



시험 성적서

TEST REPORT

페이지(page) : (1) / 총(Total) (55)

성적서 번호 Report No.		ICRT-TR-E253848-0A	
신청자 Client	기관명 Name	LG Electronics Inc.	
	주 소 Address	222 LG-ro, Jinwi-myeon, Pyeongtaek-si, gyeonggi-do	
시험대상품목 Sample description		ThinQ ON	
모델명 Type description		HMAM5W	
정 격 Ratings		DC 5.0 V	
시험장소 Place of test		☒ 고정시험실(Permanent Testing Lab) ☐ 현장시험(On Site Testing) 주소지(Address): 112, 113 Hwanggeum 3-ro 7beon-gil, Hagun-ri, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea	
시험기간 Date of test		29. Sep. 2025 ~ 28. Nov. 2025	
시험방법/항목 Test Method/Item		FCC Part 15 Subpart C	
시험결과 Test Results		Refer to 3. Test Summary	
확 인 Affirmation	작성자 Tested by	기술책임자 Technical Manager	
	성명 Name Eun-Hye, Kwak (Signature)	성명 Name Min-Gi, Son (Signature)	

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☐ The above test report is certified that the above mentioned products have been tested for the sample.
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☐ The above test report is not related to accreditation by KS Q ISO/IEC 17025 and Korea Laboratory Accreditation scheme.
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2025. 11. 28

주식회사 아이씨알 대표이사

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The authenticity of the test report can be checked on the G4B or ICR website.

경기도 김포시 양촌읍 황금3로7번길 112 / Tel: 02-6351-9001 ~ 6

112, Hwanggeum3-ro 7beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea / Tel: 02-6351-9001 ~ 6



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Revision History

Issued Report No.	Issued Date	Revisions	Effect Section
ICRT-TR-E253848-0A	2025. 11. 28	Initial Issue	All



1. Applicant & Manufacturer & Test Laboratory Information

1.1 Applicant information

Applicant	LG Electronics Inc.
Address	222 LG-ro, Jinwi-myeon, Pyeongtaek-si, gyeonggi-do

1.2 Manufacturer Information

Applicant	EM-TECH
Address	No.12, Road 2, VSIP Nghe An Industrial Park, Hung Tay Commune, Hune Nguyen District, Nghe An Province, Vietnam

1.3 Test Laboratory Information

Laboratory	ICR Co., Ltd.
Address	112, Hwanggeum 3-ro 7beon-gil, Hagun-ri, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea
Telephone No.	+82-2-6351-9002
Fax No.	+82-2-6351-9007
KOLAS No.	KT652
KC & FCC	KR0165

1.4 Measurement Uncertainty

Parameter	Uncertainty	Limit
Occupied Channel Bandwidth	0.14%	±5 %
RF output power, conducted	0.85 dB	±1.5 dB
Power Spectral Density, conducted	1.44 dB	±3 dB
Unwanted Emissions, conducted	1.35 dB	±3 dB
Supply voltages	0.02%	±3 %
Time	0.58%	±5 %
All emissions, radiated (Under the 30 MHz)	2.10 dB	±6 dB
All emissions, radiated (Range 30 MHz ~ 1 GHz)	1.95 dB	±6 dB
All emissions, radiated (Range 1 GHz ~ 18 GHz)	2.47 dB	±6 dB
All emissions, radiated (Range 18 GHz ~ 26.5 GHz)	2.61 dB	±6 dB



2. Equipment under Test(EUT) Information

2.1 General Information

Product Name	ThinQ ON
Model Name	HMAM5W
Additional Model Name	-
FCC ID	2BO3L-HMAM5W
Power Supply	DC 5.0 V

2.2 Additional Information

Equipment Class	DSS - Frequency Hopping Spread Spectrum system	
Device Type	Stand-alone	
Operating Frequency	2 402 MHz ~ 2 480 MHz	
RF Output Power	Bluetooth BDR	2.15 dBm
	Bluetooth EDR(8DPSK)	5.16 dBm
Number of Channel	Bluetooth BDR	79
	Bluetooth EDR(8DPSK)	79
Modulation Type	GFSK	
Antenna Type	PCB Antenna	
Antenna Gain	3.3 dBi	

2.3 Modifications of EUT

- None



3. Test Summary

3.1 Test standards and results

FCC Part 15 Subpart C			
FCC Part Clause	Test items	Applied	Results
§15.247 (a)(1)	20 dB Bandwidth	■	PASS
§15.247 (a)(1)	Carrier Frequency Separation	■	PASS
§15.247 (a)(1)(iii)	Number of Hopping Frequencies	■	PASS
§15.247 (a)(1)(iii)	Time of Occupancy (dwell Time)	■	PASS
§15.247 (b)(1)	Maximum Conducted Output Power	■	PASS
§15.247 (d)	Conducted Spurious Emission & Band edge	■	PASS
§15.247 (d) & §15.209 & §15.205	Radiated Spurious Emission & Band edge	■	PASS
		■	PASS
§15.207	AC Conducted Emissions	■	PASS

3.2 Purpose of the test

-To determine whether the equipment under test fulfills the requirements of the standards stated in FCC Part 15 Subpart C Section 15.247

3.3 Test Methodology

- Both conducted and radiated testing was performed according to the procedures in ANSI C63.10-2020. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

3.4 Configuration of Test System

- Both conducted and radiated testing was performed according to the procedures in ANSI C63.10-2020. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

3.4.1 Radiated emission test

- Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10-2020 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 m Semi Anechoic Chamber.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.



3.5 Antenna requirement

- According to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section.

The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

And according to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi.

Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Result: Pass

The transmitter has a **PCB Antenna**. The directional gain of the antenna is **3.3 dBi**.



4. Test Result

4.1. 20 dB Bandwidth

4.1.1 Test procedure

ANSI C63.10-2020 Clause 6.9.2

4.1.2 Limit

§15.247 (a)(1)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

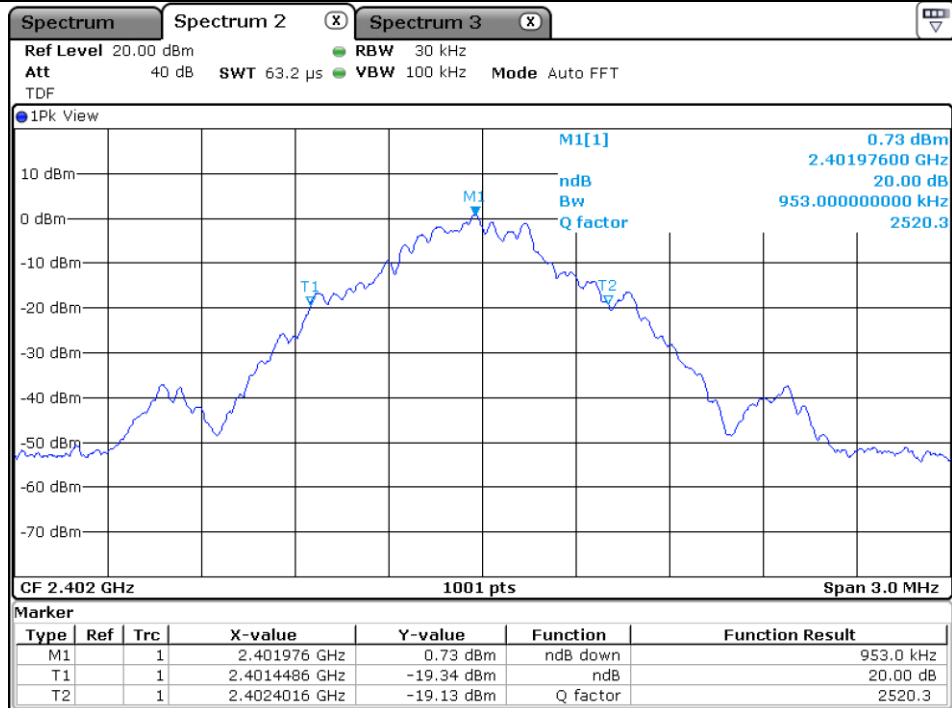
4.1.3 Test data

Result : Pass

Mode	Frequency (MHz)	Measured Value (kHz)
Bluetooth BDR	2 402	953.0
	2 441	953.0
	2 480	953.0
Bluetooth EDR	2 402	1 279.7
	2 441	1 279.7
	2 480	1 279.7

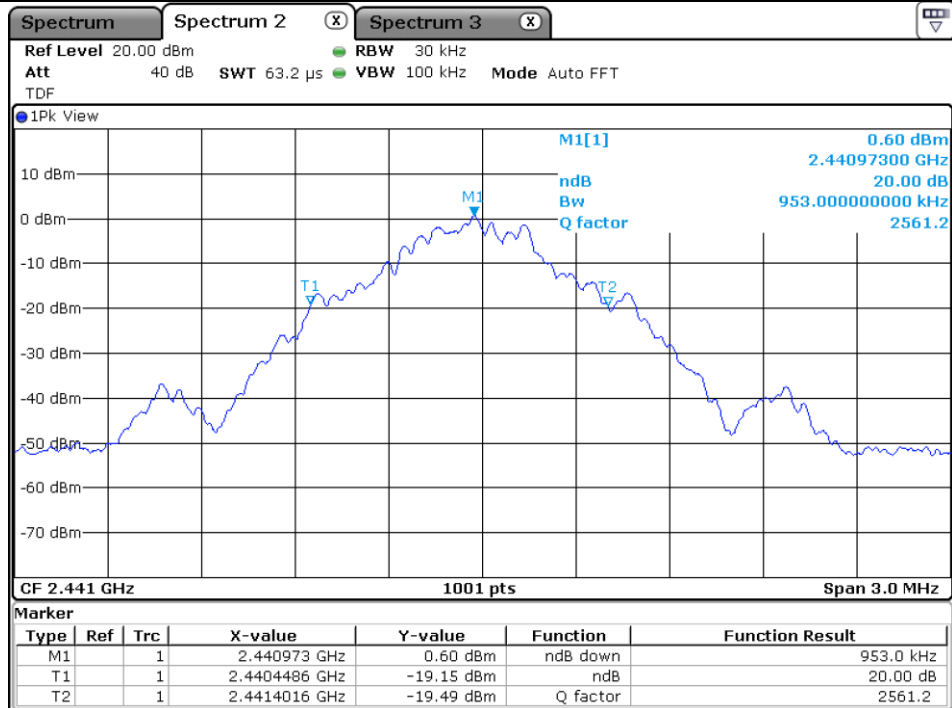


Bluetooth BDR Low ch_20 dB Bandwidth

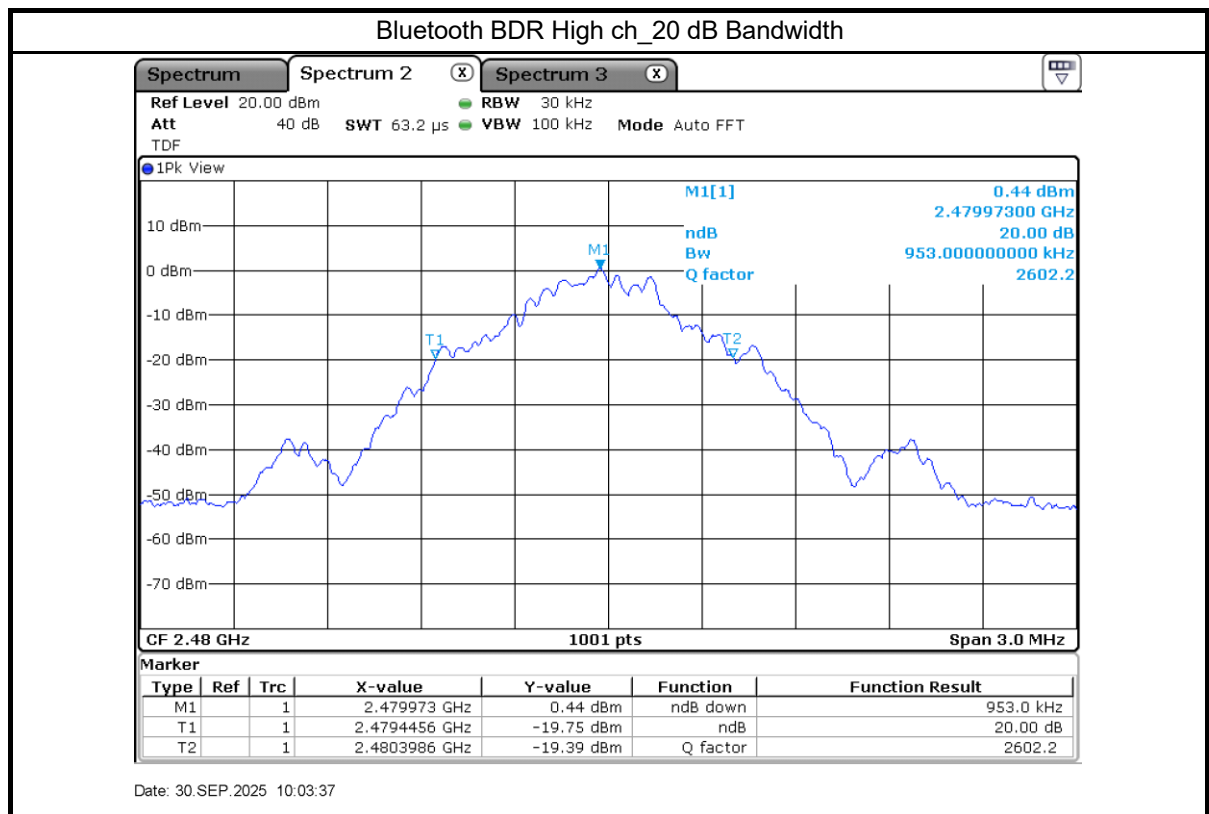


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Bluetooth BDR Mid ch_20 dB Bandwidth

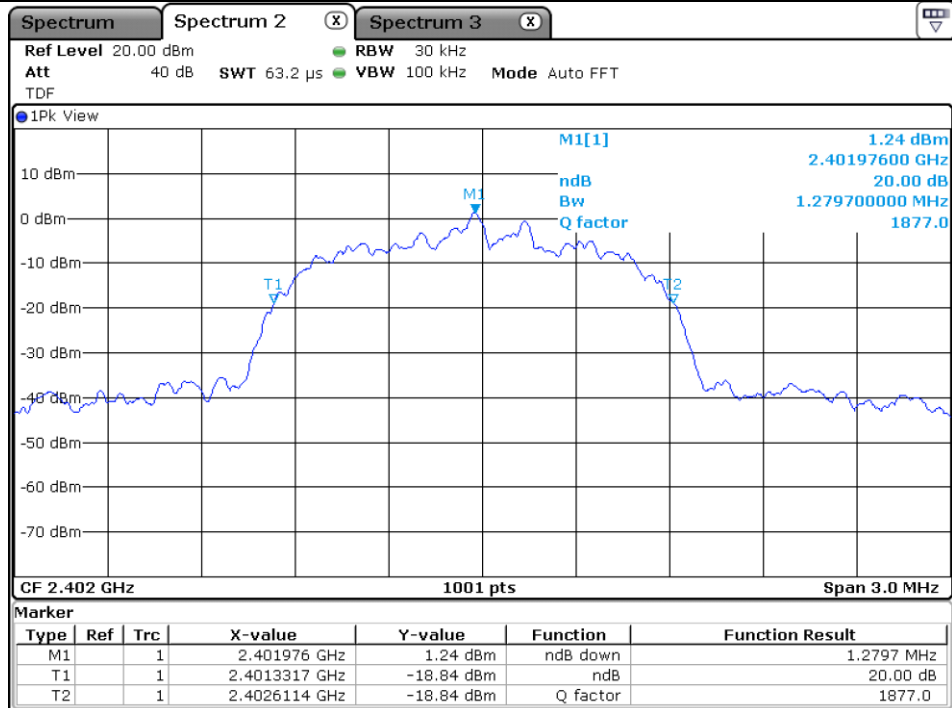


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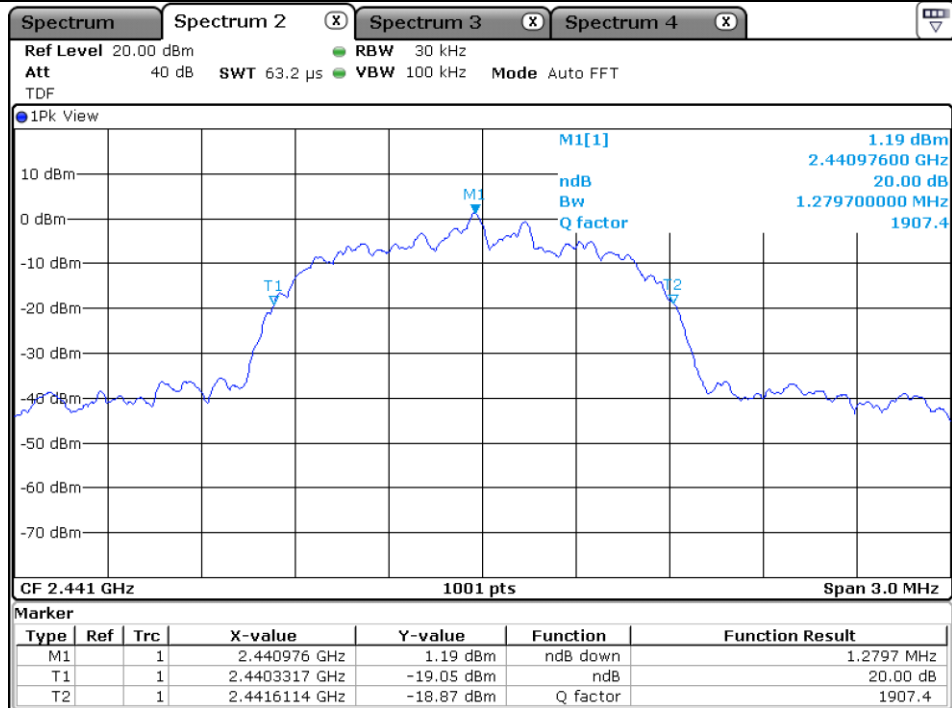


Bluetooth EDR Low ch_20 dB Bandwidth

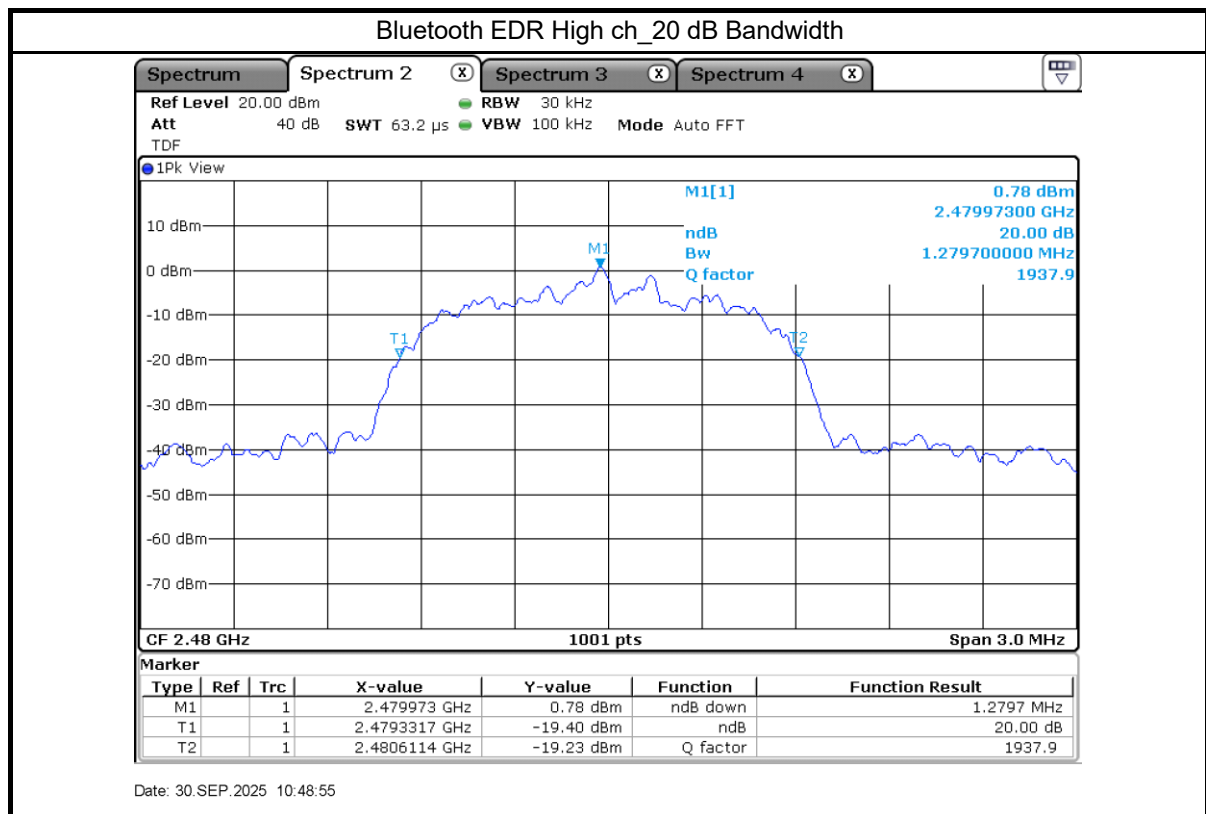


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Bluetooth EDR Mid ch_20 dB Bandwidth



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4.2 Carrier Frequency Separation

4.2.1 Test procedure

ANSI C63.10-2020 Clause 7.8.2

4.2.2 Limit

§15.247 (a)(1)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW

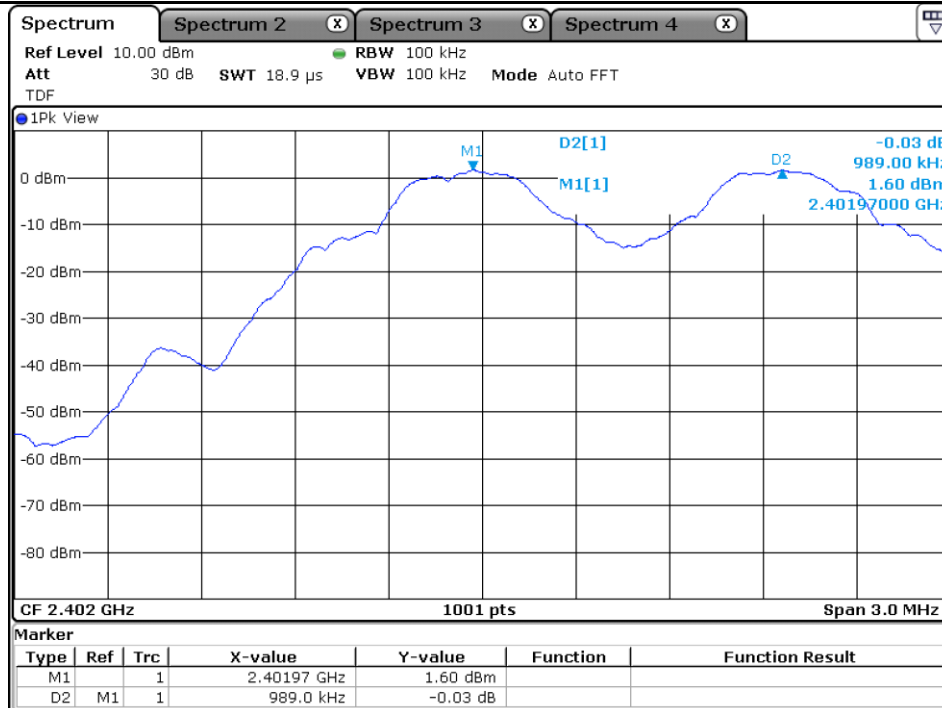
4.2.3 Test data

Result : Pass

Mode	Frequency (MHz)	Measured Value (kHz)	2/3 of the 20 dB bandwidth of the hopping channel (kHz)	Limit
Bluetooth BDR	2 402	989.0	635.33	2/3 of the 20 dB bandwidth of the hopping channel
	2 441	995.0	635.33	
	2 480	995.0	635.33	
Bluetooth EDR	2 402	1 013.0	852.67	
	2 441	1 026.0	852.67	
	2 480	1 009.0	852.67	

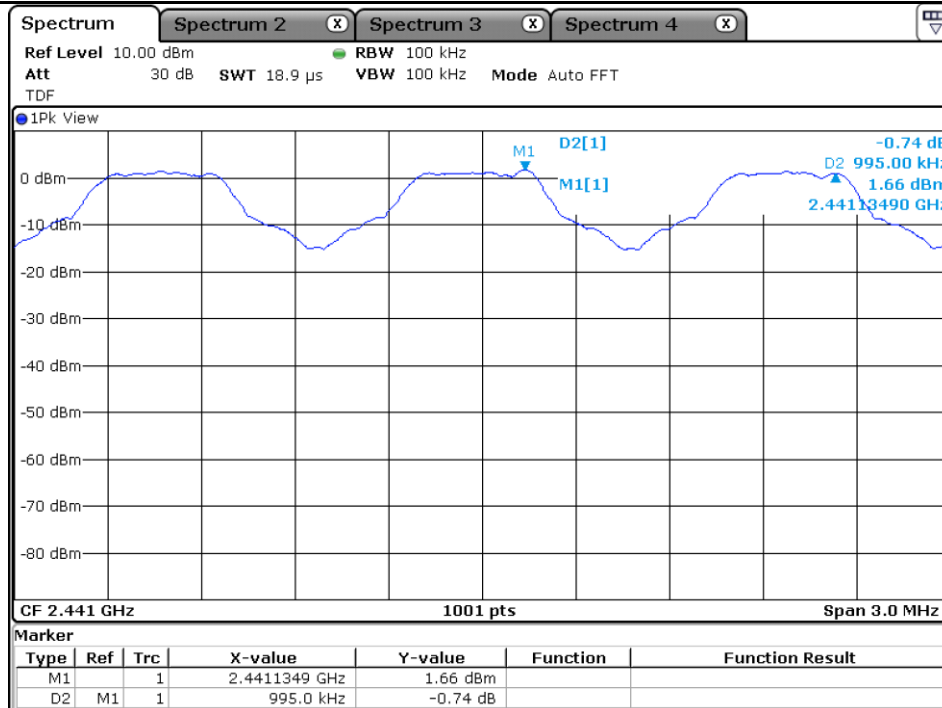


Bluetooth BDR Low ch_Carrier Frequency Separation

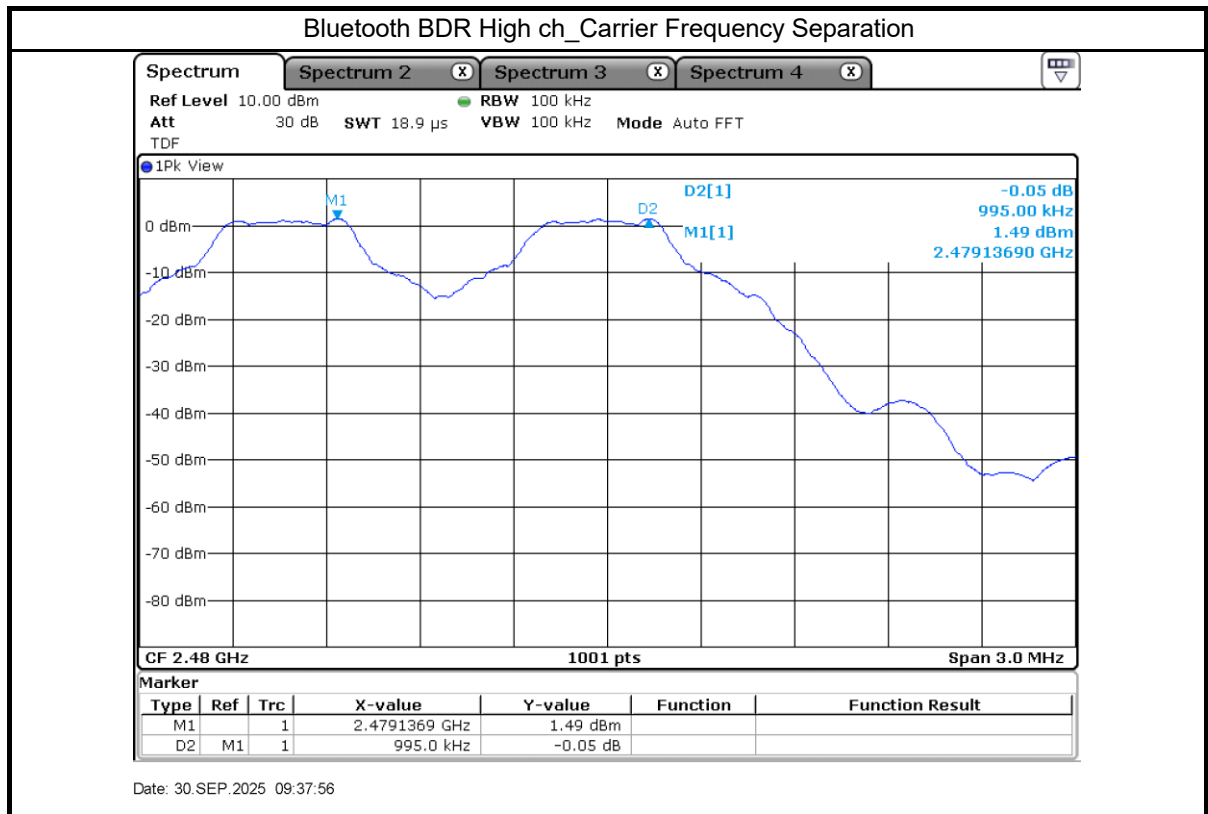


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Bluetooth BDR Mid ch_Carrier Frequency Separation

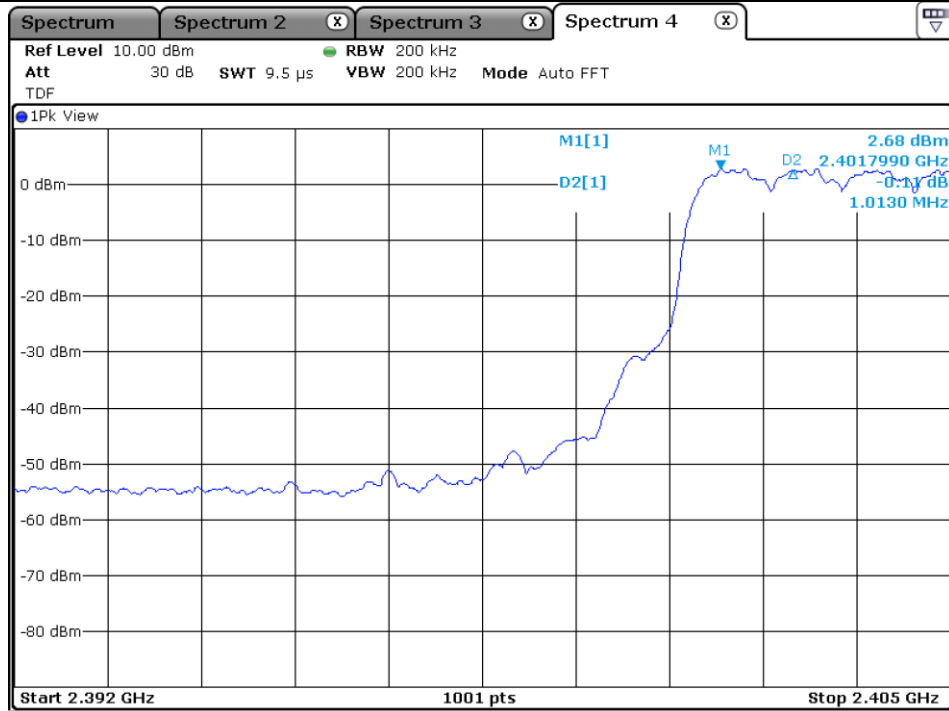


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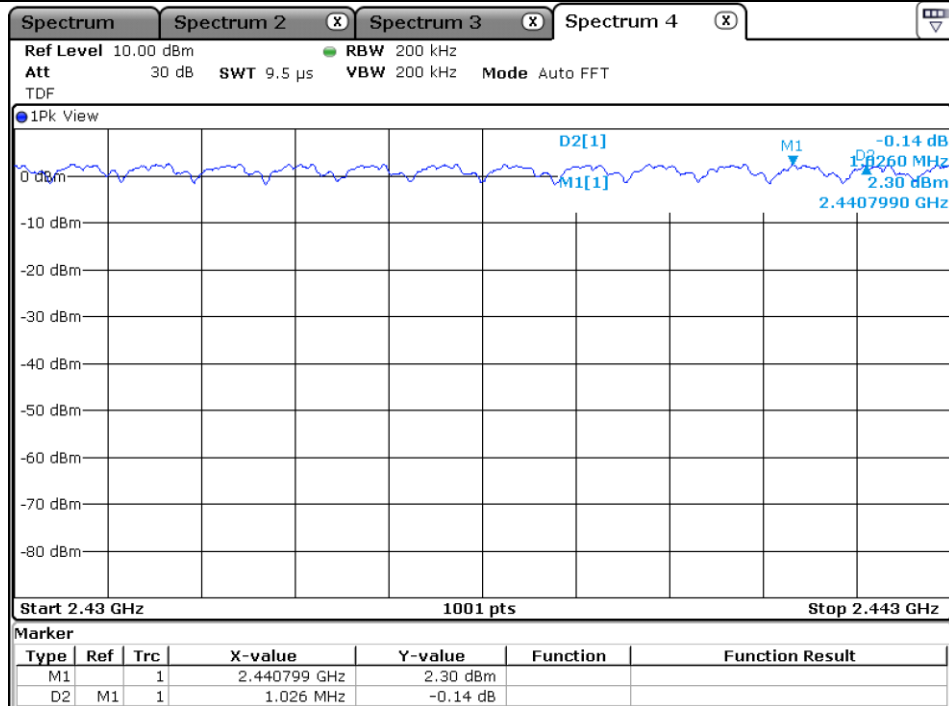


Bluetooth EDR Low ch_Carrier Frequency Separation

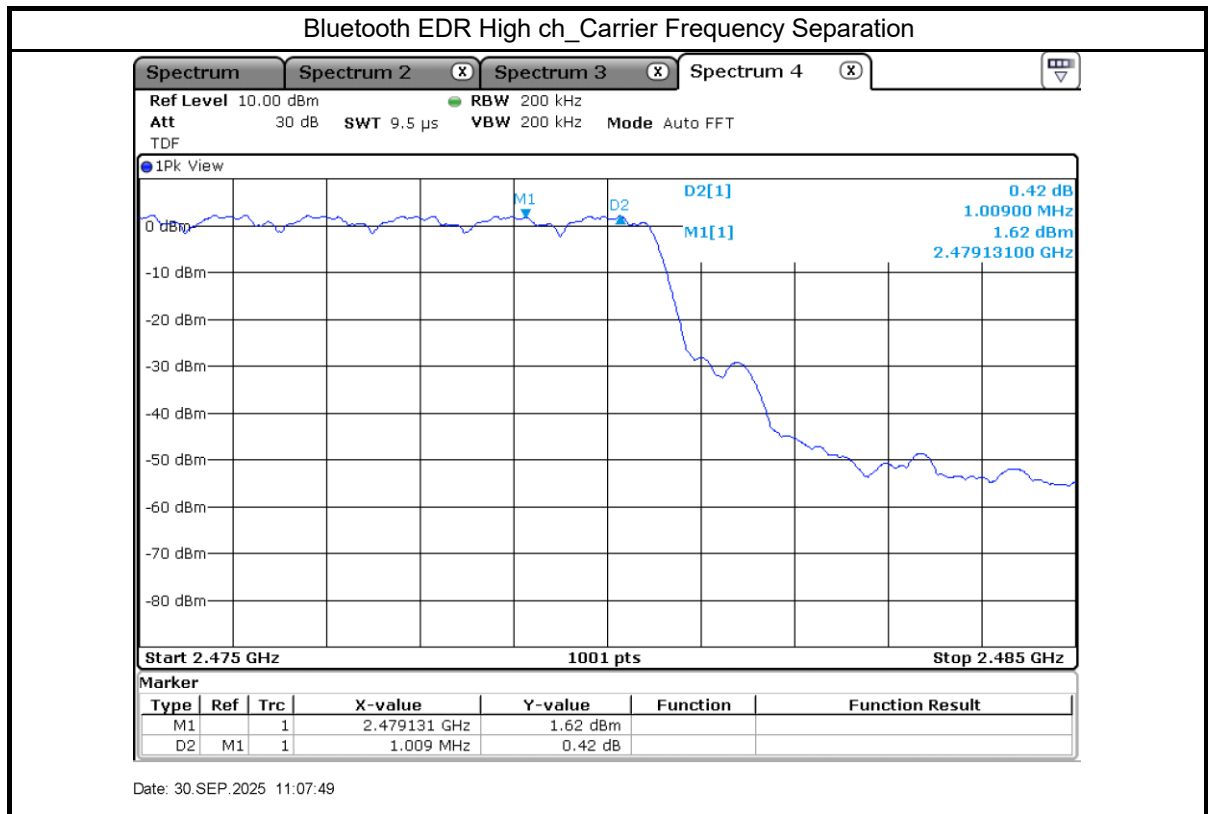


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Bluetooth EDR Mid ch_Carrier Frequency Separation



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4.3 Number of Hopping Frequency

4.3.1 Test procedure

ANSI C63.10-2020 Clause 7.8.3

4.3.2 Limit

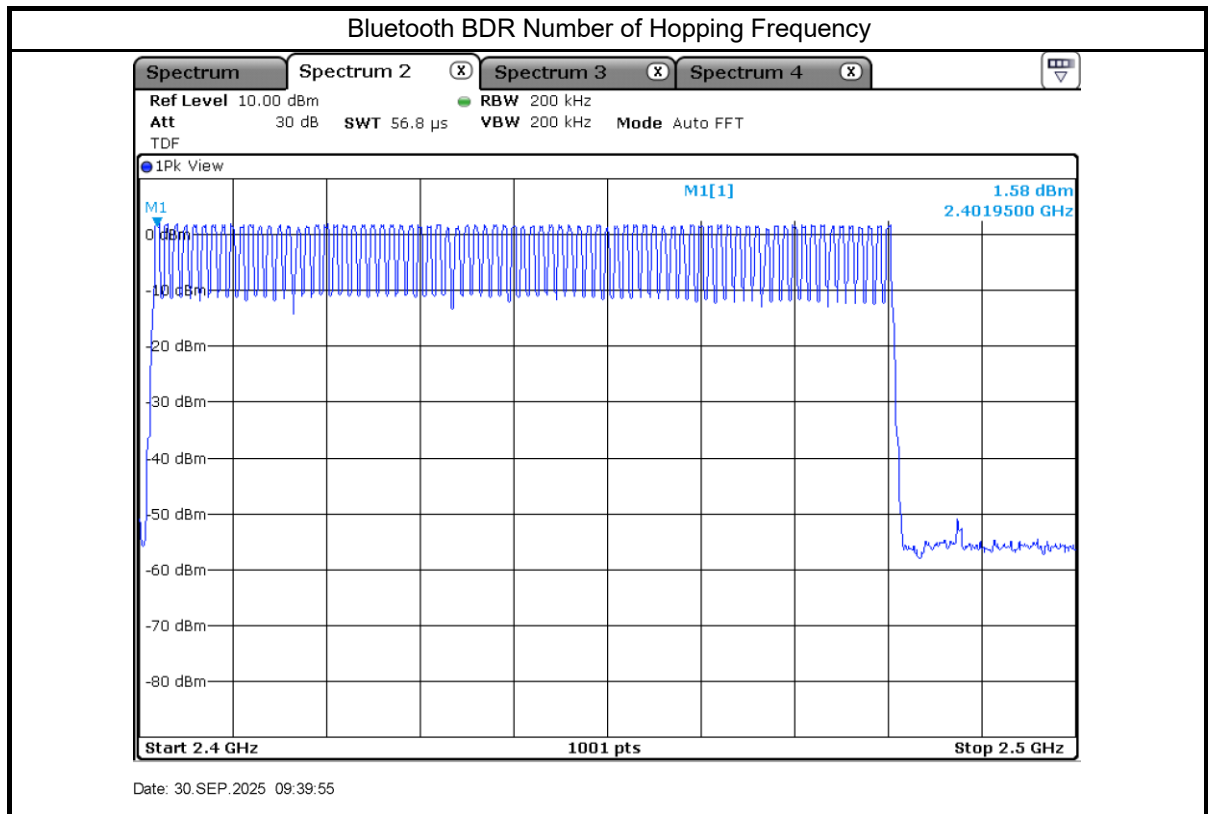
15.247 (a)(1)(iii)

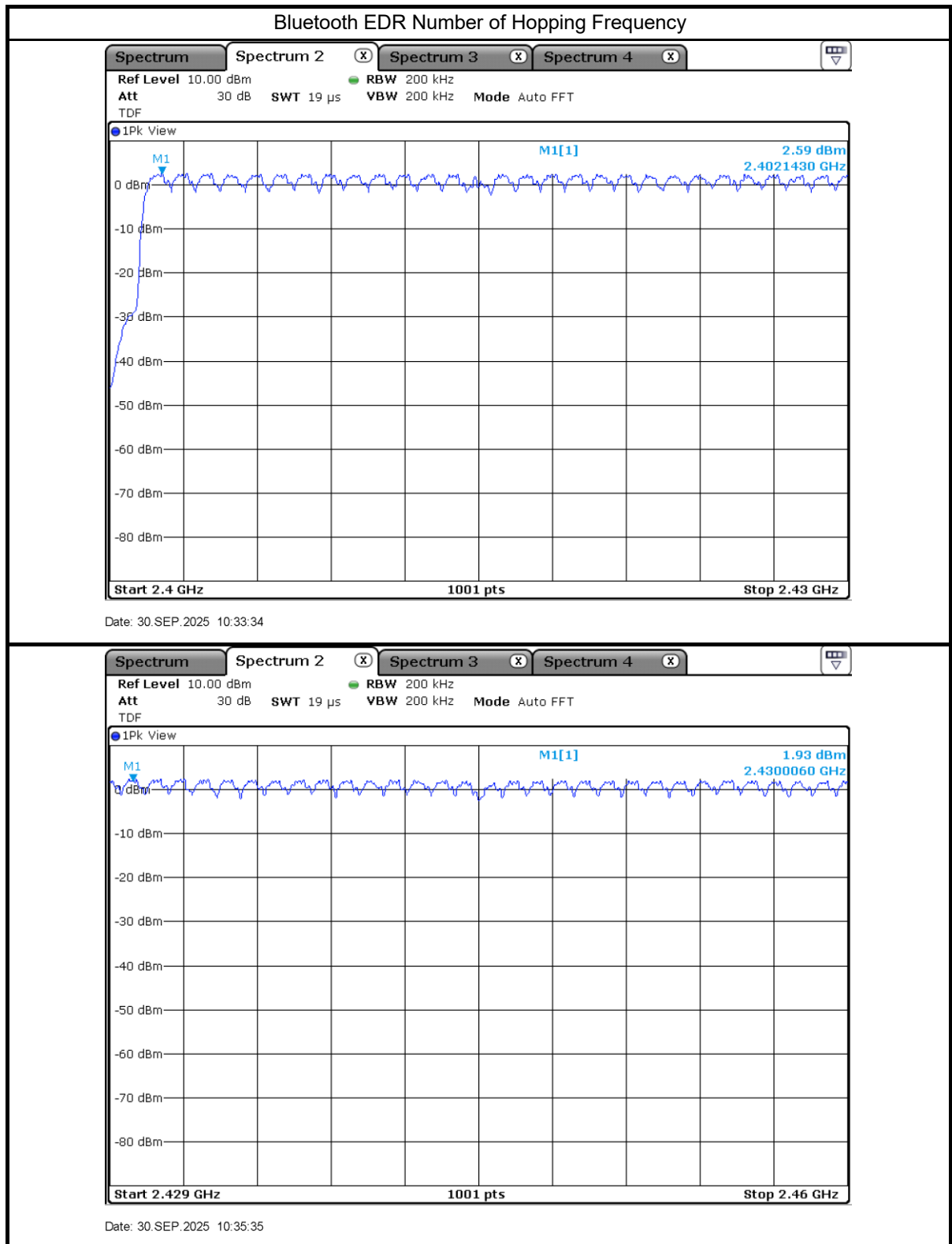
Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

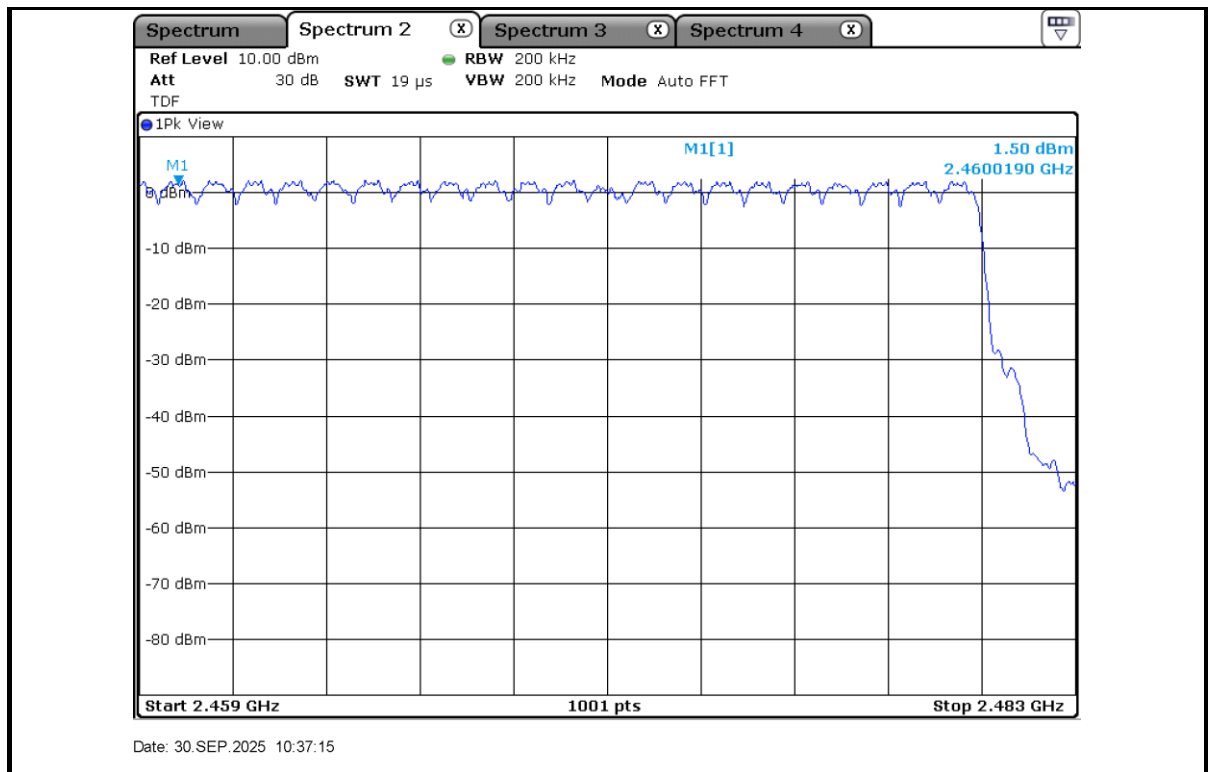
4.3.3 Test data

Result : Pass

Mode	Hopping Channel	Limit
Bluetooth BDR	79	at least 15
Bluetooth EDR	79	









4.4 Time of Occupancy (dwell Time)

4.4.1 Test procedure

ANSI C63.10-2020 Clause 7.8.4

4.4.2 Limit

15.247 (a)(1)(iii)

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

4.4.3 Test data

Result : Pass

Mode	Frequency (MHz)	number of hops on spectrum analyzer	Hops Over Occupancy Time (ms/hops)	transmit time per hop (ms)	Time of Occupancy (s)	Limit (s)
BDR	2 402	79	106.67	2.888	0.31	0.4
EDR	2 402	79	106.67	2.884	0.31	0.4

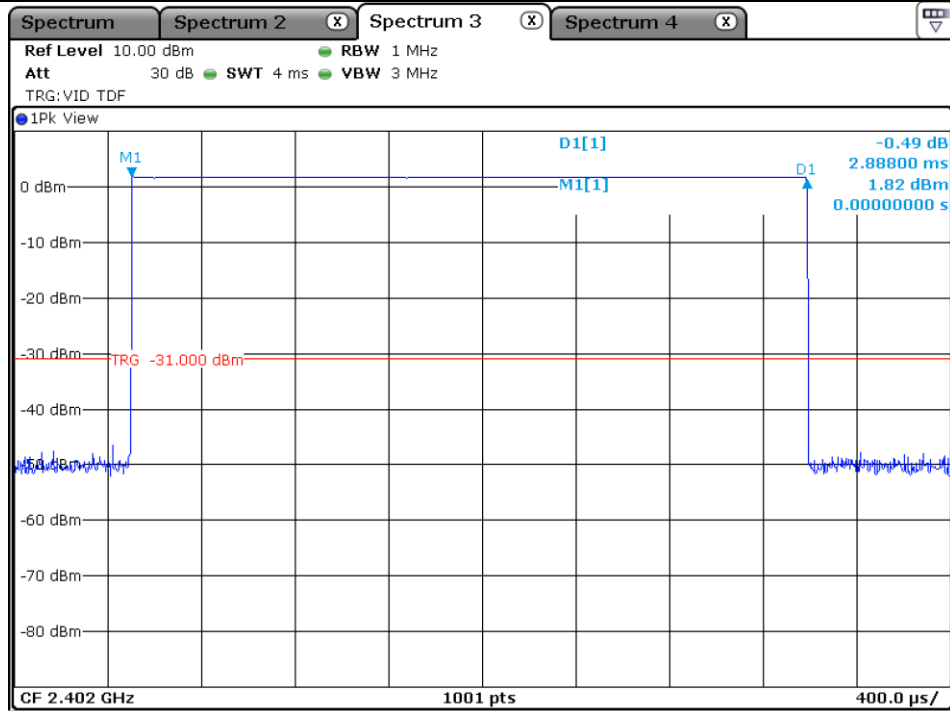
※The product was tested in hopping motion.

※ Hops Over Occupancy Time = $(1\ 600 / 6 / 79) \times (0.4 \times 79)$

※ Time of Occupancy = Hops Over Occupancy Time (hops) x Package Transfer Time (ms)

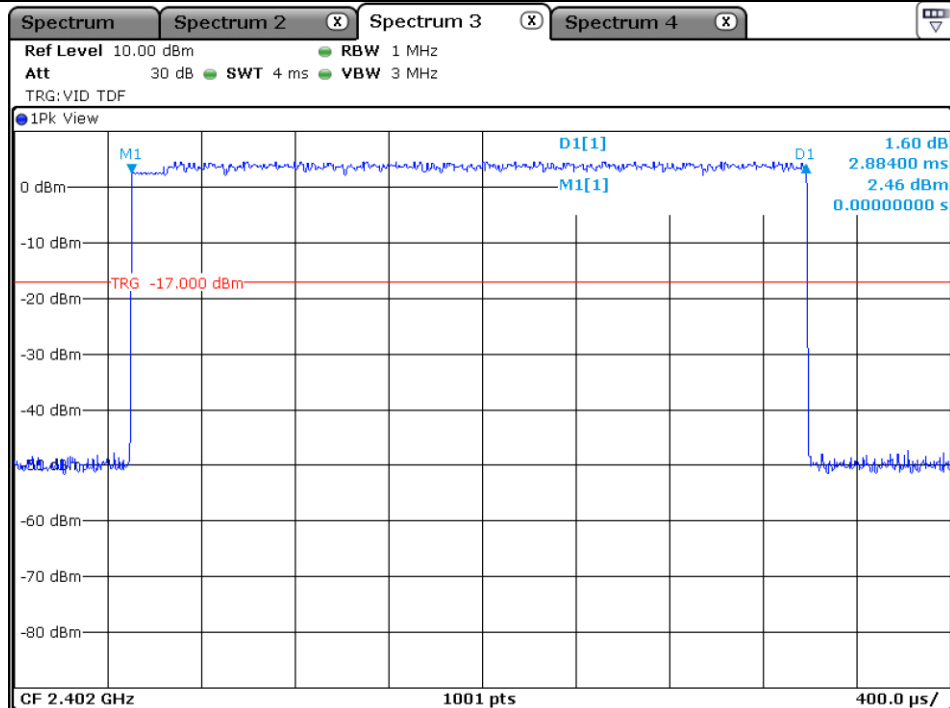


Bluetooth BDR Time of Occupancy (dwell Time)



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Bluetooth EDR Time of Occupancy (dwell Time)



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4.5 Maximum Conducted Output Power

4.5.1 Test procedure

ANSI C63.10-2020 Clause 7.8.5

4.5.2 Limit

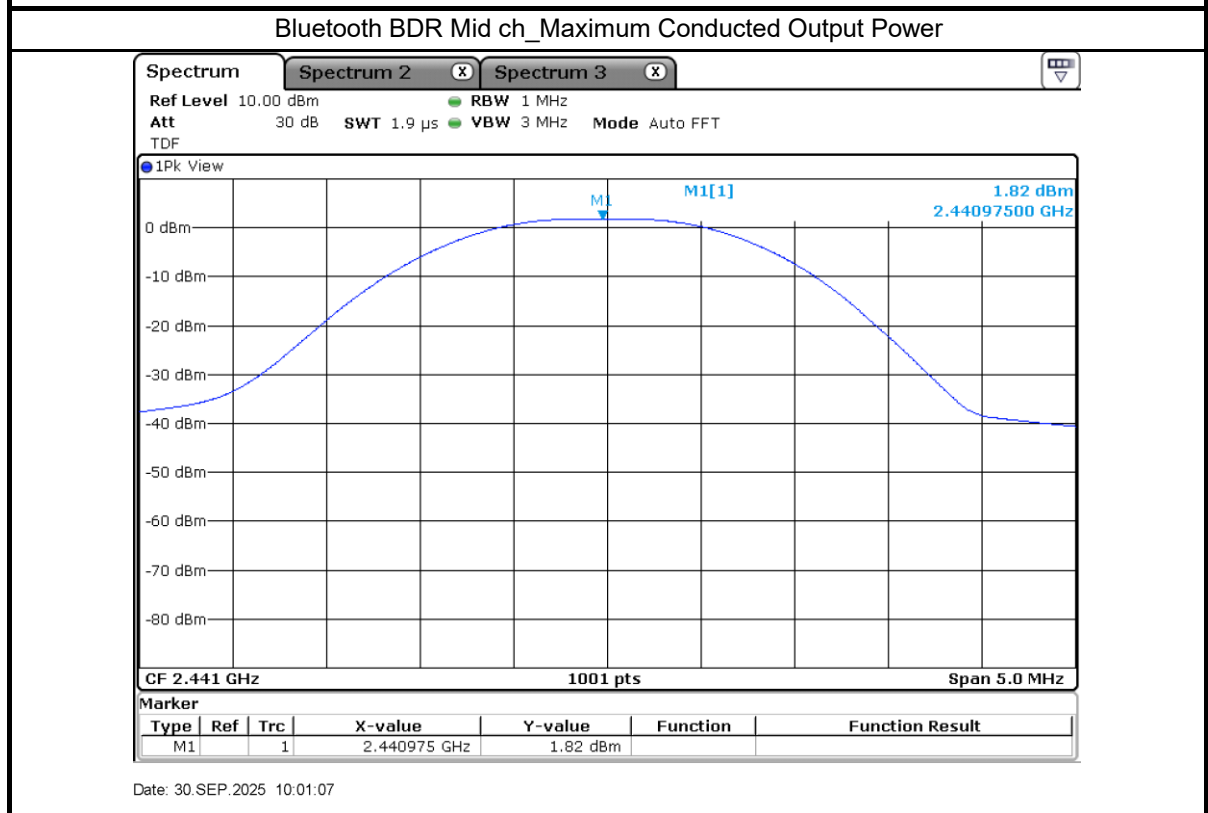
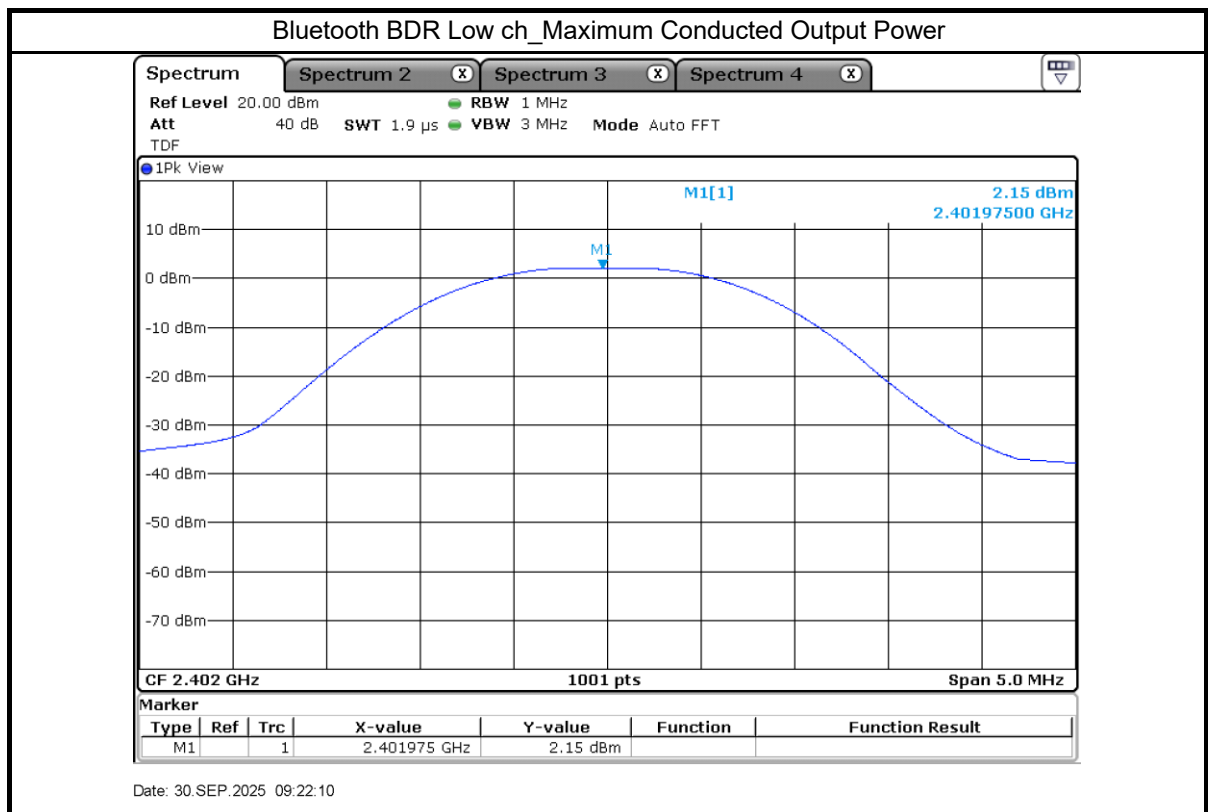
§15.247 (b)(1)

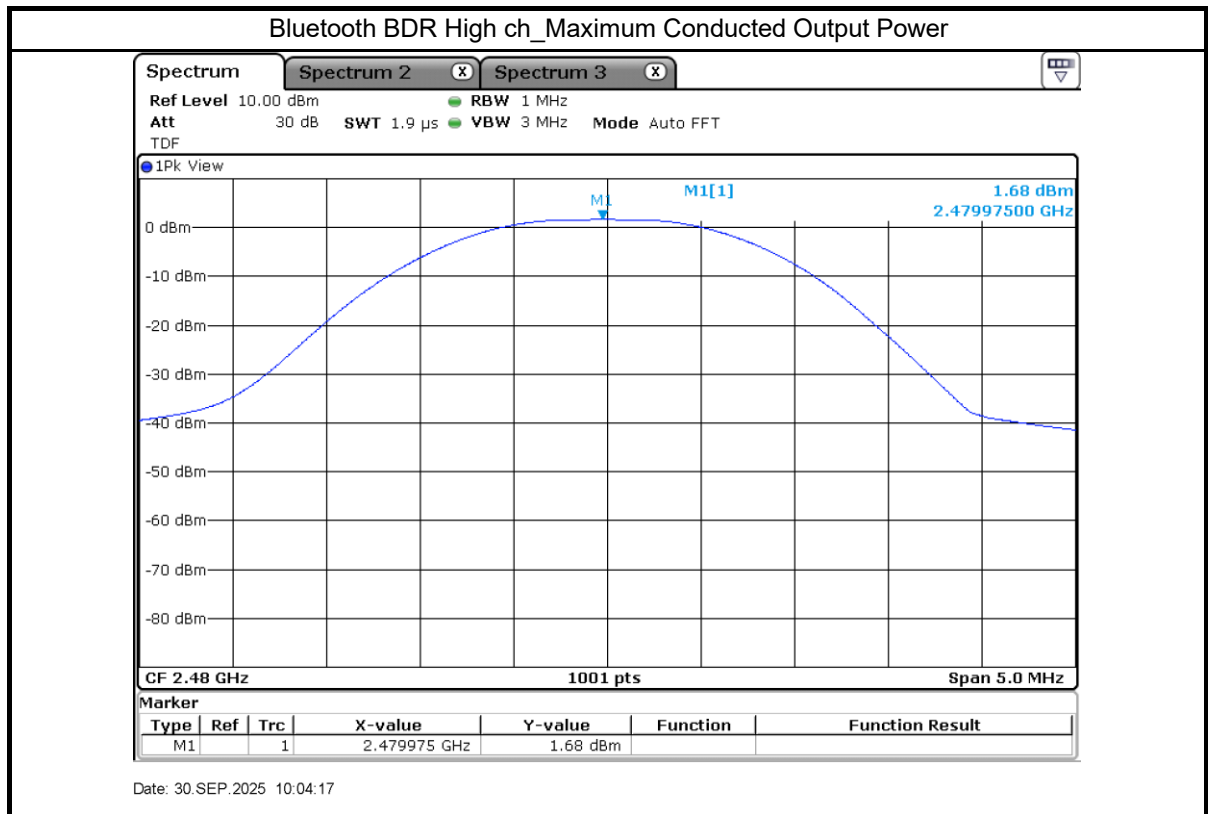
For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt.
For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

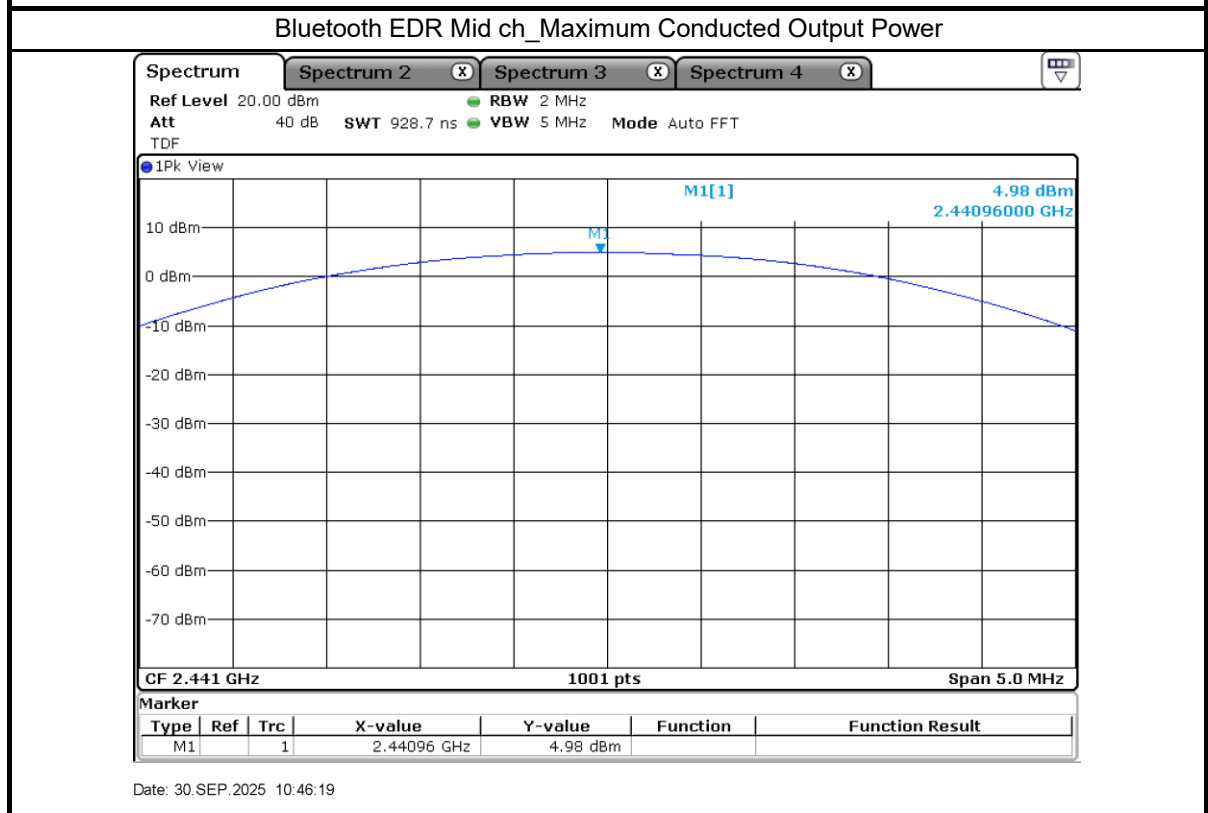
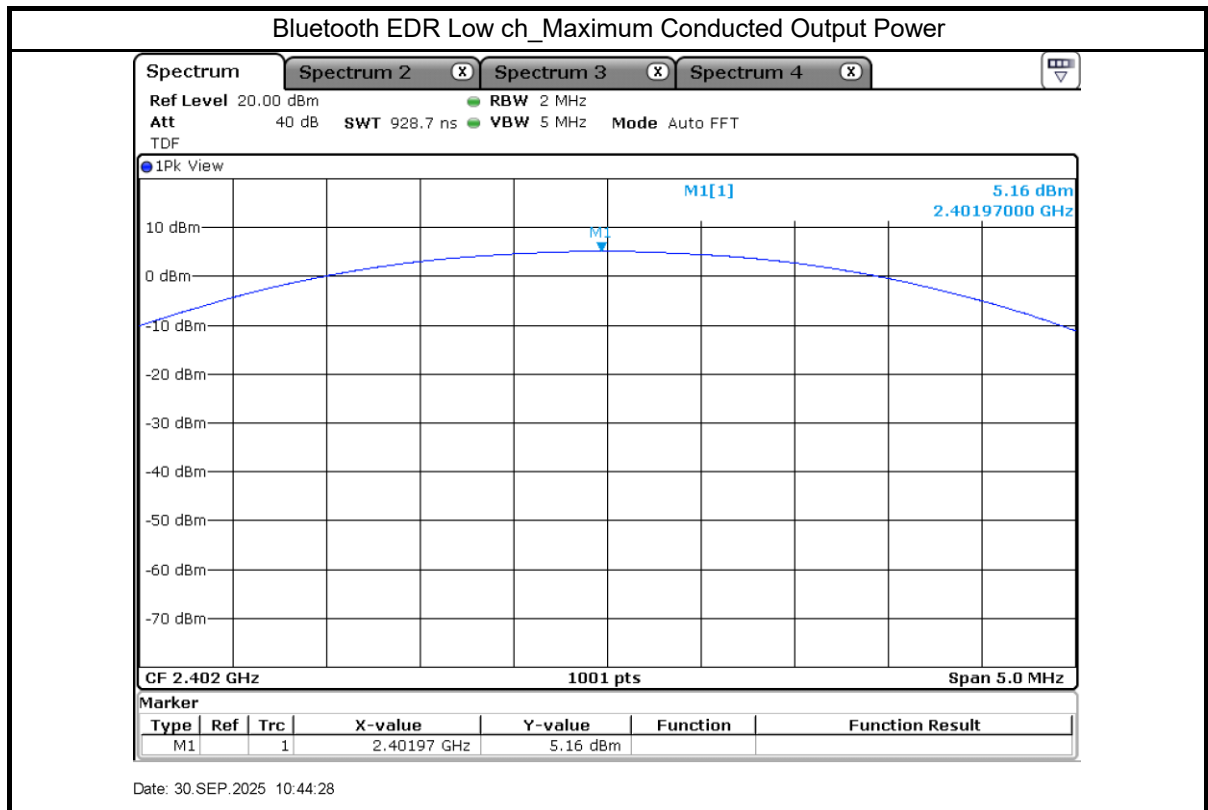
4.5.3 Test data

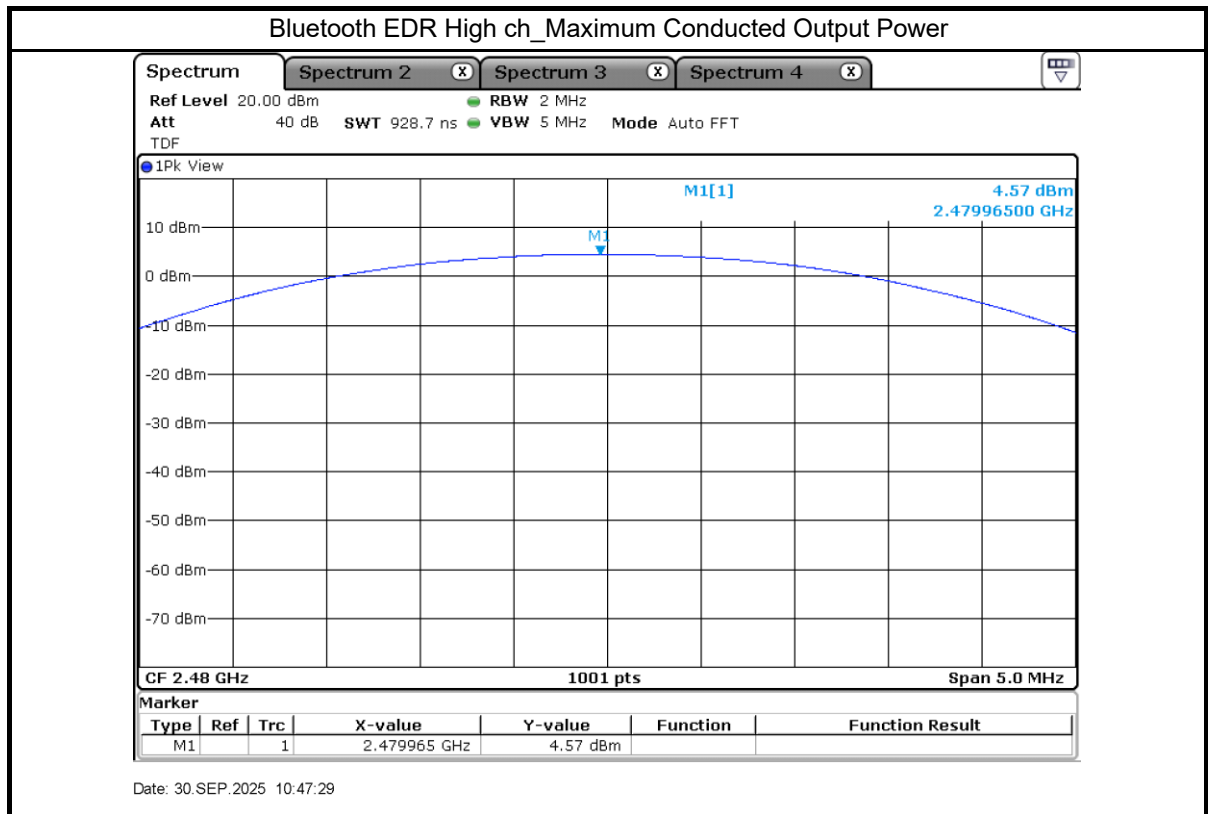
Result : Pass

Mode	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
Bluetooth BDR	2 402	2.15	30 (1 Watt)
	2 441	1.82	
	2 480	1.68	
Bluetooth EDR	2 402	5.16	
	2 441	4.98	
	2 480	4.57	











4.6 Conducted Spurious Emission

4.6.1 Test procedure

ANSI C63.10-2020 Clause 7.8.7

4.6.2 Limit

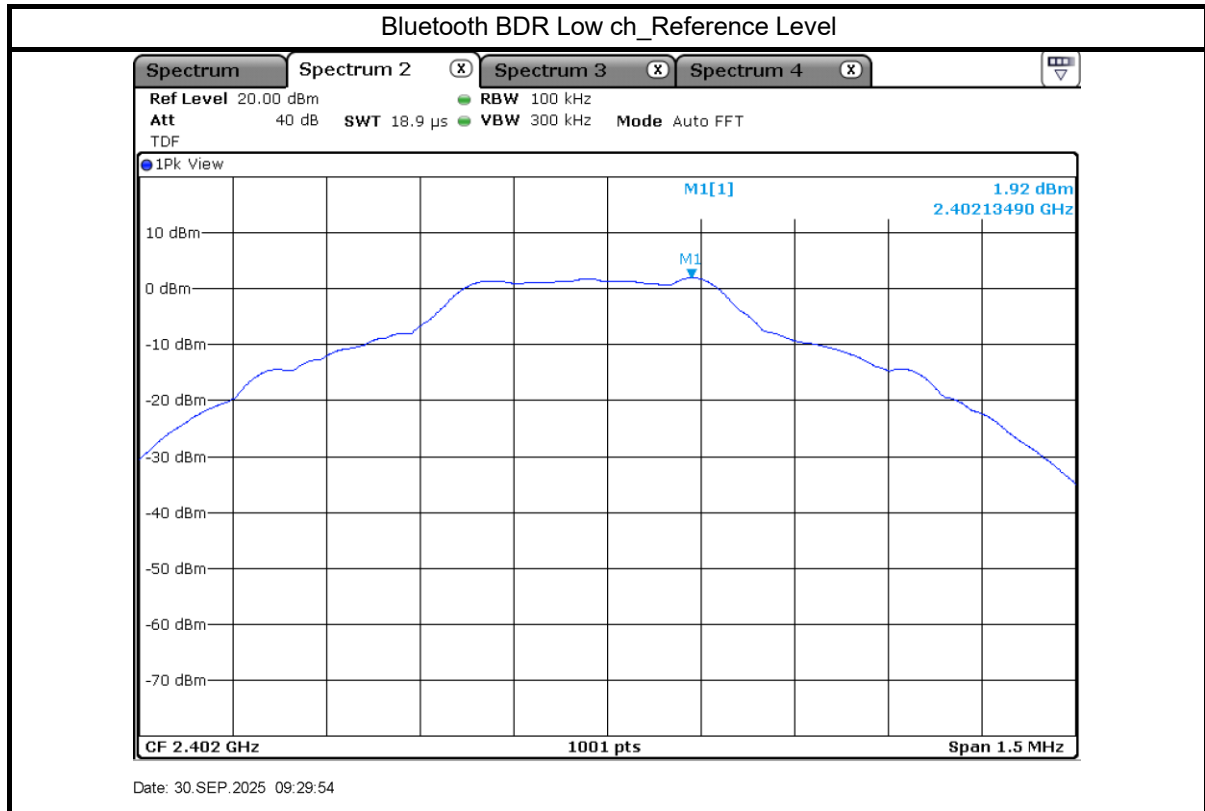
§15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).



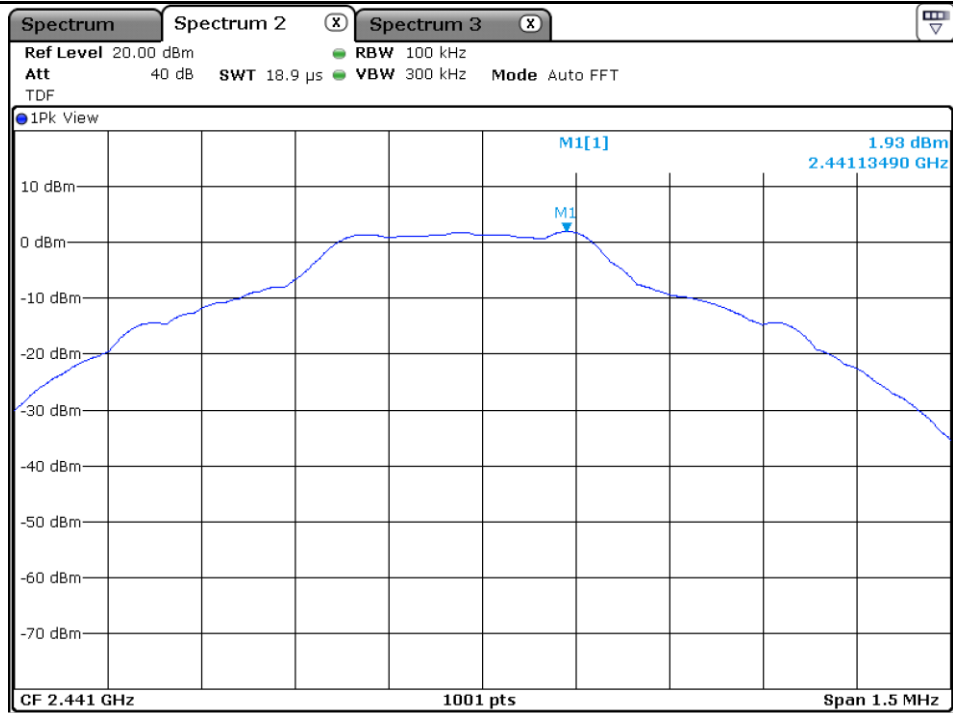
4.6.3 Test data

Result : Pass



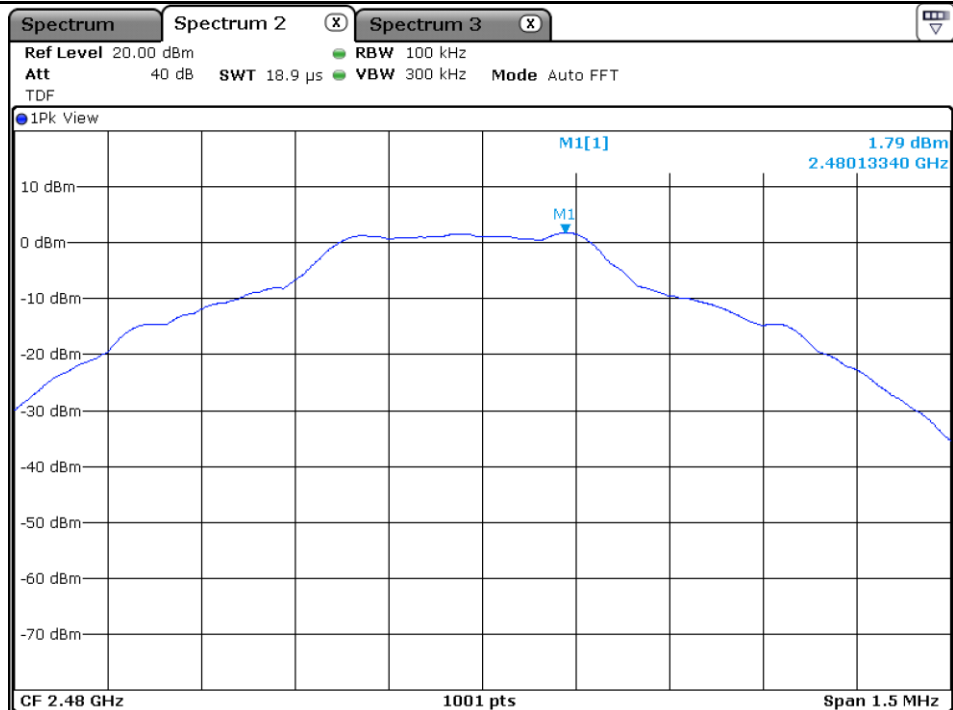


Bluetooth BDR Mid ch_Reference Level



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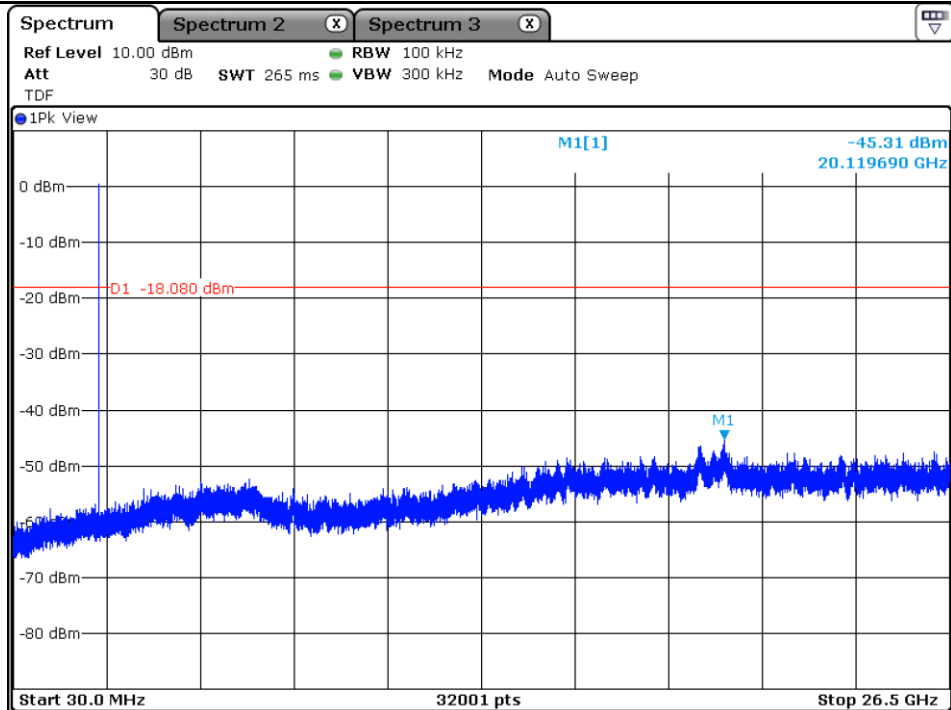
Bluetooth BDR High ch_Reference Level



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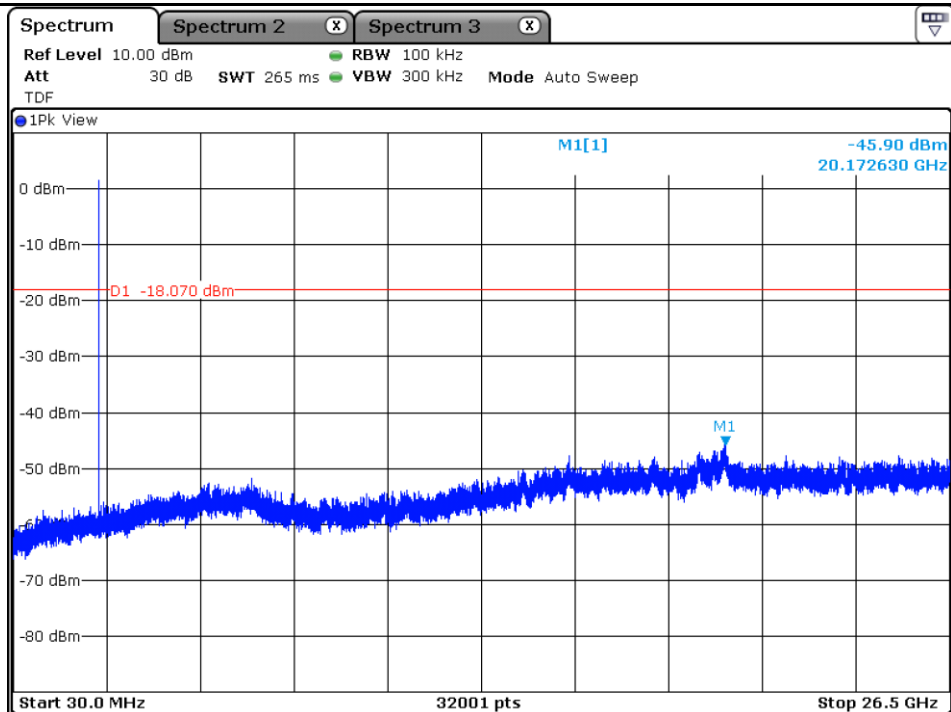


Bluetooth BDR Low ch_Conducted Spurious Emission

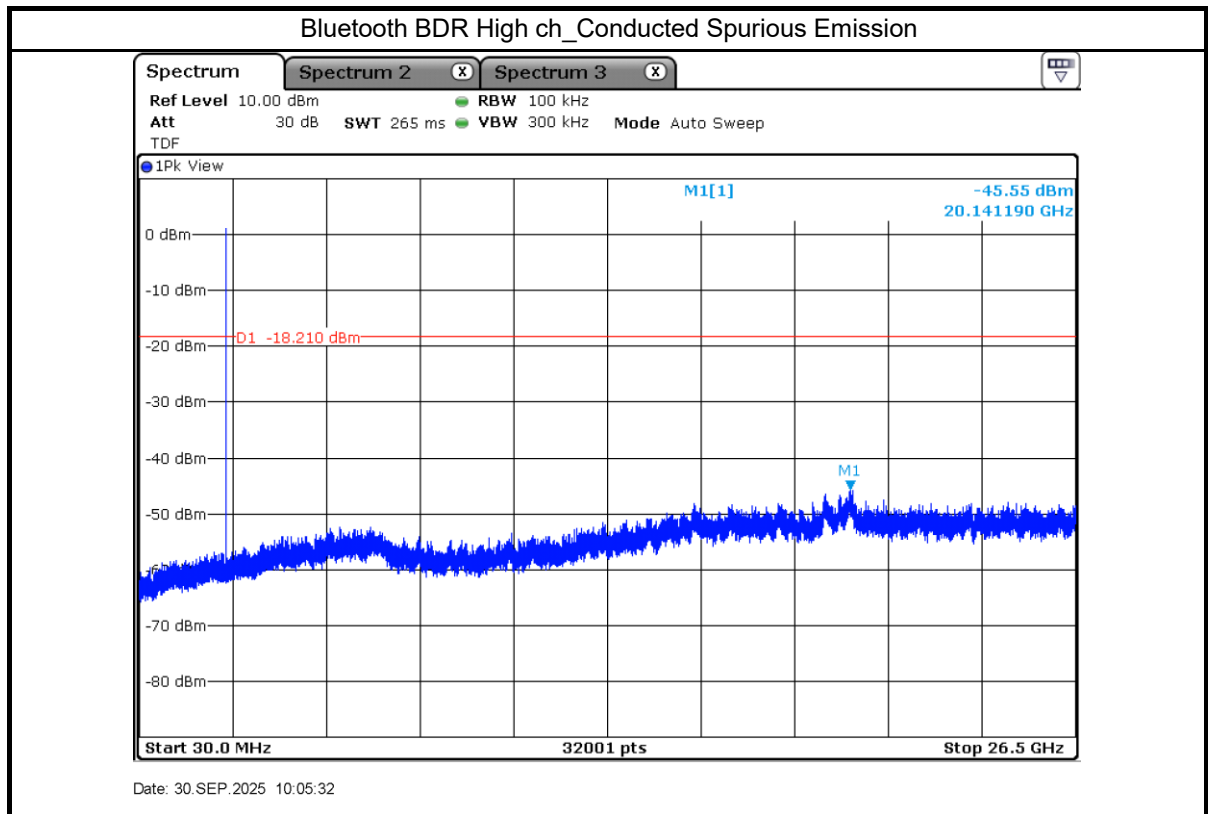


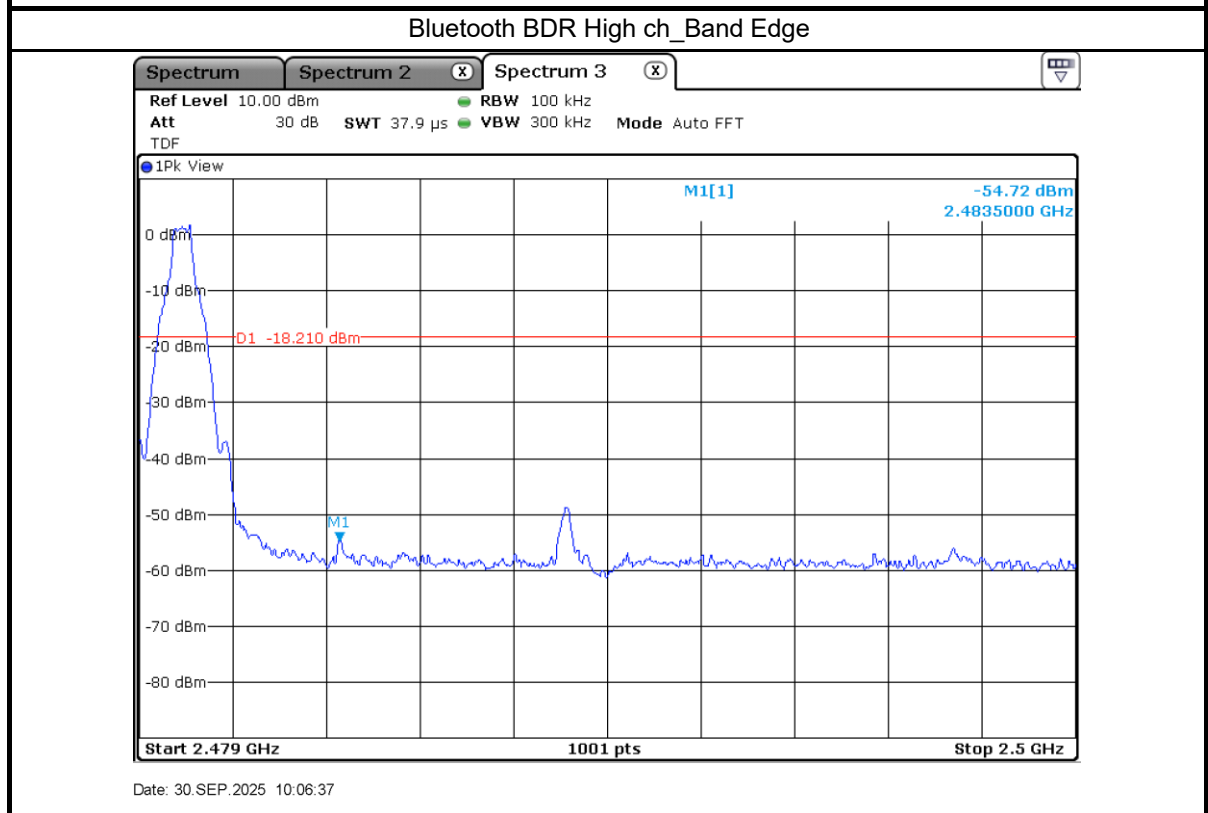
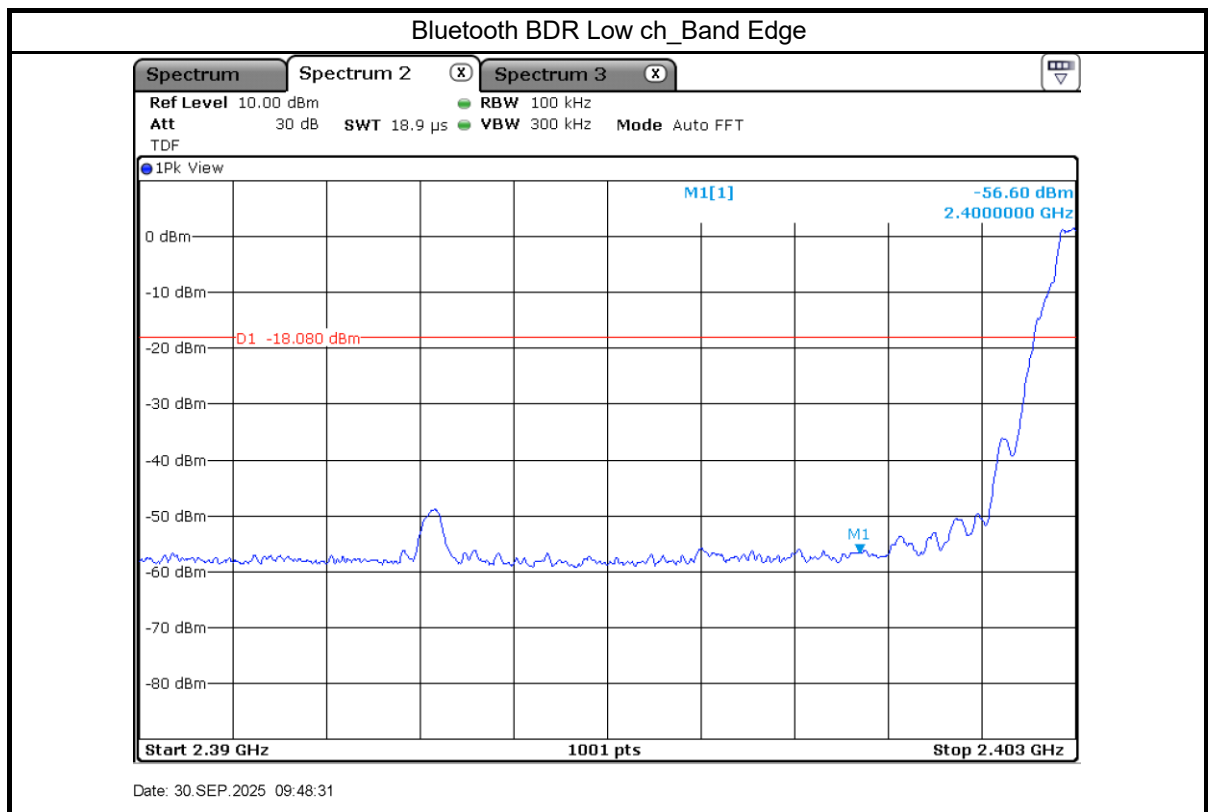
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Bluetooth BDR Mid ch_Conducted Spurious Emission



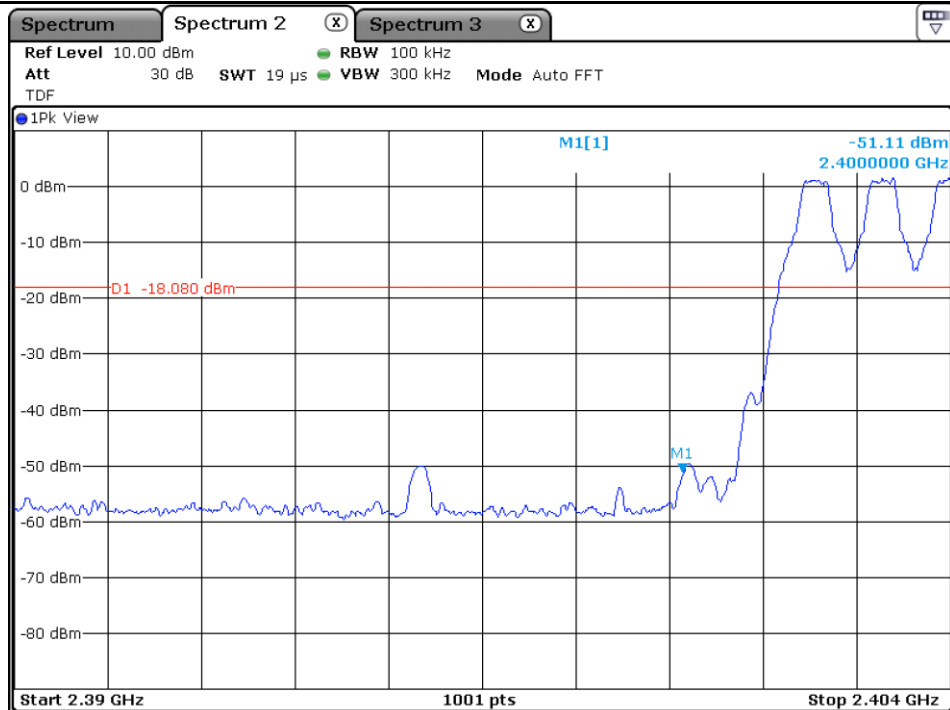
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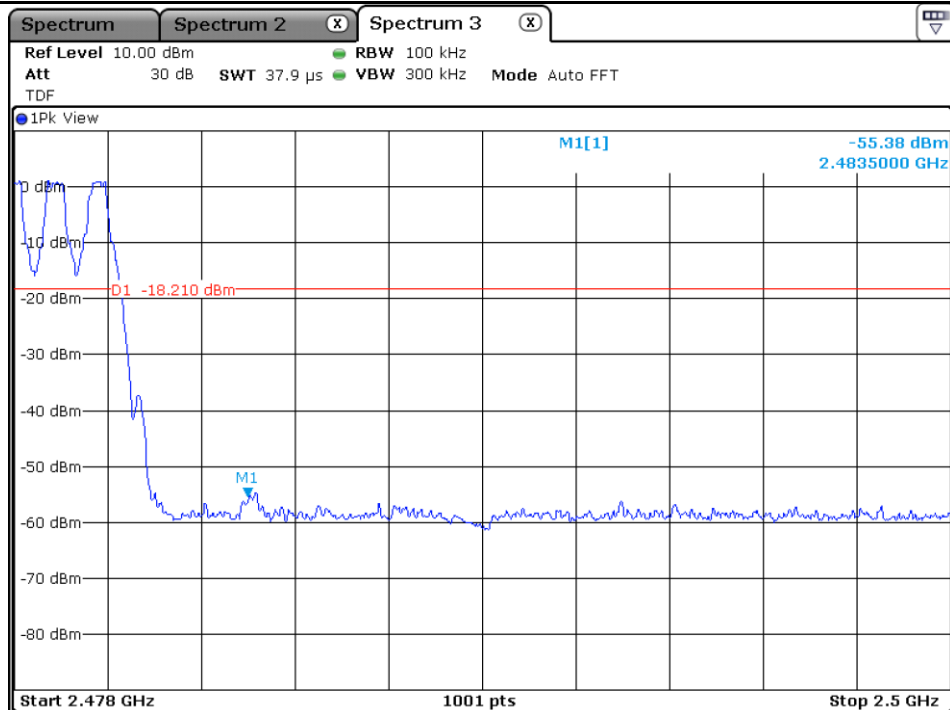


Bluetooth BDR Low ch_Hopping Mode_Band Edge

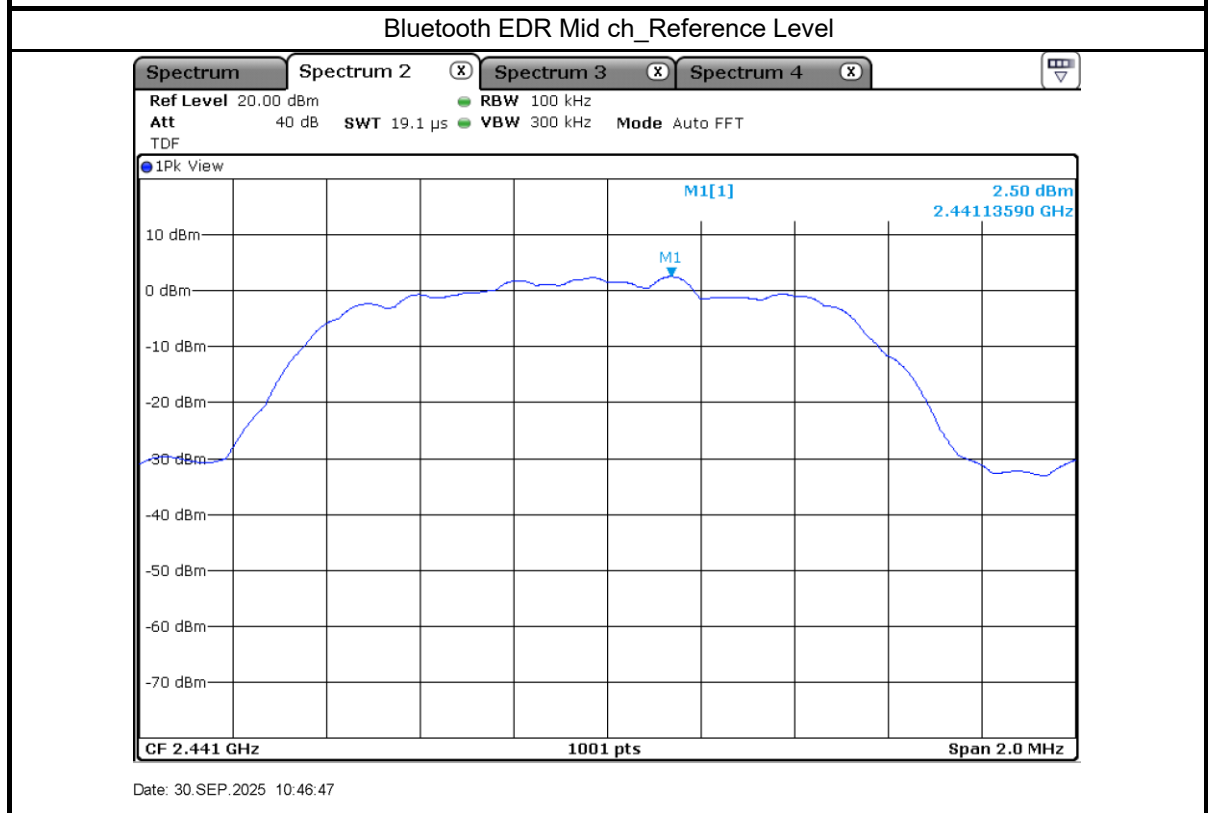
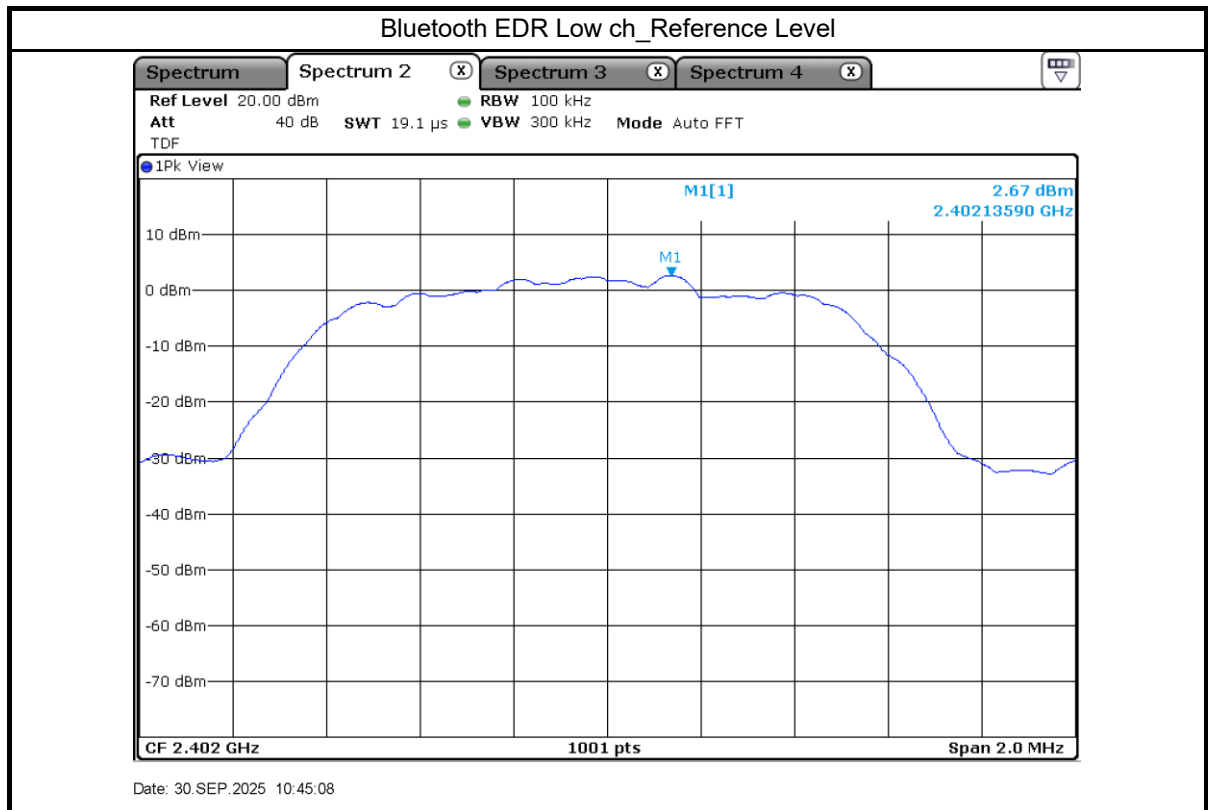


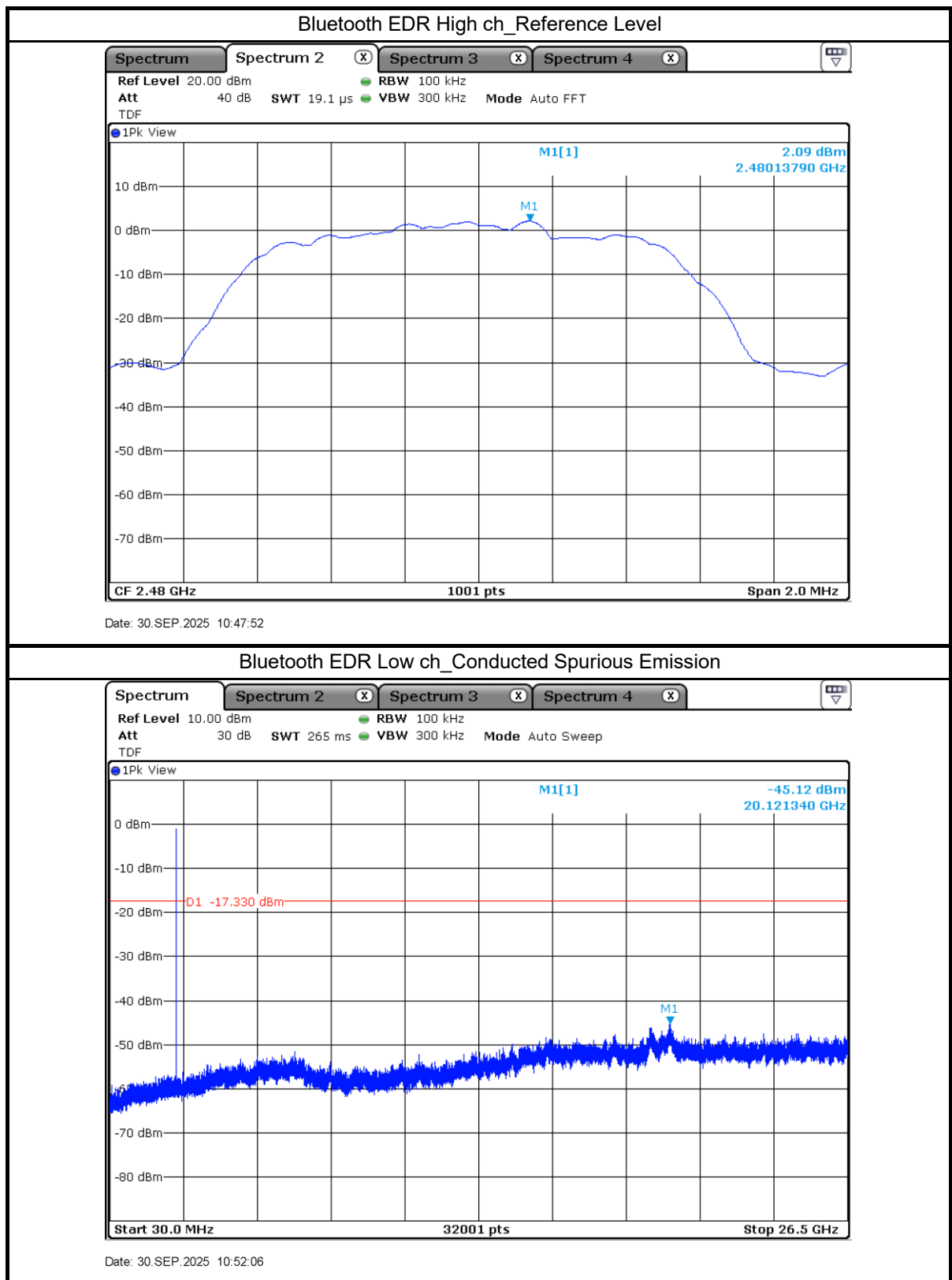
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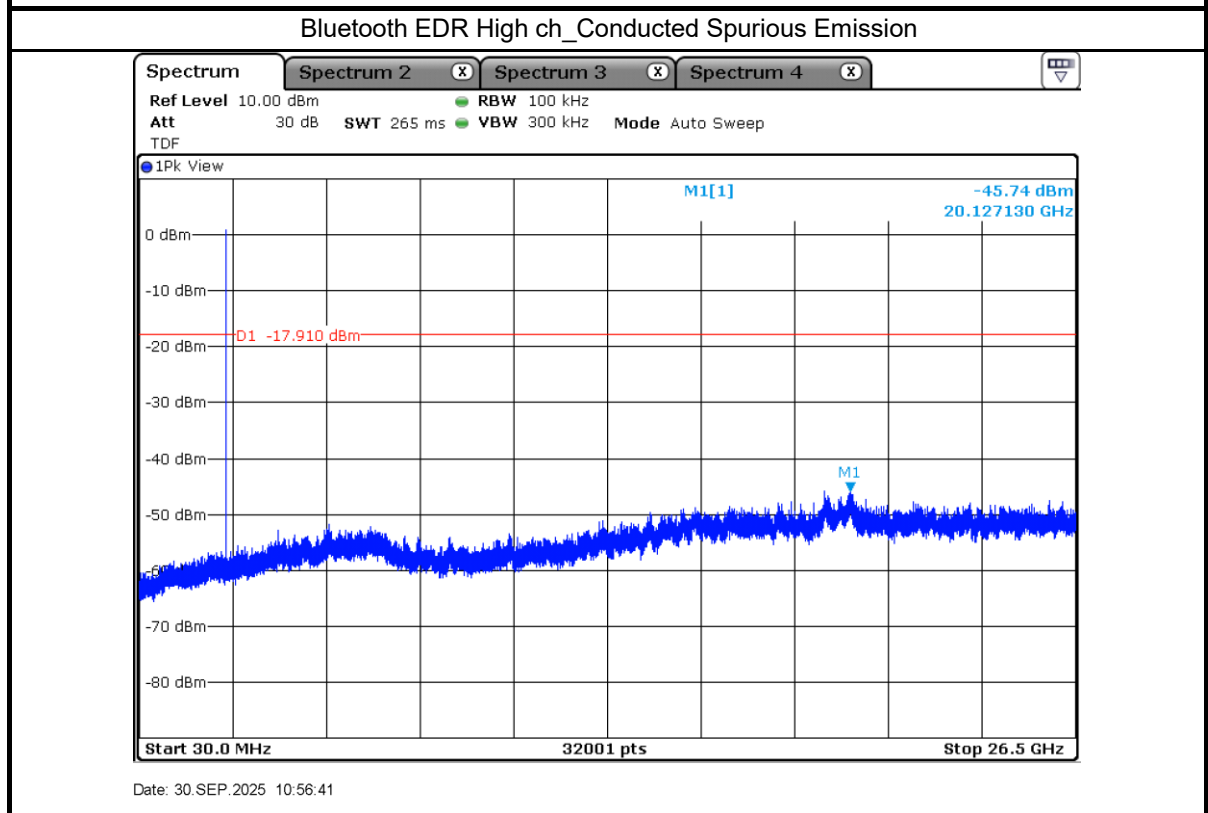
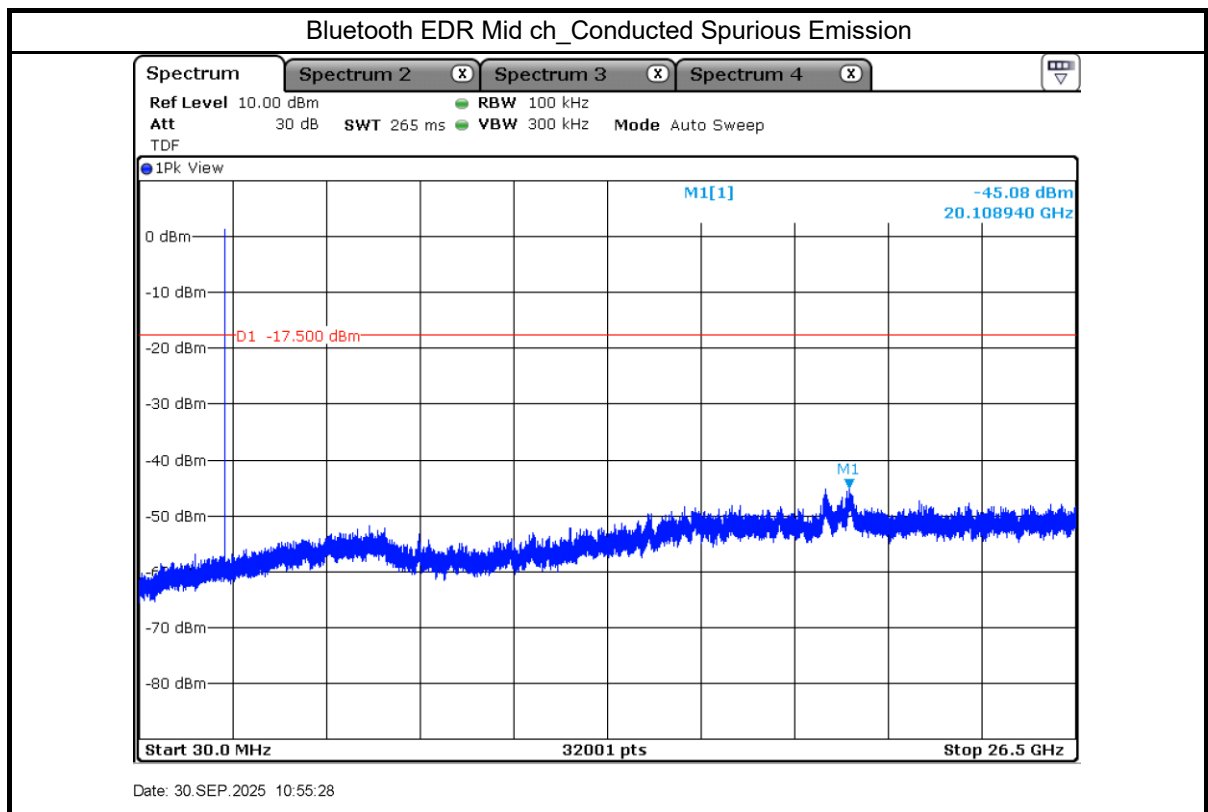
Bluetooth BDR High ch_Hopping Mode_Band Edge

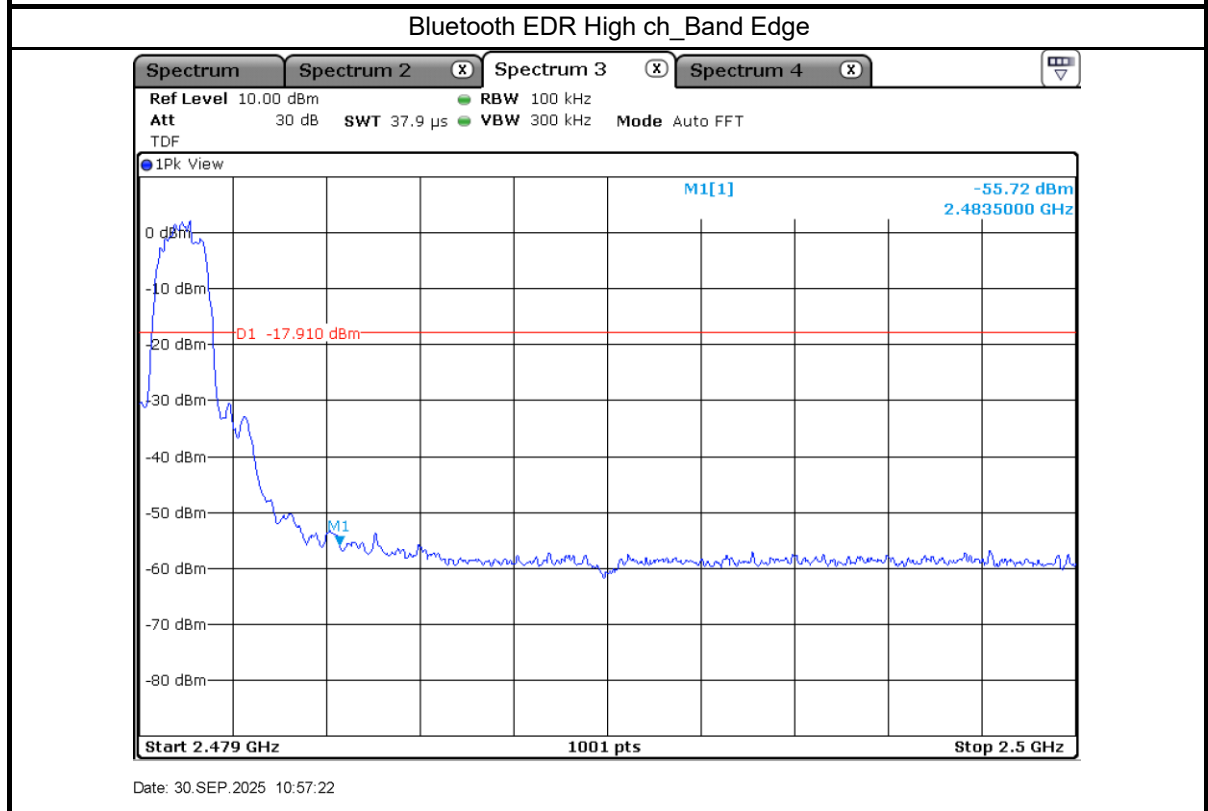
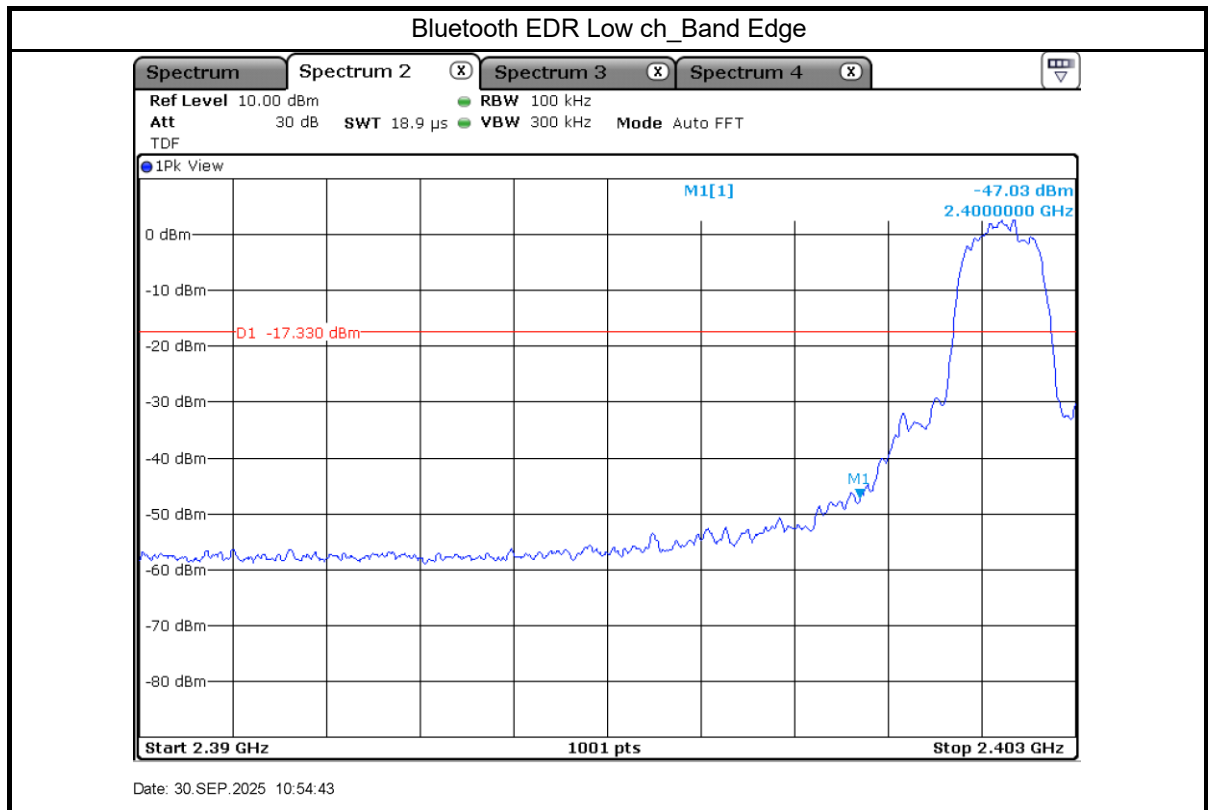


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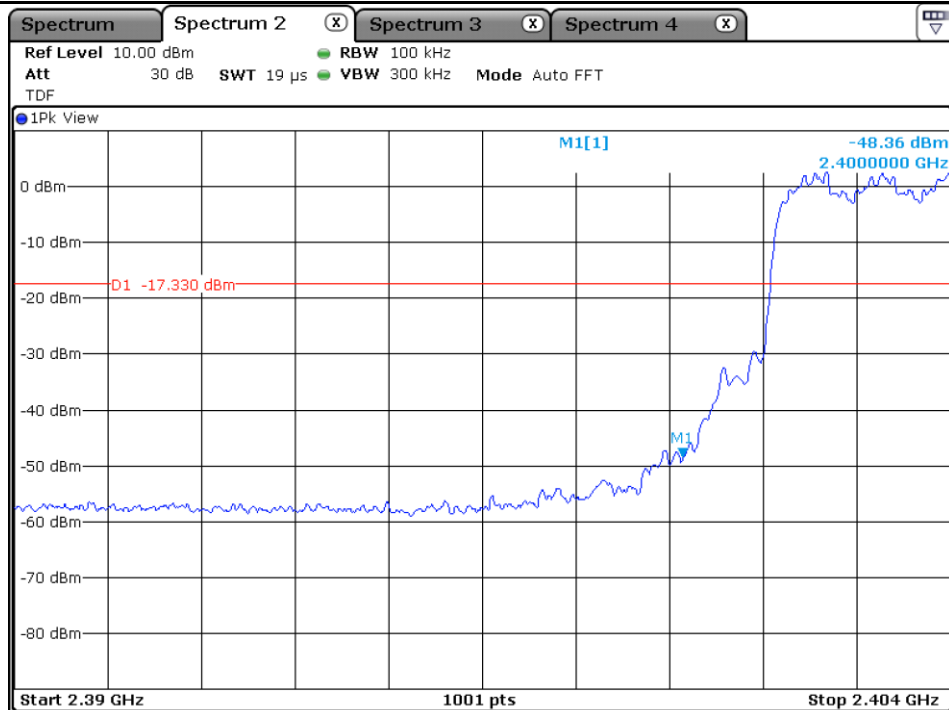






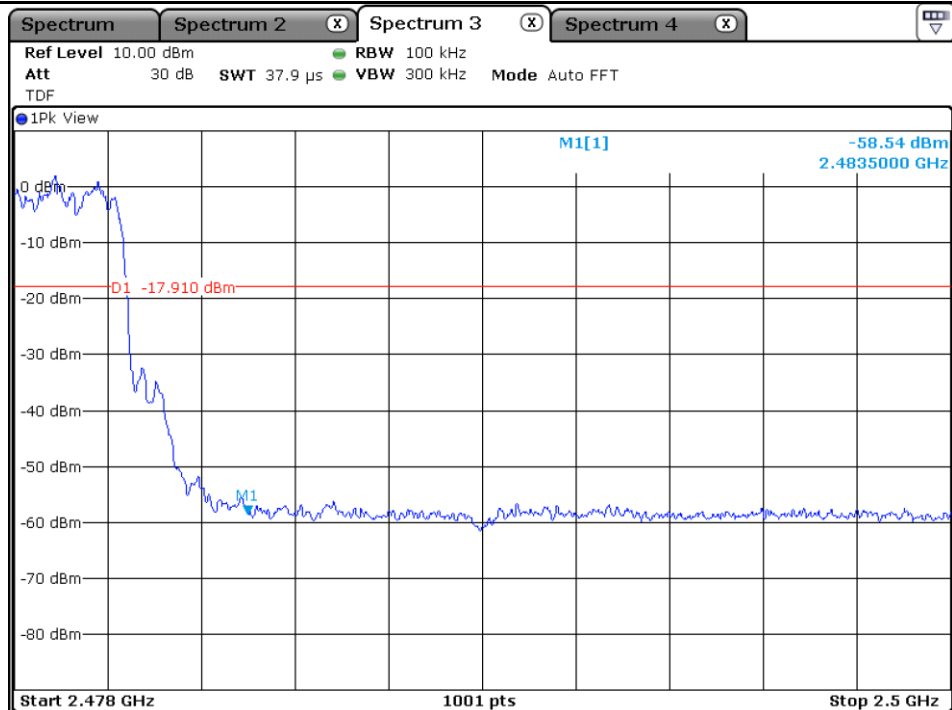


Bluetooth EDR Low ch_Hopping Mode_Band Edge



Date: 30.SEP.2025 10:53:39

Bluetooth EDR High ch_Hopping Mode_Band Edge



Date: 30.SEP.2025 10:58:33



4.7 Radiated Spurious Emission

4.7.1 Test procedure

ANSI C63.10-2020 Clause 6.4, 6.5, 6.6

4.7.2 Limit

§15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

§15.209 Radiated emission limits; general requirements.(a)

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009–0.490	2400/F(kHz)	300
0.490–1.705	24000/F(kHz)	30
1.705–30.0	30	30
30–88	100 **	3
88–216	150 **	3
216–960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54–72 MHz, 76–88 MHz, 174–216 MHz or 470–806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.



§15.205 Restricted bands of operation.(a),(b)

MHz	MHz	MHz	GHz
0.090–0.110	16.42–16.423	399.9–410	4.5–5.15
¹ 0.495–0.505	16.69475–16.69525	608–614	5.35–5.46
2.1735–2.1905	16.80425–16.80475	960–1240	7.25–7.75
4.125–4.128	25.5–25.67	1300–1427	8.025–8.5
4.17725–4.17775	37.5–38.25	1435–1626.5	9.0–9.2
4.20725–4.20775	73–74.6	1645.5–1646.5	9.3–9.5
6.215–6.218	74.8–75.2	1660–1710	10.6–12.7
6.26775–6.26825	108–121.94	1718.8–1722.2	13.25–13.4
6.31175–6.31225	123–138	2200–2300	14.47–14.5
8.291–8.294	149.9–150.05	2310–2390	15.35–16.2
8.362–8.366	156.52475–156.52525	2483.5–2500	17.7–21.4
8.37625–8.38675	156.7–156.9	2690–2900	22.01–23.12
8.41425–8.41475	162.0125–167.17	3260–3267	23.6–24.0
12.29–12.293	167.72–173.2	3332–3339	31.2–31.8
12.51975–12.52025	240–285	3345.8–3358	36.43–36.5
12.57675–12.57725	322–335.4	3600–4400	(²)
13.36–13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490–0.510 MHz.

² Above 38.6

Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in § 15.35 apply to these measurements.



4.7.3 Test data

Result : Pass

Mode : worst case

- Below 30 MHz

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
0.595	27.50	QP	H	19.90	47.40	72.36	24.96	-
0.613	32.18	QP	H	19.90	52.08	72.11	20.03	-
0.631	25.02	QP	H	19.90	44.92	71.87	26.95	-
1.207	19.38	QP	H	19.90	39.28	66.14	26.86	-
1.810	15.75	QP	H	20.00	35.75	69.54	33.79	-
6.887	22.51	QP	V	19.90	42.41	69.54	27.13	-

- Below 30 MHz_Co-location

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
1.186	7.50	QP	V	19.90	27.40	66.29	38.89	-
1.148	22.26	QP	V	19.90	42.16	64.25	22.09	-
1.619	22.91	QP	V	20.00	42.91	63.44	20.53	-
3.204	11.67	QP	V	20.10	31.77	69.54	37.77	-
11.612	12.30	QP	V	20.10	32.40	69.54	37.14	-
22.729	10.95	QP	V	20.90	31.85	69.54	37.69	-



- 30 MHz ~ 1 GHz

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
64.241	51.44	QP	V	-16.60	34.84	40.00	5.16	-
69.091	47.37	QP	V	-18.40	28.97	40.00	11.03	-
74.717	48.74	QP	V	-20.30	28.44	40.00	11.56	-
134.954	48.12	QP	V	-19.60	28.52	43.52	15.00	-
193.154	46.48	QP	H	-16.50	29.98	43.52	13.54	-
600.069	37.84	QP	V	-5.70	32.14	46.02	13.88	-

- 30 MHz ~ 1 GHz_Co-location

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
64.047	46.04	QP	V	-16.50	29.54	40.00	10.46	-
69.091	47.03	QP	V	-18.40	28.63	40.00	11.37	-
74.717	46.13	QP	V	-20.30	25.83	40.00	14.17	-
80.440	46.14	QP	V	-21.10	25.04	40.00	14.96	-
192.378	45.02	QP	H	-16.60	28.42	43.52	15.10	-
600.069	36.30	QP	V	-5.70	30.60	46.02	15.42	-



Mode : Bluetooth BDR

- 1 GHz Above_Low ch

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
2323.75	47.55	PK	V	-11.10	36.45	74.00	37.55	Restricted band
	34.42	AVG	V		23.32	54.00	30.68	
4802.1	45.13	PK	H	-2.90	42.23	74.00	31.77	2nd Harmonic
	31.99	AVG	H		29.09	54.00	24.91	
5544.5	47.84	PK	V	-1.10	46.74	74.00	27.26	Spurious Emission
	38.44	AVG	V		37.34	54.00	16.66	
7206.2	46.90	PK	H	0.90	47.80	74.00	26.20	3rd Harmonic
	34.41	AVG	H		35.31	54.00	18.69	

- 1 GHz Above_Mid ch

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
4890.55	44.48	PK	V	-2.40	42.08	74.00	31.92	2nd Harmonic
	30.90	AVG	V		28.50	54.00	25.50	
5544.5	47.97	PK	V	-1.10	46.87	74.00	27.13	Spurious Emission
	39.42	AVG	V		38.32	54.00	15.68	
7326.55	48.78	PK	V	0.90	49.68	74.00	24.32	3rd Harmonic
	34.98	AVG	V		35.88	54.00	18.12	

- 1 GHz Above_High ch

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
2498	47.34	PK	V	-10.00	37.34	74.00	36.66	Restricted band
	34.39	AVG	V		24.39	54.00	29.61	
4963.05	43.41	PK	V	-2.30	41.11	74.00	32.89	2nd Harmonic
	30.72	AVG	V		28.42	54.00	25.58	
7439.65	48.15	PK	V	1.00	49.15	74.00	24.85	3rd Harmonic
	35.18	AVG	V		36.18	54.00	17.82	
9362.35	48.41	PK	V	3.50	51.91	74.00	22.09	Spurious Emission
	36.09	AVG	V		39.59	54.00	14.41	



Mode : Bluetooth EDR

- 1 GHz Above_Low ch

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
2338.5	46.88	PK	H	-11.10	35.78	74.00	38.22	Restricted band
	34.26	AVG	H		23.16	54.00	30.84	
4803.55	44.74	PK	V	-2.80	41.94	74.00	32.06	2nd Harmonic
	31.91	AVG	V		29.11	54.00	24.89	
7206.2	48.16	PK	V	0.90	49.06	74.00	24.94	3rd Harmonic
	35.49	AVG	V		36.39	54.00	17.61	
20045.95	37.40	PK	V	7.00	44.40	74.00	29.60	Spurious Emission
	24.64	AVG	V		31.64	54.00	22.36	
26396.3	37.05	PK	V	9.10	46.15	74.00	27.85	Spurious Emission
	23.17	AVG	V		32.27	54.00	21.73	

- 1 GHz Above_Mid ch

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
1535	68.42	PK	H	-15.30	53.12	74.00	20.88	Spurious Emission
	67.24	AVG	H		51.94	54.00	2.06	
4876.05	43.83	PK	V	-2.40	41.43	74.00	32.57	2nd Harmonic
	30.76	AVG	V		28.36	54.00	25.64	
7323.65	48.25	PK	V	0.90	49.15	74.00	24.85	3rd Harmonic
	35.57	AVG	V		36.47	54.00	17.53	

- 1 GHz Above_High ch

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
2492.5	47.99	PK	V	-10.10	37.89	74.00	36.11	Restricted band
	34.50	AVG	V		24.40	54.00	29.60	
4990.6	43.99	PK	V	-2.20	41.79	74.00	32.21	2nd Harmonic
	30.64	AVG	V		28.44	54.00	25.56	
7439.65	49.07	PK	V	1.00	50.07	74.00	23.93	3rd Harmonic
	36.35	AVG	V		37.35	54.00	16.65	



Mode : Co-location worst case

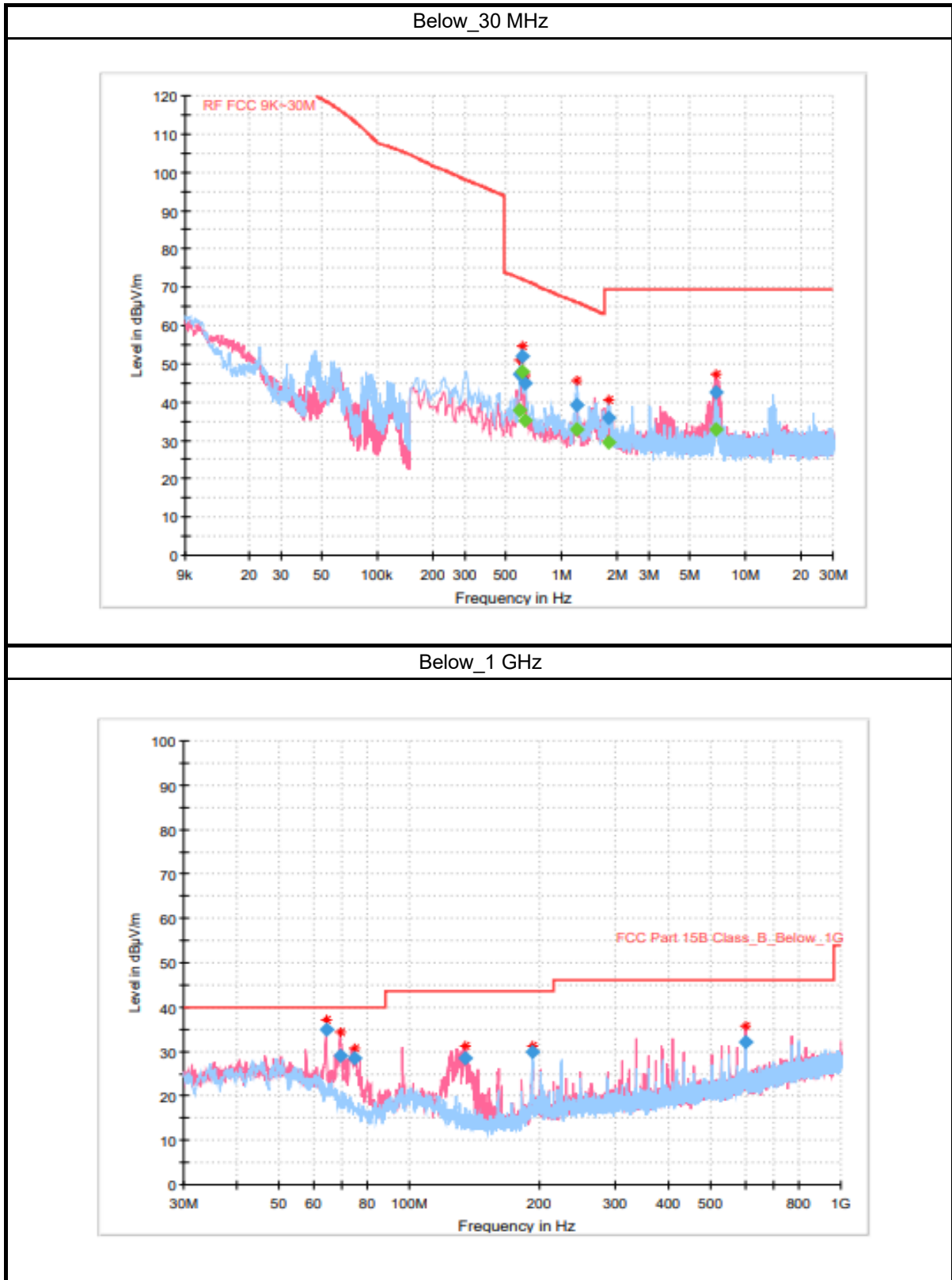
- 1 GHz Above_Low ch

Frequency (MHz)	Reading (dBuV/m)	Detector	Pol.	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
2352	81.81	PK	H	-11.00	70.81	74.00	3.19	Restricted band
	49.13	AVG	H		38.13	54.00	15.87	
2490.8	79.87	PK	H	-10.10	69.77	74.00	4.23	Restricted band
	40.31	AVG	H		30.21	54.00	23.79	
2528.2	75.36	PK	H	-9.80	65.56	74.00	8.44	Spurious Emission
	41.95	AVG	H		32.15	54.00	21.85	
4794.4	44.19	PK	V	-2.90	41.29	74.00	32.71	Spurious Emission
	31.29	AVG	V		28.39	54.00	25.61	
5544.1	48.00	PK	V	-1.10	46.90	74.00	27.10	Spurious Emission
	40.28	AVG	V		39.18	54.00	14.82	
7242.4	46.16	PK	H	0.90	47.06	74.00	26.94	Spurious Emission
	33.19	AVG	H		34.09	54.00	19.91	
17998.3	50.71	PK	H	14.10	64.81	74.00	9.19	Spurious Emission
	37.78	AVG	H		51.88	54.00	2.12	
18106.25	37.89	PK	V	6.20	44.09	74.00	29.91	Spurious Emission
	24.55	AVG	V		30.75	54.00	23.25	
26495.75	35.56	PK	H	9.20	44.76	74.00	29.24	Spurious Emission
	22.44	AVG	H		31.64	54.00	22.36	



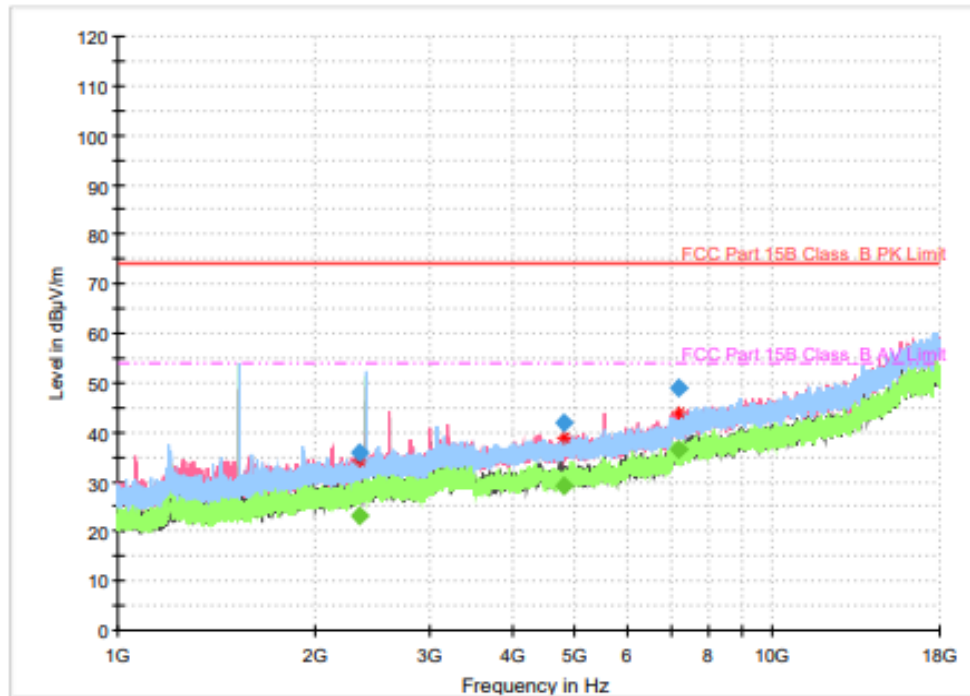
4.8.4 Test plot

Worst case Mode

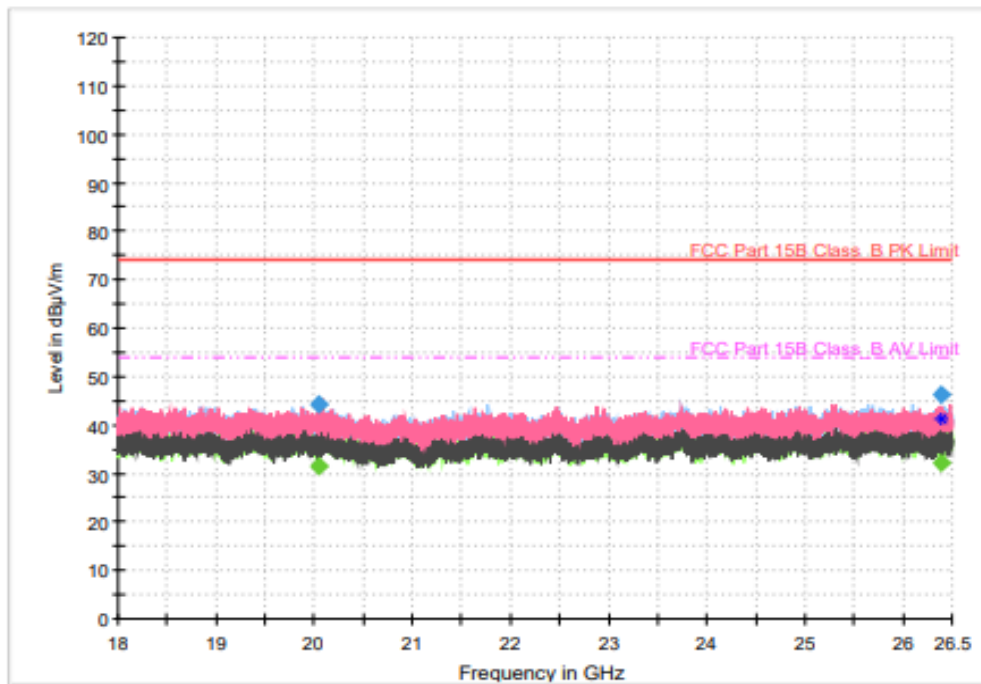




Above_1 GHz



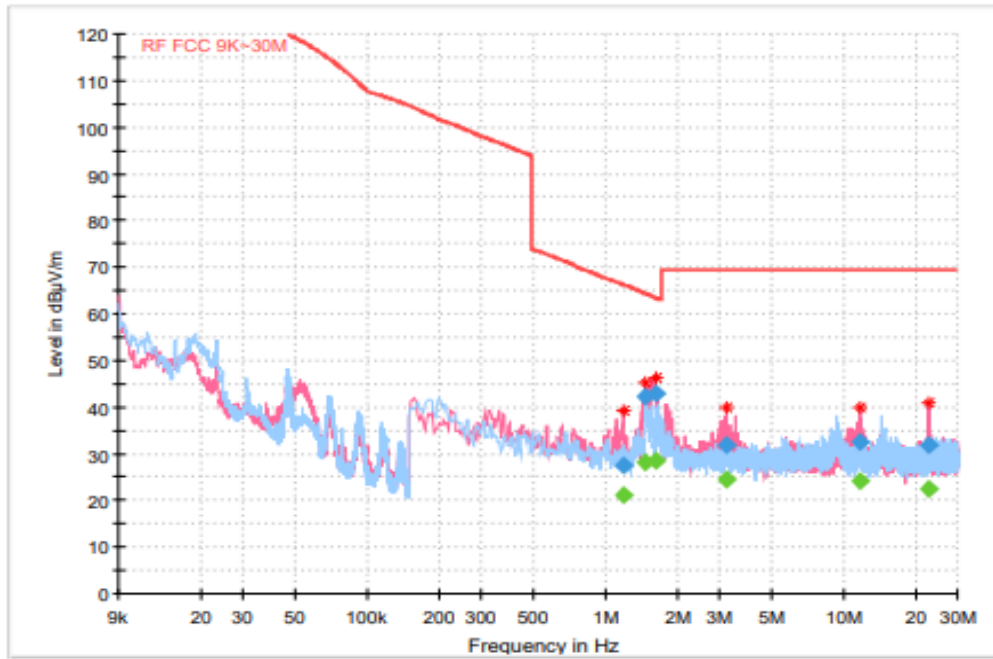
Above_18 GHz



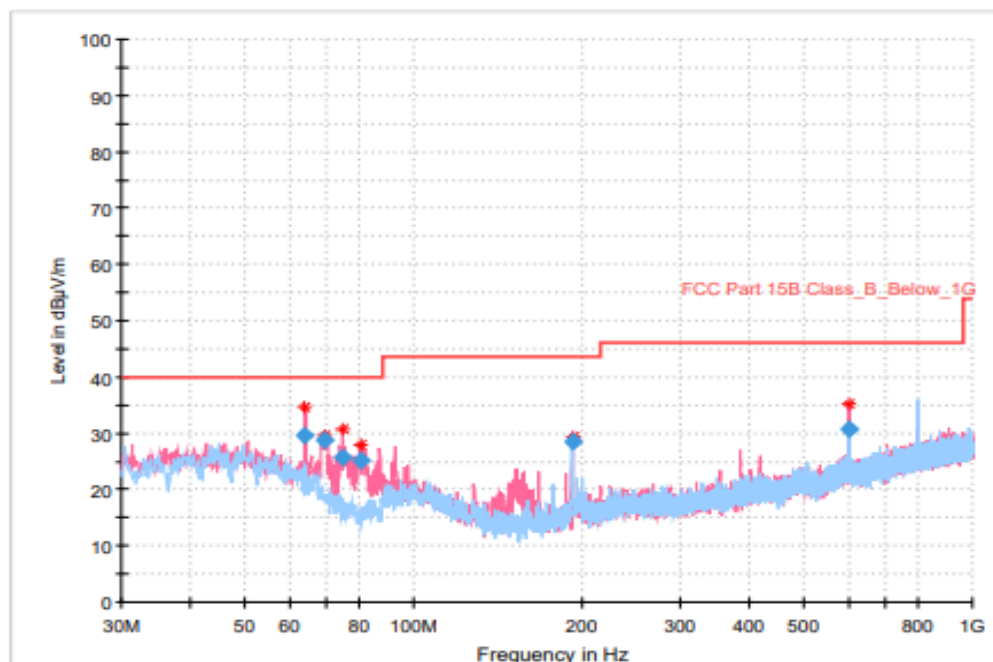


Worst case Co-location Mode

Below_30 MHz

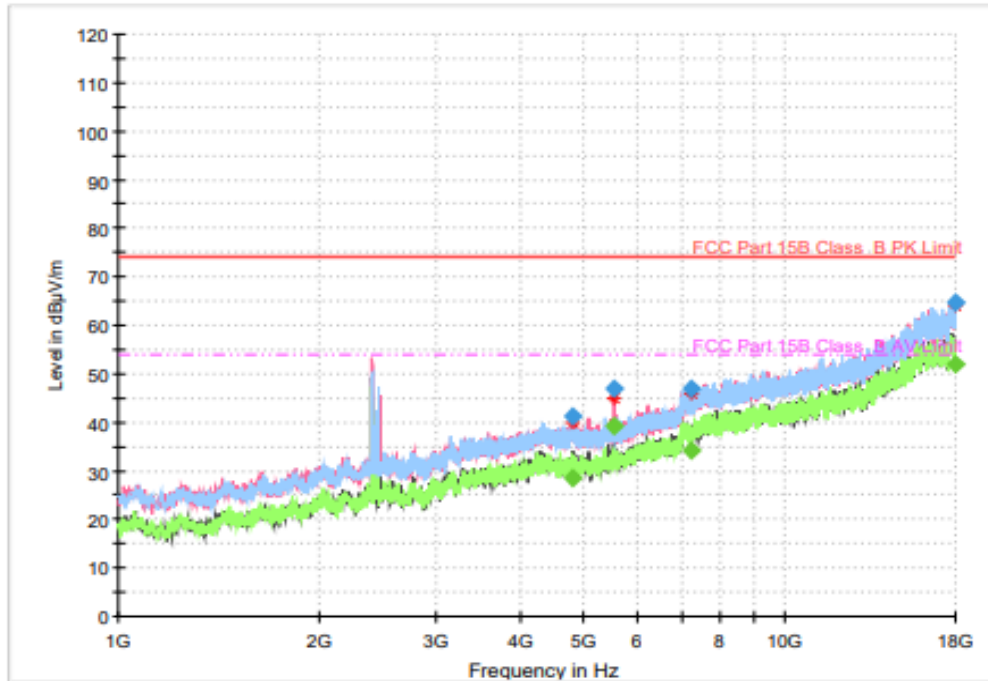


Below_1 GHz

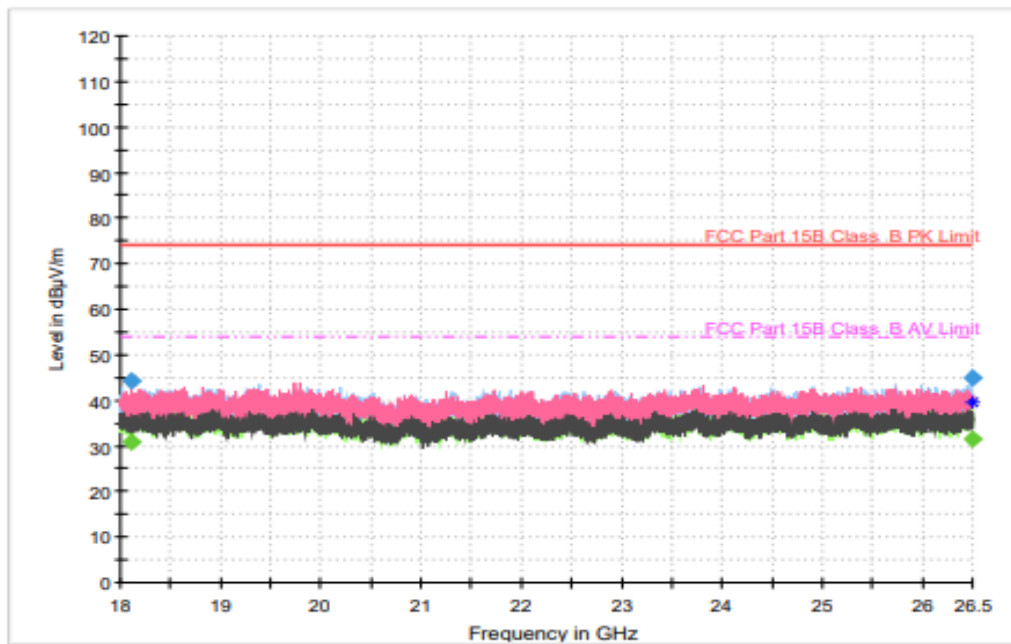




Above_1 GHz



Above_1 GHz





4.8 Power Line Conducted Emission

4.8.1 Test procedure

ANSI C63.10-2020 Clause 6.2

4.8.2 Limit

§15.207 (a)

Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

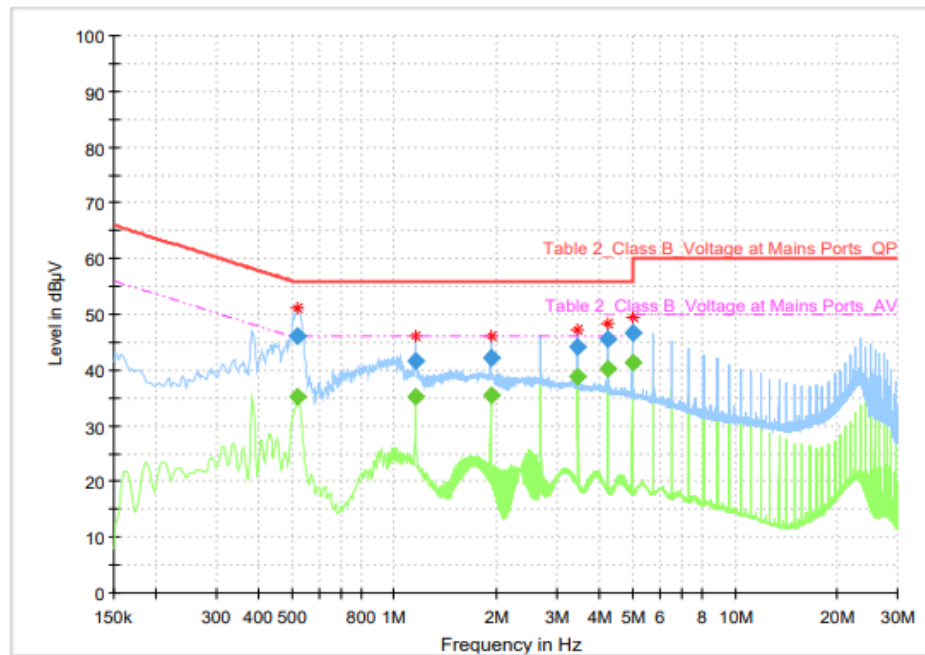
*Decreases with the logarithm of the frequency.



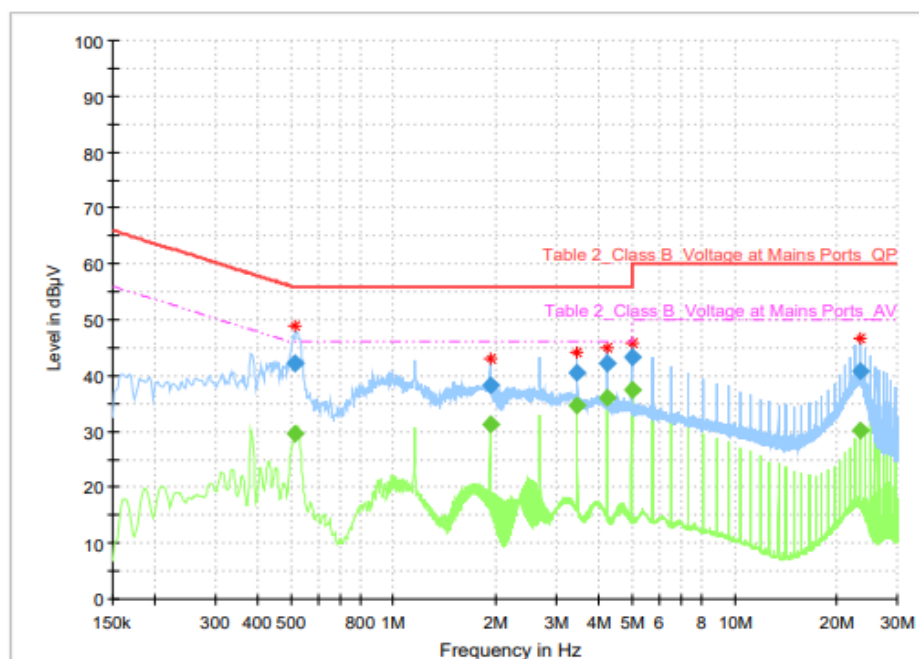
4.8.3 Test data

Result : Pass

L-Line Conducted Emission



N-Line Conducted Emission





L-Line Conducted Emission

Frequency (MHz)	Reading (dBuV/m)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
0.519	36.06	QP	10.00	46.06	56.00	9.94	-
	25.23	AVG		35.23	46.00	10.77	
1.151	31.96	QP	9.80	41.76	56.00	14.24	-
	25.43	AVG		35.23	46.00	10.77	
1.919	32.24	QP	9.80	42.04	56.00	13.96	-
	25.79	AVG		35.59	46.00	10.41	
3.455	34.33	QP	9.80	44.13	56.00	11.87	-
	28.90	AVG		38.70	46.00	7.30	
4.225	35.84	QP	9.80	45.64	56.00	10.36	-
	30.47	AVG		40.27	46.00	5.73	
4.992	36.87	QP	9.80	46.67	56.00	9.33	-
	31.59	AVG		41.39	46.00	4.61	

N-Line Conducted Emission

Frequency (MHz)	Reading (dBuV/m)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)	note
0.515	32.12	QP	10.00	42.12	56.00	13.88	-
	19.60	AVG		29.60	46.00	16.40	
1.919	28.46	QP	9.80	38.26	56.00	17.74	-
	21.49	AVG		31.29	46.00	14.71	
3.455	30.81	QP	9.80	40.61	56.00	15.39	-
	24.73	AVG		34.53	46.00	11.47	
4.225	32.45	QP	9.80	42.25	56.00	13.75	-
	26.35	AVG		36.15	46.00	9.85	
4.992	33.50	QP	9.80	43.30	56.00	12.70	-
	27.51	AVG		37.31	46.00	8.69	
23.424	30.78	QP	10.10	40.88	60.00	19.12	-
	20.14	AVG		30.24	50.00	19.76	



5. Used equipment

	Description	Model Name	Manufacturer	Serial Number	Next Cal
■	SIGNAL GENERATOR	SMB100A	ROHDE & SCHWARZ	180607	2026-02-24
■	SPECTRUM ANALYZER	FSV40-N	ROHDE & SCHWARZ	101303	2026-02-24
■	DC BLOCK	PDCB-00012650-SMSF-2	PSATEK INC.	-	2026-03-04
■	DC POWER SUPPLY	E3632A	AGILENT	MY40011056	2026-01-22
■	LOOP ANTENNA	HFH2-Z2	ROHDE & SCHWARZ	100271	2027-03-04
■	TRILOG BROADBAND ANTENNA	VULB 9162	SCHWARZBECK	120	2026-12-09
■	EMI TEST RECEIVER	ESR26	ROHDE & SCHWARZ	101462	2026-03-24
■	SIGNAL CONDITIONING UNIT	SCU 08	ROHDE & SCHWARZ	100746	2026-03-24
■	DOUBLE-RIDGED HORN ANTENNA	HF907	ROHDE & SCHWARZ	102556	2026-07-28
■	HIGH PASS FILTER	WT-A1698-HS	WT MICROWAVE	WT171201-6-4	2026-02-24
■	SIGNAL CONDITIONING UNIT	SCU18	ROHDE & SCHWARZ	102342	2026-03-24
■	EMI TEST RECEIVER	ESR26	ROHDE & SCHWARZ	101461	2026-03-24
■	HORN ANTENNA	LB-42-10-C-KF	A-INFOMW	J202024625	2026-03-07
■	RF PRE AMPLIFIER	AMF-4F-18265-35-8P-1	MITEQ	771846	2026-03-06
■	TWO-LINE V-NETWORK	ENV216	ROHDE & SCHWARZ	102195	2026-09-04
■	EMI TEST RECEIVER	ESR7	ROHDE & SCHWARZ	102034	2026-03-24

- END OF REPORT.