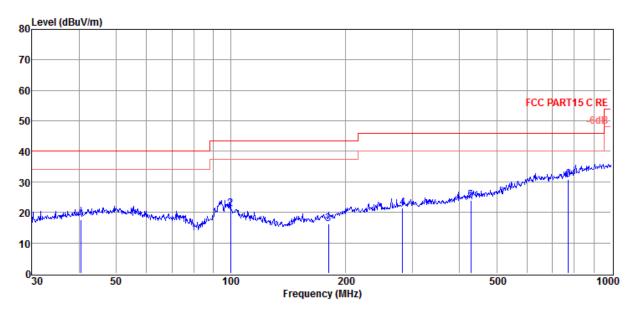
## Above 30MHz: **TR-4-E-009 Radiated Emission Test Result**

Test Site	: DDT 3m Chamber 1#	D:\2018 RE1# Repo charger\RF.EM6	ort Data\Q18040406-1E wireless
Test Date	: 2018-04-12	Tested By	: Sunny
EUT	: wireless charger	Model Number	: EC500F
Power Supply	: AC 120V/60Hz	Test Mode	: TX mode
Condition	. Temp:24.5'C,Humi:55%, Press:100.1kPa	Antenna/Distance	: 2017 VULB 9163 1#/3m/HORIZONTAL
Memo	:		

Data: 7



Item (Mark)	<b>Freq.</b> (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	40.42	1.08	12.66	3.88	17.62	40.00	-22.38	QP	HORIZONTAL
2	99.88	5.37	11.48	4.41	21.26	43.50	-22.24	QP	HORIZONTAL
3	180.65	1.39	9.76	4.93	16.08	43.50	-27.42	QP	HORIZONTAL
4	282.99	3.06	13.04	5.45	21.55	46.00	-24.45	QP	HORIZONTAL
5	428.02	2.31	15.90	5.76	23.97	46.00	-22.03	QP	HORIZONTAL
6	771.45	2.73	20.86	7.23	30.82	46.00	-15.18	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.

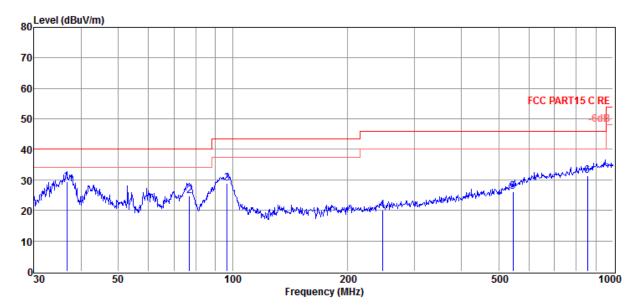
# **TR-4-E-009 Radiated Emission Test Result**

Test Site	: DDT 3m Chamber 1#	D:\2018 RE1# Repo charger\RF.EM6	ort Data\Q18040406-1E wireless
Test Date	: 2018-04-12	Tested By	: Sunny
EUT	: wireless charger	Model Number	: EC500F
Power Supply	: AC 120V/60Hz	Test Mode	: TX mode
Condition	_ Temp:24.5'C,Humi:55%, <sup>*</sup> Press:100.1kPa	Antenna/Distance	: 2017 VULB 9163 1#/3m/VERTICAL

Memo

Data: 6

:



Item	Freq.	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
(Mark)	36.64	(dBµV) 13.65	11.93	3.84	29.42	40.00	-10.58	QP	VERTICAL
	30.04	13.00	11.95	3.04	29.42	40.00	-10.56	QF	VERTICAL
2	77.05	12.57	8.05	4.23	24.85	40.00	-15.15	QP	VERTICAL
3	96.78	13.59	10.85	4.39	28.83	43.50	-14.67	QP	VERTICAL
4	247.68	2.41	12.45	5.28	20.14	46.00	-25.86	QP	VERTICAL
5	545.18	1.84	18.40	5.96	26.20	46.00	-19.80	QP	VERTICAL
6	857.03	1.89	22.06	7.48	31.43	46.00	-14.57	QP	VERTICAL

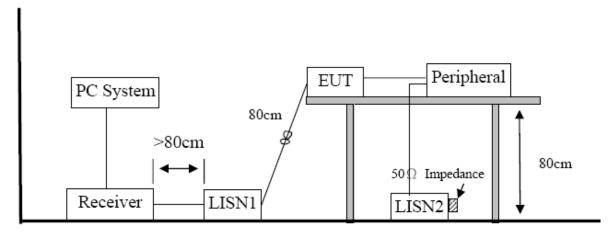
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

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.

## 6 Power Line Conducted Emission

### 6.1. Block diagram of test setup



### 6.2. 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.

### 6.3. 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.

#### 6.4. Test Result

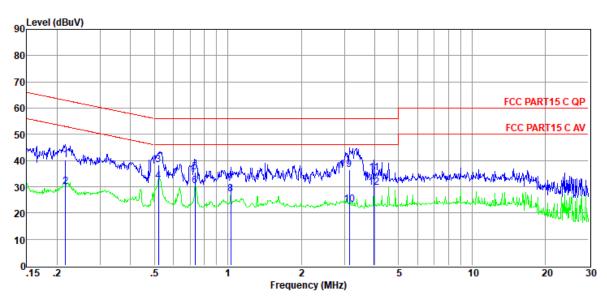
#### PASS. (See below detailed test result)

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/50Hz, recorded worst case (AC 120V/60Hz).

# **TR-4-E-010 Conducted Emission Test Result**

Test Site	: DDT 1# Shield Room	D:\2018 CE report	data\Q18040406-1E WIRELESS เค
Test Date	: 2018-04-16	Tested By	: Sunny
EUT	: wireless charger	Model Number	: EC500F
Power Supply	: AC 120V/60Hz	Test Mode	: TX mode
Condition	. Temp:24.5'C,Humi:55%, Press:100.1kPa	LISN	: 2017 ENV216/NEUTRAL
Memo	:		

Data: 2



ltem	Freq.	Read	LISN	Cable	Pulse	Result	Limit	Over	Detector	Phase
		Level	Factor	Loss	Limiter Factor	Level	Line	Limit		
(Mark)	(MHz)	(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)		
1	0.22	21.00	9.44	0.04	9.86	40.34	62.96	-22.62	QP	NEUTRAL
2	0.22	10.80	9.44	0.04	9.86	30.14	52.96	-22.82	Average	NEUTRAL
3	0.52	19.05	9.35	0.05	9.81	38.26	56.00	-17.74	QP	NEUTRAL
4	0.52	12.91	9.35	0.05	9.81	32.12	46.00	-13.88	Average	NEUTRAL
5	0.74	16.42	9.32	0.10	9.86	35.70	56.00	-20.30	QP	NEUTRAL
6	0.74	10.89	9.32	0.10	9.86	30.17	46.00	-15.83	Average	NEUTRAL
7	1.03	11.89	9.30	0.14	9.86	31.19	56.00	-24.81	QP	NEUTRAL
8	1.03	8.03	9.30	0.14	9.86	27.33	46.00	-18.67	Average	NEUTRAL
9	3.14	17.19	9.27	0.11	9.87	36.44	56.00	-19.56	QP	NEUTRAL
10	3.14	3.85	9.27	0.11	9.87	23.10	46.00	-22.90	Average	NEUTRAL
11	3.97	16.00	9.27	0.11	9.87	35.25	56.00	-20.75	QP	NEUTRAL
12	3.97	10.50	9.27	0.11	9.87	29.75	46.00	-16.25	Average	NEUTRAL

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

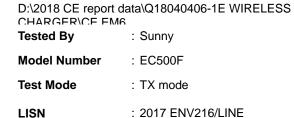
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

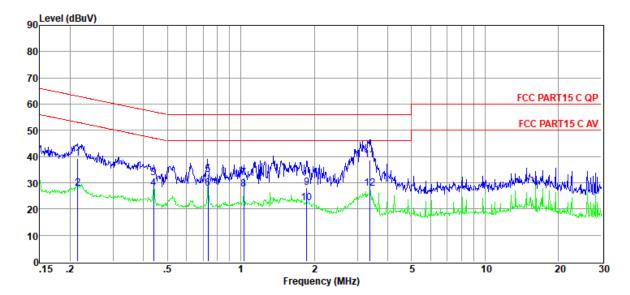
Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

# **TR-4-E-010 Conducted Emission Test Result**

Test Site	: DDT 1# Shield Room	D:\2018 CE report
Test Date	: 2018-04-16	Tested By
EUT	: wireless charger	Model Number
Power Supply	: AC 120V/60Hz	Test Mode
Condition	_ Temp:24.5'C,Humi:55%, Press:100.1kPa	LISN
Memo	:	

Data: 4





ltem	Freq.	Read	LISN	Cable	Pulse	Result	Limit	Over	Detector	Phase
		Level	Factor	Loss	Limiter Factor		Line	Limit		
(Mark)	(MHz)	(dBµV)	(dB)	(dB)	(dB)	(dBµV)	(dBµV)	(dB)		
1	0.22	19.72	9.51	0.04	9.86	39.13	63.01	-23.88	QP	LINE
2	0.22	8.53	9.51	0.04	9.86	27.94	53.01	-25.07	Average	LINE
3	0.44	12.47	9.53	0.04	9.82	31.86	57.07	-25.21	QP	LINE
4	0.44	8.39	9.53	0.04	9.82	27.78	47.07	-19.29	Average	LINE
5	0.73	13.43	9.55	0.10	9.86	32.94	56.00	-23.06	QP	LINE
6	0.73	8.46	9.55	0.10	9.86	27.97	46.00	-18.03	Average	LINE
7	1.03	12.22	9.57	0.14	9.86	31.79	56.00	-24.21	QP	LINE
8	1.03	7.88	9.57	0.14	9.86	27.45	46.00	-18.55	Average	LINE
9	1.86	8.62	9.60	0.12	9.87	28.21	56.00	-27.79	QP	LINE
10	1.86	2.54	9.60	0.12	9.87	22.13	46.00	-23.87	Average	LINE
11	3.38	19.10	9.62	0.11	9.87	38.70	56.00	-17.30	QP	LINE
12	3.38	8.30	9.62	0.11	9.87	27.90	46.00	-18.10	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.

Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

## 7 Antenna Requirements

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

**END OF REPORT**