

FCC Radio Test Report

FCC ID : TLZ-HM610
Equipment : IEEE 802.11ah Wireless LAN Module
Brand Name : AzureWave
Model Name : AW-HM610
Applicant : AzureWave Technologies, Inc.
8F., No.94, Baozhong Rd. , Xindian
Dist., New Taipei City , Taiwan 231
Manufacturer : AzureWave Technologies, Inc.
8F., No.94, Baozhong Rd. , Xindian
Dist., New Taipei City , Taiwan 231
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 06, 2024, and testing was started from Jul. 17, 2024 and completed on Jul. 26, 2024. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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History of this test report

[illegible]

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	FCC 15.203
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	≥500kHz
3.3	15.247(b)	Maximum Conducted Output Power	PASS	Power [dBm]:30
3.4	15.247(e)	Power Spectral Density	PASS	PSD [dBm/3kHz]:8
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	Non-Restricted Bands: > 20 dBc
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	Restricted Bands: FCC 15.209

Declaration of Conformity:

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

Comments and Explanations:

None

Reviewed by: Ben Tseng

Report Producer: Julie Tseng

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Modulation	Ch. Frequency (MHz)	BWch (MHz)	Channel Number
902-928	OFDM	903.5-926.5	1	3-49 [24]
902-928	OFDM	905-925	2	6-46 [11]
902-928	OFDM	906-926	4	8-48 [6]

Band	Mode	BWch (MHz)	Nant
902-928MHz	Halow	1	1TX
902-928MHz	Halow	2	1TX
902-928MHz	Halow	4	1TX

Bandwidth							
1 MHz							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
3	903.5	15	909.5	27	915.5	39	921.5
5	904.5	17	910.5	29	916.5	41	922.5
7	905.5	19	911.5	31	917.5	43	923.5
9	906.5	21	912.5	33	918.5	45	924.5
11	907.5	23	913.5	35	919.5	47	925.5
13	908.5	25	914.5	37	920.5	49	926.5

Bandwidth					
2 MHz				4 MHz	
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
6	905	30	917	8	906
10	907	34	919	16	910
14	909	38	921	24	914
18	911	42	923	32	918
22	913	46	925	40	922
26	915	-	-	48	926

Note:

- ♦ 902-928 MHz Band uses a combination of OFDM modulation.
- ♦ BWch is the nominal channel bandwidth.

**1.1.2 Antenna Information**

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Cortec	AN0915-5001BSM	Diople	RP-Diople(M)	2

Note 1: The EUT has one antenna.

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

For SRD function:

For SRD mode (1TX/1RX)

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

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From Host system		
EUT Function	☐ Point-to-multipoint	☒ Point-to-point	
Type of EUT			
☒ Stand-alone			
☐ Combined (EUT where the radio part is fully integrated within another device)			
Combined Equipment - Brand Name / Model No.:	...		
☐ Plug-in radio (EUT intended for a variety of host systems)			
Host System - Brand Name / Model No.:	...		
☐ Other:			

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
Halow_1MHz_Nss1_1TX	0.916	0.38	7.567m	300
Halow_2MHz_Nss1_1TX	0.781	1.07	3.484m	300
Halow_4MHz_Nss1_1TX	0.704	1.52	1.805m	1k

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

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013

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

- ♦ KDB 558074 D01 v05r02

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Wayne Chiu	21.8~22.4°C / 55~58%	26/Jul/2024
RF Conducted	TH07-HY	Yuna Lin	23.2~23.7°C / 50~54%	17/Jul/2024
☒ Wenhua 3rd. (TAF: 3785)	ADD: No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist. Taoyuan City 333, Taiwan (R.O.C.)			
	TEL: 886-3-327-0868			
Test site Designation No. TW0036 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	03CH26-HY	Jack Tang	21.6~22.4°C / 53~58%	18/Jul/2024

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
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Emissions in Non-restricted Frequency Bands	0.14 dB	Confidence levels of 95%
Emissions in Restricted Frequency Bands	4.8 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TX-DTS	Tnom	20°C
-	Vnom	3.3V

2.2 Test Channel Mode

Test Software Version	NRC ModemTestTool (S/W v1.6.0,LIB v1.8.2)
-----------------------	---

Mode	Power Setting
Halow_1MHz_Nss1_1TX	-
903.5MHz	17
914.5MHz	18
926.5MHz	18
Halow_2MHz_Nss1_1TX	-
905MHz	18
915MHz	18
925MHz	18
Halow_4MHz_Nss1_1TX	-
906MHz	18
914MHz	18
926MHz	17

2.3 The Worst Case Measurement Configuration

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

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	CTX		
1	USB mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT			V

2.4 Support Equipment

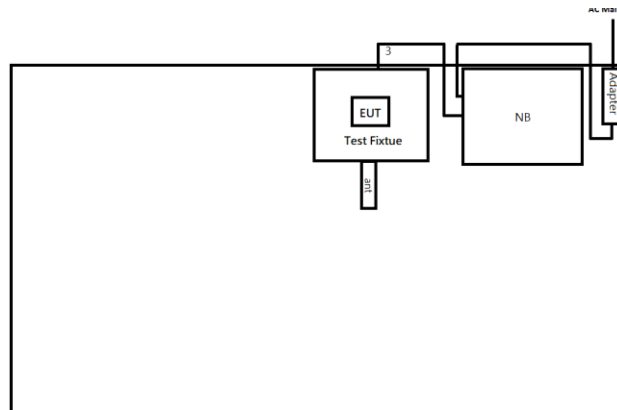
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	PP13S	-	-
2	Adapter for NB	DELL	AA90PM111	-	-
3	USB cable	Cortec	AN0915-5001BSM	-	-
4	Fixture	AzureWave	2610-I2	-	Provided by Customer
5	Antenna	Cortec	AN0915-5001BSM	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Fixture	AzureWave	2610-I2	-	Provided by Customer

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	PP13S	-	-
2	Adapter for NB	DELL	AA90PM111	-	-
3	USB cable	Cortec	AN0915-5001BSM	-	-
4	Fixture	AzureWave	2610-I2	-	Provided by Customer
5	Antenna	Cortec	AN0915-5001BSM	-	-

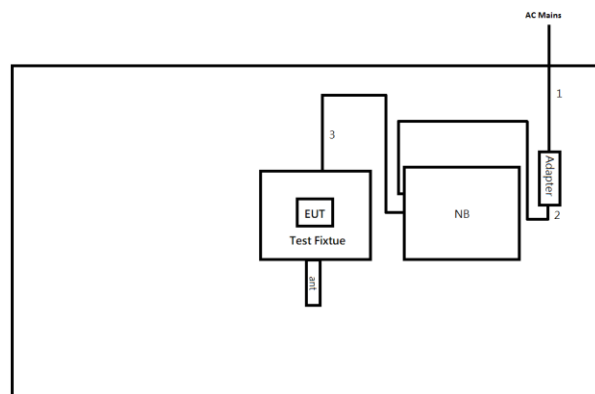
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.5	-
3	USB cable	No	1.2	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.5	-
3	USB cable	No	1.2	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

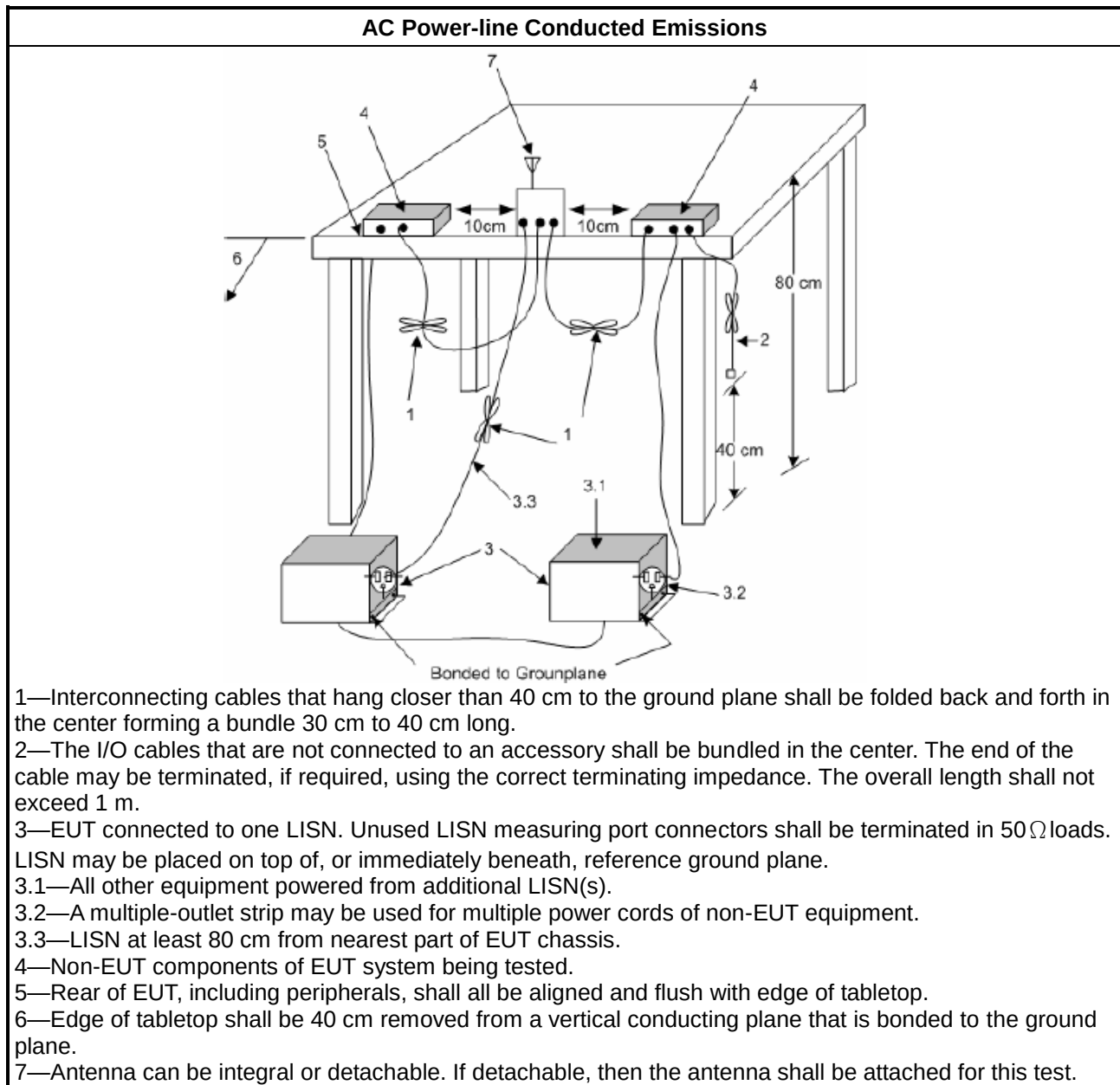
Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:

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

3.1.5 Test Setup



3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
▪	6 dB bandwidth $\geq$ 500 kHz.

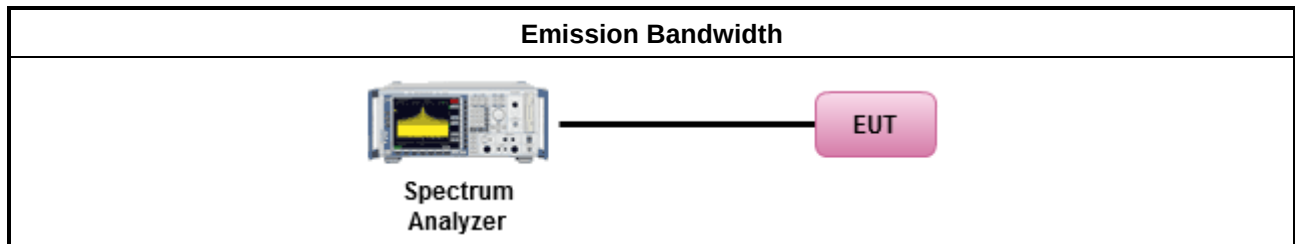
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as KDB 558074. clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
☐	Refer as RSS-Gen, clause 6.7 for for occupied bandwidth testing.
☐	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 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
e.i.r.p. Power Limit:		
	2400-2483.5 MHz Band	
	Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)	
	Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm	
	Smart antenna system (SAS)	
	-	Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	-	Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	-	Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ 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.		

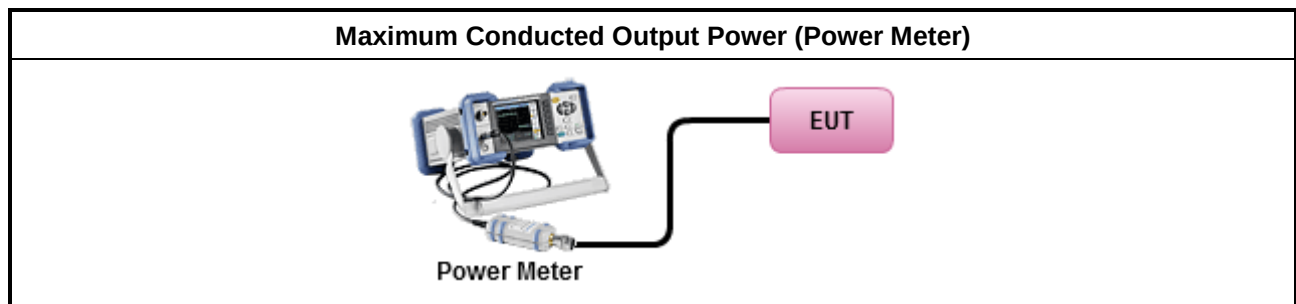
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
☐	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
☒	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as 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: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

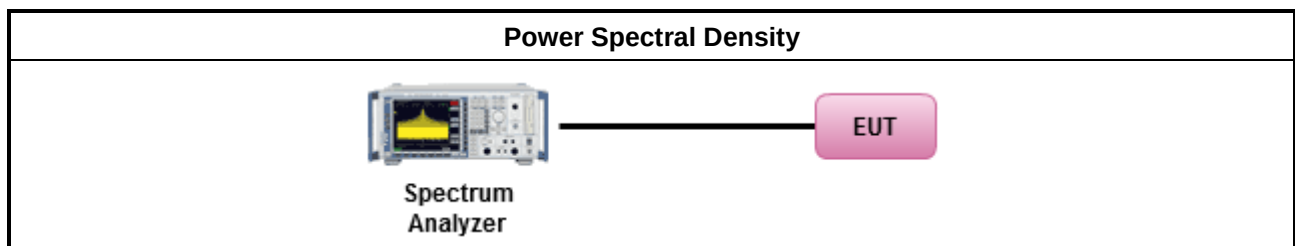
3.4.2 Measuring Instruments

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

3.4.3 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 KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
For conducted measurement.
- If The EUT supports multiple transmit chains using options given below: - Measure and sum the spectra across the outputs. Refer as 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.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 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.	

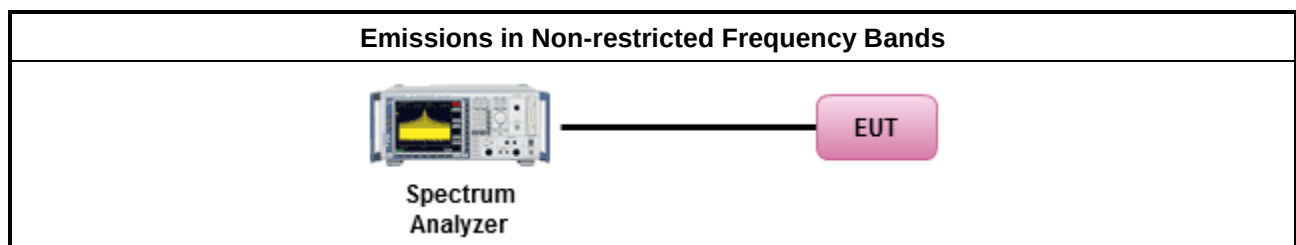
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

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

**3.6.3 Test Procedures**

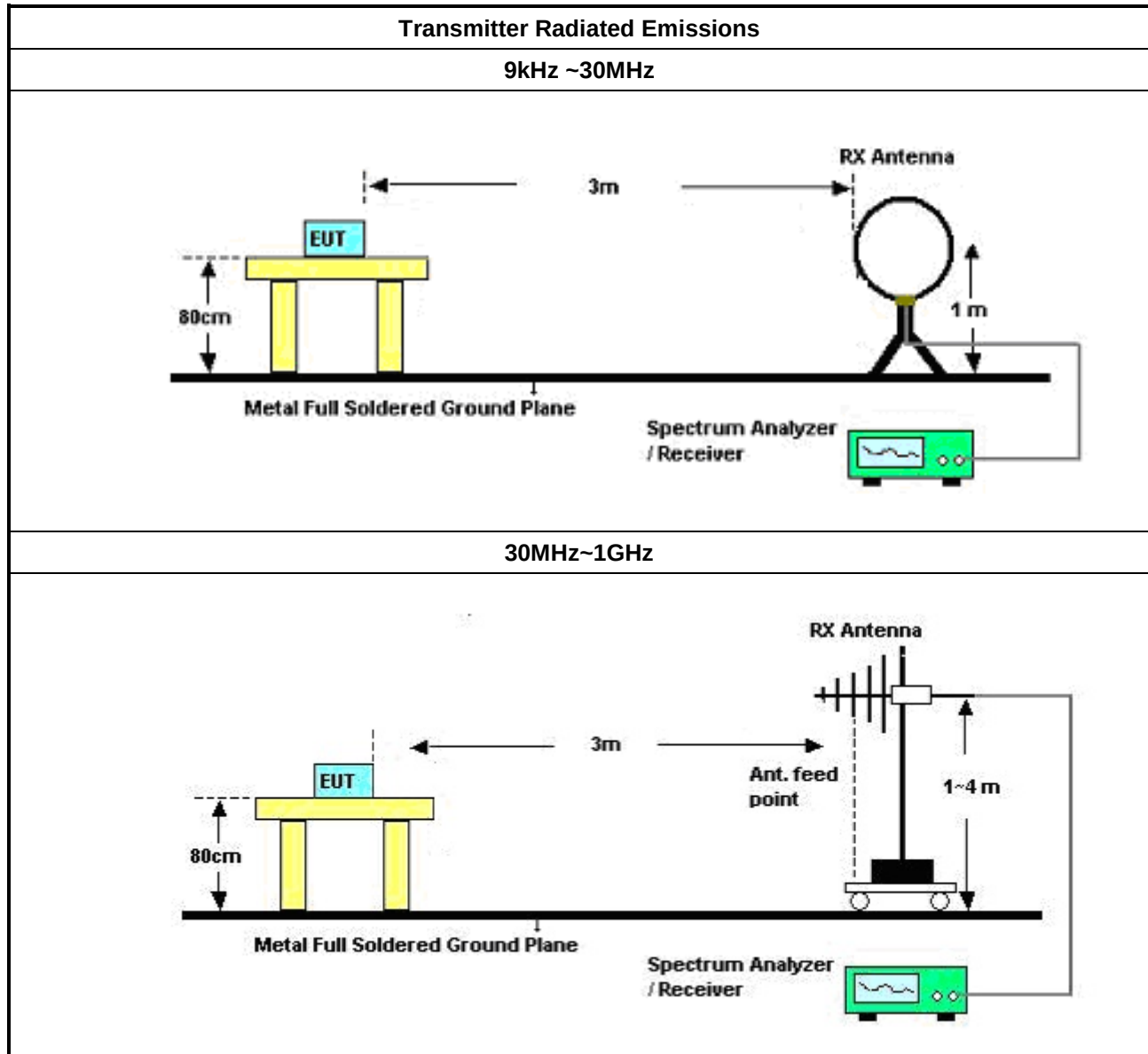
Test Method	
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
▪ For the transmitter band-edge emissions shall be measured using following options below:	
	▪ Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).

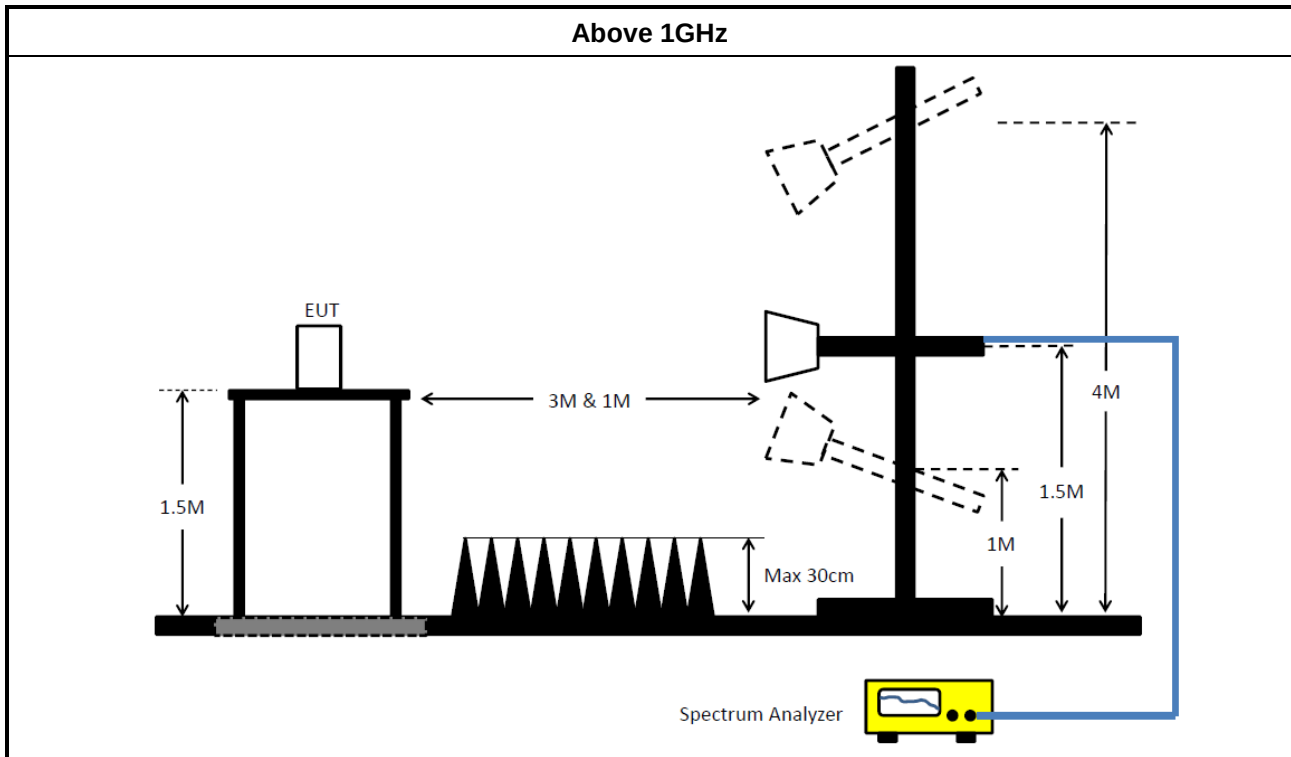
3.6.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.6.5 Test Setup





3.6.6 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.

3.6.7 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer / Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR	102051	9kHz ~ 3.6GHz	17/May/2024	16/May/2025
Two-Line V-Network	R&S	ENV 216	101274	9kHz ~ 30MHz	18/Jun/2024	17/Jun/2025
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	27/Feb/2024	26/Feb/2025
Impuls Begrenzer Puls e Limiter	SCHWARZBEC K	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	18/Oct/2023	17/Oct/2024
Software	Sporton	SENSE-EMI	V5.11.3	-	NCR	NCR

NCR: No Calibration Required.

Instrument for Radiated Test

Instrument	Manufacturer / Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH26-HY	30MHz~1GHz 3m	08/Aug/2023	07/Aug/2024
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH26-HY	1GHz~18GHz 3m	08/Aug/2023	07/Aug/2024
EMI Test Receiver	ROHDE & SCHWARZ	ESR	102318	9kHz~3.6GHz	27/Dec/2023	26/Dec/2024
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101411	10Hz~44GHz	06/Oct/2023	05/Oct/2024
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	19/Mar/2024	18/Mar/2025
Bilog Antenna & 6dB Attenuator	TESEQ & VGT	CBL 6111D & VFA 04002-06	63540/002	30MHz~1GHz	05/Jun/2024	04/Jun/2025
Double Ridged Guide Horn Antenna	SCHWARZBEC K	BBHA 9120 D	BBHA 9120 D 1534	1GHz~18GHz	21/Mar/2024	20/Mar/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB009	9kHz~1GHz	18/Oct/2023	17/Oct/2024
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB009	1GHz~40GHz	18/Oct/2023	17/Oct/2024
Preamplifier	SGH	PRAMP 903	20230515-2	30MHz~1GHz	24/May/2024	23/May/2025
Preamplifier	SGH	PRAMP 118-H	20230515-4	1GHz ~18GHz	24/May/2024	23/May/2025
SENSE-15247-FS	Sporton	V5.11.18	NA	NA	NA	NA



Instrument for Conducted Test

Instrument	Manufacturer / Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV3044	101439	10Hz~44GHz	30/Nov/2023	29/Nov/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	20/Oct/2023	19/Oct/2024
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	15/Dec/2023	14/Dec/2024
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	15/Dec/2023	14/Dec/2024
SENSE-15247_ FS	Sporton	V5.11.18	N/A	N/A	N/A	N/A



Conducted Emissions at Powerline

Appendix A

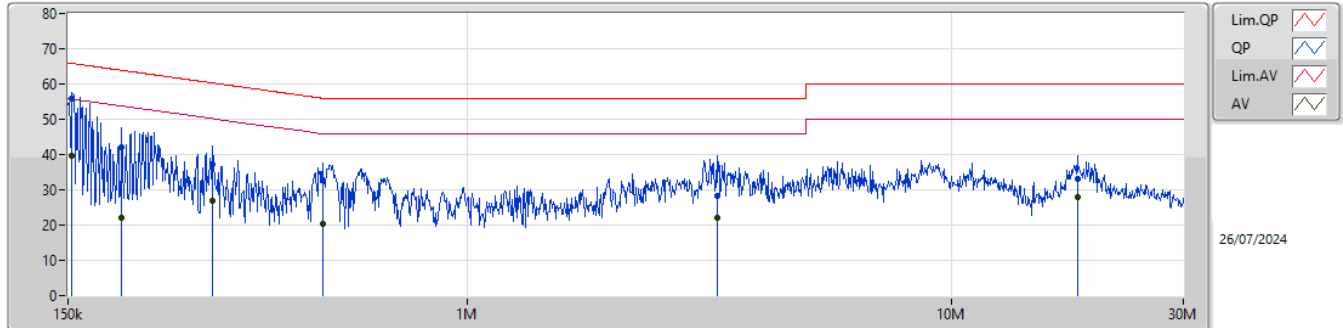
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	153.024k	55.69	65.83	-10.14	Line

Result

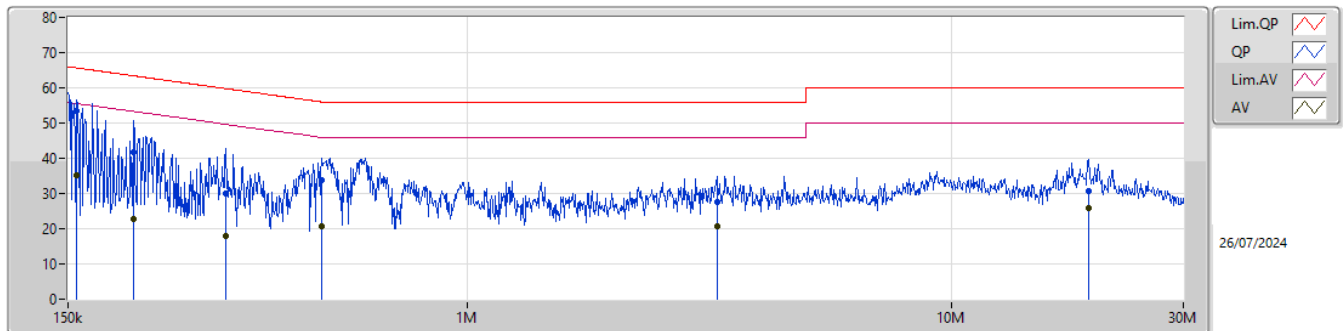
Mode	Result	Type	Freq (Hz)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	153.024k	55.69	65.83	-10.14	Line	-
Mode 1	Pass	AV	153.024k	39.80	55.83	-16.03	Line	-
Mode 1	Pass	QP	193.664k	42.05	63.88	-21.83	Line	-
Mode 1	Pass	AV	193.664k	22.23	53.88	-31.65	Line	-
Mode 1	Pass	QP	298.051k	37.34	60.30	-22.96	Line	-
Mode 1	Pass	AV	298.051k	26.80	50.30	-23.50	Line	-
Mode 1	Pass	QP	502.813k	32.70	56.00	-23.30	Line	-
Mode 1	Pass	AV	502.813k	20.34	46.00	-25.66	Line	-
Mode 1	Pass	QP	3.27M	28.20	56.00	-27.80	Line	-
Mode 1	Pass	AV	3.27M	21.96	46.00	-24.04	Line	-
Mode 1	Pass	QP	18.125M	33.01	60.00	-26.99	Line	-
Mode 1	Pass	AV	18.125M	28.01	50.00	-21.99	Line	-
Mode 1	Pass	QP	156.109k	53.59	65.67	-12.08	Neutral	-
Mode 1	Pass	AV	156.109k	35.19	55.67	-20.48	Neutral	-
Mode 1	Pass	QP	204.796k	41.83	63.42	-21.59	Neutral	-
Mode 1	Pass	AV	204.796k	22.78	53.42	-30.64	Neutral	-
Mode 1	Pass	QP	317.709k	30.04	59.77	-29.73	Neutral	-
Mode 1	Pass	AV	317.709k	18.00	49.77	-31.77	Neutral	-
Mode 1	Pass	QP	500k	33.96	56.00	-22.04	Neutral	-
Mode 1	Pass	AV	500k	20.54	46.00	-25.46	Neutral	-
Mode 1	Pass	QP	3.27M	27.49	56.00	-28.51	Neutral	-
Mode 1	Pass	AV	3.27M	20.65	46.00	-25.35	Neutral	-
Mode 1	Pass	QP	19.167M	30.74	60.00	-29.26	Neutral	-
Mode 1	Pass	AV	19.167M	25.93	50.00	-24.07	Neutral	-

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	153.024k	55.69	65.83	-10.14	19.48	Line	-	36.21	9.66	0.07	9.75						
AV	153.024k	39.80	55.83	-16.03	19.48	Line	-	20.32	9.66	0.07	9.75						
QP	193.664k	42.05	63.88	-21.83	19.43	Line	-	22.62	9.65	0.09	9.69						
AV	193.664k	22.23	53.88	-31.65	19.43	Line	-	2.80	9.65	0.09	9.69						
QP	298.051k	37.34	60.30	-22.96	19.49	Line	-	17.85	9.65	0.11	9.73						
AV	298.051k	26.80	50.30	-23.50	19.49	Line	-	7.31	9.65	0.11	9.73						
QP	502.813k	32.70	56.00	-23.30	19.53	Line	-	13.17	9.65	0.11	9.77						
AV	502.813k	20.34	46.00	-25.66	19.53	Line	-	0.81	9.65	0.11	9.77						
QP	3.27M	28.20	56.00	-27.80	19.55	Line	-	8.65	9.68	0.08	9.79						
AV	3.27M	21.96	46.00	-24.04	19.55	Line	-	2.41	9.68	0.08	9.79						
QP	18.125M	33.01	60.00	-26.99	19.62	Line	-	13.39	9.68	0.11	9.83						
AV	18.125M	28.01	50.00	-21.99	19.62	Line	-	8.39	9.68	0.11	9.83						

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	156.109k	53.59	65.67	-12.08	19.42	Neutral	-	34.17	9.60	0.07	9.75						
AV	156.109k	35.19	55.67	-20.48	19.42	Neutral	-	15.77	9.60	0.07	9.75						
QP	204.796k	41.83	63.42	-21.59	19.37	Neutral	-	22.46	9.60	0.09	9.68						
AV	204.796k	22.78	53.42	-30.64	19.37	Neutral	-	3.41	9.60	0.09	9.68						
QP	317.709k	30.04	59.77	-29.73	19.44	Neutral	-	10.60	9.60	0.11	9.73						
AV	317.709k	18.00	49.77	-31.77	19.44	Neutral	-	-1.44	9.60	0.11	9.73						
QP	500k	33.96	56.00	-22.04	19.48	Neutral	-	14.48	9.60	0.11	9.77						
AV	500k	20.54	46.00	-25.46	19.48	Neutral	-	1.06	9.60	0.11	9.77						
QP	3.27M	27.49	56.00	-28.51	19.49	Neutral	-	8.00	9.62	0.08	9.79						
AV	3.27M	20.65	46.00	-25.35	19.49	Neutral	-	1.16	9.62	0.08	9.79						
QP	19.167M	30.74	60.00	-29.26	19.62	Neutral	-	11.12	9.67	0.12	9.83						
AV	19.167M	25.93	50.00	-24.07	19.62	Neutral	-	6.31	9.67	0.12	9.83						

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
902-928MHz	-	-	-	-	-
Halow_1MHz_Nss1_1TX	865k	868.368k	868KD1D	842.5k	855.4k
Halow_2MHz_Nss1_1TX	1.783M	1.778M	1M78D1D	1.763M	1.774M
Halow_4MHz_Nss1_1TX	3.57M	3.605M	3M61D1D	3.495M	3.59M

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)
Halow_1MHz_Nss1_1TX	-	-	-	-
903.5MHz	Pass	500k	842.5k	855.4k
914.5MHz	Pass	500k	857.5k	868.368k
926.5MHz	Pass	500k	865k	864.054k
Halow_2MHz_Nss1_1TX	-	-	-	-
905MHz	Pass	500k	1.783M	1.774M
915MHz	Pass	500k	1.783M	1.777M
925MHz	Pass	500k	1.763M	1.778M
Halow_4MHz_Nss1_1TX	-	-	-	-
906MHz	Pass	500k	3.495M	3.605M
914MHz	Pass	500k	3.57M	3.59M
926MHz	Pass	500k	3.56M	3.595M

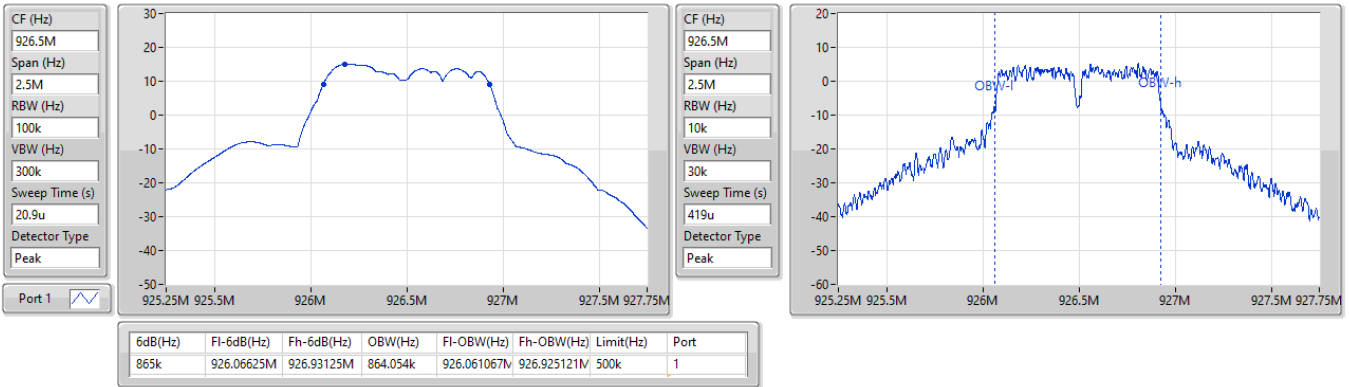
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

902-928MHz_Halow_1MHz_Nss1_1TX

EBW-DTS

926.5MHz

17/07/2024

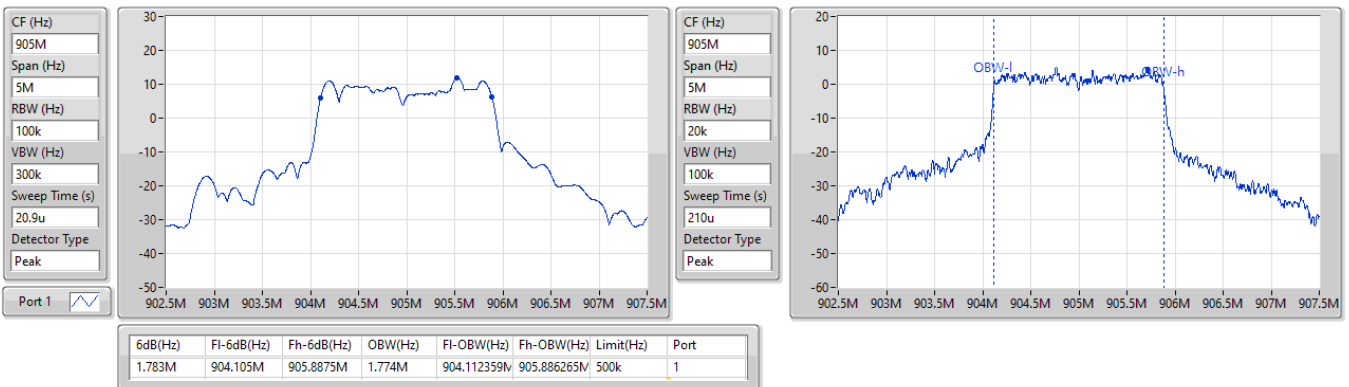


902-928MHz_Halow_2MHz_Nss1_1TX

EBW-DTS

905MHz

17/07/2024

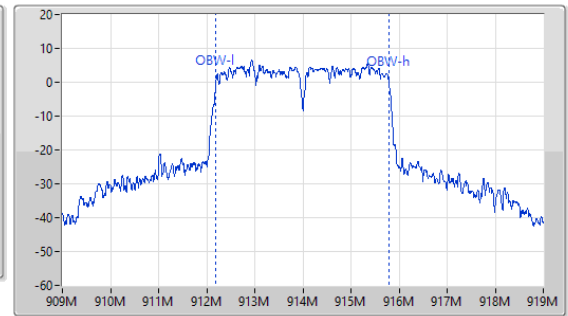
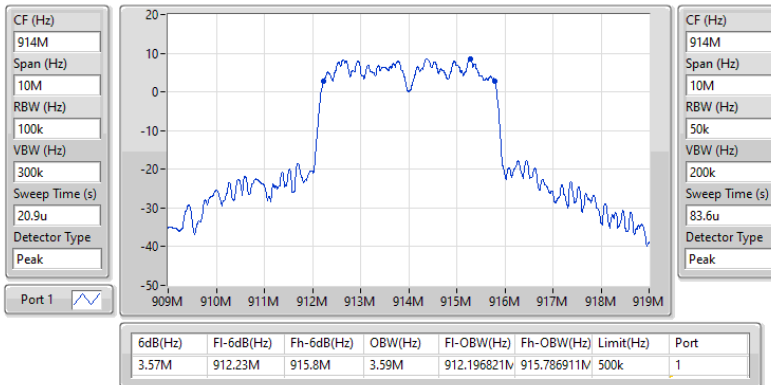


902-928MHz_Halow_4MHz_Nss1_1TX

EBW-DTS

914MHz

17/07/2024





Summary

Mode	Total Power (dBm)	Total Power (W)
902-928MHz	-	-
Halow_1MHz_Nss1_1TX	23.58	0.22803
Halow_2MHz_Nss1_1TX	23.72	0.23550
Halow_4MHz_Nss1_1TX	23.75	0.23714



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
Halow_1MHz_Nss1_1TX	-	-	-	-
903.5MHz	Pass	2.00	23.43	30.00
914.5MHz	Pass	2.00	23.58	30.00
926.5MHz	Pass	2.00	23.52	30.00
Halow_2MHz_Nss1_1TX	-	-	-	-
905MHz	Pass	2.00	23.72	30.00
915MHz	Pass	2.00	23.71	30.00
925MHz	Pass	2.00	23.62	30.00
Halow_4MHz_Nss1_1TX	-	-	-	-
906MHz	Pass	2.00	23.75	30.00
914MHz	Pass	2.00	23.66	30.00
926MHz	Pass	2.00	23.39	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.



Summary

Mode	Total Power (dBm)	Total Power (W)
902-928MHz	-	-
Halow_1MHz_Nss1_1TX	16.97	0.04977
Halow_2MHz_Nss1_1TX	16.95	0.04955
Halow_4MHz_Nss1_1TX	16.72	0.04699



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
Halow_1MHz_Nss1_1TX	-	-	-	-
903.5MHz	Pass	2.00	16.41	30.00
914.5MHz	Pass	2.00	16.97	30.00
926.5MHz	Pass	2.00	16.86	30.00
Halow_2MHz_Nss1_1TX	-	-	-	-
905MHz	Pass	2.00	16.95	30.00
915MHz	Pass	2.00	16.89	30.00
925MHz	Pass	2.00	16.87	30.00
Halow_4MHz_Nss1_1TX	-	-	-	-
906MHz	Pass	2.00	16.72	30.00
914MHz	Pass	2.00	16.67	30.00
926MHz	Pass	2.00	15.73	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.



Summary

Mode	PD (dBm/RBW)
902-928MHz	-
Halow_1MHz_Nss1_1TX	1.50
Halow_2MHz_Nss1_1TX	-1.36
Halow_4MHz_Nss1_1TX	-4.64

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Halow_1MHz_Nss1_1TX	-	-	-	-
903.5MHz	Pass	2.00	0.57	8.00
914.5MHz	Pass	2.00	1.50	8.00
926.5MHz	Pass	2.00	1.06	8.00
Halow_2MHz_Nss1_1TX	-	-	-	-
905MHz	Pass	2.00	-1.36	8.00
915MHz	Pass	2.00	-1.88	8.00
925MHz	Pass	2.00	-1.99	8.00
Halow_4MHz_Nss1_1TX	-	-	-	-
906MHz	Pass	2.00	-4.64	8.00
914MHz	Pass	2.00	-4.80	8.00
926MHz	Pass	2.00	-5.33	8.00

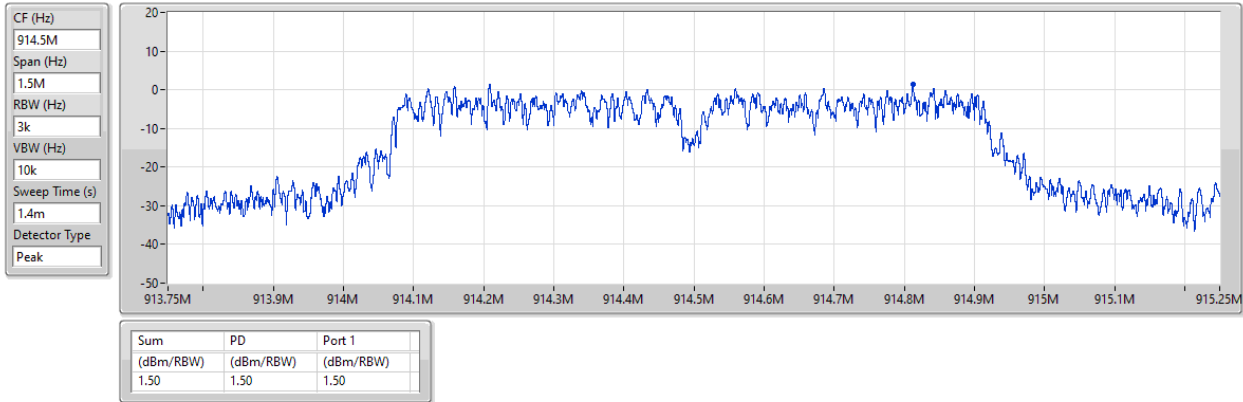
DG = Directional Gain; RBW = 3kHz;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
 Inf = There's no restriction for the limit.

902-928MHz_Halow_1MHz_Nss1_1TX

PSD

914.5MHz

17/07/2024

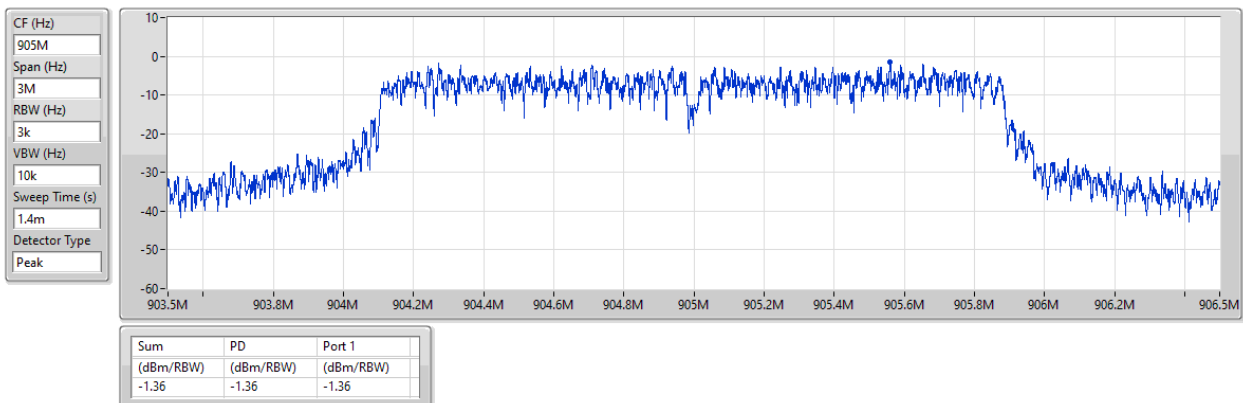


902-928MHz_Halow_2MHz_Nss1_1TX

PSD

905MHz

17/07/2024

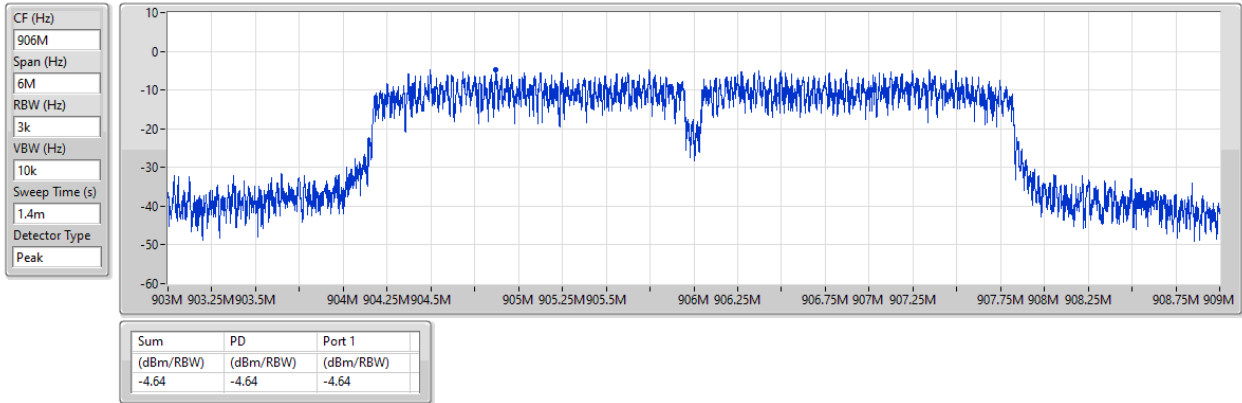


902-928MHz_Halow_4MHz_Nss1_1TX

PSD

906MHz

17/07/2024



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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halow_1MHz_Nss1_1TX	Pass	914.84M	16.23	-3.77	772.94M	-56.10	902M	-22.72	902M	-22.49	928.56M	-53.12	1.80681G	-37.82	1
Halow_2MHz_Nss1_1TX	Pass	905.64M	13.51	-6.49	768.26M	-56.47	900.92M	-52.54	928M	-29.07	928.28M	-31.17	1.84867G	-46.01	1
Halow_4MHz_Nss1_1TX	Pass	904.81M	10.31	-9.69	729.49M	-56.47	902M	-54.08	928M	-12.04	928M	-17.22	1.85094G	-45.87	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
Halow_1MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
903.5MHz	Pass	914.84M	16.23	-3.77	772.94M	-56.10	902M	-22.72	902M	-22.49	928.56M	-53.12	1.80681G	-37.82	1
914.5MHz	Pass	914.84M	16.23	-3.77	195.29M	-57.05	895.56M	-53.46	902M	-55.17	934.8M	-53.94	1.82831G	-37.53	1
926.5MHz	Pass	914.84M	16.23	-3.77	33.41M	-56.63	885.8M	-53.49	928M	-25.34	928.08M	-25.46	1.85207G	-39.53	1
Halow_2MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
905MHz	Pass	905.64M	13.51	-6.49	686.89M	-56.21	902M	-32.72	902M	-33.02	931.88M	-53.93	1.80907G	-43.82	1
915MHz	Pass	905.64M	13.51	-6.49	831.73M	-56.90	901.68M	-53.29	928M	-54.20	941.48M	-53.32	1.83057G	-42.62	1
925MHz	Pass	905.64M	13.51	-6.49	768.26M	-56.47	900.92M	-52.54	928M	-29.07	928.28M	-31.17	1.84867G	-46.01	1
Halow_4MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
906MHz	Pass	904.81M	10.31	-9.69	864.11M	-57.11	901.92M	-23.89	902M	-21.45	930.6M	-53.60	1.81133G	-41.98	1
914MHz	Pass	904.81M	10.31	-9.69	817.25M	-57.36	901.76M	-46.21	902M	-51.55	929.4M	-52.54	1.82604G	-43.94	1
926MHz	Pass	904.81M	10.31	-9.69	729.49M	-56.47	902M	-54.08	928M	-12.04	928M	-17.22	1.85094G	-45.87	1

902-928MHz_Halow_1MHz_Nss1_1TX

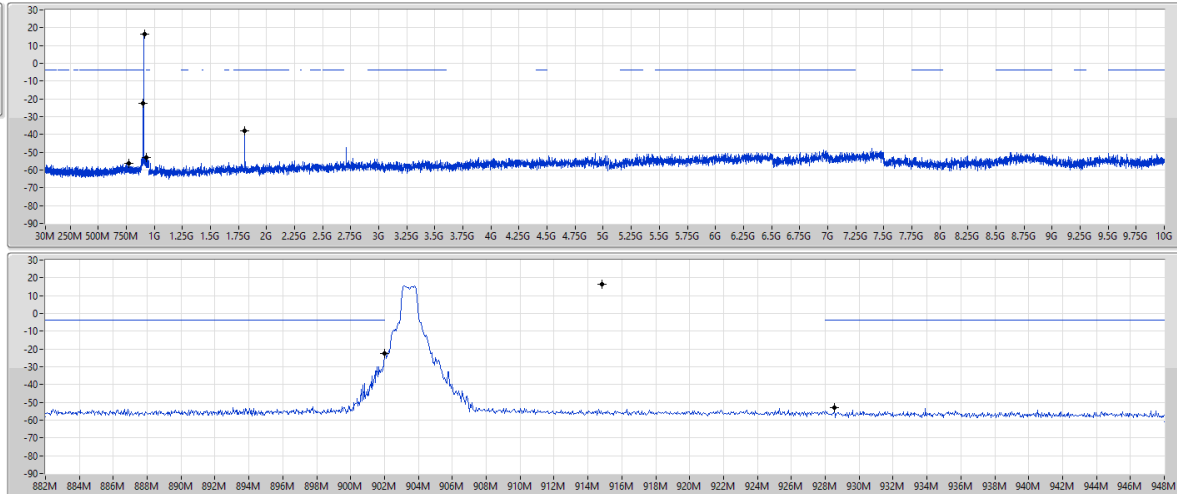
CSEndB-DTS

903.5MHz

17/07/2024

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Port 1



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
914.84M	16.23	-3.77	772.94M	-56.10	902M	-22.72	902M	-22.49	928.56M	-53.12	1.80681G	-37.82	1

902-928MHz_Halow_2MHz_Nss1_1TX

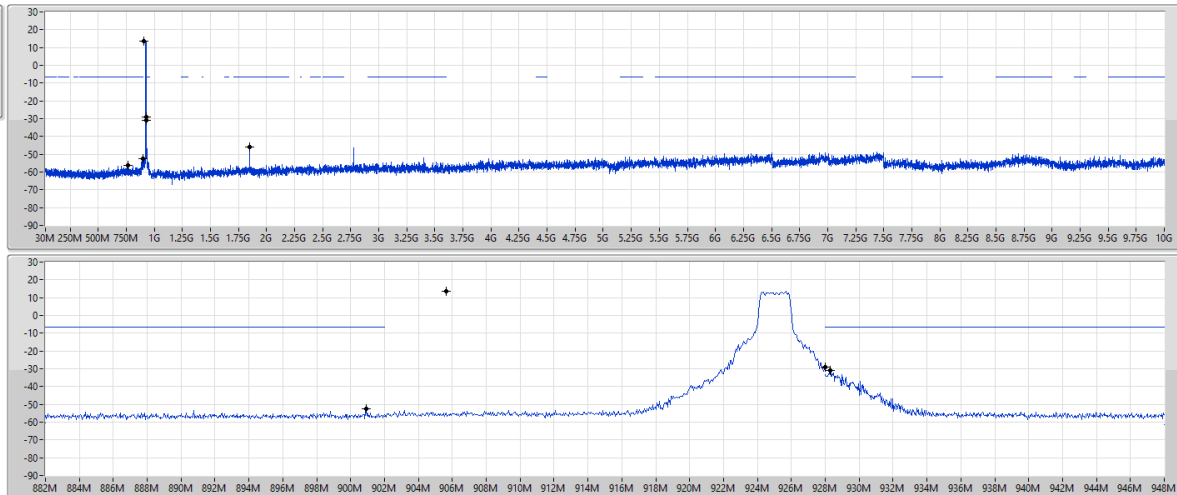
CSEndB-DTS

925MHz

17/07/2024

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Port 1



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
905.64M	13.51	-6.49	768.26M	-56.47	900.92M	-52.54	928M	-29.07	928.28M	-31.17	1.84867G	-46.01	1

902-928MHz_Halow_4MHz_Nss1_1TX

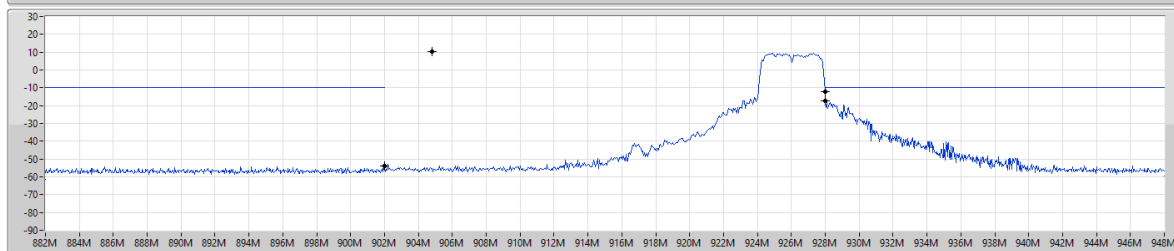
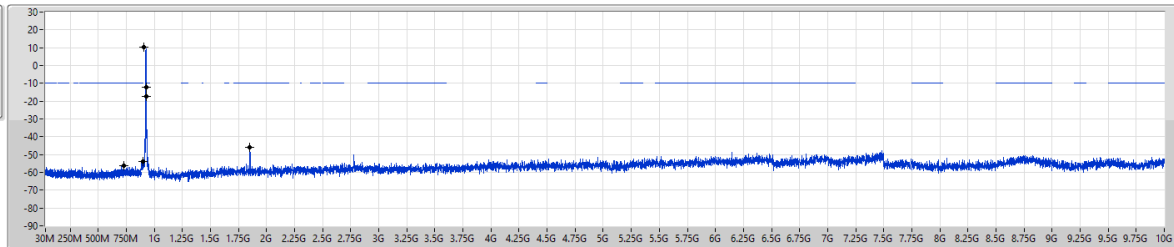
CSEndB-DTS

926MHz

17/07/2024

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Port 1



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
904.81M	10.31	-9.69	729.49M	-56.47	902M	-54.08	928M	-12.04	928M	-17.22	1.85094G	-45.87	1



Summary

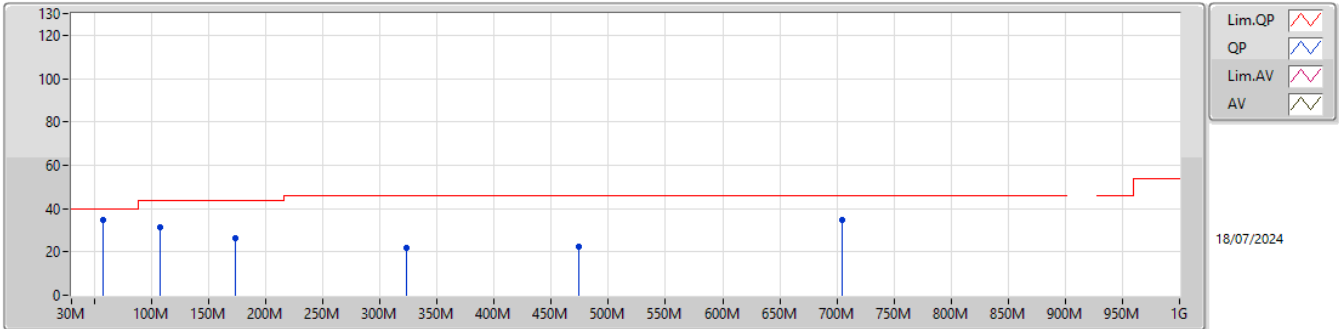
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
902-928MHz	-	-	-	-	-	-	-	-	-	-
Halow_4MHz_Nss1_1TX	Pass	PK	57.16M	34.76	40.00	-5.24	3	Vertical	0	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Halow_4MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
906MHz	Pass	PK	57.16M	34.76	40.00	-5.24	3	Vertical	0	1.00
906MHz	Pass	PK	107.6M	31.27	43.50	-12.23	3	Vertical	0	1.00
906MHz	Pass	PK	173.56M	26.23	43.50	-17.27	3	Vertical	0	1.00
906MHz	Pass	PK	322.94M	21.81	46.00	-24.19	3	Vertical	0	1.00
906MHz	Pass	PK	474.26M	22.47	46.00	-23.53	3	Vertical	0	1.00
906MHz	Pass	PK	705.12M	34.61	46.00	-11.39	3	Vertical	0	1.00
906MHz	Pass	PK	61.04M	31.66	40.00	-8.34	3	Horizontal	360	1.00
906MHz	Pass	PK	191.02M	32.93	43.50	-10.57	3	Horizontal	360	1.00
906MHz	Pass	PK	245.34M	29.87	46.00	-16.13	3	Horizontal	360	1.00
906MHz	Pass	PK	363.68M	27.50	46.00	-18.50	3	Horizontal	360	1.00
906MHz	Pass	PK	546.04M	23.49	46.00	-22.51	3	Horizontal	360	1.00
906MHz	Pass	PK	757.5M	29.13	46.00	-16.87	3	Horizontal	360	1.00

902-928MHz_Halow_4MHz_Nss1_1TX

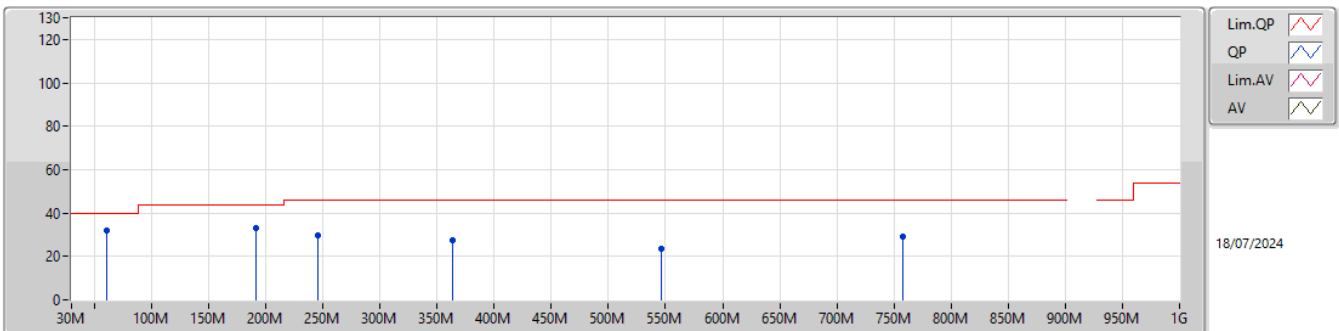
906MHz_USB



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	57.16M	34.76	40.00	-5.24	-31.87	3	Vertical	0	1.00	66.63	12.09	0.72	44.68
PK	107.6M	31.27	43.50	-12.23	-26.68	3	Vertical	0	1.00	57.95	16.92	1.00	44.60
PK	173.56M	26.23	43.50	-17.27	-27.80	3	Vertical	0	1.00	54.03	15.56	1.25	44.61
PK	322.94M	21.81	46.00	-24.19	-22.90	3	Vertical	0	1.00	44.71	19.69	1.69	44.28
PK	474.26M	22.47	46.00	-23.53	-18.28	3	Vertical	0	1.00	40.75	23.71	2.01	44.00
PK	705.12M	34.61	46.00	-11.39	-14.62	3	Vertical	0	1.00	49.23	26.86	2.44	43.92

902-928MHz_Halow_4MHz_Nss1_1TX

906MHz_USB



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	61.04M	31.66	40.00	-8.34	-32.02	3	Horizontal	360	1.00	63.68	11.92	0.76	44.70
PK	191.02M	32.93	43.50	-10.57	-28.34	3	Horizontal	360	1.00	61.27	14.90	1.32	44.56
PK	245.34M	29.87	46.00	-16.13	-24.90	3	Horizontal	360	1.00	54.77	18.08	1.47	44.45
PK	363.68M	27.50	46.00	-18.50	-21.41	3	Horizontal	360	1.00	48.91	21.02	1.76	44.19
PK	546.04M	23.49	46.00	-22.51	-16.45	3	Horizontal	360	1.00	39.94	25.32	2.18	43.95
PK	757.5M	29.13	46.00	-16.87	-12.90	3	Horizontal	360	1.00	42.03	28.45	2.51	43.86



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
902-928MHz	-	-	-	-	-	-	-	-	-	-
Halow_1MHz_Nss1_1TX	Pass	AV	2.77952G	31.10	54.00	-22.90	3	Horizontal	320	1.09
Halow_2MHz_Nss1_1TX	Pass	AV	2.77492G	29.34	54.00	-24.66	3	Horizontal	320	1.00
Halow_4MHz_Nss1_1TX	Pass	AV	3.704G	29.76	54.00	-24.24	3	Vertical	207	2.96

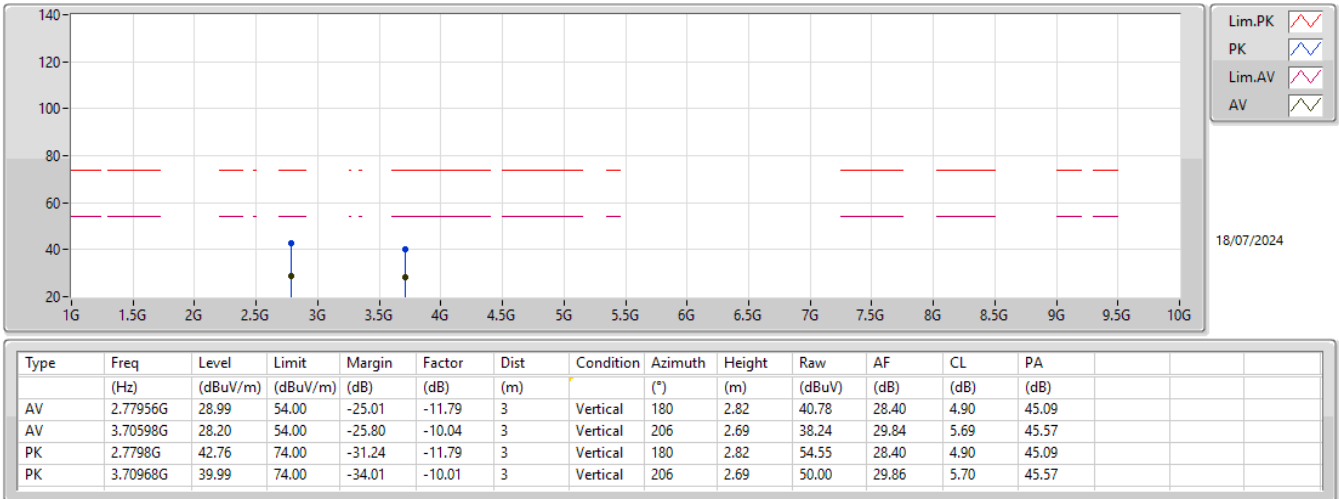
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Halow_1MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
903.5MHz	Pass	AV	2.71038G	25.57	54.00	-28.43	3	Vertical	173	2.62
903.5MHz	Pass	AV	3.61402G	26.94	54.00	-27.06	3	Vertical	292	1.15
903.5MHz	Pass	PK	2.70996G	38.34	74.00	-35.66	3	Vertical	173	2.62
903.5MHz	Pass	PK	3.61832G	39.46	74.00	-34.54	3	Vertical	292	1.15
903.5MHz	Pass	AV	2.71072G	26.08	54.00	-27.92	3	Horizontal	270	1.50
903.5MHz	Pass	AV	3.60958G	26.46	54.00	-27.54	3	Horizontal	113	2.07
903.5MHz	Pass	PK	2.71116G	38.29	74.00	-35.71	3	Horizontal	270	1.50
903.5MHz	Pass	PK	3.61814G	39.54	74.00	-34.46	3	Horizontal	113	2.07
914.5MHz	Pass	AV	2.7434G	27.21	54.00	-26.79	3	Vertical	181	2.56
914.5MHz	Pass	AV	3.65796G	27.50	54.00	-26.50	3	Vertical	205	2.31
914.5MHz	Pass	PK	2.744G	39.91	74.00	-34.09	3	Vertical	181	2.56
914.5MHz	Pass	PK	3.6576G	39.80	74.00	-34.20	3	Vertical	205	2.31
914.5MHz	Pass	AV	2.74362G	28.67	54.00	-25.33	3	Horizontal	317	1.28
914.5MHz	Pass	AV	3.65514G	26.55	54.00	-27.45	3	Horizontal	196	1.50
914.5MHz	Pass	PK	2.74366G	42.43	74.00	-31.57	3	Horizontal	317	1.28
914.5MHz	Pass	PK	3.65352G	39.22	74.00	-34.78	3	Horizontal	196	1.50
926.5MHz	Pass	AV	2.77956G	28.99	54.00	-25.01	3	Vertical	180	2.82
926.5MHz	Pass	AV	3.70598G	28.20	54.00	-25.80	3	Vertical	206	2.69
926.5MHz	Pass	PK	2.7798G	42.76	74.00	-31.24	3	Vertical	180	2.82
926.5MHz	Pass	PK	3.70968G	39.99	74.00	-34.01	3	Vertical	206	2.69
926.5MHz	Pass	AV	2.77952G	31.10	54.00	-22.90	3	Horizontal	320	1.09
926.5MHz	Pass	AV	3.70978G	26.79	54.00	-27.21	3	Horizontal	61	1.50
926.5MHz	Pass	PK	2.77934G	45.19	74.00	-28.81	3	Horizontal	320	1.09
926.5MHz	Pass	PK	3.70974G	39.49	74.00	-34.51	3	Horizontal	61	1.50
Halow_2MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
905MHz	Pass	AV	2.7155G	25.62	54.00	-28.38	3	Vertical	181	1.50
905MHz	Pass	AV	3.61994G	28.20	54.00	-25.80	3	Vertical	205	2.79
905MHz	Pass	PK	2.71586G	37.54	74.00	-36.46	3	Vertical	181	1.50
905MHz	Pass	PK	3.6238G	39.32	74.00	-34.68	3	Vertical	205	2.79
905MHz	Pass	AV	2.71476G	26.43	54.00	-27.57	3	Horizontal	323	1.07
905MHz	Pass	AV	3.619G	27.05	54.00	-26.95	3	Horizontal	257	1.50
905MHz	Pass	PK	2.7159G	38.39	74.00	-35.61	3	Horizontal	323	1.07
905MHz	Pass	PK	3.62228G	39.03	74.00	-34.97	3	Horizontal	257	1.50
915MHz	Pass	AV	2.74528G	26.66	54.00	-27.34	3	Vertical	203	2.50
915MHz	Pass	AV	3.66G	27.85	54.00	-26.15	3	Vertical	211	2.39
915MHz	Pass	PK	2.74602G	39.60	74.00	-34.40	3	Vertical	203	2.50
915MHz	Pass	PK	3.65666G	39.58	74.00	-34.42	3	Vertical	211	2.39
915MHz	Pass	AV	2.74492G	27.76	54.00	-26.24	3	Horizontal	320	1.26
915MHz	Pass	AV	3.65524G	27.04	54.00	-26.96	3	Horizontal	222	2.94
915MHz	Pass	PK	2.74412G	40.46	74.00	-33.54	3	Horizontal	320	1.26
915MHz	Pass	PK	3.66136G	39.29	74.00	-34.71	3	Horizontal	222	2.94
925MHz	Pass	AV	2.77486G	27.86	54.00	-26.14	3	Vertical	179	2.89
925MHz	Pass	AV	3.70002G	28.95	54.00	-25.05	3	Vertical	208	2.88
925MHz	Pass	PK	2.77406G	41.37	74.00	-32.63	3	Vertical	179	2.89
925MHz	Pass	PK	3.69982G	39.73	74.00	-34.27	3	Vertical	208	2.88
925MHz	Pass	AV	2.77492G	29.34	54.00	-24.66	3	Horizontal	320	1.00
925MHz	Pass	AV	3.6999G	27.54	54.00	-26.46	3	Horizontal	172	1.50
925MHz	Pass	PK	2.77662G	42.80	74.00	-31.20	3	Horizontal	320	1.00
925MHz	Pass	PK	3.69818G	40.05	74.00	-33.95	3	Horizontal	172	1.50
Halow_4MHz_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
906MHz	Pass	AV	2.71336G	26.31	54.00	-27.69	3	Vertical	230	1.85
906MHz	Pass	AV	3.62394G	28.12	54.00	-25.88	3	Vertical	142	1.50
906MHz	Pass	PK	2.72024G	37.89	74.00	-36.11	3	Vertical	230	1.85
906MHz	Pass	PK	3.62324G	39.18	74.00	-34.82	3	Vertical	142	1.50
906MHz	Pass	AV	2.71766G	26.53	54.00	-27.47	3	Horizontal	264	1.20
906MHz	Pass	AV	3.62068G	27.83	54.00	-26.17	3	Horizontal	121	1.50
906MHz	Pass	PK	2.72138G	37.87	74.00	-36.13	3	Horizontal	264	1.20
906MHz	Pass	PK	3.62228G	39.02	74.00	-34.98	3	Horizontal	121	1.50
914MHz	Pass	AV	2.74036G	26.20	54.00	-27.80	3	Vertical	240	1.50
914MHz	Pass	AV	3.65584G	28.34	54.00	-25.66	3	Vertical	216	1.31

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
914MHz	Pass	PK	2.7436G	38.06	74.00	-35.94	3	Vertical	240	1.50
914MHz	Pass	PK	3.65398G	39.76	74.00	-34.24	3	Vertical	216	1.31
914MHz	Pass	AV	2.74296G	27.56	54.00	-26.44	3	Horizontal	322	1.08
914MHz	Pass	AV	3.655G	27.95	54.00	-26.05	3	Horizontal	336	1.50
914MHz	Pass	PK	2.74338G	38.82	74.00	-35.18	3	Horizontal	322	1.08
914MHz	Pass	PK	3.66082G	39.30	74.00	-34.70	3	Horizontal	336	1.50
926MHz	Pass	AV	2.78074G	26.47	54.00	-27.53	3	Vertical	253	1.50
926MHz	Pass	AV	3.704G	29.76	54.00	-24.24	3	Vertical	207	2.96
926MHz	Pass	PK	2.77582G	37.72	74.00	-36.28	3	Vertical	253	1.50
926MHz	Pass	PK	3.70274G	39.66	74.00	-34.34	3	Vertical	207	2.96
926MHz	Pass	AV	2.77872G	28.68	54.00	-25.32	3	Horizontal	318	1.27
926MHz	Pass	AV	3.70098G	28.16	54.00	-25.84	3	Horizontal	126	2.46
926MHz	Pass	PK	2.77564G	40.70	74.00	-33.30	3	Horizontal	318	1.27
926MHz	Pass	PK	3.70704G	39.60	74.00	-34.40	3	Horizontal	126	2.46

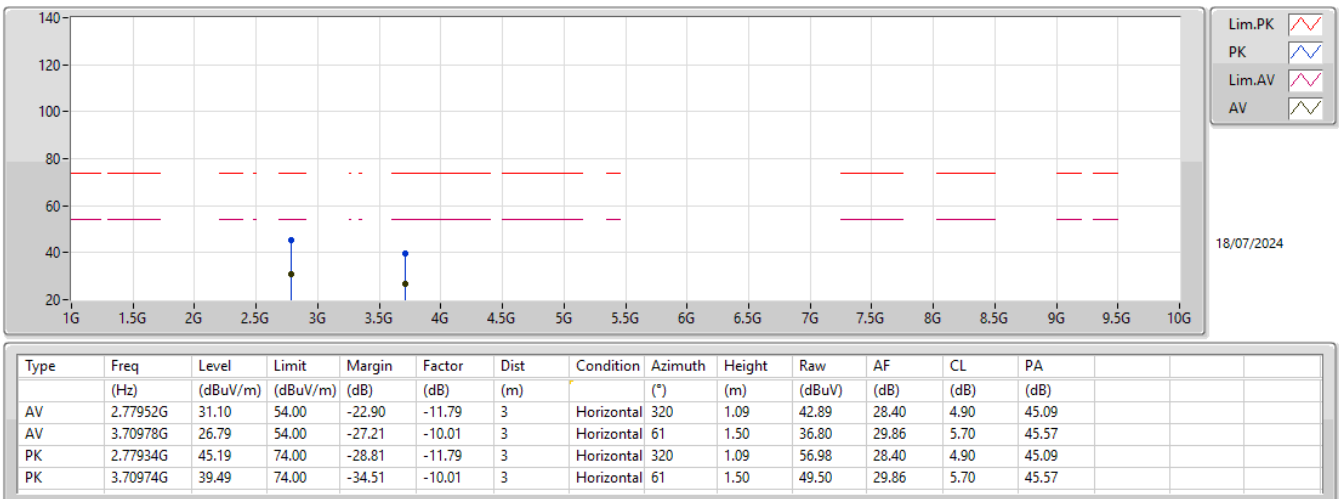
902-928MHz_Halow_1MHz_Nss1_1TX

926.5MHz_TX



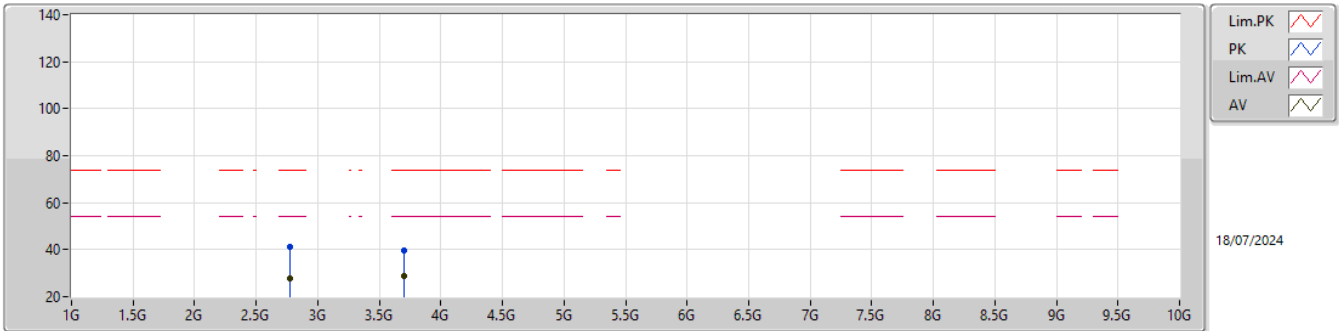
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926.5MHz_TX



902-928MHz_Halow_2MHz_Nss1_1TX

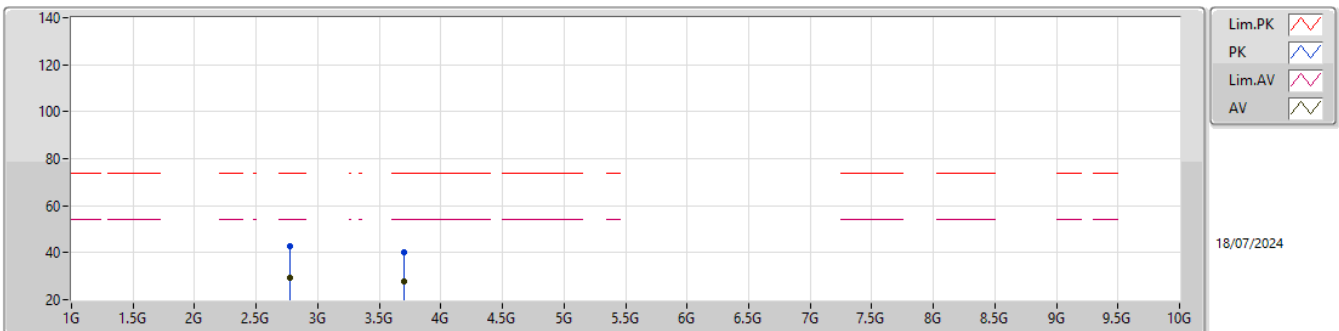
925MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.77486G	27.86	54.00	-26.14	-11.78	3	Vertical	179	2.89	39.64	28.40	4.90	45.08
AV	3.70002G	28.95	54.00	-25.05	-10.07	3	Vertical	208	2.88	39.02	29.80	5.69	45.56
PK	2.77406G	41.37	74.00	-32.63	-11.78	3	Vertical	179	2.89	53.15	28.40	4.90	45.08
PK	3.69982G	39.73	74.00	-34.27	-10.07	3	Vertical	208	2.88	49.80	29.80	5.69	45.56

902-928MHz_Halow_2MHz_Nss1_1TX

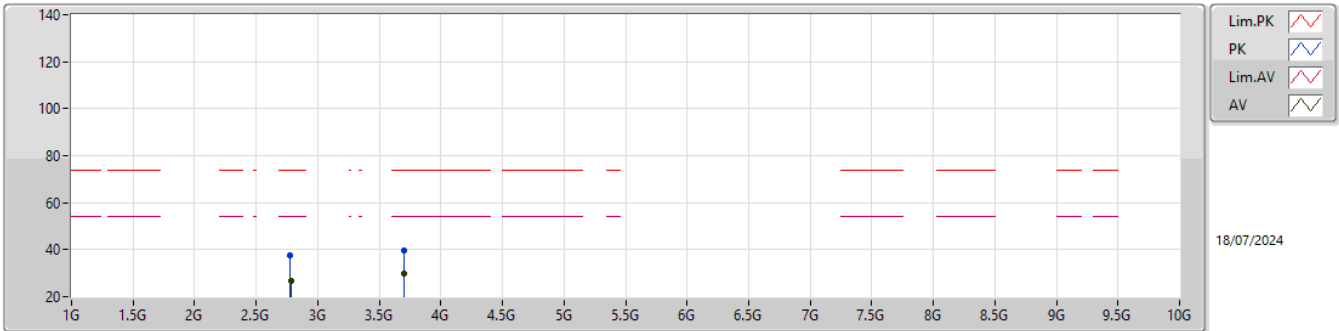
925MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.77492G	29.34	54.00	-24.66	-11.78	3	Horizontal	320	1.00	41.12	28.40	4.90	45.08
AV	3.6999G	27.54	54.00	-26.46	-10.07	3	Horizontal	172	1.50	37.61	29.80	5.69	45.56
PK	2.77662G	42.80	74.00	-31.20	-11.79	3	Horizontal	320	1.00	54.59	28.40	4.90	45.09
PK	3.69818G	40.05	74.00	-33.95	-10.07	3	Horizontal	172	1.50	50.12	29.80	5.69	45.56

902-928MHz_Halow_4MHz_Nss1_1TX

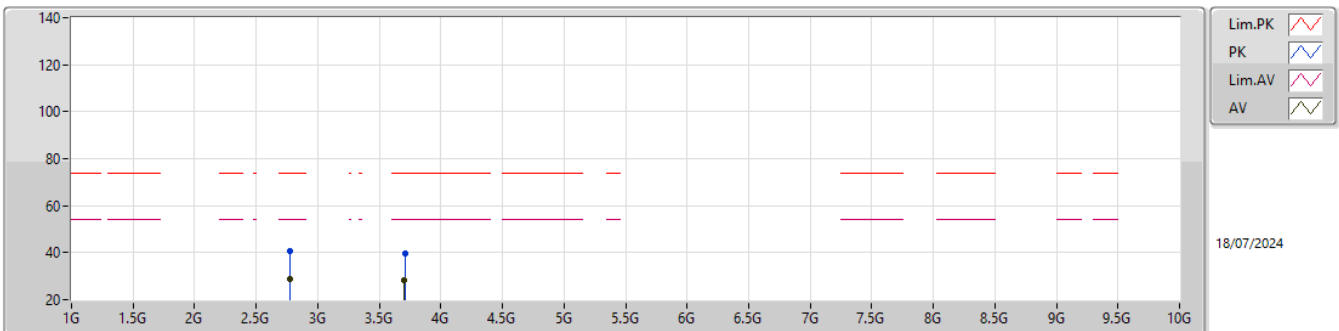
926MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.78074G	26.47	54.00	-27.53	-11.79	3	Vertical	253	1.50	38.26	28.40	4.90	45.09
AV	3.704G	29.76	54.00	-24.24	-10.05	3	Vertical	207	2.96	39.81	29.82	5.69	45.56
PK	2.77582G	37.72	74.00	-36.28	-11.78	3	Vertical	253	1.50	49.50	28.40	4.90	45.08
PK	3.70274G	39.66	74.00	-34.34	-10.05	3	Vertical	207	2.96	49.71	29.82	5.69	45.56

902-928MHz_Halow_4MHz_Nss1_1TX

926MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.77872G	28.68	54.00	-25.32	-11.79	3	Horizontal	318	1.27	40.47	28.40	4.90	45.09
AV	3.70098G	28.16	54.00	-25.84	-10.06	3	Horizontal	126	2.46	38.22	29.81	5.69	45.56
PK	2.77564G	40.70	74.00	-33.30	-11.78	3	Horizontal	318	1.27	52.48	28.40	4.90	45.08
PK	3.70704G	39.60	74.00	-34.40	-10.03	3	Horizontal	126	2.46	49.63	29.84	5.70	45.57