

FCC Test Report

Equipment : Wireless camera
Brand Name : Alarm.com
Model No. : ADC-V622
FCC ID : PPQ-143V622PT
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
Function : Point-to-multipoint; Point-to-point
Applicant : LITE-ON Technology Corp.
Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City,
23585 Taiwan
Manufacturer : Lite-On Network Communication (Dongguan) Limited
30#Keji Rd., Yin Hu Industrial Area, Qingxi
Town, DongGuan City, Guangdong, China

The product sample received on Sep. 12, 2017 and completely tested on Jan. 04, 2018. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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


Phoenix Chen / Assistant Manager





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PHOTOGRAPHS OF EUT V01



Summary of Test Result

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



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

Note:

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

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector
1	1	LYNwave	ALX17P-222XX1-00	embedded antenna	I-PEX
2	2	LYNwave	ALX17P-222XX2-00	embedded antenna	I-PEX

Ant.	Gain (dBi)		
	2.4G	5G	BT
1	2.66	4.68	2.66
2	2.12	4.76	2.12

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 n 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)

Support diversity function, the Ant. 1 (port 1) was declared to be tested only by customer.

For 5GHz function:

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

Support diversity function and pre-tested on each single chain, the worst case was Ant. 2(port 2) and it was record in this test report.

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

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



1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter
RF Chip Model No.	AMPAK 62X2
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)
	Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)
	Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	0.657	1.824	410.625u	3k

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 v04

1.3 Testing Location Information

Testing Location		
<input checked="" type="checkbox"/>	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.		
<input type="checkbox"/>	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
RF Conducted	TH01-HY	Tim	22.5°C / 61%	04/Jan/2018
Radiated	03CH09-HY	Jerry	23.5°C / 55%	04/Jan/2018
AC Conduction	CO04-HY	Bear	24.5°C / 56%	12/Dec/2017

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)	3.6 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.0 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%



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	Dos
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Mode	Power Setting
BT-LE(1Mbps)	-
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

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		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT			V

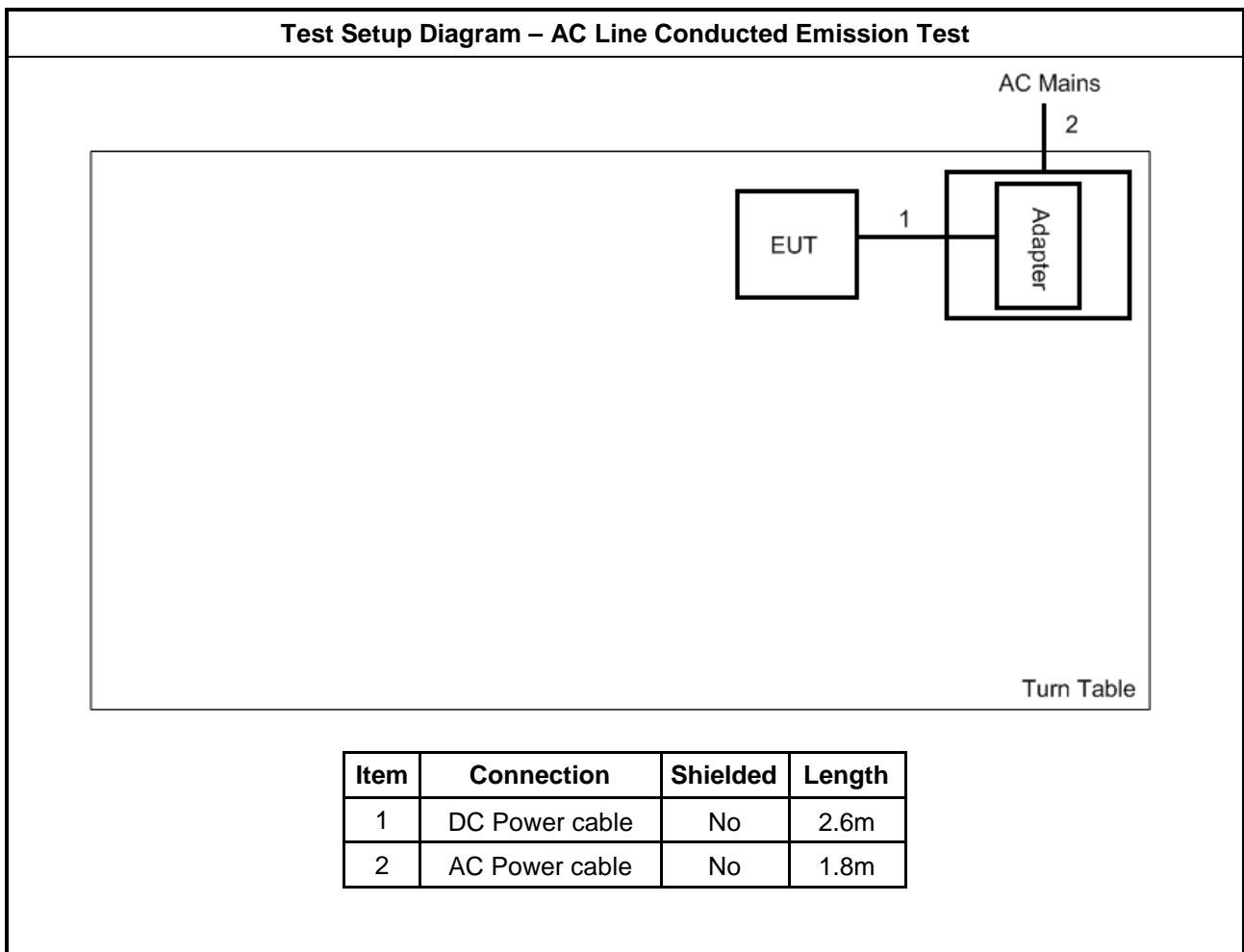
2.4 Accessories

Accessories				
AC Adapter	Brand Name	Asian	Model Name	WA-12M12R
	Power Rating	I/P: 100-240Vac, 50-60Hz, 0.5A, O/P: 12Vdc, 1A		
	Power Cord	2.6 meter, non-shielded cable, w/o ferrite core		

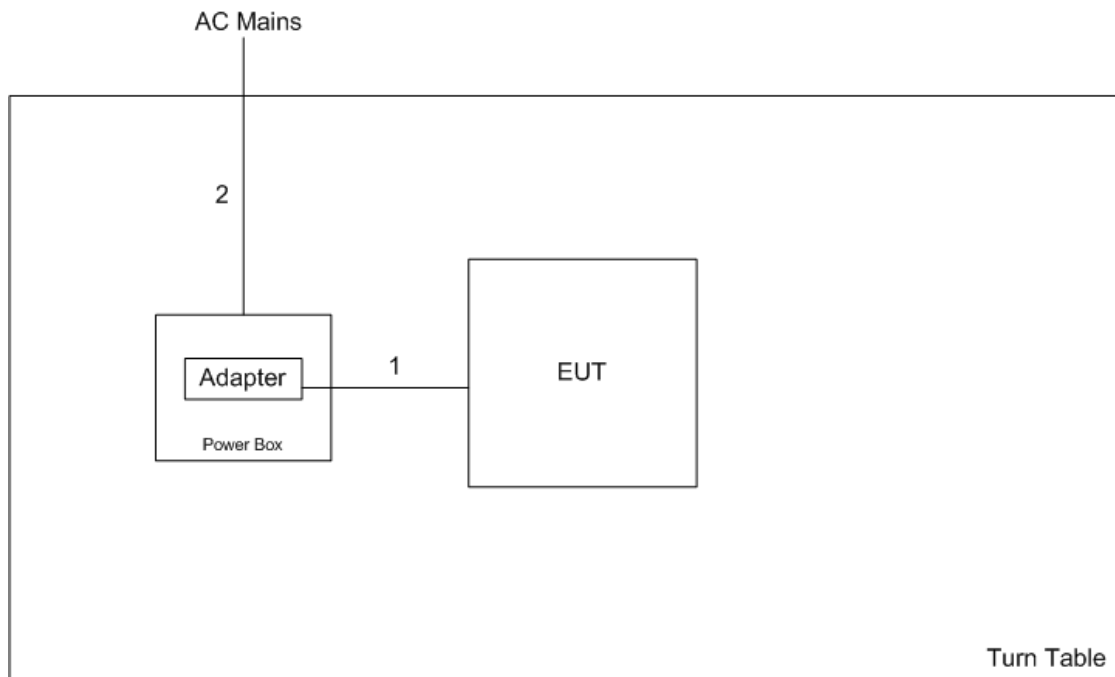
2.5 Support Equipment

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

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	DC Power cable	No	2.6m
2	AC Power cable	No	1.8m

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.

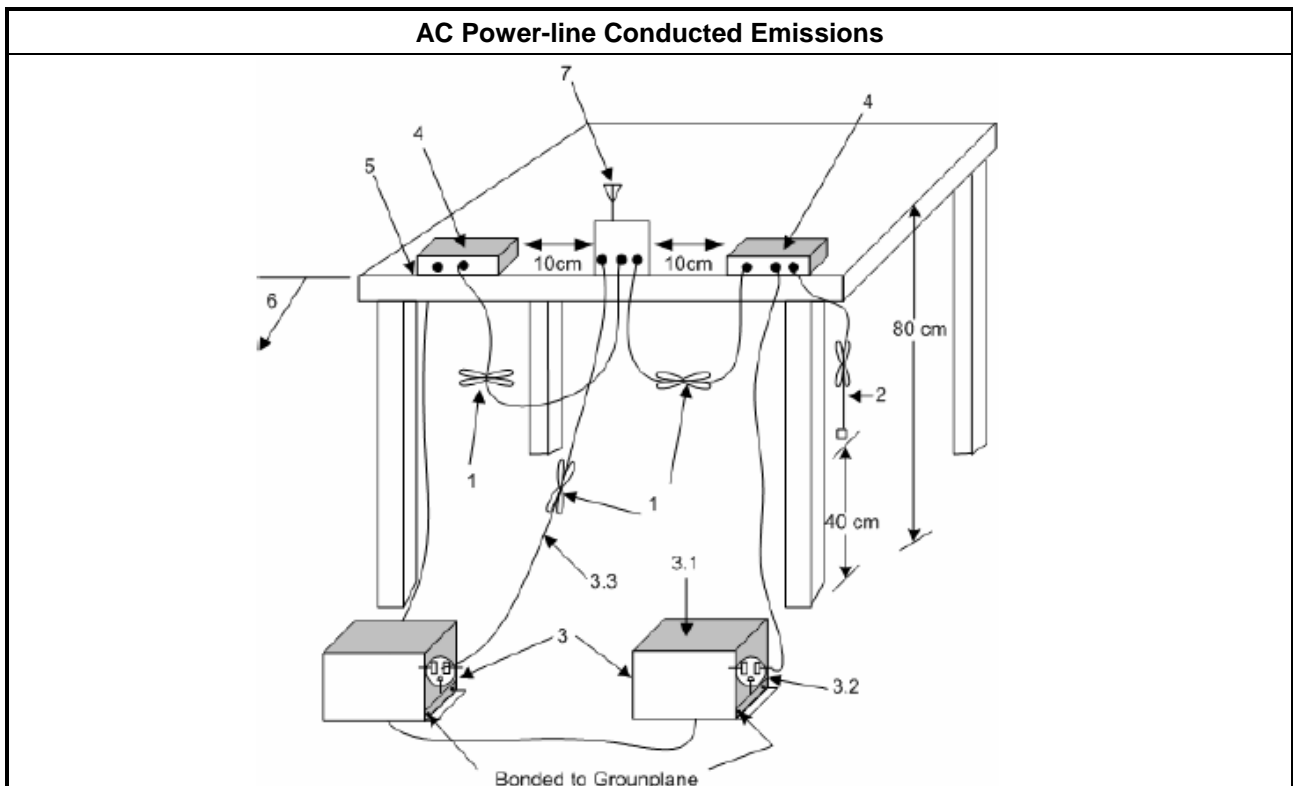
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
<ul style="list-style-type: none"> 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 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
<ul style="list-style-type: none"> ▪ 6 dB bandwidth \geq 500 kHz.

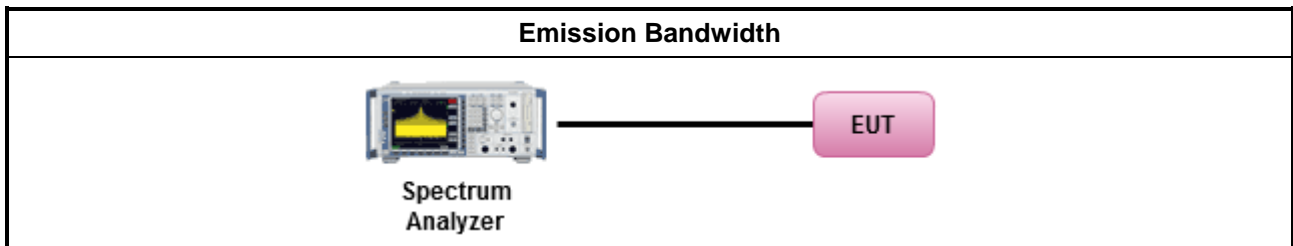
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: 	
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as RSS-Gen, clause 6.6 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	<ul style="list-style-type: none"> ▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS):
	<ul style="list-style-type: none"> - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dBm
e.i.r.p. Power Limit:	
	<ul style="list-style-type: none"> ▪ 2400-2483.5 MHz Band
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS)
	<ul style="list-style-type: none"> - Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ dBm
<p>P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

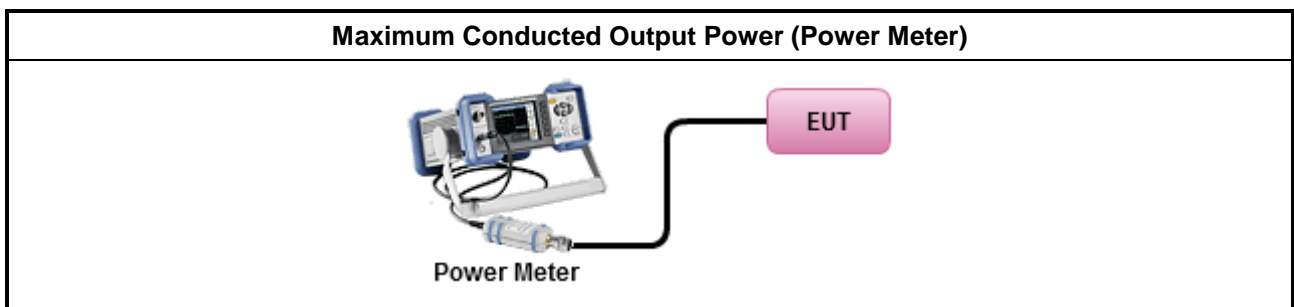
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
<input type="checkbox"/>	Refer as KDB 558074, clause 9.1.2 Option 2 (integrated band power method)
<input type="checkbox"/>	Refer as KDB 558074, clause 9.1.3 Option 3 (peak power meter for VBW ≥ DTS BW)
<ul style="list-style-type: none"> Maximum Average Conducted Output Power 	
Duty cycle ≥ 98%	
<input type="checkbox"/>	Refer as KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
Duty cycle < 98%	
<input type="checkbox"/>	Refer as KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
RF power meter and average over on/off periods with duty factor or gated trigger	
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 9.2.3.1 Method AVGPM (using an RF average power meter).
<ul style="list-style-type: none"> For conducted measurement. 	
<ul style="list-style-type: none"> 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. 	
<ul style="list-style-type: none"> If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<ul style="list-style-type: none"> Power Spectral Density (PSD) ≤ 8 dBm/3kHz

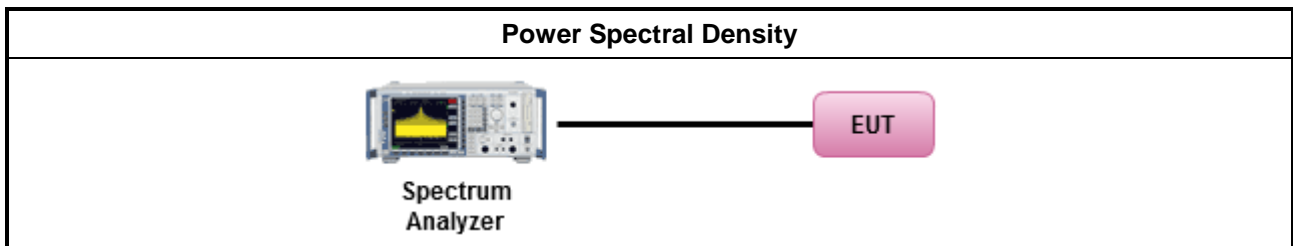
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> 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).
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).
	<ul style="list-style-type: none"> For conducted measurement.
	<ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below:
	<ul style="list-style-type: none"> Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

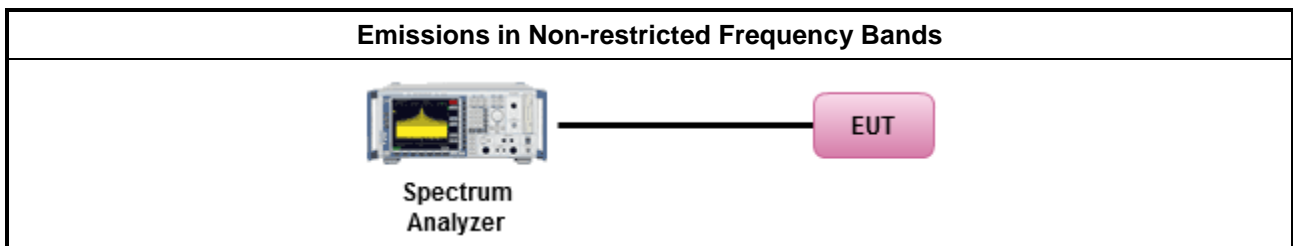
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

3.6.2 Measuring Instruments

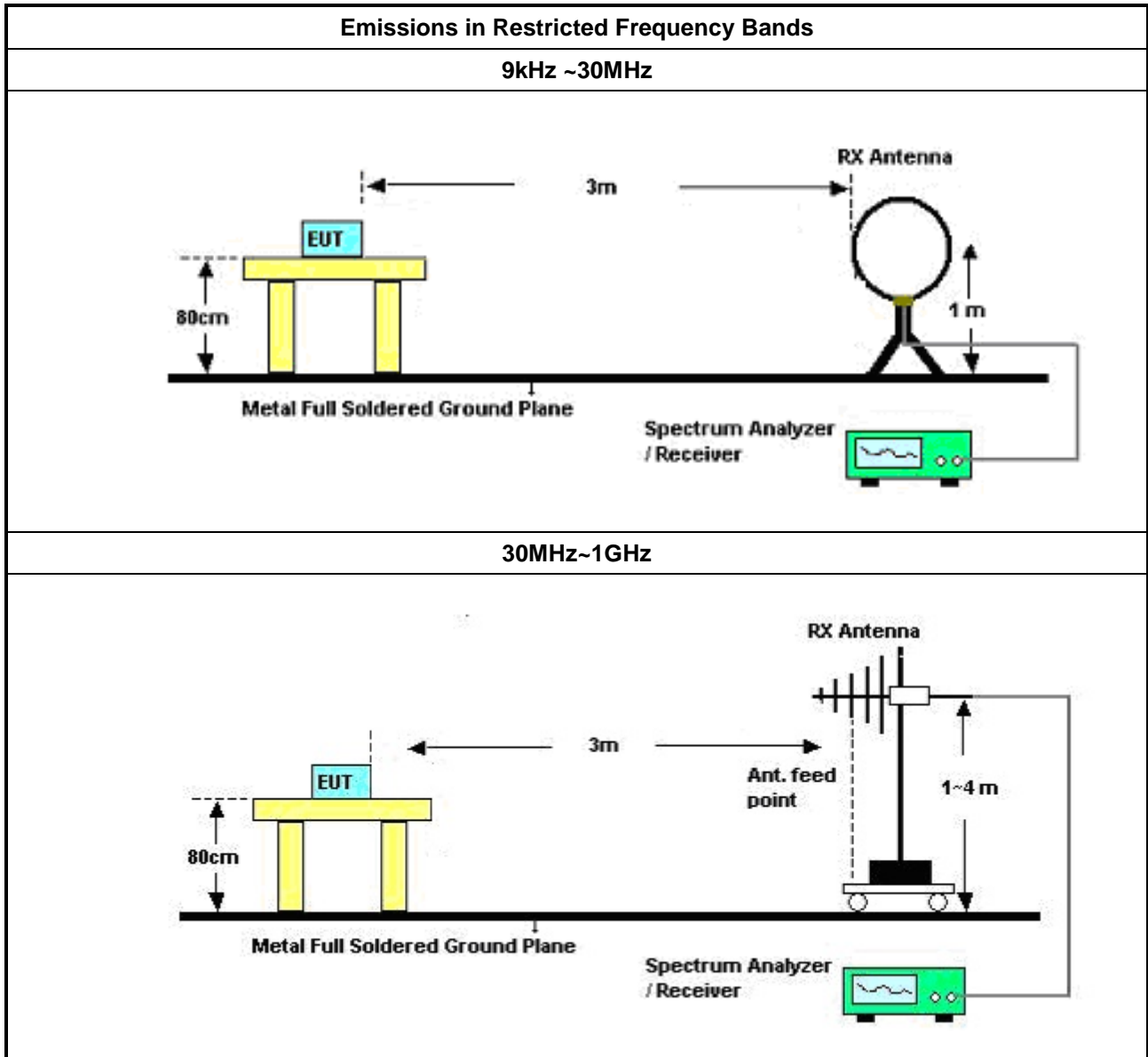
Refer a test equipment and calibration data table in this test report.

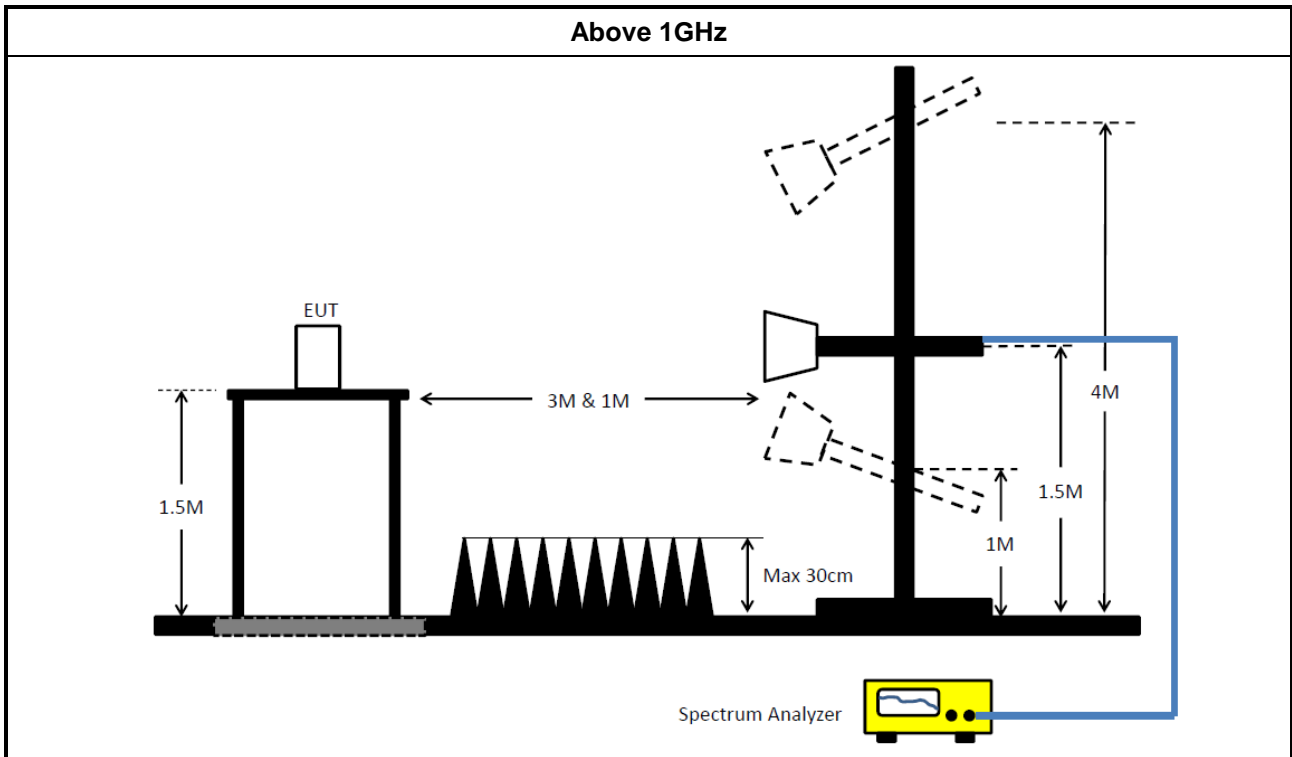


3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor]. 	
<ul style="list-style-type: none"> ▪ 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. 	
<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: 	
<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 12 for unwanted emissions into restricted bands. 	
	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Refer as KDB 558074, clause 12.2.5.3 (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW\geq1/T.
	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Refer as KDB 558074, clause 12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> ▪ For the transmitter band-edge emissions shall be measured using following options below: 	
<ul style="list-style-type: none"> ▪ Refer as KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below. 	
<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 13.2 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements. 	
<ul style="list-style-type: none"> ▪ Refer as KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz). 	
<ul style="list-style-type: none"> ▪ For conducted and cabinet radiation measurement, refer as KDB 558074, clause 12.2.2. 	
<ul style="list-style-type: none"> ▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB 	
<ul style="list-style-type: none"> ▪ For KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred. 	

3.6.4 Test Setup





3.6.5 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	29/Apr/2017	28/Apr/2018
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	06/Oct/2017	05/Oct/2018
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Puls e Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2017	11/Oct/2018
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	17/Nov/2017	16/Nov/2018

NCR : Non-Calibration Require

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	25/Apr/2017	24/Apr/2018
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	28/Jun/2017	27/Jun/2018
Amplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	25/Apr/2017	24/Apr/2018
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	25/Apr/2017	24/Apr/2018
Spectrum Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	20/Jul/2017	19/Jul/2018
Bilog Antenna	TESEQ	CBL 6111D	35418	30MHz~1GHz	09/Sep/2017	08/Sep/2018
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA9120D 1534	1GHz~18GHz	28/Apr/2017	27/Apr/2018
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18GHz ~ 40GHz	06/Feb/2017	05/Feb/2018
Loop Antenna	TESTQ	HLA 6120	31244	9 kHz~30 MHz	02/Mar/2017	01/Mar/2018
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	02/Feb/2017	01/Feb/2018
RF Cable-high	SUHNER	SUCOFLEX104	MY34918/4	1GHz ~ 40GHz	02/Feb/2017	01/Feb/2018
Receiver	R&S	ESR3	102052	9KHz ~ 3.6GHz	29/Apr/2017	28/Apr/2018

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101515	9kHz~40GHz	08/Dec/2017	07/Dec/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	27/Jul/2017	26/Jul/2018
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
RF Cable-1.5m	HUBER+SUHNER	SUCOFLEX_104	MY12582/4	30MHz~26.5GHz	25/Aug/2017	24/Aug/2018



AC Power-line Conducted Emissions Result																																																																																																																																										
Operating Mode	1	Power Phase	Line																																																																																																																																							
Operating Function	Adapter mode																																																																																																																																									
Date: 2017-12-12																																																																																																																																										
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>Read</th> <th>LISN</th> <th>Cable</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV</th> <th>Limit</th> <th>Line</th> <th>Level</th> <th>Factor</th> <th>Loss</th> <th></th> </tr> <tr> <th></th> <th></th> <th></th> <th>dB</th> <th>dBuV</th> <th>dBuV</th> <th>dB</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.1557</td> <td>24.32</td> <td>-31.37</td> <td>55.69</td> <td>14.66</td> <td>9.62</td> <td>0.04</td> <td>Average</td> </tr> <tr> <td>2</td> <td>0.1557</td> <td>38.55</td> <td>-27.14</td> <td>65.69</td> <td>28.89</td> <td>9.62</td> <td>0.04</td> <td>QP</td> </tr> <tr> <td>3</td> <td>0.1934</td> <td>21.47</td> <td>-32.42</td> <td>53.89</td> <td>11.85</td> <td>9.62</td> <td>0.00</td> <td>Average</td> </tr> <tr> <td>4</td> <td>0.1934</td> <td>32.79</td> <td>-31.10</td> <td>63.89</td> <td>23.17</td> <td>9.62</td> <td>0.00</td> <td>QP</td> </tr> <tr> <td>5</td> <td>0.3502</td> <td>27.09</td> <td>-21.87</td> <td>48.96</td> <td>17.40</td> <td>9.61</td> <td>0.08</td> <td>Average</td> </tr> <tr> <td>6</td> <td>0.3502</td> <td>37.70</td> <td>-21.26</td> <td>58.96</td> <td>28.01</td> <td>9.61</td> <td>0.08</td> <td>QP</td> </tr> <tr> <td>7</td> <td>3.0094</td> <td>20.13</td> <td>-25.87</td> <td>46.00</td> <td>10.45</td> <td>9.63</td> <td>0.05</td> <td>Average</td> </tr> <tr> <td>8</td> <td>3.0094</td> <td>28.06</td> <td>-27.94</td> <td>56.00</td> <td>18.38</td> <td>9.63</td> <td>0.05</td> <td>QP</td> </tr> <tr style="border: 2px solid black;"> <td>9 MAX</td> <td>3.6571</td> <td>25.14</td> <td>-20.86</td> <td>46.00</td> <td>15.43</td> <td>9.63</td> <td>0.08</td> <td>Average</td> </tr> <tr> <td>10</td> <td>3.6571</td> <td>30.19</td> <td>-25.81</td> <td>56.00</td> <td>20.48</td> <td>9.63</td> <td>0.08</td> <td>QP</td> </tr> <tr> <td>11</td> <td>4.8738</td> <td>22.44</td> <td>-23.56</td> <td>46.00</td> <td>12.69</td> <td>9.64</td> <td>0.11</td> <td>Average</td> </tr> <tr> <td>12</td> <td>4.8738</td> <td>29.91</td> <td>-26.09</td> <td>56.00</td> <td>20.16</td> <td>9.64</td> <td>0.11</td> <td>QP</td> </tr> </tbody> </table>					Freq	Level	Over	Limit	Read	LISN	Cable	Remark		MHz	dBuV	Limit	Line	Level	Factor	Loss					dB	dBuV	dBuV	dB	dB		1	0.1557	24.32	-31.37	55.69	14.66	9.62	0.04	Average	2	0.1557	38.55	-27.14	65.69	28.89	9.62	0.04	QP	3	0.1934	21.47	-32.42	53.89	11.85	9.62	0.00	Average	4	0.1934	32.79	-31.10	63.89	23.17	9.62	0.00	QP	5	0.3502	27.09	-21.87	48.96	17.40	9.61	0.08	Average	6	0.3502	37.70	-21.26	58.96	28.01	9.61	0.08	QP	7	3.0094	20.13	-25.87	46.00	10.45	9.63	0.05	Average	8	3.0094	28.06	-27.94	56.00	18.38	9.63	0.05	QP	9 MAX	3.6571	25.14	-20.86	46.00	15.43	9.63	0.08	Average	10	3.6571	30.19	-25.81	56.00	20.48	9.63	0.08	QP	11	4.8738	22.44	-23.56	46.00	12.69	9.64	0.11	Average	12	4.8738	29.91	-26.09	56.00	20.16	9.64	0.11	QP
	Freq	Level	Over	Limit	Read	LISN	Cable	Remark																																																																																																																																		
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<p>Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit. Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)</p>																																																																																																																																										



Summary

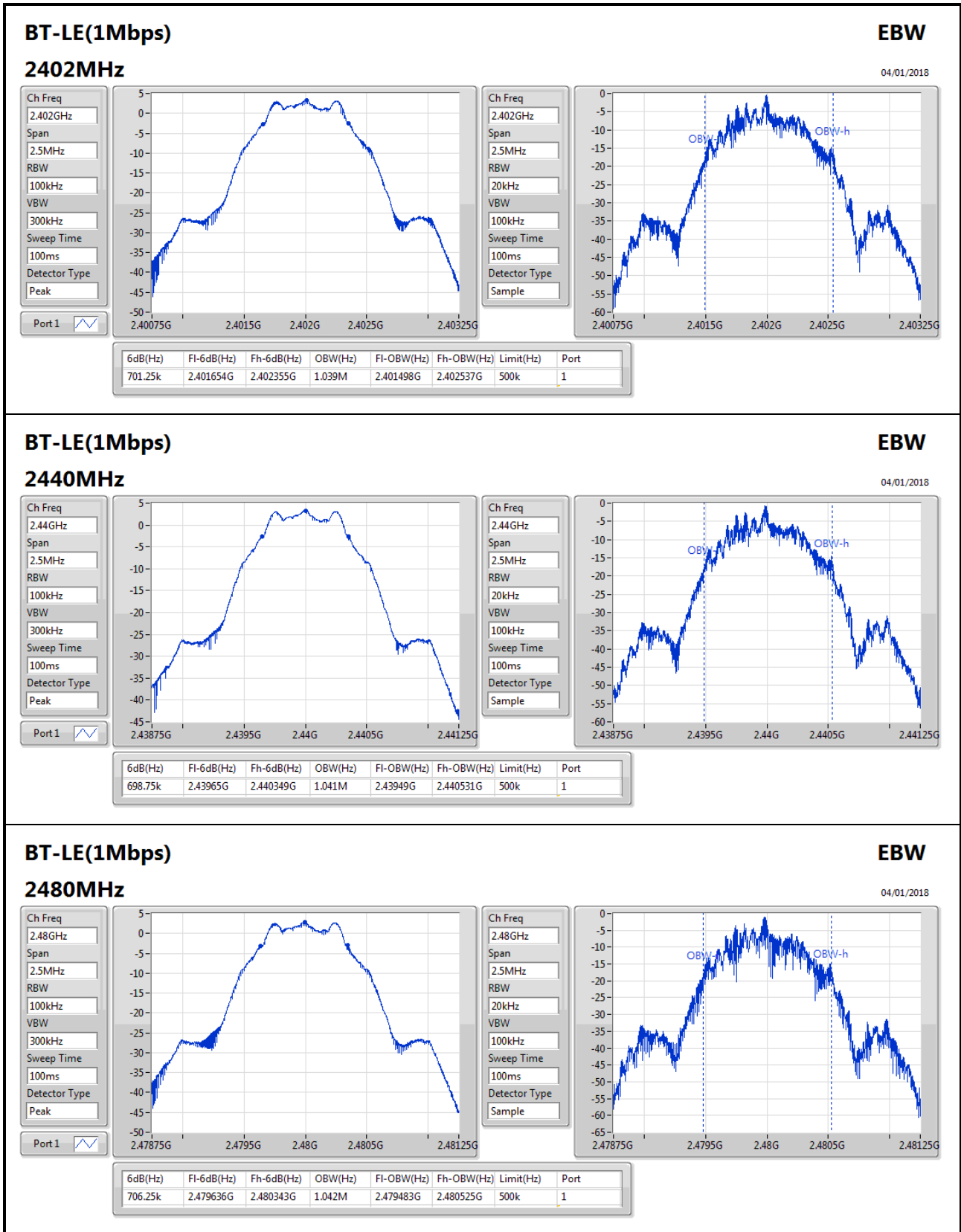
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	706.25k	1.042M	1M04F1D	698.75k	1.039M

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_TnomVnom	Pass	500k	701.25k	1.039M
2440MHz_TnomVnom	Pass	500k	698.75k	1.041M
2480MHz_TnomVnom	Pass	500k	706.25k	1.042M

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





Summary

Mode	Power	Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	3.74	0.00237

Result

Mode	Result	Gain	Power	Power Limit
		(dBi)	(dBm)	(dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	2.66	3.67	30.00
2440MHz_TnomVnom	Pass	2.66	3.74	30.00
2480MHz_TnomVnom	Pass	2.66	3.34	30.00



Summary

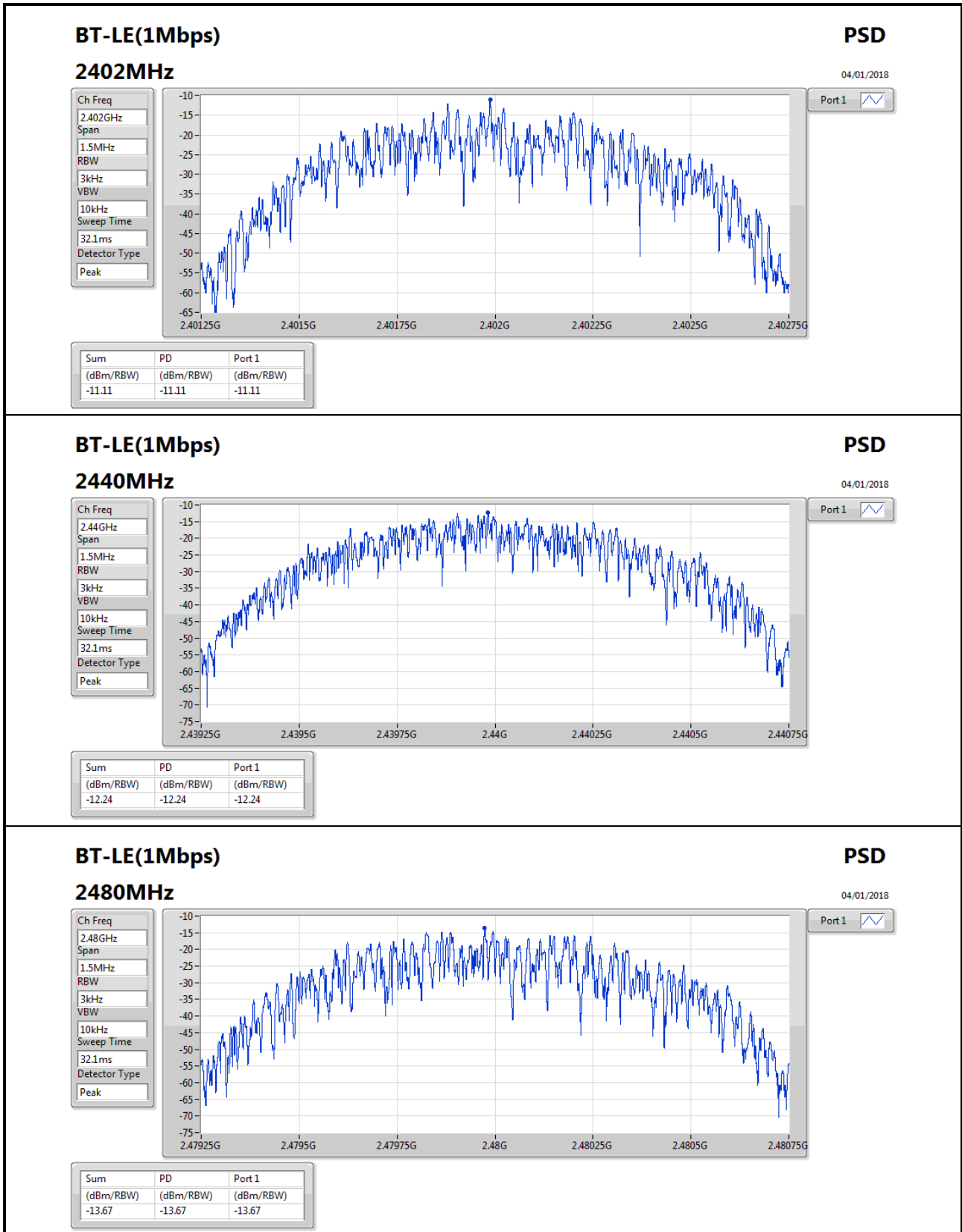
Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-11.11

RBW=3kHz.

Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	2.66	-11.11	8.00
2440MHz_TnomVnom	Pass	2.66	-12.24	8.00
2480MHz_TnomVnom	Pass	2.66	-13.67	8.00

RBW=3kHz.



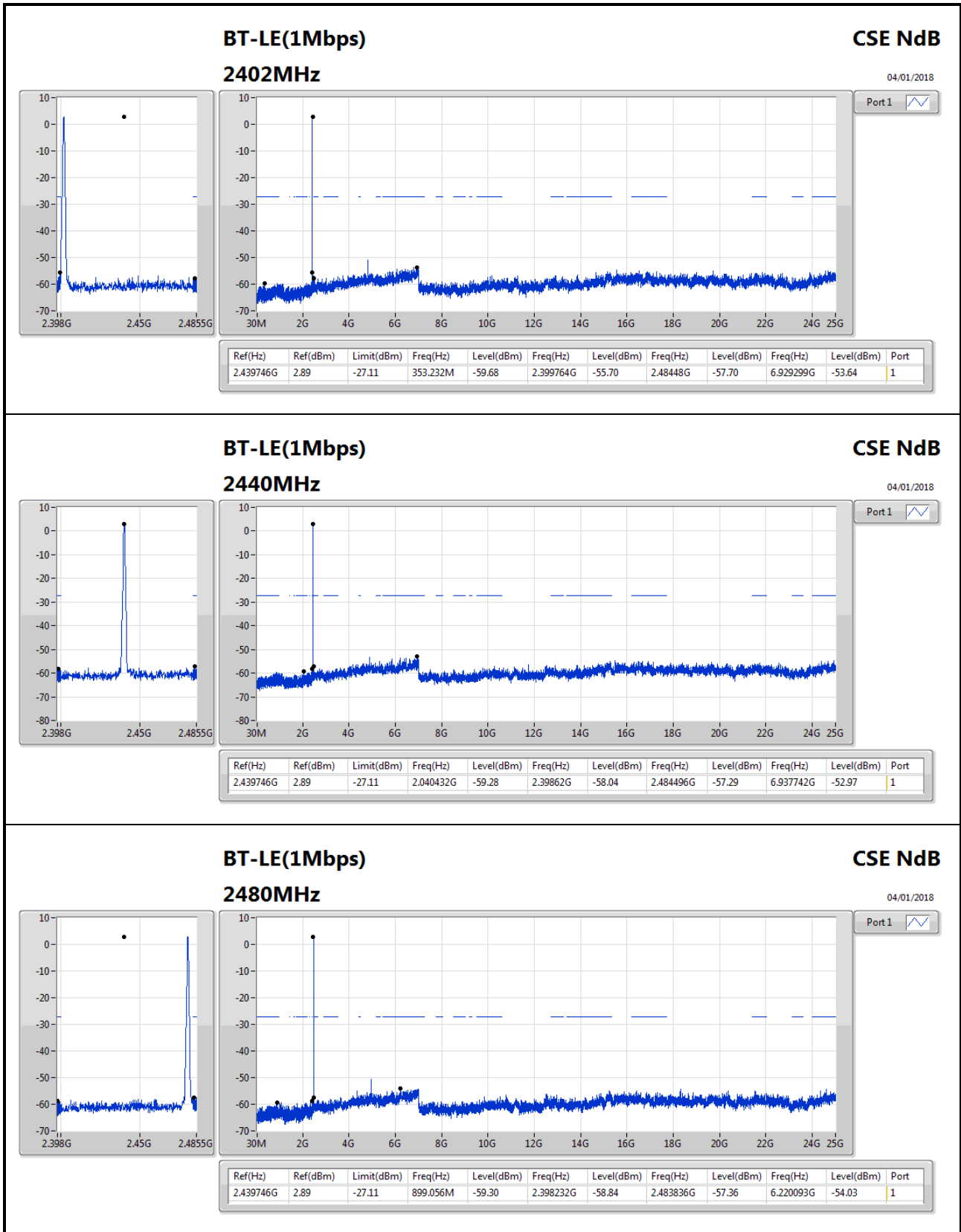


Summary

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	2.439746G	2.89	-27.11	2.040432G	-59.28	2.39862G	-58.04	2.484496G	-57.29	6.937742G	-52.97	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_TnomVnom	Pass	2.439746G	2.89	-27.11	353.232M	-59.68	2.399764G	-55.70	2.48448G	-57.70	6.929299G	-53.64	1
2440MHz_TnomVnom	Pass	2.439746G	2.89	-27.11	2.040432G	-59.28	2.39862G	-58.04	2.484496G	-57.29	6.937742G	-52.97	1
2480MHz_TnomVnom	Pass	2.439746G	2.89	-27.11	899.056M	-59.30	2.398232G	-58.84	2.483836G	-57.36	6.220093G	-54.03	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	192.96M	37.45	43.50	-6.05	-20.12	3	Horizontal	360	1.00	-

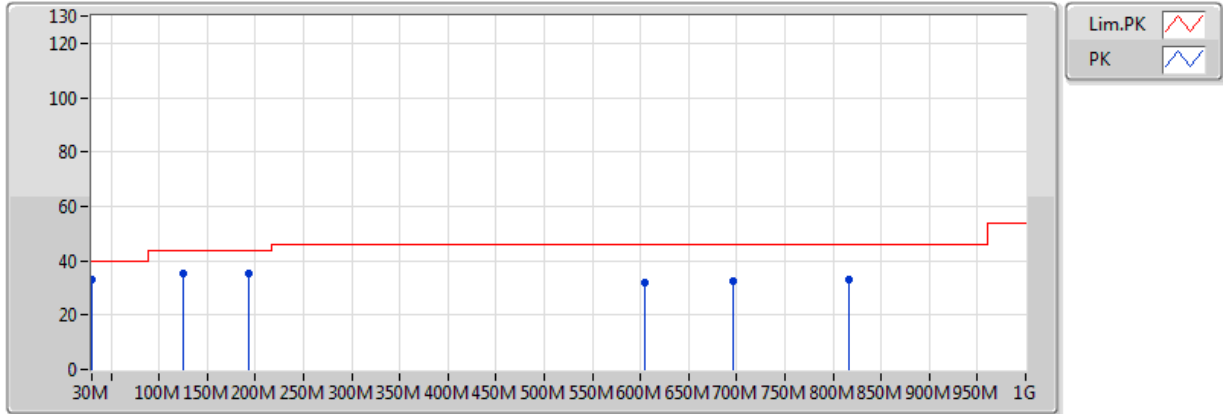


Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	22.39	40.00	-17.61	-12.77	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	86.26M	28.97	40.00	-11.03	-22.16	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	192.96M	37.45	43.50	-6.05	-20.12	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	336.52M	36.39	46.00	-9.61	-14.22	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	575.14M	31.08	46.00	-14.92	-8.36	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	815.7M	39.54	46.00	-6.46	-5.06	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	30M	33.29	40.00	-6.71	-12.77	3	Vertical	0	1.00	-
2440MHz	Pass	PK	125.06M	35.51	43.50	-7.99	-18.11	3	Vertical	0	1.00	-
2440MHz	Pass	PK	192.96M	35.39	43.50	-8.11	-20.12	3	Vertical	0	1.00	-
2440MHz	Pass	PK	604.24M	31.86	46.00	-14.14	-8.24	3	Vertical	0	1.00	-
2440MHz	Pass	PK	695.42M	32.60	46.00	-13.40	-7.26	3	Vertical	0	1.00	-
2440MHz	Pass	PK	815.7M	33.03	46.00	-12.97	-5.06	3	Vertical	0	1.00	-

BT-LE(1Mbps)
2440MHz_adapter

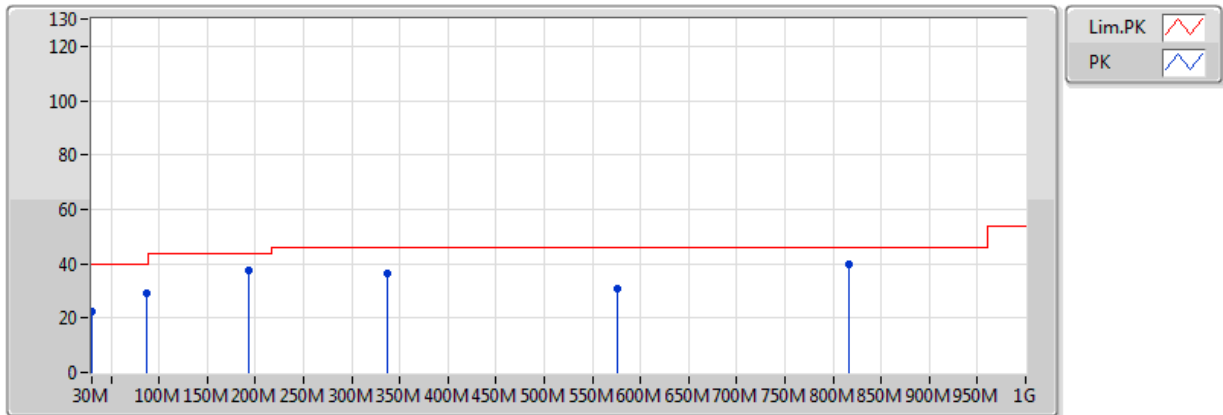
04/01/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	33.29	40.00	-6.71	-12.77	3	Vertical	0	1.00	-	46.06	23.63	0.94	37.34
PK	125.06M	35.51	43.50	-7.99	-18.11	3	Vertical	0	1.00	-	53.62	16.76	1.83	36.69
PK	192.96M	35.39	43.50	-8.11	-20.12	3	Vertical	0	1.00	-	55.51	14.02	2.26	36.41
PK	604.24M	31.86	46.00	-14.14	-8.24	3	Vertical	0	1.00	-	40.10	24.81	4.15	37.20
PK	695.42M	32.60	46.00	-13.40	-7.26	3	Vertical	0	1.00	-	39.86	25.73	4.35	37.34
PK	815.7M	33.03	46.00	-12.97	-5.06	3	Vertical	0	1.00	-	38.09	27.41	5.02	37.49

BT-LE(1Mbps)
2440MHz_adapter

04/01/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	22.39	40.00	-17.61	-12.77	3	Horizontal	360	1.00	-	35.16	23.63	0.94	37.34
PK	86.26M	28.97	40.00	-11.03	-22.16	3	Horizontal	360	1.00	-	51.13	13.24	1.49	36.90
PK	192.96M	37.45	43.50	-6.05	-20.12	3	Horizontal	360	1.00	-	57.57	14.02	2.26	36.41
PK	336.52M	36.39	46.00	-9.61	-14.22	3	Horizontal	360	1.00	-	50.61	19.21	3.07	36.50
PK	575.14M	31.08	46.00	-14.92	-8.36	3	Horizontal	360	1.00	-	39.44	24.68	4.09	37.13
PK	815.7M	39.54	46.00	-6.46	-5.06	3	Horizontal	360	1.00	-	44.60	27.41	5.02	37.49



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	2.4992G	48.76	54.00	-5.24	33.16	3	Vertical	29	1.16	-



Result

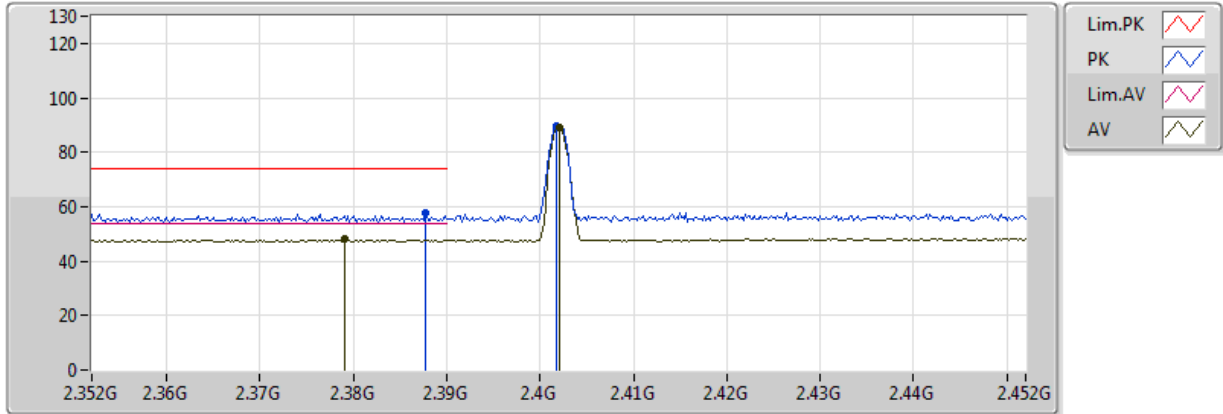
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3834G	48.04	54.00	-5.96	32.70	3	Horizontal	189	3.69	-
2402MHz	Pass	AV	2.402G	93.11	Inf	-Inf	32.77	3	Horizontal	189	3.69	-
2402MHz	Pass	PK	2.3762G	57.22	74.00	-16.78	32.67	3	Horizontal	189	3.69	-
2402MHz	Pass	PK	2.4018G	93.68	Inf	-Inf	32.77	3	Horizontal	189	3.69	-
2402MHz	Pass	AV	2.379G	47.93	54.00	-6.07	32.68	3	Vertical	335	1.50	-
2402MHz	Pass	AV	2.402G	89.03	Inf	-Inf	32.77	3	Vertical	335	1.50	-
2402MHz	Pass	PK	2.3878G	57.49	74.00	-16.51	32.71	3	Vertical	335	1.50	-
2402MHz	Pass	PK	2.4018G	89.73	Inf	-Inf	32.77	3	Vertical	335	1.50	-
2402MHz	Pass	AV	4.804G	39.23	54.00	-14.77	9.42	3	Horizontal	195	3.69	-
2402MHz	Pass	PK	4.804G	48.12	74.00	-25.88	9.42	3	Horizontal	195	3.69	-
2402MHz	Pass	AV	4.804G	39.69	54.00	-14.31	9.42	3	Vertical	200	3.64	-
2402MHz	Pass	PK	4.804G	49.26	74.00	-24.74	9.42	3	Vertical	200	3.64	-
2440MHz	Pass	AV	2.3668G	47.86	54.00	-6.14	32.63	3	Horizontal	192	3.56	-
2440MHz	Pass	AV	2.44G	92.94	Inf	-Inf	32.92	3	Horizontal	192	3.56	-
2440MHz	Pass	AV	2.498G	48.55	54.00	-5.45	33.15	3	Horizontal	192	3.56	-
2440MHz	Pass	PK	2.3584G	57.90	74.00	-16.10	32.60	3	Horizontal	192	3.56	-
2440MHz	Pass	PK	2.4404G	93.50	Inf	-Inf	32.92	3	Horizontal	192	3.56	-
2440MHz	Pass	PK	2.4892G	57.47	74.00	-16.53	33.12	3	Horizontal	192	3.56	-
2440MHz	Pass	AV	2.344G	47.96	54.00	-6.04	32.54	3	Vertical	29	1.16	-
2440MHz	Pass	AV	2.44G	90.44	Inf	-Inf	32.92	3	Vertical	29	1.16	-
2440MHz	Pass	AV	2.4992G	48.76	54.00	-5.24	33.16	3	Vertical	29	1.16	-
2440MHz	Pass	PK	2.3576G	57.10	74.00	-16.90	32.59	3	Vertical	29	1.16	-
2440MHz	Pass	PK	2.4404G	91.02	Inf	-Inf	32.92	3	Vertical	29	1.16	-
2440MHz	Pass	PK	2.5G	57.69	74.00	-16.31	33.16	3	Vertical	29	1.16	-
2440MHz	Pass	AV	4.88G	38.56	54.00	-15.44	9.65	3	Horizontal	205	3.34	-
2440MHz	Pass	PK	4.88G	46.84	74.00	-27.16	9.65	3	Horizontal	205	3.34	-
2440MHz	Pass	AV	4.88G	39.12	54.00	-14.88	9.65	3	Vertical	200	3.69	-
2440MHz	Pass	PK	4.88G	48.02	74.00	-25.98	9.65	3	Vertical	200	3.69	-
2480MHz	Pass	AV	2.48G	89.27	Inf	-Inf	33.08	3	Horizontal	183	1.03	-
2480MHz	Pass	AV	2.4868G	48.76	54.00	-5.24	33.11	3	Horizontal	183	1.03	-
2480MHz	Pass	PK	2.4798G	89.89	Inf	-Inf	33.08	3	Horizontal	183	1.03	-
2480MHz	Pass	PK	2.4866G	57.67	74.00	-16.33	33.11	3	Horizontal	183	1.03	-
2480MHz	Pass	AV	2.48G	90.61	Inf	-Inf	33.08	3	Vertical	239	3.65	-
2480MHz	Pass	AV	2.4844G	48.63	54.00	-5.37	33.10	3	Vertical	239	3.65	-
2480MHz	Pass	PK	2.4802G	91.20	Inf	-Inf	33.08	3	Vertical	239	3.65	-
2480MHz	Pass	PK	2.4976G	57.33	74.00	-16.67	33.15	3	Vertical	239	3.65	-
2480MHz	Pass	AV	4.96G	37.99	54.00	-16.01	9.88	3	Horizontal	244	1.03	-
2480MHz	Pass	PK	4.96G	47.92	74.00	-26.08	9.88	3	Horizontal	244	1.03	-
2480MHz	Pass	AV	4.96G	40.26	54.00	-13.74	9.88	3	Vertical	212	3.27	-
2480MHz	Pass	PK	4.96G	48.64	74.00	-25.36	9.88	3	Vertical	212	3.27	-



BT-LE(1Mbps)

2402MHz_TX

04/01/2018

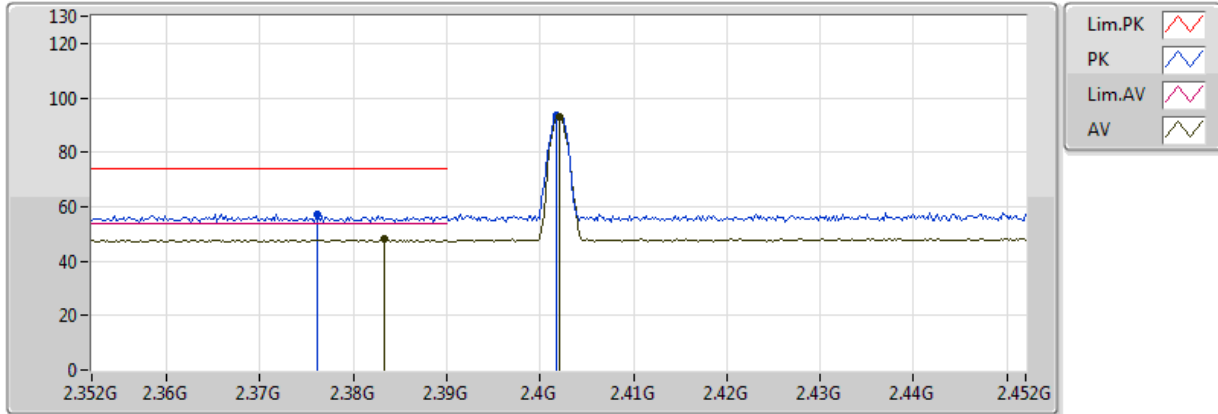


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.379G	47.93	54.00	-6.07	32.68	3	Vertical	335	1.50	-	15.26	26.96	5.72	-
AV	2.402G	89.03	Inf	-Inf	32.77	3	Vertical	335	1.50	-	56.26	27.03	5.74	-
PK	2.3878G	57.49	74.00	-16.51	32.71	3	Vertical	335	1.50	-	24.78	26.99	5.73	-
PK	2.4018G	89.73	Inf	-Inf	32.77	3	Vertical	335	1.50	-	56.96	27.03	5.74	-

BT-LE(1Mbps)

2402MHz_TX

04/01/2018

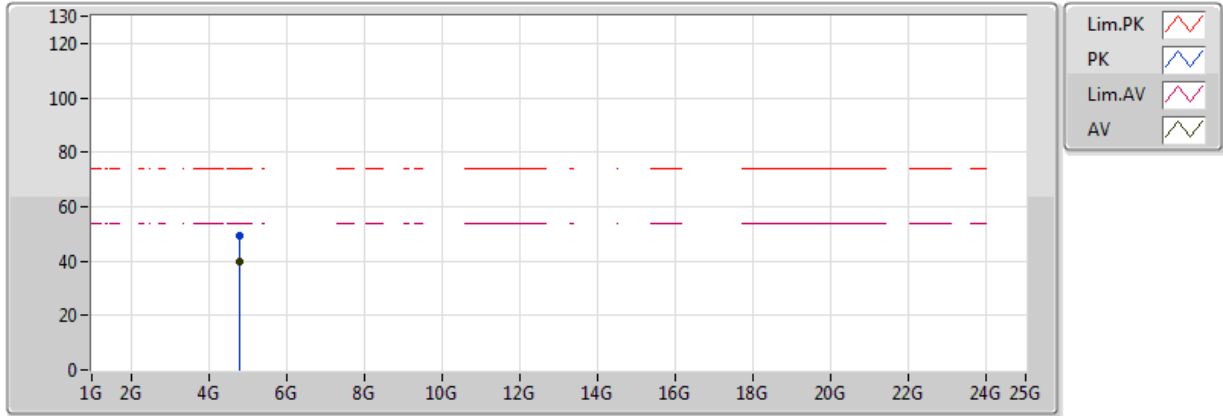


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3834G	48.04	54.00	-5.96	32.70	3	Horizontal	189	3.69	-	15.35	26.97	5.72	-
AV	2.402G	93.11	Inf	-Inf	32.77	3	Horizontal	189	3.69	-	60.34	27.03	5.74	-
PK	2.3762G	57.22	74.00	-16.78	32.67	3	Horizontal	189	3.69	-	24.55	26.95	5.71	-
PK	2.4018G	93.68	Inf	-Inf	32.77	3	Horizontal	189	3.69	-	60.91	27.03	5.74	-

BT-LE(1Mbps)

2402MHz_TX

04/01/2018

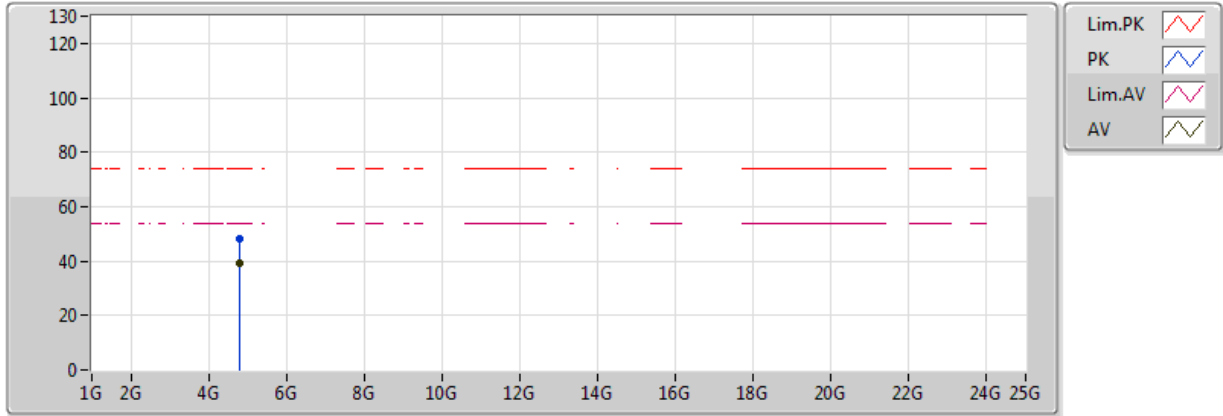


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.804G	39.69	54.00	-14.31	9.42	3	Vertical	200	3.64	-	30.27	31.19	8.08	29.85
PK	4.804G	49.26	74.00	-24.74	9.42	3	Vertical	200	3.64	-	39.84	31.19	8.08	29.85

BT-LE(1Mbps)

2402MHz_TX

04/01/2018



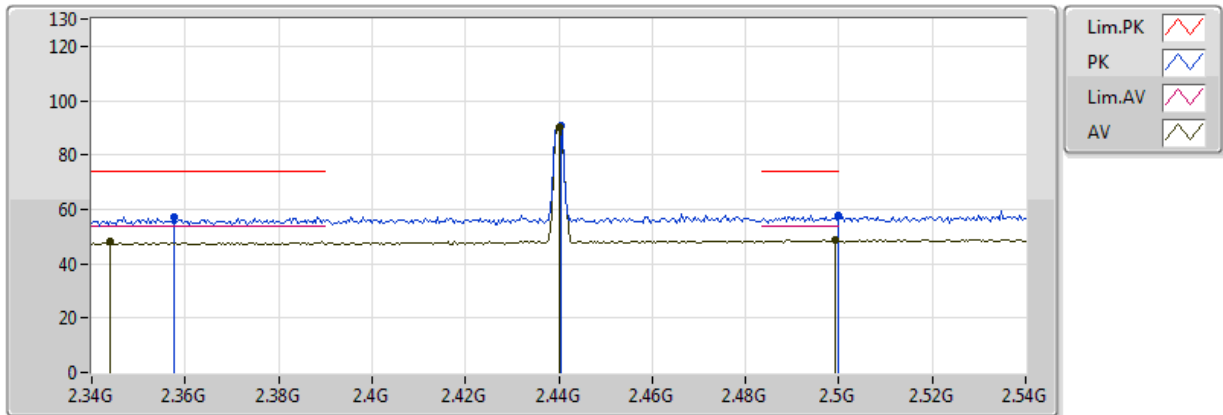
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.804G	39.23	54.00	-14.77	9.42	3	Horizontal	195	3.69	-	29.82	31.19	8.08	29.85
PK	4.804G	48.12	74.00	-25.88	9.42	3	Horizontal	195	3.69	-	38.70	31.19	8.08	29.85



BT-LE(1Mbps)

2440MHz_TX

04/01/2018



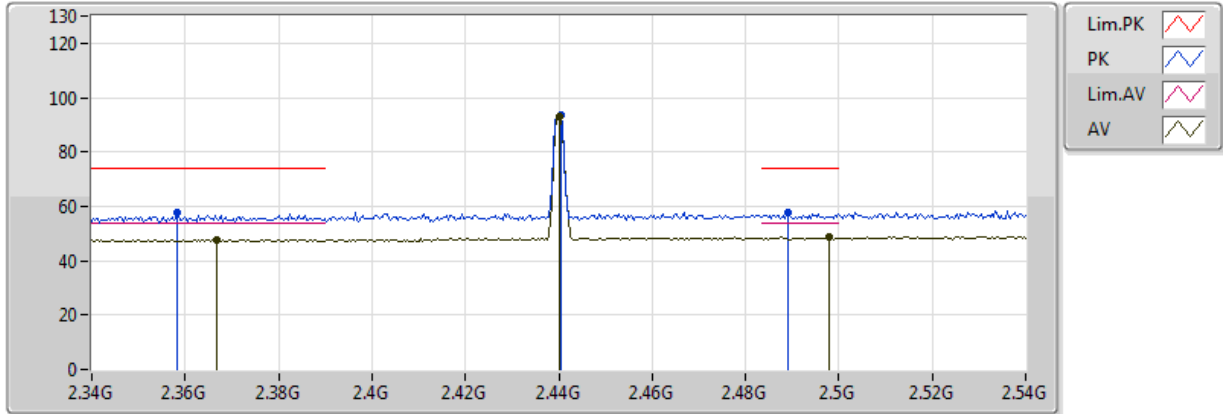
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AV	2.344G	47.96	54.00	-6.04	32.54	3	Vertical	29	1.16	-	15.42	26.86	5.68	-
AV	2.44G	90.44	Inf	-Inf	32.92	3	Vertical	29	1.16	-	57.52	27.13	5.79	-
AV	2.4992G	48.76	54.00	-5.24	33.16	3	Vertical	29	1.16	-	15.61	27.30	5.86	-
PK	2.3576G	57.10	74.00	-16.90	32.59	3	Vertical	29	1.16	-	24.50	26.90	5.69	-
PK	2.4404G	91.02	Inf	-Inf	32.92	3	Vertical	29	1.16	-	58.10	27.13	5.79	-
PK	2.5G	57.69	74.00	-16.31	33.16	3	Vertical	29	1.16	-	24.53	27.30	5.86	-



BT-LE(1Mbps)

2440MHz_TX

04/01/2018

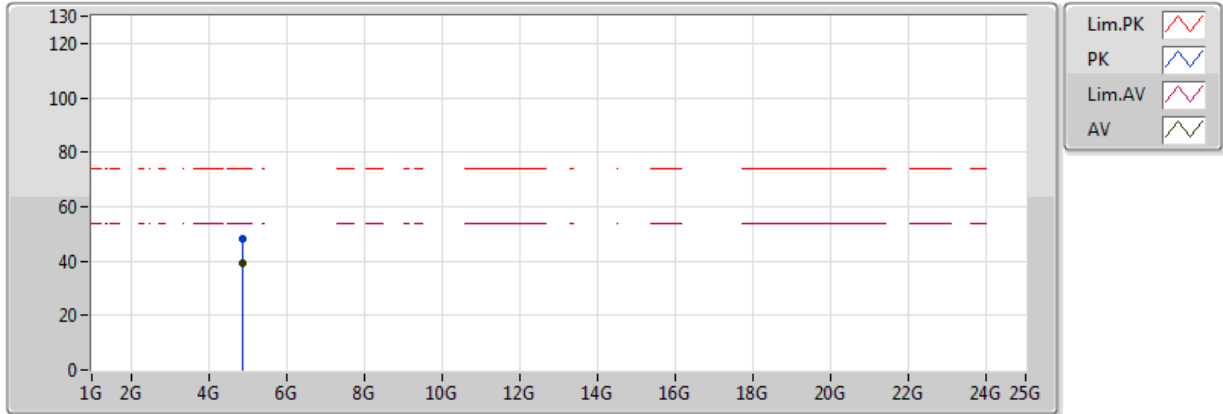


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3668G	47.86	54.00	-6.14	32.63	3	Horizontal	192	3.56	-	15.23	26.93	5.70	-
AV	2.44G	92.94	Inf	-Inf	32.92	3	Horizontal	192	3.56	-	60.02	27.13	5.79	-
AV	2.498G	48.55	54.00	-5.45	33.15	3	Horizontal	192	3.56	-	15.40	27.29	5.86	-
PK	2.3584G	57.90	74.00	-16.10	32.60	3	Horizontal	192	3.56	-	25.30	26.90	5.69	-
PK	2.4404G	93.50	Inf	-Inf	32.92	3	Horizontal	192	3.56	-	60.58	27.13	5.79	-
PK	2.4892G	57.47	74.00	-16.53	33.12	3	Horizontal	192	3.56	-	24.35	27.27	5.85	-

BT-LE(1Mbps)

2440MHz_TX

04/01/2018



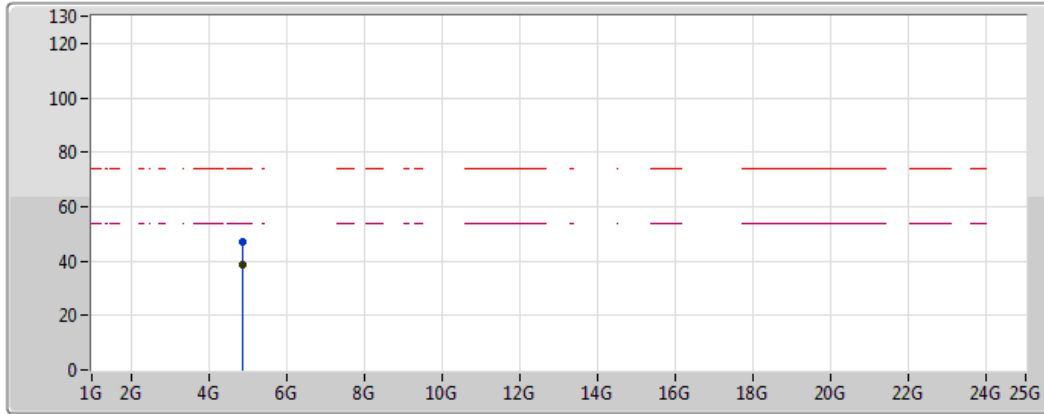
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88G	39.12	54.00	-14.88	9.65	3	Vertical	200	3.69	-	29.47	31.31	8.18	29.84
PK	4.88G	48.02	74.00	-25.98	9.65	3	Vertical	200	3.69	-	38.37	31.31	8.18	29.84



BT-LE(1Mbps)

2440MHz_TX

04/01/2018

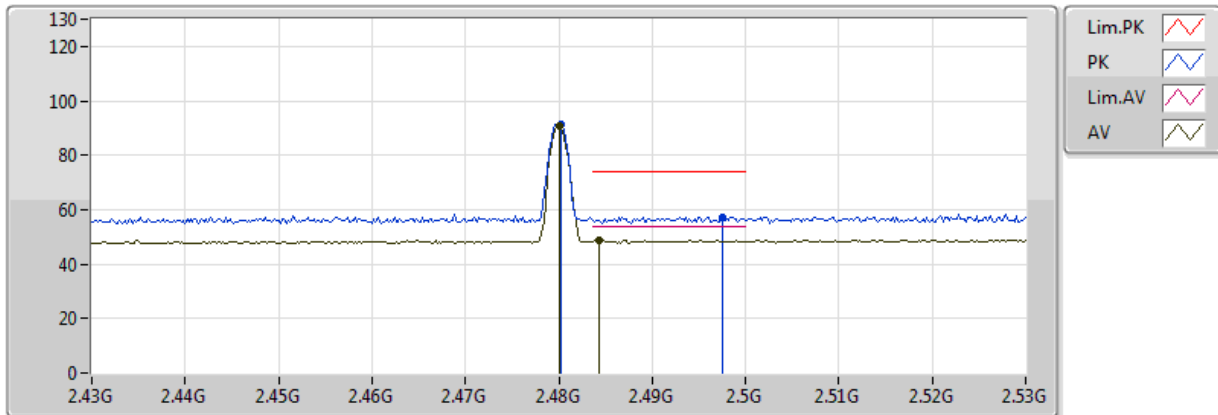


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88G	38.56	54.00	-15.44	9.65	3	Horizontal	205	3.34	-	28.91	31.31	8.18	29.84
PK	4.88G	46.84	74.00	-27.16	9.65	3	Horizontal	205	3.34	-	37.20	31.31	8.18	29.84

BT-LE(1Mbps)

2480MHz_TX

04/01/2018



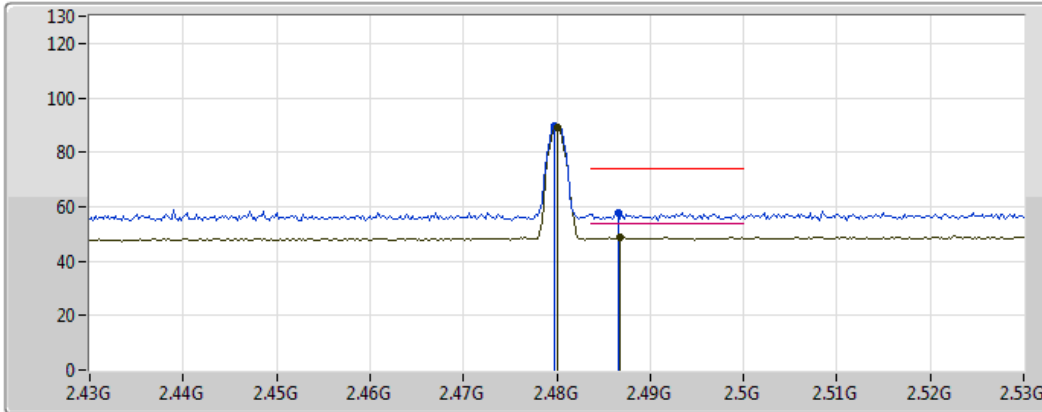
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	90.61	Inf	-Inf	33.08	3	Vertical	239	3.65	-	57.53	27.24	5.84	-
AV	2.4844G	48.63	54.00	-5.37	33.10	3	Vertical	239	3.65	-	15.53	27.26	5.84	-
PK	2.4802G	91.20	Inf	-Inf	33.08	3	Vertical	239	3.65	-	58.12	27.24	5.84	-
PK	2.4976G	57.33	74.00	-16.67	33.15	3	Vertical	239	3.65	-	24.18	27.29	5.86	-



BT-LE(1Mbps)

2480MHz_TX

04/01/2018



Legend for plot:

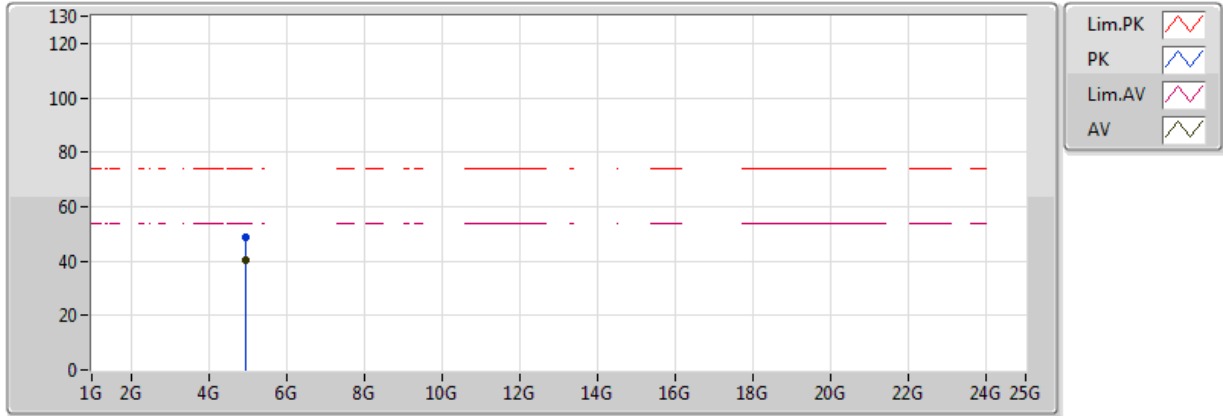
- Lim.PK: Red line with a peak icon
- PK: Blue line with a peak icon
- Lim.AV: Green line with a peak icon
- AV: Green line with a peak icon

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	89.27	Inf	-Inf	33.08	3	Horizontal	183	1.03	-	56.19	27.24	5.84	-
AV	2.4868G	48.76	54.00	-5.24	33.11	3	Horizontal	183	1.03	-	15.65	27.26	5.84	-
PK	2.4798G	89.89	Inf	-Inf	33.08	3	Horizontal	183	1.03	-	56.81	27.24	5.84	-
PK	2.4866G	57.67	74.00	-16.33	33.11	3	Horizontal	183	1.03	-	24.56	27.26	5.84	-

BT-LE(1Mbps)

2480MHz_TX

04/01/2018

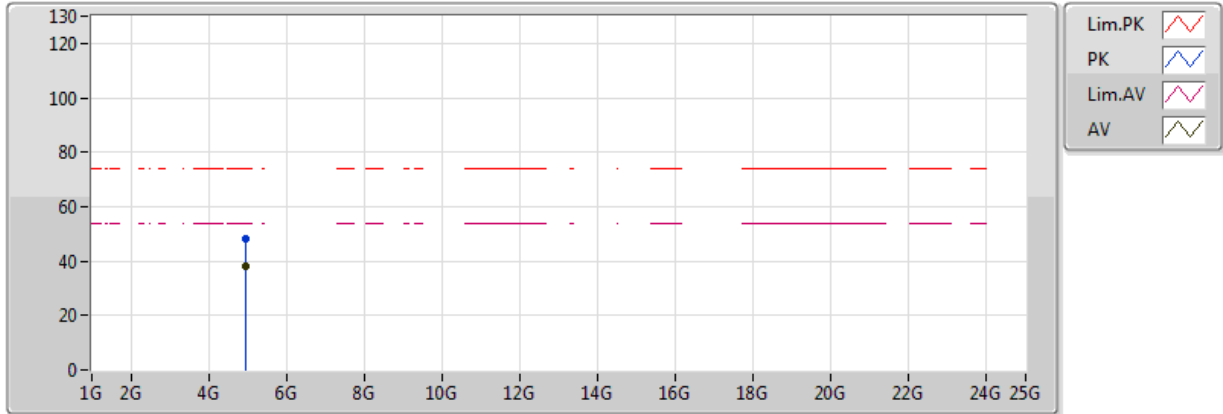


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96G	40.26	54.00	-13.74	9.88	3	Vertical	212	3.27	-	30.38	31.44	8.27	29.82
PK	4.96G	48.64	74.00	-25.36	9.88	3	Vertical	212	3.27	-	38.75	31.44	8.27	29.82

BT-LE(1Mbps)

2480MHz_TX

04/01/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96G	37.99	54.00	-16.01	9.88	3	Horizontal	244	1.03	-	28.11	31.44	8.27	29.82
PK	4.96G	47.92	74.00	-26.08	9.88	3	Horizontal	244	1.03	-	38.03	31.44	8.27	29.82