

Appendix B: Test Results of FCC 15B

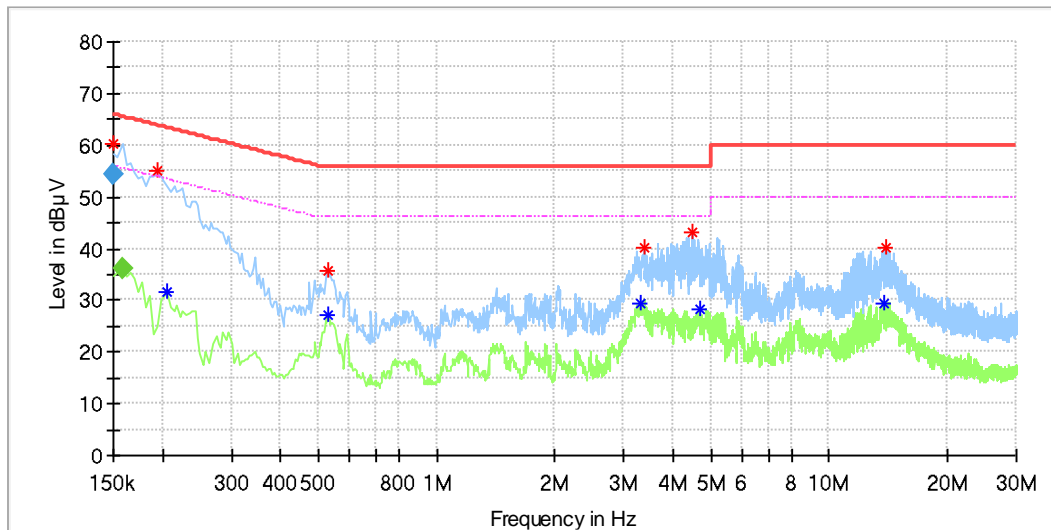
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Appendix B.1: Test Plots of Conducted Emission on AC Mains

Charing mode

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order No:	168382931
Model:	MA695B
Test Mode:	Charging
Test Voltage:	AC 120V/60Hz
Test By/Review By:	Kevin Zhou/Gary Chen
Test Standard:	FCC Part 15B
Tem./Hum./Pressure:	23.9°C/50.7%/101kPa
Remark:	SR1



Critical_Freqs

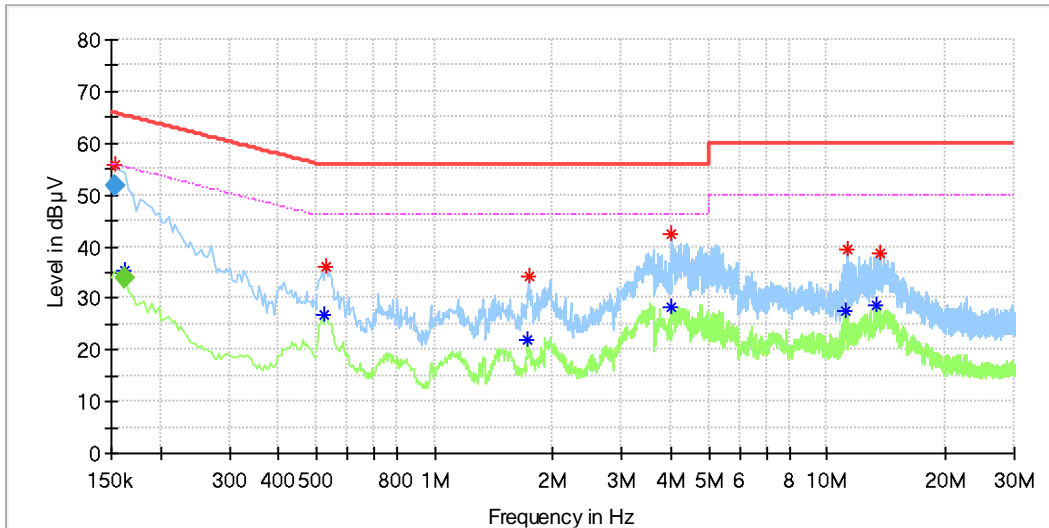
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.150000	60.31	---	65.57	5.26	L1	9.6
0.158000	---	36.24	55.57	19.32	L1	9.6
0.194000	54.97	---	63.86	8.90	L1	9.6
0.206000	---	31.57	53.37	21.79	L1	9.6
0.528000	---	27.15	46.00	18.85	L1	9.7
0.528000	35.79	---	56.00	20.21	L1	9.7
3.292000	---	29.47	46.00	16.53	L1	9.9
3.368000	40.08	---	56.00	15.92	L1	9.9
4.488000	43.28	---	56.00	12.72	L1	9.9
4.672000	---	28.38	46.00	17.62	L1	10.0
13.832000	---	29.55	50.00	20.45	L1	10.2
13.908000	40.13	---	60.00	19.87	L1	10.2

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	54.34	---	66.00	11.66	1000.0	9.000	L1	9.6
0.158000	---	36.00	55.57	19.57	1000.0	9.000	L1	9.6

EUT Information

EUT Name: Lenovo Professional Bluetooth Rechargeable Mouse
 Order No: 168382931
 Model: MA695B
 Test Mode: Charging
 Test Voltage: AC 120V/60Hz
 Test By/Review By: Kevin Zhou/Gary Chen
 Test Standard: FCC Part 15B
 Tem./Hum./Pressure: 23.9°C/50.7%/101kPa
 Remark: SR1



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.154000	55.83	---	66.00	10.17	N	9.6
0.162000	---	35.32	55.78	20.47	N	9.6
0.524000	---	26.73	46.00	19.27	N	9.7
0.528000	35.92	---	56.00	20.08	N	9.7
1.720000	---	21.89	46.00	24.11	N	9.7
1.736000	34.15	---	56.00	21.85	N	9.7
4.020000	---	28.42	46.00	17.58	N	9.9
4.024000	42.24	---	56.00	13.76	N	9.9
11.192000	---	27.36	50.00	22.64	N	10.2
11.316000	39.32	---	60.00	20.68	N	10.2
13.324000	---	28.71	50.00	21.29	N	10.2
13.592000	38.72	---	60.00	21.28	N	10.2

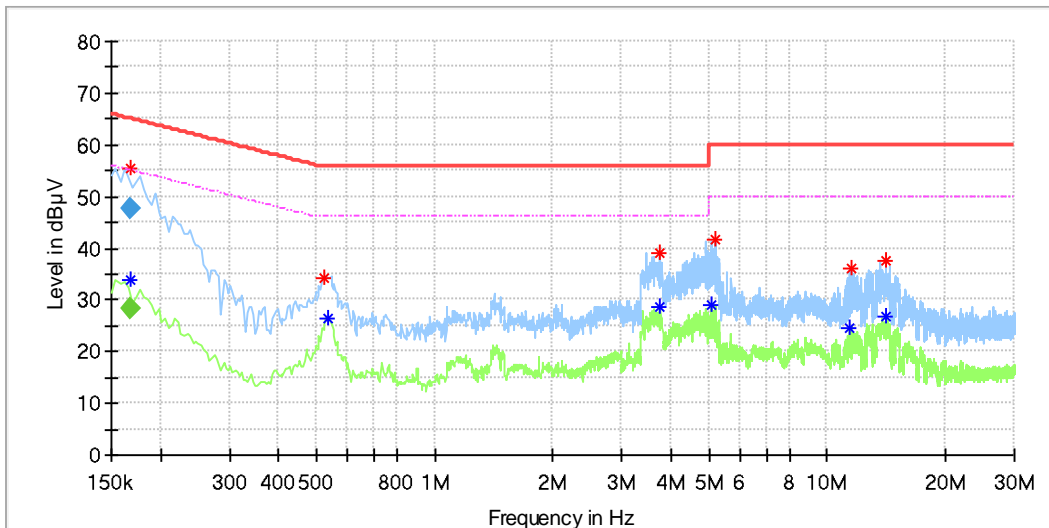
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.154000	51.55	---	65.78	14.23	1000.0	9.000	N	9.6
0.162000	---	33.86	55.36	21.50	1000.0	9.000	N	9.6

Charging + BT

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order No:	168382931
Model:	MA695B
Test Mode:	Bluetooth & Charging
Test Voltage:	AC 120V/60Hz
Test By/Review By:	Kevin Zhou/Gary Chen
Test Standard:	FCC Part 15B
Tem./Hum./Pressure:	23.9°C/50.7%/101kPa
Remark:	SR1



Critical Freqs

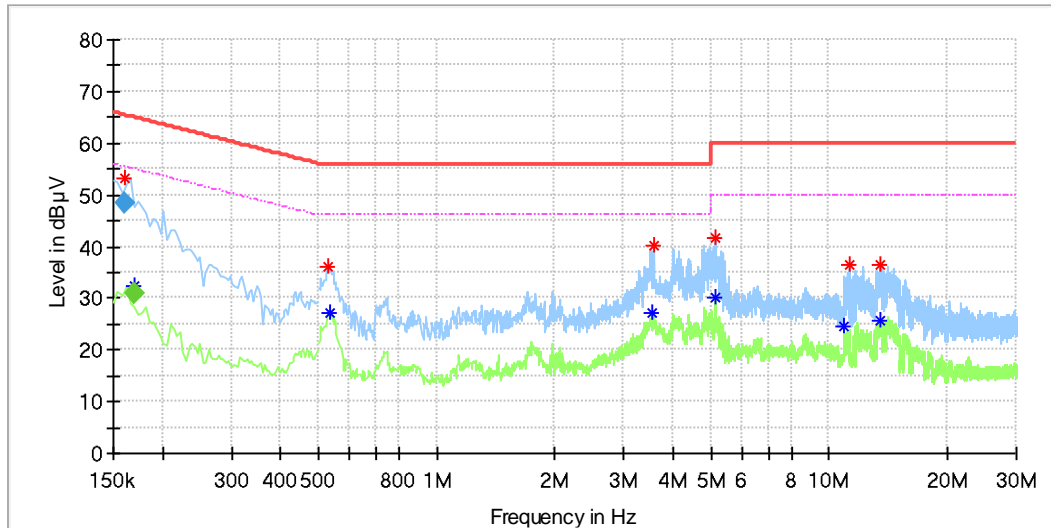
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.167500	---	33.92	55.78	21.86	N	9.6
0.167500	55.48	---	65.78	10.30	N	9.6
0.520000	34.32	---	56.00	21.68	N	9.7
0.536000	---	26.45	46.00	19.55	N	9.7
3.756000	---	28.57	46.00	17.43	N	9.9
3.756000	39.04	---	56.00	16.96	N	9.9
5.088000	---	29.20	50.00	20.80	N	10.0
5.168000	41.81	---	60.00	18.19	N	10.0
11.444000	---	24.63	50.00	25.37	N	10.2
11.540000	35.99	---	60.00	24.01	N	10.2
14.052000	37.69	---	60.00	22.31	N	10.2
14.172000	---	26.86	50.00	23.14	N	10.2

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.167500	---	28.39	55.08	26.70	1000.0	9.000	N	9.6
0.167500	47.79	---	65.08	17.29	1000.0	9.000	N	9.6

EUT Information

EUT Name: Lenovo Professional Bluetooth Rechargeable Mouse
 Order No: 168382931
 Model: MA695B
 Test Mode: Bluetooth & Charging
 Test Voltage: AC 120V/60Hz
 Test By/Review By: Kevin Zhou/Gary Chen
 Test Standard: FCC Part 15B
 Tem./Hum./Pressure: 23.9°C/50.7%/101kPa
 Remark: SR1



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.160500	53.04	---	65.16	12.12	L1	9.6
0.170000	---	32.40	55.36	22.96	L1	9.6
0.528000	36.10	---	56.00	19.90	L1	9.7
0.532000	---	27.27	46.00	18.73	L1	9.7
3.528000	---	27.08	46.00	18.92	L1	9.9
3.584000	40.06	---	56.00	15.94	L1	9.9
5.136000	---	30.11	50.00	19.89	L1	10.0
5.136000	41.76	---	60.00	18.24	L1	10.0
10.948000	---	24.65	50.00	25.35	L1	10.1
11.264000	36.28	---	60.00	23.72	L1	10.1
13.428000	---	25.68	50.00	24.32	L1	10.2
13.488000	36.42	---	60.00	23.58	L1	10.2

Final_Result

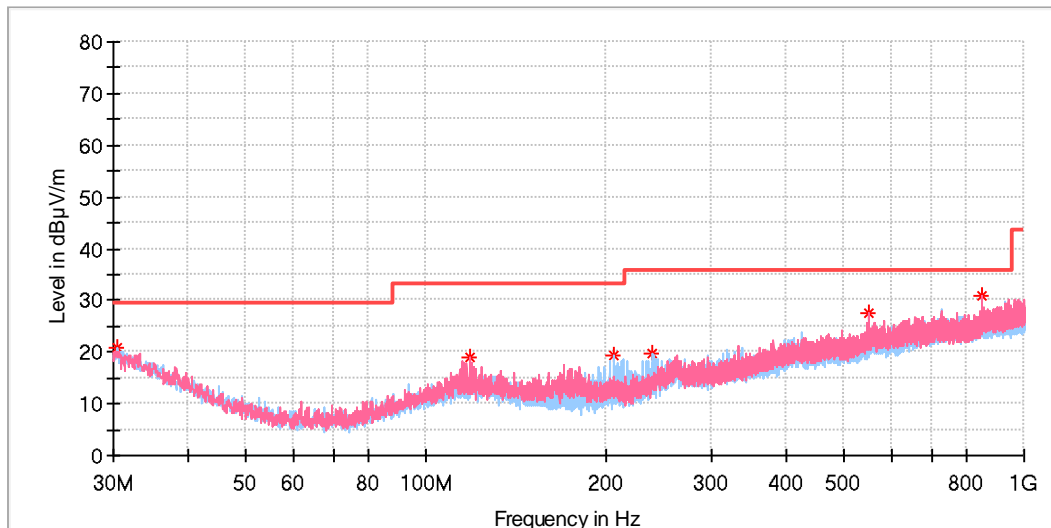
Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.160500	48.25	---	65.44	17.19	1000.0	9.000	L1	9.6
0.170000	---	30.95	54.96	24.01	1000.0	9.000	L1	9.6

Appendix B.2: Test Plots of Radiated Emission, Below 1GHz

Charing mode

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	Charging
Test Voltage:	AC 120V/60Hz
Standard:	FCC Part 15B
Test By./Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	24.2°C/49.3%/101kPa
Remark:	10m Chamber



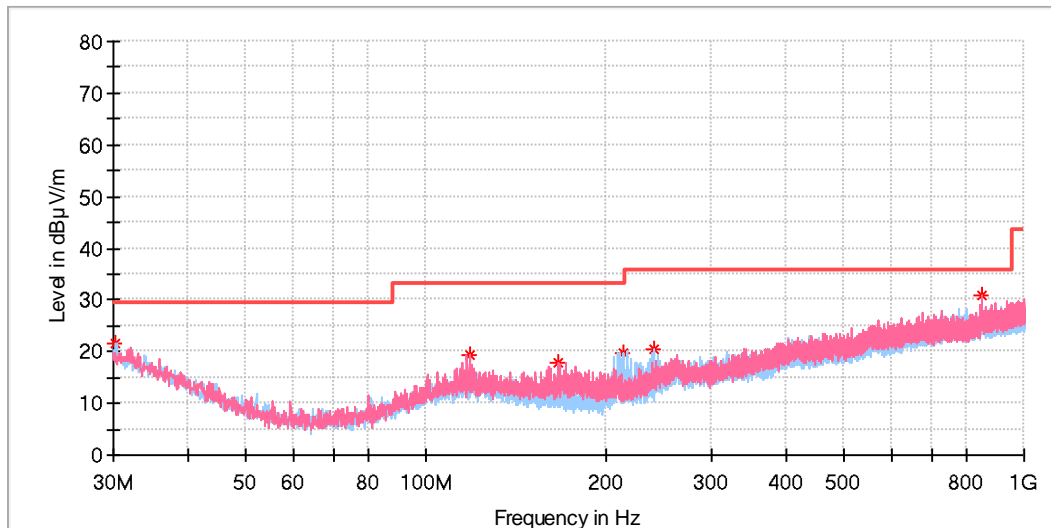
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.485000	20.87	29.50	8.63	200.0	H	283.0	-9.9
118.162222	19.01	33.10	14.09	200.0	V	45.0	-9.9
205.677778	19.45	33.10	13.65	200.0	H	244.0	-18.0
239.627778	19.60	35.60	16.00	200.0	H	332.0	-16.0
551.159444	27.62	35.60	7.98	100.0	V	322.0	-1.3
851.536111	30.95	35.60	4.65	200.0	V	296.0	1.3

On (BT)

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	Bluetooth
Test Voltage:	DC 3.7V
Standard:	FCC Part 15B
Test By./Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	24.2°C/49.3%/101kPa
Remark:	10m Chamber



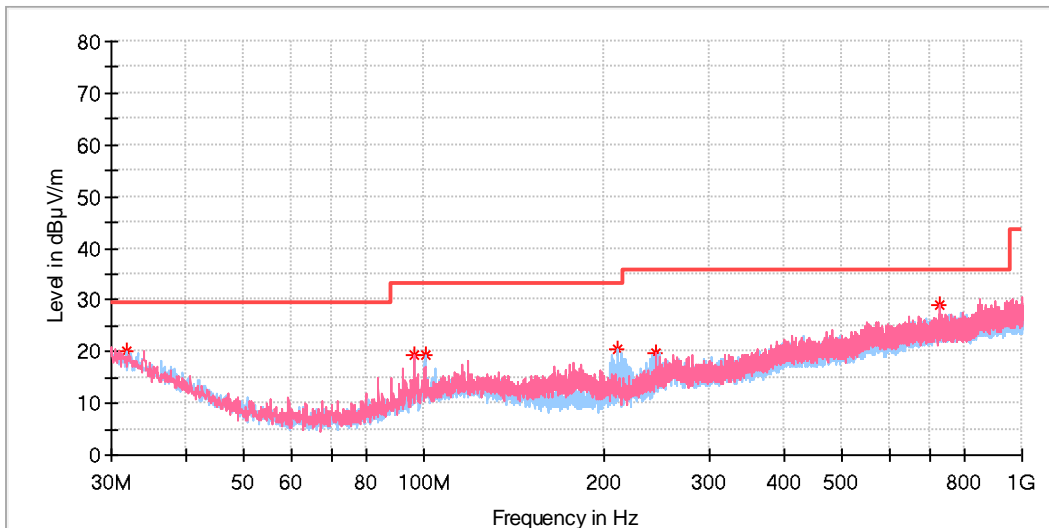
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.323333	21.47	29.50	8.03	200.0	H	141.0	-9.8
118.162222	19.20	33.10	13.90	100.0	V	234.0	-9.9
166.877778	17.97	33.10	15.13	100.0	V	125.0	-11.9
213.383889	19.81	33.10	13.29	200.0	H	297.0	-18.4
240.651667	20.53	35.60	15.07	200.0	H	148.0	-15.9
851.590000	30.70	35.60	4.90	200.0	V	14.0	1.3

Charging + BT

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	Bluetooth & Charging
Test Voltage:	AC 120V/60Hz
Standard:	FCC Part 15B
Test By./Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	24.2°C/49.3%/101kPa
Remark:	10m Chamber



Critical Freqs

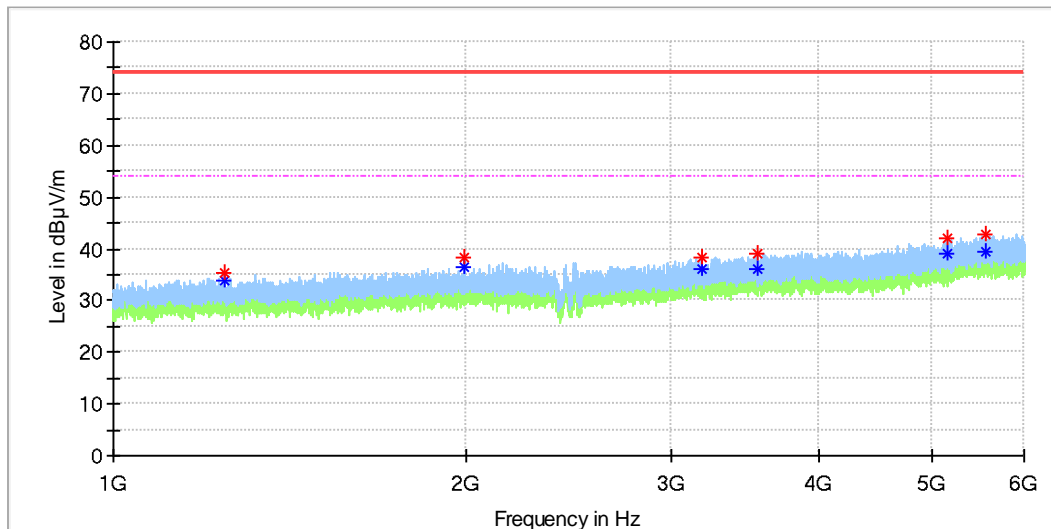
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.724444	20.21	29.50	9.29	100.0	H	0.0	-10.7
96.229444	19.52	33.10	13.58	100.0	V	165.0	-12.4
100.325000	19.45	33.10	13.65	100.0	H	338.0	-17.0
210.042778	20.36	33.10	12.74	200.0	H	134.0	-18.1
244.801111	19.69	35.60	15.91	100.0	V	64.0	-9.7
728.453889	28.85	35.60	6.75	100.0	V	0.0	-0.2

Appendix B.3: Test Plots of Radiated Emission, Above 1GHz

Note: Testing was carried out within frequency range 30MHz to the 5th harmonics. The measurement results above 6GHz were greater than 20dB below the limit, so only record the test result within the 30MHz to 6GHz.
 Charing mode

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	Charging
Test Voltage:	AC 120V/60Hz
Standard:	FCC Part 15B
Test By./Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	25.3°C/54.6%/101kPa
Remark:	10m Chamber

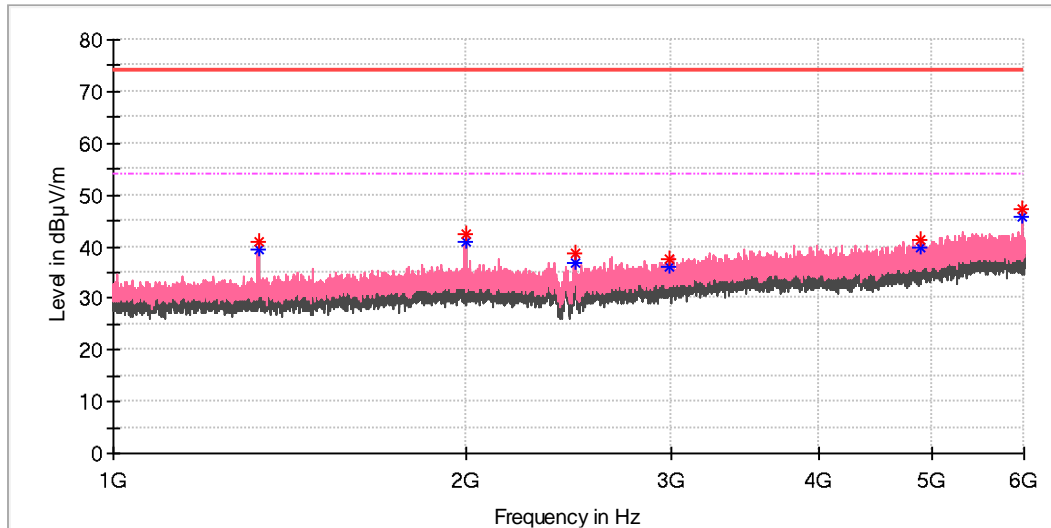


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1245.625000	35.23	---	74.00	38.77	100.0	H	0.0	-6.1
1245.625000	---	33.71	54.00	20.29	100.0	H	0.0	-6.1
1994.791667	38.36	---	74.00	35.64	100.0	H	222.0	-3.2
1994.791667	---	36.50	54.00	17.50	100.0	H	222.0	-3.2
3185.833333	38.42	---	74.00	35.58	100.0	H	169.0	1.1
3185.833333	---	35.91	54.00	18.09	100.0	H	169.0	1.1
3550.625000	---	36.15	54.00	17.85	100.0	H	6.0	2.8
3550.625000	38.94	---	74.00	35.06	100.0	H	6.0	2.8
5165.000000	42.10	---	74.00	31.90	100.0	H	20.0	8.3
5165.000000	---	39.05	54.00	14.95	100.0	H	20.0	8.3
5566.041667	42.64	---	74.00	31.36	100.0	H	82.0	9.9
5566.041667	---	39.29	54.00	14.71	100.0	H	82.0	9.9

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	Charging
Test Voltage:	AC 120V/60Hz
Standard:	FCC Part 15B
Test By:/Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	25.3°C/54.6%/101kPa
Remark:	10m Chamber



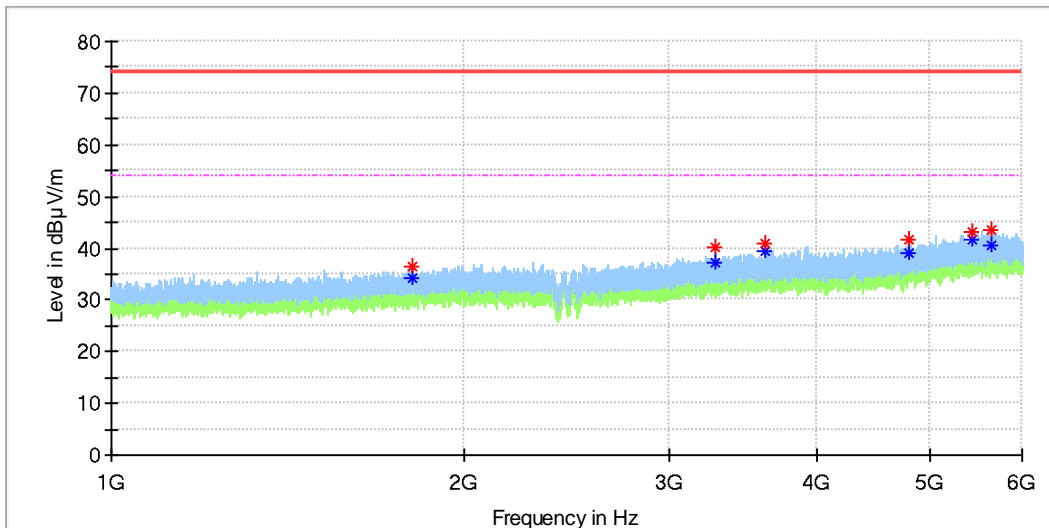
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1332.708333	41.10	---	74.00	32.90	100.0	V	160.0	-5.9
1332.708333	---	39.30	54.00	14.70	100.0	V	160.0	-5.9
1998.958333	---	41.00	54.00	13.00	100.0	V	200.0	-3.2
1998.958333	42.28	---	74.00	31.72	100.0	V	200.0	-3.2
2481.875000	38.82	---	74.00	35.18	100.0	V	174.0	-2.6
2481.875000	---	36.85	54.00	17.15	100.0	V	174.0	-2.6
2980.625000	37.54	---	74.00	36.46	100.0	V	85.0	0.0
2980.625000	---	35.95	54.00	18.05	100.0	V	85.0	0.0
4894.375000	---	39.66	54.00	14.34	100.0	V	343.0	7.1
4894.375000	41.34	---	74.00	32.66	100.0	V	343.0	7.1
5974.791667	47.40	---	74.00	26.60	100.0	V	253.0	10.2
5974.791667	---	45.81	54.00	8.19	100.0	V	253.0	10.2

On (BT)

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	BT
Test Voltage:	DC 3.7V
Standard:	FCC Part 15B
Test By./Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	25.3°C/54.6%/101kPa
Remark:	10m Chamber

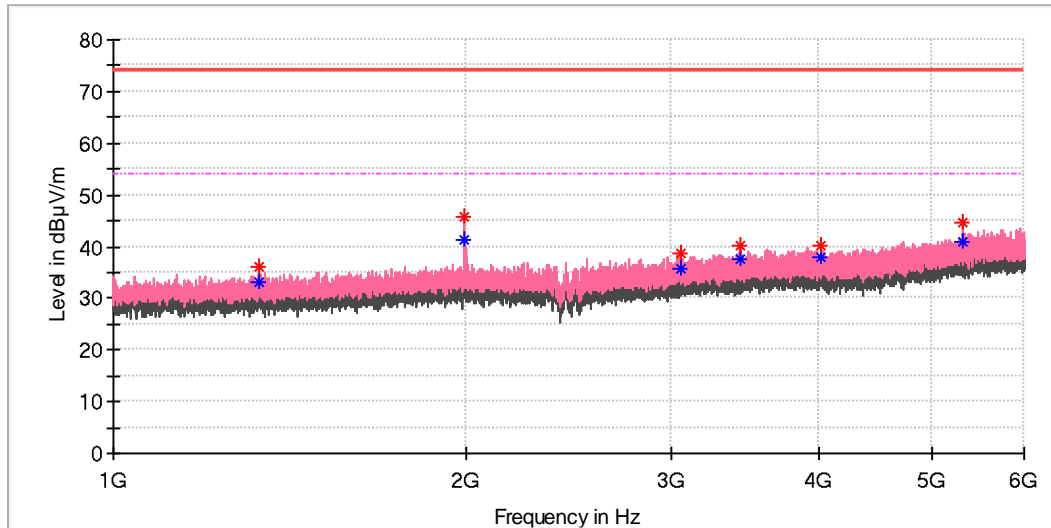


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1806.458333	36.57	---	74.00	37.43	100.0	H	237.0	-3.9
1806.458333	---	34.24	54.00	19.76	100.0	H	237.0	-3.9
3283.541667	---	37.20	54.00	16.80	100.0	H	196.0	1.6
3283.541667	40.35	---	74.00	33.65	100.0	H	196.0	1.6
3619.166667	40.89	---	74.00	33.11	100.0	H	249.0	3.0
3619.166667	---	39.40	54.00	14.60	100.0	H	249.0	3.0
4794.583333	---	39.08	54.00	14.93	100.0	H	263.0	6.6
4794.583333	41.59	---	74.00	32.41	100.0	H	263.0	6.6
5433.541667	43.13	---	74.00	30.87	100.0	H	62.0	9.6
5433.541667	---	41.79	54.00	12.21	100.0	H	62.0	9.6
5647.500000	43.37	---	74.00	30.63	100.0	H	327.0	10.0
5647.500000	---	40.43	54.00	13.57	100.0	H	327.0	10.0

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	BT
Test Voltage:	DC 3.7V
Standard:	FCC Part 15B
Test By:/Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	25.3°C/54.6%/101kPa
Remark:	10m Chamber



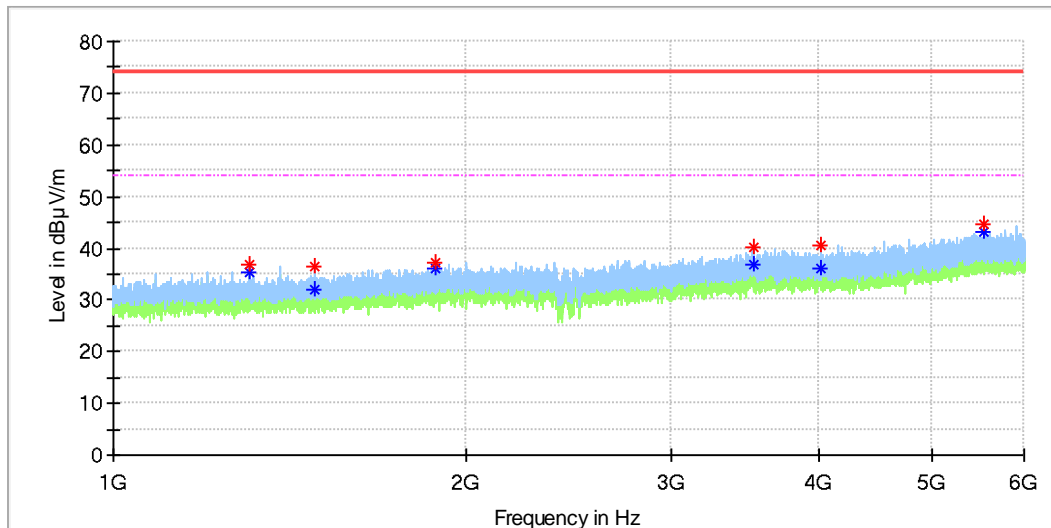
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1329.583333	---	33.10	54.00	20.90	100.0	V	74.0	-5.9
1329.791667	36.10	---	74.00	37.90	100.0	V	74.0	-5.9
1992.500000	---	41.32	54.00	12.68	100.0	V	19.0	-3.2
1992.500000	45.76	---	74.00	28.24	100.0	V	19.0	-3.2
3050.833333	---	35.66	54.00	18.34	100.0	V	157.0	0.4
3050.833333	38.85	---	74.00	35.15	100.0	V	157.0	0.4
3433.125000	---	37.68	54.00	16.32	100.0	V	177.0	2.4
3433.125000	40.06	---	74.00	33.94	100.0	V	177.0	2.4
4015.208333	---	38.09	54.00	15.91	100.0	V	137.0	4.0
4015.208333	40.08	---	74.00	33.92	100.0	V	137.0	4.0
5309.583333	---	40.96	54.00	13.04	100.0	V	177.0	9.0
5309.583333	44.57	---	74.00	29.43	100.0	V	177.0	9.0

Charging + BT

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	Charging + BT
Test Voltage:	AC 120V/60Hz
Standard:	FCC Part 15B
Test By./Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	25.3°C/54.6%/101kPa
Remark:	10m Chamber

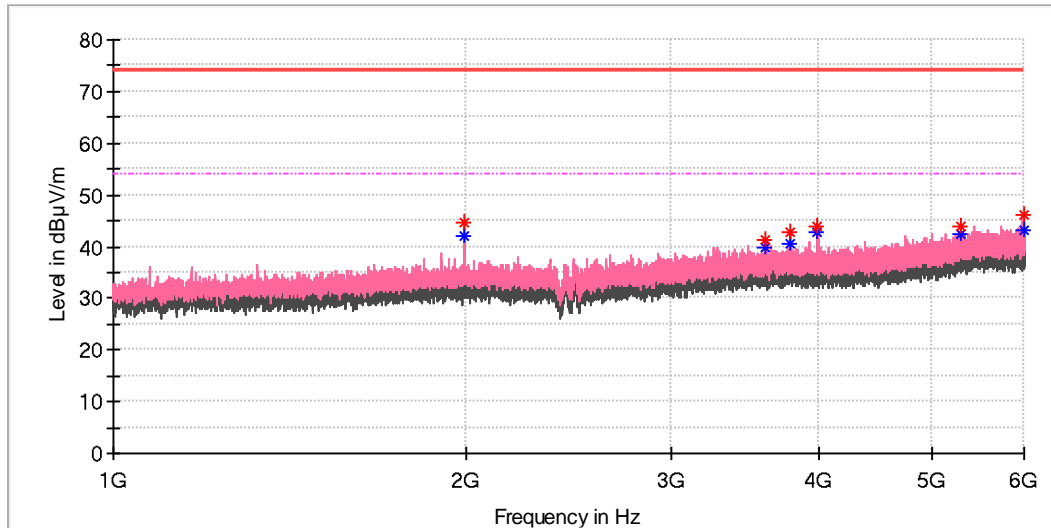


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1309.166667	36.87	---	74.00	37.13	100.0	H	61.0	-5.9
1309.166667	---	35.36	54.00	18.64	100.0	H	61.0	-5.9
1484.375000	36.54	---	74.00	37.46	100.0	H	332.0	-5.3
1484.375000	---	31.91	54.00	22.09	100.0	H	332.0	-5.3
1886.458333	37.25	---	74.00	36.75	100.0	H	100.0	-3.6
1886.458333	---	35.98	54.00	18.02	100.0	H	100.0	-3.6
3521.666667	---	36.89	54.00	17.11	100.0	H	0.0	2.7
3521.875000	40.02	---	74.00	33.98	100.0	H	29.0	2.7
4019.791667	---	35.98	54.00	18.02	100.0	H	100.0	4.0
4020.000000	40.68	---	74.00	33.32	100.0	H	100.0	4.0
5540.833333	44.53	---	74.00	29.47	100.0	H	41.0	9.9
5540.833333	---	43.18	54.00	10.82	100.0	H	41.0	9.9

EUT Information

EUT Name:	Lenovo Professional Bluetooth Rechargeable Mouse
Order Number:	168382931
Model:	MA695B
Test Mode:	Charging + BT
Test Voltage:	AC 120V/60Hz
Standard:	FCC Part 15B
Test By:/Review By:	Kevin Zhou/Gary Chen
Tem./Hum./Pressure:	25.3°C/54.6%/101kPa
Remark:	10m Chamber



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1997.291667	---	41.87	54.00	12.13	100.0	V	64.0	-3.2
1997.500000	44.60	---	74.00	29.40	100.0	V	64.0	-3.2
3603.541667	41.42	---	74.00	32.58	100.0	V	0.0	2.9
3603.541667	---	39.97	54.00	14.03	100.0	V	0.0	2.9
3786.666667	---	40.60	54.00	13.40	100.0	V	196.0	3.4
3786.875000	42.64	---	74.00	31.36	100.0	V	196.0	3.4
3999.791667	---	42.71	54.00	11.29	100.0	V	71.0	3.9
3999.791667	43.85	---	74.00	30.15	100.0	V	71.0	3.9
5295.208333	43.94	---	74.00	30.06	100.0	V	148.0	8.9
5295.208333	---	42.25	54.00	11.75	100.0	V	148.0	8.9
5994.166667	---	43.09	54.00	10.91	100.0	V	340.0	10.2
6000.000000	46.20	---	74.00	27.80	100.0	V	261.0	10.2