

FCC

RF

TEST REPORT

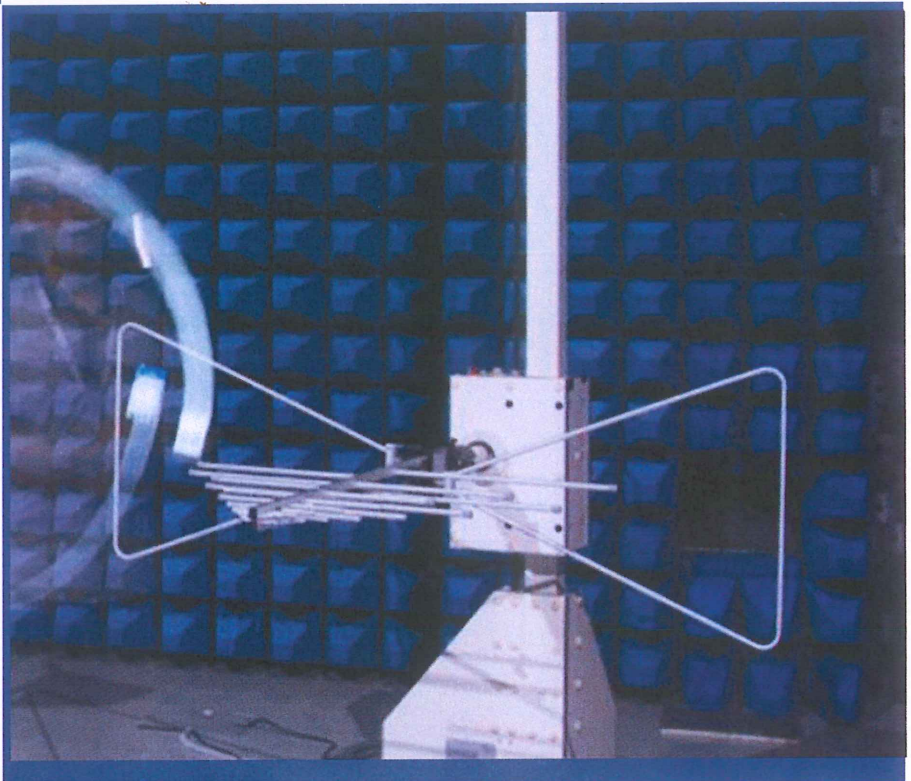
ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
**Wireless Phone Charger**

ISSUED TO  
Tesla Motors, Inc.

3500 Deer Creek Rd, Palo Alto, CA 94304, USA



Tested by: Xia Long  
Xia Long  
Date: Jan. 14, 2020

Approved by: [Signature]  
Wei Yanquan  
(Chief Engineer)  
Date: Jan. 14, 2020

Report No.:	BL-EC19C0043-401
EUT Name:	Wireless Phone Charger
Model Name:	WC2
Brand Name:	TESLA
Test Standard:	47 CFR Part 15 Subpart C
FCC ID:	2AEIM-WC2
Test Conclusion:	Pass
Test Date:	Dec. 28, 2019 ~ Jan. 10, 2020
Date of Issue:	Jan. 14, 2020

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### Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Jan. 14, 2020</u>	<u>Initial Issue</u>

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# 1 GENERAL INFORMATION

## 1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

## 1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.</p> <p>The laboratory is a testing organization accredited by American Association for Laboratory Accreditation(A2LA) according to ISO/IEC 17025. The accreditation certificate is 4344.01.</p> <p>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.</p>
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

## 1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

## 1.4 Announce

- (1) The test report reference to the report template version v2.7.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.



## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

Applicant	Tesla Motors, Inc.
Address	3500 Deer Creek Rd, Palo Alto, CA 94304, USA

### 2.2 Manufacturer Information

Manufacturer	Tesla Motors, Inc.
Address	3500 Deer Creek Rd, Palo Alto, CA 94304, USA

### 2.3 Factory Information

Factory	N/A
Address	N/A

### 2.4 General Description for Equipment under Test (EUT)

EUT Name	Wireless Phone Charger
Model Name Under Test	WC2
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

### 2.5 Ancillary Equipment

Note: Not applicable.

### 2.6 Technical Information

Network and Wireless connectivity	Qi
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The requirement for the following technical information of the EUT was tested in this report:

Operating Frequency	110~205 kHz
Product Type	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Antenna Type	Coil Antenna

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C (10-1-18 Edition)	Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

#### 3.2 Verdict

No.	Description	FCC Rule	Test Verdict	Result
1	Radiated Emission	15.209,15.215(b)	Pass	Annex A.1
2	Conducted Emission, AC Ports	15.207	Pass	Annex A.2
3	20 dB Bandwidth	15.215(c)	Pass	Annex A.3
Note: This EUT has three modes. Mode1 is EUT + DC Power Supply, Mode2 is EUT + DC Power Supply + Artificial Load 1, Mode3 is EUT + DC Power Supply + Artificial Load 2 + Artificial Load 3.				

#### 3.3 Test Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

Measurement	Value
Conducted emissions (9 kHz-30 MHz)	2.96 dB
Radiated emissions (30 MHz-1 GHz)	3.66 dB
Radiated emissions (1 GHz-18 GHz)	5.57 dB

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

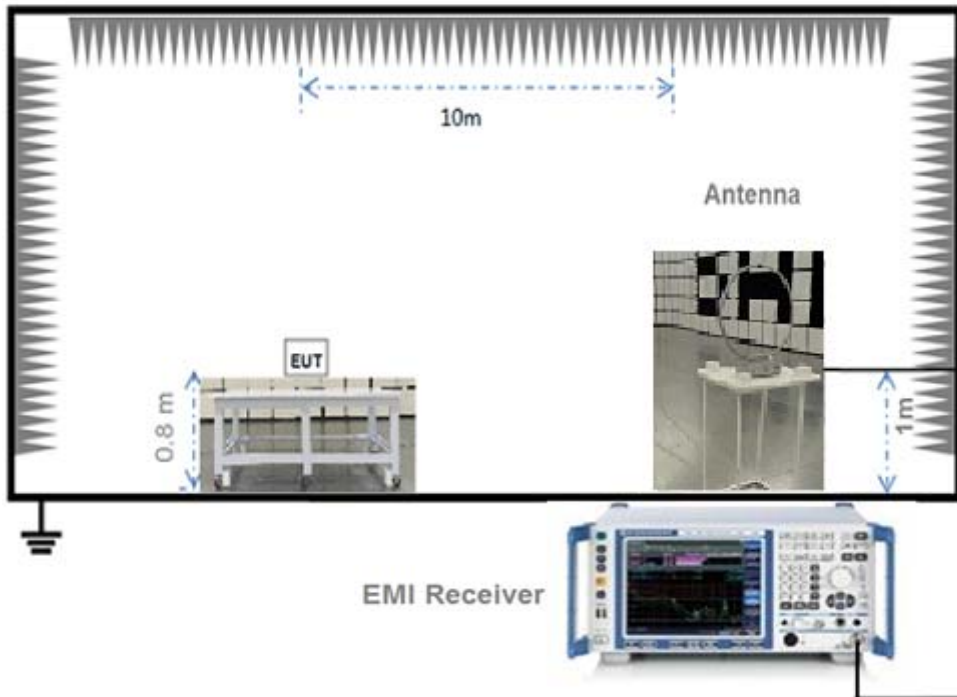
Relative Humidity	45% to 55%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	9V

### 4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2019.07.04	2020.07.03
Test Antenna- Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2019.10.29	2021.10.28
Test Antenna- Bi-Log(30 MHz- 3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2018.08.22	2020.08.21
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7 .35m	N/A	2018.08.08	2021.08.07
EMI Receiver	KEYSIGHT	N9010B	MY5711030 9	2019.06.13	2020.06.12
LISN	SCHWARZBECK	NSLK 8127	8127-687	2019.07.04	2020.07.03
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.4m*3.1m*2. 8m	N/A	2018.08.16	2021.08.15
Test Software	BALUN	BL410_E	V19.918	--	--

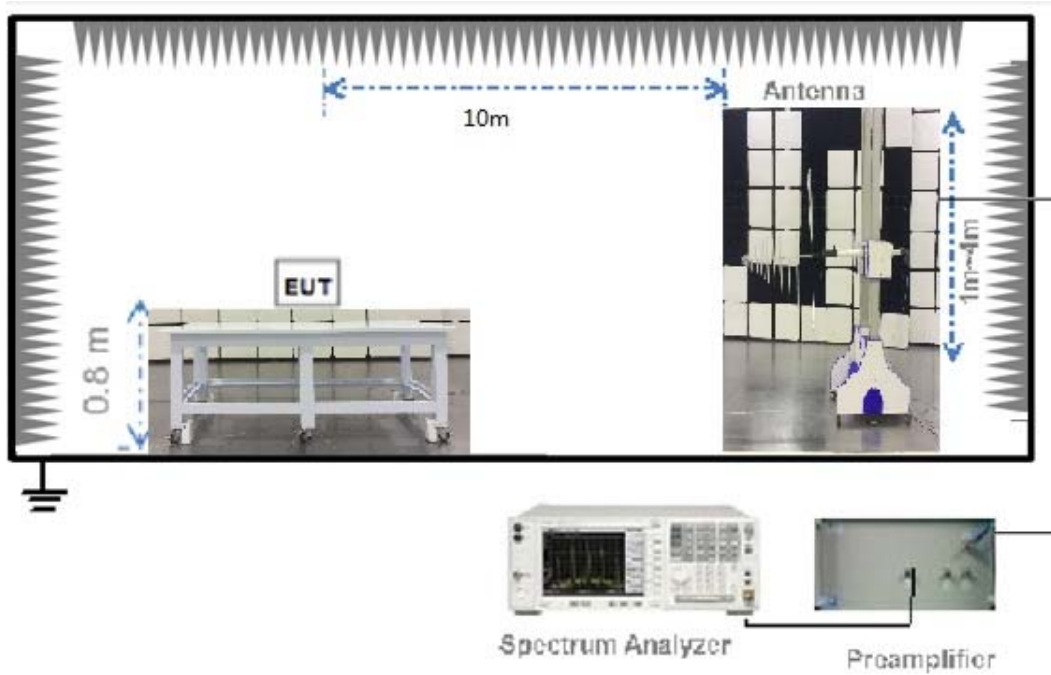
### 4.3 Test Setups

#### Test Setup 1



For Radiated Emission Test (Below 30 MHz))

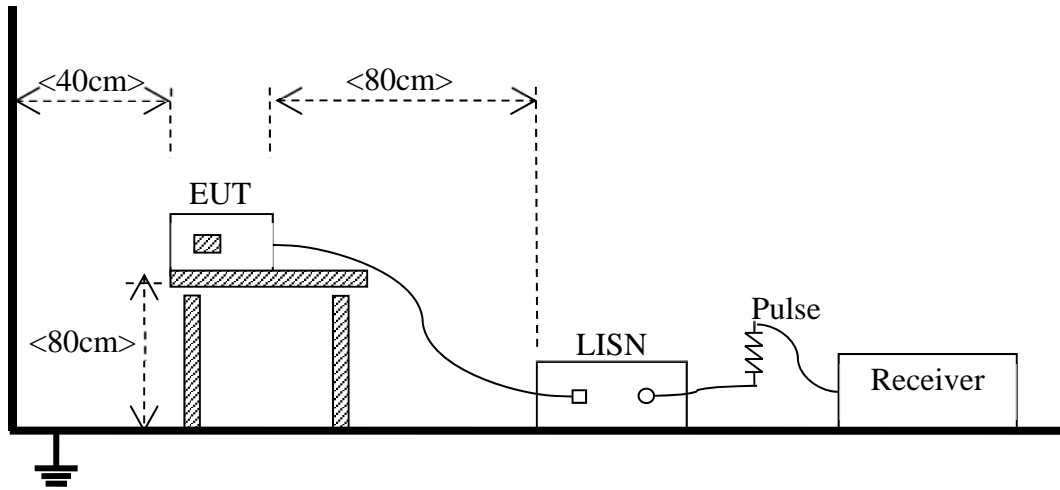
#### Test Setup 2



(For Radiated Emission Test (30 MHz-1 GHz))



Test Setup 3



(For Conducted Emission, AC Ports Test)

## 5 TEST ITEMS

### 5.1 Emission Tests

#### 5.1.1 Radiated Emission

##### 5.1.1.1 Limit

Frequency (MHz)	Field Strength ( $\mu\text{V/m}$ )	Measurement Distance (m)
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

NOTE:

- 1) Field Strength (dB $\mu\text{V/m}$ ) =  $20 \cdot \log$  [Field Strength ( $\mu\text{V/m}$ )].
- 2) In the emission tables above, the tighter limit applies at the band edges.
- 3) For above 1000 MHz, limit field strength of harmonics: 54 dBuV/m@3 m (AV) and 74 dBuV/m@3 m (PK)
- 4) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). For example, at the frequency 9 kHz, limit @10m =  $20 \cdot \log (2400/f) + 40 \log (d_{\text{limit}}/d_{\text{measure}})$  where limit = 300m,  $d_{\text{measure}}=10\text{m}$ . limit @10m =  $20 \cdot \log (2400/9) + 40 \log (300/10) = 107.5$  (dB $\mu\text{V/m}$ ).
- 5) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided, When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements). For example, at the frequency 30 MHz, limit @10m =  $20 \cdot \log (100) + 20 \log (d_{\text{limit}}/d_{\text{measure}})$  where limit = 3m,  $d_{\text{measure}}=10\text{m}$ . limit @10m =  $20 \cdot \log (100) + 20 \log (3/10) = 29.5$  (dB $\mu\text{V/m}$ ).

##### 5.1.1.2 Test Setup

Refer to 4.3 section (test setup 1 to test setup 2) for radiated emission test, the photo of test setup please refer to ANNEX B.

##### 5.1.1.3 Test Procedure

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

An initial pre-scan was performed in the chamber using the EMI Receiver in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bi-Log antenna with 2 orthogonal polarities.

##### 5.1.1.4 Test Result

Please refer to ANNEX A.1.

## NOTE:

1. Results (dBuV/m) = Reading (dBuV) + Factor (dB/m)

The reading level is calculated by software which is not shown in the sheet

2. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Amplifier Gain (dB)

3. Over limit = Results – Limit.

## 5.1.2 Conducted Emission

### 5.1.2.1 Test Limit

Frequency range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- 1) The limit is applicable to Class B ITE.
- 2) The lower limit shall apply at the band edges.
- 3) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50 MHz.

### 5.1.2.2 Test Setup

Refer to 4.3 section test (test setup 3) for conducted emission, the photo of test setup please refer to ANNEX B.

### 5.1.2.3 Test Procedure

The EUT is connected to the power mains through a LISN which provides 50  $\Omega$ /50  $\mu$ H of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

### 5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

$$1. \text{ Results (dB}\mu\text{V/m)} = \text{Reading (dB}\mu\text{V)} + \text{Factor (dB/m)}$$

The reading level is calculated by software which is not shown in the sheet

$$2. \text{ Factor} = \text{Insertion loss} + \text{Cable loss}$$

$$3. \text{ Over limit} = \text{Results} - \text{Limit.}$$

### 5.1.3 20 dB Bandwidth

#### 5.1.3.1 Limit

FCC §15.215(c)

The 20 dB bandwidth is known as the 99% emission bandwidth, or 20 dB bandwidth ( $10 \cdot \log 1\% = 20$  dB) taking the total RF output power.

#### 5.1.3.2 Test Setup

Refer to 4.3 section test (test setup 1) for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

#### 5.1.3.3 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW  $\geq$  1% of the 20 dB bandwidth

VBW  $\geq$  RBW

Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate, Allow the trace to stabilize.

#### 5.1.3.4 Test Result

Please refer to ANNEX A.3.



## ANNEX A TEST RESULTS

### A.1 Radiated Emission

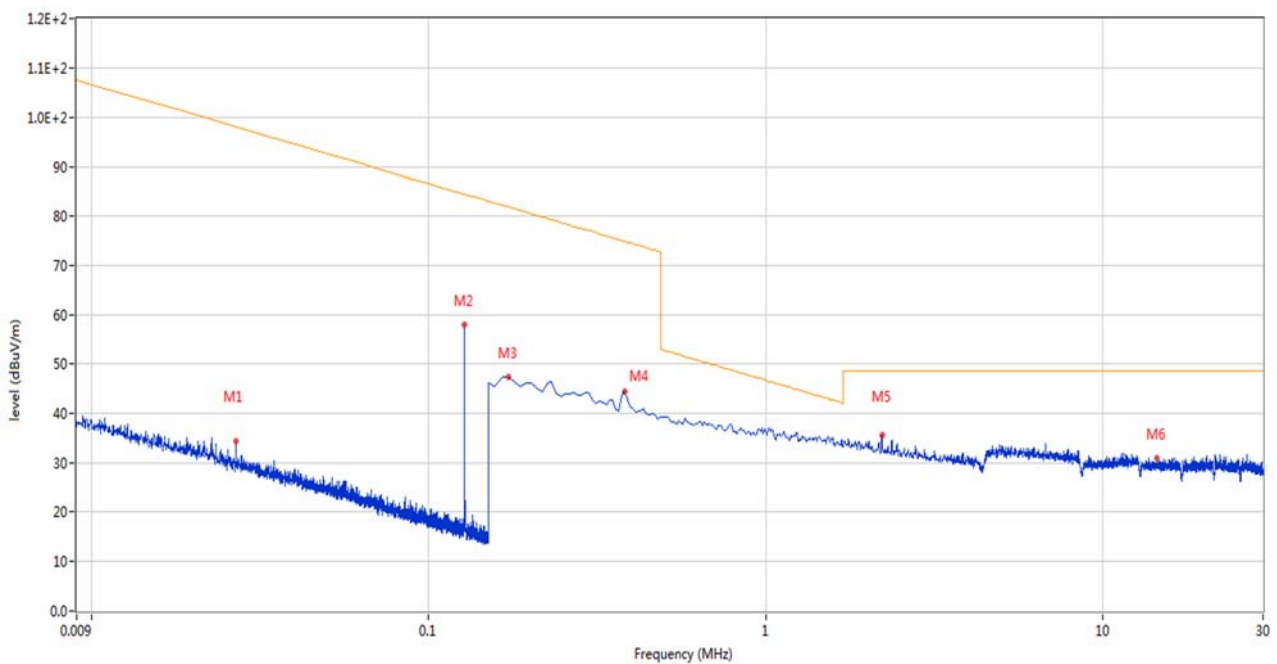
Note<sup>1</sup>: The symbol of "--" in the table which means not application.

Note<sup>2</sup>: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note<sup>3</sup>: The marked spikes near 0.128 MHz with circle should be ignored because they are carrier frequency.

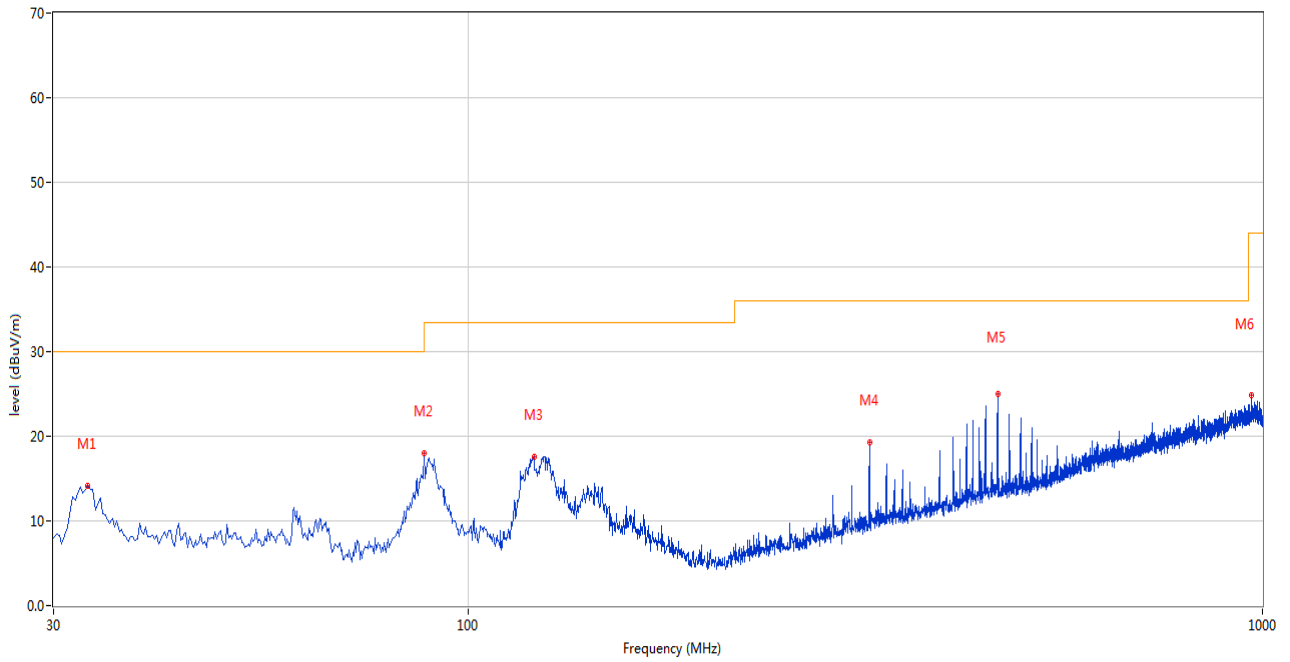
#### QI Test Data and Plots (Mode1)

##### A.1.1 Test Antenna Vertical, 9 kHz –30 MHz



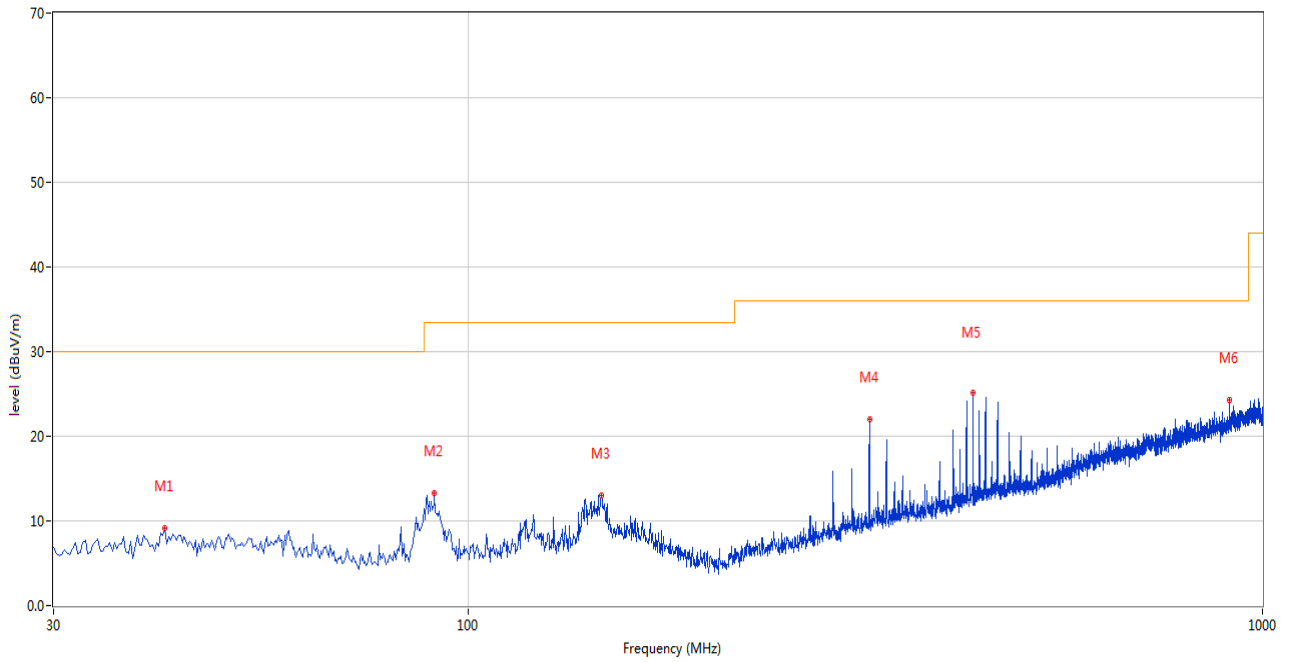
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	0.027	34.32	20.26	98.1	-63.78	Peak	282.00	100	Vertical	Pass
2	0.128	58.21	20.15	84.4	-26.19	Peak	351.00	100	Vertical	N/A
3	0.172	47.24	20.10	81.9	-34.66	Peak	360.00	100	Vertical	Pass
4	0.381	44.27	20.17	75.0	-30.73	Peak	343.00	100	Vertical	Pass
5	2.217	35.40	20.43	48.5	-13.10	Peak	34.00	100	Vertical	Pass
6	14.482	30.80	20.87	48.5	-17.70	Peak	360.00	100	Vertical	Pass

## A.1.2 Test Antenna Vertical, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	33.152	14.13	-27.42	30.0	-15.87	Peak	360.00	200	Vertical	Pass
2	87.943	18.00	-31.09	30.0	-12.00	Peak	159.00	200	Vertical	Pass
3	120.915	17.61	-27.91	33.5	-15.89	Peak	255.00	200	Vertical	Pass
4	319.958	19.31	-25.31	36.0	-16.69	Peak	271.00	100	Vertical	Pass
5	463.967	25.06	-21.22	36.0	-10.94	Peak	0.00	100	Vertical	Pass
6	969.938	24.86	-11.23	44.0	-19.14	Peak	0.00	100	Vertical	Pass

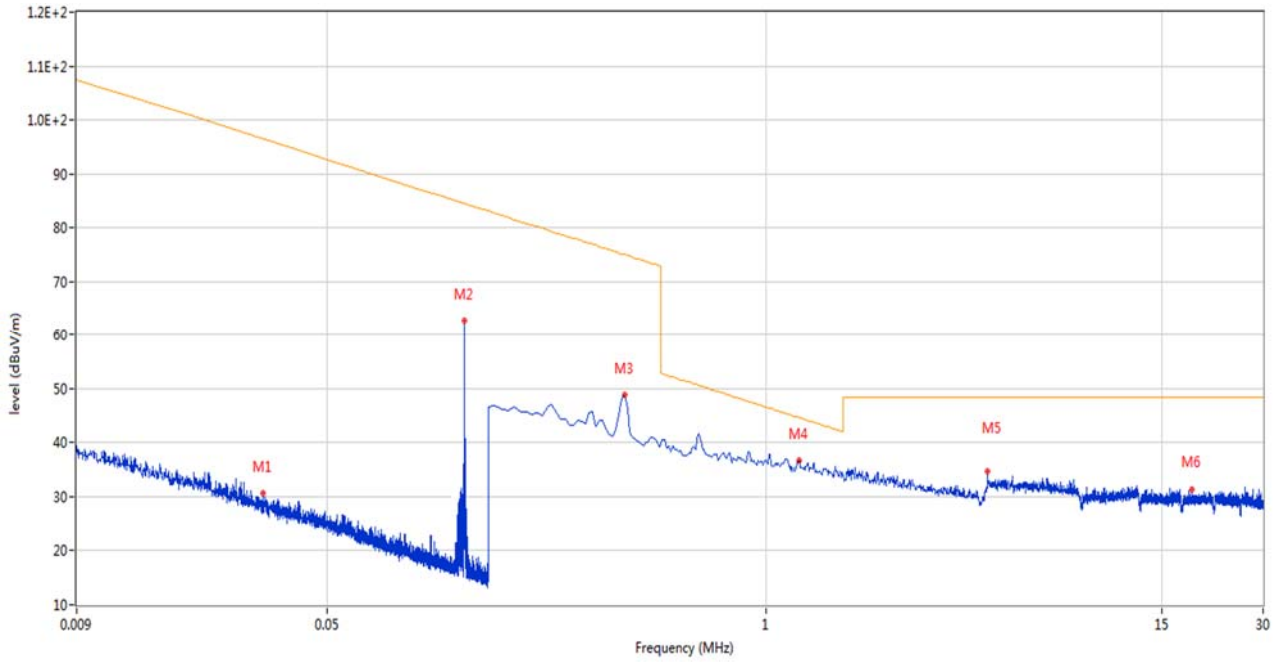
A.1.3 Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	41.395	9.21	-26.77	30.0	-20.79	Peak	320.00	200	Horizontal	Pass
2	90.610	13.23	-31.09	33.5	-20.27	Peak	360.00	200	Horizontal	Pass
3	146.856	13.03	-25.94	33.5	-20.47	Peak	134.00	200	Horizontal	Pass
4	319.958	21.99	-25.31	36.0	-14.01	Peak	235.00	200	Horizontal	Pass
5	431.965	25.08	-21.99	36.0	-10.92	Peak	210.00	200	Horizontal	Pass
6	907.631	24.25	-12.31	36.0	-11.75	Peak	282.00	100	Horizontal	Pass

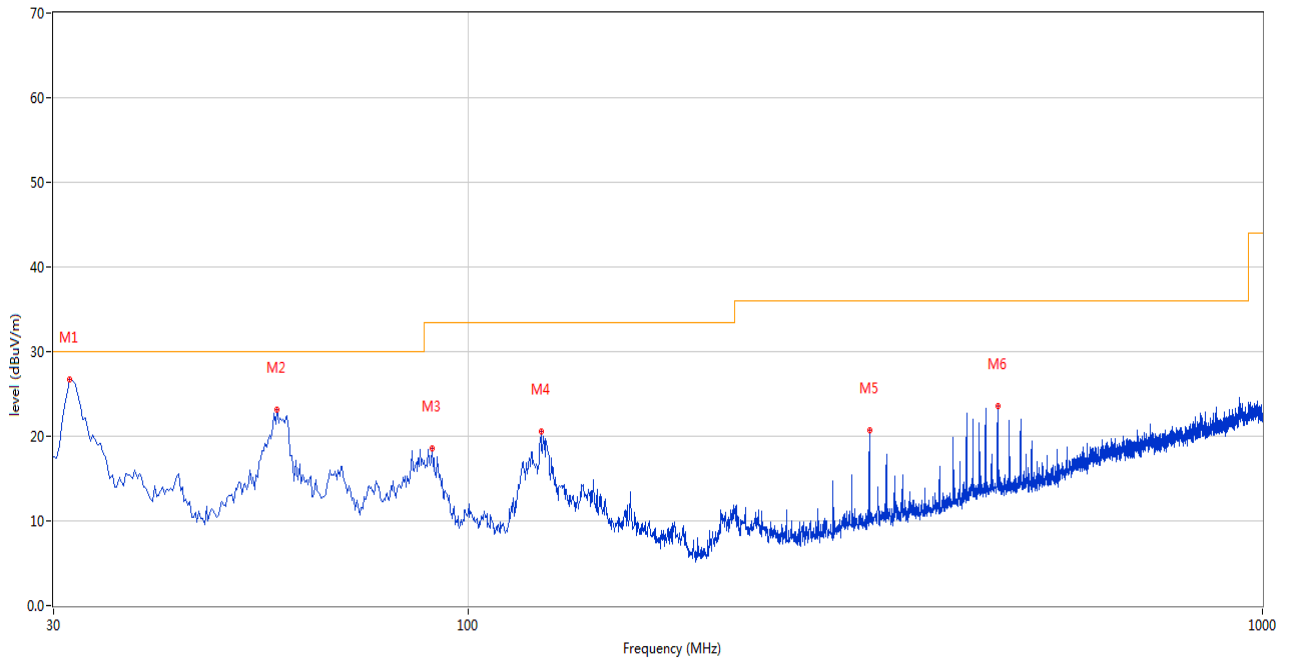
QI Test Data and Plots (Mode2)

A.1.4 Test Antenna Vertical, 9 kHz –30 MHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	0.032	30.70	20.20	96.5	-65.80	Peak	53.00	100	Vertical	Pass
2	0.128	62.68	20.15	84.4	-21.72	Peak	211.00	100	Vertical	N/A
3	0.381	48.82	20.17	75.0	-26.18	Peak	166.00	100	Vertical	Pass
4	1.254	36.78	20.49	44.7	-7.92	Peak	0.00	100	Vertical	Pass
5	4.567	34.73	20.75	48.5	-13.77	Peak	193.00	100	Vertical	Pass
6	18.503	31.29	21.05	48.5	-17.21	Peak	113.00	100	Vertical	Pass

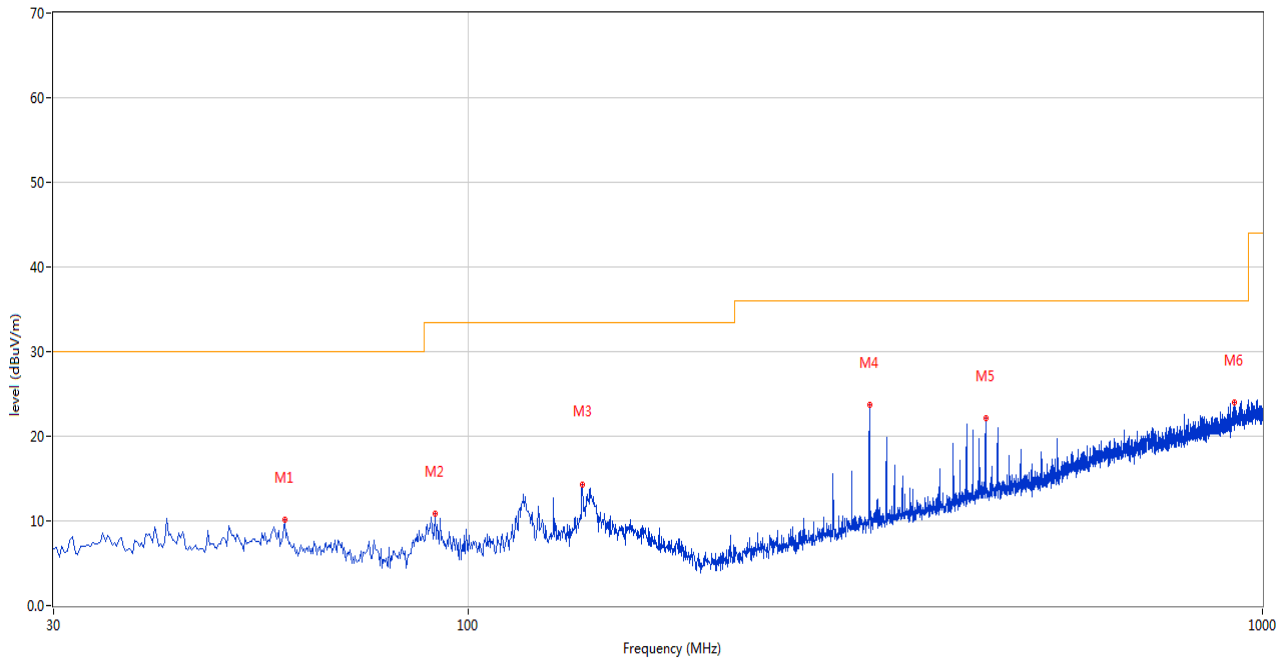
A.1.5 Test Antenna Vertical, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	31.455	26.68	-27.46	30.0	-3.32	Peak	48.00	300	Vertical	Pass
2	57.396	23.18	-27.75	30.0	-6.82	Peak	300.00	300	Vertical	Pass
3	89.883	18.50	-31.19	33.5	-15.00	Peak	360.00	300	Vertical	Pass
4	123.339	20.51	-27.87	33.5	-12.99	Peak	50.00	100	Vertical	Pass
5	319.958	20.75	-25.31	36.0	-15.25	Peak	166.00	100	Vertical	Pass
6	463.967	23.59	-21.22	36.0	-12.41	Peak	360.00	300	Vertical	Pass



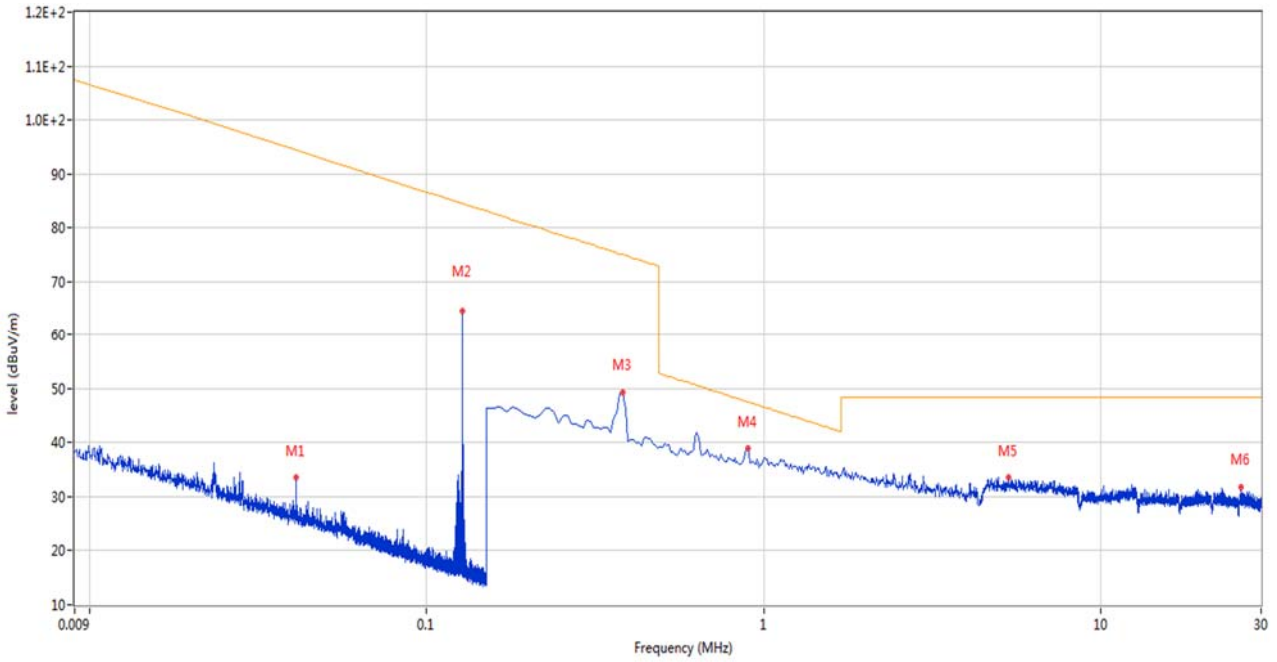
## A.1.6 Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	58.608	10.17	-27.78	30.0	-19.83	Peak	65.00	100	Horizontal	Pass
2	90.852	10.80	-31.05	33.5	-22.70	Peak	360.00	300	Horizontal	Pass
3	139.098	14.26	-26.41	33.5	-19.24	Peak	104.00	300	Horizontal	Pass
4	319.958	23.66	-25.31	36.0	-12.34	Peak	204.00	300	Horizontal	Pass
5	447.966	22.13	-21.59	36.0	-13.87	Peak	230.00	300	Horizontal	Pass
6	922.419	23.93	-12.10	36.0	-12.07	Peak	360.00	300	Horizontal	Pass

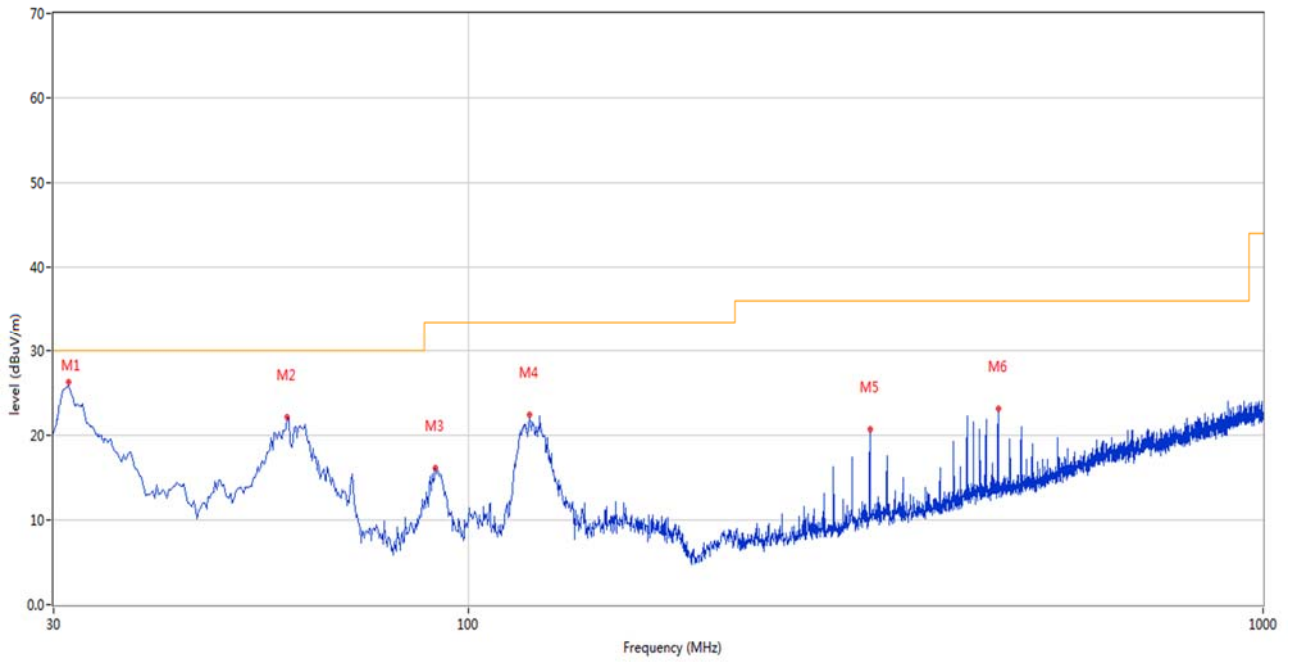
QI Test Data and Plots (Mode3)

A.1.7 Test Antenna Vertical, 9 kHz –30 MHz



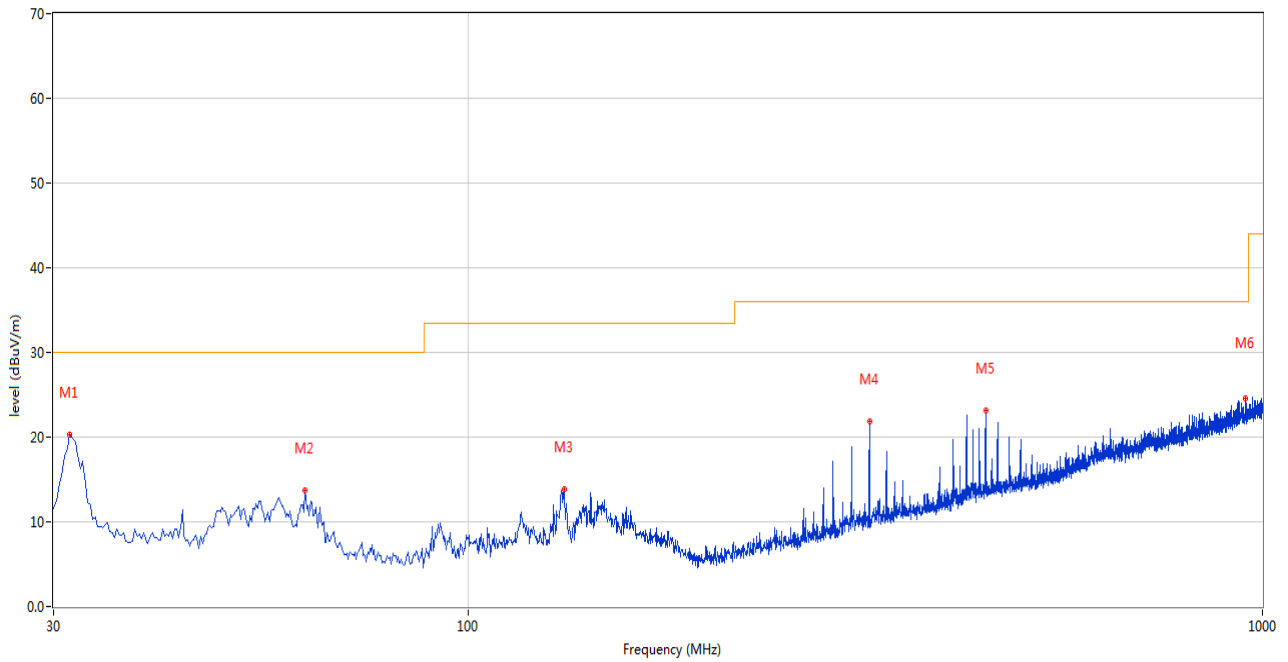
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	0.041	34.25	20.22	94.4	-60.15	Peak	105.00	100	Vertical	Pass
2	0.128	64.50	20.15	84.4	-19.90	Peak	150.00	100	Vertical	N/A
3	0.381	49.38	20.17	75.0	-25.62	Peak	148.00	100	Vertical	Pass
4	0.896	38.92	20.51	47.5	-8.58	Peak	350.00	100	Vertical	Pass
5	5.320	33.48	20.80	48.5	-15.02	Peak	95.00	100	Vertical	Pass
6	26.173	31.74	21.20	48.5	-16.76	Peak	350.00	100	Vertical	Pass

A.1.8 Test Antenna Vertical, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	31.515	26.92	-27.46	30.0	-3.08	Peak	124.00	130	Vertical	Pass
2	59.093	22.09	-27.77	30.0	-7.91	Peak	251.00	200	Vertical	Pass
3	90.852	16.19	-31.05	33.5	-17.31	Peak	216.00	200	Vertical	Pass
4	119.218	22.47	-28.16	33.5	-11.03	Peak	104.00	100	Vertical	Pass
5	319.958	20.73	-25.31	36.0	-15.27	Peak	164.00	100	Vertical	Pass
6	463.967	23.08	-21.22	36.0	-12.92	Peak	0.00	200	Vertical	Pass

## A.1.9 Test Antenna Horizontal, 30 MHz – 1 GHz



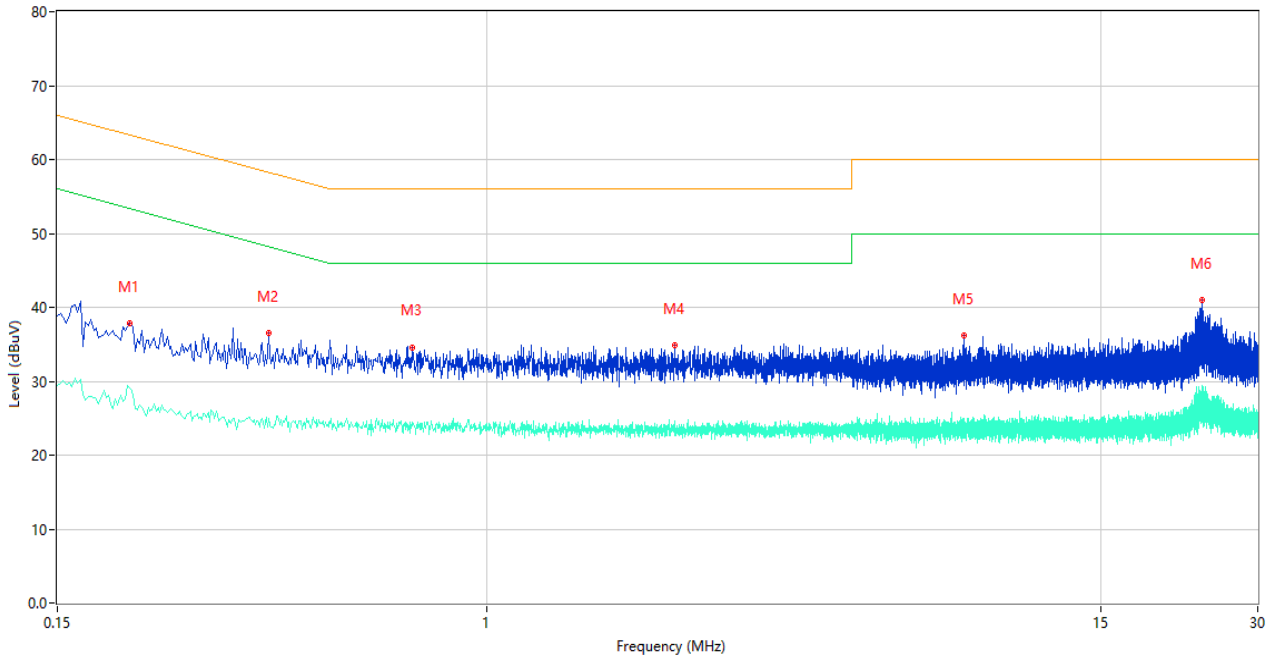
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	30.242	12.40	-27.46	30.0	-17.60	Peak	186.00	400	Horizontal	Pass
2	62.244	13.70	-28.32	30.0	-16.30	Peak	191.00	400	Horizontal	Pass
3	131.825	13.90	-27.15	33.5	-19.60	Peak	256.00	400	Horizontal	Pass
4	319.958	21.87	-25.31	36.0	-14.13	Peak	63.00	300	Horizontal	Pass
5	447.966	23.12	-21.59	36.0	-12.88	Peak	226.00	200	Horizontal	Pass
6	952.482	24.62	-11.65	36.0	-11.38	Peak	82.00	100	Horizontal	Pass

## A.2 Conducted Emission

Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz ) shown here.

### QI Test Data and Plots (Mode1)

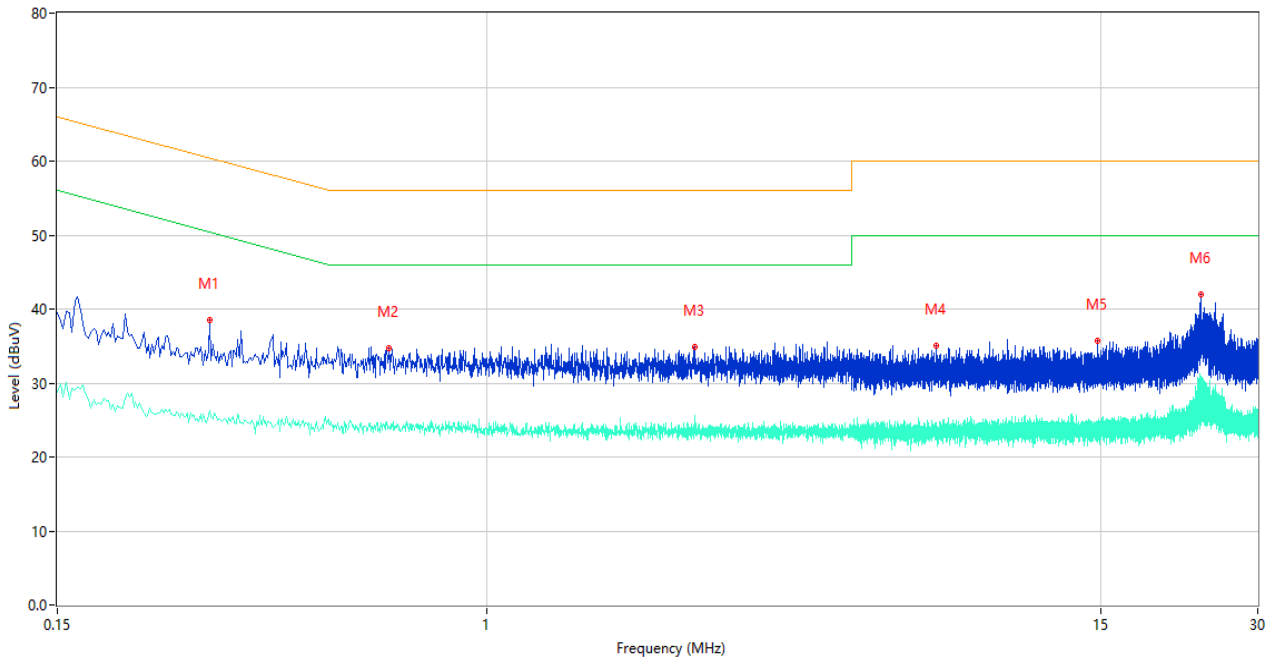
#### A.2.1 L Phase



No.	Frequency (MHz)	Results (dBUV)	Factor (dB)	Limit (dBUV)	Over Limit (dB)	Detector	Line	Verdict
1	0.206	37.81	10.38	63.37	-25.56	Peak	L	Pass
1**	0.206	29.09	10.38	53.37	-24.28	AV	L	Pass
2	0.382	36.55	10.30	58.24	-21.69	Peak	L	Pass
2**	0.382	25.03	10.30	48.24	-23.21	AV	L	Pass
3	0.720	34.50	10.27	56.00	-21.50	Peak	L	Pass
3**	0.720	24.46	10.27	46.00	-21.54	AV	L	Pass
4	2.284	34.89	10.28	56.00	-21.11	Peak	L	Pass
4**	2.284	24.58	10.28	46.00	-21.42	AV	L	Pass
5	8.214	36.23	10.35	60.00	-23.77	Peak	L	Pass
5**	8.214	25.03	10.35	50.00	-24.97	AV	L	Pass
6	23.458	41.05	10.62	60.00	-18.95	Peak	L	Pass
6**	23.458	27.57	10.62	50.00	-22.43	AV	L	Pass



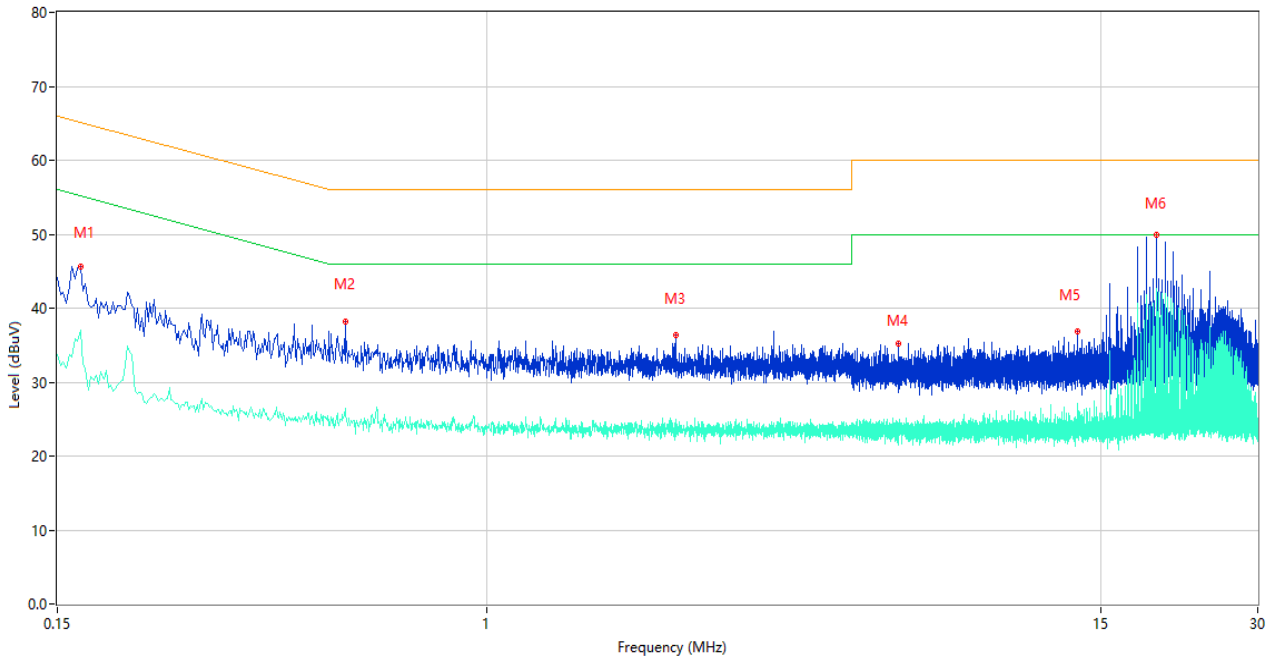
A.2.2 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.294	38.48	10.33	60.41	-21.93	Peak	N	Pass
1**	0.294	26.27	10.33	50.41	-24.14	AV	N	Pass
2	0.648	34.72	10.27	56.00	-21.28	Peak	N	Pass
2**	0.648	23.91	10.27	46.00	-22.09	AV	N	Pass
3	2.506	34.88	10.28	56.00	-21.12	Peak	N	Pass
3**	2.506	25.62	10.28	46.00	-20.38	AV	N	Pass
4	7.258	35.04	10.35	60.00	-24.96	Peak	N	Pass
4**	7.258	24.59	10.35	50.00	-25.41	AV	N	Pass
5	14.780	35.62	10.40	60.00	-24.38	Peak	N	Pass
5**	14.780	24.53	10.40	50.00	-25.47	AV	N	Pass
6	23.408	41.91	10.62	60.00	-18.09	Peak	N	Pass
6**	23.408	30.30	10.62	50.00	-19.70	AV	N	Pass

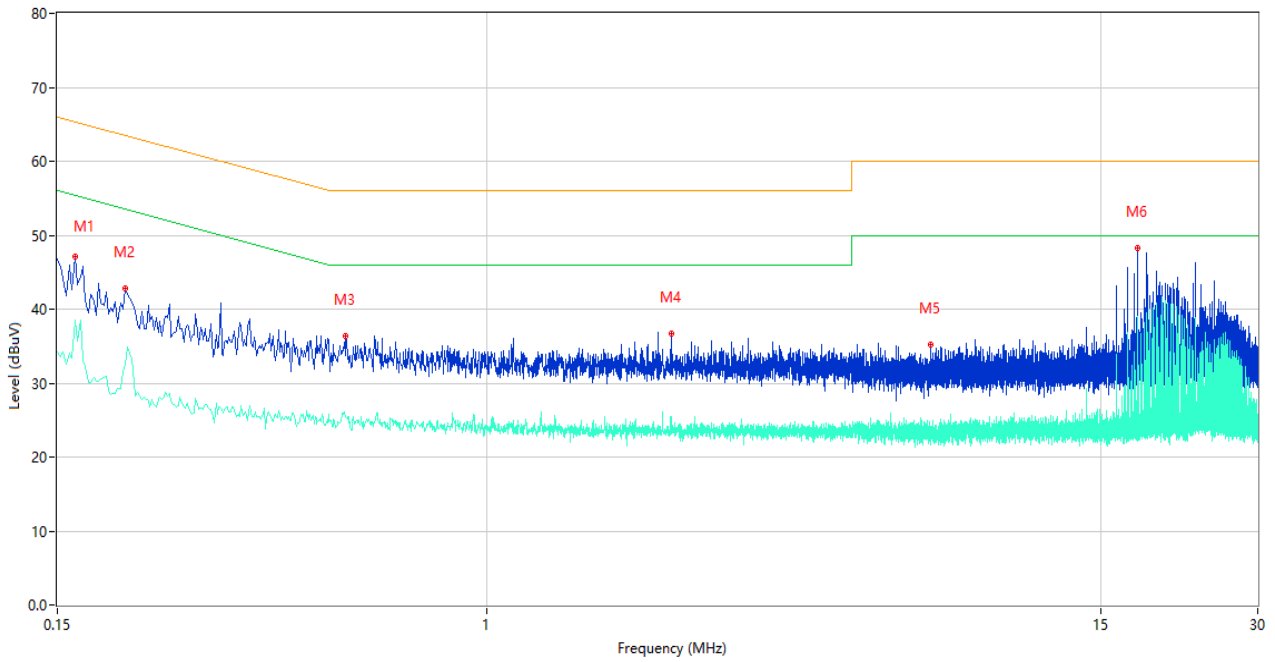
QI Test Data and Plots (Mode2)

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.166	45.66	10.40	65.16	-19.50	Peak	L	Pass
1**	0.166	37.04	10.40	55.16	-18.12	AV	L	Pass
2	0.534	38.23	10.29	56.00	-17.77	Peak	L	Pass
2**	0.534	26.48	10.29	46.00	-19.52	AV	L	Pass
3	2.302	36.37	10.28	56.00	-19.63	Peak	L	Pass
3**	2.302	24.03	10.28	46.00	-21.97	AV	L	Pass
4	6.148	35.27	10.33	60.00	-24.73	Peak	L	Pass
4**	6.148	24.40	10.33	50.00	-25.60	AV	L	Pass
5	13.544	36.81	10.40	60.00	-23.19	Peak	L	Pass
5**	13.544	26.49	10.40	50.00	-23.51	AV	L	Pass
6	19.166	49.99	10.52	60.00	-10.01	Peak	L	Pass
6**	19.166	42.65	10.52	50.00	-7.35	AV	L	Pass

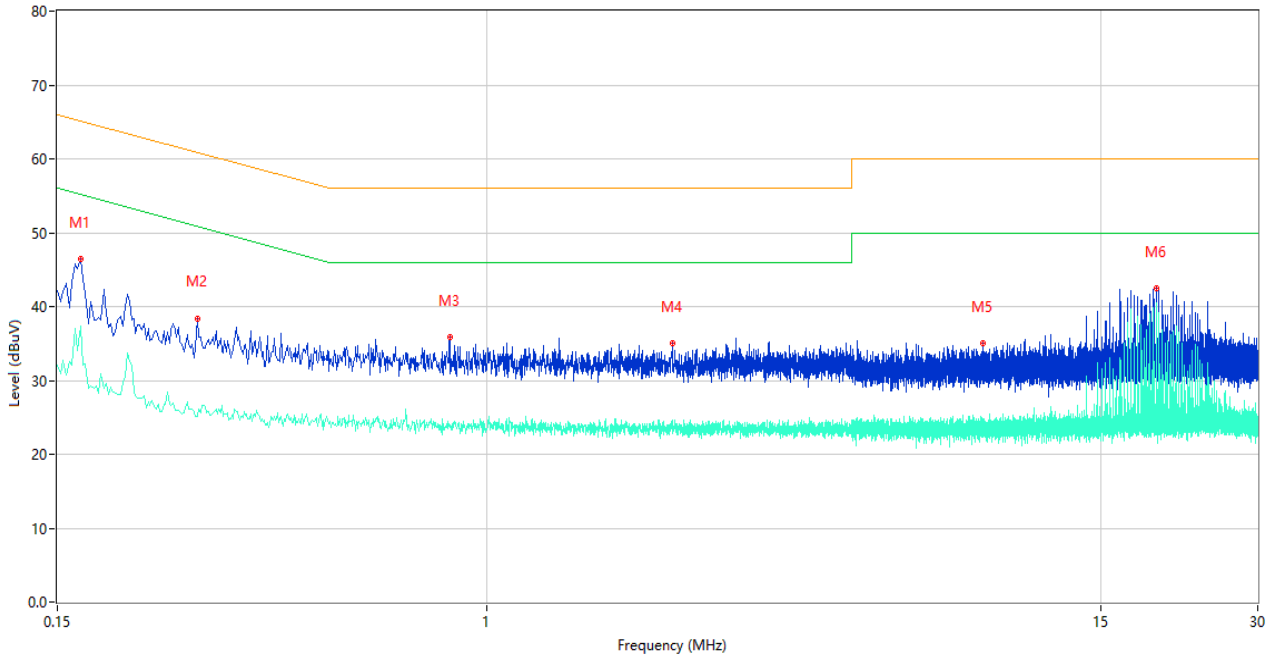
## A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.162	47.16	10.40	65.36	-18.20	Peak	N	Pass
1**	0.162	38.52	10.40	55.36	-16.84	AV	N	Pass
2	0.202	42.82	10.38	63.53	-20.71	Peak	N	Pass
2**	0.202	32.64	10.38	53.53	-20.89	AV	N	Pass
3	0.536	36.29	10.29	56.00	-19.71	Peak	N	Pass
3**	0.536	25.52	10.29	46.00	-20.48	AV	N	Pass
4	2.252	36.76	10.27	56.00	-19.24	Peak	N	Pass
4**	2.252	25.50	10.27	46.00	-20.50	AV	N	Pass
5	7.086	35.26	10.33	60.00	-24.74	Peak	N	Pass
5**	7.086	22.01	10.33	50.00	-27.99	AV	N	Pass
6	17.634	48.32	10.48	60.00	-11.68	Peak	N	Pass
6**	17.634	38.96	10.48	50.00	-11.04	AV	N	Pass

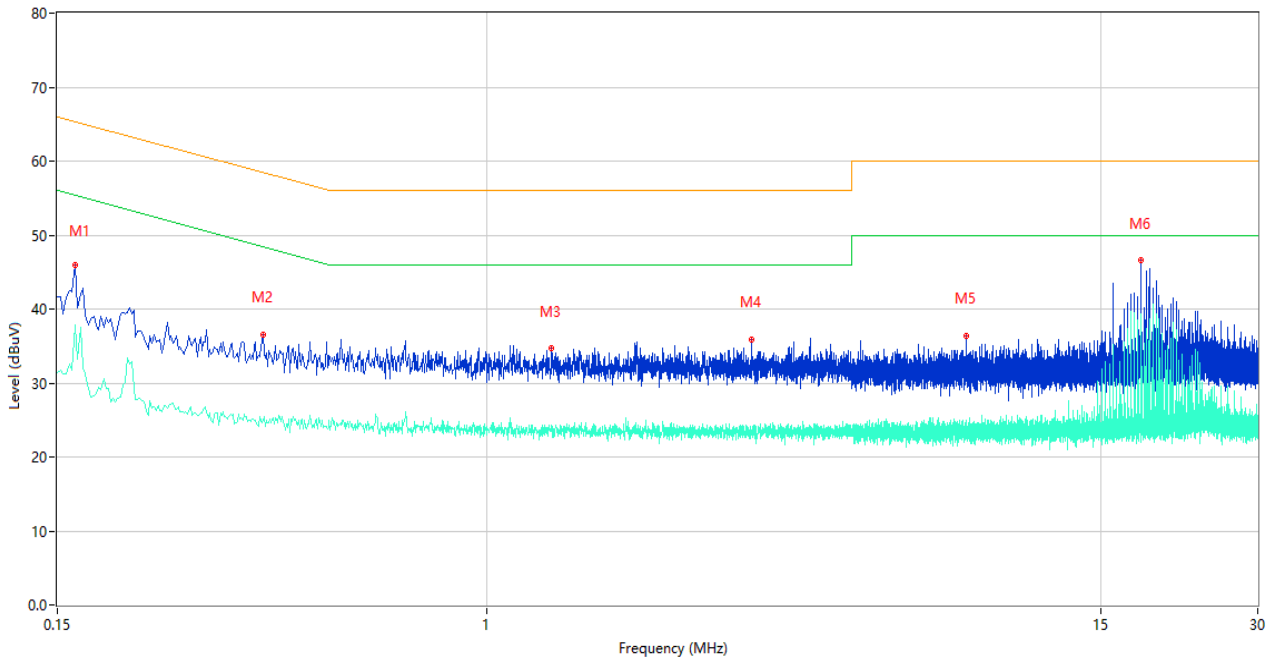
QI Test Data and Plots (Mode3)

A.2.5 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.166	46.48	10.40	65.16	-18.68	Peak	L	Pass
1**	0.166	37.31	10.40	55.16	-17.85	AV	L	Pass
2	0.278	38.41	10.34	60.88	-22.47	Peak	L	Pass
2**	0.278	25.15	10.34	50.88	-25.73	AV	L	Pass
3	0.848	35.84	10.24	56.00	-20.16	Peak	L	Pass
3**	0.848	23.96	10.24	46.00	-22.04	AV	L	Pass
4	2.266	34.97	10.27	56.00	-21.03	Peak	L	Pass
4**	2.266	24.60	10.27	46.00	-21.40	AV	L	Pass
5	8.924	35.10	10.36	60.00	-24.90	Peak	L	Pass
5**	8.924	24.18	10.36	50.00	-25.82	AV	L	Pass
6	19.166	42.51	10.52	60.00	-17.49	Peak	L	Pass
6**	19.166	40.47	10.52	50.00	-9.53	AV	L	Pass

## A.2.6 N Phase



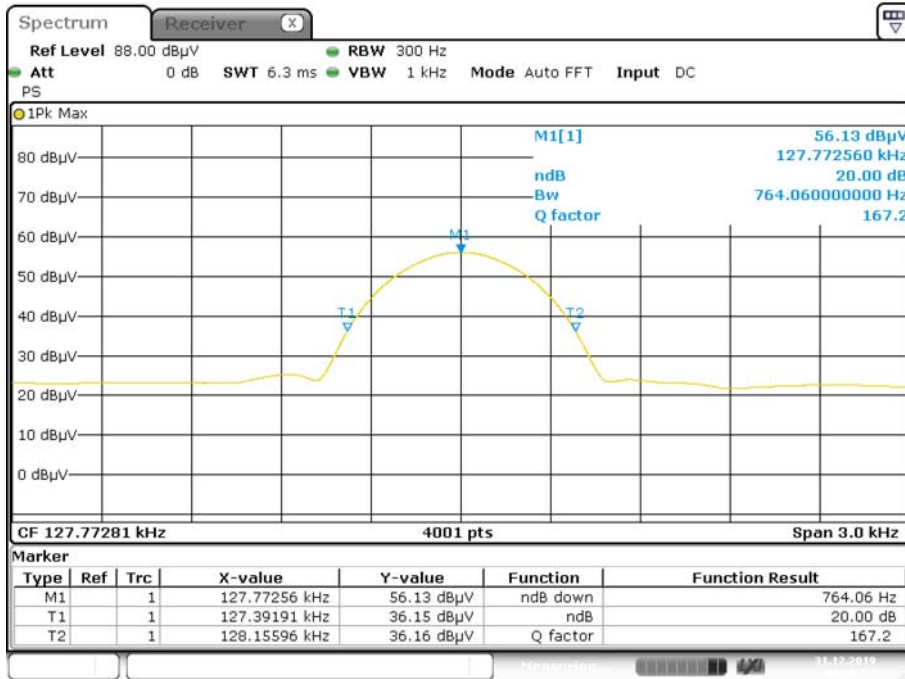
No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	41.73	10.41	65.67	-23.94	Peak	N	Pass
1**	0.156	31.18	10.41	55.67	-24.49	AV	N	Pass
2	0.372	36.57	10.30	58.46	-21.89	Peak	N	Pass
2**	0.372	24.96	10.30	48.46	-23.50	AV	N	Pass
3	1.330	34.70	10.24	56.00	-21.30	Peak	N	Pass
3**	1.330	24.23	10.24	46.00	-21.77	AV	N	Pass
4	3.218	35.93	10.30	56.00	-20.07	Peak	N	Pass
4**	3.218	23.33	10.30	46.00	-22.67	AV	N	Pass
5	8.288	36.40	10.35	60.00	-23.60	Peak	N	Pass
5**	8.288	24.51	10.35	50.00	-25.49	AV	N	Pass
6	17.890	46.66	10.49	60.00	-13.34	Peak	N	Pass
6**	17.890	39.36	10.49	50.00	-10.64	AV	N	Pass



### A.3 20 dB Bandwidth

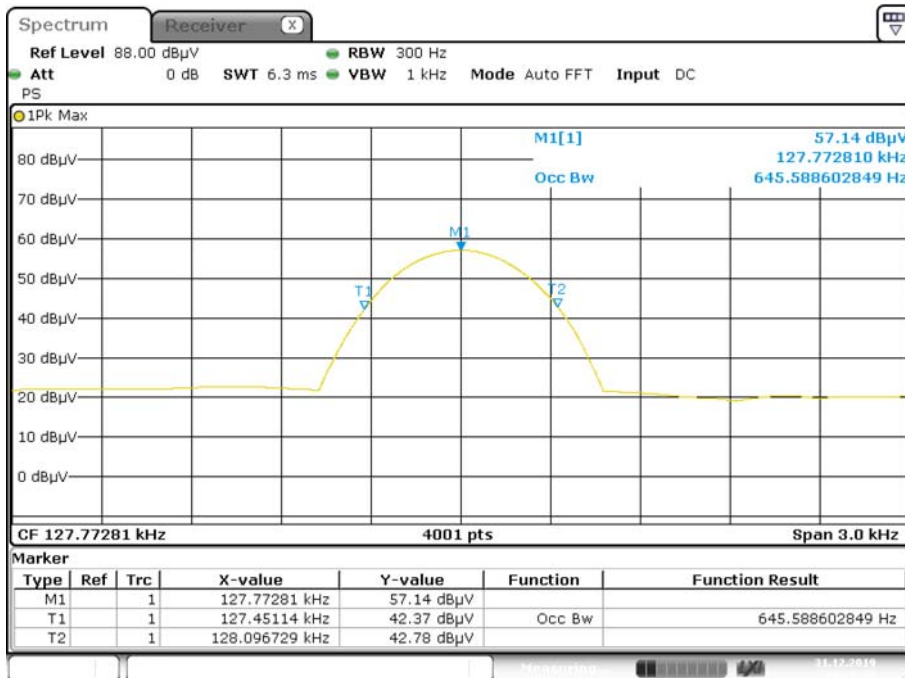
#### QI Test Data and Plots (Mode1)

##### 20 dB Bandwidth



Date: 31.DEC.2019 10:18:53

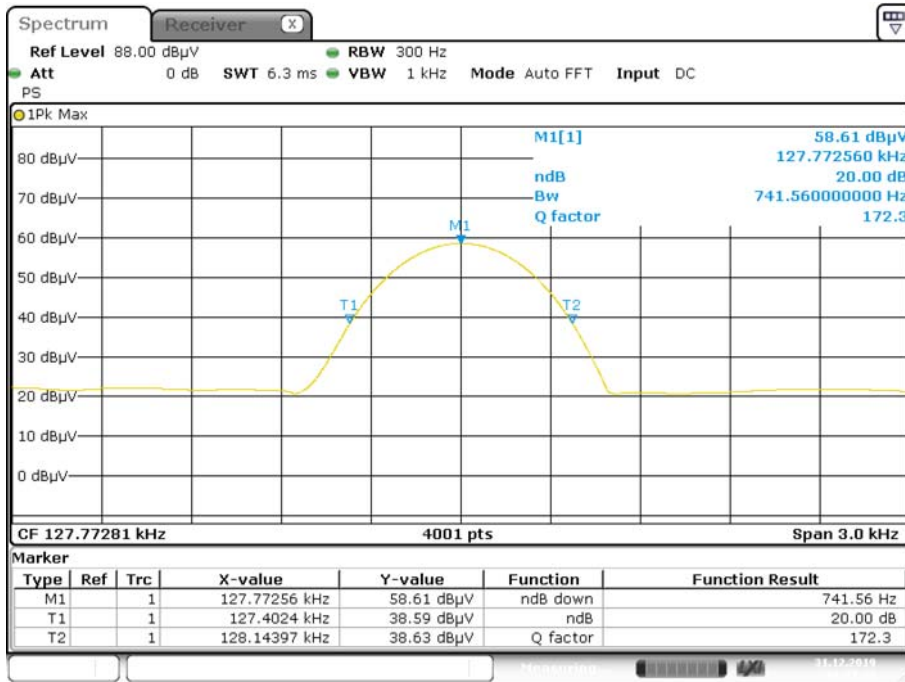
##### 99% Occupied Bandwidth



Date: 31.DEC.2019 10:15:49

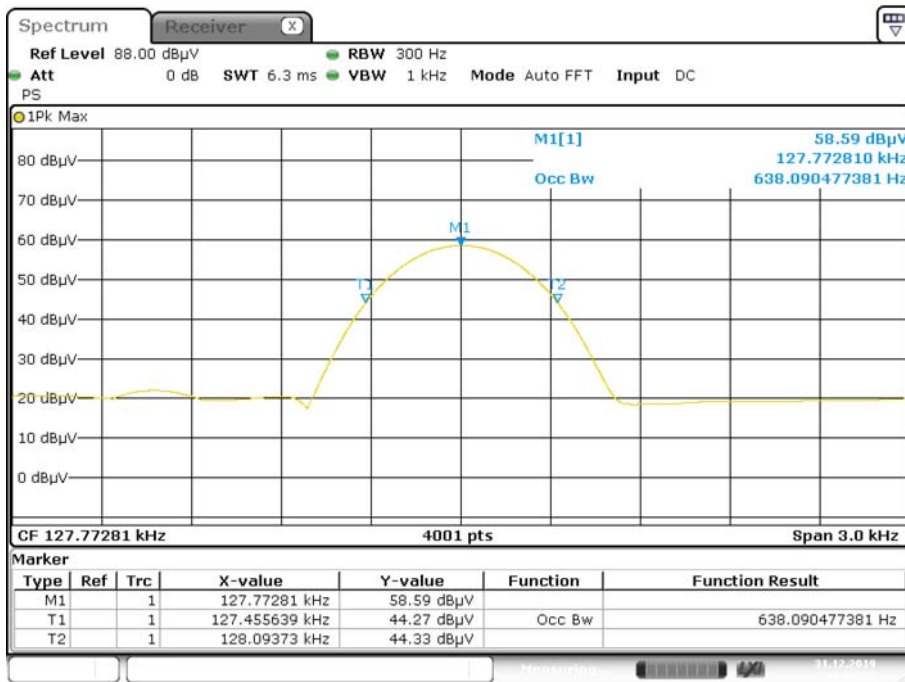
QI Test Data and Plots (Mode2)

20 dB Bandwidth



Date: 31.DEC.2019 10:07:38

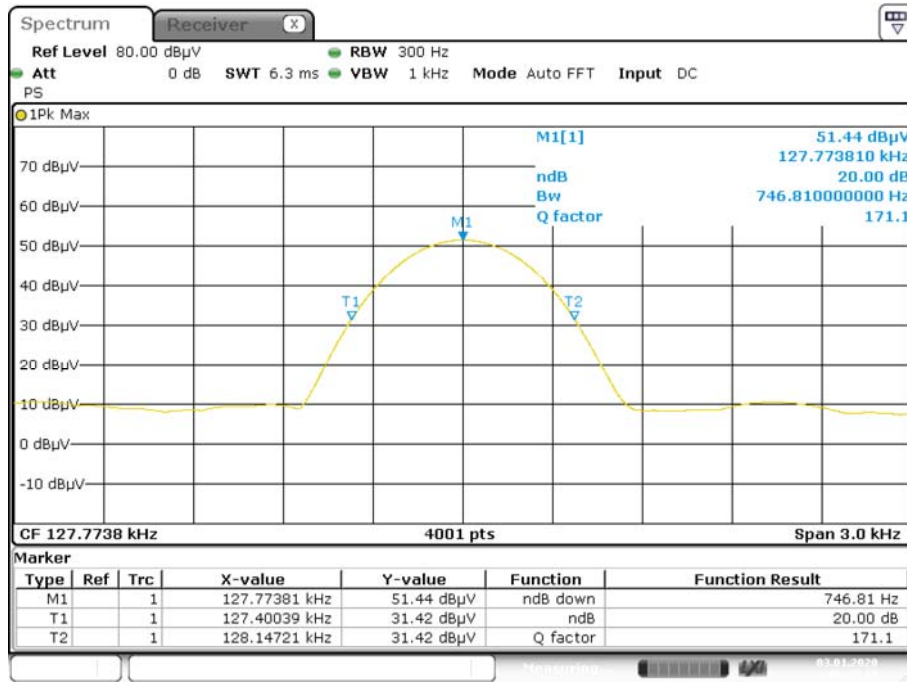
99% Occupied Bandwidth



Date: 31.DEC.2019 10:04:35

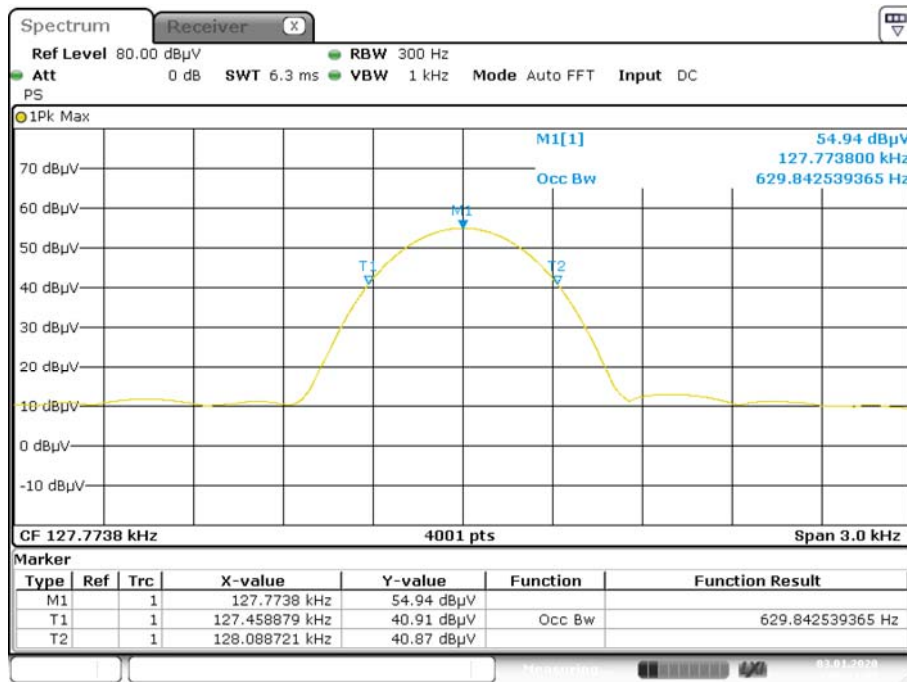
QI Test Data and Plots (Mode3)

20 dB Bandwidth



Date: 3.JAN.2020 09:25:10

99% Occupied Bandwidth



Date: 3.JAN.2020 09:21:07

## **ANNEX B TEST SETUP PHOTOS**

Please refer the document "BL-EC19C0043-AE.PDF".

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document "BL-EC19C0043-AW.PDF".

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document "BL-EC19C0043-AI.PDF".

--END OF REPORT--