FCC EMC TEST REPORT

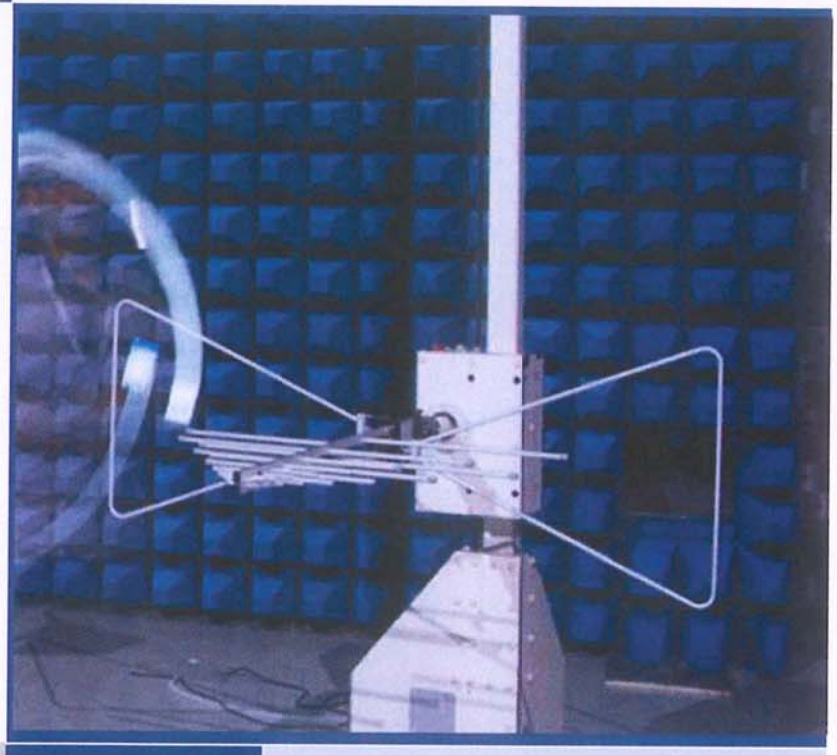
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

4G Smart phone

ISSUED TO
CommuniTake Technologies Ltd.

Yokneam Star Building, High-Tech Park, POB 344, Yokneam, Israel 2069205



Tested by: Xia Long
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(Engineer)
Date Jan.08.2020

Approved by:
Wei Yanquan
(Chief Engineer)
Date Jan.08.2020

Report No.:	BL-SZ1970095-401
EUT Name:	4G Smart phone
Model Name:	CTGED01
Brand Name:	CommuniTake
Test Standard:	47 CFR Part 15 Subpart B
FCC ID:	2AUHC-CTGED01A
Test Conclusion:	Pass
Test Date:	Jul. 04, 2019 ~ Jul. 15, 2019
Date of Issue:	Jan. 08, 2020

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Revision History

Version	Issue Date	Revisions Content
Rev. 01	Jan. 08, 2020	Initial Issue

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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 organizatin 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℃ to 25℃
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 v6.7.

(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	CommuniTake Technologies Ltd.
Address	Yokneam Star Building, High-Tech Park, POB 344, Yokneam, Israel 2069205

2.2 Manufacturer Information

Manufacturer	CommuniTake Technologies Ltd.
Address	Yokneam Star Building, High-Tech Park, POB 344, Yokneam, Israel 2069205

2.3 Factory Information

Factory	Shenzhen Joyhong Technology Co., Ltd.
Address	4/F., Building A2, Zhengfeng Industrial Park, Fengtang Road, Fuyong, Bao'an, Shenzhen, China

2.4 General Description for Equipment under Test (EUT)

EUT Name	4G Smart phone
Model Name Under Test	CTGED01
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 2	Adapter	
	Brand Name	N/A
	Model No.	SR-C50501000U1
	Serial No.	N/A
	Rated Input	100-240 V~, 0.2 A, 50/60 Hz
	Rated Output	5 V⎓ 1 A
Ancillary Equipment 3	USB Cable	
	Model No.	N/A
	Length (Approx.)	0.8 m
Ancillary Equipment 4	Earphone	
	Model No.	N/A
	Length (Approx.)	1 m

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA Band 2/4/5 4G Network FDD LTE Band 2/4/5/7/12/17 Bluetooth, WIFI

The requirement for the following technical information of the EUT was tested in this report:

The Highest Speed of Processor	1.3 GHz
About the Product	The equipment is smart phone, intended for used with information technology equipment.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	FCC 47 CFR Part 15 Subpart B (10-1-17 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 to 25°C	AC 120 V/60 Hz or DC 3.7V 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&SCHWARZ	ESRP	101036	2019.06.12	2020.06.11	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-977	2017.07.22	2019.07.21	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1600	2018.07.11	2020.07.10	☐
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2020.02.20	☒
Test Software	BALUN	BL410_E	V18.626	--	--	☒

Radiated Emission Test For Frequency Above 1 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	2017.07.22	2019.07.21	☐
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	☒
Test Software	BALUN	BL410_E	V18.626	--	--	☒

Conducted Emission Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2019.06.12	2020.06.11	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2019.06.12	2020.06.11	☒
ISN	TESEQ	ISN T800	34449	2018.11.16	2019.11.15	☐
Shielded Enclosure	ChangNing	CN-130701	130703	N/A	N/A	☒
Test Software	BALUN	BL410_E	V18.626	--	--	☒

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 Communications Test Set	R&S	CMW500	142028	N/A	Cal. Due 2019.06.14	☐
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	☒
Earphone	N/A	OPPO	N/A	1.1 m	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	600014010687210006	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	☐

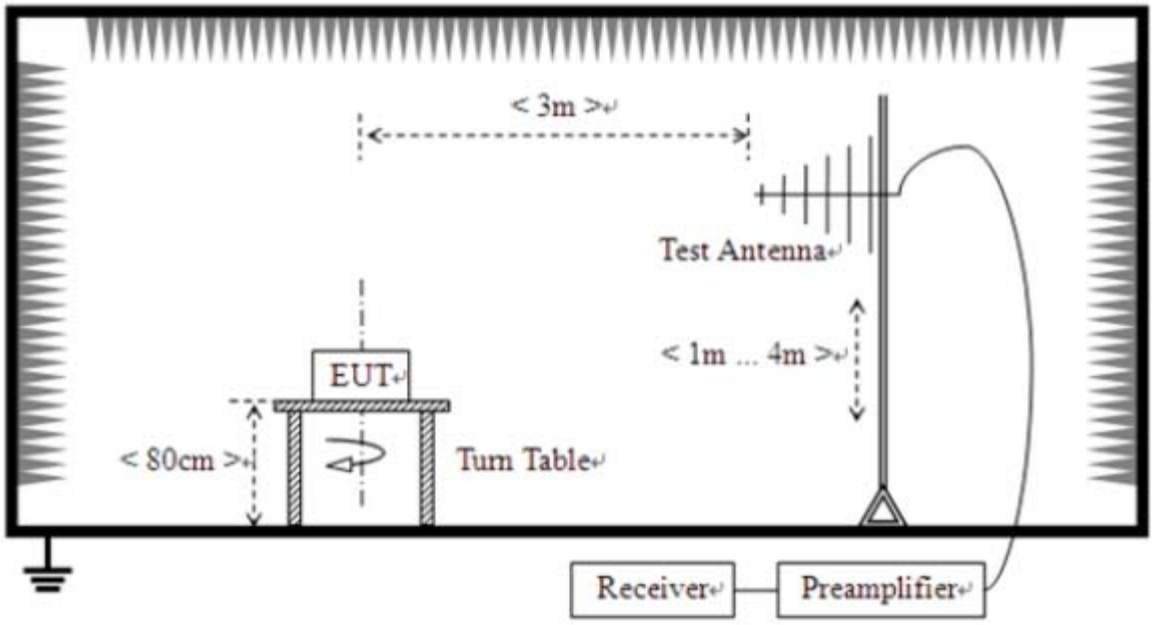
4.4 Test Configurations

Test Configurations (TC) No.	Description
Traffic Test Mode	
TC01	The GSM 850 MHz Test Mode GSM 850 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC02	The EDGE 850 MHz Test Mode EDGE 850 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC03	The GSM 1900 Test Mode GSM 1900 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC04	The EDGE 1900 MHz Test Mode EDGE 1900 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC05	The WCDMA B2 Test Mode WCDMA B2 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC06	The WCDMA B4 Test Mode WCDMA B4 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC07	The WCDMA B5 MHz test mode WCDMA B5 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC08	The FDD LTE Band 2 Test Mode LTE Band 2 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC09	The FDD LTE Band 4 Test Mode LTE Band 4 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC10	The FDD LTE Band 5 Test Mode LTE Band 5 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC11	The FDD LTE Band 7 Test Mode LTE Band 7 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC12	The FDD LTE Band 12 Test Mode LTE Band 12 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC13	The FDD LTE Band 17 Test Mode LTE Band 17 Link + Adapter + USB Cable + Battery + Earphone + TF Card + BT Link + WIFI Link
TC14	The Idle Test Mode

	GSM 850(Idle) + Battery + Earphone
Amusement Test Mode	
TC15	The Camera Test Mode EUT + Battery + Adapter + Earphone + TF Card
TC16	The Video Play Test Mode EUT + Battery + Adapter + Earphone + TF Card
TC17	The USB Test Mode EUT + USB Cable + Battery + Earphone + TF Card + Laptop

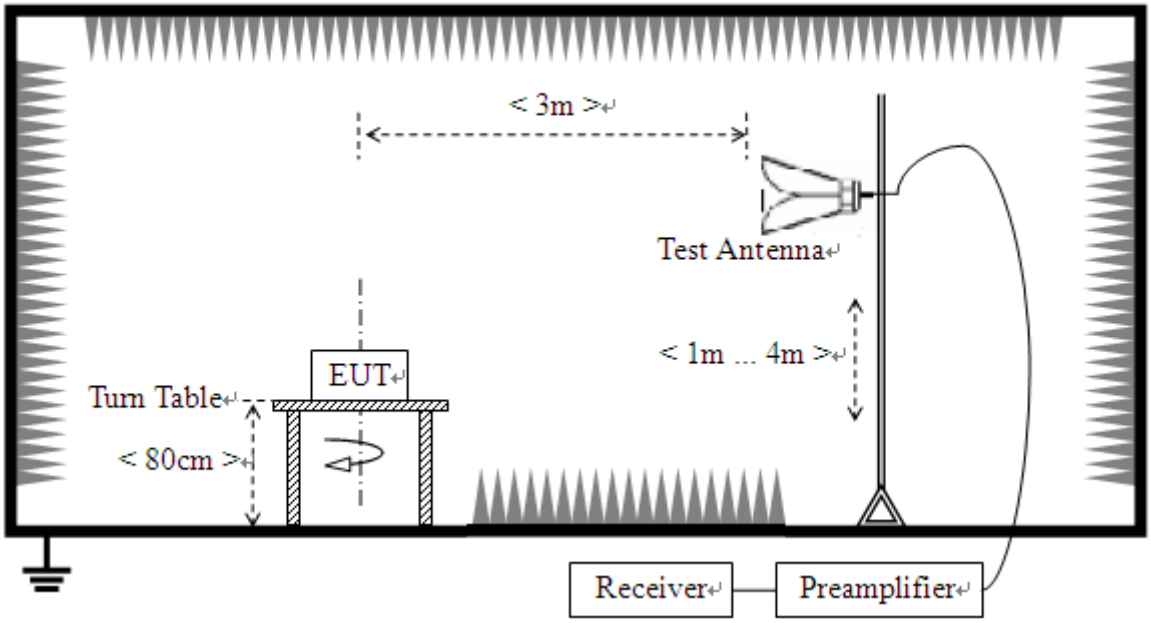
4.5 Test Setups

Test Setup 1



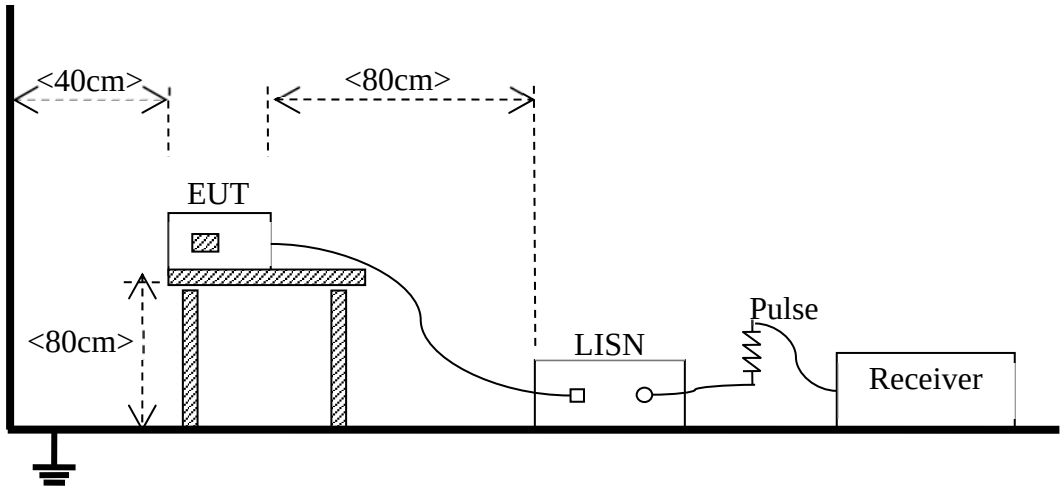
(For Radiated Emission Test (30 MHz-1 GHz))

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~TC17Note
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 GSM850 test mode is the worst mode in this report.		

5 TEST ITEMS

5.1 Emission Tests

5.1.1 Radiated Emission

5.1.1.1 Limit

Frequency range (MHz)	Class B (at 3 m)		Class B (at 10 m)	Class A (at 10 m)	
	Field Strength (μV/m)	Field Strength (dBμV/m)	Field Strength (dBμV/m)	Field Strength (μV/m)	Field Strength (dBμV/m)
30 - 88	100	40	30	90	39
88 - 216	150	43.5	33.5	150	43.5
216 - 960	200	46	36	210	46.4
Above 960	500	54	44	300	49.5

NOTE:

1) Field Strength (dBμV/m) = 20*log [Field Strength (μV/m)].

2) In the emission tables above, the tighter limit applies at the band edges.

5.1.1.2 Test Setup

Refer to 4.5 section (test setup 1 to test setup 2) for radiated emission test, the photo of test setup please refer to ANNEX B.

5.1.1.3 Test Procedure

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

An initial pre-scan was performed in the chamber using the EMI Receiver in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bi-Log antenna with 2 orthogonal polarities.

5.1.1.4 Test Result

Please refer to ANNEX A.1.

NOTE:

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

The reading level is calculated by software which is not shown in the sheet

2. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Amplifier Gain (dB)

3. Over limit = Results – Limit.

5.1.2 Conducted Emission

5.1.2.1 Test Limit

Frequency range (MHz)	Class A	
	Quasi-peak (dBμV)	Average (dBμV)
0.15 - 0.50	79	66
0.50 - 30	73	60

Frequency range (MHz)	Class B	
	Quasi-peak (dBμV)	Average (dBμV)
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

1) The lower limit shall apply at the band edges.
2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50 MHz.

5.1.2.2 Test Setup

Refer to 4.5 section test (test setup 3) for conducted emission, the photo of test setup please refer to ANNEX B.

5.1.2.3 Test Procedure

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

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

5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

1. Results (dBuV/m) = Reading (dBuV) + 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.

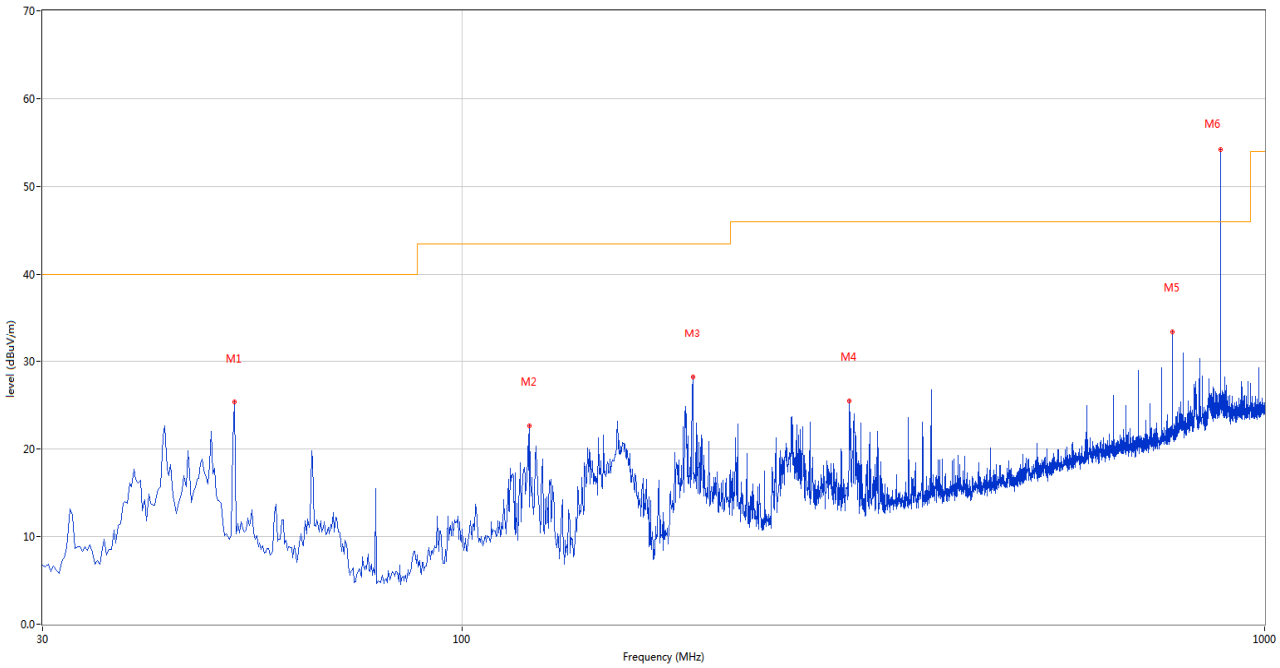
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: 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 carrier frequency.

Test Data and Plots

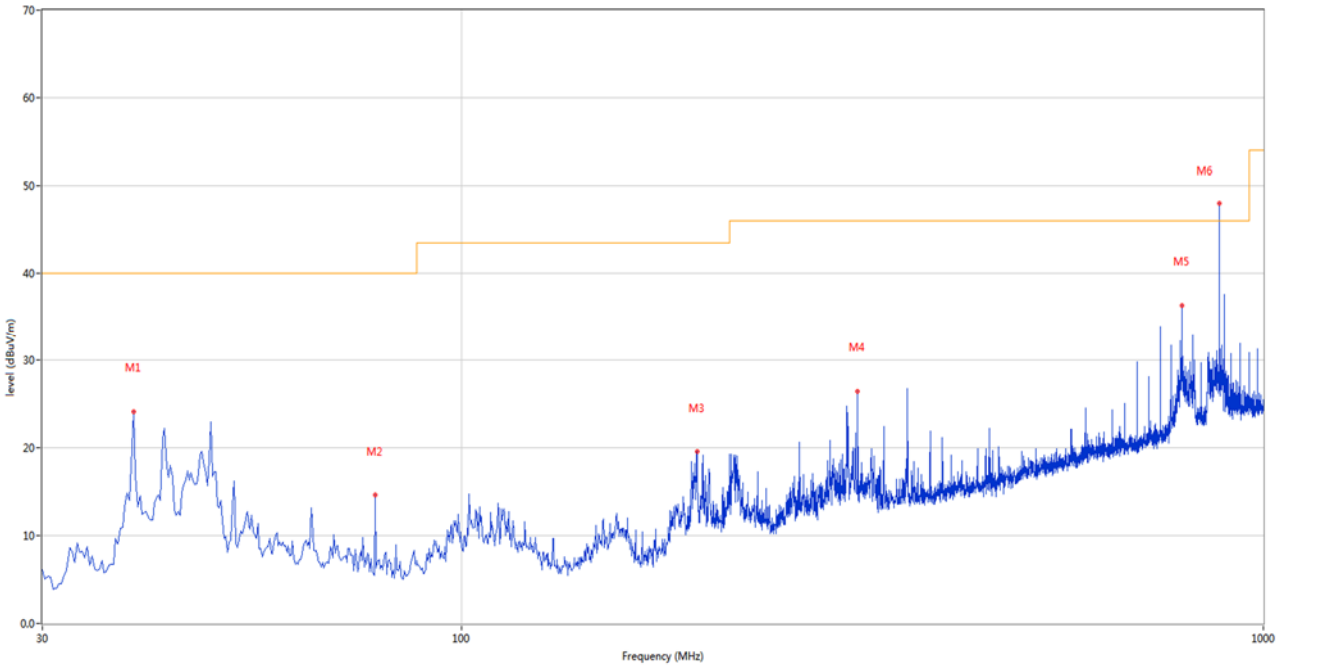
The GSM850 Test Mode

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



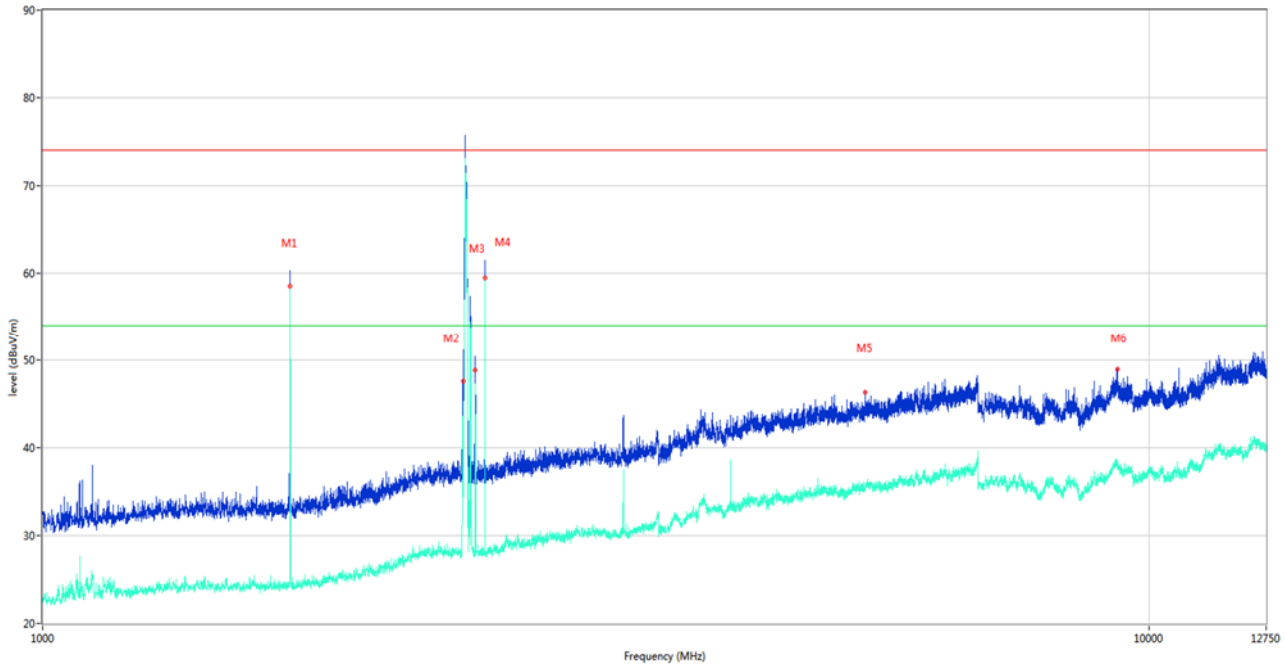
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	52.068	25.32	-23.30	40.0	-14.68	Peak	11.60	100	Vertical	Pass
2	121.423	22.66	-26.71	43.5	-20.84	Peak	0.00	200	Vertical	Pass
3	193.930	28.22	-24.51	43.5	-15.28	Peak	359.70	300	Vertical	Pass
4	303.782	25.52	-21.80	46.0	-20.48	Peak	310.90	100	Vertical	Pass
5	767.927	33.48	-12.20	46.0	-12.52	Peak	314.30	100	Vertical	Pass
6	881.660	54.25	-10.69	46.0	8.25	Peak	318.00	100	Vertical	N/A

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



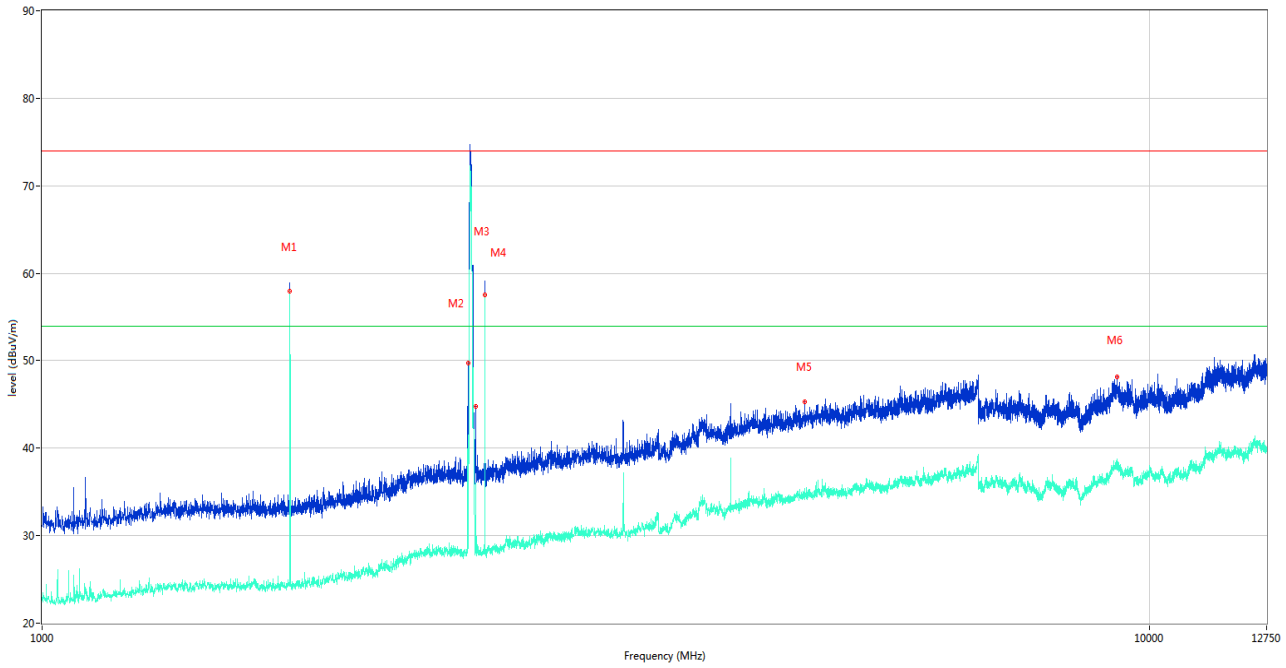
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	38.972	24.12	-24.43	40.0	-15.88	Peak	65.90	200	Horizontal	Pass
2	78.015	14.60	-28.91	40.0	-25.40	Peak	210.50	200	Horizontal	Pass
3	196.598	19.57	-24.41	43.5	-23.93	Peak	281.60	100	Horizontal	Pass
4	312.027	26.44	-22.01	46.0	-19.56	Peak	111.50	100	Horizontal	Pass
5	791.935	36.33	-11.79	46.0	-9.67	Peak	228.20	100	Horizontal	Pass
6	881.660	48.02	-10.69	46.0	2.02	Peak	52.40	200	Horizontal	N/A

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



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1673.500	58.52	-18.84	54.0	4.52	AV	70.50	100	Vertical	N/A
1	1673.500	60.28	-18.84	74.0	-13.72	Peak	70.50	100	Vertical	N/A
2**	2403.000	47.54	-14.64	54.0	-6.46	AV	0.40	100	Vertical	N/A
2	2403.000	52.93	-14.64	74.0	-21.07	Peak	0.40	100	Vertical	N/A
3**	2458.000	43.76	-14.88	54.0	-10.24	AV	27.90	100	Vertical	N/A
3	2458.000	48.84	-14.88	74.0	-25.16	Peak	27.90	100	Vertical	N/A
4**	2510.500	59.48	-14.20	54.0	5.48	AV	359.30	100	Vertical	N/A
4	2510.500	59.59	-14.20	74.0	-14.41	Peak	359.30	100	Vertical	N/A
5**	5540.000	35.72	-4.36	54.0	-18.28	AV	48.40	100	Vertical	Pass
5	5540.000	46.35	-4.36	74.0	-27.65	Peak	48.40	100	Vertical	Pass
6**	9358.937	38.41	19.09	54.0	-15.59	AV	120.40	100	Vertical	Pass
6	9358.937	48.90	19.09	74.0	-25.10	Peak	120.40	100	Vertical	Pass

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

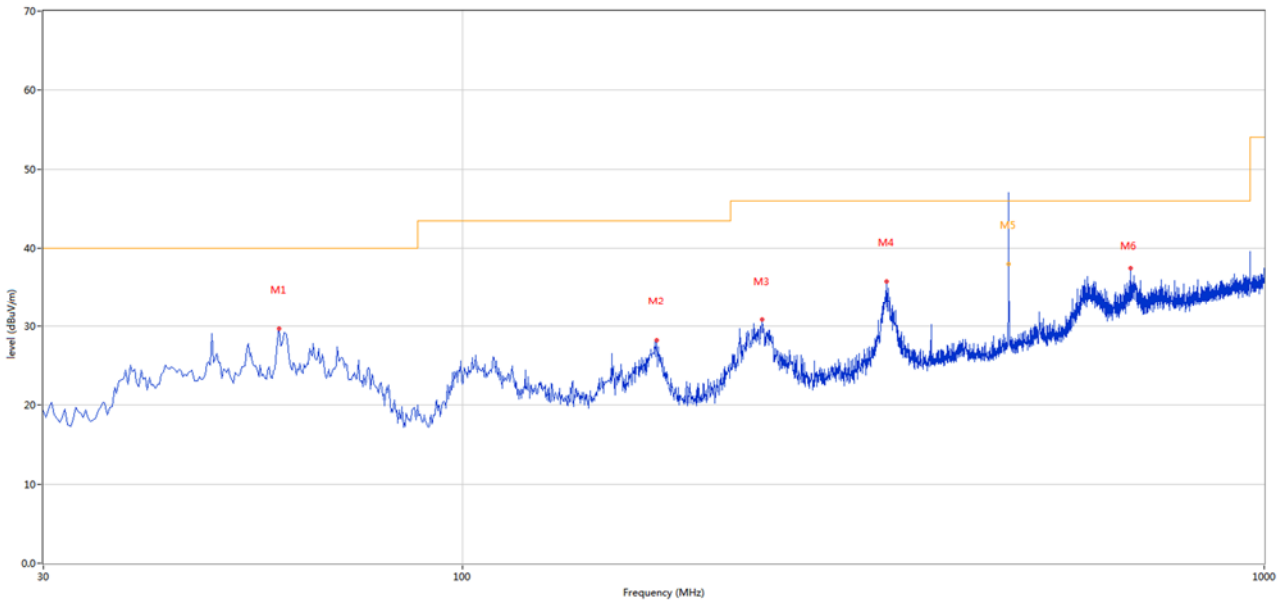


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1673.500	58.03	-18.84	54.0	4.03	AV	0.00	100	Horizontal	N/A
1	1673.500	58.98	-18.84	74.0	-15.02	Peak	0.00	100	Horizontal	N/A
2**	2424.000	41.52	-13.72	54.0	-12.48	AV	218.80	100	Horizontal	N/A
2	2424.000	49.67	-13.72	74.0	-24.33	Peak	218.80	100	Horizontal	N/A
3**	2461.500	31.26	-14.76	54.0	-22.74	AV	164.80	100	Horizontal	N/A
3	2461.500	44.75	-14.76	74.0	-29.25	Peak	164.80	100	Horizontal	N/A
4**	2510.500	57.62	-14.20	54.0	3.62	AV	308.20	100	Horizontal	N/A
4	2510.500	57.65	-14.20	74.0	-16.35	Peak	308.20	100	Horizontal	N/A
5**	4879.000	34.62	-4.26	54.0	-19.38	AV	175.30	100	Horizontal	Pass
5	4879.000	45.27	-4.26	74.0	-28.73	Peak	175.30	100	Horizontal	Pass
6**	9343.126	37.83	19.35	54.0	-16.17	AV	314.80	100	Horizontal	Pass
6	9343.126	48.12	19.35	74.0	-25.88	Peak	314.80	100	Horizontal	Pass

Test Data and Plots

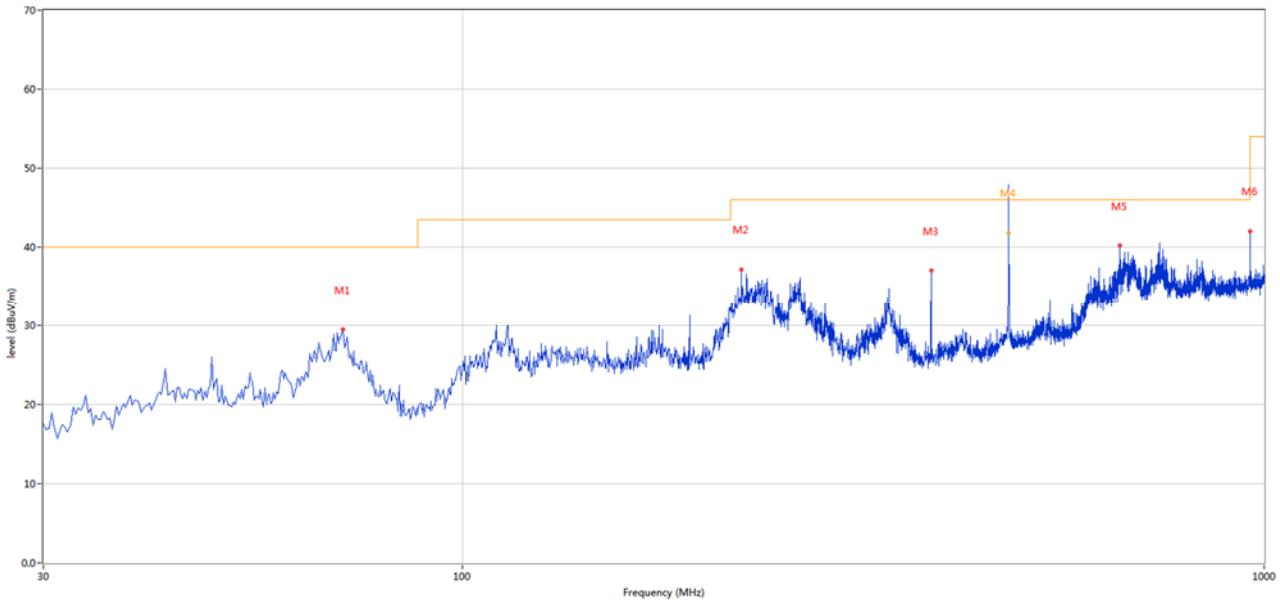
The USB Test Mode

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



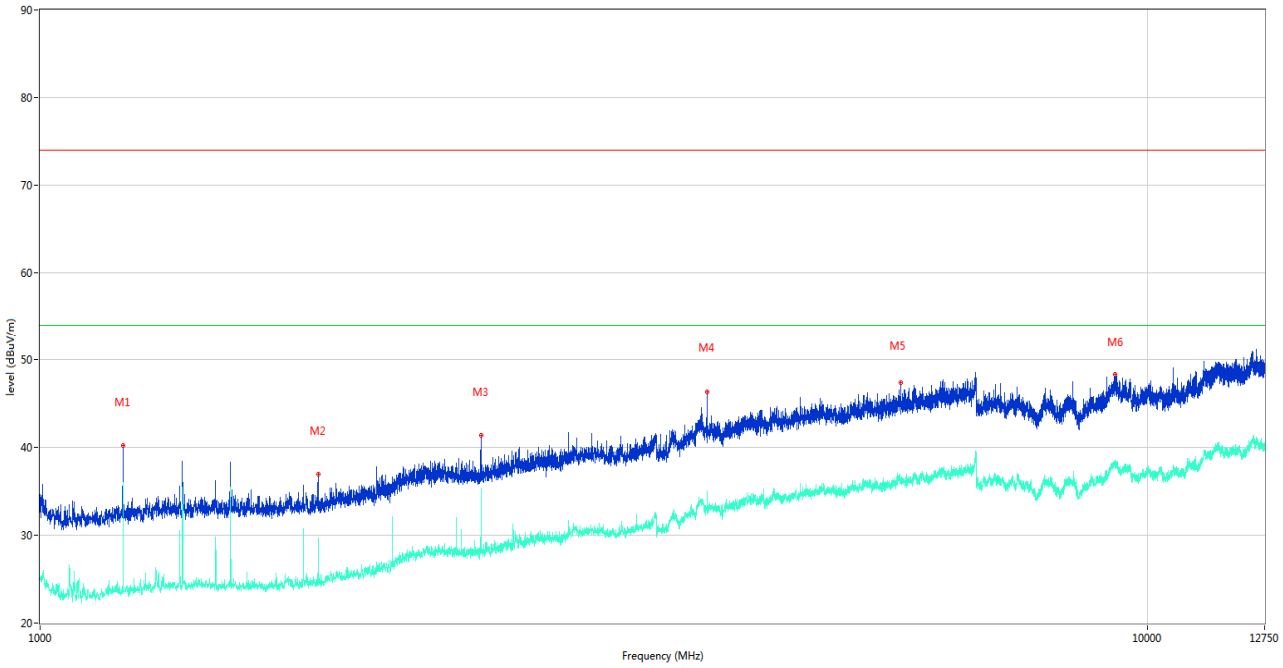
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	59.100	29.72	-24.51	40.0	-10.28	Peak	203.10	100	Vertical	Pass
2	174.530	28.25	-26.72	43.5	-15.25	Peak	123.70	100	Vertical	Pass
3	236.610	30.80	-23.28	46.0	-15.20	Peak	246.40	100	Vertical	Pass
4	337.733	35.76	-20.54	46.0	-10.24	Peak	141.30	200	Vertical	Pass
5	480.080	41.46	-17.60	46.0	-4.54	Peak	65.70	103	Vertical	N/A
5*	480.080	37.97	-17.60	46.0	-8.03	QP	65.70	103	Vertical	Pass
6	680.628	37.51	-13.64	46.0	-8.49	Peak	206.30	100	Vertical	Pass

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



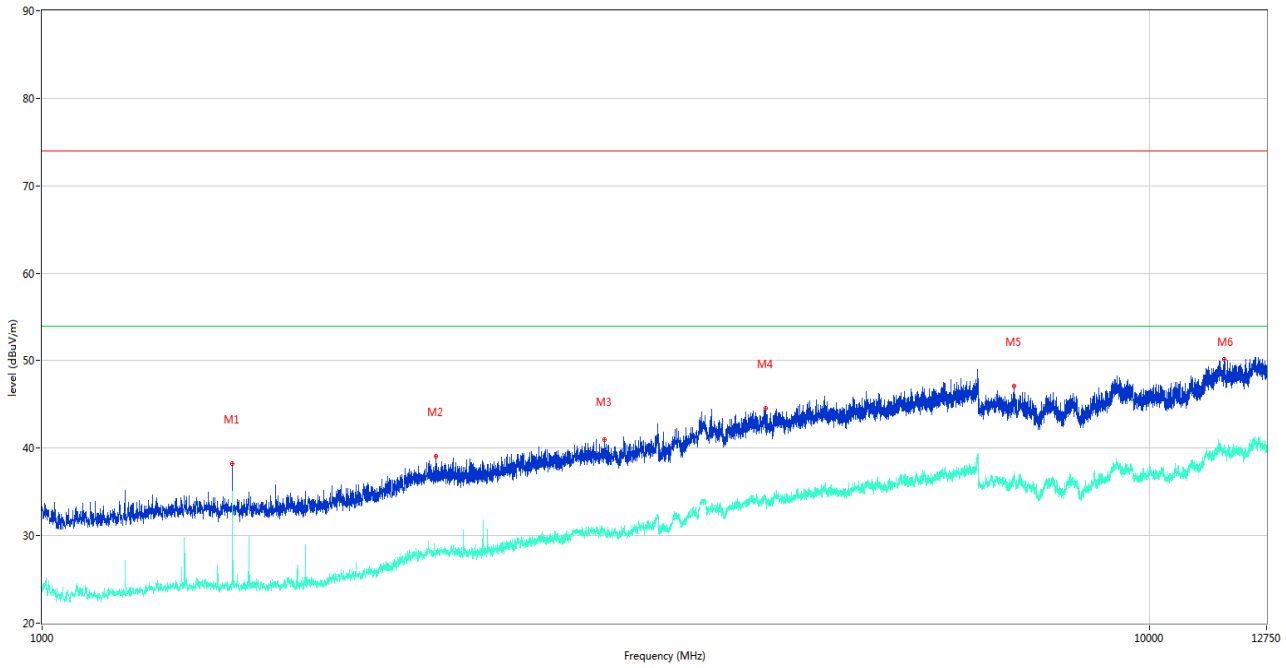
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	70.982	29.50	-27.54	40.0	-10.50	Peak	360.00	200	Horizontal	Pass
2	222.788	37.18	-24.49	46.0	-8.82	Peak	281.70	100	Horizontal	Pass
3	384.050	37.04	-19.58	46.0	-8.96	Peak	193.80	100	Horizontal	Pass
4	480.080	45.46	-17.60	46.0	-0.54	Peak	209.30	183	Horizontal	N/A
4*	480.080	41.76	-17.60	46.0	-4.24	QP	209.30	183	Horizontal	Pass
5	661.227	40.17	-13.89	46.0	-5.83	Peak	319.70	100	Horizontal	Pass
6	960.230	42.01	-9.53	54.0	-11.99	Peak	51.30	100	Horizontal	Pass

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



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1188.000	33.65	-19.95	54.0	-20.35	AV	210.50	100	Vertical	Pass
1	1188.000	40.16	-19.95	74.0	-33.84	Peak	210.50	100	Vertical	Pass
2**	1782.000	27.16	-18.99	54.0	-26.84	AV	113.80	100	Vertical	Pass
2	1782.000	36.92	-18.99	74.0	-37.08	Peak	113.80	100	Vertical	Pass
3**	2500.000	31.14	-14.71	54.0	-22.86	AV	92.40	100	Vertical	Pass
3	2500.000	41.34	-14.71	74.0	-32.66	Peak	92.40	100	Vertical	Pass
4**	4000.000	33.43	-6.09	54.0	-20.57	AV	217.80	100	Vertical	Pass
4	4000.000	46.34	-6.09	74.0	-27.66	Peak	217.80	100	Vertical	Pass
5**	5986.000	36.49	-4.15	54.0	-17.51	AV	66.30	100	Vertical	Pass
5	5986.000	47.33	-4.15	74.0	-26.67	Peak	66.30	100	Vertical	Pass
6**	9341.688	37.95	19.34	54.0	-16.05	AV	256.70	100	Vertical	Pass
6	9341.688	48.34	19.34	74.0	-25.66	Peak	256.70	100	Vertical	Pass

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



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1485.000	31.26	-19.19	54.0	-22.74	AV	211.00	100	Horizontal	Pass
1	1485.000	38.26	-19.19	74.0	-35.74	Peak	211.00	100	Horizontal	Pass
2**	2266.500	27.96	-15.54	54.0	-26.04	AV	0.00	100	Horizontal	Pass
2	2266.500	39.07	-15.54	74.0	-34.93	Peak	0.00	100	Horizontal	Pass
3**	3218.000	30.60	-10.78	54.0	-23.40	AV	257.80	100	Horizontal	Pass
3	3218.000	40.94	-10.78	74.0	-33.06	Peak	257.80	100	Horizontal	Pass
4**	4504.000	33.84	-4.92	54.0	-20.16	AV	0.90	100	Horizontal	Pass
4	4504.000	44.57	-4.92	74.0	-29.43	Peak	0.90	100	Horizontal	Pass
5**	7543.375	36.54	15.83	54.0	-17.46	AV	85.50	100	Horizontal	Pass
5	7543.375	47.09	15.83	74.0	-26.91	Peak	85.50	100	Horizontal	Pass
6**	11676.188	39.54	20.11	54.0	-14.46	AV	209.30	100	Horizontal	Pass
6	11676.188	50.10	20.11	74.0	-23.90	Peak	209.30	100	Horizontal	Pass

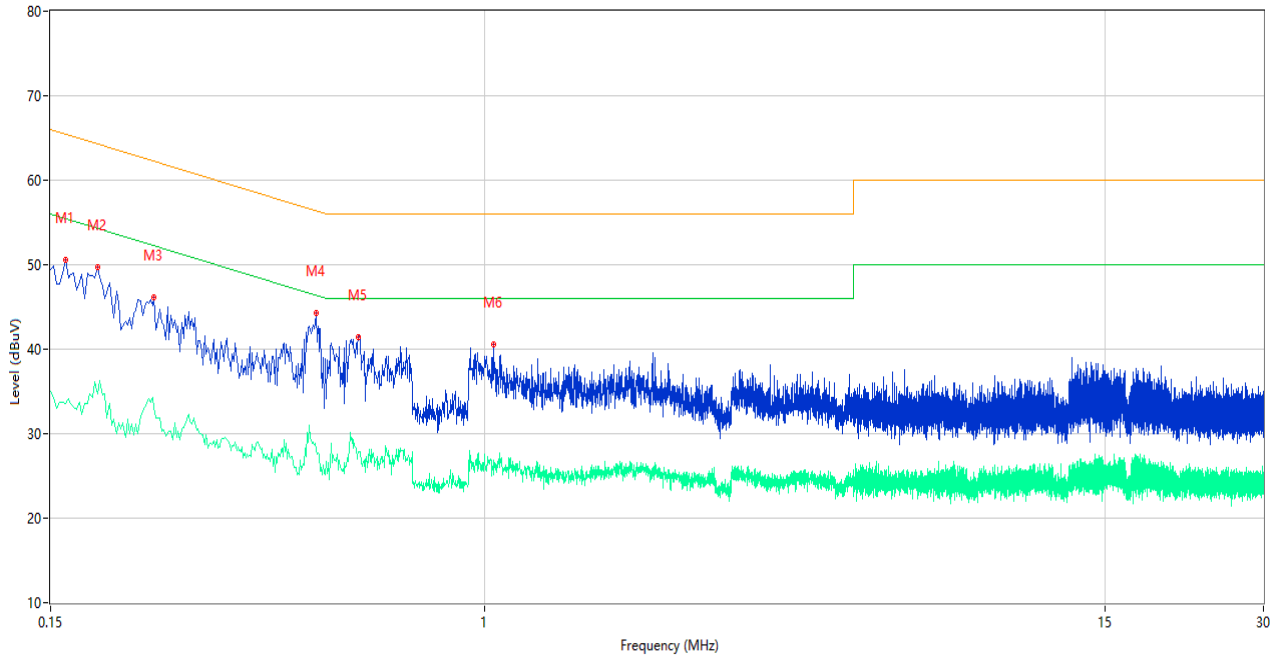
A.2 Conducted Emission

Test Data and Plots

The GSM850 Test Mode

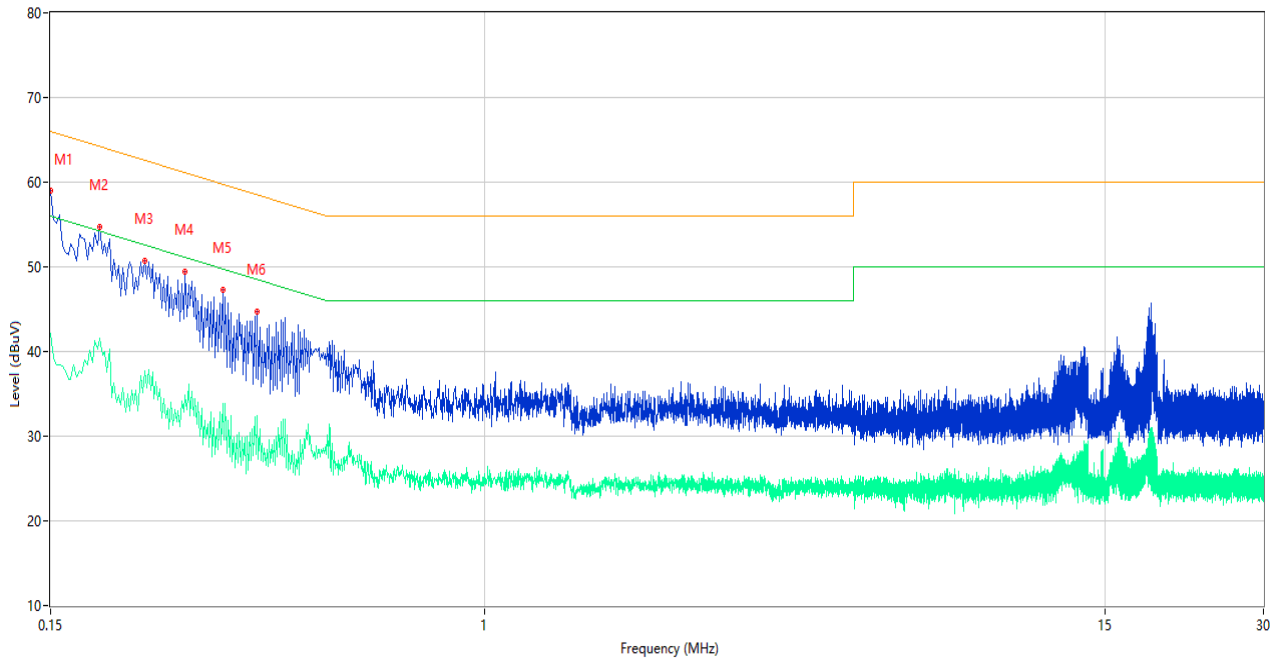
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst 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	0.160	50.51	10.40	65.46	-14.95	Peak	L	Pass
1**	0.160	33.53	10.40	55.46	-21.93	AV	L	Pass
2	0.184	49.75	10.39	64.30	-14.55	Peak	L	Pass
2**	0.184	34.66	10.39	54.30	-19.64	AV	L	Pass
3	0.236	46.10	10.35	62.24	-16.14	Peak	L	Pass
3**	0.236	33.13	10.35	52.24	-19.11	AV	L	Pass
4	0.478	44.35	10.29	56.37	-12.02	Peak	L	Pass
4**	0.478	28.11	10.29	46.37	-18.26	AV	L	Pass
5	0.576	41.36	10.27	56.00	-14.64	Peak	L	Pass
5**	0.576	27.80	10.27	46.00	-18.20	AV	L	Pass
6	1.038	40.56	10.23	56.00	-15.44	Peak	L	Pass
6**	1.038	25.10	10.23	46.00	-20.90	AV	L	Pass

A.2.2 N Phase

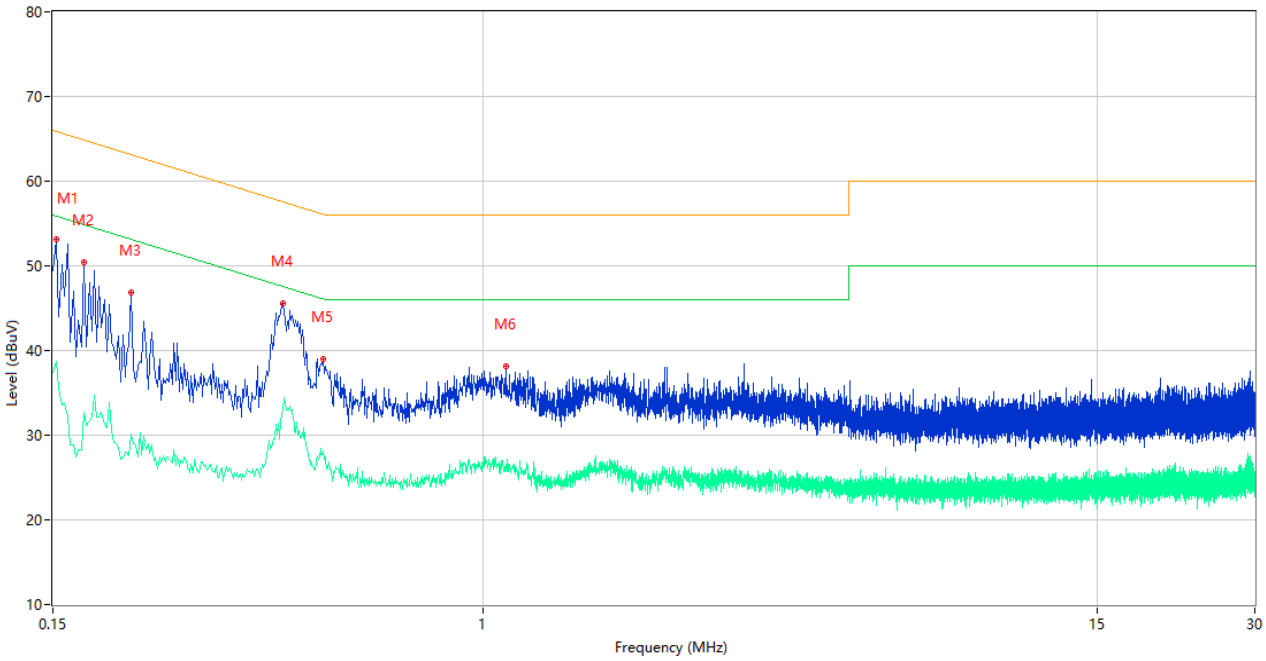


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	58.93	10.41	66.00	-7.07	Peak	N	Pass
1**	0.150	42.15	10.41	56.00	-13.85	AV	N	Pass
2	0.186	54.77	10.39	64.21	-9.44	Peak	N	Pass
2**	0.186	41.51	10.39	54.21	-12.70	AV	N	Pass
3	0.226	50.70	10.36	62.60	-11.90	Peak	N	Pass
3**	0.226	37.72	10.36	52.60	-14.88	AV	N	Pass
4	0.270	49.39	10.34	61.12	-11.73	Peak	N	Pass
4**	0.270	34.88	10.34	51.12	-16.24	AV	N	Pass
5	0.318	47.25	10.33	59.76	-12.51	Peak	N	Pass
5**	0.318	33.88	10.33	49.76	-15.88	AV	N	Pass
6	0.370	44.76	10.30	58.50	-13.74	Peak	N	Pass
6**	0.370	32.37	10.30	48.50	-16.13	AV	N	Pass

Test Data and Plots

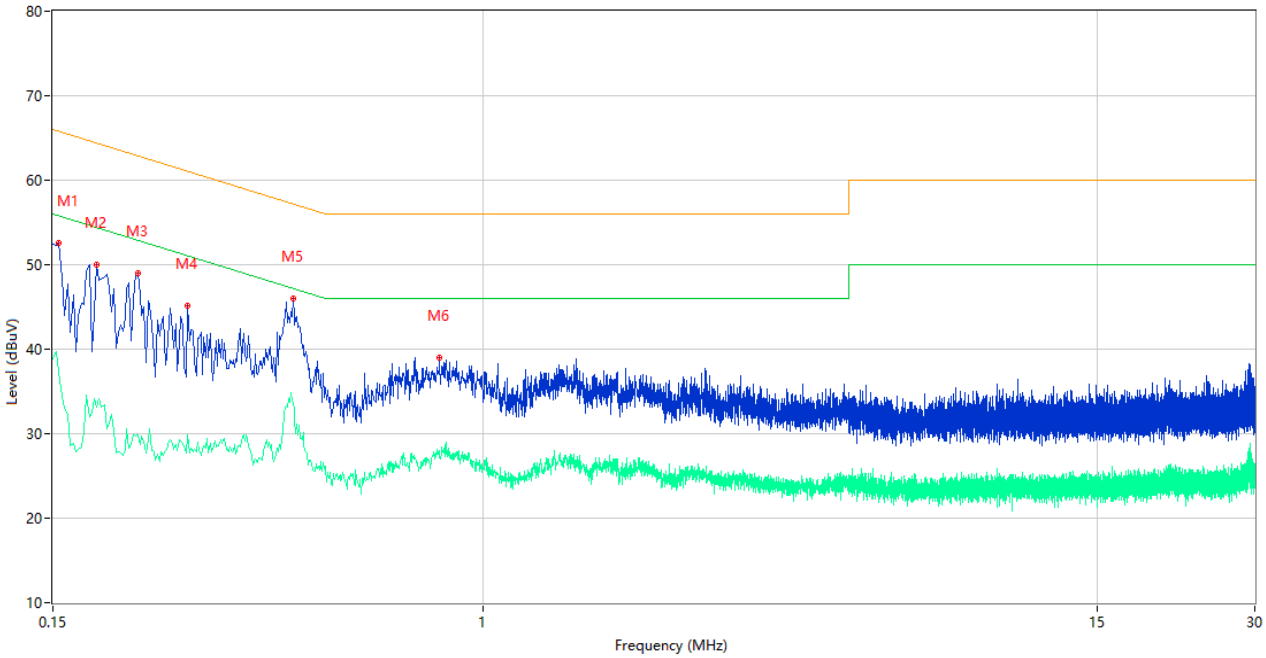
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	49.39	10.41	66.00	-16.61	Peak	L	Pass
1**	0.150	37.46	10.41	56.00	-18.54	AV	L	Pass
2	0.172	50.42	10.40	64.86	-14.44	Peak	L	Pass
2**	0.172	32.71	10.40	54.86	-22.15	AV	L	Pass
3	0.212	46.87	10.38	63.13	-16.26	Peak	L	Pass
3**	0.212	30.08	10.38	53.13	-23.05	AV	L	Pass
4	0.414	45.56	10.31	57.57	-12.01	Peak	L	Pass
4**	0.414	33.02	10.31	47.57	-14.55	AV	L	Pass
5	0.494	39.00	10.29	56.10	-17.10	Peak	L	Pass
5**	0.494	28.18	10.29	46.10	-17.92	AV	L	Pass
6	1.104	38.17	10.23	56.00	-17.83	Peak	L	Pass
6**	1.104	26.42	10.23	46.00	-19.58	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.154	52.62	10.41	65.78	-13.16	Peak	N	Pass
1**	0.154	37.22	10.41	55.78	-18.56	AV	N	Pass
2	0.182	50.00	10.39	64.39	-14.39	Peak	N	Pass
2**	0.182	33.07	10.39	54.39	-21.32	AV	N	Pass
3	0.218	49.00	10.37	62.89	-13.89	Peak	N	Pass
3**	0.218	29.89	10.37	52.89	-23.00	AV	N	Pass
4	0.272	45.19	10.34	61.06	-15.87	Peak	N	Pass
4**	0.272	29.89	10.34	51.06	-21.17	AV	N	Pass
5	0.432	45.99	10.31	57.21	-11.22	Peak	N	Pass
5**	0.432	33.66	10.31	47.21	-13.55	AV	N	Pass
6	0.824	39.06	10.26	56.00	-16.94	Peak	N	Pass
6**	0.824	27.75	10.26	46.00	-18.25	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1970095-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ1970095-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ1970095-AI.PDF”.

--END OF REPORT--