

FCC

RF

TEST REPORT

ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



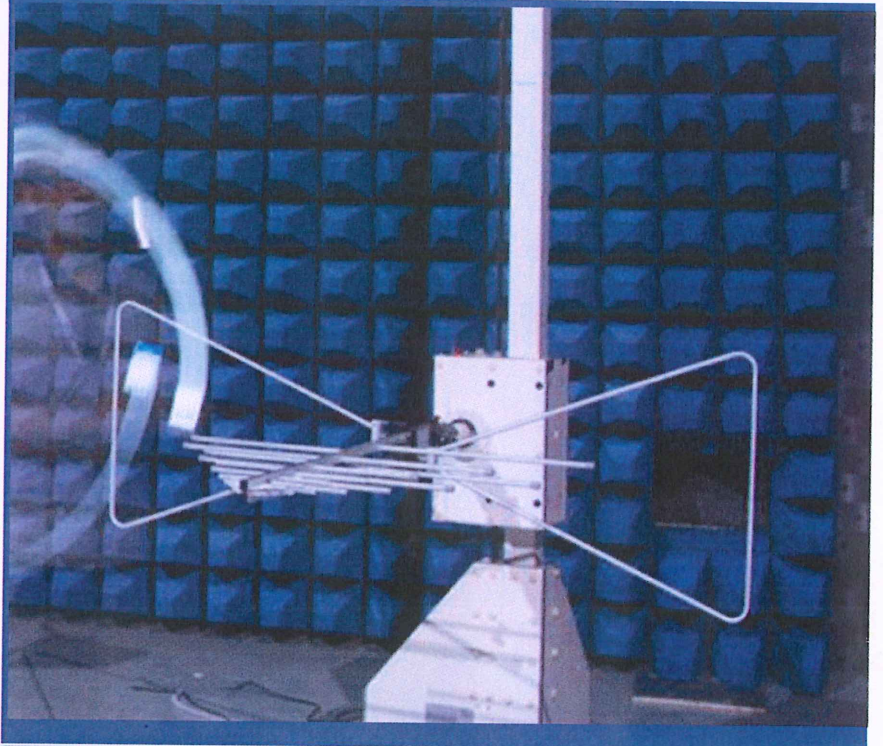
FOR

**Powerstand fast wireless qi charger**

ISSUED TO

ShenZhen Smacat Electronic Technology Co.,Ltd

6th Floor, Building A1, YangBei Industrial Zone, HuangTian,  
HangCheng street, BaoAn, ShenZhen, Guangdong, China



Tested by: Xia Long  
Xia Long  
(Engineer)

Date: Jan. 18, 2019

Approved by: Wei Yanquan  
Wei Yanquan  
(Chief Engineer)

Date: Jan. 18, 2019

Report No.: BL-SZ18B0417-401

EUT Name: Powerstand fast wireless qi charger

Model Name: OW1/BLK (refer section 2.4)

Brand Name: Orgoo

Test Standard: 47 CFR Part 15 Subpart C

FCC ID: 2ARZ5SMACAT1001

Test Conclusion: Pass

Test Date: Dec. 03, 2018 ~ Jan. 07, 2019

Date of Issue: Jan. 18, 2019

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### Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Jan. 11, 2019</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Jan. 18, 2019</u>	<u>Updated Technical Information in section 2.6</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 v2.6.
- (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	ShenZhen Smacat Electronic Technology Co.,Ltd
Address	6th Floor, Building A1, YangBei Industrial Zone, HuangTian, HangCheng street, BaoAn, ShenZhen, GuangDong, China

### 2.2 Manufacturer Information

Manufacturer	ShenZhen Smacat Electronic Technology Co.,Ltd
Address	6th Floor, Building A1, YangBei Industrial Zone, HuangTian, HangCheng street, BaoAn, ShenZhen, GuangDong, China

### 2.3 Factory Information

Factory	ShenZhen Smacat Electronic Technology Co.,Ltd
Address	6th Floor, Building A1, YangBei Industrial Zone, HuangTian, HangCheng street, BaoAn, ShenZhen, GuangDong, China

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

EUT Name	Powerstand fast wireless qi charger
Model Name Under Test	OW1/BLK
Series Model Name	Q720
Description of Model name differentiation	All models are same with electrical parameters and internal circuit structure, but only different on screen printing.
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

## 2.5 Ancillary Equipment

Ancillary Equipment	USB Cable	
	Length (Approx.)	1.0 m

## 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	111~205 kHz
Product Type	<input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Antenna Type	Coil Antenna
About Product	The EUT only support the QI technology.

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C (10-1-17 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

#### 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)	3.23 dB
Radiated emissions (30 MHz-1 GHz)	4.30 dB
Radiated emissions (1 GHz-18 GHz)	4.81 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)	DC 9V

### 4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2018.06.13	2019.06.12
Test Antenna- Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2017.11.07	2019.11.08
Test Antenna- Rod(9 kHz-30 MHz)	SCHWARZBECK	VAMP 9243	9243-556	2017.07.22	2019.07.21
Test Antenna- Bi-Log(30 MHz- 3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2018.07.11	2019.07.10
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7 .35m	N/A	2018.08.08	2019.08.07
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2018.06.13	2019.06.12
LISN	SCHWARZBECK	NSLK 8127	8127-687	s	2019.06.12
Shielded Enclosure	ChangNing	CN-130701	130703	N/A	N/A
Test Software	BALUN	BL410_E	V18.626	--	--

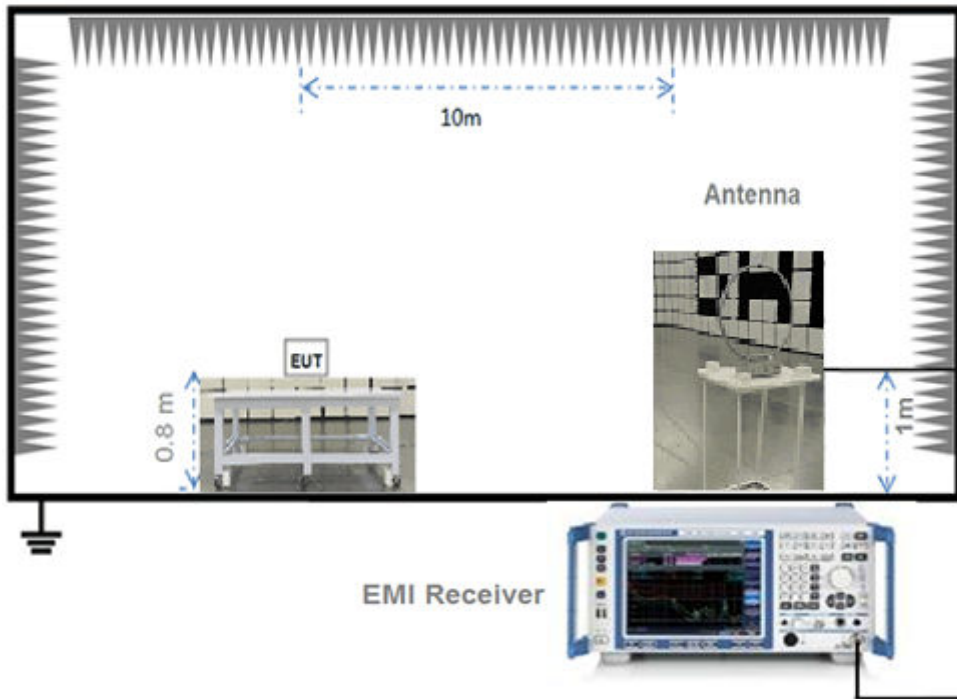


### 4.3 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>Mode 1</u> EUT + USB Cable + Adapter
TC02	<u>Mode 2</u> EUT + USB Cable + Adapter + iPhone X(phone is horizontal)
TC03	<u>Mode 3</u> EUT + USB Cable + Adapter + iPhone X(phone is vertical)

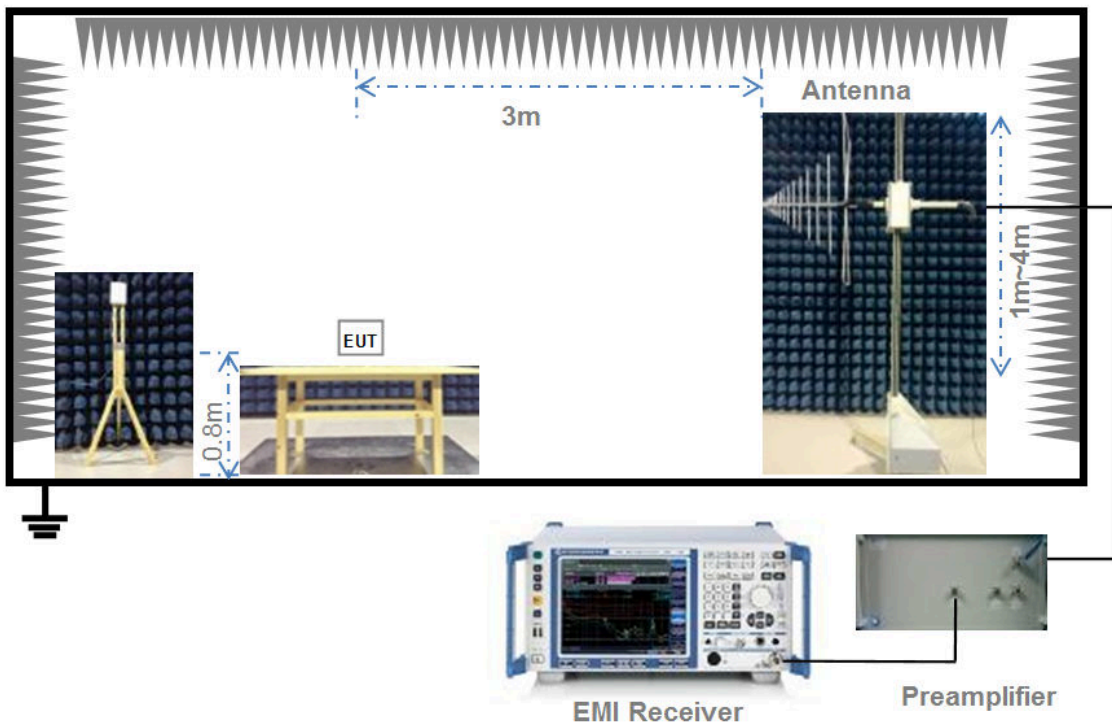
### 4.4 Test Setups

#### Test Setup 1



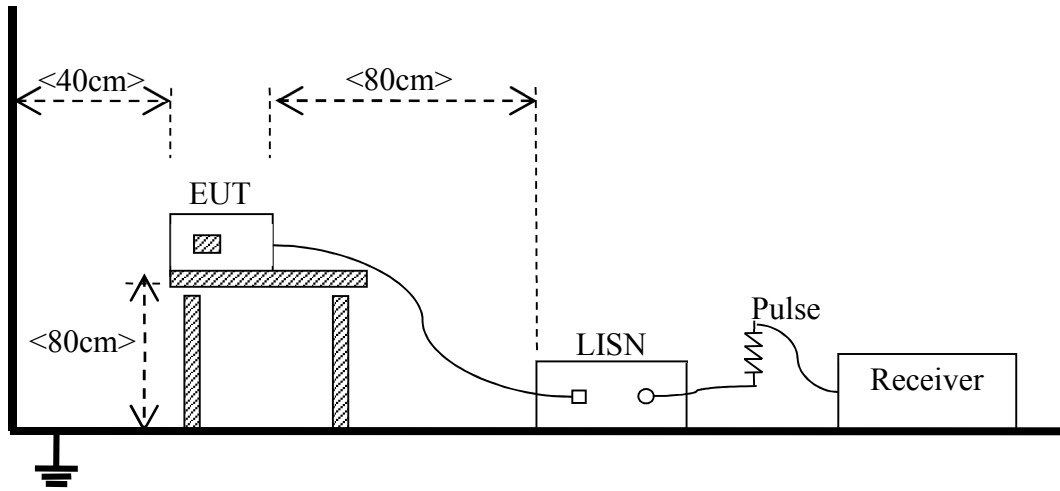
For Radiated Emission Test (Below 30 MHz)

#### 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

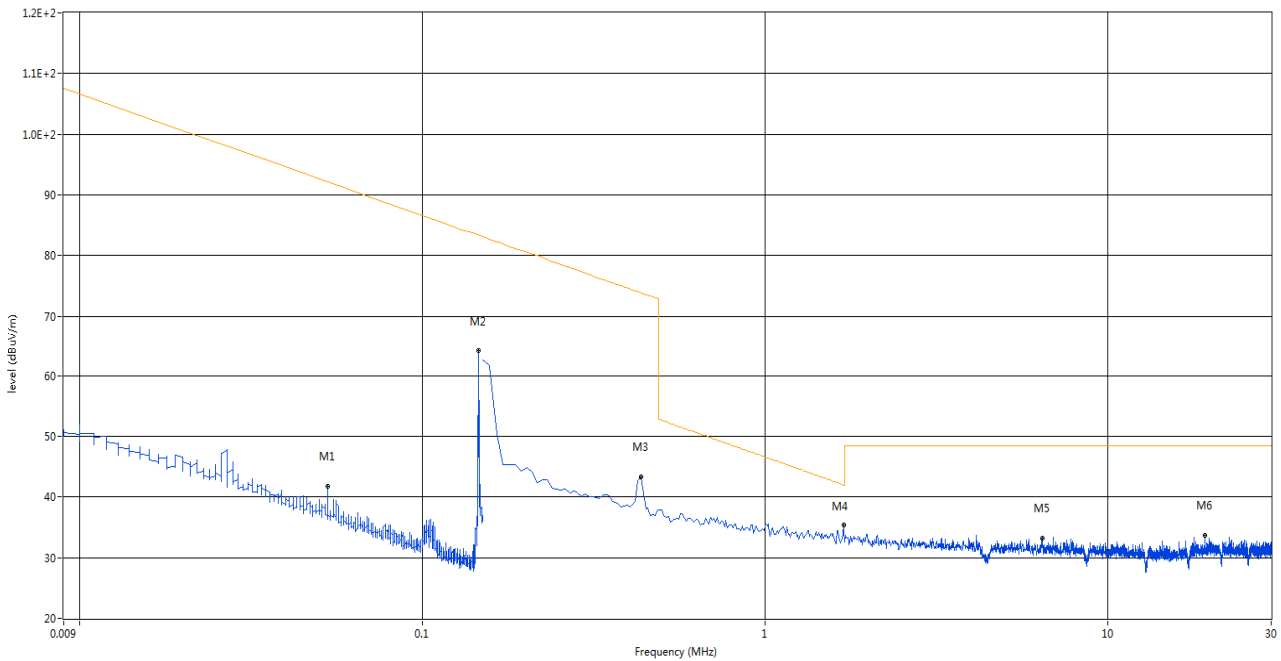
## A.1 Radiated Emission

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

Note 2: 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.

### Mode 1 Test Data and Plots

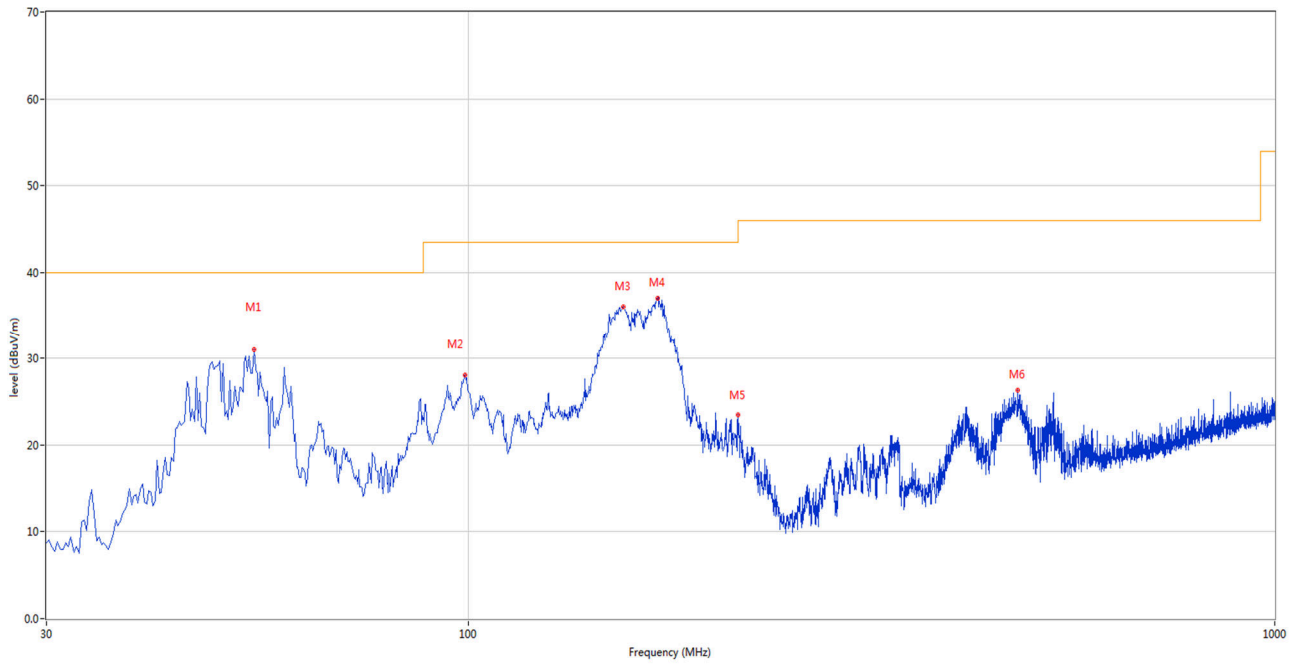
#### A.1.1 Test Antenna Vertical, 9 kHz –30 MHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	0.053	41.96	20.22	92.1	-50.14	Peak	0.00	100	V	Pass
2	0.146	64.84	20.15	83.3	-18.46	Peak	343.00	100	V	N/A
3	0.434	43.36	20.21	73.8	-30.44	Peak	356.00	100	V	Pass
4	1.695	35.43	20.46	42.0	-6.57	Peak	176.00	100	V	Pass
5	6.441	33.21	20.82	48.5	-15.29	Peak	211.00	100	V	Pass
6	19.217	33.63	21.09	48.5	-14.87	Peak	61.00	100	V	Pass

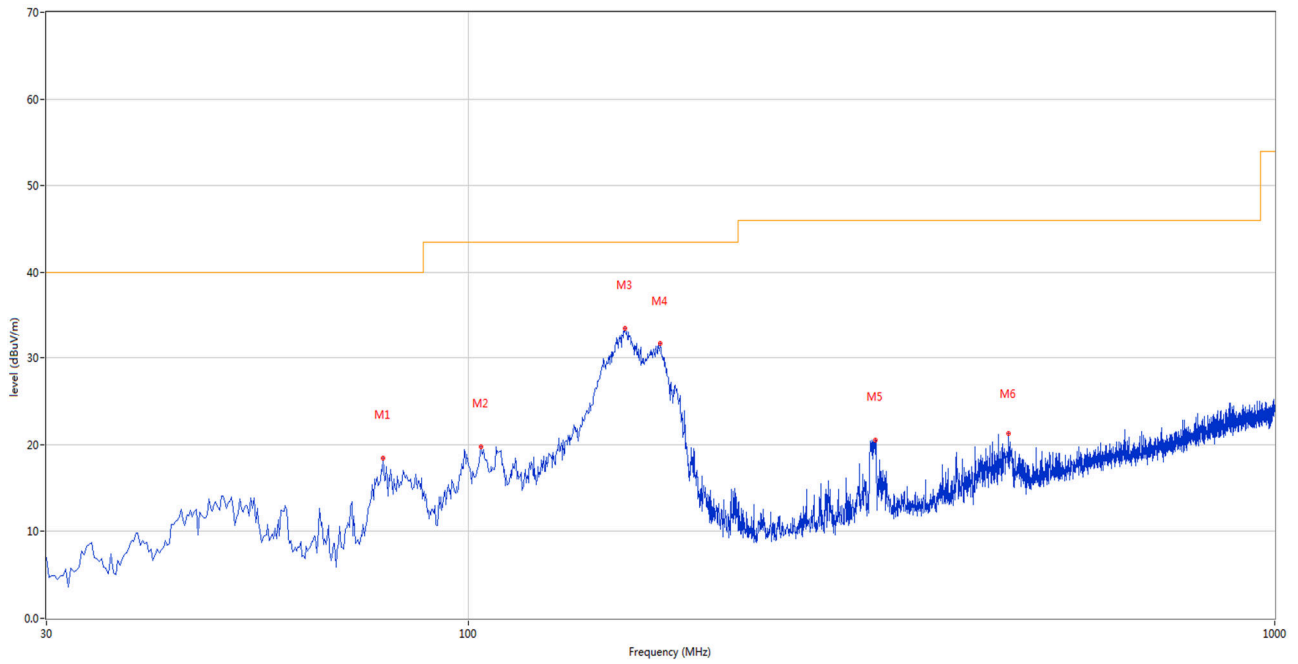


## A.1.2 Test Antenna Vertical, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	54.250	31.06	-23.47	40.0	-8.94	Peak	0.00	100	V	Pass
2	99.113	28.04	-24.84	43.5	-15.46	Peak	0.00	100	V	Pass
3	155.615	36.04	-27.83	43.5	-7.46	Peak	69.30	100	V	Pass
4	171.620	37.00	-26.81	43.5	-6.50	Peak	69.30	100	V	Pass
5	215.998	23.43	-24.38	43.5	-20.07	Peak	6.50	100	V	Pass
6	480.322	26.28	-17.63	46.0	-19.72	Peak	0.00	200	V	Pass

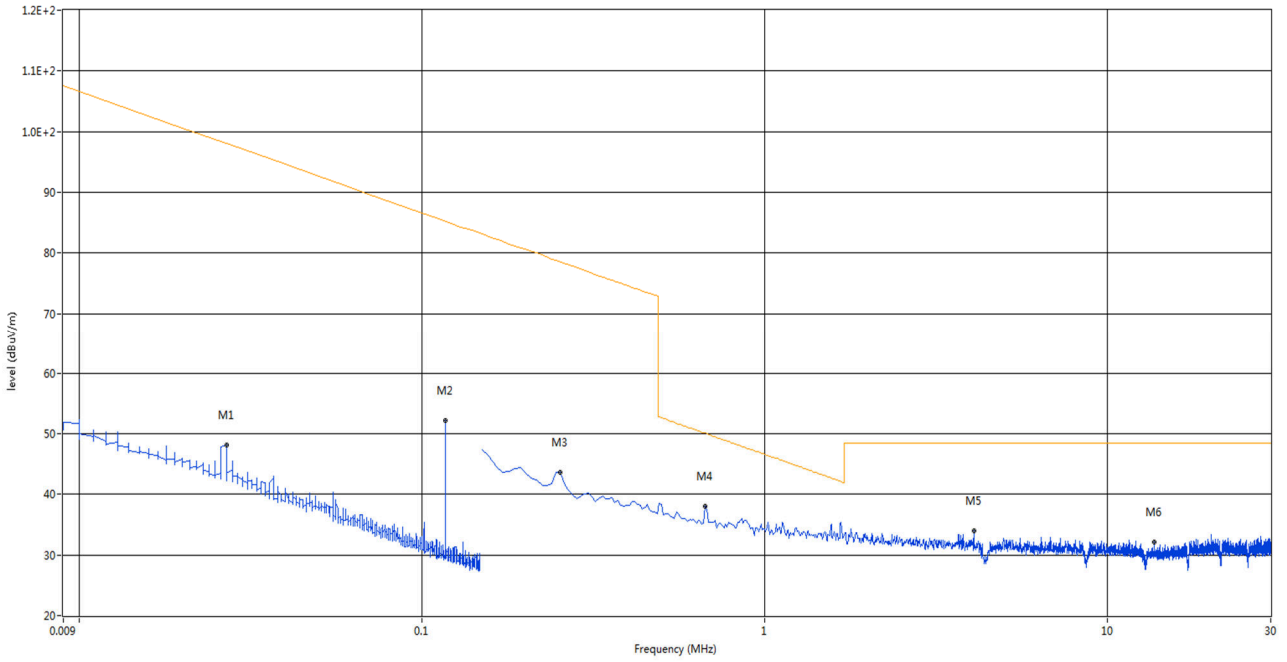
A.1.3 Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	78.500	18.43	-28.85	40.0	-21.57	Peak	0.00	200	H	Pass
2	103.720	19.81	-24.85	43.5	-23.69	Peak	0.00	200	H	Pass
3	156.342	33.53	-27.82	43.5	-9.97	Peak	109.60	200	H	Pass
4	173.075	31.69	-26.79	43.5	-11.81	Peak	109.60	200	H	Pass
5	319.545	20.55	-21.68	46.0	-25.45	Peak	111.00	100	H	Pass
6	467.955	21.24	-17.71	46.0	-24.76	Peak	153.10	100	H	Pass

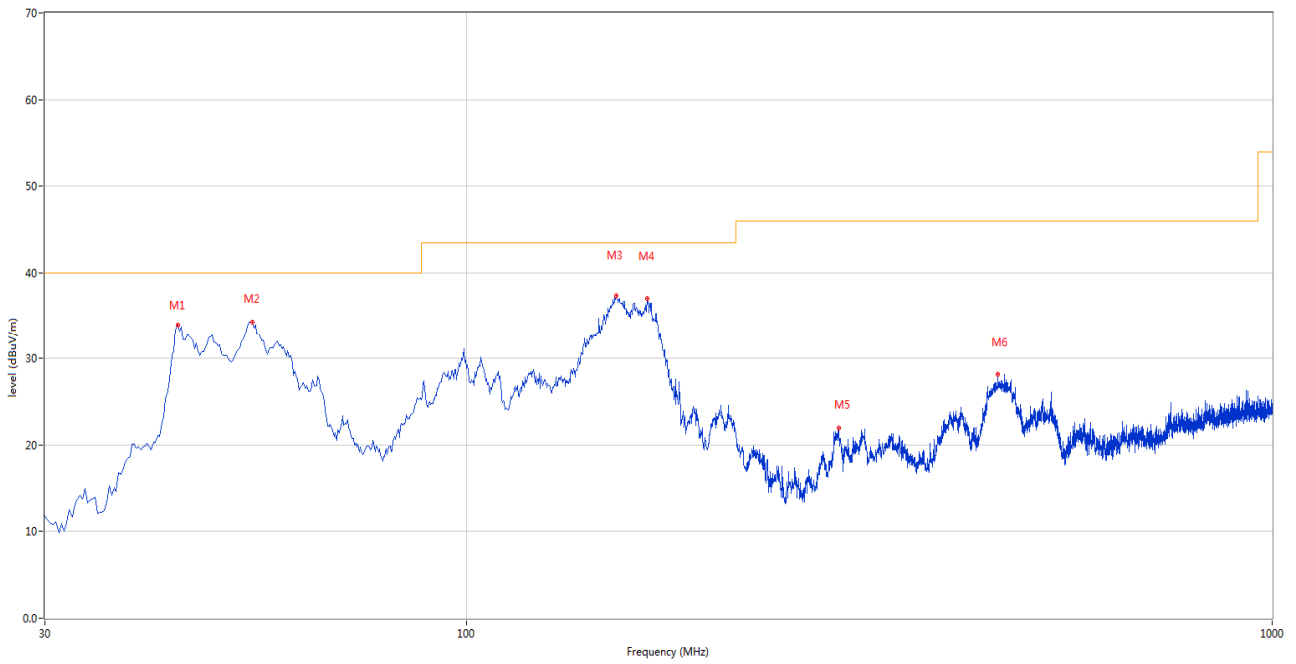
Mode 2 Test Data and Plots

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



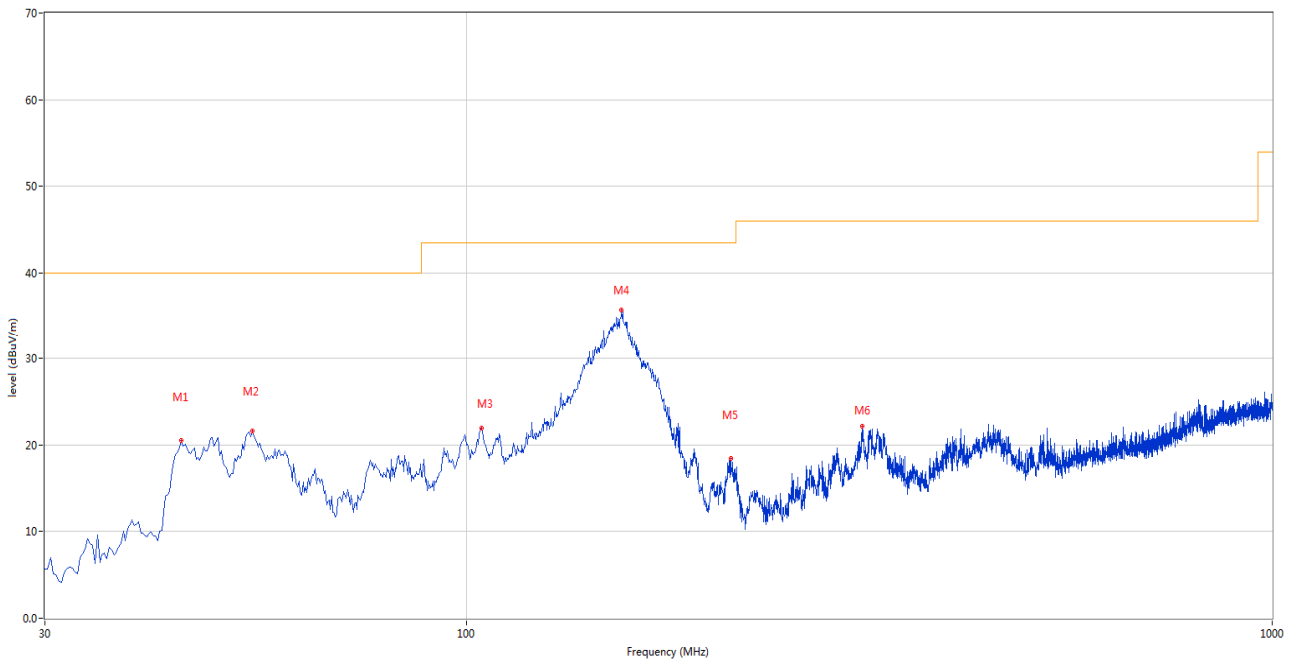
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	0.027	48.12	20.25	98.0	-49.88	Peak	227.00	100	V	Pass
2	0.117	32.93	20.17	85.2	-52.27	Peak	166.00	100	V	N/A
3	0.254	43.66	20.13	78.5	-34.84	Peak	168.00	100	V	Pass
4	0.672	38.05	20.38	50.1	-12.05	Peak	124.00	100	V	Pass
5	4.083	33.95	20.69	48.5	-14.55	Peak	177.00	100	V	Pass
6	13.702	32.10	20.85	48.5	-16.40	Peak	194.00	100	V	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 (o)	Height (cm)	ANT	Verdict
1	43.822	33.92	-23.50	40.0	-6.08	Peak	197.00	100	V	Pass
2	54.250	34.32	-23.47	40.0	-5.68	Peak	113.20	100	V	Pass
3	153.432	37.37	-27.95	43.5	-6.13	Peak	0.00	100	V	Pass
4	167.740	36.97	-27.23	43.5	-6.53	Peak	238.70	100	V	Pass
5	289.960	21.95	-22.10	46.0	-24.05	Peak	151.00	200	V	Pass
6	456.558	28.22	-18.00	46.0	-17.78	Peak	29.60	100	V	Pass

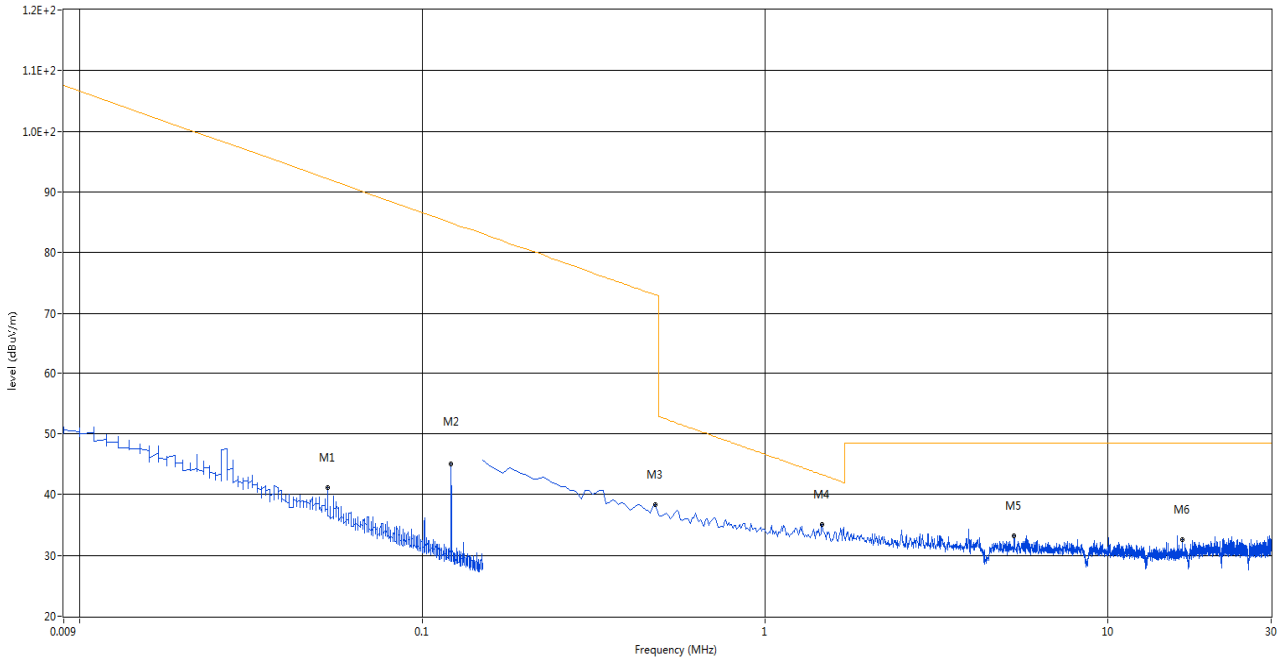
## A.1.6 Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	44.307	20.53	-23.47	40.0	-19.47	Peak	360.00	100	H	Pass
2	54.250	21.65	-23.47	40.0	-18.35	Peak	196.50	100	H	Pass
3	104.448	21.99	-24.84	43.5	-21.51	Peak	298.00	200	H	Pass
4	155.858	35.70	-27.83	43.5	-7.80	Peak	130.70	200	H	Pass
5	212.845	18.45	-24.29	43.5	-25.05	Peak	89.00	200	H	Pass
6	310.330	22.19	-21.59	46.0	-23.81	Peak	112.70	100	H	Pass

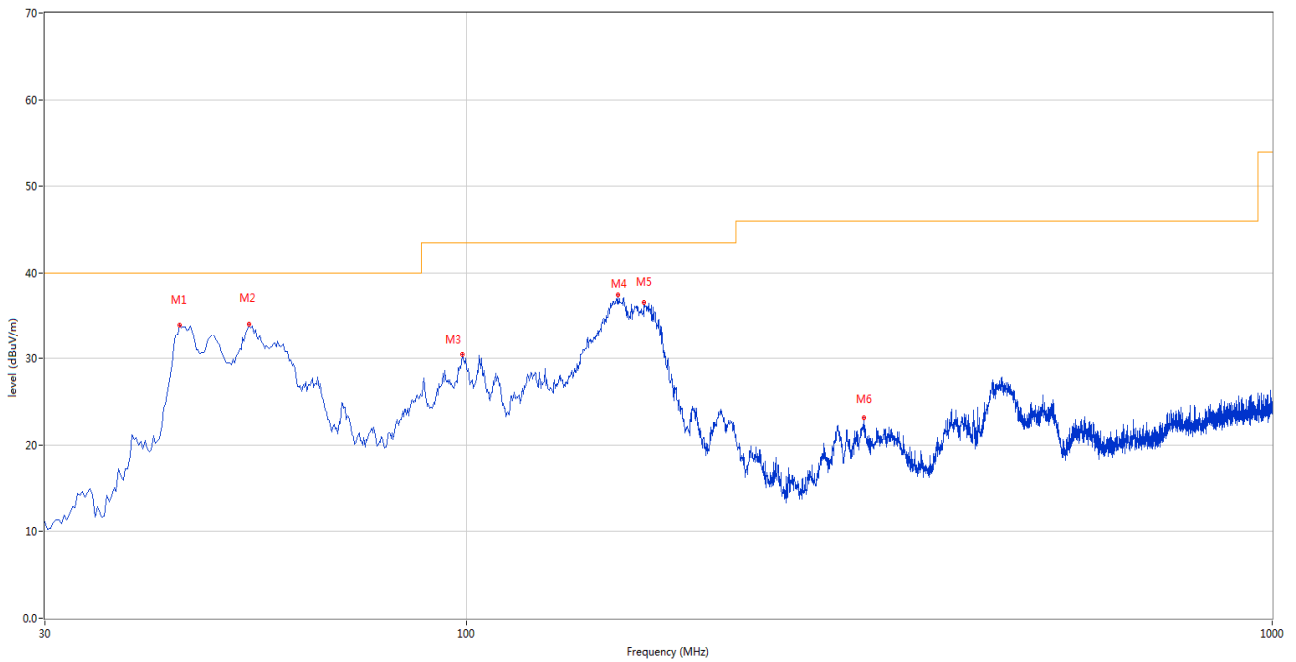
Mode 3 Test Data and Plots

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



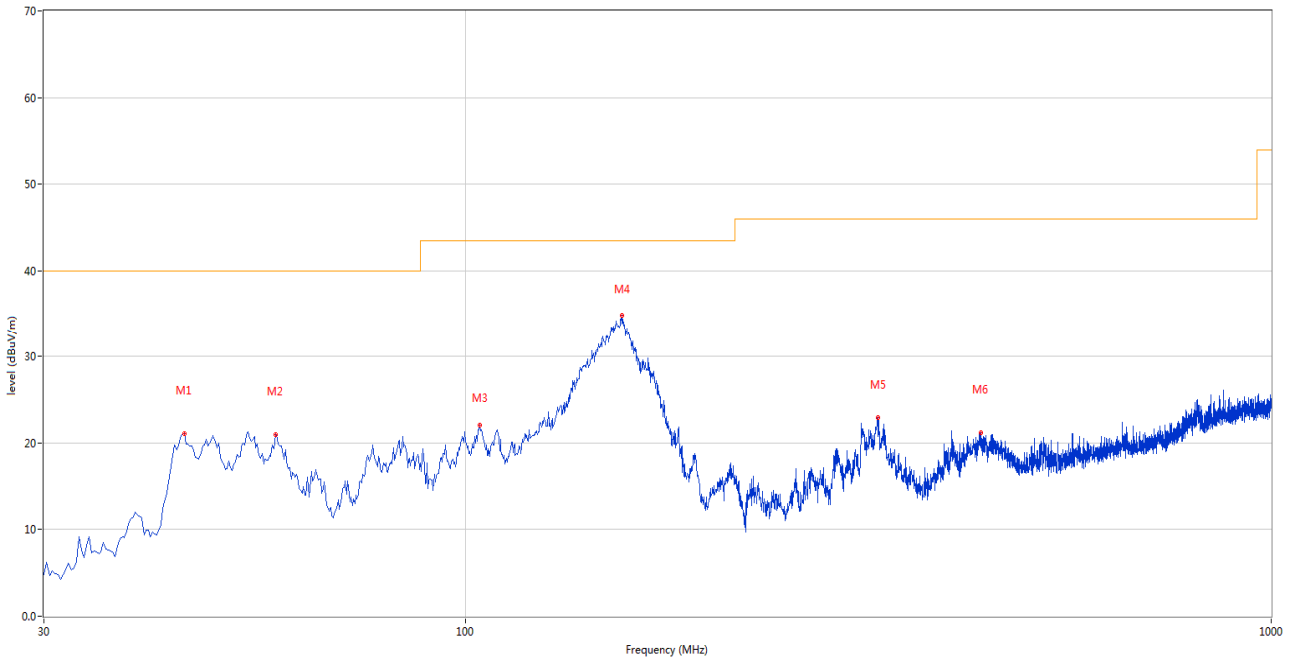
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	0.053	41.09	20.22	92.1	-51.01	Peak	184.00	100	V	Pass
2	0.121	36.27	20.16	84.9	-48.63	Peak	140.00	100	V	N/A
3	0.478	38.35	20.23	73.0	-34.65	Peak	0.00	100	V	Pass
4	1.471	35.07	20.52	43.3	-8.23	Peak	125.00	100	V	Pass
5	5.336	33.25	20.80	48.5	-15.25	Peak	5.00	100	V	Pass
6	16.530	32.58	20.92	48.5	-15.92	Peak	1.00	100	V	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 (o)	Height (cm)	ANT	Verdict
1	44.065	33.92	-23.48	40.0	-6.08	Peak	237.90	100	V	Pass
2	53.765	34.06	-23.41	40.0	-5.94	Peak	133.40	100	V	Pass
3	98.870	30.50	-24.87	43.5	-13.00	Peak	358.10	100	V	Pass
4	154.160	37.48	-27.91	43.5	-6.02	Peak	360.00	100	V	Pass
5	166.285	36.53	-27.13	43.5	-6.97	Peak	217.10	100	V	Pass
6	311.785	23.13	-21.67	46.0	-22.87	Peak	0.00	200	V	Pass

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



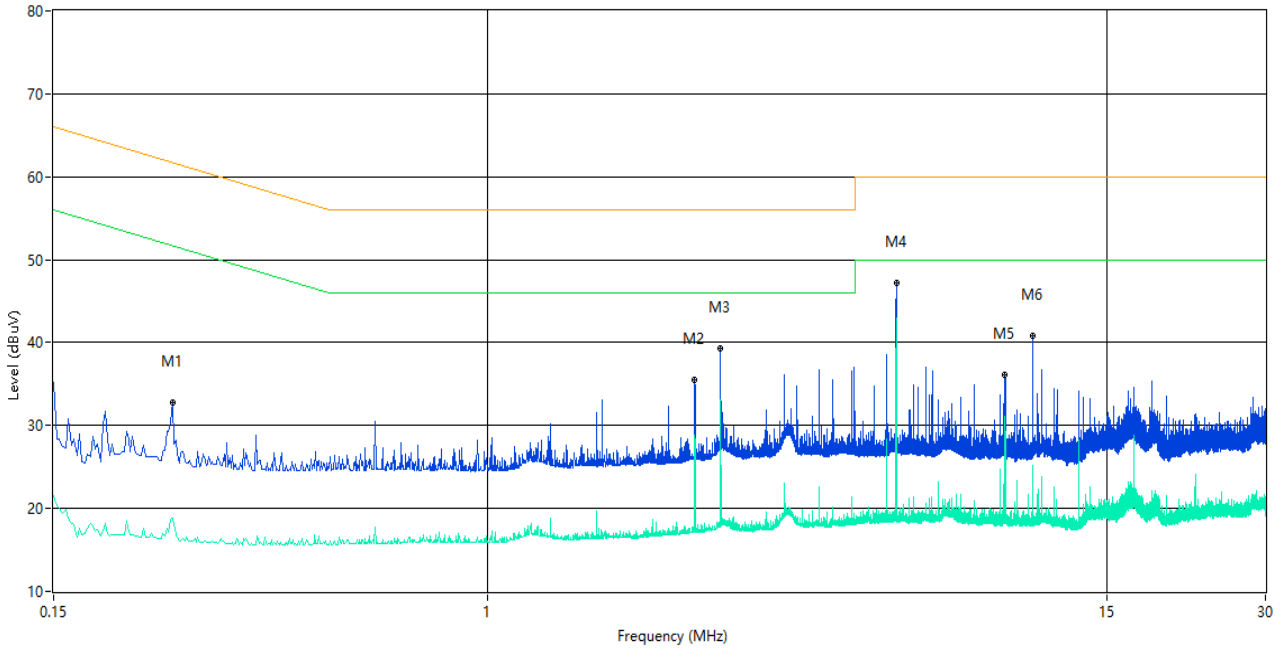
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	44.792	21.10	-23.44	40.0	-18.90	Peak	195.80	100	H	Pass
2	58.130	20.97	-24.28	40.0	-19.03	Peak	237.60	100	H	Pass
3	104.205	22.05	-24.85	43.5	-21.45	Peak	317.00	200	H	Pass
4	156.585	34.83	-27.82	43.5	-8.67	Peak	129.60	200	H	Pass
5	325.122	22.92	-21.16	46.0	-23.08	Peak	112.40	100	H	Pass
6	436.672	21.19	-18.29	46.0	-24.81	Peak	174.70	100	H	Pass



## A.2 Conducted Emission

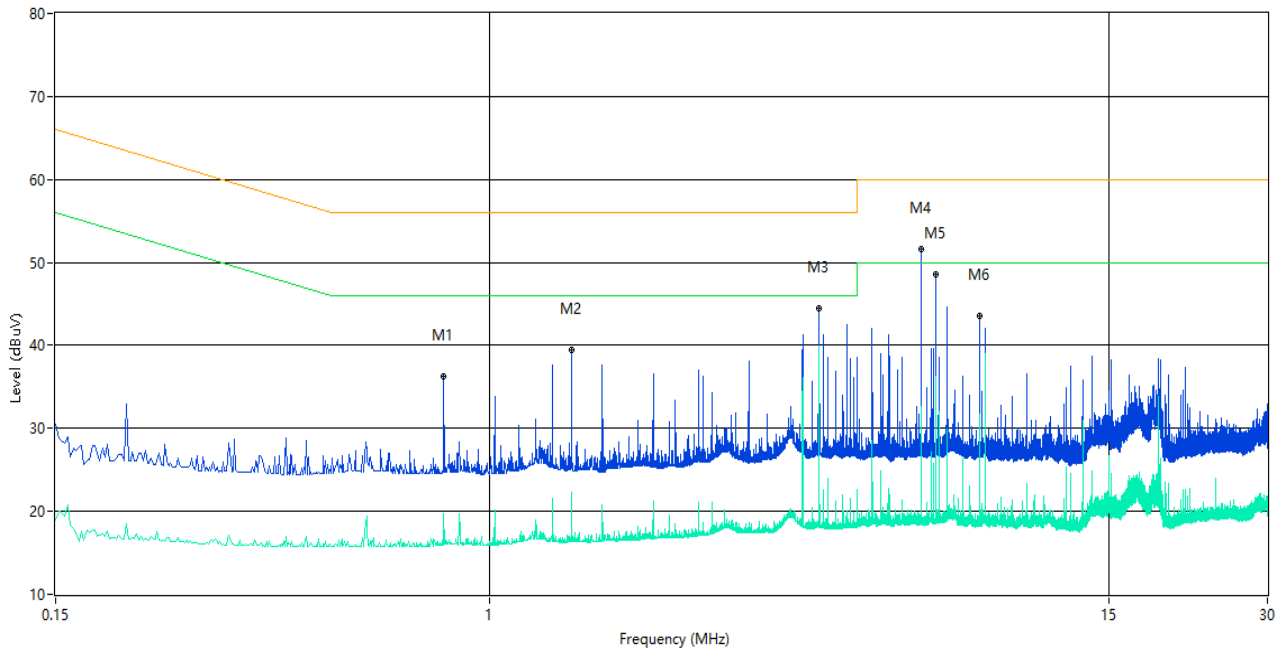
### Mode 1 Test Data and Plots

#### A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.252	32.8	10.00	61.7	-28.90	Peak	L Line	Pass
1**	0.252	18.8	10.00	51.7	-32.90	AV	L Line	Pass
2	2.476	35.5	10.08	56.0	-20.50	Peak	L Line	Pass
2**	2.476	28.8	10.08	46.0	-17.20	AV	L Line	Pass
3	2.768	39.3	10.08	56.0	-16.70	Peak	L Line	Pass
3**	2.768	33.1	10.08	46.0	-12.90	AV	L Line	Pass
4	5.972	47.2	10.13	60.0	-12.80	Peak	L Line	Pass
4**	5.972	42.4	10.13	50.0	-7.60	AV	L Line	Pass
5	9.614	36.1	10.17	60.0	-23.90	Peak	L Line	Pass
5**	9.614	29.5	10.17	50.0	-20.50	AV	L Line	Pass
6	10.866	40.9	10.18	60.0	-19.10	Peak	L Line	Pass
6**	10.866	25.2	10.18	50.0	-24.80	AV	L Line	Pass

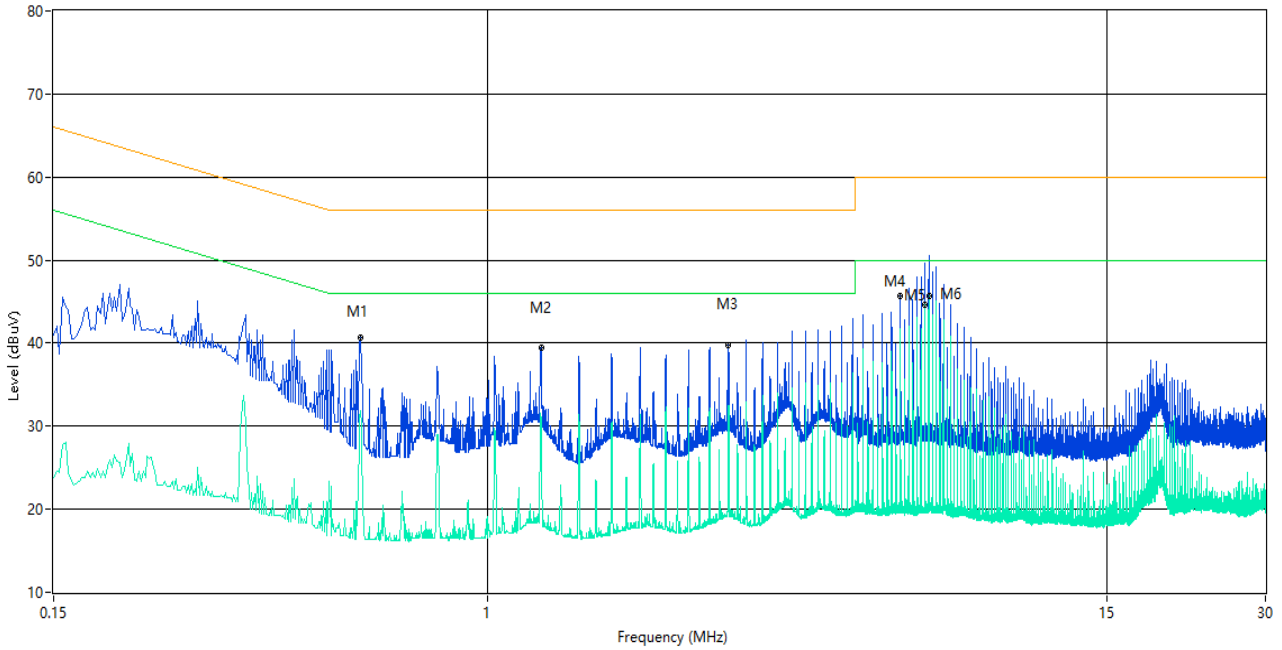
## A.2.2 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.818	36.2	10.04	56.0	-19.80	Peak	N Line	Pass
1**	0.818	19.7	10.04	46.0	-26.30	AV	N Line	Pass
2	1.432	39.4	10.05	56.0	-16.60	Peak	N Line	Pass
2**	1.432	22.3	10.05	46.0	-23.70	AV	N Line	Pass
3	4.224	44.4	10.11	56.0	-11.60	Peak	N Line	Pass
3**	4.224	40.0	10.11	46.0	-6.00	AV	N Line	Pass
4	6.614	51.6	10.14	60.0	-8.40	Peak	N Line	Pass
4**	6.614	32.6	10.14	50.0	-17.40	AV	N Line	Pass
5	7.040	48.5	10.14	60.0	-11.50	Peak	N Line	Pass
5**	7.040	36.2	10.14	50.0	-13.80	AV	N Line	Pass
6	8.506	43.6	10.16	60.0	-16.40	Peak	N Line	Pass
6**	8.506	31.7	10.16	50.0	-18.30	AV	N Line	Pass

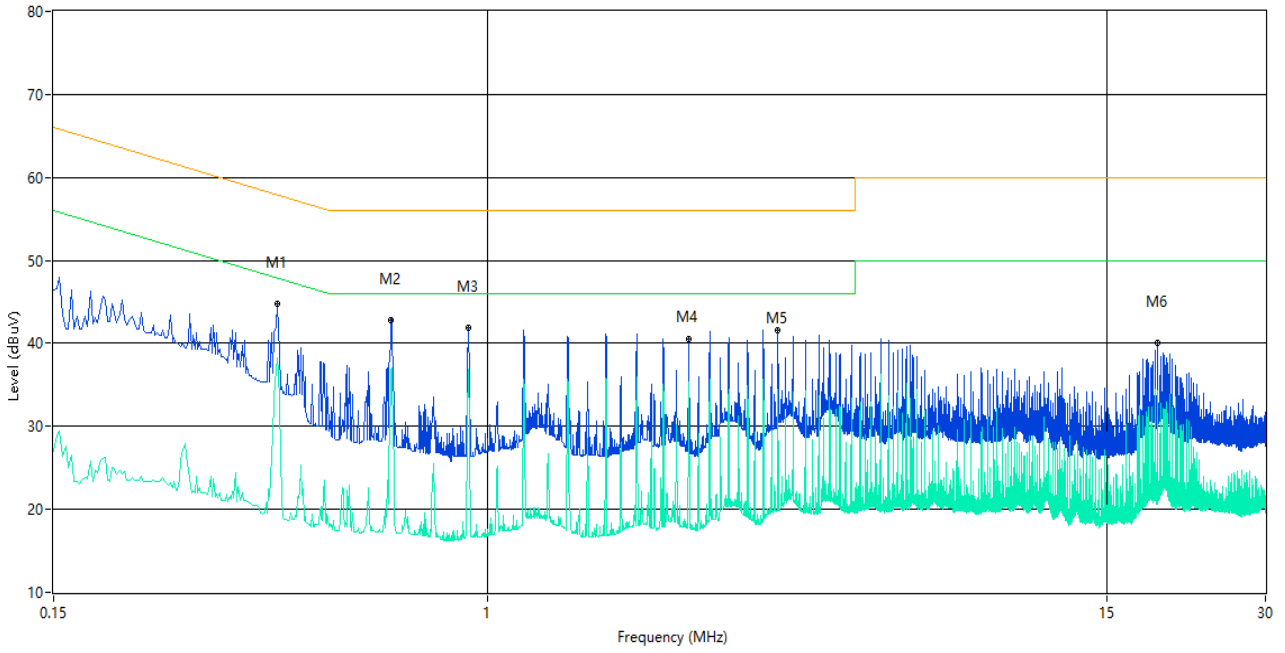
Mode 2 Test Data and Plots

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.574	40.6	10.01	56.0	-15.40	Peak	L Line	Pass
1**	0.574	31.9	10.01	46.0	-14.10	AV	L Line	Pass
2	1.264	39.4	10.05	56.0	-16.60	Peak	L Line	Pass
2**	1.264	30.8	10.05	46.0	-15.20	AV	L Line	Pass
3	2.868	39.8	10.08	56.0	-16.20	Peak	L Line	Pass
3**	2.868	32.5	10.08	46.0	-13.50	AV	L Line	Pass
4	6.080	45.7	10.12	60.0	-14.30	Peak	L Line	Pass
4**	6.080	41.7	10.12	50.0	-8.30	AV	L Line	Pass
5	6.768	49.6	10.13	60.0	-10.40	Peak	L Line	Pass
5**	6.768	44.6	10.13	50.0	-5.40	AV	L Line	Pass
6	6.884	50.6	10.14	60.0	-9.40	Peak	L Line	Pass
6**	6.884	45.7	10.14	50.0	-4.30	AV	L Line	Pass

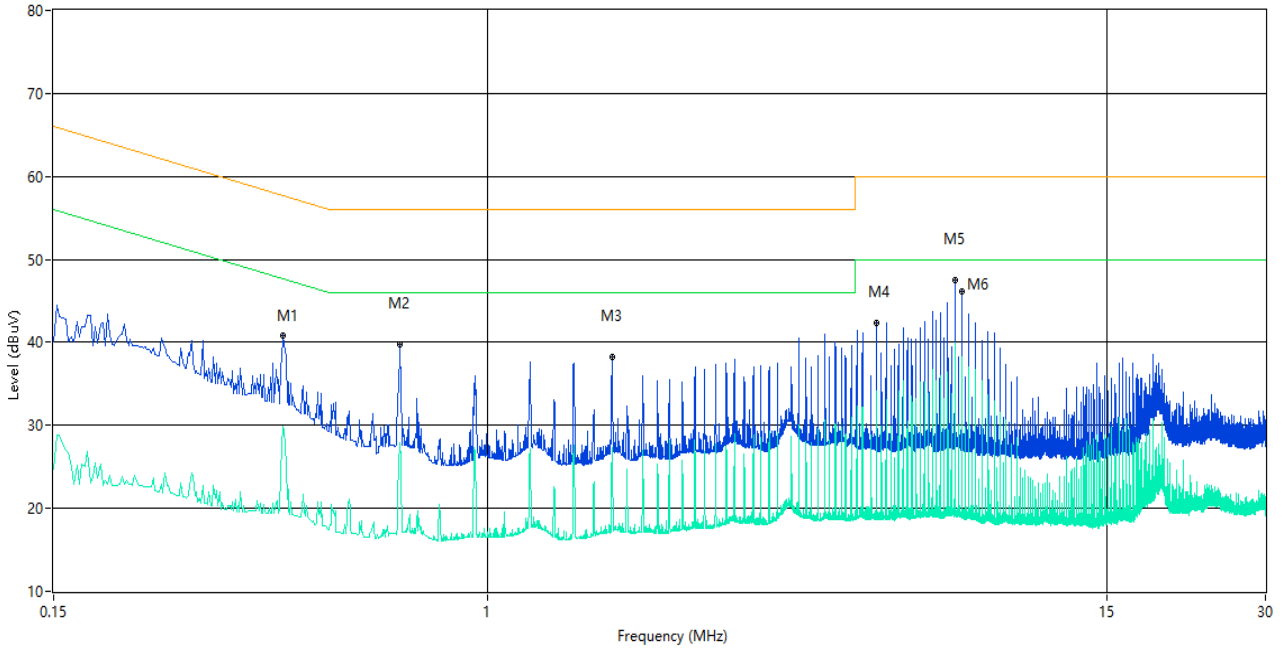
## A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.398	44.7	10.02	57.9	-13.20	Peak	N Line	Pass
1**	0.398	38.2	10.02	47.9	-9.70	AV	N Line	Pass
2	0.656	42.8	10.03	56.0	-13.20	Peak	N Line	Pass
2**	0.656	36.8	10.03	46.0	-9.20	AV	N Line	Pass
3	0.920	41.9	10.03	56.0	-14.10	Peak	N Line	Pass
3**	0.920	36.8	10.03	46.0	-9.20	AV	N Line	Pass
4	2.412	40.5	10.07	56.0	-15.50	Peak	N Line	Pass
4**	2.412	35.4	10.07	46.0	-10.60	AV	N Line	Pass
5	3.558	41.6	10.10	56.0	-14.40	Peak	N Line	Pass
5**	3.558	34.5	10.10	46.0	-11.50	AV	N Line	Pass
6	18.752	40.1	10.24	60.0	-19.90	Peak	N Line	Pass
6**	18.752	34.3	10.24	50.0	-15.70	AV	N Line	Pass

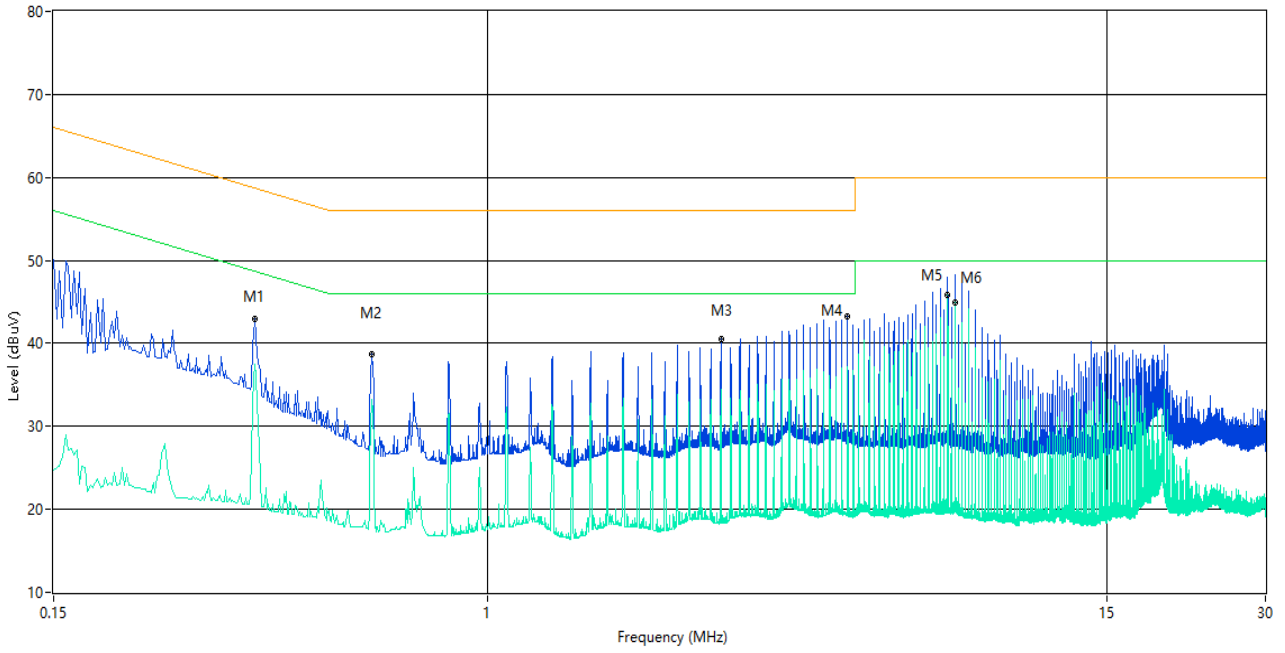
Mode 3 Test Data and Plots

A.2.5 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.408	40.9	10.02	57.7	-16.80	Peak	L Line	Pass
1**	0.408	29.9	10.02	47.7	-17.80	AV	L Line	Pass
2	0.682	39.7	10.03	56.0	-16.30	Peak	L Line	Pass
2**	0.682	28.0	10.03	46.0	-18.00	AV	L Line	Pass
3	1.722	38.3	10.07	56.0	-17.70	Peak	L Line	Pass
3**	1.722	27.1	10.07	46.0	-18.90	AV	L Line	Pass
4	5.474	42.3	10.12	60.0	-17.70	Peak	L Line	Pass
4**	5.474	34.1	10.12	50.0	-15.90	AV	L Line	Pass
5	7.720	47.5	10.15	60.0	-12.50	Peak	L Line	Pass
5**	7.720	39.9	10.15	50.0	-10.10	AV	L Line	Pass
6	7.964	46.1	10.15	60.0	-13.90	Peak	L Line	Pass
6**	7.964	38.3	10.15	50.0	-11.70	AV	L Line	Pass

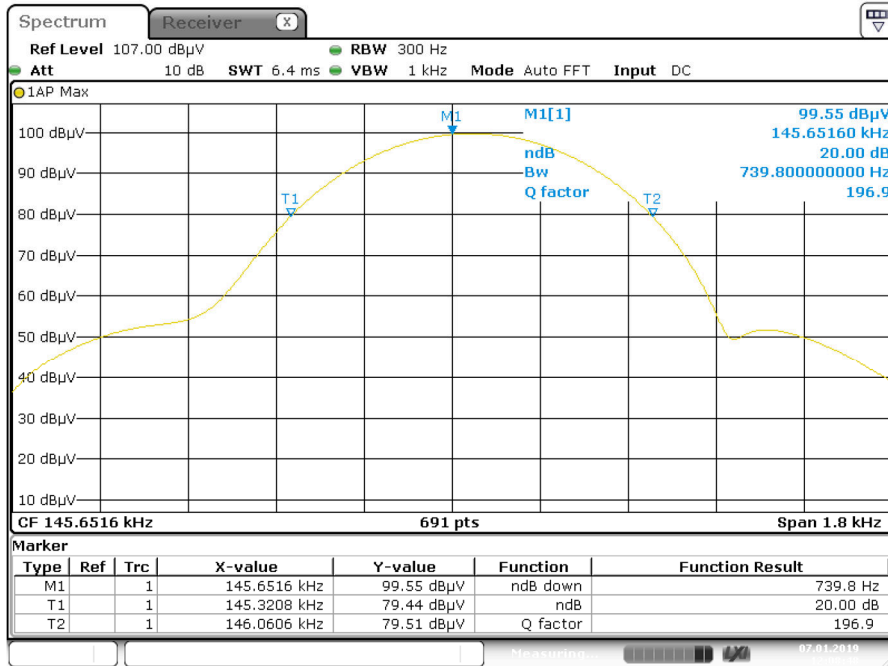
## A.2.6 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.362	42.9	10.01	58.7	-15.80	Peak	N Line	Pass
1**	0.362	37.5	10.01	48.7	-11.20	AV	N Line	Pass
2	0.602	38.7	10.03	56.0	-17.30	Peak	N Line	Pass
2**	0.602	33.2	10.03	46.0	-12.80	AV	N Line	Pass
3	2.776	40.6	10.08	56.0	-15.40	Peak	N Line	Pass
3**	2.776	34.5	10.08	46.0	-11.50	AV	N Line	Pass
4	4.828	43.3	10.11	56.0	-12.70	Peak	N Line	Pass
4**	4.828	37.2	10.11	46.0	-8.80	AV	N Line	Pass
5	7.480	48.0	10.14	60.0	-12.00	Peak	N Line	Pass
5**	7.480	45.9	10.14	50.0	-4.10	AV	N Line	Pass
6	7.724	48.3	10.15	60.0	-11.70	Peak	N Line	Pass
6**	7.724	44.9	10.15	50.0	-5.10	AV	N Line	Pass

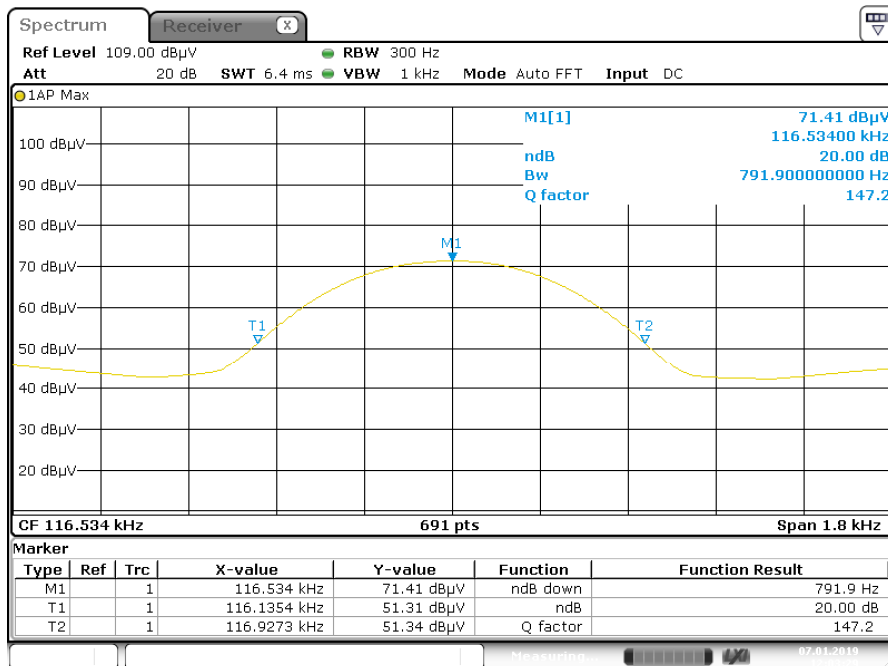
### A.3 20 dB Bandwidth

#### Mode 1 Test Data and Plots



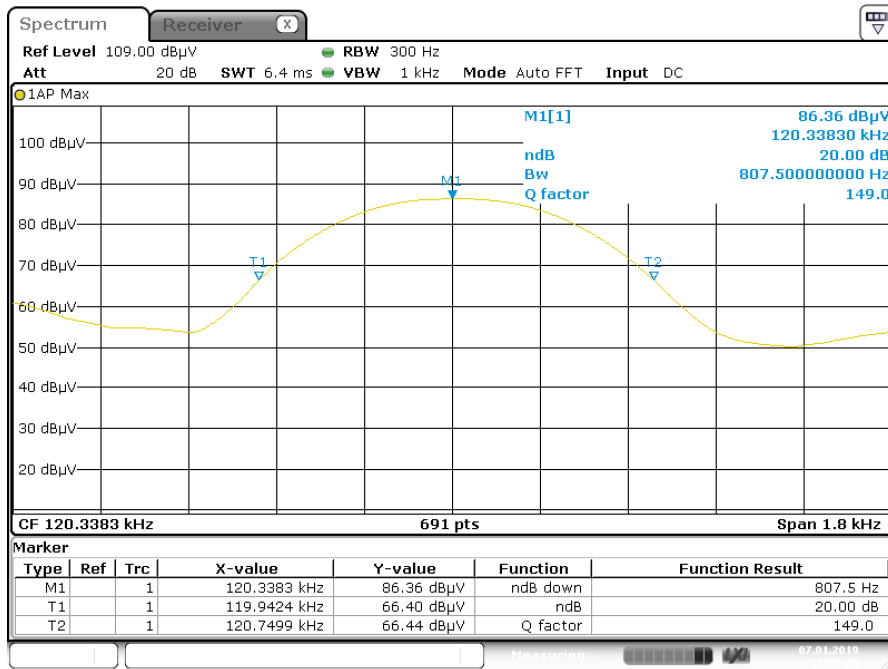
Date: 7.JAN.2019 12:08:48

#### Mode 2 Test Data and Plots



Date: 7.JAN.2019 12:03:29

Mode 3 Test Data and Plots



Date: 7.JAN.2019 11:53:20



## **ANNEX B TEST SETUP PHOTOS**

Please refer the document "BL-SZ18B0417-AR.PDF".

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document "BL-SZ18B0417-AW.PDF".

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document "BL-SZ18B0417-AI.PDF".

--END OF REPORT--