



FCC Test Report

FCC ID : QXO-AP460
Equipment : Wireless Access Point
Brand Name : Extreme Networks, Inc.
Model Name : AP460i, AP460e
Applicant : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119, United States
Manufacturer : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119, United States
Standard : 47 CFR FCC Part 15.247

The product was received on Aug. 13, 2019, and testing was started from Aug. 26, 2019 and completed on Nov. 12, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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

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History of this test report

TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver3.6
FCC ID: QXO-AP460

Summary of Test Result

Report Clause	Ref.Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	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:

None

Reviewed by: Sam Tsai

Report Producer: Jenny Yang

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Mode	Ch. Frequency (MHz)	Channel Spacing (MHz)	Channel Number
2400-2483.5	Thread	2405-2480	5	11-26 [16]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	Thread	5	1TX

Note:

- ♦ Thread uses a O-QPSK modulation for DSSS.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

(AP460i) Internal Antenna

Ant.	Brand	Model Number (P/N)	Antenna Type	Connector	Antenna Gain (dBi)			Remark
					2.4GHz	5GHz	BLE/Thread	
1	SENAO	5718A0462300	PIFA	IPEX	-	5.58	-	Radio 2
2	SENAO	5718A0463300	PIFA	IPEX	-	5.58	-	Radio 2
3	SENAO	5718A0465300	PIFA	IPEX	-	5.58	-	Radio 2
4	SENAO	5718A0464300	PIFA	IPEX	-	5.58	-	Radio 2
5	SENAO	5718A0458300	PIFA	IPEX	4.82	-	-	Radio 1
6	SENAO	5718A0459300	PIFA	IPEX	4.82	-	-	Radio 1
7	SENAO	5718A0460300	PIFA	IPEX	4.87	5.02	-	Radio 3
8	SENAO	5718A0461300	PIFA	IPEX	4.87	5.02	-	Radio 3
9	SENAO	5718A0466300	PIFA	IPEX	-	-	4.65	Radio 4

(AP460e) External Antenna

Group	Brand	Model Number (P/N)	Antenna Type	Connector	Antenna Gain (dBi)		
					2.4GHz	5GHz	BLE/Thread
1	Extreme	ML-2452-APA2-01	Omni	RP SMA male	3.17	4.85	-
2	Extreme	ML-2452-APA2-02	Omni	RP SMA male	3.17	4.85	-
3	Extreme	ML-2452-HPA5-036	Omni	RP SMA male	3.9	5.7	-
4	Extreme	ML-2452-HPAG4A6-01	Omni	N male	4	7.3	-
5	Extreme	ML-2452-PNA5-01R	Panel	Type N-Male	4.5	5	-
6	Extreme	ML-2452-PTA4M4-036	Omni	Rev-Polarity SMA Male 4x	5	6.6	-
7	Extreme	ML-2452-HPAG5A8-01	Omni	N male	5	8	-
8	Extreme	WS-AO-DQ04360N	Omni	N male	5.5	6	-
9	Extreme	AI-DQ04360S	Omni	RP SMA male	5.5	6	-
10	Extreme	ML-2452-SEC6M4-036 / WS-AI-DQ05120	Panel	RP SMA male	6.92	7.23	-
11	Extreme	WS-AI-DE07025	Panel	RP SMA male	7.5	6.5	-
12	Extreme	ML-2452-PNA7-01R	Panel 1	Type N-Male	7.8	10.7	7.8
13	Extreme	WS-AI-DE10055	Panel 2	RP SMA male	10.5	7.5	-
14	Extreme	ML-2499-HPA8-01	Dipole	N male	-	-	8

Note 1: Group 7, 12 and 13 were measured during the test for WLAN 2.4G Mode.

Note 2: Group 12 and 14 were measured during the test for Bluetooth/Thread Mode.

Note 3: Group 7 and 12 were measured during the test for WLAN 5G Mode.

For 2.4GHz function:

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

Only port 1 can be used as transmitting/receiving antenna.

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

Port 1 and port 2 could transmit/receive simultaneously.

For BT function:

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

Only port 1 can be used as transmitting/receiving antenna.

For Thread function:

For IEEE 802.15.4 Thread mode (1TX/1RX)

Only port 1 can be used as transmitting/receiving antenna.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (1TX/1RX)

Only port 1 can be used as transmitting/receiving antenna.

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

Port 1 and port 2 could transmit/receive simultaneously.

For IEEE 802.11 a/n/ac/ax mode (4TX/4RX)

Port 1, port 2, port 3 and port 4 could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From PoE
EUT Function	☒ Point-to-multipoint ☐ Point-to-point
Type of EUT	
☒	Stand-alone
☐	Combined (EUT where the radio part is fully integrated within another device)
	Combined Equipment - Brand Name / Model No.: ...
☐	Plug-in radio (EUT intended for a variety of host systems)
	Host System - Brand Name / Model No.: ...
☐	Other:

1.1.4 Table for Multiple Listing

Sample Number	Model Name	Description
1	AP460i	The "i" in AP460i indicates that it comes with internal antennas and the "e" in AP460e indicates that the access point comes with external antenna connectors.
2	AP460e	

1.1.5 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
Thread	0.887	0.52	2.666m	1k

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

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ KDB 558074 D01 v05r02
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location			
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	
		TEL : 886-3-327-3456	FAX : 886-3-327-0973
Test site Designation No. TW1190 with FCC.			
☐	JHUBEI	ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.)	
		TEL : 886-3-656-9065	FAX : 886-3-656-9085
Test site Designation No. TW0006 with FCC.			

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward Wang	20.9~22.1°C / 60.4~64.2%	08/Nov/2019~ 12/Nov/2019
RF Conducted	TH06-HY	Tim Chen	23.1~25°C / 61~67%	26/Aug/2019~ 09/Nov/2019
Radiated	03CH03-HY	Edward Wand	22.2~22.2°C / 51.8~51.8%	28/Aug/2019~ 04/Oct/2019

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.54 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	1.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%
Temperature	0.7 °C	Confidence levels of 95%
Humidity	4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

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

2.2 Test Channel Mode

Test Software	CMD
---------------	-----

Sample 1

Mode	Power Setting
Thread_Nss1_1TX	-
2405MHz	32
2440MHz	32
2480MHz	22

Sample 2_Dipole Antenna

Mode	Power Setting
Thread_Nss1_1TX	-
2405MHz	32
2440MHz	32
2480MHz	13

Sample 2_Panel 1 Antenna

Mode	Power Setting
Thread_Nss1_1TX	-
2405MHz	32
2440MHz	32
2480MHz	15

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	PoE mode (Sample 1)
2	PoE mode (Sample 2)

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

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	CTX		
1	PoE mode (Sample 1)		
2	PoE mode (Sample 2_Dipole Antenna)		
3	PoE mode (Sample 2_Panel 1 Antenna)		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V	V	V

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	CTX
1	WLAN 2.4G+ WLAN 5G+ WLAN 2.4G+ Thread
2	WLAN 2.4G+ WLAN 5G+ WLAN 5G+ Thread
Refer to Sporton Test Report No.: FA970235 for Co-location RF Exposure Evaluation.	

2.4 Support Equipment

Support Equipment – AC Conduction				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Load	Sporton	-	-
2	LAN Cable	Power Sync	CAT-6E-01	-
3	LAN Cable	Power Sync	CAT-6E-10	-
4	PoE	EnGenius	EPA5006GP	-
5	AC Power Cable	-	-	-
6	Notebook (remote)	DELL	M-S69	-
7	LAN Cable(remote)	Power Sync	CAT-6E-01	-
8	Adapter for Notebook (remote)	DELL	M-S69	-

Note: Support equipment No.4, 5 were provided by customer.

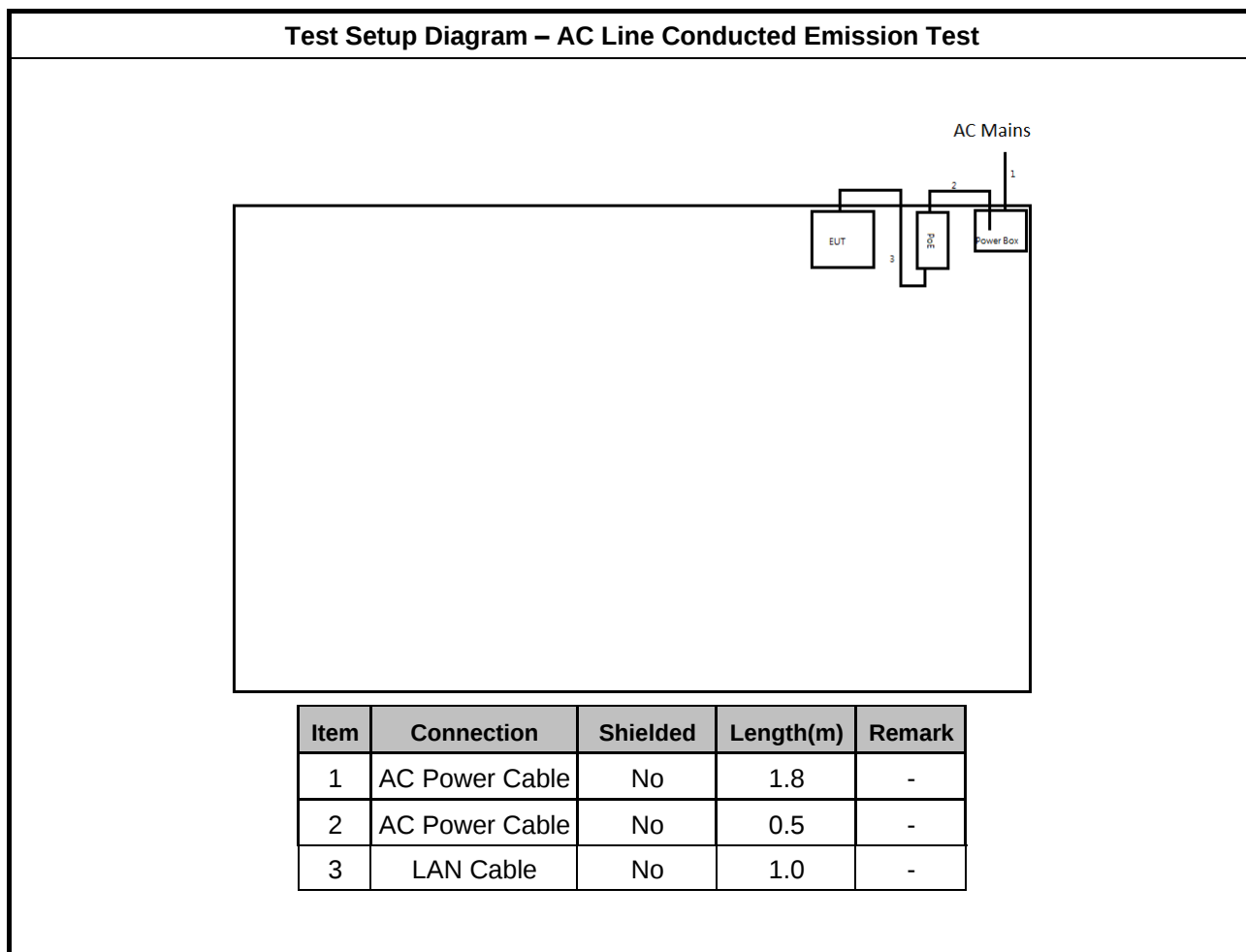
Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC
3	Notebook	DELL	E5410	DoC
4	Adapter for NB	DELL	HA65NM130	DoC
5	PoE	EnGenius	EPA5006GP	-

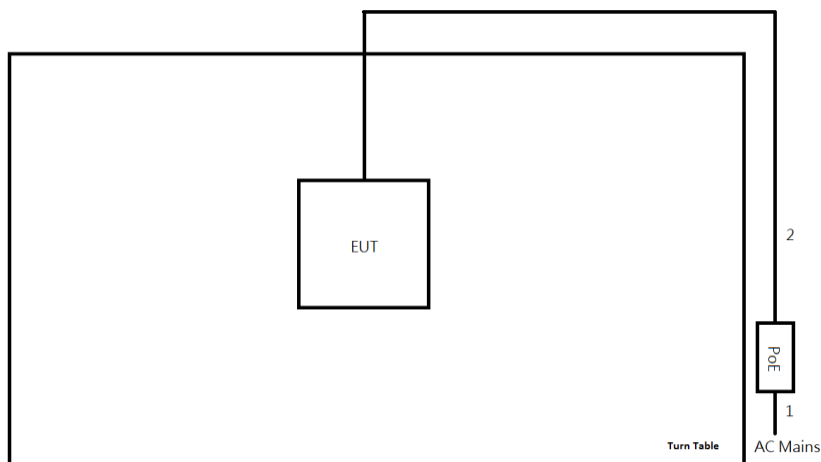
Note: Support equipment No.5 was provided by customer.

Support Equipment – Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Load	Sporton	-	-
2	LAN Cable	Power Sync	CAT-6E-01	-
3	LAN Cable	Power Sync	CAT-6E-10	-
4	PoE (remote)	EnGenius	EPA5006GP	-
5	AC Power Cable (remote)	-	-	-
6	Notebook (remote)	DELL	M-S69	-
7	LAN Cable (remote)	Power Sync	CAT-6E-01	-
8	Adapter for Notebook (remote)	DELL	M-S69	-

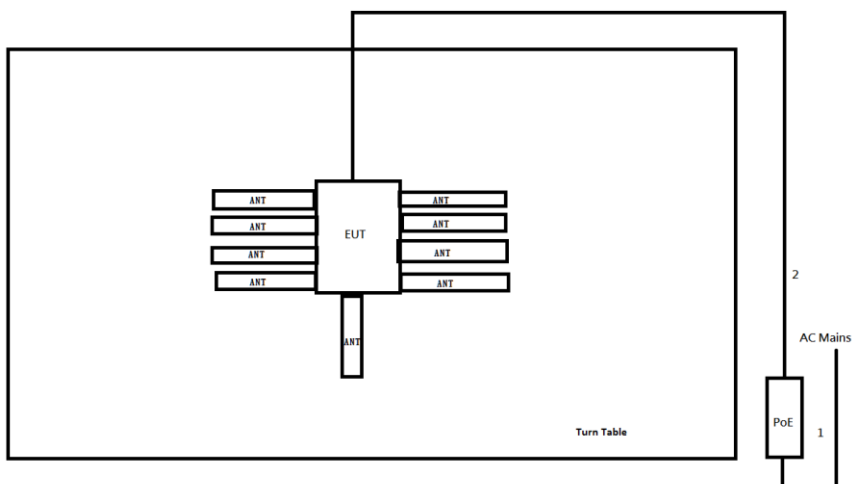
Note: Support equipment No.4, 5 were provided by customer.

2.5 Test Setup Diagram

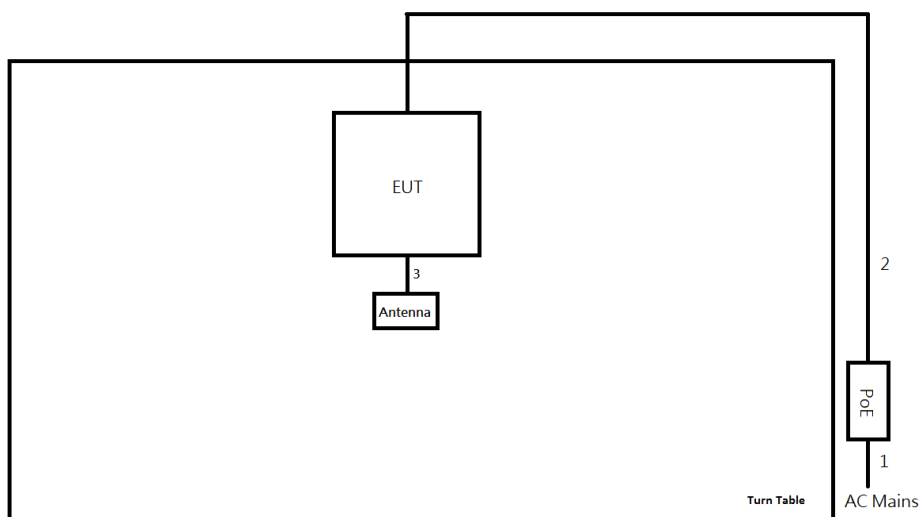


Test Setup Diagram - Radiated Test (Sample 1)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	0.5	-
2	LAN Cable	No	10.0	-

Test Setup Diagram - Radiated Test (Sample 2_Dipole Antenna)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	0.5	-
2	LAN Cable	No	10.0	-

Test Setup Diagram - Radiated Test (Sample 2_Panel 1 Antenna)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	0.5	-
2	LAN Cable	No	10.0	-
3	Antenna Cable	No	0.5	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

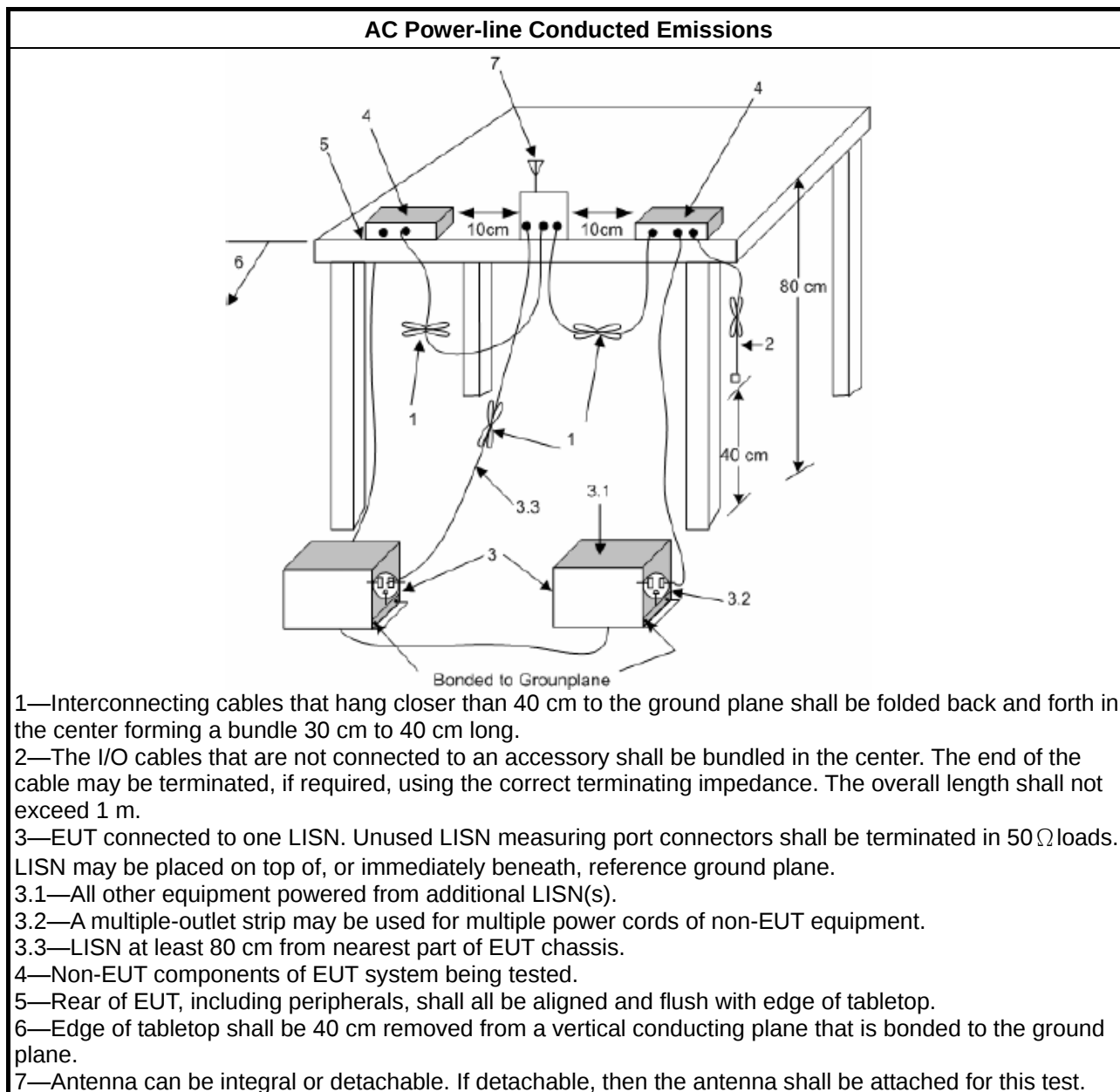
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
▪	6 dB bandwidth $\geq$ 500 kHz.

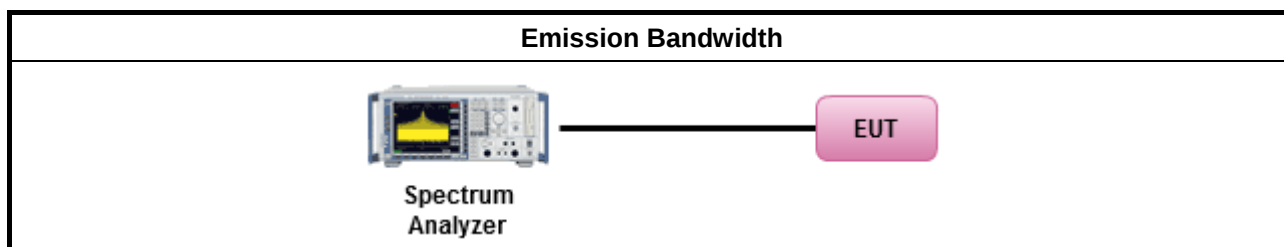
3.2.2 Measuring Instruments

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:	
☒	Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
☐	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
☐	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	
	If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dBm
e.i.r.p. Power Limit:	
	2400-2483.5 MHz Band
	Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	Smart antenna system (SAS)
	- Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

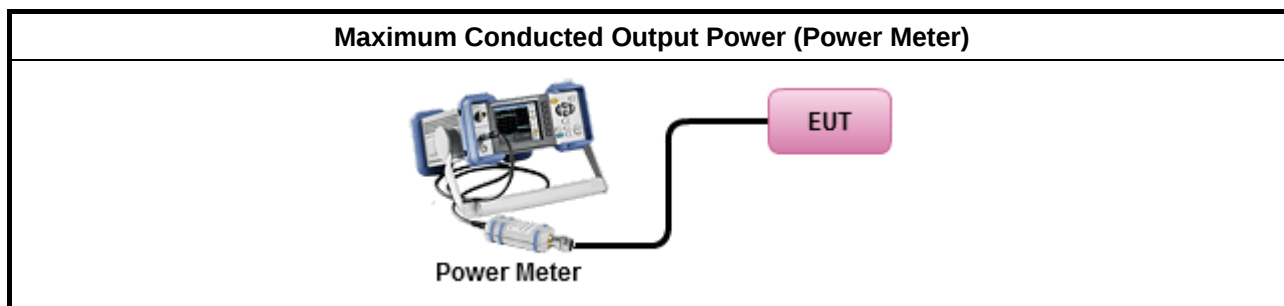
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
☐	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

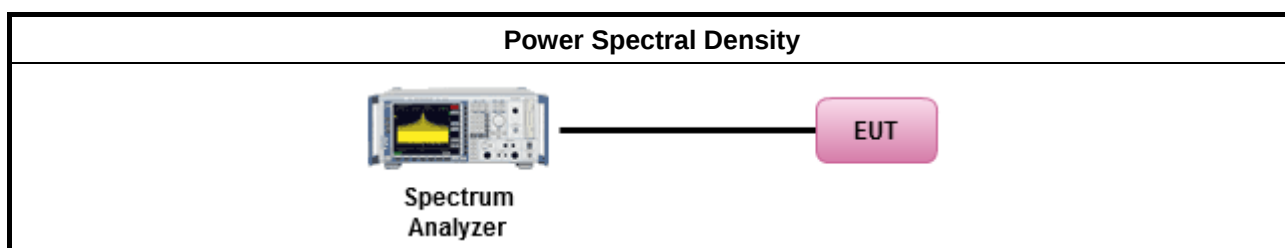
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
▪	Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
☒	Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Method PKPSD.
▪	For conducted measurement.
▪	If The EUT supports multiple transmit chains using options given below:
▪	Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average level.	

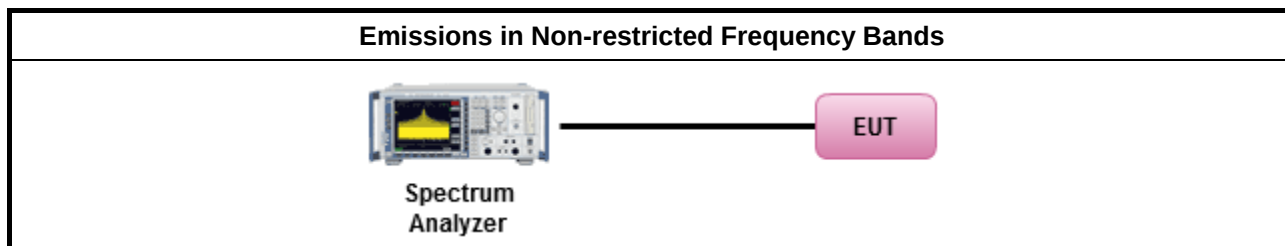
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



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.

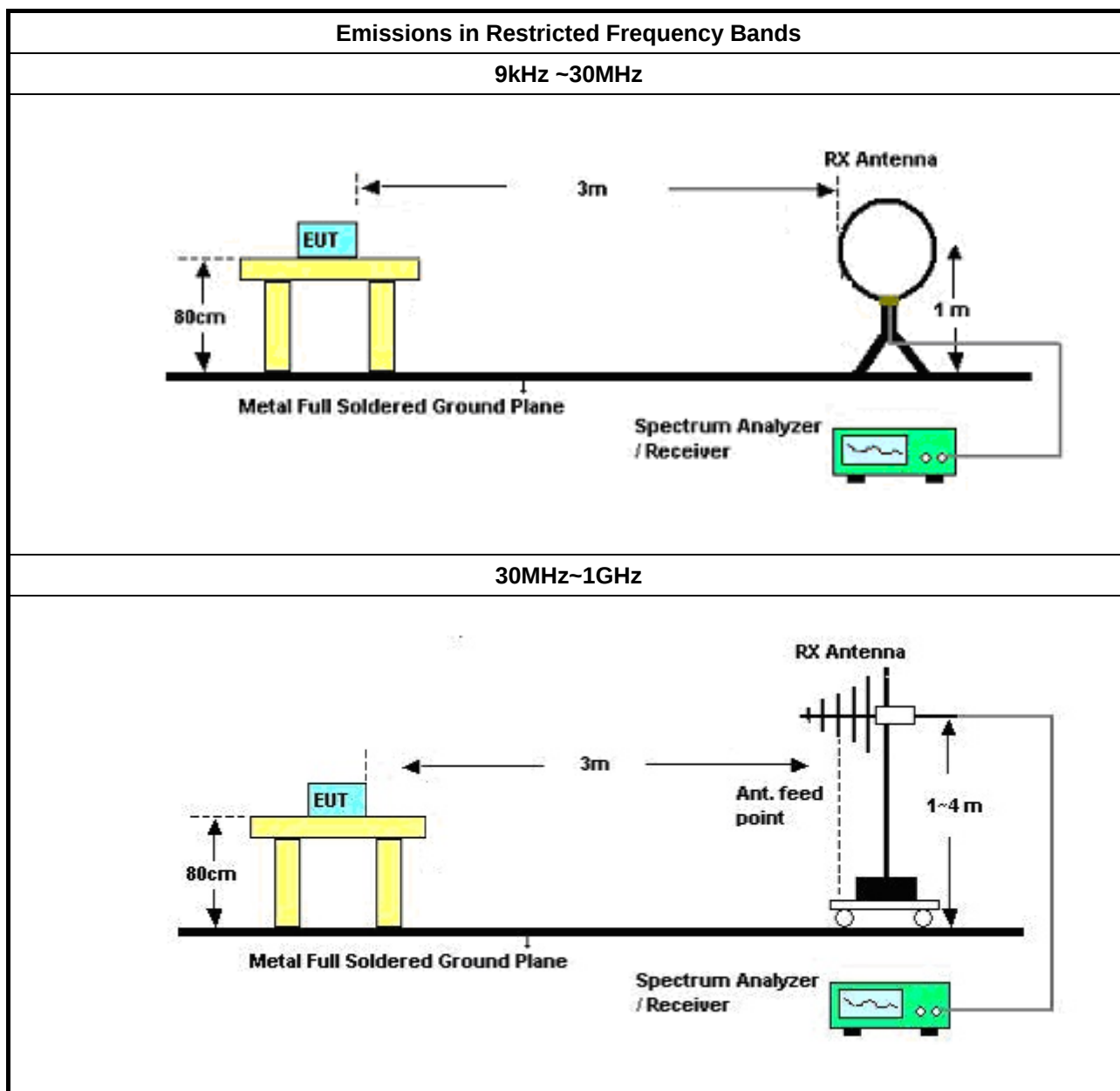
3.6.2 Measuring Instruments

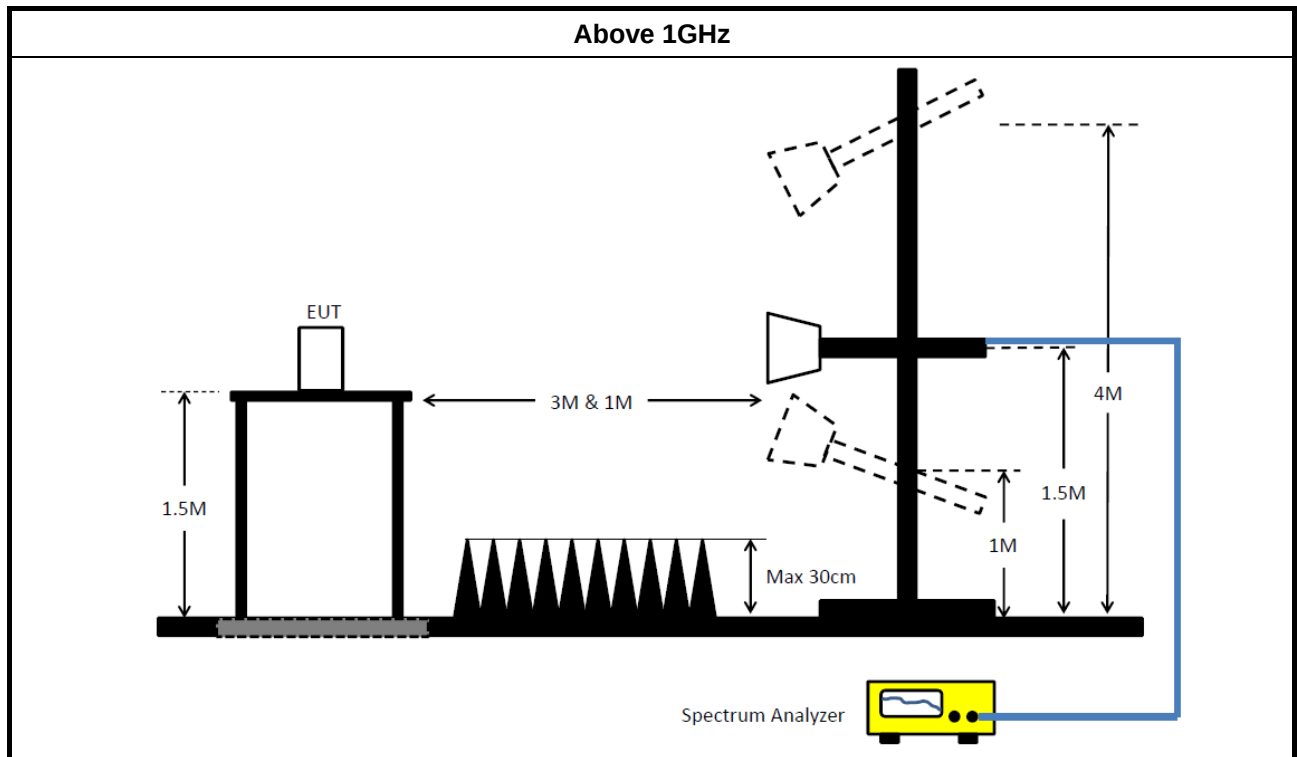
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

3.6.4 Test Setup





3.6.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	09/Apr/2019	08/Apr/2020
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	05/Nov/2019	04/Nov/2020
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	12/Sep/2019	11/Sep/2020
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	24/Sep/2019	23/Sep/2020

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	10Hz~40GHz	13/Mar/2019	12/Mar/2020
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	10/Nov/2020
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	19/Feb/2019	18/Feb/2020
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	19/Feb/2019	18/Feb/2020
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz~18G	11/Jan/2019	10/Jan/2020
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz~18G	11/Jan/2019	10/Jan/2020
Cable 0.5m	HUBER	MY10714/4	RF Cable - 05	30MHz~1G	11/Jan/2019	10/Jan/2020

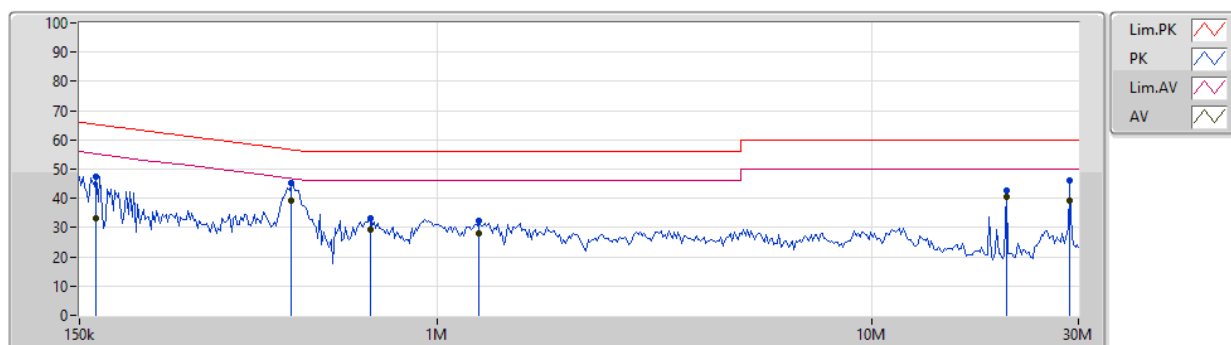
Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	30/Aug/2019	29/Aug/2020
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz ~ 18GHz 3m	30/Aug/2019	29/Aug/2020
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	22/Apr/2019	21/Apr/2020
EMI Test Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	09/Apr/2019	08/Apr/2020
Bilog Antenna & 5db Attenuator	SCHAFFNER/MTJ	CBL6112D / MTJ6102-05	2678 / 001	30MHz ~ 2GHz	06/Jul/2019	05/Jul/2020
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz ~ 2GHz	11/Oct/2019	10/Oct/2020
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz ~ 26.5GHz	23/Oct/2018	22/Oct/2019
Microwave System Preamplifier	KEYSIGHT	83017A	MY53270196	1GHz ~ 26.5GHz	09/Sep/2019	08/Sep/2020
Signal Analyzer	R&S	FSP40	100305	9 kHz ~ 40 GHz;-140-+30dBm	10/Jun/2019	09/Jun/2020
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	22/Mar/2019	21/Mar/2020
RF CABLE 6m	HUBER+SUHNER	SUOFLEX 104	SN 805801/4	1GHz ~ 40GHz	21/Mar/2019	20/Mar/2020
RF CABLE	HUBER+SUHNER	SUOFLEX 104	802378/4	1 GHz ~ 18 GHz	04/Jul/2019	03/Jul/2020
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz ~ 40GHz	22/Mar/2019	21/Mar/2020
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz ~ 18GHz	09/Mar/2019	08/Mar/2020
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	15/Mar/2019	14/Mar/2020

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Sample 1; PoE mode; Thread 2.4G TX		

08/11/2019

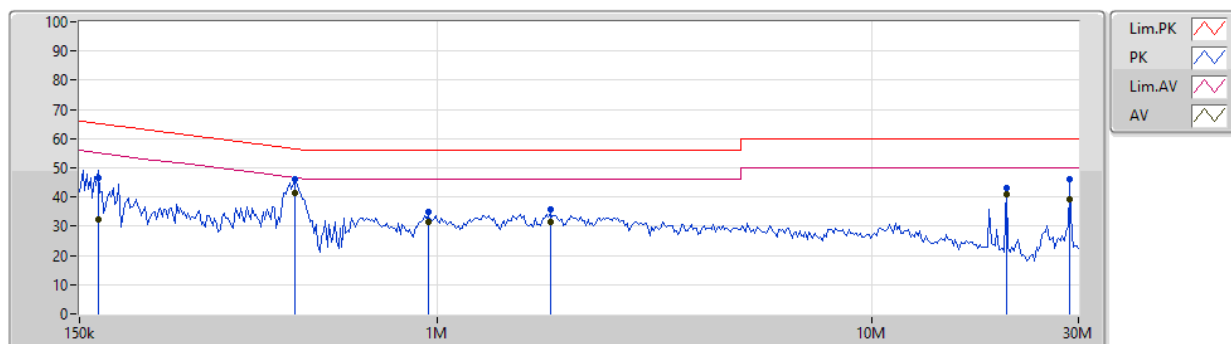


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	164.053k	47.56	65.25	-17.69	19.58	Neutral	-	27.98	9.60	0.11	9.87			
AV	164.053k	33.07	55.25	-22.18	19.58	Neutral	-	13.49	9.60	0.11	9.87			
QP	461.75k	45.35	56.67	-11.32	19.59	Neutral	-	25.76	9.59	0.13	9.87			
AV	461.75k	39.19	46.67	-7.48	19.59	Neutral	"Worst"	19.60	9.59	0.13	9.87			
QP	701.301k	33.30	56.00	-22.70	19.58	Neutral	-	13.72	9.59	0.12	9.87			
AV	701.301k	29.23	46.00	-16.77	19.58	Neutral	-	9.65	9.59	0.12	9.87			
QP	1.249M	32.14	56.00	-23.86	19.60	Neutral	-	12.54	9.60	0.12	9.88			
AV	1.249M	28.16	46.00	-17.84	19.60	Neutral	-	8.56	9.60	0.12	9.88			
QP	20.457M	42.73	60.00	-17.27	19.94	Neutral	-	22.79	9.68	0.37	9.89			
AV	20.457M	40.72	50.00	-9.28	19.94	Neutral	-	20.78	9.68	0.37	9.89			
QP	28.693M	46.06	60.00	-13.94	19.99	Neutral	-	26.07	9.67	0.44	9.88			
AV	28.693M	39.21	50.00	-10.79	19.99	Neutral	-	19.22	9.67	0.44	9.88			

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Sample 1; PoE mode; Thread 2.4G TX		

08/11/2019

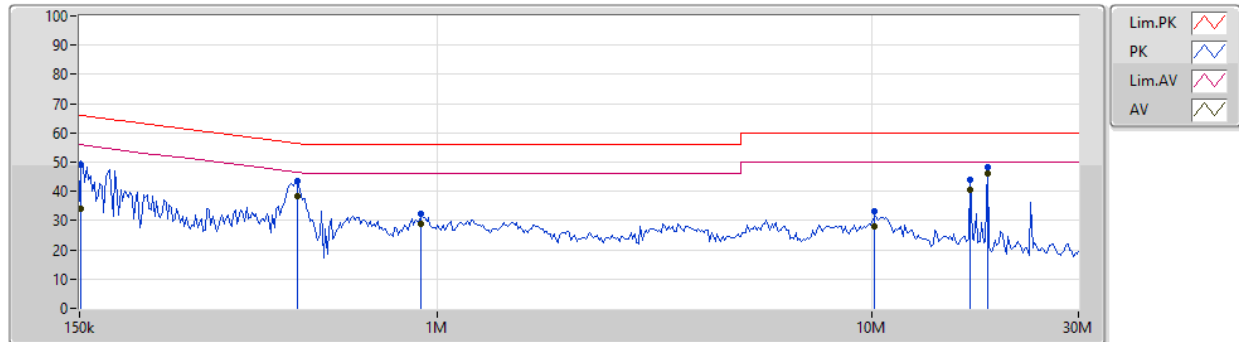


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	165.693k	46.50	65.18	-18.68	19.58	Line	-	26.92	9.60	0.11	9.87			
AV	165.693k	32.40	55.18	-22.78	19.58	Line	-	12.82	9.60	0.11	9.87			
QP	471.031k	46.10	56.50	-10.40	19.59	Line	-	26.51	9.59	0.13	9.87			
AV	471.031k	41.48	46.50	-5.02	19.59	Line	"Worst"	21.89	9.59	0.13	9.87			
QP	954.7k	34.85	56.00	-21.15	19.59	Line	-	15.26	9.60	0.11	9.88			
AV	954.7k	31.49	46.00	-14.51	19.59	Line	-	11.90	9.60	0.11	9.88			
QP	1.823M	35.80	56.00	-20.20	19.63	Line	-	16.17	9.62	0.14	9.87			
AV	1.823M	31.46	46.00	-14.54	19.63	Line	-	11.83	9.62	0.14	9.87			
QP	20.457M	42.98	60.00	-17.02	19.89	Line	-	23.09	9.63	0.37	9.89			
AV	20.457M	40.77	50.00	-9.23	19.89	Line	-	20.88	9.63	0.37	9.89			
QP	28.693M	46.20	60.00	-13.80	19.86	Line	-	26.34	9.54	0.44	9.88			
AV	28.693M	39.17	50.00	-10.83	19.86	Line	-	19.31	9.54	0.44	9.88			

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Neutral
Operating Function	Sample 2; PoE mode; Thread 2.4G TX		

11/11/2019

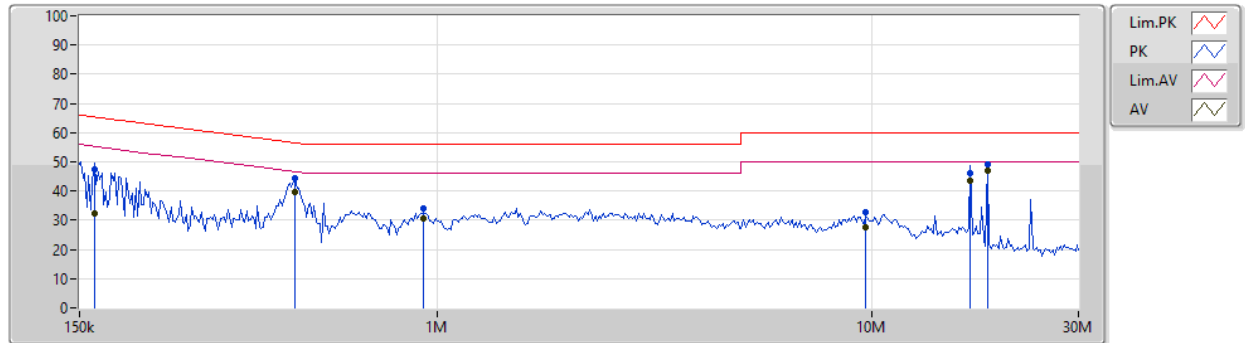


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	151.5k	49.15	65.92	-16.77	19.58	Neutral	-	29.57	9.60	0.11	9.87			
AV	151.5k	34.02	55.92	-21.90	19.58	Neutral	-	14.44	9.60	0.11	9.87			
QP	475.741k	43.66	56.42	-12.76	19.59	Neutral	-	24.07	9.59	0.13	9.87			
AV	475.741k	38.42	46.42	-8.00	19.59	Neutral	-	18.83	9.59	0.13	9.87			
QP	917.448k	32.27	56.00	-23.73	19.58	Neutral	-	12.69	9.59	0.11	9.88			
AV	917.448k	28.69	46.00	-17.31	19.58	Neutral	-	9.11	9.59	0.11	9.88			
QP	10.194M	33.29	60.00	-26.71	19.82	Neutral	-	13.47	9.67	0.27	9.88			
AV	10.194M	28.02	50.00	-21.98	19.82	Neutral	-	8.20	9.67	0.27	9.88			
QP	16.933M	43.84	60.00	-16.16	19.89	Neutral	-	23.95	9.68	0.33	9.88			
AV	16.933M	40.65	50.00	-9.35	19.89	Neutral	-	20.76	9.68	0.33	9.88			
QP	18.52M	48.43	60.00	-11.57	19.92	Neutral	-	28.51	9.68	0.35	9.89			
AV	18.52M	46.05	50.00	-3.95	19.92	Neutral	"Worst"	26.13	9.68	0.35	9.89			

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Line
Operating Function	Sample 2; PoE mode; Thread 2.4G TX		

11/11/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	162.429k	47.24	65.33	-18.09	19.58	Line	-	27.66	9.60	0.11	9.87			
AV	162.429k	32.32	55.33	-23.01	19.58	Line	-	12.74	9.60	0.11	9.87			
QP	471.031k	44.61	56.50	-11.89	19.59	Line	-	25.02	9.59	0.13	9.87			
AV	471.031k	39.73	46.50	-6.77	19.59	Line	-	20.14	9.59	0.13	9.87			
QP	926.622k	33.99	56.00	-22.01	19.59	Line	-	14.40	9.60	0.11	9.88			
AV	926.622k	30.50	46.00	-15.50	19.59	Line	-	10.91	9.60	0.11	9.88			
QP	9.699M	32.86	60.00	-27.14	19.82	Line	-	13.04	9.67	0.27	9.88			
AV	9.699M	27.77	50.00	-22.23	19.82	Line	-	7.95	9.67	0.27	9.88			
QP	16.933M	46.17	60.00	-13.83	19.85	Line	-	26.32	9.64	0.33	9.88			
AV	16.933M	43.34	50.00	-6.66	19.85	Line	-	23.49	9.64	0.33	9.88			
QP	18.52M	49.31	60.00	-10.69	19.87	Line	-	29.44	9.63	0.35	9.89			
AV	18.52M	46.77	50.00	-3.23	19.87	Line	"Worst"	26.90	9.63	0.35	9.89			



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Thread_Nss1_1TX	1.613M	2.343M	2M34D1D	1.581M	2.324M

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;



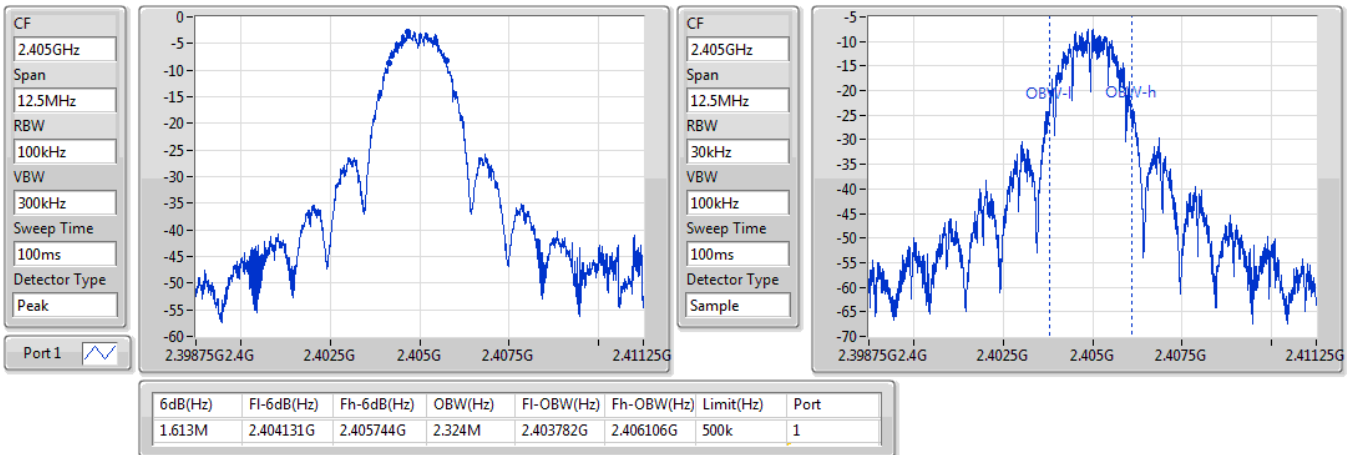
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Thread_Nss1_1TX	-	-	-	-
2405MHz_TnomVnom	Pass	500k	1.613M	2.324M
2440MHz_TnomVnom	Pass	500k	1.588M	2.33M
2480MHz_TnomVnom	Pass	500k	1.581M	2.343M

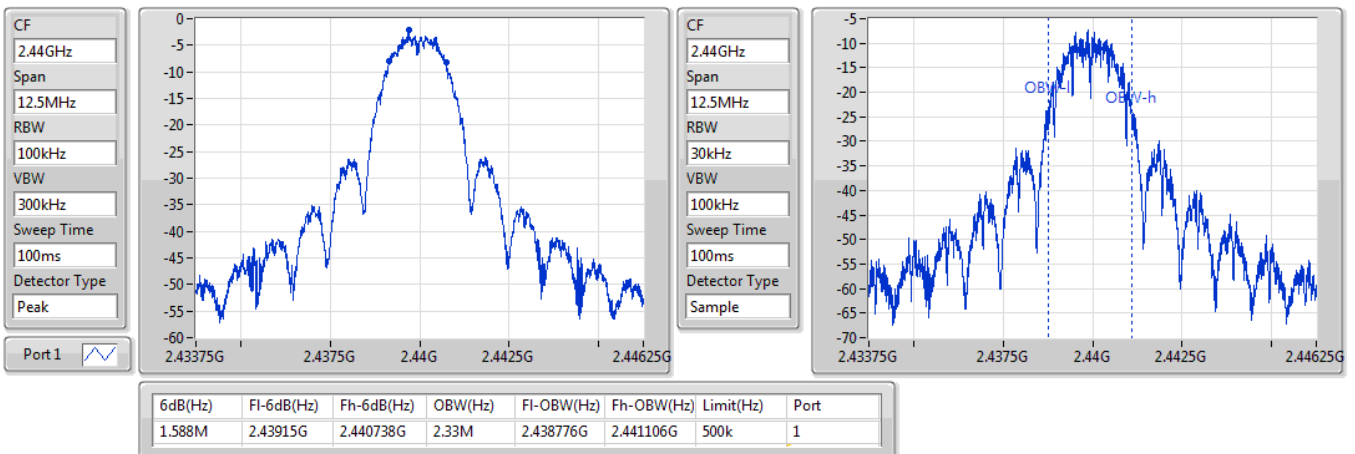
Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

Thread_Nss1_1TX
EBW
2405MHz

28/08/2019


Thread_Nss1_1TX
EBW
2440MHz

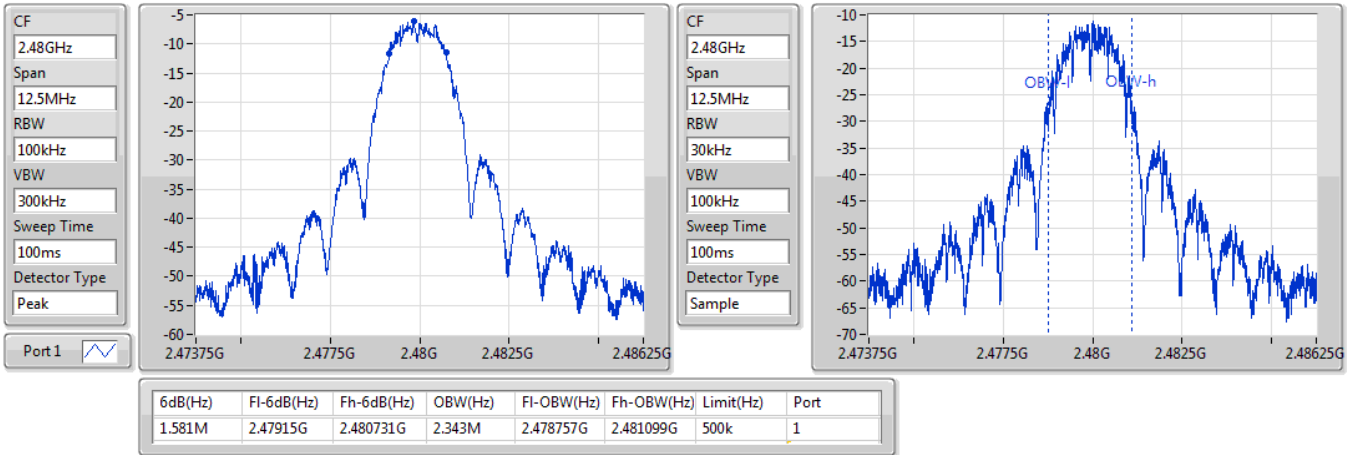
28/08/2019



Thread_Nss1_1TX

2480MHz

28/08/2019





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Thread_Nss1_1TX	1.606M	2.336M	2M34D1D	1.594M	2.311M

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;



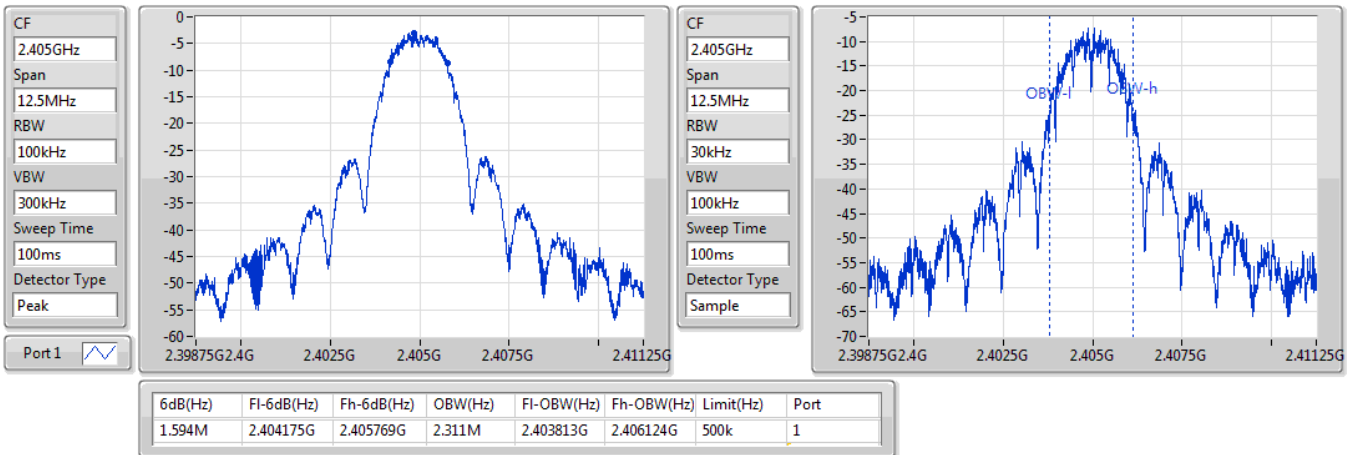
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Thread_Nss1_1TX	-	-	-	-
2405MHz_TnomVnom	Pass	500k	1.594M	2.311M
2440MHz_TnomVnom	Pass	500k	1.6M	2.336M
2480MHz_TnomVnom	Pass	500k	1.606M	2.336M

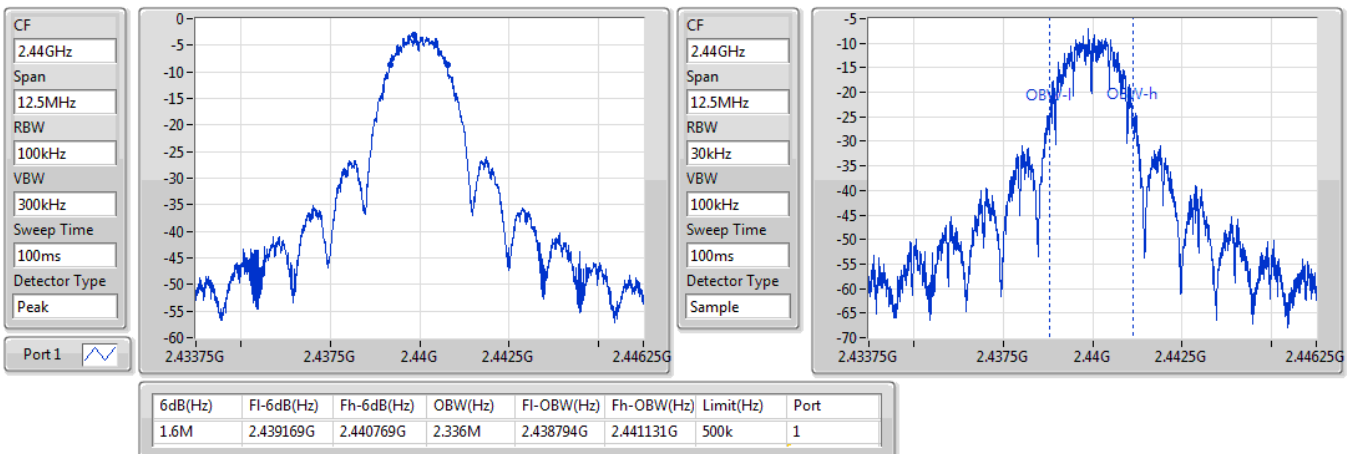
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

Thread_Nss1_1TX
EBW
2405MHz

28/08/2019


Thread_Nss1_1TX
EBW
2440MHz

28/08/2019

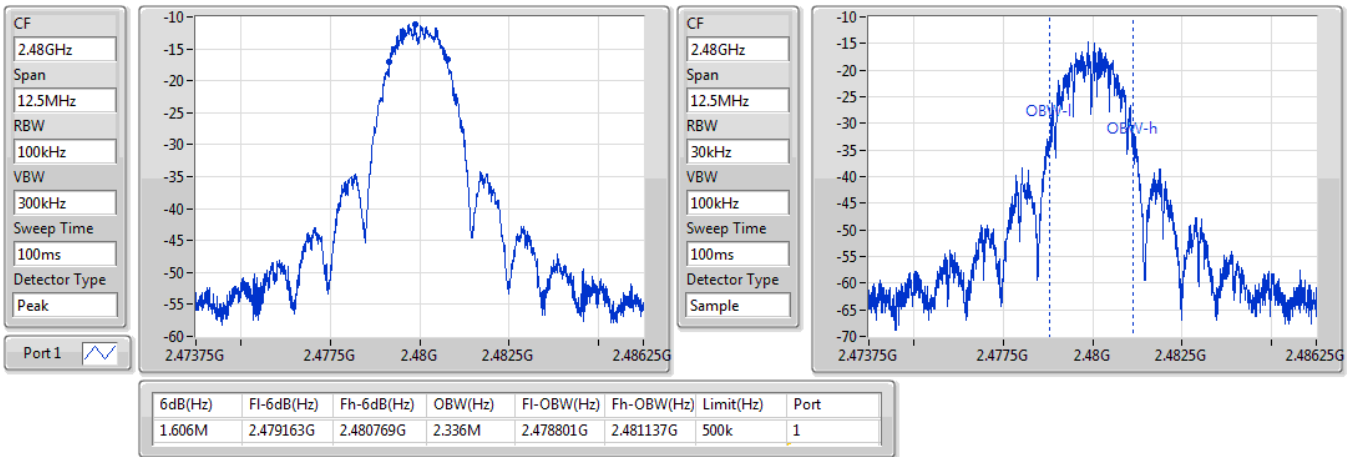


Thread_Nss1_1TX

EBW

2480MHz

28/08/2019





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Thread_Nss1_1TX	1.6M	2.336M	2M34D1D	1.594M	2.311M

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;



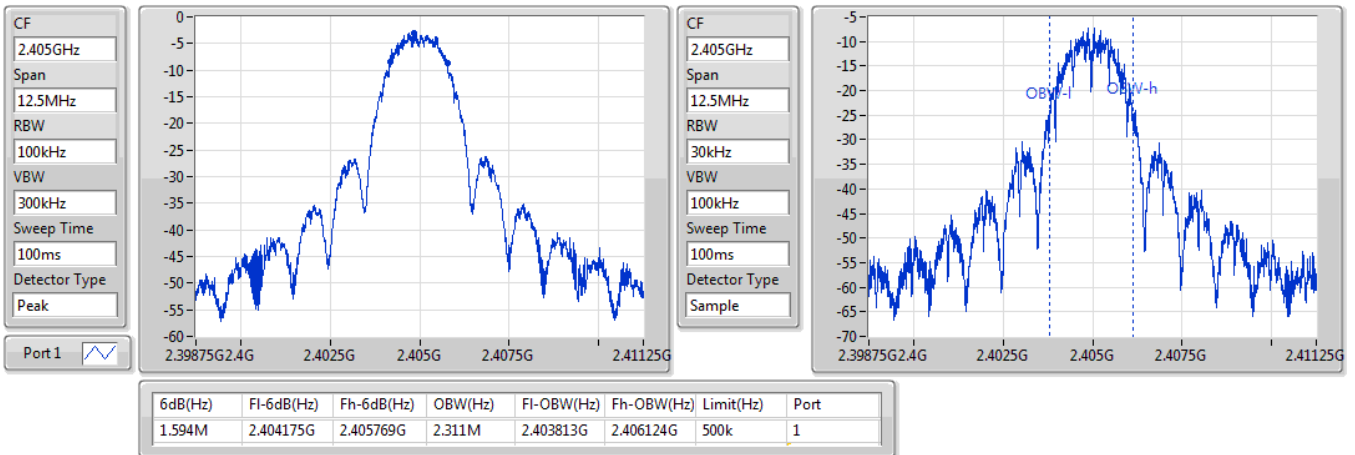
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Thread_Nss1_1TX	-	-	-	-
2405MHz_TnomVnom	Pass	500k	1.594M	2.311M
2440MHz_TnomVnom	Pass	500k	1.6M	2.336M
2480MHz_TnomVnom	Pass	500k	1.594M	2.33M

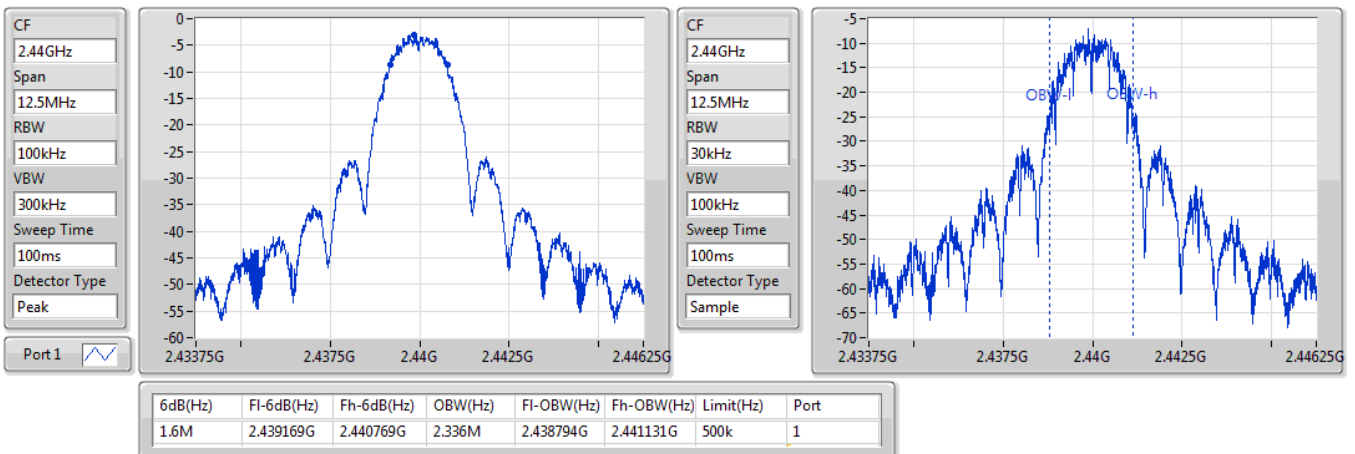
Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

Thread_Nss1_1TX
EBW
2405MHz

28/08/2019


Thread_Nss1_1TX
EBW
2440MHz

28/08/2019

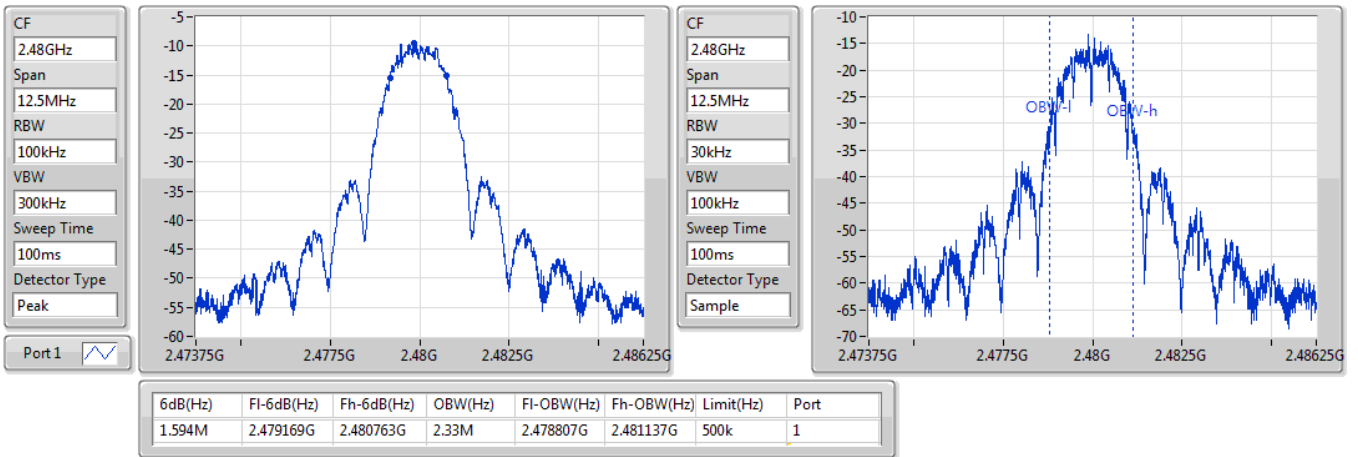


Thread_Nss1_1TX

EBW

2480MHz

28/08/2019





Average Power_Sample 1

Appendix C.1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Thread_Nss1_1TX	1.41	0.00138



Average Power_Sample 1

Appendix C.1

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Thread_Nss1_1TX	-	-	-	-	-
2405MHz	Pass	4.65	1.41	1.41	30.00
2440MHz	Pass	4.65	1.36	1.36	30.00
2480MHz	Pass	4.65	-1.94	-1.94	30.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Thread_Nss1_1TX	1.09	0.00129



Average Power_Sample 2_Dipole Antenna

Appendix C.2

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Thread_Nss1_1TX	-	-	-	-	-
2405MHz_TnomVnom	Pass	8.00	1.06	1.06	28.00
2440MHz_TnomVnom	Pass	8.00	1.09	1.09	28.00
2480MHz_TnomVnom	Pass	8.00	-6.93	-6.93	28.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Thread_Nss1_1TX	1.09	0.00129



Average Power_Sample 2_Panel 1 Antenna

Appendix C.3

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Thread_Nss1_1TX	-	-	-	-	-
2405MHz	Pass	7.80	1.06	1.06	28.20
2440MHz	Pass	7.80	1.09	1.09	28.20
2480MHz	Pass	7.80	-5.58	-5.58	28.20

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
Thread_Nss1_1TX	-14.26

RBW=3 kHz.



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Thread_Nss1_1TX	-	-	-	-	-
2405MHz	Pass	4.65	-14.60	-14.60	8.00
2440MHz	Pass	4.65	-14.26	-14.26	8.00
2480MHz	Pass	4.65	-18.61	-18.61	8.00

DG = Directional Gain; RBW=3 kHz;

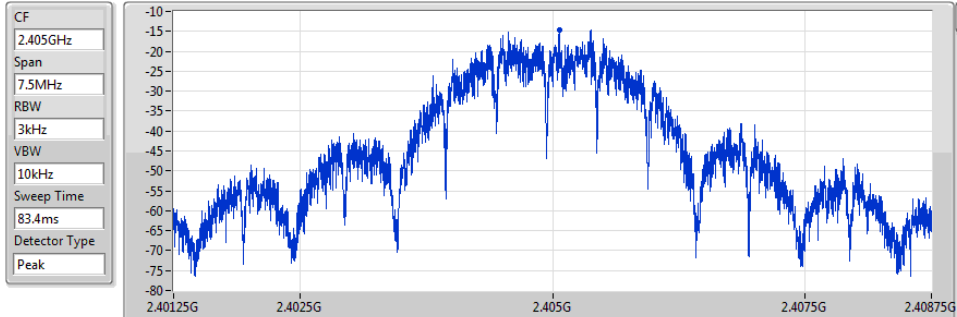
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;

Thread_Nss1_1TX

PSD

2405MHz

28/08/2019



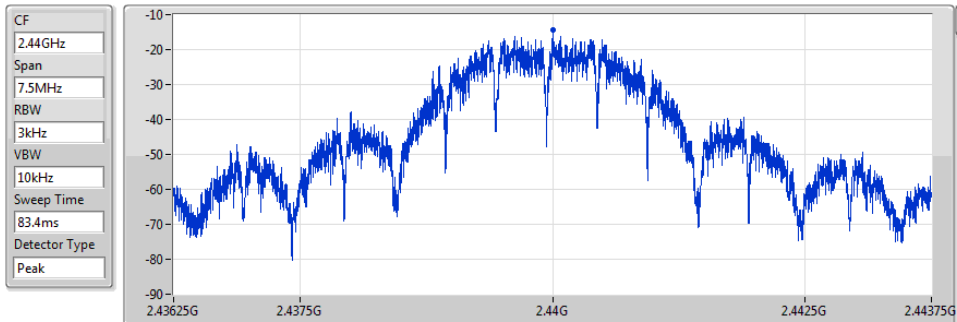
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.60	-14.60	-14.60

Thread_Nss1_1TX

PSD

2440MHz

28/08/2019



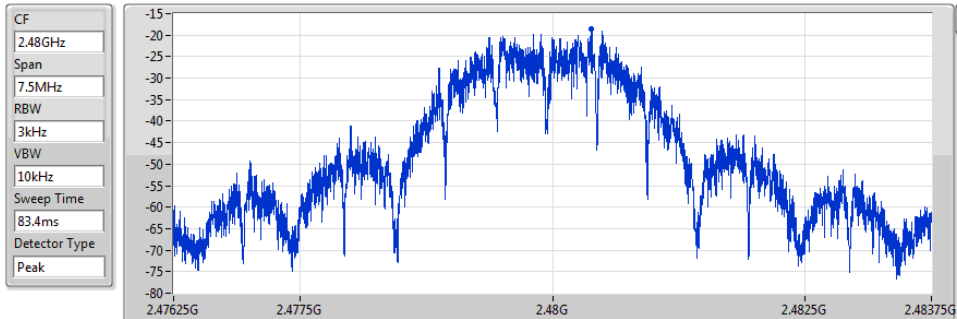
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.26	-14.26	-14.26

Thread_Nss1_1TX

PSD

2480MHz

28/08/2019



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-18.61	-18.61	-18.61



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
Thread_Nss1_1TX	-16.17

RBW=3 kHz.



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Thread_Nss1_1TX	-	-	-	-	-
2405MHz_TnomVnom	Pass	8.00	-16.17	-16.17	6.00
2440MHz_TnomVnom	Pass	8.00	-16.54	-16.54	6.00
2480MHz_TnomVnom	Pass	8.00	-22.22	-22.22	6.00

DG = Directional Gain; RBW=3 kHz;

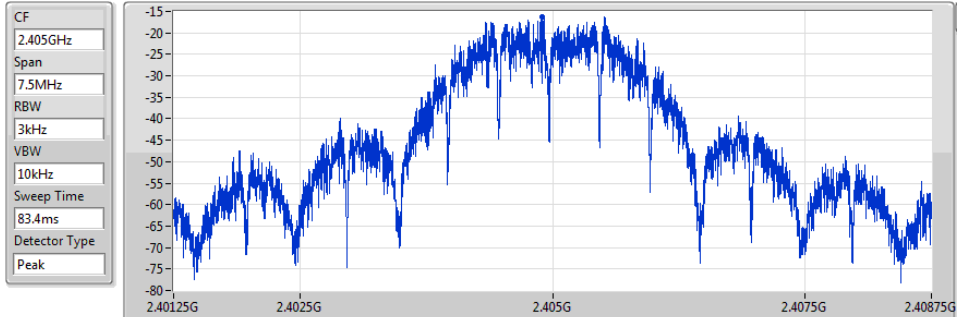
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;

Thread_Nss1_1TX

PSD

2405MHz

28/08/2019



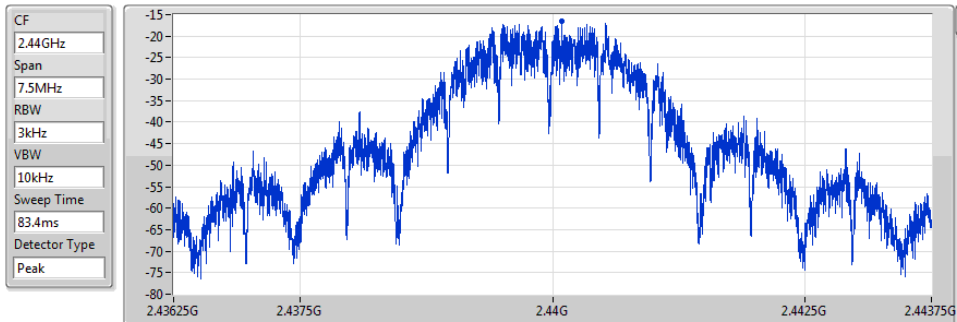
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.17	-16.17	-16.17

Thread_Nss1_1TX

PSD

2440MHz

28/08/2019



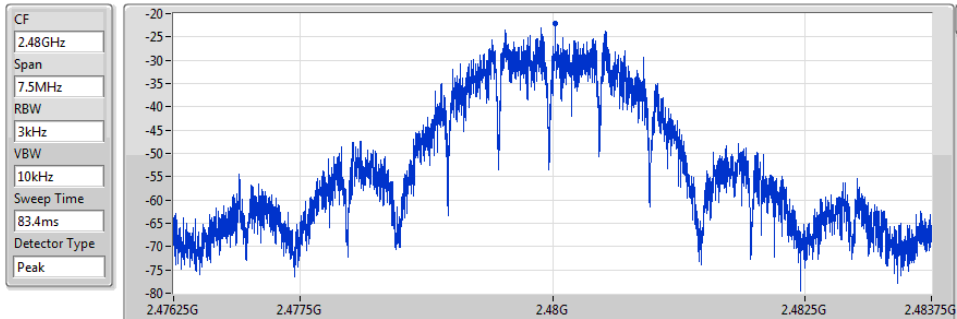
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.54	-16.54	-16.54

Thread_Nss1_1TX

PSD

2480MHz

28/08/2019



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-22.22	-22.22	-22.22



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
Thread_Nss1_1TX	-16.17

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Thread_Nss1_1TX	-	-	-	-	-
2405MHz	Pass	7.80	-16.17	-16.17	6.20
2440MHz	Pass	7.80	-16.54	-16.54	6.20
2480MHz	Pass	7.80	-21.51	-21.51	6.20

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

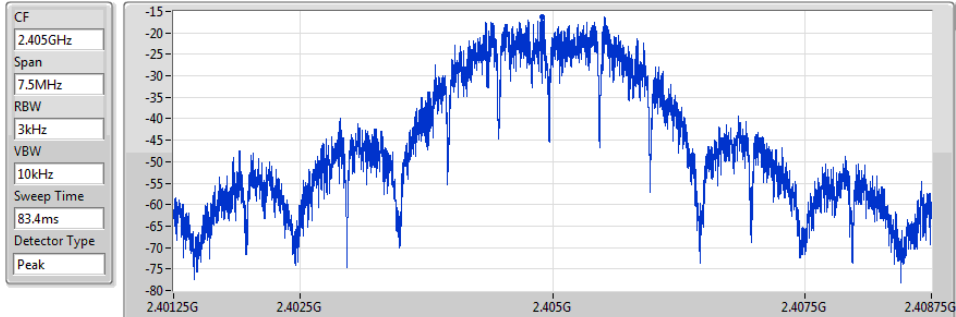
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

Thread_Nss1_1TX

PSD

2405MHz

28/08/2019



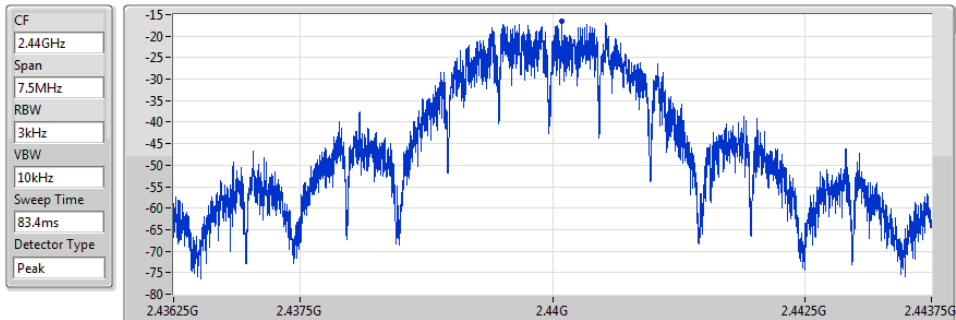
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.17	-16.17	-16.17

Thread_Nss1_1TX

PSD

2440MHz

28/08/2019



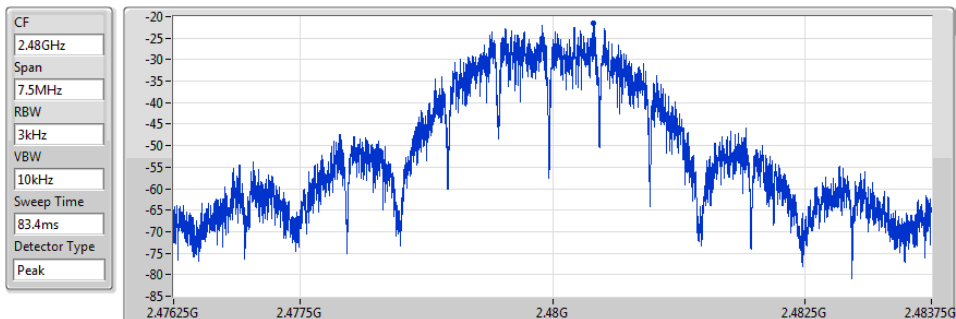
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.54	-16.54	-16.54

Thread_Nss1_1TX

PSD

2480MHz

28/08/2019



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-21.51	-21.51	-21.51



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	-	-	-	-	-	-	-	-	-	-	-	-	-
Thread_Nss1_1TX	Pass	2.4048G	-2.52	-32.52	2.01388G	-65.03	2.39476G	-64.00	2.48393G	-43.95	23.43861G	-50.01	1

Result

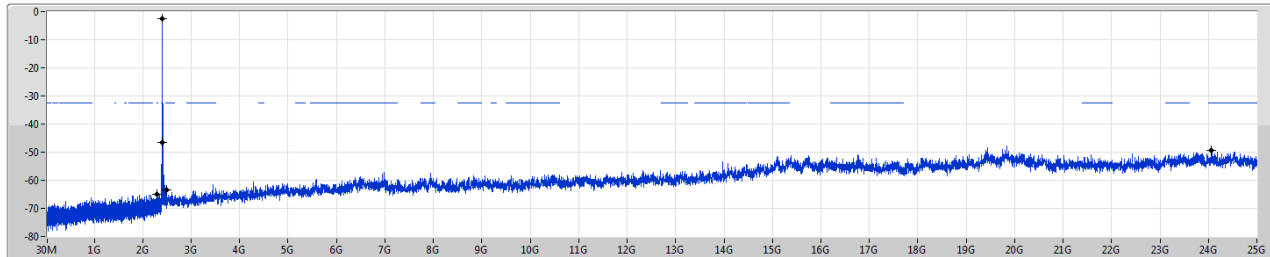
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
Thread_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz_TnomVnom	Pass	2.4048G	-2.52	-32.52	2.3015G	-64.91	2.39999G	-46.50	2.48517G	-63.29	24.05191G	-49.33	1
2440MHz_TnomVnom	Pass	2.4048G	-2.52	-32.52	2.14987G	-65.19	2.39916G	-62.18	2.4873G	-62.06	24.4289G	-49.41	1
2480MHz_TnomVnom	Pass	2.4048G	-2.52	-32.52	2.01388G	-65.03	2.39476G	-64.00	2.48393G	-43.95	23.43861G	-50.01	1

Thread_Nss1_1TX

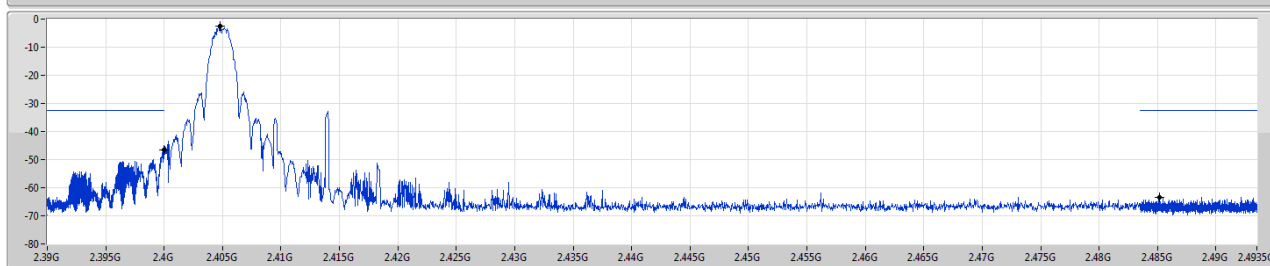
CSE NdB

2405MHz

28/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

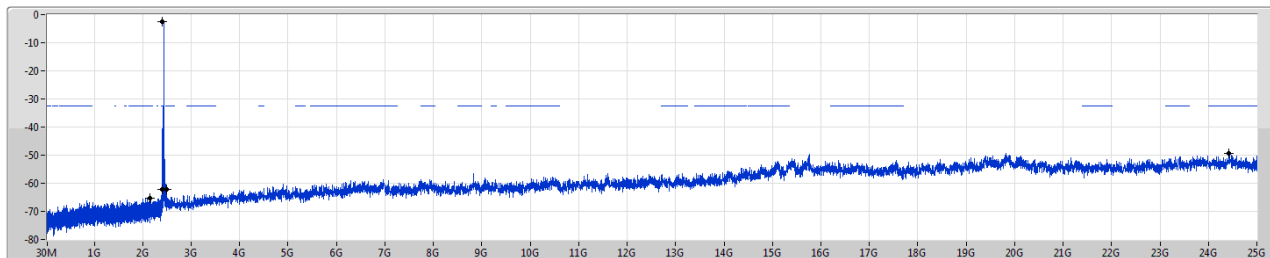
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4048G	-2.52	-32.52	2.3015G	-64.91	2.39999G	-46.50	2.48517G	-63.29	24.05191G	-49.33	1

Thread_Nss1_1TX

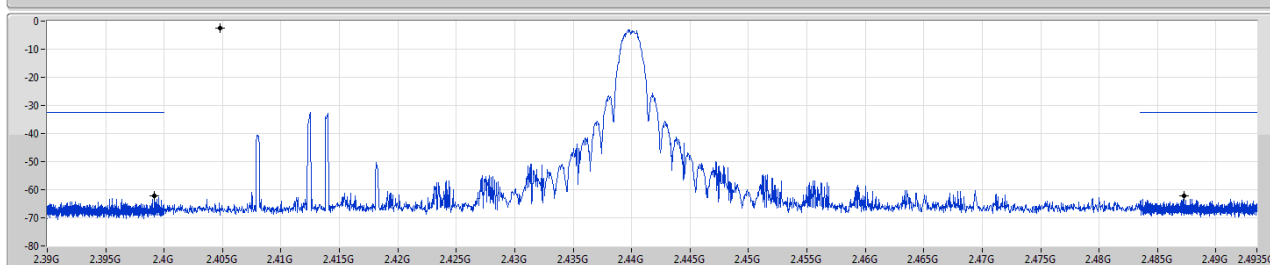
CSE NdB

2440MHz

28/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

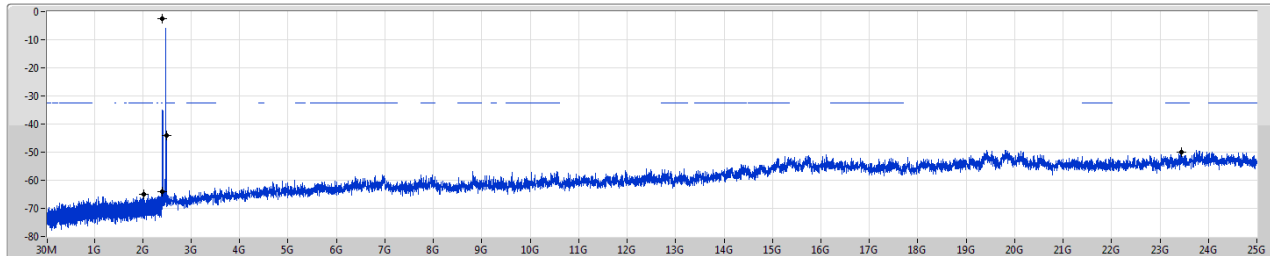
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4048G	-2.52	-32.52	2.14987G	-65.19	2.39916G	-62.18	2.4873G	-62.06	24.4289G	-49.41	1

Thread_Nss1_1TX

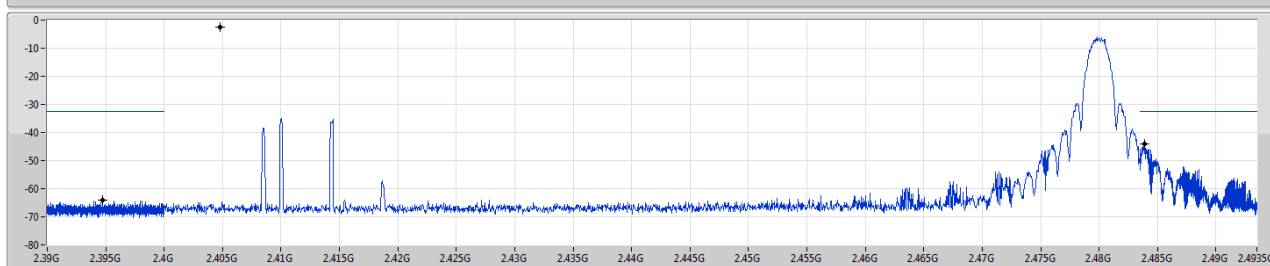
CSE NdB

2480MHz

28/08/2019



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4048G	-2.52	-32.52	2.01388G	-65.03	2.39476G	-64.00	2.48393G	-43.95	23.43861G	-50.01	1



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	-	-	-	-	-	-	-	-	-	-	-	-	-
Thread_Nss1_1TX	Pass	2.4397G	-2.02	-32.02	2.09323G	-64.68	2.39992G	-46.88	2.48371G	-63.49	24.13631G	-47.81	1

Result

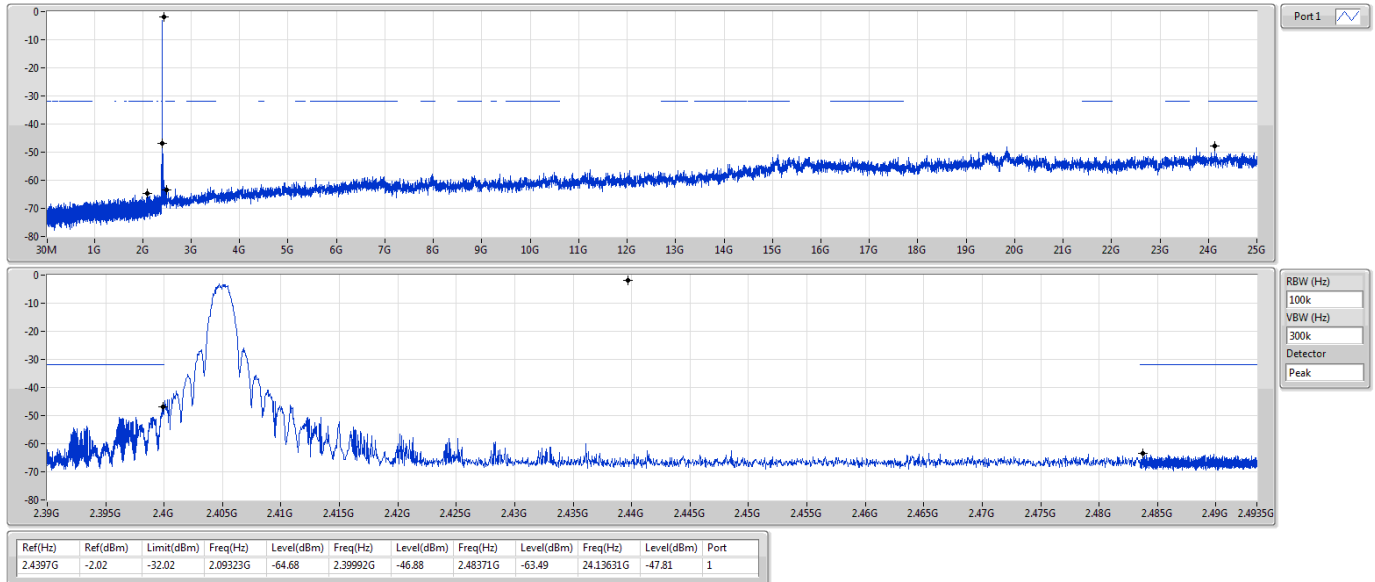
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
Thread_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz_TnomVnom	Pass	2.4397G	-2.02	-32.02	2.09323G	-64.68	2.39992G	-46.88	2.48371G	-63.49	24.13631G	-47.81	1
2440MHz_TnomVnom	Pass	2.4397G	-2.02	-32.02	2.14722G	-64.95	2.39979G	-63.36	2.49178G	-62.76	24.26573G	-50.04	1
2480MHz_TnomVnom	Pass	2.4397G	-2.02	-32.02	2.12834G	-64.70	2.39184G	-63.81	2.48387G	-48.75	24.4289G	-50.31	1

Thread_Nss1_1TX

CSE NdB

2405MHz

28/08/2019

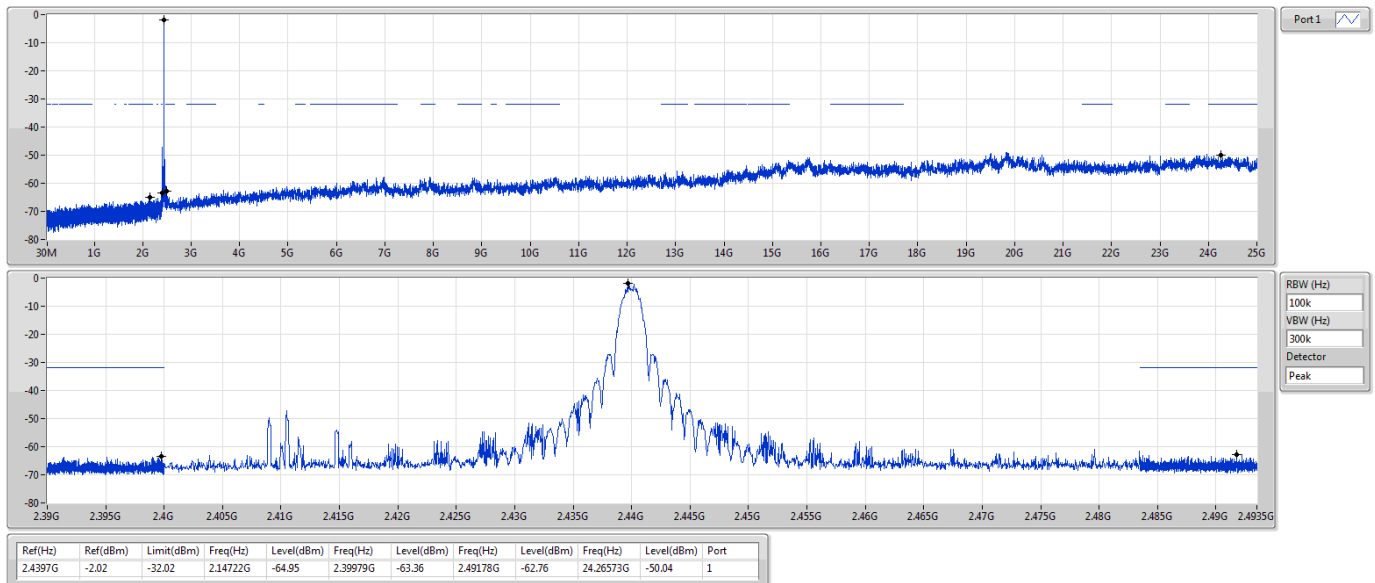


Thread_Nss1_1TX

CSE NdB

2440MHz

28/08/2019

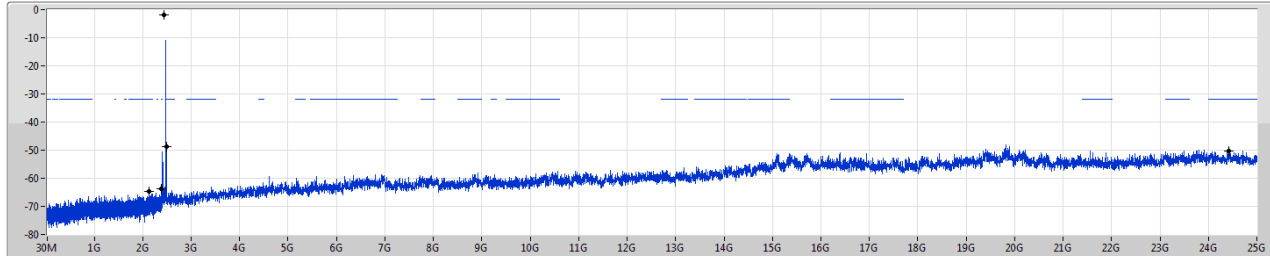


Thread_Nss1_1TX

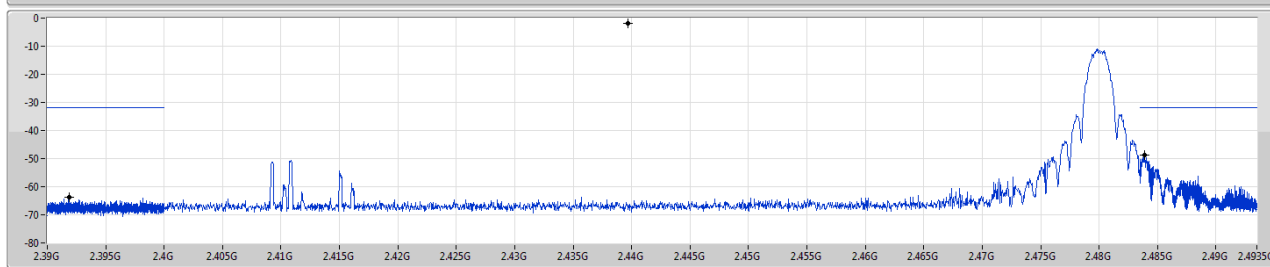
CSE NdB

2480MHz

28/08/2019



Port1



RBW (Hz)
100K
VBW (Hz)
300K
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4397G	-2.02	-32.02	2.12834G	-64.70	2.39184G	-63.81	2.48387G	-48.75	2.42889G	-50.31	1



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	-	-	-	-	-	-	-	-	-	-	-	-	-
Thread_Nss1_1TX	Pass	2.4397G	-2.02	-32.02	2.09323G	-64.68	2.39992G	-46.88	2.48371G	-63.49	24.13631G	-47.81	1

**Result**

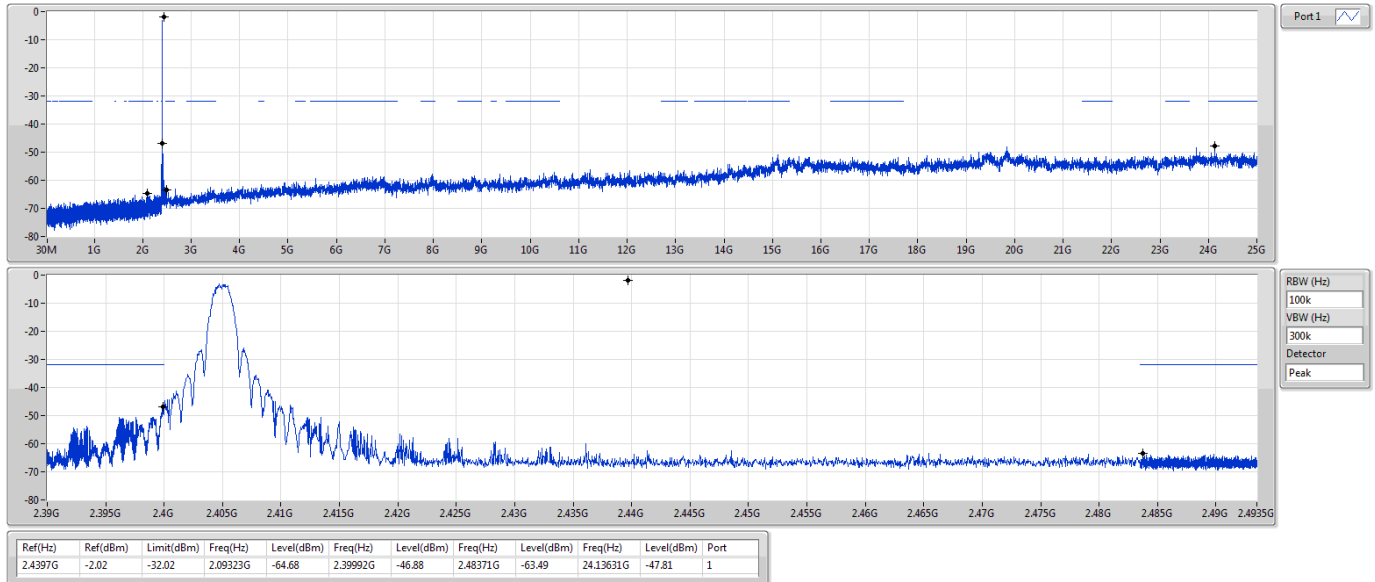
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
Thread_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz_TnomVnom	Pass	2.4397G	-2.02	-32.02	2.09323G	-64.68	2.39992G	-46.88	2.48371G	-63.49	24.13631G	-47.81	1
2440MHz_TnomVnom	Pass	2.4397G	-2.02	-32.02	2.14722G	-64.95	2.39979G	-63.36	2.49178G	-62.76	24.26573G	-50.04	1
2480MHz_TnomVnom	Pass	2.4397G	-2.02	-32.02	2.11329G	-65.76	2.39201G	-63.22	2.48384G	-47.44	24.5133G	-49.17	1

Thread_Nss1_1TX

CSE NdB

2405MHz

28/08/2019

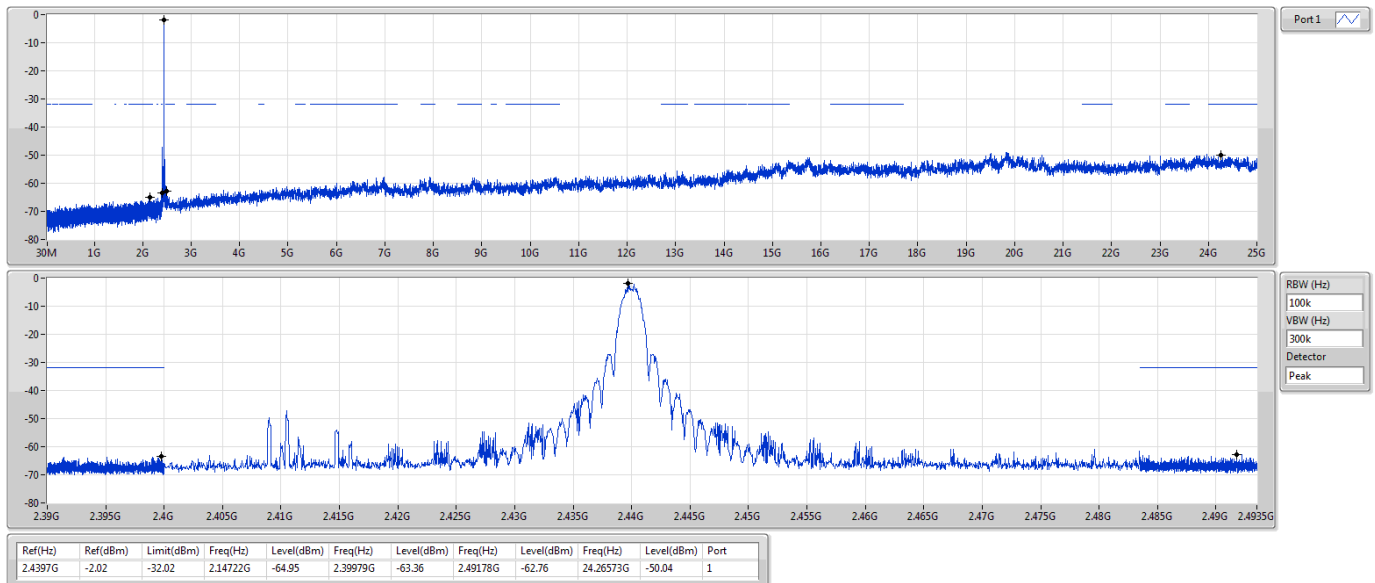


Thread_Nss1_1TX

CSE NdB

2440MHz

28/08/2019

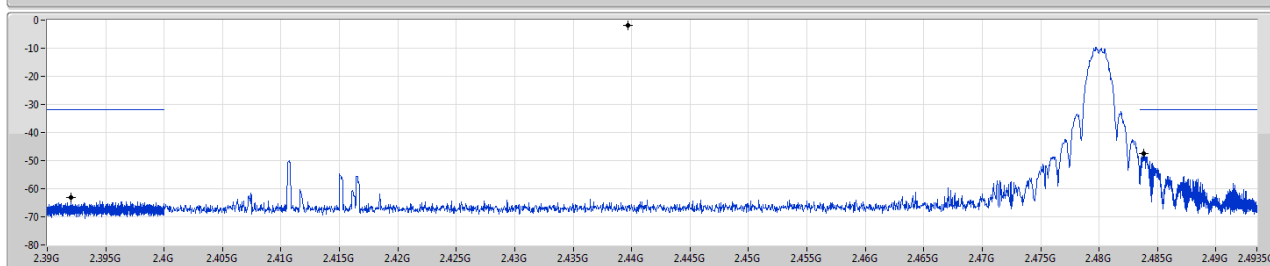
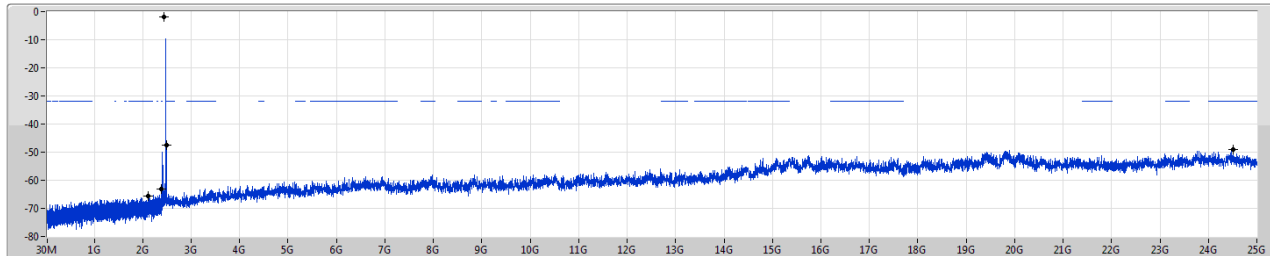


Thread_Nss1_1TX

CSE NdB

2480MHz

28/08/2019



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4397G	-2.02	-32.02	2.11329G	-65.76	2.39201G	-63.22	2.48384G	-47.44	2.45133G	-49.17	1



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	-	-	-	-	-	-	-	-	-	-	-
Thread	Pass	PK	30M	36.48	40.00	-3.52	3	Vertical	360	1.00	-

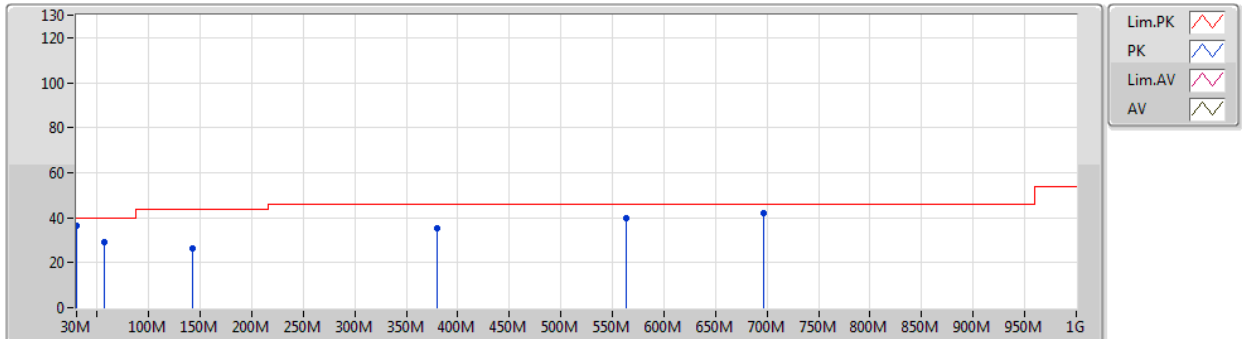
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Thread	-	-	-	-	-	-	-	-	-	-	-
2480MHz_PoE	Pass	PK	30M	36.48	40.00	-3.52	3	Vertical	360	1.00	-
2480MHz_PoE	Pass	PK	56.71M	29.18	40.00	-10.82	3	Vertical	360	1.00	-
2480MHz_PoE	Pass	PK	142.46M	26.13	43.50	-17.37	3	Vertical	360	1.00	-
2480MHz_PoE	Pass	PK	380.04M	35.31	46.00	-10.69	3	Vertical	360	1.00	-
2480MHz_PoE	Pass	PK	562.8M	39.81	46.00	-6.19	3	Vertical	360	1.00	-
2480MHz_PoE	Pass	PK	696.35M	42.15	46.00	-3.85	3	Vertical	360	1.00	-
2480MHz_PoE	Pass	PK	30M	36.01	40.00	-3.99	3	Horizontal	0	1.00	-
2480MHz_PoE	Pass	PK	141.06M	31.44	43.50	-12.06	3	Horizontal	0	1.00	-
2480MHz_PoE	Pass	PK	224M	25.28	46.00	-20.72	3	Horizontal	0	1.00	-
2480MHz_PoE	Pass	PK	387.07M	38.67	46.00	-7.33	3	Horizontal	0	1.00	-
2480MHz_PoE	Pass	PK	692.13M	38.63	46.00	-7.37	3	Horizontal	0	1.00	-
2480MHz_PoE	Pass	QP	499.54M	37.81	46.00	-8.19	3	Horizontal	193	1.29	-

Thread

2480MHz_PoE

04/10/2019

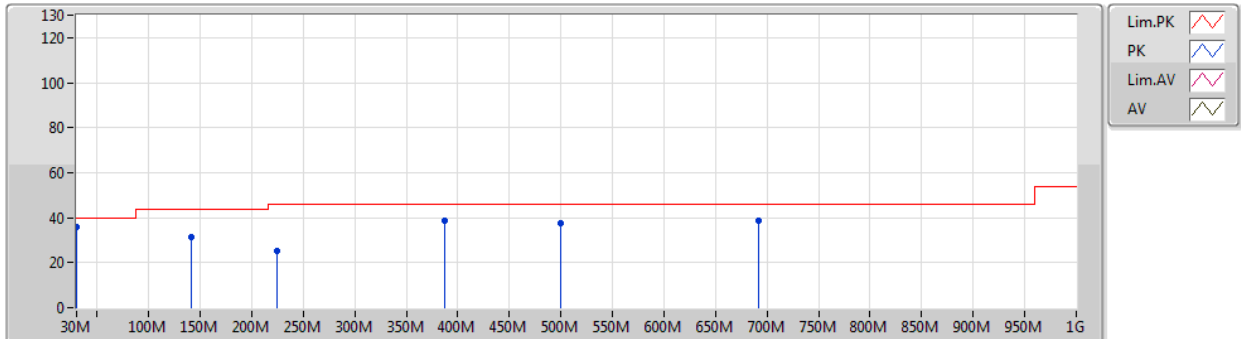


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	30M	36.48	40.00	-3.52	-7.70	3	Vertical	360	1.00	-	44.18	23.65	0.76	32.11
PK	56.71M	29.18	40.00	-10.82	-18.95	3	Vertical	360	1.00	-	48.13	11.86	1.28	32.09
PK	142.46M	26.13	43.50	-17.37	-14.19	3	Vertical	360	1.00	-	40.32	16.14	1.75	32.08
PK	380.04M	35.31	46.00	-10.69	-9.06	3	Vertical	360	1.00	-	44.37	20.07	2.69	31.82
PK	562.8M	39.81	46.00	-6.19	-4.37	3	Vertical	360	1.00	-	44.18	23.95	3.32	31.64
PK	696.35M	42.15	46.00	-3.85	-3.54	3	Vertical	360	1.00	-	45.69	24.03	3.85	31.42

Thread

2480MHz_PoE

04/10/2019



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	36.01	40.00	-3.99	-7.70	3	Horizontal	0	1.00	-	43.71	23.65	0.76	32.11
PK	141.06M	31.44	43.50	-12.06	-14.10	3	Horizontal	0	1.00	-	45.54	16.23	1.75	32.08
PK	224M	25.28	46.00	-20.72	-15.26	3	Horizontal	0	1.00	-	40.54	14.72	2.06	32.04
PK	387.07M	38.67	46.00	-7.33	-8.68	3	Horizontal	0	1.00	-	47.35	20.39	2.73	31.80
PK	692.13M	38.63	46.00	-7.37	-3.55	3	Horizontal	0	1.00	-	42.18	24.04	3.84	31.43
QP	499.54M	37.81	46.00	-8.19	-5.80	3	Horizontal	193	1.29	-	43.61	22.58	3.24	31.62



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	-	-	-	-	-	-	-	-	-	-	-
Thread	Pass	AV	2.4835G	53.70	54.00	-0.30	3	Vertical	329	2.11	-

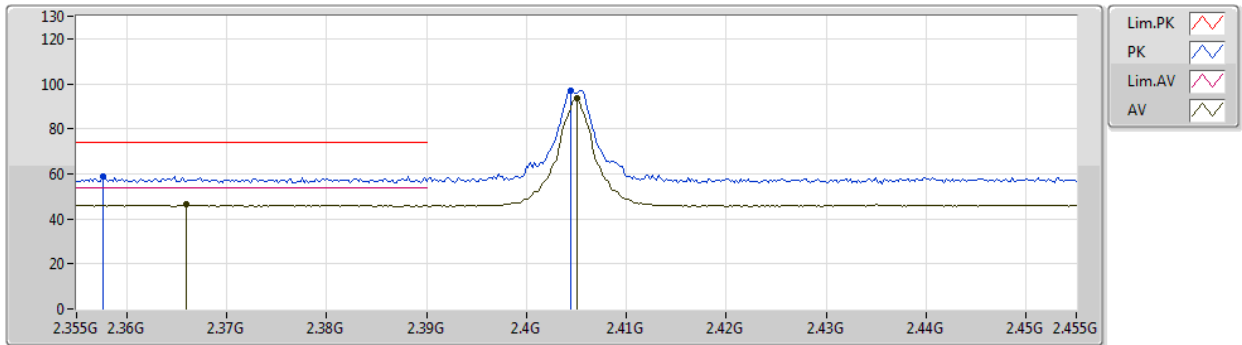
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Thread	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.366G	46.23	54.00	-7.77	3	Vertical	349	1.50	-
2405MHz	Pass	AV	2.405G	93.39	Inf	-Inf	3	Vertical	349	1.50	-
2405MHz	Pass	PK	2.3576G	59.07	74.00	-14.93	3	Vertical	349	1.50	-
2405MHz	Pass	PK	2.4044G	96.96	Inf	-Inf	3	Vertical	349	1.50	-
2405MHz	Pass	AV	2.3846G	46.12	54.00	-7.88	3	Horizontal	336	1.01	-
2405MHz	Pass	AV	2.405G	94.89	Inf	-Inf	3	Horizontal	336	1.01	-
2405MHz	Pass	PK	2.369G	58.83	74.00	-15.17	3	Horizontal	336	1.01	-
2405MHz	Pass	PK	2.4054G	98.53	Inf	-Inf	3	Horizontal	336	1.01	-
2405MHz	Pass	AV	4.81089G	34.26	54.00	-19.74	3	Vertical	28	1.71	-
2405MHz	Pass	PK	4.81174G	46.12	74.00	-27.88	3	Vertical	28	1.71	-
2405MHz	Pass	AV	4.81075G	35.41	54.00	-18.59	3	Horizontal	327	1.14	-
2405MHz	Pass	PK	4.8109G	47.17	74.00	-26.83	3	Horizontal	327	1.14	-
2440MHz	Pass	AV	2.348G	46.25	54.00	-7.75	3	Vertical	330	1.85	-
2440MHz	Pass	AV	2.44G	93.04	Inf	-Inf	3	Vertical	330	1.85	-
2440MHz	Pass	AV	2.4864G	46.26	54.00	-7.74	3	Vertical	330	1.85	-
2440MHz	Pass	PK	2.34G	58.86	74.00	-15.14	3	Vertical	330	1.85	-
2440MHz	Pass	PK	2.4404G	96.69	Inf	-Inf	3	Vertical	330	1.85	-
2440MHz	Pass	PK	2.4924G	58.62	74.00	-15.38	3	Vertical	330	1.85	-
2440MHz	Pass	AV	2.3624G	46.13	54.00	-7.87	3	Horizontal	336	1.00	-
2440MHz	Pass	AV	2.44G	93.13	Inf	-Inf	3	Horizontal	336	1.00	-
2440MHz	Pass	AV	2.496G	46.24	54.00	-7.76	3	Horizontal	336	1.00	-
2440MHz	Pass	PK	2.3484G	59.22	74.00	-14.78	3	Horizontal	336	1.00	-
2440MHz	Pass	PK	2.4396G	96.74	Inf	-Inf	3	Horizontal	336	1.00	-
2440MHz	Pass	PK	2.4972G	58.06	74.00	-15.94	3	Horizontal	336	1.00	-
2440MHz	Pass	AV	4.88094G	33.56	54.00	-20.44	3	Vertical	32	1.50	-
2440MHz	Pass	PK	4.87746G	45.93	74.00	-28.07	3	Vertical	32	1.50	-
2440MHz	Pass	AV	4.87886G	34.59	54.00	-19.41	3	Horizontal	328	1.02	-
2440MHz	Pass	PK	4.8791G	46.40	74.00	-27.60	3	Horizontal	328	1.02	-
2480MHz	Pass	AV	2.48G	91.44	Inf	-Inf	3	Vertical	329	2.11	-
2480MHz	Pass	AV	2.4835G	53.70	54.00	-0.30	3	Vertical	329	2.11	-
2480MHz	Pass	PK	2.4804G	95.09	Inf	-Inf	3	Vertical	329	2.11	-
2480MHz	Pass	PK	2.4838G	64.04	74.00	-9.96	3	Vertical	329	2.11	-
2480MHz	Pass	AV	2.48G	90.29	Inf	-Inf	3	Horizontal	32	1.10	-
2480MHz	Pass	AV	2.4835G	52.62	54.00	-1.38	3	Horizontal	32	1.10	-
2480MHz	Pass	PK	2.4804G	93.89	Inf	-Inf	3	Horizontal	32	1.10	-
2480MHz	Pass	PK	2.4842G	65.17	74.00	-8.83	3	Horizontal	32	1.10	-
2480MHz	Pass	AV	4.95878G	34.87	54.00	-19.13	3	Vertical	347	3.00	-
2480MHz	Pass	PK	4.95958G	47.83	74.00	-26.17	3	Vertical	347	3.00	-
2480MHz	Pass	AV	4.95896G	35.46	54.00	-18.54	3	Horizontal	42	1.50	-
2480MHz	Pass	PK	4.96087G	47.54	74.00	-26.46	3	Horizontal	42	1.50	-

Thread

28/08/2019

2405MHz_TX

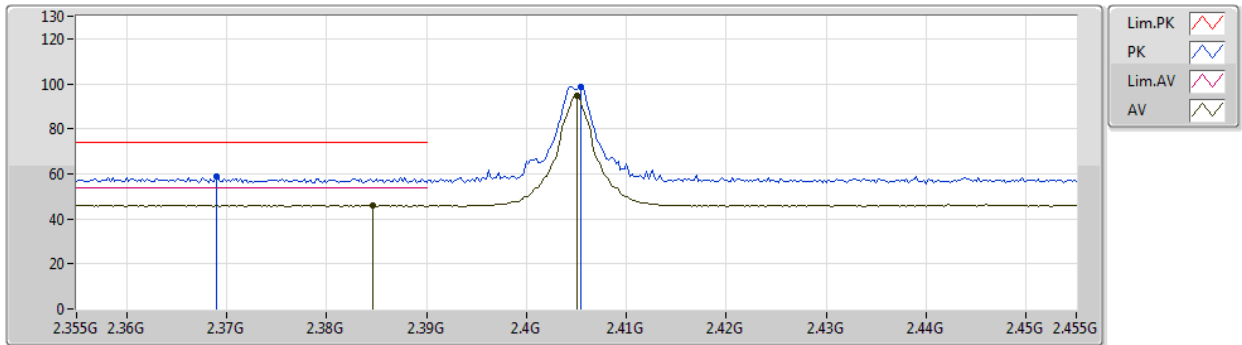


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.366G	46.23	54.00	-7.77	33.86	3	Vertical	349	1.50	-	12.37	27.74	6.12	-
AV	2.405G	93.39	Inf	-Inf	33.72	3	Vertical	349	1.50	-	59.67	27.60	6.12	-
PK	2.3576G	59.07	74.00	-14.93	33.89	3	Vertical	349	1.50	-	25.18	27.77	6.12	-
PK	2.4044G	96.96	Inf	-Inf	33.71	3	Vertical	349	1.50	-	63.25	27.60	6.11	-

Thread

2405MHz_TX

28/08/2019

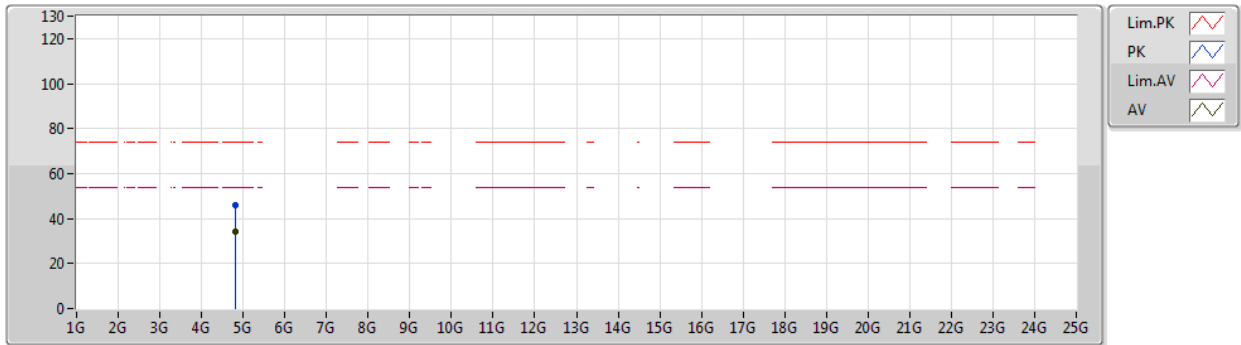


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3846G	46.12	54.00	-7.88	33.77	3	Horizontal	336	1.01	-	12.35	27.66	6.11	-
AV	2.405G	94.89	Inf	-Inf	33.72	3	Horizontal	336	1.01	-	61.17	27.60	6.12	-
PK	2.369G	58.83	74.00	-15.17	33.84	3	Horizontal	336	1.01	-	24.99	27.72	6.12	-
PK	2.4054G	98.53	Inf	-Inf	33.71	3	Horizontal	336	1.01	-	64.82	27.59	6.12	-

Thread

2405MHz_TX

28/08/2019

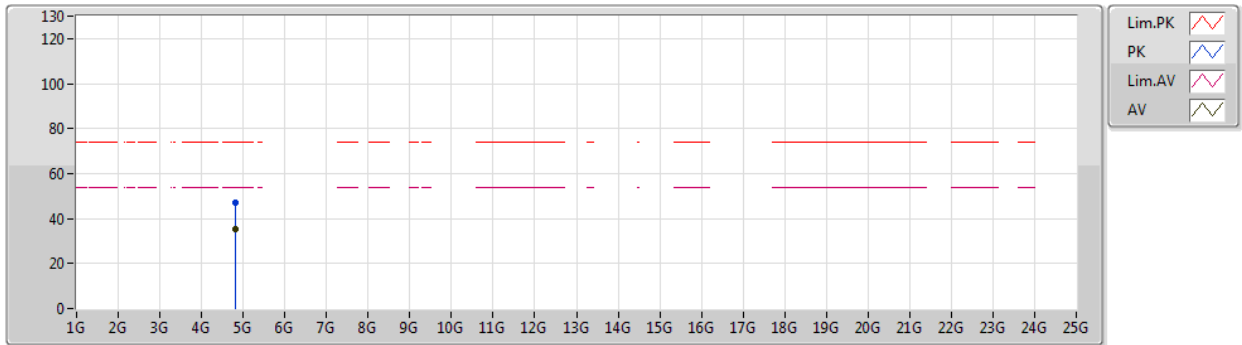


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.81089G	34.26	54.00	-19.74	5.71	3	Vertical	28	1.71	-	28.55	31.10	8.91	34.30
PK	4.81174G	46.12	74.00	-27.88	5.71	3	Vertical	28	1.71	-	40.41	31.10	8.91	34.30

Thread

28/08/2019

2405MHz_TX

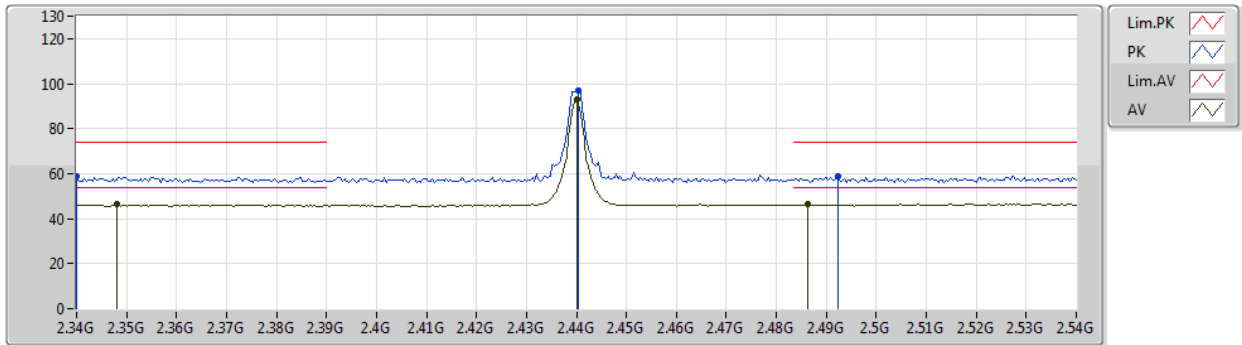


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.81075G	35.41	54.00	-18.59	5.71	3	Horizontal	327	1.14	-	29.70	31.10	8.91	34.30
PK	4.8109G	47.17	74.00	-26.83	5.71	3	Horizontal	327	1.14	-	41.46	31.10	8.91	34.30

Thread

2440MHz_TX

28/08/2019

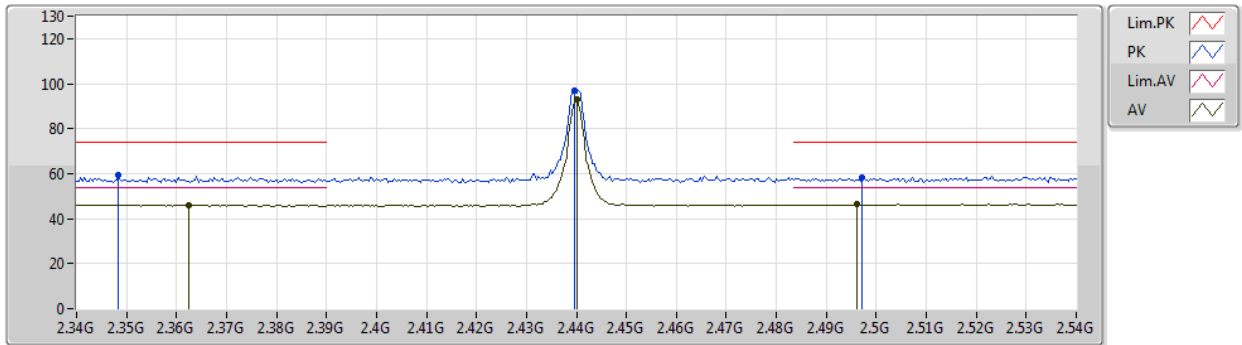


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.348G	46.25	54.00	-7.75	33.93	3	Vertical	330	1.85	-	12.32	27.81	6.12	-
AV	2.44G	93.04	Inf	-Inf	33.69	3	Vertical	330	1.85	-	59.35	27.56	6.13	-
AV	2.4864G	46.26	54.00	-7.74	33.66	3	Vertical	330	1.85	-	12.60	27.51	6.15	-
PK	2.34G	58.86	74.00	-15.14	33.96	3	Vertical	330	1.85	-	24.90	27.84	6.12	-
PK	2.4404G	96.69	Inf	-Inf	33.69	3	Vertical	330	1.85	-	63.00	27.56	6.13	-
PK	2.4924G	58.62	74.00	-15.38	33.66	3	Vertical	330	1.85	-	24.96	27.51	6.15	-

Thread

2440MHz_TX

28/08/2019

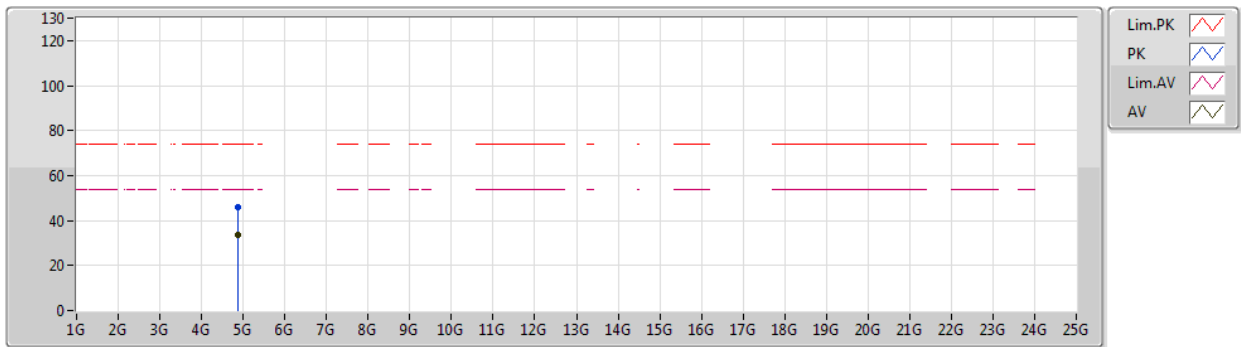


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3624G	46.13	54.00	-7.87	33.87	3	Horizontal	336	1.00	-	12.26	27.75	6.12	-
AV	2.44G	93.13	Inf	-Inf	33.69	3	Horizontal	336	1.00	-	59.44	27.56	6.13	-
AV	2.496G	46.24	54.00	-7.76	33.65	3	Horizontal	336	1.00	-	12.59	27.50	6.15	-
PK	2.3484G	59.22	74.00	-14.78	33.93	3	Horizontal	336	1.00	-	25.29	27.81	6.12	-
PK	2.4396G	96.74	Inf	-Inf	33.69	3	Horizontal	336	1.00	-	63.05	27.56	6.13	-
PK	2.4972G	58.06	74.00	-15.94	33.65	3	Horizontal	336	1.00	-	24.41	27.50	6.15	-

Thread

2440MHz_TX

28/08/2019

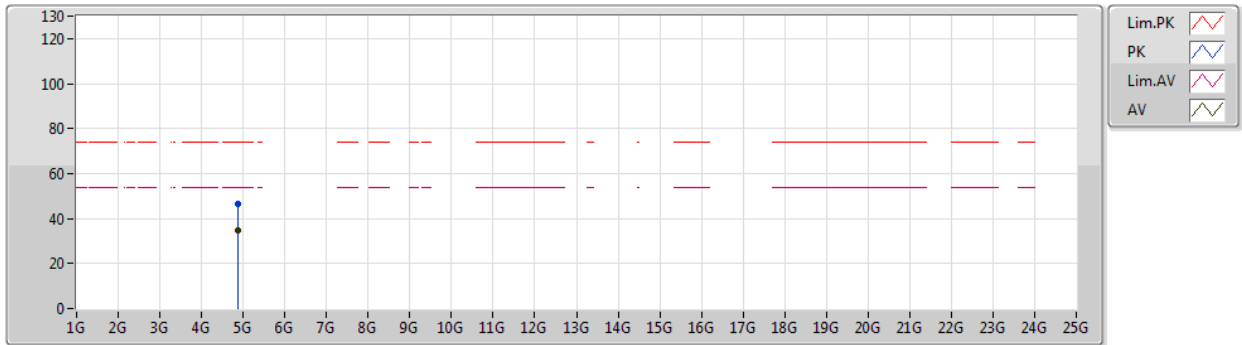


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88094G	33.56	54.00	-20.44	5.78	3	Vertical	32	1.50	-	27.78	31.10	8.96	34.28
PK	4.87746G	45.93	74.00	-28.07	5.78	3	Vertical	32	1.50	-	40.15	31.10	8.96	34.28

Thread

28/08/2019

2440MHz_TX

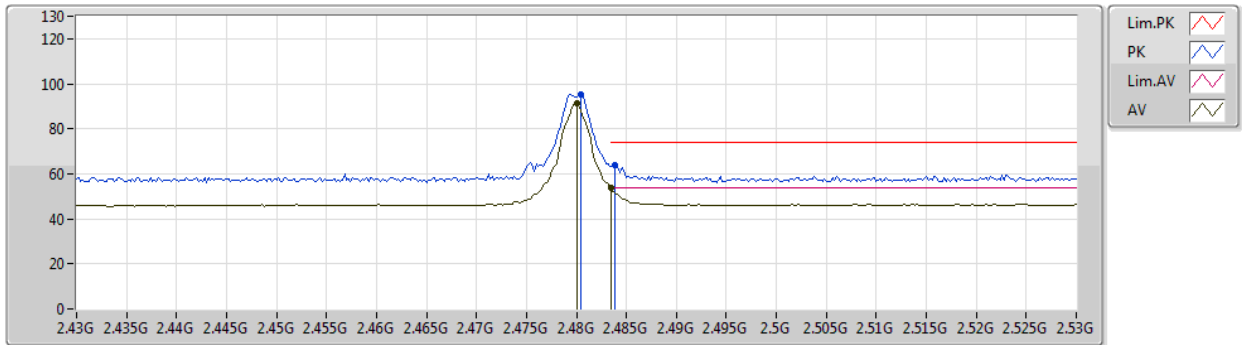


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87886G	34.59	54.00	-19.41	5.78	3	Horizontal	328	1.02	-	28.81	31.10	8.96	34.28
PK	4.8791G	46.40	74.00	-27.60	5.78	3	Horizontal	328	1.02	-	40.62	31.10	8.96	34.28

Thread

2480MHz_TX

28/08/2019

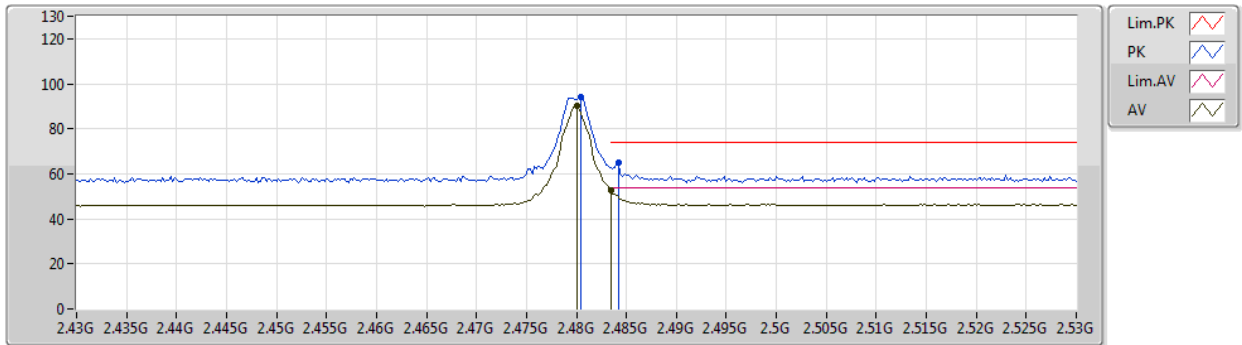


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	91.44	Inf	-Inf	33.67	3	Vertical	329	2.11	-	57.77	27.52	6.15	-
AV	2.4835G	53.70	54.00	-0.30	33.67	3	Vertical	329	2.11	-	20.03	27.52	6.15	-
PK	2.4804G	95.09	Inf	-Inf	33.67	3	Vertical	329	2.11	-	61.42	27.52	6.15	-
PK	2.4838G	64.04	74.00	-9.96	33.67	3	Vertical	329	2.11	-	30.37	27.52	6.15	-

Thread

2480MHz_TX

28/08/2019

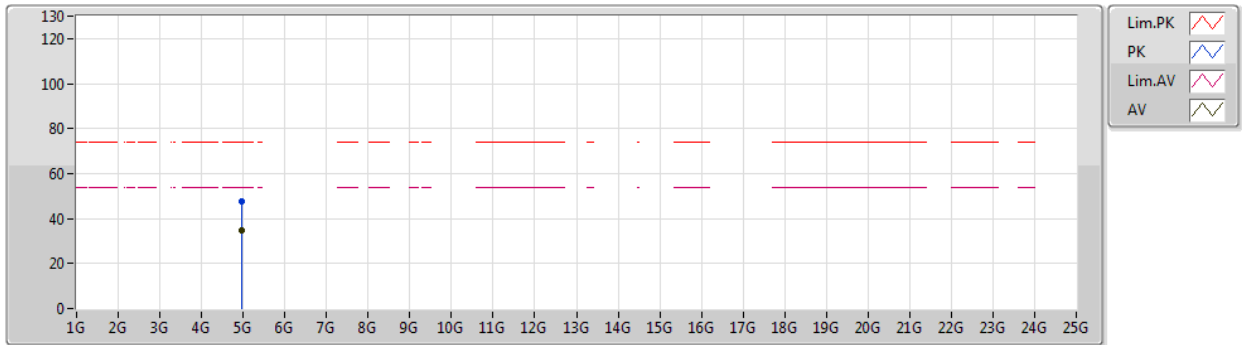


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	90.29	Inf	-Inf	33.67	3	Horizontal	32	1.10	-	56.62	27.52	6.15	-
AV	2.4835G	52.62	54.00	-1.38	33.67	3	Horizontal	32	1.10	-	18.95	27.52	6.15	-
PK	2.4804G	93.89	Inf	-Inf	33.67	3	Horizontal	32	1.10	-	60.22	27.52	6.15	-
PK	2.4842G	65.17	74.00	-8.83	33.67	3	Horizontal	32	1.10	-	31.50	27.52	6.15	-

Thread

28/08/2019

2480MHz_TX

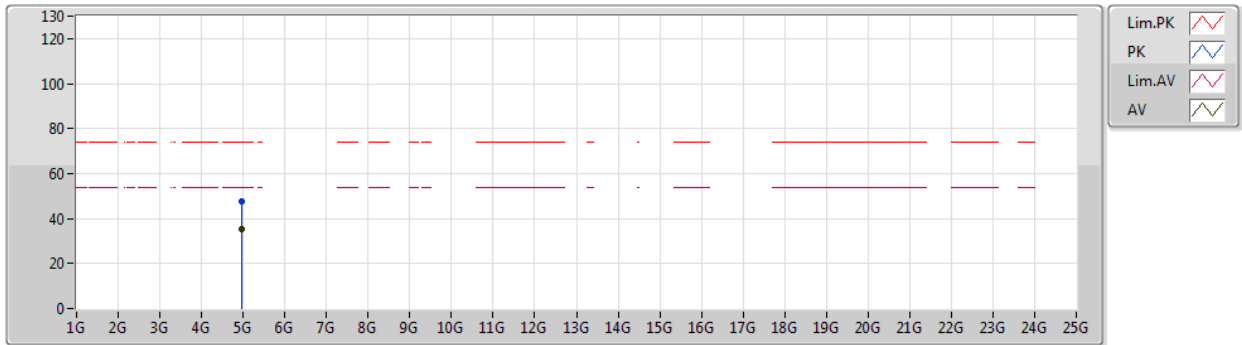


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95878G	34.87	54.00	-19.13	6.20	3	Vertical	347	3.00	-	28.67	31.34	9.02	34.16
PK	4.95958G	47.83	74.00	-26.17	6.21	3	Vertical	347	3.00	-	41.62	31.34	9.03	34.16

Thread

28/08/2019

2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95896G	35.46	54.00	-18.54	6.20	3	Horizontal	42	1.50	-	29.26	31.34	9.02	34.16
PK	4.96087G	47.54	74.00	-26.46	6.22	3	Horizontal	42	1.50	-	41.32	31.34	9.03	34.15



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	-	-	-	-	-	-	-	-	-	-	-
Thread	Pass	PK	33.88M	35.90	40.00	-4.10	3	Vertical	360	1.00	-



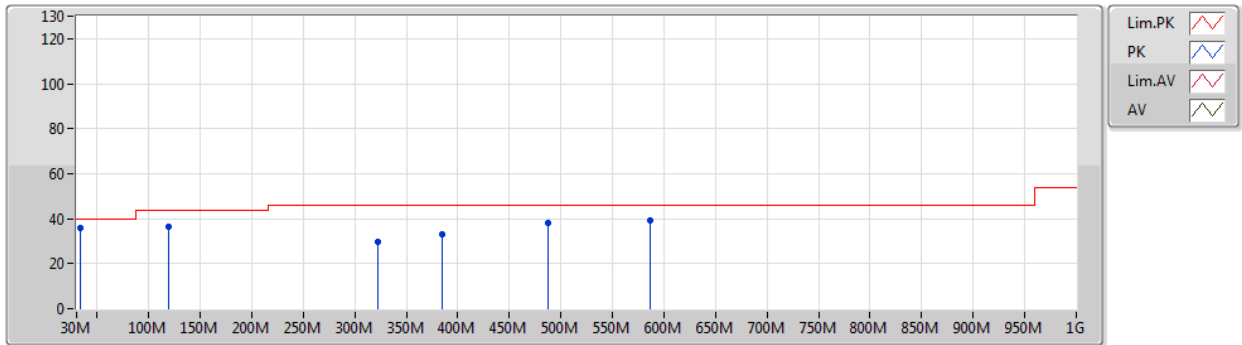
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Thread	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	33.88M	35.90	40.00	-4.10	3	Vertical	360	1.00	-
2440MHz	Pass	PK	119.24M	36.26	43.50	-7.24	3	Vertical	360	1.00	-
2440MHz	Pass	PK	322.94M	29.64	46.00	-16.36	3	Vertical	360	1.00	-
2440MHz	Pass	PK	385.02M	32.82	46.00	-13.18	3	Vertical	360	1.00	-
2440MHz	Pass	PK	487.84M	37.88	46.00	-8.12	3	Vertical	360	1.00	-
2440MHz	Pass	PK	586.78M	39.01	46.00	-6.99	3	Vertical	360	1.00	-
2440MHz	Pass	PK	117.3M	39.29	43.50	-4.21	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	386.96M	36.51	46.00	-9.49	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	513.06M	34.06	46.00	-11.94	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	586.78M	38.55	46.00	-7.45	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	705.12M	38.54	46.00	-7.46	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	860.32M	35.16	46.00	-10.84	3	Horizontal	0	1.00	-

Thread

2440MHz_PoE

04/10/2019

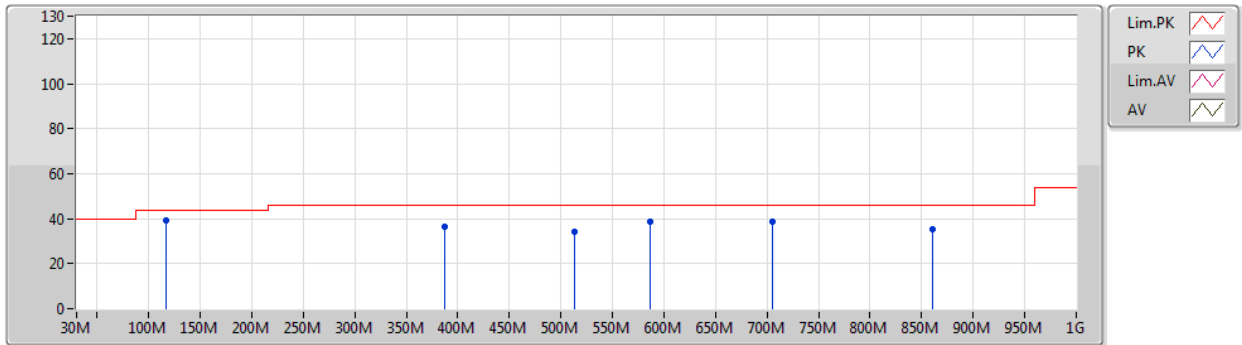


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	33.88M	35.90	40.00	-4.10	-5.91	3	Vertical	360	1.00	-	41.81	20.79	0.86	27.56
PK	119.24M	36.26	43.50	-7.24	-8.43	3	Vertical	360	1.00	-	44.69	17.21	1.67	27.31
PK	322.94M	29.64	46.00	-16.36	-5.22	3	Vertical	360	1.00	-	34.86	18.76	2.85	26.83
PK	385.02M	32.82	46.00	-13.18	-3.80	3	Vertical	360	1.00	-	36.62	20.28	3.12	27.20
PK	487.84M	37.88	46.00	-8.12	-1.56	3	Vertical	360	1.00	-	39.44	22.67	3.56	27.79
PK	586.78M	39.01	46.00	-6.99	-0.56	3	Vertical	360	1.00	-	39.57	23.49	4.00	28.05

Thread

04/10/2019

2440MHz_PoE



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	117.3M	39.29	43.50	-4.21	-8.52	3	Horizontal	0	1.00	-	47.81	17.14	1.66	27.32
PK	386.96M	36.51	46.00	-9.49	-3.73	3	Horizontal	0	1.00	-	40.24	20.35	3.13	27.21
PK	513.06M	34.06	46.00	-11.94	-1.59	3	Horizontal	0	1.00	-	35.65	22.64	3.65	27.88
PK	586.78M	38.55	46.00	-7.45	-0.56	3	Horizontal	0	1.00	-	39.11	23.49	4.00	28.05
PK	705.12M	38.54	46.00	-7.46	0.47	3	Horizontal	0	1.00	-	38.07	24.13	4.38	28.04
PK	860.32M	35.16	46.00	-10.84	2.63	3	Horizontal	0	1.00	-	32.53	25.43	4.89	27.69



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	-	-	-	-	-	-	-	-	-	-	-
Thread	Pass	AV	2.4835G	53.18	54.00	-0.82	3	Horizontal	359	1.34	-

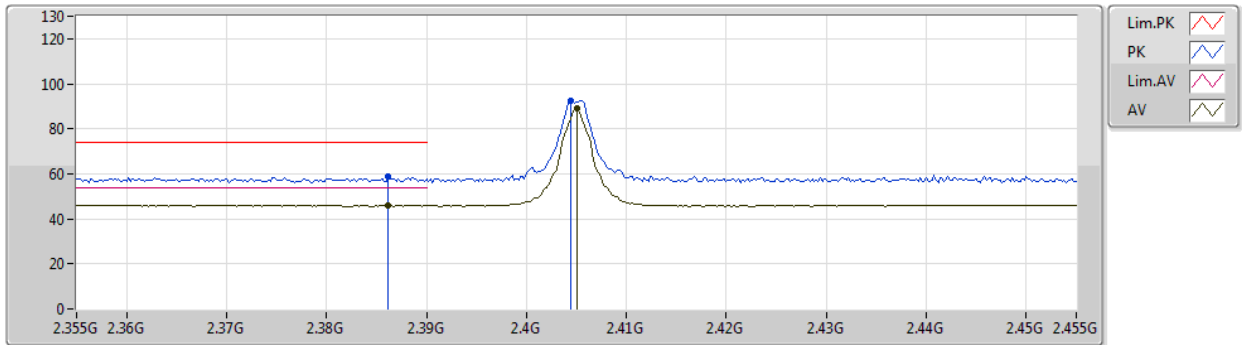
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Thread	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.3862G	46.13	54.00	-7.87	3	Vertical	356	2.96	-
2405MHz	Pass	AV	2.405G	88.91	Inf	-Inf	3	Vertical	356	2.96	-
2405MHz	Pass	PK	2.3862G	58.79	74.00	-15.21	3	Vertical	356	2.96	-
2405MHz	Pass	PK	2.4044G	92.53	Inf	-Inf	3	Vertical	356	2.96	-
2405MHz	Pass	AV	2.3576G	46.18	54.00	-7.82	3	Horizontal	356	1.15	-
2405MHz	Pass	AV	2.405G	99.02	Inf	-Inf	3	Horizontal	356	1.15	-
2405MHz	Pass	PK	2.3882G	58.89	74.00	-15.11	3	Horizontal	356	1.15	-
2405MHz	Pass	PK	2.4044G	102.58	Inf	-Inf	3	Horizontal	356	1.15	-
2405MHz	Pass	AV	4.80895G	34.64	54.00	-19.36	3	Vertical	312	1.00	-
2405MHz	Pass	PK	4.80896G	47.41	74.00	-26.59	3	Vertical	312	1.00	-
2405MHz	Pass	AV	4.80888G	34.64	54.00	-19.36	3	Horizontal	34	1.00	-
2405MHz	Pass	PK	4.80901G	46.91	74.00	-27.09	3	Horizontal	34	1.00	-
2440MHz	Pass	AV	2.3636G	46.27	54.00	-7.73	3	Vertical	264	2.85	-
2440MHz	Pass	AV	2.44G	88.25	Inf	-Inf	3	Vertical	264	2.85	-
2440MHz	Pass	AV	2.4904G	46.38	54.00	-7.62	3	Vertical	264	2.85	-
2440MHz	Pass	PK	2.3768G	58.80	74.00	-15.20	3	Vertical	264	2.85	-
2440MHz	Pass	PK	2.4396G	91.87	Inf	-Inf	3	Vertical	264	2.85	-
2440MHz	Pass	PK	2.4848G	58.60	74.00	-15.40	3	Vertical	264	2.85	-
2440MHz	Pass	AV	2.3816G	46.30	54.00	-7.70	3	Horizontal	359	1.13	-
2440MHz	Pass	AV	2.44G	98.50	Inf	-Inf	3	Horizontal	359	1.13	-
2440MHz	Pass	AV	2.4872G	46.23	54.00	-7.77	3	Horizontal	359	1.13	-
2440MHz	Pass	PK	2.3624G	59.71	74.00	-14.29	3	Horizontal	359	1.13	-
2440MHz	Pass	PK	2.4404G	102.09	Inf	-Inf	3	Horizontal	359	1.13	-
2440MHz	Pass	PK	2.4996G	59.83	74.00	-14.17	3	Horizontal	359	1.13	-
2440MHz	Pass	AV	4.87897G	34.80	54.00	-19.20	3	Vertical	26	1.00	-
2440MHz	Pass	PK	4.87916G	47.54	74.00	-26.46	3	Vertical	26	1.00	-
2440MHz	Pass	AV	4.87856G	33.66	54.00	-20.34	3	Horizontal	177	2.97	-
2440MHz	Pass	PK	4.87942G	45.91	74.00	-28.09	3	Horizontal	177	2.97	-
2480MHz	Pass	AV	2.48G	78.75	Inf	-Inf	3	Vertical	226	2.74	-
2480MHz	Pass	AV	2.4835G	47.04	54.00	-6.96	3	Vertical	226	2.74	-
2480MHz	Pass	PK	2.4804G	82.60	Inf	-Inf	3	Vertical	226	2.74	-
2480MHz	Pass	PK	2.486G	58.69	74.00	-15.31	3	Vertical	226	2.74	-
2480MHz	Pass	AV	2.48G	90.41	Inf	-Inf	3	Horizontal	359	1.34	-
2480MHz	Pass	AV	2.4835G	53.18	54.00	-0.82	3	Horizontal	359	1.34	-
2480MHz	Pass	PK	2.4804G	94.06	Inf	-Inf	3	Horizontal	359	1.34	-
2480MHz	Pass	PK	2.4842G	65.48	74.00	-8.52	3	Horizontal	359	1.34	-
2480MHz	Pass	AV	4.96079G	34.96	54.00	-19.04	3	Vertical	26	1.99	-
2480MHz	Pass	PK	4.9604G	48.04	74.00	-25.96	3	Vertical	26	1.99	-
2480MHz	Pass	AV	4.96081G	34.58	54.00	-19.42	3	Horizontal	68	2.28	-
2480MHz	Pass	PK	4.96104G	46.70	74.00	-27.30	3	Horizontal	68	2.28	-

Thread

2405MHz_TX

28/08/2019

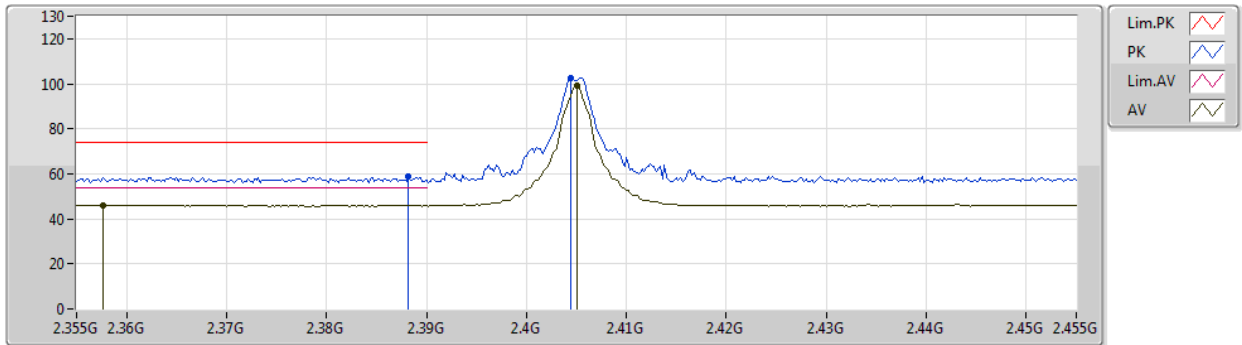


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3862G	46.13	54.00	-7.87	33.77	3	Vertical	356	2.96	-	12.36	27.66	6.11	-
AV	2.405G	88.91	Inf	-Inf	33.72	3	Vertical	356	2.96	-	55.19	27.60	6.12	-
PK	2.3862G	58.79	74.00	-15.21	33.77	3	Vertical	356	2.96	-	25.02	27.66	6.11	-
PK	2.4044G	92.53	Inf	-Inf	33.71	3	Vertical	356	2.96	-	58.82	27.60	6.11	-

Thread

2405MHz_TX

28/08/2019

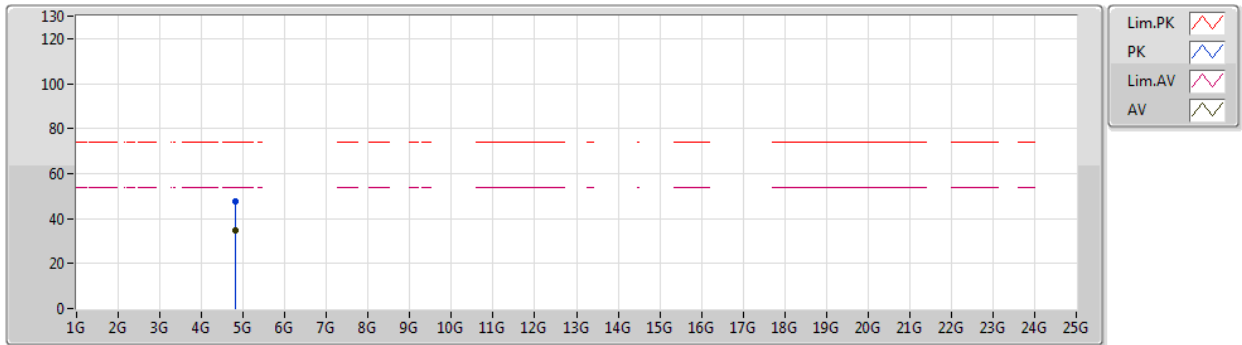


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3576G	46.18	54.00	-7.82	33.89	3	Horizontal	356	1.15	-	12.29	27.77	6.12	-
AV	2.405G	99.02	Inf	-Inf	33.72	3	Horizontal	356	1.15	-	65.30	27.60	6.12	-
PK	2.3882G	58.89	74.00	-15.11	33.76	3	Horizontal	356	1.15	-	25.13	27.65	6.11	-
PK	2.4044G	102.58	Inf	-Inf	33.71	3	Horizontal	356	1.15	-	68.87	27.60	6.11	-

Thread

2405MHz_TX

28/08/2019

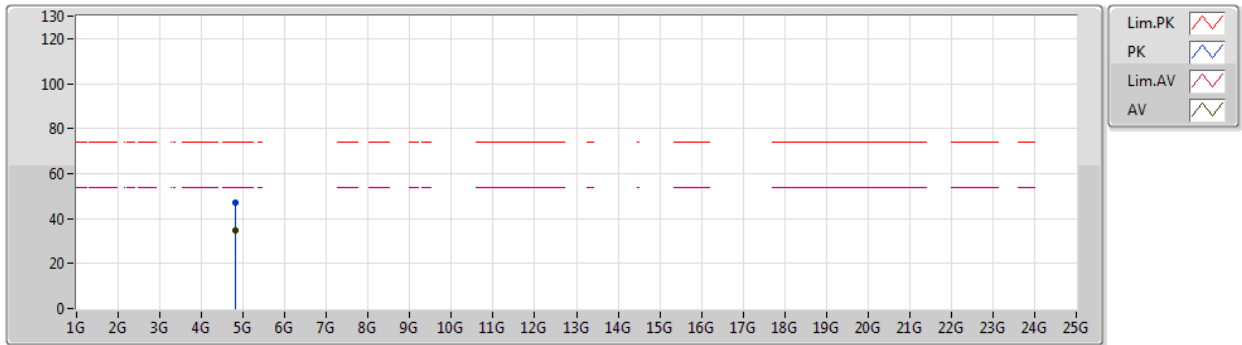


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80895G	34.64	54.00	-19.36	5.70	3	Vertical	312	1.00	-	28.94	31.10	8.90	34.30
PK	4.80896G	47.41	74.00	-26.59	5.70	3	Vertical	312	1.00	-	41.71	31.10	8.90	34.30

Thread

28/08/2019

2405MHz_TX

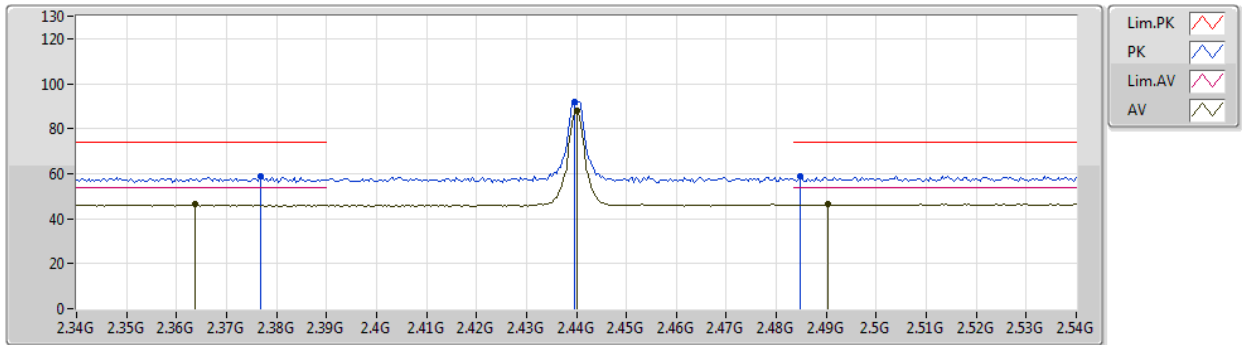


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80888G	34.64	54.00	-19.36	5.70	3	Horizontal	34	1.00	-	28.94	31.10	8.90	34.30
PK	4.80901G	46.91	74.00	-27.09	5.70	3	Horizontal	34	1.00	-	41.21	31.10	8.90	34.30

Thread

2440MHz_TX

28/08/2019

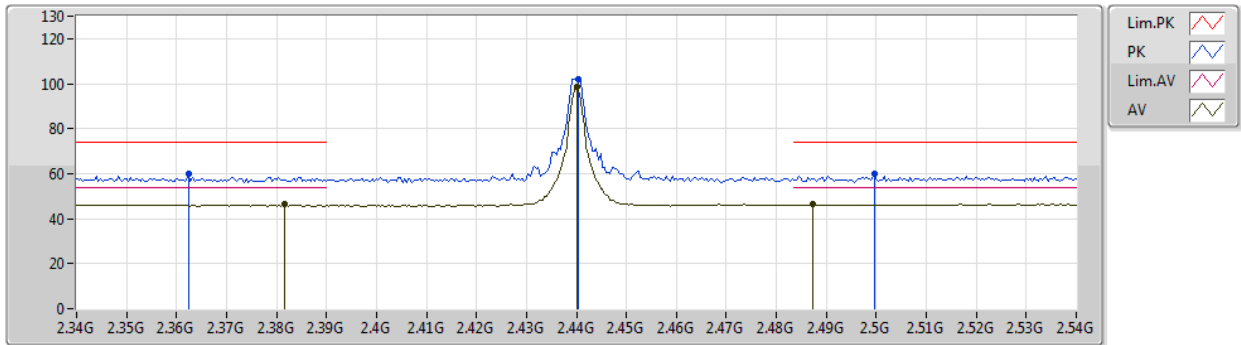


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3636G	46.27	54.00	-7.73	33.87	3	Vertical	264	2.85	-	12.40	27.75	6.12	-
AV	2.44G	88.25	Inf	-Inf	33.69	3	Vertical	264	2.85	-	54.56	27.56	6.13	-
AV	2.4904G	46.38	54.00	-7.62	33.66	3	Vertical	264	2.85	-	12.72	27.51	6.15	-
PK	2.3768G	58.80	74.00	-15.20	33.81	3	Vertical	264	2.85	-	24.99	27.69	6.12	-
PK	2.4396G	91.87	Inf	-Inf	33.69	3	Vertical	264	2.85	-	58.18	27.56	6.13	-
PK	2.4848G	58.60	74.00	-15.40	33.67	3	Vertical	264	2.85	-	24.93	27.52	6.15	-

Thread

2440MHz_TX

28/08/2019

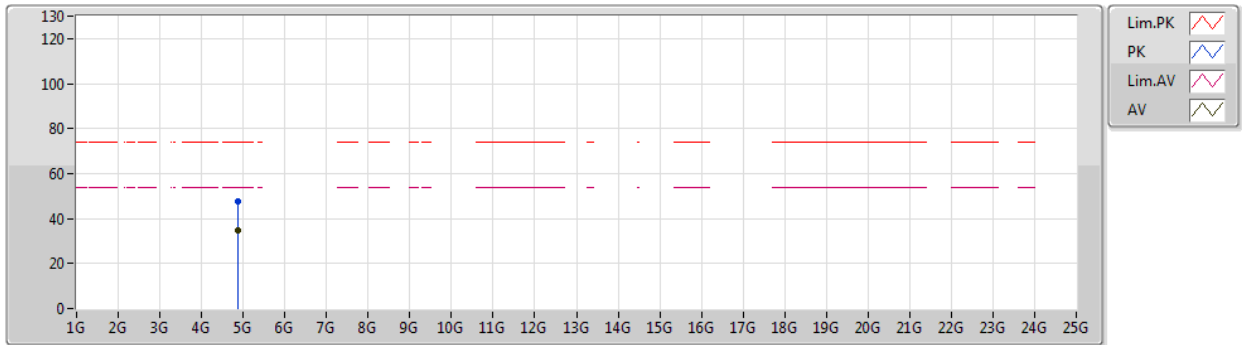


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3816G	46.30	54.00	-7.70	33.78	3	Horizontal	359	1.13	-	12.52	27.67	6.11	-
AV	2.44G	98.50	Inf	-Inf	33.69	3	Horizontal	359	1.13	-	64.81	27.56	6.13	-
AV	2.4872G	46.23	54.00	-7.77	33.66	3	Horizontal	359	1.13	-	12.57	27.51	6.15	-
PK	2.3624G	59.71	74.00	-14.29	33.87	3	Horizontal	359	1.13	-	25.84	27.75	6.12	-
PK	2.4404G	102.09	Inf	-Inf	33.69	3	Horizontal	359	1.13	-	68.40	27.56	6.13	-
PK	2.4996G	59.83	74.00	-14.17	33.65	3	Horizontal	359	1.13	-	26.18	27.50	6.15	-

Thread

2440MHz_TX

28/08/2019

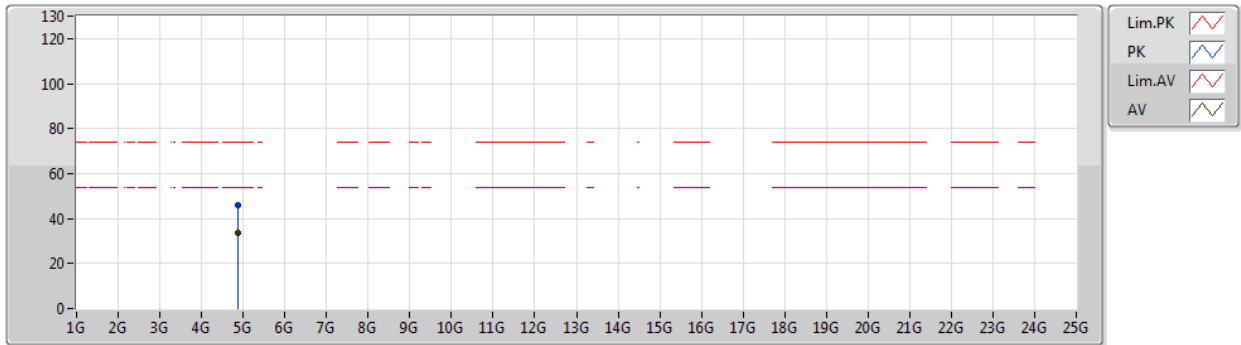


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87897G	34.80	54.00	-19.20	5.78	3	Vertical	26	1.00	-	29.02	31.10	8.96	34.28
PK	4.87916G	47.54	74.00	-26.46	5.78	3	Vertical	26	1.00	-	41.76	31.10	8.96	34.28

Thread

2440MHz_TX

28/08/2019

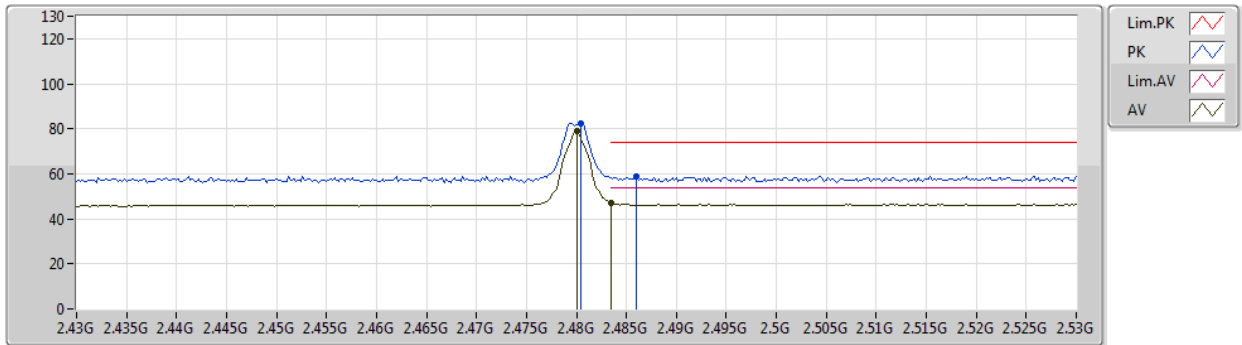


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87856G	33.66	54.00	-20.34	5.78	3	Horizontal	177	2.97	-	27.88	31.10	8.96	34.28
PK	4.87942G	45.91	74.00	-28.09	5.78	3	Horizontal	177	2.97	-	40.13	31.10	8.96	34.28

Thread

2480MHz_TX

28/08/2019

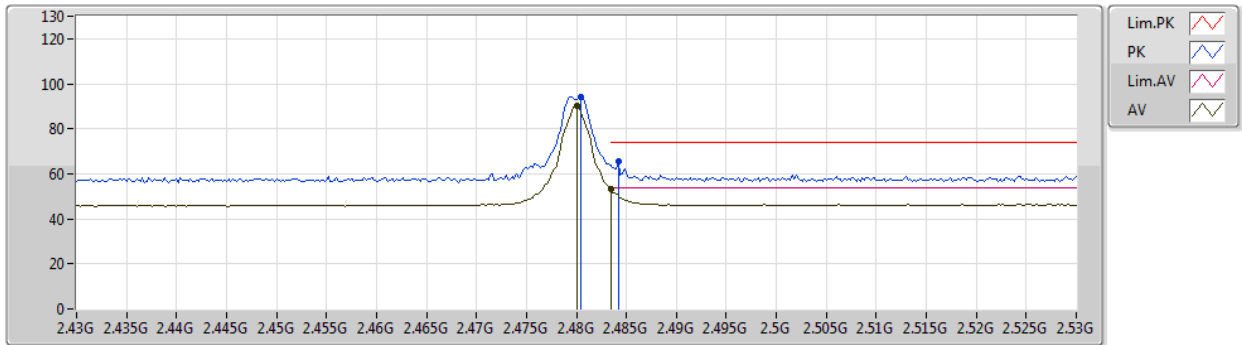


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	78.75	Inf	-Inf	33.67	3	Vertical	226	2.74	-	45.08	27.52	6.15	-
AV	2.4835G	47.04	54.00	-6.96	33.67	3	Vertical	226	2.74	-	13.37	27.52	6.15	-
PK	2.4804G	82.60	Inf	-Inf	33.67	3	Vertical	226	2.74	-	48.93	27.52	6.15	-
PK	2.486G	58.69	74.00	-15.31	33.66	3	Vertical	226	2.74	-	25.03	27.51	6.15	-

Thread

2480MHz_TX

28/08/2019

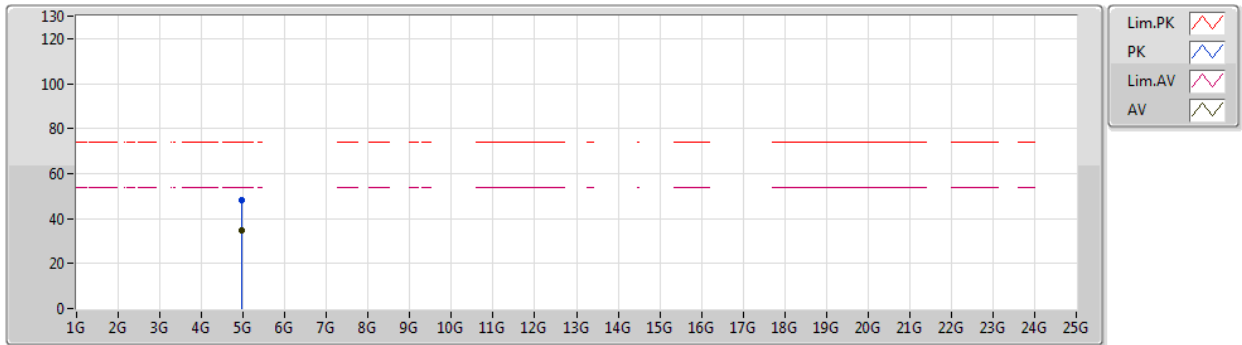


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	90.41	Inf	-Inf	33.67	3	Horizontal	359	1.34	-	56.74	27.52	6.15	-
AV	2.4835G	53.18	54.00	-0.82	33.67	3	Horizontal	359	1.34	-	19.51	27.52	6.15	-
PK	2.4804G	94.06	Inf	-Inf	33.67	3	Horizontal	359	1.34	-	60.39	27.52	6.15	-
PK	2.4842G	65.48	74.00	-8.52	33.67	3	Horizontal	359	1.34	-	31.81	27.52	6.15	-

Thread

2480MHz_TX

28/08/2019

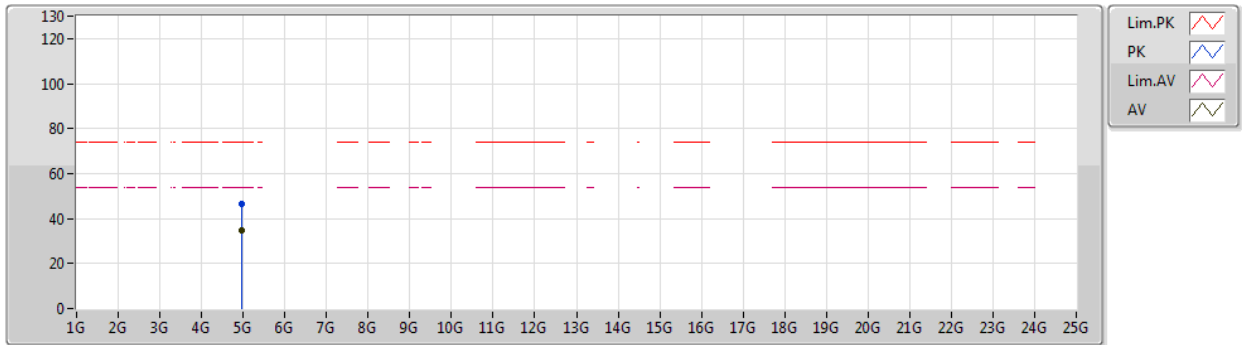


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96079G	34.96	54.00	-19.04	6.22	3	Vertical	26	1.99	-	28.74	31.34	9.03	34.15
PK	4.9604G	48.04	74.00	-25.96	6.21	3	Vertical	26	1.99	-	41.83	31.34	9.03	34.16

Thread

28/08/2019

2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96081G	34.58	54.00	-19.42	6.22	3	Horizontal	68	2.28	-	28.36	31.34	9.03	34.15
PK	4.96104G	46.70	74.00	-27.30	6.22	3	Horizontal	68	2.28	-	40.48	31.34	9.03	34.15



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	-	-	-	-	-	-	-	-	-	-	-
Thread	Pass	PK	117.3M	39.64	43.50	-3.86	3	Horizontal	0	1.00	-

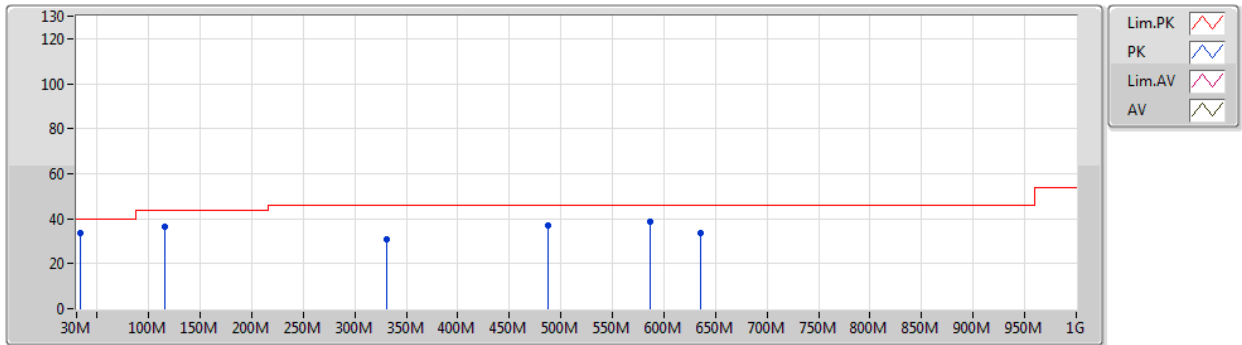
**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Thread	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	33.88M	33.88	40.00	-6.12	3	Vertical	360	1.00	-
2440MHz	Pass	PK	115.36M	36.47	43.50	-7.03	3	Vertical	360	1.00	-
2440MHz	Pass	PK	330.7M	30.59	46.00	-15.41	3	Vertical	360	1.00	-
2440MHz	Pass	PK	487.84M	36.88	46.00	-9.12	3	Vertical	360	1.00	-
2440MHz	Pass	PK	586.78M	38.55	46.00	-7.45	3	Vertical	360	1.00	-
2440MHz	Pass	PK	635.28M	33.83	46.00	-12.17	3	Vertical	360	1.00	-
2440MHz	Pass	PK	55.22M	34.10	40.00	-5.90	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	117.3M	39.64	43.50	-3.86	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	386.96M	37.25	46.00	-8.75	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	586.78M	38.42	46.00	-7.58	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	695.42M	40.63	46.00	-5.37	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	821.52M	40.18	46.00	-5.82	3	Horizontal	0	1.00	-

Thread

2440MHz_PoE

04/10/2019

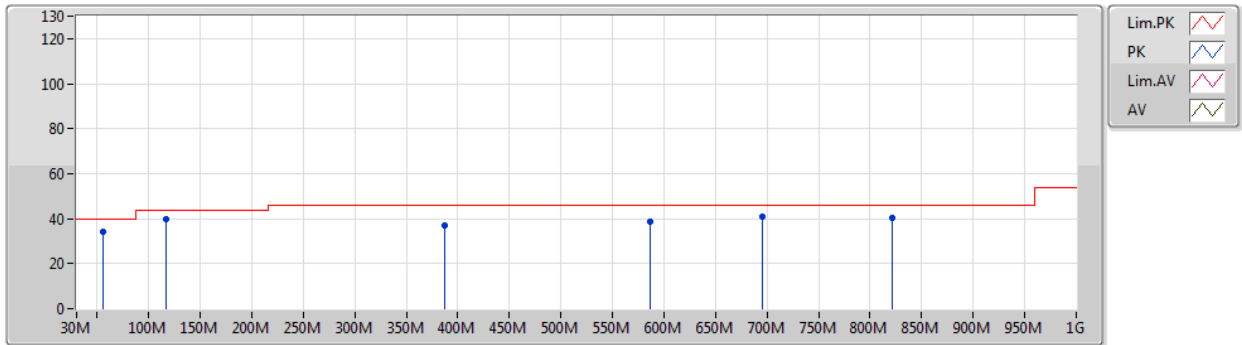


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	33.88M	33.88	40.00	-6.12	-5.91	3	Vertical	360	1.00	-	39.79	20.79	0.86	27.56
PK	115.36M	36.47	43.50	-7.03	-8.60	3	Vertical	360	1.00	-	45.07	17.08	1.64	27.32
PK	330.7M	30.59	46.00	-15.41	-5.14	3	Vertical	360	1.00	-	35.73	18.85	2.88	26.87
PK	487.84M	36.88	46.00	-9.12	-1.56	3	Vertical	360	1.00	-	38.44	22.67	3.56	27.79
PK	586.78M	38.55	46.00	-7.45	-0.56	3	Vertical	360	1.00	-	39.11	23.49	4.00	28.05
PK	635.28M	33.83	46.00	-12.17	0.30	3	Vertical	360	1.00	-	33.53	24.25	4.15	28.10

Thread

2440MHz_PoE

04/10/2019



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	55.22M	34.10	40.00	-5.90	-14.58	3	Horizontal	0	1.00	-	48.68	11.82	1.11	27.51
PK	117.3M	39.64	43.50	-3.86	-8.52	3	Horizontal	0	1.00	-	48.16	17.14	1.66	27.32
PK	386.96M	37.25	46.00	-8.75	-3.73	3	Horizontal	0	1.00	-	40.98	20.35	3.13	27.21
PK	586.78M	38.42	46.00	-7.58	-0.56	3	Horizontal	0	1.00	-	38.98	23.49	4.00	28.05
PK	695.42M	40.63	46.00	-5.37	0.35	3	Horizontal	0	1.00	-	40.28	24.06	4.34	28.05
PK	821.52M	40.18	46.00	-5.82	2.13	3	Horizontal	0	1.00	-	38.05	25.14	4.80	27.81

**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	-	-	-	-	-	-	-	-	-	-	-
Thread	Pass	AV	2.4835G	53.71	54.00	-0.29	3	Vertical	93	1.00	-

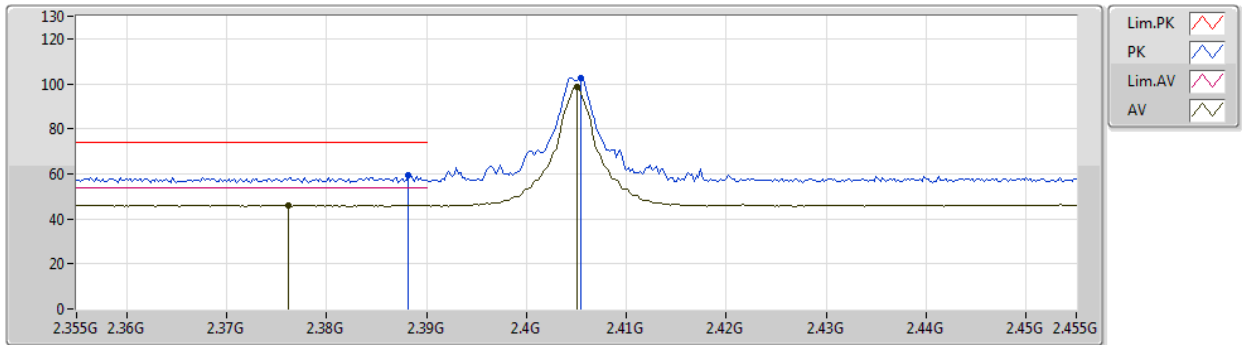
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Thread	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.3762G	46.19	54.00	-7.81	3	Vertical	102	1.17	-
2405MHz	Pass	AV	2.405G	98.86	Inf	-Inf	3	Vertical	102	1.17	-
2405MHz	Pass	PK	2.3882G	59.60	74.00	-14.40	3	Vertical	102	1.17	-
2405MHz	Pass	PK	2.4054G	102.42	Inf	-Inf	3	Vertical	102	1.17	-
2405MHz	Pass	AV	2.3562G	46.19	54.00	-7.81	3	Horizontal	275	1.49	-
2405MHz	Pass	AV	2.405G	81.40	Inf	-Inf	3	Horizontal	275	1.49	-
2405MHz	Pass	PK	2.3884G	58.96	74.00	-15.04	3	Horizontal	275	1.49	-
2405MHz	Pass	PK	2.4044G	85.15	Inf	-Inf	3	Horizontal	275	1.49	-
2405MHz	Pass	AV	4.80893G	34.43	54.00	-19.57	3	Vertical	261	1.50	-
2405MHz	Pass	PK	4.80969G	46.59	74.00	-27.41	3	Vertical	261	1.50	-
2405MHz	Pass	AV	4.80913G	34.06	54.00	-19.94	3	Horizontal	295	2.85	-
2405MHz	Pass	PK	4.8079G	46.27	74.00	-27.73	3	Horizontal	295	2.85	-
2440MHz	Pass	AV	2.3568G	46.22	54.00	-7.78	3	Vertical	101	1.00	-
2440MHz	Pass	AV	2.44G	98.95	Inf	-Inf	3	Vertical	101	1.00	-
2440MHz	Pass	AV	2.4956G	46.33	54.00	-7.67	3	Vertical	101	1.00	-
2440MHz	Pass	PK	2.3804G	58.91	74.00	-15.09	3	Vertical	101	1.00	-
2440MHz	Pass	PK	2.4404G	102.50	Inf	-Inf	3	Vertical	101	1.00	-
2440MHz	Pass	PK	2.486G	58.89	74.00	-15.11	3	Vertical	101	1.00	-
2440MHz	Pass	AV	2.3732G	46.23	54.00	-7.77	3	Horizontal	250	1.00	-
2440MHz	Pass	AV	2.44G	83.31	Inf	-Inf	3	Horizontal	250	1.00	-
2440MHz	Pass	AV	2.4888G	46.30	54.00	-7.70	3	Horizontal	250	1.00	-
2440MHz	Pass	PK	2.3752G	58.97	74.00	-15.03	3	Horizontal	250	1.00	-
2440MHz	Pass	PK	2.4404G	86.96	Inf	-Inf	3	Horizontal	250	1.00	-
2440MHz	Pass	PK	2.4932G	59.00	74.00	-15.00	3	Horizontal	250	1.00	-
2440MHz	Pass	AV	4.87889G	34.42	54.00	-19.58	3	Vertical	23	1.10	-
2440MHz	Pass	PK	4.87906G	46.87	74.00	-27.13	3	Vertical	23	1.10	-
2440MHz	Pass	AV	4.87905G	33.06	54.00	-20.94	3	Horizontal	359	1.50	-
2440MHz	Pass	PK	4.88132G	45.81	74.00	-28.19	3	Horizontal	359	1.50	-
2480MHz	Pass	AV	2.48G	91.12	Inf	-Inf	3	Vertical	93	1.00	-
2480MHz	Pass	AV	2.4835G	53.71	54.00	-0.29	3	Vertical	93	1.00	-
2480MHz	Pass	PK	2.4804G	94.72	Inf	-Inf	3	Vertical	93	1.00	-
2480MHz	Pass	PK	2.4835G	64.16	74.00	-9.84	3	Vertical	93	1.00	-
2480MHz	Pass	AV	2.48G	73.91	Inf	-Inf	3	Horizontal	276	1.34	-
2480MHz	Pass	AV	2.4836G	46.42	54.00	-7.58	3	Horizontal	276	1.34	-
2480MHz	Pass	PK	2.4804G	78.13	Inf	-Inf	3	Horizontal	276	1.34	-
2480MHz	Pass	PK	2.4835G	59.34	74.00	-14.66	3	Horizontal	276	1.34	-
2480MHz	Pass	AV	4.95877G	34.99	54.00	-19.01	3	Vertical	24	1.49	-
2480MHz	Pass	PK	4.95906G	48.18	74.00	-25.82	3	Vertical	24	1.49	-
2480MHz	Pass	AV	4.95863G	33.86	54.00	-20.14	3	Horizontal	10	1.50	-
2480MHz	Pass	PK	4.96043G	47.05	74.00	-26.95	3	Horizontal	10	1.50	-

Thread

2405MHz_TX

28/08/2019

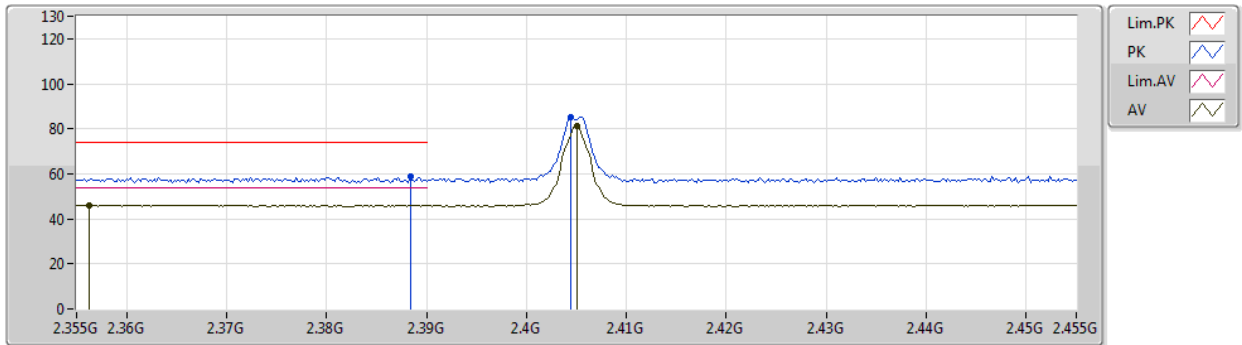


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3762G	46.19	54.00	-7.81	33.82	3	Vertical	102	1.17	-	12.37	27.70	6.12	-
AV	2.405G	98.86	Inf	-Inf	33.72	3	Vertical	102	1.17	-	65.14	27.60	6.12	-
PK	2.3882G	59.60	74.00	-14.40	33.76	3	Vertical	102	1.17	-	25.84	27.65	6.11	-
PK	2.4054G	102.42	Inf	-Inf	33.71	3	Vertical	102	1.17	-	68.71	27.59	6.12	-

Thread

28/08/2019

2405MHz_TX

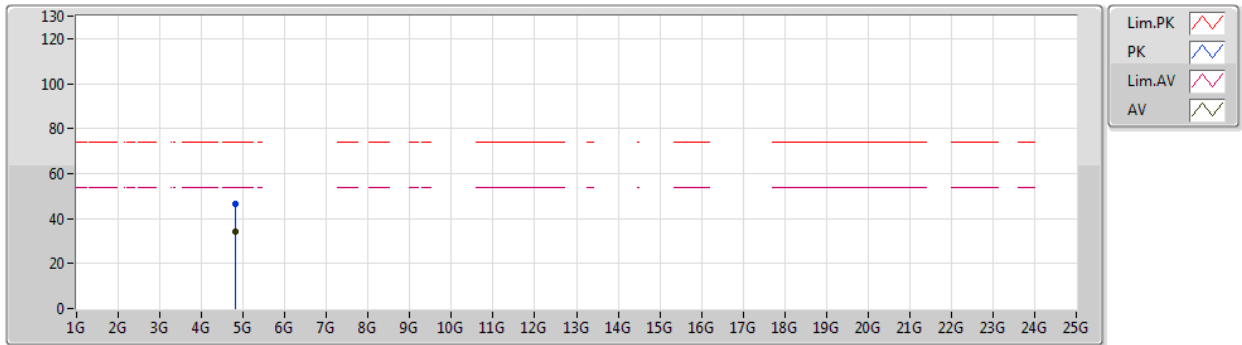


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3562G	46.19	54.00	-7.81	33.90	3	Horizontal	275	1.49	-	12.29	27.78	6.12	-
AV	2.405G	81.40	Inf	-Inf	33.72	3	Horizontal	275	1.49	-	47.68	27.60	6.12	-
PK	2.3884G	58.96	74.00	-15.04	33.76	3	Horizontal	275	1.49	-	25.20	27.65	6.11	-
PK	2.4044G	85.15	Inf	-Inf	33.71	3	Horizontal	275	1.49	-	51.44	27.60	6.11	-

Thread

2405MHz_TX

28/08/2019

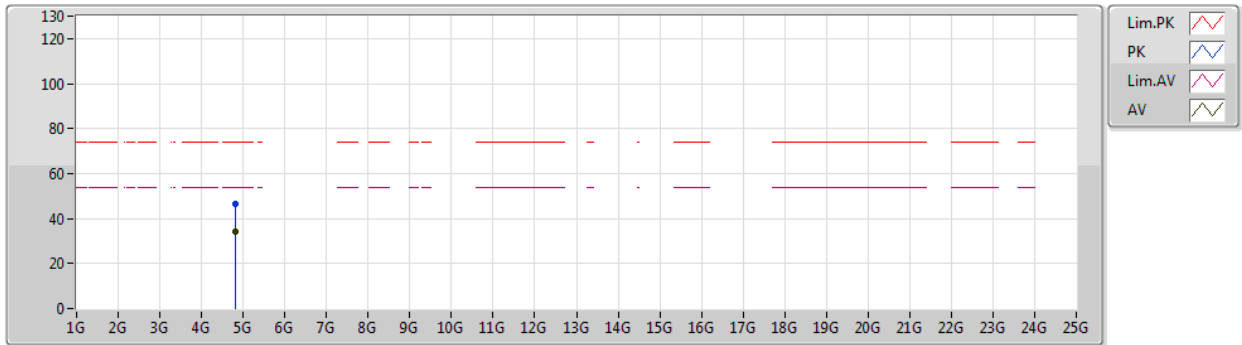


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80893G	34.43	54.00	-19.57	5.70	3	Vertical	261	1.50	-	28.73	31.10	8.90	34.30
PK	4.80969G	46.59	74.00	-27.41	5.70	3	Vertical	261	1.50	-	40.89	31.10	8.90	34.30

Thread

28/08/2019

2405MHz_TX

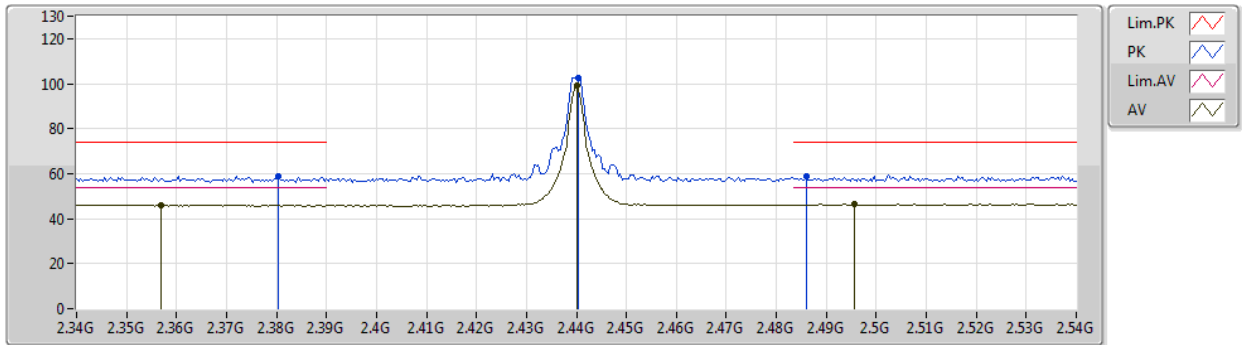


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80913G	34.06	54.00	-19.94	5.70	3	Horizontal	295	2.85	-	28.36	31.10	8.90	34.30
PK	4.8079G	46.27	74.00	-27.73	5.70	3	Horizontal	295	2.85	-	40.57	31.10	8.90	34.30

Thread

2440MHz_TX

28/08/2019

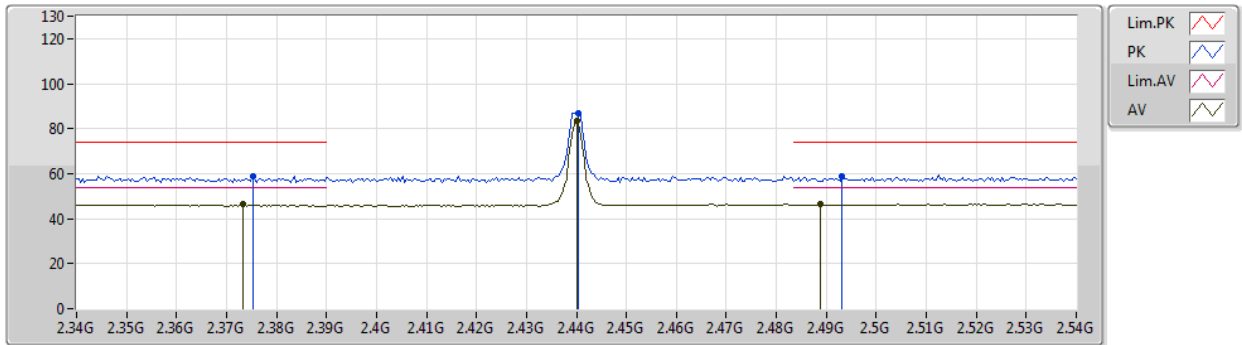


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3568G	46.22	54.00	-7.78	33.89	3	Vertical	101	1.00	-	12.33	27.77	6.12	-
AV	2.44G	98.95	Inf	-Inf	33.69	3	Vertical	101	1.00	-	65.26	27.56	6.13	-
AV	2.4956G	46.33	54.00	-7.67	33.65	3	Vertical	101	1.00	-	12.68	27.50	6.15	-
PK	2.3804G	58.91	74.00	-15.09	33.79	3	Vertical	101	1.00	-	25.12	27.68	6.11	-
PK	2.4404G	102.50	Inf	-Inf	33.69	3	Vertical	101	1.00	-	68.81	27.56	6.13	-
PK	2.486G	58.89	74.00	-15.11	33.66	3	Vertical	101	1.00	-	25.23	27.51	6.15	-

Thread

2440MHz_TX

28/08/2019

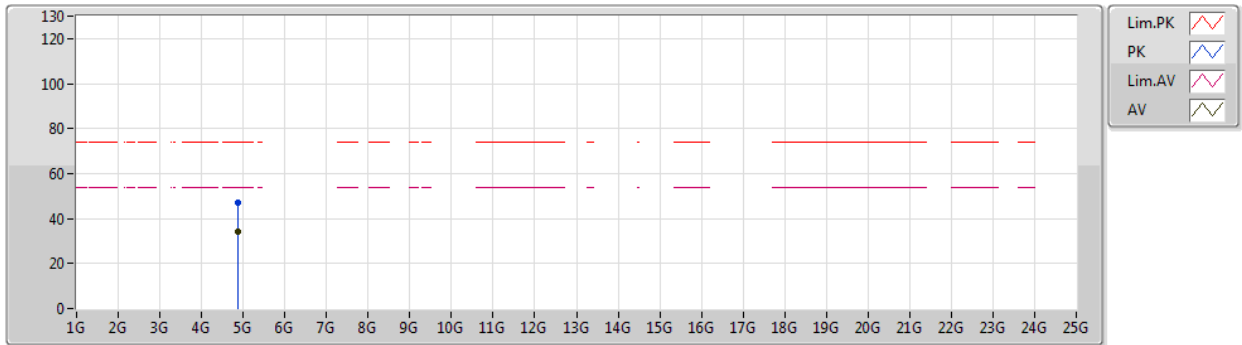


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3732G	46.23	54.00	-7.77	33.83	3	Horizontal	250	1.00	-	12.40	27.71	6.12	-
AV	2.44G	83.31	Inf	-Inf	33.69	3	Horizontal	250	1.00	-	49.62	27.56	6.13	-
AV	2.4888G	46.30	54.00	-7.70	33.66	3	Horizontal	250	1.00	-	12.64	27.51	6.15	-
PK	2.3752G	58.97	74.00	-15.03	33.82	3	Horizontal	250	1.00	-	25.15	27.70	6.12	-
PK	2.4404G	86.96	Inf	-Inf	33.69	3	Horizontal	250	1.00	-	53.27	27.56	6.13	-
PK	2.4932G	59.00	74.00	-15.00	33.66	3	Horizontal	250	1.00	-	25.34	27.51	6.15	-

Thread

28/08/2019

2440MHz_TX

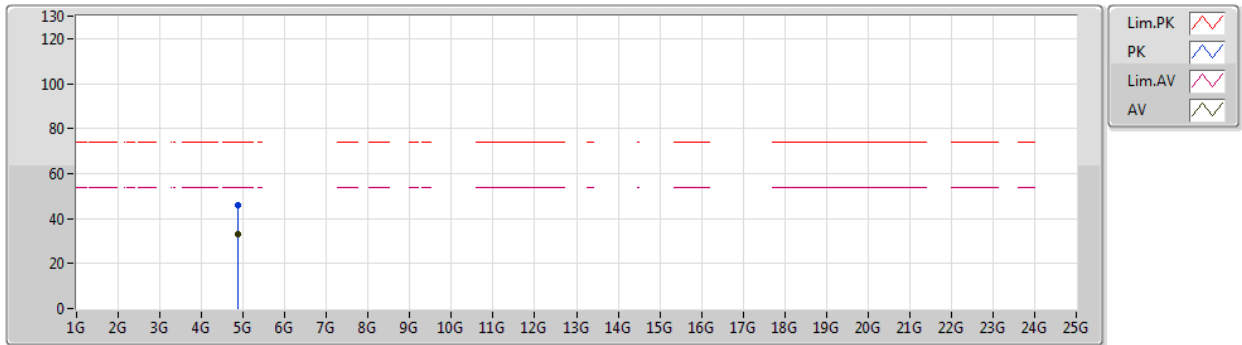


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87889G	34.42	54.00	-19.58	5.78	3	Vertical	23	1.10	-	28.64	31.10	8.96	34.28
PK	4.87906G	46.87	74.00	-27.13	5.78	3	Vertical	23	1.10	-	41.09	31.10	8.96	34.28

Thread

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2440MHz_TX

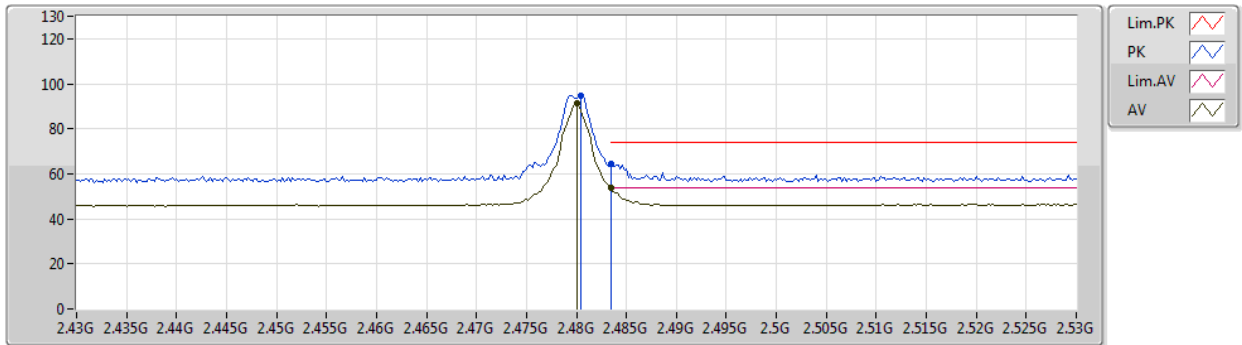


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87905G	33.06	54.00	-20.94	5.78	3	Horizontal	359	1.50	-	27.28	31.10	8.96	34.28
PK	4.88132G	45.81	74.00	-28.19	5.78	3	Horizontal	359	1.50	-	40.03	31.10	8.96	34.28

Thread

2480MHz_TX

28/08/2019

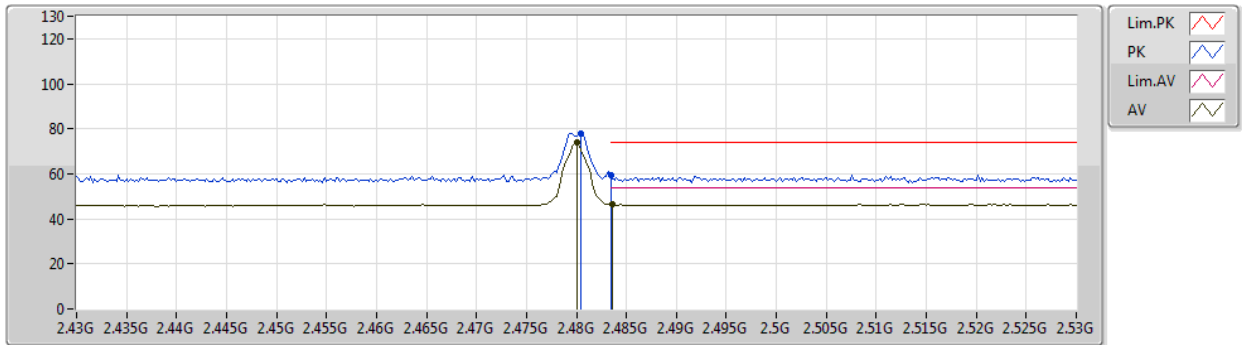


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	91.12	Inf	-Inf	33.67	3	Vertical	93	1.00	-	57.45	27.52	6.15	-
AV	2.4835G	53.71	54.00	-0.29	33.67	3	Vertical	93	1.00	-	20.04	27.52	6.15	-
PK	2.4804G	94.72	Inf	-Inf	33.67	3	Vertical	93	1.00	-	61.05	27.52	6.15	-
PK	2.4835G	64.16	74.00	-9.84	33.67	3	Vertical	93	1.00	-	30.49	27.52	6.15	-

Thread

2480MHz_TX

28/08/2019

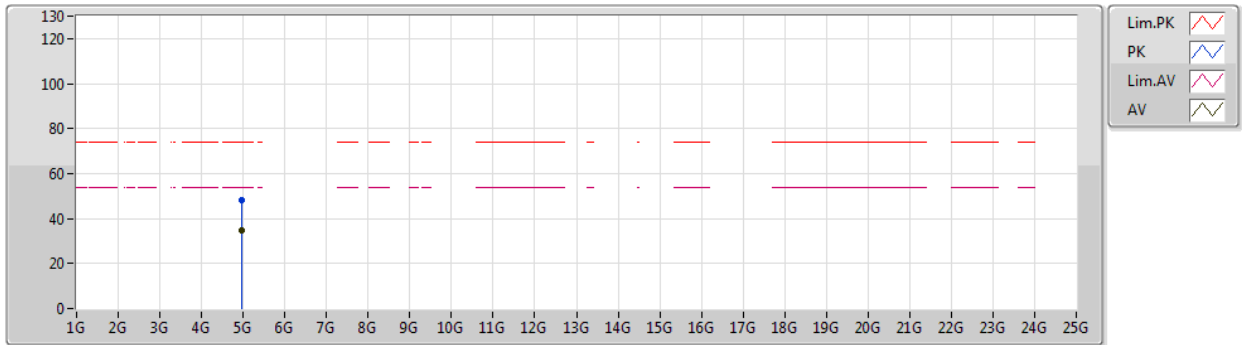


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	73.91	Inf	-Inf	33.67	3	Horizontal	276	1.34	-	40.24	27.52	6.15	-
AV	2.4836G	46.42	54.00	-7.58	33.67	3	Horizontal	276	1.34	-	12.75	27.52	6.15	-
PK	2.4804G	78.13	Inf	-Inf	33.67	3	Horizontal	276	1.34	-	44.46	27.52	6.15	-
PK	2.4835G	59.34	74.00	-14.66	33.67	3	Horizontal	276	1.34	-	25.67	27.52	6.15	-

Thread

2480MHz_TX

28/08/2019

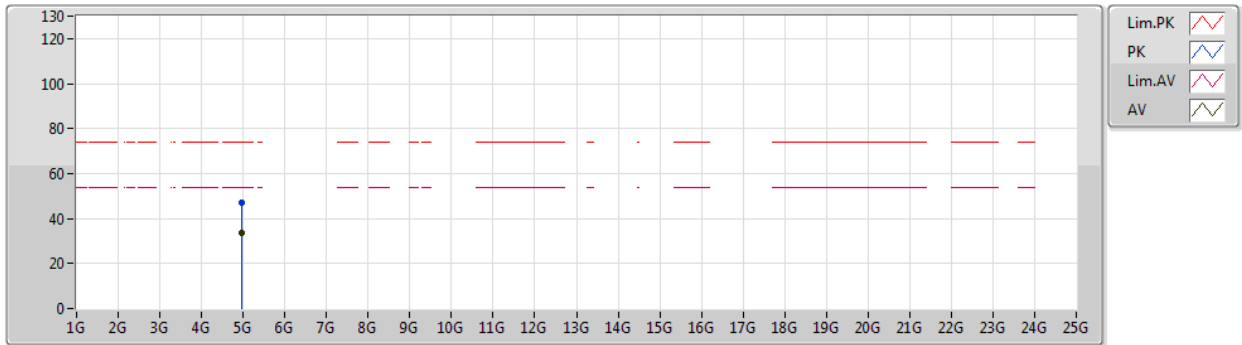


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95877G	34.99	54.00	-19.01	6.20	3	Vertical	24	1.49	-	28.79	31.34	9.02	34.16
PK	4.95906G	48.18	74.00	-25.82	6.21	3	Vertical	24	1.49	-	41.97	31.34	9.03	34.16

Thread

28/08/2019

2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95863G	33.86	54.00	-20.14	6.19	3	Horizontal	10	1.50	-	27.67	31.33	9.02	34.16
PK	4.96043G	47.05	74.00	-26.95	6.21	3	Horizontal	10	1.50	-	40.84	31.34	9.03	34.16