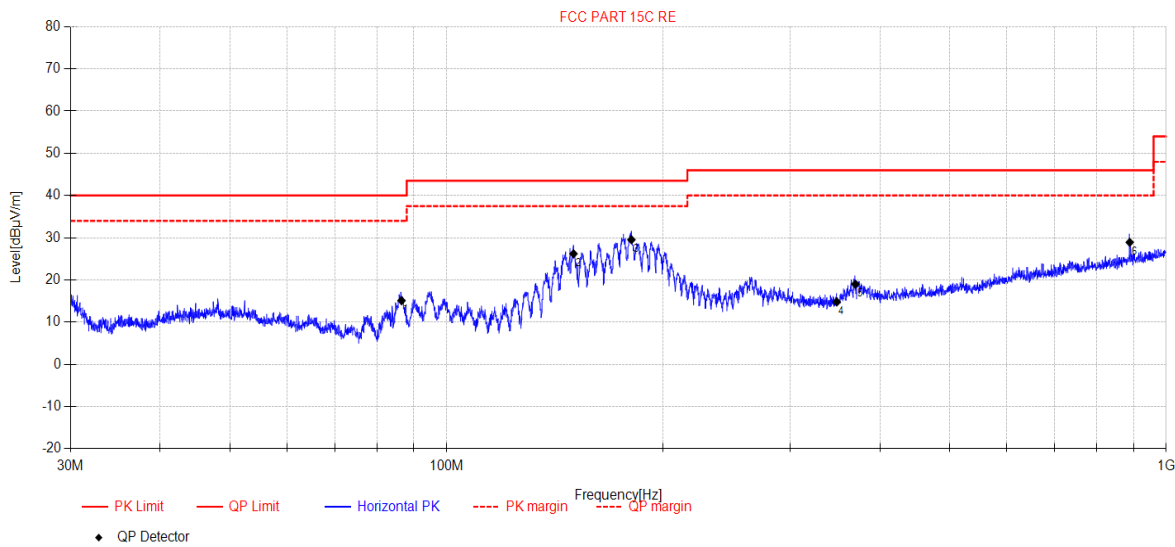


TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-13 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\FCC BELOW 1G\20230626-011737_H
Memo: BLE 2M R



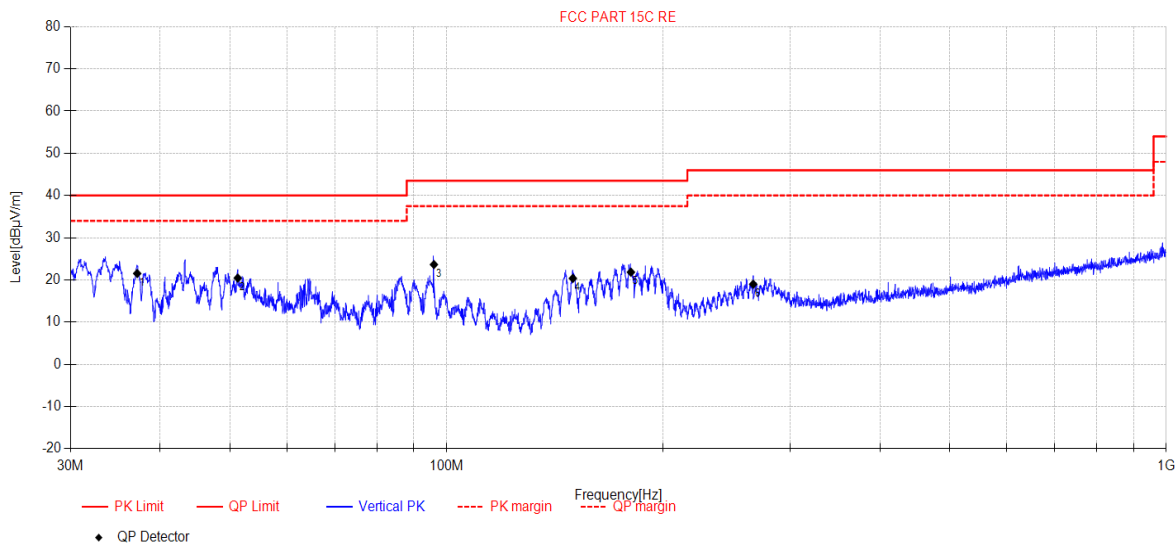
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	86.55	33.94	8.51	4.90	-32.25	15.10	40.00	24.90	QP	Horizontal
2	150.07	45.55	7.51	5.32	-32.18	26.20	43.50	17.30	QP	Horizontal
3	180.58	46.94	9.26	5.57	-32.24	29.53	43.50	13.97	QP	Horizontal
4	348.35	26.14	14.57	6.42	-32.34	14.79	46.00	31.21	QP	Horizontal
5	369.74	29.93	14.89	6.53	-32.35	19.00	46.00	27.00	QP	Horizontal
6	889.50	30.51	22.39	8.30	-32.29	28.91	46.00	17.09	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-13 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\FCC BELOW 1G\20230626-011831_V
Memo: BLE 2M R



Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	37.15	37.73	11.53	4.56	-32.29	21.53	40.00	18.47	QP	Vertical
2	51.26	34.92	13.07	4.73	-32.28	20.44	40.00	19.56	QP	Vertical
3	96.01	40.37	10.50	5.02	-32.24	23.65	43.50	19.85	QP	Vertical
4	149.75	39.73	7.50	5.32	-32.18	20.37	43.50	23.13	QP	Vertical
5	180.33	39.28	9.23	5.57	-32.24	21.84	43.50	21.66	QP	Vertical
6	266.68	32.6	12.63	6.01	-32.25	18.99	46.00	27.01	QP	Vertical

Note:

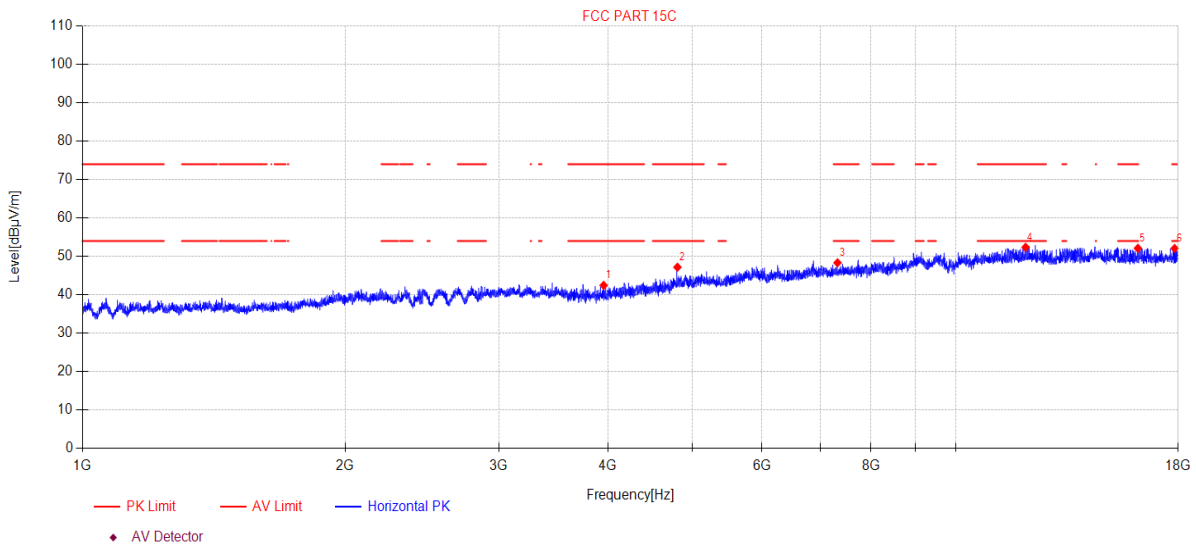
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1 GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\27
Memo: BLE 1M 2402 L

Test Graph



Suspected Data List

N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3954.33	47.38	5.84	30.61	-41.37	42.46	74.00	31.54	PK	Horizontal
2	4803.36	48.56	7.47	32.31	-41.16	47.18	74.00	26.82	PK	Horizontal
3	7326.93	45.21	7.63	36.50	-41.00	48.34	74.00	25.66	PK	Horizontal
4	12031.09	41.79	10.54	38.96	-38.93	52.36	74.00	21.64	PK	Horizontal
5	16179.22	39.60	15.17	37.72	-40.38	52.11	74.00	21.89	PK	Horizontal
6	17823.99	39.11	12.92	40.67	-40.63	52.07	74.00	21.93	PK	Horizontal

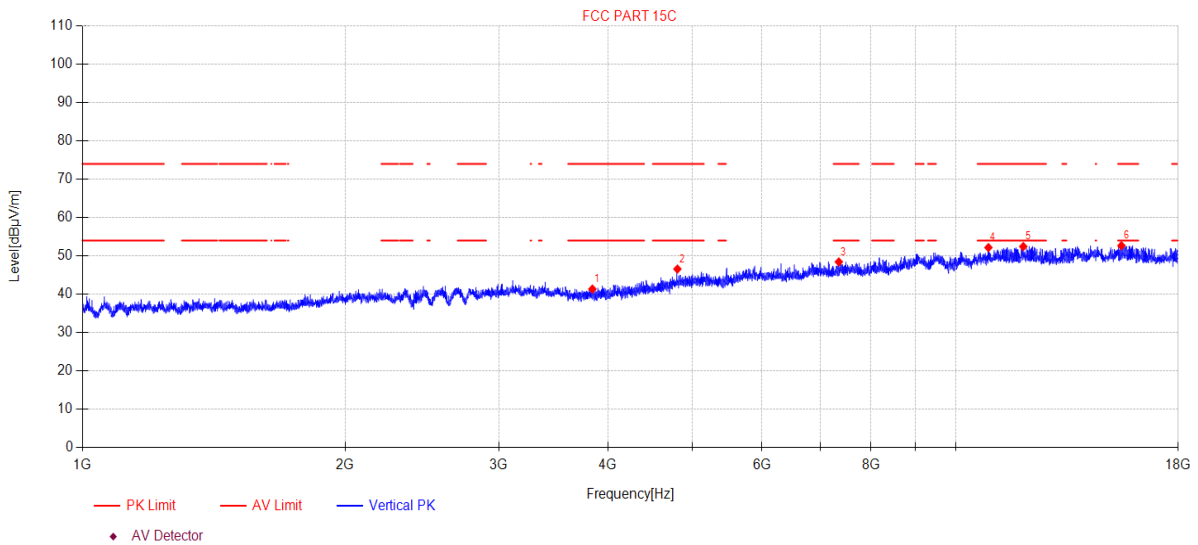
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\28
Memo: BLE 1M 2402 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3838.36	46.47	5.81	30.38	-41.30	41.36	74.00	32.64	PK	Vertical
2	4803.36	47.96	7.47	32.31	-41.16	46.58	74.00	27.42	PK	Vertical
3	7352.38	45.31	7.63	36.50	-41.00	48.44	74.00	25.56	PK	Vertical
4	10908.26	44.01	9.58	39.10	-40.51	52.18	74.00	21.82	PK	Vertical
5	11958.29	42.06	10.50	38.86	-38.97	52.45	74.00	21.55	PK	Vertical
6	15492.82	40.52	13.58	38.61	-40.04	52.67	74.00	21.33	PK	Vertical

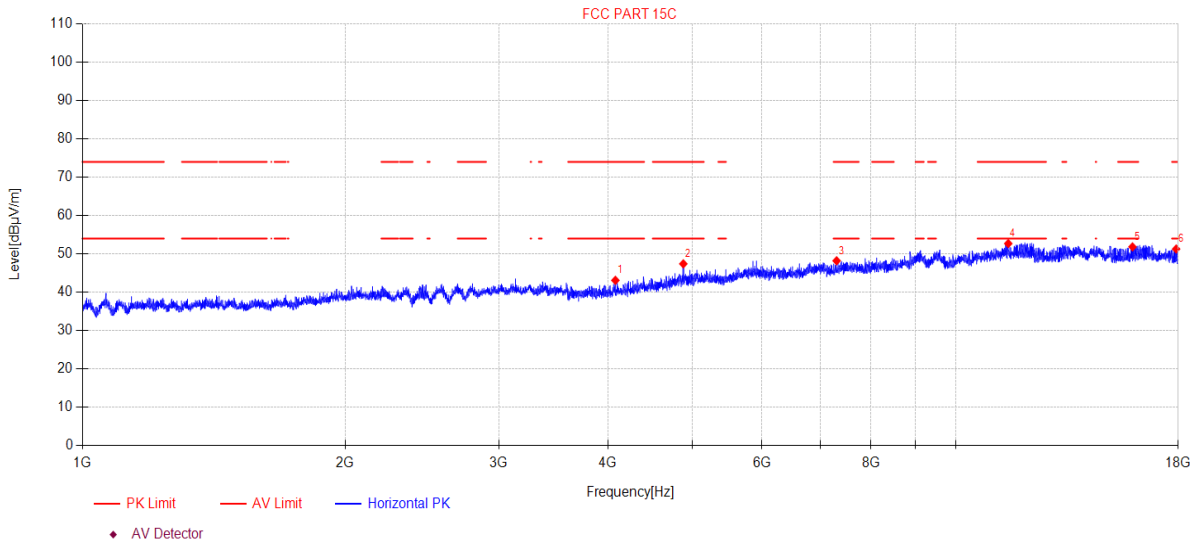
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\29
Memo: BLE 1M 2440 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4078.53	47.63	6.01	30.86	-41.38	43.12	74.00	30.88	PK	Horizontal
2	4878.91	48.36	7.63	32.56	-41.14	47.41	74.00	26.59	PK	Horizontal
3	7310.00	45.08	7.63	36.50	-41.00	48.21	74.00	25.79	PK	Horizontal
4	11494.07	43.31	10.09	39.01	-39.71	52.70	74.00	21.30	PK	Horizontal
5	15951.71	38.54	15.66	38.00	-40.37	51.83	74.00	22.17	PK	Horizontal
6	17896.26	37.76	13.01	41.17	-40.66	51.28	74.00	22.72	PK	Horizontal

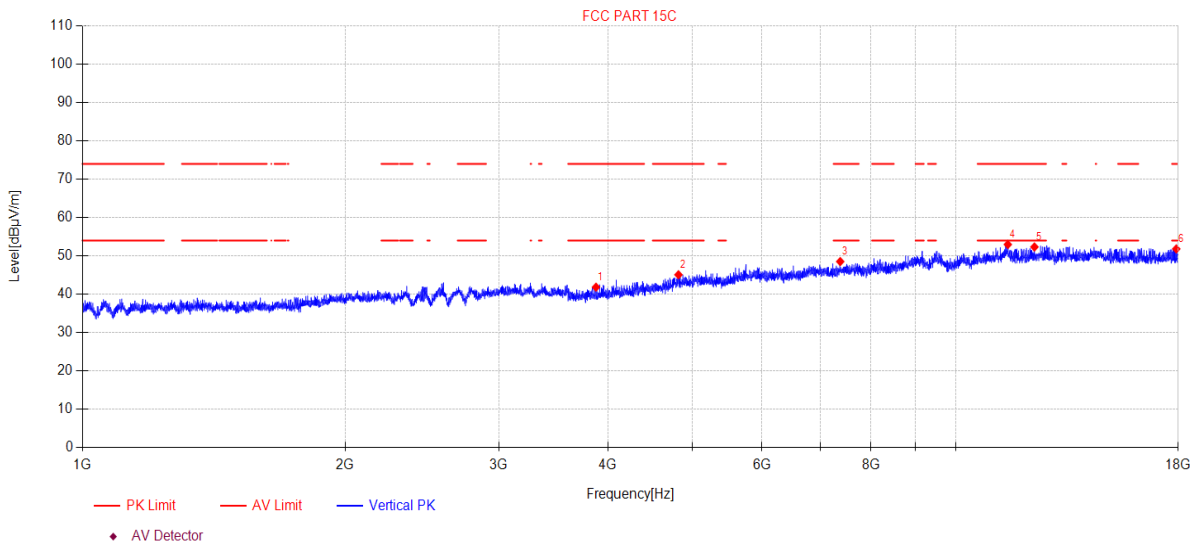
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\30
Memo: BLE 1M 2440 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3875.14	46.92	5.82	30.45	-41.33	41.86	74.00	32.14	PK	Vertical
2	4817.26	46.37	7.50	32.37	-41.15	45.09	74.00	28.91	PK	Vertical
3	7380.06	45.39	7.64	36.50	-41.00	48.53	74.00	25.47	PK	Vertical
4	11480.79	43.61	10.08	39.02	-39.73	52.98	74.00	21.02	PK	Vertical
5	12316.06	41.92	10.54	39.10	-39.22	52.34	74.00	21.66	PK	Vertical
6	17901.43	38.26	13.01	41.21	-40.66	51.82	74.00	22.18	PK	Vertical

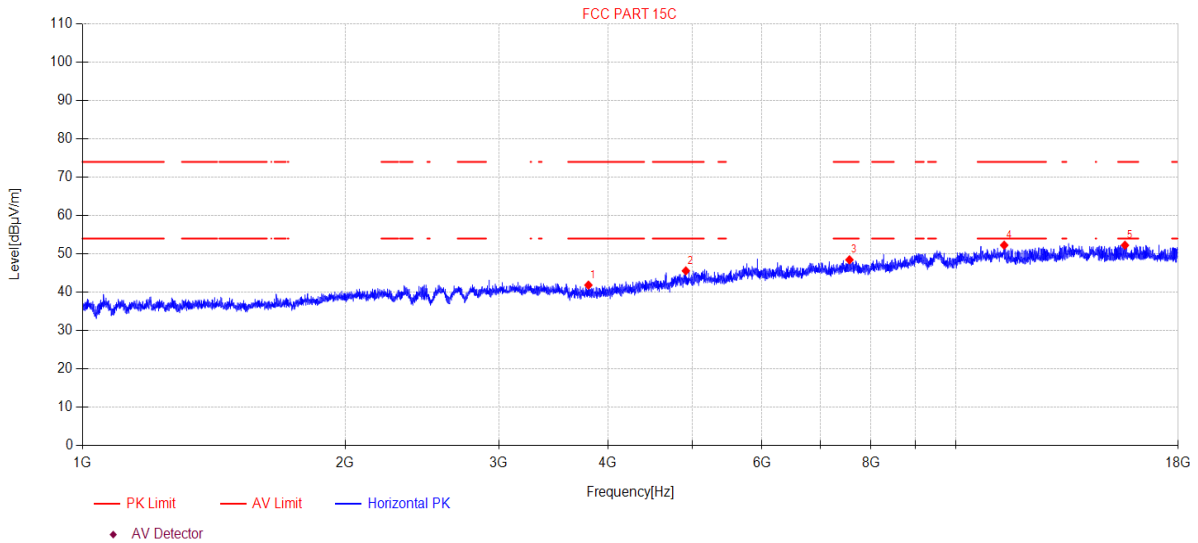
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\31
Memo: BLE 1M 2480 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3798.63	47.05	5.81	30.29	-41.28	41.87	74.00	32.13	PK	Horizontal
2	4911.45	46.38	7.69	32.65	-41.13	45.59	74.00	28.41	PK	Horizontal
3	7561.41	45.41	7.65	36.40	-41.00	48.46	74.00	25.54	PK	Horizontal
4	11371.81	43.11	9.98	39.10	-39.91	52.28	74.00	21.72	PK	Horizontal
5	15636.76	39.83	14.23	38.36	-40.15	52.27	74.00	21.73	PK	Horizontal

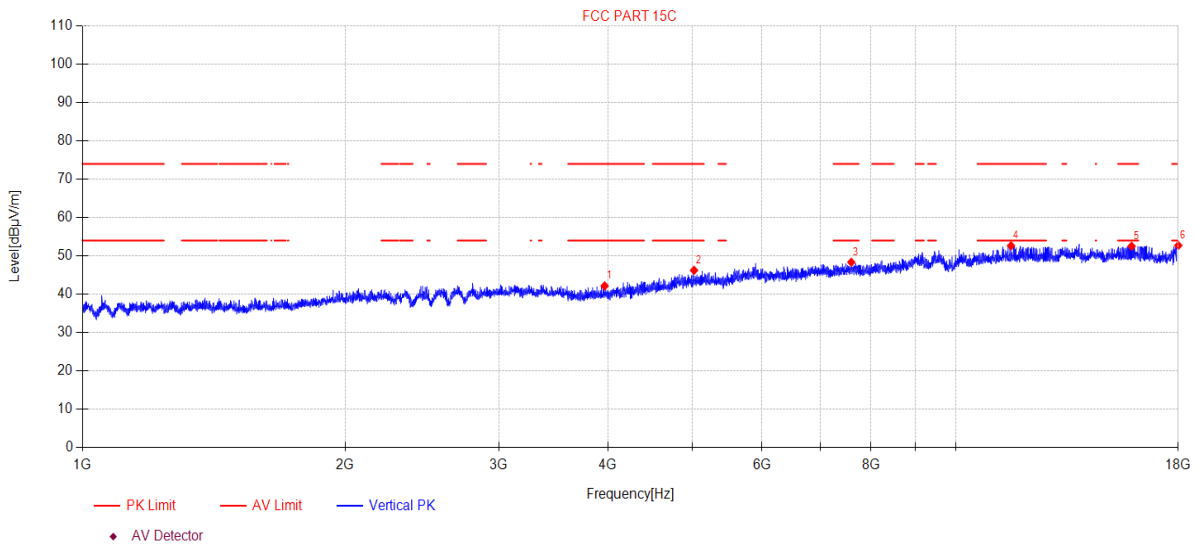
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\32
Memo: BLE 1M 2480 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3964.63	47.10	5.84	30.63	-41.38	42.19	74.00	31.81	PK	Vertical
2	5019.07	46.60	7.90	32.84	-41.09	46.25	74.00	27.75	PK	Vertical
3	7598.65	45.31	7.65	36.40	-41.00	48.36	74.00	25.64	PK	Vertical
4	11577.41	43.16	10.16	38.92	-39.58	52.66	74.00	21.34	PK	Vertical
5	15914.88	39.32	15.49	38.07	-40.34	52.54	74.00	21.46	PK	Vertical
6	18000.00	38.49	13.13	41.80	-40.70	52.72	74.00	21.28	PK	Vertical

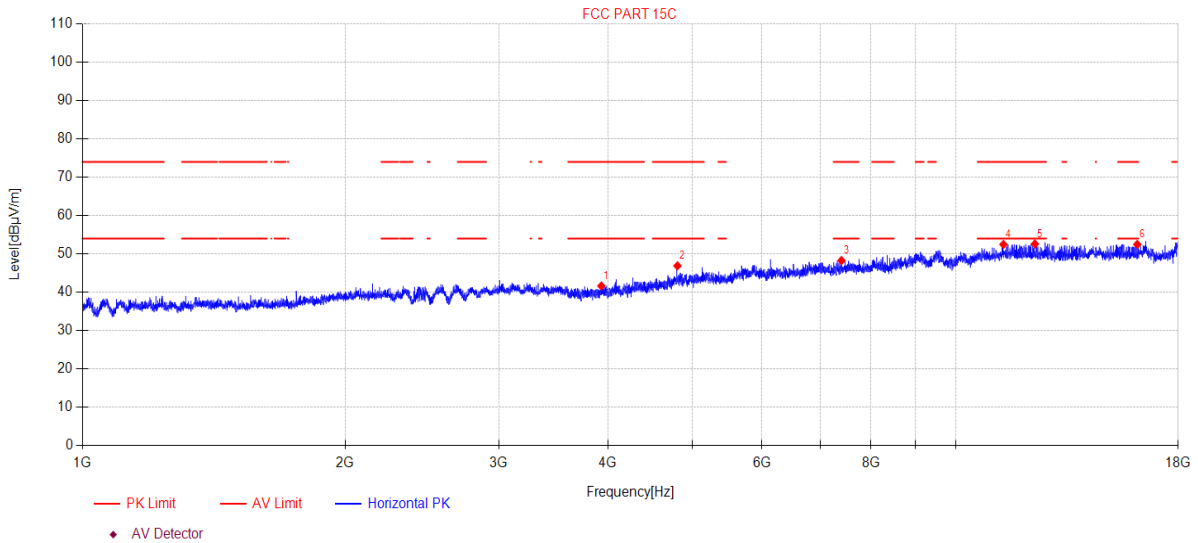
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\33
Memo: BLE 2M 2402 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3930.41	46.61	5.83	30.56	-41.36	41.64	74.00	32.36	PK	Horizontal
2	4803.36	48.27	7.47	32.31	-41.16	46.89	74.00	27.11	PK	Horizontal
3	7403.56	45.13	7.64	36.50	-41.00	48.27	74.00	25.73	PK	Horizontal
4	11348.83	43.35	9.96	39.10	-39.94	52.47	74.00	21.53	PK	Horizontal
5	12330.30	42.19	10.54	39.10	-39.23	52.60	74.00	21.40	PK	Horizontal
6	16151.19	39.83	15.28	37.75	-40.38	52.48	74.00	21.52	PK	Horizontal

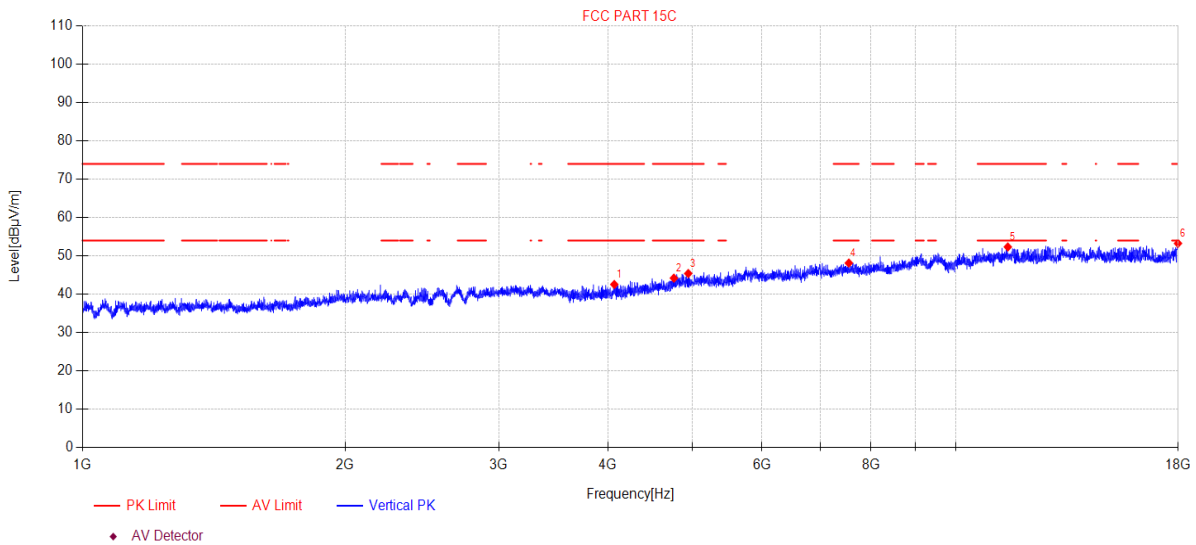
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\34
Memo: BLE 2M 2402 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4066.76	47.14	5.98	30.83	-41.38	42.57	74.00	31.43	PK	Vertical
2	4759.14	45.86	7.38	32.14	-41.17	44.21	74.00	29.79	PK	Vertical
3	4942.77	46.02	7.75	32.77	-41.12	45.42	74.00	28.58	PK	Vertical
4	7548.31	45.10	7.65	36.40	-41.00	48.15	74.00	25.85	PK	Vertical
5	11480.79	42.97	10.08	39.02	-39.73	52.34	74.00	21.66	PK	Vertical
6	17984.40	39.13	13.11	41.71	-40.69	53.26	74.00	20.74	PK	Vertical

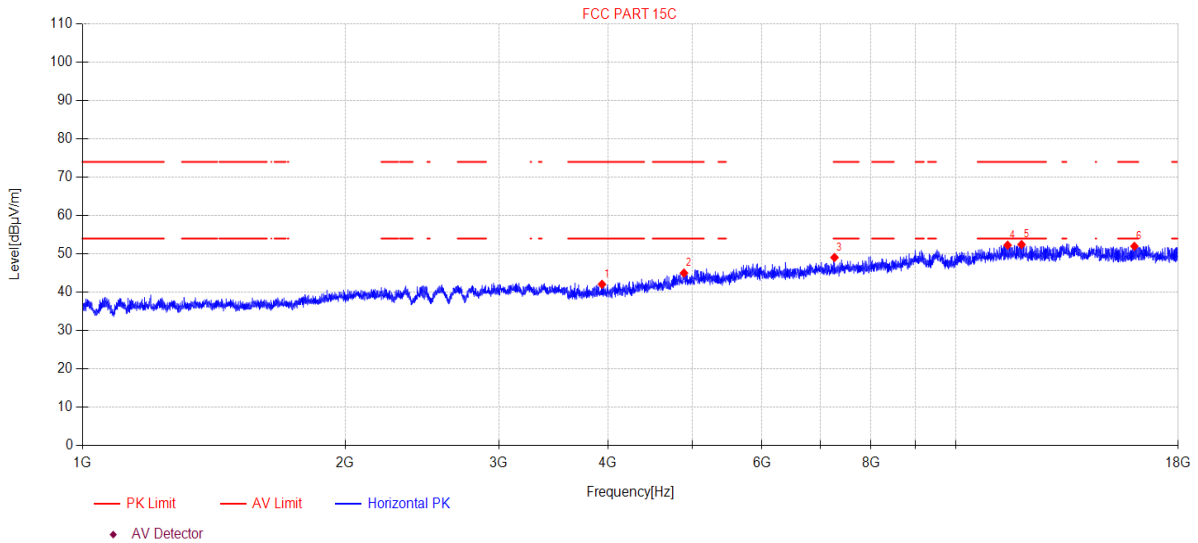
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\35
Memo: BLE 2M 2440 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3937.23	47.03	5.84	30.57	-41.36	42.08	74.00	31.92	PK	Horizontal
2	4887.38	45.94	7.64	32.57	-41.13	45.02	74.00	28.98	PK	Horizontal
3	7267.87	45.94	7.63	36.50	-41.00	49.07	74.00	24.93	PK	Horizontal
4	11474.15	42.92	10.07	39.03	-39.74	52.28	74.00	21.72	PK	Horizontal
5	11903.12	42.26	10.45	38.80	-39.06	52.45	74.00	21.55	PK	Horizontal
6	16030.28	38.77	15.76	37.87	-40.40	52.00	74.00	22.00	PK	Horizontal

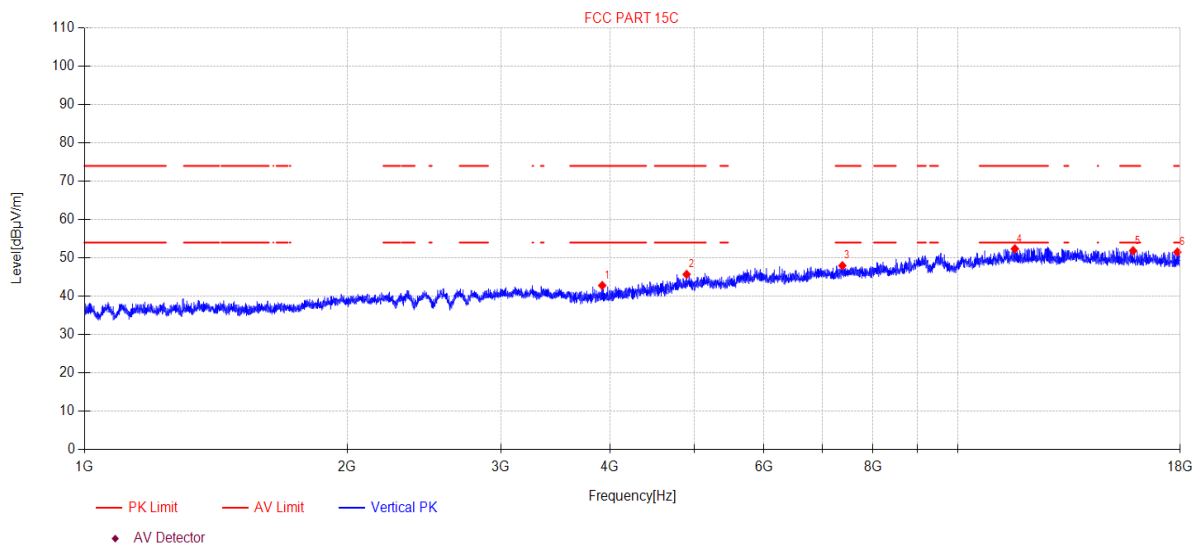
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\36
Memo: BLE 2M 2440 L

Test Graph



Suspected Data List

N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3919.07	47.79	5.83	30.54	-41.35	42.81	74.00	31.19	PK	Vertical
2	4895.86	46.59	7.66	32.59	-41.13	45.71	74.00	28.29	PK	Vertical
3	7382.19	44.84	7.64	36.50	-41.00	47.98	74.00	26.02	PK	Vertical
4	11634.44	42.77	10.21	38.87	-39.48	52.37	74.00	21.63	PK	Vertical
5	15891.89	38.70	15.39	38.11	-40.32	51.88	74.00	22.12	PK	Vertical
6	17860.09	38.29	12.96	40.92	-40.64	51.53	74.00	22.47	PK	Vertical

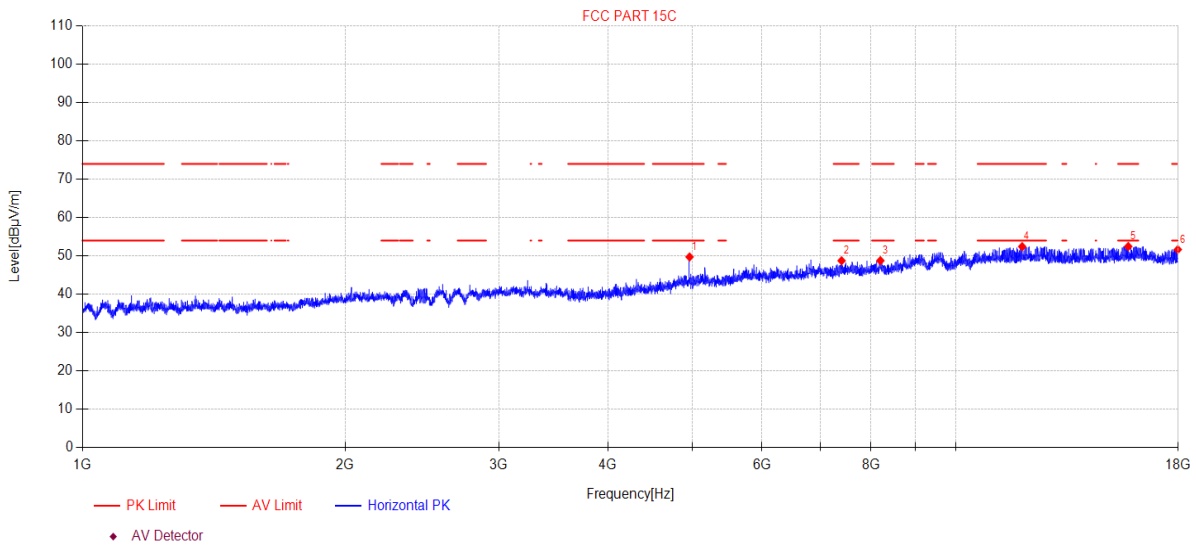
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\37
Memo: BLE 2M 2480 L

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4959.95	50.25	7.79	32.80	-41.11	49.73	74.00	24.27	PK	Horizontal
2	7405.70	45.60	7.64	36.50	-41.00	48.74	74.00	25.26	PK	Horizontal
3	8203.48	44.45	7.89	37.10	-40.67	48.77	74.00	25.23	PK	Horizontal
4	11923.78	42.16	10.47	38.82	-39.02	52.43	74.00	21.57	PK	Horizontal
5	15772.93	39.62	14.85	38.23	-40.24	52.46	74.00	21.54	PK	Horizontal
6	17974.01	37.61	13.10	41.64	-40.69	51.66	74.00	22.34	PK	Horizontal

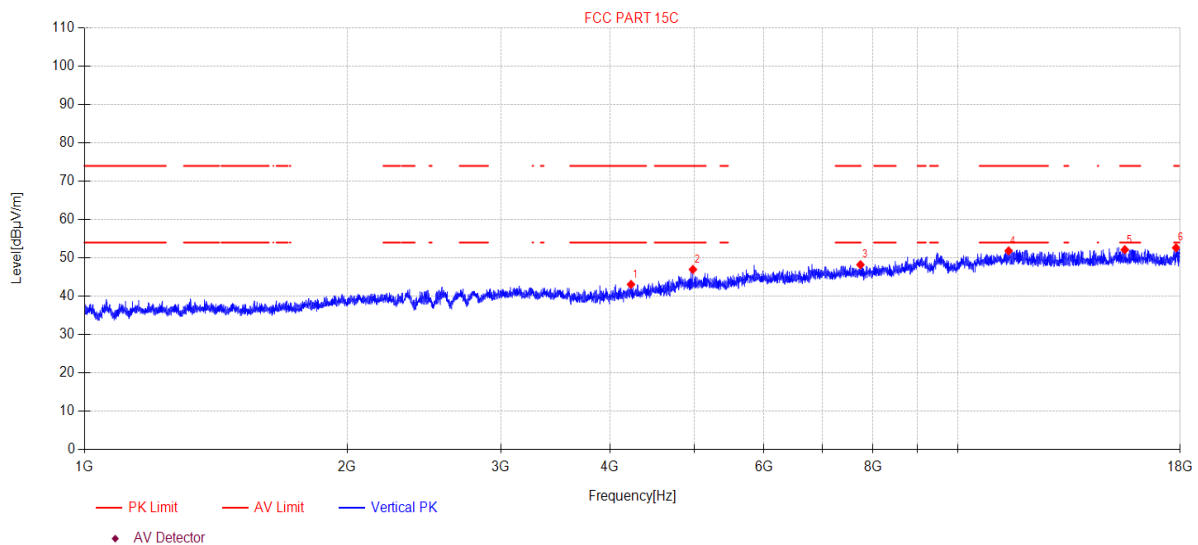
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L\38
Memo: BLE 2M 2480 L

Test Graph



Suspected Data List

N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4227.34	46.97	6.31	31.15	-41.33	43.10	74.00	30.90	PK	Vertical
2	4977.18	47.48	7.82	32.80	-41.11	46.99	74.00	27.01	PK	Vertical
3	7742.75	44.96	7.66	36.60	-41.00	48.22	74.00	25.57	PK	Vertical
4	11444.35	42.52	10.05	39.06	-39.79	51.84	74.00	22.16	PK	Vertical
5	15546.64	39.89	13.83	38.51	-40.08	52.15	74.00	21.85	PK	Vertical
6	17798.26	39.87	12.89	40.49	-40.62	52.63	74.00	21.37	PK	Vertical

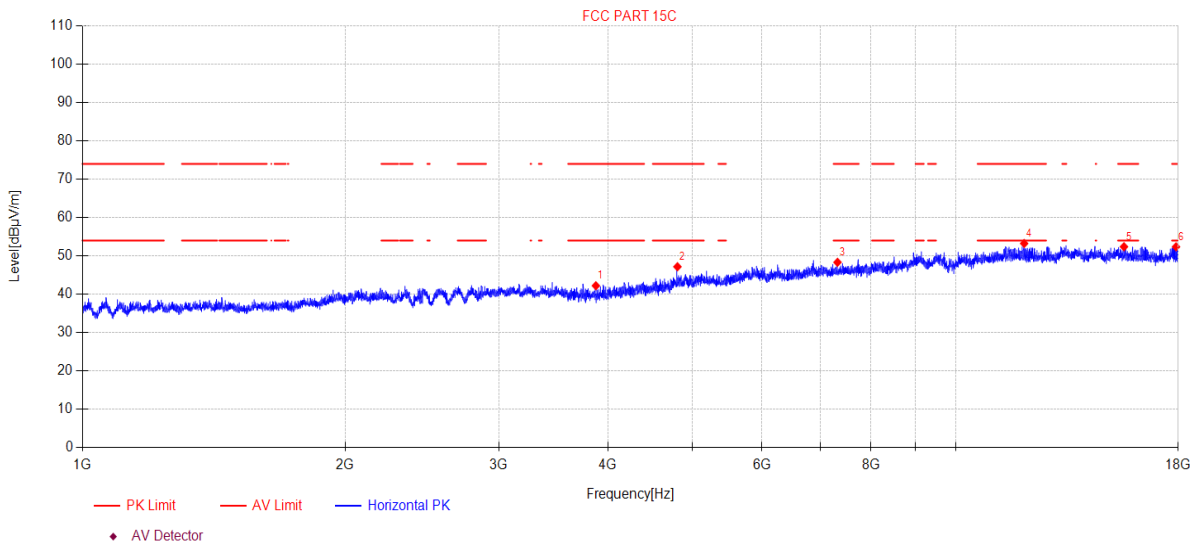
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\7
Memo: BLE 1M 2402 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3874.02	47.27	5.82	30.45	-41.32	42.22	74.00	31.78	PK	Horizontal
2	4803.36	48.56	7.47	32.31	-41.16	47.18	74.00	26.82	PK	Horizontal
3	7326.93	45.21	7.63	36.50	-41.00	48.34	74.00	25.66	PK	Horizontal
4	11985.97	42.74	10.53	38.89	-38.92	53.24	74.00	20.76	PK	Horizontal
5	15596.14	40.05	14.05	38.41	-40.12	52.39	74.00	21.61	PK	Horizontal
6	17891.09	38.89	13.00	41.14	-40.66	52.37	74.00	21.63	PK	Horizontal

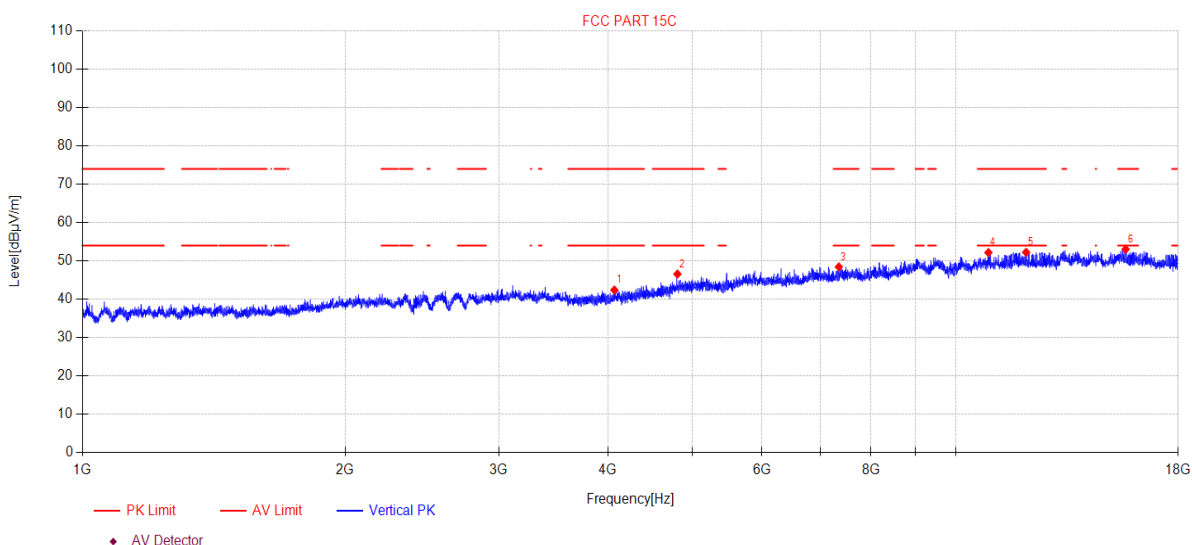
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\8
Memo: BLE 1M 2402 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4067.93	46.97	5.99	30.84	-41.38	42.42	74.00	31.58	PK	Vertical
2	4803.36	47.96	7.47	32.31	-41.16	46.58	74.00	27.42	PK	Vertical
3	7352.38	45.31	7.63	36.50	-41.00	48.44	74.00	25.56	PK	Vertical
4	10908.26	44.01	9.58	39.10	-40.51	52.18	74.00	21.82	PK	Vertical
5	12048.49	41.65	10.54	39.00	-38.95	52.24	74.00	21.76	PK	Vertical
6	15663.90	40.50	14.36	38.34	-40.16	53.04	74.00	20.96	PK	Vertical

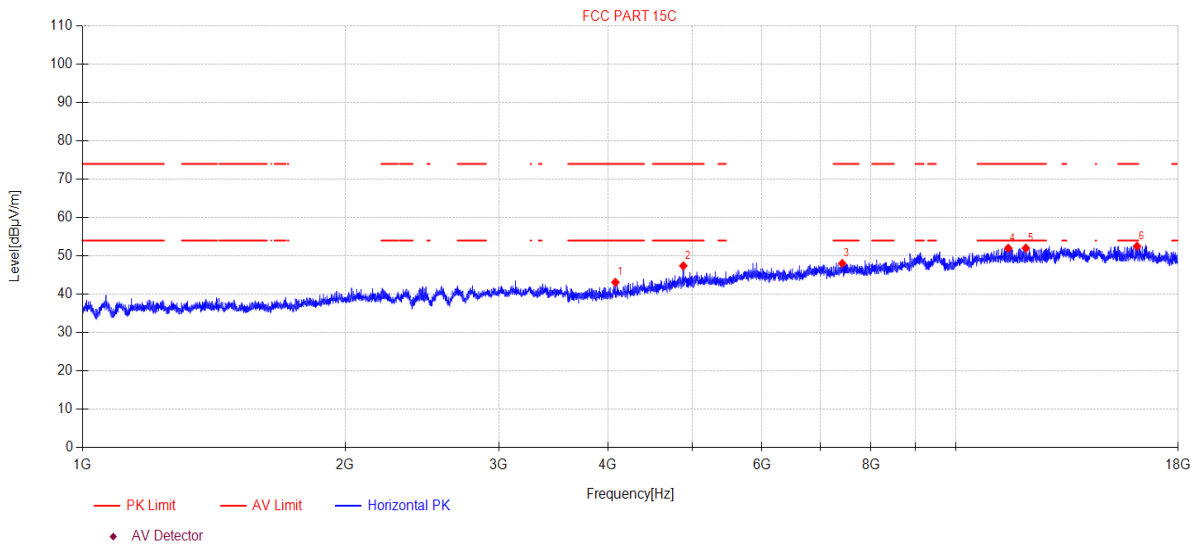
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\9
Memo: BLE 1M 2440 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4078.53	47.63	6.01	30.86	-41.38	43.12	74.00	30.88	PK	Horizontal
2	4878.91	48.36	7.63	32.56	-41.14	47.41	74.00	26.59	PK	Horizontal
3	7418.55	44.90	7.64	36.50	-41.00	48.04	74.00	25.96	PK	Horizontal
4	11494.07	42.62	10.09	39.01	-39.71	52.01	74.00	21.99	PK	Horizontal
5	12038.05	41.45	10.54	38.98	-38.94	52.03	74.00	21.97	PK	Horizontal
6	16141.86	39.84	15.32	37.76	-40.39	52.53	74.00	21.47	PK	Horizontal

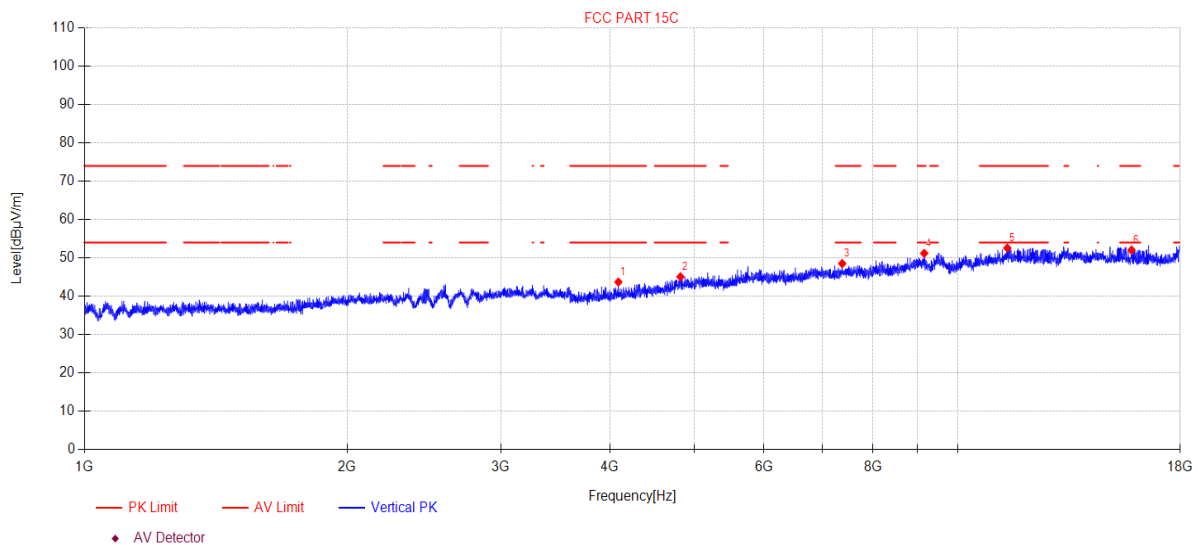
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\10
Memo: BLE 1M 2440 R

Test Graph



Suspected Data List

N O.	Freq. [MHz]	Reading [dBμV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4089.15	48.18	6.03	30.88	-41.37	43.72	74.00	30.28	PK	Vertical
2	4817.26	46.37	7.50	32.37	-41.15	45.09	74.00	28.91	PK	Vertical
3	7380.06	45.39	7.64	36.50	-41.00	48.53	74.00	25.47	PK	Vertical
4	9161.04	43.73	8.76	38.30	-39.59	51.20	74.00	22.80	PK	Vertical
5	11404.72	43.31	10.01	39.10	-39.85	52.57	74.00	21.43	PK	Vertical
6	15823.15	39.08	15.08	38.18	-40.28	52.06	74.00	21.94	PK	Vertical

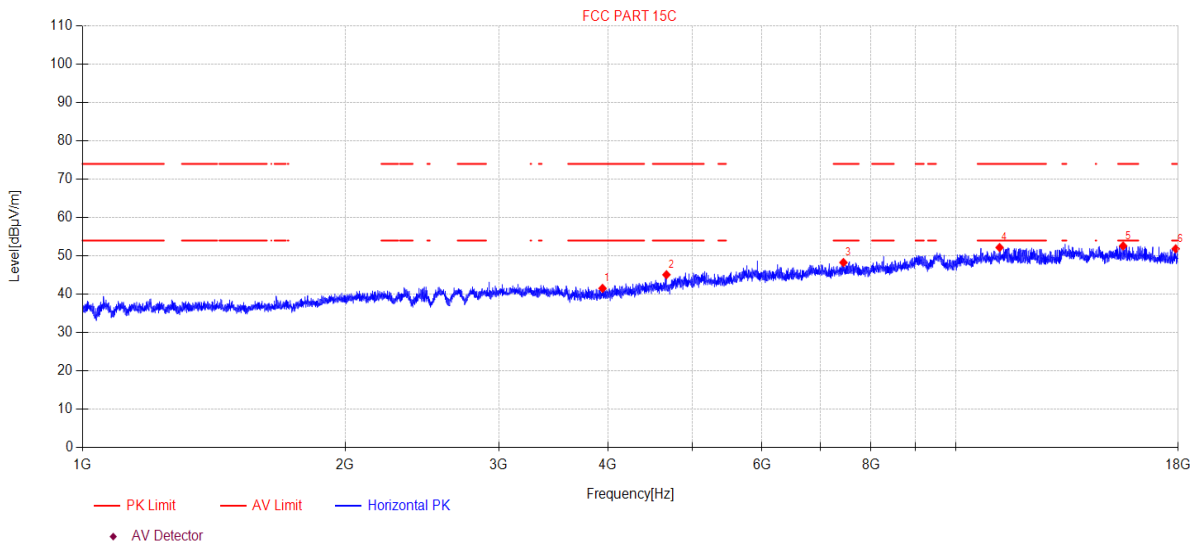
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\11
Memo: BLE 1M 2480 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3942.92	46.48	5.84	30.59	-41.37	41.54	74.00	32.46	PK	Horizontal
2	4666.52	47.23	7.20	31.87	-41.20	45.10	74.00	28.90	PK	Horizontal
3	7442.17	45.14	7.64	36.50	-41.00	48.28	74.00	25.72	PK	Horizontal
4	11234.61	43.35	9.86	39.10	-40.12	52.19	74.00	21.81	PK	Horizontal
5	15560.13	40.32	13.89	38.48	-40.09	52.60	74.00	21.40	PK	Horizontal
6	17875.58	38.50	12.98	41.03	-40.65	51.86	74.00	22.14	PK	Horizontal

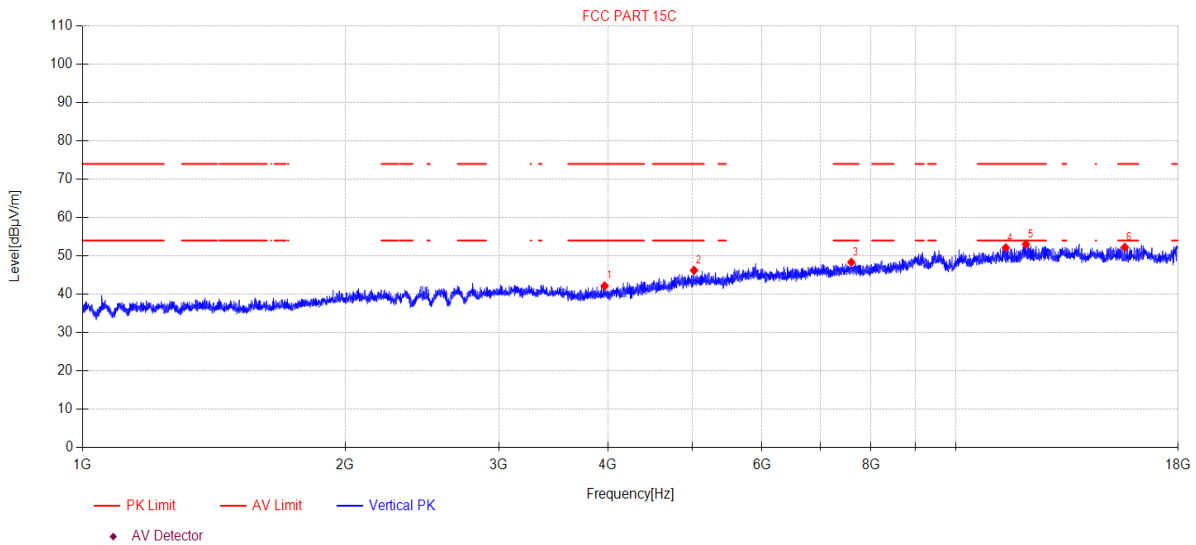
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\12
Memo: BLE 1M 2480 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3964.63	47.10	5.84	30.63	-41.38	42.19	74.00	31.81	PK	Vertical
2	5019.07	46.60	7.90	32.84	-41.09	46.25	74.00	27.75	PK	Vertical
3	7598.65	45.31	7.65	36.40	-41.00	48.36	74.00	25.64	PK	Vertical
4	11417.92	42.86	10.02	39.08	-39.83	52.13	74.00	21.87	PK	Vertical
5	12041.53	42.46	10.54	38.98	-38.94	53.04	74.00	20.96	PK	Vertical
6	15627.73	39.84	14.19	38.37	-40.14	52.26	74.00	21.74	PK	Vertical

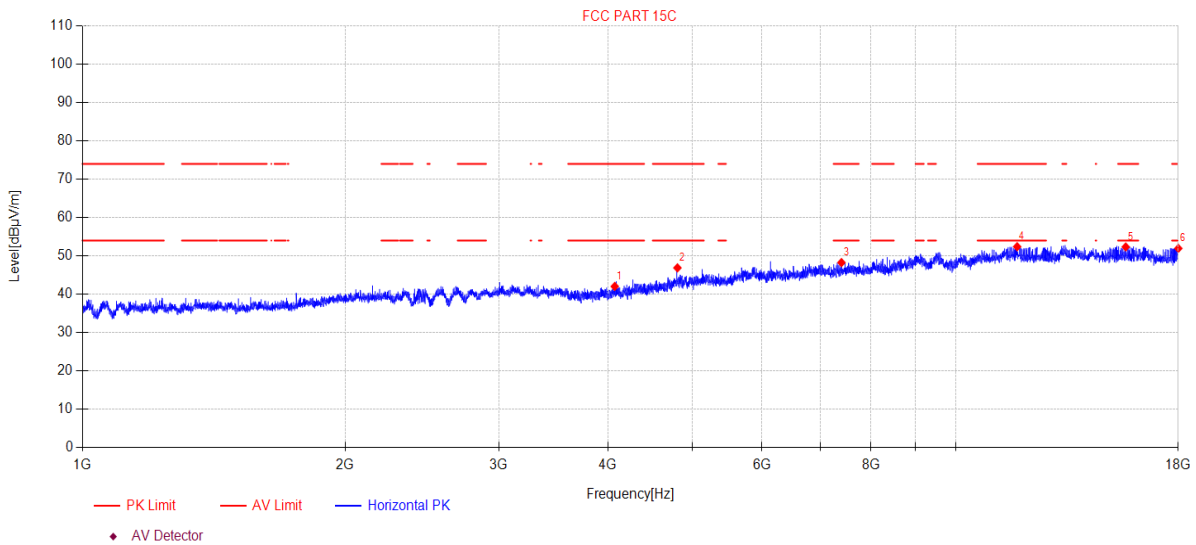
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\13
Memo: BLE 2M 2402 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4071.46	46.60	5.99	30.84	-41.38	42.05	74.00	31.95	PK	Horizontal
2	4803.36	48.27	7.47	32.31	-41.16	46.89	74.00	27.11	PK	Horizontal
3	7403.56	45.13	7.64	36.50	-41.00	48.27	74.00	25.73	PK	Horizontal
4	11766.31	42.55	10.33	38.80	-39.27	52.41	74.00	21.59	PK	Horizontal
5	15668.43	39.81	14.38	38.33	-40.17	52.35	74.00	21.65	PK	Horizontal
6	18000.00	37.73	13.13	41.80	-40.70	51.96	74.00	22.04	PK	Horizontal

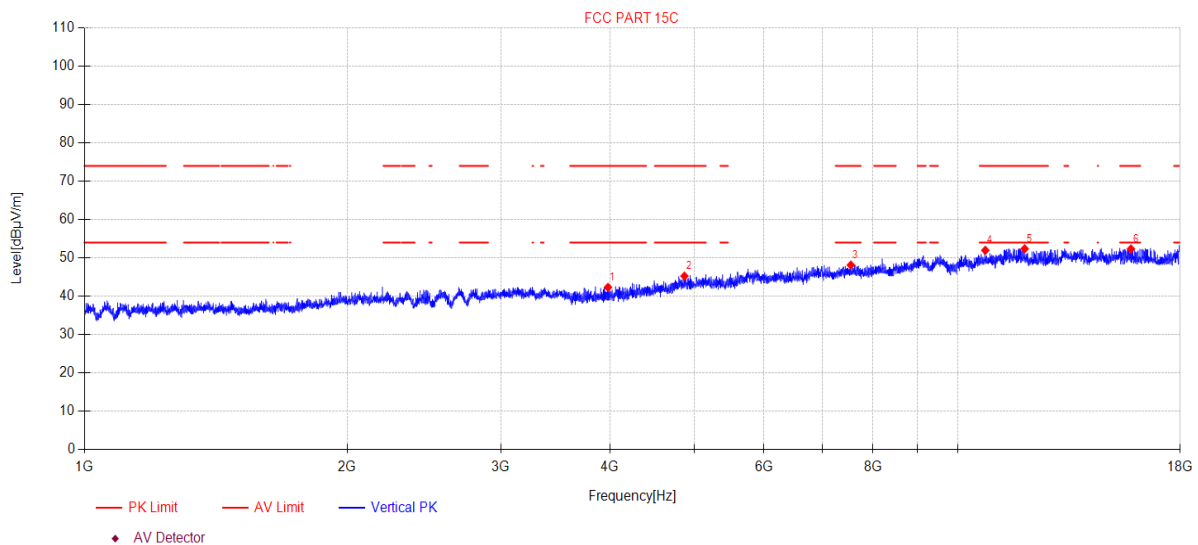
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\14
Memo: BLE 2M 2402 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3978.41	47.22	5.85	30.66	-41.39	42.34	74.00	31.66	PK	Vertical
2	4867.64	46.26	7.60	32.54	-41.14	45.26	74.00	28.74	PK	Vertical
3	7548.31	45.10	7.65	36.40	-41.00	48.15	74.00	25.85	PK	Vertical
4	10761.09	43.91	9.48	39.10	-40.52	51.97	74.00	22.03	PK	Vertical
5	11937.58	42.06	10.48	38.84	-39.00	52.38	74.00	21.62	PK	Vertical
6	15800.30	39.42	14.98	38.20	-40.26	52.34	74.00	21.66	PK	Vertical

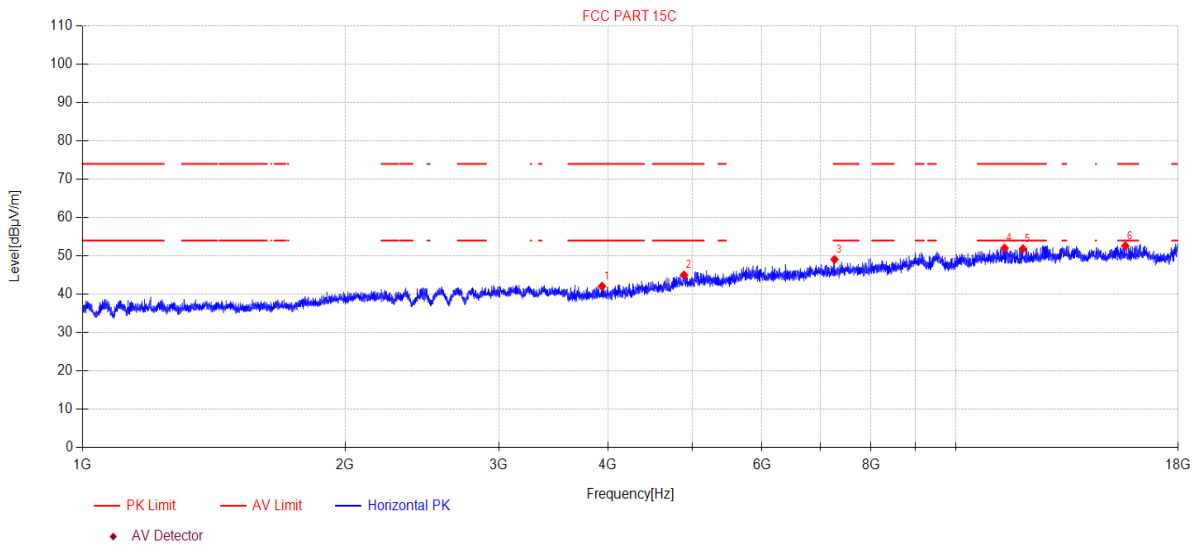
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\15
Memo: BLE 2M 2440 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3937.23	47.03	5.84	30.57	-41.36	42.08	74.00	31.92	PK	Horizontal
2	4887.38	45.94	7.64	32.57	-41.13	45.02	74.00	28.98	PK	Horizontal
3	7267.87	45.94	7.63	36.50	-41.00	49.07	74.00	24.93	PK	Horizontal
4	11381.68	42.84	9.99	39.10	-39.89	52.04	74.00	21.96	PK	Horizontal
5	11947.93	41.51	10.49	38.85	-38.98	51.87	74.00	22.13	PK	Horizontal
6	15650.33	40.13	14.30	38.35	-40.16	52.62	74.00	21.38	PK	Horizontal

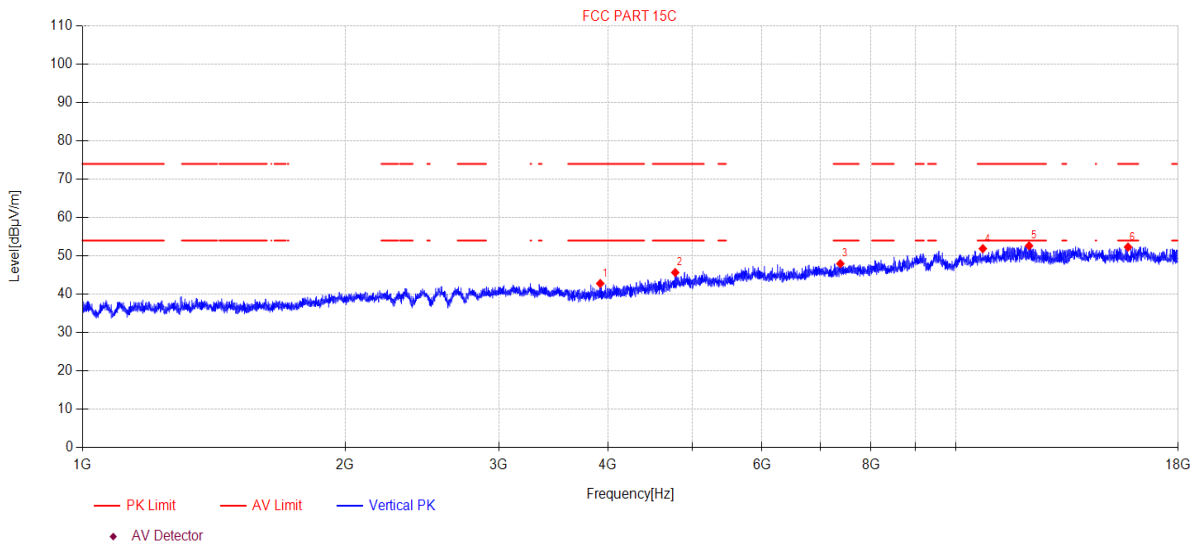
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\16
Memo: BLE 2M 2440 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3919.07	47.79	5.83	30.54	-41.35	42.81	74.00	31.19	PK	Vertical
2	4775.67	47.22	7.42	32.20	-41.17	45.67	74.00	28.33	PK	Vertical
3	7382.19	44.84	7.64	36.50	-41.00	47.98	74.00	26.02	PK	Vertical
4	10748.66	43.85	9.47	39.10	-40.53	51.89	74.00	22.11	PK	Vertical
5	12142.87	42.04	10.54	39.10	-39.04	52.64	74.00	21.36	PK	Vertical
6	15763.81	39.50	14.81	38.24	-40.23	52.32	74.00	21.68	PK	Vertical

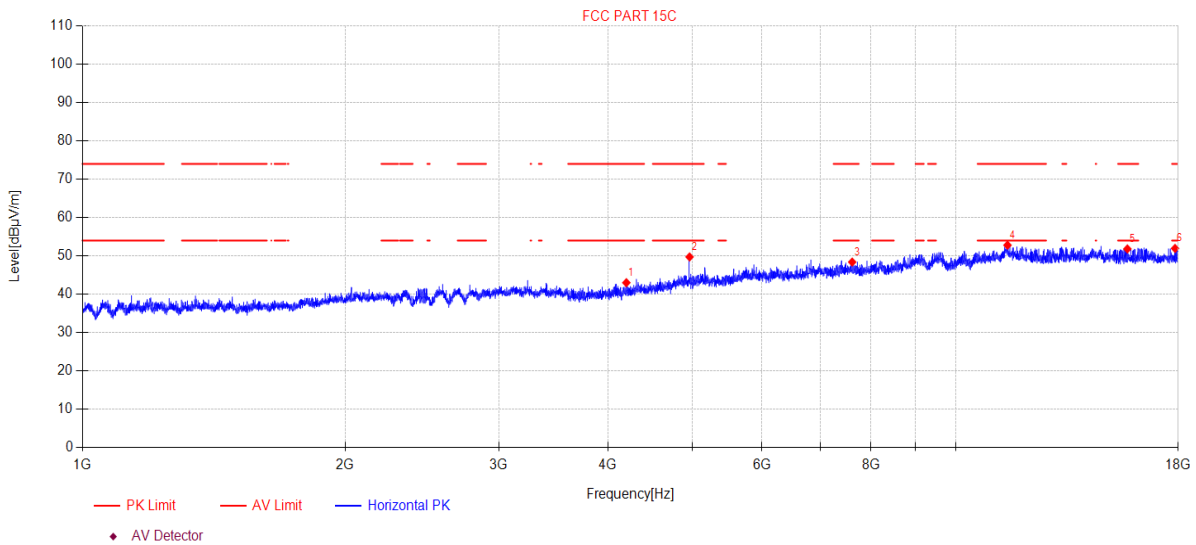
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\17
Memo: BLE 2M 2480 R

Test Graph



Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4198.12	47.01	6.25	31.10	-41.34	43.02	74.00	30.98	PK	Horizontal
2	4959.95	50.25	7.79	32.80	-41.11	49.73	74.00	24.27	PK	Horizontal
3	7616.24	45.32	7.65	36.43	-41.00	48.40	74.00	25.60	PK	Horizontal
4	11470.84	43.45	10.07	39.03	-39.75	52.80	74.00	21.20	PK	Horizontal
5	15736.50	39.10	14.69	38.26	-40.22	51.83	74.00	22.17	PK	Horizontal
6	17844.61	38.84	12.94	40.81	-40.64	51.95	74.00	22.05	PK	Horizontal

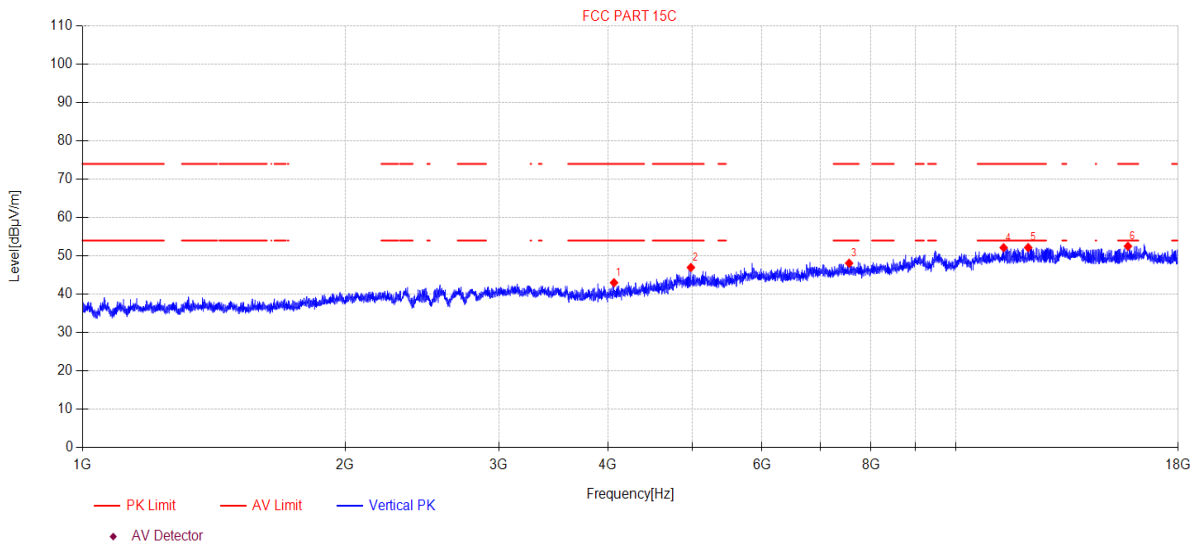
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G\18
Memo: BLE 2M 2480 R

Test Graph



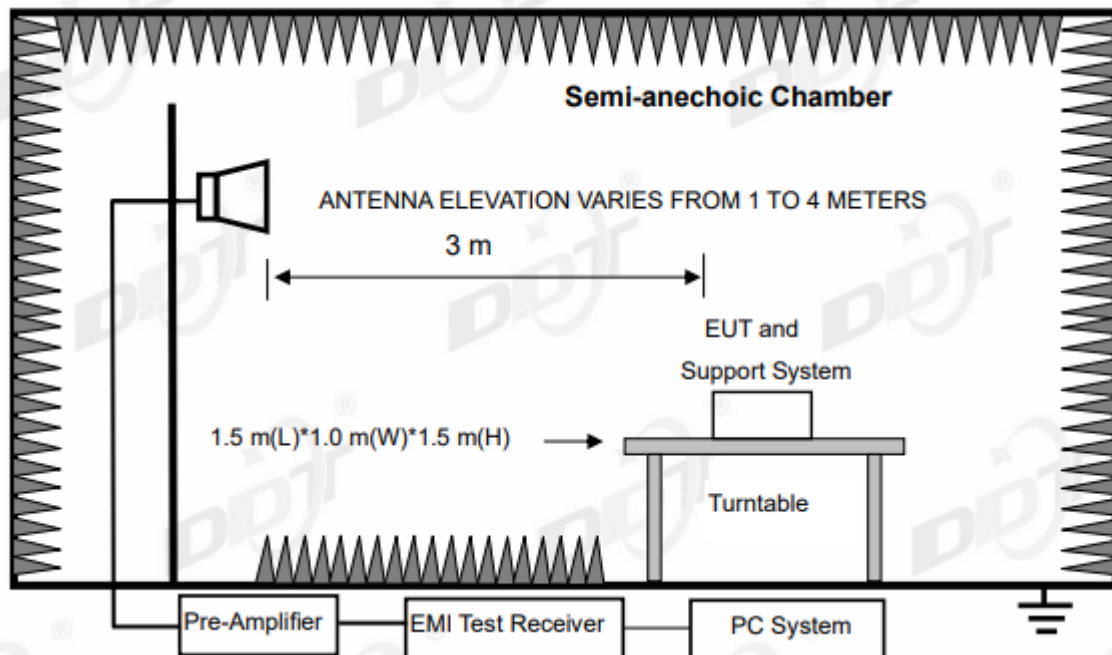
Suspected Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	4064.41	47.60	5.98	30.83	-41.38	43.03	74.00	30.97	PK	Vertical
2	4977.18	47.48	7.82	32.80	-41.11	46.99	74.00	27.01	PK	Vertical
3	7554.86	45.05	7.65	36.40	-41.00	48.10	74.00	25.90	PK	Vertical
4	11355.39	43.01	9.97	39.10	-39.93	52.15	74.00	21.85	PK	Vertical
5	12114.83	41.54	10.54	39.10	-39.01	52.17	74.00	21.83	PK	Vertical
6	15759.26	39.73	14.79	38.24	-40.23	52.53	74.00	21.47	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

12. Emissions in Restricted Frequency Bands

12.1. Block diagram of test setup



12.2. Limit

All restriction band should comply with 15.209 and RSS-Gen section 8.9 limits, other emission should be at least 20 dB below the fundamental.

12.3. Test procedure

Same with Radiated Emission except change investigated frequency range from 2310 MHz to 2410 MHz and 2475 MHz to 2500 MHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

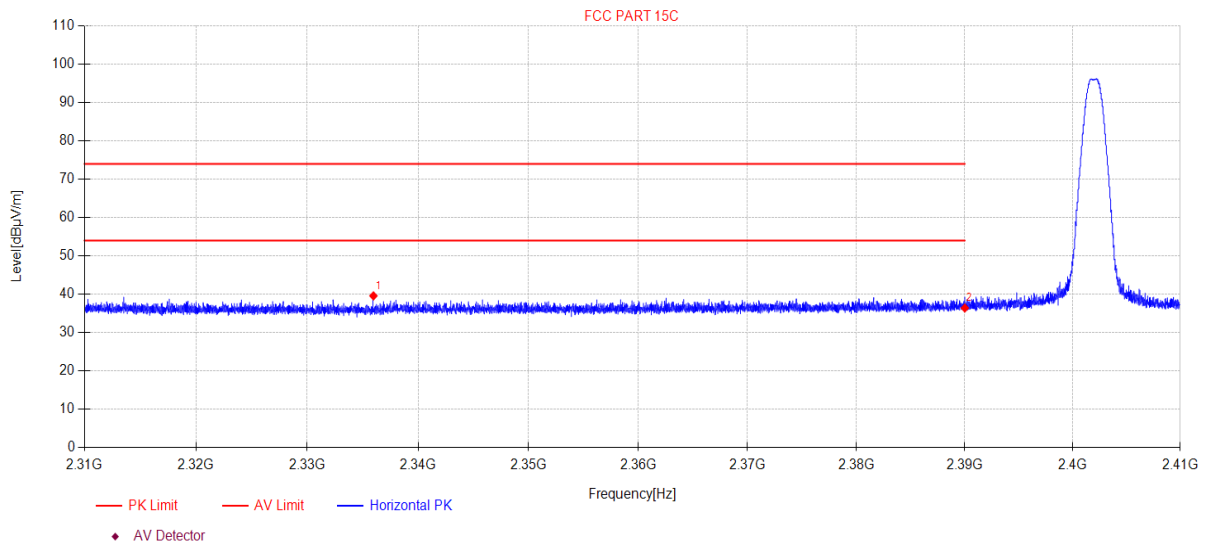
12.4. Test result

Pass. (See below detailed test result)

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-25 **Tested By:** Bairong
EUT: True Wireless Earbuds **Model Number:** TW-EF3A
Test Mode: TX Mode **Power Supply:** Battery
Condition: Temp:23.4°C;Humi:50.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23021029-3E TW-EF3A\20230625 FCC ABOVE 1G L17
Memo: BLE 1M 2402 L

Test Graph



Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2335.97	48.46	3.83	27.37	-40.07	39.59	74.00	34.41	PK	Horizontal
2	2390.00	45.20	3.87	27.48	-40.13	36.42	74.00	37.58	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.