

FCC

EMC

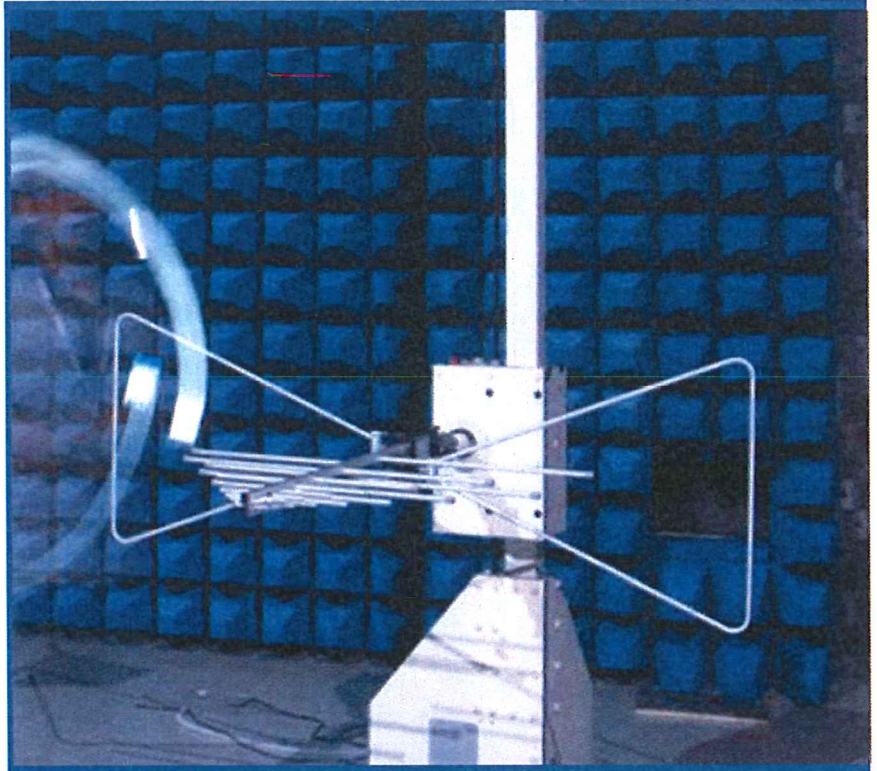
TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Mobile Phone

ISSUED TO
Realme Chongqing Mobile Telecommunications Corp., Ltd.
No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China



Tested by: Liu Zhenxiang
Liu Zhenxiang
Date: Feb. 26, 2021

Approved by: Tolan Tu
Tolan Tu
(Testing Director)
Date: Feb. 26, 2021



Report No.: BL-SZ2110327-401

EUT Name: Mobile Phone

Model Name: RMX3081

Brand Name: realme

Test Standard: 47 CFR Part 15 Subpart B

FCC ID: 2AUYFRMX3081

Test Conclusion: Pass

Test Date: Jan. 15, 2021 ~ Jan. 19, 2021

Date of Issue: Feb. 26, 2021

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Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Feb. 26, 2021</u>	<u>Initial Issue</u>

TABLE OF CONTENTS

1	GENERAL INFORMATION	4
1.1	Identification of the Testing Laboratory	4
1.2	Identification of the Responsible Testing Location	4
1.3	Laboratory Condition	4
1.4	Announce	4
2	PRODUCT INFORMATION	5
2.1	Applicant Information	5
2.2	Manufacturer Information	5
2.3	Factory Information	5
2.4	General Description for Equipment under Test (EUT)	5
2.5	Ancillary Equipment	6
2.6	Technical Information	7
3	SUMMARY OF TEST RESULTS	8
3.1	Test Standards	8
3.2	Verdict	8
3.3	Test Uncertainty	8
4	GENERAL TEST CONFIGURATIONS	9
4.1	Test Environments	9
4.2	Test Equipment List	9
4.3	Test Enclosure list	11
4.4	Test Configurations	12
4.5	Test Setups	13
4.6	Test Conditions	15
5	TEST ITEMS	16
5.1	Emission Tests	16
ANNEX A	TEST RESULTS	18

A.1 Radiated Emission 18

A.2 Conducted Emission 26

ANNEX B TEST SETUP PHOTOS 30

ANNEX C EUT EXTERNAL PHOTOS 30

ANNEX D EUT INTERNAL PHOTOS 30

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
Fax Number	+86 755 6182 4271

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
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 refer to the BALUN report mode v7.0.
- (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.
- (7) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.2 Manufacturer Information

Manufacturer	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.3 Factory Information

Factory	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	RMX3081
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	realme UI V2.0
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery	
	Brand Name	realme
	Model No.	BLP837
	Serial No.	N/A
	Capacitance	Rated: 4400mAh/17.02Wh Typical: 4500mAh/17.41Wh
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
Ancillary Equipment 2	Adapter 1	
	Brand Name	realme
	Model No.	VCA7JAUH
	Serial No.	N/A
	Rated Input 1	100-130V~ 50/60Hz 1.8A
	Rated Output 1	5.0VDC 2A or 10.0VDC 5.0A Max
	Rated Input 2	200-240V~ 50/60Hz 1.8A
	Rated Output 2	5.0VDC 2A or 10.0VDC 6.5A Max (US Plug)
Ancillary Equipment 3	Adapter 2	
	Brand Name	realme
	Model No.	VCA7JDUH
	Serial No.	N/A
	Rated Input 1	100-130V~ 50/60Hz 1.8A
	Rated Output 1	5.0VDC 2A or 10.0VDC 5.0A Max
	Rated Input 2	200-240V~ 50/60Hz 1.8A
Ancillary Equipment 4	Adapter 3	
	Brand Name	realme
	Model No.	VCA7HAUH
	Serial No.	N/A
	Rated Input 1	100-130V ~ 50/60Hz, 1.8 A
	Rated Output 1	5VDC 2A or 10VDC 5A Max
	Rated Input 2	200-240V ~ 50/60Hz, 1.8 A
Ancillary Equipment 5	USB Cable	
	Model No.	DL129
	Length (Approx.)	1.0 m
Note 1: Letter in () means plug type.		

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/900/1800/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/DC-HSDPA/DC-HSUPA/ HSPA+ Band 1/2/4/5/8 4G Network LTE FDD Band 1/2/3/4/5/7/8/12/17/26/28/66 LTE TDD Band 38/41 CA Downlink (DL): CA_1C, CA_2C, CA_3C, CA_7C, CA_38C, CA_41C Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, BDS, Galileo
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The requirement for the following technical information of the EUT was tested in this report:

The Highest Speed of Processor	2.3 GHz
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3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	FCC 47 CFR Part 15 Subpart B (10-1-19 Edition)	Unintentional Radiators
2	ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low- Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

3.2 Verdict

No.	Description	FCC Rule	Test Verdict	Result
1	Radiated Emission	15.109	Pass	Annex A .1
2	Conducted Emission, AC Ports	15.107	Pass	Annex A .2

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)	3.67 dB
Radiated emissions (1 GHz-18 GHz)	3.57 dB
Radiated emissions (18 GHz-40 GHz)	5.16 dB

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

Environment Parameter	Selected Values During Tests			
	Temperature	Voltage	Relative Humidity	Ambient Pressure
Normal Temperature, Normal Voltage (NTNV)	23°C to 25°C	AC 120 V/60 Hz or DC 3.87 V from Battery	50% to 55%	100 kPa to 102 kPa

4.2 Test Equipment List

Radiated Emission Test For Frequency Below 1 GHz (10 m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWA RZ	ESRP	101036	2020.06.09	2021.06.08	<input type="checkbox"/>
Test Antenna- Bi-Log	SCHWARZBECK	VULB 9168	9168-0883	2020.05.11	2022.05.10	<input type="checkbox"/>
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	N/A	2018.08.08	2021.08.07	<input type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input type="checkbox"/>

Radiated Emission Test For Frequency Below 1 GHz (3 m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2020.09.18	2021.09.17	<input checked="" type="checkbox"/>
Test Antenna- Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2021.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.27	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input checked="" type="checkbox"/>

Radiated Emission Test For Frequency 1 GHz-18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2020.09.18	2021.09.17	<input checked="" type="checkbox"/>
Test Antenna- Horn	SCHWARZBECK	BBHA 9120D	9120D-1917	2019.07.02	2021.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.17	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input checked="" type="checkbox"/>

Radiated Emission Test For Frequency Above 18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE & SCHWARZ	FSV40	101544	2020.02.19	2021.02.18	<input checked="" type="checkbox"/>
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.01.05	2023.01.04	<input checked="" type="checkbox"/>
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.17	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input checked="" type="checkbox"/>

Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2020.06.08	2021.06.07	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NSLK 8127	8127-687	2020.06.09	2021.06.08	<input checked="" type="checkbox"/>
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.4m*3.1m*2.8m	N/A	2018.08.16	2021.08.15	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input checked="" type="checkbox"/>

4.3 Test Enclosure list

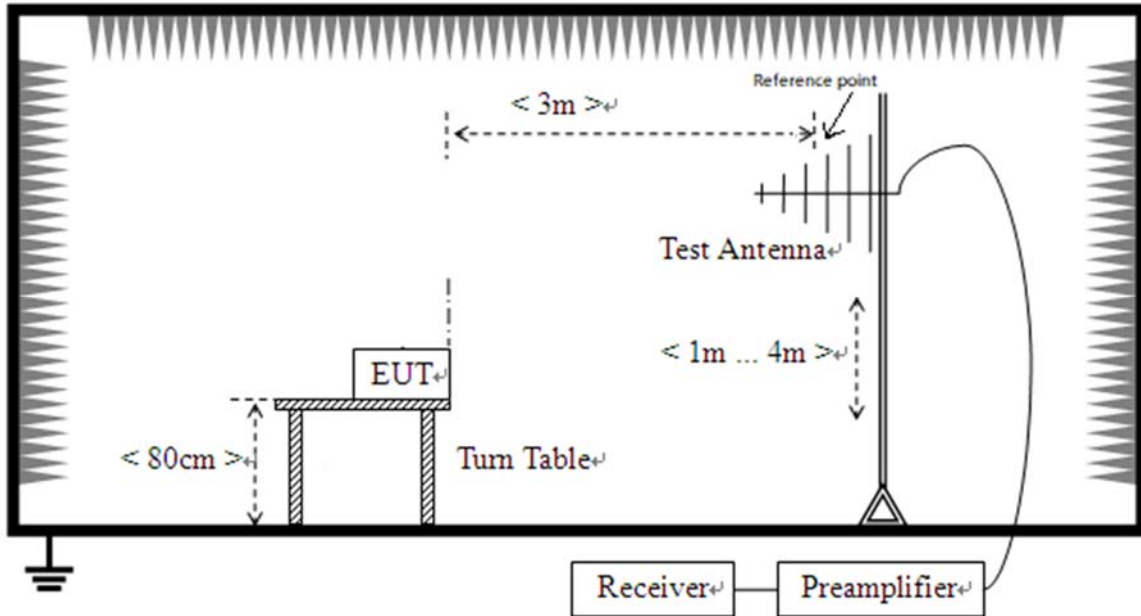
Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	<input type="checkbox"/>
Laptop	Apple	A1465	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Printer	HP	DESKJET 1000	N/A	N/A	N/A	<input type="checkbox"/>
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	<input type="checkbox"/>
Mouse	Logitech	M100	N/A	N/A	N/A	<input type="checkbox"/>
USB disk	Kingston	N/A	N/A	N/A	N/A	<input type="checkbox"/>
TF Card	Kingston	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
VGA Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
HDMI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
DVI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
Coaxial video cable	N/A	N/A	N/A	2.0 m	Shielded with core	<input type="checkbox"/>
iPhone	Apple	A1586	N/A	N/A	N/A	<input type="checkbox"/>
Phone	MI	M4	N/A	N/A	N/A	<input type="checkbox"/>
Bluetooth Earphone	SAMSUNG	Gear Circle	N/A	N/A	N/A	<input type="checkbox"/>
Wireless Communications Test Set	R&S	CMW500	142028	N/A	Cal. Due 2021.06.08	<input type="checkbox"/>
5G Wireless Test Platform	Keysight	UXM E7515B	MY59321617	N/A	Cal. Due 2021.10.19	<input type="checkbox"/>
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	<input type="checkbox"/>
Earphone	N/A	OPPO	N/A	1.1 m	N/A	<input type="checkbox"/>
Car Battery	Camel	55530	N/A	N/A	12 V/55 Ah	<input type="checkbox"/>
Artificial load	N/A	N/A	N/A	N/A	2.5 Ω/100 W	<input type="checkbox"/>
Artificial load	N/A	N/A	N/A	N/A	5 Ω/100 W	<input type="checkbox"/>
Electronic Load	ITECH	IT8511	N/A	N/A	N/A	<input type="checkbox"/>
USB Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
DC Power Supply	ITECH	IT6863A	60001401068 7210006	N/A	N/A	<input type="checkbox"/>
LCD Monitor	SAMSUNG	UA32C4000P	N/A	N/A	N/A	<input type="checkbox"/>
LCD Monitor	Dell	U241HB	N/A	N/A	N/A	<input type="checkbox"/>
RJ45 Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>

4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>The Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
TC02	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
TC03	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop+ Headset + TF Card

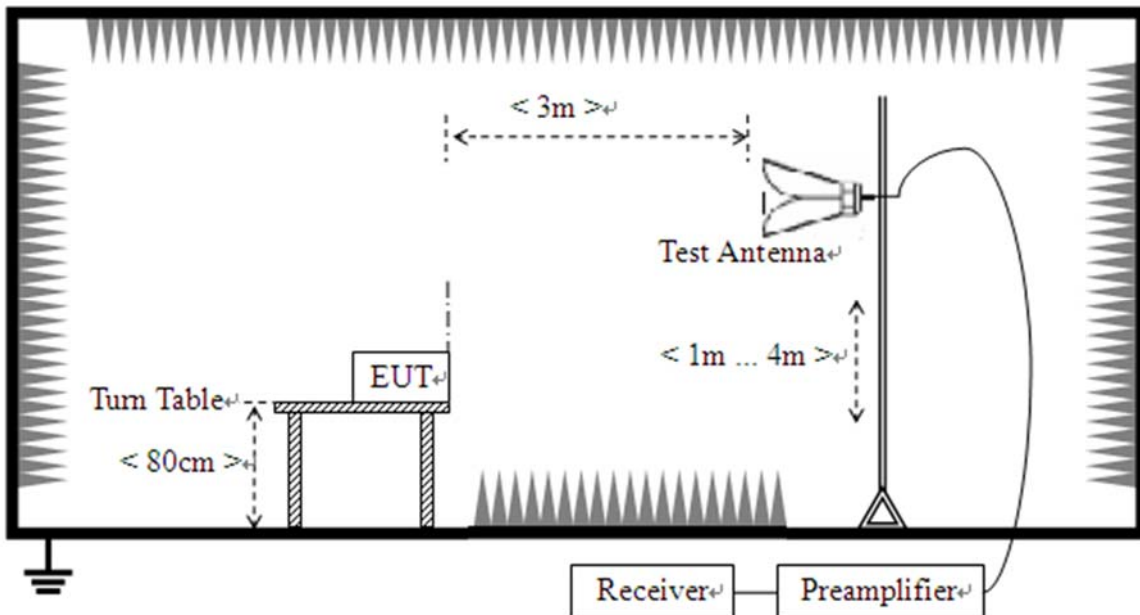
4.5 Test Setups

Test Setup 1



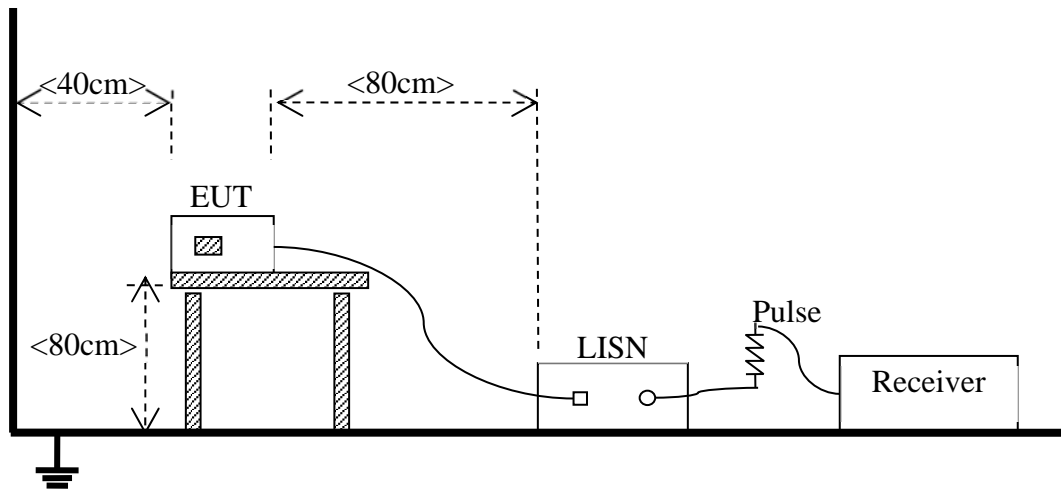
(For Radiated Emission Test (30 MHz-1 GHz))

Test Setup 2



(For Radiated Emission Test (above 1 GHz))

Test Setup 3



(For Conducted Emission, AC Ports Test)

4.6 Test Conditions

Test Case	Test Conditions	
Radiated Emission	Test Env.	NTNV
	Test Setup	Test Setup 1&2
	Test Configuration	TC01~TC03 ^{ote}
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01~TC03 ^{ote}

Note: Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report. The Camera Test Mode is the worst mode in this report.

5 TEST ITEMS

5.1 Emission Tests

5.1.1 Radiated Emission

5.1.1.1 Limit

Frequency range (MHz)	Class B (at 3 m)		Class B (at 10 m)	Class A (at 10 m)	
	Field Strength ($\mu\text{V/m}$)	Field Strength ($\text{dB}\mu\text{V/m}$)	Field Strength ($\text{dB}\mu\text{V/m}$)	Field Strength ($\mu\text{V/m}$)	Field Strength ($\text{dB}\mu\text{V/m}$)
30 - 88	100	40	30	90	39
88 - 216	150	43.5	33.5	150	43.5
216 - 960	200	46	36	210	46.4
Above 960	500	54	44	300	49.5

NOTE:

- 1) Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \cdot \log$ [Field Strength ($\mu\text{V/m}$)].
- 2) In the emission tables above, the tighter limit applies at the band edges.

5.1.1.2 Test Setup

Refer to 4.5 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 ($\text{dB}\mu\text{V/m}$) = Reading ($\text{dB}\mu\text{V}$) + 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)	Class A	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15 - 0.50	79	66
0.50 - 30	73	60

Frequency range (MHz)	Class B	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- 1) The lower limit shall apply at the band edges.
- 2) 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 4.5 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 Ω /50 μ 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:

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

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

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

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

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

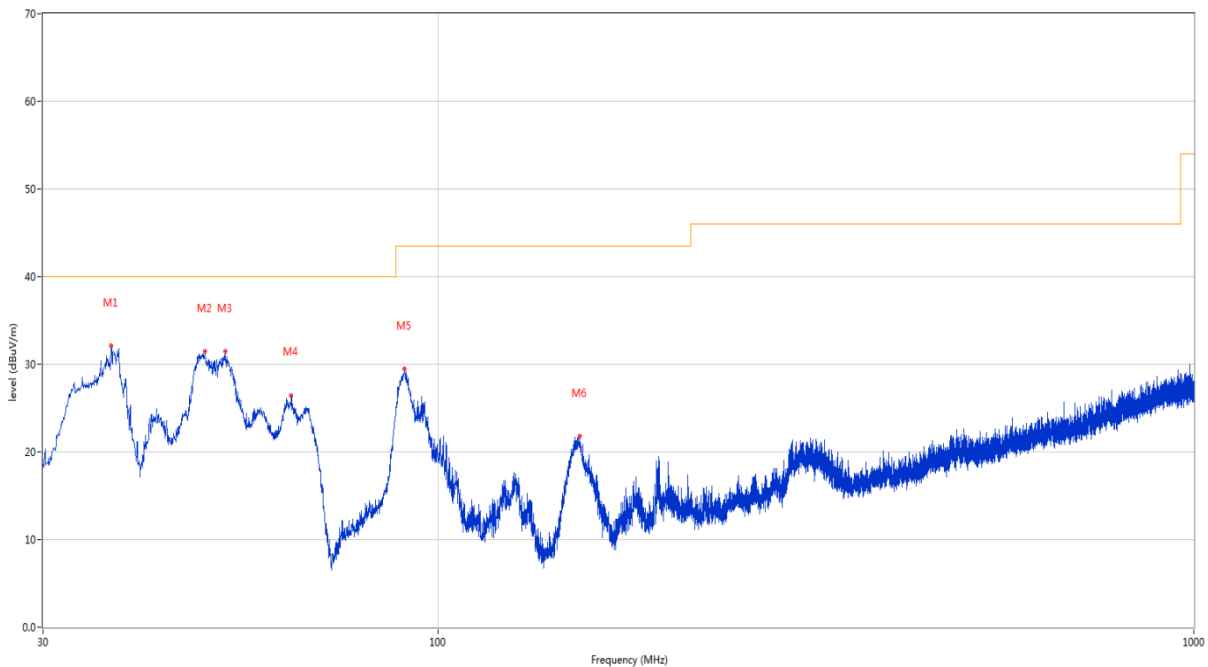
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The Radiated Emission from 18G-40G is noise only, do not show on the report.

Test Data and Plots

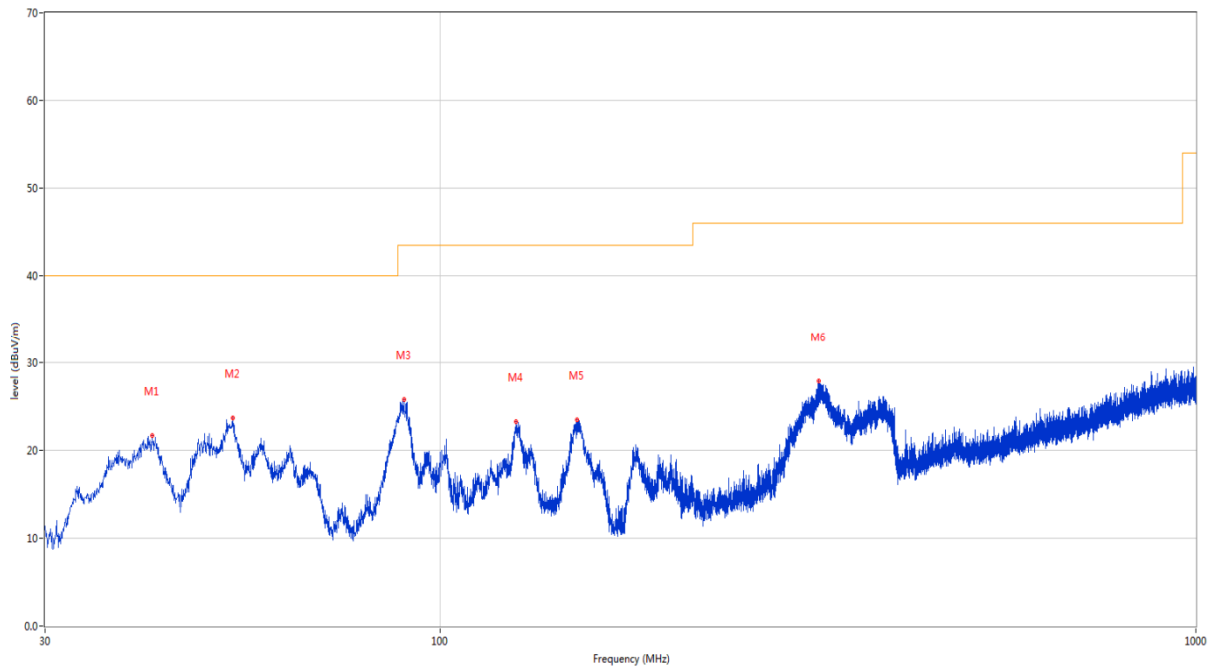
The Camera Test Mode

A.1.1 Test Antenna Vertical, 30 MHz – 1 GHz



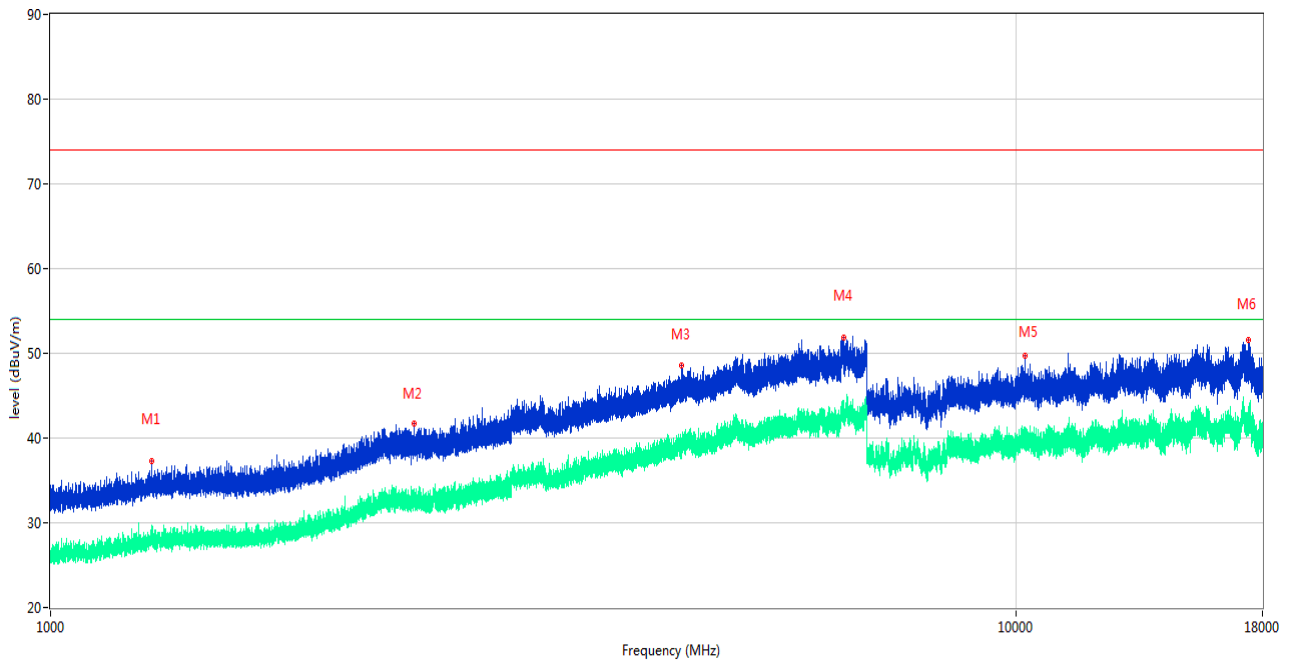
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	36.935	32.09	-24.64	40.0	-7.91	Peak	27.80	100	Vertical	Pass
2	49.157	31.45	-22.40	40.0	-8.55	Peak	273.10	100	Vertical	Pass
3	52.310	31.44	-23.12	40.0	-8.56	Peak	298.50	100	Vertical	Pass
4	63.901	26.40	-24.91	40.0	-13.60	Peak	273.10	100	Vertical	Pass
5	90.237	29.46	-26.06	43.5	-14.04	Peak	264.70	100	Vertical	Pass
6	153.820	21.81	-27.47	43.5	-21.69	Peak	357.90	100	Vertical	Pass

A.1.2 Test Antenna Horizontal, 30 MHz – 1 GHz



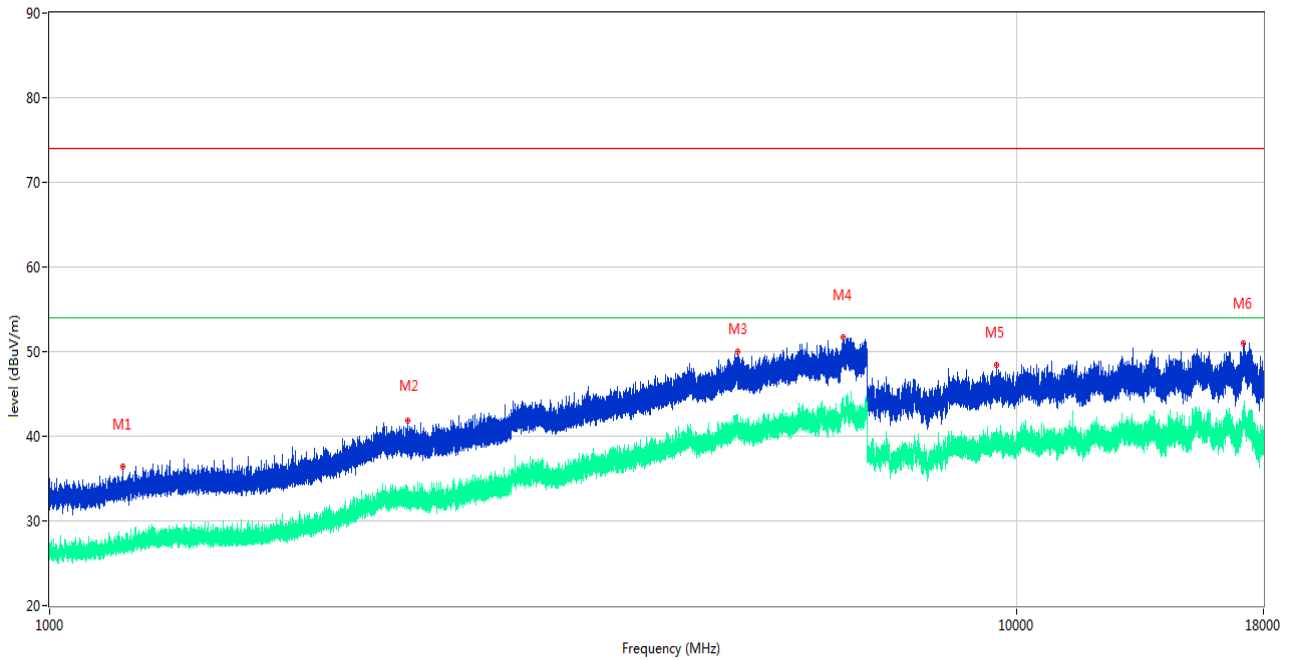
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	41.543	21.70	-23.61	40.0	-18.30	Peak	123.70	200	Horizontal	Pass
2	53.135	23.70	-22.98	40.0	-16.30	Peak	179.50	100	Horizontal	Pass
3	89.558	25.79	-26.26	43.5	-17.71	Peak	246.20	200	Horizontal	Pass
4	126.078	23.29	-26.65	43.5	-20.21	Peak	360.00	200	Horizontal	Pass
5	151.735	23.46	-27.99	43.5	-20.04	Peak	0.60	200	Horizontal	Pass
6	316.829	27.93	-20.93	46.0	-18.07	Peak	327.10	100	Horizontal	Pass

A.1.3 Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1272.300	37.30	-17.34	74.0	-36.70	Peak	203.00	150	Vertical	Pass
1**	1272.300	28.00	-17.34	54.0	-26.00	AV	203.00	150	Vertical	Pass
2	2379.600	41.68	-12.54	74.0	-32.32	Peak	163.00	150	Vertical	Pass
2**	2379.600	32.98	-12.54	54.0	-21.02	AV	163.00	150	Vertical	Pass
3	4498.800	48.51	-4.43	74.0	-25.49	Peak	211.00	150	Vertical	Pass
3**	4498.800	38.95	-4.43	54.0	-15.05	AV	211.00	150	Vertical	Pass
4	6630.000	51.89	-0.28	74.0	-22.11	Peak	110.00	150	Vertical	Pass
4**	6630.000	43.57	-0.28	54.0	-10.43	AV	110.00	150	Vertical	Pass
5	10209.651	49.77	0.24	74.0	-24.23	Peak	328.00	150	Vertical	Pass
5**	10209.651	40.18	0.24	54.0	-13.82	AV	328.00	150	Vertical	Pass
6	17422.762	51.57	3.68	74.0	-22.43	Peak	62.00	150	Vertical	Pass
6**	17422.762	42.73	3.68	54.0	-11.27	AV	62.00	150	Vertical	Pass

A.1.4 Test Antenna Horizontal, 1 GHz – 18 GHz

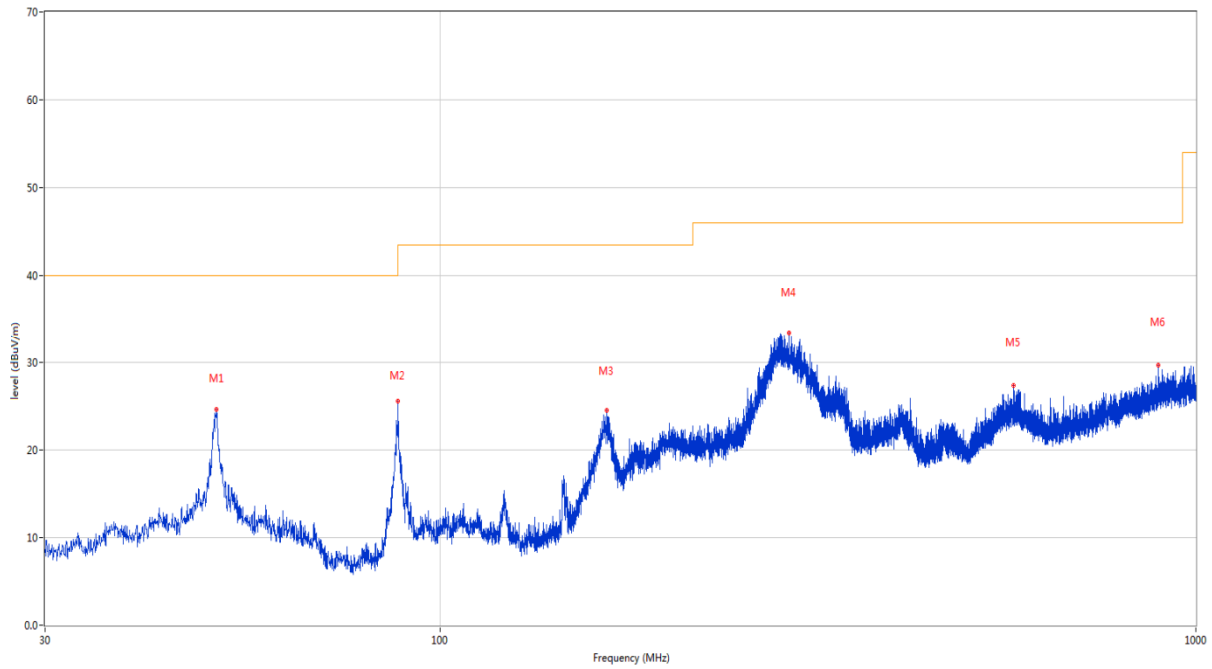


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1191.200	36.44	-17.87	74.0	-37.56	Peak	122.00	150	Horizontal	Pass
1**	1191.200	27.64	-17.87	54.0	-26.36	AV	122.00	150	Horizontal	Pass
2	2345.700	41.81	-12.65	74.0	-32.19	Peak	360.00	150	Horizontal	Pass
2**	2345.700	32.55	-12.65	54.0	-21.45	AV	360.00	150	Horizontal	Pass
3	5152.400	49.99	-2.81	74.0	-24.01	Peak	230.00	150	Horizontal	Pass
3**	5152.400	41.08	-2.81	54.0	-12.92	AV	230.00	150	Horizontal	Pass
4	6609.800	51.74	0.16	74.0	-22.26	Peak	126.00	150	Horizontal	Pass
4**	6609.800	43.80	0.16	54.0	-10.20	AV	126.00	150	Horizontal	Pass
5	9536.037	48.42	-0.34	74.0	-25.58	Peak	81.00	150	Horizontal	Pass
5**	9536.037	38.42	-0.34	54.0	-15.58	AV	81.00	150	Horizontal	Pass
6	17155.801	50.96	2.14	74.0	-23.04	Peak	161.00	150	Horizontal	Pass
6**	17155.801	42.51	2.14	54.0	-11.49	AV	161.00	150	Horizontal	Pass

Test Data and Plots

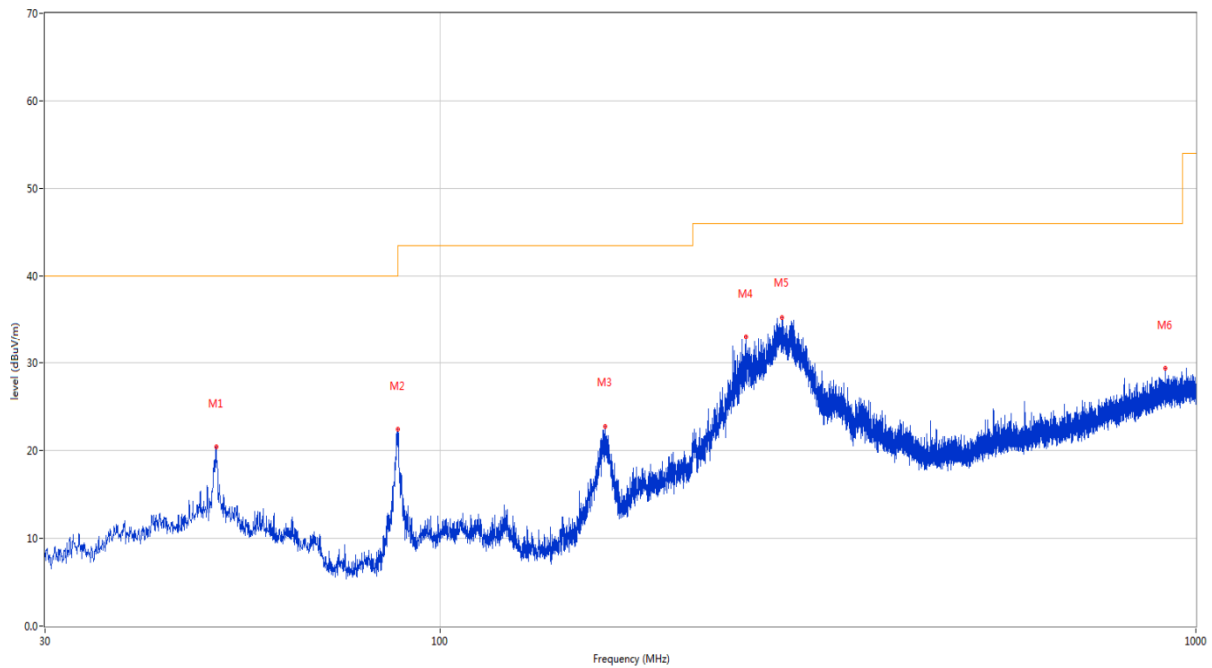
The USB Test Mode

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



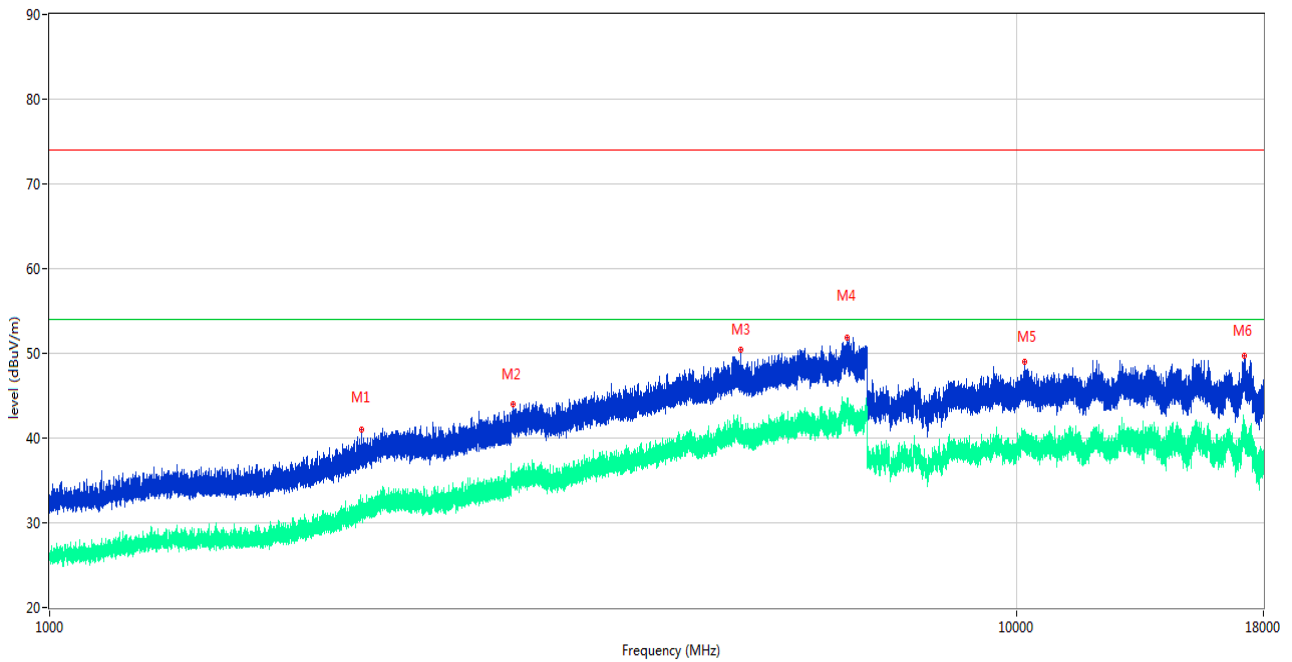
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.612	24.60	-23.04	40.0	-15.40	Peak	103.00	100	Vertical	Pass
2	87.909	25.61	-26.50	40.0	-14.39	Peak	132.60	100	Vertical	Pass
3	166.091	24.49	-26.72	43.5	-19.01	Peak	240.10	100	Vertical	Pass
4	289.718	33.51	-21.83	46.0	-12.49	Peak	57.30	200	Vertical	Pass
5	573.540	27.34	-14.84	46.0	-18.66	Peak	26.70	100	Vertical	Pass
6	890.972	29.67	-10.13	46.0	-16.33	Peak	158.80	100	Vertical	Pass

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



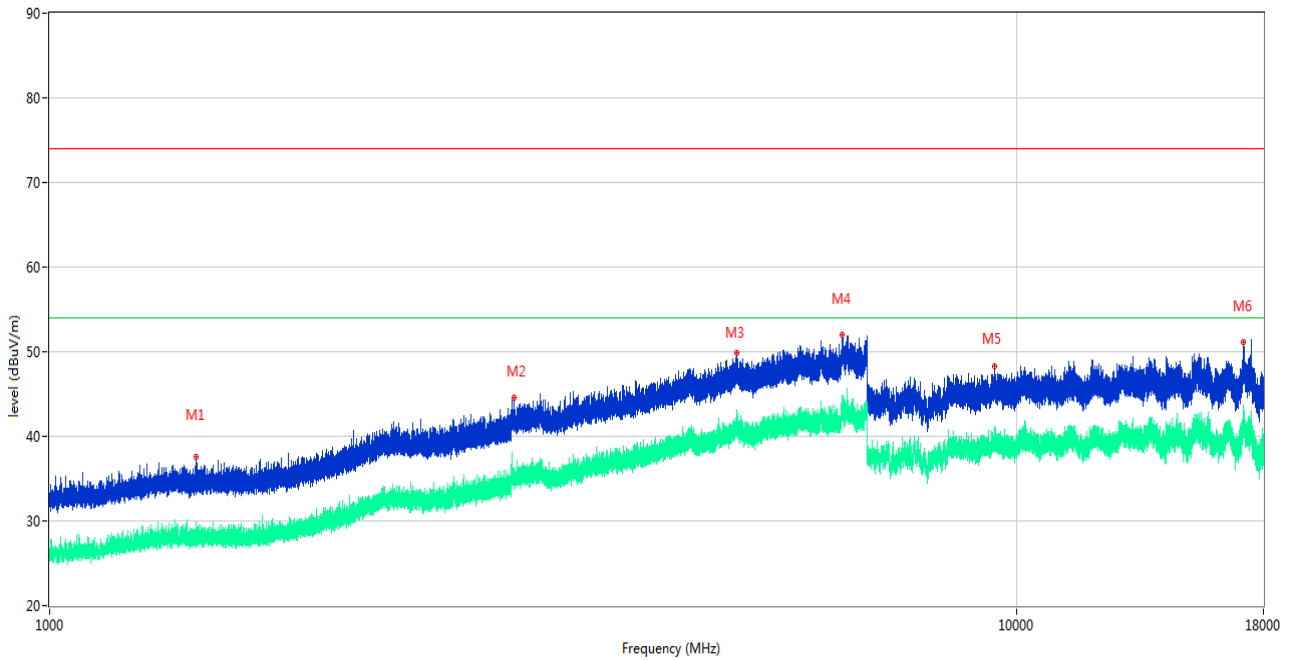
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.516	20.40	-23.00	40.0	-19.60	Peak	0.00	200	Horizontal	Pass
2	87.812	22.43	-26.51	40.0	-17.57	Peak	91.10	200	Horizontal	Pass
3	165.315	22.75	-26.75	43.5	-20.75	Peak	258.30	200	Horizontal	Pass
4	253.682	33.00	-22.69	46.0	-13.00	Peak	140.60	100	Horizontal	Pass
5	283.364	35.28	-21.89	46.0	-10.72	Peak	128.10	100	Horizontal	Pass
6	911.827	29.38	-10.24	46.0	-16.62	Peak	61.60	200	Horizontal	Pass

A.1.7 Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2101.000	40.99	-14.25	74.0	-33.01	Peak	206.00	150	Vertical	Pass
1**	2101.000	31.27	-14.25	54.0	-22.73	AV	206.00	150	Vertical	Pass
2	3011.600	43.98	-8.29	74.0	-30.02	Peak	85.00	150	Vertical	Pass
2**	3011.600	34.81	-8.29	54.0	-19.19	AV	85.00	150	Vertical	Pass
3	5185.600	50.43	-2.84	74.0	-23.57	Peak	113.00	150	Vertical	Pass
3**	5185.600	40.53	-2.84	54.0	-13.47	AV	113.00	150	Vertical	Pass
4	6683.000	51.82	-0.41	74.0	-22.18	Peak	185.00	150	Vertical	Pass
4**	6683.000	43.86	-0.41	54.0	-10.14	AV	185.00	150	Vertical	Pass
5	10205.050	49.01	0.33	74.0	-24.99	Peak	236.00	150	Vertical	Pass
5**	10205.050	39.98	0.33	54.0	-14.02	AV	236.00	150	Vertical	Pass
6	17192.550	49.68	2.26	74.0	-24.32	Peak	307.00	150	Vertical	Pass
6**	17192.550	40.57	2.26	54.0	-13.43	AV	307.00	150	Vertical	Pass

A.1.8 Test Antenna Horizontal, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1418.700	37.53	-17.49	74.0	-36.47	Peak	276.00	150	Horizontal	Pass
1**	1418.700	28.36	-17.49	54.0	-25.64	AV	276.00	150	Horizontal	Pass
2	3020.400	44.58	-8.48	74.0	-29.42	Peak	67.00	150	Horizontal	Pass
2**	3020.400	35.23	-8.48	54.0	-18.77	AV	67.00	150	Horizontal	Pass
3	5135.000	49.87	-2.32	74.0	-24.13	Peak	138.00	150	Horizontal	Pass
3**	5135.000	41.19	-2.32	54.0	-12.81	AV	138.00	150	Horizontal	Pass
4	6601.800	51.97	-0.22	74.0	-22.03	Peak	10.00	150	Horizontal	Pass
4**	6601.800	44.41	-0.22	54.0	-9.59	AV	10.00	150	Horizontal	Pass
5	9500.675	48.24	-0.50	74.0	-25.76	Peak	18.00	150	Horizontal	Pass
5**	9500.675	39.47	-0.50	54.0	-14.53	AV	18.00	150	Horizontal	Pass
6	17176.537	51.08	2.55	74.0	-22.92	Peak	332.00	150	Horizontal	Pass
6**	17176.537	41.32	2.55	54.0	-12.68	AV	332.00	150	Horizontal	Pass

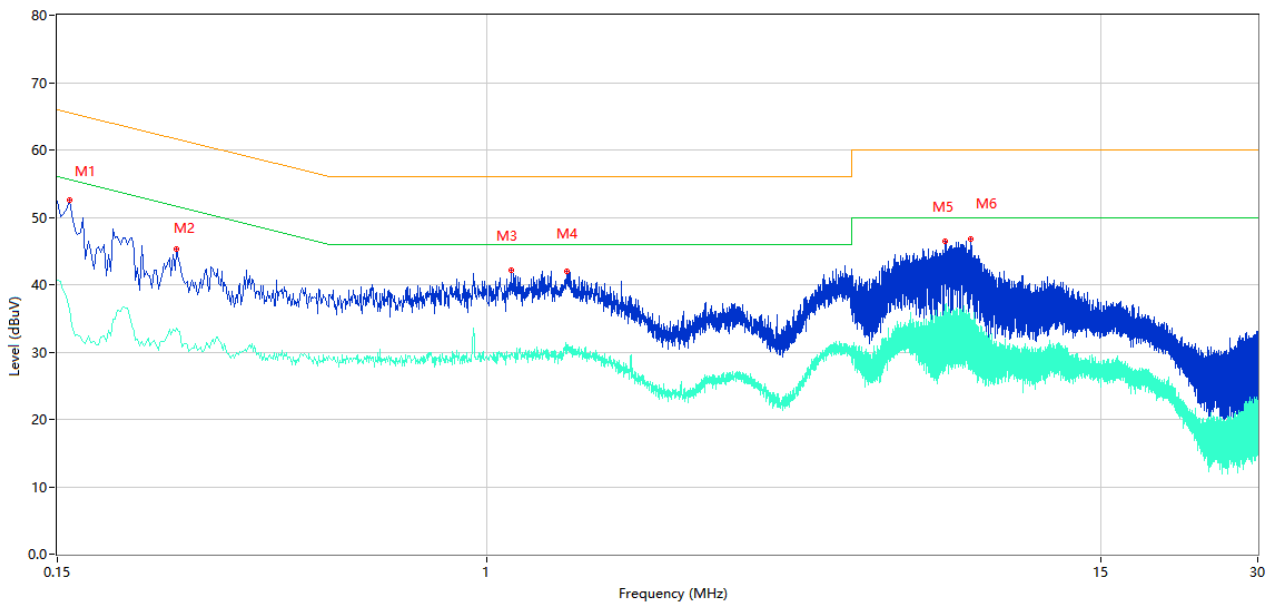
A.2 Conducted Emission

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.

Test Data and Plots

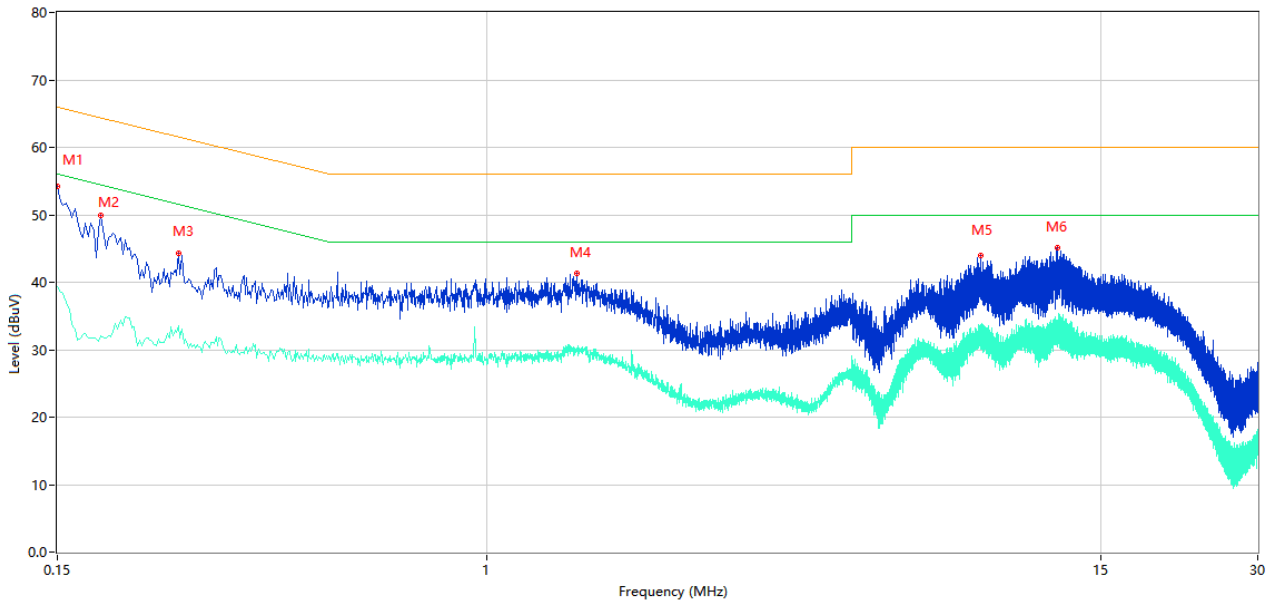
The Camera Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.158	52.64	10.40	65.57	-12.93	Peak	L	Pass
1**	0.158	36.42	10.40	55.57	-19.15	AV	L	Pass
2	0.254	45.29	10.34	61.63	-16.34	Peak	L	Pass
2**	0.254	33.61	10.34	51.63	-18.02	AV	L	Pass
3	1.110	42.07	10.24	56.00	-13.93	Peak	L	Pass
3**	1.110	29.91	10.24	46.00	-16.09	AV	L	Pass
4	1.424	41.93	10.25	56.00	-14.07	Peak	L	Pass
4**	1.424	31.00	10.25	46.00	-15.00	AV	L	Pass
5	7.566	46.39	10.34	60.00	-13.61	Peak	L	Pass
5**	7.566	35.13	10.34	50.00	-14.87	AV	L	Pass
6	8.450	46.73	10.35	60.00	-13.27	Peak	L	Pass
6**	8.450	33.63	10.35	50.00	-16.37	AV	L	Pass

A.2.2 N Phase

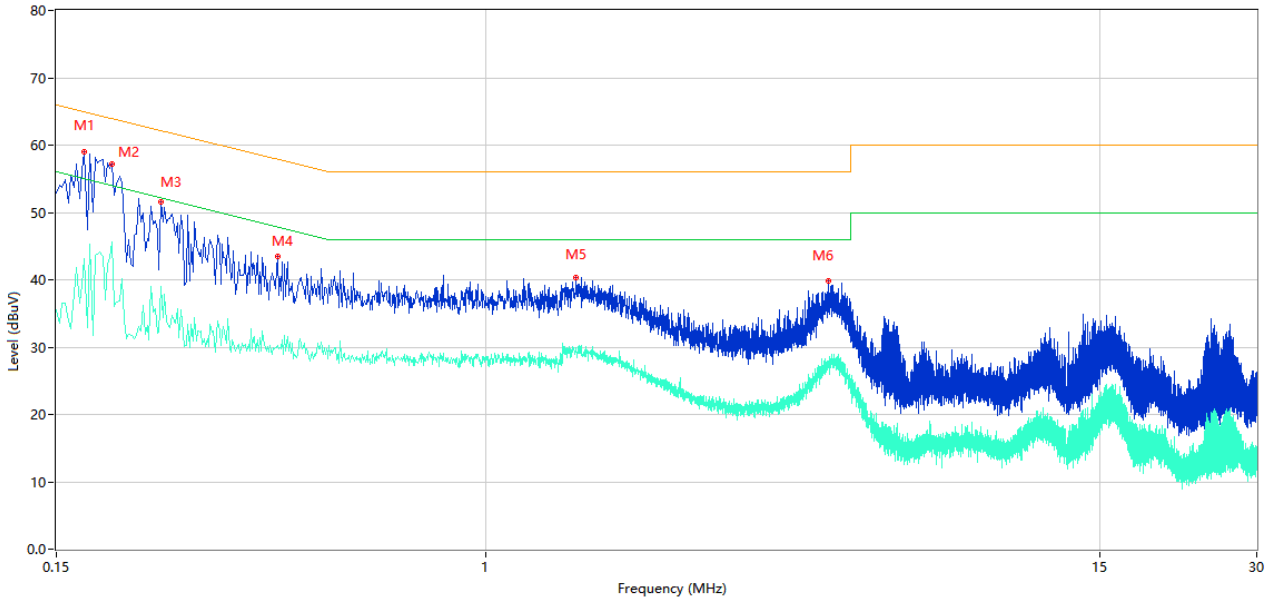


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	54.18	10.41	66.00	-11.82	Peak	N	Pass
1**	0.150	39.31	10.41	56.00	-16.69	AV	N	Pass
2	0.182	49.97	10.39	64.39	-14.42	Peak	N	Pass
2**	0.182	32.01	10.39	54.39	-22.38	AV	N	Pass
3	0.256	44.37	10.34	61.56	-17.19	Peak	N	Pass
3**	0.256	33.60	10.34	51.56	-17.96	AV	N	Pass
4	1.488	41.37	10.25	56.00	-14.63	Peak	N	Pass
4**	1.488	30.17	10.25	46.00	-15.83	AV	N	Pass
5	8.838	43.94	10.37	60.00	-16.06	Peak	N	Pass
5**	8.838	32.71	10.37	50.00	-17.29	AV	N	Pass
6	12.382	45.11	10.39	60.00	-14.89	Peak	N	Pass
6**	12.382	34.34	10.39	50.00	-15.66	AV	N	Pass

Test Data and Plots

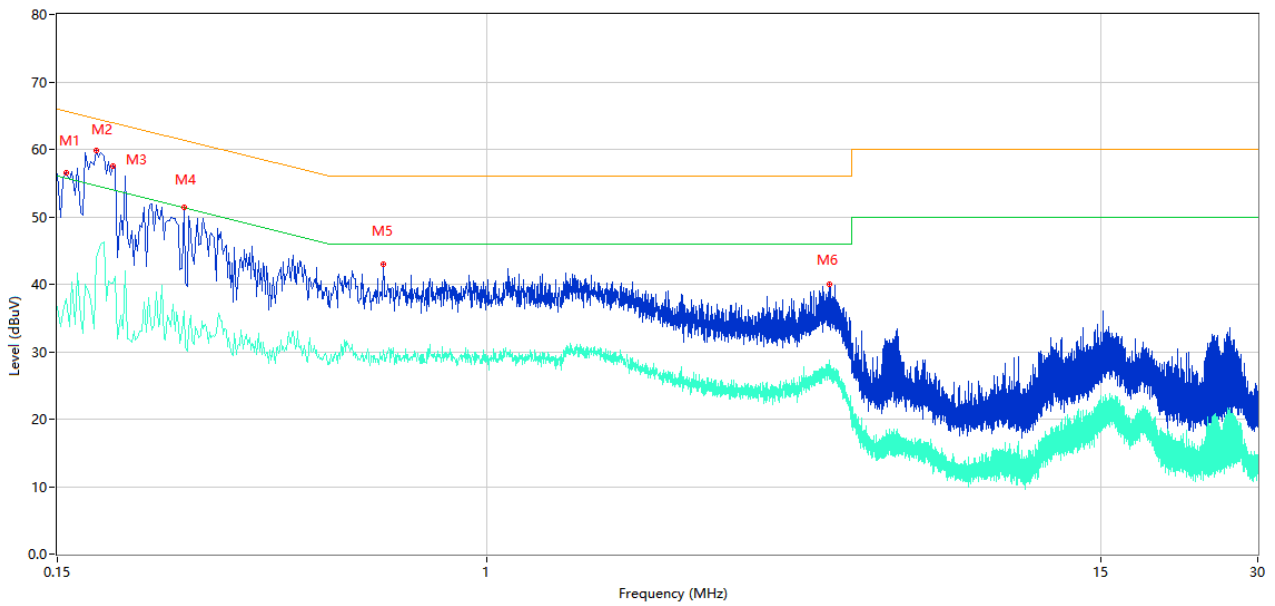
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.170	58.95	10.40	64.96	-6.01	Peak	L	Pass
1**	0.170	43.08	10.40	54.96	-11.88	AV	L	Pass
2	0.192	57.27	10.38	63.95	-6.68	Peak	L	Pass
2**	0.192	45.59	10.38	53.95	-8.36	AV	L	Pass
3	0.238	51.62	10.35	62.17	-10.55	Peak	L	Pass
3**	0.238	39.02	10.35	52.17	-13.15	AV	L	Pass
4	0.398	43.41	10.31	57.90	-14.49	Peak	L	Pass
4**	0.398	30.26	10.31	47.90	-17.64	AV	L	Pass
5	1.488	40.30	10.25	56.00	-15.70	Peak	L	Pass
5**	1.488	29.55	10.25	46.00	-16.45	AV	L	Pass
6	4.538	39.78	10.31	56.00	-16.22	Peak	L	Pass
6**	4.538	27.95	10.31	46.00	-18.05	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	56.50	10.41	65.67	-9.17	Peak	N	Pass
1**	0.156	37.89	10.41	55.67	-17.78	AV	N	Pass
2	0.178	59.60	10.39	64.58	-4.98	Peak	N	N/A
2*	0.178	56.77	10.39	64.58	-7.81	QP	N	Pass
2**	0.178	44.05	10.39	54.58	-10.53	AV	N	Pass
3	0.192	57.60	10.38	63.95	-6.35	Peak	N	Pass
3**	0.192	40.24	10.38	53.95	-13.71	AV	N	Pass
4	0.262	51.43	10.34	61.37	-9.94	Peak	N	Pass
4**	0.262	36.07	10.34	51.37	-15.30	AV	N	Pass
5	0.632	42.94	10.27	56.00	-13.06	Peak	N	Pass
5**	0.632	30.19	10.27	46.00	-15.81	AV	N	Pass
6	4.526	39.98	10.31	56.00	-16.02	Peak	N	Pass
6**	4.526	26.79	10.31	46.00	-19.21	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-SZ2110327-AE.PDF".

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ2110327-AW.PDF".

ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL-SZ2110327-AI.PDF".

--END OF REPORT--