

FCC

EMC

TEST REPORT

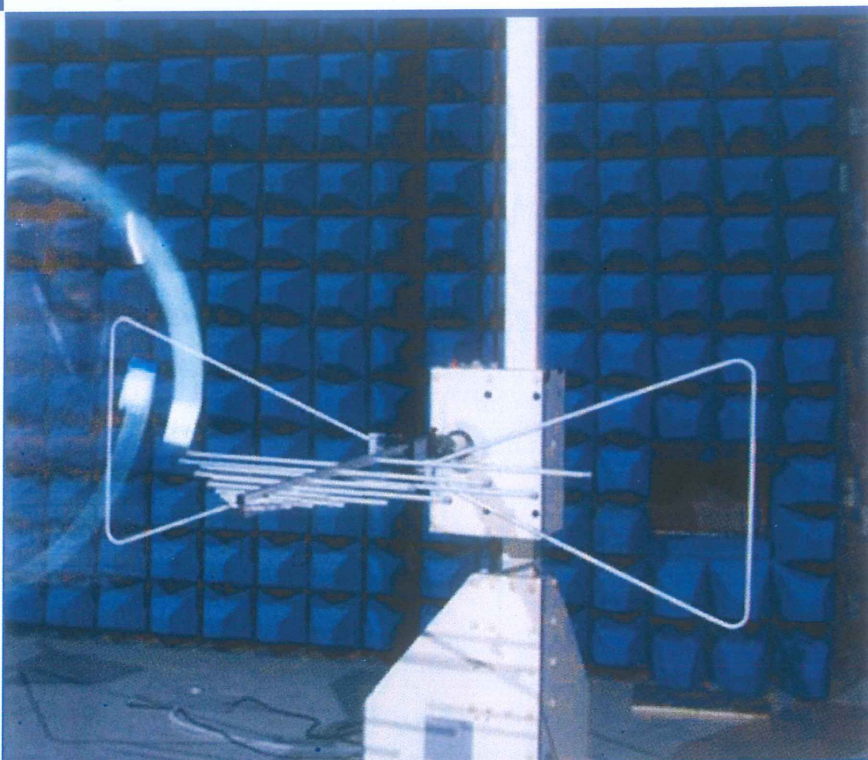
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Y50 FDD-LTE Smartphone

ISSUED TO
TP-LINK Technologies Co., Ltd.

Building 24-1F/3F/4F/5F, 28-1F/2F/3F/4F Science and Technology
Park, Shennan Road, Nanshan District, Shenzhen City, Guangdong
Province, P.R. China



Tested by: Xia Long
Xia Long
(Engineer)

Date: Apr. 06, 2017

Approved by: Wei Yanquan
Wei Yanquan
(Chief Engineer)

Date: Apr. 06, 2017

Report No.: BL-SZ1720011-401

EUT Name: Y50 FDD-LTE Smartphone

Model Name: TP803C

Brand Name: neffos

Test Standard: 47 CFR Part 15 Subpart B

FCC ID: TE7Y50V1

Test Conclusion: Pass

Test Date: Mar. 22, 2017 ~ Mar. 28, 2017

Date of Issue: Apr. 06, 2017

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Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Apr. 06, 2017</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

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	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.</p> <p>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.</p>
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~25°C
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v6.3.
- (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	TP-LINK Technologies Co., Ltd.
Address	Building 24-1F/3F/4F/5F, 28-1F/2F/3F/4F Science and Technology Park, Shennan Road, Nanshan District, Shenzhen City, Guangdong Province, P.R. China

2.2 Manufacturer Information

Manufacturer	TP-LINK Technologies Co., Ltd.
Address	Building 24-1F/3F/4F/5F, 28-1F/2F/3F/4F Science and Technology Park, Shennan Road, Nanshan District, Shenzhen City, Guangdong Province, P.R. China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Y50 FDD-LTE Smartphone
Model Name Under Test	TP803C
Series Model Name	TP803C, TP803CXXYY
Description of Model name differentiation	The Circuit, PCB Layout, Electrical Parts and Outlook of TP803CXXYY are identical to TP803C. (XX= 11 or 21 or 31 (11 indicates Pearl White, 21 indicates Dark Gray, 31 indicates Sunny Yellow); YY indicates different national.)
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A
The Highest Speed of Processor	N/A
Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network FDD LTE Band 2/4/7 Bluetooth, WIFI, FM, GPS, GLONASS

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	neffos
	Model No.	NBL-46A2020
	Serial No.	N/A
	Capacitance	2020 mAh
	Rated Voltage	3.8 V
	Limit Charge Voltage	4.35 V
Ancillary Equipment 2	Adapter	
	Brand Name	neffos
	Model Name	N050100-2B3
	Rated Input	100-240 V~, 50/60 Hz, 300 mA
	Rated Output	5 V=, 1 A
Ancillary Equipment 3	USB Cable	
	Length(Approx.)	100 cm

2.6 Technical Information

Note: Not applicable.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	FCC 47 CFR Part 15 Subpart B (10-1-15 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)	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~26°C	AC 120 V/60 Hz from Adapter or DC 3.8 V from Battery	50%-55%	100 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&SCHWARZ	ESRP	101036	2016.07.05	2017.07.04	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-977	2016.07.19	2018.07.18	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2015.07.22	2017.07.21	<input type="checkbox"/>
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	N/A	2016.08.09	2018.08.08	<input checked="" type="checkbox"/>

Radiated Emission Test For Frequency Above 1 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2016.09.09	2017.09.08	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2015.07.22	2017.07.21	<input type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2015.07.22	2017.07.21	<input checked="" type="checkbox"/>
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2019.02.20	<input checked="" type="checkbox"/>

Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2016.07.05	2017.07.04	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NSLK 8127	8127-687	2016.07.05	2017.07.04	<input checked="" type="checkbox"/>
Shielded Enclosure	ChangNing	CN-130701	130703	N/A	N/A	<input checked="" type="checkbox"/>

4.3 Test Enclosure list

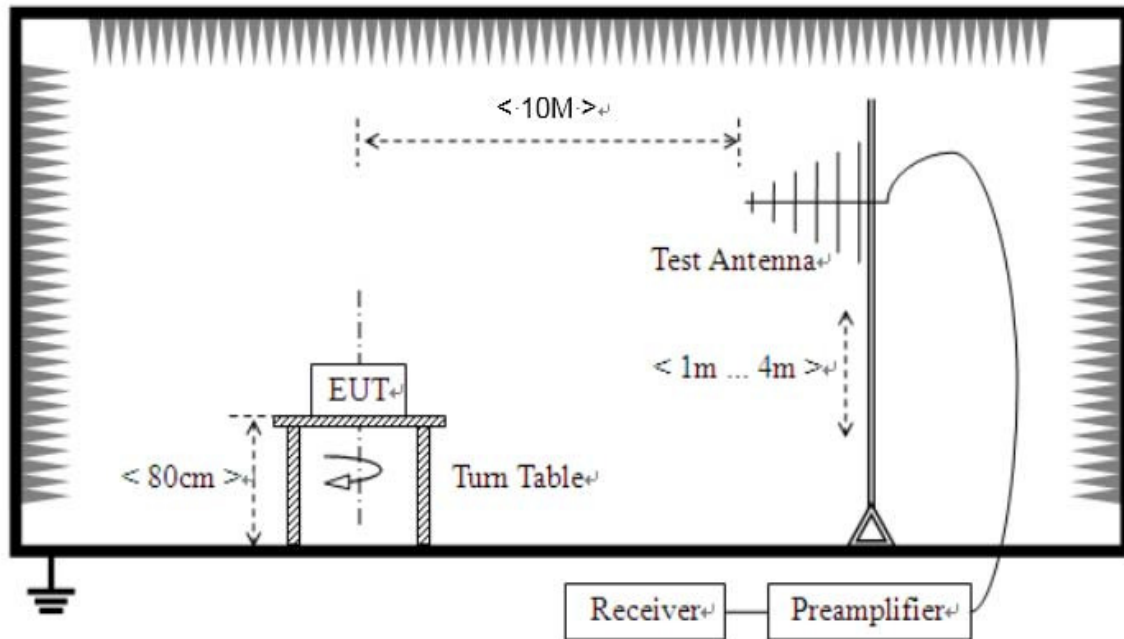
Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	<input type="checkbox"/>
Laptop	Apple	A1465	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Printer	HP	DESKJET 1000	N/A	N/A	N/A	<input type="checkbox"/>
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	<input type="checkbox"/>
Mouse	Logitech	M100	N/A	N/A	N/A	<input type="checkbox"/>
USB disk	Kingston	N/A	N/A	N/A	N/A	<input type="checkbox"/>
TF Card	Kingston	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
VGA Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
HDMI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
DVI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
Coaxial video cable	N/A	N/A	N/A	2.0 m	Shielded with core	<input type="checkbox"/>
iPhone	Apple	A1586	N/A	N/A	N/A	<input type="checkbox"/>
Phone	MI	M4	N/A	N/A	N/A	<input type="checkbox"/>
Bluetooth Earphone	SAMSUNG	Gear Circle	N/A	N/A	N/A	<input checked="" type="checkbox"/>
GPS/GLONASS Vector signal generator	R&S	N5172B EXG	N/A	N/A	N/A	<input checked="" type="checkbox"/>
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Earphone	N/A	OPPO	N/A	1.1 m	N/A	<input type="checkbox"/>
Car Battery	Camel	55530	N/A	N/A	12 V/55 Ah	<input type="checkbox"/>
Artificial load	N/A	N/A	N/A	N/A	2.5 Ω/100 W	<input type="checkbox"/>
Artificial load	N/A	N/A	N/A	N/A	5 Ω/100 W	<input type="checkbox"/>
Electronic Load	ITECH	IT8511	N/A	N/A	N/A	<input type="checkbox"/>
USB Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>
DC Power Supply	ITECH	IT6863A	60001401068 7210006	N/A	N/A	<input type="checkbox"/>
LCD Monitor	SAMSUNG	UA32C4000P	N/A	N/A	N/A	<input type="checkbox"/>
LCD Monitor	Dell	U241HB	N/A	N/A	N/A	<input type="checkbox"/>
RJ45 Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input type="checkbox"/>

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 + Earphone + BT Link + WIFI Link + GPS RX
TC02	<u>The EDGE 850 MHz Test Mode</u> EDGE 850 Link + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GLONASS RX
TC03	<u>The GSM 1900 Test Mode</u> GSM 1900 Link + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GPS RX
TC04	<u>The EDGE 1900 MHz Test Mode</u> EDGE 1900 Link + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GLONASS RX
TC05	<u>The WCDMA Band 2 Test Mode</u> WCDMA Band 2 + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GPS RX
TC06	<u>The WCDMA Band 4 Test Mode</u> WCDMA Band 4 + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GLONASS RX
TC07	<u>The WCDMA Band 5 test mode</u> WCDMA Band 5 + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GPS RX
TC08	<u>The FDD LTE Band 2 Test Mode</u> LTE Band 2 Link + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GLONASS RX
TC09	<u>The FDD LTE Band 4 Test Mode</u> LTE Band 4 Link + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GPS RX
TC10	<u>The FDD LTE Band 7 Test Mode</u> LTE Band 7 Link + Adapter + USB Cable + Battery + Earphone + BT Link + WIFI Link + GLONASS RX
TC11	<u>The Idle Test Mode</u> GSM 850(Idle) + Battery + TF Card + Adapter + USB Cable + Earphone + FM RX
Amusement Test Mode	
TC12	<u>The USB Test Mode</u> EUT + Battery + TF Card + Earphone + USB Cable + Laptop
TC13	<u>The Camera Test Mode</u> EUT + Battery + TF Card + Adapter + USB Cable + Earphone
TC14	<u>The Video Play Test Mode</u> EUT + Battery + TF Card + Adapter + USB Cable + Earphone

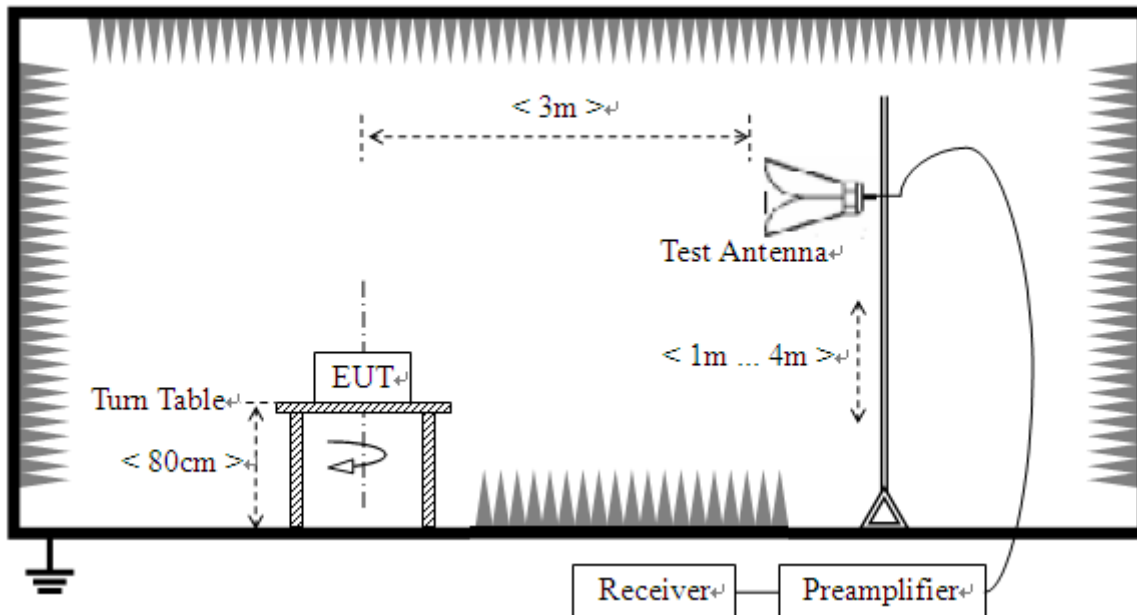
4.5 Test Setups

Test Setup 1



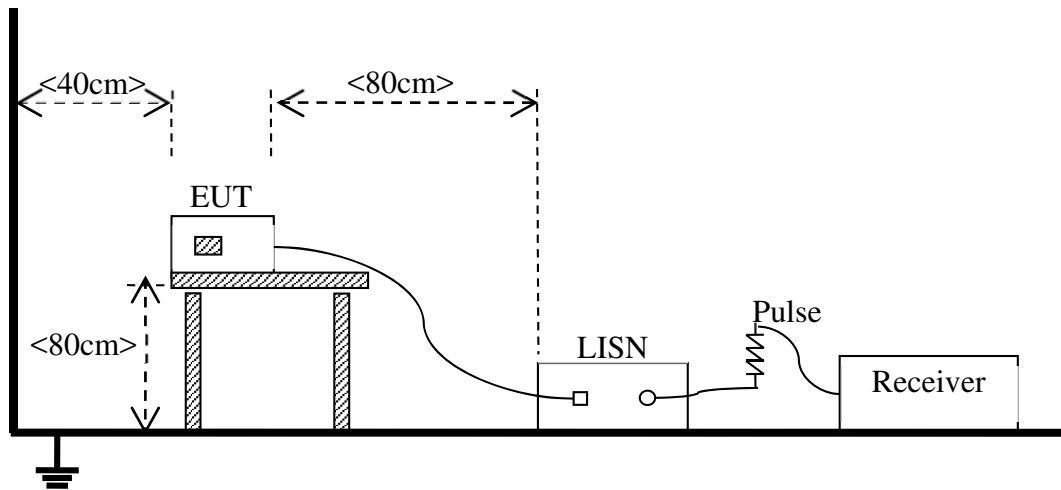
(For Radiated Emission Test (30 MHz-1 GHz))

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~TC14 ^{Note}
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01~TC14 ^{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 10 m)		Class A (at 10 m)	
	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)
30 - 88	100	30	90	39
88 - 216	150	33.5	150	43.5
216 - 960	200	36	210	46.4
Above 960	500	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.

5.1.1.2 Test Setup

Refer to 4.5 section (test setups1 to test setups2) 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.

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.

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

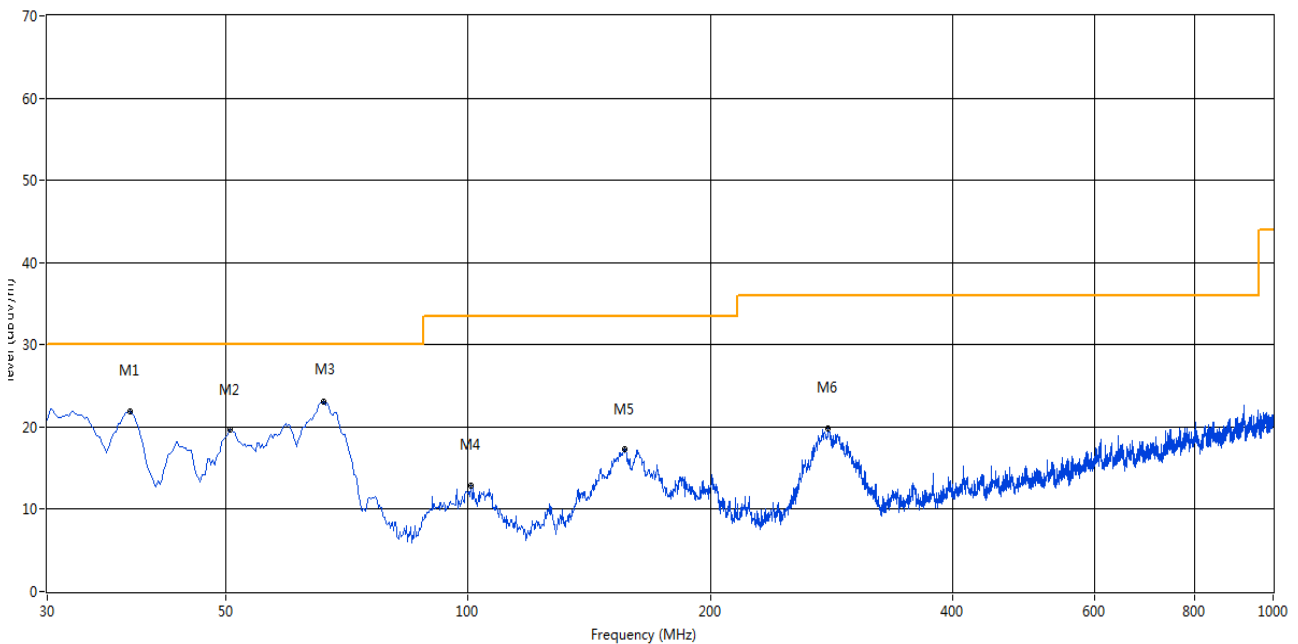
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: This frequency which near the multiplier of 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

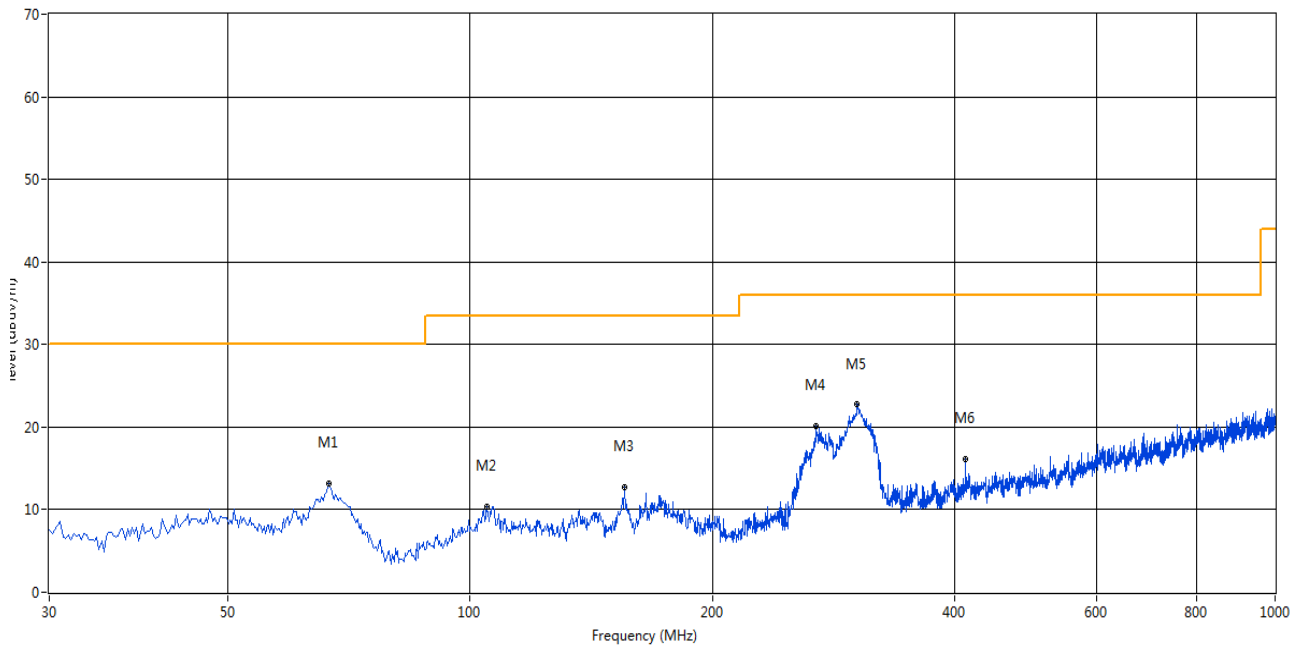
The GSM 850 MHz Test Mode

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



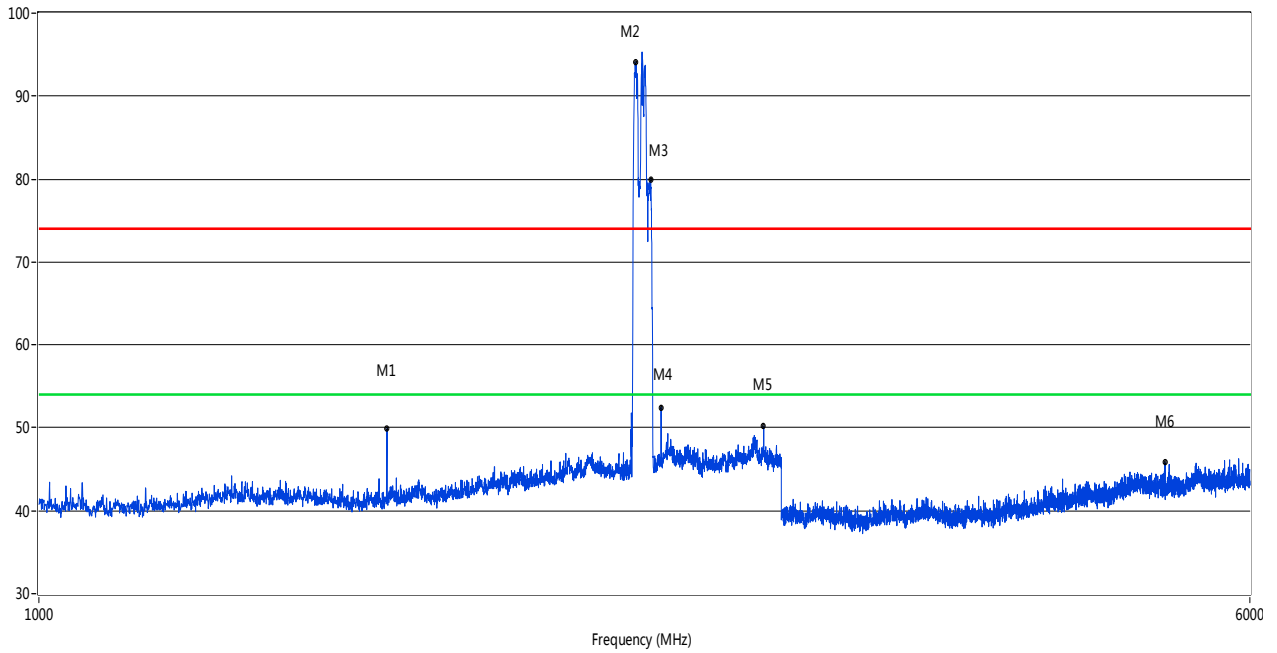
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	38.000	21.98	-15.46	30.0	8.02	Peak	5.00	100	Vertical	Pass
2	50.607	19.61	-13.97	30.0	10.39	Peak	4.00	100	Vertical	Pass
3	66.123	23.12	-16.64	30.0	6.88	Peak	0.00	300	Vertical	Pass
4	100.792	12.91	-16.12	33.5	20.59	Peak	2.00	100	Vertical	Pass
5	156.311	17.24	-19.17	33.5	16.26	Peak	1.00	100	Vertical	Pass
6	280.197	19.81	-13.89	36.0	16.19	Peak	3.00	100	Vertical	Pass

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



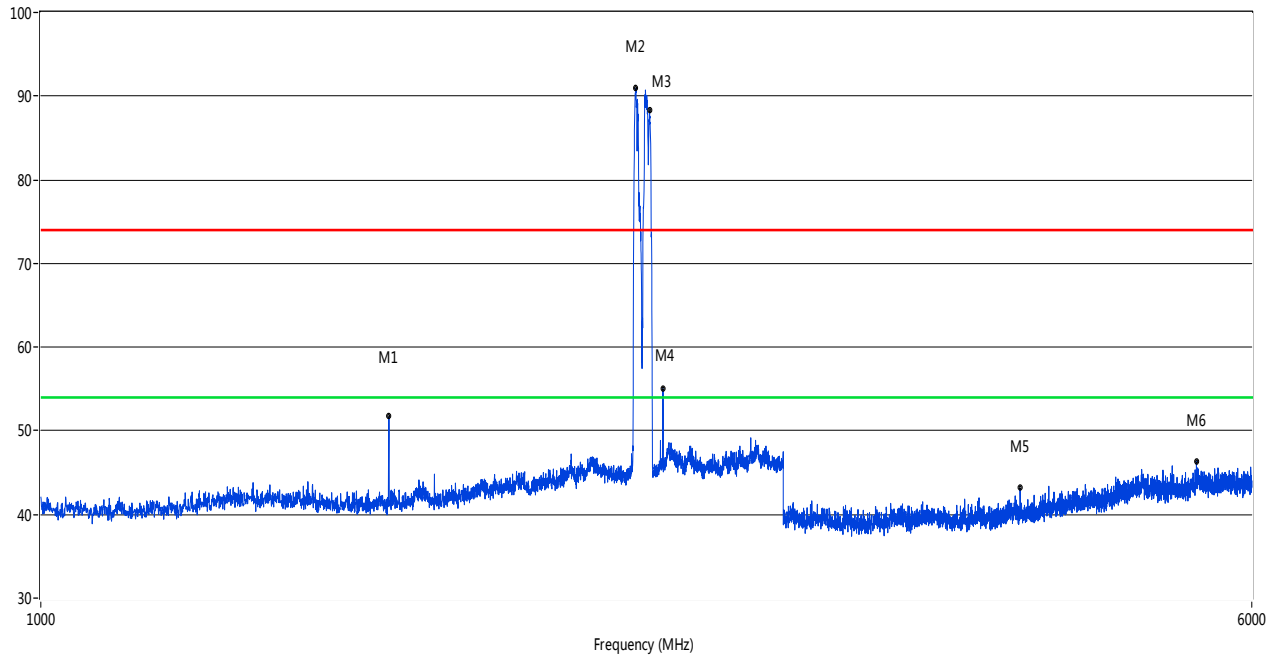
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	66.851	13.17	-16.93	30.0	16.83	Peak	1.00	200	Horizontal	Pass
2	104.914	10.42	-15.66	33.5	23.08	Peak	5.00	200	Horizontal	Pass
3	155.584	12.71	-19.16	33.5	20.79	Peak	4.00	200	Horizontal	Pass
4	269.288	20.18	-14.13	36.0	15.82	Peak	91.00	300	Horizontal	Pass
5	302.502	22.75	-13.31	36.0	13.25	Peak	1.00	300	Horizontal	Pass
6	412.569	16.16	-10.58	36.0	19.84	Peak	3.00	200	Horizontal	Pass

A.1.3 Test Antenna Vertical, 1 GHz – 6 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1674.00	49.91	-2.99	74.0	24.09	Peak	316.70	100	Vertical	N/A
2	2416.50	94.11	0.82	74.0	-20.11	Peak	293.20	100	Vertical	N/A
3	2472.50	79.88	1.41	74.0	-5.88	Peak	2.40	100	Vertical	N/A
4	2511.00	52.47	2.25	74.0	21.53	Peak	334.50	100	Vertical	N/A
5	2922.50	50.18	3.90	74.0	23.82	Peak	107.20	100	Vertical	Pass
6	5292.00	45.81	9.85	74.0	28.19	Peak	346.20	100	Vertical	Pass

A.1.4 Test Antenna Horizontal, 1 GHz – 6 GHz

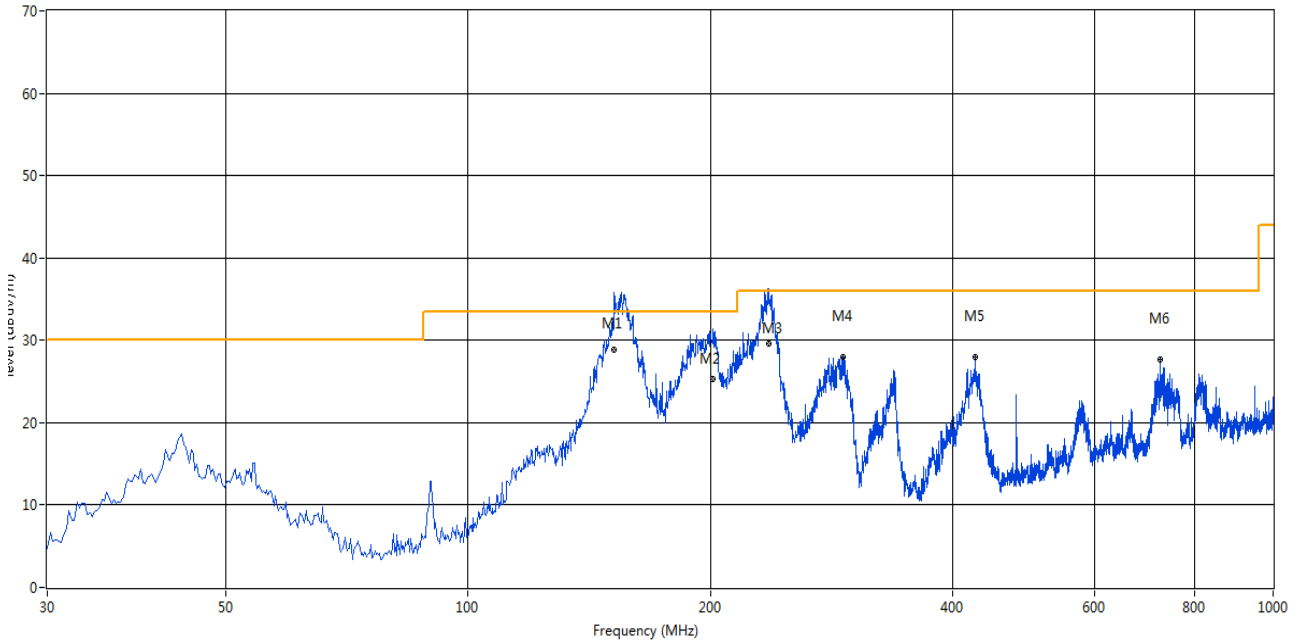


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1674.00	51.70	-2.99	74.0	22.30	Peak	298.80	100	Horizontal	N/A
2	2411.00	90.95	0.99	74.0	-16.95	Peak	261.50	100	Horizontal	N/A
3	2461.50	88.38	1.15	74.0	-14.38	Peak	269.50	100	Horizontal	N/A
4	2510.50	54.98	2.18	74.0	19.02	Peak	327.90	100	Horizontal	N/A
5	4258.50	43.18	8.05	74.0	30.82	Peak	214.30	100	Horizontal	Pass
6	5529.00	46.35	10.87	74.0	27.65	Peak	147.50	100	Horizontal	Pass

Test Data and Plots

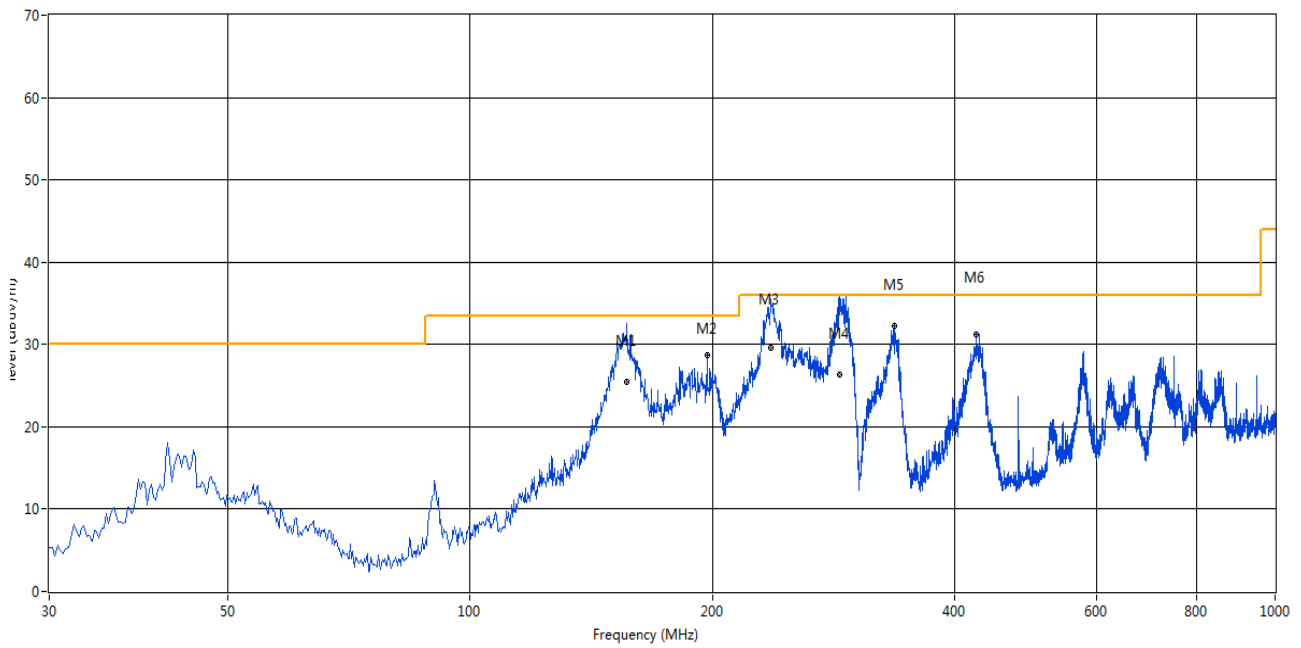
The USB Test Mode

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



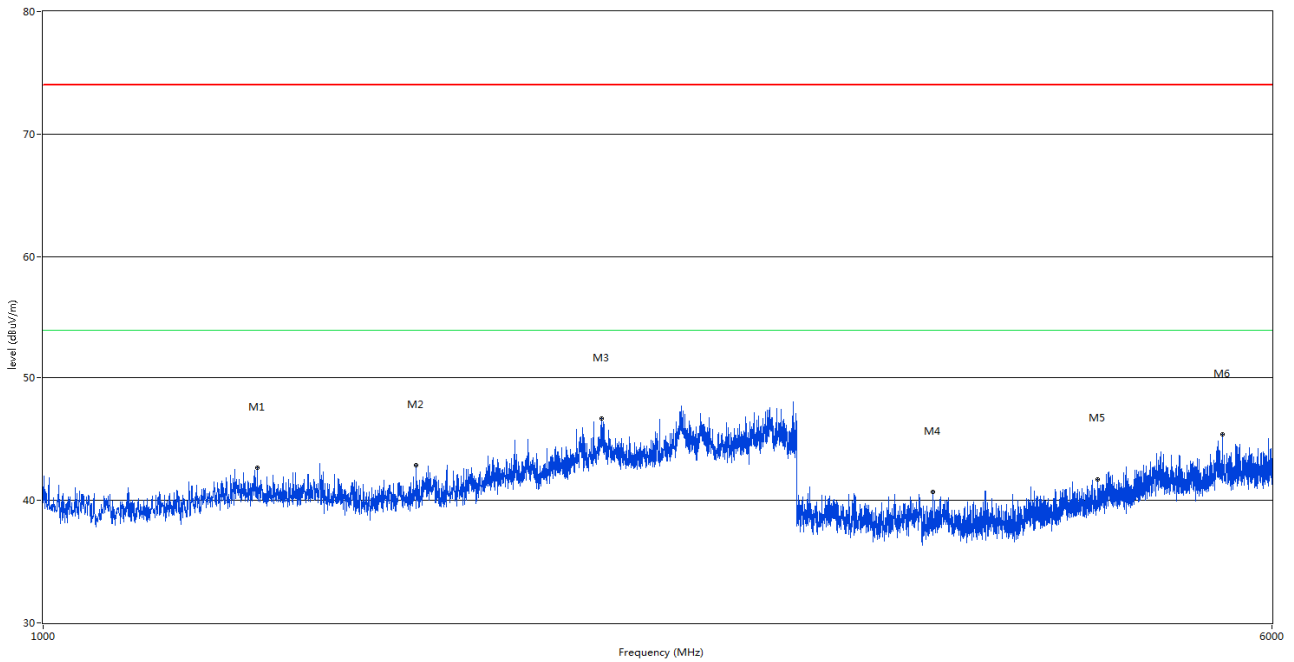
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	151.489	35.67	-19.29	33.5	-2.17	Peak	264.00	224.00	Vertical	N/A
1*	151.489	28.91	-19.29	33.5	4.59	QP	264.00	224.00	Vertical	Pass
2	201.274	31.42	-15.93	33.5	2.08	Peak	0.00	100.00	Vertical	N/A
2*	201.274	25.26	-15.93	33.5	8.24	QP	0.00	100.00	Vertical	Pass
3	236.160	36.06	-15.06	36.0	-0.06	Peak	164.00	151.00	Vertical	N/A
3*	236.160	29.59	-15.06	36.0	6.41	QP	164.00	151.00	Vertical	Pass
4	292.562	28.02	-13.40	36.0	7.98	Peak	222.00	100	Vertical	Pass
5	426.631	27.96	-10.28	36.0	8.04	Peak	304.00	100	Vertical	Pass
6	723.862	27.67	-5.21	36.0	8.33	Peak	318.00	300	Vertical	Pass

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



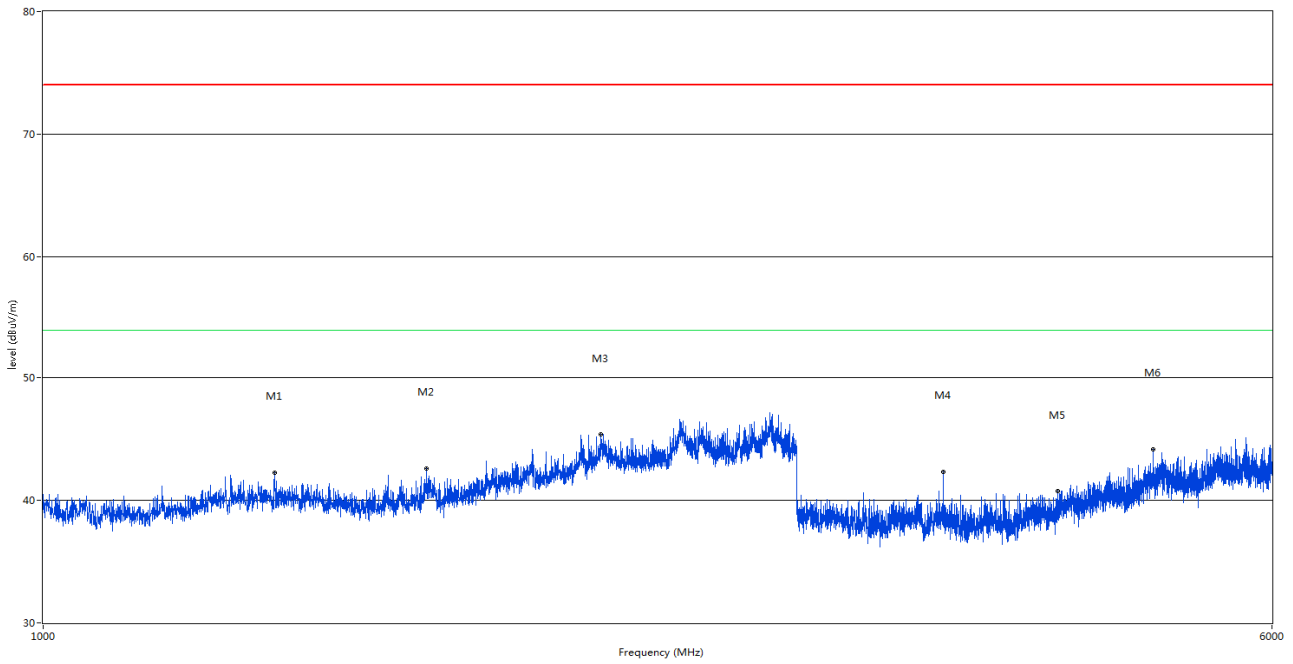
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	156.084	32.12	-19.18	33.5	1.38	Peak	24.00	397.00	Horizontal	N/A
1*	156.084	25.44	-19.18	33.5	8.06	QP	24.00	397.00	Horizontal	Pass
2	196.798	28.76	-16.14	33.5	4.74	Peak	1.00	400	Horizontal	Pass
3	235.961	35.50	-15.04	36.0	0.50	Peak	4.00	400.00	Horizontal	N/A
3*	235.961	29.60	-15.04	36.0	6.40	QP	4.00	400.00	Horizontal	Pass
4	287.498	33.16	-13.72	36.0	2.84	Peak	3.00	326.00	Horizontal	N/A
4*	287.498	26.33	-13.72	36.0	9.67	QP	3.00	326.00	Horizontal	Pass
5	336.928	32.24	-12.19	36.0	3.76	Peak	1.00	300	Horizontal	Pass
6	425.419	31.28	-10.25	36.0	4.72	Peak	5.00	200	Horizontal	Pass

A.1.7 Test Antenna Vertical, 1 GHz – 6 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1366.500	42.64	-2.82	74.0	31.36	Peak	70.60	100	Vertical	Pass
2	1723.000	42.87	-2.38	74.0	31.13	Peak	46.80	100	Vertical	Pass
3	2257.500	46.67	2.11	74.0	27.33	Peak	315.70	100	Vertical	Pass
4	3660.000	40.70	6.42	74.0	33.30	Peak	356.90	100	Vertical	Pass
5	4652.250	41.75	8.84	74.0	32.25	Peak	314.90	100	Vertical	Pass
6	5580.000	45.39	10.38	74.0	28.61	Peak	45.50	100	Vertical	Pass

A.1.8 Test Antenna Horizontal, 1 GHz – 6 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1402.000	42.23	-3.12	74.0	31.77	Peak	263.80	100	Horizontal	Pass
2	1749.000	42.59	-1.58	74.0	31.41	Peak	269.60	100	Horizontal	Pass
3	2256.000	45.41	2.09	74.0	28.59	Peak	193.40	100	Horizontal	Pass
4	3716.250	42.32	6.97	74.0	31.68	Peak	106.90	100	Horizontal	Pass
5	4293.750	40.45	7.98	74.0	33.55	Peak	129.70	100	Horizontal	Pass
6	5046.000	44.17	10.11	74.0	29.83	Peak	190.70	100	Horizontal	Pass

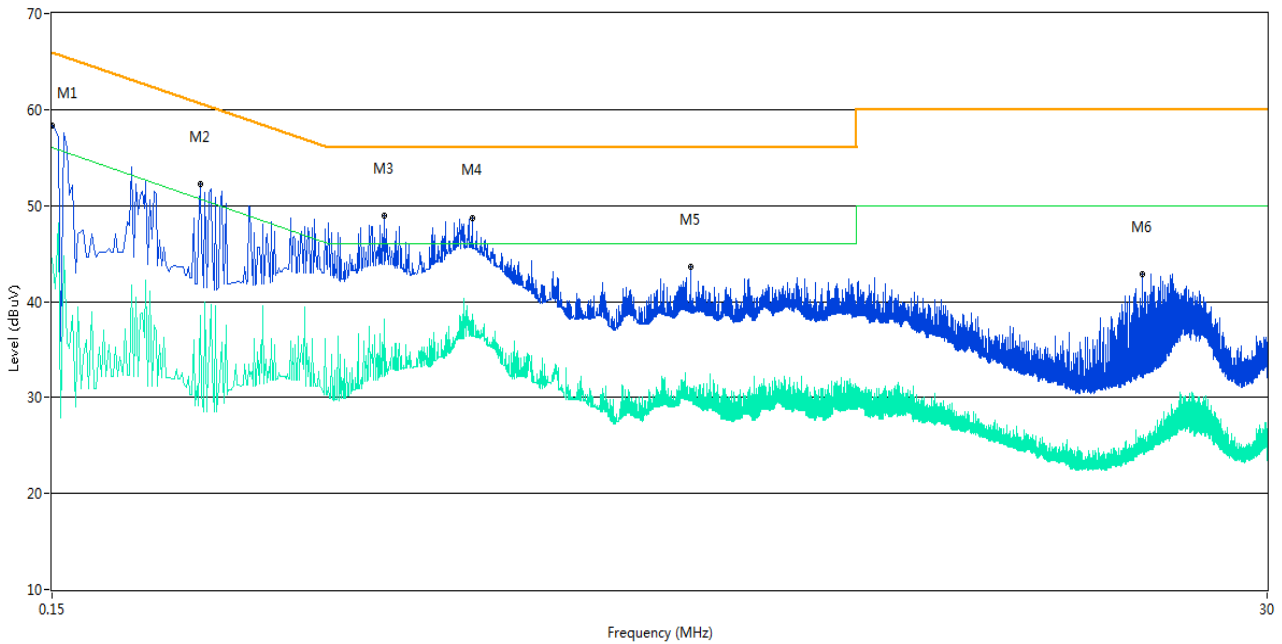
A.2 Conducted Emission

Test Data and Plots

The GSM 850 MHz Test Mode

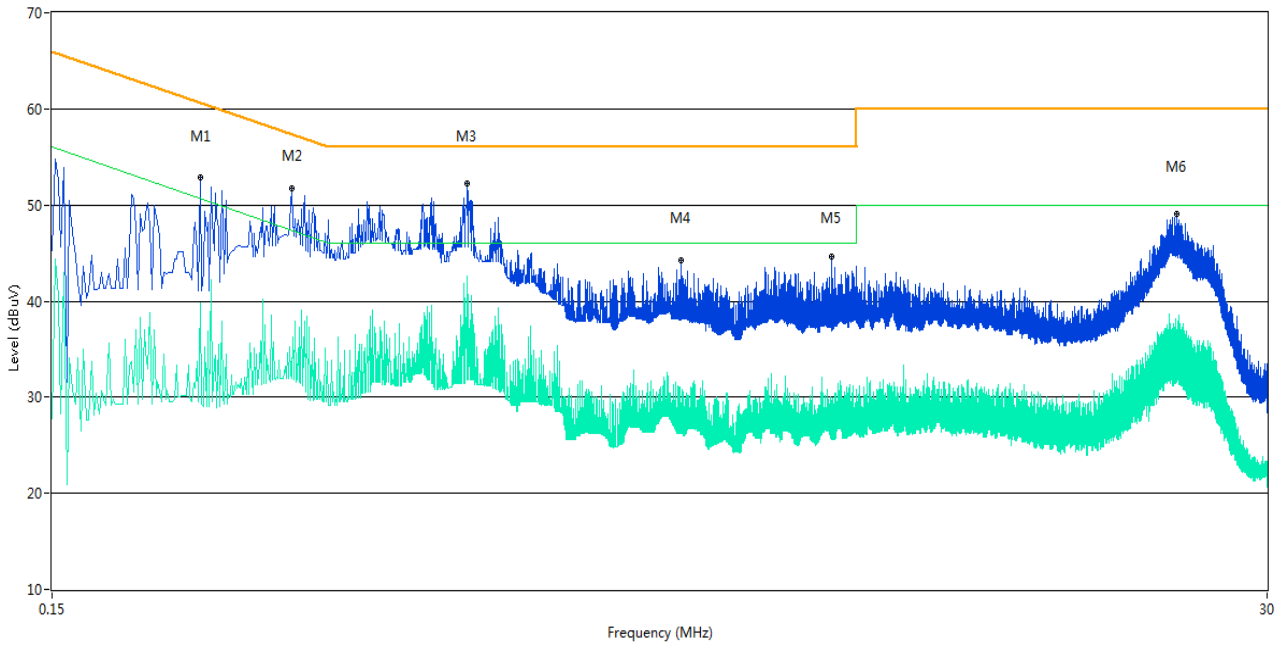
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst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

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	58.3	11.00	66.0	7.70	Peak	L Line	Pass
1**	0.150	44.5	11.00	56.0	11.50	AV	L Line	Pass
2	0.286	52.2	11.00	60.6	8.40	Peak	L Line	Pass
2**	0.286	38.5	11.00	50.6	12.10	AV	L Line	Pass
3	0.640	48.9	11.00	56.0	7.10	Peak	L Line	Pass
3**	0.640	38.2	11.00	46.0	7.80	AV	L Line	Pass
4	0.938	48.7	11.00	56.0	7.30	Peak	L Line	Pass
4**	0.938	38.7	11.00	46.0	7.30	AV	L Line	Pass
5	2.430	43.6	11.00	56.0	12.40	Peak	L Line	Pass
5**	2.430	30.9	11.00	46.0	15.10	AV	L Line	Pass
6	17.436	42.8	11.00	60.0	17.20	Peak	L Line	Pass
6**	17.436	25.6	11.00	50.0	24.40	AV	L Line	Pass

A.2.2 N Phase

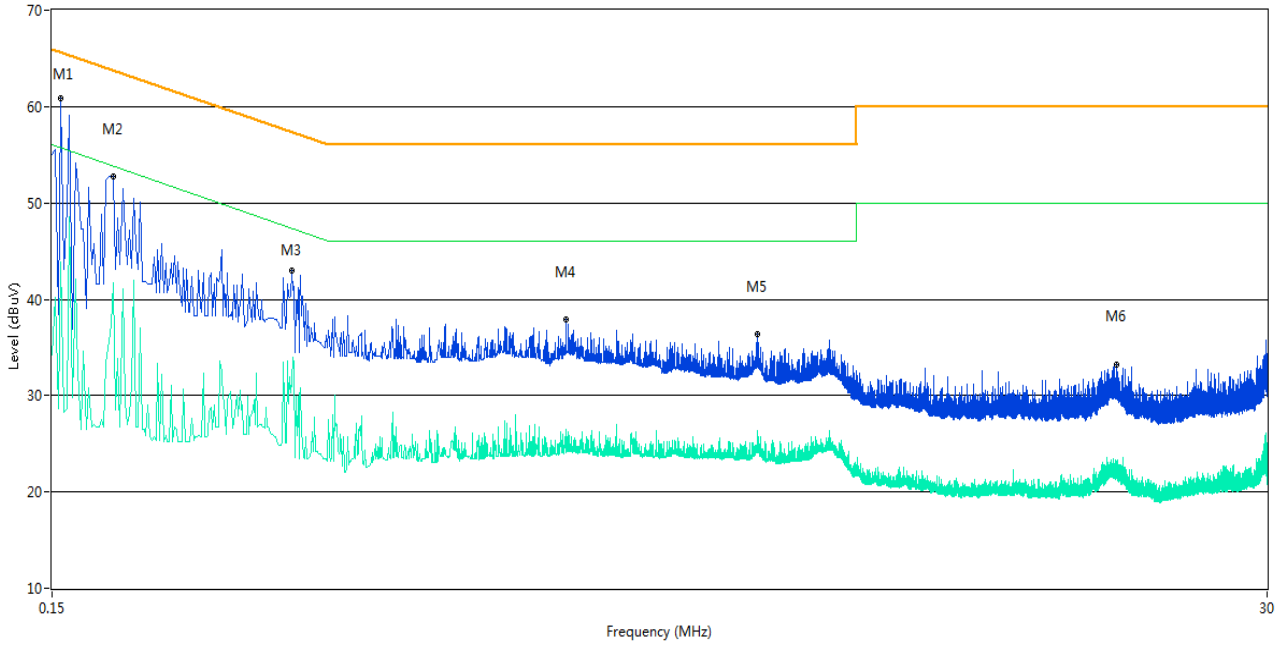


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.286	52.9	11.00	60.6	7.70	Peak	N Line	Pass
1**	0.286	39.8	11.00	50.6	10.80	AV	N Line	Pass
2	0.426	51.7	11.00	57.3	5.60	Peak	N Line	Pass
2**	0.426	31.9	11.00	47.3	15.40	AV	N Line	Pass
3	0.918	52.2	11.00	56.0	3.80	Peak	N Line	Pass
3**	0.918	42.7	11.00	46.0	3.30	AV	N Line	Pass
4	2.328	44.3	11.00	56.0	11.70	Peak	N Line	Pass
4**	2.328	29.4	11.00	46.0	16.60	AV	N Line	Pass
5	4.494	44.6	11.00	56.0	11.40	Peak	N Line	Pass
5**	4.494	29.6	11.00	46.0	16.40	AV	N Line	Pass
6	20.266	49.1	11.00	60.0	10.90	Peak	N Line	Pass
6**	20.266	33.1	11.00	50.0	16.90	AV	N Line	Pass

Test Data and Plots

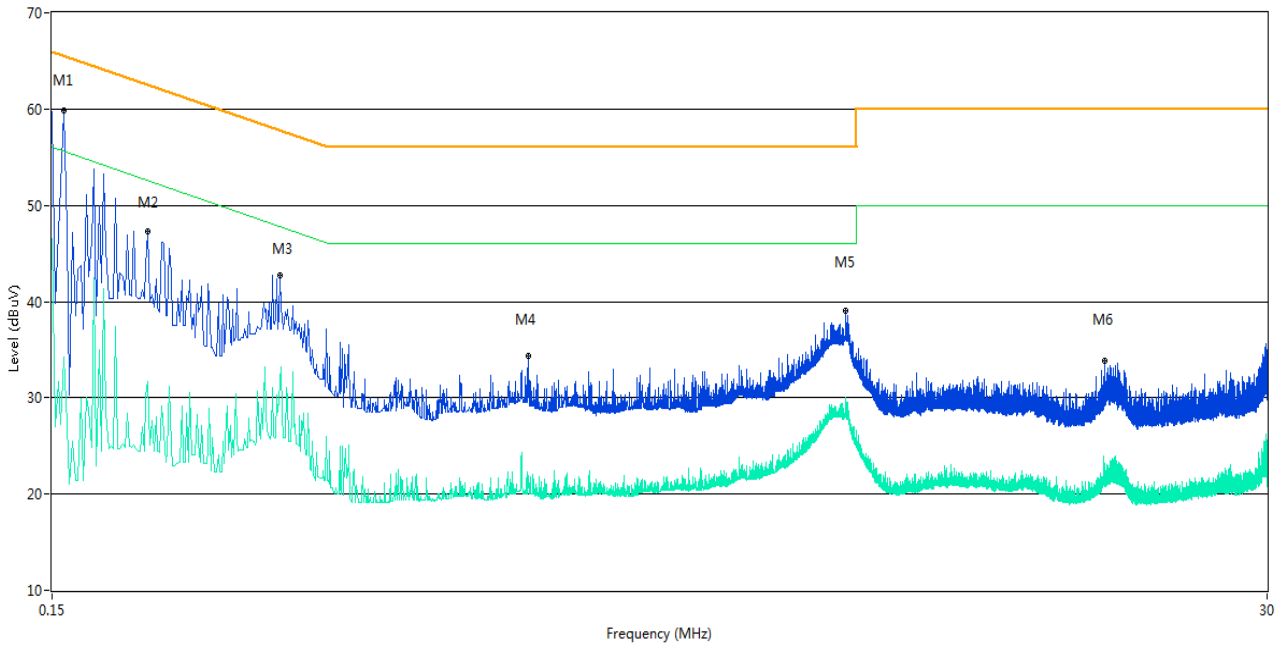
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.156	60.9	11.00	65.7	4.80	Peak	L Line	Pass
1**	0.156	43.9	11.00	55.7	11.80	AV	L Line	Pass
2	0.196	52.7	11.00	63.8	11.10	Peak	L Line	Pass
2**	0.196	41.7	11.00	53.8	12.10	AV	L Line	Pass
3	0.426	43.0	11.00	57.3	14.30	Peak	L Line	Pass
3**	0.426	31.4	11.00	47.3	15.90	AV	L Line	Pass
4	1.410	37.9	11.00	56.0	18.10	Peak	L Line	Pass
4**	1.410	26.5	11.00	46.0	19.50	AV	L Line	Pass
5	3.250	36.4	11.00	56.0	19.60	Peak	L Line	Pass
5**	3.250	26.3	11.00	46.0	19.70	AV	L Line	Pass
6	15.556	33.2	11.00	60.0	26.80	Peak	L Line	Pass
6**	15.556	22.9	11.00	50.0	27.10	AV	L Line	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.158	59.9	11.00	65.6	5.70	Peak	N Line	Pass
1**	0.158	34.2	11.00	55.6	21.40	AV	N Line	Pass
2	0.228	47.3	11.00	62.5	15.20	Peak	N Line	Pass
2**	0.228	31.7	11.00	52.5	20.80	AV	N Line	Pass
3	0.406	42.8	11.00	57.7	14.90	Peak	N Line	Pass
3**	0.406	31.7	11.00	47.7	16.00	AV	N Line	Pass
4	1.200	34.4	11.00	56.0	21.60	Peak	N Line	Pass
4**	1.200	21.7	11.00	46.0	24.30	AV	N Line	Pass
5	4.782	39.0	11.00	56.0	17.00	Peak	N Line	Pass
5**	4.782	30.1	11.00	46.0	15.90	AV	N Line	Pass
6	14.804	33.9	11.00	60.0	26.10	Peak	N Line	Pass
6**	14.804	23.3	11.00	50.0	26.70	AV	N Line	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-SZ1720011-AE.PDF".

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ1720011-AW.PDF".

ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL-SZ1720011-AI.PDF".

--END OF REPORT--