FCC Test Report

FCC ID	:	**QXO-AP4000U**
Equipment	:	**Access Point**
Brand Name	:	**Extreme Networks**
Model Name	:	**AP4000U**
Applicant	:	**Extreme Networks, Inc. 6480 Via Del Oro, San Jose, CA 95119**
Manufacturer	:	**Extreme Networks, Inc. 6480 Via Del Oro, San Jose, CA 95119**
Standard	:	**47 CFR FCC Part 15.517**

The product was received on May 20, 2021, and testing was started from Jun. 03, 2021 and completed on Aug. 25, 2021. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Allen Lin

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)

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PHOTOGRAPHS OF EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FR151220-01	01	Initial issue of report	Sep. 06, 2021

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
1.1.5	15.517(a)	Operational Restriction	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.517(b)	UWB Bandwidth	PASS	-
3.3	15.517(e)	Peak Emissions within a 50 MHz Bandwidth	PASS	-
3.4	15.517(c) /15.517(d)	Radiated Emissions	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:
After verification, the signal 1.2GHz is not generated by the UWB transmitter.

Reviewed by: Sam Tsai

Report Producer: Michelle Tsai

1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information				
Frequency Range (MHz)	Mode	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N_{TX})
6000-9000	UWB	6489.6	5 [1]	1
	UWB	7987.2	9 [1]	1
Note 1: UWB uses BPSK modulation.				

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	WNC	N/A	PIFA	I-PEX

Ant.	Port	Gain (dBi)	
		6489.6 MHz	7987.2 MHz
1	1	4.16	4.17

For UWB function:

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

1.1.3 Type of EUT

Operational Condition	
EUT Power Type	From PoE
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 Test Signal Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
Ultra Wide Band	0.974	0.11	322.5u	10k

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

1.1.5 Operational Restriction

Operation Restriction	Informed the applicant	Not applicable	User Manual Informed	Passed
☒ Indoor UWB devices & Fixed indoor infrastructure				
Must be capable of operation only indoors. The necessity to operate with a fixed indoor infrastructure. [A transmitter that had been connected to the AC power lines and operates solely through the AC mains. Or The device under test operates solely through USB port of a PC. It is not intended to operate from any other power source and be considered sufficient to demonstrate a fixed indoor infrastructure]	☒	☐	☐	☒
☒ Emissions from equipment				
The emissions from equipment operated shall not be intentionally directed outside of the building in which the equipment is located, such as through a window or a doorway, to perform an outside function, such as the detection of persons about to enter a building. [The applicant has been informed of this requirement.]	☒	☐	☐	☒
☒ Outdoor mounted antennas				
The use of outdoor mounted antennas, e.g., antennas mounted on the outside of a building or on a telephone pole, or any other outdoors infrastructure is prohibited. [The applicant has been informed without any outdoor mounted antennas.]	☒	☐	☐	☒
☒ Field disturbance sensors install				
Field disturbance sensors installed inside of metal or underground storage tanks are considered to operate indoors provided the emissions are directed towards the ground. [Not applicable for this client.]	☐	☒	☐	☒
☒ A communications system shall transmit only				
A communications system shall transmit only when the intentional radiator is sending information to an associated receiver. [The applicant has been informed of this requirement and is clearly stated on the user manual.]	☒	☐	☒	☐

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 393764 D01 v02
- KDB 412172 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		**FAX:** 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
AC Conduction	CO04-HY	Billy Wang	22.2~23.4°C / 59~60%	23/Jun/2021
RF Conducted	TH01-HY	Barry Hsiao	25.1~25.3°C / 58~60%	04/Jun/2021
RF Conducted	TH01-HY	Barry Hsiao	25~26.5°C / 59~62%	23/Aug/2021
Radiated	03CH03-HY	Tony Chang	24.1~24.5°C / 53~55%	22/Jun/2021
Radiated	03CH03-HY	Edward Wang	24.3~25.4°C / 58~63%	25/Aug/2021
☒ Wen 33rd. St. (TAF: 3785)	**ADD:** No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		**FAX:** 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
Radiated	03CH09-HY	Daniel Hsu	25.1~25.6°C / 54~57%	03/Jun/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)	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%
Conducted Emission	1.0 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 The Worst Case Configuration

Worst Modulation Used for Conformance Testing		
Mode	**Transmit Chains (N_{TX})**	**Test Channel Frequencies (MHz)**
UWB	1	6489.6,7987.2

2.3 The Worse Case Power Setting Parameter

Test Software Version	Tera Term Version 4.76

Mode	PowerSetting
Ultra Wide Band_Nss1_1TX	-
6489.6MHz	0x7f7f7f7f
7987.2MHz	0x73737373

2.4 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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Conducted Emissions, UWB Bandwidth
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Peak Emissions within a 50 MHz Bandwidth, Radiated Emissions		
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	CTX		
1	PoE Mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
Worst Planes of EUT		V	

2.5 Accessories

Accessories				
Wall Bracket	Brand Name	N/A	Model Name	N/A

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

2.6 Support Equipment

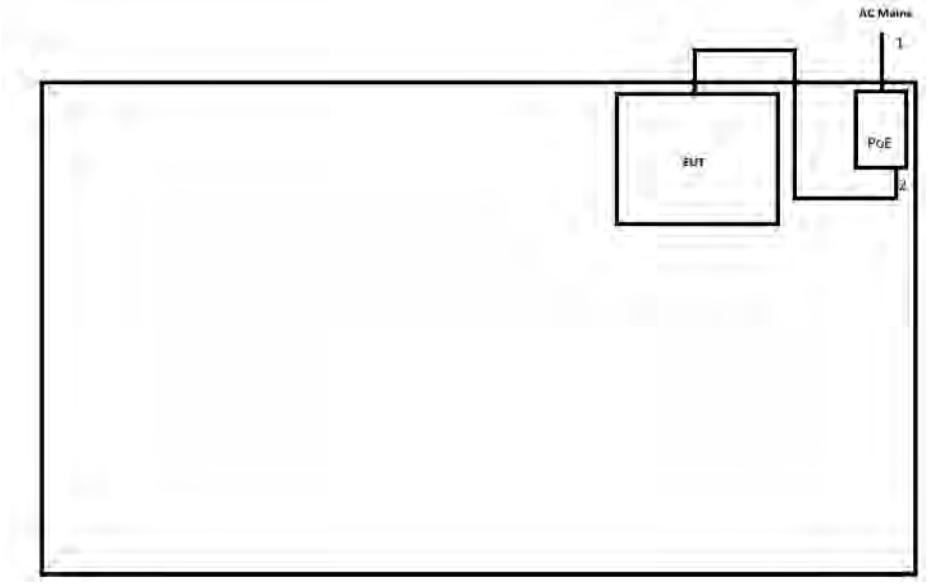
Support Equipment – AC Conduction					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	RJ45 Cable	Power Sync	CAT-6E-10	-	-
2	PoE	Microsemi	PD-9001-10GC/AC	-	-

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	RJ45 Cable	Power Sync	CAT-6E-10	-	-
2	PoE	Microsemi	PD-9001-10GC/AC	-	Remote

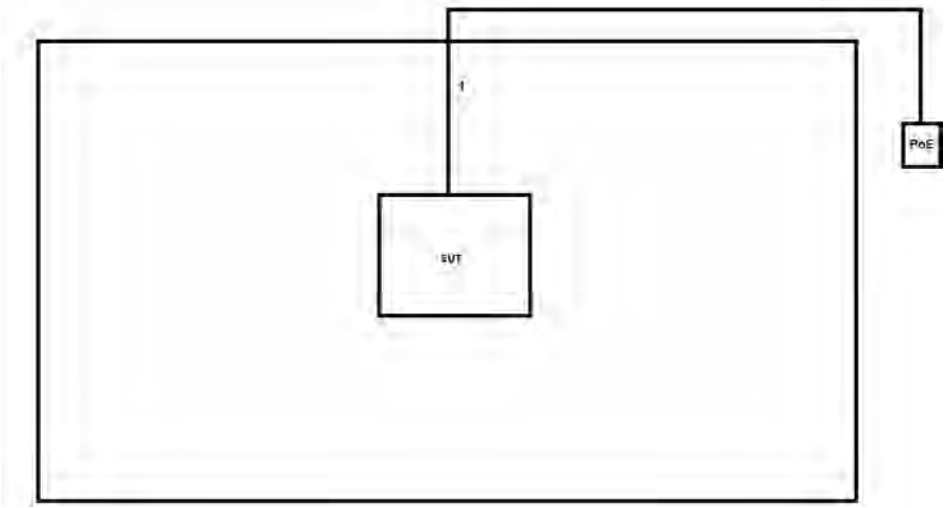
2.7 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	RJ45 cable	No	10.0	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	RJ45 cable	No	10.0	-

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

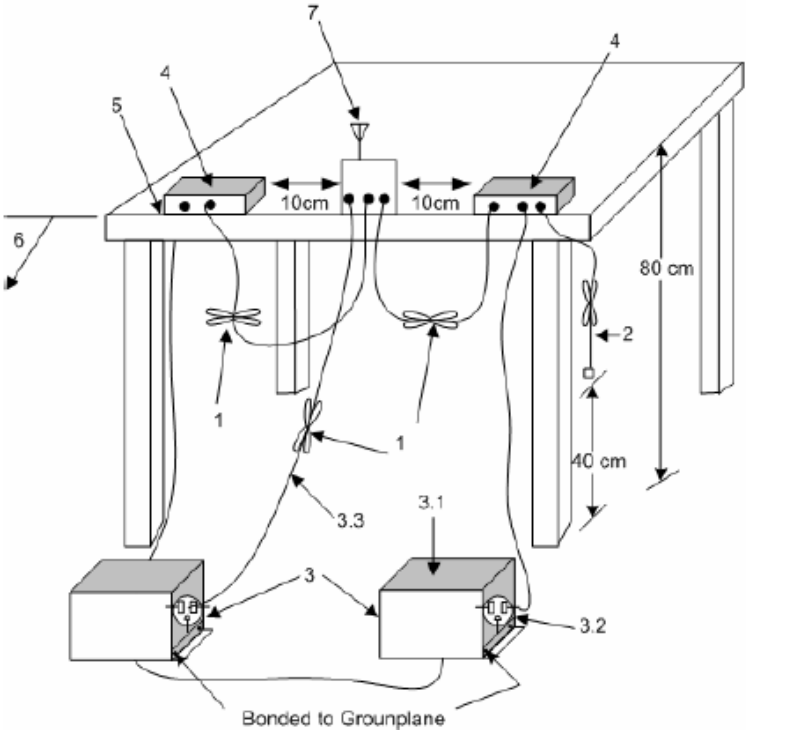
Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Raw(Read Level) +LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).

3.1.5 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50Ωloads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 UWB bandwidth

3.2.1 UWB bandwidth Limit

UWB bandwidth Limit
☒ UWB bandwidth ≥ 500 MHz or Fractional bandwidth ≥ 0.2; Fractional bandwidth = $2(f_H - f_L)/(f_H + f_L)$

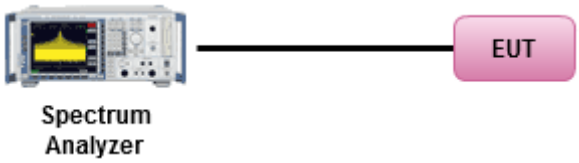
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
☒ For the UWB bandwidth shall be measured using one of the options below:	
	☒ Refer as ANSI C63.10, clause 6.9.3 and clause 10.1 for UWB bandwidth testing.

3.2.4 Test Setup

UWB Bandwidth


3.2.5 Test Result of UWB Bandwidth

Refer as Appendix B

3.3 Peak Emissions within a 50 MHz Bandwidth

3.3.1 Peak Emissions within a 50 MHz Bandwidth Limit

Peak Emissions within a 50 MHz Bandwidth Limit
P_{eirp} = 0 dBm/50MHz

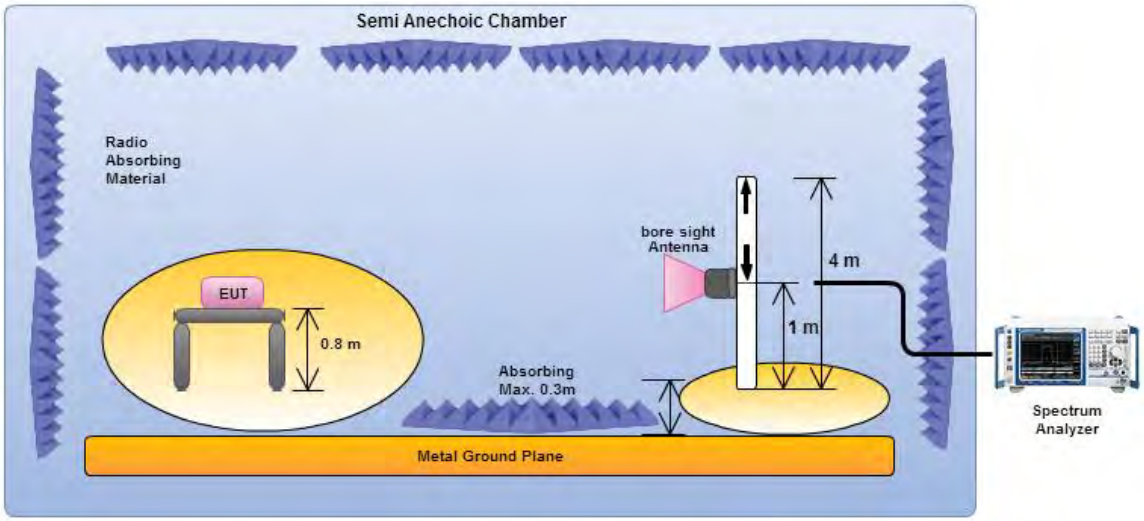
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
☒	Peak Emissions within a 50 MHz Bandwidth
☒	Refer as ANSI C63.10, clause 10.3.1 for radiated measurement procedure testing.
☒	Refer as ANSI C63.10, clause 10.3.2 for measurement distance is 3m.
☒	Refer as ANSI C63.10, clause 10.3.4 for peak detector procedure testing.
☒	Refer as ANSI C63.10, clause 10.3.6 for bandwidth conversion of peak power. $EIRP_{50MHz} = EIRP_{28MHz} – 20 \log(28MHz/50MHz)$

3.3.4 Test Setup

Peak Emissions


3.3.5 Test Result of Peak Emissions within a 50 MHz Bandwidth

Refer as Appendix C

3.4 Radiated Emissions

3.4.1 Radiated Emissions Limit

Radiated Emissions below 960MHz and Emissions from Digital Circuitry 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.

Radiated Emissions above 960MHz Limit	
Frequency Range (MHz)	**EIRP (dBm)**
960-1610	-75.3
1610-1990	-53.3
1990-3100	-51.3
3100-10600	-41.3
Above 10600	-51.3

Radiated Emissions in GPS Bands Limit	
Frequency Range (MHz)	**EIRP (dBm)**
1164-1240	-85.3
1559-1610	-85.3

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method for Radiated Emissions above 960MHz		
☒	Radiated Emissions above 960MHz	
	☒	Refer as ANSI C63.10, clause 10.3.1 for radiated measurement procedure testing.
	☒	Refer as ANSI C63.10, clause 10.3.2 for measurement distance is 3m. In some cases, it may be necessary to measure the radiated UWB emissions at a closer distance to obtain enough signal and margin to overcome the measurement system noise floor. Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
	☒	Refer as ANSI C63.10, clause 10.3.4 for rms detector procedure testing.
	☒	Refer as ANSI C63.10, clause 10.3.7 for evaluating AVG-PSD (RBW=1MHz).
	☒	Refer as ANSI C63.10, clause 10.3.10 for evaluating AVG-PSD in GPS Band (RBW≥1kHz).
☒	For radiated measurement.	
	☒	Refer as KDB 412172, clause 2.2 following eirp can be used radiated test configuration.
	☒	Refer as KDB 412172, clause 5 following eirp can be directly determined using the field strength.
	☐	Refer as KDB 412172, clause 6 following eirp can be used signal/antenna substitution techniques.

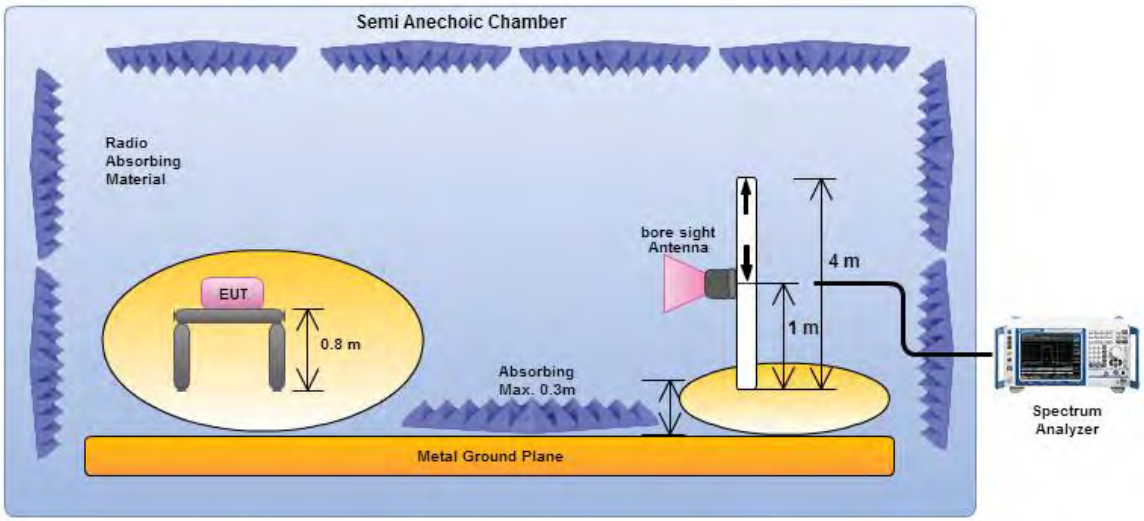
Test Method for Radiated Emissions below 960MHz and Emissions from Digital Circuitry		
☒	Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing 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).	
☒	For the transmitter unwanted emissions shall be measured using following options below:	
	☒	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW) – Duty cycle ≥ 100%.
	☐	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions. Adjusted by a “duty cycle correction factor”, derived from 20log (dwell time/100 ms). Average emission = peak emission + 20 log (duty cycle).
	☒	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
☒	For radiated measurement.	
	☒	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	☒	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	☒	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1 GHz and test distance is 3m.
☒	The any unwanted emissions level shall not exceed the fundamental emission level.	

3.4.4 Measurement Results Calculation

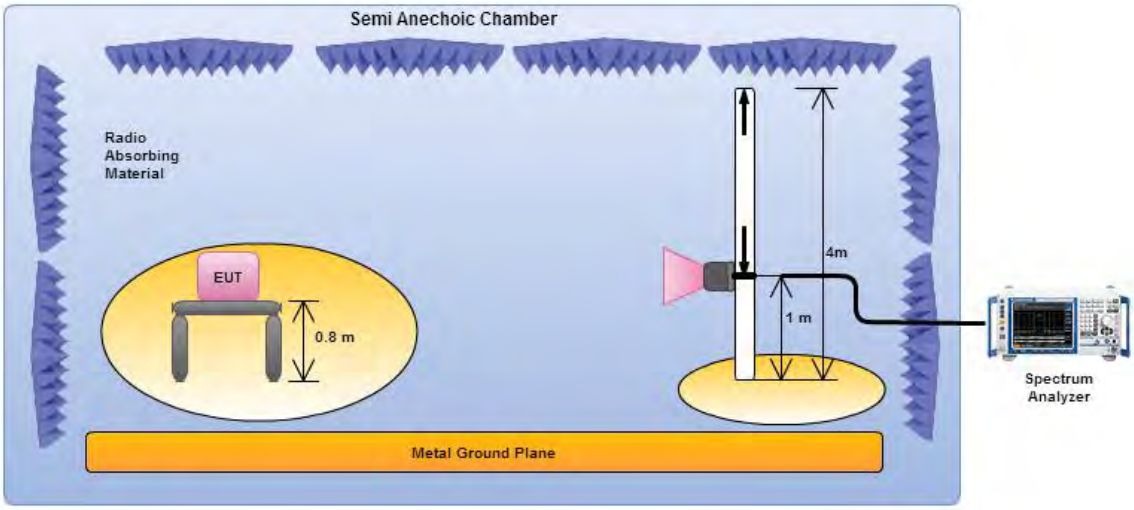
The measured Level is calculated using:
Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp Factor)

3.4.5 Test Setup

Radiated Emissions above 960MHz



Radiated Emissions below 960MHz and Emissions from Digital Circuitry



Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna and the frequency range of 1 GHz to 40 GHz using a calibrated horn antenna.

3.4.6 Radiated Emissions (Below 30MHz)

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

3.4.7 Test Result of Radiated Emissions

Refer as Appendix D

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR	102052	9kHz ~ 3.6GHz	19/Apr/2021	18/Apr/2022
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	11/Nov/2020	10/Nov/2021
RF Cable 5m	TITAN	TITAN	CO04-cable-01	0.1MHz~200MHz	03/Mar/2021	02/Mar/2022
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	21/Sep/2020	20/Sep/2021

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	30/Mar/2021	29/Mar/2022
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	20/Oct/2020	19/Oct/2021

Instrument for Radiated Test (03CH03-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	03/Aug/2021	02/Aug/2022
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	04/Aug/2020	03/Aug/2021
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	03/Aug/2021	02/Aug/2022
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	30/Mar/2021	29/Mar/2022
Amplifier	HP	8447D	2944A08033	10kHz~1.3GHz	13/Apr/2021	12/Apr/2022
Microwave Preamplifier	EMC INSTRUMENT	EMC051845BE	980241	1GHz~18GHz	17/May/2021	16/May/2022
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	06/Sep/2020	05/Sep/2021
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	24/Mar/2021	23/Mar/2022
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	16/Jun/2021	15/Jun/2022
RF Cable-R03m	Jye Bao	RG142	MY37335/4+CB021-1+CB021-2	30MHz~1GHz	17/Mar/2021	16/Mar/2022
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	SN MY38596/4+SN 804300/4	1GHz~40GHz	04/Aug/2020	03/Aug/2021
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	SN MY38596/4+SN 804300/4	1GHz~40GHz	28/Jul/2021	27/Jul/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	11/Mar/2021	10/Mar/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	19/Apr/2021	18/Apr/2022
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2021	15/Mar/2022

Instrument for Radiated Test (03CH09-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz~1GHz 3m	26/Mar/2021	25/Mar/2022
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	18/Mar/2021	17/Mar/2022
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	11/Aug/2020	10/Aug/2021
Amplifier	EMC	EMC9135	980232	9kHz~1GHz	12/Apr/2021	11/Apr/2022
Microwave Preamplifier	EMC INSTRUMENT	EMC051845BE	980241	1GHz~18GHz	17/May/2021	16/May/2022
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D&MTJ6 102-05	35418 & 3	30MHz~1GHz	06/Sep/2020	05/Sep/2021
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	18/May/2021	17/May/2022
RF Cable-low	Jye Bao	RG142	CB031+324530/4	9kHz~30MHz	03/Sep/2020	02/Sep/2021
RF Cable-low	Jye Bao	RG142	CB031+324530/4	30MHz~1GHz	09/Feb/2021	08/Feb/2022
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	SN MY25918/4+ SN MY39478/4 + SN 324530/4	1GHz~40GHz	15/Aug/2020	14/Aug/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	11/Mar/2021	10/Mar/2022
Microwave Premplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	09/Mar/2021	08/Mar/2022
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	18/Mar/2021	17/Mar/2022
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2021	15/Mar/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	19/Apr/2021	18/Apr/2022

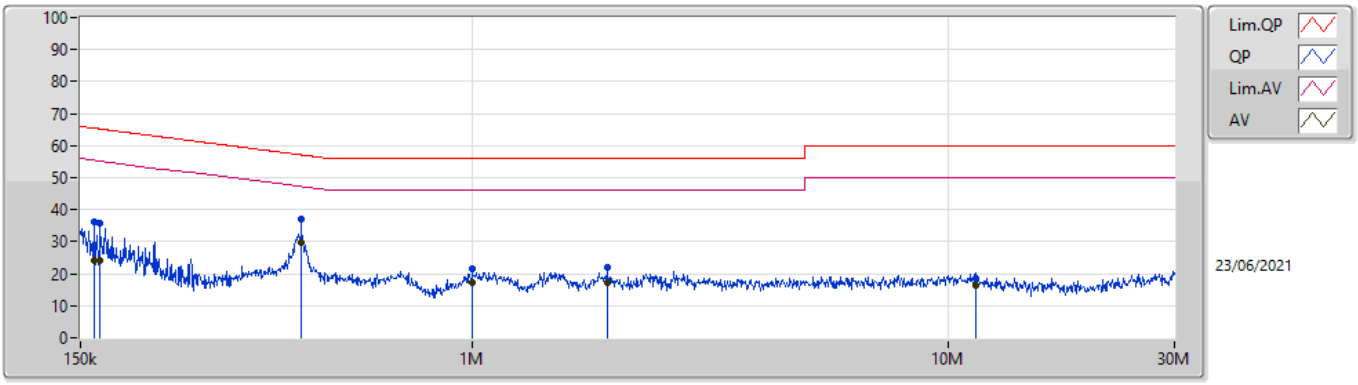
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	435.504k	29.91	47.15	-17.24	Line

Mode config

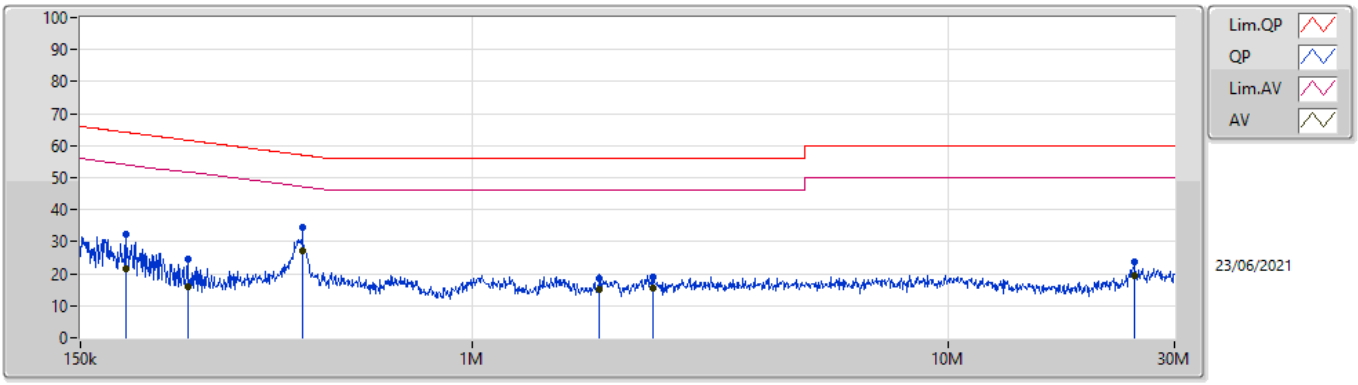
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	159.893k	36.24	65.46	-29.22	Line	-
Mode 1	Pass	AV	159.893k	24.32	55.46	-31.14	Line	-
Mode 1	Pass	QP	165.082k	35.80	65.20	-29.40	Line	-
Mode 1	Pass	AV	165.082k	24.25	55.20	-30.95	Line	-
Mode 1	Pass	QP	435.504k	36.97	57.15	-20.18	Line	-
Mode 1	Pass	AV	435.504k	29.91	47.15	-17.24	Line	-
Mode 1	Pass	QP	1.003M	21.58	56.00	-34.42	Line	-
Mode 1	Pass	AV	1.003M	17.39	46.00	-28.61	Line	-
Mode 1	Pass	QP	1.923M	22.02	56.00	-33.98	Line	-
Mode 1	Pass	AV	1.923M	17.35	46.00	-28.65	Line	-
Mode 1	Pass	QP	11.453M	18.45	60.00	-41.55	Line	-
Mode 1	Pass	AV	11.453M	16.30	50.00	-33.70	Line	-
Mode 1	Pass	QP	186.83k	32.25	64.18	-31.93	Neutral	-
Mode 1	Pass	AV	186.83k	21.60	54.18	-32.58	Neutral	-
Mode 1	Pass	QP	252.043k	24.40	61.70	-37.30	Neutral	-
Mode 1	Pass	AV	252.043k	16.07	51.70	-35.63	Neutral	-
Mode 1	Pass	QP	440.751k	34.50	57.05	-22.55	Neutral	-
Mode 1	Pass	AV	440.751k	27.31	47.05	-19.74	Neutral	-
Mode 1	Pass	QP	1.855M	18.56	56.00	-37.44	Neutral	-
Mode 1	Pass	AV	1.855M	15.13	46.00	-30.87	Neutral	-
Mode 1	Pass	QP	2.395M	19.11	56.00	-36.89	Neutral	-
Mode 1	Pass	AV	2.395M	15.33	46.00	-30.67	Neutral	-
Mode 1	Pass	QP	24.746M	23.53	60.00	-36.47	Neutral	-
Mode 1	Pass	AV	24.746M	19.22	50.00	-30.78	Neutral	-

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	159.893k	36.24	65.46	-29.22	19.63	Line	-	16.61	9.69	0.04	9.90
AV	159.893k	24.32	55.46	-31.14	19.63	Line	-	4.69	9.69	0.04	9.90
QP	165.082k	35.80	65.20	-29.40	19.63	Line	-	16.17	9.69	0.04	9.90
AV	165.082k	24.25	55.20	-30.95	19.63	Line	-	4.62	9.69	0.04	9.90
QP	435.504k	36.97	57.15	-20.18	19.62	Line	-	17.35	9.67	0.06	9.89
AV	435.504k	29.91	47.15	-17.24	19.62	Line	-	10.29	9.67	0.06	9.89
QP	1.003M	21.58	56.00	-34.42	19.55	Line	-	2.03	9.67	0.08	9.80
AV	1.003M	17.39	46.00	-28.61	19.55	Line	-	-2.16	9.67	0.08	9.80
QP	1.923M	22.02	56.00	-33.98	19.58	Line	-	2.44	9.68	0.10	9.80
AV	1.923M	17.35	46.00	-28.65	19.58	Line	-	-2.23	9.68	0.10	9.80
QP	11.453M	18.45	60.00	-41.55	19.83	Line	-	-1.38	9.71	0.22	9.90
AV	11.453M	16.30	50.00	-33.70	19.83	Line	-	-3.53	9.71	0.22	9.90

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	186.83k	32.25	64.18	-31.93	19.62	Neutral	-	12.63	9.68	0.04	9.90
AV	186.83k	21.60	54.18	-32.58	19.62	Neutral	-	1.98	9.68	0.04	9.90
QP	252.043k	24.40	61.70	-37.30	19.63	Neutral	-	4.77	9.68	0.05	9.90
AV	252.043k	16.07	51.70	-35.63	19.63	Neutral	-	-3.56	9.68	0.05	9.90
QP	440.751k	34.50	57.05	-22.55	19.62	Neutral	-	14.88	9.67	0.06	9.89
AV	440.751k	27.31	47.05	-19.74	19.62	Neutral	-	7.69	9.67	0.06	9.89
QP	1.855M	18.56	56.00	-37.44	19.58	Neutral	-	-1.02	9.68	0.10	9.80
AV	1.855M	15.13	46.00	-30.87	19.58	Neutral	-	-4.45	9.68	0.10	9.80
QP	2.395M	19.11	56.00	-36.89	19.62	Neutral	-	-0.51	9.68	0.11	9.83
AV	2.395M	15.33	46.00	-30.67	19.62	Neutral	-	-4.29	9.68	0.11	9.83
QP	24.746M	23.53	60.00	-36.47	19.94	Neutral	-	3.59	9.72	0.32	9.90
AV	24.746M	19.22	50.00	-30.78	19.94	Neutral	-	-0.72	9.72	0.32	9.90

Summary

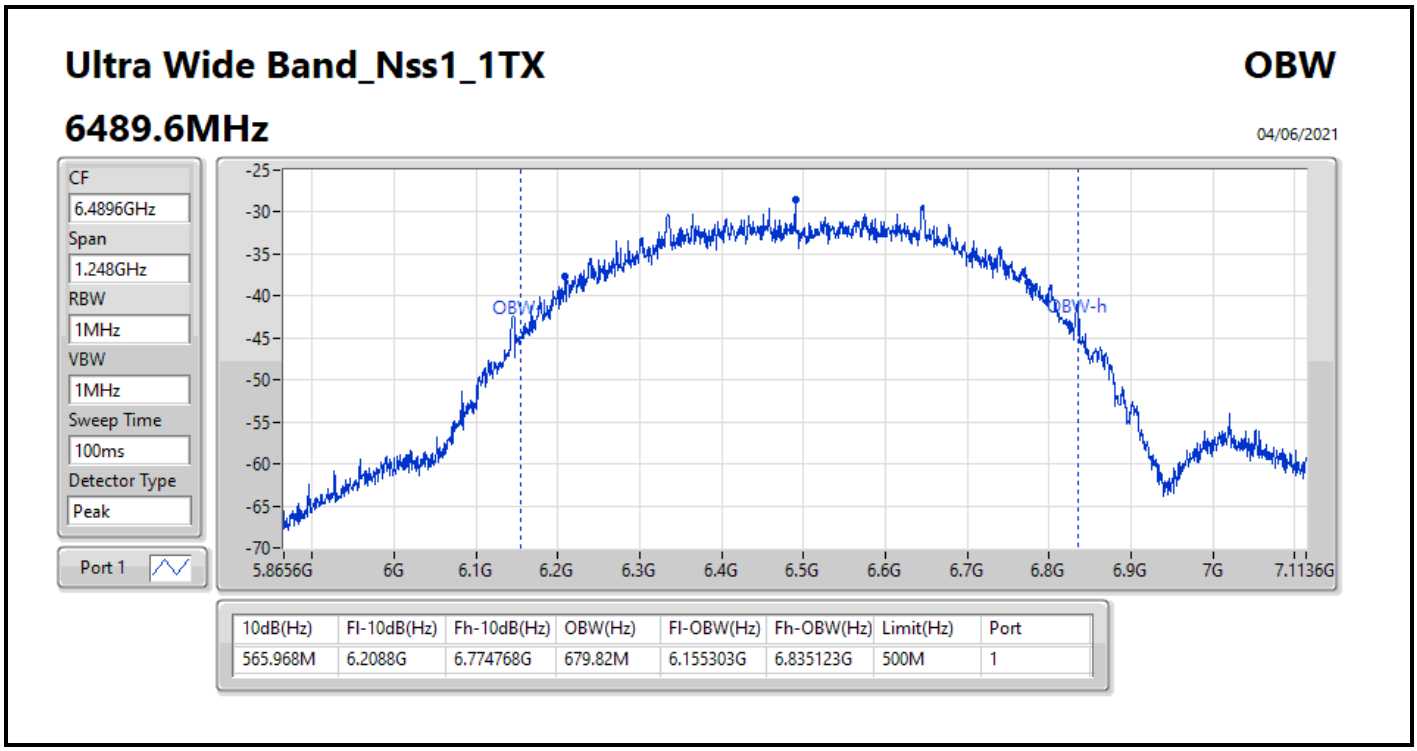
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
3.1-10.6GHz	-	-	-	-	-
Ultra Wide Band_Nss1_1TX	565.968M	684.81M	685MD1D	565.968M	679.82M

Max-N dB = Maximum 10dB down bandwidth
Max-OBW = Maximum99% occupied bandwidth;
Min-N dB = Minimum 10dB down bandwidth
Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Ultra Wide Band_Nss1_1TX	-	-	-	-
6489.6MHz	Pass	500M	565.968M	679.82M
7987.2MHz	Pass	500M	565.968M	684.81M

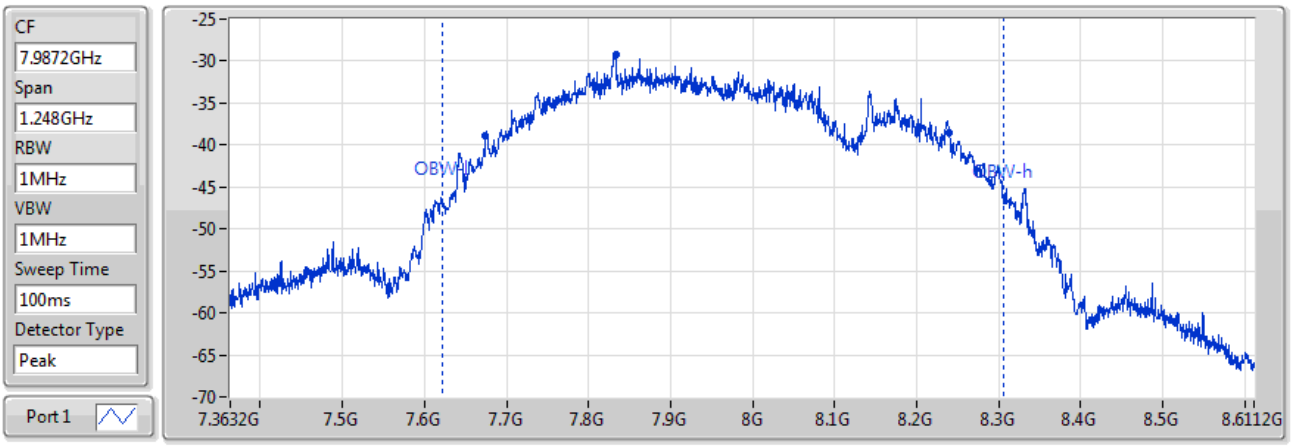
Port X-N dB = Port **X** 10dB down bandwidth
Port X-OBW = Port **X** 99% occupied bandwidth



Ultra Wide Band_Nss1_1TX OBW

7987.2MHz

23/08/2021



10dB(Hz)	Fl-10dB(Hz)	Fh-10dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
565.968M	7.673952G	8.23992G	684.81M	7.621719G	8.306528G	3G	1

Summary

Mode	EIRP PD (dBm/50MHz)
3.1-10.6GHz	-
Ultra Wide Band_Nss1_1TX	-0.29

Result

Mode	Result	Raw (dBuV/m)	Factor (dB)	EIRP PD (dBm/50MHz)	EIRP PD Limit (dBm/50MHz)
Ultra Wide Band_Nss1_1TX	-	-	-	-	-
6489.6MHz	Pass	102.14	-102.43	-0.29	0
7987.2MHz	Pass	101.58	-102.43	-0.85	0

EIRP PD= Raw + Factor

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
3.1-10.6GHz	-	-	-	-	-	-	-	-	-	-	-
Ultra Wide Band_Nss1_1TX	Pass	QP	43.58M	38.94	40.00	-1.06	3	Vertical	12	1.00	-

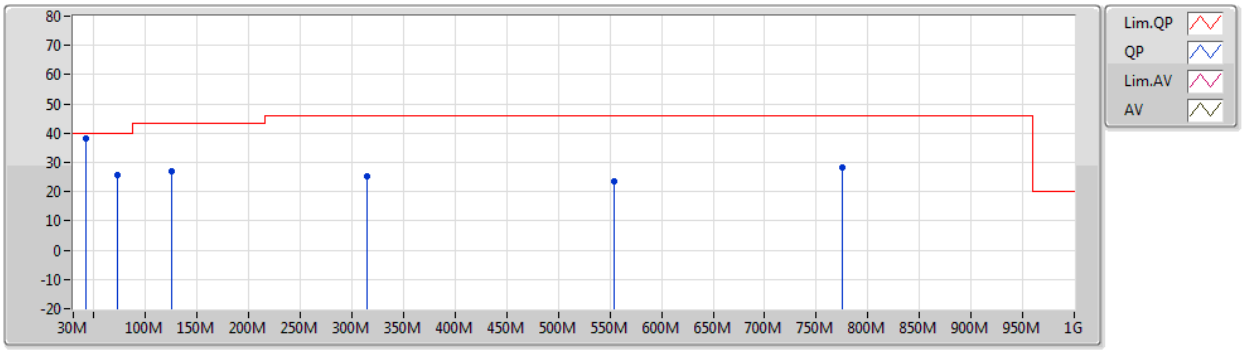
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Ultra Wide Band_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-
6489.6MHz_PoE	Pass	PK	72.68M	25.58	40.00	-14.42	3	Vertical	360	1.00	-
6489.6MHz_PoE	Pass	PK	125.06M	27.10	43.50	-16.40	3	Vertical	360	1.00	-
6489.6MHz_PoE	Pass	PK	315.18M	25.14	46.00	-20.86	3	Vertical	360	1.00	-
6489.6MHz_PoE	Pass	PK	553.8M	23.67	46.00	-22.33	3	Vertical	360	1.00	-
6489.6MHz_PoE	Pass	PK	774.96M	28.20	46.00	-17.80	3	Vertical	360	1.00	-
6489.6MHz_PoE	Pass	QP	41.64M	38.31	40.00	-1.69	3	Vertical	355	1.00	-
6489.6MHz_PoE	Pass	PK	47.46M	23.37	40.00	-16.63	3	Horizontal	0	1.00	-
6489.6MHz_PoE	Pass	PK	125.06M	27.57	43.50	-15.93	3	Horizontal	0	1.00	-
6489.6MHz_PoE	Pass	PK	315.18M	26.89	46.00	-19.11	3	Horizontal	0	1.00	-
6489.6MHz_PoE	Pass	PK	445.16M	21.25	46.00	-24.75	3	Horizontal	0	1.00	-
6489.6MHz_PoE	Pass	PK	571.26M	23.60	46.00	-22.40	3	Horizontal	0	1.00	-
6489.6MHz_PoE	Pass	PK	776.9M	27.61	46.00	-18.39	3	Horizontal	0	1.00	-
7987.2MHz_PoE	Pass	PK	99.84M	30.90	43.50	-12.60	3	Vertical	360	1.00	-
7987.2MHz_PoE	Pass	PK	165.8M	30.03	43.50	-13.47	3	Vertical	360	1.00	-
7987.2MHz_PoE	Pass	PK	239.52M	26.31	46.00	-19.69	3	Vertical	360	1.00	-
7987.2MHz_PoE	Pass	PK	398.6M	28.15	46.00	-17.85	3	Vertical	360	1.00	-
7987.2MHz_PoE	Pass	PK	489.78M	28.44	46.00	-17.56	3	Vertical	360	1.00	-
7987.2MHz_PoE	Pass	QP	43.58M	38.94	40.00	-1.06	3	Vertical	12	1.00	-
7987.2MHz_PoE	Pass	PK	97.9M	25.47	43.50	-18.03	3	Horizontal	0	1.00	-
7987.2MHz_PoE	Pass	PK	239.52M	33.42	46.00	-12.58	3	Horizontal	0	1.00	-
7987.2MHz_PoE	Pass	PK	398.6M	28.12	46.00	-17.88	3	Horizontal	0	1.00	-
7987.2MHz_PoE	Pass	PK	464.56M	27.46	46.00	-18.54	3	Horizontal	0	1.00	-
7987.2MHz_PoE	Pass	PK	557.68M	28.15	46.00	-17.85	3	Horizontal	0	1.00	-
7987.2MHz_PoE	Pass	QP	45.52M	38.66	40.00	-1.34	3	Horizontal	0	1.46	-

Ultra Wide Band_Nss1_1TX

6489.6MHz_PoE

03/06/2021

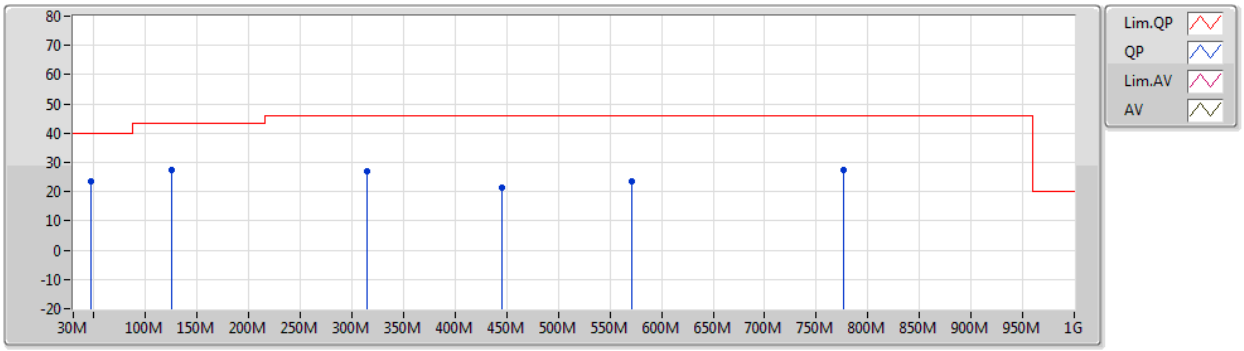


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	72.68M	25.58	40.00	-14.42	-24.58	3	Vertical	360	1.00	-	50.16	11.52	0.85	36.95
PK	125.06M	27.10	43.50	-16.40	-18.63	3	Vertical	360	1.00	-	45.73	16.88	1.10	36.61
PK	315.18M	25.14	46.00	-20.86	-16.22	3	Vertical	360	1.00	-	41.36	18.55	1.70	36.47
PK	553.8M	23.67	46.00	-22.33	-9.77	3	Vertical	360	1.00	-	33.44	24.92	2.39	37.08
PK	774.96M	28.20	46.00	-17.80	-7.42	3	Vertical	360	1.00	-	35.62	27.36	2.77	37.55
QP	41.64M	38.31	40.00	-1.69	-18.63	3	Vertical	355	1.00	-	56.94	17.69	0.75	37.07

Ultra Wide Band_Nss1_1TX

6489.6MHz_PoE

03/06/2021

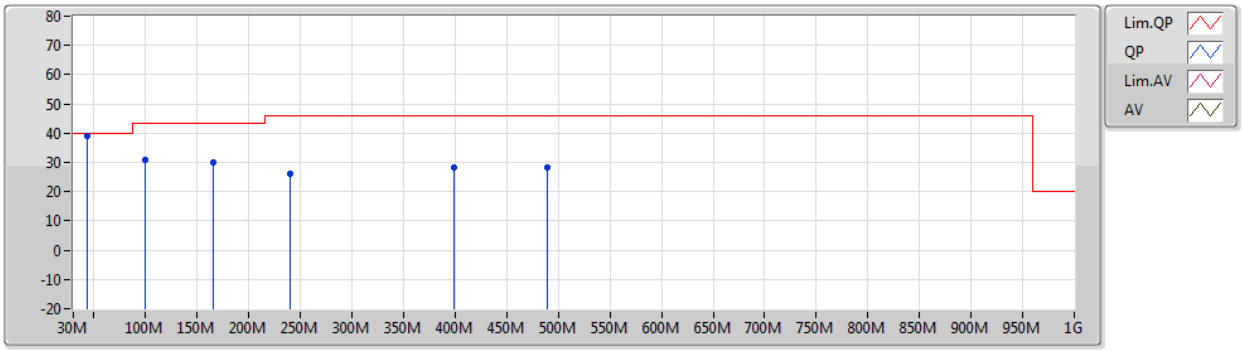


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	47.46M	23.37	40.00	-16.63	-21.91	3	Horizontal	0	1.00	-	45.28	14.37	0.80	37.08
PK	125.06M	27.57	43.50	-15.93	-18.63	3	Horizontal	0	1.00	-	46.20	16.88	1.10	36.61
PK	315.18M	26.89	46.00	-19.11	-16.22	3	Horizontal	0	1.00	-	43.11	18.55	1.70	36.47
PK	445.16M	21.25	46.00	-24.75	-12.20	3	Horizontal	0	1.00	-	33.45	22.34	2.08	36.62
PK	571.26M	23.60	46.00	-22.40	-9.52	3	Horizontal	0	1.00	-	33.12	25.16	2.42	37.10
PK	776.9M	27.61	46.00	-18.39	-7.41	3	Horizontal	0	1.00	-	35.02	27.36	2.77	37.54

Ultra Wide Band_Nss1_1TX

7987.2MHz_PoE

25/08/2021

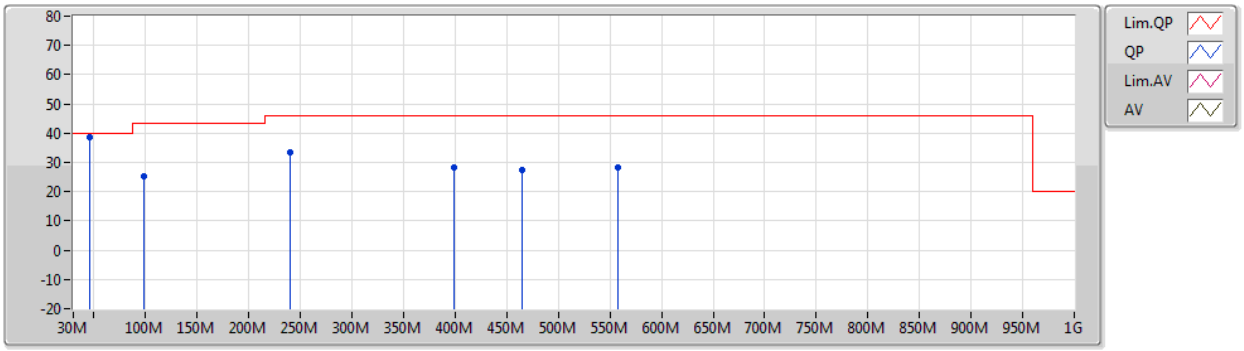


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	99.84M	30.90	43.50	-12.60	-9.60	3	Vertical	360	1.00	-	40.50	16.09	1.70	27.39
PK	165.8M	30.03	43.50	-13.47	-10.10	3	Vertical	360	1.00	-	40.13	14.92	2.16	27.18
PK	239.52M	26.31	46.00	-19.69	-7.76	3	Vertical	360	1.00	-	34.07	16.42	2.61	26.79
PK	398.6M	28.15	46.00	-17.85	-2.83	3	Vertical	360	1.00	-	30.98	20.98	3.44	27.25
PK	489.78M	28.44	46.00	-17.56	-1.09	3	Vertical	360	1.00	-	29.53	22.77	3.83	27.69
QP	43.58M	38.94	40.00	-1.06	-10.74	3	Vertical	12	1.00	-	49.68	15.79	1.07	27.60

Ultra Wide Band_Nss1_1TX

7987.2MHz_PoE

25/08/2021



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	97.9M	25.47	43.50	-18.03	-10.04	3	Horizontal	0	1.00	-	35.51	15.70	1.68	27.42
PK	239.52M	33.42	46.00	-12.58	-7.76	3	Horizontal	0	1.00	-	41.18	16.42	2.61	26.79
PK	398.6M	28.12	46.00	-17.88	-2.83	3	Horizontal	0	1.00	-	30.95	20.98	3.44	27.25
PK	464.56M	27.46	46.00	-18.54	-1.51	3	Horizontal	0	1.00	-	28.97	22.47	3.74	27.72
PK	557.68M	28.15	46.00	-17.85	0.17	3	Horizontal	0	1.00	-	27.98	24.16	4.13	28.12
QP	45.52M	38.66	40.00	-1.34	-11.52	3	Horizontal	0	1.46	-	50.18	14.98	1.09	27.59

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
3.1-10.6GHz	-	-	-	-	-	-	-	-	-	-	-
Ultra Wide Band_Nss1_1TX	Pass	AV	1.2G	13.28	-	-	3	Vertical	344	2.54	-

Result

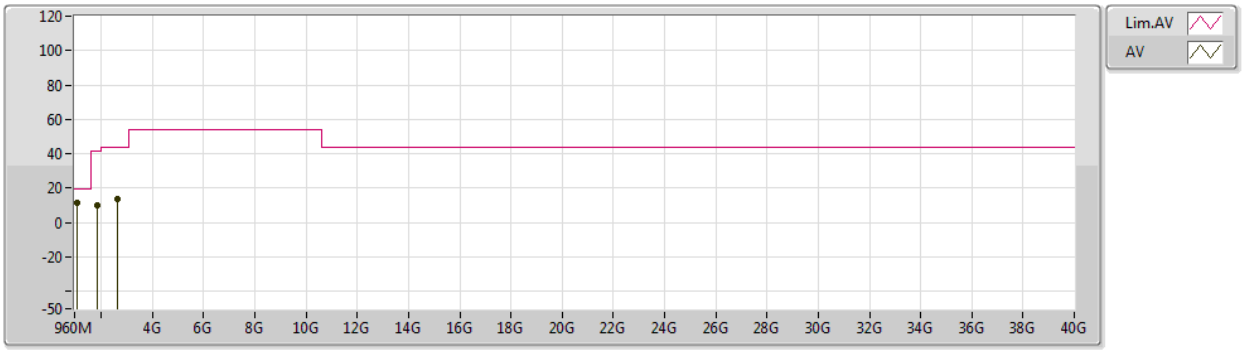
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Ultra Wide Band_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-
6489.6MHz_TX	Pass	AV	1.03568G	11.63	19.90	-8.27	3	Vertical	360	1.50	-
6489.6MHz_TX	Pass	AV	1.86128G	10.32	41.90	-31.58	3	Vertical	360	1.50	-
6489.6MHz_TX	Pass	AV	2.63872G	14.09	43.90	-29.81	3	Vertical	360	1.50	-
6489.6MHz_TX	Pass	AV	1.04944G	11.35	19.90	-8.55	3	Horizontal	0	1.50	-
6489.6MHz_TX	Pass	AV	1.97136G	11.28	41.90	-30.62	3	Horizontal	0	1.50	-
6489.6MHz_TX	Pass	AV	2.99648G	15.32	43.90	-28.58	3	Horizontal	0	1.50	-
6489.6MHz_TX	Pass	AV	1.17479G	-7.47	9.90	-17.37	3	Vertical	143	1.40	-
6489.6MHz_TX*	Pass	AV	1.2G	13.28	NaN	NaN	3	Vertical	344	2.54	-
6489.6MHz_TX	Pass	AV	1.22784G	-5.32	9.90	-15.22	3	Vertical	262	2.27	-
6489.6MHz_TX	Pass	AV	1.18832G	-8.32	9.90	-18.22	3	Horizontal	171	2.16	-
6489.6MHz_TX*	Pass	AV	1.2G	15.93	NaN	NaN	3	Horizontal	153	1.68	-
6489.6MHz_TX	Pass	AV	1.23498G	-8.10	9.90	-18.00	3	Horizontal	135	2.17	-
6489.6MHz_TX	Pass	AV	1.56859G	-6.65	9.90	-16.55	3	Vertical	190	1.10	-
6489.6MHz_TX	Pass	AV	1.58736G	-8.13	9.90	-18.03	3	Vertical	62	2.13	-
6489.6MHz_TX	Pass	AV	1.6G	6.19	9.90	-3.71	3	Vertical	21	1.77	-
6489.6MHz_TX	Pass	AV	1.56859G	-7.99	9.90	-17.89	3	Horizontal	54	1.98	-
6489.6MHz_TX	Pass	AV	1.58736G	-8.71	9.90	-18.61	3	Horizontal	221	1.37	-
6489.6MHz_TX	Pass	AV	1.6G	7.55	9.90	-2.35	3	Horizontal	196	1.64	-
7987.2MHz_TX	Pass	AV	1.153G	13.69	19.90	-6.21	3	Vertical	325	1.54	-
7987.2MHz_TX	Pass	AV	2.251G	16.24	43.90	-27.66	3	Vertical	125	1.45	-
7987.2MHz_TX	Pass	AV	2.998G	21.00	43.90	-22.90	3	Vertical	142	1.33	-
7987.2MHz_TX	Pass	AV	1.153G	12.99	19.90	-6.91	3	Horizontal	241	1.24	-
7987.2MHz_TX	Pass	AV	2.233G	16.24	43.90	-27.66	3	Horizontal	222	1.33	-
7987.2MHz_TX	Pass	AV	2.998G	19.04	43.90	-24.86	3	Horizontal	120	1.45	-
7987.2MHz_TX	Pass	AV	1.1725G	-8.59	9.90	-18.49	3	Vertical	228	1.49	-
7987.2MHz_TX	Pass	AV	1.19649G	-10.70	9.90	-20.60	3	Vertical	333	1.48	-
7987.2MHz_TX*	Pass	AV	1.2G	13.32	NaN	NaN	3	Vertical	12	1.58	-
7987.2MHz_TX	Pass	AV	1.23367G	-11.59	9.90	-21.49	3	Vertical	319	1.49	-
7987.2MHz_TX	Pass	AV	1.17929G	-10.51	9.90	-20.41	3	Horizontal	197	1.49	-
7987.2MHz_TX	Pass	AV	1.19108G	-11.02	9.90	-20.92	3	Horizontal	151	1.49	-
7987.2MHz_TX*	Pass	AV	1.2G	17.24	NaN	NaN	3	Horizontal	152	1.48	-
7987.2MHz_TX	Pass	AV	1.20678G	-11.29	9.90	-21.19	3	Horizontal	141	1.48	-
7987.2MHz_TX	Pass	AV	1.57021G	-9.22	9.90	-19.12	3	Vertical	51	1.49	-
7987.2MHz_TX	Pass	AV	1.5775G	-9.02	9.90	-18.92	3	Vertical	163	1.11	-
7987.2MHz_TX	Pass	AV	1.6G	8.40	9.90	-1.50	3	Vertical	28	2.04	-
7987.2MHz_TX	Pass	AV	1.56071G	-13.41	9.90	-23.31	3	Horizontal	205	1.48	-
7987.2MHz_TX	Pass	AV	1.5744G	-13.51	9.90	-23.41	3	Horizontal	205	1.49	-
7987.2MHz_TX	Pass	AV	1.6G	8.30	9.90	-1.60	3	Horizontal	209	1.49	-

*The frequencies mentioned in Comments and Explanations are not limited to this Limit.

Ultra Wide Band_Nss1_1TX

6489.6MHz_TX

03/06/2021

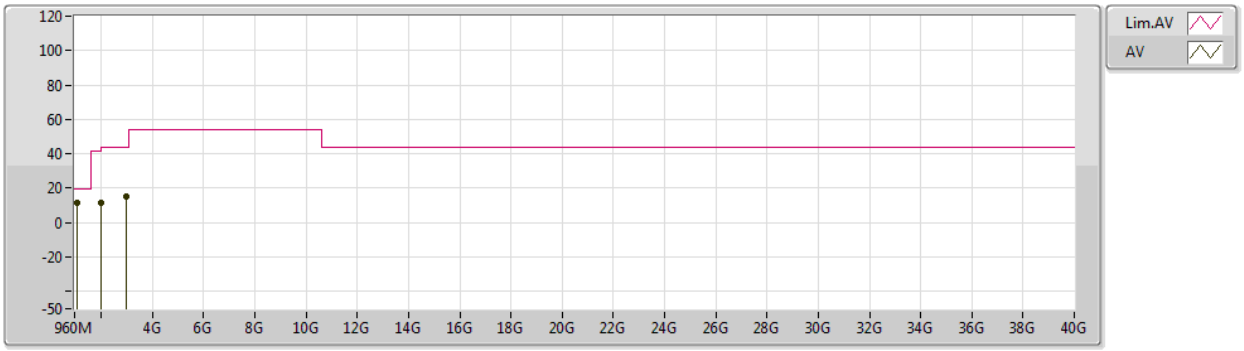


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.03568G	11.63	19.90	-8.27	-34.45	3	Vertical	360	1.50	-	46.08	24.47	2.44	51.82
AV	1.86128G	10.32	41.90	-31.58	-32.86	3	Vertical	360	1.50	-	43.18	25.45	3.26	52.03
AV	2.63872G	14.09	43.90	-29.81	-29.32	3	Vertical	360	1.50	-	43.41	27.73	4.26	51.77

Ultra Wide Band_Nss1_1TX

6489.6MHz_TX

03/06/2021

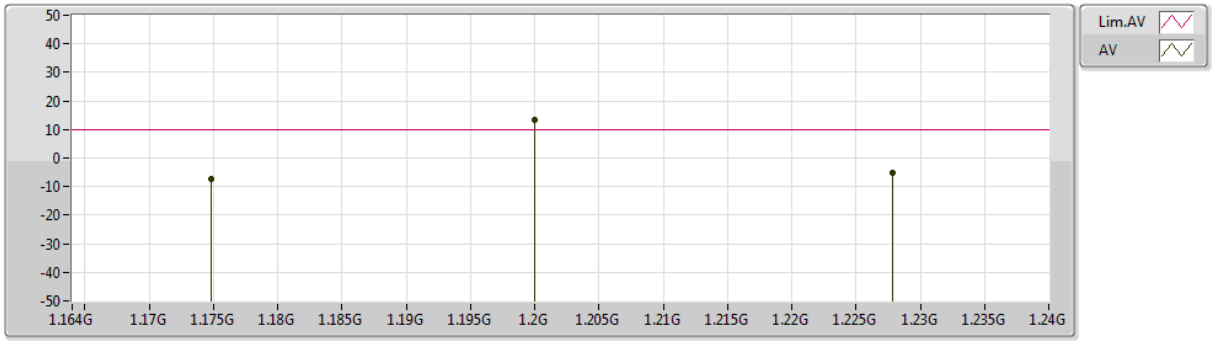


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.04944G	11.35	19.90	-8.55	-34.41	3	Horizontal	0	1.50	-	45.76	24.50	2.45	51.82
AV	1.97136G	11.28	41.90	-30.62	-32.35	3	Horizontal	0	1.50	-	43.63	25.89	3.37	52.07
AV	2.99648G	15.32	43.90	-28.58	-28.21	3	Horizontal	0	1.50	-	43.53	28.30	4.70	51.67

Ultra Wide Band_Nss1_1TX

6489.6MHz_TX

03/06/2021



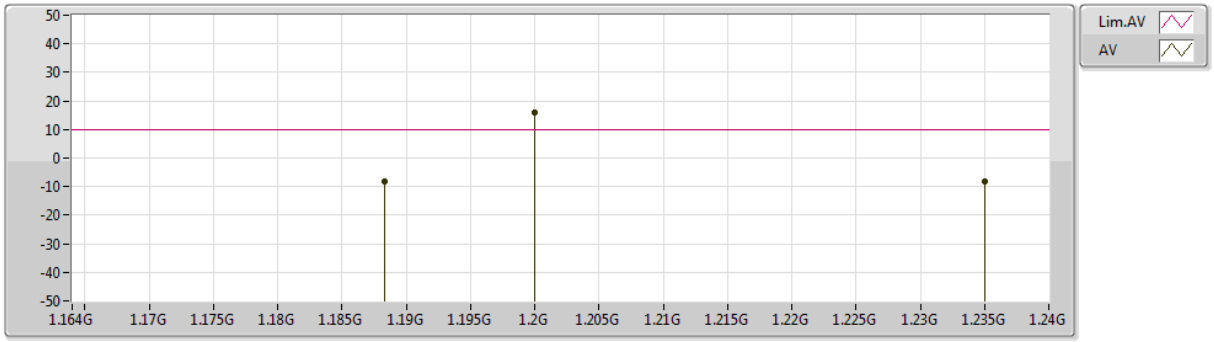
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.17479G	-7.47	9.90	-17.37	-33.31	3	Vertical	143	1.40	-	25.84	25.50	2.57	51.84
AV	1.2G	13.28	-	-	-33.29	3	Vertical	344	2.54	-	46.57	25.50	2.60	51.85
AV	1.22784G	-5.32	9.90	-15.22	-33.21	3	Vertical	262	2.27	-	27.89	25.56	2.63	51.86

Note: The frequencies mentioned in Comments and Explanations are not limited to this Limit.

Ultra Wide Band_Nss1_1TX

6489.6MHz_TX

03/06/2021



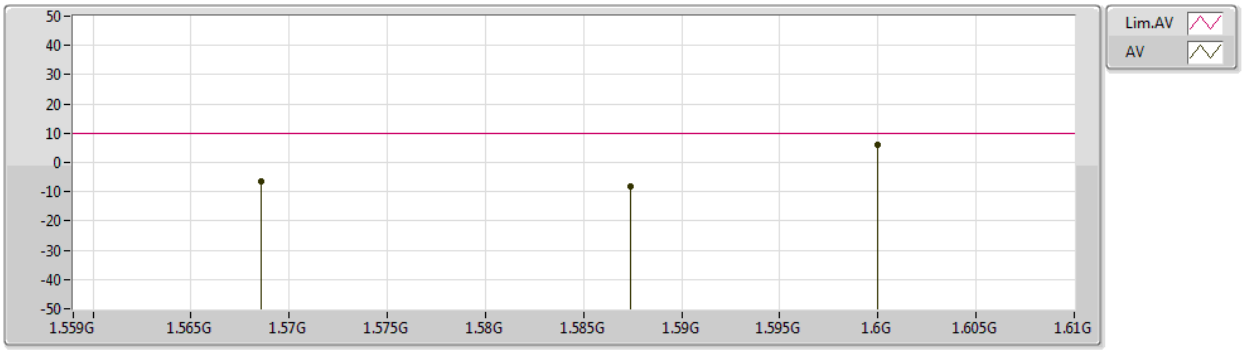
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.18832G	-8.32	9.90	-18.22	-33.30	3	Horizontal	171	2.16	-	24.98	25.50	2.59	51.85
AV	1.2G	15.93	-	-	-33.29	3	Horizontal	153	1.68	-	49.22	25.50	2.60	51.85
AV	1.23498G	-8.10	9.90	-18.00	-33.20	3	Horizontal	135	2.17	-	25.10	25.57	2.63	51.86

Note: The frequencies mentioned in Comments and Explanations are not limited to this Limit.

Ultra Wide Band_Nss1_1TX

6489.6MHz_TX

03/06/2021

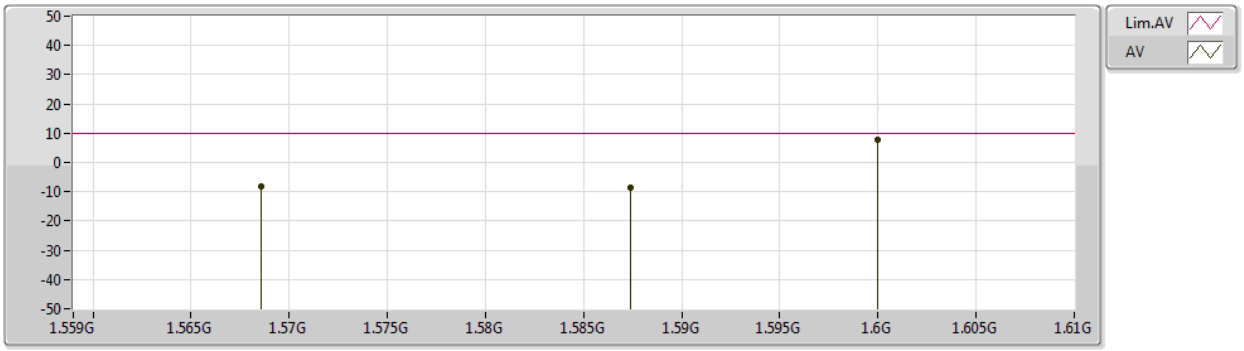


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.56859G	-6.65	9.90	-16.55	-33.37	3	Vertical	190	1.10	-	26.72	25.13	2.97	51.93
AV	1.58736G	-8.13	9.90	-18.03	-33.44	3	Vertical	62	2.13	-	25.31	25.05	2.99	51.94
AV	1.6G	6.19	9.90	-3.71	-33.48	3	Vertical	21	1.77	-	39.67	25.00	3.00	51.94

Ultra Wide Band_Nss1_1TX

6489.6MHz_TX

03/06/2021

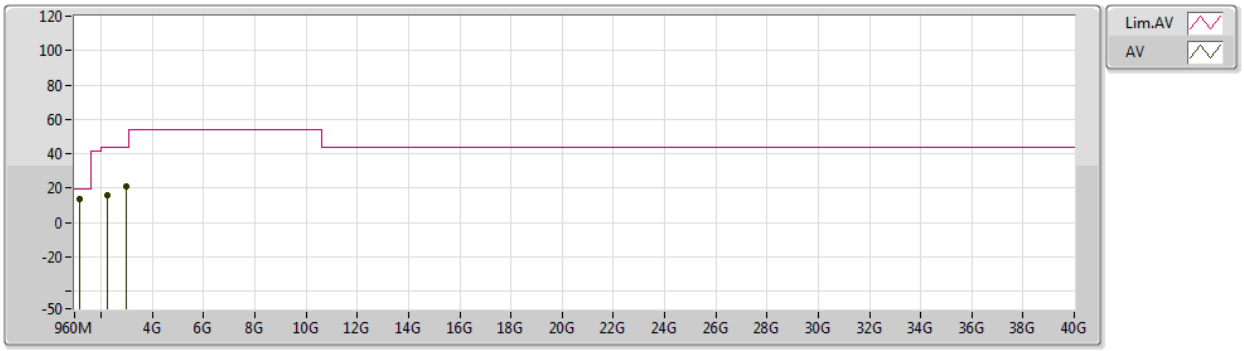


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.56859G	-7.99	9.90	-17.89	-33.37	3	Horizontal	54	1.98	-	25.38	25.13	2.97	51.93
AV	1.58736G	-8.71	9.90	-18.61	-33.44	3	Horizontal	221	1.37	-	24.73	25.05	2.99	51.94
AV	1.6G	7.55	9.90	-2.35	-33.48	3	Horizontal	196	1.64	-	41.03	25.00	3.00	51.94

Ultra Wide Band_Nss1_1TX

7987.2MHz_TX

25/08/2021

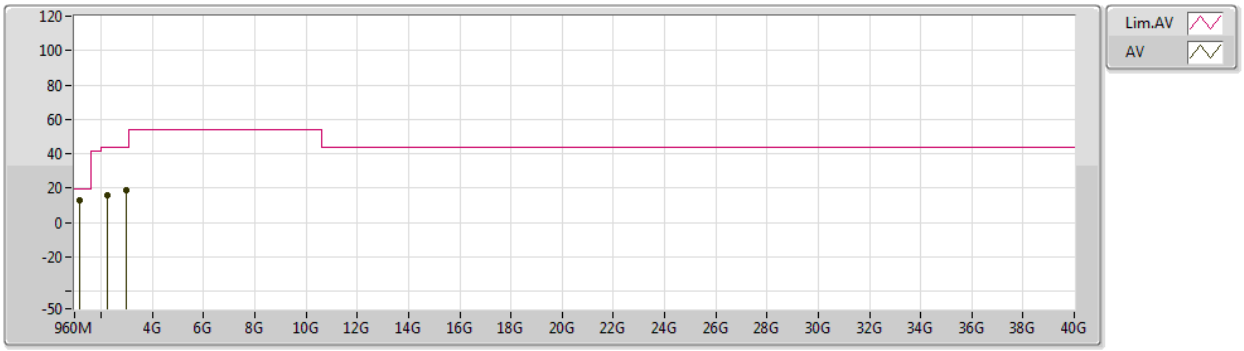


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.153G	13.69	19.90	-6.21	-32.88	3	Vertical	325	1.54	-	46.57	25.51	2.99	51.84
AV	2.251G	16.24	43.90	-27.66	-29.07	3	Vertical	125	1.45	-	45.31	28.19	4.22	51.94
AV	2.998G	21.00	43.90	-22.90	-27.76	3	Vertical	142	1.33	-	48.76	28.50	4.95	51.67

Ultra Wide Band_Nss1_1TX

7987.2MHz_TX

25/08/2021

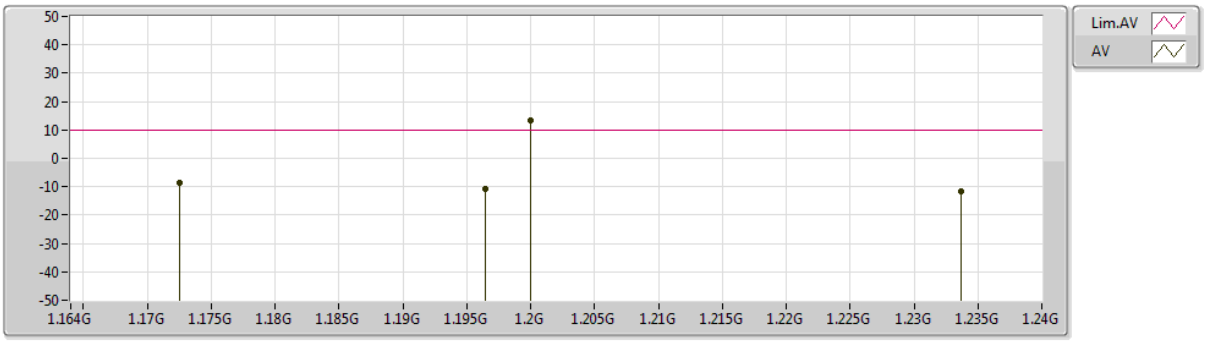


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.153G	12.99	19.90	-6.91	-32.88	3	Horizontal	241	1.24	-	45.87	25.51	2.99	51.84
AV	2.233G	16.24	43.90	-27.66	-29.12	3	Horizontal	222	1.33	-	45.36	28.17	4.20	51.95
AV	2.998G	19.04	43.90	-24.86	-27.76	3	Horizontal	120	1.45	-	46.80	28.50	4.95	51.67

Ultra Wide Band_Nss1_1TX

7987.2MHz_TX

25/08/2021



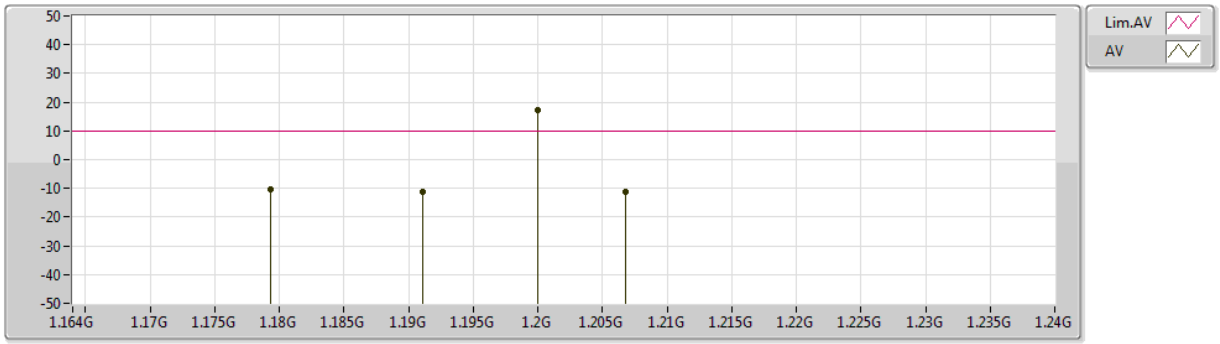
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.1725G	-8.59	9.90	-18.49	-32.78	3	Vertical	228	1.49	-	24.19	25.59	3.01	51.84
AV	1.19649G	-10.70	9.90	-20.60	-32.65	3	Vertical	333	1.48	-	21.95	25.69	3.05	51.85
AV	1.2G	13.32	-	-	-32.64	3	Vertical	12	1.58	-	45.96	25.70	3.05	51.85
AV	1.23367G	-11.59	9.90	-21.49	-32.60	3	Vertical	319	1.49	-	21.01	25.70	3.10	51.86

Note: The frequencies mentioned in Comments and Explanations are not limited to this Limit.

Ultra Wide Band_Nss1_1TX

7987.2MHz_TX

25/08/2021



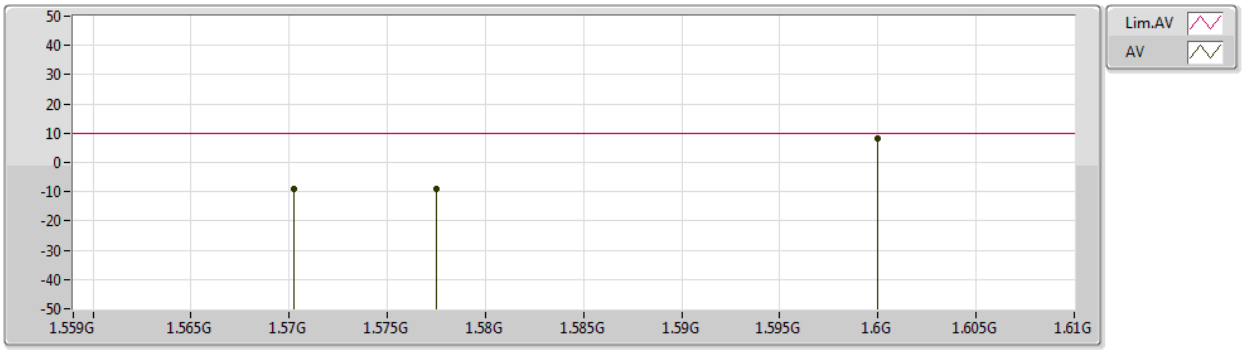
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.17929G	-10.51	9.90	-20.41	-32.75	3	Horizontal	197	1.49	-	22.24	25.62	3.02	51.85
AV	1.19108G	-11.02	9.90	-20.92	-32.69	3	Horizontal	151	1.49	-	21.67	25.66	3.04	51.85
AV	1.2G	17.24	-	-	-32.64	3	Horizontal	152	1.48	-	49.88	25.70	3.05	51.85
AV	1.20678G	-11.29	9.90	-21.19	-32.63	3	Horizontal	141	1.48	-	21.34	25.70	3.06	51.85

Note: The frequencies mentioned in Comments and Explanations are not limited to this Limit.

Ultra Wide Band_Nss1_1TX

7987.2MHz_TX

25/08/2021

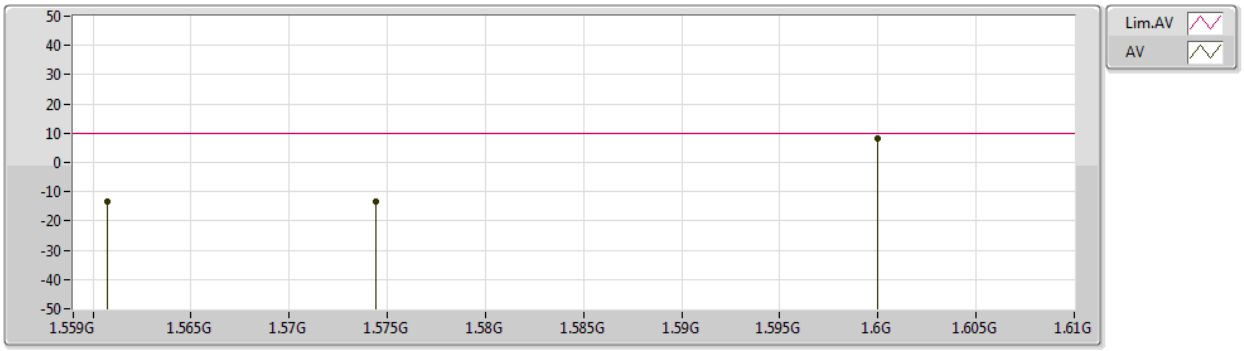


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	1.57021G	-9.22	9.90	-19.12	-32.80	3	Vertical	51	1.49	-	23.58	25.18	3.49	51.93
AV	1.5775G	-9.02	9.90	-18.92	-32.85	3	Vertical	163	1.11	-	23.83	25.13	3.50	51.94
AV	1.6G	8.40	9.90	-1.50	-32.96	3	Vertical	28	2.04	-	41.36	25.00	3.52	51.94

Ultra Wide Band_Nss1_1TX

7987.2MHz_TX

25/08/2021



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	1.56071G	-13.41	9.90	-23.31	-32.75	3	Horizontal	205	1.48	-	19.34	25.24	3.48	51.93
AV	1.5744G	-13.51	9.90	-23.41	-32.83	3	Horizontal	205	1.49	-	19.32	25.15	3.50	51.94
AV	1.6G	8.30	9.90	-1.60	-32.96	3	Horizontal	209	1.49	-	41.26	25.00	3.52	51.94