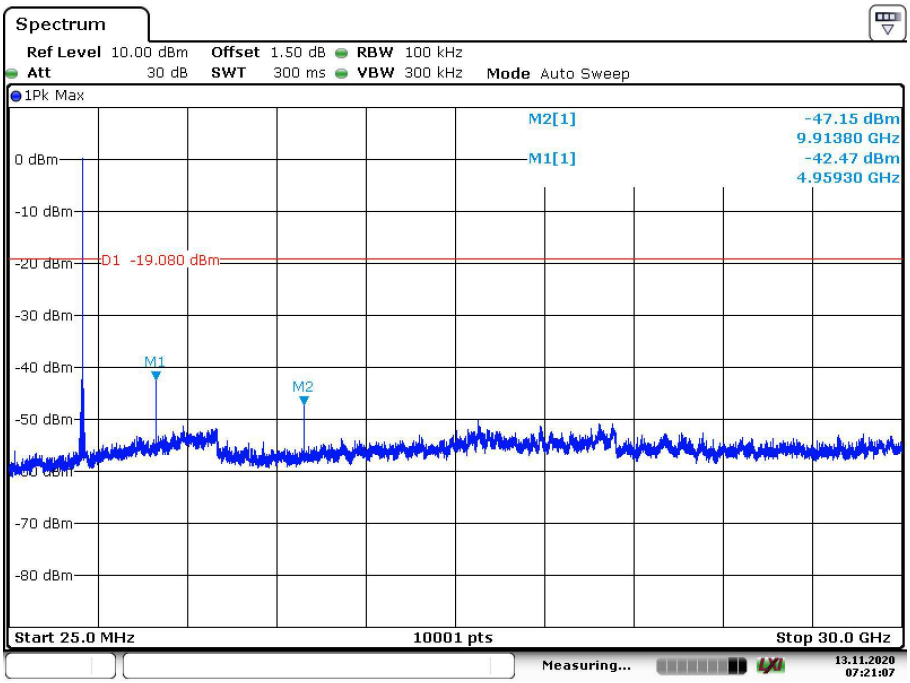
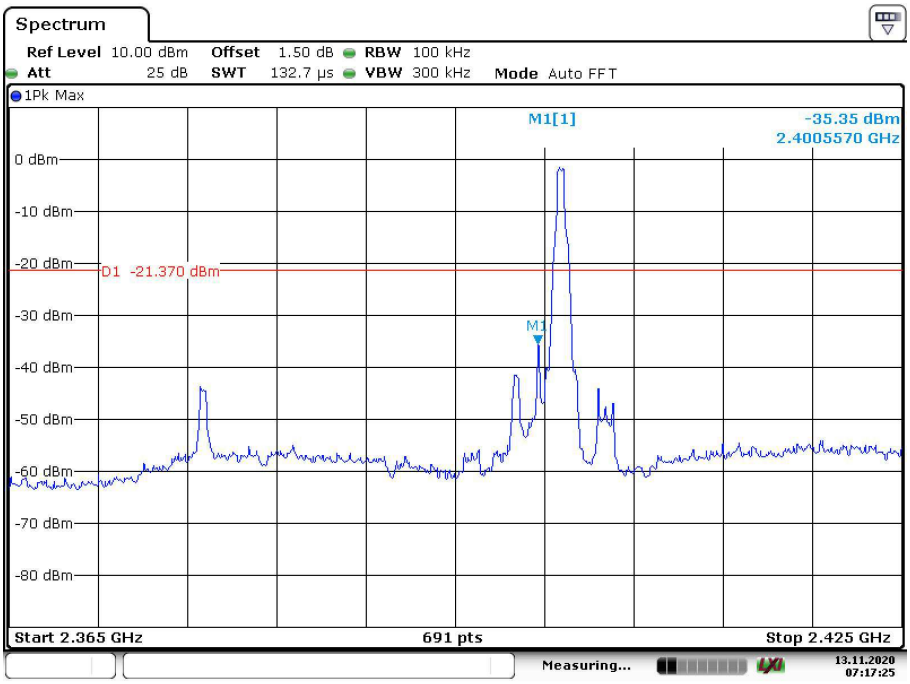
High Channel

Date: 13.NOV.2020 07:15:38



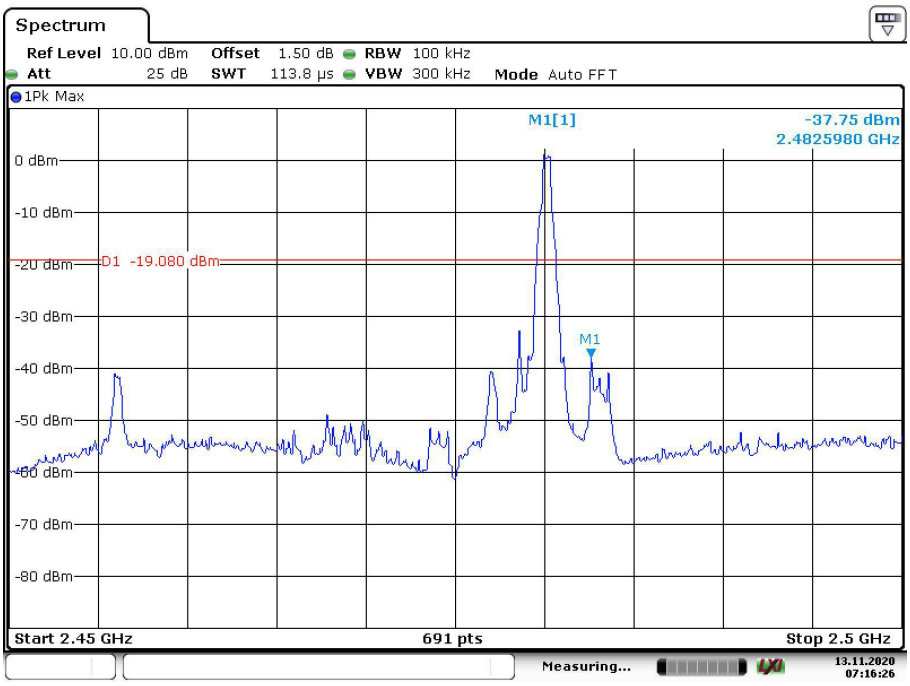
Date: 13.NOV.2020 07:21:08

Band Edge, Low Channel



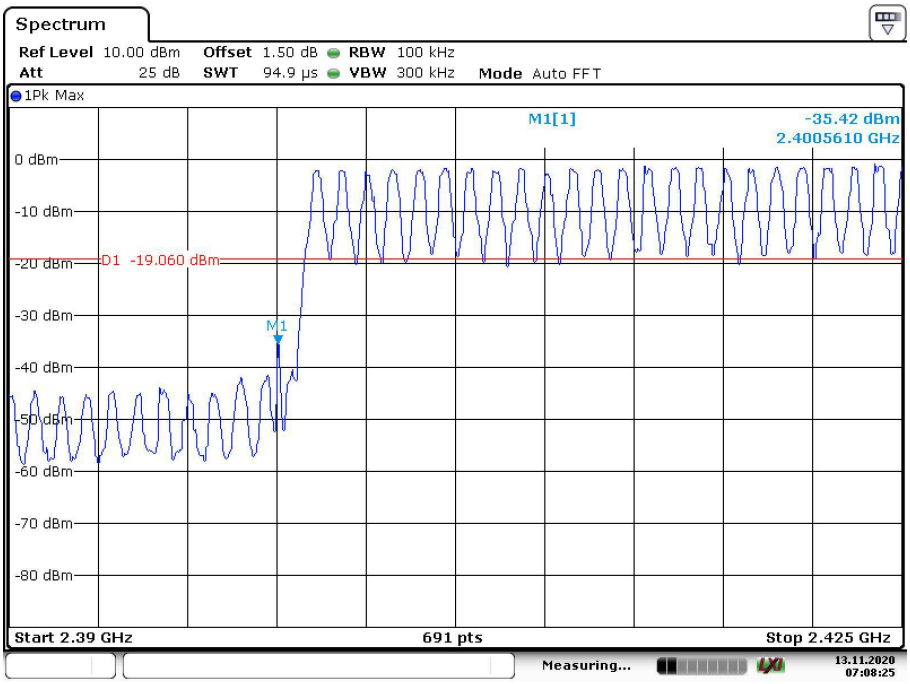
Date: 13.NOV.2020 07:17:25

Band Edge, High Channel



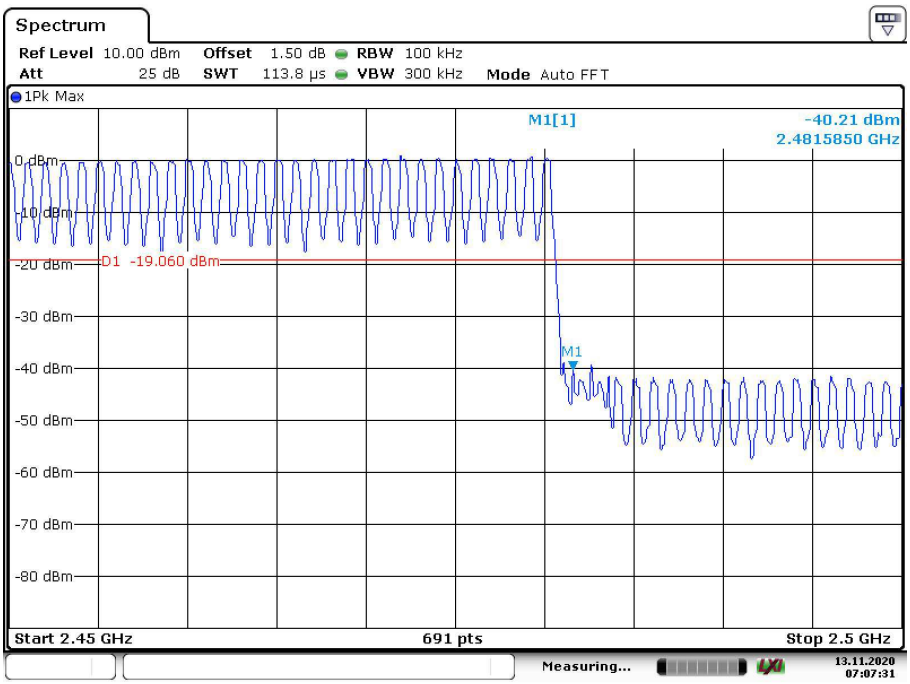
Date: 13.NOV.2020 07:16:26

Band Edge, Hopping Mode, Low Channel



Date: 13.NOV.2020 07:08:25

Band Edge, Hopping Mode, High Channle



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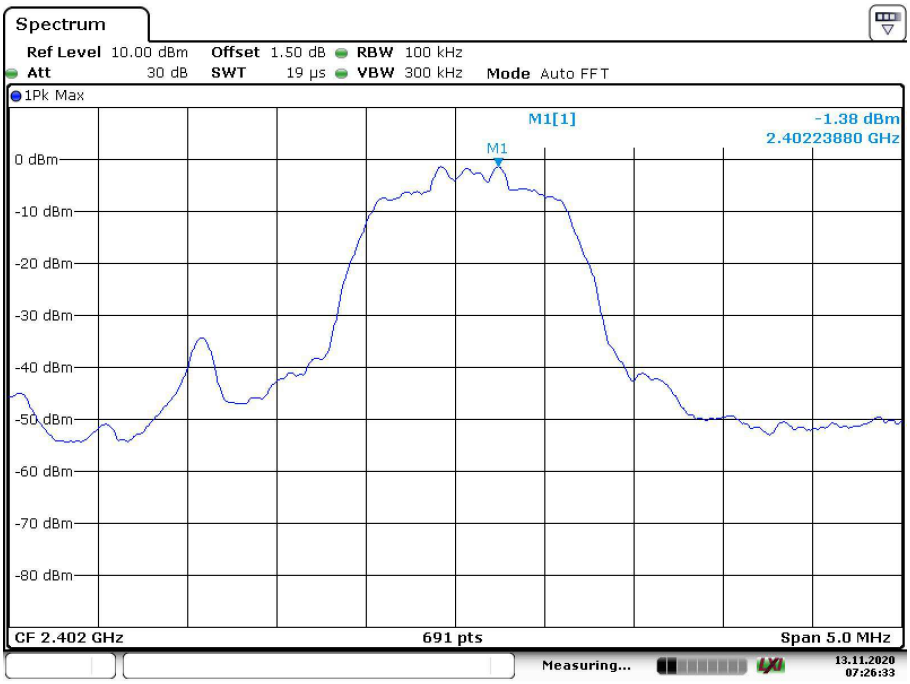
EDR mode (π/4-DQPSK)

Low Channel



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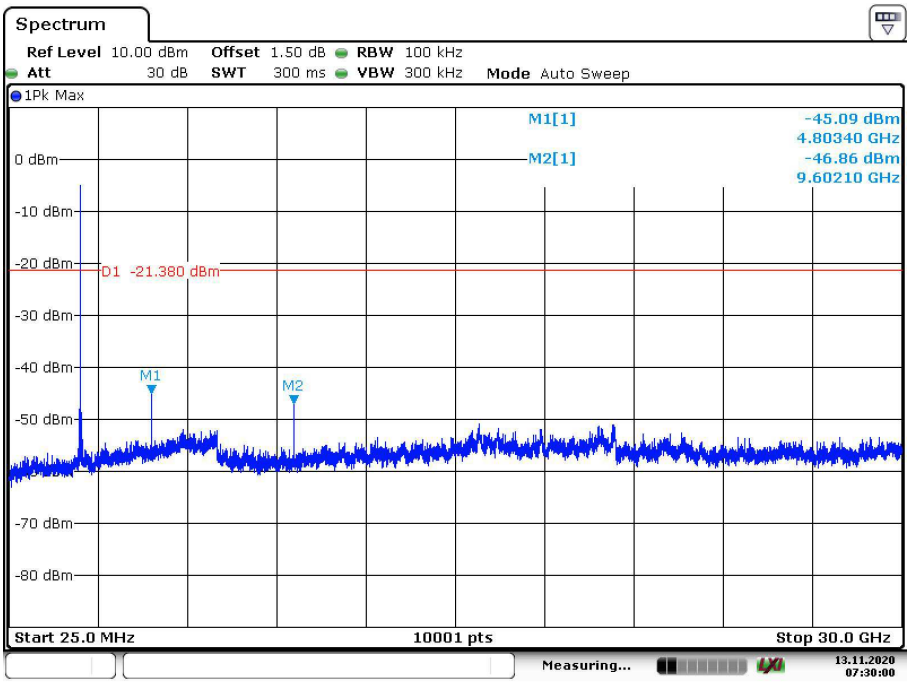
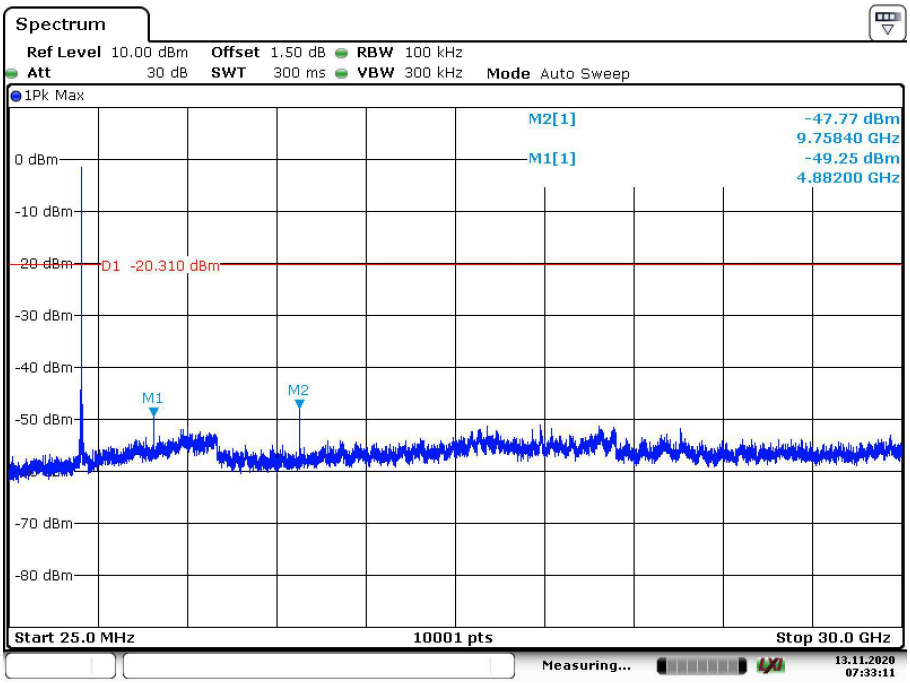


Date: 13.NOV.2020 07:30:00

Middle Channel

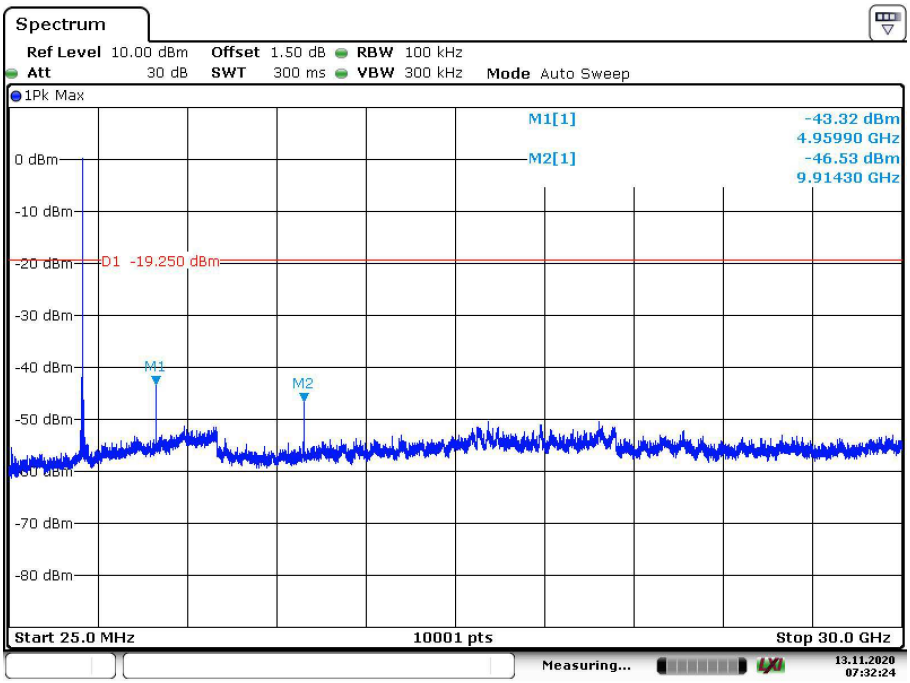
Date: 13.NOV.2020 07:27:03



Date: 13.NOV.2020 07:33:12

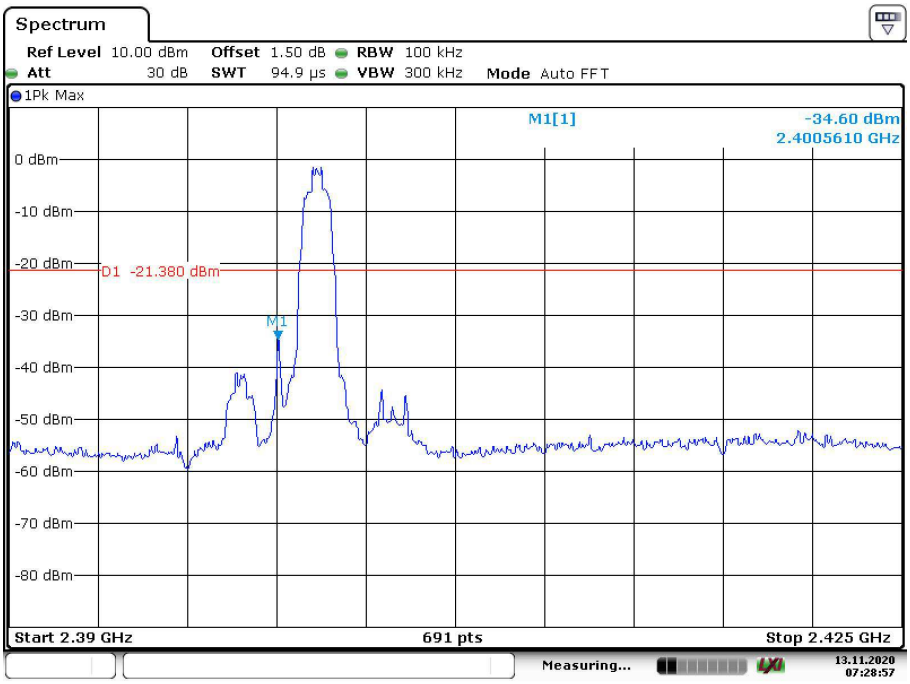
High Channel

Date: 13.NOV.2020 07:27:29



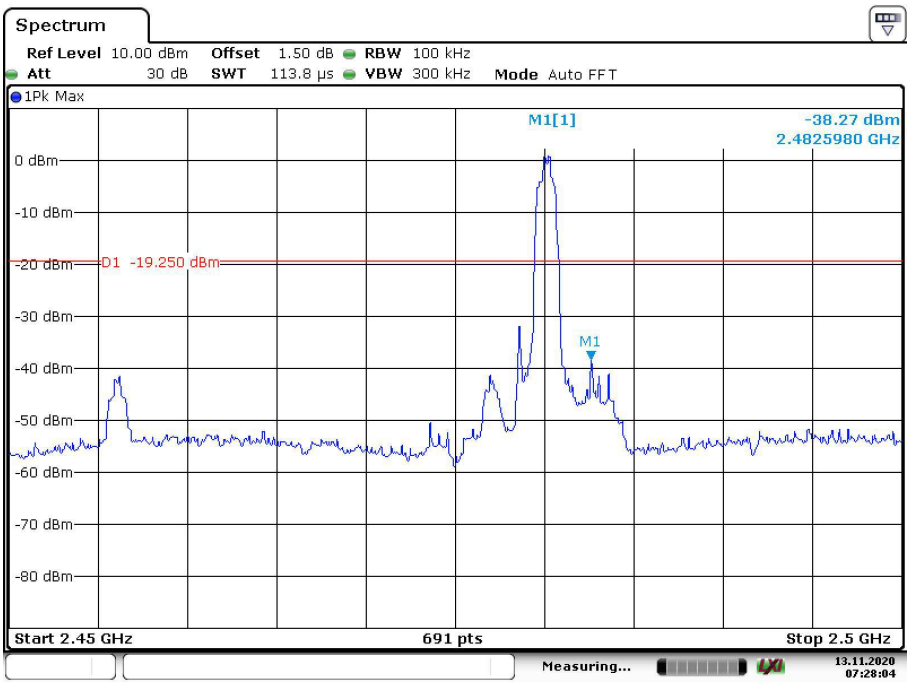
Date: 13.NOV.2020 07:32:24

Band Edge, Low Channel



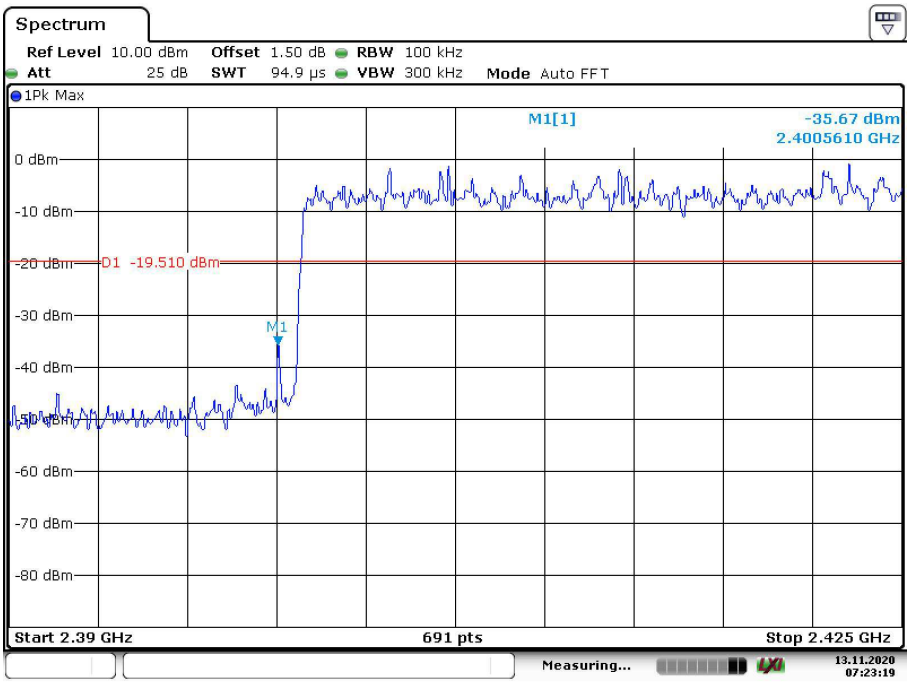
Date: 13.NOV.2020 07:28:57

Band Edge, High Channel



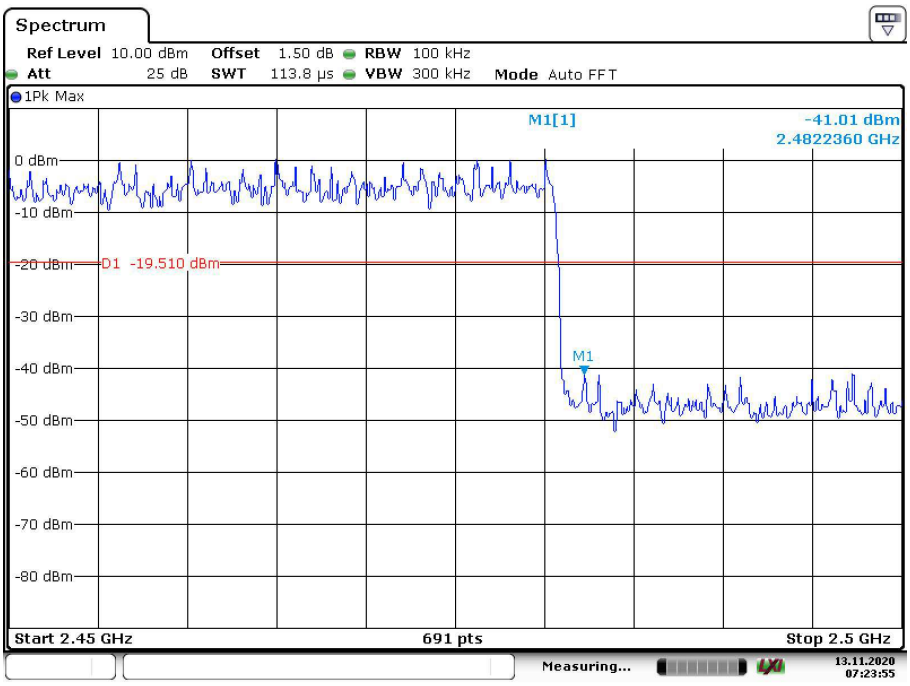
Date: 13.NOV.2020 07:28:05

Band Edge, Hopping Mode, Low Channel



Date: 13.NOV.2020 07:23:19

Band Edge, Hopping Mode, High Channle



Date: 13.NOV.2020 07:23:56

Note: 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.

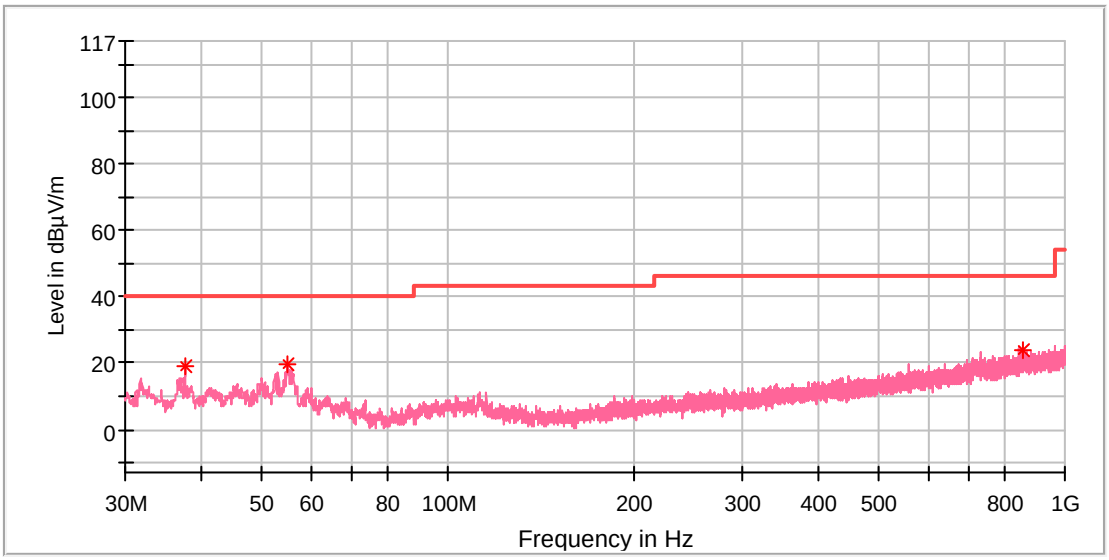
Appendix B.7: Test Results of Radiated Spurious Emissions

Note: This testing was carried out on different modulations, but only the worst case (GFSK) was presented in this report.

30MHz - 1GHz

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

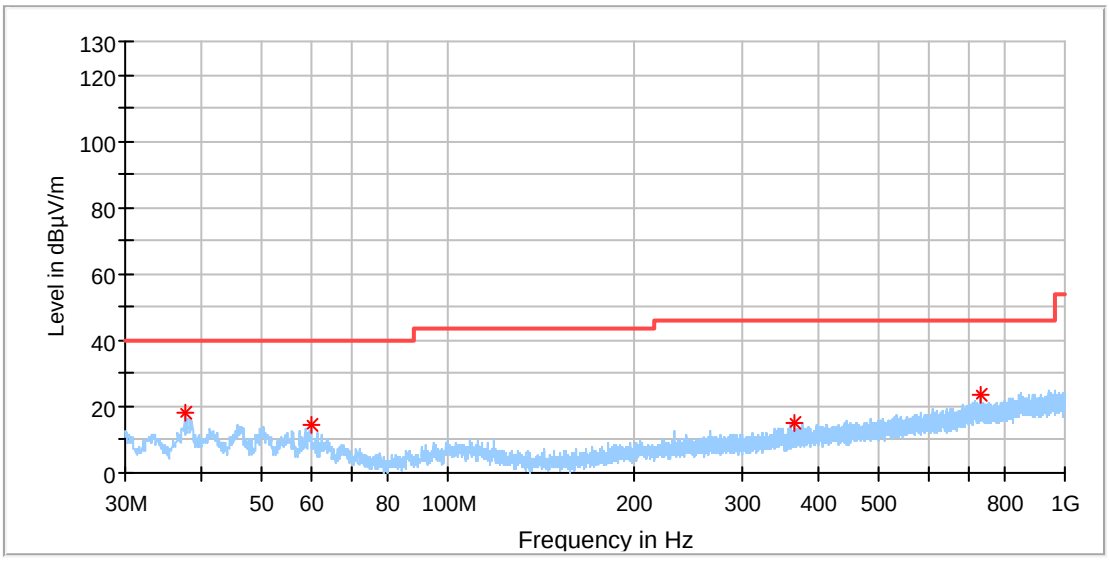


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.469000	18.95	---	40.00	21.05	100.0	V	313.0	-21.0
54.832000	19.71	---	40.00	20.29	100.0	V	199.0	-18.4
853.869500	23.92	---	46.00	22.08	100.0	V	227.0	-5.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

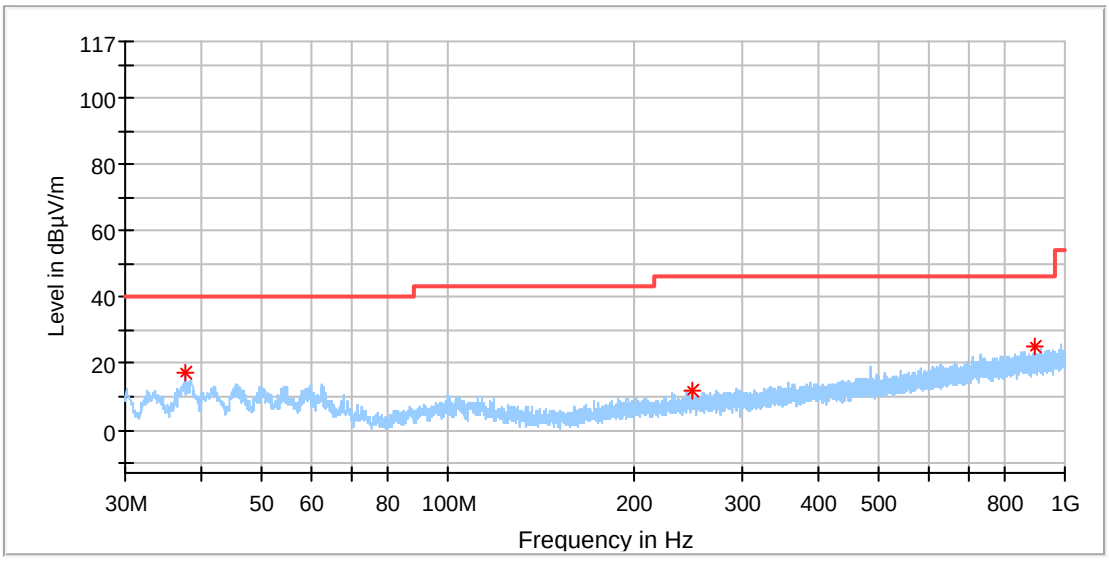


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.469000	17.94	---	40.00	22.06	100.0	H	168.0	-21.0
59.973000	14.33	---	40.00	25.67	100.0	H	0.0	-19.0
364.601500	15.19	---	46.00	30.81	100.0	H	3.0	-14.6
728.836500	23.85	---	46.00	22.15	100.0	H	168.0	-7.5

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

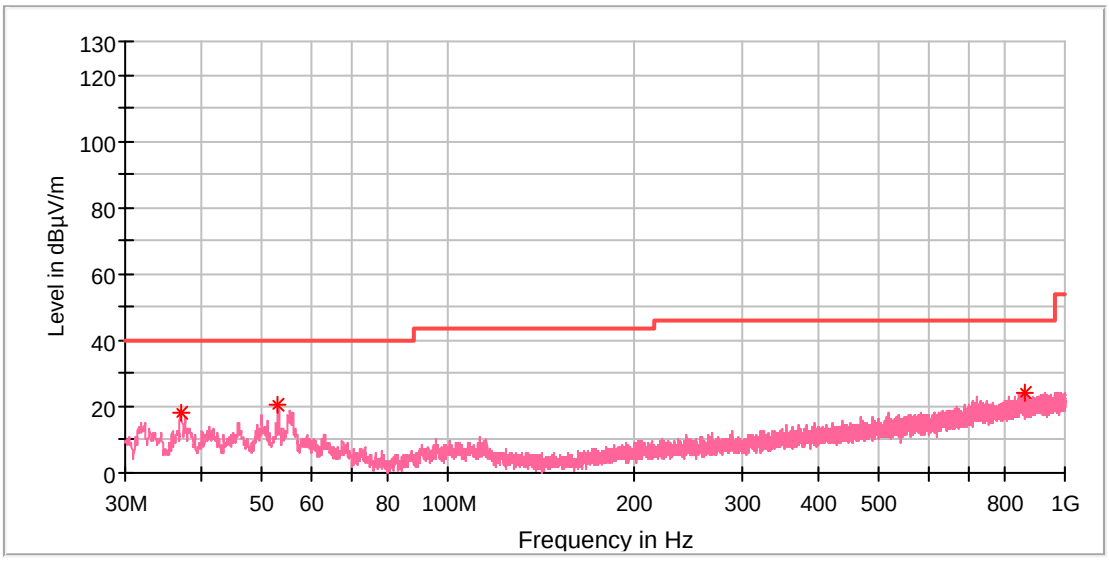


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.469000	17.14	---	40.00	22.86	100.0	H	339.0	-21.0
248.250000	12.06	---	46.00	33.94	100.0	H	248.0	-17.5
892.281500	24.82	---	46.00	21.18	100.0	H	81.0	-5.0

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



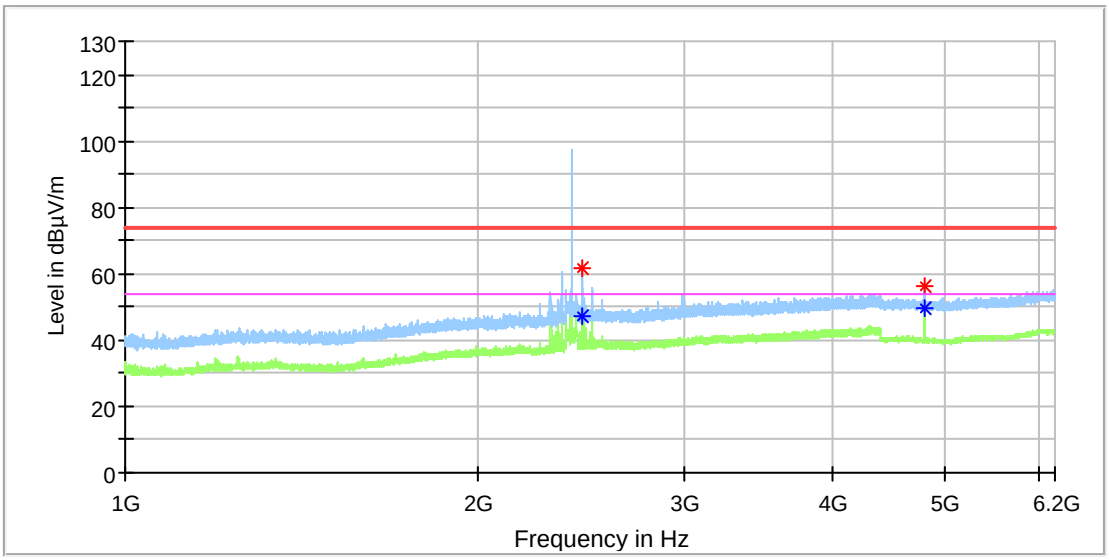
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.887000	18.23	---	40.00	21.77	100.0	V	333.0	-21.2
53.134500	20.58	---	40.00	19.42	100.0	V	120.0	-18.4
862.066000	24.39	---	46.00	21.61	100.0	V	58.0	-5.3

1GHz - 18GHz
Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

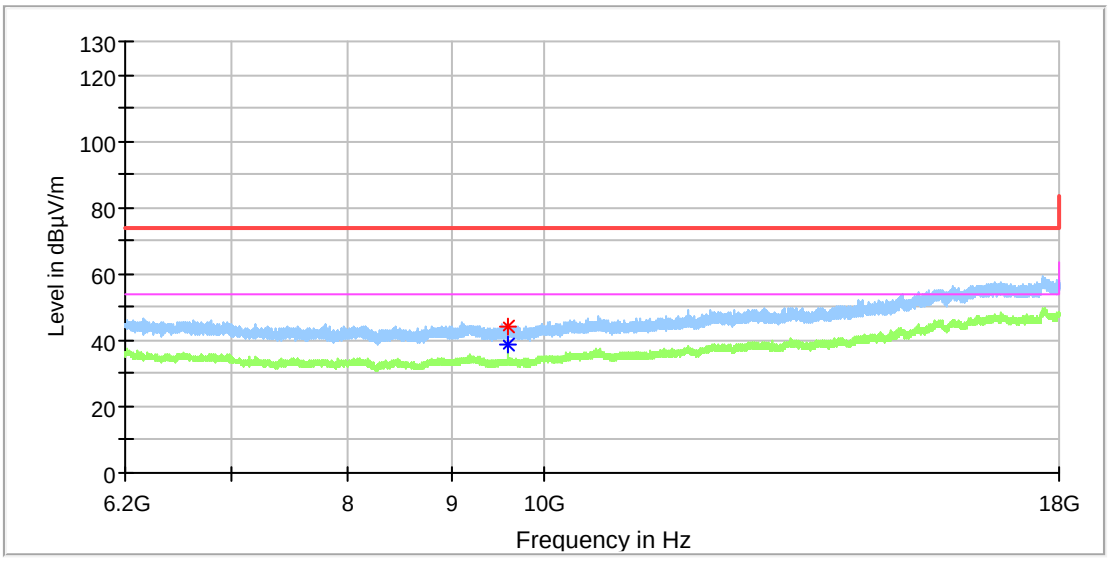


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2449.768125	61.60	---	74.00	12.40	100.0	H	195.0	7.5
2450.083750	---	47.36	54.00	6.64	130.0	H	195.0	7.5
4800.500000	---	49.46	54.00	4.54	100.0	H	228.0	13.6
4801.000000	56.43	---	74.00	17.57	100.0	H	228.0	13.6

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

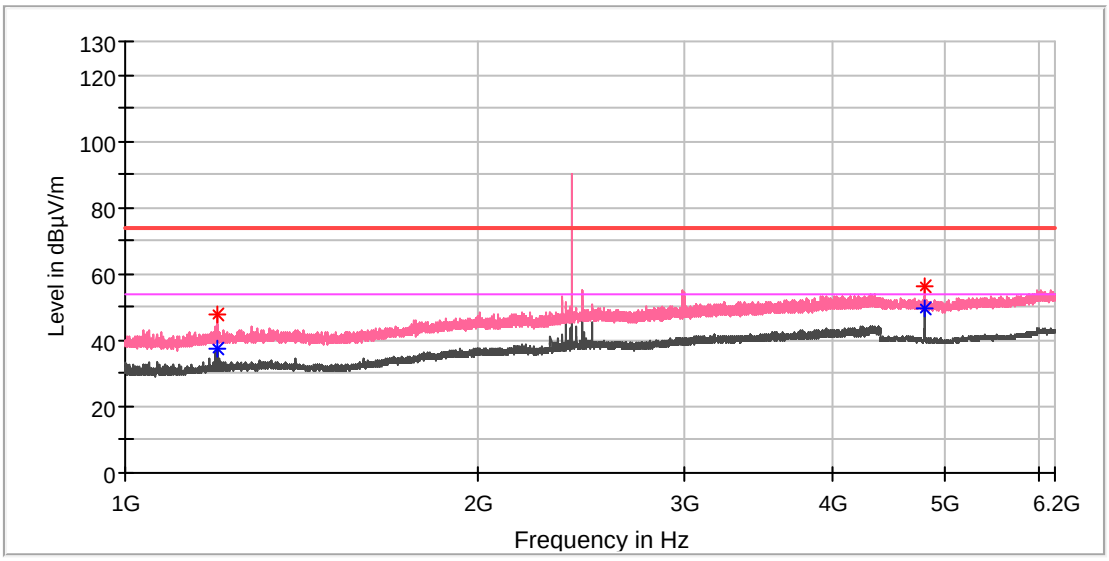


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9601.841667	44.32	---	74.00	29.68	100.0	H	304.0	10.4
9601.841667	---	38.46	54.00	15.54	100.0	H	304.0	10.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

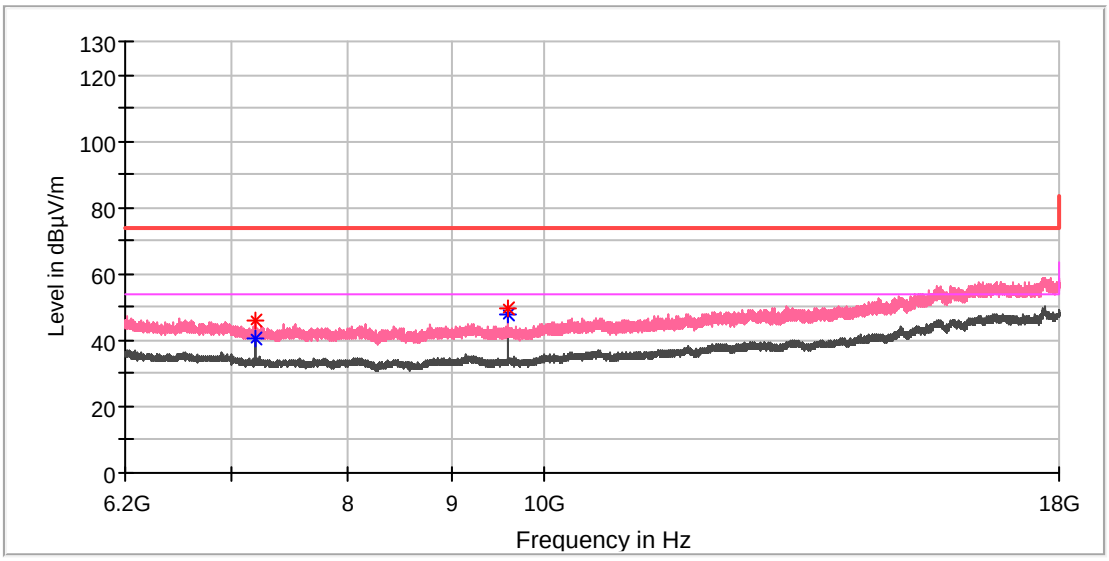


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1197.837500	---	37.43	54.00	16.57	100.0	V	349.0	1.1
1197.837500	47.65	---	74.00	26.35	100.0	V	349.0	1.1
4801.172222	---	49.56	54.00	4.44	100.0	V	251.0	13.6
4801.230556	56.00	---	74.00	18.00	100.0	V	259.0	13.6

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

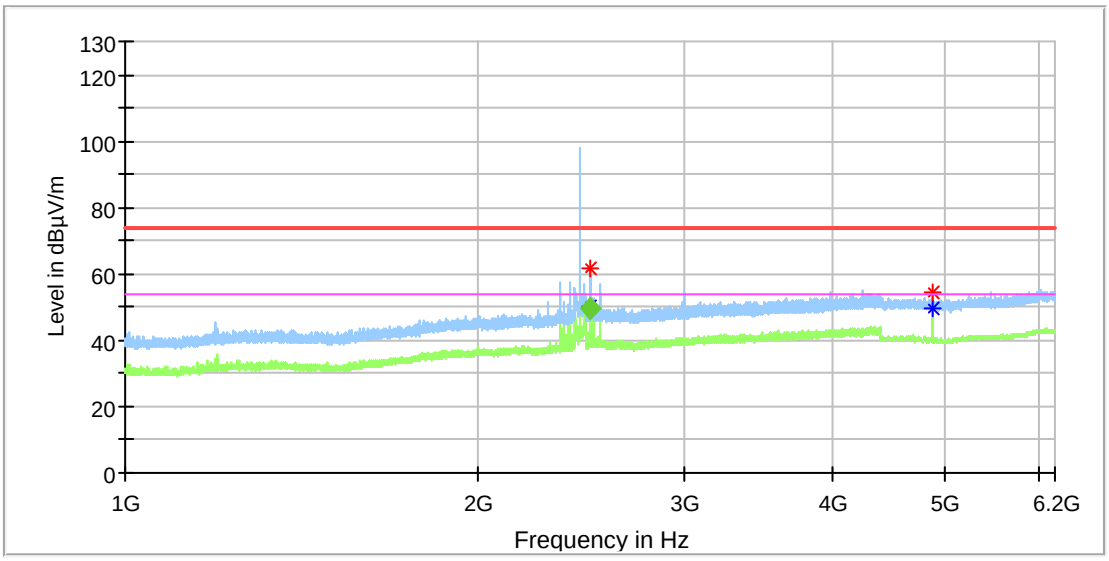


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7199.558333	45.71	---	74.00	28.29	100.0	V	324.0	8.8
7200.050000	---	40.38	54.00	13.62	100.0	V	324.0	8.8
9602.333333	49.84	---	74.00	24.16	100.0	V	339.0	10.4
9602.333333	---	47.85	54.00	6.15	100.0	V	339.0	10.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Mid channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

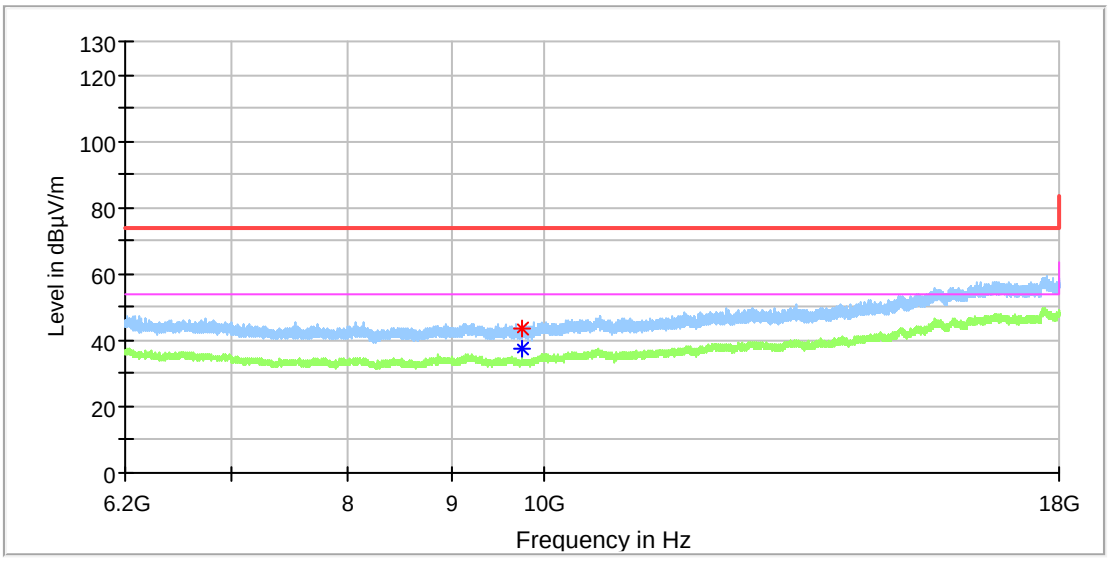
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2489.065625	61.78	---	74.00	12.22	100.0	H	209.0	7.4
4879.000000	---	49.57	54.00	4.43	100.0	H	236.0	13.4
4879.000000	54.69	---	74.00	19.31	100.0	H	236.0	13.4

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2489.081250	---	49.87	54.00	4.13	100.0	H	209.0	7.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Mid channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

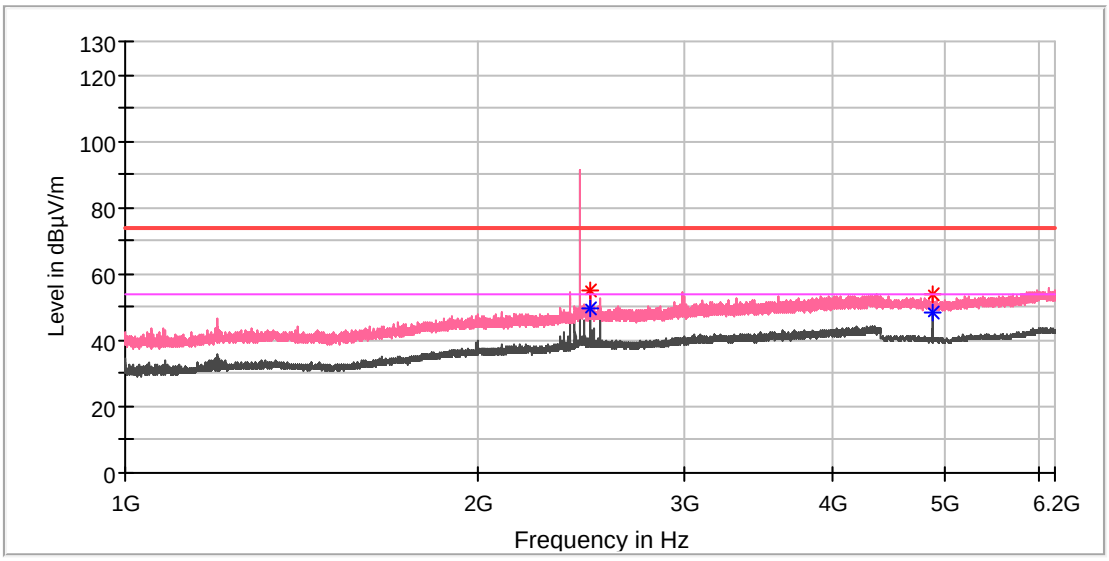


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9758.191667	43.76	---	74.00	30.24	100.0	H	284.0	10.4
9758.191667	---	37.46	54.00	16.54	100.0	H	284.0	10.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Mid channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

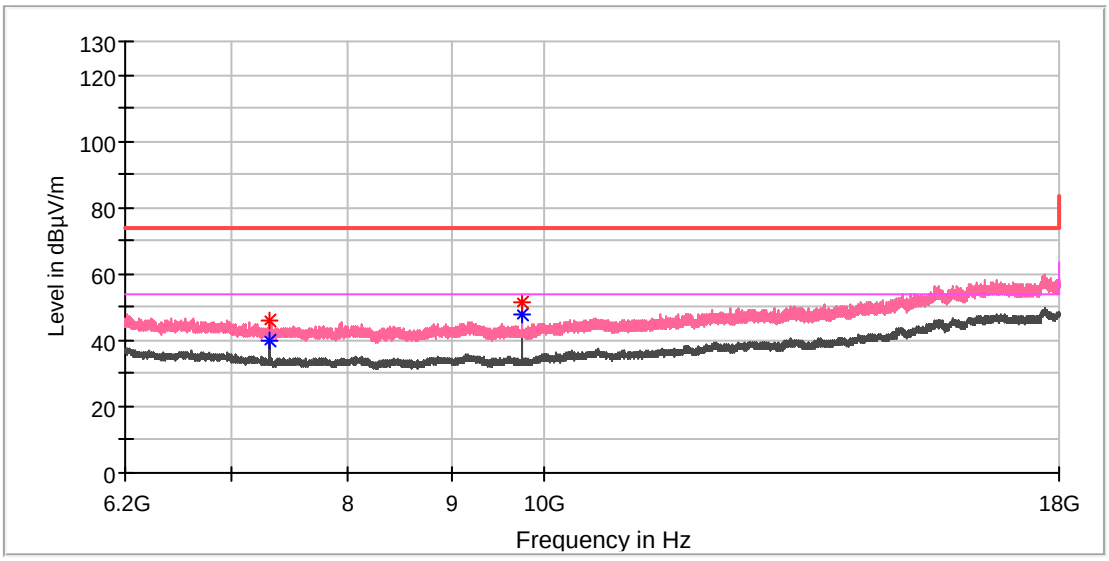


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2488.987500	---	49.31	54.00	4.69	100.0	V	100.0	7.4
2489.837500	55.00	---	74.00	19.00	100.0	V	264.0	7.4
4879.000000	54.11	---	74.00	19.89	100.0	V	264.0	13.4
4879.000000	---	48.51	54.00	5.49	100.0	V	264.0	13.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Mid channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

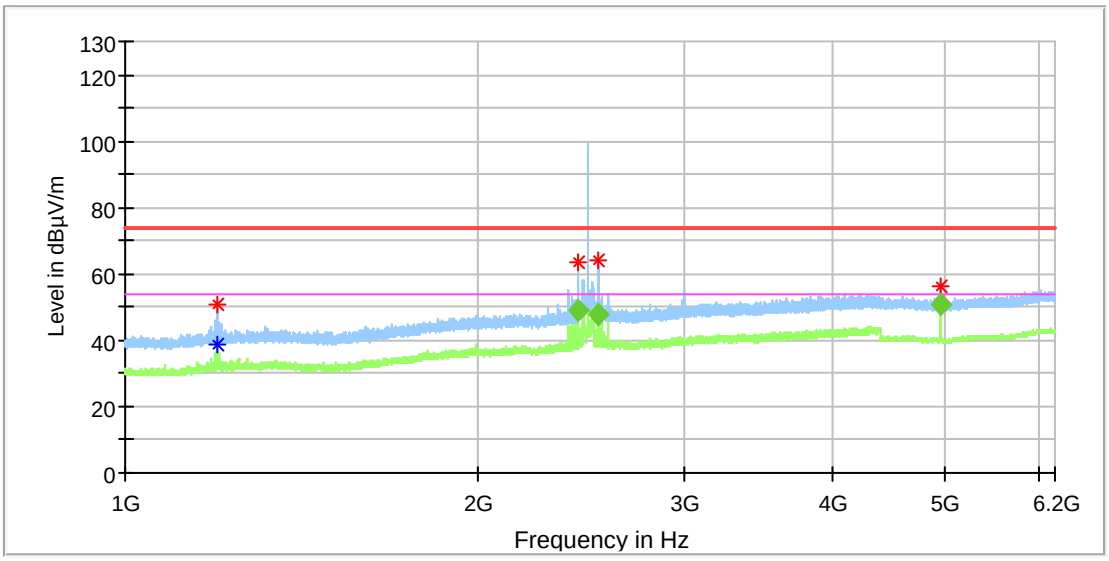


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7317.066667	46.02	---	74.00	27.98	100.0	V	296.0	8.2
7317.066667	---	40.00	54.00	14.00	100.0	V	296.0	8.2
9758.191667	51.43	---	74.00	22.57	100.0	V	341.0	10.4
9758.191667	---	48.06	54.00	5.94	100.0	V	341.0	10.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

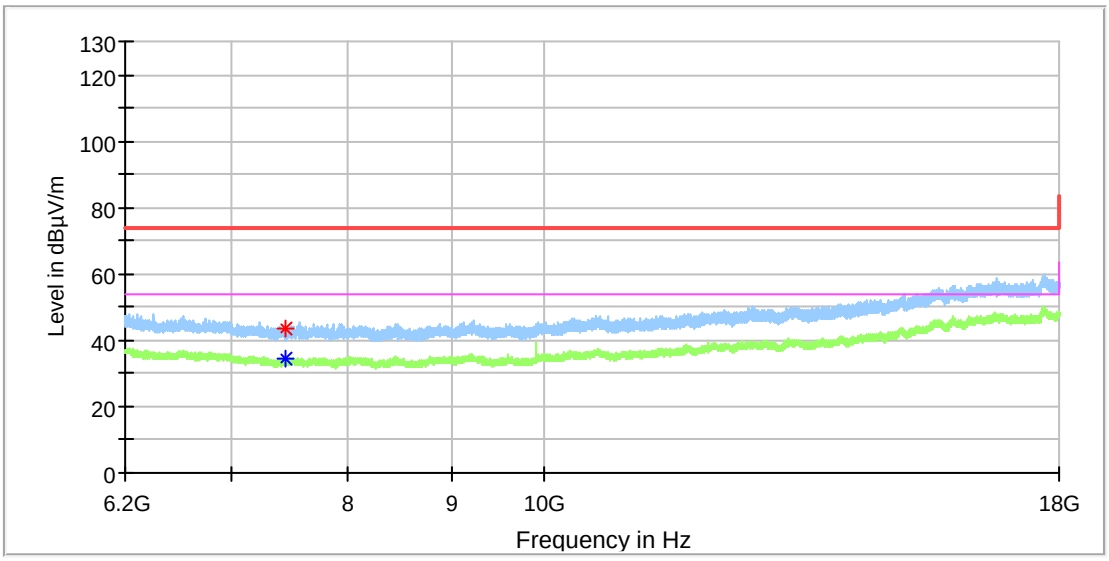
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1199.750000	---	38.75	54.00	15.25	100.0	H	311.0	1.1
1200.175000	50.98	---	74.00	23.02	100.0	H	311.0	1.1
2432.462500	63.31	---	74.00	10.69	100.0	H	193.0	7.3
2527.662500	64.23	---	74.00	9.77	100.0	H	214.0	7.5
4957.000000	56.32	---	74.00	17.68	100.0	H	251.0	13.2

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2431.981875	---	48.93	54.00	5.07	104.0	H	183.0	7.3
2527.976875	---	47.88	54.00	6.12	105.0	H	8.0	7.5
4957.205556	---	50.77	54.00	3.23	100.0	H	243.0	13.2

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

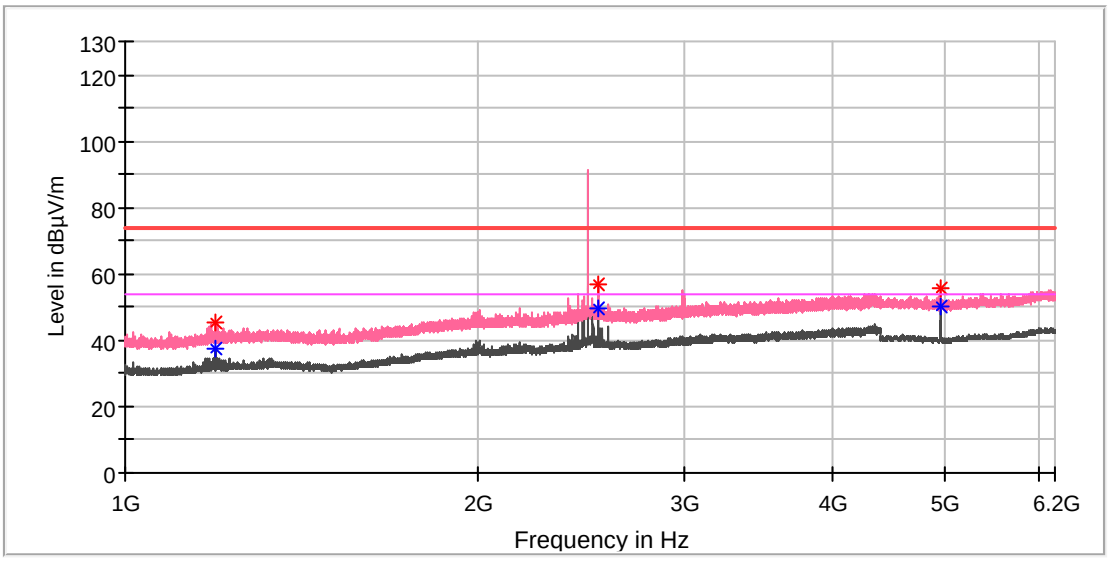


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7441.950000	---	34.18	54.00	19.82	100.0	H	120.0	8.4
7448.341667	43.60	---	74.00	30.40	100.0	H	9.0	8.5

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

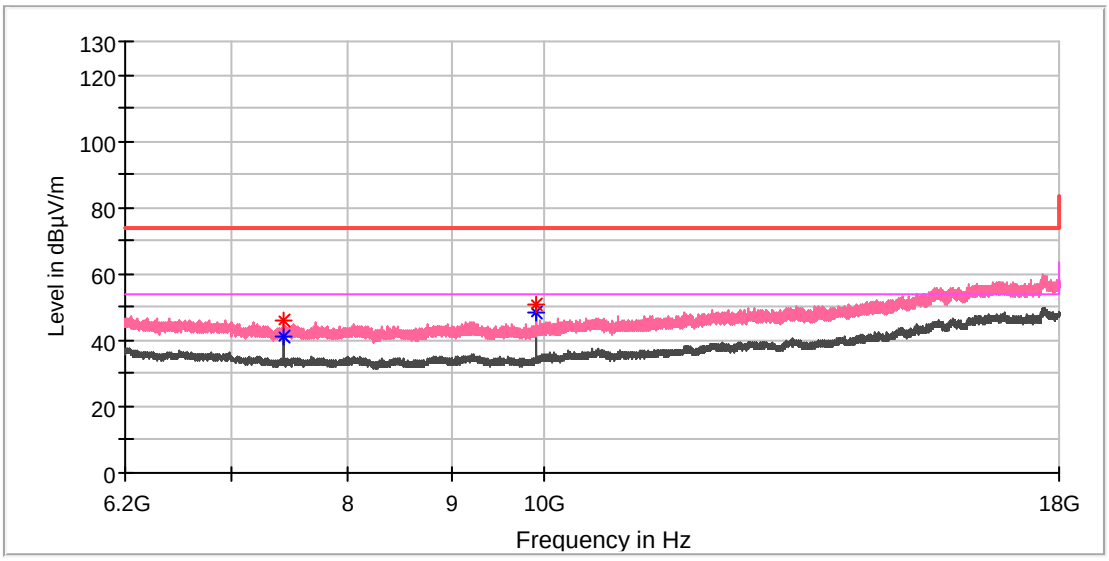


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1192.312500	45.33	---	74.00	28.67	100.0	V	231.0	1.1
1192.312500	---	37.34	54.00	16.66	100.0	V	231.0	1.1
2528.087500	---	49.72	54.00	4.28	100.0	V	102.0	7.5
2529.362500	56.98	---	74.00	17.02	100.0	V	123.0	7.5
4957.000000	---	50.27	54.00	3.73	100.0	V	271.0	13.2
4957.000000	55.62	---	74.00	18.38	100.0	V	271.0	13.2

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
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)
7434.083333	46.05	---	74.00	27.95	100.0	V	316.0	8.4
7434.083333	---	41.25	54.00	12.75	100.0	V	316.0	8.4
9914.050000	---	48.57	54.00	5.43	100.0	V	330.0	10.8
9914.541667	50.97	---	74.00	23.03	100.0	V	330.0	10.8

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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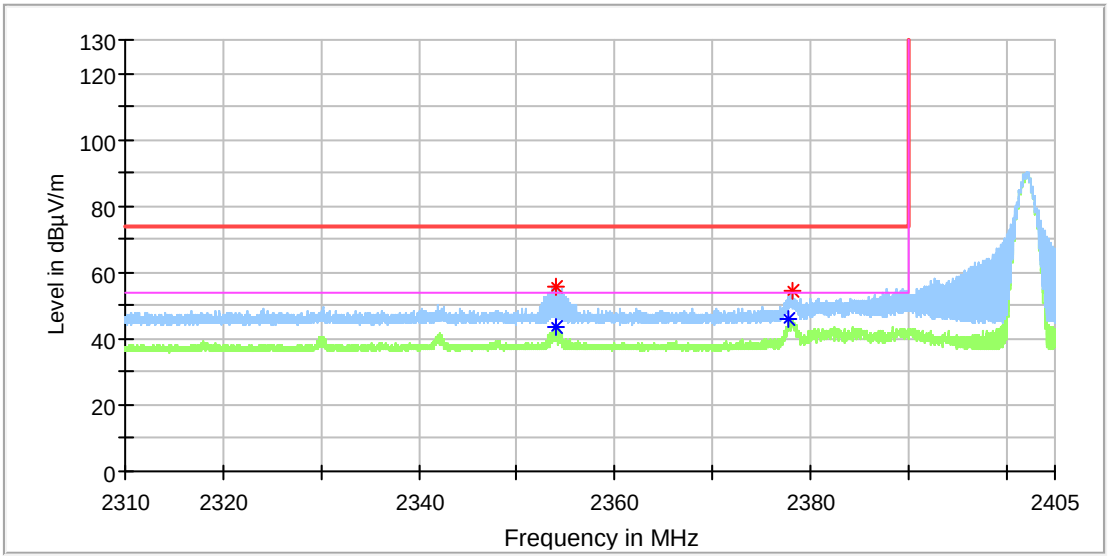
Appendix B.8: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

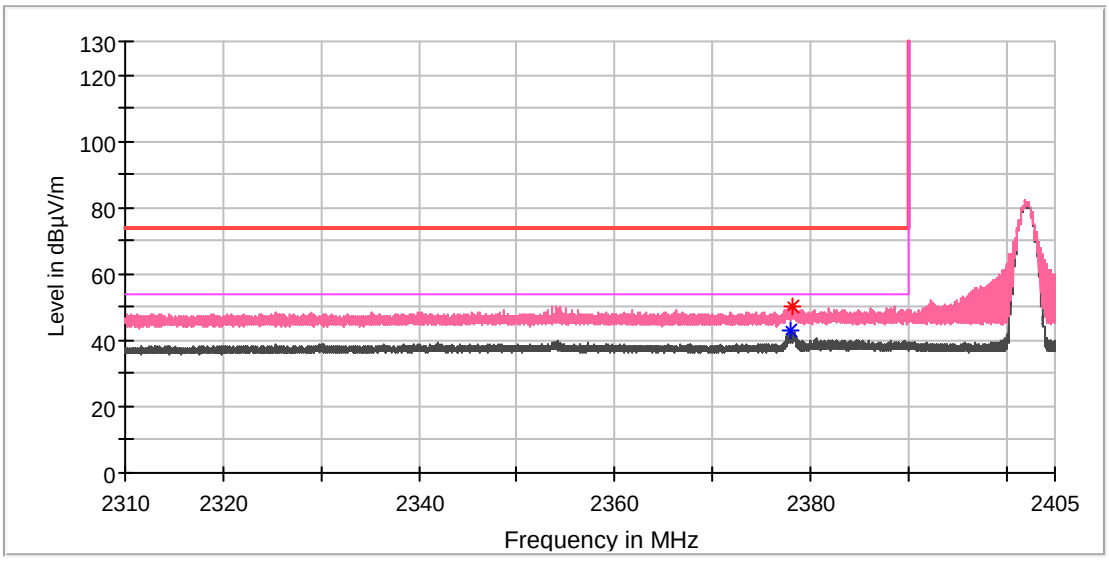


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2353.973125	---	43.40	54.00	10.60	100.0	H	182.0	6.9
2353.973125	55.58	---	74.00	18.42	100.0	H	182.0	6.9
2377.871563	---	46.03	54.00	7.97	100.0	H	1.0	6.9
2378.168438	54.27	---	74.00	19.73	100.0	H	192.0	6.9

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_Low channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

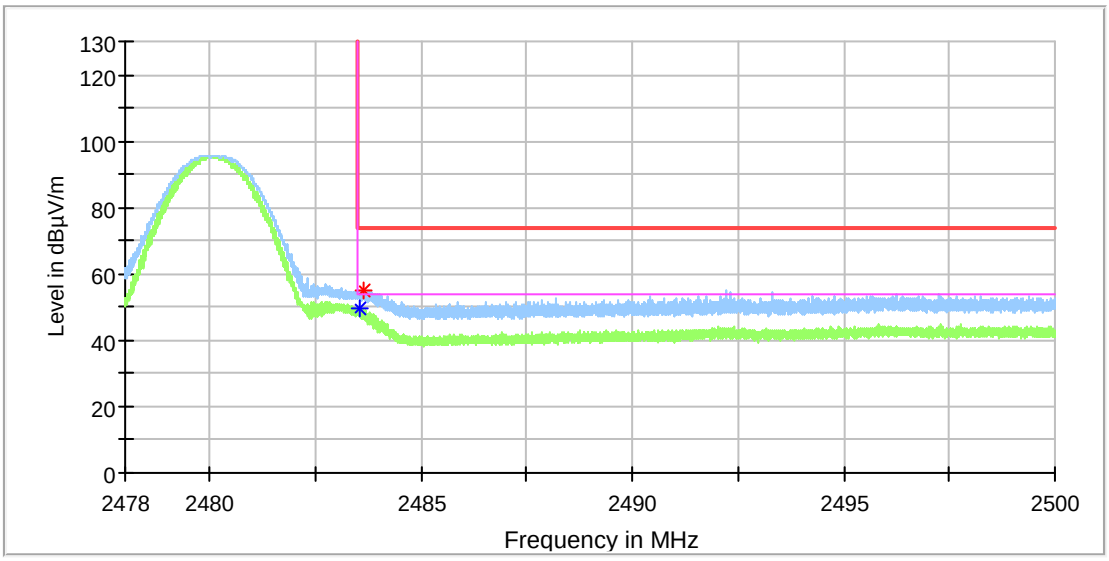


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2378.008125	---	42.66	54.00	11.34	100.0	V	144.0	6.9
2378.257500	50.31	---	74.00	23.69	100.0	V	89.0	6.9

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

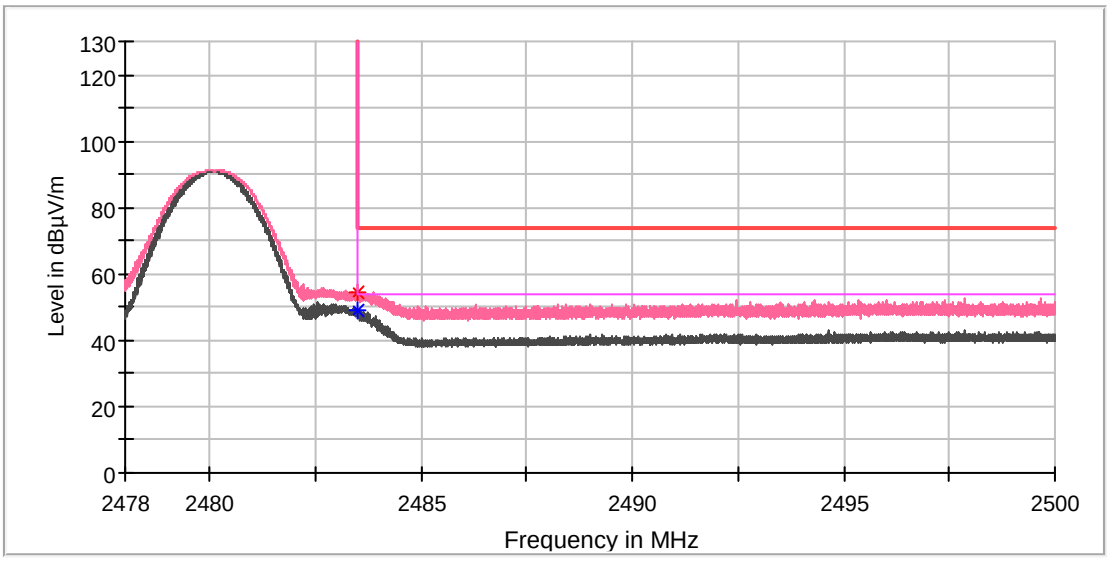


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.528875	---	49.70	54.00	4.30	100.0	H	221.0	7.4
2483.638875	55.00	---	74.00	19.00	100.0	H	221.0	7.4

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Model:	SNX-TE-003
Test Mode:	BT_GFSK_High channel
Test Voltage::	DC 5V From USB
Remark:	Temp 24 Humi:47%
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)
2483.501375	---	48.93	54.00	5.07	100.0	V	101.0	7.4
2483.501375	54.27	---	74.00	19.73	100.0	V	101.0	7.4

Final_Result

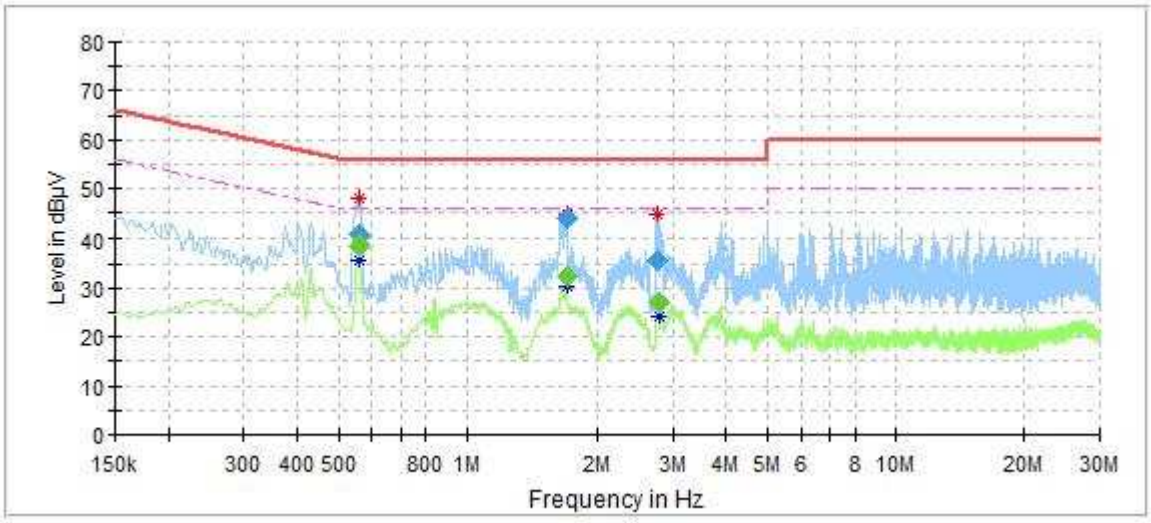
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

Appendix B.9: Test Results of Conducted Emission on AC Mains

BT playing mode

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Order No.:	168286270 90
Model:	SNX-TE-003
Test Mode:	BT playing mode
Test Voltage:	AC 120V, 60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	



Critical_Freqs

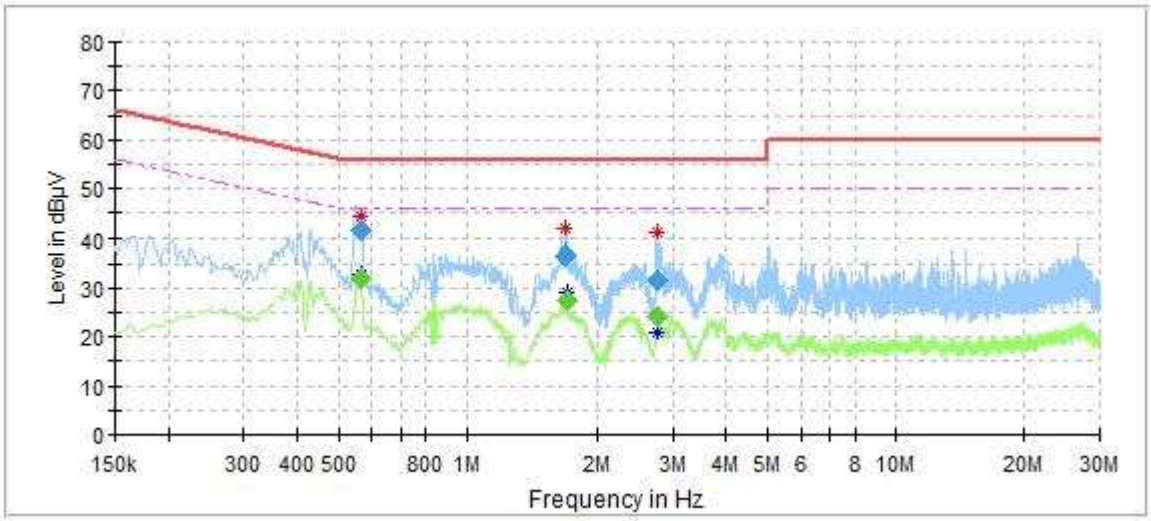
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.557925	48.11	---	56.00	7.89	L1	9.7
0.561633	---	35.54	46.00	10.46	L1	9.7
1.693883	---	30.31	46.00	15.69	L1	9.7
1.697592	44.69	---	56.00	11.31	L1	9.7
2.764292	44.72	---	56.00	11.28	L1	9.8
2.781950	---	24.15	46.00	21.85	L1	9.8

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.557925	40.51	---	56.00	15.49	200.0	9.000	L1	9.7
0.561633	---	38.71	46.00	7.29	200.0	9.000	L1	9.7
1.693883	---	32.22	46.00	13.78	200.0	9.000	L1	9.7
1.697592	43.94	---	56.00	12.06	200.0	9.000	L1	9.7
2.764292	35.89	---	56.00	20.11	200.0	9.000	L1	9.8
2.781950	---	27.08	46.00	18.92	200.0	9.000	L1	9.8

EUT Information

EUT Name:	Sonix Bluetooth Speaker
Order No.:	168286270 90
Model:	SNX-TE-003
Test Mode:	BT playing mode
Test Voltage:	AC 120V, 60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.563583	44.46	---	56.00	11.54	N	9.7
0.564267	---	32.92	46.00	13.08	N	9.7
1.674567	41.90	---	56.00	14.10	N	9.7
1.696225	---	29.21	46.00	16.79	N	9.7
2.748683	41.18	---	56.00	14.82	N	9.8
2.768975	---	20.84	46.00	25.16	N	9.8

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.563583	41.42	---	56.00	14.58	200.0	9.000	N	9.7
0.564267	---	31.88	46.00	14.12	200.0	9.000	N	9.7
1.674567	36.47	---	56.00	19.53	200.0	9.000	N	9.7
1.696225	---	27.51	46.00	18.49	200.0	9.000	N	9.7
2.748683	31.41	---	56.00	24.59	200.0	9.000	N	9.8
2.768975	---	24.21	46.00	21.79	200.0	9.000	N	9.8