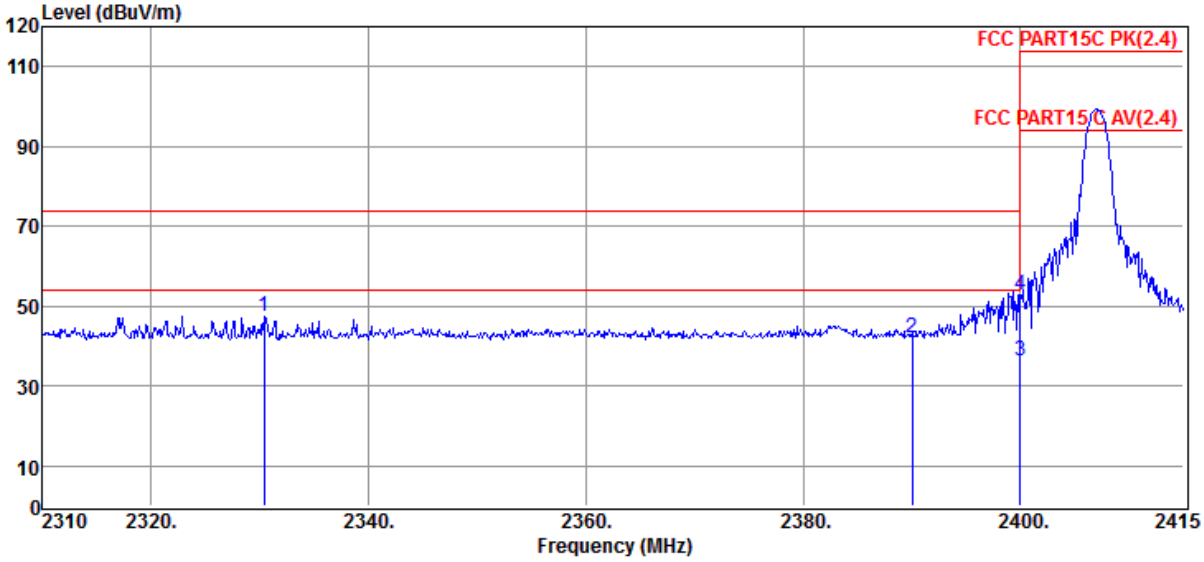
TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/VERTICAL
Memo	: GFSK 2407MHz		

Data: 25



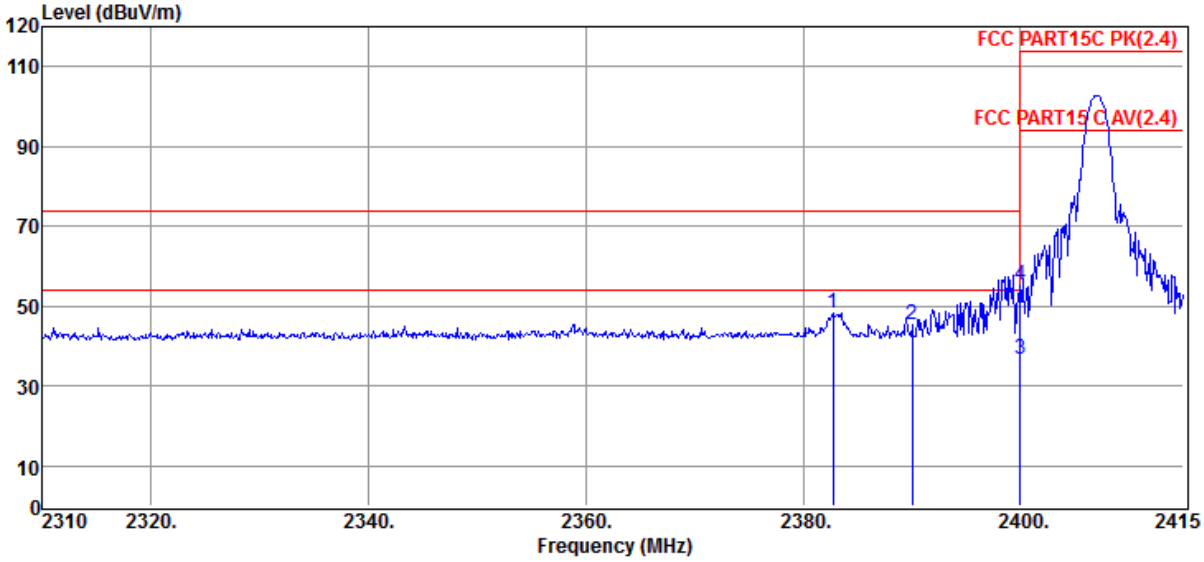
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2330.37	58.15	28.99	44.15	4.59	47.58	74.00	-26.42	Peak	VERTICAL
2	2390.00	52.64	29.10	44.18	4.56	42.12	74.00	-31.88	Peak	VERTICAL
3	2400.00	46.94	29.12	44.18	4.56	36.44	54.00	-17.56	Average	VERTICAL
4	2400.00	63.46	29.12	44.18	4.56	52.96	74.00	-21.04	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/HORIZONTAL
Memo	: GFSK 2407MHz		

Data: 26



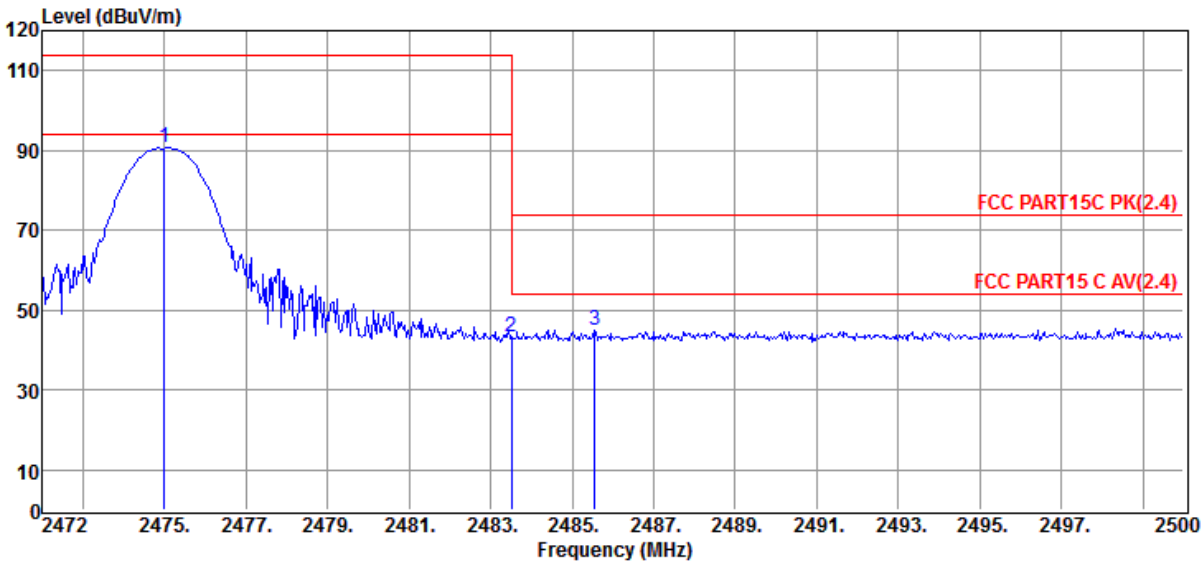
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2382.77	58.84	29.08	44.17	4.57	48.32	74.00	-25.68	Peak	HORIZONTAL
2	2390.00	55.85	29.10	44.18	4.56	45.33	74.00	-28.67	Peak	HORIZONTAL
3	2400.00	47.33	29.12	44.18	4.56	36.83	54.00	-17.17	Average	HORIZONTAL
4	2400.00	65.92	29.12	44.18	4.56	55.42	74.00	-18.58	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/VERTICAL
Memo	: GFSK 2475MHz		

Data: 31



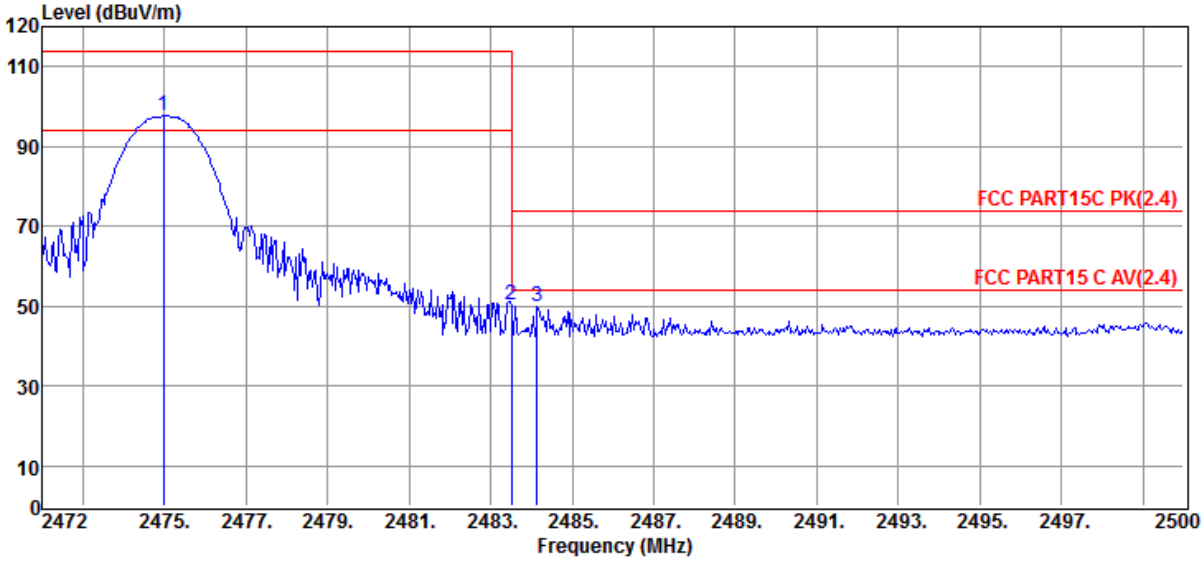
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
2	2483.52	53.20	29.27	44.21	4.89	43.15	74.00	-30.85	Peak	VERTICAL
3	2485.55	55.15	29.27	44.21	4.90	45.11	74.00	-28.89	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/HORIZONTAL
Memo	: GFSK 2475MHz		

Data: 32



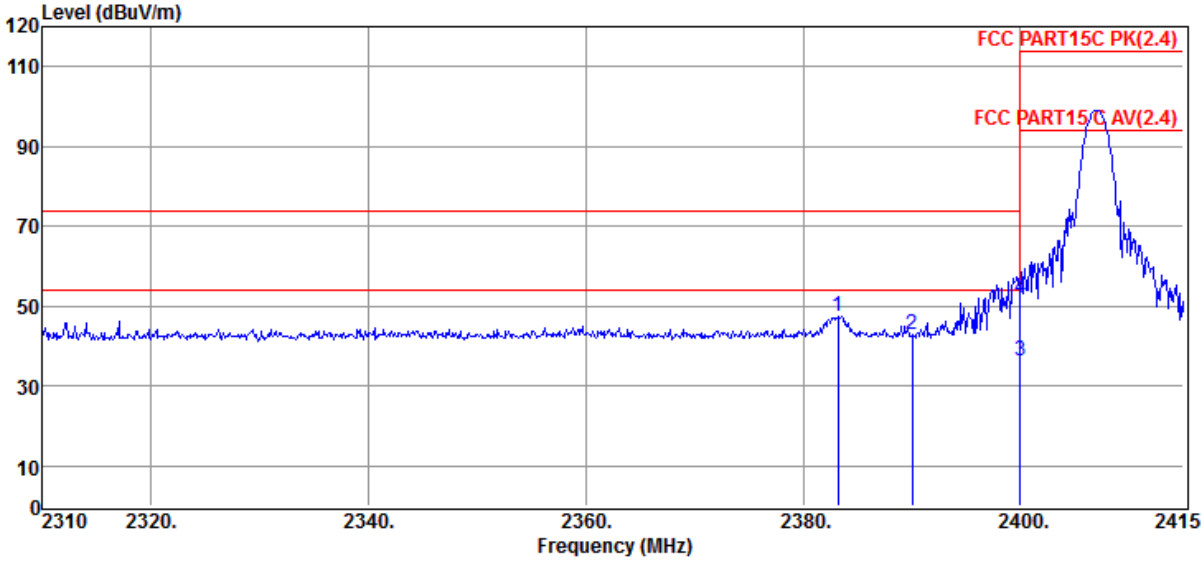
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
2	2483.52	60.30	29.27	44.21	4.89	50.25	74.00	-23.75	Peak	HORIZONTAL
3	2484.15	59.84	29.27	44.21	4.90	49.80	74.00	-24.20	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/VERTICAL
Memo	: 2DH5 2407MHz		

Data: 35



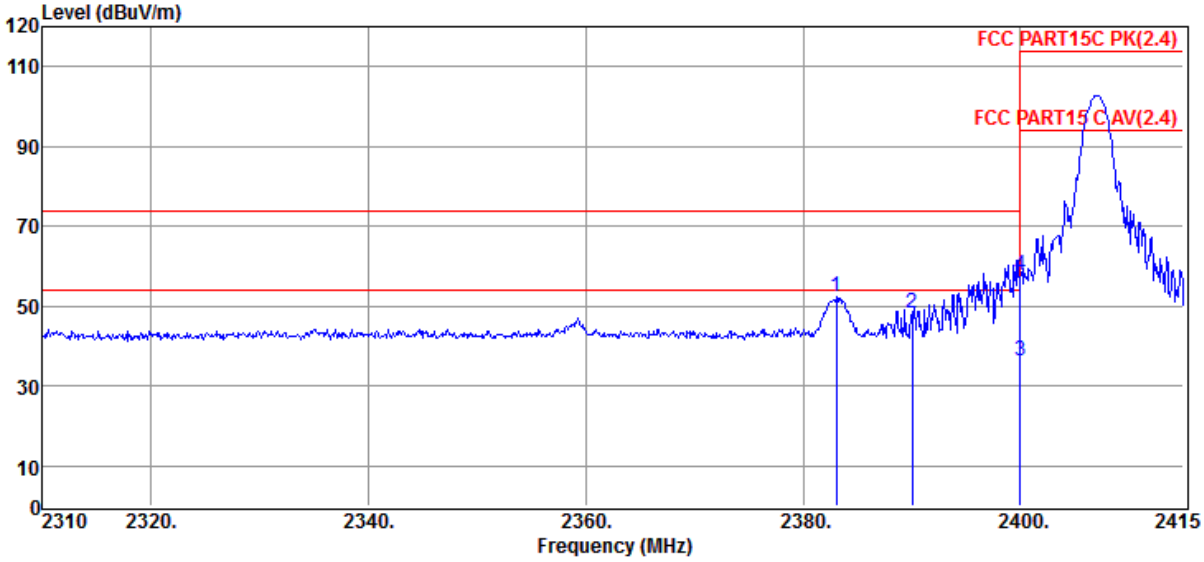
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2383.19	58.04	29.09	44.17	4.57	47.53	74.00	-26.47	Peak	VERTICAL
2	2390.00	53.36	29.10	44.18	4.56	42.84	74.00	-31.16	Peak	VERTICAL
3	2400.00	46.99	29.12	44.18	4.56	36.49	54.00	-17.51	Average	VERTICAL
4	2400.00	62.49	29.12	44.18	4.56	51.99	74.00	-22.01	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/HORIZONTAL
Memo	: 2DH5 2407MHz		

Data: 36



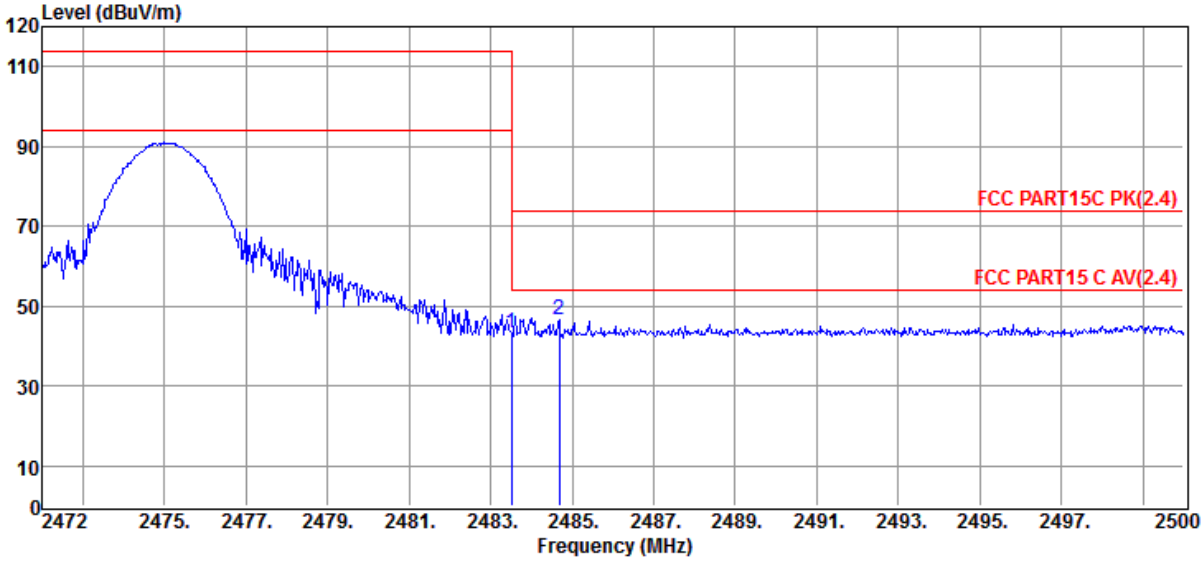
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2383.08	62.82	29.09	44.17	4.57	52.31	74.00	-21.69	Peak	HORIZONTAL
2	2390.01	58.85	29.10	44.18	4.56	48.33	74.00	-25.67	Peak	HORIZONTAL
3	2400.00	46.84	29.12	44.18	4.56	36.34	54.00	-17.66	Average	HORIZONTAL
4	2400.00	68.16	29.12	44.18	4.56	57.66	74.00	-16.34	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/VERTICAL
Memo	: 2DH5 2475MHz		

Data: 41



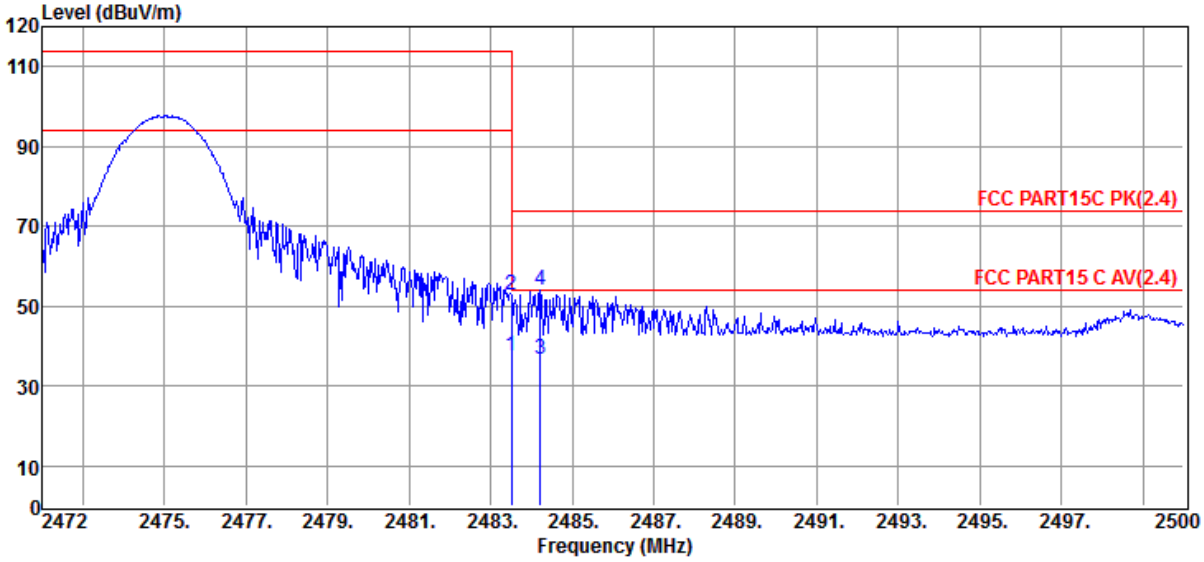
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.51	53.38	29.27	44.21	4.89	43.33	74.00	-30.67	Peak	VERTICAL
2	2484.68	56.44	29.27	44.21	4.90	46.40	74.00	-27.60	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/HORIZONTAL
Memo	: 2DH5 2475MHz		

Data: 42



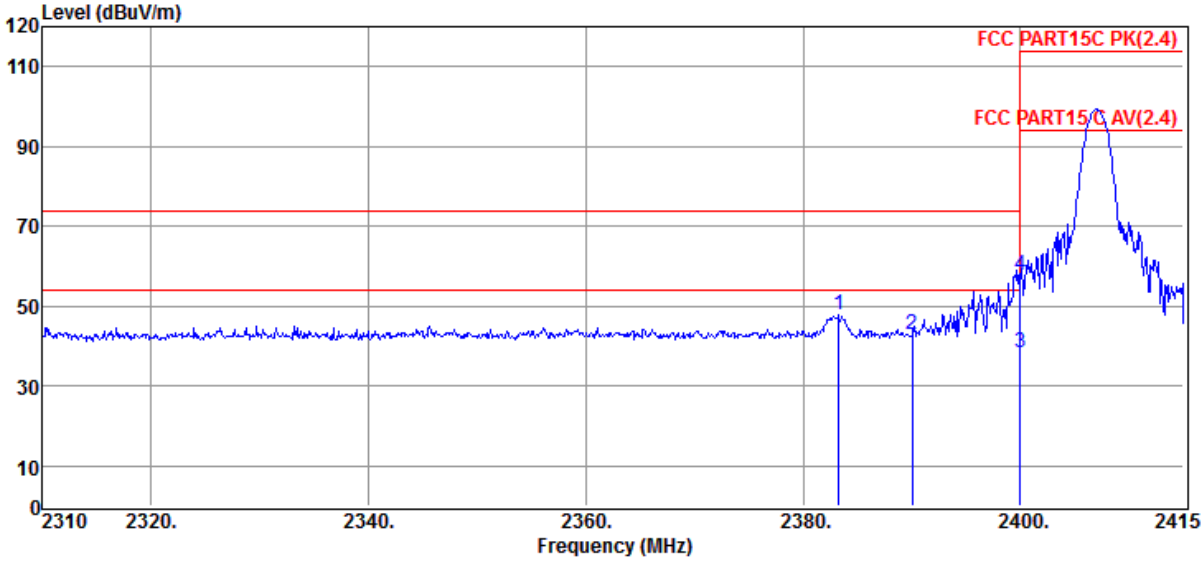
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	47.50	29.27	44.21	4.89	37.45	54.00	-16.55	Average	HORIZONTAL
2	2483.50	63.00	29.27	44.21	4.89	52.95	74.00	-21.05	Peak	HORIZONTAL
3	2484.21	46.66	29.27	44.21	4.90	36.62	54.00	-17.38	Average	HORIZONTAL
4	2484.21	63.86	29.27	44.21	4.90	53.82	74.00	-20.18	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/VERTICAL
Memo	: 3DH5 2407MHz		

Data: 45



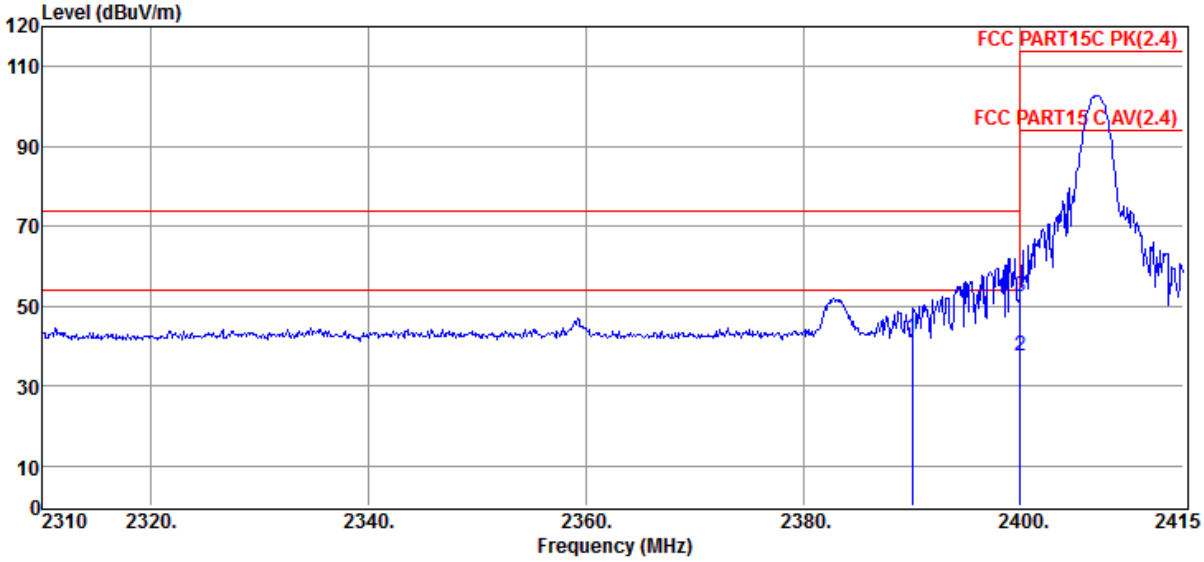
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2383.29	58.45	29.09	44.17	4.57	47.94	74.00	-26.06	Peak	VERTICAL
2	2390.00	53.21	29.10	44.18	4.56	42.69	74.00	-31.31	Peak	VERTICAL
3	2400.00	48.75	29.12	44.18	4.56	38.25	54.00	-15.75	Average	VERTICAL
4	2400.00	68.25	29.12	44.18	4.56	57.75	74.00	-16.25	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/HORIZONTAL
Memo	: 3DH5 2407MHz		

Data: 46



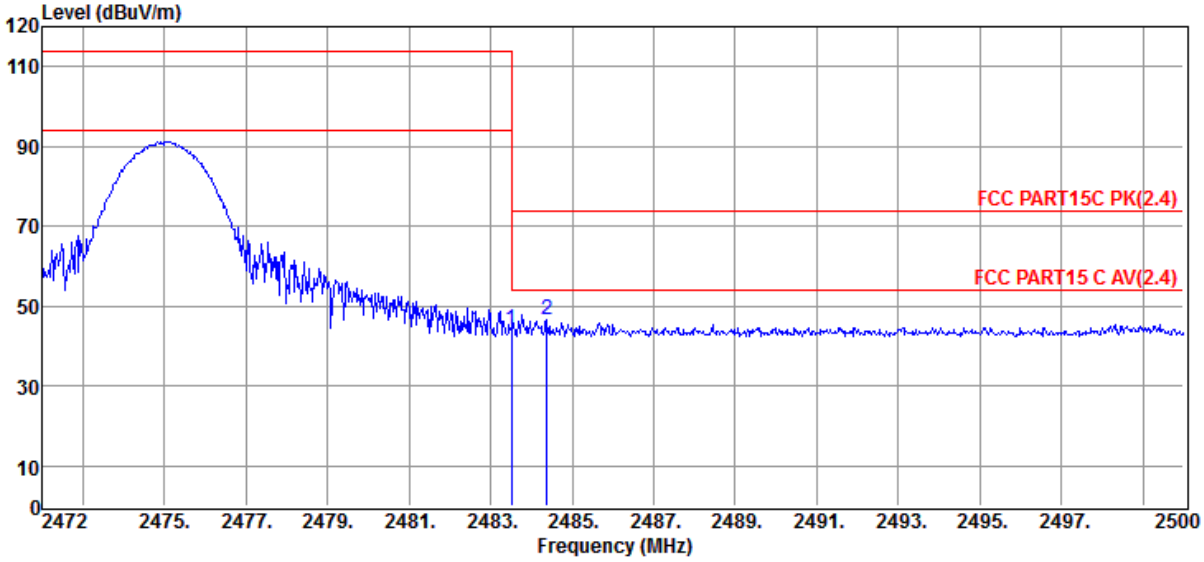
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2390.00	52.61	29.10	44.18	4.56	42.09	74.00	-31.91	Peak	HORIZONTAL
2	2400.00	47.93	29.12	44.18	4.56	37.43	54.00	-16.57	Average	HORIZONTAL
3	2400.00	62.86	29.12	44.18	4.56	52.36	74.00	-21.64	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/VERTICAL
Memo	: 3DH5 2475MHz		

Data: 51



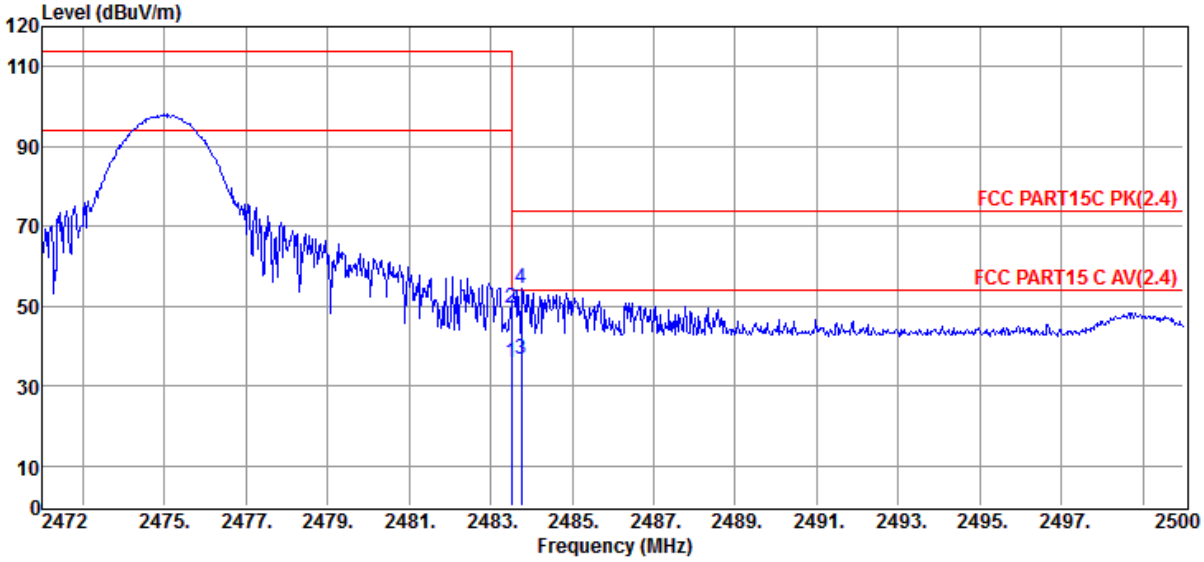
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	54.12	29.27	44.21	4.89	44.07	74.00	-29.93	Peak	VERTICAL
2	2484.38	56.46	29.27	44.21	4.90	46.42	74.00	-27.58	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Test Data\G\GGEC\20190325 pulse4 RF.EM6	
Test Date	: 2019-05-28	**Tested By**	: Sunny
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2018 HF 907/3m/HORIZONTAL
Memo	: 3DH5 2475MHz		

Data: 52

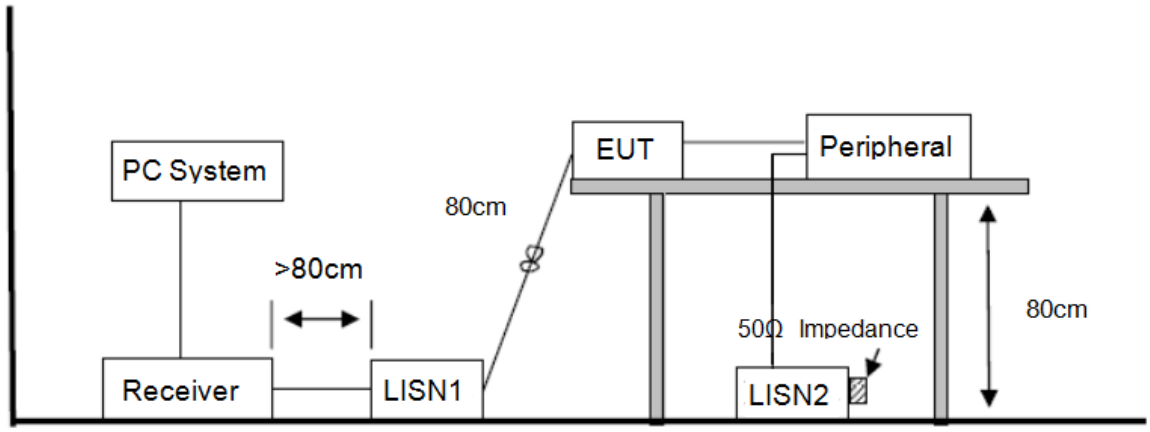


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	45.85	29.27	44.21	4.89	35.80	54.00	-18.20	Average	HORIZONTAL
2	2483.50	59.63	29.27	44.21	4.89	49.58	74.00	-24.42	Peak	HORIZONTAL
3	2483.76	46.73	29.27	44.21	4.90	36.69	54.00	-17.31	Average	HORIZONTAL
4	2483.76	64.35	29.27	44.21	4.90	54.31	74.00	-19.69	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
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.

7. Power Line Conducted Emission

7.1. Block diagram of test setup



7.2. Power Line Conducted Emission Limits

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

Note 1: * Decreasing linearly with logarithm of frequency.

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

7.3. Test Procedure

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

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.

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 30MHz 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.

7.4. Test Result

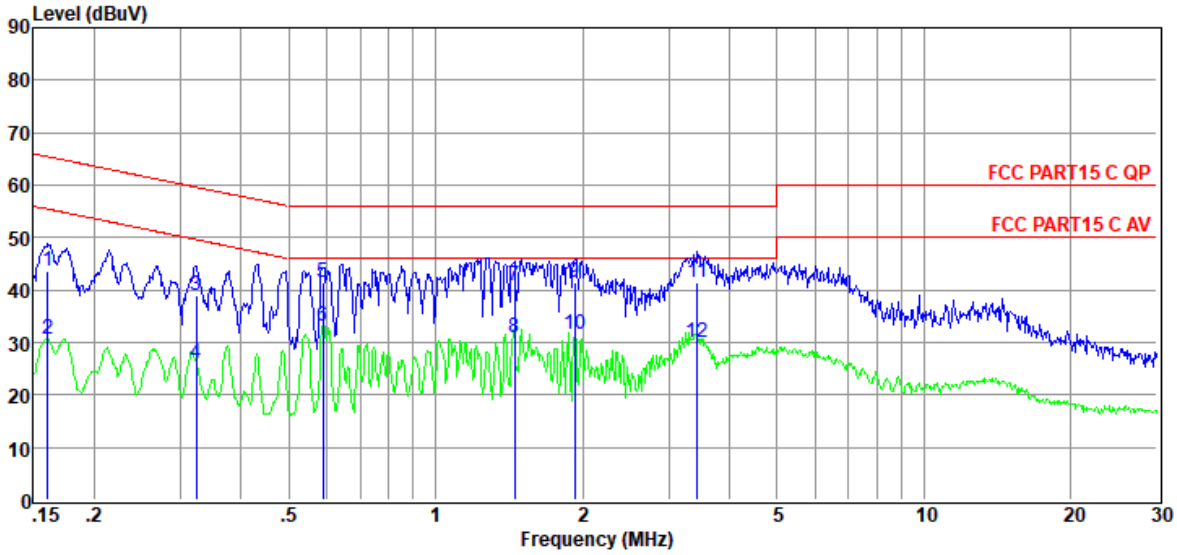
PASS. (See below detailed test result)

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/60Hz, recorded worst case. (AC 240V/60Hz)

Original data:

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2019 CE report data\Q19032112-1E\CE.EM6	
Test Date	: 2019-06-03	**Tested By**	: Alan
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:71.2%, Press:101.4kPa	**LISN**	: 2018 ENV216/NEUTRAL
Memo	: Factory 1		



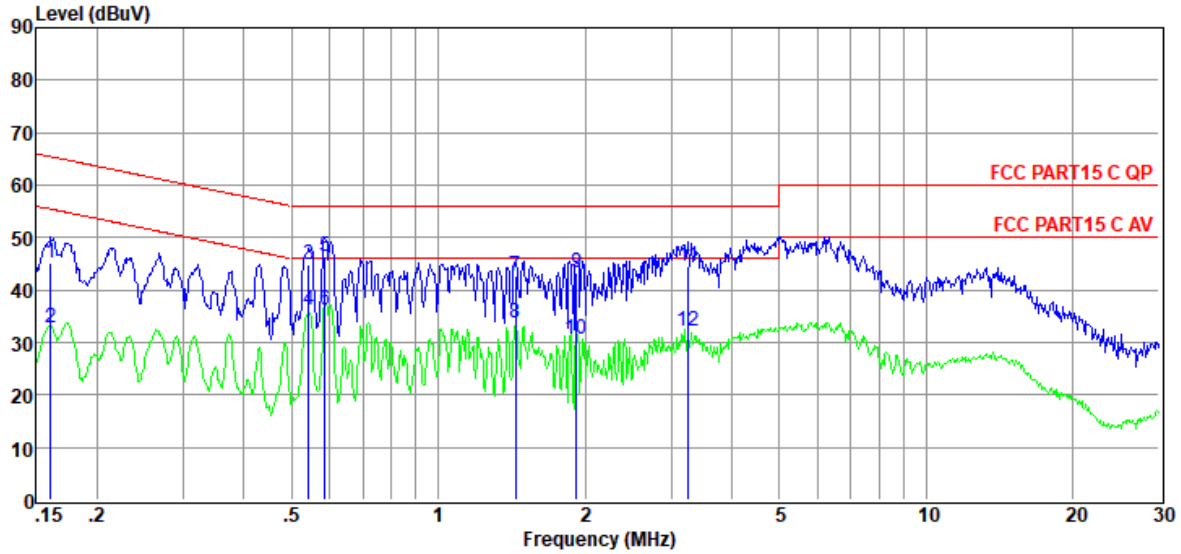
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.16	24.14	9.64	0.02	9.86	43.66	65.43	-21.77	QP	NEUTRAL
2	0.16	11.03	9.64	0.02	9.86	30.55	55.43	-24.88	Average	NEUTRAL
3	0.32	19.34	9.64	0.02	9.86	38.86	59.62	-20.76	QP	NEUTRAL
4	0.32	6.41	9.64	0.02	9.86	25.93	49.62	-23.69	Average	NEUTRAL
5	0.59	21.85	9.64	0.03	9.86	41.38	56.00	-14.62	QP	NEUTRAL
6	0.59	13.57	9.64	0.03	9.86	33.10	46.00	-12.90	Average	NEUTRAL
7	1.45	21.30	9.66	0.08	9.87	40.91	56.00	-15.09	QP	NEUTRAL
8	1.45	11.29	9.66	0.08	9.87	30.90	46.00	-15.10	Average	NEUTRAL
9	1.93	21.98	9.67	0.06	9.87	41.58	56.00	-14.42	QP	NEUTRAL
10	1.93	12.09	9.67	0.06	9.87	31.69	46.00	-14.31	Average	NEUTRAL
11	3.44	21.73	9.68	0.05	9.87	41.33	56.00	-14.67	QP	NEUTRAL
12	3.44	10.27	9.68	0.05	9.87	29.87	46.00	-16.13	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:\2019 CE report data\Q19032112-1E\CE.EM6	
Test Date	: 2019-06-03	**Tested By**	: Alan
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:71.2%, Press:101.4kPa	**LISN**	: 2018 ENV216/LINE
Memo	: Factory 1		

Data: 44



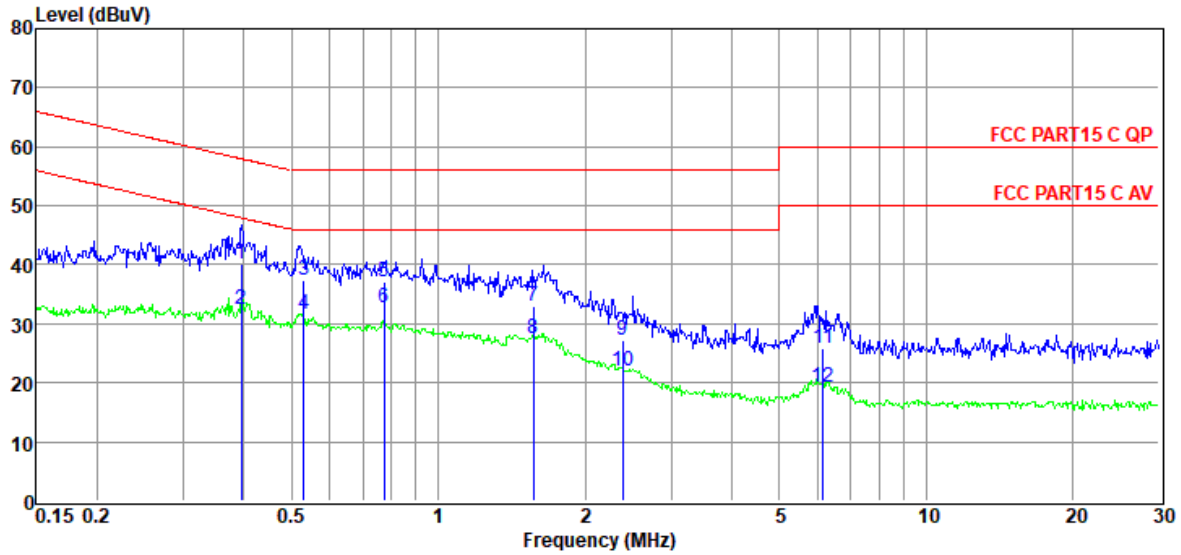
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.16	25.60	9.63	0.02	9.86	45.11	65.43	-20.32	QP	LINE
2	0.16	13.37	9.63	0.02	9.86	32.88	55.43	-22.55	Average	LINE
3	0.54	25.43	9.64	0.02	9.86	44.95	56.00	-11.05	QP	LINE
4	0.54	16.63	9.64	0.02	9.86	36.15	46.00	-9.85	Average	LINE
5	0.59	26.99	9.64	0.03	9.86	46.52	56.00	-9.48	QP	LINE
6	0.59	16.70	9.64	0.03	9.86	36.23	46.00	-9.77	Average	LINE
7	1.44	23.14	9.65	0.08	9.87	42.74	56.00	-13.26	QP	LINE
8	1.44	14.15	9.65	0.08	9.87	33.75	46.00	-12.25	Average	LINE
9	1.92	23.76	9.65	0.06	9.87	43.34	56.00	-12.66	QP	LINE
10	1.92	10.91	9.65	0.06	9.87	30.49	46.00	-15.51	Average	LINE
11	3.26	24.86	9.67	0.04	9.87	44.44	56.00	-11.56	QP	LINE
12	3.26	12.63	9.67	0.04	9.87	32.21	46.00	-13.79	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 5# Shield Room	D:\2019 report data\Q19032112-4E\20190509 CE.EM6	
Test Date	: 2019-05-09	**Tested By**	: Only
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55.5%, Press:100.1kPa	**LISN**	: 2018 ENV216 2#/NEUTRAL
Memo	: Factory 2		

Data: 26



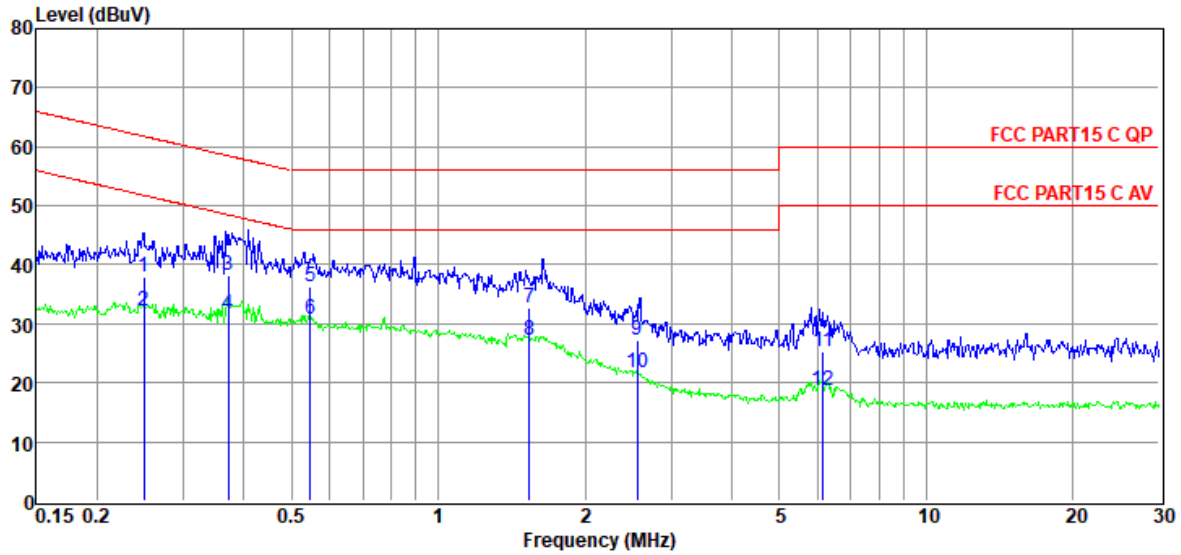
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.40	20.60	9.65	0.20	9.78	40.23	57.95	-17.72	QP	NEUTRAL
2	0.40	12.90	9.65	0.20	9.78	32.53	47.95	-15.42	Average	NEUTRAL
3	0.53	17.63	9.64	0.20	9.78	37.25	56.00	-18.75	QP	NEUTRAL
4	0.53	11.86	9.64	0.20	9.78	31.48	46.00	-14.52	Average	NEUTRAL
5	0.78	17.54	9.64	0.21	9.78	37.17	56.00	-18.83	QP	NEUTRAL
6	0.78	13.17	9.64	0.21	9.78	32.80	46.00	-13.20	Average	NEUTRAL
7	1.57	13.29	9.64	0.28	9.78	32.99	56.00	-23.01	QP	NEUTRAL
8	1.57	7.89	9.64	0.28	9.78	27.59	46.00	-18.41	Average	NEUTRAL
9	2.38	7.67	9.64	0.33	9.70	27.34	56.00	-28.66	QP	NEUTRAL
10	2.38	2.34	9.64	0.33	9.70	22.01	46.00	-23.99	Average	NEUTRAL
11	6.15	6.43	9.67	0.38	9.35	25.83	60.00	-34.17	QP	NEUTRAL
12	6.15	-0.25	9.67	0.38	9.35	19.15	50.00	-30.85	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 5# Shield Room	D:\2019 report data\Q19032112-4E\20190509 CE.EM6	
Test Date	: 2019-05-09	**Tested By**	: Only
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C, Humi:55.5%, Press:100.1kPa	**LISN**	: 2018 ENV216 2#/LINE
Memo	: Factory 2		

Data: 28



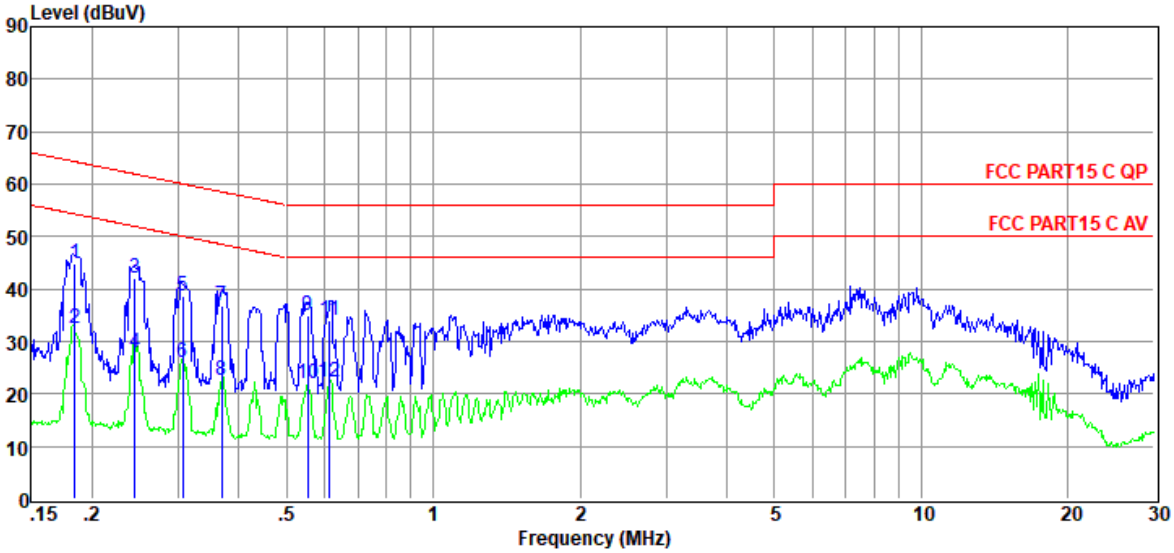
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.25	18.39	9.66	0.18	9.78	38.01	61.78	-23.77	QP	LINE
2	0.25	12.65	9.66	0.18	9.78	32.27	51.78	-19.51	Average	LINE
3	0.37	18.71	9.65	0.19	9.78	38.33	58.47	-20.14	QP	LINE
4	0.37	11.94	9.65	0.19	9.78	31.56	48.47	-16.91	Average	LINE
5	0.55	16.73	9.64	0.20	9.78	36.35	56.00	-19.65	QP	LINE
6	0.55	11.17	9.64	0.20	9.78	30.79	46.00	-15.21	Average	LINE
7	1.54	13.05	9.64	0.28	9.78	32.75	56.00	-23.25	QP	LINE
8	1.54	7.57	9.64	0.28	9.78	27.27	46.00	-18.73	Average	LINE
9	2.55	7.49	9.64	0.34	9.67	27.14	56.00	-28.86	QP	LINE
10	2.55	2.13	9.64	0.34	9.67	21.78	46.00	-24.22	Average	LINE
11	6.15	5.82	9.67	0.38	9.35	25.22	60.00	-34.78	QP	LINE
12	6.15	-0.60	9.67	0.38	9.35	18.80	50.00	-31.20	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.

Battery: IAA033NA:

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2019 CE report data\Q19103115-1E\1122 ce.EM6	
Test Date	: 2019-12-02	**Tested By**	: Lori
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24'C,Humi:54%,Press:101.4kPa	**LISN**	: 2018 ENV216/NEUTRAL
Memo	:		

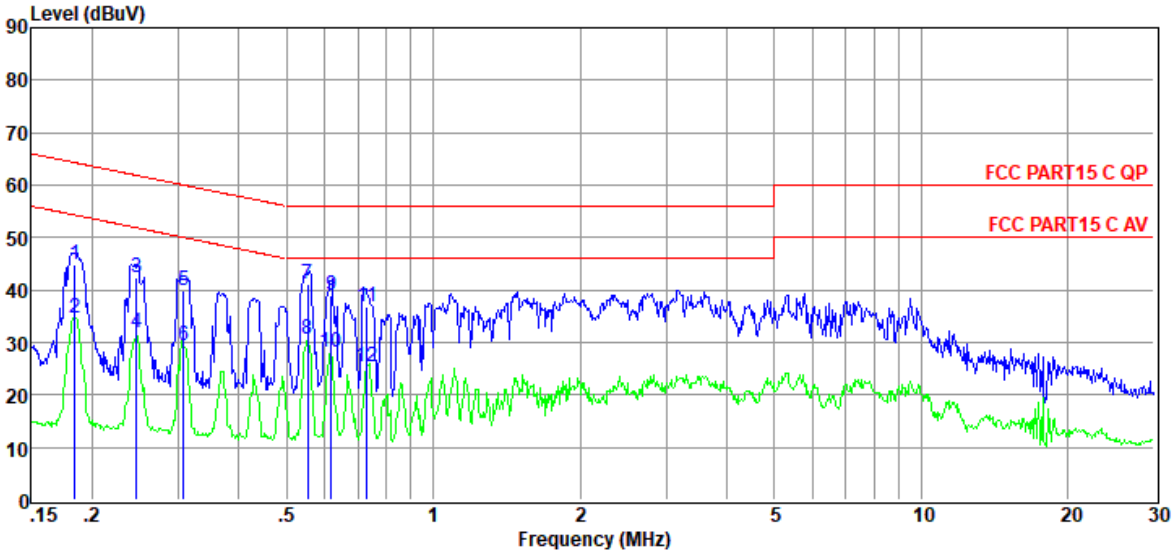


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	25.22	9.64	0.02	9.86	44.74	64.28	-19.54	QP	NEUTRAL
2	0.18	12.85	9.64	0.02	9.86	32.37	54.28	-21.91	Average	NEUTRAL
3	0.24	22.39	9.64	0.02	9.86	41.91	61.95	-20.04	QP	NEUTRAL
4	0.24	8.35	9.64	0.02	9.86	27.87	51.95	-24.08	Average	NEUTRAL
5	0.31	19.09	9.64	0.02	9.86	38.61	60.06	-21.45	QP	NEUTRAL
6	0.31	6.38	9.64	0.02	9.86	25.90	50.06	-24.16	Average	NEUTRAL
7	0.37	17.27	9.64	0.02	9.86	36.79	58.52	-21.73	QP	NEUTRAL
8	0.37	3.19	9.64	0.02	9.86	22.71	48.52	-25.81	Average	NEUTRAL
9	0.55	15.40	9.64	0.02	9.86	34.92	56.00	-21.08	QP	NEUTRAL
10	0.55	2.33	9.64	0.02	9.86	21.85	46.00	-24.15	Average	NEUTRAL
11	0.61	14.44	9.64	0.03	9.86	33.97	56.00	-22.03	QP	NEUTRAL
12	0.61	2.85	9.64	0.03	9.86	22.38	46.00	-23.62	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:\2019 CE report data\Q19103115-1E\1122 ce.EM6	
Test Date	: 2019-12-02	**Tested By**	: Lori
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24'C,Humi:54%,Press:101.4kPa	**LISN**	: 2018 ENV216/LINE
Memo	:		



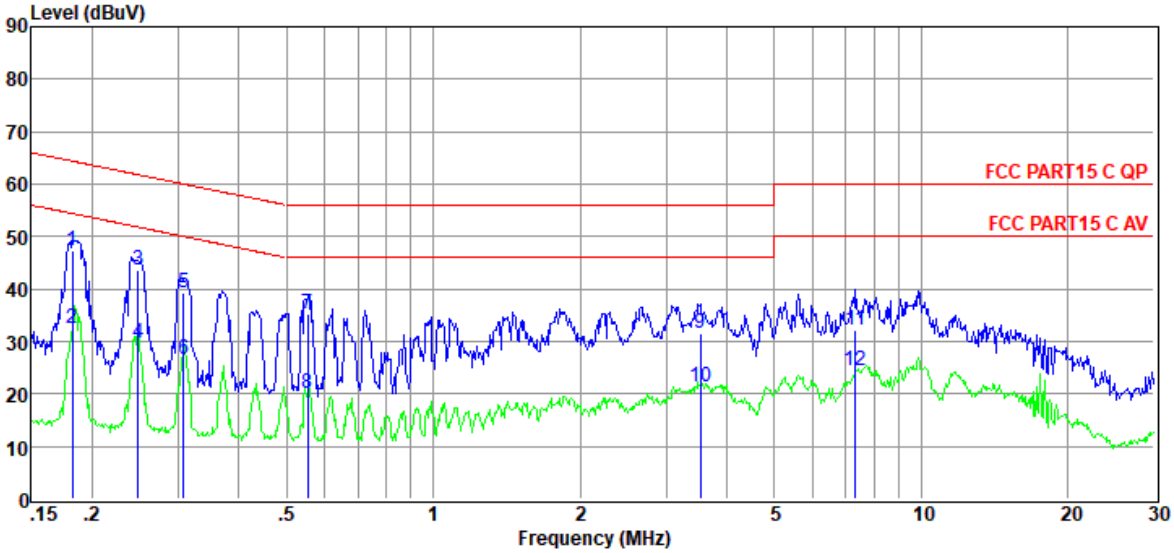
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	25.48	9.63	0.02	9.86	44.99	64.28	-19.29	QP	LINE
2	0.18	15.12	9.63	0.02	9.86	34.63	54.28	-19.65	Average	LINE
3	0.25	22.87	9.63	0.02	9.86	42.38	61.86	-19.48	QP	LINE
4	0.25	12.31	9.63	0.02	9.86	31.82	51.86	-20.04	Average	LINE
5	0.31	20.33	9.63	0.02	9.86	39.84	60.02	-20.18	QP	LINE
6	0.31	9.92	9.63	0.02	9.86	29.43	50.02	-20.59	Average	LINE
7	0.55	21.66	9.64	0.02	9.86	41.18	56.00	-14.82	QP	LINE
8	0.55	11.15	9.64	0.02	9.86	30.67	46.00	-15.33	Average	LINE
9	0.62	19.47	9.64	0.03	9.86	39.00	56.00	-17.00	QP	LINE
10	0.62	8.49	9.64	0.03	9.86	28.02	46.00	-17.98	Average	LINE
11	0.73	17.39	9.64	0.04	9.86	36.93	56.00	-19.07	QP	LINE
12	0.73	5.88	9.64	0.04	9.86	25.42	46.00	-20.58	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.

Battery: SUN-INTE-277:

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2019 CE report data\Q19103115-4E\1216 ce.EM6	
Test Date	: 2019-12-16	**Tested By**	: Lori
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24'C,Humi:54%,Press:101.4kPa	**LISN**	: 2018 ENV216/LINE
Memo	:		

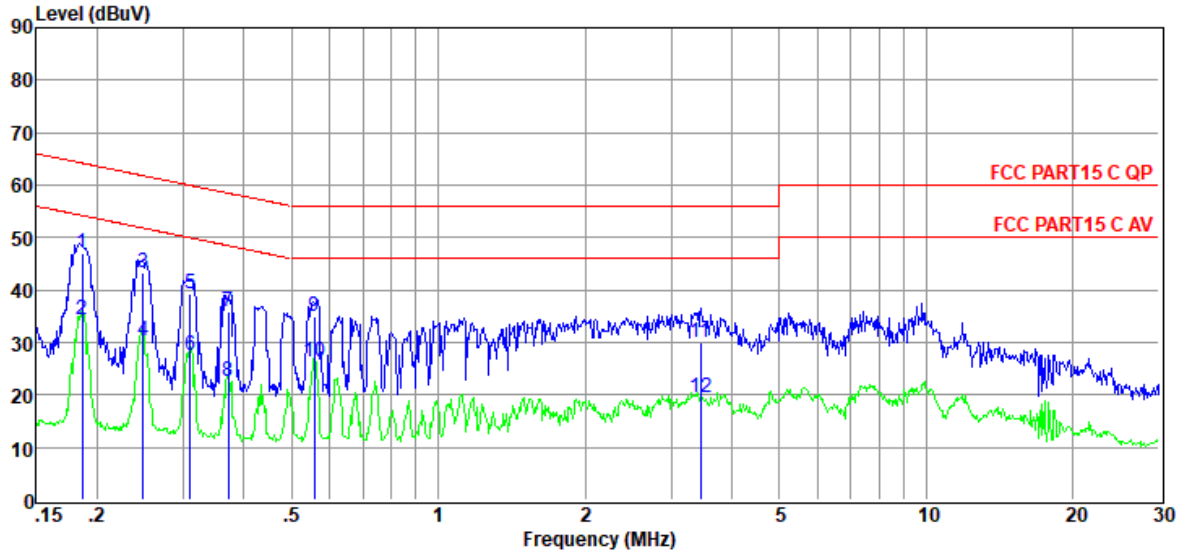


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	27.75	9.63	0.02	9.86	47.26	64.37	-17.11	QP	LINE
2	0.18	12.88	9.63	0.02	9.86	32.39	54.37	-21.98	Average	LINE
3	0.25	24.24	9.63	0.02	9.86	43.75	61.82	-18.07	QP	LINE
4	0.25	10.23	9.63	0.02	9.86	29.74	51.82	-22.08	Average	LINE
5	0.31	19.85	9.63	0.02	9.86	39.36	60.02	-20.66	QP	LINE
6	0.31	7.17	9.63	0.02	9.86	26.68	50.02	-23.34	Average	LINE
7	0.55	15.76	9.64	0.02	9.86	35.28	56.00	-20.72	QP	LINE
8	0.55	0.69	9.64	0.02	9.86	20.21	46.00	-25.79	Average	LINE
9	3.53	11.96	9.68	0.05	9.87	31.56	56.00	-24.44	QP	LINE
10	3.53	1.63	9.68	0.05	9.87	21.23	46.00	-24.77	Average	LINE
11	7.33	12.60	9.73	0.03	9.89	32.25	60.00	-27.75	QP	LINE
12	7.33	4.64	9.73	0.03	9.89	24.29	50.00	-25.71	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:\2019 CE report data\Q19103115-4E\1216 ce.EM6	
Test Date	: 2019-12-16	**Tested By**	: Lori
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: AC 240V/60Hz	**Test Mode**	: Tx mode
Condition	: Temp:24'C,Humi:54%,Press:101.4kPa	**LISN**	: 2018 ENV216/NEUTRAL
Memo	:		



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	0.19	27.48	9.64	0.02	9.86	47.00	64.20	-17.20	QP	NEUTRAL
2	0.19	14.73	9.64	0.02	9.86	34.25	54.20	-19.95	Average	NEUTRAL
3	0.25	23.79	9.64	0.02	9.86	43.31	61.82	-18.51	QP	NEUTRAL
4	0.25	10.80	9.64	0.02	9.86	30.32	51.82	-21.50	Average	NEUTRAL
5	0.31	19.90	9.64	0.02	9.86	39.42	59.97	-20.55	QP	NEUTRAL
6	0.31	7.96	9.64	0.02	9.86	27.48	49.97	-22.49	Average	NEUTRAL
7	0.37	16.32	9.64	0.02	9.86	35.84	58.47	-22.63	QP	NEUTRAL
8	0.37	3.04	9.64	0.02	9.86	22.56	48.47	-25.91	Average	NEUTRAL
9	0.56	15.41	9.64	0.03	9.86	34.94	56.00	-21.06	QP	NEUTRAL
10	0.56	6.82	9.64	0.03	9.86	26.35	46.00	-19.65	Average	NEUTRAL
11	3.45	10.43	9.68	0.05	9.87	30.03	56.00	-25.97	QP	NEUTRAL
12	3.45	-0.05	9.68	0.05	9.87	19.55	46.00	-26.45	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.

8. Antenna Requirements

8.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

8.2. Result

The antennas used for this product are FPC Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 3.25 dBi.

END OF REPORT