

Appendix A for test data:

1. Conducted Peak Output Power

Test Result

Mode	Channel	Peak Output Power (dBm)	Limit (dBm)	Result
BLE 1M	0	0.15	≤30	PASS
	19	-0.18	≤30	PASS
	39	-0.76	≤30	PASS
BLE 2M	1	-0.73	≤30	PASS
	19	-0.90	≤30	PASS
	38	-1.33	≤30	PASS

2.Duty Cycle

Test Result

Mode	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
BLE 1M	0	0.411	0.625	65.76	0.6576	1.8204	2.4331
	19	0.412	0.625	65.90	0.6590	1.8111	2.4272
	39	0.412	0.625	65.87	0.6587	1.8131	2.4272
BLE 2M	1	0.228	0.625	36.43	0.3643	4.3854	4.3860
	19	0.227	0.625	36.39	0.3639	4.3902	4.4053
	38	0.227	0.625	36.39	0.3639	4.3902	4.4053

Test Graphs

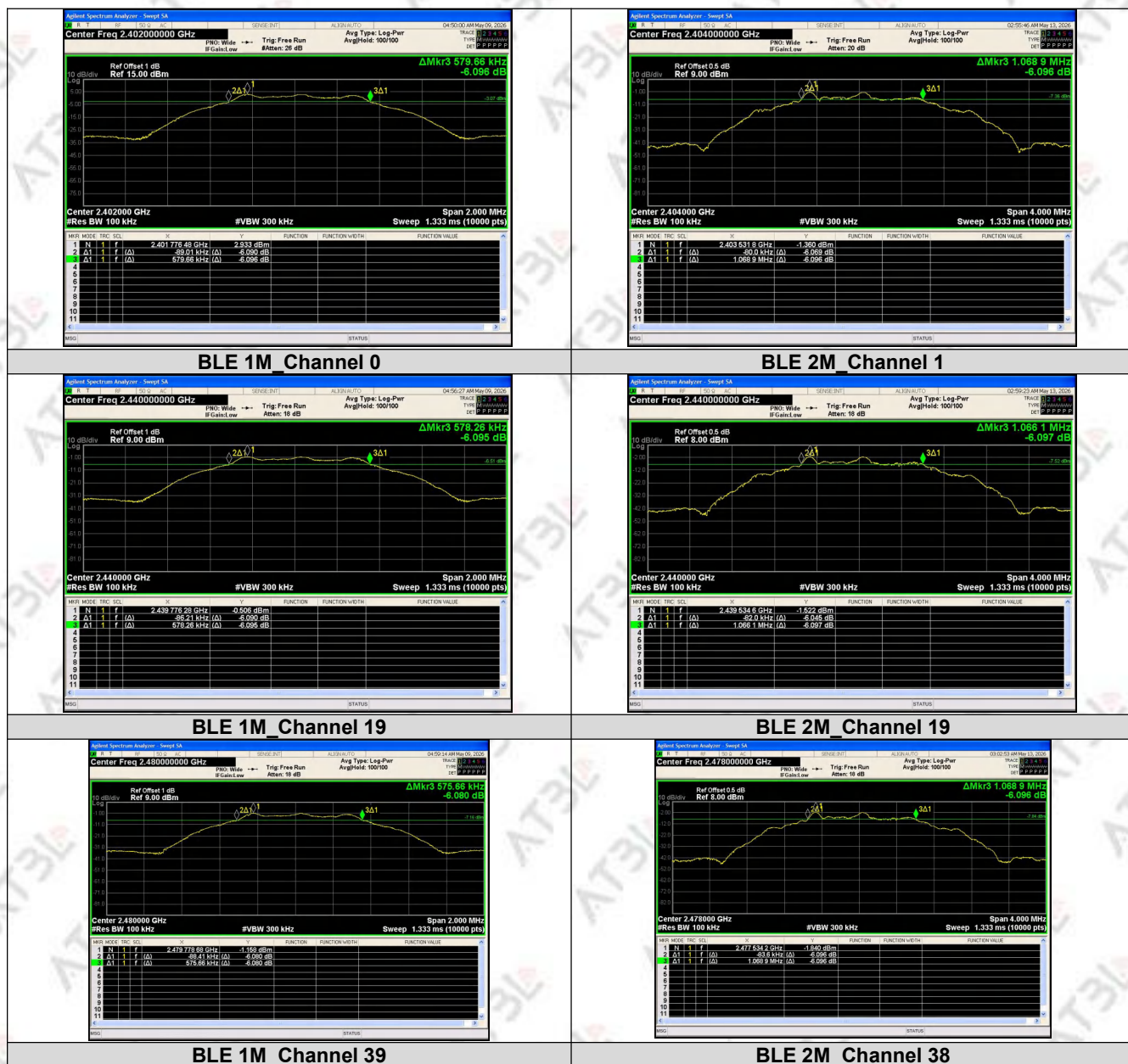


3.6dB Bandwidth and 99% Bandwidth

Test Result

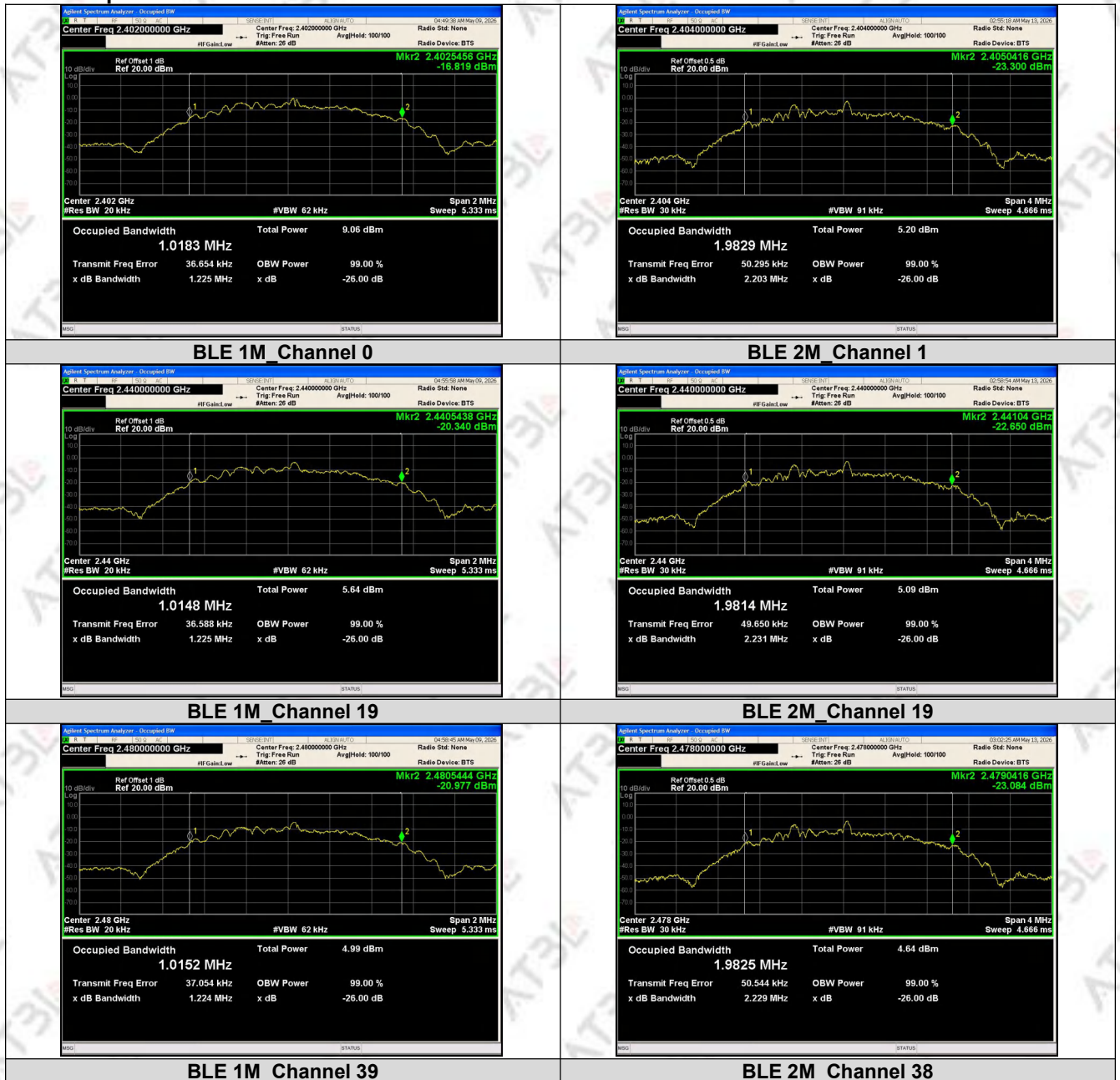
Mode	Channel	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.6700	≥0.5	PASS
	19	2440	0.6600		PASS
	39	2480	0.6600		PASS
BLE 2M	1	2404	1.150		PASS
	19	2440	1.150		PASS
	38	2478	1.150		PASS

Test Graphs



Mode	Channel	Center Frequency (MHz)	99% BW (MHz)
BLE 1M	0	2402	1.0183
BLE 1M	19	2440	1.0148
BLE 1M	39	2480	1.0152
BLE 2M	1	2404	1.9829
BLE 2M	19	2440	1.9814
BLE 2M	38	2478	1.9825

Test Graphs

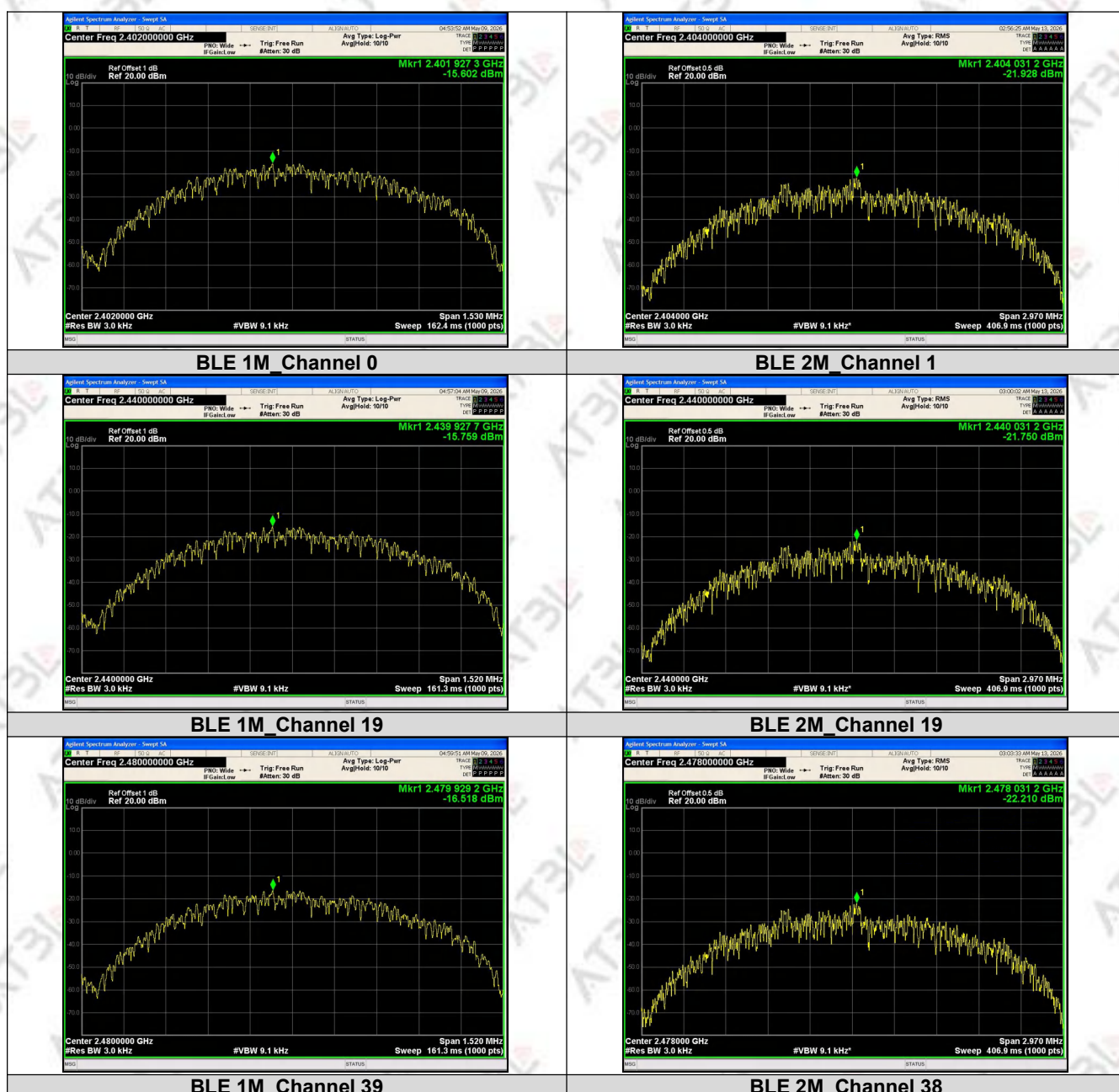


4.Power Spectral Density

Test Result

Mode	Channel	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
BLE 1M	0	-15.600	≤8	PASS
BLE 1M	19	-15.760	≤8	PASS
BLE 1M	39	-16.520	≤8	PASS
BLE 2M	1	-21.930	≤8	PASS
BLE 2M	19	-21.750	≤8	PASS
BLE 2M	38	-22.210	≤8	PASS

Test Graphs



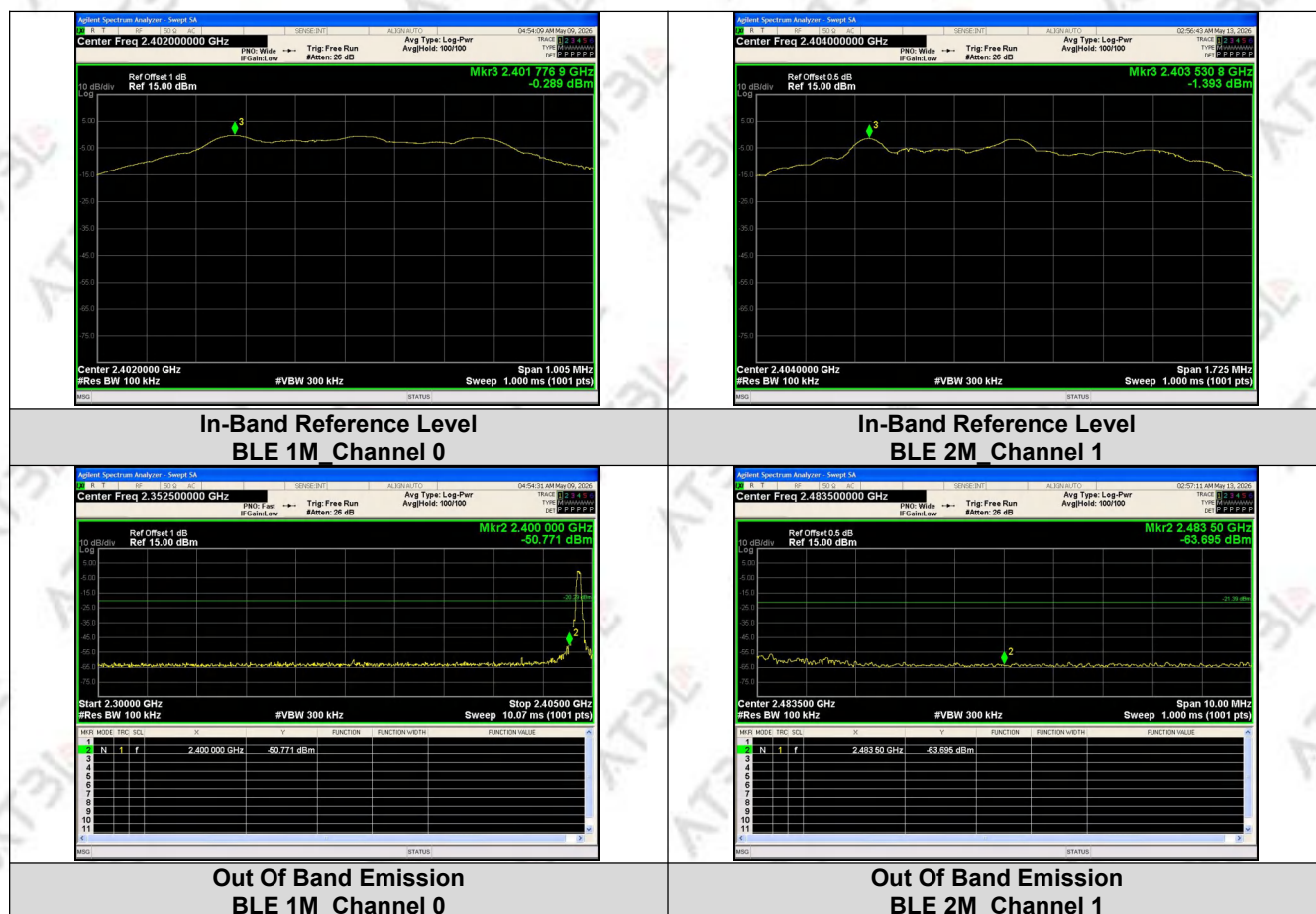
5. Conducted Spurious & Band Edge Emission

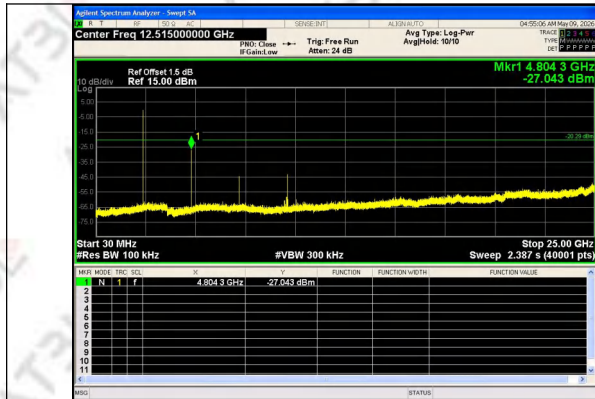
Test Result

Mode	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
BLE 1M	0	2400.00	-50.771	-20.29	-30.481	PASS
		4804.26	-27.043	-20.29	-6.753	PASS
	19	4880.42	-27.922	-20.62	-7.302	PASS
		2483.50	-58.516	-21.2	-37.316	PASS
		4960.33	-28.770	-21.2	-7.570	PASS
BLE 2M	1	2483.50	-63.695	-21.39	-42.305	PASS
		4809.26	-30.629	-21.39	-9.239	PASS
	19	4879.17	-29.168	-21.51	-7.658	PASS
		2483.50	-60.226	-21.94	-38.286	PASS
		4955.96	-29.881	-21.94	-7.941	PASS

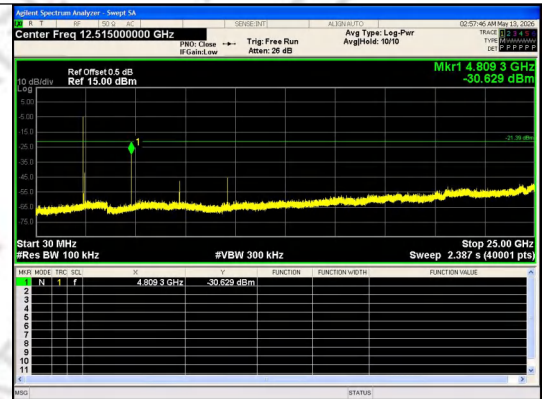
Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs

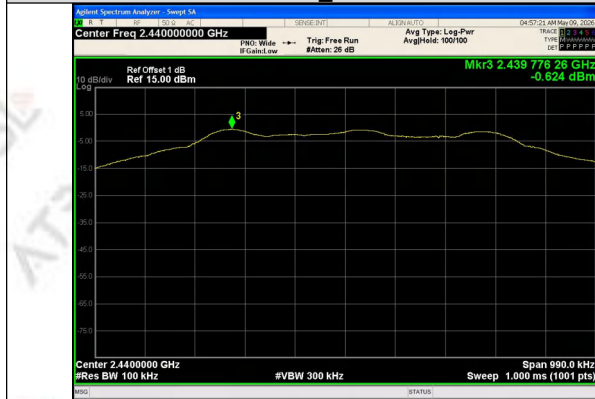




30.0 MHz - 25000.0 MHz
BLE 1M_Channel 0



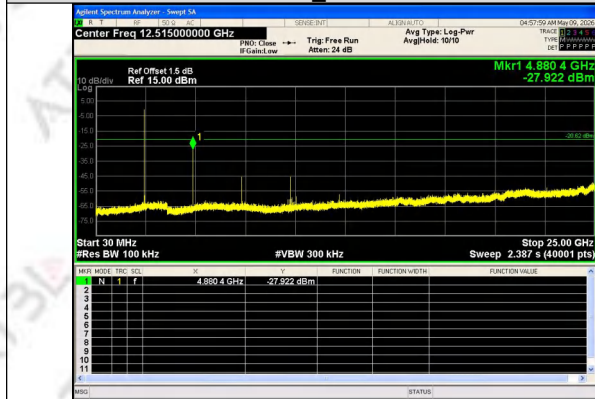
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 1



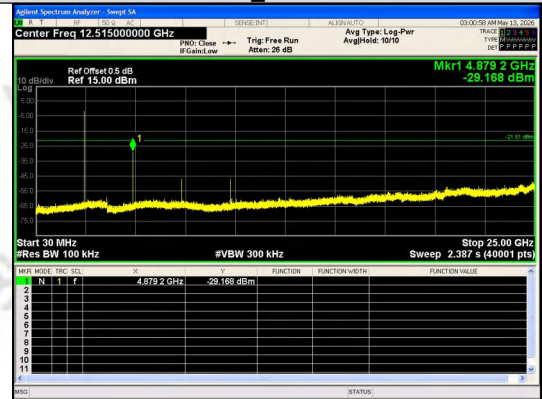
In-Band Reference Level
BLE 1M_Channel 19



In-Band Reference Level
BLE 2M_Channel 19



30.0 MHz - 25000.0 MHz
BLE 1M_Channel 19



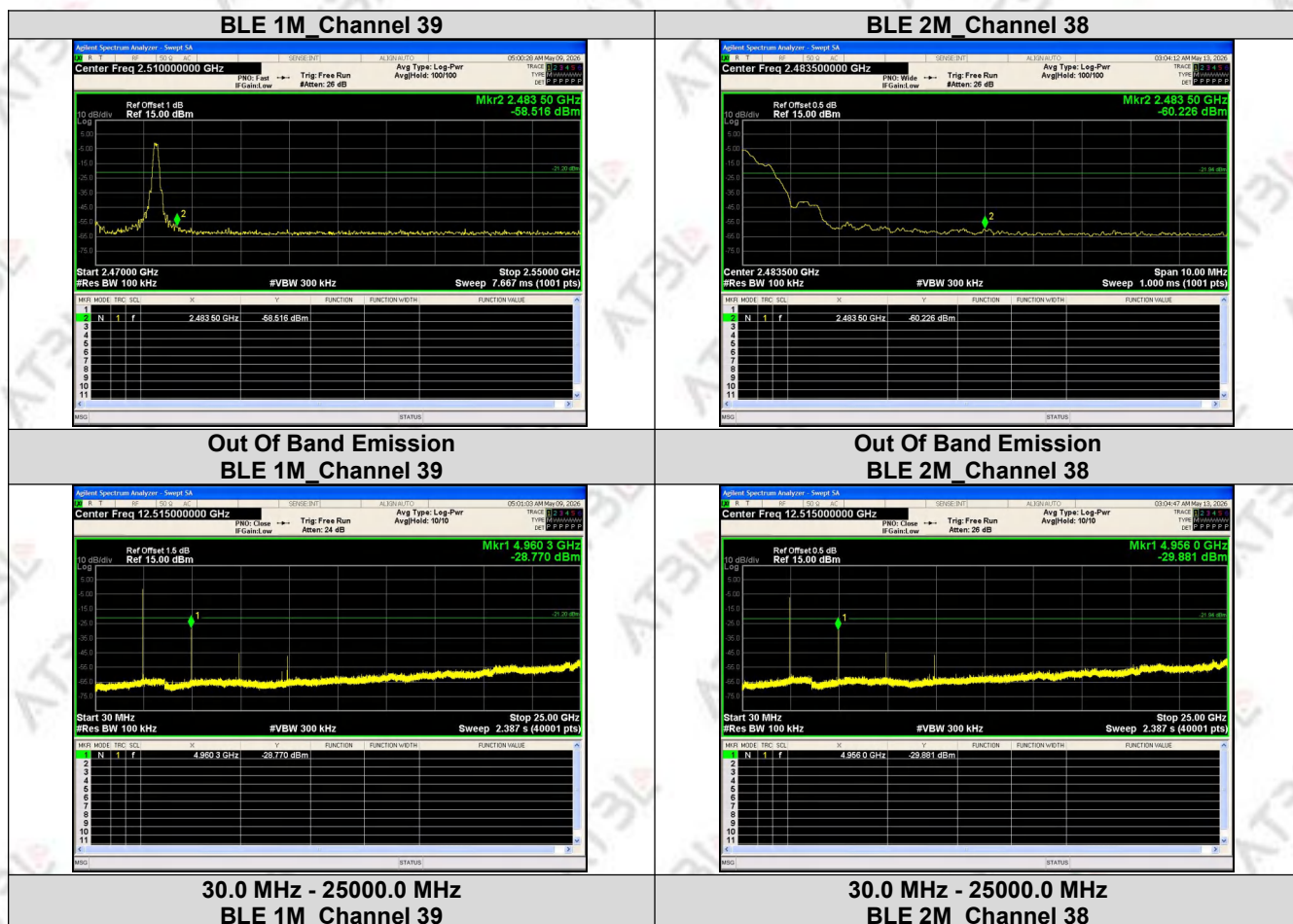
30.0 MHz - 25000.0 MHz
BLE 2M_Channel 19



In-Band Reference Level



In-Band Reference Level



6. Radiated Spurious Emission and Restricted Band

Test Result

Radiated Spurious Emission:

For 9 kHz ~ 30 MHz

Note:

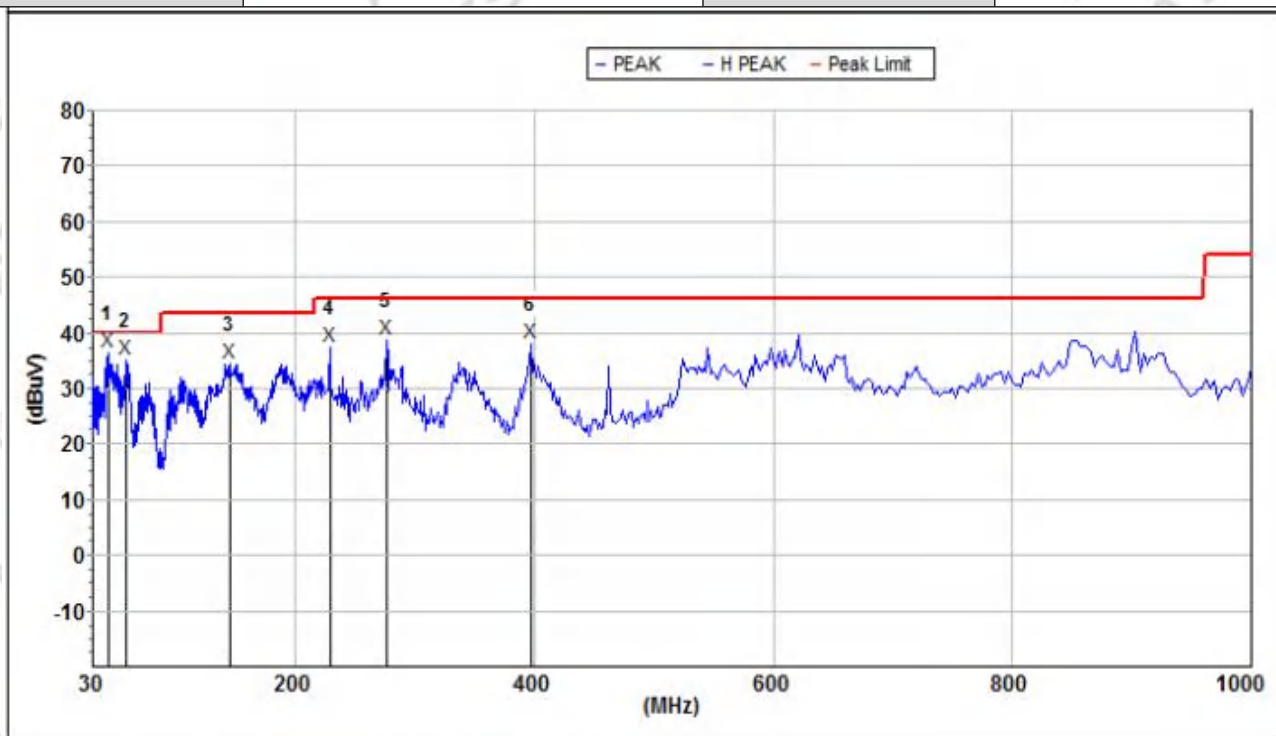
1. The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.
2. The all data rate modes had been test, but only worse test data was recorded in the test report.

Below 1GHz:

Note:

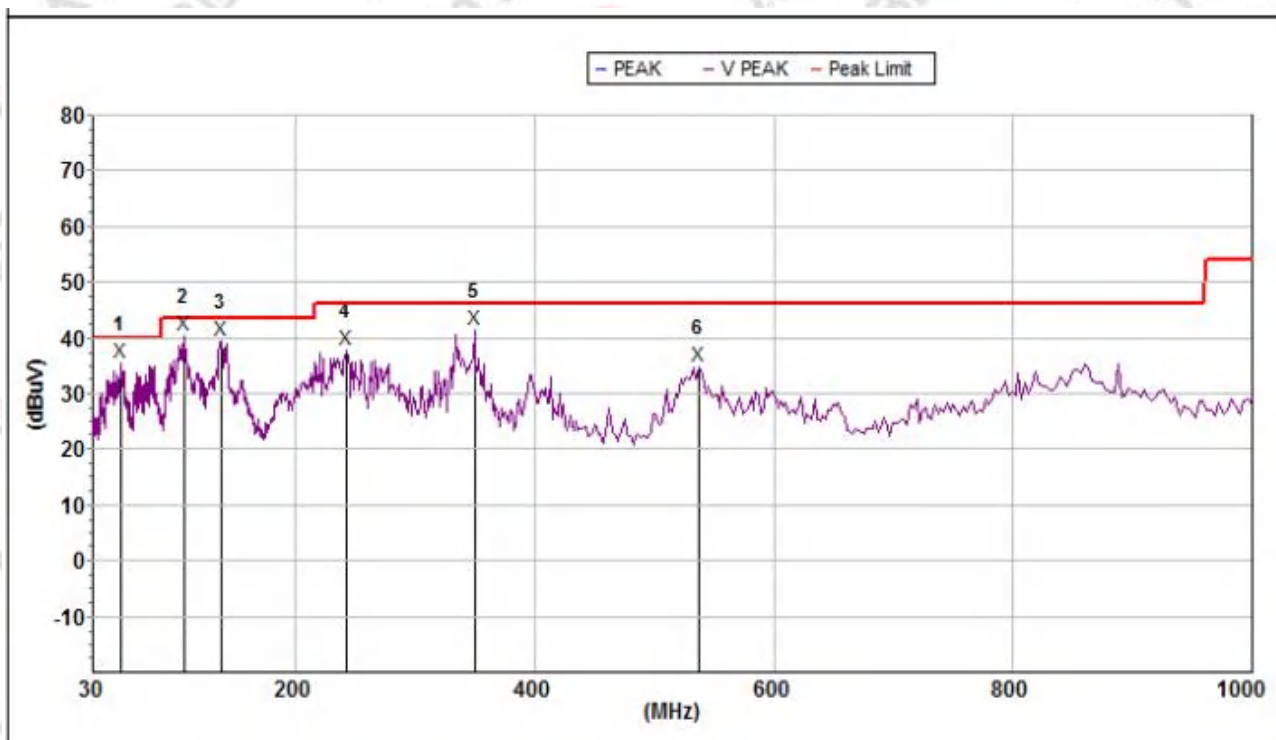
1. All modes have been tested, only worst (BLE_1M-TX-2402MHz) mode was recorded in the test report.
2. Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
3. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Amplifier Gain.
4. The emission levels of other frequencies were less than 20dB margin against the limit.
5. Margin value = Emission level - Limit value.

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2402MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	43.812	36.7	40.0	3.3	-42.1	H
2	58.613	35.4	40.0	4.6	-43.8	H
3	144.335	34.7	43.5	8.8	-33.6	H
4	228.490	37.5	46.0	8.5	-28.3	H
5	276.124	38.9	46.0	7.1	-27.0	H
6	397.633	38.2	46.0	7.8	-24.4	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2402MHz	Antenna	Vertical



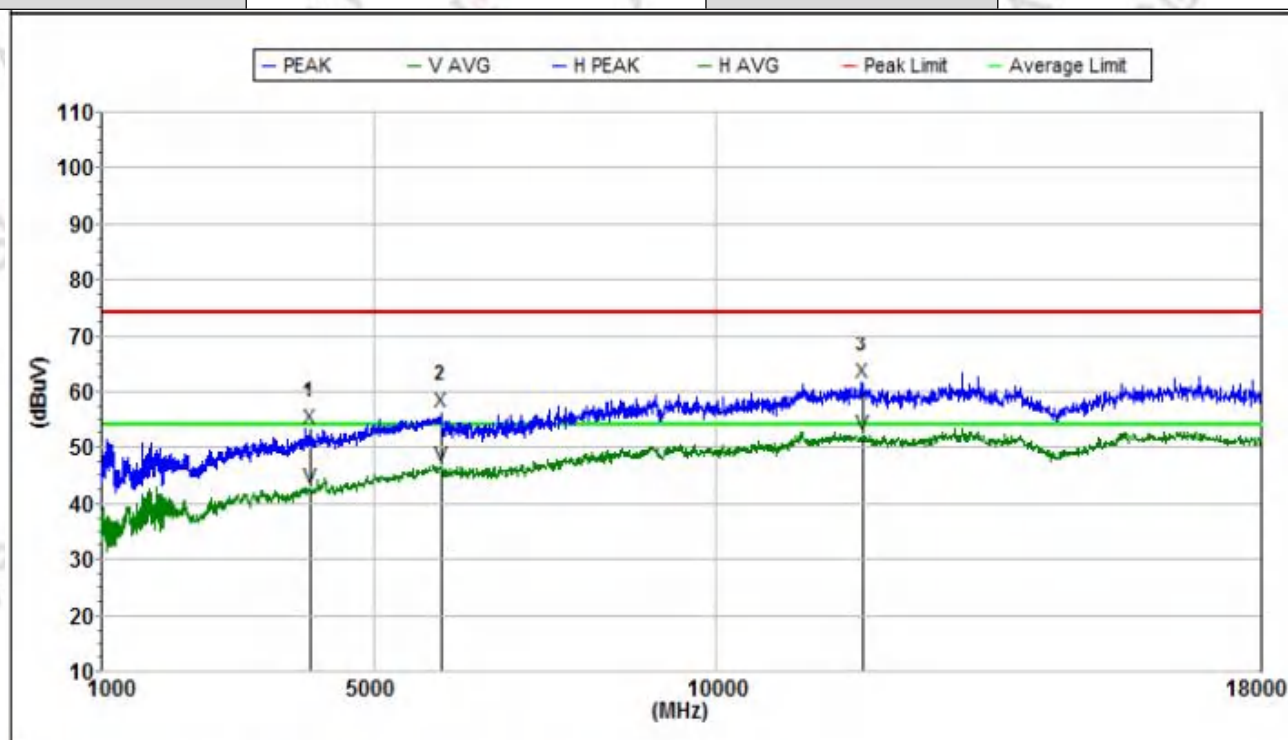
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	53.693	35.7	40.0	4.3	-43.4	V
2	106.759	40.5	43.5	3.0	-34.4	V
3	136.939	39.6	43.5	3.9	-36.6	V
4	241.676	37.8	46.0	8.2	-26.1	V
5	349.250	41.5	46.0	4.5	-25.6	V
6	537.589	34.9	46.0	11.1	-22.5	V

Above 1GHz:

Note:

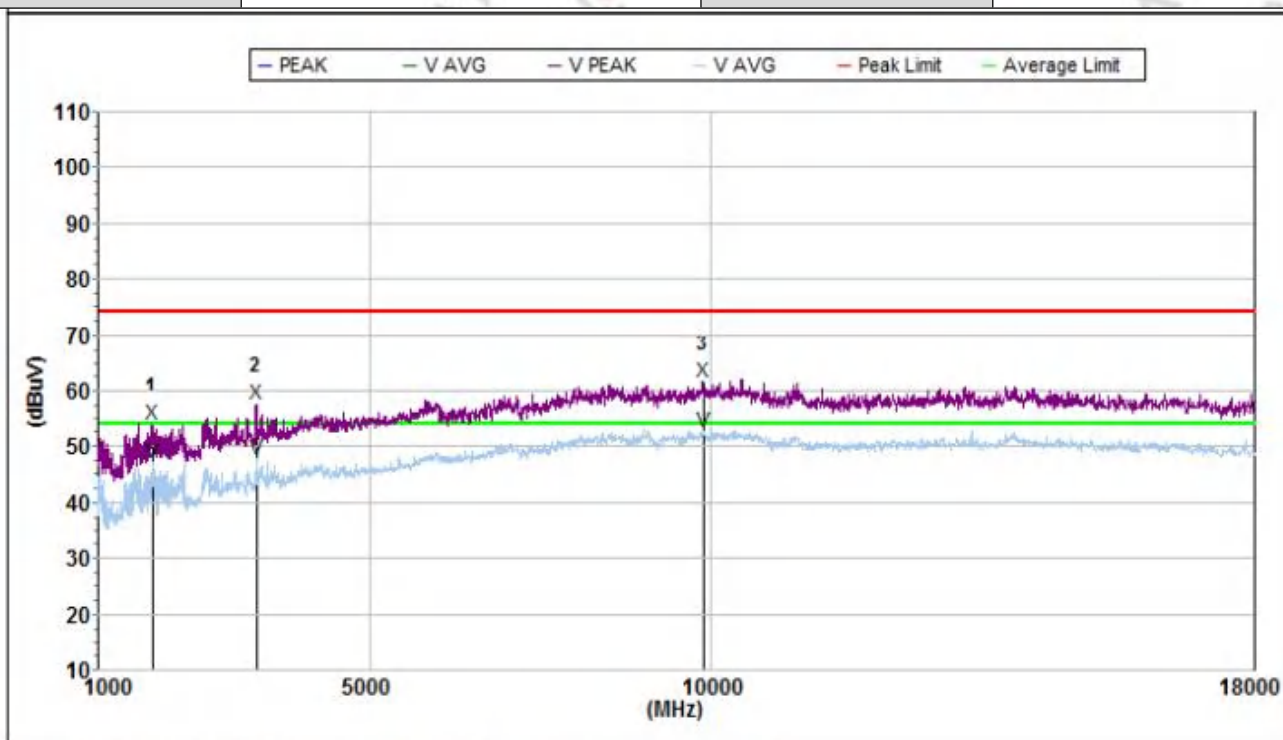
- 1.All modes have been tested, only worst (BLE_1M)mode was recorded in the test report.
- 2.In frequency ranges 18 ~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.
- 3.We used the filter to test and the main frequency was filtered out.
- 4.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
5. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
6. Margin value = Emission level-Limit value.

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2402MHz	Antenna	Horizontal



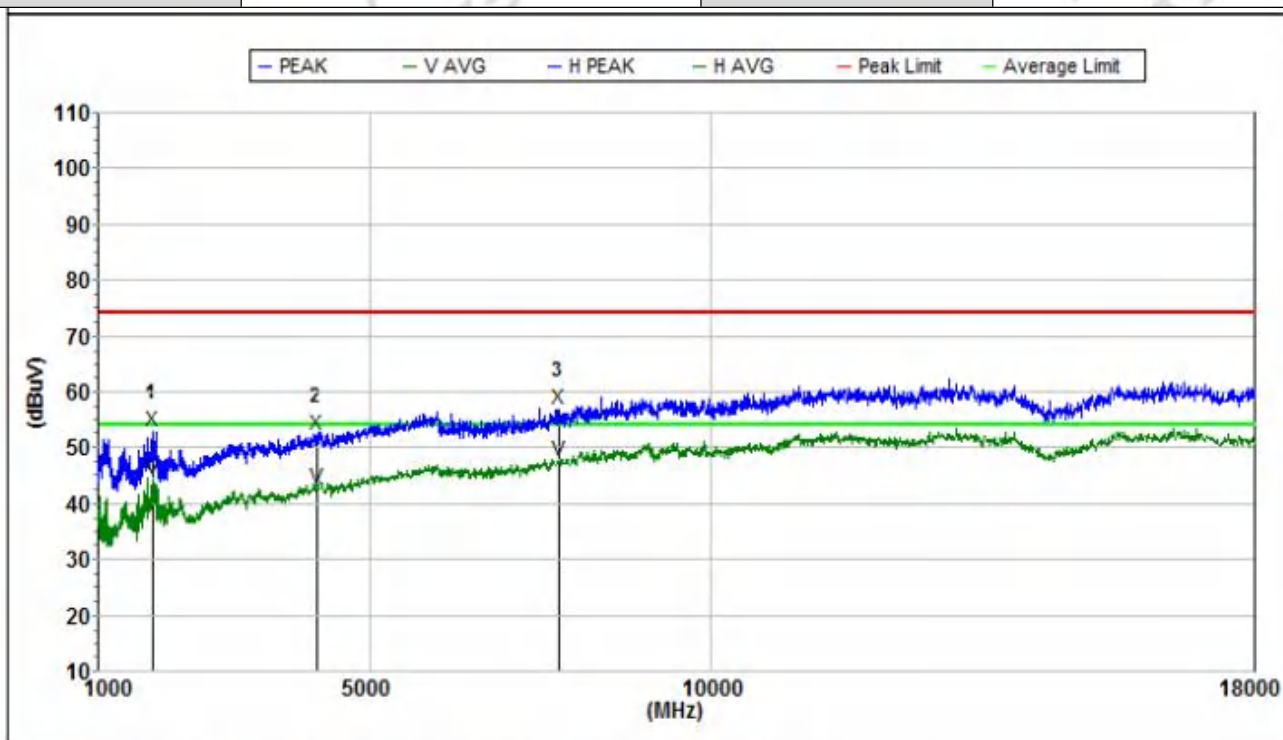
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	4067.500	53.4	74.0	20.6	-8.1	H	
2	5980.000	56.4	74.0	17.6	-3.2	H	
3	12168.000	61.8	74.0	12.2	2.8	H	
Avg							
1	4067.500	42.9	54.0	11.1	-8.1	H	
2	5980.000	46.7	54.0	7.3	-3.2	H	
3	12168.000	52.3	54.0	1.7	2.8	H	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2402MHz	Antenna	Vertical



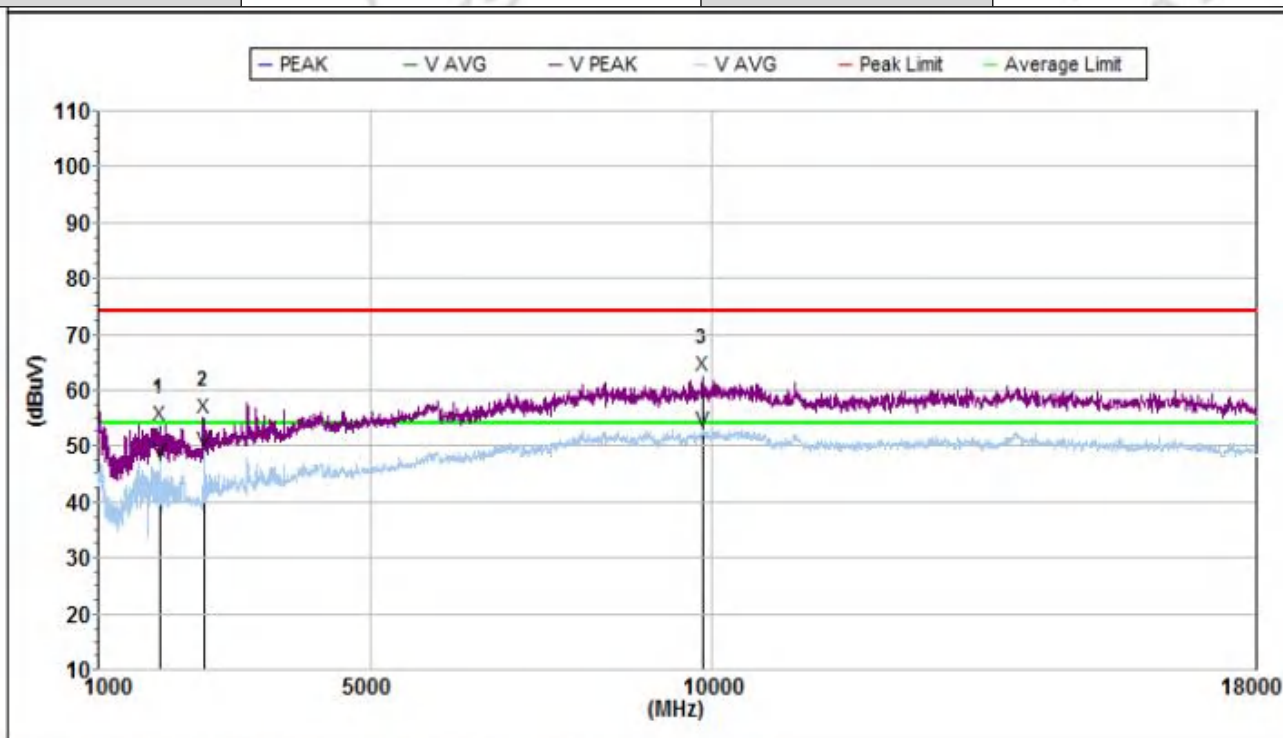
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	1807.919	54.2	74.0	19.8	-12.3	V
2	3332.500	57.6	74.0	16.4	-9.0	V
3	9900.000	61.7	74.0	12.3	2.9	V
Avg						
1	1807.919	47.2	54.0	6.8	-12.3	V
2	3332.500	47.9	54.0	6.1	-9.0	V
3	9900.000	52.6	54.0	1.4	2.9	V

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1MHz2440MHz	Antenna	Horizontal



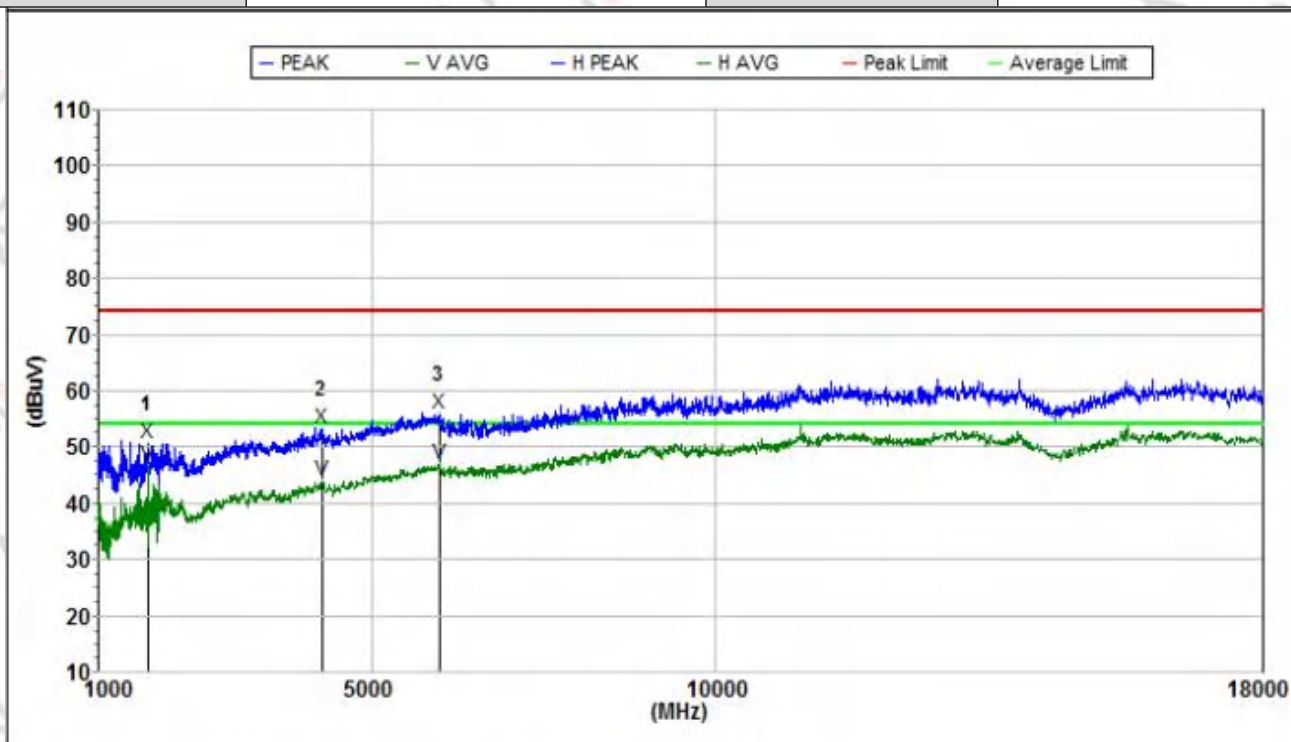
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	1805.000	53.2	74.0	20.8	-15.5	H
2	4217.500	52.5	74.0	21.5	-7.9	H
3	7770.000	57.1	74.0	16.9	-1.4	H
Avg						
1	1805.000	44.7	54.0	9.3	-15.5	H
2	4217.500	42.8	54.0	11.2	-7.9	H
3	7770.000	47.9	54.0	6.1	-1.4	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1MHz2440MHz	Antenna	Vertical



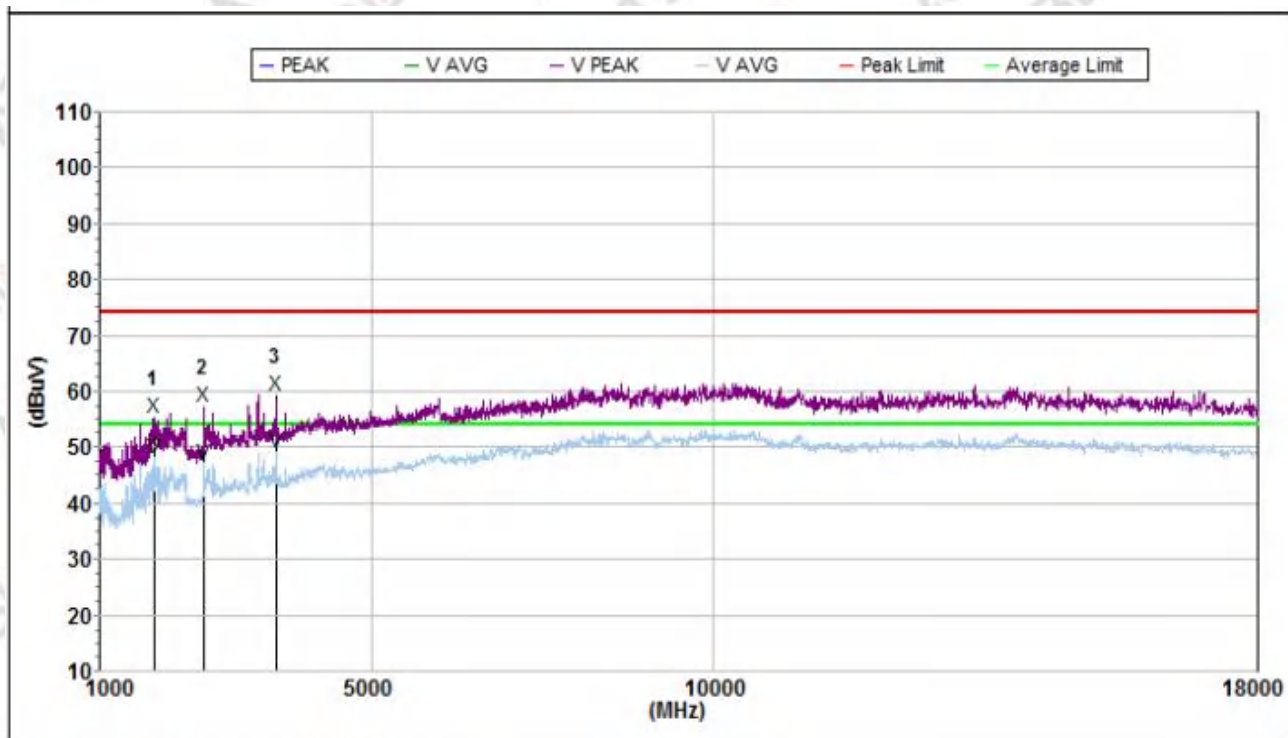
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	1915.000	53.8	74.0	20.2	-11.0	V	
2	2552.500	55.1	74.0	18.9	-11.4	V	
3	9870.000	62.5	74.0	11.5	2.8	V	
Avg							
1	1915.000	47.2	54.0	6.8	-11.0	V	
2	2552.500	49.0	54.0	5.0	-11.4	V	
3	9870.000	52.9	54.0	1.1	2.8	V	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1MHz2480MHz	Antenna	Horizontal



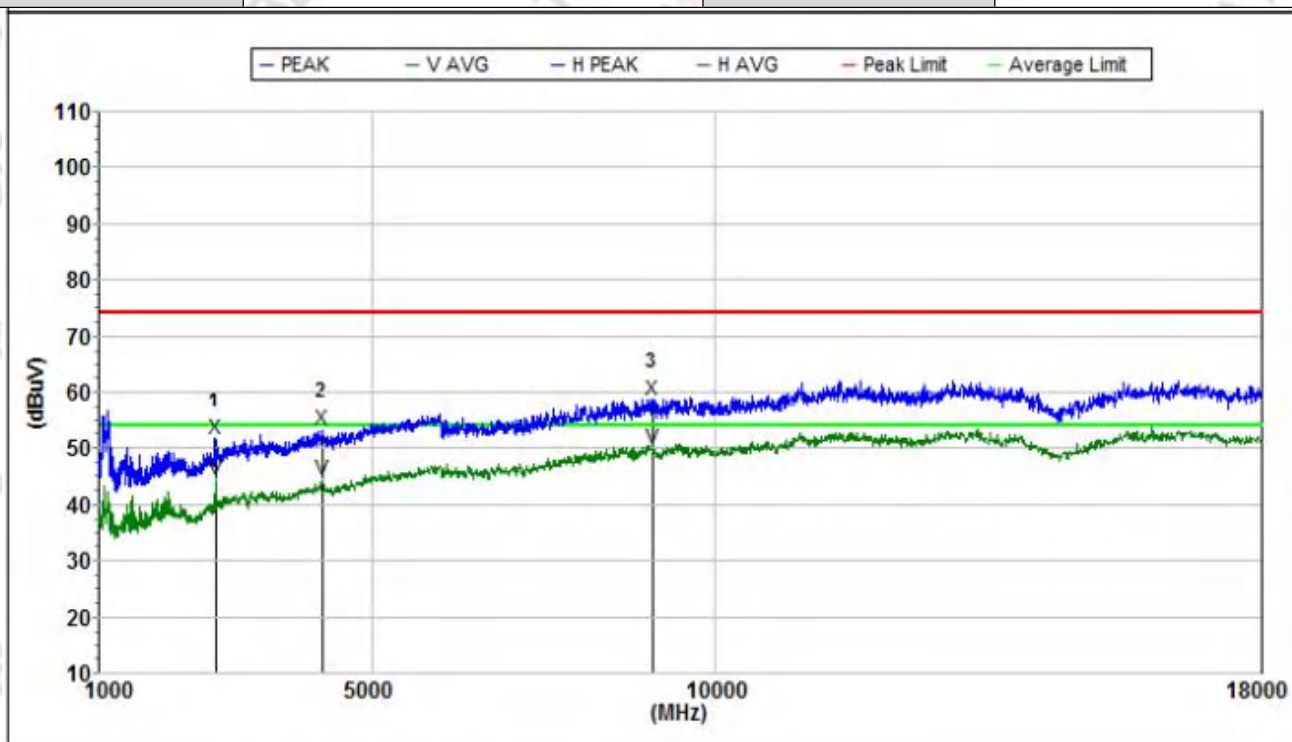
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	1735.000	50.8	74.0	23.2	-16.0	H
2	4267.500	53.3	74.0	20.7	-7.8	H
3	5980.000	56.0	74.0	18.0	-3.2	H
Avg						
1	1735.000	46.7	54.0	7.3	-16.0	H
2	4267.500	44.1	54.0	9.9	-7.8	H
3	5980.000	47.3	54.0	6.7	-3.2	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1MHz2480MHz	Antenna	Vertical



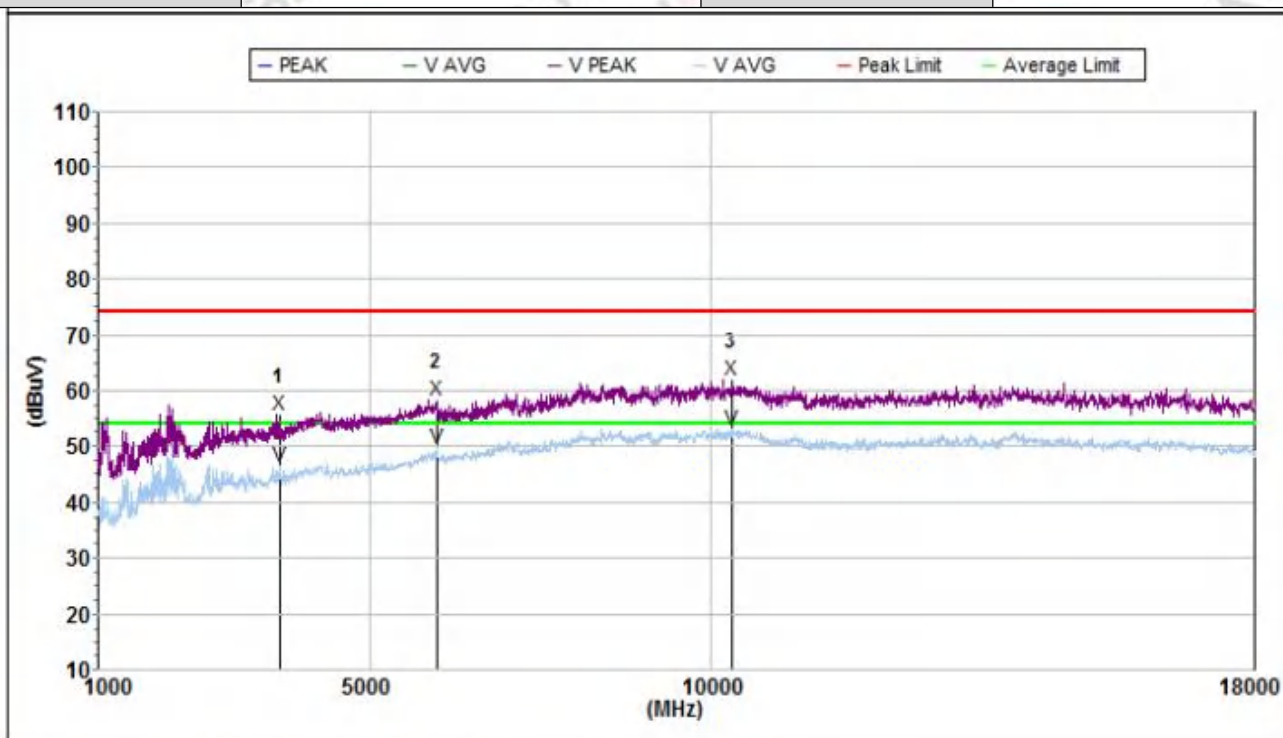
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	1795.008	55.3	74.0	18.7	-12.4	V	
2	2530.000	57.3	74.0	16.7	-11.6	V	
3	3590.000	59.5	74.0	14.5	-8.3	V	
Avg							
1	1795.008	48.2	54.0	5.8	-12.4	V	
2	2530.000	47.3	54.0	6.7	-11.6	V	
3	3590.000	49.3	54.0	4.7	-8.3	V	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2MHz-2404MHz	Antenna	Horizontal



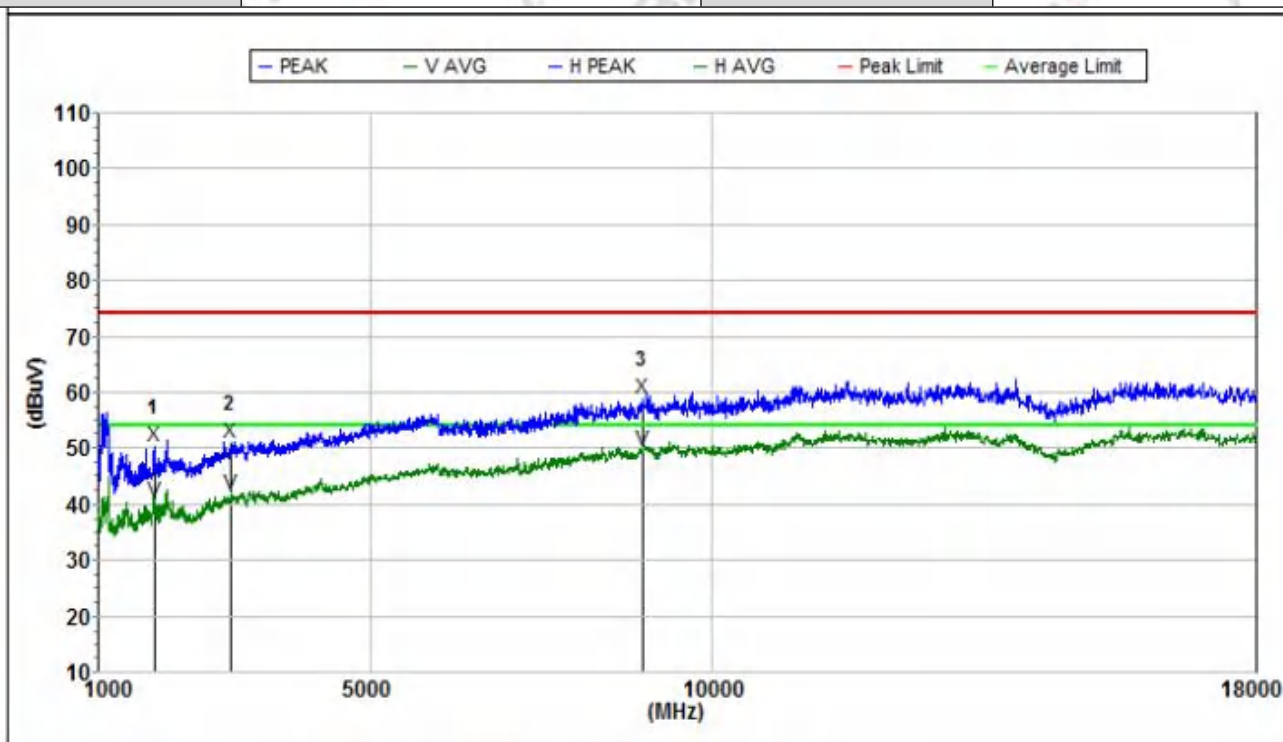
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	2700.000	51.7	74.0	22.3	-12.9	H
2	4277.500	53.4	74.0	20.6	-7.8	H
3	9096.000	58.8	74.0	15.2	0.0	H
Avg						
1	2700.000	44.7	54.0	9.3	-12.9	H
2	4277.500	44.4	54.0	9.6	-7.8	H
3	9096.000	50.1	54.0	3.9	0.0	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2MHz-2404MHz	Antenna	Vertical



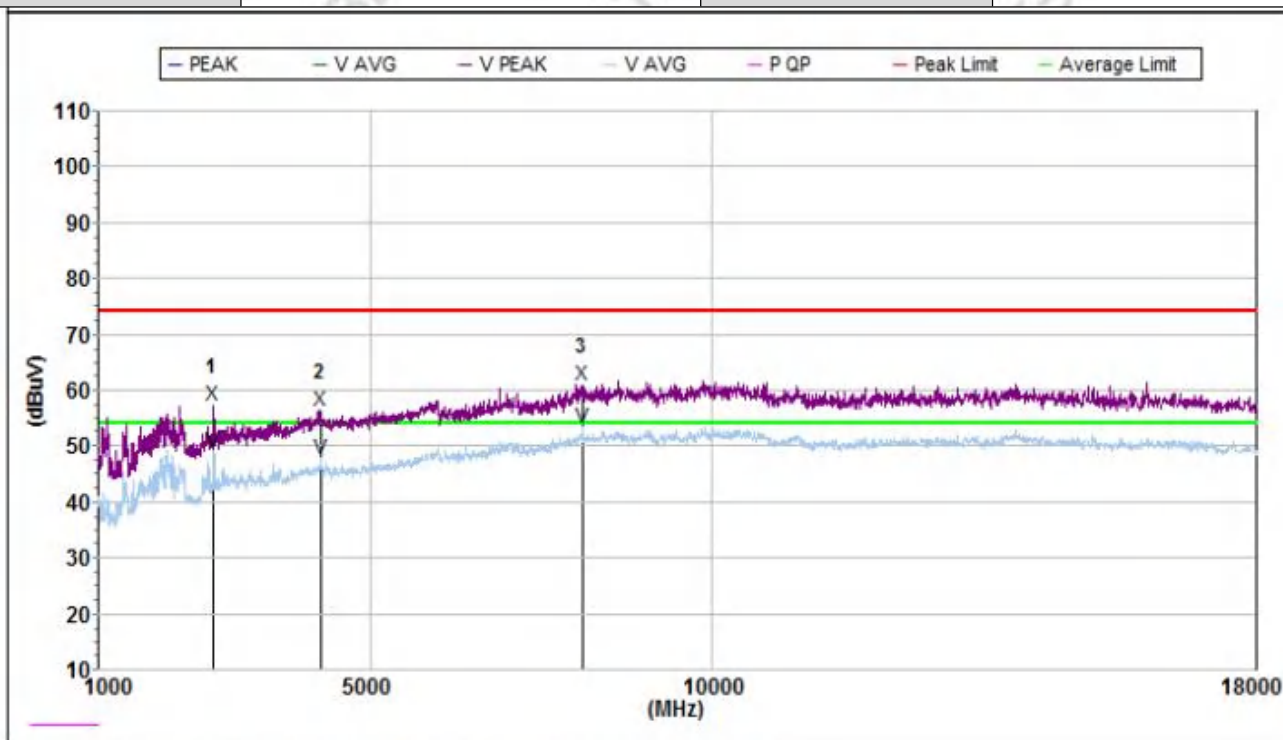
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	3667.500	55.8	74.0	18.2	-7.7	V	
2	5982.500	58.3	74.0	15.7	-1.1	V	
3	10326.000	62.0	74.0	12.0	3.3	V	
Avg							
1	3667.500	46.6	54.0	7.4	-7.7	V	
2	5982.500	49.8	54.0	4.2	-1.1	V	
3	10326.000	53.2	54.0	0.8	3.3	V	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2MHz-2440MHz	Antenna	Horizontal



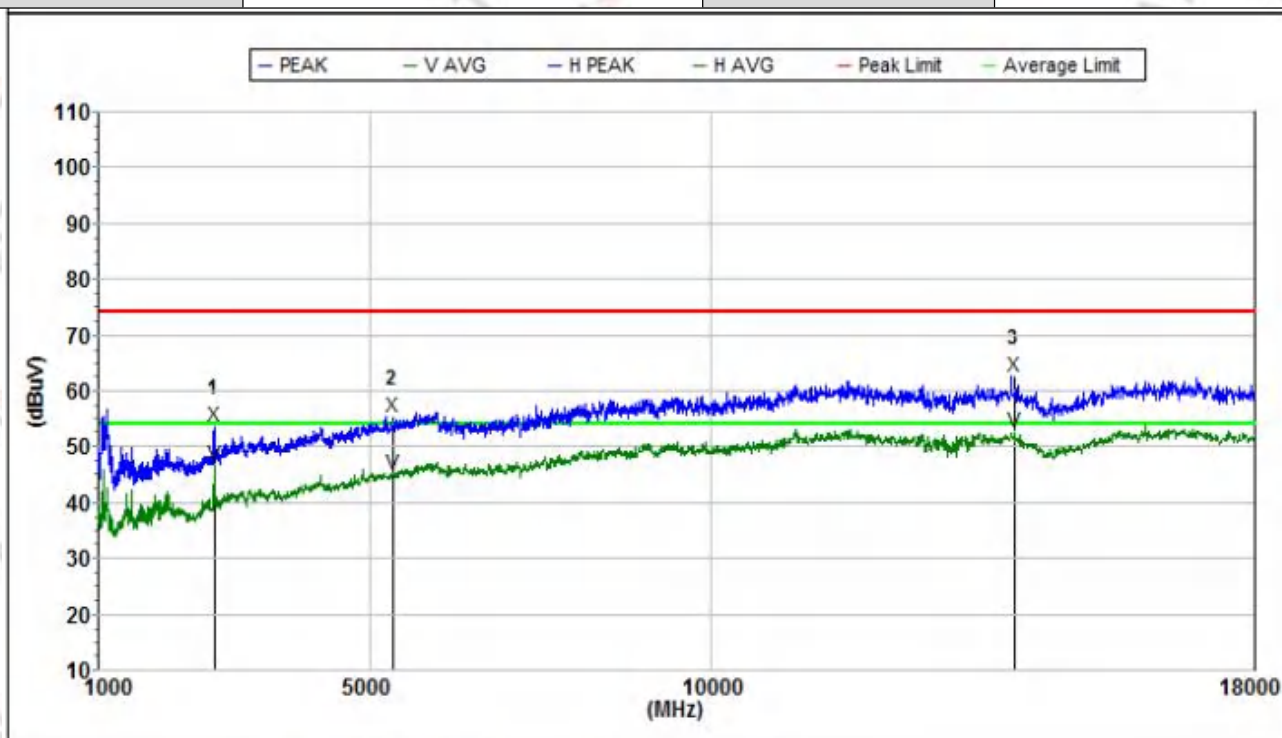
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	1827.500	50.4	74.0	23.6	-15.3	H
2	2957.500	51.2	74.0	22.8	-11.3	H
3	8988.000	59.0	74.0	15.0	-0.2	H
Avg						
1	1827.500	40.7	54.0	13.3	-15.3	H
2	2957.500	41.8	54.0	12.2	-11.3	H
3	8988.000	49.7	54.0	4.3	-0.2	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2MHz-2440MHz	Antenna	Vertical



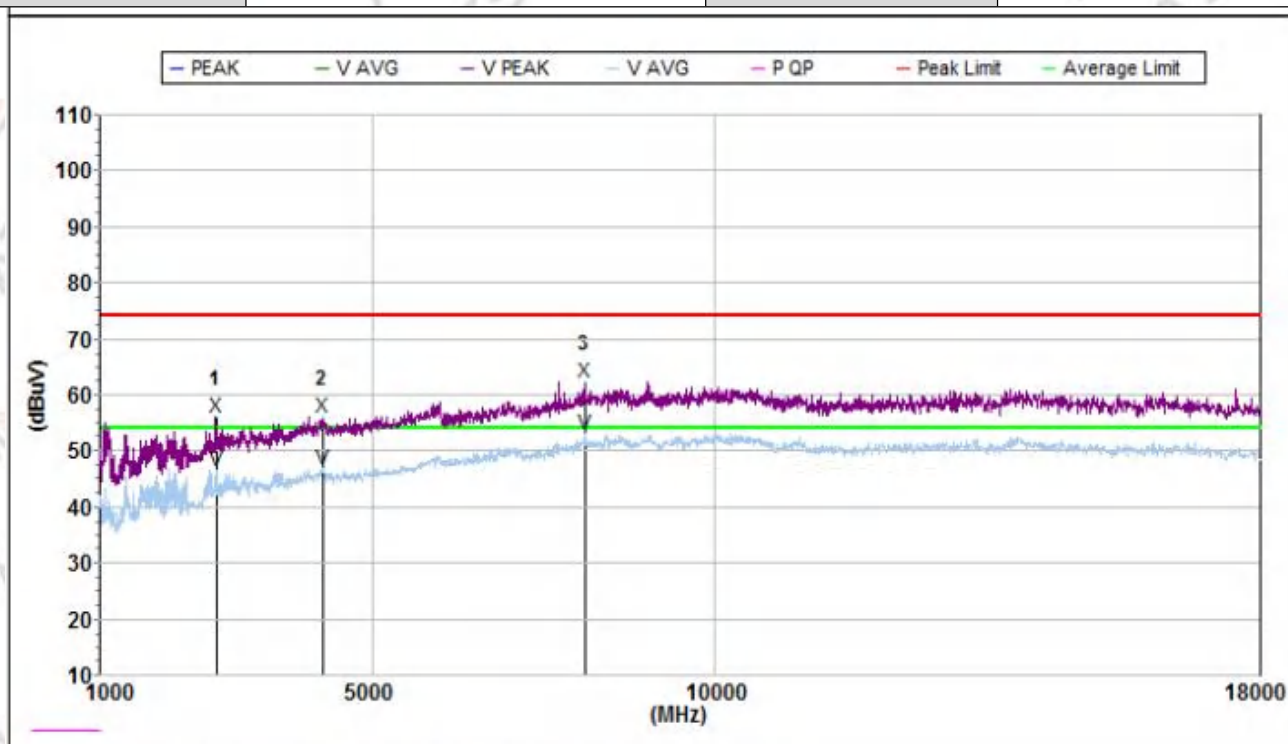
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	2695.000	57.5	74.0	16.5	-10.7	V	
2	4267.500	56.4	74.0	17.6	-5.2	V	
3	8106.000	61.0	74.0	13.0	2.3	V	
Avg							
1	2695.000	49.1	54.0	4.9	-10.7	V	
2	4267.500	47.7	54.0	6.3	-5.2	V	
3	8106.000	53.3	54.0	0.7	2.3	V	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2MHz-2478MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	2702.500	53.6	74.0	20.4	-12.9	H	
2	5325.000	55.3	74.0	18.7	-5.1	H	
3	14466.000	62.5	74.0	11.5	2.3	H	
Avg							
1	2702.500	46.7	54.0	7.3	-12.9	H	
2	5325.000	45.3	54.0	8.7	-5.1	H	
3	14466.000	52.6	54.0	1.4	2.3	H	

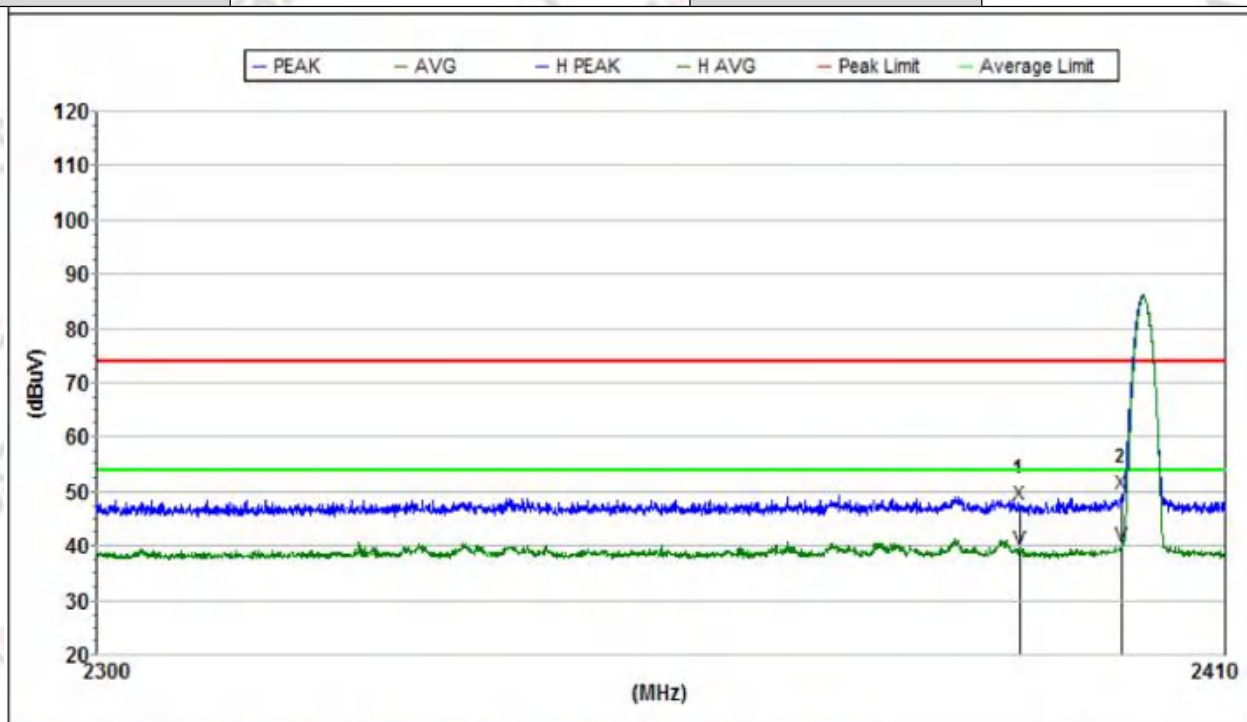
EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2MHz-2478MHz	Antenna	Vertical



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.
Peak:						
1	2700.000	56.1	74.0	17.9	-10.7	V
2	4267.500	56.1	74.0	17.9	-5.2	V
3	8106.000	62.2	74.0	11.8	2.3	V
Avg						
1	2700.000	46.6	54.0	7.4	-10.7	V
2	4267.500	46.9	54.0	7.1	-5.2	V
3	8106.000	53.0	54.0	1.0	2.3	V

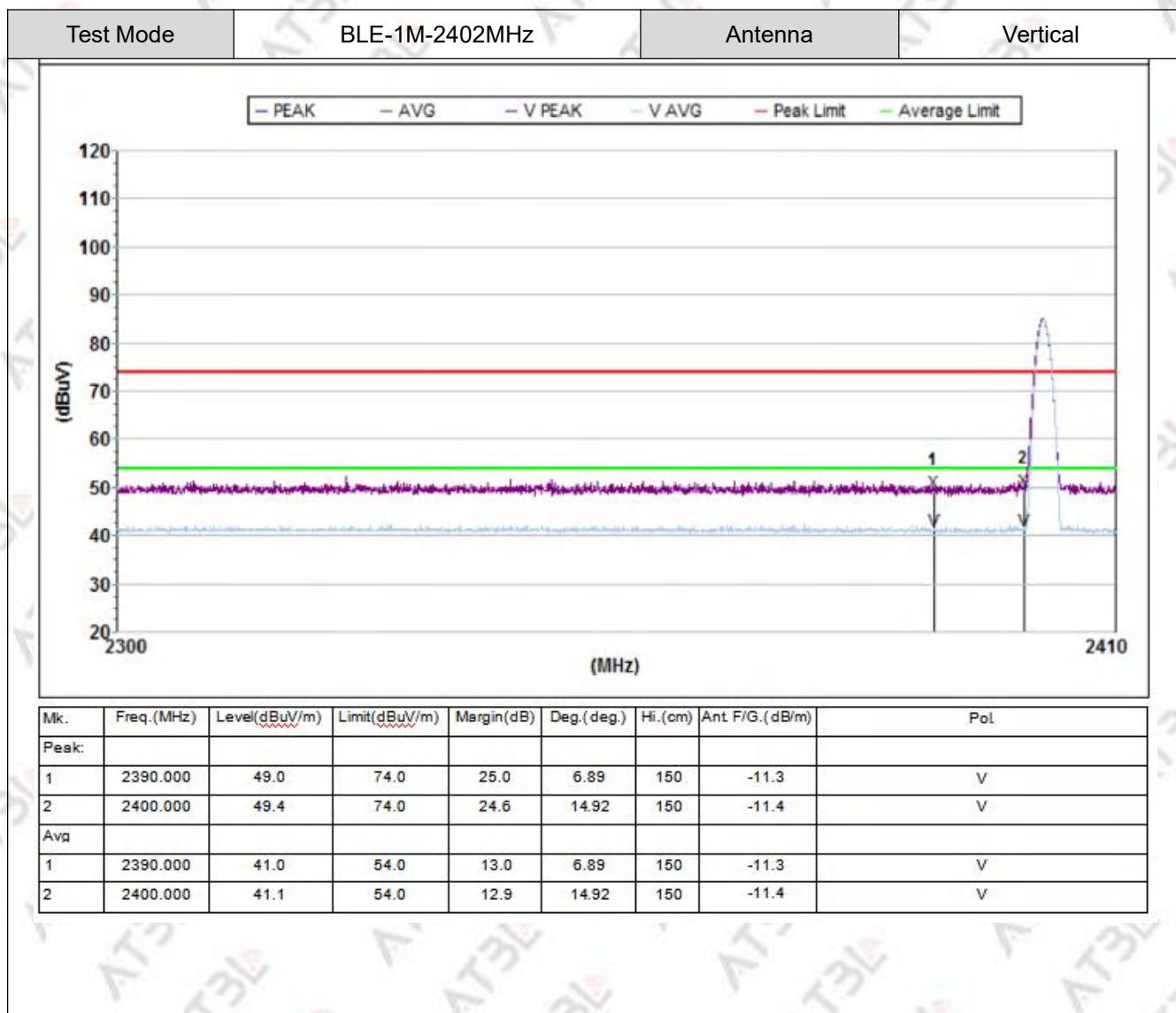
Restricted Band:

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2402MHz	Antenna	Horizontal

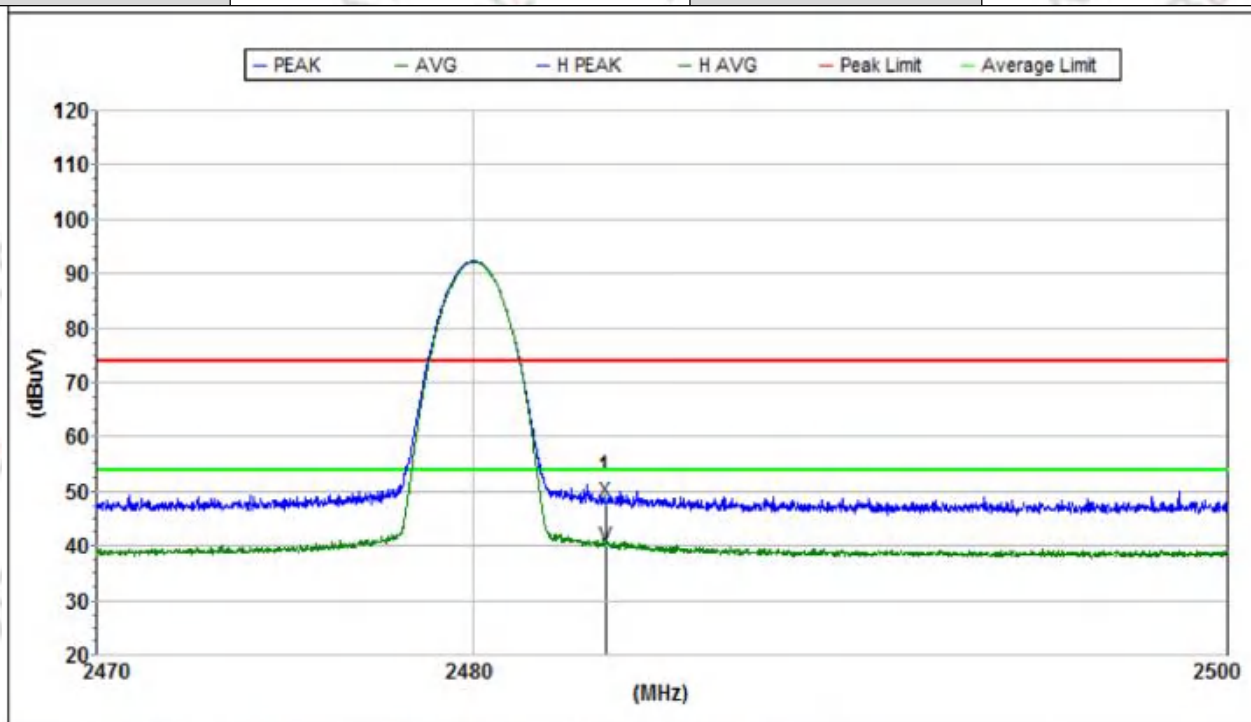


Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg.(deg.)	Hi.(cm)	Ant.F/G.(dB/m)	Pol
Peak:								
1	2390.000	47.5	74.0	26.5	6.72	150	-14.2	H
2	2400.000	49.6	74.0	24.4	19.51	150	-14.2	H
Avg								
1	2390.000	39.3	54.0	14.7	6.72	150	-14.2	H
2	2400.000	40.2	54.0	13.8	19.51	150	-14.2	H

EUT	Telephone headset	Model Name	Spark 07
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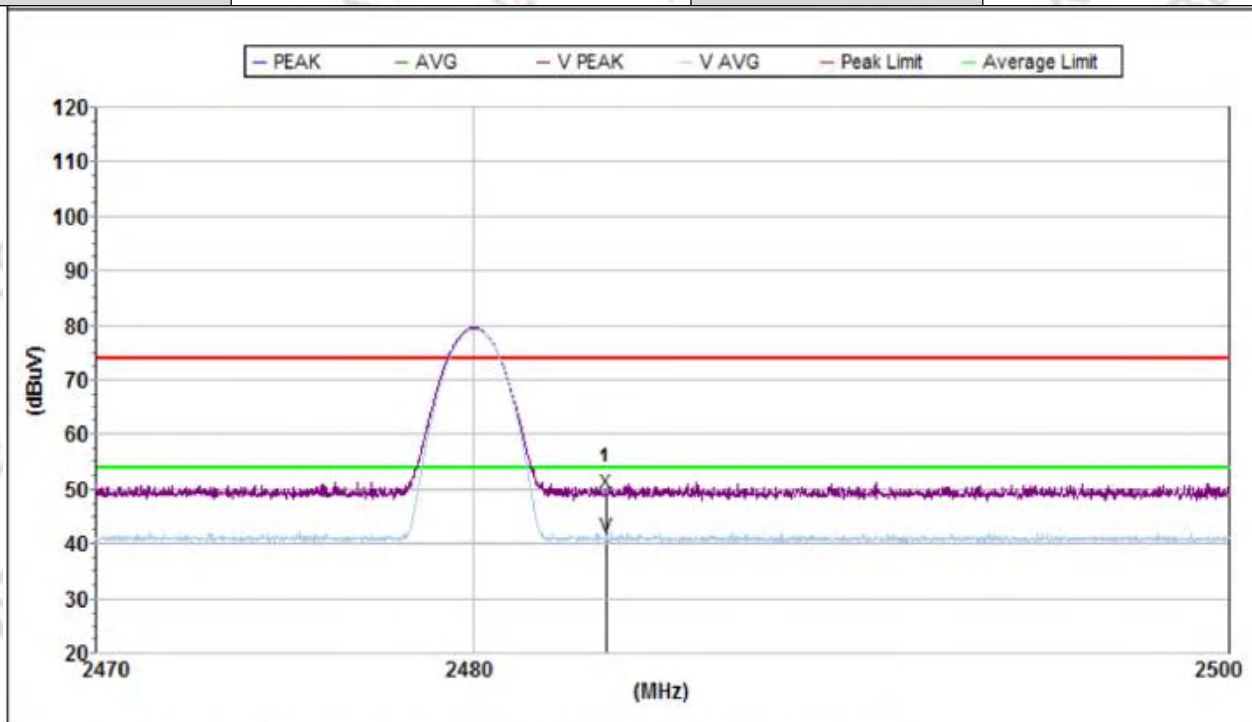


EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2480MHz	Antenna	Horizontal



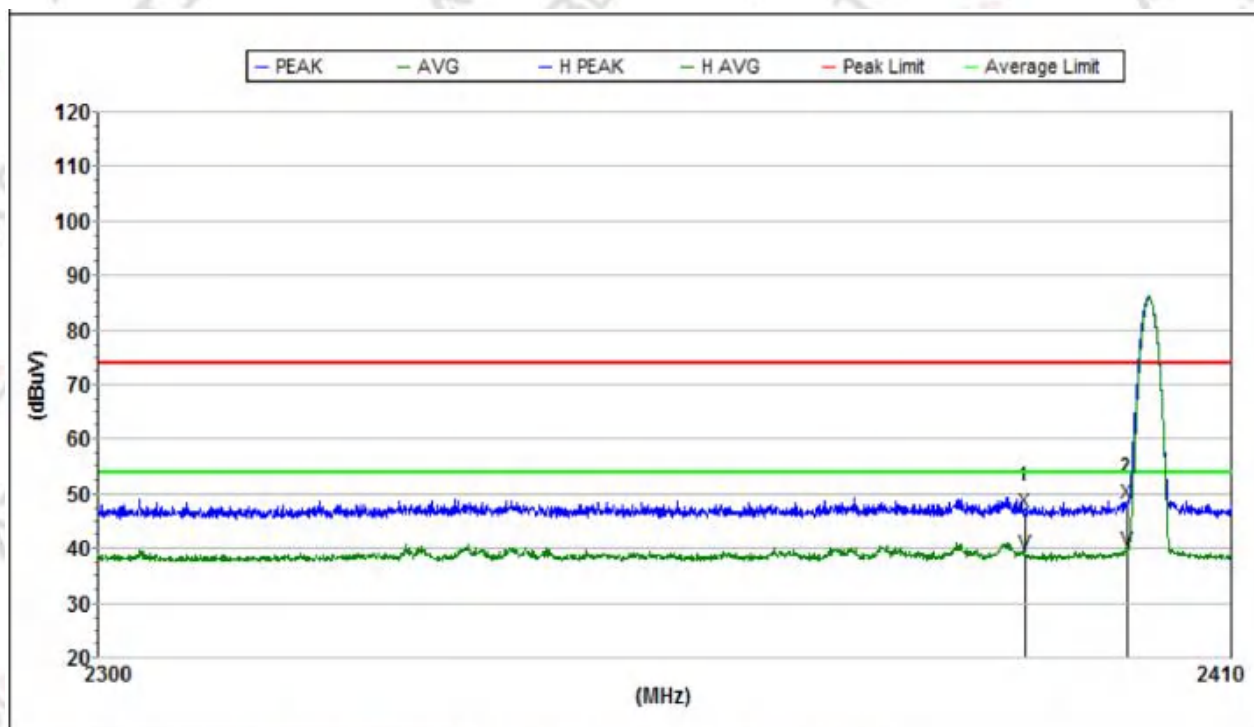
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg.(deg.)	Hi.(cm)	Ant F/G.(dB/m)	Pol
Peak:								
1	2483.500	48.4	74.0	25.6	34.17	150	-14.3	H
Avg								
1	2483.500	40.1	54.0	13.9	34.17	150	-14.3	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2480MHz	Antenna	Vertical



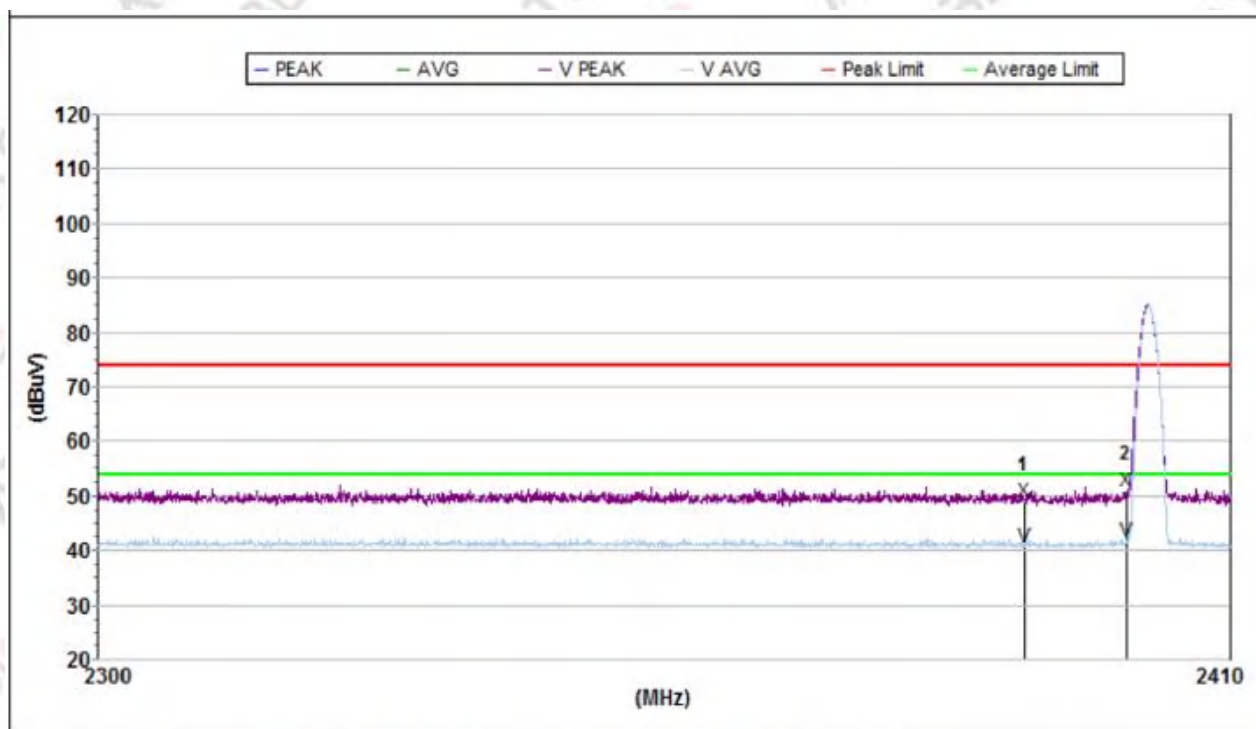
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg.(deg.)	Hi.(cm)	Ant F/G.(dB/m)	Pol
Peak:								
1	2483.500	49.4	74.0	24.6	0.5	150	-11.6	V
Avg								
1	2483.500	41.3	54.0	12.7	0.5	150	-11.6	V

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2M-2404MHz	Antenna	Horizontal



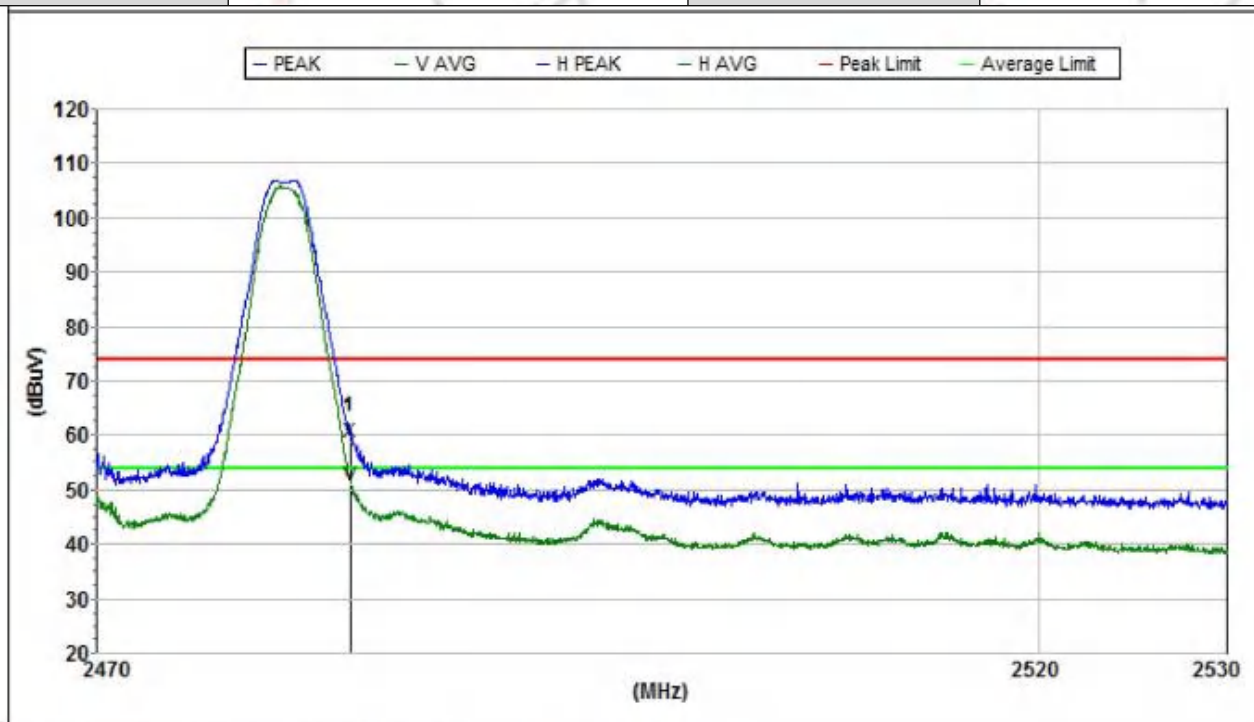
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg.(deg.)	Hi.(cm)	Ant F/G.(dB/m)	Pol
Peak:								
1	2390.000	46.7	74.0	27.3	14.92	150	-14.2	H
2	2400.000	48.2	74.0	25.8	0.9	150	-14.2	H
Avg								
1	2390.000	39.2	54.0	14.8	14.92	150	-14.2	H
2	2400.000	39.9	54.0	14.1	0.9	150	-14.2	H

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2M-2404MHz	Antenna	Vertical



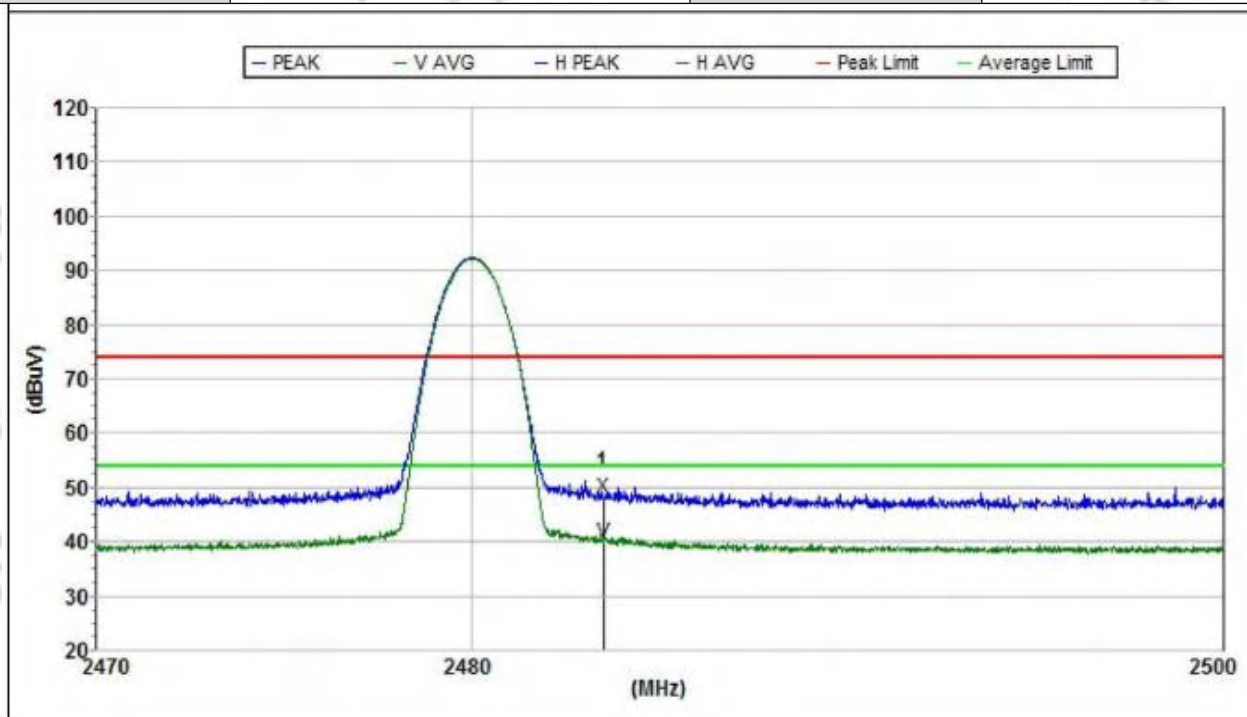
Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg.(deg.)	Hi.(cm)	Ant F/G.(dB/m)	Pol
Peak:								
1	2390.000	49.0	74.0	25.0	5.19	150	-11.3	V
2	2400.000	50.8	74.0	23.2	0.5	150	-11.4	V
Avg								
1	2390.000	40.6	54.0	13.4	5.19	150	-11.3	V
2	2400.000	41.7	54.0	12.3	0.5	150	-11.4	V

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2M-2478MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Pol.	
Peak:							
1	2483.500	58.8	74.0	15.2	-14.3	H	
Avg							
1	2483.500	50.8	54.0	3.2	-14.3	H	

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-2M-2478MHz	Antenna	Vertical



Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Pol.	
Peak:							
1	2483.500	48.4	74.0	25.6	-14.3	H	
Avg							
1	2483.500	40.1	54.0	13.9	-14.3	H	

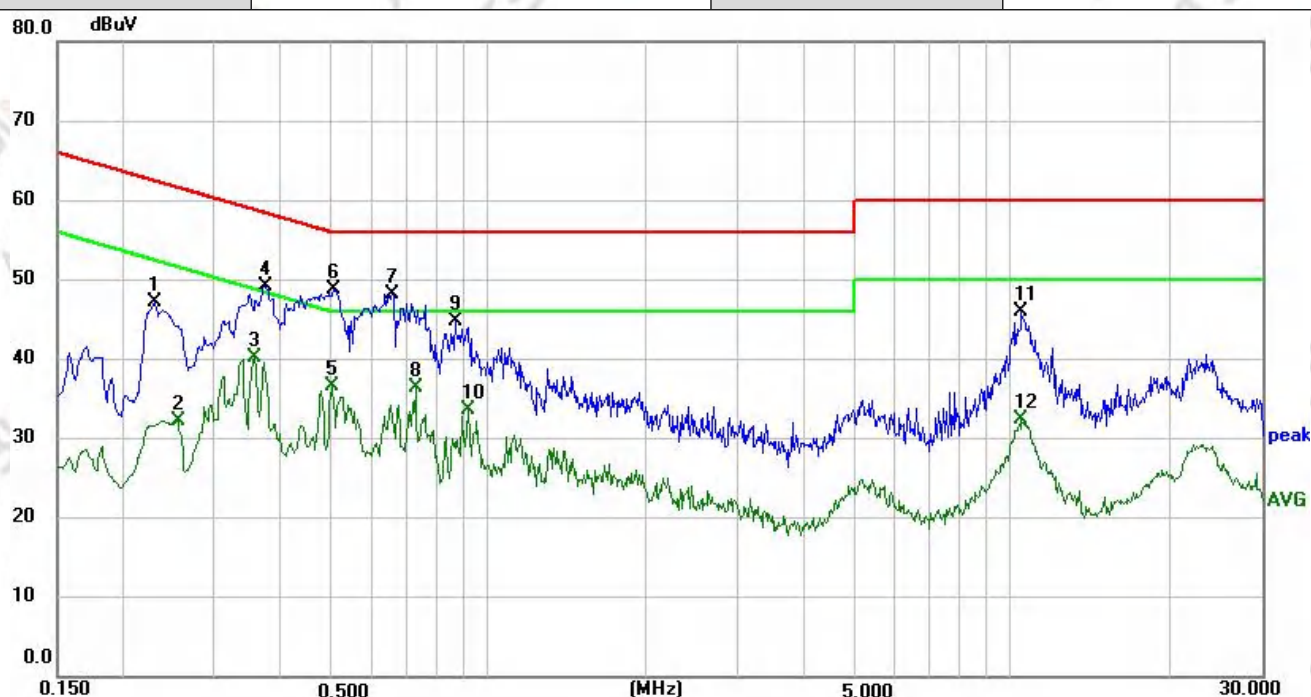
7.AC Power-Line Conducted Emission

Test Result

Note:

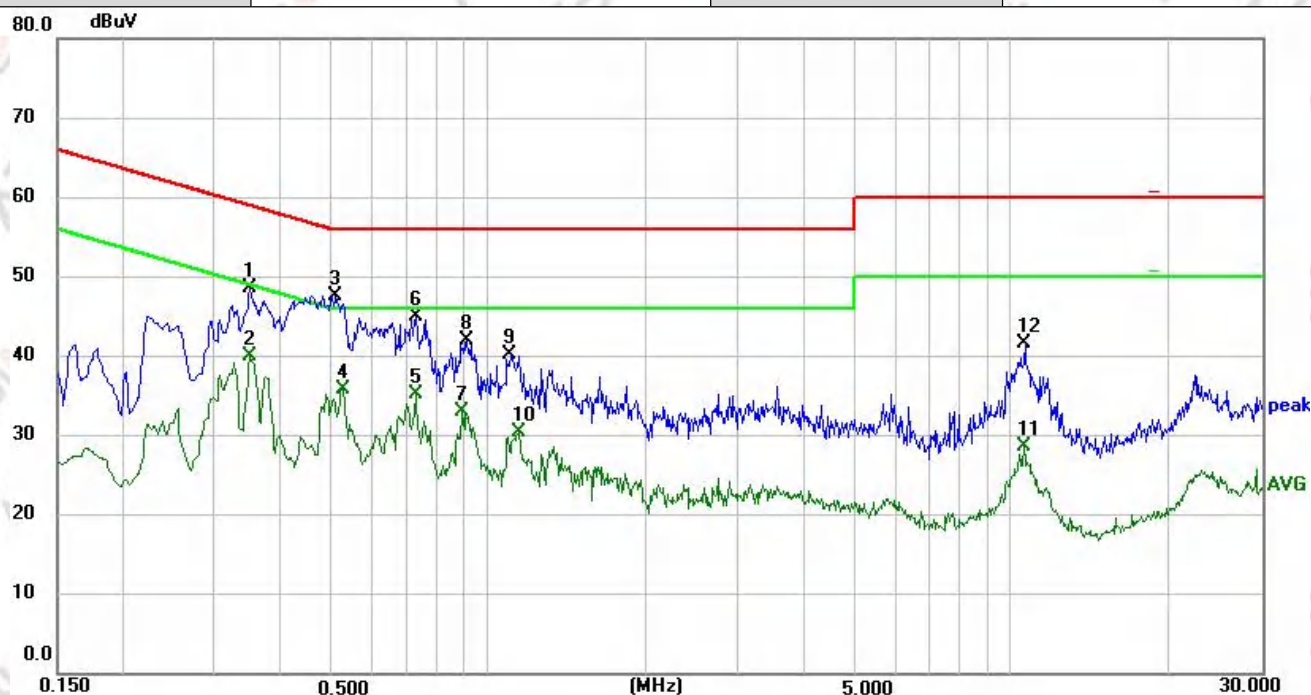
- 1.All modes have been tested, only worst mode(BLE-1M-2402MHz) was recorded in the test report.
- 2.Emission Level = Reading Value + Correction Factor .
3. Correction Factor = Insertion loss + Cable loss.
4. The emission levels of other frequencies were less than 20dB margin against the limit.
5. Margin value = Emission level-Limit value.

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2402MHz	Phase	L1



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measurement(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2300	27.36	19.73	47.09	62.45	-15.36	peak
2	0.2540	12.42	19.74	32.16	51.63	-19.47	AVG
3	0.3540	20.38	19.81	40.19	48.87	-8.68	AVG
4	0.3740	29.35	19.81	49.16	58.41	-9.25	peak
5	0.5020	16.67	19.85	36.52	46.00	-9.48	AVG
6 *	0.5060	28.97	19.85	48.82	56.00	-7.18	peak
7	0.6540	28.34	19.93	48.27	56.00	-7.73	peak
8	0.7260	16.50	19.93	36.43	46.00	-9.57	AVG
9	0.8660	24.97	19.84	44.81	56.00	-11.19	peak
10	0.9180	13.79	19.80	33.59	46.00	-12.41	AVG
11	10.4220	25.25	20.74	45.99	60.00	-14.01	peak
12	10.4220	11.77	20.74	32.51	50.00	-17.49	AVG

EUT	Telephone headset	Model Name	Spark 07
Test Mode	BLE-1M-2402MHz	Phase	N



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measurement(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3500	28.79	19.81	48.60	58.96	-10.36	peak
2	0.3500	20.20	19.81	40.01	48.96	-8.95	AVG
3 *	0.5100	28.11	19.56	47.67	56.00	-8.33	peak
4	0.5260	16.27	19.58	35.85	46.00	-10.15	AVG
5	0.7260	15.56	19.75	35.31	46.00	-10.69	AVG
6	0.7300	25.29	19.75	45.04	56.00	-10.96	peak
7	0.8940	13.19	19.75	32.94	46.00	-13.06	AVG
8	0.9100	22.18	19.75	41.93	56.00	-14.07	peak
9	1.1019	20.41	19.79	40.20	56.00	-15.80	peak
10	1.1420	10.54	19.80	30.34	46.00	-15.66	AVG
11	10.5540	7.67	20.90	28.57	50.00	-21.43	AVG
12	10.5659	20.62	20.90	41.52	60.00	-18.48	peak