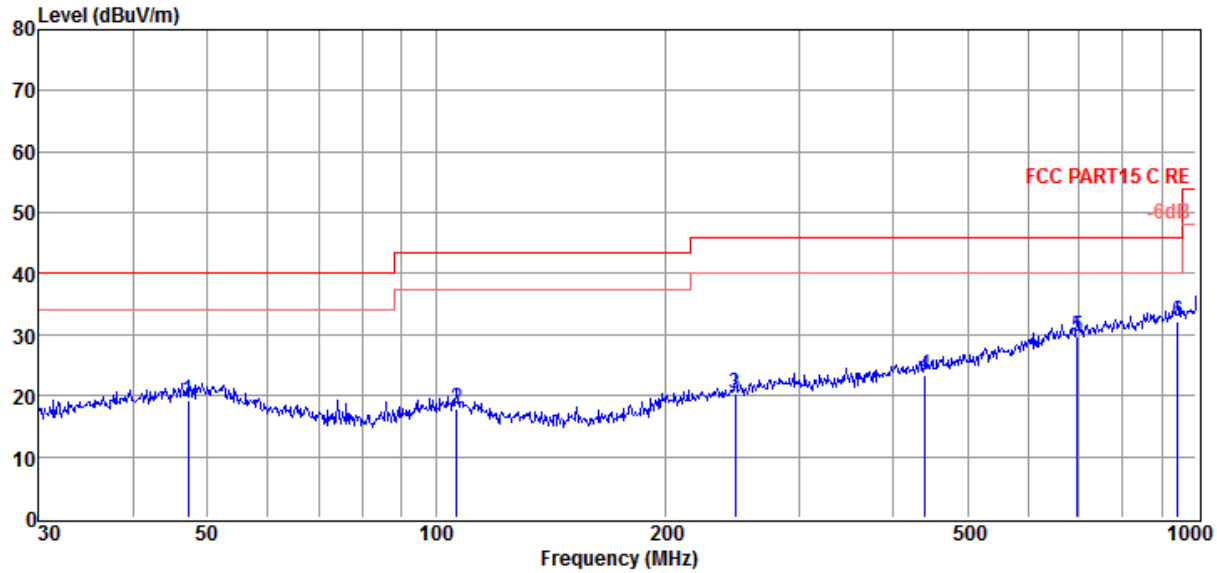
TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2019 RE1# Report Data\Q18121103-1E Y400Wireless\FCC BELOW1G.EM6	
Test Date	: 2019-06-03	**Tested By**	: Talent
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 VULB 9163 1#/3m/VERTICAL
Memo	: Factory 2		

Data: 8



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	47.16	1.09	14.29	3.84	19.22	40.00	-20.78	QP	VERTICAL
2	106.39	1.77	11.76	4.24	17.77	43.50	-25.73	QP	VERTICAL
3	247.68	2.56	12.77	4.99	20.32	46.00	-25.68	QP	VERTICAL
4	440.20	1.59	16.24	5.64	23.47	46.00	-22.53	QP	VERTICAL
5	696.86	3.29	20.05	6.37	29.71	46.00	-16.29	QP	VERTICAL
6	945.44	2.84	22.21	7.06	32.11	46.00	-13.89	QP	VERTICAL

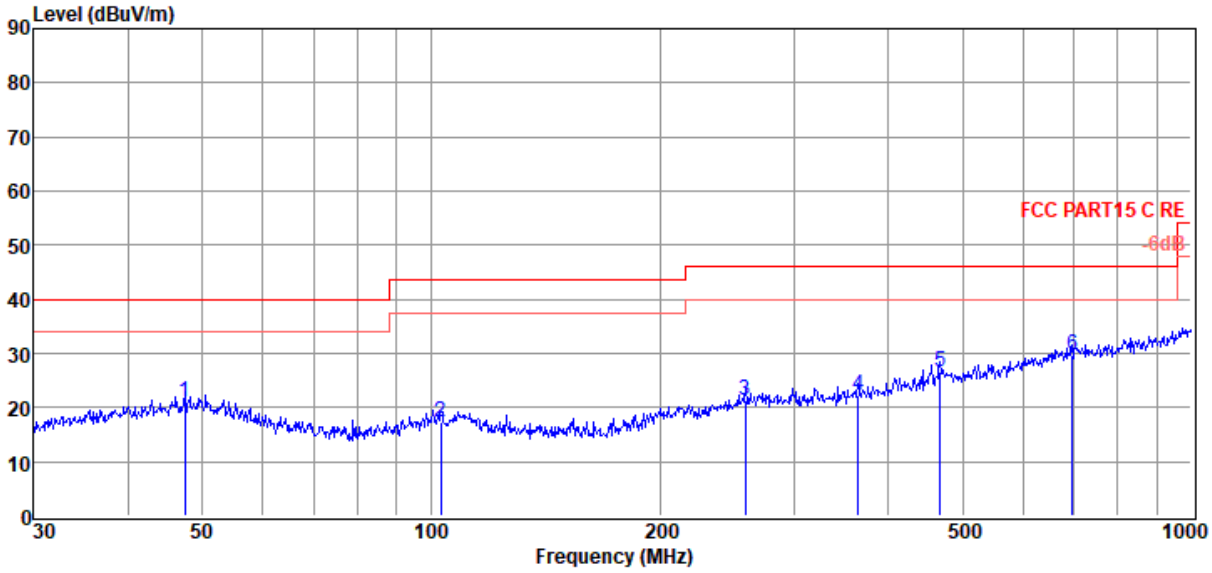
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Battery: IAA033NA:

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2019 RE1# Report Data\Q19103115-1E PULSE4\FCC BELOW1G.EM6	
Test Date	: 2019-11-25	**Tested By**	: Talent
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 VULB 9163 1#/3m/VERTICAL
Memo	:		

Data: 1



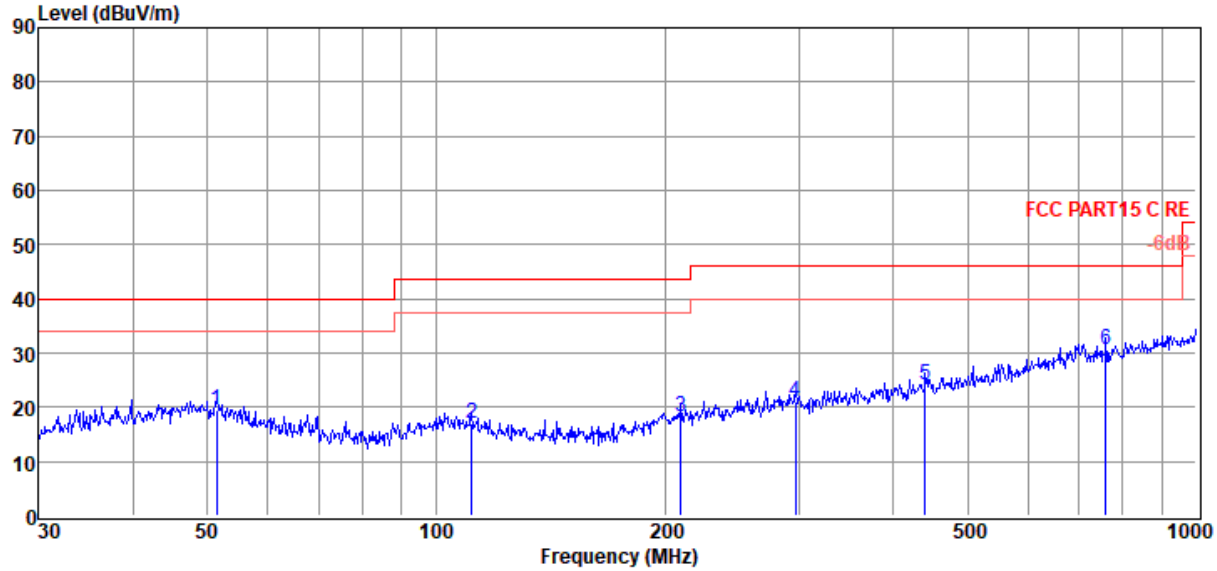
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	47.49	2.76	14.32	3.85	20.93	40.00	-19.07	QP	VERTICAL
2	103.08	1.25	11.73	4.22	17.20	43.50	-26.30	QP	VERTICAL
3	259.23	3.39	13.06	5.04	21.49	46.00	-24.51	QP	VERTICAL
4	364.26	1.94	15.08	5.40	22.42	46.00	-23.58	QP	VERTICAL
5	467.24	4.09	16.64	5.72	26.45	46.00	-19.55	QP	VERTICAL
6	696.86	3.14	20.05	6.37	29.56	46.00	-16.44	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Report Data\Q19103115-1E PULSE4\FCC BELOW1G.EM6	
Test Date	: 2019-11-25	**Tested By**	: Talent
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 VULB 9163 1#/3m/HORIZONTAL
Memo	:		

Data: 2



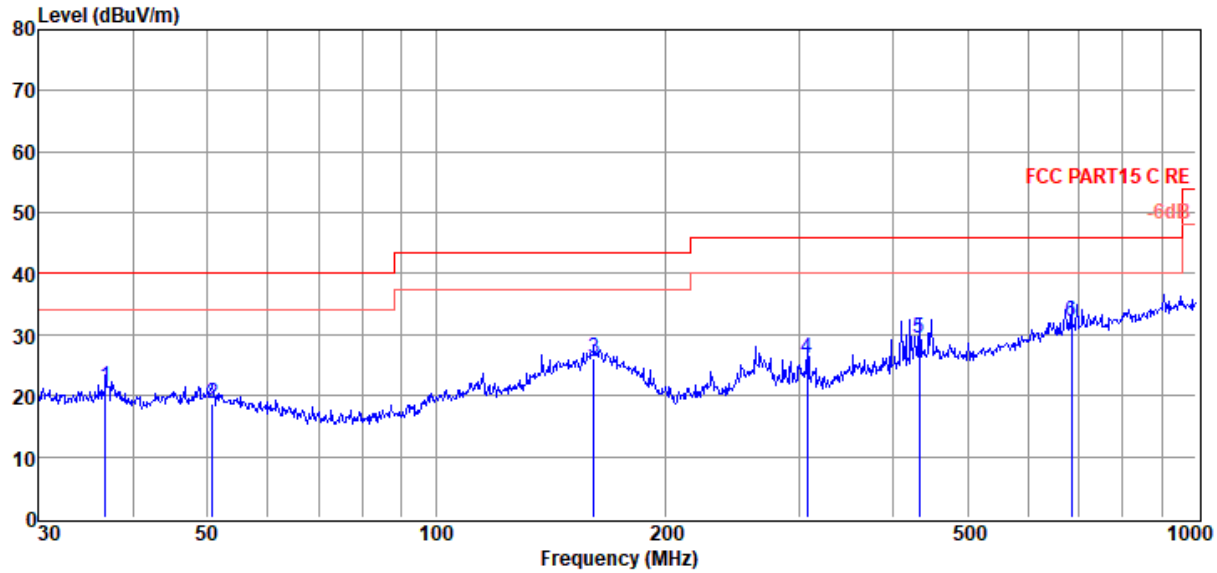
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	51.48	1.59	14.09	3.88	19.56	40.00	-20.44	Peak	HORIZONTAL
2	111.35	1.23	11.51	4.26	17.00	43.50	-26.50	Peak	HORIZONTAL
3	210.05	1.83	11.71	4.85	18.39	43.50	-25.11	Peak	HORIZONTAL
4	297.22	1.88	13.94	5.18	21.00	46.00	-25.00	Peak	HORIZONTAL
5	440.20	2.34	16.24	5.64	24.22	46.00	-21.78	Peak	HORIZONTAL
6	760.70	3.65	20.47	6.52	30.64	46.00	-15.36	Peak	HORIZONTAL

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

Battery: SUN-INTE-277:

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2019 RE1# Report Data\Q19103115-4E 三诺 pulse4\FCC BELOW 1G.EM6	
Test Date	: 2019-12-19	**Tested By**	: Jacky
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C,Humi:55%,Press:101.4kPa	**Antenna/Distance**	: 2018 VULB 9161/3m/VERTICAL
Memo	:		

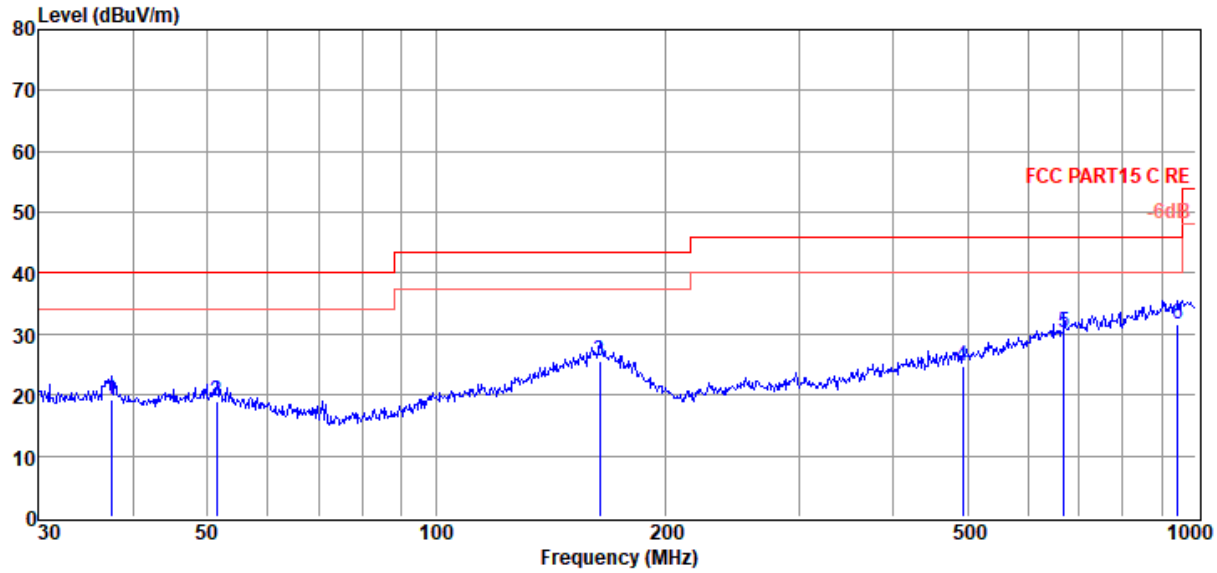


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	36.77	5.16	12.58	3.73	21.47	40.00	-18.53	QP	VERTICAL
2	50.76	2.16	12.71	3.88	18.75	40.00	-21.25	QP	VERTICAL
3	161.47	2.86	18.72	4.60	26.18	43.50	-17.32	QP	VERTICAL
4	307.83	7.44	13.36	5.21	26.01	46.00	-19.99	QP	VERTICAL
5	432.55	7.73	16.10	5.62	29.45	46.00	-16.55	QP	VERTICAL
6	684.75	6.03	19.84	6.33	32.20	46.00	-13.80	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
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 Site	: DDT 3m Chamber 1#	D:\2019 RE1# Report Data\Q19103115-4E 三诺 pulse4\FCC BELOW 1G.EM6	
Test Date	: 2019-12-19	**Tested By**	: Jacky
EUT	: Portable Bluetooth Speaker	**Model Number**	: PULSE4
Power Supply	: Battery	**Test Mode**	: Tx mode
Condition	: Temp:24.5'C,Humi:55%,Press:101.4kPa	**Antenna/Distance**	: 2018 VULB 9161/3m/HORIZONTAL
Memo	:		



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	37.42	2.97	12.49	3.74	19.20	40.00	-20.80	QP	HORIZONTAL
2	51.48	2.46	12.53	3.88	18.87	40.00	-21.13	QP	HORIZONTAL
3	164.33	2.12	18.95	4.62	25.69	43.50	-17.81	QP	HORIZONTAL
4	492.47	2.31	16.67	5.80	24.78	46.00	-21.22	QP	HORIZONTAL
5	670.49	4.26	19.60	6.29	30.15	46.00	-15.85	QP	HORIZONTAL
6	945.44	1.34	23.11	7.06	31.51	46.00	-14.49	QP	HORIZONTAL

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

Radiated Emission test (above 1GHz)

Factory 1:

Freq. (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
Tx mode 2402MHz									
4842.00	45.63	33.81	44.23	10.70	45.91	74.00	-28.09	Peak	HORIZONTAL
6814.00	44.46	35.49	43.60	12.35	48.70	74.00	-25.30	Peak	HORIZONTAL
9415.00	44.47	37.06	43.83	14.85	52.55	74.00	-21.45	Peak	HORIZONTAL
10673.00	41.55	37.63	43.91	15.83	51.10	74.00	-22.90	Peak	HORIZONTAL
13444.00	35.44	38.92	43.22	19.46	50.60	74.00	-23.40	Peak	HORIZONTAL
15127.00	32.52	40.65	42.82	20.35	50.70	74.00	-23.30	Peak	HORIZONTAL
5777.00	45.41	34.53	44.04	11.38	47.28	74.00	-26.72	Peak	VERTICAL
7443.00	45.37	35.87	43.33	13.11	51.02	74.00	-22.98	Peak	VERTICAL
9415.00	44.96	37.06	43.83	14.85	53.04	74.00	-20.96	Peak	VERTICAL
10656.00	39.14	37.64	43.91	15.81	48.68	74.00	-25.32	Peak	VERTICAL
11778.00	38.43	38.26	43.62	17.48	50.55	74.00	-23.45	Peak	VERTICAL
13427.00	34.17	38.90	43.23	19.44	49.28	74.00	-24.72	Peak	VERTICAL
Tx mode 2441MHz									
5369.00	46.26	34.20	44.12	10.48	46.82	74.00	-27.18	Peak	HORIZONTAL
6899.00	45.14	35.54	43.56	12.32	49.44	74.00	-24.56	Peak	HORIZONTAL
8922.00	44.75	36.80	43.59	14.05	52.01	74.00	-21.99	Peak	HORIZONTAL
10656.00	40.79	37.64	43.91	15.81	50.33	74.00	-23.67	Peak	HORIZONTAL
12730.00	38.01	38.19	43.39	18.58	51.39	74.00	-22.61	Peak	HORIZONTAL
14107.00	34.67	40.22	43.08	20.20	52.01	74.00	-21.99	Peak	HORIZONTAL
5811.00	46.01	34.55	44.04	11.43	47.95	74.00	-26.05	Peak	VERTICAL
7494.00	44.59	35.90	43.30	13.16	50.35	74.00	-23.65	Peak	VERTICAL
9415.00	44.69	37.06	43.83	14.85	52.77	74.00	-21.23	Peak	VERTICAL
10690.00	41.48	37.62	43.90	15.85	51.05	74.00	-22.95	Peak	VERTICAL
13427.00	35.83	38.90	43.23	19.44	50.94	74.00	-23.06	Peak	VERTICAL
15195.00	32.98	40.62	42.78	20.51	51.33	74.00	-22.67	Peak	VERTICAL
Tx mode 2480MHz									
6202.00	44.69	34.95	43.90	12.29	48.03	74.00	-25.97	Peak	HORIZONTAL
7426.00	44.38	35.86	43.33	13.10	50.01	74.00	-23.99	Peak	HORIZONTAL
9398.00	44.25	37.05	43.82	14.89	52.37	74.00	-21.63	Peak	HORIZONTAL
10758.00	41.18	37.60	43.88	15.93	50.83	74.00	-23.17	Peak	HORIZONTAL
12713.00	39.04	38.19	43.39	18.56	52.40	74.00	-21.60	Peak	HORIZONTAL
14124.00	34.77	40.23	43.08	20.20	52.12	74.00	-21.88	Peak	HORIZONTAL
5811.00	46.01	34.55	44.04	11.43	47.95	74.00	-26.05	Peak	VERTICAL
7494.00	44.59	35.90	43.30	13.16	50.35	74.00	-23.65	Peak	VERTICAL
9415.00	44.69	37.06	43.83	14.85	52.77	74.00	-21.23	Peak	VERTICAL
10690.00	40.48	37.62	43.90	15.85	50.05	74.00	-23.95	Peak	VERTICAL
12186.00	38.53	38.04	43.51	18.02	51.08	74.00	-22.92	Peak	VERTICAL
14124.00	33.57	40.23	43.08	20.20	50.92	74.00	-23.08	Peak	VERTICAL
Result: Pass									

Factory 2:

Freq. (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
Tx mode 2402MHz									
5131.00	44.24	34.01	44.17	10.33	44.41	74.00	-29.59	Peak	HORIZONTAL
6899.00	43.73	35.54	43.56	12.32	48.03	74.00	-25.97	Peak	HORIZONTAL
8973.00	43.27	36.80	43.61	14.26	50.72	74.00	-23.28	Peak	HORIZONTAL
10894.00	41.66	37.54	43.85	16.11	51.46	74.00	-22.54	Peak	HORIZONTAL
12441.00	38.08	38.09	43.45	18.28	51.00	74.00	-23.00	Peak	HORIZONTAL
13954.00	35.14	40.09	43.11	20.16	52.28	74.00	-21.72	Peak	HORIZONTAL
5420.00	43.05	34.24	44.11	10.57	43.75	74.00	-30.25	Peak	VERTICAL
7069.00	41.05	35.64	43.49	12.62	45.82	74.00	-28.18	Peak	VERTICAL
8582.00	40.64	36.80	43.41	14.40	48.43	74.00	-25.57	Peak	VERTICAL
10775.00	42.05	37.59	43.88	15.96	51.72	74.00	-22.28	Peak	VERTICAL
12322.00	38.58	38.06	43.48	18.16	51.32	74.00	-22.68	Peak	VERTICAL
13631.00	35.85	39.32	43.18	19.72	51.71	74.00	-22.29	Peak	VERTICAL
Tx mode 2441MHz									
5182.00	44.72	34.05	44.16	10.40	45.01	74.00	-28.99	Peak	HORIZONTAL
6185.00	42.80	34.93	43.90	12.14	45.97	74.00	-28.03	Peak	HORIZONTAL
7630.00	41.59	36.01	43.25	13.07	47.42	74.00	-26.58	Peak	HORIZONTAL
9568.00	41.82	37.15	43.90	14.87	49.94	74.00	-24.06	Peak	HORIZONTAL
11642.00	39.99	38.43	43.65	17.26	52.03	74.00	-21.97	Peak	HORIZONTAL
13767.00	35.25	39.65	43.15	19.90	51.65	74.00	-22.35	Peak	HORIZONTAL
6202.00	43.21	34.95	43.90	12.29	46.55	74.00	-27.45	Peak	VERTICAL
7817.00	41.42	36.16	43.17	13.57	47.98	74.00	-26.02	Peak	VERTICAL
9908.00	42.77	37.35	44.06	15.24	51.30	74.00	-22.70	Peak	VERTICAL
11914.00	38.62	38.10	43.58	17.69	50.83	74.00	-23.17	Peak	VERTICAL
13461.00	36.39	38.95	43.22	19.49	51.61	74.00	-22.39	Peak	VERTICAL
14719.00	34.47	40.48	42.96	20.10	52.09	74.00	-21.91	Peak	VERTICAL
Tx mode 2480MHz									
4927.00	43.22	33.86	44.21	9.85	42.72	74.00	-31.28	Peak	HORIZONTAL
6712.00	42.73	35.43	43.65	12.10	46.61	74.00	-27.39	Peak	HORIZONTAL
8752.00	39.81	36.80	43.50	14.12	47.23	74.00	-26.77	Peak	HORIZONTAL
10384.00	42.59	37.63	43.99	15.46	51.69	74.00	-22.31	Peak	HORIZONTAL
12373.00	37.27	38.07	43.47	18.21	50.08	74.00	-23.92	Peak	HORIZONTAL
14243.00	34.15	40.25	43.05	20.18	51.53	74.00	-22.47	Peak	HORIZONTAL
5420.00	42.62	34.24	44.11	10.57	43.32	74.00	-30.68	Peak	VERTICAL
6984.00	40.93	35.59	43.52	12.59	45.59	74.00	-28.41	Peak	VERTICAL
8650.00	38.63	36.80	43.45	14.32	46.30	74.00	-27.70	Peak	VERTICAL
10792.00	40.55	37.58	43.87	15.98	50.24	74.00	-23.76	Peak	VERTICAL
12662.00	37.41	38.17	43.40	18.51	50.69	74.00	-23.31	Peak	VERTICAL
15025.00	33.98	40.69	42.88	20.11	51.90	74.00	-22.10	Peak	VERTICAL
Result: Pass									

Note: 1.30MHz~25GHz: (Scan with GFSK, π/4-DQPSK, 8DPSK, the worst case is GFSK Mode)

2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

3: For emissions above 1GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

11. RF Conducted Spurious Emissions

11.1. Block diagram of test setup

Same as section 4.1

11.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

11.3. Test Procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	≥span/RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

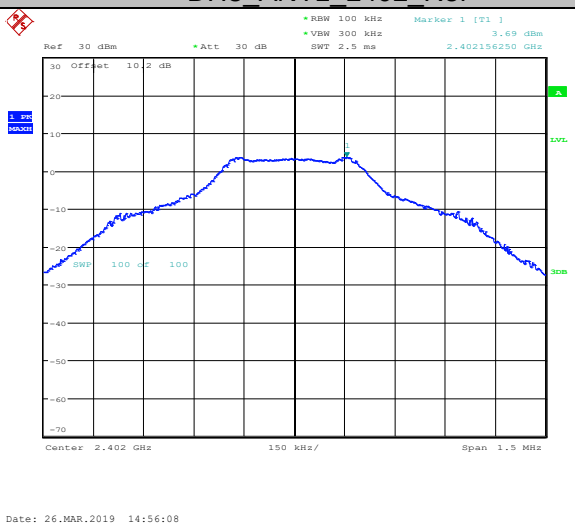
(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

11.4. Test Result

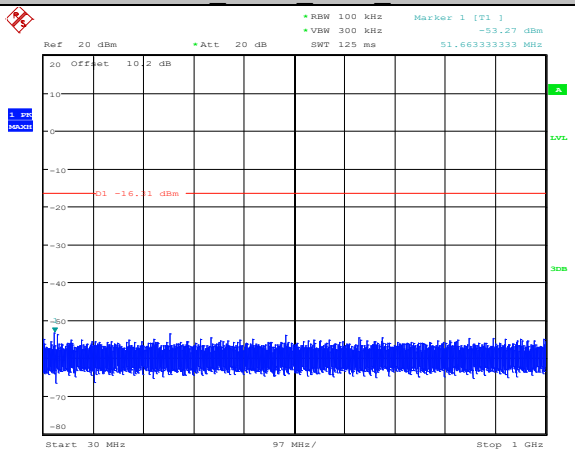
Mode	Freq. (MHz)	Conclusion
GFSK	Hopping off 2402	PASS
	Hopping off 2441	PASS
	Hopping off 2480	PASS
8DPSK	Hopping off 2402	PASS
	Hopping off 2441	PASS
	Hopping off 2480	PASS

11.5. Original test data

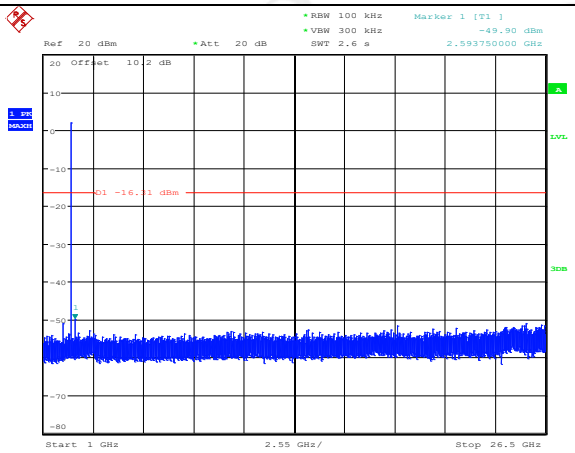
DH5_ANT1_2402_Ref



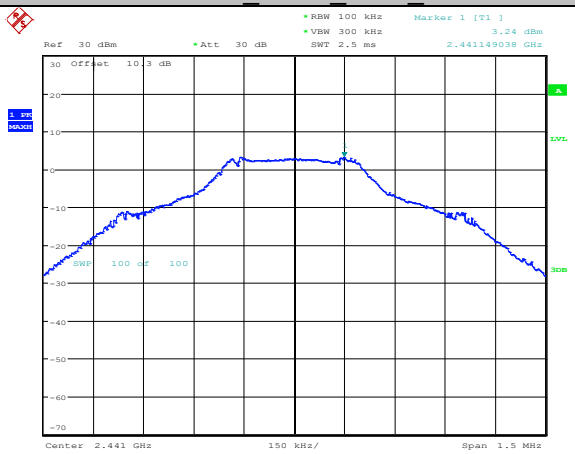
DH5_ANT1_2402_30~1000



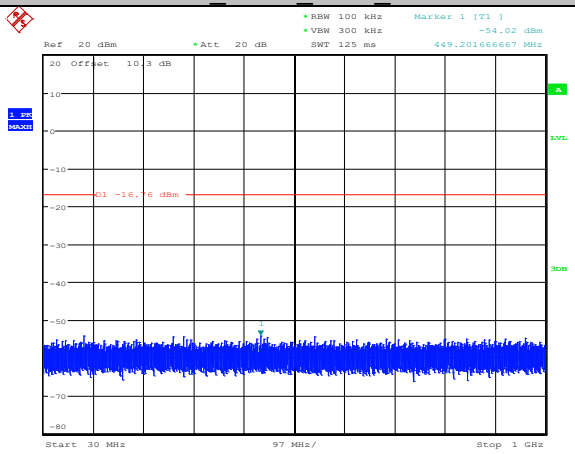
DH5_ANT1_2402_1000~26500



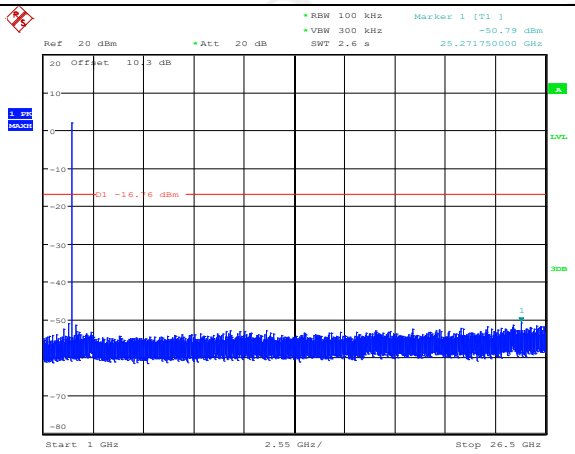
DH5_ANT1_2441_Ref



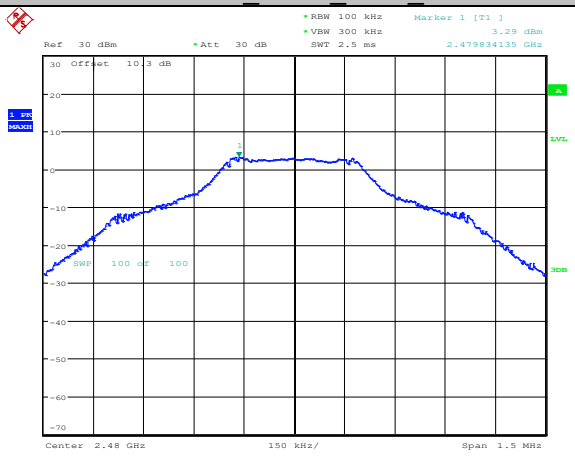
DH5_ANT1_2441_30~1000



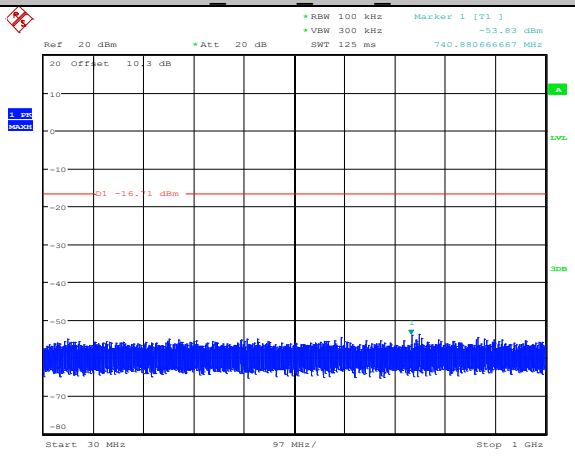
DH5_ANT1_2441_1000~26500



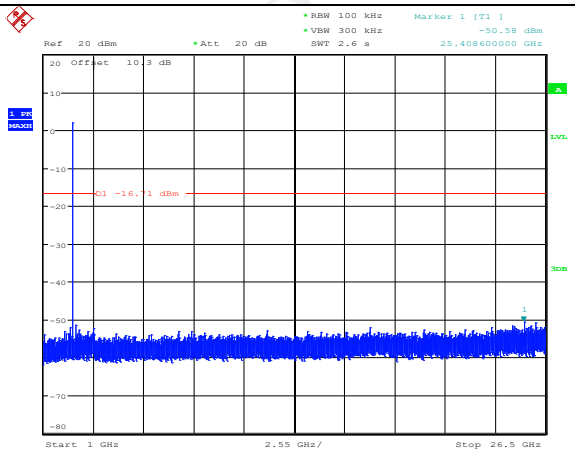
DH5_ANT1_2480_Ref



DH5_ANT1_2480_30~1000



DH5_ANT1_2480_1000~26500



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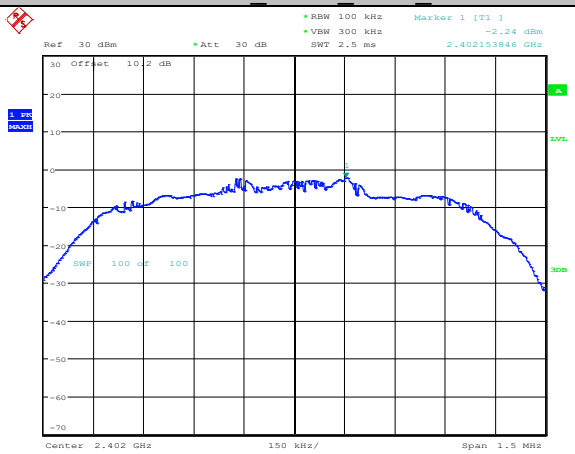
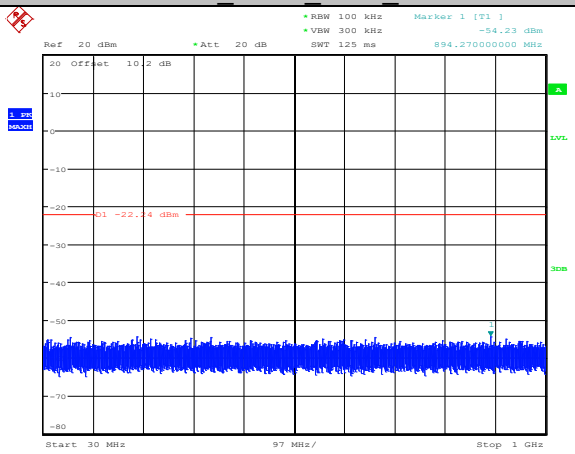
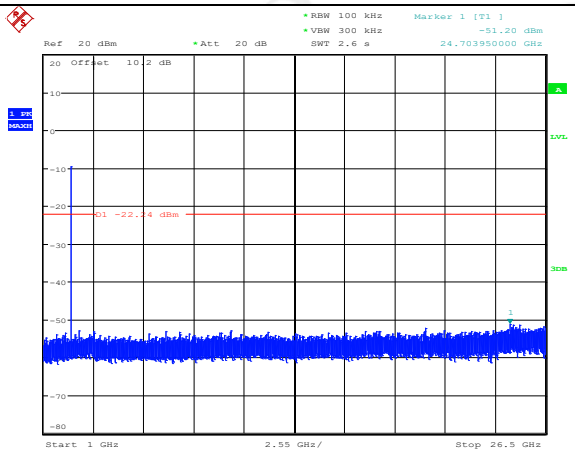


3DH5_ANT1_2402_30~1000



3DH5_ANT1_2402_1000~26500



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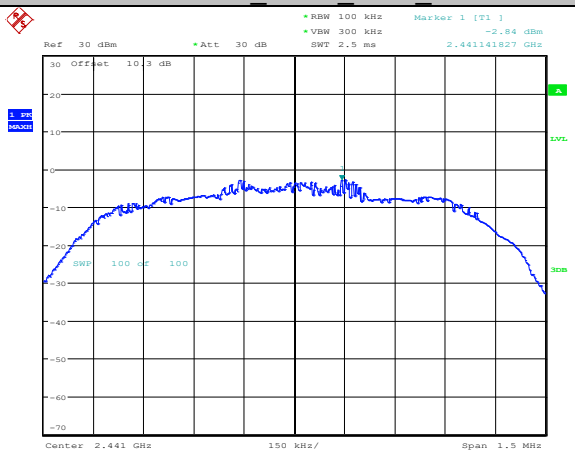
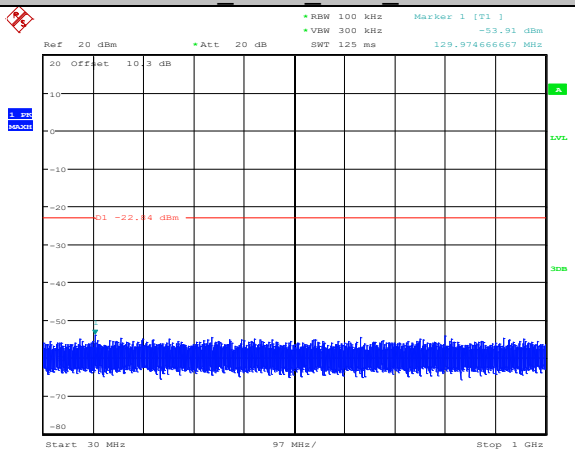
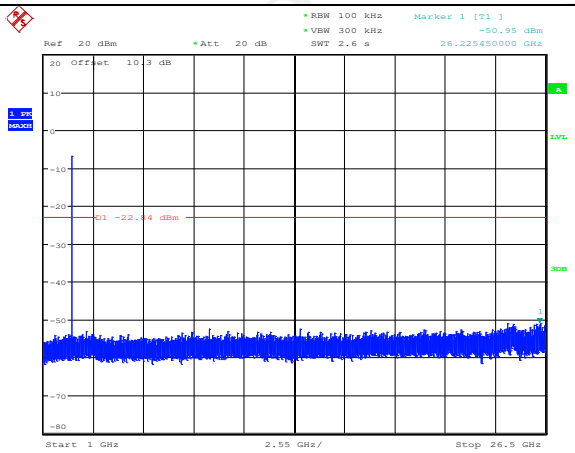


3DH5_ANT1_2441_30~1000



3DH5_ANT1_2441_1000~26500



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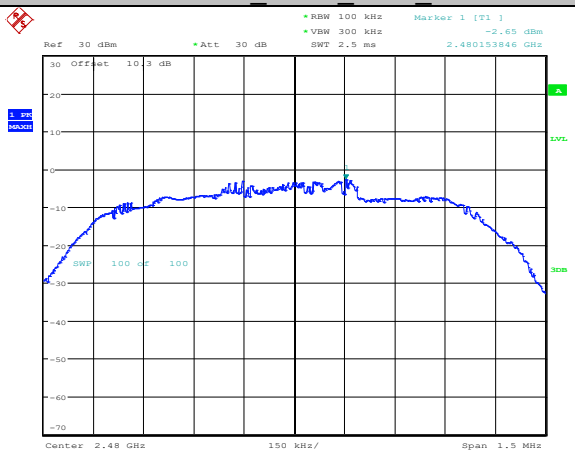
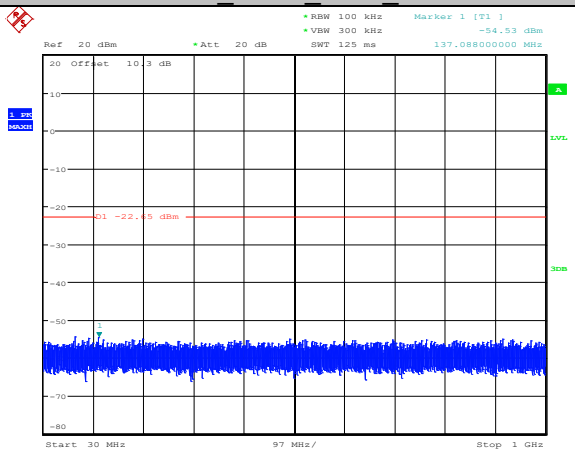
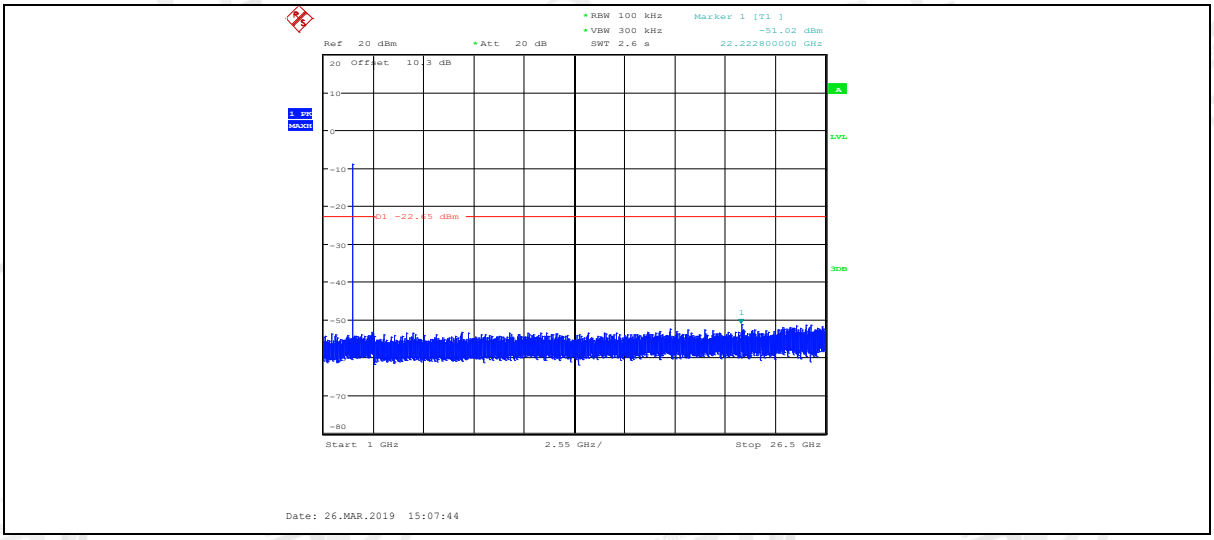


3DH5_ANT1_2480_30~1000

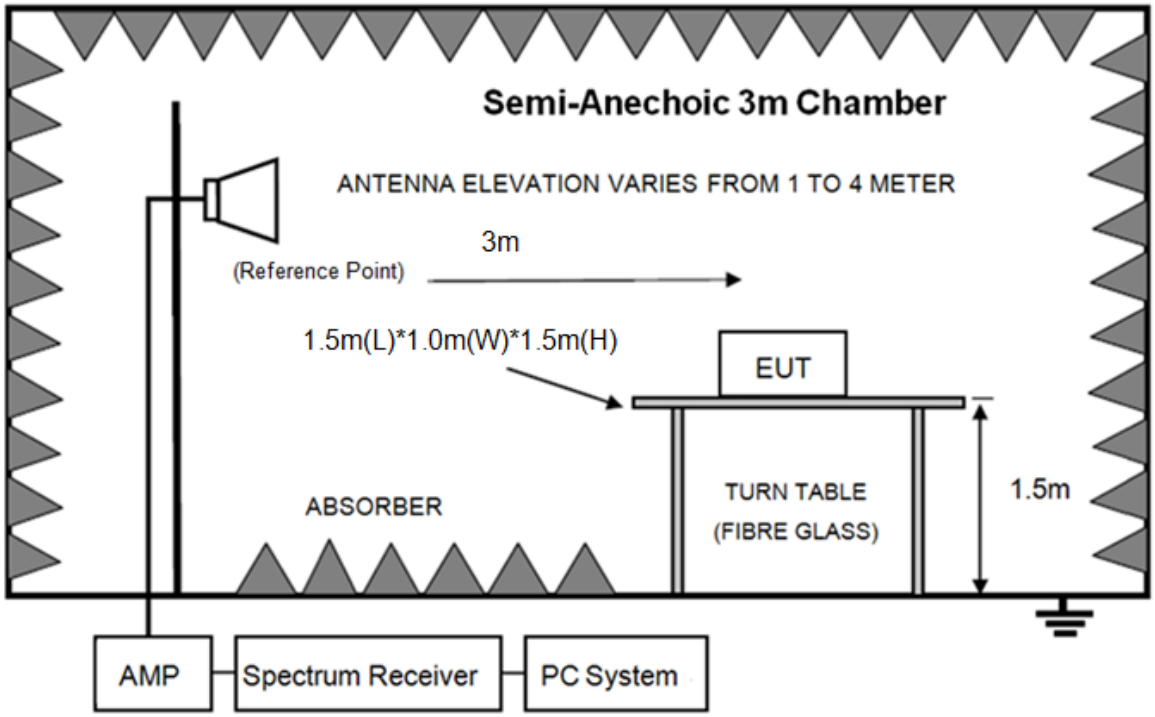


3DH5_ANT1_2480_1000~26500


RBW 100 kHz
VBW 300 kHz
SWT 2.6 s
Marker 1 [T1]
-51.02 dBm
22.222800000 GHz
Ref 20 dBm
Att 20 dB
Offset 10.3 dB
D1 -22.45 dBm
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz
Date: 26.MAR.2019 15:07:44

12. Band Edge Compliance (radiated method)

12.1. Block diagram of test setup



12.2. Limit

All restriction band should comply with 15.209, other emission should be at least 20dB below the fundamental.

12.3. Test Procedure

Same with clause 10.3 except change investigated frequency range from 2310 MHz to 2410 MHz and 2475 MHz to 2500 MHz.

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

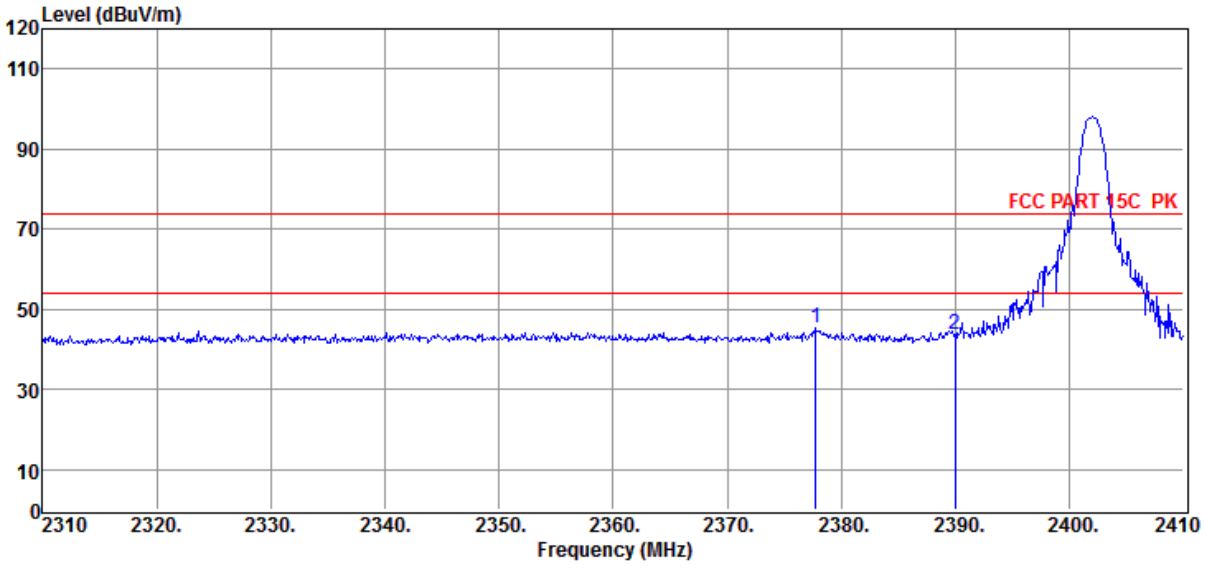
12.4. Test result

PASS. (See below detailed test result)
Remark: hopping on and hopping off mode all have been test, hopping off mode is worse and reported only.

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	:	2019-05-26	**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 2402MHz			

Data: 1



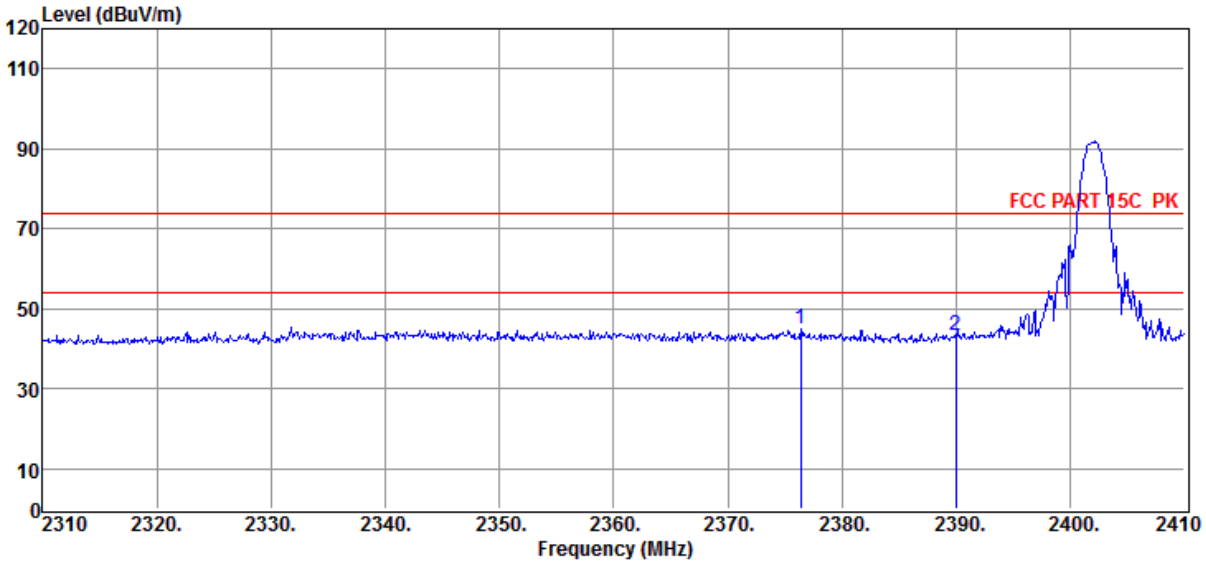
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2377.80	56.07	29.08	44.17	4.57	45.55	74.00	-28.45	Peak	HORIZONTAL
2	2390.00	54.38	29.10	44.18	4.56	43.86	74.00	-30.14	Peak	HORIZONTAL

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	:	2019-05-26	**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 2402MHz			

Data: 2



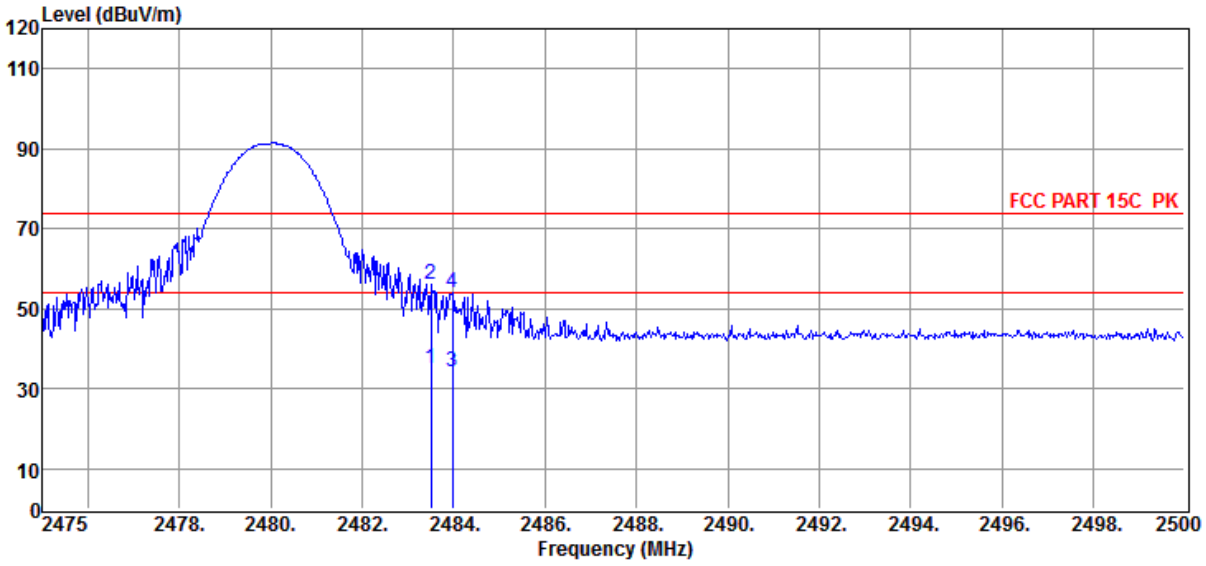
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2376.40	55.60	29.07	44.17	4.57	45.07	74.00	-28.93	Peak	VERTICAL
2	2390.00	53.62	29.10	44.18	4.56	43.10	74.00	-30.90	Peak	VERTICAL

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	:	2019-05-26	**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 2480MHz			

Data: 3



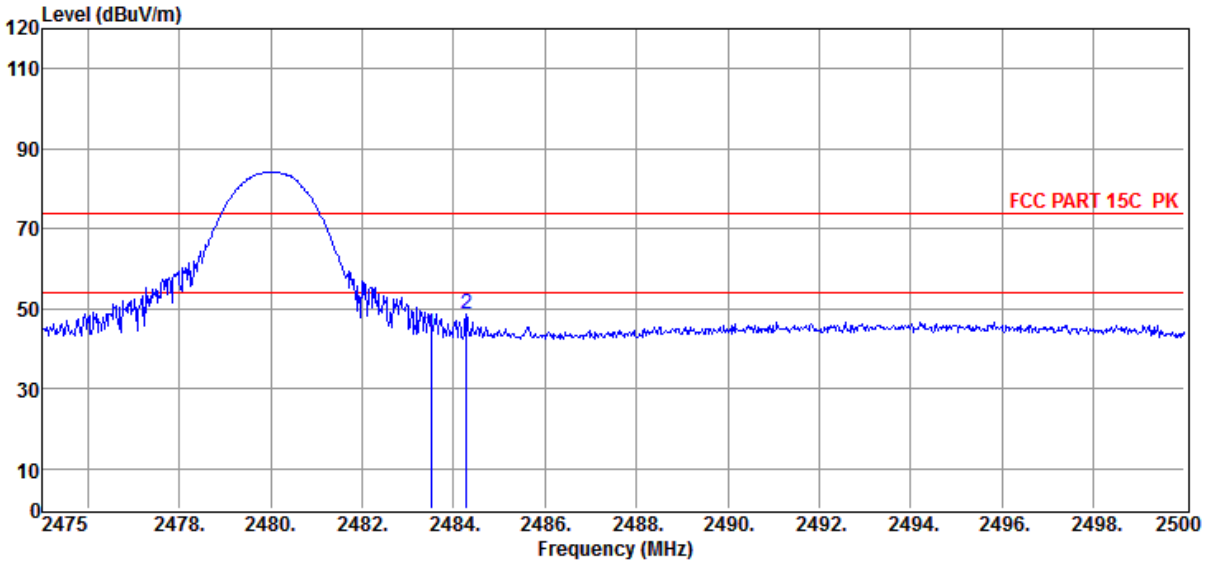
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	45.27	29.27	44.21	4.89	35.22	54.00	-18.78	Average	HORIZONTAL
2	2483.50	66.27	29.27	44.21	4.89	56.22	74.00	-17.78	Peak	HORIZONTAL
3	2483.98	44.10	29.27	44.21	4.90	34.06	54.00	-19.94	Average	HORIZONTAL
4	2483.98	64.10	29.27	44.21	4.90	54.06	74.00	-19.94	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	:	2019-05-26	**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 2480MHz			

Data: 4



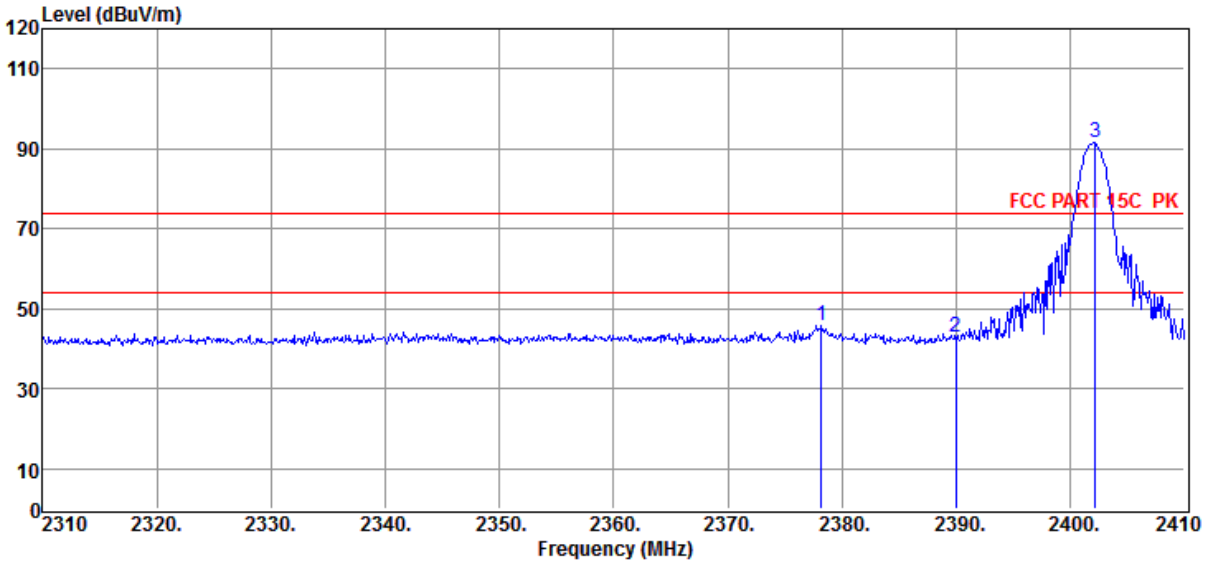
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	53.77	29.27	44.21	4.89	43.72	74.00	-30.28	Peak	VERTICAL
2	2484.28	58.81	29.27	44.21	4.90	48.77	74.00	-25.23	Peak	VERTICAL

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	:	2019-05-26	**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	:	8DPSK 2402MHz			

Data: 5



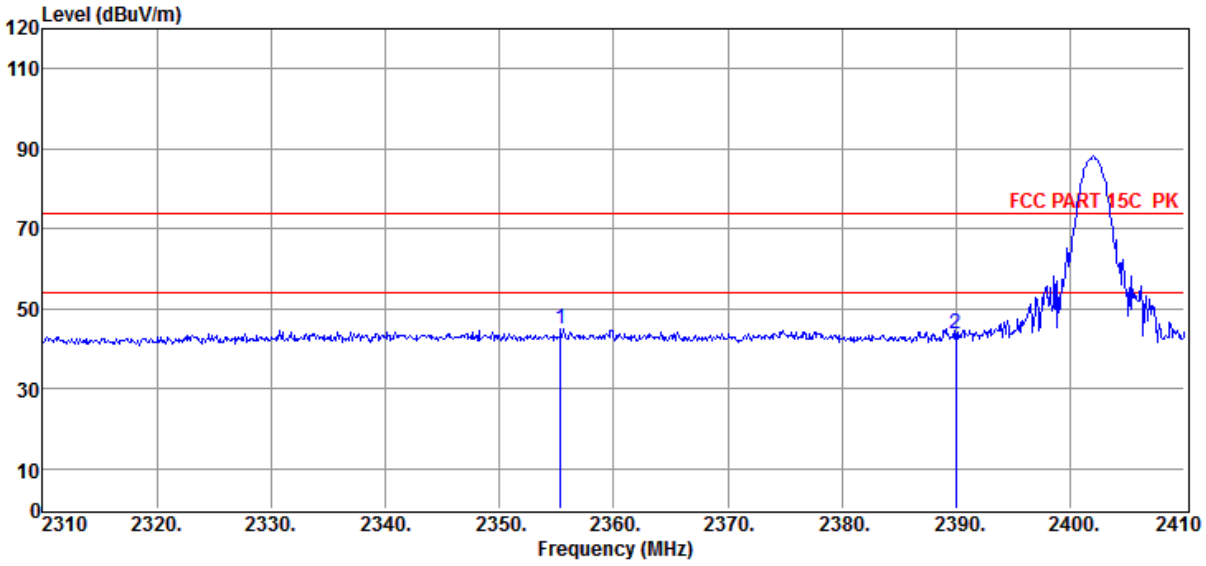
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2378.20	56.44	29.08	44.17	4.57	45.92	74.00	-28.08	Peak	HORIZONTAL
2	2390.00	53.51	29.10	44.18	4.56	42.99	74.00	-31.01	Peak	HORIZONTAL
3	2402.20	102.02	29.12	44.18	4.57	91.53	74.00	17.53	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	:	2019-05-26	**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	:	8DPSK 2402MHz			

Data: 6



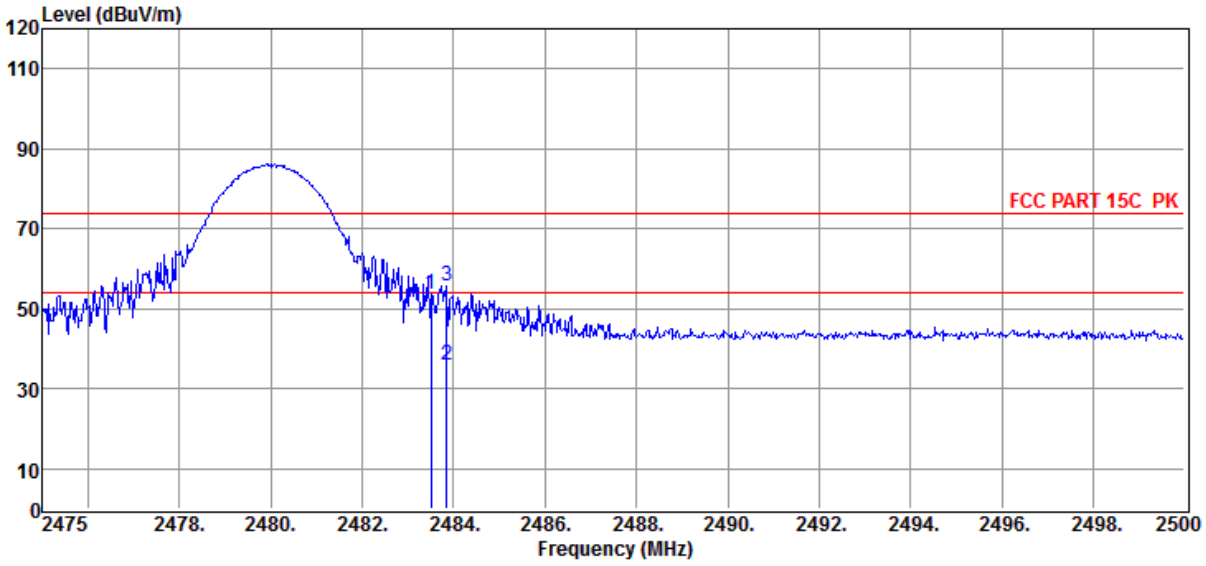
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2355.40	55.38	29.03	44.16	4.58	44.83	74.00	-29.17	Peak	VERTICAL
2	2390.00	54.17	29.10	44.18	4.56	43.65	74.00	-30.35	Peak	VERTICAL

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	:	2019-05-26	**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	:	8DPSK 2480MHz			

Data: 7



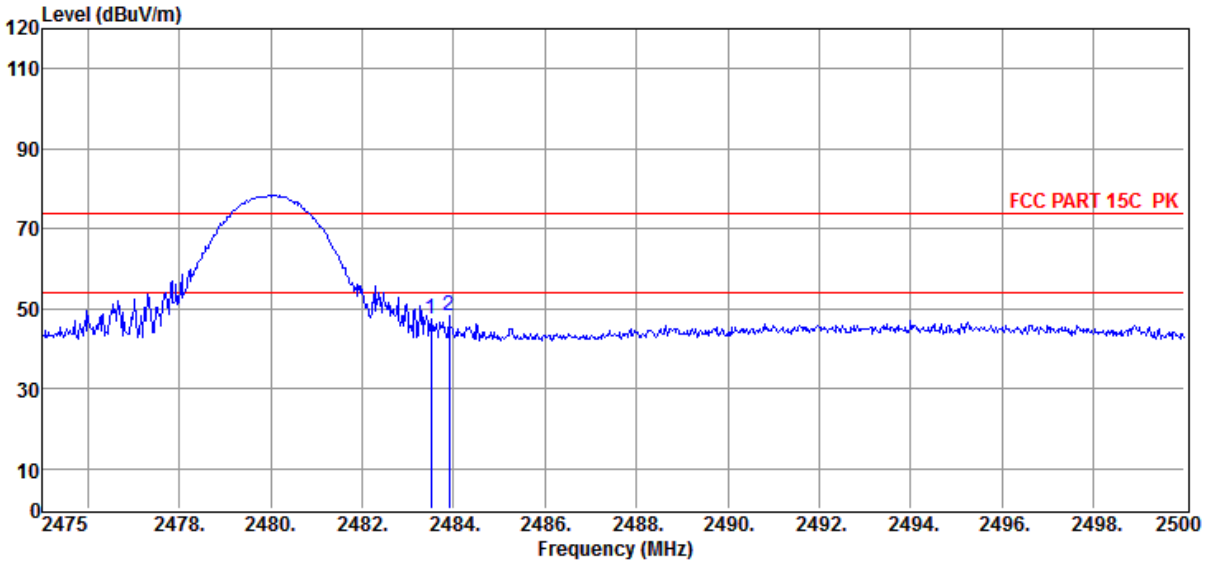
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	63.46	29.27	44.21	4.89	53.41	74.00	-20.59	Peak	HORIZONTAL
2	2483.85	45.86	29.27	44.21	4.90	35.82	54.00	-18.18	Average	HORIZONTAL
3	2483.85	65.86	29.27	44.21	4.90	55.82	74.00	-18.18	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	:	2019-05-26	**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	:	8DPSK 2480MHz			

Data: 8

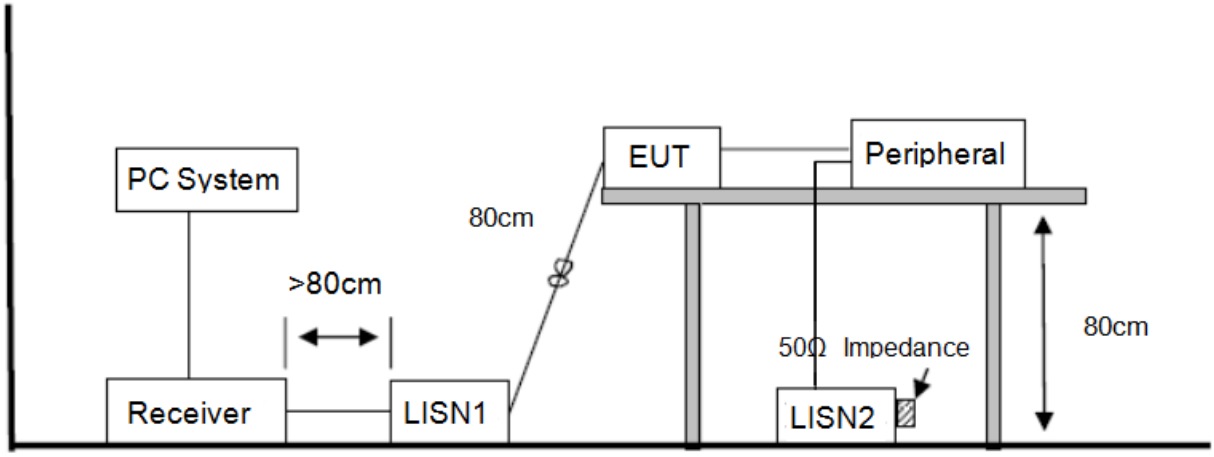


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	57.40	29.27	44.21	4.89	47.35	74.00	-26.65	Peak	VERTICAL
2	2483.90	58.48	29.27	44.21	4.90	48.44	74.00	-25.56	Peak	VERTICAL

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.

13. Power Line Conducted Emission

13.1. Block diagram of test setup



13.2. Power Line Conducted Emission 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.

13.3. 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.

13.4. Test Result

PASS. (See below detailed test result)

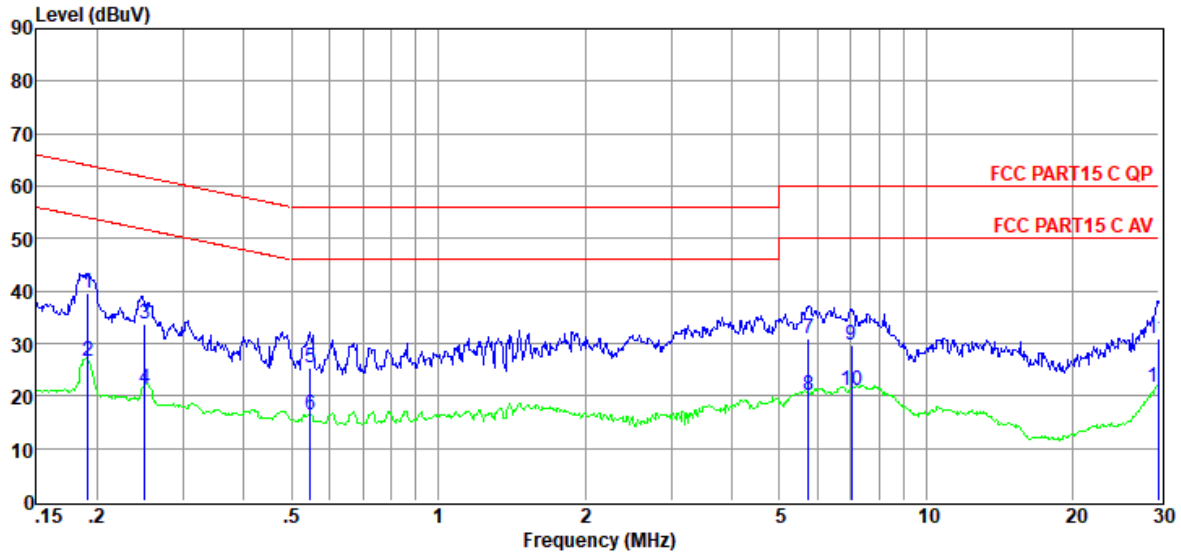
Note1: All emissions not reported below are too low against the prescribed limits.
Note2: "-----" means Peak detection; "-----" means Average detection.
Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/60Hz, recorded worse case. (AC 240V/60Hz)

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	:	2019-05-06	**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			

Data: 26



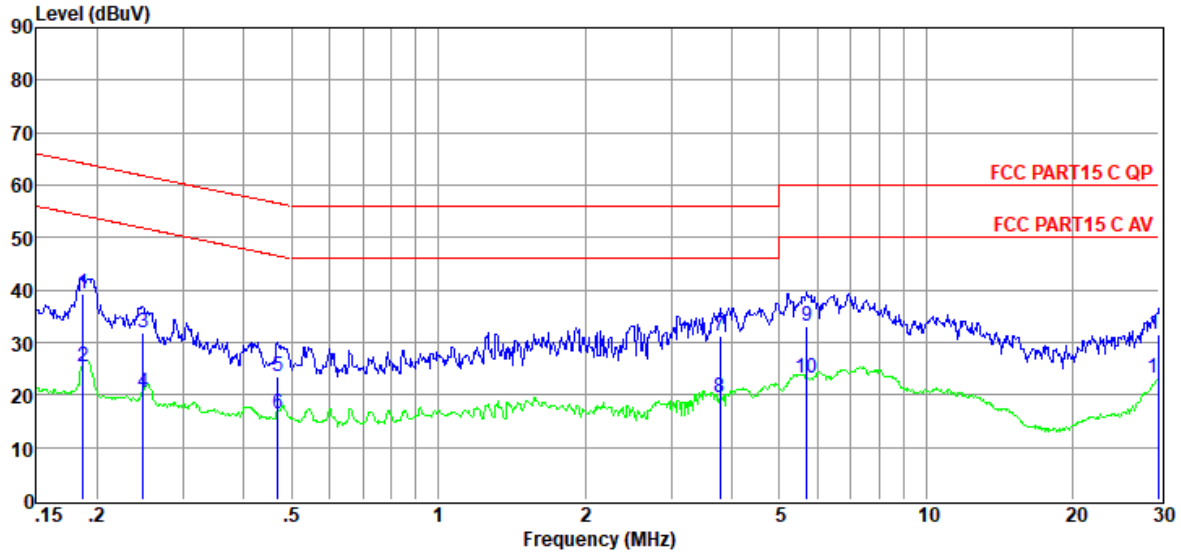
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.19	20.12	9.64	0.02	9.86	39.64	63.98	-24.34	QP	NEUTRAL
2	0.19	7.15	9.64	0.02	9.86	26.67	53.98	-27.31	Average	NEUTRAL
3	0.25	14.13	9.64	0.02	9.86	33.65	61.73	-28.08	QP	NEUTRAL
4	0.25	1.80	9.64	0.02	9.86	21.32	51.73	-30.41	Average	NEUTRAL
5	0.55	5.89	9.64	0.02	9.86	25.41	56.00	-30.59	QP	NEUTRAL
6	0.55	-3.05	9.64	0.02	9.86	16.47	46.00	-29.53	Average	NEUTRAL
7	5.74	11.38	9.72	0.07	9.88	31.05	60.00	-28.95	QP	NEUTRAL
8	5.74	0.54	9.72	0.07	9.88	20.21	50.00	-29.79	Average	NEUTRAL
9	7.03	9.94	9.74	0.04	9.89	29.61	60.00	-30.39	QP	NEUTRAL
10	7.03	1.35	9.74	0.04	9.89	21.02	50.00	-28.98	Average	NEUTRAL
11	29.84	10.43	10.23	0.16	10.02	30.84	60.00	-29.16	QP	NEUTRAL
12	29.84	1.12	10.23	0.16	10.02	21.53	50.00	-28.47	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	:	2019-05-06	**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: 28



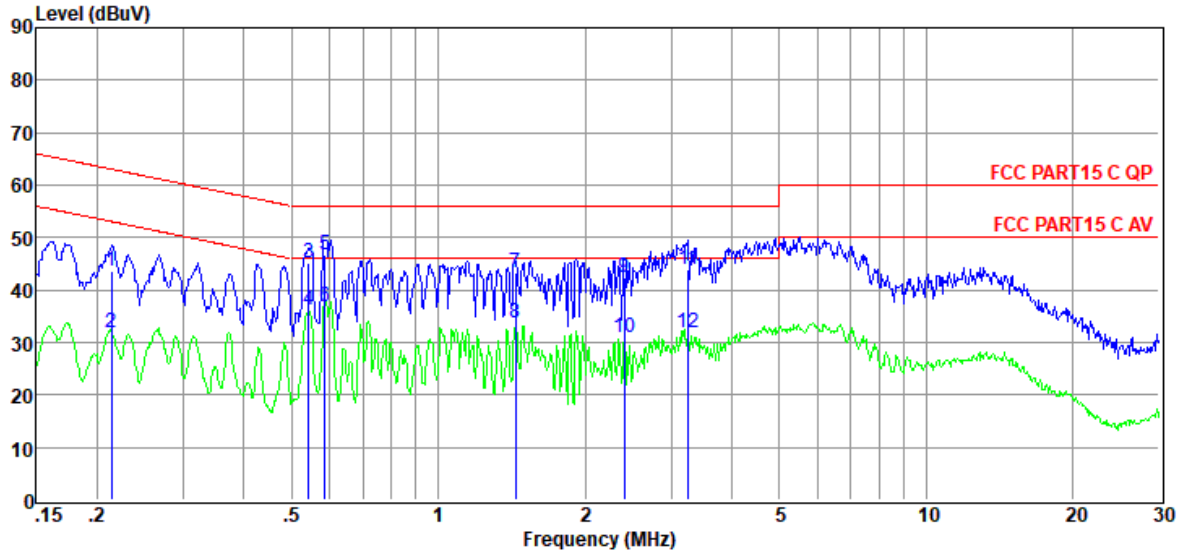
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.19	19.88	9.63	0.02	9.86	39.39	64.15	-24.76	QP	LINE
2	0.19	5.99	9.63	0.02	9.86	25.50	54.15	-28.65	Average	LINE
3	0.25	12.39	9.63	0.02	9.86	31.90	61.82	-29.92	QP	LINE
4	0.25	0.88	9.63	0.02	9.86	20.39	51.82	-31.43	Average	LINE
5	0.47	3.95	9.64	0.02	9.86	23.47	56.54	-33.07	QP	LINE
6	0.47	-3.05	9.64	0.02	9.86	16.47	46.54	-30.07	Average	LINE
7	3.78	11.59	9.68	0.06	9.87	31.20	56.00	-24.80	QP	LINE
8	3.78	-0.09	9.68	0.06	9.87	19.52	46.00	-26.48	Average	LINE
9	5.68	13.36	9.70	0.07	9.88	33.01	60.00	-26.99	QP	LINE
10	5.68	3.61	9.70	0.07	9.88	23.26	50.00	-26.74	Average	LINE
11	30.00	11.27	10.02	0.16	10.02	31.47	60.00	-28.53	QP	LINE
12	30.00	3.09	10.02	0.16	10.02	23.29	50.00	-26.71	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\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 2			

Data: 46



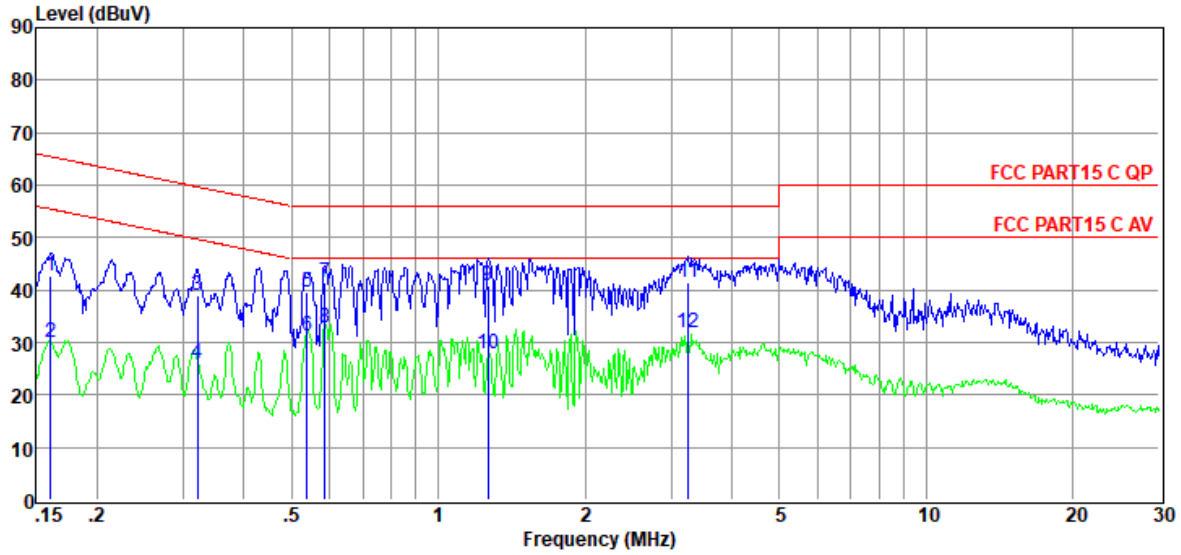
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.21	24.01	9.63	0.02	9.86	43.52	63.05	-19.53	QP	LINE
2	0.21	12.24	9.63	0.02	9.86	31.75	53.05	-21.30	Average	LINE
3	0.54	25.55	9.64	0.02	9.86	45.07	56.00	-10.93	QP	LINE
4	0.54	16.78	9.64	0.02	9.86	36.30	46.00	-9.70	Average	LINE
5	0.59	27.20	9.64	0.03	9.86	46.73	56.00	-9.27	QP	LINE
6	0.59	17.16	9.64	0.03	9.86	36.69	46.00	-9.31	Average	LINE
7	1.44	23.55	9.65	0.08	9.87	43.15	56.00	-12.85	QP	LINE
8	1.44	14.19	9.65	0.08	9.87	33.79	46.00	-12.21	Average	LINE
9	2.41	22.67	9.66	0.04	9.87	42.24	56.00	-13.76	QP	LINE
10	2.41	11.36	9.66	0.04	9.87	30.93	46.00	-15.07	Average	LINE
11	3.26	24.32	9.67	0.04	9.87	43.90	56.00	-12.10	QP	LINE
12	3.26	12.39	9.67	0.04	9.87	31.97	46.00	-14.03	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\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 2			

Data: 48



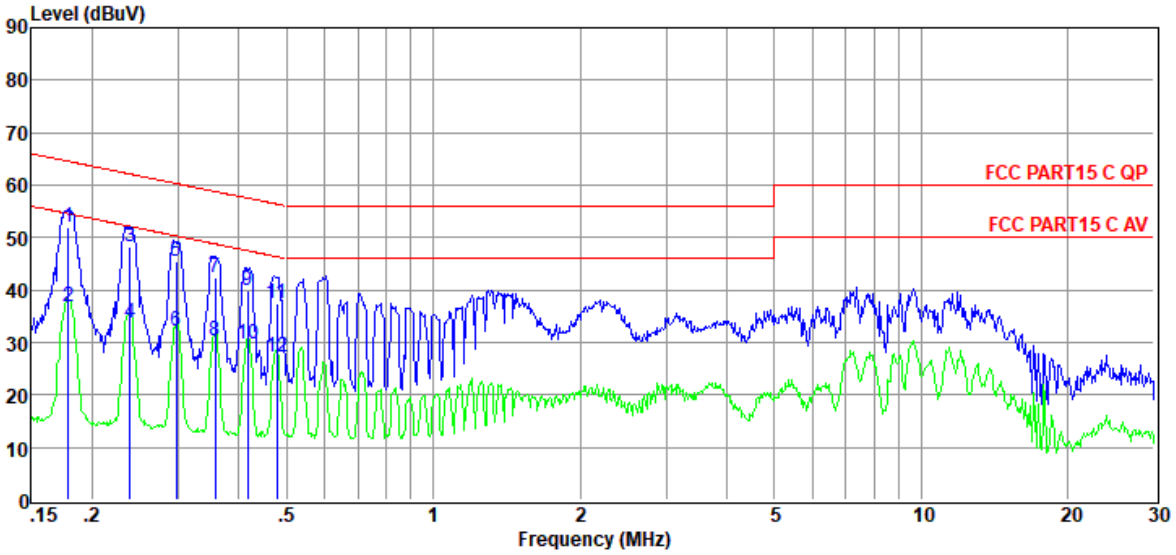
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.16	23.19	9.64	0.02	9.86	42.71	65.43	-22.72	QP	NEUTRAL
2	0.16	10.39	9.64	0.02	9.86	29.91	55.43	-25.52	Average	NEUTRAL
3	0.32	19.31	9.64	0.02	9.86	38.83	59.66	-20.83	QP	NEUTRAL
4	0.32	6.45	9.64	0.02	9.86	25.97	49.66	-23.69	Average	NEUTRAL
5	0.54	20.22	9.64	0.02	9.86	39.74	56.00	-16.26	QP	NEUTRAL
6	0.54	11.82	9.64	0.02	9.86	31.34	46.00	-14.66	Average	NEUTRAL
7	0.59	22.01	9.64	0.03	9.86	41.54	56.00	-14.46	QP	NEUTRAL
8	0.59	13.16	9.64	0.03	9.86	32.69	46.00	-13.31	Average	NEUTRAL
9	1.26	21.24	9.65	0.09	9.87	40.85	56.00	-15.15	QP	NEUTRAL
10	1.26	8.32	9.65	0.09	9.87	27.93	46.00	-18.07	Average	NEUTRAL
11	3.26	21.80	9.68	0.04	9.87	41.39	56.00	-14.61	QP	NEUTRAL
12	3.26	12.18	9.68	0.04	9.87	31.77	46.00	-14.23	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.

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	:				

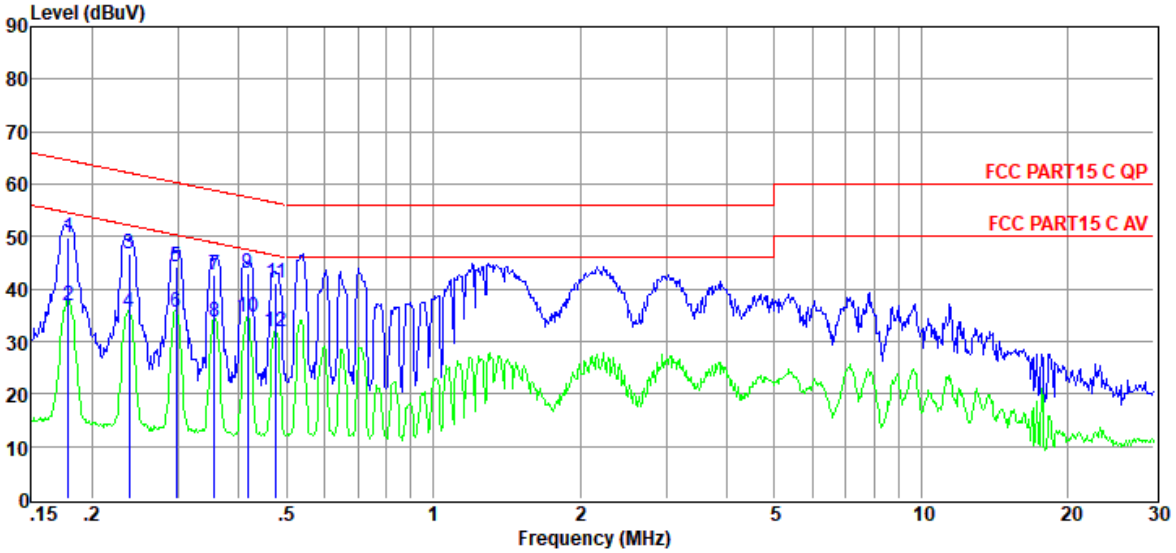


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	32.44	9.64	0.02	9.86	51.96	64.55	-12.59	QP	NEUTRAL
2	0.18	17.40	9.64	0.02	9.86	36.92	54.55	-17.63	Average	NEUTRAL
3	0.24	28.77	9.64	0.02	9.86	48.29	62.13	-13.84	QP	NEUTRAL
4	0.24	14.29	9.64	0.02	9.86	33.81	52.13	-18.32	Average	NEUTRAL
5	0.30	25.89	9.64	0.02	9.86	45.41	60.32	-14.91	QP	NEUTRAL
6	0.30	12.79	9.64	0.02	9.86	32.31	50.32	-18.01	Average	NEUTRAL
7	0.36	22.84	9.64	0.02	9.86	42.36	58.78	-16.42	QP	NEUTRAL
8	0.36	10.70	9.64	0.02	9.86	30.22	48.78	-18.56	Average	NEUTRAL
9	0.42	20.37	9.64	0.02	9.86	39.89	57.51	-17.62	QP	NEUTRAL
10	0.42	10.08	9.64	0.02	9.86	29.60	47.51	-17.91	Average	NEUTRAL
11	0.48	18.03	9.64	0.02	9.86	37.55	56.36	-18.81	QP	NEUTRAL
12	0.48	7.60	9.64	0.02	9.86	27.12	46.36	-19.24	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	:		



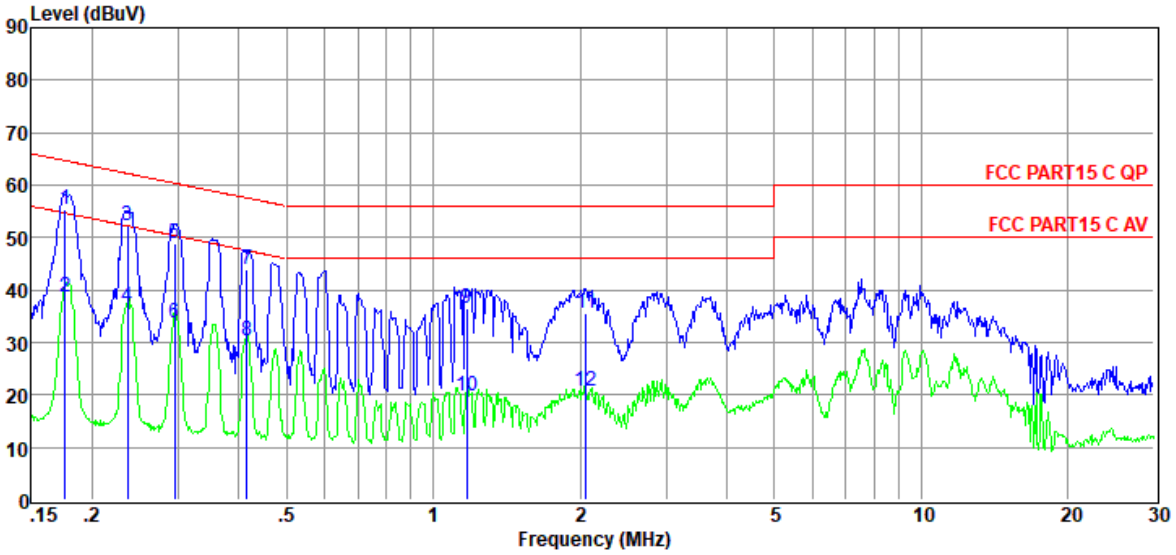
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	30.17	9.63	0.02	9.86	49.68	64.55	-14.87	QP	LINE
2	0.18	17.29	9.63	0.02	9.86	36.80	54.55	-17.75	Average	LINE
3	0.24	27.24	9.63	0.02	9.86	46.75	62.17	-15.42	QP	LINE
4	0.24	16.03	9.63	0.02	9.86	35.54	52.17	-16.63	Average	LINE
5	0.30	24.81	9.63	0.02	9.86	44.32	60.32	-16.00	QP	LINE
6	0.30	16.10	9.63	0.02	9.86	35.61	50.32	-14.71	Average	LINE
7	0.36	23.13	9.63	0.02	9.86	42.64	58.83	-16.19	QP	LINE
8	0.36	14.31	9.63	0.02	9.86	33.82	48.83	-15.01	Average	LINE
9	0.42	23.59	9.64	0.02	9.86	43.11	57.51	-14.40	QP	LINE
10	0.42	15.19	9.64	0.02	9.86	34.71	47.51	-12.80	Average	LINE
11	0.48	21.59	9.64	0.02	9.86	41.11	56.41	-15.30	QP	LINE
12	0.48	12.34	9.64	0.02	9.86	31.86	46.41	-14.55	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	35.79	9.63	0.02	9.86	55.30	64.68	-9.38	QP	LINE
2	0.18	19.26	9.63	0.02	9.86	38.77	54.68	-15.91	Average	LINE
3	0.24	32.79	9.63	0.02	9.86	52.30	62.22	-9.92	QP	LINE
4	0.24	17.20	9.63	0.02	9.86	36.71	52.22	-15.51	Average	LINE
5	0.30	29.23	9.63	0.02	9.86	48.74	60.37	-11.63	QP	LINE
6	0.30	14.21	9.63	0.02	9.86	33.72	50.37	-16.65	Average	LINE
7	0.41	24.47	9.64	0.02	9.86	43.99	57.55	-13.56	QP	LINE
8	0.41	10.73	9.64	0.02	9.86	30.25	47.55	-17.30	Average	LINE
9	1.17	16.76	9.64	0.09	9.87	36.36	56.00	-19.64	QP	LINE
10	1.17	0.26	9.64	0.09	9.87	19.86	46.00	-26.14	Average	LINE
11	2.06	16.04	9.65	0.05	9.87	35.61	56.00	-20.39	QP	LINE
12	2.06	1.24	9.65	0.05	9.87	20.81	46.00	-25.19	Average	LINE

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

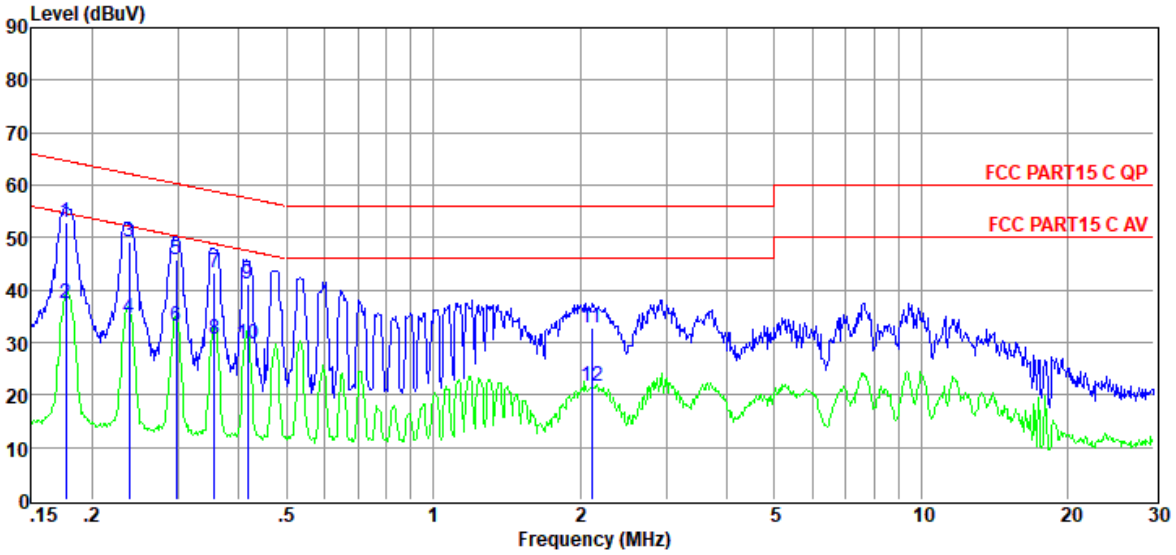
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

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	0.18	33.26	9.64	0.02	9.86	52.78	64.64	-11.86	QP	NEUTRAL
2	0.18	17.97	9.64	0.02	9.86	37.49	54.64	-17.15	Average	NEUTRAL
3	0.24	29.58	9.64	0.02	9.86	49.10	62.17	-13.07	QP	NEUTRAL
4	0.24	15.03	9.64	0.02	9.86	34.55	52.17	-17.62	Average	NEUTRAL
5	0.30	26.40	9.64	0.02	9.86	45.92	60.32	-14.40	QP	NEUTRAL
6	0.30	13.46	9.64	0.02	9.86	32.98	50.32	-17.34	Average	NEUTRAL
7	0.36	23.91	9.64	0.02	9.86	43.43	58.83	-15.40	QP	NEUTRAL
8	0.36	11.00	9.64	0.02	9.86	30.52	48.83	-18.31	Average	NEUTRAL
9	0.42	21.47	9.64	0.02	9.86	40.99	57.51	-16.52	QP	NEUTRAL
10	0.42	10.22	9.64	0.02	9.86	29.74	47.51	-17.77	Average	NEUTRAL
11	2.11	13.31	9.67	0.05	9.87	32.90	56.00	-23.10	QP	NEUTRAL
12	2.11	2.13	9.67	0.05	9.87	21.72	46.00	-24.28	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.

14. Antenna Requirements

14.1. 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

14.2. Result

The antennas used for this product are integrated 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