

14.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-11-26

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode (Ant1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

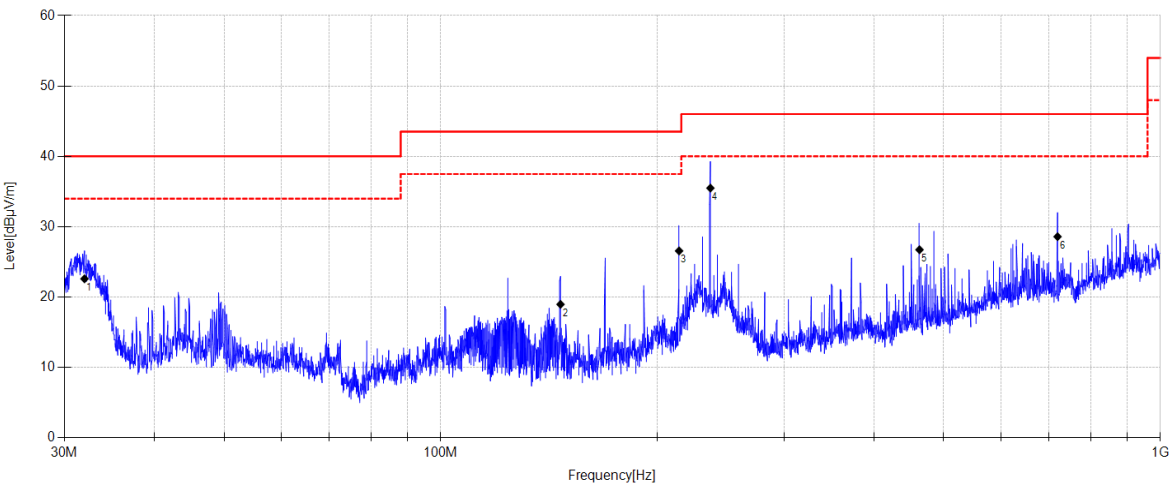
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\FCC BELOW1G\20241126-211137_H

Memo:

Sample Number:S24092711-003 Power Setting:NA 18650-11.1V-6000mAh-3S3P



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	31.999	39.83	10.10	3.77	22.60	40.00	17.40	QP	Horizontal
2	146.738	36.91	8.74	4.47	18.97	43.50	24.53	QP	Horizontal
3	214.430	42.28	10.68	4.83	26.56	43.50	16.94	QP	Horizontal
4	237.045	50.27	11.56	4.93	35.49	46.00	10.51	QP	Horizontal
5	462.741	36.45	15.90	5.86	26.73	46.00	19.27	QP	Horizontal
6	719.751	34.06	19.20	6.74	28.59	46.00	17.41	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:

2024-11-26

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode (Ant1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

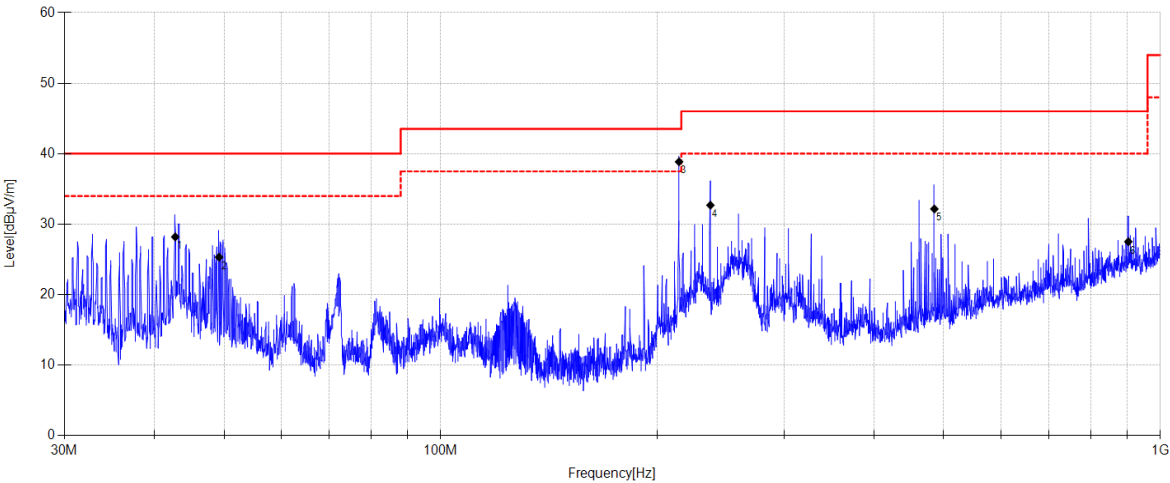
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\FCC BELOW1G\20241126-211200_V

Memo:

Sample Number:S24092711-003 Power Setting:NA 18650-11.1V-6000mAh-3S3P



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	42.777	42.58	12.87	3.84	28.19	40.00	11.81	QP	Vertical
2	49.216	39.78	12.76	3.88	25.32	40.00	14.68	QP	Vertical
3	214.430	54.57	10.68	4.83	38.85	43.50	4.65	QP	Vertical
4	237.045	47.47	11.56	4.93	32.69	46.00	13.31	QP	Vertical
5	485.339	41.22	16.48	5.94	32.15	46.00	13.85	QP	Vertical
6	902.695	28.95	21.90	7.21	27.51	46.00	18.49	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.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-11-26

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode (ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

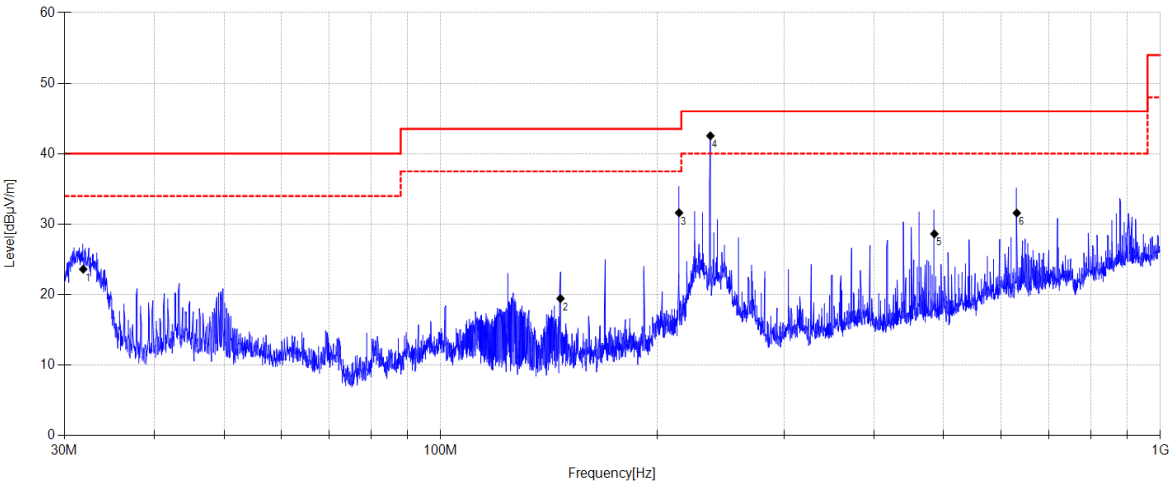
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\FCC BELOW1G\20241126-210345_H

Memo:

Sample Number:S24092711-003 Power Setting:NA 18650-11.1V-6000mAh-3S3P



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	31.865	40.8	10.14	3.77	23.61	40.00	16.39	QP	Horizontal
2	146.738	37.39	8.74	4.47	19.45	43.50	24.05	QP	Horizontal
3	214.430	47.33	10.68	4.83	31.61	43.50	11.89	QP	Horizontal
4	237.045	57.31	11.56	4.93	42.53	46.00	3.47	QP	Horizontal
5	485.339	37.69	16.48	5.94	28.62	46.00	17.38	QP	Horizontal
6	631.746	38.14	18.47	6.47	31.58	46.00	14.42	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:

2024-11-26

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode (ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

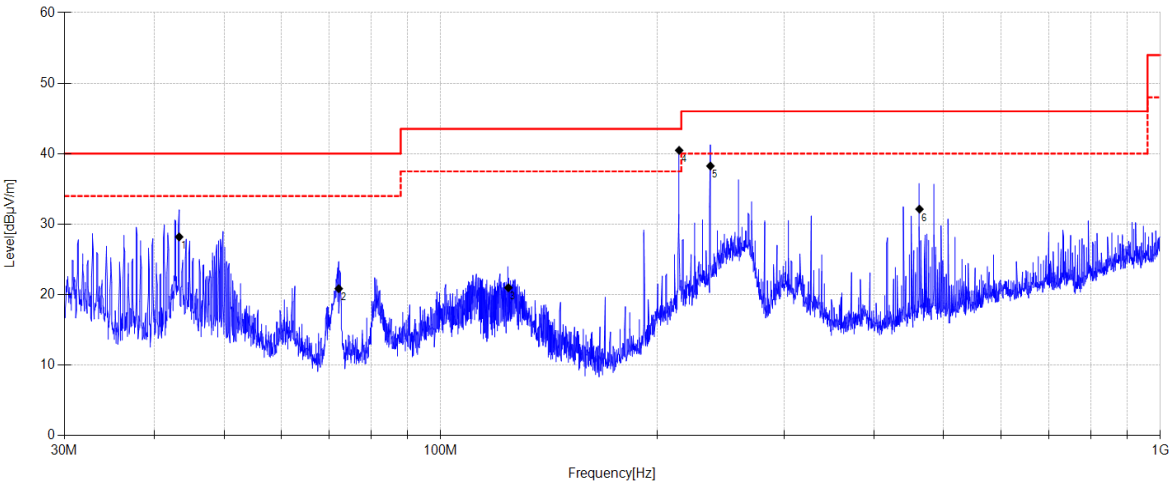
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\FCC BELOW1G\20241126-210432_V

Memo:

Sample Number:S24092711-003 Power Setting:NA 18650-11.1V-6000mAh-3S3P



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	43.320	42.59	12.86	3.84	28.19	40.00	11.81	QP	Vertical
2	72.173	38.38	9.53	4.04	20.85	40.00	19.15	QP	Vertical
3	124.185	38.69	9.06	4.35	20.98	43.50	22.52	QP	Vertical
4	214.494	56.19	10.68	4.83	40.47	43.50	3.03	QP	Vertical
5	237.045	53.03	11.56	4.93	38.25	46.00	7.75	QP	Vertical
6	462.741	41.85	15.90	5.86	32.13	46.00	13.87	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.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

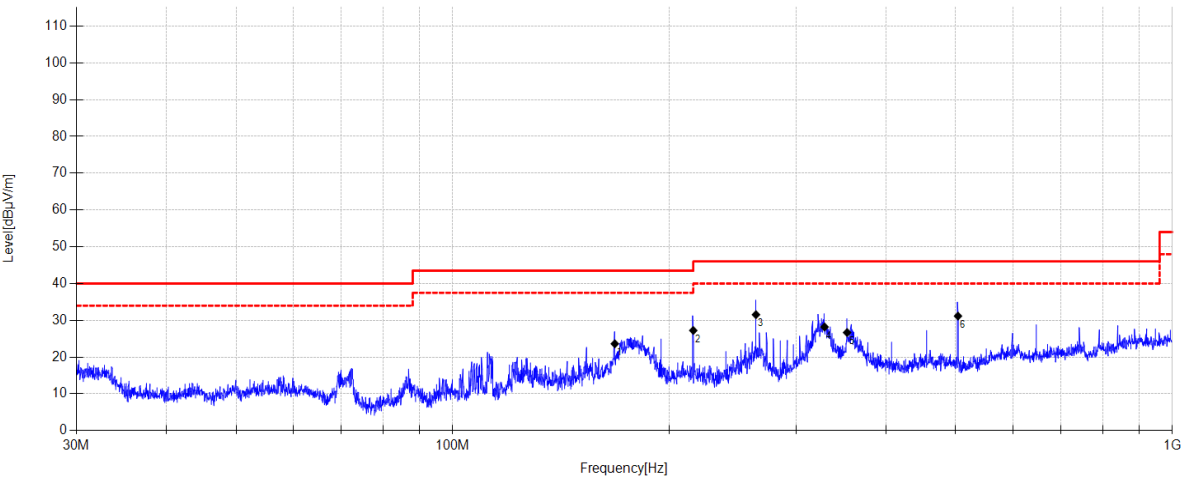
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-164712_H

Memo:

Sample Number:S24092711-003 WLY 18650-3S3P



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	168.002	41.29	8.90	4.59	23.61	43.50	19.89	QP	Horizontal
2	215.939	42.87	10.76	4.83	27.23	43.50	16.27	QP	Horizontal
3	263.889	46.15	11.66	5.05	31.53	46.00	14.47	QP	Horizontal
4	328.651	40.18	14.08	5.33	28.18	46.00	17.82	QP	Horizontal
5	353.264	37.52	15.15	5.43	26.67	46.00	19.33	QP	Horizontal
6	503.715	39.84	16.80	6.01	31.15	46.00	14.85	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:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

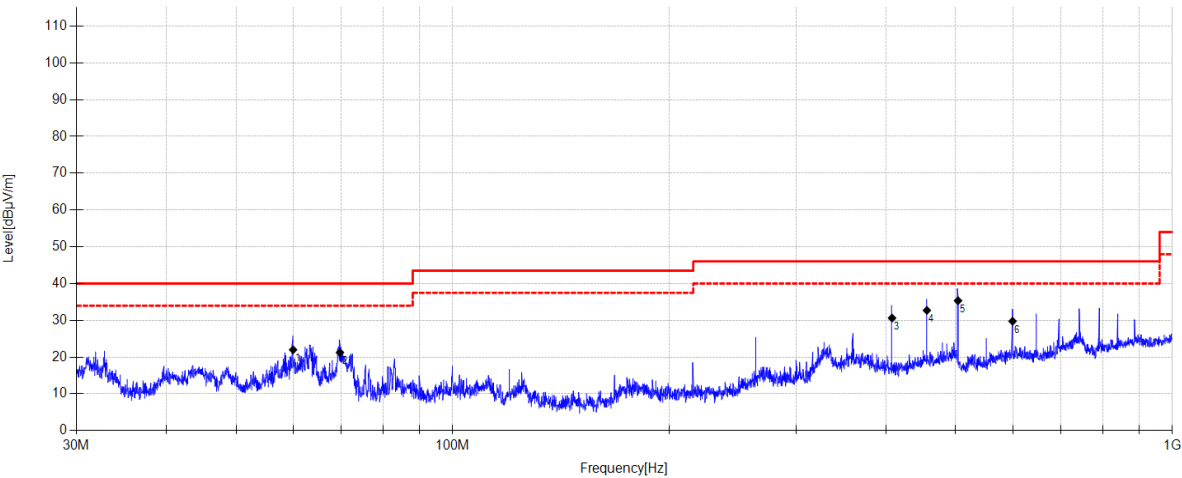
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-164730_V

Memo:

Sample Number:S24092711-003 WLY 18650-3S3P



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	60.019	36.33	12.79	3.96	21.98	40.00	18.02	QP	Vertical
2	69.735	38.33	9.99	4.02	21.24	40.00	18.76	QP	Vertical
3	407.874	41.46	14.94	5.65	30.60	46.00	15.40	QP	Vertical
4	455.977	42.36	15.98	5.83	32.69	46.00	13.31	QP	Vertical
5	503.715	44.02	16.80	6.01	35.33	46.00	10.67	QP	Vertical
6	599.803	35.7	19.18	6.37	29.75	46.00	16.25	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.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

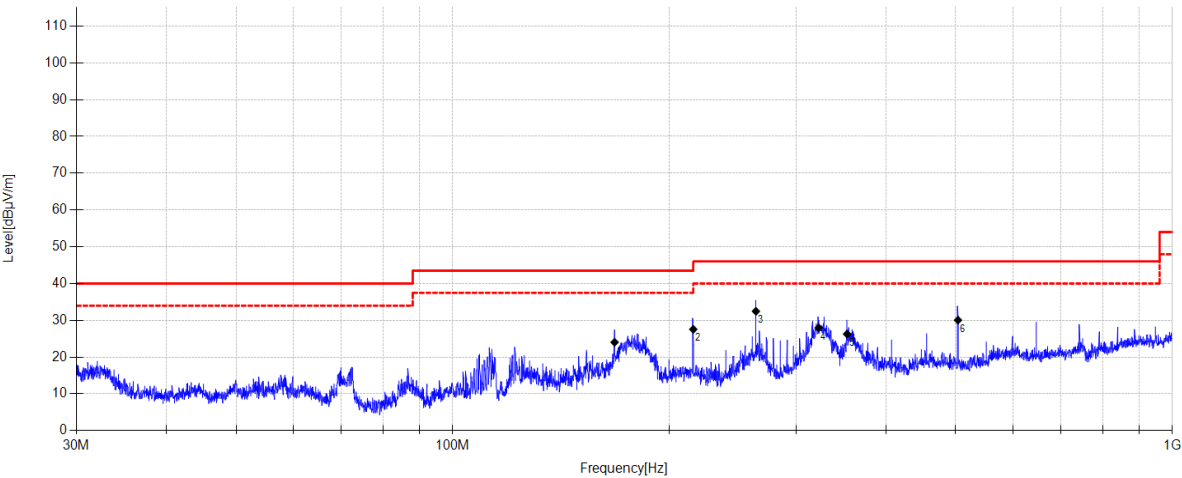
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-164812_H

Memo:

Sample Number:S24092711-003 B18650-201C-91



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	167.884	41.71	8.89	4.59	24.02	43.50	19.48	QP	Horizontal
2	215.939	43.19	10.76	4.83	27.55	43.50	15.95	QP	Horizontal
3	263.889	47.07	11.66	5.05	32.45	46.00	13.55	QP	Horizontal
4	322.488	40.3	13.75	5.31	27.95	46.00	18.05	QP	Horizontal
5	353.264	37.11	15.15	5.43	26.26	46.00	19.74	QP	Horizontal
6	503.715	38.72	16.80	6.01	30.03	46.00	15.97	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:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

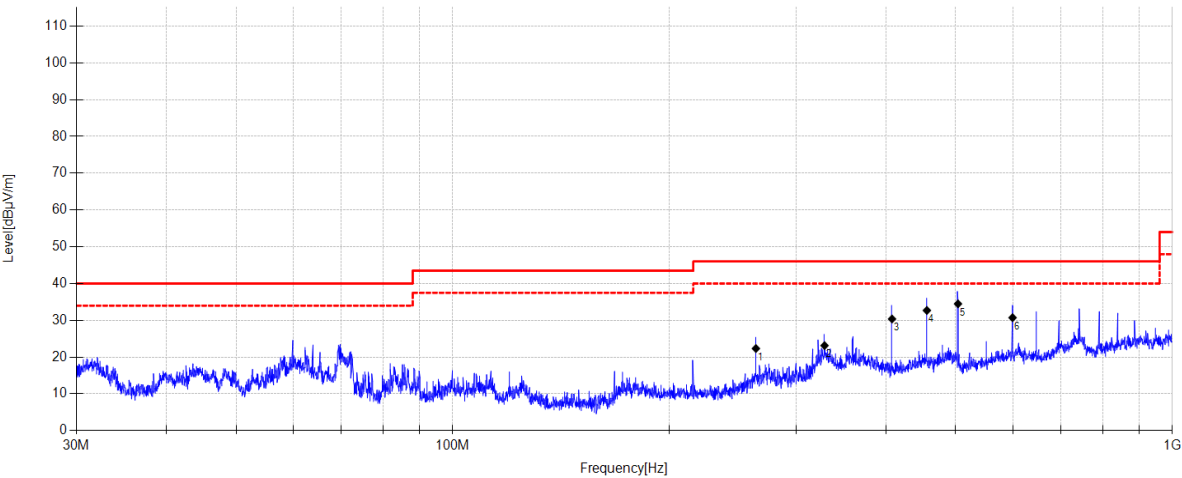
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-164832_V

Memo:

Sample Number:S24092711-003 B18650-201C-91



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	263.889	36.94	11.66	5.05	22.32	46.00	23.68	QP	Vertical
2	328.651	35.12	14.08	5.33	23.12	46.00	22.88	QP	Vertical
3	407.874	41.22	14.94	5.65	30.36	46.00	15.64	QP	Vertical
4	455.977	42.34	15.98	5.83	32.67	46.00	13.33	QP	Vertical
5	503.715	43.16	16.80	6.01	34.47	46.00	11.53	QP	Vertical
6	599.803	36.66	19.18	6.37	30.71	46.00	15.29	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.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

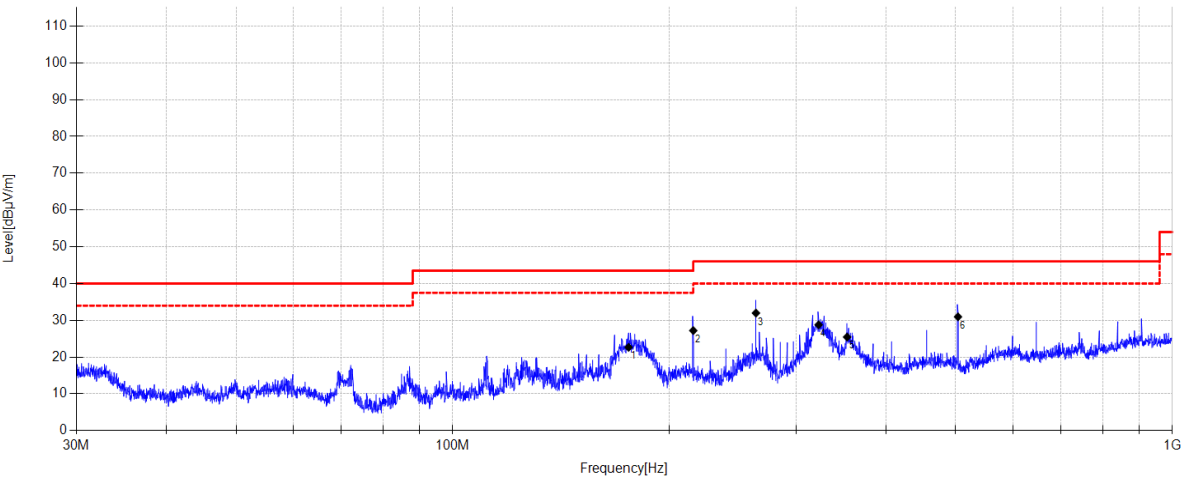
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-165114_H

Memo:

Sample Number:S24092711-003 PQ3220-2409192WK



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	175.590	39.65	9.55	4.63	22.65	43.50	20.85	QP	Horizontal
2	215.939	42.84	10.76	4.83	27.20	43.50	16.30	QP	Horizontal
3	263.889	46.58	11.66	5.05	31.96	46.00	14.04	QP	Horizontal
4	322.488	41.12	13.75	5.31	28.77	46.00	17.23	QP	Horizontal
5	353.264	36.29	15.15	5.43	25.44	46.00	20.56	QP	Horizontal
6	503.715	39.63	16.80	6.01	30.94	46.00	15.06	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:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

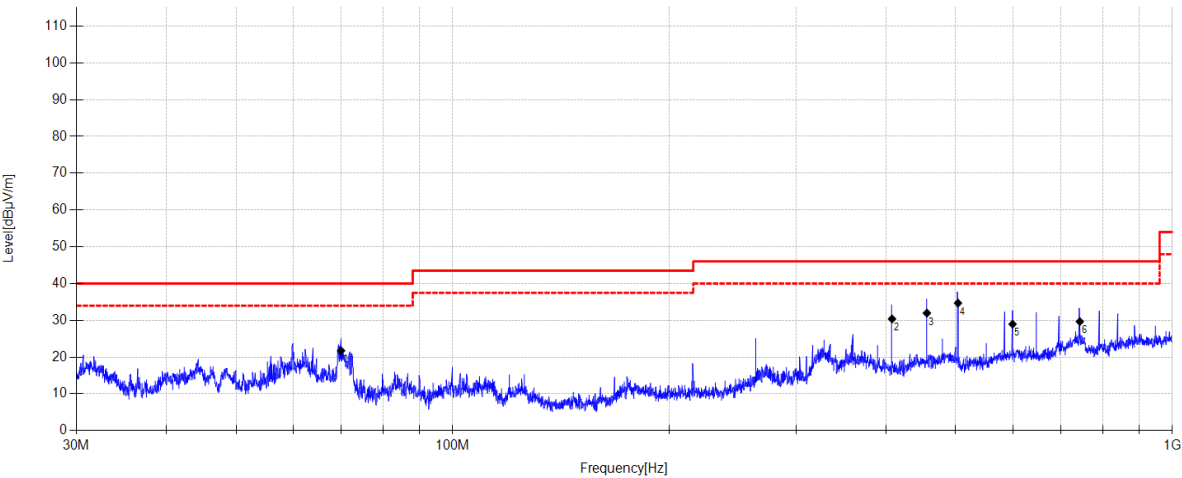
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-165134_V

Memo:

Sample Number:S24092711-003 PQ3220-2409192WK



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	69.980	38.99	9.81	4.02	21.72	40.00	18.28	QP	Vertical
2	407.874	41.23	14.94	5.65	30.37	46.00	15.63	QP	Vertical
3	455.977	41.62	15.98	5.83	31.95	46.00	14.05	QP	Vertical
4	503.715	43.36	16.80	6.01	34.67	46.00	11.33	QP	Vertical
5	599.803	34.9	19.18	6.37	28.95	46.00	17.05	QP	Vertical
6	743.866	34.2	19.95	6.80	29.65	46.00	16.35	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.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

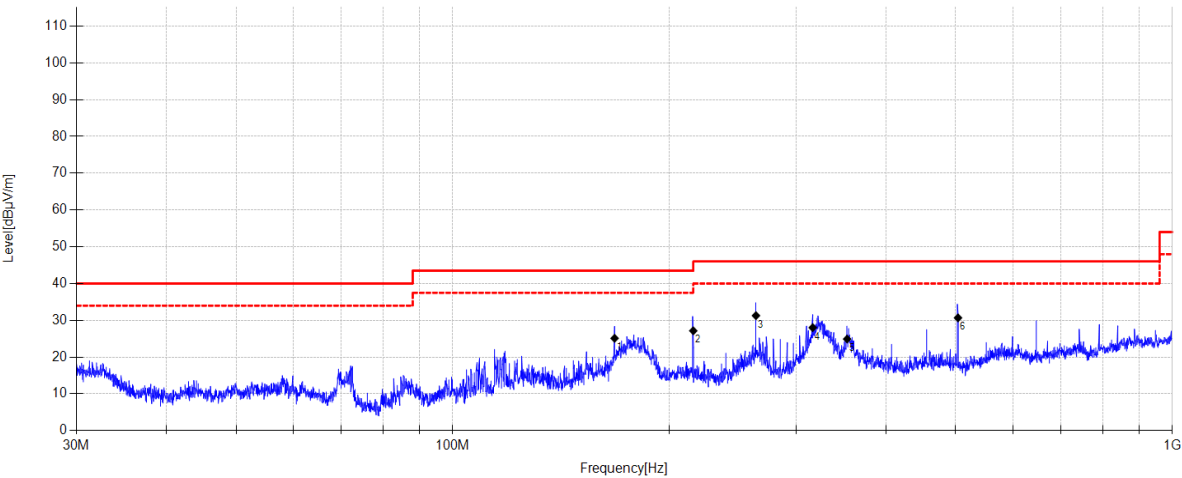
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-165220_H

Memo:

Sample Number:S24092711-003 PSM-0100-022U



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	167.884	42.79	8.89	4.59	25.10	43.50	18.40	QP	Horizontal
2	215.939	42.78	10.76	4.83	27.14	43.50	16.36	QP	Horizontal
3	263.889	45.88	11.66	5.05	31.26	46.00	14.74	QP	Horizontal
4	316.440	40.48	13.64	5.29	28.00	46.00	18.00	QP	Horizontal
5	353.264	35.75	15.15	5.43	24.90	46.00	21.10	QP	Horizontal
6	503.715	39.36	16.80	6.01	30.67	46.00	15.33	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:

2025-01-16

Tested By:

Gen Liu

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE AND
DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX Mode

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

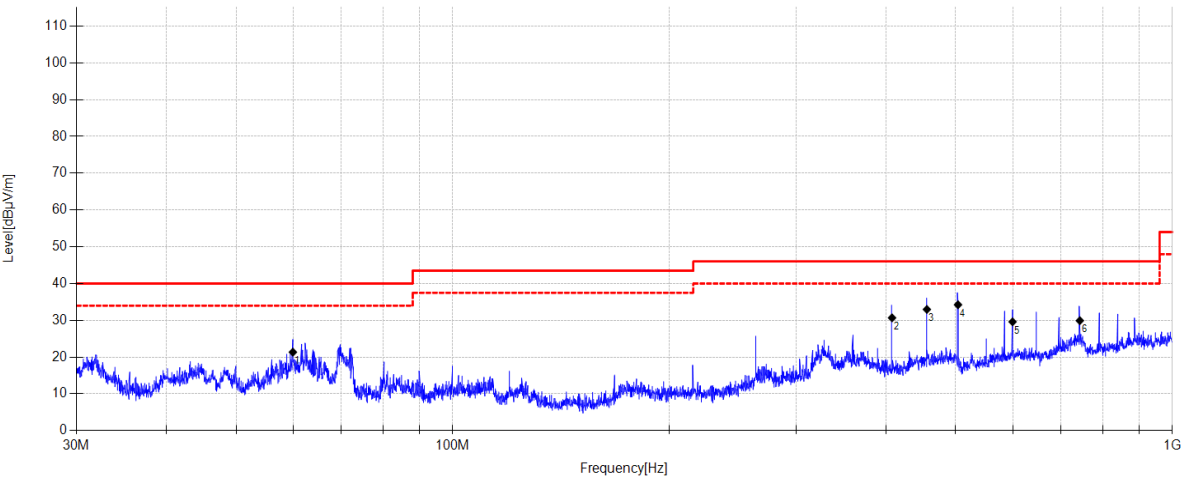
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24092711-1E\0116\20250116-165239_V

Memo:

Sample Number:S24092711-003 PSM-0100-022U



Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	59.977	35.68	12.79	3.96	21.33	40.00	18.67	QP	Vertical
2	407.874	41.53	14.94	5.65	30.67	46.00	15.33	QP	Vertical
3	455.977	42.63	15.98	5.83	32.96	46.00	13.04	QP	Vertical
4	503.715	42.92	16.80	6.01	34.23	46.00	11.77	QP	Vertical
5	599.803	35.54	19.18	6.37	29.59	46.00	16.41	QP	Vertical
6	743.866	34.45	19.95	6.80	29.90	46.00	16.10	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.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2402MHz Mode (ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

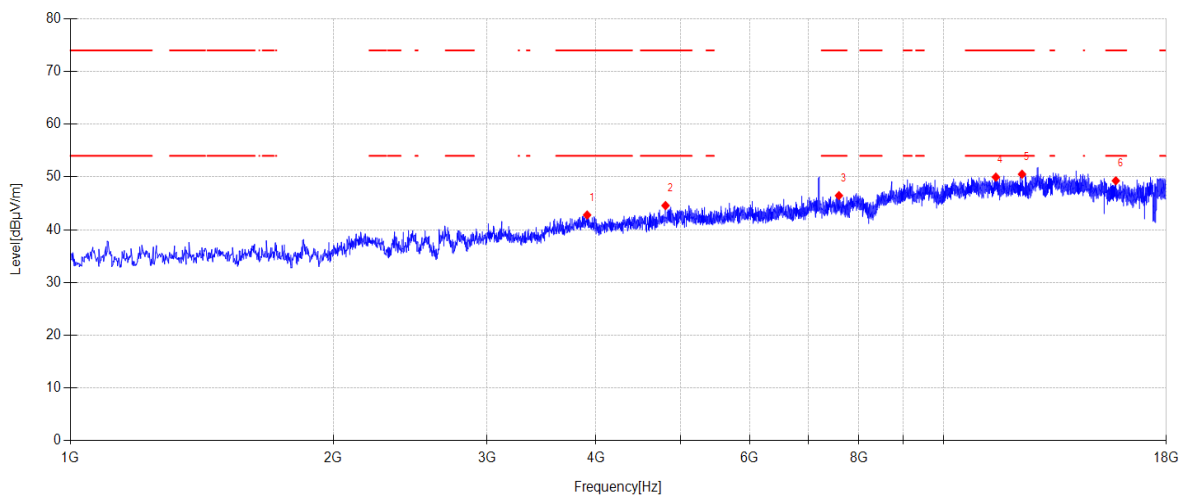
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\21

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3907.000	46.19	31.19	5.07	-39.66	42.79	74.00	31.21	PK	Horizontal
2	4804.600	46.05	32.62	5.53	-39.62	44.58	74.00	29.42	PK	Horizontal
3	7590.900	43.71	36.48	6.75	-40.47	46.47	74.00	27.53	PK	Horizontal
4	11482.200	41.80	39.22	8.43	-39.48	49.97	74.00	24.03	PK	Horizontal
5	12303.300	42.25	39.30	8.91	-39.94	50.52	74.00	23.48	PK	Horizontal
6	15754.300	40.30	38.39	9.99	-39.40	49.28	74.00	24.72	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2402MHz Mode(ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

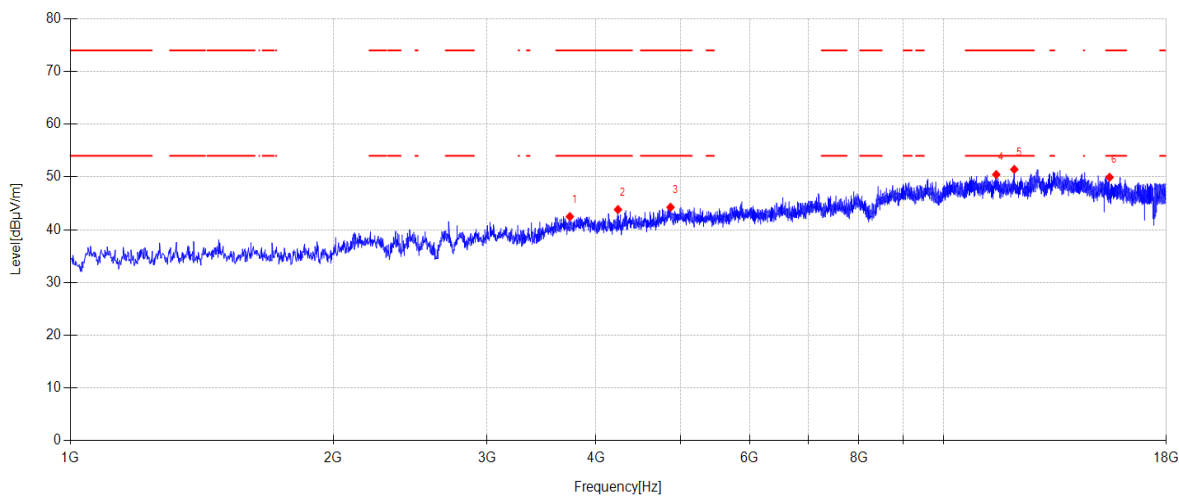
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d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\22

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3733.600	46.53	30.47	5.10	-39.62	42.48	74.00	31.52	PK	Vertical
2	4238.500	46.94	31.35	5.19	-39.66	43.82	74.00	30.18	PK	Vertical
3	4869.200	44.81	33.49	5.57	-39.61	44.26	74.00	29.74	PK	Vertical
4	11494.100	42.30	39.21	8.44	-39.49	50.46	74.00	23.54	PK	Vertical
5	12053.400	43.38	39.25	8.79	-39.99	51.43	74.00	22.57	PK	Vertical
6	15497.600	40.73	38.80	9.81	-39.40	49.94	74.00	24.06	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2441MHz Mode (ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

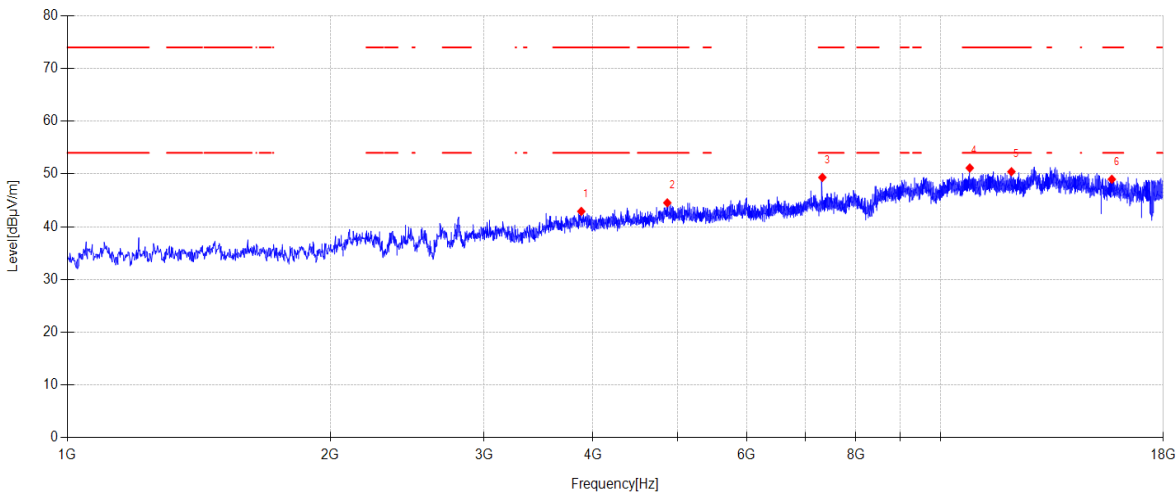
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d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\19

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3878.100	46.42	31.07	5.07	-39.65	42.91	74.00	31.09	PK	Horizontal
2	4865.800	45.02	33.55	5.57	-39.61	44.53	74.00	29.47	PK	Horizontal
3	7324.000	46.59	36.85	6.61	-40.71	49.34	74.00	24.66	PK	Horizontal
4	10803.900	42.82	39.40	8.03	-39.12	51.13	74.00	22.87	PK	Horizontal
5	12058.500	42.37	39.26	8.79	-39.99	50.43	74.00	23.57	PK	Horizontal
6	15715.200	39.96	38.47	9.96	-39.40	48.99	74.00	25.01	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2441MHz Mode (ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

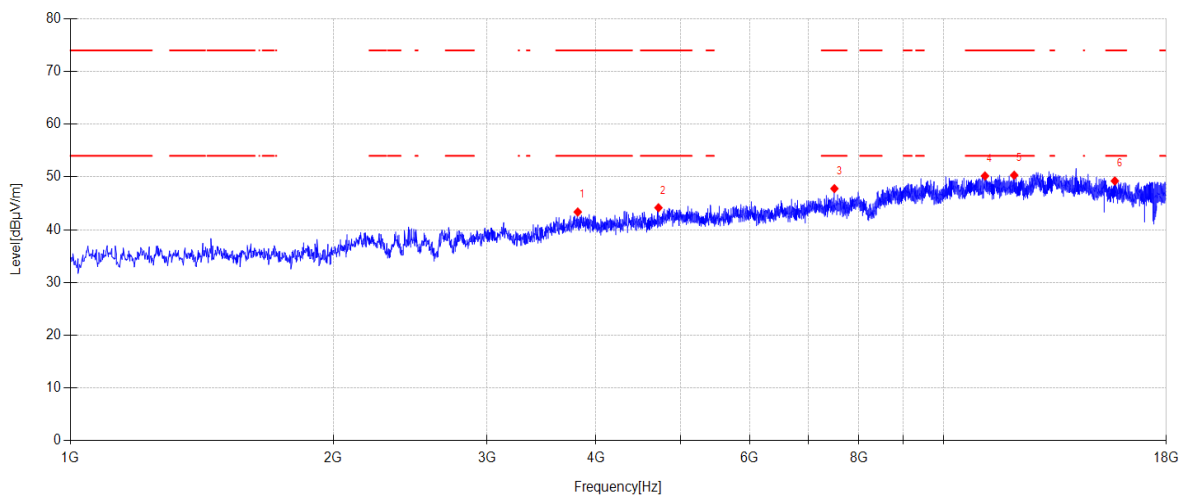
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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3811.800	47.16	30.75	5.08	-39.63	43.36	74.00	30.64	PK	Vertical
2	4716.200	46.08	32.23	5.48	-39.62	44.17	74.00	29.83	PK	Vertical
3	7500.800	45.14	36.50	6.71	-40.55	47.80	74.00	26.20	PK	Vertical
4	11157.500	41.88	39.24	8.23	-39.16	50.19	74.00	23.81	PK	Vertical
5	12051.700	42.28	39.25	8.79	-39.99	50.33	74.00	23.67	PK	Vertical
6	15713.500	40.21	38.47	9.96	-39.40	49.24	74.00	24.76	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2480MHz Mode (ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

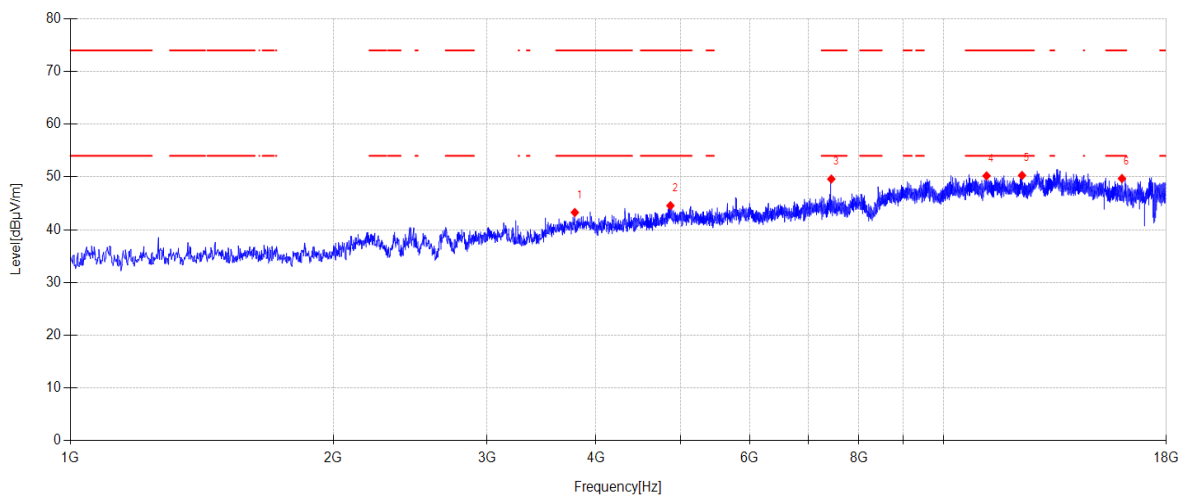
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d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\17

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3782.900	47.18	30.63	5.09	-39.63	43.27	74.00	30.73	PK	Horizontal
2	4867.500	45.08	33.52	5.57	-39.61	44.56	74.00	29.44	PK	Horizontal
3	7439.600	46.92	36.62	6.67	-40.60	49.61	74.00	24.39	PK	Horizontal
4	11203.400	41.95	39.20	8.26	-39.20	50.21	74.00	23.79	PK	Horizontal
5	12303.300	42.02	39.30	8.91	-39.94	50.29	74.00	23.71	PK	Horizontal
6	16011.000	40.98	37.99	10.15	-39.41	49.71	74.00	24.29	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2480MHz Mode (ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

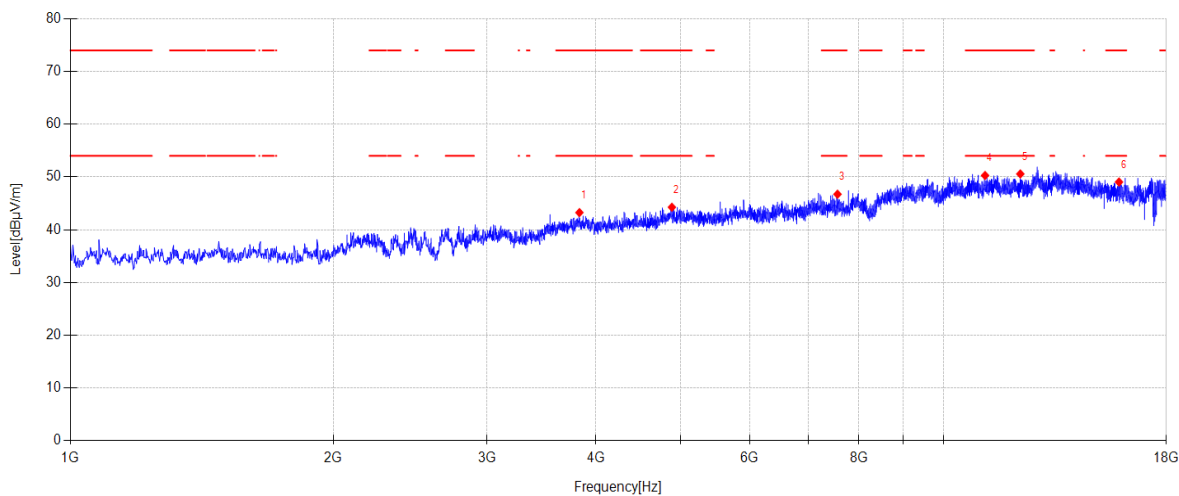
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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3828.800	46.99	30.82	5.08	-39.64	43.25	74.00	30.75	PK	Vertical
2	4886.200	45.08	33.22	5.58	-39.61	44.27	74.00	29.73	PK	Vertical
3	7562.000	44.06	36.42	6.74	-40.49	46.73	74.00	27.27	PK	Vertical
4	11159.200	41.97	39.24	8.23	-39.16	50.28	74.00	23.72	PK	Vertical
5	12247.200	42.33	39.30	8.89	-39.95	50.57	74.00	23.43	PK	Vertical
6	15886.900	40.24	38.13	10.07	-39.40	49.04	74.00	24.96	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2402MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

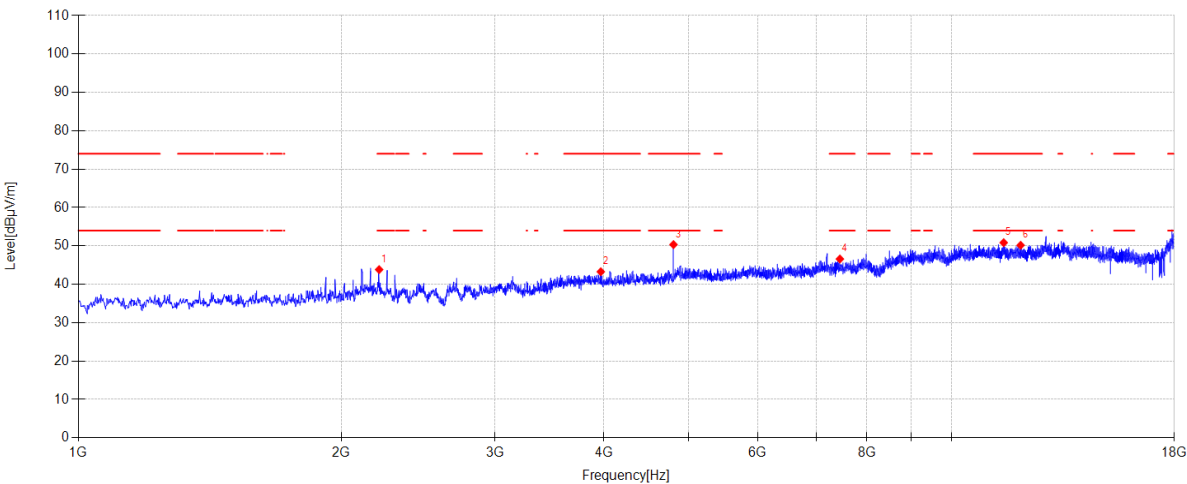
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d:\ts\2024 report data\Q24092711-1E\FCC Above 1G ANT2\1

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2210.400	49.86	27.70	4.72	-38.45	43.83	74.00	30.17	PK	Horizontal
2	3966.500	46.85	31.03	5.06	-39.67	43.27	74.00	30.73	PK	Horizontal
3	4804.600	51.81	32.62	5.53	-39.62	50.34	74.00	23.66	PK	Horizontal
4	7451.500	43.90	36.60	6.68	-40.59	46.59	74.00	27.41	PK	Horizontal
5	11477.100	42.68	39.22	8.43	-39.48	50.85	74.00	23.15	PK	Horizontal
6	12000.700	42.21	39.20	8.76	-40.00	50.17	74.00	23.83	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2402MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

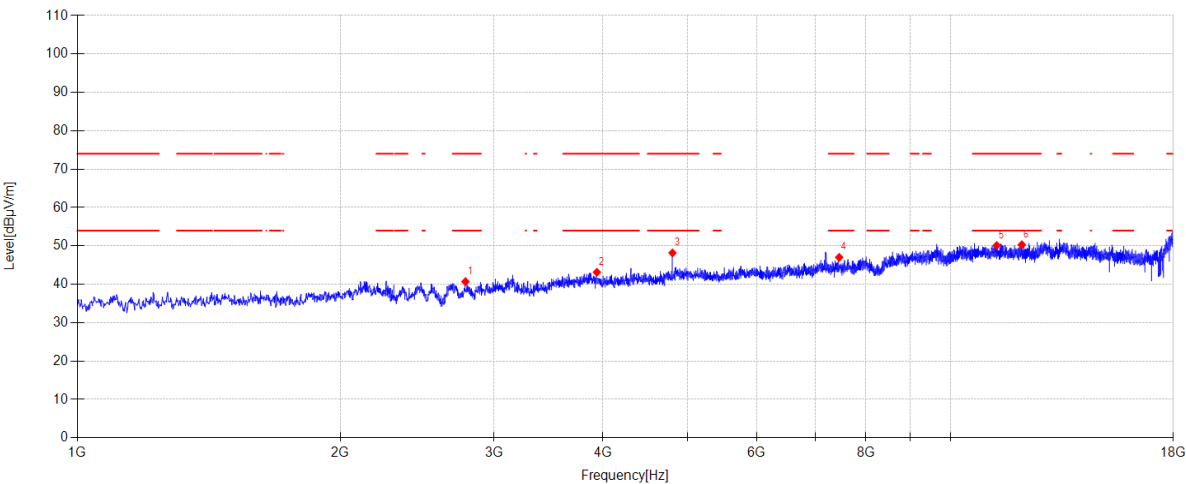
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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2783.300	47.31	27.47	5.08	-39.17	40.69	74.00	33.31	PK	Vertical
2	3935.900	46.61	31.13	5.06	-39.66	43.14	74.00	30.86	PK	Vertical
3	4804.600	49.65	32.62	5.53	-39.62	48.18	74.00	25.82	PK	Vertical
4	7456.600	44.34	36.59	6.68	-40.59	47.02	74.00	26.98	PK	Vertical
5	11298.600	41.88	39.20	8.32	-39.30	50.10	74.00	23.90	PK	Vertical
6	12070.400	42.22	39.27	8.80	-39.99	50.30	74.00	23.70	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2441 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

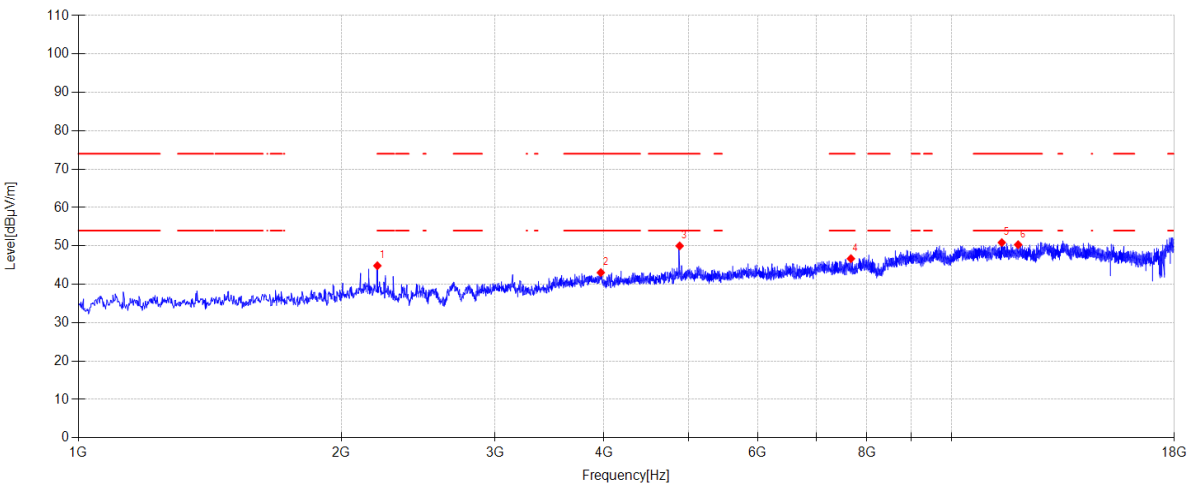
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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2200.200	50.74	27.80	4.72	-38.43	44.83	74.00	29.17	PK	Horizontal
2	3966.500	46.62	31.03	5.06	-39.67	43.04	74.00	30.96	PK	Horizontal
3	4882.800	50.74	33.28	5.58	-39.61	49.99	74.00	24.01	PK	Horizontal
4	7670.800	43.64	36.64	6.80	-40.40	46.68	74.00	27.32	PK	Horizontal
5	11419.300	42.63	39.28	8.39	-39.42	50.88	74.00	23.12	PK	Horizontal
6	11922.500	42.56	38.97	8.71	-39.92	50.32	74.00	23.68	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2441 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

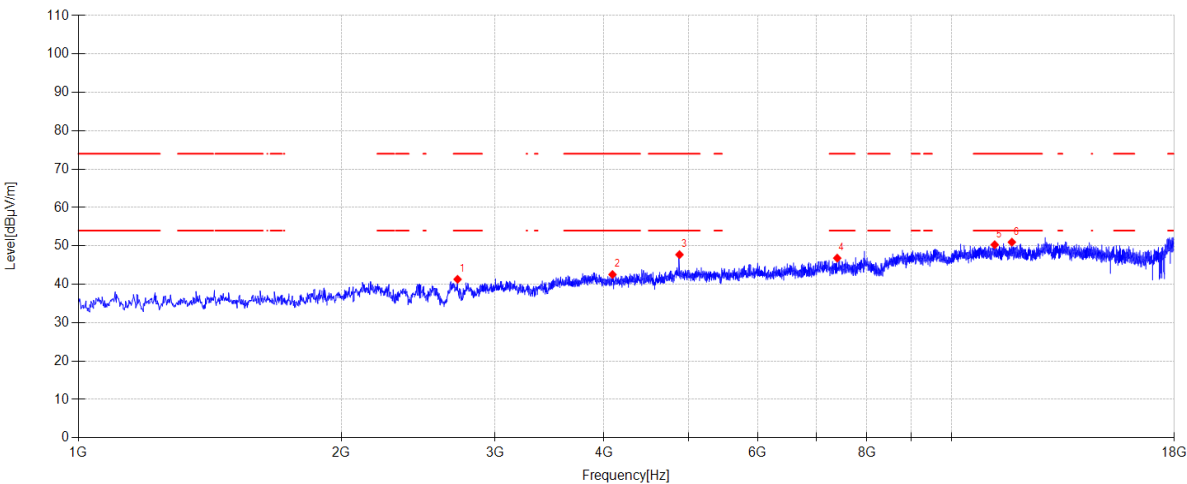
File Path:

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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2718.700	47.80	27.54	5.04	-39.09	41.29	74.00	32.71	PK	Vertical
2	4090.600	46.04	31.08	5.10	-39.67	42.55	74.00	31.45	PK	Vertical
3	4881.100	48.45	33.30	5.58	-39.61	47.72	74.00	26.28	PK	Vertical
4	7398.800	44.11	36.70	6.65	-40.64	46.82	74.00	27.18	PK	Vertical
5	11206.800	42.05	39.20	8.26	-39.21	50.30	74.00	23.70	PK	Vertical
6	11727.000	43.15	38.97	8.59	-39.73	50.98	74.00	23.02	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2480 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

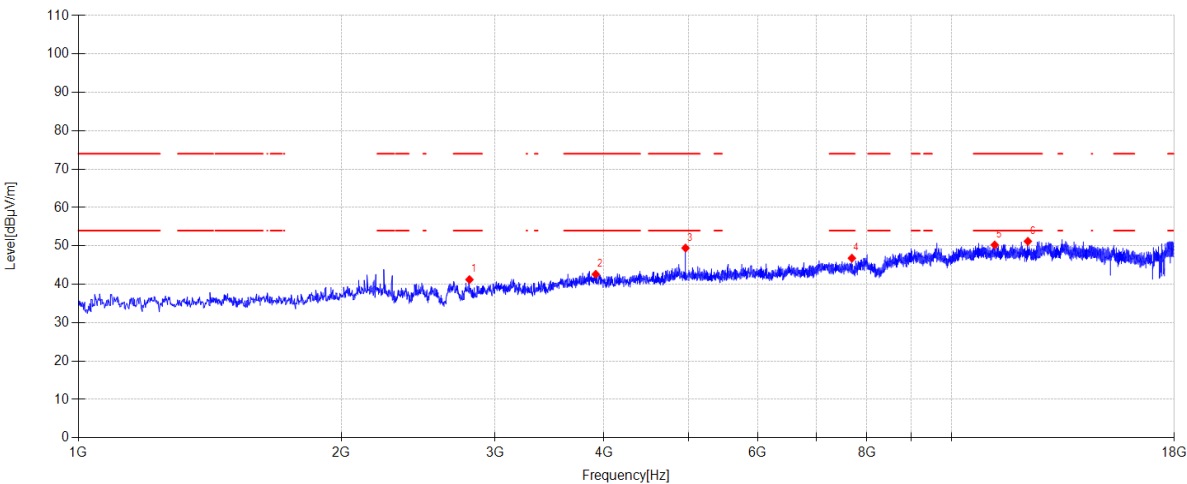
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d:\ts\2024 report data\Q24092711-1E\FCC Above 1G ANT2\5

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2805.400	47.87	27.44	5.10	-39.19	41.22	74.00	32.78	PK	Horizontal
2	3913.800	46.04	31.17	5.06	-39.66	42.61	74.00	31.39	PK	Horizontal
3	4959.300	50.29	33.12	5.63	-39.60	49.44	74.00	24.56	PK	Horizontal
4	7691.200	43.69	36.68	6.81	-40.38	46.80	74.00	27.20	PK	Horizontal
5	11208.500	42.00	39.20	8.26	-39.21	50.25	74.00	23.75	PK	Horizontal
6	12231.900	42.96	39.30	8.88	-39.95	51.19	74.00	22.81	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2480 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

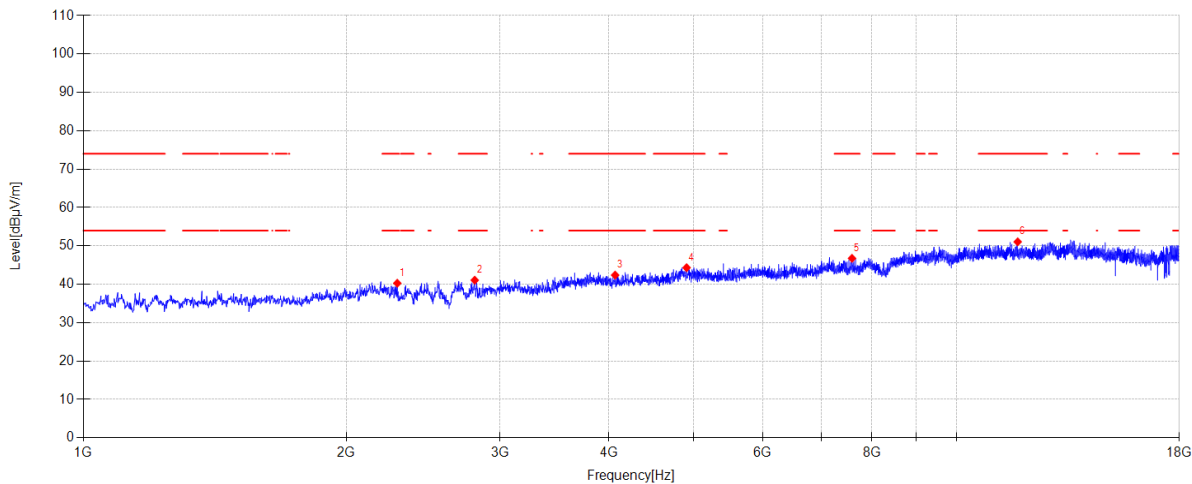
File Path:

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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2288.600	47.14	26.91	4.77	-38.54	40.28	74.00	33.72	PK	Vertical
2	2807.100	47.71	27.46	5.10	-39.20	41.07	74.00	32.93	PK	Vertical
3	4065.100	45.94	31.03	5.09	-39.67	42.39	74.00	31.61	PK	Vertical
4	4908.300	45.33	33.02	5.59	-39.61	44.33	74.00	29.67	PK	Vertical
5	7592.600	43.99	36.49	6.75	-40.47	46.76	74.00	27.24	PK	Vertical
6	11752.500	43.26	38.95	8.60	-39.75	51.06	74.00	22.94	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.

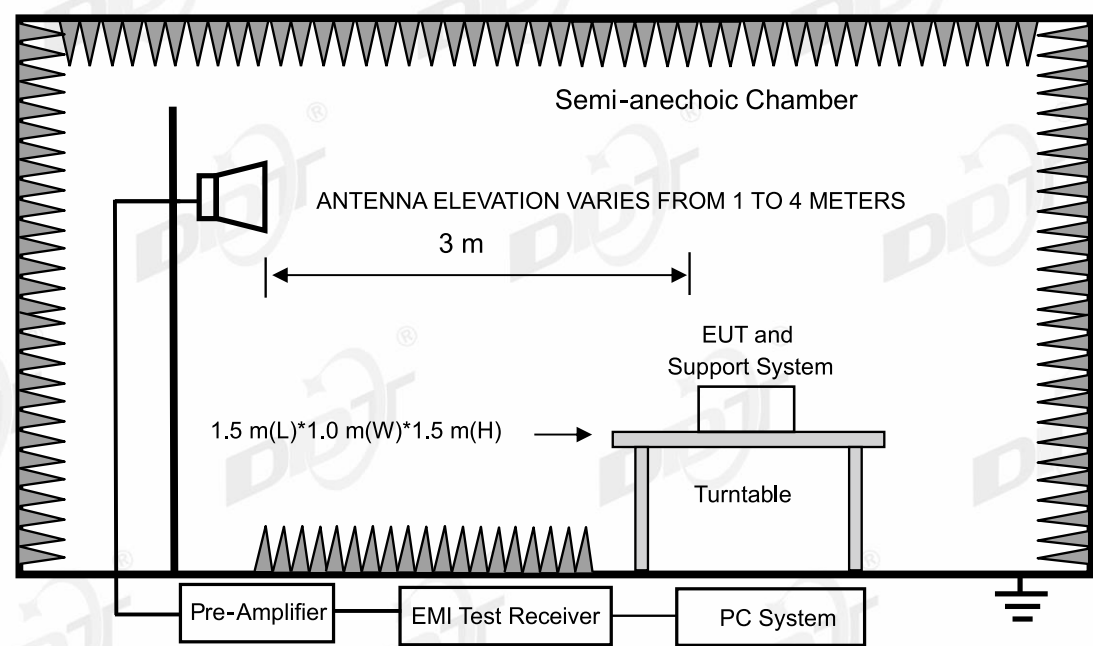
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

15.Band Edge Compliance

15.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/08/25
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/03/31
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/03/31
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2025/09/18
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/03/31
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11

15.2. Block diagram of test setup



15.3. Limits

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.

15.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

15.5. Test procedure

Same with Radiated Emission except change investigated frequency range.
Remark: All restriction band have been tested, and only the worst case is shown in report. According to the results of the radiated Emission test, it can be judged that the ANT1 Vertical direction is the Worst case, the ANT2 Horizontal direction is the Worst case.

15.6. Test result

PASS. (See below detailed test result)

15.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2402MHz Mode(ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

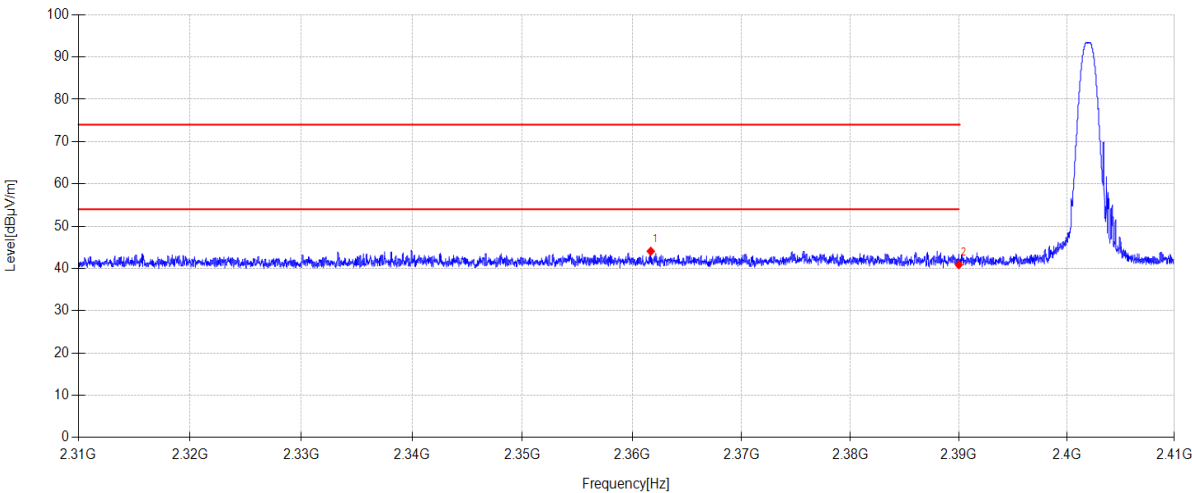
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\24

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2361.700	13.37	27.15	3.55	0.00	44.07	74.00	29.93	PK	Vertical
2	2390.000	10.06	27.26	3.57	0.00	40.89	74.00	33.11	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

2DH5 TX 2402MHz Mode(ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

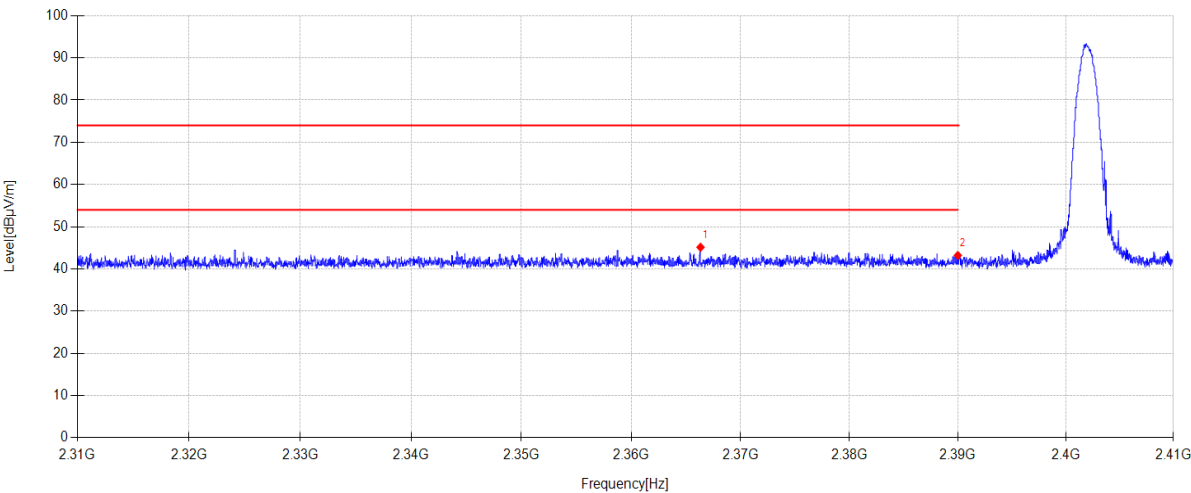
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\25

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2366.340	14.41	27.17	3.56	0.00	45.14	74.00	28.86	PK	Vertical
2	2390.000	12.38	27.26	3.57	0.00	43.21	74.00	30.79	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

3DH5 TX 2402MHz Mode(ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

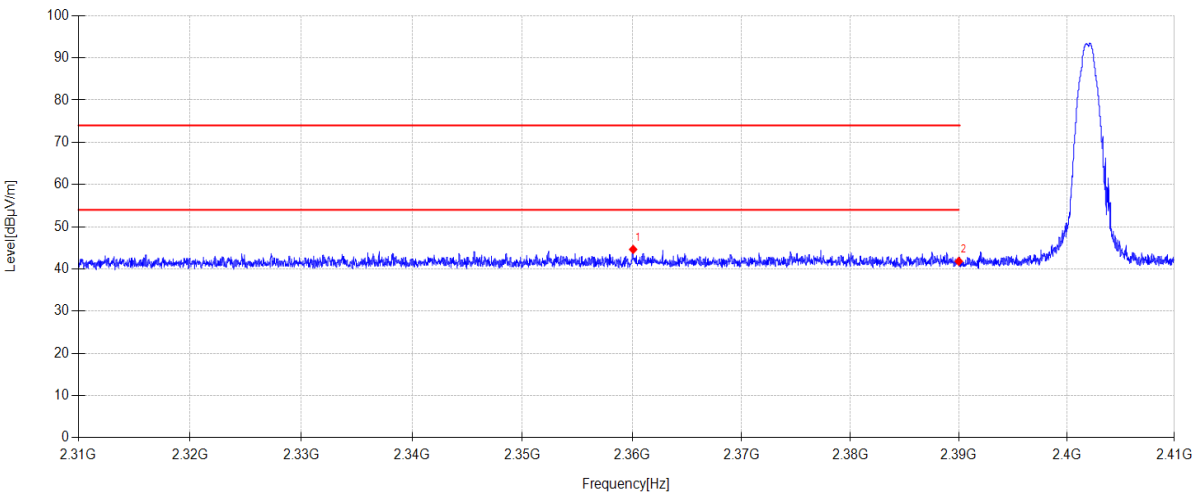
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\26

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2360.090	13.93	27.14	3.55	0.00	44.62	74.00	29.38	PK	Vertical
2	2390.000	10.96	27.26	3.57	0.00	41.79	74.00	32.21	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2480MHz Mode(ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

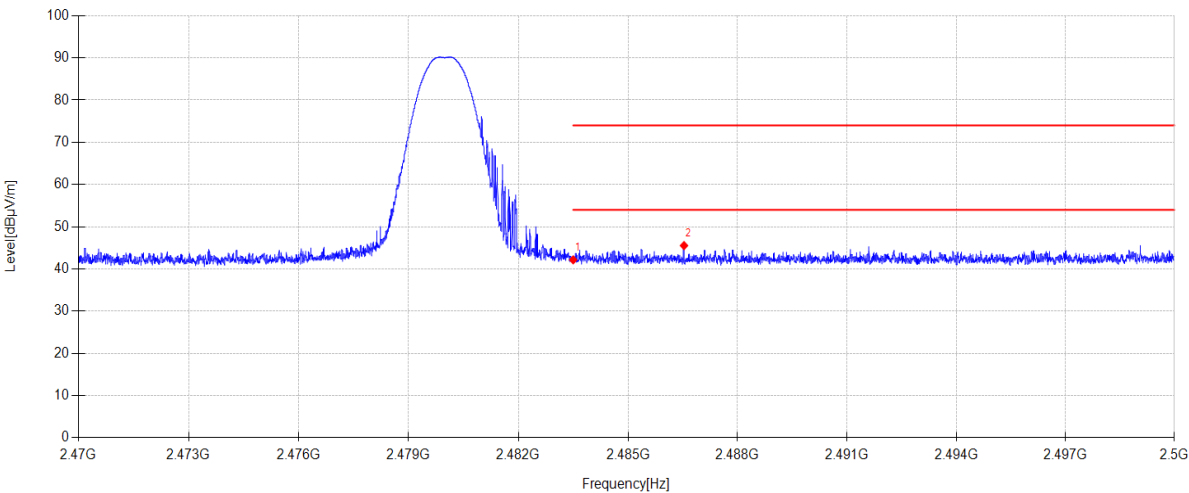
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d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\29

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.00	27.53	3.62	0.00	42.15	74.00	31.85	PK	Vertical
2	2486.533	14.36	27.55	3.62	0.00	45.53	74.00	28.47	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.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

2DH5 TX 2480MHz Mode(ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

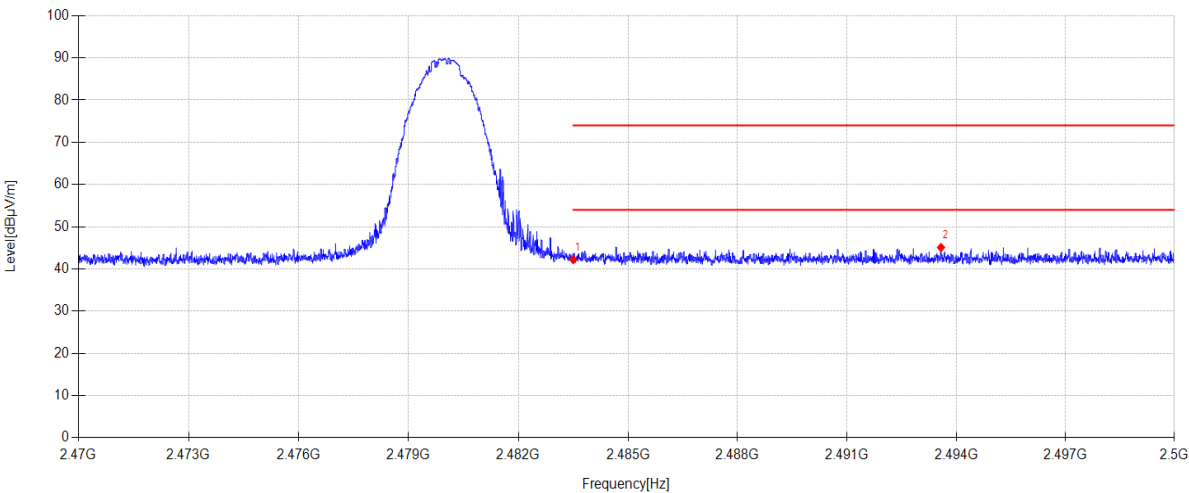
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d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\28

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.07	27.53	3.62	0.00	42.22	74.00	31.78	PK	Vertical
2	2493.583	13.89	27.57	3.63	0.00	45.09	74.00	28.91	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:

2024-10-25

Tested By:

Zhong Nan

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

3DH5 TX 2480MHz Mode(ANT1)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

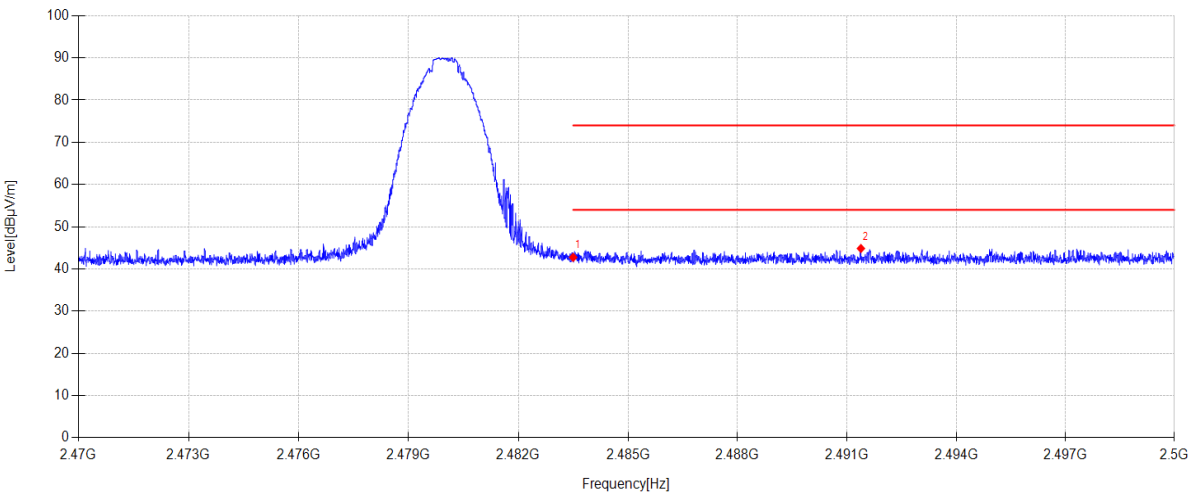
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC ABOVE1G\27

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.60	27.53	3.62	0.00	42.75	74.00	31.25	PK	Vertical
2	2491.384	13.65	27.57	3.63	0.00	44.85	74.00	29.15	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2402 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

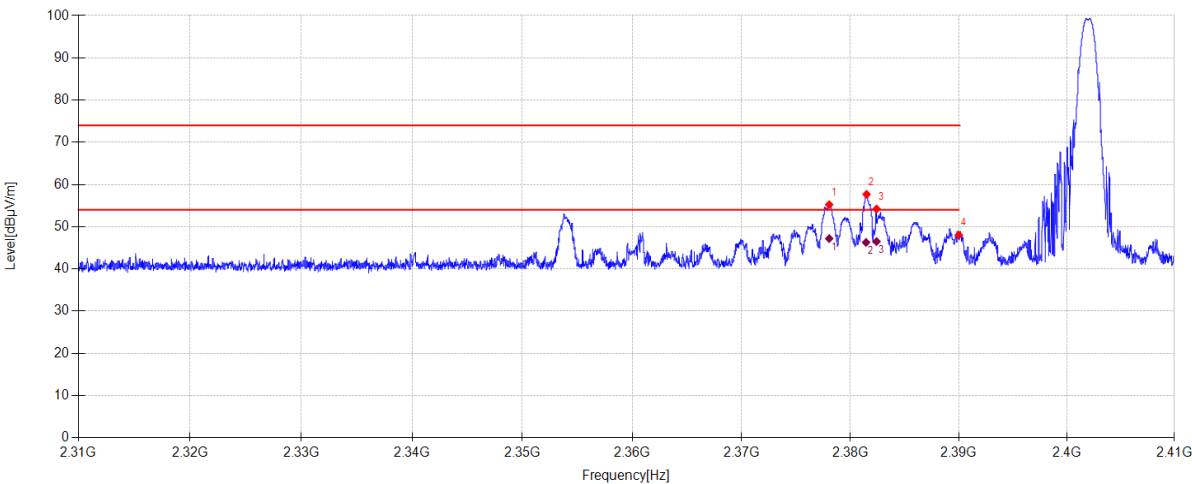
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC Above 1G ANT2\10

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2378.050	24.47	27.21	3.56	0.00	55.24	74.00	18.76	PK	Horizontal
2	2381.490	26.89	27.23	3.56	0.00	57.68	74.00	16.32	PK	Horizontal
3	2382.410	23.42	27.23	3.56	0.00	54.21	74.00	19.79	PK	Horizontal
4	2390.000	17.21	27.26	3.57	0.00	48.04	74.00	25.96	PK	Horizontal

Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2378.050	16.42	27.21	3.56	47.19	54.00	6.81	AV	Horizontal
2	2381.444	15.50	27.23	3.56	46.29	54.00	7.71	AV	Horizontal
3	2382.410	15.71	27.23	3.56	46.50	54.00	7.50	AV	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

2DH5 TX 2402 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

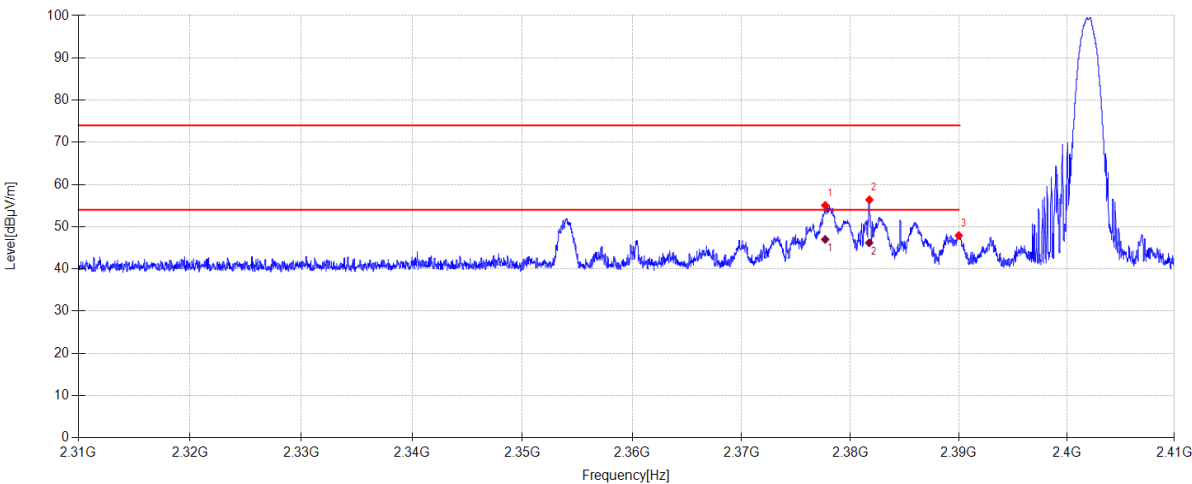
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d:\ts\2024 report data\Q24092711-1E\FCC Above 1G ANT2\11

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2377.680	24.29	27.21	3.56	0.00	55.06	74.00	18.94	PK	Horizontal
2	2381.750	25.58	27.23	3.56	0.00	56.37	74.00	17.63	PK	Horizontal
3	2390.000	17.08	27.26	3.57	0.00	47.91	74.00	26.09	PK	Horizontal

Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity	
1	2377.680	16.22	27.21	3.56	46.99	54.00	7.01	AV	Horizontal	
2	2381.735	15.40	27.23	3.56	46.19	54.00	7.81	AV	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

3DH5 TX 2402 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

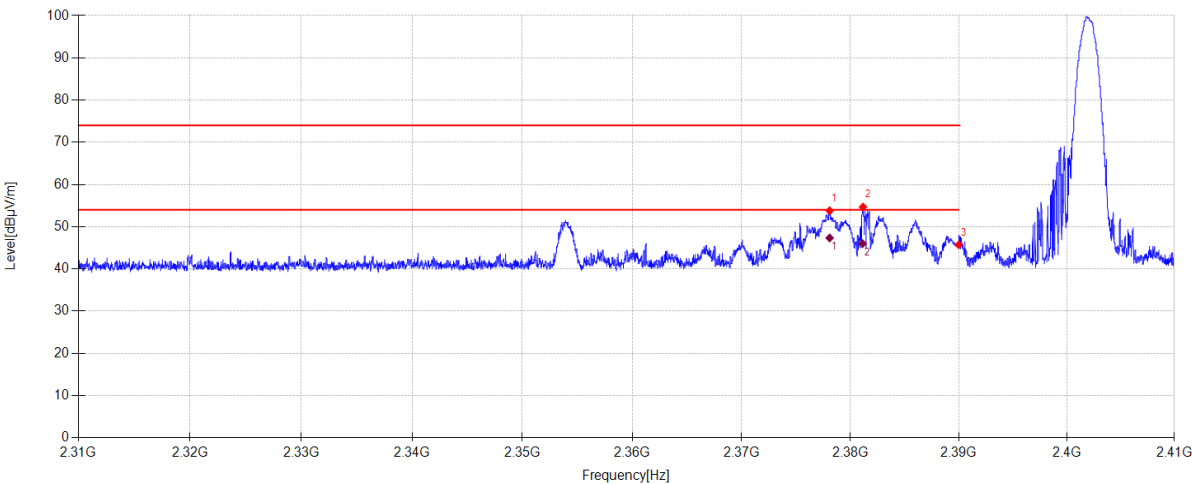
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC Above 1G ANT2\12

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2378.090	23.01	27.21	3.56	0.00	53.78	74.00	20.22	PK	Horizontal
2	2381.160	23.90	27.22	3.56	0.00	54.68	74.00	19.32	PK	Horizontal
3	2390.000	14.88	27.26	3.57	0.00	45.71	74.00	28.29	PK	Horizontal

Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2378.090	16.57	27.21	3.56	47.34	54.00	6.66	AV	Horizontal
2	2381.123	15.21	27.22	3.56	45.99	54.00	8.01	AV	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

DH5 TX 2480 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

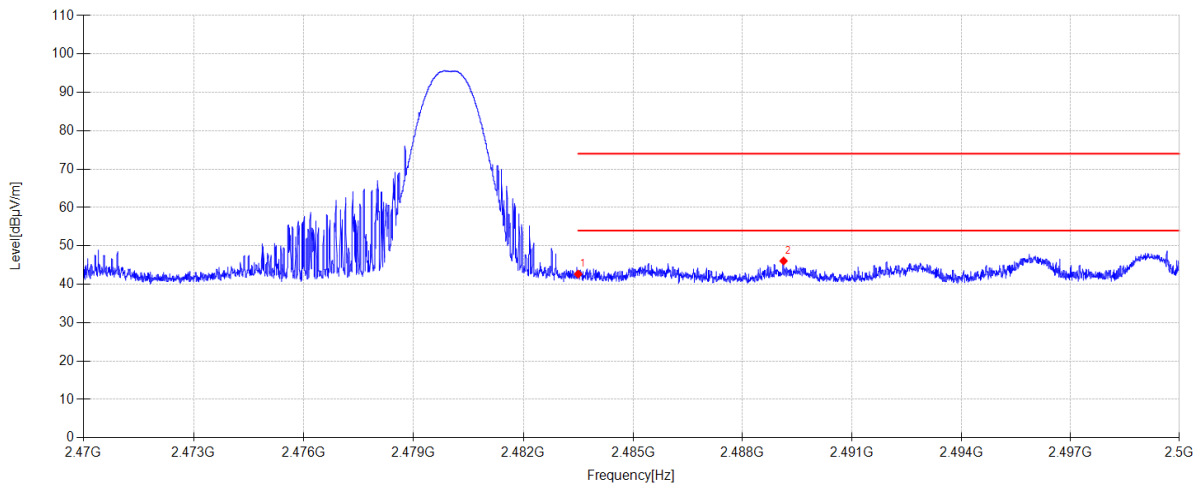
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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.51	27.53	3.62	0.00	42.66	74.00	31.34	PK	Horizontal
2	2489.125	14.89	27.56	3.62	0.00	46.07	74.00	27.93	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

2DH5 TX 2480 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

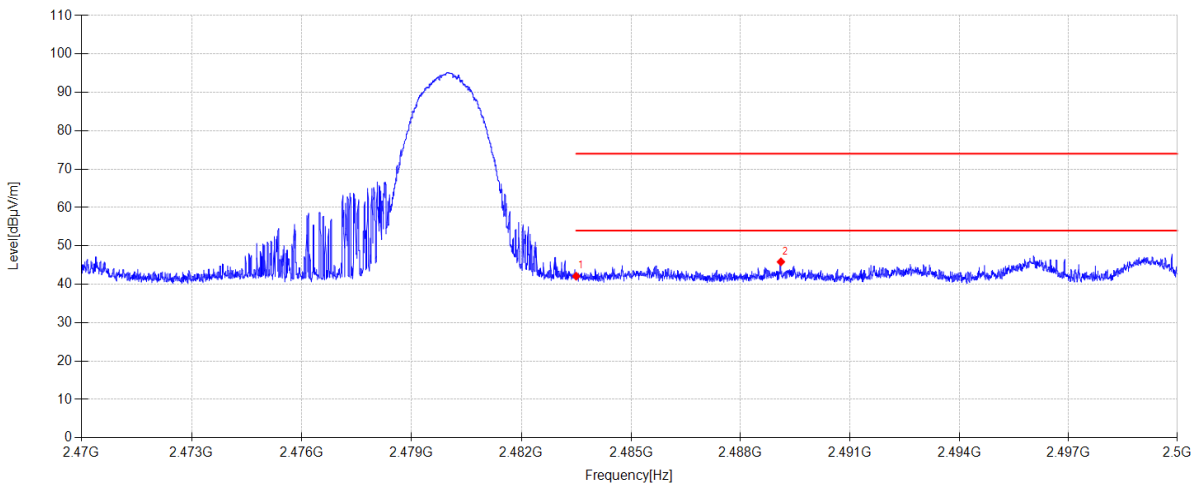
File Path:

d:\ts\2024 report data\Q24092711-1E\FCC Above 1G ANT2\8

Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	10.96	27.53	3.62	0.00	42.11	74.00	31.89	PK	Horizontal
2	2489.107	14.66	27.56	3.62	0.00	45.84	74.00	28.16	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:

2024-11-15

Tested By:

Guoyuan Lin

EUT:

BATTERY-POWERED PA SPEAKER
WITH WIRELESS MICROPHONE
AND DYNAMIC LIGHTS

Model Number:

TOTAL PA™ APEX

Test Mode:

3DH5 TX 2480 MHz Mode(ANT2)

Power Supply:

Battery

Condition:

Temp:23.5°C;Humi:65.2%

Test Site:

DDT 3# Chamber

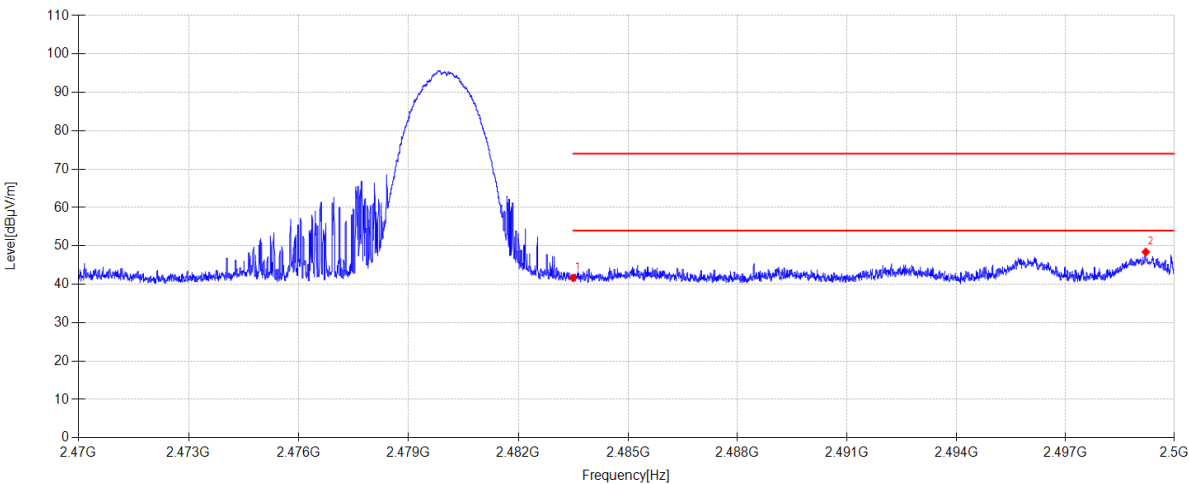
File Path:

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Memo:

Sample Number:S24092711-003 Power Setting:0

Test Graph



Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	10.52	27.53	3.62	0.00	41.67	74.00	32.33	PK	Horizontal
2	2499.214	17.18	27.60	3.63	0.00	48.41	74.00	25.59	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.

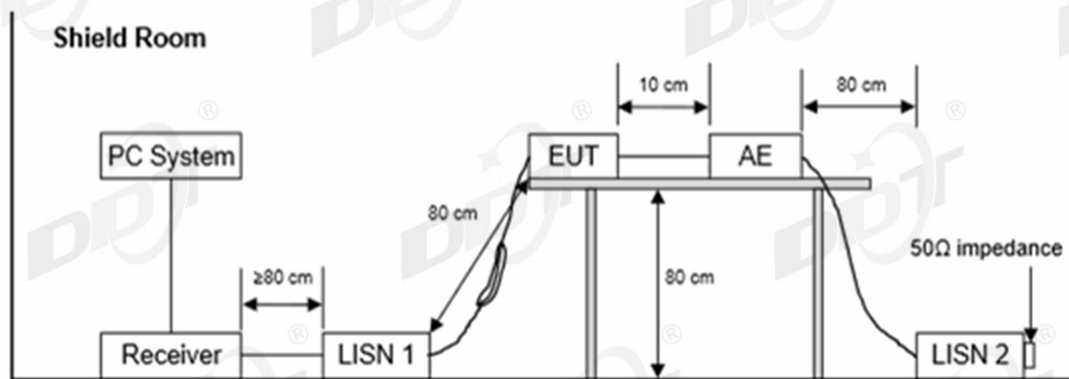
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

16.Power Line Conducted Emissions

16.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Δ-shaped artificial power network	SCHWARZBEC K	PVDC 8301	DDT-ZC03939	2025/03/31
Two Line V-Network	R&S	ENV216	DDT-ZC02059	2025/07/08
Pulse Limiter	SCHWARZBEC K	VTSD 9561	DDT-ZC02128	2025/07/08
EMI Test Receiver	R&S	ESCI/E3	DDT-ZC01297	2025/07/08
Two Line V-Network	R&S	ENV216	DDT-ZC02056	2025/07/08
Three-phase artificial power network	SCHWARZBEC K	NSLK 8163	DDT-ZC01572	2025/07/08
RF Cable	Yuhu Technology	Z806-NJ-NJ-6M	DDT-ZC02004	2025/07/08
Conducted Radiated Software	Audix	E3	DDT-ZC00562	/

16.2. Block diagram of test setup



16.3. Limits

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

16.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

16.5. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

16.6. Test result

PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Note2: “----” means Peak detection; “----” means Average detection.

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded the worst case.

16.7. Test data

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2024 Report Date\Q24092711-2E\1104 CE.EM6

Test Date : 2024-11-04

Tested By : Genliu

EUT : BATTERY-POWERED PA SPEAKER WITH
WIRELESS MICROPHONE AND DYNAMIC

Model Number : TOTAL PA™ APEX

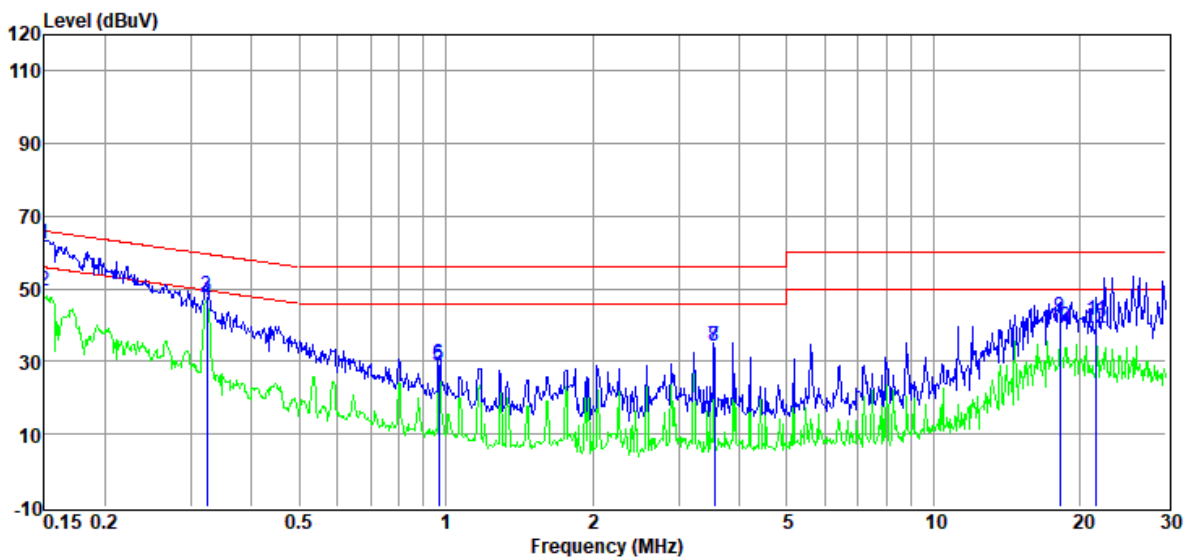
Power Supply : AC 120V/60Hz

Test Mode : BT mode

Condition : Temp:21.8°C,Humi:52.9%

LISN : 2024 ENV216 3#/NEUTRAL

Memo : 18650-11.1V-6000mAh-3S3P



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	42.74	9.78	0.07	9.83	62.42	66.00	-3.58	QP	NEUTRAL
2	0.15	29.77	9.78	0.07	9.83	49.45	56.00	-6.55	Average	NEUTRAL
3	0.32	28.49	9.76	0.07	9.83	48.15	59.62	-11.47	QP	NEUTRAL
4	0.32	26.96	9.76	0.07	9.83	46.62	49.62	-3.00	Average	NEUTRAL
5	0.97	9.31	9.76	0.11	9.84	29.02	56.00	-26.98	QP	NEUTRAL
6	0.97	9.51	9.76	0.11	9.84	29.22	46.00	-16.78	Average	NEUTRAL
7	3.56	14.49	9.78	0.10	9.85	34.22	56.00	-21.78	QP	NEUTRAL
8	3.56	14.58	9.78	0.10	9.85	34.31	46.00	-11.69	Average	NEUTRAL
9	18.15	22.18	9.95	0.25	9.93	42.31	60.00	-17.69	QP	NEUTRAL
10	18.15	19.42	9.95	0.25	9.93	39.55	50.00	-10.45	Average	NEUTRAL
11	21.60	21.10	10.03	0.27	9.95	41.35	60.00	-18.65	QP	NEUTRAL
12	21.60	19.09	10.03	0.27	9.95	39.34	50.00	-10.66	Average	NEUTRAL

Note: 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).

4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

Test Date : 2024-11-04

EUT : BATTERY-POWERED PA SPEAKER WITH WIRELESS MICROPHONE AND DYNAMIC

Power Supply : AC 120V/60Hz

Condition : Temp:21.8°C,Humi:52.9%

Memo : 18650-11.1V-6000mAh-3S3P

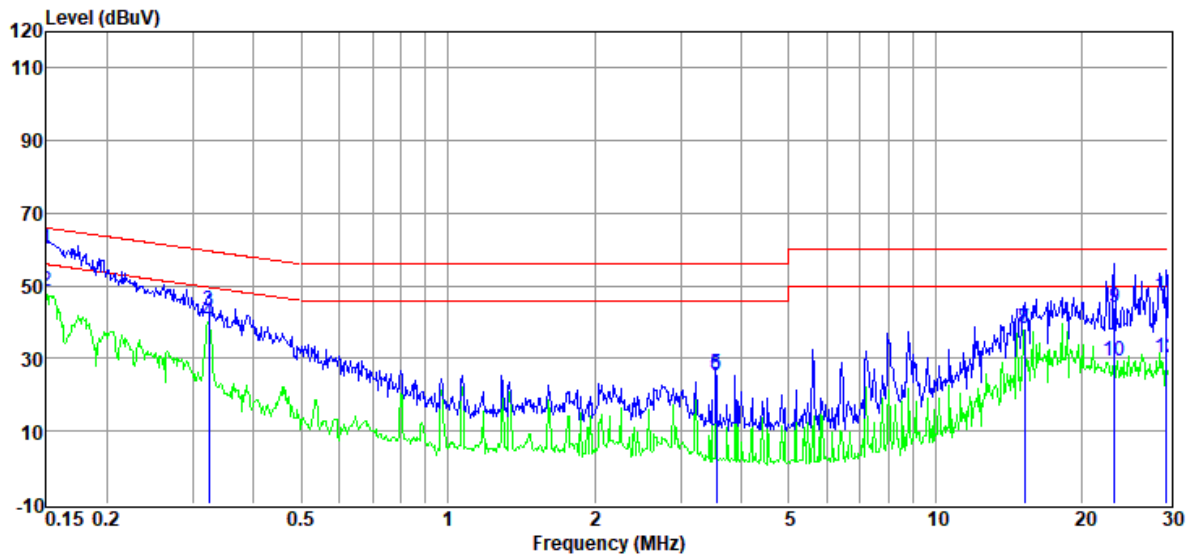
D:\2024 Report Date\Q24092711-2E\1104 CE.EM6

Tested By : Genliu

Model Number : TOTAL PA™ APEX

Test Mode : BT mode

LISN : 2024 ENV216 3#/LINE



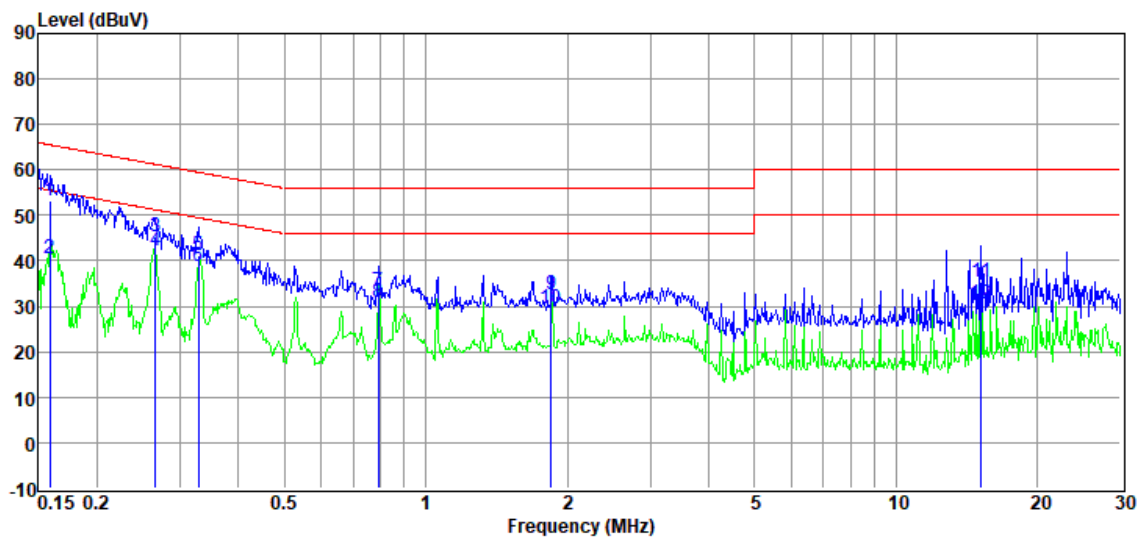
Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	40.42	9.78	0.07	9.83	60.10	66.00	-5.90	QP	LINE
2	0.15	28.69	9.78	0.07	9.83	48.37	56.00	-7.63	Average	LINE
3	0.32	23.57	9.77	0.07	9.83	43.24	59.62	-16.38	QP	LINE
4	0.32	20.44	9.77	0.07	9.83	40.11	49.62	-9.51	Average	LINE
5	3.55	5.87	9.77	0.10	9.85	25.59	56.00	-30.41	QP	LINE
6	3.55	5.68	9.77	0.10	9.85	25.40	46.00	-20.60	Average	LINE
7	15.23	18.07	9.90	0.24	9.91	38.12	60.00	-21.88	QP	LINE
8	15.23	18.30	9.90	0.24	9.91	38.35	50.00	-11.65	Average	LINE
9	23.26	23.54	10.06	0.28	9.95	43.83	60.00	-16.17	QP	LINE
10	23.26	9.09	10.06	0.28	9.95	29.38	50.00	-20.62	Average	LINE
11	29.68	26.48	10.24	0.32	9.97	47.01	60.00	-12.99	QP	LINE
12	29.68	9.88	10.24	0.32	9.97	30.41	50.00	-19.59	Average	LINE

Note: 1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER **Model Number** : TOTAL PA™ APEX
: WITH WIRELESS MICROPHONE AND DYNAMIC LIGHTS
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/LINE
Memo : WLY 1865-353P

Data: 2



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.16	33.50	9.88	0.11	9.86	53.35	65.52	-12.17	QP	LINE
2	0.16	20.50	9.88	0.11	9.86	40.35	55.52	-15.17	Average	LINE
3	0.27	25.53	9.74	0.14	9.86	45.27	61.25	-15.98	QP	LINE
4	0.27	22.47	9.74	0.14	9.86	42.21	51.25	-9.04	Average	LINE
5	0.33	21.47	9.77	0.13	9.86	41.23	59.49	-18.26	QP	LINE
6	0.33	18.92	9.77	0.13	9.86	38.68	49.49	-10.81	Average	LINE
7	0.79	13.68	9.82	0.09	9.87	33.46	56.00	-22.54	QP	LINE
8	0.79	10.99	9.82	0.09	9.87	30.77	46.00	-15.23	Average	LINE
9	1.85	12.91	9.75	0.04	9.87	32.57	56.00	-23.43	QP	LINE
10	1.85	9.77	9.75	0.04	9.87	29.43	46.00	-16.57	Average	LINE
11	15.15	15.40	9.95	0.14	9.93	35.42	60.00	-24.58	QP	LINE
12	15.15	10.62	9.95	0.14	9.93	30.64	50.00	-19.36	Average	LINE

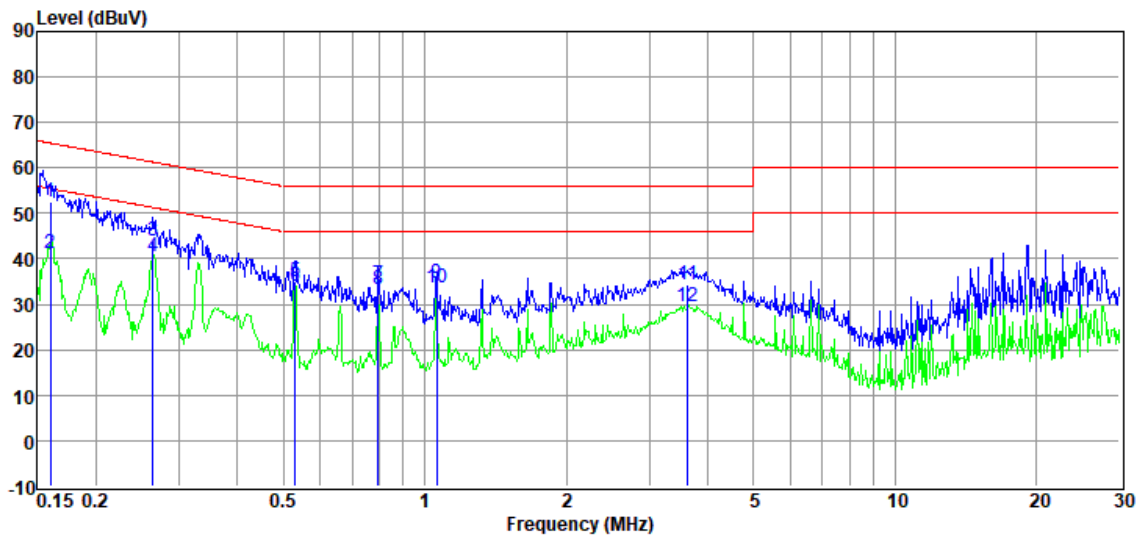
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER
Model Number : TOTAL PA™ APEX
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/NEUTRAL
Memo : WLY 1865-353P

Data: 4



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.16	33.02	9.66	0.11	9.86	52.65	65.47	-12.82	QP	NEUTRAL
2	0.16	21.69	9.66	0.11	9.86	41.32	55.47	-14.15	Average	NEUTRAL
3	0.26	24.09	9.72	0.14	9.86	43.81	61.29	-17.48	QP	NEUTRAL
4	0.26	20.71	9.72	0.14	9.86	40.43	51.29	-10.86	Average	NEUTRAL
5	0.53	15.28	9.78	0.06	9.86	34.98	56.00	-21.02	QP	NEUTRAL
6	0.53	14.41	9.78	0.06	9.86	34.11	46.00	-11.89	Average	NEUTRAL
7	0.80	14.55	9.72	0.09	9.87	34.23	56.00	-21.77	QP	NEUTRAL
8	0.80	13.65	9.72	0.09	9.87	33.33	46.00	-12.67	Average	NEUTRAL
9	1.06	15.16	9.70	0.04	9.88	34.78	56.00	-21.22	QP	NEUTRAL
10	1.06	13.89	9.70	0.04	9.88	33.51	46.00	-12.49	Average	NEUTRAL
11	3.62	14.88	9.65	0.05	9.86	34.44	56.00	-21.56	QP	NEUTRAL
12	3.62	9.96	9.65	0.05	9.86	29.52	46.00	-16.48	Average	NEUTRAL

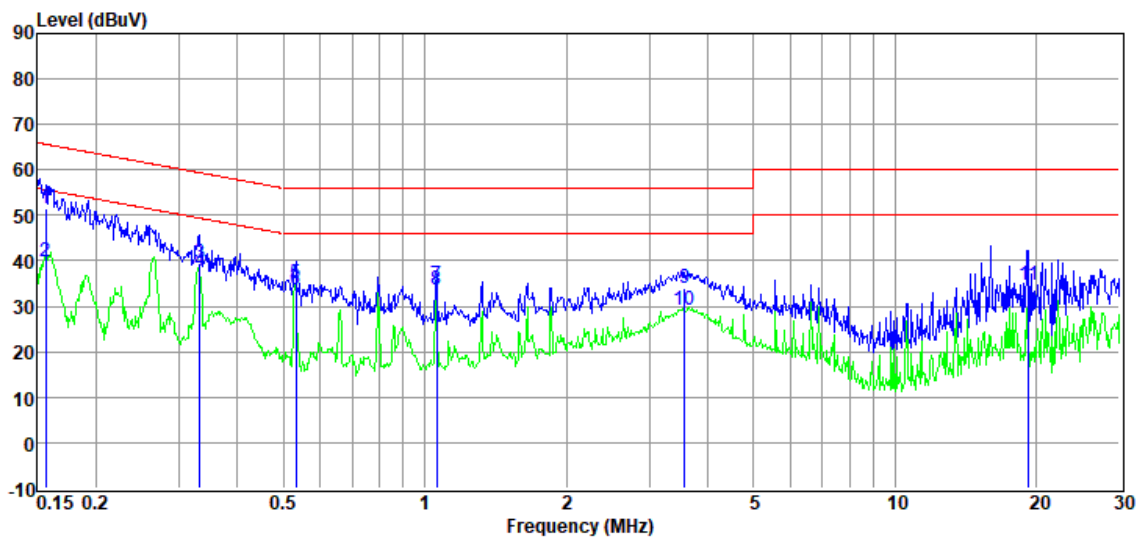
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER **Model Number** : TOTAL PA™ APEX
 : WITH WIRELESS MICROPHONE AND DYNAMIC LIGHTS
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/LINE
Memo : B18650-201C-91

Data: 10



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.16	31.59	9.88	0.11	9.86	51.44	65.65	-14.21	QP	LINE
2	0.16	20.03	9.88	0.11	9.86	39.88	55.65	-15.77	Average	LINE
3	0.33	19.82	9.77	0.13	9.86	39.58	59.40	-19.82	QP	LINE
4	0.33	17.91	9.77	0.13	9.86	37.67	49.40	-11.73	Average	LINE
5	0.53	15.08	9.85	0.06	9.86	34.85	56.00	-21.15	QP	LINE
6	0.53	14.01	9.85	0.06	9.86	33.78	46.00	-12.22	Average	LINE
7	1.06	15.01	9.78	0.04	9.88	34.71	56.00	-21.29	QP	LINE
8	1.06	13.84	9.78	0.04	9.88	33.54	46.00	-12.46	Average	LINE
9	3.57	14.35	9.74	0.05	9.86	34.00	56.00	-22.00	QP	LINE
10	3.57	9.43	9.74	0.05	9.86	29.08	46.00	-16.92	Average	LINE
11	19.22	14.58	10.04	0.15	9.96	34.73	60.00	-25.27	QP	LINE
12	19.22	8.22	10.04	0.15	9.96	28.37	50.00	-21.63	Average	LINE

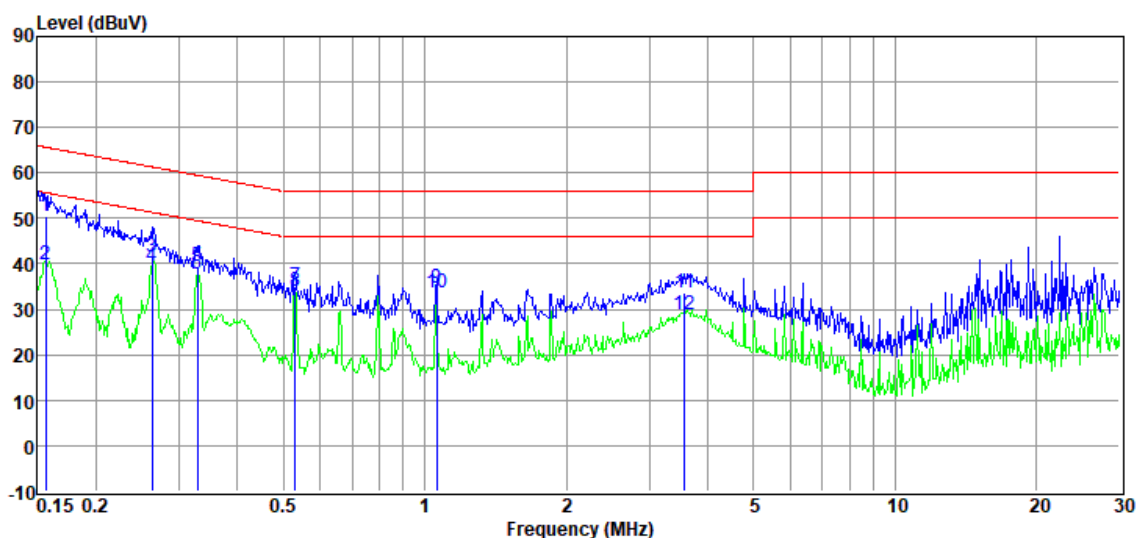
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER
: WITH WIRELESS MICROPHONE AND **Model Number** : TOTAL PA™ APEX
: DYNAMIC LIGHTS
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/NEUTRAL
Memo : B18650-201C-91

Data: 12



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.16	30.94	9.65	0.11	9.86	50.56	65.65	-15.09	QP	NEUTRAL
2	0.16	20.26	9.65	0.11	9.86	39.88	55.65	-15.77	Average	NEUTRAL
3	0.26	21.76	9.72	0.14	9.86	41.48	61.34	-19.86	QP	NEUTRAL
4	0.26	19.67	9.72	0.14	9.86	39.39	51.34	-11.95	Average	NEUTRAL
5	0.33	19.90	9.73	0.13	9.86	39.62	59.49	-19.87	QP	NEUTRAL
6	0.33	18.03	9.73	0.13	9.86	37.75	49.49	-11.74	Average	NEUTRAL
7	0.53	15.21	9.78	0.06	9.86	34.91	56.00	-21.09	QP	NEUTRAL
8	0.53	14.29	9.78	0.06	9.86	33.99	46.00	-12.01	Average	NEUTRAL
9	1.06	15.20	9.70	0.04	9.88	34.82	56.00	-21.18	QP	NEUTRAL
10	1.06	14.09	9.70	0.04	9.88	33.71	46.00	-12.29	Average	NEUTRAL
11	3.57	14.15	9.65	0.05	9.86	33.71	56.00	-22.29	QP	NEUTRAL
12	3.57	9.31	9.65	0.05	9.86	28.87	46.00	-17.13	Average	NEUTRAL

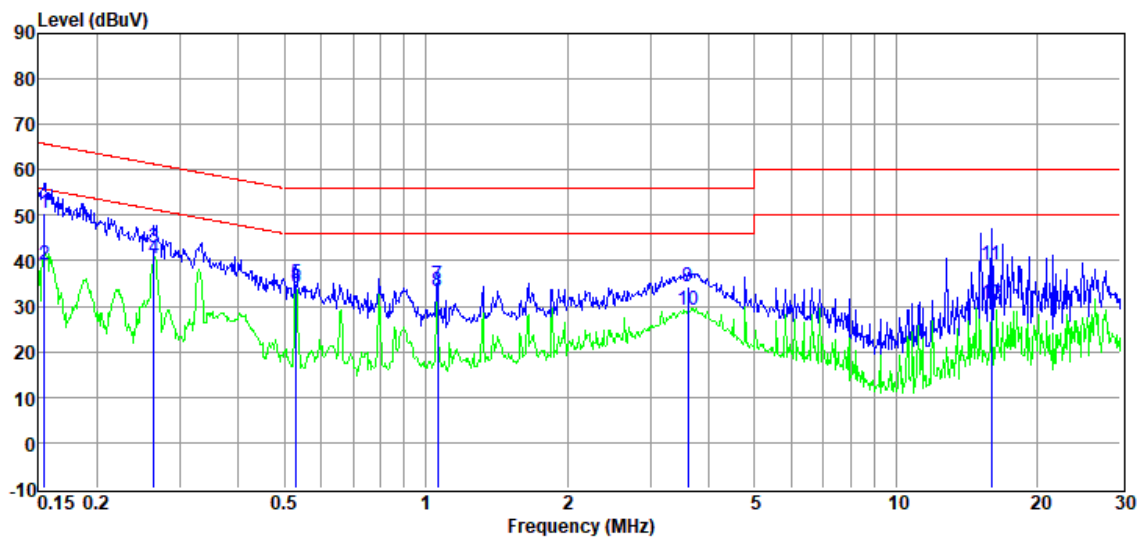
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER **Model Number** : TOTAL PA™ APEX
 : WITH WIRELESS MICROPHONE AND DYNAMIC LIGHTS
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/LINE
Memo : PQ3220-2409192WK

Data: 18



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	30.61	9.89	0.11	9.86	50.47	65.74	-15.27	QP	LINE
2	0.15	19.26	9.89	0.11	9.86	39.12	55.74	-16.62	Average	LINE
3	0.26	23.07	9.74	0.14	9.86	42.81	61.29	-18.48	QP	LINE
4	0.26	20.93	9.74	0.14	9.86	40.67	51.29	-10.62	Average	LINE
5	0.53	15.27	9.85	0.06	9.86	35.04	56.00	-20.96	QP	LINE
6	0.53	14.19	9.85	0.06	9.86	33.96	46.00	-12.04	Average	LINE
7	1.06	14.98	9.78	0.04	9.88	34.68	56.00	-21.32	QP	LINE
8	1.06	13.75	9.78	0.04	9.88	33.45	46.00	-12.55	Average	LINE
9	3.60	14.65	9.74	0.05	9.86	34.30	56.00	-21.70	QP	LINE
10	3.60	9.36	9.74	0.05	9.86	29.01	46.00	-16.99	Average	LINE
11	15.97	19.10	9.97	0.14	9.94	39.15	60.00	-20.85	QP	LINE
12	15.97	10.56	9.97	0.14	9.94	30.61	50.00	-19.39	Average	LINE

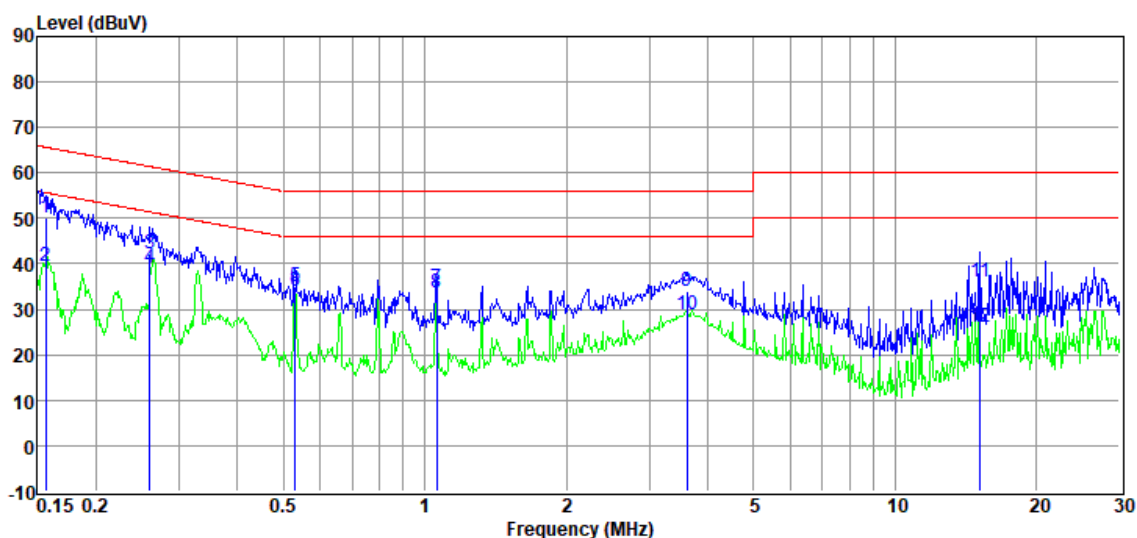
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER
: WITH WIRELESS MICROPHONE AND **Model Number** : TOTAL PA™ APEX
: DYNAMIC LIGHTS
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/NEUTRAL
Memo : PQ3220-2409192WK

Data: 20



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.16	30.47	9.65	0.11	9.86	50.09	65.65	-15.56	QP	NEUTRAL
2	0.16	19.84	9.65	0.11	9.86	39.46	55.65	-16.19	Average	NEUTRAL
3	0.26	22.46	9.72	0.14	9.86	42.18	61.42	-19.24	QP	NEUTRAL
4	0.26	19.38	9.72	0.14	9.86	39.10	51.42	-12.32	Average	NEUTRAL
5	0.53	15.28	9.78	0.06	9.86	34.98	56.00	-21.02	QP	NEUTRAL
6	0.53	14.26	9.78	0.06	9.86	33.96	46.00	-12.04	Average	NEUTRAL
7	1.06	15.12	9.70	0.04	9.88	34.74	56.00	-21.26	QP	NEUTRAL
8	1.06	14.06	9.70	0.04	9.88	33.68	46.00	-12.32	Average	NEUTRAL
9	3.60	14.41	9.65	0.05	9.86	33.97	56.00	-22.03	QP	NEUTRAL
10	3.60	9.39	9.65	0.05	9.86	28.95	46.00	-17.05	Average	NEUTRAL
11	15.15	16.21	9.85	0.14	9.93	36.13	60.00	-23.87	QP	NEUTRAL
12	15.15	5.99	9.85	0.14	9.93	25.91	50.00	-24.09	Average	NEUTRAL

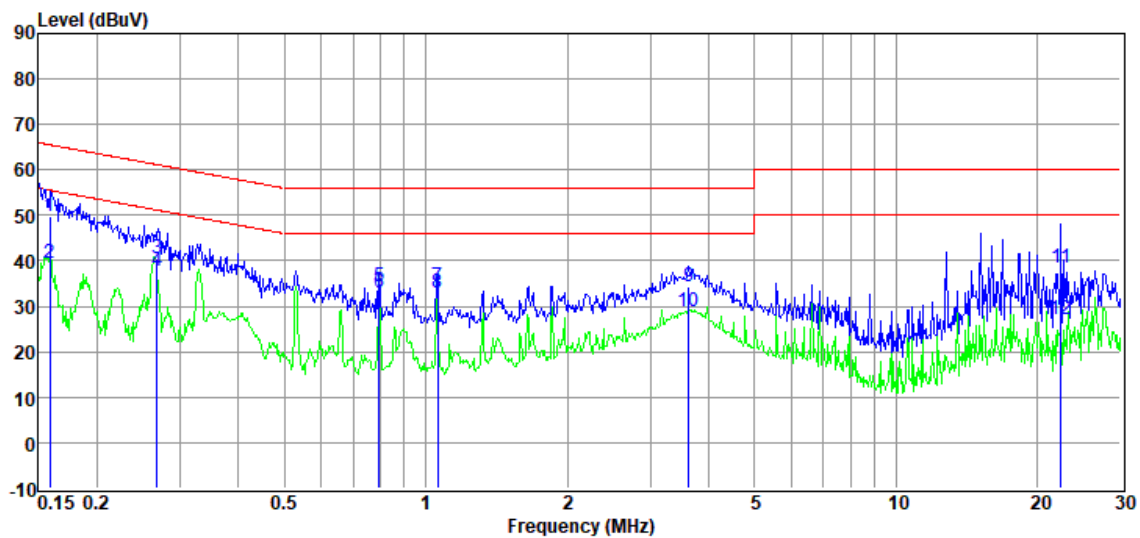
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER **Model Number** : TOTAL PA™ APEX
 : WITH WIRELESS MICROPHONE AND DYNAMIC LIGHTS
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/LINE
Memo : PSM-0100-022U

Data: 26



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.16	29.85	9.88	0.11	9.86	49.70	65.52	-15.82	QP	LINE
2	0.16	19.75	9.88	0.11	9.86	39.60	55.52	-15.92	Average	LINE
3	0.27	20.64	9.74	0.14	9.86	40.38	61.16	-20.78	QP	LINE
4	0.27	18.08	9.74	0.14	9.86	37.82	51.16	-13.34	Average	LINE
5	0.80	14.46	9.82	0.09	9.87	34.24	56.00	-21.76	QP	LINE
6	0.80	13.28	9.82	0.09	9.87	33.06	46.00	-12.94	Average	LINE
7	1.06	14.52	9.78	0.04	9.88	34.22	56.00	-21.78	QP	LINE
8	1.06	13.37	9.78	0.04	9.88	33.07	46.00	-12.93	Average	LINE
9	3.62	14.55	9.74	0.05	9.86	34.20	56.00	-21.80	QP	LINE
10	3.62	9.18	9.74	0.05	9.86	28.83	46.00	-17.17	Average	LINE
11	22.42	18.27	10.10	0.17	9.98	38.52	60.00	-21.48	QP	LINE
12	22.42	6.97	10.10	0.17	9.98	27.22	50.00	-22.78	Average	LINE

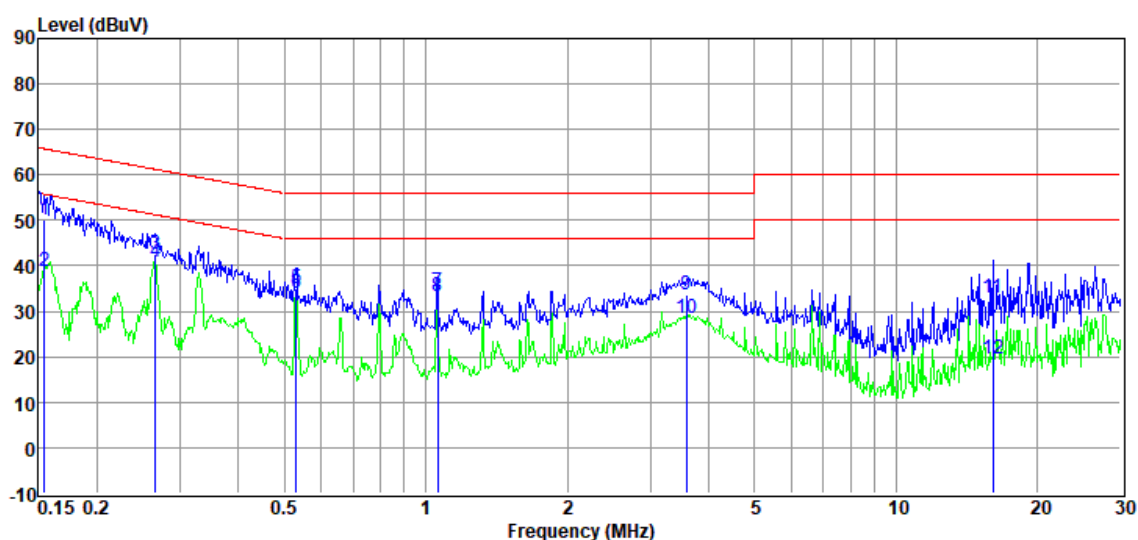
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q24092711-1E\CE-FCC.EM6**
Test Date : 2025-01-16 **Tested By** : Nelson Peng
EUT : BATTERY-POWERED PA SPEAKER
Model Number : TOTAL PA™ APEX
Power Supply : AC 120V/60Hz **Test Mode** : BT mode
Condition : TEMP:23.4°C, RH:61.2% **LISN** : 2024 1# ENV216/NEUTRAL
Memo : PSM-0100-022U

Data: 28



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	30.42	9.65	0.11	9.86	50.04	65.74	-15.70	QP	NEUTRAL
2	0.15	19.31	9.65	0.11	9.86	38.93	55.74	-16.81	Average	NEUTRAL
3	0.27	23.00	9.72	0.14	9.86	42.72	61.25	-18.53	QP	NEUTRAL
4	0.27	21.25	9.72	0.14	9.86	40.97	51.25	-10.28	Average	NEUTRAL
5	0.53	15.25	9.78	0.06	9.86	34.95	56.00	-21.05	QP	NEUTRAL
6	0.53	14.27	9.78	0.06	9.86	33.97	46.00	-12.03	Average	NEUTRAL
7	1.06	14.73	9.70	0.04	9.88	34.35	56.00	-21.65	QP	NEUTRAL
8	1.06	13.78	9.70	0.04	9.88	33.40	46.00	-12.60	Average	NEUTRAL
9	3.58	14.08	9.65	0.05	9.86	33.64	56.00	-22.36	QP	NEUTRAL
10	3.58	8.88	9.65	0.05	9.86	28.44	46.00	-17.56	Average	NEUTRAL
11	16.06	12.85	9.86	0.14	9.94	32.79	60.00	-27.21	QP	NEUTRAL
12	16.06	-0.22	9.86	0.14	9.94	19.72	50.00	-30.28	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

18. Photos of the EUT

Please refer to DDT-Q24092711-2E appendix I

-----End Report-----