

Appendix A: Test Results of Bluetooth Low Energy

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Appendix A.1: Test Results of Conducted Power Spectral Density

Bluetooth LE Mode, 1Mbps

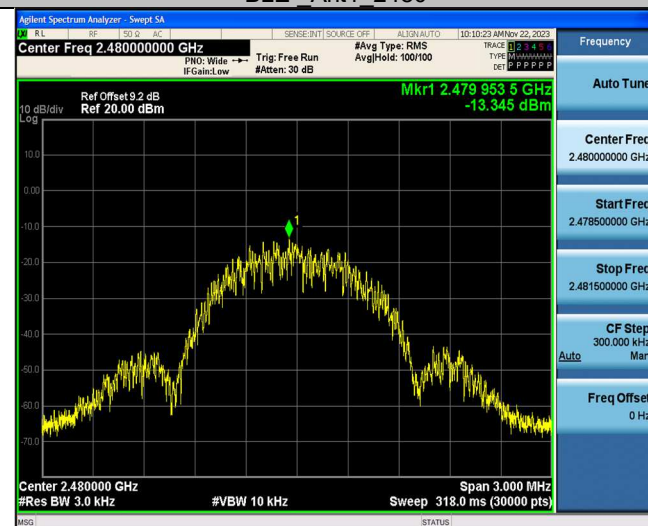
BLE_Ant1_2402



BLE_Ant1_2440



BLE_Ant1_2480



Appendix A.2: Test Results of 6dB Bandwidth

Bluetooth LE Mode, 1Mbps

Channel	6dB BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]
2402	0.676	2401.656	2402.332	≥0.5
2440	0.680	2439.656	2440.336	≥0.5
2480	0.668	2479.656	2480.324	≥0.5

BLE_Ant1_2402



BLE_Ant1_2440



BLE_Ant1_2480



Appendix A.3: Test Results of 99% Bandwidth

Bluetooth LE Mode, 1Mbps

Channel	99% BW [MHz]	FL[MHz]	FH[MHz]
2402	1.0232	2401.488	2402.512
2440	1.0212	2439.489	2440.510
2480	1.0216	2479.488	2480.510

BLE_Ant1_2402



BLE_Ant1_2440



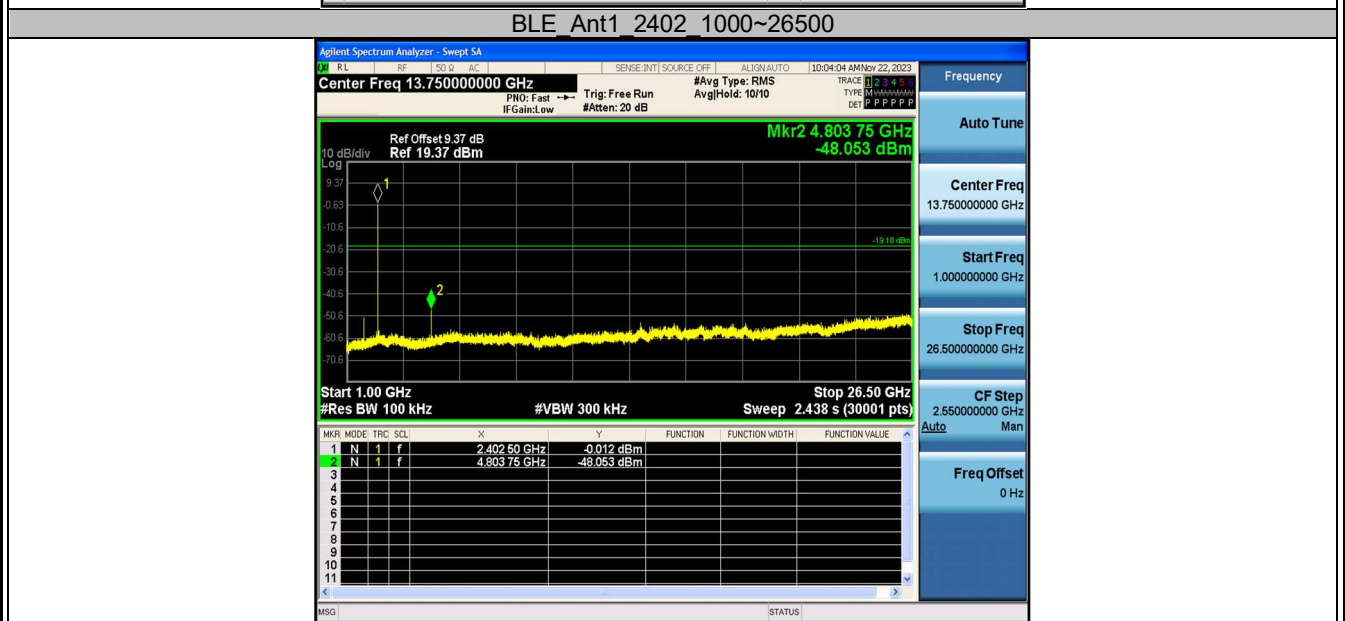
BLE_Ant1_2480



Appendix A.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Bluetooth LE Mode, 1Mbps

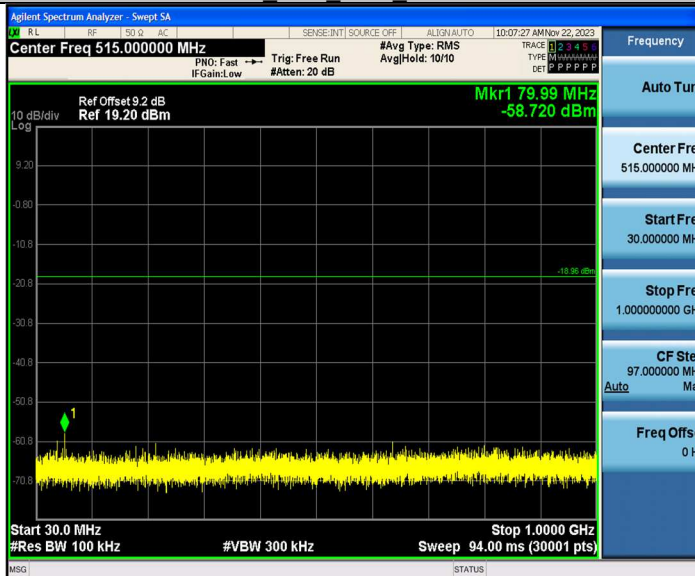
TestMode	Antenna	Channel	FreqRange [MHz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
BLE	Ant1	2402	Reference	0.82		---	---
			30~1000	0.82	-56.72	≤-19.18	PASS
			1000~26500	0.82	-48.05	≤-19.18	PASS
		2440	Reference	1.04		---	---
			30~1000	1.04	-58.72	≤-18.96	PASS
			1000~26500	1.04	-48.06	≤-18.96	PASS
		2480	Reference	-0.31		---	---
			30~1000	-0.31	-59.02	≤-20.31	PASS
			1000~26500	-0.31	-49.41	≤-20.31	PASS



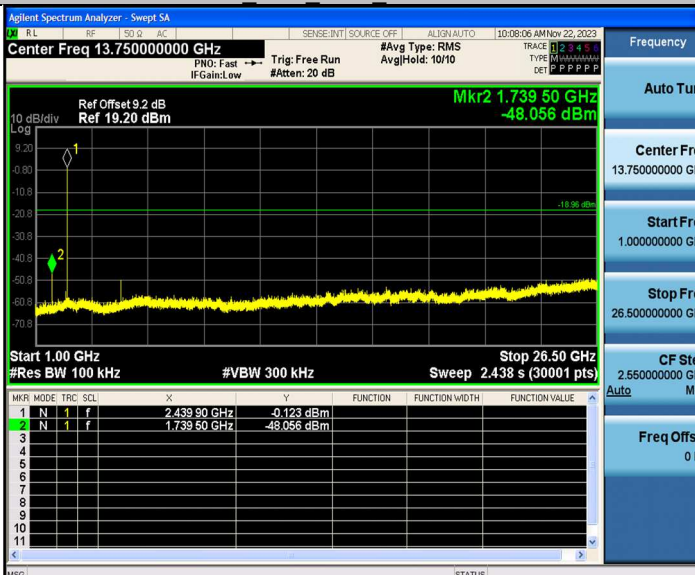
BLE_Ant1_2440_0~Reference



BLE_Ant1_2440_30~1000



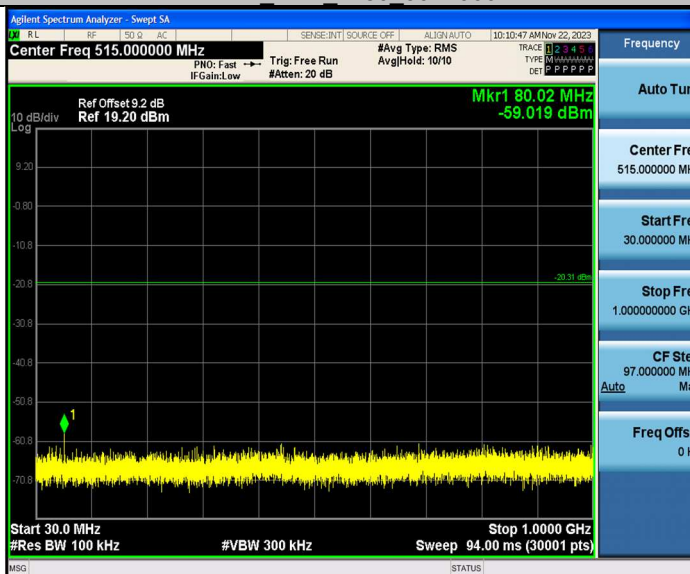
BLE_Ant1_2440_1000~26500



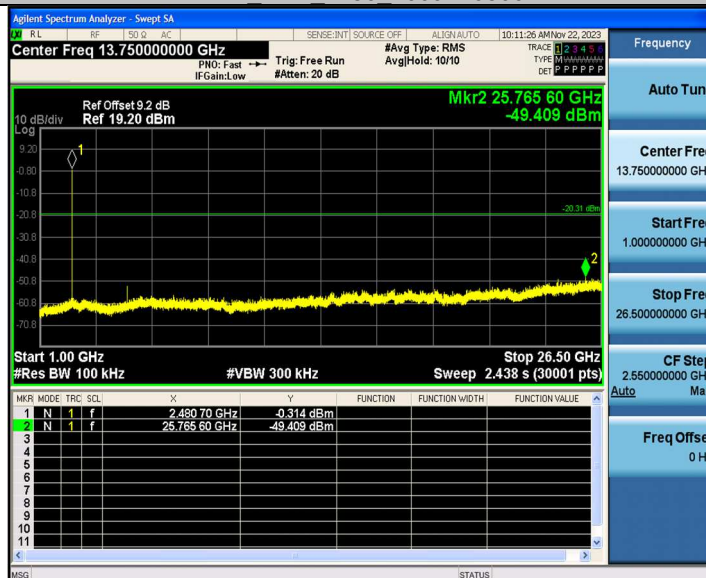
BLE_Ant1_2480_0~Reference



BLE_Ant1_2480_30~1000



BLE_Ant1_2480_1000~26500



Appendix A.5: Test Results of Radiated Spurious Emissions

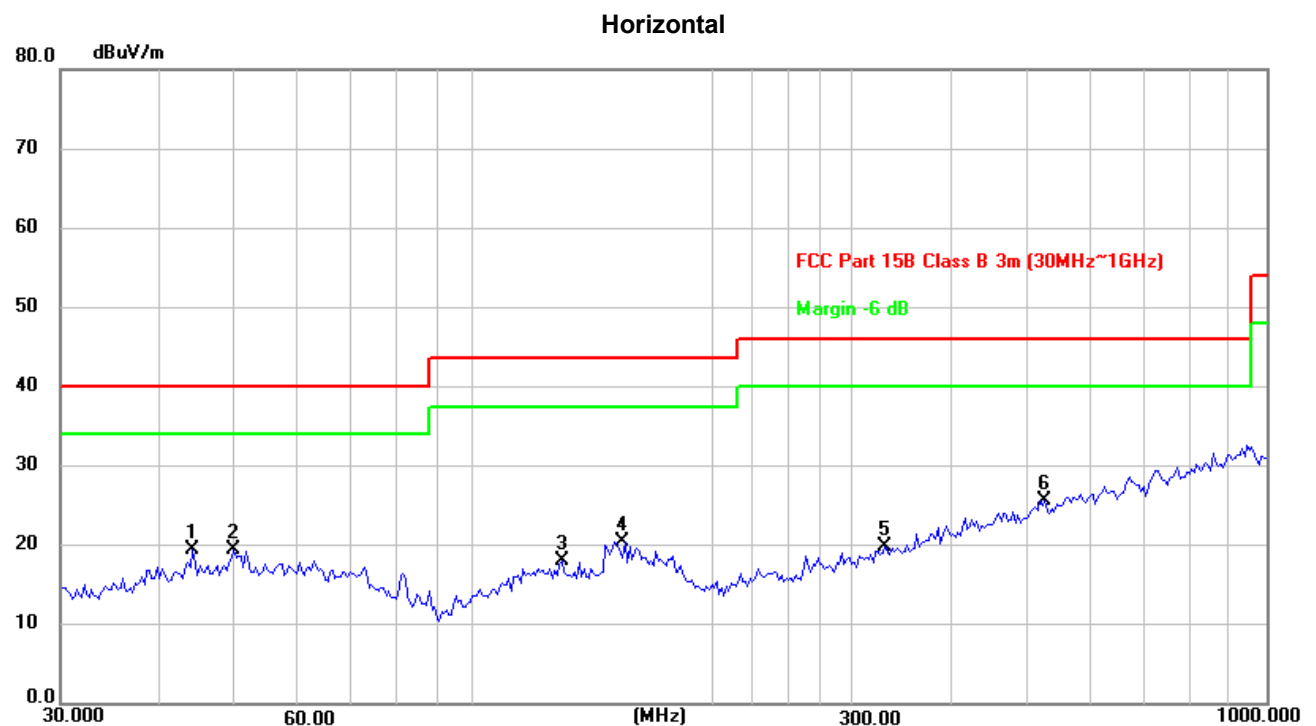
Note:

- 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.

30 MHz - 1GHz

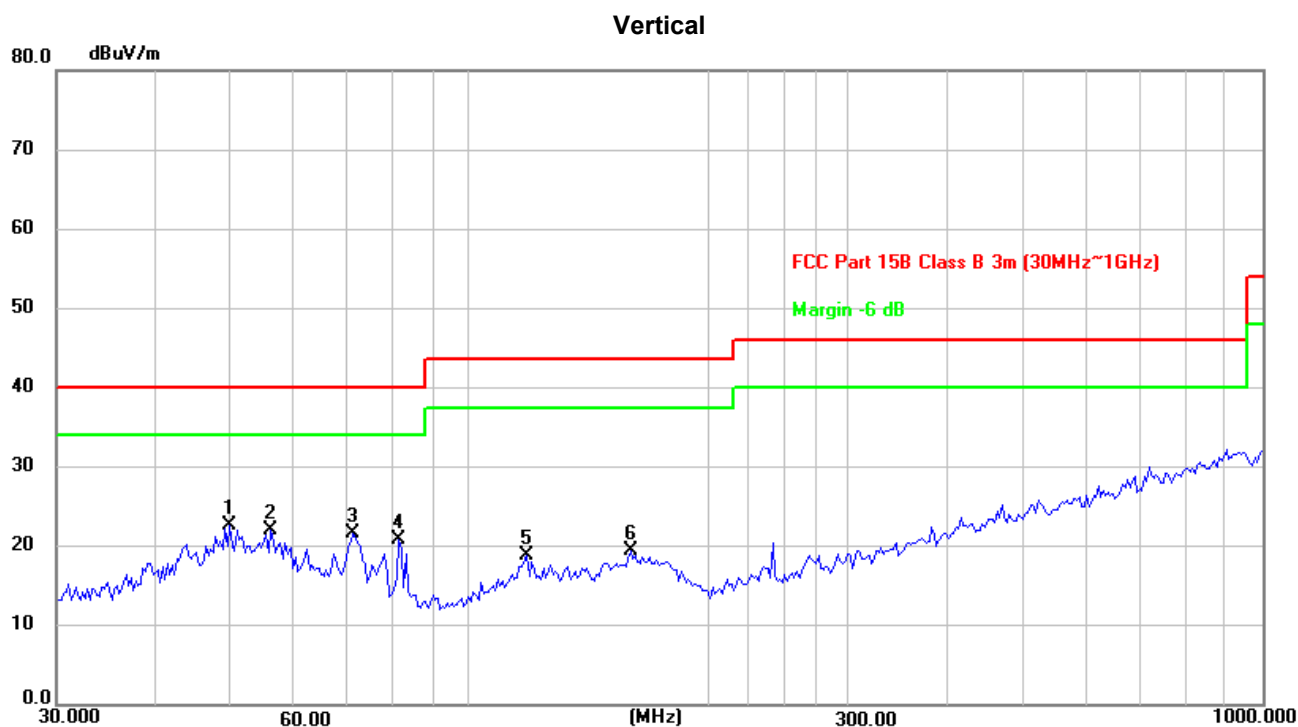
EUT Information

EUT Name:	Foldable Bluetooth Stereo Noise Reduction Headphone
Model:	BN982
Test Mode:	BLE
Test Voltage::	DC 3.7V From battery
Remark:	Temp 24 Humi: 37%
Test Standard:	FCC 15.247
Tested By:	Hua
Reviewed By:	Scott He



Critical_Freqs

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	44.1202	33.67	-14.26	19.41	40.00	-20.59	peak	220	25
2	49.7068	33.34	-13.93	19.41	40.00	-20.59	peak	186	176
3	129.0146	32.99	-14.97	18.02	43.50	-25.48	peak	234	221
4	154.8204	33.66	-13.24	20.42	43.50	-23.08	peak	156	146
5	330.1949	32.10	-12.34	19.76	46.00	-26.24	peak	177	325
6	524.5541	31.93	-6.21	25.72	46.00	-20.28	peak	201	261



Critical_Freqs

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	49.7068	36.56	-13.93	22.63	40.00	-17.37	peak	124	221
2	56.0007	36.06	-14.00	22.06	40.00	-17.94	peak	110	21
3	71.0803	37.65	-16.01	21.64	40.00	-18.36	peak	163	153
4	81.2117	38.82	-17.99	20.83	40.00	-19.17	peak	128	287
5	117.7725	33.98	-15.15	18.83	43.50	-24.67	peak	150	304
6	159.2251	32.27	-12.75	19.52	43.50	-23.98	peak	103	16

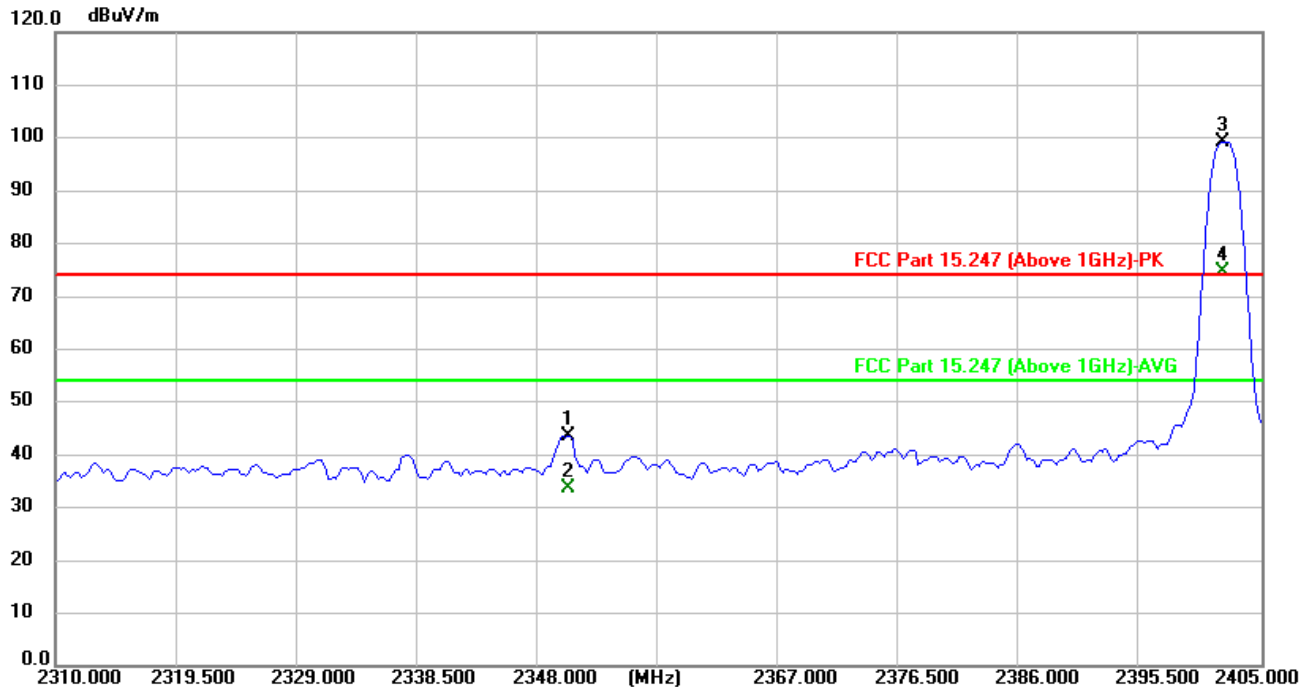
1GHz - 18GHz

Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name:	Foldable Bluetooth Stereo Noise Reduction Headphone
Model:	BN982
Test Mode:	BLE_Low channel
Test Voltage:	DC 3.7V From battery
Remark:	Temp 24 Humi: 37%
Test Standard:	FCC 15.247
Tested By:	Hua
Reviewed By:	Scott He

Horizontal

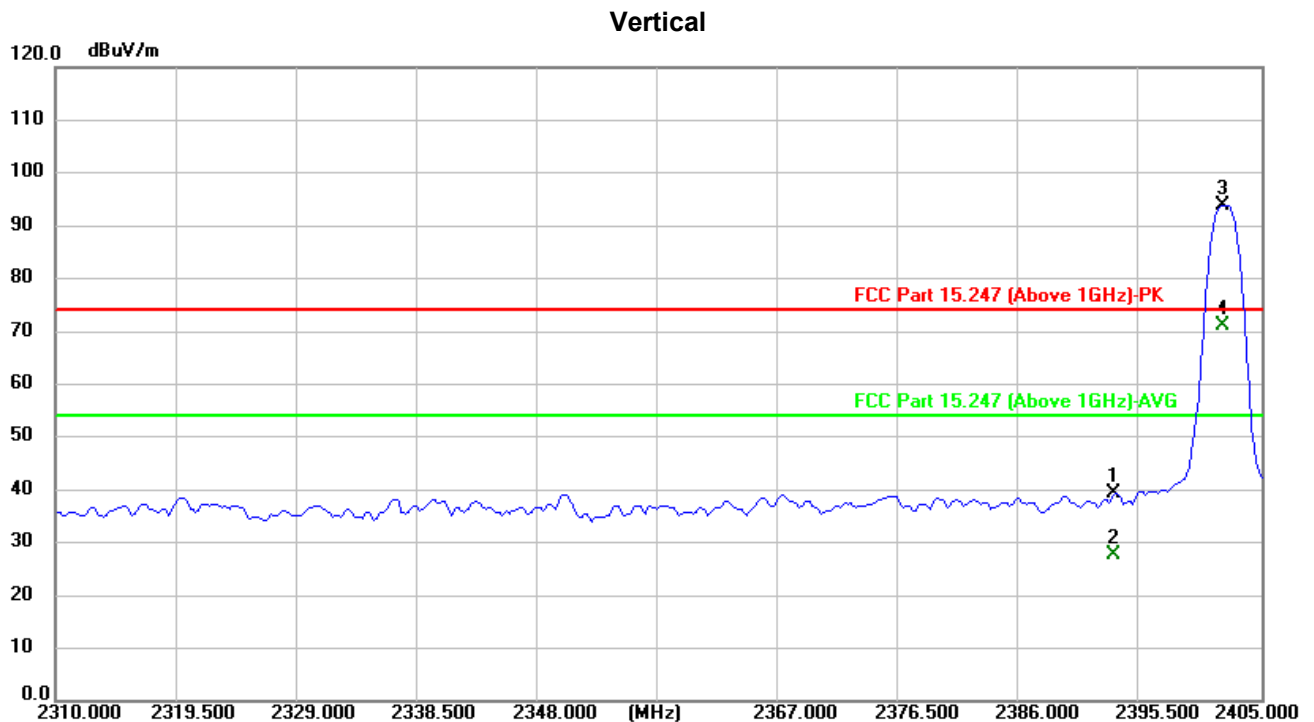


Critical_Freqs(Fundamental frequency)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2402.144	99.66	-0.39	99.27			peak	360	209
2	2402.144	74.98	-0.39	74.59			AVG	360	209

Critical_Freqs(Suprious Emission out of band)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2350.361	44.08	-0.50	43.58	74.00	-30.42	peak	360	209
2	2350.361	34.15	-0.50	33.65	54.00	-20.35	AVG	360	209
3	4804.000	43.03	5.30	48.33	74.00	-25.67	peak	103	150
4	4804.000	30.66	5.30	35.96	54.00	-18.04	AVG	103	150
5	7206.000	40.09	12.40	52.49	74.00	-21.51	peak	236	100
6	7206.000	28.22	12.40	40.62	54.00	-13.38	AVG	236	100



Critical_Freqs(Fundamental frequency)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2402.144	94.33	-0.39	93.94			peak	291	231
2	2402.144	71.37	-0.39	70.98			AVG	291	231

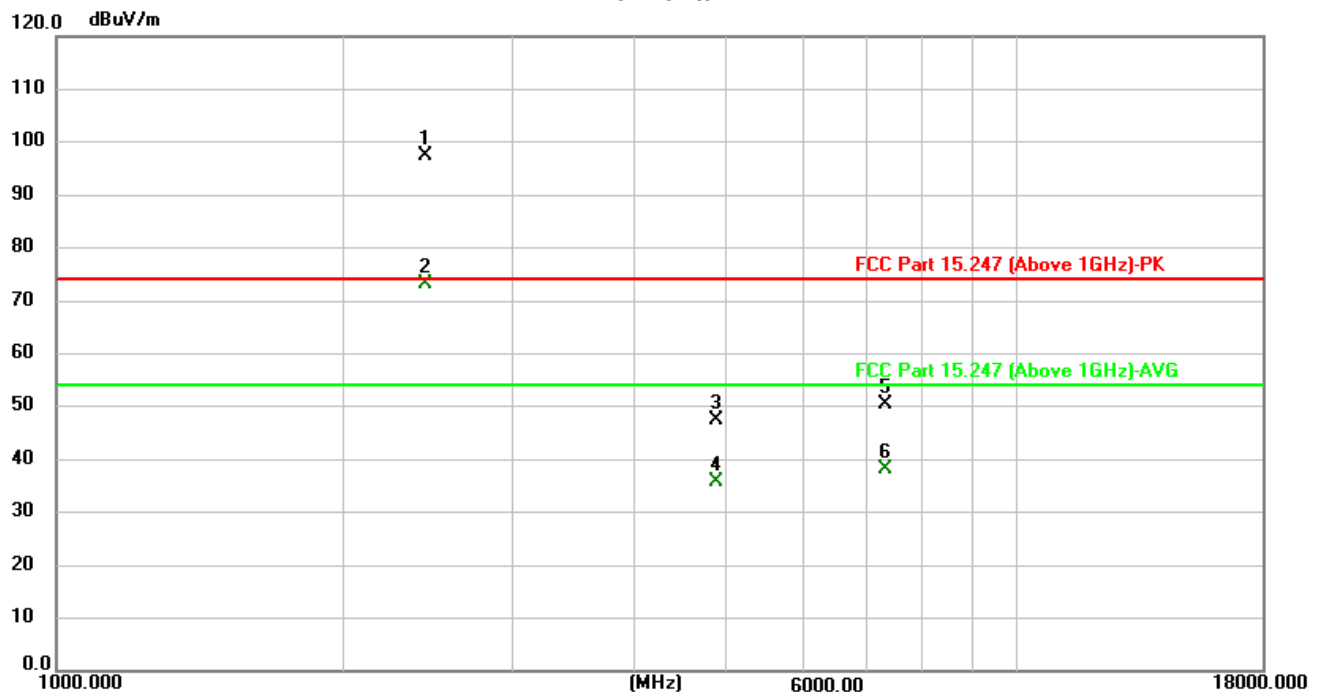
Critical_Freqs(Suprious Emission out of band)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2393.577	39.73	-0.40	39.33	74.00	-34.67	peak	291	231
2	2393.577	28.00	-0.40	27.60	54.00	-26.40	AVG	291	231
3	4804.000	42.69	5.30	47.99	74.00	-26.01	peak	100	147
4	4804.000	30.27	5.30	35.57	54.00	-18.43	AVG	100	147
5	7206.000	40.78	12.40	53.18	74.00	-20.82	peak	122	238
6	7206.000	28.36	12.40	40.76	54.00	-13.24	AVG	122	238

EUT Information

EUT Name: Foldable Bluetooth Stereo Noise Reduction Headphone
Model: BN982
Test Mode: BLE_Middle channel
Test Voltage: DC 3.7V From battery
Remark: Temp 24 Humi: 37%
Test Standard: FCC 15.247
Tested By: Jim Xu
Reviewed By: Scott He

Horizontal

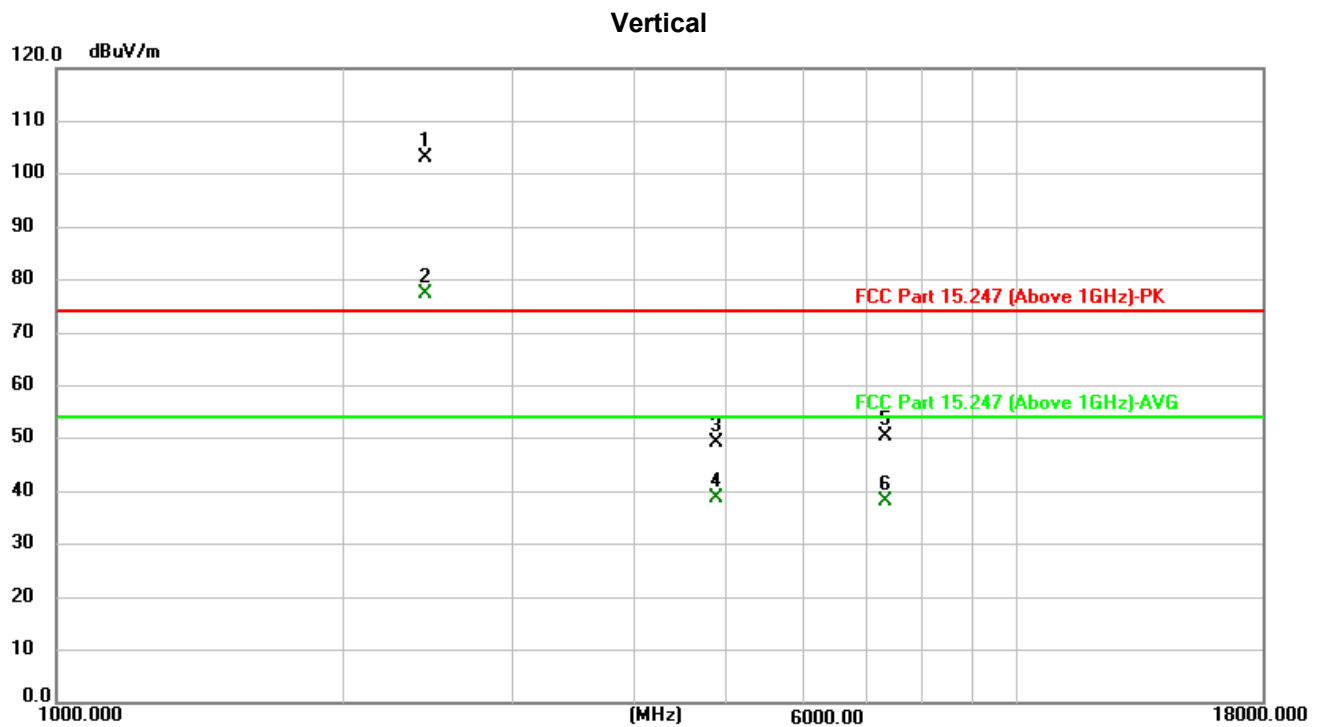


Critical_Freqs(Fundamental frequency)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2440.000	97.81	-0.31	97.50			peak	385	273
2	2440.000	73.48	-0.31	73.17			AVG	385	273

Critical_Freqs(Suprious Emission out of band)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4880.000	41.08	6.25	47.33	74.00	-26.67	peak	100	329
2	4880.000	29.45	6.25	35.70	54.00	-18.30	AVG	100	329
3	7320.000	37.76	12.65	50.41	74.00	-23.59	peak	122	273
4	7320.000	25.65	12.65	38.30	54.00	-15.70	AVG	122	273



Critical_Freqs(Fundamental frequency)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2440.000	103.55	-0.31	103.24			peak	380	311
2	2440.000	77.71	-0.31	77.40			AVG	380	311

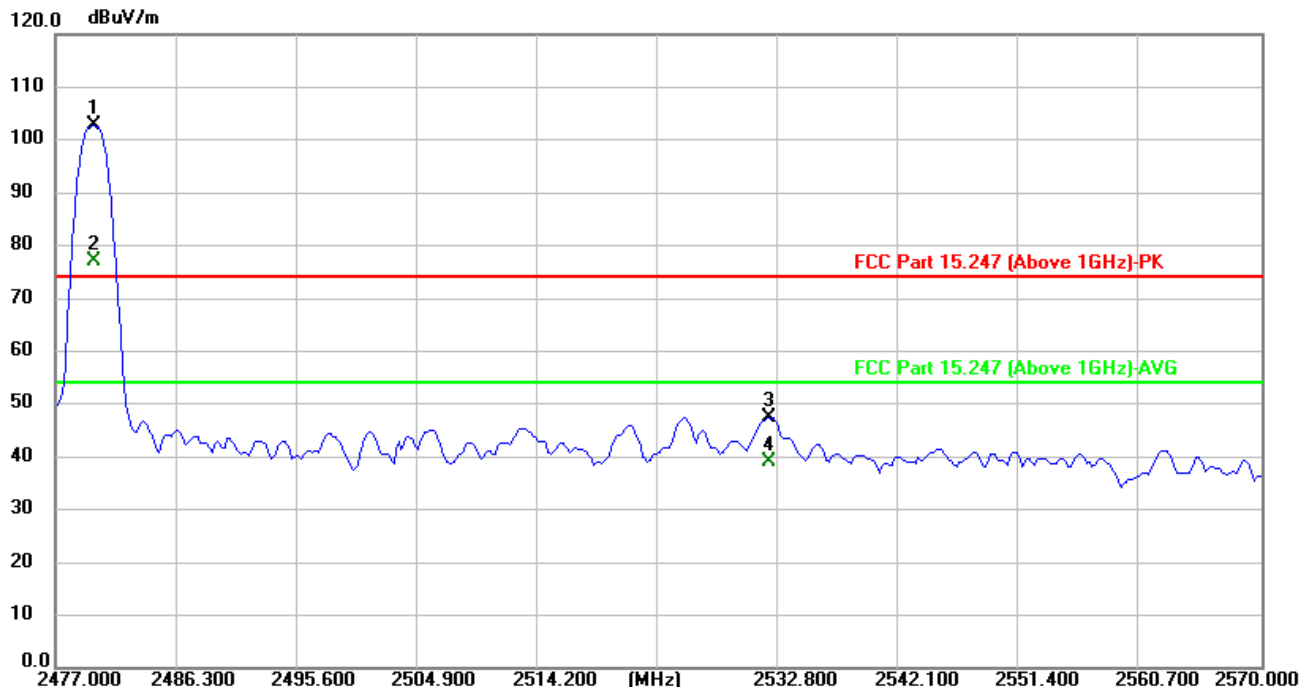
Critical_Freqs(Suprious Emission out of band)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4880.000	43.10	6.25	49.35	74.00	-24.65	peak	276	236
2	4880.000	32.54	6.25	38.79	54.00	-15.21	AVG	276	236
3	7320.000	37.83	12.65	50.48	74.00	-23.52	peak	135	205
4	7320.000	25.45	12.65	38.10	54.00	-15.90	AVG	135	205

EUT Information

EUT Name: Foldable Bluetooth Stereo Noise Reduction Headphone
Model: BN982
Test Mode: BLE_High channel
Test Voltage: DC 3.7V From battery
Remark: Temp 24 Humi: 37%
Test Standard: FCC 15.247
Tested By: Hua
Reviewed By: Scott He

Horizontal

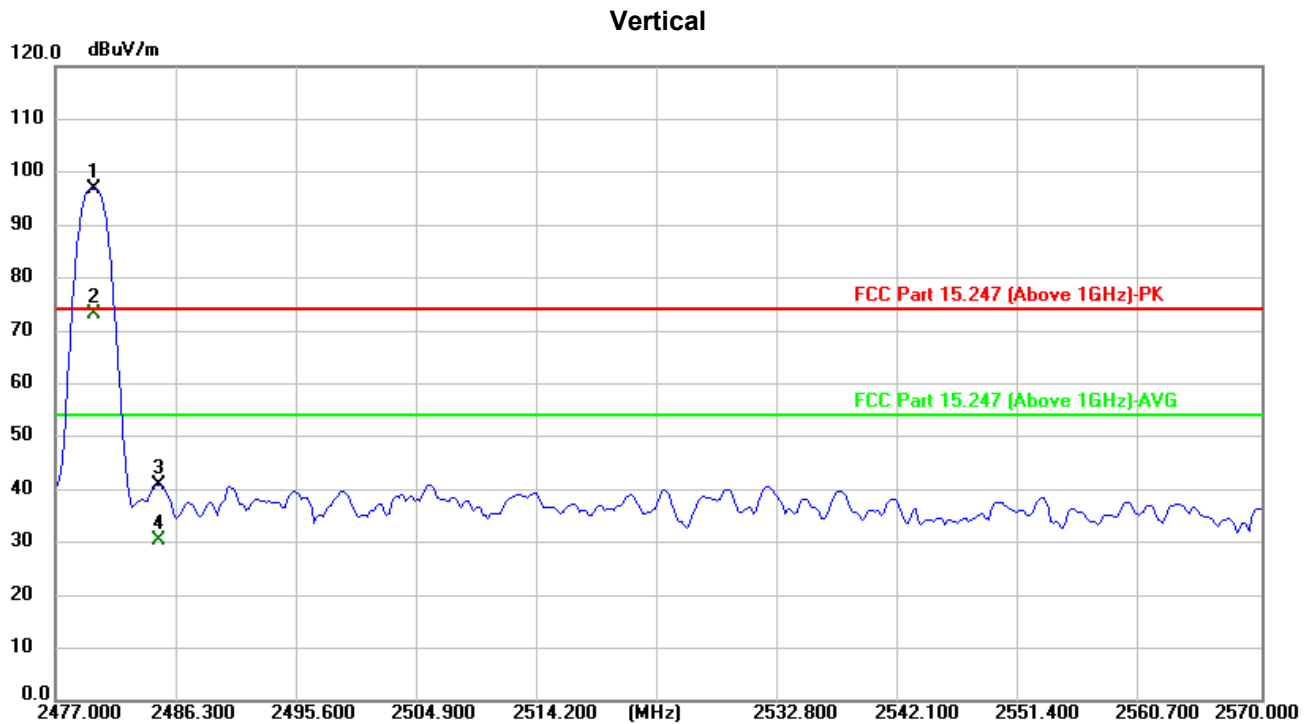


Critical_Freqs(Fundamental frequency)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2479.982	102.86	-0.21	102.65			peak	241	90
2	2479.982	77.25	-0.21	77.04			AVG	241	90

Critical_Freqs(Suprious Emission out of band)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2531.980	47.51	-0.10	47.41	74.00	-26.59	peak	241	90
2	2531.980	39.04	-0.10	38.94	54.00	-15.06	AVG	241	90
3	4960.000	42.40	6.16	48.56	74.00	-25.44	peak	100	141
4	4960.000	31.14	6.16	37.30	54.00	-16.70	AVG	100	141
5	7440.000	37.42	12.91	50.33	74.00	-23.67	peak	107	262
6	7440.000	25.14	12.91	38.05	54.00	-15.95	AVG	107	262



Critical Freqs(Fundamental frequency)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2479.982	97.05	-0.21	96.84			peak	171	269
2	2479.982	73.46	-0.21	73.25			AVG	171	269

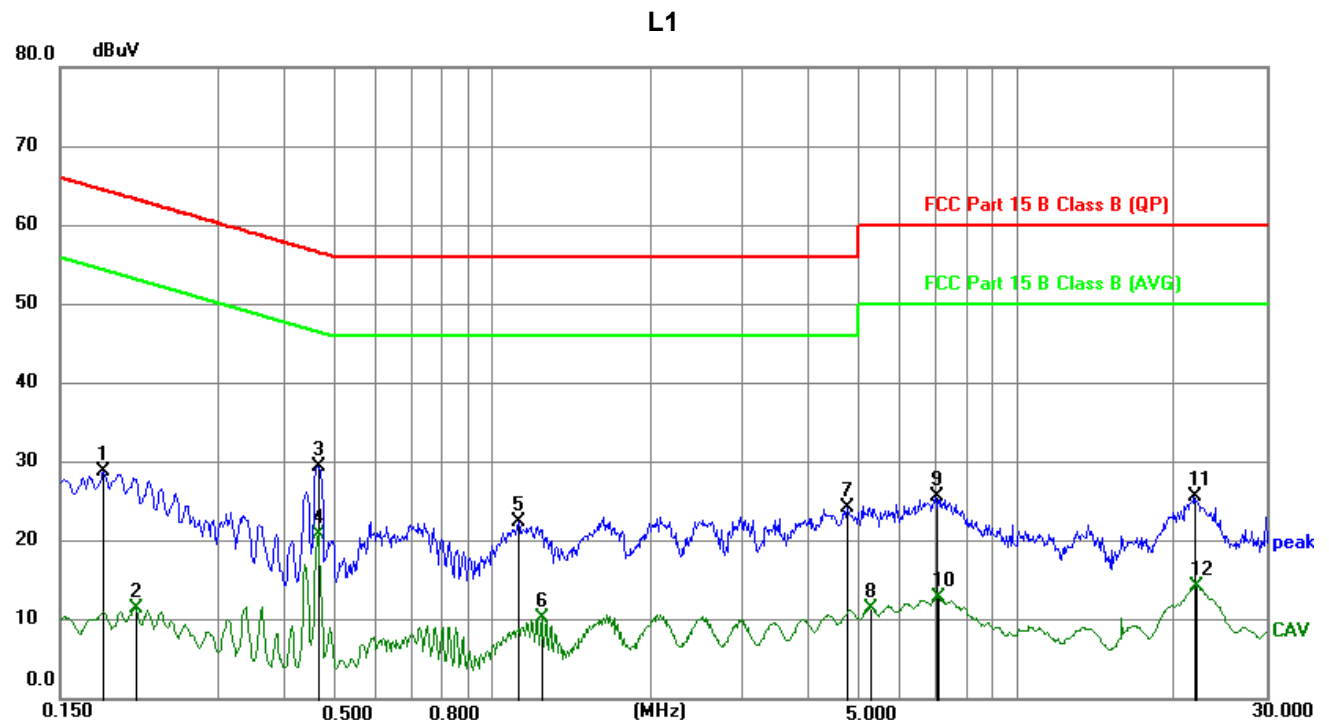
Critical Freqs(Suprious Emission out of band)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2485.014	41.16	-0.19	40.97	74.00	-33.03	peak	171	269
2	2485.014	30.52	-0.19	30.33	54.00	-23.67	AVG	171	269
3	4960.000	40.62	6.16	46.78	74.00	-27.22	peak	100	217
4	4960.000	30.41	6.16	36.57	54.00	-17.43	AVG	100	217
5	7440.000	36.59	12.91	49.50	74.00	-24.50	peak	123	45
6	7440.000	25.03	12.91	37.94	54.00	-16.06	AVG	123	45

Appendix A.6: Test Results of Conducted Emission

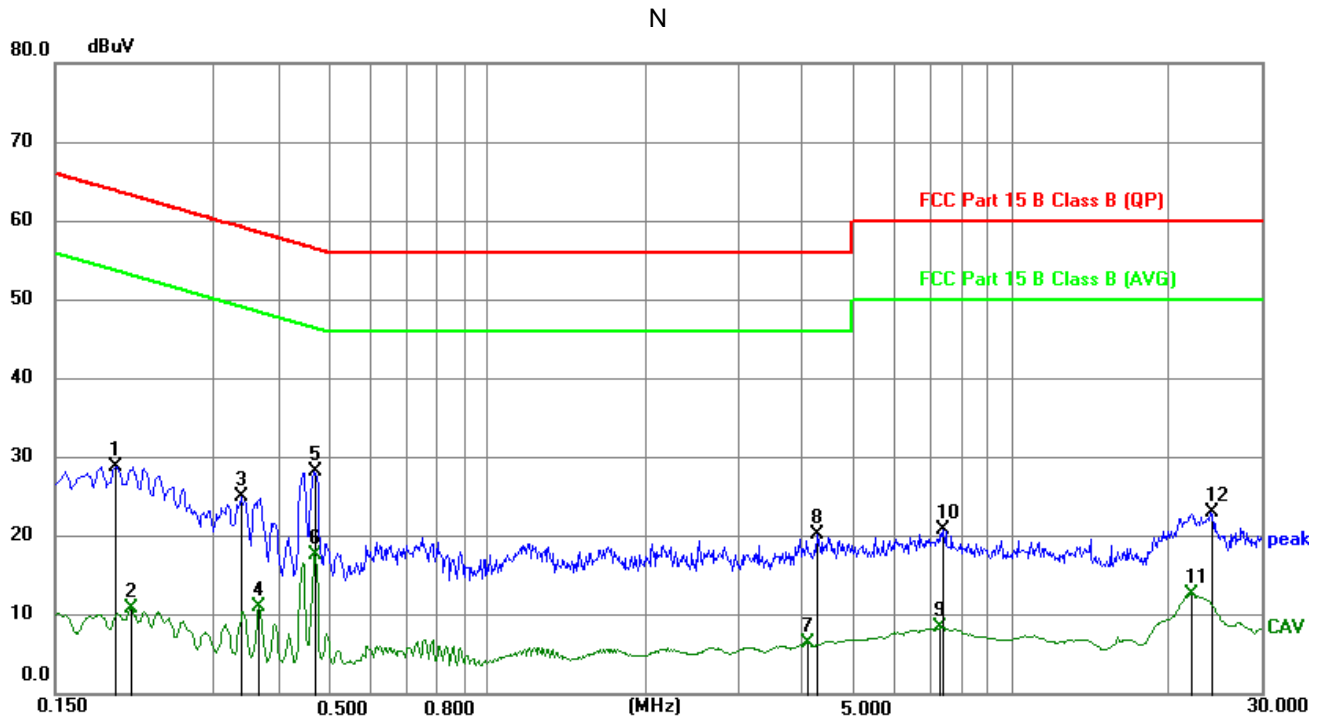
EUT Information

EUT Name: Foldable Bluetooth Stereo Noise Reduction Headphone
Model: BN982
Test mode: Charging
Test Voltage: DC 5V From USB port
Test By: Jim Xu
Review By: Scott He



Critical Freqs

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1815	18.66	10.15	28.81	64.42	-35.61	peak
2	0.2085	1.29	10.15	11.44	53.26	-41.82	AVG
3	0.4650	19.32	10.11	29.43	56.60	-27.17	peak
4	0.4672	10.66	10.11	20.77	46.56	-25.79	AVG
5	1.1242	12.44	10.04	22.48	56.00	-33.52	peak
6	1.2458	0.16	10.05	10.21	46.00	-35.79	AVG
7	4.7647	14.13	10.07	24.20	56.00	-31.80	peak
8	5.2800	1.53	10.04	11.57	50.00	-38.43	AVG
9	7.0418	15.51	10.03	25.54	60.00	-34.46	peak
10	7.0913	2.80	10.03	12.83	50.00	-37.17	AVG
11	21.9278	15.27	10.38	25.65	60.00	-34.35	peak
12	22.1460	3.81	10.38	14.19	50.00	-35.81	AVG



Critical Freqs

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1949	18.60	10.14	28.74	63.83	-35.09	peak
2	0.2085	0.73	10.14	10.87	53.26	-42.39	AVG
3	0.3390	14.91	10.14	25.05	59.23	-34.18	peak
4	0.3682	0.91	10.12	11.03	48.54	-37.51	AVG
5	0.4695	18.13	10.11	28.24	56.52	-28.28	peak
6	0.4695	7.64	10.11	17.75	46.52	-28.77	AVG
7	4.1100	-3.58	10.10	6.52	46.00	-39.48	AVG
8	4.2810	10.25	10.08	20.33	56.00	-35.67	peak
9	7.3635	-1.51	10.04	8.53	50.00	-41.47	AVG
10	7.4355	10.74	10.04	20.78	60.00	-39.22	peak
11	22.1415	2.32	10.40	12.72	50.00	-37.28	AVG
12	24.0338	12.73	10.41	23.14	60.00	-36.86	peak