Testing Laboratory
3787

RADIO TEST REPORT

FCC ID	:	2AFXU-BS10001
Equipment	:	Base Station
Brand Name	:	M2COMM
Model Name	:	Base Station
Applicant	:	M2Communication Inc. 15F-1, No.32, Gaotie 2nd Rd., Zhubei City, Hsinchu County, 302, Taiwan
Manufacturer	:	M2Communication Inc. 15F-1, No.32, Gaotie 2nd Rd., Zhubei City, Hsinchu County, 302, Taiwan
Standard	:	47 CFR FCC Part 15.247

The product was received on Jun. 30, 2021, and testing was started from Aug. 04, 2021 and completed on Aug. 26, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Sam Chen

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

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History of this test report

Report No.	Version	Description	Issued Date
FR163003	01	Initial issue of report	Aug. 30, 2021

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	-
4.1	15.247(a)	DTS Bandwidth	PASS	-
4.2	15.247(b)	Maximum Conducted Output Power	PASS	-
4.3	15.247(e)	Power Spectral Density	PASS	-
4.4	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
4.5	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	Lora Mode	Ch. Frequency (MHz)	Channel Spacing (MHz)	Channel Number
902 MHz – 928 MHz	LoRa-650kHz	903-927	0.25	97

Band	Lora Mode	BWch (MHz)	Nant
902-928MHz	LoRa (650kHz)	0.65	1

Note:
- 900M is the 900MHz band (902 MHz – 928 MHz)
- LoRa-650kHz uses as a DTS
- LoRa-650kHz uses 2-GFSK modulation
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	ARISTOTLE	RFA-S1-C21-M62-10886	Dipole	SMA	0.52

Note: The above information was declared by manufacturer.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
LoRa (650kHz)	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From adapter or PoE			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	TeraTerm 4.75			

Note: The above information was declared by manufacturer.

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 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Serway Lee	23.3~25.3 / 66~67	Aug. 05, 2021
Radiated (Below 1GHz)	10CH01-CB	Peter Wu	22~23 / 60~62	Aug. 26, 2021
Radiated (Above 1GHz)	03CH05-CB	Eason Chen	24.3-25.4 / 55-58	Aug. 04, 2021
AC Conduction	CO02-CB	Ryo Fan	20~22 / 59~60	Aug. 05, 2021

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	1.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
LoRa (650kHz)	-
903MHz	10
915MHz	16
927MHz	18

2.2 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
1	EUT + Adapter
2	EUT + PoE
For operating mode 2 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT in Z axis + Adapter
2	EUT in Y axis + Adapter
Mode 1 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT in Z axis + PoE
For operating mode 3 are the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at X、Y axis and Z axis and the worst case was found at X axis. So the measurement will follow this same test configuration	
1	EUT in X axis

Note: The Adapter and PoE was for measurement only, would not be marketed.
The detail information as below:

Power	Brand	Model
Adapter	DVE	DSA-6PFG-05 FSU050100
PoE	GOSPELL	G0695-500-030

2.3 EUT Operation during Test

For CTX Mode:
The EUT was programmed to be in continuously transmitting mode.
For Normal Link:
During the test, the EUT operation to normal function.

2.4 Accessories

RJ-45 cable*1, non-shielded 1.5m

2.5 Support Equipment

For AC Conduction and Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	GOSPELL	G0695-500-030	N/A
B	LAN NB	DELL	E6430	N/A
C	Base Station (Device)	M2COMM	Base Station	N/A

For Radiated (above 1GHz):

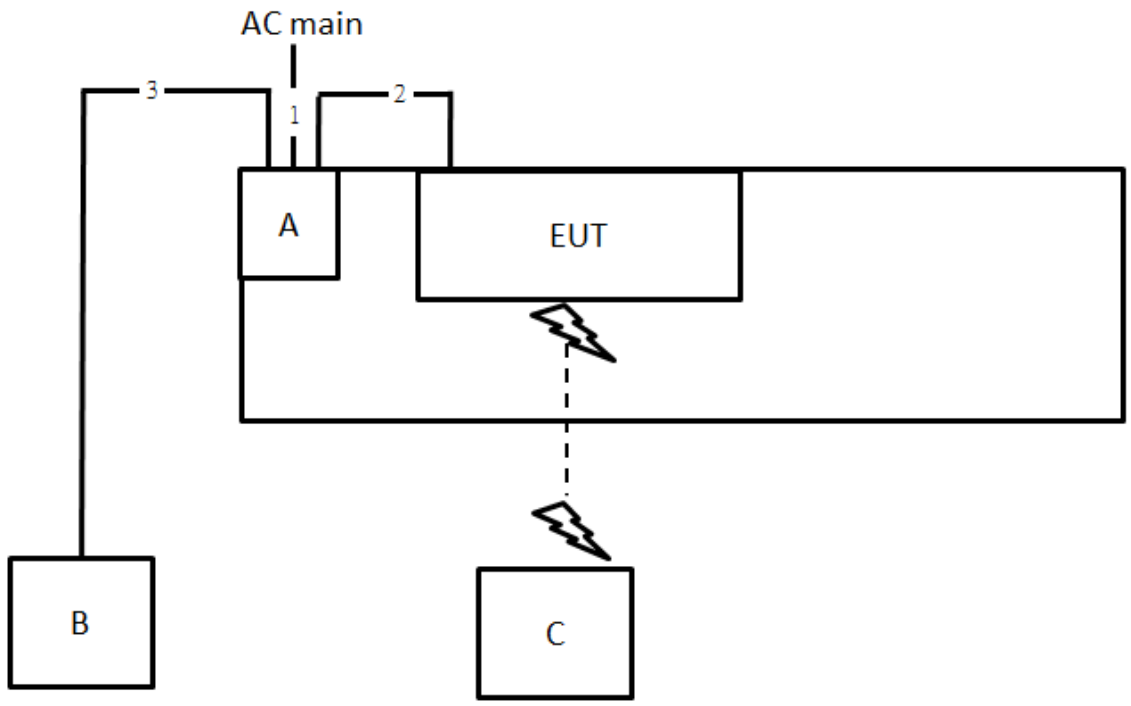
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	Adapter	DVE	DSA-6PFG-05 FSU050100	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	Comsole	M2COMM	0C1-0001-02	N/A
C	Adapter	DVE	DSA-6PFG-05 FSU050100	N/A

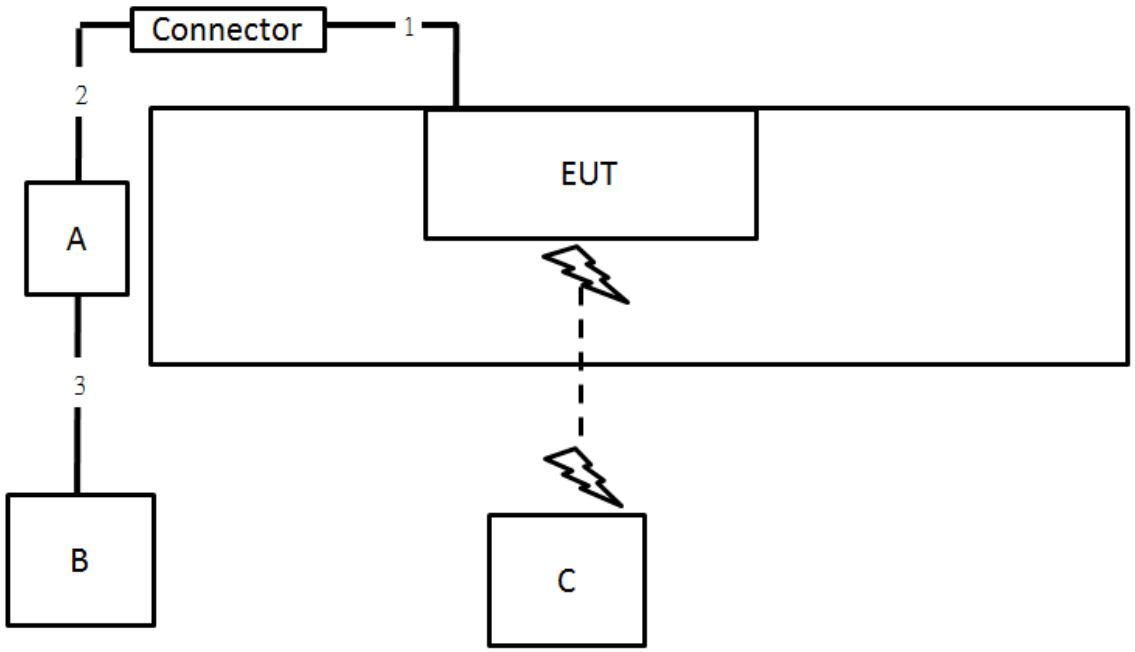
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



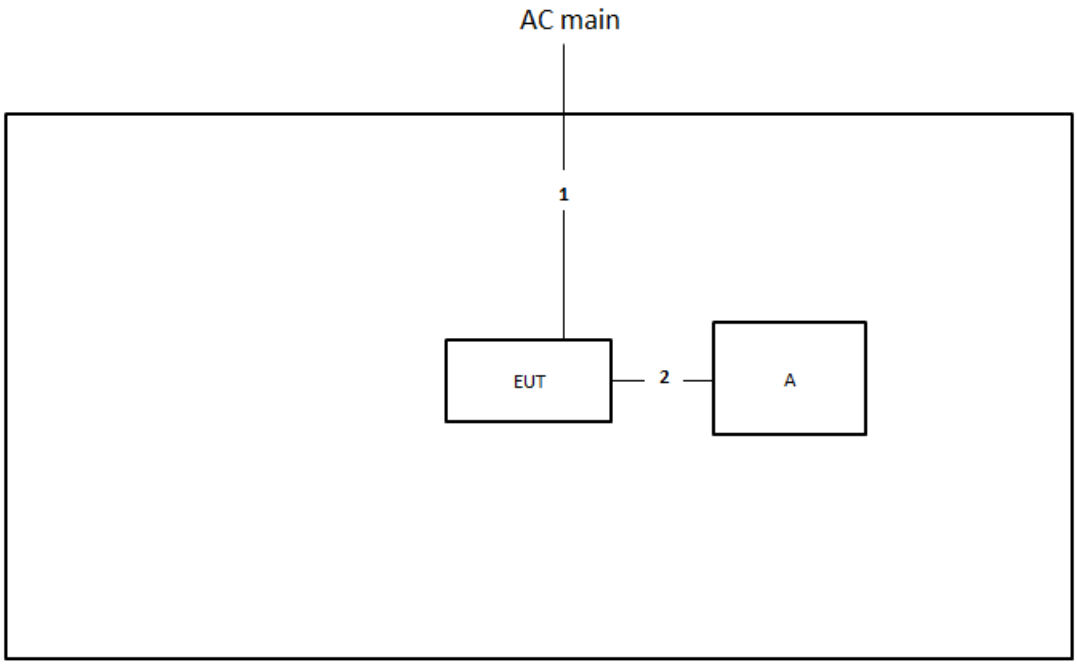
Item	Connection	Shielded	Length
1	Power cable	No	0.3m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	Console cable	Yes	0.3m

3 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

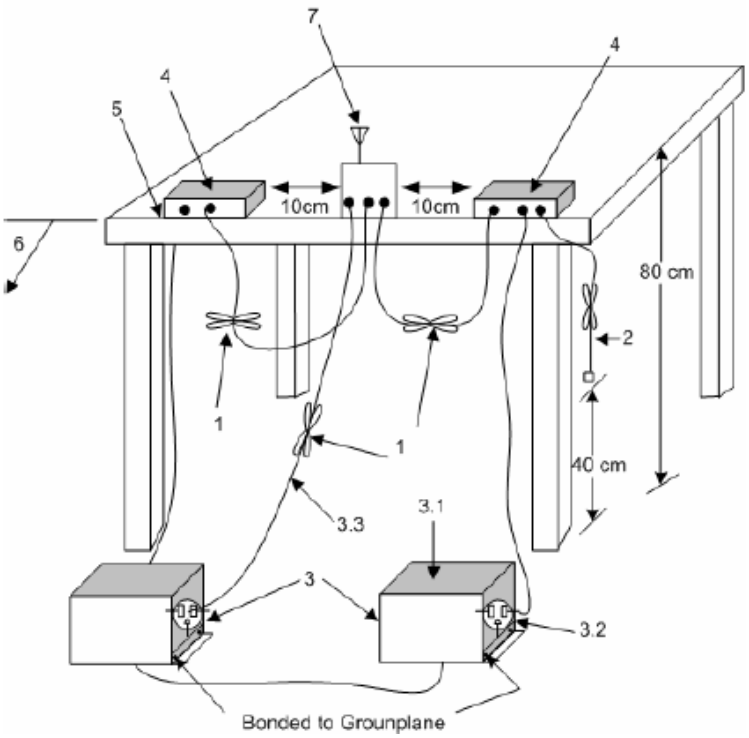
Refer a test equipment and calibration data table in this test report.

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

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 50 Ω loads. 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.

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

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

b. Margin = -Limit + Level

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

4 Transmitter Test Result

4.1 DTS Bandwidth

4.1.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

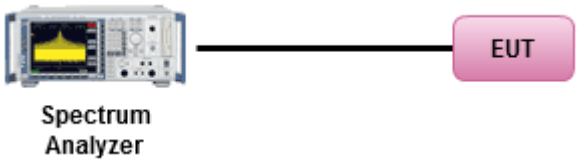
4.1.2 Measuring Instruments

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

4.1.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

4.1.4 Test Setup

Emission Bandwidth


4.1.5 Test Result of Emission Bandwidth

Refer as Appendix B

4.2 Maximum Conducted Output Power

4.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.		

4.2.2 Measuring Instruments

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

4.2.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
	Measurement using a power meter (PM)
	☐ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
	☒ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

4.2.4 Test Setup

Maximum Conducted Output Power (Power Meter)


4.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

4.3 Power Spectral Density

4.3.1 Power Spectral Density Limit

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

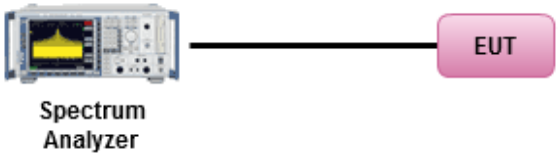
4.3.2 Measuring Instruments

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

4.3.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		☐ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

4.3.4 Test Setup

Power Spectral Density


4.3.5 Test Result of Power Spectral Density

Refer as Appendix D

4.4 Emissions in Non-restricted Frequency Bands

4.4.1 Emissions in Non-restricted Frequency Bands Limit

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

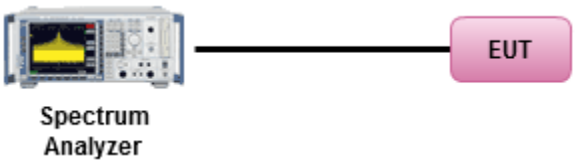
4.4.2 Measuring Instruments

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

4.4.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

4.4.4 Test Setup

Emissions in Non-restricted Frequency Bands


4.4.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

4.5 Emissions in Restricted Frequency Bands

4.5.1 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 below30 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.

4.5.2 Measuring Instruments

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

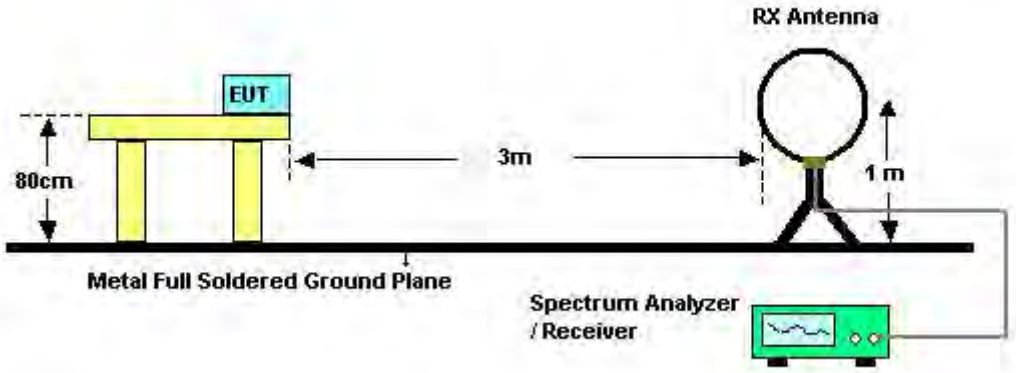
4.5.3 Test Procedures

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 ≥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≥1/T).
☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 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.

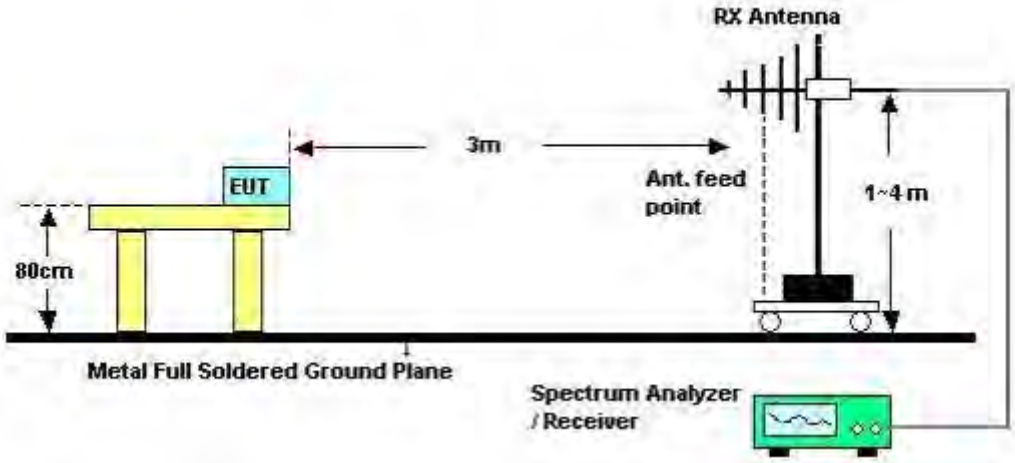
4.5.4 Test Setup

Transmitter Radiated Emissions

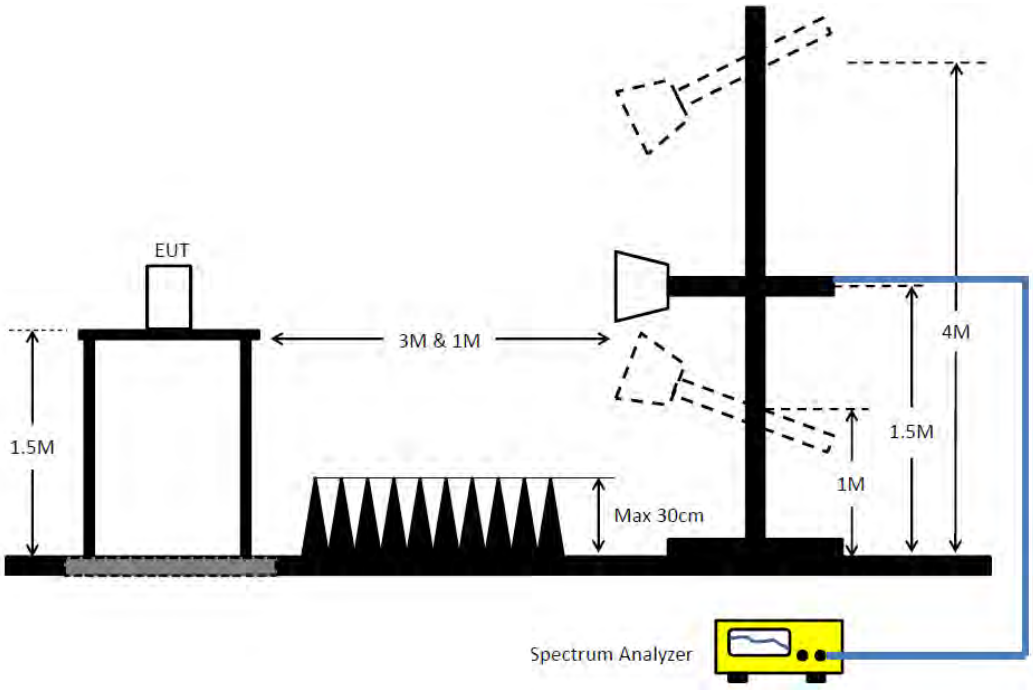
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



4.5.5 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor (if applicable) = Level.

4.5.6 Transmitter Radiated Unwanted 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.

4.5.7 Transmitter Radiated Unwanted Emissions

Refer as Appendix F

5 Test Equipment and Calibration Data

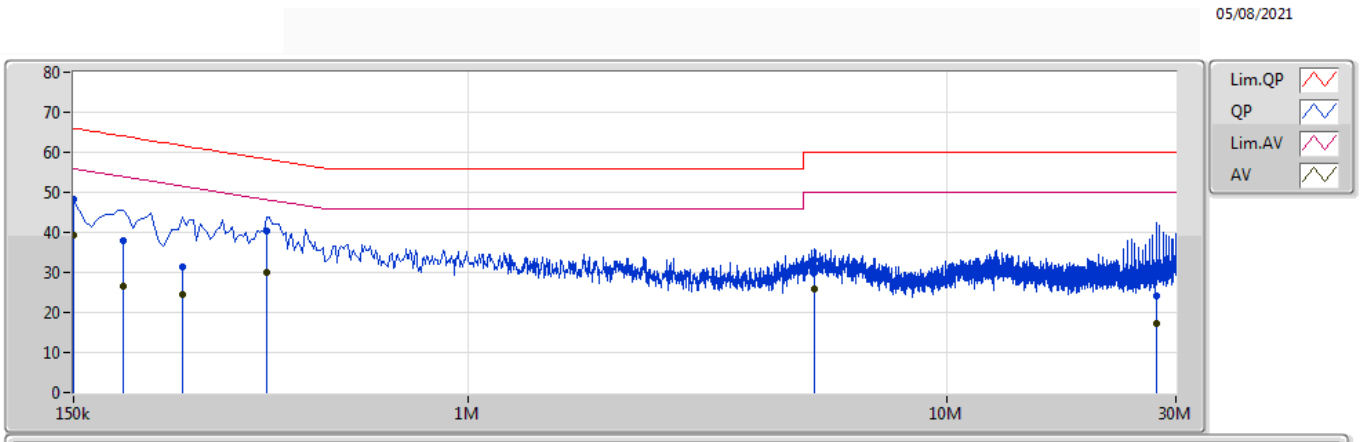
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Dec. 04, 2020	Dec. 03, 2021	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 20, 2020	Nov. 19, 2021	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 05, 2021	May 04, 2022	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 20, 2020	Oct. 19, 2021	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 18, 2021	Mar. 17, 2022	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
10m Semi Anechoic Chamber NSA	TDK	SAC-10M	10CH01-CB	30MHz~1GHz 10m,3m	Jan. 28, 2021	Jan. 27, 2022	Radiation (10CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (10CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10783	9kHz ~ 1.3GHz	Mar. 11, 2021	Mar. 10, 2022	Radiation (10CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10784	9kHz ~ 1.3GHz	Mar. 11, 2021	Mar. 10, 2022	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-01	25MHz ~ 1GHz	Oct. 20, 2020	Oct. 19, 2021	Radiation (10CH01-CB)
High Cable	Woken	SUCOFLEX 104	low cable-02	25MHz ~ 1GHz	Oct. 20, 2020	Oct. 19, 2021	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCI	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jul. 01, 2021	Jun. 30, 2022	Radiation (10CH01-CB)
EMI Test Receiver	Rohde& Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (10CH01-CB)
Spectrum Analyzer	Rohde& Schwarz	FSV30	101026	9kHz ~ 30GHz	Mar. 08, 2021	Mar. 07, 2022	Radiation (10CH01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (10CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 08, 2020	Nov. 07, 2021	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Sep. 05, 2020	Sep. 04, 2021	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 18, 2021	Jun. 17, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH05-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 21, 2021	May 20, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 23, 2021	Feb. 22, 2022	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 23, 2021	Feb. 22, 2022	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

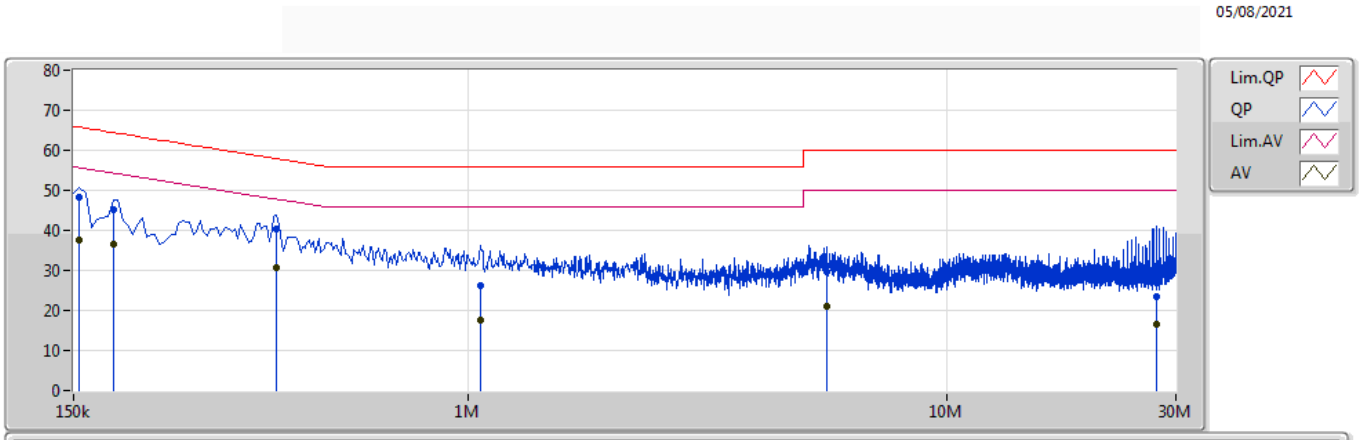
Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	150k	39.45	56.00	-16.55	Line



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	48.39	66.00	-17.61	10.29	Line	-	38.10	0.07	0.07	10.15
AV	150k	39.45	56.00	-16.55	10.29	Line	"Worst"	29.16	0.07	0.07	10.15
QP	190.5k	37.76	64.01	-26.25	10.30	Line	-	27.46	0.07	0.07	10.16
AV	190.5k	26.61	54.01	-27.40	10.30	Line	-	16.31	0.07	0.07	10.16
QP	253.5k	31.26	61.64	-30.38	10.28	Line	-	20.98	0.07	0.07	10.14
AV	253.5k	24.38	51.64	-27.26	10.28	Line	-	14.10	0.07	0.07	10.14
QP	379.5k	40.28	58.29	-18.01	10.25	Line	-	30.03	0.08	0.06	10.11
AV	379.5k	30.12	48.29	-18.17	10.25	Line	-	19.87	0.08	0.06	10.11
QP	5.285M	33.06	60.00	-26.94	10.45	Line	-	22.61	0.18	0.16	10.11
AV	5.285M	25.69	50.00	-24.31	10.45	Line	-	15.24	0.18	0.16	10.11
QP	27.303M	24.03	60.00	-35.97	11.07	Line	-	12.96	0.59	0.28	10.20
AV	27.303M	17.10	50.00	-32.90	11.07	Line	-	6.03	0.59	0.28	10.20



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	48.43	65.75	-17.32	10.28	Neutral	"Worst"	38.15	0.06	0.07	10.15
AV	154.5k	37.52	55.75	-18.23	10.28	Neutral	-	27.24	0.06	0.07	10.15
QP	181.5k	45.22	64.41	-19.19	10.29	Neutral	-	34.93	0.06	0.07	10.16
AV	181.5k	36.42	54.41	-17.99	10.29	Neutral	-	26.13	0.06	0.07	10.16
QP	397.5k	40.33	57.91	-17.58	10.23	Neutral	-	30.10	0.06	0.06	10.11
AV	397.5k	30.57	47.91	-17.34	10.23	Neutral	-	20.34	0.06	0.06	10.11
QP	1.059M	26.36	56.00	-29.64	10.26	Neutral	-	16.10	0.08	0.08	10.10
AV	1.059M	17.68	46.00	-28.32	10.26	Neutral	-	7.42	0.08	0.08	10.10
QP	5.604M	29.73	60.00	-30.27	10.44	Neutral	-	19.29	0.16	0.17	10.11
AV	5.604M	20.87	50.00	-29.13	10.44	Neutral	-	10.43	0.16	0.17	10.11
QP	27.335M	23.37	60.00	-36.63	10.85	Neutral	-	12.52	0.37	0.28	10.20
AV	27.335M	16.53	50.00	-33.47	10.85	Neutral	-	5.68	0.37	0.28	10.20

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
902-928MHz	-	-	-	-	-
LoRa (650kHz)	545k	636.557k	637KF1D	544.375k	606.572k

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

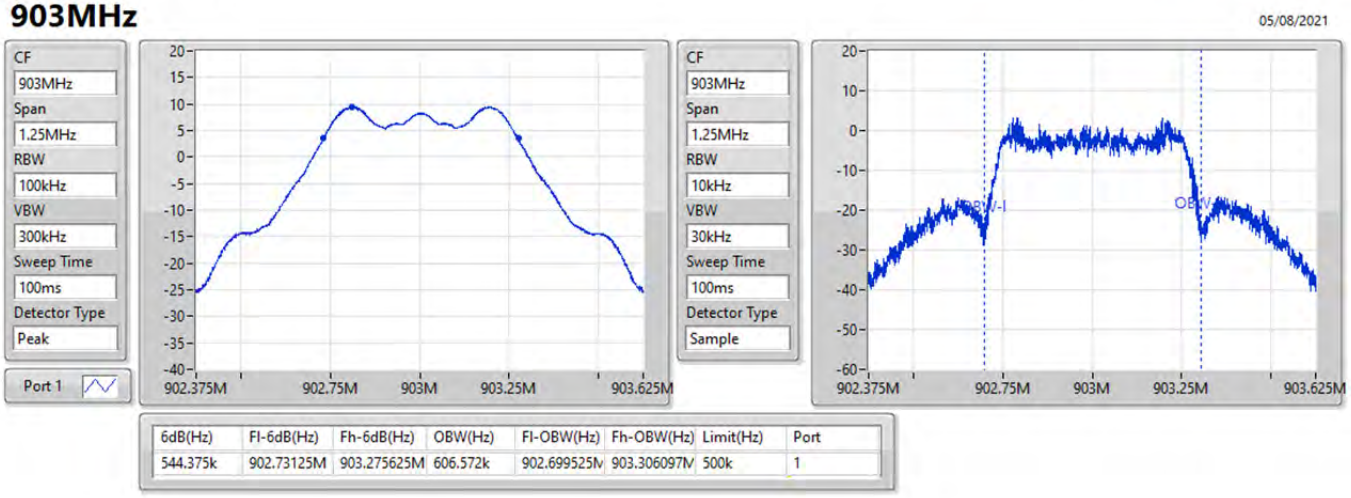
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
LoRa (650kHz)	-	-	-	-
903MHz	Pass	500k	544.375k	606.572k
915MHz	Pass	500k	545k	630.935k
927MHz	Pass	500k	544.375k	636.557k

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

LoRa (650kHz) EBW-DTS

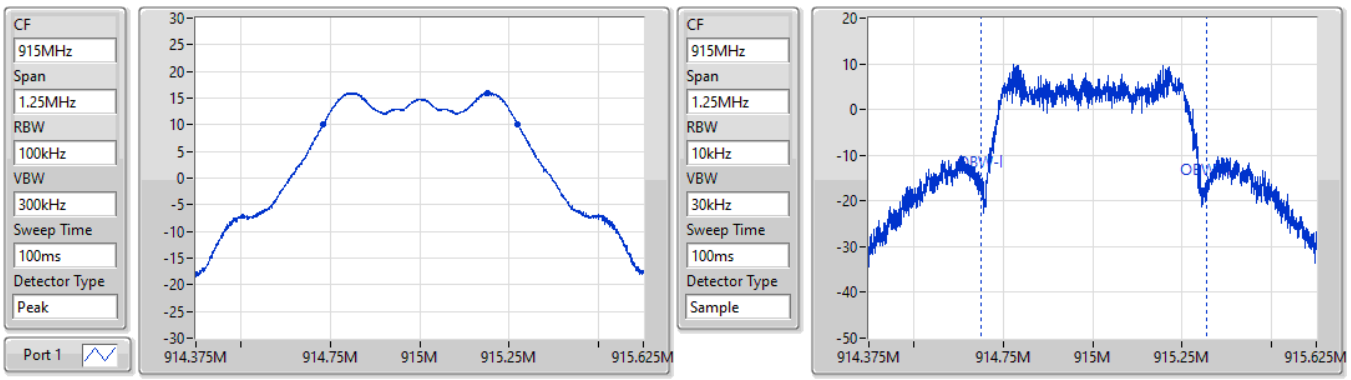
903MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
544.375k	902.73125M	903.275625M	606.572k	902.699525M	903.306097M	500k	1

LoRa (650kHz) EBW-DTS

915MHz

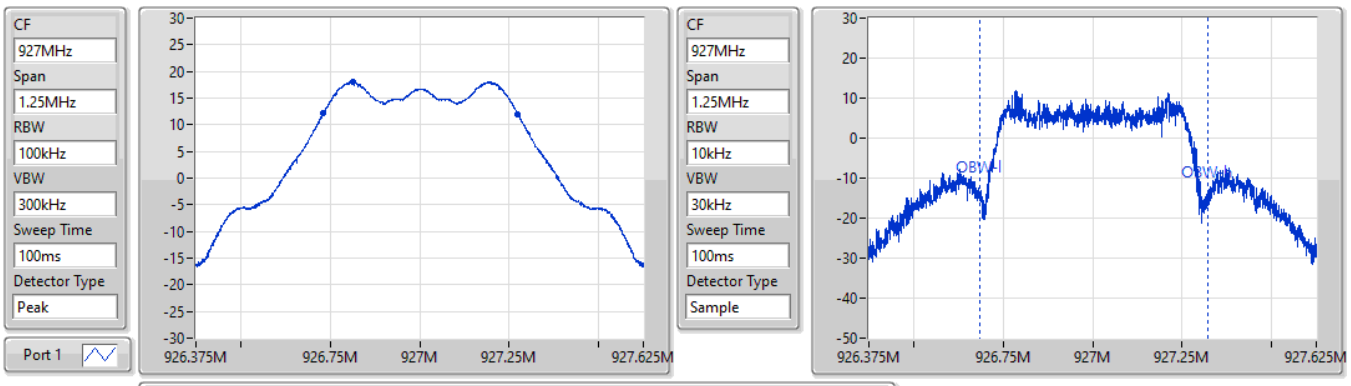


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
545k	914.73M	915.275M	630.935k	914.688906M	915.31984M	500k	1

LoRa (650kHz) **EBW-DTS**

927MHz

05/08/2021



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
544.375k	926.729375M	927.27375M	636.557k	926.685157M	927.321714M	500k	1

Summary

Mode	Power (dBm)	Power (W)
902-928MHz	-	-
LoRa (650kHz)	18.10	0.06457

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
LoRa (650kHz)	-	-	-	-
903MHz	Pass	0.52	9.72	30.00
915MHz	Pass	0.52	16.14	30.00
927MHz	Pass	0.52	18.10	30.00

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

Summary

Mode	PD (dBm/RBW)
902-928MHz	-
LoRa (650kHz)	6.12

RBW = 3kHz;

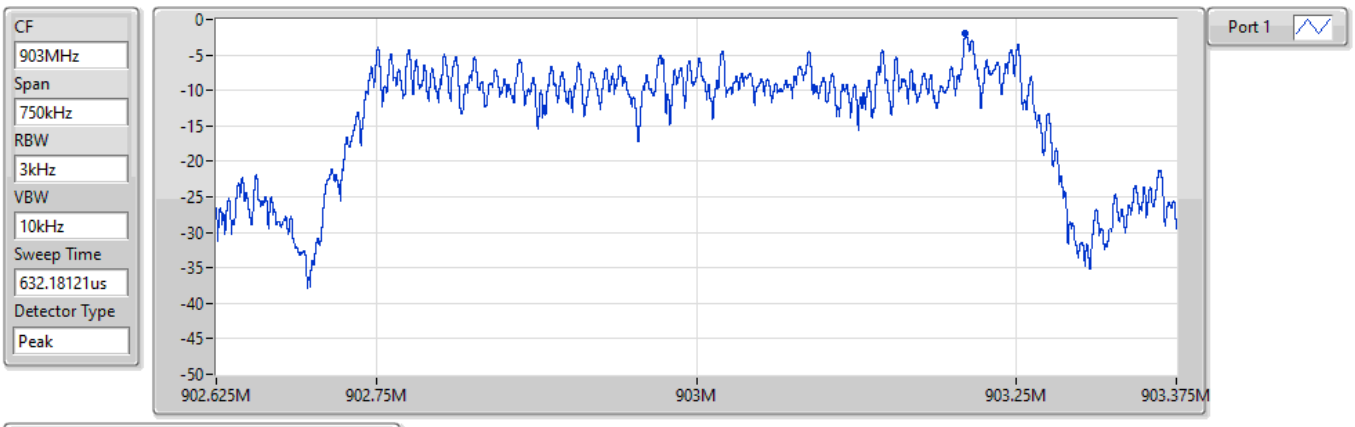
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
LoRa (650kHz)	-	-	-	-
903MHz	Pass	0.52	-2.02	8.00
915MHz	Pass	0.52	3.89	8.00
927MHz	Pass	0.52	6.12	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

LoRa (650kHz) PSD

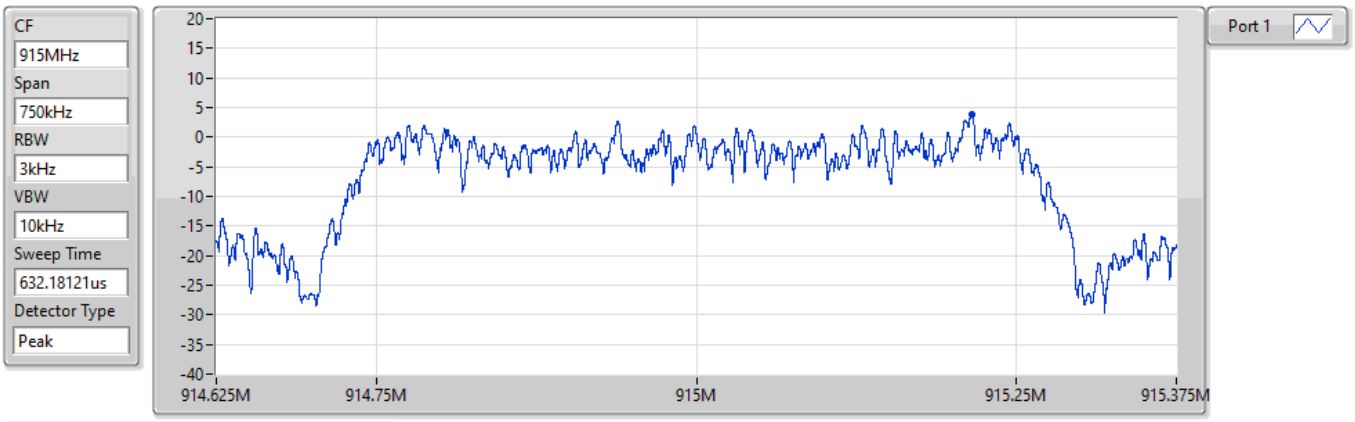
903MHz



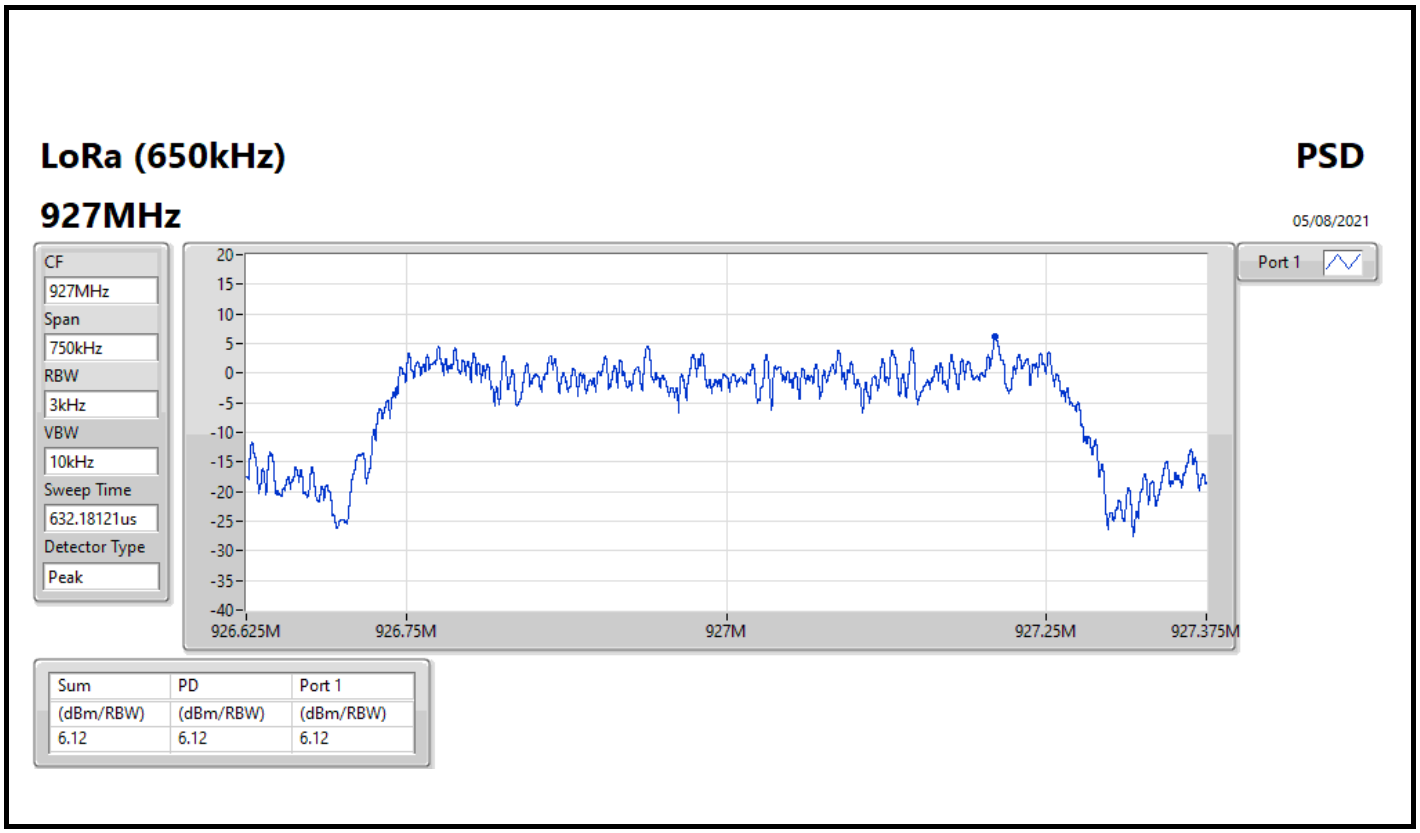
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.02	-2.02	-2.02

LoRa (650kHz) PSD

915MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.89	3.89	3.89


LoRa (650kHz)
PSD
927MHz
05/08/2021
CF
927MHz
Span
750kHz
RBW
3kHz
VBW
10kHz
Sweep Time
632.18121us
Detector Type
Peak
Port 1
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
926.625M
926.75M
927M
927.25M
927.375M
Sum
(dBm/RBW)
6.12
PD
(dBm/RBW)
6.12
Port 1
(dBm/RBW)
6.12

Summary

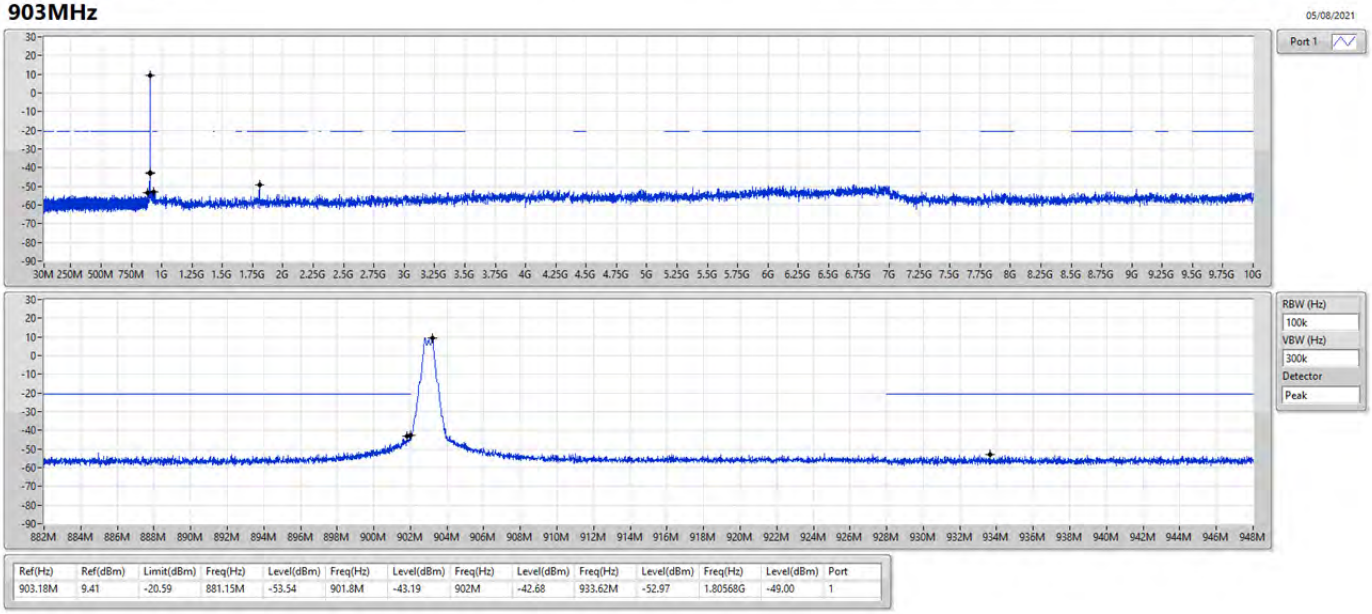
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
902-928MHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LoRa (650kHz)	Pass	927.19M	17.92	-12.08	629.06M	-54.41	885M	-52.35	928M	-35.39	928.04M	-34.09	1.8532G	-44.74	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
LoRa (650kHz)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
903MHz	Pass	903.18M	9.41	-20.59	881.15M	-53.54	901.8M	-43.19	902M	-42.68	933.62M	-52.97	1.80568G	-49.00	1
915MHz	Pass	915.2M	15.94	-14.06	160.04M	-54.61	900.91M	-52.72	928M	-54.34	932.01M	-52.35	1.82944G	-43.96	1
927MHz	Pass	927.19M	17.92	-12.08	629.06M	-54.41	885M	-52.35	928M	-35.39	928.04M	-34.09	1.8532G	-44.74	1

LoRa (650kHz) CSENdB-DTS

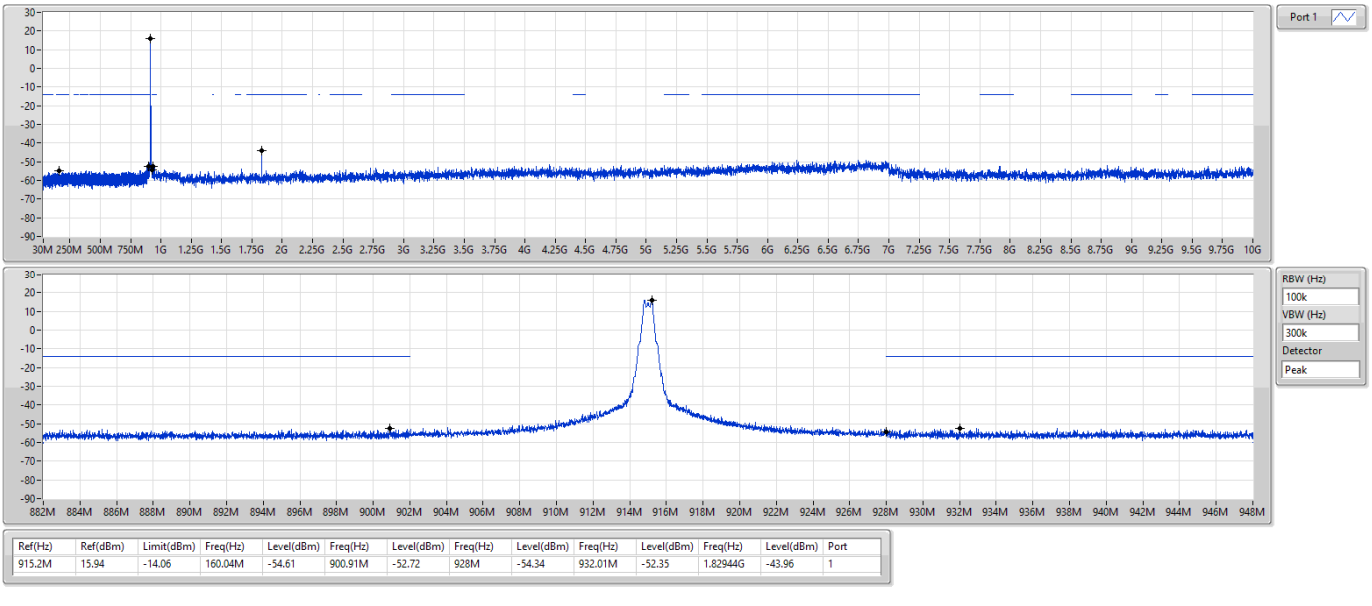
903MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
903.18M	9.41	-20.59	881.15M	-53.54	901.8M	-43.19	902M	-42.68	933.62M	-52.97	1.80568G	-49.00	1

LoRa (650kHz) CSENdB-DTS

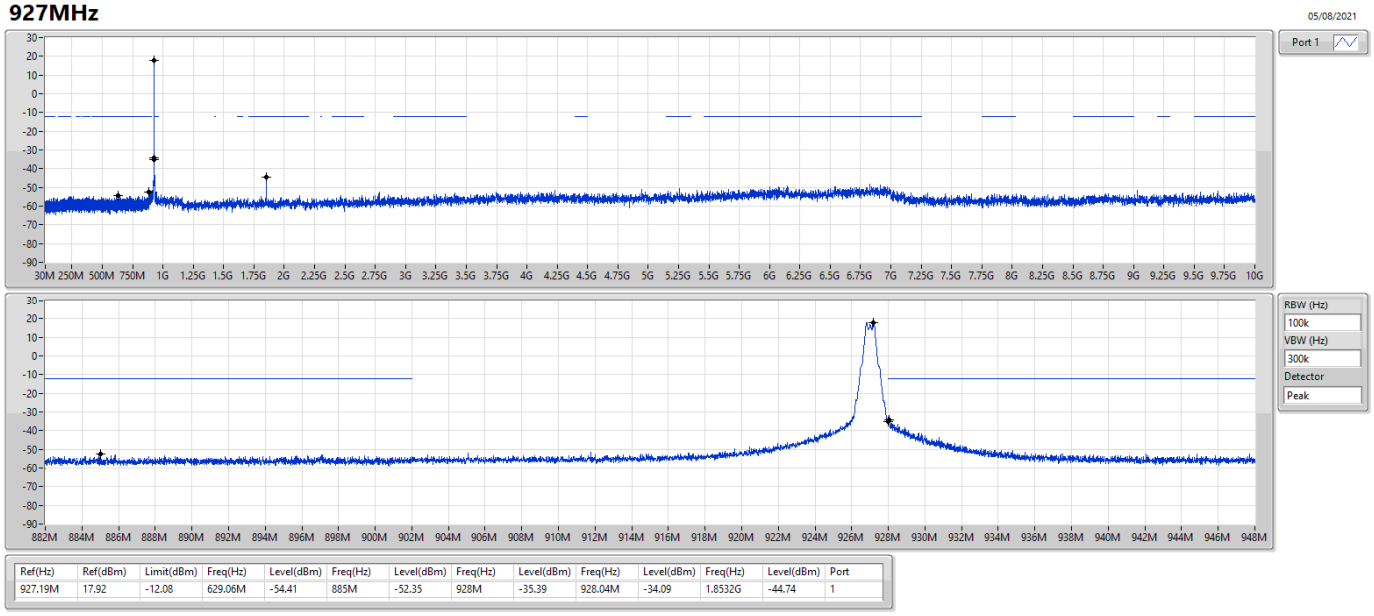
915MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
915.2M	15.94	-14.06	160.04M	-54.61	900.91M	-52.72	928M	-54.34	932.01M	-52.35	1.82944G	-43.96	1

LoRa (650kHz) **CSENdB-DTS**

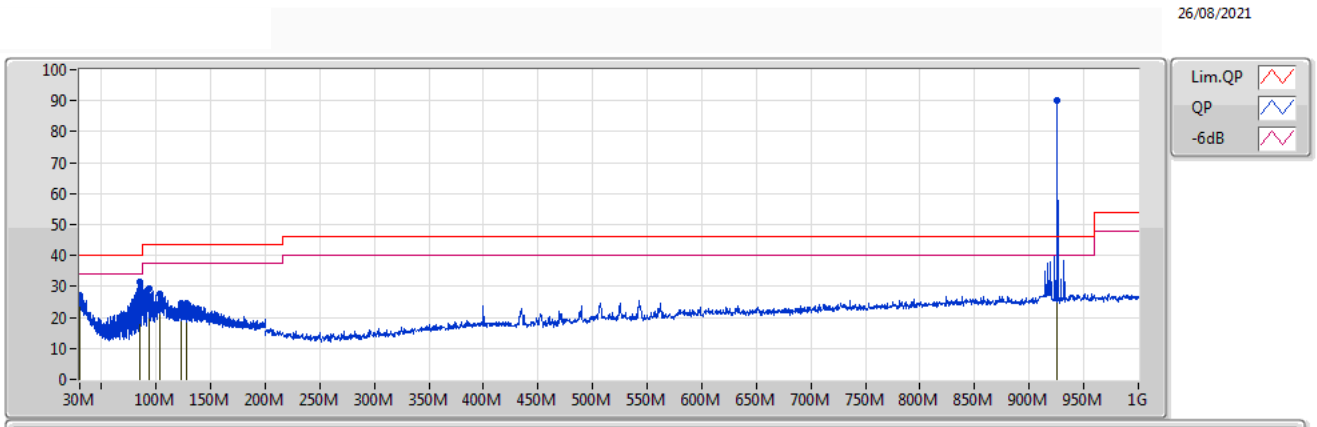
927MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
927.19M	17.92	-12.08	629.06M	-54.41	885M	-52.35	928M	-35.39	928.04M	-34.09	1.8532G	-44.74	1

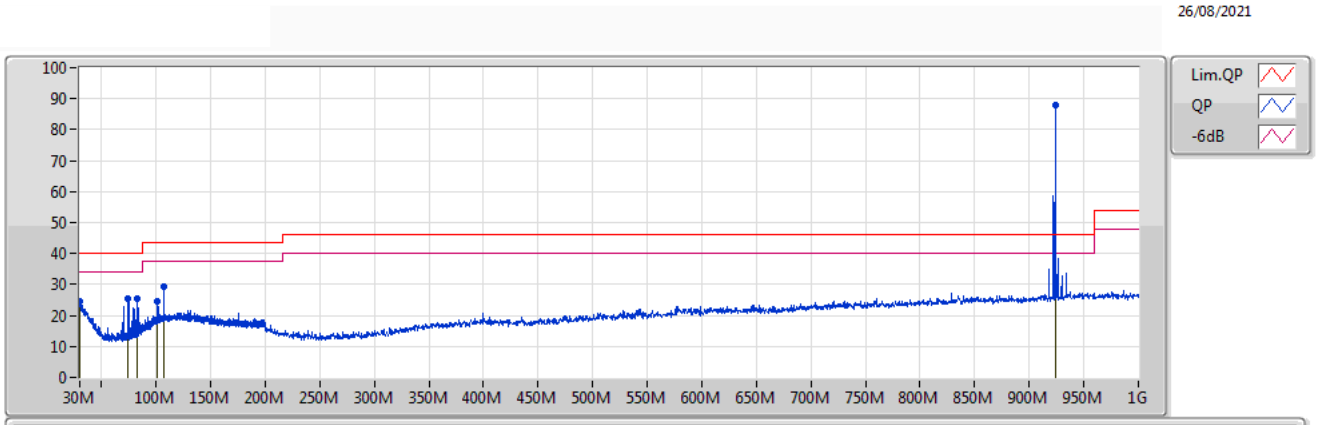
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 3	Pass	PK	84.83M	31.47	40.00	-8.53	Vertical



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	30.34M	27.01	40.00	-12.99	-3.18	3	Vertical	317	1.00	-	30.19	23.69	1.01	27.88
PK	84.83M	31.47	40.00	-8.53	-11.99	3	Vertical	5	2.00	"Worst"	43.46	13.66	2.20	27.85
PK	93.58M	29.13	43.50	-14.37	-9.88	3	Vertical	197	4.00	-	39.01	15.69	2.27	27.84
PK	103.36M	27.72	43.50	-15.78	-8.03	3	Vertical	59	1.00	-	35.75	17.30	2.45	27.78
PK	122.65M	24.64	43.50	-18.86	-6.67	3	Vertical	338	1.00	-	31.31	18.22	2.74	27.63
PK	127.5M	24.57	43.50	-18.93	-6.78	3	Vertical	296	3.00	-	31.35	18.01	2.81	27.60
PK	925.6M	90.22			2.19	3	Vertical	84	2.00	-	88.03	21.88	6.80	26.49

Note: 903~927MHz is the fundamental frequency.



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	30.26M	24.49	40.00	-15.51	-3.15	3	Horizontal	31	1.00	-	27.64	23.72	1.01	27.88
PK	74.54M	25.54	40.00	-14.46	-13.57	3	Horizontal	115	2.00	-	39.11	12.22	1.99	27.78
PK	82.11M	25.24	40.00	-14.76	-12.59	3	Horizontal	338	1.00	-	37.83	13.13	2.14	27.86
PK	100.72M	24.41	43.50	-19.09	-8.33	3	Horizontal	94	4.00	-	32.74	17.06	2.41	27.80
PK	106.59M	29.36	43.50	-14.14	-7.65	3	Horizontal	348	1.00	"Worst"	37.01	17.60	2.50	27.75
PK	924.6M	87.81			2.19	3	Horizontal	350	1.00	-	85.62	21.88	6.80	26.49

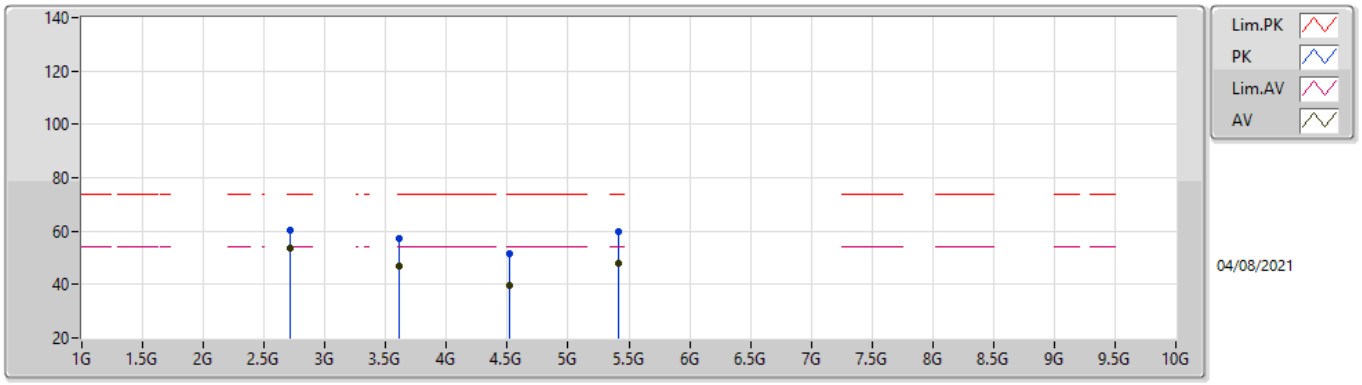
Note: 903~927MHz is the fundamental frequency.

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
902-928MHz	-	-	-	-	-	-	-	-	-	-	-
LoRa (650kHz)	Pass	AV	2.7451G	53.76	54.00	-0.24	3	Vertical	234	1.62	-

LoRa (650kHz)

903MHz_TX

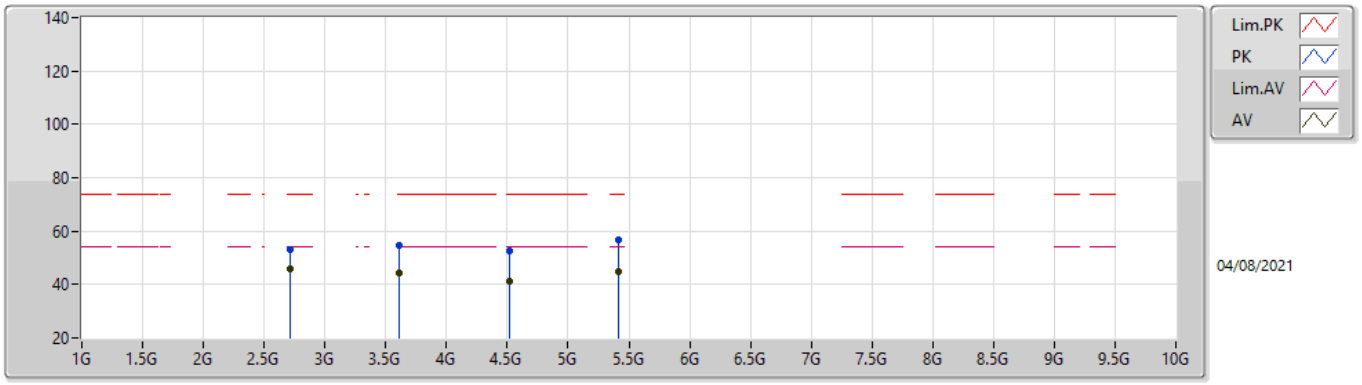


EUT X_1TX
Setting 10
05-A-E-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.70848G	60.40	74.00	-13.60	65.05	3	Vertical	232	1.55	-	28.00	4.40	37.05
AV	2.7089G	53.65	54.00	-0.35	58.30	3	Vertical	232	1.55	-	28.00	4.40	37.05
PK	3.61118G	57.09	74.00	-16.91	59.44	3	Vertical	90	2.29	-	29.12	5.02	36.49
AV	3.6116G	47.13	54.00	-6.87	49.48	3	Vertical	90	2.29	-	29.12	5.02	36.49
PK	4.51598G	51.41	74.00	-22.59	51.05	3	Vertical	320	1.23	-	30.63	5.72	35.99
AV	4.51422G	39.82	54.00	-14.18	39.47	3	Vertical	320	1.23	-	30.63	5.71	35.99
PK	5.4192G	59.80	74.00	-14.20	57.52	3	Vertical	338	1.02	-	31.72	6.25	35.69
AV	5.41702G	47.76	54.00	-6.24	45.51	3	Vertical	338	1.02	-	31.70	6.24	35.69

LoRa (650kHz)

903MHz_TX

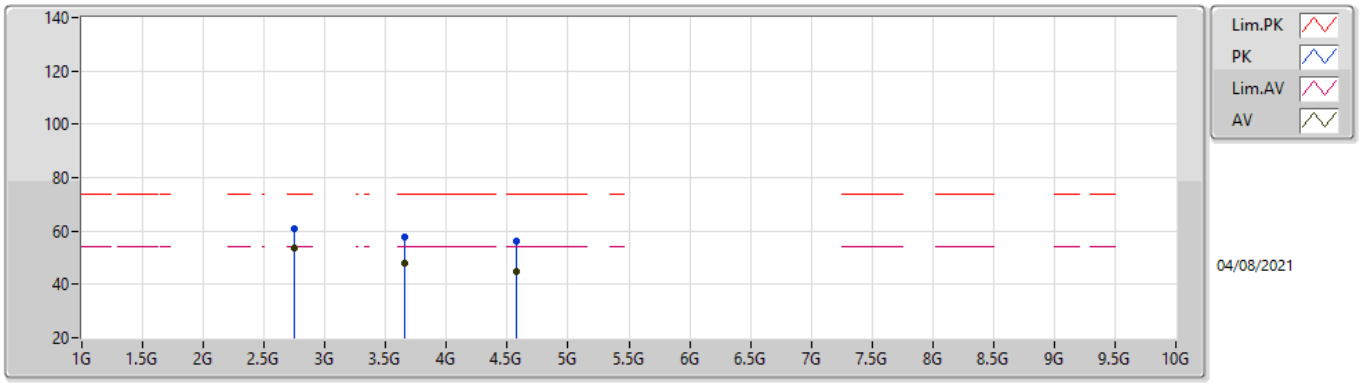


EUT X_1TX
Setting 10
05-A-E-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.70846G	53.21	74.00	-20.79	57.86	3	Horizontal	243	1.39	-	28.00	4.40	37.05
AV	2.70908G	45.84	54.00	-8.16	50.49	3	Horizontal	243	1.39	-	28.00	4.40	37.05
PK	3.61128G	54.59	74.00	-19.41	56.94	3	Horizontal	290	2.65	-	29.12	5.02	36.49
AV	3.61152G	44.39	54.00	-9.61	46.74	3	Horizontal	290	2.65	-	29.12	5.02	36.49
PK	4.5141G	52.34	74.00	-21.66	51.99	3	Horizontal	316	1.00	-	30.63	5.71	35.99
AV	4.5143G	41.29	54.00	-12.71	40.94	3	Horizontal	316	1.00	-	30.63	5.71	35.99
PK	5.41918G	56.76	74.00	-17.24	54.48	3	Horizontal	360	1.15	-	31.72	6.25	35.69
AV	5.41712G	44.84	54.00	-9.16	42.59	3	Horizontal	360	1.15	-	31.70	6.24	35.69

LoRa (650kHz)

915MHz_TX

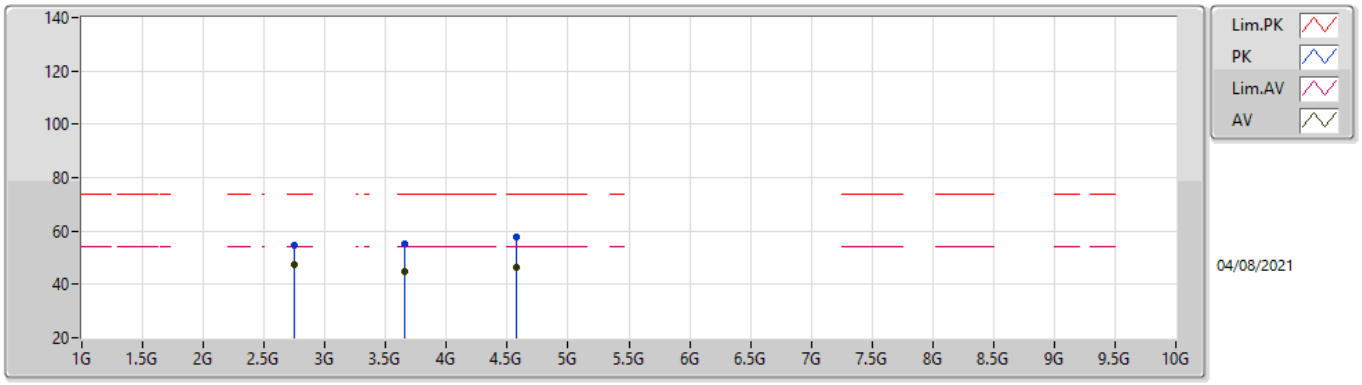


EUT X_1TX
Setting 16
05-A-E-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.74442G	60.61	74.00	-13.39	65.26	3	Vertical	234	1.62	-	28.00	4.40	37.05
AV	2.7451G	53.76	54.00	-0.24	58.41	3	Vertical	234	1.62	-	28.00	4.40	37.05
PK	3.65926G	57.75	74.00	-16.25	59.92	3	Vertical	93	2.32	-	29.20	5.09	36.46
AV	3.6596G	47.81	54.00	-6.19	49.98	3	Vertical	93	2.32	-	29.20	5.09	36.46
PK	4.574G	56.04	74.00	-17.96	55.49	3	Vertical	308	1.81	-	30.75	5.77	35.97
AV	4.57422G	44.87	54.00	-9.13	44.32	3	Vertical	308	1.81	-	30.75	5.77	35.97

LoRa (650kHz)

915MHz_TX

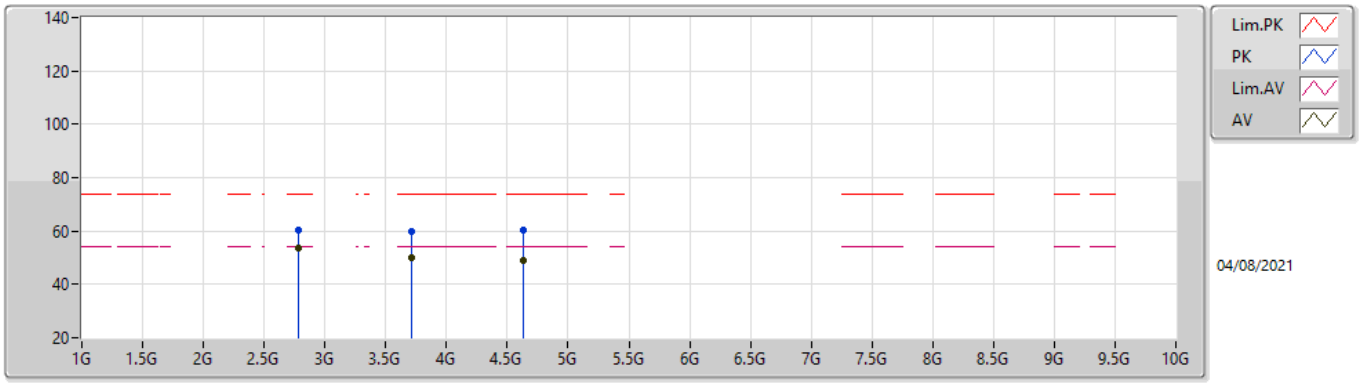


EUT X_1TX
Setting 16
05-A-E-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.74436G	54.56	74.00	-19.44	59.21	3	Horizontal	243	1.56	-	28.00	4.40	37.05
AV	2.7449G	47.38	54.00	-6.62	52.03	3	Horizontal	243	1.56	-	28.00	4.40	37.05
PK	3.65934G	55.10	74.00	-18.90	57.27	3	Horizontal	248.1	1.02	-	29.20	5.09	36.46
AV	3.6595G	45.01	54.00	-8.99	47.18	3	Horizontal	248.1	1.02	-	29.20	5.09	36.46
PK	4.57412G	57.56	74.00	-16.44	57.01	3	Horizontal	326	1.00	-	30.75	5.77	35.97
AV	4.5742G	46.30	54.00	-7.70	45.75	3	Horizontal	326	1.00	-	30.75	5.77	35.97

LoRa (650kHz)

927MHz_TX

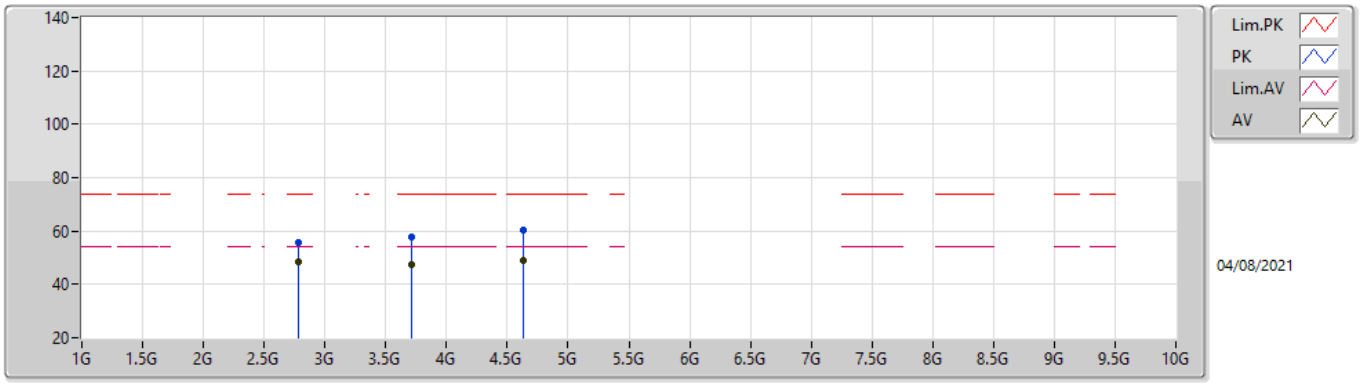


EUT X_1TX
Setting 18
05-A-E-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.78158G	60.57	74.00	-13.43	65.08	3	Vertical	233	1.59	-	28.13	4.40	37.04
AV	2.781G	53.66	54.00	-0.34	58.18	3	Vertical	233	1.59	-	28.12	4.40	37.04
PK	3.70878G	60.01	74.00	-13.99	62.05	3	Vertical	76	1.96	-	29.22	5.16	36.42
AV	3.7076G	50.25	54.00	-3.75	52.29	3	Vertical	76	1.96	-	29.22	5.16	36.42
PK	4.63404G	60.39	74.00	-13.61	59.51	3	Vertical	324	1.54	-	31.00	5.83	35.95
AV	4.63434G	48.76	54.00	-5.24	47.87	3	Vertical	324	1.54	-	31.01	5.83	35.95

LoRa (650kHz)

927MHz_TX



EUT X_1TX
Setting 18
05-A-E-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.78158G	55.58	74.00	-18.42	60.09	3	Horizontal	322	3.00	-	28.13	4.40	37.04
AV	2.78112G	48.38	54.00	-5.62	52.90	3	Horizontal	322	3.00	-	28.12	4.40	37.04
PK	3.70878G	57.53	74.00	-16.47	59.57	3	Horizontal	242	2.30	-	29.22	5.16	36.42
AV	3.70768G	47.47	54.00	-6.53	49.51	3	Horizontal	242	2.30	-	29.22	5.16	36.42
PK	4.634G	60.46	74.00	-13.54	59.58	3	Horizontal	323	1.00	-	31.00	5.83	35.95
AV	4.63428G	48.96	54.00	-5.04	48.07	3	Horizontal	323	1.00	-	31.01	5.83	35.95