

FCC

EMC

TEST REPORT

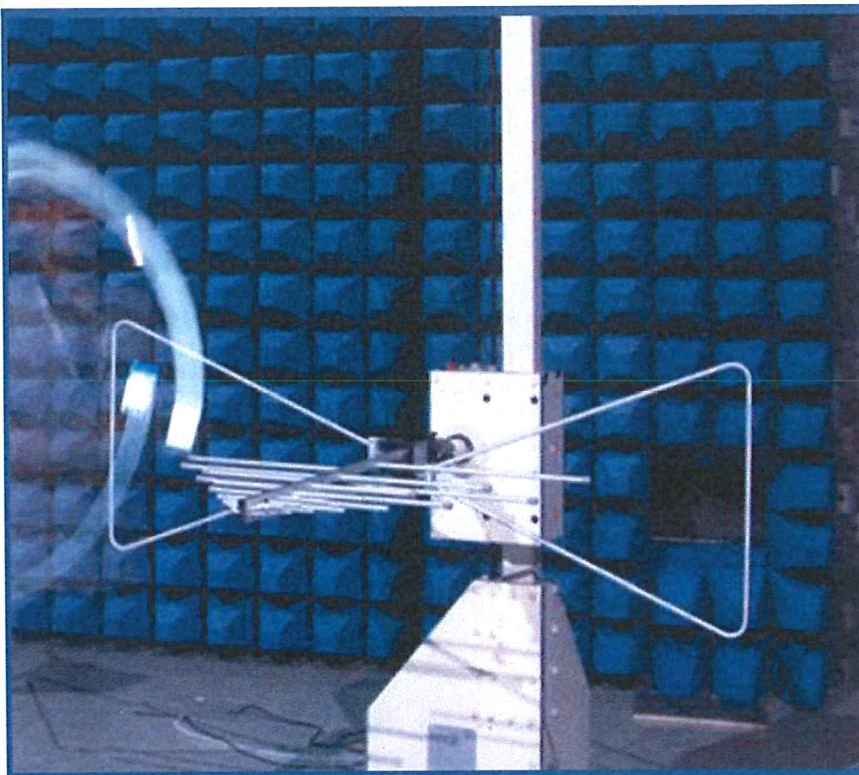
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Mobile phone

ISSUED TO
Guangdong OPPO Mobile Telecommunications Corp., Ltd.

NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City,
Guangdong, China



Tested by: Liu Zhenxiang

Date: Feb. 03, 2021

Approved by: [Signature]

Liao Jianming
(Technical Director)

Date: Feb. 04, 2021

Report No.: BL-SZ20B0874-401

EUT Name: Mobile Phone

Model Name: CPH2195, CPH2197

Brand Name: OPPO

Test Standard: 47 CFR Part 15 Subpart B

FCC ID: R9C-CPH2195

Test Conclusion: Pass

Test Date: Dec. 04, 2020 ~ Dec. 10, 2020

Date of Issue: Feb. 03, 2021

NOTE: This test report of test results only related to testing samples, which can be duplicated completely for the legal use with the approval of the applicant; it shall not be reproduced except in full, without the written approval of Shenzhen BALUN Technology Co., Ltd. Any objections should be raised within thirty days from the date of issue. To validate the report, please contact us.

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Feb. 03, 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	5
2	PRODUCT INFORMATION	6
2.1	Applicant Information	6
2.2	Manufacturer Information	6
2.3	Factory Information	6
2.4	General Description for Equipment under Test (EUT)	6
2.5	Ancillary Equipment	7
2.6	Technical Information	7
3	SUMMARY OF TEST RESULTS	10
3.1	Test Standards	10
3.2	Verdict	10
3.3	Test Uncertainty	10
4	GENERAL TEST CONFIGURATIONS	11
4.1	Test Environments	11
4.2	Test Equipment List	11
4.3	Test Enclosure list	11
4.4	Test Configurations	14
4.5	Test Setups	15
4.6	Test Conditions	17
5	TEST ITEMS	18
5.1	Emission Tests	18
ANNEX A	TEST RESULTS	20

A.1	Radiated Emission	20
A.2	Conducted Emission	28
ANNEX B	TEST SETUP PHOTOS	32
ANNEX C	EUT EXTERNAL PHOTOS	32
ANNEX D	EUT INTERNAL PHOTOS	32

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 v6.9.
- (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	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China

2.2 Manufacturer Information

Manufacturer	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China

2.3 Factory Information

Factory	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	CPH2195
Series Model Name	CPH2197
Description of Model name differentiation	Only different in model name
Hardware Version	11
Software Version	ColorOS V11.1
Dimensions (Approx.)	162.9x74.7x8.4mm
Weight (Approx.)	Glass: about 190g(with battery)

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery	
	Brand Name	OPPO
	Model No.	BLP805
	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 2	Li-Polymer Battery(alternative) 2	
	Brand Name	OPPO
	Model No.	BLP805
	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.,Branch 3
Ancillary Equipment 3	Power Supply Unit 1	
	Brand Name	OPPO
	Model No.	OP52JAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.4A
	Rated Output	5VDC 2A (US Plug)
Ancillary Equipment 4	Power Supply Unit(alternative) 2	
	Brand Name	OPPO
	Model No.	OP52YAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.4A
	Rated Output	5VDC 2A (US Plug)
Ancillary Equipment 5	Power Supply Unit(alternative) 3	
	Brand Name	OPPO
	Model No.	OP52KAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.4A
	Rated Output	5VDC 2A (US Plug)
Ancillary Equipment 6	Power Supply Unit(alternative) 4	
	Brand Name	OPPO
	Model No.	OP52JBUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.4A
	Rated Output	5VDC 2A (US Plug)
Ancillary Equipment 7	Power Supply Unit (alternative) 5	

	Brand Name	OPPO
	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 8	Power Supply Unit(alternative) 6	
	Brand Name	OPPO
	Model No.	OP92JAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.5A
Ancillary Equipment 9	Power Supply Unit(alternative) 7	
	Brand Name	OPPO
	Model No.	OP92CAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.5A
Ancillary Equipment 10	Power Supply Unit(alternative) 8	
	Brand Name	OPPO
	Model No.	OP92YAUH
	Serial No.	N/A
	Rated Input	100-240VAC 50/60Hz 0.5A
Ancillary Equipment 11	USB Cable	
	Model No.	DL143
	Length (Approx.)	1.0 m
Ancillary Equipment 12	Headset	
	Model No.	MH156
	Length (Approx.)	1.2 m
Note 1: Letter in () means plug type.		

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/HSPA+/DC-HSDPA 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): 7C, 38C, 41C 5G Network SA: NR n7/n41 NSA(EN-DC): DC_5A_n7A, DC_7A_n5A, DC_26A_n41A, Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, BDS, Galileo, SBAS, 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	2.0 GHz
About the Product	The equipment is smart 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	2020.02.19	2021.02.18	☒
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2019.01.05	2021.01.04	☒
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

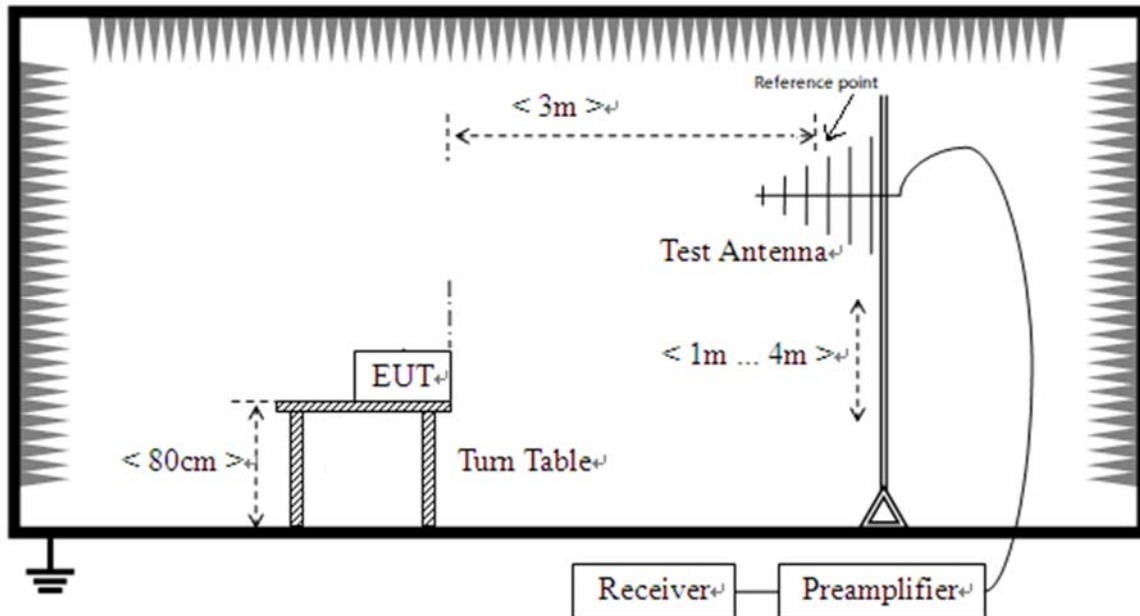
Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	☐
Laptop	Apple	A1465	N/A	N/A	N/A	☒
Printer	HP	DESKJET 1000	N/A	N/A	N/A	☐
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	☐
Mouse	Logitech	M100	N/A	N/A	N/A	☐
USB disk	Kingston	N/A	N/A	N/A	N/A	☐
TF Card	Kingston	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	☐
Bluetooth Earphone	SAMSUNG	Gear Circle	N/A	N/A	N/A	☐
Wireless Communication s Test Set	R&S	CMW500	142028	N/A	Cal. Due 2019.06.14	☐
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 Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Headset + TF Card
TC02	<u>The Camera 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

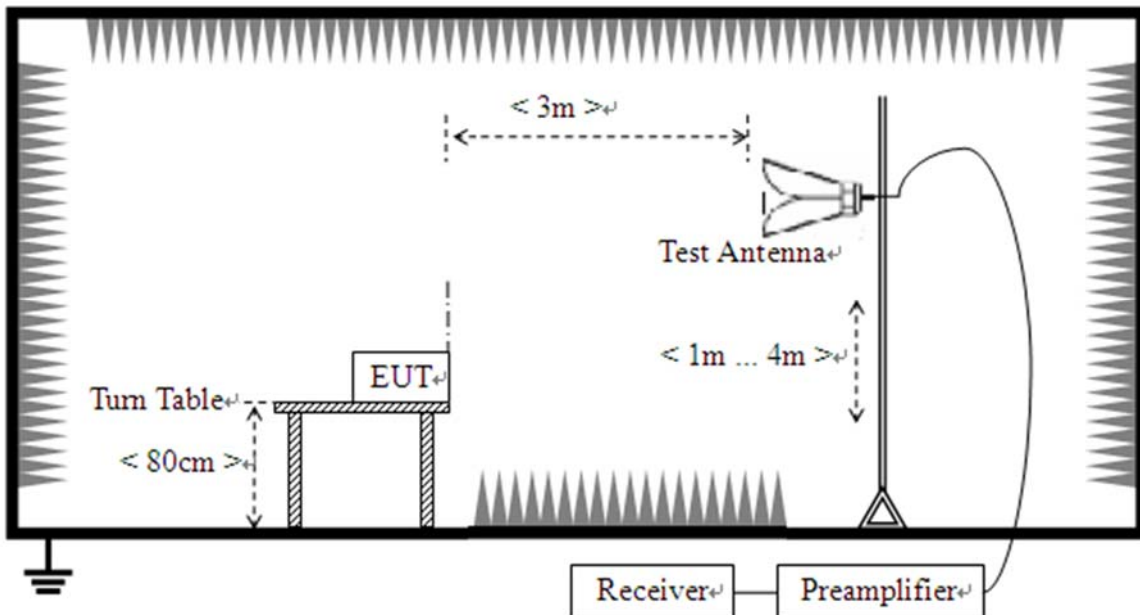
4.5 Test Setups

Test Setup 1



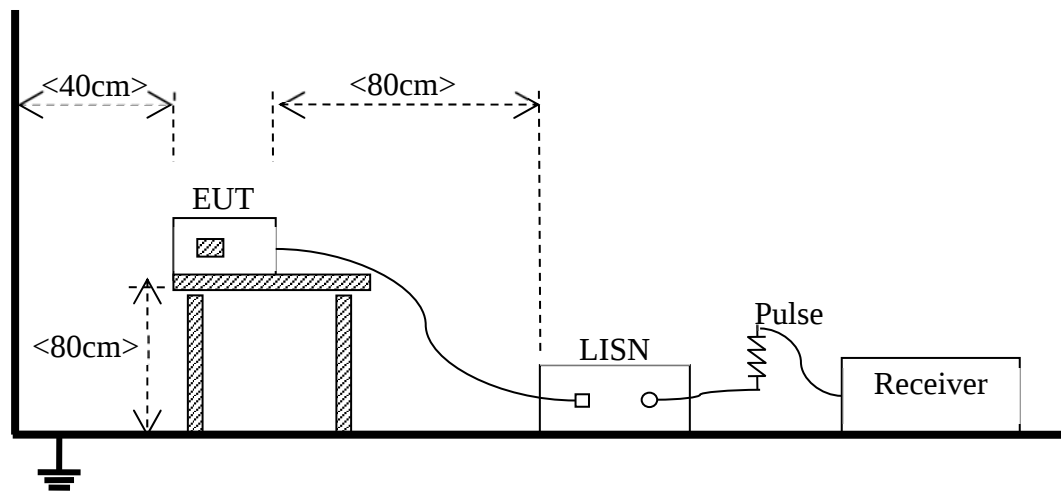
(For Radiated Emission Test (30 MHz-1 GHz))

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 ^{Note}
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01~TC03 ^{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:

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

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

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

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

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

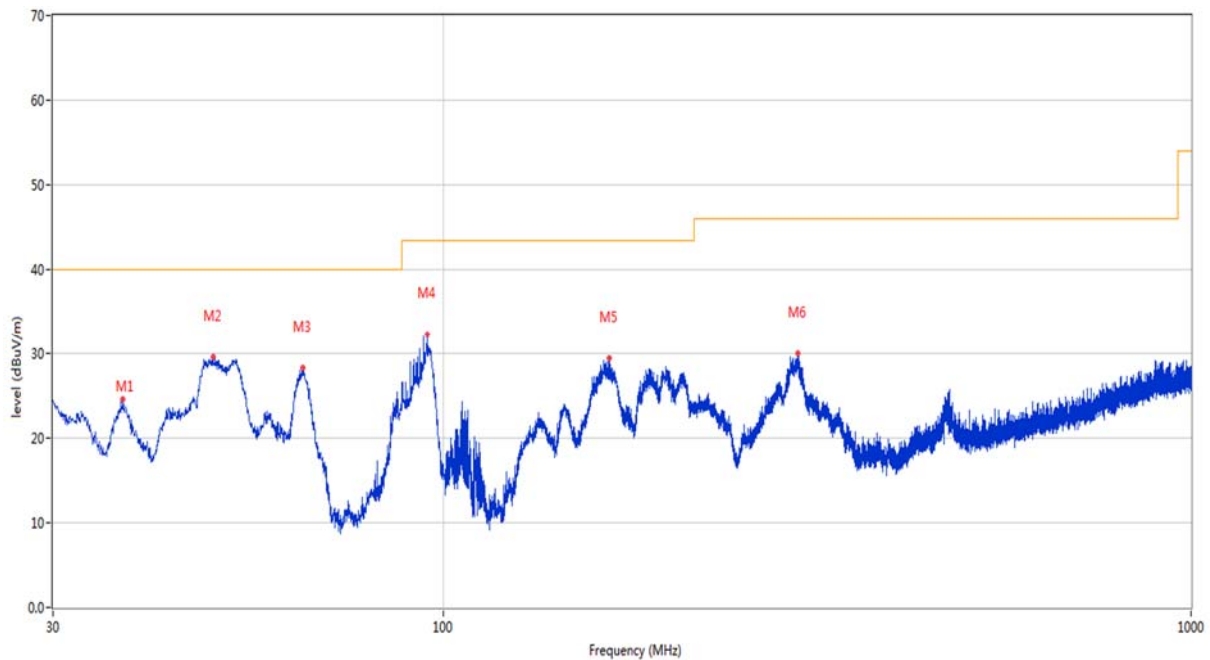
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Test Data and Plots

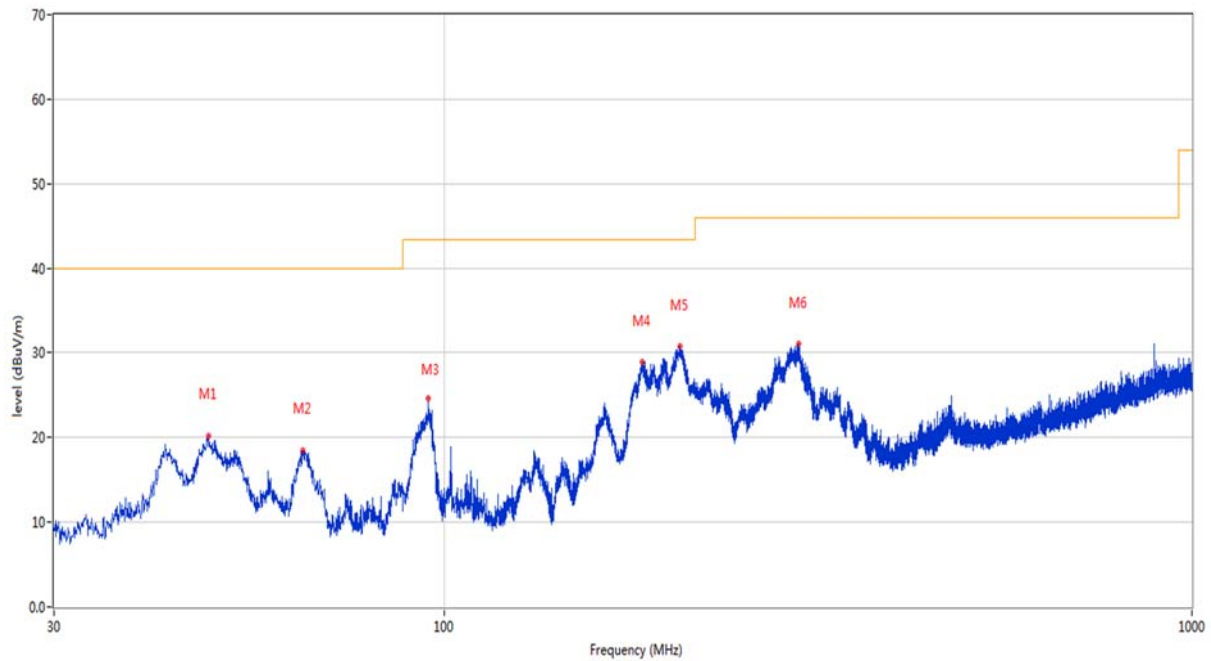
The Camera Test Mode

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



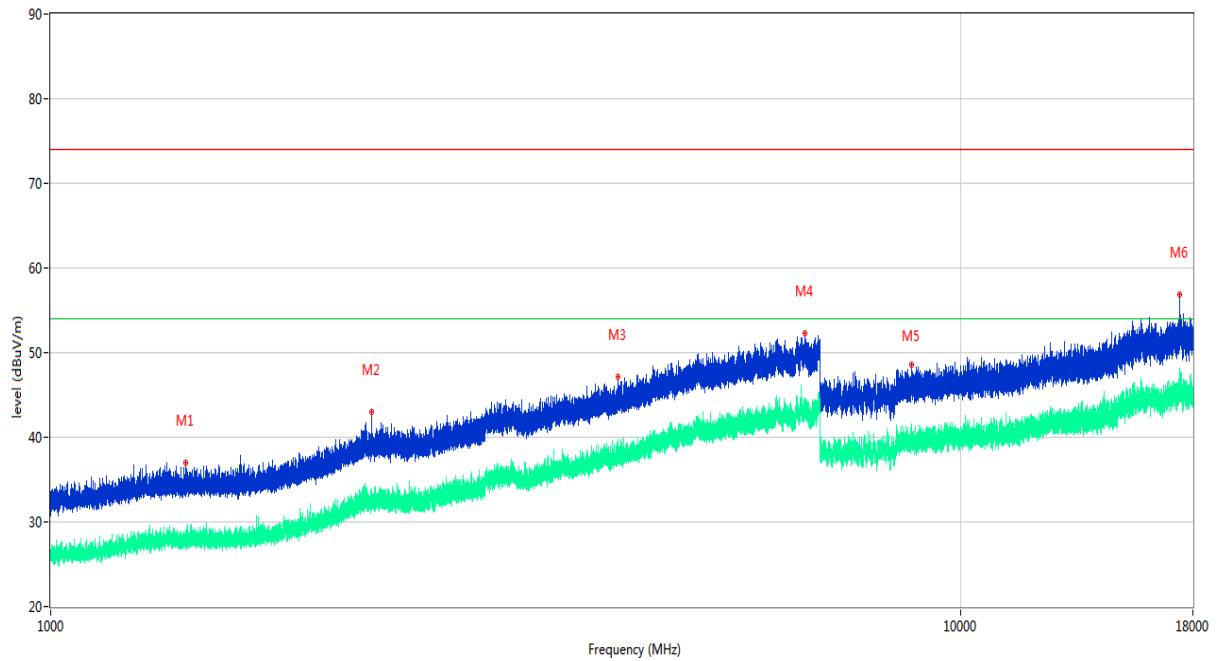
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	37.227	24.56	-24.60	40.0	-15.44	Peak	271.50	100	Vertical	Pass
2	49.109	29.61	-22.41	40.0	-10.39	Peak	183.00	100	Vertical	Pass
3	64.726	28.24	-25.01	40.0	-11.76	Peak	86.40	100	Vertical	Pass
4	95.087	32.24	-24.98	43.5	-11.26	Peak	44.30	100	Vertical	Pass
5	166.770	29.37	-26.88	43.5	-14.13	Peak	292.50	100	Vertical	Pass
6	297.817	29.98	-21.37	46.0	-16.02	Peak	188.00	200	Vertical	Pass

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



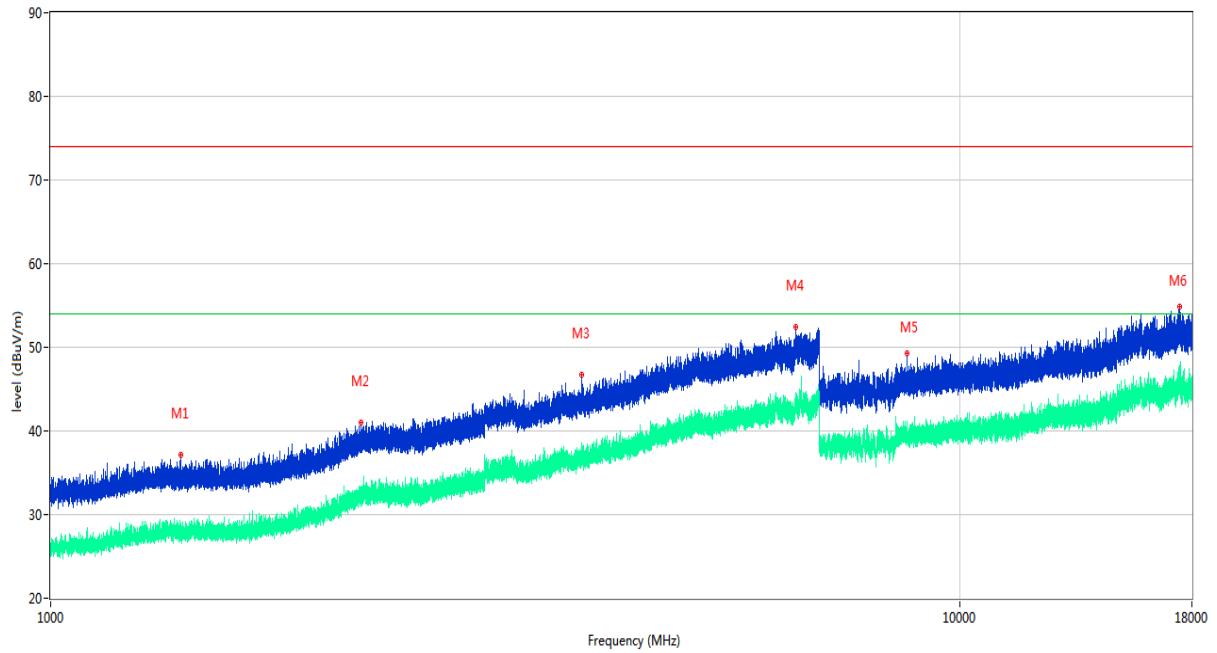
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.285	20.20	-22.58	40.0	-19.80	Peak	133.70	200	Horizontal	Pass
2	64.532	18.45	-24.99	40.0	-21.55	Peak	0.20	200	Horizontal	Pass
3	95.038	24.53	-25.00	43.5	-18.97	Peak	214.30	200	Horizontal	Pass
4	184.084	28.80	-25.32	43.5	-14.70	Peak	86.60	200	Horizontal	Pass
5	206.394	30.69	-23.85	43.5	-12.81	Peak	103.20	100	Horizontal	Pass
6	297.526	31.07	-21.42	46.0	-14.93	Peak	145.90	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	1407.400	37.05	-17.54	74.0	-36.95	Peak	62.00	150	Vertical	Pass
1**	1407.400	26.73	-17.54	54.0	-27.27	AV	62.00	150	Vertical	Pass
2	2253.500	42.93	-12.62	74.0	-31.07	Peak	176.00	150	Vertical	Pass
2**	2253.500	32.72	-12.62	54.0	-21.28	AV	176.00	150	Vertical	Pass
3	4204.600	47.16	-5.18	74.0	-26.84	Peak	360.00	150	Vertical	Pass
3**	4204.600	38.40	-5.18	54.0	-15.60	AV	360.00	150	Vertical	Pass
4	6746.200	52.26	-0.45	74.0	-21.74	Peak	345.00	150	Vertical	Pass
4**	6746.200	43.31	-0.45	54.0	-10.69	AV	345.00	150	Vertical	Pass
5	8832.238	48.57	-0.95	74.0	-25.43	Peak	271.00	150	Vertical	Pass
5**	8832.238	40.35	-0.95	54.0	-13.65	AV	271.00	150	Vertical	Pass
6	17425.388	56.84	3.61	74.0	-17.16	Peak	142.00	150	Vertical	Pass
6**	17425.388	46.80	3.61	54.0	-7.20	AV	142.00	150	Vertical	Pass

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

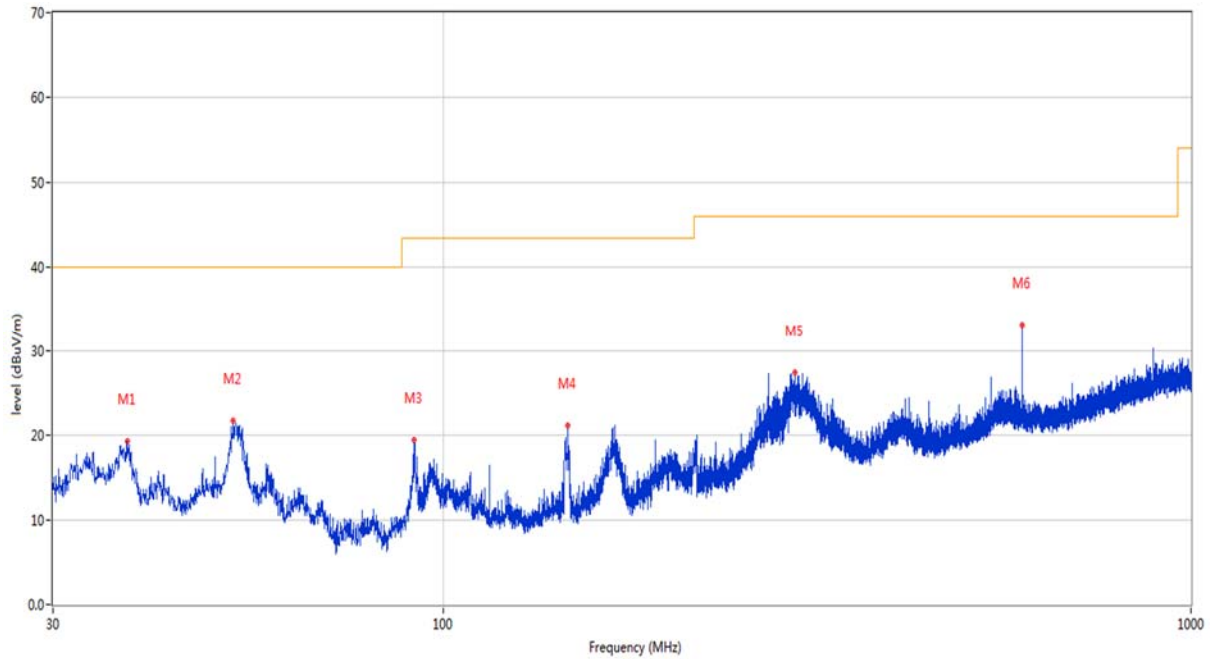


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1391.500	37.14	-17.49	74.0	-36.86	Peak	71.00	150	Horizontal	Pass
1**	1391.500	28.93	-17.49	54.0	-25.07	AV	71.00	150	Horizontal	Pass
2	2194.400	40.97	-13.26	74.0	-33.03	Peak	60.00	150	Horizontal	Pass
2**	2194.400	32.58	-13.26	54.0	-21.42	AV	60.00	150	Horizontal	Pass
3	3834.600	46.70	-4.86	74.0	-27.30	Peak	109.00	150	Horizontal	Pass
3**	3834.600	36.49	-4.86	54.0	-17.51	AV	109.00	150	Horizontal	Pass
4	6605.600	52.36	0.09	74.0	-21.64	Peak	360.00	150	Horizontal	Pass
4**	6605.600	43.94	0.09	54.0	-10.06	AV	360.00	150	Horizontal	Pass
5	8750.875	49.22	-1.57	74.0	-24.78	Peak	271.00	150	Horizontal	Pass
5**	8750.875	40.98	-1.57	54.0	-13.02	AV	271.00	150	Horizontal	Pass
6	17467.650	54.92	2.90	74.0	-19.08	Peak	346.00	150	Horizontal	Pass
6**	17467.650	46.04	2.90	54.0	-7.96	AV	346.00	150	Horizontal	Pass

Test Data and Plots

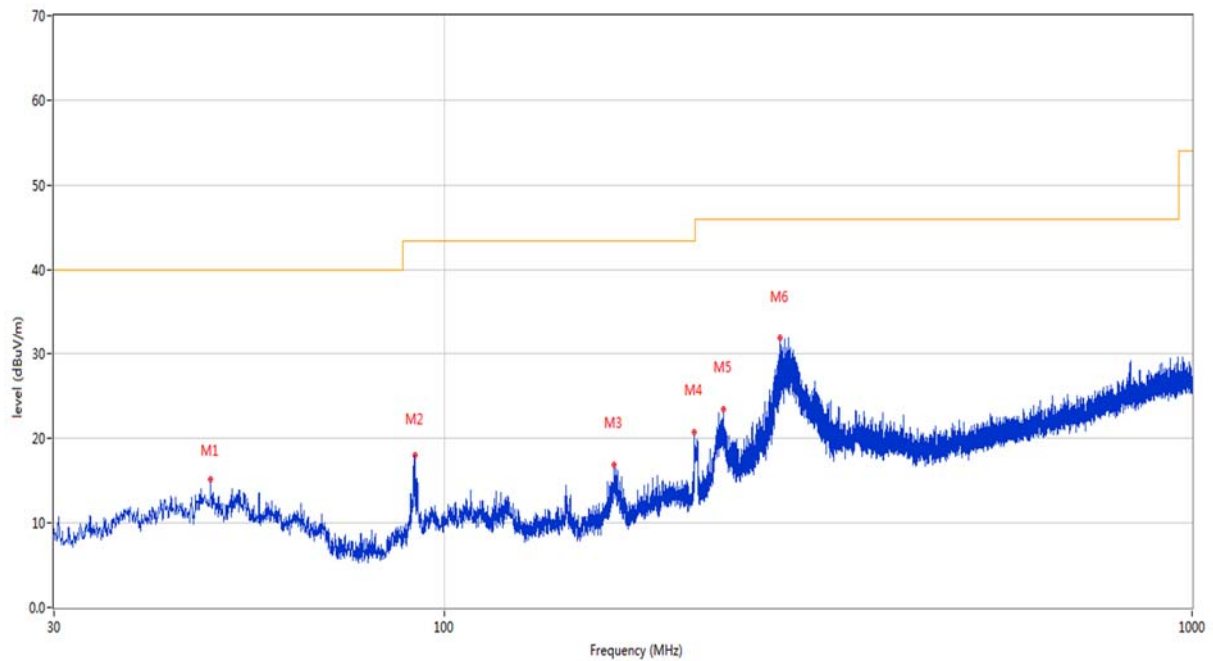
The USB Test Mode

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



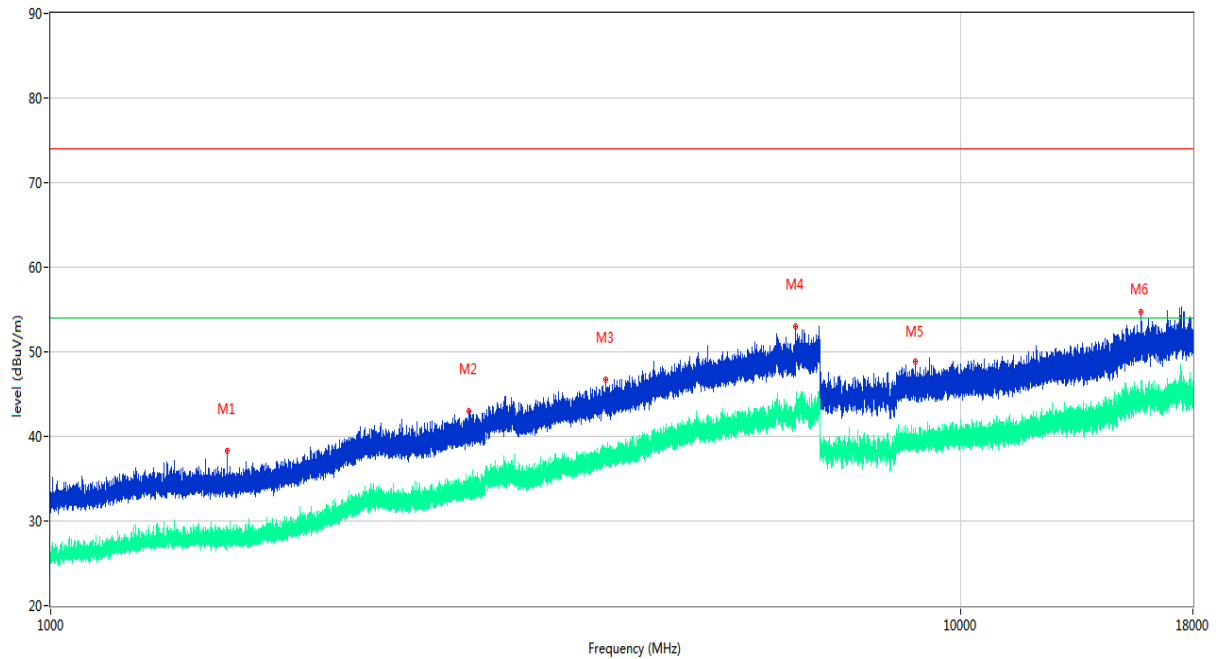
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	37.712	19.26	-24.53	40.0	-20.74	Peak	256.70	100	Vertical	Pass
2	52.310	21.76	-23.12	40.0	-18.24	Peak	268.70	200	Vertical	Pass
3	91.353	19.44	-25.78	43.5	-24.06	Peak	277.60	100	Vertical	Pass
4	146.400	21.15	-27.61	43.5	-22.35	Peak	223.40	100	Vertical	Pass
5	294.956	27.38	-21.84	46.0	-18.62	Peak	0.00	200	Vertical	Pass
6	594.006	33.17	-14.68	46.0	-12.83	Peak	155.80	200	Vertical	Pass

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



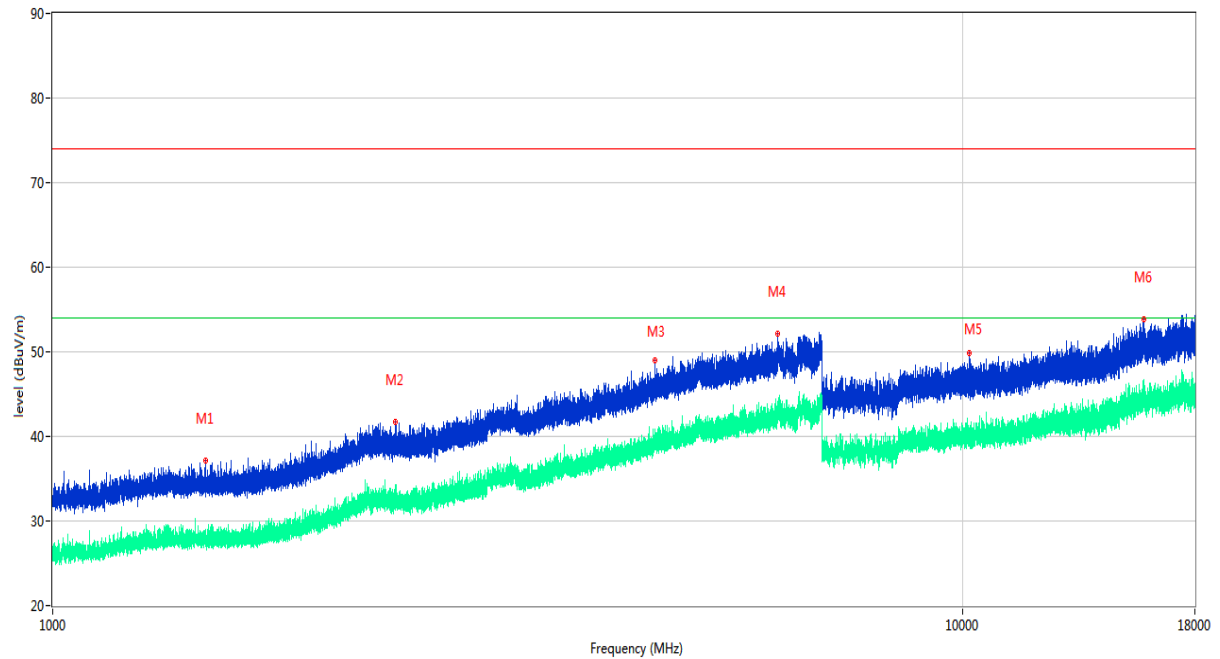
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.575	15.09	-22.52	40.0	-24.91	Peak	69.70	200	Horizontal	Pass
2	91.353	17.98	-25.78	43.5	-25.52	Peak	264.60	200	Horizontal	Pass
3	168.662	16.91	-27.09	43.5	-26.59	Peak	266.10	100	Horizontal	Pass
4	215.998	20.66	-23.92	43.5	-22.84	Peak	91.10	200	Horizontal	Pass
5	236.125	23.49	-22.97	46.0	-22.51	Peak	181.40	100	Horizontal	Pass
6	281.278	31.81	-21.75	46.0	-14.19	Peak	287.00	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	1562.100	38.27	-17.40	74.0	-35.73	Peak	195.00	150	Vertical	Pass
1**	1562.100	28.62	-17.40	54.0	-25.38	AV	195.00	150	Vertical	Pass
2	2881.800	42.97	-10.25	74.0	-31.03	Peak	329.00	150	Vertical	Pass
2**	2881.800	35.30	-10.25	54.0	-18.70	AV	329.00	150	Vertical	Pass
3	4070.200	46.65	-5.41	74.0	-27.35	Peak	117.00	150	Vertical	Pass
3**	4070.200	37.34	-5.41	54.0	-16.66	AV	117.00	150	Vertical	Pass
4	6583.200	53.02	-1.85	74.0	-20.98	Peak	92.00	150	Vertical	Pass
4**	6583.200	43.56	-1.85	54.0	-10.44	AV	92.00	150	Vertical	Pass
5	8916.763	48.88	-0.44	74.0	-25.12	Peak	188.00	150	Vertical	Pass
5**	8916.763	39.89	-0.44	54.0	-14.11	AV	188.00	150	Vertical	Pass
6	15802.613	54.66	2.30	74.0	-19.34	Peak	140.00	150	Vertical	Pass
6**	15802.613	45.75	2.30	54.0	-8.25	AV	140.00	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	1470.800	37.10	-17.49	74.0	-36.90	Peak	256.00	150	Horizontal	Pass
1**	1470.800	28.10	-17.49	54.0	-25.90	AV	256.00	150	Horizontal	Pass
2	2380.300	41.65	-12.56	74.0	-32.35	Peak	233.00	150	Horizontal	Pass
2**	2380.300	32.77	-12.56	54.0	-21.23	AV	233.00	150	Horizontal	Pass
3	4585.800	49.06	-3.56	74.0	-24.94	Peak	160.00	150	Horizontal	Pass
3**	4585.800	39.54	-3.56	54.0	-14.46	AV	160.00	150	Horizontal	Pass
4	6267.000	52.08	-0.54	74.0	-21.92	Peak	248.00	150	Horizontal	Pass
4**	6267.000	43.29	-0.54	54.0	-10.71	AV	248.00	150	Horizontal	Pass
5	10171.125	49.84	-0.22	74.0	-24.16	Peak	360.00	150	Horizontal	Pass
5**	10171.125	40.64	-0.22	54.0	-13.36	AV	360.00	150	Horizontal	Pass
6	15806.287	53.84	2.24	74.0	-20.16	Peak	64.00	150	Horizontal	Pass
6**	15806.287	44.69	2.24	54.0	-9.31	AV	64.00	150	Horizontal	Pass

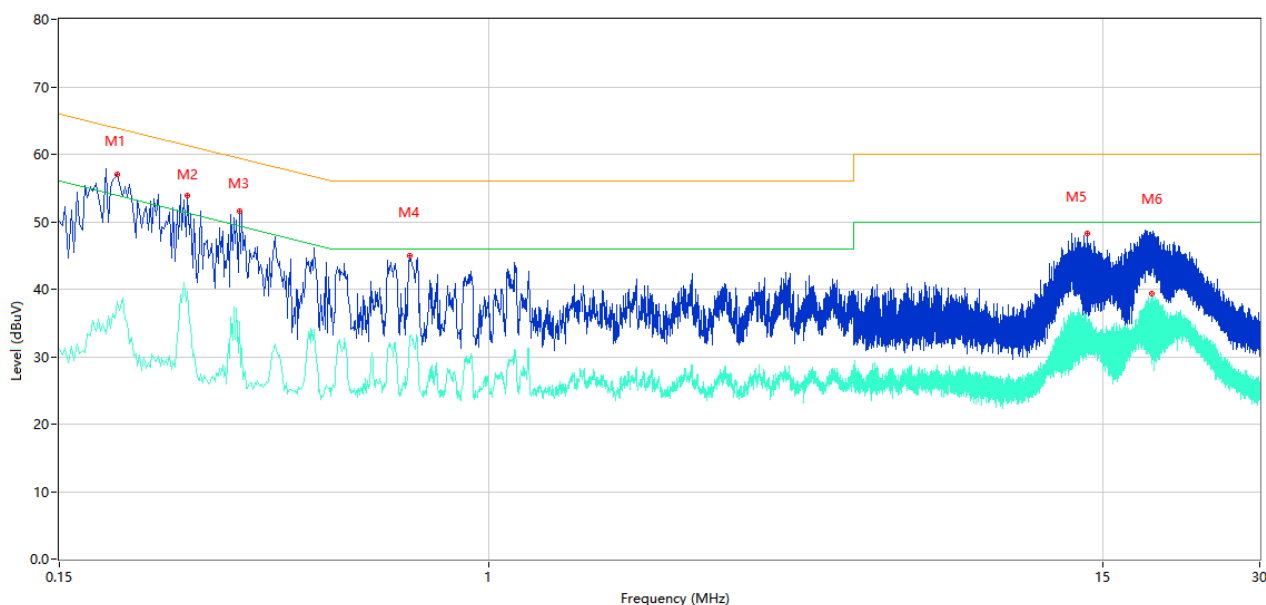
A.2 Conducted Emission

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

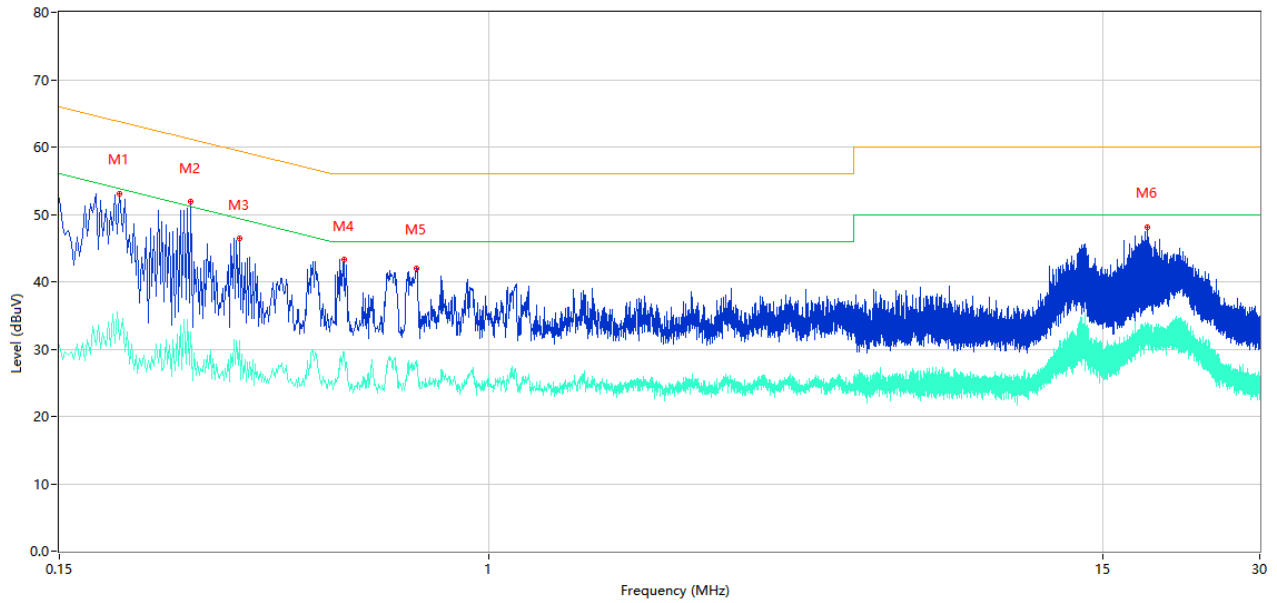
The Camera Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.194	57.07	10.38	63.86	-6.79	Peak	L	Pass
1**	0.194	38.23	10.38	53.86	-15.63	AV	L	Pass
2	0.264	53.96	10.34	61.30	-7.34	Peak	L	Pass
2**	0.264	39.72	10.34	51.30	-11.58	AV	L	Pass
3	0.332	51.57	10.33	59.40	-7.83	Peak	L	Pass
3**	0.332	35.21	10.33	49.40	-14.19	AV	L	Pass
4	0.704	44.99	10.26	56.00	-11.01	Peak	L	Pass
4**	0.704	32.19	10.26	46.00	-13.81	AV	L	Pass
5	13.996	48.30	10.40	60.00	-11.70	Peak	L	Pass
5**	13.996	35.06	10.40	50.00	-14.94	AV	L	Pass
6	18.636	47.41	10.51	60.00	-12.59	Peak	L	Pass
6**	18.636	39.30	10.51	50.00	-10.70	AV	L	Pass

A.2.2 N Phase

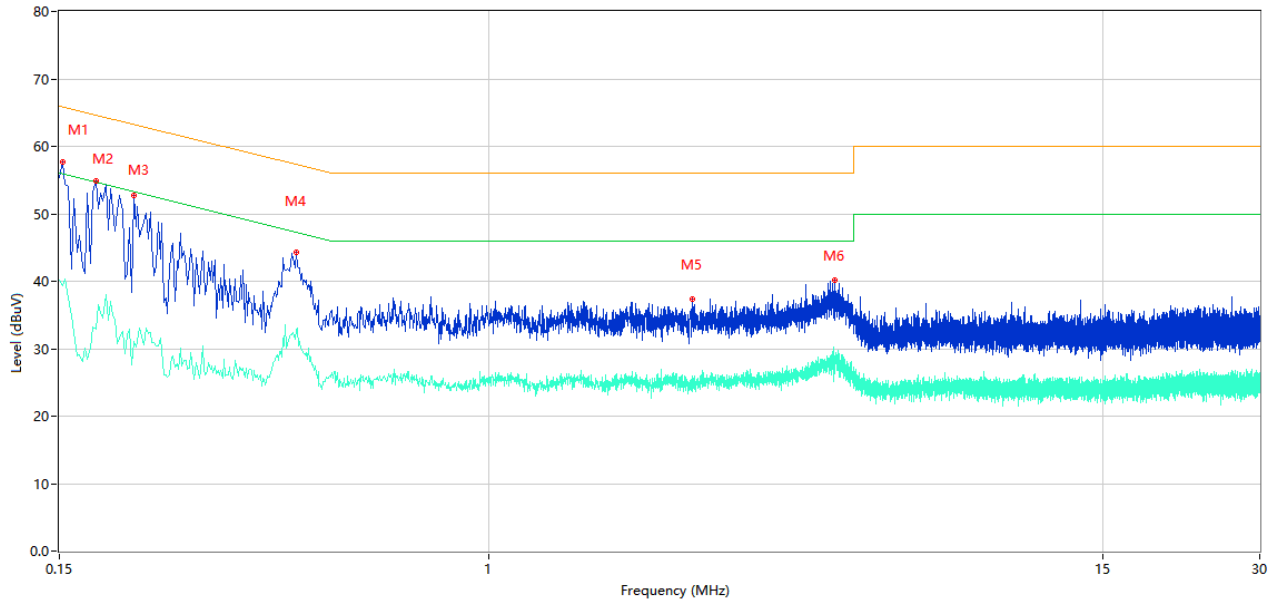


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.196	53.11	10.38	63.78	-10.67	Peak	N	Pass
1**	0.196	31.47	10.38	53.78	-22.31	AV	N	Pass
2	0.268	51.85	10.34	61.18	-9.33	Peak	N	Pass
2**	0.268	32.63	10.34	51.18	-18.55	AV	N	Pass
3	0.332	46.38	10.33	59.40	-13.02	Peak	N	Pass
3**	0.332	31.21	10.33	49.40	-18.19	AV	N	Pass
4	0.528	43.29	10.29	56.00	-12.71	Peak	N	Pass
4**	0.528	29.67	10.29	46.00	-16.33	AV	N	Pass
5	0.724	41.90	10.27	56.00	-14.10	Peak	N	Pass
5**	0.724	28.34	10.27	46.00	-17.66	AV	N	Pass
6	18.278	48.15	10.50	60.00	-11.85	Peak	N	Pass
6**	18.278	33.25	10.50	50.00	-16.75	AV	N	Pass

Test Data and Plots

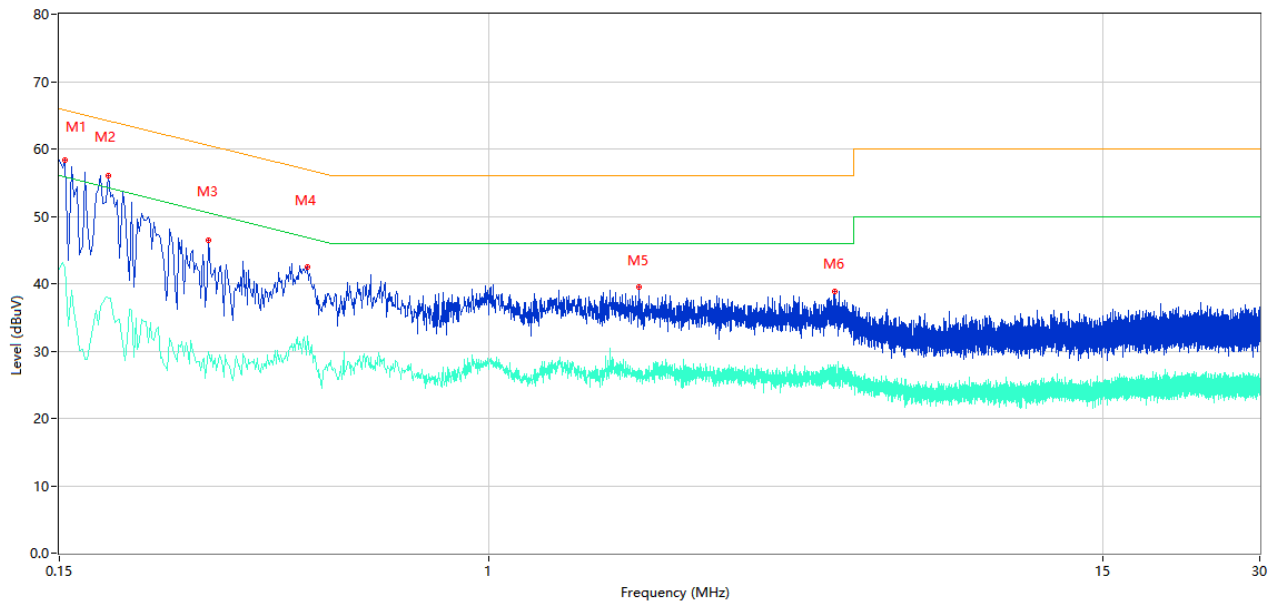
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.152	57.74	10.41	65.89	-8.15	Peak	L	Pass
1**	0.152	39.27	10.41	55.89	-16.62	AV	L	Pass
2	0.176	54.80	10.39	64.67	-9.87	Peak	L	Pass
2**	0.176	32.94	10.39	54.67	-21.73	AV	L	Pass
3	0.208	52.77	10.38	63.28	-10.51	Peak	L	Pass
3**	0.208	31.02	10.38	53.28	-22.26	AV	L	Pass
4	0.426	44.36	10.31	57.33	-12.97	Peak	L	Pass
4**	0.426	32.86	10.31	47.33	-14.47	AV	L	Pass
5	2.456	37.38	10.27	56.00	-18.62	Peak	L	Pass
5**	2.456	25.52	10.27	46.00	-20.48	AV	L	Pass
6	4.608	40.15	10.30	56.00	-15.85	Peak	L	Pass
6**	4.608	28.94	10.30	46.00	-17.06	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.154	58.32	10.41	65.78	-7.46	Peak	N	Pass
1**	0.154	42.52	10.41	55.78	-13.26	AV	N	Pass
2	0.186	56.10	10.39	64.21	-8.11	Peak	N	Pass
2**	0.186	37.92	10.39	54.21	-16.29	AV	N	Pass
3	0.290	46.45	10.34	60.52	-14.07	Peak	N	Pass
3**	0.290	29.86	10.34	50.52	-20.66	AV	N	Pass
4	0.448	42.48	10.30	56.91	-14.43	Peak	N	Pass
4**	0.448	32.23	10.30	46.91	-14.68	AV	N	Pass
5	1.940	39.50	10.25	56.00	-16.50	Peak	N	Pass
5**	1.940	27.46	10.25	46.00	-18.54	AV	N	Pass
6	4.596	38.80	10.30	56.00	-17.20	Peak	N	Pass
6**	4.596	27.05	10.30	46.00	-18.95	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ20B0874-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ20B0874-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ20B0874-AI.PDF”.

--END OF REPORT--