

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: CPH2577
Brand Name: OPPO
FCC ID: R9C-CPH2577
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: May 15, 2023
Test Date: May 19, 2023 - May 26, 2023
Date of Issue: Jun. 15, 2023

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

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Zhang Guoxi

Xia Long

Liao Jianming

Revision History		
<u>Version</u>	<u>Issue Date</u>	<u>Revisions</u>
<u>Rev. 01</u>	<u>Jun. 15, 2023</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	<input checked="" type="checkbox"/> Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	<input type="checkbox"/> 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, 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.

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	CPH2577
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	ColorOS 13.1
Dimensions (Approx.)	165.60x75.98x7.99mm
Weight (Approx.)	191g(with battery)
EUT ID	S10, S13,
IMEI Number	S10: IMEI1: 865508060020258, IMEI2: 865508060020241
	S13: IMEI1: 865508060020191, IMEI2: 865508060020183

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery 1	
	Brand Name	SUPERVOOC
	Model No.	BLPA19
	Serial No.	N/A
	Capacity	Rated: 4880mAh/19.09Wh Typical: 5000mAh/19.55Wh
	Rated Voltage	3.91V
	Limited Voltage	4.50 V
	Manufacturer	Sunwoda Electronic Co., Ltd.
Ancillary Equipment 2	Li-Polymer Battery 2	
	Brand Name	SUPERVOOC
	Model No.	BLPA19
	Serial No.	N/A
	Capacitance	Rated: 4880mAh/19.09Wh Typical: 5000mAh/19.55Wh
	Rated Voltage	3.91V
	Limited Voltage	4.50 V
	Manufacturer	TWS Technology (Guangzhou) Limited
Ancillary Equipment 3	Power Supply Unit 1	
	Brand Name	SUPERVOOC
	Model No.	VCB3HDUH (US Plug)
	Serial No.	Huntkey
	Rated Input	100-240VAC 50/60Hz 1.2A
	Rated Output	5VDC 2A or 5-11VDC 3.0A Max
Ancillary Equipment 4	Power Supply Unit 2	
	Brand Name	SUPERVOOC
	Model No.	VCB3HDUH (US Plug)
	Serial No.	GOLDEN LAKE
	Rated Input	100-240VAC 50/60Hz 1.2A
	Rated Output	5VDC 2A or 5-11VDC 3.0A Max
Ancillary Equipment 5	USB Cable 1	
	Model No.	DL143
	Length (Approx.)	1.0 m
Ancillary Equipment 6	USB Cable 2	
	Model No.	DL129
	Length (Approx.)	1.0 m
<p>Note 1: All batteries are tested, only the worst data of BLPA19 (TWS Technology (Guangzhou) Limited.) shown in this report.</p> <p>Note 2: All adapters are tested, only the worst data of VCB3HDUH(GOLDEN LAKE) shown in this report.</p> <p>Note 3: All USB Cable are tested, only the worst data of DL143 shown in this report.</p>		

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 2/4/5/7/12/13/17/26/66 LTE TDD Band 38/41 Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40), VHT20/40 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) U-NII-1/2A/2C/3, GPS, GLONASS, BDS, Galileo, SBAS, FM Receiver
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The requirement for the following technical information of the EUT was tested in this report:

The Highest Speed of Processor	N/A
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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 3.91V(battery)	26.8℃	41%	101kPa	May. 19, 2023	Gu Shuaizhen
Conducted Emission	AC 230V/50Hz AC 120V/60Hz DC 3.91V(battery)	24.6℃	48%		May. 22, 2023	Gu Shuaizhen

4.2 Test Equipment List

Radiated Emission Test For Frequency Below 1 GHz (3m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	Keysight	N9038A	MY55330120	2022.09.09	2023.09.08	<input checked="" type="checkbox"/>
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119081	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-00867	2022.04.12	2025.04.11	<input checked="" type="checkbox"/>
Anechoic Chamber	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	<input checked="" type="checkbox"/>
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V22.930		<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	Keysight	N9038A	MY55330120	2022.09.09	2023.09.08	<input checked="" type="checkbox"/>
Amplifier (1-12GHz)	Advanced Microwave	WLA652A	1740103	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Amplifier (0.8-21GHz)	Mini-Circuits	ZVA-213-S+	225321316	2022.12.07	2023.12.06	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01917	2022.06.09	2025.06.08	<input checked="" type="checkbox"/>
Anechoic Chamber	YiHeng	9m*6m*6m	142	2021.08.19	2024.08.18	<input checked="" type="checkbox"/>
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V22.930		<input checked="" type="checkbox"/>

Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2022.09.09	2023.09.08	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	<input checked="" type="checkbox"/>
ISN	TESEQ	ISN T800	34449	2022.11.11	2023.11.10	<input type="checkbox"/>
ISN	TESEQ	ISN T8-Cat6	53561	2023.04.23	2024.04.22	<input type="checkbox"/>
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	112	2022.02.19	2025.02.18	<input checked="" type="checkbox"/>
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V22.930		<input checked="" type="checkbox"/>

4.3 Test Enclosure list

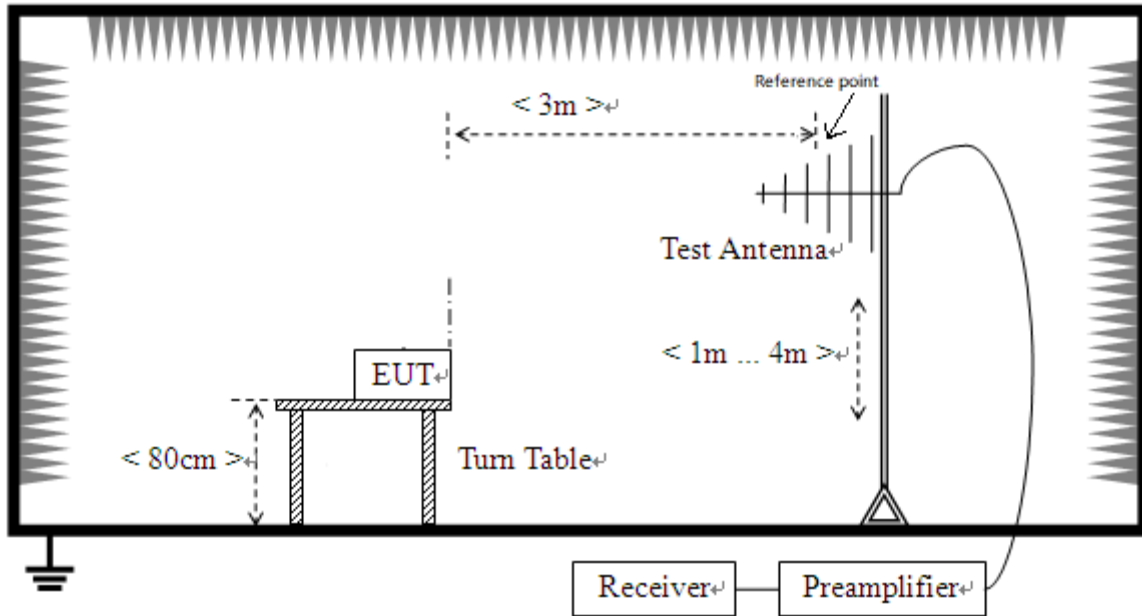
Description	Manufacturer	Model	Serial No.	Length	Description	Use
Wireless Communications Test Set	R&S	CMW500	127801	N/A	Cal. Due 2023.12.27	<input checked="" type="checkbox"/>
Laptop	HONOR	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Laptop	Apple	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Data connector	N/A	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
USB disk	Sandisk	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Headset	N/A	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
TF Card	Kingston	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Type-C Headset	N/A	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>

4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>The GSM 850 MHz RX Test Mode</u> GSM 850 MHz RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC02	<u>The EGPRS 850 MHz RX Test Mode</u> EGPRS 850 MHz RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC03	<u>The WCDMA Band 5 RX Test Mode</u> WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC04	<u>The FDD LTE Band 5 RX Test Mode</u> LTE Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC05	<u>The FDD LTE Band 12 RX Test Mode</u> LTE Band 12 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC06	<u>The FDD LTE Band 13 RX Test Mode</u> LTE Band 13 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC07	<u>The FDD LTE Band 17 RX Test Mode</u> LTE Band 17 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC08	<u>The FDD LTE Band 26 RX Test Mode</u> LTE Band 26 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset
TC09	<u>The Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + TF Card + Headset
TC10	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + TF Card + Headset
TC11	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Laptop + TF Card + Headset
TC12	<u>The OTG Test Mode</u> EUT + Battery + Data connector + USB Disk + TF Card + Headset
TC13	<u>The Type-C Headset Test Mode</u> EUT + Type-C Headset + Battery

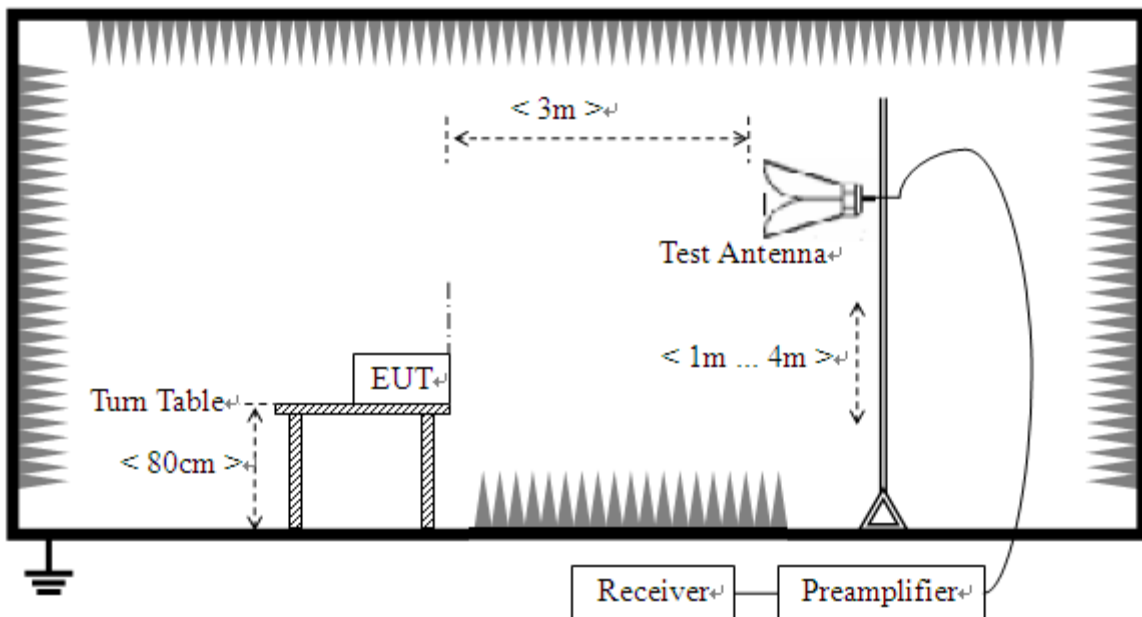
4.5 Test Setups

Test Setup 1



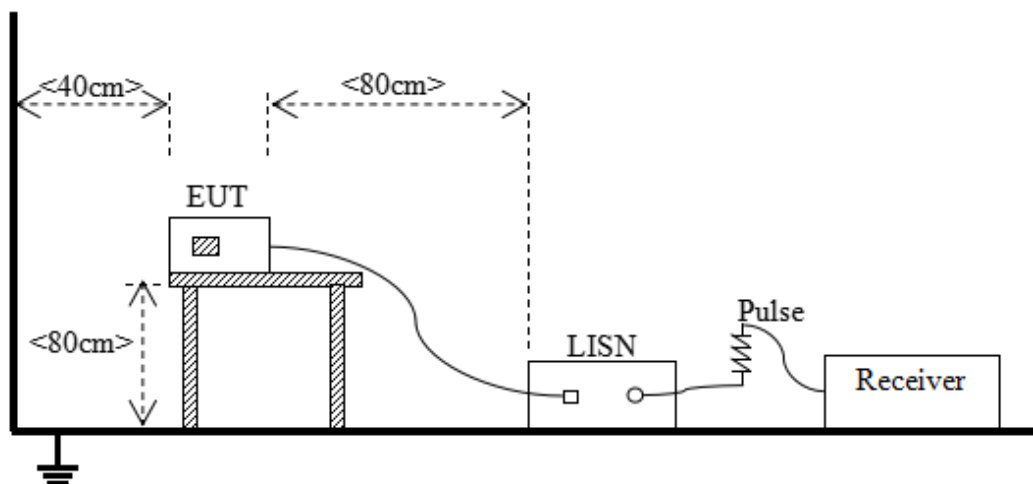
(For Radiated Emission Test (30 MHz-1 GHz))

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 GSM 850 MHz RX 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 (dB μ V/m) = Reading (dB μ V/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 (dB μ V) = Reading (dB μ V) + 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.

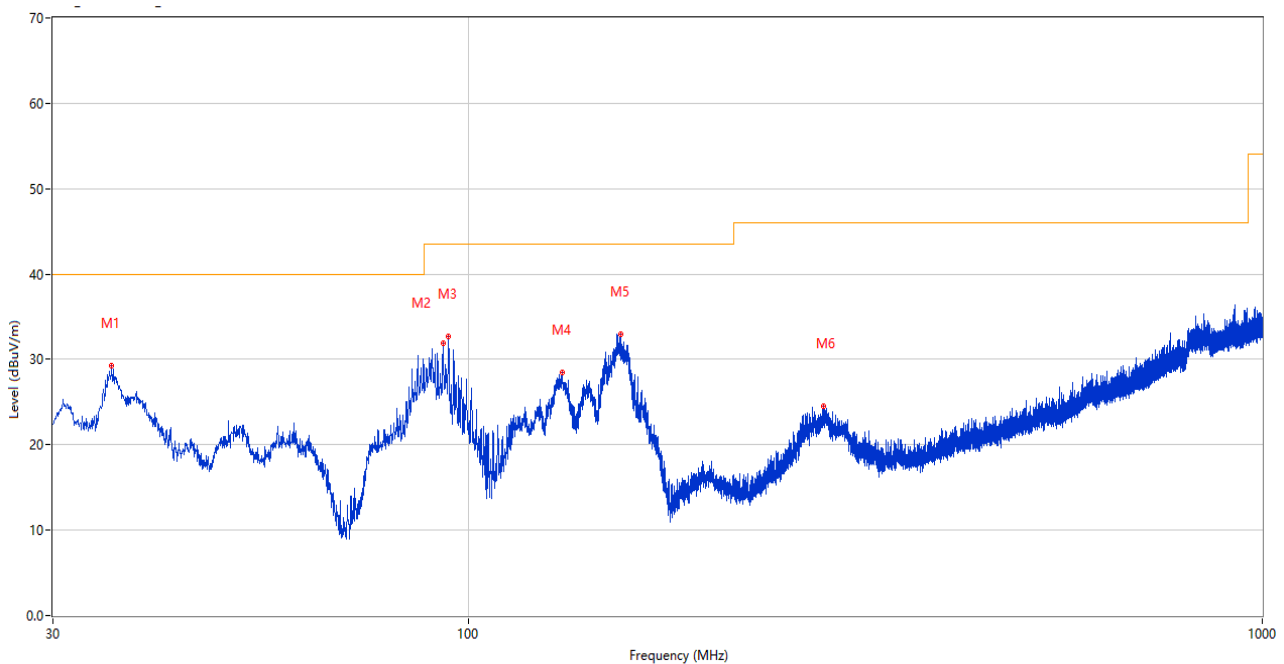
Note 3: The Radiated Emission from 18G-40G is noise only, do not show on the report.

Note 4: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data and Plots

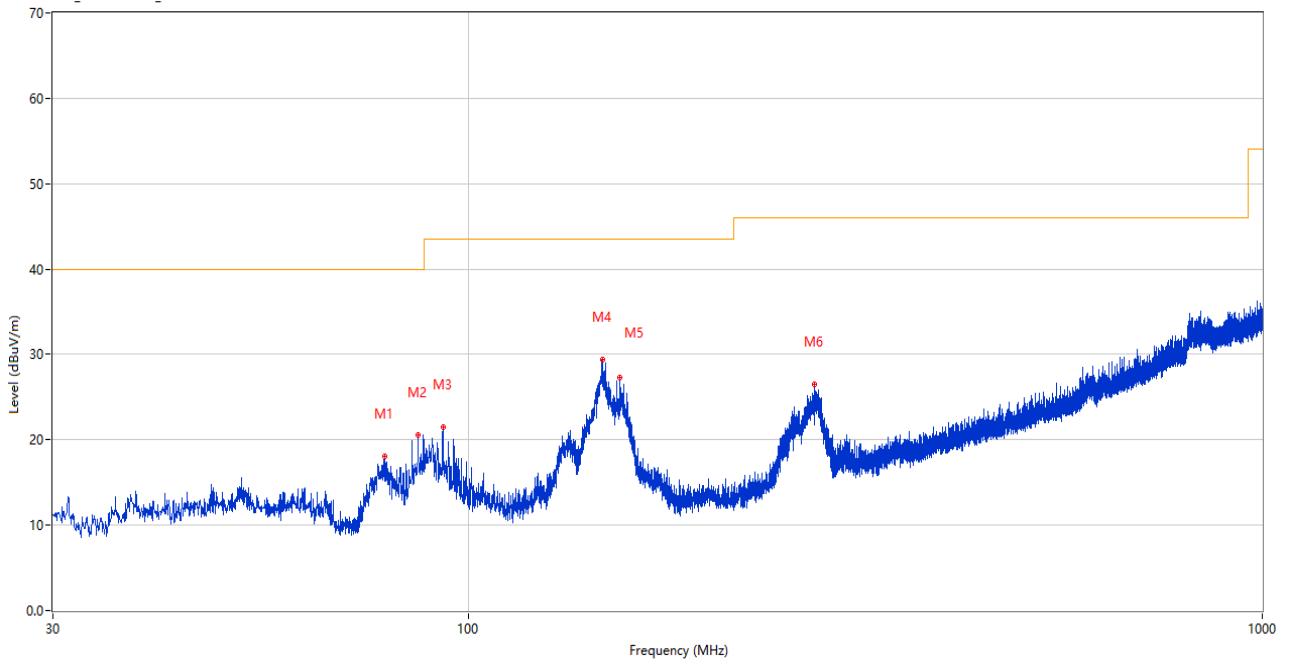
The GSM 850 MHz RX Test Mode

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



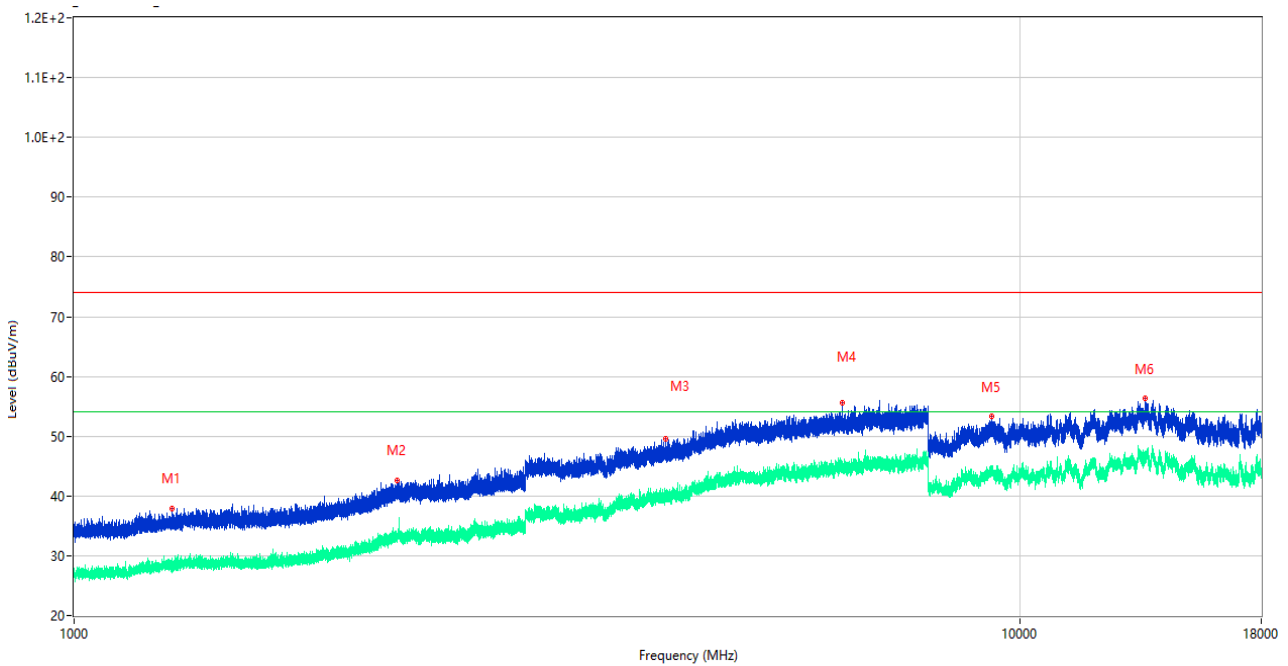
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	35.578	29.21	-27.19	40.0	10.79	Peak	0.00	100	Vertical	Pass
2	93.099	31.85	-26.38	43.5	11.65	Peak	360.00	100	Vertical	Pass
3	94.456	32.72	-26.17	43.5	10.78	Peak	339.00	100	Vertical	Pass
4	131.462	28.52	-28.15	43.5	14.98	Peak	257.00	100	Vertical	Pass
5	155.566	33.00	-27.83	43.5	10.50	Peak	285.00	100	Vertical	Pass
6	279.921	24.50	-21.39	46.0	21.50	Peak	323.00	100	Vertical	Pass

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



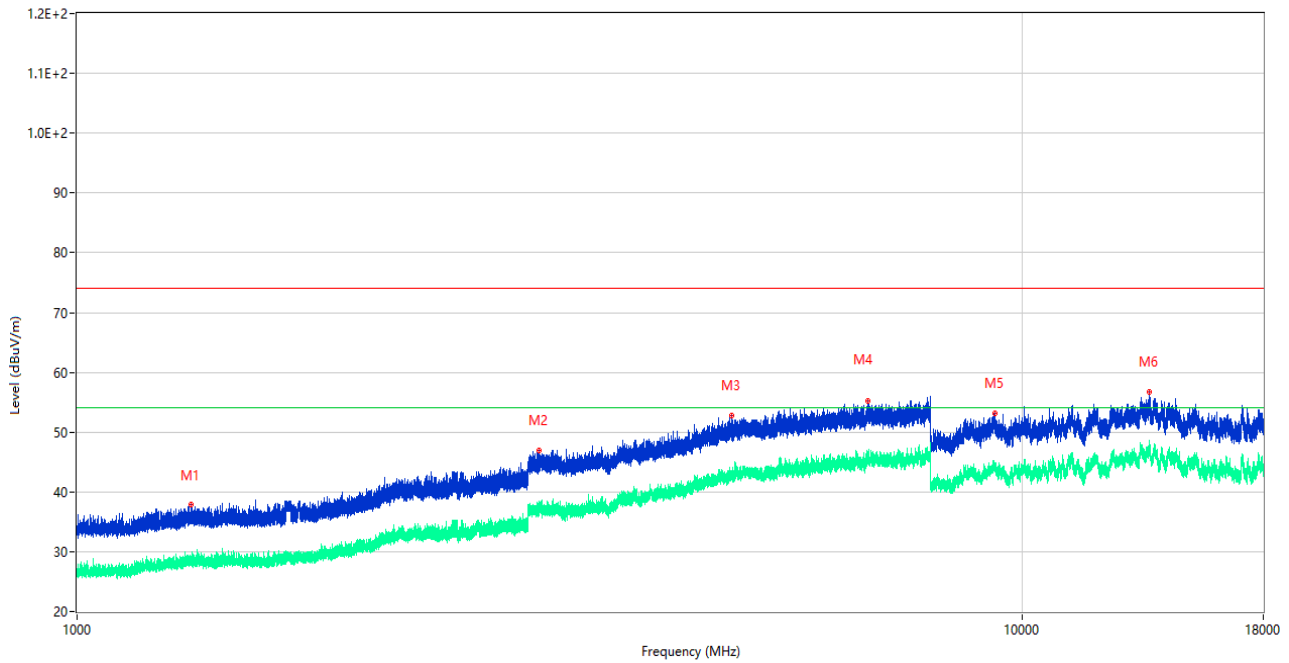
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	78.597	18.06	-29.82	40.0	21.94	Peak	133.00	200	Horizontal	Pass
2	86.454	20.60	-28.14	40.0	19.40	Peak	177.00	200	Horizontal	Pass
3	92.905	21.51	-26.43	43.5	21.99	Peak	219.00	200	Horizontal	Pass
4	147.516	29.41	-28.27	43.5	14.09	Peak	165.00	200	Horizontal	Pass
5	155.372	27.27	-27.88	43.5	16.23	Peak	0.00	200	Horizontal	Pass
6	272.791	26.48	-21.64	46.0	19.52	Peak	226.00	100	Horizontal	Pass

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



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1268.600	37.96	-16.97	74.0	36.04	Peak	327.00	100	Vertical	Pass
1**	1268.600	27.97	-16.97	54.0	26.03	AV	327.00	100	Vertical	Pass
2	2197.200	42.69	-11.97	74.0	31.31	Peak	296.00	100	Vertical	Pass
2**	2197.200	32.93	-11.97	54.0	21.07	AV	296.00	100	Vertical	Pass
3	4219.000	49.53	-2.43	74.0	24.47	Peak	198.00	100	Vertical	Pass
3**	4219.000	39.42	-2.43	54.0	14.58	AV	198.00	100	Vertical	Pass
4	6497.250	55.57	1.29	74.0	18.43	Peak	350.00	100	Vertical	Pass
4**	6497.250	45.15	1.29	54.0	8.85	AV	350.00	100	Vertical	Pass
5	9329.000	53.30	2.17	74.0	20.70	Peak	12.00	100	Vertical	Pass
5**	9329.000	43.98	2.17	54.0	10.02	AV	12.00	100	Vertical	Pass
6	13569.500	56.28	4.73	74.0	17.72	Peak	254.00	100	Vertical	Pass
6**	13569.500	46.88	4.73	54.0	7.12	AV	254.00	100	Vertical	Pass

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

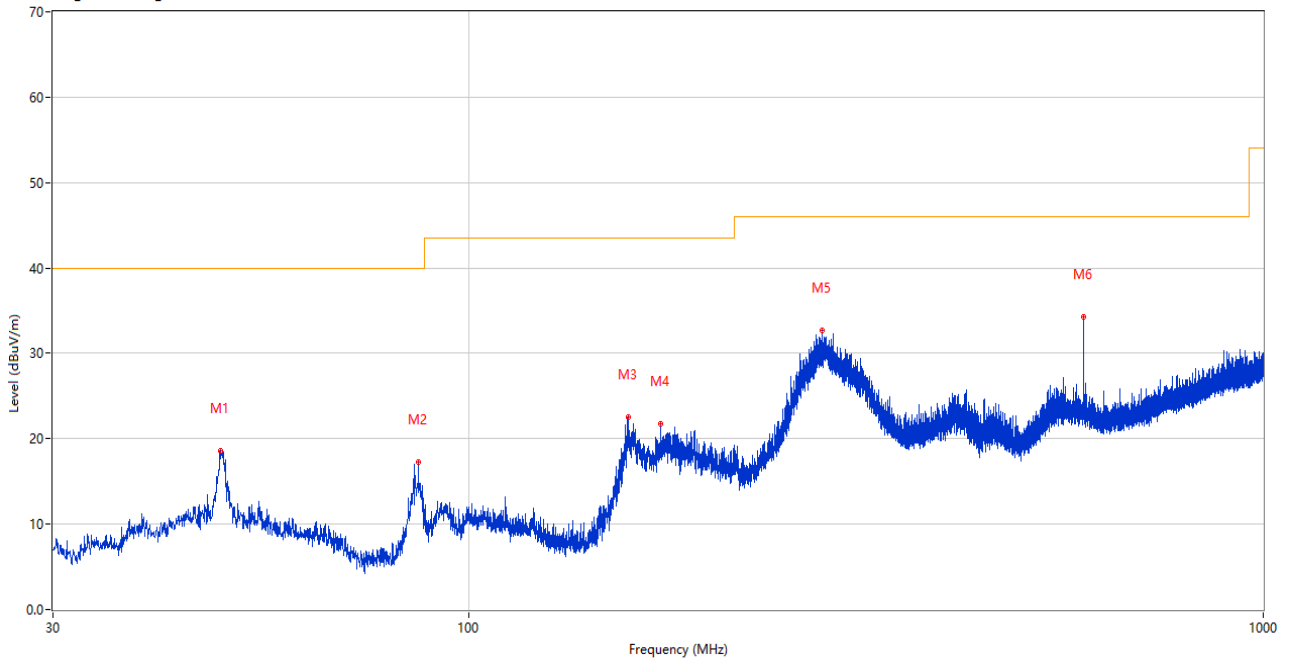


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1320.900	37.82	-16.48	74.0	36.18	Peak	281.00	100	Horizontal	Pass
1**	1320.900	28.27	-16.48	54.0	25.73	AV	281.00	100	Horizontal	Pass
2	3080.500	47.00	-5.69	74.0	27.00	Peak	100.00	100	Horizontal	Pass
2**	3080.500	37.08	-5.69	54.0	16.92	AV	100.00	100	Horizontal	Pass
3	4932.750	52.84	0.37	74.0	21.16	Peak	151.00	100	Horizontal	Pass
3**	4932.750	42.28	0.37	54.0	11.72	AV	151.00	100	Horizontal	Pass
4	6866.750	55.13	1.91	74.0	18.87	Peak	64.00	100	Horizontal	Pass
4**	6866.750	45.52	1.91	54.0	8.48	AV	64.00	100	Horizontal	Pass
5	9359.500	53.19	2.07	74.0	20.81	Peak	143.00	100	Horizontal	Pass
5**	9359.500	44.36	2.07	54.0	9.64	AV	143.00	100	Horizontal	Pass
6	13637.000	56.76	5.02	74.0	17.24	Peak	0.00	100	Horizontal	Pass
6**	13637.000	46.66	5.02	54.0	7.34	AV	0.00	100	Horizontal	Pass

Test Data and Plots

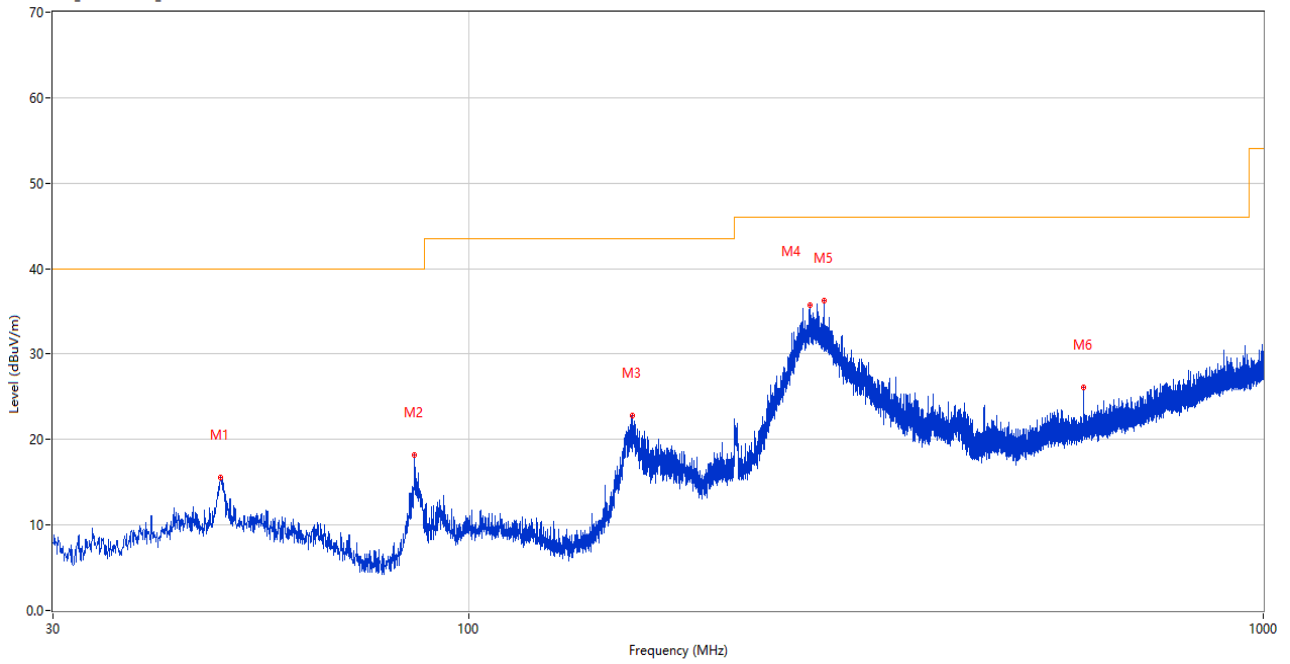
The USB Test Mode

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



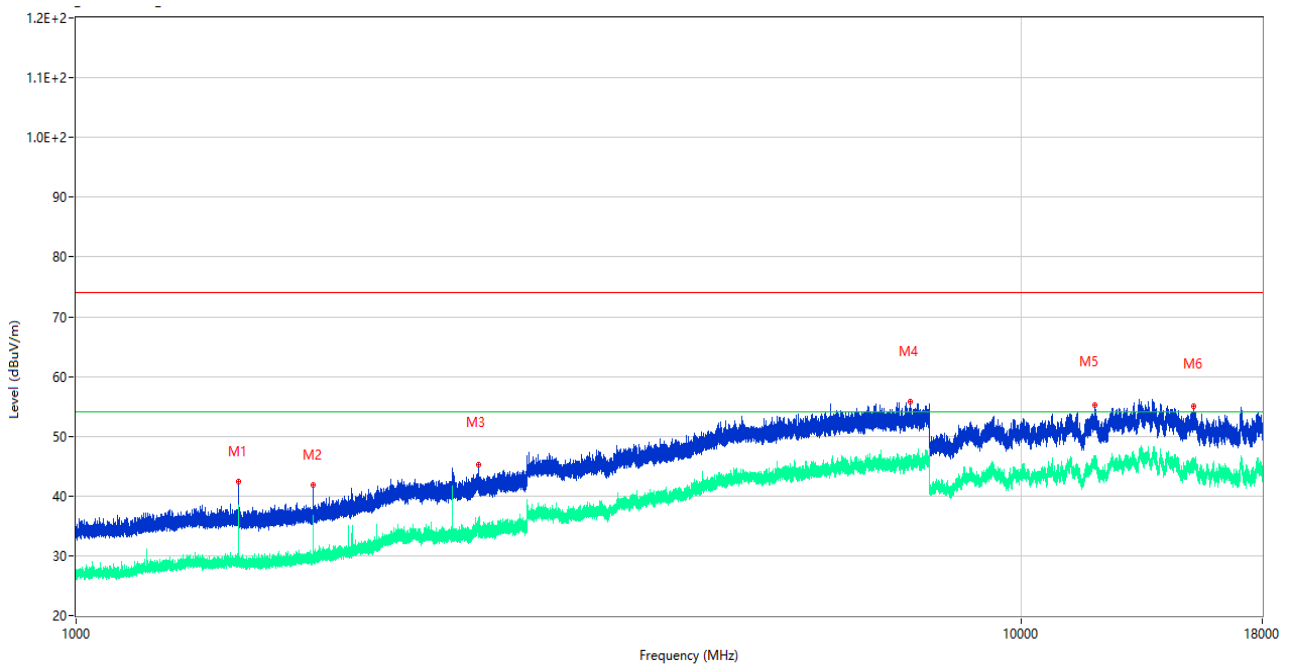
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.721	18.58	-25.36	40.0	21.42	Peak	59.00	100	Vertical	Pass
2	86.503	17.28	-29.56	40.0	22.72	Peak	132.00	100	Vertical	Pass
3	158.670	22.58	-29.67	43.5	20.92	Peak	66.00	100	Vertical	Pass
4	174.579	21.70	-28.92	43.5	21.80	Peak	71.00	100	Vertical	Pass
5	278.611	32.64	-24.27	46.0	13.36	Peak	360.00	200	Vertical	Pass
6	593.958	34.33	-16.07	46.0	11.67	Peak	188.00	100	Vertical	Pass

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



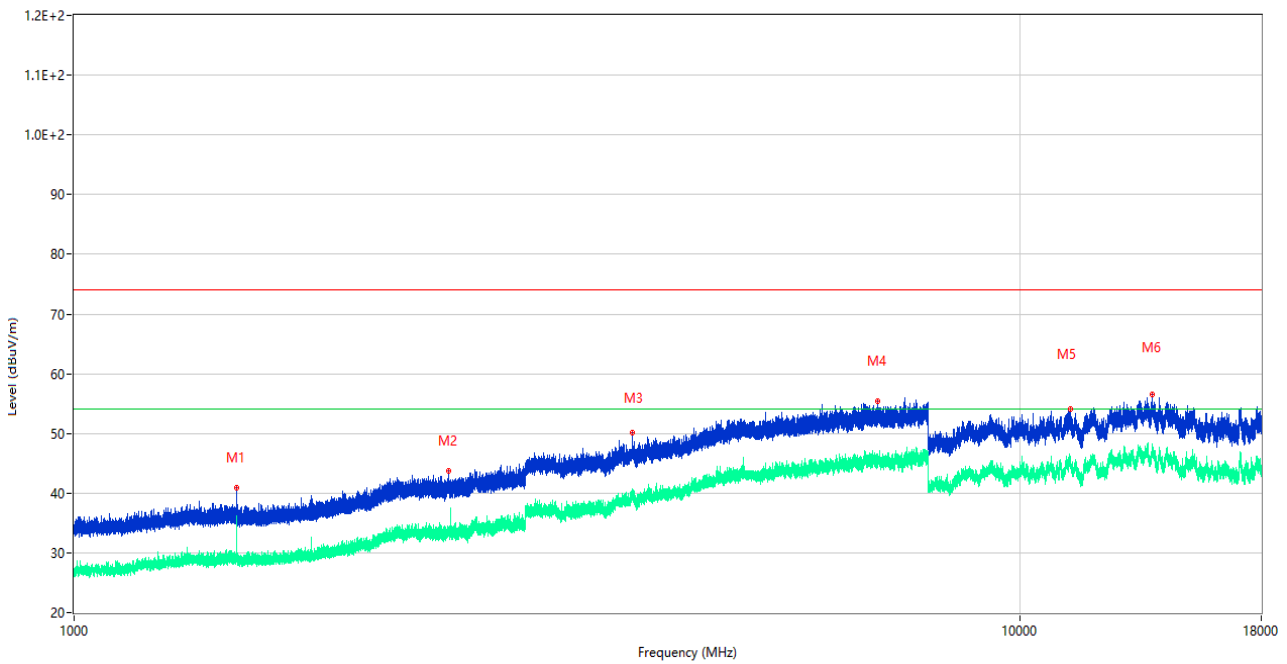
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.770	15.60	-25.36	40.0	24.40	Peak	329.00	200	Horizontal	Pass
2	85.533	18.22	-29.84	40.0	21.78	Peak	234.00	200	Horizontal	Pass
3	160.902	22.79	-29.54	43.5	20.71	Peak	31.00	200	Horizontal	Pass
4	269.347	35.77	-24.51	46.0	10.23	Peak	109.00	100	Horizontal	Pass
5	279.823	36.27	-24.15	46.0	9.73	Peak	109.00	100	Horizontal	Pass
6	594.006	26.06	-16.07	46.0	19.94	Peak	256.00	200	Horizontal	Pass

A.1.7 Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1484.900	42.41	-16.62	74.0	31.59	Peak	171.00	100	Vertical	Pass
1**	1484.900	33.28	-16.62	54.0	20.72	AV	171.00	100	Vertical	Pass
2	1781.800	41.86	-16.17	74.0	32.14	Peak	117.00	100	Vertical	Pass
2**	1781.800	36.81	-16.17	54.0	17.19	AV	117.00	100	Vertical	Pass
3	2665.100	45.28	-9.40	74.0	28.72	Peak	99.00	100	Vertical	Pass
3**	2665.100	34.52	-9.40	54.0	19.48	AV	99.00	100	Vertical	Pass
4	7625.250	55.84	2.28	74.0	18.16	Peak	202.00	100	Vertical	Pass
4**	7625.250	45.41	2.28	54.0	8.59	AV	202.00	100	Vertical	Pass
5	11971.500	55.25	2.64	74.0	18.75	Peak	288.00	100	Vertical	Pass
5**	11971.500	45.00	2.64	54.0	9.00	AV	288.00	100	Vertical	Pass
6	15232.500	55.06	3.30	74.0	18.94	Peak	342.00	100	Vertical	Pass
6**	15232.500	44.87	3.30	54.0	9.13	AV	342.00	100	Vertical	Pass

A.1.8 Test Antenna Horizontal, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1485.100	40.84	-16.62	74.0	33.16	Peak	260.00	100	Horizontal	Pass
1**	1485.100	35.19	-16.62	54.0	18.81	AV	260.00	100	Horizontal	Pass
2	2486.100	43.66	-10.59	74.0	30.34	Peak	164.00	100	Horizontal	Pass
2**	2486.100	33.13	-10.59	54.0	20.87	AV	164.00	100	Horizontal	Pass
3	3894.750	50.07	-2.25	74.0	23.93	Peak	248.00	100	Horizontal	Pass
3**	3894.750	39.15	-2.25	54.0	14.85	AV	248.00	100	Horizontal	Pass
4	7074.750	55.32	1.64	74.0	18.68	Peak	85.00	100	Horizontal	Pass
4**	7074.750	45.08	1.64	54.0	8.92	AV	85.00	100	Horizontal	Pass
5	11303.000	54.07	2.32	74.0	19.93	Peak	16.00	100	Horizontal	Pass
5**	11303.000	45.12	2.32	54.0	8.88	AV	16.00	100	Horizontal	Pass
6	13803.500	56.50	5.77	74.0	17.50	Peak	197.00	100	Horizontal	Pass
6**	13803.500	47.64	5.77	54.0	6.36	AV	197.00	100	Horizontal	Pass

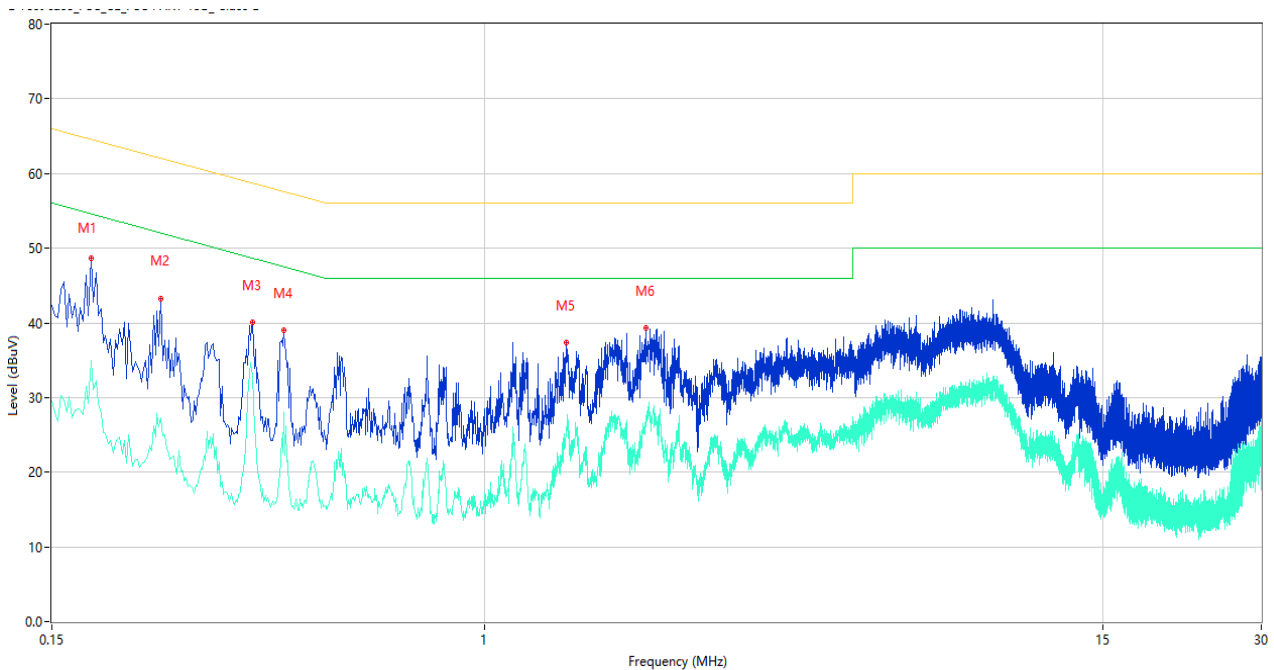
A.2 Conducted Emission

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

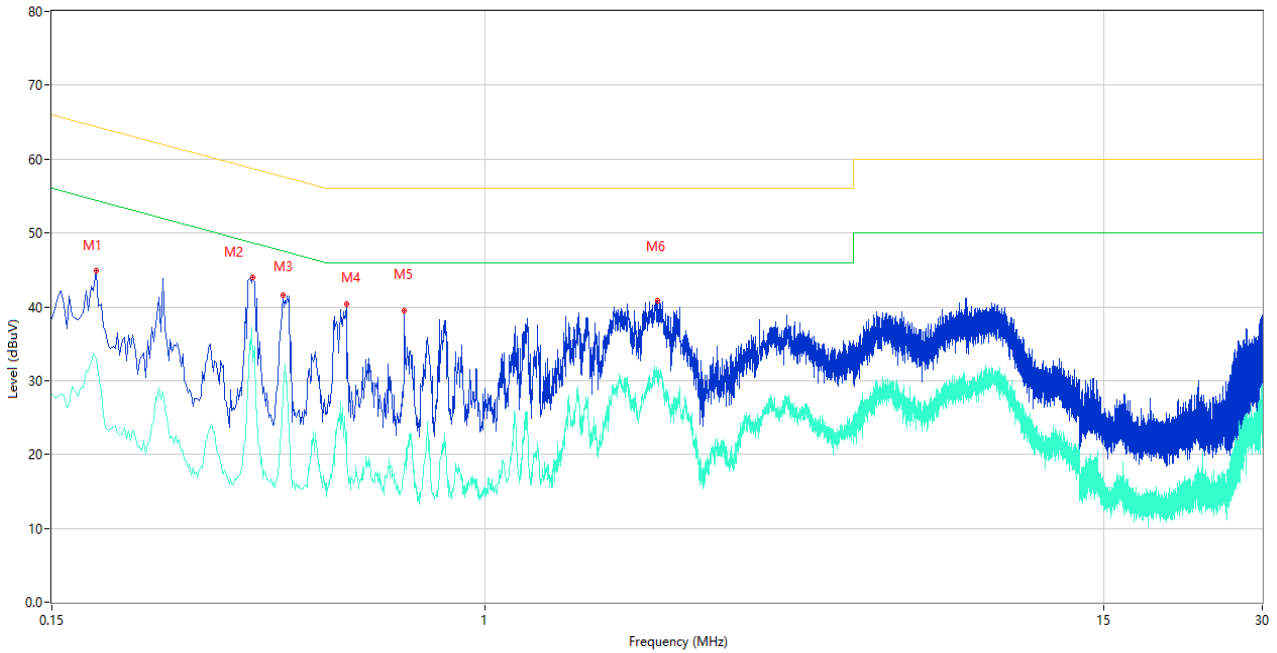
The GSM 850 MHz RX Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.178	48.61	9.81	64.58	15.97	Peak	L	Pass
1**	0.178	35.02	9.81	54.58	19.56	AV	L	Pass
2	0.242	43.31	9.79	62.03	18.72	Peak	L	Pass
2**	0.242	27.33	9.79	52.03	24.70	AV	L	Pass
3	0.362	40.01	9.87	58.68	18.67	Peak	L	Pass
3**	0.362	33.01	9.87	48.68	15.67	AV	L	Pass
4	0.414	38.97	10.36	57.57	18.60	Peak	L	Pass
4**	0.414	28.00	10.36	47.57	19.57	AV	L	Pass
5	1.430	37.29	10.34	56.00	18.71	Peak	L	Pass
5**	1.430	25.27	10.34	46.00	20.73	AV	L	Pass
6	2.022	39.33	10.16	56.00	16.67	Peak	L	Pass
6**	2.022	26.93	10.16	46.00	19.07	AV	L	Pass

A.2.2 N Phase

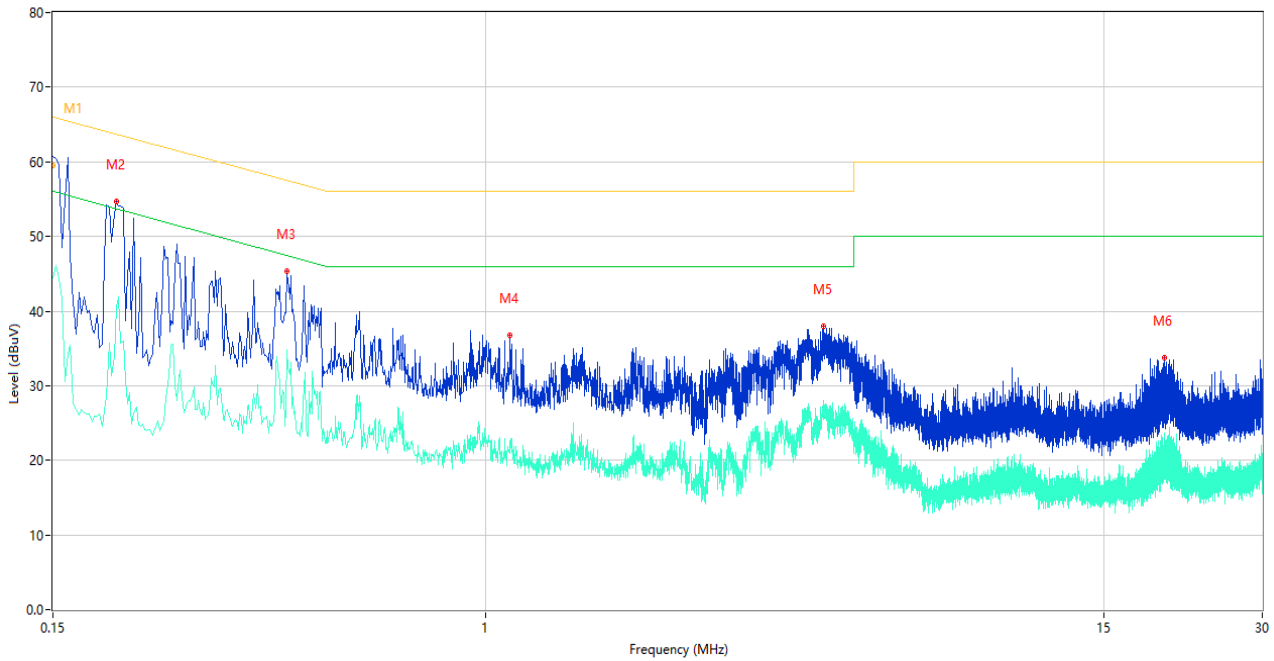


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.182	44.90	9.80	64.39	19.49	Peak	N	Pass
1**	0.182	32.97	9.80	54.39	21.42	AV	N	Pass
2	0.362	44.01	9.87	58.68	14.67	Peak	N	Pass
2**	0.362	32.56	9.87	48.68	16.12	AV	N	Pass
3	0.412	41.60	10.36	57.61	16.01	Peak	N	Pass
3**	0.412	28.36	10.36	47.61	19.25	AV	N	Pass
4	0.544	40.31	10.18	56.00	15.69	Peak	N	Pass
4**	0.544	23.02	10.18	46.00	22.98	AV	N	Pass
5	0.702	39.52	10.44	56.00	16.48	Peak	N	Pass
5**	0.702	18.53	10.44	46.00	27.47	AV	N	Pass
6	2.126	40.88	10.28	56.00	15.12	Peak	N	Pass
6**	2.126	30.80	10.28	46.00	15.20	AV	N	Pass

Test Data and Plots

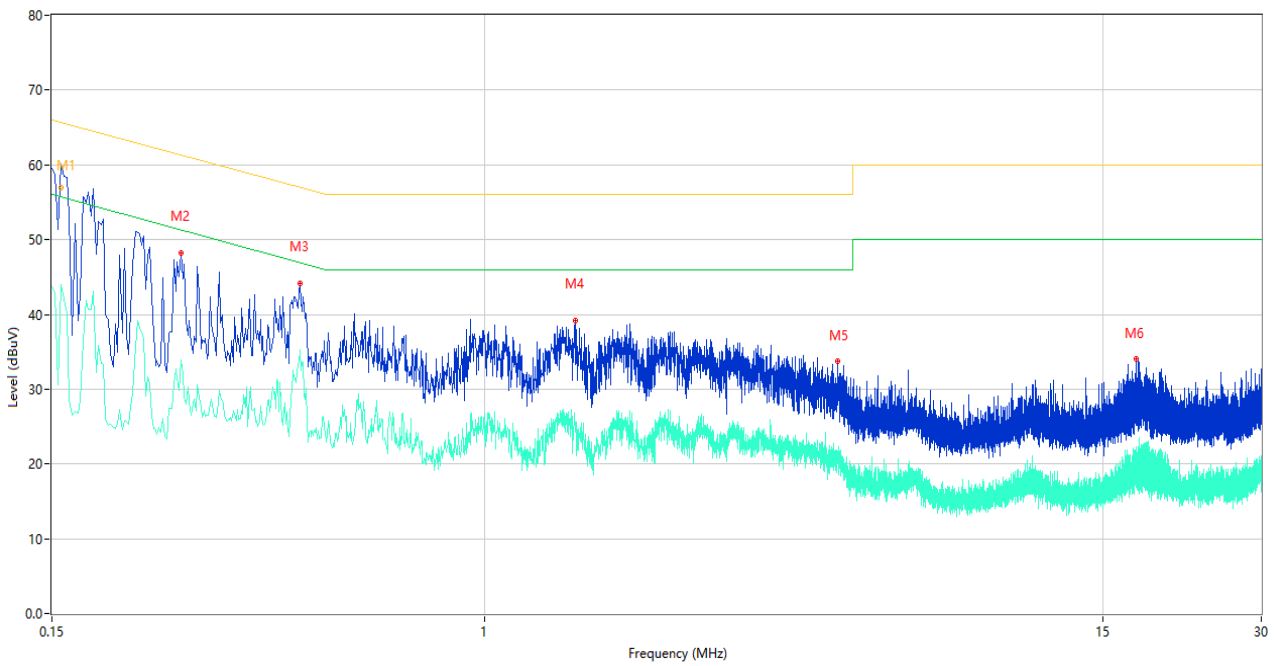
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	61.40	10.19	66.00	4.60	Peak	L	N.A
1*	0.150	59.58	10.19	66.00	6.42	QP	L	Pass
1**	0.150	44.43	10.19	56.00	11.57	AV	L	Pass
2	0.198	54.65	10.10	63.69	9.04	Peak	L	Pass
2**	0.198	40.46	10.10	53.69	13.23	AV	L	Pass
3	0.418	45.33	10.59	57.49	12.16	Peak	L	Pass
3**	0.418	34.80	10.59	47.49	12.69	AV	L	Pass
4	1.110	36.79	10.31	56.00	19.21	Peak	L	Pass
4**	1.110	21.01	10.31	46.00	24.99	AV	L	Pass
5	4.392	37.95	10.36	56.00	18.05	Peak	L	Pass
5**	4.392	28.05	10.36	46.00	17.95	AV	L	Pass
6	19.554	33.68	10.46	60.00	26.32	Peak	L	Pass
6**	19.554	21.78	10.46	50.00	28.22	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.156	60.46	10.18	65.67	5.21	Peak	N	N.A
1*	0.156	56.99	10.18	65.67	8.68	QP	N	Pass
1**	0.156	43.93	10.18	55.67	11.74	AV	N	Pass
2	0.264	48.15	10.07	61.30	13.15	Peak	N	Pass
2**	0.264	33.94	10.07	51.30	17.36	AV	N	Pass
3	0.444	44.17	10.54	56.99	12.82	Peak	N	Pass
3**	0.444	35.24	10.54	46.99	11.75	AV	N	Pass
4	1.484	39.22	10.25	56.00	16.78	Peak	N	Pass
4**	1.484	25.07	10.25	46.00	20.93	AV	N	Pass
5	4.680	33.81	10.25	56.00	22.19	Peak	N	Pass
5**	4.680	21.24	10.25	46.00	24.76	AV	N	Pass
6	17.364	34.04	10.48	60.00	25.96	Peak	N	Pass
6**	17.364	20.72	10.48	50.00	29.28	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2350627-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2350627-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2350627-AI.PDF”.

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--END OF REPORT--