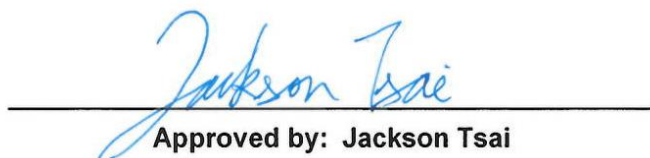


FCC Radio Test Report

FCC ID : 2AVDR-MISSION2
Equipment : Dive Computer
Brand Name : ATMOS
Model Name : MISSION2
Applicant : ATMOS CO., LTD.
16F-7, No. 258, Liancheng Rd., Zhonghe Dist., NEW
TAIPEI CITY, 23553, Taiwan
Manufacturer : ATMOS CO., LTD.
16F-7, No. 258, Liancheng Rd., Zhonghe Dist., NEW
TAIPEI CITY, 23553, Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Mar. 07, 2022, and testing was started from Mar. 25, 2022 and completed on May 20, 2022. 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

TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver.4.2
FCC ID: 2AVDR-MISSION2

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: Ryan Hsiao

Report Producer: Debby Hung

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

Note:

- ♦ Bluetooth LE uses a GFSK (1Mbps) modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	ACX	AT3216	Chip Antenna	N/A	0.5

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 / Host system / DC Power supply
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)	0.631	2	394.063u	3k

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 / 55~57%	17/May/2022
Conducted	TH06-HY	Johnny Yu	22.3~25.9°C / 51~59%	25/Mar/2022
Radiated(CTX)	03CH03-HY	Billy Wang	23.6 ~ 24°C / 56~60%	12/May/2022~13/May/2022
Radiated(Charging)	03CH03-HY	Daniel Lin	23.9 ~ 25.1°C / 55~62%	19/May/2022~20/May/2022
☐ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: 886-3-318-0787 FAX: 886-3-318-0287			
Test site Designation No. TW0008 with FCC.				

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	0.9 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.0 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	nRFgo studio-DTM UART interface ver. 1.21.2.10
-----------------------	--

Mode	Power Setting
BT-LE(1Mbps)	-
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	
1	DC Power Supply ; CTX
2	Adapter mode ; Charging mode
3	USB mode ; Charging 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			
1	DC Power Supply ; CTX		
2	Adapter mode ; Charging mode		
3	USB mode ; Charging mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		

2.3 Accessories

Accessories				
Battery	Brand Name	SUNHE	Model Name	SH462527-340mAh
	Power Rating	3.8 Vdc, 3.4 mA	Type	Li-ion, Polymer rechargeable battery
USB Cable	Brand Name	Globalsat	Model Name	LT-100
	Signal Line	1 meter,D-shielded cable,w/o ferrite core		

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

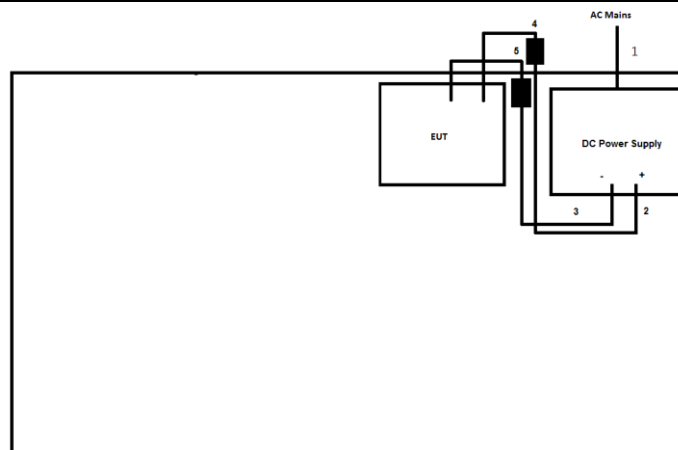
2.4 Support Equipment

Support Equipment – AC Conduction and Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	DC Power Supply	GW	GPS-3030DD	-	-
2	DC Power cable(+)	MiSUMi	WTN1229	-	-
3	DC Power cable(-)	MiSUMi	WTN1229	-	-
4	AC power cable	Power sync	PW-GPC180-3	-	-
5	Adapter	Apple	A1385	-	-
6	iPod	APPLE	A1199	-	-
7	30-pin to USB Original cable	APPLE	MA591GC	-	-
8	Mouse(USB)	Lenovo	MOGOUO	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	DC Power Supply	GW	GPS-3030DD	-	-

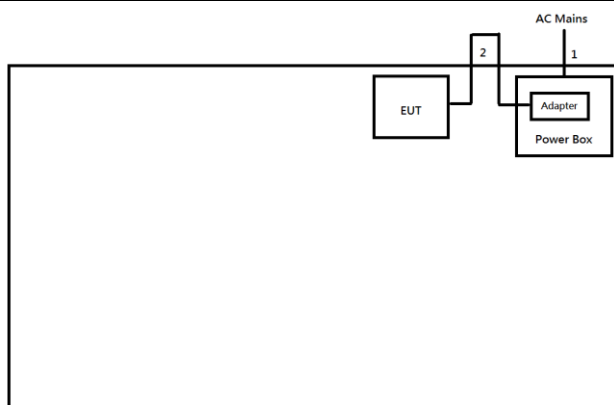
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test (Mode 1)

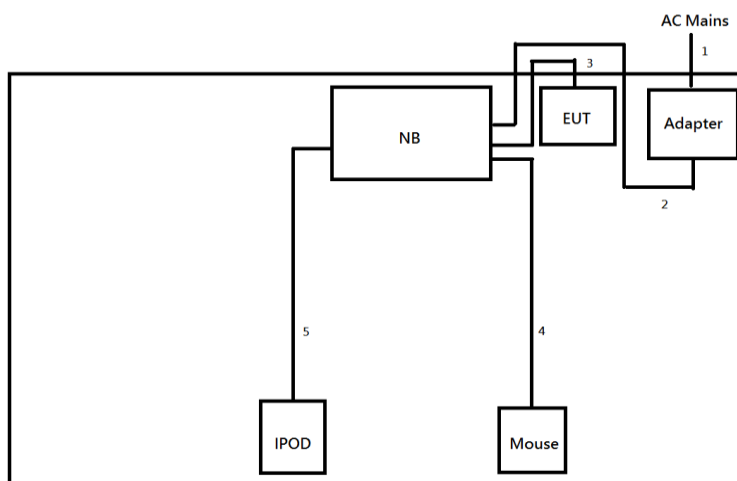


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable(+)	No	1.0	-
3	DC Power cable(-)	No	1.0	-
4	DC Power cable(+)	No	0.1	-
5	DC Power cable(-)	No	0.1	-

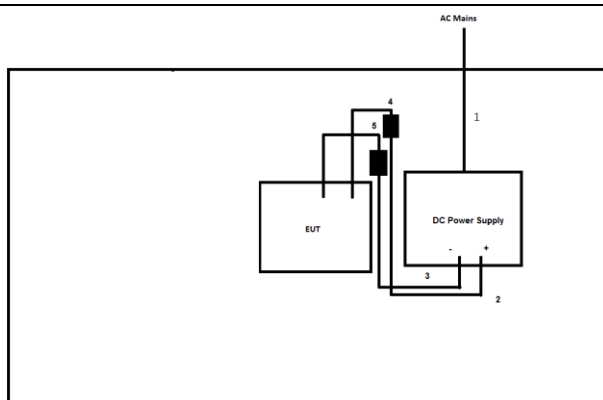
Test Setup Diagram – AC Line Conducted Emission Test (Mode 2)



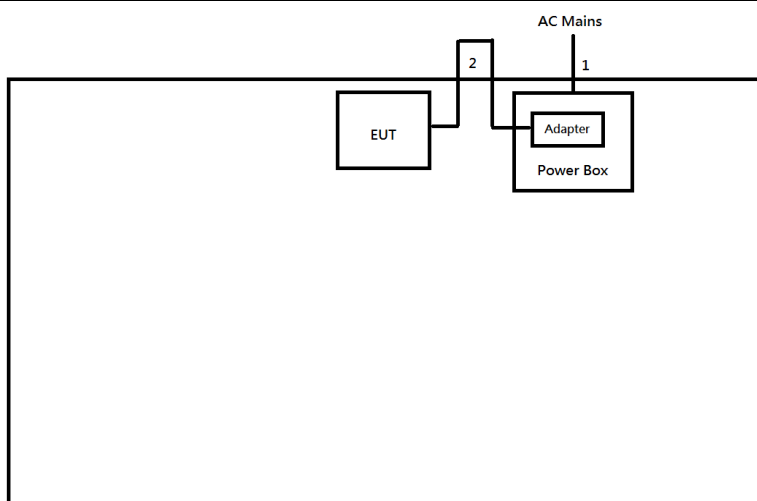
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB cable	Yes	1.0	-

Test Setup Diagram – AC Line Conducted Emission Test (Mode 3)


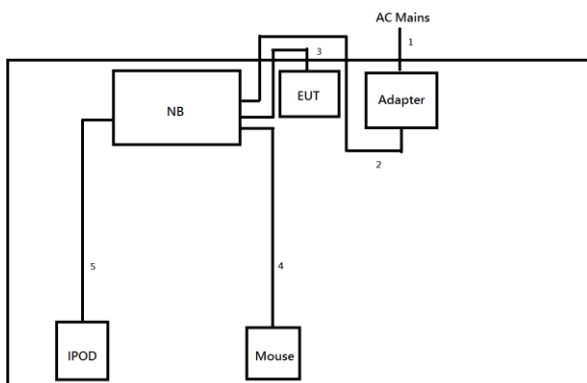
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.8	-
3	USB cable	Yes	1.0	-
4	USB cable	No	1.0	-
5	30-pin to USB Original Cable	No	1.0	-

Test Setup Diagram - Radiated Test (Mode 1)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable(+)	No	1.0	-
3	DC Power cable(-)	No	1.0	-
4	DC Power cable(+)	No	0.1	-
5	DC Power cable(-)	No	0.1	-

Test Setup Diagram - Radiated Test (Mode 2)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB cable	Yes	1.0	-

Test Setup Diagram - Radiated Test (Mode 3)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.8	-
3	USB cable	Yes	1.0	-
4	USB cable	No	1.0	-
5	30-pin to USB Original Cable	No	1.0	-

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

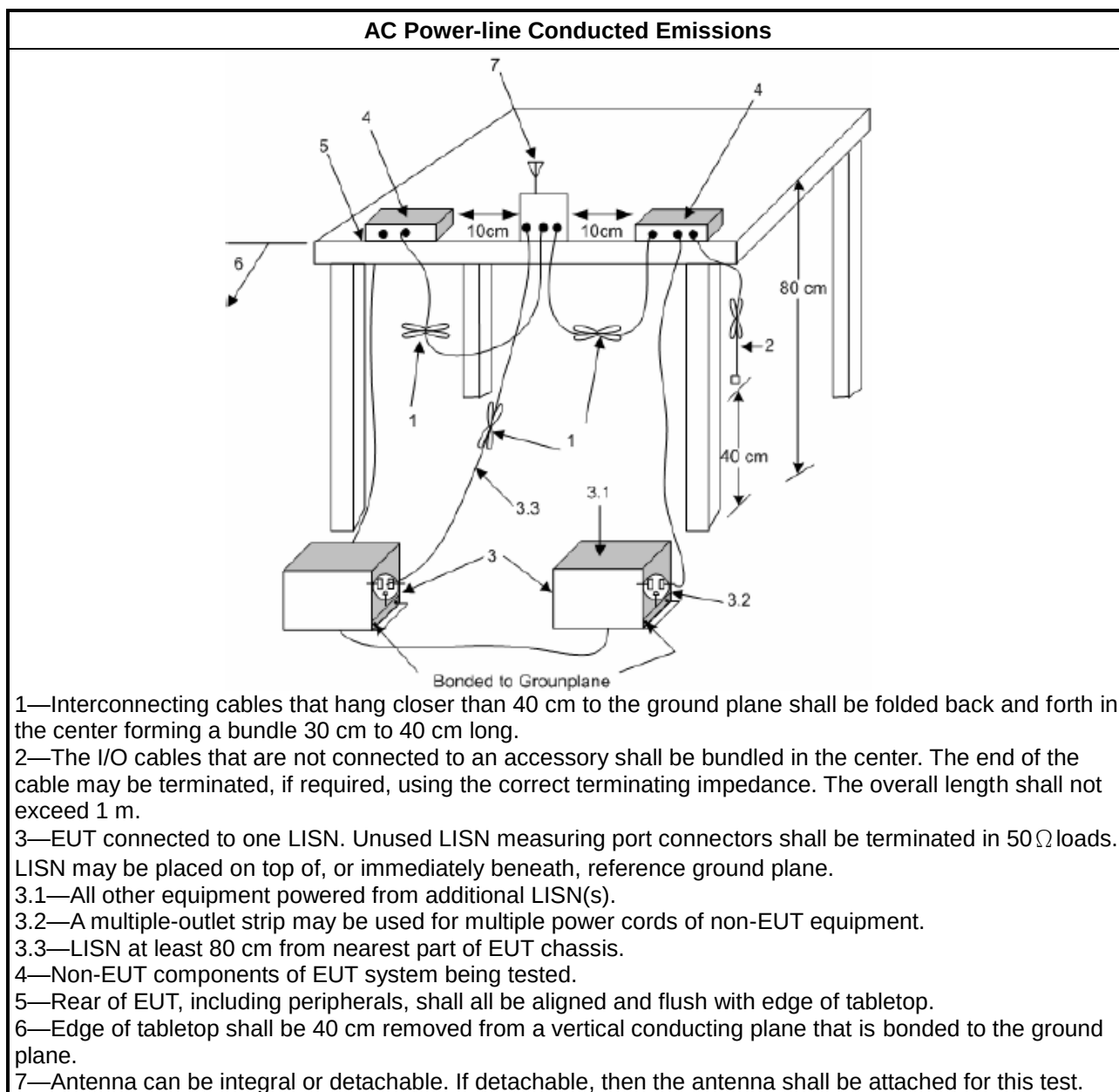
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

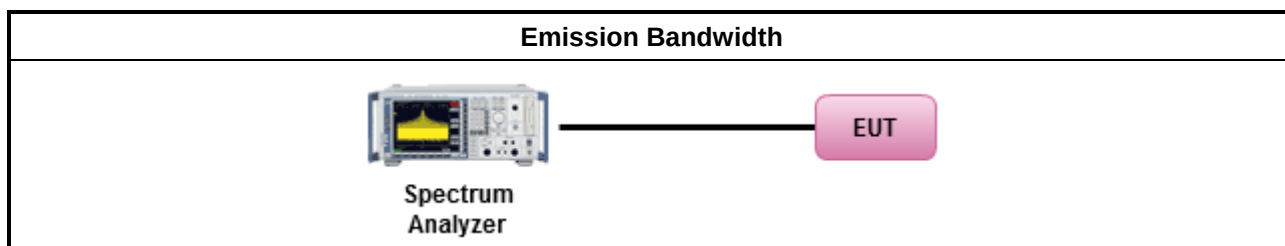
3.2.2 Measuring Instruments

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.	

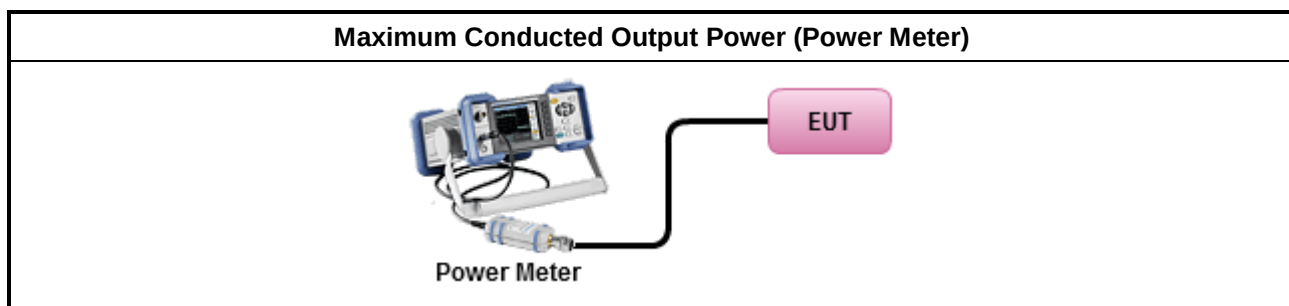
3.3.2 Measuring Instruments

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

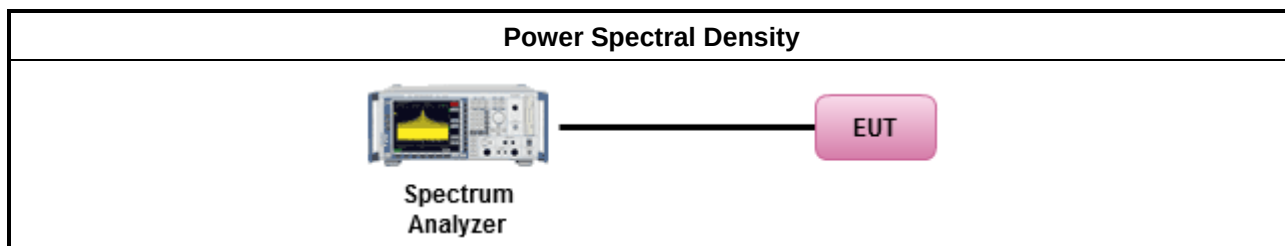
3.4.2 Measuring Instruments

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.	

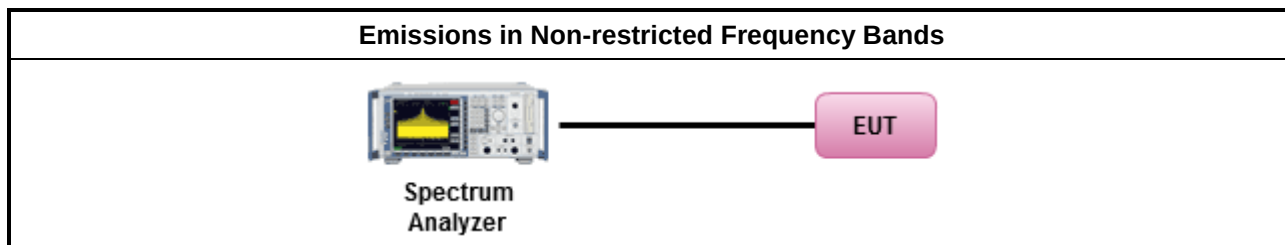
3.5.2 Measuring Instruments

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

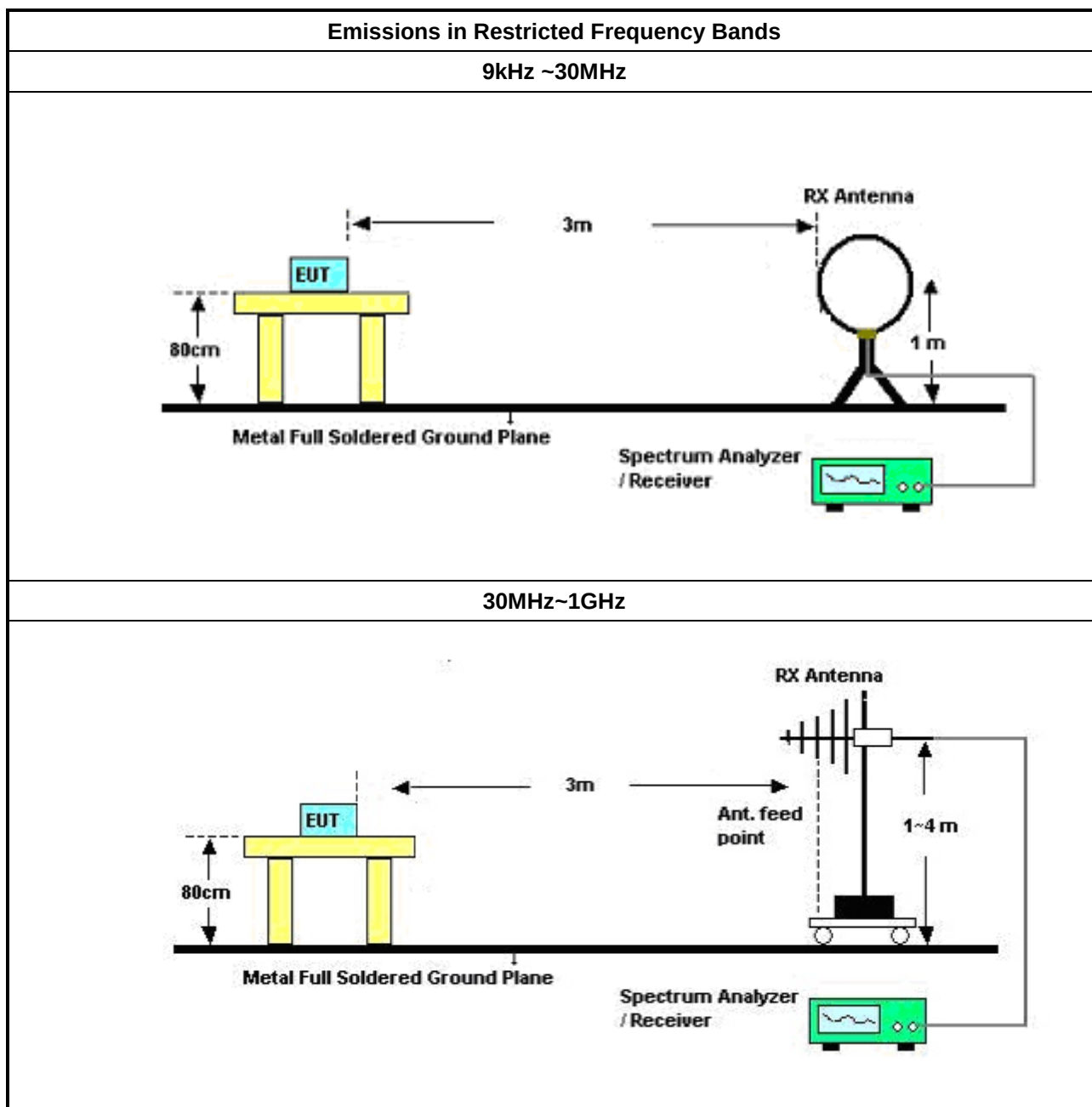
Test Method	
	The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	For the transmitter unwanted 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.

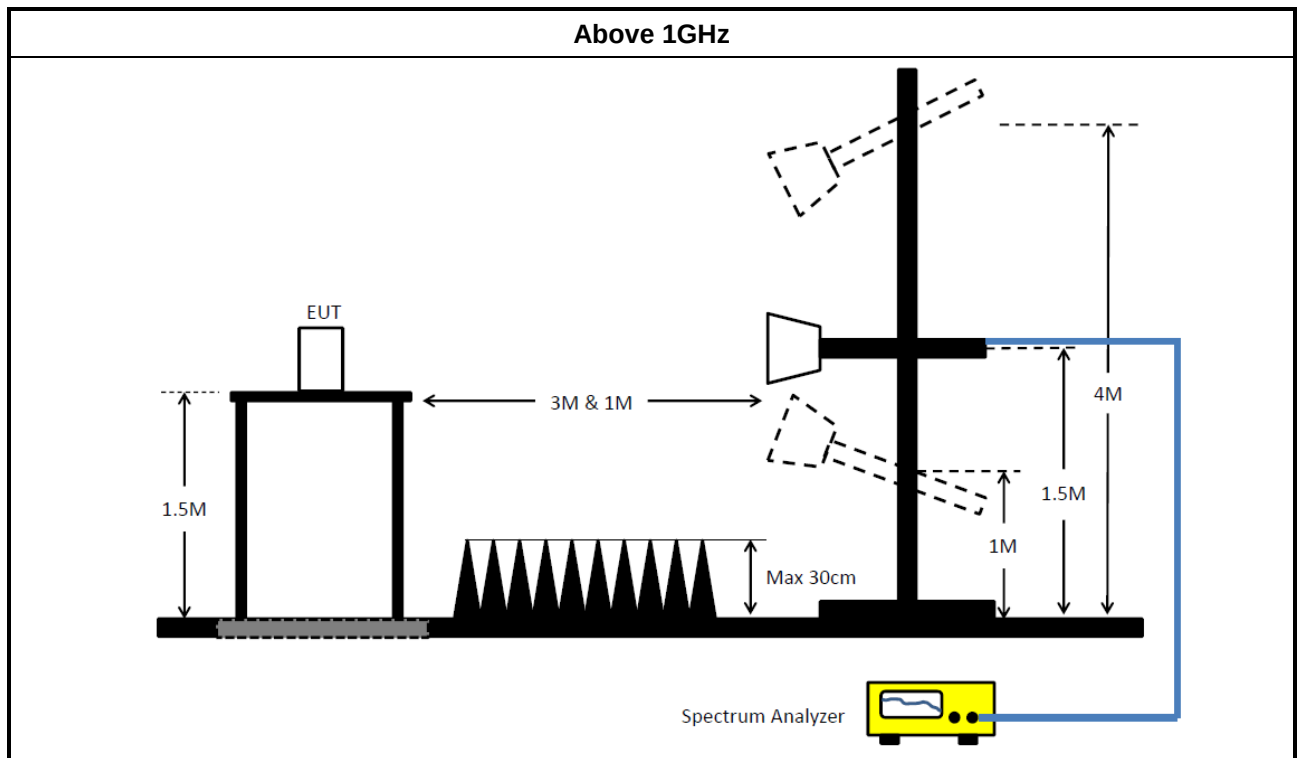
3.6.4 Measurement Results Calculation

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	R&S	ESR3	102051	9kHz ~ 3.6GHz	21/May/2021	20/May/2022
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	18/Feb/2022	17/Feb/2023
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	01/Mar/2022	28/Feb/2023
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	26/Oct/2021	25/Oct/2022
Software	Sporton	SENSE-EMI	V5.10.7	-	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	20/Oct/2021	19/Oct/2022
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2021	20/Oct/2022
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	21/Feb/2022	20/Feb/2023
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	21/Feb/2022	20/Feb/2023
SENSE-15247_FS	Sporton	V5.10.7.14	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	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	03/Aug/2021	02/Aug/2022
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	03/Aug/2021	02/Aug/2022
Signal Analyzer	R&S	FSP40	100593	9kHz~40GHz	08/Apr/2022	07/Apr/2023
Amplifier	HP	8447D	2944A08033	10kHz~1.3GHz	08/Apr/2022	07/Apr/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02267	1GHz ~18GHz	14/Sep/2021	13/Sep/2022
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMC	CBL6112B / N-6-05	22237 / AT-N-0603	30MHz~1GHz	17/Oct/2021	16/Oct/2022
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	16/Jun/2021	15/Jun/2022
RF Cable-R03m	Jye Bao	RG142	MY37335/4+CB021-1+CB021-2	30MHz~1GHz	22/Mar/2022	21/Mar/2023
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	SN MY38596/4+SN 804300/4	1GHz~40GHz	28/Jul/2021	27/Jul/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	18/Mar/2022	17/Mar/2023
Microwave Prempplier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	08/Mar/2022	07/Mar/2023
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	18/Mar/2022	17/Mar/2023
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	02/Jun/2021	01/Jun/2022
Microwave Preampplier	Agilent	8449B	3008A02326	1GHz~26.5GHz	15/Jul/2021	14/Jul/2022
SENSE-15247_FS	Sporton	V5.10.7.14	NA	NA	NA	NA
SENSE-EMI	Sporton	V5.10.7.14	NA	NA	NA	NA



Conducted Emissions at Powerline

Appendix A.1

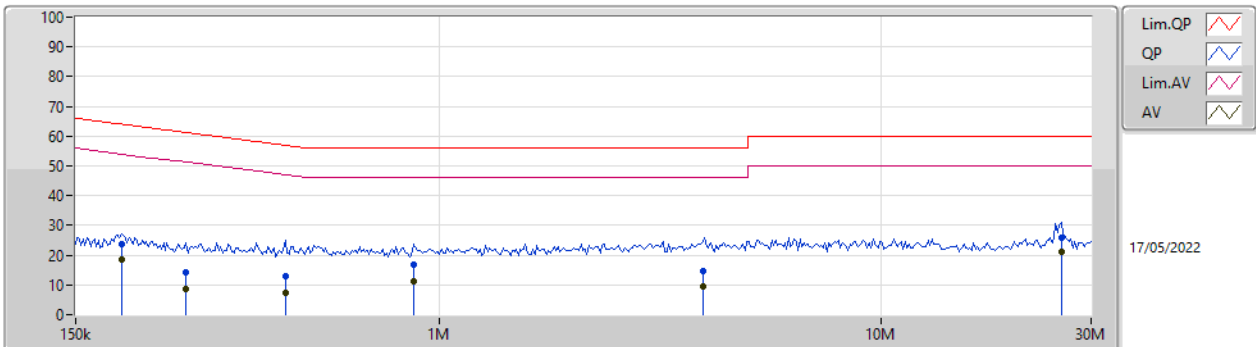
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	23.988M	23.64	50.00	-26.36	Neutral

Mode Configure

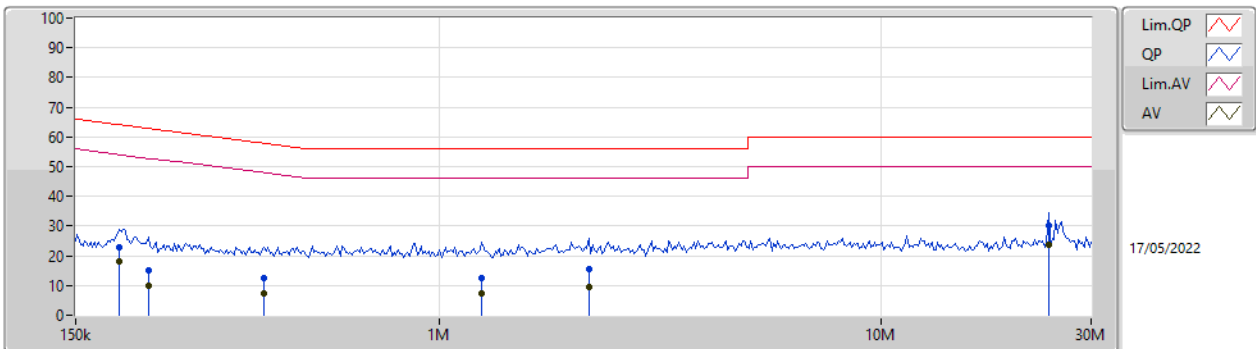
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	190.46k	23.67	64.01	-40.34	Line	-
Mode 1	Pass	AV	190.46k	18.68	54.01	-35.33	Line	-
Mode 1	Pass	QP	267.135k	14.40	61.20	-46.80	Line	-
Mode 1	Pass	AV	267.135k	8.68	51.20	-42.52	Line	-
Mode 1	Pass	QP	448.17k	12.82	56.92	-44.10	Line	-
Mode 1	Pass	AV	448.17k	7.46	46.92	-39.46	Line	-
Mode 1	Pass	QP	872.92k	16.75	56.00	-39.25	Line	-
Mode 1	Pass	AV	872.92k	11.34	46.00	-34.66	Line	-
Mode 1	Pass	QP	3.961M	14.86	56.00	-41.14	Line	-
Mode 1	Pass	AV	3.961M	9.33	46.00	-36.67	Line	-
Mode 1	Pass	QP	25.718M	25.91	60.00	-34.09	Line	-
Mode 1	Pass	AV	25.718M	21.14	50.00	-28.86	Line	-
Mode 1	Pass	QP	188.574k	22.87	64.11	-41.24	Neutral	-
Mode 1	Pass	AV	188.574k	17.90	54.11	-36.21	Neutral	-
Mode 1	Pass	QP	218.929k	15.10	62.86	-47.76	Neutral	-
Mode 1	Pass	AV	218.929k	9.75	52.86	-43.11	Neutral	-
Mode 1	Pass	QP	401.705k	12.66	57.82	-45.16	Neutral	-
Mode 1	Pass	AV	401.705k	7.49	47.82	-40.33	Neutral	-
Mode 1	Pass	QP	1.249M	12.32	56.00	-43.68	Neutral	-
Mode 1	Pass	AV	1.249M	7.21	46.00	-38.79	Neutral	-
Mode 1	Pass	QP	2.18M	15.51	56.00	-40.49	Neutral	-
Mode 1	Pass	AV	2.18M	9.35	46.00	-36.65	Neutral	-
Mode 1	Pass	QP	23.988M	30.14	60.00	-29.86	Neutral	-
Mode 1	Pass	AV	23.988M	23.64	50.00	-26.36	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	190.46k	23.67	64.01	-40.34	19.63	Line	-	4.04	9.69	0.03	9.91				
AV	190.46k	18.68	54.01	-35.33	19.63	Line	-	-0.95	9.69	0.03	9.91				
QP	267.135k	14.40	61.20	-46.80	19.63	Line	-	-5.23	9.69	0.03	9.91				
AV	267.135k	8.68	51.20	-42.52	19.63	Line	-	-10.95	9.69	0.03	9.91				
QP	448.17k	12.82	56.92	-44.10	19.63	Line	-	-6.81	9.68	0.04	9.91				
AV	448.17k	7.46	46.92	-39.46	19.63	Line	-	-12.17	9.68	0.04	9.91				
QP	872.92k	16.75	56.00	-39.25	19.65	Line	-	-2.90	9.68	0.05	9.92				
AV	872.92k	11.34	46.00	-34.66	19.65	Line	-	-8.31	9.68	0.05	9.92				
QP	3.961M	14.86	56.00	-41.14	19.76	Line	-	-4.90	9.71	0.13	9.92				
AV	3.961M	9.33	46.00	-36.67	19.76	Line	-	-10.43	9.71	0.13	9.92				
QP	25.718M	25.91	60.00	-34.09	20.04	Line	-	5.87	9.80	0.31	9.93				
AV	25.718M	21.14	50.00	-28.86	20.04	Line	-	1.10	9.80	0.31	9.93				

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	188.574k	22.87	64.11	-41.24	19.66	Neutral	-	3.21	9.72	0.03	9.91				
AV	188.574k	17.90	54.11	-36.21	19.66	Neutral	-	-1.76	9.72	0.03	9.91				
QP	218.929k	15.10	62.86	-47.76	19.66	Neutral	-	-4.56	9.72	0.03	9.91				
AV	218.929k	9.75	52.86	-43.11	19.66	Neutral	-	-9.91	9.72	0.03	9.91				
QP	401.705k	12.66	57.82	-45.16	19.67	Neutral	-	-7.01	9.72	0.04	9.91				
AV	401.705k	7.49	47.82	-40.33	19.67	Neutral	-	-12.18	9.72	0.04	9.91				
QP	1.249M	12.32	56.00	-43.68	19.71	Neutral	-	-7.39	9.73	0.06	9.92				
AV	1.249M	7.21	46.00	-38.79	19.71	Neutral	-	-12.50	9.73	0.06	9.92				
QP	2.18M	15.51	56.00	-40.49	19.75	Neutral	-	-4.24	9.74	0.09	9.92				
AV	2.18M	9.35	46.00	-36.65	19.75	Neutral	-	-10.40	9.74	0.09	9.92				
QP	23.988M	30.14	60.00	-29.86	20.29	Neutral	-	9.85	10.06	0.30	9.93				
AV	23.988M	23.64	50.00	-26.36	20.29	Neutral	-	3.35	10.06	0.30	9.93				



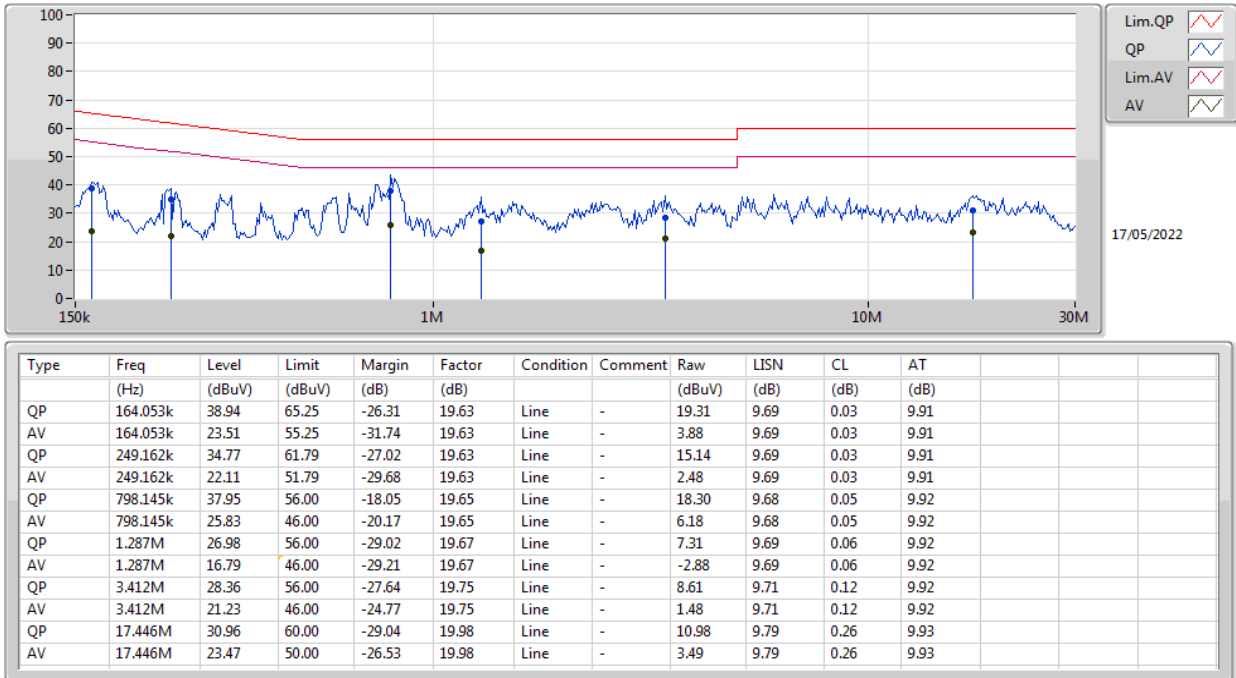
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	QP	798.145k	37.95	56.00	-18.05	Line
Mode 3	Pass	AV	563.422k	39.14	46.00	-6.86	Line

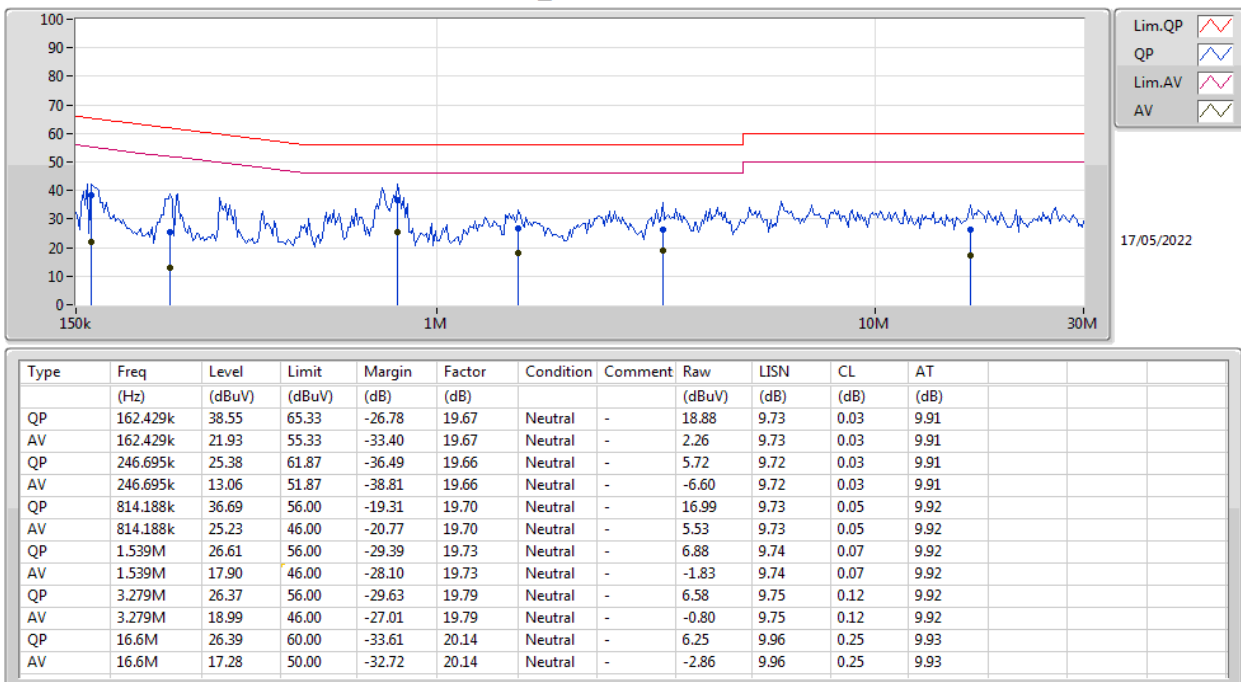
Mode config

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 2	Pass	QP	164.053k	38.94	65.25	-26.31	Line	-
Mode 2	Pass	AV	164.053k	23.51	55.25	-31.74	Line	-
Mode 2	Pass	QP	249.162k	34.77	61.79	-27.02	Line	-
Mode 2	Pass	AV	249.162k	22.11	51.79	-29.68	Line	-
Mode 2	Pass	QP	798.145k	37.95	56.00	-18.05	Line	-
Mode 2	Pass	AV	798.145k	25.83	46.00	-20.17	Line	-
Mode 2	Pass	QP	1.287M	26.98	56.00	-29.02	Line	-
Mode 2	Pass	AV	1.287M	16.79	46.00	-29.21	Line	-
Mode 2	Pass	QP	3.412M	28.36	56.00	-27.64	Line	-
Mode 2	Pass	AV	3.412M	21.23	46.00	-24.77	Line	-
Mode 2	Pass	QP	17.446M	30.96	60.00	-29.04	Line	-
Mode 2	Pass	AV	17.446M	23.47	50.00	-26.53	Line	-
Mode 2	Pass	QP	162.429k	38.55	65.33	-26.78	Neutral	-
Mode 2	Pass	AV	162.429k	21.93	55.33	-33.40	Neutral	-
Mode 2	Pass	QP	246.695k	25.38	61.87	-36.49	Neutral	-
Mode 2	Pass	AV	246.695k	13.06	51.87	-38.81	Neutral	-
Mode 2	Pass	QP	814.188k	36.69	56.00	-19.31	Neutral	-
Mode 2	Pass	AV	814.188k	25.23	46.00	-20.77	Neutral	-
Mode 2	Pass	QP	1.539M	26.61	56.00	-29.39	Neutral	-
Mode 2	Pass	AV	1.539M	17.90	46.00	-28.10	Neutral	-
Mode 2	Pass	QP	3.279M	26.37	56.00	-29.63	Neutral	-
Mode 2	Pass	AV	3.279M	18.99	46.00	-27.01	Neutral	-
Mode 2	Pass	QP	16.6M	26.39	60.00	-33.61	Neutral	-
Mode 2	Pass	AV	16.6M	17.28	50.00	-32.72	Neutral	-
Mode 3	Pass	QP	212.49k	51.96	63.11	-11.15	Line	-
Mode 3	Pass	AV	212.49k	40.94	53.11	-12.17	Line	-
Mode 3	Pass	QP	280.762k	43.74	60.80	-17.06	Line	-
Mode 3	Pass	AV	280.762k	35.22	50.80	-15.58	Line	-
Mode 3	Pass	QP	563.422k	42.43	56.00	-13.57	Line	-
Mode 3	Pass	AV	563.422k	39.14	46.00	-6.86	Line	-
Mode 3	Pass	QP	1.2M	33.08	56.00	-22.92	Line	-
Mode 3	Pass	AV	1.2M	31.24	46.00	-14.76	Line	-
Mode 3	Pass	QP	3.246M	24.62	56.00	-31.38	Line	-
Mode 3	Pass	AV	3.246M	18.47	46.00	-27.53	Line	-
Mode 3	Pass	QP	13.336M	31.28	60.00	-28.72	Line	-
Mode 3	Pass	AV	13.336M	25.72	50.00	-24.28	Line	-
Mode 3	Pass	QP	208.304k	48.84	63.27	-14.43	Neutral	-
Mode 3	Pass	AV	208.304k	37.88	53.27	-15.39	Neutral	-
Mode 3	Pass	QP	283.569k	44.72	60.70	-15.98	Neutral	-
Mode 3	Pass	AV	283.569k	35.55	50.70	-15.15	Neutral	-
Mode 3	Pass	QP	563.422k	42.14	56.00	-13.86	Neutral	-
Mode 3	Pass	AV	563.422k	38.79	46.00	-7.21	Neutral	-
Mode 3	Pass	QP	1.555M	32.54	56.00	-23.46	Neutral	-
Mode 3	Pass	AV	1.555M	31.00	46.00	-15.00	Neutral	-
Mode 3	Pass	QP	2.824M	29.86	56.00	-26.14	Neutral	-
Mode 3	Pass	AV	2.824M	27.40	46.00	-18.60	Neutral	-
Mode 3	Pass	QP	12.563M	27.58	60.00	-32.42	Neutral	-
Mode 3	Pass	AV	12.563M	21.42	50.00	-28.58	Neutral	-

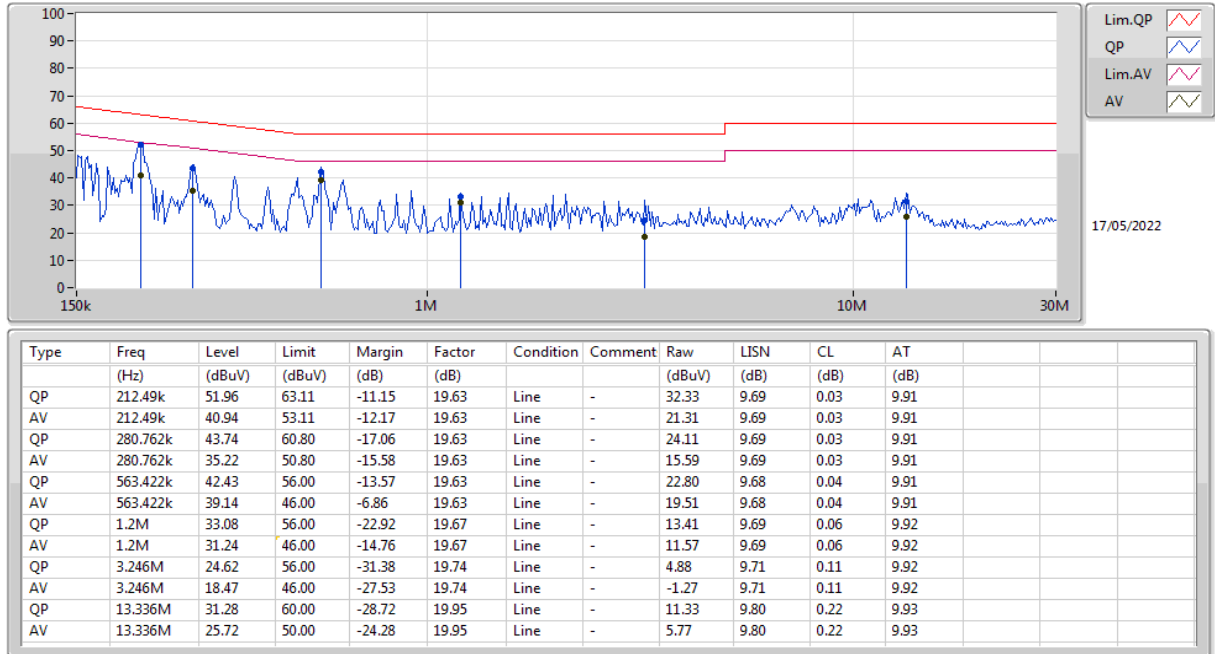
Conducted Emissions at Powerline_Mode 2



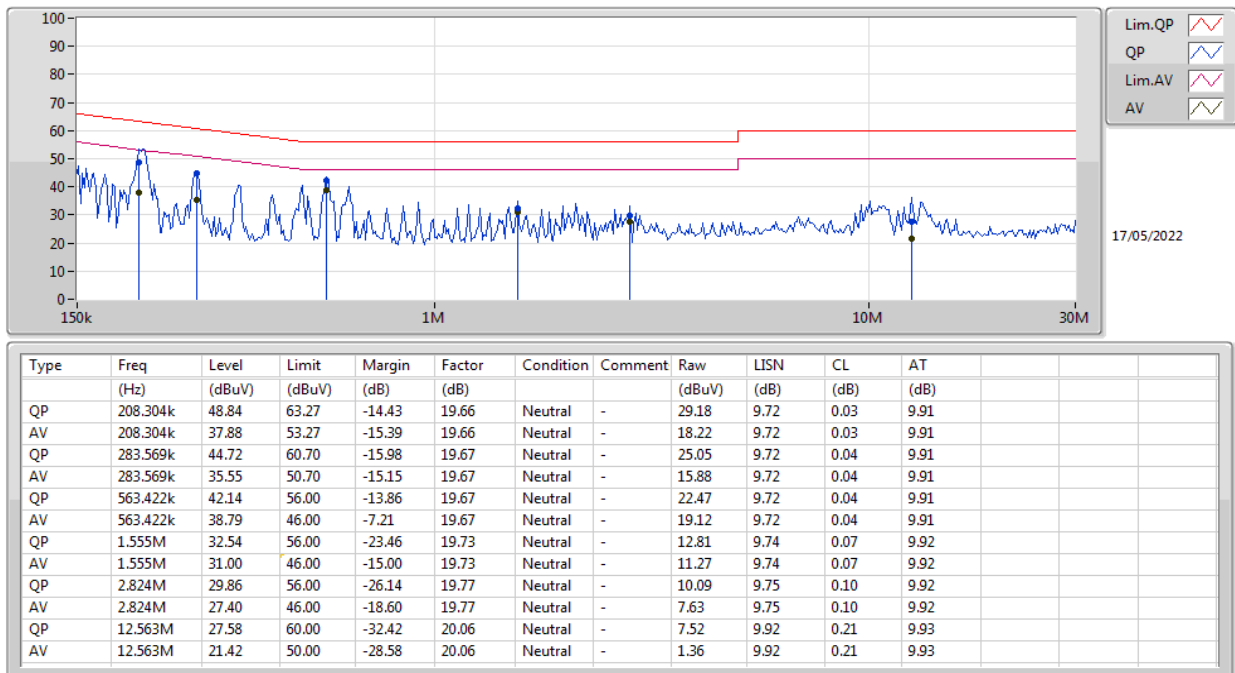
Conducted Emissions at Powerline_Mode 2



Conducted Emissions at Powerline_Mode 3



Conducted Emissions at Powerline_Mode 3





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)	698.75k	1.048M	1M05F1D	698.75k	1.039M

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

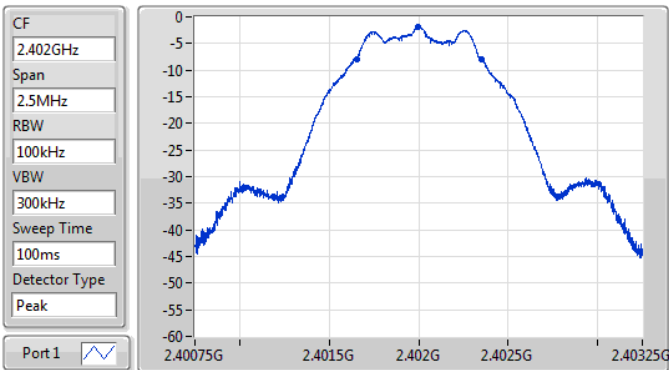
**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	698.75k	1.044M
2440MHz	Pass	500k	698.75k	1.039M
2480MHz	Pass	500k	698.75k	1.048M

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

BT-LE(1Mbps)

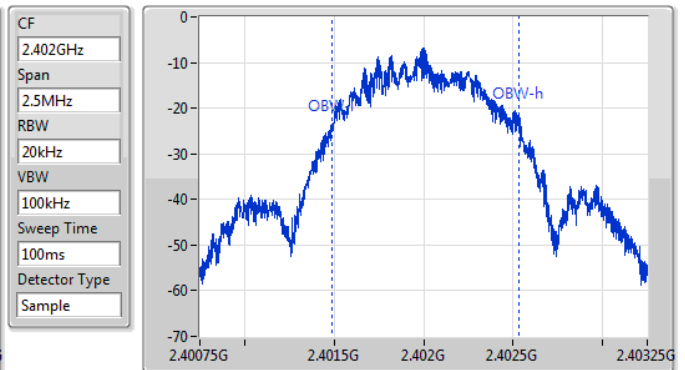
2402MHz



6dB(Hz)	FI-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
698.75k	2.401656G	2.402355G	1.044M	2.401488G	2.402532G	500k	1

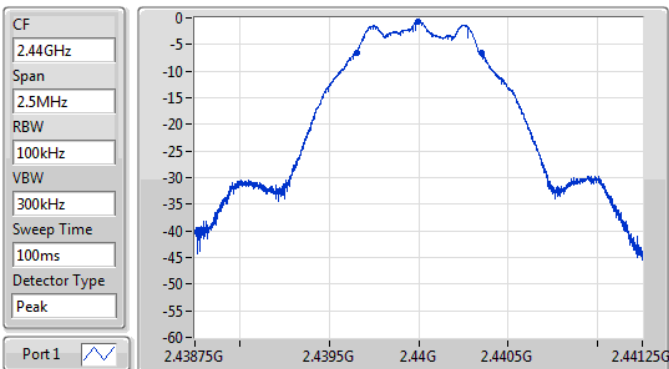
EBW-DTS

25/03/2022



BT-LE(1Mbps)

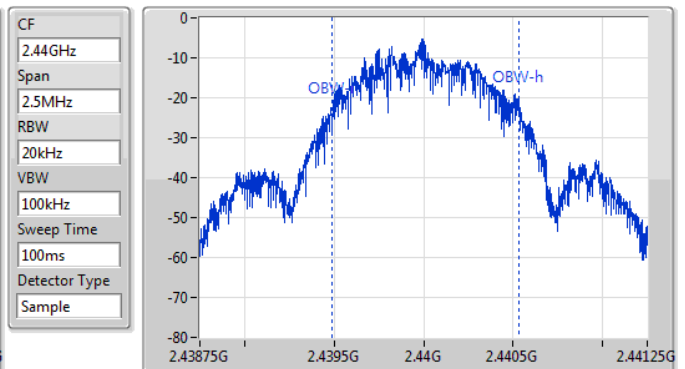
2440MHz



6dB(Hz)	FI-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
698.75k	2.439655G	2.440354G	1.039M	2.439492G	2.440531G	500k	1

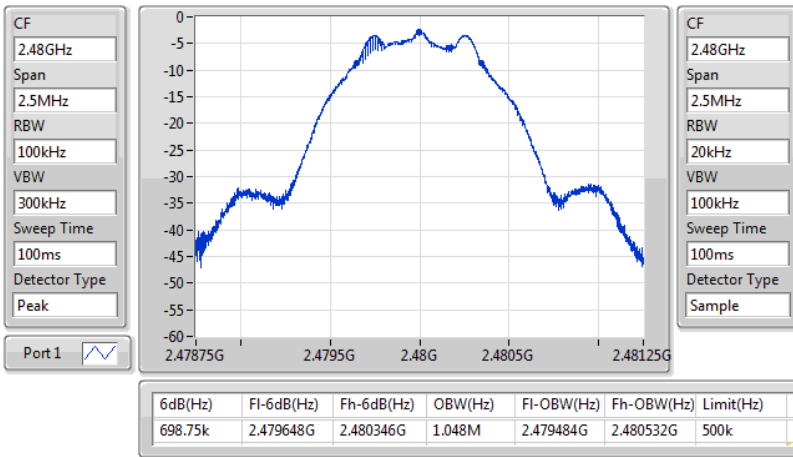
EBW-DTS

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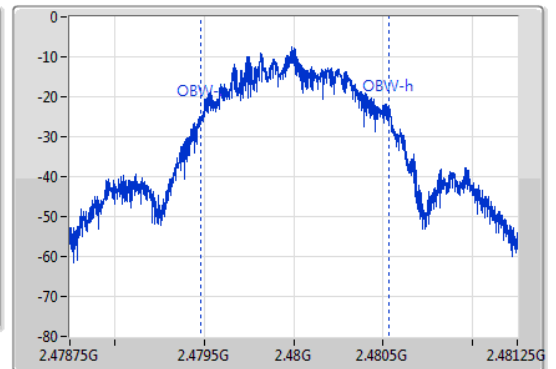
BT-LE(1Mbps)

2480MHz



EBW-DTS

25/03/2022





Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	-0.80	0.00083



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	0.50	-2.11	30.00
2440MHz	Pass	0.50	-0.80	30.00
2480MHz	Pass	0.50	-2.87	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-16.99

RBW = 3kHz;



Result

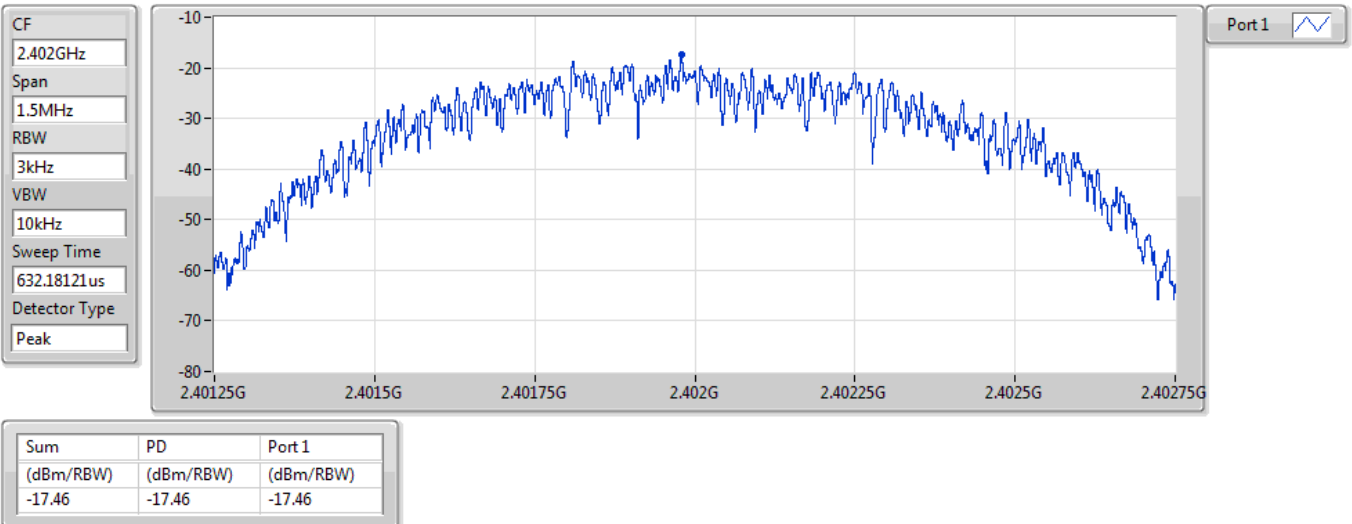
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	0.50	-17.46	8.00
2440MHz	Pass	0.50	-16.99	8.00
2480MHz	Pass	0.50	-18.32	8.00

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;

BT-LE(1Mbps)

2402MHz

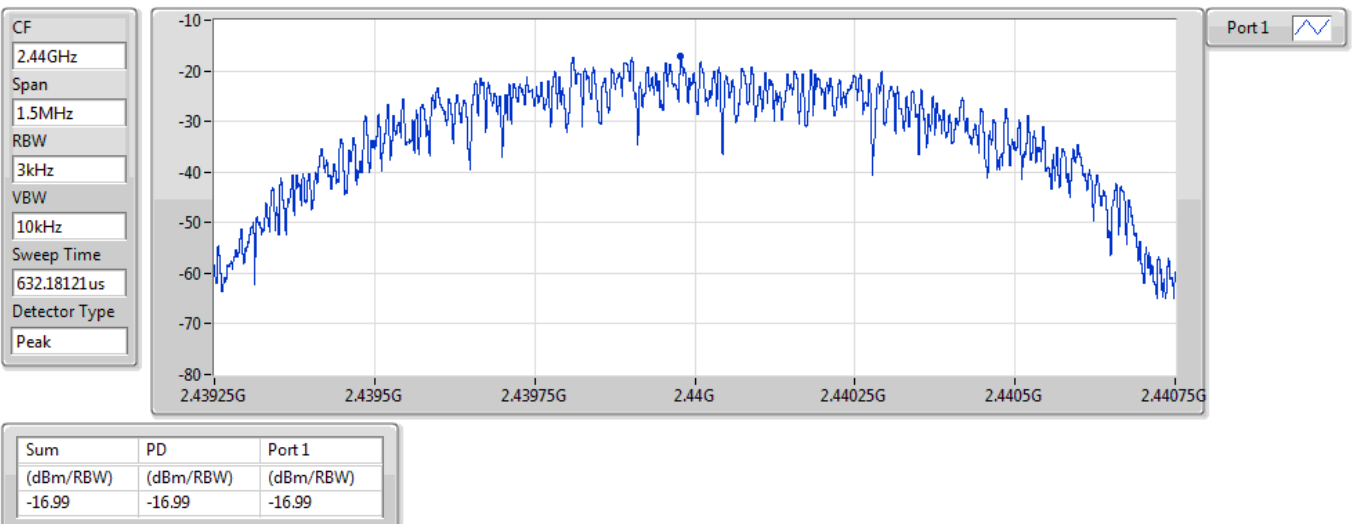
25/03/2022



BT-LE(1Mbps)

2440MHz

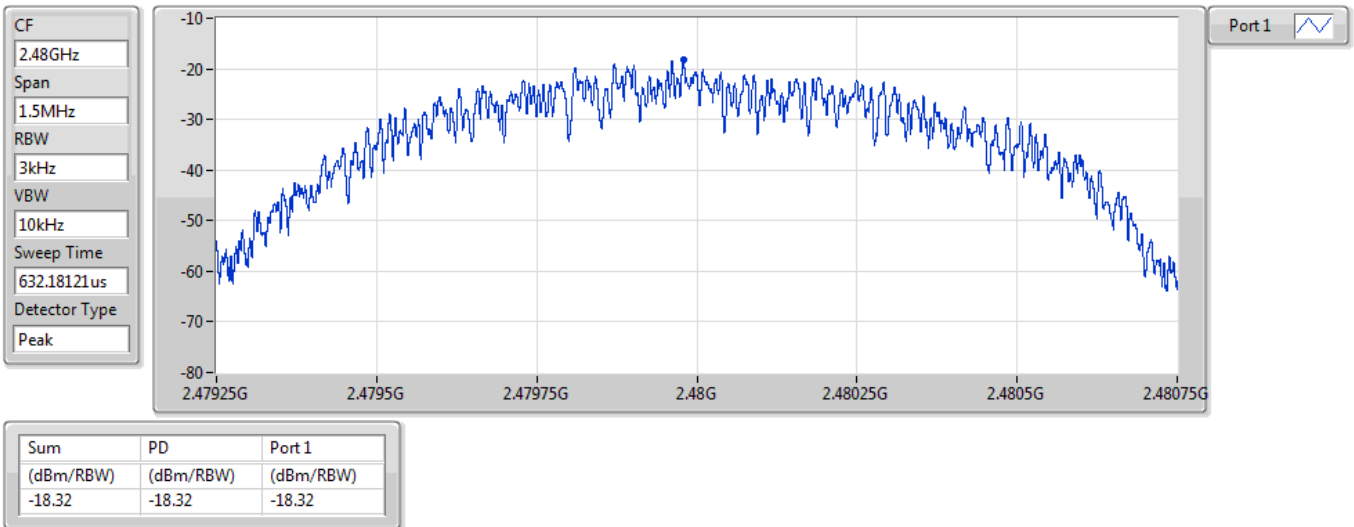
25/03/2022



BT-LE(1Mbps)

2480MHz

25/03/2022





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	2.44G	-0.68	-30.68	91.1M	-47.99	2.39308G	-55.29	2.4G	-66.43	2.50082G	-59.83	24.72442G	-51.72	1



Result

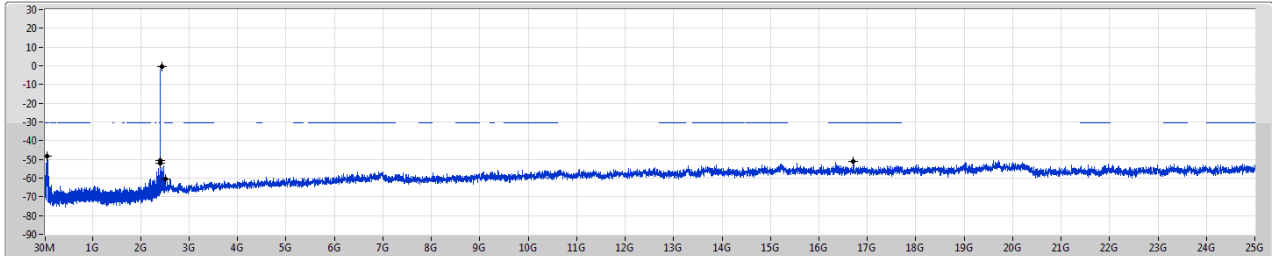
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44G	-0.68	-30.68	59.96M	-48.29	2.39997G	-50.57	2.4G	-52.23	2.50203G	-60.67	16.71566G	-51.28	1
2440MHz	Pass	2.44G	-0.68	-30.68	91.1M	-47.99	2.39308G	-55.29	2.4G	-66.43	2.50082G	-59.83	24.72442G	-51.72	1
2480MHz	Pass	2.44G	-0.68	-30.68	59.96M	-48.47	2.39892G	-59.08	2.4G	-65.80	2.5035G	-59.71	15.24496G	-50.95	1

BT-LE(1Mbps)

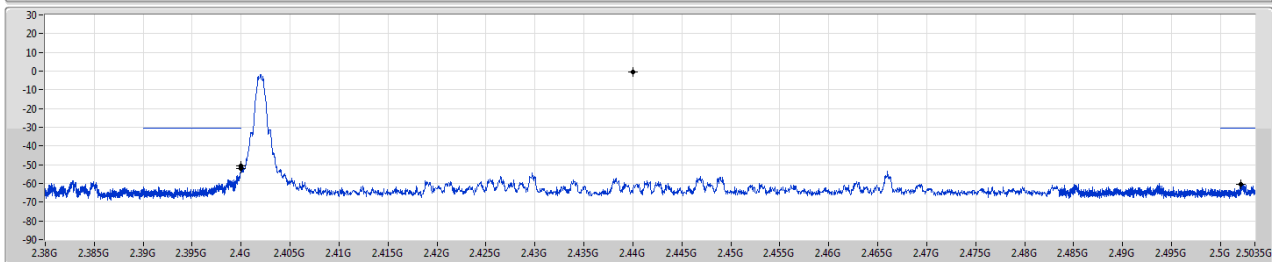
CSEndB-DTS

2402MHz

25/03/2022



Port1



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

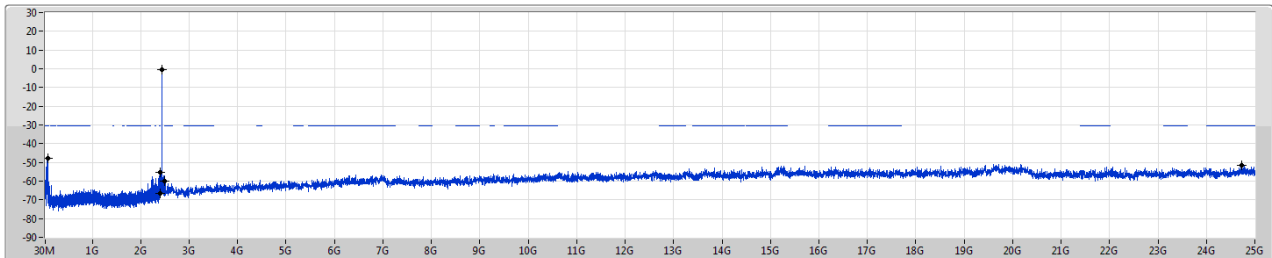
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44G	-0.68	-30.68	59.96M	-48.29	2.39997G	-50.57	2.4G	-52.23	2.50203G	-60.67	16.71566G	-51.28	1

BT-LE(1Mbps)

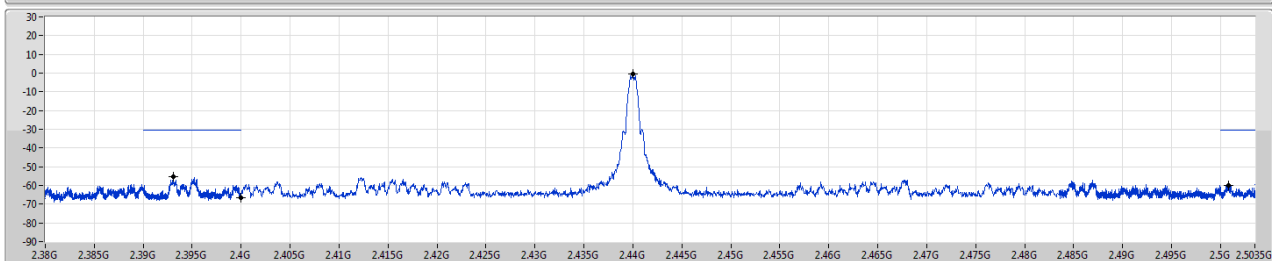
CSEndB-DTS

2440MHz

25/03/2022



Port1



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

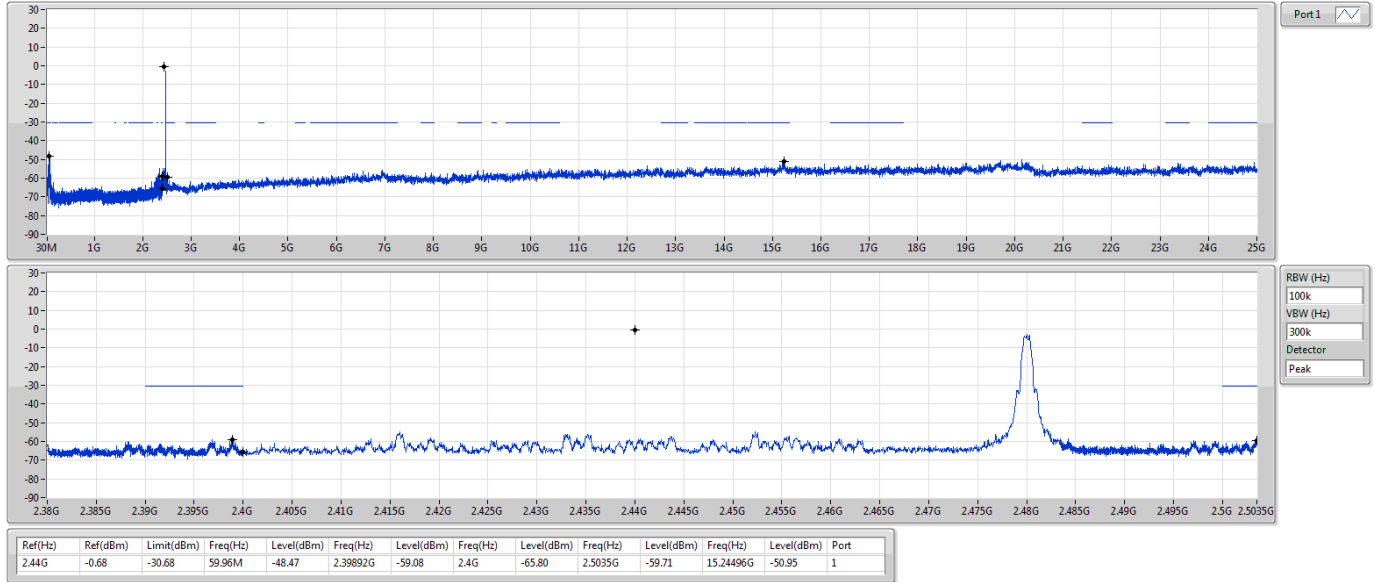
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44G	-0.68	-30.68	91.1M	-47.99	2.39308G	-55.29	2.4G	-66.43	2.50082G	-59.83	24.72442G	-51.72	1

BT-LE(1Mbps)

CSEndB-DTS

2480MHz

25/03/2022





Summary

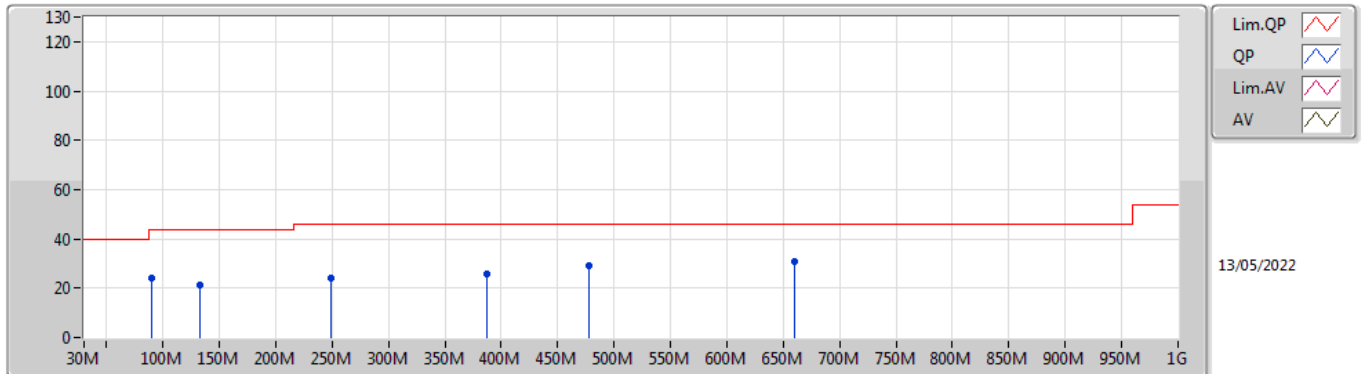
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	PK	647.05M	32.28	46.00	-13.72	3	Horizontal	0	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	90.14M	24.35	43.50	-19.15	3	Vertical	360	1.00	-
2440MHz	Pass	PK	132.82M	21.31	43.50	-22.19	3	Vertical	360	1.00	-
2440MHz	Pass	PK	249.22M	24.32	46.00	-21.68	3	Vertical	360	1.00	-
2440MHz	Pass	PK	386.96M	25.86	46.00	-20.14	3	Vertical	360	1.00	-
2440MHz	Pass	PK	478.14M	29.21	46.00	-16.79	3	Vertical	360	1.00	-
2440MHz	Pass	PK	660.5M	30.95	46.00	-15.05	3	Vertical	360	1.00	-
2440MHz	Pass	PK	128.35M	23.09	43.50	-20.41	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	235.6M	21.64	46.00	-24.36	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	298M	26.15	46.00	-19.85	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	409.15M	29.12	46.00	-16.88	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	494.95M	29.16	46.00	-16.84	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	647.05M	32.28	46.00	-13.72	3	Horizontal	0	1.00	-

BT-LE(1Mbps)

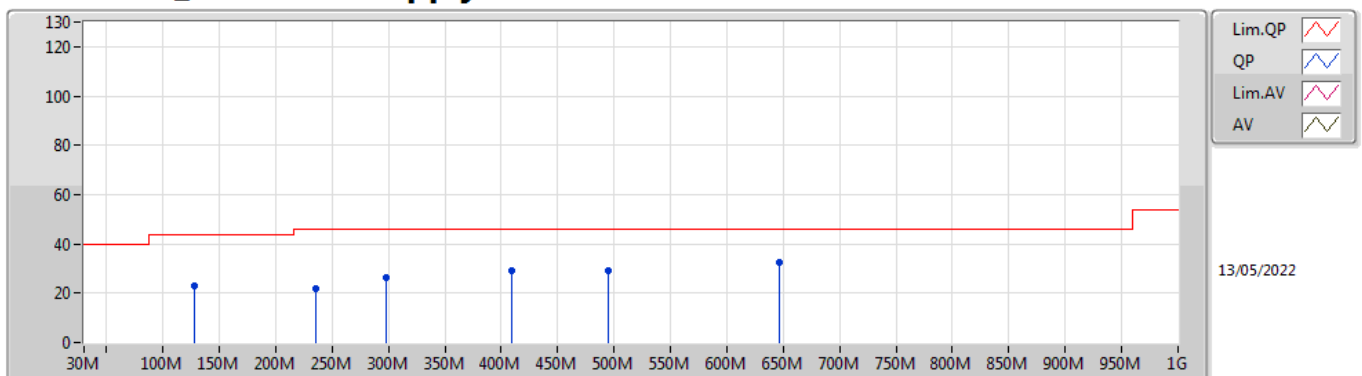
2440MHz_DC Power Supply



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	90.14M	24.35	43.50	-19.15	-11.83	3	Vertical	360	1.00	-	36.18	14.03	1.54	27.40
PK	132.82M	21.31	43.50	-22.19	-8.42	3	Vertical	360	1.00	-	29.73	16.91	1.89	27.22
PK	249.22M	24.32	46.00	-21.68	-6.61	3	Vertical	360	1.00	-	30.93	17.44	2.63	26.68
PK	386.96M	25.86	46.00	-20.14	-3.40	3	Vertical	360	1.00	-	29.26	20.38	3.32	27.10
PK	478.14M	29.21	46.00	-16.79	-1.30	3	Vertical	360	1.00	-	30.51	22.67	3.71	27.68
PK	660.5M	30.95	46.00	-15.05	0.47	3	Vertical	360	1.00	-	30.48	24.04	4.43	28.00

BT-LE(1Mbps)

2440MHz_DC Power Supply



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	128.35M	23.09	43.50	-20.41	-8.23	3	Horizontal	0	1.00	-	31.32	17.15	1.86	27.24
PK	235.6M	21.64	46.00	-24.36	-8.37	3	Horizontal	0	1.00	-	30.01	15.82	2.55	26.74
PK	298M	26.15	46.00	-19.85	-5.46	3	Horizontal	0	1.00	-	31.61	18.24	2.91	26.61
PK	409.15M	29.12	46.00	-16.88	-2.41	3	Horizontal	0	1.00	-	31.53	21.43	3.42	27.26
PK	494.95M	29.16	46.00	-16.84	-1.32	3	Horizontal	0	1.00	-	30.48	22.64	3.79	27.75
PK	647.05M	32.28	46.00	-13.72	0.35	3	Horizontal	0	1.00	-	31.93	24.00	4.38	28.03



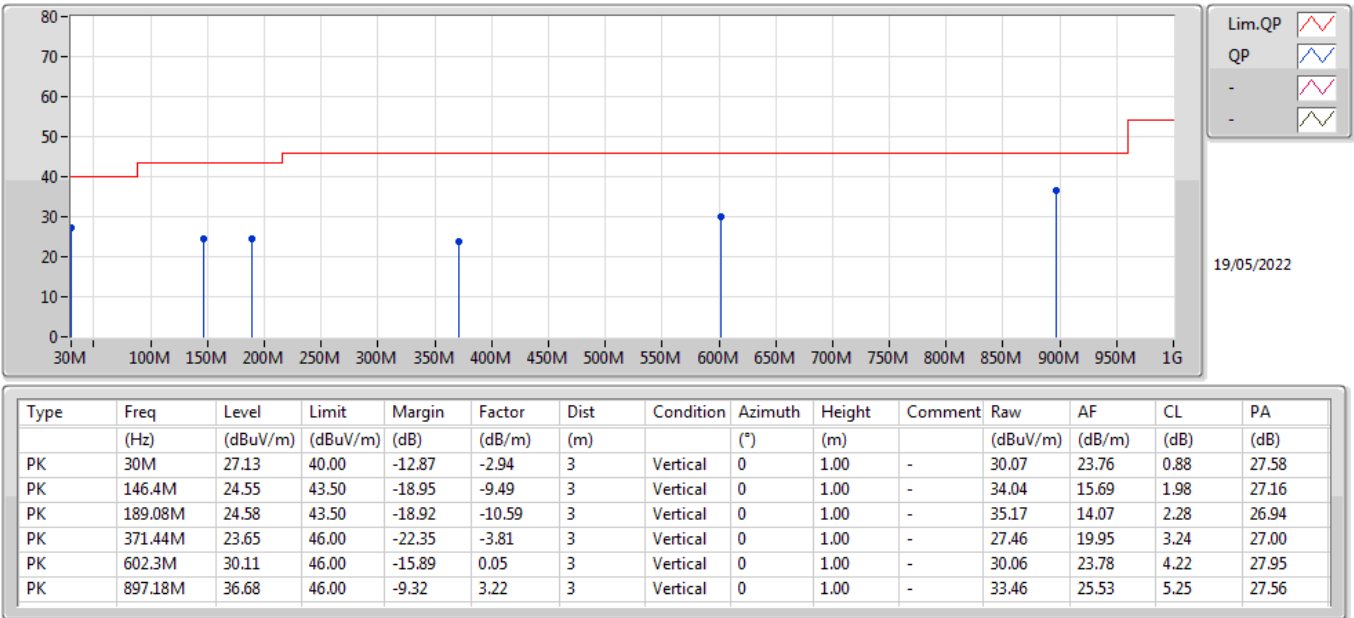
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	PK	897.18M	37.24	46.00	-8.76	Horizontal
Mode 3	Pass	PK	61.04M	33.96	40.00	-6.04	Vertical

Mode config

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 2	Pass	PK	30M	27.13	40.00	-12.87	3	Vertical	0	1.00	-
Mode 2	Pass	PK	146.4M	24.55	43.50	-18.95	3	Vertical	0	1.00	-
Mode 2	Pass	PK	189.08M	24.58	43.50	-18.92	3	Vertical	0	1.00	-
Mode 2	Pass	PK	371.44M	23.65	46.00	-22.35	3	Vertical	0	1.00	-
Mode 2	Pass	PK	602.3M	30.11	46.00	-15.89	3	Vertical	0	1.00	-
Mode 2	Pass	PK	897.18M	36.68	46.00	-9.32	3	Vertical	0	1.00	-
Mode 2	Pass	PK	30M	23.49	40.00	-16.51	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	140.58M	21.34	43.50	-22.16	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	272.5M	22.16	46.00	-23.84	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	452.92M	25.52	46.00	-20.48	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	555.74M	28.96	46.00	-17.04	3	Horizontal	360	1.00	-
Mode 2	Pass	PK	897.18M	37.24	46.00	-8.76	3	Horizontal	360	1.00	-
Mode 3	Pass	PK	61.04M	33.96	40.00	-6.04	3	Vertical	360	1.00	-
Mode 3	Pass	PK	136.7M	28.96	43.50	-14.54	3	Vertical	360	1.00	-
Mode 3	Pass	PK	212.36M	23.41	43.50	-20.09	3	Vertical	360	1.00	-
Mode 3	Pass	PK	416.06M	26.62	46.00	-19.38	3	Vertical	360	1.00	-
Mode 3	Pass	PK	532.46M	29.29	46.00	-16.71	3	Vertical	360	1.00	-
Mode 3	Pass	PK	627.52M	30.88	46.00	-15.12	3	Vertical	360	1.00	-
Mode 3	Pass	PK	61.04M	31.09	40.00	-8.91	3	Horizontal	0	1.00	-
Mode 3	Pass	PK	165.8M	27.60	43.50	-15.90	3	Horizontal	0	1.00	-
Mode 3	Pass	PK	224M	28.84	46.00	-17.16	3	Horizontal	0	1.00	-
Mode 3	Pass	PK	336.52M	28.99	46.00	-17.01	3	Horizontal	0	1.00	-
Mode 3	Pass	PK	538.28M	28.18	46.00	-17.82	3	Horizontal	0	1.00	-
Mode 3	Pass	PK	745.86M	33.75	46.00	-12.25	3	Horizontal	0	1.00	-

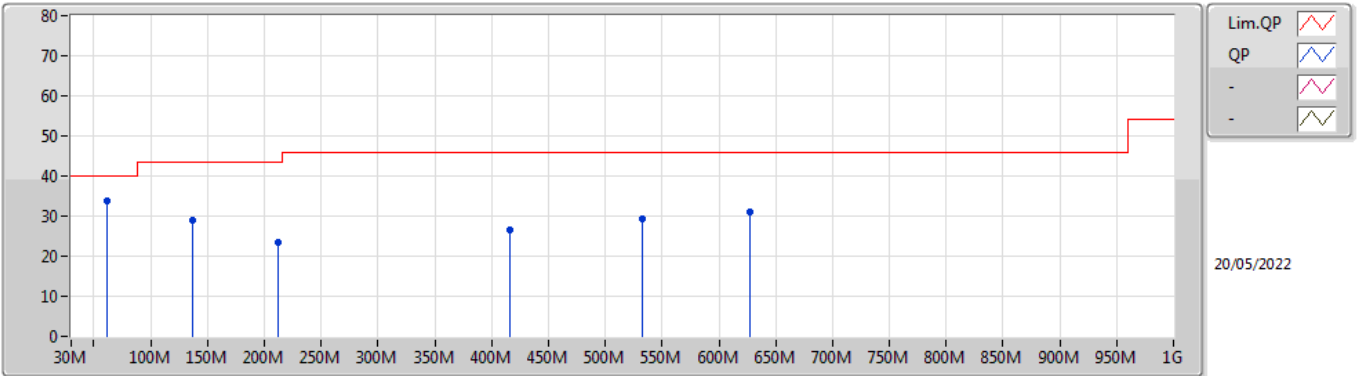
Radiated Emissions below 1GHz_Mode 2



Radiated Emissions below 1GHz_Mode 2

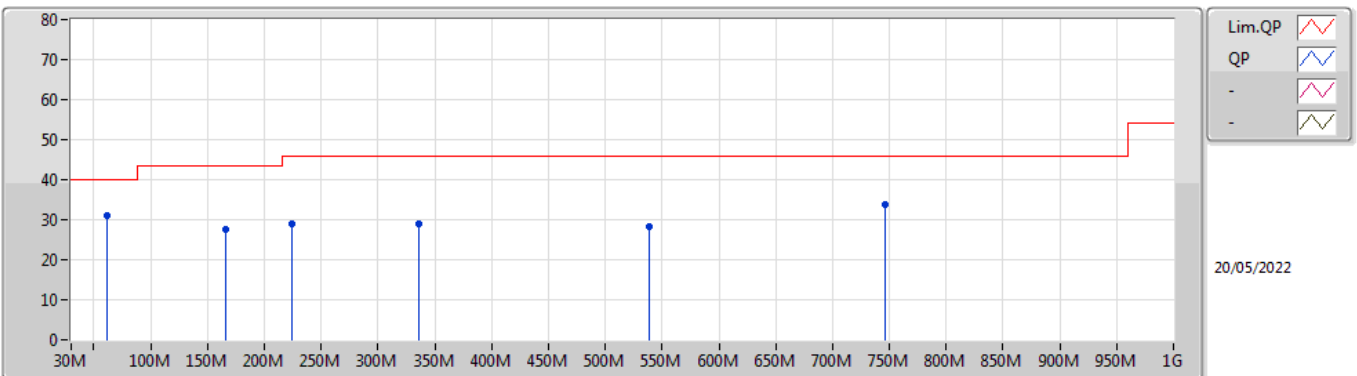


Radiated Emissions below 1GHz_Mode 3



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	61.04M	33.96	40.00	-6.04	-14.72	3	Vertical	360	1.00	-	48.68	11.50	1.27	27.49
PK	136.7M	28.96	43.50	-14.54	-8.66	3	Vertical	360	1.00	-	37.62	16.62	1.92	27.20
PK	212.36M	23.41	43.50	-20.09	-10.47	3	Vertical	360	1.00	-	33.88	13.95	2.42	26.84
PK	416.06M	26.62	46.00	-19.38	-2.13	3	Vertical	360	1.00	-	28.75	21.73	3.45	27.31
PK	532.46M	29.29	46.00	-16.71	-0.54	3	Vertical	360	1.00	-	29.83	23.46	3.91	27.91
PK	627.52M	30.88	46.00	-15.12	0.37	3	Vertical	360	1.00	-	30.51	24.05	4.31	27.99

Radiated Emissions below 1GHz_Mode 3



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	61.04M	31.09	40.00	-8.91	-14.72	3	Horizontal	0	1.00	-	45.81	11.50	1.27	27.49
PK	165.8M	27.60	43.50	-15.90	-10.08	3	Horizontal	0	1.00	-	37.68	14.88	2.12	27.08
PK	224M	28.84	46.00	-17.16	-9.74	3	Horizontal	0	1.00	-	38.58	14.57	2.48	26.79
PK	336.52M	28.99	46.00	-17.01	-4.72	3	Horizontal	0	1.00	-	33.71	18.99	3.08	26.79
PK	538.28M	28.18	46.00	-17.82	0.03	3	Horizontal	0	1.00	-	28.15	24.04	3.93	27.94
PK	745.86M	33.75	46.00	-12.25	2.01	3	Horizontal	0	1.00	-	31.74	25.04	4.72	27.75



Summary

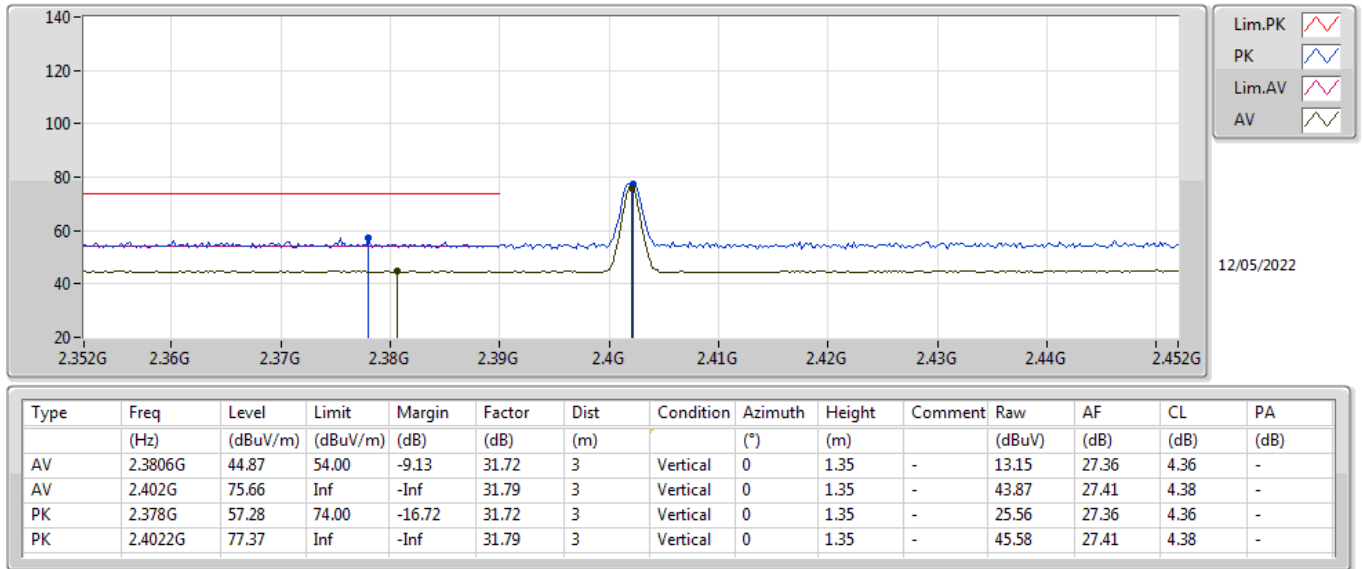
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	7.31938G	50.10	54.00	-3.90	3	Vertical	234	1.09	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3806G	44.87	54.00	-9.13	3	Vertical	0	1.35	-
2402MHz	Pass	AV	2.402G	75.66	Inf	-Inf	3	Vertical	0	1.35	-
2402MHz	Pass	PK	2.378G	57.28	74.00	-16.72	3	Vertical	0	1.35	-
2402MHz	Pass	PK	2.4022G	77.37	Inf	-Inf	3	Vertical	0	1.35	-
2402MHz	Pass	AV	2.379G	44.75	54.00	-9.25	3	Horizontal	357	1.15	-
2402MHz	Pass	AV	2.402G	74.25	Inf	-Inf	3	Horizontal	357	1.15	-
2402MHz	Pass	PK	2.365G	56.11	74.00	-17.89	3	Horizontal	357	1.15	-
2402MHz	Pass	PK	2.4018G	75.97	Inf	-Inf	3	Horizontal	357	1.15	-
2402MHz	Pass	AV	4.80366G	38.75	54.00	-15.25	3	Vertical	219	1.50	-
2402MHz	Pass	PK	4.8045G	47.82	74.00	-26.18	3	Vertical	219	1.50	-
2402MHz	Pass	AV	4.80377G	36.29	54.00	-17.71	3	Horizontal	150	1.00	-
2402MHz	Pass	PK	4.80439G	45.99	74.00	-28.01	3	Horizontal	150	1.00	-
2440MHz	Pass	AV	2.3756G	44.89	54.00	-9.11	3	Vertical	3	1.45	-
2440MHz	Pass	AV	2.44G	75.17	Inf	-Inf	3	Vertical	3	1.45	-
2440MHz	Pass	AV	2.4904G	45.33	54.00	-8.67	3	Vertical	3	1.45	-
2440MHz	Pass	PK	2.3752G	56.91	74.00	-17.09	3	Vertical	3	1.45	-
2440MHz	Pass	PK	2.44G	76.90	Inf	-Inf	3	Vertical	3	1.45	-
2440MHz	Pass	PK	2.492G	55.83	74.00	-18.17	3	Vertical	3	1.45	-
2440MHz	Pass	AV	2.342G	44.96	54.00	-9.04	3	Horizontal	31	1.50	-
2440MHz	Pass	AV	2.44G	72.68	Inf	-Inf	3	Horizontal	31	1.50	-
2440MHz	Pass	AV	2.4984G	45.37	54.00	-8.63	3	Horizontal	31	1.50	-
2440MHz	Pass	PK	2.3576G	56.01	74.00	-17.99	3	Horizontal	31	1.50	-
2440MHz	Pass	PK	2.4396G	75.03	Inf	-Inf	3	Horizontal	31	1.50	-
2440MHz	Pass	PK	2.4872G	55.45	74.00	-18.55	3	Horizontal	31	1.50	-
2440MHz	Pass	AV	4.87971G	36.81	54.00	-17.19	3	Vertical	227	2.01	-
2440MHz	Pass	AV	7.31938G	50.10	54.00	-3.90	3	Vertical	234	1.09	-
2440MHz	Pass	PK	4.8795G	47.58	74.00	-26.42	3	Vertical	227	2.01	-
2440MHz	Pass	PK	7.31919G	57.95	74.00	-16.05	3	Vertical	234	1.09	-
2440MHz	Pass	AV	4.87967G	35.02	54.00	-18.98	3	Horizontal	223	2.04	-
2440MHz	Pass	AV	7.31937G	49.95	54.00	-4.05	3	Horizontal	205	1.03	-
2440MHz	Pass	PK	4.87952G	46.67	74.00	-27.33	3	Horizontal	223	2.04	-
2440MHz	Pass	PK	7.32069G	57.90	74.00	-16.10	3	Horizontal	205	1.03	-
2480MHz	Pass	AV	2.48G	73.07	Inf	-Inf	3	Vertical	352	1.34	-
2480MHz	Pass	AV	2.4982G	45.44	54.00	-8.56	3	Vertical	352	1.34	-
2480MHz	Pass	PK	2.4798G	74.95	Inf	-Inf	3	Vertical	352	1.34	-
2480MHz	Pass	PK	2.489G	56.10	74.00	-17.90	3	Vertical	352	1.34	-
2480MHz	Pass	AV	2.48G	73.94	Inf	-Inf	3	Horizontal	163	1.50	-
2480MHz	Pass	AV	2.4994G	45.42	54.00	-8.58	3	Horizontal	163	1.50	-
2480MHz	Pass	PK	2.4798G	75.84	Inf	-Inf	3	Horizontal	163	1.50	-
2480MHz	Pass	PK	2.492G	55.98	74.00	-18.02	3	Horizontal	163	1.50	-
2480MHz	Pass	AV	4.95995G	41.56	54.00	-12.44	3	Vertical	61	1.03	-
2480MHz	Pass	AV	7.43938G	47.48	54.00	-6.52	3	Vertical	228	1.34	-
2480MHz	Pass	PK	4.96048G	49.96	74.00	-24.04	3	Vertical	61	1.03	-
2480MHz	Pass	PK	7.43925G	56.15	74.00	-17.85	3	Vertical	228	1.34	-
2480MHz	Pass	AV	4.95977G	37.65	54.00	-16.35	3	Horizontal	20	1.50	-
2480MHz	Pass	AV	7.43942G	46.11	54.00	-7.89	3	Horizontal	174	3.00	-
2480MHz	Pass	PK	4.96055G	47.81	74.00	-26.19	3	Horizontal	20	1.50	-
2480MHz	Pass	PK	7.44067G	55.29	74.00	-18.71	3	Horizontal	174	3.00	-

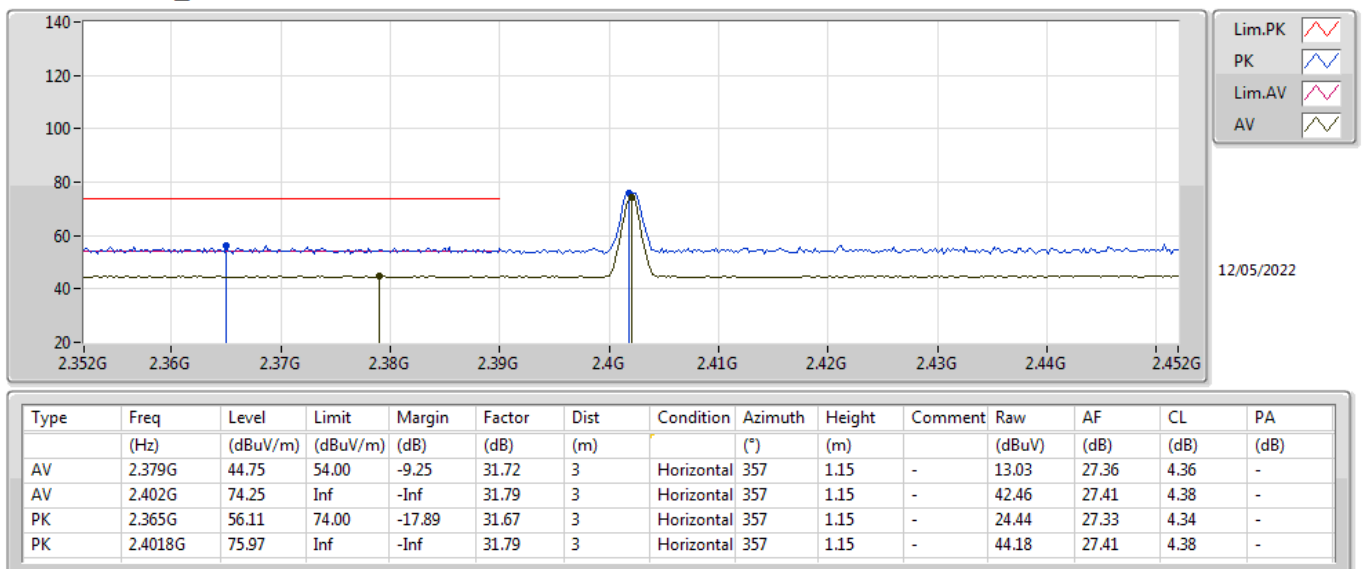
BT-LE(1Mbps)

2402MHz_TX



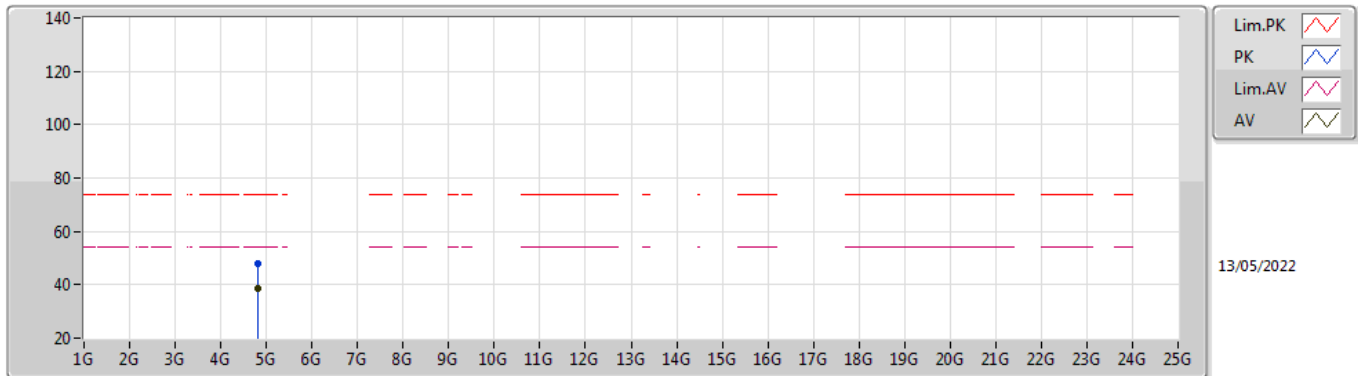
BT-LE(1Mbps)

2402MHz_TX



BT-LE(1Mbps)

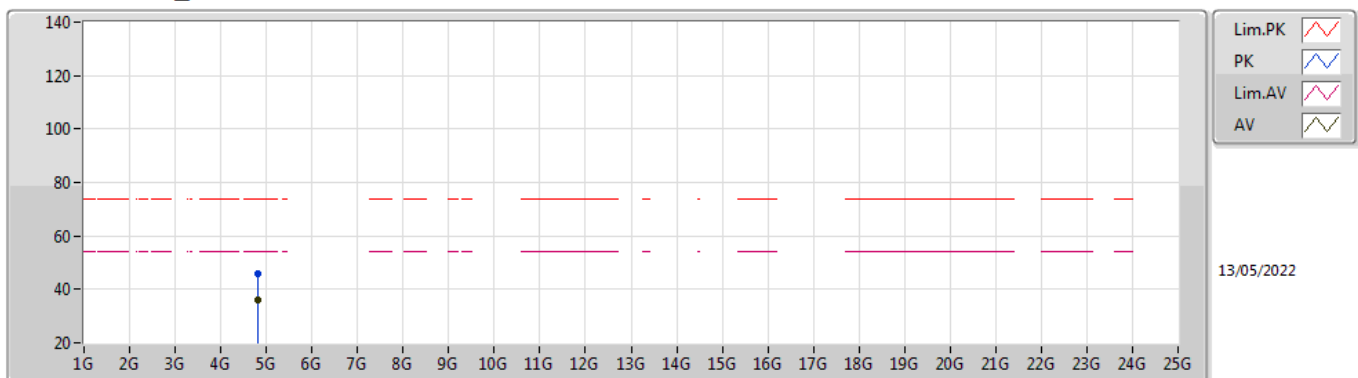
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80366G	38.75	54.00	-15.25	4.32	3	Vertical	219	1.50	-	34.43	32.51	6.26	34.45
PK	4.8045G	47.82	74.00	-26.18	4.33	3	Vertical	219	1.50	-	43.49	32.52	6.26	34.45

BT-LE(1Mbps)

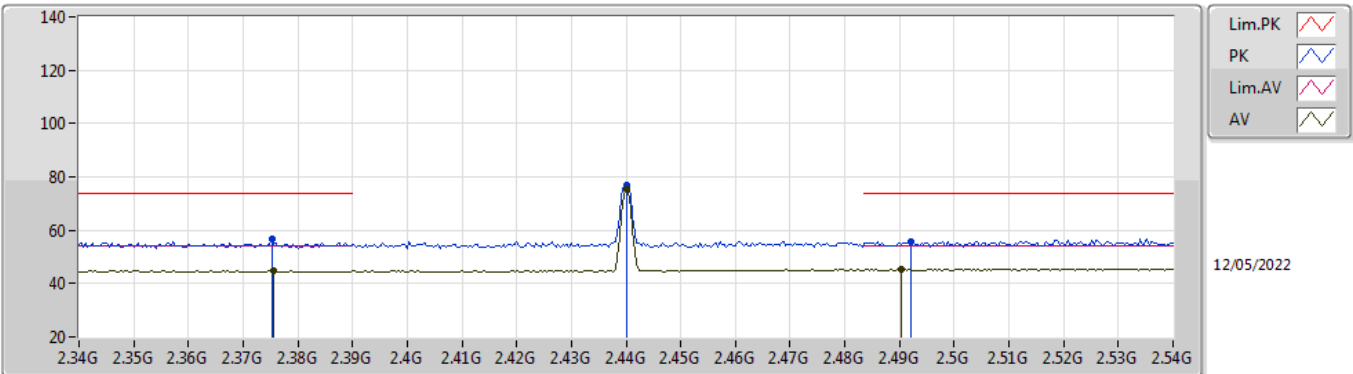
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80377G	36.29	54.00	-17.71	4.33	3	Horizontal	150	1.00	-	31.96	32.52	6.26	34.45
PK	4.80439G	45.99	74.00	-28.01	4.33	3	Horizontal	150	1.00	-	41.66	32.52	6.26	34.45

BT-LE(1Mbps)

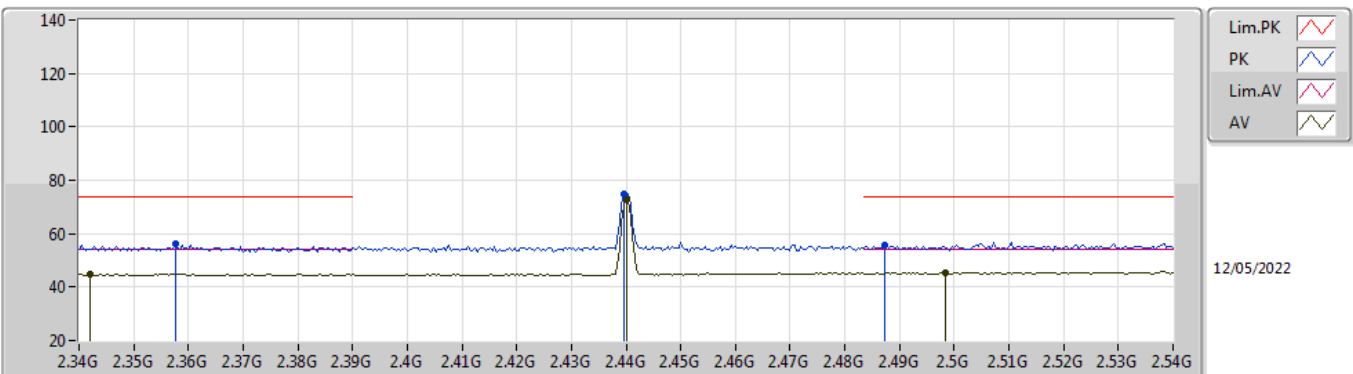
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3756G	44.89	54.00	-9.11	31.70	3	Vertical	3	1.45	-	13.19	27.35	4.35	-
AV	2.44G	75.17	Inf	-Inf	32.00	3	Vertical	3	1.45	-	43.17	27.56	4.44	-
AV	2.4904G	45.33	54.00	-8.67	32.35	3	Vertical	3	1.45	-	12.98	27.84	4.51	-
PK	2.3752G	56.91	74.00	-17.09	31.70	3	Vertical	3	1.45	-	25.21	27.35	4.35	-
PK	2.44G	76.90	Inf	-Inf	32.00	3	Vertical	3	1.45	-	44.90	27.56	4.44	-
PK	2.492G	55.83	74.00	-18.17	32.36	3	Vertical	3	1.45	-	23.47	27.85	4.51	-

BT-LE(1Mbps)

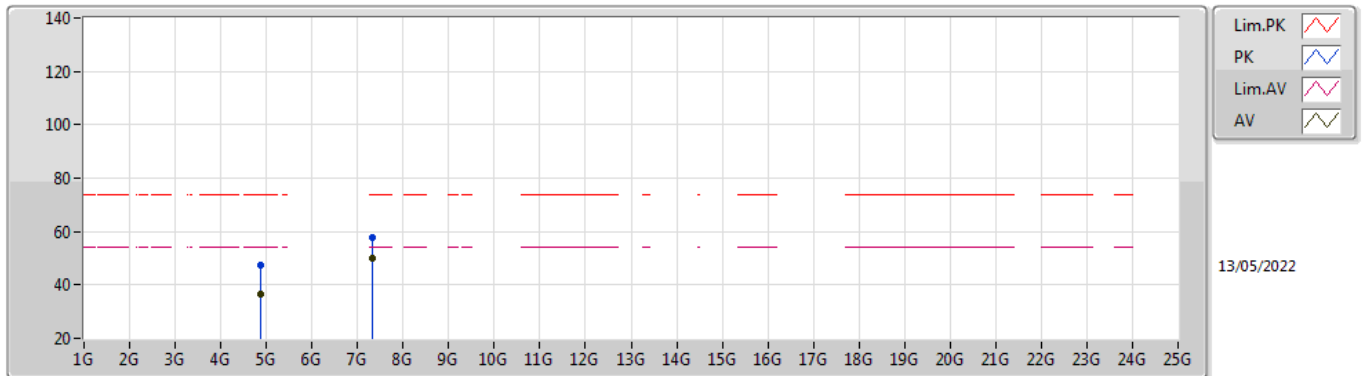
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.342G	44.96	54.00	-9.04	31.59	3	Horizontal	31	1.50	-	13.37	27.27	4.32	-
AV	2.44G	72.68	Inf	-Inf	32.00	3	Horizontal	31	1.50	-	40.68	27.56	4.44	-
AV	2.4984G	45.37	54.00	-8.63	32.41	3	Horizontal	31	1.50	-	12.96	27.89	4.52	-
PK	2.3576G	56.01	74.00	-17.99	31.66	3	Horizontal	31	1.50	-	24.35	27.32	4.34	-
PK	2.4396G	75.03	Inf	-Inf	32.00	3	Horizontal	31	1.50	-	43.03	27.56	4.44	-
PK	2.4872G	55.45	74.00	-18.55	32.33	3	Horizontal	31	1.50	-	23.12	27.82	4.51	-

BT-LE(1Mbps)

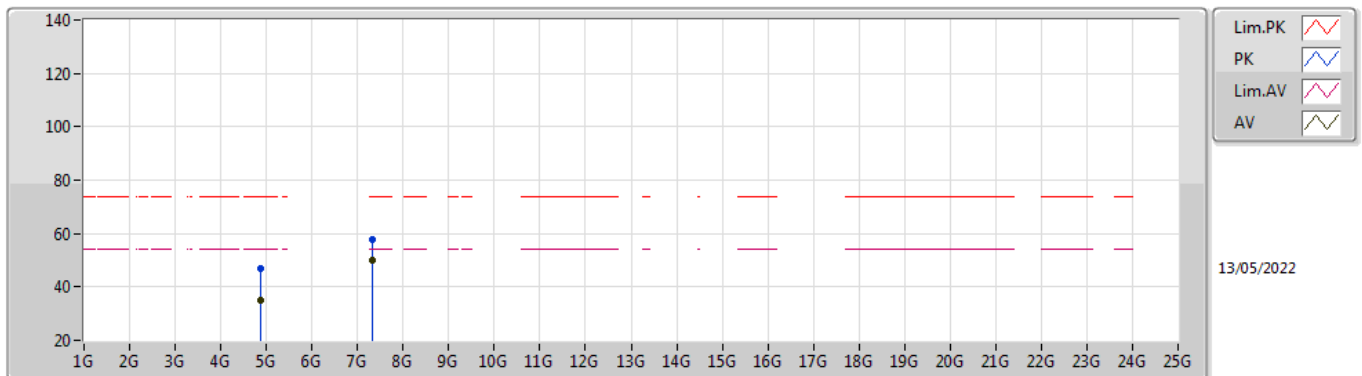
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87971G	36.81	54.00	-17.19	4.63	3	Vertical	227	2.01	-	32.18	32.76	6.31	34.44
AV	7.31938G	50.10	54.00	-3.90	10.11	3	Vertical	234	1.09	-	39.99	36.78	8.14	34.81
PK	4.8795G	47.58	74.00	-26.42	4.63	3	Vertical	227	2.01	-	42.95	32.76	6.31	34.44
PK	7.31919G	57.95	74.00	-16.05	10.11	3	Vertical	234	1.09	-	47.84	36.78	8.14	34.81

BT-LE(1Mbps)

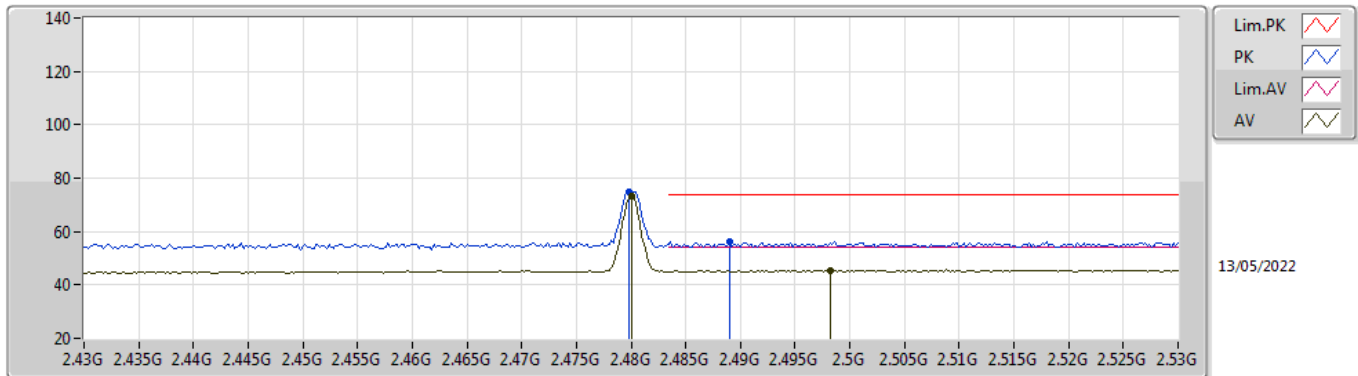
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87967G	35.02	54.00	-18.98	4.63	3	Horizontal	223	2.04	-	30.39	32.76	6.31	34.44
AV	7.31937G	49.95	54.00	-4.05	10.11	3	Horizontal	205	1.03	-	39.84	36.78	8.14	34.81
PK	4.87952G	46.67	74.00	-27.33	4.63	3	Horizontal	223	2.04	-	42.04	32.76	6.31	34.44
PK	7.32069G	57.90	74.00	-16.10	10.11	3	Horizontal	205	1.03	-	47.79	36.78	8.14	34.81

BT-LE(1Mbps)

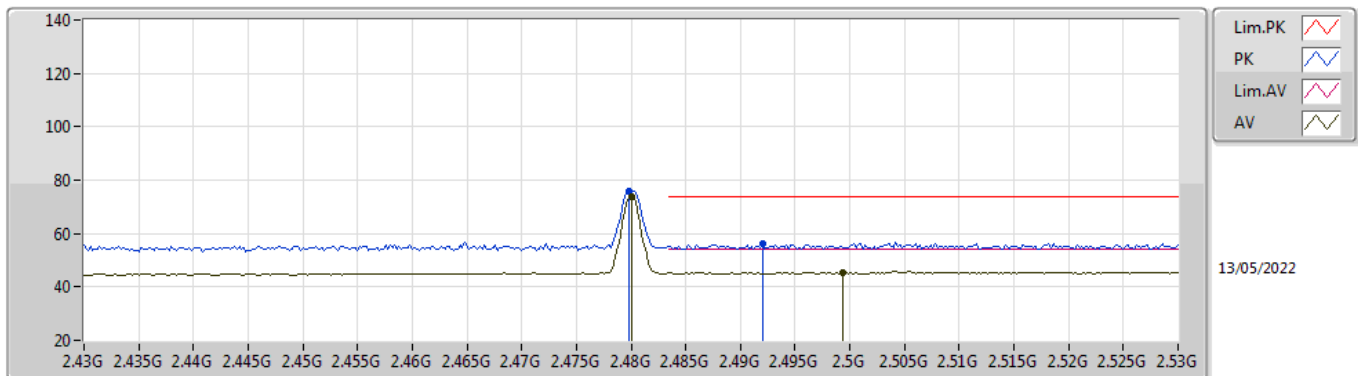
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	73.07	Inf	-Inf	32.28	3	Vertical	352	1.34	-	40.79	27.78	4.50	-
AV	2.4982G	45.44	54.00	-8.56	32.41	3	Vertical	352	1.34	-	13.03	27.89	4.52	-
PK	2.4798G	74.95	Inf	-Inf	32.28	3	Vertical	352	1.34	-	42.67	27.78	4.50	-
PK	2.489G	56.10	74.00	-17.90	32.34	3	Vertical	352	1.34	-	23.76	27.83	4.51	-

BT-LE(1Mbps)

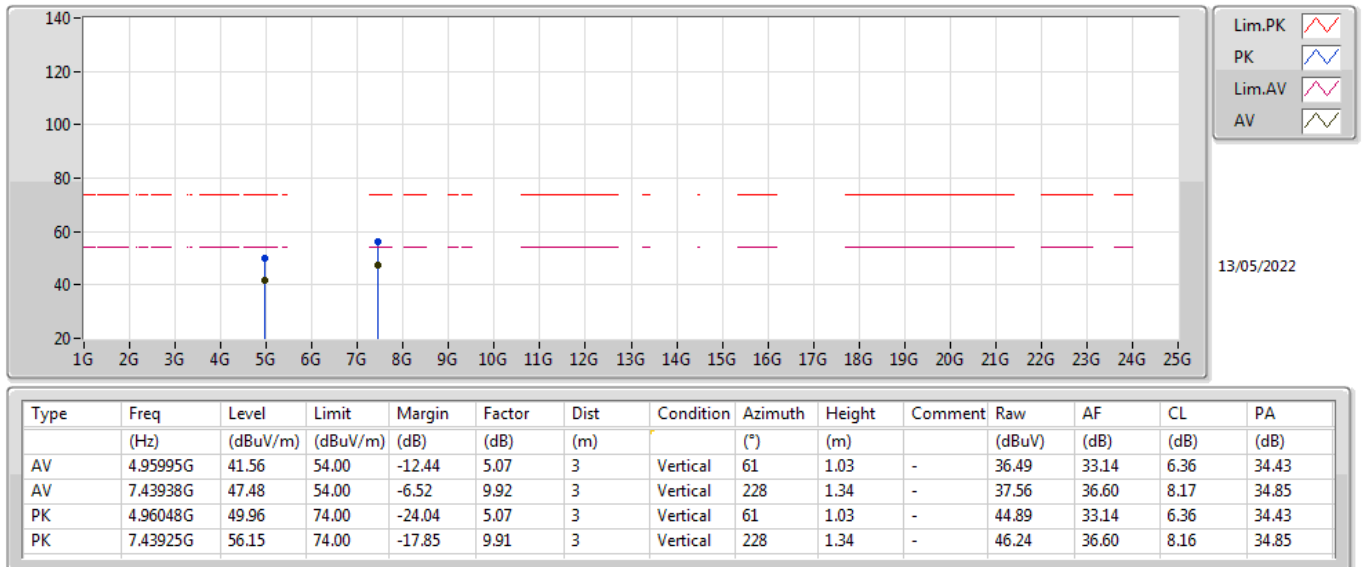
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	73.94	Inf	-Inf	32.28	3	Horizontal	163	1.50	-	41.66	27.78	4.50	-
AV	2.4994G	45.42	54.00	-8.58	32.42	3	Horizontal	163	1.50	-	13.00	27.90	4.52	-
PK	2.4798G	75.84	Inf	-Inf	32.28	3	Horizontal	163	1.50	-	43.56	27.78	4.50	-
PK	2.492G	55.98	74.00	-18.02	32.36	3	Horizontal	163	1.50	-	23.62	27.85	4.51	-

BT-LE(1Mbps)

2480MHz_TX



BT-LE(1Mbps)

2480MHz_TX

