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EMC

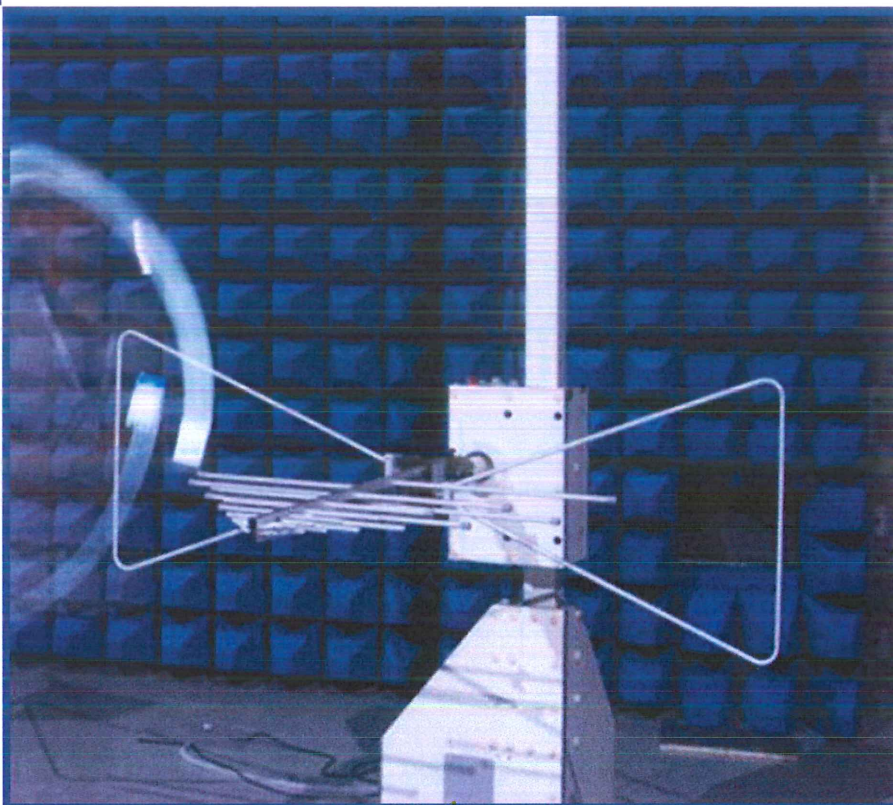
TEST REPORT

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: MAR. 20, 2021

Approved by: Liao Jianming

Liao Jianming
(Technical Director)

Date: MAR. 20, 2021

Report No.: BL-SZ2120324-401

EUT Name: Mobile Phone

Model Name: RMX3241

Brand Name: realme

Test Standard: 47 CFR Part 15 Subpart B

FCC ID: 2AUYFRMX3241

Test Conclusion: Pass

Test Date: Feb. 22, 2021 ~ Feb. 23, 2021

Date of Issue: Mar. 30, 2021

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Mar. 25, 2021</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Mar. 30, 2021</u>	<u>Updated the sections 4.3, 4.4 and 4.6</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	8
3	SUMMARY OF TEST RESULTS	9
3.1	Test Standards	9
3.2	Verdict	9
3.3	Test Uncertainty	9
4	GENERAL TEST CONFIGURATIONS	10
4.1	Test Environments	10
4.2	Test Equipment List	10
4.3	Test Enclosure list	12
4.4	Test Configurations	13
4.5	Test Setups	14
4.6	Test Conditions	16
5	TEST ITEMS	17
5.1	Emission Tests	17
ANNEX A	TEST RESULTS	19

A.1	Radiated Emission	19
A.2	Conducted Emission	27
ANNEX B	TEST SETUP PHOTOS	31
ANNEX C	EUT EXTERNAL PHOTOS	31
ANNEX D	EUT INTERNAL PHOTOS	31

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
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.
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	RMX3241
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	2AA774
Software Version	realme UI1.0
Dimensions (Approx.)	162.5*74.8*8.5 mm
Weight (Approx.)	185g

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery 1	
	Brand Name	realme
	Model No.	BLP803
	Serial No.	N/A
	Capacitance	Rated: 4890mAh/18.92Wh Typical: 5000mAh/19.35Wh
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
	Manufacturer	Sunwoda Electronic CO., LTD.
Ancillary Equipment 2	Li-Polymer Battery (alternative) 2	
	Brand Name	realme
	Model No.	BLP803
	Serial No.	N/A
	Capacitance	Rated: 4890mAh/18.92Wh Typical: 5000mAh/19.35Wh
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
	Manufacturer	PT. BATTERY TECHNOLOGY INDONESIA
Ancillary Equipment 3	Li-Polymer Battery (alternative) 3	
	Brand Name	realme
	Model No.	BLP803
	Serial No.	N/A
	Capacitance	Rated: 4890mAh/18.92Wh Typical: 5000mAh/19.35Wh
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
	Manufacturer	Huizhou Desay Battery Co., Ltd
Ancillary Equipment 4	Power Supply Unit(alternative) 2	
	Brand Name	realme
	Model No.	OP92JAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.5A
	Rated Output	5VDC 2A or 9VDC 2A (US Plug)
Ancillary Equipment 5	Power Supply Unit(alternative) 6	
	Brand Name	realme
	Model No.	OP92KAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.5A
	Rated Output	5VDC 2A or 9VDC 2A (US Plug)
Ancillary Equipment 6	Power Supply Unit(alternative) 12	
	Brand Name	realme
	Model No.	OP92CAUH
	Serial No.	N/A

	Rated Input	100-240VAC 50/60Hz 0.5A
	Rated Output	5VDC 2A or 9VDC 2A (US Plug)
Ancillary Equipment 7	USB Cable	
	Model No.	DL143
	Length (Approx.)	1.0 m

Note 1: Letter in () means plug type.

Note 2: All adapters are tested, only the worst data of OP92KAUH (SU Plug 100-240VAC) shown in this report.

Note 3: All batteries are tested, only the worst data of BLP803 (Sunwoda) shown in this report.

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/HSPA+ Band 2/4/5 4G Network LTE FDD Band 2/4/5/7/12/17/26/66 LTE TDD Band 38/41 LTE CA Uplink (UL): CA_7C, CA_38C, CA_41C 5G Network SA: NR n5/n7/n38/n41 Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40), 802.11ac(VHT20/40) 5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, BDS, NFC
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The requirement for the following technical information of the EUT was tested in this report:

The Highest Speed of Processor	1.3 GHz
About the Product	The equipment is mobile Phone, intended for used with information technology equipment.

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	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&SCHWARZ	ESRP	101036	2020.06.09	2021.06.08	☐
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-0883	2020.05.11	2022.05.10	☐
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	N/A	2018.08.08	2021.08.07	☐
Test Software	BALUN	BL410_E	V19.918	--	--	☐

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	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2021.07.01	☒
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.27	☒
Test Software	BALUN	BL410_E	V19.918	--	--	☒

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	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1917	2019.07.02	2021.07.01	☒
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.17	☒
Test Software	BALUN	BL410_E	V19.918	--	--	☒

Radiated Emission Test For Frequency Above 18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE & SCHWARZ	FSV40	101544	2021.02.18	2022.02.17	☒
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.01.05	2023.01.04	☒
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.17	☒
Test Software	BALUN	BL410_E	V19.918	--	--	☒

Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2020.06.08	2021.06.07	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2020.06.09	2021.06.08	☒
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 Enclosure list

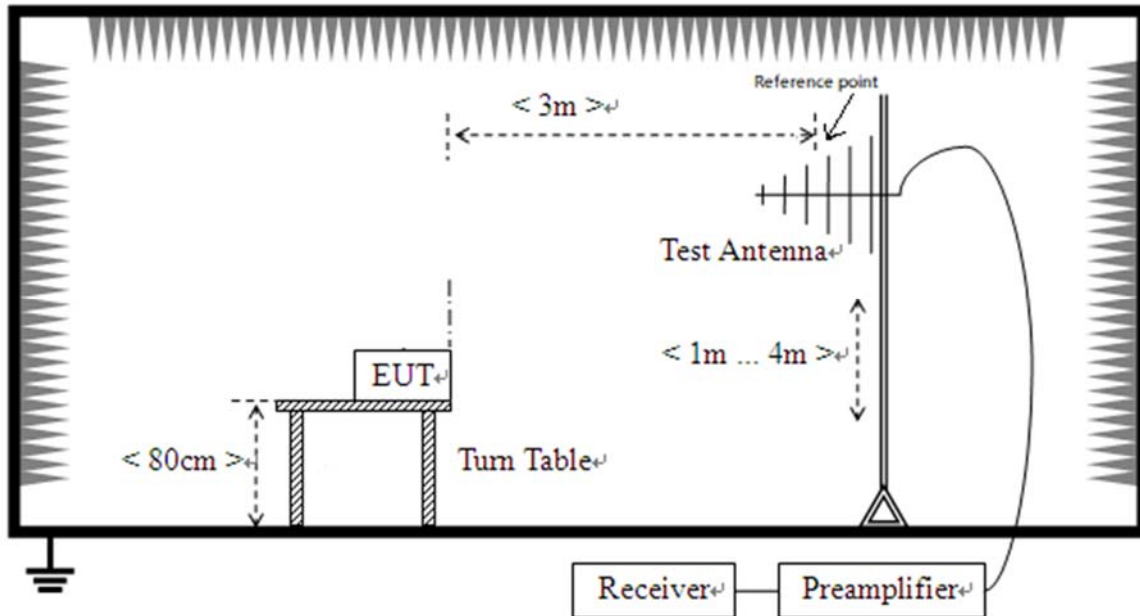
Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	☐
Laptop	Apple	A1465	N/A	N/A	N/A	☒
Printer	HP	DESKJET 1000	N/A	N/A	N/A	☐
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	☐
Mouse	Logitech	M100	N/A	N/A	N/A	☐
USB disk	Kingston	N/A	N/A	N/A	N/A	☐
TF Card	Kingston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

4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>The GSM 850 MHz RX Test Mode</u> GSM 850 MHz RX + EUT +Adapter + USB Cable + Battery + Earphone + TF card + GPS RX
TC02	<u>The WCDMA Band 5 RX Test Mode</u> WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery + Earphone + TF card + GLONASS RX
TC03	<u>The FDD LTE Band 5 RX Test Mode</u> LTE Band 5 RX + EUT +Adapter + USB Cable + Battery + Earphone + TF card + Galileo RX
TC04	<u>The FDD LTE Band 12 RX Test Mode</u> LTE Band 12 RX + EUT +Adapter + USB Cable + Battery + Earphone + TF card + Beidou RX
TC05	<u>The FDD LTE Band 17 RX Test Mode</u> LTE Band 17 RX + EUT +Adapter + USB Cable + Battery + Earphone + TF card + GPS RX
TC06	<u>The FDD LTE Band 26 RX Test Mode</u> LTE Band 26 RX + EUT +Adapter + USB Cable + Battery + Earphone + TF card + GLONASS RX
TC07	<u>The Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Earphone + TF Card
TC08	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Earphone + TF Card
TC09	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop+ Earphone + TF Card

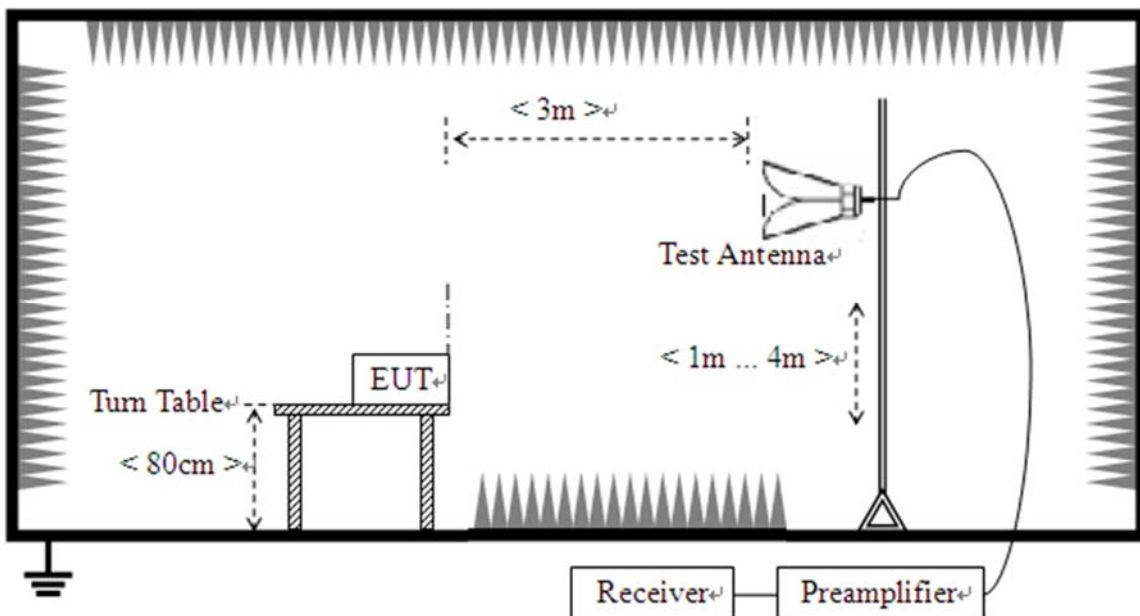
4.5 Test Setups

Test Setup 1



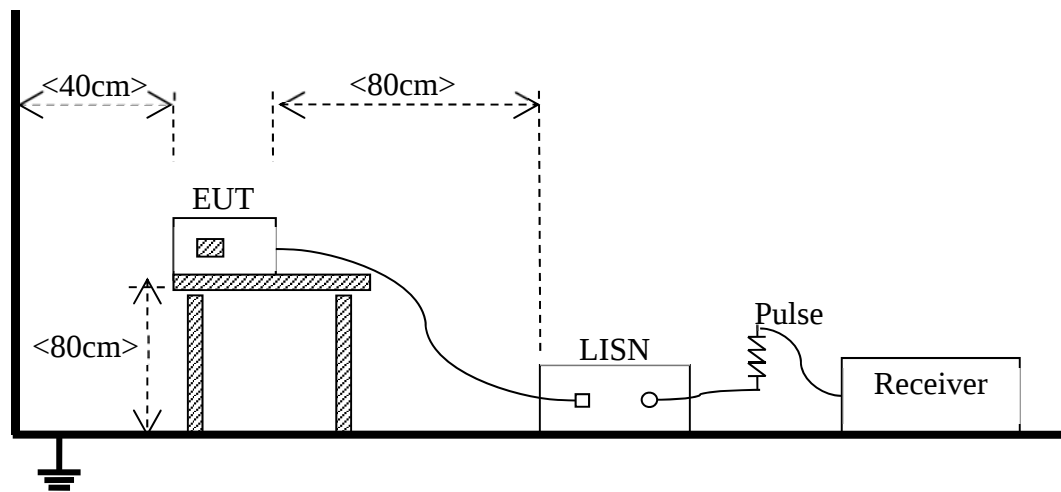
(For Radiated Emission Test (30 MHz-1 GHz))

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~TC09 ^{Note}
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01~TC09 ^{Note}
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 (dB $\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Field Strength ($\mu\text{V/m}$)	Field Strength (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 (dB $\mu\text{V/m}$) = $20 \times \log [\text{Field Strength } (\mu\text{V/m})]$.
- 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 (dB $\mu\text{V/m}$) = Reading (dB μV) + 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. Results (dB μ V/m) = Reading (dB μ V) + Factor (dB/m)

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

2. Factor = Insertion loss + Cable loss

3. Over limit = Results – Limit.

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

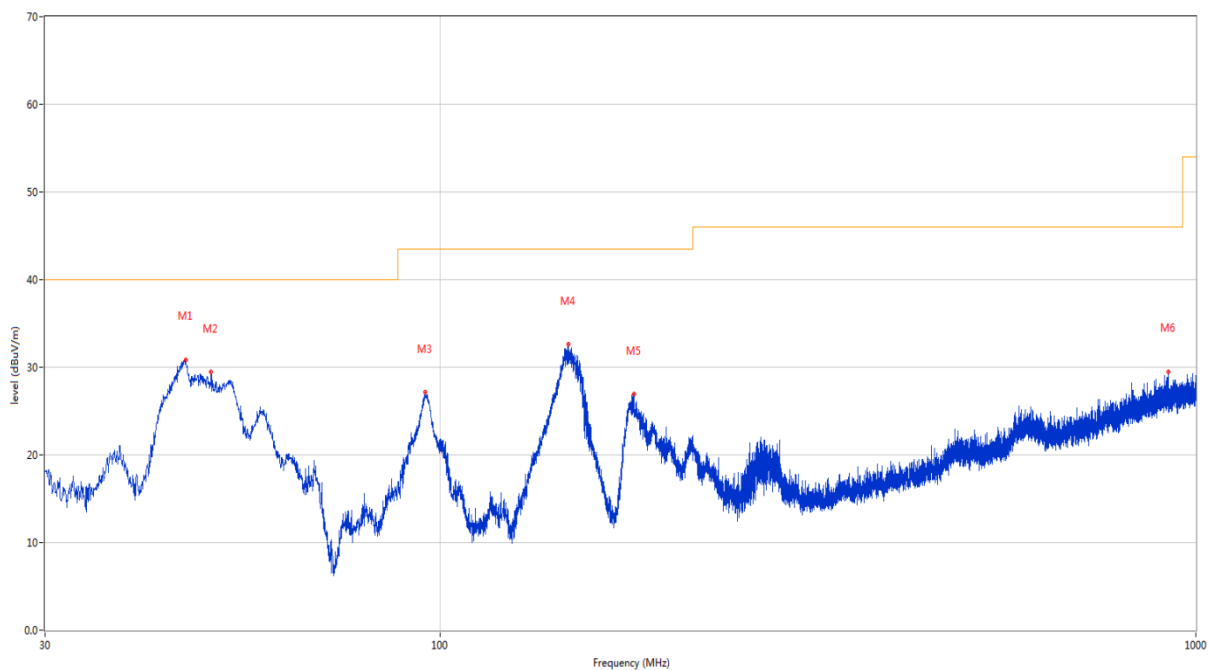
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Test Data and Plots

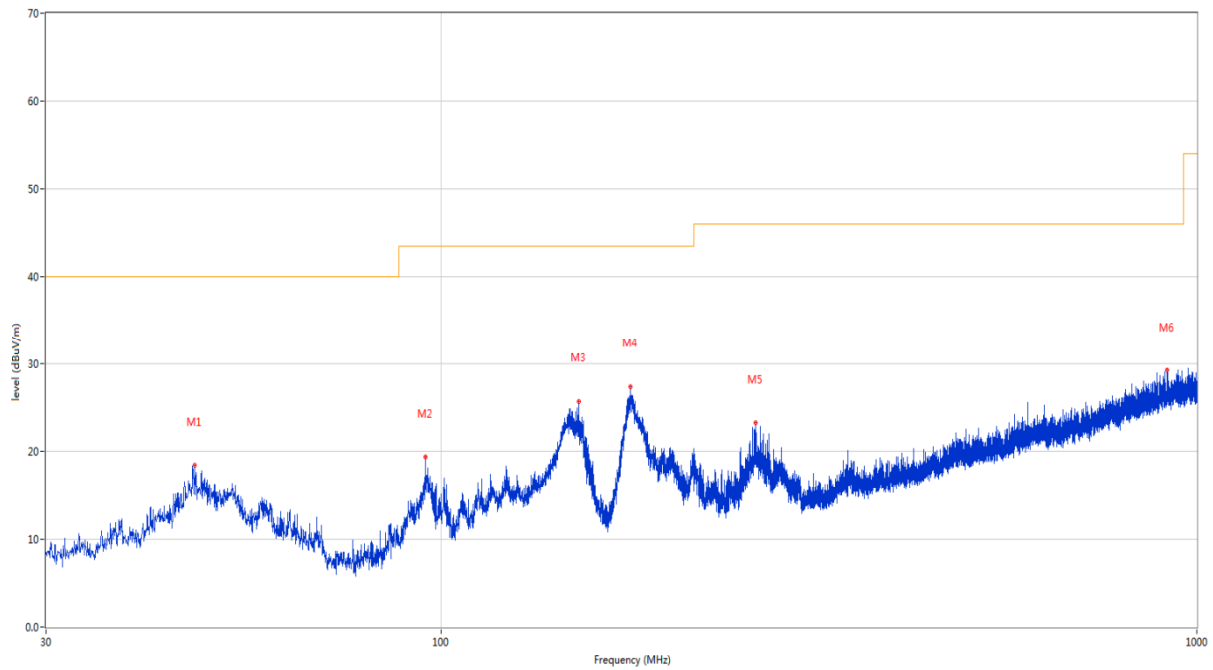
The Camera Test Mode

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



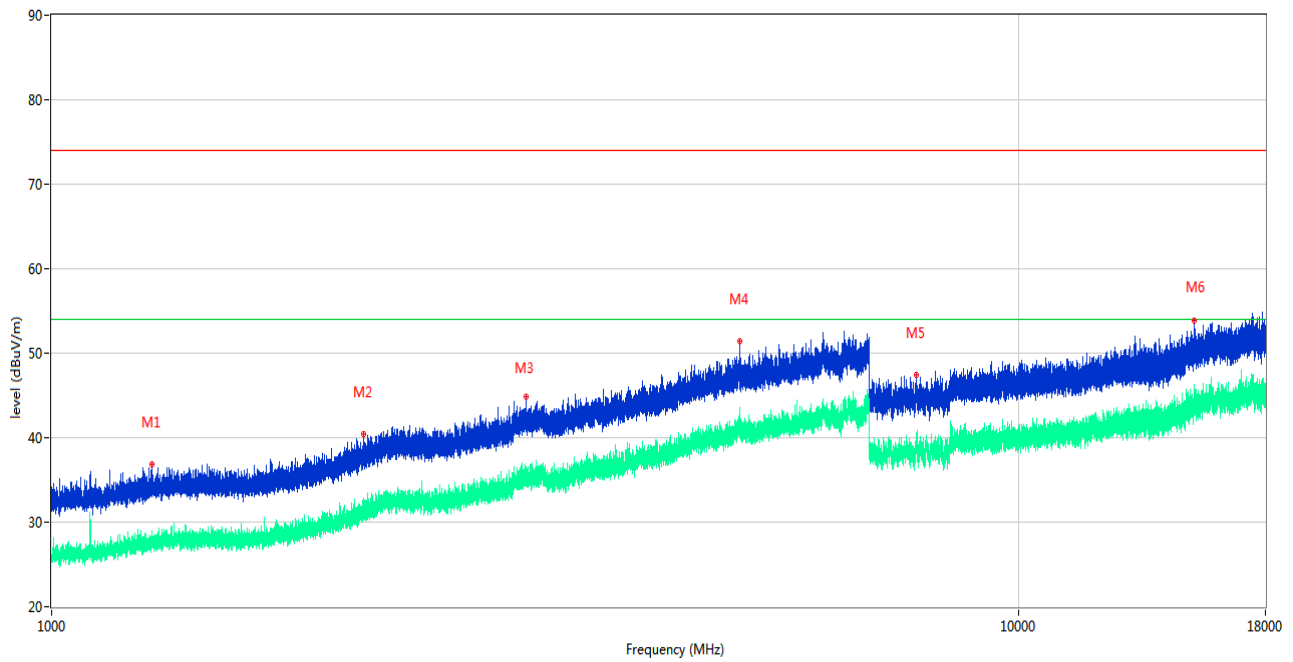
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	46.053	30.81	-23.03	40.0	-9.19	Peak	229.30	100	Vertical	Pass
2	49.739	29.51	-22.66	40.0	-10.49	Peak	347.10	100	Vertical	Pass
3	95.669	27.18	-24.80	43.5	-16.32	Peak	360.00	200	Vertical	Pass
4	147.758	32.67	-27.85	43.5	-10.83	Peak	15.00	100	Vertical	Pass
5	180.641	26.97	-25.97	43.5	-16.53	Peak	44.30	100	Vertical	Pass
6	919.102	29.42	-9.81	46.0	-16.58	Peak	0.00	200	Vertical	Pass

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



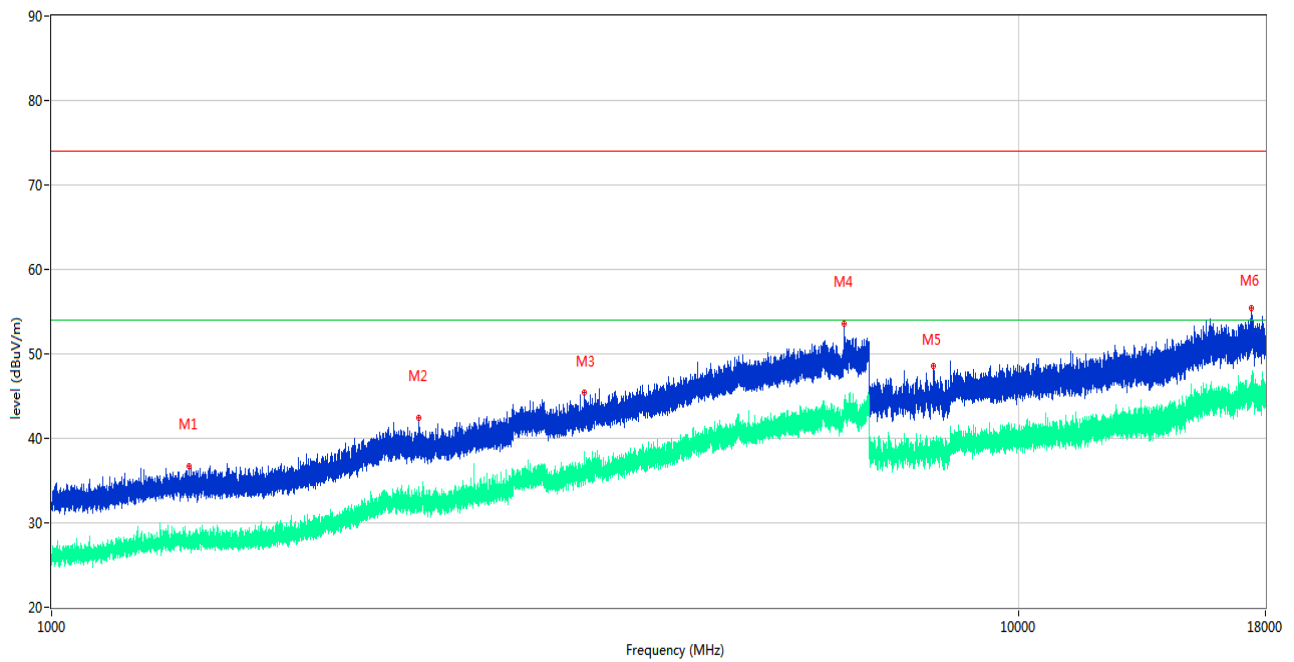
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	47.218	18.40	-22.83	40.0	-21.60	Peak	175.60	200	Horizontal	Pass
2	95.378	19.33	-24.89	43.5	-24.17	Peak	252.60	200	Horizontal	Pass
3	152.220	25.66	-27.84	43.5	-17.84	Peak	357.80	200	Horizontal	Pass
4	178.070	27.34	-26.17	43.5	-16.16	Peak	86.90	100	Horizontal	Pass
5	260.860	23.21	-22.43	46.0	-22.79	Peak	121.10	100	Horizontal	Pass
6	914.252	29.25	-9.46	46.0	-16.75	Peak	112.70	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	1271.100	36.84	-17.32	74.0	-37.16	Peak	194.00	150	Vertical	Pass
1**	1271.100	27.33	-17.32	54.0	-26.67	AV	194.00	150	Vertical	Pass
2	2101.100	40.40	-14.25	74.0	-33.60	Peak	119.00	150	Vertical	Pass
2**	2101.100	32.88	-14.25	54.0	-21.12	AV	119.00	150	Vertical	Pass
3	3092.600	44.84	-8.37	74.0	-29.16	Peak	270.00	150	Vertical	Pass
3**	3092.600	36.20	-8.37	54.0	-17.80	AV	270.00	150	Vertical	Pass
4	5142.400	51.41	-2.50	74.0	-22.59	Peak	108.00	150	Vertical	Pass
4**	5142.400	41.44	-2.50	54.0	-12.56	AV	108.00	150	Vertical	Pass
5	7832.600	47.46	-2.23	74.0	-26.54	Peak	244.00	150	Vertical	Pass
5**	7832.600	38.24	-2.23	54.0	-15.76	AV	244.00	150	Vertical	Pass
6	15182.063	53.83	1.32	74.0	-20.17	Peak	238.00	150	Vertical	Pass
6**	15182.063	43.96	1.32	54.0	-10.04	AV	238.00	150	Vertical	Pass

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

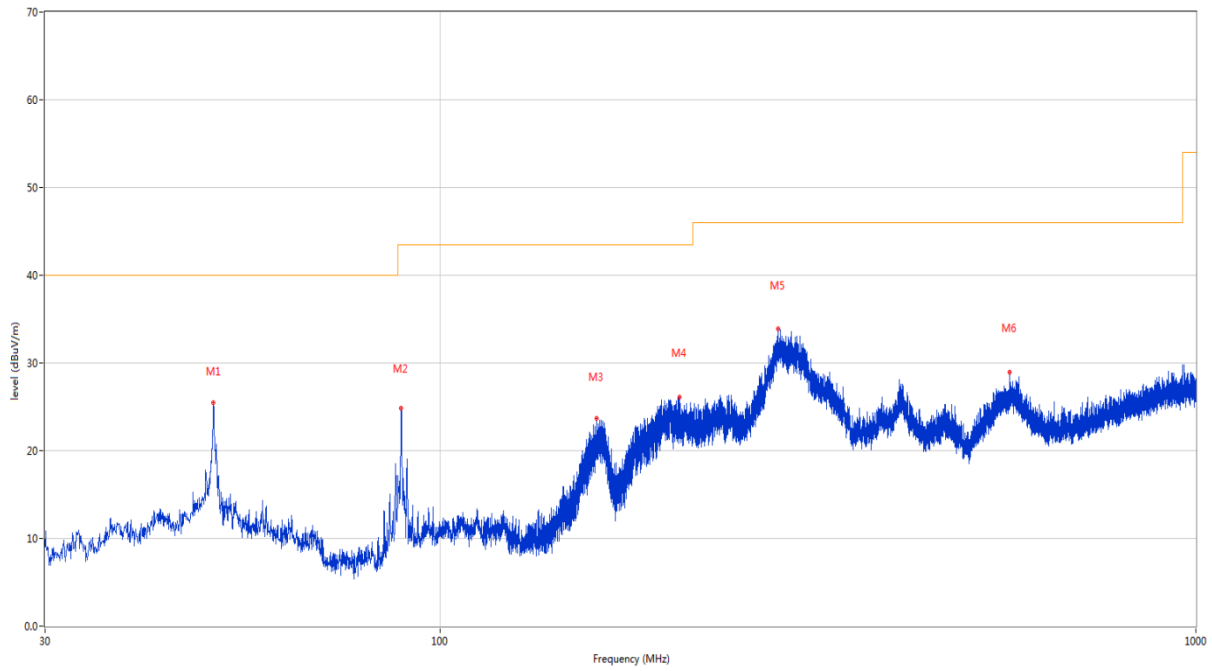


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1388.300	36.65	-17.44	74.0	-37.35	Peak	169.00	150	Horizontal	Pass
1**	1388.300	29.03	-17.44	54.0	-24.97	AV	169.00	150	Horizontal	Pass
2	2397.400	42.38	-12.45	74.0	-31.62	Peak	0.00	150	Horizontal	Pass
2**	2397.400	34.25	-12.45	54.0	-19.75	AV	0.00	150	Horizontal	Pass
3	3553.000	45.36	-7.19	74.0	-28.64	Peak	0.00	150	Horizontal	Pass
3**	3553.000	35.51	-7.19	54.0	-18.49	AV	0.00	150	Horizontal	Pass
4	6604.000	53.53	-0.02	74.0	-20.47	Peak	20.00	150	Horizontal	Pass
4**	6604.000	43.58	-0.02	54.0	-10.42	AV	20.00	150	Horizontal	Pass
5	8171.562	48.53	-3.45	74.0	-25.47	Peak	88.00	150	Horizontal	Pass
5**	8171.562	38.61	-3.45	54.0	-15.39	AV	88.00	150	Horizontal	Pass
6	17423.026	55.48	3.67	74.0	-18.52	Peak	32.00	150	Horizontal	Pass
6**	17423.026	46.12	3.67	54.0	-7.88	AV	32.00	150	Horizontal	Pass

Test Data and Plots

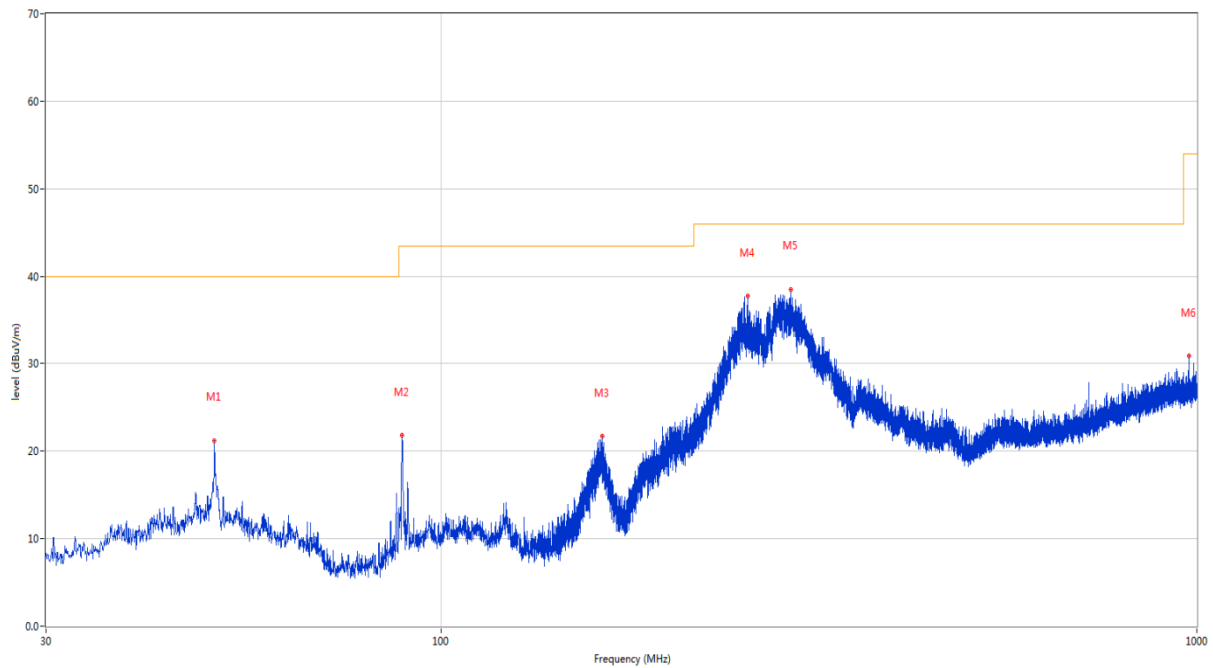
The USB Test Mode

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



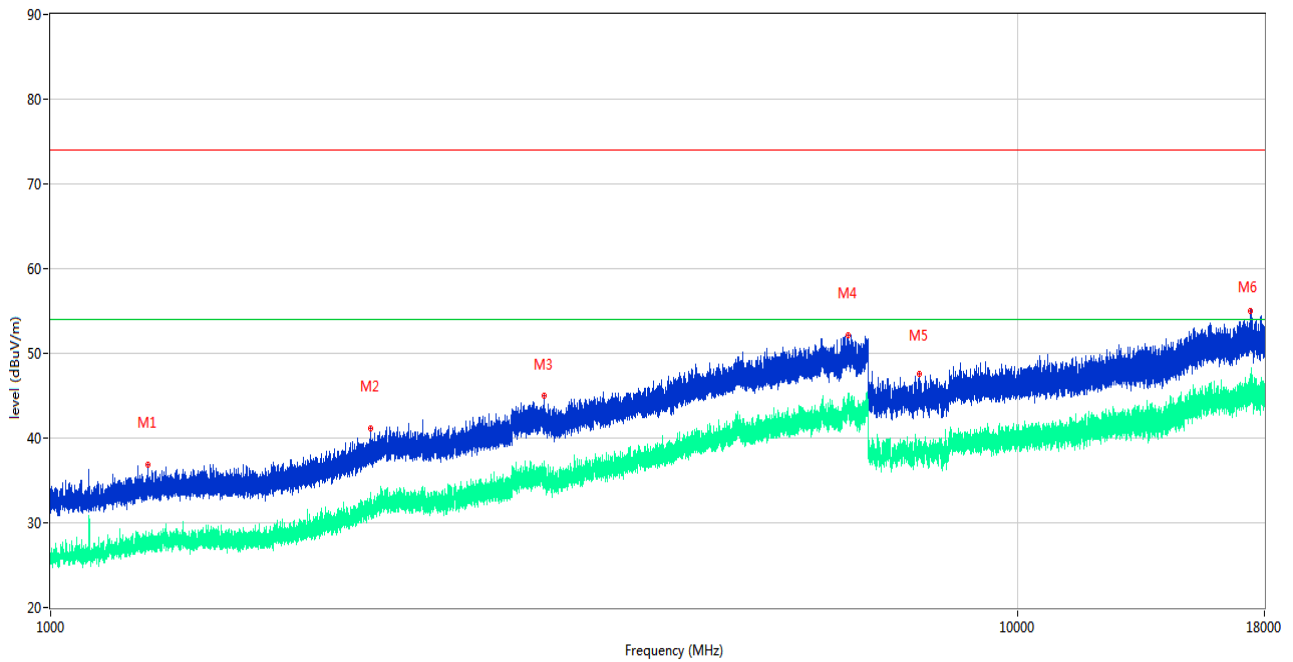
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.127	25.46	-22.84	40.0	-14.54	Peak	123.30	100	Vertical	Pass
2	88.830	24.80	-26.37	43.5	-18.70	Peak	360.00	200	Vertical	Pass
3	160.999	23.71	-27.23	43.5	-19.79	Peak	360.00	100	Vertical	Pass
4	207.122	26.06	-23.94	43.5	-17.44	Peak	51.40	100	Vertical	Pass
5	280.211	33.89	-21.77	46.0	-12.11	Peak	3.70	200	Vertical	Pass
6	566.943	28.97	-15.03	46.0	-17.03	Peak	200.90	100	Vertical	Pass

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



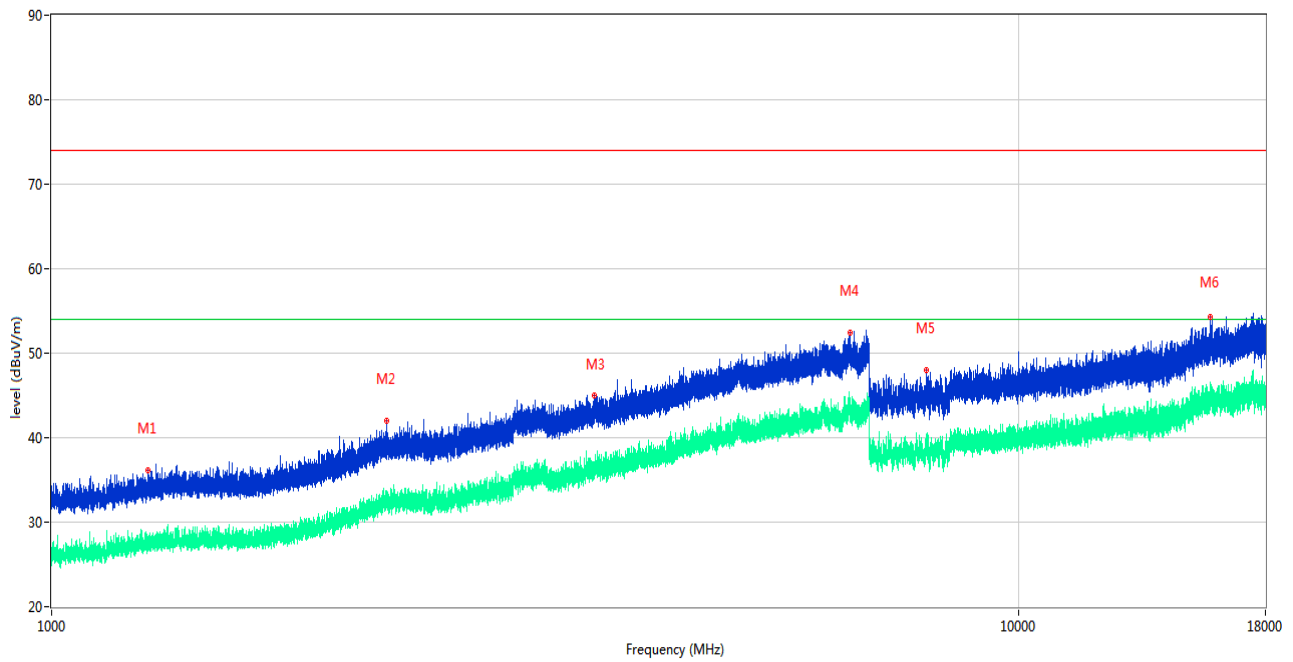
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.079	21.20	-22.81	40.0	-18.80	Peak	325.40	200	Horizontal	Pass
2	88.733	21.75	-26.38	43.5	-21.75	Peak	292.40	200	Horizontal	Pass
3	163.423	21.64	-26.90	43.5	-21.86	Peak	242.10	200	Horizontal	Pass
4	254.410	37.76	-22.64	46.0	-8.24	Peak	163.00	100	Horizontal	Pass
5	290.397	38.54	-21.72	46.0	-7.46	Peak	121.40	100	Horizontal	Pass
6	976.671	30.87	-8.73	54.0	-23.13	Peak	359.70	100	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	1259.500	36.89	-17.53	74.0	-37.11	Peak	89.00	150	Vertical	Pass
1**	1259.500	28.07	-17.53	54.0	-25.93	AV	89.00	150	Vertical	Pass
2	2142.700	41.13	-13.95	74.0	-32.87	Peak	202.00	150	Vertical	Pass
2**	2142.700	31.84	-13.95	54.0	-22.16	AV	202.00	150	Vertical	Pass
3	3239.200	44.96	-8.12	74.0	-29.04	Peak	134.00	150	Vertical	Pass
3**	3239.200	34.94	-8.12	54.0	-19.06	AV	134.00	150	Vertical	Pass
4	6684.600	52.16	-0.26	74.0	-21.84	Peak	313.00	150	Vertical	Pass
4**	6684.600	43.21	-0.26	54.0	-10.79	AV	313.00	150	Vertical	Pass
5	7913.962	47.51	-2.35	74.0	-26.49	Peak	330.00	150	Vertical	Pass
5**	7913.962	38.29	-2.35	54.0	-15.71	AV	330.00	150	Vertical	Pass
6	17427.489	54.95	3.54	74.0	-19.05	Peak	0.00	150	Vertical	Pass
6**	17427.489	46.20	3.54	54.0	-7.80	AV	0.00	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	1258.500	36.20	-17.57	74.0	-37.80	Peak	195.00	150	Horizontal	Pass
1**	1258.500	27.68	-17.57	54.0	-26.32	AV	195.00	150	Horizontal	Pass
2	2222.600	41.99	-12.86	74.0	-32.01	Peak	290.00	150	Horizontal	Pass
2**	2222.600	32.99	-12.86	54.0	-21.01	AV	290.00	150	Horizontal	Pass
3	3645.000	44.99	-6.17	74.0	-29.01	Peak	92.00	150	Horizontal	Pass
3**	3645.000	36.50	-6.17	54.0	-17.50	AV	92.00	150	Horizontal	Pass
4	6698.000	52.44	-0.55	74.0	-21.56	Peak	105.00	150	Horizontal	Pass
4**	6698.000	43.97	-0.55	54.0	-10.03	AV	105.00	150	Horizontal	Pass
5	8027.812	47.99	-2.73	74.0	-26.01	Peak	0.00	150	Horizontal	Pass
5**	8027.812	38.75	-2.73	54.0	-15.25	AV	0.00	150	Horizontal	Pass
6	15797.888	54.26	2.26	74.0	-19.74	Peak	321.00	150	Horizontal	Pass
6**	15797.888	45.28	2.26	54.0	-8.72	AV	321.00	150	Horizontal	Pass

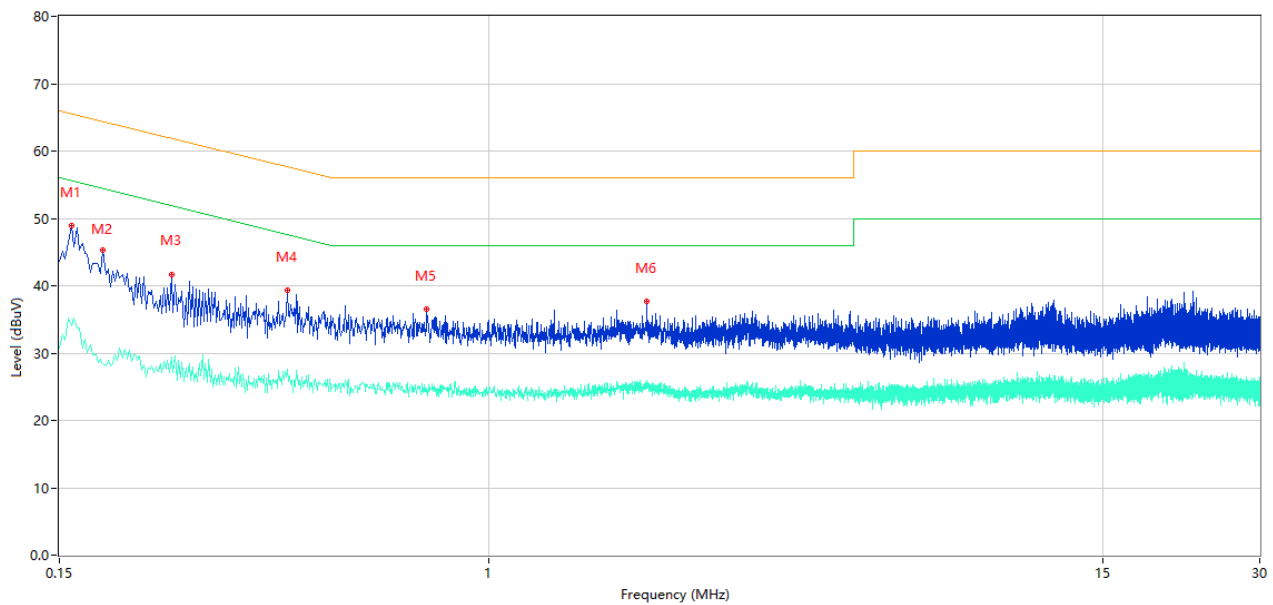
A.2 Conducted Emission

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

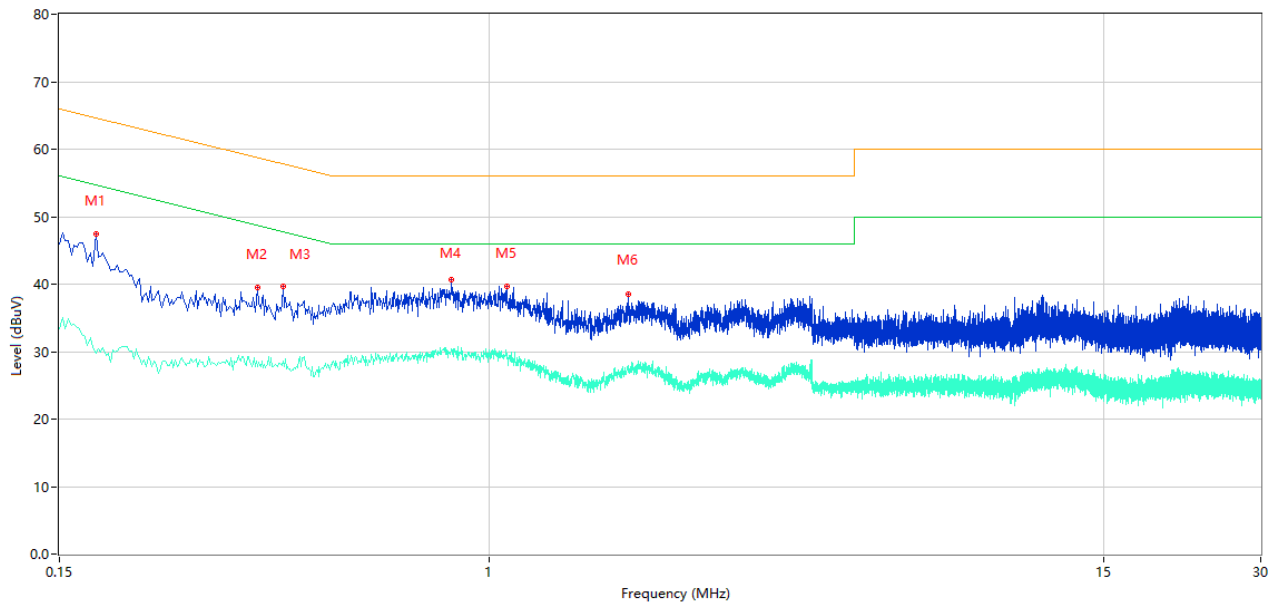
The Camera Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.158	48.91	10.40	65.57	-16.66	Peak	L	Pass
1**	0.158	34.07	10.40	55.57	-21.50	AV	L	Pass
2	0.182	45.25	10.39	64.39	-19.14	Peak	L	Pass
2**	0.182	28.50	10.39	54.39	-25.89	AV	L	Pass
3	0.246	41.73	10.34	61.89	-20.16	Peak	L	Pass
3**	0.246	29.44	10.34	51.89	-22.45	AV	L	Pass
4	0.410	39.28	10.31	57.65	-18.37	Peak	L	Pass
4**	0.410	27.68	10.31	47.65	-19.97	AV	L	Pass
5	0.760	36.48	10.25	56.00	-19.52	Peak	L	Pass
5**	0.760	24.40	10.25	46.00	-21.60	AV	L	Pass
6	2.004	37.74	10.26	56.00	-18.26	Peak	L	Pass
6**	2.004	25.71	10.26	46.00	-20.29	AV	L	Pass

A.2.2 N Phase

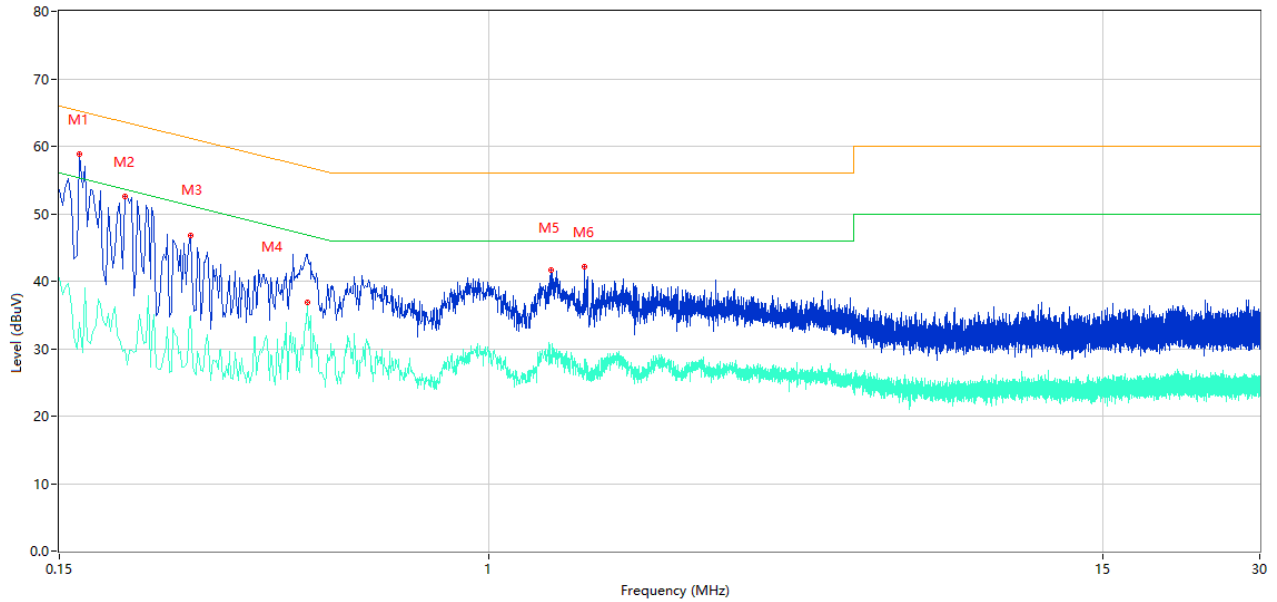


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.176	47.44	10.39	64.67	-17.23	Peak	N	Pass
1**	0.176	29.74	10.39	54.67	-24.93	AV	N	Pass
2	0.360	39.58	10.31	58.73	-19.15	Peak	N	Pass
2**	0.360	27.75	10.31	48.73	-20.98	AV	N	Pass
3	0.402	39.63	10.31	57.81	-18.18	Peak	N	Pass
3**	0.402	28.63	10.31	47.81	-19.18	AV	N	Pass
4	0.846	40.69	10.24	56.00	-15.31	Peak	N	Pass
4**	0.846	30.47	10.24	46.00	-15.53	AV	N	Pass
5	1.078	39.69	10.23	56.00	-16.31	Peak	N	Pass
5**	1.078	29.12	10.23	46.00	-16.88	AV	N	Pass
6	1.846	38.57	10.25	56.00	-17.43	Peak	N	Pass
6**	1.846	27.52	10.25	46.00	-18.48	AV	N	Pass

Test Data and Plots

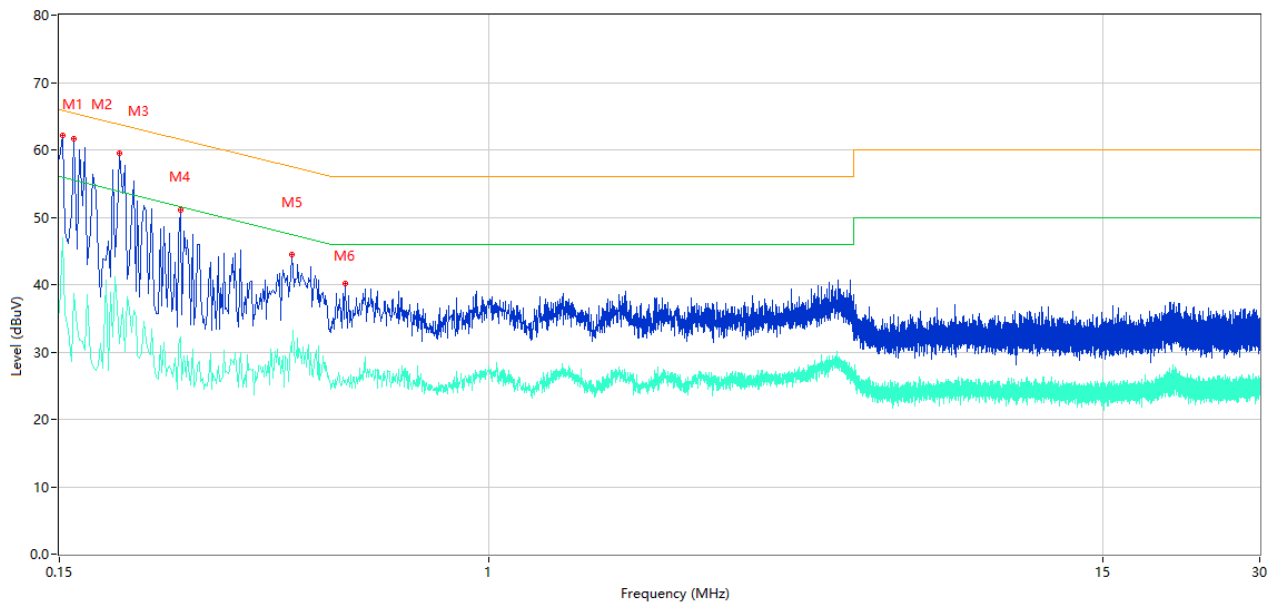
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.164	58.91	10.40	65.26	-6.35	Peak	L	Pass
1**	0.164	33.94	10.40	55.26	-21.32	AV	L	Pass
2	0.200	52.50	10.38	63.61	-11.11	Peak	L	Pass
2**	0.200	29.84	10.38	53.61	-23.77	AV	L	Pass
3	0.268	46.75	10.34	61.18	-14.43	Peak	L	Pass
3**	0.268	34.80	10.34	51.18	-16.38	AV	L	Pass
4	0.448	43.99	10.30	56.91	-12.92	Peak	L	Pass
4**	0.448	36.85	10.30	46.91	-10.06	AV	L	Pass
5	1.312	41.70	10.25	56.00	-14.30	Peak	L	Pass
5**	1.312	29.10	10.25	46.00	-16.90	AV	L	Pass
6	1.526	42.13	10.24	56.00	-13.87	Peak	L	Pass
6**	1.526	28.39	10.24	46.00	-17.61	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.152	62.08	10.41	65.89	-3.81	Peak	N	N/A
1*	0.152	59.30	10.41	65.89	-6.59	QP	N	Pass
1**	0.152	46.96	10.41	55.89	-8.93	AV	N	Pass
2	0.160	61.57	10.40	65.46	-3.89	Peak	N	N/A
2*	0.160	56.77	10.40	65.46	-8.69	QP	N	Pass
2**	0.160	38.64	10.40	55.46	-16.82	AV	N	Pass
3	0.196	59.47	10.38	63.78	-4.31	Peak	N	N/A
3*	0.196	53.30	10.38	63.78	-10.48	QP	N	Pass
3**	0.196	31.30	10.38	53.78	-22.48	AV	N	Pass
4	0.256	51.10	10.34	61.56	-10.46	Peak	N	Pass
4**	0.256	32.20	10.34	51.56	-19.36	AV	N	Pass
5	0.418	44.44	10.31	57.49	-13.05	Peak	N	Pass
5**	0.418	30.10	10.31	47.49	-17.39	AV	N	Pass
6	0.530	40.16	10.29	56.00	-15.84	Peak	N	Pass
6**	0.530	25.75	10.29	46.00	-20.25	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2120324-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2120324-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2120324-AI.PDF”.

--END OF REPORT--