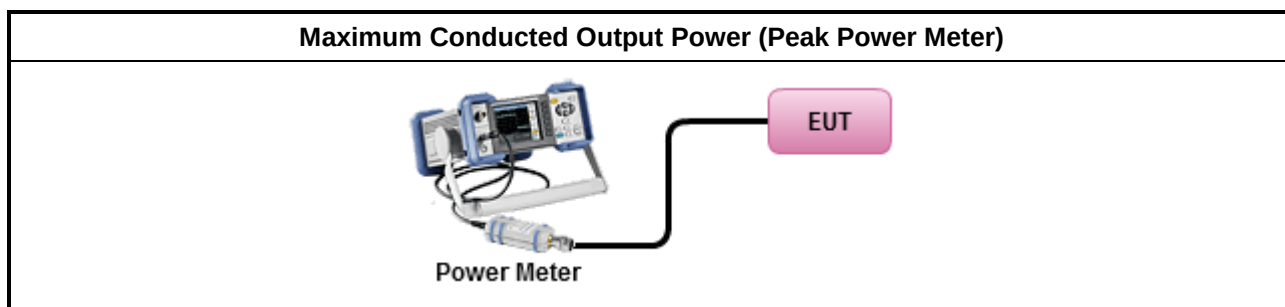
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Emissions in Restricted Frequency Bands

3.3.1 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.

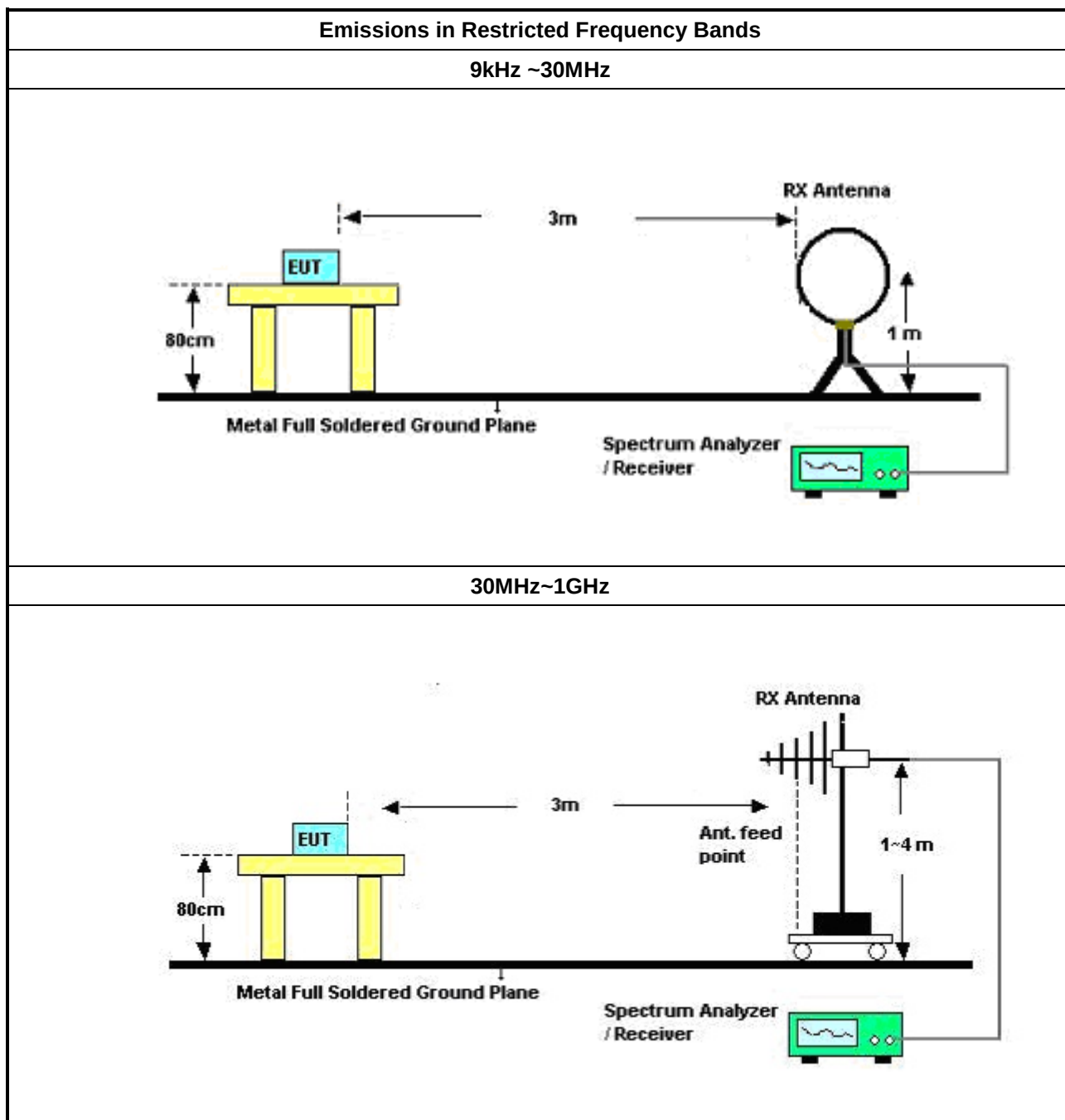
3.3.2 Measuring Instruments

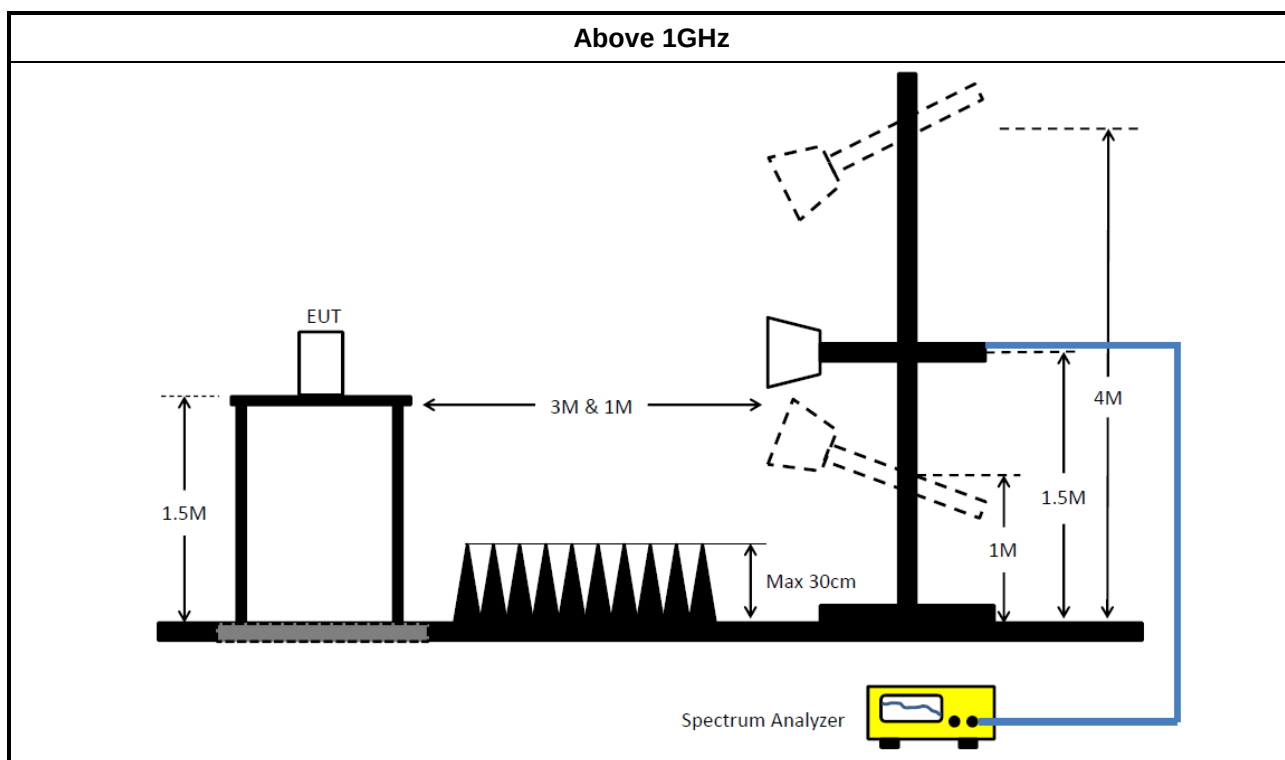
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [hopping duty factor].	
▪ Refer as ANSI C63.10; clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.

3.3.4 Test Setup





3.3.5 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.

3.3.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix C

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	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 Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2018	11/Oct/2019
EMC Receiver	R&S	ESR	102051	9KHz ~ 3.6GHz	03/May/2018	02/May/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	101013	9kHz~40GHz	30/Dec/2016	29/Dec/2017
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	10/Feb/2017	09/Feb/2018
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	10/Feb/2017	09/Feb/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	21/Jul/2016	20/Jul/2017
RF Cable-0.2m	HUBER+ SUHNER	SUCOFLEX_104	MY10710/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.2m	HUBER+ SUHNER	SUCOFLEX_104	MY10709/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+ SUHNER	SUCOFLEX_104	MY10713/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
Spectrum Analyzer	R&S	FSV 40	101029	10Hz~40GHz	11/Sep/2018	10/Sep/2019
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	10/Nov/2020
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz~1G	11/Jan/2019	10/Jan/2020
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	1G~18G	11/Jan/2019	10/Jan/2020
Cable 0.2m	HUBER	MY10711/4	RF Cable - 01	30MHz~1G	11/Jan/2019	10/Jan/2020
Cable 0.2m	HUBER	MY10711/4	RF Cable - 01	1G~18G	11/Jan/2019	10/Jan/2020
Cable 0.5m	HUBER	MY10714/4	RF Cable - 05	30MHz~1G	11/Jan/2019	10/Jan/2020
Cable 0.5m	HUBER	MY10714/4	RF Cable - 05	1G~18G	11/Jan/2019	10/Jan/2020

Instrument for Radiated Test

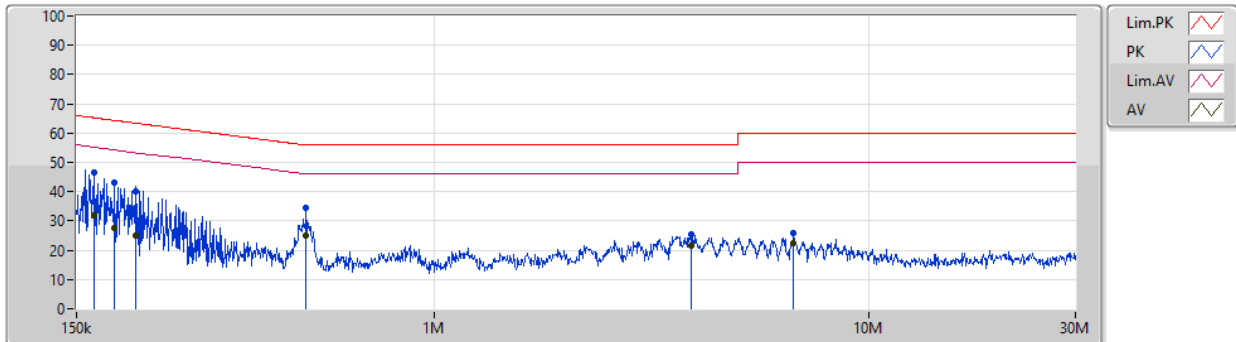
Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	23/Apr/2018	22/Apr/2019
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	14/Jun/2018	13/Jun/2019
Microwave Preamplifier	Agilent	8449B	3008A02096	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
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	29/Mar/2018	28/Mar/2019
RF Cable-R03m	Jye Bao	RG142	CB031	9kHz ~ 1GHz	1/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	14/Mar/2018	13/Mar/2019

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Adapter Mode		

AC Conduction

24/01/2019



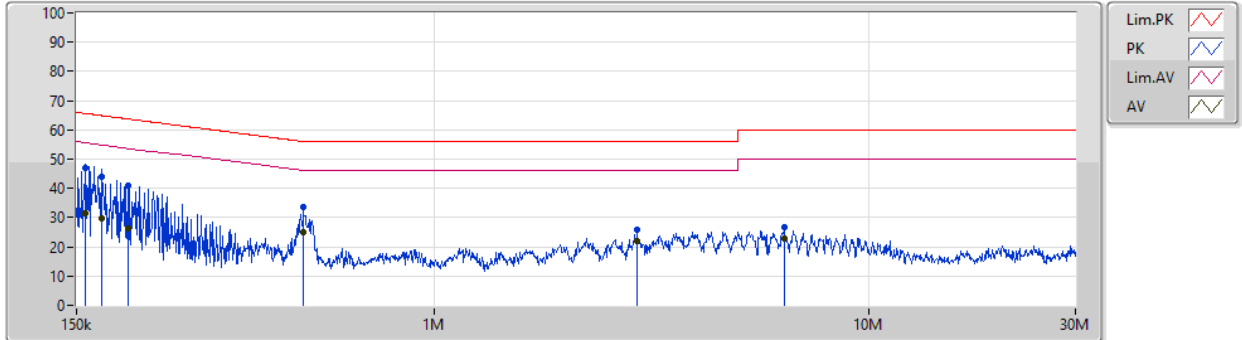
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	165.082k	46.73	65.20	-18.47	19.48	Neutral	"Worst"	27.25	9.60	0.01	9.87			
AV	165.082k	31.81	55.20	-23.39	19.48	Neutral	-	12.33	9.60	0.01	9.87			
QP	183.87k	43.21	64.30	-21.09	19.47	Neutral	-	23.74	9.59	0.01	9.87			
AV	183.87k	27.71	54.30	-26.59	19.47	Neutral	-	8.24	9.59	0.01	9.87			
QP	204.796k	40.01	63.42	-23.41	19.47	Neutral	-	20.54	9.59	0.01	9.87			
AV	204.796k	25.04	53.42	-28.38	19.47	Neutral	-	5.57	9.59	0.01	9.87			
QP	506.843k	34.36	56.00	-21.64	19.48	Neutral	-	14.88	9.59	0.01	9.88			
AV	506.843k	24.98	46.00	-21.02	19.48	Neutral	-	5.50	9.59	0.01	9.88			
QP	3.898M	25.54	56.00	-30.46	19.55	Neutral	-	5.99	9.61	0.05	9.89			
AV	3.898M	21.61	46.00	-24.39	19.55	Neutral	-	2.06	9.61	0.05	9.89			
QP	6.735M	25.87	60.00	-34.13	19.59	Neutral	-	6.28	9.64	0.06	9.89			
AV	6.735M	22.33	50.00	-27.67	19.59	Neutral	-	2.74	9.64	0.06	9.89			

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Adapter Mode		

AC Conduction

24/01/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	157.361k	47.11	65.60	-18.49	19.48	Line	"Worst"	27.63	9.60	0.01	9.87			
AV	157.361k	31.50	55.60	-24.10	19.48	Line	-	12.02	9.60	0.01	9.87			
QP	171.806k	44.18	64.87	-20.69	19.48	Line	-	24.70	9.60	0.01	9.87			
AV	171.806k	29.60	54.87	-25.27	19.48	Line	-	10.12	9.60	0.01	9.87			
QP	196.781k	41.12	63.74	-22.62	19.48	Line	-	21.64	9.60	0.01	9.87			
AV	196.781k	26.42	53.74	-27.32	19.48	Line	-	6.94	9.60	0.01	9.87			
QP	500k	33.72	56.00	-22.28	19.48	Line	-	14.24	9.59	0.01	9.88			
AV	500k	25.16	46.00	-20.84	19.48	Line	-	5.68	9.59	0.01	9.88			
QP	2.924M	25.82	56.00	-30.18	19.56	Line	-	6.26	9.63	0.04	9.89			
AV	2.924M	21.79	46.00	-24.21	19.56	Line	-	2.23	9.63	0.04	9.89			
QP	6.394M	26.66	60.00	-33.34	19.60	Line	-	7.06	9.65	0.06	9.89			
AV	6.394M	22.91	50.00	-27.09	19.60	Line	-	3.31	9.65	0.06	9.89			

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	12.19	0.01656
BT-EDR(2Mbps)	14.29	0.02685
BT-EDR(3Mbps)	14.63	0.02904

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	4.70	11.79	21.00
2441MHz	Pass	4.70	12.19	21.00
2480MHz	Pass	4.70	10.17	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	4.70	13.96	21.00
2441MHz	Pass	4.70	14.29	21.00
2480MHz	Pass	4.70	12.43	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	4.70	14.18	21.00
2441MHz	Pass	4.70	14.63	21.00
2480MHz	Pass	4.70	13.40	21.00

Summary

Mode	Power	Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	12.15	0.01641
BT-EDR(2Mbps)	12.29	0.01694
BT-EDR(3Mbps)	12.19	0.01656

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	4.70	11.15	30.00
2441MHz	Pass	4.70	12.15	30.00
2480MHz	Pass	4.70	9.61	30.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	4.70	12.15	30.00
2441MHz	Pass	4.70	12.29	30.00
2480MHz	Pass	4.70	9.98	30.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	4.70	12.18	30.00
2441MHz	Pass	4.70	12.19	30.00
2480MHz	Pass	4.70	10.74	30.00



RSE TX below 1GHz Result

Appendix C.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-BR(1Mbps)	Pass	PK	30M	31.34	40.00	-8.66	-13.40	3	Vertical	0	1.00	-

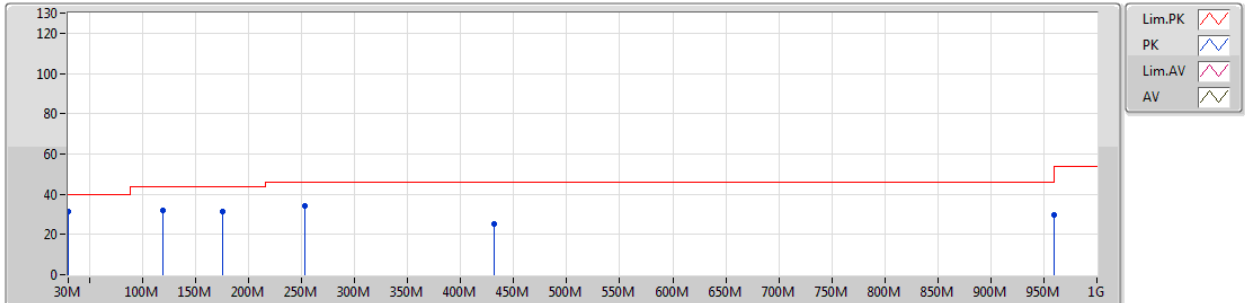
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2441MHz	Pass	PK	30M	31.34	40.00	-8.66	-13.40	3	Vertical	0	1.00	-
2441MHz	Pass	PK	119.24M	31.77	43.50	-11.73	-19.33	3	Vertical	0	1.00	-
2441MHz	Pass	PK	175.5M	31.59	43.50	-11.91	-21.03	3	Vertical	0	1.00	-
2441MHz	Pass	PK	253.1M	34.21	46.00	-11.79	-16.67	3	Vertical	0	1.00	-
2441MHz	Pass	PK	431.58M	25.49	46.00	-20.51	-13.10	3	Vertical	0	1.00	-
2441MHz	Pass	PK	960M	29.87	46.00	-16.13	-4.52	3	Vertical	0	1.00	-
2441MHz	Pass	PK	90.14M	22.78	43.50	-20.72	-22.41	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	189.08M	34.07	43.50	-9.43	-21.38	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	249.22M	32.67	46.00	-13.33	-17.26	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	412.18M	22.32	46.00	-23.68	-13.54	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	676.02M	24.49	46.00	-21.51	-9.99	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	960M	29.71	46.00	-16.29	-4.52	3	Horizontal	360	1.00	-

BT-BR(1Mbps)

2441MHz_Adapter

31/01/2019

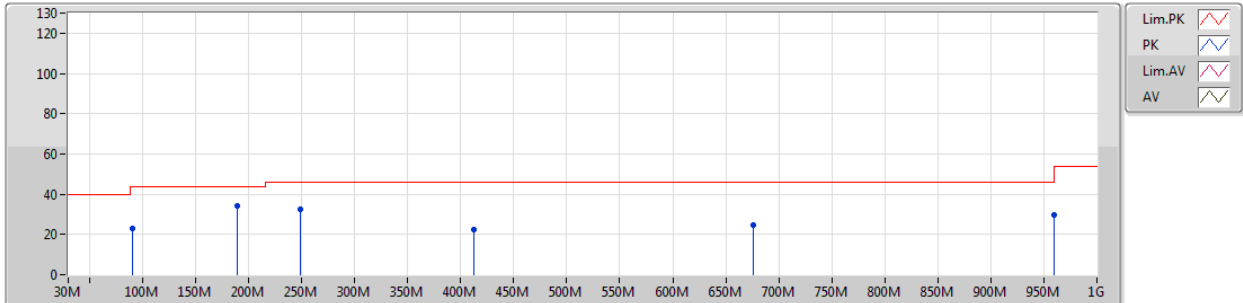


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments									
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)										
PK	30M	31.34	40.00	-8.66	-13.40	3	Vertical	0	1.00	-									
PK	119.24M	31.77	43.50	-11.73	-19.33	3	Vertical	0	1.00	-									
PK	175.5M	31.59	43.50	-11.91	-21.03	3	Vertical	0	1.00	-									
PK	253.1M	34.21	46.00	-11.79	-16.67	3	Vertical	0	1.00	-									
PK	431.58M	25.49	46.00	-20.51	-13.10	3	Vertical	0	1.00	-									
PK	960M	29.87	46.00	-16.13	-4.52	3	Vertical	0	1.00	-									

BT-BR(1Mbps)

2441MHz_Adapter

31/01/2019



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	90.14M	22.78	43.50	-20.72	-22.41	3	Horizontal	360	1.00	-
PK	189.08M	34.07	43.50	-9.43	-21.38	3	Horizontal	360	1.00	-
PK	249.22M	32.67	46.00	-13.33	-17.26	3	Horizontal	360	1.00	-
PK	412.18M	22.32	46.00	-23.68	-13.54	3	Horizontal	360	1.00	-
PK	676.02M	24.49	46.00	-21.51	-9.99	3	Horizontal	360	1.00	-
PK	960M	29.71	46.00	-16.29	-4.52	3	Horizontal	360	1.00	-

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-BR(1Mbps)	Pass	AV	4.95999G	52.26	54.00	-1.74	6.17	3	Horizontal	358	1.01	-
BT-EDR(2Mbps)	Pass	AV	4.95991G	53.18	54.00	-0.82	6.17	3	Horizontal	355	1.02	-
BT-EDR(3Mbps)	Pass	AV	4.95994G	53.90	54.00	-0.10	6.17	3	Horizontal	356	1.01	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3558G	44.85	54.00	-9.15	31.89	3	Vertical	349	1.01	-
2402MHz	Pass	AV	2.402G	93.94	Inf	-Inf	32.04	3	Vertical	349	1.01	-
2402MHz	Pass	PK	2.3792G	56.51	74.00	-17.49	31.97	3	Vertical	349	1.01	-
2402MHz	Pass	PK	2.4022G	94.78	Inf	-Inf	32.05	3	Vertical	349	1.01	-
2402MHz	Pass	AV	2.3756G	44.78	54.00	-9.22	31.96	3	Horizontal	206	2.84	-
2402MHz	Pass	AV	2.402G	107.87	Inf	-Inf	32.04	3	Horizontal	206	2.84	-
2402MHz	Pass	PK	2.3634G	56.19	74.00	-17.81	31.91	3	Horizontal	206	2.84	-
2402MHz	Pass	PK	2.4022G	108.77	Inf	-Inf	32.05	3	Horizontal	206	2.84	-
2402MHz	Pass	AV	4.804G	46.32	54.00	-7.68	3.44	3	Vertical	124	2.78	-
2402MHz	Pass	PK	4.80358G	51.63	74.00	-22.37	3.44	3	Vertical	124	2.78	-
2402MHz	Pass	AV	4.804G	51.91	54.00	-2.09	3.44	3	Horizontal	11	2.89	-
2402MHz	Pass	PK	4.80364G	56.13	74.00	-17.87	3.44	3	Horizontal	11	2.89	-
2441MHz	Pass	AV	2.3758G	49.29	54.00	-4.71	30.33	3	Vertical	257	2.43	-
2441MHz	Pass	AV	2.441G	94.36	Inf	-Inf	30.55	3	Vertical	257	2.43	-
2441MHz	Pass	AV	2.4858G	47.12	54.00	-6.88	30.71	3	Vertical	257	2.43	-
2441MHz	Pass	PK	2.3758G	57.22	74.00	-16.78	30.33	3	Vertical	257	2.43	-
2441MHz	Pass	PK	2.441G	94.51	Inf	-Inf	30.55	3	Vertical	257	2.43	-
2441MHz	Pass	PK	2.4906G	58.12	74.00	-15.88	30.72	3	Vertical	257	2.43	-
2441MHz	Pass	AV	2.3758G	50.50	54.00	-3.50	30.33	3	Horizontal	358	1.99	-
2441MHz	Pass	AV	2.441G	108.13	Inf	-Inf	30.55	3	Horizontal	358	1.99	-
2441MHz	Pass	AV	2.4954G	47.16	54.00	-6.84	30.74	3	Horizontal	358	1.99	-
2441MHz	Pass	PK	2.3758G	57.90	74.00	-16.10	30.33	3	Horizontal	358	1.99	-
2441MHz	Pass	PK	2.441G	108.28	Inf	-Inf	30.55	3	Horizontal	358	1.99	-
2441MHz	Pass	PK	2.4938G	57.45	74.00	-16.55	30.73	3	Horizontal	358	1.99	-
2441MHz	Pass	AV	4.88206G	34.61	54.00	-19.39	6.01	3	Vertical	120	2.06	-
2441MHz	Pass	PK	4.89202G	44.83	74.00	-29.17	6.04	3	Vertical	120	2.06	-
2441MHz	Pass	AV	4.88192G	43.31	54.00	-10.69	6.01	3	Horizontal	358	1.09	-
2441MHz	Pass	PK	4.88167G	49.72	74.00	-24.28	6.01	3	Horizontal	358	1.09	-
2480MHz	Pass	AV	2.48G	95.09	Inf	-Inf	30.68	3	Vertical	162	2.84	-
2480MHz	Pass	AV	2.4992G	47.17	54.00	-6.83	30.75	3	Vertical	162	2.84	-
2480MHz	Pass	PK	2.4798G	95.26	Inf	-Inf	30.68	3	Vertical	162	2.84	-
2480MHz	Pass	PK	2.4884G	58.47	74.00	-15.53	30.71	3	Vertical	162	2.84	-
2480MHz	Pass	AV	2.48G	95.01	Inf	-Inf	30.68	3	Horizontal	138	2.15	-
2480MHz	Pass	AV	2.4992G	47.17	54.00	-6.83	30.75	3	Horizontal	138	2.15	-
2480MHz	Pass	PK	2.4798G	95.14	Inf	-Inf	30.68	3	Horizontal	138	2.15	-
2480MHz	Pass	PK	2.4904G	58.19	74.00	-15.81	30.72	3	Horizontal	138	2.15	-
2480MHz	Pass	AV	4.95994G	41.48	54.00	-12.52	6.17	3	Vertical	176	2.57	-
2480MHz	Pass	PK	4.96006G	48.44	74.00	-25.56	6.17	3	Vertical	176	2.57	-
2480MHz	Pass	AV	4.95999G	52.26	54.00	-1.74	6.17	3	Horizontal	358	1.01	-
2480MHz	Pass	PK	4.96026G	55.56	74.00	-18.44	6.17	3	Horizontal	358	1.01	-
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3892G	46.04	54.00	-7.96	30.37	3	Vertical	32	2.99	-
2402MHz	Pass	AV	2.402G	96.45	Inf	-Inf	30.41	3	Vertical	32	2.99	-
2402MHz	Pass	PK	2.3736G	57.15	74.00	-16.85	30.33	3	Vertical	32	2.99	-
2402MHz	Pass	PK	2.4022G	99.46	Inf	-Inf	30.42	3	Vertical	32	2.99	-
2402MHz	Pass	AV	2.3756G	46.97	54.00	-7.03	30.33	3	Horizontal	350	2.92	-
2402MHz	Pass	AV	2.402G	108.07	Inf	-Inf	30.41	3	Horizontal	350	2.92	-

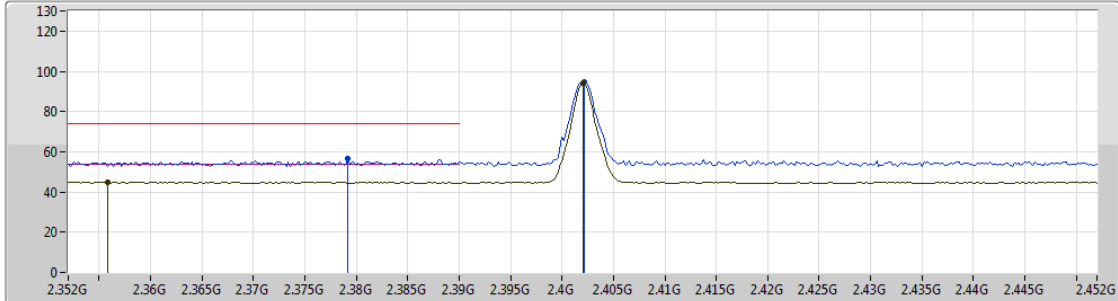
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2402MHz	Pass	PK	2.3764G	57.29	74.00	-16.71	30.33	3	Horizontal	350	2.92	-
2402MHz	Pass	PK	2.4022G	111.07	Inf	-Inf	30.42	3	Horizontal	350	2.92	-
2402MHz	Pass	AV	4.80394G	42.49	54.00	-11.51	5.86	3	Vertical	116	2.20	-
2402MHz	Pass	PK	4.80424G	51.06	74.00	-22.94	5.86	3	Vertical	116	2.20	-
2402MHz	Pass	AV	4.80394G	52.67	54.00	-1.33	5.86	3	Horizontal	359	2.39	-
2402MHz	Pass	PK	4.80425G	60.76	74.00	-13.24	5.86	3	Horizontal	359	2.39	-
2441MHz	Pass	AV	2.3758G	48.52	54.00	-5.48	30.33	3	Vertical	256	2.43	-
2441MHz	Pass	AV	2.441G	93.70	Inf	-Inf	30.55	3	Vertical	256	2.43	-
2441MHz	Pass	AV	2.4938G	47.15	54.00	-6.85	30.73	3	Vertical	256	2.43	-
2441MHz	Pass	PK	2.343G	57.25	74.00	-16.75	30.22	3	Vertical	256	2.43	-
2441MHz	Pass	PK	2.441G	96.58	Inf	-Inf	30.55	3	Vertical	256	2.43	-
2441MHz	Pass	PK	2.4966G	58.00	74.00	-16.00	30.74	3	Vertical	256	2.43	-
2441MHz	Pass	AV	2.3758G	47.67	54.00	-6.33	30.33	3	Horizontal	348	1.17	-
2441MHz	Pass	AV	2.441G	107.91	Inf	-Inf	30.55	3	Horizontal	348	1.17	-
2441MHz	Pass	AV	2.495G	47.16	54.00	-6.84	30.74	3	Horizontal	348	1.17	-
2441MHz	Pass	PK	2.3874G	57.64	74.00	-16.36	30.37	3	Horizontal	348	1.17	-
2441MHz	Pass	PK	2.441G	110.77	Inf	-Inf	30.55	3	Horizontal	348	1.17	-
2441MHz	Pass	PK	2.4962G	57.92	74.00	-16.08	30.74	3	Horizontal	348	1.17	-
2441MHz	Pass	AV	4.88186G	34.34	54.00	-19.66	6.01	3	Vertical	120	2.19	-
2441MHz	Pass	PK	4.8816G	45.21	74.00	-28.79	6.01	3	Vertical	120	2.19	-
2441MHz	Pass	AV	4.88187G	42.73	54.00	-11.27	6.01	3	Horizontal	360	1.07	-
2441MHz	Pass	PK	4.88156G	50.51	74.00	-23.49	6.01	3	Horizontal	360	1.07	-
2480MHz	Pass	AV	2.48G	93.68	Inf	-Inf	30.68	3	Vertical	162	2.75	-
2480MHz	Pass	AV	2.4982G	47.17	54.00	-6.83	30.75	3	Vertical	162	2.75	-
2480MHz	Pass	PK	2.4798G	96.61	Inf	-Inf	30.68	3	Vertical	162	2.75	-
2480MHz	Pass	PK	2.5G	58.30	74.00	-15.70	30.75	3	Vertical	162	2.75	-
2480MHz	Pass	AV	2.48G	106.58	Inf	-Inf	30.68	3	Horizontal	348	1.07	-
2480MHz	Pass	AV	2.4835G	48.12	54.00	-5.88	30.69	3	Horizontal	348	1.07	-
2480MHz	Pass	PK	2.4798G	109.50	Inf	-Inf	30.68	3	Horizontal	348	1.07	-
2480MHz	Pass	PK	2.4858G	58.67	74.00	-15.33	30.71	3	Horizontal	348	1.07	-
2480MHz	Pass	AV	4.95989G	41.11	54.00	-12.89	6.17	3	Vertical	178	1.01	-
2480MHz	Pass	PK	4.95968G	49.57	74.00	-24.43	6.17	3	Vertical	178	1.01	-
2480MHz	Pass	AV	4.95991G	53.18	54.00	-0.82	6.17	3	Horizontal	355	1.02	-
2480MHz	Pass	PK	4.95974G	59.15	74.00	-14.85	6.17	3	Horizontal	355	1.02	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.376G	46.48	54.00	-7.52	30.33	3	Vertical	32	2.98	-
2402MHz	Pass	AV	2.402G	95.70	Inf	-Inf	30.41	3	Vertical	32	2.98	-
2402MHz	Pass	PK	2.3896G	57.04	74.00	-16.96	30.38	3	Vertical	32	2.98	-
2402MHz	Pass	PK	2.402G	98.70	Inf	-Inf	30.41	3	Vertical	32	2.98	-
2402MHz	Pass	AV	2.3758G	47.67	54.00	-6.33	30.33	3	Horizontal	351	2.92	-
2402MHz	Pass	AV	2.402G	107.79	Inf	-Inf	30.41	3	Horizontal	351	2.92	-
2402MHz	Pass	PK	2.3876G	57.08	74.00	-16.92	30.37	3	Horizontal	351	2.92	-
2402MHz	Pass	PK	2.402G	110.85	Inf	-Inf	30.41	3	Horizontal	351	2.92	-
2402MHz	Pass	AV	4.80395G	42.15	54.00	-11.85	5.86	3	Vertical	117	1.97	-
2402MHz	Pass	PK	4.8039G	51.76	74.00	-22.24	5.86	3	Vertical	117	1.97	-
2402MHz	Pass	AV	4.80397G	52.36	54.00	-1.64	5.86	3	Horizontal	0	2.38	-
2402MHz	Pass	PK	4.80409G	60.65	74.00	-13.35	5.86	3	Horizontal	0	2.38	-
2441MHz	Pass	AV	2.3758G	48.52	54.00	-5.48	30.33	3	Vertical	256	2.44	-
2441MHz	Pass	AV	2.441G	93.37	Inf	-Inf	30.55	3	Vertical	256	2.44	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2441MHz	Pass	AV	2.4986G	47.17	54.00	-6.83	30.75	3	Vertical	256	2.44	-
2441MHz	Pass	PK	2.3718G	56.47	74.00	-17.53	30.31	3	Vertical	256	2.44	-
2441MHz	Pass	PK	2.441G	96.45	Inf	-Inf	30.55	3	Vertical	256	2.44	-
2441MHz	Pass	PK	2.4954G	57.77	74.00	-16.23	30.74	3	Vertical	256	2.44	-
2441MHz	Pass	AV	2.3758G	48.31	54.00	-5.69	30.33	3	Horizontal	350	1.17	-
2441MHz	Pass	AV	2.441G	107.79	Inf	-Inf	30.55	3	Horizontal	350	1.17	-
2441MHz	Pass	AV	2.4982G	46.89	54.00	-7.11	30.75	3	Horizontal	350	1.17	-
2441MHz	Pass	PK	2.379G	56.95	74.00	-17.05	30.34	3	Horizontal	350	1.17	-
2441MHz	Pass	PK	2.441G	110.64	Inf	-Inf	30.55	3	Horizontal	350	1.17	-
2441MHz	Pass	PK	2.485G	57.64	74.00	-16.36	30.69	3	Horizontal	350	1.17	-
2441MHz	Pass	AV	4.88177G	34.70	54.00	-19.30	6.01	3	Vertical	117	2.39	-
2441MHz	Pass	PK	4.88186G	45.77	74.00	-28.23	6.01	3	Vertical	117	2.39	-
2441MHz	Pass	AV	4.88196G	42.15	54.00	-11.85	6.01	3	Horizontal	360	1.06	-
2441MHz	Pass	PK	4.88164G	50.42	74.00	-23.58	6.01	3	Horizontal	360	1.06	-
2480MHz	Pass	AV	2.48G	94.06	Inf	-Inf	30.68	3	Vertical	162	2.74	-
2480MHz	Pass	AV	2.4918G	47.14	54.00	-6.86	30.72	3	Vertical	162	2.74	-
2480MHz	Pass	PK	2.48G	97.12	Inf	-Inf	30.68	3	Vertical	162	2.74	-
2480MHz	Pass	PK	2.4966G	58.36	74.00	-15.64	30.74	3	Vertical	162	2.74	-
2480MHz	Pass	AV	2.48G	106.91	Inf	-Inf	30.68	3	Horizontal	347	1.08	-
2480MHz	Pass	AV	2.4835G	48.59	54.00	-5.41	30.69	3	Horizontal	347	1.08	-
2480MHz	Pass	PK	2.48G	110.04	Inf	-Inf	30.68	3	Horizontal	347	1.08	-
2480MHz	Pass	PK	2.4835G	59.74	74.00	-14.26	30.69	3	Horizontal	347	1.08	-
2480MHz	Pass	PK	4.95981G	49.97	74.00	-24.03	6.17	3	Vertical	179	1.01	-
2480MHz	Pass	AV	4.96001G	41.66	54.00	-12.34	6.17	3	Vertical	179	1.01	-
2480MHz	Pass	AV	4.95994G	53.90	54.00	-0.10	6.17	3	Horizontal	356	1.01	-
2480MHz	Pass	PK	4.95992G	60.22	74.00	-13.78	6.17	3	Horizontal	356	1.01	-

BT-BR(1Mbps)

2402MHz_TX

25/01/2019



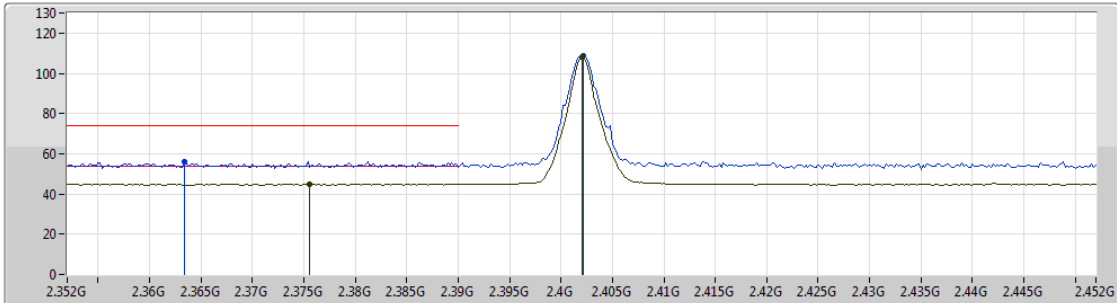
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Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3558G	44.85	54.00	-9.15	31.89	3	Vertical	349	1.01	-								
AV	2.402G	93.94	Inf	-Inf	32.04	3	Vertical	349	1.01	-								
PK	2.3792G	56.51	74.00	-17.49	31.97	3	Vertical	349	1.01	-								
PK	2.402G	94.78	Inf	-Inf	32.05	3	Vertical	349	1.01	-								

BT-BR(1Mbps)

2402MHz_TX

25/01/2019

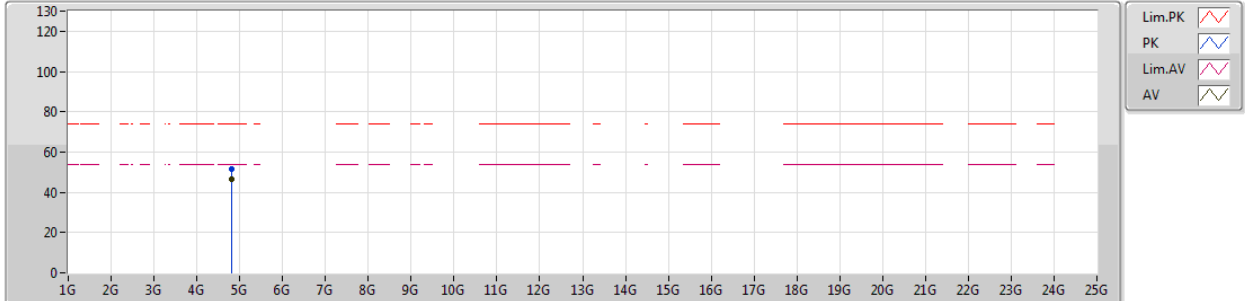


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3756G	44.78	54.00	-9.22	31.96	3	Horizontal	206	2.84	-
AV	2.402G	107.87	Inf	-Inf	32.04	3	Horizontal	206	2.84	-
PK	2.3634G	56.19	74.00	-17.81	31.91	3	Horizontal	206	2.84	-
PK	2.4022G	108.77	Inf	-Inf	32.05	3	Horizontal	206	2.84	-

BT-BR(1Mbps)

2402MHz_TX

25/01/2019

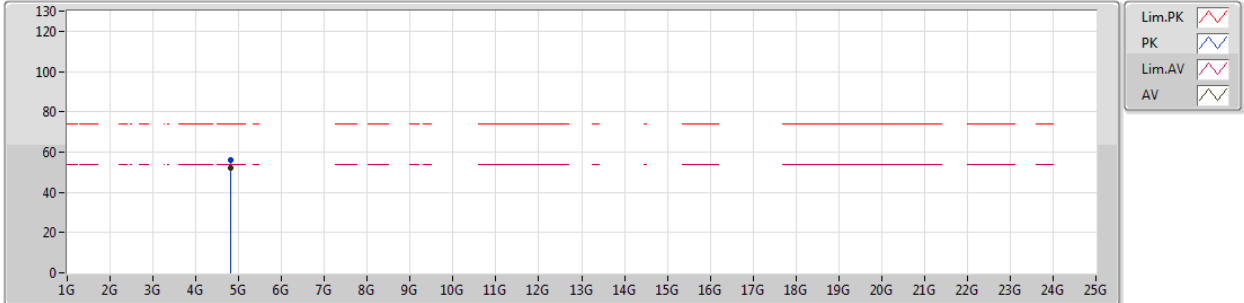


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments							
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)								
AV	4.804G	46.32	54.00	-7.68	3.44	3	Vertical	124	2.78	-							
PK	4.80358G	51.63	74.00	-22.37	3.44	3	Vertical	124	2.78	-							

BT-BR(1Mbps)

2402MHz_TX

25/01/2019

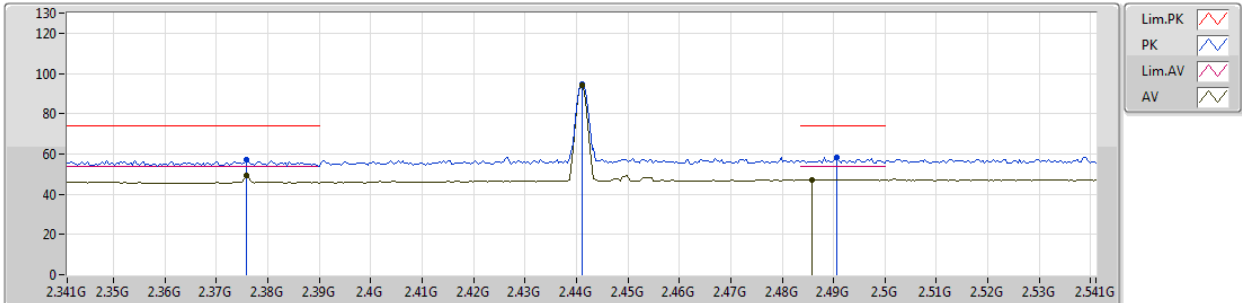


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	4.804G	51.91	54.00	-2.09	3.44	3	Horizontal	11	2.89	-								
PK	4.80364G	56.13	74.00	-17.87	3.44	3	Horizontal	11	2.89	-								

BT-BR(1Mbps)

2441MHz_TX

25/01/2019

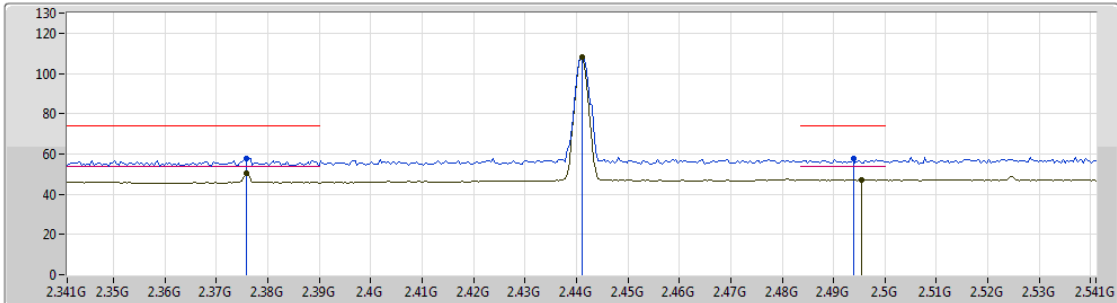


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3758G	49.29	54.00	-4.71	30.33	3	Vertical	257	2.43	-
AV	2.441G	94.36	Inf	-Inf	30.55	3	Vertical	257	2.43	-
AV	2.4858G	47.12	54.00	-6.88	30.71	3	Vertical	257	2.43	-
PK	2.3758G	57.22	74.00	-16.78	30.33	3	Vertical	257	2.43	-
PK	2.441G	94.51	Inf	-Inf	30.55	3	Vertical	257	2.43	-
PK	2.4906G	58.12	74.00	-15.88	30.72	3	Vertical	257	2.43	-

BT-BR(1Mbps)

25/01/2019

2441MHz_TX



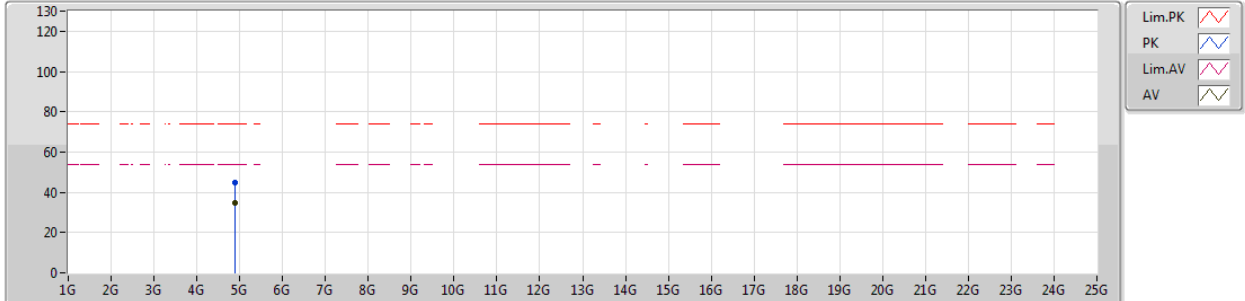
Lim.PK	
PK	
Lim.AV	
AV	

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3758G	50.50	54.00	-3.50	30.33	3	Horizontal	358	1.99	-
AV	2.441G	108.13	Inf	-Inf	30.55	3	Horizontal	358	1.99	-
AV	2.4954G	47.16	54.00	-6.84	30.74	3	Horizontal	358	1.99	-
PK	2.3758G	57.90	74.00	-16.10	30.33	3	Horizontal	358	1.99	-
PK	2.441G	108.28	Inf	-Inf	30.55	3	Horizontal	358	1.99	-
PK	2.4938G	57.45	74.00	-16.55	30.73	3	Horizontal	358	1.99	-

BT-BR(1Mbps)

2441MHz_TX

25/01/2019

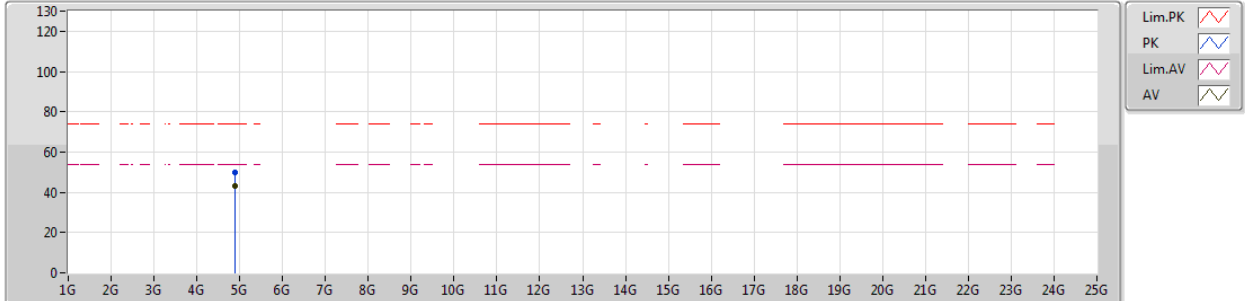


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	4.88206G	34.61	54.00	-19.39	6.01	3	Vertical	120	2.06	-								
PK	4.89202G	44.83	74.00	-29.17	6.04	3	Vertical	120	2.06	-								

BT-BR(1Mbps)

2441MHz_TX

25/01/2019

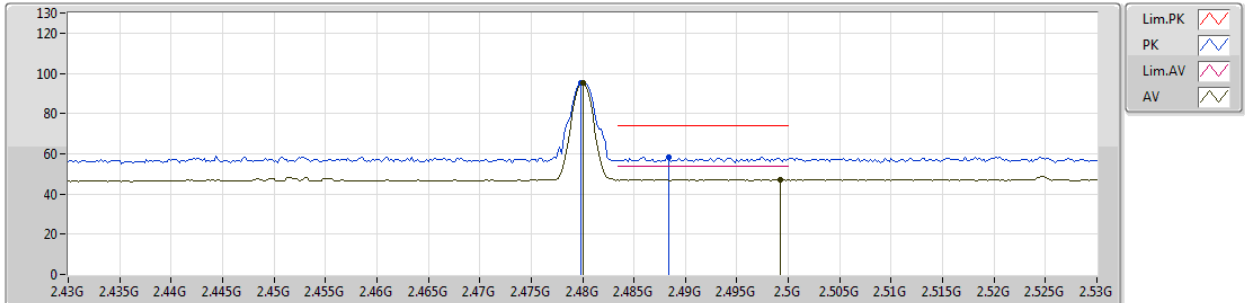


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88192G	43.31	54.00	-10.69	6.01	3	Horizontal	358	1.09	-
PK	4.88167G	49.72	74.00	-24.28	6.01	3	Horizontal	358	1.09	-

BT-BR(1Mbps)

2480MHz_TX

25/01/2019

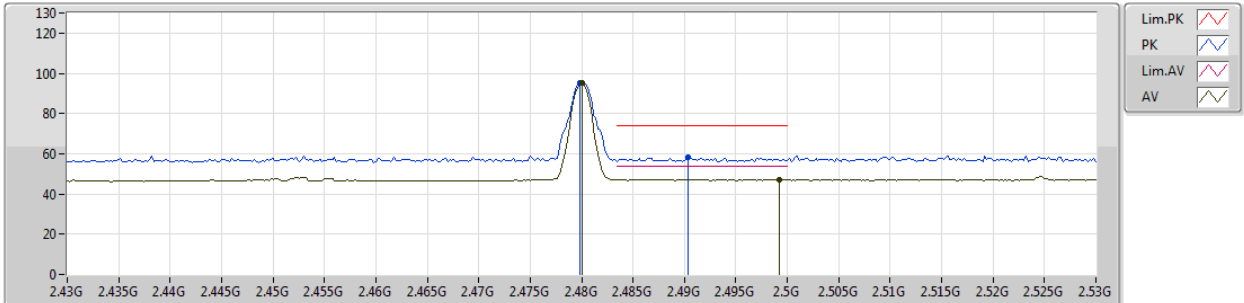


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	95.09	Inf	-Inf	30.68	3	Vertical	162	2.84	-
AV	2.4992G	47.17	54.00	-6.83	30.75	3	Vertical	162	2.84	-
PK	2.4798G	95.26	Inf	-Inf	30.68	3	Vertical	162	2.84	-
PK	2.4884G	58.47	74.00	-15.53	30.71	3	Vertical	162	2.84	-

BT-BR(1Mbps)

2480MHz_TX

25/01/2019

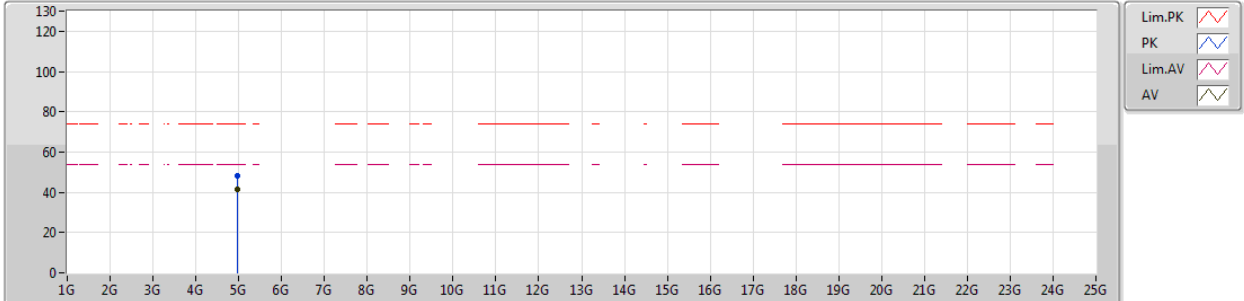


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	95.01	Inf	-Inf	30.68	3	Horizontal	138	2.15	-
AV	2.4992G	47.17	54.00	-6.83	30.75	3	Horizontal	138	2.15	-
PK	2.4798G	95.14	Inf	-Inf	30.68	3	Horizontal	138	2.15	-
PK	2.4904G	58.19	74.00	-15.81	30.72	3	Horizontal	138	2.15	-

BT-BR(1Mbps)

2480MHz_TX

25/01/2019

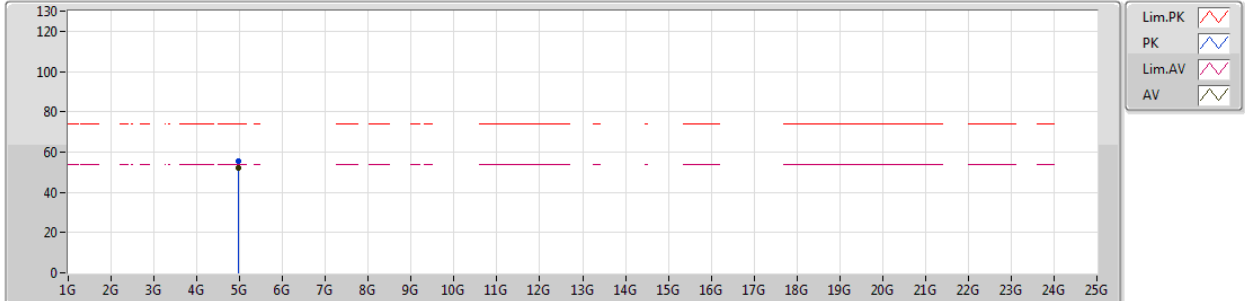


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.95994G	41.48	54.00	-12.52	6.17	3	Vertical	176	2.57	-
PK	4.96006G	48.44	74.00	-25.56	6.17	3	Vertical	176	2.57	-

BT-BR(1Mbps)

2480MHz_TX

25/01/2019

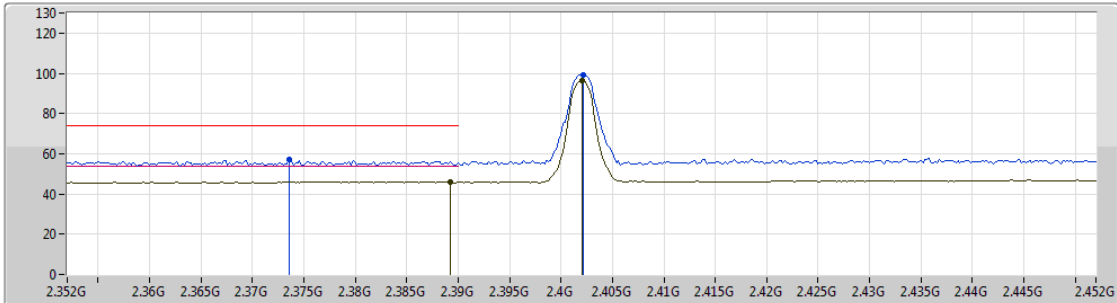


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments							
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)								
AV	4.95999G	52.26	54.00	-1.74	6.17	3	Horizontal	358	1.01	-							
PK	4.96026G	55.56	74.00	-18.44	6.17	3	Horizontal	358	1.01	-							

BT-EDR(2Mbps)

2402MHz_TX

25/01/2019



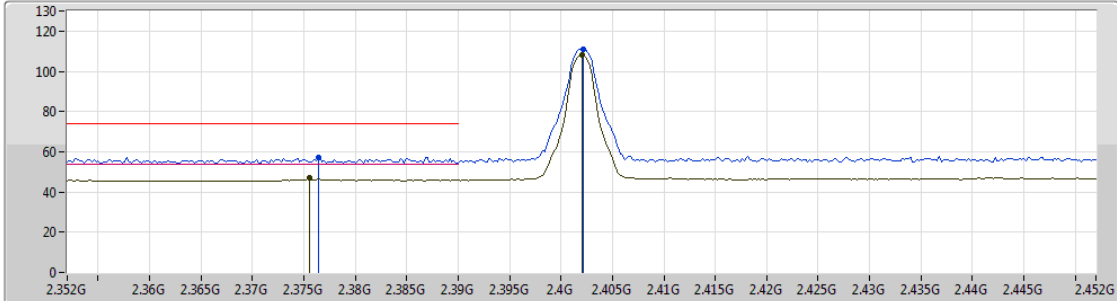
Lim.PK	
PK	
Lim.AV	
AV	

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3892G	46.04	54.00	-7.96	30.37	3	Vertical	32	2.99	-								
AV	2.402G	96.45	Inf	-Inf	30.41	3	Vertical	32	2.99	-								
PK	2.3736G	57.15	74.00	-16.85	30.33	3	Vertical	32	2.99	-								
PK	2.402G	99.46	Inf	-Inf	30.42	3	Vertical	32	2.99	-								

BT-EDR(2Mbps)

2402MHz_TX

25/01/2019



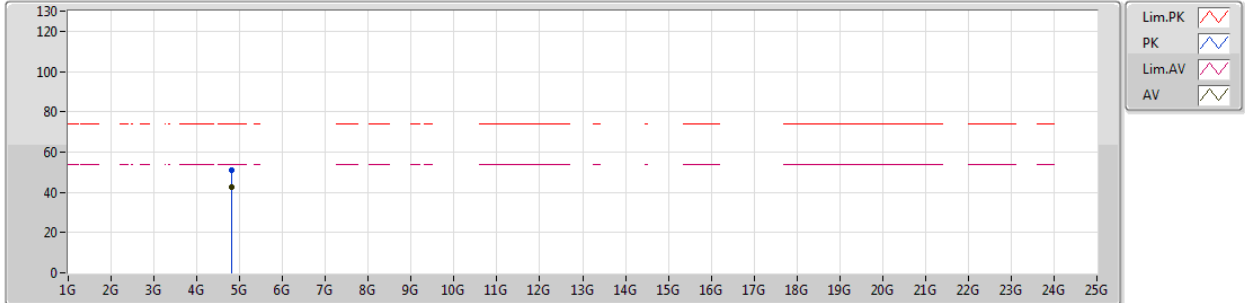
Lim.PK	
PK	
Lim.AV	
AV	

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3756G	46.97	54.00	-7.03	30.33	3	Horizontal	350	2.92	-								
AV	2.402G	108.07	Inf	-Inf	30.41	3	Horizontal	350	2.92	-								
PK	2.3764G	57.29	74.00	-16.71	30.33	3	Horizontal	350	2.92	-								
PK	2.4022G	111.07	Inf	-Inf	30.42	3	Horizontal	350	2.92	-								

BT-EDR(2Mbps)

2402MHz_TX

25/01/2019

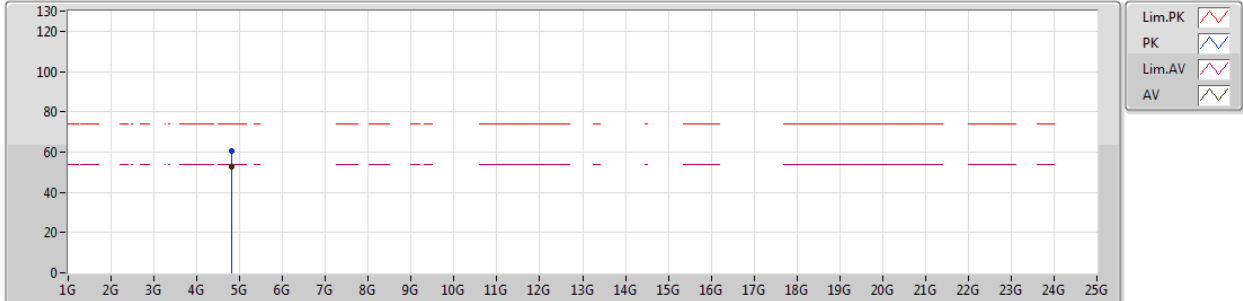


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	4.80394G	42.49	54.00	-11.51	5.86	3	Vertical	116	2.20	-								
PK	4.80424G	51.06	74.00	-22.94	5.86	3	Vertical	116	2.20	-								

BT-EDR(2Mbps)

2402MHz_TX

25/01/2019

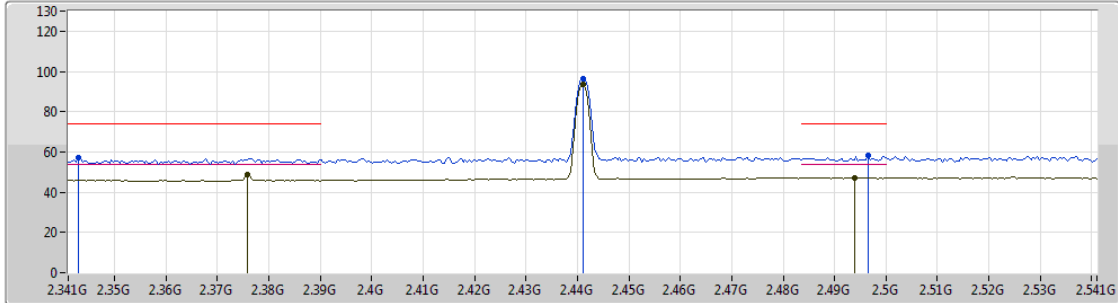


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80394G	52.67	54.00	-1.33	5.86	3	Horizontal	359	2.39	-
PK	4.80425G	60.76	74.00	-13.24	5.86	3	Horizontal	359	2.39	-

BT-EDR(2Mbps)

25/01/2019

2441MHz_TX

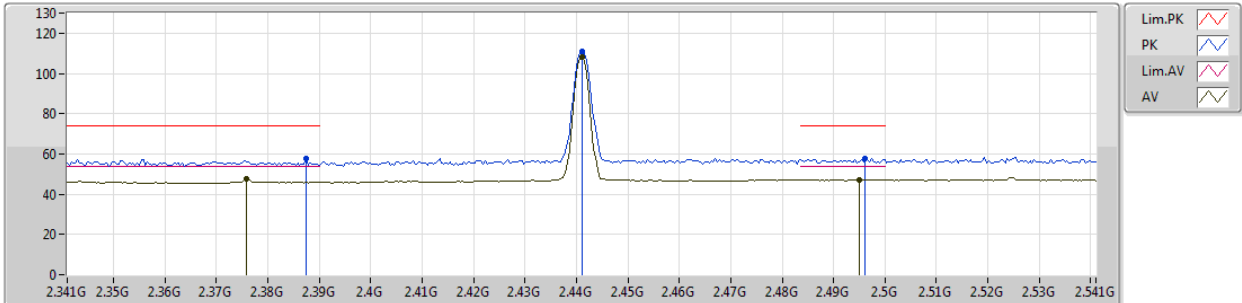


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3758G	48.52	54.00	-5.48	30.33	3	Vertical	256	2.43	-
AV	2.441G	93.70	Inf	-Inf	30.55	3	Vertical	256	2.43	-
AV	2.4938G	47.15	54.00	-6.85	30.73	3	Vertical	256	2.43	-
PK	2.343G	57.25	74.00	-16.75	30.22	3	Vertical	256	2.43	-
PK	2.441G	96.58	Inf	-Inf	30.55	3	Vertical	256	2.43	-
PK	2.4966G	58.00	74.00	-16.00	30.74	3	Vertical	256	2.43	-

BT-EDR(2Mbps)

25/01/2019

2441MHz_TX

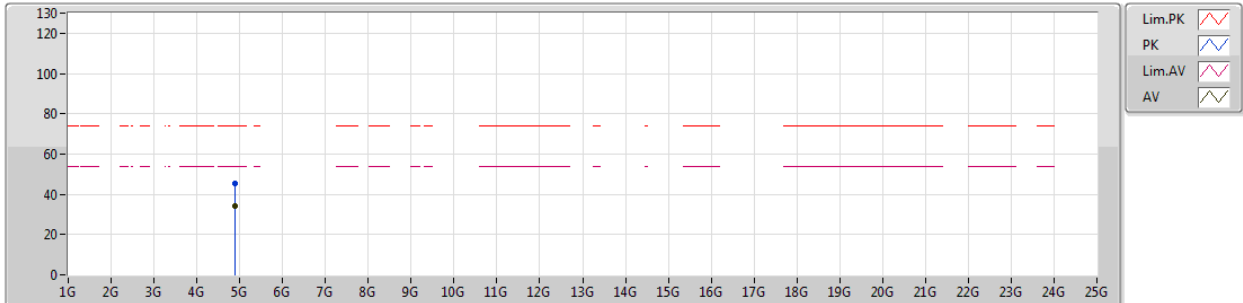


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3758G	47.67	54.00	-6.33	30.33	3	Horizontal	348	1.17	-
AV	2.441G	107.91	Inf	-Inf	30.55	3	Horizontal	348	1.17	-
AV	2.495G	47.16	54.00	-6.84	30.74	3	Horizontal	348	1.17	-
PK	2.3874G	57.64	74.00	-16.36	30.37	3	Horizontal	348	1.17	-
PK	2.441G	110.77	Inf	-Inf	30.55	3	Horizontal	348	1.17	-
PK	2.4962G	57.92	74.00	-16.08	30.74	3	Horizontal	348	1.17	-

BT-EDR(2Mbps)

2441MHz_TX

25/01/2019

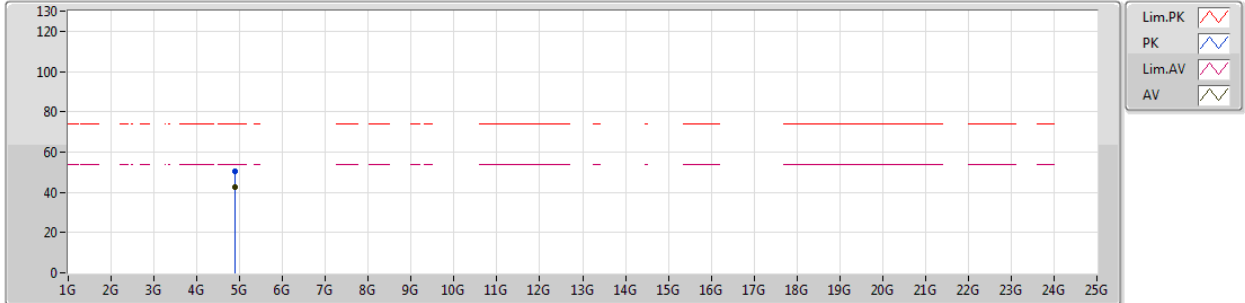


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88186G	34.34	54.00	-19.66	6.01	3	Vertical	120	2.19	-
PK	4.8816G	45.21	74.00	-28.79	6.01	3	Vertical	120	2.19	-

BT-EDR(2Mbps)

25/01/2019

2441MHz_TX

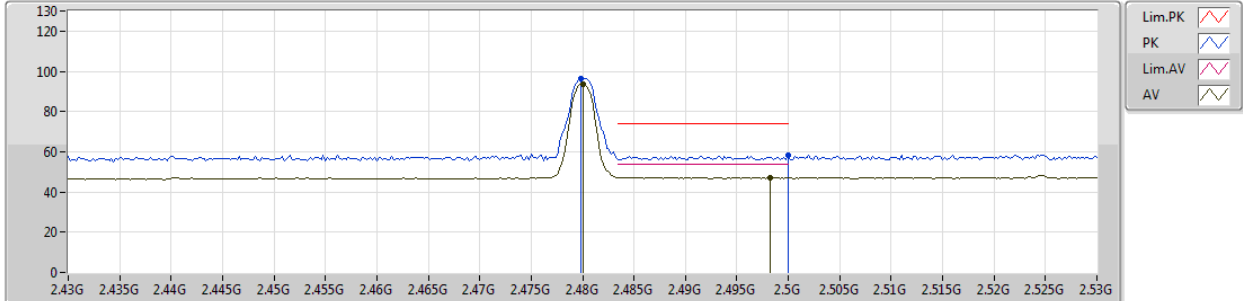


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments								
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)									
AV	4.88187G	42.73	54.00	-11.27	6.01	3	Horizontal	360	1.07	-								
PK	4.88156G	50.51	74.00	-23.49	6.01	3	Horizontal	360	1.07	-								

BT-EDR(2Mbps)

2480MHz_TX

25/01/2019

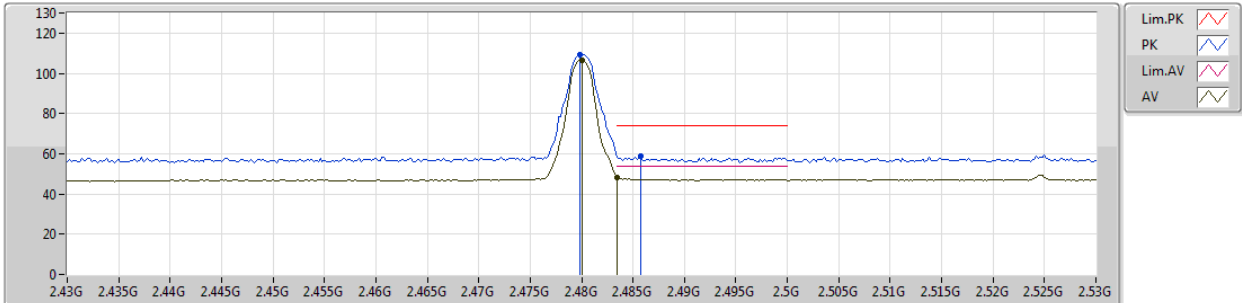


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	93.68	Inf	-Inf	30.68	3	Vertical	162	2.75	-
AV	2.4982G	47.17	54.00	-6.83	30.75	3	Vertical	162	2.75	-
PK	2.4798G	96.61	Inf	-Inf	30.68	3	Vertical	162	2.75	-
PK	2.5G	58.30	74.00	-15.70	30.75	3	Vertical	162	2.75	-

BT-EDR(2Mbps)

2480MHz_TX

25/01/2019

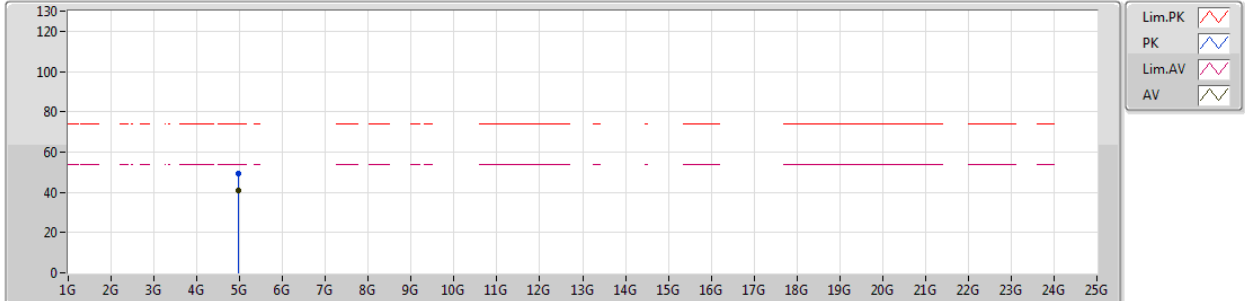


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	106.58	Inf	-Inf	30.68	3	Horizontal	348	1.07	-
AV	2.4835G	48.12	54.00	-5.88	30.69	3	Horizontal	348	1.07	-
PK	2.4798G	109.50	Inf	-Inf	30.68	3	Horizontal	348	1.07	-
PK	2.4858G	58.67	74.00	-15.33	30.71	3	Horizontal	348	1.07	-

BT-EDR(2Mbps)

2480MHz_TX

25/01/2019

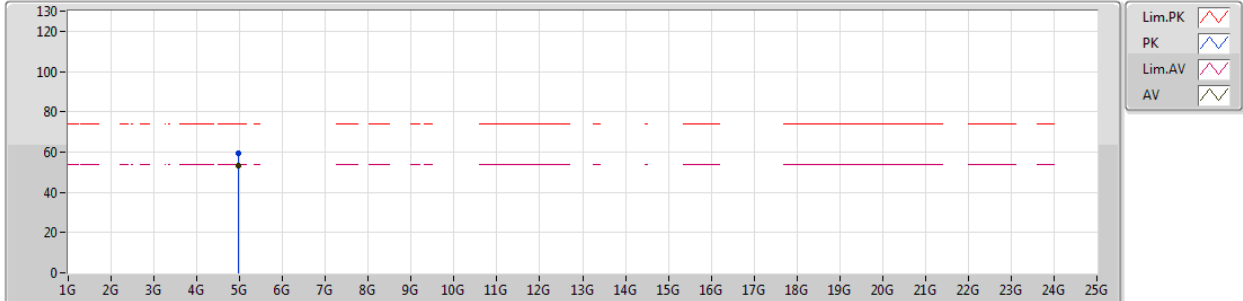


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.95989G	41.11	54.00	-12.89	6.17	3	Vertical	178	1.01	-
PK	4.95968G	49.57	74.00	-24.43	6.17	3	Vertical	178	1.01	-

BT-EDR(2Mbps)

2480MHz_TX

25/01/2019

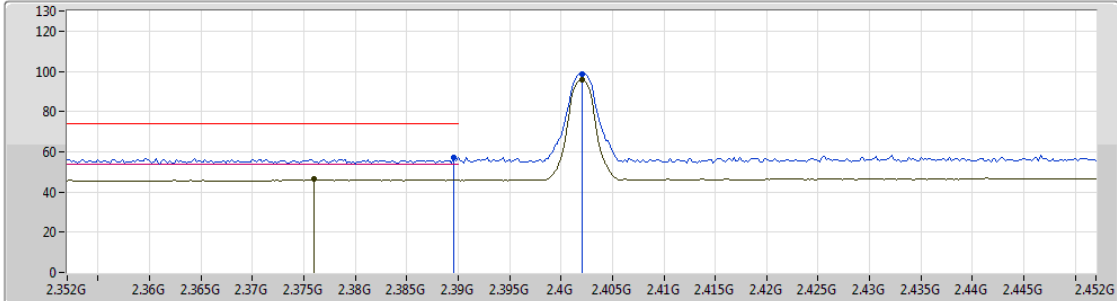


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.95991G	53.18	54.00	-0.82	6.17	3	Horizontal	355	1.02	-
PK	4.95974G	59.15	74.00	-14.85	6.17	3	Horizontal	355	1.02	-

BT-EDR(3Mbps)

2402MHz_TX

25/01/2019



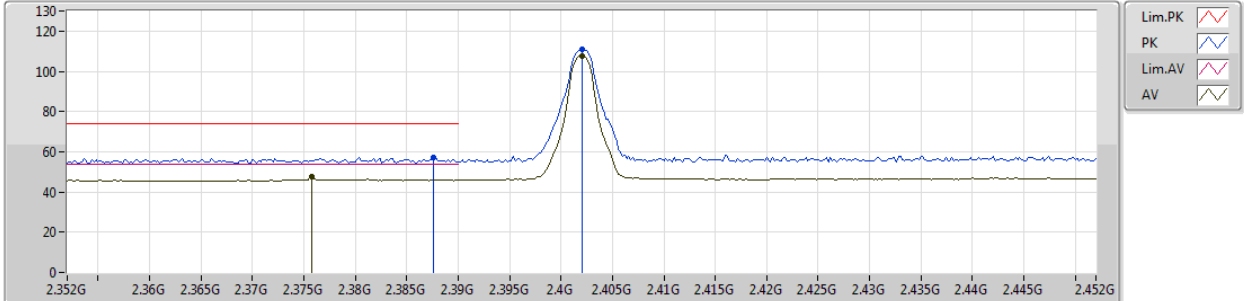
Lim.PK	
PK	
Lim.AV	
AV	

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.376G	46.48	54.00	-7.52	30.33	3	Vertical	32	2.98	-								
AV	2.402G	95.70	Inf	-Inf	30.41	3	Vertical	32	2.98	-								
PK	2.3896G	57.04	74.00	-16.96	30.38	3	Vertical	32	2.98	-								
PK	2.402G	98.70	Inf	-Inf	30.41	3	Vertical	32	2.98	-								

BT-EDR(3Mbps)

2402MHz_TX

25/01/2019

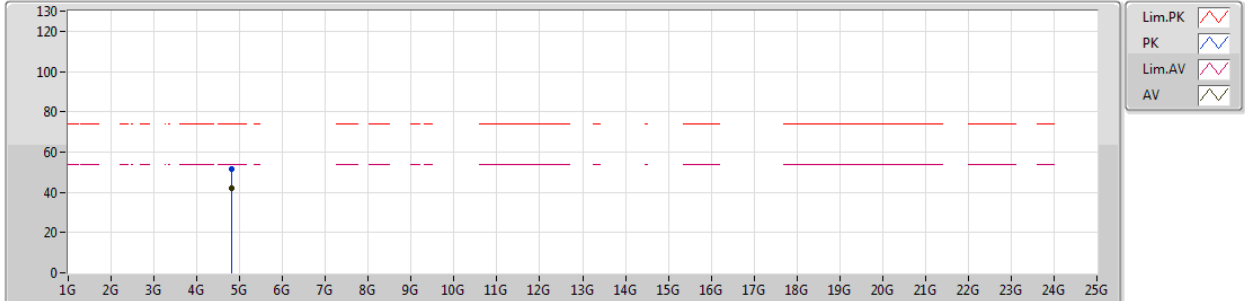


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3758G	47.67	54.00	-6.33	30.33	3	Horizontal	351	2.92	-								
AV	2.402G	107.79	Inf	-Inf	30.41	3	Horizontal	351	2.92	-								
PK	2.3876G	57.08	74.00	-16.92	30.37	3	Horizontal	351	2.92	-								
PK	2.402G	110.85	Inf	-Inf	30.41	3	Horizontal	351	2.92	-								

BT-EDR(3Mbps)

2402MHz_TX

25/01/2019

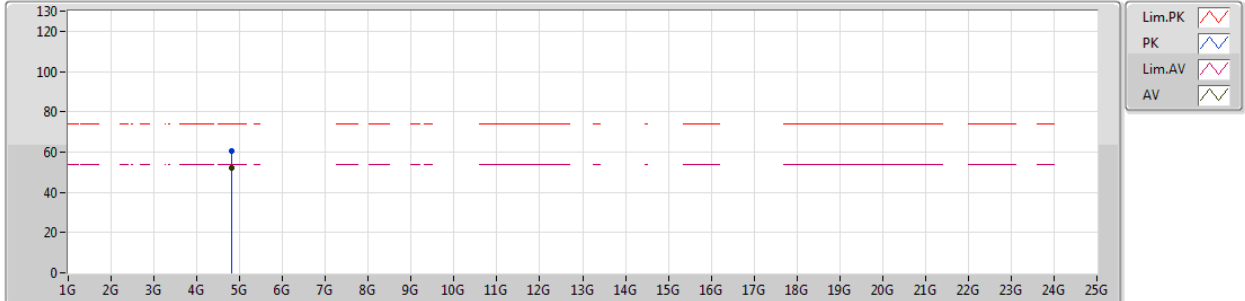


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80395G	42.15	54.00	-11.85	5.86	3	Vertical	117	1.97	-
PK	4.8039G	51.76	74.00	-22.24	5.86	3	Vertical	117	1.97	-

BT-EDR(3Mbps)

25/01/2019

2402MHz_TX

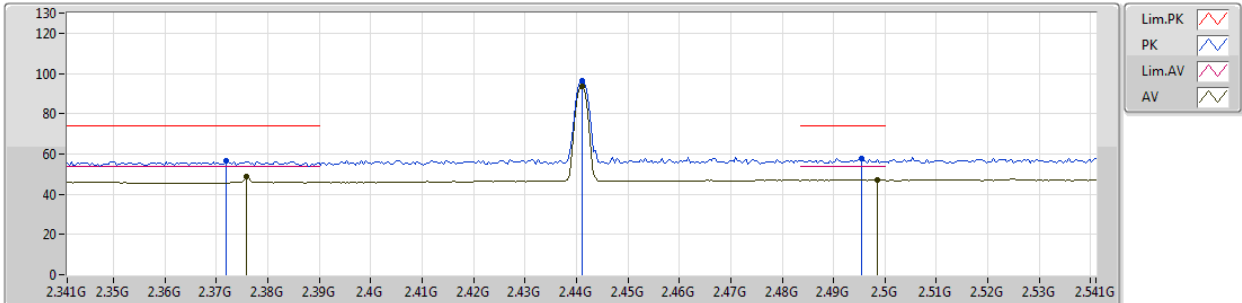


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	4.80397G	52.36	54.00	-1.64	5.86	3	Horizontal	0	2.38	-								
PK	4.80409G	60.65	74.00	-13.35	5.86	3	Horizontal	0	2.38	-								

BT-EDR(3Mbps)

25/01/2019

2441MHz_TX

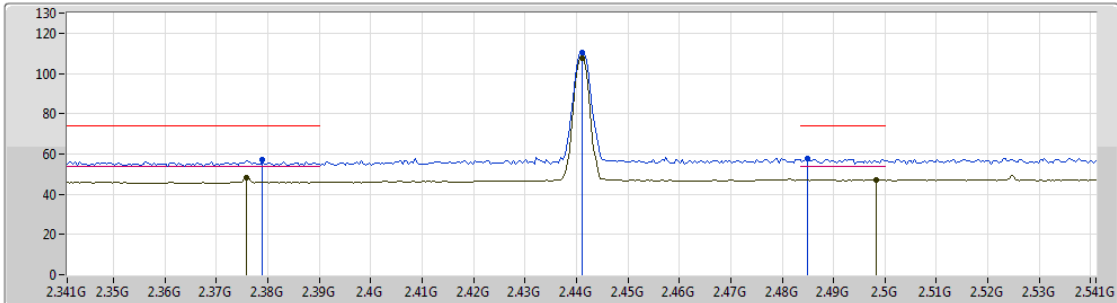


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3758G	48.52	54.00	-5.48	30.33	3	Vertical	256	2.44	-
AV	2.441G	93.37	Inf	-Inf	30.55	3	Vertical	256	2.44	-
AV	2.4986G	47.17	54.00	-6.83	30.75	3	Vertical	256	2.44	-
PK	2.3718G	56.47	74.00	-17.53	30.31	3	Vertical	256	2.44	-
PK	2.441G	96.45	Inf	-Inf	30.55	3	Vertical	256	2.44	-
PK	2.4954G	57.77	74.00	-16.23	30.74	3	Vertical	256	2.44	-

BT-EDR(3Mbps)

25/01/2019

2441MHz_TX



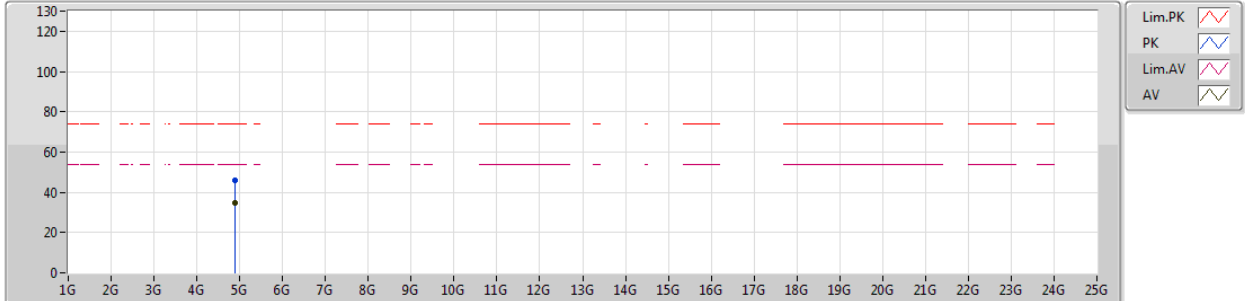
Lim.PK	
PK	
Lim.AV	
AV	

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3758G	48.31	54.00	-5.69	30.33	3	Horizontal	350	1.17	-								
AV	2.441G	107.79	Inf	-Inf	30.55	3	Horizontal	350	1.17	-								
AV	2.4982G	46.89	54.00	-7.11	30.75	3	Horizontal	350	1.17	-								
PK	2.379G	56.95	74.00	-17.05	30.34	3	Horizontal	350	1.17	-								
PK	2.441G	110.64	Inf	-Inf	30.55	3	Horizontal	350	1.17	-								
PK	2.485G	57.64	74.00	-16.36	30.69	3	Horizontal	350	1.17	-								

BT-EDR(3Mbps)

2441MHz_TX

25/01/2019

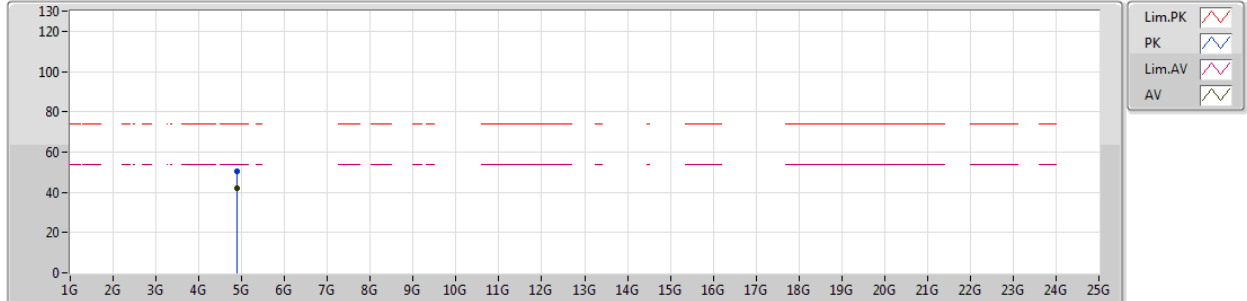


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments							
AV	4.88177G	34.70	54.00	-19.30	6.01	3	Vertical	117	2.39	-							
PK	4.88186G	45.77	74.00	-28.23	6.01	3	Vertical	117	2.39	-							

BT-EDR(3Mbps)

25/01/2019

2441MHz_TX

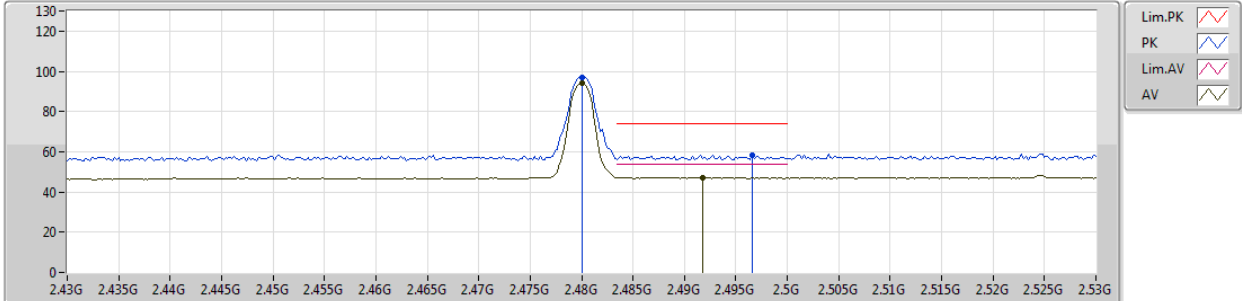


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments							
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)								
AV	4.88196G	42.15	54.00	-11.85	6.01	3	Horizontal	360	1.06	-							
PK	4.88164G	50.42	74.00	-23.58	6.01	3	Horizontal	360	1.06	-							

BT-EDR(3Mbps)

2480MHz_TX

25/01/2019

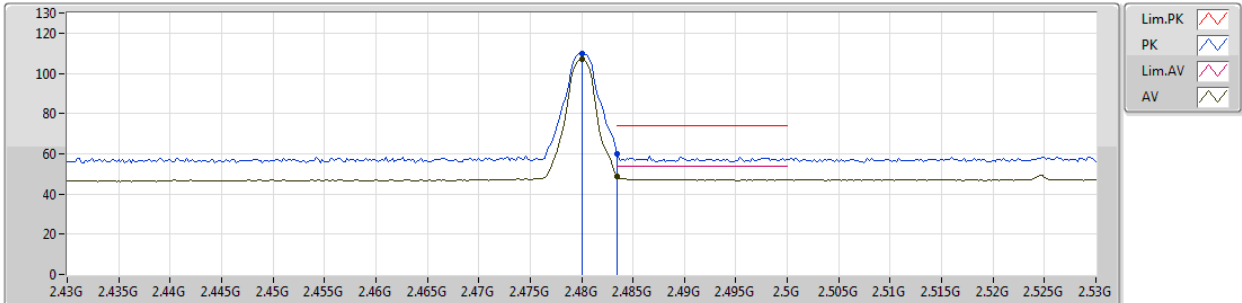


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	94.06	Inf	-Inf	30.68	3	Vertical	162	2.74	-
AV	2.4918G	47.14	54.00	-6.86	30.72	3	Vertical	162	2.74	-
PK	2.48G	97.12	Inf	-Inf	30.68	3	Vertical	162	2.74	-
PK	2.4966G	58.36	74.00	-15.64	30.74	3	Vertical	162	2.74	-

BT-EDR(3Mbps)

2480MHz_TX

25/01/2019

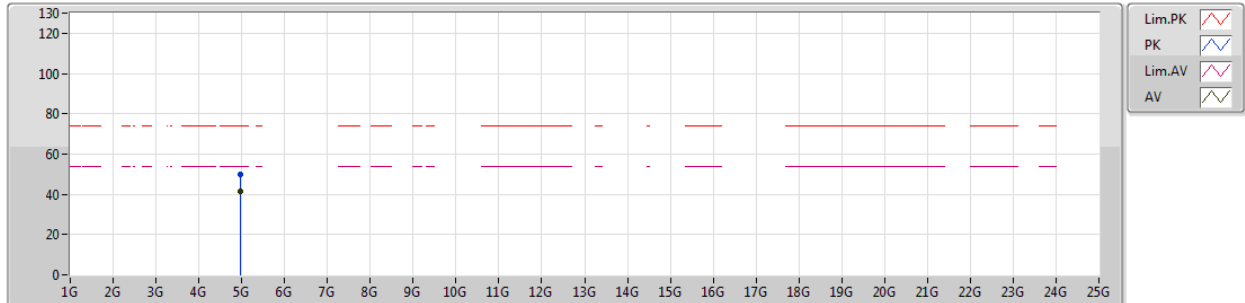


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	106.91	Inf	-Inf	30.68	3	Horizontal	347	1.08	-
AV	2.4835G	48.59	54.00	-5.41	30.69	3	Horizontal	347	1.08	-
PK	2.48G	110.04	Inf	-Inf	30.68	3	Horizontal	347	1.08	-
PK	2.4835G	59.74	74.00	-14.26	30.69	3	Horizontal	347	1.08	-

BT-EDR(3Mbps)

2480MHz_TX

25/01/2019

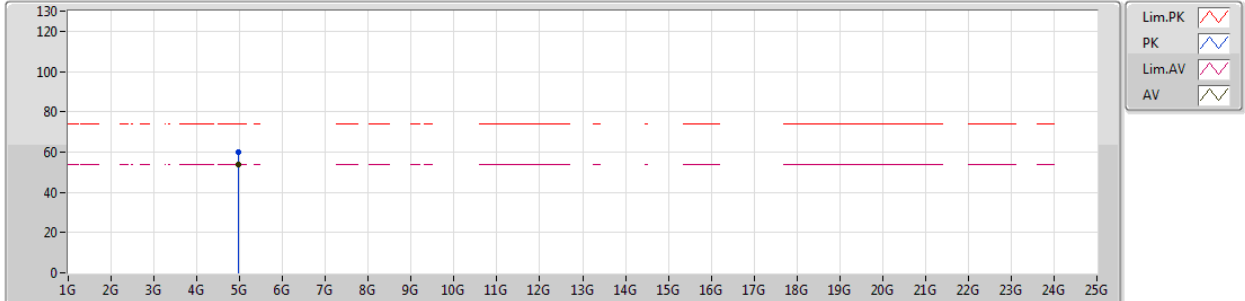


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	4.95981G	49.97	74.00	-24.03	6.17	3	Vertical	179	1.01	-
AV	4.96001G	41.66	54.00	-12.34	6.17	3	Vertical	179	1.01	-

BT-EDR(3Mbps)

2480MHz_TX

25/01/2019



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments							
AV	4.95994G	53.90	54.00	-0.10	6.17	3	Horizontal	356	1.01	-							
PK	4.95992G	60.22	74.00	-13.78	6.17	3	Horizontal	356	1.01	-							