

FCC

EMC

TEST REPORT

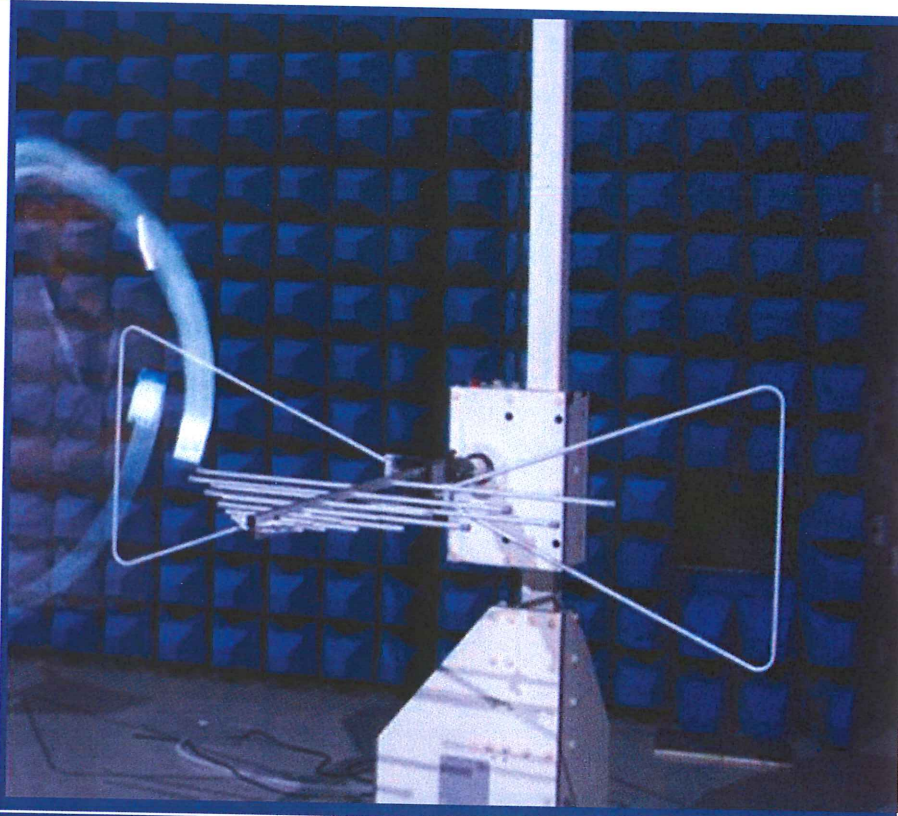
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Rugged Mobile Computer

ISSUED TO
iWaylink INC

6F., No. 288, Sec. 6, Civic Blvd., Xinyi Dist., Taipei city 110, Taiwan



Tested by: Xia Long
Date: Mar. 26, 2020

Approved by: Wei Yanquan
(Chief Engineer)

Date: Mar. 26, 2020

Report No.: BL-SZ19C0149-401

EUT Name: Rugged Mobile Computer

Model Name: TC601

Brand Name: iMotion

Test Standard: 47 CFR Part 15 Subpart B

FCC ID: SPYTC601

Test Conclusion: Pass

Test Date: Dec. 12, 2019 ~ Dec. 19, 2019

Date of Issue: Mar. 26, 2020

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Mar. 26, 2020</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 v6.8.
- (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	iWaylink INC
Address	6F., No. 288, Sec. 6, Civic Blvd., Xinyi Dist., Taipei city 110, Taiwan

2.2 Manufacturer Information

Manufacturer	iWaylink INC
Address	6F., No. 288, Sec. 6, Civic Blvd., Xinyi Dist., Taipei city 110, Taiwan

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Rugged Mobile Computer
Model Name Under Test	TC601
Series Model Name	N/A
Description of Model name differentiation	The model TC601 has two configurations, (ROM: 64G, RAM: 4G) and (ROM: 32G, RAM: 3G), two configurations are identical each other, except ROM and RAM.
Hardware Version	V3
Software Version	1.0.1.681.0
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery 1	
	Battery Name	N/A
	Brand Name	N/A
	Model No.	TC601A
	Capacitance	4000mAh
	Rated Voltage	3.85V
	Limit Charge Voltage	4.4V
Ancillary Equipment 2	Battery 2	
	Battery Name	N/A
	Brand Name	N/A
	Model No.	U0086
	Capacitance	60mAh
	Rated Voltage	3.7V
	Limit Charge Voltage	4.2V
Ancillary Equipment 3	Adapter	
	Brand Name	N/A
	Model No.	A138A-120150U-US2 (US Plug)
	Serial No.	N/A
	Rated Input	100-240 V~, 0.5 A, 50/60 Hz
	Rated Output	5 V= 2.5 A / 9 V= 2 A / 12 V= 1.5 A
	Manufacturer	N/A
Ancillary Equipment 4	USB Cable	
	Length (Approx.)	1 m

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 2/5 4G Network FDD LTE Band 2/4/5/7/12/17 TDD LTE Band 41 Bluetooth, WIFI, GPS, GLONASS, NFC
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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 (10-1-18 Edition)	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)	3.66 dB
Radiated emissions (1 GHz-18 GHz)	5.57 dB
Radiated emissions (18 GHz-40 GHz)	6.12 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 or DC 3.85V 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	2019.07.04	2020.07.03	☐
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-0883	2018.05.11	2020.05.10	☐
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	N/A	2018.08.08	2021.08.07	☐

Radiated Emission Test For Frequency Below 1 GHz (3 m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2019.10.29	2020.10.28	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2018.08.22	2020.08.21	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1600	2018.07.12	2020.07.11	☐
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2020.02.20	☒

Radiated Emission Test For Frequency 1 GHz-18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2018.11.07	2019.11.06	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2018.08.22	2020.08.21	☐
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2018.07.11	2020.07.10	☒
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2020.02.20	☒

Radiated Emission Test For Frequency Above 18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE & SCHWARZ	FSV40	101544	2019.02.15	2020.02.14	☒
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2019.01.05	2020.01.04	☒
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2020.02.20	☒

Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2019.06.13	2020.06.12	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2019.07.04	2020.07.03	☒
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.4m*3.1m*2.8m	N/A	2018.08.16	2021.08.15	☒

4.3 Test Enclosure list

Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	☐
Laptop	Apple	N/A	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 Communications Test Set	R&S	CMW500	142028	N/A	Cal. Due 2020.06.13	☒
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	☒
Earphone	HUAWEI	N/A	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	☐
Ground Wire	N/A	N/A	N/A	N/A	N/A	☐
Power Line	N/A	N/A	N/A	N/A	N/A	☐
LCD Monitor	SAMSUNG	UA32C4000P	N/A	N/A	N/A	☐
Analog Serial Port Connector	N/A	N/A	N/A	N/A	N/A	☐
RJ45 Cable	N/A	N/A	N/A	1.5 m	Shielded with core	☐
HIP Switch	N/A	HIP switch 150	N/A	N/A	N/A	☐
Adapter	N/A	GST18A24	N/A	N/A	N/A	☐
Fiber Cable	N/A	N/A	N/A	N/A	N/A	☐
POE Adapter	N/A	GRT-480050	N/A	N/A	N/A	☐

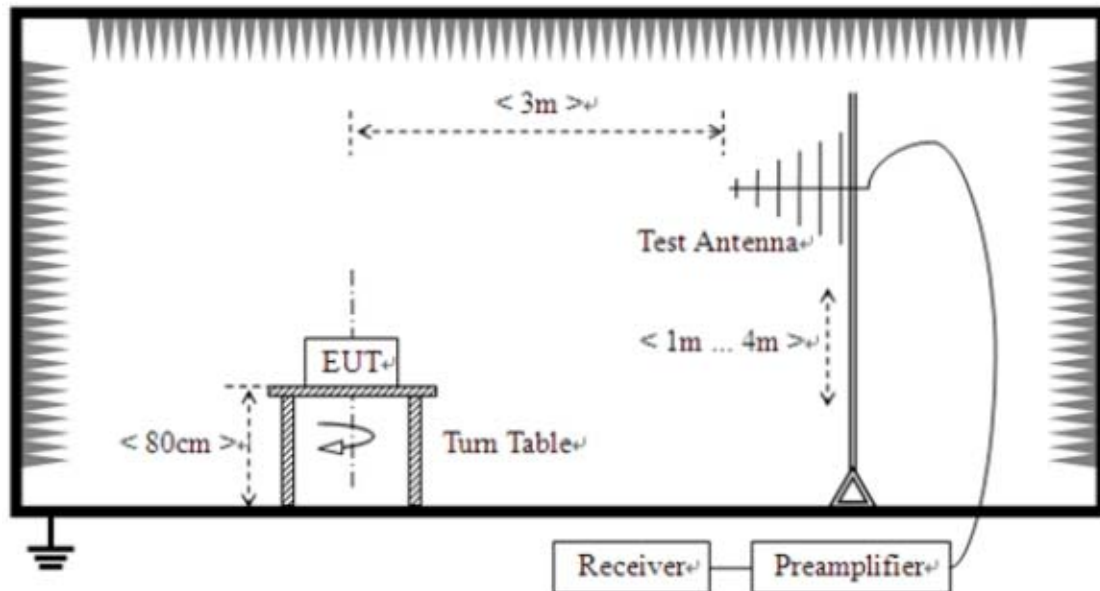
4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>The GSM 850 MHz Test Mode</u> GSM 850 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Camera
TC02	<u>The EDGE 850 MHz Test Mode</u> EDGE 850 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GLONASS RX + NFC Link + Video Play
TC03	<u>The GSM 850 MHz Test Mode with internal speaker</u> GSM 850 Link + Adapter + USB Cable + Battery + BT Link + WIFI Link + GPS RX + NFC Link + Barcode Scanning
TC04	<u>The GSM 1900 MHz Test Mode</u> GSM 1900 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GLONASS RX+ NFC Link + Camera
TC05	<u>The EDGE 1900 MHz Test Mode</u> EDGE 1900 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Video Play
TC06	<u>The WCDMA Band 2 MHz Test Mode</u> WCDMA Band 2 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GLONASS RX + NFC Link + Barcode Scanning
TC07	<u>The WCDMA Band 5 MHz Test Mode</u> WCDMA Band 5 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Camera
TC08	<u>The FDD LTE Band 2 MHz Test Mode</u> LTE Band 2 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GLONASS RX + NFC Link + Video Play
TC09	<u>The FDD LTE Band 4 MHz Test Mode</u> LTE Band 4 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Barcode Scanning
TC10	<u>The FDD LTE Band 5 MHz Test Mode</u> LTE Band 5 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GLONASS RX + NFC Link + Camera
TC11	<u>The FDD LTE Band 7 MHz Test Mode</u> LTE Band 7 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Video Play
TC12	<u>The FDD LTE Band 12 MHz Test Mode</u> LTE Band 12 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GLONASS RX + NFC Link + Barcode Scanning
TC13	<u>The FDD LTE Band 17 MHz Test Mode</u> LTE Band 17 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Camera

TC14	<u>The TDD LTE Band 41 MHz Test Mode</u> LTE Band 41 Link + Adapter + USB Cable + Battery + TF Card + BT Link + WIFI Link + GLONASS RX + NFC Link + Video Play
TC15	<u>The Idle Test Mode</u> GPRS 850 (Idle) + Adapter + USB Cable + Battery + TF Card
TC16	<u>The USB Test Mode Test Mode</u> GSM 850 Link + USB Cable + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Laptop
TC17	<u>The Earphone Test Mode Test Mode</u> GSM 850 Link + Battery + TF Card + BT Link + WIFI Link + GPS RX + NFC Link + Earphone

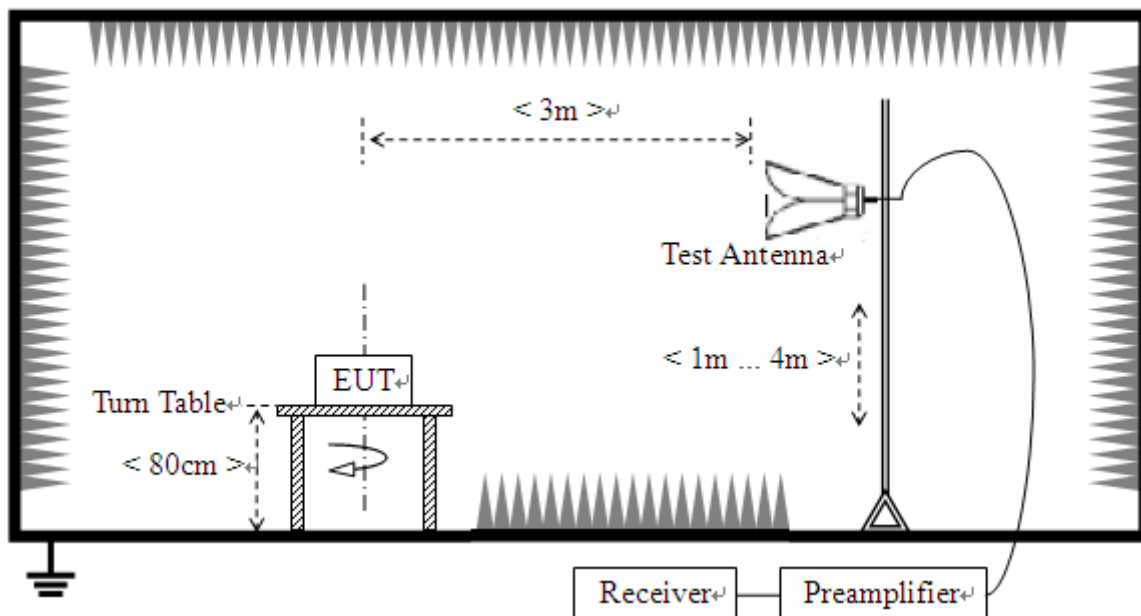
4.5 Test Setups

Test Setup 1



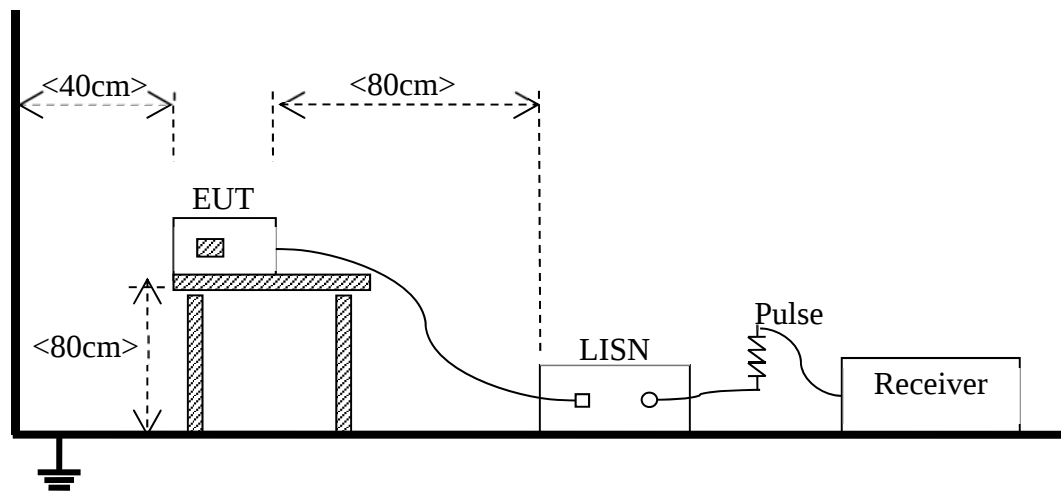
(For Radiated Emission Test (30 MHz-1 GHz))

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~TC17 ^{Note}
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01~TC16 ^{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. Tested all mode on configuration (ROM: 64G, RAM: 4G), other configuration (ROM: 32G, RAM: 3G) tested the worst case.		

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 $\mu\text{V/m}$) = $20 \times \log [\text{Field Strength } (\mu\text{V/m})]$.
- 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.

5.1.1.4 Test Result

Please refer to ANNEX A.1.

NOTE:

1. Results (dB $\mu\text{V/m}$) = Reading (dB μV) + 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.

5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

1. Results (dB μ V/m) = Reading (dB μ V) + Factor (dB/m)

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.

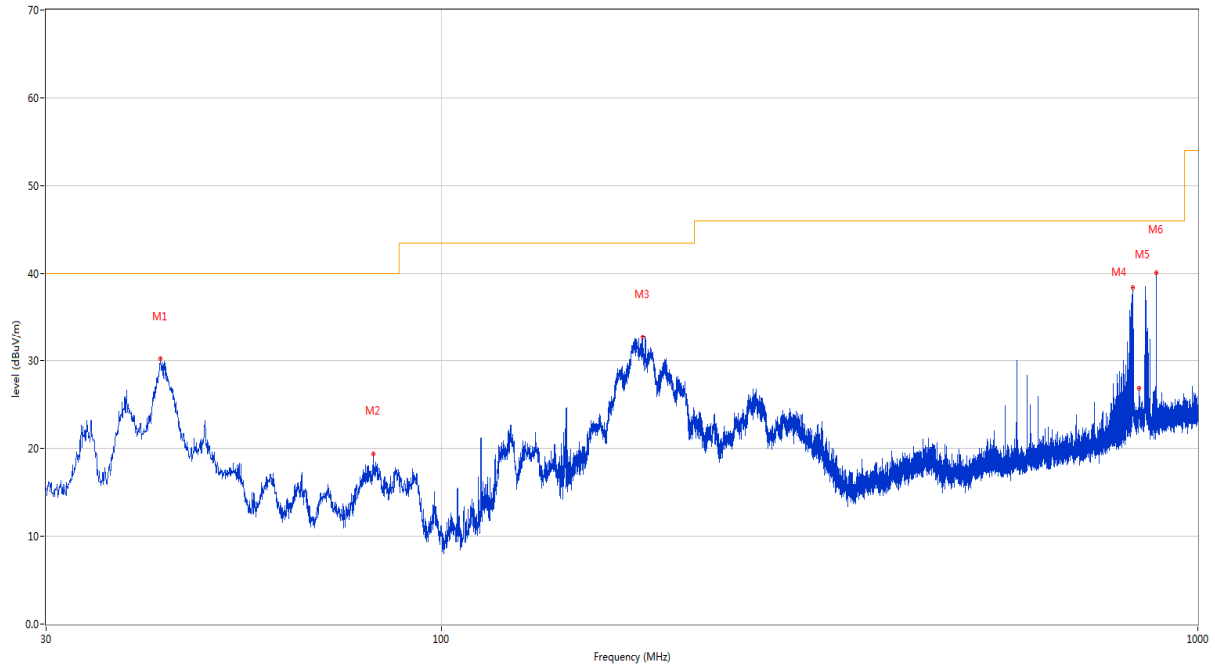
Note 3: The Radiated Emission from 18G-40G is noise only, do not show on the report.

Note 4: This frequency which near 850 MHz with circle should be ignored because they are MS and SS carrier frequency, the marked spikes near 2400 MHz with circle should be ignored because they are Bluetooth or WIFI carrier frequency.

Test Data and Plots

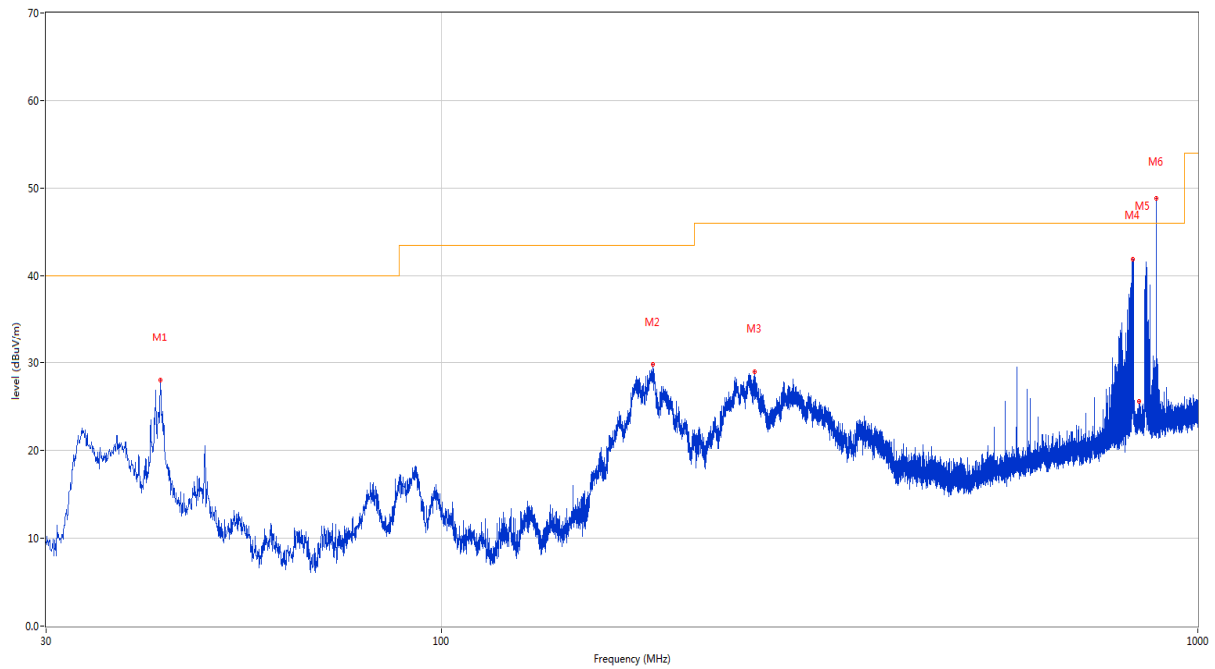
The GSM 850 MHz Test Mode

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



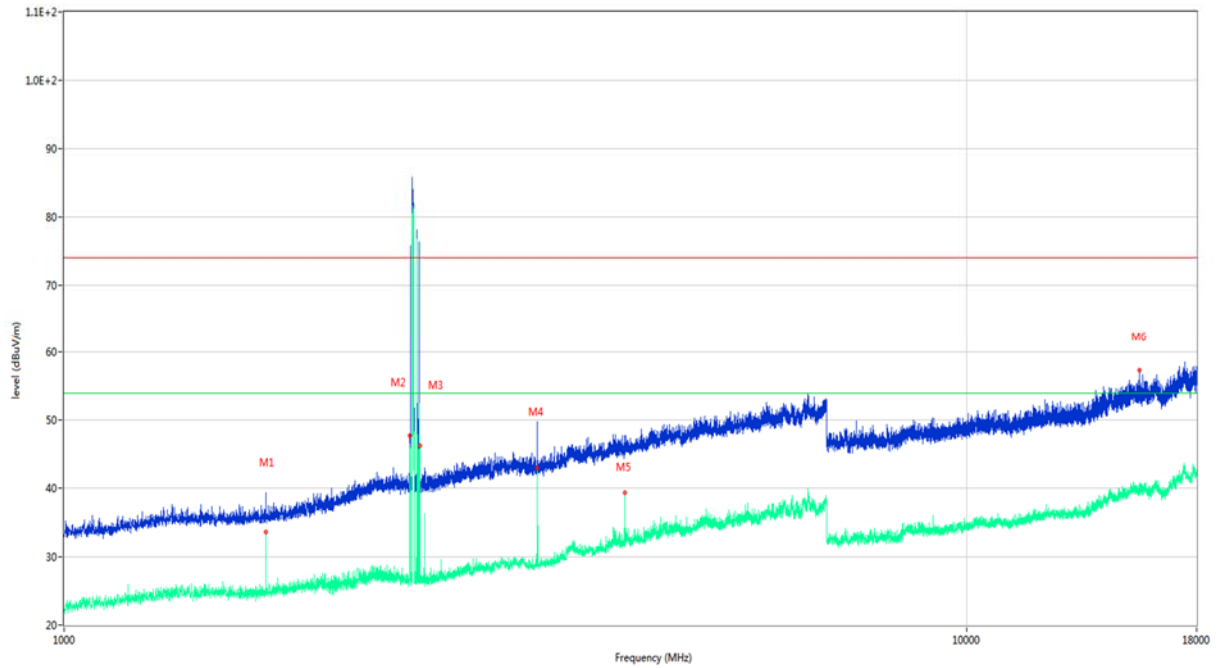
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	42.465	30.16	-23.26	40.0	-9.84	Peak	69.10	100	Vertical	Pass
2	81.216	19.34	-28.36	40.0	-20.66	Peak	279.20	200	Vertical	Pass
3	184.327	32.70	-25.39	43.5	-10.80	Peak	359.90	100	Vertical	Pass
4	821.035	38.39	-8.44	46.0	-7.61	Peak	144.60	100	Vertical	N/A
5	835.924	26.82	-7.98	46.0	-19.18	Peak	33.40	200	Vertical	N/A
6	881.563	40.08	-10.34	46.0	-5.92	Peak	125.50	200	Vertical	N/A

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



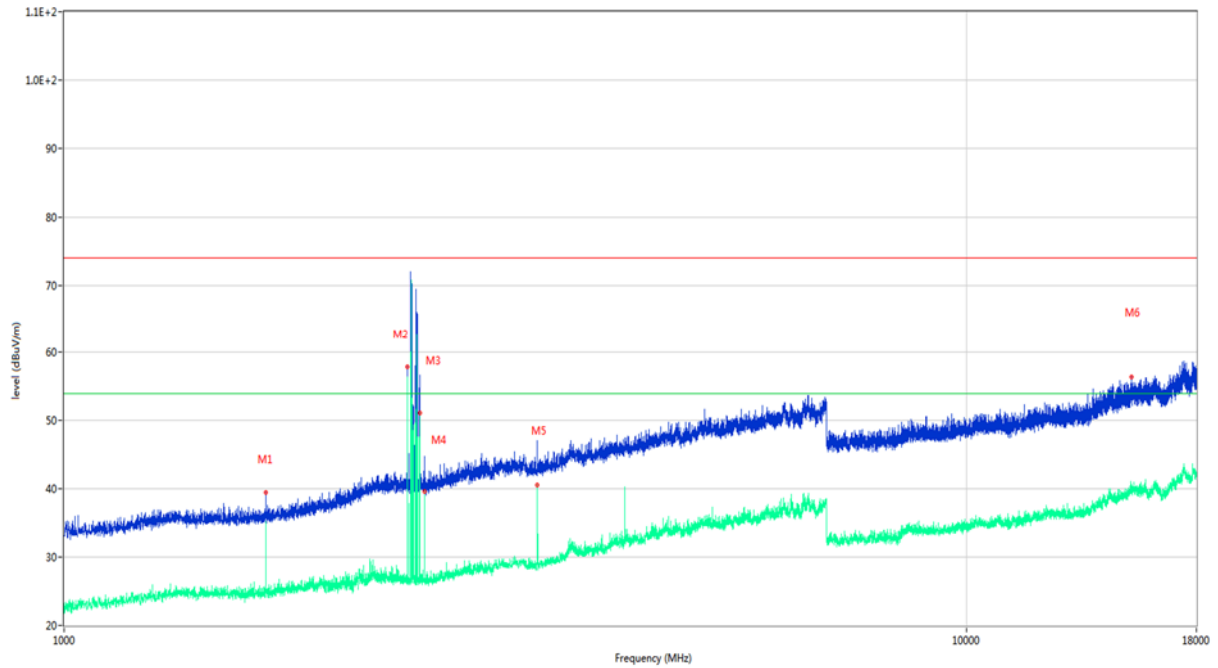
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	42.513	27.97	-23.25	40.0	-12.03	Peak	360.00	200	Horizontal	Pass
2	190.195	29.76	-24.97	43.5	-13.74	Peak	48.90	100	Horizontal	Pass
3	259.163	28.97	-22.53	46.0	-17.03	Peak	244.90	100	Horizontal	Pass
4	819.823	41.91	-8.94	46.0	-4.09	Peak	224.50	100	Horizontal	N/A
5	835.633	25.61	-7.94	46.0	-20.39	Peak	57.50	100	Horizontal	N/A
6	881.563	48.89	-10.34	46.0	2.89	Peak	274.00	100	Horizontal	N/A

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	1673.500	38.30	-16.98	74.0	-35.70	Peak	145.00	100	Vertical	N/A
1**	1673.500	33.73	-16.98	54.0	-20.27	AV	145.00	100	Vertical	N/A
2	2417.000	47.72	-12.06	74.0	-26.28	Peak	46.00	100	Vertical	N/A
2**	2417.000	37.68	-12.06	54.0	-16.32	AV	46.00	100	Vertical	N/A
3	2478.500	46.23	-11.44	74.0	-27.77	Peak	161.00	100	Vertical	N/A
3**	2478.500	43.14	-11.44	54.0	-10.86	AV	161.00	100	Vertical	N/A
4	3347.000	47.83	-7.59	74.0	-26.17	Peak	332.00	100	Vertical	N/A
4**	3347.000	42.95	-7.59	54.0	-11.05	AV	332.00	100	Vertical	N/A
5	4184.000	46.66	-4.70	74.0	-27.34	Peak	208.00	100	Vertical	N/A
5**	4184.000	39.37	-4.70	54.0	-14.63	AV	208.00	100	Vertical	N/A
6	15567.938	57.41	2.60	74.0	-16.59	Peak	155.00	100	Vertical	Pass
6**	15567.938	40.39	2.60	54.0	-13.61	AV	155.00	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	1673.000	39.43	-16.97	74.0	-34.57	Peak	325.00	100	Horizontal	N/A
1**	1673.000	27.24	-16.97	54.0	-26.76	AV	325.00	100	Horizontal	N/A
2	2402.000	57.91	-12.03	74.0	-16.09	Peak	54.00	100	Horizontal	N/A
2**	2402.000	47.79	-12.03	54.0	-6.21	AV	54.00	100	Horizontal	N/A
3	2480.000	45.29	-11.45	74.0	-28.71	Peak	70.00	100	Horizontal	N/A
3**	2480.000	51.19	-11.45	54.0	-2.81	AV	70.00	100	Horizontal	N/A
4	2510.000	44.77	-11.71	74.0	-29.23	Peak	6.00	100	Horizontal	N/A
4**	2510.000	39.57	-11.71	54.0	-14.43	AV	6.00	100	Horizontal	N/A
5	3347.000	45.69	-7.59	74.0	-28.31	Peak	179.00	100	Horizontal	N/A
5**	3347.000	40.59	-7.59	54.0	-13.41	AV	179.00	100	Horizontal	N/A
6	15237.188	56.38	2.04	74.0	-17.62	Peak	69.00	100	Horizontal	Pass
6**	15237.188	40.24	2.04	54.0	-13.76	AV	69.00	100	Horizontal	Pass

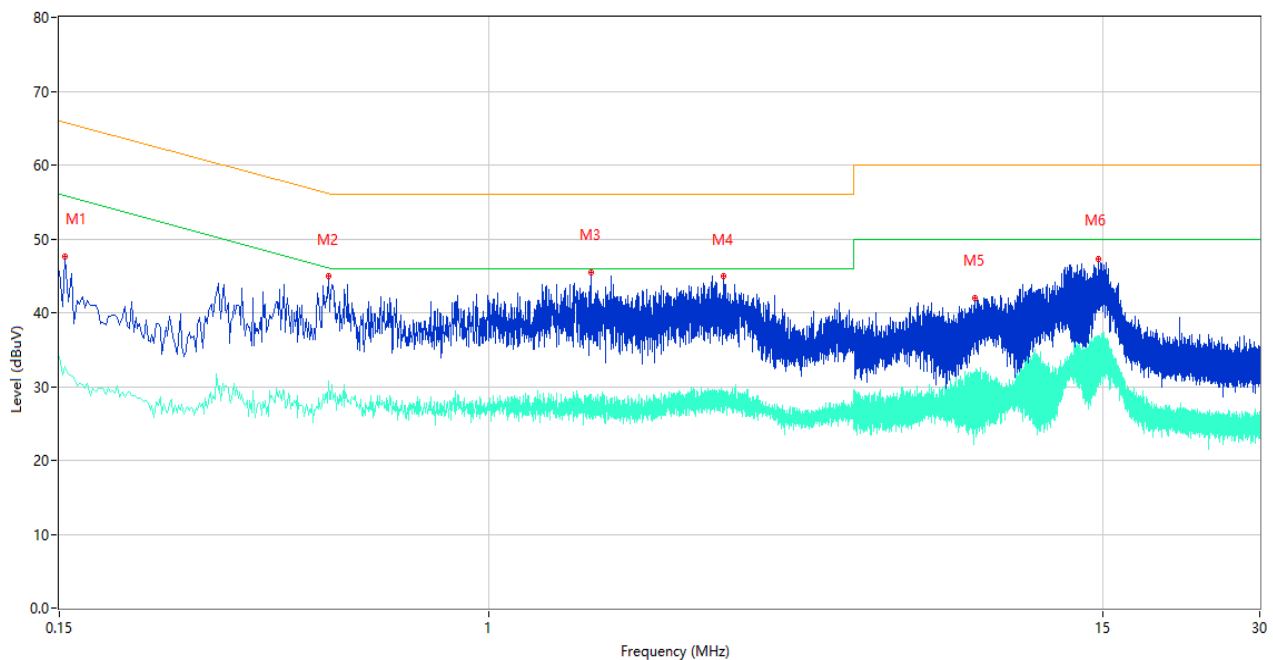
A.2 Conducted Emission

Test Data and Plots

The GSM 850 MHz Test Mode

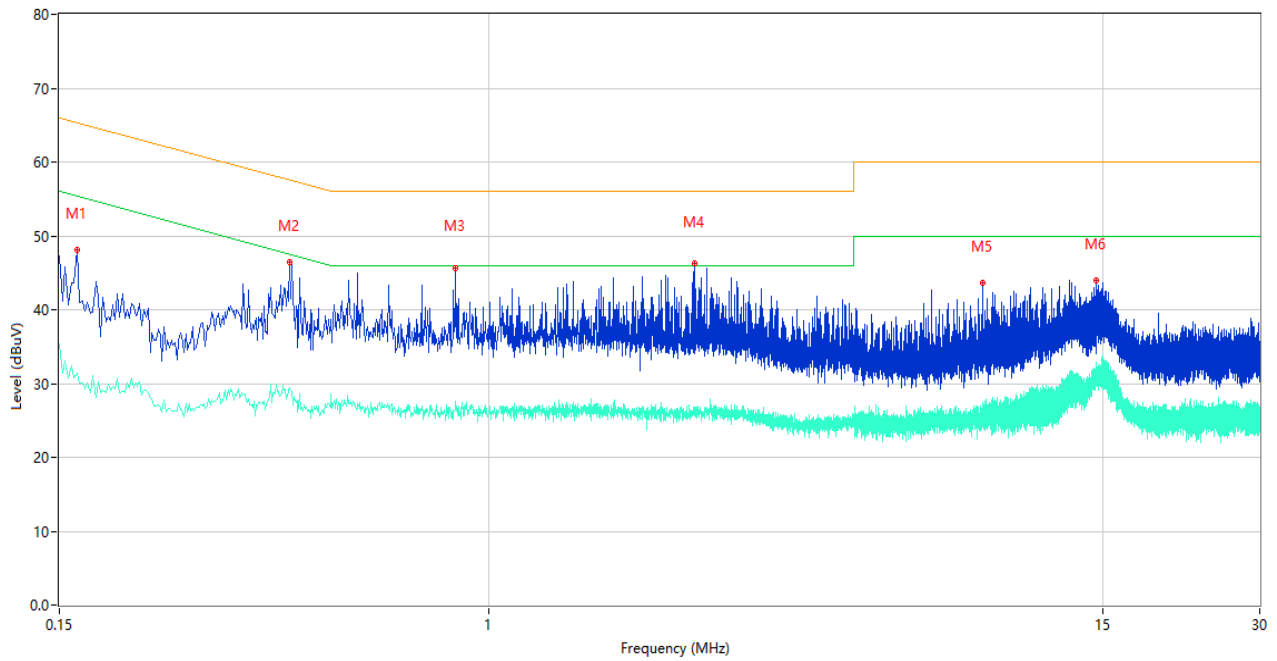
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst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

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	45.56	10.41	66.00	-20.44	Peak	L	Pass
1**	0.150	34.06	10.41	56.00	-21.94	AV	L	Pass
2	0.492	44.98	10.29	56.13	-11.15	Peak	L	Pass
2**	0.492	30.69	10.29	46.13	-15.44	AV	L	Pass
3	1.572	45.44	10.24	56.00	-10.56	Peak	L	Pass
3**	1.572	28.97	10.24	46.00	-17.03	AV	L	Pass
4	2.816	44.90	10.29	56.00	-11.10	Peak	L	Pass
4**	2.816	29.35	10.29	46.00	-16.65	AV	L	Pass
5	8.546	42.05	10.35	60.00	-17.95	Peak	L	Pass
5**	8.546	26.32	10.35	50.00	-23.68	AV	L	Pass
6	14.696	47.27	10.40	60.00	-12.73	Peak	L	Pass
6**	14.696	35.93	10.40	50.00	-14.07	AV	L	Pass

A.2.2 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.162	48.09	10.40	65.36	-17.27	Peak	N	Pass
1**	0.162	31.38	10.40	55.36	-23.98	AV	N	Pass
2	0.414	46.46	10.31	57.57	-11.11	Peak	N	Pass
2**	0.414	29.43	10.31	47.57	-18.14	AV	N	Pass
3	0.862	45.55	10.24	56.00	-10.45	Peak	N	Pass
3**	0.862	27.68	10.24	46.00	-18.32	AV	N	Pass
4	2.480	46.23	10.28	56.00	-9.77	Peak	N	Pass
4**	2.480	26.64	10.28	46.00	-19.36	AV	N	Pass
5	8.812	43.67	10.37	60.00	-16.33	Peak	N	Pass
5**	8.812	27.44	10.37	50.00	-22.56	AV	N	Pass
6	14.590	43.94	10.40	60.00	-16.06	Peak	N	Pass
6**	14.590	32.41	10.40	50.00	-17.59	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ19C0149-AE-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ19C0149-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ19C0149-AI.PDF”.

--END OF REPORT--