



# FCC Test Report

FCC ID : 2AF82-TD0350  
Equipment : Panel PC  
Brand Name : Qbic  
Model Name : TD-035XXX, (where X can be 0-9, A-Z or blank)  
Applicant : Qbic technology Co., Ltd  
26F. -12, No.99, Sec.1, Xintai 5th Rd., Xizhi Dist.,  
New Taipei City 221, Taiwan(R.O.C)  
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 22, 2018, and testing was started from Jul. 10, 2018 and completed on Jul. 12, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Allen Lin

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

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

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## Summary of Test Result

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

**Reviewed by: Sam Chen**

**Report Producer: Ann Hou**

# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX

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	Gain (dBi)
1	1	-	-	FPC	fixed on board	2

### 1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter
EUT Function	<input checked="" type="checkbox"/> Point-to-multipoint <input type="checkbox"/> Point-to-point
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) $\geq 1/T$
BT-LE(1Mbps)	0.626	2.034	391.25u	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
AC Conduction	CO04-HY	Jeremy Lin	22.8°C / 60%	12/Jul/2018
RF Conducted	TH01-HY	Andy Lee	23.5°C / 65%	10/Jul/2018
Radiated	03CH09-HY	Andy Hsu	22.8°C / 59%	10/Jul/2018

## 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.6 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%
Temperature	0.7 °C	Confidence levels of 95%
Humidity	4 %	Confidence levels of 95%

## 2 Test Configuration of EUT

### 2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

### 2.2 Test Channel Mode




Test Software Version	Ampak RFTTestTool VER:5.4
-----------------------	---------------------------

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	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral
<b>Operating Mode</b>	CTX
1	Adapter mode

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

The Worst Case Mode for Following Conformance Tests			
<b>Tests Item</b>	Emissions in Restricted Frequency Bands		
<b>Test Condition</b>	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.		
<b>Operating Mode &lt; 1GHz</b>	CTX		
1	Adapter mode		
<b>Operating Mode &gt; 1GHz</b>	CTX		
<b>Orthogonal Planes of EUT</b>	<b>X Plane</b>	<b>Y Plane</b>	<b>Z Plane</b>
			
<b>Worst Planes of EUT</b>			V



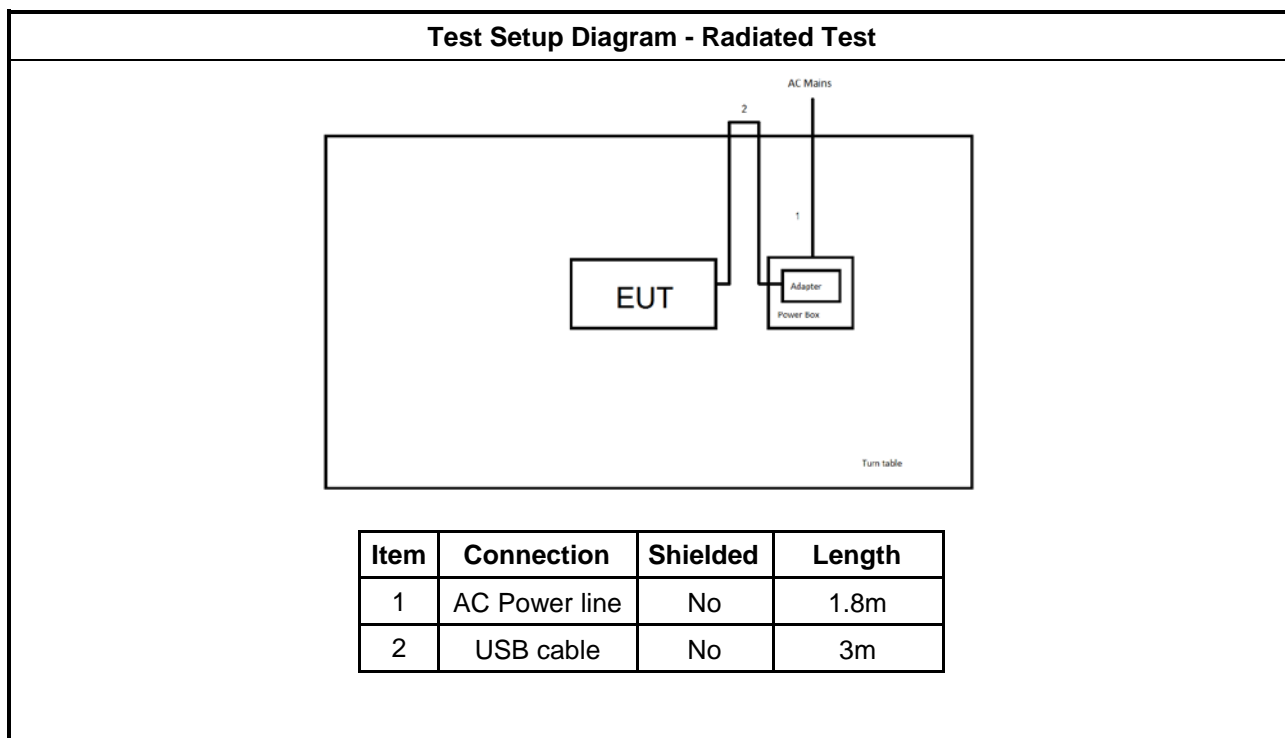
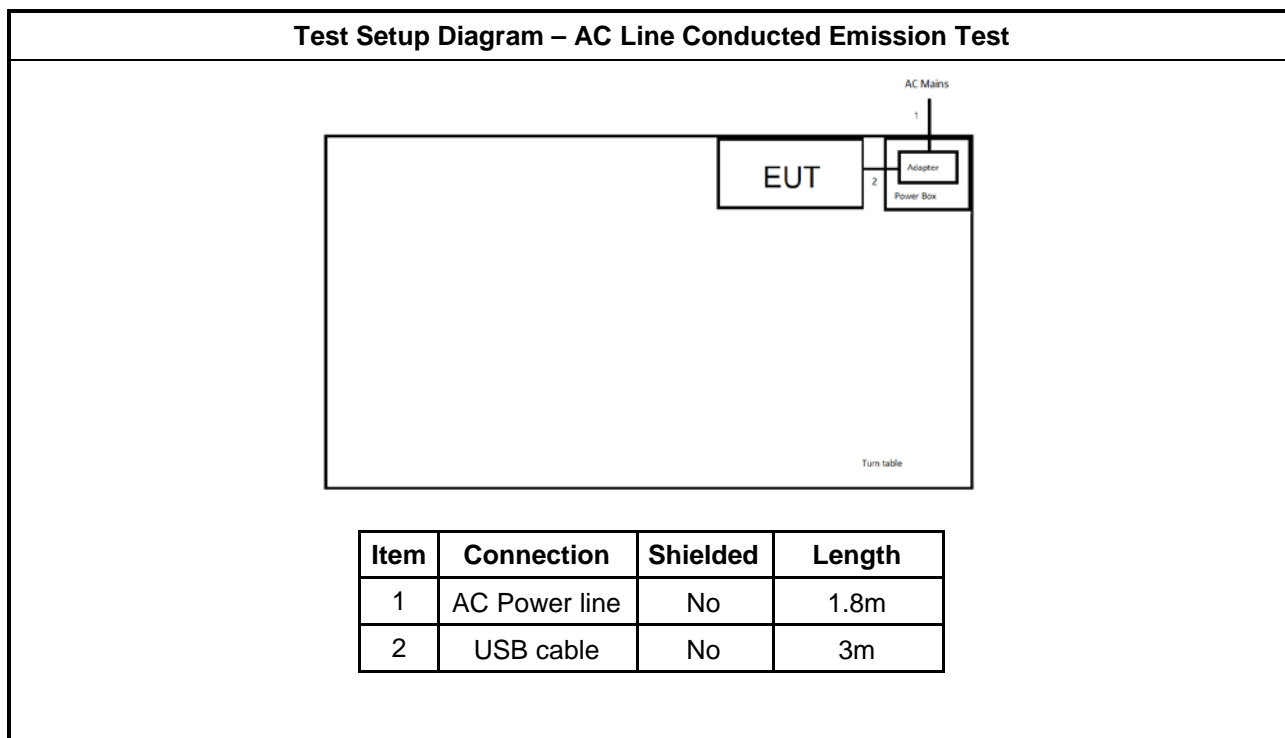
## 2.4 Accessories and Support Equipment

Accessories				
AC Adapter 1	<b>Brand Name</b>	SOY	<b>Model Name</b>	SOY-0500200-090
	<b>Power Rating</b>	I/P: 100 - 240Vac, 0.5A, O/P: 5Vdc, 2 A		
AC Adapter 1	<b>Brand Name</b>	PHIHONE	<b>Model Name</b>	PSAF10R-050Q
	<b>Power Rating</b>	I/P: 100 - 240Vac, 0.3A, O/P: 5Vdc, 2.0 A		
USB Cable	<b>Brand Name</b>	NA	<b>Model Name</b>	389G175GZAAFAMOOHF
	<b>Signal Line</b>	3 meter, non-shielded cable, without ferrite core		

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

Support Equipment - RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC
3	AC Power Source	G.W	APS-9102	-

## 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.

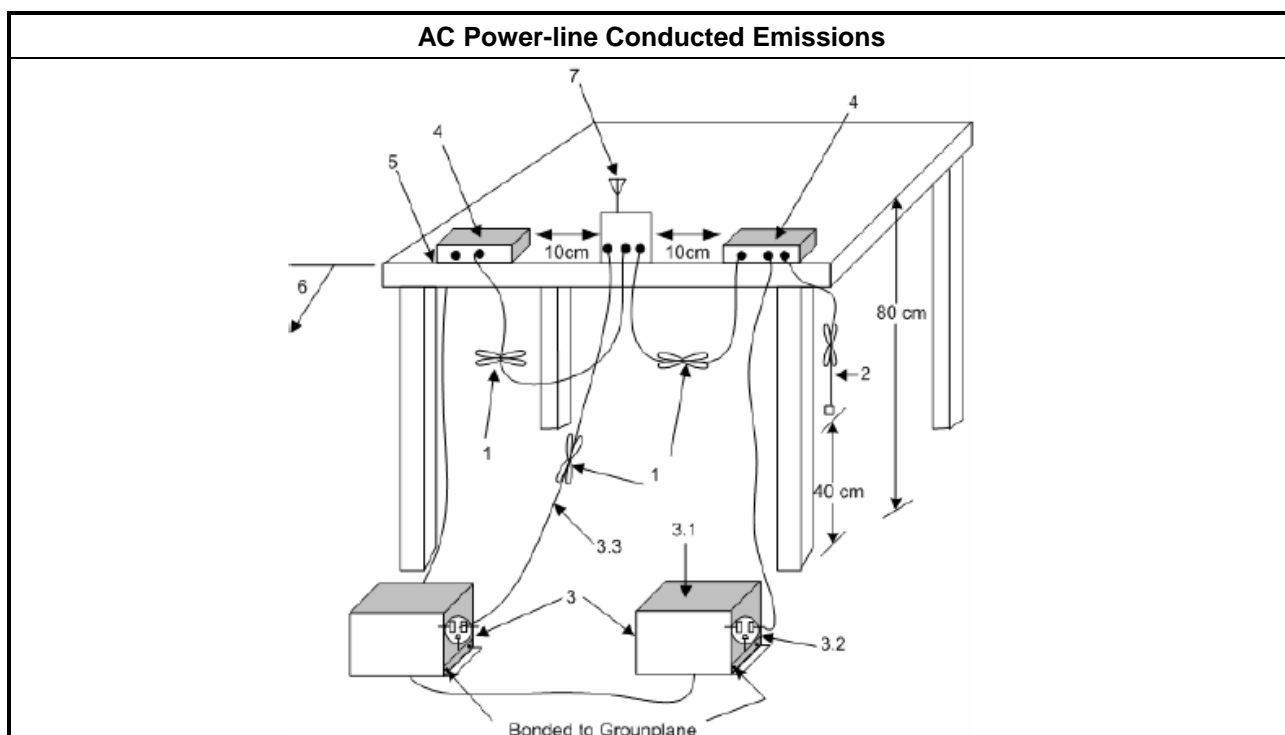
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.</li> </ul>

##### 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	
<b>Systems using digital modulation techniques:</b>	
▪	6 dB bandwidth $\geq$ 500 kHz.

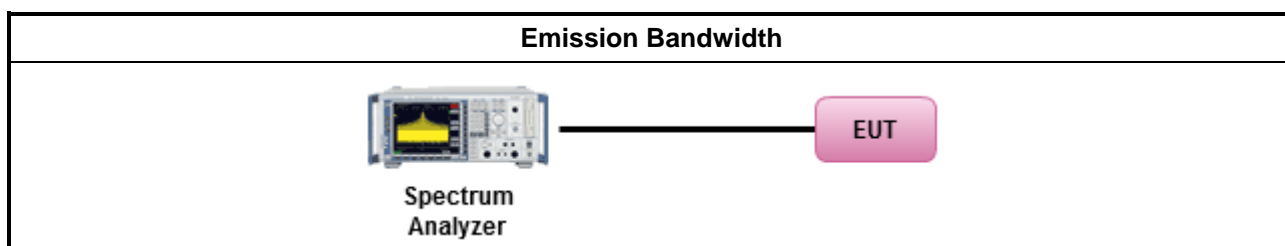
### 3.2.2 Measuring Instruments

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

### 3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
<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 RSS-Gen, clause 6.7 for for occupied bandwidth testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

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

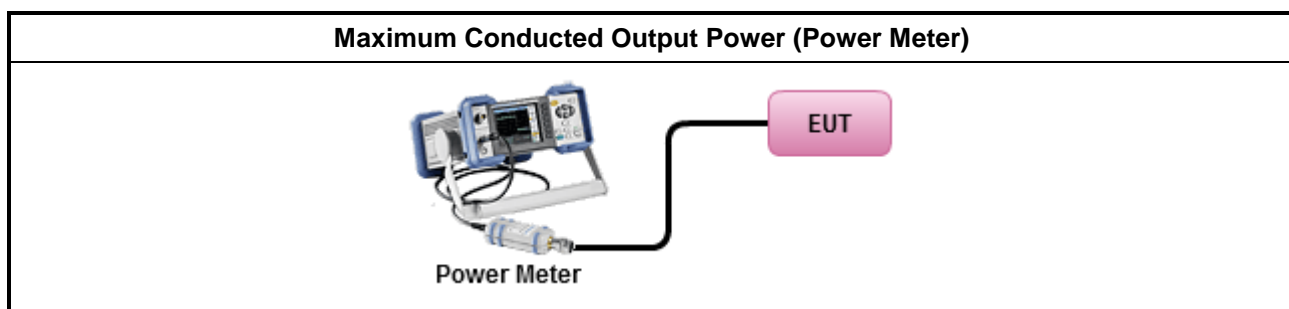
#### 3.3.2 Measuring Instruments

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

### 3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>Maximum Peak Conducted Output Power</li> </ul>	
<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"> <li>Maximum Average Conducted Output Power</li> </ul>	
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"> <li>For conducted measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	
<ul style="list-style-type: none"> <li>If multiple transmit chains, EIRP calculation could be following as methods:  <math display="block">P_{\text{total}} = P_1 + P_2 + \dots + P_n</math> (calculated in linear unit [mW] and transfer to log unit [dBm])  <math display="block">\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}</math> </li> </ul>	

### 3.3.4 Test Setup



### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

### 3.4 Power Spectral Density

#### 3.4.1 Power Spectral Density Limit

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

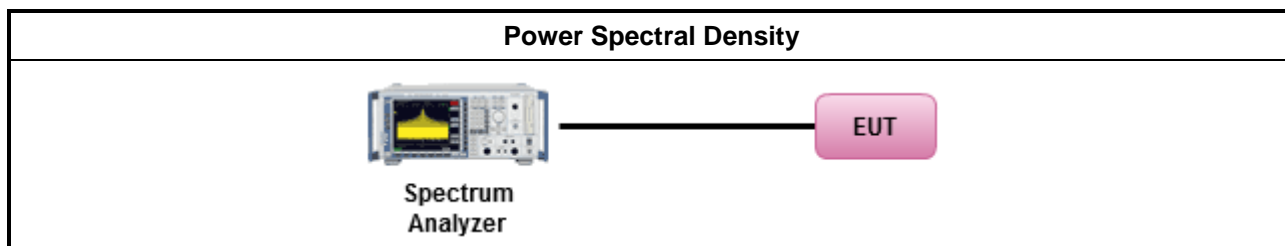
#### 3.4.2 Measuring Instruments

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

#### 3.4.3 Test Procedures

Test Method	
▪	Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).
▪	For conducted measurement.
▪	If The EUT supports multiple transmit chains using options given below:
▪	Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

#### 3.4.4 Test Setup



#### 3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

## 3.5 Emissions in Non-restricted Frequency Bands

### 3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30
<p>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.</p> <p>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.</p>	

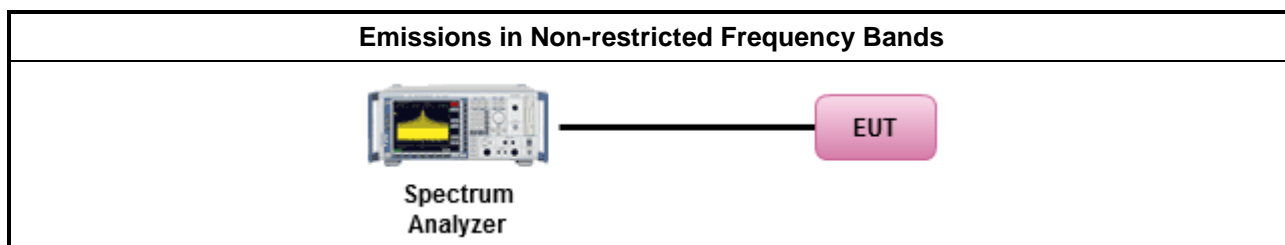
### 3.5.2 Measuring Instruments

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"> <li>Refer as KDB 558074, clause 11 for unwanted emissions into non-restricted bands.</li> </ul>

### 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.

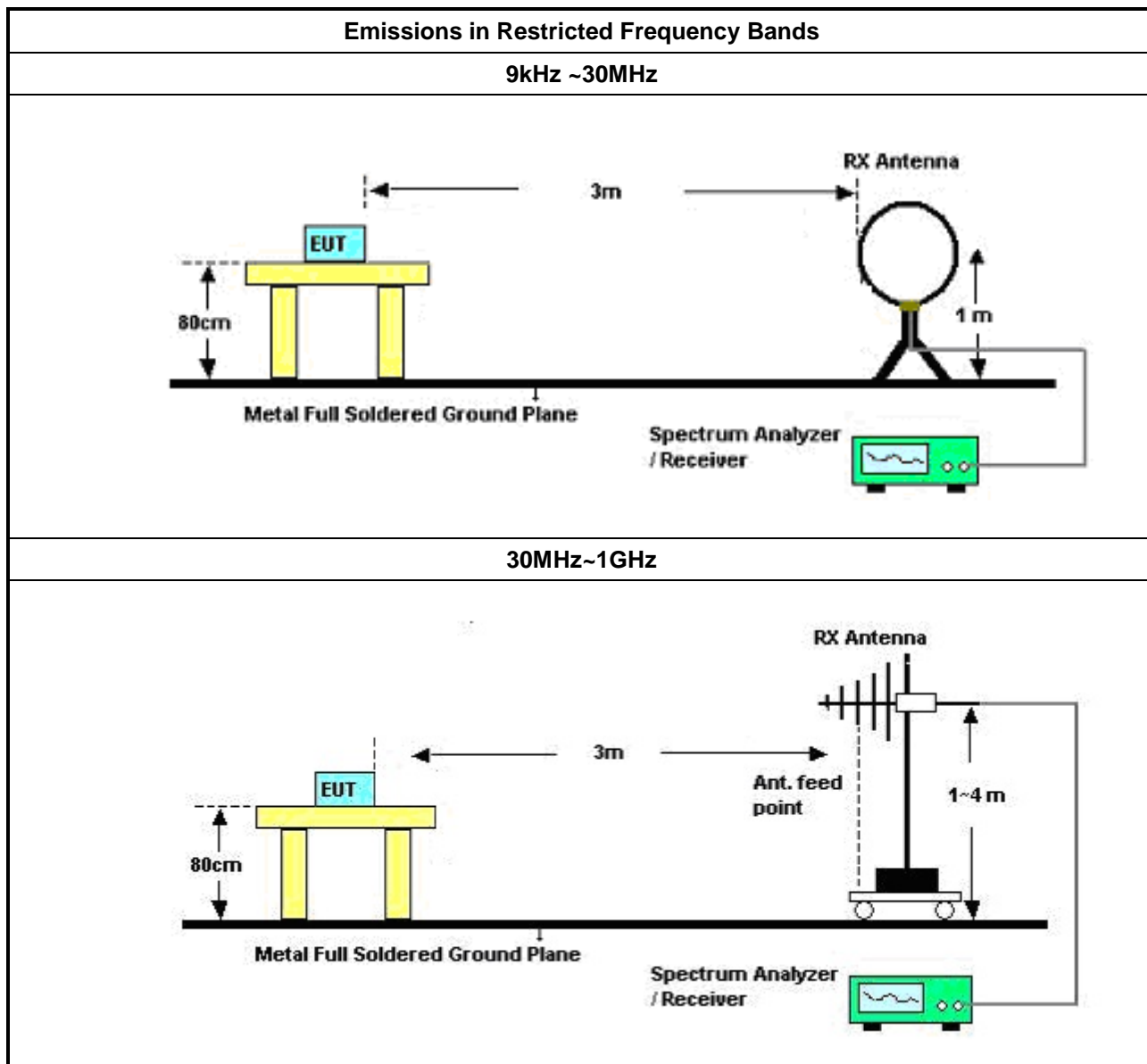
#### 3.6.2 Measuring Instruments

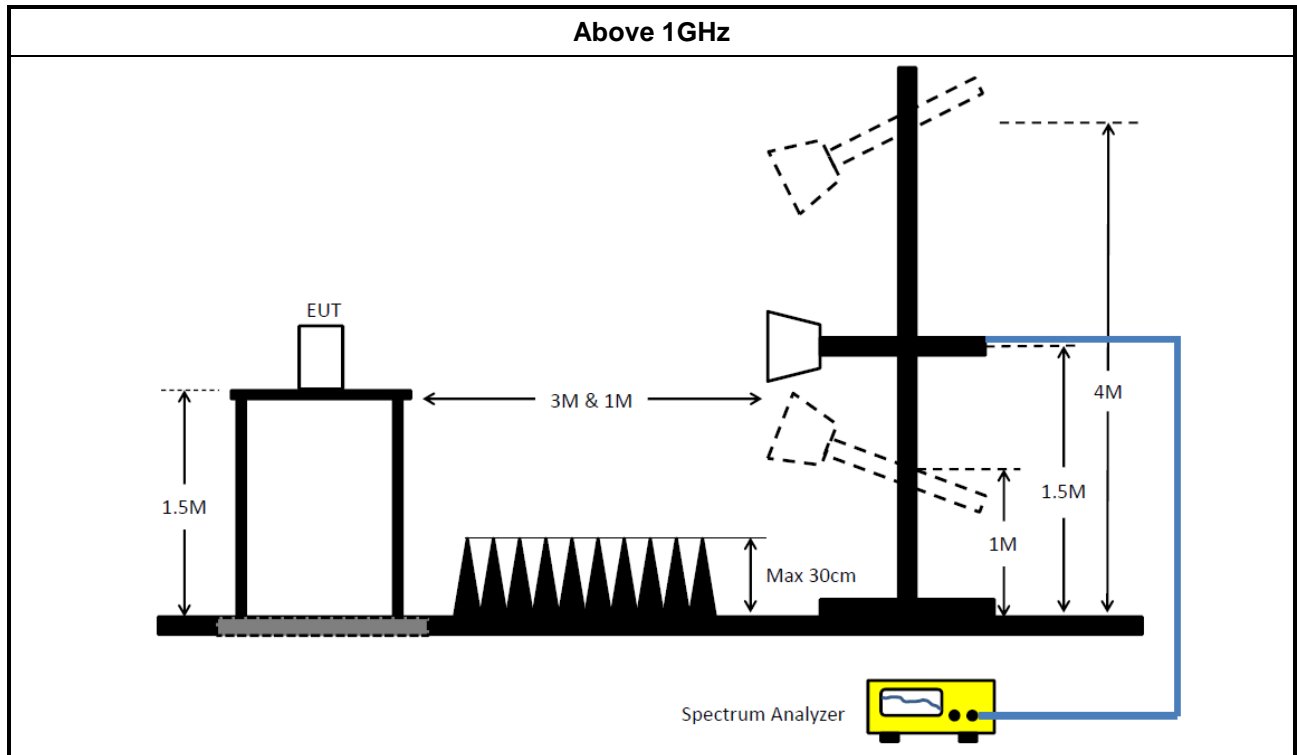
Refer a test equipment and calibration data table in this test report.

### 3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>The average emission levels shall be measured in [duty cycle <math>\geq</math> 98 or duty factor].</li> </ul>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	
<ul style="list-style-type: none"> <li>For the transmitter unwanted emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>Refer as KDB 558074, clause 12 for unwanted emissions into restricted bands.</li> </ul>
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 12.2.5.3 (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW $\geq$ 1/T.
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> <li>For the transmitter band-edge emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>Refer as KDB 558074, clause 13.2 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.</li> </ul>
	<ul style="list-style-type: none"> <li>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).</li> </ul>
<ul style="list-style-type: none"> <li>For conducted and cabinet radiation measurement, refer as KDB 558074, clause 12.2.2.</li> </ul>	
	<ul style="list-style-type: none"> <li>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</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>

### 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	102051	9KHz ~ 3.6GHz	03/May/2018	02/May/2019
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	17/Nov/2017	16/Nov/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 Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2017	11/Oct/2018

NCR : Non-Calibration Require

### Instrument for Conducted Test

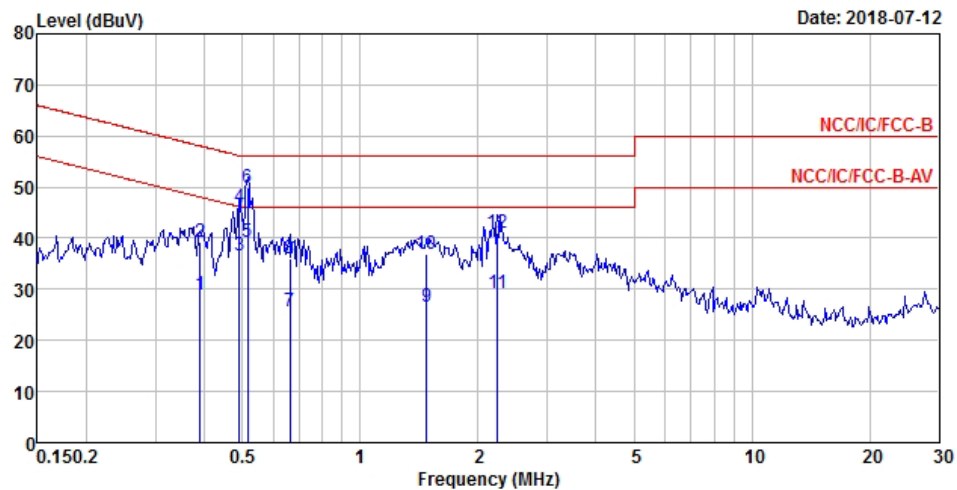
Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9kHz~40GHz	05/Feb/2018	04/Feb/2019
Loop Antenna	TESEQ	HLA 6120	31244	9 kHz~30 MHz	29/Mar/2018	28/May/2019
Temp. and Humidity Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-007	-20 ~ 100℃	22/May/2018	21/May/2019

### Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	23/Apr/2018	22/Apr/2019
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	14/Jun/2018	13/Jun/2019
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	10/May/2018	09/May/2019
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	27/Apr/2018	26/Apr/2019
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	20/Jul/2017	19/Jul/2018
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D & MTJ6102-05	35418 / 3	30MHz~1GHz	09/Sep/2017	08/Sep/2018
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170614	18GHz~40GHz	09/Feb/2018	08/Feb/2019
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	24/Aug/2017	23/Aug/2018
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

## AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Adapter mode		

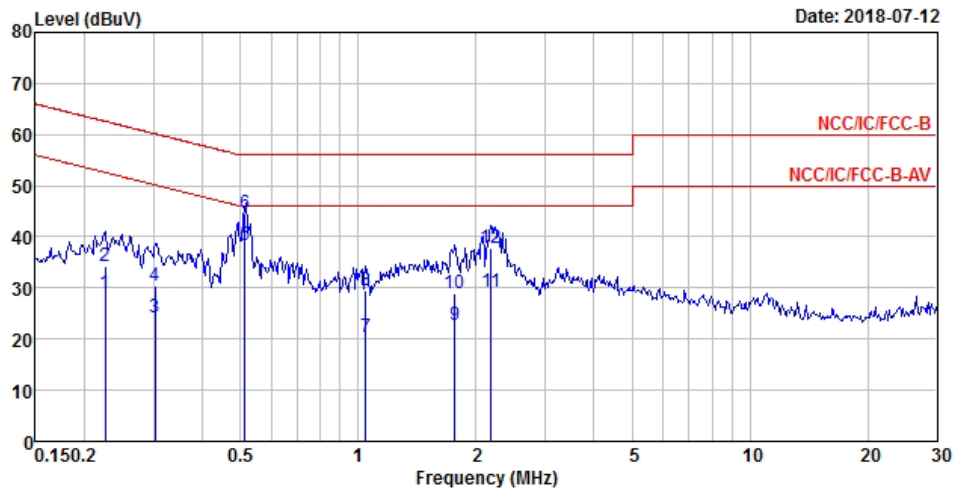


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.39	28.97	-19.09	48.06	19.26	9.61	0.10	Average
2	0.39	39.27	-18.79	58.06	29.56	9.61	0.10	QP
3	0.49	36.67	-9.47	46.14	26.98	9.61	0.08	Average
4	0.49	46.02	-10.12	56.14	36.33	9.61	0.08	QP
5	0.52	39.15	-6.85	46.00	29.47	9.61	0.07	Average
6 MAX	0.52	50.03	-5.97	56.00	40.35	9.61	0.07	QP
7	0.66	25.75	-20.25	46.00	16.08	9.62	0.05	Average
8	0.66	35.91	-20.09	56.00	26.24	9.62	0.05	QP
9	1.48	26.43	-19.57	46.00	16.80	9.63	0.00	Average
10	1.48	37.04	-18.96	56.00	27.41	9.63	0.00	QP
11	2.24	29.13	-16.87	46.00	19.49	9.63	0.01	Average
12	2.24	41.15	-14.85	56.00	31.51	9.63	0.01	QP

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.)

## AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Adapter mode		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.23	29.05	-23.56	52.61	19.41	9.62	0.02	Average
2	0.23	34.31	-28.30	62.61	24.67	9.62	0.02	QP
3	0.30	24.26	-25.89	50.15	14.59	9.61	0.06	Average
4	0.30	30.54	-29.61	60.15	20.87	9.61	0.06	QP
5 MAX	0.51	38.25	-7.75	46.00	28.57	9.61	0.07	Average
6	0.51	44.60	-11.40	56.00	34.92	9.61	0.07	QP
7	1.04	20.31	-25.69	46.00	10.70	9.61	0.00	Average
8	1.04	29.57	-26.43	56.00	19.96	9.61	0.00	QP
9	1.76	22.80	-23.20	46.00	13.18	9.62	0.00	Average
10	1.76	28.87	-27.13	56.00	19.25	9.62	0.00	QP
11	2.19	29.15	-16.85	46.00	19.52	9.62	0.01	Average
12	2.19	37.87	-18.13	56.00	28.24	9.62	0.01	QP

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.)

**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)	716.25k	1.056M	1M06F1D	708.75k	1.053M

**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**

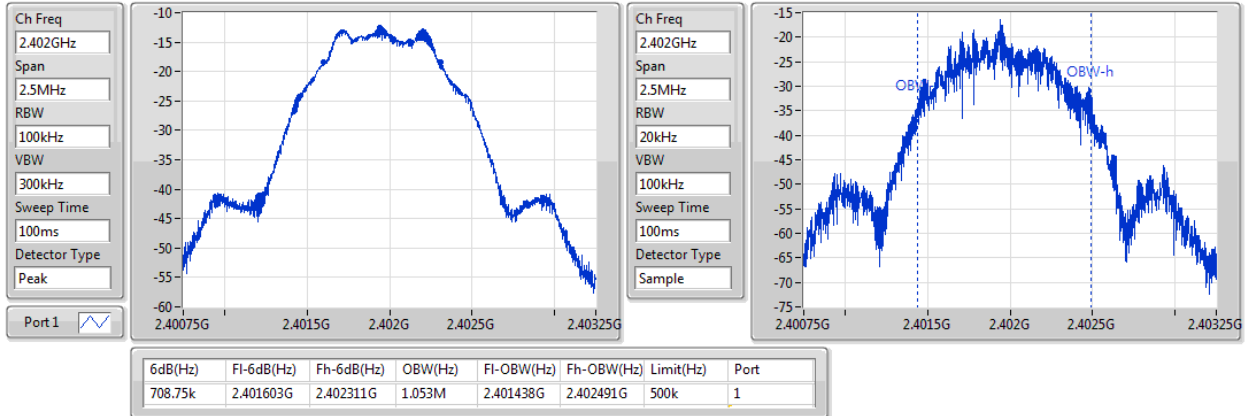
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	500k	708.75k	1.053M
2440MHz_TnomVnom	Pass	500k	708.75k	1.056M
2480MHz_TnomVnom	Pass	500k	716.25k	1.054M

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

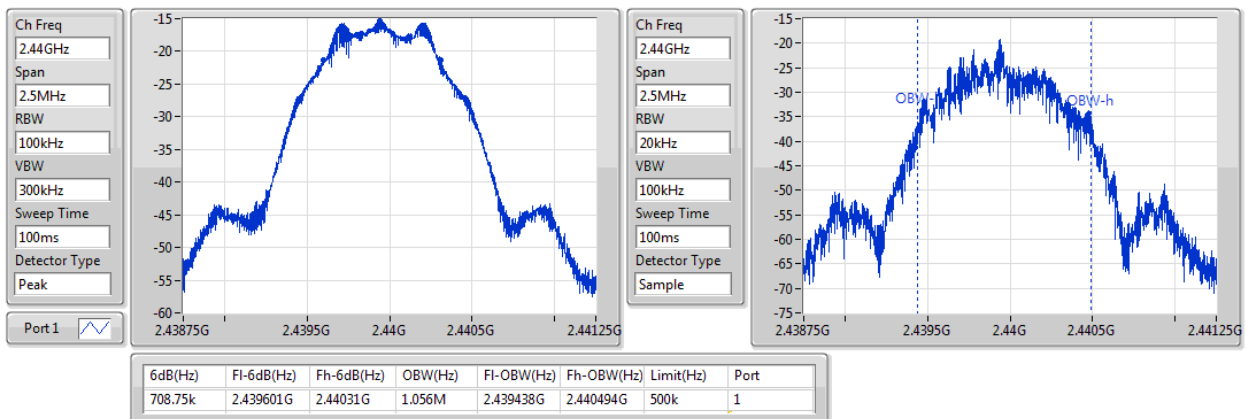


**BT-LE(1Mbps)**
**EBW**
**2402MHz**

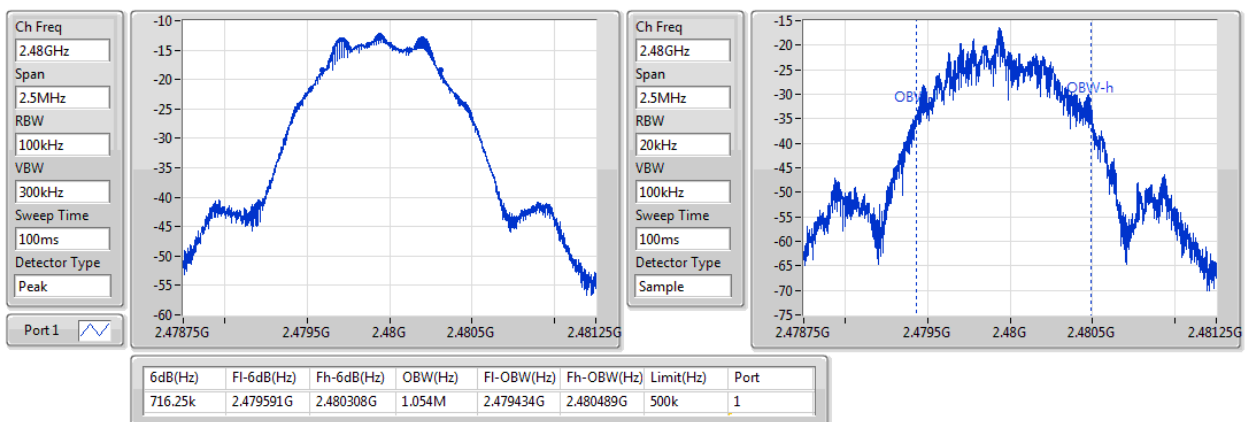
10/07/2018


**BT-LE(1Mbps)**
**EBW**
**2440MHz**

10/07/2018


**BT-LE(1Mbps)**
**EBW**
**2480MHz**

10/07/2018



**Summary**

Mode	Power	Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	11.46	0.01400

**Result**

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	2.00	11.46	30.00
2440MHz_TnomVnom	Pass	2.00	11.45	30.00
2480MHz_TnomVnom	Pass	2.00	11.46	30.00

**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-27.11

RBW=3kHz.

**Result**

Mode	Result	Gain (dB)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	2.00	-27.11	8.00
2440MHz_TnomVnom	Pass	2.00	-28.98	8.00
2480MHz_TnomVnom	Pass	2.00	-27.99	8.00

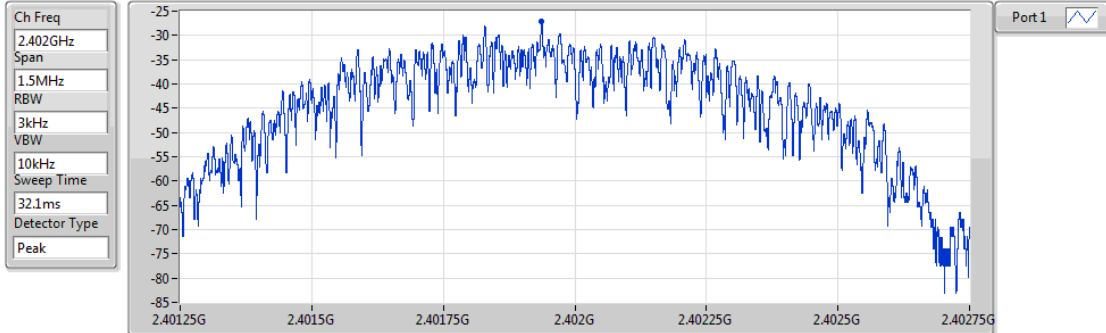
RBW=3kHz.

### BT-LE(1Mbps)

### PSD

2402MHz

10/07/2018



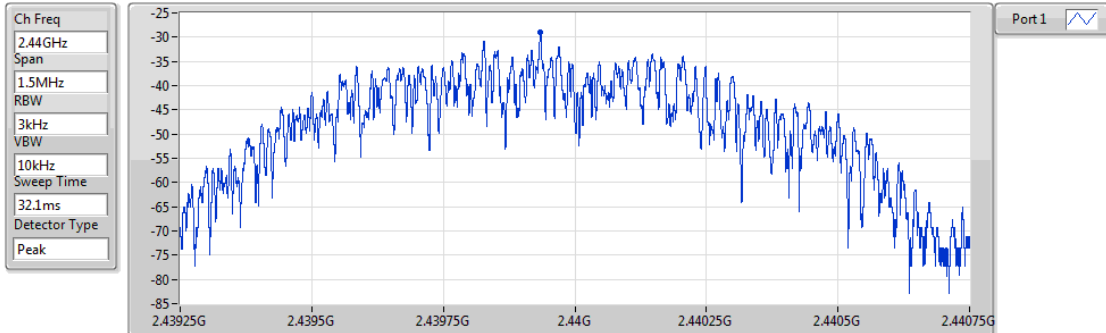
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-27.11	-27.11	-27.11

### BT-LE(1Mbps)

### PSD

2440MHz

10/07/2018



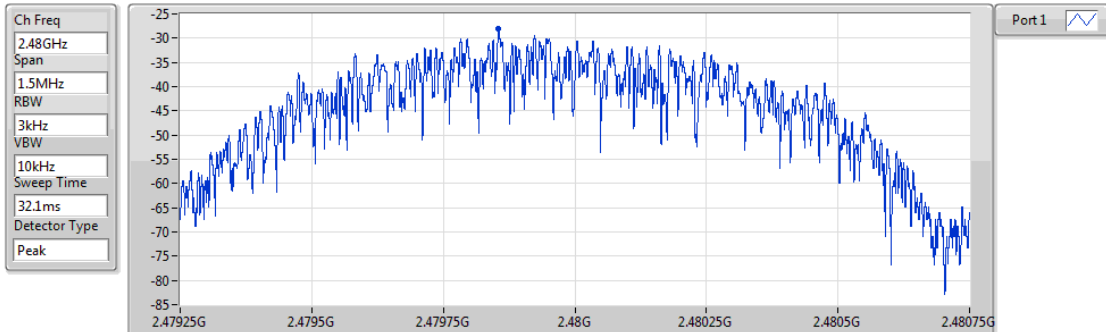
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-28.98	-28.98	-28.98

### BT-LE(1Mbps)

### PSD

2480MHz

10/07/2018



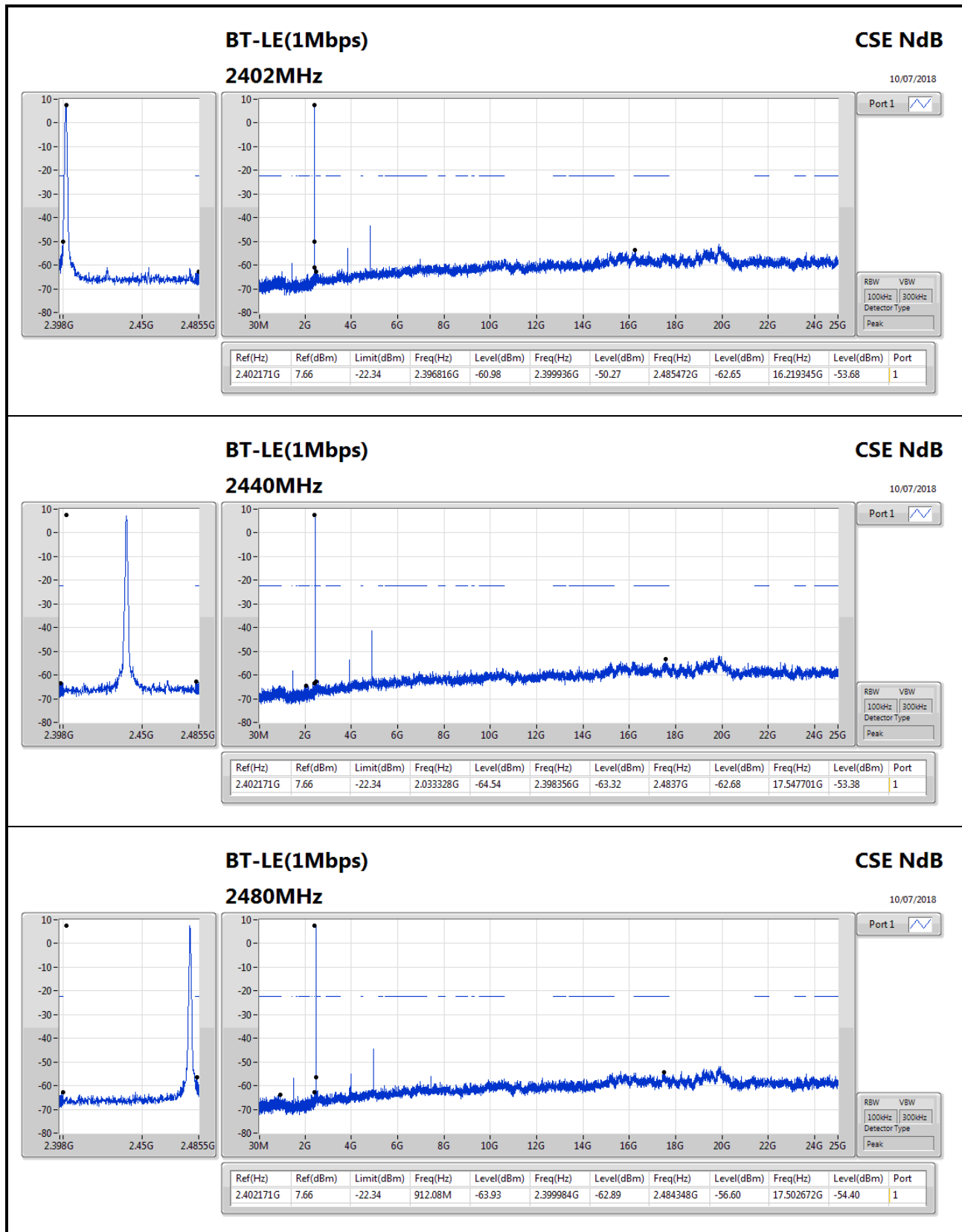
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-27.99	-27.99	-27.99

## 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	2.402171G	7.66	-22.34	2.396816G	-60.98	2.399936G	-50.27	2.485472G	-62.65	16.219345G	-53.68	1

## Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402171G	7.66	-22.34	2.396816G	-60.98	2.399936G	-50.27	2.485472G	-62.65	16.219345G	-53.68	1
2440MHz	Pass	2.402171G	7.66	-22.34	2.033328G	-64.54	2.398356G	-63.32	2.4837G	-62.68	17.547701G	-53.38	1
2480MHz	Pass	2.402171G	7.66	-22.34	912.08M	-63.93	2.399984G	-62.89	2.484348G	-56.60	17.502672G	-54.40	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	815.7M	39.95	46.00	-6.05	-8.01	3	Vertical	0	1.00	-

## Result

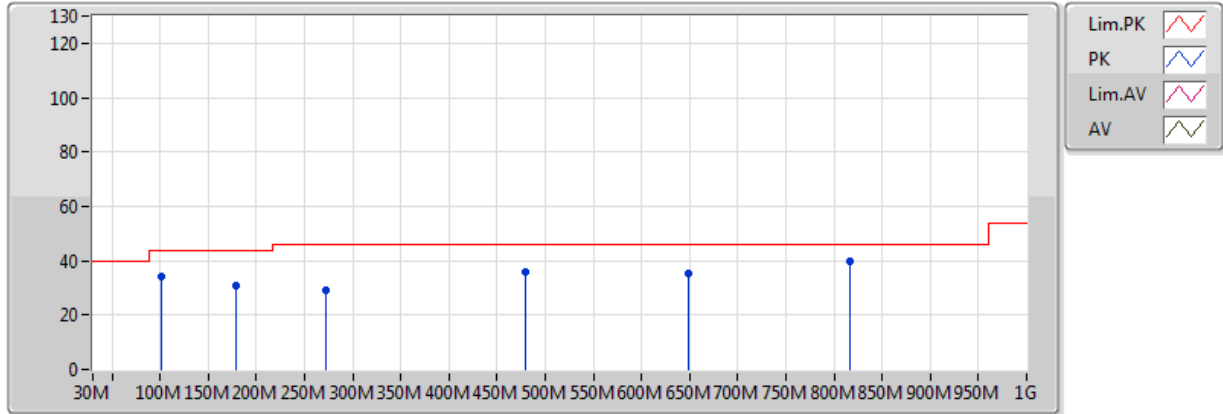
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	101.78M	34.31	43.50	-9.19	-20.88	3	Vertical	0	1.00	-
2440MHz	Pass	PK	179.38M	31.03	43.50	-12.47	-21.28	3	Vertical	0	1.00	-
2440MHz	Pass	PK	272.5M	28.97	46.00	-17.03	-16.54	3	Vertical	0	1.00	-
2440MHz	Pass	PK	480.08M	35.93	46.00	-10.07	-12.38	3	Vertical	0	1.00	-
2440MHz	Pass	PK	648.86M	35.22	46.00	-10.78	-9.94	3	Vertical	0	1.00	-
2440MHz	Pass	PK	815.7M	39.95	46.00	-6.05	-8.01	3	Vertical	0	1.00	-
2440MHz	Pass	PK	51.34M	31.85	40.00	-8.15	-23.89	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	101.78M	34.38	43.50	-9.12	-20.88	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	255.04M	27.44	46.00	-18.56	-16.39	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	480.08M	38.38	46.00	-7.62	-12.38	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	503.36M	36.31	46.00	-9.69	-12.10	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	774.96M	35.84	46.00	-10.16	-8.14	3	Horizontal	360	1.00	-



## BT-LE(1Mbps)

## 2440MHz\_Adapter

10/07/2018

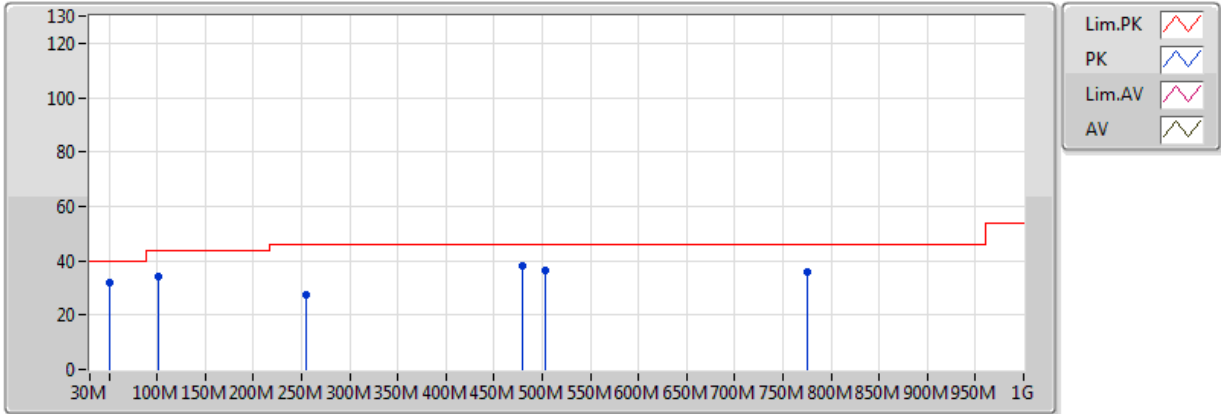


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	101.78M	34.31	43.50	-9.19	-20.88	3	Vertical	0	1.00	-
PK	179.38M	31.03	43.50	-12.47	-21.28	3	Vertical	0	1.00	-
PK	272.5M	28.97	46.00	-17.03	-16.54	3	Vertical	0	1.00	-
PK	480.08M	35.93	46.00	-10.07	-12.38	3	Vertical	0	1.00	-
PK	648.86M	35.22	46.00	-10.78	-9.94	3	Vertical	0	1.00	-
PK	815.7M	39.95	46.00	-6.05	-8.01	3	Vertical	0	1.00	-

## BT-LE(1Mbps)

## 2440MHz\_Adapter

10/07/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	51.34M	31.85	40.00	-8.15	-23.89	3	Horizontal	360	1.00	-
PK	101.78M	34.38	43.50	-9.12	-20.88	3	Horizontal	360	1.00	-
PK	255.04M	27.44	46.00	-18.56	-16.39	3	Horizontal	360	1.00	-
PK	480.08M	38.38	46.00	-7.62	-12.38	3	Horizontal	360	1.00	-
PK	503.36M	36.31	46.00	-9.69	-12.10	3	Horizontal	360	1.00	-
PK	774.96M	35.84	46.00	-10.16	-8.14	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-LE(1Mbps)	Pass	AV	2.483502G	43.91	54.00	-10.09	31.11	3	Horizontal	133	1.08	-

## 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	2.3724G	42.69	54.00	-11.31	30.71	3	Vertical	352	1.00	-
2402MHz	Pass	AV	2.402G	82.70	Inf	-Inf	30.82	3	Vertical	352	1.00	-
2402MHz	Pass	AV	2.4916G	43.48	54.00	-10.52	31.14	3	Vertical	352	1.00	-
2402MHz	Pass	PK	2.3868G	56.36	74.00	-17.64	30.76	3	Vertical	352	1.00	-
2402MHz	Pass	PK	2.402G	96.48	Inf	-Inf	30.82	3	Vertical	352	1.00	-
2402MHz	Pass	PK	2.4972G	56.43	74.00	-17.57	31.16	3	Vertical	352	1.00	-
2402MHz	Pass	AV	2.3468G	42.76	54.00	-11.24	30.62	3	Horizontal	137	1.04	-
2402MHz	Pass	AV	2.402G	87.52	Inf	-Inf	30.82	3	Horizontal	137	1.04	-
2402MHz	Pass	AV	2.4876G	43.46	54.00	-10.54	31.13	3	Horizontal	137	1.04	-
2402MHz	Pass	PK	2.3892G	55.71	74.00	-18.29	30.77	3	Horizontal	137	1.04	-
2402MHz	Pass	PK	2.402G	102.78	Inf	-Inf	30.82	3	Horizontal	137	1.04	-
2402MHz	Pass	PK	2.4876G	56.38	74.00	-17.62	31.13	3	Horizontal	137	1.04	-
2402MHz	Pass	AV	4.80391G	37.21	54.00	-16.79	2.08	3	Vertical	137	1.38	-
2402MHz	Pass	PK	4.80398G	48.21	74.00	-25.79	2.08	3	Vertical	137	1.38	-
2402MHz	Pass	AV	4.80389G	39.00	54.00	-15.00	2.08	3	Horizontal	111	1.30	-
2402MHz	Pass	PK	4.80351G	49.89	74.00	-24.11	2.08	3	Horizontal	111	1.30	-
2440MHz	Pass	AV	2.3784G	42.68	54.00	-11.32	30.73	3	Vertical	238	1.50	-
2440MHz	Pass	AV	2.44G	82.43	Inf	-Inf	30.95	3	Vertical	238	1.50	-
2440MHz	Pass	AV	2.4976G	43.42	54.00	-10.58	31.16	3	Vertical	238	1.50	-
2440MHz	Pass	PK	2.3512G	55.62	74.00	-18.38	30.64	3	Vertical	238	1.50	-
2440MHz	Pass	PK	2.44G	96.16	Inf	-Inf	30.95	3	Vertical	238	1.50	-
2440MHz	Pass	PK	2.4976G	56.08	74.00	-17.92	31.16	3	Vertical	238	1.50	-
2440MHz	Pass	AV	2.3536G	42.67	54.00	-11.33	30.65	3	Horizontal	136	1.02	-
2440MHz	Pass	AV	2.44G	86.48	Inf	-Inf	30.95	3	Horizontal	136	1.02	-
2440MHz	Pass	AV	2.4992G	43.45	54.00	-10.55	31.17	3	Horizontal	136	1.02	-
2440MHz	Pass	PK	2.3608G	55.75	74.00	-18.25	30.67	3	Horizontal	136	1.02	-
2440MHz	Pass	PK	2.44G	101.41	Inf	-Inf	30.95	3	Horizontal	136	1.02	-
2440MHz	Pass	PK	2.4872G	56.65	74.00	-17.35	31.12	3	Horizontal	136	1.02	-
2440MHz	Pass	AV	4.879569G	28.35	54.00	-25.65	2.27	3	Vertical	201	1.14	-
2440MHz	Pass	PK	4.87992G	37.28	74.00	-36.72	2.27	3	Vertical	201	1.14	-
2440MHz	Pass	AV	4.87991G	37.18	54.00	-16.82	2.27	3	Horizontal	152	1.01	-
2440MHz	Pass	PK	4.87969G	48.72	74.00	-25.28	2.27	3	Horizontal	152	1.01	-
2480MHz	Pass	AV	2.3624G	42.73	54.00	-11.27	30.67	3	Vertical	233	1.00	-
2480MHz	Pass	AV	2.48G	83.43	Inf	-Inf	31.10	3	Vertical	233	1.00	-
2480MHz	Pass	AV	2.4984G	43.49	54.00	-10.51	31.17	3	Vertical	233	1.00	-
2480MHz	Pass	PK	2.3448G	55.35	74.00	-18.65	30.62	3	Vertical	233	1.00	-
2480MHz	Pass	PK	2.48G	97.43	Inf	-Inf	31.10	3	Vertical	233	1.00	-
2480MHz	Pass	PK	2.4976G	56.01	74.00	-17.99	31.16	3	Vertical	233	1.00	-
2480MHz	Pass	AV	2.3848G	42.75	54.00	-11.25	30.76	3	Horizontal	133	1.08	-
2480MHz	Pass	AV	2.48G	87.50	Inf	-Inf	31.10	3	Horizontal	133	1.08	-
2480MHz	Pass	AV	2.483502G	43.91	54.00	-10.09	31.11	3	Horizontal	133	1.08	-
2480MHz	Pass	PK	2.3144G	55.98	74.00	-18.02	30.51	3	Horizontal	133	1.08	-
2480MHz	Pass	PK	2.48G	102.56	Inf	-Inf	31.10	3	Horizontal	133	1.08	-
2480MHz	Pass	PK	2.4872G	56.65	74.00	-17.35	31.12	3	Horizontal	133	1.08	-
2480MHz	Pass	AV	4.95954G	29.96	54.00	-24.04	2.47	3	Vertical	31	1.50	-
2480MHz	Pass	PK	4.96017G	43.48	74.00	-30.52	2.47	3	Vertical	31	1.50	-
2480MHz	Pass	AV	4.95988G	38.83	54.00	-15.17	2.47	3	Horizontal	150	1.10	-



## RSE TX above 1GHz Result

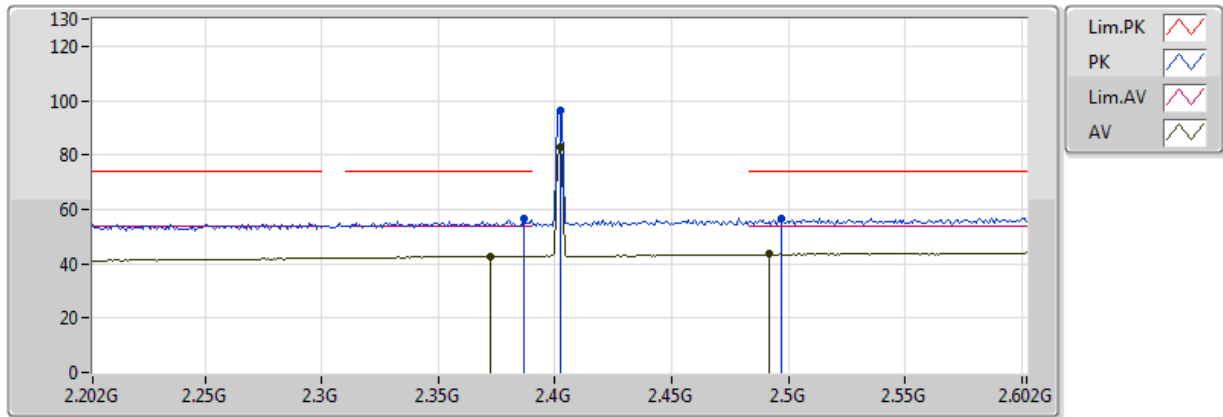
## Appendix F.2

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2480MHz	Pass	PK	4.95934G	49.75	74.00	-24.25	2.47	3	Horizontal	150	1.10	-

## BT-LE(1Mbps)

## 2402MHz\_TX

09/07/2018

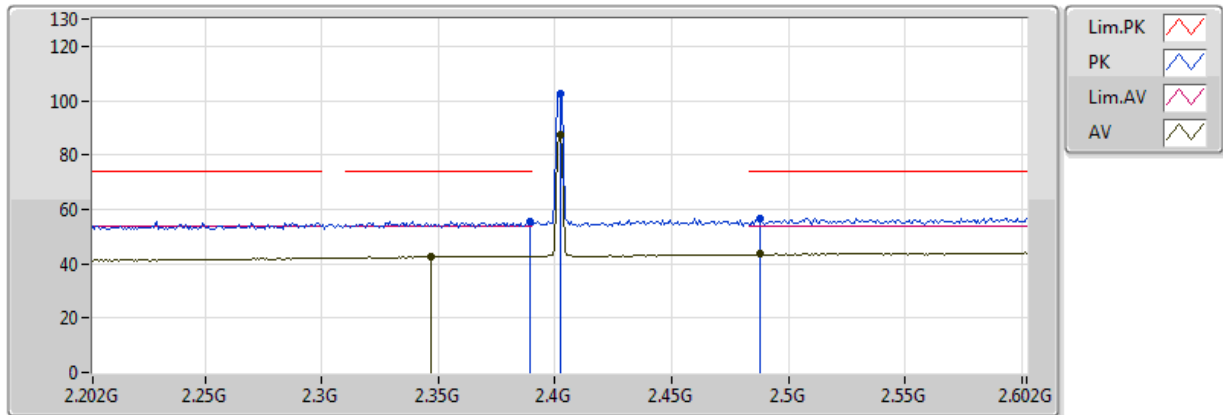


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3724G	42.69	54.00	-11.31	30.71	3	Vertical	352	1.00	-
AV	2.402G	82.70	Inf	-Inf	30.82	3	Vertical	352	1.00	-
AV	2.4916G	43.48	54.00	-10.52	31.14	3	Vertical	352	1.00	-
PK	2.3868G	56.36	74.00	-17.64	30.76	3	Vertical	352	1.00	-
PK	2.402G	96.48	Inf	-Inf	30.82	3	Vertical	352	1.00	-
PK	2.4972G	56.43	74.00	-17.57	31.16	3	Vertical	352	1.00	-

## BT-LE(1Mbps)

## 2402MHz\_TX

09/07/2018

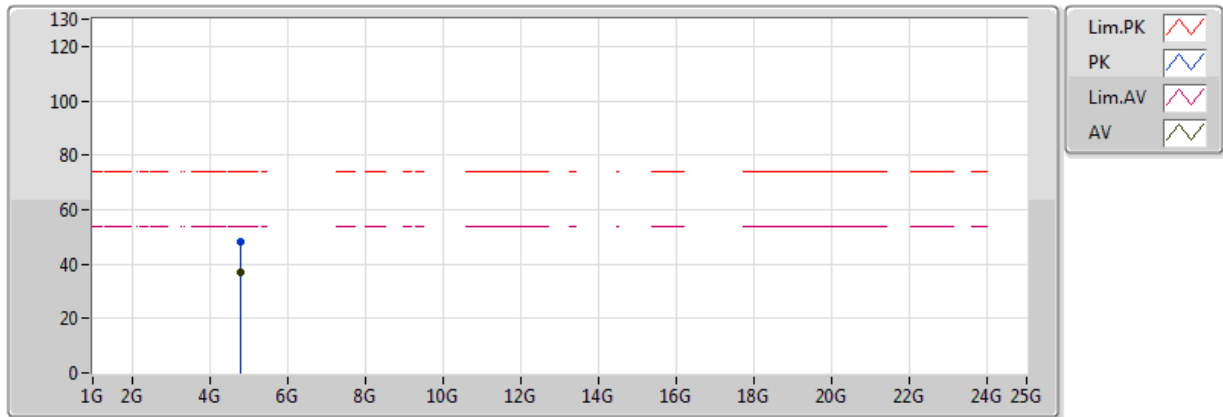


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3468G	42.76	54.00	-11.24	30.62	3	Horizontal	137	1.04	-
AV	2.402G	87.52	Inf	-Inf	30.82	3	Horizontal	137	1.04	-
AV	2.4876G	43.46	54.00	-10.54	31.13	3	Horizontal	137	1.04	-
PK	2.3892G	55.71	74.00	-18.29	30.77	3	Horizontal	137	1.04	-
PK	2.402G	102.78	Inf	-Inf	30.82	3	Horizontal	137	1.04	-
PK	2.4876G	56.38	74.00	-17.62	31.13	3	Horizontal	137	1.04	-

### BT-LE(1Mbps)

### 2402MHz\_TX

09/07/2018



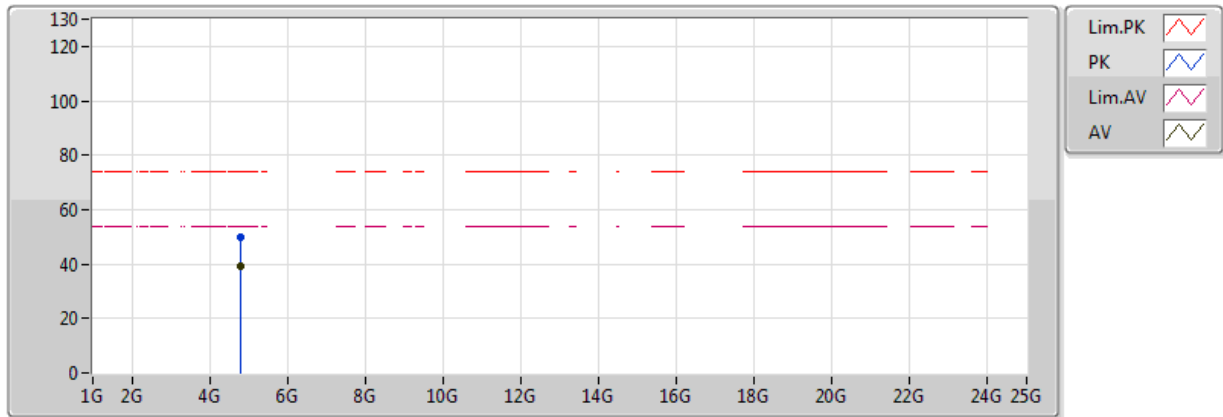
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80391G	37.21	54.00	-16.79	2.08	3	Vertical	137	1.38	-
PK	4.80398G	48.21	74.00	-25.79	2.08	3	Vertical	137	1.38	-



### BT-LE(1Mbps)

### 2402MHz\_TX

09/07/2018

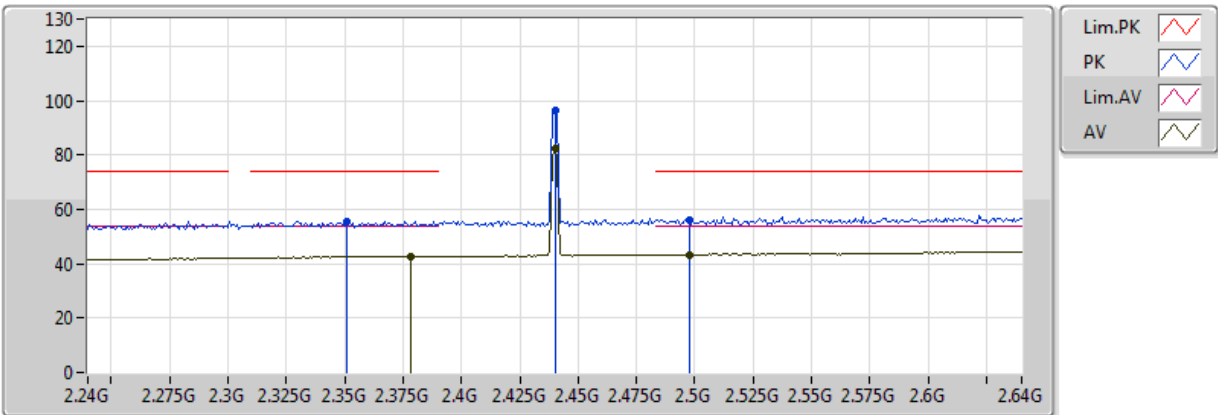


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80389G	39.00	54.00	-15.00	2.08	3	Horizontal	111	1.30	-
PK	4.80351G	49.89	74.00	-24.11	2.08	3	Horizontal	111	1.30	-

## BT-LE(1Mbps)

## 2440MHz\_TX

09/07/2018

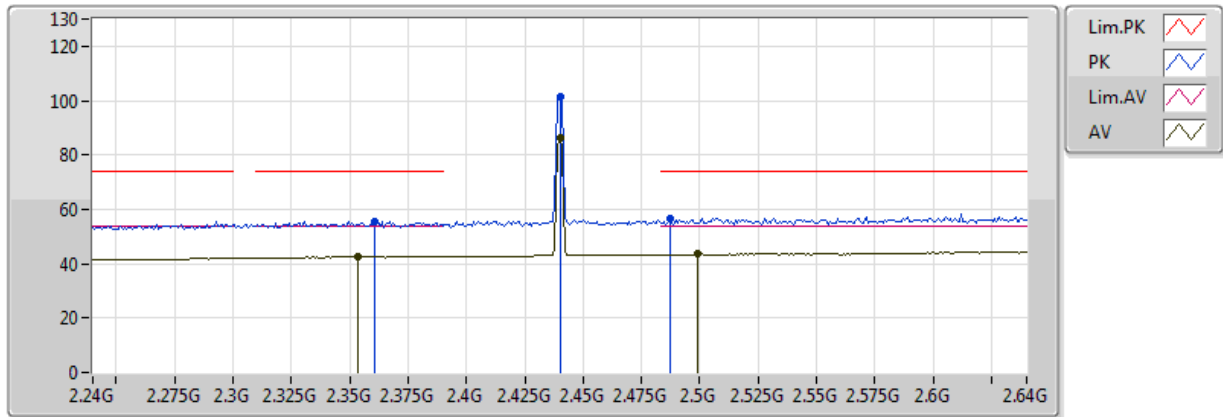


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3784G	42.68	54.00	-11.32	30.73	3	Vertical	238	1.50	-
AV	2.44G	82.43	Inf	-Inf	30.95	3	Vertical	238	1.50	-
AV	2.4976G	43.42	54.00	-10.58	31.16	3	Vertical	238	1.50	-
PK	2.3512G	55.62	74.00	-18.38	30.64	3	Vertical	238	1.50	-
PK	2.44G	96.16	Inf	-Inf	30.95	3	Vertical	238	1.50	-
PK	2.4976G	56.08	74.00	-17.92	31.16	3	Vertical	238	1.50	-

## BT-LE(1Mbps)

## 2440MHz\_TX

09/07/2018

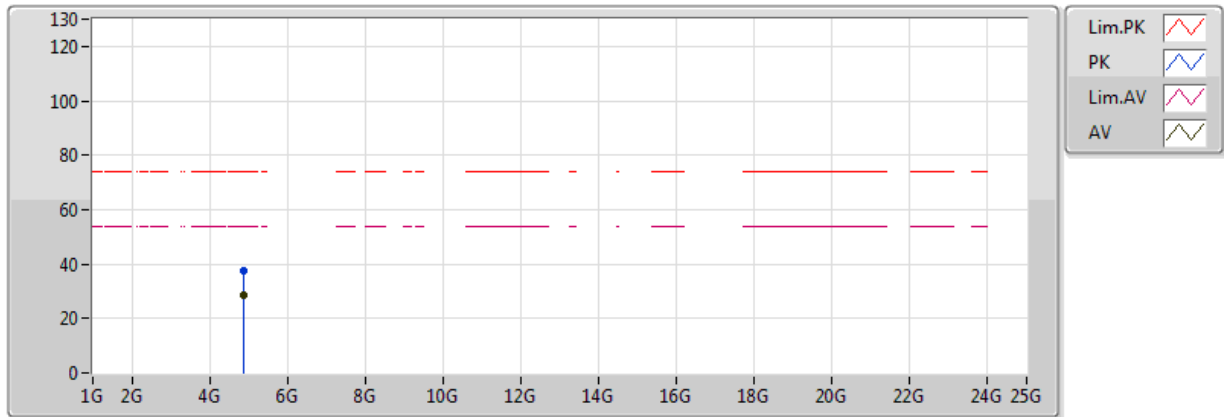


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3536G	42.67	54.00	-11.33	30.65	3	Horizontal	136	1.02	-
AV	2.44G	86.48	Inf	-Inf	30.95	3	Horizontal	136	1.02	-
AV	2.4992G	43.45	54.00	-10.55	31.17	3	Horizontal	136	1.02	-
PK	2.3608G	55.75	74.00	-18.25	30.67	3	Horizontal	136	1.02	-
PK	2.44G	101.41	Inf	-Inf	30.95	3	Horizontal	136	1.02	-
PK	2.4872G	56.65	74.00	-17.35	31.12	3	Horizontal	136	1.02	-

## BT-LE(1Mbps)

## 2440MHz\_TX

09/07/2018

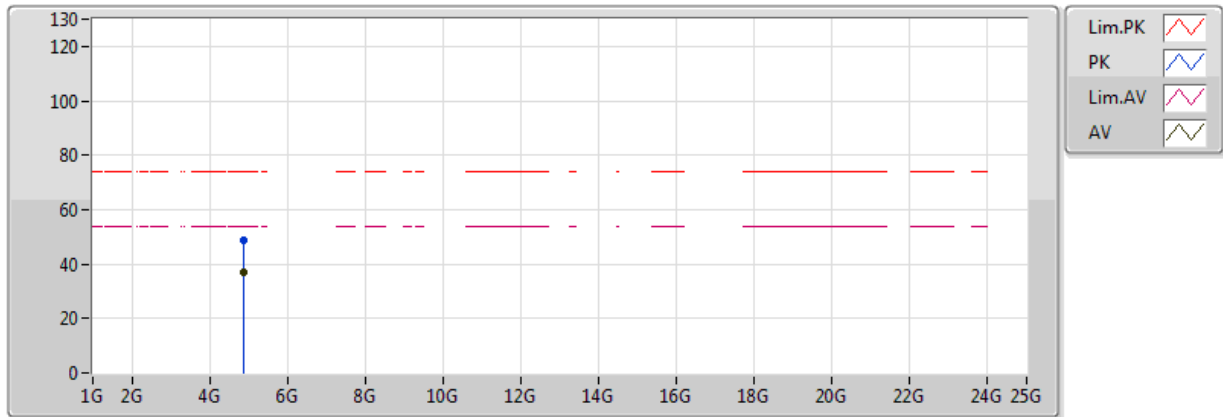


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.879569G	28.35	54.00	-25.65	2.27	3	Vertical	201	1.14	-
PK	4.87992G	37.28	74.00	-36.72	2.27	3	Vertical	201	1.14	-

### BT-LE(1Mbps)

### 2440MHz\_TX

09/07/2018

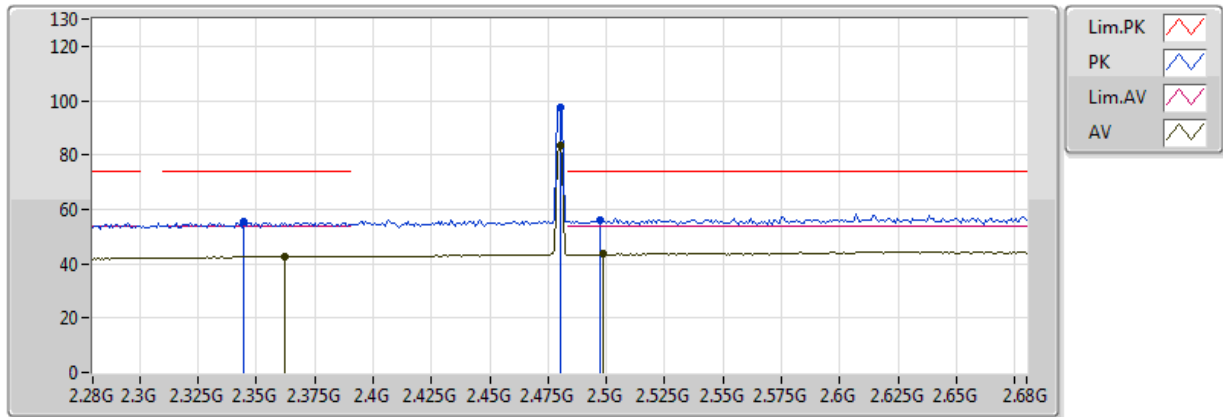


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.87991G	37.18	54.00	-16.82	2.27	3	Horizontal	152	1.01	-
PK	4.87969G	48.72	74.00	-25.28	2.27	3	Horizontal	152	1.01	-

## BT-LE(1Mbps)

## 2480MHz\_TX

09/07/2018

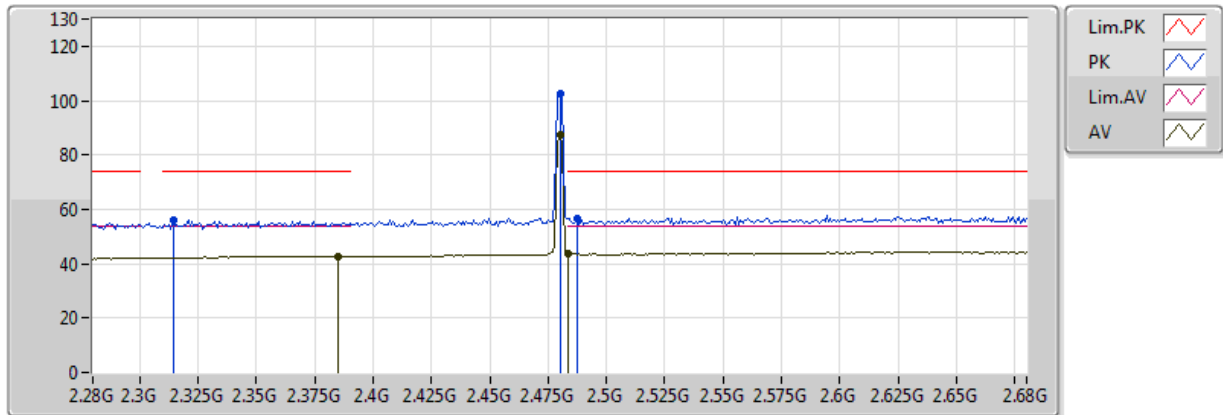


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3624G	42.73	54.00	-11.27	30.67	3	Vertical	233	1.00	-
AV	2.48G	83.43	Inf	-Inf	31.10	3	Vertical	233	1.00	-
AV	2.4984G	43.49	54.00	-10.51	31.17	3	Vertical	233	1.00	-
PK	2.3448G	55.35	74.00	-18.65	30.62	3	Vertical	233	1.00	-
PK	2.48G	97.43	Inf	-Inf	31.10	3	Vertical	233	1.00	-
PK	2.4976G	56.01	74.00	-17.99	31.16	3	Vertical	233	1.00	-

### BT-LE(1Mbps)

### 2480MHz\_TX

09/07/2018

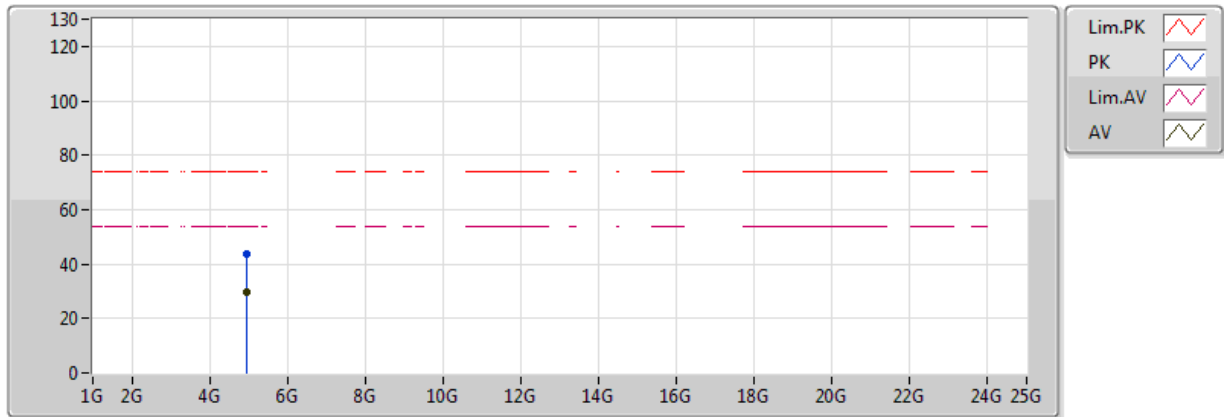


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3848G	42.75	54.00	-11.25	30.76	3	Horizontal	133	1.08	-
AV	2.48G	87.50	Inf	-Inf	31.10	3	Horizontal	133	1.08	-
AV	2.483502G	43.91	54.00	-10.09	31.11	3	Horizontal	133	1.08	-
PK	2.3144G	55.98	74.00	-18.02	30.51	3	Horizontal	133	1.08	-
PK	2.48G	102.56	Inf	-Inf	31.10	3	Horizontal	133	1.08	-
PK	2.4872G	56.65	74.00	-17.35	31.12	3	Horizontal	133	1.08	-

### BT-LE(1Mbps)

### 2480MHz\_TX

09/07/2018



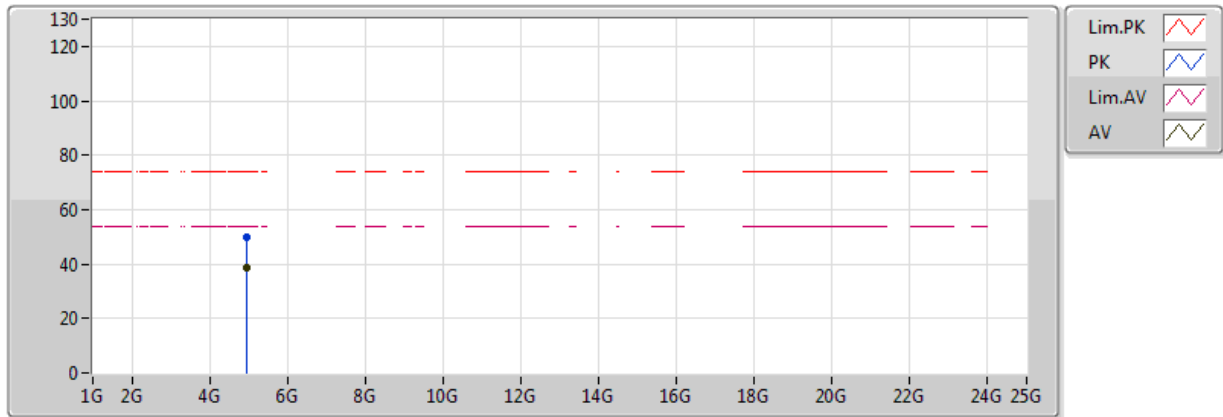
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.95954G	29.96	54.00	-24.04	2.47	3	Vertical	31	1.50	-
PK	4.96017G	43.48	74.00	-30.52	2.47	3	Vertical	31	1.50	-



### BT-LE(1Mbps)

### 2480MHz\_TX

09/07/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.95988G	38.83	54.00	-15.17	2.47	3	Horizontal	150	1.10	-
PK	4.95934G	49.75	74.00	-24.25	2.47	3	Horizontal	150	1.10	-