TEST REPORT

Applicant:	Blackshark Technologies (Nanchang) Co., Ltd.
Address:	Room 815-1, 8th floor, Block A, Huajiang Building, No.1 Tsinghua Science Park, Nanchang City, China
Equipment Type:	5G Digital Mobile Phone
Model Name:	SHARK PAR-H0
Brand Name:	BLACK SHARK
FCC ID:	2A2ZHPAR-H0
Test Standard:	47 CFR Part 15 Subpart B
Test Date:	Dec. 28, 2021 ~ Jan. 05, 2022
Date of Issue:	Mar. 15, 2022

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Sijie Zheng	**Checked by:** Xia Long	**Approved by:** Liao Jianming (Technical Director)
Sijie. Zheng	Xia Long	

Revision History

Version	Issue Date	Revisions Content
Rev. 01	Mar. 15, 2022	Initial Issue

TABLE OF CONTENTS

1 GENERAL INFORMATION 4

1.1 Identification of the Testing Laboratory 4

1.2 Identification of the Responsible Testing Location 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 6

3 SUMMARY OF TEST RESULTS 7

3.1 Test Standards 7

3.2 Verdict 7

3.3 Test Uncertainty 7

4 GENERAL TEST CONFIGURATIONS 8

4.1 Test Environments,Test Date and Test Engineer 8

4.2 Test Equipment List 9

4.3 Test Enclosure list 11

4.4 Test Configurations 12

4.5 Test Setups 13

4.6 Test Conditions 15

5 TEST ITEMS 16

5.1 Emission Tests 16

ANNEX A TEST RESULTS 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
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	Blackshark Technologies (Nanchang) Co., Ltd.
Address	Room 815-1, 8th floor, Block A, Huajiang Building, No.1 Tsinghua Science Park, Nanchang City, China

2.2 Manufacturer Information

Manufacturer	Blackshark Technologies (Nanchang) Co., Ltd.
Address	Room 815-1, 8th floor, Block A, Huajiang Building, No.1 Tsinghua Science Park, Nanchang City, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	5G Digital Mobile Phone
Model Name Under Test	SHARK PAR-H0
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	BS10FA
	Serial No.	N/A
	Capacity	2240 mAh
	Rated Voltage	N/A
	Limit Charge Voltage	N/A
	Manufacturer	DongGuan Amperex Technology Limited
Ancillary Equipment 2	Adapter	
	Brand Name	N/A
	Model No.	MDY-13-EG-1
	Serial No.	N/A
	Rated Input	N/A
	Rated Output	N/A
	Manufacturer	Blackshark Technologies (Nanchang) Co., Ltd.
Ancillary Equipment 3	USB Cable	
	Model No.	N/A
	Length (Approx.)	1m

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 EVDO Rel. 0/Rev. A Band Class 0 4G Network FDD LTE Band 2/4/5/7/12/17/26 TDD LTE Band 38/41 LTE CA Uplink (UL): CA_7C 5G Network SA: NR n5/n7/n41/n77/n78 NSA(EN-DC): DC_5A_n78A, DC_7A_n78A, DC_38A_n78A Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40), 802.11ax(HE20/40) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) and 802.11ax(HE20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, Beidou, Galileo, NFC

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

The Highest Speed of Processor	N/A

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 120 V/60 Hz or AC 230 V/50 Hz DC 7.78 V from Battery	15°C-35°C	30%-60% RH	100-102kPa	Jan. 05, 2022	Sijie Zheng
Conducted Emission	AC 120 V/60 Hz or AC 230 V/50 Hz DC 7.78 V from Battery	15°C-35°C	30%-60% RH	100-102kPa	Dec. 28, 2021	Sijie Zheng

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

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	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2021.10.20	2022.10.19	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2022.07.01	☒
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2021.09.04	2024.09.03	☒
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V19.918		☒

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	☒
EMI Receiver	ROHDE & SCHWARZ	FSV40	101544	2022.01.04	2023.01.03	☒
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2021.10.20	2022.10.19	☒
Amplifier（0.8-21GHz）	Mini-Circuits	ZVA-213-S+	225321316	2021.10.20	2022.10.19	☒
Amplifier（18-40GHz）	COM-MV	KA_LNA18-40G-01	18050001	2021.10.20	2022.10.19	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	1917	2019.07.02	2022.07.01	☒

Radiated Emission Test For Frequency Above 1 GHz (3m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2021.07.02	2024.07.01	☒
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2021.09.04	2024.09.03	☒
Description	Manufacturer	Name		Version		Use
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	2021.10.10	2022.10.09	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2021.06.08	2022.06.07	☒
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.4m*3.1m*2.8m	N/A	2018.08.16	2022.08.15	☒
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V19.918		☒

4.3 Test Enclosure list

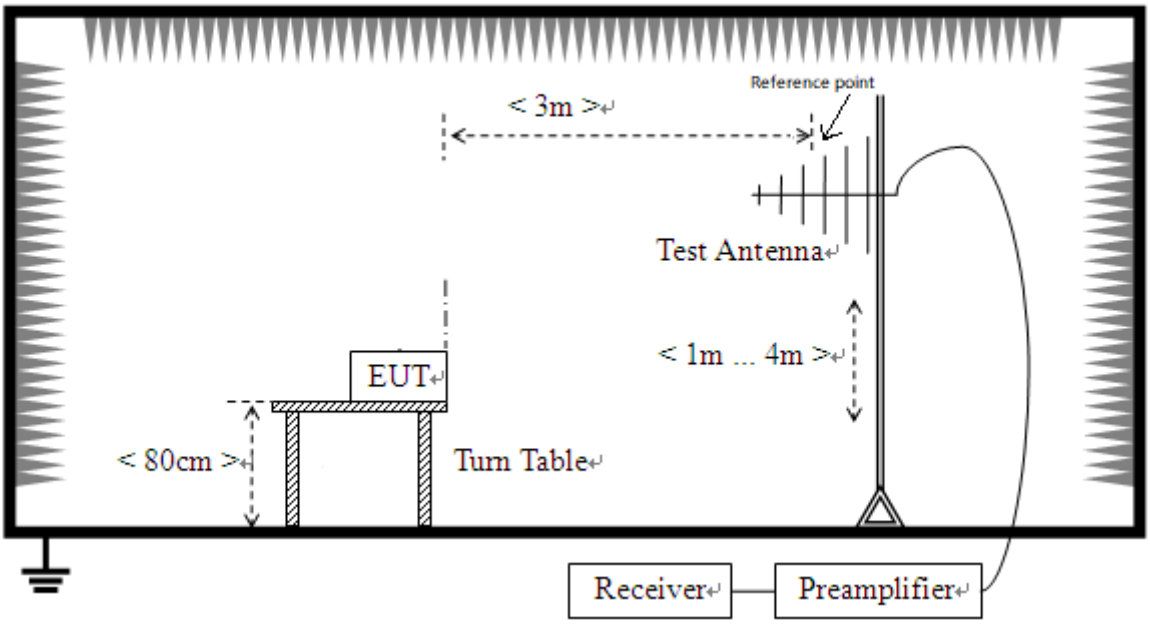
Description	Manufacturer	Model	Serial No.	Length	Description	Use
Laptop	Apple	A1465	N/A	N/A	N/A	☒
Laptop	HONOR	N/A	N/A	N/A	N/A	☒
Wireless Communications Test Set	R&S	CMW500	142028	N/A	Cal. Due 2023.01.03	☒
Headset	N/A	N/A	N/A	N/A	N/A	☒

4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	The GSM 850 MHz RX Test Mode GSM 850 MHz RX + EUT +Adapter + USB Cable + Battery
TC02	The EGPRS 850 MHz RX Test Mode EGPRS 850 MHz RX + EUT +Adapter + USB Cable + Battery
TC03	The WCDMA Band 5 RX Test Mode WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery
TC04	The FDD LTE Band 5 RX Test Mode LTE Band 5 RX + EUT +Adapter + USB Cable + Battery
TC05	The FDD LTE Band 12 RX Test Mode LTE Band 12 RX + EUT +Adapter + USB Cable + Battery
TC06	The FDD LTE Band 17 RX Test Mode LTE Band 17 RX + EUT +Adapter + USB Cable + Battery
TC07	The FDD LTE Band 26 RX Test Mode LTE Band 26 RX + EUT +Adapter + USB Cable + Battery
TC08	The EVDO BC0 RX Test Mode EVDO BC0 RX + EUT +Adapter + USB Cable + Battery
TC09	The n5 RX Test Mode n5 RX + EUT +Adapter + USB Cable + Battery
TC10	The Camera Test Mode EUT + Adapter + USB Cable + Battery
TC11	The Video Play Test Mode EUT + Adapter + USB Cable + Battery
TC12	The USB Test Mode EUT + USB Cable + Battery + Laptop
TC13	The Type-C Headset Test Mode EUT + Type-C Headset + Battery

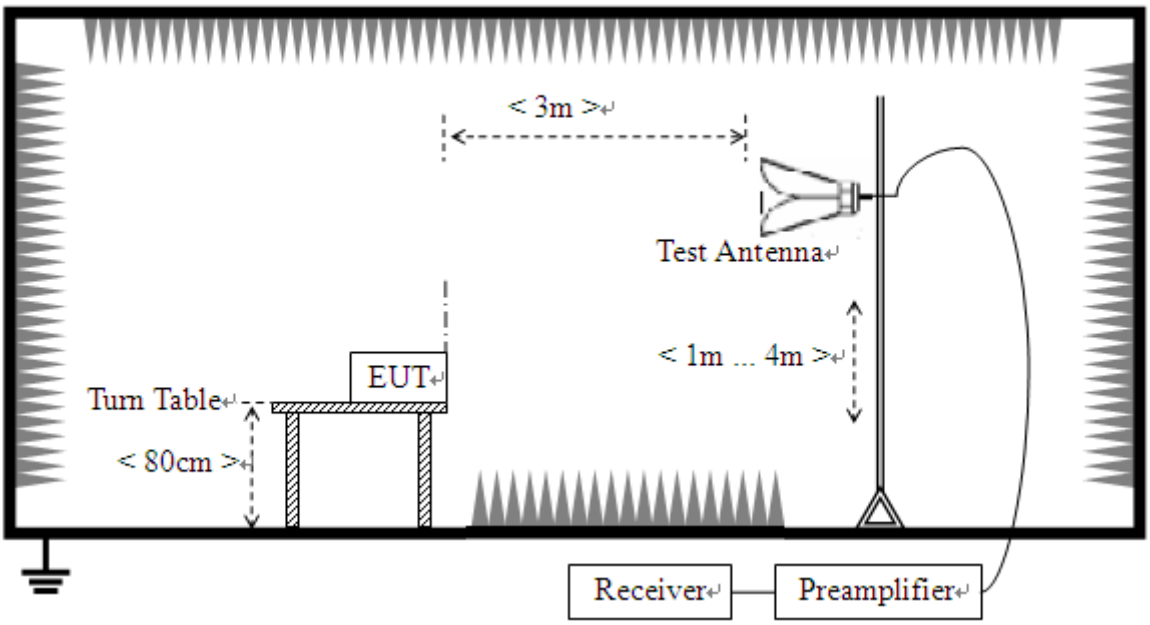
4.5 Test Setups

Test Setup 1



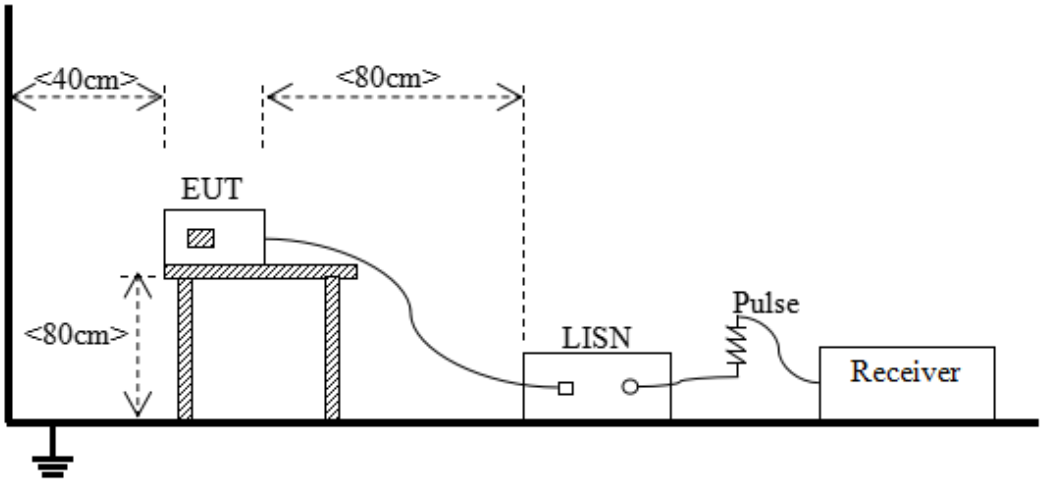
(For Radiated Emission Test (30 MHz-1 GHz))

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~TC13 Note
Conducted Emission, AC Ports	Test Setup	Test Setup 3
	Test Configuration	TC01~TC11 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 (μV/m)	Field Strength (dBμV/m)	Field Strength (dBμV/m)	Field Strength (μV/m)	Field Strength (dBμV/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 (dBμV/m) = 20*log [Field Strength (μV/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 ≥ 1 GHz, 100 kHz for f < 1 GHz

VBW ≥ RBW

Sweep = auto

Detector function = peak for f <1 GHz, peak & RMS Average for f ≥ 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 (dBμV)	Average (dBμV)
0.15 - 0.50	79	66
0.50 - 30	73	60

Frequency range (MHz)	Class B	
	Quasi-peak (dBμV)	Average (dBμV)
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 μH 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 ≥ 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.

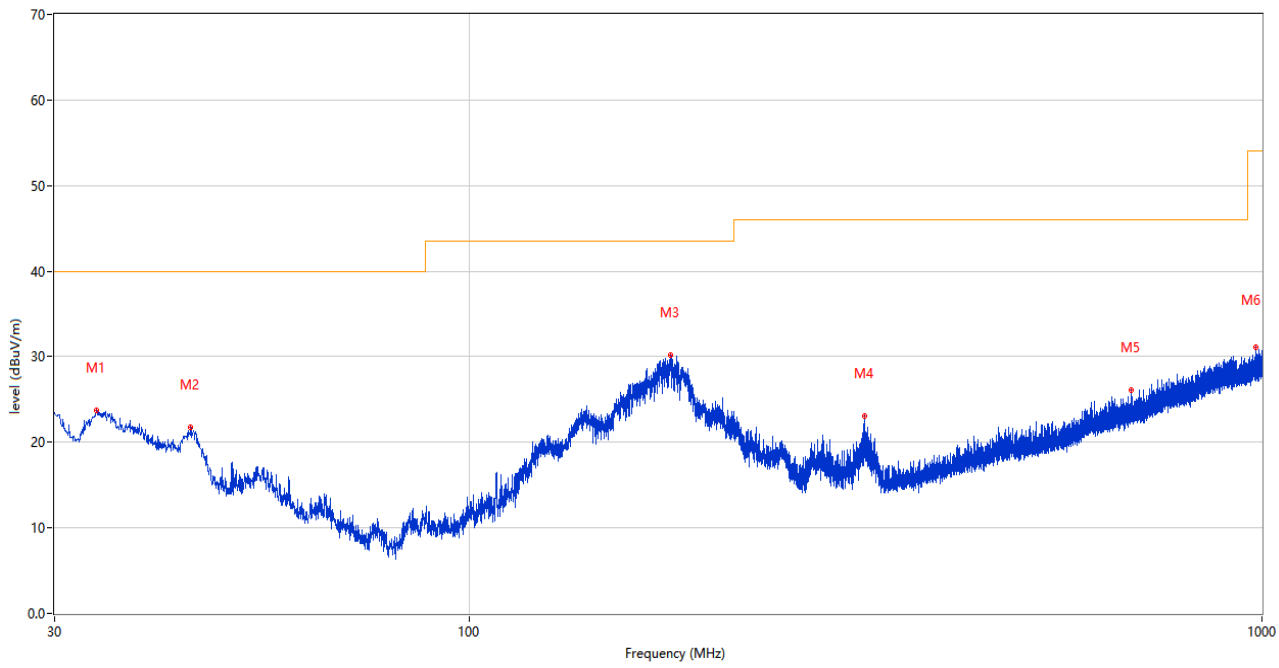
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Test Data and Plots

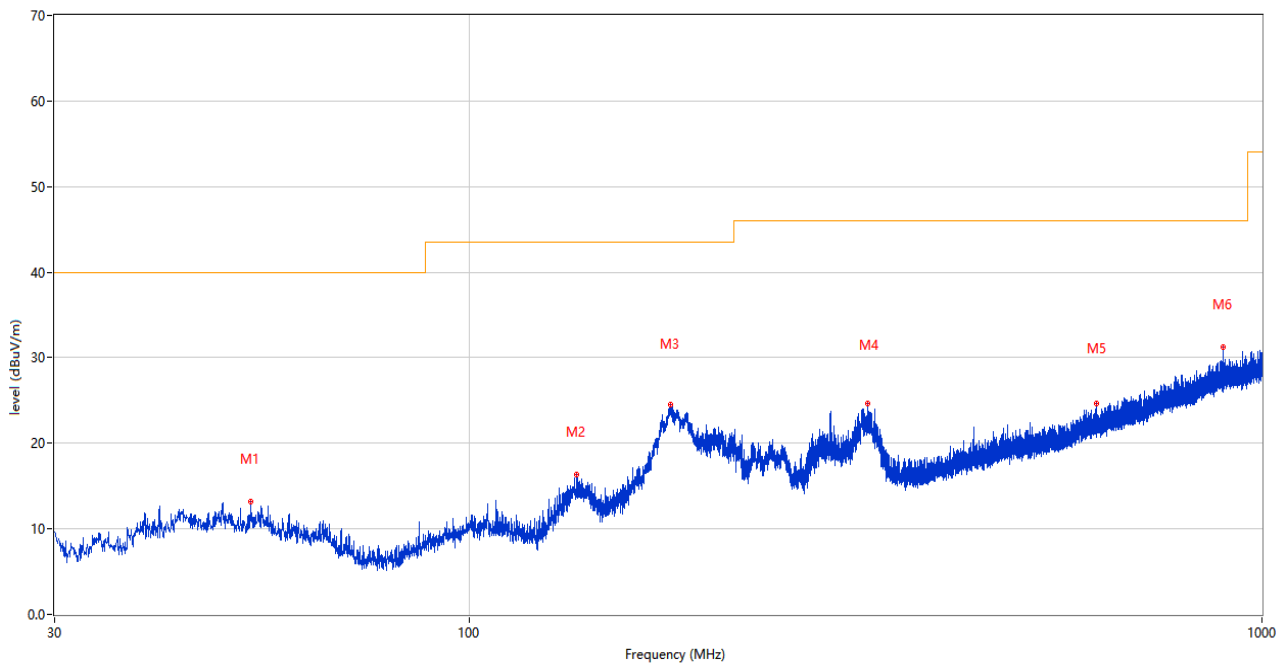
The Camera Test Mode

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



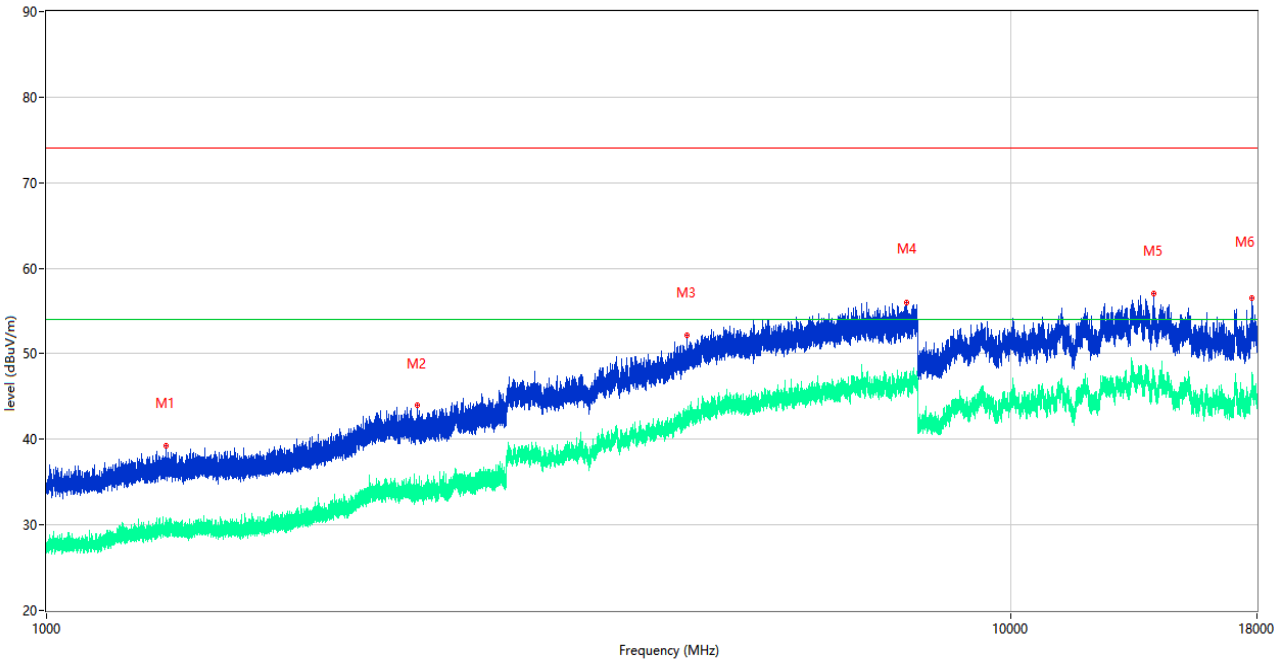
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	33.880	23.79	-28.80	40.0	-16.21	Peak	236.00	100	Vertical	Pass
2	44.502	21.81	-25.68	40.0	-18.19	Peak	0.00	100	Vertical	Pass
3	179.380	30.15	-28.49	43.5	-13.35	Peak	273.00	100	Vertical	Pass
4	315.471	23.02	-23.24	46.0	-22.98	Peak	162.00	100	Vertical	Pass
5	684.750	26.10	-14.25	46.0	-19.90	Peak	347.00	200	Vertical	Pass
6	982.686	31.05	-8.58	54.0	-22.95	Peak	45.00	200	Vertical	Pass

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



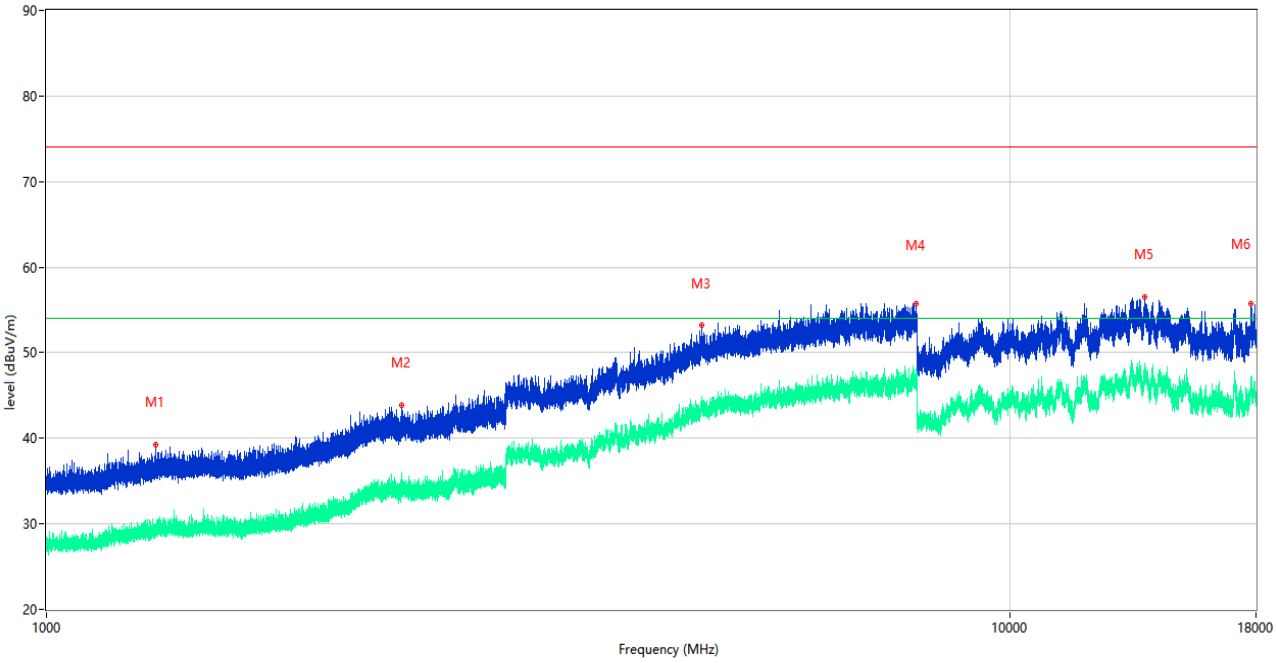
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	52.989	13.14	-25.51	40.0	-26.86	Peak	361.00	200	Horizontal	Pass
2	136.749	16.32	-30.13	43.5	-27.18	Peak	26.00	200	Horizontal	Pass
3	179.574	24.55	-28.49	43.5	-18.95	Peak	218.00	200	Horizontal	Pass
4	318.187	24.59	-23.19	46.0	-21.41	Peak	12.00	100	Horizontal	Pass
5	619.130	24.65	-15.60	46.0	-21.35	Peak	130.00	200	Horizontal	Pass
6	892.378	31.20	-10.07	46.0	-14.80	Peak	189.00	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	1330.900	39.30	-16.75	74.0	-34.70	Peak	354.00	150	Vertical	Pass
1**	1330.900	28.80	-16.75	54.0	-25.20	AV	354.00	150	Vertical	Pass
2	2424.000	44.03	-11.66	74.0	-29.97	Peak	183.00	150	Vertical	Pass
2**	2424.000	34.37	-11.66	54.0	-19.63	AV	183.00	150	Vertical	Pass
3	4616.750	52.13	-1.51	74.0	-21.87	Peak	292.00	150	Vertical	Pass
3**	4616.750	42.44	-1.51	54.0	-11.56	AV	292.00	150	Vertical	Pass
4	7797.000	56.04	2.63	74.0	-17.96	Peak	185.00	150	Vertical	Pass
4**	7797.000	47.17	2.63	54.0	-6.83	AV	185.00	150	Vertical	Pass
5	14055.500	57.04	5.29	74.0	-16.96	Peak	346.00	150	Vertical	Pass
5**	14055.500	47.91	5.29	54.0	-6.09	AV	346.00	150	Vertical	Pass
6	17801.001	56.53	2.88	74.0	-17.47	Peak	0.00	150	Vertical	Pass
6**	17801.001	47.09	2.88	54.0	-6.91	AV	0.00	150	Vertical	Pass

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

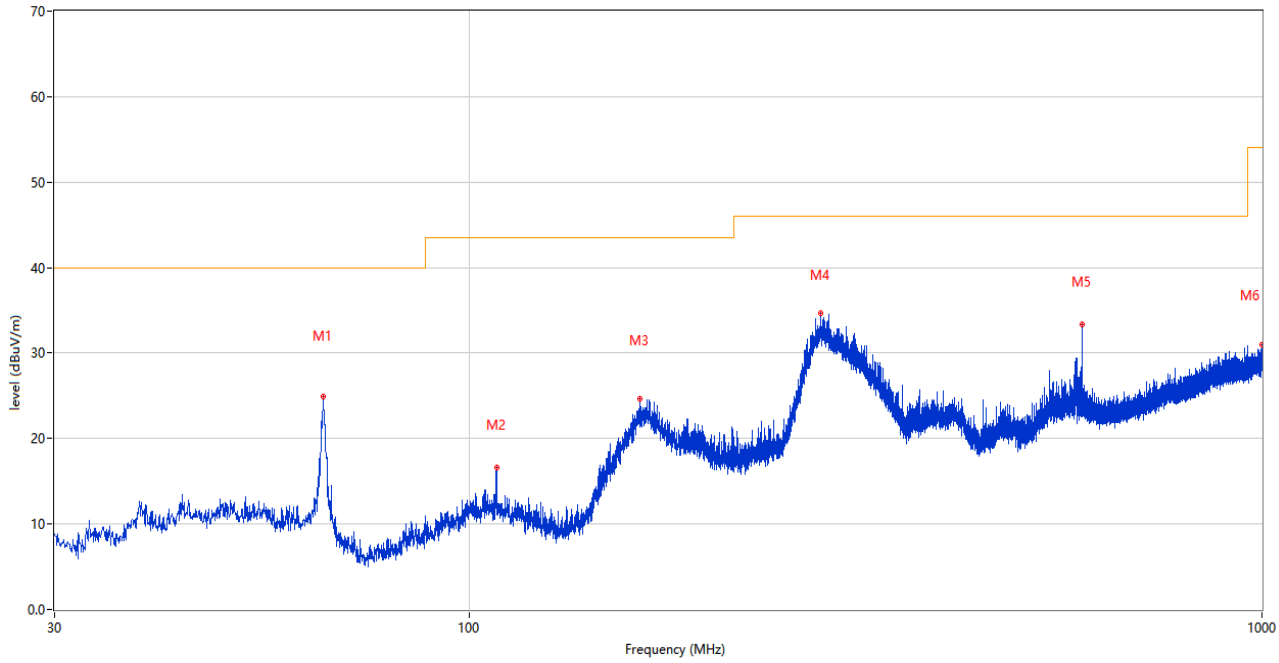


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1298.400	39.30	-16.68	74.0	-34.70	Peak	360.00	150	Horizontal	Pass
1**	1298.400	29.25	-16.68	54.0	-24.75	AV	360.00	150	Horizontal	Pass
2	2334.600	43.85	-11.72	74.0	-30.15	Peak	160.00	150	Horizontal	Pass
2**	2334.600	35.94	-11.72	54.0	-18.06	AV	160.00	150	Horizontal	Pass
3	4791.250	53.21	0.69	74.0	-20.79	Peak	115.00	150	Horizontal	Pass
3**	4791.250	44.73	0.69	54.0	-9.27	AV	115.00	150	Horizontal	Pass
4	7989.000	55.71	2.34	74.0	-18.29	Peak	330.00	150	Horizontal	Pass
4**	7989.000	46.24	2.34	54.0	-7.76	AV	330.00	150	Horizontal	Pass
5	13813.000	56.56	5.65	74.0	-17.44	Peak	134.00	150	Horizontal	Pass
5**	13813.000	47.89	5.65	54.0	-6.11	AV	134.00	150	Horizontal	Pass
6	17802.500	55.71	2.83	74.0	-18.29	Peak	187.00	150	Horizontal	Pass
6**	17802.500	46.16	2.83	54.0	-7.84	AV	187.00	150	Horizontal	Pass

Test Data and Plots

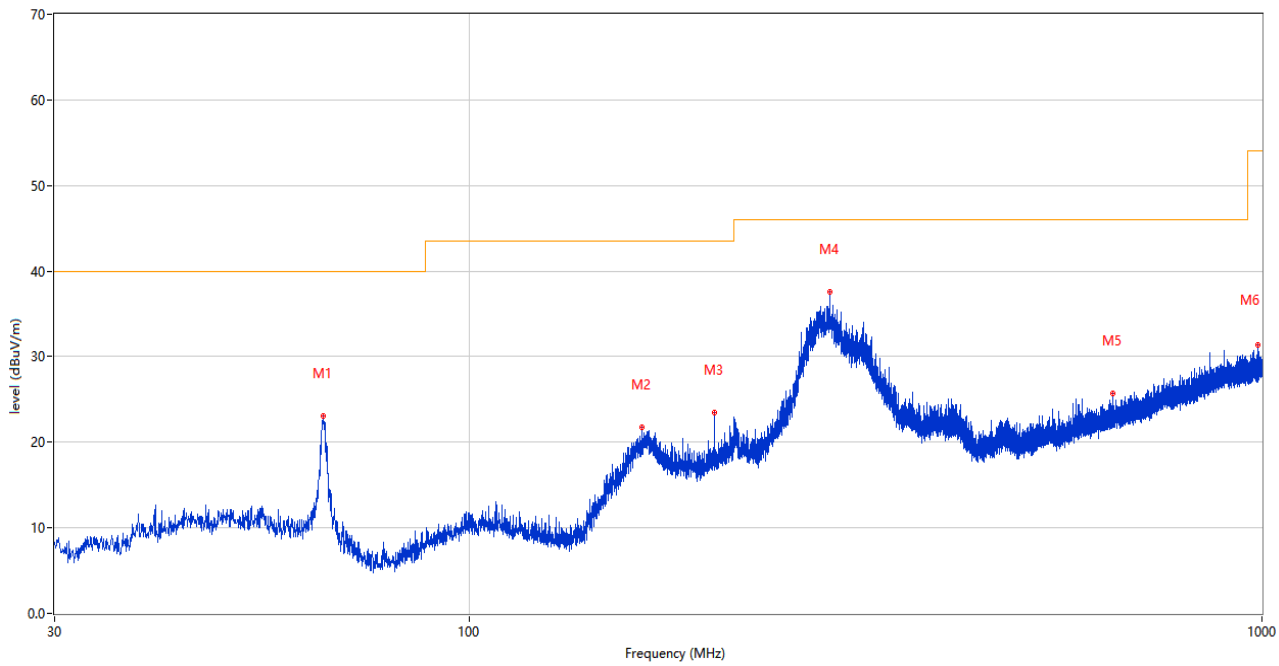
The USB Test Mode

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



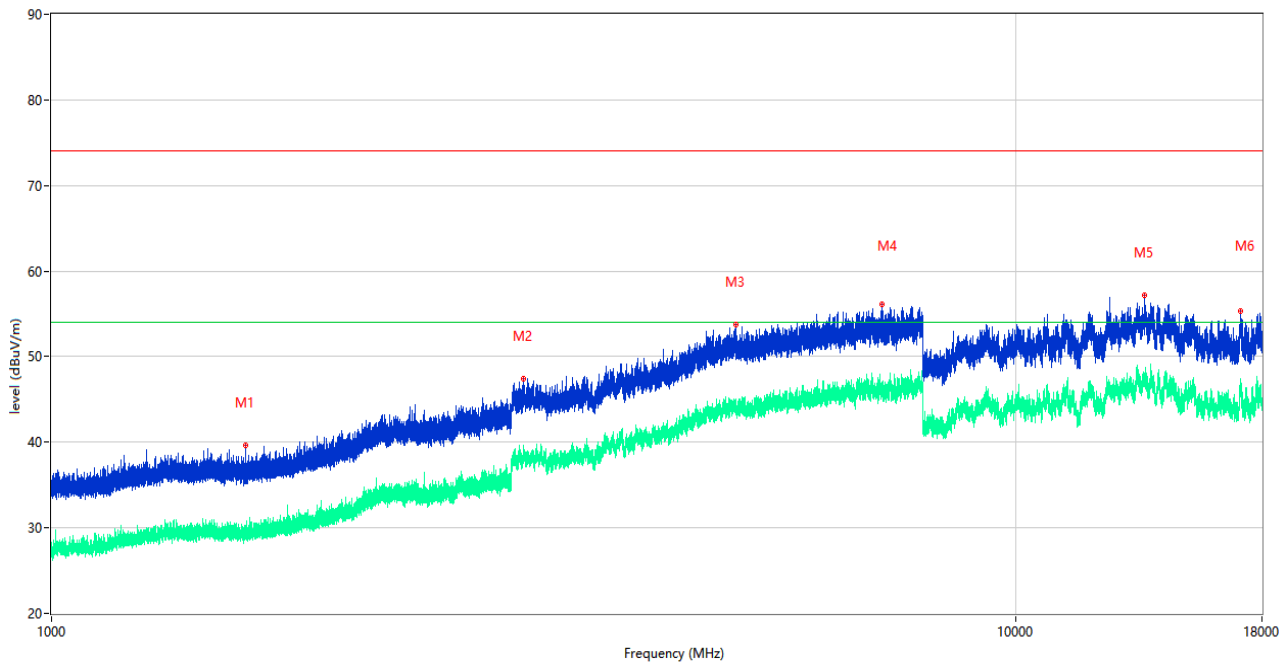
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	65.550	24.88	-27.74	40.0	-15.12	Peak	69.00	100	Vertical	Pass
2	108.279	16.66	-26.60	43.5	-26.84	Peak	182.00	100	Vertical	Pass
3	164.005	24.59	-29.38	43.5	-18.91	Peak	115.00	100	Vertical	Pass
4	277.350	34.65	-24.31	46.0	-11.35	Peak	361.00	200	Vertical	Pass
5	594.006	33.33	-16.07	46.0	-12.67	Peak	196.00	200	Vertical	Pass
6	999.175	30.97	-8.35	54.0	-23.03	Peak	361.00	200	Vertical	Pass

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



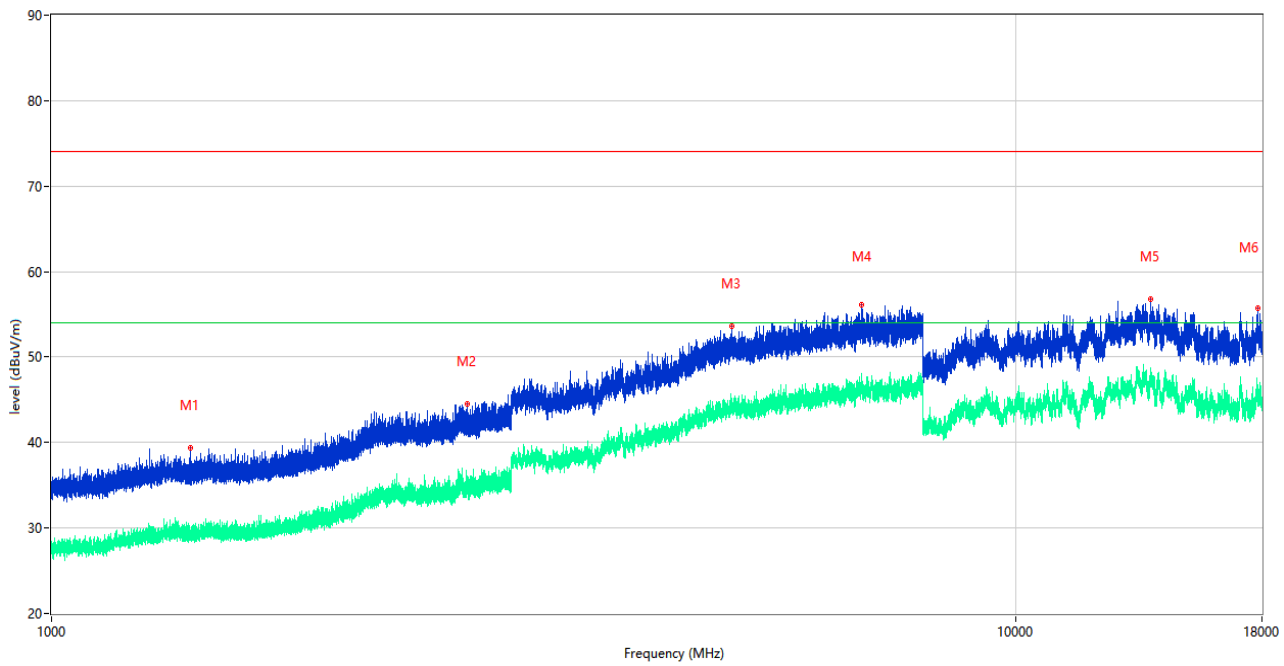
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	65.502	23.11	-27.72	40.0	-16.89	Peak	360.00	200	Horizontal	Pass
2	165.218	21.79	-29.32	43.5	-21.71	Peak	360.00	200	Horizontal	Pass
3	203.921	23.43	-26.54	43.5	-20.07	Peak	360.00	200	Horizontal	Pass
4	284.867	37.63	-24.00	46.0	-8.37	Peak	96.00	100	Horizontal	Pass
5	648.763	25.73	-14.88	46.0	-20.27	Peak	360.00	200	Horizontal	Pass
6	986.953	31.35	-8.63	54.0	-22.65	Peak	301.00	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	1588.600	39.67	-16.96	74.0	-34.33	Peak	206.00	150	Vertical	Pass
1**	1588.600	30.31	-16.96	54.0	-23.69	AV	206.00	150	Vertical	Pass
2	3083.000	47.42	-5.64	74.0	-26.58	Peak	345.00	150	Vertical	Pass
2**	3083.000	37.57	-5.64	54.0	-16.43	AV	345.00	150	Vertical	Pass
3	5121.500	53.80	0.27	74.0	-20.20	Peak	285.00	150	Vertical	Pass
3**	5121.500	43.72	0.27	54.0	-10.28	AV	285.00	150	Vertical	Pass
4	7258.000	56.07	2.46	74.0	-17.93	Peak	0.00	150	Vertical	Pass
4**	7258.000	46.36	2.46	54.0	-7.64	AV	0.00	150	Vertical	Pass
5	13613.000	57.16	4.82	74.0	-16.84	Peak	0.00	150	Vertical	Pass
5**	13613.000	46.93	4.82	54.0	-7.07	AV	0.00	150	Vertical	Pass
6	17100.500	55.31	3.74	74.0	-18.69	Peak	0.00	150	Vertical	Pass
6**	17100.500	45.88	3.74	54.0	-8.12	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	1392.200	39.42	-16.65	74.0	-34.58	Peak	149.00	150	Horizontal	Pass
1**	1392.200	29.34	-16.65	54.0	-24.66	AV	149.00	150	Horizontal	Pass
2	2695.300	44.56	-9.77	74.0	-29.44	Peak	294.00	150	Horizontal	Pass
2**	2695.300	35.77	-9.77	54.0	-18.23	AV	294.00	150	Horizontal	Pass
3	5070.500	53.57	0.23	74.0	-20.43	Peak	41.00	150	Horizontal	Pass
3**	5070.500	44.11	0.23	54.0	-9.89	AV	41.00	150	Horizontal	Pass
4	6918.500	56.09	1.82	74.0	-17.91	Peak	148.00	150	Horizontal	Pass
4**	6918.500	46.75	1.82	54.0	-7.25	AV	148.00	150	Horizontal	Pass
5	13807.500	56.80	5.72	74.0	-17.20	Peak	241.00	150	Horizontal	Pass
5**	13807.500	47.62	5.72	54.0	-6.38	AV	241.00	150	Horizontal	Pass
6	17817.000	55.67	2.32	74.0	-18.33	Peak	66.00	150	Horizontal	Pass
6**	17817.000	46.17	2.32	54.0	-7.83	AV	66.00	150	Horizontal	Pass

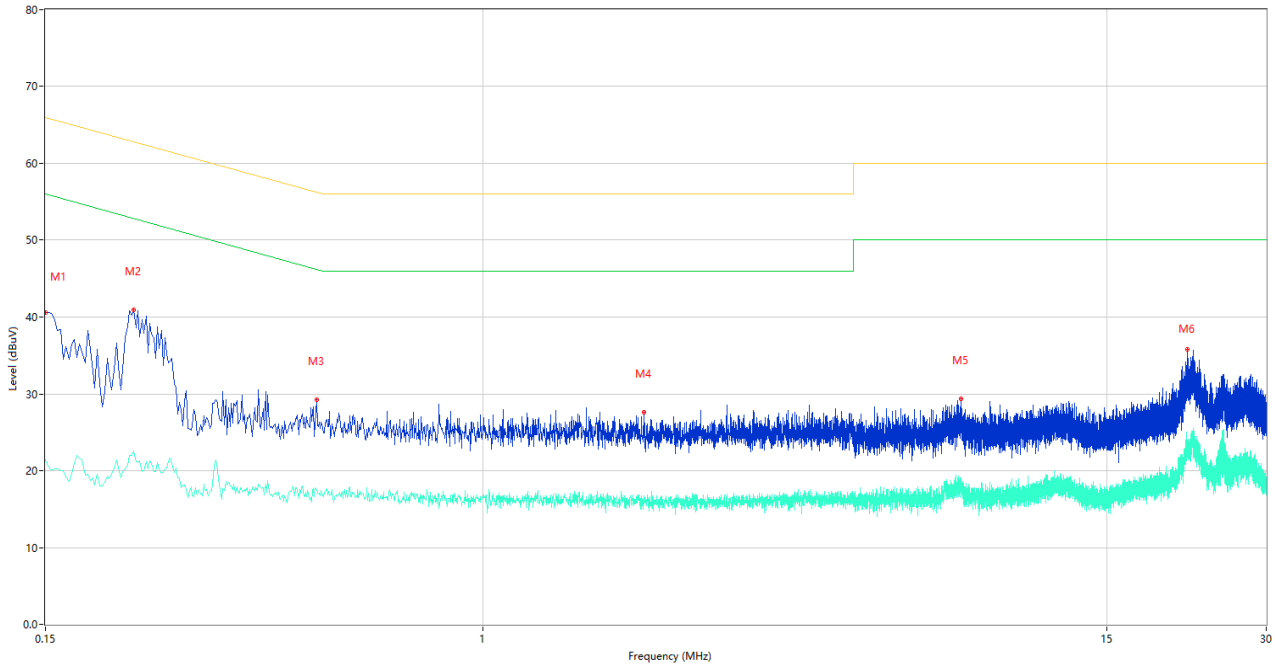
A.2 Conducted Emission

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

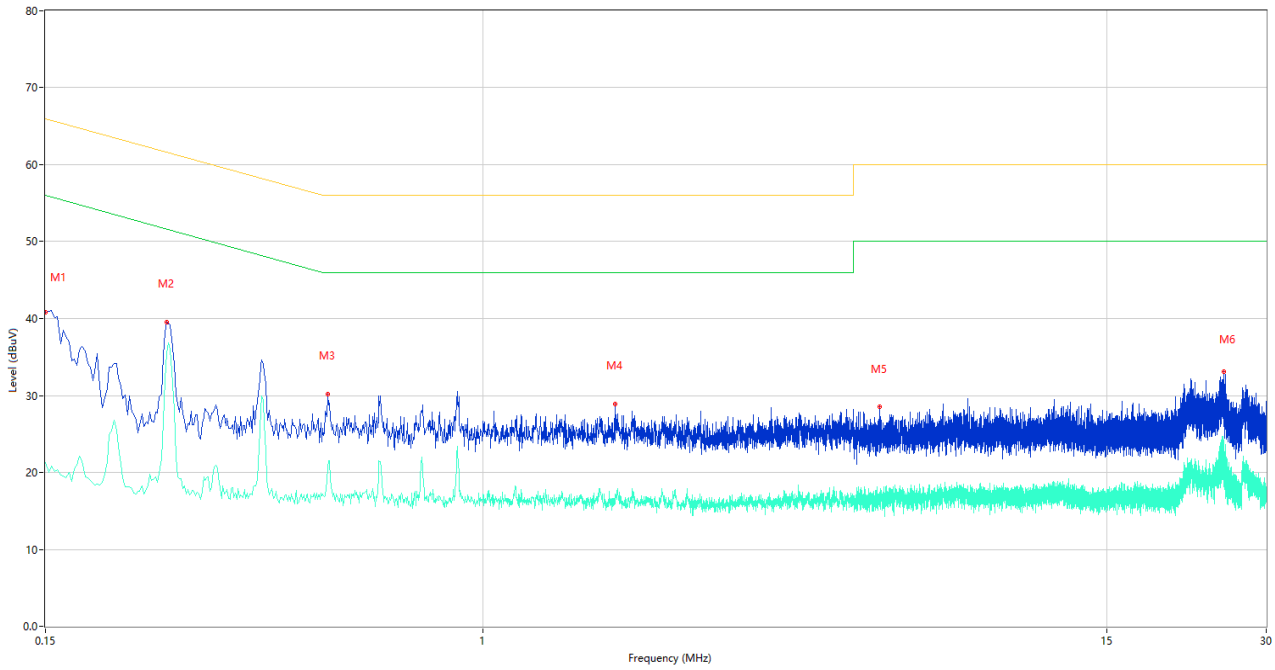
The Camera Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	40.59	10.19	66.00	-25.41	Peak	L	Pass
1**	0.150	21.41	10.19	56.00	-34.59	AV	L	Pass
2	0.220	40.97	10.09	62.82	-21.85	Peak	L	Pass
2**	0.220	22.60	10.09	52.82	-30.22	AV	L	Pass
3	0.486	29.26	10.11	56.24	-26.98	Peak	L	Pass
3**	0.486	17.60	10.11	46.24	-28.64	AV	L	Pass
4	2.016	27.58	9.86	56.00	-28.42	Peak	L	Pass
4**	2.016	16.48	9.86	46.00	-29.52	AV	L	Pass
5	7.968	29.33	10.09	60.00	-30.67	Peak	L	Pass
5**	7.968	18.77	10.09	50.00	-31.23	AV	L	Pass
6	21.324	35.75	10.28	60.00	-24.25	Peak	L	Pass
6**	21.324	23.56	10.28	50.00	-26.44	AV	L	Pass

A.2.2 N Phase

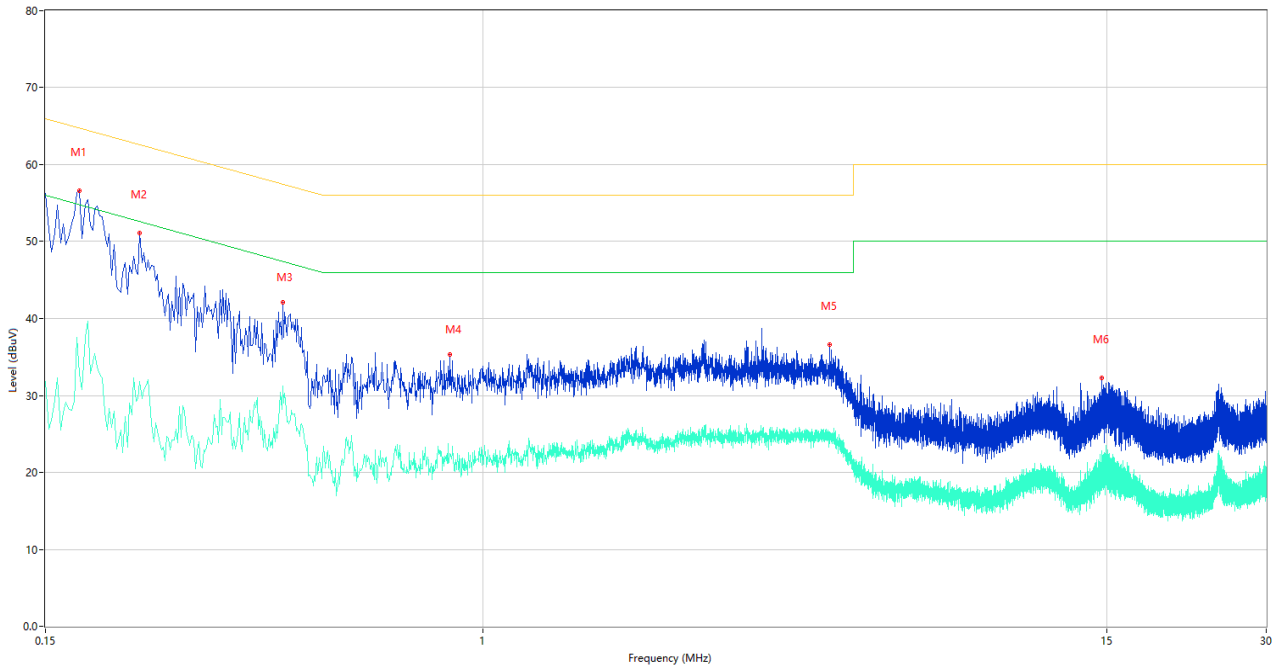


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	40.88	10.19	66.00	-25.12	Peak	N	Pass
1**	0.150	21.24	10.19	56.00	-34.76	AV	N	Pass
2	0.254	39.51	10.08	61.63	-22.12	Peak	N	Pass
2**	0.254	35.59	10.08	51.63	-16.04	AV	N	Pass
3	0.510	30.22	10.11	56.00	-25.78	Peak	N	Pass
3**	0.510	20.59	10.11	46.00	-25.41	AV	N	Pass
4	1.780	28.93	9.90	56.00	-27.07	Peak	N	Pass
4**	1.780	17.18	9.90	46.00	-28.82	AV	N	Pass
5	5.608	28.51	10.02	60.00	-31.49	Peak	N	Pass
5**	5.608	17.39	10.02	50.00	-32.61	AV	N	Pass
6	24.964	33.08	10.16	60.00	-26.92	Peak	N	Pass
6**	24.964	23.64	10.16	50.00	-26.36	AV	N	Pass

Test Data and Plots

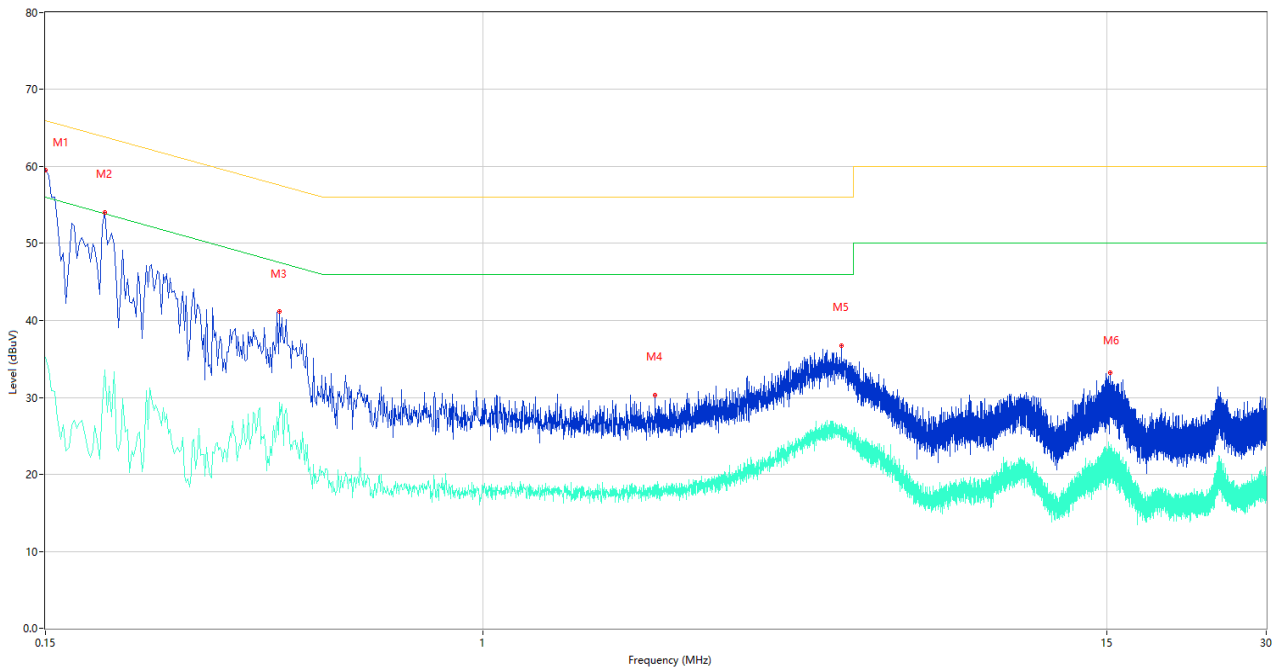
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.174	56.66	10.15	64.77	-8.11	Peak	L	Pass
1**	0.174	32.86	10.15	54.77	-21.91	AV	L	Pass
2	0.226	51.09	10.09	62.60	-11.51	Peak	L	Pass
2**	0.226	31.78	10.09	52.60	-20.82	AV	L	Pass
3	0.420	42.13	10.09	57.45	-15.32	Peak	L	Pass
3**	0.420	31.24	10.09	47.45	-16.21	AV	L	Pass
4	0.866	35.28	10.05	56.00	-20.72	Peak	L	Pass
4**	0.866	22.41	10.05	46.00	-23.59	AV	L	Pass
5	4.512	36.64	10.01	56.00	-19.36	Peak	L	Pass
5**	4.512	25.26	10.01	46.00	-20.74	AV	L	Pass
6	14.668	32.33	10.14	60.00	-27.67	Peak	L	Pass
6**	14.668	21.86	10.14	50.00	-28.14	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	59.51	10.19	66.00	-6.49	Peak	N	Pass
1**	0.150	35.17	10.19	56.00	-20.83	AV	N	Pass
2	0.194	54.09	10.11	63.86	-9.77	Peak	N	Pass
2**	0.194	33.52	10.11	53.86	-20.34	AV	N	Pass
3	0.414	41.21	10.09	57.57	-16.36	Peak	N	Pass
3**	0.414	29.31	10.09	47.57	-18.26	AV	N	Pass
4	2.112	30.27	9.88	56.00	-25.73	Peak	N	Pass
4**	2.112	18.71	9.88	46.00	-27.29	AV	N	Pass
5	4.744	36.67	9.97	56.00	-19.33	Peak	N	Pass
5**	4.744	25.90	9.97	46.00	-20.10	AV	N	Pass
6	15.230	33.25	10.15	60.00	-26.75	Peak	N	Pass
6**	15.230	22.68	10.15	50.00	-27.32	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-EC21C0857-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-EC21C0857-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-EC21C0857-AI.PDF”.

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