

FCC Test Report

FCC ID : 2AIHD2024
Contains FCC ID : NKRM18Q2
Equipment : IG15
Brand Name : Samsara
Model Name : 010-1015
Applicant : Samsara Networks Inc
1990 Alameda St, San Francisco, CA 94103, USA
Manufacturer : Samsara Networks Inc
1990 Alameda St, San Francisco, CA 94103, USA
Standard : 47 CFR FCC Part 15.247

The product was received on May 28, 2020, and testing was started from Jun. 08, 2020 and completed on Jun. 25, 2020. 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 test results in this variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.


Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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



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History of this test report

[illegible]

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	-
-	15.247(a)	DTS Bandwidth	Not Performed	Refer to 1.1.5
-	15.247(b)	Maximum Conducted Output Power	Not Performed	Refer to 1.1.5
-	15.247(e)	Power Spectral Density	Not Performed	Refer to 1.1.5
-	15.247(d)	Emissions in Non-restricted Frequency Bands	Not Performed	Refer to 1.1.5
3.2	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: Debby Hung

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX

Note:

- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	Grand-Tek	OS-LTEG-014-01-SA	Outdoor Array antenna	SMA

Ant.	Port	WCDMA Gain (dBi)	
		Band 2	Band 5
1	1	2.6	3.2

Ant.	Port	LTE Gain (dBi)			
		Band 2	Band 4	Band 5	Band 12
1	1	3.2	3.2	2.6	2.6

Note 1: The EUT has one antenna.

Note. 2: The antenna mentioned above will not be sold with the EUT in the market.

For WWAN function:

Ant. 1 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From AC Adapter/Battery			
EUT Function	☒	Point-to-multipoint	☐	Point-to-point
Beamforming Function	☐	With beamforming	☒	Without beamforming
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 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11b_Nss1,(1Mbps)_1TX	0.991	0.04	12.211m	10

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

1.1.5 Table for Permissive Change

This product is an extension of original one reported under FCC ID: 2AIHD2024

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

Modifications	Performance Checking
Equipment/Model name: IG15/010-1015 was added. (This model replaces the internal antennas of LTE and GPS with external antennas.)	1. AC Conduction and Radiated Emission data was evaluated. 2. Photographs of EUT.

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

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

- ♦ 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.			
☐	Wen Shan	ADD : No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
		TEL : 886-3-318-0787	FAX : 886-3-318-0287
Test site Designation No. TW1097 with FCC.			

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward Wang	24.5~24.8°C/55~59%	24/Jun/2020~25/Jun/2020
Radiated	03CH02-HY	Edward Wang	20.1~25.1°C/52~57%	08/Jun/2020~10/Jun/2020

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)	0.9 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

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

2.2 Test Channel Mode

Test Software Version	QRCT 3.0
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Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2437MHz	14

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	Adapter Mode

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	CTX
1	WWAN + Bluetooth
2	WWAN + WLAN 2.4GHz
Refer to Sporton Test Report No.: FA7N2021-06 for Co-location RF Exposure Evaluation.	

2.4 Accessories

Li-ion Battery	Brand Name	SHENZHEN DBK	Model Name	BAT001-P(1S5P)
	Power Rating	3.7 Vdc, 12500 mAh		
Mounting bracket	Brand Name	TIMSON	Model Name	6301A4963000

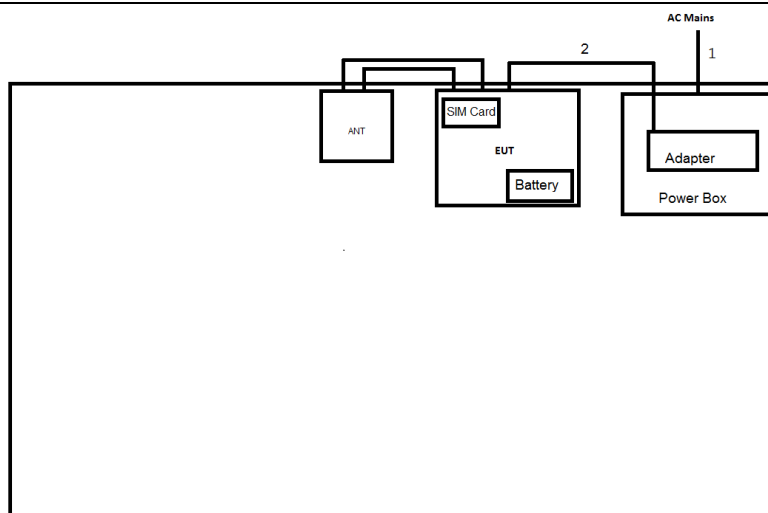
Reminder: Regarding to more detail and other information, please refer to user manual.

2.5 Support Equipment

Support Equipment – AC Conduction and Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	AC Adapter	DVE	WA-30J12R	-	-

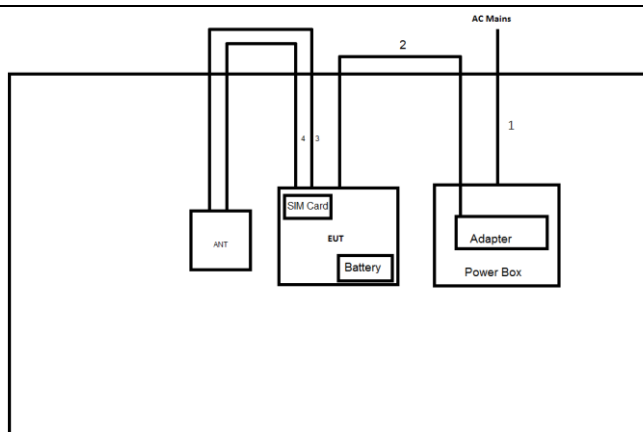
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	2.8	-
3	RF Cable	No	1.5	-
4	RF Cable	No	1.5	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	2.8	-
3	RF Cable	No	1.5	-
4	RF Cable	No	1.5	-

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.		

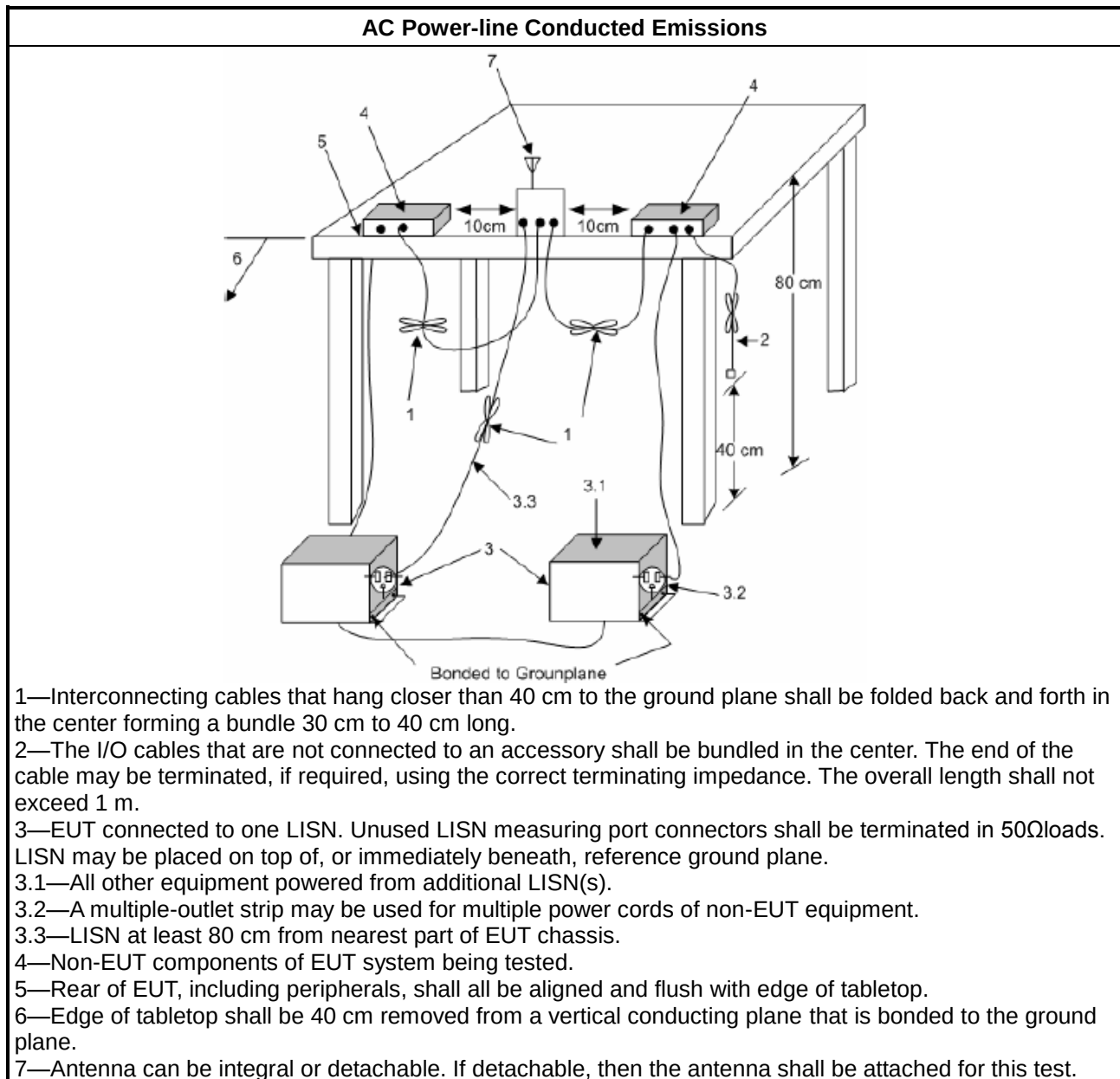
3.1.2 Measuring Instruments

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 for AC 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 Emissions in Restricted Frequency Bands

3.2.1 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.

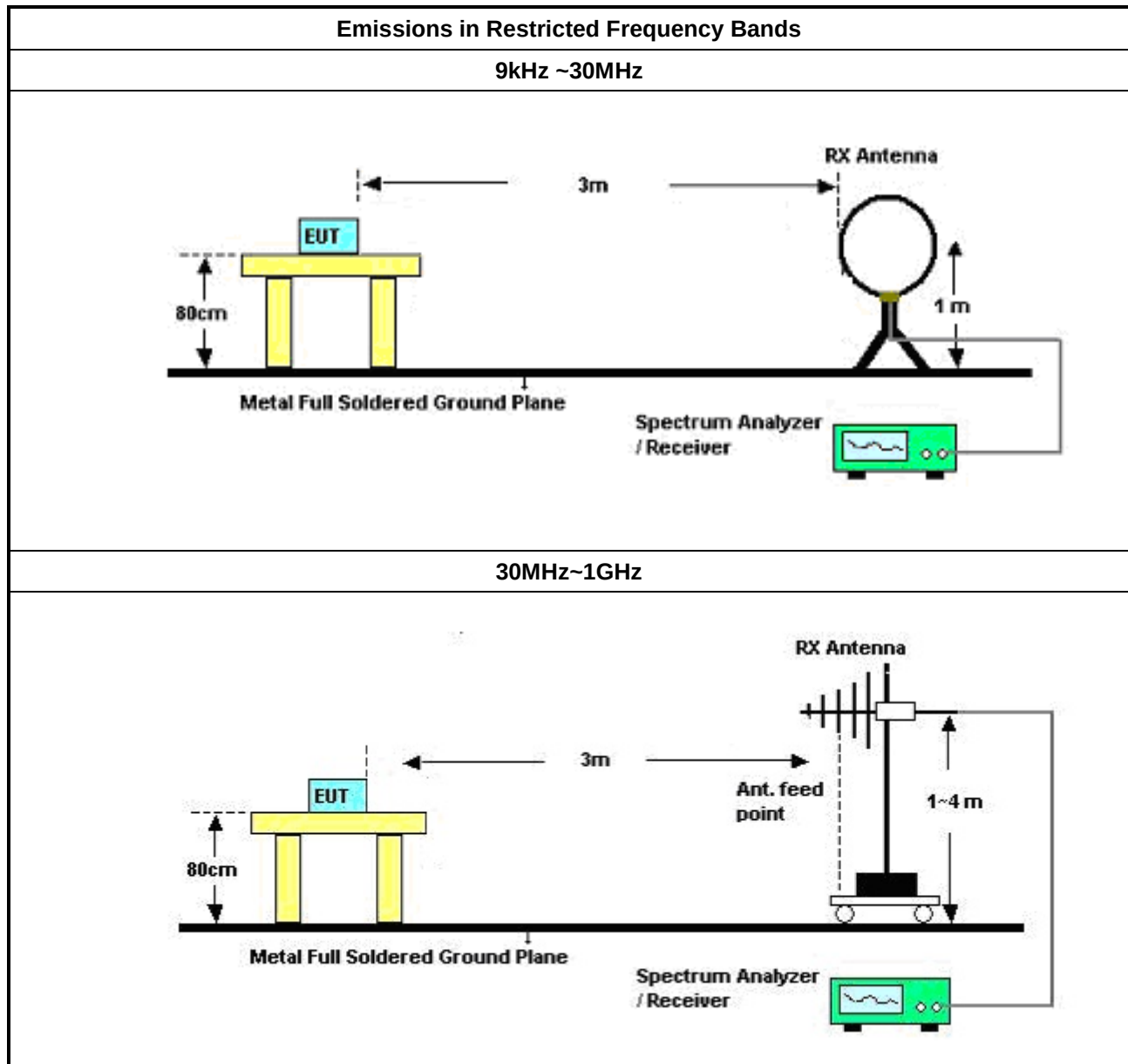
3.2.2 Measuring Instruments

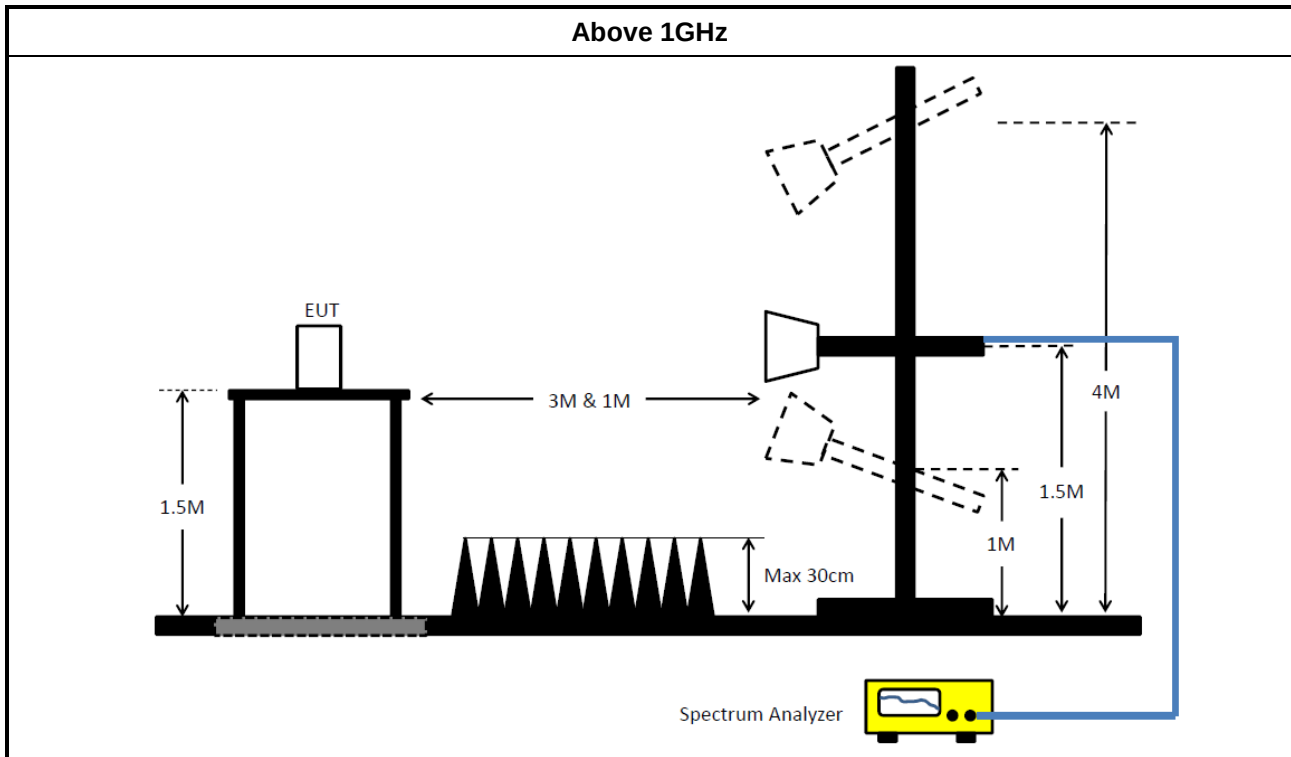
Refer a test equipment and calibration data table in this test report.

3.2.3 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.

3.2.4 Test Setup





3.2.5 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.

3.2.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix B

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR	102051	9kHz ~ 3.6GHz	29/May/2020	28/May/2021
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	05/Nov/2019	04/Nov/2020
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	23/Sep/2019	22/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 Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz ~ 1GHz 3m	29/Aug/2019	28/Aug/2020
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz ~ 18GHz 3m	29/Aug/2019	28/Aug/2020
Amplifier	Agilent	8447D	2944A11149	100kHz ~ 1.3GHz	02/Jul/2019	01/Jul/2020
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz ~ 26.5GHz	16/Oct/2019	15/Oct/2020
Spectrum Analyzer	Rohde & Schwarz	FSP40	100593	9kHz - 40GHz	27/Feb/2020	26/Feb/2021
EMI Test Receiver	R&S	ESR	102052	9kHz ~ 3.6GHz	29/Apr/2020	28/Apr/2021
EMI Test Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	29/May/2020	28/May/2021
RF Cable-R03m	Jye Bao	RG142	CB017	9kHz ~ 1GHz	25/Mar/2020	24/Mar/2021
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+805192/4	1GHz~40GHz	08/Apr/2020	07/Apr/2021
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz ~ 1GHz	28/Feb/2020	27/Feb/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170339	18GHz ~ 40GHz	14/Apr/2020	13/Apr/2021
Double Ridged Guide Horn Antenna	COM-POWER	AH-118	10094	1GHz~18GHz	17/Jul/2019	16/Jul/2020
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz ~ 40GHz	05/Aug/2019	04/Aug/2020
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	16/Mar/2020	15/Mar/2021

Summary

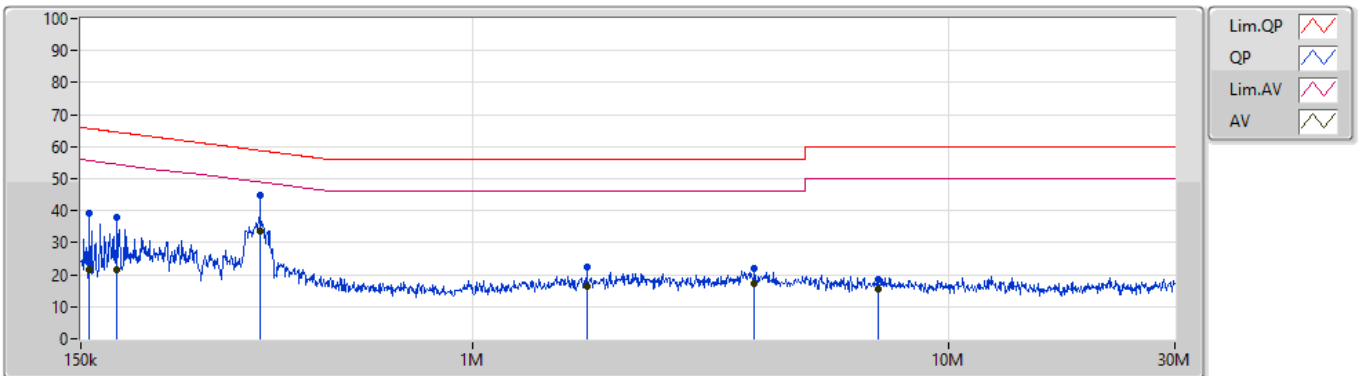
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	358.003k	44.75	58.77	-14.02	Line

Mode Configure

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	156.306k	39.43	65.66	-26.23	Line	-
Mode 1	Pass	AV	156.306k	21.42	55.66	-34.24	Line	-
Mode 1	Pass	QP	178.388k	37.78	64.57	-26.79	Line	-
Mode 1	Pass	AV	178.388k	21.44	54.57	-33.13	Line	-
Mode 1	Pass	QP	358.003k	44.75	58.77	-14.02	Line	"Worst"
Mode 1	Pass	AV	358.003k	33.72	48.77	-15.05	Line	-
Mode 1	Pass	QP	1.741M	22.29	56.00	-33.71	Line	-
Mode 1	Pass	AV	1.741M	16.23	46.00	-29.77	Line	-
Mode 1	Pass	QP	3.917M	21.80	56.00	-34.20	Line	-
Mode 1	Pass	AV	3.917M	17.40	46.00	-28.60	Line	-
Mode 1	Pass	QP	7.148M	18.50	60.00	-41.50	Line	-
Mode 1	Pass	AV	7.148M	15.48	50.00	-34.52	Line	-
Mode 1	Pass	QP	150.039k	41.57	66.00	-24.43	Neutral	-
Mode 1	Pass	AV	150.039k	24.70	56.00	-31.30	Neutral	-
Mode 1	Pass	QP	186.619k	36.13	64.18	-28.05	Neutral	-
Mode 1	Pass	AV	186.619k	22.91	54.18	-31.27	Neutral	-
Mode 1	Pass	QP	357.782k	43.95	58.77	-14.82	Neutral	"Worst"
Mode 1	Pass	AV	357.782k	32.82	48.77	-15.95	Neutral	-
Mode 1	Pass	QP	1.259M	24.55	56.00	-31.45	Neutral	-
Mode 1	Pass	AV	1.259M	18.08	46.00	-27.92	Neutral	-
Mode 1	Pass	QP	2.214M	22.51	56.00	-33.49	Neutral	-
Mode 1	Pass	AV	2.214M	17.73	46.00	-28.27	Neutral	-
Mode 1	Pass	QP	4.748M	21.31	56.00	-34.69	Neutral	-
Mode 1	Pass	AV	4.748M	16.63	46.00	-29.37	Neutral	-

Conducted Emissions at Powerline_Mode 1

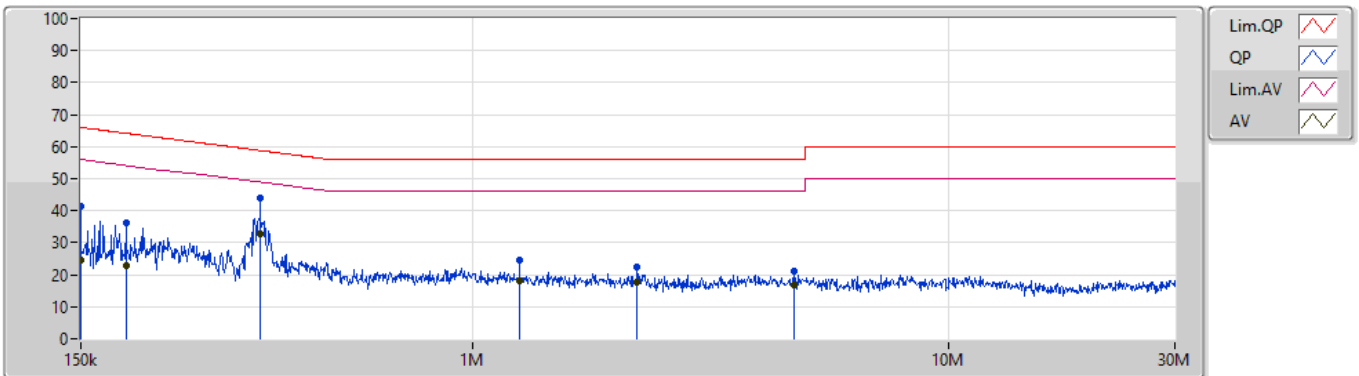
25/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	156.306k	39.43	65.66	-26.23	19.64	Line	-	19.79	9.66	0.11	9.87			
AV	156.306k	21.42	55.66	-34.24	19.64	Line	-	1.78	9.66	0.11	9.87			
QP	178.388k	37.78	64.57	-26.79	19.63	Line	-	18.15	9.65	0.11	9.87			
AV	178.388k	21.44	54.57	-33.13	19.63	Line	-	1.81	9.65	0.11	9.87			
QP	358.003k	44.75	58.77	-14.02	19.63	Line	"Worst"	25.12	9.64	0.12	9.87			
AV	358.003k	33.72	48.77	-15.05	19.63	Line	-	14.09	9.64	0.12	9.87			
QP	1.741M	22.29	56.00	-33.71	19.66	Line	-	2.63	9.65	0.14	9.87			
AV	1.741M	16.23	46.00	-29.77	19.66	Line	-	-3.43	9.65	0.14	9.87			
QP	3.917M	21.80	56.00	-34.20	19.73	Line	-	2.07	9.66	0.19	9.88			
AV	3.917M	17.40	46.00	-28.60	19.73	Line	-	-2.33	9.66	0.19	9.88			
QP	7.148M	18.50	60.00	-41.50	19.80	Line	-	-1.30	9.68	0.24	9.88			
AV	7.148M	15.48	50.00	-34.52	19.80	Line	-	-4.32	9.68	0.24	9.88			

Conducted Emissions at Powerline_Mode 1

25/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	150.039k	41.57	66.00	-24.43	19.63	Neutral	-	21.94	9.65	0.11	9.87			
AV	150.039k	24.70	56.00	-31.30	19.63	Neutral	-	5.07	9.65	0.11	9.87			
QP	186.619k	36.13	64.18	-28.05	19.62	Neutral	-	16.51	9.64	0.11	9.87			
AV	186.619k	22.91	54.18	-31.27	19.62	Neutral	-	3.29	9.64	0.11	9.87			
QP	357.782k	43.95	58.77	-14.82	19.62	Neutral	"Worst"	24.33	9.63	0.12	9.87			
AV	357.782k	32.82	48.77	-15.95	19.62	Neutral	-	13.20	9.63	0.12	9.87			
QP	1.259M	24.55	56.00	-31.45	19.64	Neutral	-	4.91	9.64	0.12	9.88			
AV	1.259M	18.08	46.00	-27.92	19.64	Neutral	-	-1.56	9.64	0.12	9.88			
QP	2.214M	22.51	56.00	-33.49	19.67	Neutral	-	2.84	9.65	0.15	9.87			
AV	2.214M	17.73	46.00	-28.27	19.67	Neutral	-	-1.94	9.65	0.15	9.87			
QP	4.748M	21.31	56.00	-34.69	19.75	Neutral	-	1.56	9.67	0.20	9.88			
AV	4.748M	16.63	46.00	-29.37	19.75	Neutral	-	-3.12	9.67	0.20	9.88			



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	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	2.4866G	48.44	54.00	-5.56	3	Horizontal	159	1.22	-

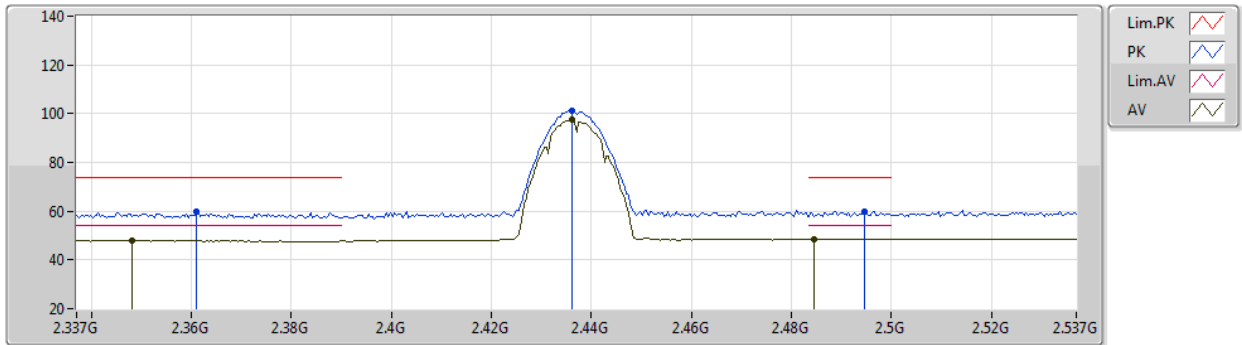
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	AV	2.3482G	47.80	54.00	-6.20	3	Vertical	338	1.48	-
2437MHz	Pass	AV	2.4362G	97.39	Inf	-Inf	3	Vertical	338	1.48	-
2437MHz	Pass	AV	2.4846G	48.37	54.00	-5.63	3	Vertical	338	1.48	-
2437MHz	Pass	PK	2.361G	59.69	74.00	-14.31	3	Vertical	338	1.48	-
2437MHz	Pass	PK	2.4362G	101.41	Inf	-Inf	3	Vertical	338	1.48	-
2437MHz	Pass	PK	2.4946G	60.06	74.00	-13.94	3	Vertical	338	1.48	-
2437MHz	Pass	AV	2.3414G	47.76	54.00	-6.24	3	Horizontal	159	1.22	-
2437MHz	Pass	AV	2.4362G	101.44	Inf	-Inf	3	Horizontal	159	1.22	-
2437MHz	Pass	AV	2.4866G	48.44	54.00	-5.56	3	Horizontal	159	1.22	-
2437MHz	Pass	PK	2.3418G	59.28	74.00	-14.72	3	Horizontal	159	1.22	-
2437MHz	Pass	PK	2.4362G	105.32	Inf	-Inf	3	Horizontal	159	1.22	-
2437MHz	Pass	PK	2.4914G	59.56	74.00	-14.44	3	Horizontal	159	1.22	-
2437MHz	Pass	AV	4.88894G	32.82	54.00	-21.18	3	Vertical	103	1.49	-
2437MHz	Pass	PK	4.87838G	46.31	74.00	-27.69	3	Vertical	103	1.49	-
2437MHz	Pass	AV	4.87442G	32.84	54.00	-21.16	3	Horizontal	245	1.48	-
2437MHz	Pass	PK	4.8722G	46.66	74.00	-27.34	3	Horizontal	245	1.48	-

802.11b_Nss1,(1Mbps)_1TX

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2437MHz_TX

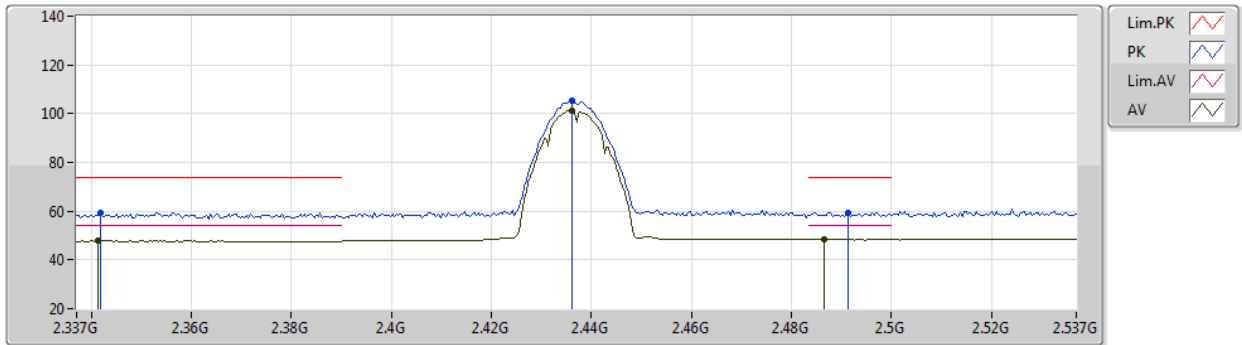


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3482G	47.80	54.00	-6.20	35.52	3	Vertical	338	1.48	-	12.28	29.60	5.92	-
AV	2.4362G	97.39	Inf	-Inf	35.88	3	Vertical	338	1.48	-	61.51	29.88	6.00	-
AV	2.4846G	48.37	54.00	-5.63	36.18	3	Vertical	338	1.48	-	12.19	30.12	6.06	-
PK	2.361G	59.69	74.00	-14.31	35.55	3	Vertical	338	1.48	-	24.14	29.62	5.93	-
PK	2.4362G	101.41	Inf	-Inf	35.88	3	Vertical	338	1.48	-	65.53	29.88	6.00	-
PK	2.4946G	60.06	74.00	-13.94	36.24	3	Vertical	338	1.48	-	23.82	30.17	6.07	-

802.11b_Nss1,(1Mbps)_1TX

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2437MHz_TX

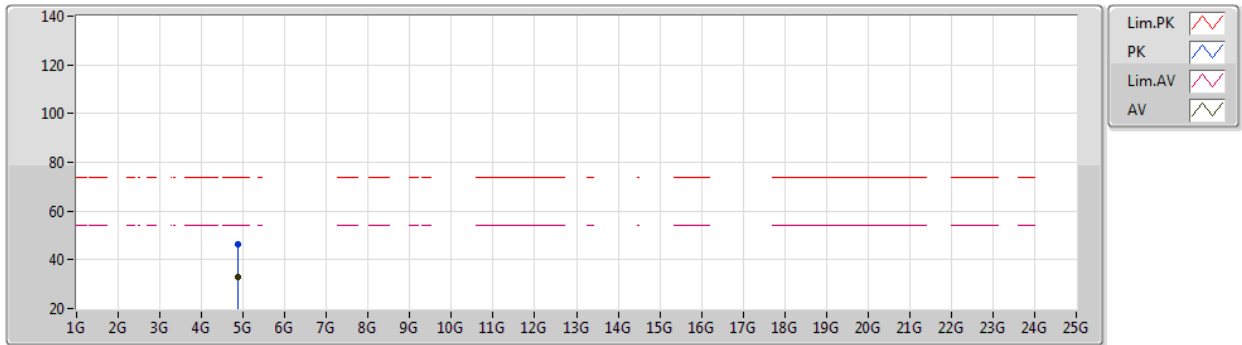


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3414G	47.76	54.00	-6.24	35.50	3	Horizontal	159	1.22	-	12.26	29.58	5.92	-
AV	2.4362G	101.44	Inf	-Inf	35.88	3	Horizontal	159	1.22	-	65.56	29.88	6.00	-
AV	2.4866G	48.44	54.00	-5.56	36.19	3	Horizontal	159	1.22	-	12.25	30.13	6.06	-
PK	2.3418G	59.28	74.00	-14.72	35.50	3	Horizontal	159	1.22	-	23.78	29.58	5.92	-
PK	2.4362G	105.32	Inf	-Inf	35.88	3	Horizontal	159	1.22	-	69.44	29.88	6.00	-
PK	2.4914G	59.56	74.00	-14.44	36.23	3	Horizontal	159	1.22	-	23.33	30.16	6.07	-

802.11b_Nss1,(1Mbps)_1TX

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2437MHz_TX

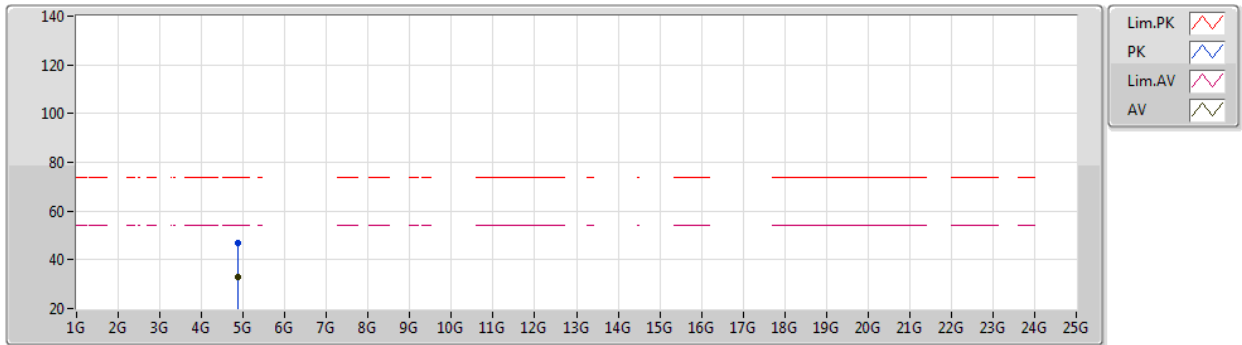


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88894G	32.82	54.00	-21.18	8.22	3	Vertical	103	1.49	-	24.60	33.78	8.31	33.87
PK	4.87838G	46.31	74.00	-27.69	8.19	3	Vertical	103	1.49	-	38.12	33.76	8.30	33.87

802.11b_Nss1,(1Mbps)_1TX

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2437MHz_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	4.87442G	32.84	54.00	-21.16	8.18	3	Horizontal	245	1.48	-	24.66	33.75	8.30	33.87
PK	4.8722G	46.66	74.00	-27.34	8.17	3	Horizontal	245	1.48	-	38.49	33.74	8.30	33.87