

EMC TEST REPORT

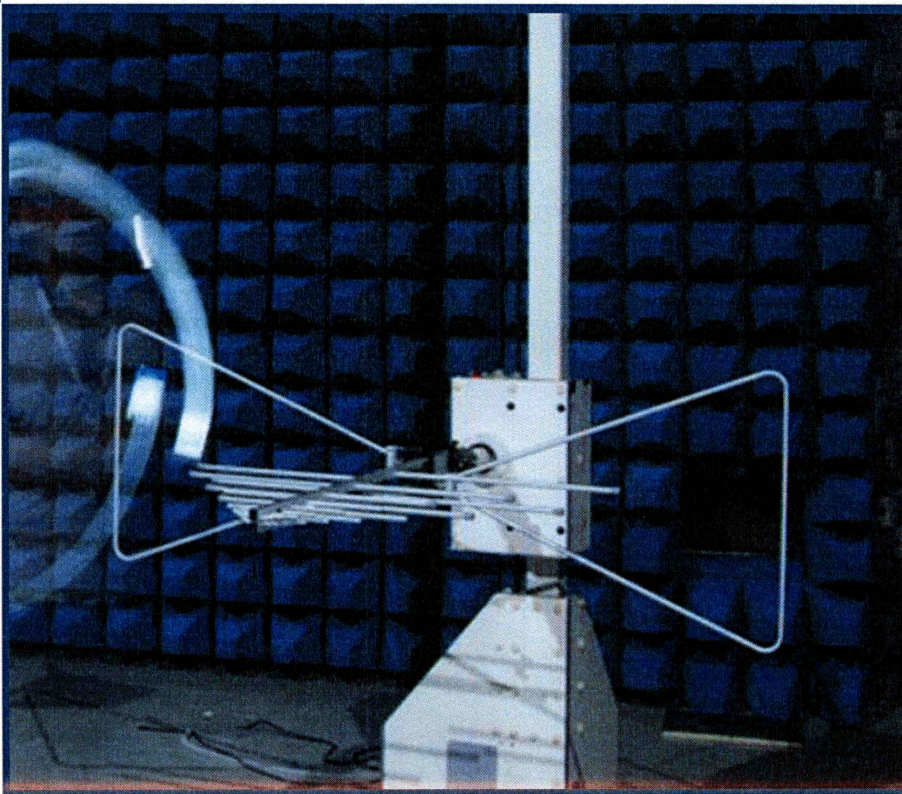
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



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

Liu Zhenxiang

Date Sep. 30, 2021

Approved by: Liao Jianming

Liao Jianming

(Technical Director)

Date Sep. 30, 2021

Report No.: BL-SZ2190504-401

EUT Name: Mobile Phone

Model Name: A103OP

Brand Name: OPPO

Test Standard: 47 CFR Part 15 Subpart B
(refer section 3.1)

FCC ID: R9C-A103OP

Test Conclusion: Pass

Test Date: Sep. 17, 2021 ~ Sep. 18, 2021

Date of Issue: Sep. 30, 2021

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Sep. 30, 2021</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
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	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	A103OP
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	ColorOS 11
Dimensions (Approx.)	162x74.4x8.2mm
Weight (Approx.)	182g

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery	
	Brand Name	OPPO
	Model No.	BLP779
	Serial No.	N/A
	Capacitance	Rated: 3890mAh/14.97Wh Typical: 4000mAh/15.40Wh
	Rated Voltage	3.85 V
	Limited Voltage	4.4 V
	Manufacturer	TWS TECHNOLOGY (GUANGZHOU) LIMITED
Ancillary Equipment 2	Power Supply Unit 1	
	Brand Name	OPPO
	Model No.	OP92KAJH
	Serial No.	N/A
	Rated Input	100-240V~ 50/60Hz 0.5A
	Rated Output	5VDC 2A or 9VDC 2A (US Plug)
Ancillary Equipment 3	Power Supply Unit 2	
	Brand Name	OPPO
	Model No.	OP92JAJH
	Serial No.	N/A
	Rated Input	100-240V~ 50/60Hz 0.5A
	Rated Output	5VDC 2A or 9VDC 2A (US Plug)
Ancillary Equipment 4	USB Cable	
	Model No.	DL143
	Length (Approx.)	1.0 m
Ancillary Equipment 5	Earphone	
	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 Band 2/4/5
	4G Network LTE FDD Band 2/4/5/7/12/17/26
	LTE TDD Band 38/41
	LTE CA Uplink (UL): CA_7C
	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, FM receiver

The requirement for the following technical information of the EUT was tested in this report:

The Highest Speed of Processor	2.36 GHz
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3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	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

Note: The only difference between the EUT (test samples in this report) and testing sample of report BL-SZ 2110319-401, which was issued by Shenzhen BALUN Technology Co., Ltd. on Mar. 19, 2021 show as below:

1. Model name changed to A103OP.
2. Changed from dual cards to "one actual cards + one eSIM".

The other hardware circuits and software are the same, and all test items are re-tested.

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 3.85 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&SCHWARZ	ESRP	101036	2021.06.01	2022.05.31	☐
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	2021.08.15	2024.08.14	☐
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	☒
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2021.09.13	2022.09.12	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2022.07.01	☒
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2020.03.16	2023.03.15	☒
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	2021.09.18	2022.09.17	☒
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2021.09.13	2022.09.12	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1917	2019.07.02	2022.07.01	☒
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2020.03.16	2023.03.15	☒
Test Software	BALUN	BL410_E	V19.918	--	--	☒

Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY5711030 9	2021.06.08	2022.06.07	☒
EMI Receiver	KEYSIGHT	N9010B	MY5711030 9	2021.06.01	2022.05.31	☒
LISN	SCHWARZBECK	NSLK 8127	8127-940	2020.11.10	2021.11.09	☒
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.4m*3.1m*2 .8m	N/A	2018.08.16	2022.08.15	☒
Test Software	BALUN	BL410_E	V19.918	--	--	☒

4.3 Test Enclosure list

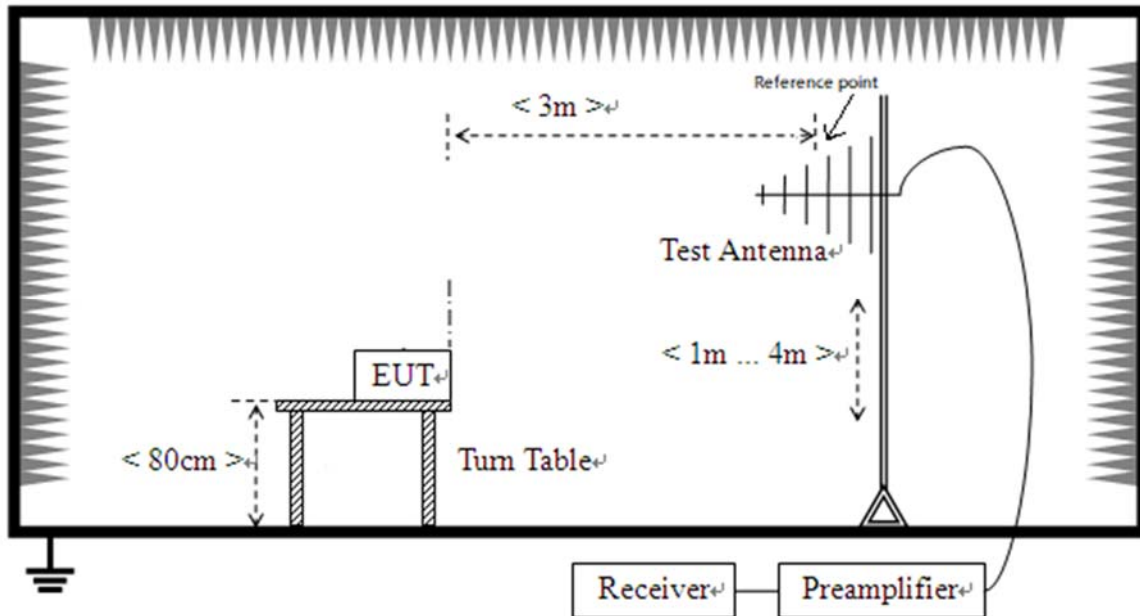
Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	☐
Laptop	Apple	A1465	N/A	N/A	N/A	☒
Printer	HP	DESKJET 1000	N/A	N/A	N/A	☐
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	☐
Mouse	Logitech	M100	N/A	N/A	N/A	☐
USB disk	Kingston	N/A	N/A	N/A	N/A	☐
TF Card	Kingston	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	☐
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 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

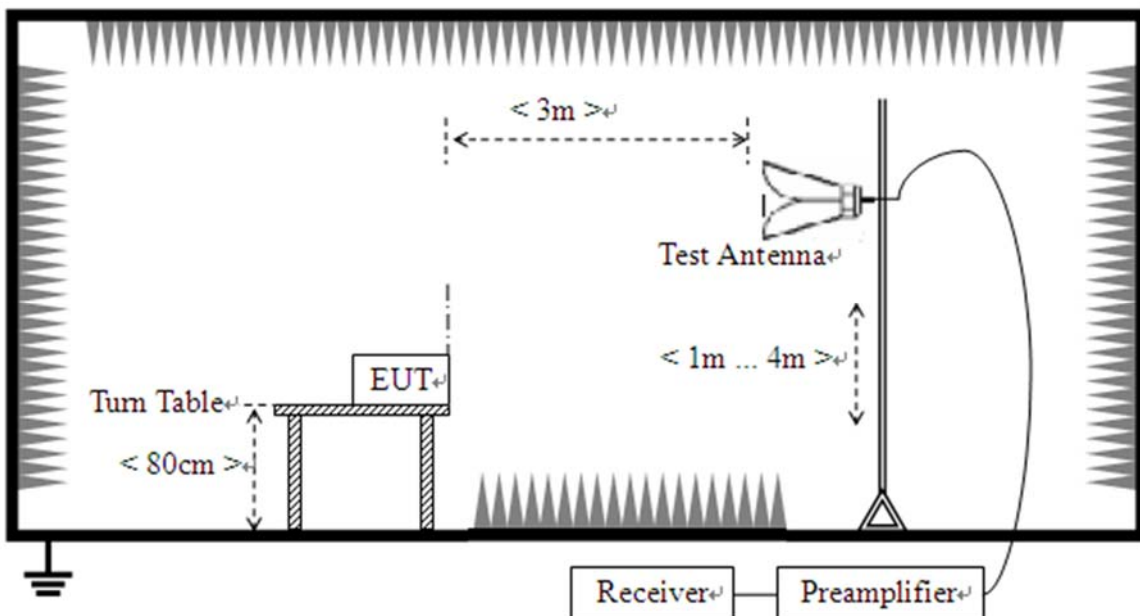
4.5 Test Setups

Test Setup 1



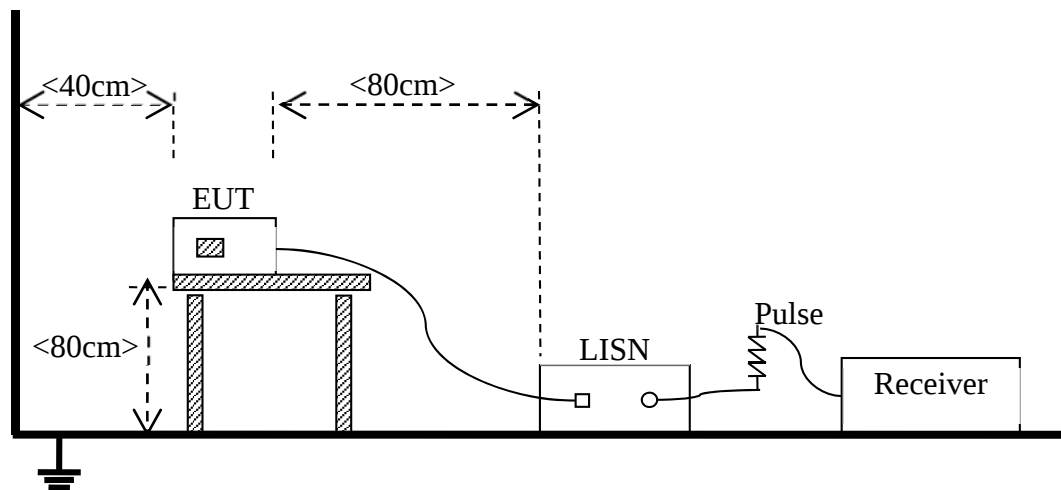
(For Radiated Emission Test (30 MHz-1 GHz))

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 ^{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. 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.

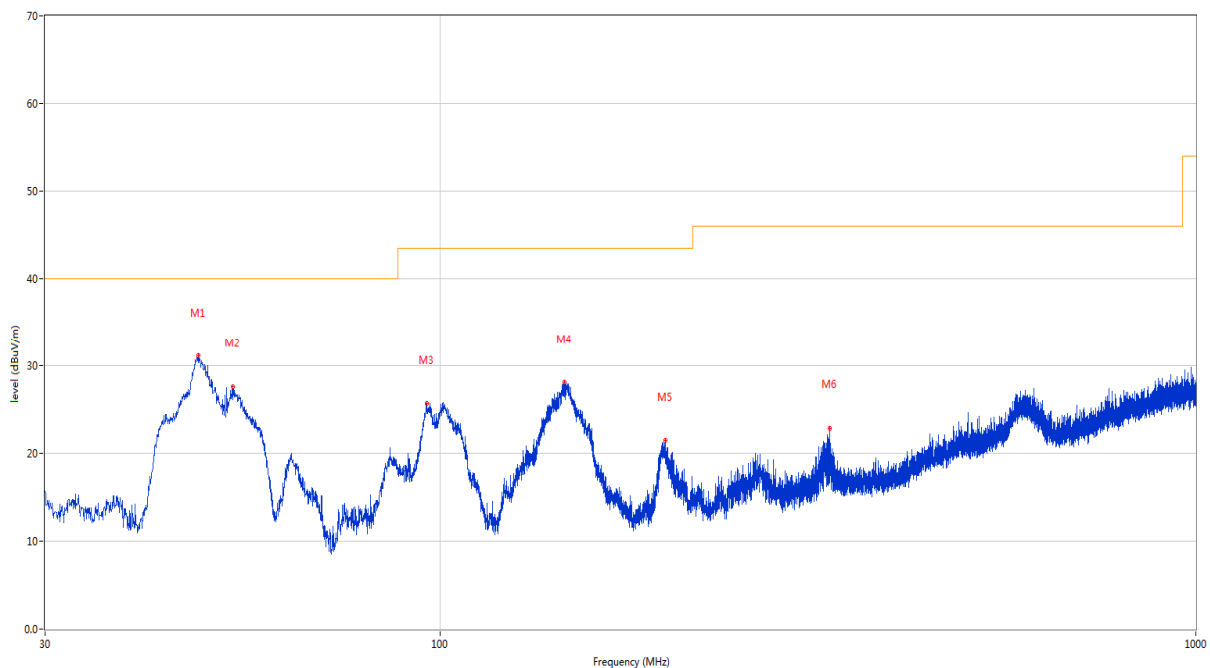
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Test Data and Plots

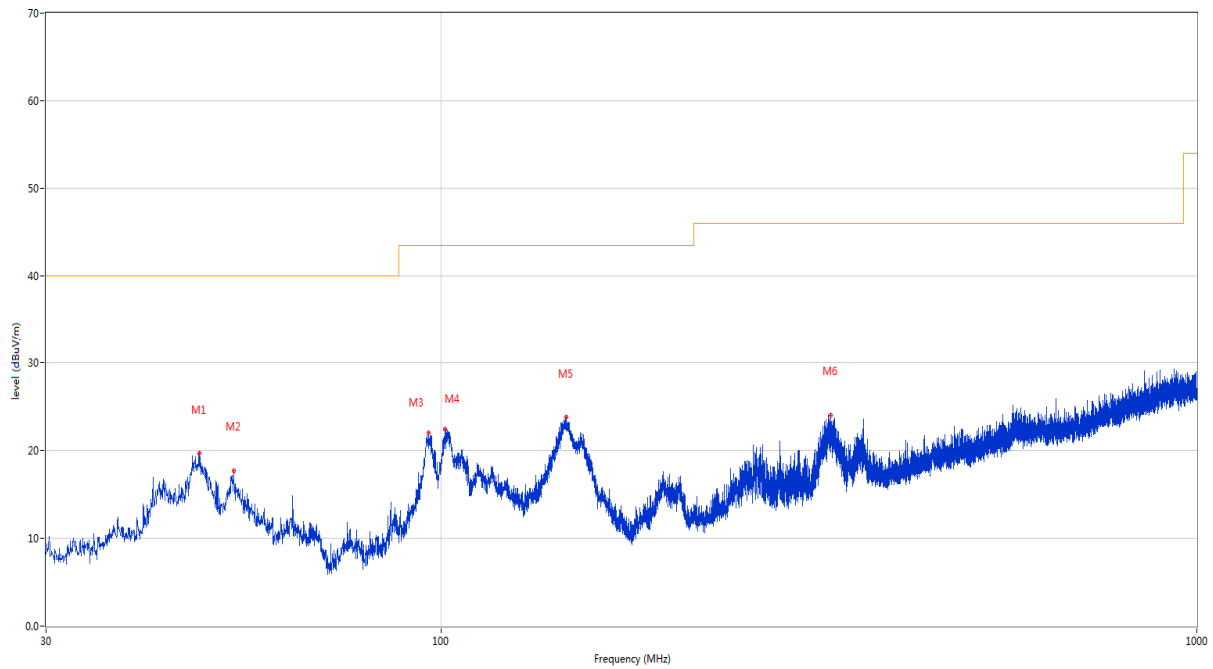
The Camera Test Mode

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



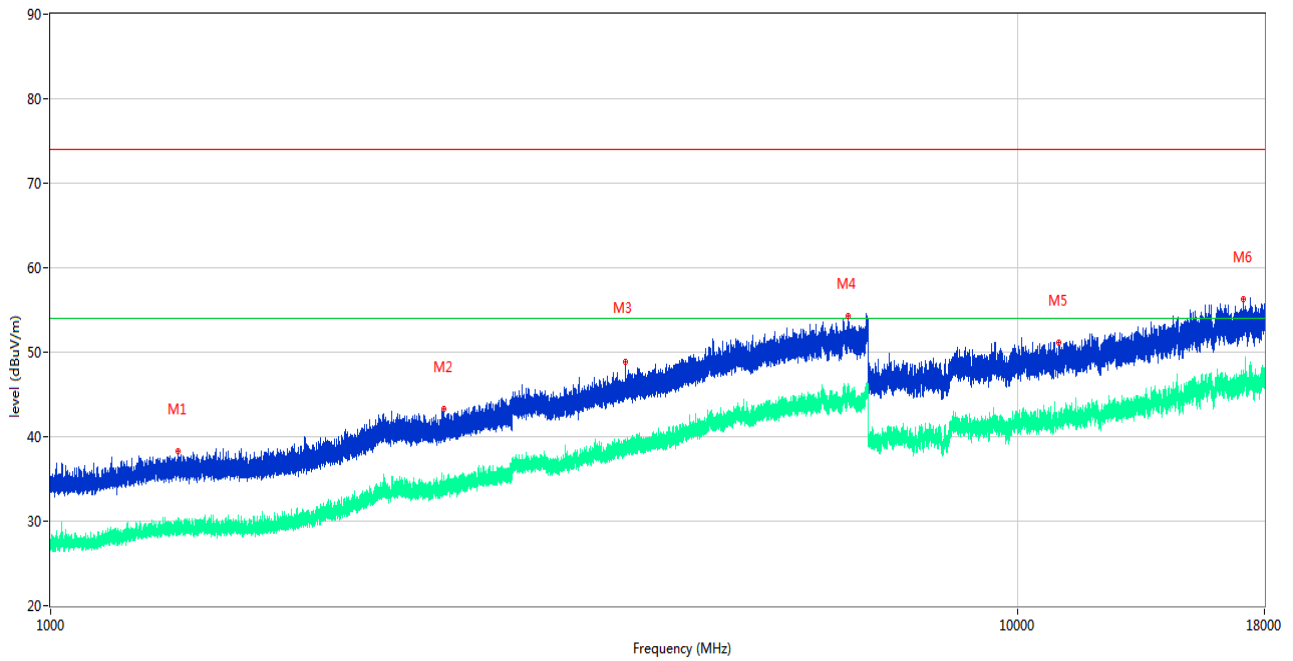
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	47.897	31.12	-22.66	40.0	-8.88	Peak	168.00	100	Vertical	Pass
2	53.183	27.59	-22.97	40.0	-12.41	Peak	172.10	100	Vertical	Pass
3	95.911	25.65	-24.73	43.5	-17.85	Peak	353.60	100	Vertical	Pass
4	146.012	28.06	-27.60	43.5	-15.44	Peak	290.10	100	Vertical	Pass
5	198.441	21.46	-24.17	43.5	-22.04	Peak	53.90	100	Vertical	Pass
6	327.790	22.83	-20.75	46.0	-23.17	Peak	163.20	200	Vertical	Pass

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



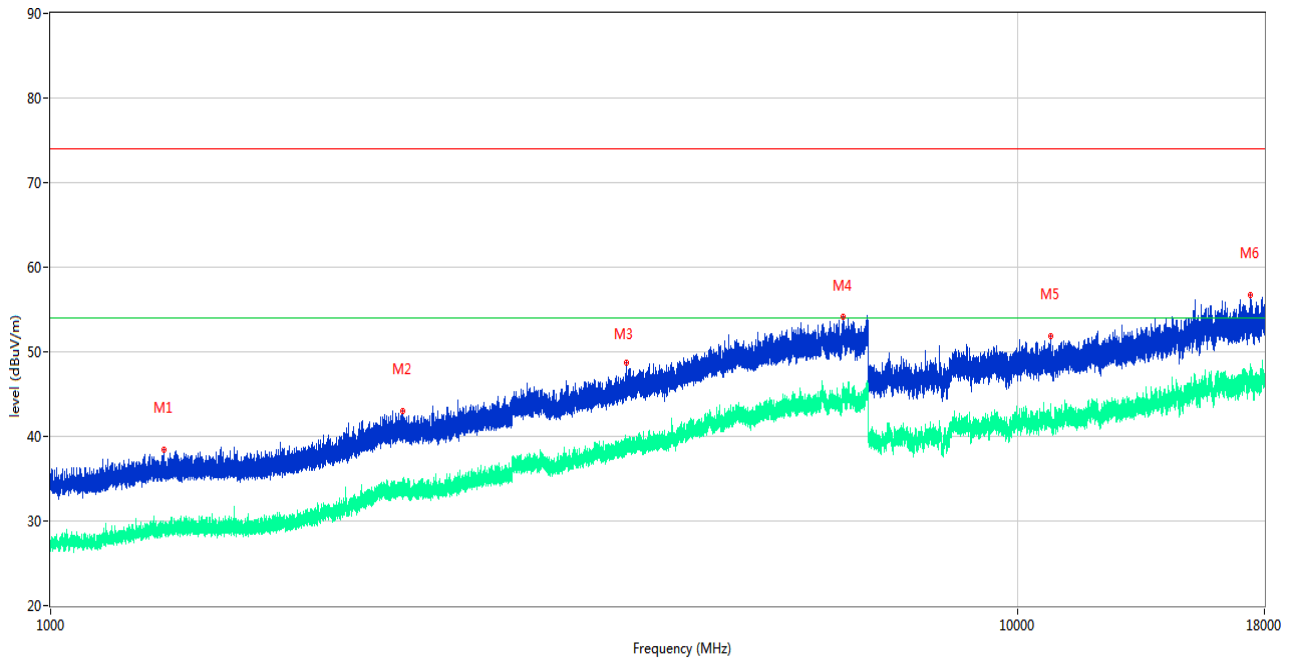
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	47.848	19.67	-22.67	40.0	-20.33	Peak	140.70	200	Horizontal	Pass
2	53.135	17.72	-22.98	40.0	-22.28	Peak	89.80	200	Horizontal	Pass
3	96.154	21.98	-24.75	43.5	-21.52	Peak	285.40	200	Horizontal	Pass
4	101.149	22.44	-24.64	43.5	-21.06	Peak	268.60	100	Horizontal	Pass
5	146.352	23.76	-27.61	43.5	-19.74	Peak	217.30	200	Horizontal	Pass
6	328.033	24.01	-20.79	46.0	-21.99	Peak	209.40	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	1354.300	38.22	-17.36	74.0	-35.78	Peak	0.00	100	Vertical	Pass
1**	1354.300	29.11	-17.36	54.0	-24.89	AV	0.00	100	Vertical	Pass
2	2548.900	43.30	-12.05	74.0	-30.70	Peak	189.00	100	Vertical	Pass
2**	2548.900	33.70	-12.05	54.0	-20.30	AV	189.00	100	Vertical	Pass
3	3926.400	48.84	-5.47	74.0	-25.16	Peak	171.00	100	Vertical	Pass
3**	3926.400	38.43	-5.47	54.0	-15.57	AV	171.00	100	Vertical	Pass
4	6684.800	54.25	-0.23	74.0	-19.75	Peak	151.00	100	Vertical	Pass
4**	6684.800	44.92	-0.23	54.0	-9.08	AV	151.00	100	Vertical	Pass
5	11032.762	51.20	-0.59	74.0	-22.80	Peak	330.00	100	Vertical	Pass
5**	11032.762	42.46	-0.59	54.0	-11.54	AV	330.00	100	Vertical	Pass
6	17126.400	56.35	2.25	74.0	-17.65	Peak	119.00	100	Vertical	Pass
6**	17126.400	46.72	2.25	54.0	-7.28	AV	119.00	100	Vertical	Pass

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

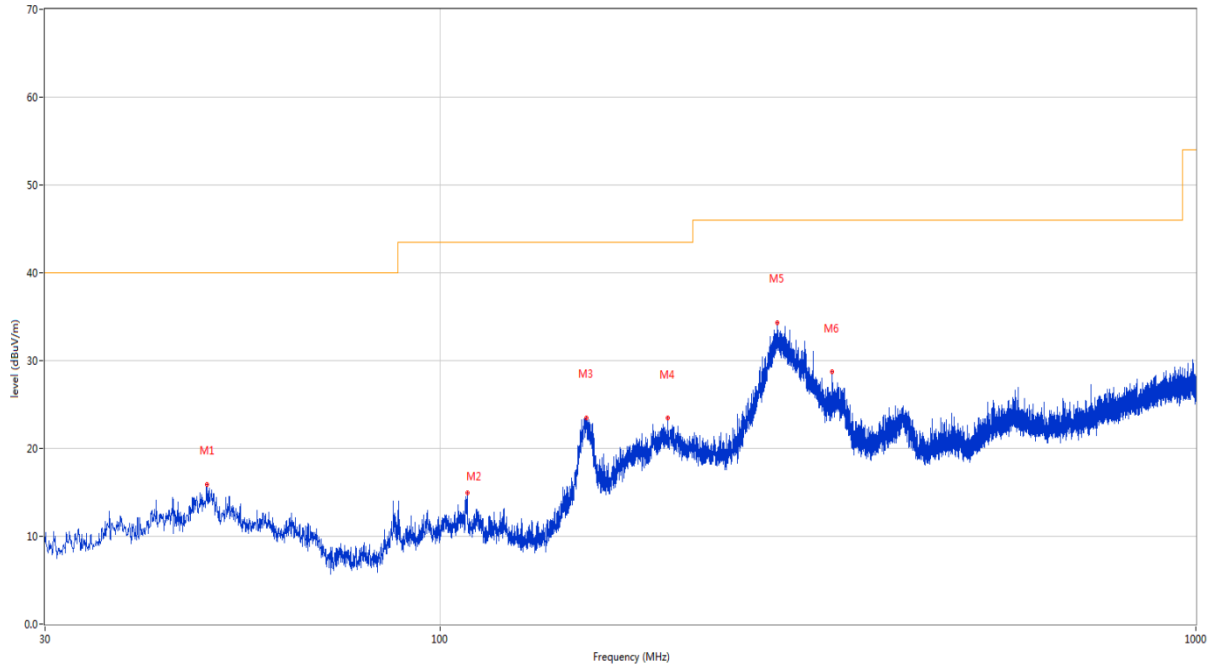


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1310.200	38.41	-17.29	74.0	-35.59	Peak	51.00	100	Horizontal	Pass
1**	1310.200	28.70	-17.29	54.0	-25.30	AV	51.00	100	Horizontal	Pass
2	2314.500	42.94	-12.94	74.0	-31.06	Peak	206.00	100	Horizontal	Pass
2**	2314.500	33.82	-12.94	54.0	-20.18	AV	206.00	100	Horizontal	Pass
3	3940.200	48.69	-5.48	74.0	-25.31	Peak	127.00	100	Horizontal	Pass
3**	3940.200	38.32	-5.48	54.0	-15.68	AV	127.00	100	Horizontal	Pass
4	6602.000	54.20	-0.19	74.0	-19.80	Peak	151.00	100	Horizontal	Pass
4**	6602.000	45.03	-0.19	54.0	-8.97	AV	151.00	100	Horizontal	Pass
5	10820.588	51.85	0.19	74.0	-22.15	Peak	0.00	100	Horizontal	Pass
5**	10820.588	42.72	0.19	54.0	-11.28	AV	0.00	100	Horizontal	Pass
6	17420.401	56.66	3.75	74.0	-17.34	Peak	338.00	100	Horizontal	Pass
6**	17420.401	47.82	3.75	54.0	-6.18	AV	338.00	100	Horizontal	Pass

Test Data and Plots

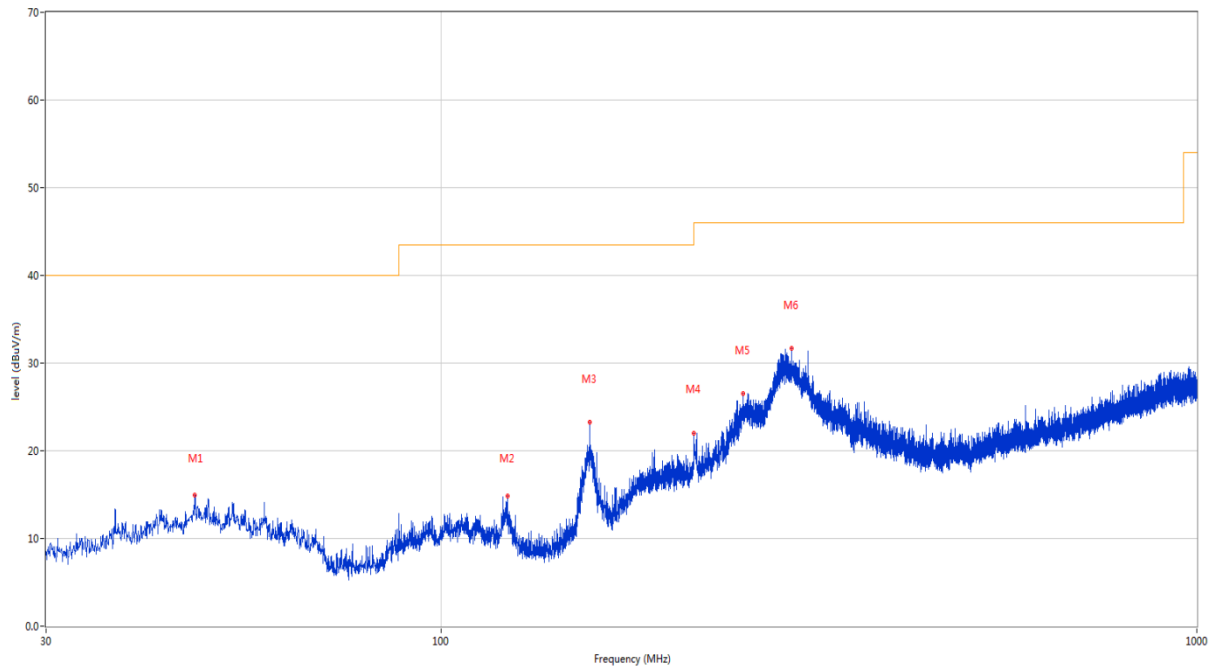
The USB Test Mode

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



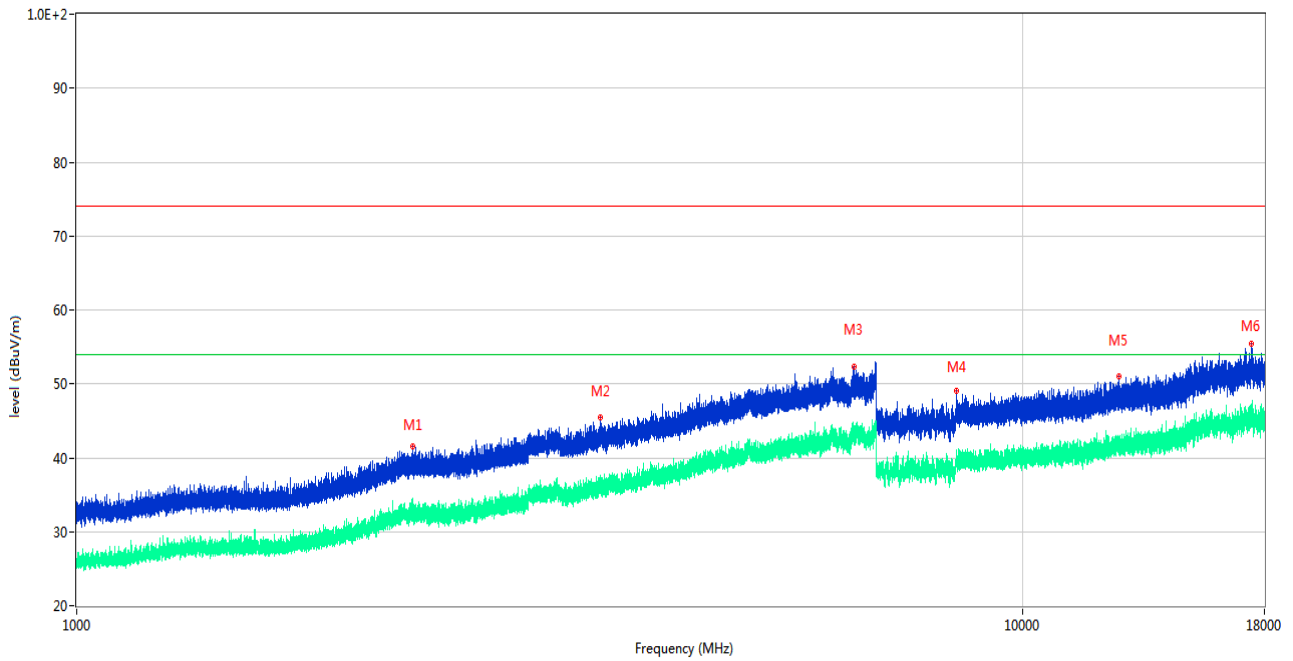
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	49.109	15.93	-22.41	40.0	-24.07	Peak	360.00	200	Vertical	Pass
2	108.570	14.95	-24.43	43.5	-28.55	Peak	23.10	100	Vertical	Pass
3	156.197	23.52	-27.44	43.5	-19.98	Peak	113.30	100	Vertical	Pass
4	199.992	23.47	-24.10	43.5	-20.03	Peak	168.90	100	Vertical	Pass
5	279.096	34.27	-21.85	46.0	-11.73	Peak	32.80	200	Vertical	Pass
6	330.070	28.74	-20.98	46.0	-17.26	Peak	360.00	200	Vertical	Pass

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



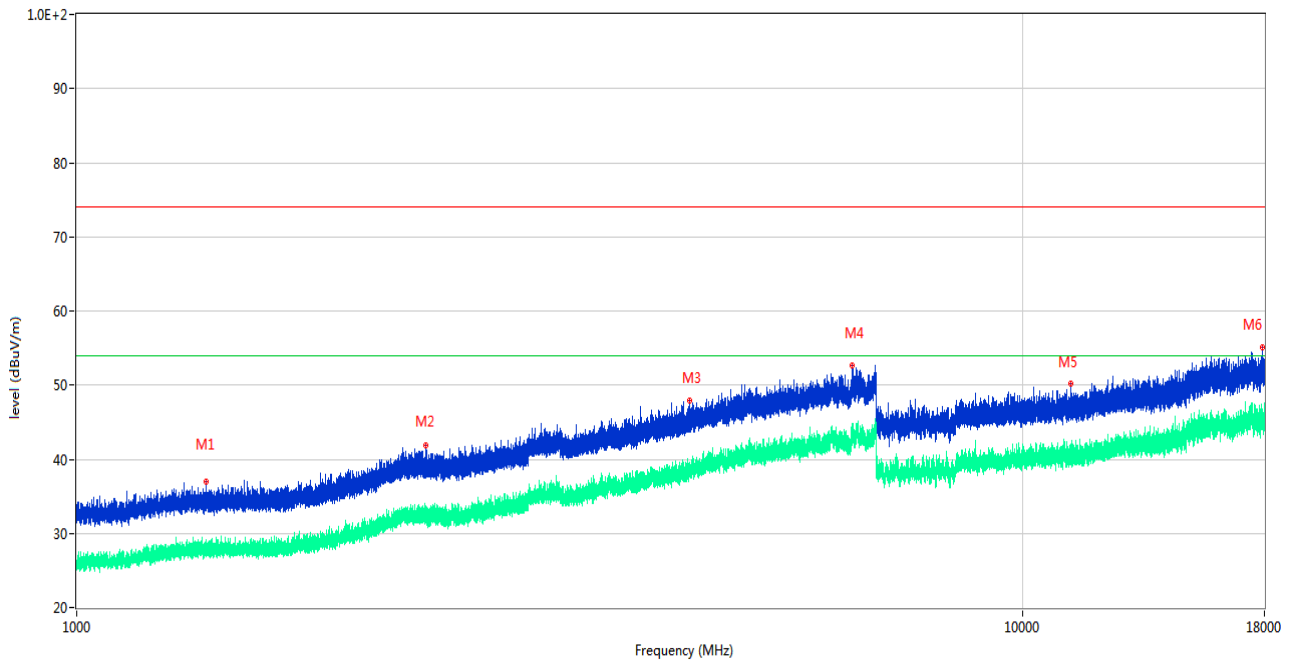
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	47.218	14.92	-22.83	40.0	-25.08	Peak	187.30	200	Horizontal	Pass
2	122.296	14.89	-26.12	43.5	-28.61	Peak	360.00	200	Horizontal	Pass
3	157.312	23.31	-27.60	43.5	-20.19	Peak	204.60	200	Horizontal	Pass
4	215.949	22.01	-23.91	43.5	-21.49	Peak	119.30	200	Horizontal	Pass
5	250.966	26.51	-22.88	46.0	-19.49	Peak	130.80	100	Horizontal	Pass
6	290.978	31.66	-21.62	46.0	-14.34	Peak	135.00	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	2266.800	41.53	-12.83	74.0	-32.47	Peak	248.00	150	Vertical	Pass
1**	2266.800	32.20	-12.83	54.0	-21.80	AV	248.00	150	Vertical	Pass
2	3575.200	45.41	-6.73	74.0	-28.59	Peak	272.00	150	Vertical	Pass
2**	3575.200	36.13	-6.73	54.0	-17.87	AV	272.00	150	Vertical	Pass
3	6637.400	52.27	-0.56	74.0	-21.73	Peak	350.00	150	Vertical	Pass
3**	6637.400	41.95	-0.56	54.0	-12.05	AV	350.00	150	Vertical	Pass
4	8512.825	49.03	-1.43	74.0	-24.97	Peak	108.00	150	Vertical	Pass
4**	8512.825	39.17	-1.43	54.0	-14.83	AV	108.00	150	Vertical	Pass
5	12625.225	51.04	1.59	74.0	-22.96	Peak	242.00	150	Vertical	Pass
5**	12625.225	42.34	1.59	54.0	-11.66	AV	242.00	150	Vertical	Pass
6	17426.438	55.39	3.57	74.0	-18.61	Peak	137.00	150	Vertical	Pass
6**	17426.438	46.50	3.57	54.0	-7.50	AV	137.00	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	1370.700	37.03	-17.42	74.0	-36.97	Peak	338.00	150	Horizontal	Pass
1**	1370.700	28.01	-17.42	54.0	-25.99	AV	338.00	150	Horizontal	Pass
2	2338.900	41.91	-12.64	74.0	-32.09	Peak	91.00	150	Horizontal	Pass
2**	2338.900	33.69	-12.64	54.0	-20.31	AV	91.00	150	Horizontal	Pass
3	4443.800	47.88	-4.07	74.0	-26.12	Peak	112.00	150	Horizontal	Pass
3**	4443.800	38.97	-4.07	54.0	-15.03	AV	112.00	150	Horizontal	Pass
4	6603.400	52.63	-0.07	74.0	-21.37	Peak	273.00	150	Horizontal	Pass
4**	6603.400	44.75	-0.07	54.0	-9.25	AV	273.00	150	Horizontal	Pass
5	11225.388	50.19	-0.23	74.0	-23.81	Peak	360.00	150	Horizontal	Pass
5**	11225.388	41.66	-0.23	54.0	-12.34	AV	360.00	150	Horizontal	Pass
6	17903.663	55.17	3.64	74.0	-18.83	Peak	264.00	150	Horizontal	Pass
6**	17903.663	45.20	3.64	54.0	-8.80	AV	264.00	150	Horizontal	Pass

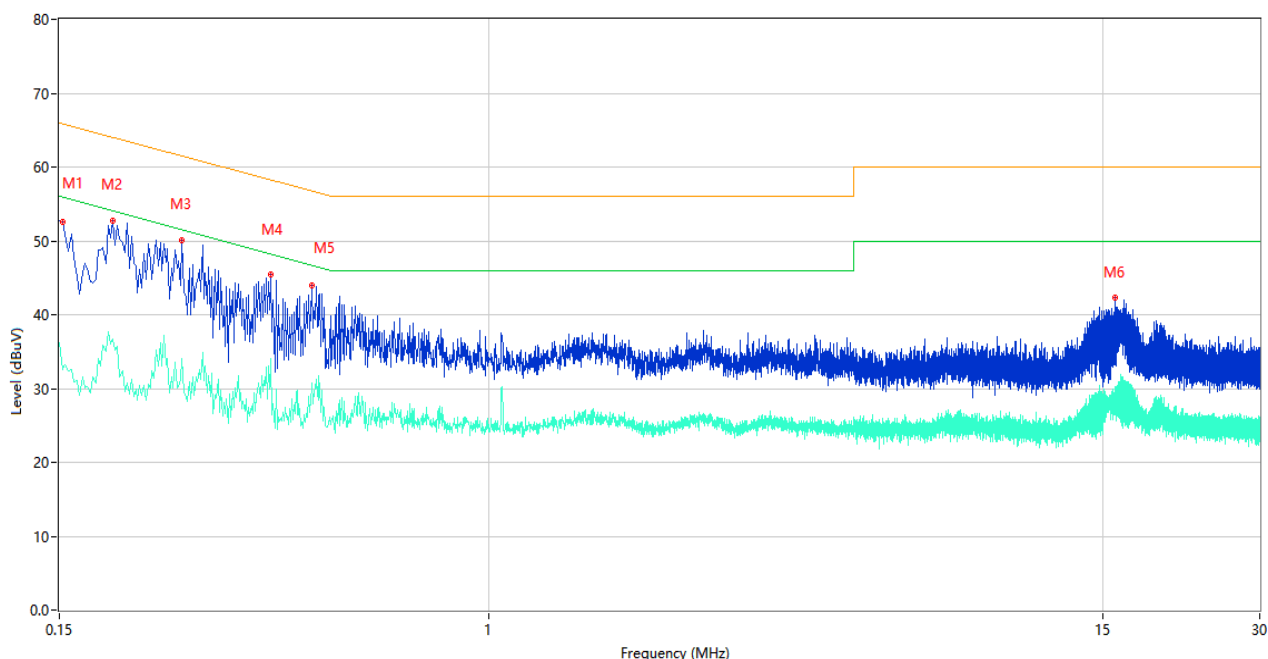
A.2 Conducted Emission

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

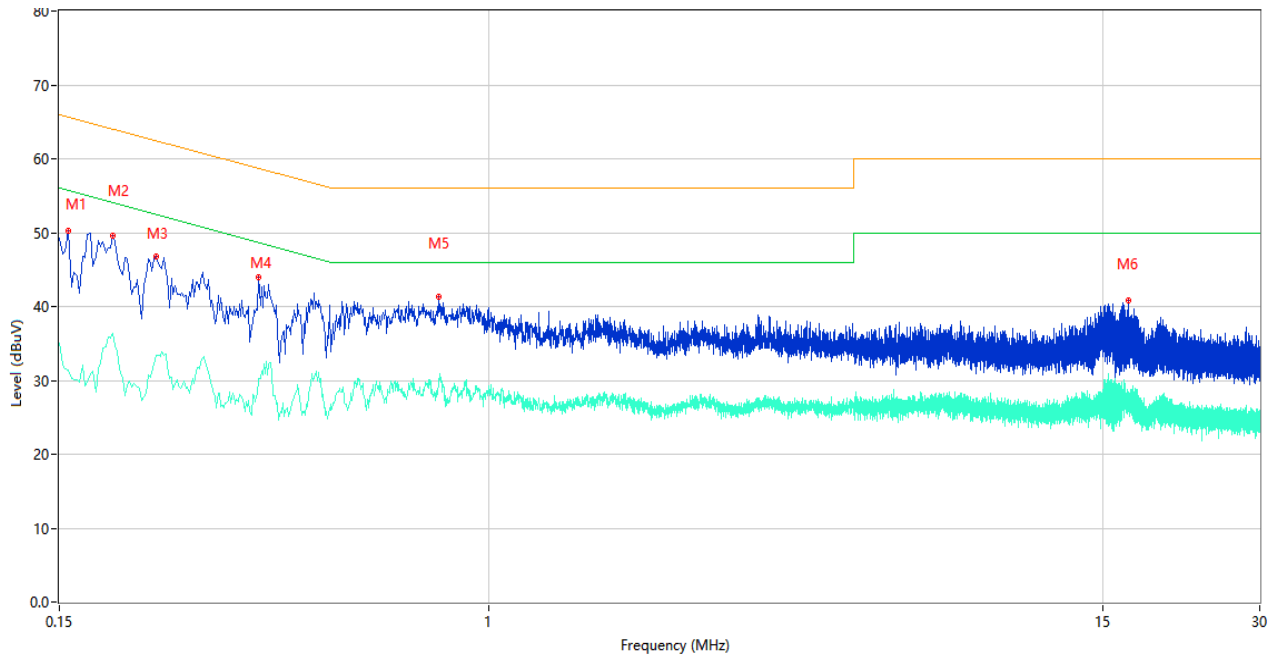
The Camera Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.152	52.62	10.41	65.89	-13.27	Peak	L	Pass
1**	0.152	32.62	10.41	55.89	-23.27	AV	L	Pass
2	0.190	52.74	10.38	64.04	-11.30	Peak	L	Pass
2**	0.190	36.64	10.38	54.04	-17.40	AV	L	Pass
3	0.258	50.05	10.34	61.50	-11.45	Peak	L	Pass
3**	0.258	34.05	10.34	51.50	-17.45	AV	L	Pass
4	0.382	45.52	10.30	58.24	-12.72	Peak	L	Pass
4**	0.382	34.12	10.30	48.24	-14.12	AV	L	Pass
5	0.458	44.01	10.30	56.73	-12.72	Peak	L	Pass
5**	0.458	30.75	10.30	46.73	-15.98	AV	L	Pass
6	15.832	42.27	10.43	60.00	-17.73	Peak	L	Pass
6**	15.832	29.83	10.43	50.00	-20.17	AV	L	Pass

A.2.2 N Phase

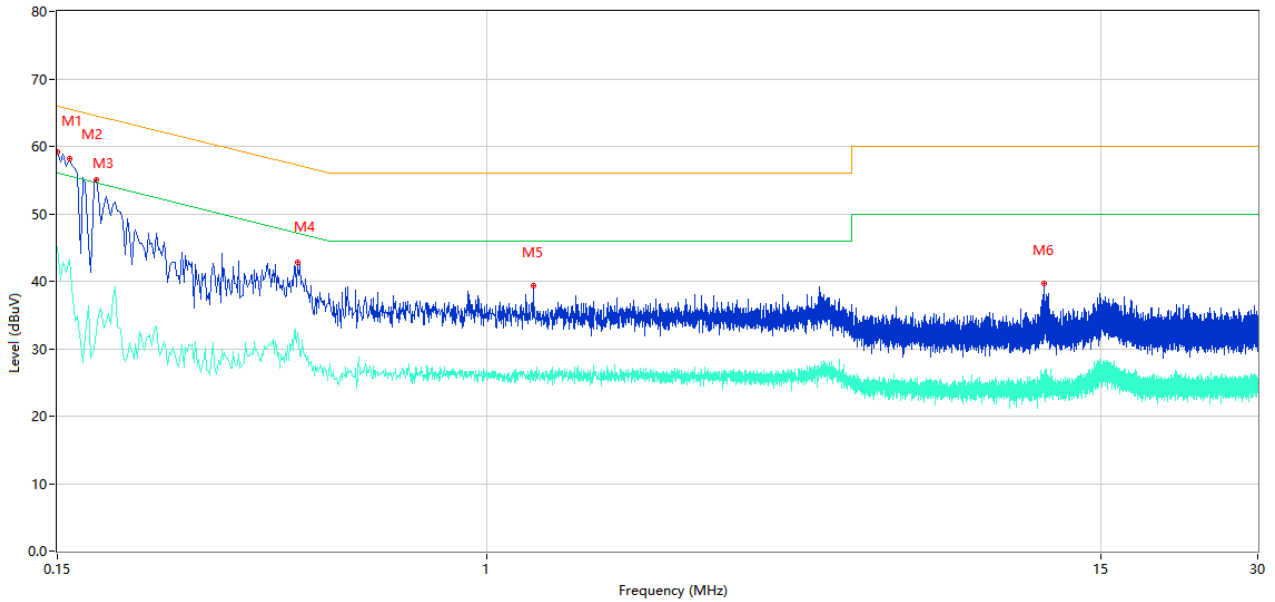


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	50.31	10.41	65.67	-15.36	Peak	N	Pass
1**	0.156	31.45	10.41	55.67	-24.22	AV	N	Pass
2	0.190	49.58	10.38	64.04	-14.46	Peak	N	Pass
2**	0.190	36.36	10.38	54.04	-17.68	AV	N	Pass
3	0.230	46.70	10.36	62.45	-15.75	Peak	N	Pass
3**	0.230	33.37	10.36	52.45	-19.08	AV	N	Pass
4	0.362	43.94	10.31	58.68	-14.74	Peak	N	Pass
4**	0.362	30.30	10.31	48.68	-18.38	AV	N	Pass
5	0.800	41.32	10.27	56.00	-14.68	Peak	N	Pass
5**	0.800	29.83	10.27	46.00	-16.17	AV	N	Pass
6	16.776	40.81	10.46	60.00	-19.19	Peak	N	Pass
6**	16.776	26.83	10.46	50.00	-23.17	AV	N	Pass

Test Data and Plots

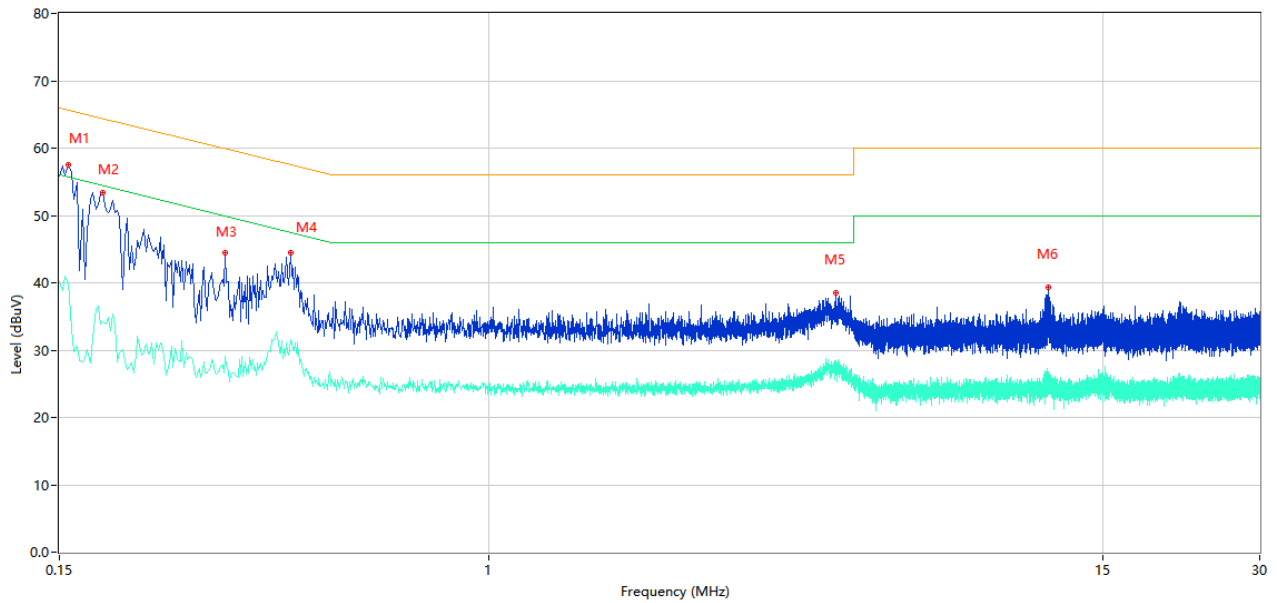
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	59.16	10.41	66.00	-6.84	Peak	L	Pass
1**	0.150	45.20	10.41	56.00	-10.80	AV	L	Pass
2	0.158	58.24	10.40	65.57	-7.33	Peak	L	Pass
2**	0.158	43.28	10.40	55.57	-12.29	AV	L	Pass
3	0.178	55.00	10.39	64.58	-9.58	Peak	L	Pass
3**	0.178	32.72	10.39	54.58	-21.86	AV	L	Pass
4	0.434	42.80	10.31	57.18	-14.38	Peak	L	Pass
4**	0.434	32.41	10.31	47.18	-14.77	AV	L	Pass
5	1.224	39.32	10.25	56.00	-16.68	Peak	L	Pass
5**	1.224	25.34	10.25	46.00	-20.66	AV	L	Pass
6	11.706	39.65	10.38	60.00	-20.35	Peak	L	Pass
6**	11.706	23.14	10.38	50.00	-26.86	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	57.47	10.41	65.67	-8.20	Peak	N	Pass
1**	0.156	40.01	10.41	55.67	-15.66	AV	N	Pass
2	0.182	53.33	10.39	64.39	-11.06	Peak	N	Pass
2**	0.182	34.17	10.39	54.39	-20.22	AV	N	Pass
3	0.312	44.49	10.33	59.92	-15.43	Peak	N	Pass
3**	0.312	29.12	10.33	49.92	-20.80	AV	N	Pass
4	0.416	44.52	10.31	57.53	-13.01	Peak	N	Pass
4**	0.416	31.50	10.31	47.53	-16.03	AV	N	Pass
5	4.612	38.43	10.30	56.00	-17.57	Peak	N	Pass
5**	4.612	27.22	10.30	46.00	-18.78	AV	N	Pass
6	11.796	39.27	10.38	60.00	-20.73	Peak	N	Pass
6**	11.796	26.10	10.38	50.00	-23.90	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2190504-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2190504-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2190504-AI.PDF”.

--END OF REPORT--