

Appendix A.6: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Band Edge

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	6.782	-47.09	≤-13.22	PASS
DH5	Ant1	High	2480	6.474	-48.74	≤-13.53	PASS
3DH5	Ant1	Low	2402	6.29	-45.14	≤-13.71	PASS
3DH5	Ant1	High	2480	6.722	-49.69	≤-13.28	PASS
DH5	Ant1	Hopping	2402	5.963	-49.36	≤-14.04	PASS
DH5	Ant1	Hopping	2480	6.52	-49.59	≤-13.48	PASS
3DH5	Ant1	Hopping	2402	3.94	-47.62	≤-16.06	PASS
3DH5	Ant1	Hopping	2480	4.36	-49.38	≤-15.64	PASS





3DH5_Ant1_Hopping_2402



3DH5_Ant1_Hopping_2480



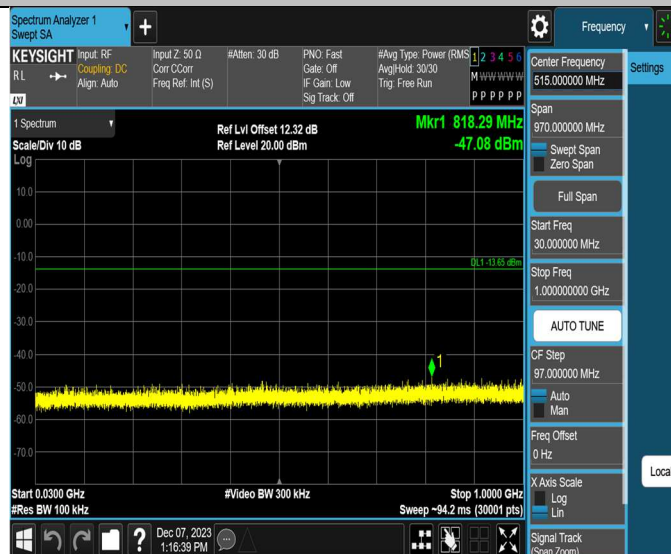
Conducted Spurious Emission

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	6.35	6.35	---	PASS
			30~1000	6.35	-47.09	≤-13.65	PASS
			1000~26500	6.35	-37.92	≤-13.65	PASS
		2441	Reference	6.25	6.25	---	PASS
			30~1000	6.25	-47.81	≤-13.75	PASS
			1000~26500	6.25	-38.16	≤-13.75	PASS
		2480	Reference	6.14	6.14	---	PASS
			30~1000	6.14	-47.14	≤-13.86	PASS
			1000~26500	6.14	-37.68	≤-13.86	PASS
3DH5	Ant1	2402	Reference	6.29	6.29	---	PASS
			30~1000	6.29	-47.33	≤-13.71	PASS
			1000~26500	6.29	-37.15	≤-13.71	PASS
		2441	Reference	4.27	4.27	---	PASS
			30~1000	4.27	-47.08	≤-15.73	PASS
			1000~26500	4.27	-38.2	≤-15.73	PASS
		2480	Reference	4.93	4.93	---	PASS
			30~1000	4.93	-47.46	≤-15.07	PASS
			1000~26500	4.93	-38.21	≤-15.07	PASS

DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



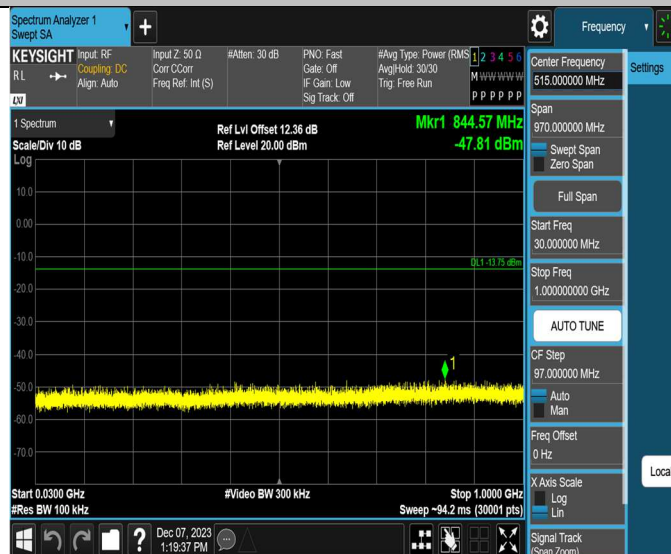
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



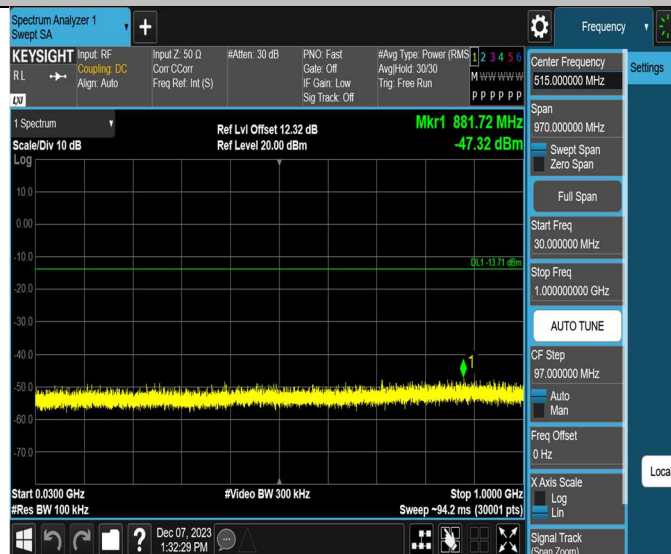
DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



3DH5_Ant1_2402_1000~26500



3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



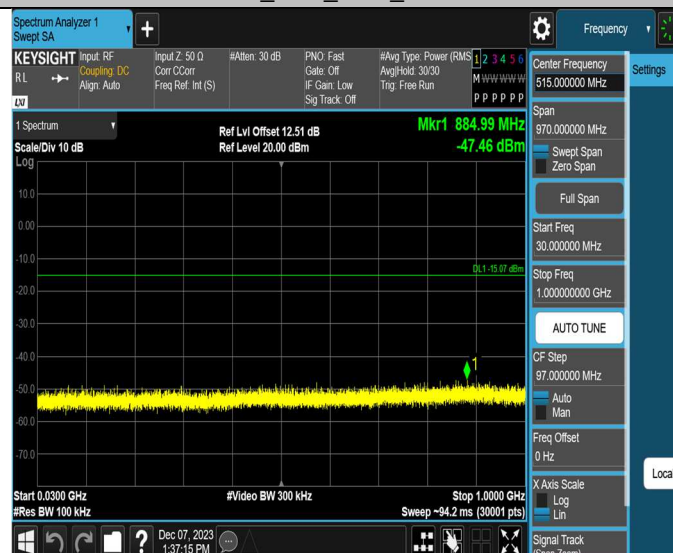
3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



Appendix A.7: Test Results of Radiated Spurious Emissions

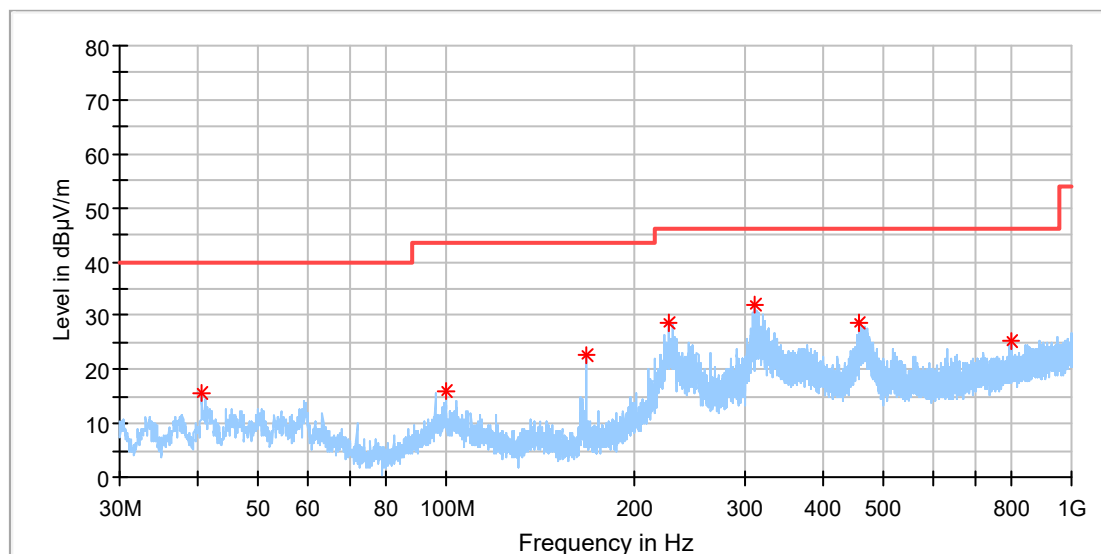
Note:

- 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 - 1GHz

EUT Information

EUT Name:	WIFI+BT Module
Model:	WXT5EM2511
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168451684/A003594964-001
Test Voltage:	DC 5V From USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

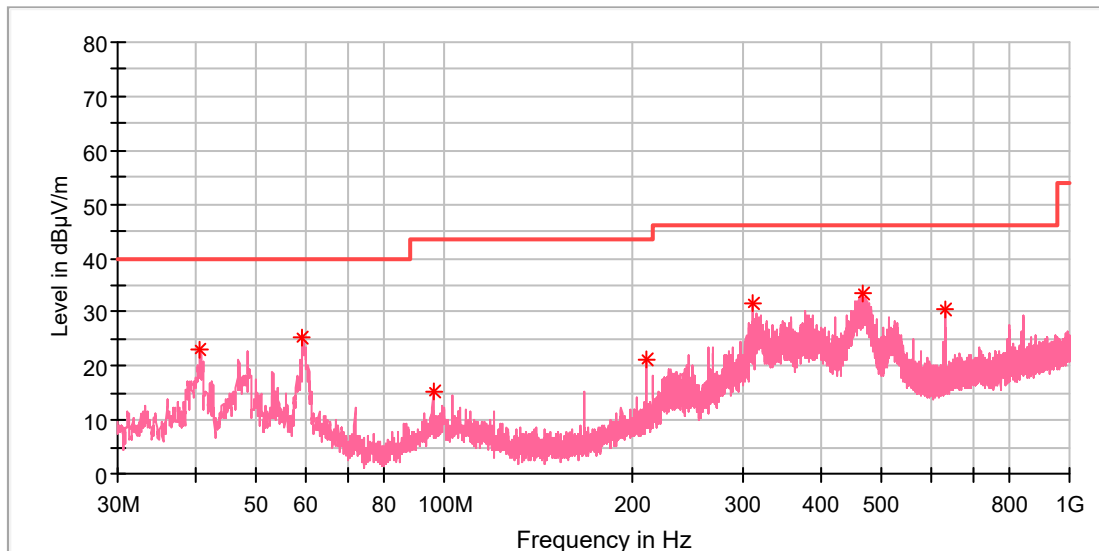


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.632692	15.76	40.00	24.24	100.0	H	120.0	-20.2
99.765385	16.14	43.50	27.36	100.0	H	243.0	-19.3
168.001154	22.78	43.50	20.72	100.0	H	267.0	-21.7
226.798077	28.72	46.00	17.28	100.0	H	0.0	-18.6
312.008846	31.94	46.00	14.06	100.0	H	274.0	-16.3
458.478846	28.82	46.00	17.18	100.0	H	301.0	-13.1
798.725000	25.16	46.00	20.84	100.0	H	188.0	-6.8

EUT Information

EUT Name:	WIFI+BT Module
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Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168451684/A003594964-001
Test Voltage:	DC 5V From USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

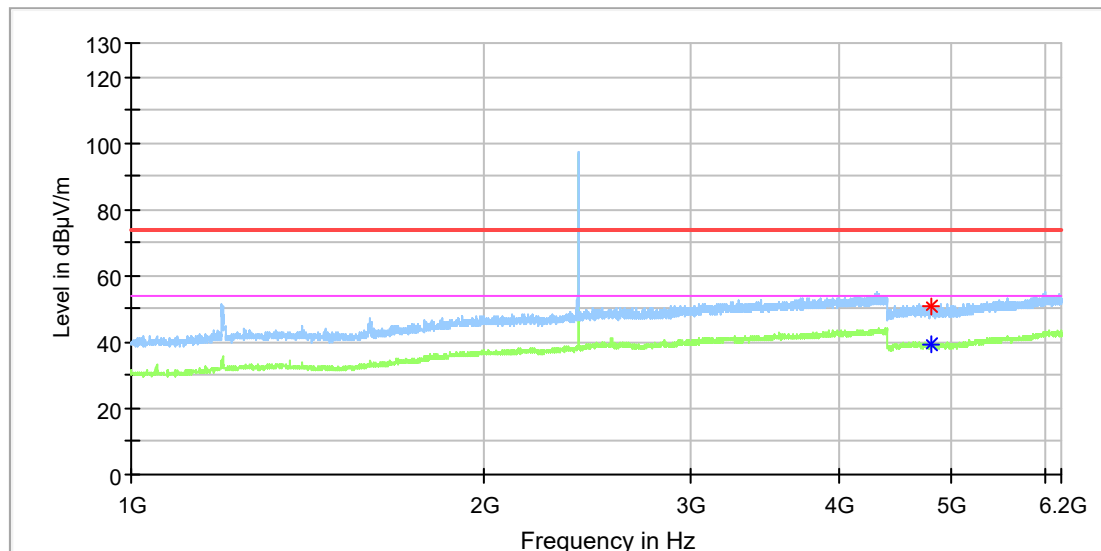
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.707308	23.22	40.00	16.78	100.0	V	189.0	-20.2
59.361154	25.31	40.00	14.69	100.0	V	82.0	-19.2
95.960000	15.36	43.50	28.14	100.0	V	325.0	-19.9
210.345385	21.36	43.50	22.14	100.0	V	344.0	-19.2
312.008846	31.73	46.00	14.27	100.0	V	344.0	-16.3
466.089615	33.63	46.00	12.37	100.0	V	206.0	-12.9
631.101539	30.47	46.00	15.53	100.0	V	189.0	-9.7

1GHz - 18GHz

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

EUT Information

EUT Name:	WIFI+BT Module
Model:	WXT5EM2511
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168451684/A003594964-001
Test Voltage:	DC 5V From USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

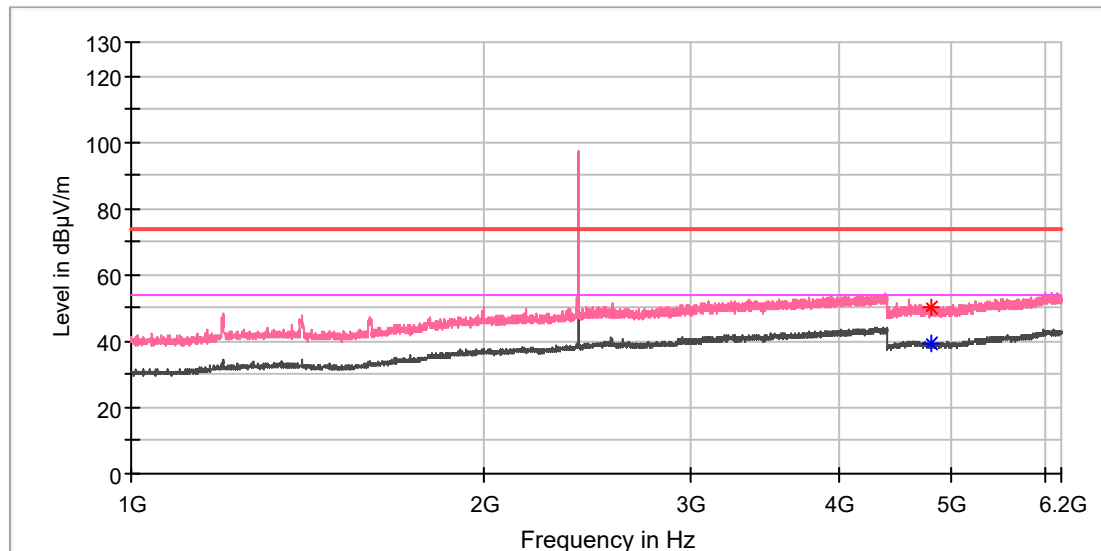
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.500000	---	39.58	54.00	14.42	100.0	H	110.0	11.8
4805.000000	50.94	---	74.00	23.06	100.0	H	41.0	11.8

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Low channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

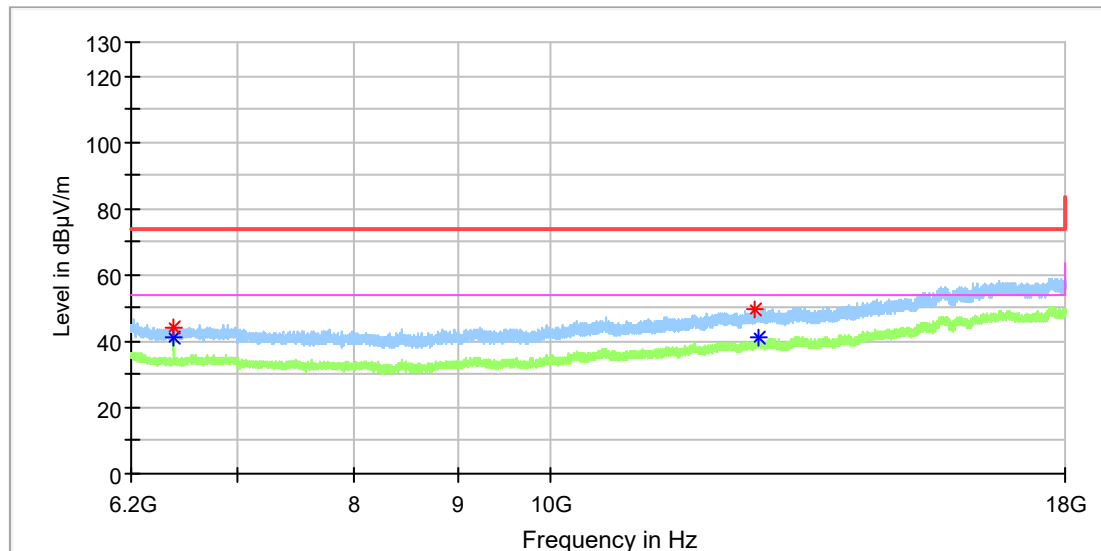
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4796.500000	50.47	---	74.00	23.53	100.0	V	224.0	11.8
4799.500000	---	39.51	54.00	14.49	100.0	V	180.0	11.8

Final Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Low channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

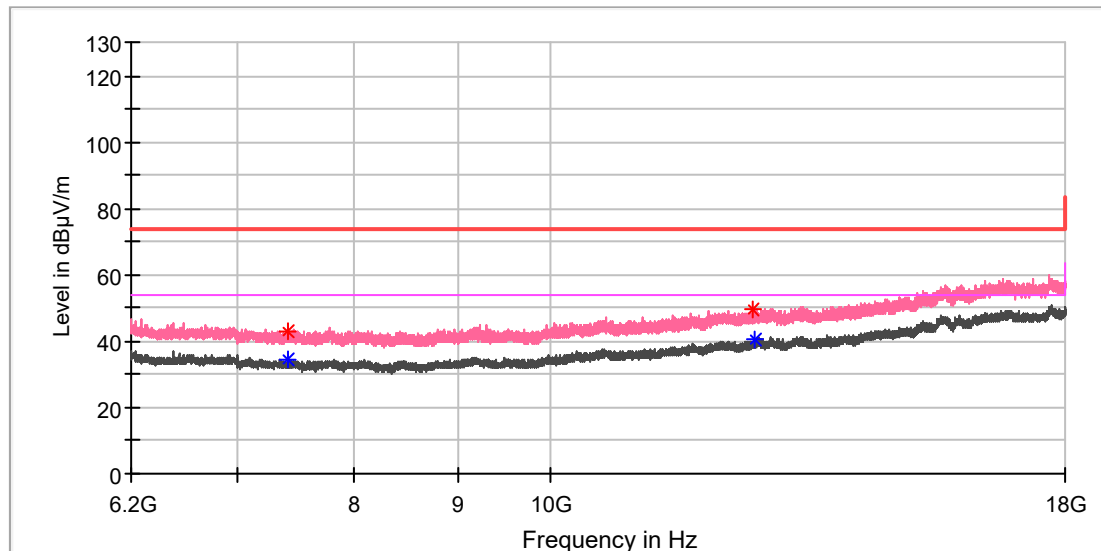
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6511.716667	---	40.87	54.00	13.13	100.0	H	9.0	8.8
6512.208333	44.29	---	74.00	29.71	100.0	H	0.0	8.8
12639.358333	49.82	---	74.00	24.18	100.0	H	9.0	15.0
12690.491667	---	40.95	54.00	13.05	100.0	H	193.0	15.1

Final Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Low channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

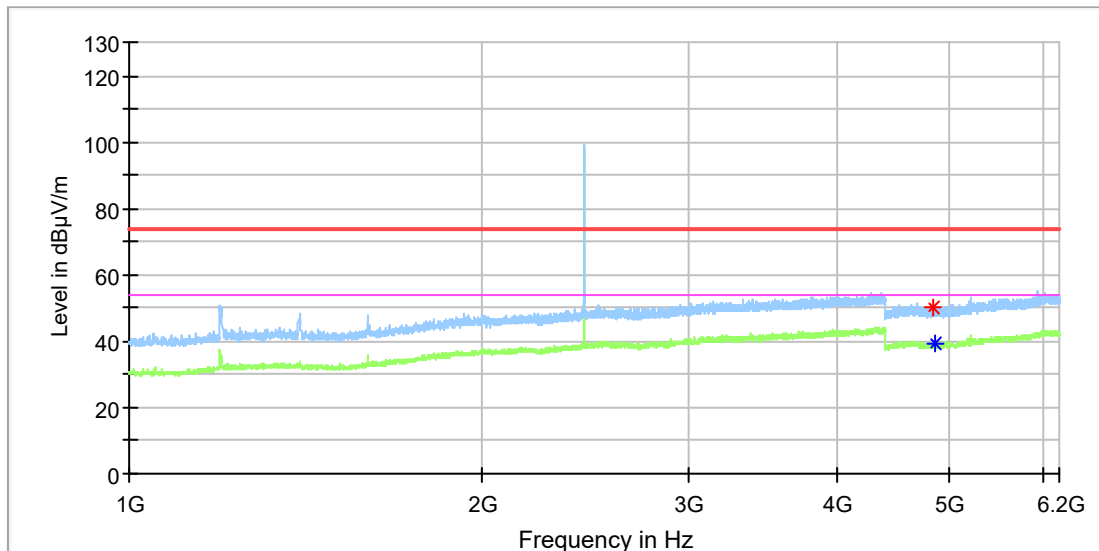
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7416.383333	---	34.37	54.00	19.63	100.0	V	206.0	8.3
7417.366667	43.23	---	74.00	30.77	100.0	V	317.0	8.3
12610.841667	49.73	---	74.00	24.27	100.0	V	133.0	14.9
12638.866667	---	40.70	54.00	13.30	100.0	V	170.0	15.0

Final Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
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Critical_Freqs

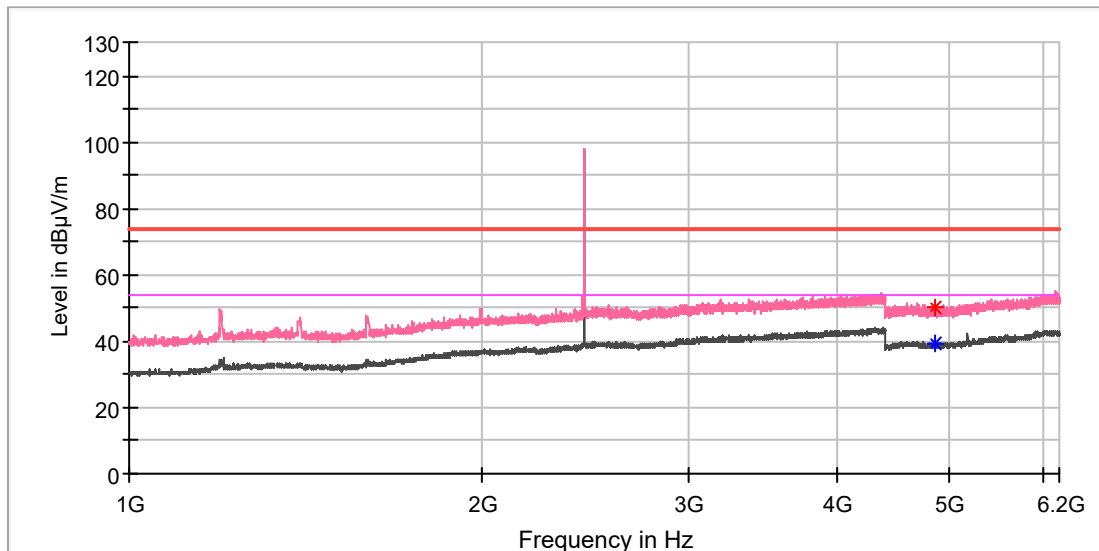
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4845.500000	50.32	---	74.00	23.68	100.0	H	288.0	11.8
4863.000000	---	39.31	54.00	14.69	100.0	H	132.0	11.8

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

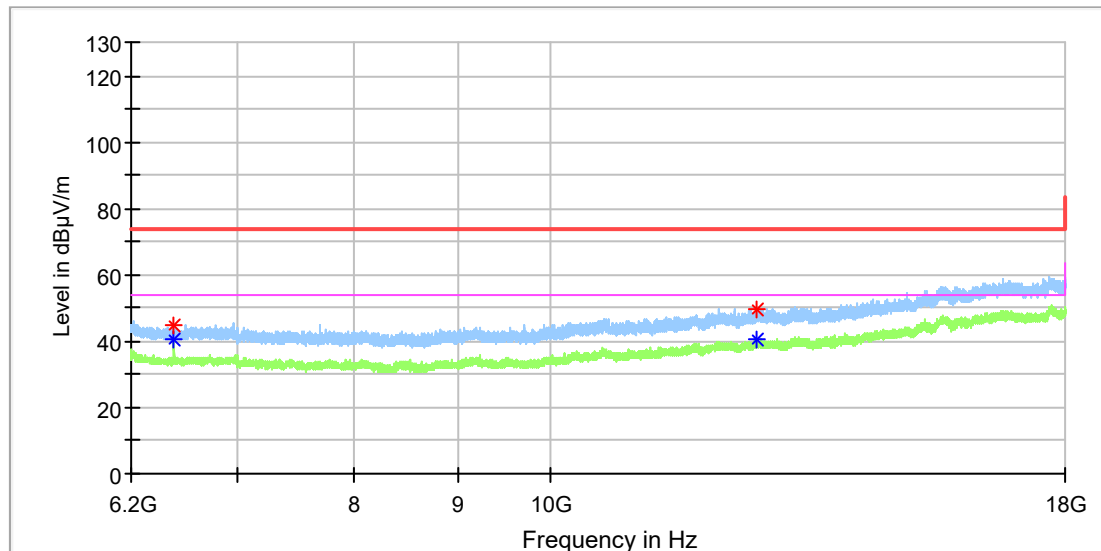
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4856.500000	50.42	---	74.00	23.58	100.0	V	43.0	11.8
4863.000000	---	39.60	54.00	14.40	100.0	V	144.0	11.8

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

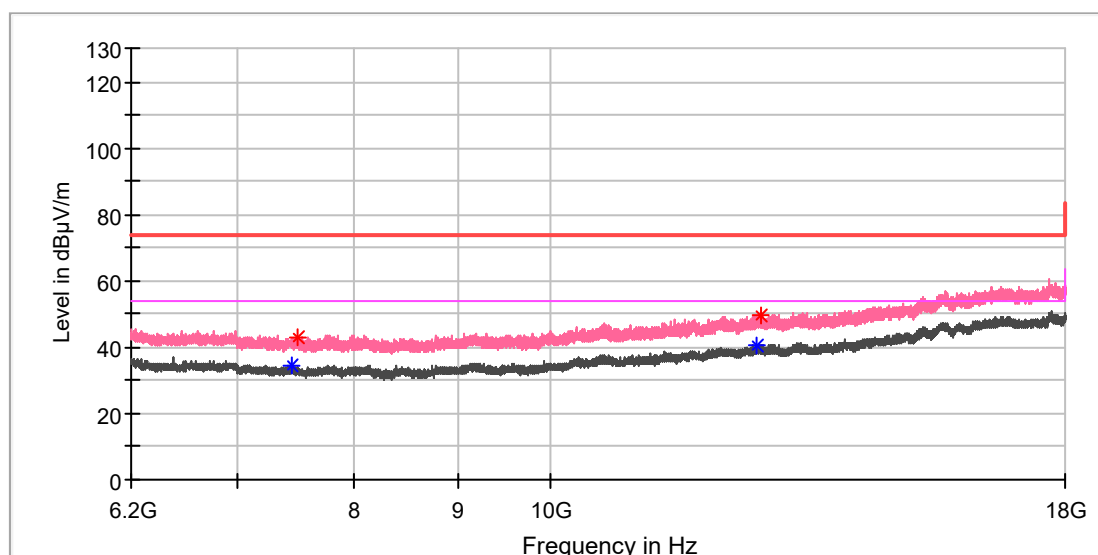
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6511.716667	---	40.39	54.00	13.61	100.0	H	0.0	8.8
6511.716667	44.83	---	74.00	29.17	100.0	H	0.0	8.8
12643.291667	---	40.68	54.00	13.32	100.0	H	290.0	15.0
12651.650000	49.48	---	74.00	24.52	100.0	H	184.0	15.0

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

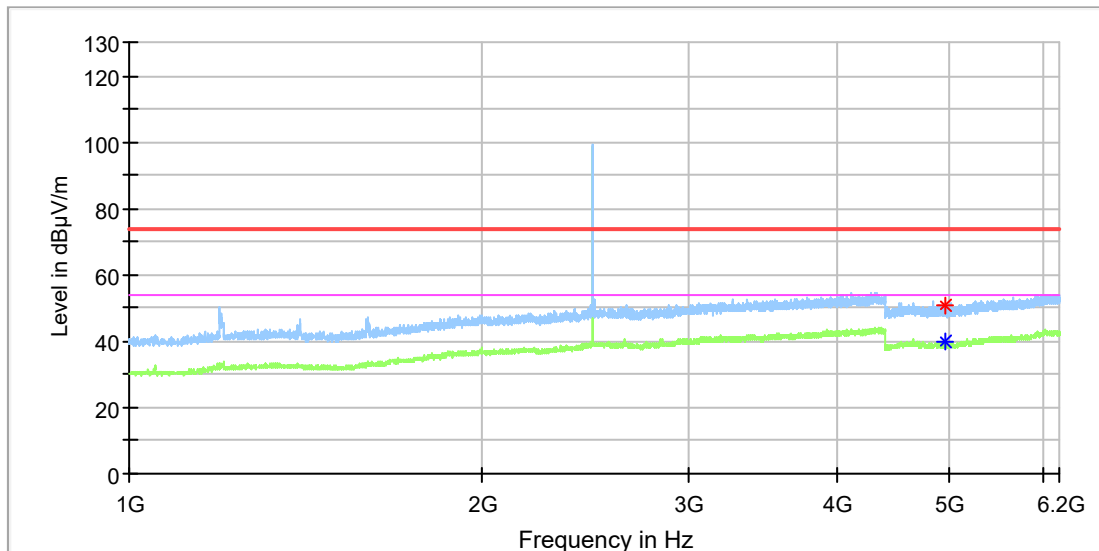
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7451.291667	---	34.40	54.00	19.60	100.0	V	155.0	8.5
7490.625000	43.15	---	74.00	30.85	100.0	V	47.0	8.7
12644.275000	---	40.48	54.00	13.52	100.0	V	277.0	15.0
12702.291667	49.44	---	74.00	24.56	100.0	V	107.0	15.1

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_High channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

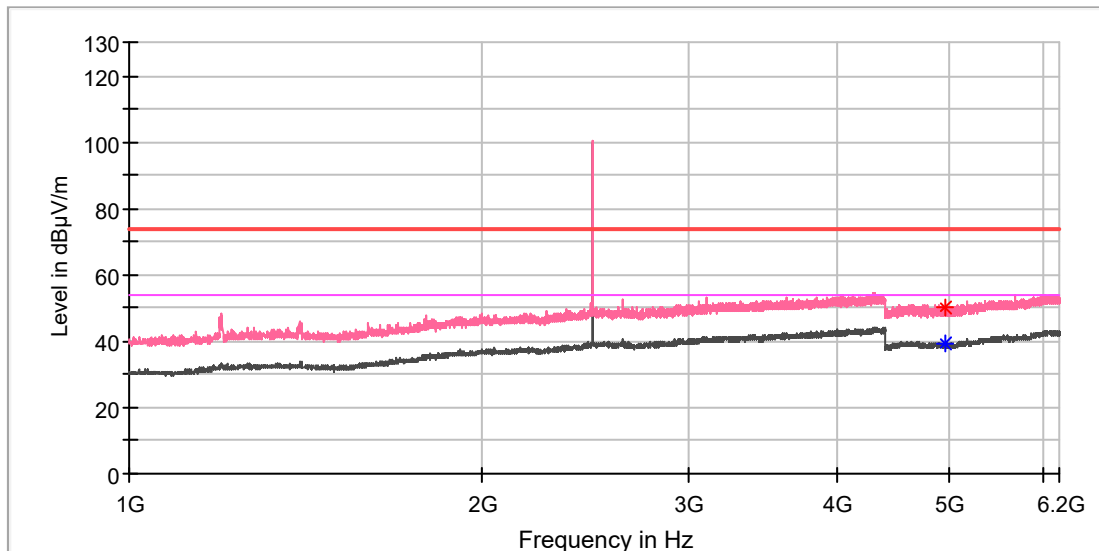
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4956.500000	50.58	---	74.00	23.42	100.0	H	106.0	11.8
4959.500000	---	39.70	54.00	14.30	100.0	H	49.0	11.8

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_High channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

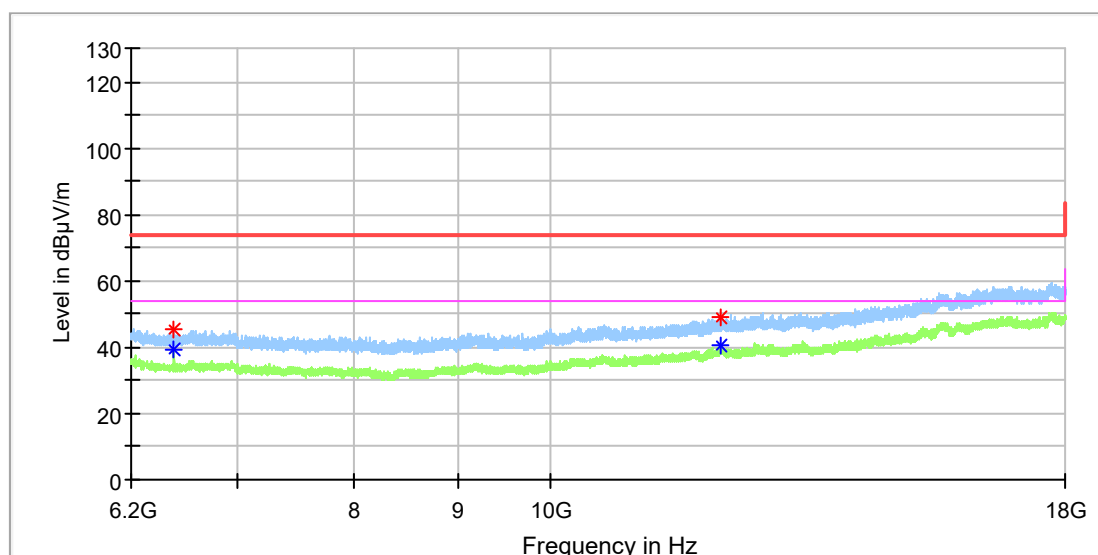
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4948.000000	---	39.39	54.00	14.61	100.0	V	162.0	11.8
4952.500000	50.18	---	74.00	23.82	100.0	V	149.0	11.8

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_High channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

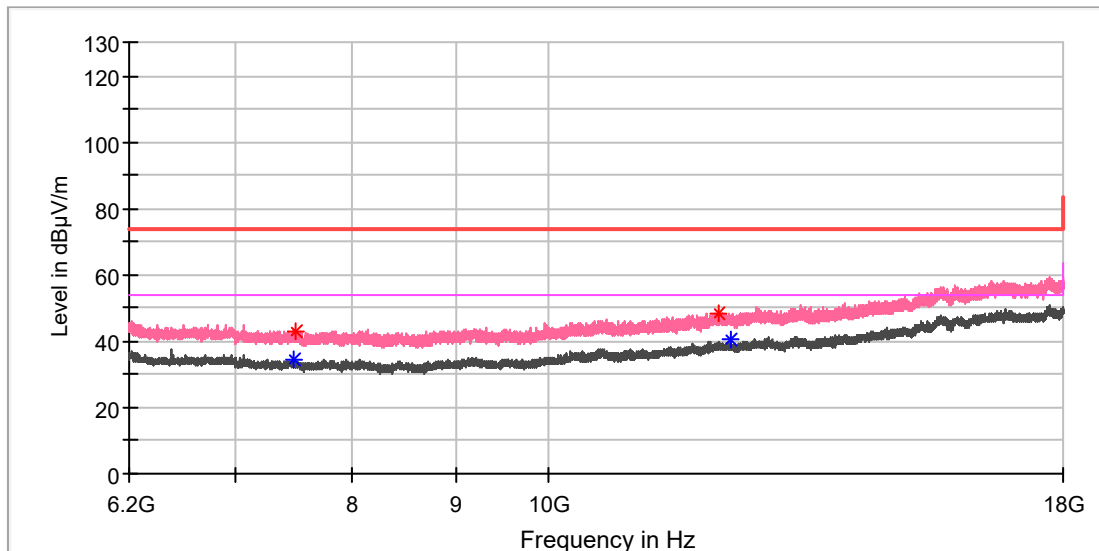
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6511.716667	45.14	---	74.00	28.86	100.0	H	356.0	8.8
6511.716667	---	39.26	54.00	14.74	100.0	H	356.0	8.8
12132.941667	48.90	---	74.00	25.10	100.0	H	193.0	14.3
12137.858333	---	40.42	54.00	13.58	100.0	H	145.0	14.4

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_High channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
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)
7471.450000	---	34.44	54.00	19.56	100.0	V	259.0	8.6
7502.425000	43.19	---	74.00	30.81	100.0	V	220.0	8.7
12142.283333	48.59	---	74.00	25.41	100.0	V	296.0	14.4
12313.383333	---	40.64	54.00	13.36	100.0	V	208.0	14.9

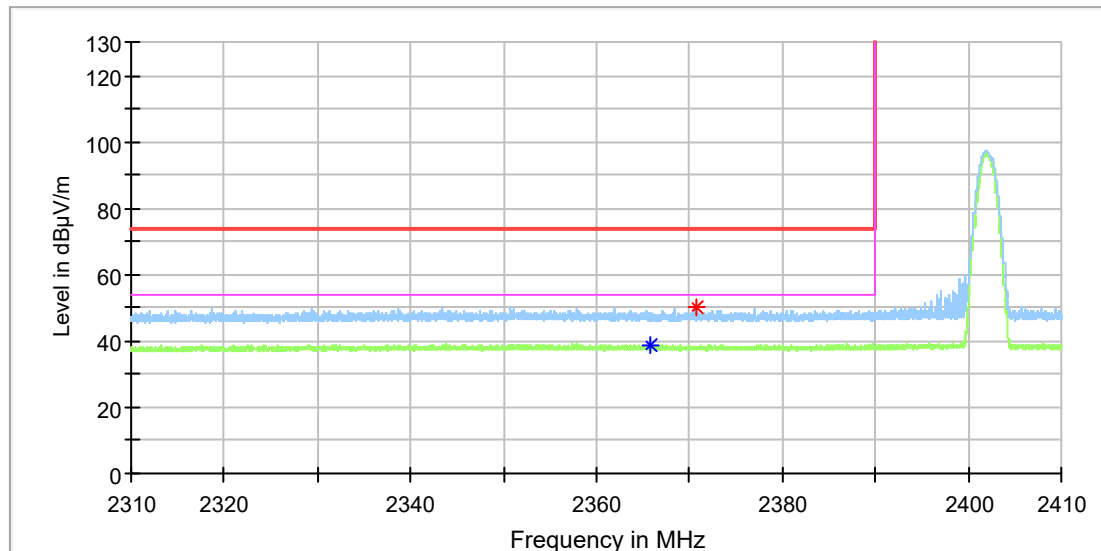
Final_Result

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

Appendix A.8: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	WIFI+BT Module
Model:	WXT5EM2511
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168451684/A003594964-001
Test Voltage:	DC 5V From USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

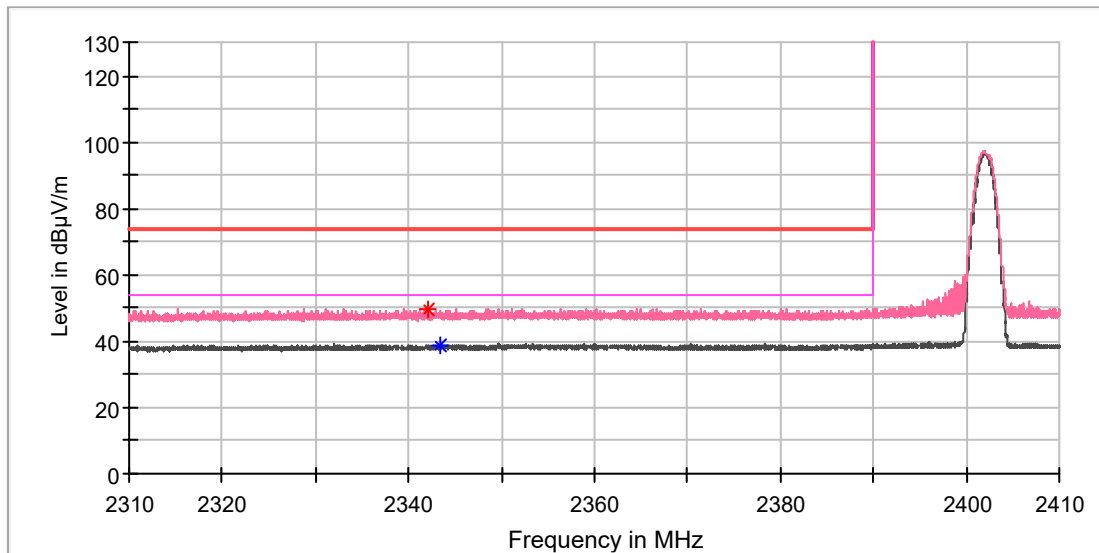
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2365.779412	---	38.66	54.00	15.34	100.0	H	101.0	6.9
2370.750000	50.26	---	74.00	23.74	100.0	H	309.0	6.9

Final_Result

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

EUT Information

EUT Name: WIFI+BT Module
Model: WXT5EM2511
Test Mode: BR_DH5_Low channel
Order No/Sample No: 168451684/A003594964-001
Test Voltage: DC 5V From USB
Remark: Temp 22 Humi:52%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

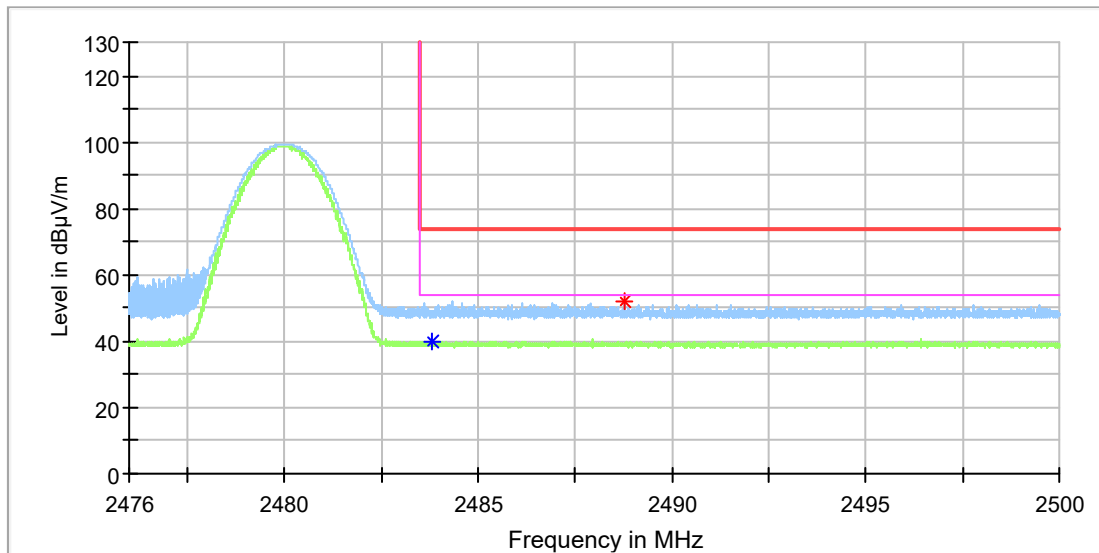
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2342.073530	49.76	---	74.00	24.24	100.0	V	274.0	6.8
2343.426471	---	38.84	54.00	15.16	100.0	V	197.0	6.9

Final Result

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

EUT Name:	WIFI+BT Module
Model:	WXT5EM2511
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168451684/A003594964-001
Test Voltage:	DC 5V From USB
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

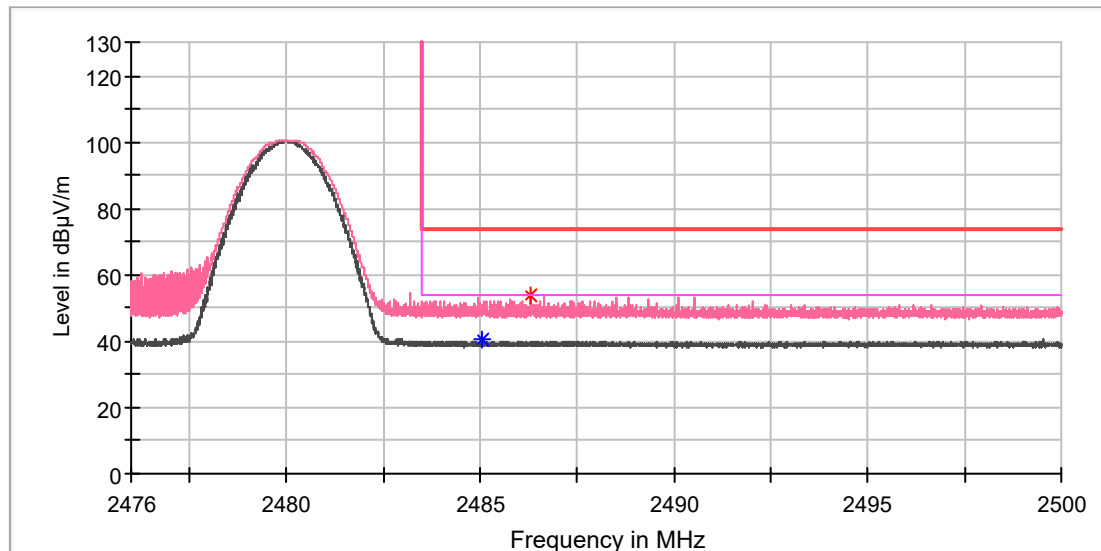
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.821177	---	40.16	54.00	13.84	100.0	H	124.0	7.4
2488.790588	52.21	---	74.00	21.79	100.0	H	356.0	7.4

Final_Result

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

EUT Name:	WIFI+BT Module
Model:	WXT5EM2511
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168451684/A003594964-001
Test Voltage:	DC 5V From USB
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)
2485.049412	---	40.75	54.00	13.25	100.0	V	132.0	7.4
2486.305882	53.60	---	74.00	20.40	100.0	V	59.0	7.4

Final Result

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