

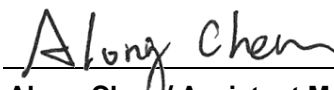
FCC Test Report

FCC ID : SQG-RM1262
Equipment : RM126X LoRaWAN Module
Model No. : RM1262
Brand Name : Laird Connectivity
Applicant : Laird Connectivity LLC
Address : W66N220 Commerce Court, Cedarburg, WI
53012 United States Of America
Standard : 47 CFR FCC Part 15.247
Received Date : Dec. 29, 2022
Tested Date : Feb. 23 ~ Mar. 27, 2023

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:



Along Chen / Assistant Manager



Gary Chang / Manager

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Appendix A. 6dB and Occupied Bandwidth

Appendix B. Conducted Output Power

Appendix C. Power Spectral Density

Appendix D. Unwanted Emissions into Restricted Frequency Bands

Appendix E. Emissions in Non-Restricted Frequency Bands

Appendix F. AC Power Line Conducted Emissions

Release Record

Report No.	Version	Description	Issued Date
FR2D2902-1	Rev. 01	Initial issue	Jun. 16, 2023

Summary of Test Results

FCC Rules	Test Items	Test method	Measured	Result
15.207	AC Power Line Conducted Emission	Conducted (TX)	[dBuV]: 0.546MHz 32.21 (Margin -13.79dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	Conducted (TX) Radiated (TX)	[dBuV/m at 3m]:70.74MHz 36.48 (Margin -3.52dB) - QP	Pass
15.247(b)(3)	Conducted Output Power	Conducted (TX)	Max Power [dBm]: 21.82	Pass
15.247(a)(2)	6dB Bandwidth	Conducted (TX)	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	Conducted (TX)	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Conducted (TX)	Meet the requirement of limit	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.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

Country	USA
LoRaWAN Region	US902-928
Modulation	LoRa
Type	DTS

RF Genera Information					
Channel Frequency (MHz)	Channel List	UL/DL	Data Rate (bit/sec)	Spread Factor	Channel Bandwidth (kHz)
903.0 ~ 914.2	8 channels	UL	12500	8	500

Note: RF output power specifies that Maximum Conducted (Average) Output Power.

1.1.2 Antenna Details

Ant. No.	Manufacturer	Model	Part Number	Type	Connector	Gain (dBi)
1	Embedded Antenna Design (EAD)	BKR915	FBKR35301-R S-KR	Dipole	RP-SMA	2.00
2	Linx	OC-LG Series	ANT-916-OC-L G-RPS	Dipole	RP-SMA	2.20
3	Laird	900FlexPIFA	EFB9020A3S-1 5MH4L	PIFA	I-PEX MHF4L	-0.1dBi
4	Laird	i-900FlexPIFA	EFG9020A3S-15MH4L	PIFA	I-PEX MHF4L	0.5dBi

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host
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1.1.4 Accessories

N/A

1.1.5 Channel List

Frequency Range (MHz)	903.0 ~ 914.2
Channel	Frequency(MHz)
64	903.0
65	904.6
66	906.2
67	907.8
68	909.4
69	911.0
70	912.6
71	914.2

1.1.6 Test Tool and Duty Cycle

Test Tool	UwTerminalX, v1.10a	
Duty Cycle and Duty Factor	Duty Cycle (%)	Duty Factor (dB)
	80.69%	0.93

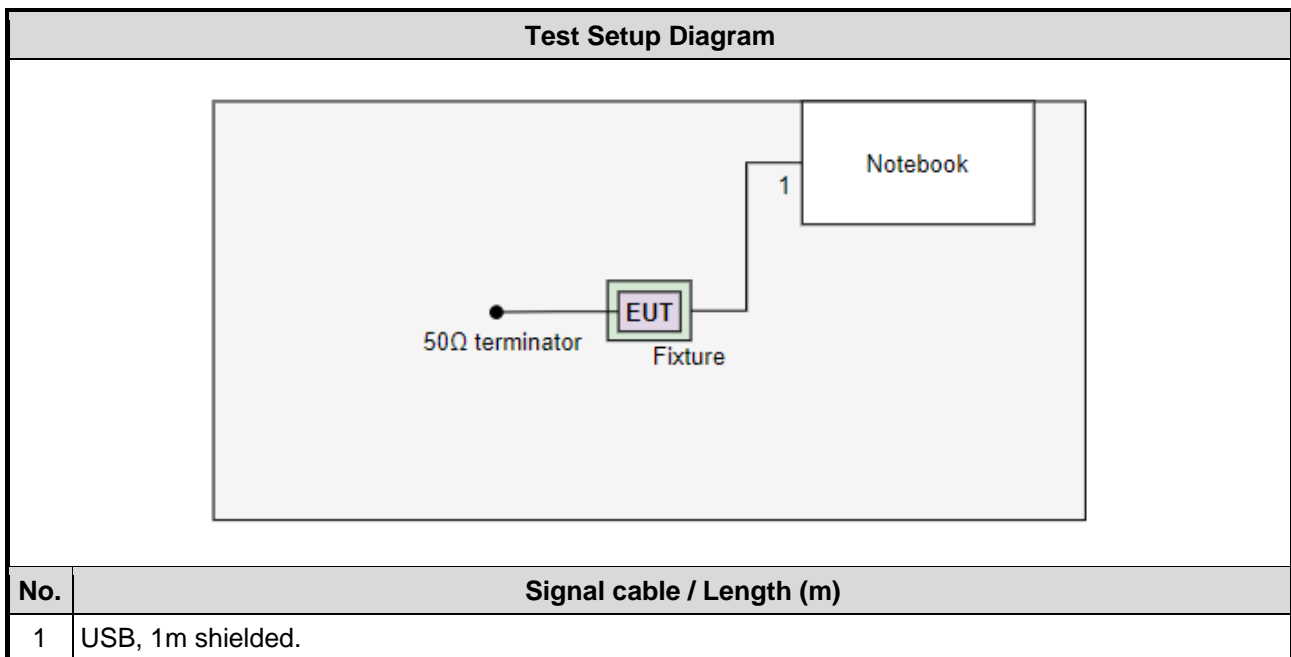
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
LoRa	903.0	22
LoRa	907.8	22
LoRa	914.2	22

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Notebook	DELL	Latitude E5470	DoC	---
2	Fixture	Laird	DVK-RM126X	---	Provided by applicant.
3	50Ω terminator	---	---	---	---
4	USB Cable	ICC	micro to A	---	---

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Mar. 21, 2023				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Feb. 17, 2023	Feb. 16, 2024
LISN	R&S	ENV216	101579	Apr. 21, 2022	Apr. 20, 2023
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127667	Jan .02, 2023	Jan .03, 2024
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 17, 2022	Oct. 16, 2023
50 ohm terminal (Support Unit)	NA	50	01	May 10, 2022	May 09, 2023
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Feb. 23, 2023				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 15, 2022	Mar. 14, 2023
Spectrum Analyzer	R&S	FSV40	101498	Nov. 21, 2022	Nov. 20, 2023
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 01, 2022	Oct. 31, 2023
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 03, 2022	Aug. 02, 2023
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Nov. 25, 2022	Nov. 24, 2023
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 27, 2022	Oct. 26, 2023
Preamplifier	EMC	EMC02325	980225	Jun. 28, 2022	Jun. 27, 2023
Preamplifier	EMC	EMC118A45SE	980898	Jul. 16, 2022	Jul. 15, 2023
Preamplifier	EMC	EMC184045SE	980903	Jul. 16, 2022	Jul. 15, 2023
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 04, 2022	Oct. 03, 2023
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 04, 2022	Oct. 03, 2023
LF cable 11M	EMC	EMCCFD400-NW-NW-11000	200801	Oct. 04, 2022	Oct. 03, 2023
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 04, 2022	Oct. 03, 2023
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 04, 2022	Oct. 03, 2023
RF Cable	EMC	EMC104-35M-35M-3000	210922	Oct. 04, 2022	Oct. 03, 2023
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Mar. 27, 2023				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2022	Apr. 17, 2023
Power Meter	Anritsu	ML2495A	1241002	Nov. 23, 2022	Nov. 22, 2023
Power Sensor	Anritsu	MA2411B	1207366	Nov. 23, 2022	Nov. 22, 2023
Measurement Software	Sporton	SENSE-15247_FS	V5.10.8	NA	NA

Note: Calibration Interval of instruments listed above is one year.

1.5 Test Standards

47 CFR FCC Part 15.247

ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Radiated emission ≤ 1 GHz	± 3.41 dB
Radiated emission > 1 GHz	± 4.59 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Channel Bandwidth (kHz)	Test Frequency (MHz)	Separating Factor	Test method	Mode	Test Configuration
AC Power Line Conducted Emission Conducted Output Power 6dB bandwidth Power spectral density	500	903.0 / 907.8 / 914.2	SF8	Conducted	TX	--
Unwanted Emissions	500	903.0 / 907.8 / 914.2	SF8	Conducted	TX	--
Unwanted Emissions	500	903.0 / 907.8 / 914.2	SF8	Radiated	TX	Note2

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** result was found as the worst case and was shown in this report.
2. The 50Ω terminator is connected to antenna port of EUT for radiated emission measurement.
3. SX1262 chipset DCDC convertor mode A: DCDC ON (LDO OFF).
SX1262 chipset DCDC convertor mode B: DCDC OFF (LDO ON).
Mode A is the worst case

3 Transmitter Test Results

3.1 6dB and Occupied Bandwidth

3.1.1 Limit of 6dB Bandwidth

The minimum 6dB bandwidth shall be at least 500 kHz.

3.1.2 Test Procedures

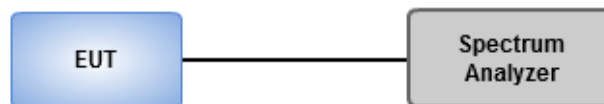
6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Sample, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	24°C / 61%	Tested By	Roger Lu
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Refer to Appendix A.

3.2 RF Output Power

3.2.1 Limit of RF Output Power

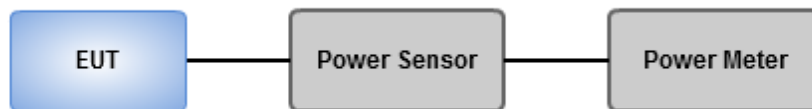
Conducted power shall not exceed 1Watt.

Antenna gain $\leq 6\text{dBi}$, no any corresponding reduction is in output power limit.

3.2.2 Test Procedures

A broadband RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

3.2.3 Test Setup



3.2.4 Test Results

Ambient Condition	24°C / 61%	Tested By	Roger Lu
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Refer to Appendix B.

3.3 Power Spectral Density

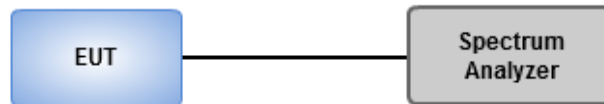
3.3.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.3.2 Test Procedures

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = RMS, Sweep time = auto couple.
3. Sweep time = auto couple.
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. Use the peak marker function to determine the maximum amplitude level.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	24°C / 61%	Tested By	Roger Lu
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Refer to Appendix C.

3.4 Unwanted Emissions into Restricted Frequency Bands

3.4.1 Limit of Unwanted Emissions into Restricted Frequency Bands

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:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.4.2 Test Procedures

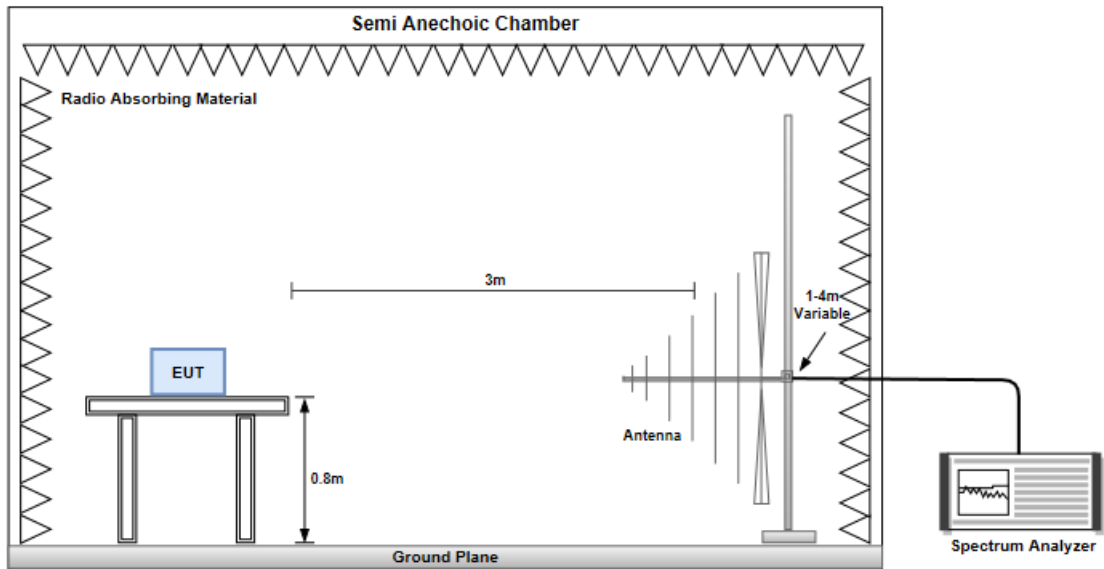
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

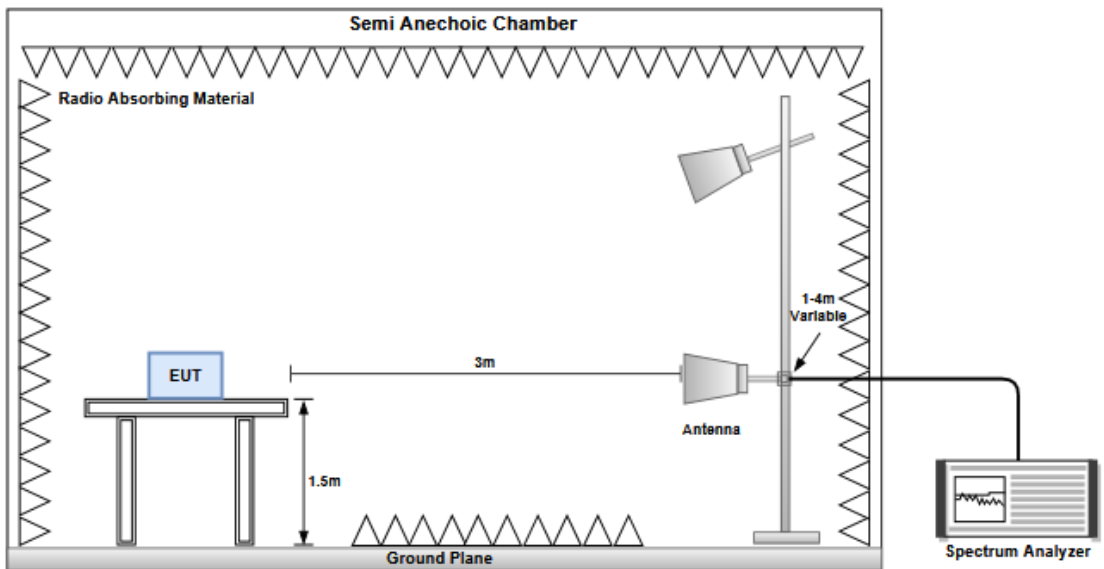
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.4.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.4.4 Test Results

Refer to Appendix D.

3.5 Emissions in Non-Restricted Frequency Bands

3.5.1 Emissions in Non-Restricted Frequency Bands Limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.5.2 Test Procedures

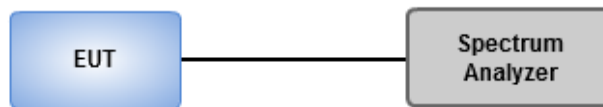
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.5.3 Test Setup



3.5.4 Test Results

Ambient Condition	24°C / 61%	Tested By	Roger Lu
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Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

3.6.1 Limit of AC Power Line Conducted Emissions

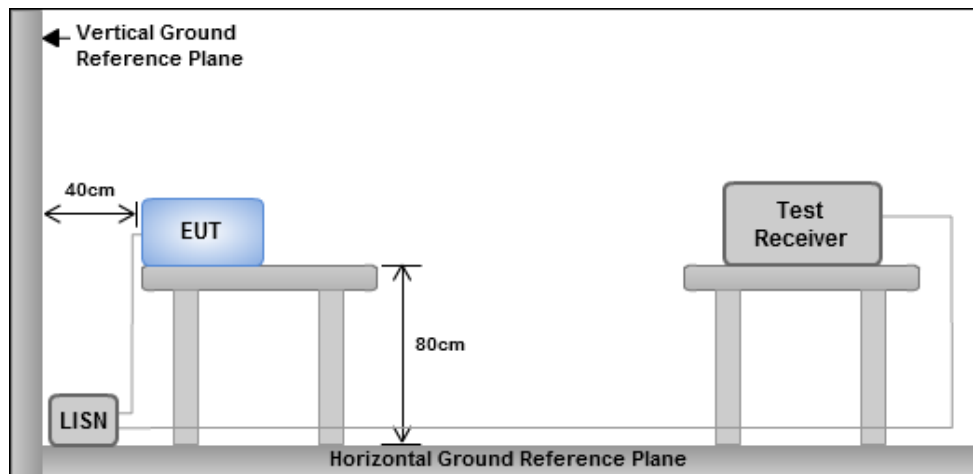
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.6.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

3.6.3 Test Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.6.4 Test Results

Refer to Appendix F.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou
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Kwei Shan

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No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0345

Email: ICC_Service@icertifi.com.tw

==END==



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
902-928MHz	-	-	-	-	-
LoRa (500kHz)	630k	507.246k	507KF1D	627.5k	506.622k

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 (500kHz)	-	-	-	-
903MHz	Pass	500k	628.75k	506.622k
907.8MHz	Pass	500k	627.5k	507.246k
914.2MHz	Pass	500k	630k	506.622k

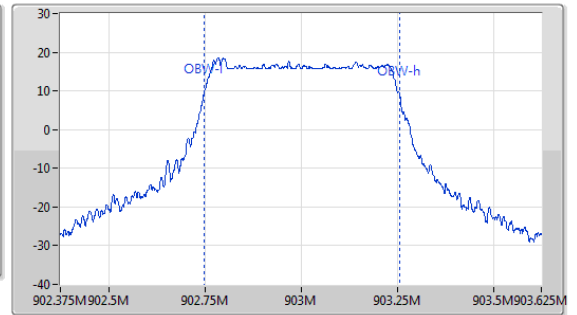
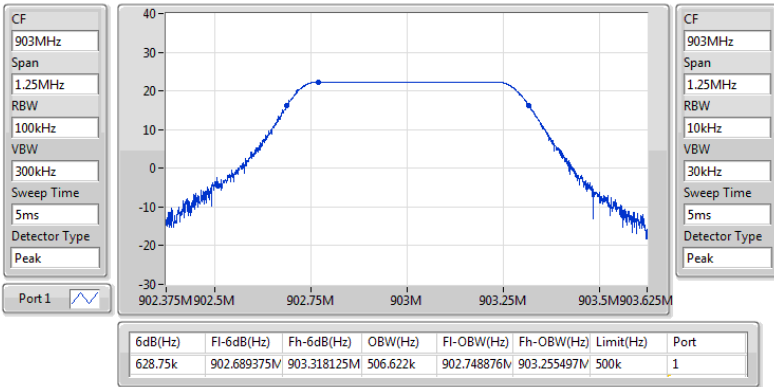
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth



902-928MHz_LoRa (500kHz)

EBW-DTS

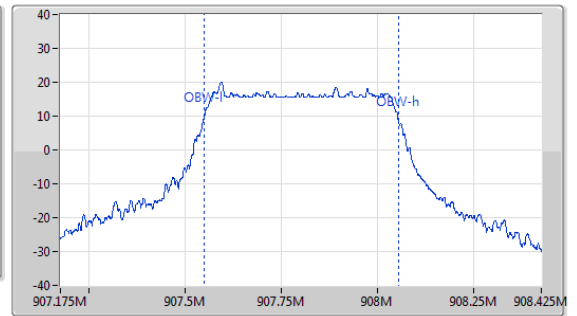
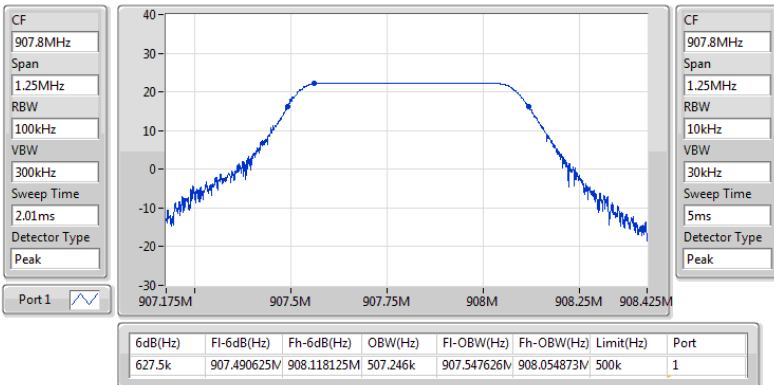
903MHz

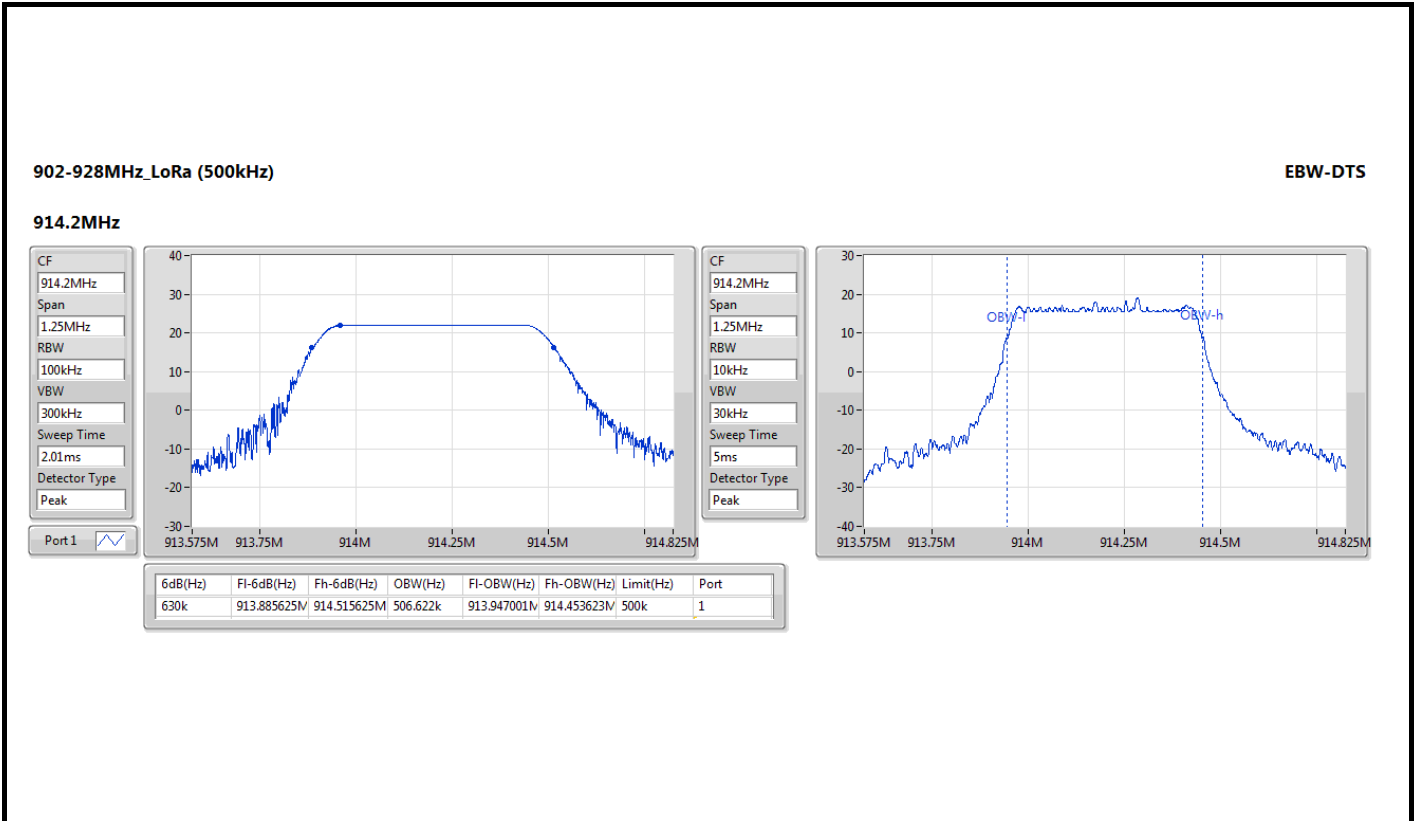


902-928MHz_LoRa (500kHz)

EBW-DTS

907.8MHz







Conducted Output Power (Average)

Appendix B

Summary

Mode	Total Power (dBm)	Power (W)
902-928MHz	-	-
LoRa (500kHz)	21.82	0.15205

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
LoRa (500kHz)	-	-	-	-
903MHz	Pass	2.20	21.82	30.00
907.8MHz	Pass	2.20	21.70	30.00
914.2MHz	Pass	2.20	21.56	30.00

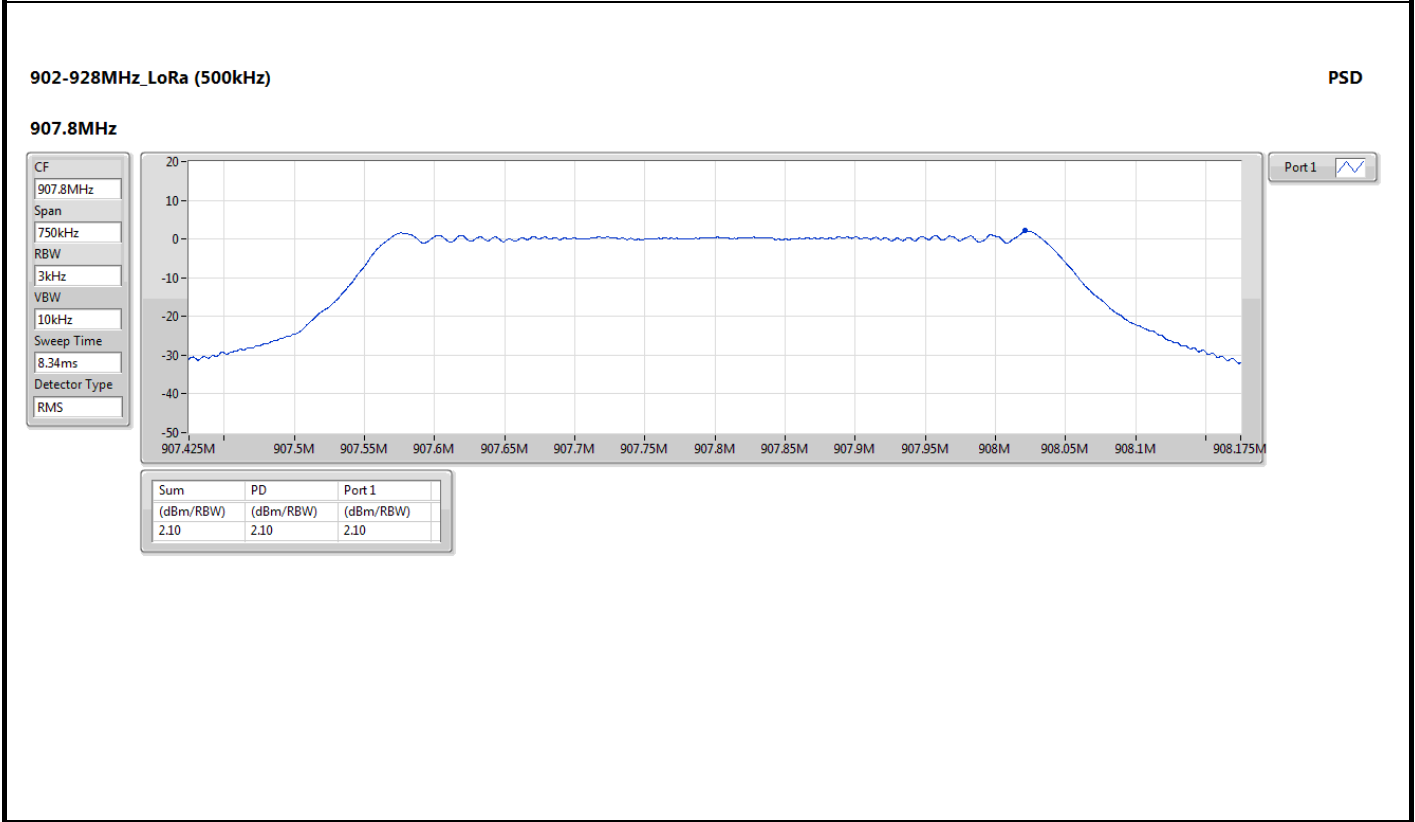
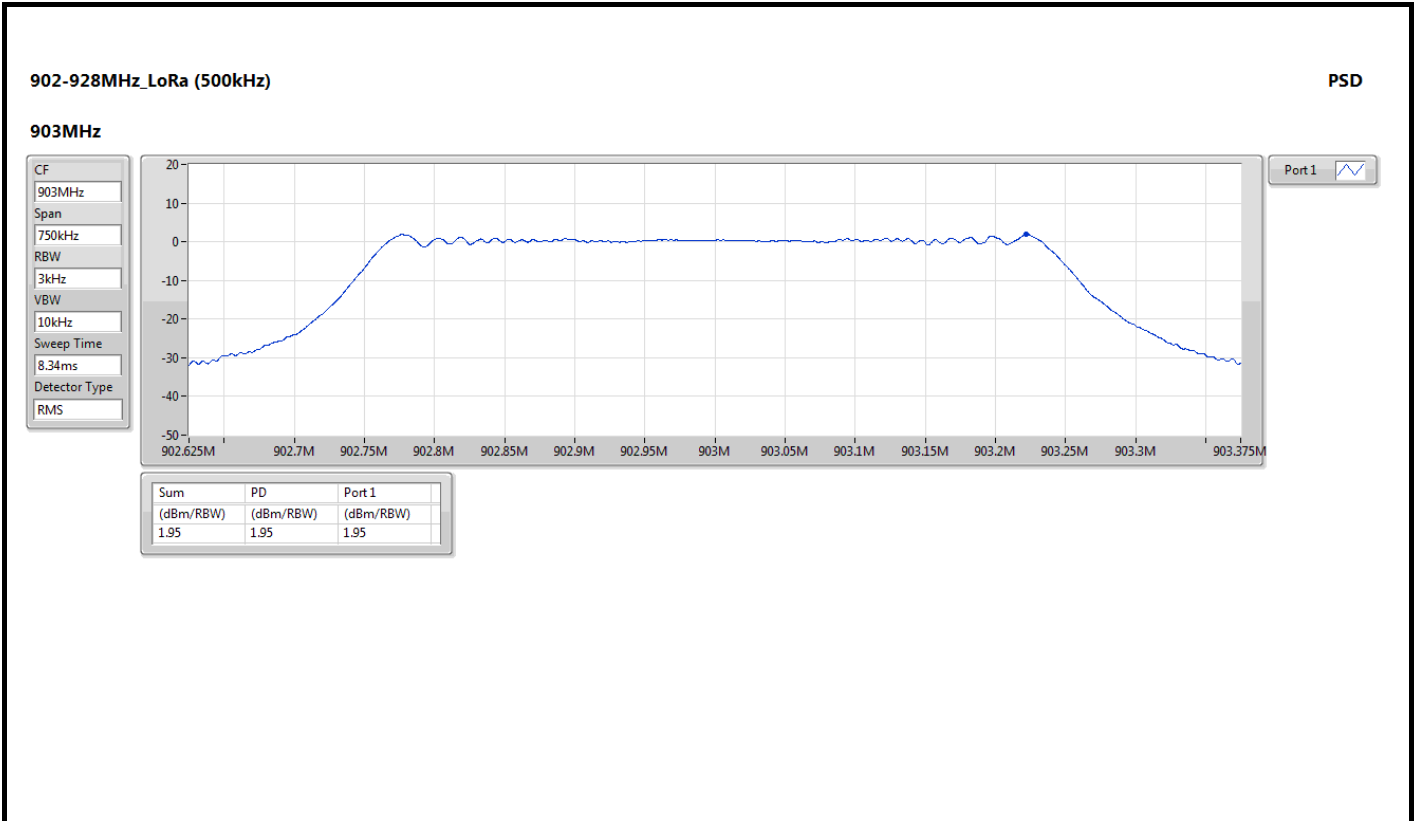


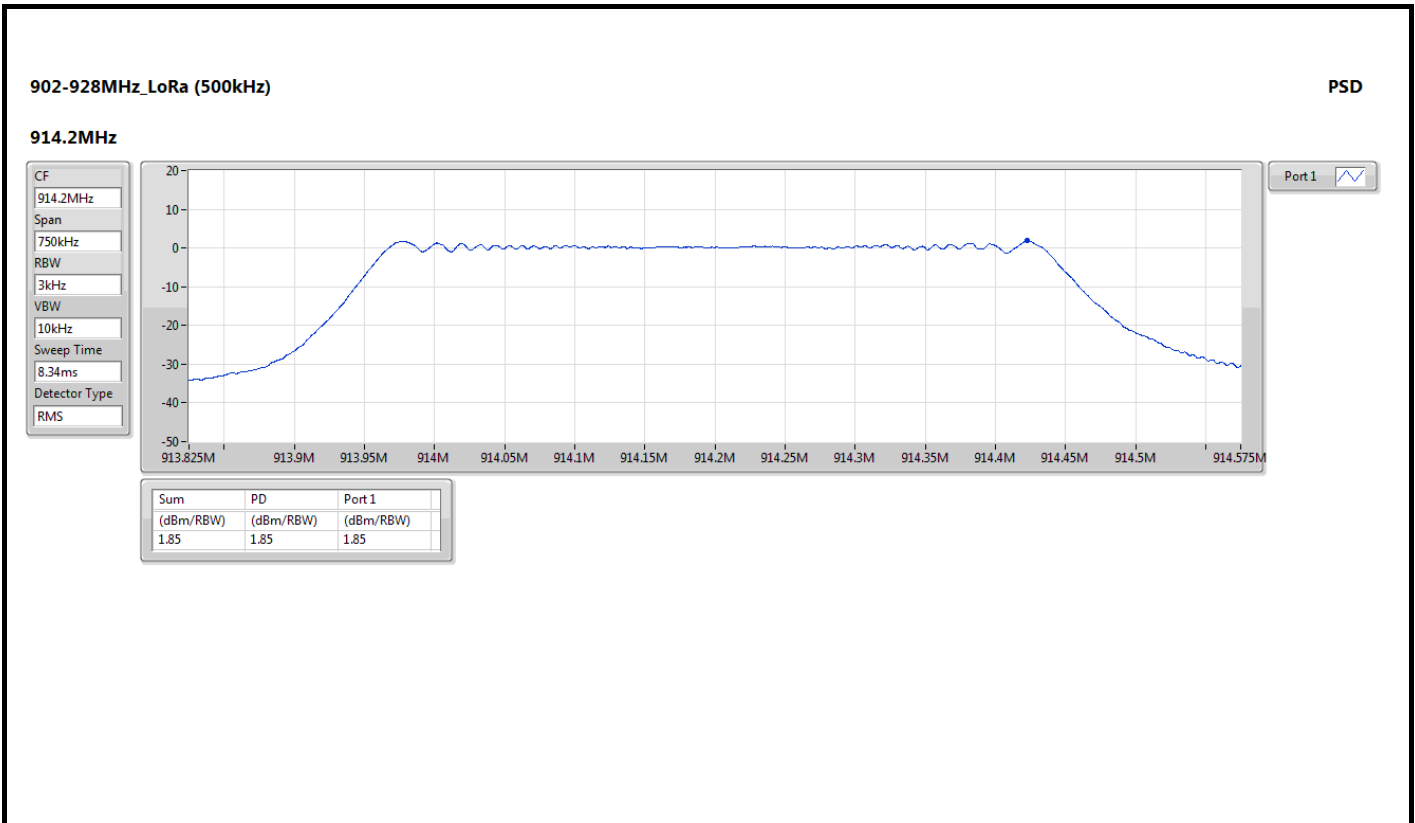
Summary

Mode	PD (dBm/3kHz)
902-928MHz	-
LoRa (500kHz)	2.10

Result

Mode	Result	DG (dBi)	PD (dBm/3kHz)	PD Limit (dBm/3kHz)
LoRa (500kHz)	-	-	-	-
903MHz	Pass	2.20	1.95	8.00
907.8MHz	Pass	2.20	2.10	8.00
914.2MHz	Pass	2.20	1.85	8.00







Unwanted Conducted Emissions (30M~1.5GHz)

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
LoRa (500kHz)	-	-	-	-	-	-	-	-	-	-	-
907.8MHz	Pass	88M	216M	QP	129.28M	2.20	-60.42	4.7	-53.52	-51.70	-1.82

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
LoRa (500kHz)	-	-	-	-	-	-	-	-	-	-	-
903MHz	Pass	1G	1.5G	AV	1.0215G	2.20	-56.75	0	-54.55	-41.20	-13.35
903MHz	Pass	30M	88M	QP	73.85M	2.20	-66.55	4.7	-59.65	-55.20	-4.45
903MHz	Pass	88M	216M	QP	162.62M	2.20	-60.45	4.7	-53.55	-51.70	-1.85
903MHz	Pass	216M	902M	QP	613.19M	2.20	-59.82	4.7	-52.92	-49.20	-3.72
903MHz	Pass	928M	1G	PK	995.28M	2.20	-55.93	4.7	-49.03	-41.20	-7.83
903MHz	Pass	1G	1.5G	PK	1.00025G	2.20	-46.62	0	-44.42	-21.20	-23.22
907.8MHz	Pass	1G	1.5G	AV	1.0095G	2.20	-56.74	0	-54.54	-41.20	-13.34
907.8MHz	Pass	30M	88M	QP	74.83M	2.20	-66.58	4.7	-59.68	-55.20	-4.48
907.8MHz	Pass	88M	216M	QP	129.28M	2.20	-60.42	4.7	-53.52	-51.70	-1.82
907.8MHz	Pass	216M	902M	QP	402.94M	2.20	-59.88	4.7	-52.98	-49.20	-3.78
907.8MHz	Pass	928M	1G	PK	998.49M	2.20	-56.17	4.7	-49.27	-41.20	-8.07
907.8MHz	Pass	1G	1.5G	PK	1.00775G	2.20	-47.12	0	-44.92	-21.20	-23.72
914.2MHz	Pass	1G	1.5G	AV	1.00425G	2.20	-56.97	0	-54.77	-41.20	-13.57
914.2MHz	Pass	30M	88M	QP	74.49M	2.20	-66.56	4.7	-59.66	-55.20	-4.46
914.2MHz	Pass	88M	216M	QP	163.07M	2.20	-60.48	4.7	-53.58	-51.70	-1.88
914.2MHz	Pass	216M	902M	QP	612.17M	2.20	-59.85	4.7	-52.95	-49.20	-3.75
914.2MHz	Pass	928M	1G	PK	998.06M	2.20	-55.70	4.7	-48.80	-41.20	-7.60
914.2MHz	Pass	1G	1.5G	PK	1.05025G	2.20	-46.33	0	-44.13	-21.20	-22.93

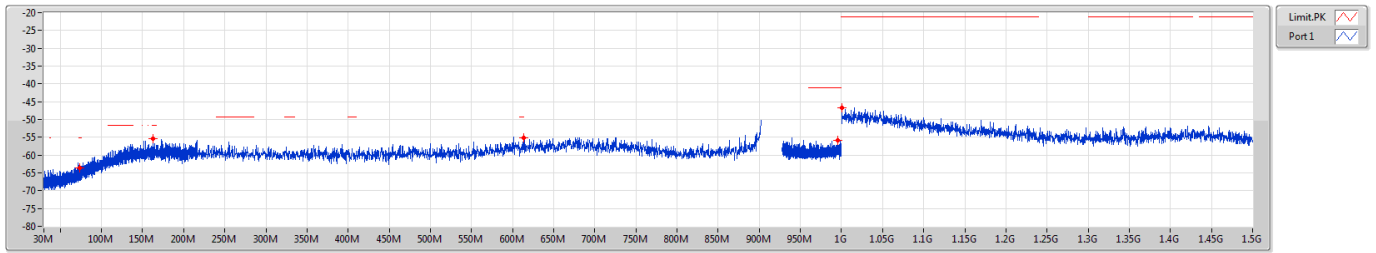
DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX



902-928MHz_LoRa (500kHz)

CSE Other-DTS [PK]

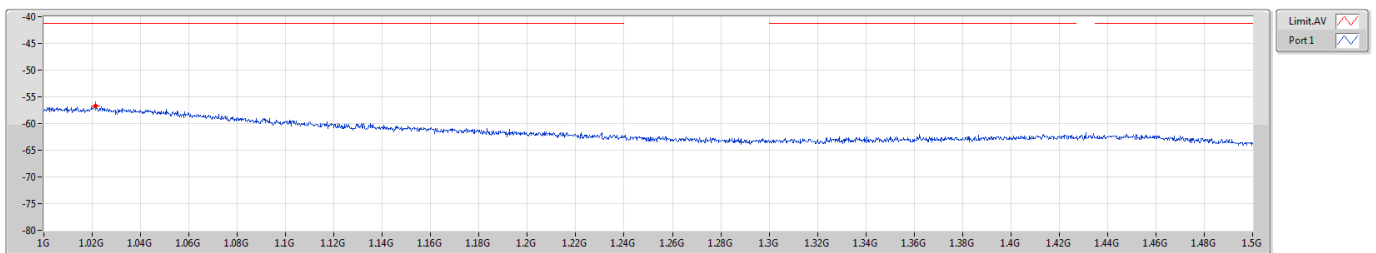
903MHz

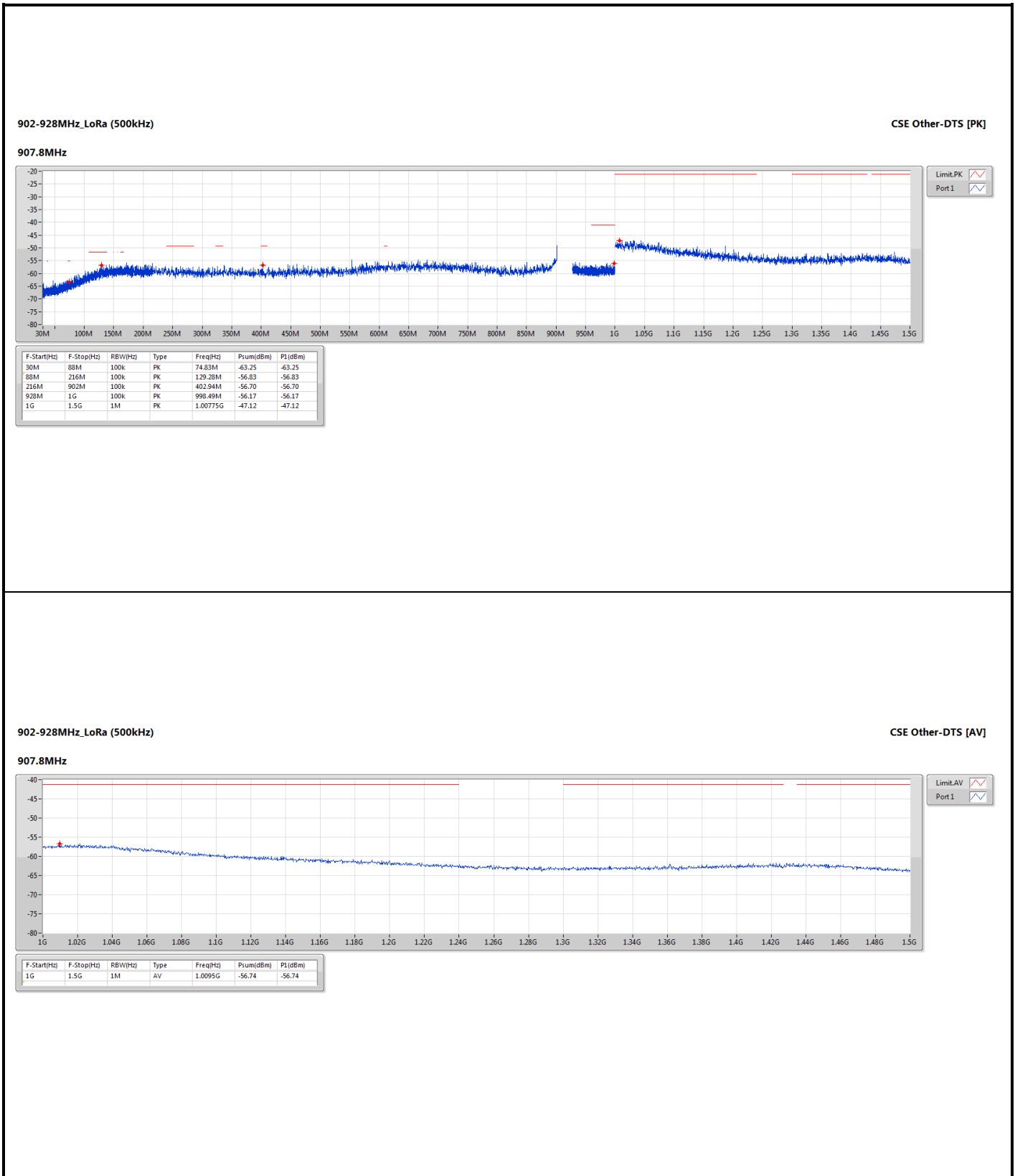


902-928MHz_LoRa (500kHz)

CSE Other-DTS [AV]

903MHz



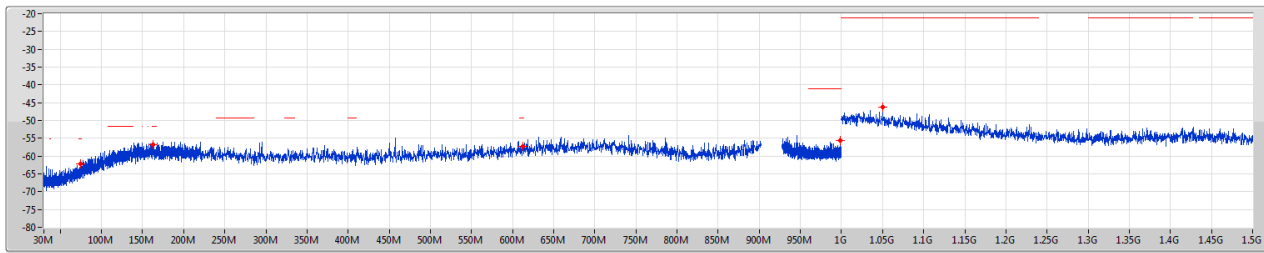




902-928MHz_LoRa (500kHz)

CSE Other-DTS [PK]

914.2MHz



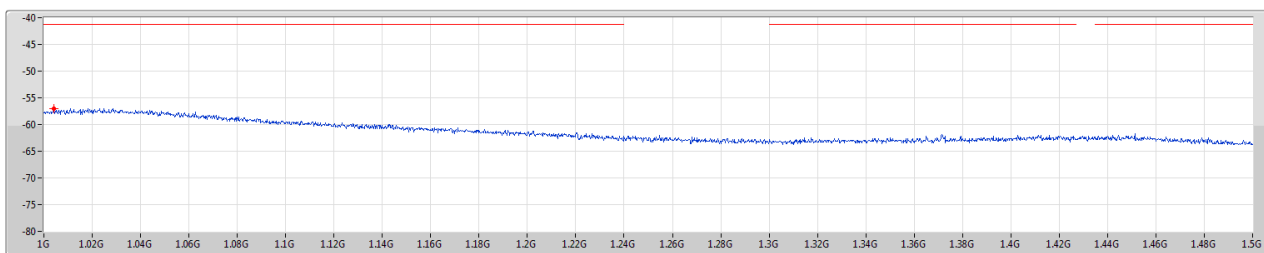
Limit.PK
Port1

F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
30M	88M	100k	PK	74.49M	-62.20	-62.20
88M	216M	100k	PK	163.07M	-56.76	-56.76
216M	902M	100k	PK	612.17M	-57.28	-57.28
928M	1G	100k	PK	998.06M	-55.70	-55.70
1G	1.5G	1M	PK	1.05025G	-46.33	-46.33

902-928MHz_LoRa (500kHz)

CSE Other-DTS [AV]

914.2MHz



Limit.AV
Port1

F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	1.5G	1M	AV	1.0425G	-56.97	-56.97



Unwanted Conducted Emissions (1.5G~10GHz)

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
902-928MHz	-	-	-	-	-	-	-	-	-	-
LoRa (500kHz)	Pass	1.5G	4G	AV	2.72313G	2.20	-48.59	-46.39	-41.20	-5.19

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
LoRa (500kHz)	-	-	-	-	-	-	-	-	-	-
903MHz	Pass	1.5G	4G	AV	2.70969G	2.20	-48.72	-46.52	-41.20	-5.32
903MHz	Pass	4G	7G	AV	4.51563G	2.20	-62.84	-60.64	-41.20	-19.44
903MHz	Pass	7G	10G	AV	7.74738G	2.20	-73.94	-71.74	-41.20	-30.54
903MHz	Pass	1.5G	4G	PK	2.70906G	2.20	-48.12	-45.92	-21.20	-24.72
903MHz	Pass	4G	7G	PK	4.5145G	2.20	-59.95	-57.75	-21.20	-36.55
903MHz	Pass	7G	10G	PK	9.31863G	2.20	-63.78	-61.58	-21.20	-40.38
907.8MHz	Pass	1.5G	4G	AV	2.72313G	2.20	-48.59	-46.39	-41.20	-5.19
907.8MHz	Pass	4G	7G	AV	4.53888G	2.20	-63.39	-61.19	-41.20	-19.99
907.8MHz	Pass	7G	10G	AV	7.738G	2.20	-73.87	-71.67	-41.20	-30.47
907.8MHz	Pass	1.5G	4G	PK	2.72406G	2.20	-47.98	-45.78	-21.20	-24.58
907.8MHz	Pass	4G	7G	PK	4.53888G	2.20	-60.48	-58.28	-21.20	-37.08
907.8MHz	Pass	7G	10G	PK	9.18775G	2.20	-63.28	-61.08	-21.20	-39.88
914.2MHz	Pass	1.5G	4G	AV	2.74313G	2.20	-48.82	-46.62	-41.20	-5.42
914.2MHz	Pass	4G	7G	AV	4.57038G	2.20	-65.71	-63.51	-41.20	-22.31
914.2MHz	Pass	7G	10G	AV	9.14313G	2.20	-73.65	-71.45	-41.20	-30.25
914.2MHz	Pass	1.5G	4G	PK	2.74219G	2.20	-48.20	-46.00	-21.20	-24.80
914.2MHz	Pass	4G	7G	PK	4.57G	2.20	-61.38	-59.18	-21.20	-37.98
914.2MHz	Pass	7G	10G	PK	7.73575G	2.20	-63.39	-61.19	-21.20	-39.99

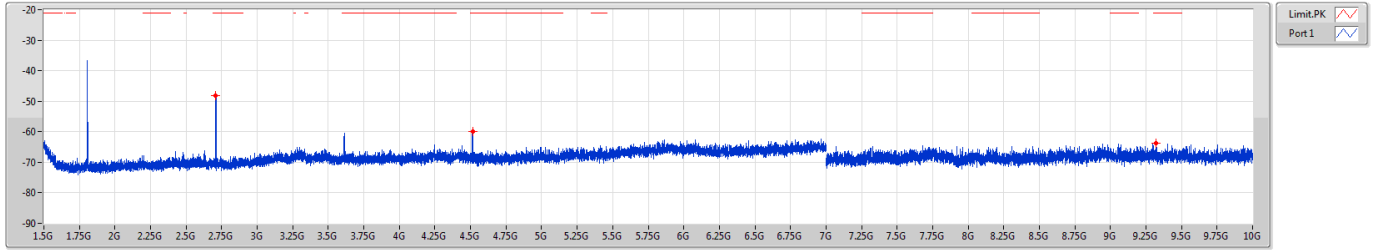
DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX



902-928MHz_LoRa (500kHz)

CSE-DTS [PK]

903MHz

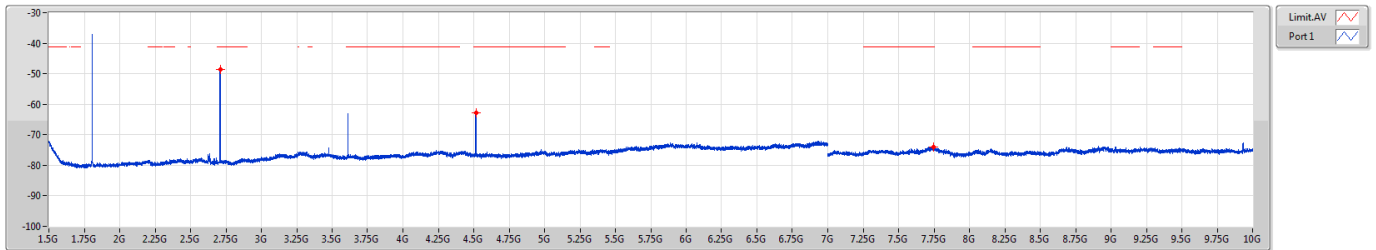


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1.5G	4G	1M	PK	2.70906G	-48.12	-48.12
4G	7G	1M	PK	4.5145G	-59.95	-59.95
7G	10G	1M	PK	9.31863G	-63.78	-63.78

902-928MHz_LoRa (500kHz)

CSE-DTS [AV]

903MHz



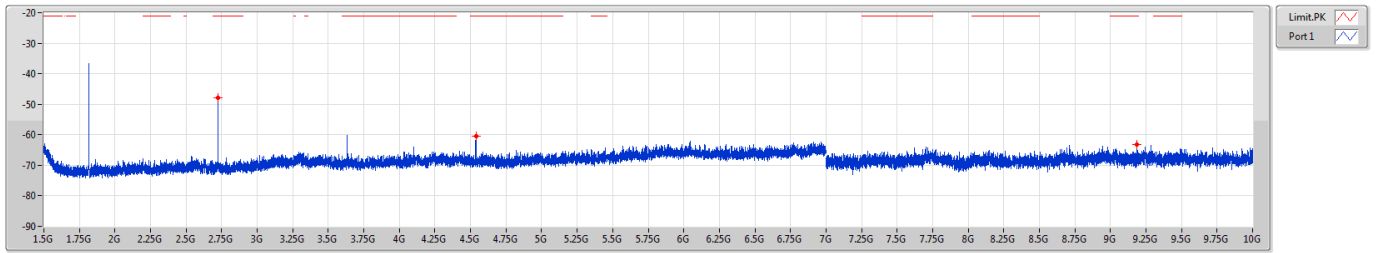
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1.5G	4G	1M	AV	2.70969G	-48.72	-48.72
4G	7G	1M	AV	4.51563G	-62.84	-62.84
7G	10G	1M	AV	7.74738G	-73.94	-73.94



902-928MHz_LoRa (500kHz)

CSE-DTS [PK]

907.8MHz

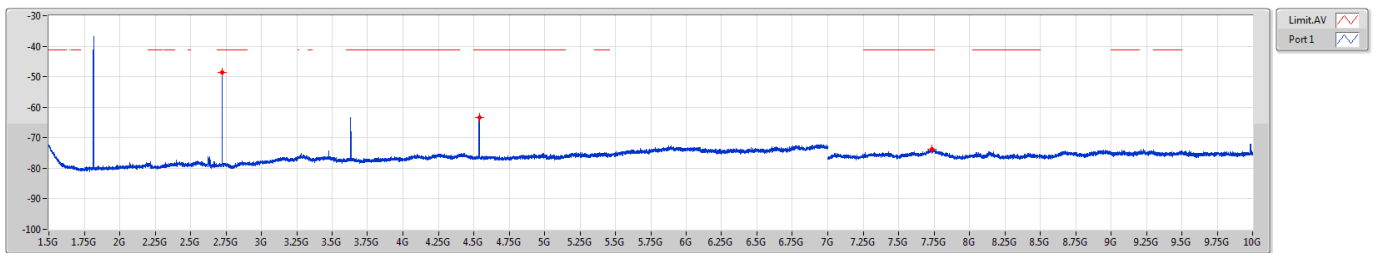


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1.5G	4G	1M	PK	2.72406G	-47.98	-47.98
4G	7G	1M	PK	4.53888G	-60.48	-60.48
7G	10G	1M	PK	9.18775G	-63.28	-63.28

902-928MHz_LoRa (500kHz)

CSE-DTS [AV]

907.8MHz



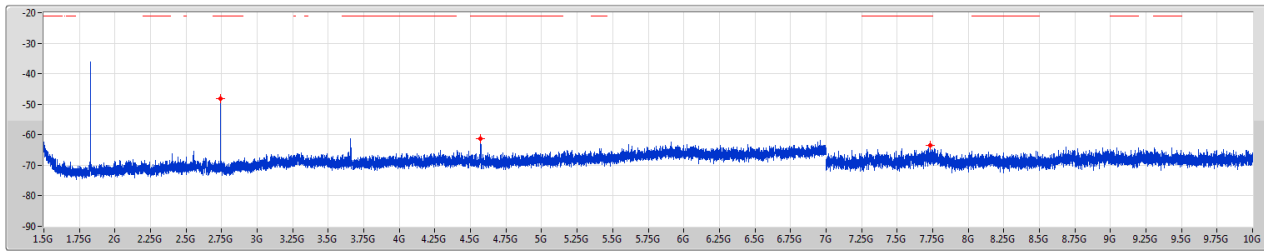
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1.5G	4G	1M	AV	2.72313G	-48.59	-48.59
4G	7G	1M	AV	4.53888G	-63.39	-63.39
7G	10G	1M	AV	7.738G	-73.87	-73.87



902-928MHz_LoRa (500kHz)

CSE-DTS [PK]

914.2MHz



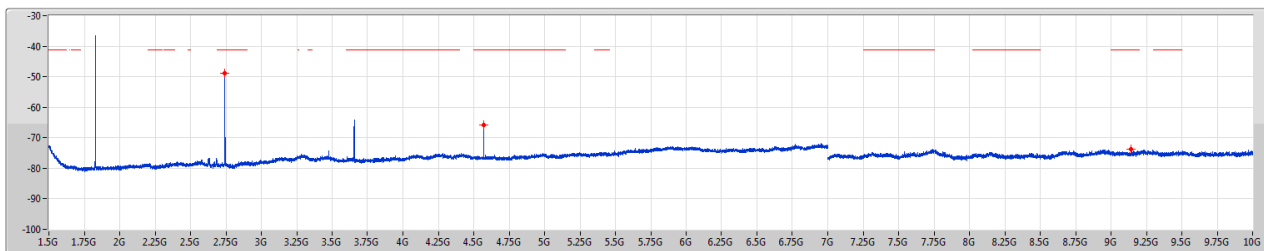
LimitPK
Port1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1.5G	4G	1M	PK	2.74219G	-48.20	-48.20
4G	7G	1M	PK	4.57G	-61.38	-61.38
7G	10G	1M	PK	7.73575G	-63.39	-63.39

902-928MHz_LoRa (500kHz)

CSE-DTS [AV]

914.2MHz



LimitAV
Port1

F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1.5G	4G	1M	AV	2.74313G	-48.82	-48.82
4G	7G	1M	AV	4.57038G	-65.71	-65.71
7G	10G	1M	AV	9.14315G	-73.65	-73.65



Unwanted Radiated Emissions (Below 1GHz)

Mode	LoRa (500kHz)	Test Freq. (MHz)	903.0						
Polarization	Horizontal								
Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	70.74	36.48	40.00	-3.52	47.80	-11.32	QP	154	201
2	74.33	30.67	40.00	-9.33	42.91	-12.24	Peak	---	---
3	167.88	38.33	43.50	-5.17	47.63	-9.30	Peak	---	---
4	173.58	37.59	43.50	-5.91	47.33	-9.74	Peak	---	---
5	614.00	29.73	46.00	-16.27	30.33	-0.60	Peak	---	---
6	960.00	35.24	46.00	-10.76	30.03	5.21	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



Mode	LoRa (500kHz)	Test Freq. (MHz)	903.0						
Polarization	Vertical								
Test By : Sean Yu		Temperature(°C): 23		Humidity(%): 64					
<p>The spectrum plot displays the emission level in dBuV/m across a frequency range from 30 MHz to 1000 MHz. A red step function represents the CLASS-B emission limit. Six peaks are identified and labeled with blue numbers 1 through 6. Peak 1 is at 70.74 MHz, peak 2 at 74.58 MHz, peak 3 at 167.83 MHz, peak 4 at 176.79 MHz, peak 5 at 614.00 MHz, and peak 6 at 960.00 MHz. The emission levels for these peaks are 33.86, 26.77, 26.59, 25.46, 29.47, and 34.18 dBuV/m, respectively.</p>									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	70.74	33.86	40.00	-6.14	45.18	-11.32	Peak	---	---
2	74.58	26.77	40.00	-13.23	39.04	-12.27	Peak	---	---
3	167.83	26.59	43.50	-16.91	35.89	-9.30	Peak	---	---
4	176.79	25.46	43.50	-18.04	35.51	-10.05	Peak	---	---
5	614.00	29.47	46.00	-16.53	30.07	-0.60	Peak	---	---
6	960.00	34.18	46.00	-11.82	28.97	5.21	Peak	---	---
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).</p>									



Mode	LoRa (500kHz)	Test Freq. (MHz)	907.8																																																																						
Polarization	Horizontal																																																																								
Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64																																																																									
<p>The spectrum plot displays the emission level in dBuV/m across a frequency range from 30 MHz to 1000 MHz. A red step function represents the CLASS-B emission limit. Several peaks are identified with blue vertical lines and labels: Peak 2 at 70.74 MHz, Peak 3 at 74.62 MHz, Peak 4 at 167.55 MHz, Peak 5 at 614.00 MHz, and Peak 6 at 960.00 MHz. The emission level for Peak 6 is 35.22 dBuV/m, which is below the CLASS-B limit of 46.00 dBuV/m at that frequency.</p>																																																																									
	<table border="1"> <thead> <tr> <th>Freq. MHz</th> <th>Emission level dBuV/m</th> <th>Limit dBuV/m</th> <th>Margin dB</th> <th>SA reading dBuV</th> <th>Factor dB/m</th> <th>Remark</th> <th>ANT High cm</th> <th>Turn Table deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>70.74</td> <td>36.24</td> <td>40.00</td> <td>-3.76</td> <td>47.56</td> <td>-11.32</td> <td>QP</td> <td>158</td> <td>198</td> </tr> <tr> <td>2</td> <td>74.62</td> <td>30.67</td> <td>40.00</td> <td>-9.33</td> <td>42.94</td> <td>-12.27</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>3</td> <td>167.55</td> <td>38.44</td> <td>43.50</td> <td>-5.06</td> <td>47.74</td> <td>-9.30</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>4</td> <td>173.67</td> <td>37.58</td> <td>43.50</td> <td>-5.92</td> <td>47.33</td> <td>-9.75</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>5</td> <td>614.00</td> <td>29.47</td> <td>46.00</td> <td>-16.53</td> <td>30.07</td> <td>-0.60</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>6</td> <td>960.00</td> <td>35.22</td> <td>46.00</td> <td>-10.78</td> <td>30.01</td> <td>5.21</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> </tbody> </table>	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg	1	70.74	36.24	40.00	-3.76	47.56	-11.32	QP	158	198	2	74.62	30.67	40.00	-9.33	42.94	-12.27	Peak	---	---	3	167.55	38.44	43.50	-5.06	47.74	-9.30	Peak	---	---	4	173.67	37.58	43.50	-5.92	47.33	-9.75	Peak	---	---	5	614.00	29.47	46.00	-16.53	30.07	-0.60	Peak	---	---	6	960.00	35.22	46.00	-10.78	30.01	5.21	Peak	---	---			
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Mode	LoRa (500kHz)	Test Freq. (MHz)	907.8																																																																
Polarization	Vertical																																																																		
Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64																																																																			
<p>The plot shows emission levels across a frequency range from 30 to 1000 MHz. A red step function represents the CLASS-B limit, starting at 40 dBuV/m and stepping up to 50 dBuV/m at 100 MHz, 200 MHz, and 907.8 MHz. Six peaks are identified with blue vertical lines and numbered 1 through 6.</p>																																																																			
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4	25.42	43.50	-18.08	35.45	-10.03	Peak	---	---																																																											
5	29.43	46.00	-16.57	30.03	-0.60	Peak	---	---																																																											
6	34.52	46.00	-11.48	29.31	5.21	Peak	---	---																																																											
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																																			



Mode	LoRa (500kHz)	Test Freq. (MHz)	914.2																																																																
Polarization	Horizontal																																																																		
Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64																																																																			
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Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg																																																											
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Mode	LoRa (500kHz)	Test Freq. (MHz)	914.2																																																																
Polarization	Vertical																																																																		
Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64																																																																			
<p>The plot shows a red step-like line representing the CLASS-B emission limit. The y-axis is Level (dBuV/m) from 0 to 90. The x-axis is Frequency (MHz) from 30 to 1000. Six peaks are labeled with blue numbers 1 through 6. Peak 1 is at 70.74 MHz, peak 2 at 74.84 MHz, peak 3 at 167.83 MHz, peak 4 at 176.55 MHz, peak 5 at 614.00 MHz, and peak 6 at 960.00 MHz.</p>																																																																			
	<table border="1"> <thead> <tr> <th>Freq. MHz</th> <th>Emission level dBuV/m</th> <th>Limit dBuV/m</th> <th>Margin dB</th> <th>SA reading dBuV</th> <th>Factor dB/m</th> <th>Remark</th> <th>ANT High cm</th> <th>Turn Table deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>34.27</td> <td>40.00</td> <td>-5.73</td> <td>45.59</td> <td>-11.32</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>2</td> <td>26.72</td> <td>40.00</td> <td>-13.28</td> <td>39.01</td> <td>-12.29</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>3</td> <td>27.49</td> <td>43.50</td> <td>-16.01</td> <td>36.79</td> <td>-9.30</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>4</td> <td>25.64</td> <td>43.50</td> <td>-17.86</td> <td>35.66</td> <td>-10.02</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>5</td> <td>29.51</td> <td>46.00</td> <td>-16.49</td> <td>30.11</td> <td>-0.60</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>6</td> <td>34.52</td> <td>46.00</td> <td>-11.48</td> <td>29.31</td> <td>5.21</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> </tbody> </table>	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg	1	34.27	40.00	-5.73	45.59	-11.32	Peak	---	---	2	26.72	40.00	-13.28	39.01	-12.29	Peak	---	---	3	27.49	43.50	-16.01	36.79	-9.30	Peak	---	---	4	25.64	43.50	-17.86	35.66	-10.02	Peak	---	---	5	29.51	46.00	-16.49	30.11	-0.60	Peak	---	---	6	34.52	46.00	-11.48	29.31	5.21	Peak	---	---			
Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg																																																											
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Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																																			



Unwanted Radiated Emissions (Above 1GHz)

Mode	LoRa (500kHz)	Test Freq. (MHz)	903.0						
Polarization	Horizontal								
Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2709.00	34.08	54.00	-19.92	38.29	-4.21	Average	208	222
2	2709.00	43.27	74.00	-30.73	47.48	-4.21	Peak	208	222
3	3612.00	30.48	54.00	-23.52	32.85	-2.37	Average	100	126
4	3612.00	41.93	74.00	-32.07	44.30	-2.37	Peak	100	126
5	4515.00	37.10	54.00	-16.90	38.17	-1.07	Average	203	241
6	4515.00	47.18	74.00	-26.82	48.25	-1.07	Peak	203	241

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

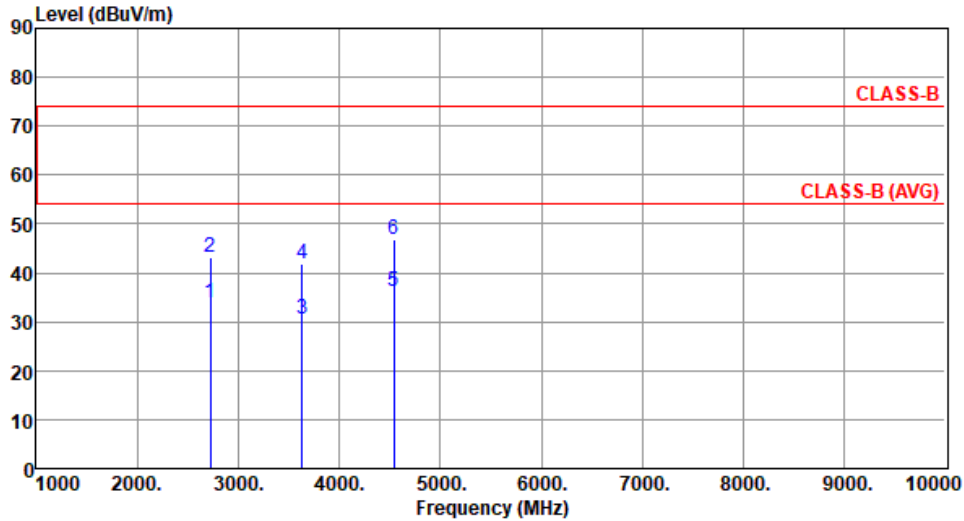


Mode	LoRa (500kHz)		Test Freq. (MHz)	903.0					
Polarization	Vertical								
Test By : Sean Yu		Temperature(°C): 23		Humidity(%): 64					
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2709.00	32.47	54.00	-21.53	36.68	-4.21	Average	304	299
2	2709.00	42.96	74.00	-31.04	47.17	-4.21	Peak	304	299
3	3612.00	30.48	54.00	-23.52	32.85	-2.37	Average	100	271
4	3612.00	42.15	74.00	-31.85	44.52	-2.37	Peak	100	271
5	4515.00	35.88	54.00	-18.12	36.95	-1.07	Average	300	276
6	4515.00	46.29	74.00	-27.71	47.36	-1.07	Peak	300	276
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).</p>									



Mode	LoRa (500kHz)	Test Freq. (MHz)	907.8
Polarization	Horizontal		

Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2723.40	33.83	54.00	-20.17	37.94	-4.11	Average	210	224
2	2723.40	43.16	74.00	-30.84	47.27	-4.11	Peak	210	224
3	3631.20	30.64	54.00	-23.36	33.03	-2.39	Average	100	138
4	3631.20	41.82	74.00	-32.18	44.21	-2.39	Peak	100	138
5	4539.00	36.14	54.00	-17.86	37.11	-0.97	Average	208	239
6	4539.00	46.74	74.00	-27.26	47.71	-0.97	Peak	208	239

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



Mode	LoRa (500kHz)		Test Freq. (MHz)	907.8					
Polarization	Vertical								
Test By : Sean Yu		Temperature(°C): 23		Humidity(%): 64					
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2723.40	32.21	54.00	-21.79	36.32	-4.11	Average	281	310
2	2723.40	42.57	74.00	-31.43	46.68	-4.11	Peak	281	310
3	3631.20	30.84	54.00	-23.16	33.23	-2.39	Average	100	277
4	3631.20	42.35	74.00	-31.65	44.74	-2.39	Peak	100	277
5	4539.00	35.23	54.00	-18.77	36.20	-0.97	Average	286	273
6	4539.00	46.35	74.00	-27.65	47.32	-0.97	Peak	286	273
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).</p>									



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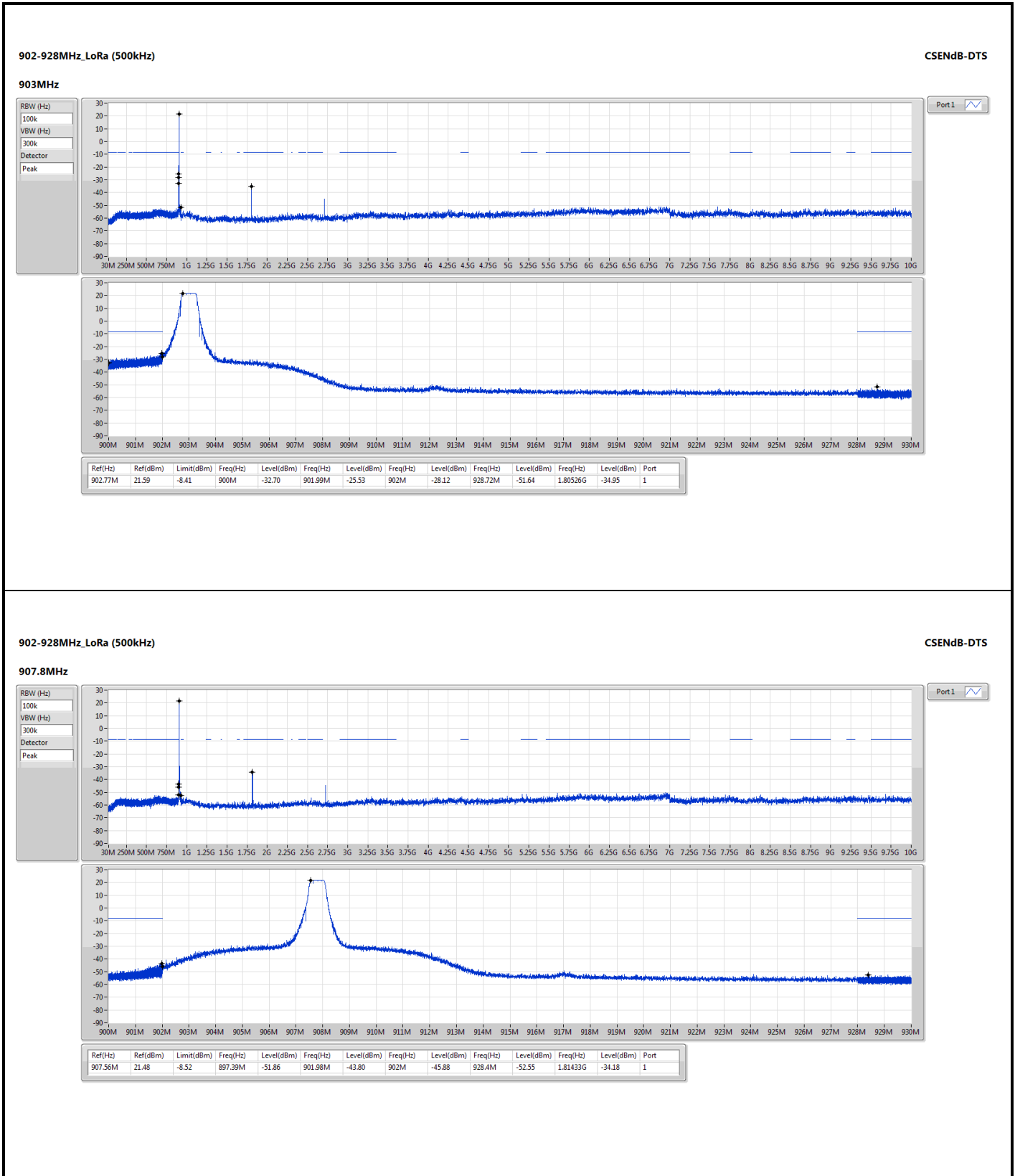
Mode	LoRa (500kHz)	Test Freq. (MHz)	914.2						
Polarization	Horizontal								
Test By : Sean Yu Temperature(°C): 23 Humidity(%): 64									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2742.60	34.41	54.00	-19.59	38.37	-3.96	Average	237	228
2	2742.60	44.18	74.00	-29.82	48.14	-3.96	Peak	237	228
3	3656.80	30.91	54.00	-23.09	33.34	-2.43	Average	100	135
4	3656.80	41.84	74.00	-32.16	44.27	-2.43	Peak	100	135
5	4571.00	34.49	54.00	-19.51	35.38	-0.89	Average	204	234
6	4571.00	45.67	74.00	-28.33	46.56	-0.89	Peak	204	234

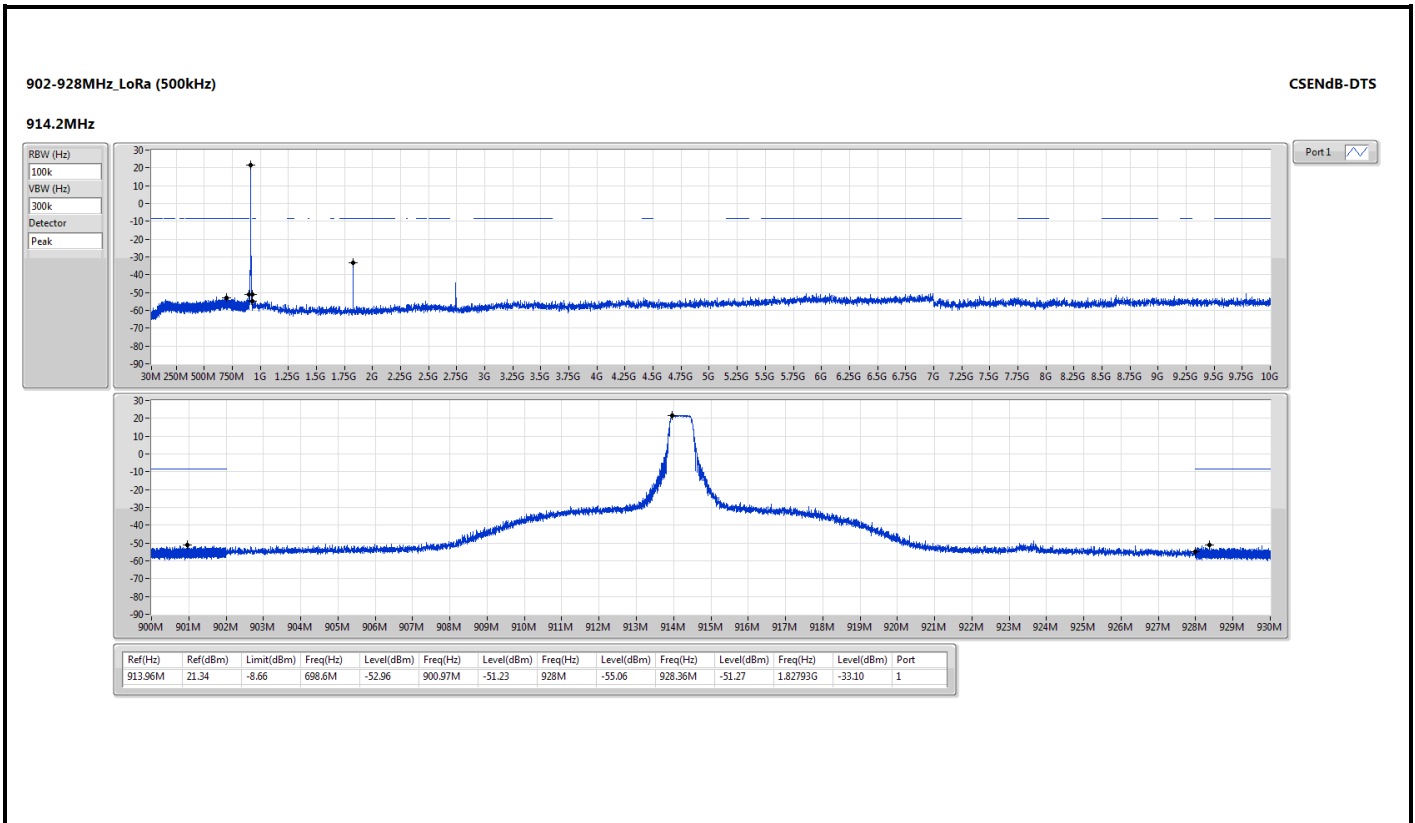
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



Mode	LoRa (500kHz)		Test Freq. (MHz)	914.2					
Polarization	Vertical								
Test By :Sean Yu Temperature(°C):23 Humidity(%):64									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2742.60	32.25	54.00	-21.75	36.21	-3.96	Average	295	252
2	2742.60	42.36	74.00	-31.64	46.32	-3.96	Peak	295	252
3	3656.80	30.69	54.00	-23.31	33.12	-2.43	Average	100	271
4	3656.80	41.84	74.00	-32.16	44.27	-2.43	Peak	100	271
5	4571.00	34.76	54.00	-19.24	35.65	-0.89	Average	280	268
6	4571.00	45.03	74.00	-28.97	45.92	-0.89	Peak	280	268

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

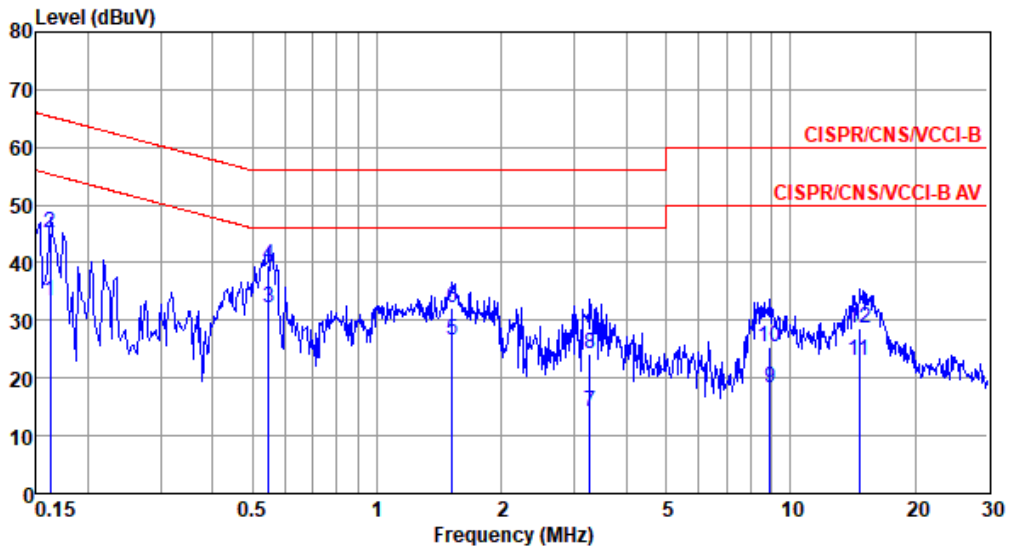






Power Phase	Line	Test Freq. (MHz)	903.0
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Test by : Joe Liao Temperature: 21°C Humidity: 60%



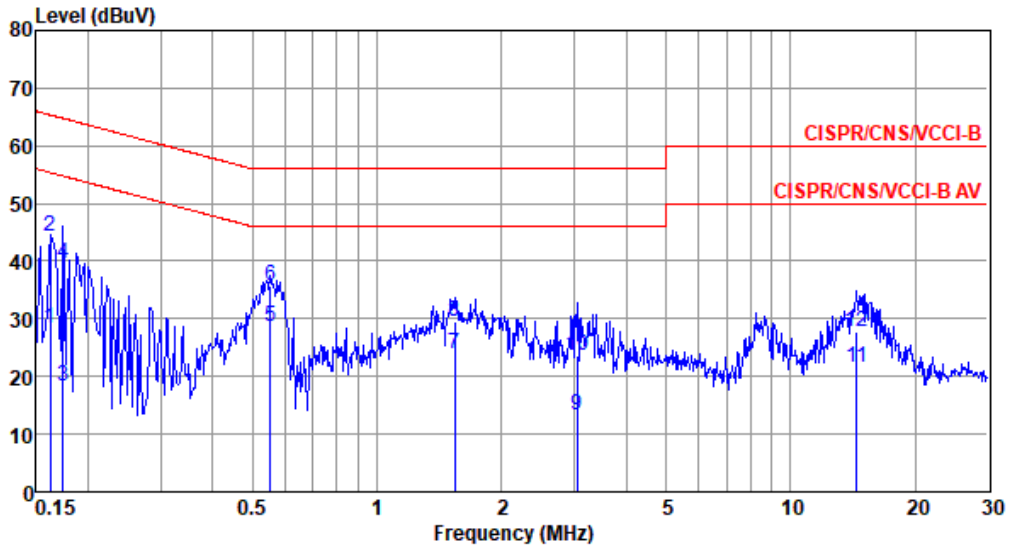
	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.162	33.37	55.34	-21.97	23.63	9.68	0.06	0.00	Average
2	0.162	45.07	65.34	-20.27	35.33	9.68	0.06	0.00	QP
3*	0.546	32.21	46.00	-13.79	22.46	9.67	0.08	0.00	Average
4	0.546	39.44	56.00	-16.56	29.69	9.67	0.08	0.00	QP
5	1.519	26.55	46.00	-19.45	16.74	9.69	0.12	0.00	Average
6	1.519	32.06	56.00	-23.94	22.25	9.69	0.12	0.00	QP
7	3.276	14.02	46.00	-31.98	4.15	9.70	0.17	0.00	Average
8	3.276	24.29	56.00	-31.71	14.42	9.70	0.17	0.00	QP
9	8.916	18.17	50.00	-31.83	8.10	9.73	0.34	0.00	Average
10	8.916	25.26	60.00	-34.74	15.19	9.73	0.34	0.00	QP
11	14.672	22.89	50.00	-27.11	12.72	9.73	0.44	0.00	Average
12	14.672	28.70	60.00	-31.30	18.53	9.73	0.44	0.00	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
 2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).



Power Phase	Neutral	Test Freq. (MHz)	903.0
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Test by : Joe Liao Temperature: 21°C Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.162	28.22	55.34	-27.12	18.55	9.61	0.06	0.00	Average
2	0.162	44.21	65.34	-21.13	34.54	9.61	0.06	0.00	QP
3	0.174	18.36	54.77	-36.41	8.69	9.61	0.06	0.00	Average
4	0.174	39.68	64.77	-25.09	30.01	9.61	0.06	0.00	QP
5*	0.552	28.78	46.00	-17.22	19.09	9.61	0.08	0.00	Average
6	0.552	35.67	56.00	-20.33	25.98	9.61	0.08	0.00	QP
7	1.544	23.81	46.00	-22.19	14.07	9.62	0.12	0.00	Average
8	1.544	29.66	56.00	-26.34	19.92	9.62	0.12	0.00	QP
9	3.041	13.27	46.00	-32.73	3.48	9.63	0.16	0.00	Average
10	3.041	23.55	56.00	-32.45	13.76	9.63	0.16	0.00	QP
11	14.440	21.58	50.00	-28.42	11.41	9.74	0.43	0.00	Average
12	14.440	27.66	60.00	-32.34	17.49	9.74	0.43	0.00	QP

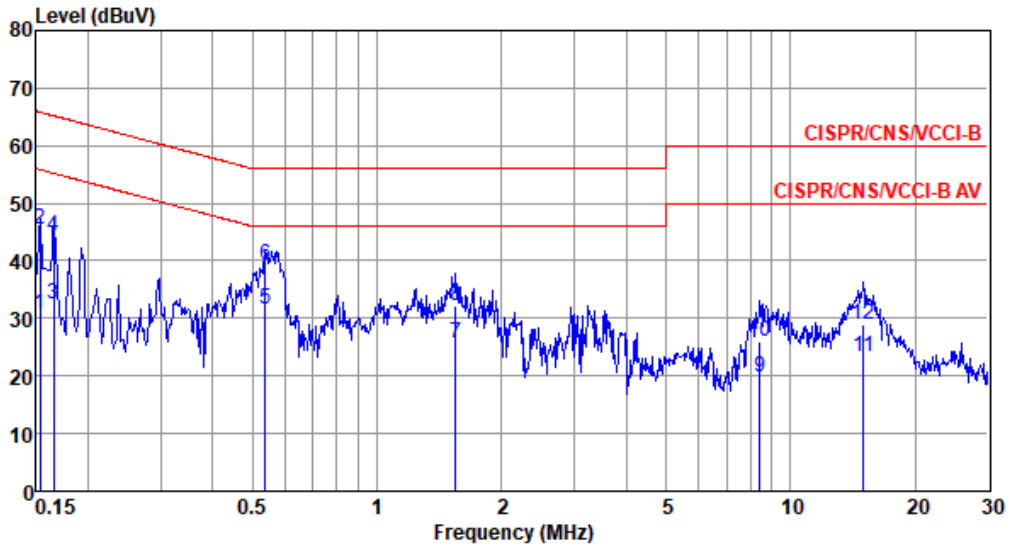
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).



Power Phase	Line	Test Freq. (MHz)	907.8
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Test by : Joe Liao Temperature: 21°C Humidity: 60%



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.153	30.72	55.82	-25.10	20.98	9.68	0.06	0.00	Average
2	0.153	45.59	65.82	-20.23	35.85	9.68	0.06	0.00	QP
3	0.165	32.35	55.21	-22.86	22.61	9.68	0.06	0.00	Average
4	0.165	44.27	65.21	-20.94	34.53	9.68	0.06	0.00	QP
5*	0.538	31.73	46.00	-14.27	21.98	9.67	0.08	0.00	Average
6	0.538	39.22	56.00	-16.78	29.47	9.67	0.08	0.00	QP
7	1.552	25.56	46.00	-20.44	15.75	9.69	0.12	0.00	Average
8	1.552	32.29	56.00	-23.71	22.48	9.69	0.12	0.00	QP
9	8.412	19.64	50.00	-30.36	9.58	9.73	0.33	0.00	Average
10	8.412	26.06	60.00	-33.94	16.00	9.73	0.33	0.00	QP
11	14.986	23.42	50.00	-26.58	13.25	9.73	0.44	0.00	Average
12	14.986	29.04	60.00	-30.96	18.87	9.73	0.44	0.00	QP

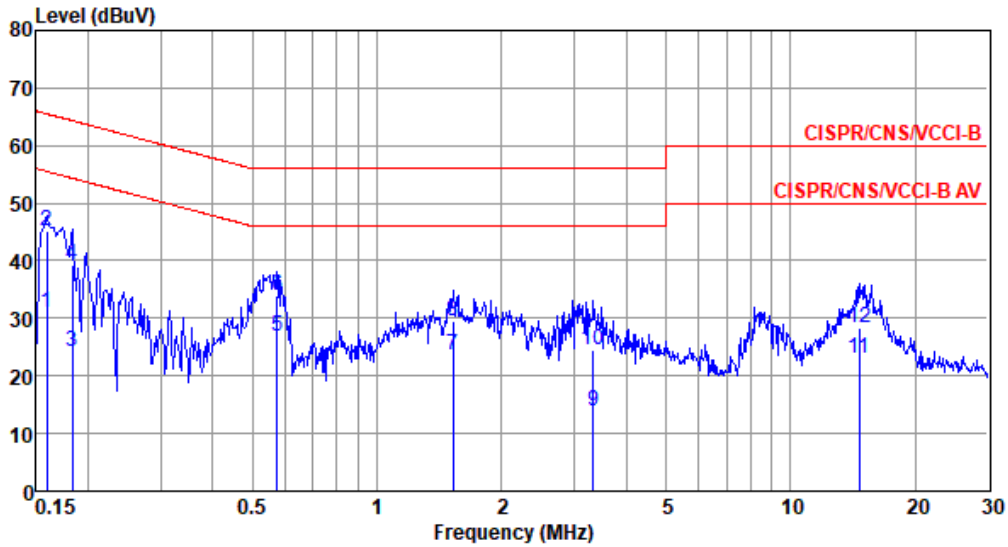
Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

Note 2: Over Limit (dB) = Level (dBUV) - Limit Line (dBUV).



Power Phase	Neutral	Test Freq. (MHz)	907.8
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Test by : Joe Liao Temperature: 21°C Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.159	30.99	55.52	-24.53	21.32	9.61	0.06	0.00	Average
2	0.159	45.20	65.52	-20.32	35.53	9.61	0.06	0.00	QP
3	0.183	24.29	54.33	-30.04	14.62	9.61	0.06	0.00	Average
4	0.183	39.28	64.33	-25.05	29.61	9.61	0.06	0.00	QP
5*	0.573	26.80	46.00	-19.20	17.11	9.61	0.08	0.00	Average
6	0.573	33.89	56.00	-22.11	24.20	9.61	0.08	0.00	QP
7	1.527	23.61	46.00	-22.39	13.87	9.62	0.12	0.00	Average
8	1.527	29.60	56.00	-26.40	19.86	9.62	0.12	0.00	QP
9	3.328	13.78	46.00	-32.22	3.98	9.63	0.17	0.00	Average
10	3.328	24.44	56.00	-31.56	14.64	9.63	0.17	0.00	QP
11	14.672	23.12	50.00	-26.88	12.93	9.75	0.44	0.00	Average
12	14.672	28.47	60.00	-31.53	18.28	9.75	0.44	0.00	QP

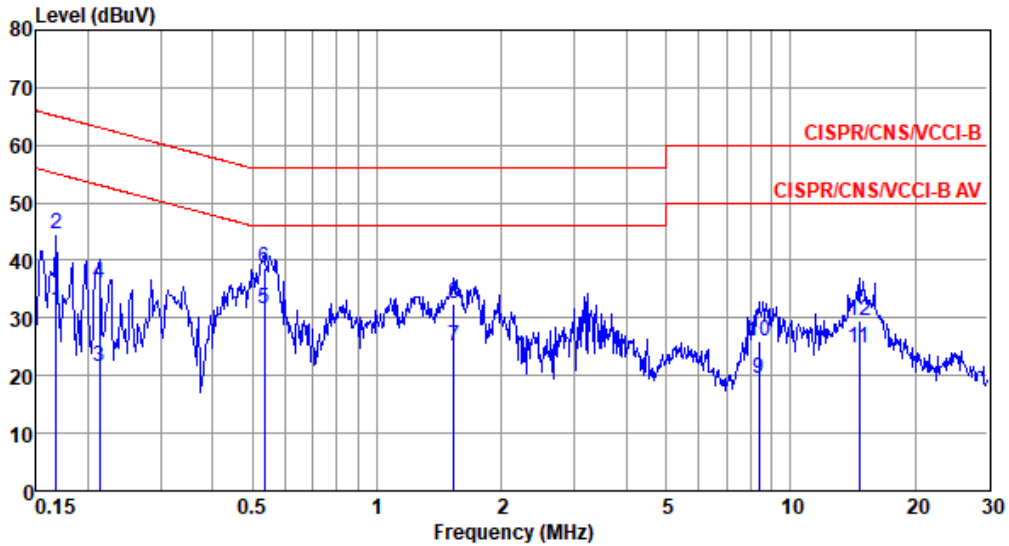
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).



Power Phase	Line	Test Freq. (MHz)	914.2
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Test by : Joe Liao Temperature: 21°C Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.168	31.41	55.08	-23.67	21.67	9.68	0.06	0.00	Average
2	0.168	44.44	65.08	-20.64	34.70	9.68	0.06	0.00	QP
3	0.213	21.53	53.10	-31.57	11.79	9.68	0.06	0.00	Average
4	0.213	35.87	63.10	-27.23	26.13	9.68	0.06	0.00	QP
5*	0.535	31.67	46.00	-14.33	21.92	9.67	0.08	0.00	Average
6	0.535	38.74	56.00	-17.26	28.99	9.67	0.08	0.00	QP
7	1.535	25.13	46.00	-20.87	15.32	9.69	0.12	0.00	Average
8	1.535	32.48	56.00	-23.52	22.67	9.69	0.12	0.00	QP
9	8.367	19.47	50.00	-30.53	9.42	9.73	0.32	0.00	Average
10	8.367	26.08	60.00	-33.92	16.03	9.73	0.32	0.00	QP
11	14.672	24.75	50.00	-25.25	14.58	9.73	0.44	0.00	Average
12	14.672	29.49	60.00	-30.51	19.32	9.73	0.44	0.00	QP

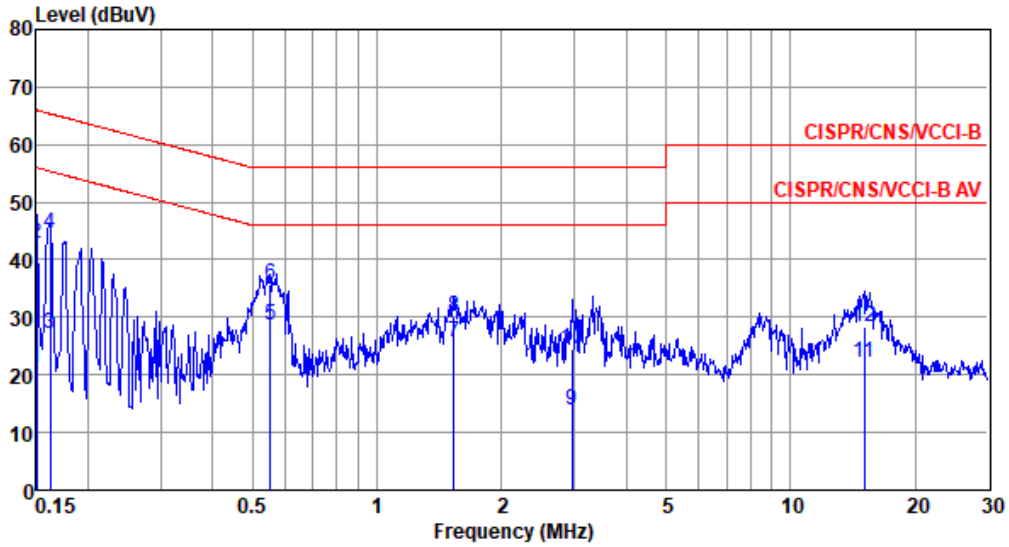
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).



Power Phase	Neutral	Test Freq. (MHz)	914.2
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Test by : Joe Liao Temperature: 21°C Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.150	21.16	56.00	-34.84	11.49	9.61	0.06	0.00	Average
2	0.150	42.78	66.00	-23.22	33.11	9.61	0.06	0.00	QP
3	0.162	27.17	55.34	-28.17	17.50	9.61	0.06	0.00	Average
4	0.162	44.62	65.34	-20.72	34.95	9.61	0.06	0.00	QP
5*	0.552	28.75	46.00	-17.25	19.06	9.61	0.08	0.00	Average
6	0.552	35.58	56.00	-20.42	25.89	9.61	0.08	0.00	QP
7	1.535	25.59	46.00	-20.41	15.85	9.62	0.12	0.00	Average
8	1.535	30.13	56.00	-25.87	20.39	9.62	0.12	0.00	QP
9	2.962	13.77	46.00	-32.23	3.98	9.63	0.16	0.00	Average
10	2.962	24.43	56.00	-31.57	14.64	9.63	0.16	0.00	QP
11	15.066	22.02	50.00	-27.98	11.83	9.75	0.44	0.00	Average
12	15.066	28.48	60.00	-31.52	18.29	9.75	0.44	0.00	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).