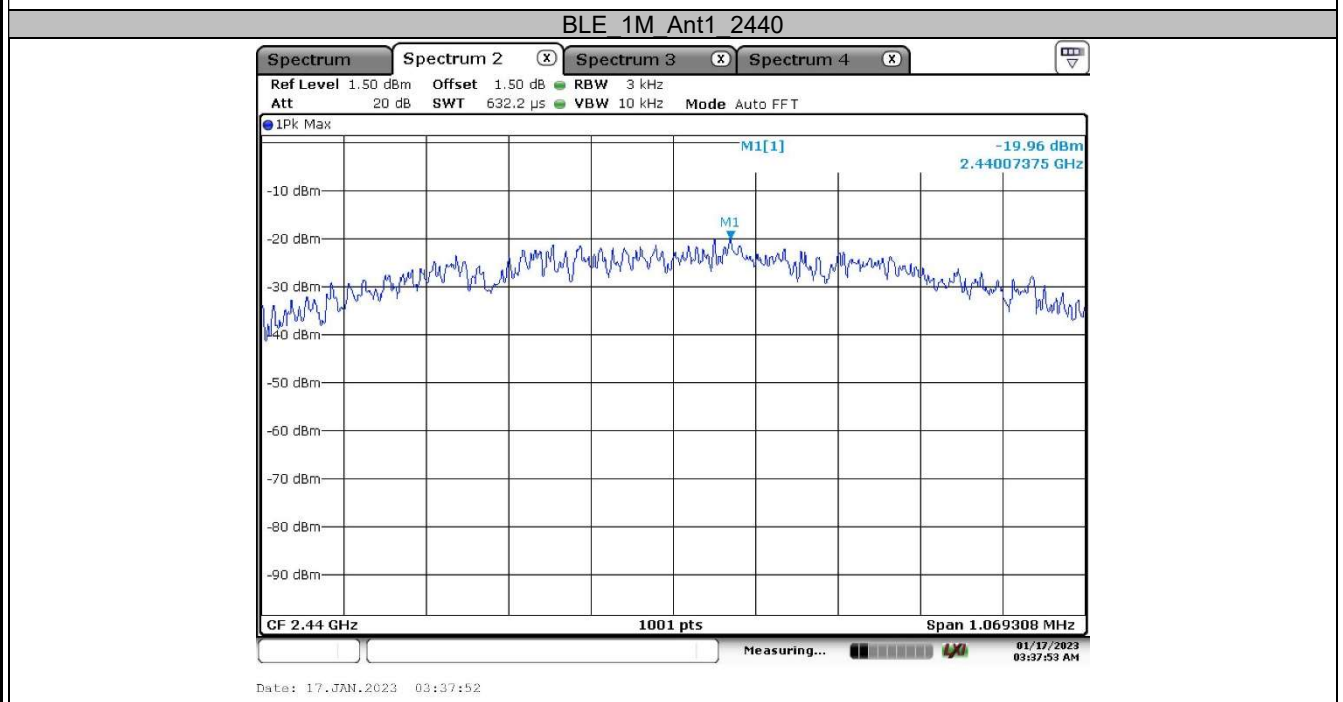
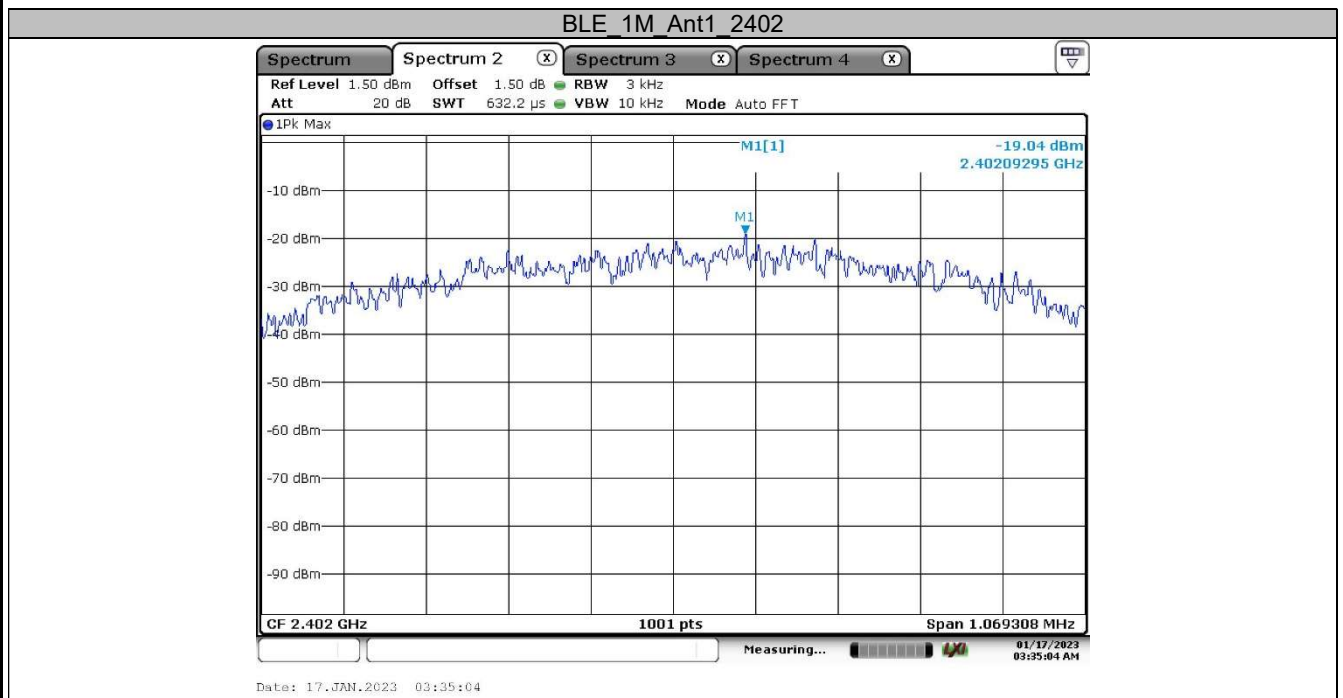


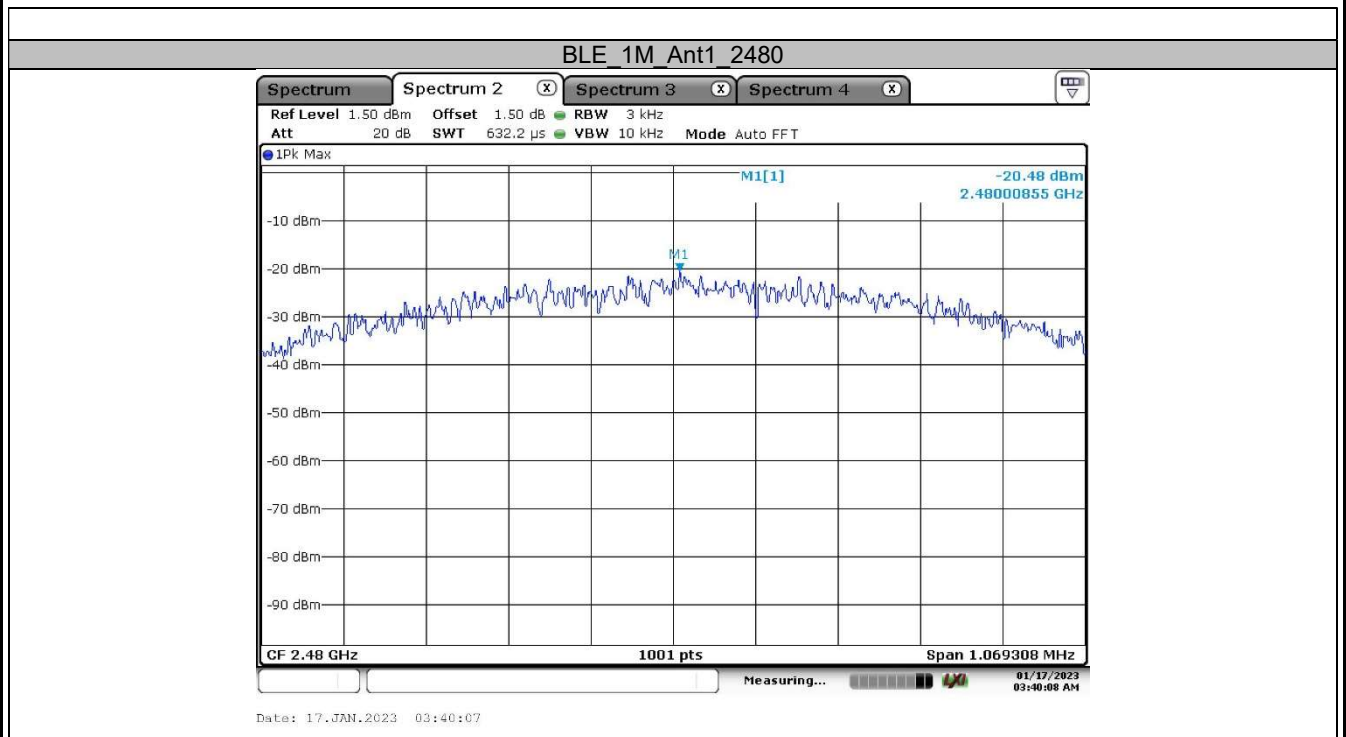
Appendix B: Test Results of Bluetooth Low Energy

APPENDIX B: TEST RESULTS OF BLUETOOTH LOW ENERGY	1
APPENDIX B.1: TEST RESULTS OF CONDUCTED POWER SPECTRAL DENSITY	2
APPENDIX B.2: TEST RESULTS OF 6dB BANDWIDTH.....	4
APPENDIX B.3: TEST RESULTS OF 99% BANDWIDTH	6
APPENDIX B.4: TEST RESULTS OF CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH.....	8
<i>Conducted Spurious Emission</i>	8
<i>Band Edge</i>	12
APPENDIX B.5: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS	13
30 MHz to 1GHz.....	13
1GHz-18GHz.....	15
APPENDIX B.6: TEST RESULTS OF RADIATED EMISSIONS IN RESTRICTED BANDS	27

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	-19.04	≤8	PASS
		2440	-19.96	≤8	PASS
		2480	-20.48	≤8	PASS

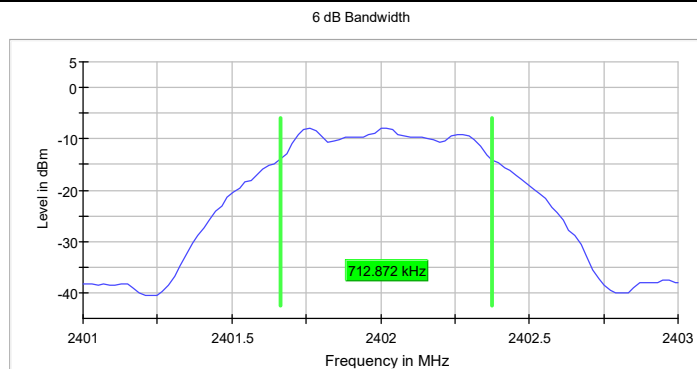




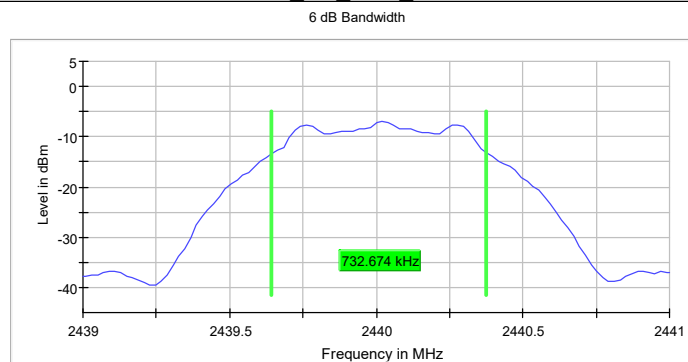
Appendix B.2: Test Results of 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	RBW[KHz]	VBW[KHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.713	100	300	2401.663	2402.376	0.5	PASS
		2440	0.733	100	300	2439.643	2440.376	0.5	PASS
		2480	0.733	100	300	2479.663	2480.396	0.5	PASS

BLE_1M_Ant1_2402

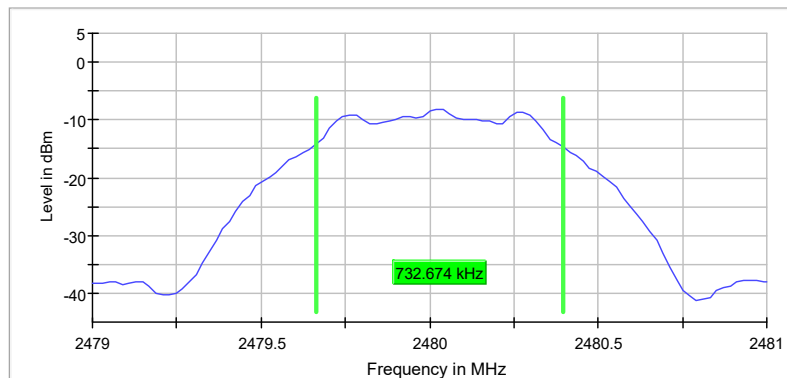


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

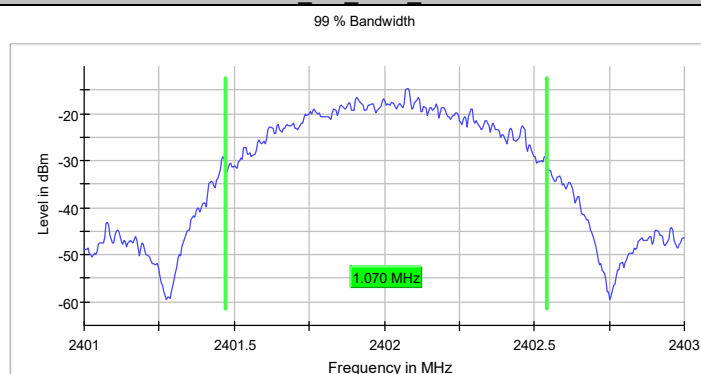
6 dB Bandwidth



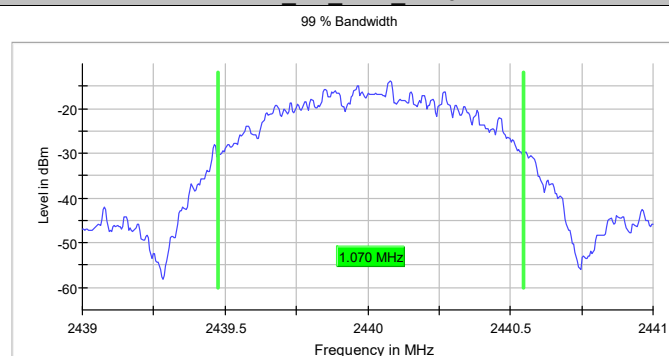
Appendix B.3: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	RBW[KHz]	VBW[KHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0700	30	100	2401.4725	2402.5425	---	PASS
		2440	1.0700	30	100	2439.4775	2440.5475	---	PASS
		2480	1.0700	30	100	2479.4775	2480.5475	---	PASS

BLE_1M_Ant1_2402

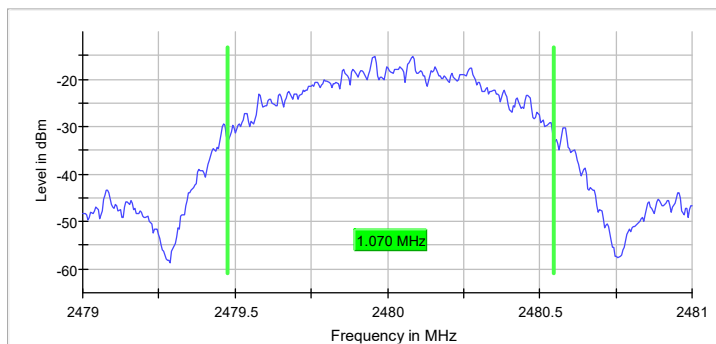


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

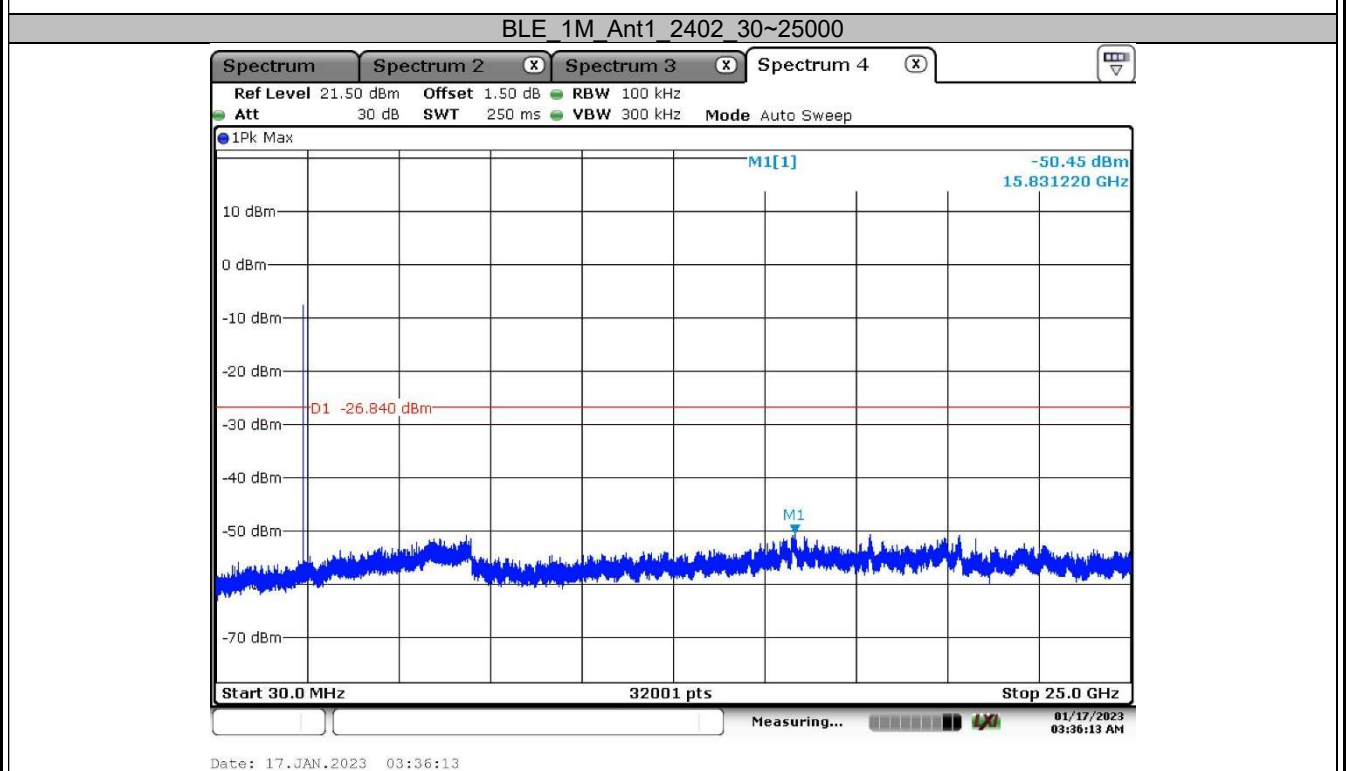
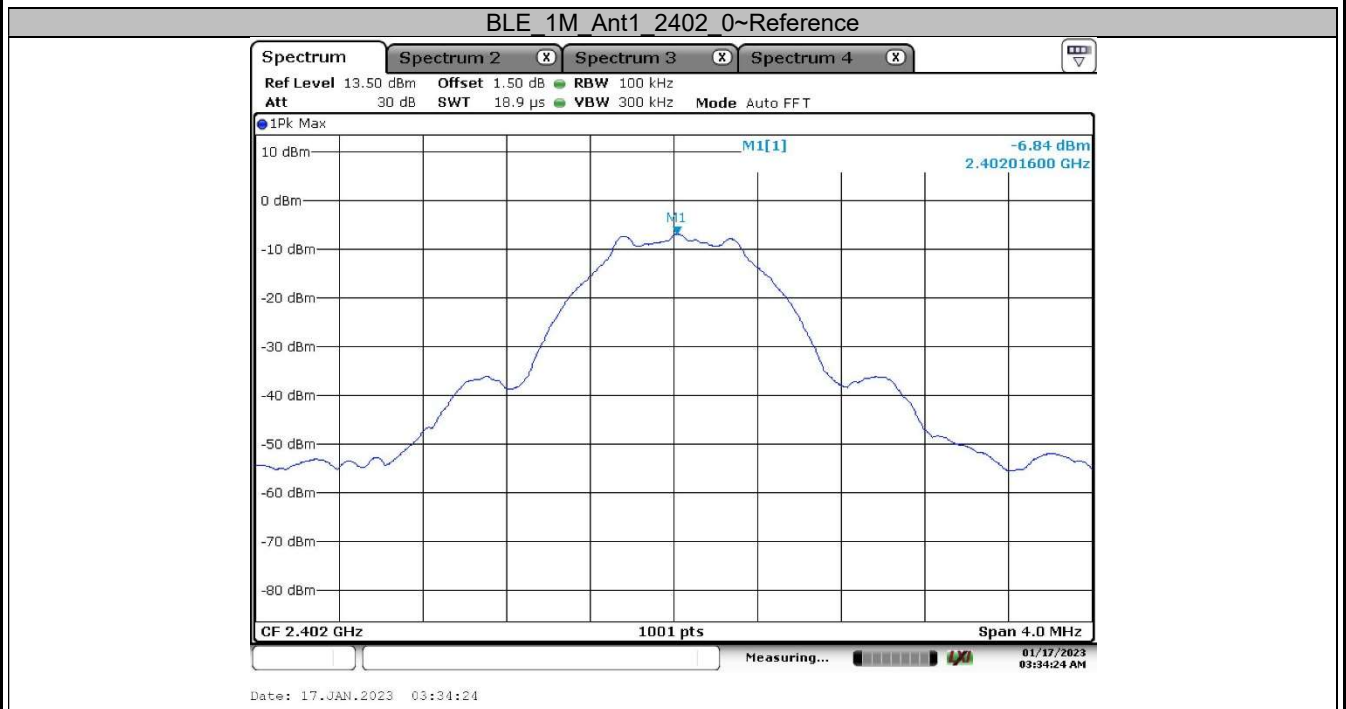
99 % Bandwidth



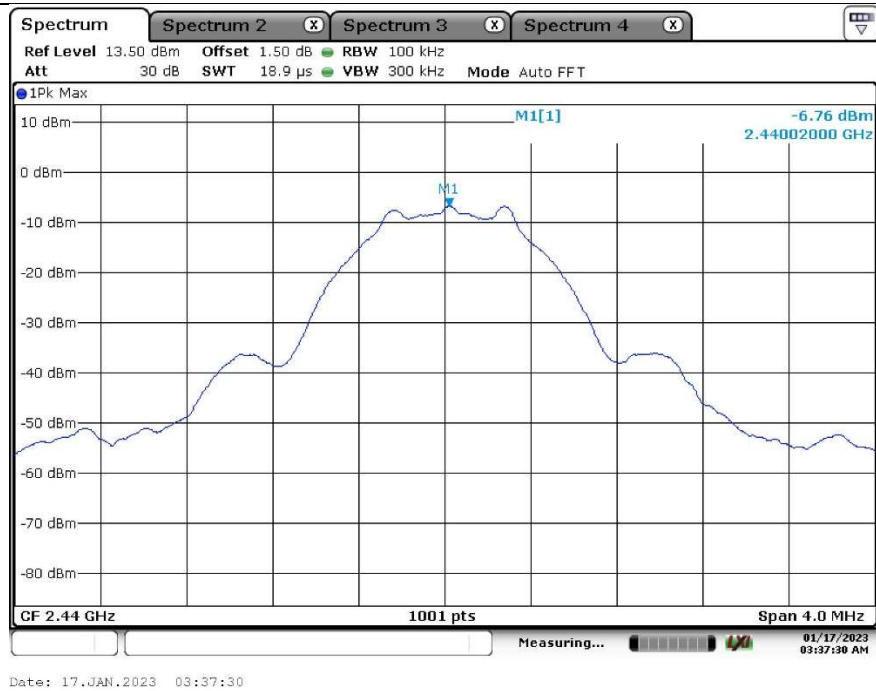
Appendix B.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Conducted Spurious Emission

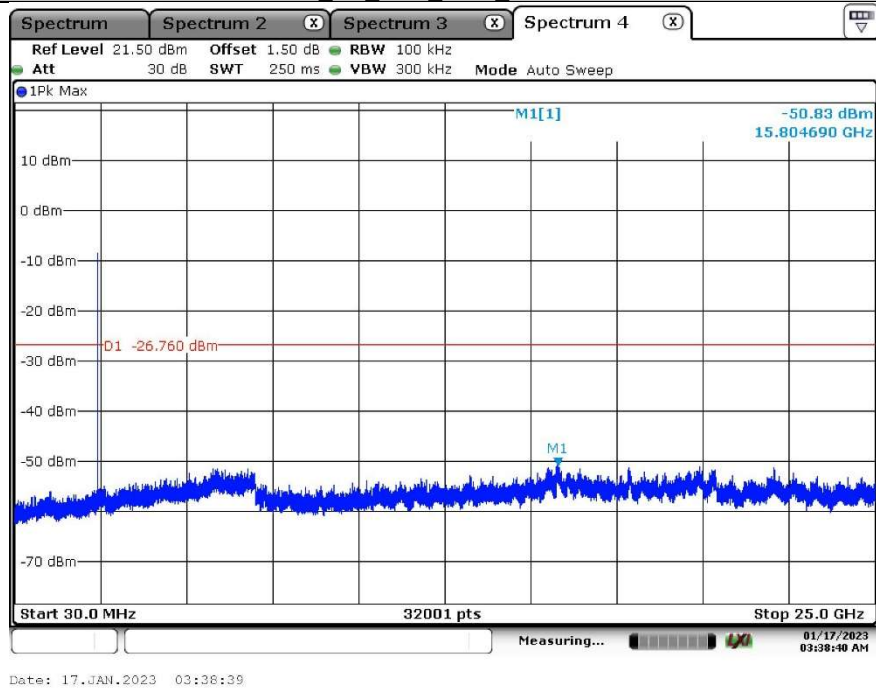
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	13.50	-6.84	---	PASS
			30~25000	21.50	-50.45	≤-26.84	PASS
		2440	Reference	13.50	-6.76	---	PASS
			30~25000	21.50	-50.83	≤-26.76	PASS
		2480	Reference	13.50	-7.19	---	PASS
			30~25000	21.50	-49.45	≤-27.19	PASS



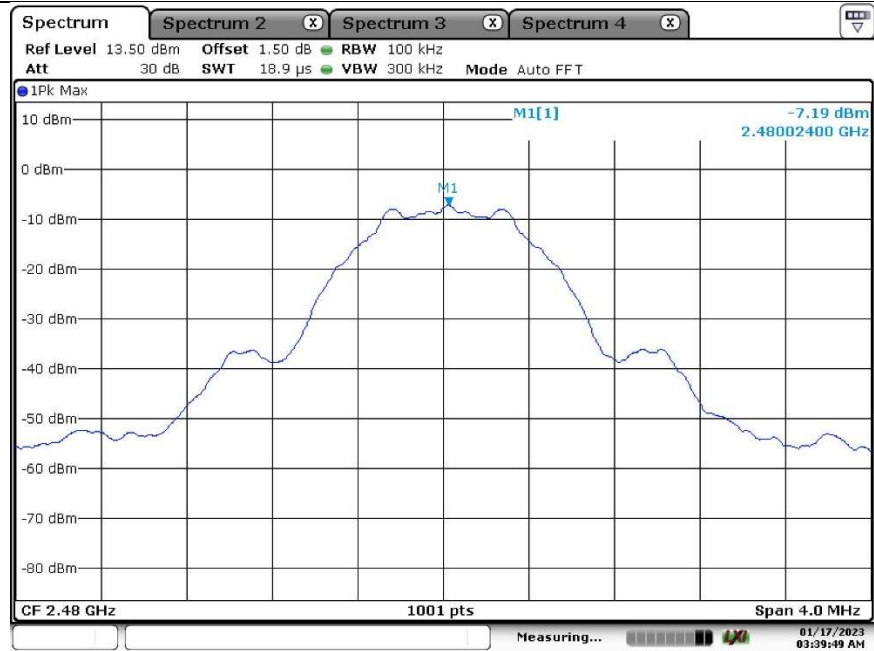
BLE_1M_Ant1_2440_0~Reference



BLE 1M Ant1 2440 30~25000

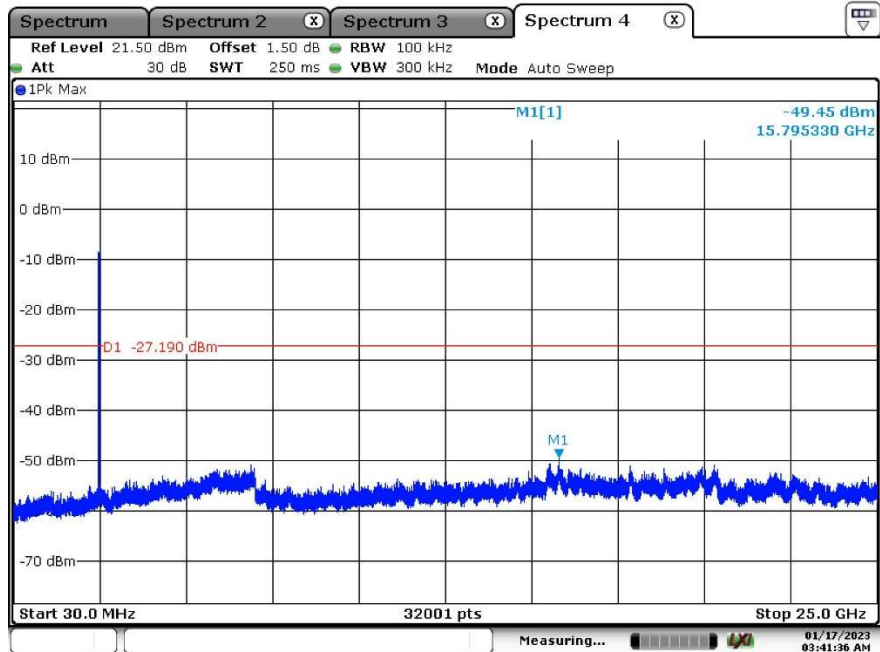


BLE 1M Ant1 2480 0~Reference



Date: 17.JAN.2023 03:39:49

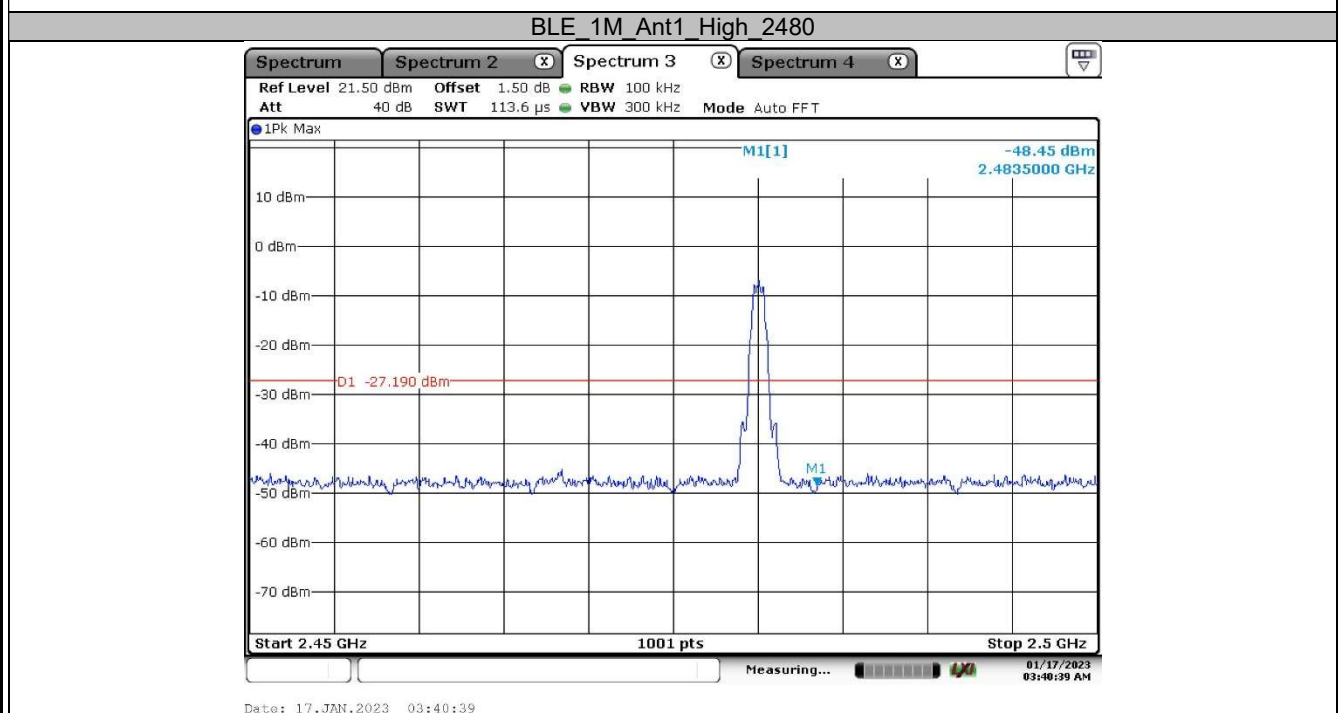
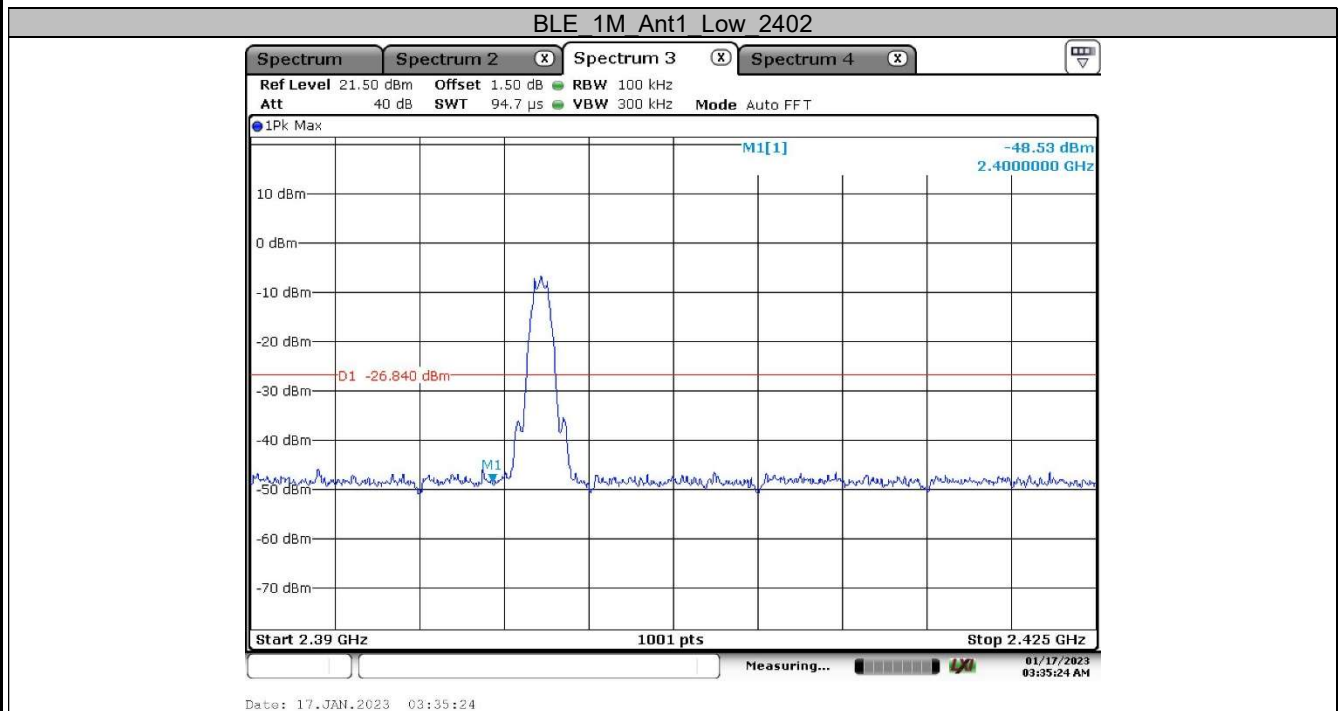
BLE 1M Ant1 2480 30~25000



Date: 17.JAN.2023 03:41:36

Band Edge

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	21.50	-48.53	≤-26.84	PASS
		High	2480	21.50	-48.45	≤-27.19	PASS



Appendix B.5: Test Results of Radiated Spurious Emissions

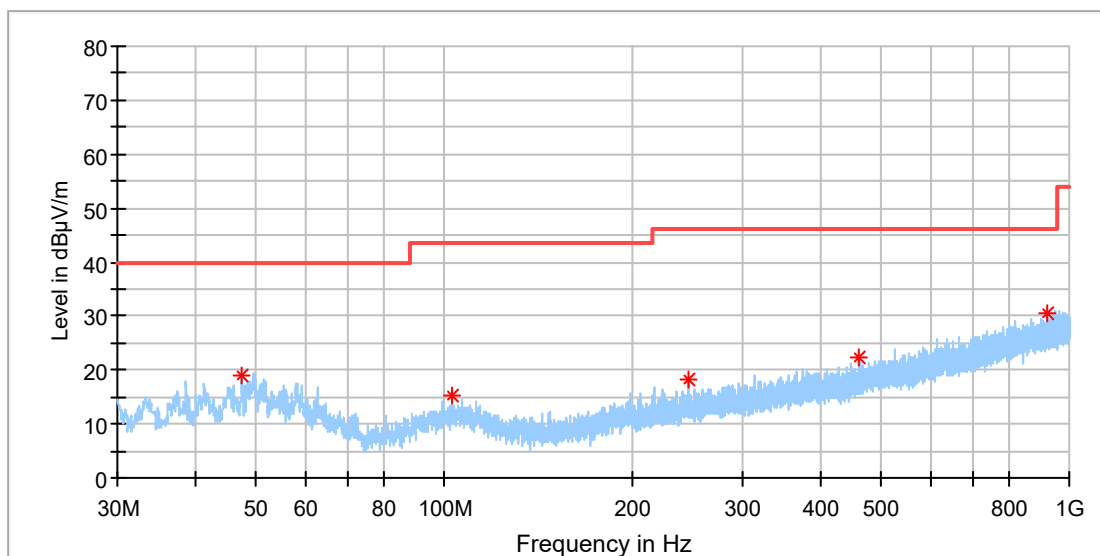
Note:

- 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 Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

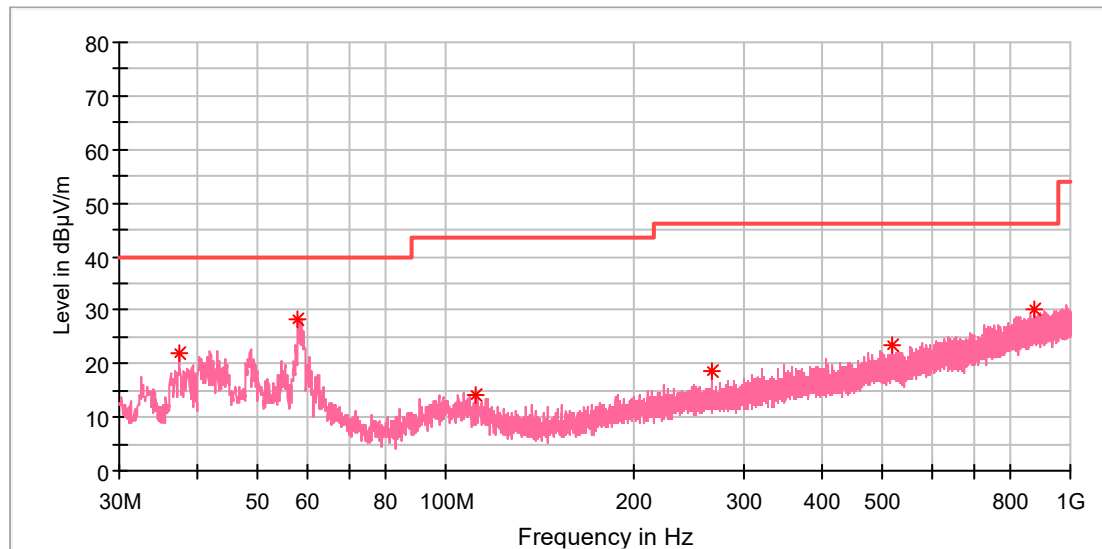


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
47.460000	18.85	40.00	21.15	100.0	H	358.0	-18.5
103.138000	15.21	43.50	28.29	100.0	H	240.0	-18.8
246.213000	18.22	46.00	27.78	100.0	H	341.0	-17.5
462.280500	22.25	46.00	23.75	100.0	H	198.0	-12.6
923.321500	30.65	46.00	15.35	100.0	H	97.0	-4.8

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_Mid channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

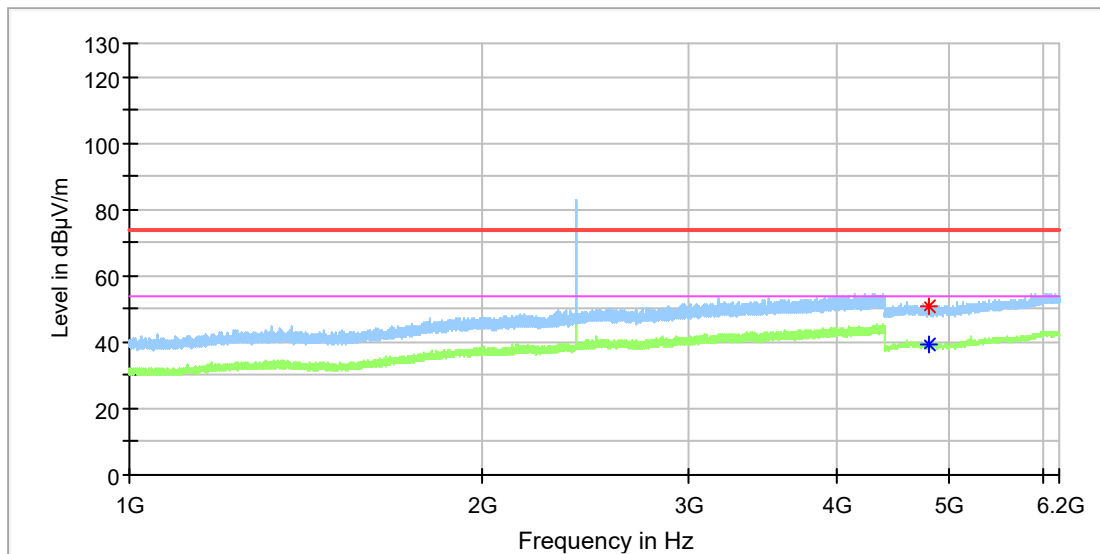
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.517500	21.94	40.00	18.06	100.0	V	265.0	-21.0
58.081500	28.25	40.00	11.75	100.0	V	293.0	-18.8
111.334500	14.07	43.50	29.43	100.0	V	168.0	-19.3
267.068000	18.56	46.00	27.44	100.0	V	176.0	-17.0
517.279500	23.42	46.00	22.58	100.0	V	20.0	-11.6
872.542000	30.17	46.00	15.83	100.0	V	220.0	-5.2

1GHz-18GHz

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

EUT Information

EUT Name:	Sekstant Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

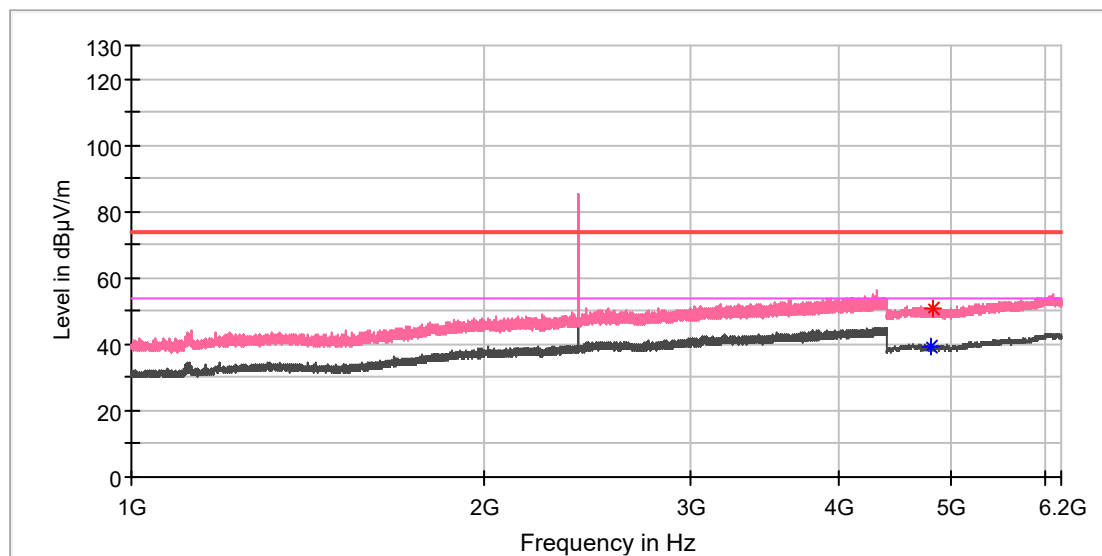


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4800.500000	50.96	---	74.00	23.04	100.0	H	288.0	11.8
4806.500000	---	39.36	54.00	14.64	100.0	H	203.0	11.8

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_Low channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

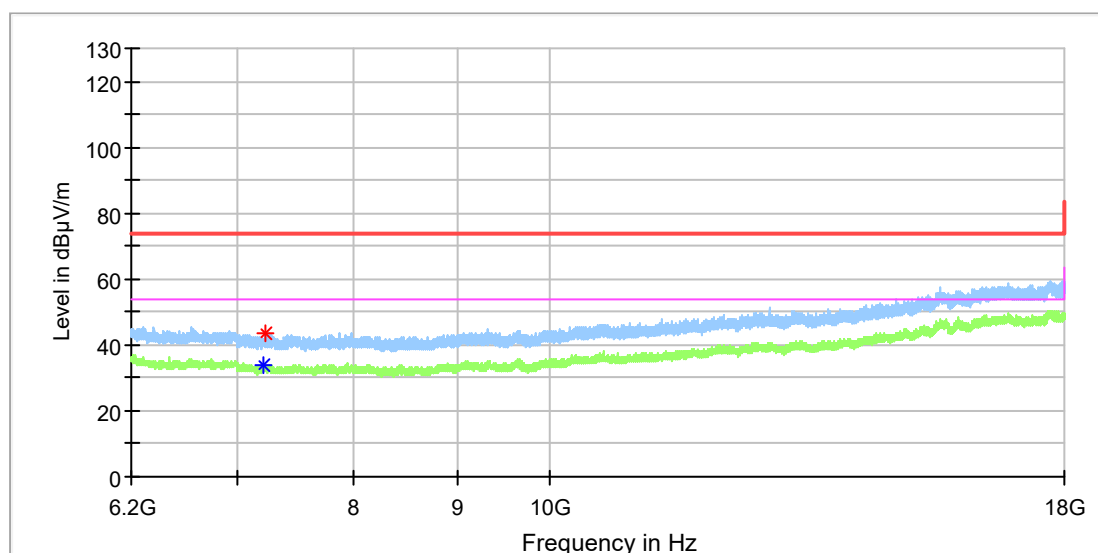


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4805.500000	---	39.34	54.00	14.66	100.0	V	306.0	11.8
4818.500000	50.57	---	74.00	23.43	100.0	V	172.0	11.8

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_Low channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

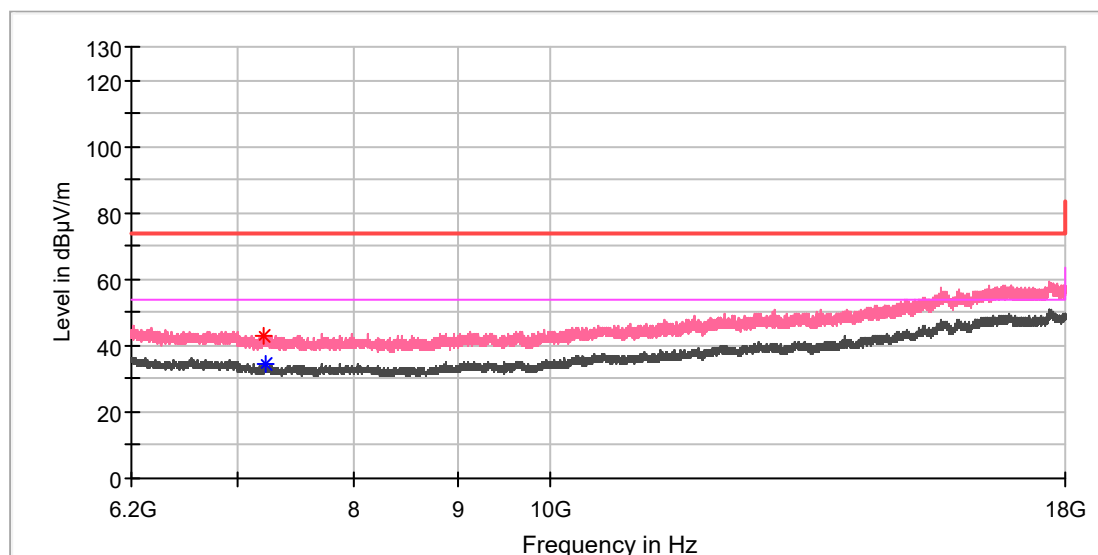


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7216.275000	---	34.00	54.00	20.00	100.0	H	302.0	8.7
7224.141667	43.30	---	74.00	30.70	100.0	H	168.0	8.7

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_Low channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

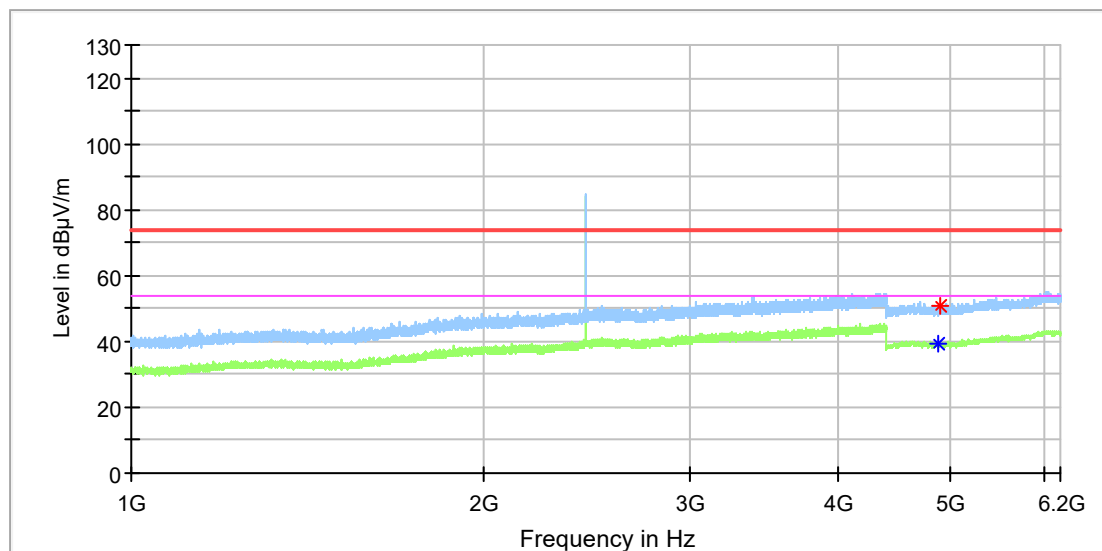


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7209.883333	42.74	---	74.00	31.26	100.0	V	315.0	8.7
7221.191667	---	34.37	54.00	19.63	100.0	V	276.0	8.7

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_Mid channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

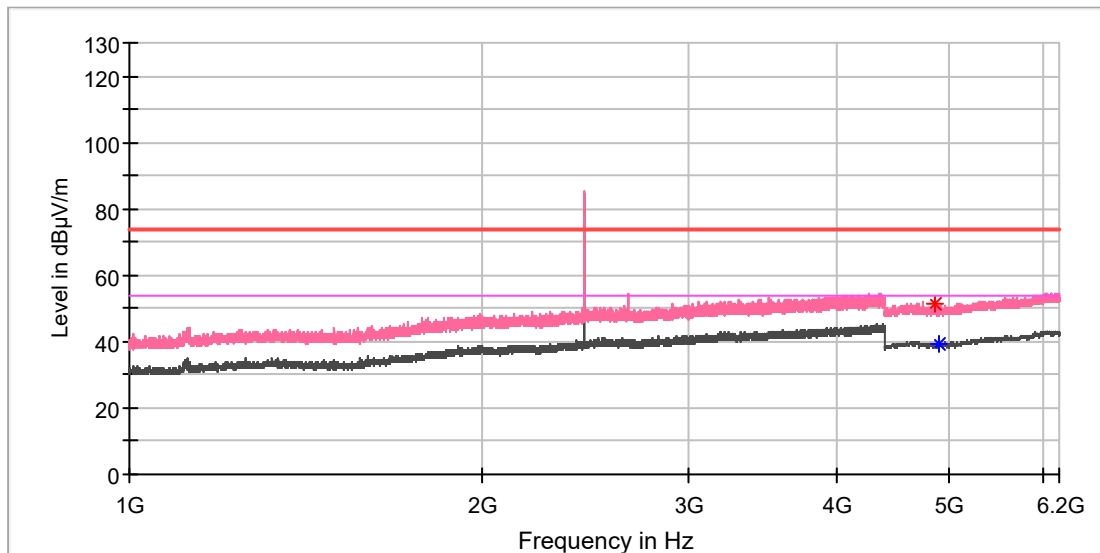


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4870.500000	---	39.18	54.00	14.82	100.0	H	24.0	11.8
4905.000000	50.54	---	74.00	23.46	100.0	H	24.0	11.8

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_Mid channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

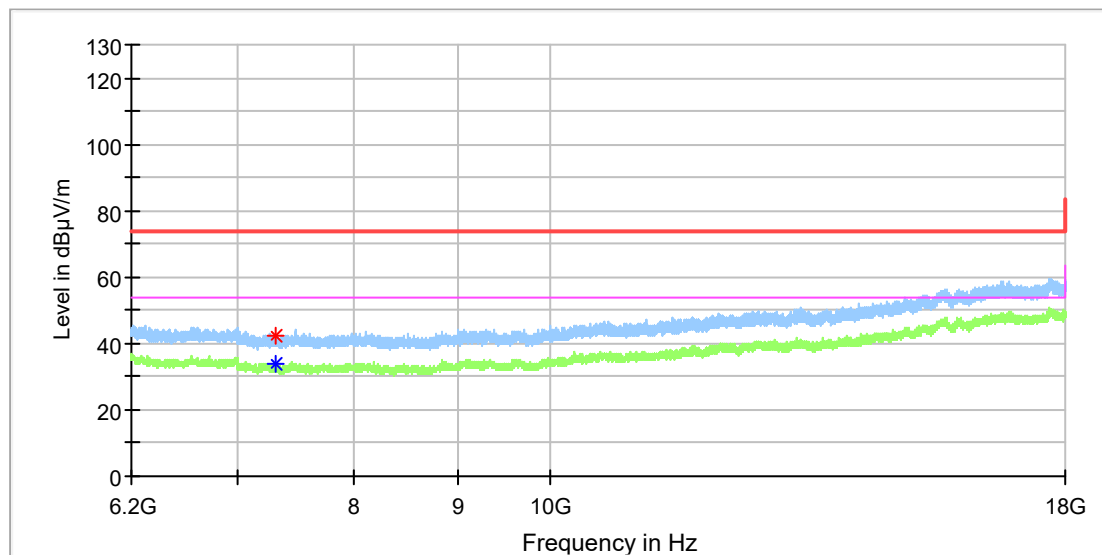


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4858.500000	51.20	---	74.00	22.80	100.0	V	246.0	11.8
4891.500000	---	39.36	54.00	14.64	100.0	V	232.0	11.8

EUT Information

EUT Name:	Sekstant Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

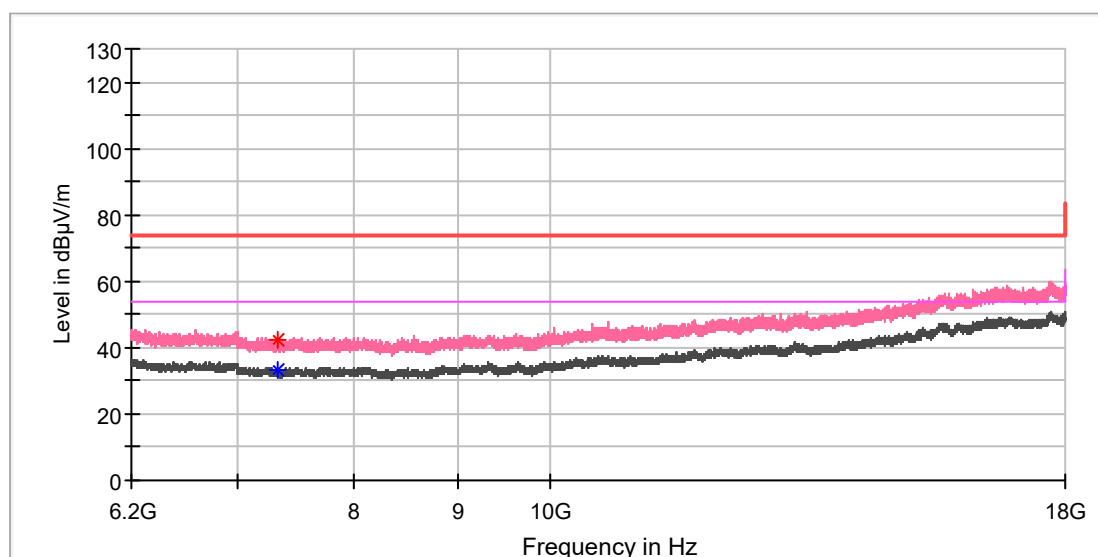


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7303.300000	---	33.68	54.00	20.32	100.0	H	346.0	8.3
7303.300000	42.48	---	74.00	31.52	100.0	H	346.0	8.3

EUT Information

EUT Name:	Sekstant Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

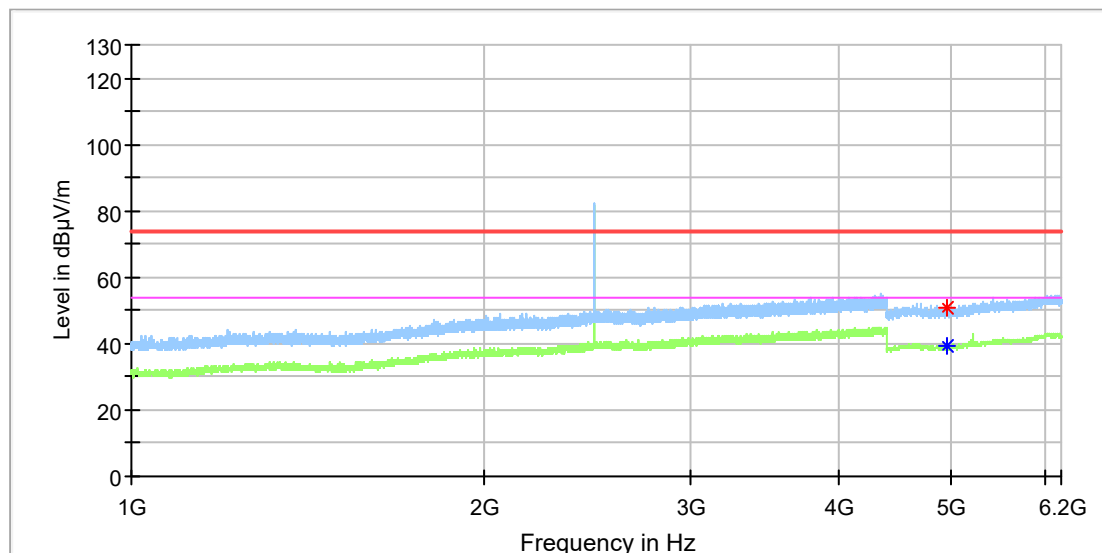


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7321.000000	---	33.20	54.00	20.80	100.0	V	77.0	8.2
7334.766667	42.43	---	74.00	31.57	100.0	V	155.0	8.1

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_High channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

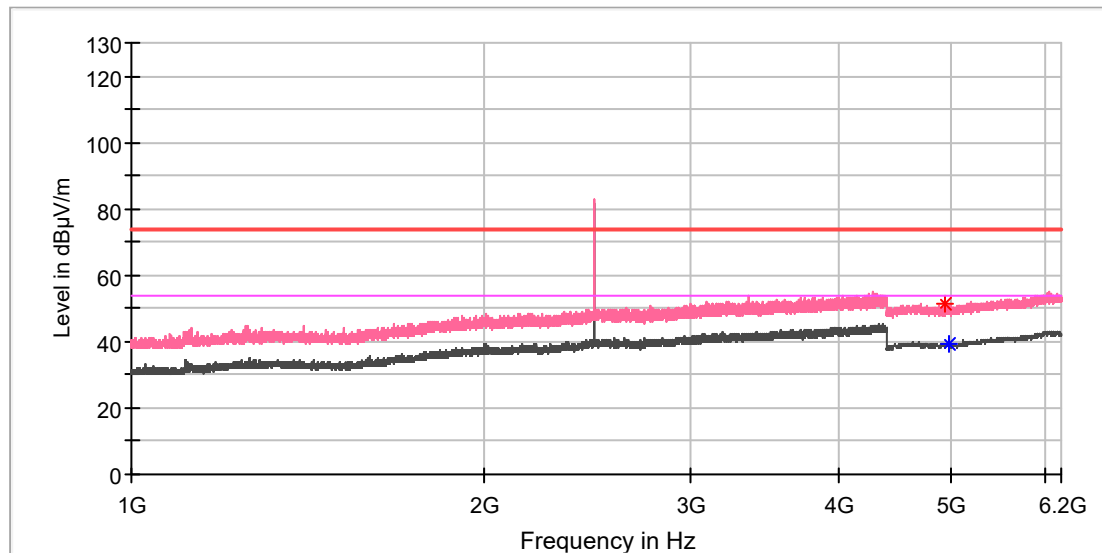


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4952.000000	---	39.59	54.00	14.41	100.0	H	357.0	11.8
4957.500000	50.59	---	74.00	23.41	100.0	H	40.0	11.8

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_High channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

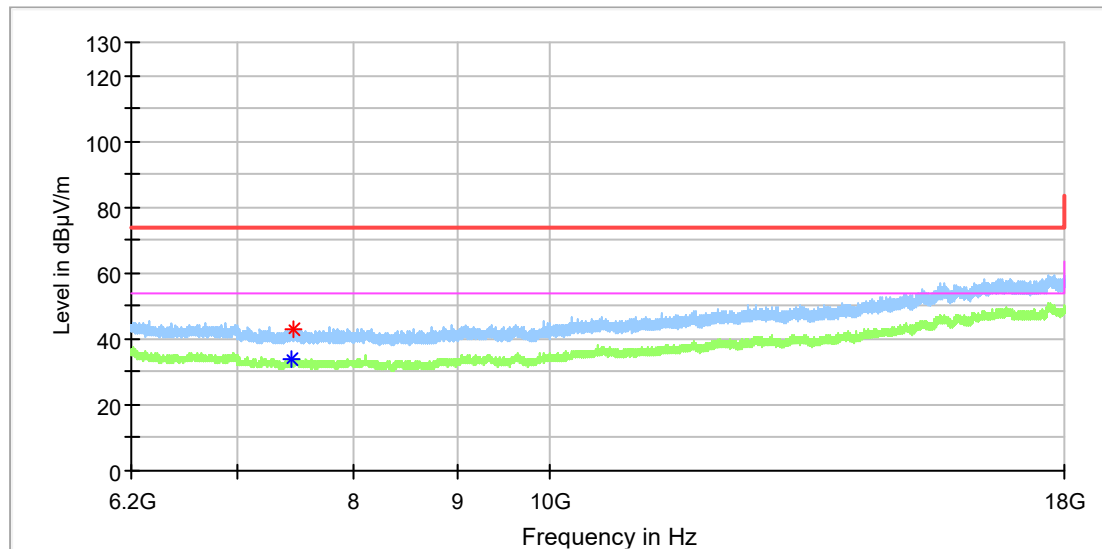


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4942.000000	51.23	---	74.00	22.77	100.0	V	311.0	11.8
4969.000000	---	39.50	54.00	14.50	100.0	V	341.0	11.8

EUT Information

EUT Name:	Sekstant Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

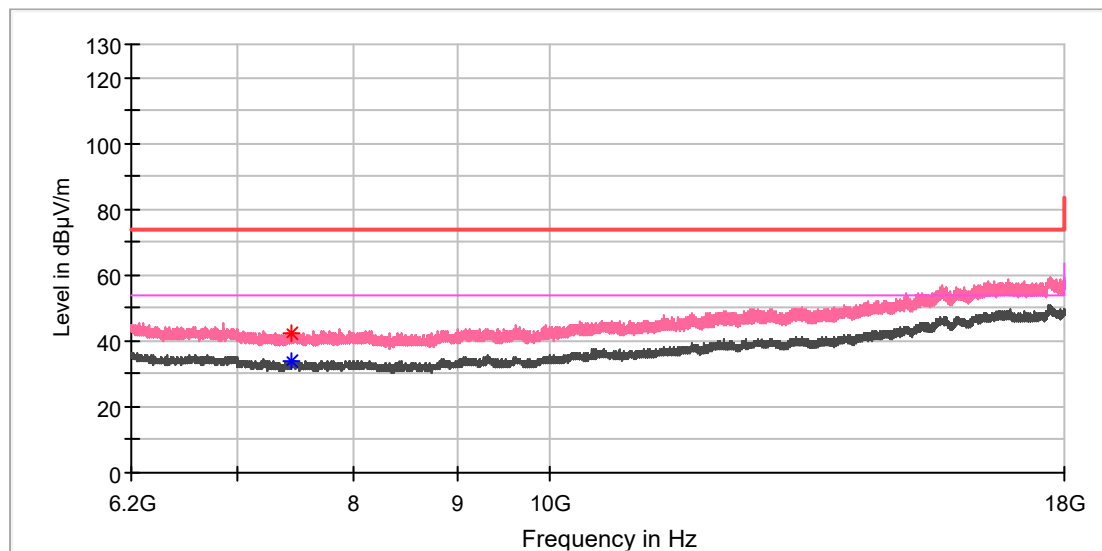


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.000000	---	34.11	54.00	19.89	100.0	H	290.0	8.4
7461.616667	42.98	---	74.00	31.02	100.0	H	67.0	8.5

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_High channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



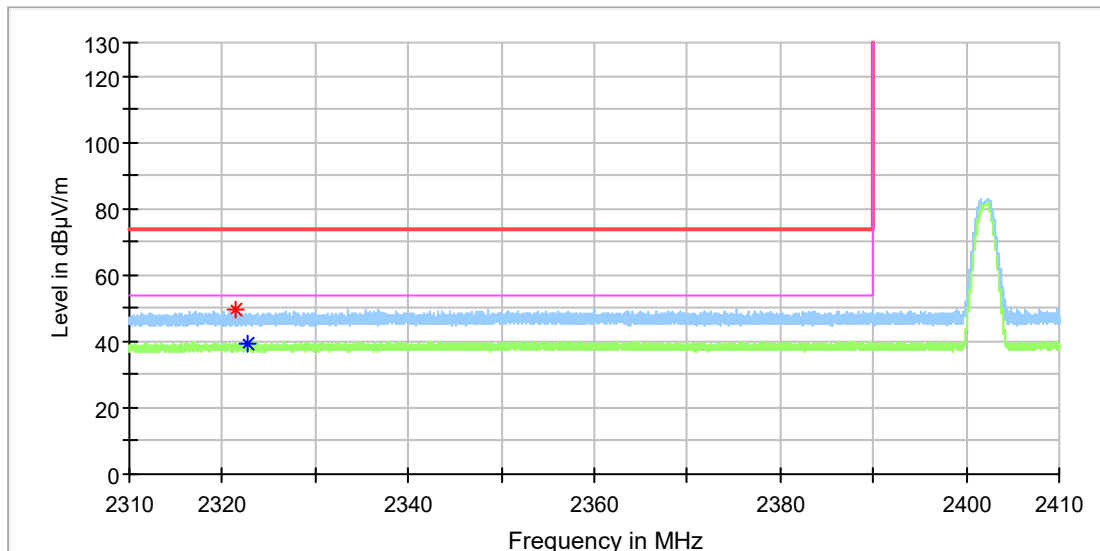
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.491667	---	34.00	54.00	20.00	100.0	V	97.0	8.4
7451.783333	42.61	---	74.00	31.39	100.0	V	356.0	8.5

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

EUT Information

EUT Name:	Sekstant Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

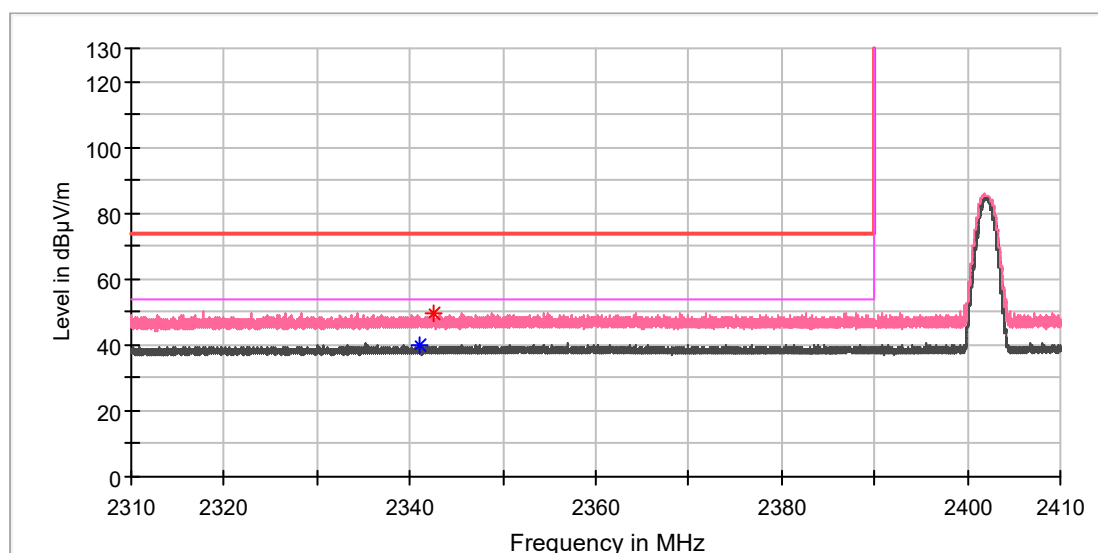


Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2321.475000	49.67	---	74.00	24.33	100.0	H	55.0	6.6
2322.780000	---	39.44	54.00	14.56	100.0	H	136.0	6.6

EUT Information

EUT Name: Sekstant Door Sensor
Model: 839215ID183
Test Mode: BLE 1M_Low channel
Order No/Sample No: 168399325/A003377842-001
Test Voltage:: Battery
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

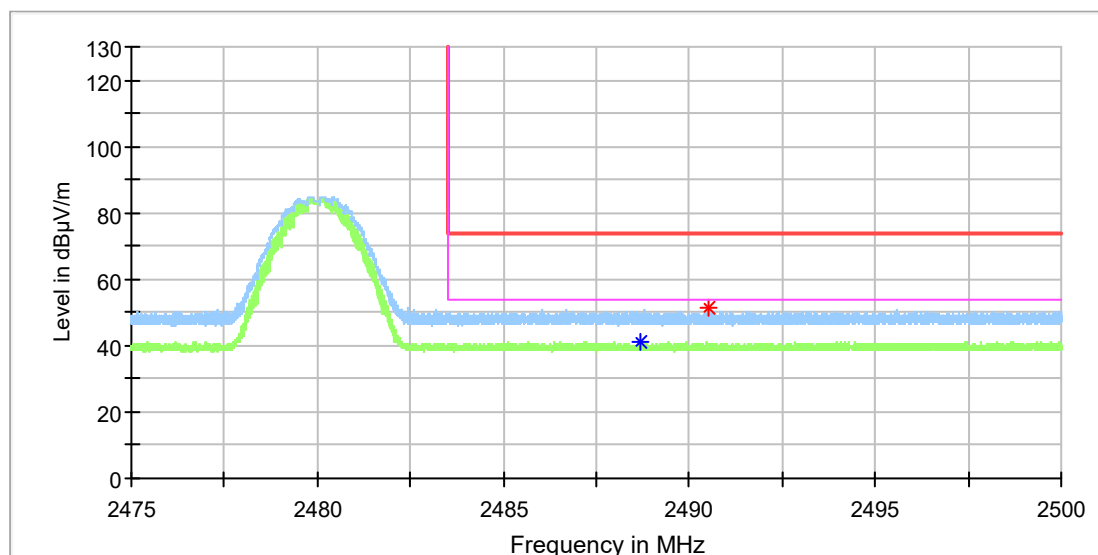


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2341.125000	---	39.82	54.00	14.18	100.0	V	159.0	6.8
2342.445000	49.57	---	74.00	24.43	100.0	V	65.0	6.8

EUT Information

EUT Name:	Sekstant Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

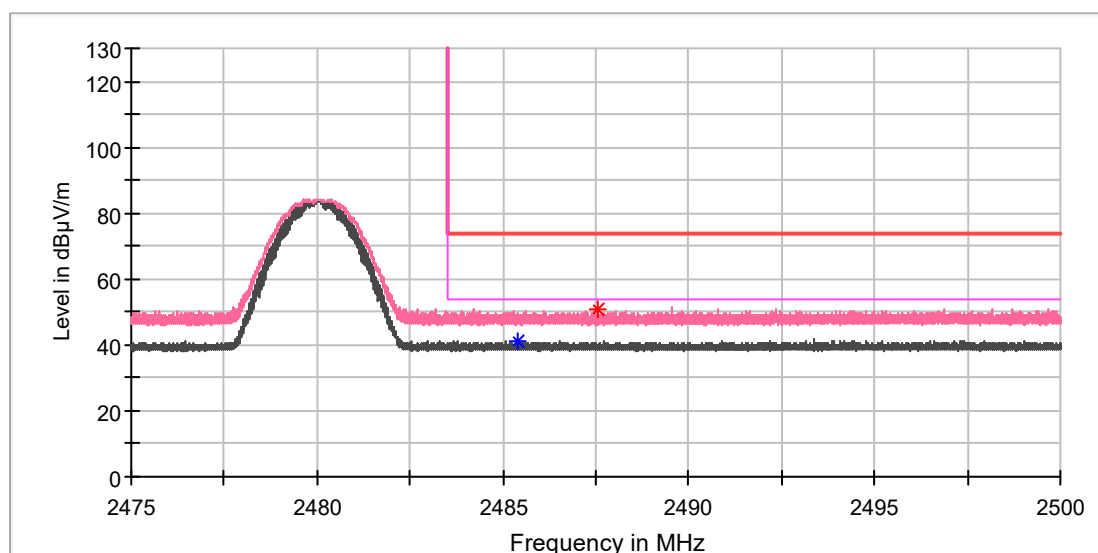


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2488.700000	---	41.01	54.00	12.99	100.0	H	83.0	7.4
2490.541250	51.50	---	74.00	22.50	100.0	H	83.0	7.4

EUT Information

EUT Name:	Sekstant Door Sensor
Model:	839215ID183
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168399325/A003377842-001
Test Voltage::	Battery
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)
2485.380000	---	40.94	54.00	13.06	100.0	V	280.0	7.4
2487.568750	50.97	---	74.00	23.03	100.0	V	329.0	7.4