

Appendix A: Test Results

APPENDIX A: TEST RESULTS	1
APPENDIX A.1: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS, BLUETOOTH BR & EDR	2
30 MHz - 1GHz.....	2
1GHz - 18GHz	4
APPENDIX A.2: TEST RESULTS OF RADIATED EMISSIONS IN RESTRICTED BANDS, BLUETOOTH BR & EDR	16
APPENDIX A.3: CONDUCTED EMISSION ON AC MAINS	20

Appendix A.1: Test Results of Radiated Spurious Emissions, Bluetooth BR & EDR

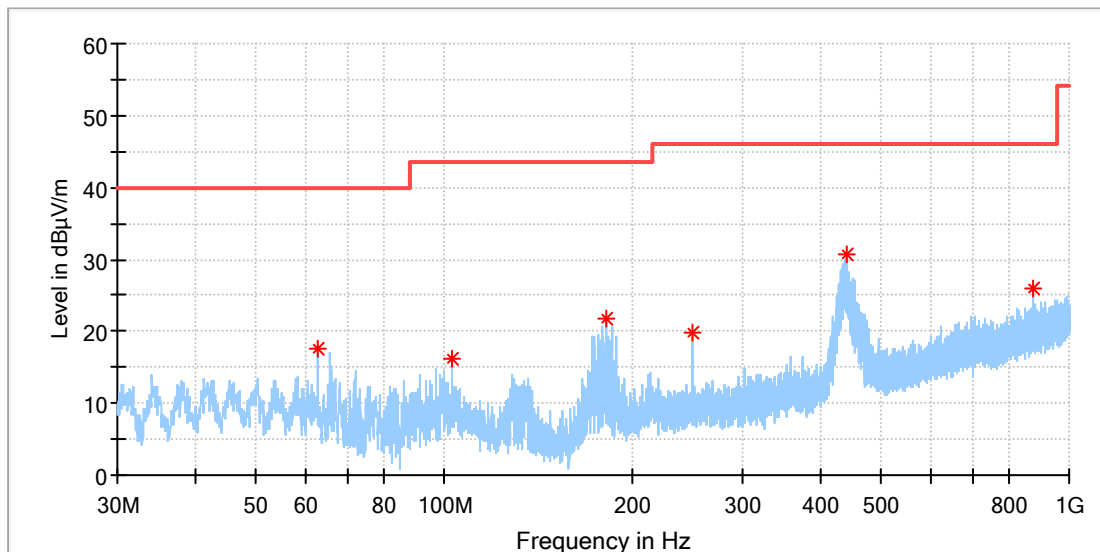
Note:

- 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 Bluetooth Fundamental.

30 MHz - 1GHz

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_Mid
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

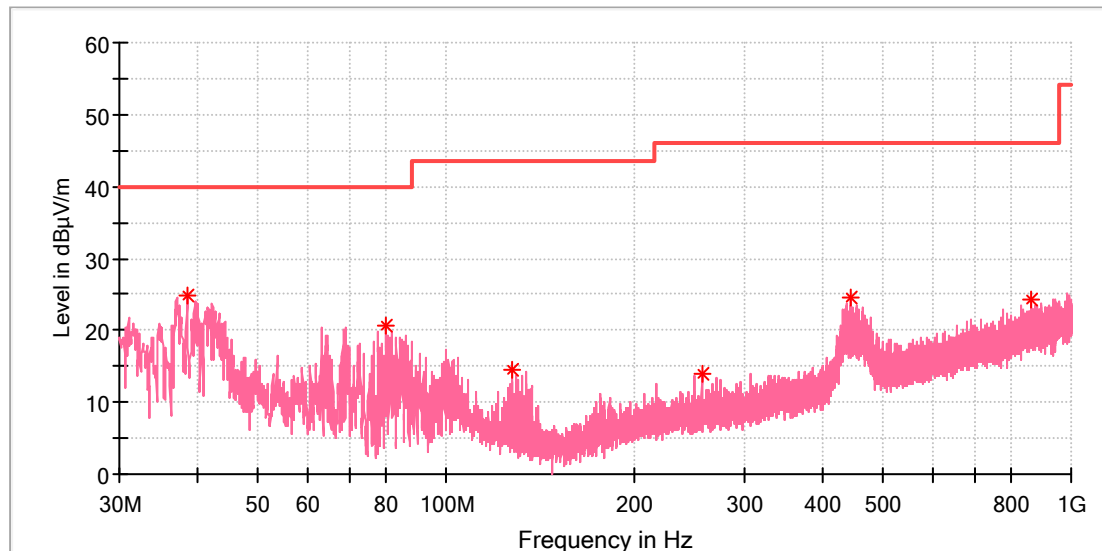
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
62.718846	17.69	40.00	22.31	100.0	H	274.0	-19.7
102.899231	16.21	43.50	27.29	100.0	H	148.0	-19.0
181.357308	21.78	43.50	21.72	100.0	H	249.0	-20.5
250.003462	19.94	46.00	26.06	100.0	H	53.0	-17.4
439.116154	30.81	46.00	15.19	100.0	H	228.0	-13.0
875.019231	25.98	46.00	20.02	100.0	H	0.0	-5.1

Final Result

Frequency (MHz)	QuasiPeak (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: BR_DH5_Mid
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)
38.506154	24.86	40.00	15.14	100.0	V	176.0	-20.6
80.253462	20.58	40.00	19.42	100.0	V	185.0	-23.5
127.820769	14.50	43.50	29.00	100.0	V	168.0	-21.7
256.196539	14.05	46.00	31.96	100.0	V	334.0	-17.2
443.220000	24.49	46.00	21.51	100.0	V	98.0	-12.9
860.394615	24.21	46.00	21.79	100.0	V	23.0	-5.3

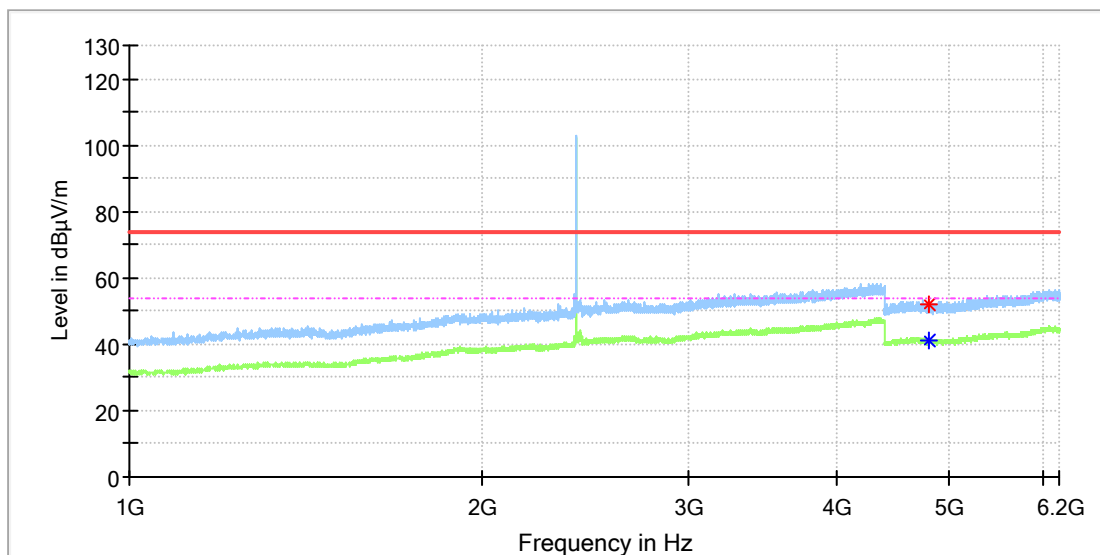
Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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1GHz - 18GHz

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_Low
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

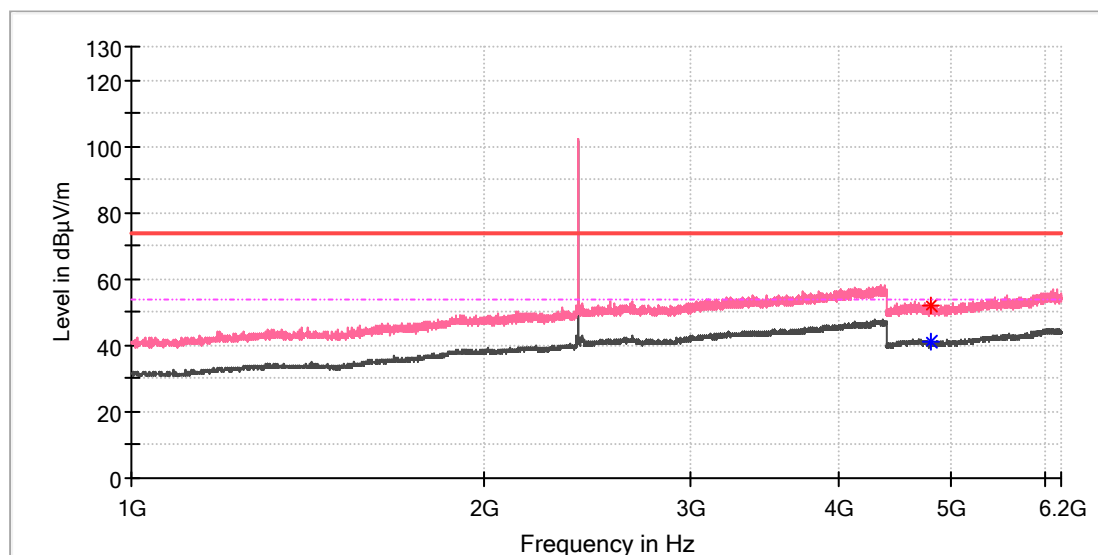
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4805.000000	---	41.14	54.00	12.86	150.0	H	270.0	13.3
4805.000000	51.85	---	74.00	22.15	150.0	H	270.0	13.3

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:	BR_DH5_Low
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

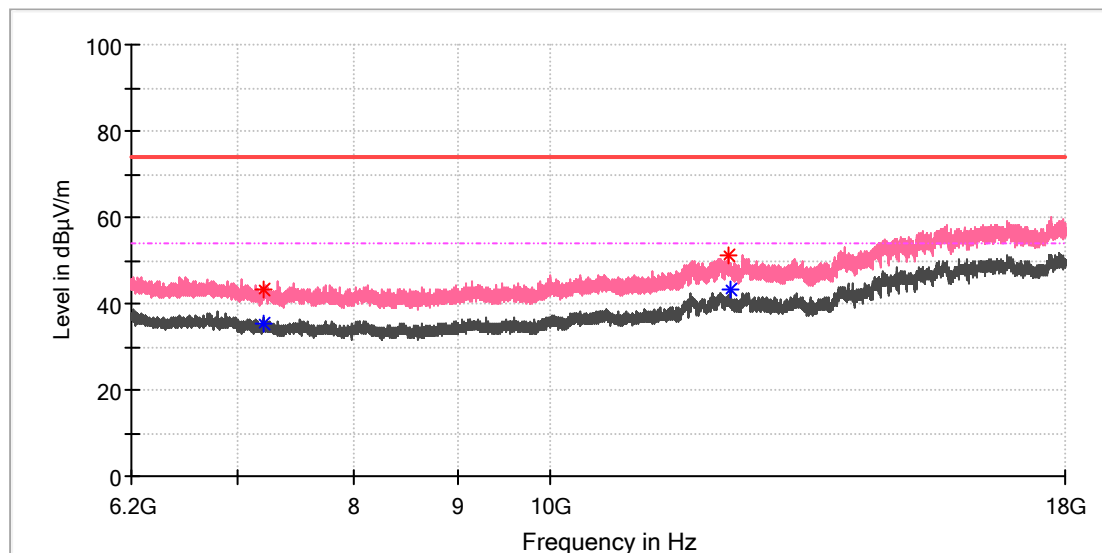
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4806.000000	---	41.28	54.00	12.72	150.0	V	81.0	13.3
4806.500000	52.23	---	74.00	21.77	150.0	V	49.0	13.3

Final Result

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

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_Low
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

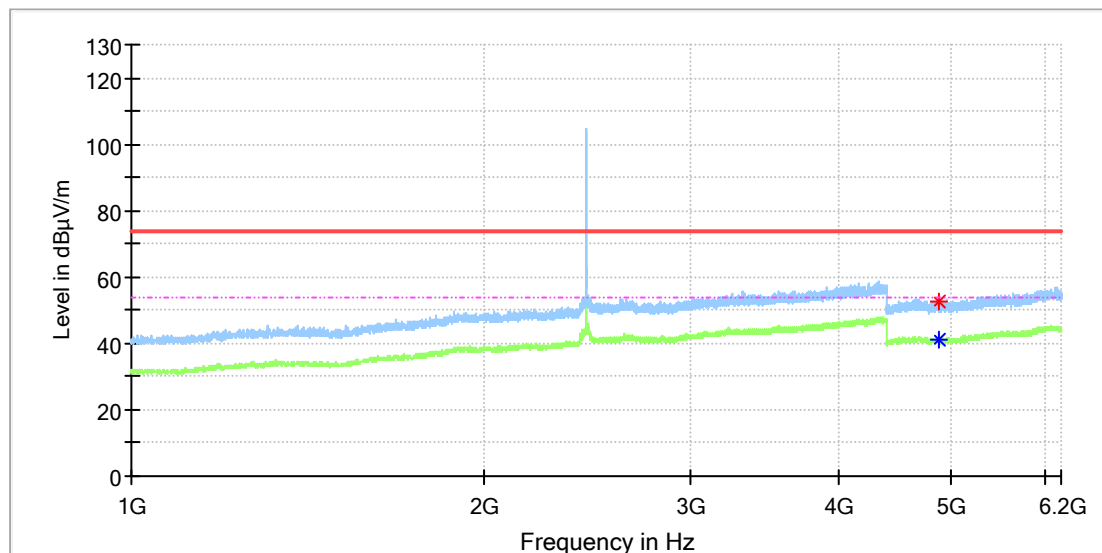
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7207.425000	43.16	---	74.00	30.84	150.0	V	168.0	8.8
7207.916667	---	35.47	54.00	18.53	150.0	V	3.0	8.8
12244.058333	51.30	---	74.00	22.70	150.0	V	304.0	16.1
12276.508333	---	43.05	54.00	10.95	150.0	V	279.0	16.1

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:	BR_DH5_Mid
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

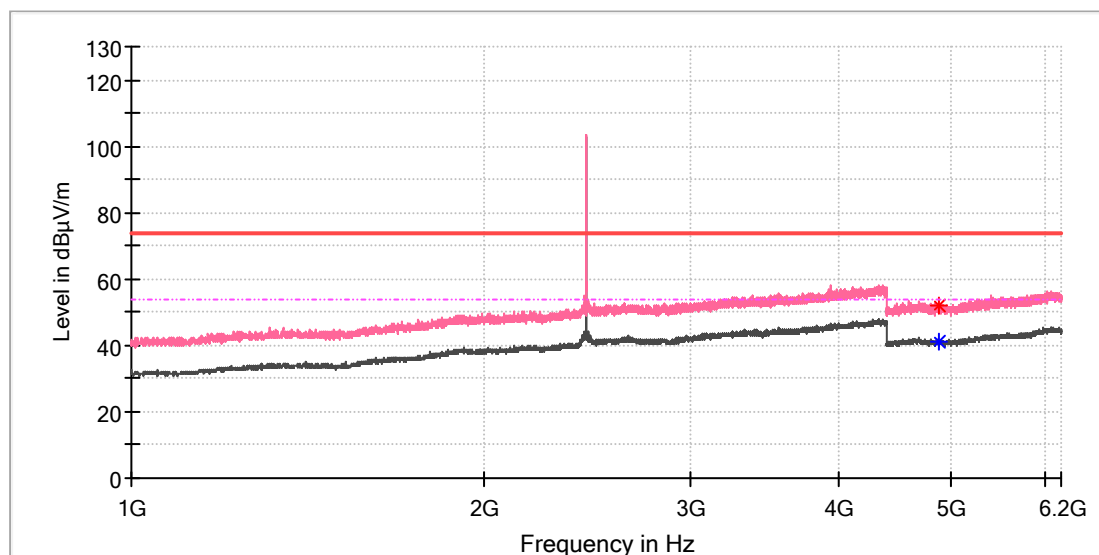
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4883.000000	52.60	---	74.00	21.40	150.0	H	116.0	13.3
4883.500000	---	41.04	54.00	12.96	150.0	H	178.0	13.3

Final Result

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

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_Mid
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

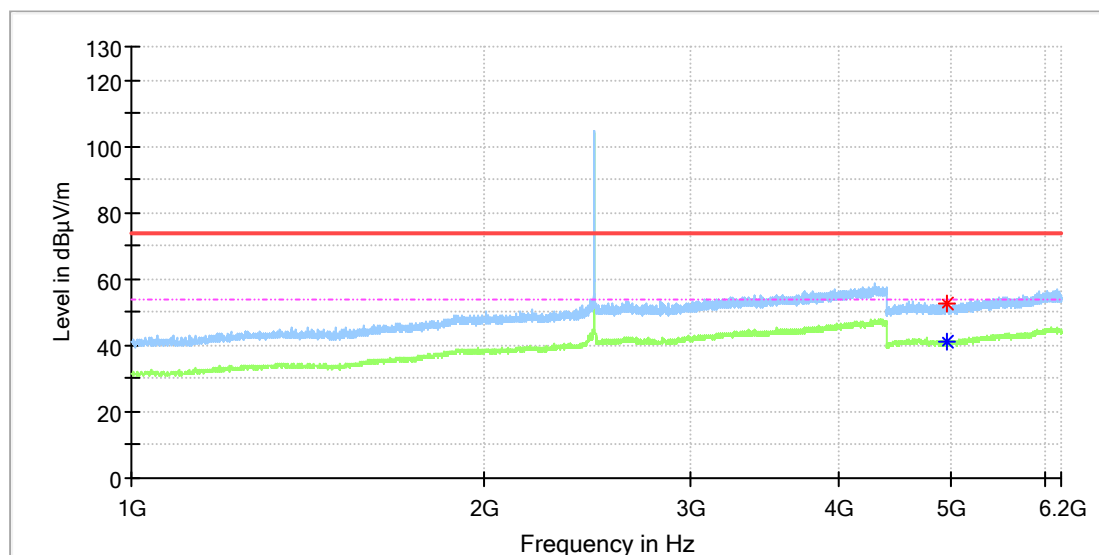
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.500000	---	41.11	54.00	12.89	150.0	V	42.0	13.3
4882.500000	51.81	---	74.00	22.19	150.0	V	42.0	13.3

Final Result

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

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_High
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

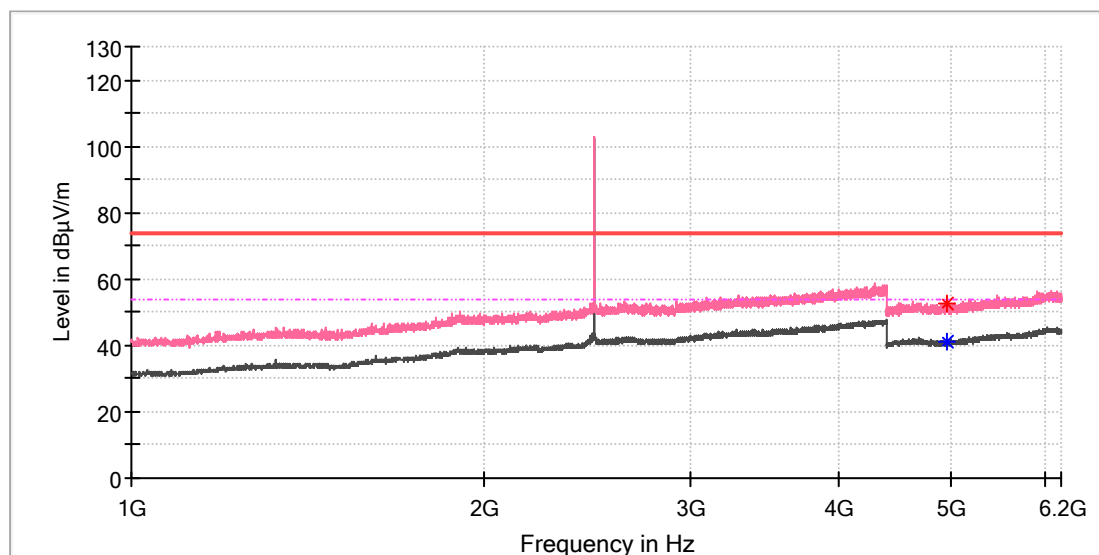
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4960.000000	---	41.13	54.00	12.87	150.0	H	314.0	13.3
4960.000000	52.45	---	74.00	21.55	150.0	H	314.0	13.3

Final Result

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

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_High
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)
4957.500000	52.58	---	74.00	21.42	150.0	V	344.0	13.3
4957.500000	---	41.31	54.00	12.69	150.0	V	344.0	13.3

Final Result

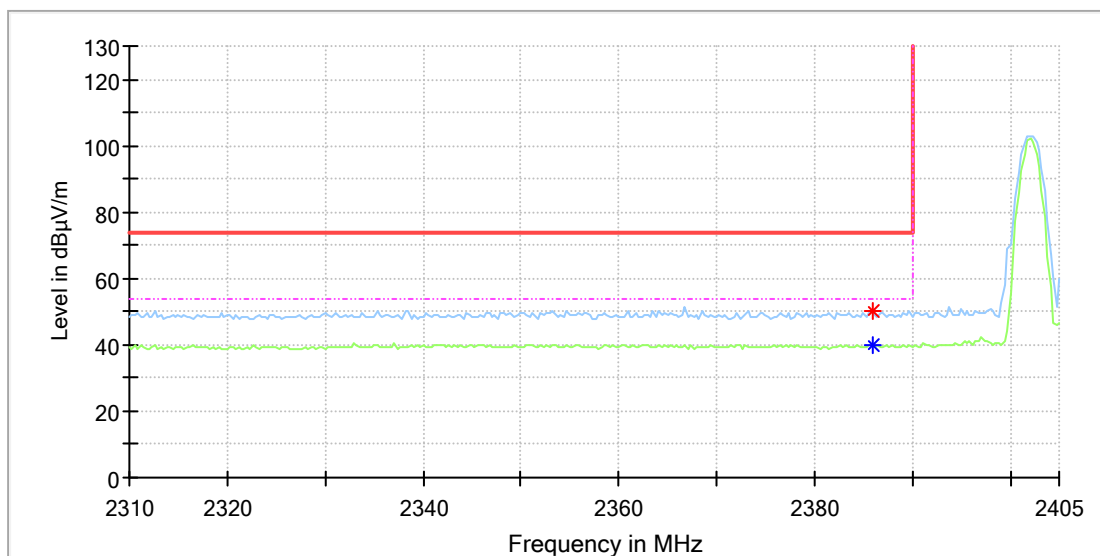
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix A.2: Test Results of Radiated Emissions in Restricted Bands, Bluetooth BR & EDR

EUT Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_Low
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)
2385.882353	---	39.96	54.00	14.04	150.0	H	116.0	8.5
2385.882353	50.30	---	74.00	23.70	150.0	H	116.0	8.5

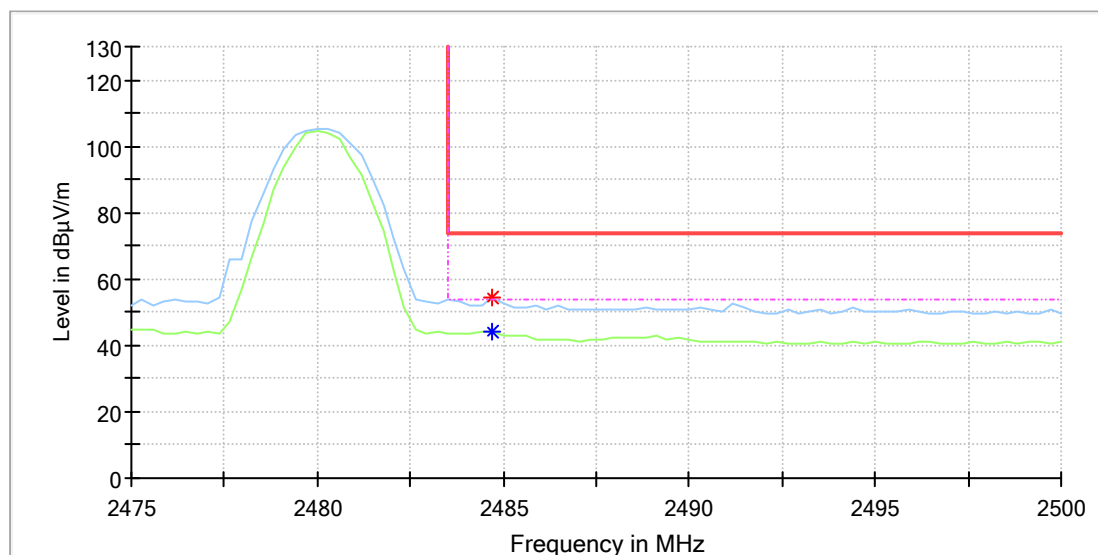
Final Result

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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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:	BR_DH5_High
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

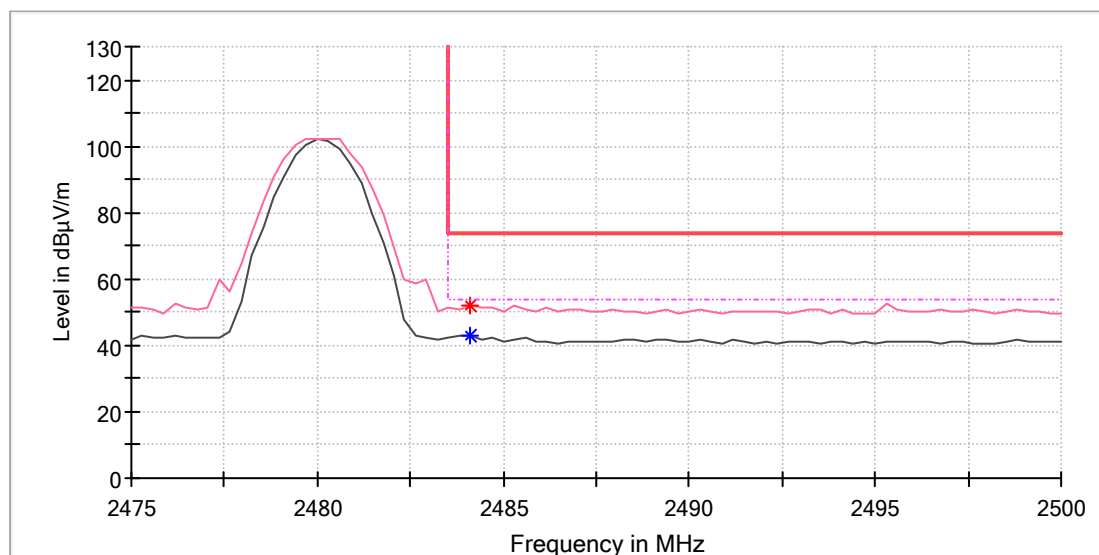
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.705882	---	43.96	54.00	10.04	150.0	H	203.0	9.0
2484.705882	54.31	---	74.00	19.69	150.0	H	203.0	9.0

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 Information

EUT Name:	Unattended Terminal
Model:	U200
Test Mode:	BR_DH5_High
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)
2484.117647	52.00	---	74.00	22.00	150.0	V	197.0	9.0
2484.117647	---	43.03	54.00	10.97	150.0	V	197.0	9.0

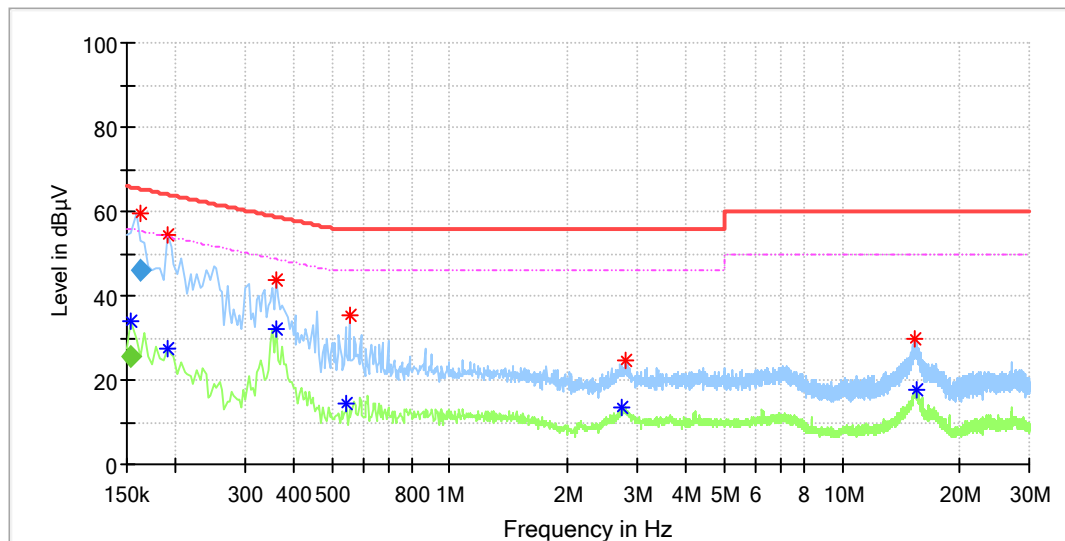
Final Result

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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Appendix A.3: Conducted Emission on AC Mains

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

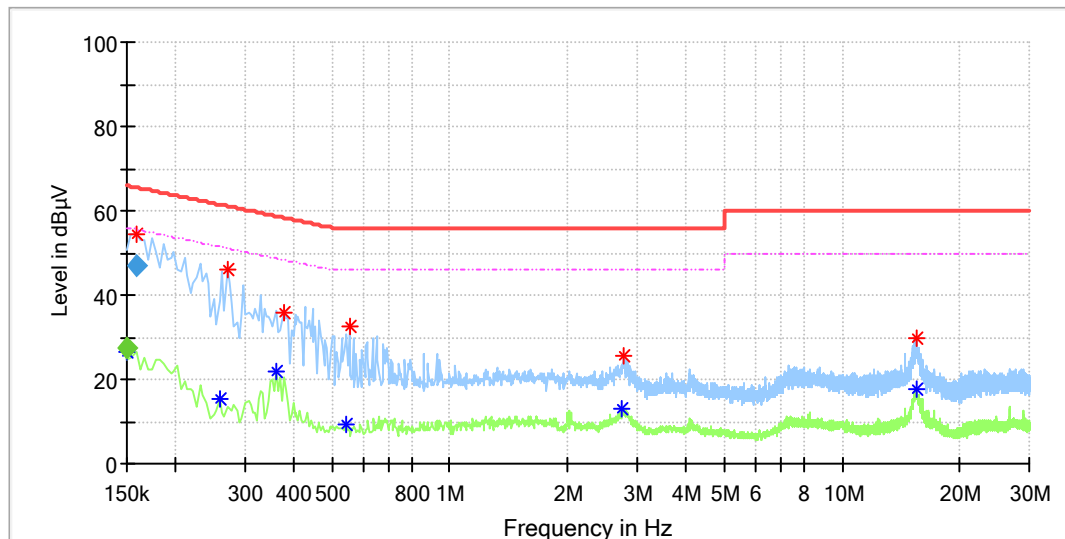
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.15	---	34.15	55.78	21.63	L1	10.24
0.16	59.51	---	65.57	6.06	L1	10.24
0.19	---	27.59	54.04	26.45	L1	10.24
0.19	54.46	---	64.04	9.57	L1	10.24
0.36	---	31.86	48.68	16.82	L1	10.25
0.36	43.51	---	58.68	15.17	L1	10.25
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