FCC RADIO TEST REPORT

FCC ID	:	**A4RGD1YQ**
Equipment	:	**Phone**
Model Name	:	**GD1YQ**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**FCC Part 15 Subpart C §15.209**

The product was received on Apr. 17, 2020 and testing was started from May 04, 2020 and completed on Aug. 04, 2020. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Reviewed by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR011718-01H	01	Initial issue of report	Jul. 10, 2020
FR011718-01H	02	Updated the marker within the fundamental frequency range from 110kHz to 148kHz at page C3.	Jul. 31, 2020
FR011718-01H	03	Updated the field strength of fundamental emissions and radiated emissions (9 kHz~30MHz) at page C1 and C2	Aug. 04, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.207	AC Power Line Conducted Emissions	Pass	Under limit 10.28 dB at 0.203MHz
3.2	2.1049	99% OBW Spectrum Bandwidth	Reporting only	-
3.3	15.209	Field Strength of Fundamental Emissions	Pass	Max level -21.18 dBμV/m at 0.148 MHz
		Radiated Spurious Emissions	Pass	Under limit 7.84 dB at 43.580MHz
3.4	15.203	Antenna Requirements	Pass	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Dara Chiu

1. General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Phone
Model Name	GD1YQ
FCC ID	A4RGD1YQ
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/ NFC/GNSS/WPC/WPT WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE

Remark: The above EUT's information was declared by manufacturer.

EUT Information List	
S/N	Performed Test Item
03281FDD400039	Radiated Spurious Emission
03311FDD40001W	Conducted Emission

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency	110~148.5kHz
99%OBW	0.672 kHZ
Antenna Type	Single Coil Antenna

Remark: The above EUT's information was declared by manufacturer.

1.3 Modification of EUT

No modifications are made to the EUT during all test items.

1.4 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory	
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	
	TH03-HY	CO05-HY
Test Engineer	Louis Chung	Tom Lee
Temperature	22~24℃	23~25℃
Relative Humidity	53~55%	42~50%

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH11-HY
Test Engineer	Cookie Gu and Troye Hsieh
Temperature	20.2~21.8℃
Relative Humidity	63.1~66.7%

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW0007

1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.209
- FCC KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2013

Remark: The TAF code is not including all the FCC KDB listed without accreditation.

2. Test Configuration of Equipment Under Test

2.1 Descriptions of Test Mode

Investigation has been done on all the possible configurations.

The following table is a list of the test modes shown in this test report.

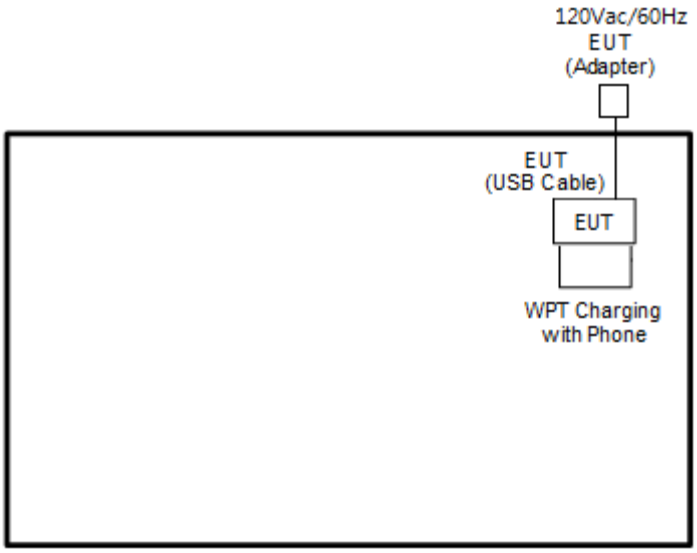
Test Items	
AC Power Line Conducted Emissions	20dB Spectrum Bandwidth
Field Strength of Fundamental Emissions	Radiated Emissions 9kHz~30MHz
Radiated Emissions 30MHz~1GHz	

Pre-scanned tests, X, Y, Z in three orthogonal panels to determine the final configuration (X Plane for Battery 0%; Y Plane for Battery 50% and Battery 100%) from all possible combinations.

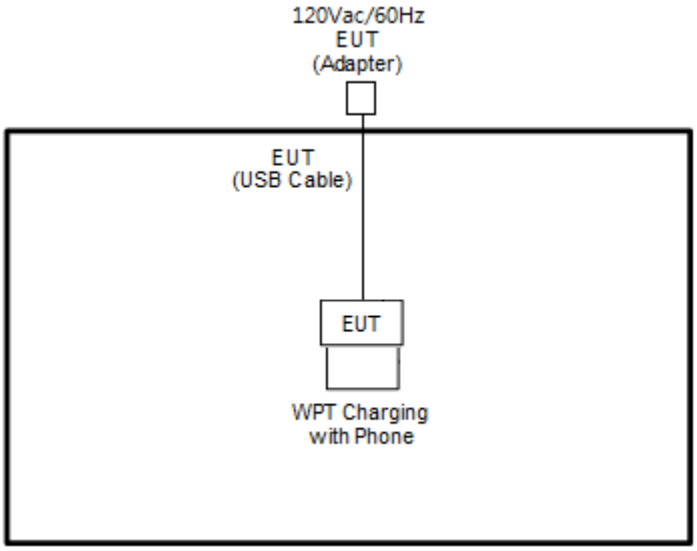
Test Cases	
AC Conducted Emission	Mode 1: WPT Charging with Phone + USB Cable (Charging from Adapter 2); Battery 0% Mode 2: WPT Charging with Phone + USB Cable (Charging from Adapter 2); Battery 50% Mode 3: WPT Charging with Phone + USB Cable (Charging from Adapter 2); Battery 100%
Remark: **1.** The worst case of conducted emission is mode 2; only the test data of it was reported **2.** For Radiated Test Cases, the tests were performed with Adapter 2.	

2.2 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WPT Tx Mode>



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Phone	Google	N/A	N/A	N/A	N/A

2.4 EUT Operation Test Setup

For WPT Tx test items, utility “CMD” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

The EUT charger with other phone via wireless power transfer function

3. Test Results

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

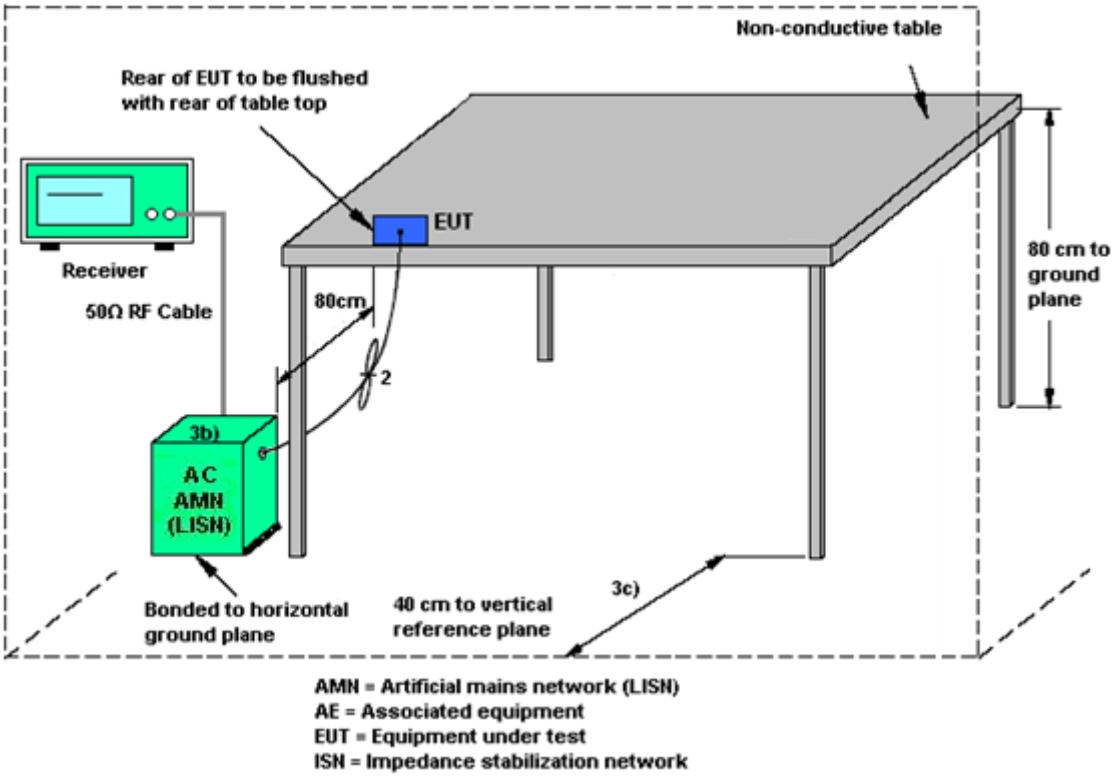
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.1.4 Test setup



3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

3.2 99% OBW Spectrum Bandwidth Measurement

3.2.1 Limit

Reporting only

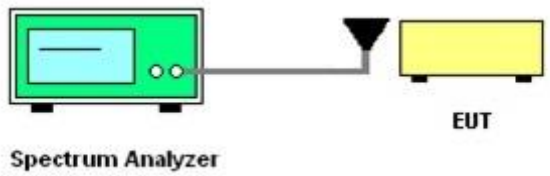
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used.
3. Measured the spectrum width with power higher than 20dB below carrier.
4. Measured the 99% OBW.

3.2.4 Test Setup



3.2.5 Test Result of Conducted Test Items

Please refer to Appendix B.

3.3 Radiated Emissions Measurement

3.3.1 Limit

The field strength of any emissions which appear band shall not exceed the general radiated emissions limits.

Frequencies (MHz)	Field Strength (μV/m)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Measuring Instrument Setting

The following table is the setting of receiver:

Receiver Parameter	Setting
Attenuation	Auto
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

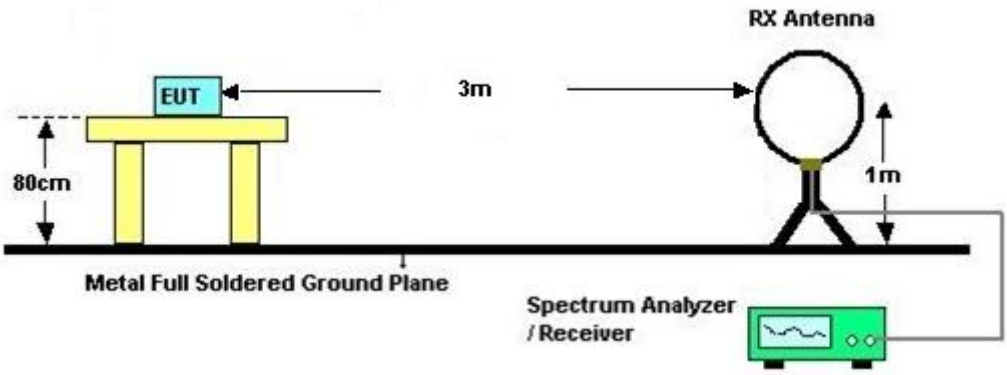
Note: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz and 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

3.3.4 Test Procedures

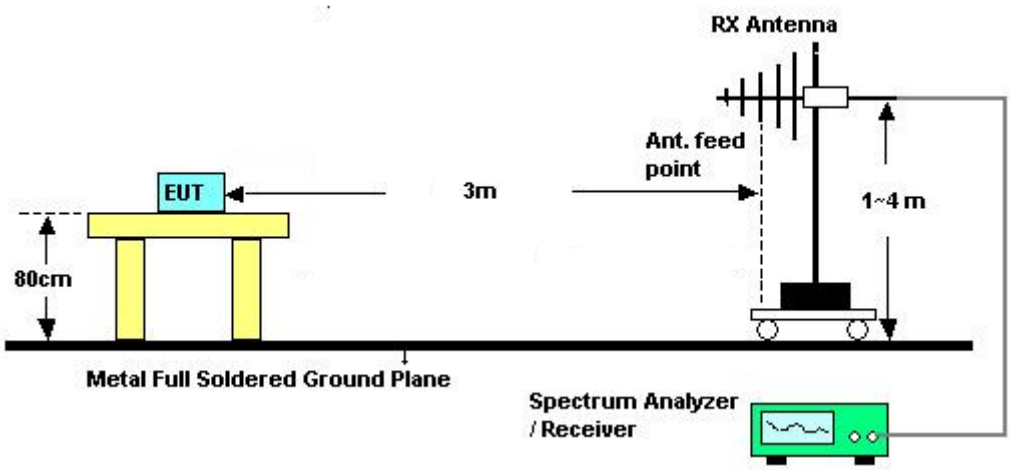
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver.

3.3.5 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



3.3.6 Test Result of Radiated Emissions Measurement

Please refer to Appendix C.

3.4 Antenna Requirements

3.4.1 Standard Applicable

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. 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 the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

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 rule.

3.4.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 24, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Jun. 24, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 07, 2019	Jun. 24, 2020	Nov. 06, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 20, 2019	Jun. 24,.2020	Nov. 19, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 15, 2019	Jun. 24, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jun. 24, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Jun. 24, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Jun. 24, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 26, 2020	May 04, 2020	Mar. 25, 2021	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Sep. 04, 2019	May 04, 2020	Sep. 03, 2020	Conducted (TH03-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	May 04, 2020 ~ Aug. 04, 2020	N/A	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 03, 2019	May 04, 2020 ~ Aug. 04, 2020	Dec. 02, 2020	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 12, 2019	May 04, 2020 ~ Aug. 04, 2020	Oct. 11, 2020	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 09, 2020	May 04, 2020 ~ May 05, 2020	Jan. 08, 2021	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jul. 14, 2020	Aug. 04, 2020	Jul. 13, 2021	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	May 04, 2020 ~ Aug. 04, 2020	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	May 04, 2020 ~ Aug. 04, 2020	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	May 04, 2020 ~ Aug. 04, 2020	N/A	Radiation (03CH11-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290045	20MHz~8.4GHz	Jan. 18, 2020	May 04, 2020 ~ Aug. 04, 2020	Jan. 17, 2021	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 28, 2019	May 04, 2020 ~ Aug. 04, 2020	Oct. 27, 2020	Radiation (03CH11-HY)
Filter	Wainwright	WHK20/1000C 7/40SS	SN2	20M High Pass	Sep. 15, 2019	May 04, 2020 ~ Aug. 04, 2020	Sep. 14, 2020	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz-30MHz	Mar. 12, 2020	May 04, 2020 ~ Aug. 04, 2020	Mar. 11, 2021	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	30M-18G	Mar. 12, 2020	May 04, 2020 ~ Aug. 04, 2020	Mar. 11, 2021	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTN-303B	TP140325	N/A	Nov. 07, 2019	May 04, 2020 ~ Aug. 04, 2020	Nov. 06, 2020	Radiation (03CH11-HY)

5. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.30

Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.12

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.20

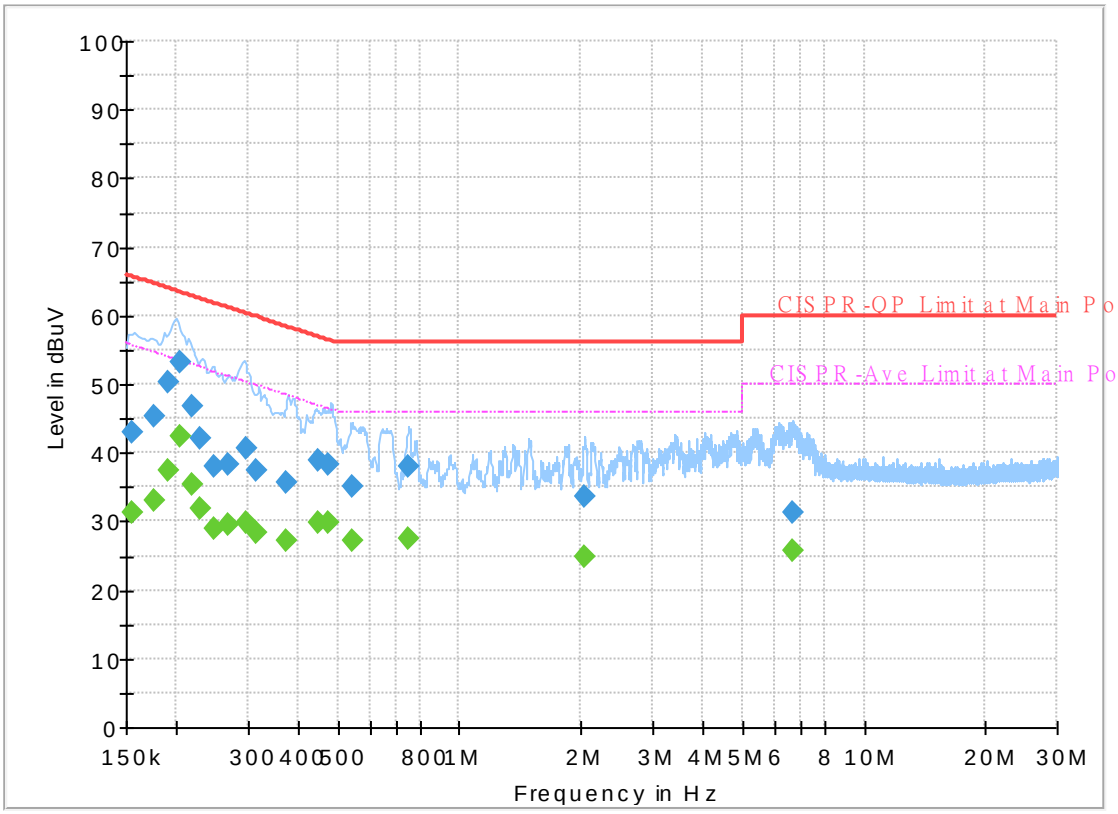
Appendix A. Test Results of Conducted Emission Test

Test Engineer :	Tom Lee	**Temperature :**	23~25℃
		Relative Humidity :	42~50%

EUT Information

Test Mode :	Mode 2
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



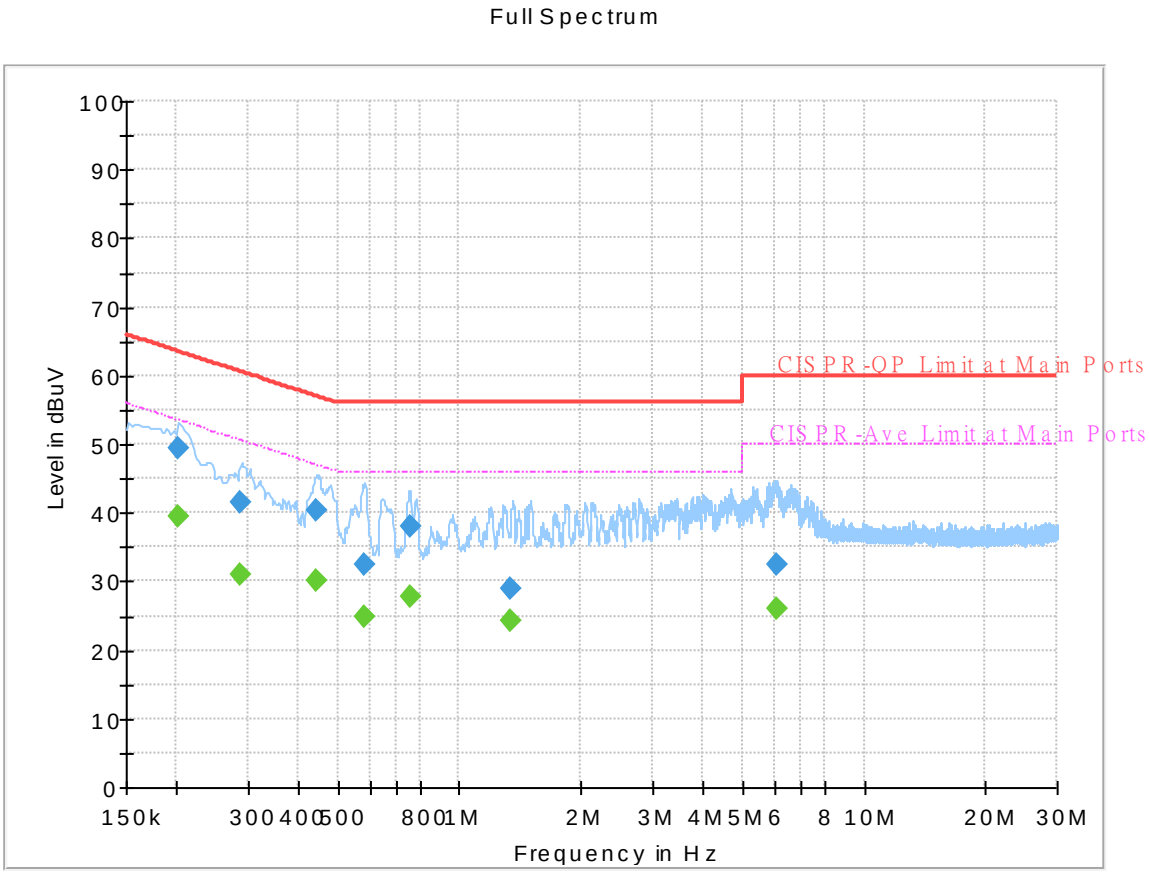
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	31.40	55.75	24.35	L1	OFF	19.6
0.154500	43.00	---	65.75	22.75	L1	OFF	19.6
0.175290	---	33.14	54.71	21.57	L1	OFF	19.6
0.175290	45.44	---	64.71	19.27	L1	OFF	19.6
0.190230	---	37.28	54.03	16.75	L1	OFF	19.6
0.190230	50.43	---	64.03	13.60	L1	OFF	19.6
0.202920	---	42.52	53.49	10.97	L1	OFF	19.6
0.202920	53.21	---	63.49	10.28	L1	OFF	19.6
0.217500	---	35.35	52.91	17.56	L1	OFF	19.6
0.217500	46.70	---	62.91	16.21	L1	OFF	19.6
0.228120	---	31.94	52.52	20.58	L1	OFF	19.6
0.228120	42.08	---	62.52	20.44	L1	OFF	19.6
0.246480	---	28.94	51.88	22.94	L1	OFF	19.6
0.246480	37.94	---	61.88	23.94	L1	OFF	19.6
0.268260	---	29.58	51.17	21.59	L1	OFF	19.6
0.268260	38.42	---	61.17	22.75	L1	OFF	19.6
0.298500	---	29.84	50.28	20.44	L1	OFF	19.6
0.298500	40.59	---	60.28	19.69	L1	OFF	19.6
0.314250	---	28.27	49.86	21.59	L1	OFF	19.6
0.314250	37.36	---	59.86	22.50	L1	OFF	19.6
0.374100	---	27.08	48.41	21.33	L1	OFF	19.6

0.374100	35.63	---	58.41	22.78	L1	OFF	19.6
0.449250	---	29.91	46.89	16.98	L1	OFF	19.6
0.449250	39.02	---	56.89	17.87	L1	OFF	19.6
0.476340	---	29.97	46.40	16.43	L1	OFF	19.6
0.476340	38.23	---	56.40	18.17	L1	OFF	19.6
0.544290	---	27.13	46.00	18.87	L1	OFF	19.6
0.544290	34.96	---	56.00	21.04	L1	OFF	19.6
0.747150	---	27.48	46.00	18.52	L1	OFF	19.6
0.747150	37.96	---	56.00	18.04	L1	OFF	19.6
2.042250	---	24.87	46.00	21.13	L1	OFF	19.6
2.042250	33.66	---	56.00	22.34	L1	OFF	19.6
6.645750	---	25.83	50.00	24.17	L1	OFF	19.9
6.645750	31.24	---	60.00	28.76	L1	OFF	19.9

EUT Information

Test Mode :	Mode 2
Test Voltage :	120Vac/60Hz
Phase :	Neutral



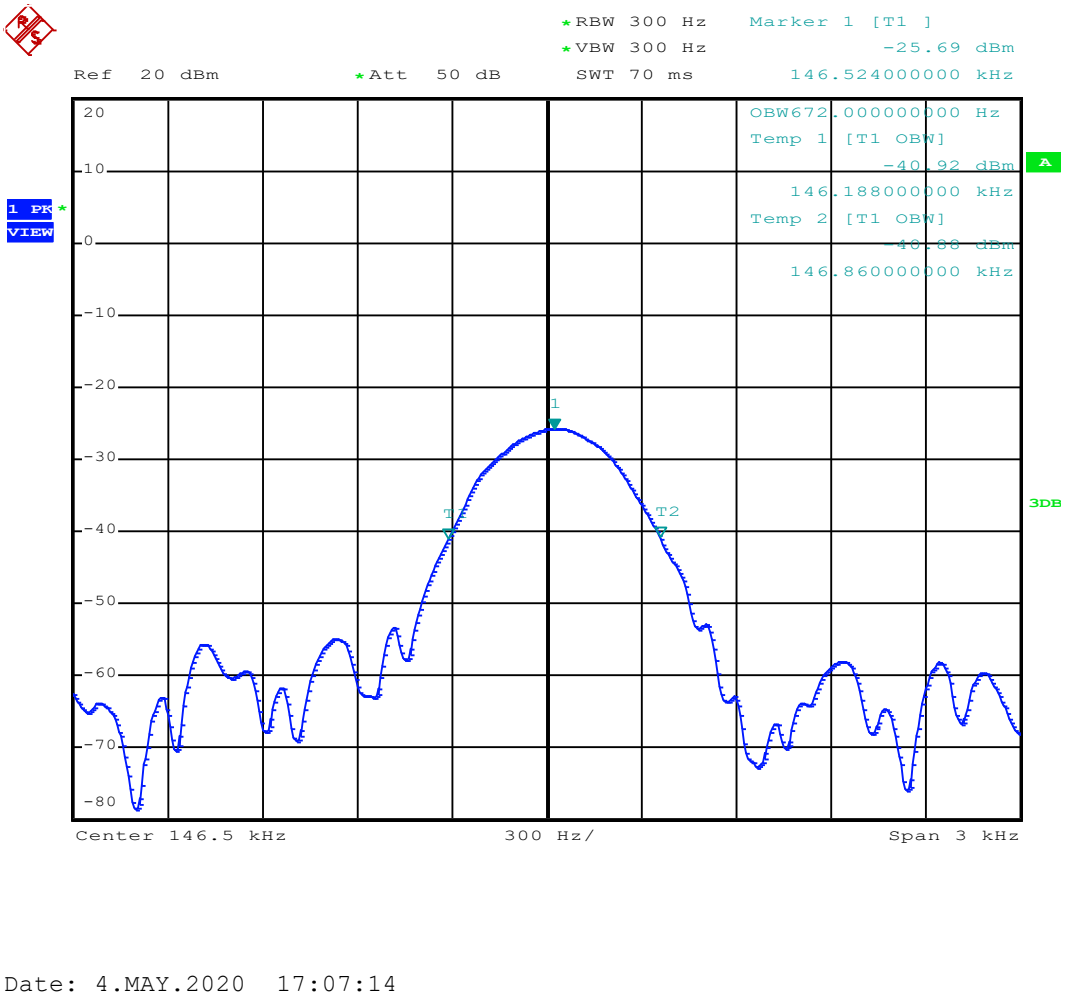
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.202560	---	39.49	53.51	14.02	N	OFF	19.5
0.202560	49.56	---	63.51	13.95	N	OFF	19.5
0.288420	---	30.87	50.57	19.70	N	OFF	19.5
0.288420	41.54	---	60.57	19.03	N	OFF	19.5
0.441960	---	30.11	47.03	16.92	N	OFF	19.5
0.441960	40.32	---	57.03	16.71	N	OFF	19.5
0.583710	---	24.88	46.00	21.12	N	OFF	19.5
0.583710	32.45	---	56.00	23.55	N	OFF	19.5
0.754530	---	27.73	46.00	18.27	N	OFF	19.5
0.754530	38.13	---	56.00	17.87	N	OFF	19.5
1.344750	---	24.27	46.00	21.73	N	OFF	19.6
1.344750	29.01	---	56.00	26.99	N	OFF	19.6
6.087660	---	26.03	50.00	23.97	N	OFF	19.7
6.087660	32.55	---	60.00	27.45	N	OFF	19.7

Appendix B. Test Results of Conducted Test Items

B1. Test Result of 20dB Spectrum Bandwidth

Test mode	WPT Tx



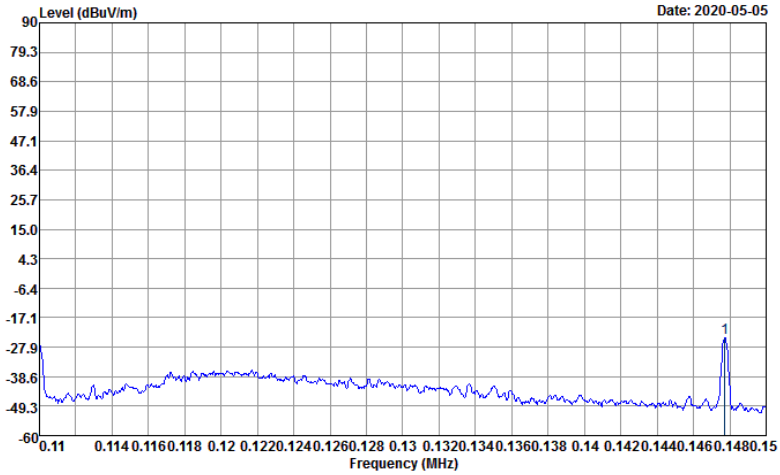
99% Occupied BW(kHz)	0.672

Remark: Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

Appendix C. Test Results of Radiated Test Items

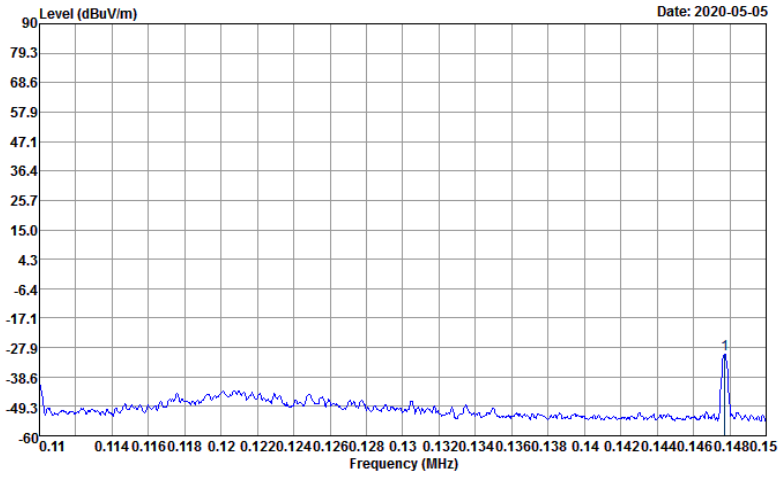
C1. Test Result of Field Strength of Fundamental Emissions

Test Mode :	WPT Charging with Phone; Battery 0%



Site : 03CH11-HY
Condition : 3m LOOP_ANT(H)_100488 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

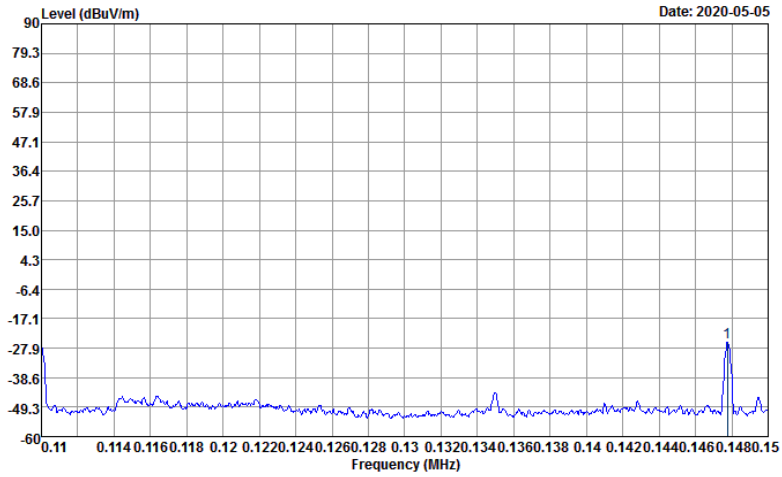
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.148	-24.56	------	------	36.83	18.60	0.01	100	0	Average



Site : 03CH11-HY
Condition : 3m LOOP_ANT(V)_100488 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

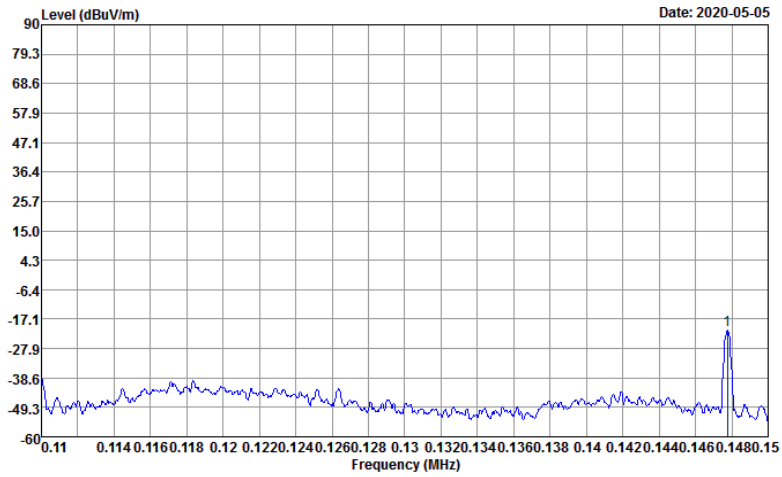
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.148	-30.35	------	------	31.04	18.60	0.01	100	84	Average

Test Mode :	WPT Charging with Phone; Battery 50%



Site : 03CH11-HY
Condition : 3m LOOP_ANT(H)_100488 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

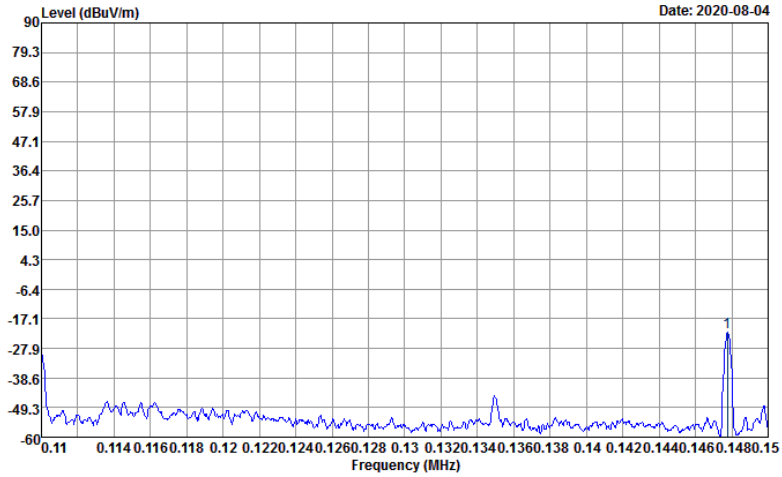
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.148	-25.72	------	------	35.67	18.60	0.01	100	0	Average



Site : 03CH11-HY
Condition : 3m LOOP_ANT(V)_100488 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

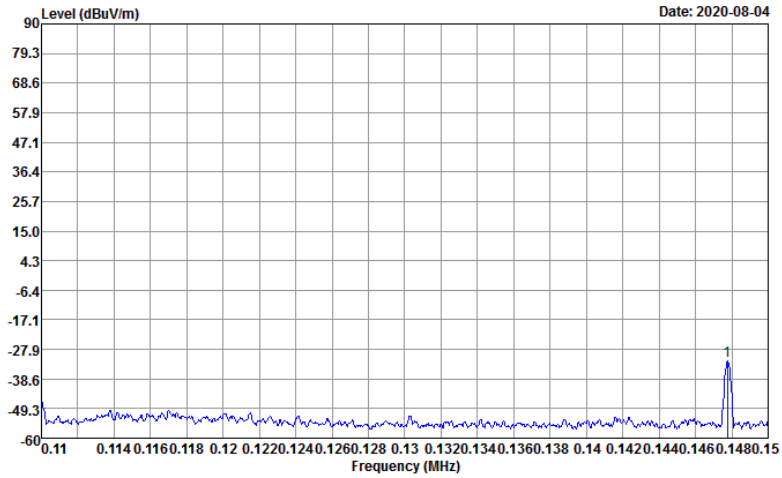
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.148	-21.18	------	------	40.21	18.60	0.01	100	284	Average

Test Mode :	WPT Charging with Phone; Battery 100%



Site : 03CH11-HY
Condition : 3m LOOP_ANT(H)_100488 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

	Freq	Level	Over Limit	Limit Line	ReadLevel	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.148	-21.99	------	------	40.02	17.97	0.02	100	83	Average

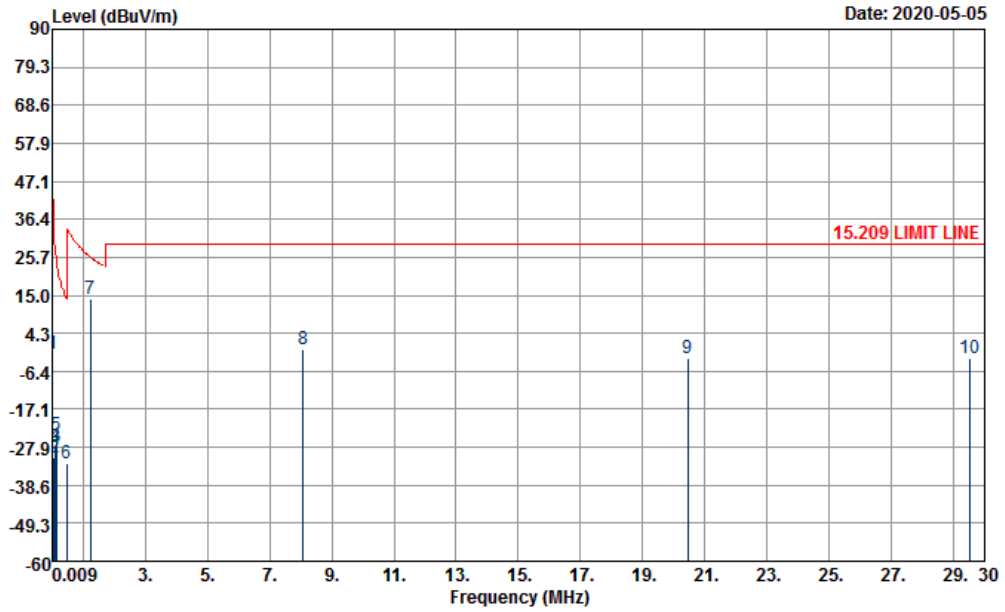


Site : 03CH11-HY
Condition : 3m LOOP_ANT(V)_100488 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

	Freq	Level	Over Limit	Limit Line	ReadLevel	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.148	-32.17	------	------	29.84	17.97	0.02	100	359	Average

C2. Results of Radiated Spurious Emissions (9 kHz~30MHz)

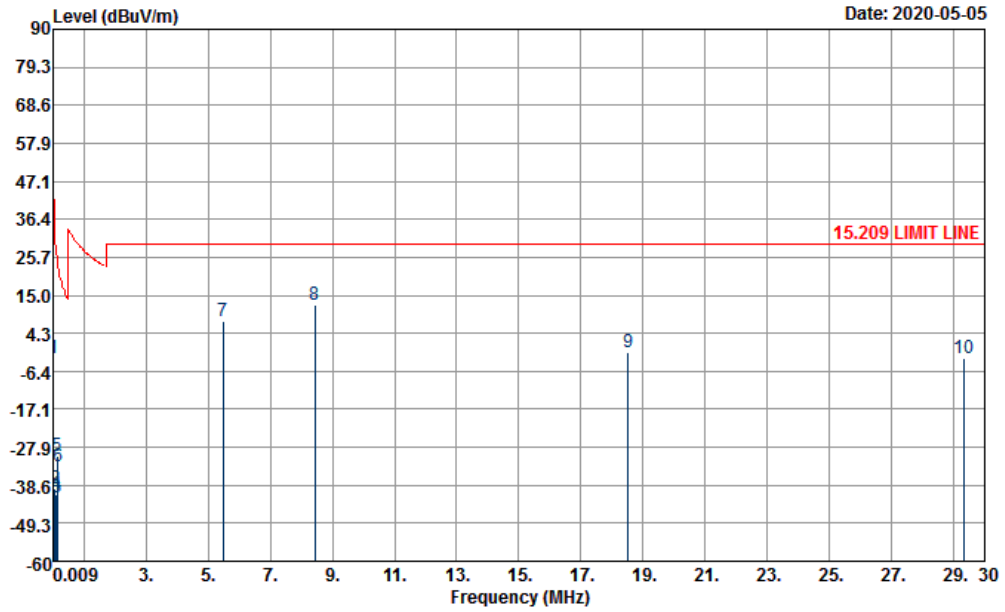
Test Mode :	WPT Charging with Phone; Battery 0%	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(H)_100488 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-1.54	80	-43.46	41.92	59.32	19.13	0.01	-	-	Average
0.06912	-30.85	80	-61.66	30.81	30.23	18.91	0.01	-	-	Average
0.11	-27.62	80	-54.4	26.78	33.77	18.6	0.01	-	-	QP
0.11	-27.37	80	-54.15	26.78	34.02	18.6	0.01	-	-	Average
0.14772	-24.56	80	-48.78	24.22	36.83	18.6	0.01	-	-	Average
0.4764	-32.61	40	-46.65	14.04	28.78	18.6	0.01	-	-	Average
1.249	13.82	40	-11.86	25.68	35.21	18.6	0.01	100	0	QP
8.088	-0.22	40	-29.72	29.5	19.78	19.88	0.12			QP
20.455	-2.94	40	-32.44	29.5	15.78	21.11	0.17	-	-	QP
29.515	-2.82	40	-32.32	29.5	15.69	21.29	0.2	-	-	QP

Test Mode :	WPT Charging with Phone; Battery 0%	Polarization :	Vertical



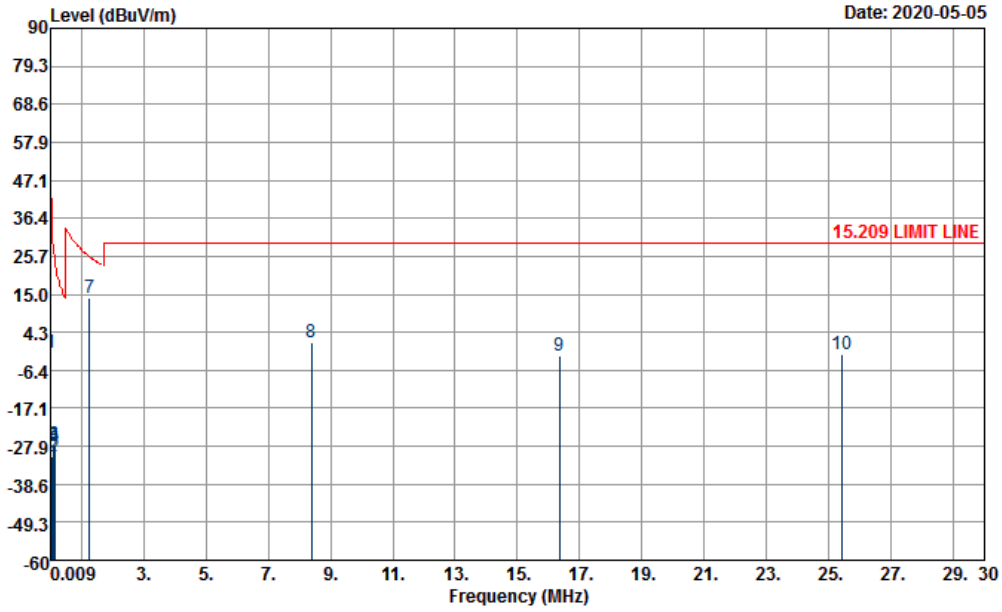
Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(V)_100488 VERTICAL

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-2.77	80	-44.69	41.92	58.09	19.13	0.01	-	-	Average
0.07281	-39.58	80	-69.94	30.36	21.54	18.87	0.01	-	-	Average
0.11	-41.99	80	-68.77	26.78	19.4	18.6	0.01	-	-	QP
0.11	-41.32	80	-68.1	26.78	20.07	18.6	0.01	-	-	Average
0.14772	-30.35	80	-54.57	24.22	31.04	18.6	0.01	-	-	Average
0.15272	-33.09	40	-57.02	23.93	28.3	18.6	0.01	-	-	Average
5.477	7.66	40	-21.84	29.5	28.25	19.3	0.11	-	-	QP
8.44	12.27	40	-17.23	29.5	32.19	19.96	0.12	100	0	QP
18.52	-1.17	40	-30.67	29.5	17.69	20.98	0.16	-	-	QP
29.31	-2.59	40	-32.09	29.5	15.92	21.29	0.2	-	-	QP

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
3. Limit line = specific limits (dBµV) + distance extrapolation factor.

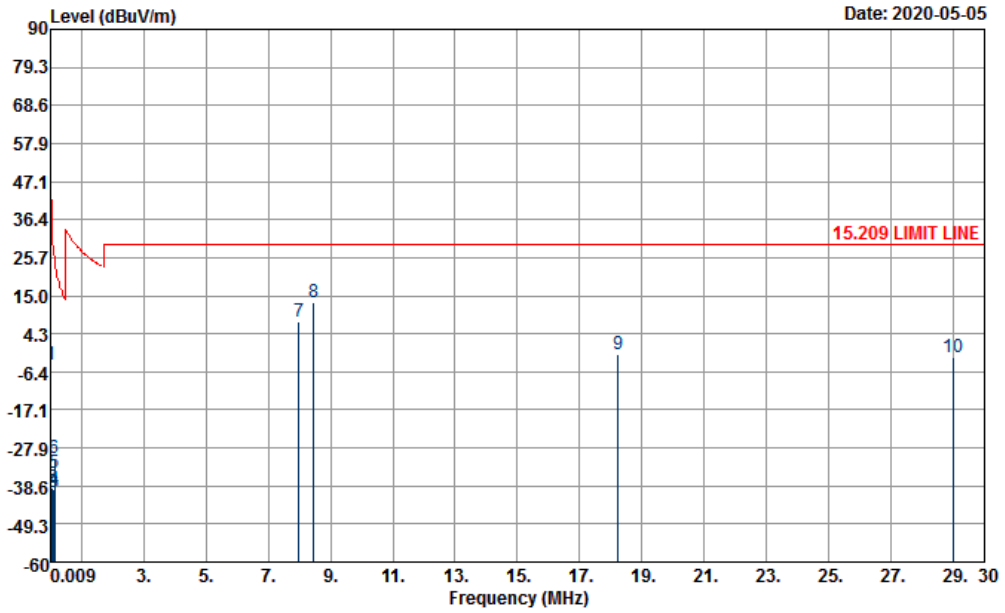
Test Mode :	WPT Charging with Phone; Battery 50%	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(H)_100488 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-1.66	80	-43.6	41.94	59.2	19.13	0.01	-	-	Average
0.06912	-30.79	80	-61.6	30.81	30.29	18.91	0.01	-	-	Average
0.11	-27.99	80	-54.77	26.78	33.4	18.6	0.01	-	-	QP
0.11004	-27.69	80	-54.46	26.77	33.7	18.6	0.01	-	-	Average
0.14776	-29.38	80	-53.59	24.21	32.01	18.6	0.01	-	-	Average
0.15	-27.6	40	-51.68	24.08	33.79	18.6	0.01	-	-	Average
1.271	13.83	40	-11.69	25.52	35.22	18.6	0.01	100	0	QP
8.4	1.23	40	-28.27	29.5	21.16	19.95	0.12	-	-	QP
16.342	-2.54	40	-32.04	29.5	16.49	20.81	0.16	-	-	QP
25.445	-1.89	40	-31.39	29.5	16.71	21.21	0.19	-	-	QP

Test Mode :	WPT Charging with Phone; Battery 50%	Polarization :	Vertical



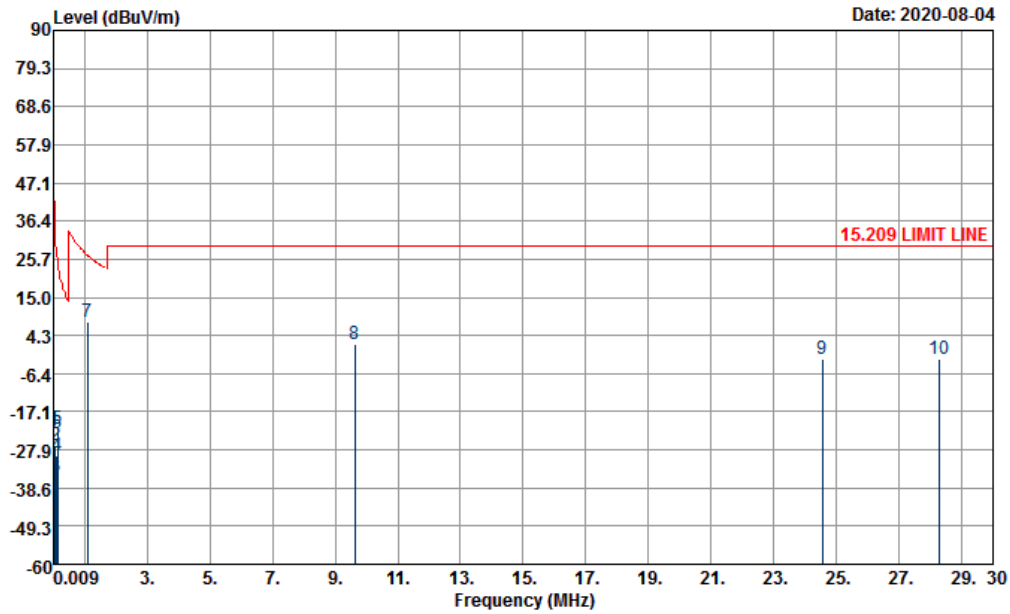
Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(V)_100488 VERTICAL

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-4.4	80	-46.32	41.92	56.46	19.13	0.01	-	-	Average
0.06342	-39.32	80	-70.88	31.56	21.7	18.97	0.01	-	-	Average
0.11	-40.56	80	-67.34	26.78	20.83	18.6	0.01	-	-	QP
0.11004	-39.61	80	-66.38	26.77	21.78	18.6	0.01	-	-	Average
0.14776	-34.74	80	-58.95	24.21	26.65	18.6	0.01	-	-	Average
0.15204	-30.83	40	-54.8	23.97	30.56	18.6	0.01	-	-	Average
7.992	7.88	40	-21.62	29.5	27.9	19.86	0.12	-	-	QP
8.472	13.12	40	-16.38	29.5	33.04	19.96	0.12	100	0	QP
18.232	-1.4	40	-30.9	29.5	17.48	20.96	0.16	-	-	QP
29.005	-2.42	40	-31.92	29.5	16.1	21.28	0.2	-	-	QP

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
3. Limit line = specific limits (dBµV) + distance extrapolation factor.

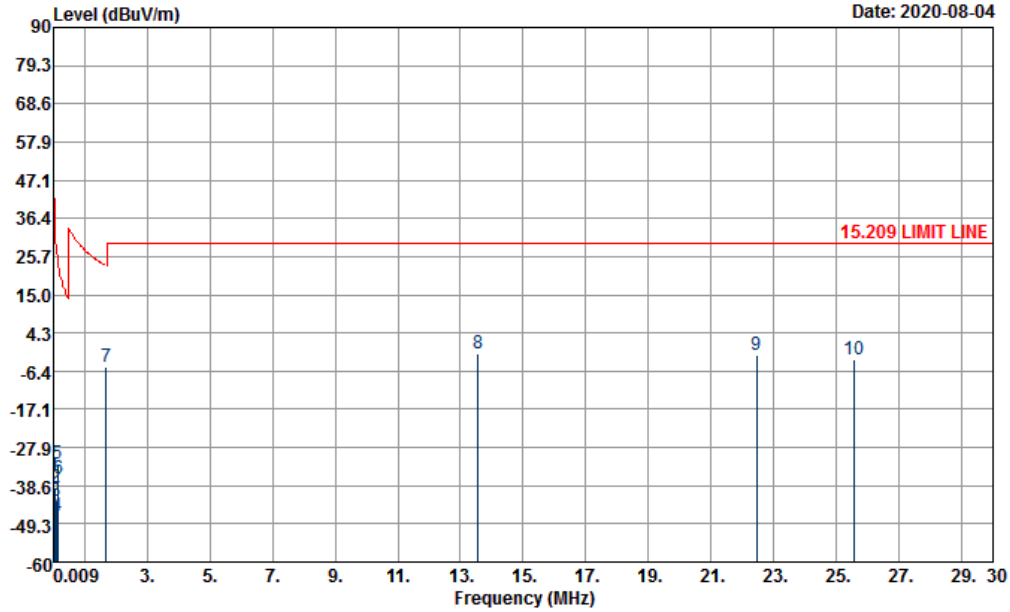
Test Mode :	WPT Charging with Phone; Battery 100%	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(H)_100488 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-22.39	-80	-64.31	41.92	39.14	18.46	0.01	-	-	Average
0.06657	-26.37	-80	-57.51	31.14	35.07	18.54	0.02	-	-	Average
0.09098	-35.45	-80	-63.88	28.43	26.52	18	0.03	-	-	QP
0.11004	-29.7	-80	-56.47	26.77	32.43	17.84	0.03	-	-	Average
0.14776	-21.88	-80	-46.09	24.21	40.13	17.97	0.02	-	-	Average
0.15	-23.23	-80	-47.31	24.08	38.78	17.97	0.02	-	-	Average
1.083	7.92	-40	-18.99	26.91	29.35	18.49	0.08	100	0	QP
9.64	1.79	-40	-27.71	29.5	21.45	20.22	0.12	-	-	QP
24.541	-2.23	-40	-31.73	29.5	16.24	21.34	0.19	-	-	QP
28.265	-2.14	-40	-31.64	29.5	16.22	21.45	0.19	-	-	QP

Test Mode :	WPT Charging with Phone; Battery 100%	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP ANT(V) 100488 VERTICAL

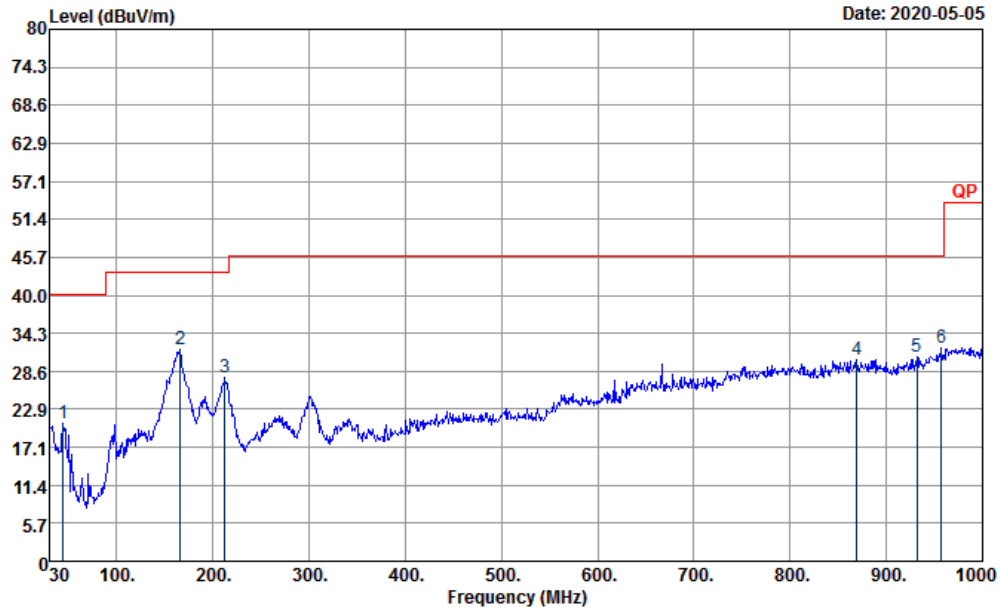
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-35.72	-80	-77.66	41.94	25.81	18.46	0.01	-	-	Average
0.07344	-39.05	-80	-69.34	30.29	22.55	18.38	0.02	-	-	Average
0.0924	-42.75	-80	-71.04	28.29	19.25	17.97	0.03	-	-	QP
0.11	-46.93	-80	-73.71	26.78	15.21	17.83	0.03	-	-	Average
0.14776	-32.29	-80	-56.5	24.21	29.72	17.97	0.02	-	-	Average
0.15884	-36.51	-80	-60.09	23.58	25.46	18.01	0.02	-	-	Average
1.699	-5.24	-40	-28.24	23	16.3	18.43	0.03	100	0	QP
13.568	-1.61	-40	-31.11	29.5	17.64	20.62	0.13	-	-	QP
22.444	-1.8	-40	-31.3	29.5	16.75	21.27	0.18	-	-	QP
25.575	-3.18	-40	-32.68	29.5	15.26	21.37	0.19	-	-	QP

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
3. Limit line = specific limits (dBµV) + distance extrapolation factor.

C3. Results of Radiated Spurious Emissions (30MHz~1GHz)

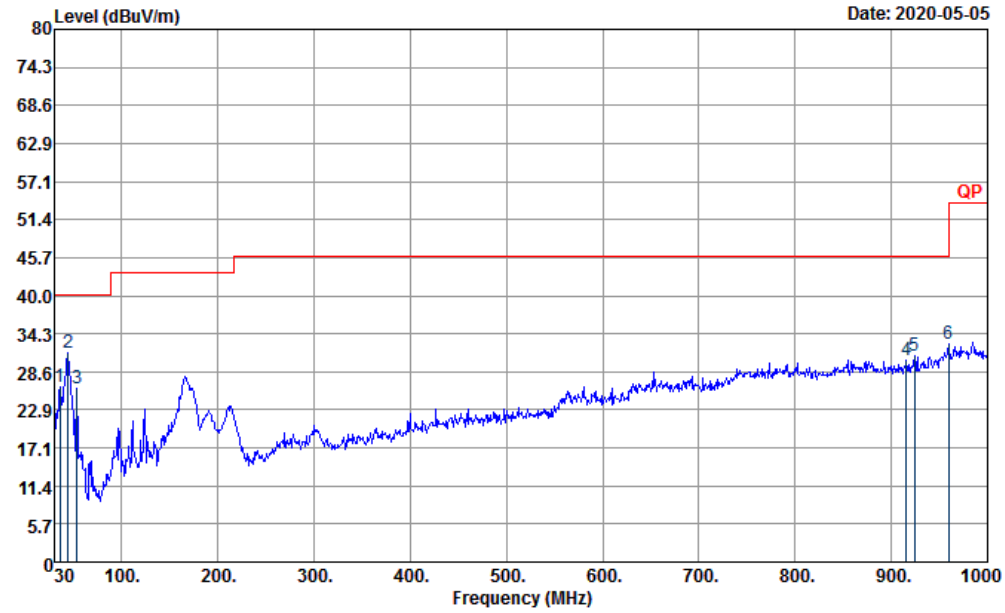
Test Mode :	WPT Charging with Phone; Battery 0%	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m BI-LOG 6111D-LF_ETC HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
44.55	20.82	-19.18	40	35.44	16.87	1.02	32.51	-	-	Peak
165.8	31.79	-11.71	43.5	45.9	16.49	1.92	32.52	100	0	Peak
212.36	27.53	-15.97	43.5	42.97	14.93	2.17	32.54	-	-	Peak
869.05	30.27	-15.73	46	27.89	29.06	5.18	31.86	-	-	Peak
932.1	30.69	-15.31	46	27.58	29.22	5.2	31.31	-	-	Peak
957.32	32.17	-13.83	46	27.21	30.51	5.42	30.97	-	-	Peak

Test Mode :	WPT Charging with Phone; Battery 0%	Polarization :	Vertical



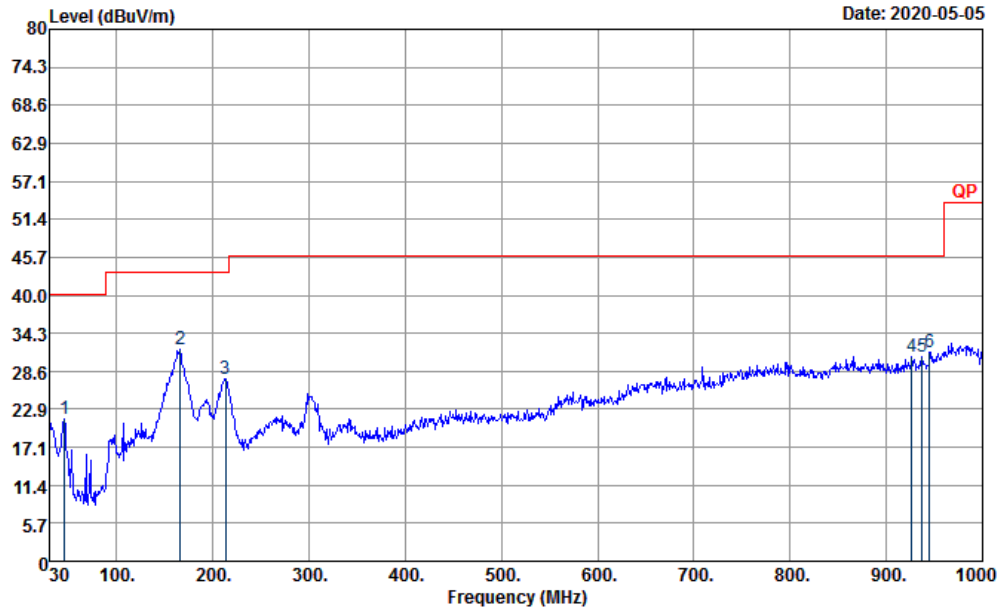
Site : 03CH11-HY
Condition : QP 3m BI-LOG 6111D-LF_ETC VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
35.82	26.23	-13.77	40	36.42	21.29	0.97	32.45	-	-	Peak
44.55	31.35	-8.65	40	45.97	16.87	1.02	32.51	100	0	Peak
53.28	26.18	-13.82	40	44.93	12.68	1.1	32.53	-	-	Peak
915.61	30.4	-15.6	46	27.91	28.9	5.11	31.52	-	-	Peak
924.34	30.91	-15.09	46	28.13	29.03	5.16	31.41	-	-	Peak
959.26	32.77	-13.23	46	27.63	30.64	5.45	30.95	-	-	Peak

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.

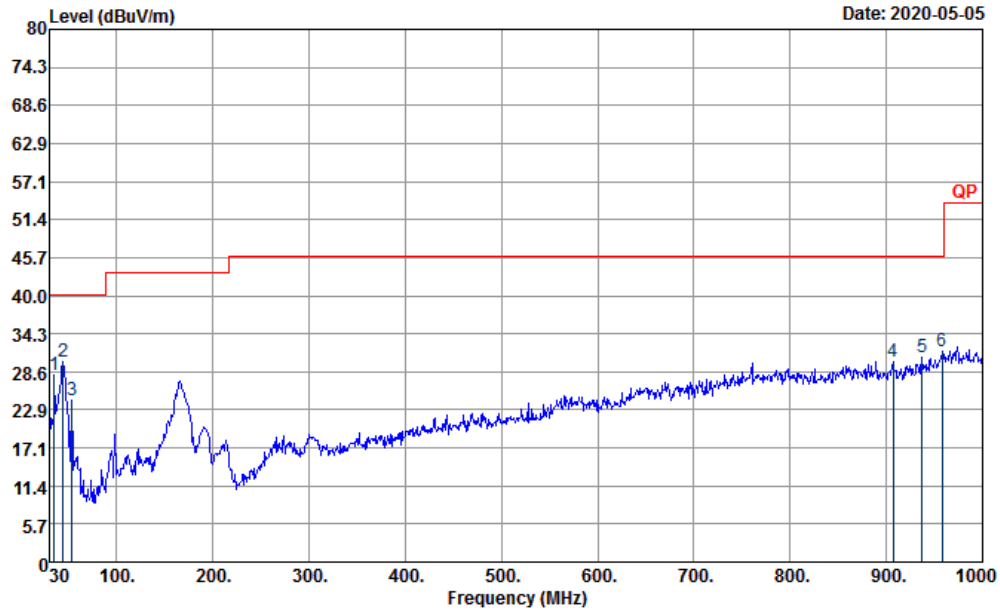
Test Mode :	WPT Charging with Phone; Battery 50%	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m BI-LOG 6111D-LF_ETC HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
45.52	21.31	-18.69	40	36.34	16.45	1.03	32.51	-	-	Peak
165.8	31.97	-11.53	43.5	46.08	16.49	1.92	32.52	100	0	Peak
213.33	27.42	-16.08	43.5	42.89	14.91	2.16	32.54	-	-	Peak
926.28	30.76	-15.24	46	27.91	29.06	5.17	31.38	-	-	Peak
936.95	30.8	-15.2	46	27.39	29.42	5.23	31.24	-	-	Peak
944.71	31.47	-14.53	46	27.54	29.8	5.27	31.14	-	-	Peak

Test Mode :	WPT Charging with Phone; Battery 50%	Polarization :	Vertical



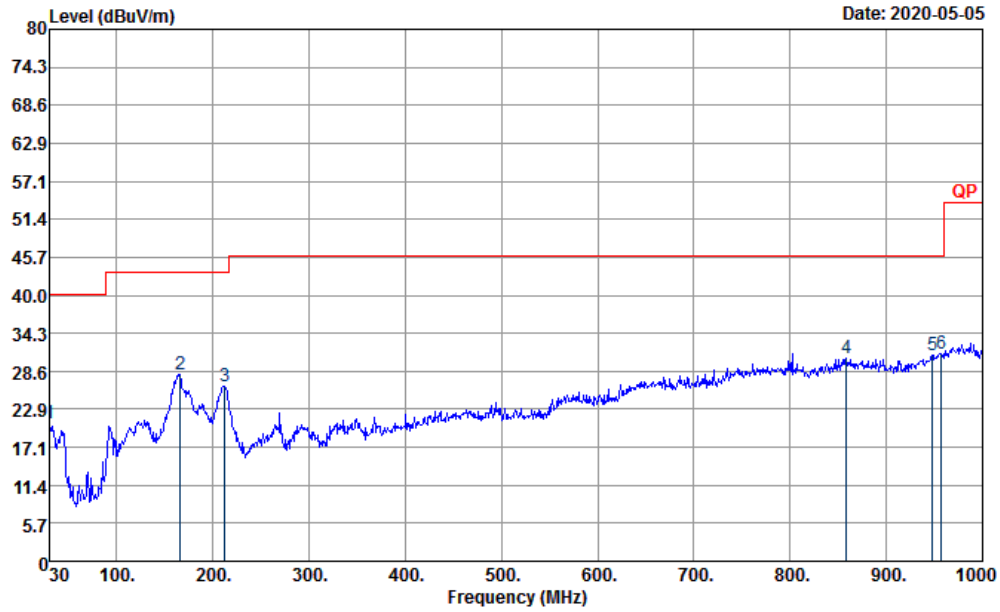
Site : 03CH11-HY
Condition : QP 3m BI-LOG 6111D-LF_ETC VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
34.85	28.14	-11.86	40	37.58	22.04	0.97	32.45	-	-	Peak
44.55	30.05	-9.95	40	44.67	16.87	1.02	32.51	100	0	Peak
53.28	24.19	-15.81	40	42.94	12.68	1.1	32.53	-	-	Peak
906.88	30.17	-15.83	46	27.92	28.82	5.07	31.64	-	-	Peak
936.95	30.72	-15.28	46	27.31	29.42	5.23	31.24	-	-	Peak
958.29	31.68	-14.32	46	26.63	30.57	5.44	30.96	-	-	Peak

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.

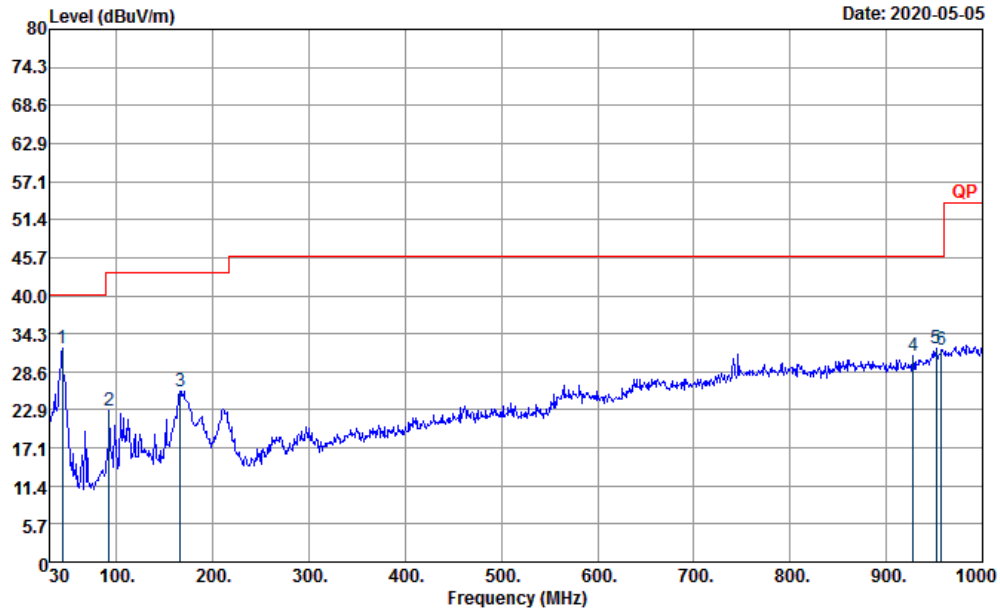
Test Mode :	WPT Charging with Phone; Battery 100%	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m BI-LOG 6111D-LF_ETC HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.76	-19.24	40	28.11	24.15	0.92	32.42	-	-	Peak
165.8	28.08	-15.42	43.5	42.19	16.49	1.92	32.52	-	-	Peak
212.36	26.34	-17.16	43.5	41.78	14.93	2.17	32.54	-	-	Peak
858.38	30.54	-15.46	46	28.24	28.97	5.24	31.91	-	-	Peak
947.62	30.93	-15.07	46	26.8	29.95	5.28	31.1	-	-	Peak
957.32	31.3	-14.7	46	26.34	30.51	5.42	30.97	100	0	Peak

Test Mode :	WPT Charging with Phone; Battery 100%	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m BI-LOG 6111D-LF_ETC VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
43.58	32.16	-7.84	40	46.31	17.33	1.02	32.5	100	0	Peak
92.08	22.71	-20.79	43.5	38.85	14.78	1.49	32.41	-	-	Peak
165.8	25.66	-17.84	43.5	39.77	16.49	1.92	32.52	-	-	Peak
928.22	30.91	-15.09	46	28	29.09	5.18	31.36	-	-	Peak
951.5	31.98	-14.02	46	27.56	30.15	5.32	31.05	-	-	Peak
957.32	31.91	-14.09	46	26.95	30.51	5.42	30.97	-	-	Peak

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.

———THE END———