Testing Laboratory 3785

FCC Radio Test Report

FCC ID	:	**HBW-GDOCAM360**
Equipment	:	**Garage Camera Module**
Brand Name	:	**myQ**
Model Name	:	**GDOCAM360**
Applicant	:	**The Chamberlain Group LLC 300 Windsor Drive Oak Brook, IL 60523 USA**
Manufacturer	:	**The Chamberlain Group, LLC 300 Windsor Drive Oak Brook, IL 60523 USA**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Mar. 27, 2025, and testing was started from Apr. 08, 2025 and completed on Apr. 21, 2025. 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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PHOTOGRAPHS OF EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FR532514AL	01	Initial issue of report	May 16, 2025

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:
None

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 (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:
- Bluetooth LE uses a GFSK (1Mbps/2Mbps) modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	INPAQ	RFPCA471415EMAB401	PIFA	Reverse SMA	2.4G/BLE

Ant.	Port	Gain (dBi)	
		2.4G	Bluetooth
1	1	4.77	4.77

Note 1: The EUT has one antenna.

For 2.4GHz function:

For IEEE 802.11 b/g/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

Operational Condition				
EUT Power Type	From AC Adapter			
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
BT-LE(1Mbps)	0.634	1.98	395u	3k
BT-LE(2Mbps)	0.337	4.72	209.375u	5k

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	CON04-HY	Rian Chung	21.3~22.9°C / 51~53%	17/Apr/2025
RF Conducted	TH07-HY	Xun Hsieh	23.4~23.9°C / 52~55%	08/Apr/2025
☒ 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	03CH25-HY	Henry Ho	22.5~23.4°C / 50~52%	10/Apr/2025
Radiated (Co-location)	03CH25-HY	Henry Ho	22.5~23.6°C / 52~53%	21/Apr/2025

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 Channel Mode

Test Software Version	RTLBTAPP

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

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	**X Plane**	**Y Plane**	**Z Plane**
Worst Planes of EUT			V

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	WLAN 2.4GHz + Bluetooth
Refer to Sporton Test Report No.: FA532514 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

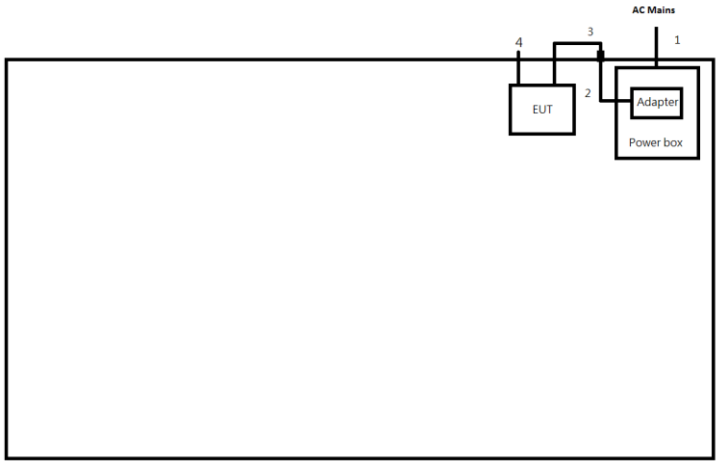
2.3 Support Equipment

Support Equipment – AC Conduction and Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Adapter	HTC	TC P2000-US	-	-
2	USB Cable	N/A	N/A	-	-
3	UART Cable	N/A	N/A	-	-
4	console cable	N/A	N/A	-	-

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	UART Cable*2	N/A	N/A	-	-
4	5V Adapter*2	HTC	TC P2000-US	-	-
5	Transmission line USB*2	N/A	N/A	-	-
6	console cable*2	N/A	N/A	-	-
7	USB dongle*2	N/A	N/A	-	-

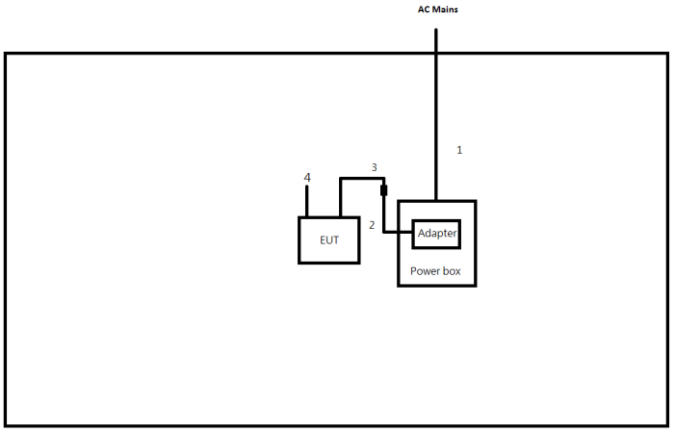
2.4 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB Cable	No	0.9	-
3	UART Cable	No	0.45	-
4	console cable	No	0.5	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB Cable	No	0.9	-
3	UART Cable	No	0.45	-
4	console cable	No	0.5	-

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

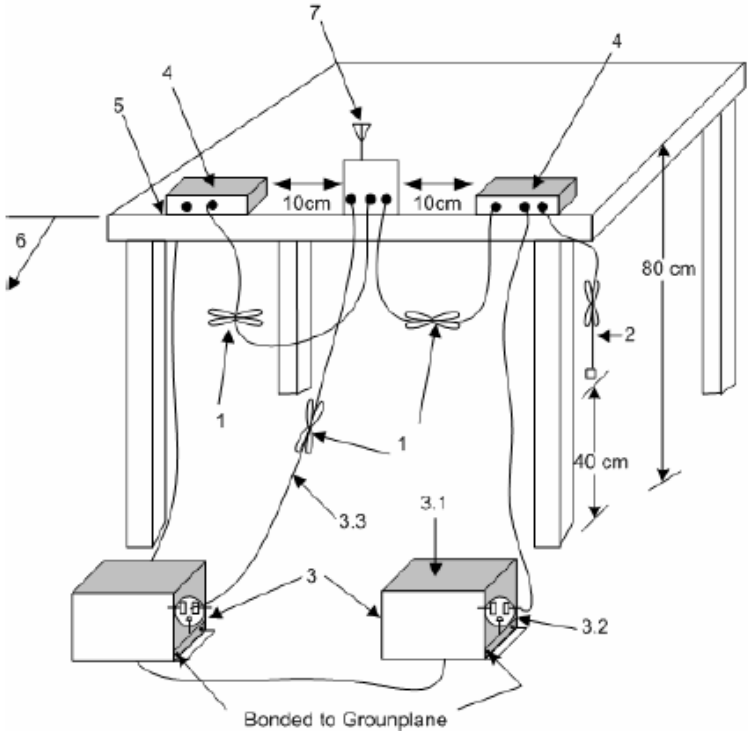
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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

AC Power-line Conducted Emissions



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

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

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

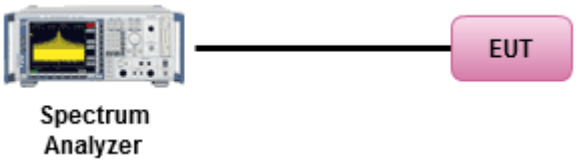
3.2.2 Measuring Instruments

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

Emission Bandwidth


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} ≤ 6 dBi, then P_{Out} ≤ 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 + 8dB dBm	
e.i.r.p. Power Limit:			
▪ 2400-2483.5 MHz Band			
	▪ Point-to-multipoint systems (P2M): P_{eirp} ≤ 36 dBm (4 W)		
	▪ Point-to-point systems (P2P): P_{eirp} ≤ MAX(36, [P_{Out} + G_{TX}]) dBm		
	▪ Smart antenna system (SAS)		
		- Single beam: P_{eirp} ≤ MAX(36, P_{Out} + G_{TX}) dBm	
		- Overlap beam: P_{eirp} ≤ MAX(36, P_{Out} + G_{TX}) dBm	
		- Aggregate power on all beams: P_{eirp} ≤ 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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

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

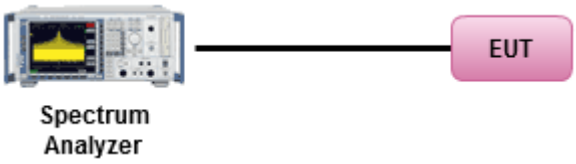
3.4.2 Measuring Instruments

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

Power Spectral Density


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.	

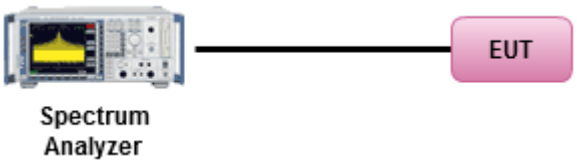
3.5.2 Measuring Instruments

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

Emissions in Non-restricted Frequency Bands


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 below30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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

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.
▪	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 ≥ 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.

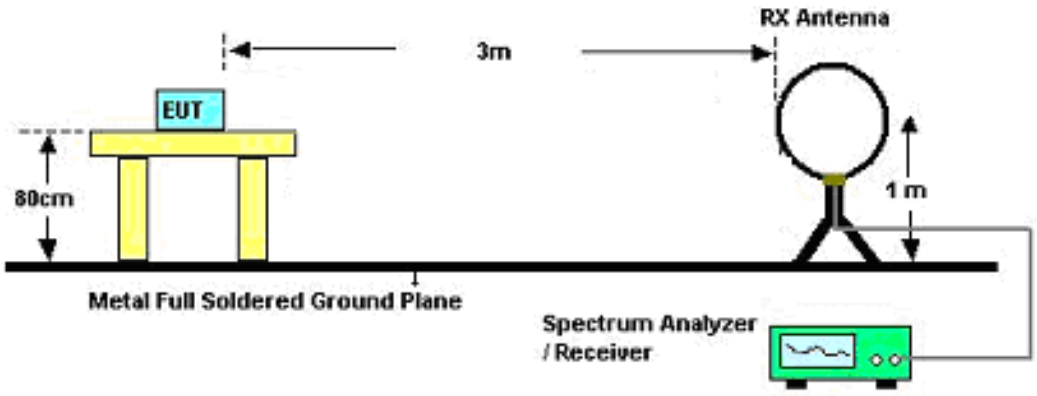
3.6.4 Measurement Results Calculation

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

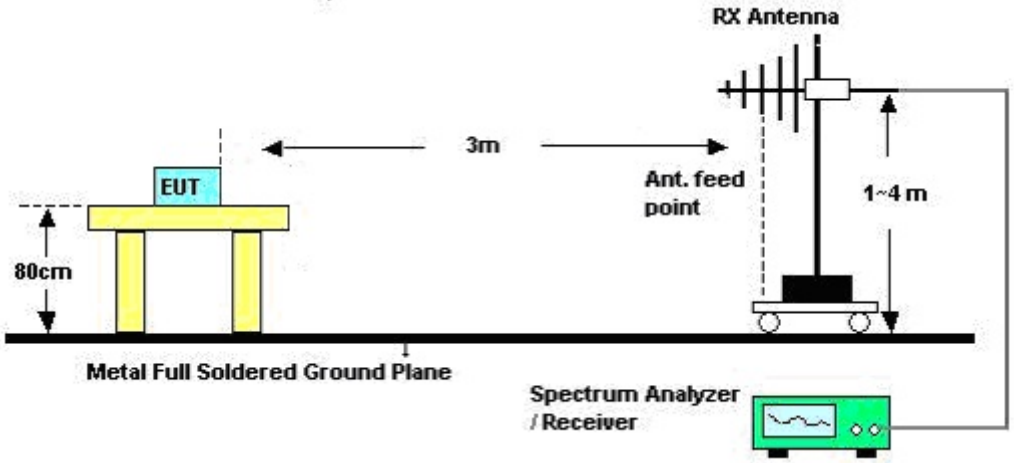
3.6.5 Test Setup

Emissions in Restricted Frequency Bands

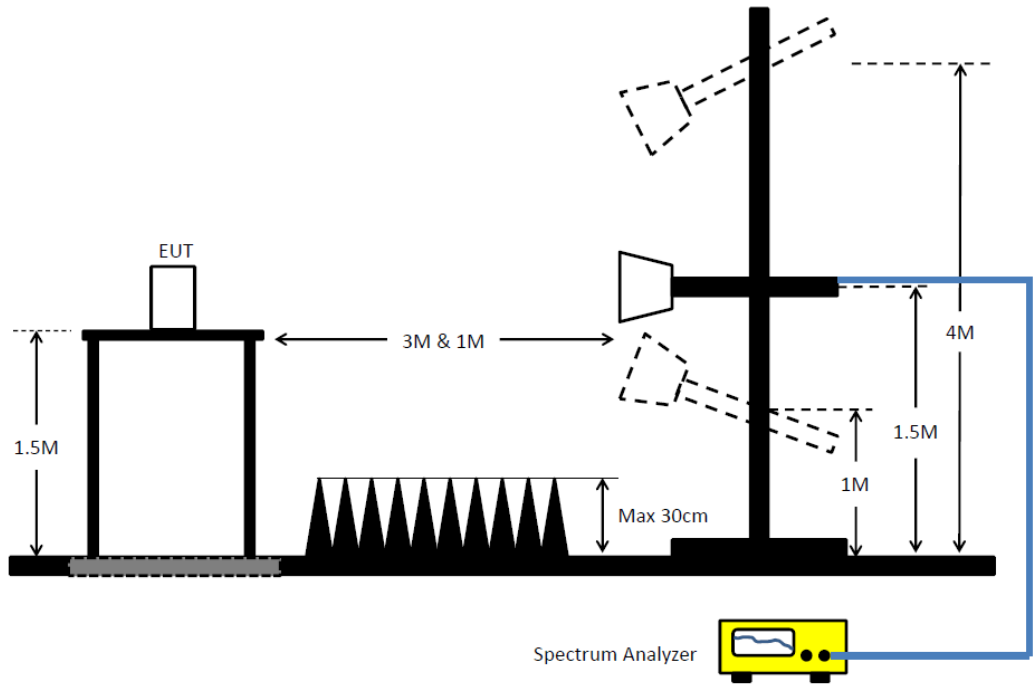
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



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	101578	9kHz ~ 30MHz	11/Oct/2024	10/Oct/2025
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	26/Feb/2025	25/Feb/2026
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	101515	10Hz~40GHz	23/Jan/2025	22/Jan/2026
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	18/Dec/2024	17/Dec/2025
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	18/Dec/2024	17/Dec/2025
SENSE-15247_FS	Sporton	V5.11.23	N/A	N/A	N/A	N/A

Instrument for Radiated Test (Co-location)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	08/Aug/2024	07/Aug/2025
Signal Analyzer	ROHDE&SCHWARZ	FSV3044	101410	10Hz~44GHz	18/Nov/2024	17/Nov/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	1GHz~40GHz	15/Feb/2025	14/Feb/2026
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	24/May/2024	23/May/2025
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	18/Apr/2025	17/Apr/2026
SENSE-EMI	Sporton	V5.11.6	NA	NA	NA	NA

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	20/Mar/2025	19/Mar/2026
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	15/Feb/2025	14/Feb/2026
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
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40GA	060604	18GHz ~ 40GHz	19/Apr/2024	18/Apr/2025
SENSE-15247-FS	Sporton	V5.11.23	NA	NA	NA	NA

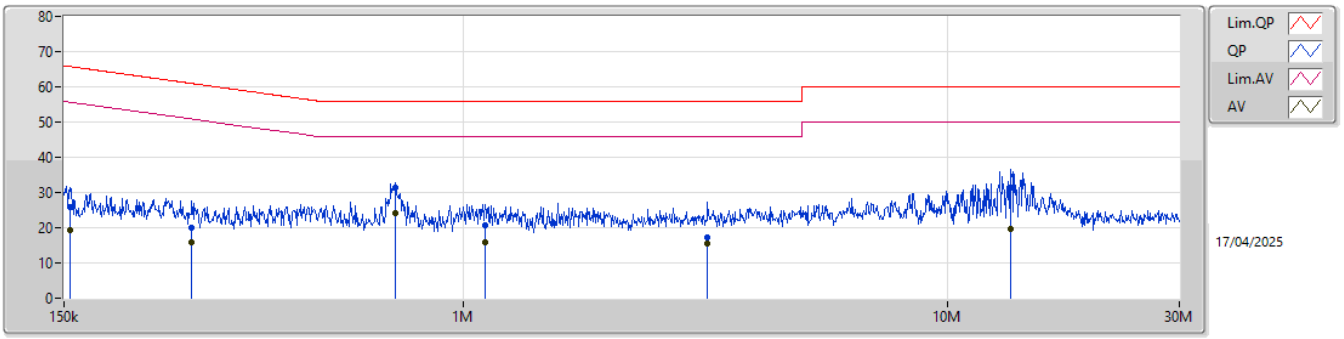
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	723.06k	32.23	46.00	-13.77	Neutral

Result

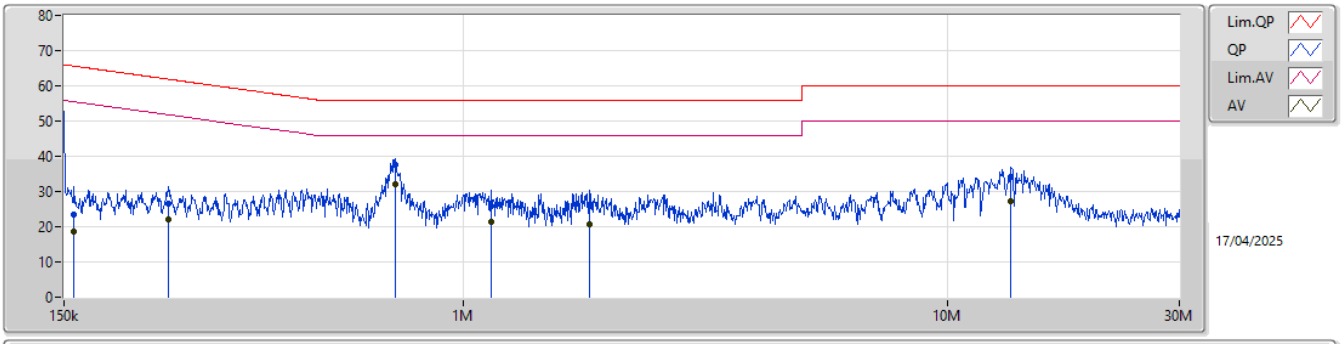
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	154.251k	25.80	65.77	-39.97	Line
Mode 1	Pass	AV	154.251k	19.36	55.77	-36.41	Line
Mode 1	Pass	QP	275.179k	19.83	60.95	-41.12	Line
Mode 1	Pass	AV	275.179k	15.92	50.95	-35.03	Line
Mode 1	Pass	QP	723.06k	31.27	56.00	-24.73	Line
Mode 1	Pass	AV	723.06k	24.06	46.00	-21.94	Line
Mode 1	Pass	QP	1.108M	20.73	56.00	-35.27	Line
Mode 1	Pass	AV	1.108M	16.01	46.00	-29.99	Line
Mode 1	Pass	QP	3.192M	17.34	56.00	-38.66	Line
Mode 1	Pass	AV	3.192M	15.53	46.00	-30.47	Line
Mode 1	Pass	QP	13.435M	31.24	60.00	-28.76	Line
Mode 1	Pass	AV	13.435M	19.65	50.00	-30.35	Line
Mode 1	Pass	QP	157.361k	23.45	65.60	-42.15	Neutral
Mode 1	Pass	AV	157.361k	18.67	55.60	-36.93	Neutral
Mode 1	Pass	QP	246.077k	26.38	61.89	-35.51	Neutral
Mode 1	Pass	AV	246.077k	22.19	51.89	-29.70	Neutral
Mode 1	Pass	QP	723.06k	37.75	56.00	-18.25	Neutral
Mode 1	Pass	AV	723.06k	32.23	46.00	-13.77	Neutral
Mode 1	Pass	QP	1.14M	25.94	56.00	-30.06	Neutral
Mode 1	Pass	AV	1.14M	21.42	46.00	-24.58	Neutral
Mode 1	Pass	QP	1.818M	25.84	56.00	-30.16	Neutral
Mode 1	Pass	AV	1.818M	20.64	46.00	-25.36	Neutral
Mode 1	Pass	QP	13.489M	34.26	60.00	-25.74	Neutral
Mode 1	Pass	AV	13.489M	27.14	50.00	-22.86	Neutral

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.251k	25.80	65.77	-39.97	19.97	Line	-	5.83	9.99	0.01	9.97
AV	154.251k	19.36	55.77	-36.41	19.97	Line	-	-0.61	9.99	0.01	9.97
QP	275.179k	19.83	60.95	-41.12	19.72	Line	-	0.11	9.73	0.02	9.97
AV	275.179k	15.92	50.95	-35.03	19.72	Line	-	-3.80	9.73	0.02	9.97
QP	723.06k	31.27	56.00	-24.73	19.96	Line	-	11.31	9.94	0.04	9.98
AV	723.06k	24.06	46.00	-21.94	19.96	Line	-	4.10	9.94	0.04	9.98
QP	1.108M	20.73	56.00	-35.27	19.83	Line	-	0.90	9.80	0.05	9.98
AV	1.108M	16.01	46.00	-29.99	19.83	Line	-	-3.82	9.80	0.05	9.98
QP	3.192M	17.34	56.00	-38.66	19.71	Line	-	-2.37	9.69	0.04	9.98
AV	3.192M	15.53	46.00	-30.47	19.71	Line	-	-4.18	9.69	0.04	9.98
QP	13.435M	31.24	60.00	-28.76	19.96	Line	-	11.28	9.71	0.27	9.98
AV	13.435M	19.65	50.00	-30.35	19.96	Line	-	-0.31	9.71	0.27	9.98

Conducted Emissions at Powerline_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	157.361k	23.45	65.60	-42.15	20.04	Neutral	-	3.41	10.06	0.01	9.97
AV	157.361k	18.67	55.60	-36.93	20.04	Neutral	-	-1.37	10.06	0.01	9.97
QP	246.077k	26.38	61.89	-35.51	19.68	Neutral	-	6.70	9.69	0.02	9.97
AV	246.077k	22.19	51.89	-29.70	19.68	Neutral	-	2.51	9.69	0.02	9.97
QP	723.06k	37.75	56.00	-18.25	19.97	Neutral	-	17.78	9.95	0.04	9.98
AV	723.06k	32.23	46.00	-13.77	19.97	Neutral	-	12.26	9.95	0.04	9.98
QP	1.14M	25.94	56.00	-30.06	19.83	Neutral	-	6.11	9.80	0.05	9.98
AV	1.14M	21.42	46.00	-24.58	19.83	Neutral	-	1.59	9.80	0.05	9.98
QP	1.818M	25.84	56.00	-30.16	19.73	Neutral	-	6.11	9.73	0.03	9.97
AV	1.818M	20.64	46.00	-25.36	19.73	Neutral	-	0.91	9.73	0.03	9.97
QP	13.489M	34.26	60.00	-25.74	19.99	Neutral	-	14.27	9.74	0.27	9.98
AV	13.489M	27.14	50.00	-22.86	19.99	Neutral	-	7.15	9.74	0.27	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)	660k	1.043M	1M04F1D	646.25k	1.032M
BT-LE(2Mbps)	1.383M	2.079M	2M08F1D	925k	2.039M

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

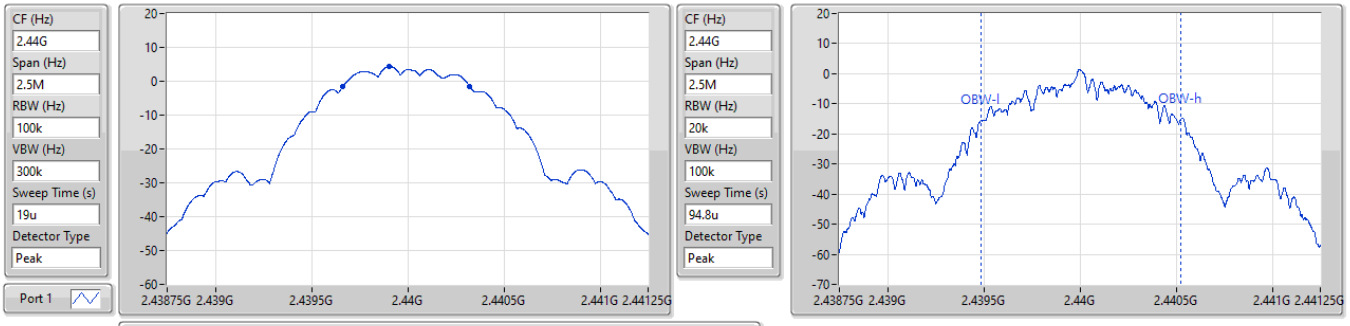
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	646.25k	1.043M
2440MHz	Pass	500k	660k	1.038M
2480MHz	Pass	500k	648.75k	1.032M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.383M	2.069M
2440MHz	Pass	500k	925k	2.039M
2480MHz	Pass	500k	1.015M	2.079M

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**

2440MHz

08/04/2025

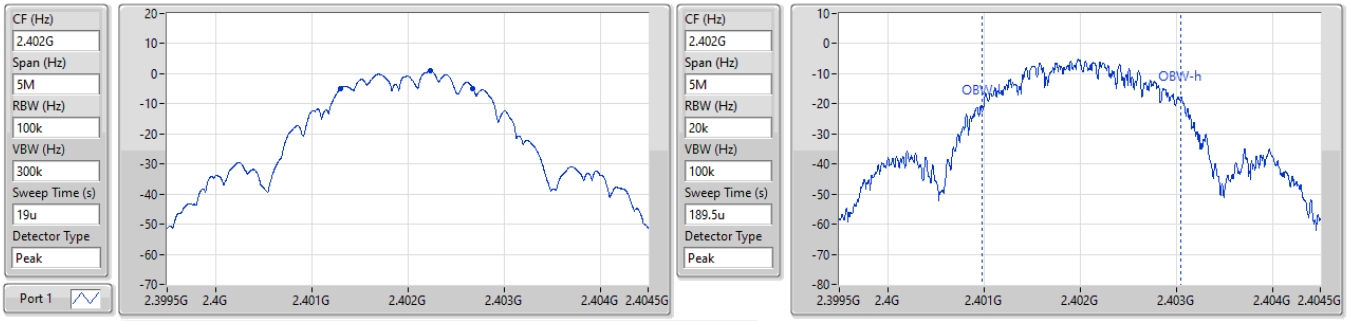


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
660k	2.439664G	2.440324G	1.038M	2.439488G	2.440526G	500k	1

2.4-2.4835GHz_BT-LE(2Mbps) **EBW-DTS**

2402MHz

08/04/2025



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.383M	2.401298G	2.40268G	2.069M	2.400986G	2.403054G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	7.14	0.00518
BT-LE(2Mbps)	5.74	0.00375

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.77	6.38	30.00
2440MHz	Pass	4.77	6.48	30.00
2480MHz	Pass	4.77	7.14	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.77	5.50	30.00
2440MHz	Pass	4.77	5.69	30.00
2480MHz	Pass	4.77	5.74	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)	-8.18
BT-LE(2Mbps)	-10.64

RBW = 3kHz;

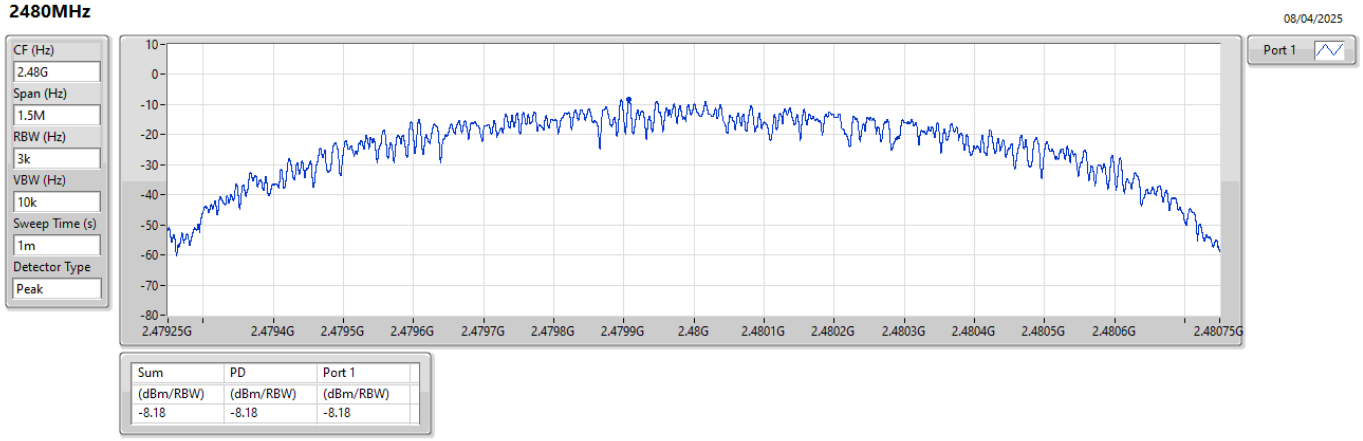
Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.77	-9.57	8.00
2440MHz	Pass	4.77	-8.38	8.00
2480MHz	Pass	4.77	-8.18	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.77	-12.08	8.00
2440MHz	Pass	4.77	-10.64	8.00
2480MHz	Pass	4.77	-11.19	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**

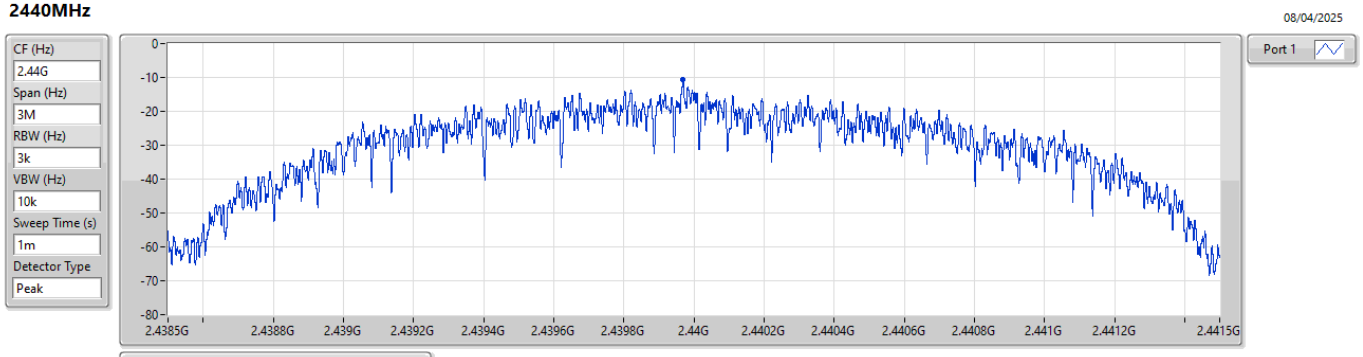
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.18	-8.18	-8.18

2.4-2.4835GHz_BT-LE(2Mbps) **PSD**

2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.64	-10.64	-10.64

Summary

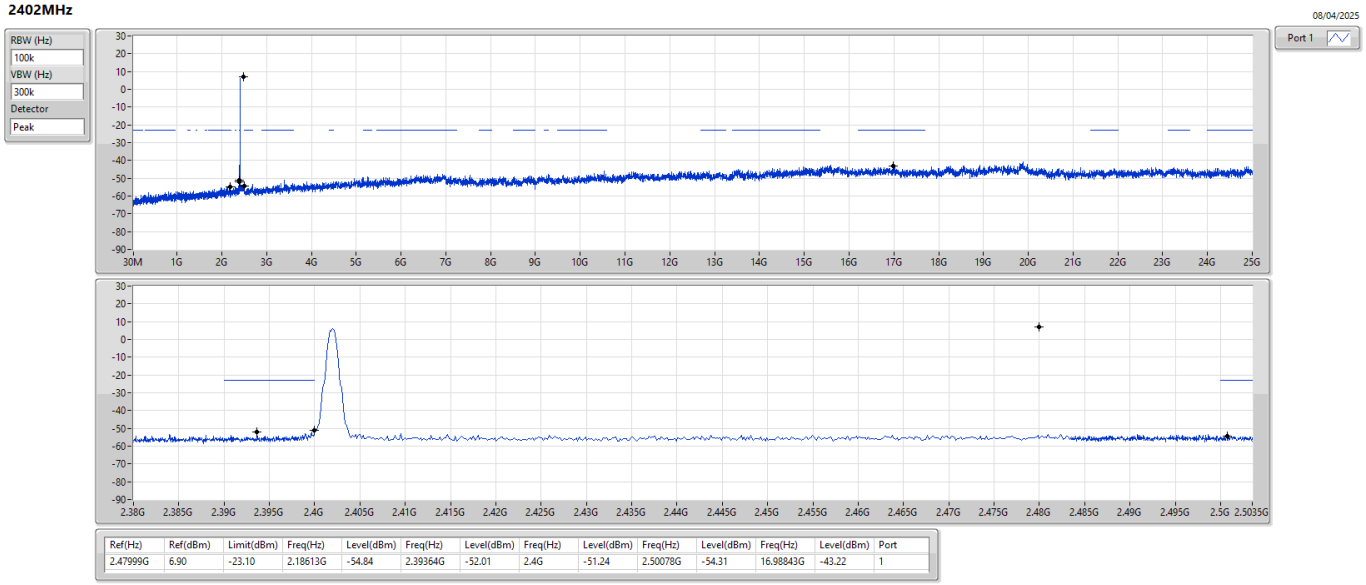
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.47999G	6.90	-23.10	2.18613G	-54.84	2.39364G	-52.01	2.4G	-51.24	2.50078G	-54.31	16.98843G	-43.22	1
BT-LE(2Mbps)	Pass	2.48016G	5.83	-24.17	1.6468G	-55.74	2.4G	-27.34	2.4G	-27.07	2.50042G	-53.90	21.94891G	-42.47	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	2.47999G	6.90	-23.10	2.18613G	-54.84	2.39364G	-52.01	2.4G	-51.24	2.50078G	-54.31	16.98843G	-43.22	1
2440MHz	Pass	2.47999G	6.90	-23.10	2.02163G	-55.07	2.3998G	-53.96	2.4G	-55.97	2.50138G	-53.69	23.18622G	-43.10	1
2480MHz	Pass	2.47999G	6.90	-23.10	2.11563G	-55.57	2.39852G	-54.25	2.4G	-55.97	2.50222G	-53.50	16.88158G	-43.58	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.48016G	5.83	-24.17	1.6468G	-55.74	2.4G	-27.34	2.4G	-27.07	2.50042G	-53.90	21.94891G	-42.47	1
2440MHz	Pass	2.48016G	5.83	-24.17	2.18495G	-55.93	2.39448G	-53.72	2.4G	-56.96	2.50326G	-54.24	16.42321G	-41.93	1
2480MHz	Pass	2.48016G	5.83	-24.17	2.16968G	-55.30	2.3916G	-54.31	2.4G	-56.09	2.50234G	-53.22	24.91845G	-42.52	1

2.4-2.4835GHz_BT-LE(1Mbps) **CSENdB-DTS**

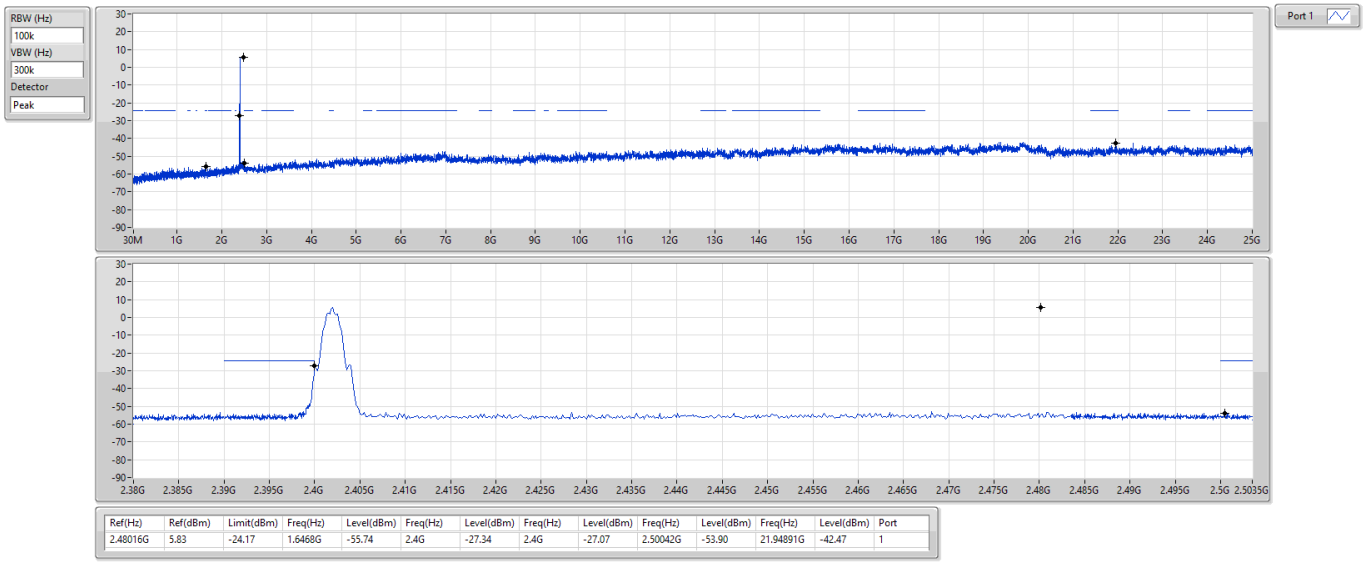
2402MHz



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
2.47999G	6.90	-23.10	2.18613G	-54.84	2.39364G	-52.01	2.4G	-51.24	2.50078G	-54.31	16.98843G	-43.22	1

2.4-2.4835GHz_BT-LE(2Mbps) **CSENdB-DTS**

2402MHz



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
2.48016G	5.83	-24.17	1.6468G	-55.74	2.4G	-27.34	2.4G	-27.07	2.50042G	-53.90	21.94891G	-42.47	1

Summary

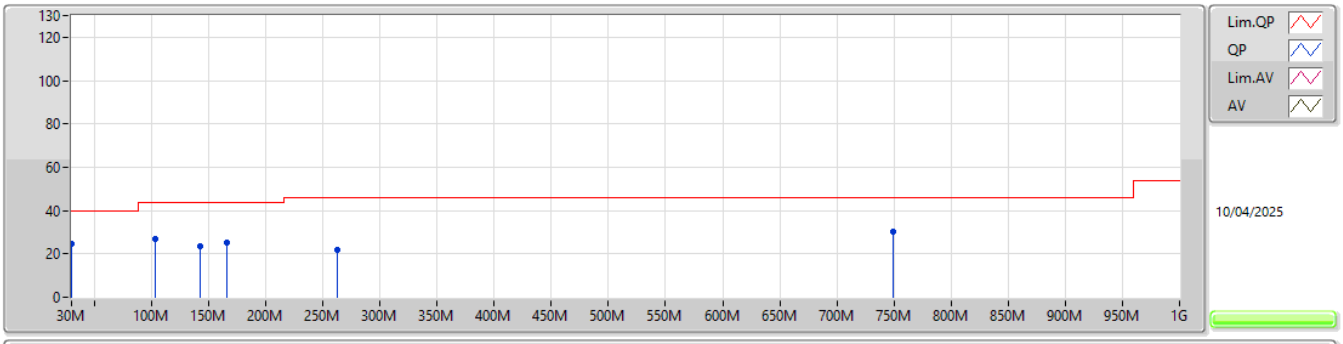
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	31.94M	32.24	40.00	-7.76	3	Horizontal	0	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	103.72M	26.89	43.50	-16.61	3	Vertical	360	1.00
2440MHz	Pass	PK	142.52M	23.70	43.50	-19.80	3	Vertical	360	1.00
2440MHz	Pass	PK	165.8M	25.40	43.50	-18.10	3	Vertical	360	1.00
2440MHz	Pass	PK	262.8M	21.77	46.00	-24.23	3	Vertical	360	1.00
2440MHz	Pass	PK	749.74M	30.39	46.00	-15.61	3	Vertical	360	1.00
2440MHz	Pass	QP	30M	24.70	40.00	-15.30	3	Vertical	86	1.00
2440MHz	Pass	PK	31.94M	32.24	40.00	-7.76	3	Horizontal	0	1.00
2440MHz	Pass	PK	165.8M	33.87	43.50	-9.63	3	Horizontal	0	1.00
2440MHz	Pass	PK	253.1M	32.66	46.00	-13.34	3	Horizontal	0	1.00
2440MHz	Pass	PK	410.24M	37.78	46.00	-8.22	3	Horizontal	0	1.00
2440MHz	Pass	QP	86.26M	24.30	40.00	-15.70	3	Horizontal	150	1.00
2440MHz	Pass	QP	125.06M	30.62	43.50	-12.88	3	Horizontal	88	3.00

2.4-2.4835GHz_BT-LE(2Mbps)

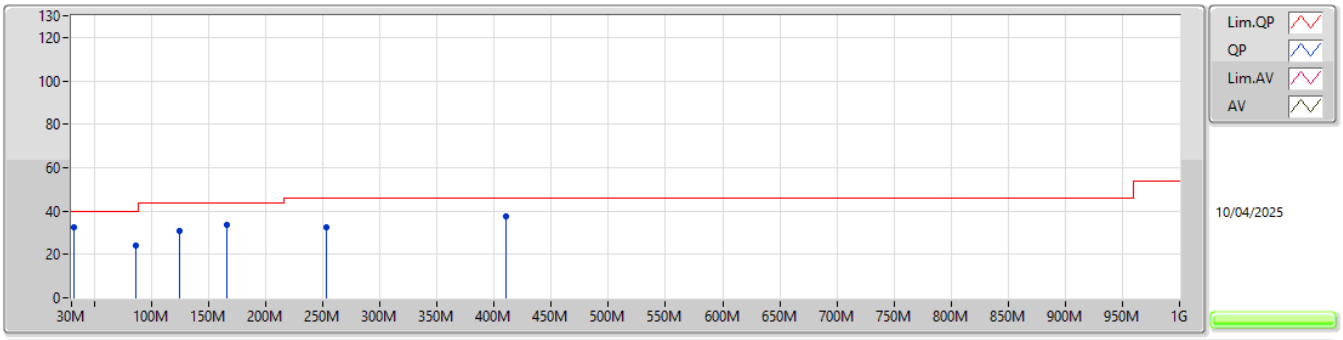
2440MHz_Adapter



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
PK	103.72M	26.89	43.50	-16.61	-27.20	3	Vertical	360	1.00	54.09	16.51	0.82	44.53
PK	142.52M	23.70	43.50	-19.80	-26.02	3	Vertical	360	1.00	49.72	17.57	0.99	44.58
PK	165.8M	25.40	43.50	-18.10	-27.28	3	Vertical	360	1.00	52.68	16.27	0.99	44.54
PK	262.8M	21.77	46.00	-24.23	-23.10	3	Vertical	360	1.00	44.87	20.08	1.16	44.34
PK	749.74M	30.39	46.00	-15.61	-13.43	3	Vertical	360	1.00	43.82	28.33	2.02	43.78
QP	30M	24.70	40.00	-15.30	-19.10	3	Vertical	86	1.00	43.80	24.72	0.45	44.27

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_Adapter



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
PK	31.94M	32.24	40.00	-7.76	-20.11	3	Horizontal	0	1.00	52.35	23.74	0.45	44.30
PK	165.8M	33.87	43.50	-9.63	-27.28	3	Horizontal	0	1.00	61.15	16.27	0.99	44.54
PK	253.1M	32.66	46.00	-13.34	-24.16	3	Horizontal	0	1.00	56.82	19.05	1.15	44.36
PK	410.24M	37.78	46.00	-8.22	-20.10	3	Horizontal	0	1.00	57.88	22.45	1.46	44.01
QP	86.26M	24.30	40.00	-15.70	-29.38	3	Horizontal	150	1.00	53.68	14.48	0.76	44.62
QP	125.06M	30.62	43.50	-12.88	-25.95	3	Horizontal	88	3.00	56.57	17.74	0.87	44.56

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	2.4944G	47.03	54.00	-6.97	3	Vertical	293	1.00
BT-LE(2Mbps)	Pass	AV	2.4835G	48.05	54.00	-5.95	3	Horizontal	9	1.05

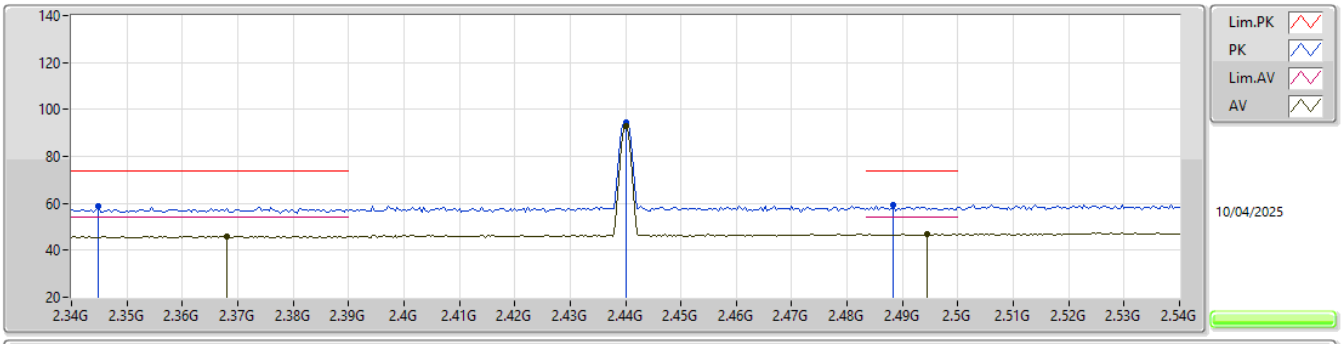
Result

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	2.3672G	46.19	54.00	-7.81	3	Vertical	207	2.95
2402MHz	Pass	AV	2.402G	92.45	Inf	-Inf	3	Vertical	207	2.95
2402MHz	Pass	PK	2.384G	59.18	74.00	-14.82	3	Vertical	207	2.95
2402MHz	Pass	PK	2.402G	93.68	Inf	-Inf	3	Vertical	207	2.95
2402MHz	Pass	AV	2.381G	46.20	54.00	-7.80	3	Horizontal	13	2.78
2402MHz	Pass	AV	2.402G	97.70	Inf	-Inf	3	Horizontal	13	2.78
2402MHz	Pass	PK	2.3678G	58.61	74.00	-15.39	3	Horizontal	13	2.78
2402MHz	Pass	PK	2.402G	98.93	Inf	-Inf	3	Horizontal	13	2.78
2402MHz	Pass	AV	4.80406G	34.75	54.00	-19.25	3	Vertical	57	2.24
2402MHz	Pass	PK	4.80351G	45.82	74.00	-28.18	3	Vertical	57	2.24
2402MHz	Pass	AV	4.80391G	32.49	54.00	-21.51	3	Horizontal	74	1.27
2402MHz	Pass	PK	4.80391G	43.89	74.00	-30.11	3	Horizontal	74	1.27
2440MHz	Pass	AV	2.368G	46.11	54.00	-7.89	3	Vertical	293	1.00
2440MHz	Pass	AV	2.44G	93.10	Inf	-Inf	3	Vertical	293	1.00
2440MHz	Pass	AV	2.4944G	47.03	54.00	-6.97	3	Vertical	293	1.00
2440MHz	Pass	PK	2.3448G	58.58	74.00	-15.42	3	Vertical	293	1.00
2440MHz	Pass	PK	2.44G	94.36	Inf	-Inf	3	Vertical	293	1.00
2440MHz	Pass	PK	2.4884G	59.23	74.00	-14.77	3	Vertical	293	1.00
2440MHz	Pass	AV	2.354G	46.40	54.00	-7.60	3	Horizontal	9	1.03
2440MHz	Pass	AV	2.44G	98.26	Inf	-Inf	3	Horizontal	9	1.03
2440MHz	Pass	AV	2.4876G	47.00	54.00	-7.00	3	Horizontal	9	1.03
2440MHz	Pass	PK	2.344G	58.36	74.00	-15.64	3	Horizontal	9	1.03
2440MHz	Pass	PK	2.44G	99.52	Inf	-Inf	3	Horizontal	9	1.03
2440MHz	Pass	PK	2.494G	60.09	74.00	-13.91	3	Horizontal	9	1.03
2440MHz	Pass	AV	4.87963G	33.43	54.00	-20.57	3	Vertical	21	1.50
2440MHz	Pass	PK	4.88055G	44.73	74.00	-29.27	3	Vertical	21	1.50
2440MHz	Pass	AV	4.88038G	32.33	54.00	-21.67	3	Horizontal	193	1.12
2440MHz	Pass	PK	4.88075G	43.77	74.00	-30.23	3	Horizontal	193	1.12
2480MHz	Pass	AV	2.48G	96.26	Inf	-Inf	3	Vertical	289	1.31
2480MHz	Pass	AV	2.4932G	46.99	54.00	-7.01	3	Vertical	289	1.31
2480MHz	Pass	PK	2.48G	97.51	Inf	-Inf	3	Vertical	289	1.31
2480MHz	Pass	PK	2.4968G	59.28	74.00	-14.72	3	Vertical	289	1.31
2480MHz	Pass	AV	2.48G	101.94	Inf	-Inf	3	Horizontal	3	1.20
2480MHz	Pass	AV	2.4874G	46.95	54.00	-7.05	3	Horizontal	3	1.20
2480MHz	Pass	PK	2.48G	103.16	Inf	-Inf	3	Horizontal	3	1.20
2480MHz	Pass	PK	2.4908G	59.24	74.00	-14.76	3	Horizontal	3	1.20
2480MHz	Pass	AV	4.96004G	35.62	54.00	-18.38	3	Vertical	59	2.18
2480MHz	Pass	PK	4.95967G	46.05	74.00	-27.95	3	Vertical	59	2.18
2480MHz	Pass	AV	4.96031G	33.69	54.00	-20.31	3	Horizontal	332	1.63
2480MHz	Pass	PK	4.96054G	45.45	74.00	-28.55	3	Horizontal	332	1.63
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.367G	46.89	54.00	-7.11	3	Vertical	207	2.96
2402MHz	Pass	AV	2.402G	90.97	Inf	-Inf	3	Vertical	207	2.96
2402MHz	Pass	PK	2.368G	58.27	74.00	-15.73	3	Vertical	207	2.96
2402MHz	Pass	PK	2.402G	93.81	Inf	-Inf	3	Vertical	207	2.96
2402MHz	Pass	AV	2.3724G	46.85	54.00	-7.15	3	Horizontal	11	2.80
2402MHz	Pass	AV	2.402G	95.98	Inf	-Inf	3	Horizontal	11	2.80
2402MHz	Pass	PK	2.378G	58.81	74.00	-15.19	3	Horizontal	11	2.80
2402MHz	Pass	PK	2.402G	98.85	Inf	-Inf	3	Horizontal	11	2.80
2402MHz	Pass	AV	4.80482G	33.32	54.00	-20.68	3	Vertical	56	2.29
2402MHz	Pass	PK	4.80479G	44.61	74.00	-29.39	3	Vertical	56	2.29
2402MHz	Pass	AV	4.80494G	32.13	54.00	-21.87	3	Horizontal	73	1.44
2402MHz	Pass	PK	4.80314G	43.57	74.00	-30.43	3	Horizontal	73	1.44
2440MHz	Pass	AV	2.3608G	46.70	54.00	-7.30	3	Vertical	183	1.50
2440MHz	Pass	AV	2.44G	88.89	Inf	-Inf	3	Vertical	183	1.50
2440MHz	Pass	AV	2.4964G	47.53	54.00	-6.47	3	Vertical	183	1.50
2440MHz	Pass	PK	2.3428G	58.65	74.00	-15.35	3	Vertical	183	1.50
2440MHz	Pass	PK	2.44G	92.00	Inf	-Inf	3	Vertical	183	1.50
2440MHz	Pass	PK	2.4852G	58.89	74.00	-15.11	3	Vertical	183	1.50
2440MHz	Pass	AV	2.3648G	46.70	54.00	-7.30	3	Horizontal	9	1.00

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2440MHz	Pass	AV	2.44G	96.53	Inf	-Inf	3	Horizontal	9	1.00
2440MHz	Pass	AV	2.4984G	47.57	54.00	-6.43	3	Horizontal	9	1.00
2440MHz	Pass	PK	2.344G	58.18	74.00	-15.82	3	Horizontal	9	1.00
2440MHz	Pass	PK	2.44G	99.66	Inf	-Inf	3	Horizontal	9	1.00
2440MHz	Pass	PK	2.5G	59.73	74.00	-14.27	3	Horizontal	9	1.00
2440MHz	Pass	PK	4.88014G	45.06	74.00	-28.94	3	Vertical	20	1.54
2440MHz	Pass	AV	4.87908G	33.33	54.00	-20.67	3	Vertical	20	1.54
2440MHz	Pass	AV	4.8801G	31.65	54.00	-22.35	3	Horizontal	73	1.33
2440MHz	Pass	PK	4.88073G	43.44	74.00	-30.56	3	Horizontal	73	1.33
2480MHz	Pass	AV	2.48G	94.71	Inf	-Inf	3	Vertical	291	1.14
2480MHz	Pass	AV	2.4838G	47.77	54.00	-6.23	3	Vertical	291	1.14
2480MHz	Pass	PK	2.48G	97.58	Inf	-Inf	3	Vertical	291	1.14
2480MHz	Pass	PK	2.4902G	59.18	74.00	-14.82	3	Vertical	291	1.14
2480MHz	Pass	AV	2.48G	100.30	Inf	-Inf	3	Horizontal	9	1.05
2480MHz	Pass	AV	2.4835G	48.05	54.00	-5.95	3	Horizontal	9	1.05
2480MHz	Pass	PK	2.48G	103.15	Inf	-Inf	3	Horizontal	9	1.05
2480MHz	Pass	PK	2.4976G	59.25	74.00	-14.75	3	Horizontal	9	1.05
2480MHz	Pass	AV	4.95903G	35.12	54.00	-18.88	3	Vertical	58	2.16
2480MHz	Pass	PK	4.96026G	46.31	74.00	-27.69	3	Vertical	58	2.16
2480MHz	Pass	AV	4.95908G	33.66	54.00	-20.34	3	Horizontal	330	1.49
2480MHz	Pass	PK	4.96002G	44.88	74.00	-29.12	3	Horizontal	330	1.49

2.4-2.4835GHz_BT-LE(1Mbps)

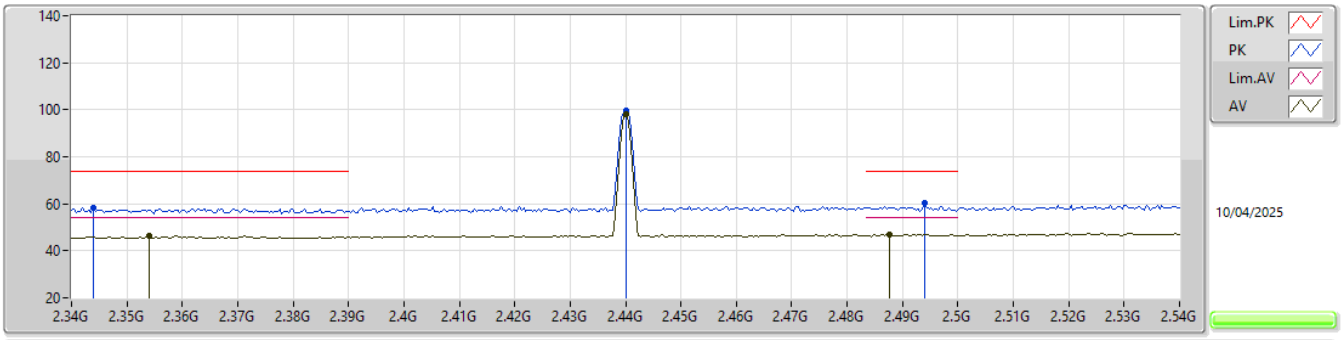
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.368G	46.11	54.00	-7.89	32.10	3	Vertical	293	1.00	14.01	27.40	4.70	-
AV	2.44G	93.10	Inf	-Inf	32.46	3	Vertical	293	1.00	60.64	27.70	4.76	-
AV	2.4944G	47.03	54.00	-6.97	32.85	3	Vertical	293	1.00	14.18	27.96	4.89	-
PK	2.3448G	58.58	74.00	-15.42	32.01	3	Vertical	293	1.00	26.57	27.30	4.71	-
PK	2.44G	94.36	Inf	-Inf	32.46	3	Vertical	293	1.00	61.90	27.70	4.76	-
PK	2.4884G	59.23	74.00	-14.77	32.86	3	Vertical	293	1.00	26.37	27.98	4.88	-

2.4-2.4835GHz_BT-LE(1Mbps)

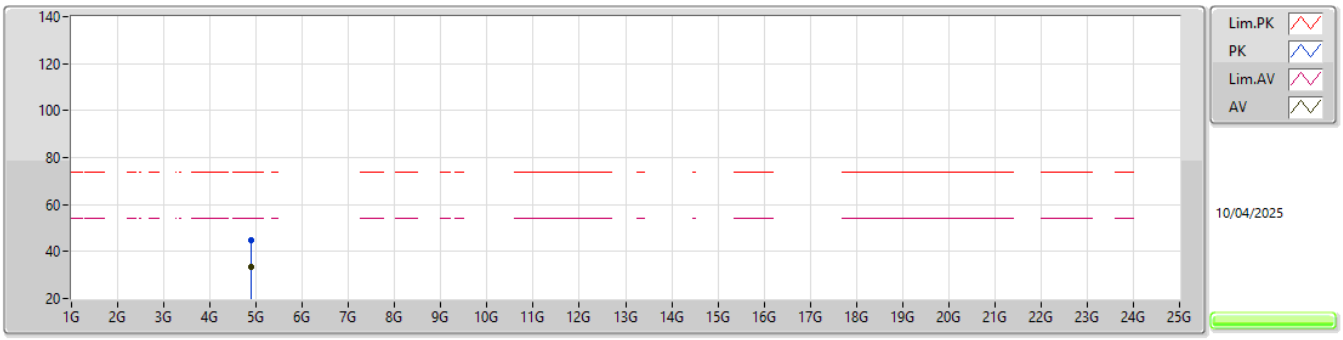
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.354G	46.40	54.00	-7.60	32.05	3	Horizontal	9	1.03	14.35	27.34	4.71	-
AV	2.44G	98.26	Inf	-Inf	32.46	3	Horizontal	9	1.03	65.80	27.70	4.76	-
AV	2.4876G	47.00	54.00	-7.00	32.86	3	Horizontal	9	1.03	14.14	27.98	4.88	-
PK	2.344G	58.36	74.00	-15.64	32.01	3	Horizontal	9	1.03	26.35	27.30	4.71	-
PK	2.44G	99.52	Inf	-Inf	32.46	3	Horizontal	9	1.03	67.06	27.70	4.76	-
PK	2.494G	60.09	74.00	-13.91	32.85	3	Horizontal	9	1.03	27.24	27.96	4.89	-

2.4-2.4835GHz_BT-LE(1Mbps)

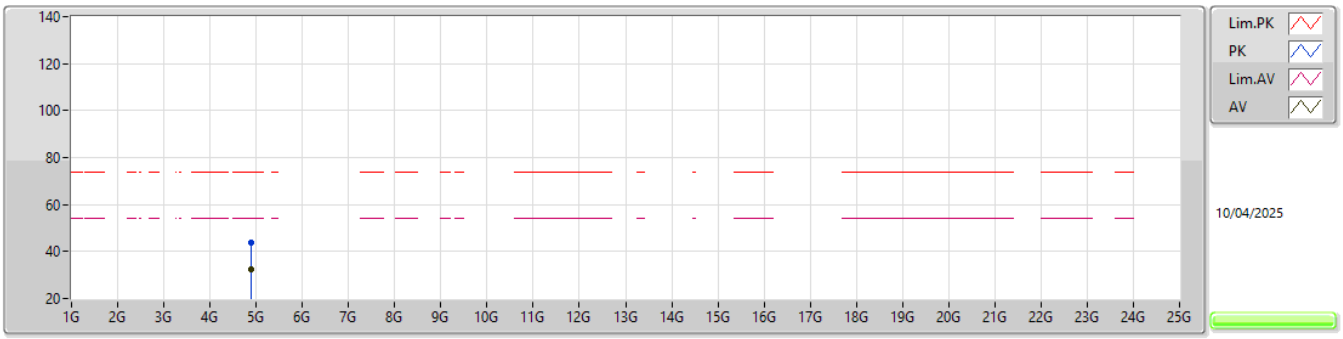
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.87963G	33.43	54.00	-20.57	-4.84	3	Vertical	21	1.50	38.27	32.82	6.39	44.05
PK	4.88055G	44.73	74.00	-29.27	-4.84	3	Vertical	21	1.50	49.57	32.82	6.39	44.05

2.4-2.4835GHz_BT-LE(1Mbps)

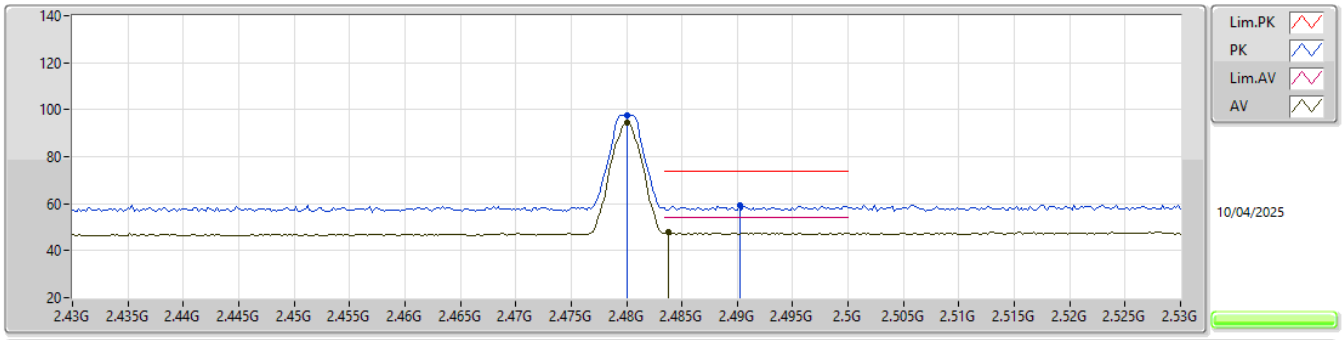
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.88038G	32.33	54.00	-21.67	-4.84	3	Horizontal	193	1.12	37.17	32.82	6.39	44.05
PK	4.88075G	43.77	74.00	-30.23	-4.84	3	Horizontal	193	1.12	48.61	32.82	6.39	44.05

2.4-2.4835GHz_BT-LE(2Mbps)

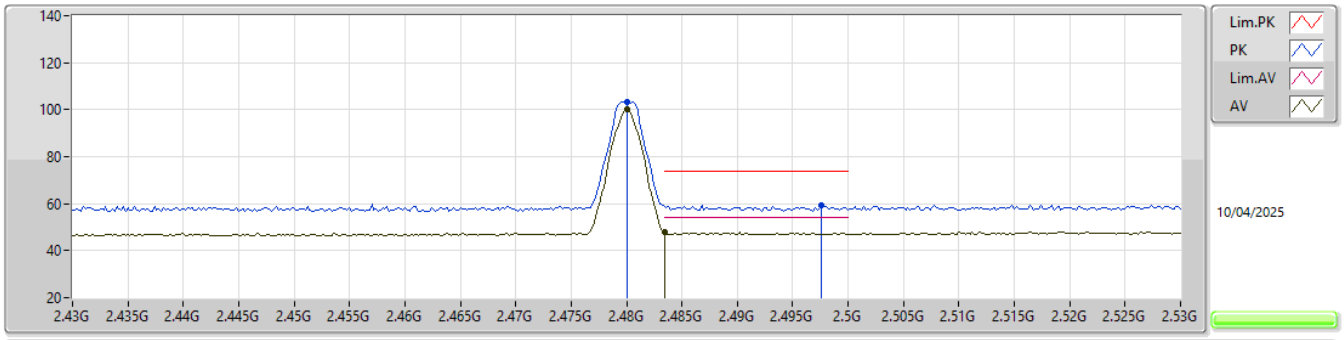
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	94.71	Inf	-Inf	32.76	3	Vertical	291	1.14	61.95	27.90	4.86	-
AV	2.4838G	47.77	54.00	-6.23	32.81	3	Vertical	291	1.14	14.96	27.94	4.87	-
PK	2.48G	97.58	Inf	-Inf	32.76	3	Vertical	291	1.14	64.82	27.90	4.86	-
PK	2.4902G	59.18	74.00	-14.82	32.88	3	Vertical	291	1.14	26.30	28.00	4.88	-

2.4-2.4835GHz_BT-LE(2Mbps)

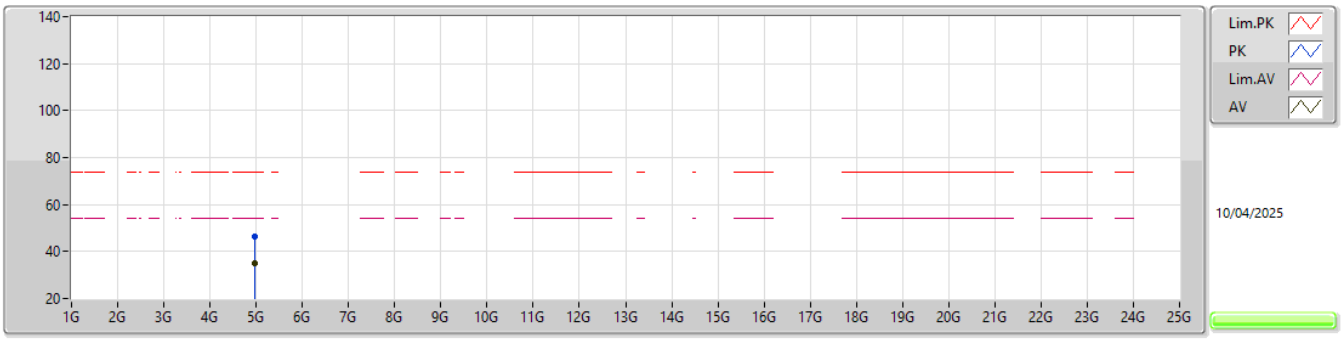
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	100.30	Inf	-Inf	32.76	3	Horizontal	9	1.05	67.54	27.90	4.86	-
AV	2.4835G	48.05	54.00	-5.95	32.81	3	Horizontal	9	1.05	15.24	27.94	4.87	-
PK	2.48G	103.15	Inf	-Inf	32.76	3	Horizontal	9	1.05	70.39	27.90	4.86	-
PK	2.4976G	59.25	74.00	-14.75	32.82	3	Horizontal	9	1.05	26.43	27.92	4.90	-

2.4-2.4835GHz_BT-LE(2Mbps)

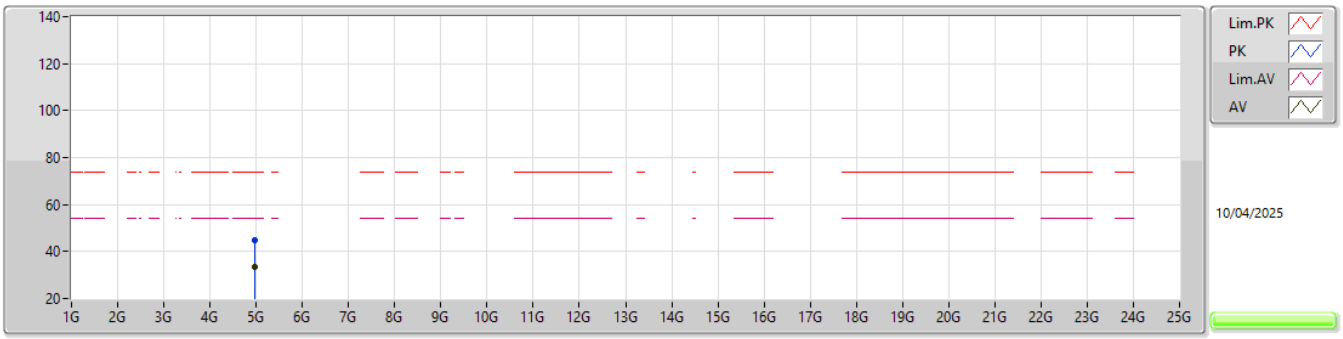
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.95903G	35.12	54.00	-18.88	-4.22	3	Vertical	58	2.16	39.34	33.34	6.48	44.04
PK	4.96026G	46.31	74.00	-27.69	-4.22	3	Vertical	58	2.16	50.53	33.34	6.48	44.04

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	4.95908G	33.66	54.00	-20.34	-4.22	3	Horizontal	330	1.49	37.88	33.34	6.48	44.04
PK	4.96002G	44.88	74.00	-29.12	-4.22	3	Horizontal	330	1.49	49.10	33.34	6.48	44.04

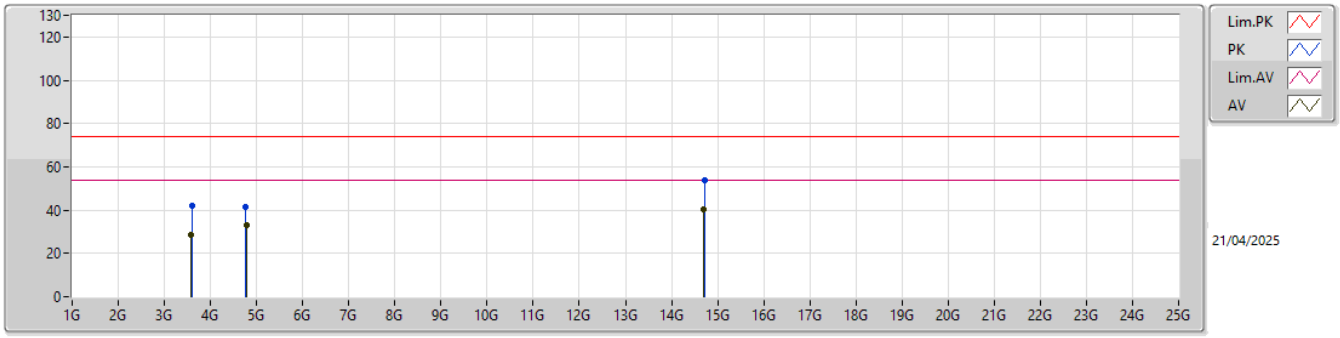
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	14.68919G	40.44	54.00	-13.56	Vertical

Result

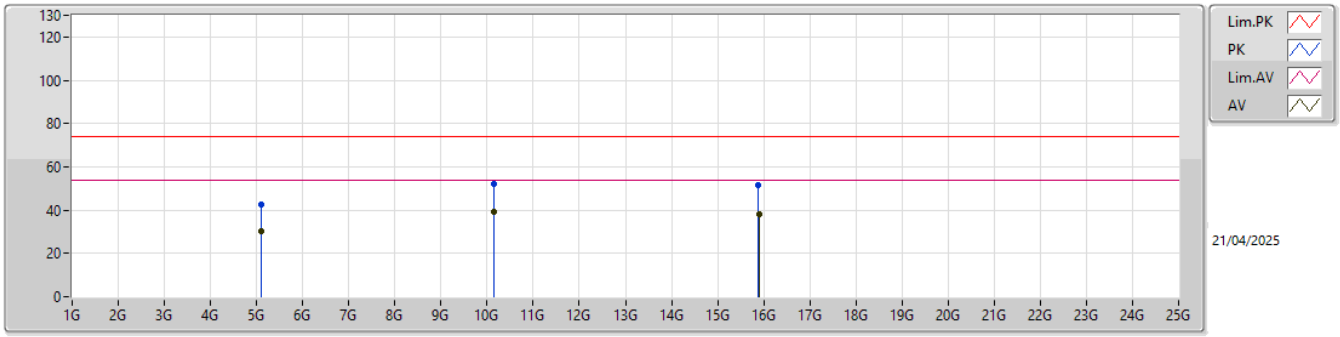
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	3.58626G	28.31	54.00	-25.69	3	Vertical	139	1.07
Mode 1	Pass	AV	4.78753G	33.18	54.00	-20.82	3	Vertical	200	1.20
Mode 1	Pass	AV	14.68919G	40.44	54.00	-13.56	3	Vertical	115	1.17
Mode 1	Pass	PK	3.58929G	42.12	74.00	-31.88	3	Vertical	139	1.07
Mode 1	Pass	PK	4.76371G	41.57	74.00	-32.43	3	Vertical	200	1.20
Mode 1	Pass	PK	14.71109G	53.86	74.00	-20.14	3	Vertical	115	1.17
Mode 1	Pass	AV	5.091G	30.02	54.00	-23.98	3	Horizontal	130	2.09
Mode 1	Pass	AV	10.15956G	39.33	54.00	-14.67	3	Horizontal	234	1.96
Mode 1	Pass	AV	15.89971G	37.98	54.00	-16.02	3	Horizontal	157	2.01
Mode 1	Pass	PK	5.10465G	42.47	74.00	-31.53	3	Horizontal	130	2.09
Mode 1	Pass	PK	10.1508G	52.31	74.00	-21.69	3	Horizontal	234	1.96
Mode 1	Pass	PK	15.88282G	51.31	74.00	-22.69	3	Horizontal	157	2.01

Radiated Emissions above 1GHz_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)	(dBuV/m)	(dB/m)	(dB)	(dB)
AV	3.58626G	28.31	54.00	-25.69	-8.56	3	Vertical	139	1.07	36.87	29.57	5.61	43.74
AV	4.78753G	33.18	54.00	-20.82	-5.36	3	Vertical	200	1.20	38.54	32.43	6.28	44.07
AV	14.68919G	40.44	54.00	-13.56	7.19	3	Vertical	115	1.17	33.25	40.14	10.00	42.95
PK	3.58929G	42.12	74.00	-31.88	-8.55	3	Vertical	139	1.07	50.67	29.58	5.61	43.74
PK	4.76371G	41.57	74.00	-32.43	-5.52	3	Vertical	200	1.20	47.09	32.28	6.27	44.07
PK	14.71109G	53.86	74.00	-20.14	7.15	3	Vertical	115	1.17	46.71	40.10	10.01	42.96

Radiated Emissions above 1GHz_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)	(dBuV/m)	(dB/m)	(dB)	(dB)
AV	5.091G	30.02	54.00	-23.98	-4.25	3	Horizontal	130	2.09	34.27	33.20	6.61	44.06
AV	10.15956G	39.33	54.00	-14.67	6.36	3	Horizontal	234	1.96	32.97	38.82	9.39	41.85
AV	15.89971G	37.98	54.00	-16.02	5.01	3	Horizontal	157	2.01	32.97	37.90	10.47	43.36
PK	5.10465G	42.47	74.00	-31.53	-4.21	3	Horizontal	130	2.09	46.68	33.23	6.62	44.06
PK	10.1508G	52.31	74.00	-21.69	6.33	3	Horizontal	234	1.96	45.98	38.80	9.38	41.85
PK	15.88282G	51.31	74.00	-22.69	4.99	3	Horizontal	157	2.01	46.32	37.87	10.46	43.34