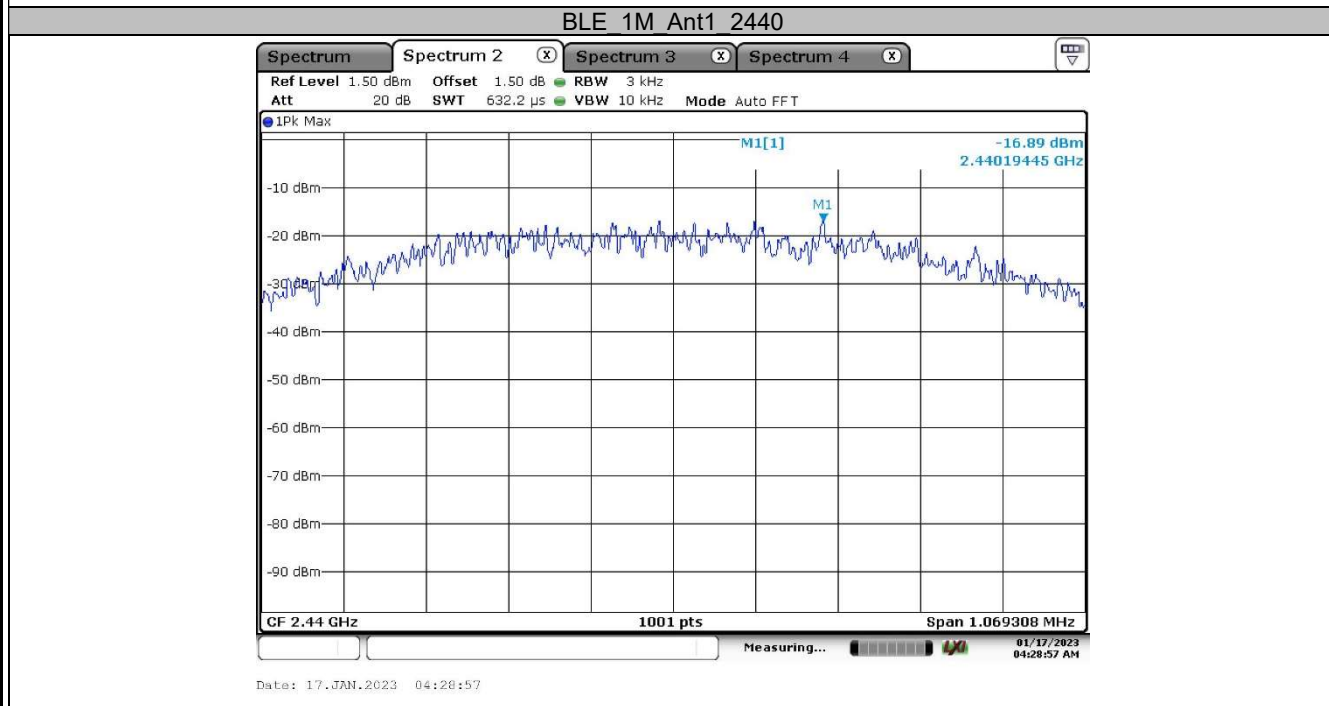
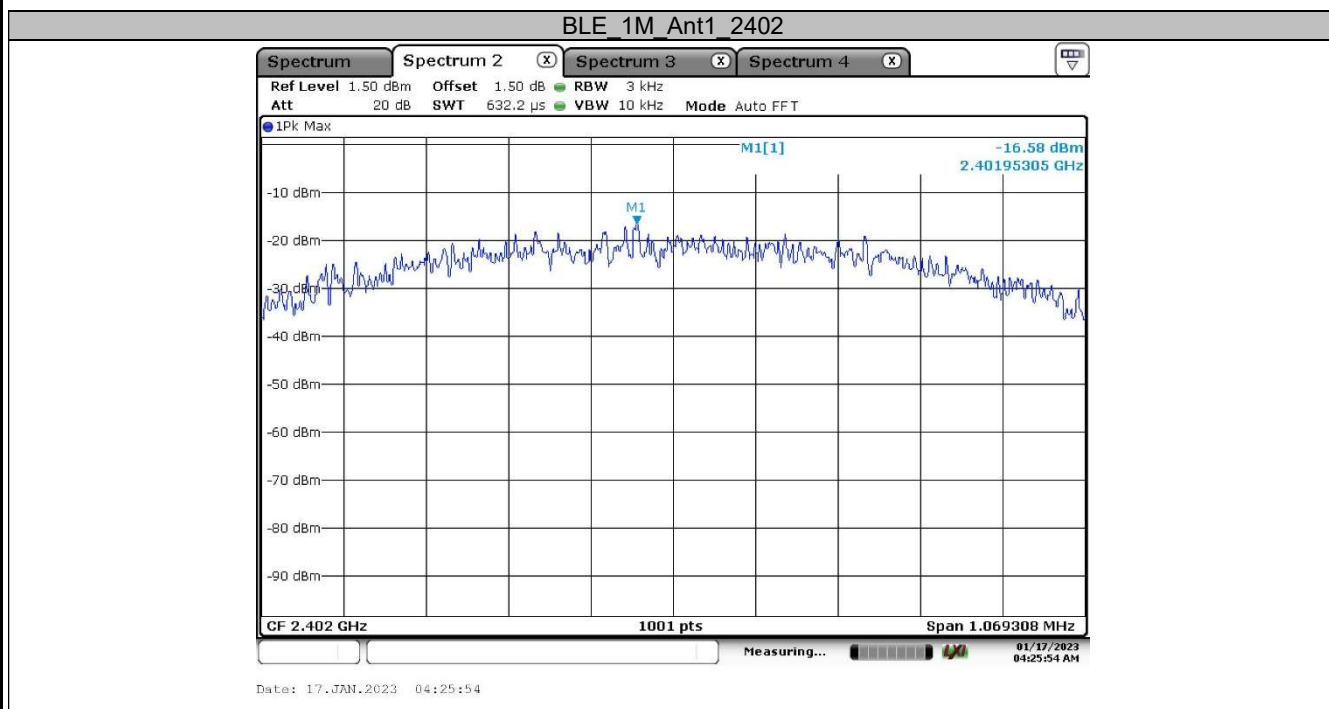


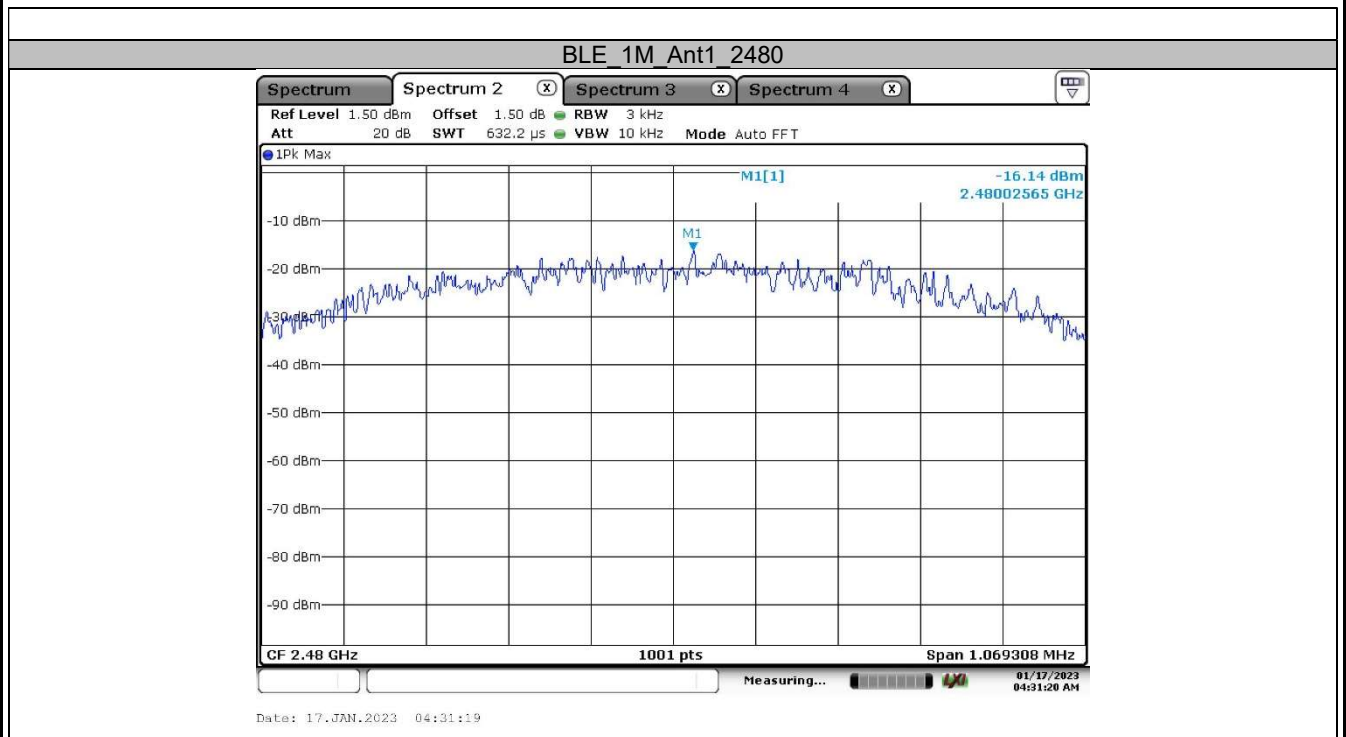
Appendix B: Test Results of Bluetooth Low Energy

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Appendix B.1: Test Results of Conducted Power Spectral Density

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.58	≤8	PASS
		2440	-16.89	≤8	PASS
		2480	-16.14	≤8	PASS



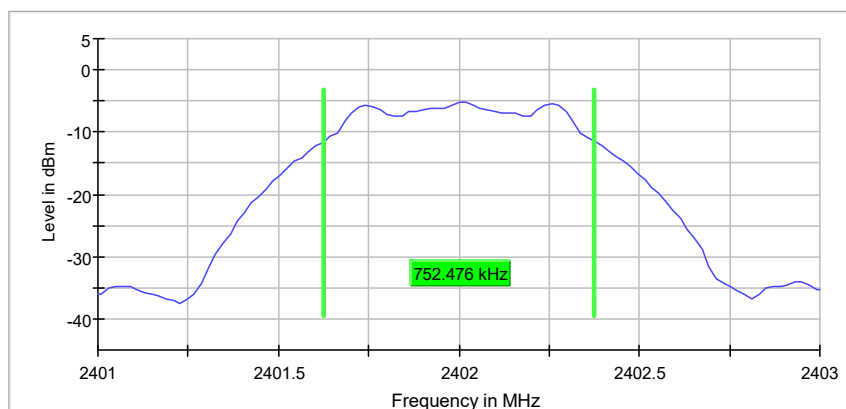


Appendix B.2: Test Results of 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	RBW[KHz]	VBW[KHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.752	100	300	2401.624	2402.376	0.5	PASS
		2440	0.752	100	300	2439.624	2440.376	0.5	PASS
		2480	0.713	100	300	2479.643	2480.356	0.5	PASS

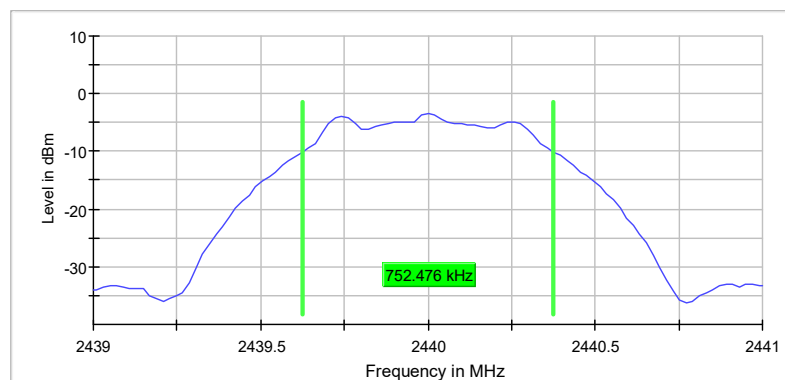
BLE_1M Ant1 2402

6 dB Bandwidth



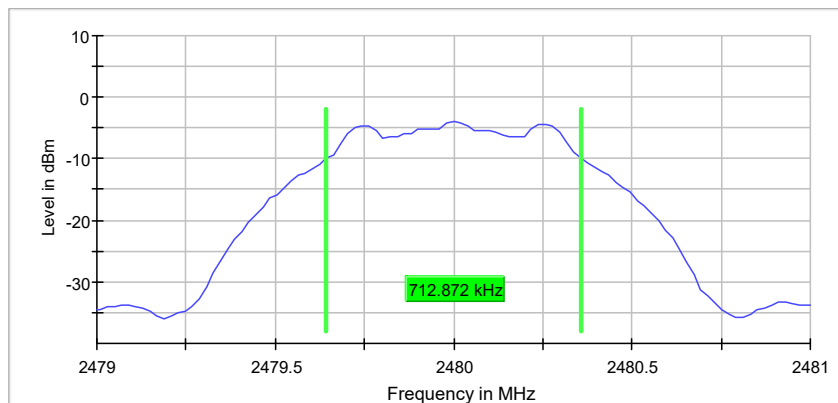
BLE_1M Ant1 2440

6 dB Bandwidth



BLE_1M_Ant1_2480

6 dB Bandwidth

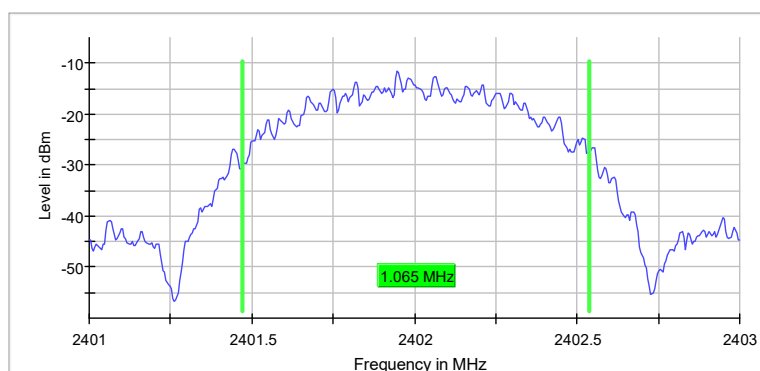


Appendix B.3: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	RBW[KHz]	VBW[KHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0650	30	100	2401.4725	2402.5375	---	PASS
		2440	1.0750	30	100	2439.4252	2440.5275	---	PASS
		2480	1.0700	30	100	2479.4575	2480.5275	---	PASS

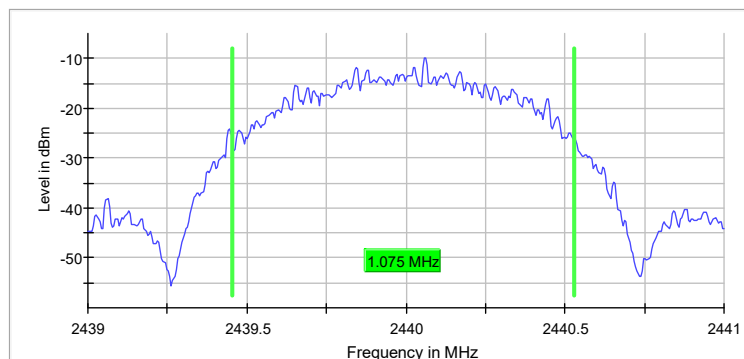
BLE_1M_Ant1_2402

99 % Bandwidth



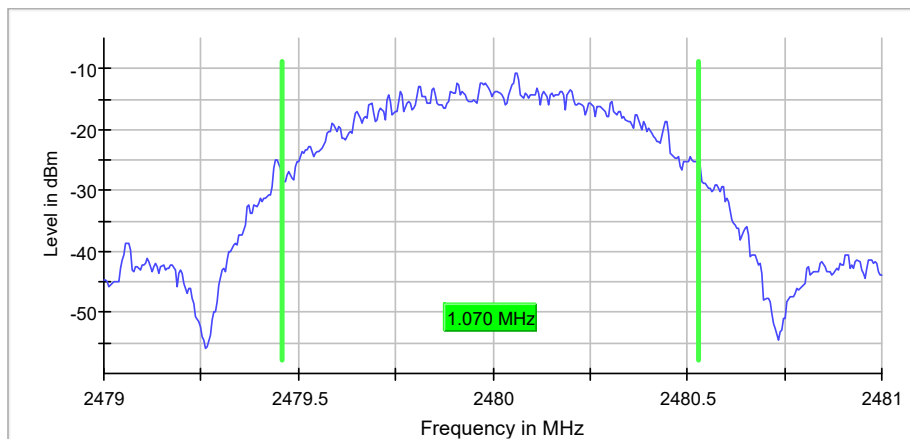
BLE_1M_Ant1_2440

99 % Bandwidth



BLE_1M_Ant1_2480

99 % Bandwidth

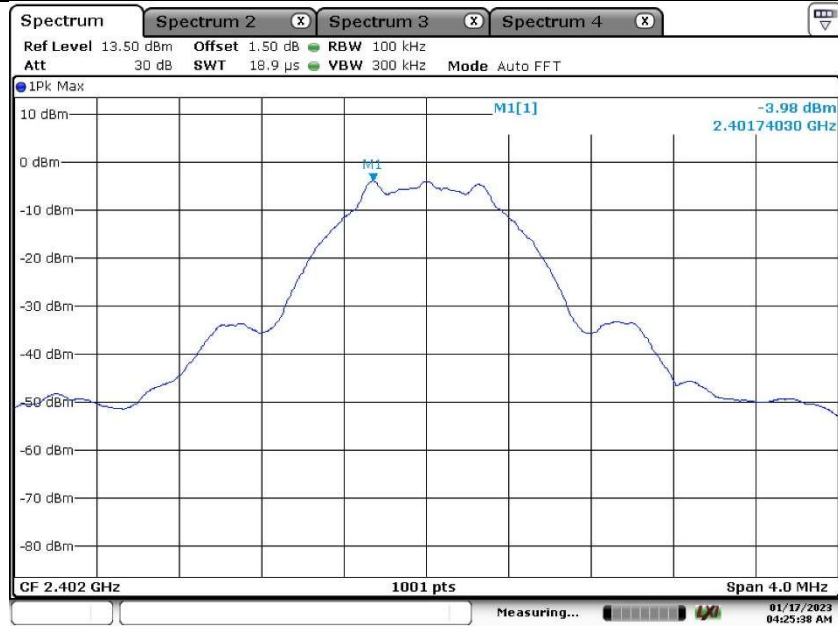


Appendix B.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Conducted Spurious Emission

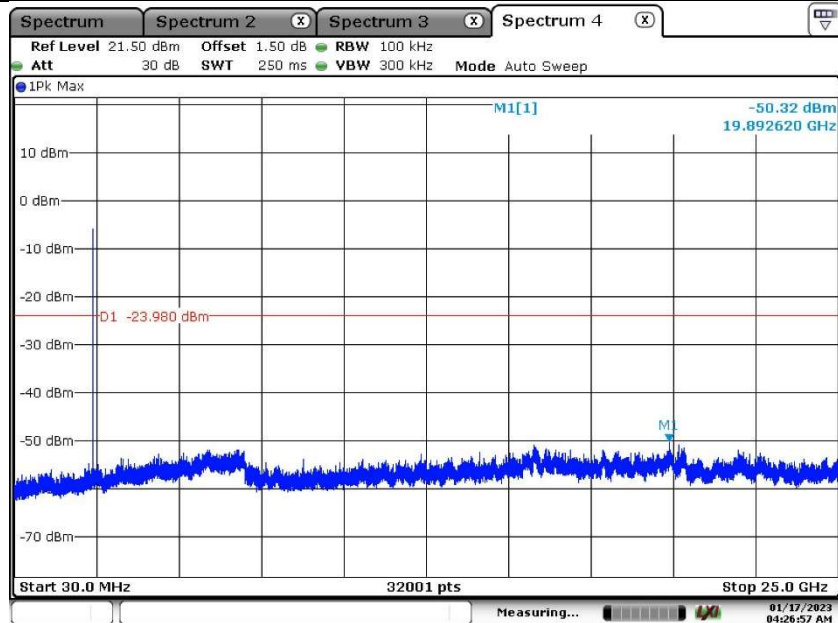
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	13.50	-3.98	---	PASS
			30~25000	21.50	-50.32	≤-23.98	PASS
		2440	Reference	13.50	-3.15	---	PASS
			30~25000	21.50	-50.65	≤-23.15	PASS
		2480	Reference	13.50	-3.12	---	PASS
			30~25000	21.50	-49.41	≤-23.12	PASS

BLE_1M_Ant1_2402_0~Reference



Date: 17.JAN.2023 04:25:37

BLE_1M_Ant1_2402_30~25000

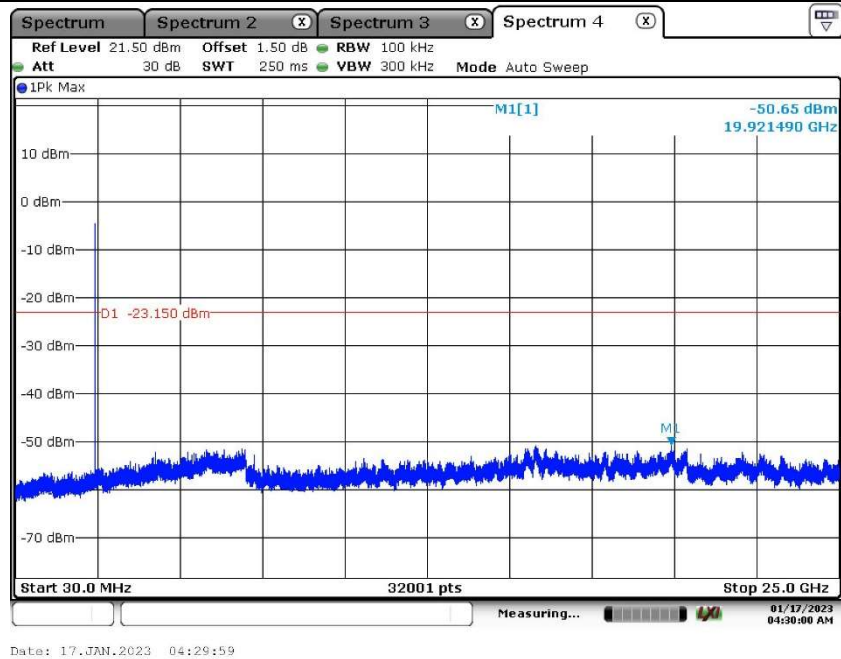


Date: 17.JAN.2023 04:26:57

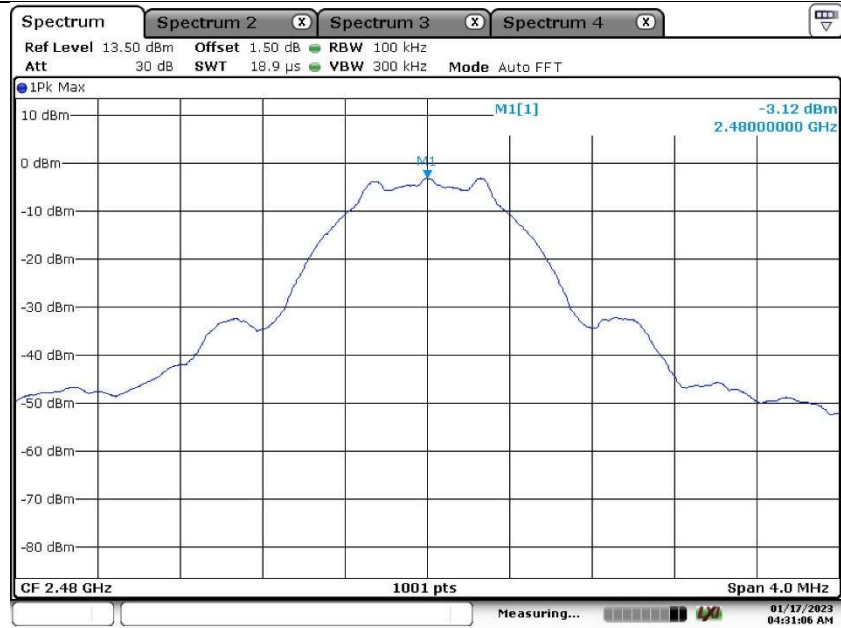
BLE_1M_Ant1_2440_0~Reference



BLE 1M Ant1 2440 30~25000

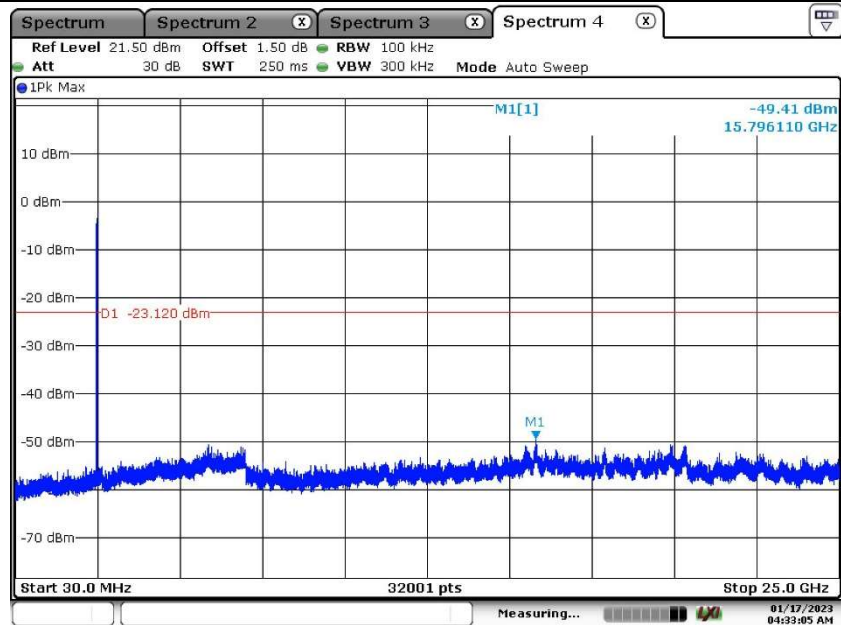


BLE 1M Ant1 2480 0~Reference



Date: 17.JAN.2023 04:31:06

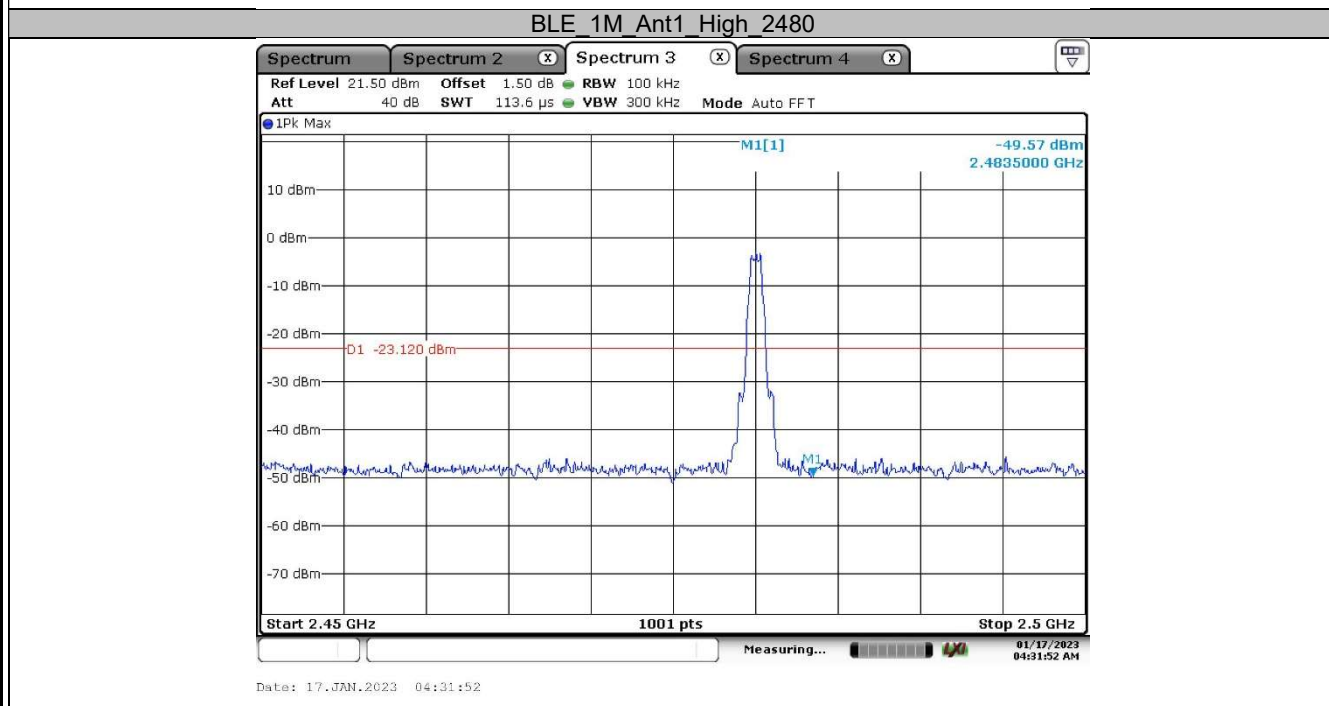
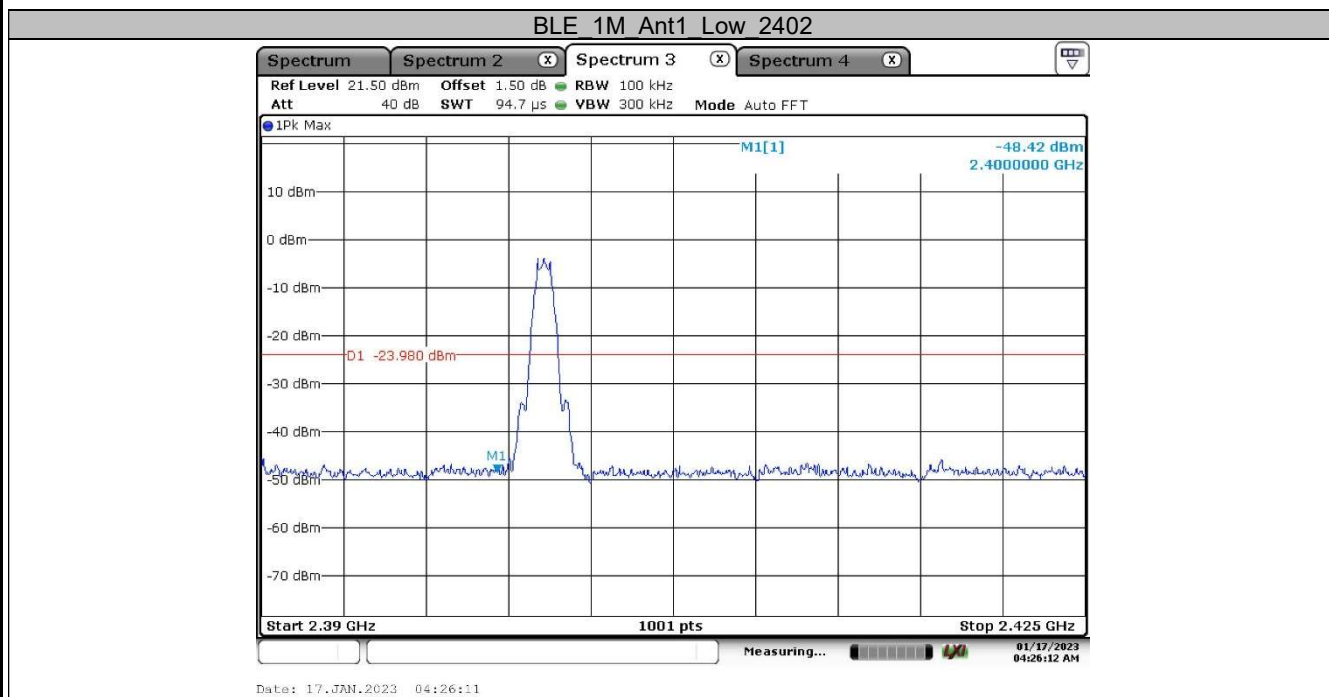
BLE 1M Ant1 2480 30~25000



Date: 17.JAN.2023 04:33:05

Band Edge

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	21.50	-48.42	≤-23.98	PASS
		High	2480	21.50	-49.57	≤-23.12	PASS



Appendix B.5: Test Results of Radiated Spurious Emissions

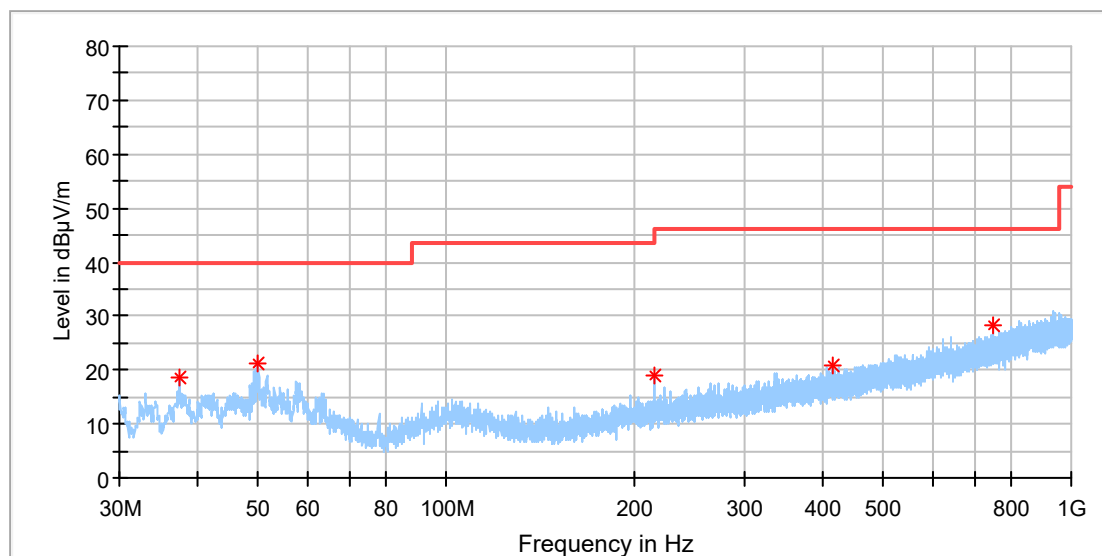
Note:

- 1) This testing was carried out on different modulations, but only the worst case was presented in this report.
- 2) Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30 MHz to 1GHz

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

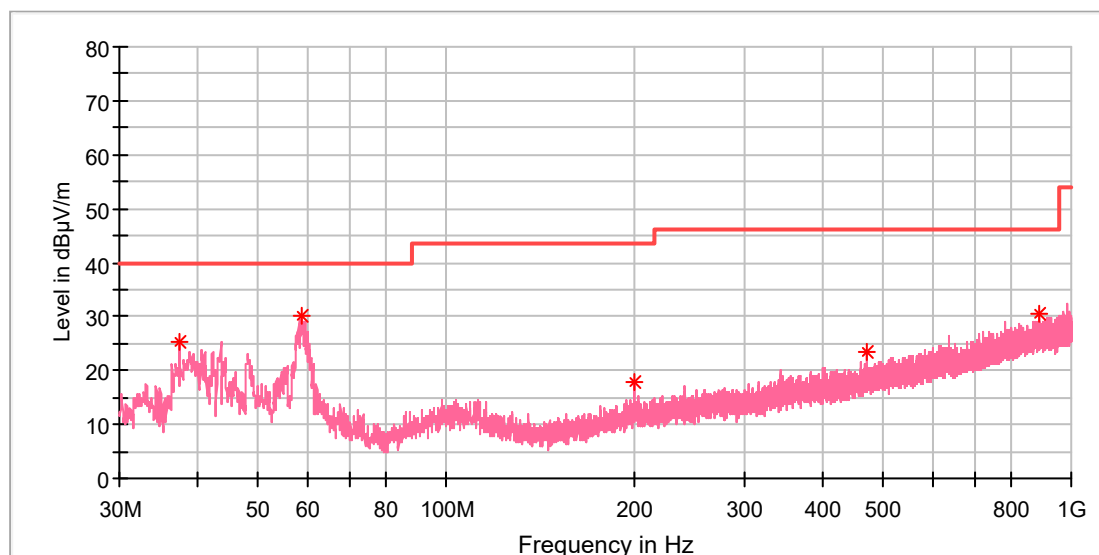


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.420500	18.56	40.00	21.44	100.0	H	194.0	-21.0
50.030500	21.26	40.00	18.74	100.0	H	9.0	-18.3
215.949000	18.92	43.50	24.58	100.0	H	278.0	-18.7
415.963000	20.93	46.00	25.07	100.0	H	258.0	-13.5
747.800000	28.26	46.00	17.74	100.0	H	188.0	-7.2

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

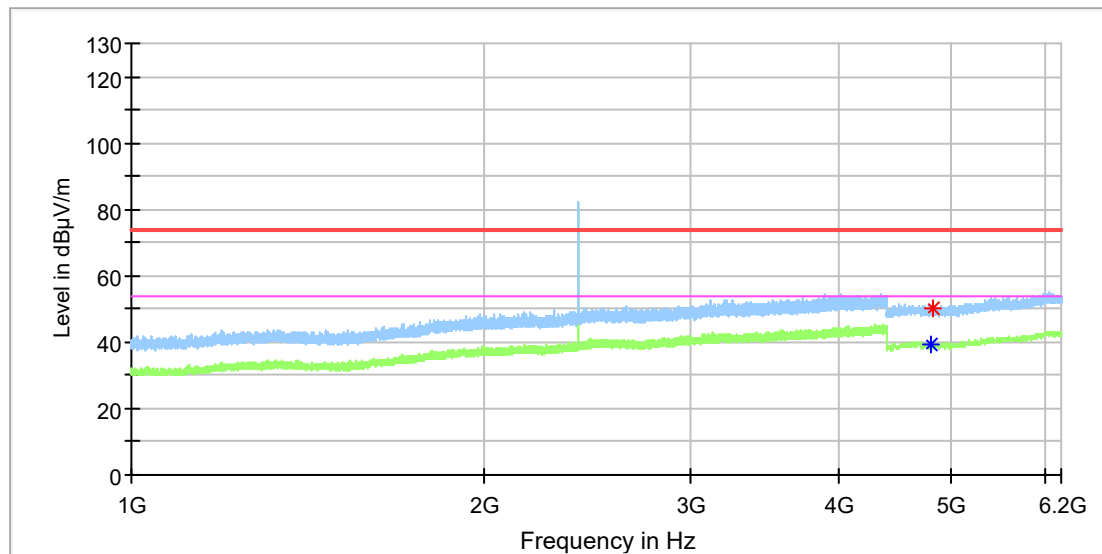
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.517500	25.40	40.00	14.60	100.0	V	201.0	-21.0
58.809000	30.15	40.00	9.85	100.0	V	285.0	-18.8
199.992500	17.92	43.50	25.58	100.0	V	264.0	-19.0
470.816500	23.50	46.00	22.50	100.0	V	264.0	-12.4
890.778000	30.69	46.00	15.31	100.0	V	264.0	-5.1

1GHz-18GHz

Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

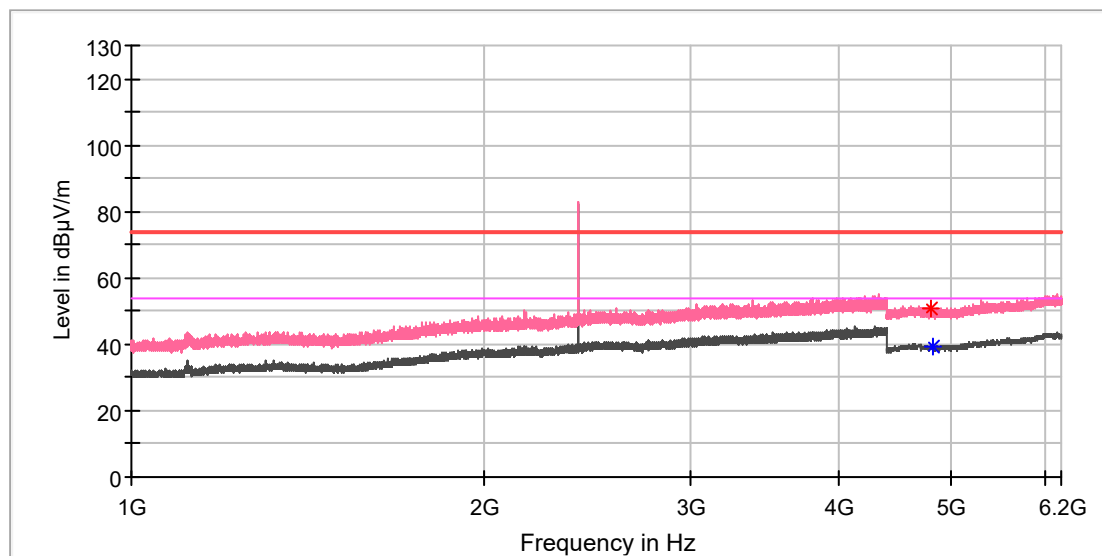


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4811.000000	---	39.33	54.00	14.67	100.0	H	53.0	11.8
4811.500000	50.23	---	74.00	23.77	100.0	H	268.0	11.8

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

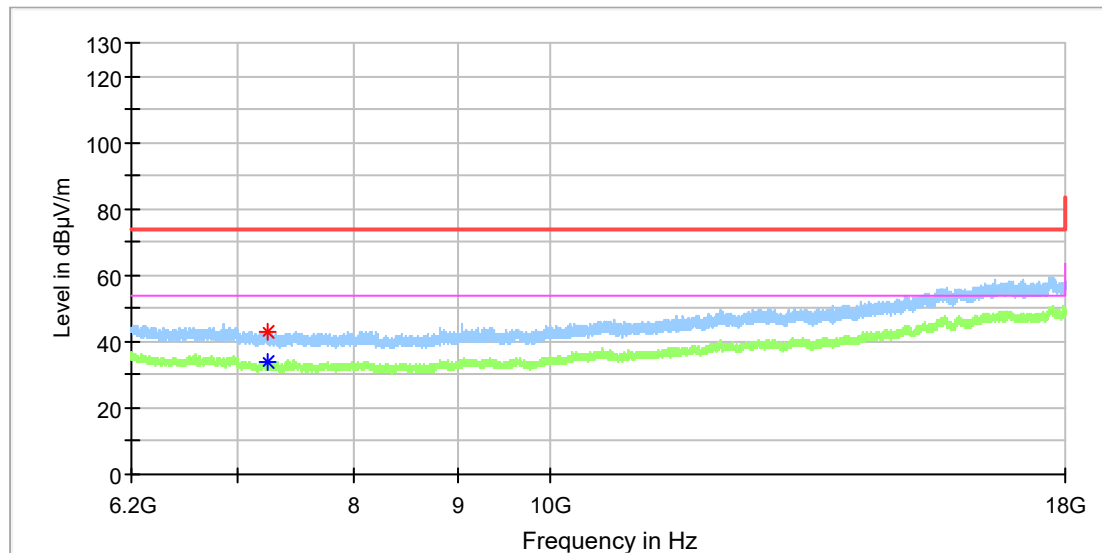


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4804.000000	50.84	---	74.00	23.16	100.0	V	43.0	11.8
4814.500000	---	39.58	54.00	14.42	100.0	V	72.0	11.8

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

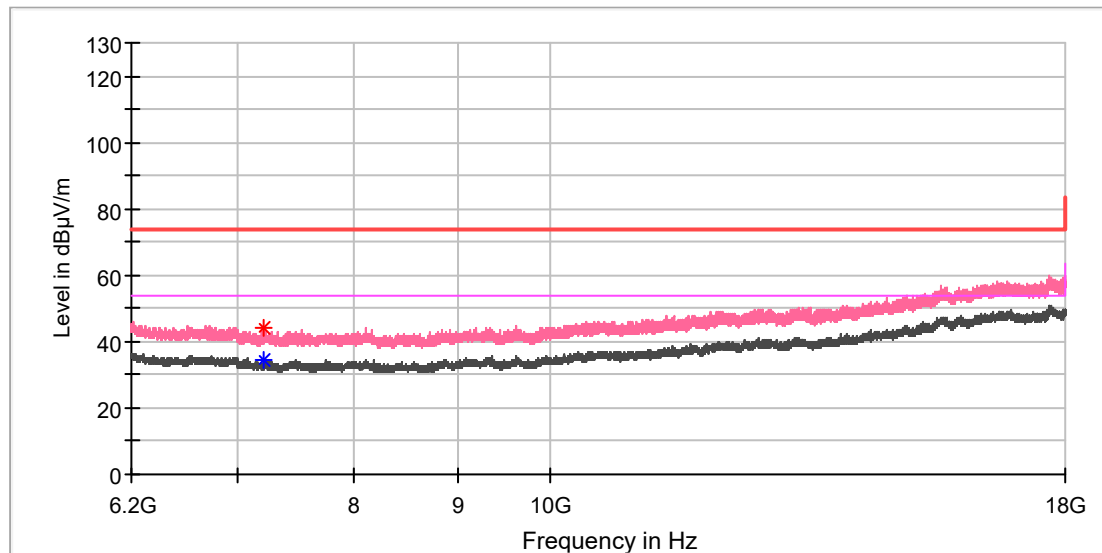


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7236.925000	---	33.71	54.00	20.29	100.0	H	325.0	8.6
7240.366667	43.01	---	74.00	30.99	100.0	H	0.0	8.6

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

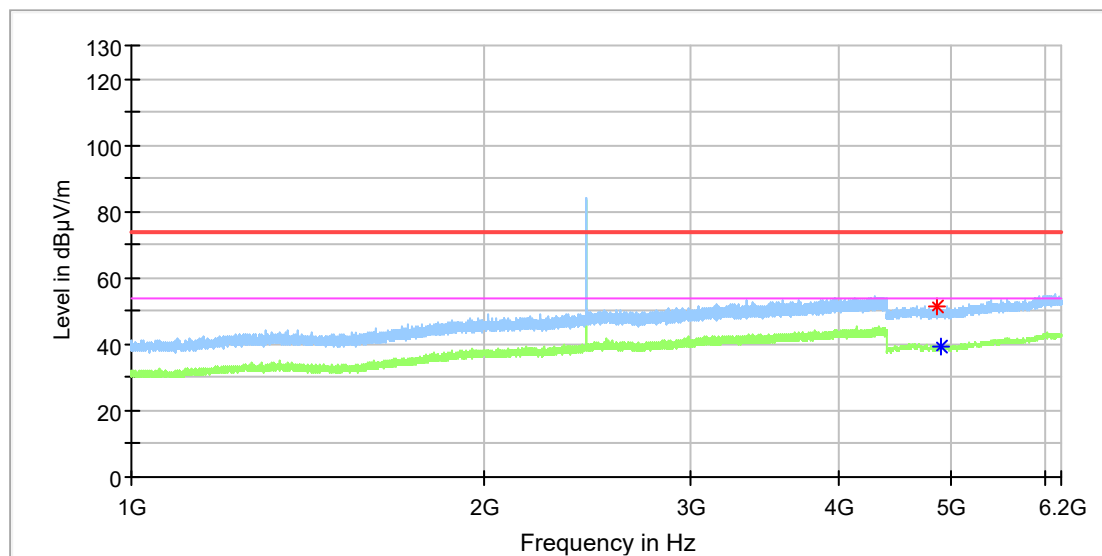


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7214.308333	---	34.37	54.00	19.63	100.0	V	253.0	8.7
7216.275000	44.23	---	74.00	29.77	100.0	V	277.0	8.7

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

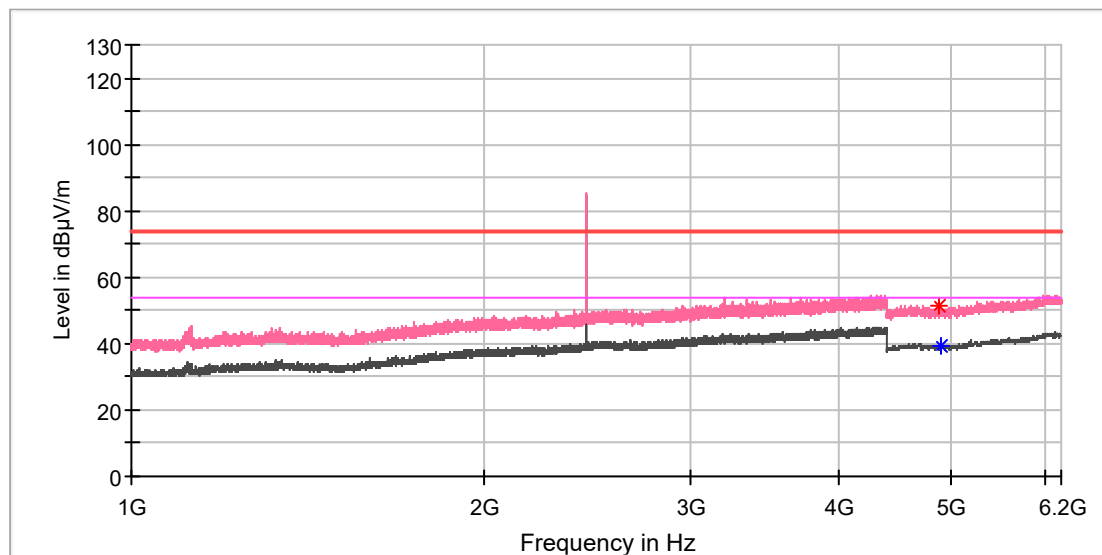


Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4863.000000	51.42	---	74.00	22.58	100.0	H	11.0	11.8
4904.000000	---	39.41	54.00	14.59	100.0	H	187.0	11.8

EUT Information

EUT Name: Sekstant BLE Transceiver
Model: 839215ID182
Test Mode: BLE 1M_Mid channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: DC 12V
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

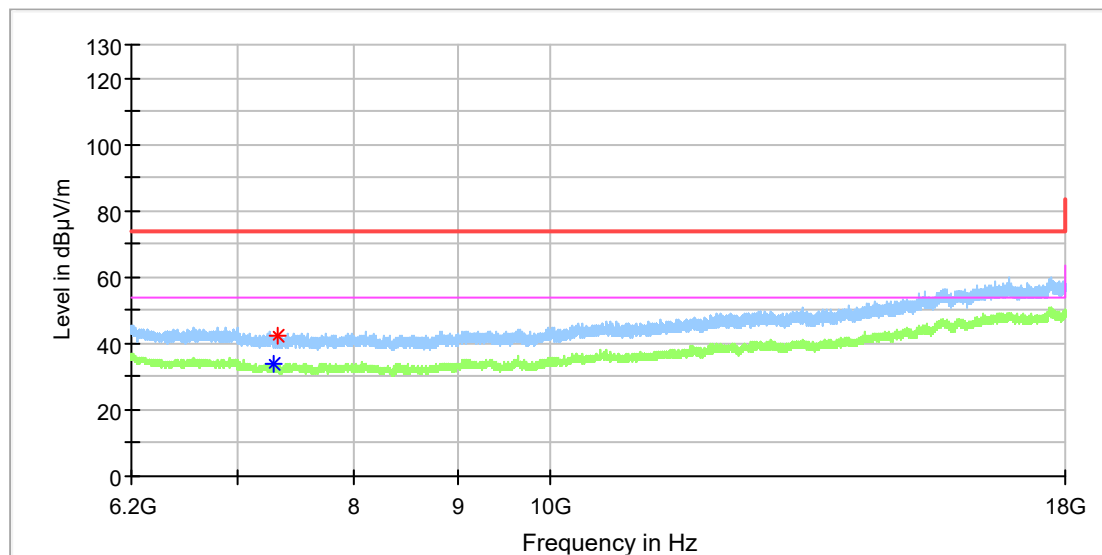


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4870.000000	51.22	---	74.00	22.78	100.0	V	46.0	11.8
4902.500000	---	39.45	54.00	14.55	100.0	V	170.0	11.8

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

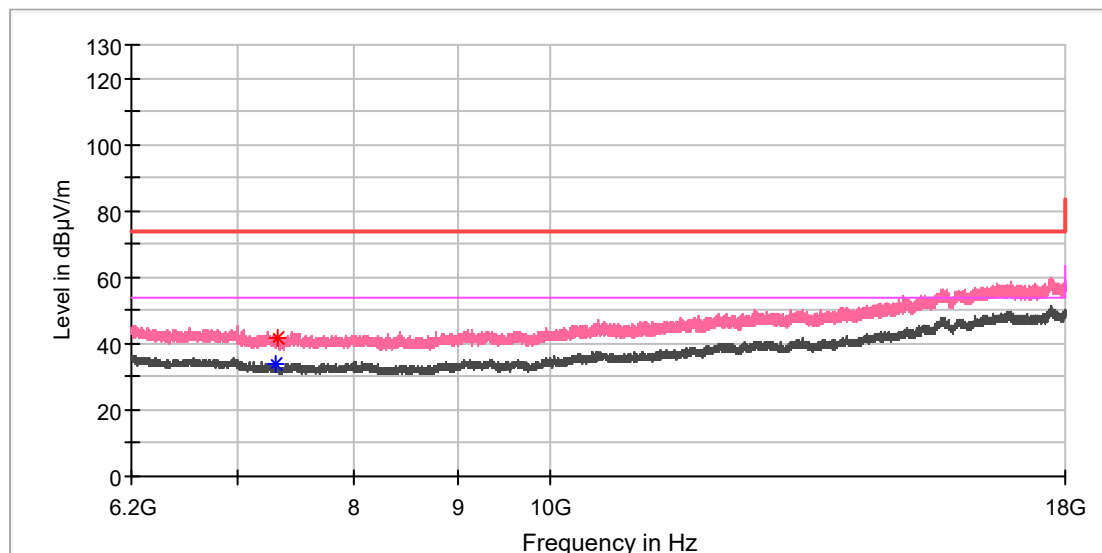


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7288.550000	---	34.13	54.00	19.87	100.0	H	5.0	8.4
7329.850000	42.32	---	74.00	31.68	100.0	H	318.0	8.1

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

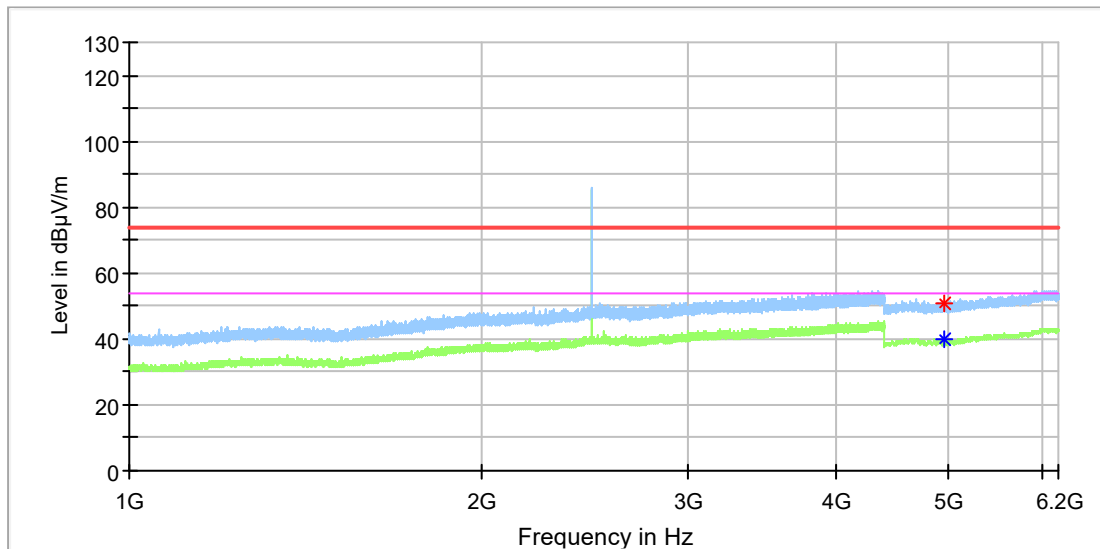


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7314.608333	---	33.73	54.00	20.27	100.0	V	75.0	8.2
7319.033333	41.68	---	74.00	32.32	100.0	V	89.0	8.2

EUT Information

EUT Name: Sekstant BLE Transceiver
Model: 839215ID182
Test Mode: BLE 1M_High channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: DC 12V
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

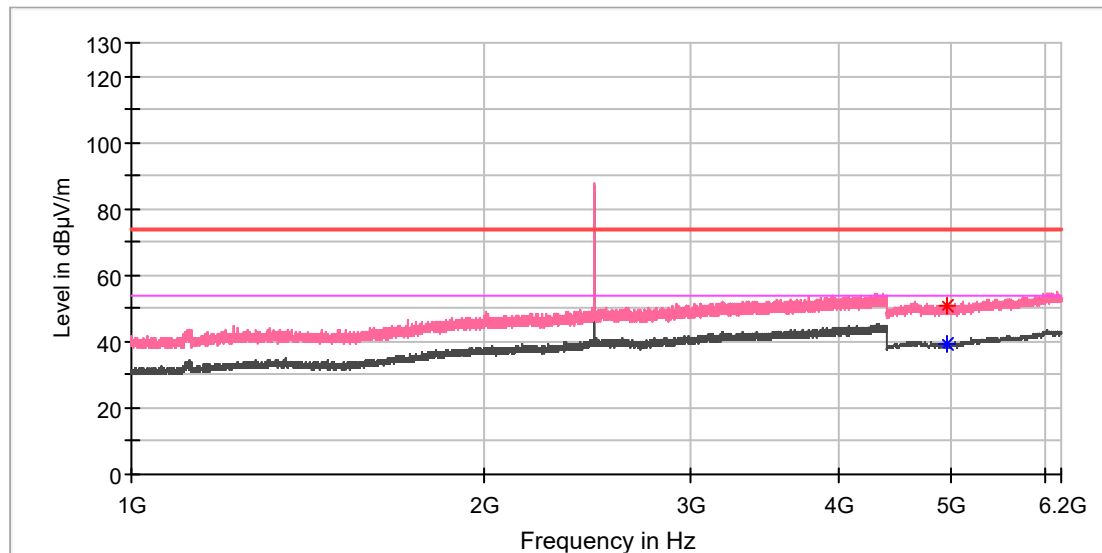


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4951.500000	50.77	---	74.00	23.23	100.0	H	83.0	11.8
4951.500000	---	39.66	54.00	14.34	100.0	H	83.0	11.8

EUT Information

EUT Name: Sekstant BLE Transceiver
Model: 839215ID182
Test Mode: BLE 1M_High channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: DC 12V
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

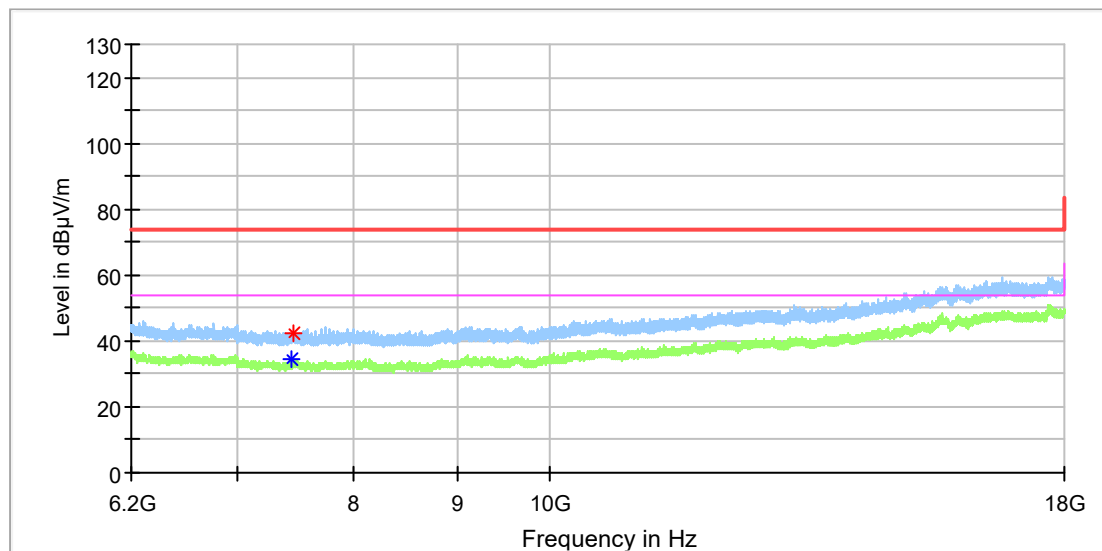


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4956.000000	---	39.54	54.00	14.46	100.0	V	251.0	11.8
4959.000000	50.84	---	74.00	23.16	100.0	V	55.0	11.8

EUT Information

EUT Name: Sekstant BLE Transceiver
Model: 839215ID182
Test Mode: BLE 1M_High channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: DC 12V
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

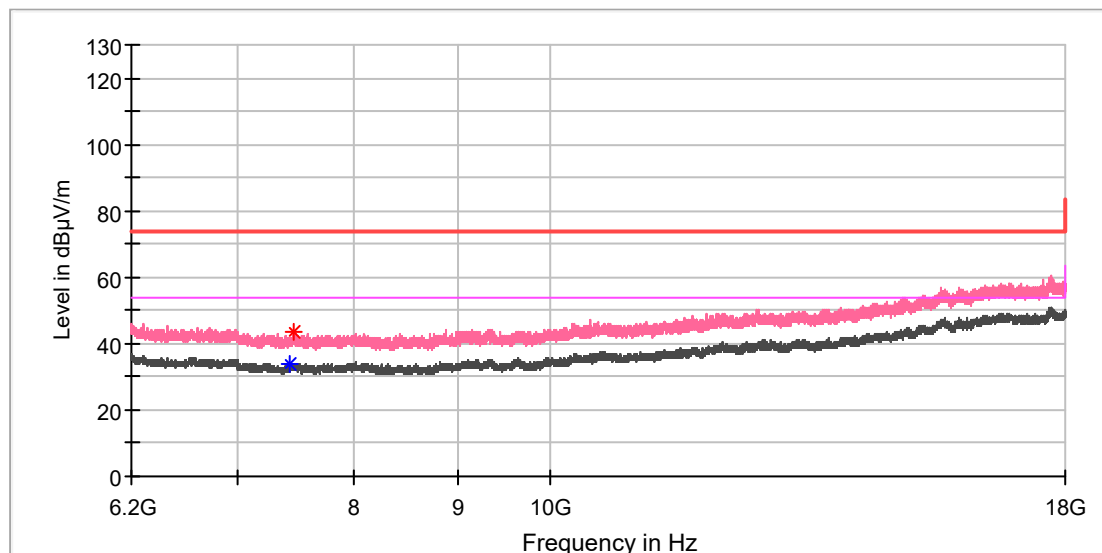


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.000000	---	34.27	54.00	19.73	100.0	H	264.0	8.4
7467.025000	42.61	---	74.00	31.39	100.0	H	189.0	8.6

EUT Information

EUT Name: Sekstant BLE Transceiver
Model: 839215ID182
Test Mode: BLE 1M_High channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: DC 12V
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



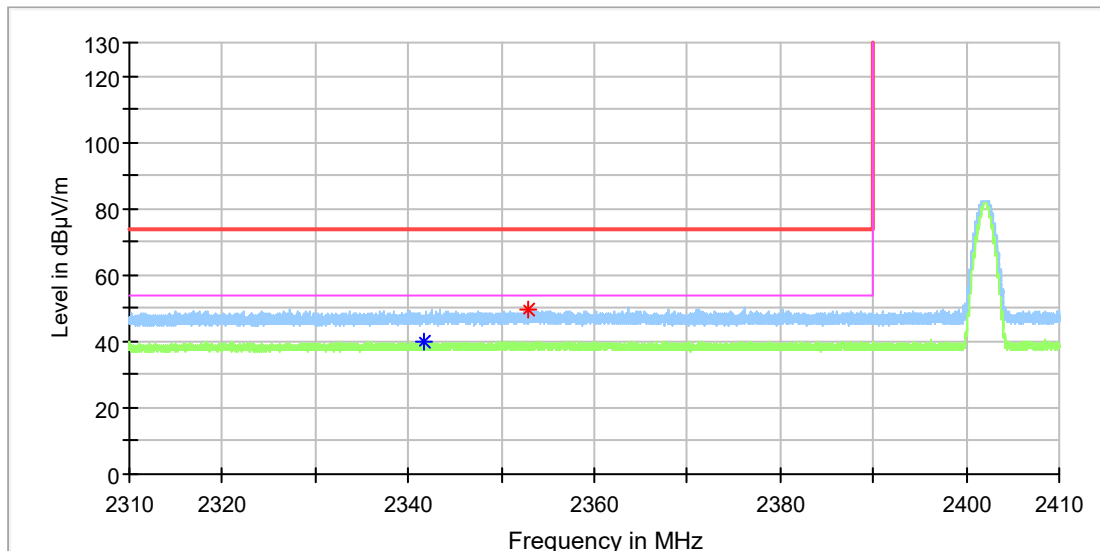
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7435.558333	---	33.74	54.00	20.26	100.0	V	309.0	8.4
7469.483333	43.57	---	74.00	30.43	100.0	V	59.0	8.6

Appendix B.6: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

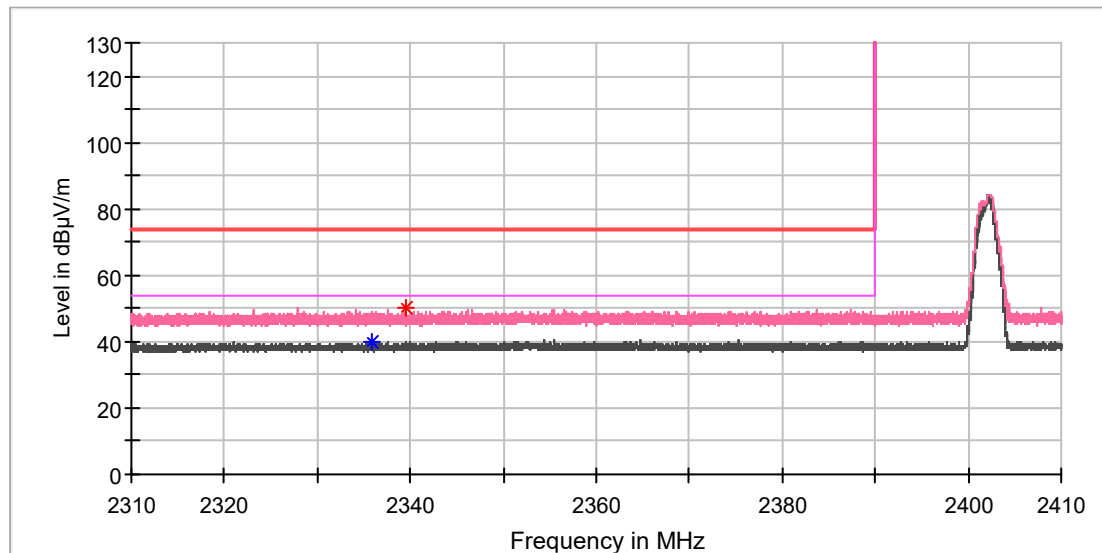


Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2341.580000	---	39.71	54.00	14.29	100.0	H	4.0	6.8
2352.915000	49.37	---	74.00	24.63	100.0	H	297.0	6.9

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

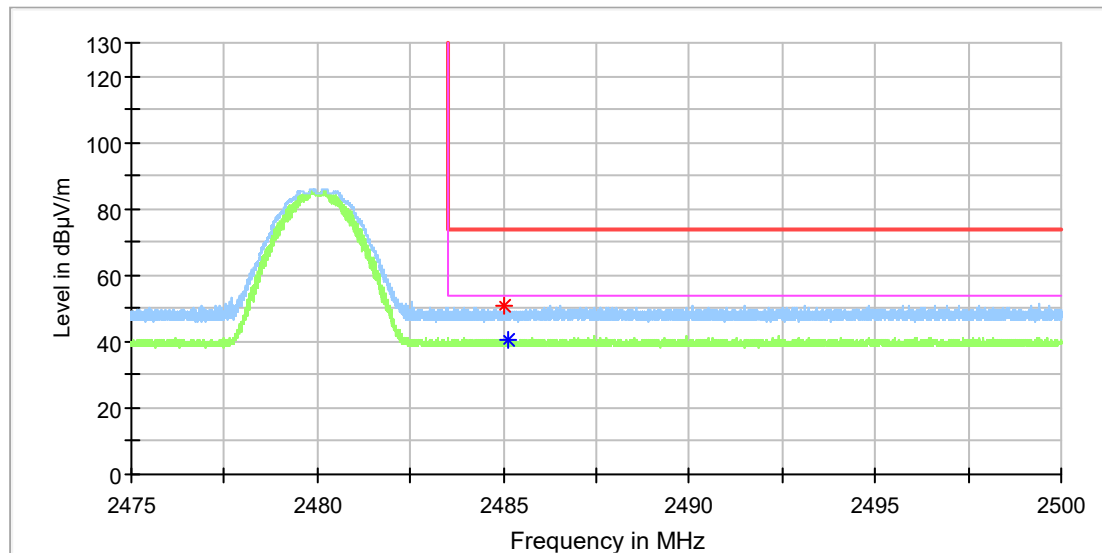


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2335.840000	---	39.77	54.00	14.23	100.0	V	253.0	6.8
2339.615000	50.24	---	74.00	23.76	100.0	V	138.0	6.8

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

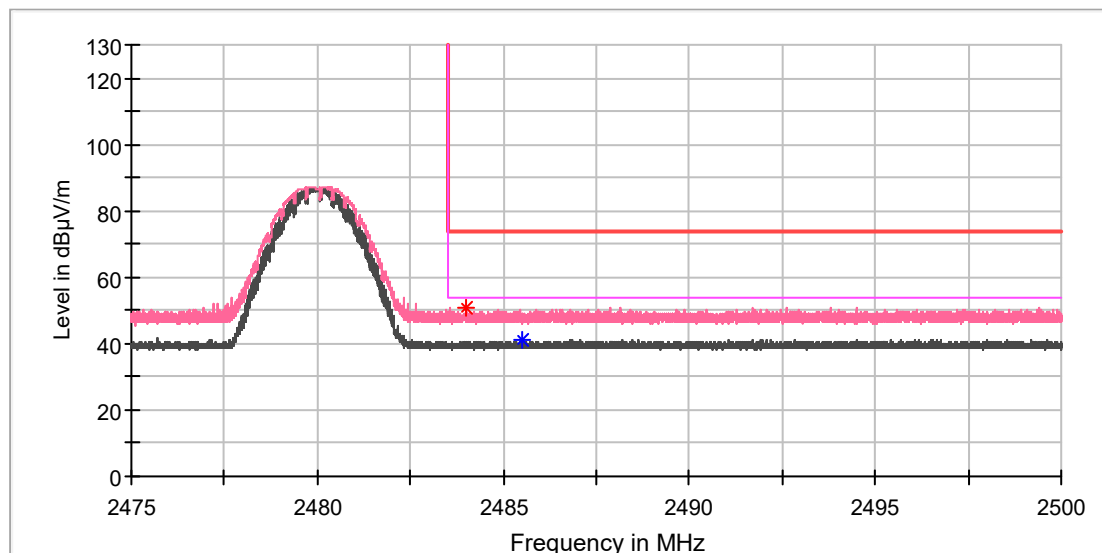


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.011250	51.05	---	74.00	22.95	100.0	H	42.0	7.4
2485.126250	---	40.42	54.00	13.58	100.0	H	240.0	7.4

EUT Information

EUT Name:	Sekstant BLE Transceiver
Model:	839215ID182
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	DC 12V
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
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Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.023750	50.82	---	74.00	23.18	100.0	V	232.0	7.4
2485.507500	---	40.91	54.00	13.09	100.0	V	111.0	7.4