



# RADIO TEST REPORT

**FCC ID** : 2A2CB-0000011000101  
**Equipment** : Wireless Spy Fishing Camera (Transmitter)  
**Brand Name** : G-Sau  
**Model Name** : Trident 101  
**Applicant** : Lian Hong Art. Co., Ltd.  
Wanshou Road, No. 492-1, 5th Floor, Section 1..Taoyuan  
City, Taiwan  
**Manufacturer** : Lian Hong Art. Co., Ltd.  
Wanshou Road, No. 492-1, 5th Floor, Section 1..Taoyuan  
City, Taiwan  
**Standard** : 47 CFR FCC Part 15.247

The product was received on Jun. 03, 2021, and testing was started from Jun. 18, 2021 and completed on Jul. 29, 2021. We, Sporton International Inc. Hsinchu 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 test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

**Sporton International Inc. Hsinchu Laboratory**

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



## Table of Contents

<b>History of this test report.....</b>	<b>3</b>
<b>Summary of Test Result.....</b>	<b>4</b>
<b>1 General Description .....</b>	<b>5</b>
1.1 Information.....	5
1.2 Applicable Standards .....	7
1.3 Testing Location Information .....	7
1.4 Measurement Uncertainty .....	7
<b>2 Test Configuration of EUT.....</b>	<b>8</b>
2.1 Test Channel Mode .....	8
2.2 The Worst Case Measurement Configuration.....	9
2.3 EUT Operation during Test .....	10
2.4 Accessories .....	10
2.5 Support Equipment.....	10
2.6 Test Setup Diagram .....	11
<b>3 Transmitter Test Result .....</b>	<b>14</b>
3.1 AC Power-line Conducted Emissions .....	14
3.2 20dB Bandwidth and Carrier Frequency Separation.....	16
3.3 Maximum Conducted Output Power .....	17
3.4 Number of Hopping Frequencies and Hopping Bandedge .....	18
3.5 Time of Occupancy (Dwell Time) .....	19
3.6 Emissions in Non-restricted Frequency Bands .....	20
3.7 Emissions in Restricted Frequency Bands.....	21
<b>4 Test Equipment and Calibration Data .....</b>	<b>24</b>
<b>Appendix A. Test Results of AC Power-line Conducted Emissions</b>	
<b>Appendix B. Test Results of 20dB Bandwidth and Carrier Frequency Separation</b>	
<b>Appendix C. Test Results of Maximum Conducted Output Power</b>	
<b>Appendix D. Test Results of Number of Hopping Frequencies and Hopping Bandedge</b>	
<b>Appendix E. Test Results of Time of Occupancy (Dwell Time)</b>	
<b>Appendix F. Test Results of Emissions in Non-restricted Frequency Bands</b>	
<b>Appendix G. Test Results of Emissions in Restricted Frequency Bands</b>	
<b>Appendix H. Test Photos</b>	
<b>Photographs of EUT v01</b>	



TEL : 886-3-656-9065  
FAX : 886-3-656-9085  
Report Template No.: CB-A10\_5 Ver1.3



## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.3	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	20dB Bandwidth	PASS	-
3.2	15.247(a)	Carrier Frequency Separation	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(a)	Number of Hopping Frequencies and Hopping Band edge	PASS	-
3.5	15.247(a)	Time of Occupancy (Dwell Time)	PASS	-
3.6	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.7	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

**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:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

**Reviewed by: Sam Chen**

**Report Producer: Sandy Chuang**



# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

Frequency Range (MHz)	Modulation	Ch. Frequency (MHz)	Channel Number
2400-2483.5	QPSK	2408-2468	1-15 [15]

Band	Mode	BWch (MHz)	Nant
2400-2483.5	QPSK	3	1

Note:

- ♦ BWch is the nominal channel bandwidth.

### 1.1.2 Table of channel

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2408	9	2445
2	2411	10	2448
3	2415	11	2452
4	2418	12	2455
5	2422	13	2458
6	2425	14	2465
7	2432	15	2468
8	2442	-	-

### 1.1.3 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Antenna Gain (dBi)	Cable Loss (dB)	Net Gain (dBi)
1	1	Faycent	FC-24CT	Omini-directional	N/A	3	3.2	-0.20

Note: The above information was declared by manufacturer.

#### For 1TX/1RX:

Only Port 1 can be used as transmitting/receiving.

**1.1.4 Mode Test Duty Cycle**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
QPSK	0.215	6.68	357.5u	3k

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

**1.1.5 EUT Operational Condition**

<b>EUT Power Type</b>	From power adapter or host system or battery
<b>Test Software Version</b>	ttermpro V4.75



## 1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15.247

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 414788 D01 v01r01

## 1.3 Testing Location Information

Testing Location Information				
Test Lab. : Sporton International Inc. Hsinchu Laboratory				
Hsinchu ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)				
(TAF: 3787) TEL: 886-3-656-9065 FAX: 886-3-656-9085				
Test site Designation No. TW3787 with FCC.				
Conformity Assessment Body Identifier (CABID) TW3787 with ISCED.				

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Gino Huang	24.6-25.2 / 65-69	Jun. 21, 2021~ Jun. 22, 2021
Radiated <Below 1GHz>	03CH05-CB	Eason Chen	25.4~25.7 / 67~69	Jul. 21, 2021
Radiated <Above 1GHz>	03CH01-CB	Gino Huang	25.4-27.1 / 60-65	Jun. 18, 2021
AC Conduction	CO01-CB	Wei Li	23~24 / 56~59	Jul. 29, 2021

## 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)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%



## **2 Test Configuration of EUT**

### **2.1 Test Channel Mode**

Mode	Power Setting
QPSK	-
2408MHz	3
2442MHz	3
2468MHz	3

## 2.2 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 Test Voltage: 120Vac / 60Hz
<b>Operating Mode</b>	Normal Link
1	EUT + Battery_powered from Adapter
2	EUT + Battery_powered from host system
For operating mode 2 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	20dB Bandwidth Carrier Frequency Separation Maximum Conducted Output Power Number of Hopping Frequencies Hopping Bandedge Time of Occupancy (Dwell Time) 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>	Normal Link
1	EUT in X axis + Battery_powered from Battery
2	EUT in Y axis + Battery_powered from Battery
3	EUT in Z axis + Battery_powered from Battery
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 ~ 5 will follow this same test mode.	
4	Normal Link: EUT in Z axis + Battery_powered from Adapter
5	Normal Link: EUT in Z axis + Battery_powered from host system
For operating mode 5 is the worst case and it was record in this test report.	
<b>Operating Mode &gt; 1GHz</b>	CTX
The EUT was performed at X axis, Y axis and Z axis position, and the worst case as below:	
1	EUT in Y axis



## 2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

## 2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Battery	Panasonic	NCR18650B	3.7V, 3350mAh

## 2.5 Support Equipment

For AC Conduction

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E6430	N/A
B	TV	ASUS	VP28U	N/A
C	Mouse	Logitech	M-U0026	N/A
D	Wireless Device(RX)	G-Sau	Trident 101	N/A
E	Earphone	e-Power	S90W	N/A

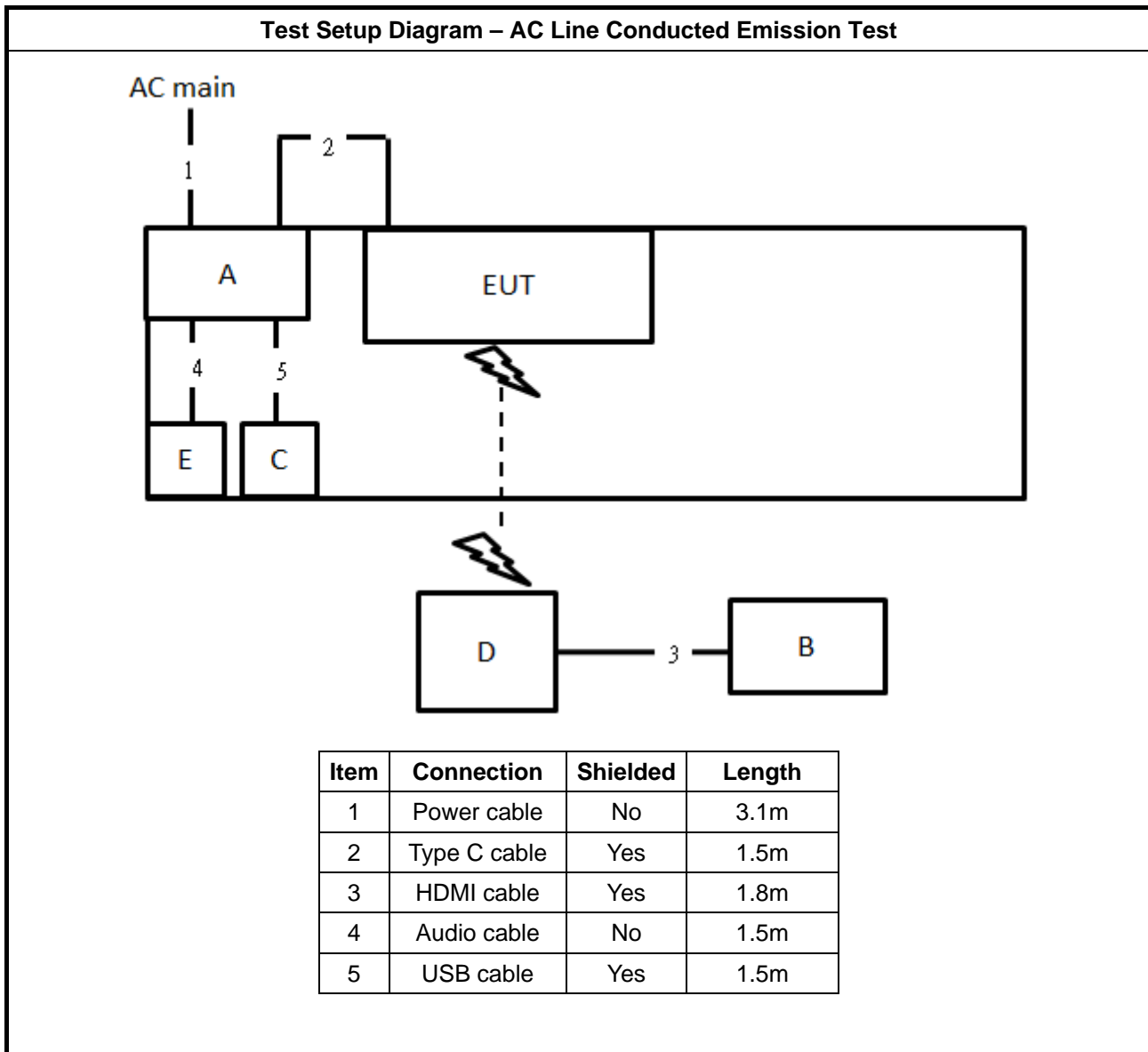
For Radiated (below 1GHz)

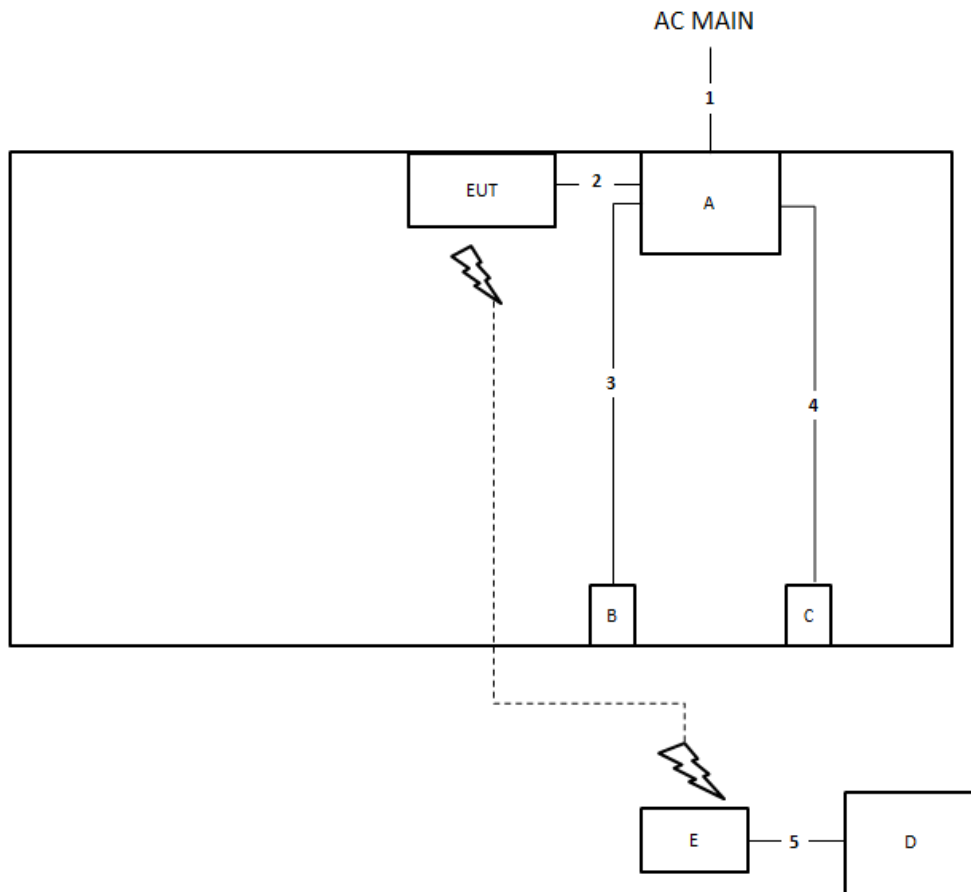
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Earphone	SHYARO CHI	MIC-04	N/A
C	Mouse	Logitech	M-U0026	N/A
D	LCD TV	SONY	KLV-32U300A	N/A
E	Wireless Device(RX)	G-Sau	Trident 101	N/A

For Radiated (above 1GHz) and RF Conducted

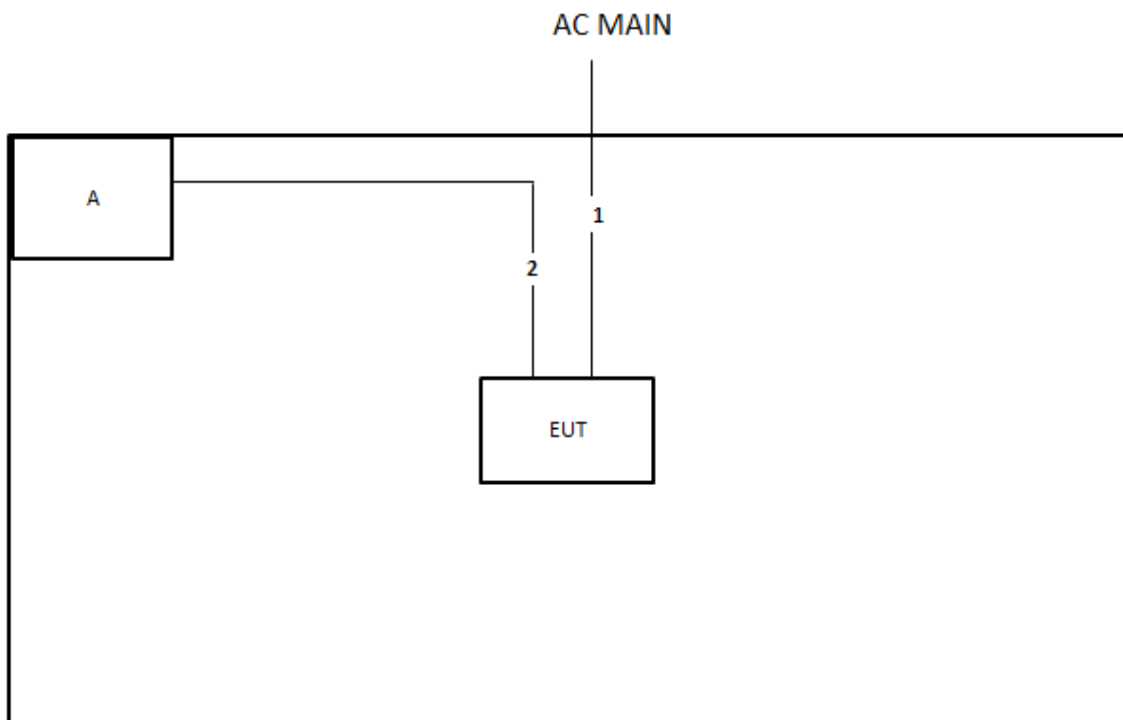
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Adapter	htc	TC U250	N/A

## 2.6 Test Setup Diagram



**Test Setup Diagram - Radiated Test < 1GHz**


Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	Type C cable	Yes	1m
3	Audio cable	No	1.4m
4	USB cable	Yes	1.8m
5	HDMI cable	Yes	1m

**Test Setup Diagram - Radiated Test > 1GHz**


Item	Connection	Shielded	Length
1	Power cable	No	1m
2	Console cable	No	0.5m



### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

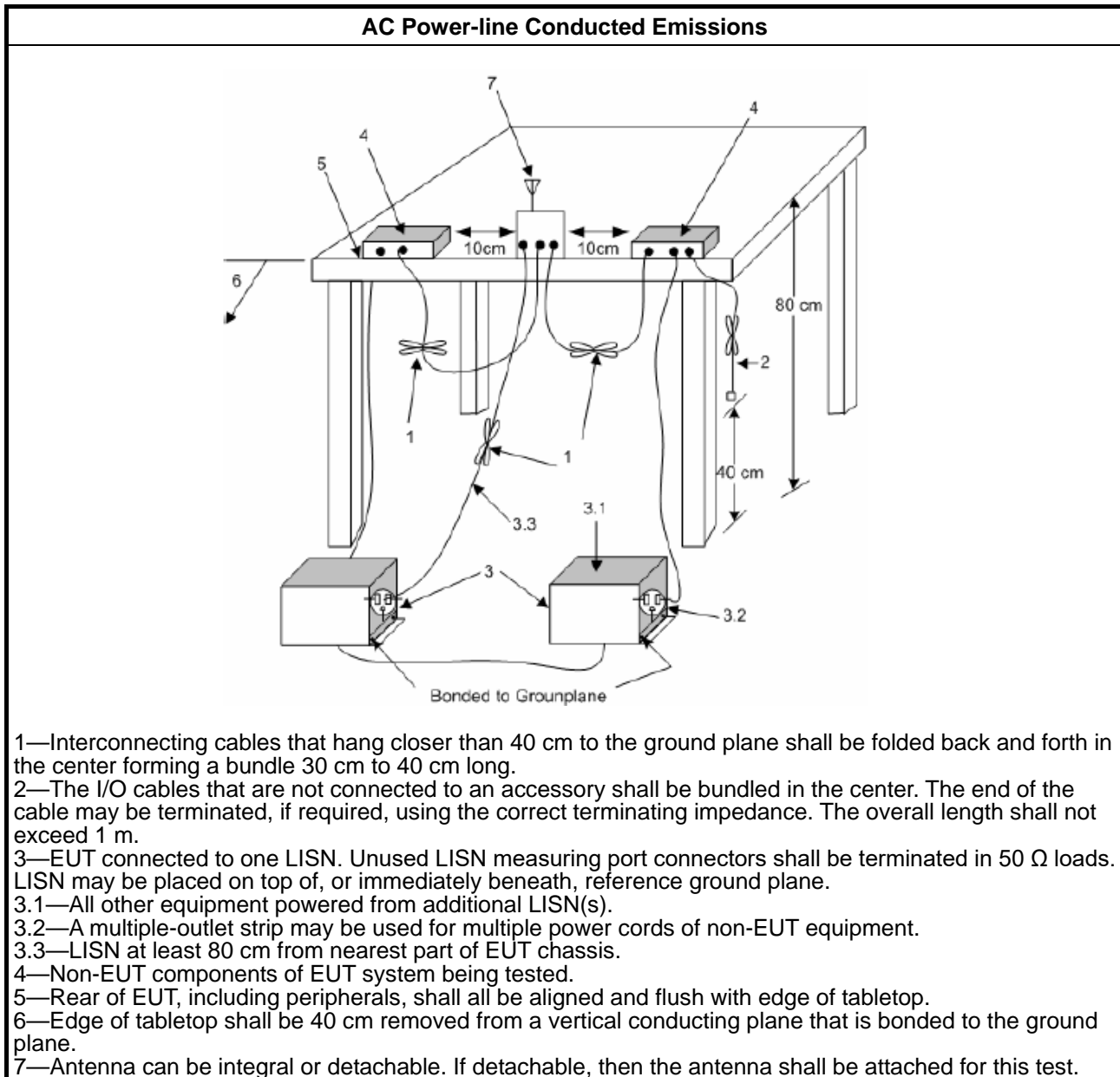
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

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

### 3.1.4 Test Setup



### 1.1.1. Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

### 3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

## 3.2 20dB Bandwidth and Carrier Frequency Separation

### 3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems	
▪ 902-928 MHz Band:	
	▪ $N \geq 50$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 250 kHz.
	▪ $50 > N \geq 25$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz.
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq \text{MAX}$ (20 dB bandwidth 2/3, 25 kHz).
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 1 MHz.
N: Number of Hopping Frequencies; ChS: Hopping Channel Separation	

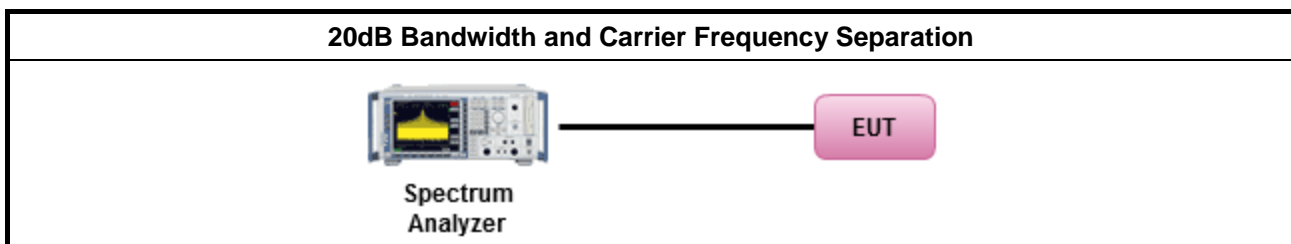
### 3.2.2 Measuring Instruments

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 6.9.1 for 20 dB bandwidth measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.

### 3.2.4 Test Setup



### 3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

### 3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
▪ 902-928 MHz Band:	
▪ $N \geq 50$ ; Power 30dBm; EIRP 36dBm	
▪ $50 > N \geq 25$ ; Power 23.98dBm; EIRP 29.98dBm	
▪ 2400-2483.5 MHz Band:	
▪ $N \geq 75$ ; Power 30dBm; EIRP 36dBm	
▪ $75 > N \geq 15$ ; Power 21dBm; EIRP 27dBm	
▪ 5725-5850 MHz Band:	
▪ $N \geq 75$ ; Power 30dBm; EIRP 36dBm	
N: Number of Hopping Frequencies	

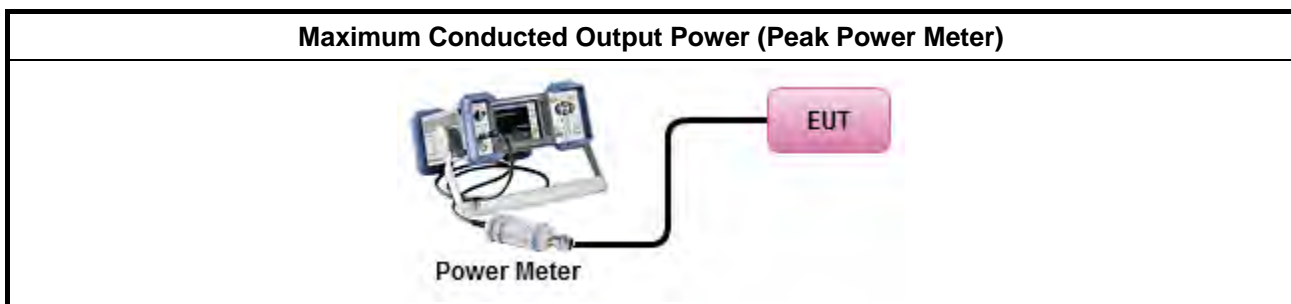
#### 3.3.2 Measuring Instruments

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

#### 3.3.3 Test Procedures

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

#### 3.3.4 Test Setup



#### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

### 3.4 Number of Hopping Frequencies and Hopping Bandedge

#### 3.4.1 Number of Hopping Frequencies Limit

Number of Hopping Frequencies Limit	
▪ 902-928 MHz Band:	
	▪ $N \geq 50$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 250 kHz.
	▪ $50 > N \geq 25$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz.
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 1 MHz.
N: Number of Hopping Frequencies; ChS : Hopping Channel Separation	

#### 3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

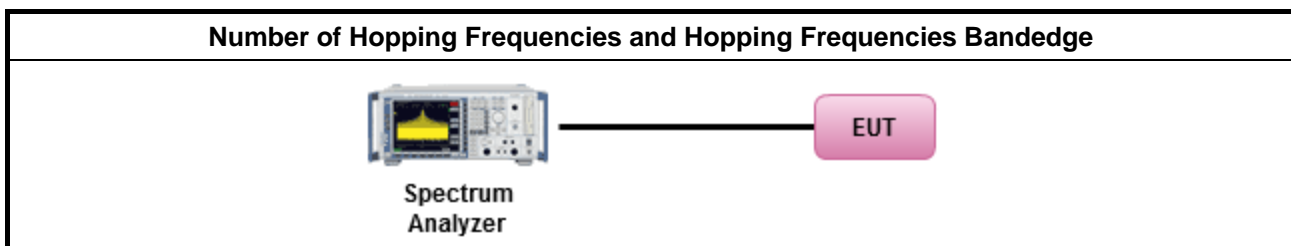
#### 3.4.3 Measuring Instruments

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

#### 3.4.4 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.

#### 3.4.5 Test Setup



#### 3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

#### 3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

### 3.5 Time of Occupancy (Dwell Time)

#### 3.5.1 Time of Occupancy (Dwell Time) Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems	
▪ 902-928 MHz Band:	
	▪ $N \geq 50$ ; 0.4s in 20s period
	▪ $50 > N \geq 25$ ; 0.4s in 10s period
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$ ; 0.4s in $N \times 0.4$ period
	▪ $75 > N \geq 15$ ; 0.4s in $N \times 0.4$ period
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$ ; 0.4s in 30s period
N: Number of Hopping Frequencies	

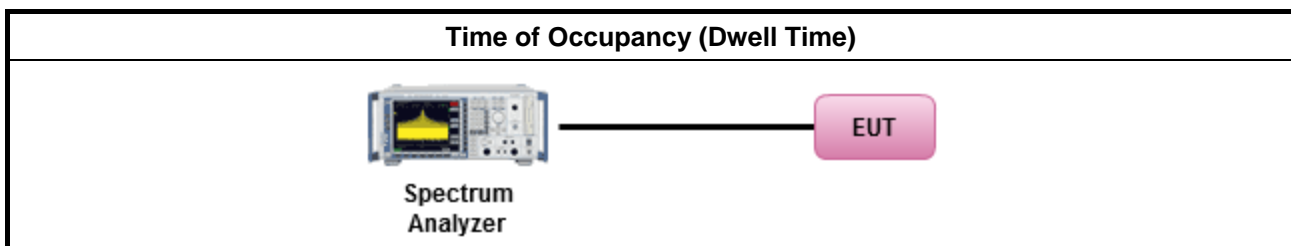
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

Test Method	
▪ Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.	
▪ Bluetooth ACL packets can be 1, 3, or 5 time slots. Following as dwell time. Operate DH5 at maximum dwell time and maximum duty cycle.	
	▪ The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is $5/1600$ seconds, or 3.125ms. DH5 Packet permit maximum $1600/79/6 = 3.37$ hops per second in each channel.

#### 3.5.4 Test Setup



#### 3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

### 3.6 Emissions in Non-restricted Frequency Bands

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

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dBc)
Peak output power procedure	20
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.	

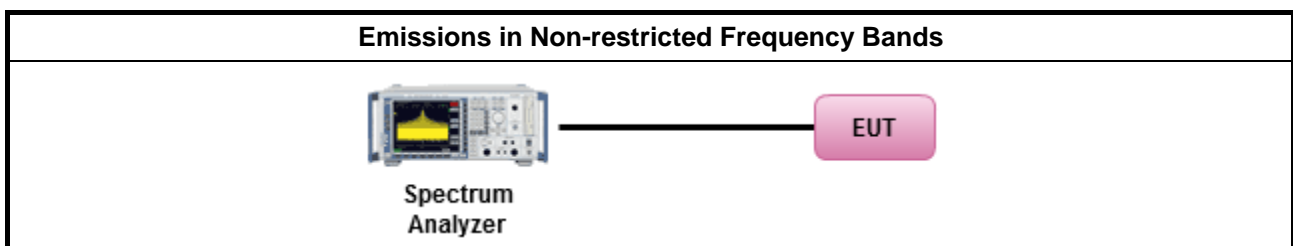
#### 3.6.2 Measuring Instruments

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>Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.</li> </ul>

#### 3.6.4 Test Setup



#### 3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F



### 3.7 Emissions in Restricted Frequency Bands

#### 3.7.1 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.

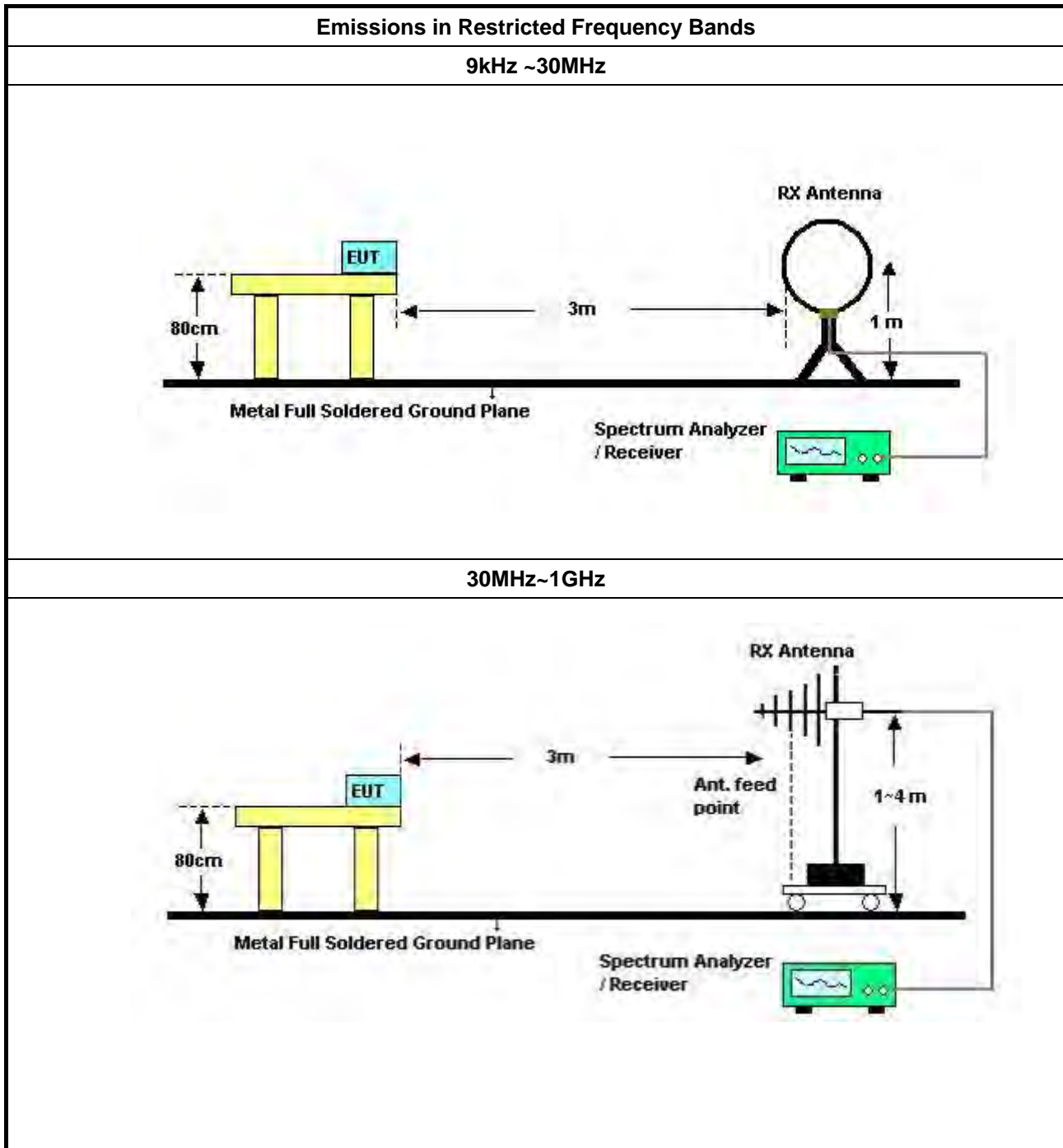
#### 3.7.2 Measuring Instruments

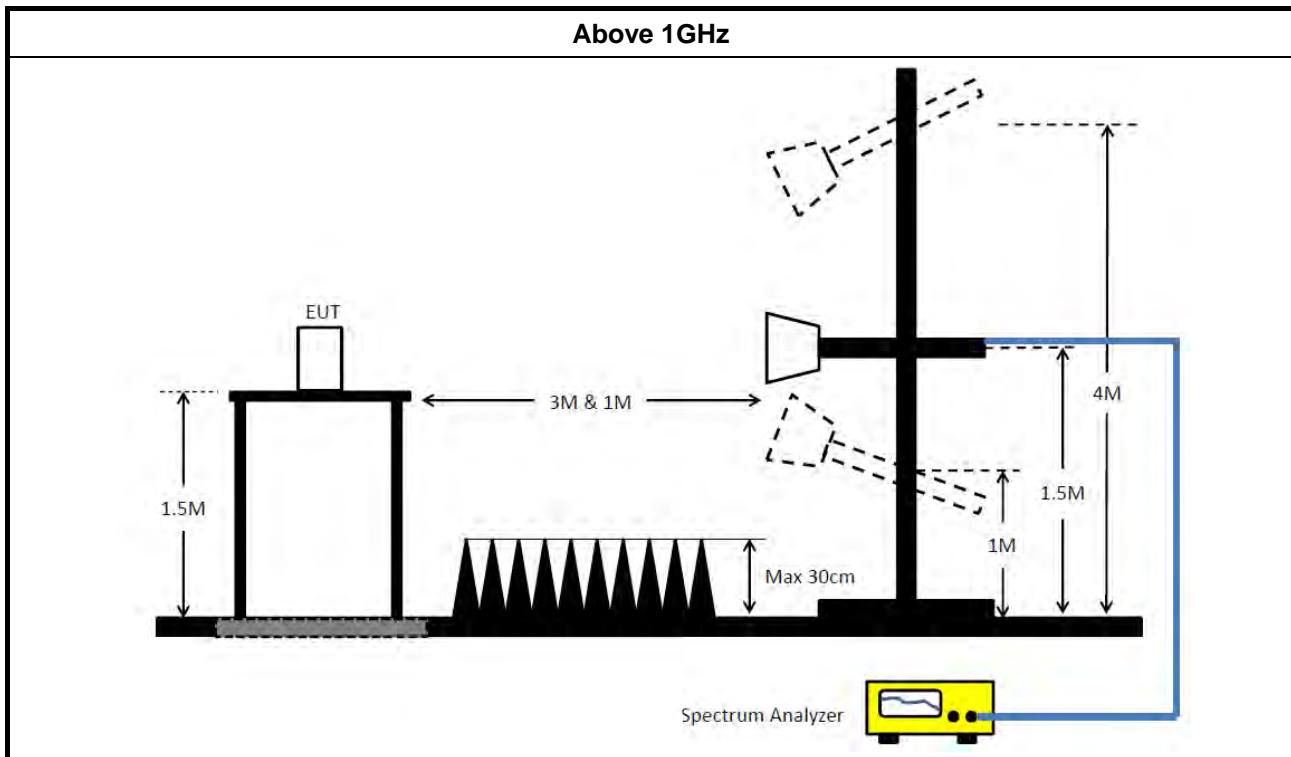
Refer a test equipment and calibration data table in this test report.

#### 3.7.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [hopping duty factor].	
▪ Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as 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.

### 3.7.4 Test Setup





### 3.7.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

### 3.7.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

### 3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G



## 4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 03, 2021	Mar. 02, 2022	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-1 6-2	04083	150kHz ~ 100MHz	Jan. 06, 2021	Jan. 05, 2022	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Mar. 07, 2021	Mar. 06, 2022	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 30, 2021	Jan. 29, 2022	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 19, 2021	May 18, 2022	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 10, 2020	Aug. 09, 2021	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 07, 2021	May 06, 2022	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2020	Nov. 05, 2021	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 18, 2021	Jun. 17, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 20, 2021	May 19, 2022	Radiation (03CH01-CB)
Amplifier	-	-	TF-130N-R1	18GHz ~ 40GHz	Jun.15, 2021	Jun. 14, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 03, 2021	May 02, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 21, 2021	May 20, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 23, 2021	Feb. 22, 2022	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 23, 2021	Feb. 22, 2022	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.



## Conducted Emissions at Powerline

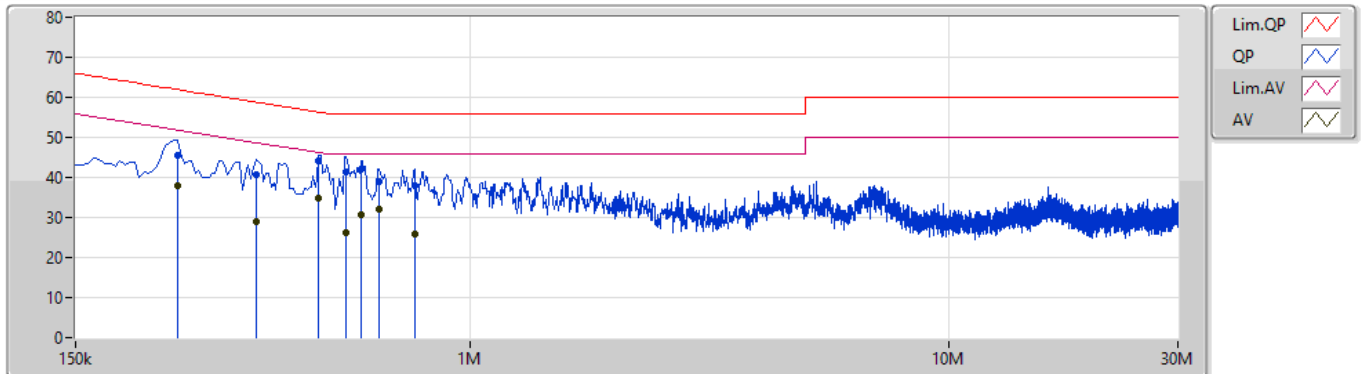
## Appendix A

### Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	487.5k	38.18	46.21	-8.03	Neutral

### Mode 2

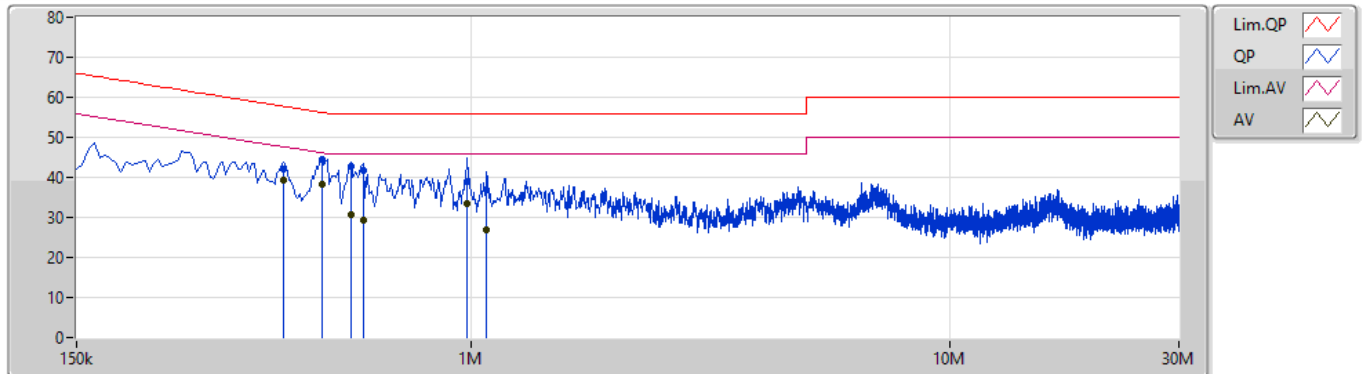
28/07/2021



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	244.5k	45.35	61.95	-16.60	9.89	Line	-	35.46	0.04	0.04	9.81			
AV	244.5k	37.95	51.95	-14.00	9.89	Line	-	28.06	0.04	0.04	9.81			
QP	357k	40.73	58.79	-18.06	9.90	Line	-	30.83	0.04	0.04	9.82			
AV	357k	29.03	48.79	-19.76	9.90	Line	-	19.13	0.04	0.04	9.82			
QP	483k	44.01	56.29	-12.28	9.90	Line	-	34.11	0.04	0.04	9.82			
AV	483k	34.75	46.29	-11.54	9.90	Line	"Worst"	24.85	0.04	0.04	9.82			
QP	550.5k	41.51	56.00	-14.49	9.91	Line	-	31.60	0.05	0.04	9.82			
AV	550.5k	26.33	46.00	-19.67	9.91	Line	-	16.42	0.05	0.04	9.82			
QP	591k	41.91	56.00	-14.09	9.91	Line	-	32.00	0.05	0.04	9.82			
AV	591k	30.80	46.00	-15.20	9.91	Line	-	20.89	0.05	0.04	9.82			
QP	645k	38.98	56.00	-17.02	9.92	Line	-	29.06	0.05	0.04	9.83			
AV	645k	31.96	46.00	-14.04	9.92	Line	-	22.04	0.05	0.04	9.83			
QP	766.5k	37.98	56.00	-18.02	9.92	Line	-	28.06	0.05	0.04	9.83			
AV	766.5k	25.94	46.00	-20.06	9.92	Line	-	16.02	0.05	0.04	9.83			

## Mode 2

28/07/2021



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	406.5k	41.93	57.72	-15.79	9.89	Neutral	-	32.04	0.03	0.04	9.82			
AV	406.5k	39.43	47.72	-8.29	9.89	Neutral	-	29.54	0.03	0.04	9.82			
QP	487.5k	44.58	56.21	-11.63	9.89	Neutral	-	34.69	0.03	0.04	9.82			
AV	487.5k	38.18	46.21	-8.03	9.89	Neutral	"Worst"	28.29	0.03	0.04	9.82			
QP	559.5k	42.79	56.00	-13.21	9.90	Neutral	-	32.89	0.04	0.04	9.82			
AV	559.5k	30.65	46.00	-15.35	9.90	Neutral	-	20.75	0.04	0.04	9.82			
QP	595.5k	41.72	56.00	-14.28	9.90	Neutral	-	31.82	0.04	0.04	9.82			
AV	595.5k	29.19	46.00	-16.81	9.90	Neutral	-	19.29	0.04	0.04	9.82			
QP	982.5k	39.13	56.00	-16.87	9.92	Neutral	-	29.21	0.05	0.04	9.83			
AV	982.5k	33.29	46.00	-12.71	9.92	Neutral	-	23.37	0.05	0.04	9.83			
QP	1.077M	36.83	56.00	-19.17	9.92	Neutral	-	26.91	0.05	0.04	9.83			
AV	1.077M	26.83	46.00	-19.17	9.92	Neutral	-	16.91	0.05	0.04	9.83			

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
QPSK	4.414M	3.928M	3M93G7D	4,369M	3.921M

Max-N dB = Maximum 20dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 20dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

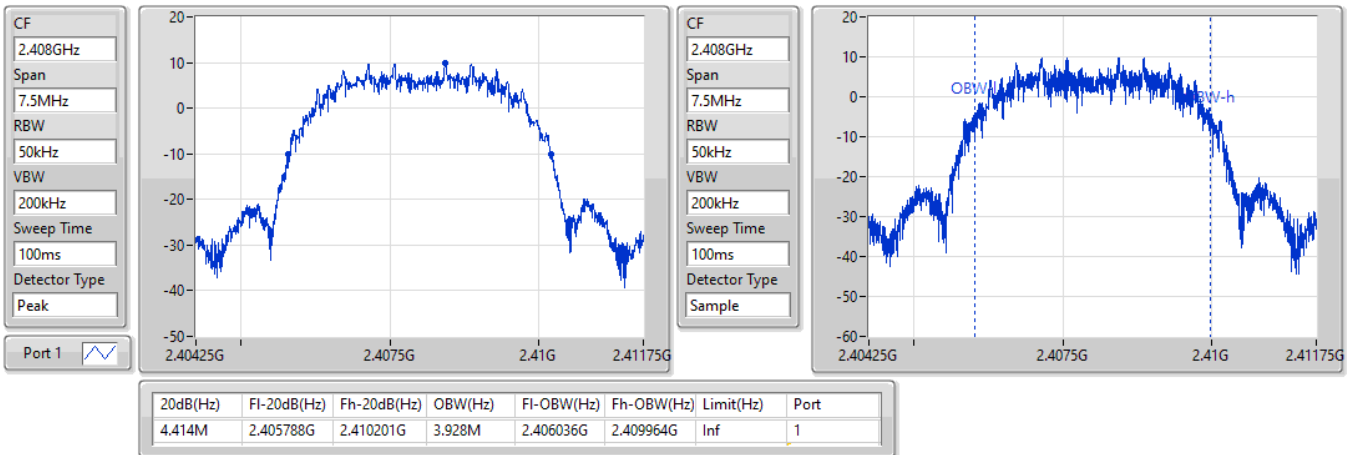
**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
QPSK	-	-	-	-
2408MHz	Pass	Inf	4.414M	3.928M
2442MHz	Pass	Inf	4.373M	3.921M
2468MHz	Pass	Inf	4.369M	3.928M

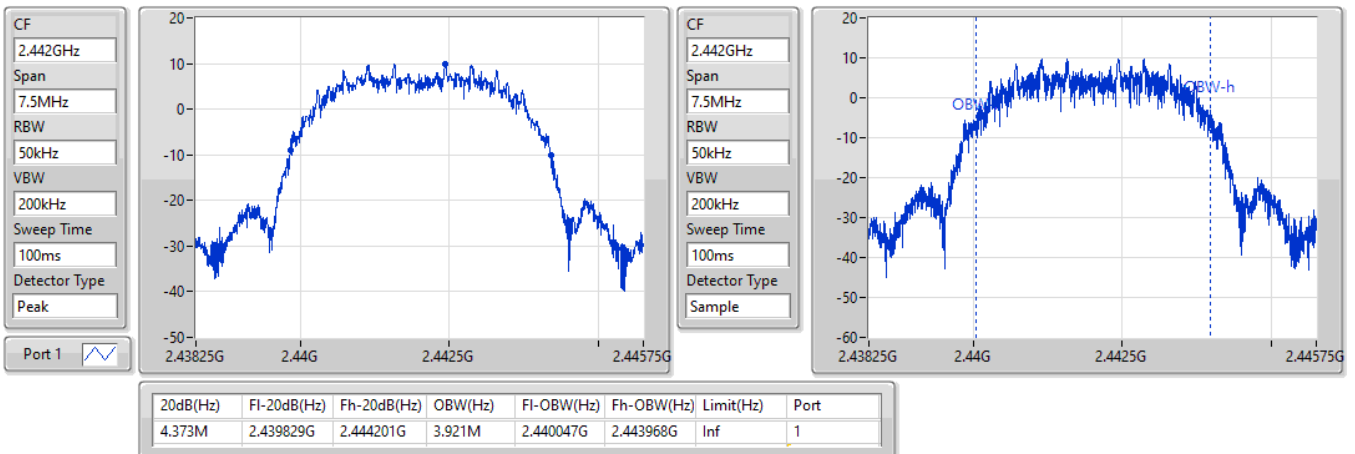
Port X-N dB = Port X 20dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth

**QPSK**
**2408MHz**
**EBW-FS**

21/06/2021

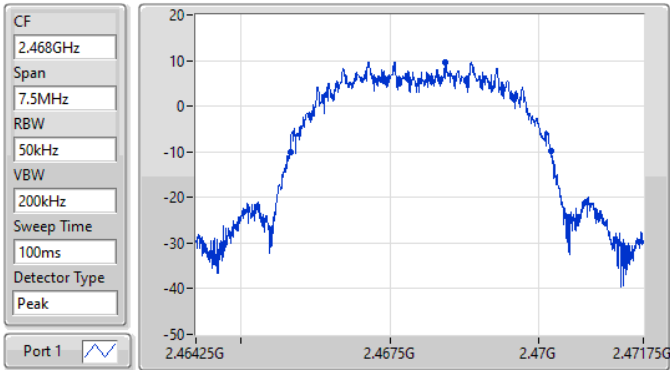

**QPSK**
**2442MHz**
**EBW-FS**

21/06/2021



## QPSK

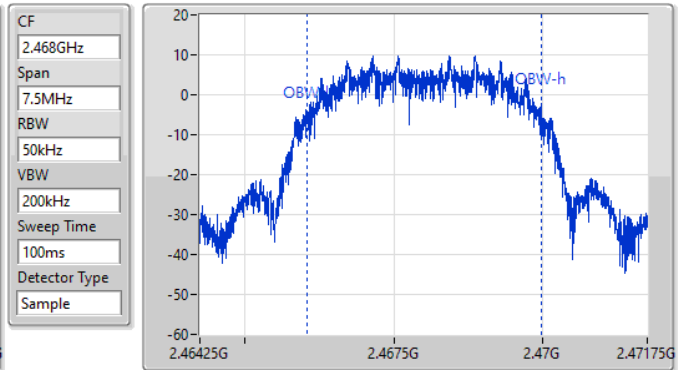
2468MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
4.369M	2.465829G	2.470198G	3.928M	2.46604G	2.469968G	Inf	1

## EBW-FS

21/06/2021





**Summary**

Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
QPSK	3.0015M	3.0015M

**Result**

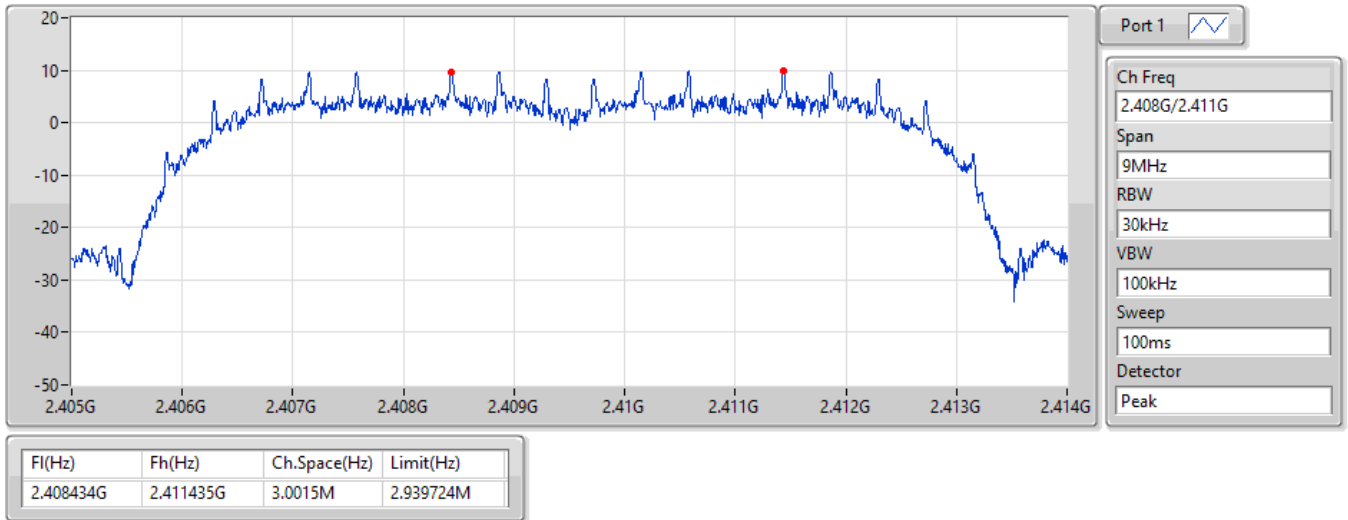
Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
QPSK	-	-	-	-	-
2408MHz	Pass	2.408434G	2.411435G	3.0015M	2.939724M
2442MHz	Pass	2.442434G	2.445435G	3.0015M	2.912418M
2468MHz	Pass	2.465434G	2.468435G	3.0015M	2.909754M

**QPSK**

**Channel Separation-FS**

**2.408G/2.411GHz**

21/06/2021

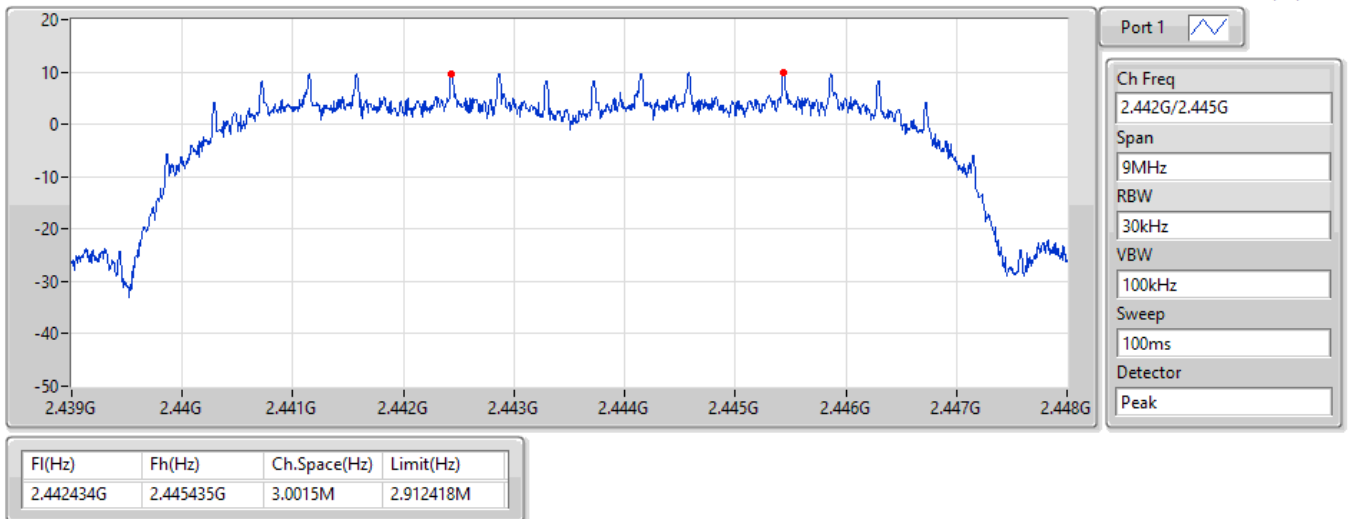


**QPSK**

**Channel Separation-FS**

**2.442G/2.445GHz**

21/06/2021

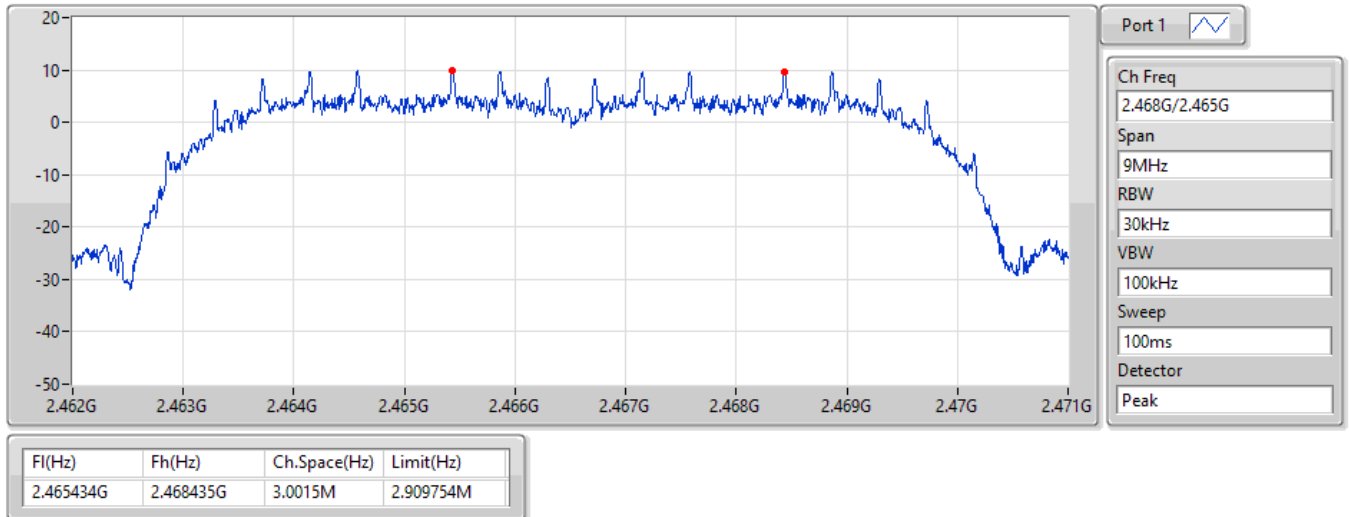


QPSK

Channel Separation-FS

2.468G/2.465GHz

21/06/2021





## Average Power-FHSS

## Appendix C.1

### Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
QPSK	17.54	0.05675



## Average Power-FHSS

## Appendix C.1

### Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
QPSK	-	-	-	-
2408MHz	Pass	-0.20	17.52	21.00
2442MHz	Pass	-0.20	17.54	21.00
2468MHz	Pass	-0.20	17.51	21.00

DG = Directional Gain; Port X = Port X output power



**Summary**

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
QPSK	20.02	0.10046

**Result**

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
QPSK	-	-	-	-
2408MHz	Pass	-0.20	19.96	21.00
2442MHz	Pass	-0.20	20.02	21.00
2468MHz	Pass	-0.20	19.96	21.00

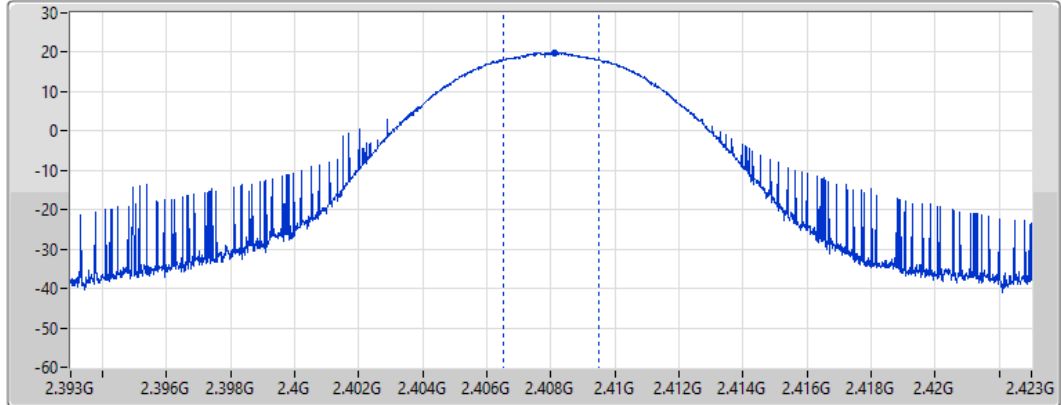
DG = Directional Gain; Port X = Port X output power

## QPSK

2408MHz

CF  
2.408GHz  
Span  
30MHz  
RBW  
3MHz  
VBW  
10MHz  
Sweep Time  
20ms  
Detector Type  
Peak  
CP BW  
NaNHz

Sum= Total Power  
PX=Port X



21/06/2021

Port 1

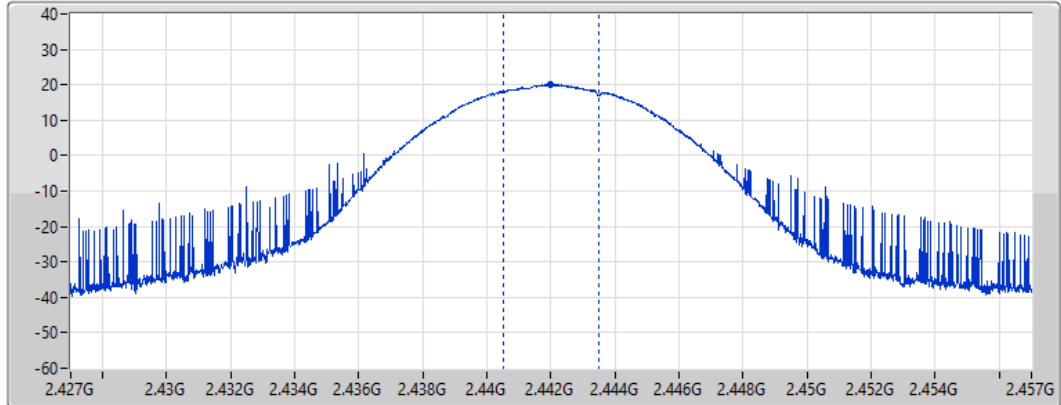
Sum(dBm)	P1(dBm)
19.96	19.96

## QPSK

2442MHz

CF  
2.442GHz  
Span  
30MHz  
RBW  
3MHz  
VBW  
10MHz  
Sweep Time  
20ms  
Detector Type  
Peak  
CP BW  
NaNHz

Sum= Total Power  
PX=Port X



21/06/2021

Port 1

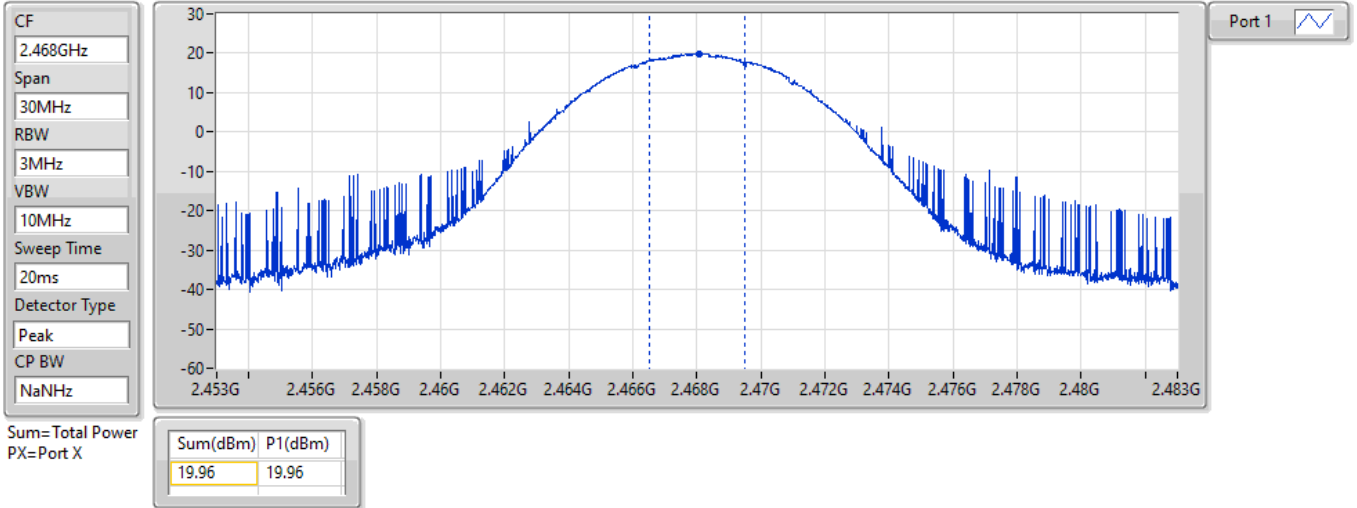
Sum(dBm)	P1(dBm)
20.02	20.02

QPSK

PK Power-FS

2468MHz

21/06/2021





**Summary**

Mode	Max-Hop No
2.4-2.4835GHz	-
QPSK	15



**Result**

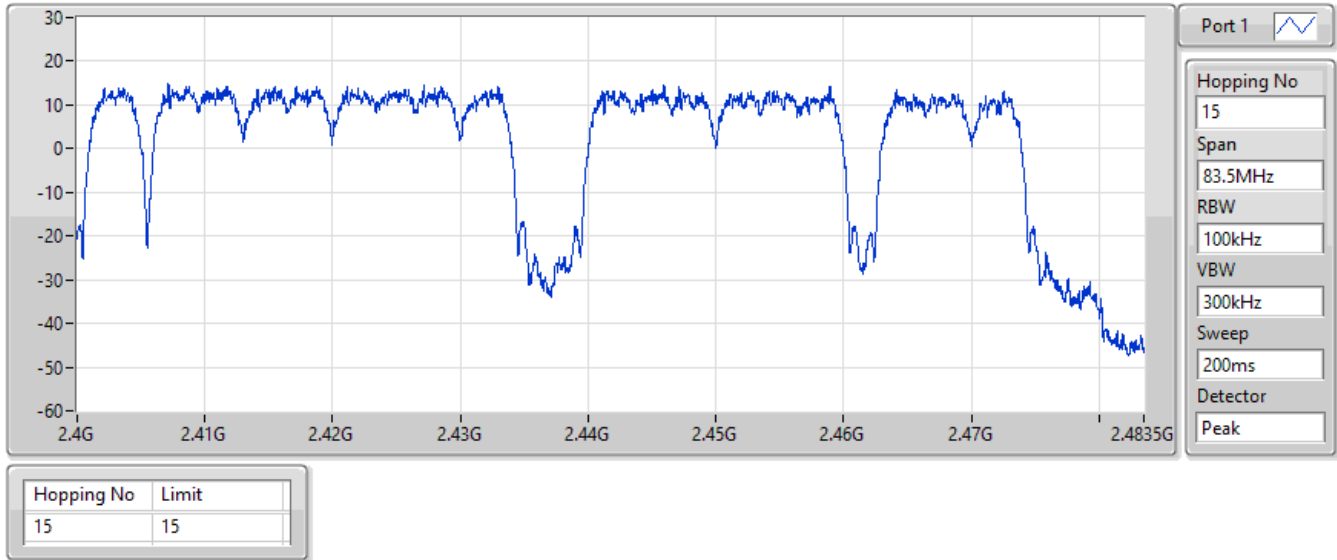
Mode	Result	Hopping No	Limit
QPSK	-	-	-
2442MHz	Pass	15	15

**QPSK**

**2442MHz**

**Hopping-FS**

22/06/2021

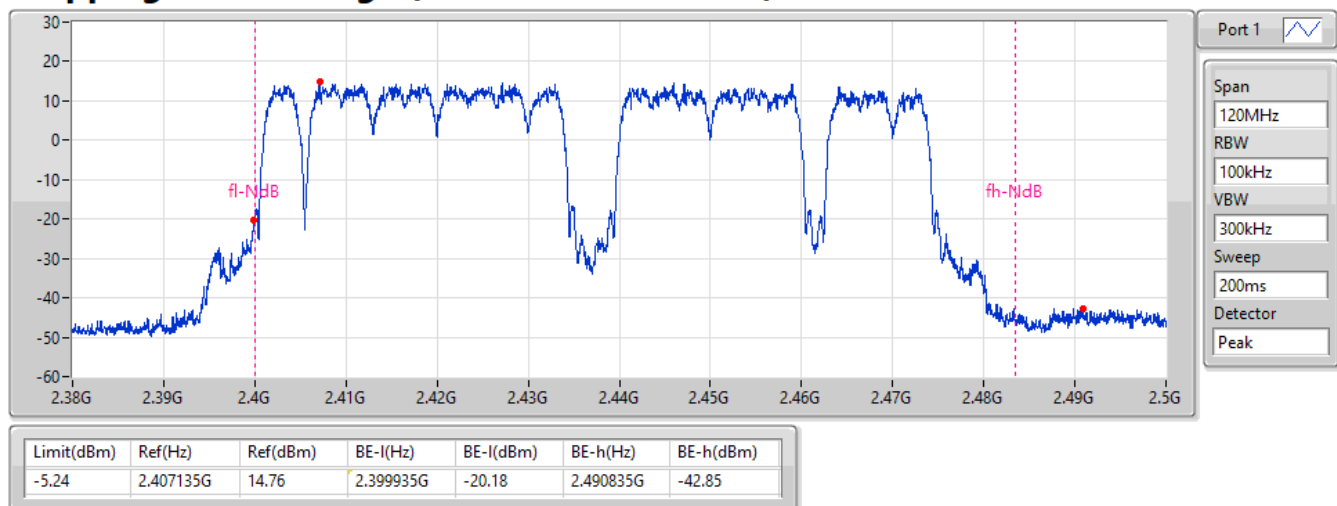


**QPSK**

**2442MHz**

**Hopping Ch Bandedge (Non-restricted Band)**

22/06/2021

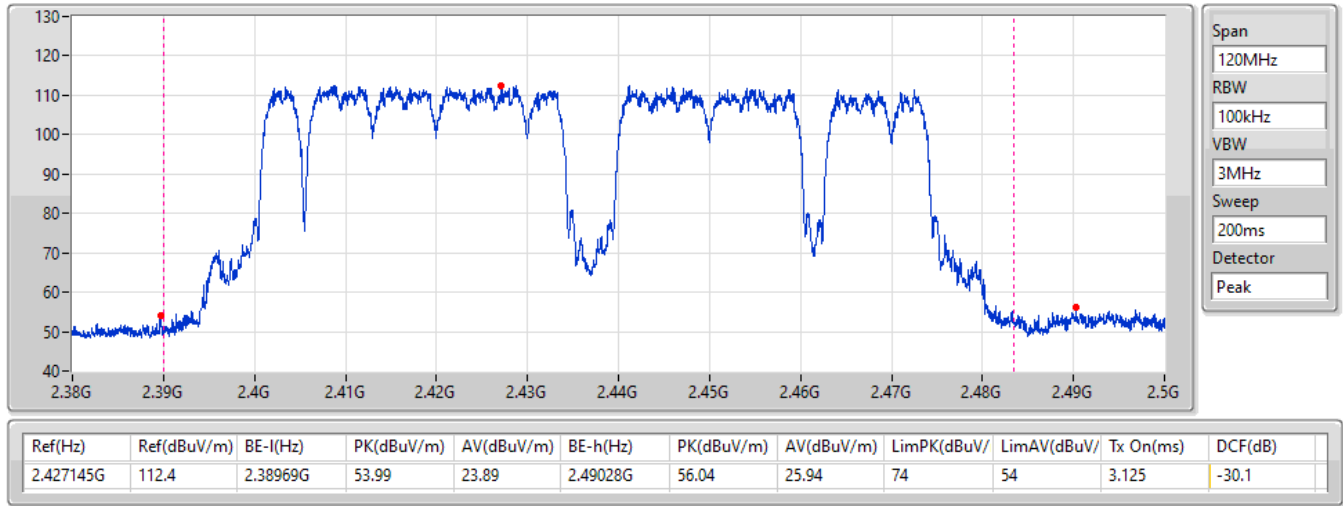


**QPSK**

**2442MHz**

**Hopping Ch Bandedge (Restricted Band)**

22/06/2021





**Summary**

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
QPSK	38.4826m



**Result**

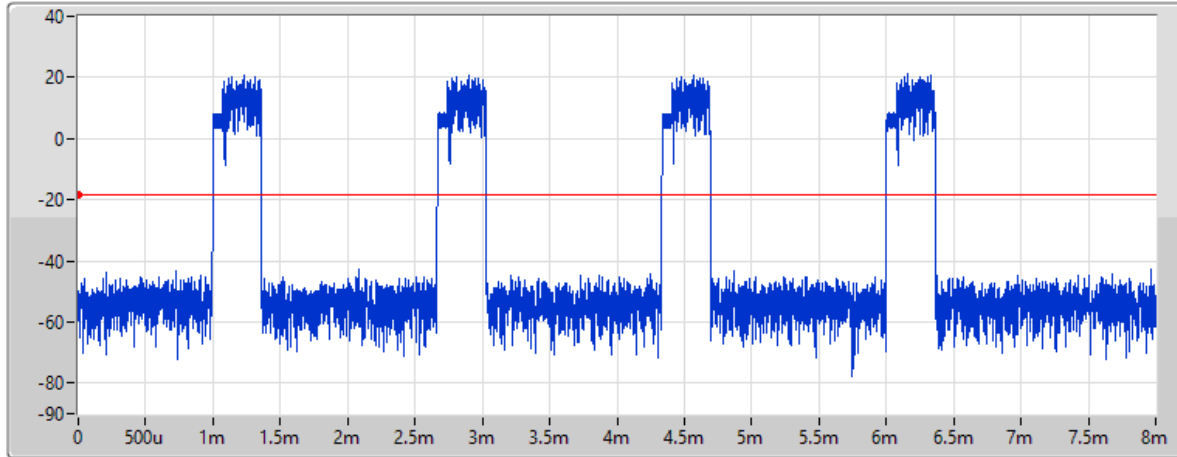
Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
QPSK	-	-	-	-	-
2442MHz	Pass	Inf	38.4826m	400m	361u


**QPSK**

**2442MHz**

**Dwell-FS**

22/06/2021



Port 1 

Ch Freq  
2.442GHz

RBW  
300kHz

VBW  
1MHz

Sweep Time  
8ms

TX Time  
361us

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
0	38.4826m_	400m	361u

## 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)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QPSK	Pass	2.40714G	12.42	-7.58	859.84M	-52.18	2.39976G	-35.05	2.4G	-44.26	2.50315G	-45.60	6.7469G	-45.74	1

**Result**

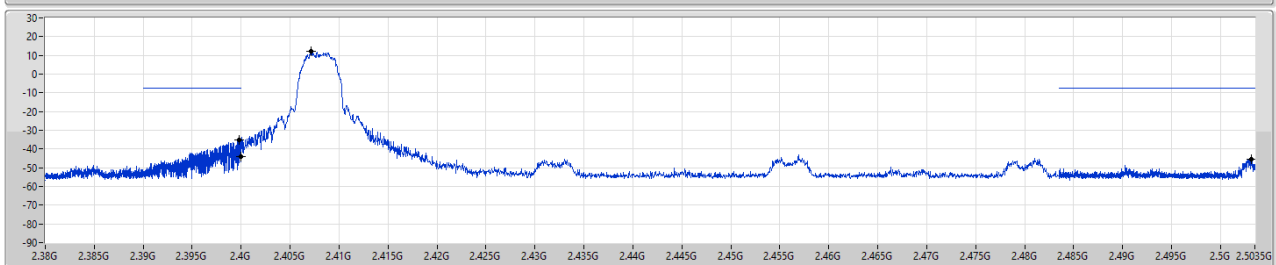
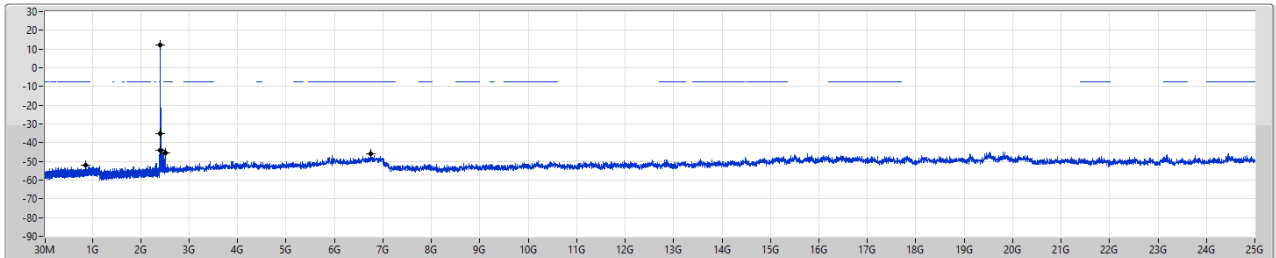
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
QPSK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2408MHz	Pass	2.40714G	12.42	-7.58	859.84M	-52.18	2.39976G	-35.05	2.4G	-44.26	2.50315G	-45.60	6.7469G	-45.74	1
2442MHz	Pass	2.44117G	12.70	-7.30	1.65444G	-52.26	2.39301G	-50.21	2.4835G	-54.29	2.491G	-43.55	16.78878G	-45.71	1
2468MHz	Pass	2.46718G	12.69	-7.31	2.30157G	-51.96	2.39476G	-48.96	2.4835G	-50.10	2.49283G	-44.57	2.54006G	-46.12	1

QPSK

2408MHz

CSENdB-FS

22/06/2021



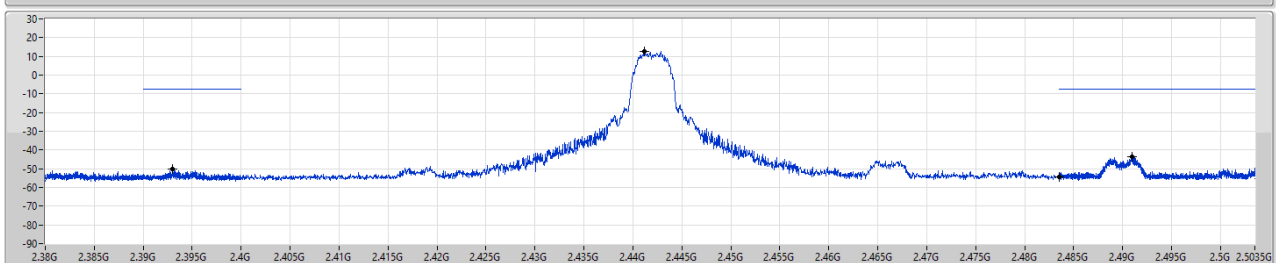
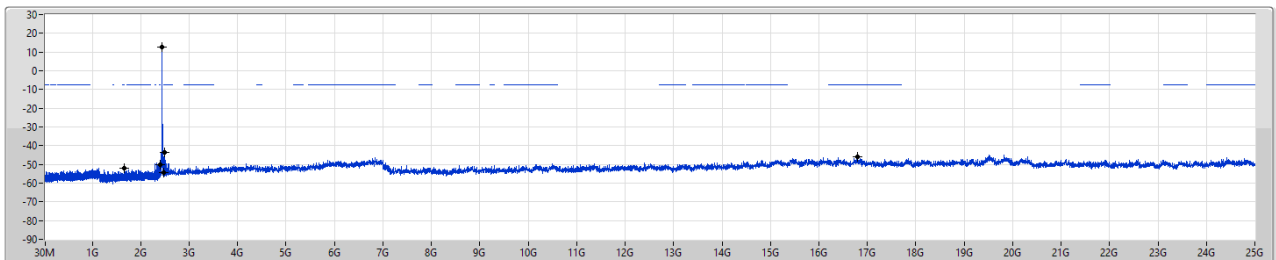
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40714G	12.42	-7.58	859.84M	-52.18	2.39976G	-35.05	2.4G	-44.26	2.50315G	-45.60	6.7469G	-45.74	1

QPSK

2442MHz

CSENdB-FS

22/06/2021



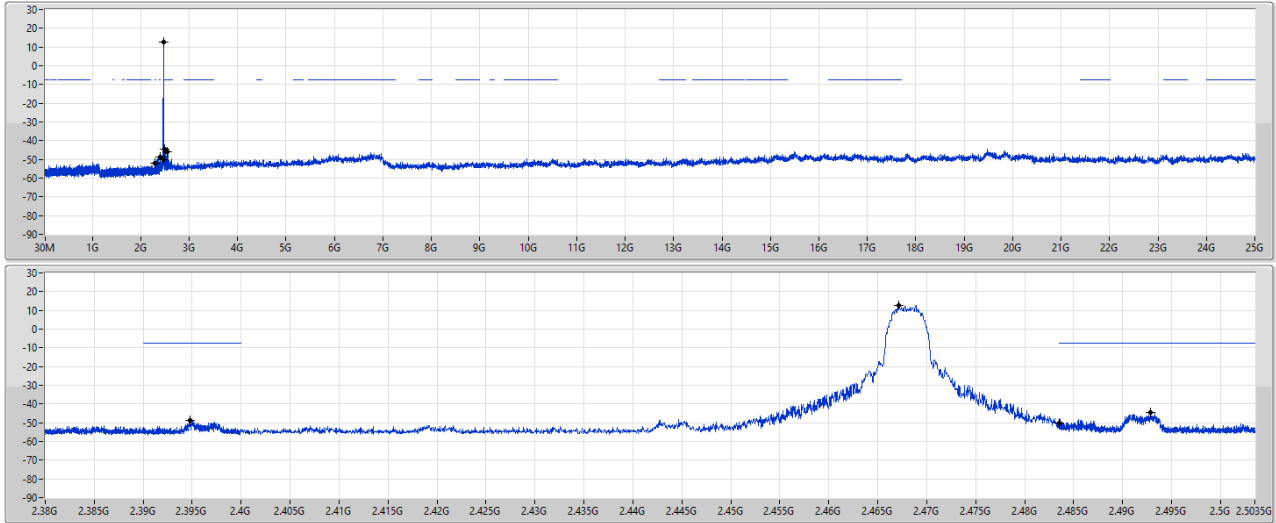
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44117G	12.70	-7.30	1.65444G	-52.26	2.39301G	-50.21	2.4835G	-54.29	2.491G	-43.55	16.78878G	-45.71	1

QPSK

CSEndB-FS

2468MHz

22/06/2021



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46718G	12.69	-7.31	2.30157G	-51.96	2.39476G	-48.96	2.4835G	-50.10	2.49283G	-44.57	2.54006G	-46.12	1



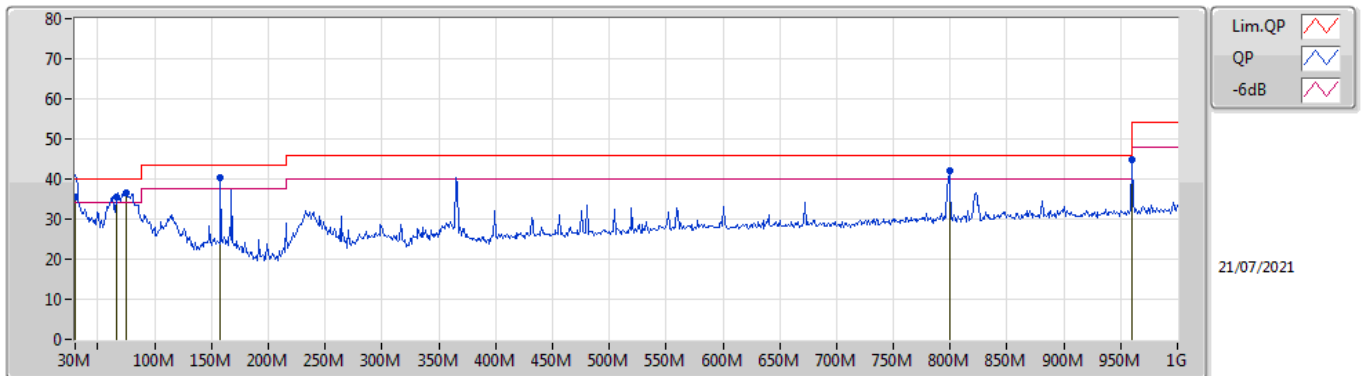
## ***Radiated Emissions below 1GHz***

## ***Appendix G.1***

### **Summary**

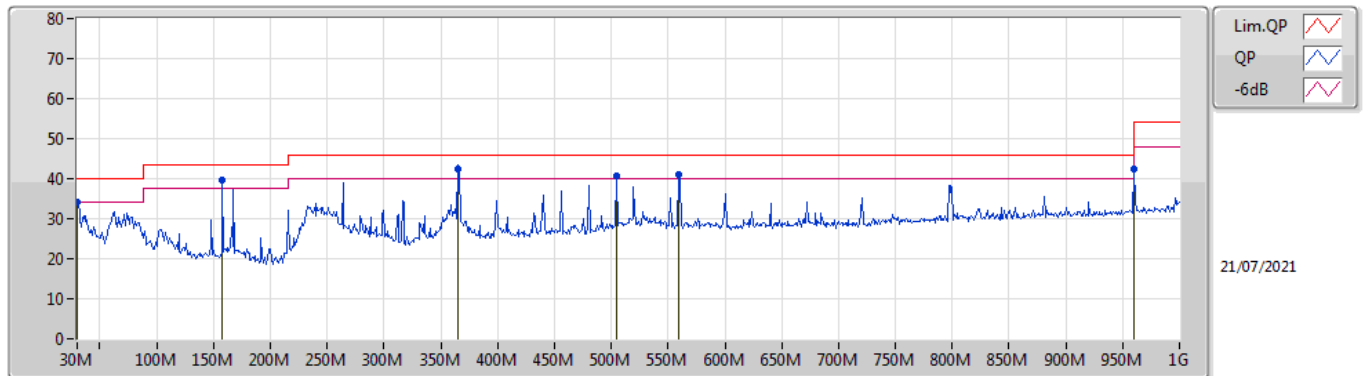
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 5	Pass	QP	959.99M	44.93	46.00	-1.07	Vertical

### Mode 5



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
QP	30M	35.41	40.00	-4.59	-6.89	3	Vertical	208	1.00	-	42.30	24.20	0.40	31.49
PK	66.86M	35.68	40.00	-4.32	-19.02	3	Vertical	64	1.50	-	54.70	12.06	0.80	31.88
PK	74.62M	36.69	40.00	-3.31	-18.79	3	Vertical	102	1.00	-	55.48	12.22	0.89	31.90
PK	158.04M	40.47	43.50	-3.03	-14.76	3	Vertical	161	1.00	-	55.23	15.81	1.39	31.96
PK	799.21M	42.04	46.00	-3.96	-3.32	3	Vertical	51	1.25	-	45.36	25.57	3.80	32.69
QP	959.99M	44.93	46.00	-1.07	-1.67	3	Vertical	158	1.25	"Worst"	46.60	26.58	4.32	32.57

### Mode 5



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	30M	34.22	40.00	-5.78	-6.89	3	Horizontal	197	1.50	-	41.11	24.20	0.40	31.49
PK	158.04M	39.52	43.50	-3.98	-14.76	3	Horizontal	76	2.00	-	54.28	15.81	1.39	31.96
QP	364.65M	42.41	46.00	-3.59	-8.99	3	Horizontal	353	1.00	"Worst"	51.40	20.68	2.46	32.13
PK	504.33M	40.60	46.00	-5.40	-6.26	3	Horizontal	102	1.00	-	46.86	23.17	2.91	32.34
PK	559.62M	40.97	46.00	-5.03	-5.11	3	Horizontal	103	1.00	-	46.08	24.33	3.04	32.48
PK	959.99M	42.30	46.00	-3.70	-1.67	3	Horizontal	138	1.00	-	43.97	26.58	4.32	32.57

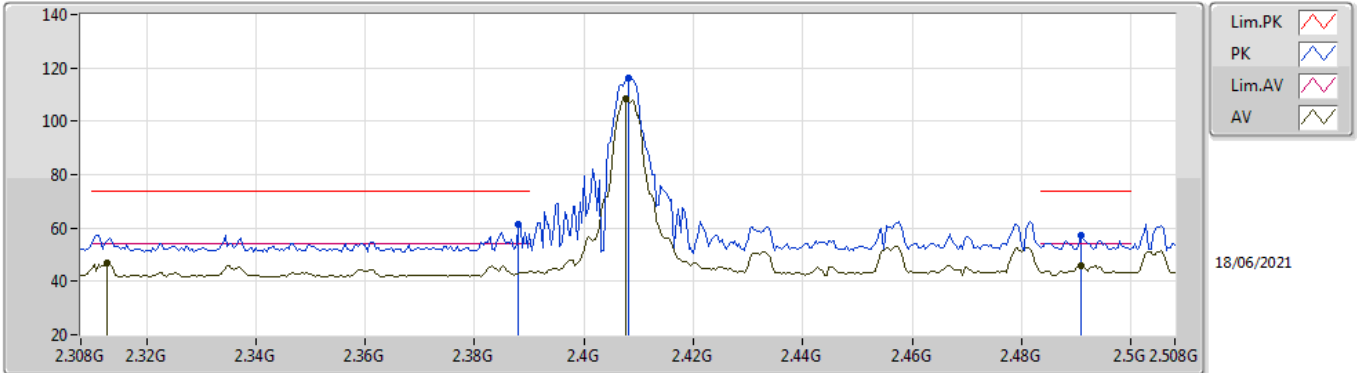


**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
QPSK	Pass	AV	2.4928G	53.91	54.00	-0.09	3	Vertical	80	1.80	-

## QPSK

### 2408MHz\_TX

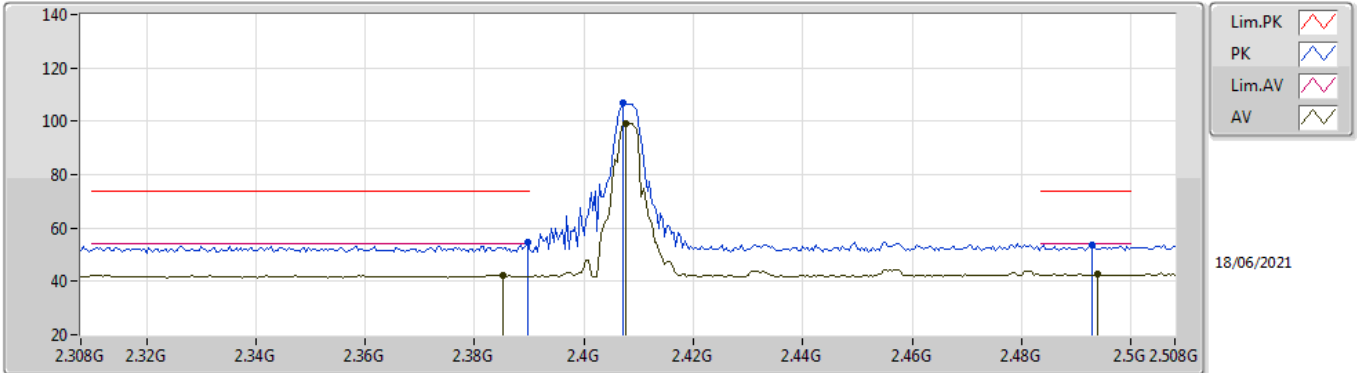


EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.388G	61.23	74.00	-12.77	31.66	3	Vertical	91	1.31	-	27.38	2.19	-
AV	2.3128G	46.70	54.00	-7.30	17.29	3	Vertical	91	1.31	-	27.30	2.11	-
PK	2.408G	116.16	Inf	-Inf	86.53	3	Vertical	91	1.31	-	27.42	2.21	-
AV	2.4076G	108.31	Inf	-Inf	78.68	3	Vertical	91	1.31	-	27.42	2.21	-
PK	2.4908G	57.12	74.00	-16.88	27.09	3	Vertical	91	1.31	-	27.74	2.29	-
AV	2.4908G	46.01	54.00	-7.99	15.98	3	Vertical	91	1.31	-	27.74	2.29	-

## QPSK

### 2408MHz\_TX

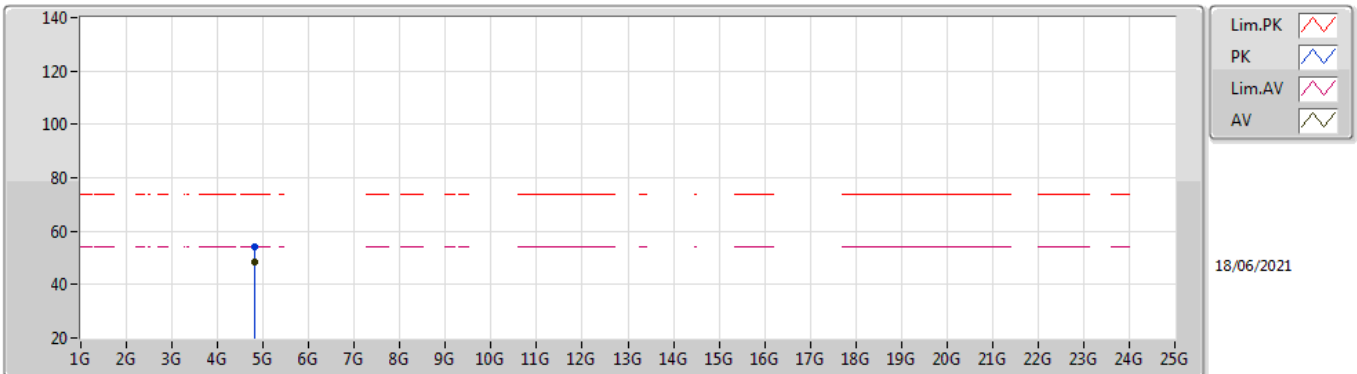


EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3896G	54.57	74.00	-19.43	25.00	3	Horizontal	76	1.42	-	27.38	2.19	-
AV	2.3852G	42.45	54.00	-11.55	12.89	3	Horizontal	76	1.42	-	27.37	2.19	-
PK	2.4072G	106.99	Inf	-Inf	77.37	3	Horizontal	76	1.42	-	27.41	2.21	-
AV	2.4076G	99.01	Inf	-Inf	69.38	3	Horizontal	76	1.42	-	27.42	2.21	-
PK	2.4928G	53.73	74.00	-20.27	23.68	3	Horizontal	76	1.42	-	27.76	2.29	-
AV	2.494G	42.75	54.00	-11.25	12.70	3	Horizontal	76	1.42	-	27.76	2.29	-

## QPSK

### 2408MHz\_TX

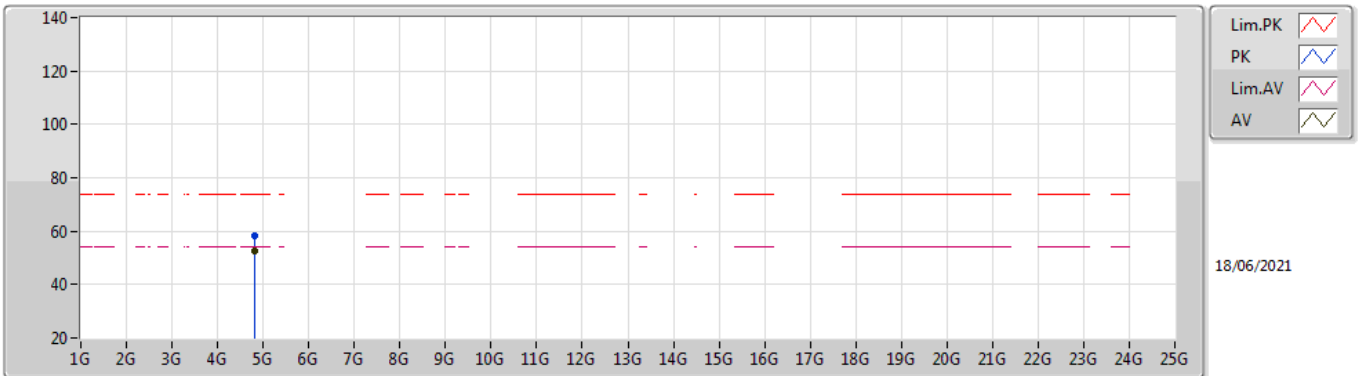


EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.81596G	54.35	74.00	-19.65	50.13	3	Vertical	250	1.80	-	32.20	5.01	32.99
AV	4.81594G	48.32	54.00	-5.68	44.10	3	Vertical	250	1.80	-	32.20	5.01	32.99

# QPSK

## 2408MHz\_TX

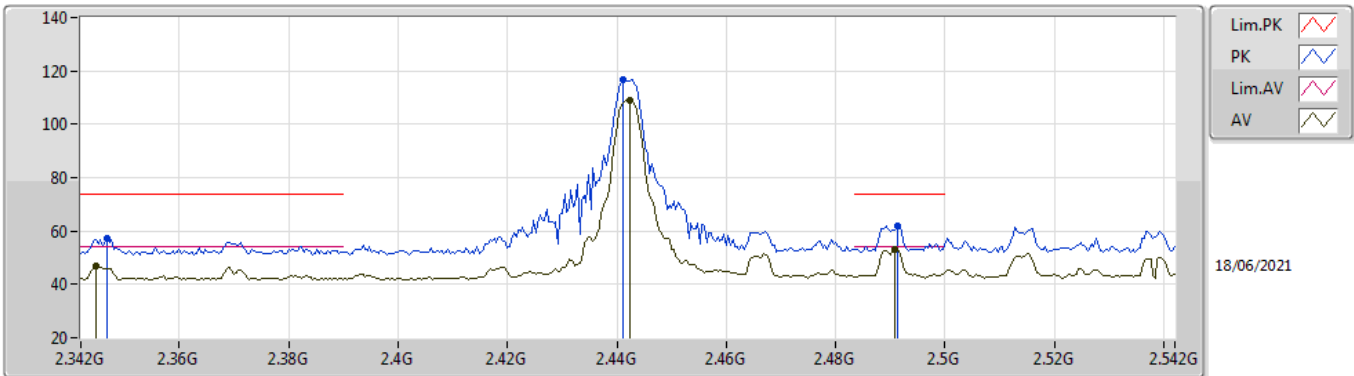


EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA	
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)	
PK	4.81604G	58.03	74.00	-15.97	53.81	3	Horizontal	355	1.80	-	32.20	5.01	32.99	
AV	4.816G	52.67	54.00	-1.33	48.45	3	Horizontal	355	1.80	-	32.20	5.01	32.99	

## QPSK

### 2442MHz\_TX

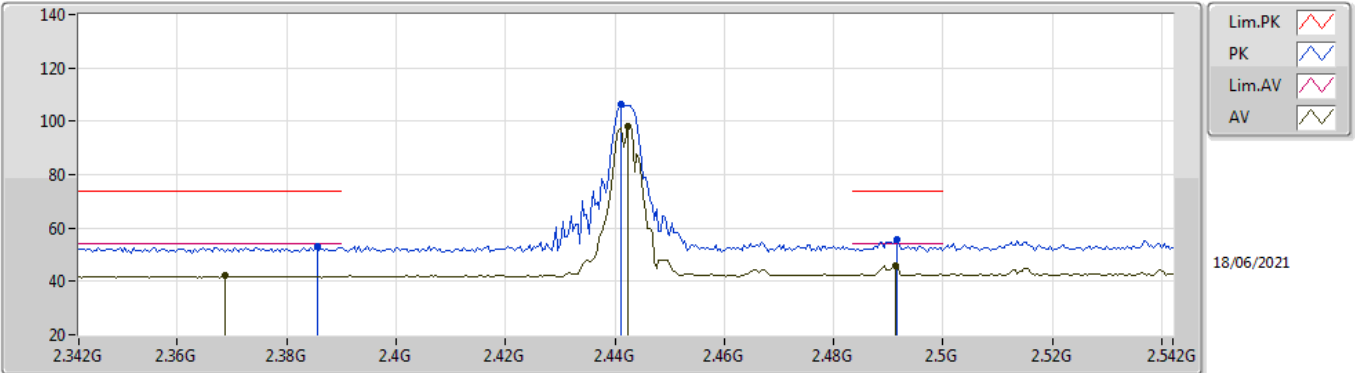


EUT V\_1TX  
Setting 2  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3468G	57.15	74.00	-16.85	27.70	3	Vertical	212	1.80	-	27.30	2.15	-
AV	2.3448G	47.09	54.00	-6.91	17.65	3	Vertical	212	1.80	-	27.30	2.14	-
PK	2.4412G	116.87	Inf	-Inf	87.15	3	Vertical	212	1.80	-	27.48	2.24	-
AV	2.4424G	108.82	Inf	-Inf	79.10	3	Vertical	212	1.80	-	27.48	2.24	-
PK	2.4912G	62.12	74.00	-11.88	32.08	3	Vertical	212	1.80	-	27.75	2.29	-
AV	2.4908G	53.10	54.00	-0.90	23.07	3	Vertical	212	1.80	-	27.74	2.29	-

## QPSK

### 2442MHz\_TX

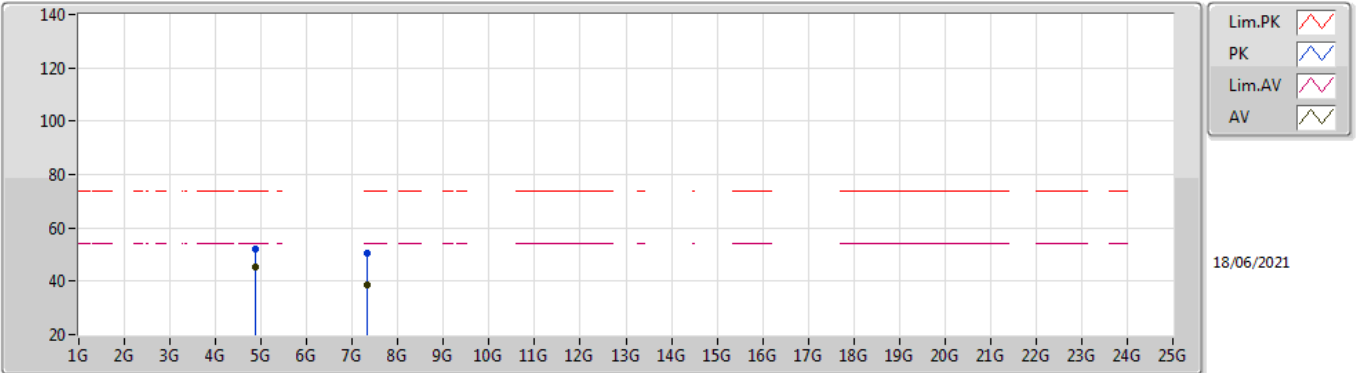


EUT V\_1TX  
Setting 2  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3856G	53.01	74.00	-20.99	23.45	3	Horizontal	169	1.74	-	27.37	2.19	-
AV	2.3688G	42.01	54.00	-11.99	12.50	3	Horizontal	169	1.74	-	27.34	2.17	-
PK	2.4412G	106.20	Inf	-Inf	76.48	3	Horizontal	169	1.74	-	27.48	2.24	-
AV	2.4424G	98.35	Inf	-Inf	68.63	3	Horizontal	169	1.74	-	27.48	2.24	-
PK	2.4916G	55.72	74.00	-18.28	25.68	3	Horizontal	169	1.74	-	27.75	2.29	-
AV	2.4912G	45.76	54.00	-8.24	15.72	3	Horizontal	169	1.74	-	27.75	2.29	-

## QPSK

### 2442MHz\_TX

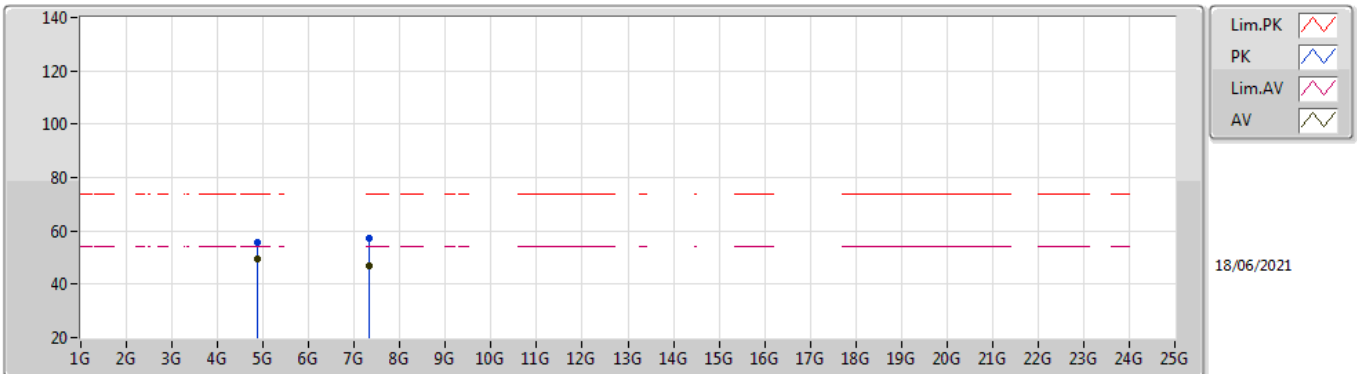


EUT V\_1TX  
Setting 2  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	4.88399G	52.21	74.00	-21.79	47.68	3	Vertical	277	2.07	-	32.47	5.04	32.98	
AV	4.88404G	45.54	54.00	-8.46	41.01	3	Vertical	277	2.07	-	32.47	5.04	32.98	
PK	7.32754G	50.65	74.00	-23.35	40.18	3	Vertical	100	1.56	-	37.21	6.33	33.07	
AV	7.32373G	38.58	54.00	-15.42	28.14	3	Vertical	100	1.56	-	37.19	6.32	33.07	

## QPSK

## 2442MHz\_TX

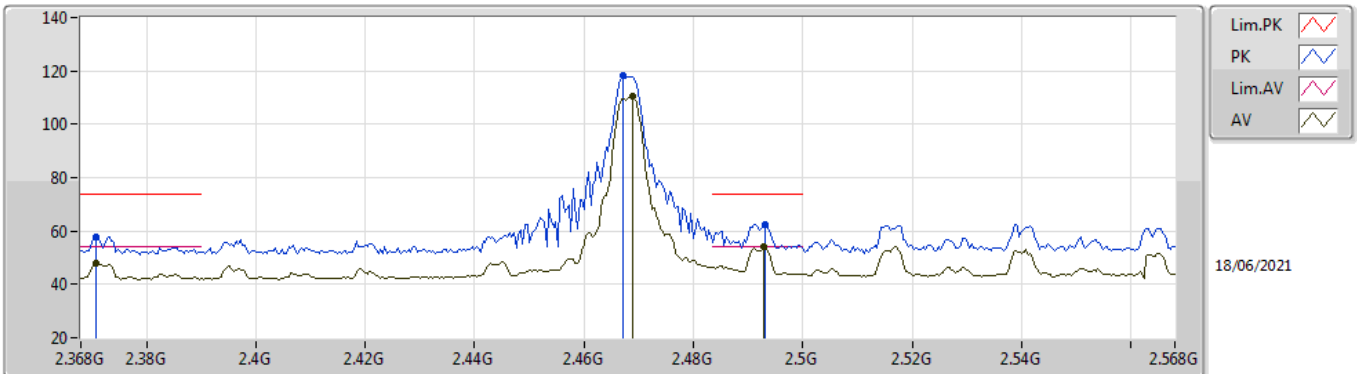


EUT V\_1TX  
Setting 2  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	4.88393G	55.56	74.00	-18.44	51.03	3	Horizontal	0	1.66	-	32.47	5.04	32.98	
AV	4.88396G	49.43	54.00	-4.57	44.90	3	Horizontal	0	1.66	-	32.47	5.04	32.98	
PK	7.32671G	56.99	74.00	-17.01	46.52	3	Horizontal	186	2.56	-	37.21	6.33	33.07	
AV	7.32507G	46.69	54.00	-7.31	36.23	3	Horizontal	186	2.56	-	37.20	6.33	33.07	

## QPSK

### 2468MHz\_TX

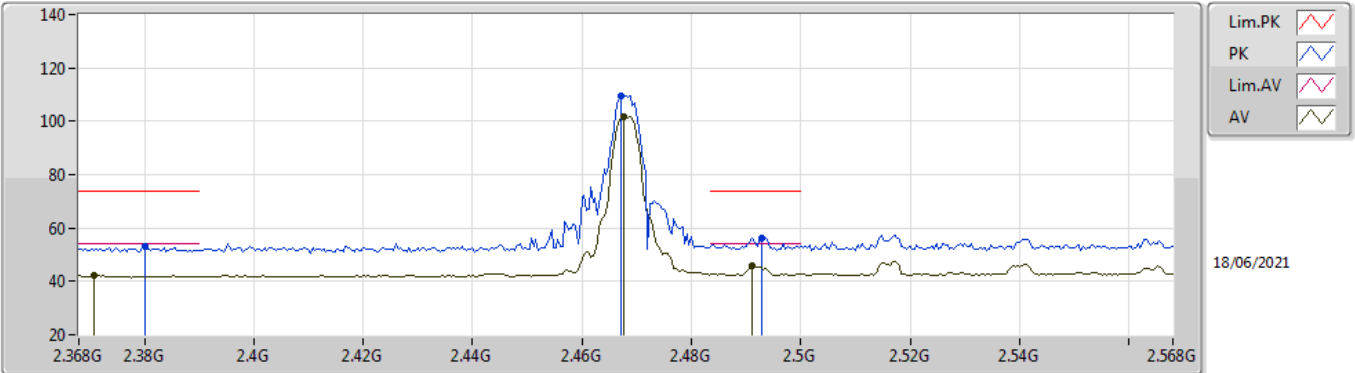


EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3708G	57.79	74.00	-16.21	28.28	3	Vertical	80	1.80	-	27.34	2.17	-
AV	2.3708G	48.09	54.00	-5.91	18.58	3	Vertical	80	1.80	-	27.34	2.17	-
PK	2.4672G	118.39	Inf	-Inf	88.52	3	Vertical	80	1.80	-	27.60	2.27	-
AV	2.4688G	110.41	Inf	-Inf	80.53	3	Vertical	80	1.80	-	27.61	2.27	-
PK	2.4932G	62.31	74.00	-11.69	32.26	3	Vertical	80	1.80	-	27.76	2.29	-
AV	2.4928G	53.91	54.00	-0.09	23.86	3	Vertical	80	1.80	-	27.76	2.29	-

## QPSK

### 2468MHz\_TX

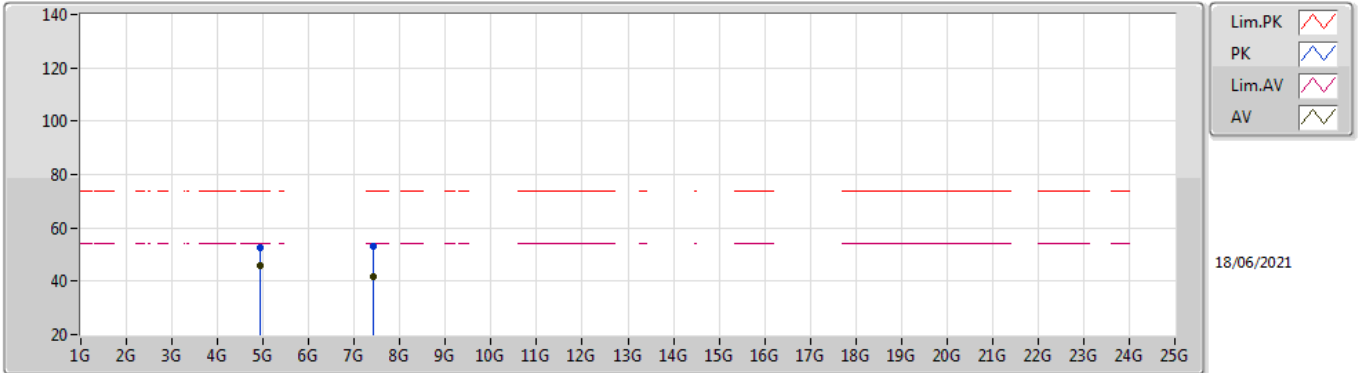


EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.38G	52.95	74.00	-21.05	23.41	3	Horizontal	166	1.39	-	27.36	2.18	-
AV	2.3708G	42.10	54.00	-11.90	12.59	3	Horizontal	166	1.39	-	27.34	2.17	-
PK	2.4672G	109.61	Inf	-Inf	79.74	3	Horizontal	166	1.39	-	27.60	2.27	-
AV	2.4676G	101.63	Inf	-Inf	71.75	3	Horizontal	166	1.39	-	27.61	2.27	-
PK	2.4928G	56.31	74.00	-17.69	26.26	3	Horizontal	166	1.39	-	27.76	2.29	-
AV	2.4912G	45.87	54.00	-8.13	15.83	3	Horizontal	166	1.39	-	27.75	2.29	-

## QPSK

### 2468MHz\_TX

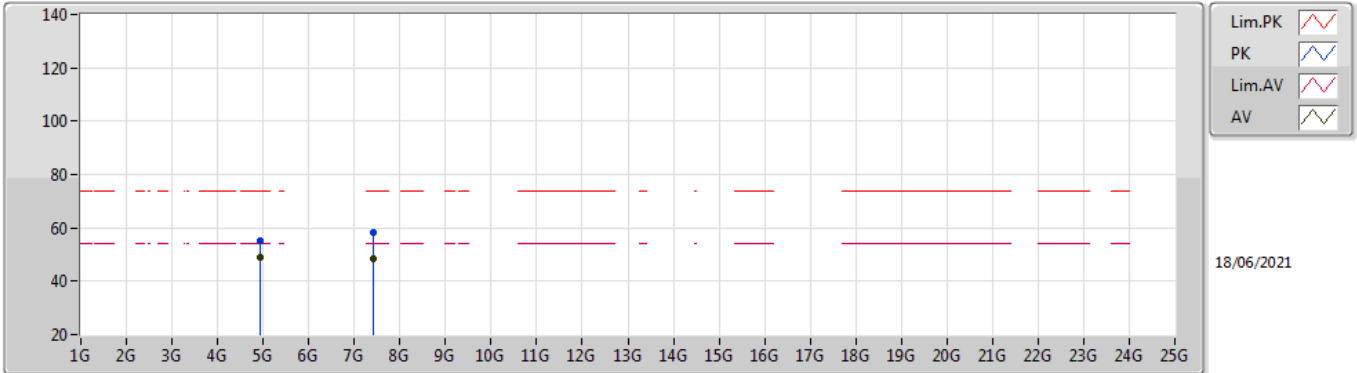


EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	4.93594G	52.52	74.00	-21.48	47.70	3	Vertical	185	1.80	-	32.72	5.07	32.97	
AV	4.93602G	45.73	54.00	-8.27	40.91	3	Vertical	185	1.80	-	32.72	5.07	32.97	
PK	7.40478G	53.14	74.00	-20.86	42.49	3	Vertical	146	1.76	-	37.29	6.40	33.04	
AV	7.40482G	41.48	54.00	-12.52	30.83	3	Vertical	146	1.76	-	37.29	6.40	33.04	

## QPSK

### 2468MHz\_TX



EUT V\_1TX  
Setting 1  
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.93594G	55.33	74.00	-18.67	50.51	3	Horizontal	0	1.80	-	32.72	5.07	32.97
AV	4.93597G	48.80	54.00	-5.20	43.98	3	Horizontal	0	1.80	-	32.72	5.07	32.97
PK	7.40524G	58.16	74.00	-15.84	47.51	3	Horizontal	191	2.62	-	37.29	6.40	33.04
AV	7.40296G	48.53	54.00	-5.47	37.88	3	Horizontal	191	2.62	-	37.29	6.40	33.04