

Appendix B for test data:**1.Radiated Spurious Emission and Restricted Band**

Test Result

Radiated Spurious Emission:**For 9 kHz ~ 30 MHz**

Note:

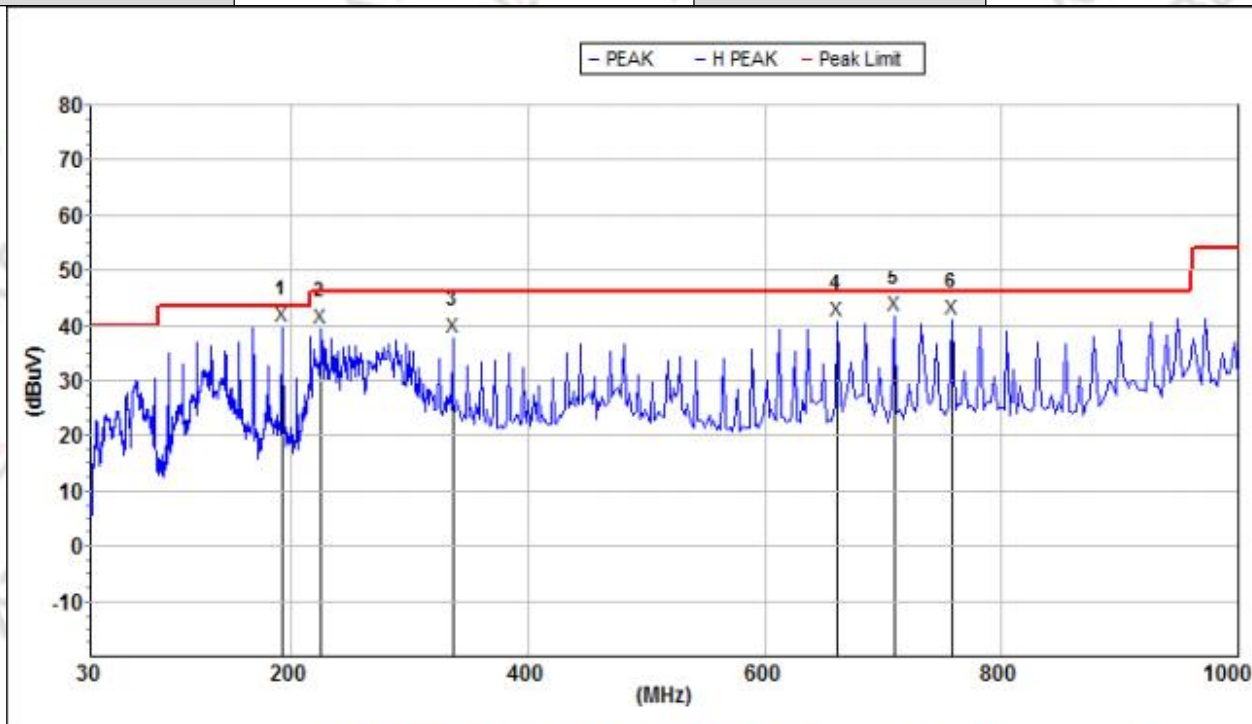
- 1.The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.
- 2.The all data rate modes had been test, but only worse test data was recorded in the test report.

Below 1GHz:

Note:

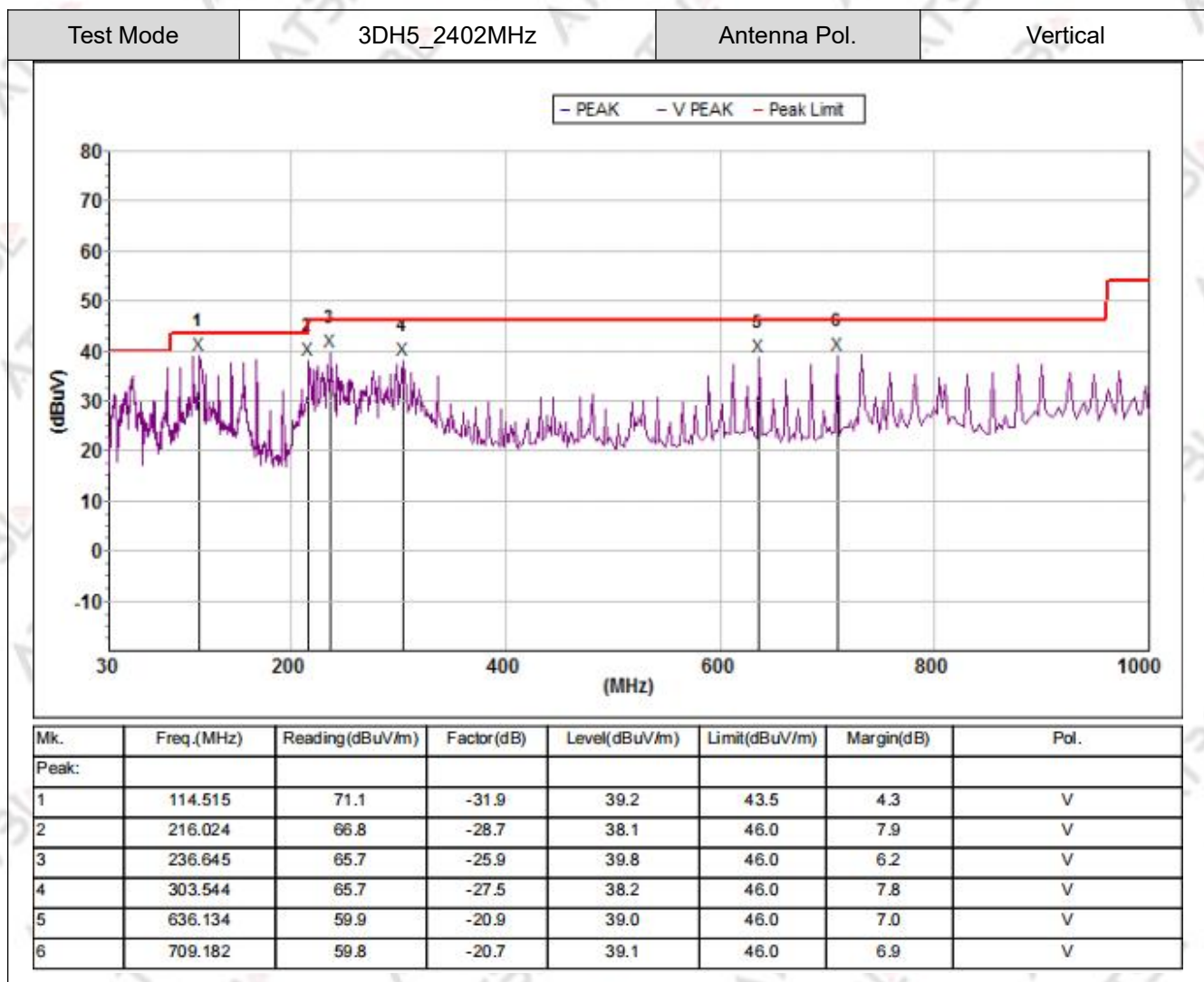
- 1.All modes have been tested, only worst (3DH5-2402MHz)mode was recorded in the test report.
- 2.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
- 3.Correction Factor (dB/m) = Antenna Pol. Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
- 4.The emission levels of other frequencies were less than 20dB margin against the limit.
- 5.Margin value = Emission level-Limit value.

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5_2402MHz	Antenna Pol.	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	191.745	74.3	-34.5	39.8	43.5	3.7	H
2	225.308	68.2	-28.8	39.4	46.0	6.6	H
3	336.035	63.3	-25.5	37.8	46.0	8.2	H
4	661.150	61.6	-20.8	40.8	46.0	5.2	H
5	709.182	62.6	-20.7	41.9	46.0	4.1	H
6	758.041	60.1	-19.0	41.1	46.0	4.9	H

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
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1GHz-18GHz:

Shanghai ATBL Technology Co., Ltd..

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Tel:+86(0)21-51298625

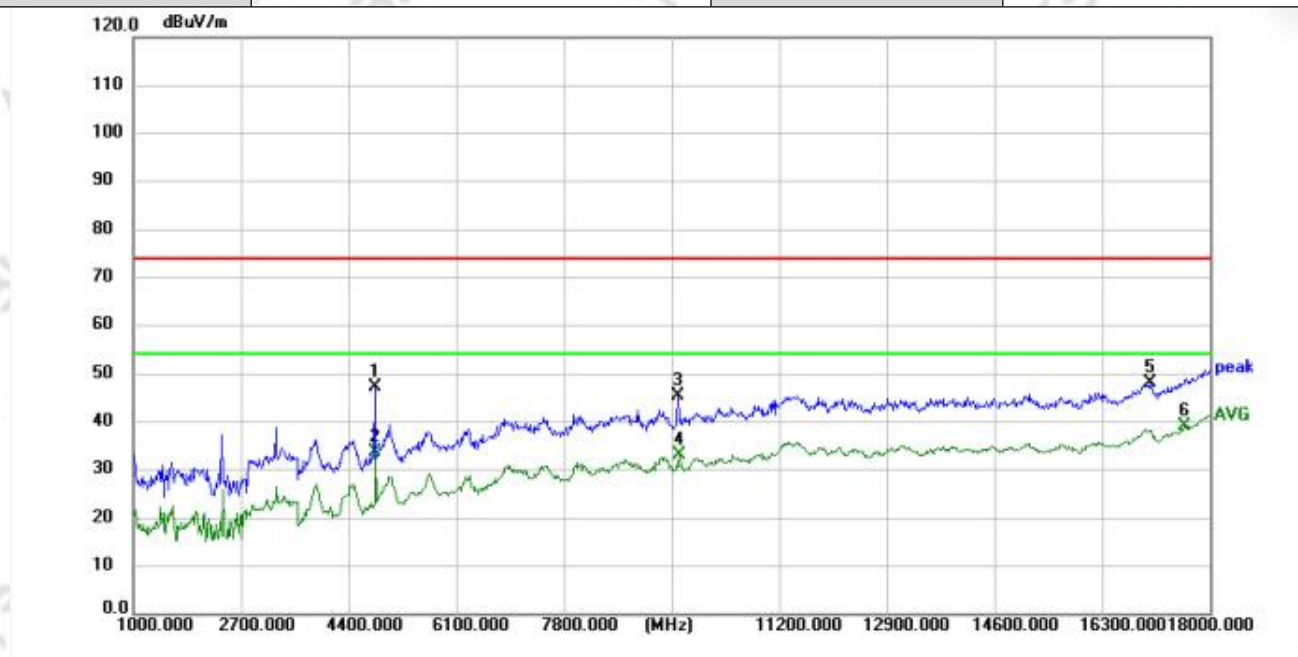
Web:www.atbl-lab.com

Email:atbl@atbl-lab.com

Note:

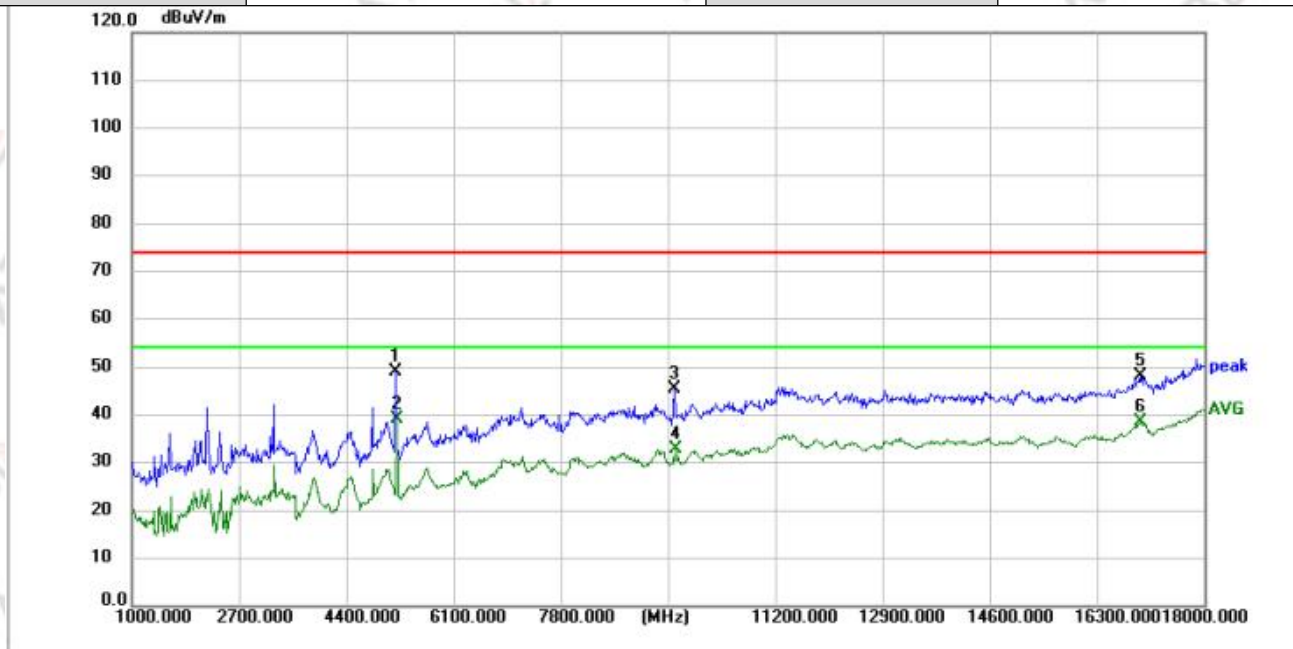
- 1.All modes have been tested, only worst (3DH5)mode was recorded in the test report.
- 2.In frequency ranges 18 ~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 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 Pol. Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
6. Margin value = Emission level-Limit value.
- 7.While performing the testing, the notch filter is used for avoiding test instrument overload.

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2402MHz	Antenna Pol.	Horizontal



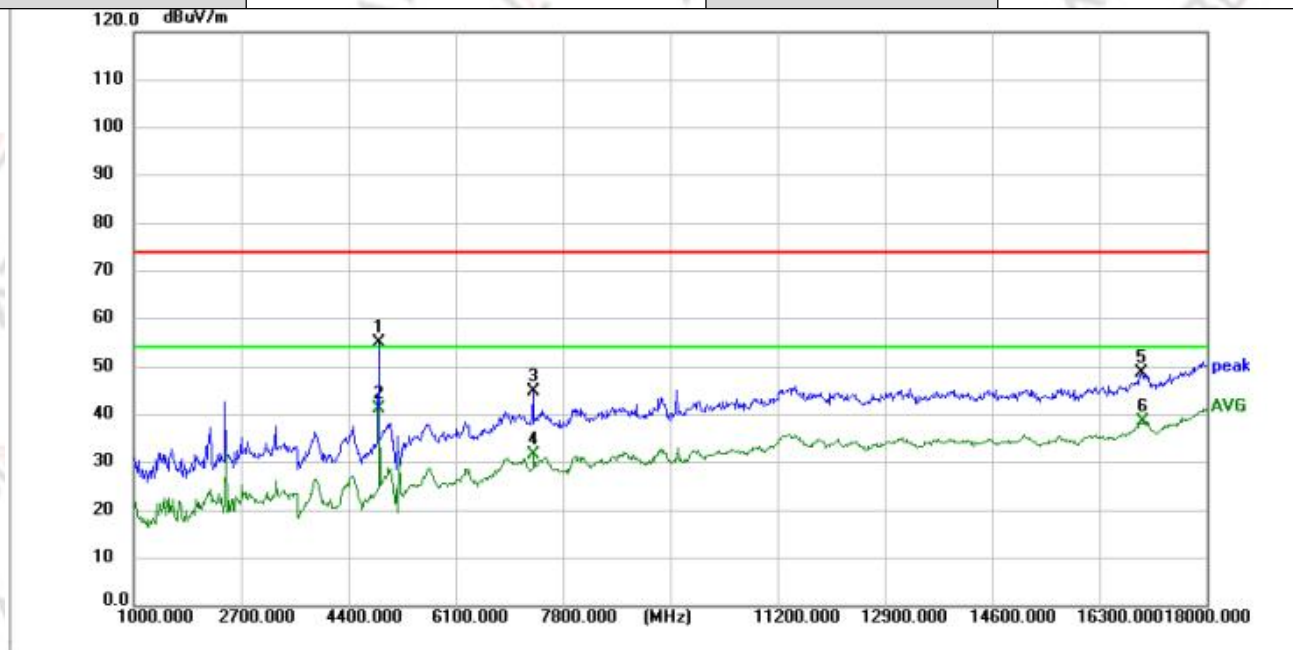
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4808.000	56.17	-8.89	47.28	74.00	-26.72	peak
2	4825.000	42.52	-8.81	33.71	54.00	-20.29	AVG
3	9602.000	45.11	0.32	45.43	74.00	-28.57	peak
4	9619.000	32.84	0.34	33.18	54.00	-20.82	AVG
5	17048.000	42.32	5.84	48.16	74.00	-25.84	peak
6 *	17592.000	30.85	8.38	39.23	54.00	-14.77	AVG

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2402MHz	Antenna Pol.	Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5182.000	57.53	-8.36	49.17	74.00	-24.83	peak
2 *	5199.000	47.64	-8.38	39.26	54.00	-14.74	AVG
3	9602.000	45.17	0.32	45.49	74.00	-28.51	peak
4	9619.000	32.60	0.34	32.94	54.00	-21.06	AVG
5	16980.000	42.57	5.64	48.21	74.00	-25.79	peak
6	16980.000	32.89	5.64	38.53	54.00	-15.47	AVG

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2441MHz	Antenna Pol.	Horizontal



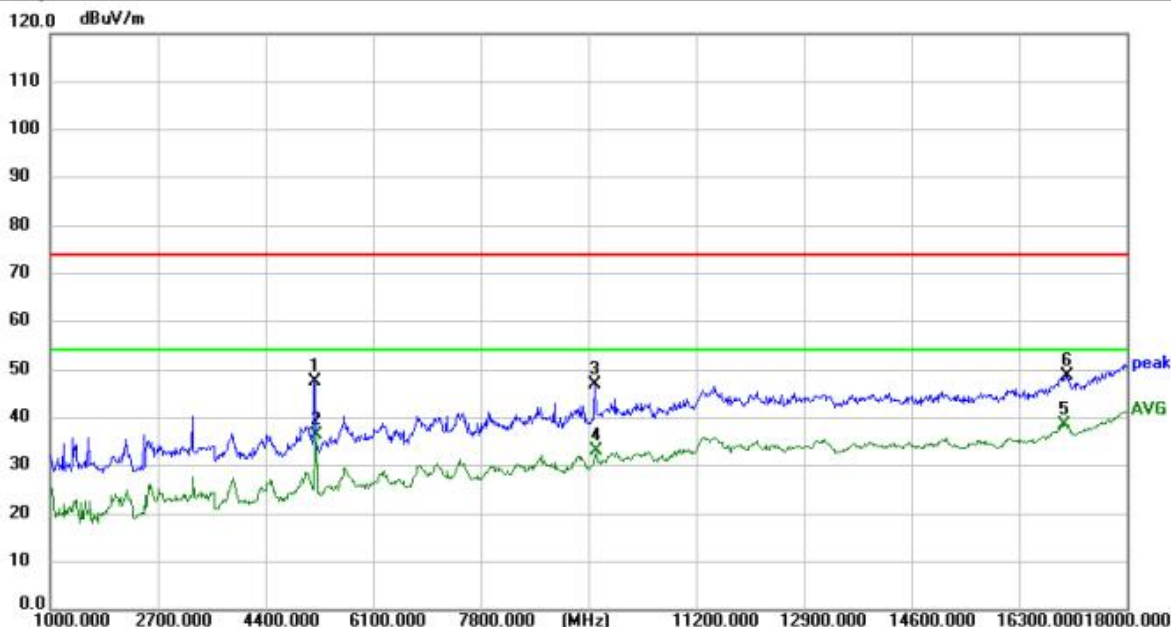
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4876.000	63.59	-8.62	54.97	74.00	-19.03	peak
2 *	4893.000	49.72	-8.56	41.16	54.00	-12.84	AVG
3	7324.000	47.72	-2.99	44.73	74.00	-29.27	peak
4	7341.000	34.65	-2.98	31.67	54.00	-22.33	AVG
5	16963.000	43.26	5.60	48.86	74.00	-25.14	peak
6	16997.000	32.78	5.68	38.46	54.00	-15.54	AVG

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2441MHz	Antenna Pol.	Vertical



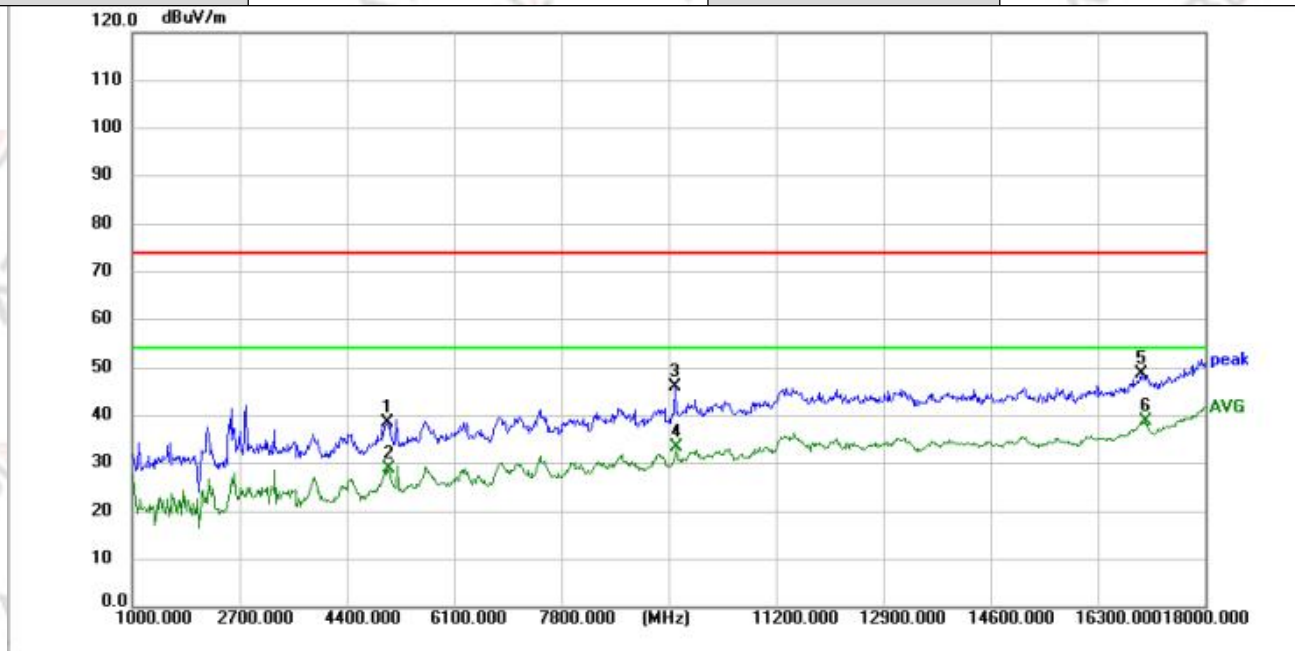
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5199.000	51.01	-8.38	42.63	74.00	-31.37	peak
2	5216.000	39.59	-8.35	31.24	54.00	-22.76	AVG
3	9602.000	46.12	0.32	46.44	74.00	-27.56	peak
4	9619.000	32.93	0.34	33.27	54.00	-20.73	AVG
5 *	16997.000	32.89	5.68	38.57	54.00	-15.43	AVG
6	17014.000	42.87	5.73	48.60	74.00	-25.40	peak

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2480MHz	Antenna Pol.	Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5182.000	55.77	-8.36	47.41	74.00	-26.59	peak
2	5199.000	44.91	-8.38	36.53	54.00	-17.47	AVG
3	9602.000	46.74	0.32	47.06	74.00	-26.94	peak
4	9619.000	32.92	0.34	33.26	54.00	-20.74	AVG
5 *	17014.000	32.93	5.73	38.66	54.00	-15.34	AVG
6	17065.000	42.87	5.89	48.76	74.00	-25.24	peak

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2480MHz	Antenna Pol.	Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5046.000	46.89	-8.22	38.67	74.00	-35.33	peak
2	5063.000	37.07	-8.23	28.84	54.00	-25.16	AVG
3	9602.000	45.82	0.32	46.14	74.00	-27.86	peak
4	9619.000	33.00	0.34	33.34	54.00	-20.66	AVG
5	16980.000	43.08	5.64	48.72	74.00	-25.28	peak
6 *	17065.000	32.81	5.89	38.70	54.00	-15.30	AVG

18GHz-40GHz:

Note:

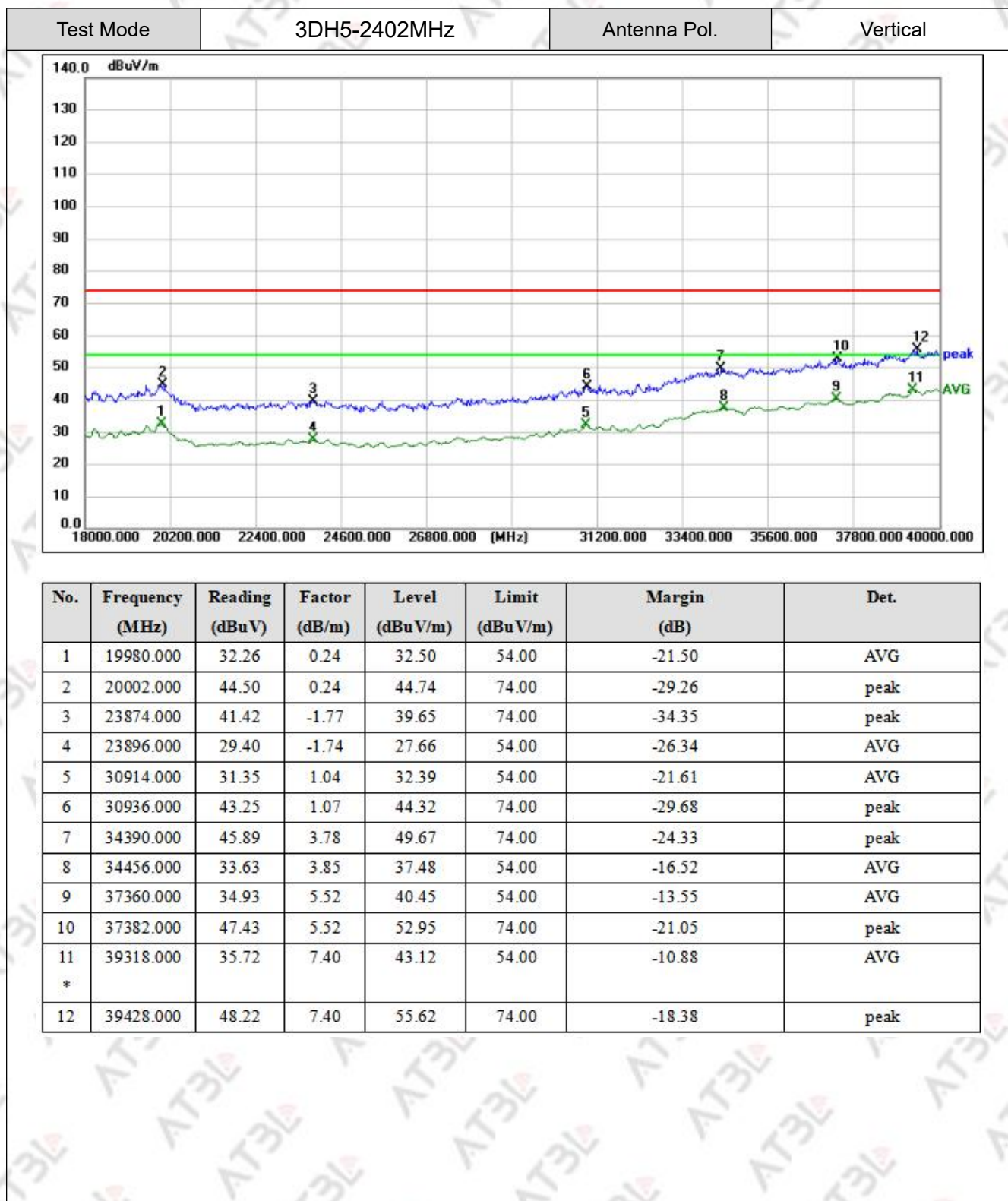
All modes have been tested, only worst (3DH5-2402MHz)mode was recorded in the test report.

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2402MHz	Antenna Pol.	Horizontal



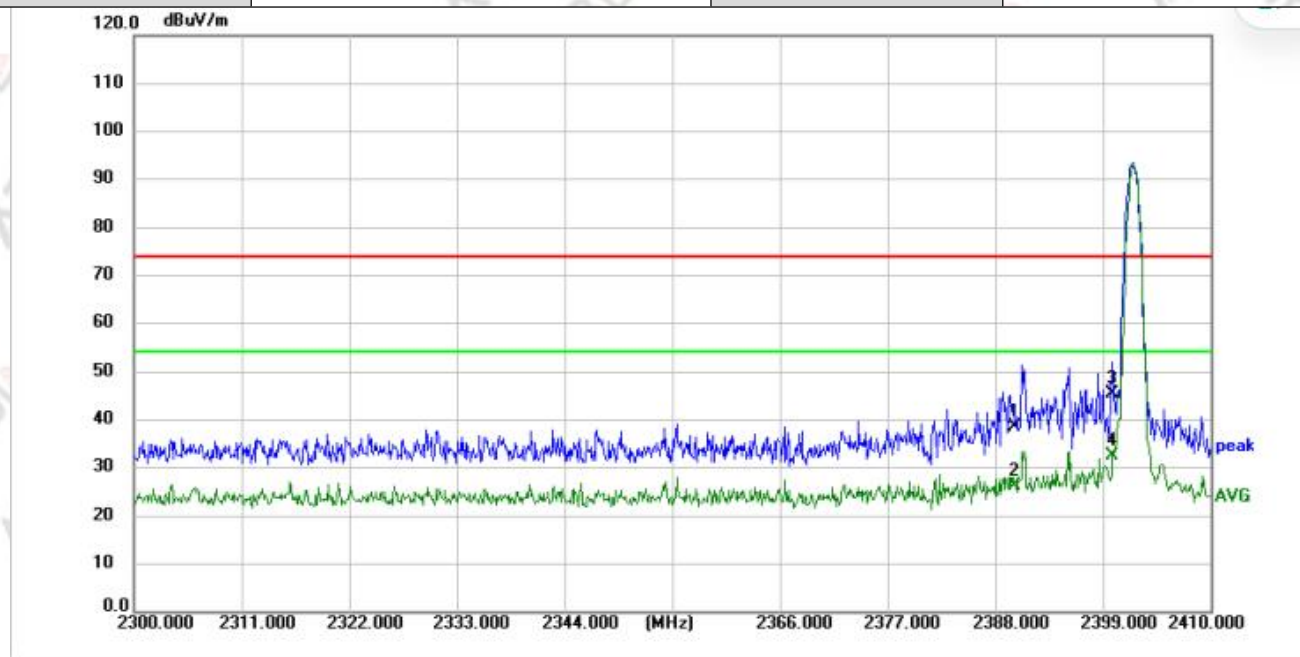
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	19584.000	44.54	-0.35	44.19	74.00	-29.81	peak
2	19914.000	32.30	-0.11	32.19	54.00	-21.81	AVG
3	23214.000	42.02	-2.53	39.49	74.00	-34.51	peak
4	23236.000	30.18	-2.52	27.66	54.00	-26.34	AVG
5	27658.000	42.32	-1.54	40.78	74.00	-33.22	peak
6	28252.000	30.00	-1.36	28.64	54.00	-25.36	AVG
7	30892.000	43.33	0.61	43.94	74.00	-30.06	peak
8	30914.000	31.25	0.65	31.90	54.00	-22.10	AVG
9	34456.000	33.71	3.64	37.35	54.00	-16.65	AVG
10	34544.000	45.63	3.76	49.39	74.00	-24.61	peak
11	39340.000	35.67	6.94	42.61	54.00	-11.39	AVG
*							
12	39450.000	47.75	6.98	54.73	74.00	-19.27	peak

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
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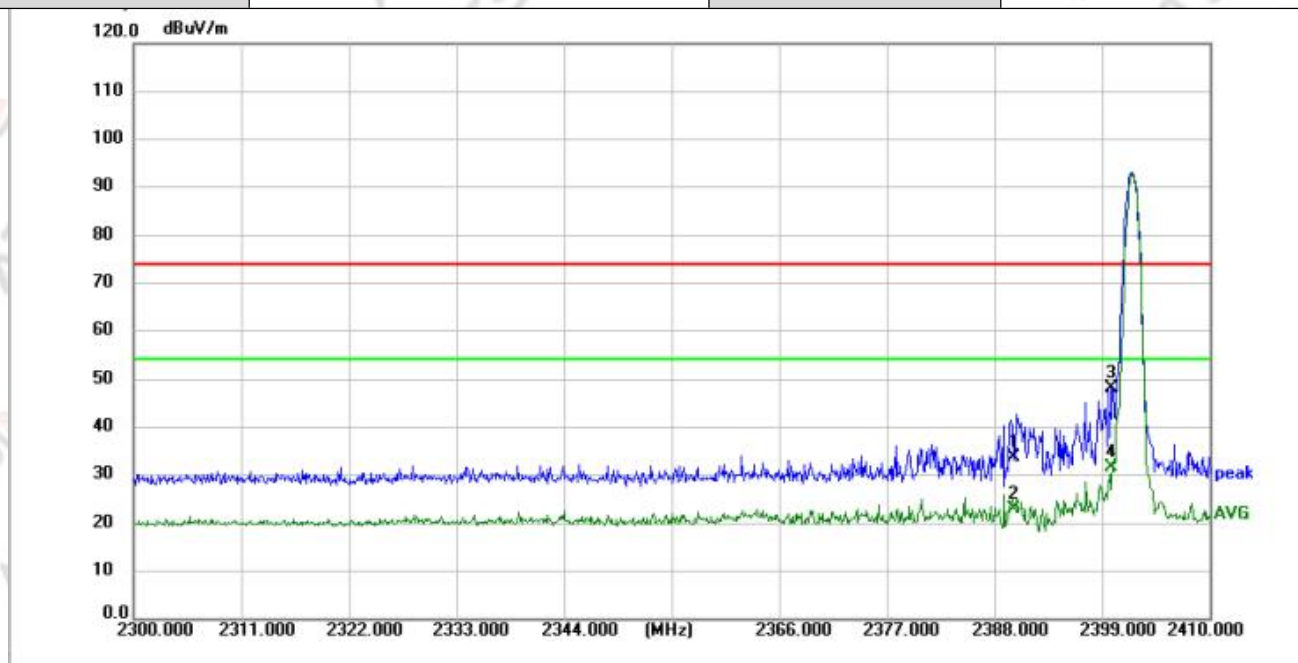
Restricted Band:

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5--2402MHz	Antenna Pol.	Horizontal



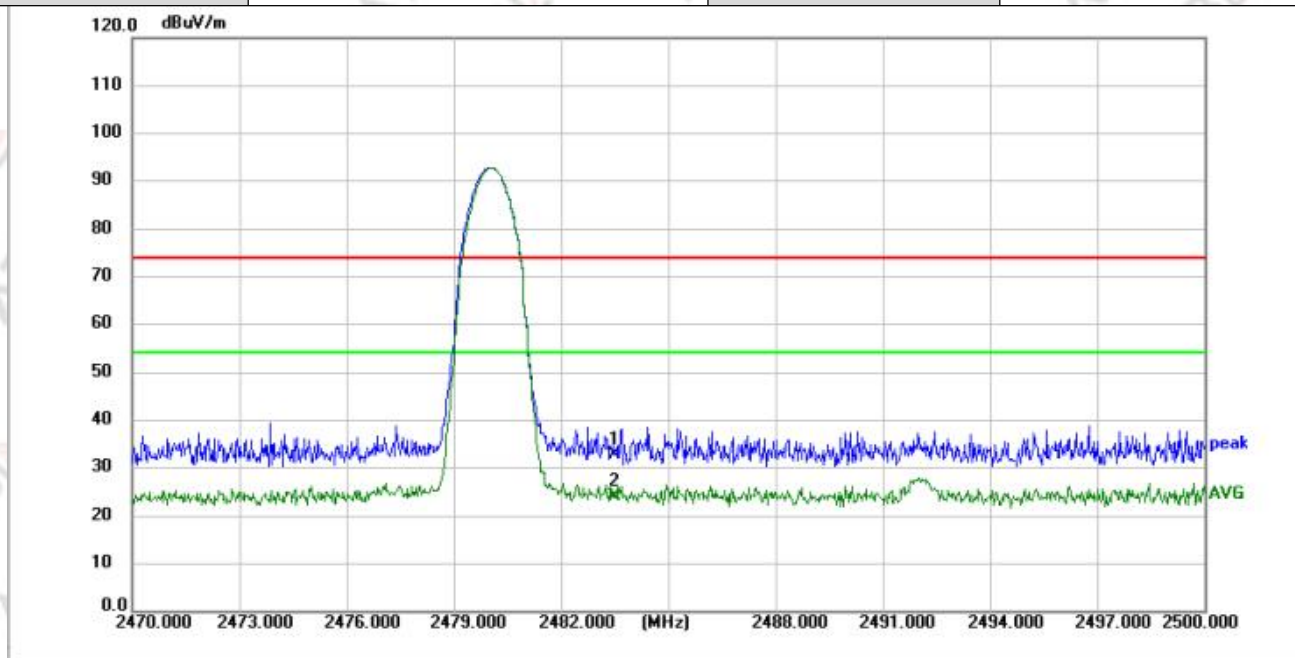
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	58.17	-19.70	38.47	74.00	-35.53	peak
2	2390.000	45.92	-19.70	26.22	54.00	-27.78	AVG
3	2400.000	65.08	-19.68	45.40	74.00	-28.60	peak
4 *	2400.000	52.21	-19.68	32.53	54.00	-21.47	AVG

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2402MHz	Antenna Pol.	Vertical



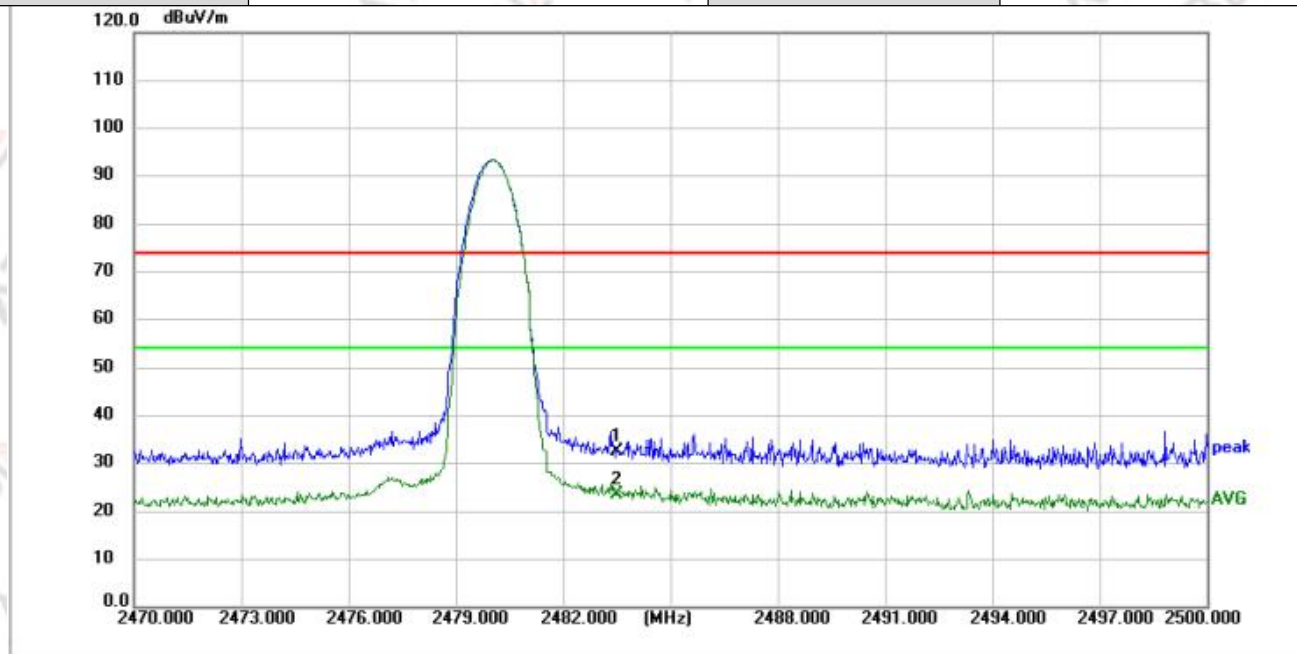
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	53.38	-19.70	33.68	74.00	-40.32	peak
2	2390.000	42.76	-19.70	23.06	54.00	-30.94	AVG
3	2400.000	67.89	-19.68	48.21	74.00	-25.79	peak
4 *	2400.000	51.46	-19.68	31.78	54.00	-22.22	AVG

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5--2480MHz	Antenna Pol.	Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	51.99	-19.07	32.92	74.00	-41.08	peak
2 *	2483.500	43.37	-19.07	24.30	54.00	-29.70	AVG

EUT	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2480MHz	Antenna Pol.	Vertical



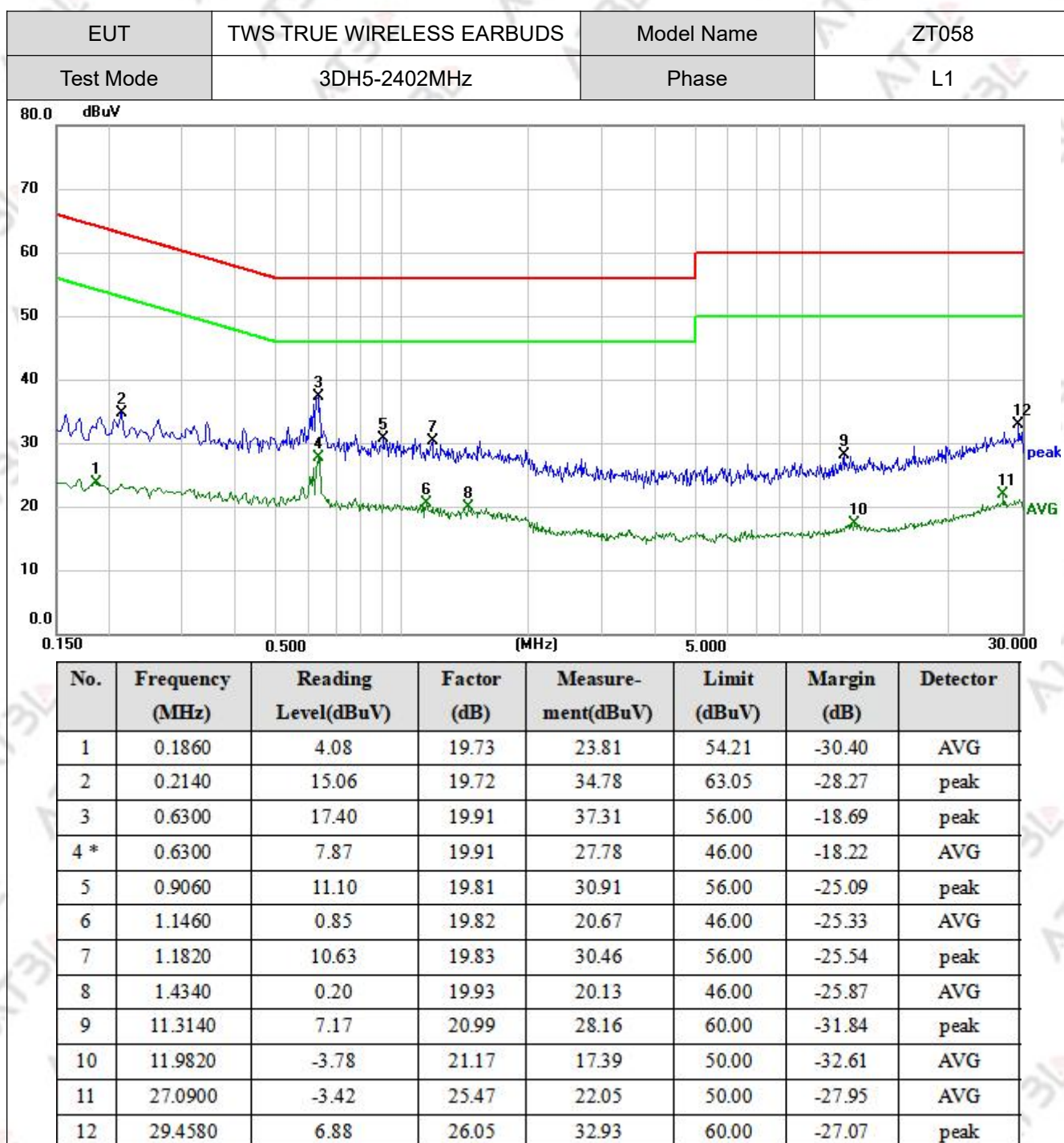
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)
1	2483.500	51.72	-19.07	32.65	74.00	-41.35	peak	150
2 *	2483.500	42.70	-19.07	23.63	54.00	-30.37	AVG	150

9.AC Power-Line Conducted Emission

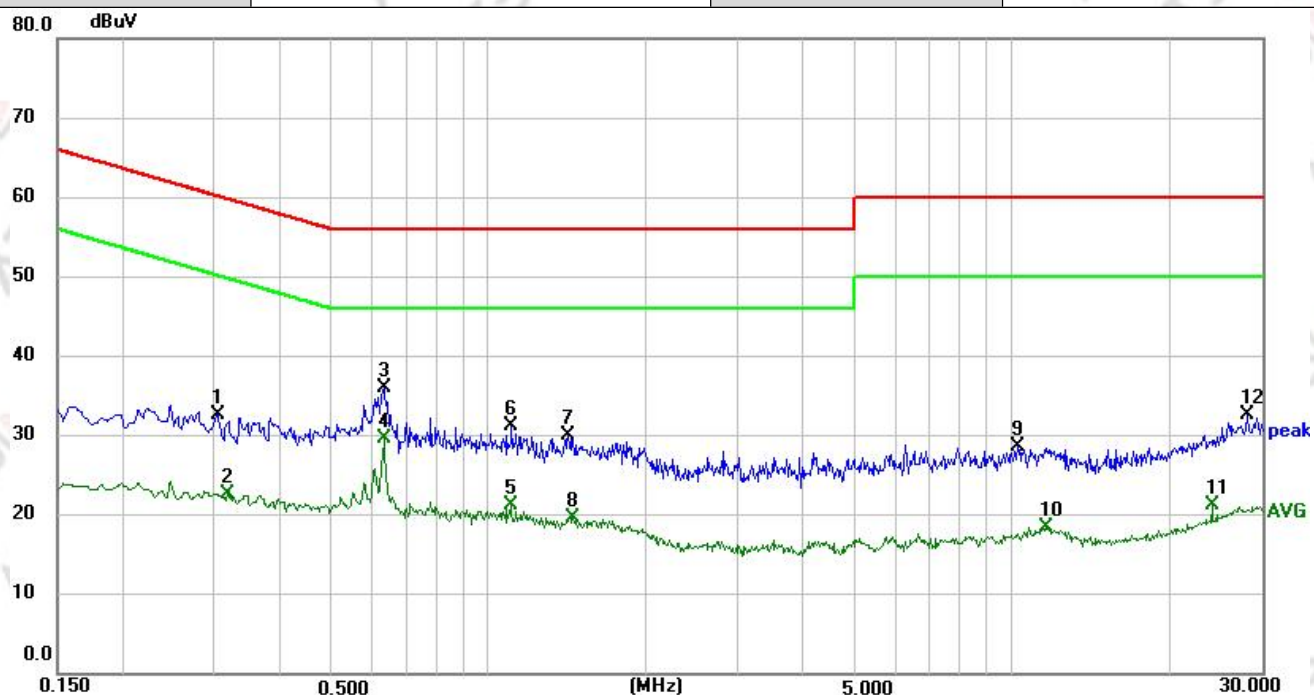
Test Result

Note:

- 1.All modes have been tested, only worst mode(3DH5-2402MHz) 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	TWS TRUE WIRELESS EARBUDS	Model Name	ZT058
Test Mode	3DH5-2402MHz	Phase	N



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measurement(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3020	12.69	19.89	32.58	60.19	-27.61	peak
2	0.3166	2.73	19.87	22.60	49.80	-27.20	AVG
3	0.6300	16.38	19.68	36.06	56.00	-19.94	peak
4 *	0.6300	9.90	19.68	29.58	46.00	-16.42	AVG
5	1.1020	1.43	19.79	21.22	46.00	-24.78	AVG
6	1.1060	11.37	19.79	31.16	56.00	-24.84	peak
7	1.4220	10.13	19.89	30.02	56.00	-25.98	peak
8	1.4540	-0.17	19.90	19.73	46.00	-26.27	AVG
9	10.2740	7.81	20.86	28.67	60.00	-31.33	peak
10	11.5620	-2.55	21.04	18.49	50.00	-31.51	AVG
11	24.0540	-3.15	24.32	21.17	50.00	-28.83	AVG
12	28.1220	7.24	25.39	32.63	60.00	-27.37	peak