



RADIO TEST REPORT

FCC ID : XIA-IFWA-40
Equipment : Wireless Home Internet
Brand Name : Netcomm
Model Name : IFWA-40
Applicant : NetComm Wireless Pty Ltd
Level 5, 18-20 Orion Road Lane Cove NSW 2066
Australia
Manufacturer : NetComm Wireless Pty Ltd
Level 5, 18-20 Orion Road Lane Cove NSW 2066
Australia
Standard : 47 CFR FCC Part 15.247

The product was received on Mar. 16, 2021, and testing was started from Mar. 17, 2021 and completed on May 07, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.


Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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History of this test report

TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A10_10 Ver1.3

Page Number : 3 of 22
Issued Date : Jun. 01, 2021
Report Version : 01



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(d)	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

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

Reviewed by: Sam Chen

Report Producer: Vicky Huang

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), ac (VHT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ac (VHT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11ac VHT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	802.11ac VHT40	40	2TX

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.
- VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		
						2.4G	5G Band 1	5G Band 4
1	1	Netcomm	-	Printed PIFA Antenna	N/A	5.17	-	-
2	2	Netcomm	-	Printed PIFA Antenna	N/A	3.9	-	-
3	1	Netcomm	-	Printed PIFA Antenna	N/A	-	5	4.45
4	2	Netcomm	-	Printed PIFA Antenna	N/A	-	5.79	5.1

Note: The above information was declared by manufacturer.

Note: The EUT has four WLAN antennas.

For WLAN 2.4GHz (2TX/2RX):

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

For WLAN 5GHz (2TX/2RX):

Ant. 3 (Port 1) and Ant. 4 (Port 2) could transmit/receive simultaneously.



1.1.3 EUT Operational Condition

EUT Power Type	From Power Adapter or Lithium-ion Battery Pack (For backup purposes only during a power outage)		
Beamforming Function	☐ With beamforming	☒ Without beamforming	
Function	☒ Point-to-multipoint	☐ Point-to-point	
Test Software Version	QRCT (ver.4.0.00088)		

Note: The above information was declared by manufacturer.

1.1.4 Table for Multiple Source Listing

There are two sources of Crystal and DRAM, the detail information as following:

Source	Crystal	DRAM memory
Main	Kyocera - CX2016DB48000E0DLFA1	Winbond Electronics p/n: W632GU6MB-12
Second	Siward - XTL501100-P120-137	ESMT p/n: M15T2G16128A-DEBG2R

Note: The above information was declared by manufacturer.



1.1.5 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR8O1751AA

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

Modifications	Performance Checking
1. Removing 1x capacitor C305 only , C305 pcb trace is not related to WWAN or WIFI , It's related to ethernet connection, address a booting up and packet loss pinging issue.	AC Power-line Conducted Emissions
	Radiated Emission below 1GHz
2. Adding the second source of crystal and DRAM memory.	Radiated Emission below 1GHz
	Radiated Emission above 1GHz After evaluating, the worst case is found at 802.11b CH6, and based on original power to retest this channel only.
3. Changing the applicant's company and manufacturer's company to "NetComm Wireless Pty Ltd" from "NetComm Wireless Limited".	After evaluating it does not need to re-test.
4. Changing the applicant address and manufacturer address to "Level 5, 18-20 Orion Road Lane Cove NSW 2066 Australia" from "18-20 Orion Road Lane Cove NSW 2066 Australia"	
5. Changing the FCC ID to "XIA-IFWA-40" from "XIA-IFWA40"	



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15.247
- ♦ ANSI C63.10-2013

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

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated (Below 1GHz-Mode 1)	03CH03-CB	Bruce Yang	20.2~21.3 / 56~58	Mar. 17, 2021
Radiated (Below 1GHz-Mode 2)	03CH05-CB	Cola Fan	21.4-22.5 / 55-57	May 07, 2021
Radiated (Above 1GHz)	03CH02-CB	Caster Chang	20.2-21.3 / 55-57	May 07, 2021
AC Conduction	CO01-CB	Wei Li	23~24 / 57~59	Mar. 18, 2021

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.0 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.9 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 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 Test Voltage: 120Vac / 60Hz
Operating Mode	Normal Link
The EUT(Main Source) performed testing at the WCDMA Band 2 and LTE Band 5. After evaluating, EUT(Main Source) Normal Link with LTE Band 5 has been evaluated to be the worst case from original test report, thus measurement will follow this same test configuration.	
1	EUT(Main Source)T Normal Link with LTE Band 5 and WLAN with Adapter

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	Normal Link
The EUT(Main Source) performed testing at the WCDMA Band 2 and LTE Band 5. The EUT(Main Source) performed testing at the Z-axis and Y-axis. After evaluating, EUT(Main Source) Normal Link with WCDMA Band 2 and EUT in Z axis has been evaluated to be the worst case from original test report, thus measurement will follow this same test configuration.	
1	EUT(Main Source) in Z axis Normal Link with WCDMA Band 2 and WLAN with Adapter
2	EUT(Second Source) in Z axis Normal Link with WCDMA Band 2 and WLAN with Adapter
Mode 1 generated the worst test result, so it was recorded in this report.	
Operating Mode > 1GHz	CTX
The EUT was performed at Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at Z axis from original test report. So the measurement will follow this same test configuration.	
1	EUT(Second Source) in Z axis



2.2 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.3 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	Adapter	DVE/CUI	DSA-18PFR-12 FUS 090200	Input: 100-240V~50/60Hz, 0.6A Output: +9V, 2A
2	Lithium-ion Battery	NetComm	BAT-40	3.7VDC, 3000mAh, 11.1Wh

2.4 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E6430	N/A
B	NB	DELL	E6430	N/A
C	NB	DELL	E6430	N/A
D	LTE base station	Anritsu	MT8820C	N/A
E	Phone	SAMPO	HT-B 907WL	N/A
F	Phone	SAMPO	HT-B 907WL	N/A
G	SIM card	N/A	N/A	N/A

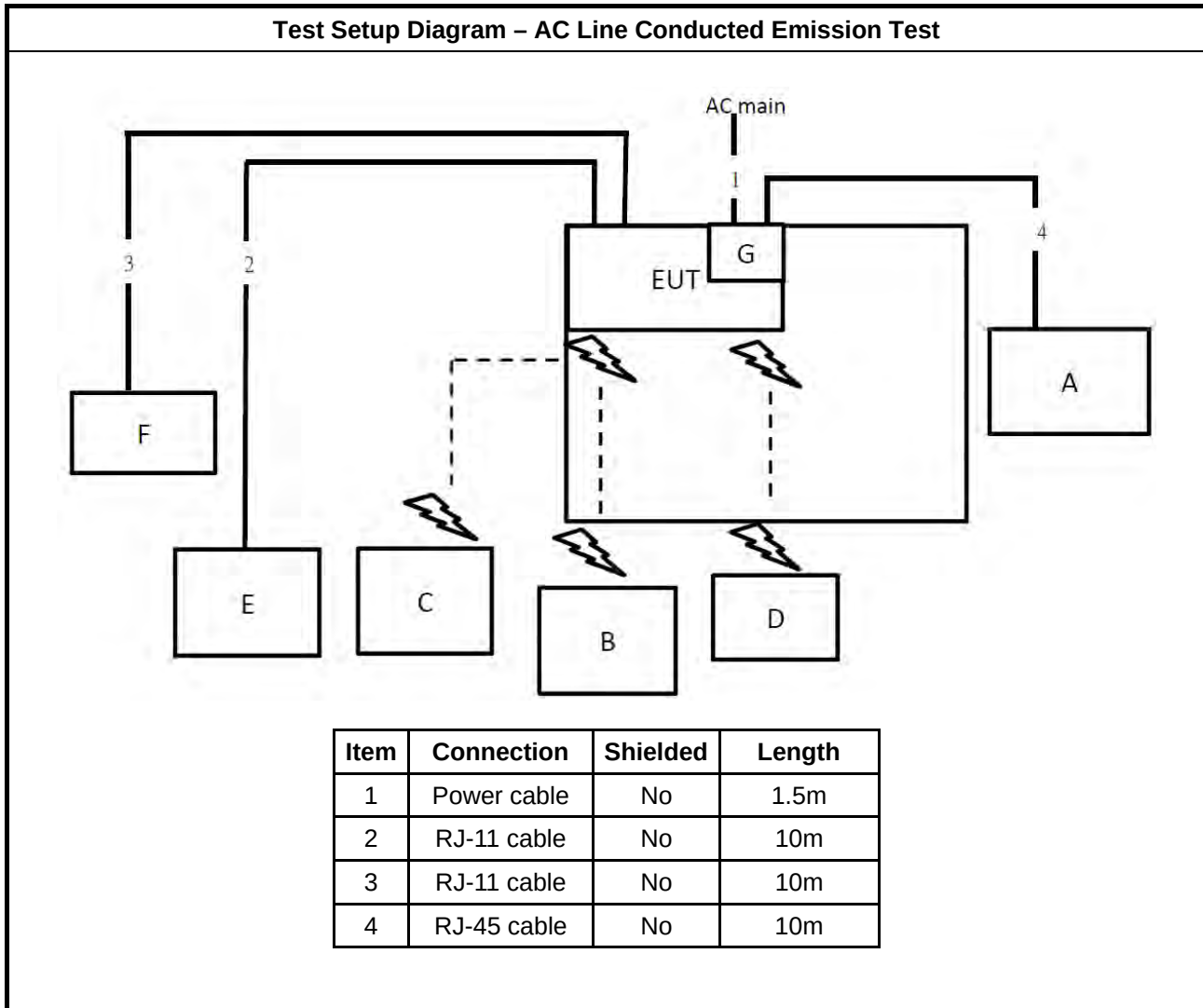
**For Radiated (below 1GHz):**

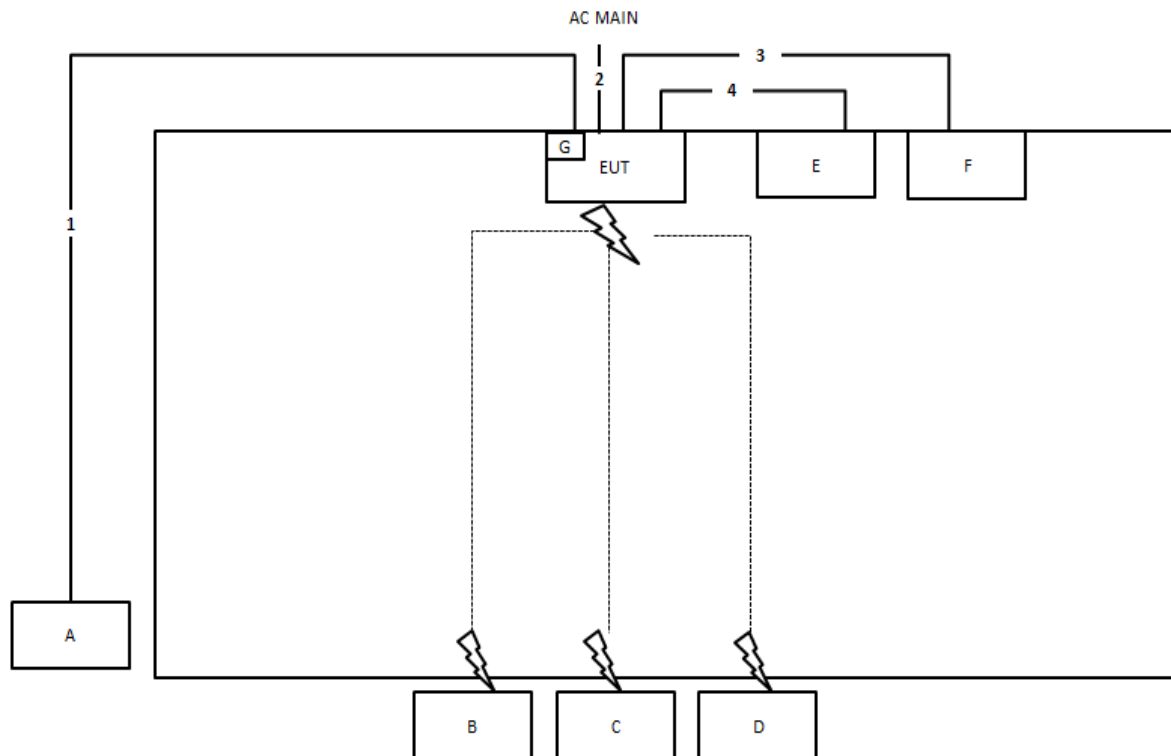
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	NB	DELL	E4300	N/A
D	LTE base station	Anritsu	MT8820C	N/A
E	Phone	PHILIPS	M20	N/A
F	Phone	PHILIPS	M20	N/A
G	SIM card	Anritsu	N/A	N/A

For Radiated (above 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

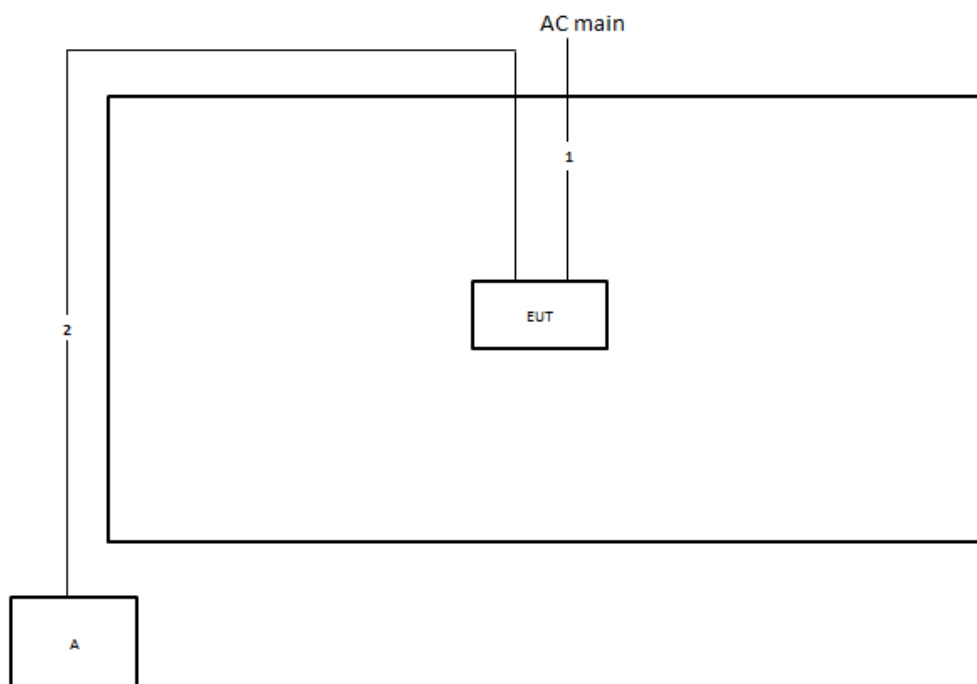
2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	1.5m
2	Power cable	No	10m
3	RJ-11 cable	No	1.5m
4	RJ-11 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m



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.

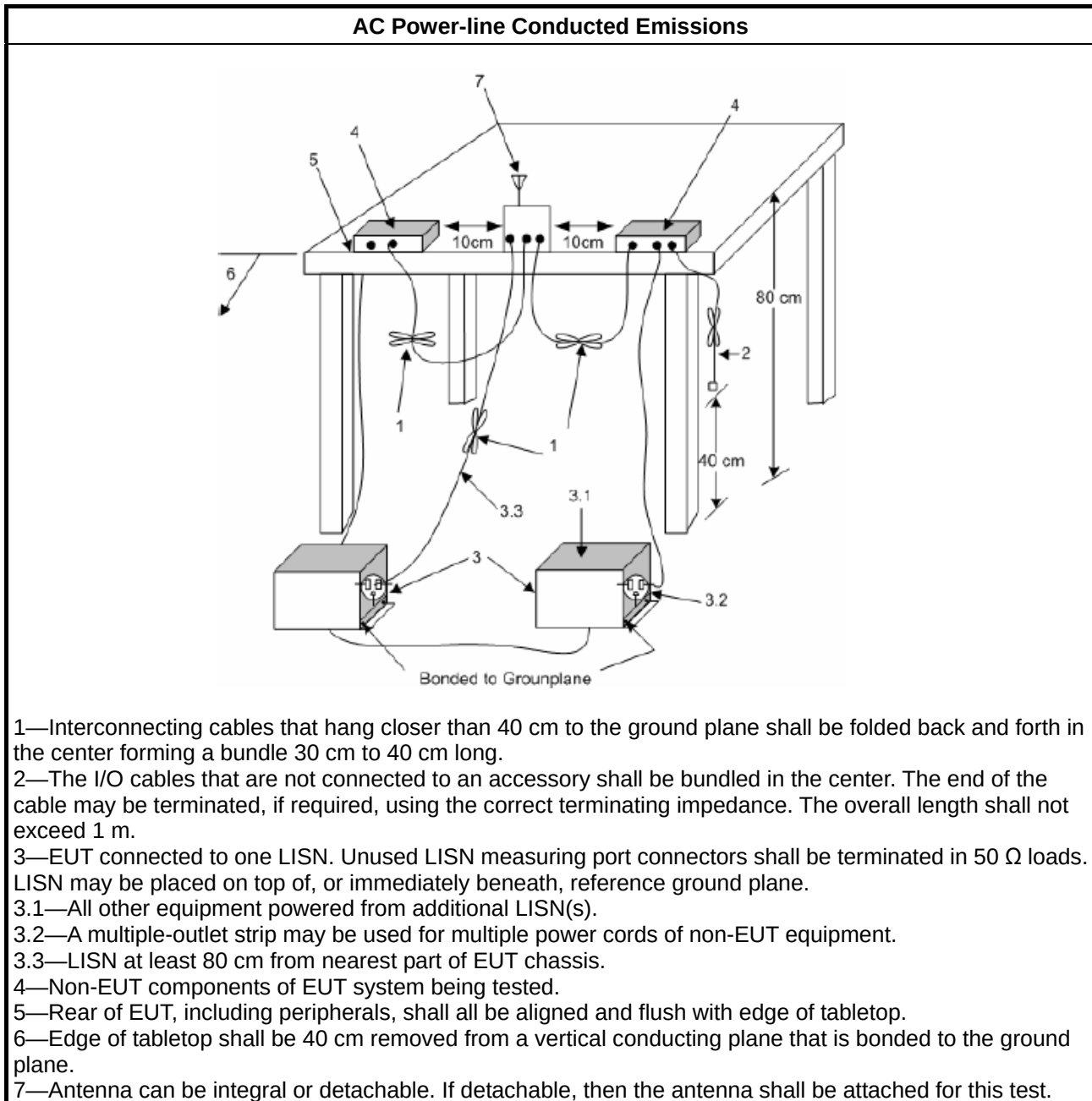
3.1.2 Measuring Instruments

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 Measurement Results Calculation

The measured Level is calculated using:

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

3.1.6 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

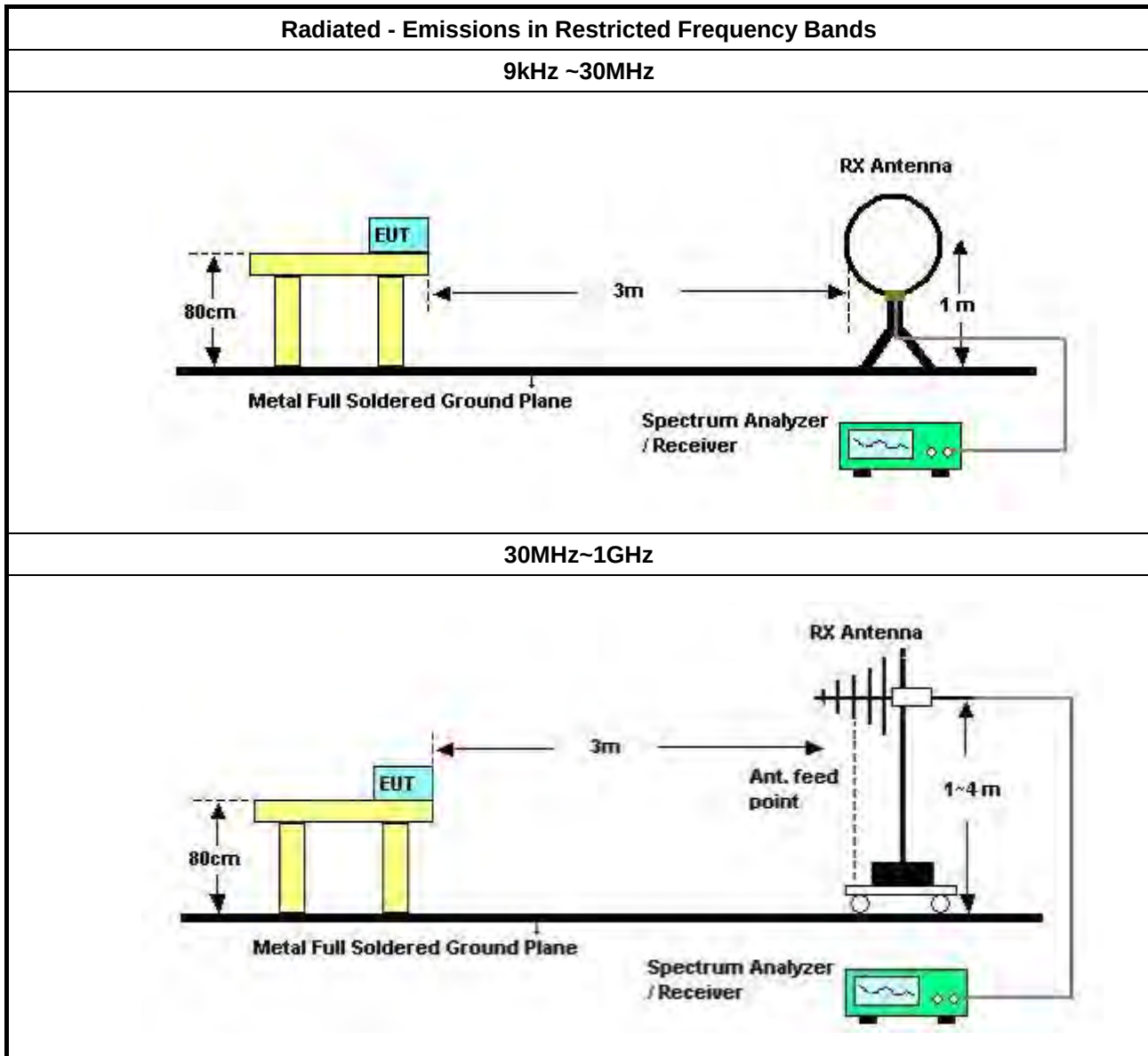
Refer a test equipment and calibration data table in this test report.

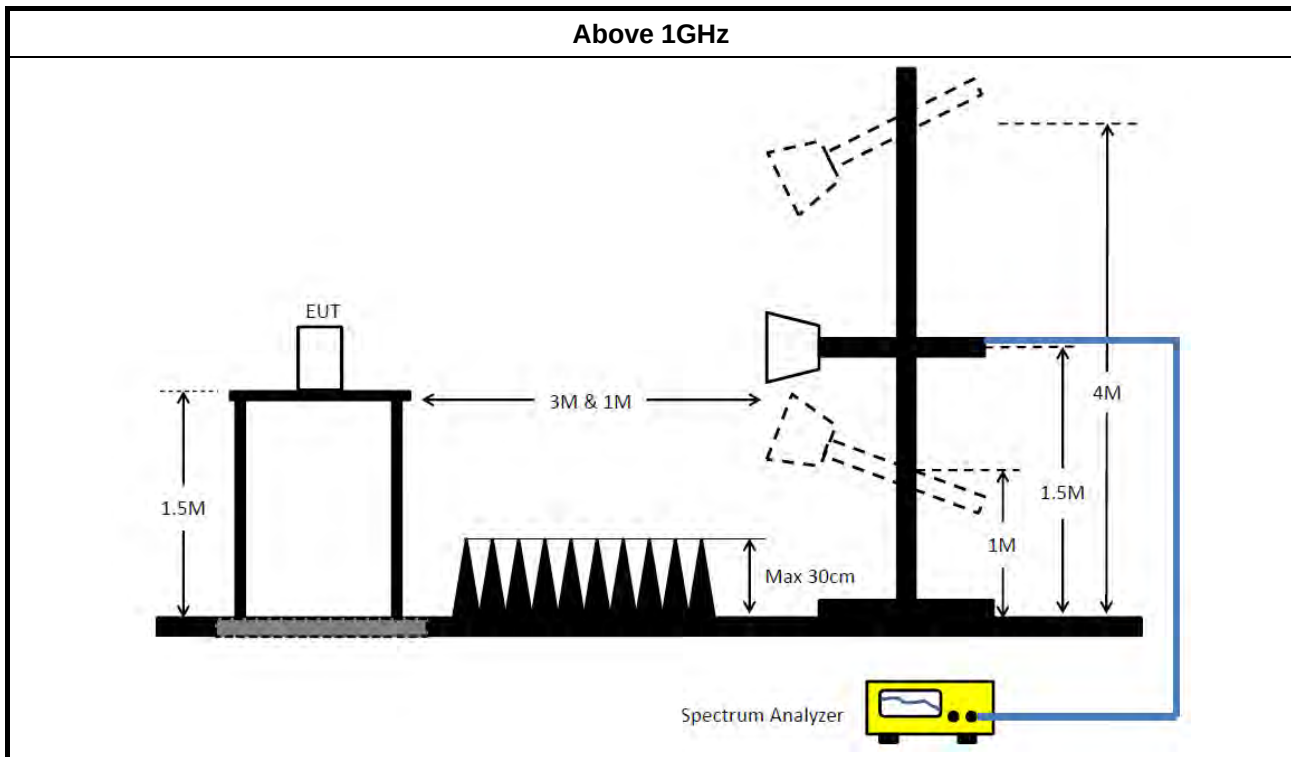


3.2.3 Test Procedures

Test Method	
The average emission levels shall be measured in [duty cycle ≥ 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 FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq 98\%$).
☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW $\geq 1/T$).
☐	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
☐	Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

3.2.4 Test Setup





3.2.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.2.6 Emissions in Restricted Frequency Bands (Below 30MHz)

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

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

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

3.2.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix B



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 03, 2021	Mar. 02, 2022	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Jan. 06, 2021	Jan. 05, 2022	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 20, 2020	Nov. 19, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 30, 2021	Jan. 29, 2022	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 20, 2020	May 19, 2021	Conduction (CO01-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 10, 2020	Aug. 09, 2021	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESR7	102171	9kHz ~ 26GHz	Jul. 01, 2020	Jun. 30, 2021	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH03-CB	30 MHz ~ 1 GHz	Jan. 27, 2021	Jan. 26, 2022	Radiation (03CH03-CB)
Bilog Antenna with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	2928 & AT-N0608	20MHz ~ 2GHz	Feb. 22, 2021	Feb. 21, 2022	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8447D	2944A10259	9kHz ~ 1.3GHz	Jan. 11, 2021	Jan. 10, 2022	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 09, 2020	Jun. 08, 2021	Radiation (03CH03-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH03-CB)
RF Cable-low	Woken	RG402	Low Cable-02+29	30MHz ~ 1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH03-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)

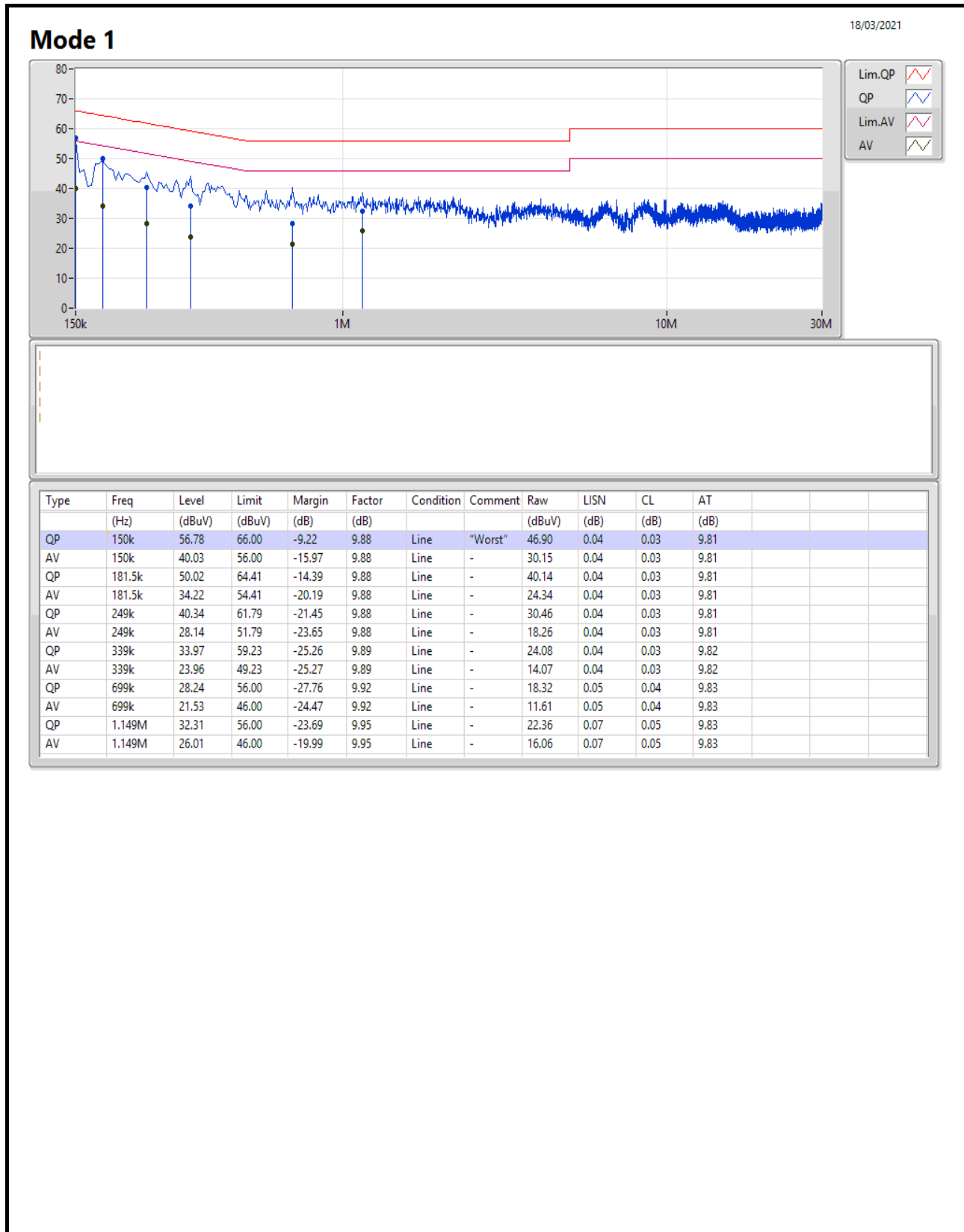


Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz 3m	Mar. 27, 2021	Mar. 26, 2022	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	May 04, 2021	May 03, 2022	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 13, 2020	Jul. 12, 2021	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Oct. 15, 2020	Oct. 14, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)

Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

Test Mode	Mode 1	Frequency Range	0.15 MHz to 30 MHz
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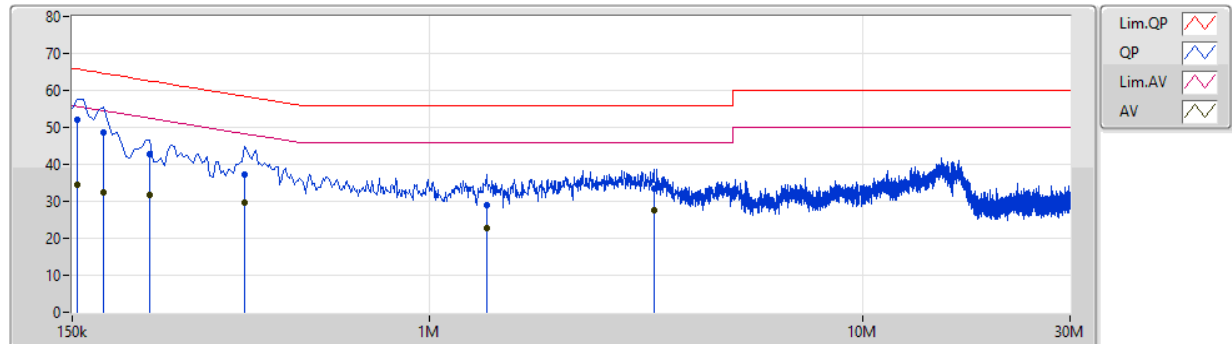
Line



Neutral

Mode 1

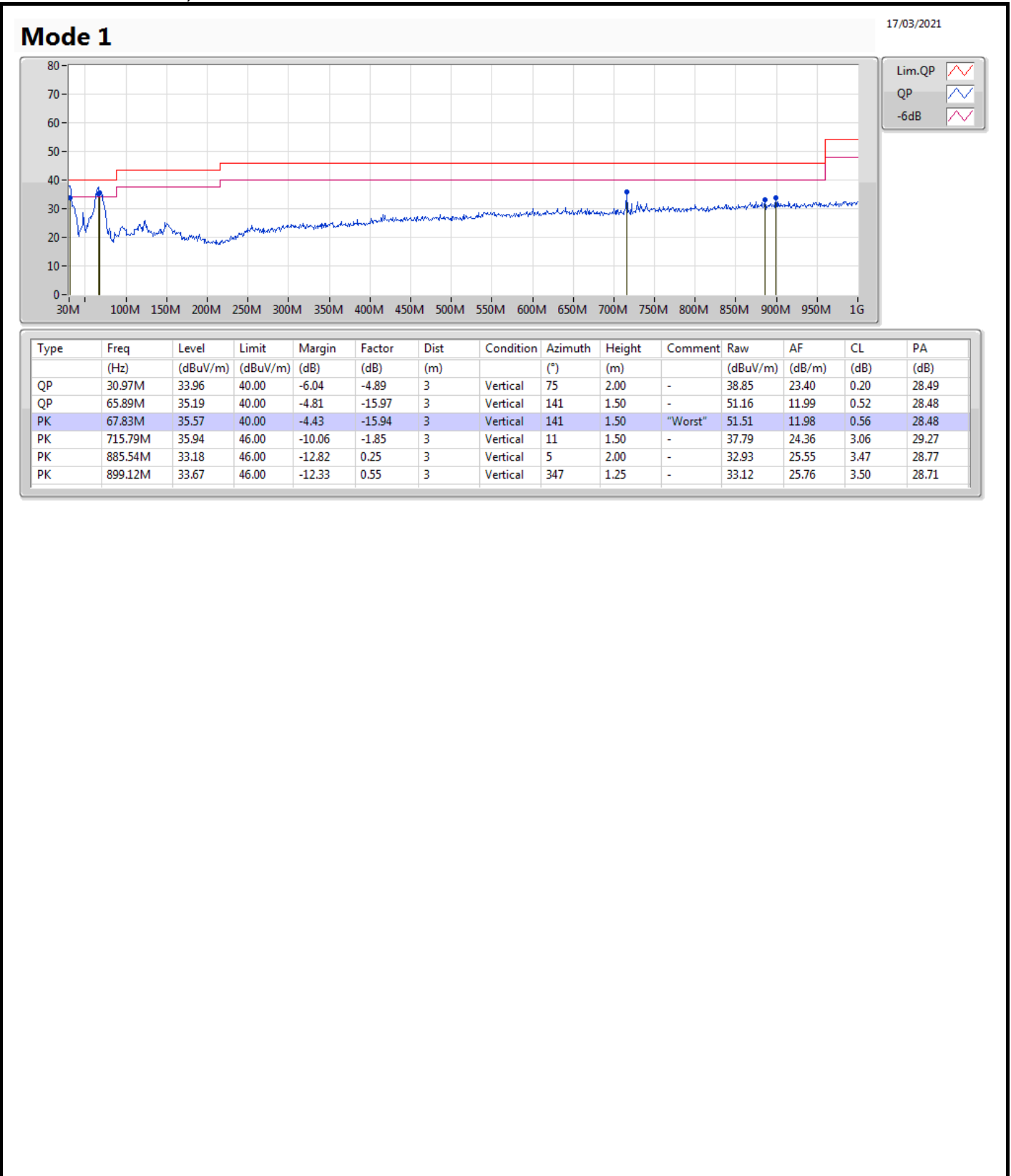
18/03/2021



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.5k	51.90	65.75	-13.85	9.87	Neutral	"Worst"	42.03	0.03	0.03	9.81			
AV	154.5k	34.57	55.75	-21.18	9.87	Neutral	-	24.70	0.03	0.03	9.81			
QP	177k	48.48	64.62	-16.14	9.87	Neutral	-	38.61	0.03	0.03	9.81			
AV	177k	32.49	54.62	-22.13	9.87	Neutral	-	22.62	0.03	0.03	9.81			
QP	226.5k	42.83	62.58	-19.75	9.87	Neutral	-	32.96	0.03	0.03	9.81			
AV	226.5k	31.85	52.58	-20.73	9.87	Neutral	-	21.98	0.03	0.03	9.81			
QP	375k	37.38	58.39	-21.01	9.88	Neutral	-	27.50	0.03	0.03	9.82			
AV	375k	29.80	48.39	-18.59	9.88	Neutral	-	19.92	0.03	0.03	9.82			
QP	1.352M	29.05	56.00	-26.95	9.94	Neutral	-	19.11	0.06	0.05	9.83			
AV	1.352M	22.90	46.00	-23.10	9.94	Neutral	-	12.96	0.06	0.05	9.83			
QP	3.287M	33.40	56.00	-22.60	10.06	Neutral	-	23.34	0.09	0.11	9.86			
AV	3.287M	27.63	46.00	-18.37	10.06	Neutral	-	17.57	0.09	0.11	9.86			

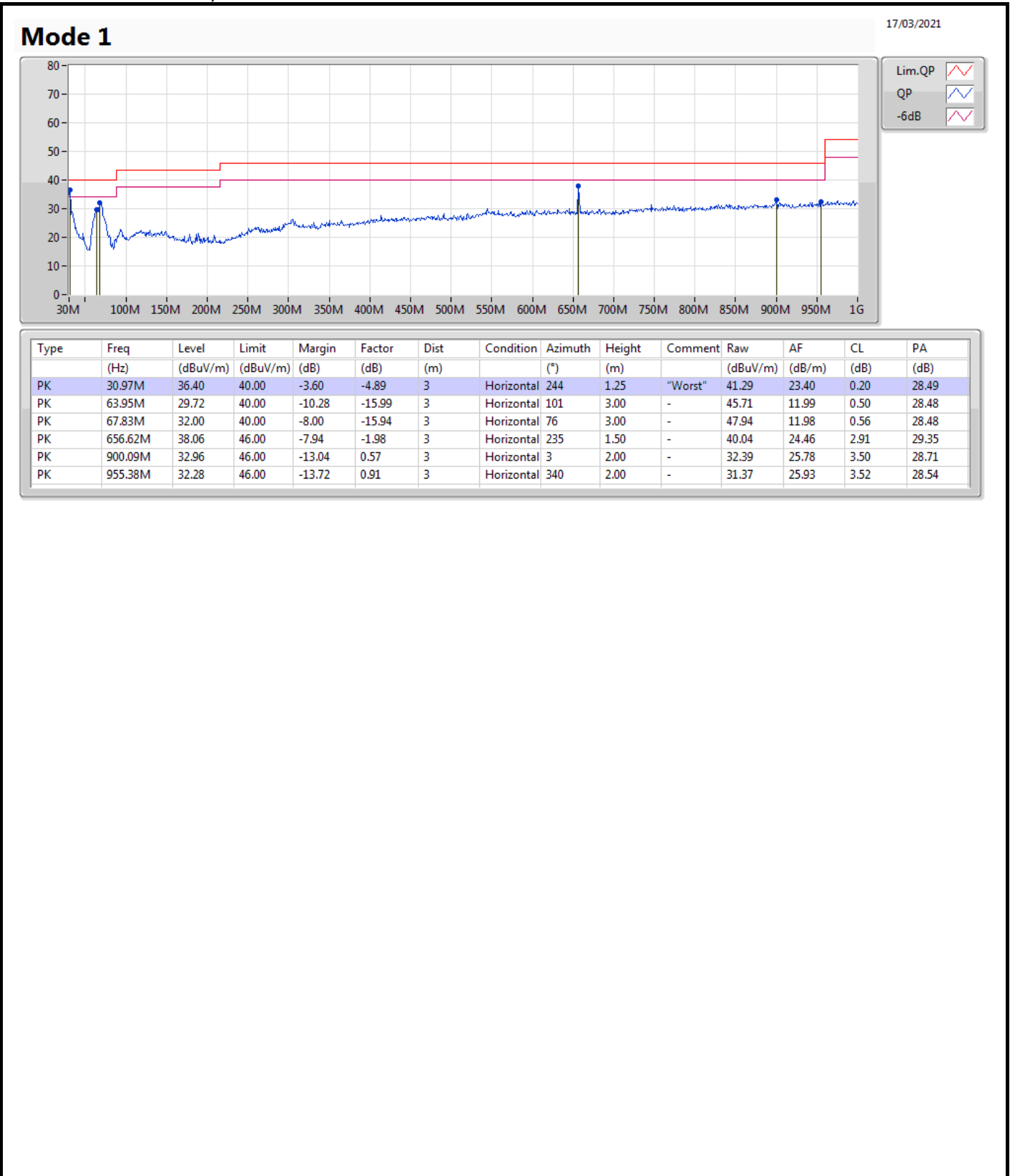
Test Mode	Mode 1	Frequency Range	30 MHz to 1,000 MHz
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Vertical 30 MHz to 1,000 MHz



Test Mode	Mode 1	Frequency Range	30 MHz to 1,000 MHz
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Horizontal 30 MHz to 1,000 MHz





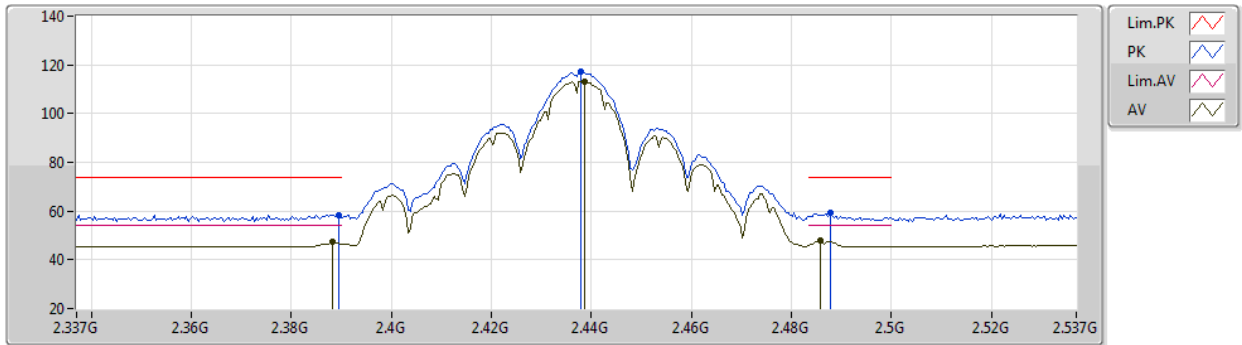
Summary

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)_2TX	Pass	AV	4.87392G	50.65	54.00	-3.35	3	Horizontal	9	2.71	-

802.11b_Nss1,(1Mbps)_2TX

07/05/2021

2437MHz_TX



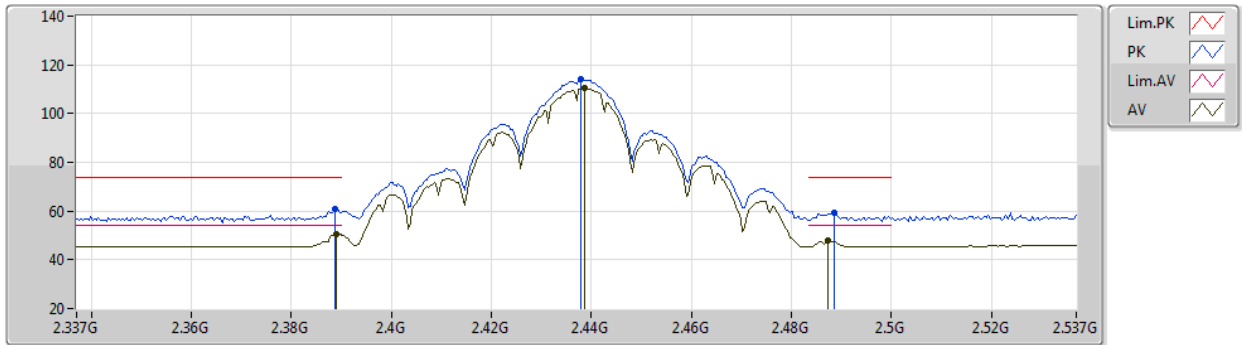
EUT_Z_2TX
Setting 25
02-B-C-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3894G	58.48	74.00	-15.52	28.43	3	Vertical	252	2.69	-	27.64	2.41	-
AV	2.3882G	47.20	54.00	-6.80	17.14	3	Vertical	252	2.69	-	27.65	2.41	-
PK	2.4378G	117.24	Inf	-Inf	87.30	3	Vertical	252	2.69	-	27.52	2.42	-
AV	2.4386G	113.30	Inf	-Inf	83.36	3	Vertical	252	2.69	-	27.52	2.42	-
PK	2.4878G	59.15	74.00	-14.85	29.29	3	Vertical	252	2.69	-	27.42	2.44	-
AV	2.4858G	47.90	54.00	-6.10	18.03	3	Vertical	252	2.69	-	27.43	2.44	-

802.11b_Nss1,(1Mbps)_2TX

07/05/2021

2437MHz_TX



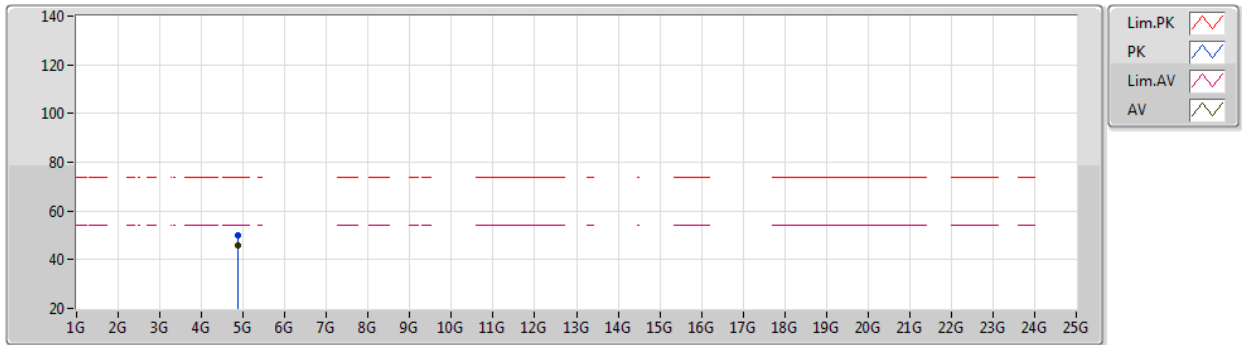
EUT_Z_2TX
Setting 25
02-B-C-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3886G	60.71	74.00	-13.29	30.65	3	Horizontal	261	1.04	-	27.65	2.41	-
AV	2.389G	50.54	54.00	-3.46	20.49	3	Horizontal	261	1.04	-	27.64	2.41	-
PK	2.4378G	114.21	Inf	-Inf	84.27	3	Horizontal	261	1.04	-	27.52	2.42	-
AV	2.4386G	110.43	Inf	-Inf	80.49	3	Horizontal	261	1.04	-	27.52	2.42	-
PK	2.4886G	59.29	74.00	-14.71	29.43	3	Horizontal	261	1.04	-	27.42	2.44	-
AV	2.4874G	47.88	54.00	-6.12	18.01	3	Horizontal	261	1.04	-	27.43	2.44	-

802.11b_Nss1,(1Mbps)_2TX

07/05/2021

2437MHz_TX



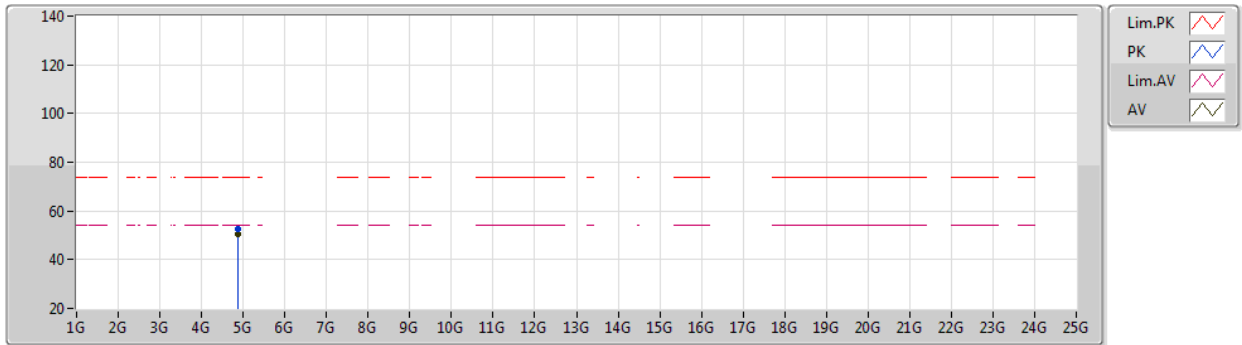
EUT_Z_2TX
Setting 25
02-B-C-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87384G	49.93	74.00	-24.07	45.77	3	Vertical	190	2.76	-	31.25	4.70	31.79
AV	4.87394G	46.02	54.00	-7.98	41.86	3	Vertical	190	2.76	-	31.25	4.70	31.79

802.11b_Nss1,(1Mbps)_2TX

07/05/2021

2437MHz_TX



EUT_Z_2TX
Setting 25
02-B-C-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8739G	52.81	74.00	-21.19	48.65	3	Horizontal	9	2.71	-	31.25	4.70	31.79
AV	4.87392G	50.65	54.00	-3.35	46.49	3	Horizontal	9	2.71	-	31.25	4.70	31.79