EMC TEST REPORT

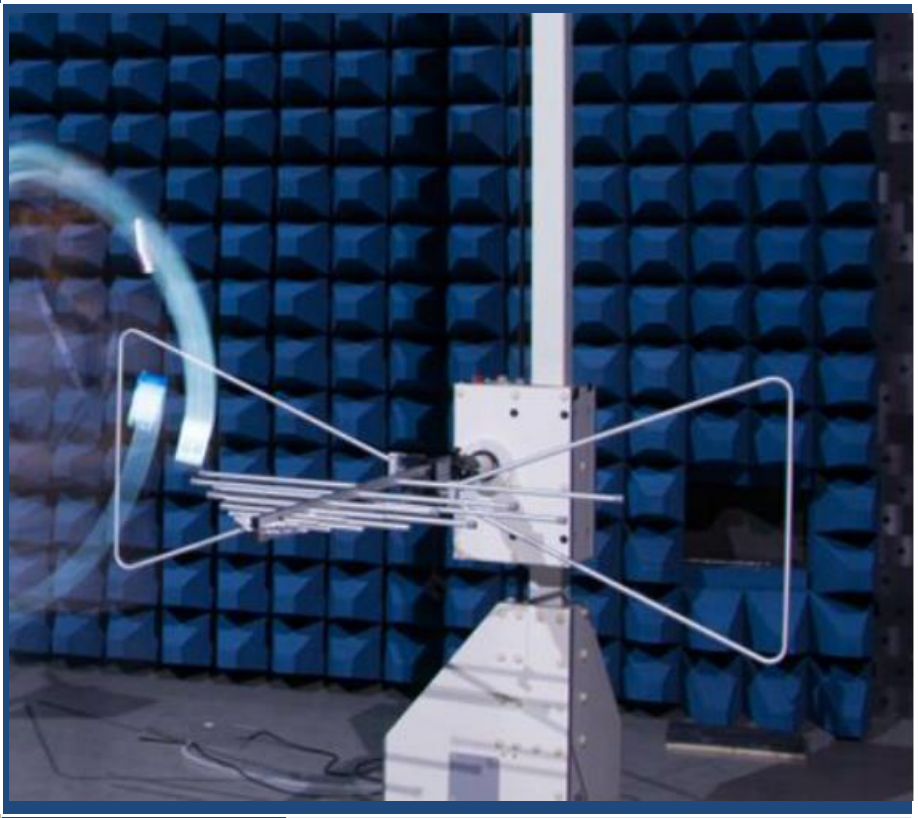
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

Mobile Phone

ISSUED TO
Xiaomi Communications Co., Ltd.

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085



Tested by:	Sijie Zheng
Date	Dec. 31, 2021
Approved by:	Liao Jianming (Technical Director)
Date	Dec. 31, 2021

Report No.:	BL-SZ21B0947-401
EUT Name:	Mobile Phone
Model Name:	2201116TG
Brand Name:	Redmi
Test Standard:	47 CFR Part 15 Subpart B
FCC ID:	2AFZZ16TG
Test Conclusion:	Pass
Test Date:	Dec. 07, 2021 ~ Dec. 14, 2021
Date of Issue:	Dec. 31, 2021

Block B, 1st FL,Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong, P. R. China 518055
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Revision History

Version	Issue Date	Revisions Content
Rev. 01	Dec. 31, 2021	Initial Issue
Rev. 02	Dec. 31, 2021	Update IMEI number in section 2.6

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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

1.3 Laboratory Condition

Ambient Temperature	20℃ to 25℃
Ambient Relative Humidity	30% to 60%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

(1) The test report refer to the BALUN report mode v7.2.

(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	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

2.2 Manufacturer Information

Manufacturer	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	2201116TG
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	P1.1
Software Version	MIUI 13
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Please refer the document “BL-SZ21B0947-AW EUT external photo.pdf”.

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/900/1800/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/DC-HSDPA Band 1/2/4/5/8 4G Network LTE FDD Band 1/2/3/4/5/7/8/12/13/17/20/26/28/32/66 LTE TDD Band 38/40/41 LTE CA Uplink (UL): CA_3C, CA_7C, CA_38C, CA_40C, CA_41C LTE CA Downlink (DL): CA_20A_32A Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40) 5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, Galileo, BDS, FM receiver, NFC
RAM & Storage	6+64 GB; 6+128GB; 8+128 GB
IMEI	S21: IMEI1#: 868202050068306 IMEI2#: 868202050068314 (6+128GB) S22: IMEI1#: 868202050067803 IMEI2#: 868202050067811 (6+128GB) S39: IMEI1#: 868202050067423 IMEI2#: 868202050067431 (6+64 GB) S37: IMEI1#: 868202050067688 IMEI2#: 868202050067696 (8+128 GB)

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)	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 DC 3.87V 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	2021.10.10	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	☐
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	MY55330120	2021.10.20	2022.10.19	☒
Amplifier	KMW	ZT30-1000MHz	N/A	2021.06.18	2022.06.17	☒
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	☒
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	MY55330120	2021.10.20	2022.10.19	☒
Amplifier	KMW	LSCX-LNA1-12G-01	N/A	2021.06.18	2022.06.17	☒
Amplifier	KMW	XKu_LNA7-18G-01	N/A	2021.06.18	2022.06.17	☒
Amplifier	KMW	DLAN-18000-40000-02	N/A	2021.06.18	2022.06.17	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1917	2019.07.02	2022.07.01	☒

Radiated Emission Test For Frequency 1 GHz-18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2021.09.04	2024.09.03	☒
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	2021.08.14	2024.08.13	☒
Test Software	BALUN	BL410_E	V19.918	--	--	☒

4.3 Test Enclosure list

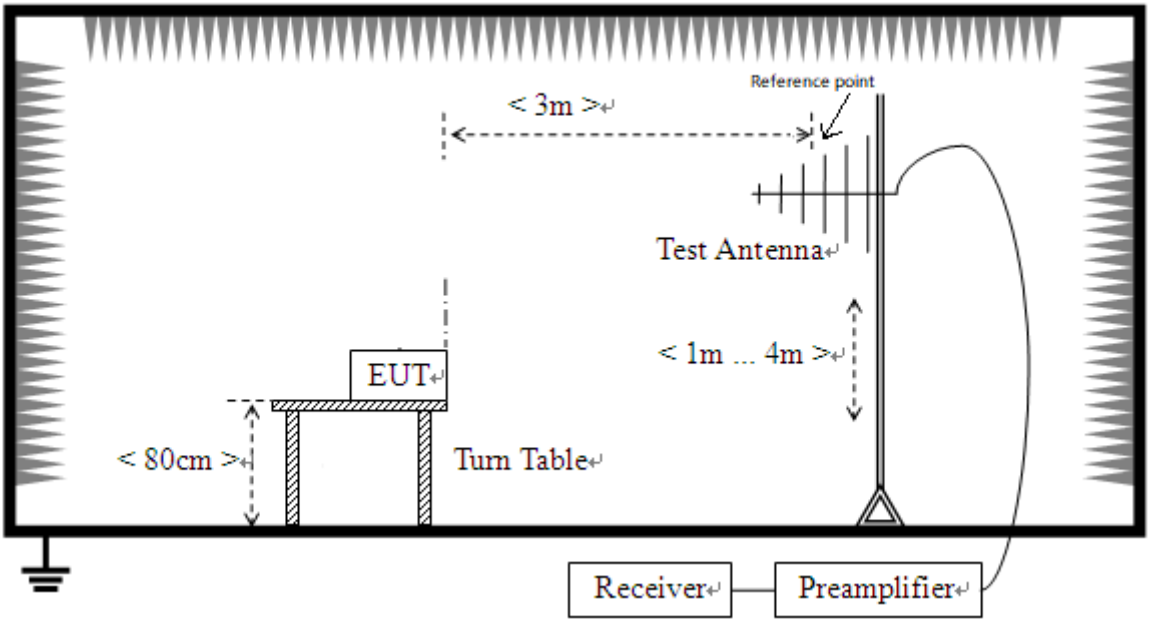
Description	Manufacturer	Model	Serial No.	Length	Description	Use
Laptop	Honor	N/A	N/A	N/A	N/A	☒
TF Card	Kingston	N/A	N/A	N/A	N/A	☒
Analog Headset	N/A	N/A	N/A	N/A	N/A	☒
Digital Headset	N/A	N/A	N/A	N/A	N/A	☒

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 + TF Card + Headset
TC02	The EGPRS 850 MHz RX Test Mode EGPRS 850 MHz RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC03	The WCDMA Band 5 RX Test Mode WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC04	The FDD LTE Band 5 RX Test Mode LTE Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC05	The FDD LTE Band 12 RX Test Mode LTE Band 12 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC06	The FDD LTE Band 13 RX Test Mode LTE Band 13 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC07	The FDD LTE Band 17 RX Test Mode LTE Band 17 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC08	The FDD LTE Band 26 RX Test Mode LTE Band 26 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC09	The Camera Test Mode EUT + Adapter + USB Cable + Battery + TF Card + Headset
TC10	The Video Play Test Mode EUT + Adapter + USB Cable + Battery + TF Card + Headset
TC11	The USB Test Mode EUT + USB Cable + Battery + Laptop + TF Card + Headset

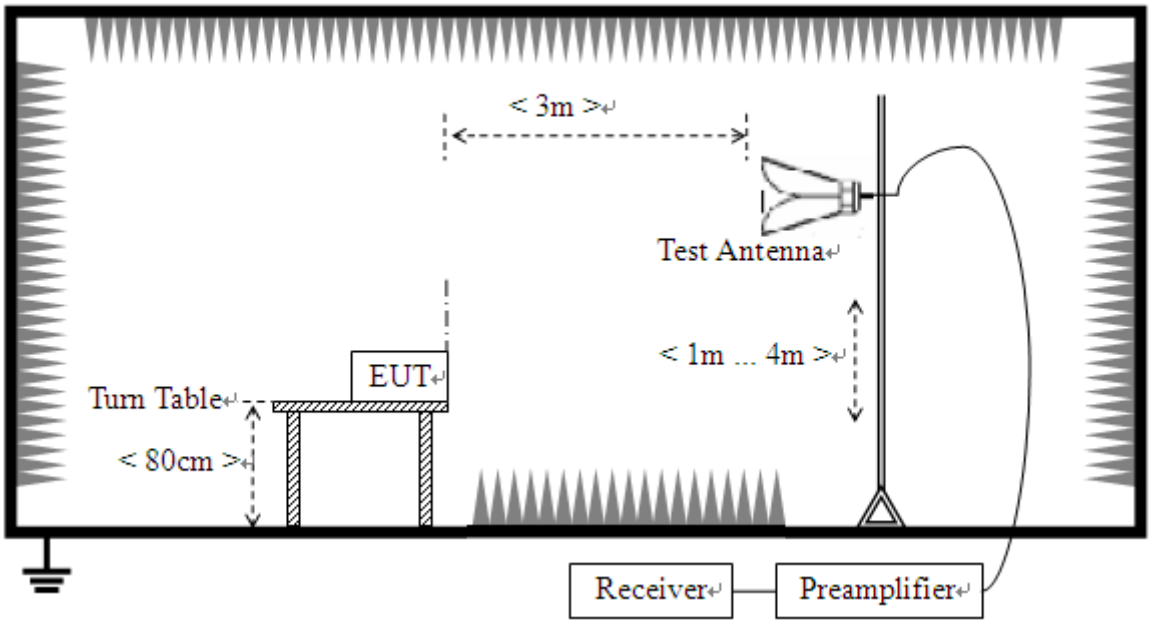
4.5 Test Setups

Test Setup 1



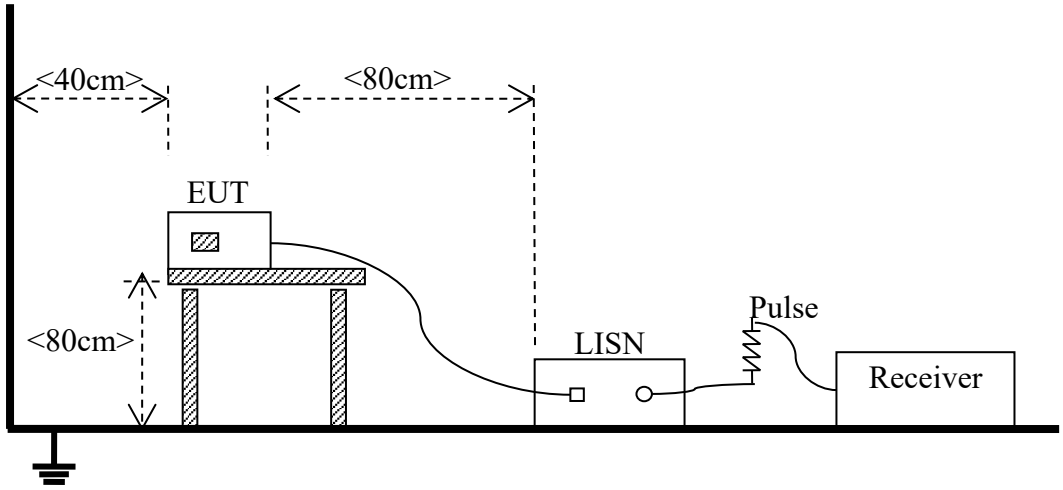
(For Radiated Emission Test (30 MHz-1 GHz))

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~TC11 Note
Conducted Emission, AC Ports	Test Env.	NTNV
	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.

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.

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.

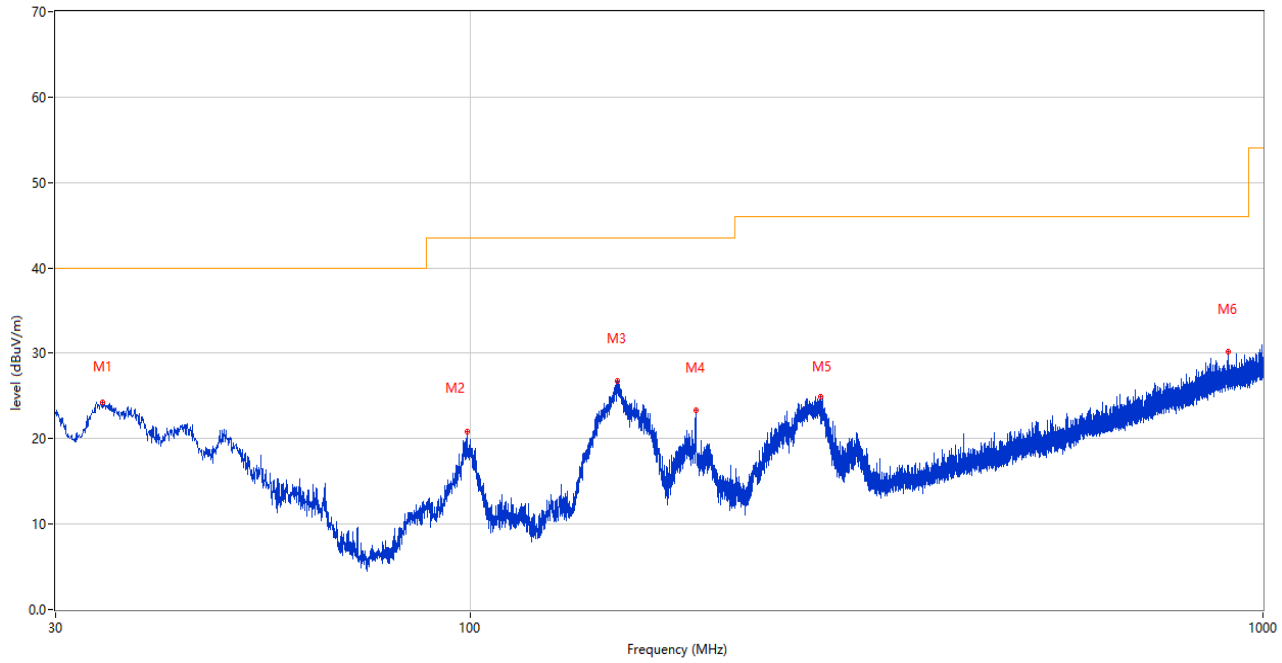
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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

Test Data and Plots

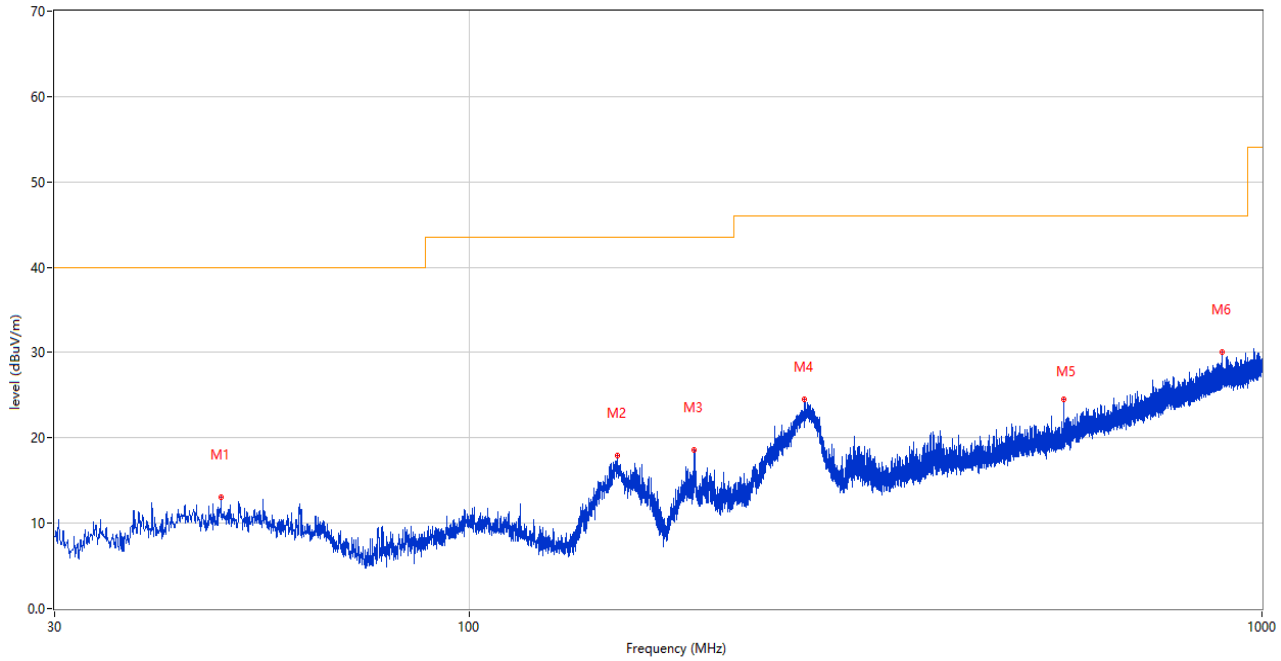
The Camera Test Mode

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



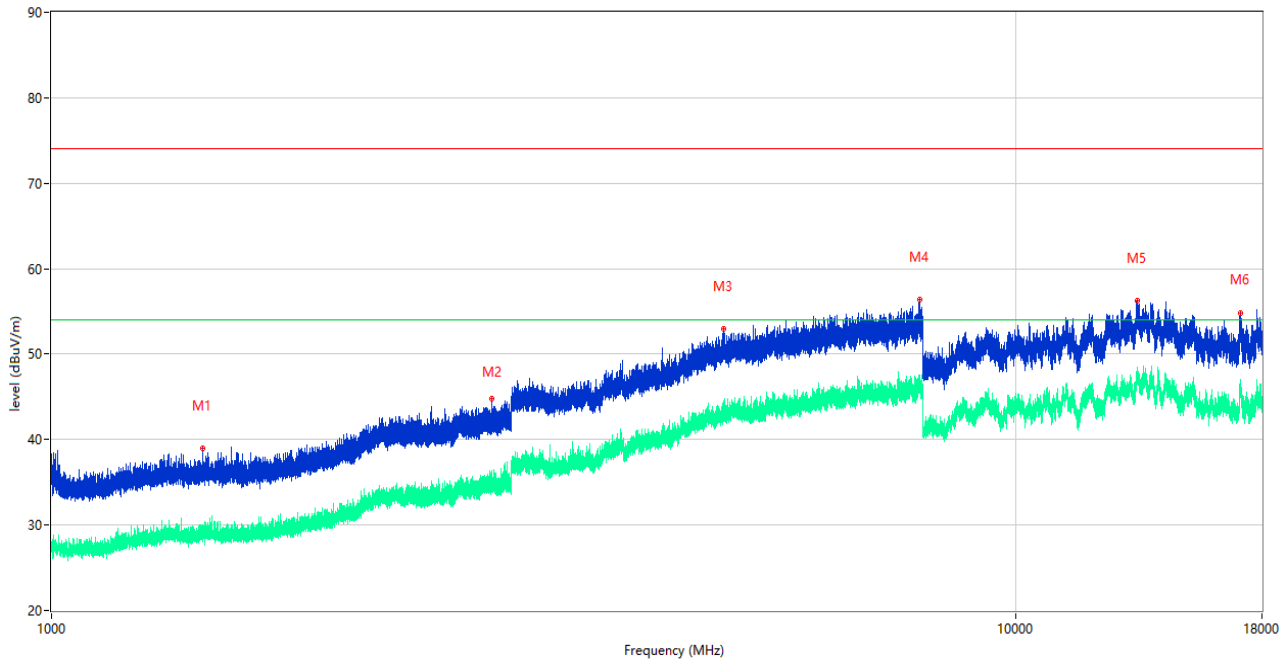
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	34.413	24.26	-28.65	40.0	-15.74	Peak	230.00	100	Vertical	Pass
2	99.161	20.78	-26.86	43.5	-22.72	Peak	139.00	100	Vertical	Pass
3	153.190	26.74	-29.86	43.5	-16.76	Peak	0.00	100	Vertical	Pass
4	192.524	23.31	-27.10	43.5	-20.19	Peak	281.00	100	Vertical	Pass
5	276.914	24.89	-24.34	46.0	-21.11	Peak	269.00	100	Vertical	Pass
6	904.891	30.15	-9.79	46.0	-15.85	Peak	360.00	200	Vertical	Pass

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



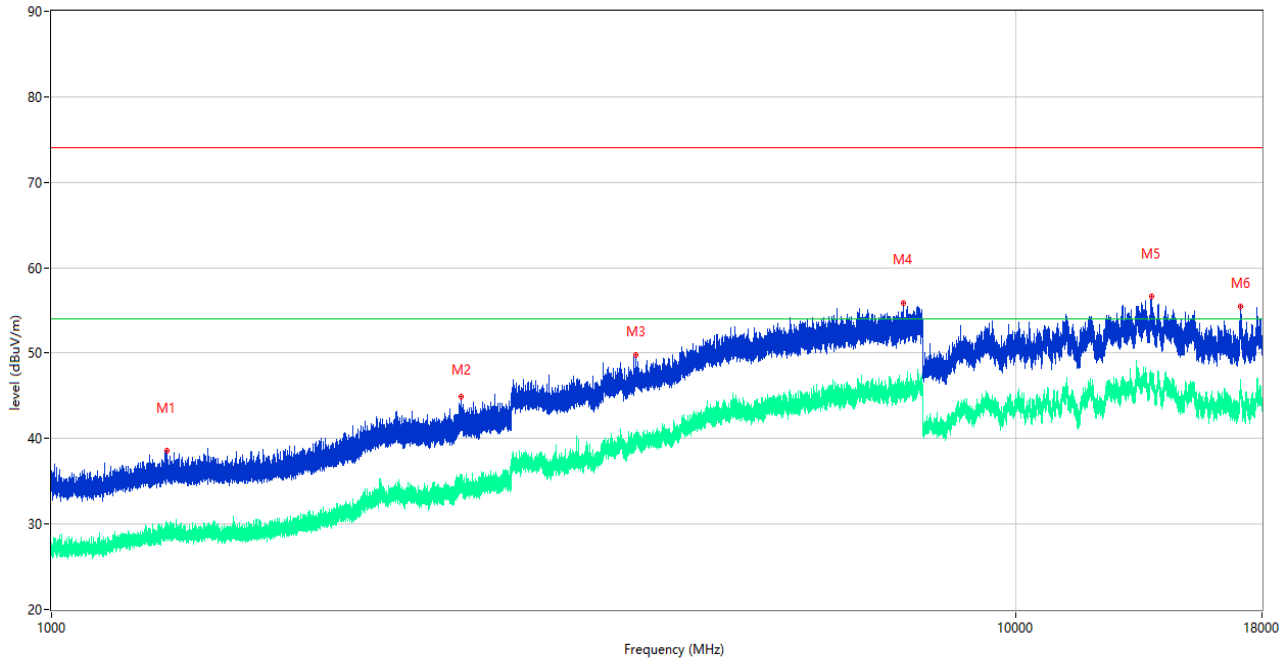
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.672	13.10	-25.35	40.0	-26.90	Peak	265.00	200	Horizontal	Pass
2	153.675	17.95	-29.89	43.5	-25.55	Peak	265.00	200	Horizontal	Pass
3	192.426	18.55	-27.11	43.5	-24.95	Peak	241.00	100	Horizontal	Pass
4	264.449	24.54	-24.51	46.0	-21.46	Peak	360.00	200	Horizontal	Pass
5	562.918	24.52	-17.24	46.0	-21.48	Peak	360.00	200	Horizontal	Pass
6	890.390	30.11	-10.14	46.0	-15.89	Peak	360.00	200	Horizontal	Pass

A.1.3 Test Antenna Vertical, 1 GHz – 18 GHz



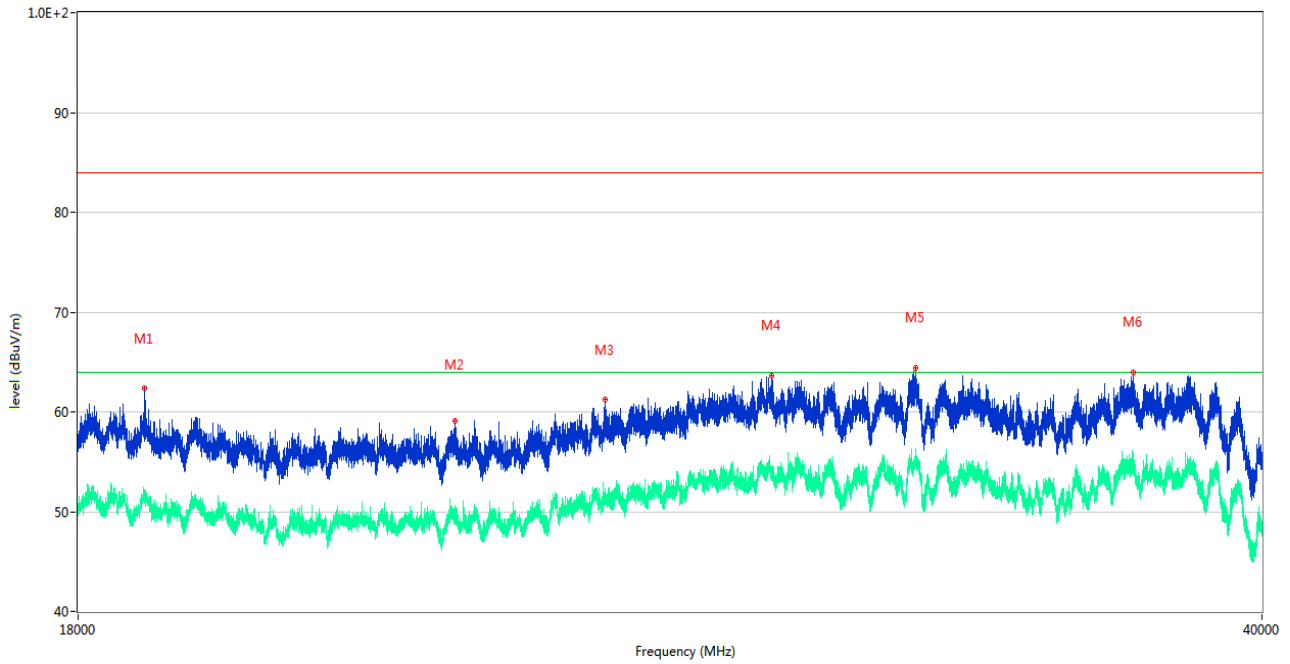
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1435.700	39.01	-16.61	74.0	-34.99	Peak	360.00	100	Vertical	Pass
1**	1435.700	28.98	-16.61	54.0	-25.02	AV	360.00	100	Vertical	Pass
2	2858.900	44.72	-9.28	74.0	-29.28	Peak	330.00	100	Vertical	Pass
2**	2858.900	34.39	-9.28	54.0	-19.61	AV	330.00	100	Vertical	Pass
3	4976.500	52.95	0.94	74.0	-21.05	Peak	57.00	100	Vertical	Pass
3**	4976.500	42.66	0.94	54.0	-11.34	AV	57.00	100	Vertical	Pass
4	7947.500	56.39	3.14	74.0	-17.61	Peak	360.00	100	Vertical	Pass
4**	7947.500	45.66	3.14	54.0	-8.34	AV	360.00	100	Vertical	Pass
5	13354.000	56.29	5.21	74.0	-17.71	Peak	62.00	100	Vertical	Pass
5**	13354.000	47.04	5.21	54.0	-6.96	AV	62.00	100	Vertical	Pass
6	17097.000	54.80	3.63	74.0	-19.20	Peak	293.00	100	Vertical	Pass
6**	17097.000	45.67	3.63	54.0	-8.33	AV	293.00	100	Vertical	Pass

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



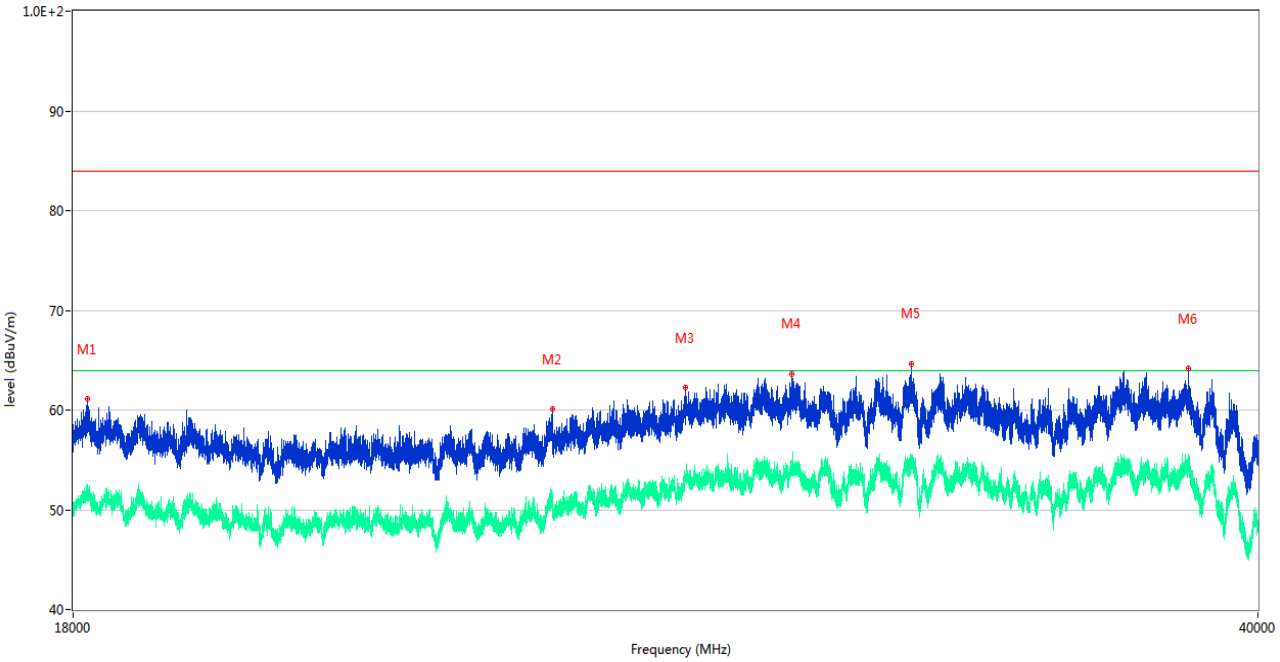
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1318.100	38.59	-16.50	74.0	-35.41	Peak	167.00	100	Horizontal	Pass
1**	1318.100	28.78	-16.50	54.0	-25.22	AV	167.00	100	Horizontal	Pass
2	2657.800	44.87	-9.33	74.0	-29.13	Peak	173.00	100	Horizontal	Pass
2**	2657.800	34.52	-9.33	54.0	-19.48	AV	173.00	100	Horizontal	Pass
3	4039.000	49.74	-2.84	74.0	-24.26	Peak	51.00	100	Horizontal	Pass
3**	4039.000	40.49	-2.84	54.0	-13.51	AV	51.00	100	Horizontal	Pass
4	7640.250	55.80	2.52	74.0	-18.20	Peak	352.00	100	Horizontal	Pass
4**	7640.250	45.56	2.52	54.0	-8.44	AV	352.00	100	Horizontal	Pass
5	13822.000	56.69	5.53	74.0	-17.31	Peak	243.00	100	Horizontal	Pass
5**	13822.000	47.37	5.53	54.0	-6.63	AV	243.00	100	Horizontal	Pass
6	17101.000	55.41	3.74	74.0	-18.59	Peak	208.00	100	Horizontal	Pass
6**	17101.000	46.58	3.74	54.0	-7.42	AV	208.00	100	Horizontal	Pass

A.1.5 Test Antenna Vertical, 18 GHz – 40 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	18835.460	62.75	9.34	84.0	-21.25	Peak	72.00	150	Vertical	Pass
1**	18835.460	51.94	9.34	64.0	-12.06	AV	72.00	150	Vertical	Pass
2	23213.600	59.49	7.75	84.0	-24.51	Peak	315.00	150	Vertical	Pass
2**	23213.600	50.90	7.75	64.0	-13.10	AV	315.00	150	Vertical	Pass
3	25685.401	61.58	9.81	84.0	-22.42	Peak	2.00	150	Vertical	Pass
3**	25685.401	51.26	9.81	64.0	-12.74	AV	2.00	150	Vertical	Pass
4	28722.700	63.28	10.82	84.0	-20.72	Peak	38.00	150	Vertical	Pass
4**	28722.700	54.46	10.82	64.0	-9.54	AV	38.00	150	Vertical	Pass
5	31673.699	64.41	9.31	84.0	-19.59	Peak	0.00	150	Vertical	Pass
5**	31673.699	56.22	9.31	64.0	-7.78	AV	0.00	150	Vertical	Pass
6	36685.248	63.93	8.48	84.0	-20.07	Peak	260.00	150	Vertical	Pass
6**	36685.248	54.95	8.48	64.0	-9.05	AV	260.00	150	Vertical	Pass

A.1.6 Test Antenna Horizontal, 18 GHz – 40 GHz

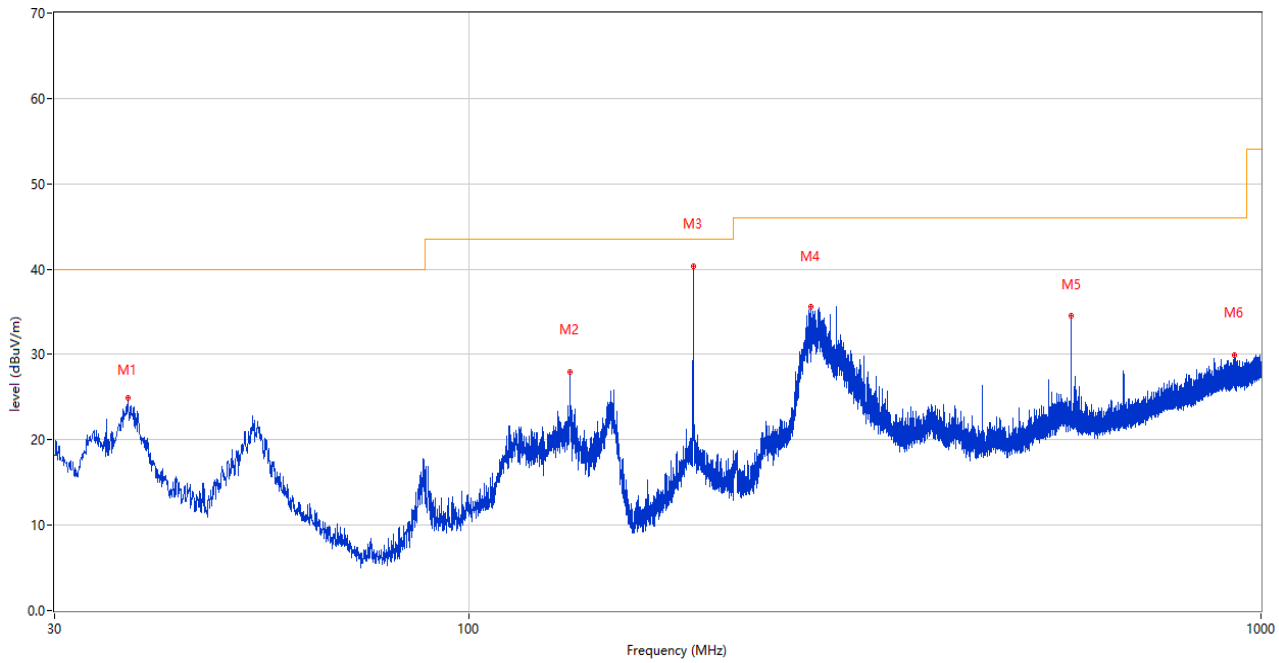


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	18156.302	61.23	10.69	84.0	-22.77	Peak	77.00	150	Horizontal	Pass
1**	18156.302	51.58	10.69	64.0	-12.42	AV	77.00	150	Horizontal	Pass
2	24863.840	60.15	8.83	84.0	-23.85	Peak	25.00	150	Horizontal	Pass
2**	24863.840	51.74	8.83	64.0	-12.26	AV	25.00	150	Horizontal	Pass
3	27174.668	62.31	10.59	84.0	-21.69	Peak	92.00	150	Horizontal	Pass
3**	27174.668	53.41	10.59	64.0	-10.59	AV	92.00	150	Horizontal	Pass
4	29205.156	63.67	10.72	84.0	-20.33	Peak	355.00	150	Horizontal	Pass
4**	29205.156	54.21	10.72	64.0	-9.79	AV	355.00	150	Horizontal	Pass
5	31653.550	64.62	9.31	84.0	-19.38	Peak	273.00	150	Horizontal	Pass
5**	31653.550	55.22	9.31	64.0	-8.78	AV	273.00	150	Horizontal	Pass
6	38154.436	64.22	6.59	84.0	-19.78	Peak	361.00	150	Horizontal	Pass
6**	38154.436	54.78	6.59	64.0	-9.22	AV	361.00	150	Horizontal	Pass

Test Data and Plots

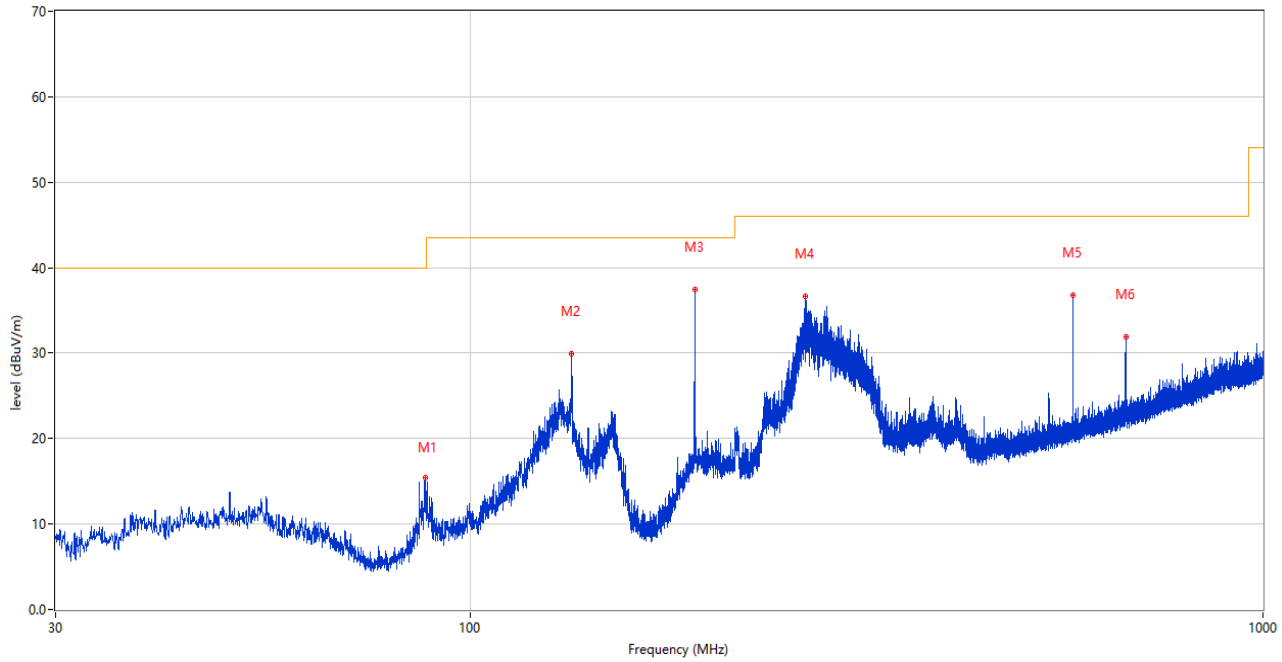
The USB Test Mode

A.1.7 Test Antenna Vertical, 30 MHz – 1 GHz



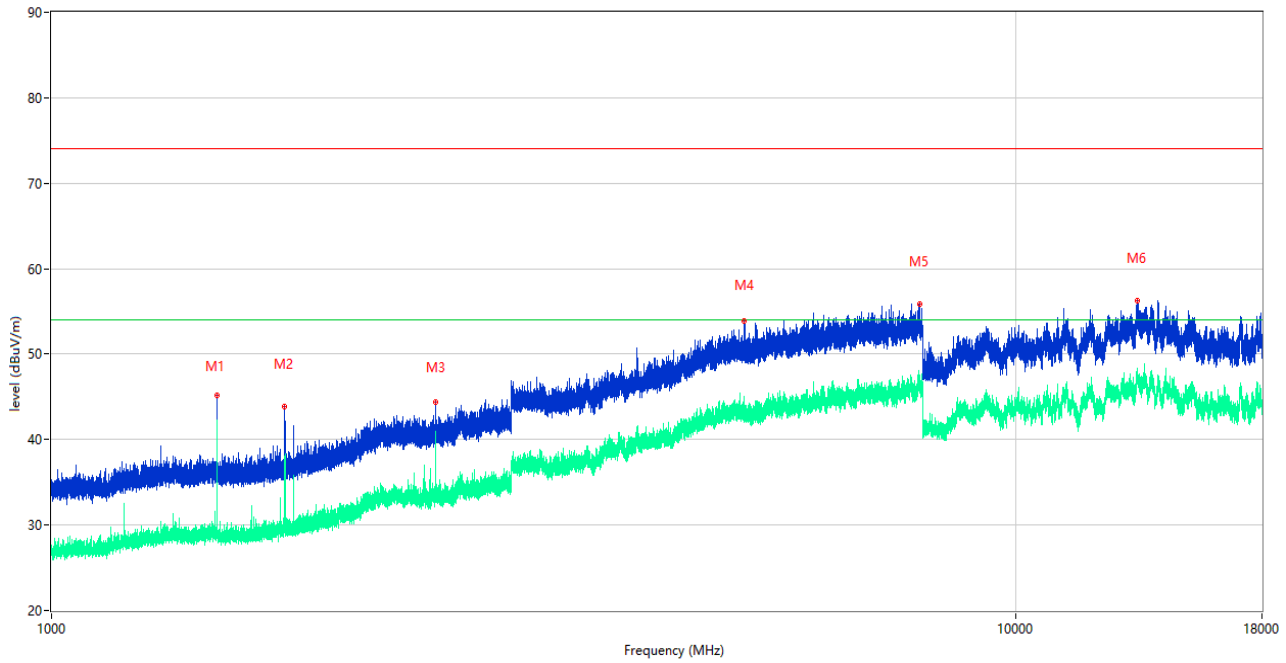
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	37.130	24.91	-27.60	40.0	-15.09	Peak	263.00	100	Vertical	Pass
2	134.178	27.92	-29.98	43.5	-15.58	Peak	209.00	100	Vertical	Pass
3	191.990	40.30	-27.16	43.5	-3.20	Peak	148.00	100	Vertical	Pass
4	270.463	35.57	-24.39	46.0	-10.43	Peak	360.00	200	Vertical	Pass
5	576.013	34.52	-16.91	46.0	-11.48	Peak	166.00	100	Vertical	Pass
6	925.504	29.88	-9.65	46.0	-16.12	Peak	131.00	200	Vertical	Pass

A.1.8 Test Antenna Horizontal, 30 MHz – 1 GHz



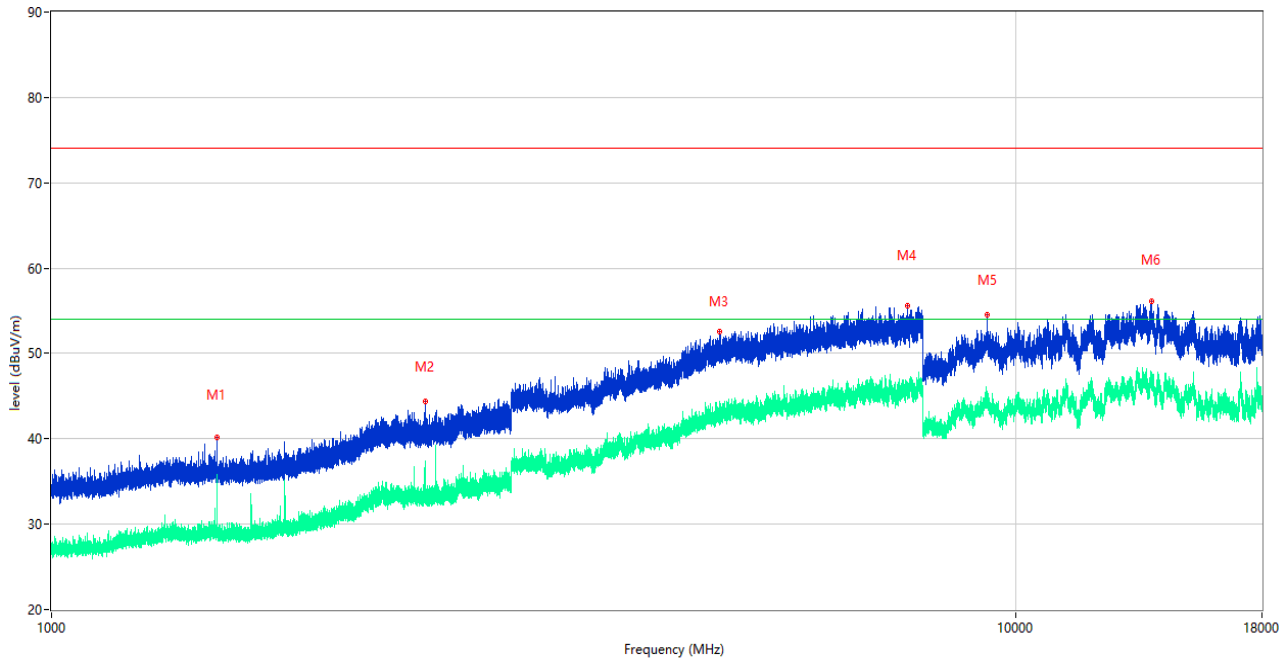
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	87.763	15.44	-29.20	40.0	-24.56	Peak	360.00	200	Horizontal	Pass
2	134.275	29.92	-29.97	43.5	-13.58	Peak	360.00	200	Horizontal	Pass
3	191.990	37.44	-27.16	43.5	-6.06	Peak	24.00	100	Horizontal	Pass
4	265.031	36.64	-24.51	46.0	-9.36	Peak	127.00	100	Horizontal	Pass
5	576.013	36.76	-16.91	46.0	-9.24	Peak	103.00	200	Horizontal	Pass
6	671.170	31.85	-14.56	46.0	-14.15	Peak	360.00	200	Horizontal	Pass

A.1.9 Test Antenna Vertical, 1 GHz – 18 GHz



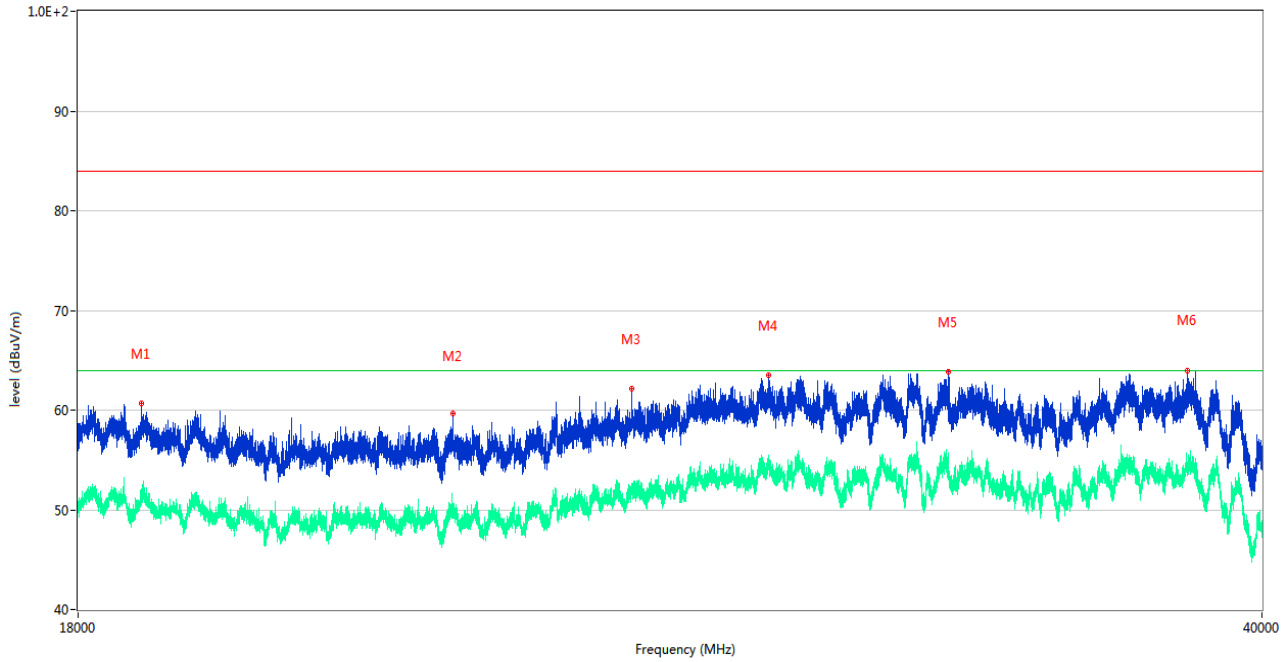
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1484.900	45.16	-16.62	74.0	-28.84	Peak	154.00	100	Vertical	Pass
1**	1484.900	37.67	-16.62	54.0	-16.33	AV	154.00	100	Vertical	Pass
2	1745.400	43.86	-16.39	74.0	-30.14	Peak	125.00	100	Vertical	Pass
2**	1745.400	34.77	-16.39	54.0	-19.23	AV	125.00	100	Vertical	Pass
3	2500.100	44.38	-11.12	74.0	-29.62	Peak	154.00	100	Vertical	Pass
3**	2500.100	40.62	-11.12	54.0	-13.38	AV	154.00	100	Vertical	Pass
4	5226.000	53.92	0.44	74.0	-20.08	Peak	303.00	100	Vertical	Pass
4**	5226.000	42.42	0.44	54.0	-11.58	AV	303.00	100	Vertical	Pass
5	7942.000	55.87	3.30	74.0	-18.13	Peak	220.00	100	Vertical	Pass
5**	7942.000	46.16	3.30	54.0	-7.84	AV	220.00	100	Vertical	Pass
6	13352.500	56.30	5.22	74.0	-17.70	Peak	14.00	100	Vertical	Pass
6**	13352.500	47.30	5.22	54.0	-6.70	AV	14.00	100	Vertical	Pass

A.1.10 Test Antenna Horizontal, 1 GHz – 18 GHz



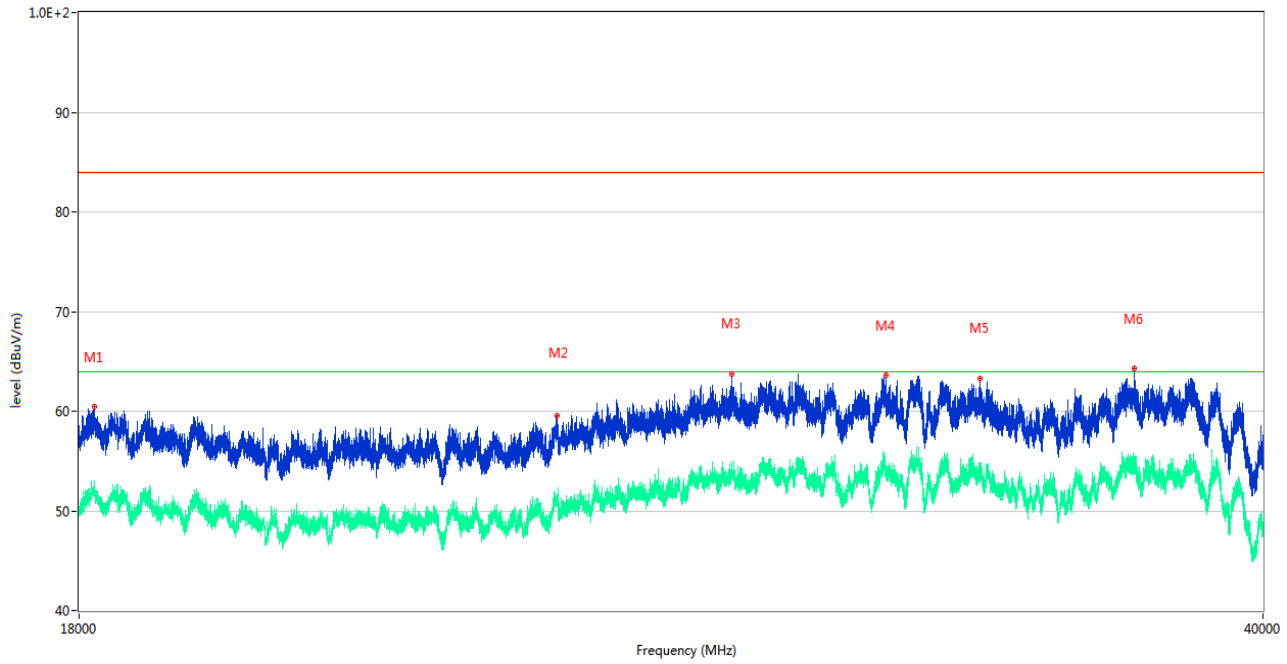
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1485.500	40.17	-16.61	74.0	-33.83	Peak	135.00	100	Horizontal	Pass
1**	1485.500	30.70	-16.61	54.0	-23.30	AV	135.00	100	Horizontal	Pass
2	2438.900	44.39	-12.18	74.0	-29.61	Peak	253.00	100	Horizontal	Pass
2**	2438.900	34.73	-12.18	54.0	-19.27	AV	253.00	100	Horizontal	Pass
3	4928.000	52.59	0.68	74.0	-21.41	Peak	189.00	100	Horizontal	Pass
3**	4928.000	43.34	0.68	54.0	-10.66	AV	189.00	100	Horizontal	Pass
4	7713.500	55.55	2.27	74.0	-18.45	Peak	214.00	100	Horizontal	Pass
4**	7713.500	44.87	2.27	54.0	-9.13	AV	214.00	100	Horizontal	Pass
5	9350.000	54.55	2.14	74.0	-19.45	Peak	311.00	100	Horizontal	Pass
5**	9350.000	44.40	2.14	54.0	-9.60	AV	311.00	100	Horizontal	Pass
6	13815.500	56.17	5.61	74.0	-17.83	Peak	0.00	100	Horizontal	Pass
6**	13815.500	47.41	5.61	54.0	-6.59	AV	0.00	100	Horizontal	Pass

A.1.11 Test Antenna Vertical, 18 GHz – 40 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	18791.15	60.65	9.43	84.0	-23.35	Peak	135.00	150	Vertical	Pass
1**	18791.150	50.89	9.43	64.0	-13.11	AV	135.00	150	Vertical	Pass
2	23164.499	59.64	7.75	84.0	-24.36	Peak	91.00	150	Vertical	Pass
2**	23164.499	49.97	7.75	64.0	-14.03	AV	91.00	150	Vertical	Pass
3	26145.099	62.16	10.22	84.0	-21.84	Peak	197.00	150	Vertical	Pass
3**	26145.099	52.22	10.22	64.0	-11.78	AV	197.00	150	Vertical	Pass
4	28673.349	63.48	10.84	84.0	-20.52	Peak	21.00	150	Vertical	Pass
4**	28673.349	54.12	10.84	64.0	-9.88	AV	21.00	150	Vertical	Pass
5	32375.950	63.85	8.95	84.0	-20.15	Peak	0.00	150	Vertical	Pass
5**	32375.950	54.39	8.95	64.0	-9.61	AV	0.00	150	Vertical	Pass
6	38034.686	63.95	6.75	84.0	-20.05	Peak	100.00	150	Vertical	Pass
6**	38034.686	54.20	6.75	64.0	-9.80	AV	100.00	150	Vertical	Pass

A.1.12 Test Antenna Horizontal, 18 GHz – 40 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	18173.127	60.52	10.65	84.0	-23.48	Peak	270.00	150	Horizontal	Pass
1**	18173.127	53.55	10.65	64.0	-10.45	AV	270.00	150	Horizontal	Pass
2	24844.150	59.72	8.82	84.0	-24.28	Peak	179.00	150	Horizontal	Pass
2**	24844.150	51.02	8.82	64.0	-12.98	AV	179.00	150	Horizontal	Pass
3	27942.750	63.78	11.05	84.0	-20.22	Peak	231.00	150	Horizontal	Pass
3**	27942.750	53.33	11.05	64.0	-10.67	AV	231.00	150	Horizontal	Pass
4	31015.452	63.55	9.88	84.0	-20.45	Peak	278.00	150	Horizontal	Pass
4**	31015.452	54.15	9.88	64.0	-9.85	AV	278.00	150	Horizontal	Pass
5	33032.222	63.54	8.76	84.0	-20.46	Peak	135.00	150	Horizontal	Pass
5**	33032.222	54.72	8.76	64.0	-9.28	AV	135.00	150	Horizontal	Pass
6	36678.658	64.29	8.49	84.0	-19.71	Peak	180.00	150	Horizontal	Pass
6**	36678.658	55.45	8.49	64.0	-8.55	AV	180.00	150	Horizontal	Pass

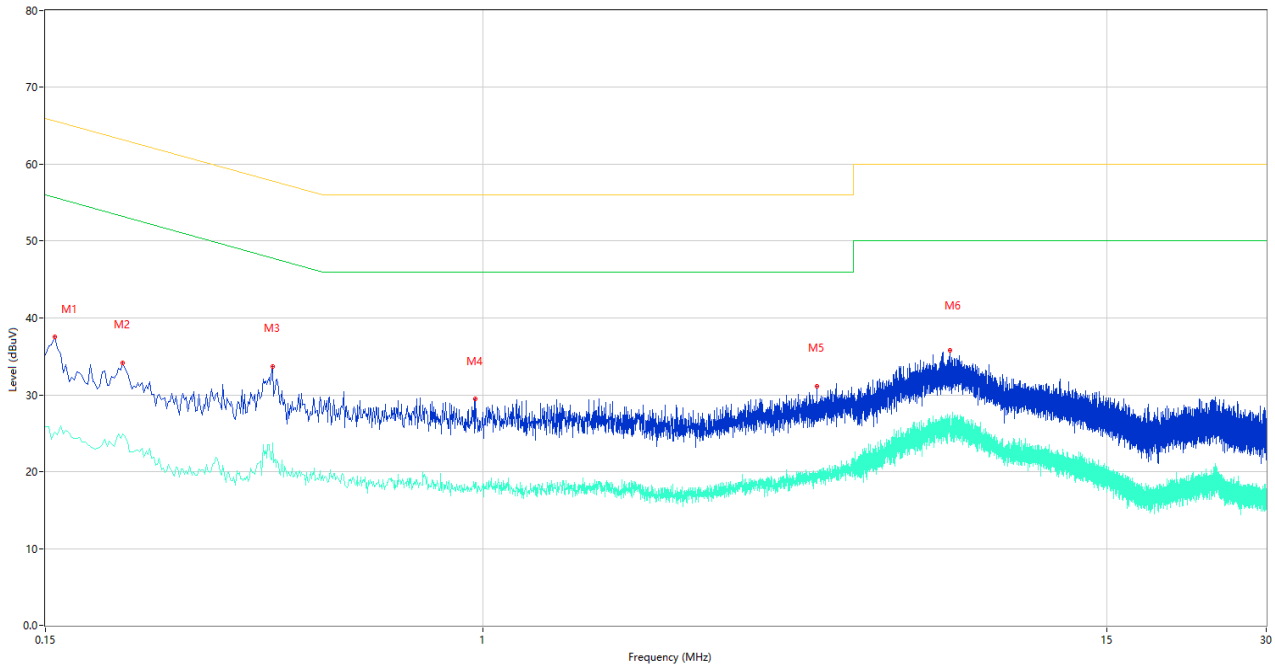
A.2 Conducted Emission

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

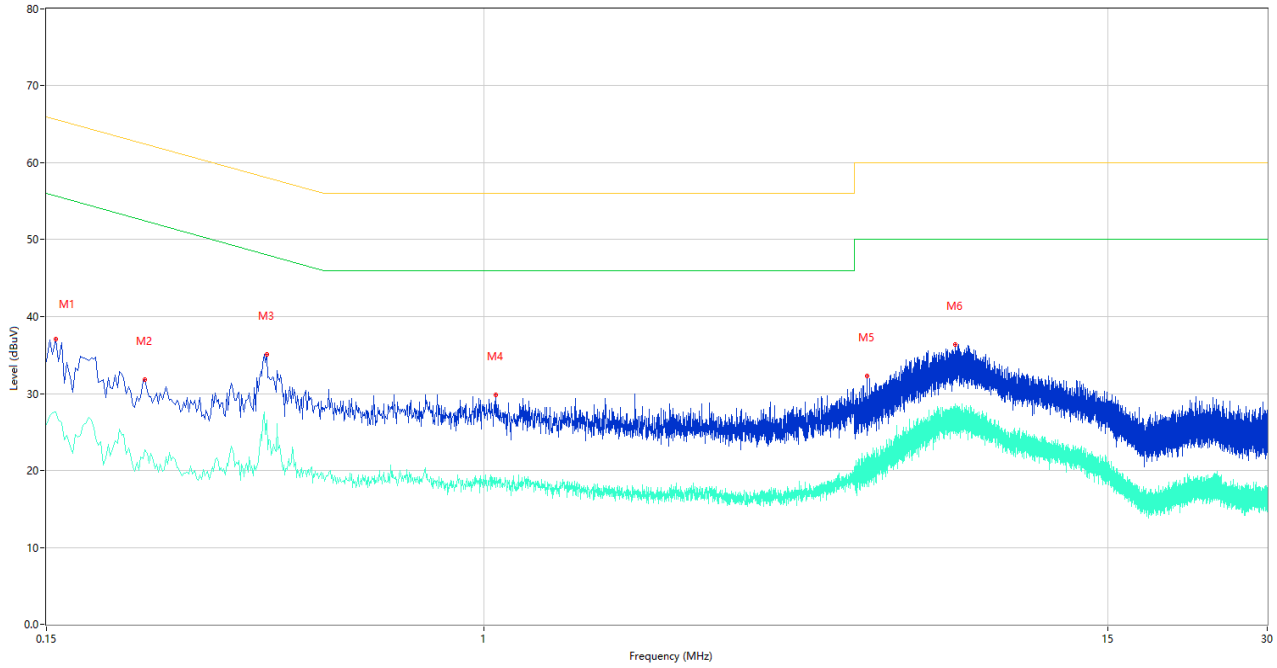
The Camera Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	37.55	10.18	65.67	-28.12	Peak	L	Pass
1**	0.156	25.19	10.18	55.67	-30.48	AV	L	Pass
2	0.210	34.20	10.09	63.21	-29.01	Peak	L	Pass
2**	0.210	24.93	10.09	53.21	-28.28	AV	L	Pass
3	0.402	33.69	10.09	57.81	-24.12	Peak	L	Pass
3**	0.402	23.71	10.09	47.81	-24.10	AV	L	Pass
4	0.968	29.49	10.04	56.00	-26.51	Peak	L	Pass
4**	0.968	18.56	10.04	46.00	-27.44	AV	L	Pass
5	4.268	31.09	10.05	56.00	-24.91	Peak	L	Pass
5**	4.268	19.81	10.05	46.00	-26.19	AV	L	Pass
6	7.592	35.79	9.99	60.00	-24.21	Peak	L	Pass
6**	7.592	25.78	9.99	50.00	-24.22	AV	L	Pass

A.2.2 N Phase

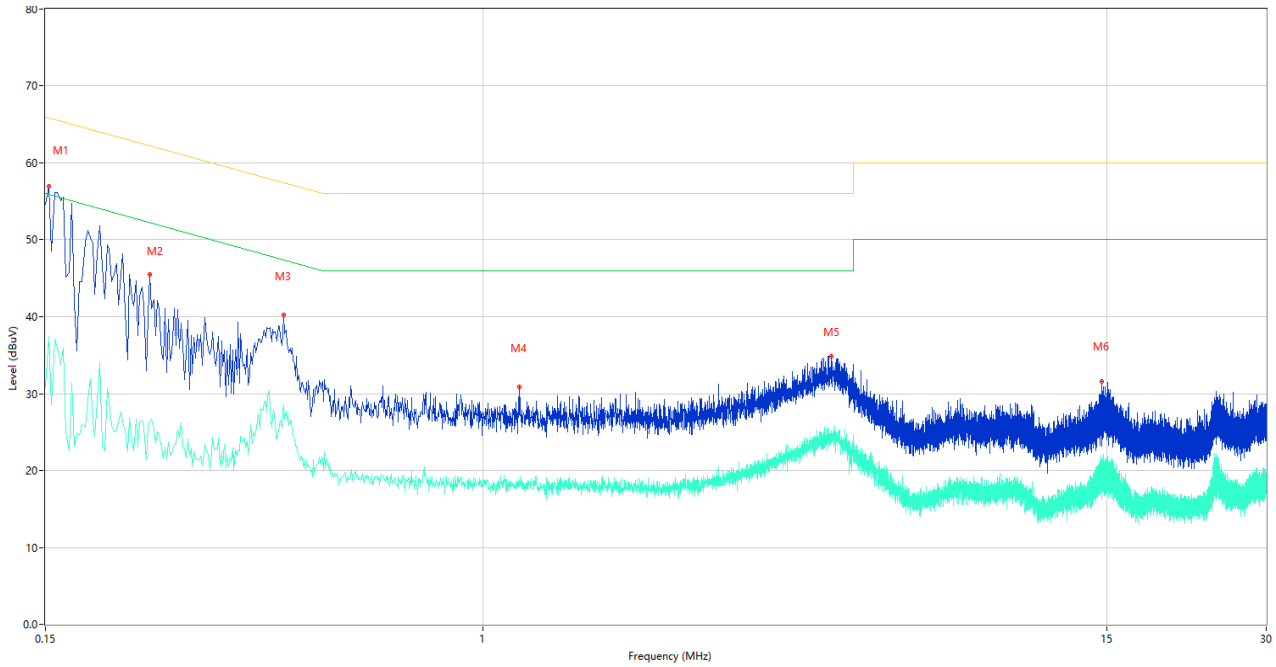


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	37.05	10.18	65.67	-28.62	Peak	N	Pass
1**	0.156	27.64	10.18	55.67	-28.03	AV	N	Pass
2	0.230	31.82	10.09	62.45	-30.63	Peak	N	Pass
2**	0.230	22.74	10.09	52.45	-29.71	AV	N	Pass
3	0.390	35.10	10.09	58.06	-22.96	Peak	N	Pass
3**	0.390	26.53	10.09	48.06	-21.53	AV	N	Pass
4	1.054	29.79	10.02	56.00	-26.21	Peak	N	Pass
4**	1.054	18.30	10.02	46.00	-27.70	AV	N	Pass
5	5.276	32.25	9.97	60.00	-27.75	Peak	N	Pass
5**	5.276	21.37	9.97	50.00	-28.63	AV	N	Pass
6	7.746	36.42	10.03	60.00	-23.58	Peak	N	Pass
6**	7.746	27.87	10.03	50.00	-22.13	AV	N	Pass

Test Data and Plots

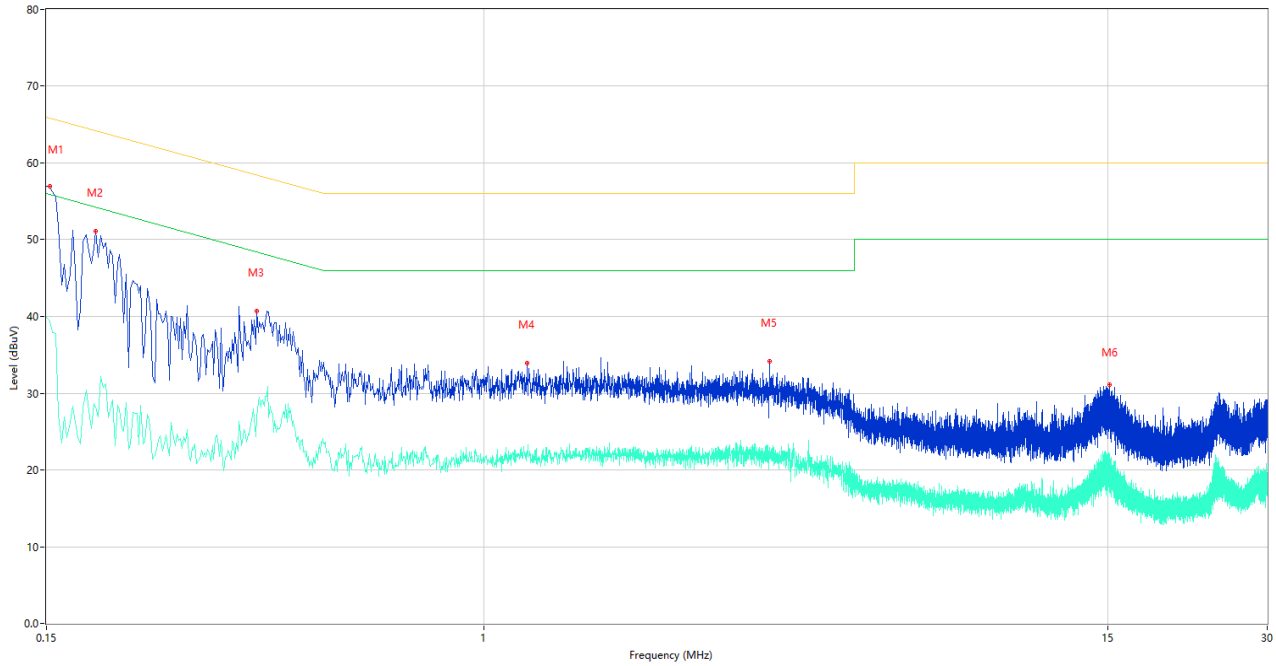
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.152	56.91	10.19	65.89	-8.98	Peak	L	Pass
1**	0.152	37.47	10.19	55.89	-18.42	AV	L	Pass
2	0.236	45.53	10.09	62.24	-16.71	Peak	L	Pass
2**	0.236	26.45	10.09	52.24	-25.79	AV	L	Pass
3	0.422	40.21	10.09	57.41	-17.20	Peak	L	Pass
3**	0.422	28.52	10.09	47.41	-18.89	AV	L	Pass
4	1.174	30.85	10.00	56.00	-25.15	Peak	L	Pass
4**	1.174	18.53	10.00	46.00	-27.47	AV	L	Pass
5	4.540	34.80	10.00	56.00	-21.20	Peak	L	Pass
5**	4.540	25.28	10.00	46.00	-20.72	AV	L	Pass
6	14.688	31.60	10.14	60.00	-28.40	Peak	L	Pass
6**	14.688	21.61	10.14	50.00	-28.39	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.152	56.91	10.19	65.89	-8.98	Peak	N	Pass
1**	0.152	39.47	10.19	55.89	-16.42	AV	N	Pass
2	0.186	51.17	10.12	64.21	-13.04	Peak	N	Pass
2**	0.186	28.13	10.12	54.21	-26.08	AV	N	Pass
3	0.374	40.74	10.08	58.41	-17.67	Peak	N	Pass
3**	0.374	26.95	10.08	48.41	-21.46	AV	N	Pass
4	1.206	33.89	9.99	56.00	-22.11	Peak	N	Pass
4**	1.206	22.08	9.99	46.00	-23.92	AV	N	Pass
5	3.462	34.10	10.08	56.00	-21.90	Peak	N	Pass
5**	3.462	22.94	10.08	46.00	-23.06	AV	N	Pass
6	15.130	31.17	10.14	60.00	-28.83	Peak	N	Pass
6**	15.130	19.29	10.14	50.00	-30.71	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ21B0947-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ21B0947-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ21B0947-AI.PDF”.

--END OF REPORT--