

Appendix A: Test Results

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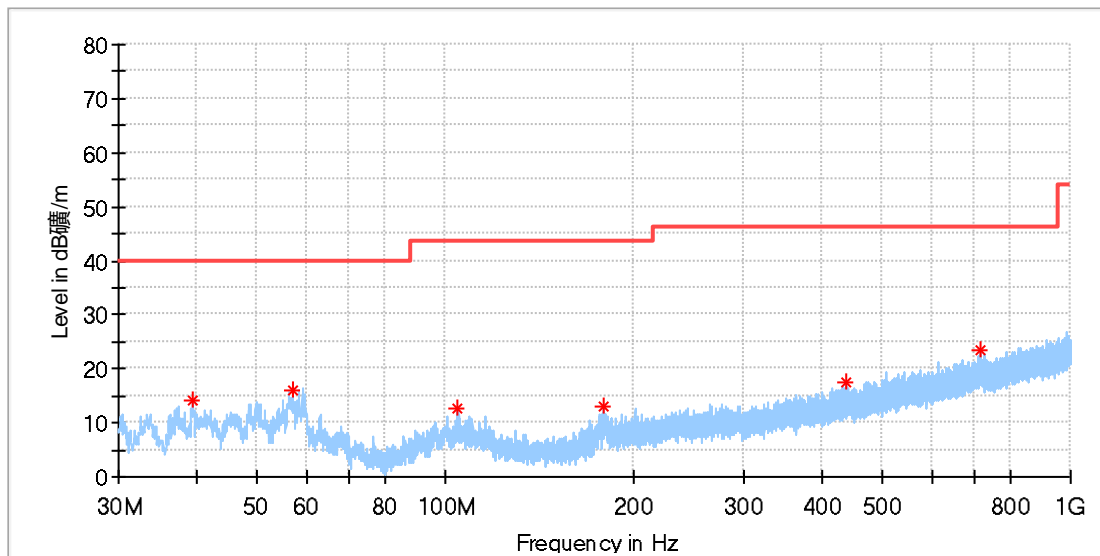
Appendix A.1: Test Results of Field strength of fundamental & harmonics

Note: The testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz to 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30MHz - 1GHz

EUT Information

EUT Name:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz Mid CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

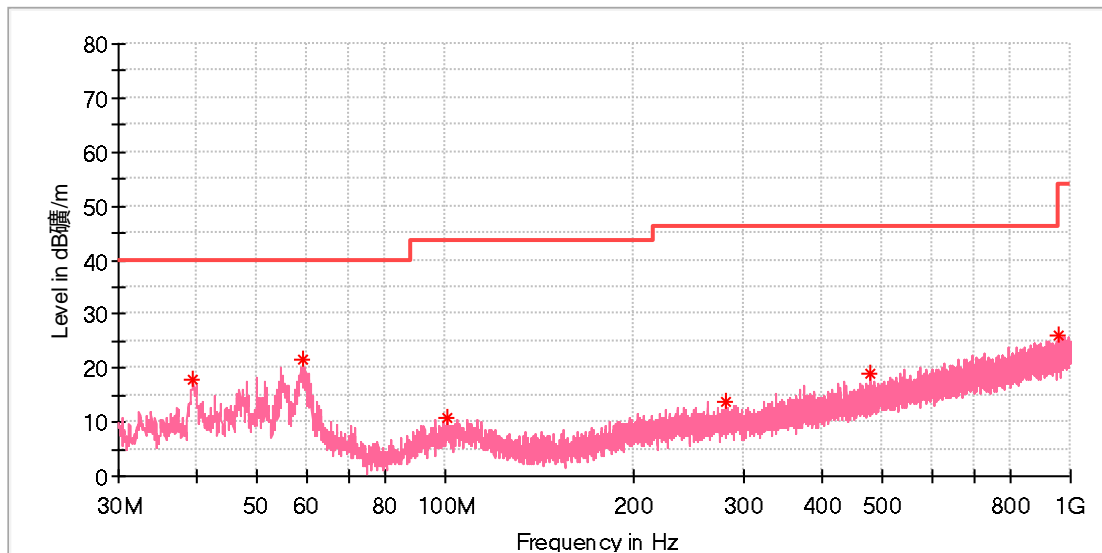
Frequency (MHz)	MaxiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.401539	14.31	40.00	25.69	100.0	H	322.0	-20.6
56.898846	16.17	40.00	23.83	100.0	H	170.0	-18.9
104.839231	12.57	43.50	30.93	100.0	H	305.0	-19.1
178.745769	13.15	43.50	30.35	100.0	H	15.0	-20.9
437.623846	17.59	46.00	28.41	100.0	H	145.0	-13.5
719.744615	23.29	46.00	22.71	100.0	H	238.0	-8.1

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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz Mid CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.438846	17.69	40.00	22.31	100.0	V	0.0	-20.6
59.100000	21.60	40.00	18.40	100.0	V	17.0	-19.2
100.623462	10.81	43.50	32.69	100.0	V	187.0	-19.3
280.521154	13.87	46.00	32.13	100.0	V	17.0	-17.1
479.147308	18.93	46.00	27.07	100.0	V	311.0	-12.6
957.618462	26.07	46.00	19.93	100.0	V	0.0	-4.8

Final_Result

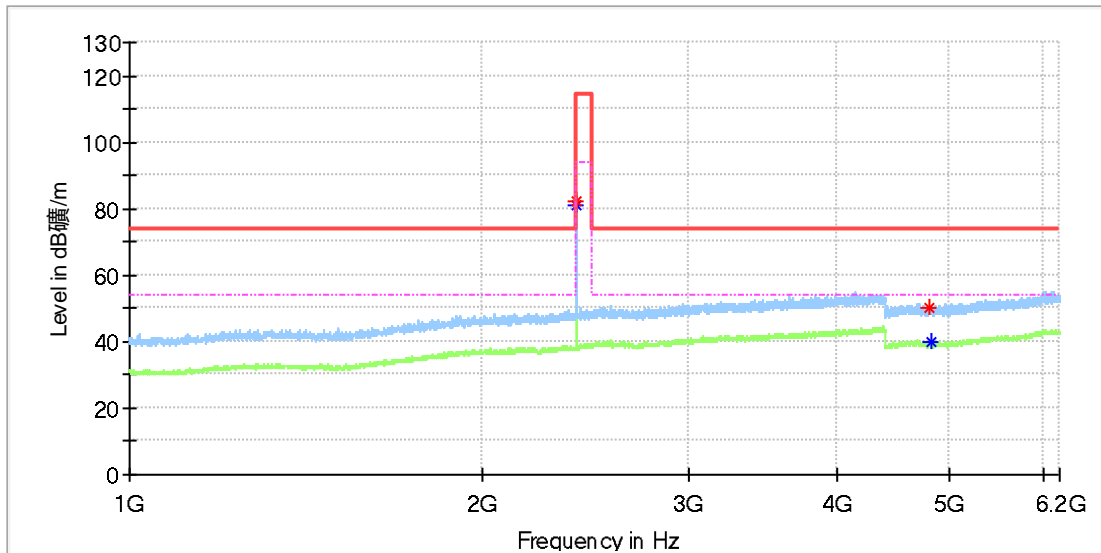
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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1GHz - 18GHz

Note: The highest waveform in the figure is 2.4GHz Fundamental.

EUT Information

EUT Name:	Radio Module-R15 Transceiver
Model:	R-15
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Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

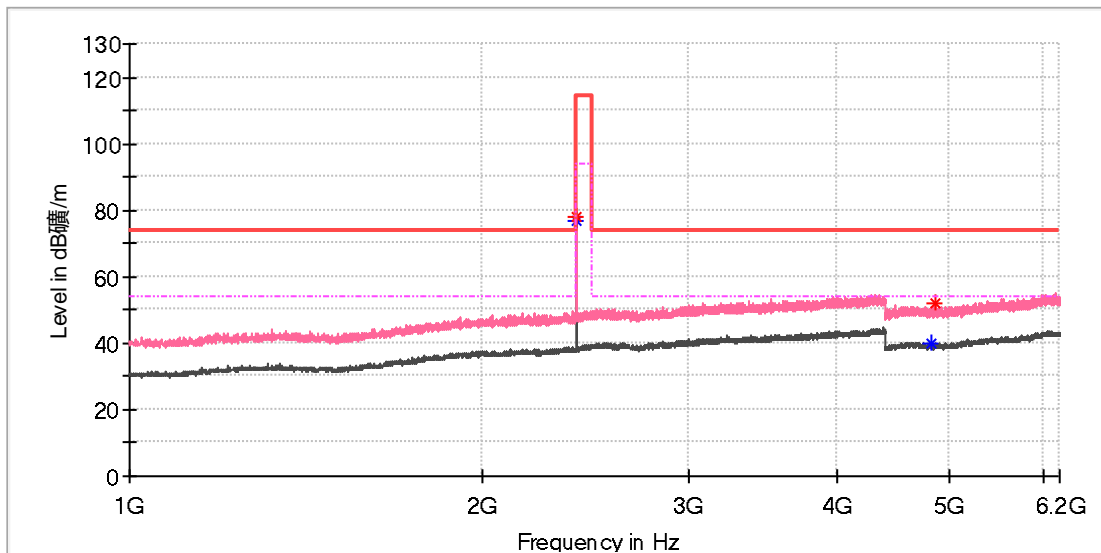
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2404.000000	---	81.27	94.00	12.73	150.0	H	72.0	7.0
2405.000000	82.10	---	114.00	31.90	150.0	H	267.0	7.0
4803.500000	50.22	---	74.00	23.78	150.0	H	298.0	11.8
4813.500000	---	39.95	54.00	14.05	150.0	H	85.0	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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz L CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

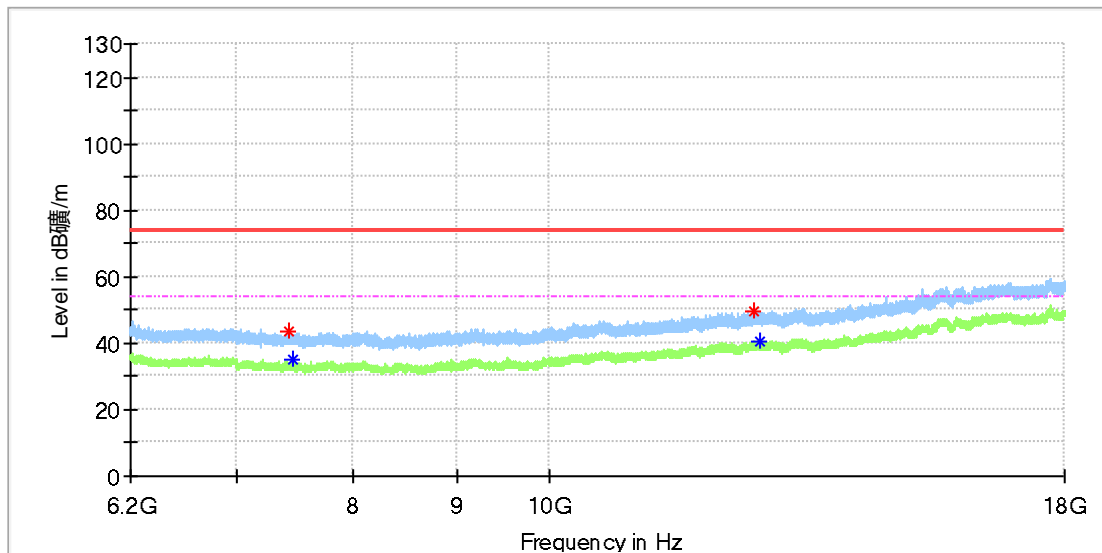
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2404.000000	---	76.98	94.00	17.02	150.0	V	282.0	7.0
2404.000000	77.85	---	114.00	36.15	150.0	V	282.0	7.0
4819.000000	---	39.78	54.00	14.22	150.0	V	153.0	11.8
4854.500000	51.84	---	74.00	22.16	150.0	V	331.0	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:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz L CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

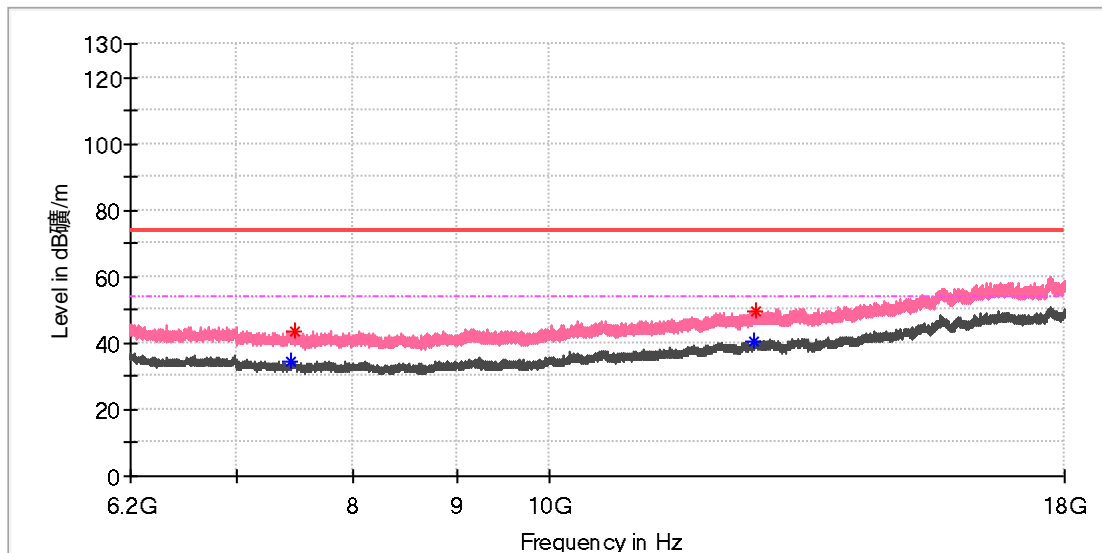
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7419.825000	43.33	---	74.00	30.67	150.0	H	0.0	8.4
7463.091667	---	34.92	54.00	19.08	150.0	H	105.0	8.6
12633.950000	49.74	---	74.00	24.26	150.0	H	227.0	15.0
12710.650000	---	40.57	54.00	13.43	150.0	H	227.0	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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz L CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

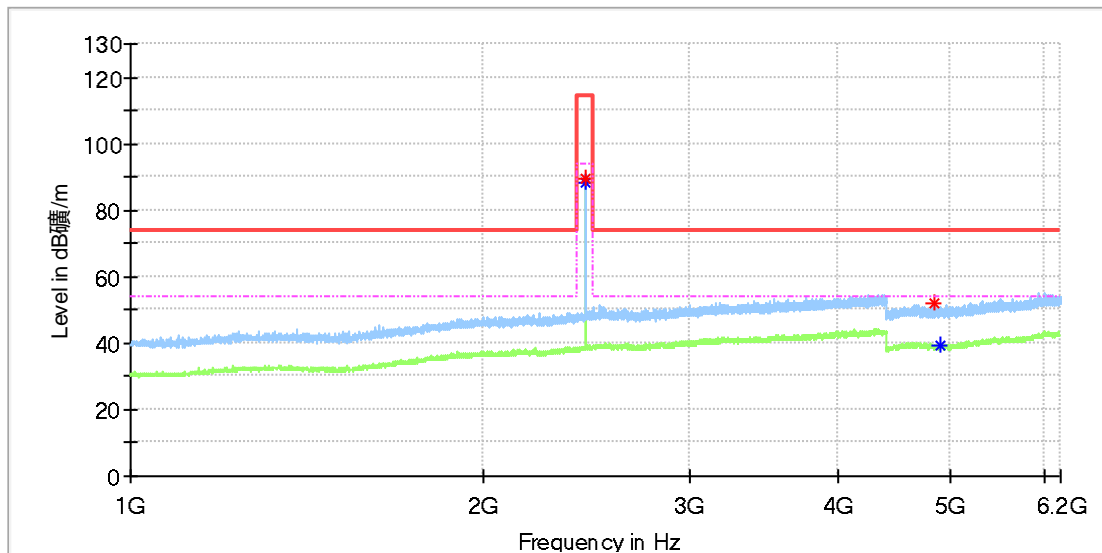
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7448.341667	---	34.47	54.00	19.53	150.0	V	285.0	8.5
7473.416667	43.40	---	74.00	30.60	150.0	V	0.0	8.6
12624.116667	---	40.70	54.00	13.30	150.0	V	158.0	14.9
12660.500000	49.68	---	74.00	24.32	150.0	V	258.0	15.0

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:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz Mid CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

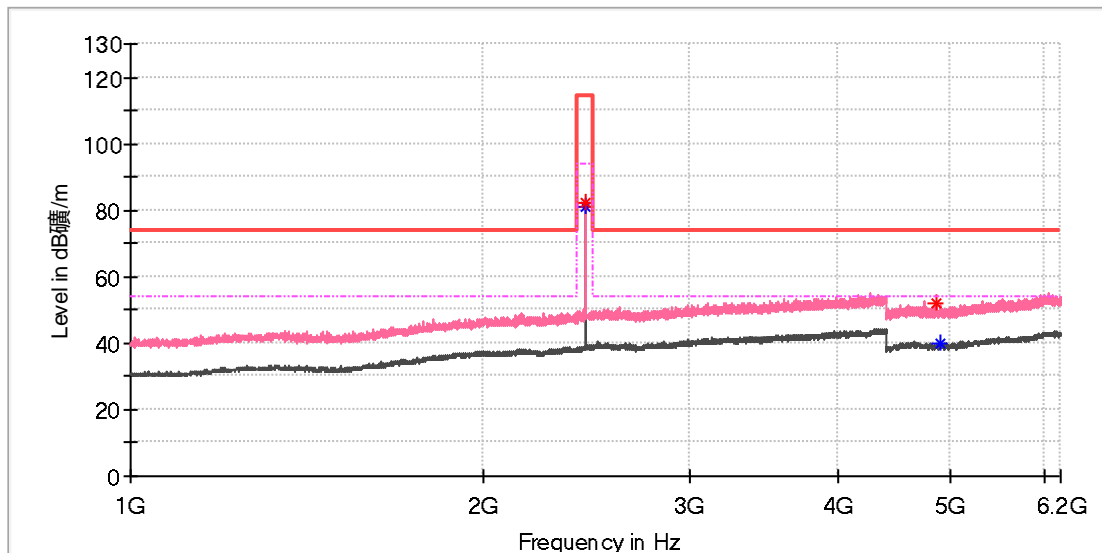
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2440.000000	89.47	---	114.00	24.53	150.0	H	269.0	7.4
2440.000000	---	88.56	94.00	5.44	150.0	H	269.0	7.4
4843.000000	52.21	---	74.00	21.79	150.0	H	338.0	11.8
4897.000000	---	39.58	54.00	14.42	150.0	H	288.0	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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz Mid CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

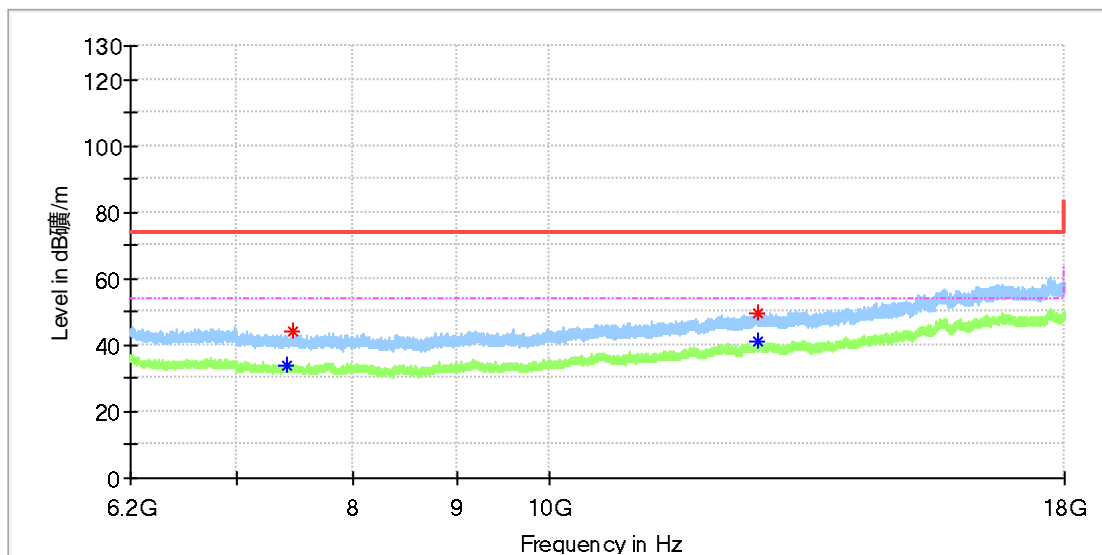
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2440.000000	82.00	---	114.00	32.00	150.0	V	171.0	7.4
2440.000000	---	80.93	94.00	13.07	150.0	V	171.0	7.4
4860.500000	51.81	---	74.00	22.19	150.0	V	27.0	11.8
4897.000000	---	39.79	54.00	14.21	150.0	V	255.0	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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz Mid CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

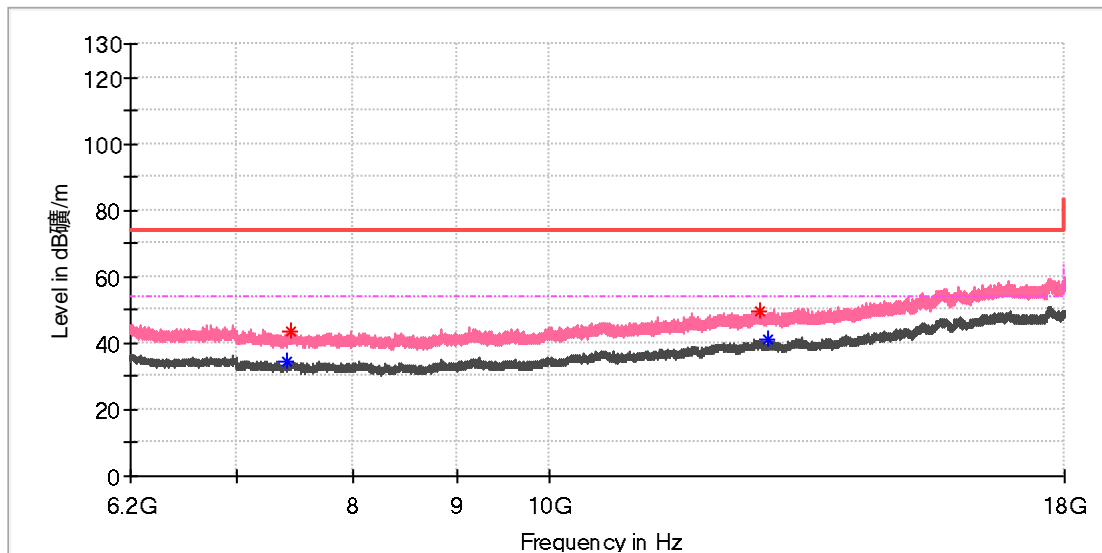
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7416.875000	---	34.13	54.00	19.87	150.0	H	68.0	8.3
7456.700000	43.92	---	74.00	30.08	150.0	H	20.0	8.5
12682.133333	---	40.85	54.00	13.15	150.0	H	105.0	15.1
12689.508333	49.52	---	74.00	24.48	150.0	H	8.0	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:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz Mid CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

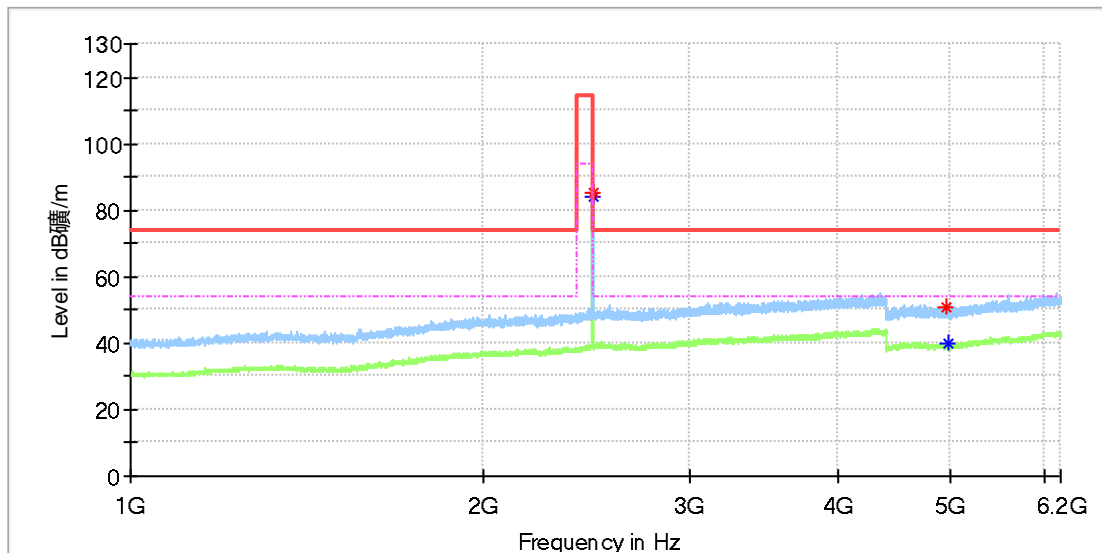
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7414.416667	---	34.21	54.00	19.79	150.0	V	289.0	8.3
7442.441667	43.81	---	74.00	30.19	150.0	V	337.0	8.4
12717.041667	49.53	---	74.00	24.47	150.0	V	253.0	15.1
12831.108333	---	40.98	54.00	13.02	150.0	V	300.0	15.3

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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz H CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

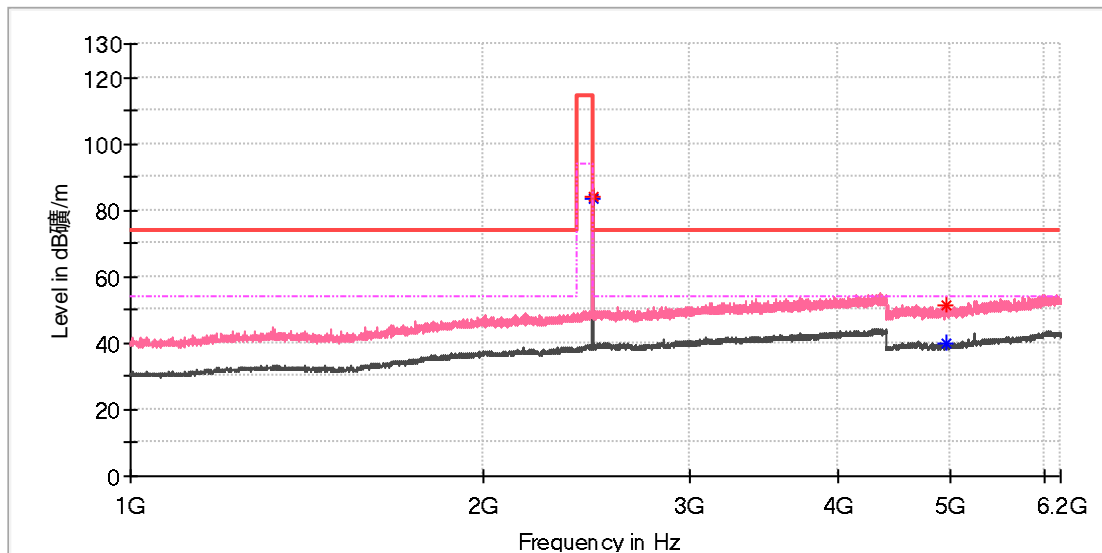
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2475.500000	85.25	---	114.00	28.75	150.0	H	30.0	7.4
2476.000000	---	84.06	94.00	9.94	150.0	H	30.0	7.4
4949.500000	50.73	---	74.00	23.27	150.0	H	194.0	11.8
4965.500000	---	39.64	54.00	14.36	150.0	H	263.0	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:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz H CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

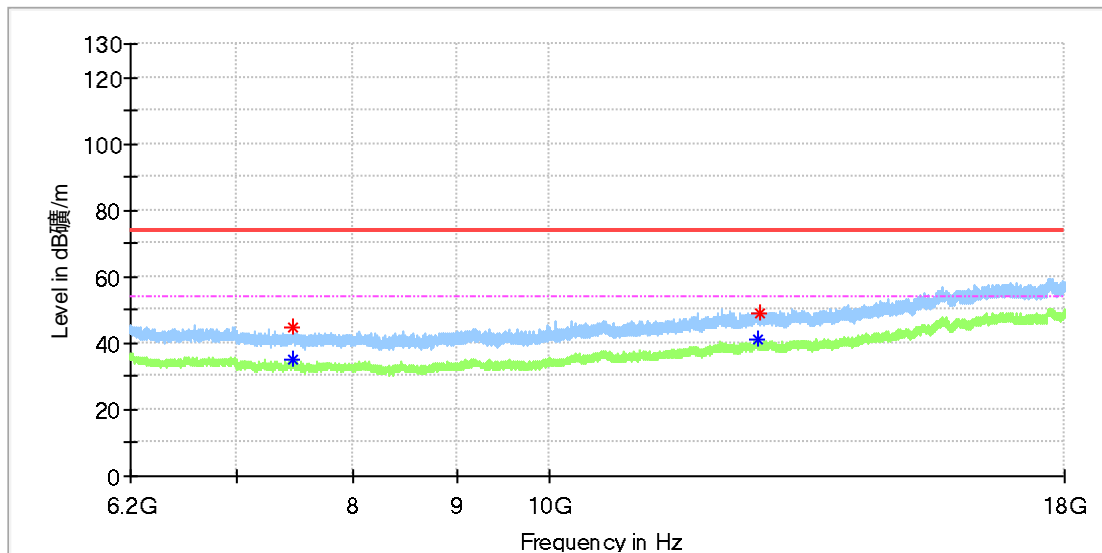
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2476.000000	---	83.14	94.00	10.86	150.0	V	169.0	7.4
2476.500000	83.82	---	114.00	30.18	150.0	V	169.0	7.4
4955.000000	51.16	---	74.00	22.84	150.0	V	273.0	11.8
4961.000000	---	39.86	54.00	14.14	150.0	V	261.0	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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz H CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

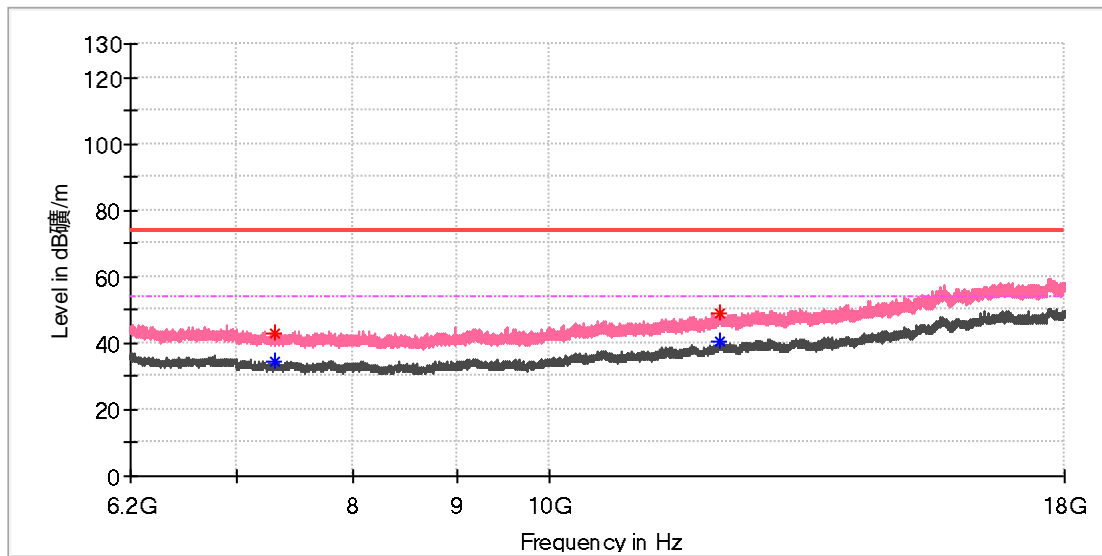
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7454.241667	---	34.88	54.00	19.12	150.0	H	285.0	8.5
7461.125000	44.53	---	74.00	29.47	150.0	H	160.0	8.5
12695.408333	---	41.27	54.00	12.73	150.0	H	99.0	15.1
12703.766667	49.24	---	74.00	24.76	150.0	H	285.0	15.1

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: Radio Module-R15 Transceiver
 Model: R-15
 Test Mode: 2.4GHz H CH
 Order No/Sample No: 168453427/A003596662-003
 Test Voltage: Battery
 Remark: Temp 22 Humi:52%
 Test Standard: FCC 15.249
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

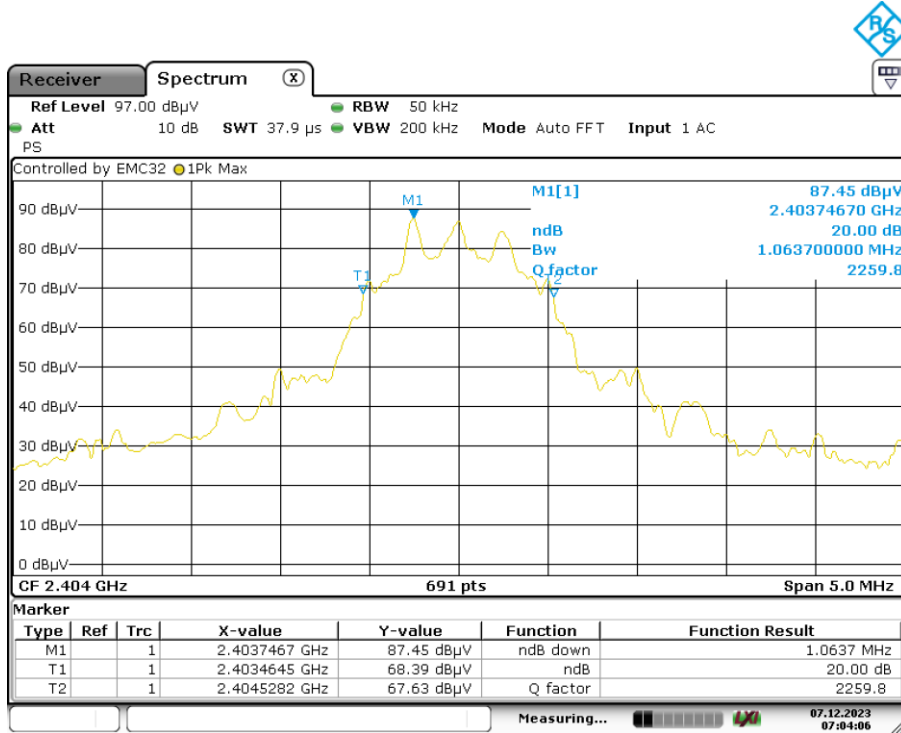
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7301.825000	---	34.62	54.00	19.38	150.0	V	252.0	8.3
7318.050000	42.93	---	74.00	31.07	150.0	V	350.0	8.2
12136.875000	---	40.29	54.00	13.71	150.0	V	229.0	14.3
12153.100000	49.21	---	74.00	24.79	150.0	V	350.0	14.4

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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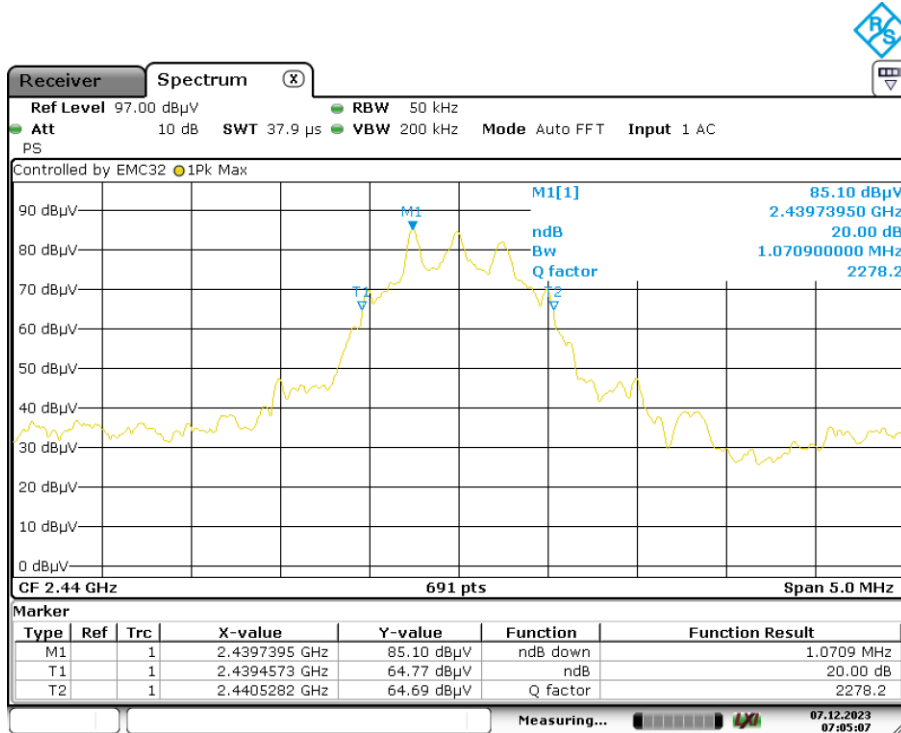
Appendix A.2: Test Results of 20dB Bandwidth

2404MHz



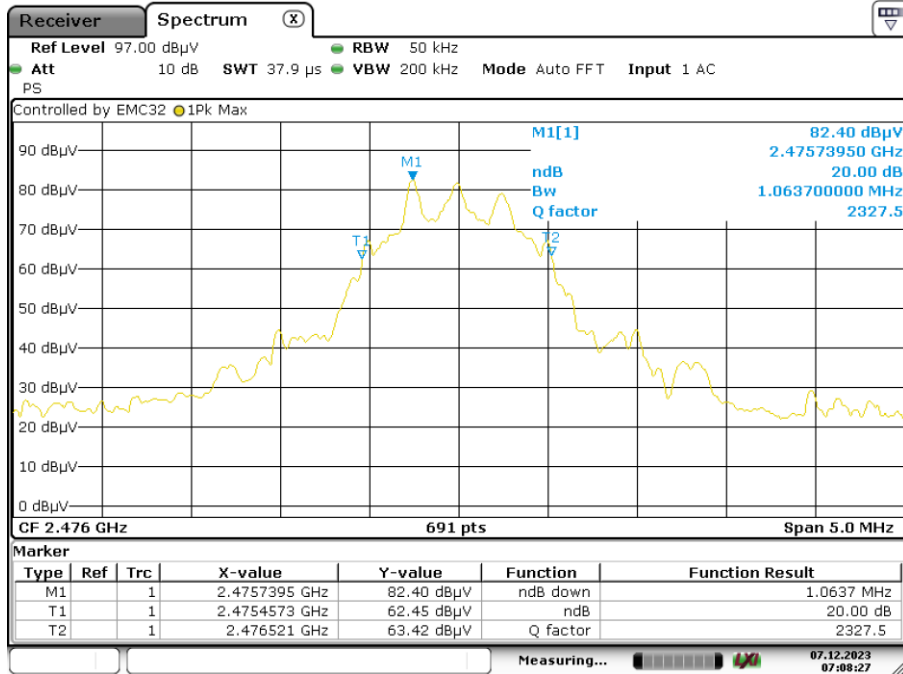
Date: 7.DEC.2023 07:04:06

2440MHz



Date: 7.DEC.2023 07:05:06

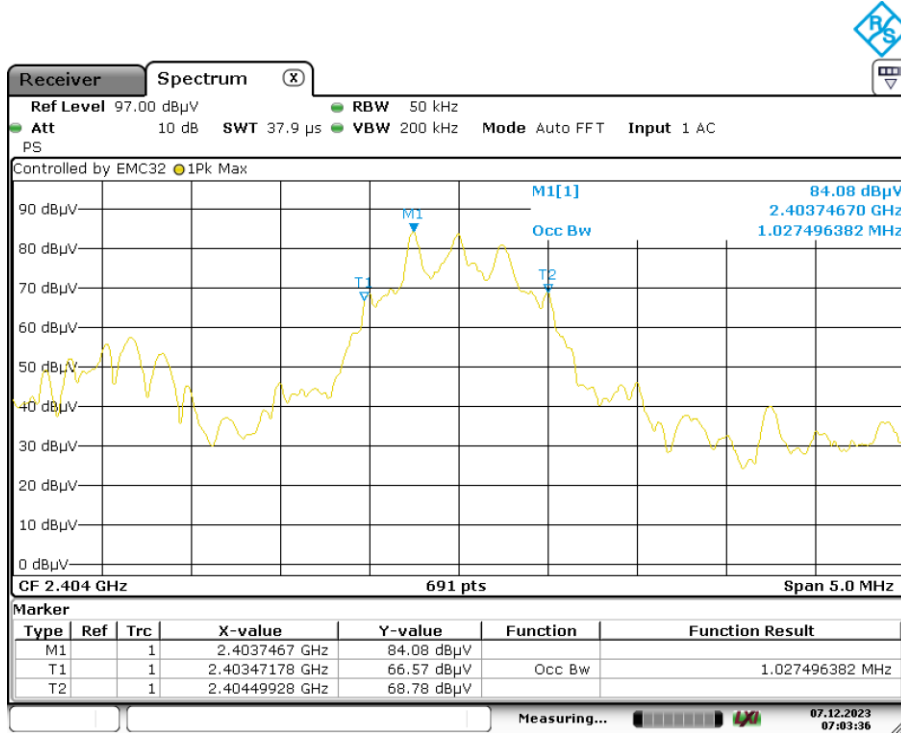
2476MHz



Date: 7.DEC.2023 07:08:27

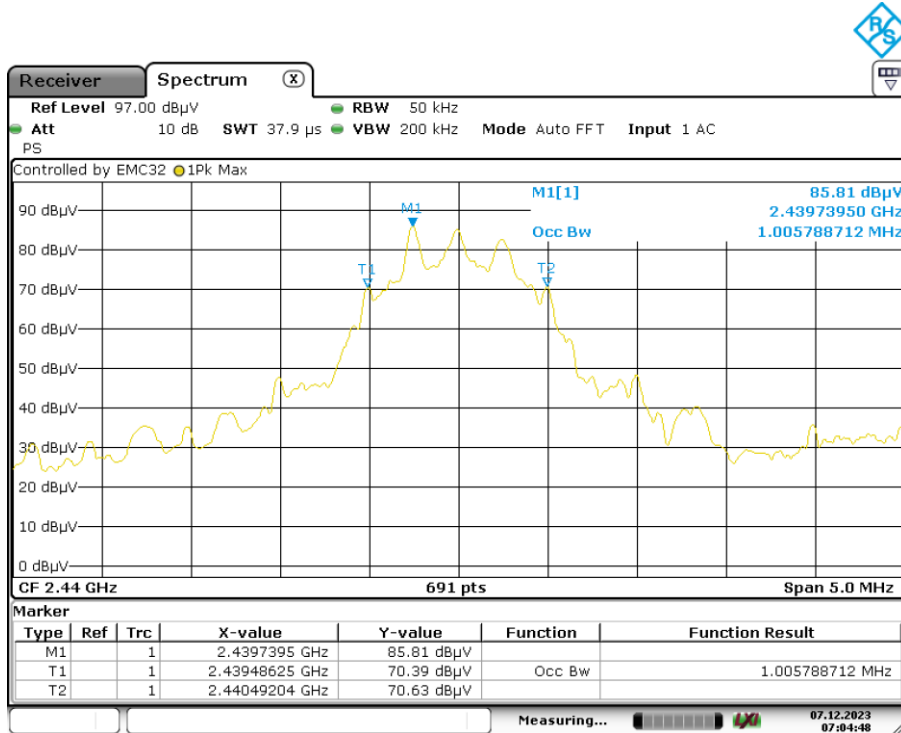
Appendix A.3: Test Results of 99% Bandwidth

2404MHz



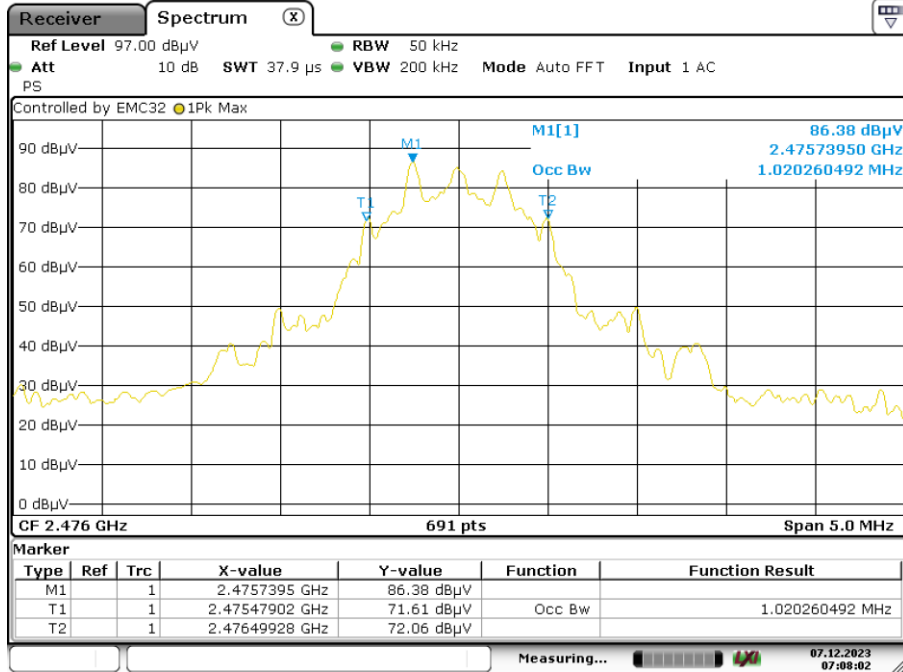
Date: 7.DEC.2023 07:03:35

2440MHz



Date: 7.DEC.2023 07:04:48

2476MHz

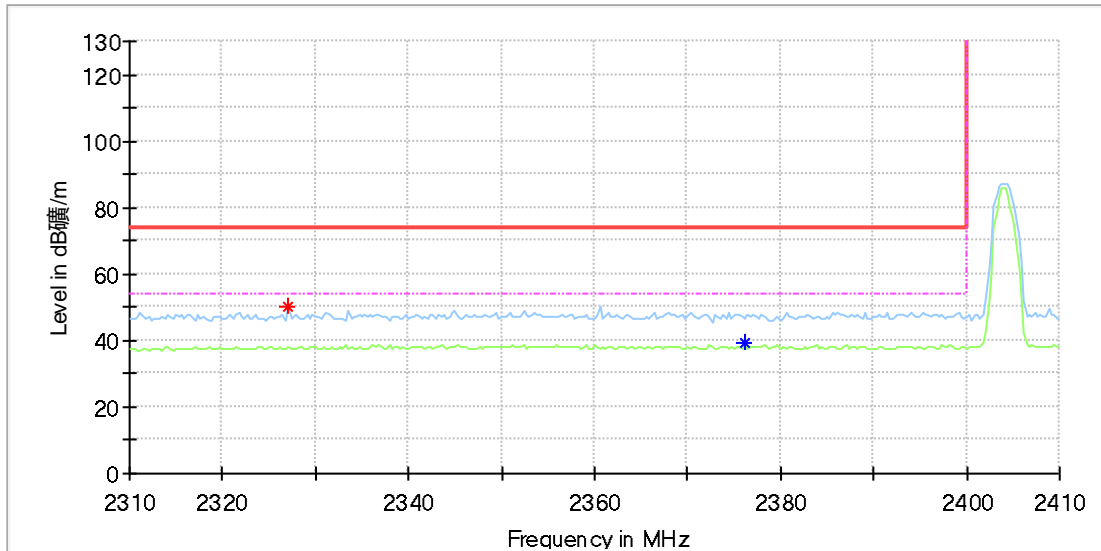


Date: 7.DEC.2023 07:08:02

Appendix A.4: Test Results of Band Edge

EUT Information

EUT Name:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz L CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

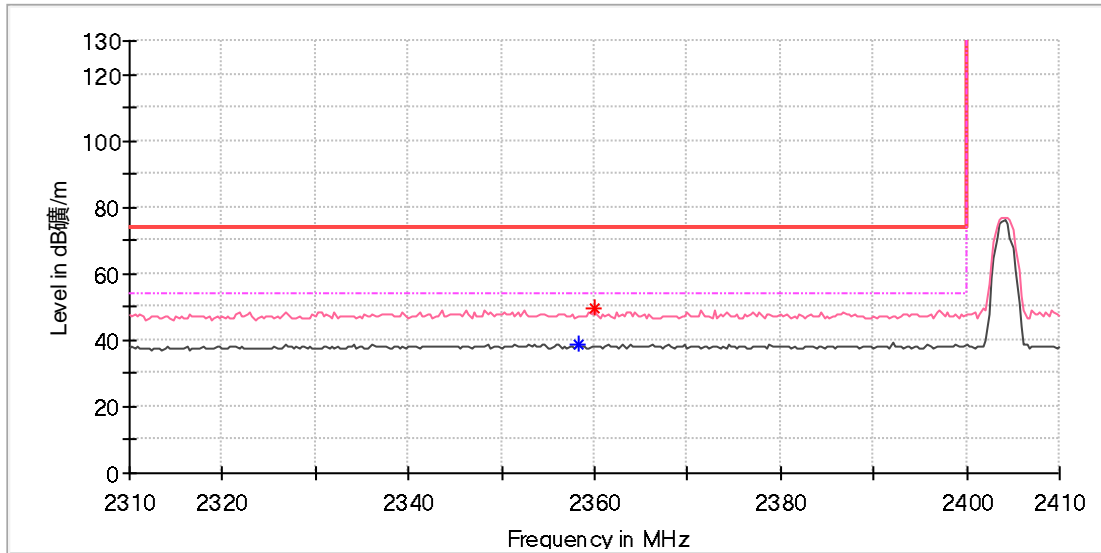
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2327.058824	50.43	---	74.00	23.57	150.0	H	138.0	6.7
2376.176471	---	39.35	54.00	14.65	150.0	H	359.0	6.9

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:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz L CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

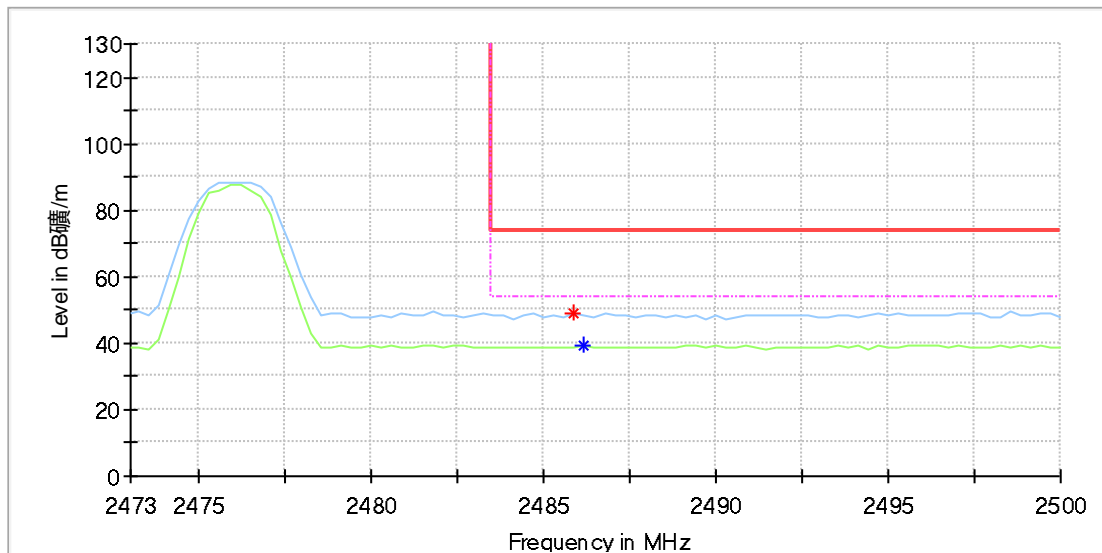
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2358.235294	---	38.70	54.00	15.30	150.0	V	256.0	6.9
2360.000000	49.82	---	74.00	24.18	150.0	V	236.0	6.9

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:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz H CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

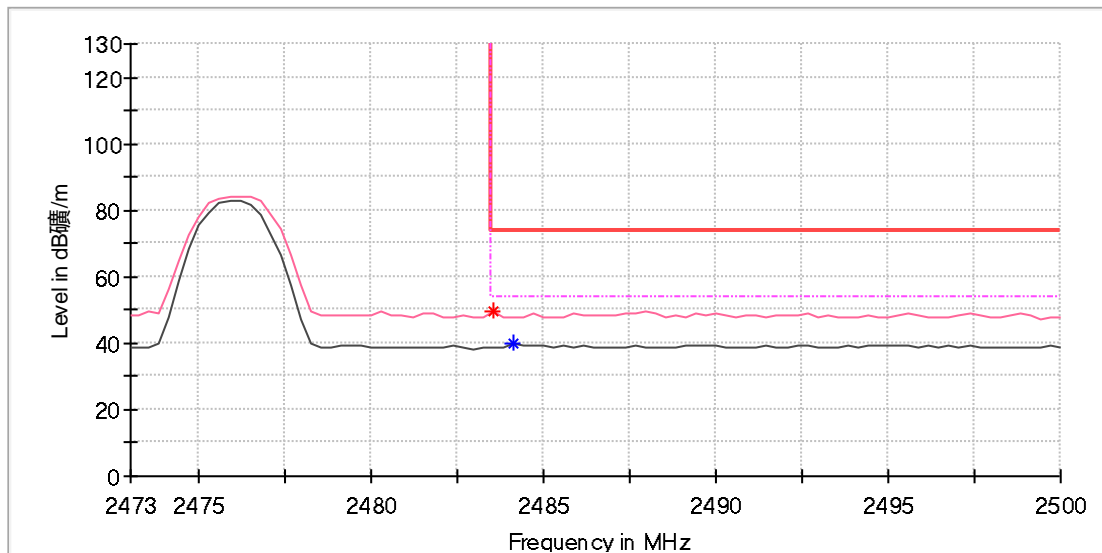
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.882353	49.14	---	74.00	24.86	150.0	H	158.0	7.4
2486.176471	---	39.07	54.00	14.93	150.0	H	296.0	7.4

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:	Radio Module-R15 Transceiver
Model:	R-15
Test Mode:	2.4GHz H CH
Order No/Sample No:	168453427/A003596662-003
Test Voltage:	Battery
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.249
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	49.69	---	74.00	24.31	150.0	V	270.0	7.4
2484.117647	---	39.69	54.00	14.31	150.0	V	60.0	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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