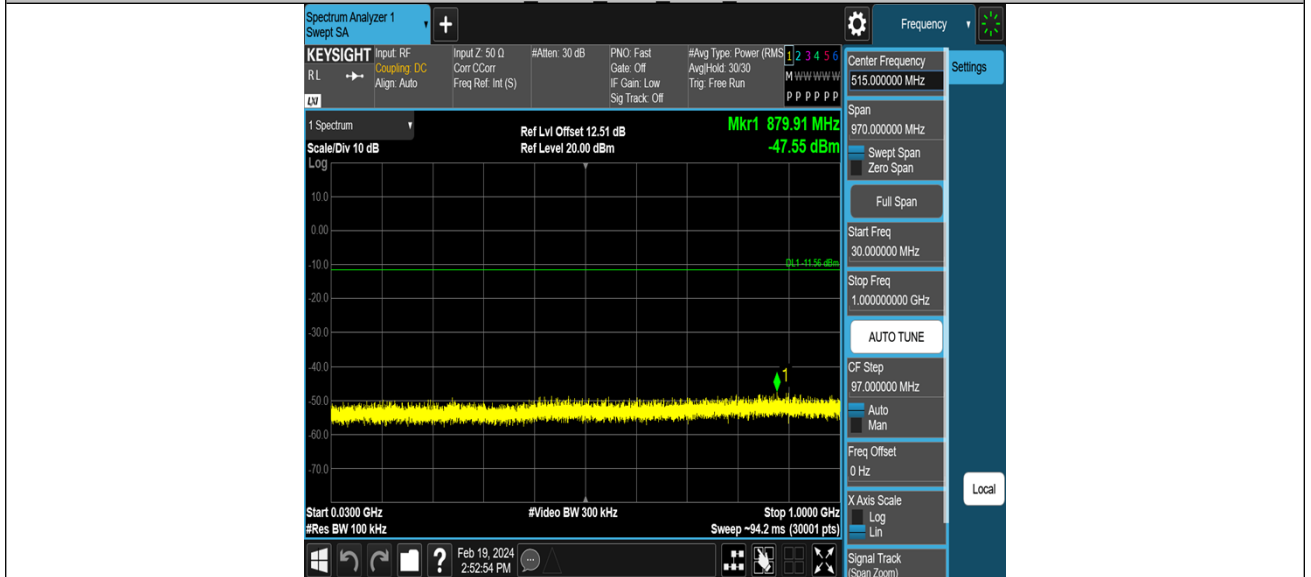


BLE 500K Ant1 2480 0~Reference



BLE 500K Ant1 2480 30~1000



BLE 500K Ant1 2480 1000~26500

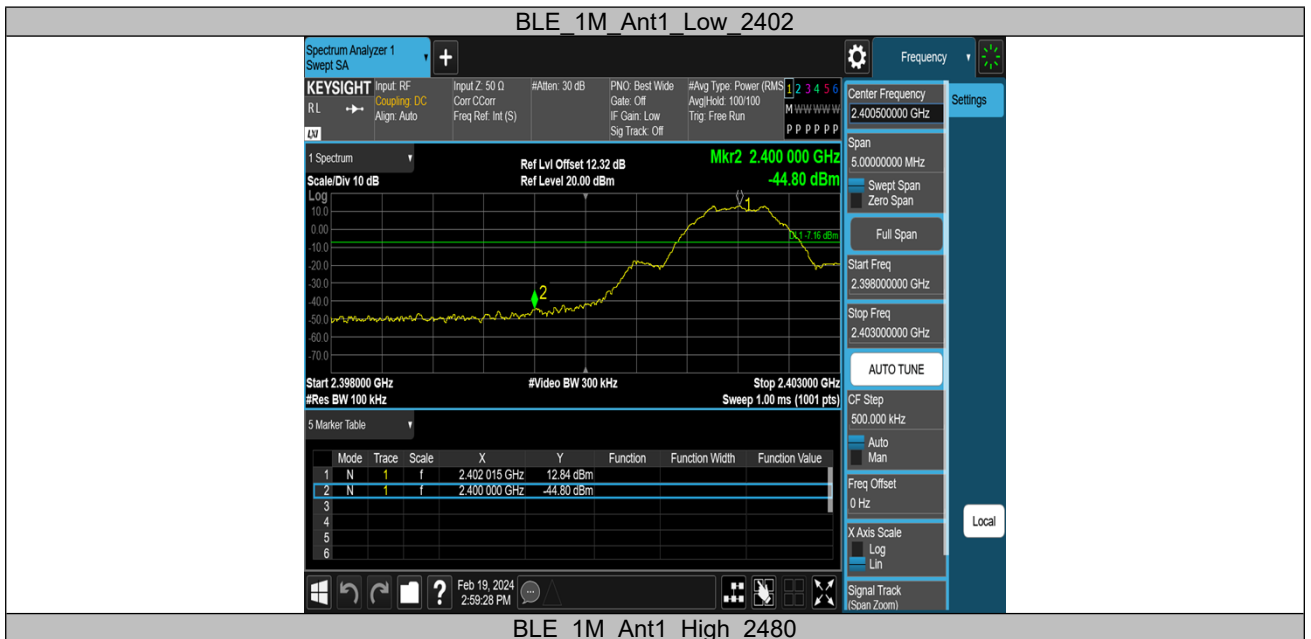


Band Edge

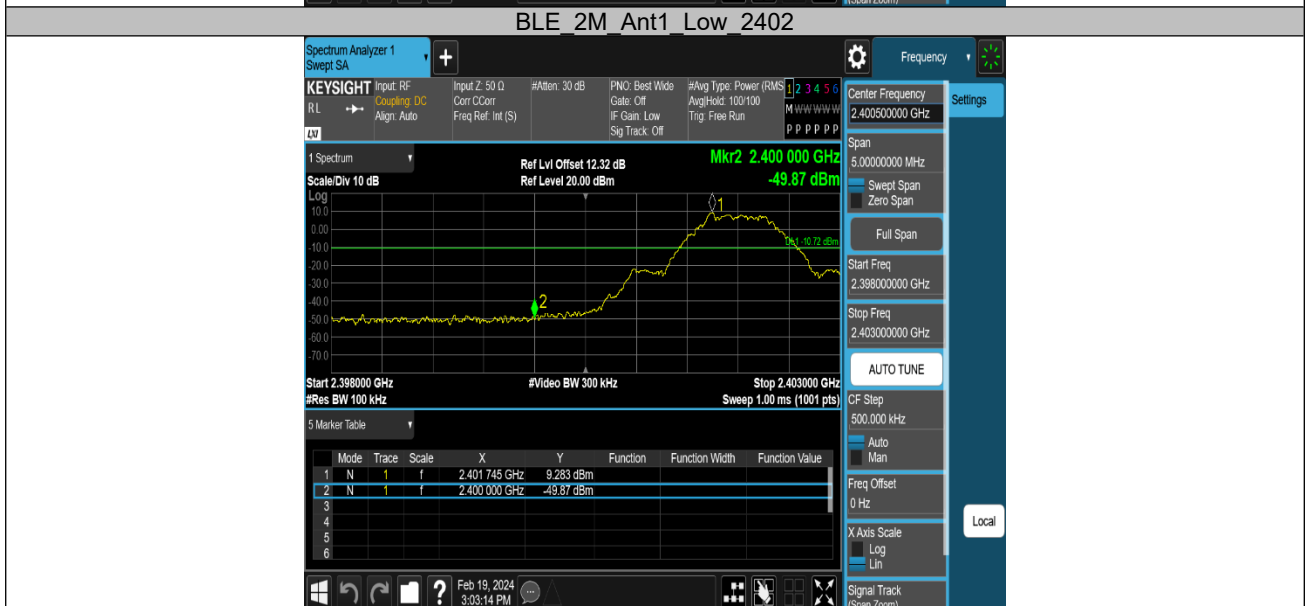
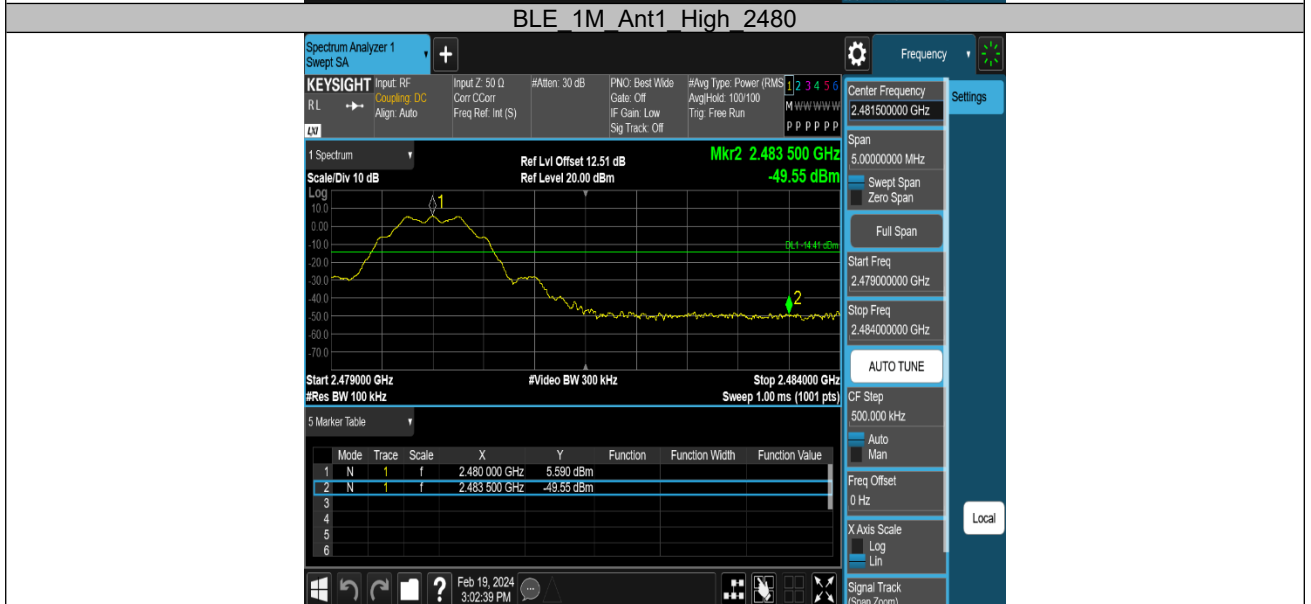
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	12.84	-44.8	≤-7.16	PASS
		High	2480	12.1	-49.67	≤-7.9	PASS
BLE_2M	Ant1	Low	2402	12.17	-18.76	≤-7.83	PASS
		High	2480	12.57	-48.83	≤-7.43	PASS
BLE 125K	Ant1	Low	2402	6.269	-48.04	≤-13.73	PASS
		High	2480	5.59	-49.55	≤-14.41	PASS
BLE 500K	Ant1	Low	2402	9.283	-49.87	≤-10.72	PASS
		High	2480	8.973	-50.01	≤-11.03	PASS

Test Graphs









APPENDIX C.5: RADIATED SPURIOUS EMISSIONS

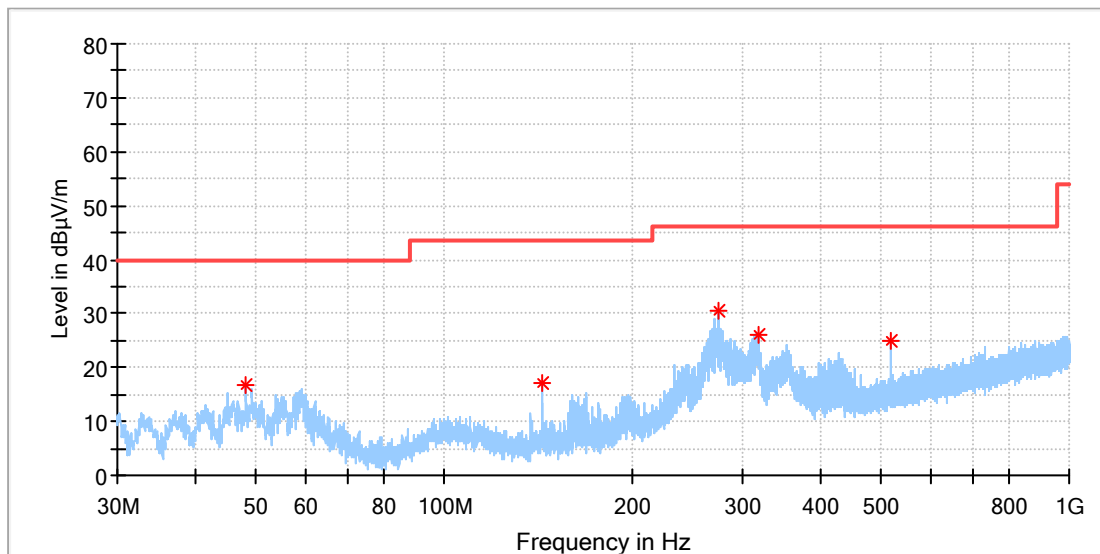
Note:

- 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.

30MHz - 1GHz (Worst case)

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

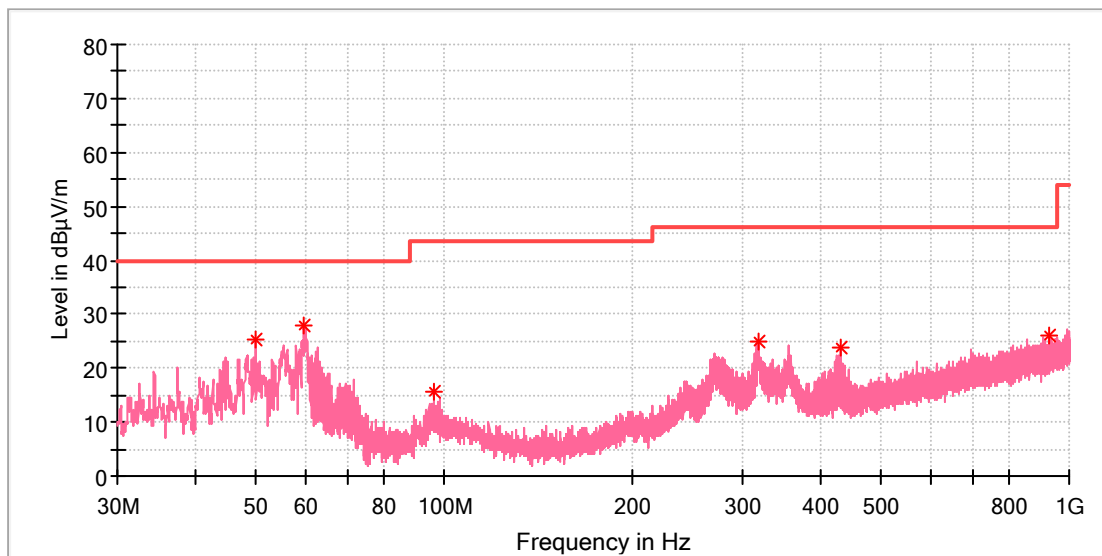


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
48.056923	16.76	40.00	23.24	100.0	H	334.0	-18.7
143.676539	16.94	43.50	26.56	100.0	H	83.0	-22.6
273.843077	30.40	46.00	15.60	100.0	H	290.0	-17.2
317.828846	26.13	46.00	19.87	100.0	H	59.0	-16.1
519.999231	24.89	46.00	21.11	100.0	H	215.0	-11.9

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



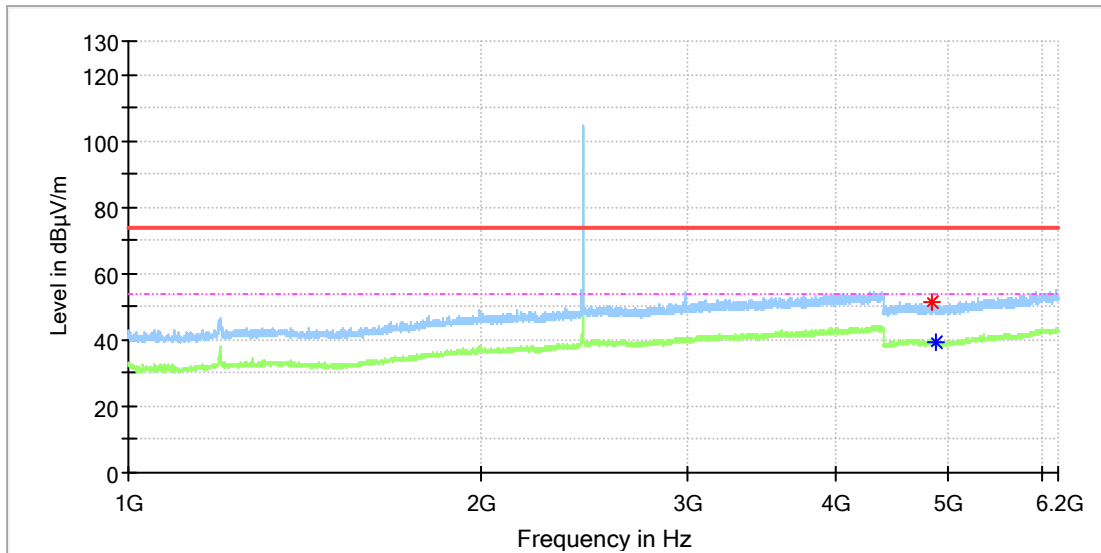
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.996923	25.37	40.00	14.63	100.0	V	0.0	-18.6
59.585000	27.82	40.00	12.18	100.0	V	0.0	-19.2
96.183846	15.66	43.50	27.84	100.0	V	354.0	-19.9
319.097308	24.91	46.00	21.09	100.0	V	219.0	-16.1
430.348846	23.76	46.00	22.24	100.0	V	354.0	-13.6
929.973462	26.19	46.00	19.81	100.0	V	16.0	-5.1

1GHz-18GHz

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

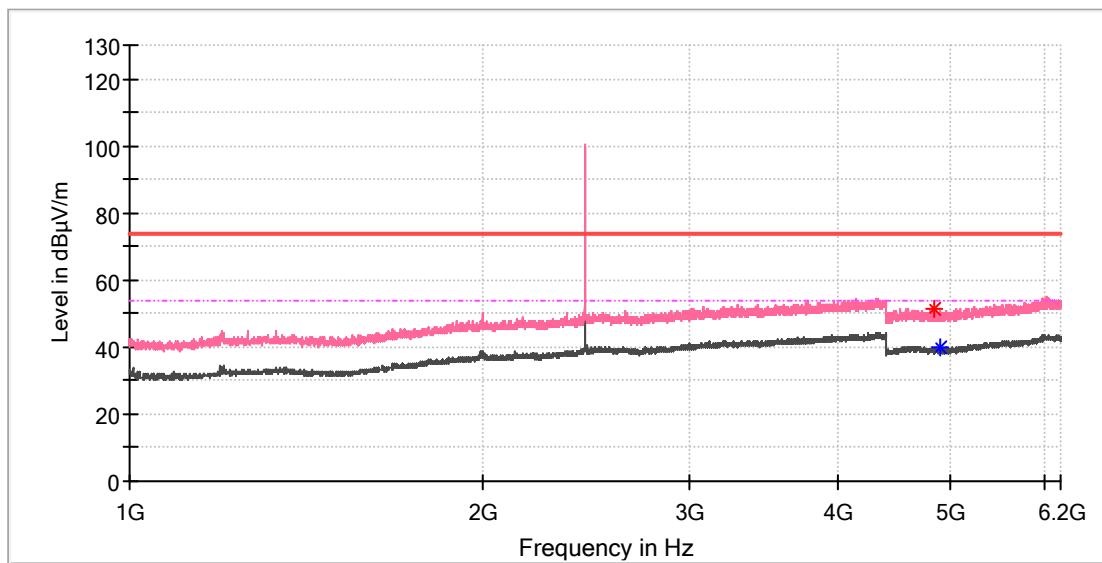


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4848.500000	51.18	---	74.00	22.82	150.0	H	174.0	11.8
4880.000000	---	39.56	54.00	14.44	150.0	H	310.0	11.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

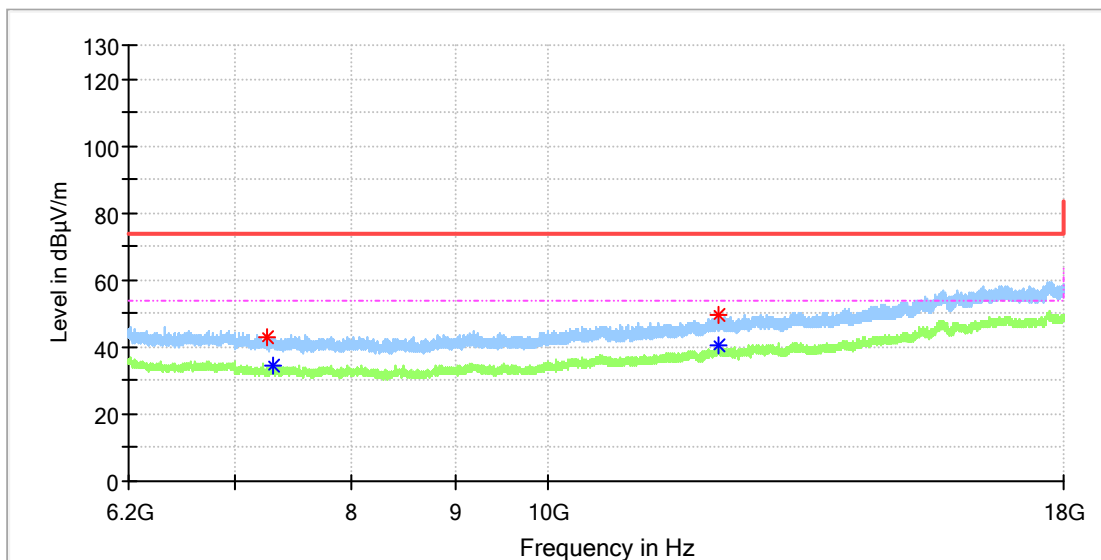


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4845.500000	51.13	---	74.00	22.87	150.0	V	129.0	11.8
4897.000000	---	39.72	54.00	14.28	150.0	V	208.0	11.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

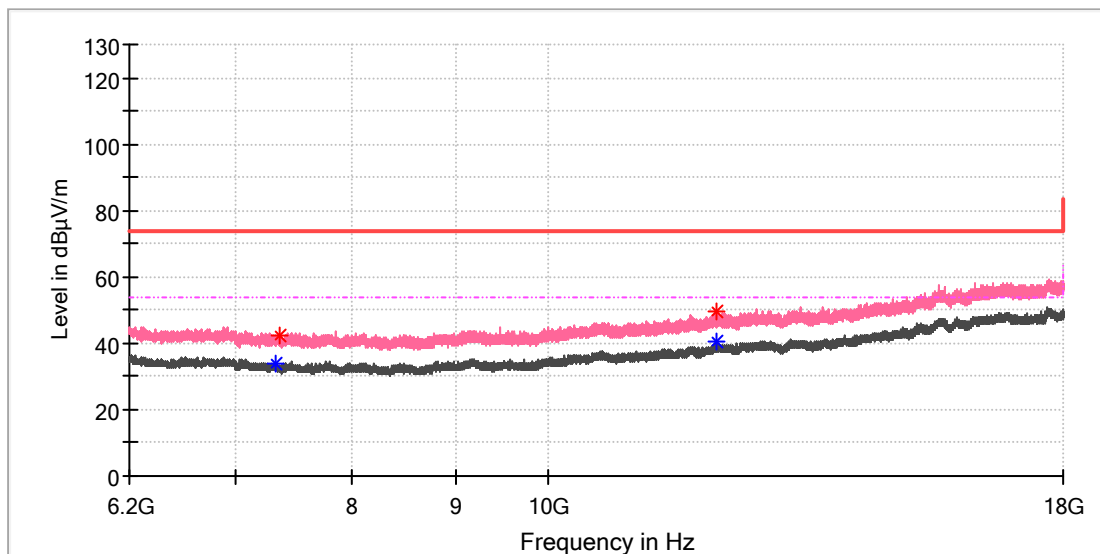


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7264.950000	42.94	---	74.00	31.06	150.0	H	187.0	8.5
7313.133333	---	34.35	54.00	19.65	150.0	H	275.0	8.2
12134.416667	---	40.27	54.00	13.73	150.0	H	0.0	14.3
12151.133333	49.47	---	74.00	24.53	150.0	H	51.0	14.4

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

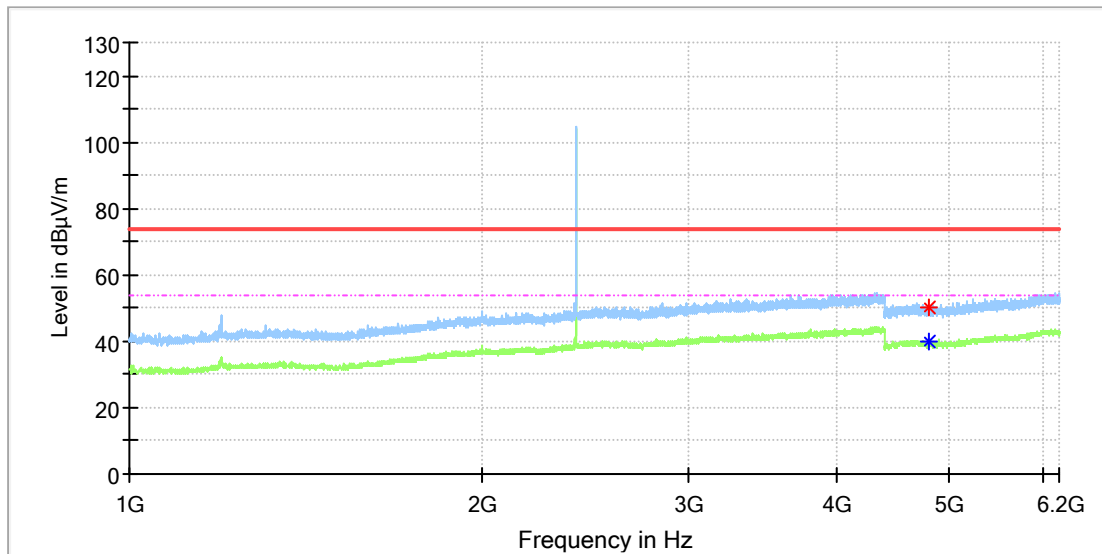


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7333.291667	---	33.87	54.00	20.13	150.0	V	323.0	8.1
7357.875000	42.39	---	74.00	31.61	150.0	V	348.0	8.1
12113.275000	---	40.26	54.00	13.74	150.0	V	206.0	14.2
12124.091667	49.41	---	74.00	24.59	150.0	V	75.0	14.3

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

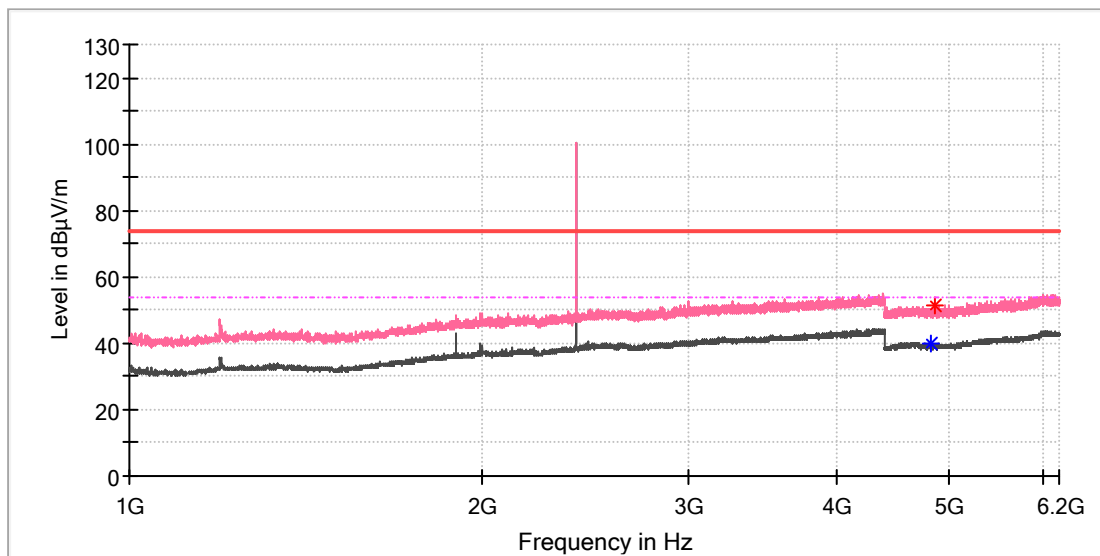


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.000000	50.20	---	74.00	23.80	150.0	H	253.0	11.8
4803.500000	---	40.19	54.00	13.81	150.0	H	82.0	11.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

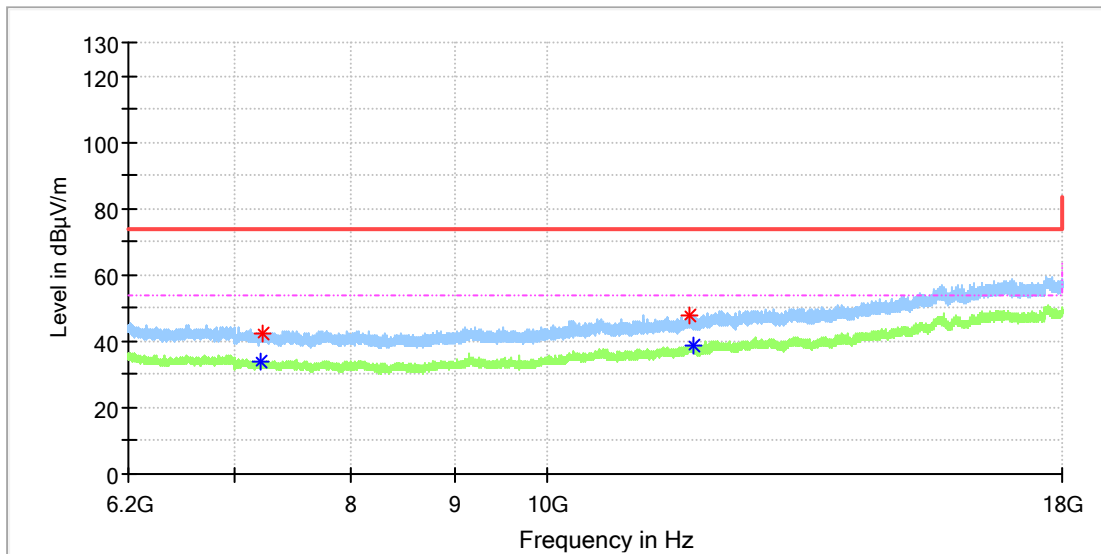


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4820.000000	---	39.65	54.00	14.35	150.0	V	252.0	11.8
4852.000000	51.20	---	74.00	22.80	150.0	V	309.0	11.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

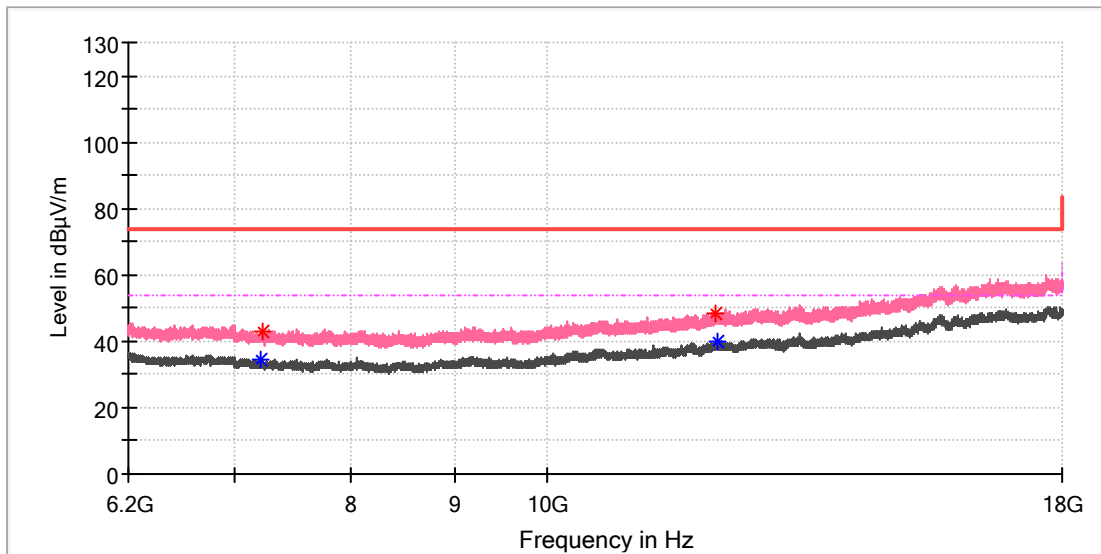


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7218.241667	---	34.13	54.00	19.87	150.0	H	57.0	8.7
7219.225000	42.51	---	74.00	31.49	150.0	H	297.0	8.7
11764.191667	47.69	---	74.00	26.31	150.0	H	284.0	13.4
11806.966667	---	38.62	54.00	15.38	150.0	H	32.0	13.5

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

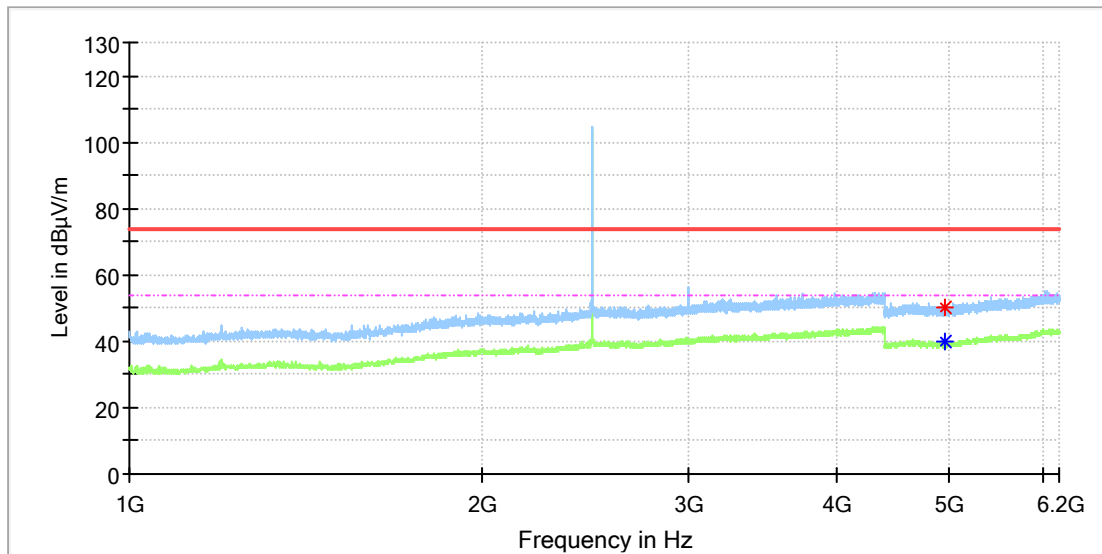


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.458333	---	34.41	54.00	19.59	150.0	V	91.0	8.8
7219.225000	42.94	---	74.00	31.06	150.0	V	287.0	8.7
12125.566667	48.41	---	74.00	25.59	150.0	V	312.0	14.3
12131.958333	---	40.03	54.00	13.97	150.0	V	30.0	14.3

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

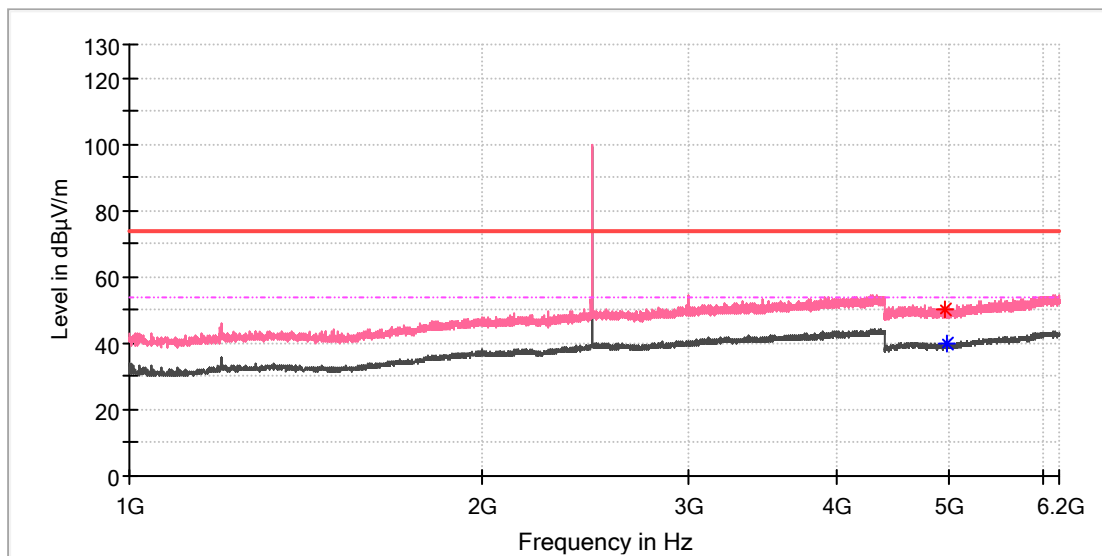


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4954.500000	50.49	---	74.00	23.51	150.0	H	266.0	11.8
4957.500000	---	39.61	54.00	14.39	150.0	H	334.0	11.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

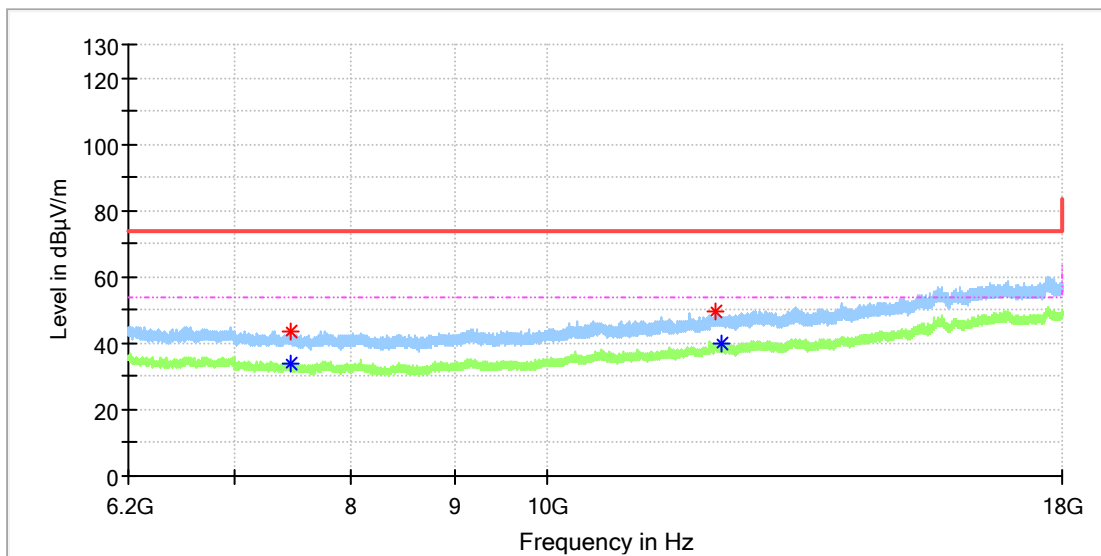


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4959.500000	50.48	---	74.00	23.52	150.0	V	326.0	11.8
4969.000000	---	39.76	54.00	14.24	150.0	V	43.0	11.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

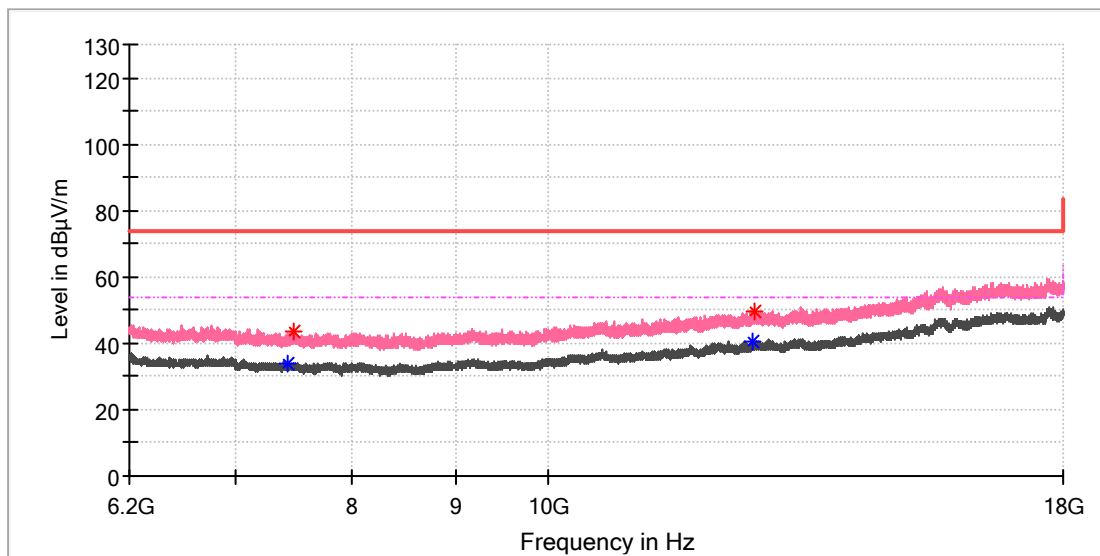


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7466.041667	43.78	---	74.00	30.22	150.0	H	160.0	8.6
7466.041667	---	33.96	54.00	20.04	150.0	H	160.0	8.6
12130.975000	49.54	---	74.00	24.46	150.0	H	266.0	14.3
12194.891667	---	40.13	54.00	13.87	150.0	H	35.0	14.6

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



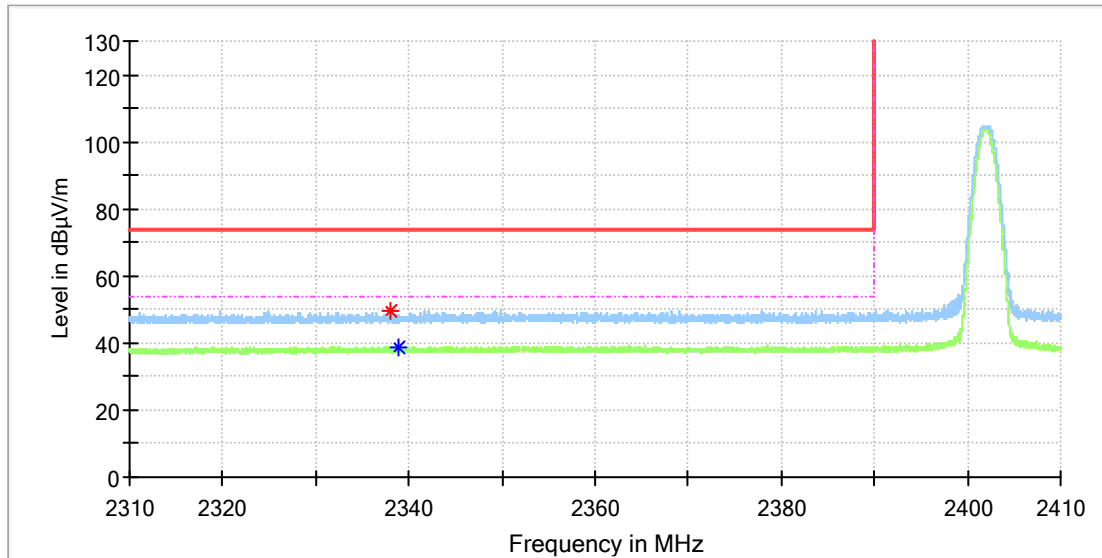
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7434.083333	---	33.77	54.00	20.23	150.0	V	118.0	8.4
7483.741667	43.33	---	74.00	30.67	150.0	V	68.0	8.7
12640.833333	---	40.61	54.00	13.39	150.0	V	0.0	15.0
12657.550000	49.84	---	74.00	24.16	150.0	V	105.0	15.0

APPENDIX C.6: RADIATED EMISSIONS IN RESTRICTED BANDS

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

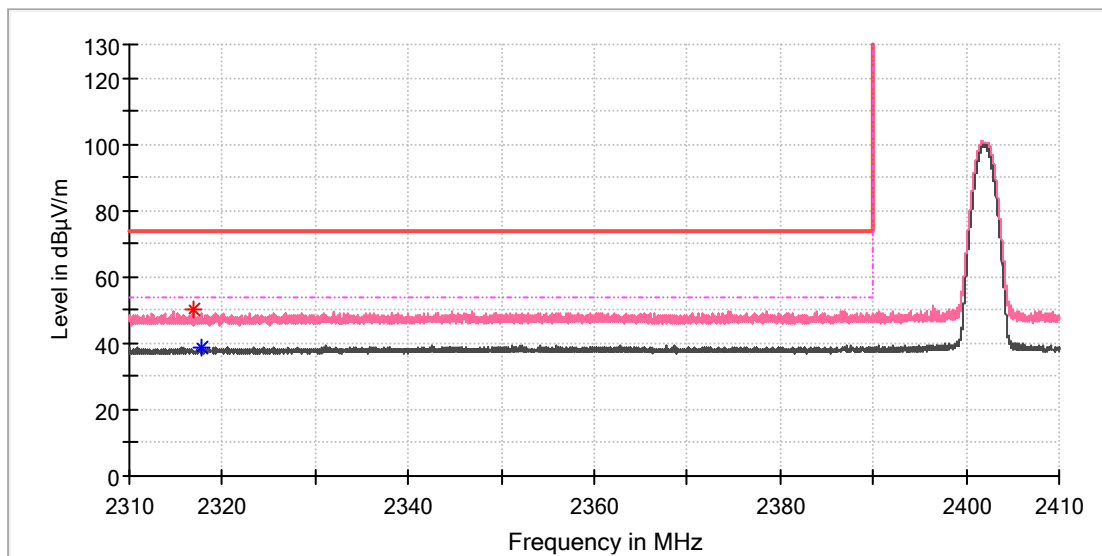


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2338.088235	49.50	---	74.00	24.50	150.0	H	240.0	6.8
2338.970588	---	38.59	54.00	15.41	150.0	H	240.0	6.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

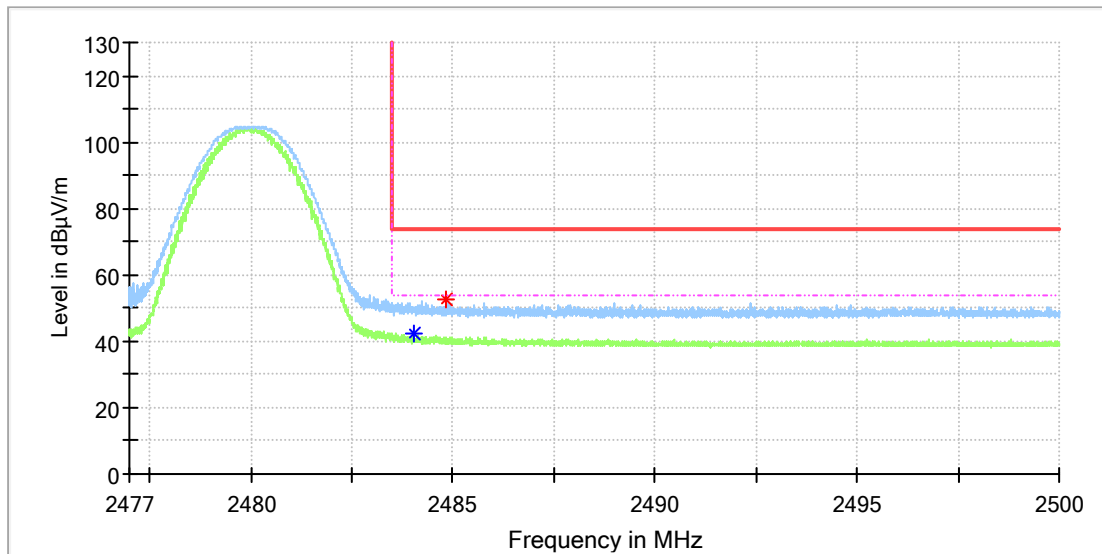


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2316.897059	50.20	---	74.00	23.80	150.0	V	288.0	6.6
2317.750000	---	38.55	54.00	15.45	150.0	V	294.0	6.6

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

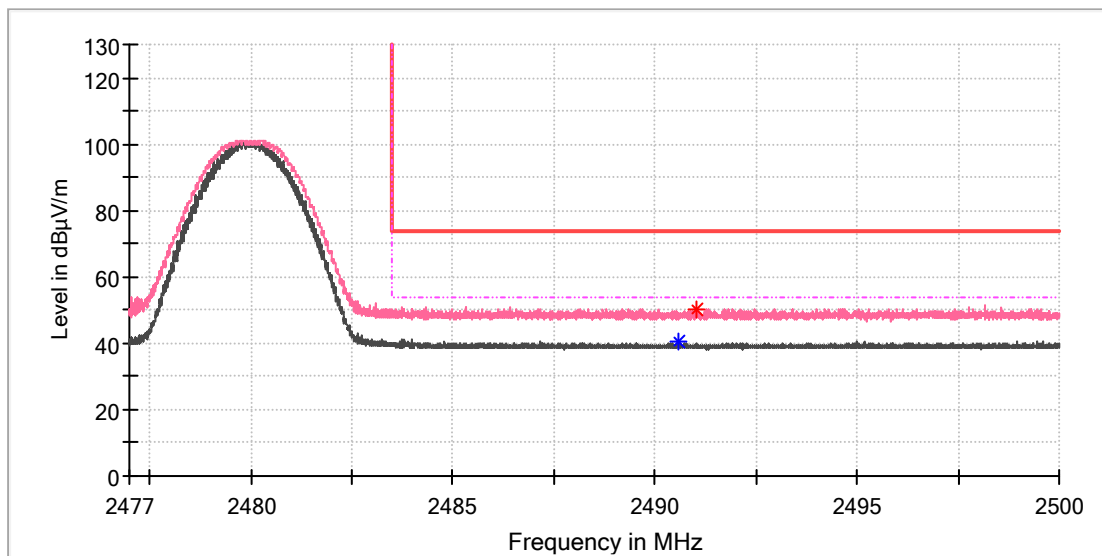


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.016177	---	42.39	54.00	11.61	150.0	H	247.0	7.4
2484.836765	52.31	---	74.00	21.69	150.0	H	247.0	7.4

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

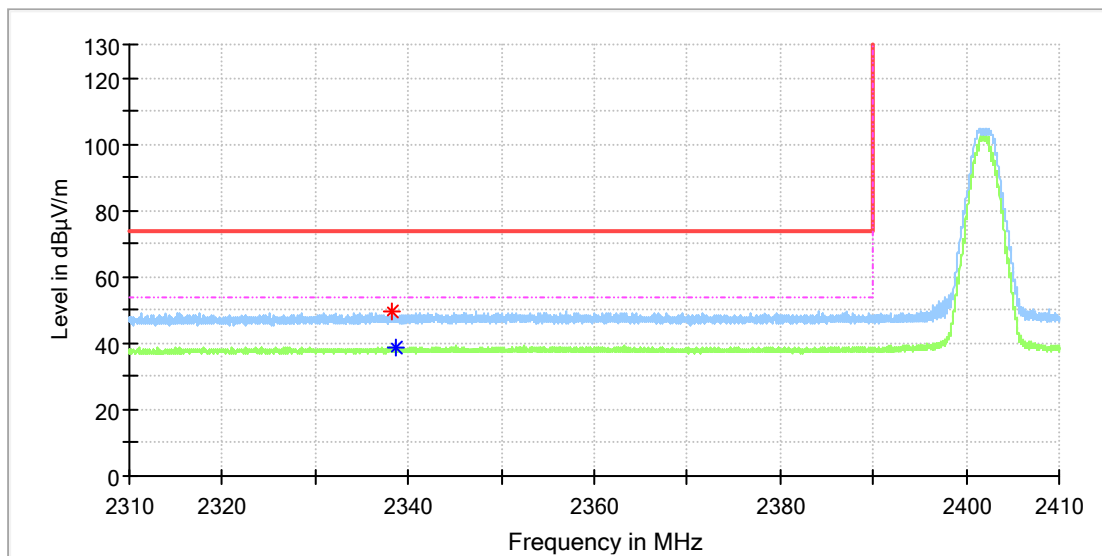


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2490.598529	---	40.26	54.00	13.74	150.0	V	51.0	7.4
2491.008824	50.26	---	74.00	23.74	150.0	V	129.0	7.4

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 2M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

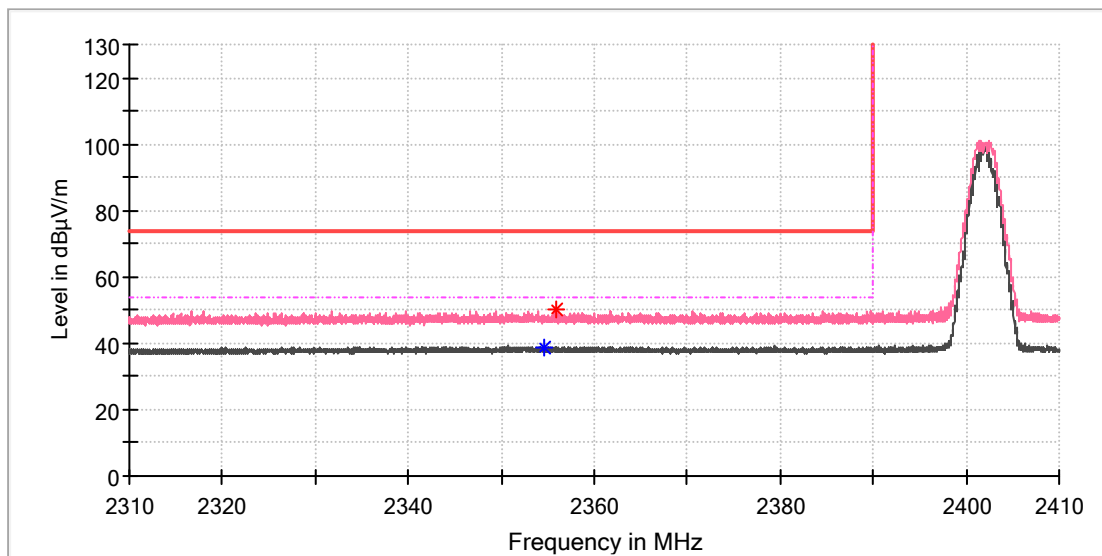


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2338.220588	49.44	---	74.00	24.56	150.0	H	332.0	6.8
2338.750000	---	38.67	54.00	15.33	150.0	H	249.0	6.8

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 2M_Low channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

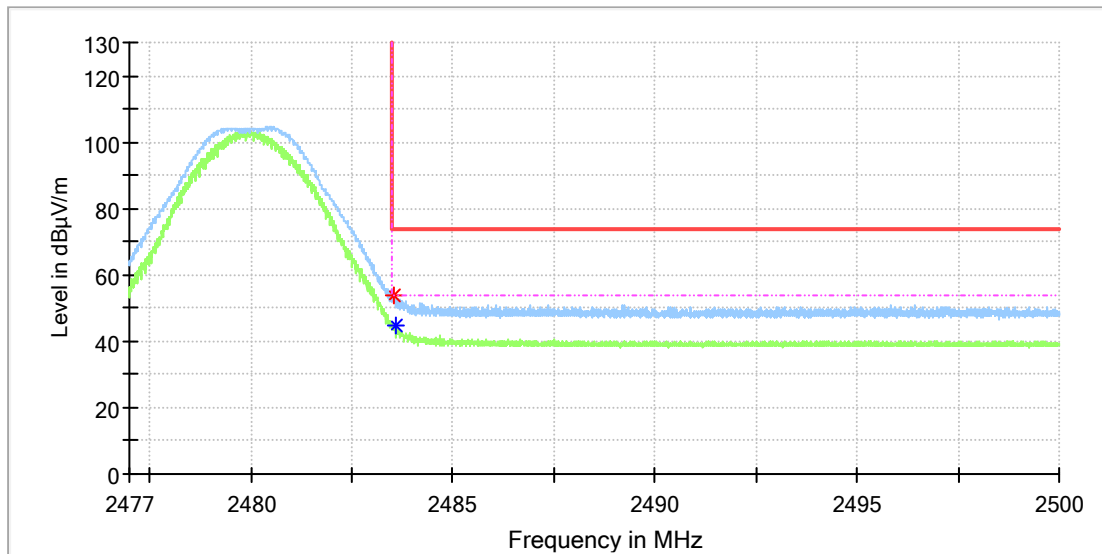


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2354.573530	---	38.84	54.00	15.16	150.0	V	270.0	6.9
2355.926471	49.94	---	74.00	24.06	150.0	V	174.0	6.9

EUT Information

EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 2M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

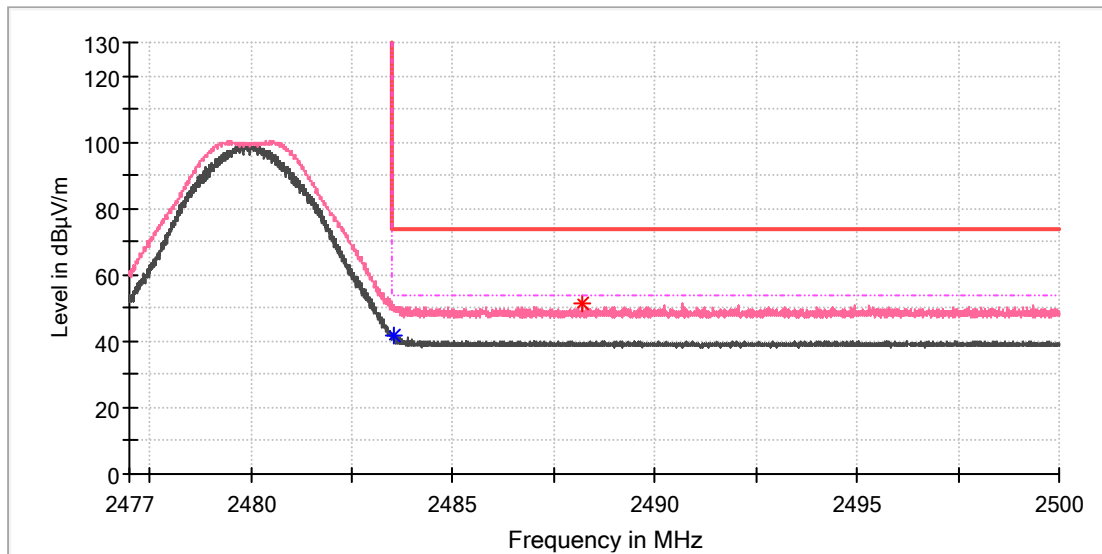


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.522059	54.06	---	74.00	19.94	150.0	H	133.0	7.4
2483.570588	---	44.69	54.00	9.31	150.0	H	246.0	7.4

EUT Information

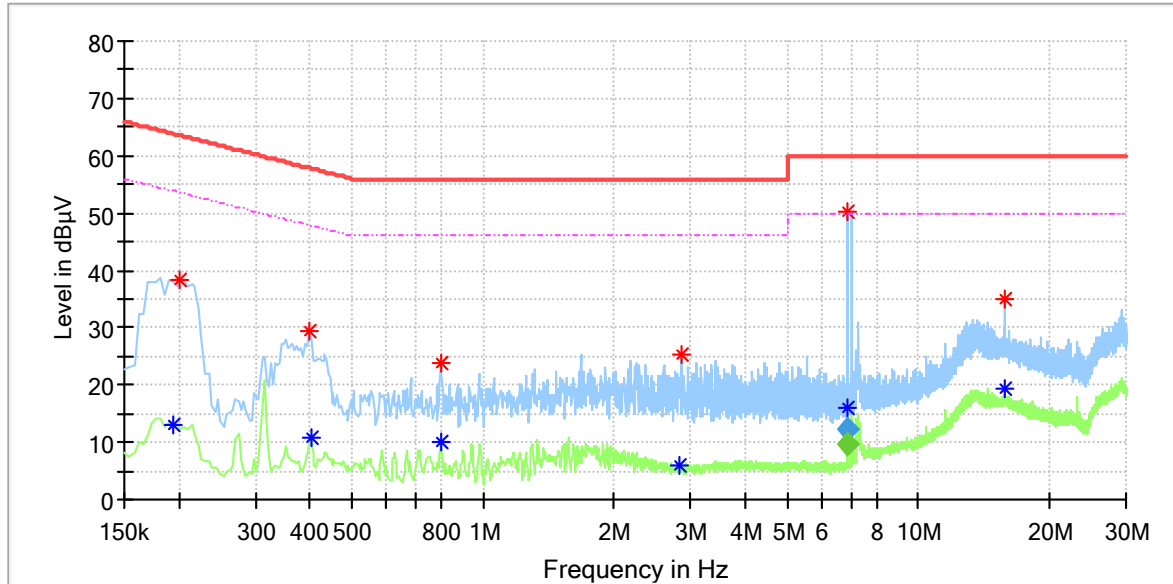
EUT Name:	Thermostat
Model:	TC320B-G
Test Mode:	BLE 2M_High channel
Order No/Sample No:	168467440/A003646592-002
Test Voltage::	120V/60HZ
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.561765	---	41.98	54.00	12.02	150.0	V	88.0	7.4
2488.207353	51.18	---	74.00	22.82	150.0	V	304.0	7.4

APPENDIX C.7: CONDUCTED EMISSION ON AC MAINS

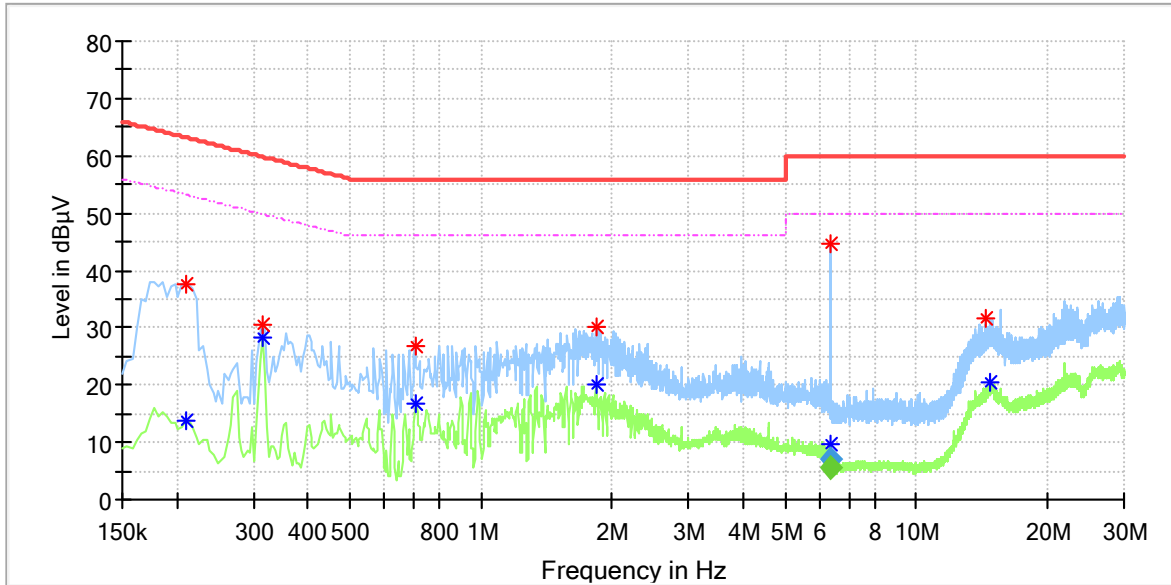


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.194000	---	13.20	53.86	40.67	L1	9.8
0.202000	38.31	---	63.53	25.22	L1	9.8
0.398000	29.34	---	57.90	28.55	L1	9.9
0.402000	---	10.61	47.81	37.20	L1	9.9
0.800000	---	9.87	46.00	36.13	L1	9.8
0.800000	23.70	---	56.00	32.30	L1	9.8
2.840000	---	6.06	46.00	39.94	L1	9.9
2.864000	25.21	---	56.00	30.79	L1	9.9
6.894500	---	15.99	50.00	34.01	L1	9.9
6.906500	50.25	---	60.00	9.75	L1	9.9
15.844000	---	19.36	50.00	30.64	L1	10.2
15.844000	34.97	---	60.00	25.03	L1	10.2

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
6.894500	---	9.74	50.00	40.26	1000.0	9.000	L1	9.9
6.906500	12.42	---	60.00	47.58	1000.0	9.000	L1	9.9



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.210000	---	13.94	53.21	39.27	N	9.7
0.210000	37.67	---	63.21	25.54	N	9.7
0.314000	---	28.41	49.86	21.45	N	9.7
0.314000	30.63	---	59.86	29.24	N	9.7
0.708000	26.78	---	56.00	29.22	N	9.8
0.712000	---	16.75	46.00	29.25	N	9.8
1.836000	---	20.20	46.00	25.80	N	9.9
1.836000	30.10	---	56.00	25.90	N	9.9
6.362500	44.64	---	60.00	15.36	N	9.9
6.374500	---	9.75	50.00	40.25	N	9.9
14.476000	31.48	---	60.00	28.52	N	10.1
14.748000	---	20.39	50.00	29.61	N	10.1

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
6.362500	6.95	---	60.00	53.05	1000.0	9.000	N	9.9
6.374500	---	5.49	50.00	44.51	1000.0	9.000	N	9.9