

FCC Radio Test Report

FCC ID : YL6-143V516
Equipment : Alarm.com 1080p Indoor Wi-Fi Camera
Brand Name : ALARM.COM
Model Name : ADC-V516
Applicant : Alarm.com Incorporated
8281 Greensboro Drive, Suite 100, Tysons,
VA 22102 United States
Manufacturer : Alarm.com Incorporated
8281 Greensboro Drive, Suite 100, Tysons,
VA 22102 United States
Standard : 47 CFR FCC Part 15.247

The product was received on Oct. 24, 2024, and testing was started from Nov. 21, 2024 and completed on Nov. 28, 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 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	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:

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

Comments and explanations:

Non

Reviewed by: Ben Tseng

Report Producer: Michelle Tsai

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE	2402-2480	0-39 [40]

Band	Mode	BWch	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX
2.4-2.4835GHz	BT-LE(125kbps)	2.0	1TX
2.4-2.4835GHz	BT-LE(500kbps)	2.0	1TX

Note:

- ♦ Bluetooth LE uses a GFSK (125kbps/500kbps/1Mbps/2Mbps) modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Bluetooth LE 125k/500k/1Mbps uses the same modulation, and 1Mbps was found to be the worst case scenario which was performed full test and recorded in this test report.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	INPAQ	RFFPA251104IMLB402	PIFA	I-PEX	2.4G+5G+BT

Ant.	Gain (dBi)		
	2.4G	5G	BT
1	2.79	3.79	2.79

For 2.4GHz function:

For IEEE 802.11 b/g/n mode (1TX/1RX)

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

For 5GHz function:

For IEEE 802.11 a/n mode(1TX/1RX)

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

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

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

**1.1.3 EUT Information**

Identify EUT	
EUT Power Type	From AC Adapter
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
BT-LE(1Mbps)	0.856	0.68	2.139m	1k
BT-LE(2Mbps)	0.577	2.39	1.082m	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
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Wayne Chiu	21.6~22.3°C / 55~59%	28/Nov/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
RF Conducted	TH06-HY	Johnny Yu	22.2~23.9°C / 52~53%	25/Nov/2024
Radiated	03CH25-HY	Rian Chung	21.3~22.3°C / 51~54%	21/Nov/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%
Receiver Radiated Unwanted Emissions	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 Channel Mode

Test Software Version	PuTTY Release 0.72
-----------------------	--------------------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	70
2440MHz	70
2480MHz	70
BT-LE(2Mbps)	-
2402MHz	70
2440MHz	70
2480MHz	70

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	Adapter 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	Adapter Mode
Operating Mode > 1GHz	CTX
Orthogonal Planes of EUT	Y Plane
	

2.3 Accessories

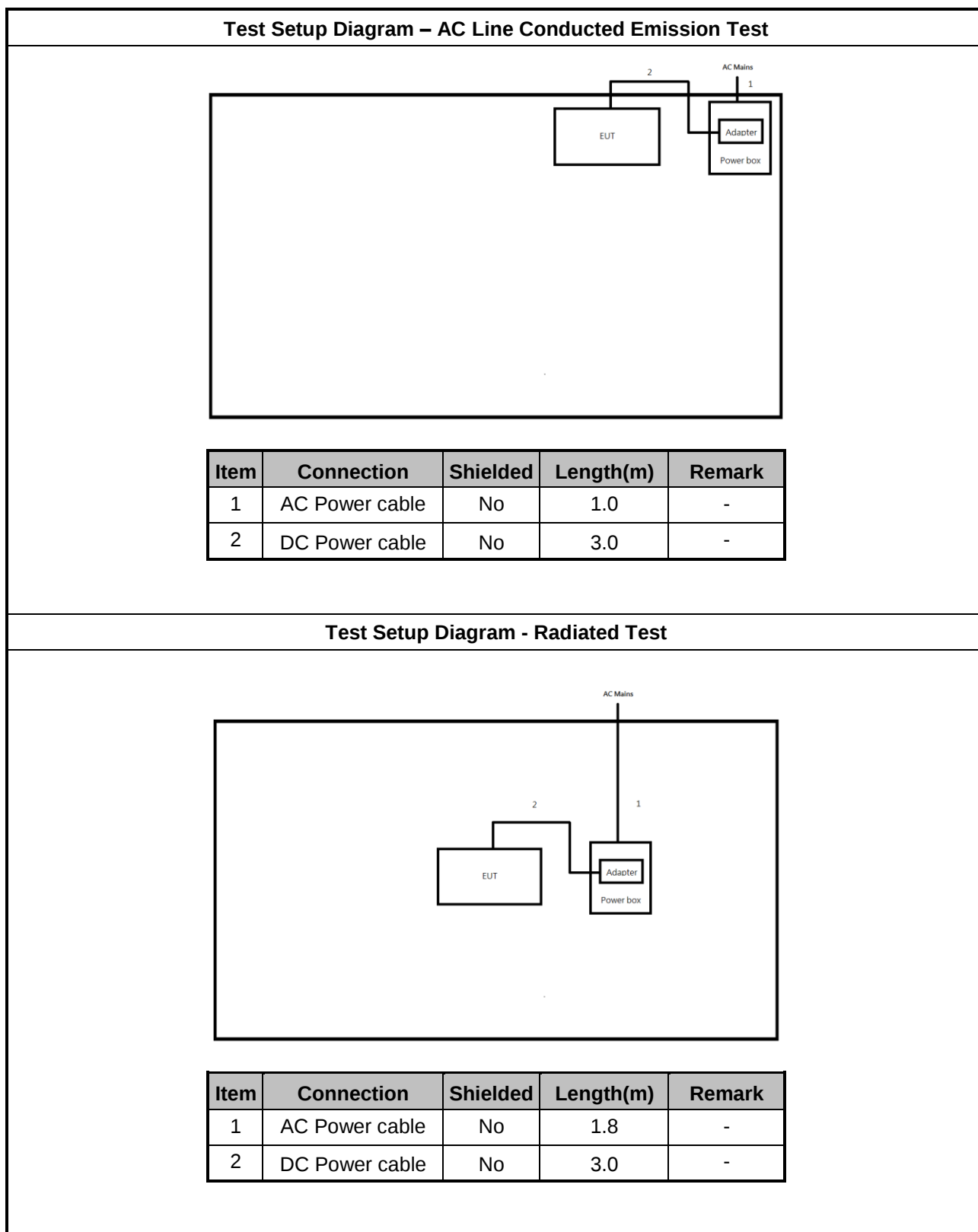
Accessories				
AC Adapter	Brand Name	APD	Model Name	WB-12G12FU
	Manufacturer	ASIAN POWER		
	Power Rating	I/P: 100-240Vac, 50-60 Hz, 0.3 A, O/P:12 Vdc, 1.0A		
	DC Power Cable	3.0meter, non-shielded cable, w/o ferrite core		

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

2.4 Support Equipment

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

2.5 Test Setup Diagram



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

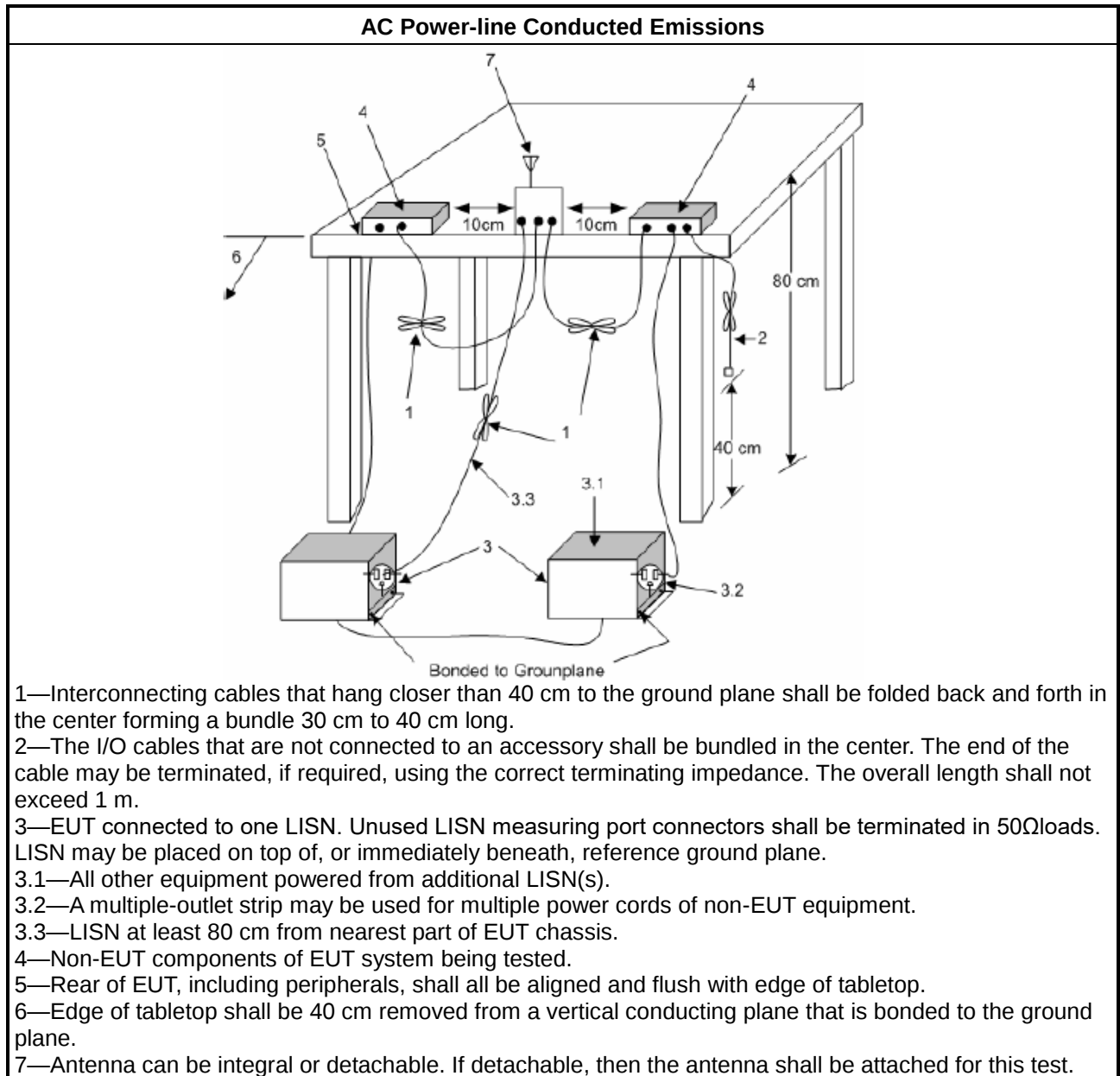
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

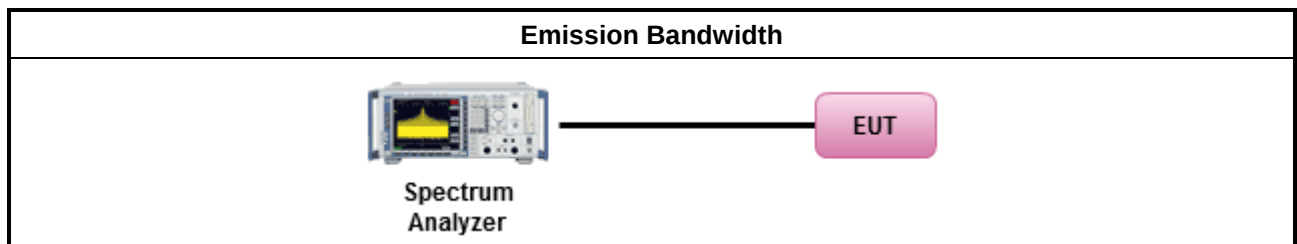
3.2.2 Measuring Instruments

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 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.	

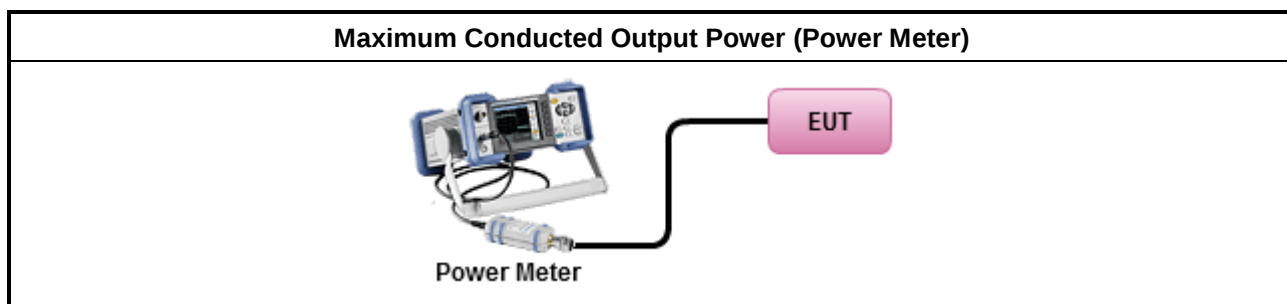
3.3.2 Measuring Instruments

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

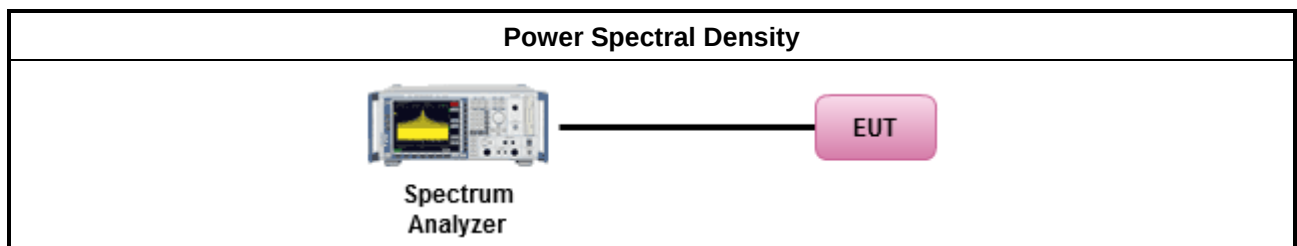
3.4.2 Measuring Instruments

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 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 level.	

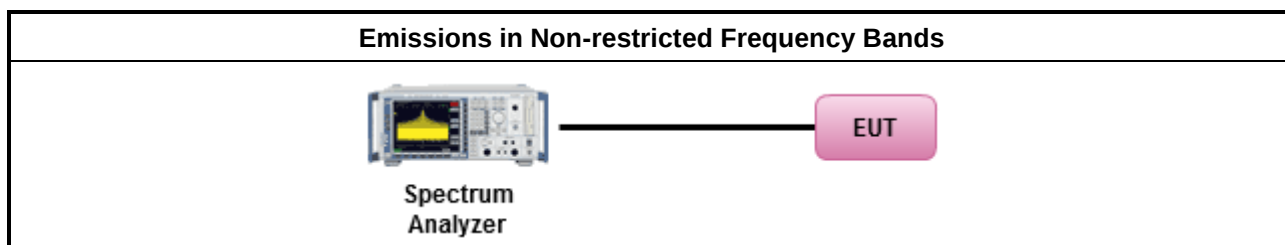
3.5.2 Measuring Instruments

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

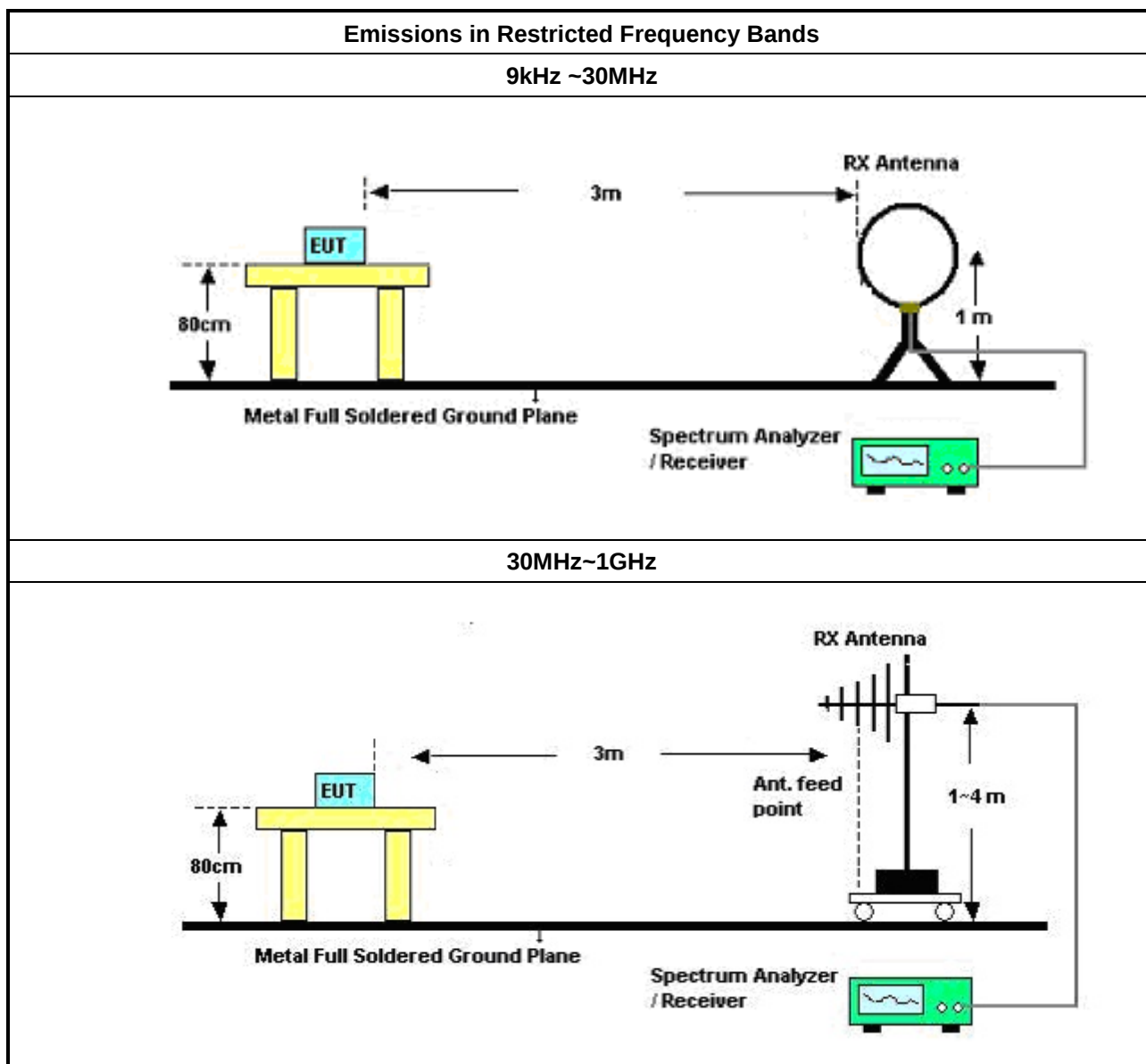
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted 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.
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

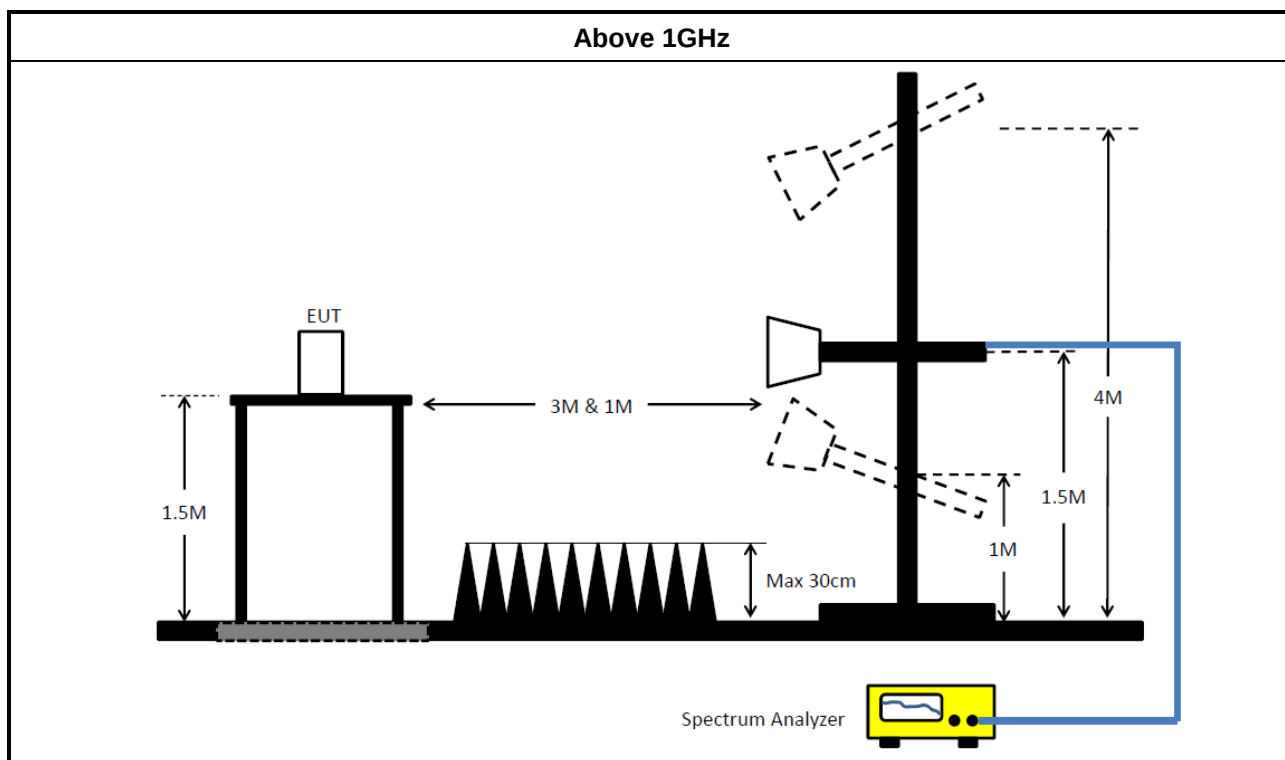
3.6.4 Measurement Results Calculation

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 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESR3	102051	9kHz ~ 3.6GHz	17/May/2024	16/May/2025
Two-Line V-Network	ROHDE & SCHWARZ	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 Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	17/Oct/2024	16/Oct/2025
Software	Sporton	SENSE-EMI	V5.11.3	-	NCR	NCR

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	28/Oct/2024	27/Oct/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	01/Apr/2024	31/Mar/2025
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	02/Apr/2024	01/Apr/2025
SENSE-15247_FS	Sporton	V5.11.18	N/A	N/A	N/A	N/A

Instrument for Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	30MHz~1GHz 3m	20/Jul/2024	19/Jul/2025
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	08/Aug/2024	07/Aug/2025
ESR7 EMI Test Receiver	ROHDE & SCHWARZ	ESR7	102956	9kHz~3.6GHz	27/Aug/2024	26/Aug/2025
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	18/Nov/2024	17/Nov/2025
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	63537/001	30MHz~1GHz	30/May/2024	29/May/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02876	1GHz~18GHz	11/Jul/2024	10/Jul/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	04/Oct/2024	03/Oct/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	9kHz~1GHz	24/Apr/2024	23/Apr/2025
RF Cable	HUBER+SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	23/Apr/2024	22/Apr/2025
Preamplifier	SGH	PRAMP 903	20230515-1	25MHz~3GHz	24/May/2024	23/May/2025
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	24/May/2024	23/May/2025
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	15/Apr/2024	14/Apr/2025
SENSE-15247-FS	Sporton	V5.11.20	NA	NA	NA	NA



Conducted Emissions at Powerline

Appendix A

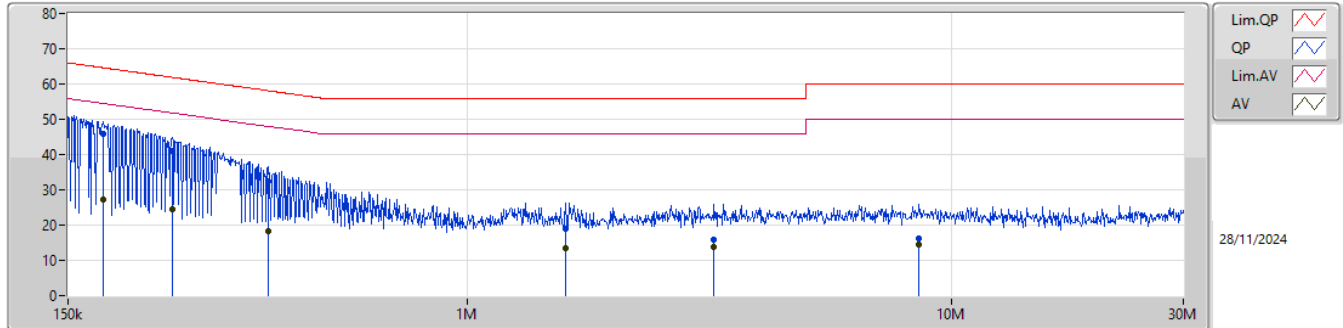
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	502.813k	31.50	46.00	-14.50	Neutral

Result

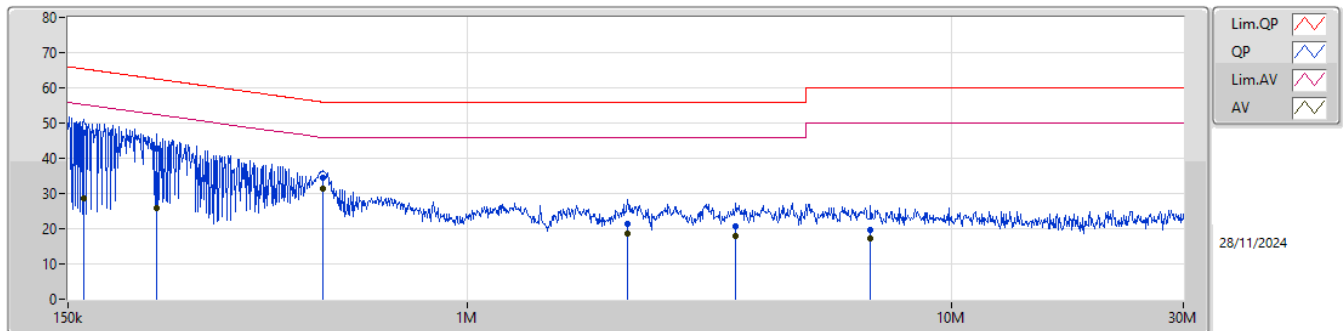
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	177.381k	45.86	64.60	-18.74	Line	-
Mode 1	Pass	AV	177.381k	27.31	54.60	-27.29	Line	-
Mode 1	Pass	QP	246.077k	41.18	61.89	-20.71	Line	-
Mode 1	Pass	AV	246.077k	24.48	51.89	-27.41	Line	-
Mode 1	Pass	QP	389.447k	32.31	58.08	-25.77	Line	-
Mode 1	Pass	AV	389.447k	18.22	48.08	-29.86	Line	-
Mode 1	Pass	QP	1.594M	18.87	56.00	-37.13	Line	-
Mode 1	Pass	AV	1.594M	13.55	46.00	-32.45	Line	-
Mode 1	Pass	QP	3.231M	15.71	56.00	-40.29	Line	-
Mode 1	Pass	AV	3.231M	13.85	46.00	-32.15	Line	-
Mode 1	Pass	QP	8.557M	16.36	60.00	-43.64	Line	-
Mode 1	Pass	AV	8.557M	14.62	50.00	-35.38	Line	-
Mode 1	Pass	QP	161.82k	47.13	65.37	-18.24	Neutral	-
Mode 1	Pass	AV	161.82k	28.47	55.37	-26.90	Neutral	-
Mode 1	Pass	QP	229.015k	42.65	62.48	-19.83	Neutral	-
Mode 1	Pass	AV	229.015k	25.89	52.48	-26.59	Neutral	-
Mode 1	Pass	QP	502.813k	34.53	56.00	-21.47	Neutral	-
Mode 1	Pass	AV	502.813k	31.50	46.00	-14.50	Neutral	-
Mode 1	Pass	QP	2.142M	21.36	56.00	-34.64	Neutral	-
Mode 1	Pass	AV	2.142M	18.56	46.00	-27.44	Neutral	-
Mode 1	Pass	QP	3.584M	20.67	56.00	-35.33	Neutral	-
Mode 1	Pass	AV	3.584M	18.04	46.00	-27.96	Neutral	-
Mode 1	Pass	QP	6.789M	19.73	60.00	-40.27	Neutral	-
Mode 1	Pass	AV	6.789M	17.32	50.00	-32.68	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	177.381k	45.86	64.60	-18.74	19.70	Line	-	26.16	9.65	0.08	9.97								
AV	177.381k	27.31	54.60	-27.29	19.70	Line	-	7.61	9.65	0.08	9.97								
QP	246.077k	41.18	61.89	-20.71	19.72	Line	-	21.46	9.65	0.10	9.97								
AV	246.077k	24.48	51.89	-27.41	19.72	Line	-	4.76	9.65	0.10	9.97								
QP	389.447k	32.31	58.08	-25.77	19.75	Line	-	12.56	9.65	0.12	9.98								
AV	389.447k	18.22	48.08	-29.86	19.75	Line	-	-1.53	9.65	0.12	9.98								
QP	1.594M	18.87	56.00	-37.13	19.74	Line	-	-0.87	9.67	0.10	9.97								
AV	1.594M	13.55	46.00	-32.45	19.74	Line	-	-6.19	9.67	0.10	9.97								
QP	3.231M	15.71	56.00	-40.29	19.74	Line	-	-4.03	9.68	0.08	9.98								
AV	3.231M	13.85	46.00	-32.15	19.74	Line	-	-5.89	9.68	0.08	9.98								
QP	8.557M	16.36	60.00	-43.64	19.74	Line	-	-3.38	9.71	0.05	9.98								
AV	8.557M	14.62	50.00	-35.38	19.74	Line	-	-5.12	9.71	0.05	9.98								

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	161.82k	47.13	65.37	-18.24	19.64	Neutral	-	27.49	9.60	0.07	9.97								
AV	161.82k	28.47	55.37	-26.90	19.64	Neutral	-	8.83	9.60	0.07	9.97								
QP	229.015k	42.65	62.48	-19.83	19.67	Neutral	-	22.98	9.60	0.10	9.97								
AV	229.015k	25.89	52.48	-26.59	19.67	Neutral	-	6.22	9.60	0.10	9.97								
QP	502.813k	34.53	56.00	-21.47	19.69	Neutral	-	14.84	9.60	0.11	9.98								
AV	502.813k	31.50	46.00	-14.50	19.69	Neutral	-	11.81	9.60	0.11	9.98								
QP	2.142M	21.36	56.00	-34.64	19.69	Neutral	-	1.67	9.61	0.11	9.97								
AV	2.142M	18.56	46.00	-27.44	19.69	Neutral	-	-1.13	9.61	0.11	9.97								
QP	3.584M	20.67	56.00	-35.33	19.68	Neutral	-	0.99	9.62	0.08	9.98								
AV	3.584M	18.04	46.00	-27.96	19.68	Neutral	-	-1.64	9.62	0.08	9.98								
QP	6.789M	19.73	60.00	-40.27	19.68	Neutral	-	0.05	9.64	0.06	9.98								
AV	6.789M	17.32	50.00	-32.68	19.68	Neutral	-	-2.36	9.64	0.06	9.98								

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	668.75k	1.034M	1M03F1D	640k	1.028M
BT-LE(2Mbps)	1.273M	2.076M	2M08F1D	1.185M	2.049M

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

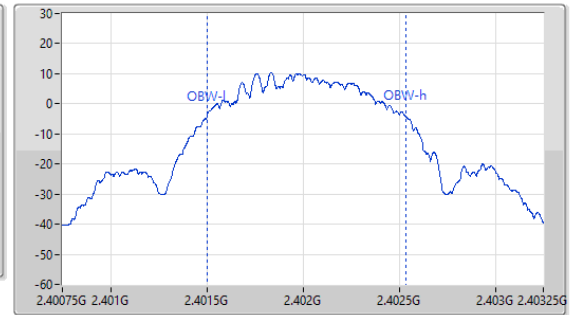
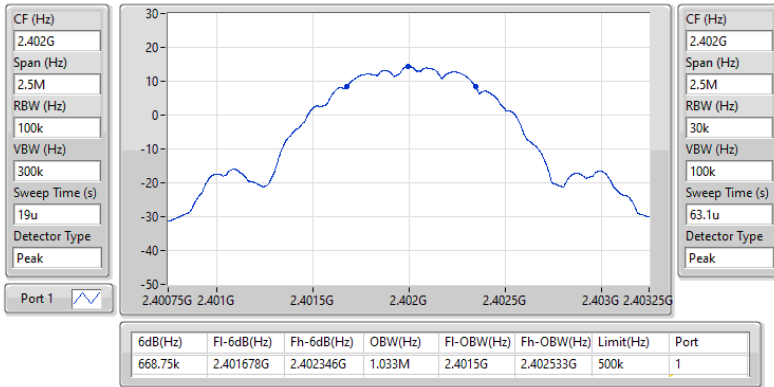
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	668.75k	1.033M
2440MHz	Pass	500k	640k	1.034M
2480MHz	Pass	500k	653.75k	1.028M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.185M	2.049M
2440MHz	Pass	500k	1.273M	2.054M
2480MHz	Pass	500k	1.223M	2.076M

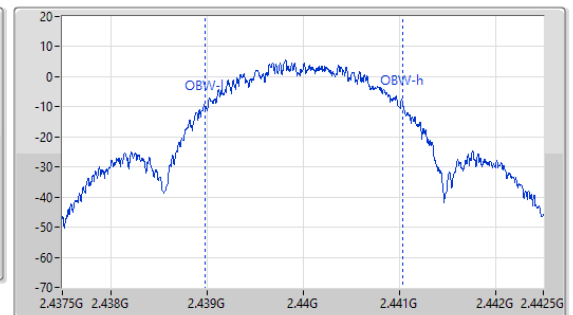
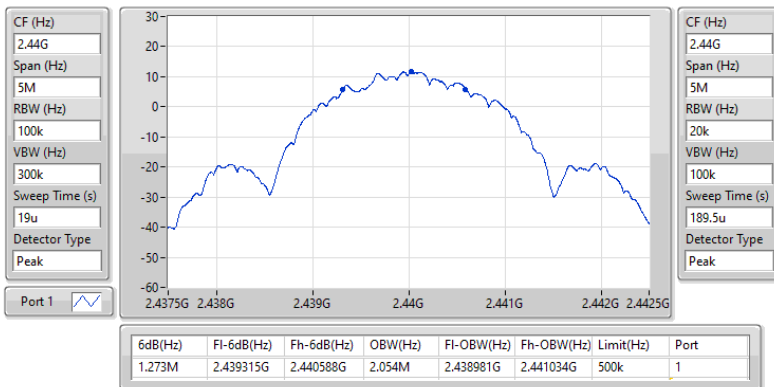
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)
EBW-DTS
2402MHz

25/11/2024


2.4-2.4835GHz_BT-LE(2Mbps)
EBW-DTS
2440MHz

25/11/2024





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	15.74	0.03750
BT-LE(2Mbps)	15.80	0.03802

**Result**

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.79	15.48	30.00
2440MHz	Pass	2.79	15.74	30.00
2480MHz	Pass	2.79	15.73	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.79	15.49	30.00
2440MHz	Pass	2.79	15.80	30.00
2480MHz	Pass	2.79	15.74	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-0.30
BT-LE(2Mbps)	-1.52

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.79	-1.02	8.00
2440MHz	Pass	2.79	-0.91	8.00
2480MHz	Pass	2.79	-0.30	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.79	-1.52	8.00
2440MHz	Pass	2.79	-2.00	8.00
2480MHz	Pass	2.79	-2.43	8.00

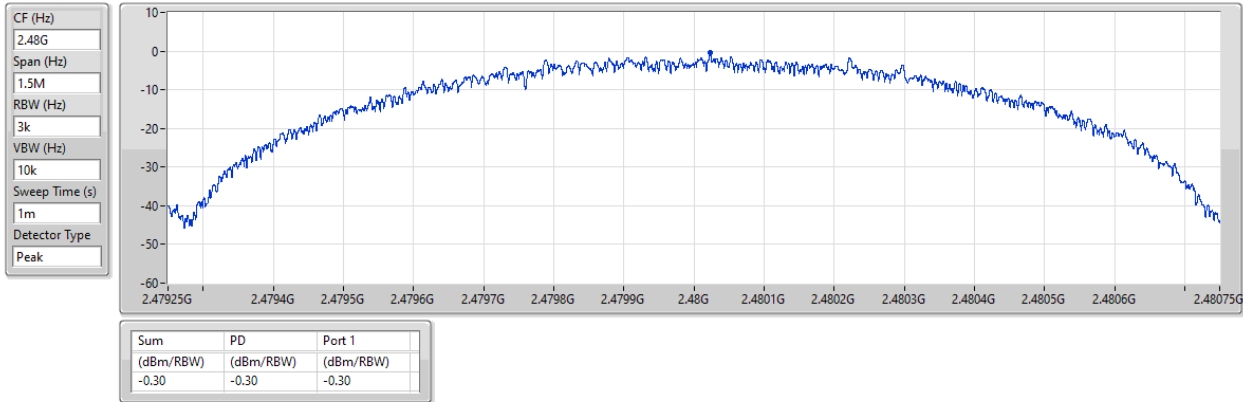
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2480MHz

25/11/2024

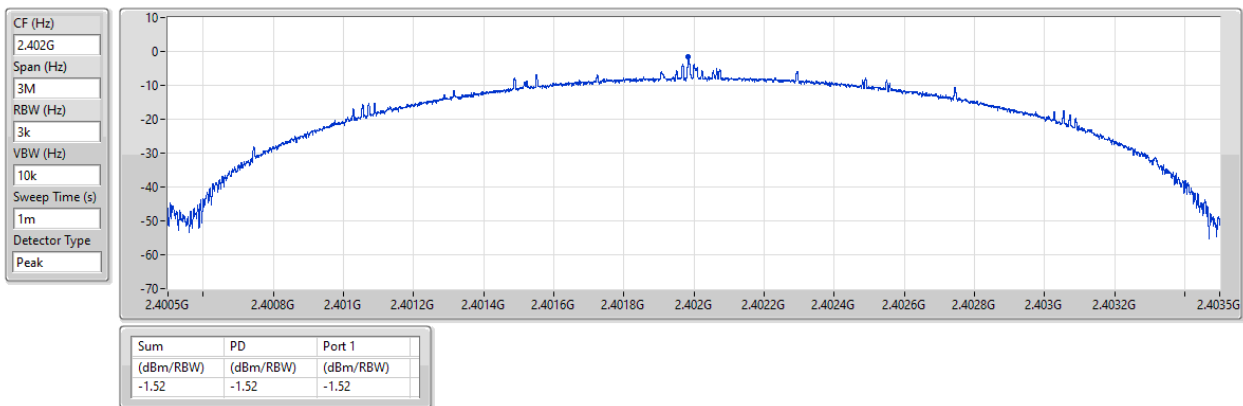


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2402MHz

25/11/2024



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
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.43991G	15.44	-14.56	2.30363G	-55.50	2.39996G	-44.06	2.4G	-40.76	2.50338G	-52.79	15.2084G	-41.29	1
BT-LE(2Mbps)	Pass	2.44008G	15.65	-14.35	2.30598G	-55.79	2.4G	-18.99	2.4G	-17.09	2.50222G	-53.72	17.6577G	-42.17	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
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.43991G	15.44	-14.56	2.30363G	-55.50	2.39996G	-44.06	2.4G	-40.76	2.50338G	-52.79	15.2084G	-41.29	1
2440MHz	Pass	2.43991G	15.44	-14.56	1.8865G	-55.84	2.39236G	-54.64	2.4G	-56.40	2.50002G	-53.90	16.51882G	-41.19	1
2480MHz	Pass	2.43991G	15.44	-14.56	1.84068G	-54.65	2.39128G	-54.16	2.4G	-56.20	2.50002G	-53.76	16.80003G	-41.72	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44008G	15.65	-14.35	2.30598G	-55.79	2.4G	-18.99	2.4G	-17.09	2.50222G	-53.72	17.6577G	-42.17	1
2440MHz	Pass	2.44008G	15.65	-14.35	935.93M	-55.90	2.3918G	-54.28	2.4G	-56.72	2.50158G	-53.47	16.97156G	-41.85	1
2480MHz	Pass	2.44008G	15.65	-14.35	2.30598G	-54.95	2.39036G	-53.82	2.4G	-57.01	2.50078G	-53.65	23.30714G	-40.94	1

2.4-2.4835GHz_BT-LE(1Mbps)

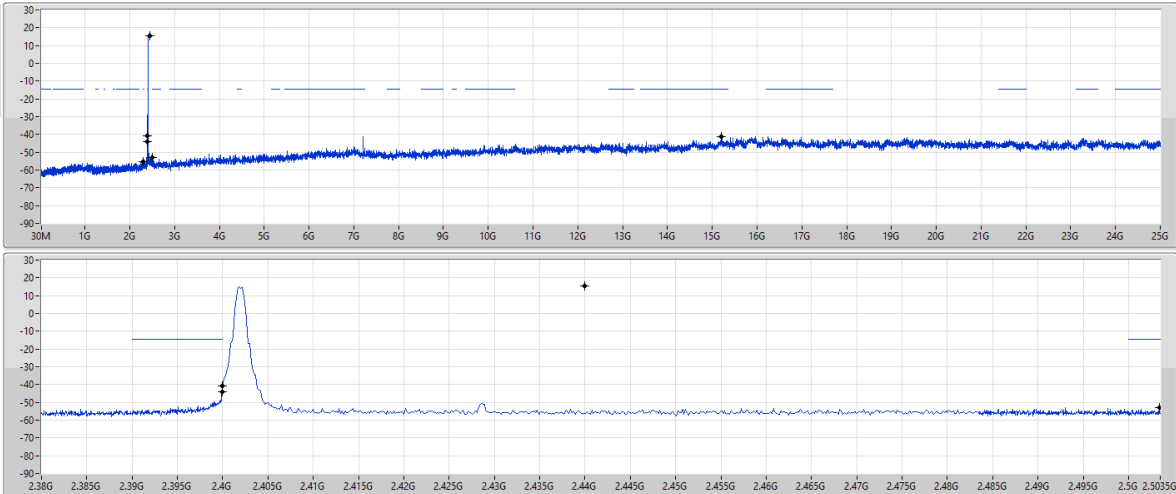
CSEndB-DTS

2402MHz

25/11/2024

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
2.43991G	15.44	-14.56	2.30363G	-55.50	2.39996G	-44.06	2.4G	-40.76	2.50338G	-52.79	15.2084G	-41.29	1

2.4-2.4835GHz_BT-LE(2Mbps)

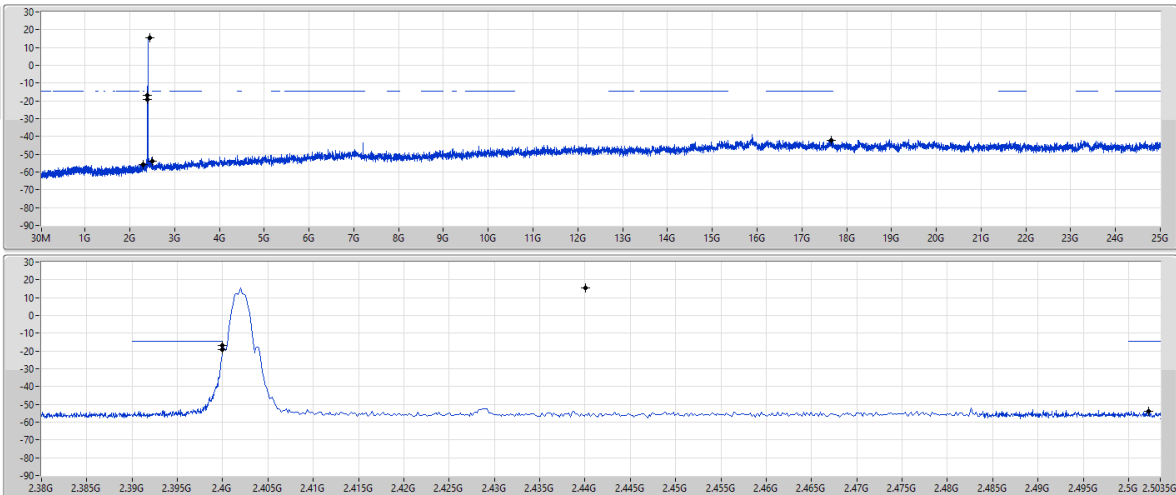
CSEndB-DTS

2402MHz

25/11/2024

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
2.44008G	15.65	-14.35	2.30598G	-55.79	2.4G	-18.99	2.4G	-17.09	2.50222G	-53.72	17.6577G	-42.17	1



Summary

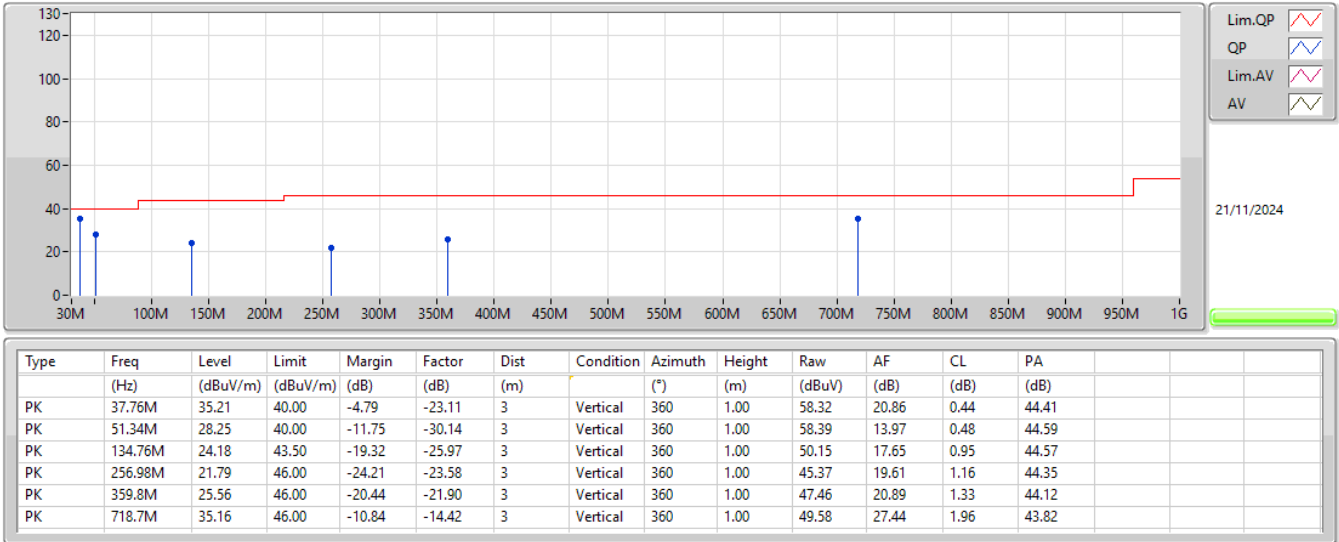
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	37.76M	35.21	40.00	-4.79	3	Vertical	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz_Adapter	Pass	PK	37.76M	35.21	40.00	-4.79	3	Vertical	360	1.00
2440MHz_Adapter	Pass	PK	51.34M	28.25	40.00	-11.75	3	Vertical	360	1.00
2440MHz_Adapter	Pass	PK	134.76M	24.18	43.50	-19.32	3	Vertical	360	1.00
2440MHz_Adapter	Pass	PK	256.98M	21.79	46.00	-24.21	3	Vertical	360	1.00
2440MHz_Adapter	Pass	PK	359.8M	25.56	46.00	-20.44	3	Vertical	360	1.00
2440MHz_Adapter	Pass	PK	718.7M	35.16	46.00	-10.84	3	Vertical	360	1.00
2440MHz_Adapter	Pass	PK	101.78M	22.61	43.50	-20.89	3	Horizontal	0	1.00
2440MHz_Adapter	Pass	PK	200.72M	20.99	43.50	-22.51	3	Horizontal	0	1.00
2440MHz_Adapter	Pass	PK	276.38M	26.15	46.00	-19.85	3	Horizontal	0	1.00
2440MHz_Adapter	Pass	PK	359.8M	31.64	46.00	-14.36	3	Horizontal	0	1.00
2440MHz_Adapter	Pass	PK	590.66M	24.77	46.00	-21.23	3	Horizontal	0	1.00
2440MHz_Adapter	Pass	PK	707.06M	28.57	46.00	-17.43	3	Horizontal	0	1.00

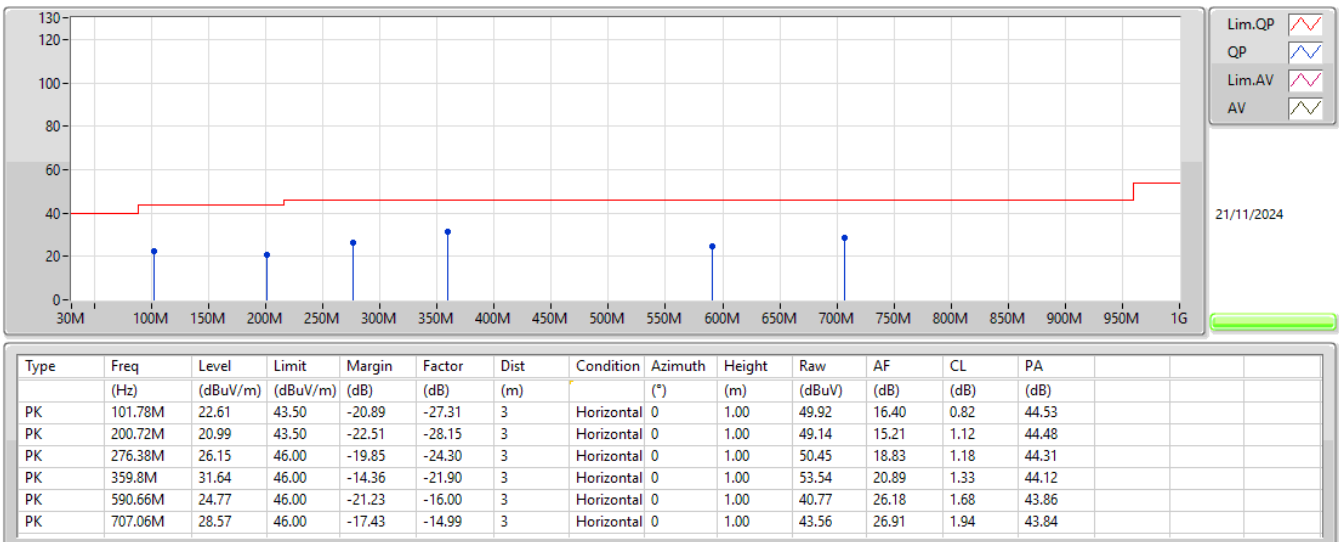
2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Adapter



2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Adapter





Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	7.32001G	50.52	54.00	-3.48	3	Vertical	260	1.09
BT-LE(2Mbps)	Pass	AV	7.31888G	50.22	54.00	-3.78	3	Vertical	260	1.10

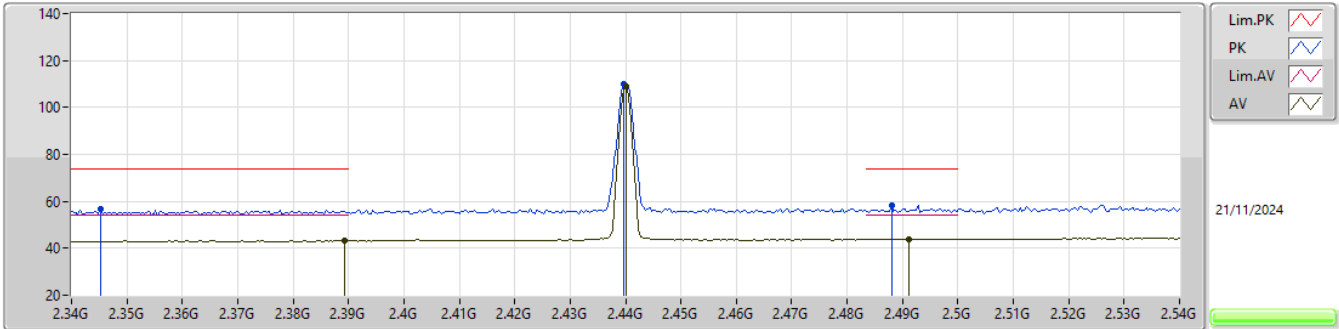
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3754G	44.21	54.00	-9.79	3	Vertical	4	1.48
2402MHz	Pass	AV	2.402G	109.95	Inf	-Inf	3	Vertical	4	1.48
2402MHz	Pass	PK	2.3592G	57.03	74.00	-16.97	3	Vertical	4	1.48
2402MHz	Pass	PK	2.4018G	111.07	Inf	-Inf	3	Vertical	4	1.48
2402MHz	Pass	AV	2.3538G	45.36	54.00	-8.64	3	Horizontal	208	2.78
2402MHz	Pass	AV	2.402G	109.56	Inf	-Inf	3	Horizontal	208	2.78
2402MHz	Pass	PK	2.354G	57.28	74.00	-16.72	3	Horizontal	208	2.78
2402MHz	Pass	PK	2.4022G	110.67	Inf	-Inf	3	Horizontal	208	2.78
2402MHz	Pass	AV	4.80401G	44.54	54.00	-9.46	3	Vertical	12	1.17
2402MHz	Pass	PK	4.80457G	50.35	74.00	-23.65	3	Vertical	12	1.17
2402MHz	Pass	AV	4.80403G	43.79	54.00	-10.21	3	Horizontal	351	1.44
2402MHz	Pass	PK	4.80456G	49.91	74.00	-24.09	3	Horizontal	351	1.44
2440MHz	Pass	AV	2.3892G	43.19	54.00	-10.81	3	Vertical	3	1.44
2440MHz	Pass	AV	2.44G	108.74	Inf	-Inf	3	Vertical	3	1.44
2440MHz	Pass	AV	2.4912G	44.03	54.00	-9.97	3	Vertical	3	1.44
2440MHz	Pass	PK	2.3452G	56.51	74.00	-17.49	3	Vertical	3	1.44
2440MHz	Pass	PK	2.4396G	109.90	Inf	-Inf	3	Vertical	3	1.44
2440MHz	Pass	PK	2.488G	58.29	74.00	-15.71	3	Vertical	3	1.44
2440MHz	Pass	AV	2.352G	43.18	54.00	-10.82	3	Horizontal	208	2.97
2440MHz	Pass	AV	2.44G	108.26	Inf	-Inf	3	Horizontal	208	2.97
2440MHz	Pass	AV	2.4888G	44.02	54.00	-9.98	3	Horizontal	208	2.97
2440MHz	Pass	PK	2.3716G	57.13	74.00	-16.87	3	Horizontal	208	2.97
2440MHz	Pass	PK	2.4396G	109.39	Inf	-Inf	3	Horizontal	208	2.97
2440MHz	Pass	PK	2.49G	58.11	74.00	-15.89	3	Horizontal	208	2.97
2440MHz	Pass	AV	4.88001G	44.14	54.00	-9.86	3	Vertical	15	1.00
2440MHz	Pass	AV	7.32001G	50.52	54.00	-3.48	3	Vertical	260	1.09
2440MHz	Pass	PK	4.87955G	50.42	74.00	-23.58	3	Vertical	15	1.00
2440MHz	Pass	PK	7.31932G	60.30	74.00	-13.70	3	Vertical	260	1.09
2440MHz	Pass	AV	4.87998G	43.84	54.00	-10.16	3	Horizontal	316	2.45
2440MHz	Pass	AV	7.31999G	47.87	54.00	-6.13	3	Horizontal	334	1.00
2440MHz	Pass	PK	4.87946G	50.23	74.00	-23.77	3	Horizontal	316	2.45
2440MHz	Pass	PK	7.32065G	57.94	74.00	-16.06	3	Horizontal	334	1.00
2480MHz	Pass	AV	2.48G	105.73	Inf	-Inf	3	Vertical	325	1.87
2480MHz	Pass	AV	2.4836G	44.18	54.00	-9.82	3	Vertical	325	1.87
2480MHz	Pass	PK	2.4802G	106.85	Inf	-Inf	3	Vertical	325	1.87
2480MHz	Pass	PK	2.4846G	58.22	74.00	-15.78	3	Vertical	325	1.87
2480MHz	Pass	AV	2.48G	107.71	Inf	-Inf	3	Horizontal	206	2.56
2480MHz	Pass	AV	2.4835G	44.52	54.00	-9.48	3	Horizontal	206	2.56
2480MHz	Pass	PK	2.4798G	108.79	Inf	-Inf	3	Horizontal	206	2.56
2480MHz	Pass	PK	2.4918G	57.68	74.00	-16.32	3	Horizontal	206	2.56
2480MHz	Pass	AV	4.96G	44.40	54.00	-9.60	3	Vertical	175	1.43
2480MHz	Pass	AV	7.44G	48.45	54.00	-5.55	3	Vertical	33	2.08
2480MHz	Pass	PK	4.95954G	50.68	74.00	-23.32	3	Vertical	175	1.43
2480MHz	Pass	PK	7.43919G	58.31	74.00	-15.69	3	Vertical	33	2.08
2480MHz	Pass	AV	4.96G	41.27	54.00	-12.73	3	Horizontal	111	1.19
2480MHz	Pass	AV	7.44002G	48.60	54.00	-5.40	3	Horizontal	343	2.07
2480MHz	Pass	PK	4.95962G	48.70	74.00	-25.30	3	Horizontal	111	1.19
2480MHz	Pass	PK	7.44073G	58.47	74.00	-15.53	3	Horizontal	343	2.07
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3752G	43.82	54.00	-10.18	3	Vertical	4	1.47
2402MHz	Pass	AV	2.402G	107.96	Inf	-Inf	3	Vertical	4	1.47
2402MHz	Pass	PK	2.3896G	56.70	74.00	-17.30	3	Vertical	4	1.47
2402MHz	Pass	PK	2.4014G	110.94	Inf	-Inf	3	Vertical	4	1.47
2402MHz	Pass	AV	2.3536G	45.42	54.00	-8.58	3	Horizontal	207	2.79
2402MHz	Pass	AV	2.402G	107.57	Inf	-Inf	3	Horizontal	207	2.79
2402MHz	Pass	PK	2.3536G	57.57	74.00	-16.43	3	Horizontal	207	2.79
2402MHz	Pass	PK	2.4024G	110.52	Inf	-Inf	3	Horizontal	207	2.79
2402MHz	Pass	AV	4.80496G	40.09	54.00	-13.91	3	Vertical	12	1.19
2402MHz	Pass	PK	4.805G	50.03	74.00	-23.97	3	Vertical	12	1.19
2402MHz	Pass	AV	4.80504G	39.36	54.00	-14.64	3	Horizontal	353	1.45

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2402MHz	Pass	PK	4.80496G	49.52	74.00	-24.48	3	Horizontal	353	1.45
2440MHz	Pass	AV	2.3704G	43.50	54.00	-10.50	3	Vertical	4	1.44
2440MHz	Pass	AV	2.44G	106.93	Inf	-Inf	3	Vertical	4	1.44
2440MHz	Pass	AV	2.4884G	44.27	54.00	-9.73	3	Vertical	4	1.44
2440MHz	Pass	PK	2.3752G	56.62	74.00	-17.38	3	Vertical	4	1.44
2440MHz	Pass	PK	2.4396G	109.91	Inf	-Inf	3	Vertical	4	1.44
2440MHz	Pass	PK	2.4964G	57.48	74.00	-16.52	3	Vertical	4	1.44
2440MHz	Pass	AV	2.3716G	43.57	54.00	-10.43	3	Horizontal	208	2.95
2440MHz	Pass	AV	2.44G	106.38	Inf	-Inf	3	Horizontal	208	2.95
2440MHz	Pass	AV	2.4912G	44.37	54.00	-9.63	3	Horizontal	208	2.95
2440MHz	Pass	PK	2.3672G	57.05	74.00	-16.95	3	Horizontal	208	2.95
2440MHz	Pass	PK	2.4396G	109.42	Inf	-Inf	3	Horizontal	208	2.95
2440MHz	Pass	PK	2.4964G	57.93	74.00	-16.07	3	Horizontal	208	2.95
2440MHz	Pass	AV	4.87904G	39.86	54.00	-14.14	3	Vertical	15	1.06
2440MHz	Pass	AV	7.31888G	50.22	54.00	-3.78	3	Vertical	260	1.10
2440MHz	Pass	PK	4.88012G	50.36	74.00	-23.64	3	Vertical	15	1.06
2440MHz	Pass	PK	7.31858G	60.10	74.00	-13.90	3	Vertical	260	1.10
2440MHz	Pass	AV	4.88096G	39.19	54.00	-14.81	3	Horizontal	316	2.31
2440MHz	Pass	AV	7.32114G	47.65	54.00	-6.35	3	Horizontal	328	1.10
2440MHz	Pass	PK	4.8809G	49.99	74.00	-24.01	3	Horizontal	316	2.31
2440MHz	Pass	PK	7.3215G	57.54	74.00	-16.46	3	Horizontal	328	1.10
2480MHz	Pass	AV	2.48G	103.83	Inf	-Inf	3	Vertical	325	1.87
2480MHz	Pass	AV	2.4835G	47.94	54.00	-6.06	3	Vertical	325	1.87
2480MHz	Pass	PK	2.4806G	106.81	Inf	-Inf	3	Vertical	325	1.87
2480MHz	Pass	PK	2.4835G	59.94	74.00	-14.06	3	Vertical	325	1.87
2480MHz	Pass	AV	2.48G	105.81	Inf	-Inf	3	Horizontal	207	2.56
2480MHz	Pass	AV	2.4835G	49.46	54.00	-4.54	3	Horizontal	207	2.56
2480MHz	Pass	PK	2.4806G	108.77	Inf	-Inf	3	Horizontal	207	2.56
2480MHz	Pass	PK	2.4835G	60.44	74.00	-13.56	3	Horizontal	207	2.56
2480MHz	Pass	AV	4.96088G	40.67	54.00	-13.33	3	Vertical	175	1.43
2480MHz	Pass	AV	7.4412G	48.75	54.00	-5.25	3	Vertical	33	2.07
2480MHz	Pass	PK	4.95904G	50.75	74.00	-23.25	3	Vertical	175	1.43
2480MHz	Pass	PK	7.43854G	58.48	74.00	-15.52	3	Vertical	33	2.07
2480MHz	Pass	AV	4.96102G	37.26	54.00	-16.74	3	Horizontal	118	2.48
2480MHz	Pass	AV	7.44112G	48.45	54.00	-5.55	3	Horizontal	348	1.34
2480MHz	Pass	PK	4.96112G	48.12	74.00	-25.88	3	Horizontal	118	2.48
2480MHz	Pass	PK	7.43862G	58.34	74.00	-15.66	3	Horizontal	348	1.34

2.4-2.4835GHz_BT-LE(1Mbps)

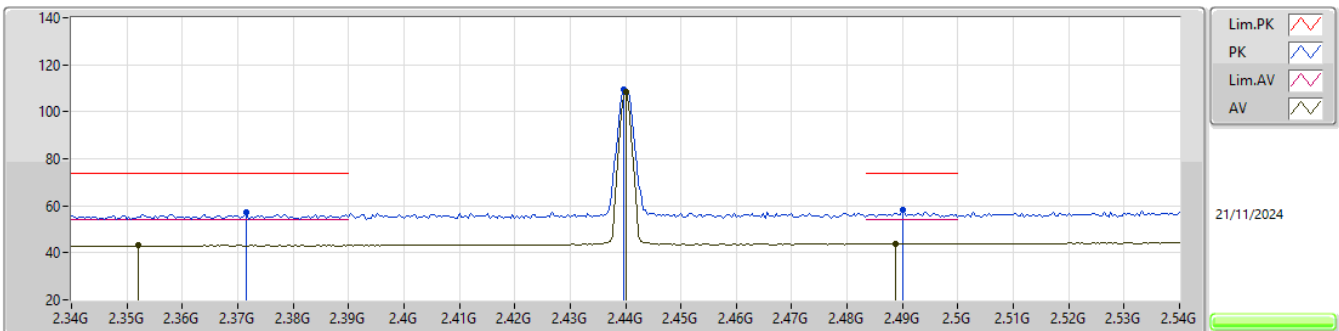
2440MHz_TX



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	2.3892G	43.19	54.00	-10.81	30.54	3	Vertical	3	1.44	12.65	27.39	3.15	-
AV	2.44G	108.74	Inf	-Inf	30.88	3	Vertical	3	1.44	77.86	27.70	3.18	-
AV	2.4912G	44.03	54.00	-9.97	31.20	3	Vertical	3	1.44	12.83	27.99	3.21	-
PK	2.3452G	56.51	74.00	-17.49	30.43	3	Vertical	3	1.44	26.08	27.30	3.13	-
PK	2.4396G	109.90	Inf	-Inf	30.88	3	Vertical	3	1.44	79.02	27.70	3.18	-
PK	2.488G	58.29	74.00	-15.71	31.19	3	Vertical	3	1.44	27.10	27.98	3.21	-

2.4-2.4835GHz_BT-LE(1Mbps)

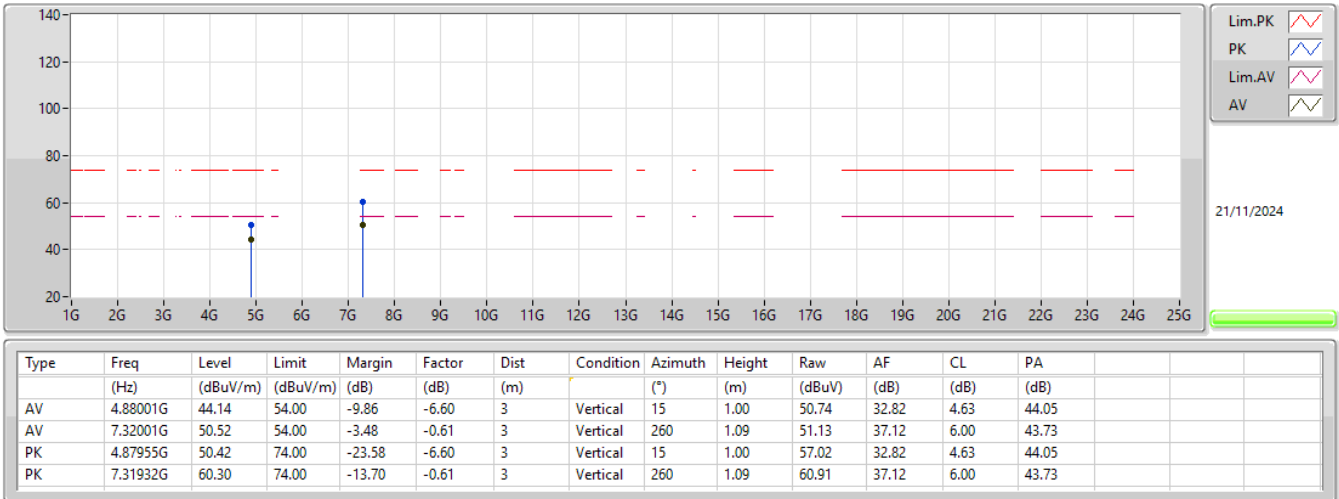
2440MHz_TX



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	2.352G	43.18	54.00	-10.82	30.45	3	Horizontal	208	2.97	12.73	27.32	3.13	-
AV	2.44G	108.26	Inf	-Inf	30.88	3	Horizontal	208	2.97	77.38	27.70	3.18	-
AV	2.4888G	44.02	54.00	-9.98	31.20	3	Horizontal	208	2.97	12.82	27.99	3.21	-
PK	2.3716G	57.13	74.00	-16.87	30.52	3	Horizontal	208	2.97	26.61	27.38	3.14	-
PK	2.4396G	109.39	Inf	-Inf	30.88	3	Horizontal	208	2.97	78.51	27.70	3.18	-
PK	2.49G	58.11	74.00	-15.89	31.21	3	Horizontal	208	2.97	26.90	28.00	3.21	-

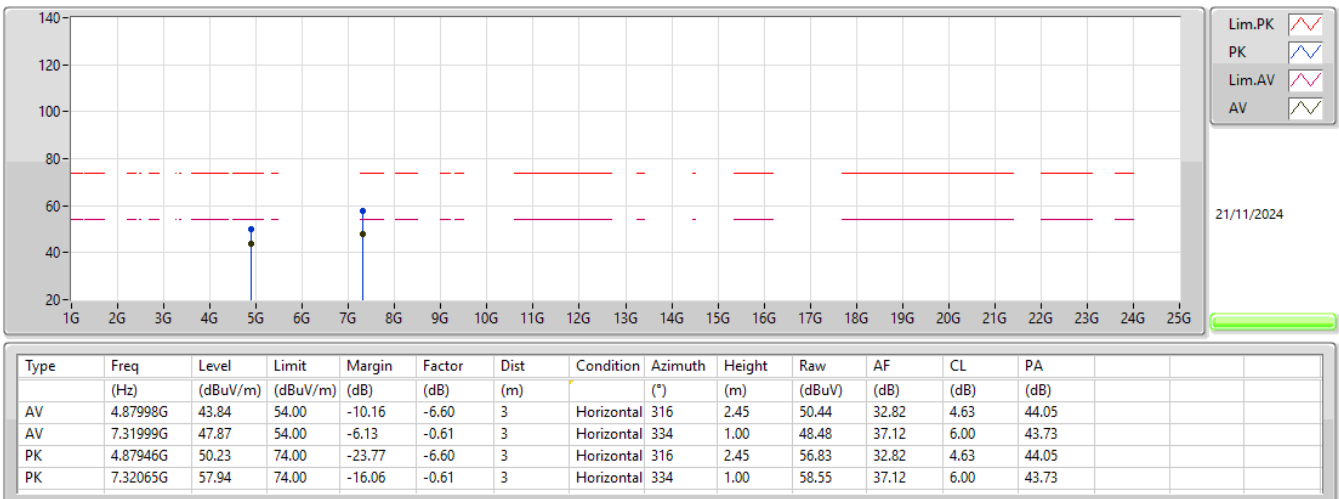
2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX



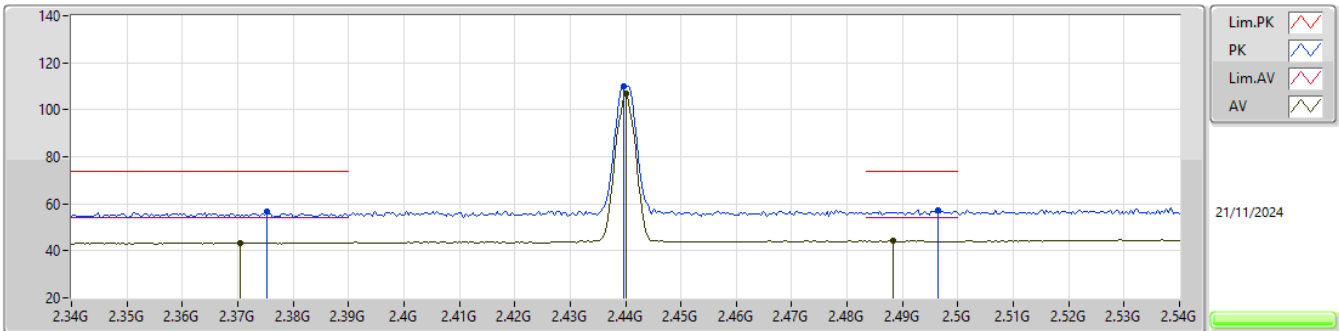
2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

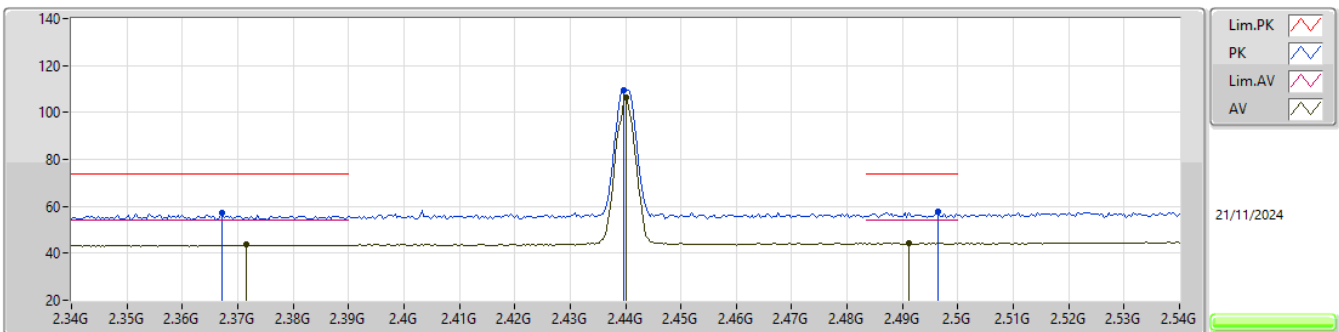
2440MHz_TX



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	2.3704G	43.50	54.00	-10.50	30.54	3	Vertical	4	1.44	12.96	27.40	3.14	-
AV	2.44G	106.93	Inf	-Inf	30.88	3	Vertical	4	1.44	76.05	27.70	3.18	-
AV	2.4884G	44.27	54.00	-9.73	31.19	3	Vertical	4	1.44	13.08	27.98	3.21	-
PK	2.3752G	56.62	74.00	-17.38	30.50	3	Vertical	4	1.44	26.12	27.35	3.15	-
PK	2.4396G	109.91	Inf	-Inf	30.88	3	Vertical	4	1.44	79.03	27.70	3.18	-
PK	2.4964G	57.48	74.00	-16.52	31.15	3	Vertical	4	1.44	26.33	27.94	3.21	-

2.4-2.4835GHz_BT-LE(2Mbps)

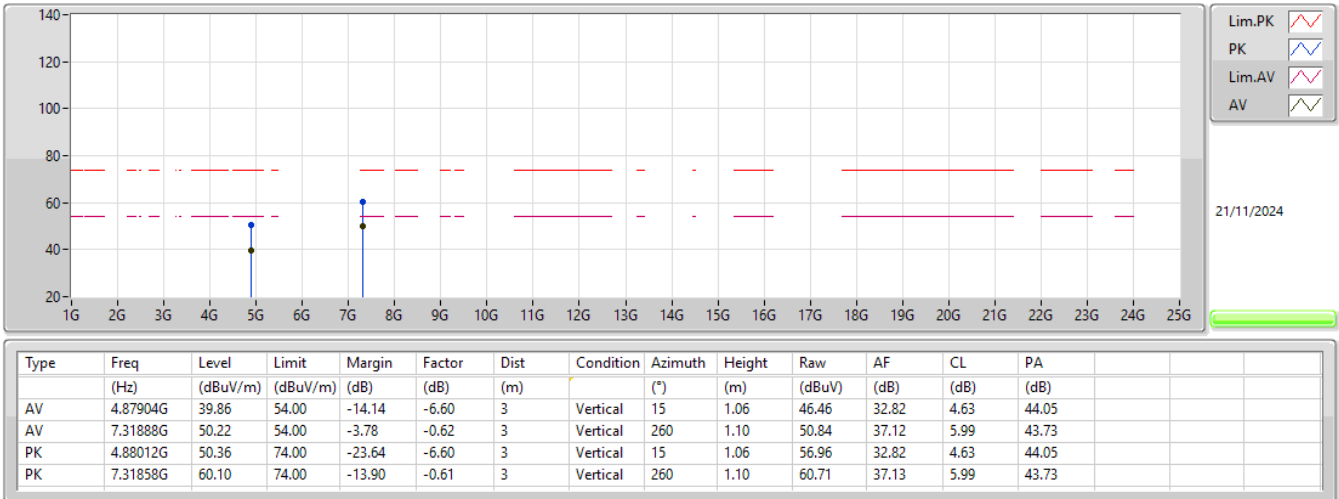
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Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3716G	43.57	54.00	-10.43	30.52	3	Horizontal	208	2.95	13.05	27.38	3.14	-
AV	2.44G	106.38	Inf	-Inf	30.88	3	Horizontal	208	2.95	75.50	27.70	3.18	-
AV	2.4912G	44.37	54.00	-9.63	31.20	3	Horizontal	208	2.95	13.17	27.99	3.21	-
PK	2.3672G	57.05	74.00	-16.95	30.54	3	Horizontal	208	2.95	26.51	27.40	3.14	-
PK	2.4396G	109.42	Inf	-Inf	30.88	3	Horizontal	208	2.95	78.54	27.70	3.18	-
PK	2.4964G	57.93	74.00	-16.07	31.15	3	Horizontal	208	2.95	26.78	27.94	3.21	-

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX



2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

