

FCC Radio Test Report

FCC ID : 2ASRT-SCN355
Equipment : Digital Projector
Brand Name : PHILIPS
Model Name : Screeneo UL5 Smart, SCN355
Applicant : Screeneo Innovation SA
Route de Lully 5C 1131 Tolochenaz Switzerland
Manufacturer : Screeneo Innovation SA
Route de Lully 5C 1131 Tolochenaz Switzerland
Standard : 47 CFR FCC Part 15.247

The product was received on Jan. 15, 2024, and testing was started from Apr. 03, 2024 and completed on Apr. 13, 2024. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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History of this test report

[illegible]

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	20dB Bandwidth	PASS	-
3.2	15.247(a)	Carrier Frequency Separation	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(a)	Number of Hopping Frequencies and Hopping Bandedge	PASS	-
3.5	15.247(a)	Time of Occupancy (Dwell Time)	PASS	-
3.6	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.7	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: Barry Hsiao

Report Producer: Amber Chiu

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Version	Ch. Frequency (MHz)	Channel Number
2400-2483.5	BR / EDR	2402-2480	0-78 [79]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-BR(1Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(2Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(3Mbps)	1	1TX

Note:

- ♦ Bluetooth BR uses a GFSK (1Mbps).
- ♦ Bluetooth EDR uses a combination of $\pi/4$ -DQPSK (2Mbps) and 8DPSK (3Mbps).
- ♦ Bluetooth BR/EDR uses as a system using FHSS modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	LeJin	LJF02-23072908-R0A	PIFA antenna	I-PEX

Ant.	Port	Gain (dBi)		
		2.4G	5G	BT
1	1	2.19	2.28	2.19

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 5GHz function:

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

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

For BT function:

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

Only Ant. 1 (port 1) can be used as transmitting/receiving antenna.

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) $\geq 1/T$
BT-BR(1Mbps)	0.77	1.14	2.888m	1k
BT-EDR(2Mbps)	0.771	1.13	2.89m	1k
BT-EDR(3Mbps)	0.772	1.12	2.893m	1k

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

1.1.5 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
Scree neo UL5 Smart, SCN355	All the models are identical, the difference model served as marketing strategy.

From the above models, Scree neo UL5 Smart was selected as representative model for the test and its data was recorded in this report.

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	Lego Lin	21.3~22.5°C / 52~53%	13/Apr/2024
RF Conducted	TH06-HY	Henry Ho	22.1~23.4°C / 50~52%	03/Apr/2024~12/Apr/2024
Radiated	03CH03-HY	Edward Wang	21.2~23.2°C / 51~53%	10/Apr/2024~11/Apr/2024
☐ 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
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%
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	putty release 0.72
Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default
BT-EDR(2Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default
BT-EDR(3Mbps)	
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	20dB Bandwidth Carrier Frequency Separation Maximum Conducted Output Power Number of Hopping Frequencies Hopping Bandedge Time of Occupancy (Dwell Time) Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains ☒ Non-adaptive frequency hopping systems (Non-AFH) ☐ adaptive frequency hopping systems (AFH)
Non-AFH Mode configuration was found to be the worst case and measured during the test.	

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
		
Worst Planes of EUT		V

2.3 Accessories

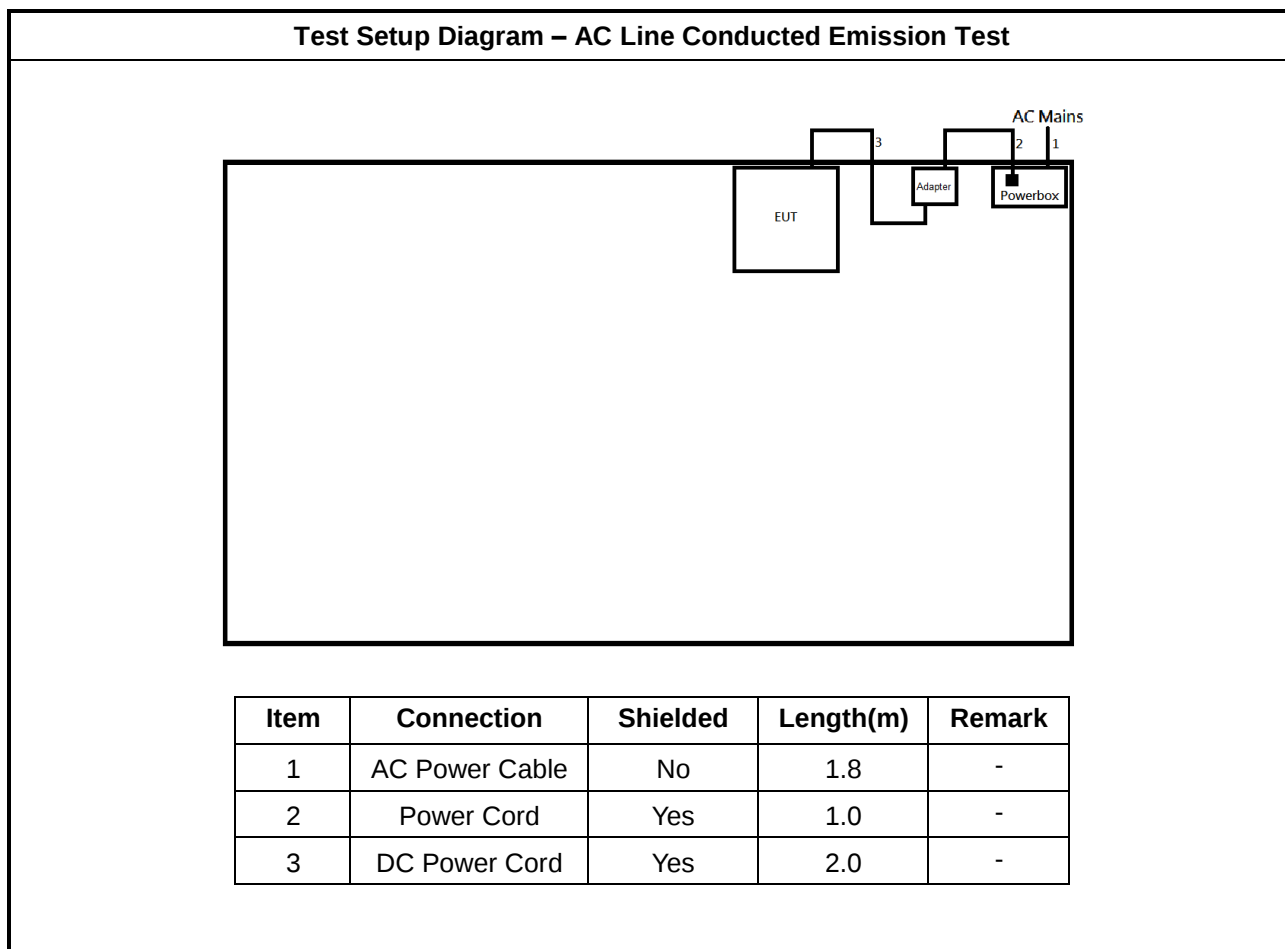
Accessories				
AC Adapter	Brand Name	PHILIPS	Model Name	S-TR-185
	Manufacturer	DONGGUAN SHELL ELECTRONIC LIMITED		
	Power Rating	I/P: 100 - 240Vac, 2 A, O/P: 5 Vdc, 3 A, 15W, 9 Vdc, 3 A, 27W 12 Vdc, 3 A, 36W 15 Vdc, 3 A, 45W 20 Vdc, 5 A, 100W		
	DC Power Cord	2 meter, shielded cable, with ferrite core		
Power Cord (US Plug)	Brand Name	I-SHENG		
	Power Cord	1 meter, shielded cable, without ferrite core		
Bluetooth remote control	Brand Name	PHILIPS	Model Name	AN2301B-2SC

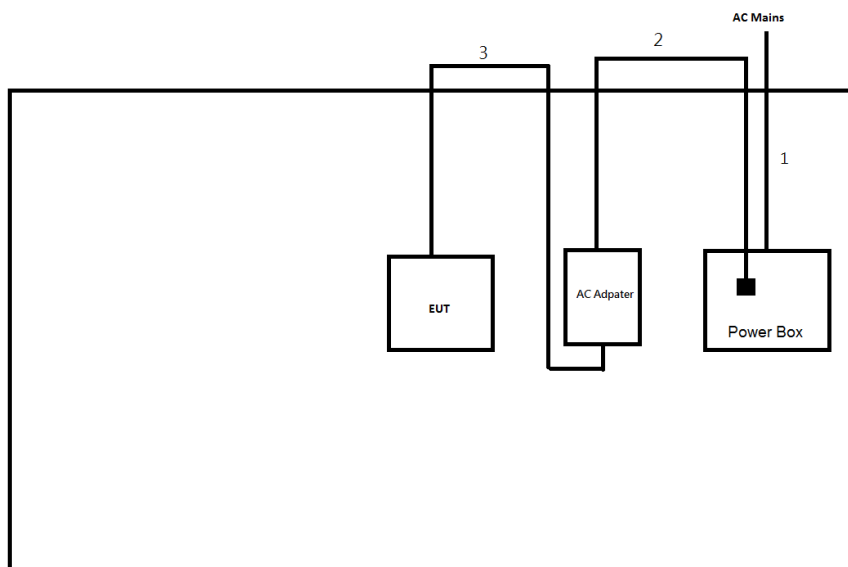
Reminder: Regarding to more detail and other information, please refer to user manual.

2.4 Support Equipment

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-

2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test


Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	Power Cord	Yes	1.0	-
3	DC Power Cord	Yes	2.0	-

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

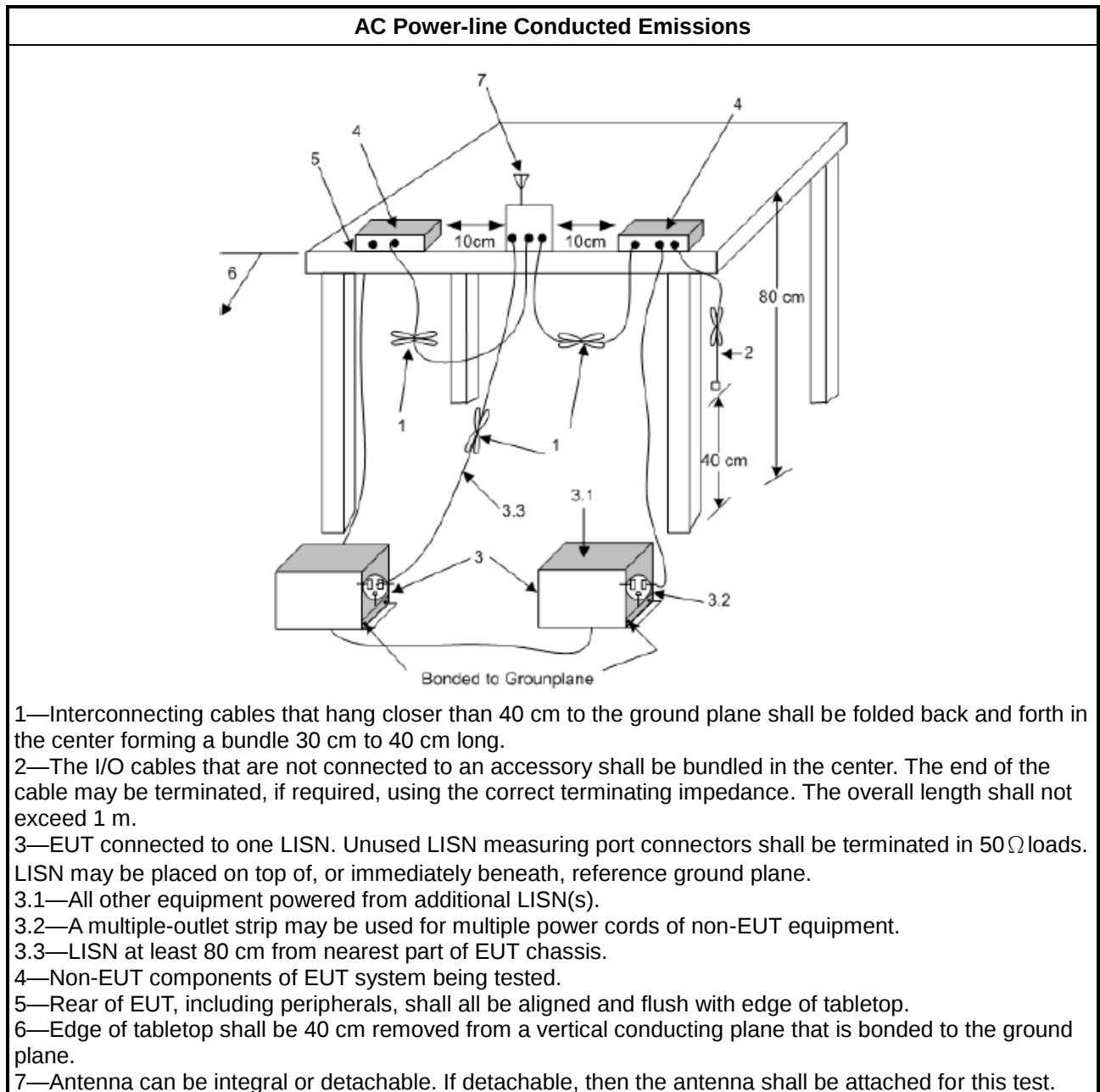
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:

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

3.1.5 Test Setup



3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 20dB Bandwidth and Carrier Frequency Separation

3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems	
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).
N: Number of Hopping Frequencies; ChS: Hopping Channel Separation	

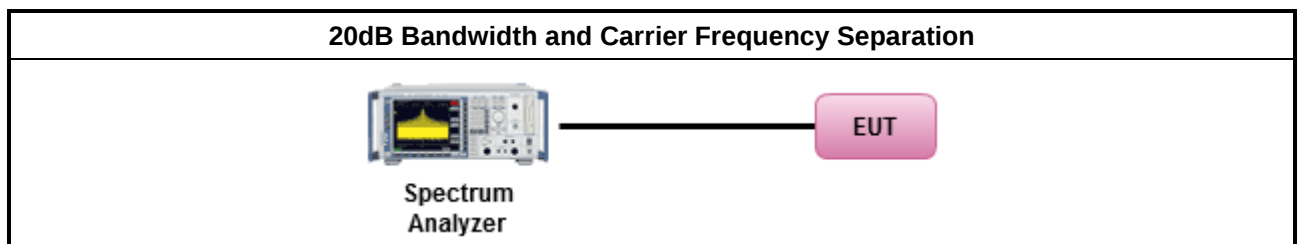
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.9.2 for 20 dB bandwidth measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.

3.2.4 Test Setup



3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$; Power 30dBm; EIRP 36dBm
	▪ $75 > N \geq 15$; Power 21dBm; EIRP 27dBm
N: Number of Hopping Frequencies	

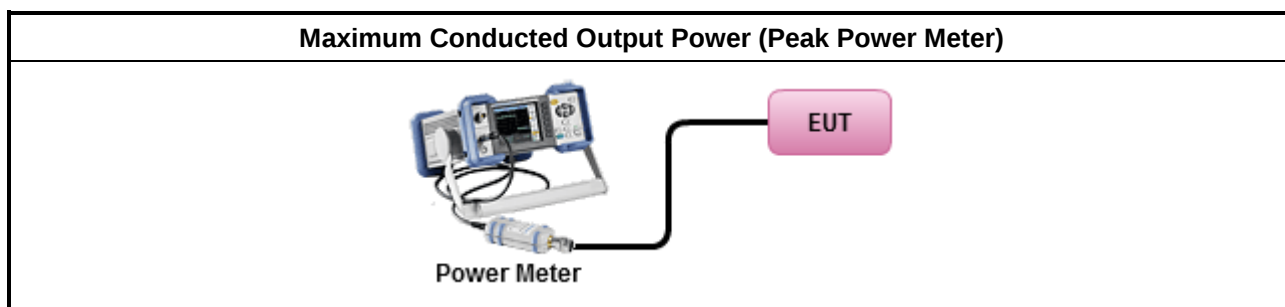
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement.

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Number of Hopping Frequencies and Hopping Bandedge

3.4.1 Number of Hopping Frequencies Limit

Number of Hopping Frequencies Limit	
2400-2483.5 MHz Band:	
	$N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	$75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).
N: Number of Hopping Frequencies; ChS : Hopping Channel Separation	

3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

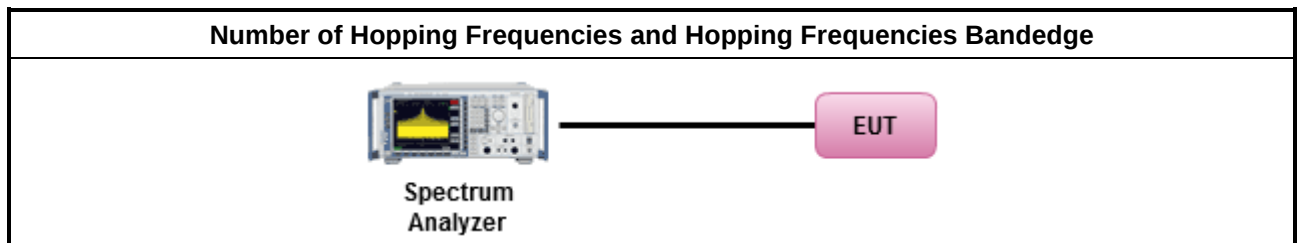
3.4.3 Measuring Instruments

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

3.4.4 Test Procedures

Test Method
Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement.
Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.

3.4.5 Test Setup



3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

3.5 Time of Occupancy (Dwell Time)

3.5.1 Time of Occupancy (Dwell Time) Limit

Time of Occupancy (Dwell Time) Limit for Frequency Hopping Systems	
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$; 0.4s in $N \times 0.4$ period
	▪ $75 > N \geq 15$; 0.4s in $N \times 0.4$ period
N: Number of Hopping Frequencies	

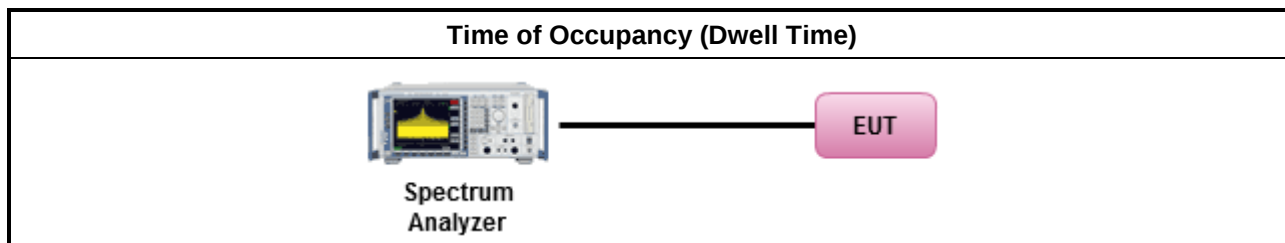
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method	
▪ Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.	
▪ Bluetooth ACL packets can be 1, 3, or 5 time slots. Following as dwell time. Operate DH5 at maximum dwell time and maximum duty cycle.	
	▪ The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is $5/1600$ seconds, or 3.125ms. DH5 Packet permit maximum $1600 / 79 / 6 = 3.37$ hops per second in each channel.

3.5.4 Test Setup



3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

3.6 Emissions in Non-restricted Frequency Bands

3.6.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.	

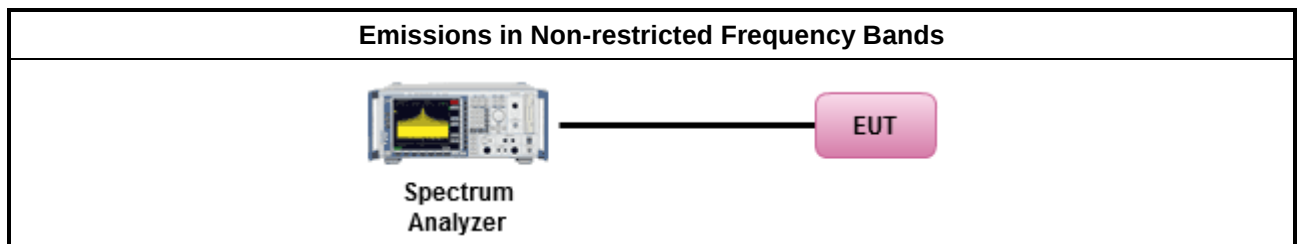
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method
Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.

3.6.4 Test Setup



3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F

3.7 Emissions in Restricted Frequency Bands

3.7.1 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.

3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

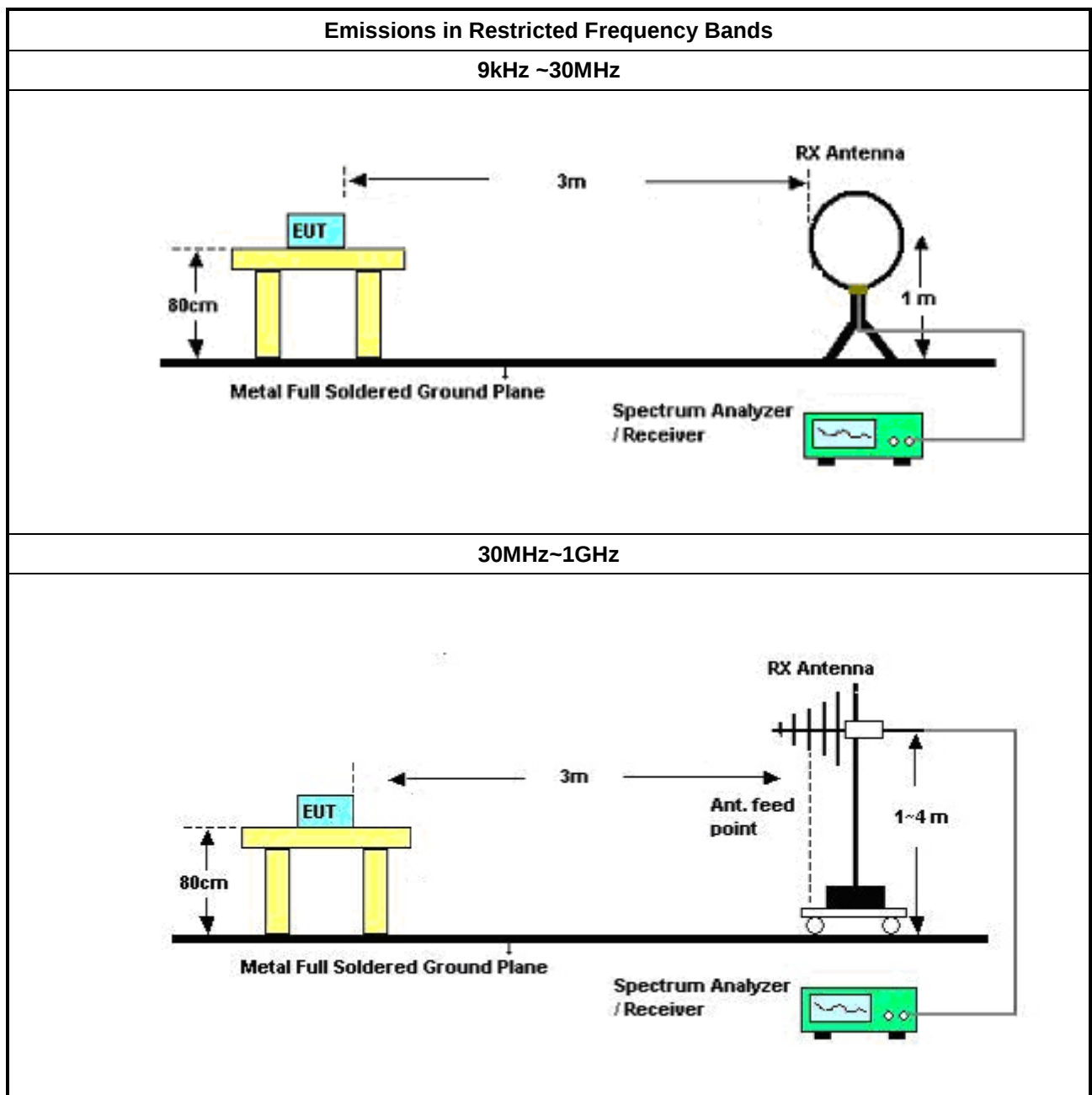
Test Method	
	The average emission levels shall be measured in [hopping duty factor].
	Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
	For the transmitter unwanted emissions shall be measured using following options below:
	Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.
	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.
	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.

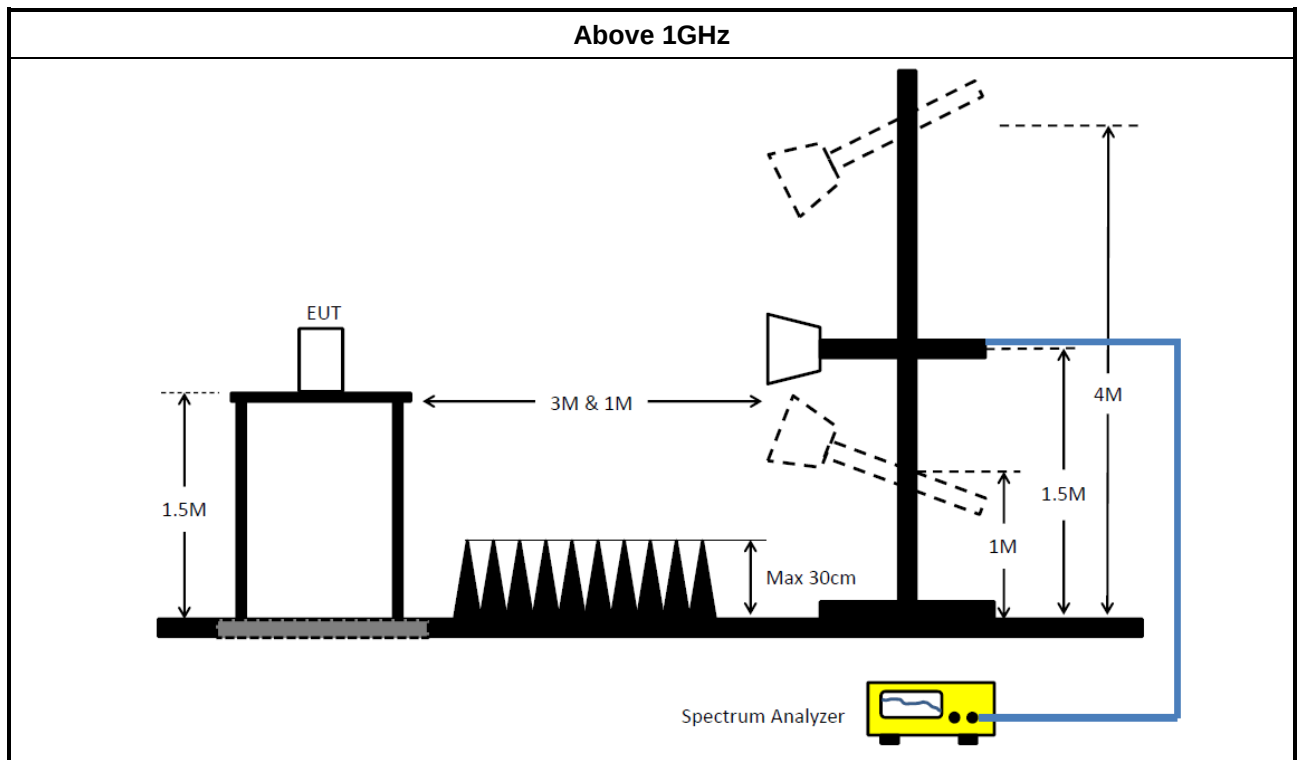
3.7.4 Measurement Results Calculation

The measured Level is calculated using:

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

3.7.5 Test Setup





3.7.6 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.

3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G



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	ESR	102051	9kHz ~ 3.6GHz	16/May/2023	15/May/2024
Two-Line V-Network	R&S	ENV 216	101295	9kHz ~ 30MHz	05/Feb/2024	04/Feb/2025
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	27/Feb/2024	26/Feb/2025
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	18/Oct/2023	17/Oct/2024
Software	Sporton	SENSE-EMI	V5.11.3	-	NCR	NCR

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	30/Oct/2023	29/Oct/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	20/Oct/2023	19/Oct/2024
Power Meter	Anritsu	ML2495A	2105003	300MHz~40GHz	19/Sep/2023	18/Sep/2024
Pulse Sensor	Anritsu	MA2411B	1911254	300MHz~40GHz	19/Sep/2023	18/Sep/2024
SENSE-15247_FS	Sporton	V5.11.17	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	1GHz~18GHz 3m	28/Jul/2023	27/Jul/2024
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	30/Jul/2023	29/Jul/2024
EMI Test Receiver	R&S	ESR3	102051	9kHz~3.6GHz	16/May/2023	15/May/2024
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	26/Oct/2023	25/Oct/2024
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	19/Mar/2024	18/Mar/2025
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMCI	CBL6112B / N-6-05	22237 / AT-N-0603	30MHz~1GHz	15/Oct/2023	14/Oct/2024
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02267	1GHz~18GHz	04/Oct/2023	03/Oct/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz ~ 40GHz	21/Aug/2023	20/Aug/2024
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	13/Jun/2023	12/Jun/2024
RF Cable-R03m	Jye Bao	RG142	03CH03-cable-02	30MHz~1GHz	13/Jun/2023	12/Jun/2024
RF CABLE 5+8 m	HUBER+SUHNER	SUOFLEX 104	03CH03-cable-03	1GHz~40GHz	20/Feb/2024	19/Feb/2025
Amplifier	Aglient	8447D	2944A08033	100kHz~1.3GHz	14/Sep/2023	13/Sep/2024
Microwave Preamplifier	Agilent	8449B	3008A02326	1GHz~26.5GHz	26/Jul/2023	25/Jul/2024
Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	18/Aug/2023	17/Aug/2024
SENSE-15247_FS	Sporton	V5.11.16	N/A	N/A	N/A	N/A



Conducted Emissions at Powerline

Appendix A

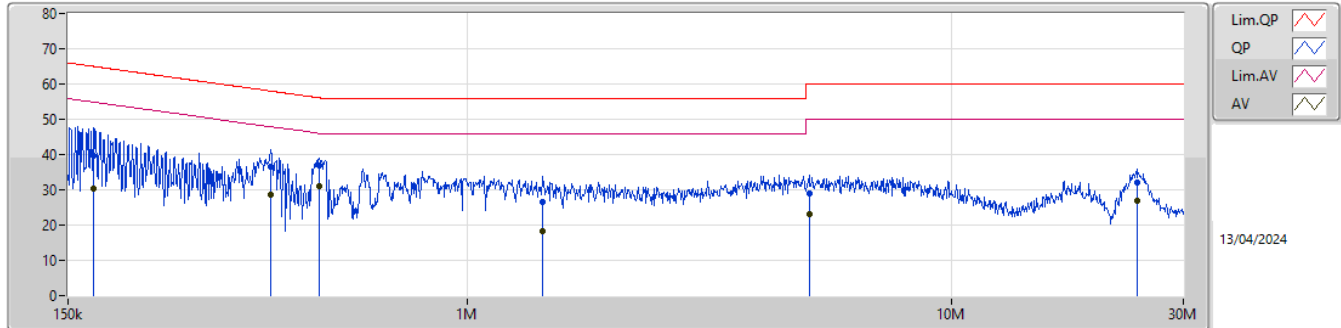
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	494.848k	30.96	46.10	-15.14	Line

Result

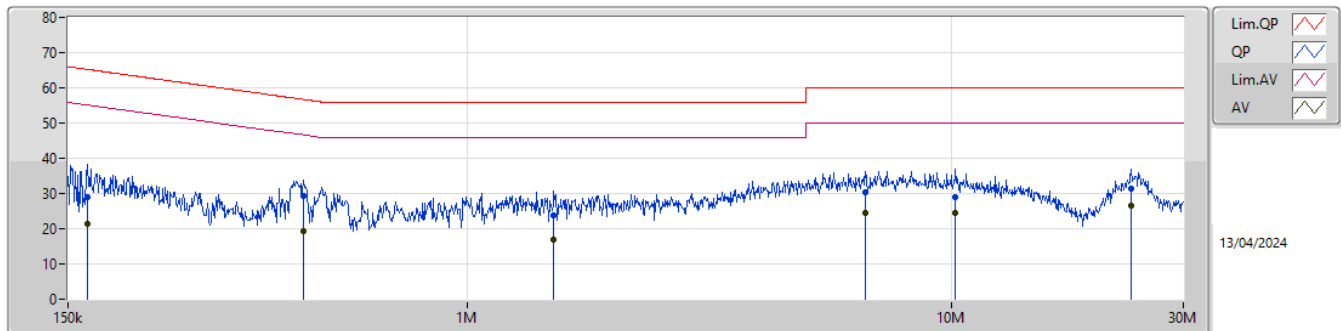
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	169.084k	39.65	65.01	-25.36	Line	-
Mode 1	Pass	AV	169.084k	30.20	55.01	-24.81	Line	-
Mode 1	Pass	QP	392.569k	36.65	58.01	-21.36	Line	-
Mode 1	Pass	AV	392.569k	28.46	48.01	-19.55	Line	-
Mode 1	Pass	QP	494.848k	36.82	56.10	-19.28	Line	-
Mode 1	Pass	AV	494.848k	30.96	46.10	-15.14	Line	-
Mode 1	Pass	QP	1.431M	26.46	56.00	-29.54	Line	-
Mode 1	Pass	AV	1.431M	18.28	46.00	-27.72	Line	-
Mode 1	Pass	QP	5.073M	29.05	60.00	-30.95	Line	-
Mode 1	Pass	AV	5.073M	23.13	50.00	-26.87	Line	-
Mode 1	Pass	QP	24.064M	32.00	60.00	-28.00	Line	-
Mode 1	Pass	AV	24.064M	27.01	50.00	-22.99	Line	-
Mode 1	Pass	QP	164.425k	28.81	65.24	-36.43	Neutral	-
Mode 1	Pass	AV	164.425k	21.32	55.24	-33.92	Neutral	-
Mode 1	Pass	QP	458.702k	29.36	56.71	-27.35	Neutral	-
Mode 1	Pass	AV	458.702k	19.40	46.71	-27.31	Neutral	-
Mode 1	Pass	QP	1.507M	23.72	56.00	-32.28	Neutral	-
Mode 1	Pass	AV	1.507M	16.87	46.00	-29.13	Neutral	-
Mode 1	Pass	QP	6.628M	30.35	60.00	-29.65	Neutral	-
Mode 1	Pass	AV	6.628M	24.46	50.00	-25.54	Neutral	-
Mode 1	Pass	QP	10.16M	29.09	60.00	-30.91	Neutral	-
Mode 1	Pass	AV	10.16M	24.54	50.00	-25.46	Neutral	-
Mode 1	Pass	QP	23.401M	31.48	60.00	-28.52	Neutral	-
Mode 1	Pass	AV	23.401M	26.40	50.00	-23.60	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	169.084k	39.65	65.01	-25.36	19.42	Line	-	20.23	9.61	0.08	9.73						
AV	169.084k	30.20	55.01	-24.81	19.42	Line	-	10.78	9.61	0.08	9.73						
QP	392.569k	36.65	58.01	-21.36	19.49	Line	-	17.16	9.61	0.12	9.76						
AV	392.569k	28.46	48.01	-19.55	19.49	Line	-	8.97	9.61	0.12	9.76						
QP	494.848k	36.82	56.10	-19.28	19.49	Line	-	17.33	9.61	0.11	9.77						
AV	494.848k	30.96	46.10	-15.14	19.49	Line	-	11.47	9.61	0.11	9.77						
QP	1.431M	26.46	56.00	-29.54	19.52	Line	-	6.94	9.62	0.10	9.80						
AV	1.431M	18.28	46.00	-27.72	19.52	Line	-	-1.24	9.62	0.10	9.80						
QP	5.073M	29.05	60.00	-30.95	19.50	Line	-	9.55	9.65	0.06	9.79						
AV	5.073M	23.13	50.00	-26.87	19.50	Line	-	3.63	9.65	0.06	9.79						
QP	24.064M	32.00	60.00	-28.00	19.51	Line	-	12.49	9.53	0.13	9.85						
AV	24.064M	27.01	50.00	-22.99	19.51	Line	-	7.50	9.53	0.13	9.85						

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	164.425k	28.81	65.24	-36.43	19.42	Neutral	-	9.39	9.62	0.07	9.73						
AV	164.425k	21.32	55.24	-33.92	19.42	Neutral	-	1.90	9.62	0.07	9.73						
QP	458.702k	29.36	56.71	-27.35	19.50	Neutral	-	9.86	9.61	0.12	9.77						
AV	458.702k	19.40	46.71	-27.31	19.50	Neutral	-	-0.10	9.61	0.12	9.77						
QP	1.507M	23.72	56.00	-32.28	19.52	Neutral	-	4.20	9.62	0.10	9.80						
AV	1.507M	16.87	46.00	-29.13	19.52	Neutral	-	-2.65	9.62	0.10	9.80						
QP	6.628M	30.35	60.00	-29.65	19.52	Neutral	-	10.83	9.67	0.06	9.79						
AV	6.628M	24.46	50.00	-25.54	19.52	Neutral	-	4.94	9.67	0.06	9.79						
QP	10.16M	29.09	60.00	-30.91	19.53	Neutral	-	9.56	9.69	0.05	9.79						
AV	10.16M	24.54	50.00	-25.46	19.53	Neutral	-	5.01	9.69	0.05	9.79						
QP	23.401M	31.48	60.00	-28.52	19.66	Neutral	-	11.82	9.69	0.13	9.84						
AV	23.401M	26.40	50.00	-23.60	19.66	Neutral	-	6.74	9.69	0.13	9.84						

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	976.25k	907.046k	907KF1D	880k	892.054k
BT-EDR(2Mbps)	1.35M	1.253M	1M25G1D	1.326M	1.216M
BT-EDR(3Mbps)	1.383M	1.232M	1M23G1D	1.262M	1.221M

Max-N dB = Maximum 20dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 20dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	880k	892.054k
2440MHz	Pass	Inf	976.25k	907.046k
2480MHz	Pass	Inf	924k	902.049k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.35M	1.244M
2440MHz	Pass	Inf	1.35M	1.216M
2480MHz	Pass	Inf	1.326M	1.253M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.262M	1.223M
2440MHz	Pass	Inf	1.284M	1.232M
2480MHz	Pass	Inf	1.383M	1.221M

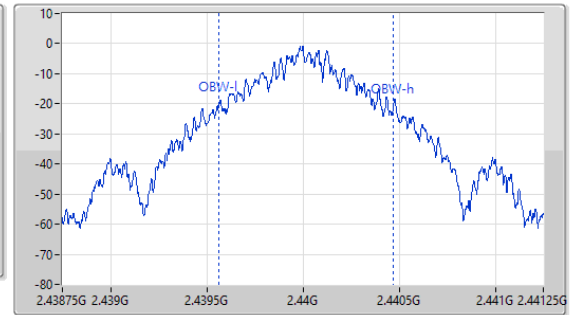
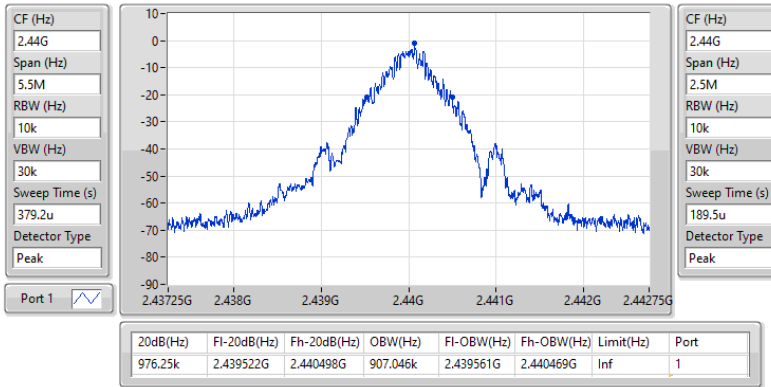
Port X-N dB = Port X 20dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-BR(1Mbps)

EBW-FS

2440MHz

03/04/2024

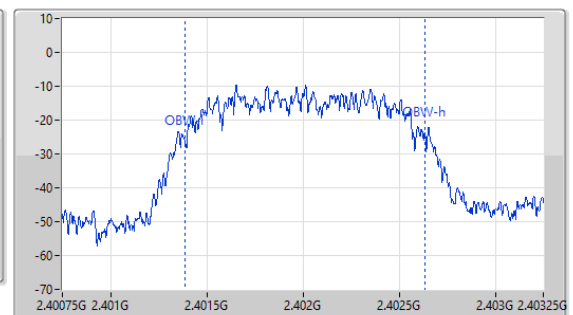
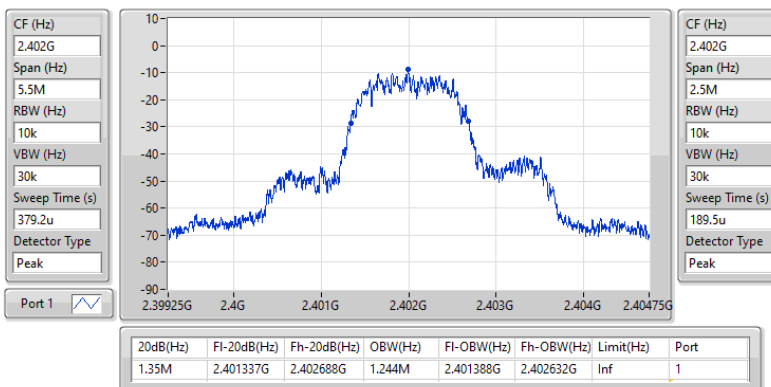


2.4-2.4835GHz_BT-EDR(2Mbps)

EBW-FS

2402MHz

03/04/2024

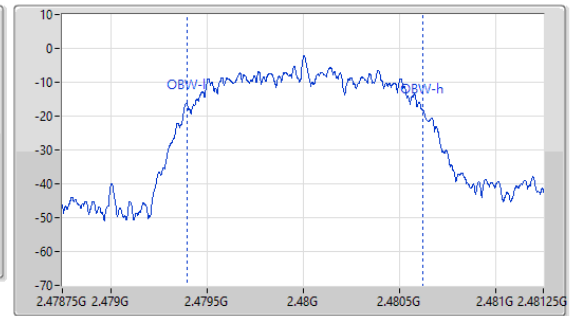
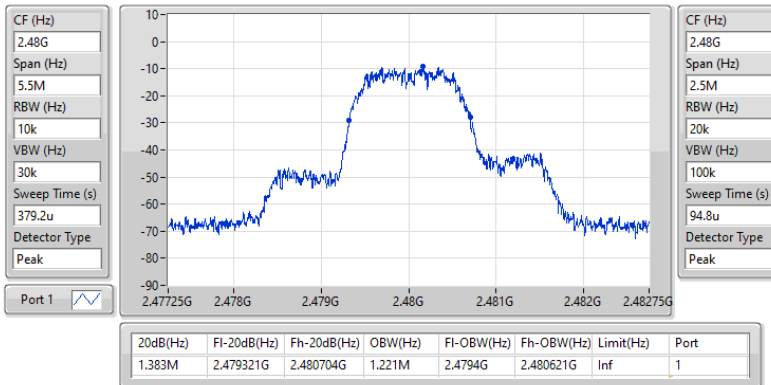


2.4-2.4835GHz_BT-EDR(3Mbps)

EBW-FS

2480MHz

03/04/2024





Summary

Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.0005M	999k
BT-EDR(2Mbps)	1.1595M	999k
BT-EDR(3Mbps)	1.002M	997.5k

Result

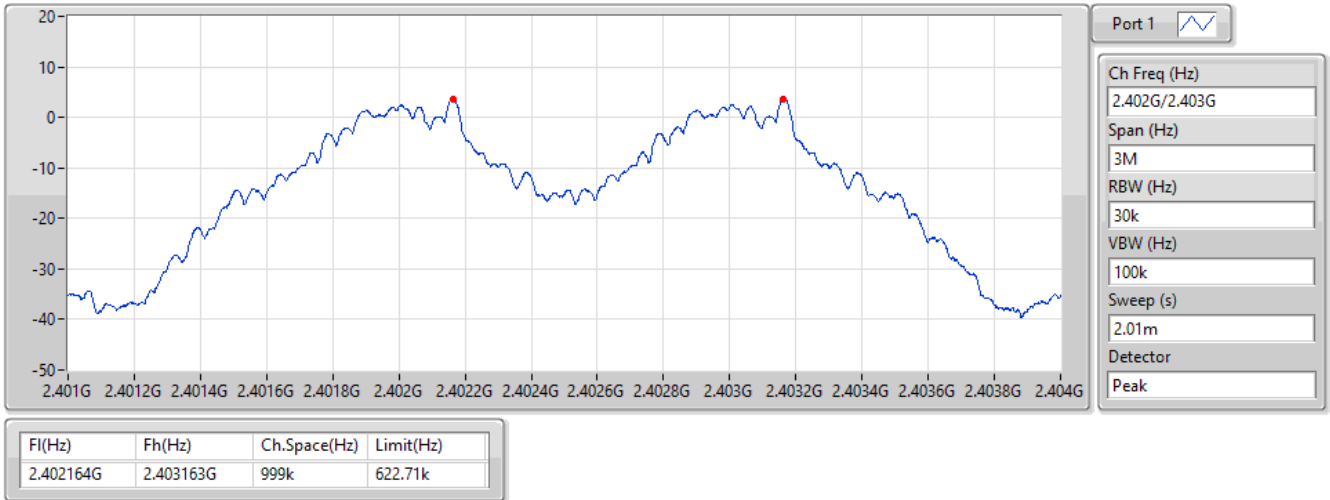
Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402164G	2.403163G	999k	622.71k
2440MHz	Pass	2.440169G	2.441169G	1.0005M	650.1825k
2480MHz	Pass	2.47917G	2.480171G	1.0005M	615.384k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402007G	2.403166G	1.1595M	899.1k
2440MHz	Pass	2.44001G	2.441009G	999k	899.1k
2480MHz	Pass	2.479013G	2.480015G	1.002M	883.116k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402163G	2.403165G	1.002M	840.492k
2440MHz	Pass	2.440169G	2.441166G	997.5k	855.144k
2480MHz	Pass	2.479173G	2.480172G	999k	921.078k

2.4-2.4835GHz_BT-BR(1Mbps)

Channel Separation-FS

2.402G/2.403GHz

03/04/2024

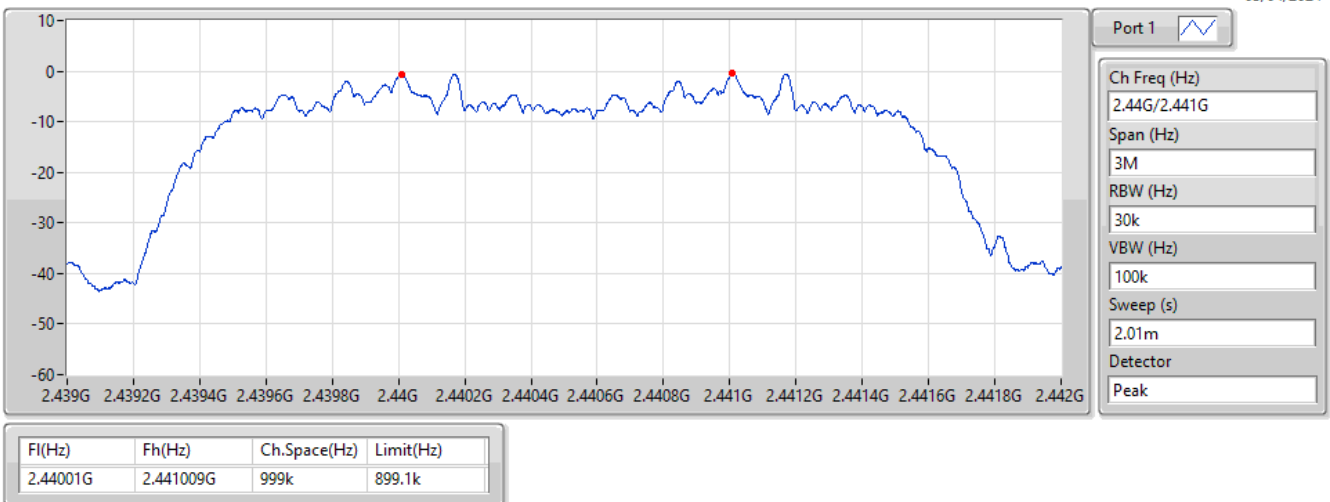


2.4-2.4835GHz_BT-EDR(2Mbps)

Channel Separation-FS

2.44G/2.441GHz

03/04/2024

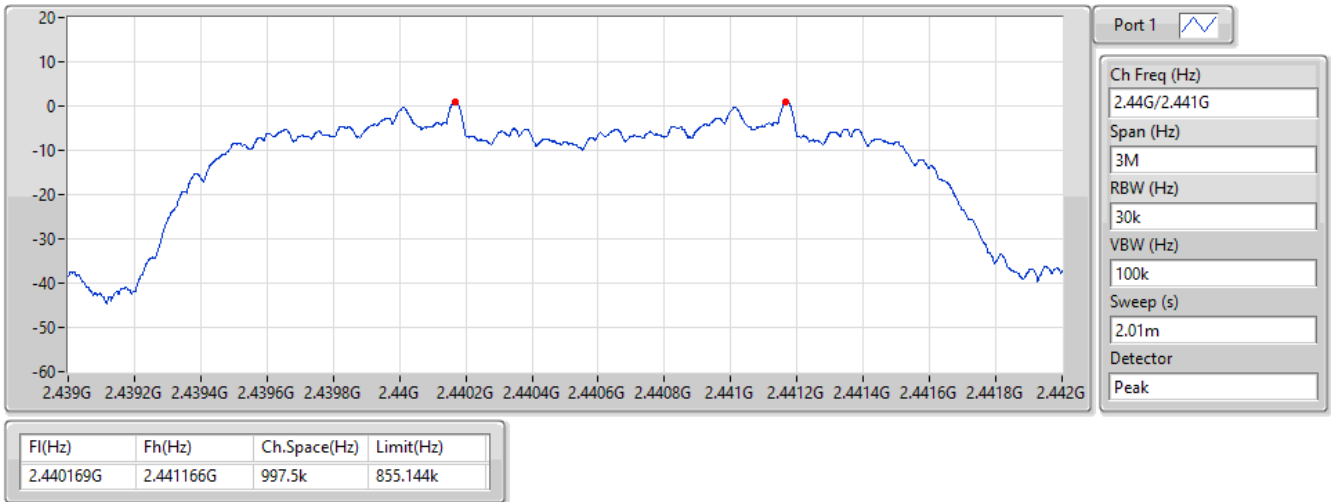


2.4-2.4835GHz_BT-EDR(3Mbps)

Channel Separation-FS

2.44G/2.441GHz

03/04/2024





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.61	0.00577
BT-EDR(2Mbps)	5.79	0.00379
BT-EDR(3Mbps)	5.98	0.00396

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.19	5.34	21.00
2440MHz	Pass	2.19	6.92	21.00
2480MHz	Pass	2.19	7.61	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.19	4.32	21.00
2440MHz	Pass	2.19	5.28	21.00
2480MHz	Pass	2.19	5.79	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.19	4.51	21.00
2440MHz	Pass	2.19	5.54	21.00
2480MHz	Pass	2.19	5.98	21.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.39	0.00548
BT-EDR(2Mbps)	3.38	0.00218
BT-EDR(3Mbps)	3.48	0.00223



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.19	5.01	21.00
2440MHz	Pass	2.19	6.70	21.00
2480MHz	Pass	2.19	7.39	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.19	1.92	21.00
2440MHz	Pass	2.19	2.86	21.00
2480MHz	Pass	2.19	3.38	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.19	1.86	21.00
2440MHz	Pass	2.19	3.01	21.00
2480MHz	Pass	2.19	3.48	21.00

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



Summary

Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

Result

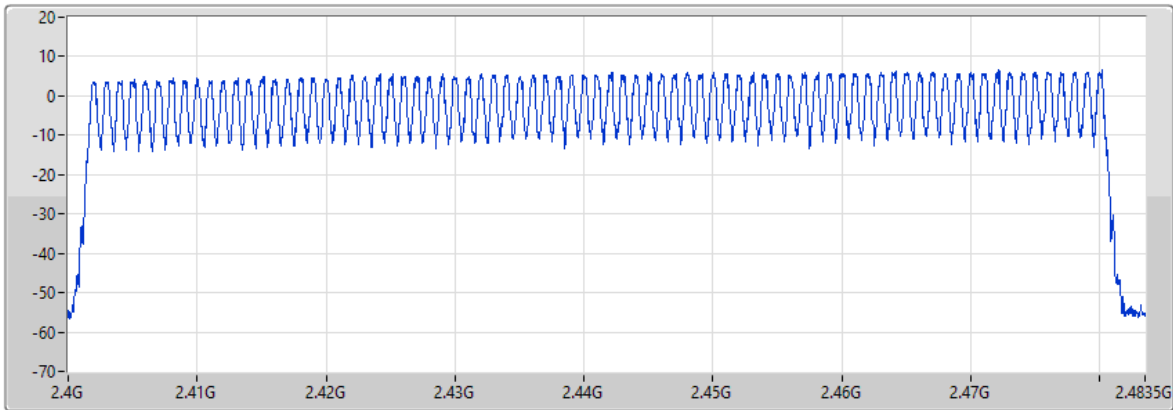
Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2440MHz	Pass	79	15

2.4-2.4835GHz_BT-BR(1Mbps)

Hopping-FS

2440MHz

03/04/2024



Port 1 

Hopping No
79

Span (Hz)
83.5M

RBW (Hz)
100k

VBW (Hz)
300kHz

Sweep (s)
8.01ms

Detector
Peak

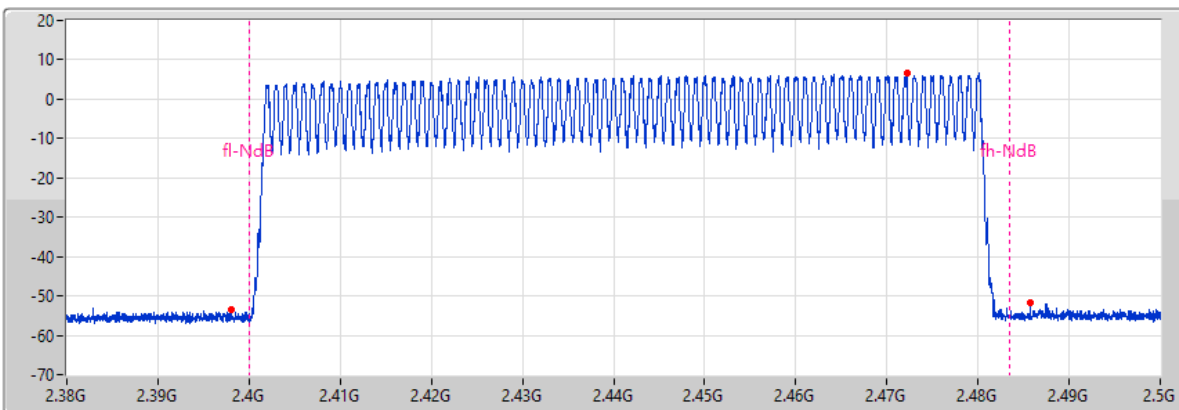
Hopping No	Limit
79	15

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

03/04/2024



Port 1 

Span (Hz)
120M

RBW (Hz)
100k

VBW (Hz)
300k

Sweep (s)
8.01m

Detector
Peak

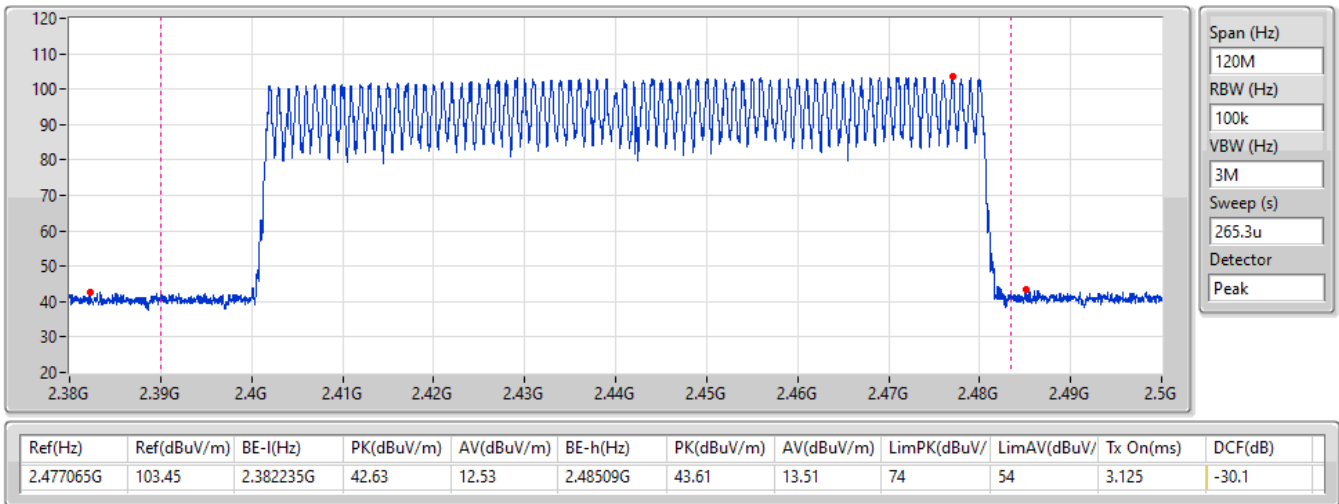
Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-13.36	2.472175G	6.64	2.39806G	-53.64	2.485765G	-51.81

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

03/04/2024

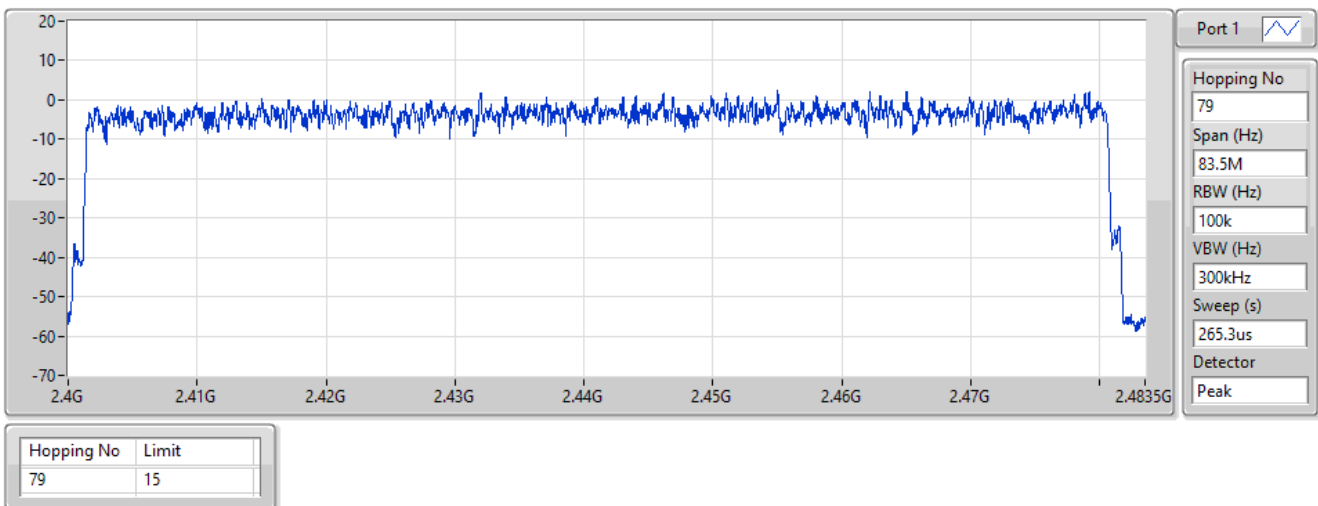


2.4-2.4835GHz_BT-EDR(2Mbps)

2440MHz

Hopping-FS

03/04/2024

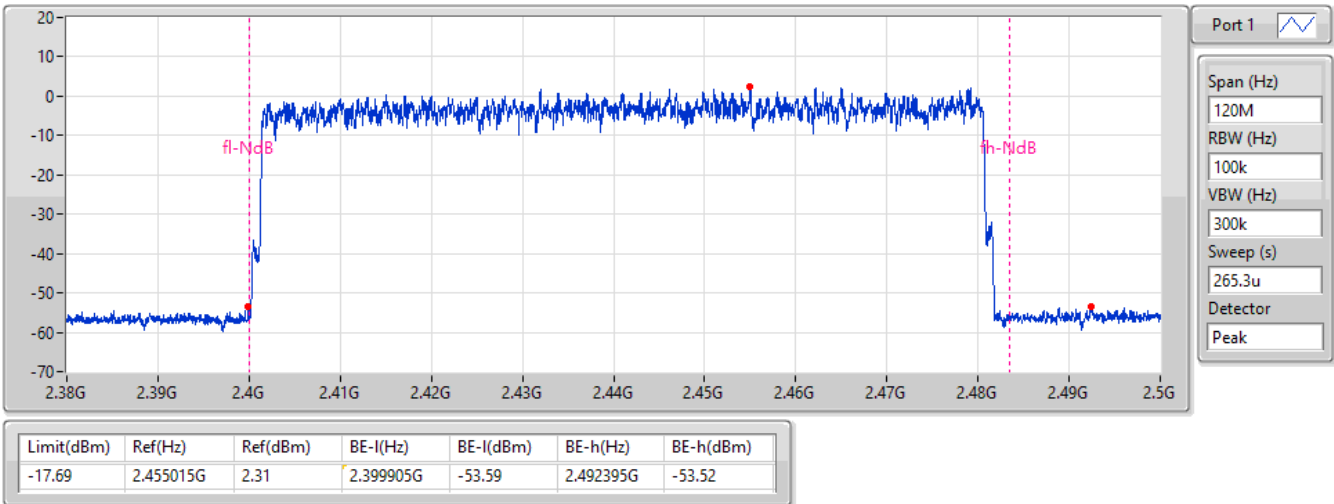


2.4-2.4835GHz_BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

03/04/2024

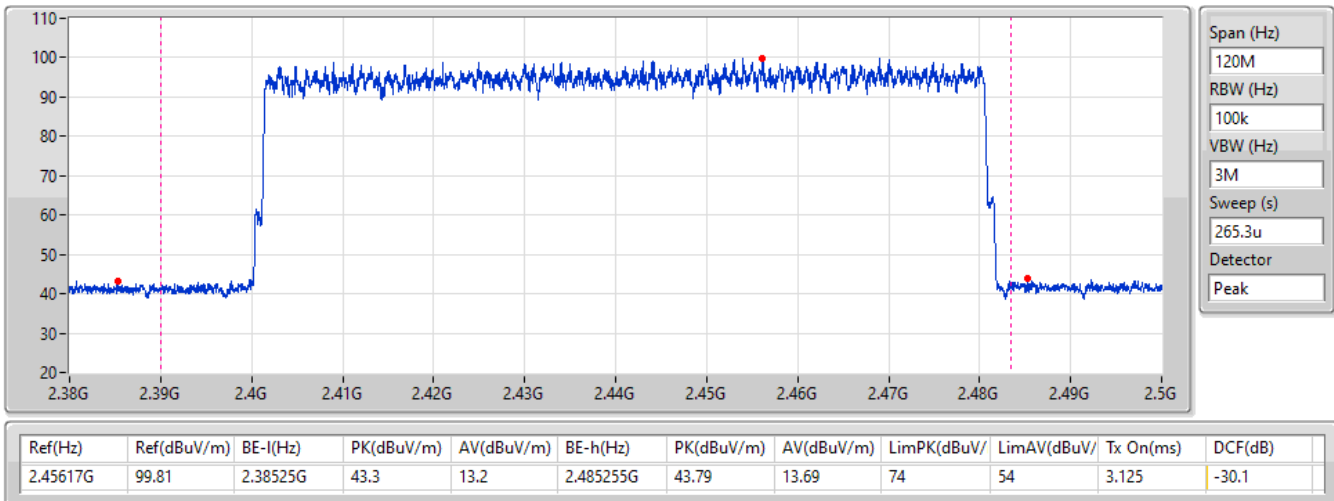


2.4-2.4835GHz_BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

03/04/2024

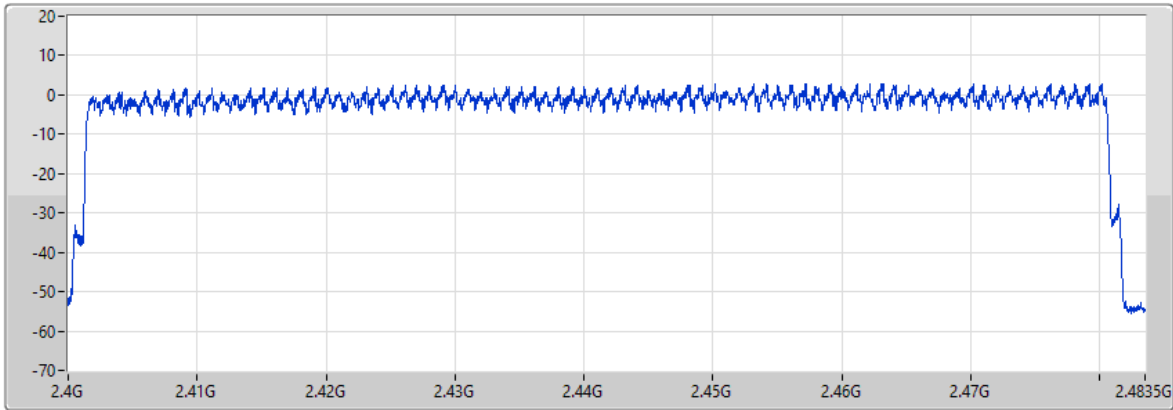


2.4-2.4835GHz_BT-EDR(3Mbps)

Hopping-FS

2440MHz

03/04/2024



Port 1 

Hopping No
79

Span (Hz)
83.5M

RBW (Hz)
100k

VBW (Hz)
300kHz

Sweep (s)
8.01ms

Detector
Peak

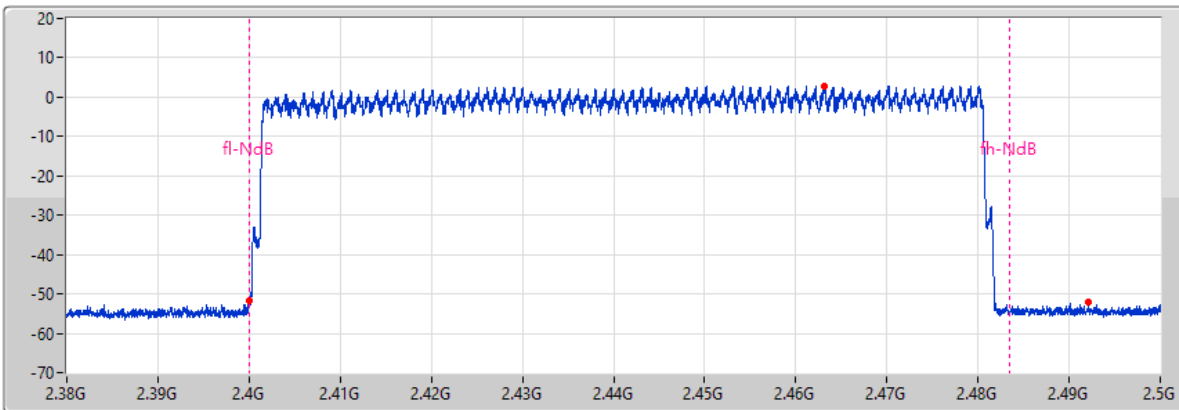
Hopping No	Limit
79	15

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

03/04/2024



Port 1 

Span (Hz)
120M

RBW (Hz)
100k

VBW (Hz)
300k

Sweep (s)
8.01m

Detector
Peak

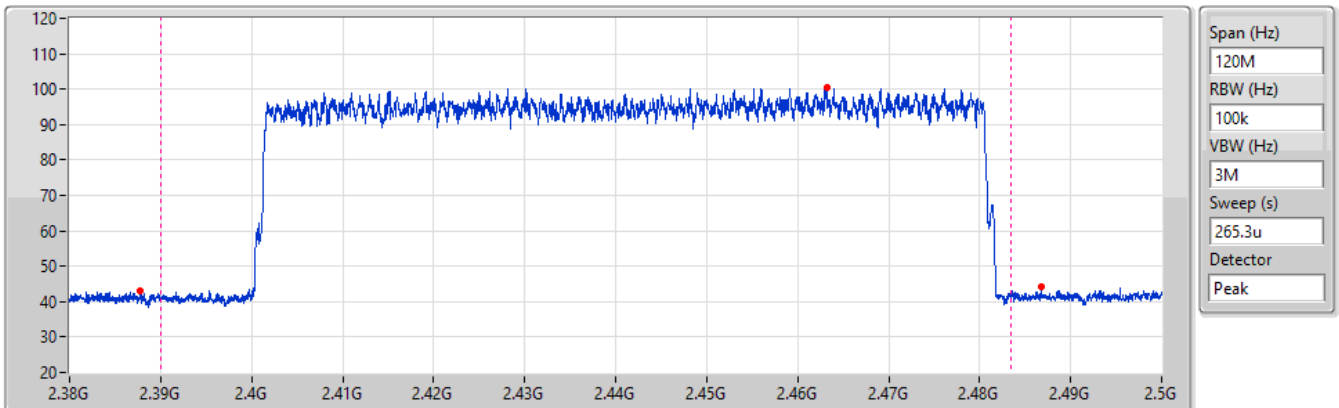
Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-17.12	2.463175G	2.88	2.39995G	-51.62	2.49211G	-52.14

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

03/04/2024



Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.463175G	100.34	2.387815G	43.09	12.99	2.486815G	44.05	13.95	74	54	3.125	-30.1



Summary

Mode	
2.4-2.4835GHz	-
BT-BR(1Mbps)	309.21995m_DH5
BT-EDR(2Mbps)	309.3532m_DH5
BT-EDR(3Mbps)	309.53975m_DH5

Result

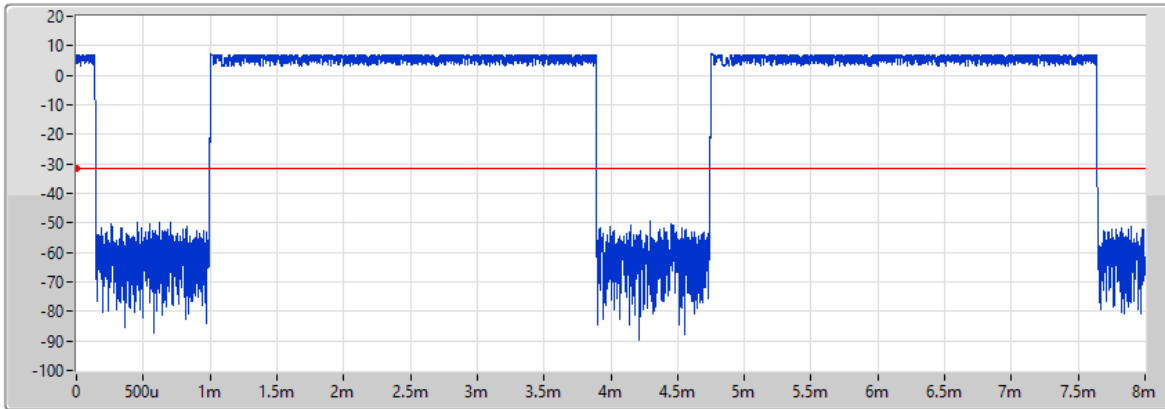
Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	309.21995m_DH5	400m	2.90075m
2440MHz	Pass	8	154.59665m_DH5-AFH	400m	2.9005m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	309.3532m_DH5	400m	2.902m
2440MHz	Pass	8	154.70325m_DH5-AFH	400m	2.9025m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	309.53975m_DH5	400m	2.90375m
2440MHz	Pass	8	154.769875m_DH5-AFH	400m	2.90375m

2.4-2.4835GHz_BT-BR(1Mbps)

Dwell-FS

2440MHz

03/04/2024



Port 1 

Ch Freq (Hz)
2.44G

RBW (Hz)
300k

VBW (Hz)
1M

Sweep Time (s)
8m

TX Time (s)
2.90075m

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	309.21995m_DH5	400m	2.90075m

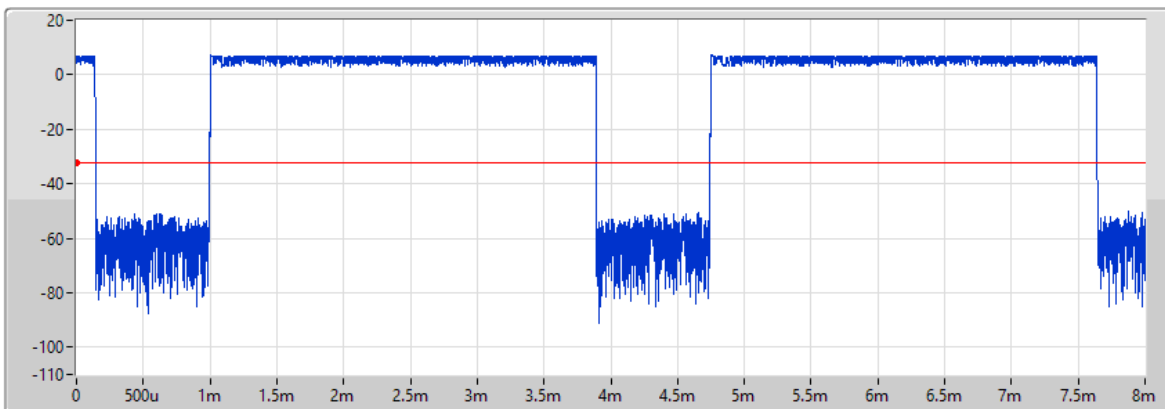
DH5

2.4-2.4835GHz_BT-BR(1Mbps)

Dwell-FS

2440MHz

03/04/2024



Port 1 

Ch Freq (Hz)
2.44G

RBW (Hz)
300k

VBW (Hz)
1M

Sweep Time (s)
8m

TX Time (s)
2.9005m

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.59665m_DH5-AFH	400m	2.9005m

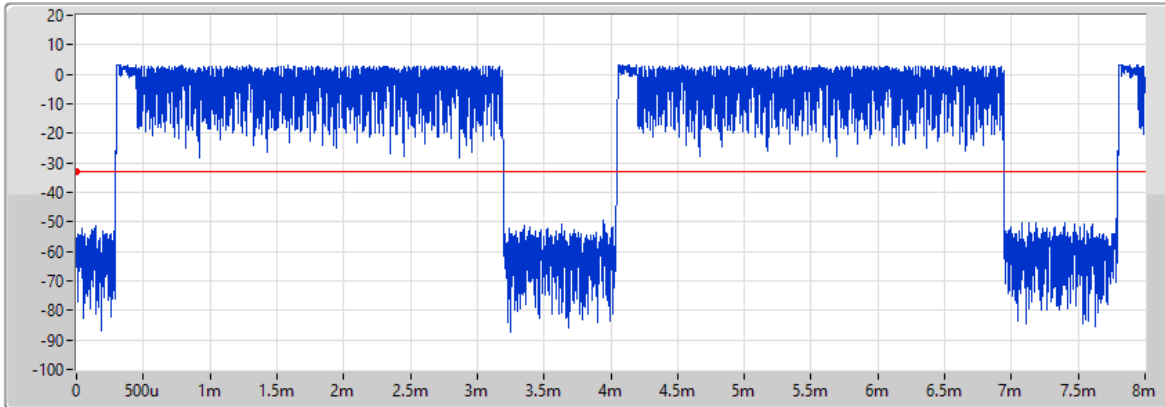
DH5-AFH

2.4-2.4835GHz_BT-EDR(2Mbps)

Dwell-FS

2440MHz

03/04/2024



DH5

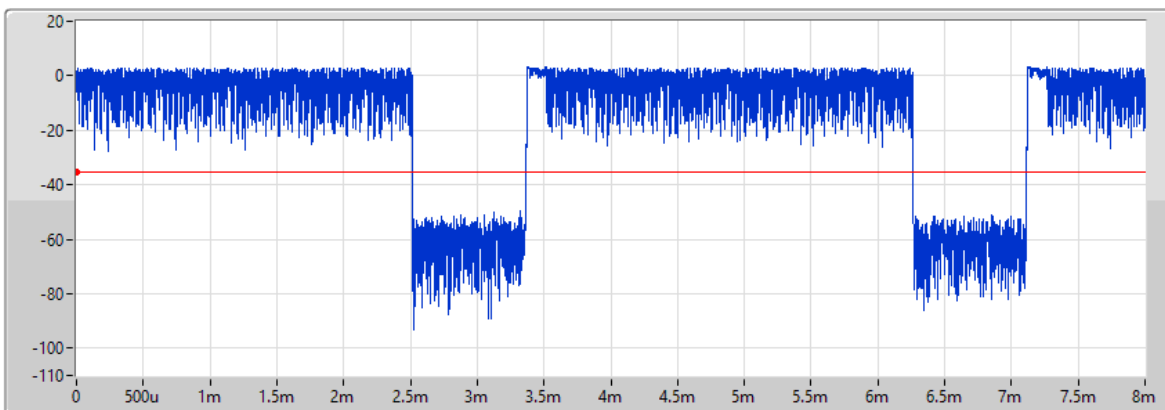
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	309.3532m_DH5	400m	2.902m

2.4-2.4835GHz_BT-EDR(2Mbps)

Dwell-FS

2440MHz

03/04/2024



DH5-AFH

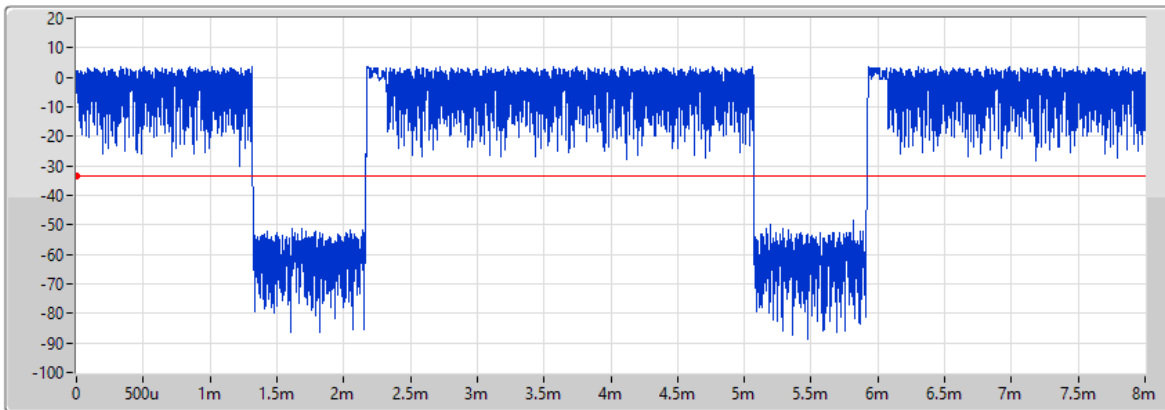
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.70325m_DH5-AFH	400m	2.9025m

2.4-2.4835GHz_BT-EDR(3Mbps)

Dwell-FS

2440MHz

03/04/2024



Port 1 

Ch Freq (Hz)
2.44G

RBW (Hz)
300k

VBW (Hz)
1M

Sweep Time (s)
8m

TX Time (s)
2.90375m

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	309.53975m_DH5	400m	2.90375m

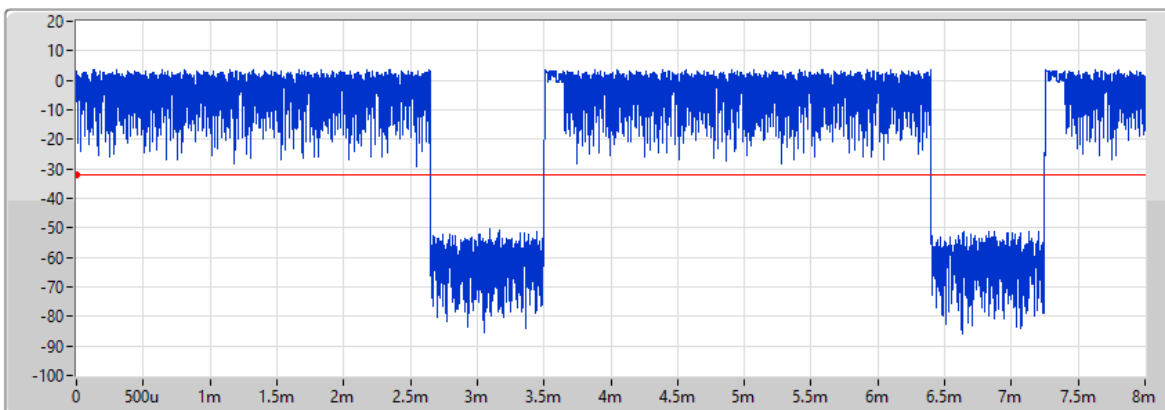
DH5

2.4-2.4835GHz_BT-EDR(3Mbps)

Dwell-FS

2440MHz

03/04/2024



Port 1 

Ch Freq (Hz)
2.44G

RBW (Hz)
300k

VBW (Hz)
1M

Sweep Time (s)
8m

TX Time (s)
2.90375m

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.769875m_DH5-AFH	400m	2.90375m

DH5-AFH



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-BR(1Mbps)	Pass	2.402G	3.68	-16.32	744.4M	-54.96	2.4G	-51.21	2.4G	-49.25	2.5007G	-53.48	15.23089G	-41.52	1
BT-EDR(2Mbps)	Pass	2.402G	0.83	-19.17	2.30245G	-55.34	2.39956G	-51.03	2.4G	-53.40	2.50226G	-53.06	17.60709G	-41.55	1
BT-EDR(3Mbps)	Pass	2.402G	1.09	-18.91	1.9429G	-55.24	2.39968G	-51.04	2.4G	-51.46	2.50138G	-52.56	16.25167G	-40.49	1

Result

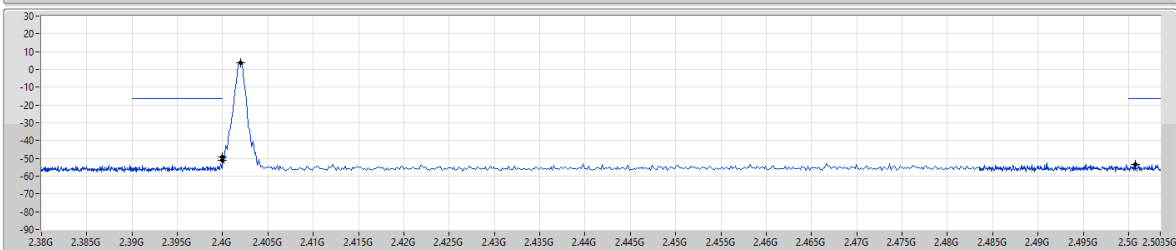
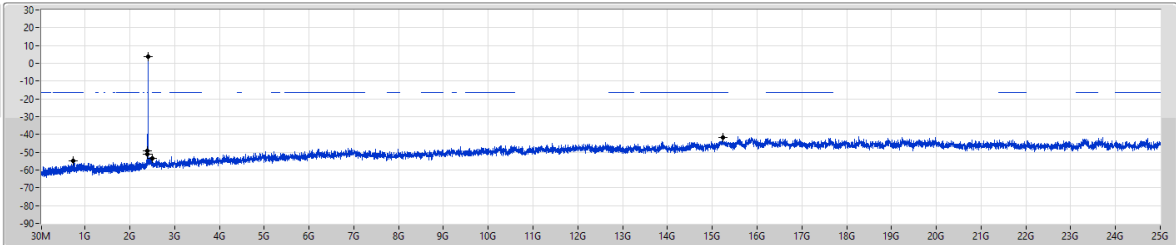
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	3.68	-16.32	744.4M	-54.96	2.4G	-51.21	2.4G	-49.25	2.5007G	-53.48	15.23089G	-41.52	1
2440MHz	Pass	2.44025G	5.90	-14.10	1.81718G	-55.26	2.3912G	-53.27	2.4G	-54.82	2.5019G	-53.56	16.24043G	-41.97	1
2480MHz	Pass	2.47999G	6.23	-13.77	938.28M	-55.73	2.3904G	-53.78	2.4G	-56.33	2.50238G	-53.08	15.26464G	-41.45	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	0.83	-19.17	2.30245G	-55.34	2.39956G	-51.03	2.4G	-53.40	2.50226G	-53.06	17.60709G	-41.55	1
2440MHz	Pass	2.43991G	1.37	-18.63	2.1309G	-55.76	2.39308G	-53.50	2.4G	-55.85	2.50294G	-52.98	24.59506G	-41.24	1
2480MHz	Pass	2.48033G	2.47	-17.53	2.18848G	-55.40	2.39408G	-53.52	2.4G	-55.78	2.50034G	-53.63	23.39431G	-41.32	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	1.09	-18.91	1.9429G	-55.24	2.39968G	-51.04	2.4G	-51.46	2.50138G	-52.56	16.25167G	-40.49	1
2440MHz	Pass	2.44008G	1.27	-18.73	2.3001G	-54.98	2.39376G	-52.71	2.4G	-55.81	2.50226G	-53.58	16.2573G	-41.51	1
2480MHz	Pass	2.47916G	2.66	-17.34	2.1309G	-54.95	2.3928G	-53.47	2.4G	-55.55	2.50174G	-52.75	15.25339G	-40.88	1

2.4-2.4835GHz_BT-BR(1Mbps)

CSENbB-FS

2402MHz

03/04/2024

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

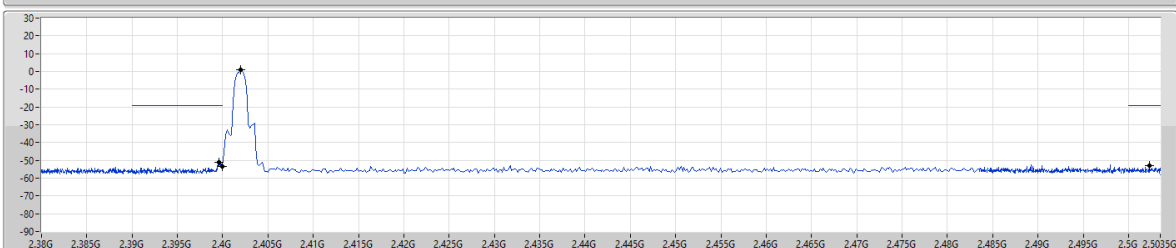
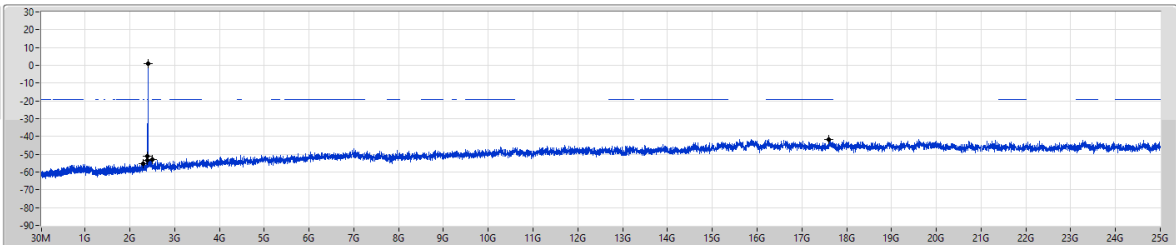
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	3.68	-16.32	744.4M	-54.96	2.4G	-51.21	2.4G	-49.25	2.5007G	-53.48	15.23089G	-41.52	1

2.4-2.4835GHz_BT-EDR(2Mbps)

CSENbB-FS

2402MHz

03/04/2024

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

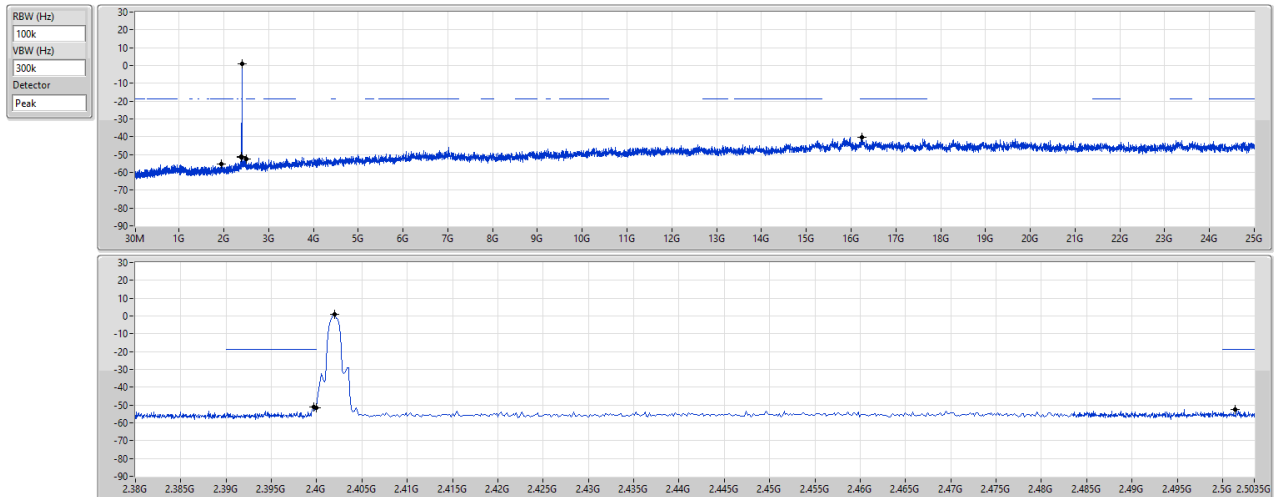
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	0.83	-19.17	2.30245G	-55.34	2.39958G	-51.03	2.4G	-53.40	2.50226G	-53.06	17.60709G	-41.55	1

2.4-2.4835GHz_BT-EDR(3Mbps)

CSEndB-FS

2402MHz

03/04/2024





Summary

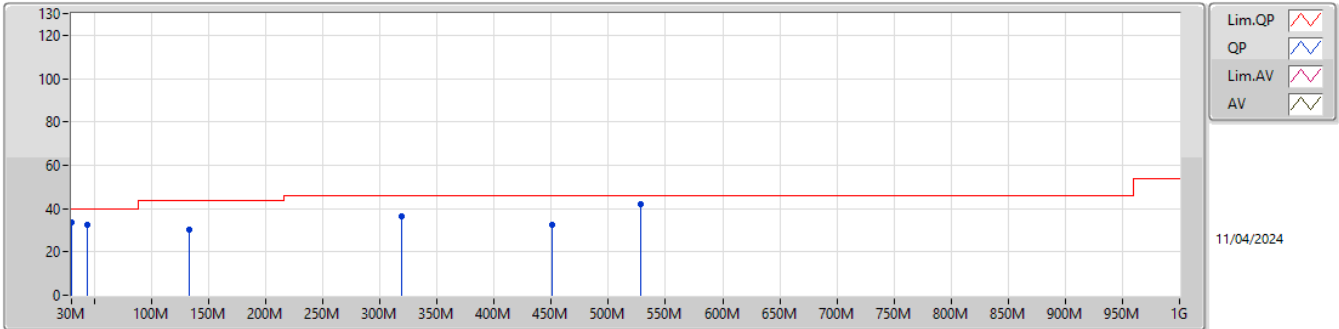
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	528.58M	42.50	46.00	-3.50	3	Horizontal	360	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	30M	33.86	40.00	-6.14	3	Vertical	0	1.00
2440MHz	Pass	PK	43.58M	32.34	40.00	-7.66	3	Vertical	0	1.00
2440MHz	Pass	PK	132.82M	30.14	43.50	-13.36	3	Vertical	0	1.00
2440MHz	Pass	PK	319.06M	36.47	46.00	-9.53	3	Vertical	0	1.00
2440MHz	Pass	PK	450.98M	32.48	46.00	-13.52	3	Vertical	0	1.00
2440MHz	Pass	PK	528.58M	41.90	46.00	-4.10	3	Vertical	0	1.00
2440MHz	Pass	PK	138.64M	31.31	43.50	-12.19	3	Horizontal	360	1.00
2440MHz	Pass	PK	313.24M	42.39	46.00	-3.61	3	Horizontal	360	1.00
2440MHz	Pass	PK	367.56M	37.85	46.00	-8.15	3	Horizontal	360	1.00
2440MHz	Pass	PK	450.98M	38.46	46.00	-7.54	3	Horizontal	360	1.00
2440MHz	Pass	PK	528.58M	42.50	46.00	-3.50	3	Horizontal	360	1.00
2440MHz	Pass	PK	792.42M	35.86	46.00	-10.14	3	Horizontal	360	1.00

2.4-2.4835GHz_BT-BR(1Mbps)

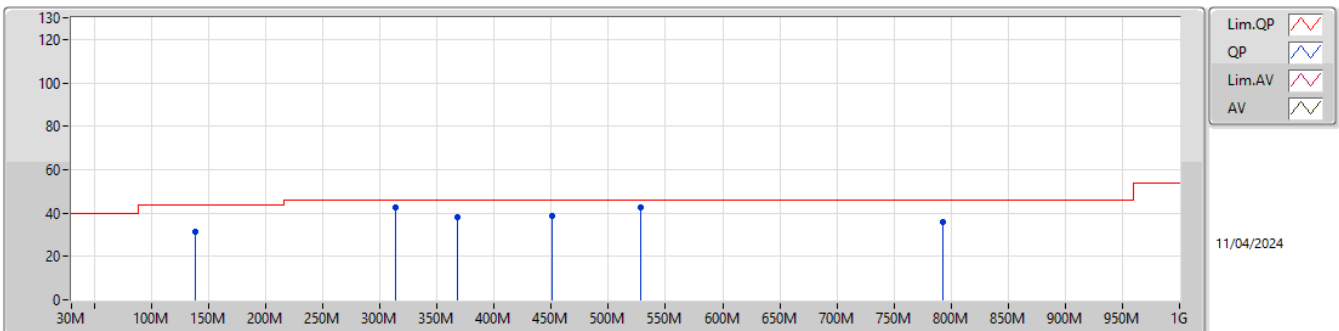
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	33.86	40.00	-6.14	-3.18	3	Vertical	0	1.00	37.04	23.49	0.92	27.59
PK	43.58M	32.34	40.00	-7.66	-10.32	3	Vertical	0	1.00	42.66	16.18	1.07	27.57
PK	132.82M	30.14	43.50	-13.36	-8.43	3	Vertical	0	1.00	38.57	16.99	1.90	27.32
PK	319.06M	36.47	46.00	-9.53	-5.29	3	Vertical	0	1.00	41.76	18.71	3.01	27.01
PK	450.98M	32.48	46.00	-13.52	-1.89	3	Vertical	0	1.00	34.37	22.29	3.62	27.80
PK	528.58M	41.90	46.00	-4.10	-0.80	3	Vertical	0	1.00	42.70	23.41	3.93	28.14

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	138.64M	31.31	43.50	-12.19	-8.65	3	Horizontal	360	1.00	39.96	16.71	1.94	27.30
PK	313.24M	42.39	46.00	-3.61	-5.36	3	Horizontal	360	1.00	47.75	18.65	2.98	26.99
PK	367.56M	37.85	46.00	-8.15	-3.94	3	Horizontal	360	1.00	41.79	20.02	3.24	27.20
PK	450.98M	38.46	46.00	-7.54	-1.89	3	Horizontal	360	1.00	40.35	22.29	3.62	27.80
PK	528.58M	42.50	46.00	-3.50	-0.80	3	Horizontal	360	1.00	43.30	23.41	3.93	28.14
PK	792.42M	35.86	46.00	-10.14	2.39	3	Horizontal	360	1.00	33.47	25.43	4.98	28.02



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-BR(1Mbps)	Pass	PK	2.4846G	62.24	74.00	-11.76	3	Vertical	307	1.17
BT-EDR(3Mbps)	Pass	PK	2.4838G	62.46	74.00	-11.54	3	Vertical	306	1.17

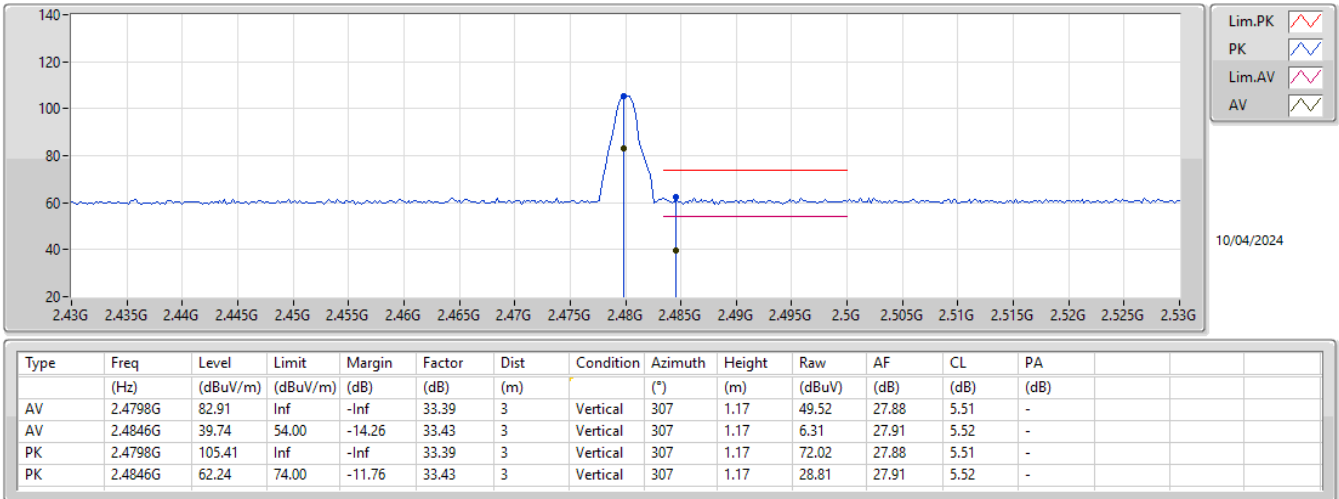
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3816G	38.61	54.00	-15.39	3	Vertical	306	1.84
2402MHz	Pass	AV	2.4018G	83.64	Inf	-Inf	3	Vertical	306	1.84
2402MHz	Pass	PK	2.3816G	61.11	74.00	-12.89	3	Vertical	306	1.84
2402MHz	Pass	PK	2.4018G	106.14	Inf	-Inf	3	Vertical	306	1.84
2402MHz	Pass	AV	2.371G	38.97	54.00	-15.03	3	Horizontal	6	1.15
2402MHz	Pass	AV	2.4018G	75.13	Inf	-Inf	3	Horizontal	6	1.15
2402MHz	Pass	PK	2.371G	61.47	74.00	-12.53	3	Horizontal	6	1.15
2402MHz	Pass	PK	2.4018G	97.63	Inf	-Inf	3	Horizontal	6	1.15
2402MHz	Pass	AV	4.80445G	30.97	54.00	-23.03	3	Vertical	262	2.26
2402MHz	Pass	PK	4.80445G	53.47	74.00	-20.53	3	Vertical	262	2.26
2402MHz	Pass	AV	4.80395G	25.93	54.00	-28.07	3	Horizontal	47	1.50
2402MHz	Pass	PK	4.80395G	48.43	74.00	-25.57	3	Horizontal	47	1.50
2440MHz	Pass	AV	2.3492G	38.76	54.00	-15.24	3	Vertical	295	2.30
2440MHz	Pass	AV	2.44G	84.46	Inf	-Inf	3	Vertical	295	2.30
2440MHz	Pass	AV	2.4844G	38.57	54.00	-15.43	3	Vertical	295	2.30
2440MHz	Pass	PK	2.3492G	61.26	74.00	-12.74	3	Vertical	295	2.30
2440MHz	Pass	PK	2.44G	106.96	Inf	-Inf	3	Vertical	295	2.30
2440MHz	Pass	PK	2.4844G	61.07	74.00	-12.93	3	Vertical	295	2.30
2440MHz	Pass	AV	2.3896G	38.94	54.00	-15.06	3	Horizontal	12	1.00
2440MHz	Pass	AV	2.44G	76.93	Inf	-Inf	3	Horizontal	12	1.00
2440MHz	Pass	AV	2.484G	38.97	54.00	-15.03	3	Horizontal	12	1.00
2440MHz	Pass	PK	2.3896G	61.44	74.00	-12.56	3	Horizontal	12	1.00
2440MHz	Pass	PK	2.44G	99.43	Inf	-Inf	3	Horizontal	12	1.00
2440MHz	Pass	PK	2.484G	61.47	74.00	-12.53	3	Horizontal	12	1.00
2440MHz	Pass	AV	4.87974G	29.05	54.00	-24.95	3	Vertical	287	1.01
2440MHz	Pass	AV	7.3196G	34.13	54.00	-19.87	3	Vertical	325	2.14
2440MHz	Pass	PK	4.87974G	51.55	74.00	-22.45	3	Vertical	287	1.01
2440MHz	Pass	PK	7.3196G	56.63	74.00	-17.37	3	Vertical	325	2.14
2440MHz	Pass	AV	4.88038G	28.32	54.00	-25.68	3	Horizontal	238	2.22
2440MHz	Pass	AV	7.31966G	31.24	54.00	-22.76	3	Horizontal	191	1.65
2440MHz	Pass	PK	4.88038G	50.82	74.00	-23.18	3	Horizontal	238	2.22
2440MHz	Pass	PK	7.31966G	53.74	74.00	-20.26	3	Horizontal	191	1.65
2480MHz	Pass	AV	2.4798G	82.91	Inf	-Inf	3	Vertical	307	1.17
2480MHz	Pass	AV	2.4846G	39.74	54.00	-14.26	3	Vertical	307	1.17
2480MHz	Pass	PK	2.4798G	105.41	Inf	-Inf	3	Vertical	307	1.17
2480MHz	Pass	PK	2.4846G	62.24	74.00	-11.76	3	Vertical	307	1.17
2480MHz	Pass	AV	2.4802G	74.66	Inf	-Inf	3	Horizontal	194	1.03
2480MHz	Pass	AV	2.4838G	39.41	54.00	-14.59	3	Horizontal	194	1.03
2480MHz	Pass	PK	2.4802G	97.16	Inf	-Inf	3	Horizontal	194	1.03
2480MHz	Pass	PK	2.4838G	61.91	74.00	-12.09	3	Horizontal	194	1.03
2480MHz	Pass	AV	4.96001G	29.51	54.00	-24.49	3	Vertical	283	1.10
2480MHz	Pass	AV	7.43945G	32.27	54.00	-21.73	3	Vertical	326	2.02
2480MHz	Pass	PK	4.96001G	52.01	74.00	-21.99	3	Vertical	283	1.10
2480MHz	Pass	PK	7.43945G	54.77	74.00	-19.23	3	Vertical	326	2.02
2480MHz	Pass	AV	4.96027G	27.46	54.00	-26.54	3	Horizontal	238	2.06
2480MHz	Pass	AV	7.44039G	30.96	54.00	-23.04	3	Horizontal	167	1.09
2480MHz	Pass	PK	4.96027G	49.96	74.00	-24.04	3	Horizontal	238	2.06
2480MHz	Pass	PK	7.44039G	53.46	74.00	-20.54	3	Horizontal	167	1.09
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3704G	38.84	54.00	-15.16	3	Vertical	303	1.85
2402MHz	Pass	AV	2.402G	81.47	Inf	-Inf	3	Vertical	303	1.85
2402MHz	Pass	PK	2.3704G	61.34	74.00	-12.66	3	Vertical	303	1.85
2402MHz	Pass	PK	2.402G	103.97	Inf	-Inf	3	Vertical	303	1.85
2402MHz	Pass	AV	2.3666G	39.29	54.00	-14.71	3	Horizontal	11	1.16
2402MHz	Pass	AV	2.402G	73.26	Inf	-Inf	3	Horizontal	11	1.16
2402MHz	Pass	PK	2.3666G	61.79	74.00	-12.21	3	Horizontal	11	1.16
2402MHz	Pass	PK	2.402G	95.76	Inf	-Inf	3	Horizontal	11	1.16
2402MHz	Pass	AV	4.80398G	25.40	54.00	-28.60	3	Vertical	301	1.00
2402MHz	Pass	PK	4.80398G	47.90	74.00	-26.10	3	Vertical	301	1.00
2402MHz	Pass	AV	4.80409G	24.85	54.00	-29.15	3	Horizontal	54	1.38

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2402MHz	Pass	PK	4.80409G	47.35	74.00	-26.65	3	Horizontal	54	1.38
2440MHz	Pass	AV	2.3428G	38.17	54.00	-15.83	3	Vertical	300	2.30
2440MHz	Pass	AV	2.44G	82.59	Inf	-Inf	3	Vertical	300	2.30
2440MHz	Pass	AV	2.486G	39.44	54.00	-14.56	3	Vertical	300	2.30
2440MHz	Pass	PK	2.3428G	60.67	74.00	-13.33	3	Vertical	300	2.30
2440MHz	Pass	PK	2.44G	105.09	Inf	-Inf	3	Vertical	300	2.30
2440MHz	Pass	PK	2.486G	61.94	74.00	-12.06	3	Vertical	300	2.30
2440MHz	Pass	AV	2.3428G	38.91	54.00	-15.09	3	Horizontal	6	1.00
2440MHz	Pass	AV	2.44G	73.99	Inf	-Inf	3	Horizontal	6	1.00
2440MHz	Pass	AV	2.4852G	39.43	54.00	-14.57	3	Horizontal	6	1.00
2440MHz	Pass	PK	2.3428G	61.41	74.00	-12.59	3	Horizontal	6	1.00
2440MHz	Pass	PK	2.44G	96.49	Inf	-Inf	3	Horizontal	6	1.00
2440MHz	Pass	PK	2.4852G	61.93	74.00	-12.07	3	Horizontal	6	1.00
2440MHz	Pass	AV	4.87982G	26.85	54.00	-27.15	3	Vertical	296	1.00
2440MHz	Pass	AV	7.31932G	31.02	54.00	-22.98	3	Vertical	335	2.01
2440MHz	Pass	PK	4.87982G	49.35	74.00	-24.65	3	Vertical	296	1.00
2440MHz	Pass	PK	7.31932G	53.52	74.00	-20.48	3	Vertical	335	2.01
2440MHz	Pass	AV	4.88011G	25.68	54.00	-28.32	3	Horizontal	237	2.19
2440MHz	Pass	AV	7.31901G	29.88	54.00	-24.12	3	Horizontal	38	1.50
2440MHz	Pass	PK	4.88011G	48.18	74.00	-25.82	3	Horizontal	237	2.19
2440MHz	Pass	PK	7.31901G	52.38	74.00	-21.62	3	Horizontal	38	1.50
2480MHz	Pass	AV	2.48G	80.77	Inf	-Inf	3	Vertical	306	1.17
2480MHz	Pass	AV	2.4838G	39.96	54.00	-14.04	3	Vertical	306	1.17
2480MHz	Pass	PK	2.48G	103.27	Inf	-Inf	3	Vertical	306	1.17
2480MHz	Pass	PK	2.4838G	62.46	74.00	-11.54	3	Vertical	306	1.17
2480MHz	Pass	AV	2.48G	72.36	Inf	-Inf	3	Horizontal	194	1.03
2480MHz	Pass	AV	2.4938G	39.32	54.00	-14.68	3	Horizontal	194	1.03
2480MHz	Pass	PK	2.48G	94.86	Inf	-Inf	3	Horizontal	194	1.03
2480MHz	Pass	PK	2.4938G	61.82	74.00	-12.18	3	Horizontal	194	1.03
2480MHz	Pass	AV	4.96042G	26.65	54.00	-27.35	3	Vertical	278	1.00
2480MHz	Pass	AV	7.43921G	30.37	54.00	-23.63	3	Vertical	321	2.00
2480MHz	Pass	PK	4.96042G	49.15	74.00	-24.85	3	Vertical	278	1.00
2480MHz	Pass	PK	7.43921G	52.87	74.00	-21.13	3	Vertical	321	2.00
2480MHz	Pass	AV	4.95978G	24.84	54.00	-29.16	3	Horizontal	78	2.01
2480MHz	Pass	AV	7.4398G	29.50	54.00	-24.50	3	Horizontal	243	1.50
2480MHz	Pass	PK	4.95978G	47.34	74.00	-26.66	3	Horizontal	78	2.01
2480MHz	Pass	PK	7.4398G	52.00	74.00	-22.00	3	Horizontal	243	1.50

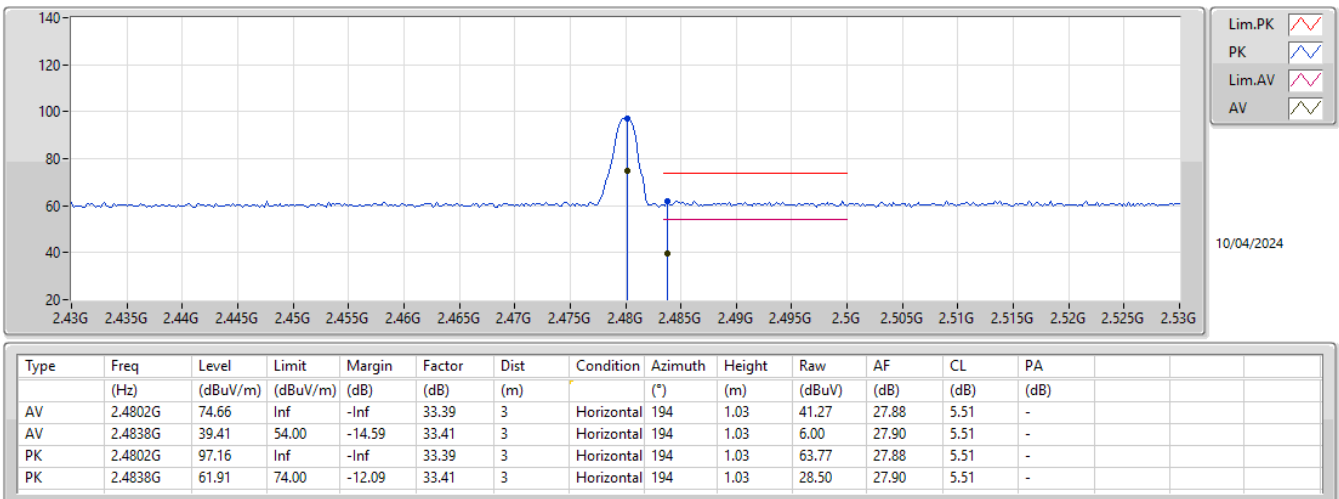
2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX



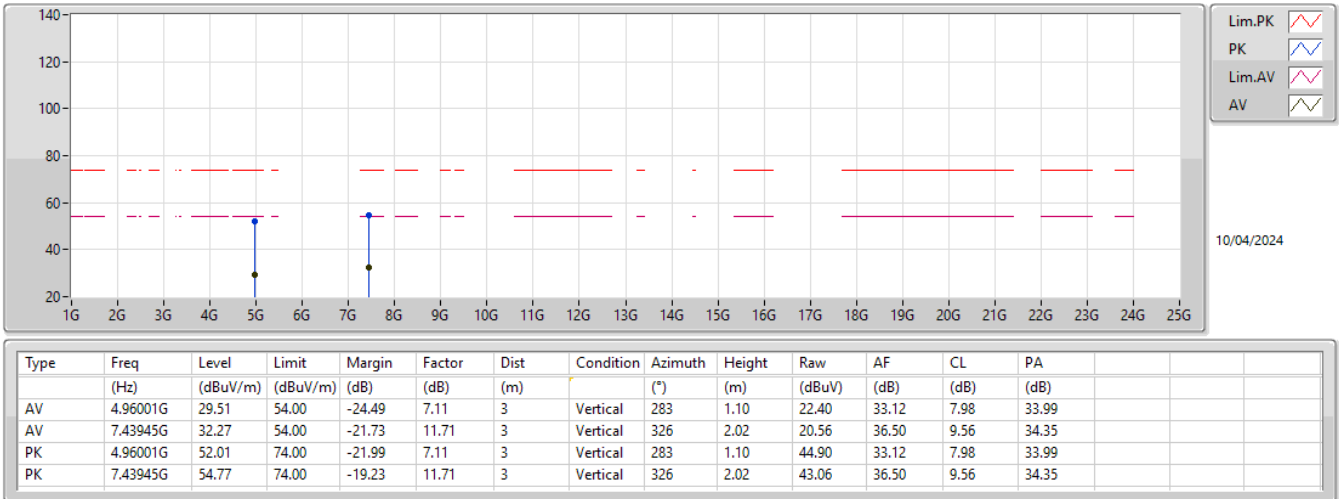
2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX



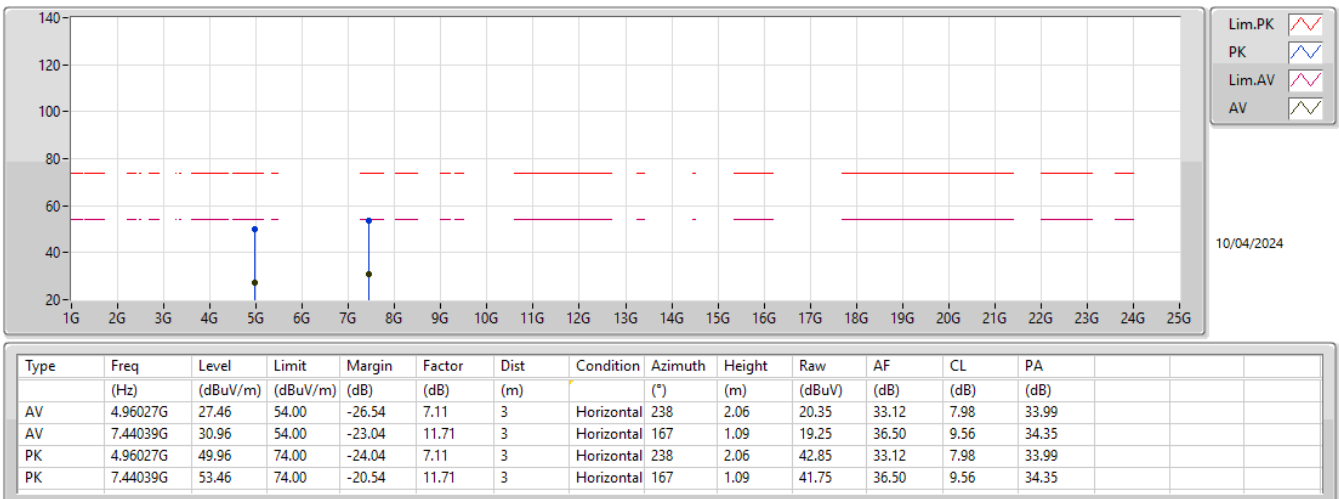
2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX



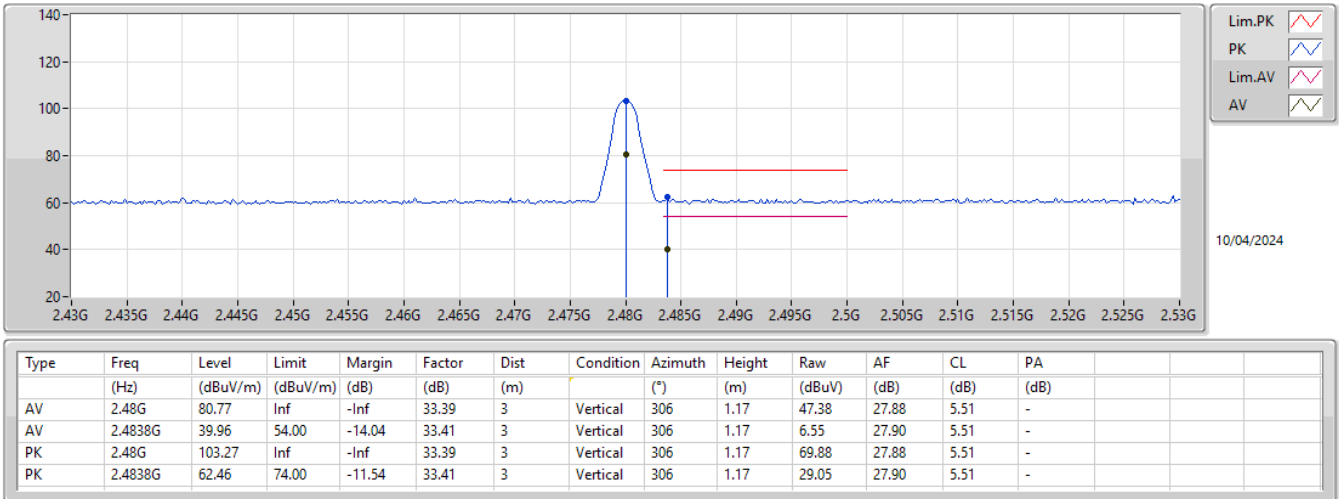
2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX



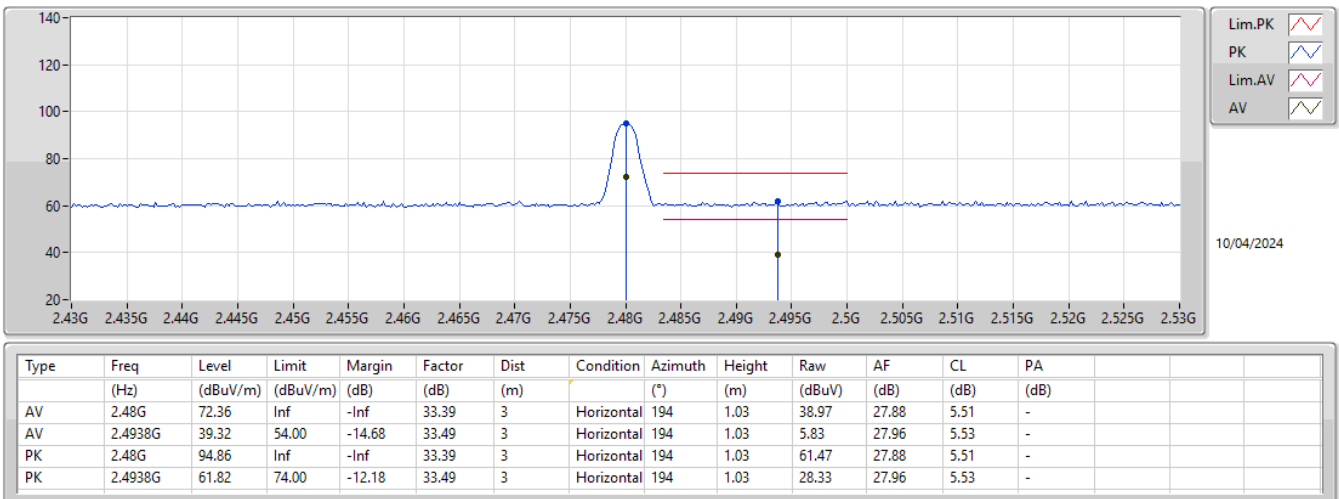
2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX



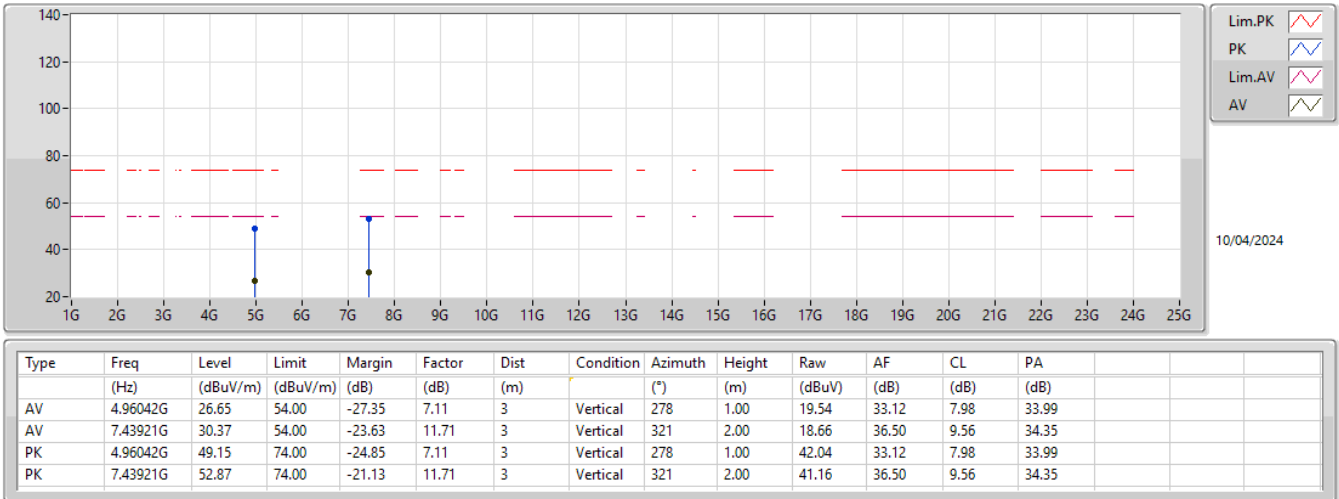
2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

