

TEST REPORT

Applicant: Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address: NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China
Equipment Type: Mobile Phone
Model Name: CPH2353
Brand Name: OPPO
FCC ID: R9C-CPH2353
Test Standard: 47 CFR Part 15 Subpart B
Test Date: Jan. 17, 2022 - Jan. 27, 2022
Date of Issue: Mar. 7, 2022

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

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(Technical Director)

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Jm Liao

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Mar. 7, 2022</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
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

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	CPH2353
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	ColorOS V12.0.1
Dimensions (Approx.)	N/A
Weight (Approx.)	175g(with battery)

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	OPPO
	Model No.	BLP917
	Serial No.	N/A
	Capacity	Rated: 4400mAh/17.02Wh Typical: 4500mAh/17.41Wh
	Rated Voltage	3.87 V
	Limit Charge Voltage	4.45 V

2.6 Technical Information

Network and Wireless connectivity	<p>2G Network GSM/GPRS/EDGE 850/1900 MHz</p> <p>3G Network WCDMA/HSDPA/HSUPA Band 4/5</p> <p>4G Network LTE FDD Band 4/5/12/17/26 LTE TDD Band 38/41</p> <p>LTE CA Uplink (UL): CA_41C</p> <p>Bluetooth (BR+EDR+BLE)</p> <p>2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40)</p> <p>5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80)</p> <p>U-NII-1/2A/2C, GPS, GLONASS, BDS, Galileo, FM receiver, NFC</p>
Note: The EUT is a mobile phone, supporting dual SIM card slots and ESIM card slot under the same transceiver.	

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

The Highest Speed of Processor	2.2 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	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)	3.22 dB
Radiated emissions (30 MHz-1 GHz)-10m	4.80 dB
Radiated emissions (30 MHz-1 GHz)-3m	4.76 dB
Radiated emissions (1 GHz-18 GHz)-3m	4.88 dB

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments, Test Date and Test Engineer

Test items	Voltage	Temperature	Relative Humidity	Ambient Pressure	Test Date	Test Engineer
Radiated Emission	AC 230V/50Hz AC 120V/60Hz DC 3.87V(battery)	25°C	55%RH	100 kPa ~ 102kPa	Jan. 17, 2022 ~ Jan. 18, 2022	Zheng Chuanzheng
Conducted Emission	AC 230V/50Hz AC 120V/60Hz DC 3.87V(battery)	25°C	55%RH	100 kPa ~ 102kPa	Jan. 27, 2022	Ye Guangqi

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	2021.10.10	2022.10.09	<input type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2018054558	2021.10.10	2022.10.09	<input type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2022.07.01	<input type="checkbox"/>
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	N/A	2021.08.15	2024.08.14	<input type="checkbox"/>
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V19.918		<input type="checkbox"/>

Radiated Emission Test For Frequency Below 1 GHz (3m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY55330120	2021.10.20	2022.10.19	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2021.10.20	2022.10.19	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2022.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2021.09.04	2024.09.03	<input checked="" type="checkbox"/>
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V19.918		<input checked="" type="checkbox"/>

Radiated Emission Test For Frequency Above 1 GHz (3m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	Agilent	N9038A	MY55330120	2021.10.20	2022.10.19	<input checked="" type="checkbox"/>
EMI Receiver	ROHDE & SCHWARZ	FSV40	101544	2022.01.04	2023.01.03	<input checked="" type="checkbox"/>
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2021.10.20	2022.10.19	<input checked="" type="checkbox"/>
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2021.10.20	2022.10.19	<input checked="" type="checkbox"/>
Amplifier (18-40GHz)	COM-MV	KA_LNA18-40G-01	18050001	2021.10.20	2022.10.19	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	1917	2019.07.02	2022.07.01	<input checked="" type="checkbox"/>
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.07.02	2024.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2021.09.04	2024.09.03	<input checked="" type="checkbox"/>
Description	Manufacturer	Name		Version		Use
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	2021.10.10	2022.10.09	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NSLK 8127	8127-687	2021.06.08	2022.06.07	<input checked="" type="checkbox"/>
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	N/A	2018.08.16	2022.08.15	<input checked="" type="checkbox"/>
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V19.918		<input checked="" type="checkbox"/>

4.3 Test Enclosure list

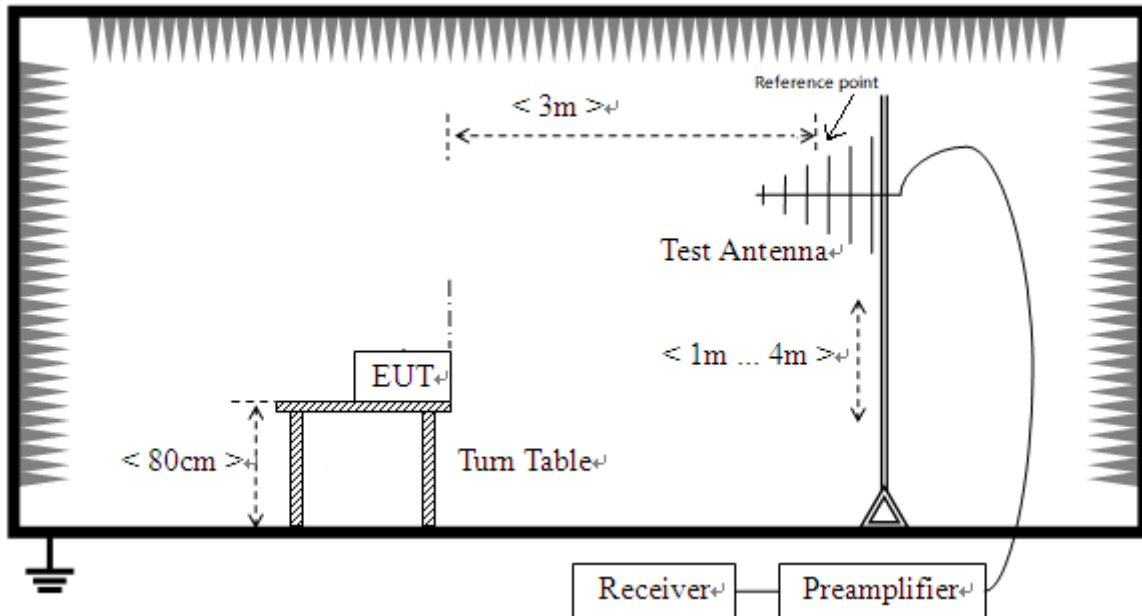
Description	Manufacturer	Model	Serial No.	Length	Description	Use
Wireless Communications Test Set	R&S	CMW500	127801	N/A	Cal. Due 2023.01.03	<input checked="" type="checkbox"/>
PC	Dell	015K3N	N/A	N/A	Special Handled	<input type="checkbox"/>
Laptop	HONOR	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
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 Headset	SAMSUNG	Gear Circle	N/A	N/A	N/A	<input type="checkbox"/>
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	<input type="checkbox"/>
Headset	OPPO	N/A	N/A	1.2 m	N/A	<input checked="" 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"/>
Type-C Cable	OPPO	N/A	N/A	1.0 m	Shielded with core	<input checked="" type="checkbox"/>
DC Power Supply	ITECH	IT6863A	600014010 687210006	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"/>
Adapter	OPPO	OP92KAJH	N/A	N/A	N/A	<input checked="" type="checkbox"/>

4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	The GSM 850 MHz RX Test Mode GSM 850 MHz RX + EUT + Adapter + Type-C Cable + Battery + Headset
TC02	The EGPRS 850 MHz RX Test Mode EGPRS 850 MHz RX + EUT + Adapter + Type-C Cable + Battery + Headset
TC03	The WCDMA Band 5 RX Test Mode WCDMA Band 5 RX + EUT + Adapter + Type-C Cable + Battery + Headset
TC04	The FDD LTE Band 5 RX Test Mode LTE Band 5 RX + EUT + Adapter + Type-C Cable + Battery + Headset
TC05	The FDD LTE Band 12 RX Test Mode LTE Band 12 RX + EUT + Adapter + Type-C Cable + Battery + Headset
TC06	The FDD LTE Band 17 RX Test Mode LTE Band 17 RX + EUT + Adapter + Type-C Cable + Battery + Headset
TC07	The FDD LTE Band 26 RX Test Mode LTE Band 26 RX + EUT + Adapter + Type-C Cable + Battery + Headset
TC08	The Camera Test Mode EUT + Adapter + Type-C Cable + Battery + Headset + TF Card
TC09	<u>The Video Play Test Mode</u> EUT + Adapter + Type-C Cable + Battery + Headset + TF Card
TC10	<u>The USB Test Mode</u> EUT + Type-C Cable + Battery + Laptop+ Headset + TF Card

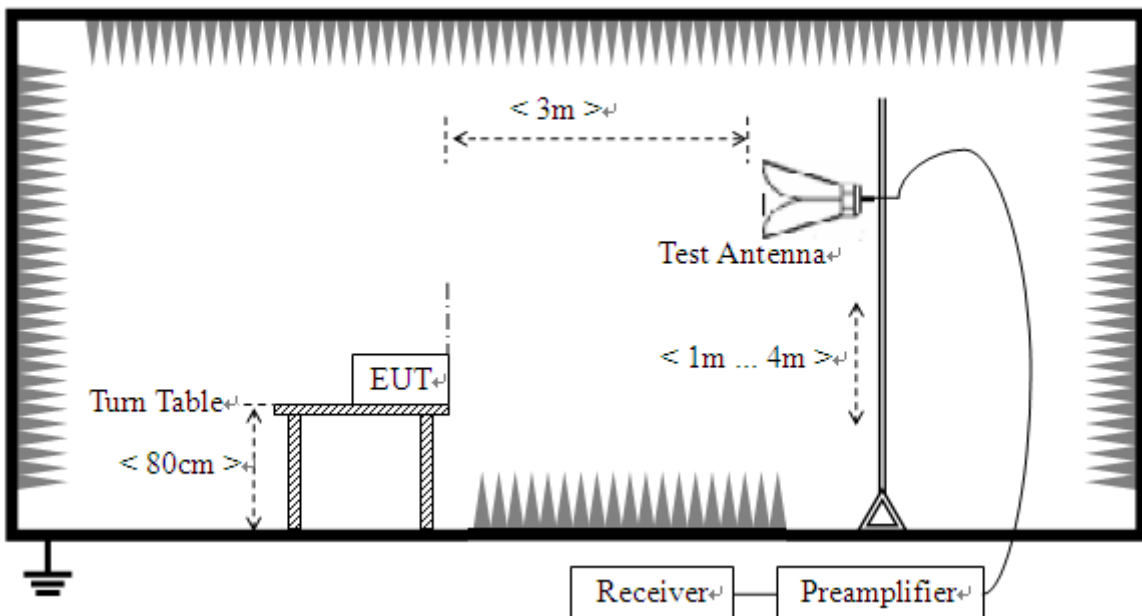
4.5 Test Setups

Test Setup 1



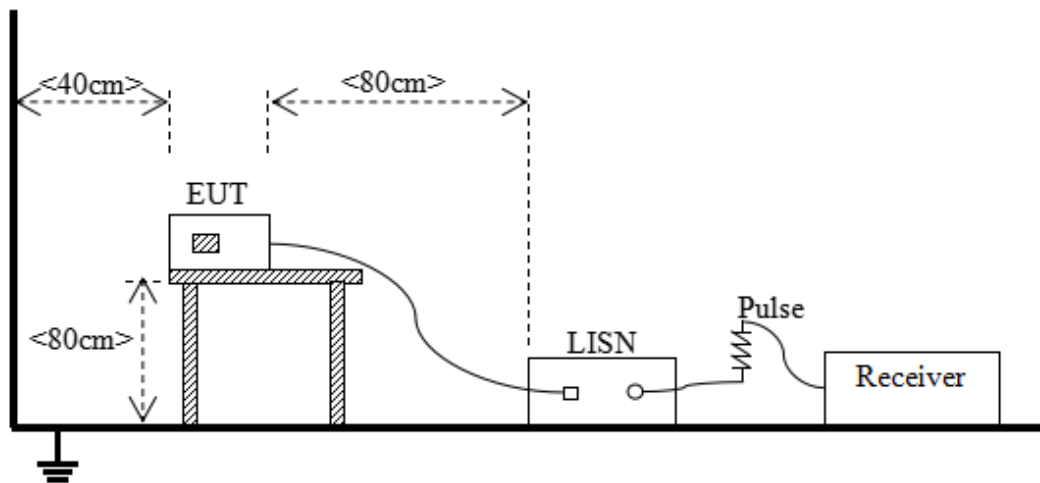
(For Radiated Emission Test (30 MHz-1 GHz))

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 Setup	Test Setup 1&2
	Test Configuration	TC01~TC10 ^{Note}
Conducted Emission, AC Ports	Test Setup	Test Setup 3
	Test Configuration	TC01~TC10 ^{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 ($\text{dB}\mu\text{V/m}$)	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.

The measurement frequency range is from 30 MHz to the 5th harmonic of the maximum frequency of the EUT internal source. The Turn Table is actuated to turn from 0° to 360° , and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW \geq RBW

Sweep = auto

Detector function = peak for $f < 1$ GHz, peak & RMS Average for $f \geq 1$ GHz

Trace = max hold

5.1.1.4 Test Result

Please refer to ANNEX A.1.

NOTE:

1. Results (dBuV/m) = Reading (dBuV/m) + 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.

Use the following spectrum analyzer settings:

RBW = 9 KHz

VBW \geq RBW

Sweep = 10ms

Detector function = peak & Average

Trace = max hold

5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

1. Results (dBuV) = Reading (dBuV) + Factor (dB)

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.

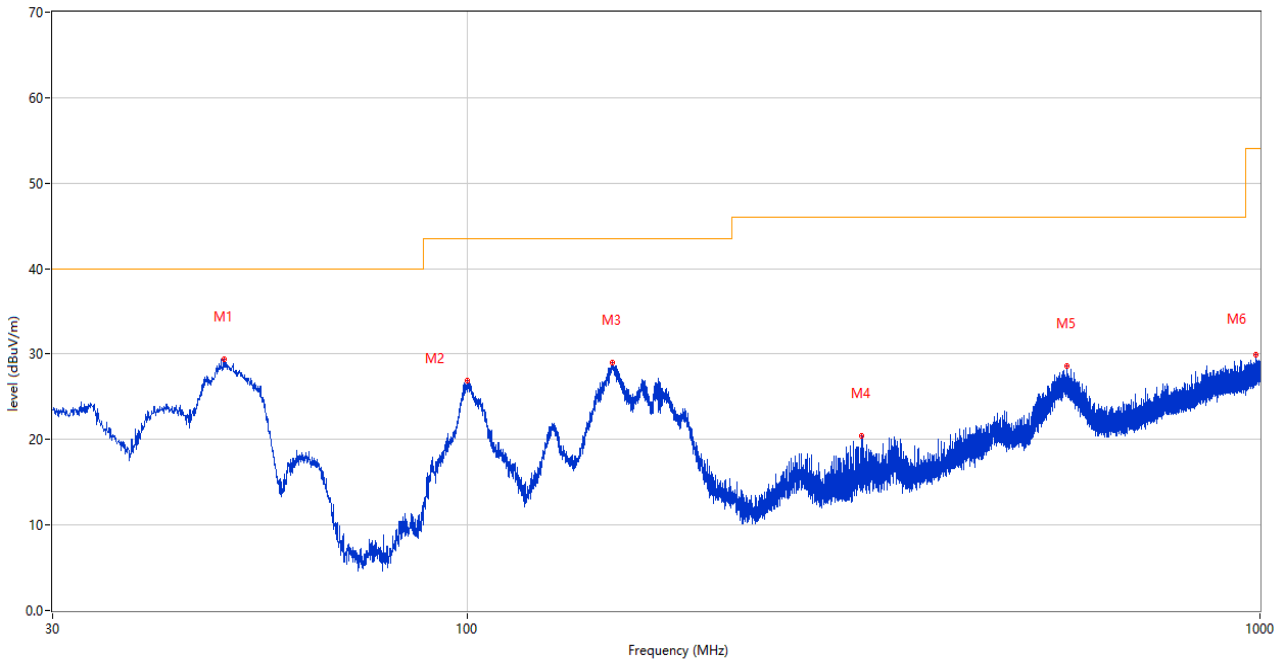
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Test Data and Plots

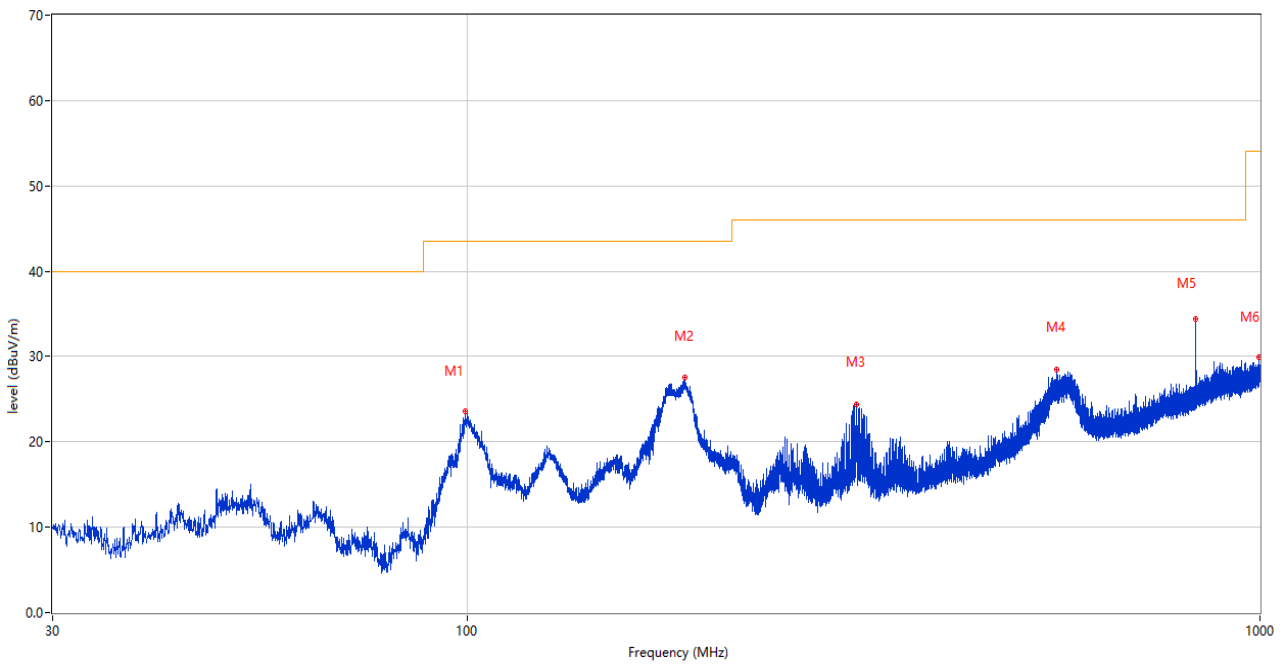
The Camera Test Mode

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



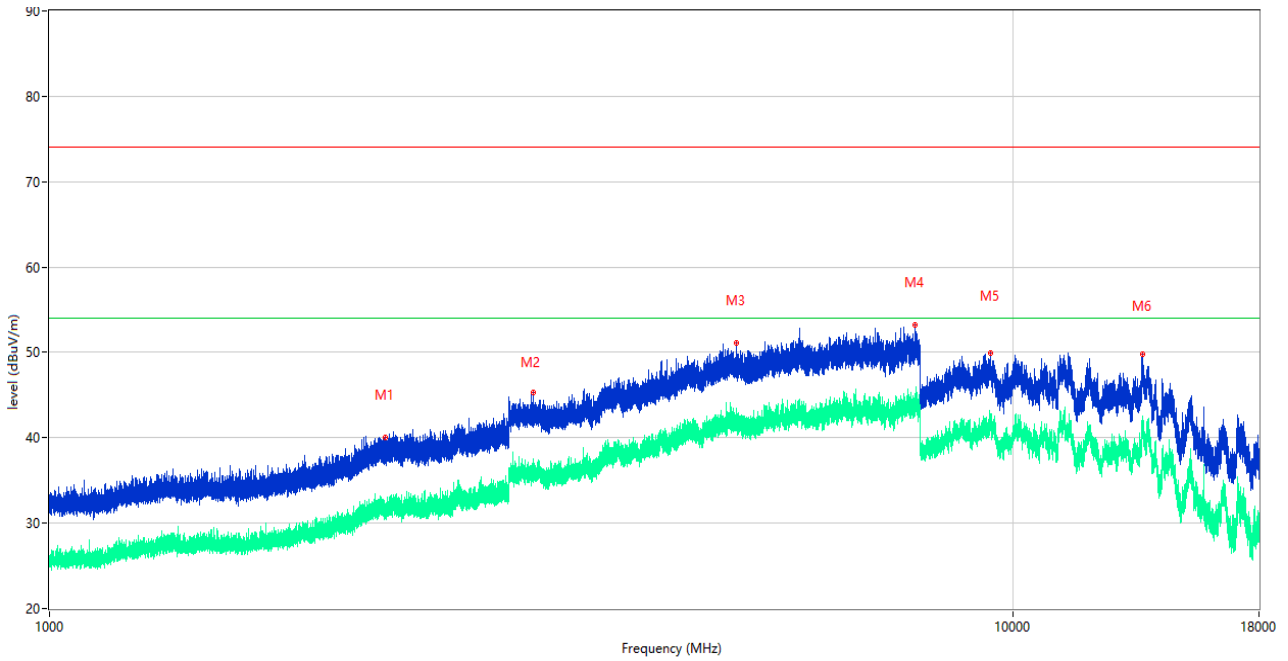
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	49.449	29.41	-25.52	40.0	-10.59	Peak	200.00	100	Vertical	Pass
2	100.131	26.91	-26.71	43.5	-16.59	Peak	263.00	100	Vertical	Pass
3	152.365	29.01	-30.04	43.5	-14.49	Peak	263.00	100	Vertical	Pass
4	314.889	20.41	-23.27	46.0	-25.59	Peak	127.00	200	Vertical	Pass
5	571.357	28.55	-17.00	46.0	-17.45	Peak	191.00	100	Vertical	Pass
6	989.330	29.92	-8.55	54.0	-24.08	Peak	284.00	100	Vertical	Pass

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



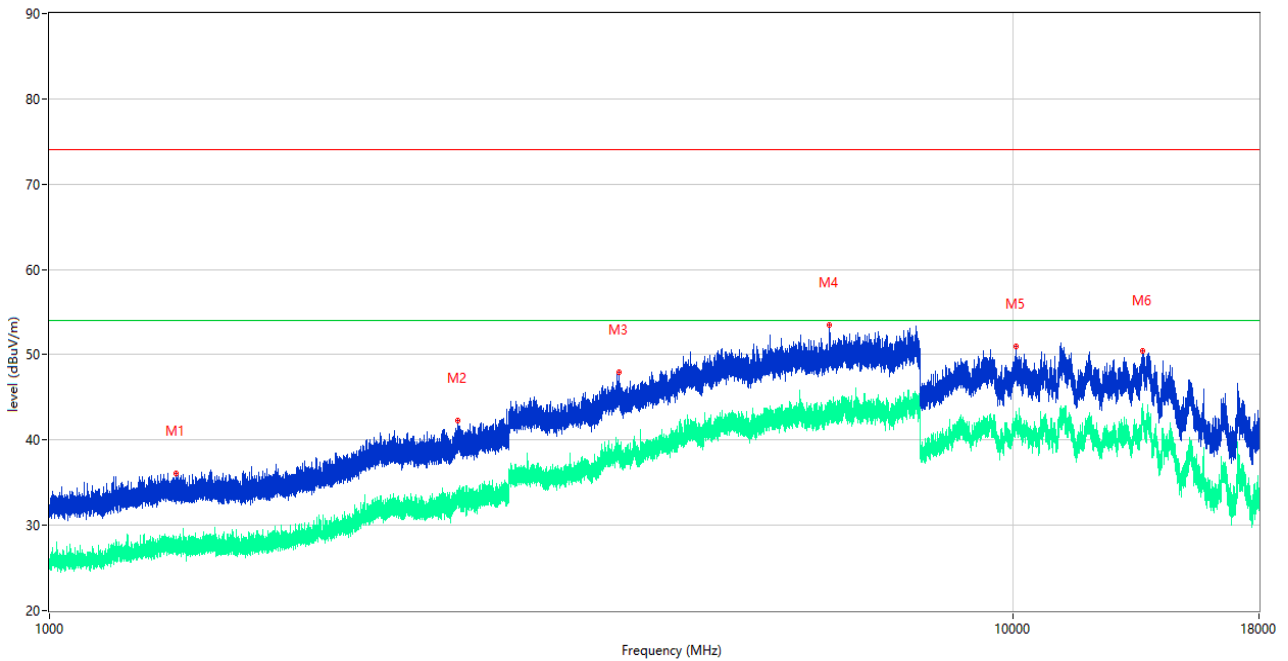
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	99.501	23.63	-26.78	43.5	-19.87	Peak	246.00	200	Horizontal	Pass
2	188.304	27.49	-27.68	43.5	-16.01	Peak	61.00	200	Horizontal	Pass
3	309.845	24.32	-23.36	46.0	-21.68	Peak	233.00	100	Horizontal	Pass
4	553.849	28.47	-17.51	46.0	-17.53	Peak	88.00	200	Horizontal	Pass
5	830.250	34.44	-11.30	46.0	-11.56	Peak	171.00	100	Horizontal	Pass
6	998.399	29.98	-8.41	54.0	-24.02	Peak	38.00	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	2233.100	40.05	-12.21	74.0	-33.95	Peak	352.00	100	Vertical	Pass
1**	2233.100	31.12	-12.21	54.0	-22.88	AV	352.00	100	Vertical	Pass
2	3180.750	45.30	-4.87	74.0	-28.70	Peak	0.00	100	Vertical	Pass
2**	3180.750	35.46	-4.87	54.0	-18.54	AV	0.00	100	Vertical	Pass
3	5163.750	51.11	-0.16	74.0	-22.89	Peak	21.00	100	Vertical	Pass
3**	5163.750	41.67	-0.16	54.0	-12.33	AV	21.00	100	Vertical	Pass
4	7906.750	53.21	2.56	74.0	-20.79	Peak	346.00	100	Vertical	Pass
4**	7906.750	44.48	2.56	54.0	-9.52	AV	346.00	100	Vertical	Pass
5	9468.000	49.95	1.48	74.0	-24.05	Peak	151.00	100	Vertical	Pass
5**	9468.000	42.09	1.48	54.0	-11.91	AV	151.00	100	Vertical	Pass
6	13619.000	49.78	4.87	74.0	-24.22	Peak	257.00	100	Vertical	Pass
6**	13619.000	40.98	4.87	54.0	-13.02	AV	257.00	100	Vertical	Pass

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

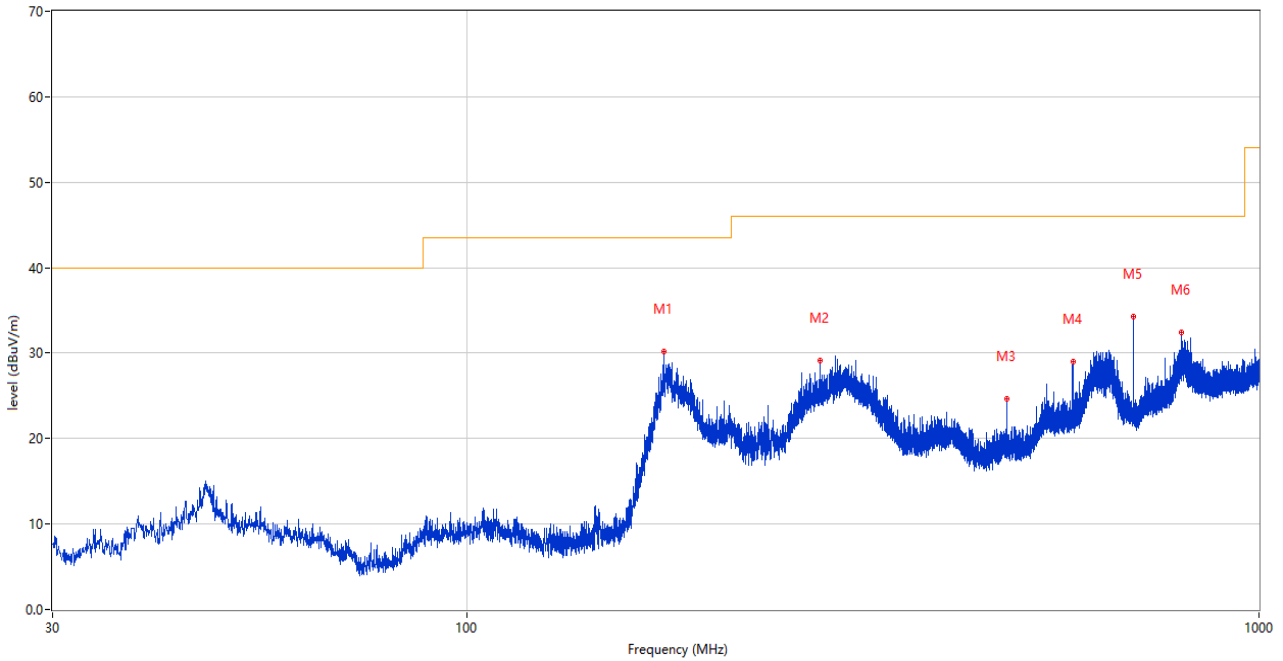


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1352.900	36.07	-16.68	74.0	-37.93	Peak	210.00	100	Horizontal	Pass
1**	1352.900	28.50	-16.68	54.0	-25.50	AV	210.00	100	Horizontal	Pass
2	2652.200	42.25	-9.87	74.0	-31.75	Peak	198.00	100	Horizontal	Pass
2**	2652.200	33.12	-9.87	54.0	-20.88	AV	198.00	100	Horizontal	Pass
3	3897.500	47.95	-2.22	74.0	-26.05	Peak	49.00	100	Horizontal	Pass
3**	3897.500	38.03	-2.22	54.0	-15.97	AV	49.00	100	Horizontal	Pass
4	6449.750	53.55	2.52	74.0	-20.45	Peak	243.00	100	Horizontal	Pass
4**	6449.750	43.53	2.52	54.0	-10.47	AV	243.00	100	Horizontal	Pass
5	10070.000	51.00	2.01	74.0	-23.00	Peak	137.00	100	Horizontal	Pass
5**	10070.000	42.08	2.01	54.0	-11.92	AV	137.00	100	Horizontal	Pass
6	13617.000	50.40	4.85	74.0	-23.60	Peak	360.00	100	Horizontal	Pass
6**	13617.000	41.98	4.85	54.0	-12.02	AV	360.00	100	Horizontal	Pass

Test Data and Plots

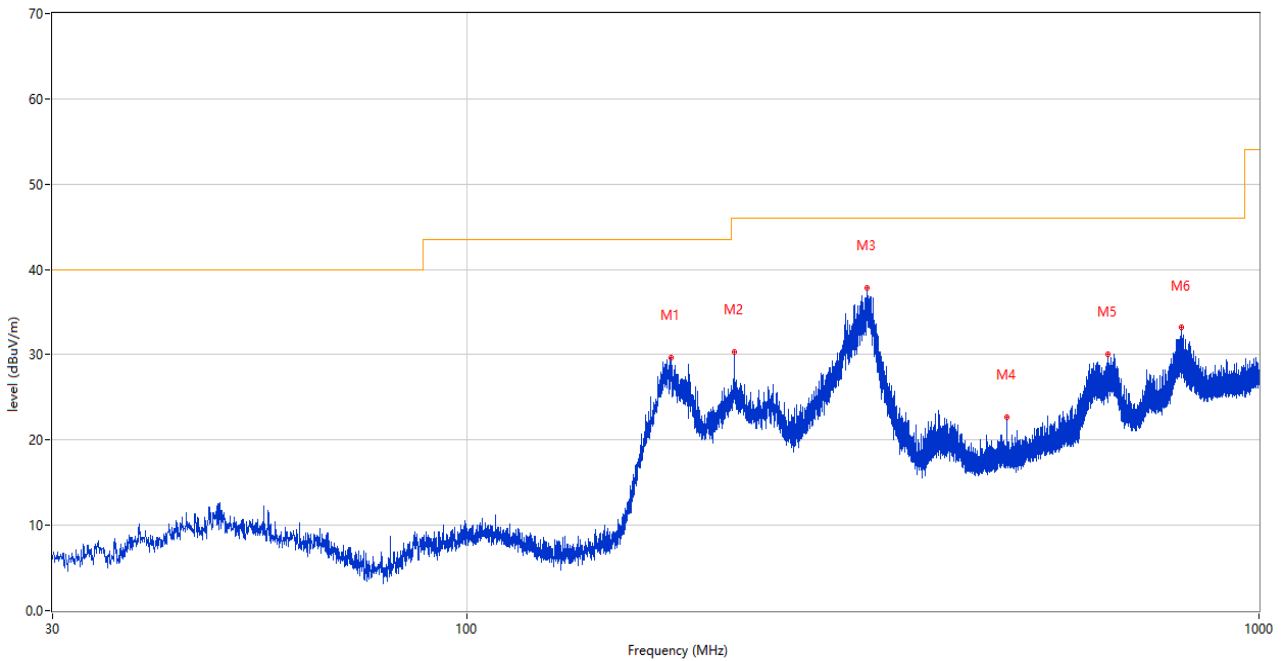
The USB Test Mode

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



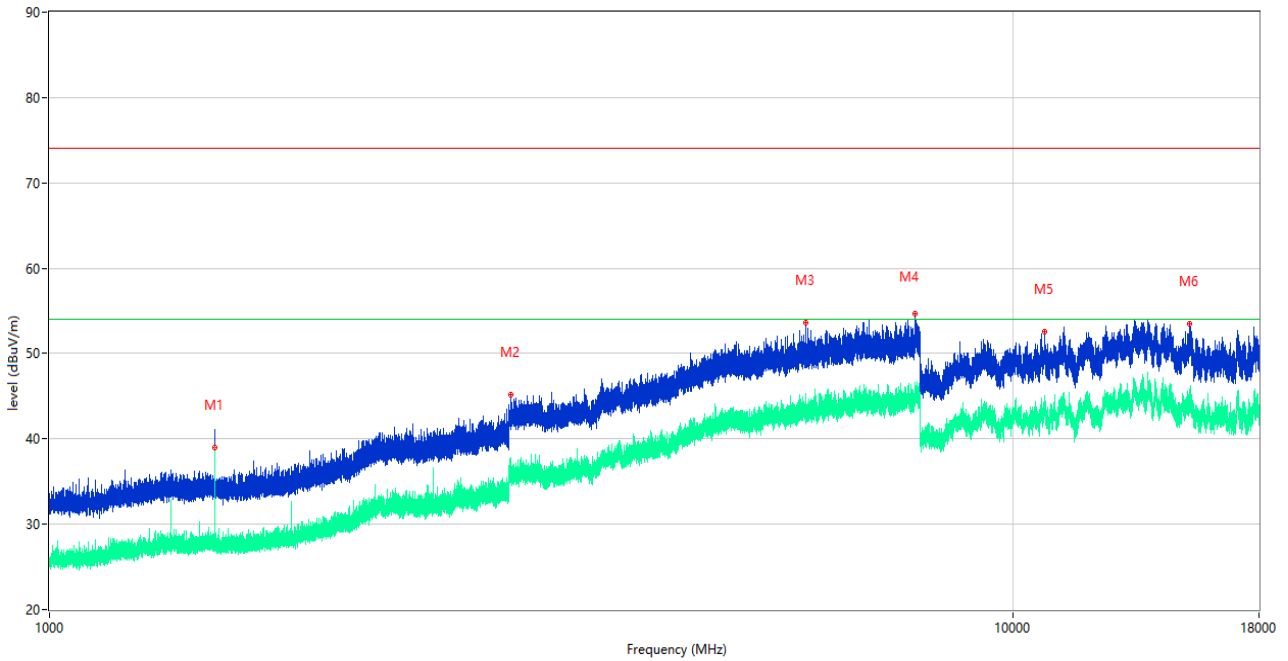
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	177.488	30.25	-28.69	43.5	-13.25	Peak	99.00	100	Vertical	Pass
2	279.096	29.11	-24.26	46.0	-16.89	Peak	360.00	200	Vertical	Pass
3	479.983	24.69	-19.19	46.0	-21.31	Peak	329.00	100	Vertical	Pass
4	583.530	29.01	-16.50	46.0	-16.99	Peak	322.00	100	Vertical	Pass
5	694.305	34.28	-14.02	46.0	-11.72	Peak	360.00	200	Vertical	Pass
6	799.210	32.37	-11.92	46.0	-13.63	Peak	360.00	200	Vertical	Pass

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



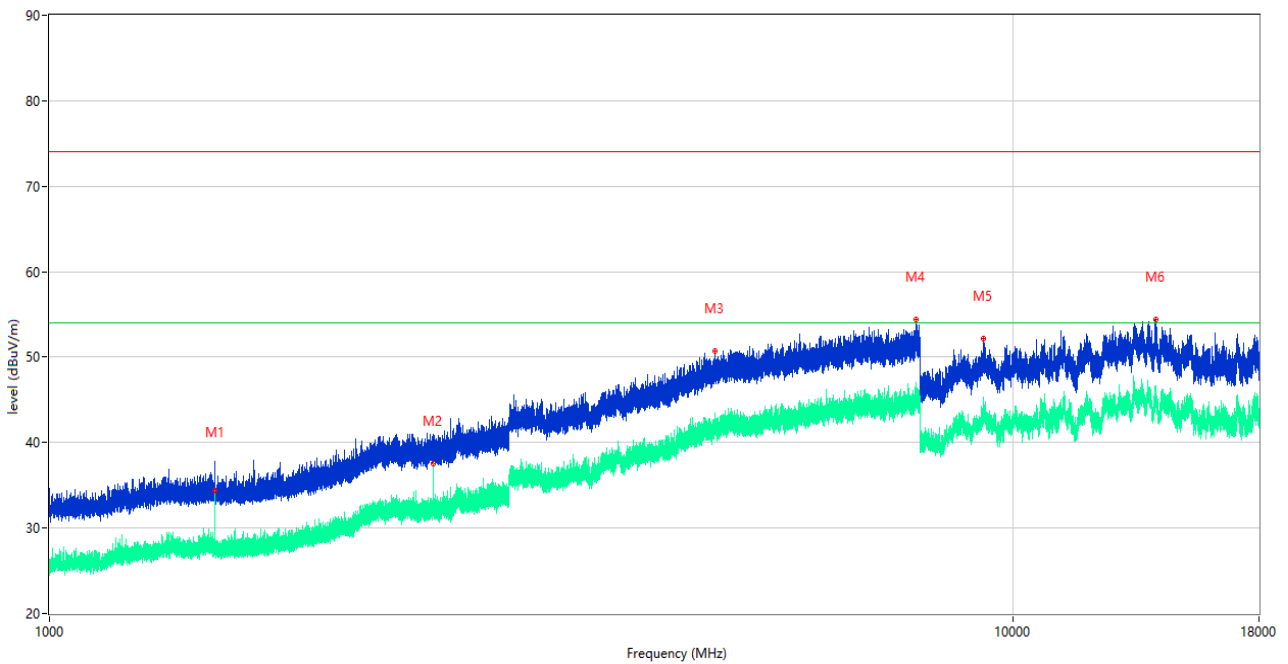
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	180.835	29.68	-28.49	43.5	-13.82	Peak	71.00	200	Horizontal	Pass
2	217.452	30.35	-26.33	46.0	-15.65	Peak	361.00	200	Horizontal	Pass
3	320.466	37.81	-23.12	46.0	-8.19	Peak	111.00	100	Horizontal	Pass
4	479.983	22.69	-19.19	46.0	-23.31	Peak	203.00	200	Horizontal	Pass
5	645.174	30.01	-15.01	46.0	-15.99	Peak	111.00	100	Horizontal	Pass
6	797.609	33.16	-11.92	46.0	-12.84	Peak	361.00	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	1485.100	38.98	-16.62	74.0	-35.02	Peak	105.00	100	Vertical	Pass
1**	1485.100	39.02	-16.62	54.0	-14.98	AV	105.00	100	Vertical	Pass
2	3013.250	45.22	-6.64	74.0	-28.78	Peak	310.00	100	Vertical	Pass
2**	3013.250	37.75	-6.64	54.0	-16.25	AV	310.00	100	Vertical	Pass
3	6093.250	53.57	0.76	74.0	-20.43	Peak	360.00	100	Vertical	Pass
3**	6093.250	42.59	0.76	54.0	-11.41	AV	360.00	100	Vertical	Pass
4	7908.750	54.64	2.60	74.0	-19.36	Peak	213.00	100	Vertical	Pass
4**	7908.750	44.22	2.60	54.0	-9.78	AV	213.00	100	Vertical	Pass
5	10798.000	52.56	2.15	74.0	-21.44	Peak	82.00	100	Vertical	Pass
5**	10798.000	43.21	2.15	54.0	-10.79	AV	82.00	100	Vertical	Pass
6	15247.000	53.54	3.38	74.0	-20.46	Peak	241.00	100	Vertical	Pass
6**	15247.000	44.16	3.38	54.0	-9.84	AV	241.00	100	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	1484.700	35.51	-16.61	74.0	-38.49	Peak	164.00	100	Horizontal	Pass
1**	1484.700	34.33	-16.61	54.0	-19.67	AV	164.00	100	Horizontal	Pass
2	2500.000	40.50	-11.12	74.0	-33.50	Peak	252.00	100	Horizontal	Pass
2**	2500.000	37.49	-11.12	54.0	-16.51	AV	252.00	100	Horizontal	Pass
3	4907.250	50.67	0.49	74.0	-23.33	Peak	340.00	100	Horizontal	Pass
3**	4907.250	40.92	0.49	54.0	-13.08	AV	340.00	100	Horizontal	Pass
4	7938.500	54.42	3.28	74.0	-19.58	Peak	255.00	100	Horizontal	Pass
4**	7938.500	46.30	3.28	54.0	-7.70	AV	255.00	100	Horizontal	Pass
5	9318.500	52.17	2.18	74.0	-21.83	Peak	84.00	100	Horizontal	Pass
5**	9318.500	43.58	2.18	54.0	-10.42	AV	84.00	100	Horizontal	Pass
6	14053.000	54.46	5.37	74.0	-19.54	Peak	360.00	100	Horizontal	Pass
6**	14053.000	45.59	5.37	54.0	-8.41	AV	360.00	100	Horizontal	Pass

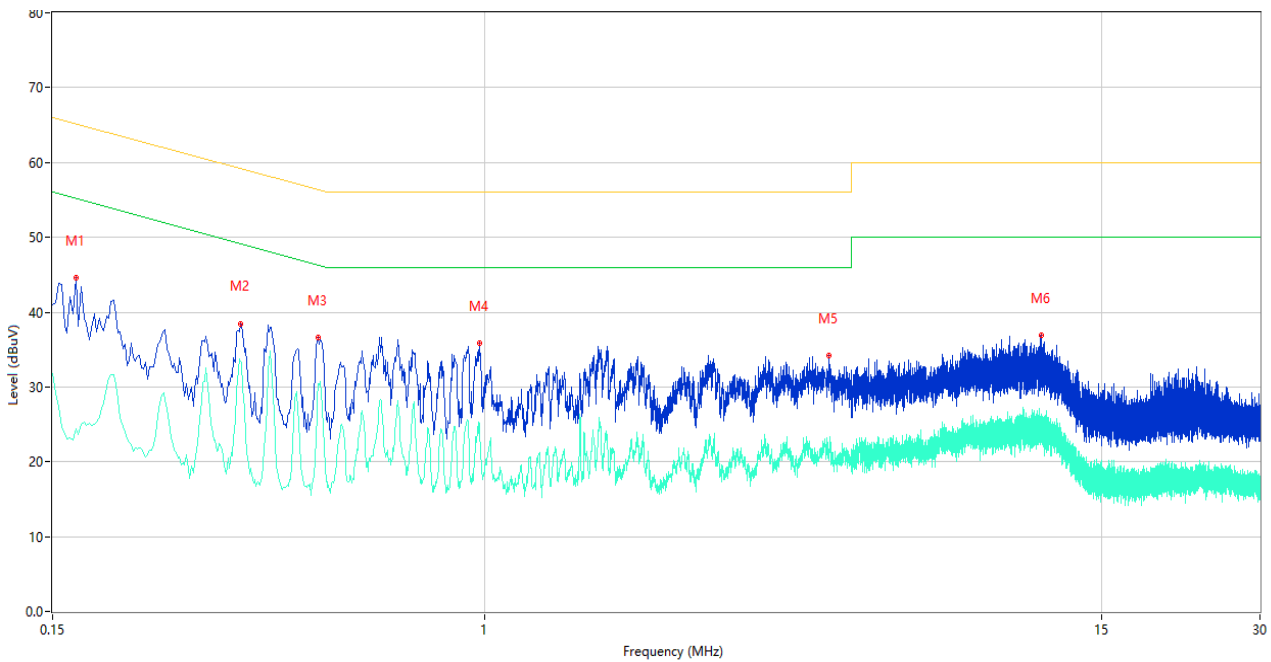
A.2 Conducted Emission

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

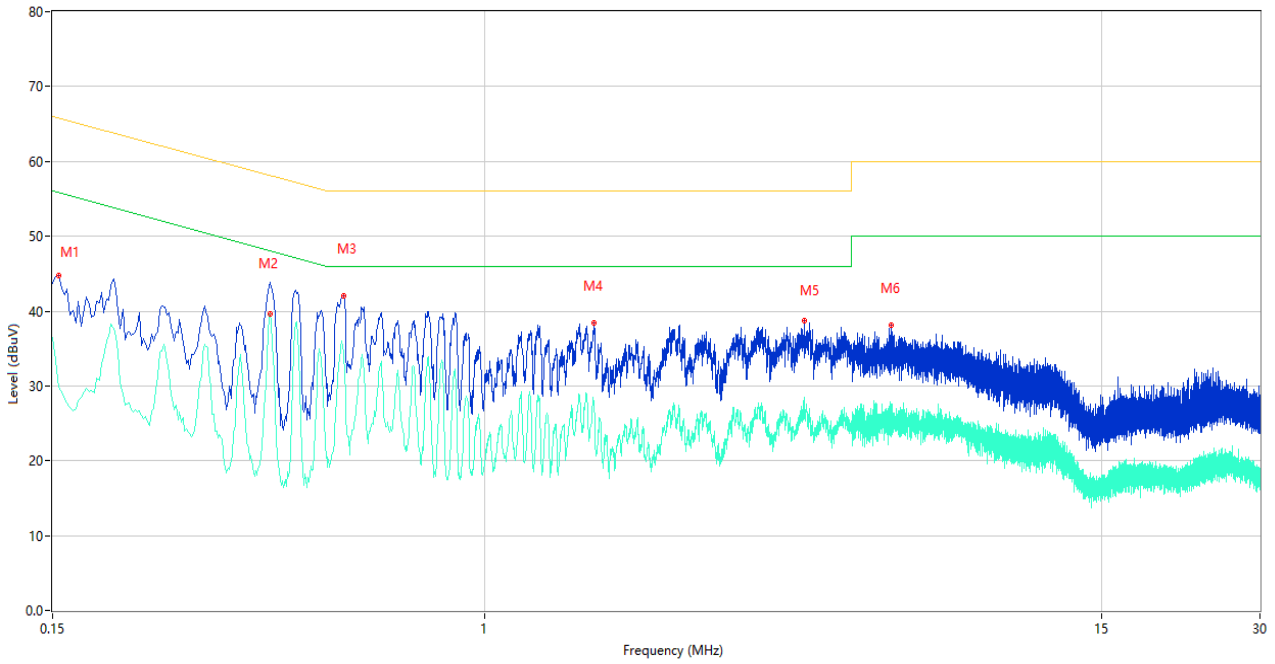
The Camera Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.166	44.62	10.16	65.16	-20.54	Peak	L	Pass
1**	0.166	24.36	10.16	55.16	-30.80	AV	L	Pass
2	0.342	38.49	10.08	59.15	-20.66	Peak	L	Pass
2**	0.342	33.51	10.08	49.15	-15.64	AV	L	Pass
3	0.482	36.55	10.11	56.30	-19.75	Peak	L	Pass
3**	0.482	30.46	10.11	46.30	-15.84	AV	L	Pass
4	0.976	35.79	10.03	56.00	-20.21	Peak	L	Pass
4**	0.976	25.12	10.03	46.00	-20.88	AV	L	Pass
5	4.534	34.15	10.00	56.00	-21.85	Peak	L	Pass
5**	4.534	21.28	10.00	46.00	-24.72	AV	L	Pass
6	11.490	36.86	10.09	60.00	-23.14	Peak	L	Pass
6**	11.490	24.51	10.09	50.00	-25.49	AV	L	Pass

A.2.2 N Phase

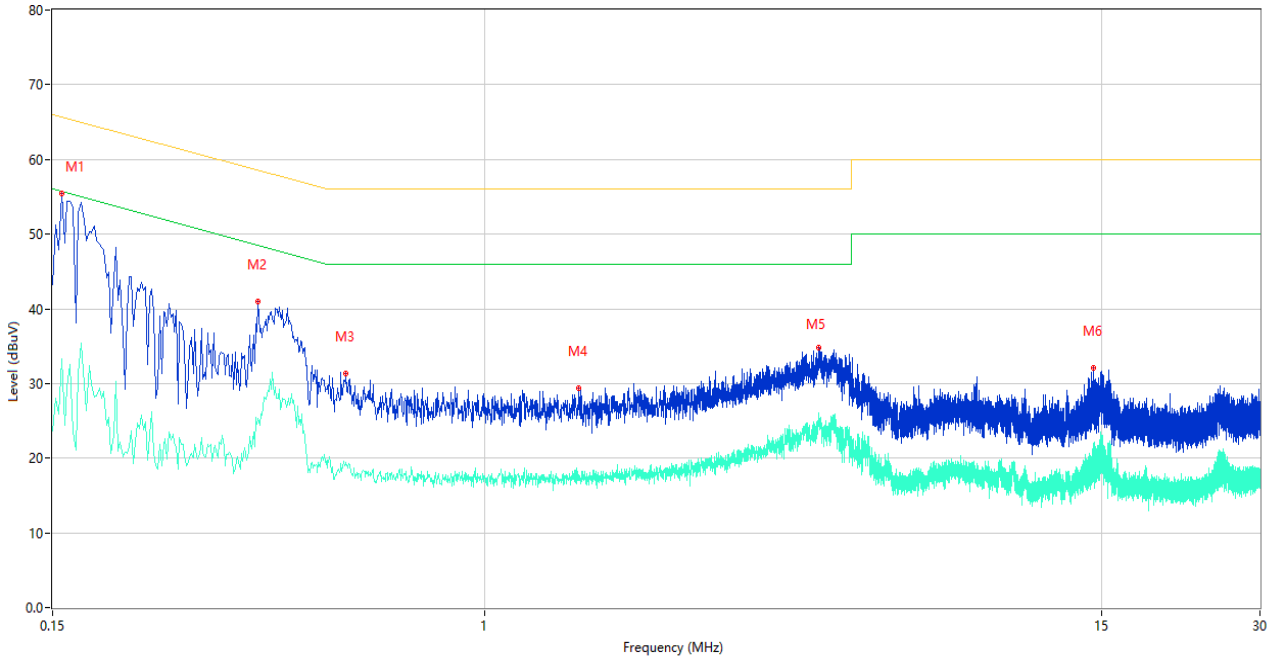


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.154	44.80	10.18	65.78	-20.98	Peak	N	Pass
1**	0.154	29.77	10.18	55.78	-26.01	AV	N	Pass
2	0.390	43.88	10.09	58.06	-14.18	Peak	N	Pass
2**	0.390	39.67	10.09	48.06	-8.39	AV	N	Pass
3	0.538	42.11	10.11	56.00	-13.89	Peak	N	Pass
3**	0.538	34.48	10.11	46.00	-11.52	AV	N	Pass
4	1.616	38.40	9.93	56.00	-17.60	Peak	N	Pass
4**	1.616	27.06	9.93	46.00	-18.94	AV	N	Pass
5	4.060	38.73	10.08	56.00	-17.27	Peak	N	Pass
5**	4.060	27.66	10.08	46.00	-18.34	AV	N	Pass
6	5.952	38.16	10.07	60.00	-21.84	Peak	N	Pass
6**	5.952	27.02	10.07	50.00	-22.98	AV	N	Pass

Test Data and Plots

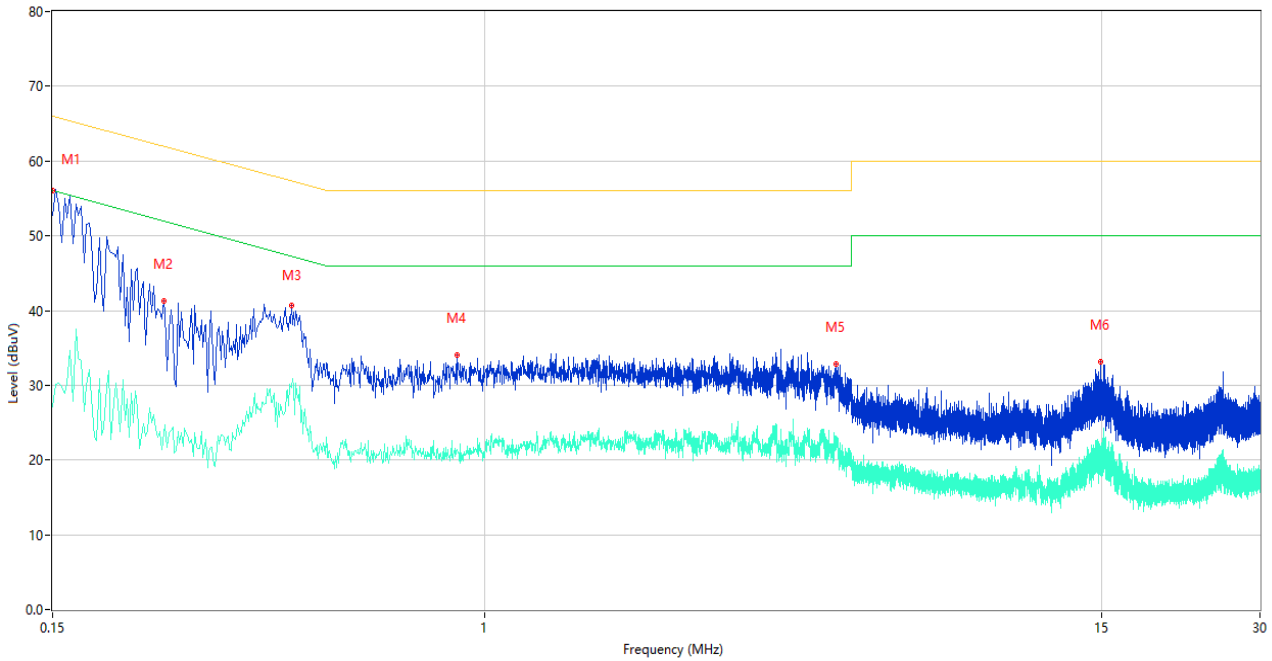
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	55.40	10.18	65.67	-10.27	Peak	L	Pass
1**	0.156	33.35	10.18	55.67	-22.32	AV	L	Pass
2	0.370	40.95	10.08	58.50	-17.55	Peak	L	Pass
2**	0.370	25.35	10.08	48.50	-23.15	AV	L	Pass
3	0.544	31.30	10.10	56.00	-24.70	Peak	L	Pass
3**	0.544	19.41	10.10	46.00	-26.59	AV	L	Pass
4	1.512	29.31	9.94	56.00	-26.69	Peak	L	Pass
4**	1.512	17.75	9.94	46.00	-28.25	AV	L	Pass
5	4.330	34.87	10.04	56.00	-21.13	Peak	L	Pass
5**	4.330	26.01	10.04	46.00	-19.99	AV	L	Pass
6	14.454	32.15	10.13	60.00	-27.85	Peak	L	Pass
6**	14.454	20.78	10.13	50.00	-29.22	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	52.80	10.19	66.00	-13.20	Peak	N	Pass
1**	0.150	27.14	10.19	56.00	-28.86	AV	N	Pass
2	0.244	41.30	10.08	61.96	-20.66	Peak	N	Pass
2**	0.244	23.68	10.08	51.96	-28.28	AV	N	Pass
3	0.428	40.70	10.10	57.29	-16.59	Peak	N	Pass
3**	0.428	29.69	10.10	47.29	-17.60	AV	N	Pass
4	0.886	34.03	10.05	56.00	-21.97	Peak	N	Pass
4**	0.886	21.44	10.05	46.00	-24.56	AV	N	Pass
5	4.672	32.87	9.98	56.00	-23.13	Peak	N	Pass
5**	4.672	23.26	9.98	46.00	-22.74	AV	N	Pass
6	14.904	33.17	10.14	60.00	-26.83	Peak	N	Pass
6**	14.904	20.60	10.14	50.00	-29.40	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2210473-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2210473-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2210473-AI.PDF”.

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--END OF REPORT--