

FCC/ISED

EMC

TEST REPORT

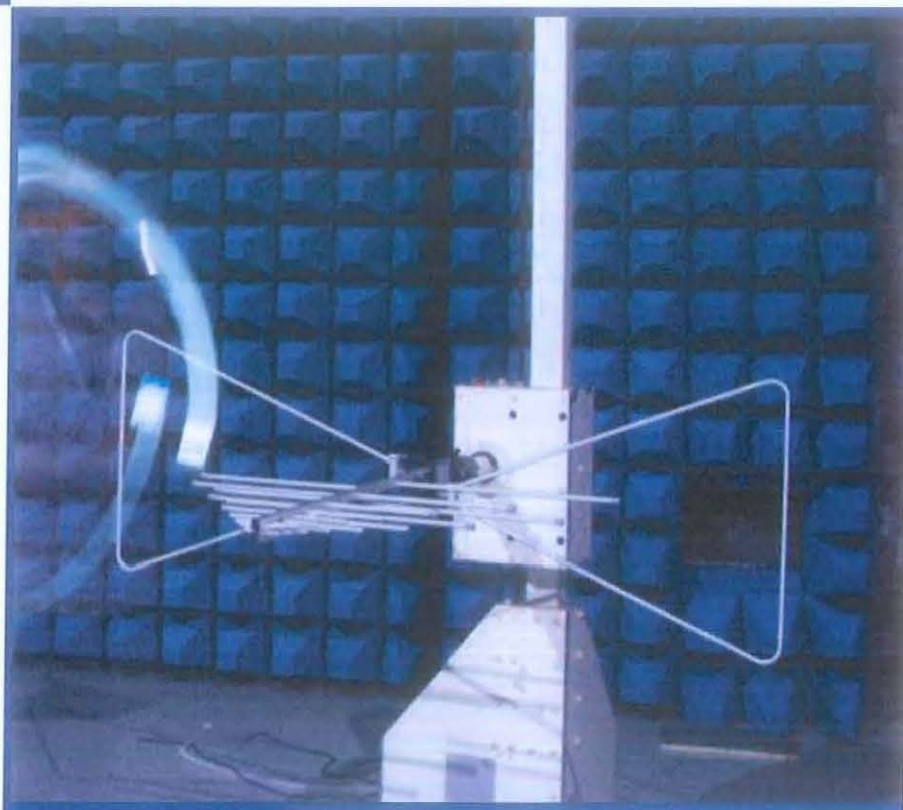
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Smart Phone

ISSUED TO
Xplore Technologies Corp.

8601 Ranch Rd. 2222, Building 2, Austin, TX 78730 USA



Tested by: Xia Long
Xia Long

(Engineer)

Date: Apr. 27, 2018

Approved by: Wei Yanquan
Wei Yanquan
(Chief Engineer)

Date: Apr. 27, 2018

Report No.: BL-EC1830166-401

EUT Name: Smart Phone

Model Name: M6

Brand Name: Xplore

Test Standard: 47 CFR Part 15 Subpart B
ICES-003 (Issue 6, January 2016)

FCC ID: Q2GIX006M1

ISED Number: 4596A-IX006M1

Test Conclusion: Pass

Test Date: Apr. 13, 2018 ~ Apr. 19, 2018

Date of Issue: Apr. 27, 2018

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Apr. 27, 2018</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 has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory is a testing organization accredited by American Association for Laboratory Accreditation(A2LA) according to ISO/IEC 17025.The accreditation certificate is 4344.01. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

- (1) The test report refer to the BALUN report mode v6.6.
- (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.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Xplore Technologies Corp.
Address	8601 Ranch Rd. 2222, Building 2, Austin, TX 78730 USA

2.2 Manufacturer Information

Manufacturer	Shenzhen UniStrong Science & Technology Co.,Ltd.
Address	B,4-4Factory, Zhengcheng Road, FuyongBaoan District, Shenzhen, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Smart Phone
Model Name Under Test	M6
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	M6_V104
Software Version	M6_V1.0
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	SJYEnergy
	Model No.	BA7800
	Serial No.	N/A
	Capacity	8000 mAh
	Rated Voltage	3.8 V
	Limit Charge Voltage	4.35 V
Ancillary Equipment 2 ^{Note}	Adapter	
	Brand Name	N/A
	Model No.	ASUC71w-050912300
	Serial No.	ASUC71z-050912300 (z= a, e, i, w)
	Rated Input	100-240 V~, 0.7 A, 50/60 Hz
	Rated Output	5 V= 3 A or 9 V= 2 A or 12 V= 1.5 A
Ancillary Equipment 3	USB Cable	
	Length (Approx.)	1.0 m
Note: All adapter are same with electrical parameters and internal circuit structure, but only differ in model name and plug type. Adapter ASUC71w-050912300 was tested in this report.		

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/900/1800/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 1/2/5/8, 4G Network FDD LTE Band 1/2/3/4/5/7/8/17/20/28 TDD LTE Band 38/40/41 CDMA2000 800 MHz Bluetooth, WIFI, GPS, GLONASS, NFC, BDS
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3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	FCC 47 CFR Part 15 Subpart B (10-1-16 Edition)	Unintentional Radiators
2	ICES-003 (Issue 6, January 2016)	Information Technology Equipment (Including Digital Apparatus) — Limits and Methods of Measurement
3	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	ISED Rule	Test Verdict	Result
1	Radiated Emission	15.109	ICES-003 6.1	Pass	Annex A .1
2	Conducted Emission, AC Ports	15.107	ICES-003 6.2	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)	3.23 dB
Radiated emissions (30 MHz-1 GHz)	4.30 dB
Radiated emissions (1 GHz-18 GHz)	4.81 dB
Radiated emissions (18 GHz-40 GHz)	5.71 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 26°C	AC 120 V/60 Hz or DC 3.8 V from battery	50% to 55%	100 kPa to 102 kPa

4.2 Test Equipment List

Radiated Emission Test For Frequency Below 1 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWA RZ	ESRP	101036	2017.06.22	2018.06.21	☒
Test Antenna- Bi-Log	SCHWARZBECK	VULB 9163	9163-977	2016.07.19	2018.07.18	☒
Test Antenna- Horn	SCHWARZBECK	BBHA 9120D	9120D-1600	2016.07.12	2018.07.11	☐
Anechoic Chamber	RAINFARD	9m*6m*6m	N/A	2017.02.21	2019.02.20	☒

Radiated Emission Test For Frequency Above 1 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2017.11.08	2018.11.07	☒
Test Antenna- Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2017.07.22	2019.07.21	☐
Test Antenna- Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2016.07.12	2018.07.11	☒
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2019.02.20	☒

Conducted Emission Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWA RZ	ESRP	101036	2017.06.22	2018.06.21	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2017.06.22	2018.06.21	☒
LISN	SCHWARZBECK	NNLK 8129	8129-462	2017.11.08	2018.11.07	☐
AMN	SCHWARZBECK	NNBM8124	8124-509	2017.06.22	2018.06.21	☐
AMN	SCHWARZBECK	NNBM8124	8124-510	2017.06.22	2018.06.21	☐
ISN	TESEQ	ISN T800	34449	2017.06.22	2018.06.21	☐
Shielded Enclosure	ChangNing	CN-130701	130703	N/A	N/A	☒

4.3 Test Enclosure list

Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	☐
Laptop	Apple	A1465	N/A	N/A	N/A	☒
Printer	HP	DESKJET 1000	N/A	N/A	N/A	☐
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	☐
Mouse	Logitech	M100	N/A	N/A	N/A	☐
USB disk	Kingston	N/A	N/A	N/A	N/A	☐
TF Card	Kingston	N/A	N/A	N/A	N/A	☒
VGA Cable	N/A	N/A	N/A	1.5 m	Shielded with core	☐
HDMI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	☐
DVI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	☐
Coaxial video cable	N/A	N/A	N/A	2.0 m	Shielded with core	☐
iPhone	Apple	A1586	N/A	N/A	N/A	☐
Phone	MI	M4	N/A	N/A	N/A	☐
Bluetooth Earphone	SAMSUNG	Gear Circle	N/A	N/A	N/A	☒
Wireless Communication s Test Set	R&S	CMW500	142028	N/A	Cal. Due 2018.06.11	☒
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	☒
GPS/GLONASS Vector signal generator	R&S	N5172B EXG	N/A	N/A	N/A	☒
Car Battery	Camel	55530	N/A	N/A	12 V/55 Ah	☐
Artificial load	N/A	N/A	N/A	N/A	2.5 Ω/100 W	☐
Artificial load	N/A	N/A	N/A	N/A	5 Ω/100 W	☐
Electronic Load	ITECH	IT8511	N/A	N/A	N/A	☐
USB Cable	N/A	N/A	N/A	1.5 m	Shielded with core	☐
DC Power Supply	ITECH	IT6863A	60001401068 7210006	N/A	N/A	☐
LCD Monitor	SAMSUNG	UA32C4000P	N/A	N/A	N/A	☐
LCD Monitor	Dell	U241HB	N/A	N/A	N/A	☐
RJ45 Cable	N/A	N/A	N/A	1.5 m	Shielded with core	☐
IC Card	N/A	N/A	N/A	N/A	N/A	☒

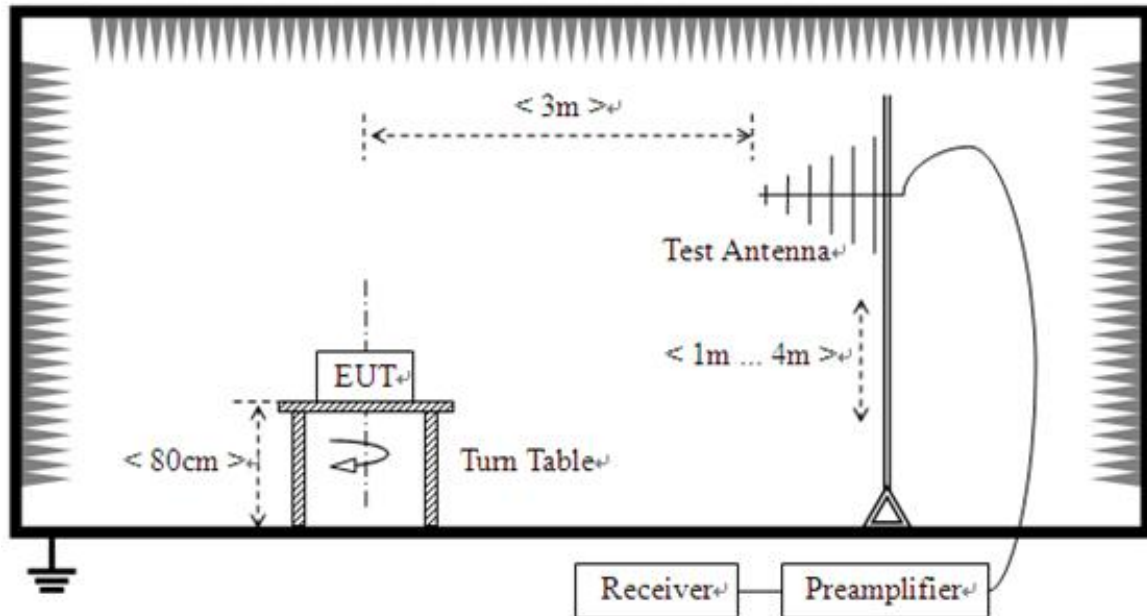
4.4 Test Configurations

Test Configurations (TC) No.	Description
Traffic Test Mode	
TC01	<u>The GSM 850 MHz Test Mode</u> GSM 850 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GPS RX
TC02	<u>The EDGE 850 MHz Test Mode</u> EDGE 850 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GLONASS RX
TC03	<u>The GSM 1900 Test Mode</u> GSM 1900 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GPS RX
TC04	<u>The EDGE 1900 MHz Test Mode</u> EDGE 1900 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GLONASS RX
TC05	<u>The WCDMA Band 2 Test Mode</u> WCDMA Band 2 + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GPS RX
TC06	<u>The WCDMA Band 5 Test Mode</u> WCDMA Band 5 + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GLONASS RX
TC07	<u>The CDMA 800 MHz Test Mode</u> CDMA 800 MHz + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GPS RX
TC08	<u>The CDMA 2000 MHz Test Mode</u> CDMA 800 MHz + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GLONASS RX
TC09	<u>The FDD LTE Band 2 Test Mode</u> LTE Band 2 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GPS RX
TC10	<u>The FDD LTE Band 4 Test Mode</u> LTE Band 4 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GLONASS RX
TC11	<u>The FDD LTE Band 5 Test Mode</u> LTE Band 5 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GPS RX
TC12	<u>The FDD LTE Band 7 Test Mode</u> LTE Band 7 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GLONASS RX
TC13	<u>The FDD LTE Band 17 Test Mode</u> LTE Band 17 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GPS RX

TC14	<u>The FDD LTE Band 41 Test Mode</u> LTE Band 41 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + Bluetooth Link + WIFI Link + GLONASS RX
TC15	<u>The Idle Test Mode</u> GSM 850(Idle) + Adapter + Battery + Bluetooth Earphone + USB Cable
Amusement Test Mode	
TC16	<u>The Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Bluetooth Earphone + TF Card
TC17	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Bluetooth Earphone + TF Card
TC18	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Bluetooth Earphone + Laptop+ TF Card
TC19	<u>The NFC Test Mode</u> EUT + Adapter + Battery + USB Cable+ NFC Link+ IC Card

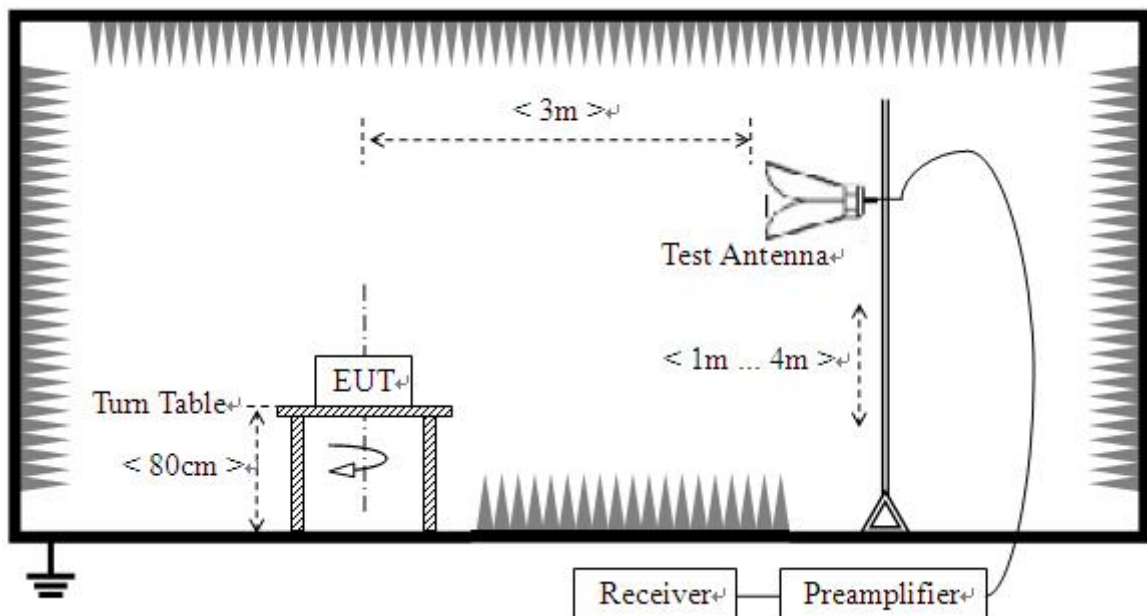
4.5 Test Setups

Test Setup 1



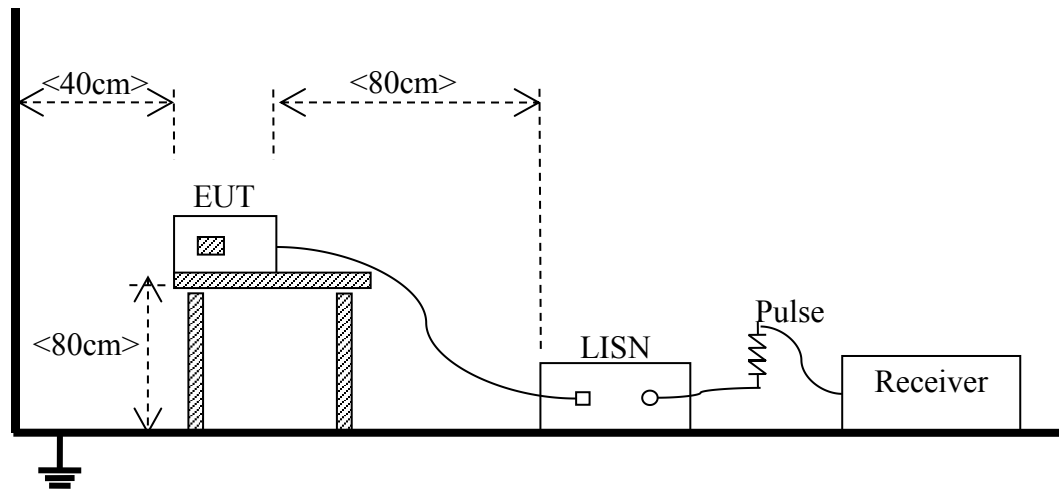
(For Radiated Emission Test (30 MHz-1 GHz))

Test Setup 2



(For Radiated Emission Test (above 1 GHz))

Test Setup 3



(For Conducted Emission, AC Ports Test)

4.6 Test Conditions

Test Case	Test Conditions	
Radiated Emission	Test Env.	NTNV
	Test Setup	Test Setup 1&2
	Test Configuration	TC01~TC19 ^{Note}
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01~TC19 ^{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 Test Mode is the worst mode in this report.

5 TEST ITEMS

5.1 Emission Tests

5.1.1 Radiated Emission

5.1.1.1 Limit

Frequency range (MHz)	Class B (at 3 m)		Class B (at 10 m)	Class A (at 10 m)	
	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)
30 - 88	100	40	30	90	39
88 - 216	150	43.5	33.5	150	43.5
216 - 960	200	46	36	210	46.4
Above 960	500	54	44	300	49.5

NOTE:

- 1) Field Strength (dB $\mu\text{V/m}$) = $20 \cdot \log$ [Field Strength ($\mu\text{V/m}$)].
- 2) In the emission tables above, the tighter limit applies at the band edges.
- 3) The limits using ANSI C63.4.

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

The test employing the methods of measurement described in the publication referenced in Section 3(b) (ANSI C63.4);

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.

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.
- 3) The limit using ANSI C63.4.

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 test employing the methods of measurement described in the publication referenced in Section 3(b) (ANSI C63.4);

The EUT is connected to the power mains through a LISN which provides 50 Ω /50 μ H of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.1.2.4 Test Result

Please refer to ANNEX A.2.

ANNEX A TEST RESULTS

A.1 Radiated Emission

Note 1: The symbol of “--” in the table which means not application.

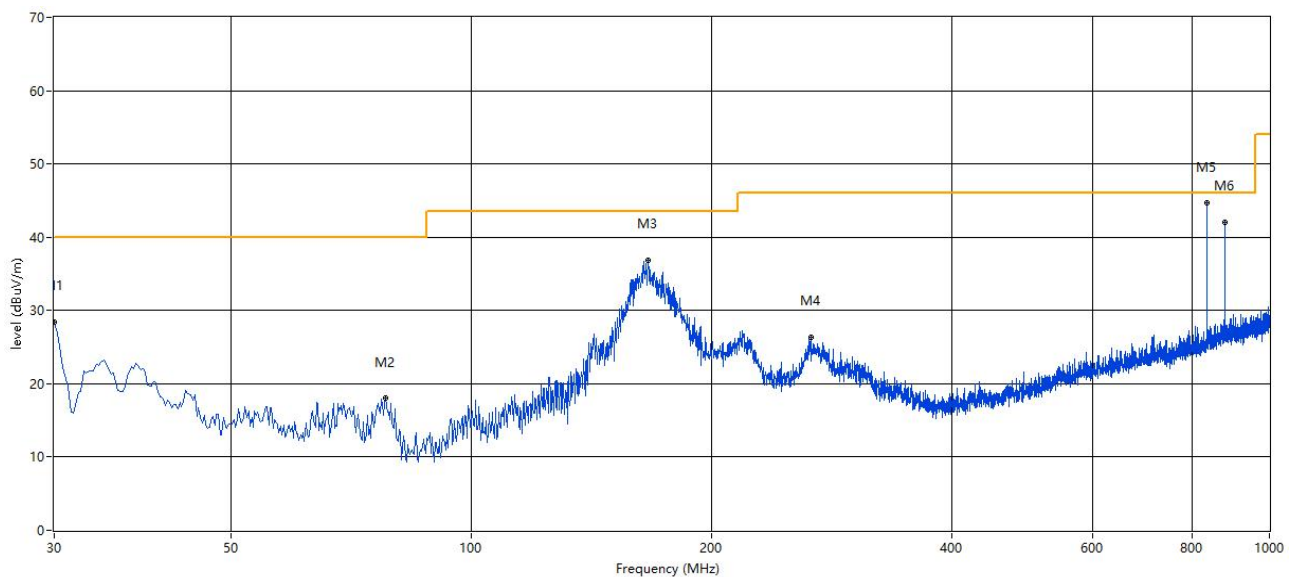
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: This frequency which near 850 MHz with circle should be ignored because they are MS and SS carrier frequency.

Test Data and Plots

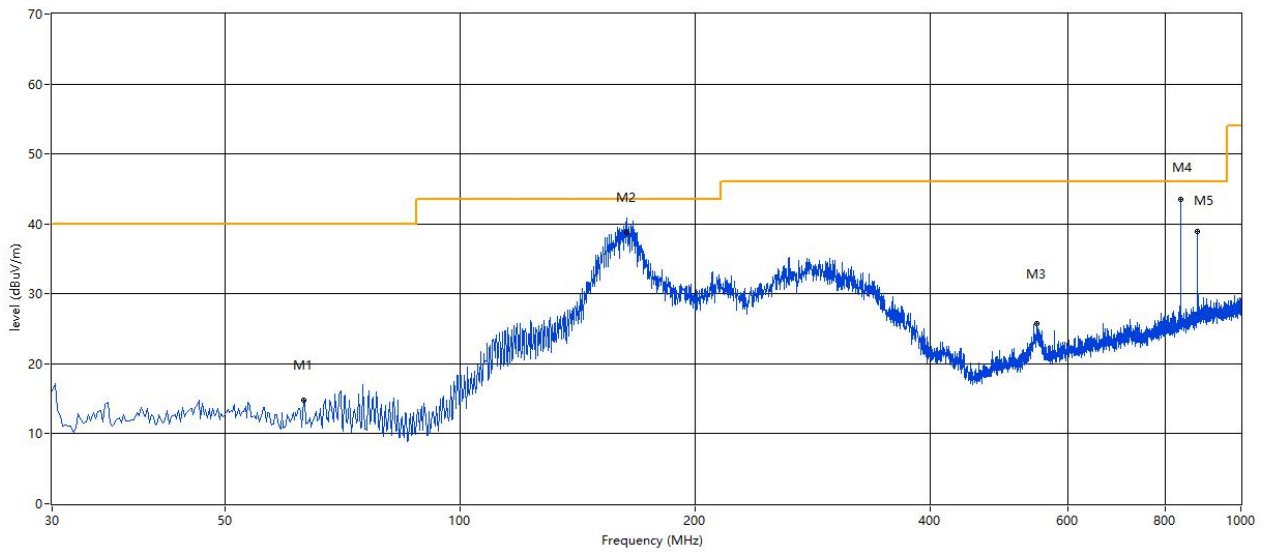
The GSM 850 MHz Test Mode

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



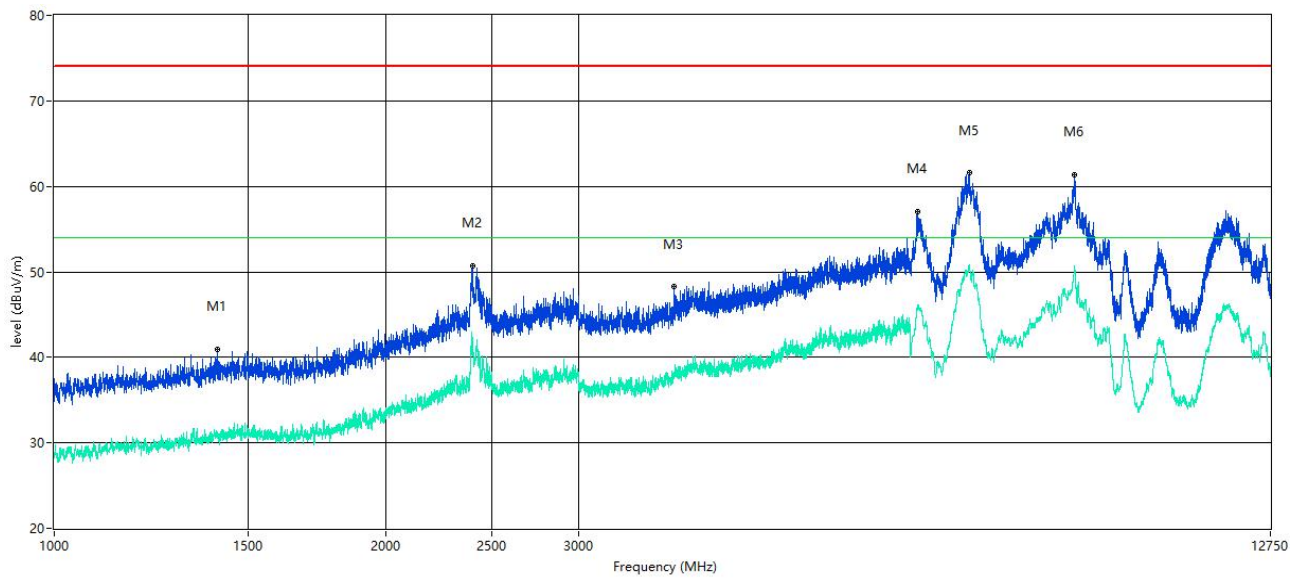
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
30.000	28.46	27.24	--	-28.14	--	40.0	--	12.76	301.00	100	Vertical	Pass
78.003	17.99	--	--	-32.87	--	40.0	--	22.01	78.00	100	Vertical	Pass
166.493	36.87	35.77	--	-31.28	--	43.5	--	7.73	63.00	100	Vertical	Pass
266.378	26.30	--	--	-26.98	--	46.0	--	19.70	190.00	100	Vertical	Pass
836.141	45.64	--	--	-14.86	--	46.0	--	0.36	318.00	100	Vertical	N.A
881.780	43.10	--	--	-13.91	--	46.0	--	2.90	213.00	100	Vertical	N.A

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



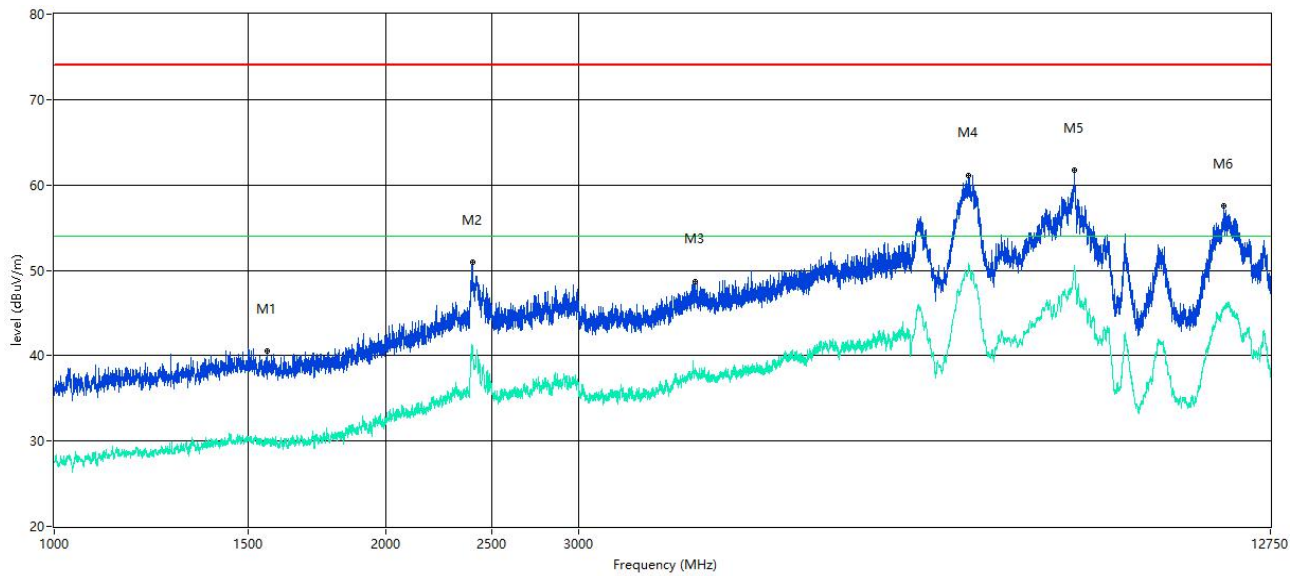
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
62.972	14.74	--	--	-28.73	--	40.0	--	25.26	105.00	100	Horizontal	Pass
163.342	40.90	38.76	--	-31.40	--	43.5	--	4.74	295.00	100	Horizontal	Pass
548.335	25.75	--	--	-20.61	--	46.0	--	20.25	43.00	100	Horizontal	Pass
836.566	44.54	--	--	-14.79	--	46.0	--	1.46	43.00	100	Horizontal	N.A
881.477	38.97	--	--	-13.86	--	46.0	--	7.03	111.00	100	Horizontal	N.A

A.1.3 Test Antenna Vertical, 1 GHz – 12.75 GHz



Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
1407.398	40.93	--	31.2	-11.87	74.0	--	54.0	22.80	9.00	100	Vertical	Pass
2401.650	50.72	--	40.8	-0.12	74.0	--	54.0	13.20	114.00	100	Vertical	Pass
3662.084	48.23	--	38.1	-3.79	74.0	--	54.0	15.90	11.00	100	Vertical	Pass
6097.851	57.02	--	46.1	7.71	74.0	--	54.0	7.90	360.00	100	Vertical	Pass
6791.240	61.57	--	50.7	12.21	74.0	--	54.0	3.30	286.00	100	Vertical	Pass
8458.073	61.40	--	50.5	9.80	74.0	--	54.0	3.50	179.00	100	Vertical	Pass

A.1.4 Test Antenna Horizontal, 1 GHz – 12.75 GHz

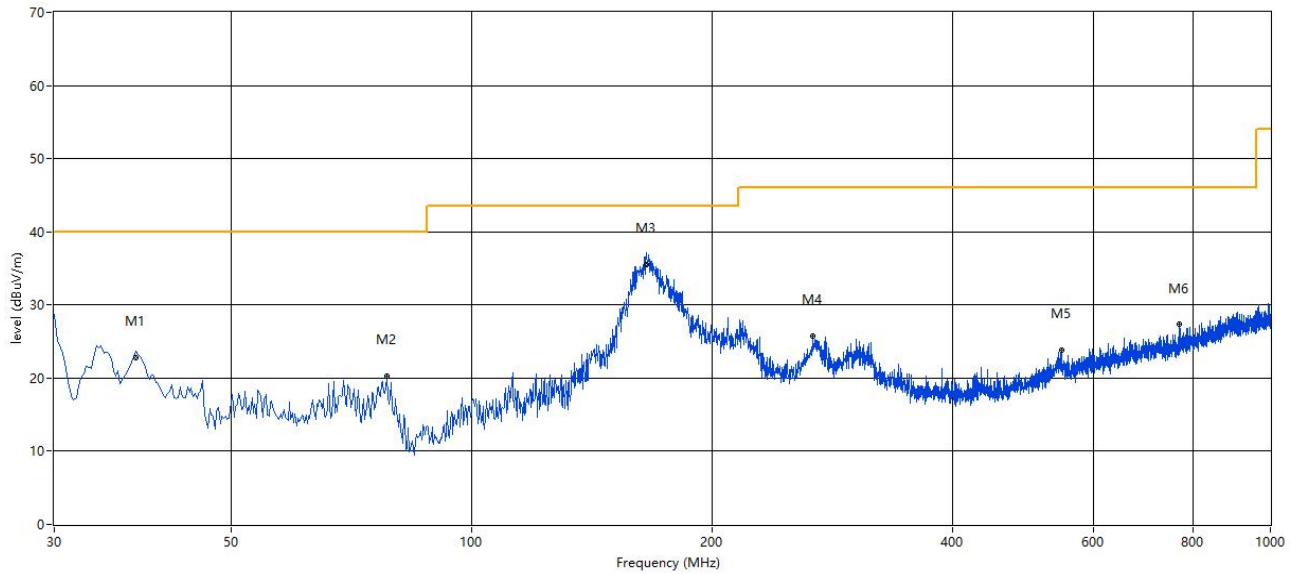


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
1560.360	40.57	--	30.0	-11.81	74.0	--	54.0	24.00	59.00	100	Horizontal	Pass
2400.650	50.94	--	40.6	-0.10	74.0	--	54.0	13.40	34.00	100	Horizontal	Pass
3825.544	48.66	--	38.1	-2.90	74.0	--	54.0	15.90	55.00	100	Horizontal	Pass
6774.369	61.09	--	50.1	11.94	74.0	--	54.0	3.90	92.00	100	Horizontal	Pass
8456.386	61.79	--	50.0	9.81	74.0	--	54.0	4.00	105.00	100	Horizontal	Pass
11553.862	57.54	--	45.7	9.51	74.0	--	54.0	8.30	92.00	100	Horizontal	Pass

Test Data and Plots

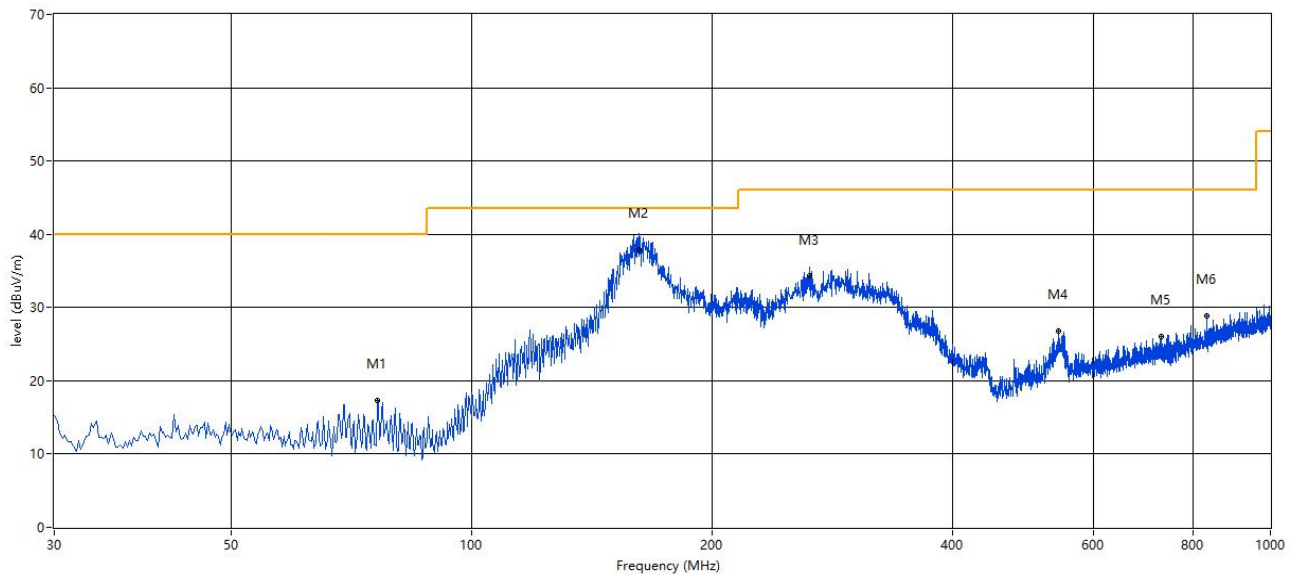
The USB Test Mode

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



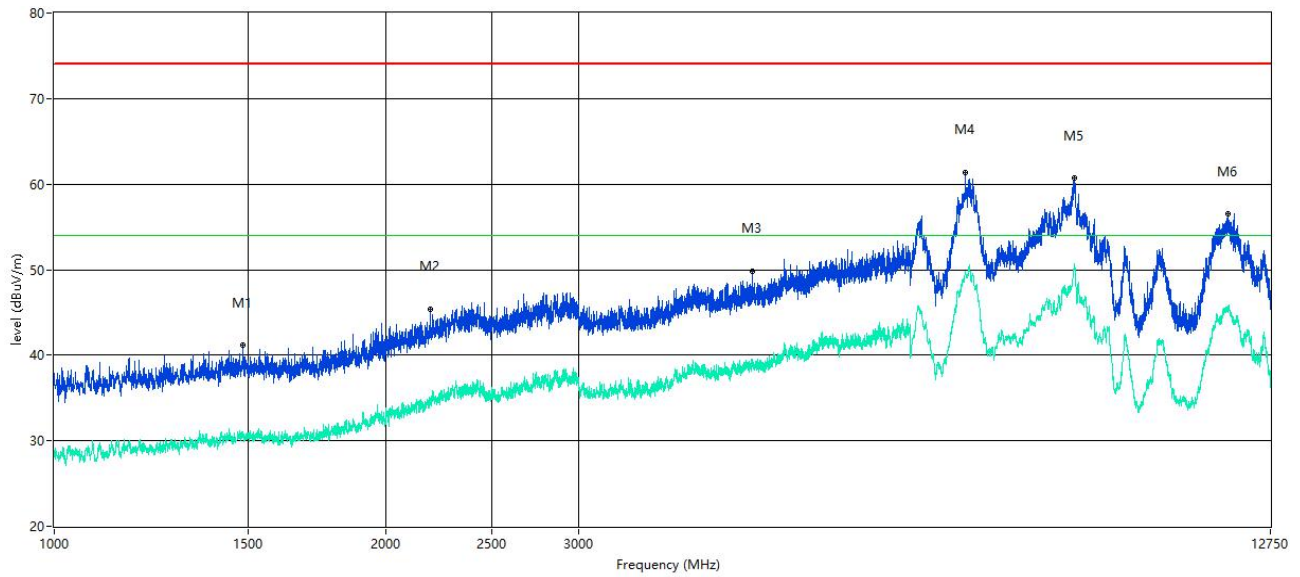
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
38.000	23.61	22.73	--	-27.54	--	40.0	--	17.27	38.00	100	Vertical	Pass
78.245	20.25	--	--	-32.85	--	40.0	--	19.75	273.30	100	Vertical	Pass
165.281	37.15	35.45	--	-31.33	--	43.5	--	8.05	175.70	100	Vertical	Pass
267.106	25.71	--	--	-26.96	--	46.0	--	20.29	66.90	100	Vertical	Pass
547.608	23.85	--	--	-20.63	--	46.0	--	22.15	330.60	100	Vertical	Pass
769.683	27.31	--	--	-16.18	--	46.0	--	18.69	344.70	100	Vertical	Pass

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



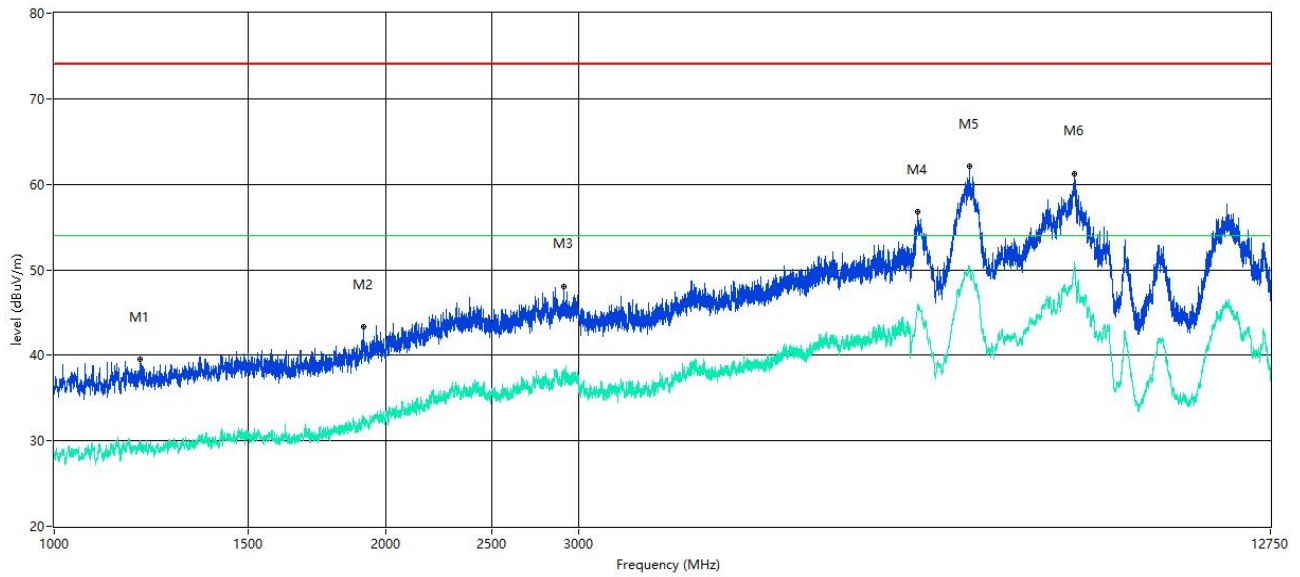
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
76.063	17.34	--	--	-32.84	--	40.0	--	22.66	106.30	100	Horizontal	Pass
162.129	40.09	37.89	--	-31.45	--	43.5	--	5.61	137.90	100	Horizontal	Pass
264.439	35.50	34.32	--	-27.02	--	46.0	--	11.68	106.30	100	Horizontal	Pass
542.759	26.74	--	--	-20.75	--	46.0	--	19.26	94.90	100	Horizontal	Pass
729.680	26.00	--	--	-16.92	--	46.0	--	20.00	339.10	100	Horizontal	Pass
832.717	28.90	--	--	-14.92	--	46.0	--	17.10	292.90	100	Horizontal	Pass

A.1.7 Test Antenna Vertical, 1 GHz – 12.75 GHz



Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
1484.879	41.13	--	30.4	-11.37	74.0	--	54.0	23.60	33.00	100	Vertical	Pass
2196.701	45.33	--	34.7	-6.60	74.0	--	54.0	19.30	338.00	100	Vertical	Pass
4309.923	49.87	--	39.0	-1.96	74.0	--	54.0	15.00	324.00	100	Vertical	Pass
6737.253	61.39	--	49.8	11.53	74.0	--	54.0	4.20	0.00	100	Vertical	Pass
8461.447	60.68	--	50.7	9.77	74.0	--	54.0	3.30	289.00	100	Vertical	Pass
11677.018	56.55	--	45.7	9.76	74.0	--	54.0	8.30	311.00	100	Vertical	Pass

A.1.8 Test Antenna Horizontal, 1 GHz – 12.75 GHz



Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Table (o)	Height (cm)	ANT	Verdict
1197.951	39.50	--	29.0	-11.94	74.0	--	54.0	25.00	2.00	100	Horizontal	Pass
1908.773	43.29	--	32.5	-8.80	74.0	--	54.0	21.50	128.00	100	Horizontal	Pass
2906.523	47.98	--	38.4	-3.34	74.0	--	54.0	15.60	360.00	100	Horizontal	Pass
6096.163	56.84	--	45.8	7.59	74.0	--	54.0	8.20	85.00	100	Horizontal	Pass
6789.553	62.13	--	50.4	12.16	74.0	--	54.0	3.60	40.00	100	Horizontal	Pass
8456.386	61.23	--	50.9	9.81	74.0	--	54.0	3.10	25.00	100	Horizontal	Pass

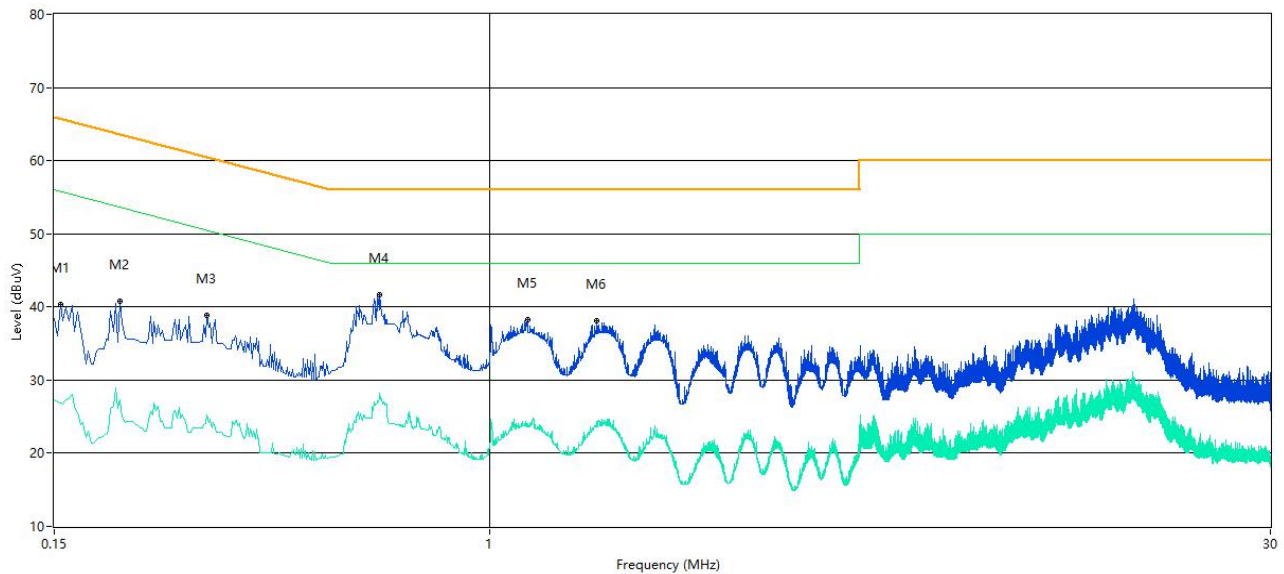
A.2 Conducted Emission

Test Data and Plots

The GSM 850 MHz Test Mode

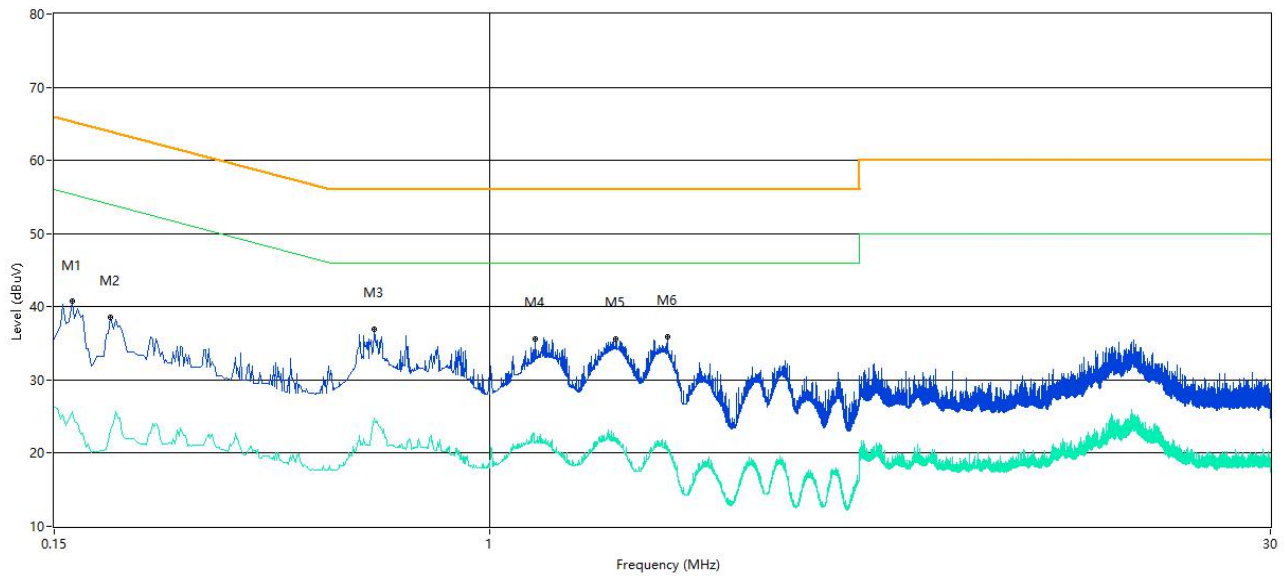
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

A.2.1 L Phase



Frequency (MHz)	Peak Level (dBuV)	Q-peak Level (dBuV)	Average Level (dBuV)	Factor (dB)	QP Limit (dBuV)	AV Limit (dBuV)	Margin (dB)	Line	Verdict
0.154	42.09	35.56	26.88	10.00	65.8	55.8	28.92	L Line	Pass
0.200	41.80	37.25	26.89	10.01	63.6	53.6	26.35	L Line	Pass
0.292	39.57	34.75	24.84	10.01	60.5	50.5	25.66	L Line	Pass
0.620	42.36	37.19	27.61	10.02	56.0	46.0	18.39	L Line	Pass
1.178	38.83	34.02	23.45	10.04	56.0	46.0	21.98	L Line	Pass
1.596	38.67	33.60	24.02	10.05	56.0	46.0	21.98	L Line	Pass

A.2.2 N Phase

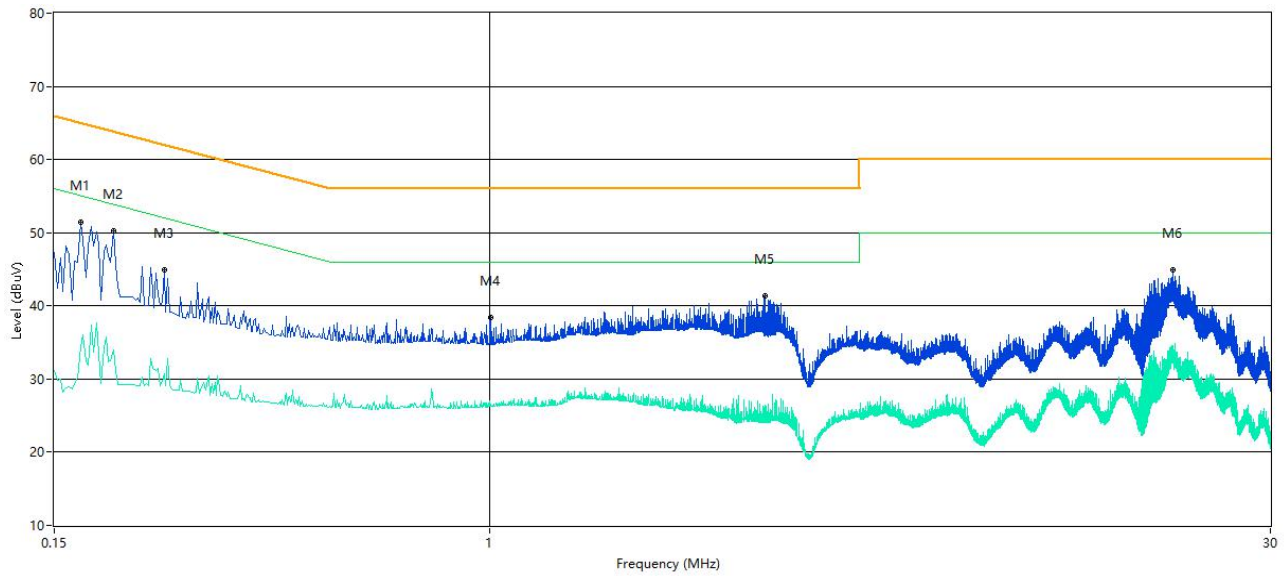


Frequency (MHz)	Peak Level (dBuV)	Q-peak Level (dBuV)	Average Level (dBuV)	Factor (dB)	QP Limit (dBuV)	AV Limit (dBuV)	Margin (dB)	Line	Verdict
0.162	41.21	36.74	24.99	10.01	65.4	55.4	28.66	N Line	Pass
0.192	40.15	35.09	23.42	10.01	63.9	53.9	28.81	N Line	Pass
0.604	39.01	32.98	24.75	10.02	56.0	46.0	21.25	N Line	Pass
1.222	35.87	29.36	21.80	10.04	56.0	46.0	24.20	N Line	Pass
1.730	36.49	31.22	21.90	10.06	56.0	46.0	24.10	N Line	Pass
2.166	35.79	29.62	20.66	10.07	56.0	46.0	25.34	N Line	Pass

Test Data and Plots

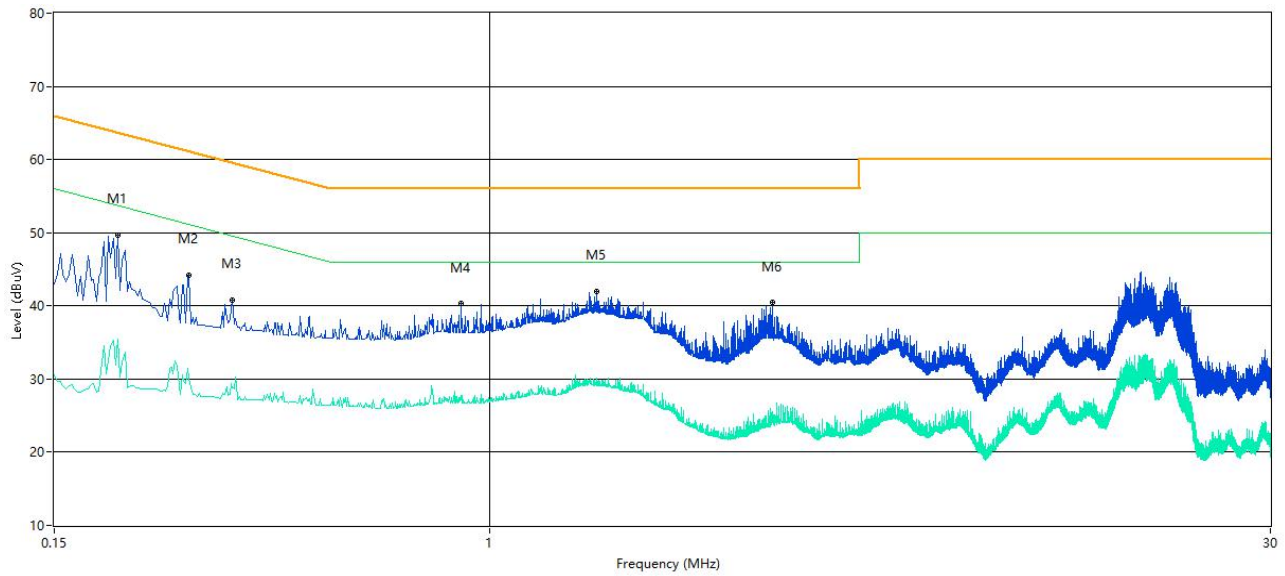
The USB Test Mode

A.2.3 L Phase



Frequency (MHz)	Peak Level (dBuV)	Q-peak Level (dBuV)	Average Level (dBuV)	Factor (dB)	QP Limit (dBuV)	AV Limit (dBuV)	Margin (dB)	Line	Verdict
0.168	47.80	37.81	21.71	10.01	65.1	55.1	27.29	L Line	Pass
0.194	50.67	47.88	34.73	10.01	63.9	53.9	16.02	L Line	Pass
0.242	44.87	38.70	28.04	10.01	62.0	52.0	23.30	L Line	Pass
1.006	33.58	28.17	20.51	10.03	56.0	46.0	25.49	L Line	Pass
3.312	40.24	33.66	23.65	10.11	56.0	46.0	22.34	L Line	Pass
19.590	46.46	39.25	31.35	10.65	60.0	50.0	18.65	L Line	Pass

A.2.4 N Phase



Frequency (MHz)	Peak Level (dBuV)	Q-peak Level (dBuV)	Average Level (dBuV)	Factor (dB)	QP Limit (dBuV)	AV Limit (dBuV)	Margin (dB)	Line	Verdict
0.198	48.96	45.83	32.80	10.01	63.7	53.7	17.87	N Line	Pass
0.270	42.60	36.95	25.59	10.01	61.1	51.1	24.15	N Line	Pass
0.326	38.89	33.63	25.72	10.01	59.6	49.6	23.88	N Line	Pass
0.884	35.89	30.94	22.47	10.03	56.0	46.0	23.53	N Line	Pass
1.594	38.80	34.53	25.32	10.05	56.0	46.0	20.68	N Line	Pass
3.430	39.44	33.42	23.54	10.11	56.0	46.0	22.46	N Line	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-EC1830166-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-EC1830166-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-EC1830166-AI.PDF”.

--END OF REPORT--