

Appendix C: Test Results for 2.4GHz Wi-Fi

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Appendix C.1: Test Results of Radiated Spurious Emissions

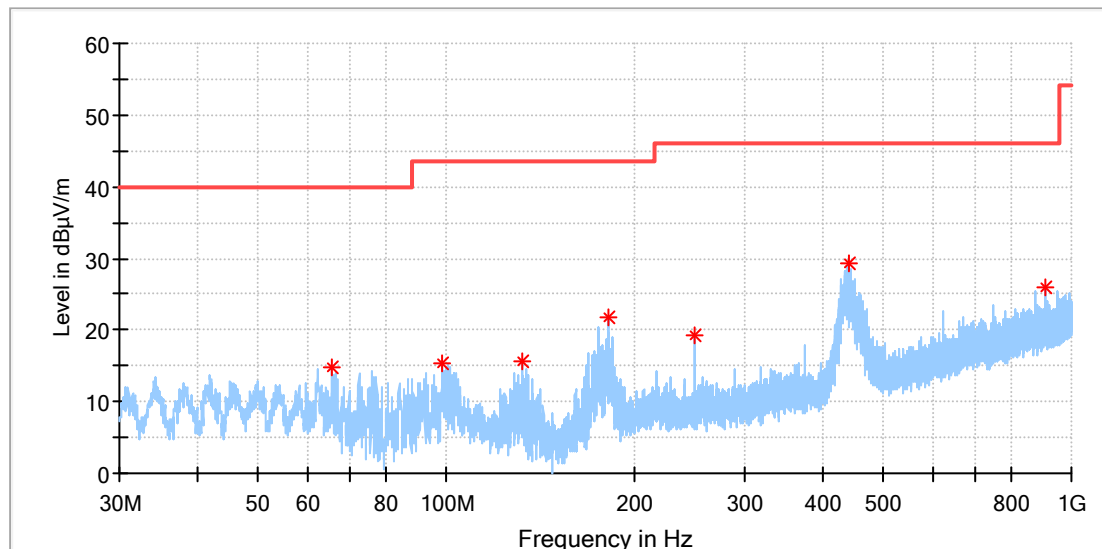
Note:

- 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.
- 3) The highest waveform in the figure is 2.4GHz Wi-Fi Fundamental.

30 MHz - 1GHz

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH6
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

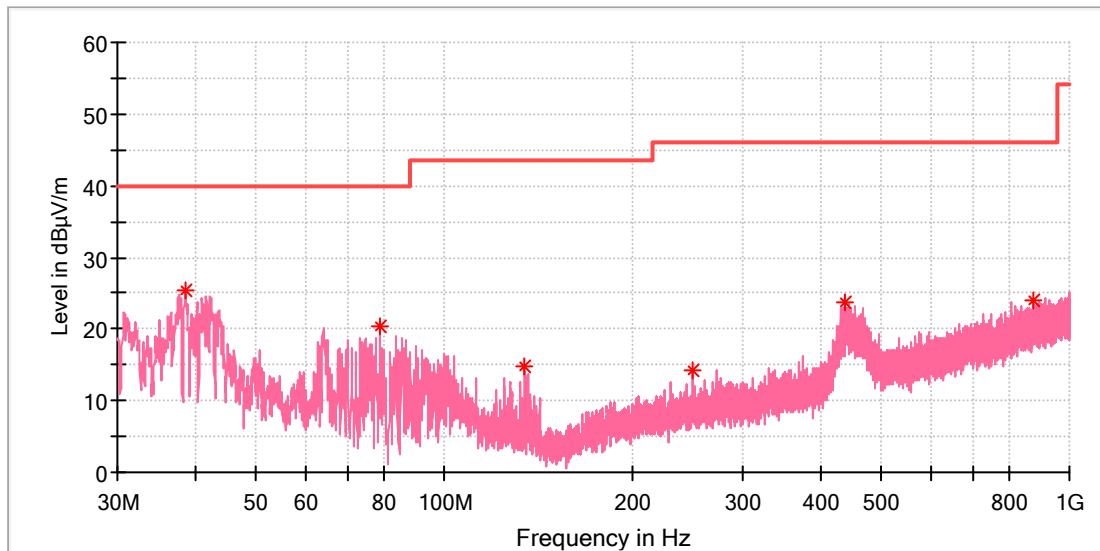
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
65.591539	14.80	40.00	25.20	100.0	H	260.0	-20.4
98.720769	15.26	43.50	28.24	100.0	H	169.0	-19.3
132.260385	15.69	43.50	27.81	100.0	H	310.0	-22.0
182.290000	21.68	43.50	21.82	100.0	H	250.0	-20.4
250.003462	19.37	46.00	26.63	100.0	H	51.0	-17.4
441.168077	29.34	46.00	16.66	100.0	H	224.0	-12.9
908.931923	25.87	46.00	20.13	100.0	H	176.0	-4.7

Final_Result

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

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH6
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
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Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
38.580769	25.27	40.00	14.73	100.0	V	231.0	-20.6
78.798462	20.35	40.00	19.65	100.0	V	223.0	-23.6
134.685385	14.80	43.50	28.70	100.0	V	223.0	-22.1
250.003462	14.22	46.00	31.78	100.0	V	215.0	-17.4
438.631154	23.66	46.00	22.34	100.0	V	162.0	-13.0
875.019231	24.14	46.00	21.86	100.0	V	0.0	-5.1

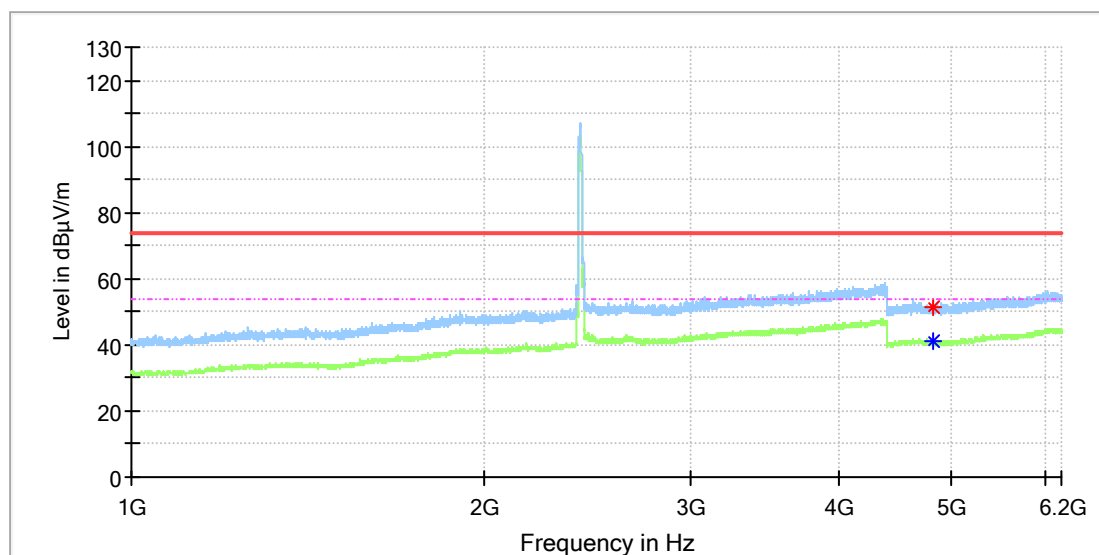
Final_Result

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

1GHz - 18GHz

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH1
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

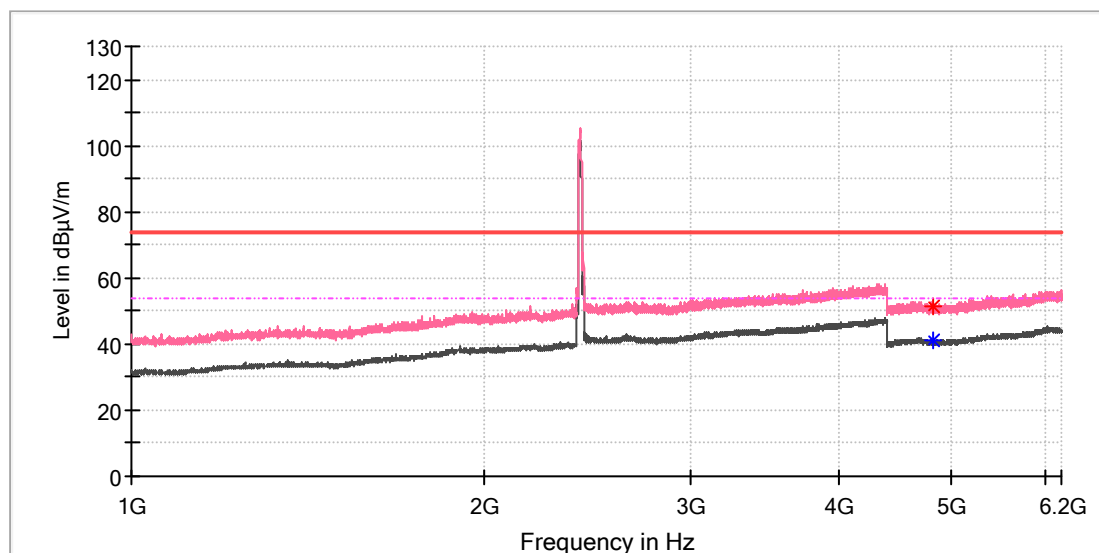
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4823.500000	---	41.17	54.00	12.83	150.0	H	287.0	13.3
4826.000000	51.54	---	74.00	22.46	150.0	H	317.0	13.3

Final Result

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

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH1
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

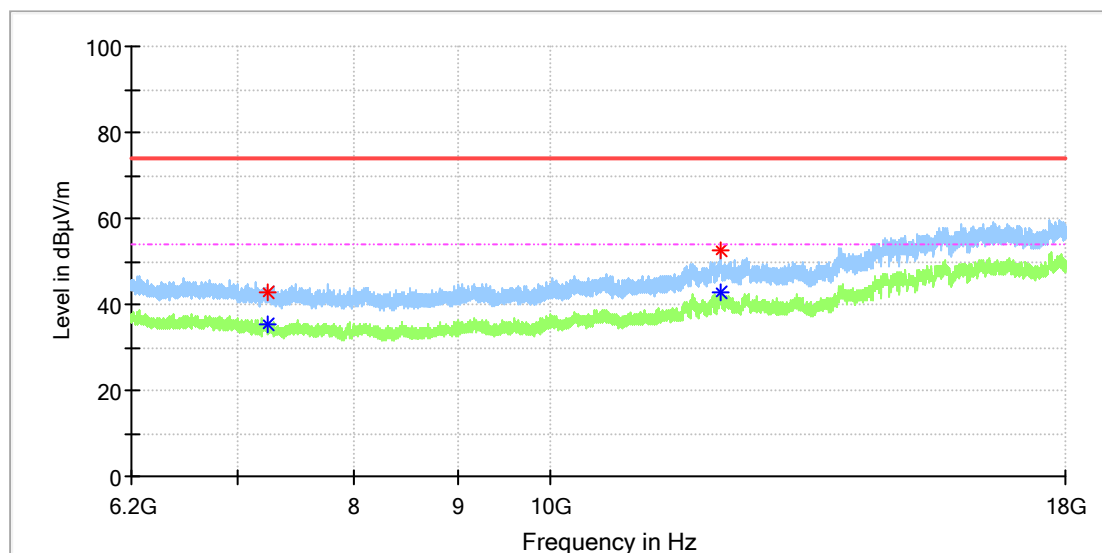
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4823.500000	---	41.08	54.00	12.92	150.0	V	173.0	13.3
4823.500000	51.48	---	74.00	22.52	150.0	V	173.0	13.3

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.000000	-100.000000	-100.000000	-100.000000	0.000000	0.000000			

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH1
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
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Critical_Freqs

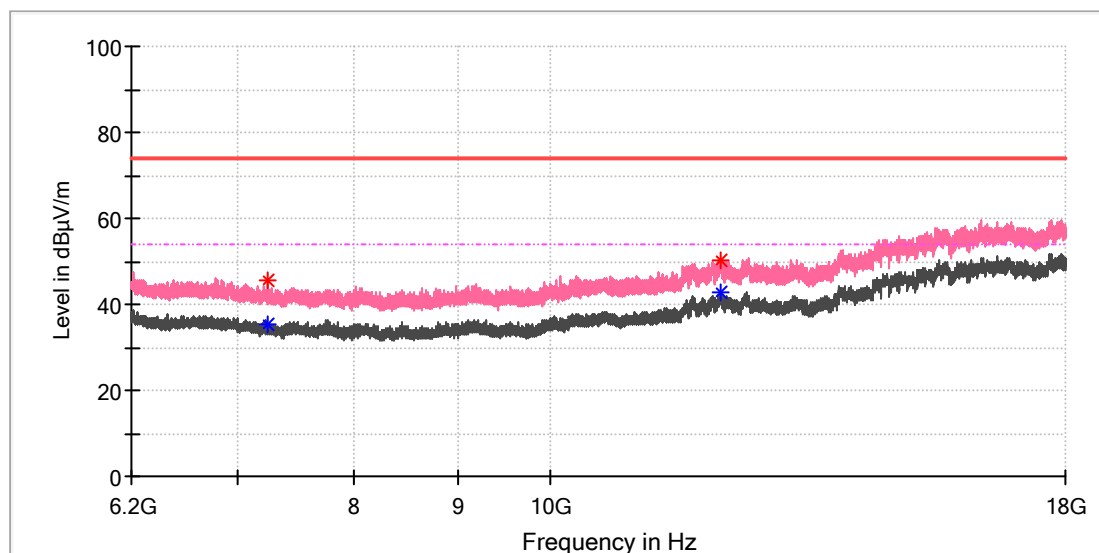
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7235.941667	42.77	---	74.00	31.23	150.0	H	253.0	8.6
7237.908333	---	35.33	54.00	18.67	150.0	H	112.0	8.6
12151.625000	52.72	---	74.00	21.28	150.0	H	241.0	16.6
12156.541667	---	42.80	54.00	11.20	150.0	H	253.0	16.4

Final Result

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

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH1
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

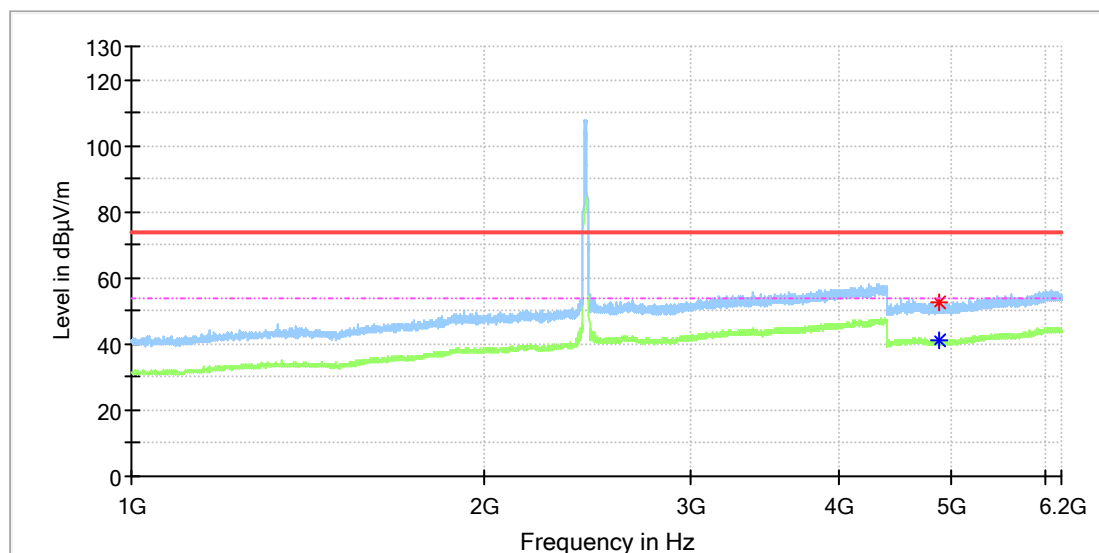
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7239.875000	---	35.25	54.00	18.75	150.0	V	317.0	8.6
7248.725000	45.45	---	74.00	28.55	150.0	V	105.0	8.5
12142.775000	---	42.64	54.00	11.36	150.0	V	105.0	16.5
12142.775000	50.27	---	74.00	23.73	150.0	V	105.0	16.5

Final Result

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

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH6
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

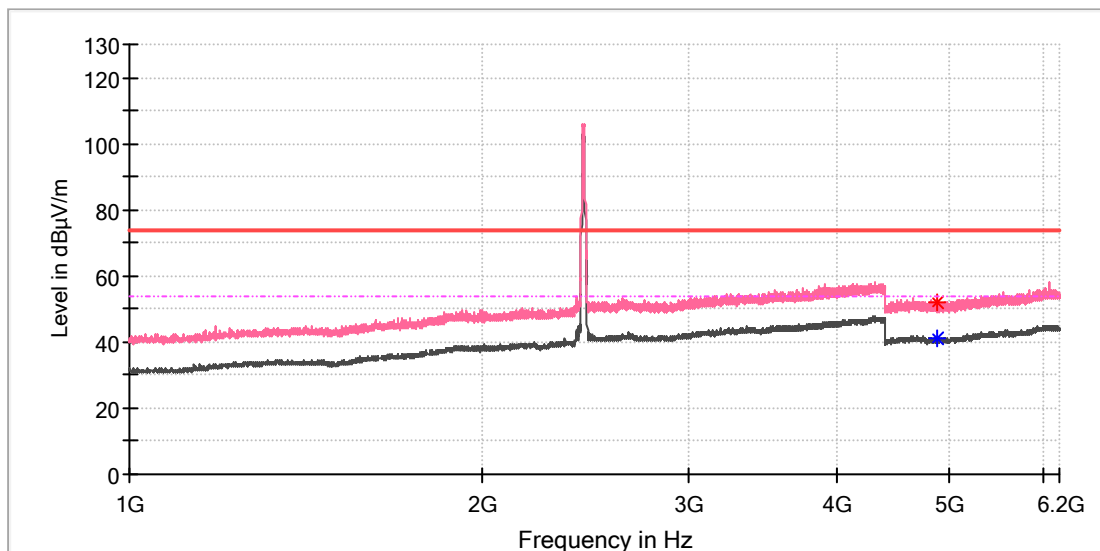
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4873.000000	52.45	---	74.00	21.55	150.0	H	3.0	13.3
4874.000000	---	40.97	54.00	13.03	150.0	H	128.0	13.3

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.000000	100.000000	100.000000	100.000000	100.000000	100.000000		100.000000	100.000000

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH6
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

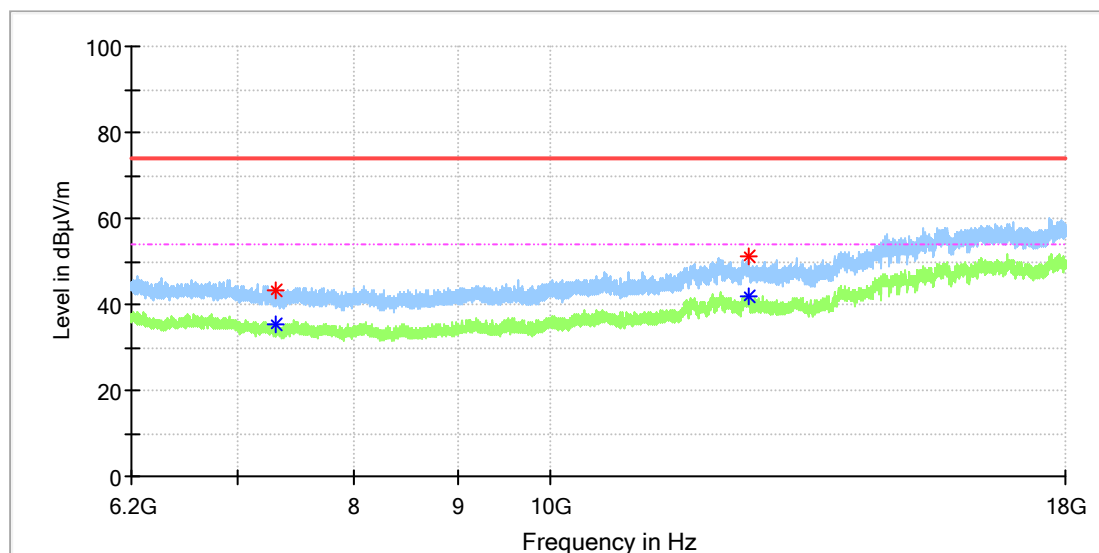
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4876.000000	---	40.91	54.00	13.09	150.0	V	354.0	13.3
4877.500000	51.90	---	74.00	22.10	150.0	V	26.0	13.3

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.000	100.000	100.000	100.000	100.000	100.000		100.000	100.000

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH6
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

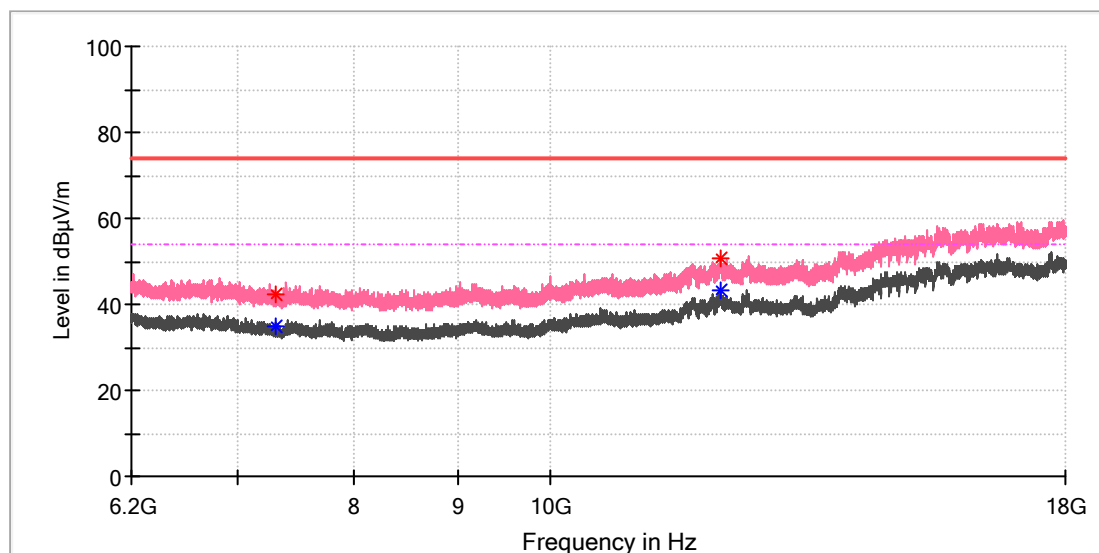
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7305.758333	---	35.49	54.00	18.51	150.0	H	339.0	8.3
7307.725000	43.36	---	74.00	30.64	150.0	H	339.0	8.3
12546.925000	---	41.73	54.00	12.27	150.0	H	252.0	16.5
12549.875000	51.27	---	74.00	22.73	150.0	H	92.0	16.6

Final Result

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

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH6
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

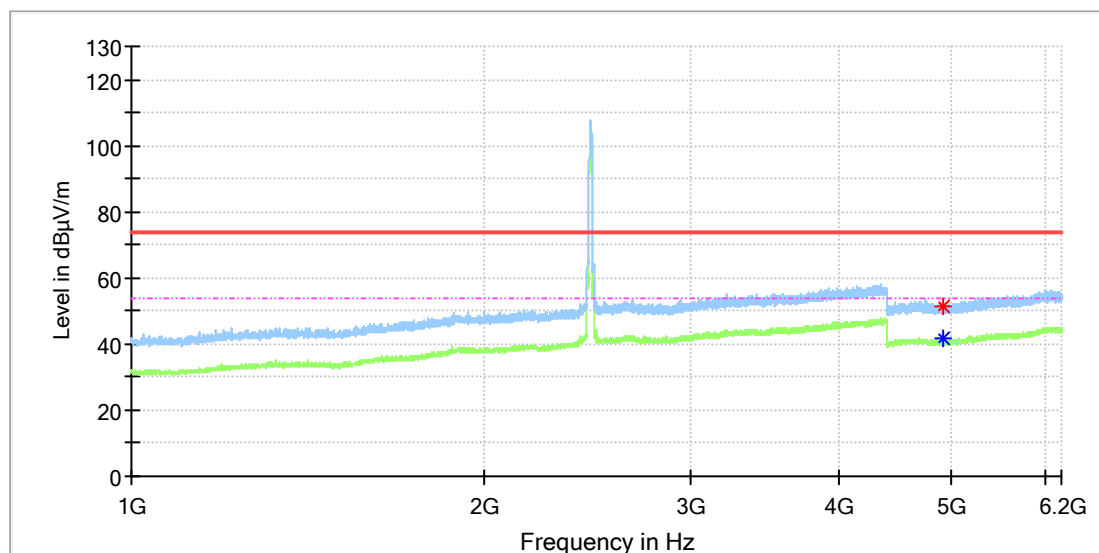
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7308.216667	42.34	---	74.00	31.66	150.0	V	136.0	8.3
7312.150000	---	35.11	54.00	18.89	150.0	V	112.0	8.2
12141.300000	50.87	---	74.00	23.13	150.0	V	196.0	16.5
12155.066667	---	43.24	54.00	10.76	150.0	V	10.0	16.5

Final Result

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

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH11
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

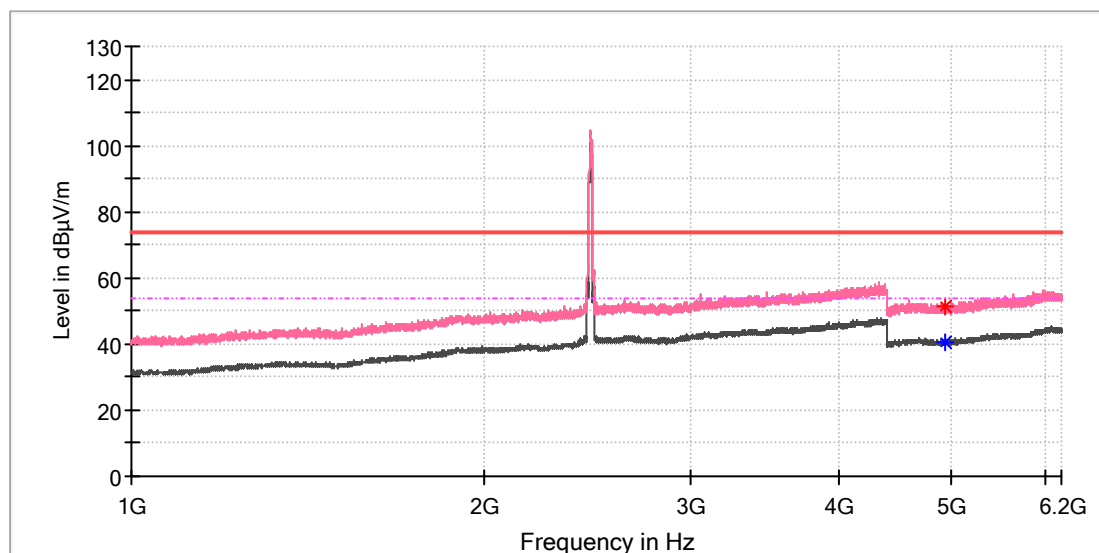
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4923.500000	---	41.43	54.00	12.57	150.0	H	323.0	13.3
4925.000000	51.61	---	74.00	22.39	150.0	H	144.0	13.3

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.000000	100.000000	100.000000	100.000000	100.000000	100.000000		100.000000	100.000000

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH11
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

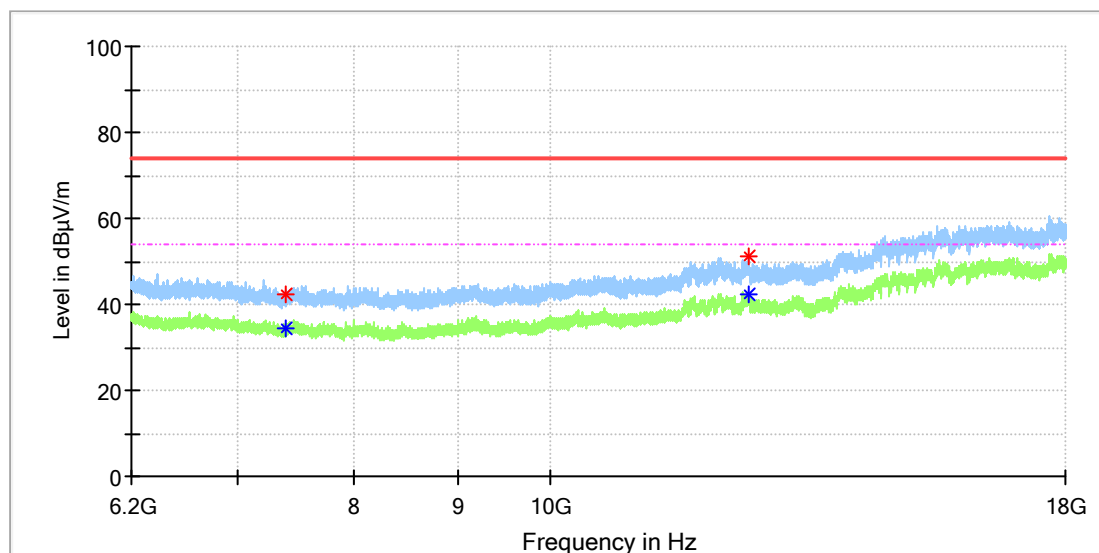
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4927.000000	---	40.37	54.00	13.63	150.0	V	195.0	13.3
4927.500000	51.42	---	74.00	22.58	150.0	V	142.0	13.3

Final Result

[illegible]

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH11
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

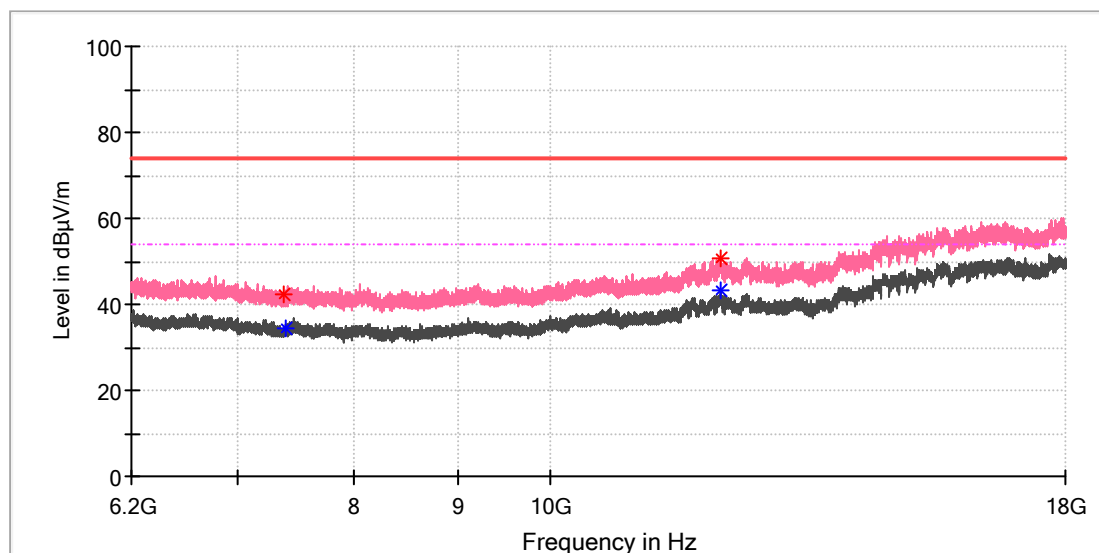
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7387.375000	42.28	---	74.00	31.72	150.0	H	0.0	8.2
7387.866667	---	34.21	54.00	19.79	150.0	H	276.0	8.2
12547.416667	---	42.27	54.00	11.73	150.0	H	309.0	16.5
12547.416667	51.27	---	74.00	22.73	150.0	H	309.0	16.5

Final Result

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

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11b_CH11
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
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)
7384.425000	42.39	---	74.00	31.61	150.0	V	151.0	8.2
7386.391667	---	34.28	54.00	19.72	150.0	V	61.0	8.2
12135.400000	50.82	---	74.00	23.18	150.0	V	243.0	16.3
12159.000000	---	43.18	54.00	10.82	150.0	V	317.0	16.3

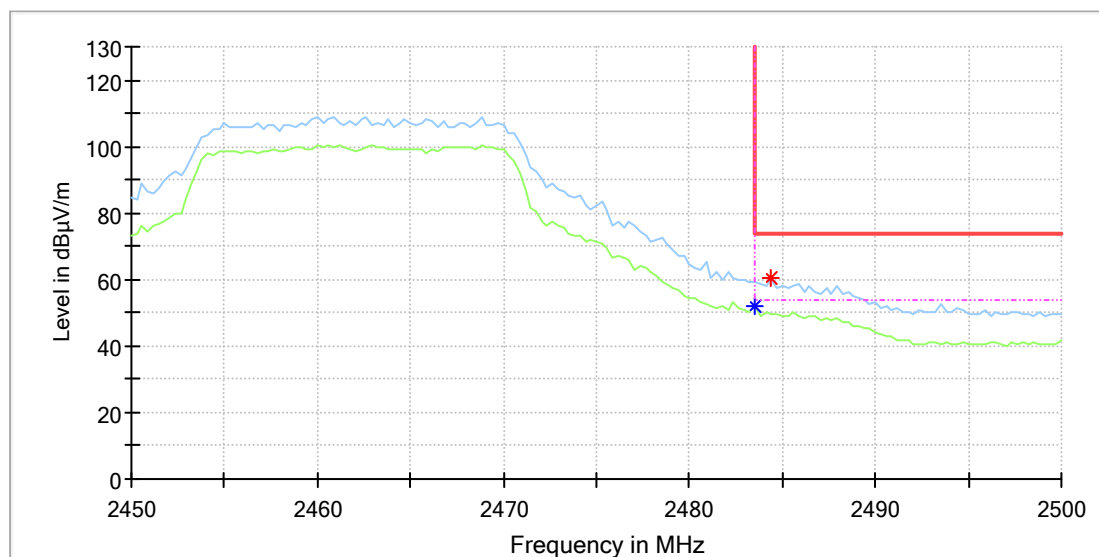
Final Result

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

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11g_CH11
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



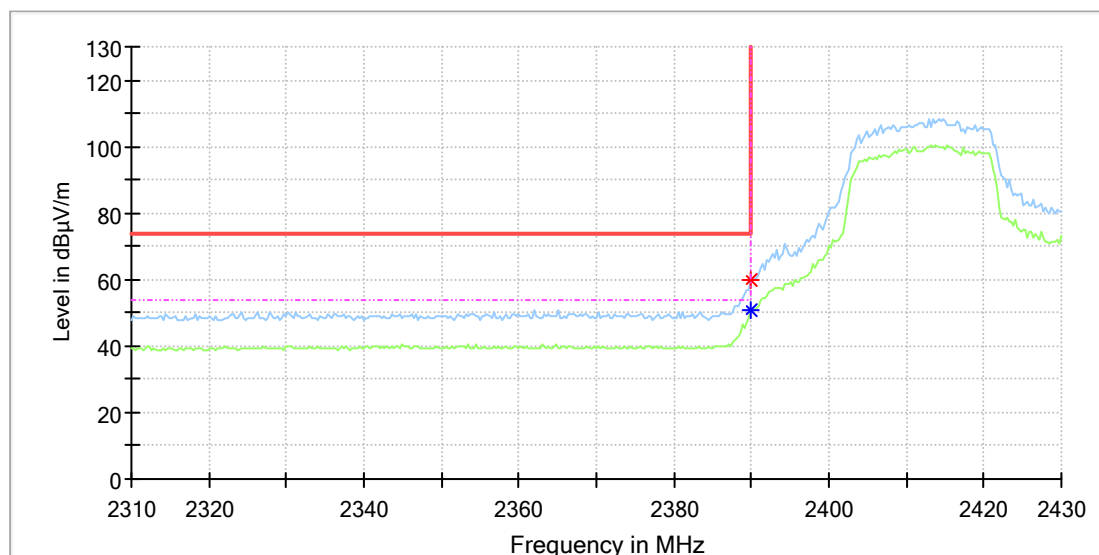
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.529412	---	51.97	54.00	2.03	150.0	H	195.0	9.0
2484.411765	60.60	---	74.00	13.40	150.0	H	221.0	9.0

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11n20_CH1
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

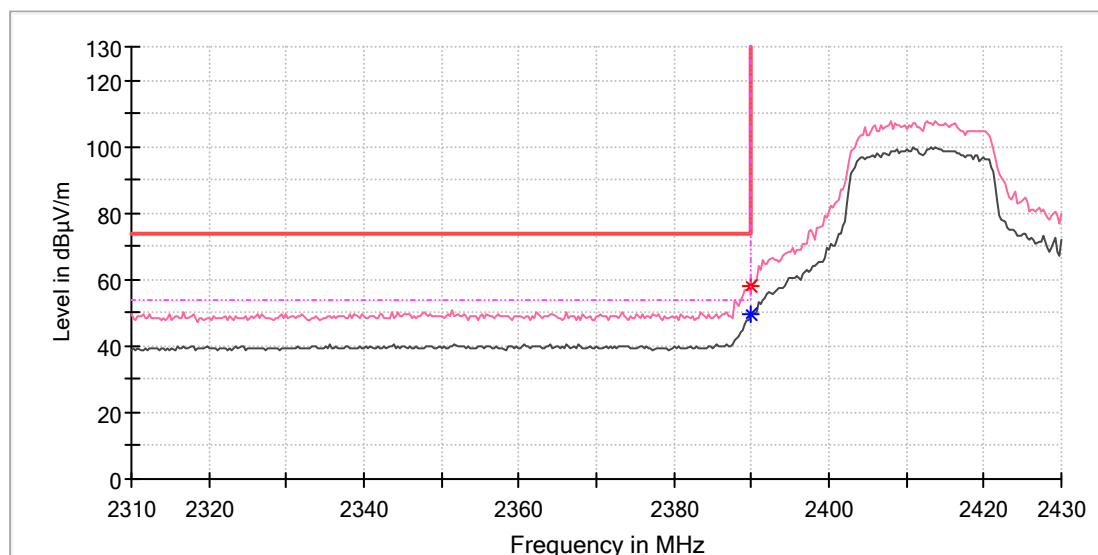
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2390.000000	---	50.96	54.00	3.04	150.0	H	199.0	8.5
2390.000000	59.76	---	74.00	14.24	150.0	H	199.0	8.5

Final Result

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

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	WIFI 2.4G_11n20_CH1
Order No/Sample No:	168581279/A004122977-005
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:53%
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)
2390.000000	---	49.42	54.00	4.58	150.0	V	269.0	8.5
2390.000000	58.09	---	74.00	15.91	150.0	V	269.0	8.5

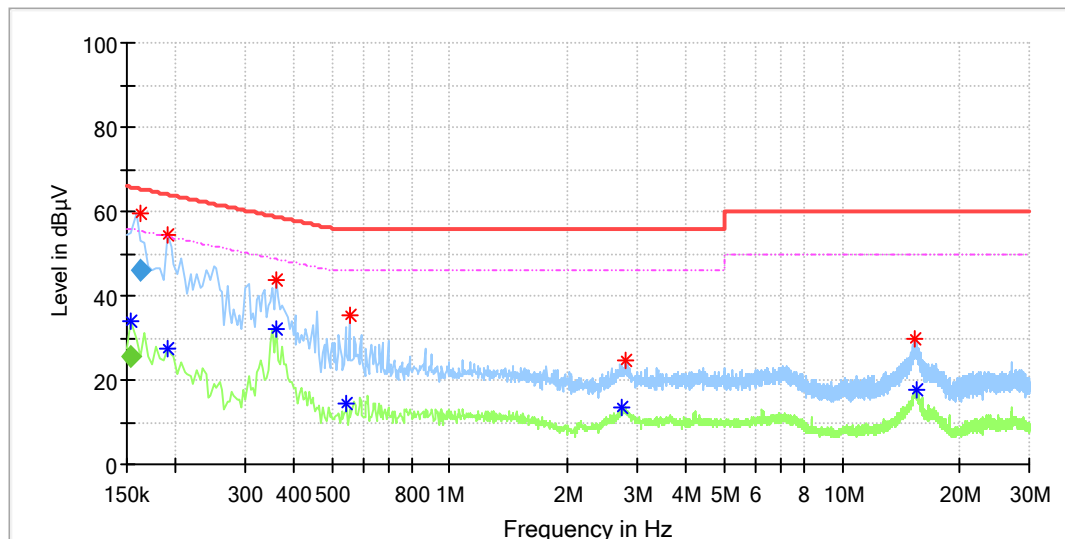
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix C.3: Test Results of AC Conducted emissions

EUT Information

EUT Name: Unattended Terminal
Order Number: 168581279(P02162052)
Model: U200
Test Mode: Wi-Fi & Bluetooth connecting
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15C
Test By./Review By: Junhua Sun/ Murphy Chen
Tem./Hum./Pressure: 24.3°C/51.0%/101kPa
Remark: SR2



Critical Freqs

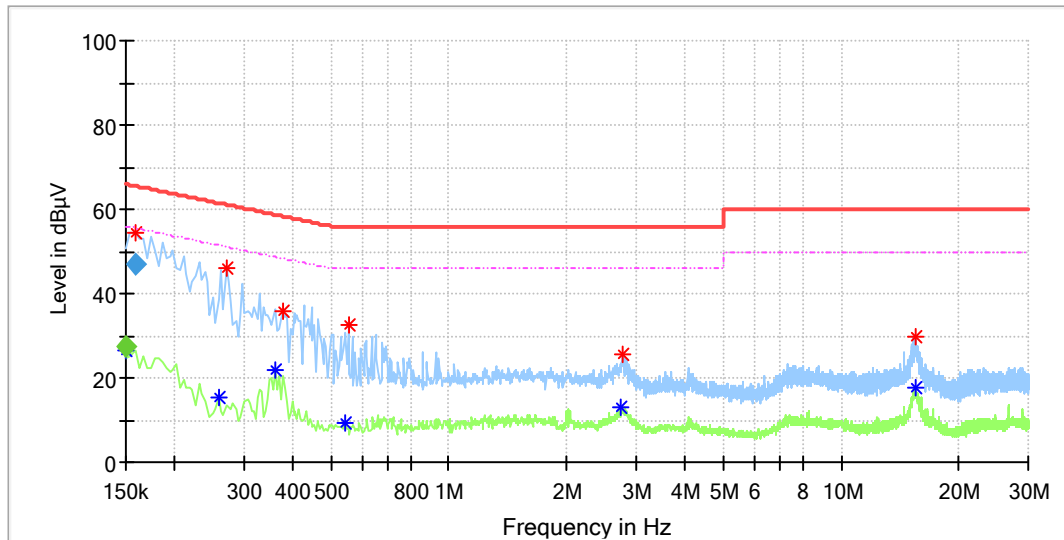
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.15	---	34.15	55.78	21.63	L1	10.24
0.16	59.51	---	65.57	6.06	L1	10.24
0.19	---	27.59	54.04	26.45	L1	10.24
0.19	54.46	---	64.04	9.57	L1	10.24
0.36	---	31.86	48.68	16.82	L1	10.25
0.36	43.51	---	58.68	15.17	L1	10.25
0.55	---	14.61	46.00	31.39	L1	10.26
0.55	35.17	---	56.00	20.83	L1	10.26
2.75	---	13.59	46.00	32.41	L1	10.33
2.81	24.71	---	56.00	31.29	L1	10.34
15.34	29.71	---	60.00	30.29	L1	10.79
15.48	---	17.61	50.00	32.39	L1	10.80

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.15	---	25.55	55.78	30.23	1000.00	9.00	L1	10.24
0.16	46.16	---	65.36	19.20	1000.00	9.00	L1	10.24

EUT Information

EUT Name: Unattended Terminal
Order Number: 168581279(P02162052)
Model: U200
Test Mode: Wi-Fi & Bluetooth connecting
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Junhua Sun/ Murphy Chen
Tem./Hum./Pressure: 24.3°C/51.0%/101kPa
Remark: SR2



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.15	---	26.33	55.57	29.23	N	10.26
0.16	54.47	---	65.57	11.10	N	10.26
0.26	---	15.36	51.50	36.13	N	10.25
0.27	45.88	---	61.12	15.23	N	10.25
0.36	---	22.03	48.68	26.66	N	10.26
0.38	35.84	---	58.32	22.48	N	10.26
0.54	---	9.47	46.00	36.53	N	10.27
0.55	32.33	---	56.00	23.67	N	10.27
2.74	---	13.18	46.00	32.82	N	10.33
2.76	25.63	---	56.00	30.37	N	10.33
15.43	---	17.45	50.00	32.55	N	10.77
15.57	29.55	---	60.00	30.45	N	10.78

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.15	---	27.33	56.00	28.67	1000.00	9.00	N	10.25
0.16	46.97	---	65.57	18.60	1000.00	9.00	N	10.26