

FCC

EMC

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

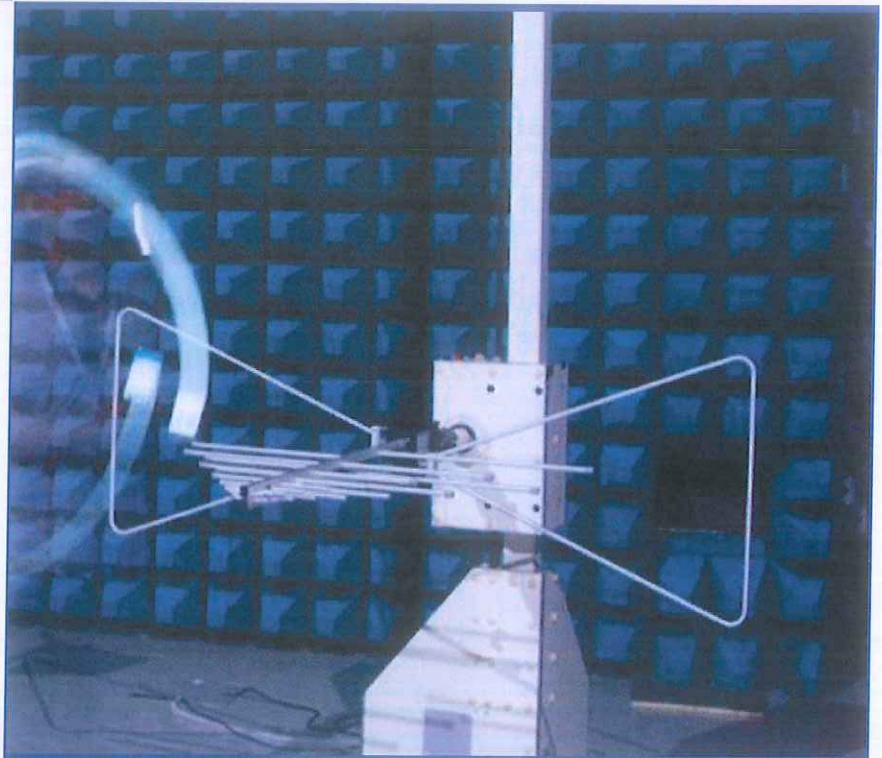


FOR

C7 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 Dec. 11, 2017

Approved by: Wei Yanquan
Wei Yanquan
(Chief Engineer)

Date Dec. 11, 2017



Report No.: BL-SZ17A0392-401

EUT Name: C7 FDD-LTE Smartphone

Model Name: TP910C

Brand Name: neffos

Test Standard: 47 CFR Part 15 Subpart B

FCC ID: TE7C7V1

Test Conclusion: Pass

Test Date: Nov. 12, 2017 ~ Nov. 17, 2017

Date of Issue: Dec. 11, 2017

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Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Dec. 11, 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
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	<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 is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.</p> <p>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.</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 to 25°C
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

1.4 Announce

- (1) The test report refer to the BALUN report mode v6.5.
- (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	C7 FDD-LTE Smartphone
Model Name Under Test	TP910C
Series Model Name	TP910C, TP910CXYZZ
Description of Model name differentiation	X=2 or 4 (2 indicates Cloudy Grey, 4 indicates Sunrise Gold) Y=4 , indicates the memory is 2G RAM + 16G Flash ZZ indicates different national All models are same with electrical parameters and internal circuit structure, but differ in color and shipping countries
Hardware Version	1.0
Software Version	TP910Rxxxx
Dimensions (Approx.)	N/A
Weight (Approx.)	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, GPS, FM, GLONASS

2.5 Ancillary Equipment

Ancillary Equipment 1	Rechargeable Li-ion Battery	
	Brand Name	neffos
	Model No.	NBL-35B3000
	Serial No.	N/A
	Capacity	3000 mAh
	Rated Voltage	3.85 V
	Limit Charge Voltage	4.4 V
Ancillary Equipment 2	Charger	
	Brand Name	neffos
	Model No.	A8-501000
	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	
	Length (Approx.)	1.0 m

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 (10-1-16 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 or DC 3.85 V from Battery	50%-55%	100 to 102 kPa

4.2 Test Equipment List

Radiated Emission Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2017.09.08	2018.09.07	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2016.07.21	2018.07.20	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2016.07.21	2018.07.20	<input checked="" type="checkbox"/>
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2019.02.20	<input checked="" type="checkbox"/>

Conducted Emission Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2017.06.22	2018.06.21	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NSLK 8127	8127-687	2017.06.22	2018.06.21	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NNLK 8129	8129-462	2017.09.13	2018.09.12	<input type="checkbox"/>
AMN	SCHWARZBECK	NNBM8124	8124-509	2017.06.22	2018.06.21	<input type="checkbox"/>
AMN	SCHWARZBECK	NNBM8124	8124-510	2017.06.22	2018.06.21	<input type="checkbox"/>
ISN	TESEQ	ISN T800	34449	2017.06.22	2018.06.21	<input type="checkbox"/>
Shielded Enclosure	ChangNing	CN-130701	130703	N/A	N/A	<input checked="" type="checkbox"/>

4.3 Test Enclosure list

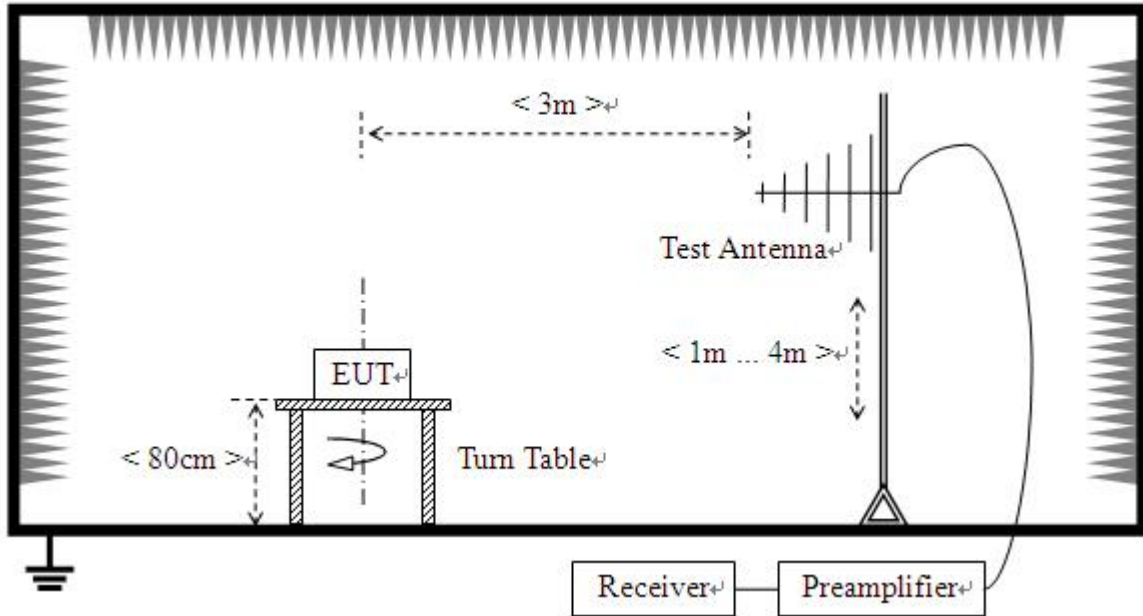
Description	Manufacturer	Model	Serial No.	Length	Description	Use
PC	Dell	015K3N	N/A	N/A	Special Handled	<input type="checkbox"/>
Laptop	Apple	A1465	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Printer	HP	DESKJET 1000	N/A	N/A	N/A	<input type="checkbox"/>
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	<input 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 + Bluetooth Earphone + BT Link + WIFI Link + GPS RX
TC02	<u>The EDGE 850 MHz Test Mode</u> EDGE 850 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + BT Link + WIFI Link + GLONASS RX
TC03	<u>The GSM 1900 Test Mode</u> GSM 1900 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + BT Link + WIFI Link + GPS RX
TC04	<u>The EDGE 1900 MHz Test Mode</u> EDGE 1900 Link + Adapter + USB Cable + Battery + Bluetooth Earphone + BT Link + WIFI Link + GLONASS RX
TC05	<u>The WCDMA Band 2 Test Mode</u> WCDMA Band 2 + Adapter + USB Cable + Battery + Bluetooth Earphone + BT Link + WIFI Link + GPS RX
TC06	<u>The WCDMA Band 4 Test Mode</u> WCDMA Band 2 + Adapter + USB Cable + Battery + Bluetooth Earphone + BT Link + WIFI Link + GLONASS RX
TC07	<u>The WCDMA Band 5 Test Mode</u> WCDMA Band 2 + Adapter + USB Cable + Battery + Bluetooth 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 + Bluetooth 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 + Bluetooth 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 + Bluetooth Earphone + BT Link + WIFI Link + GLONASS RX
TC11	<u>The Idle Test Mode</u> GSM 850(Idle) + Adapter + Battery + Bluetooth Earphone + FM Rx + USB Cable
Amusement Test Mode	
TC12	<u>The Camera Test Mode</u> EUT + Adapter + USB Cable + Battery + Bluetooth Earphone + TF Card
TC13	<u>The Video Play Test Mode</u> EUT + Adapter + USB Cable + Battery + Bluetooth Earphone + TF Card
TC14	<u>The USB Test Mode</u> EUT + USB Cable + Battery + Bluetooth Earphone + Laptop+ TF Card

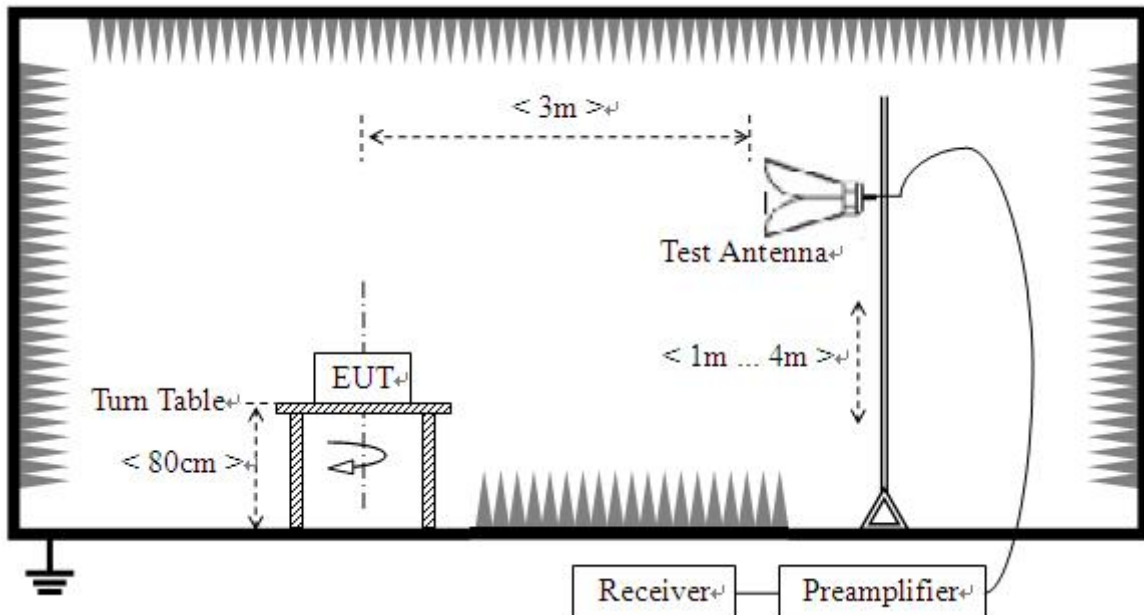
4.5 Test Setups

Test Setup 1



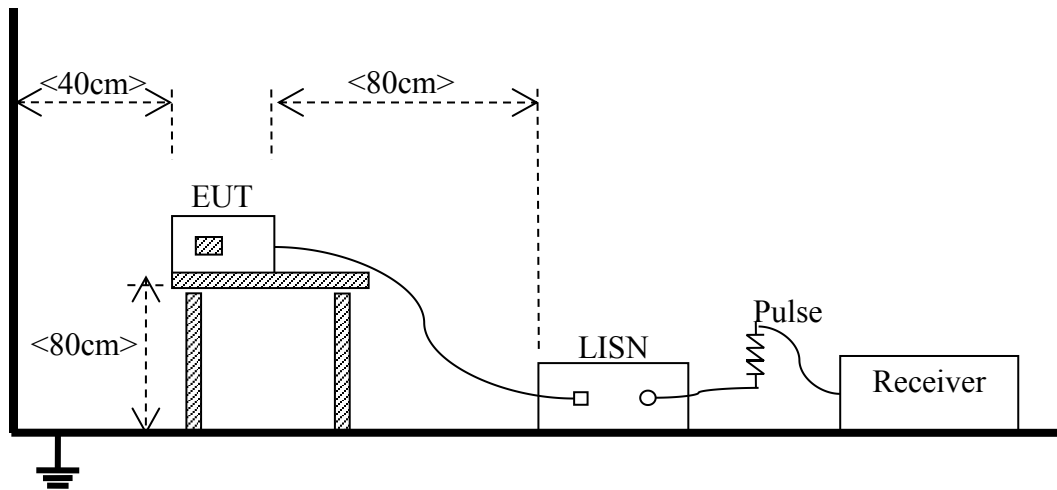
(For Radiated Emission Test (30 MHz-1 GHz))

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

NOTE:

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

5.1.1.2 Test Setup

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

5.1.1.3 Test Procedure

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

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

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.

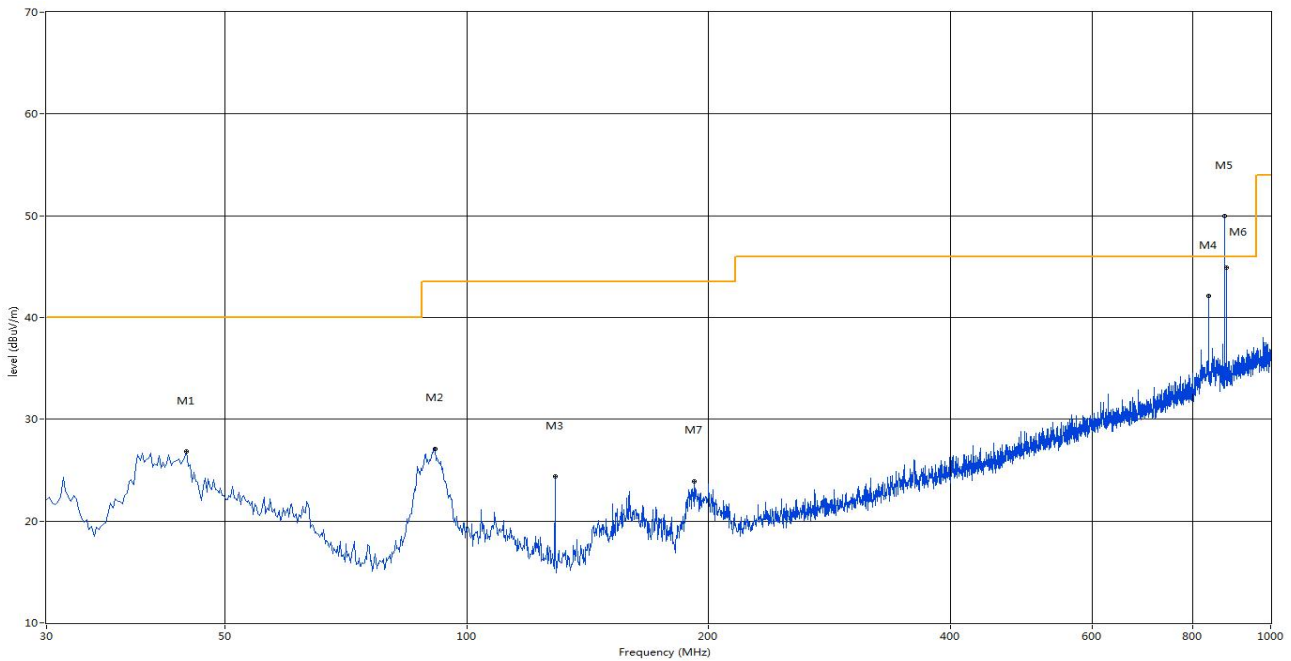
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: This frequency which near 900 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

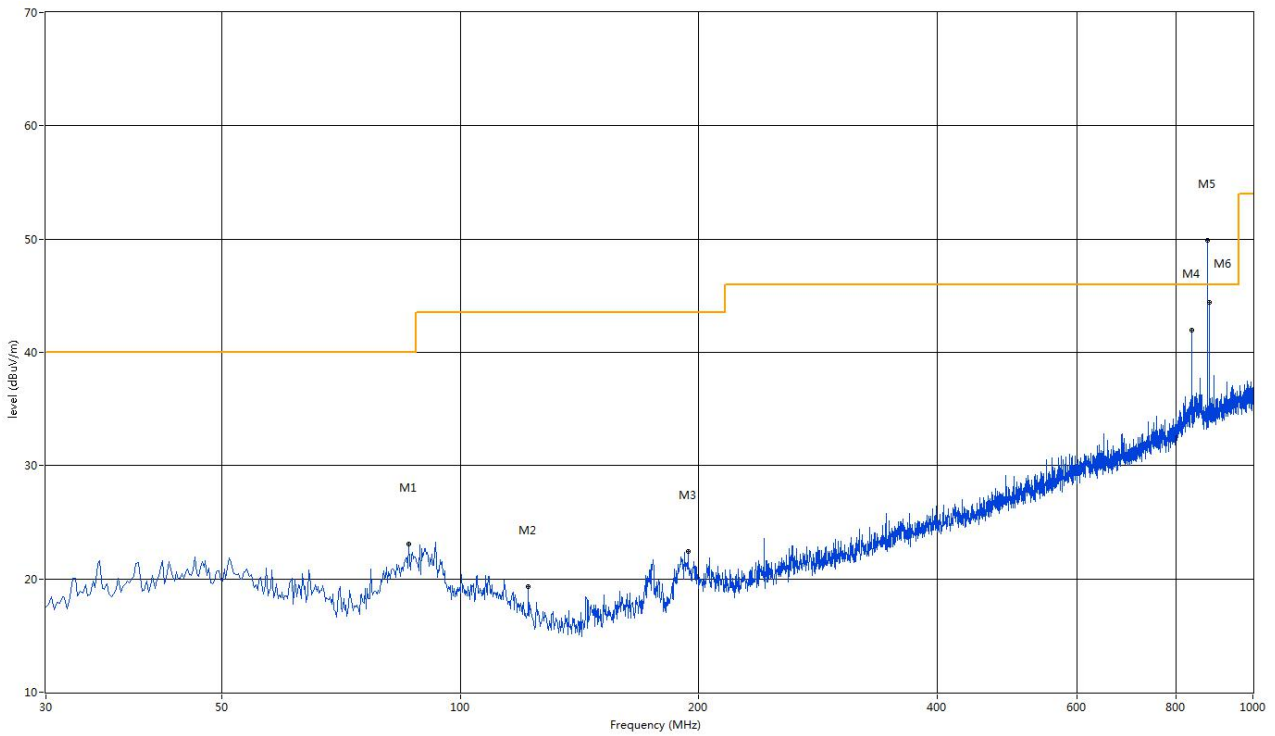
The GSM 850 MHz Test Mode

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



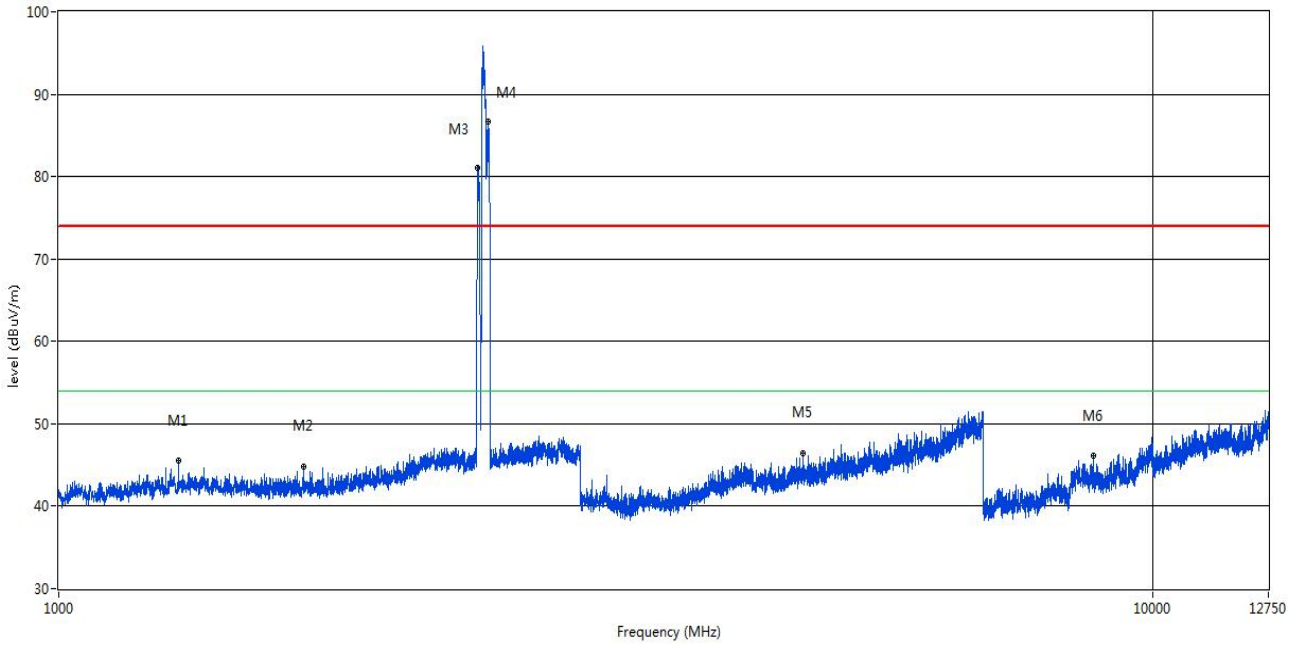
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	44.792	26.84	16.65	40.0	13.16	Peak	305.10	100	Vertical	Pass
2	91.353	27.11	13.74	43.5	16.39	Peak	0.00	200	Vertical	Pass
3	128.697	24.36	12.09	43.5	19.14	Peak	65.40	100	Vertical	Pass
4	836.555	42.11	30.07	46.0	3.89	Peak	181.00	100	Vertical	N/A
5	876.082	49.96	29.64	46.0	-3.96	Peak	142.00	100	Vertical	N/A
6	881.660	44.89	29.67	46.0	1.11	Peak	223.70	100	Vertical	N/A

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



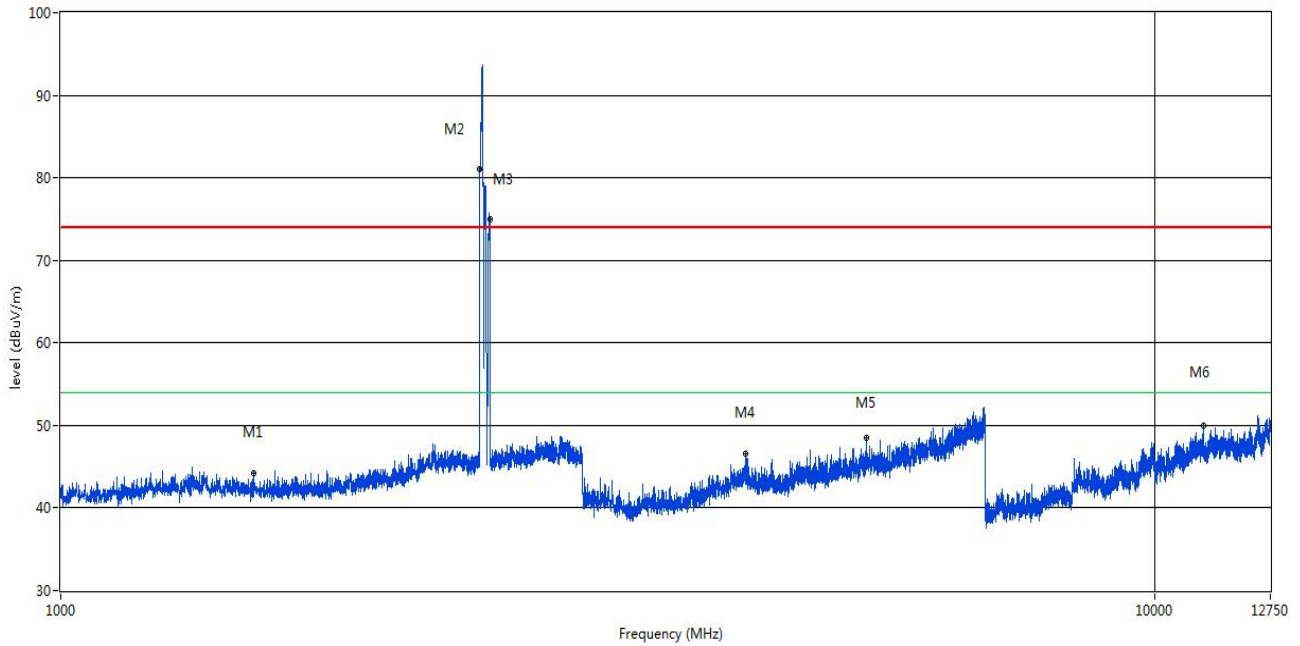
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	86.018	23.09	12.10	40.0	16.91	Peak	71.70	200	Horizontal	Pass
2	121.908	19.31	13.10	43.5	24.19	Peak	158.30	200	Horizontal	Pass
3	193.930	22.43	14.64	43.5	21.07	Peak	313.00	100	Horizontal	Pass
4	836.555	41.95	30.07	46.0	4.05	Peak	239.90	100	Horizontal	N/A
5	876.082	49.86	29.64	46.0	-3.86	Peak	0.00	200	Horizontal	N/A
6	881.660	44.41	29.67	46.0	1.59	Peak	313.90	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)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1286.000	45.47	-3.48	74.0	28.53	Peak	17.00	100	Vertical	Pass
2	1673.500	44.86	-3.13	74.0	29.14	Peak	359.00	100	Vertical	N/A
3	2415.000	81.03	0.86	74.0	-7.03	Peak	105.00	100	Vertical	N/A
4	2470.000	86.64	0.70	74.0	-12.64	Peak	105.00	100	Vertical	N/A
5	4785.000	46.45	13.97	74.0	27.55	Peak	34.00	100	Vertical	Pass
6	8827.062	46.08	24.61	74.0	27.92	Peak	176.00	100	Vertical	Pass

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

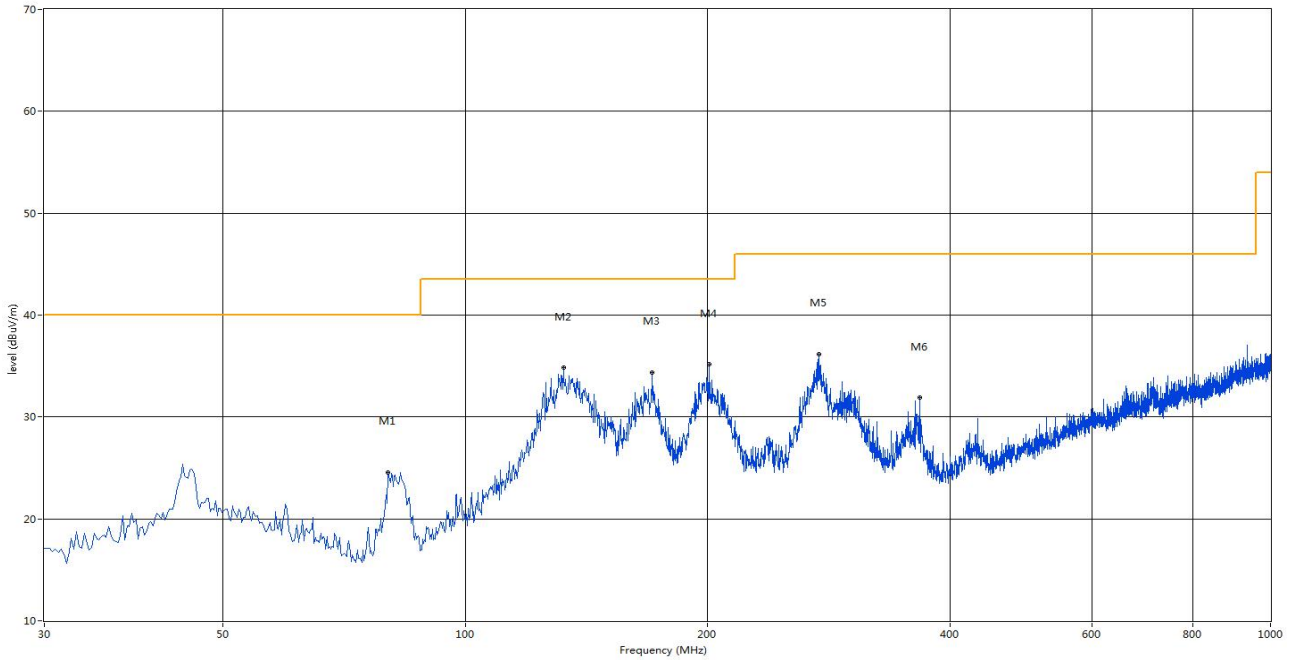


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1499.500	44.25	-3.42	74.0	29.75	Peak	43.00	100	Horizontal	Pass
2	2416.500	80.99	0.80	74.0	-6.99	Peak	4.00	100	Horizontal	N/A
3	2466.000	75.00	0.64	74.0	-1.00	Peak	1.00	100	Horizontal	N/A
4	4225.000	46.56	12.81	74.0	27.44	Peak	44.00	100	Horizontal	Pass
5	5449.000	48.46	14.86	74.0	25.54	Peak	229.00	100	Horizontal	Pass
6	11079.625	49.99	29.85	74.0	24.01	Peak	246.00	100	Horizontal	Pass

Test Data and Plots

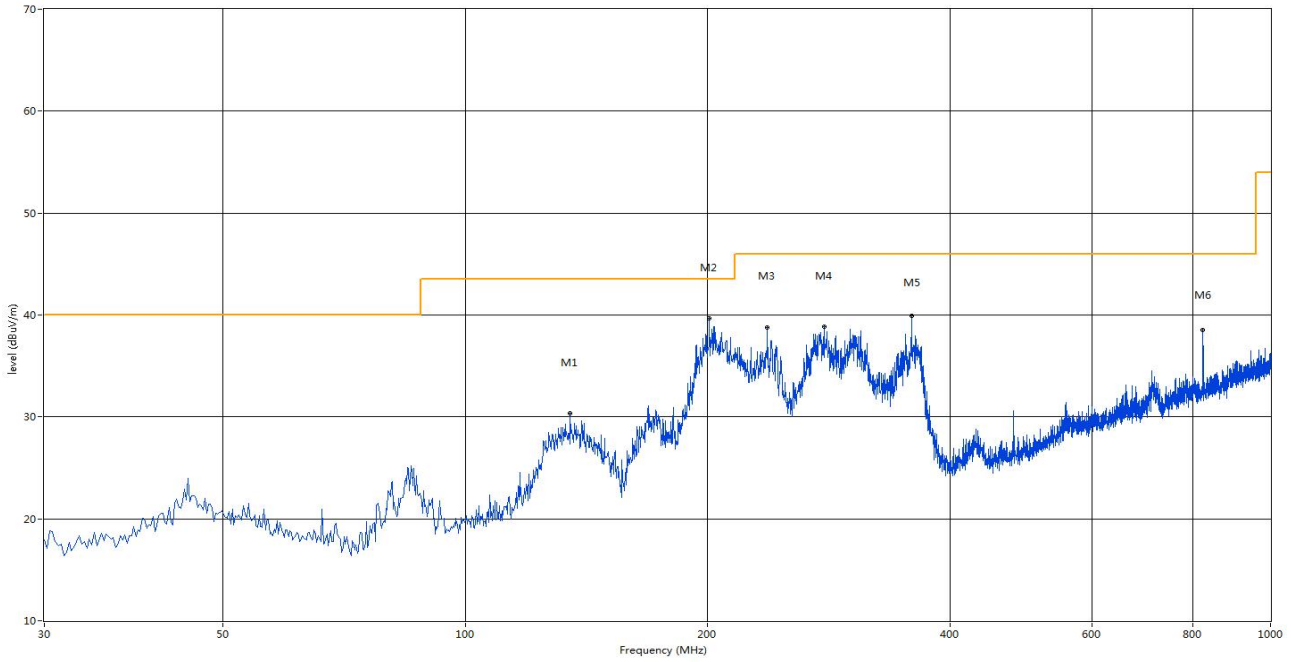
The USB Test Mode

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



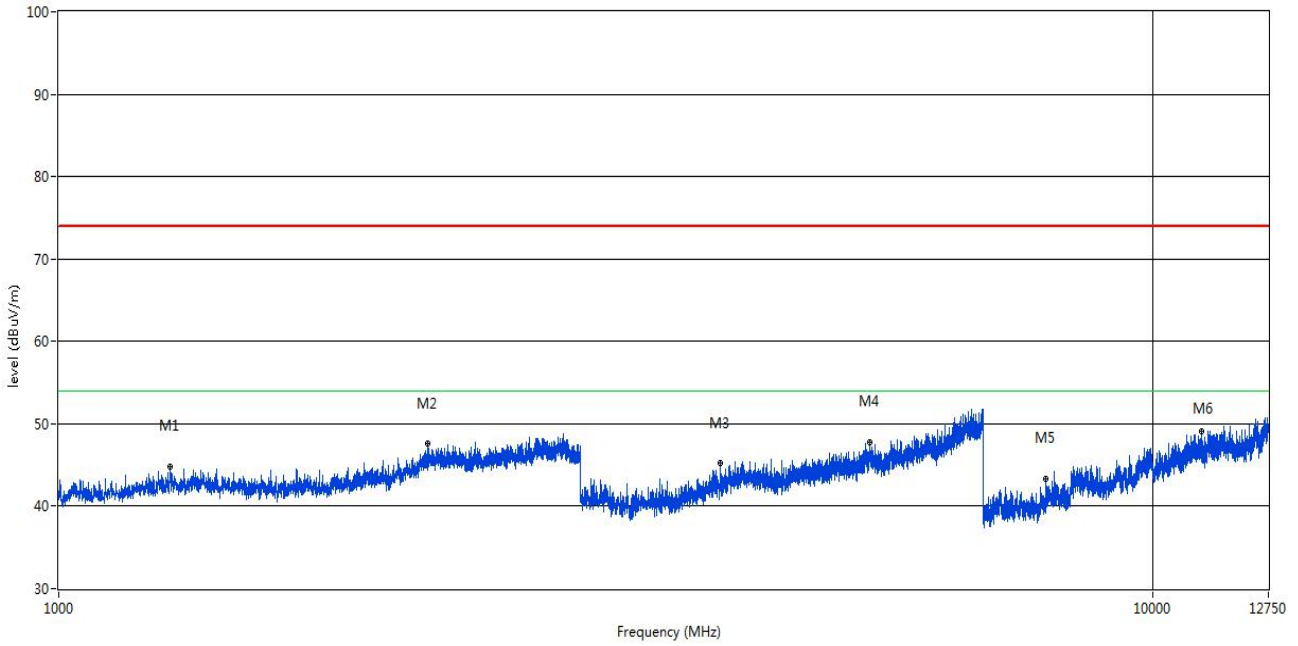
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	80.198	24.59	10.55	40.0	15.41	Peak	187.60	200	Vertical	Pass
2	132.335	34.86	11.70	43.5	8.64	Peak	116.10	100	Vertical	Pass
3	170.650	34.39	12.65	43.5	9.11	Peak	254.80	100	Vertical	Pass
4	200.962	35.19	15.08	43.5	8.31	Peak	0.30	100	Vertical	Pass
5	275.168	36.20	16.79	46.0	9.80	Peak	234.00	100	Vertical	Pass
6	366.347	31.88	19.54	46.0	14.12	Peak	314.10	100	Vertical	Pass

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



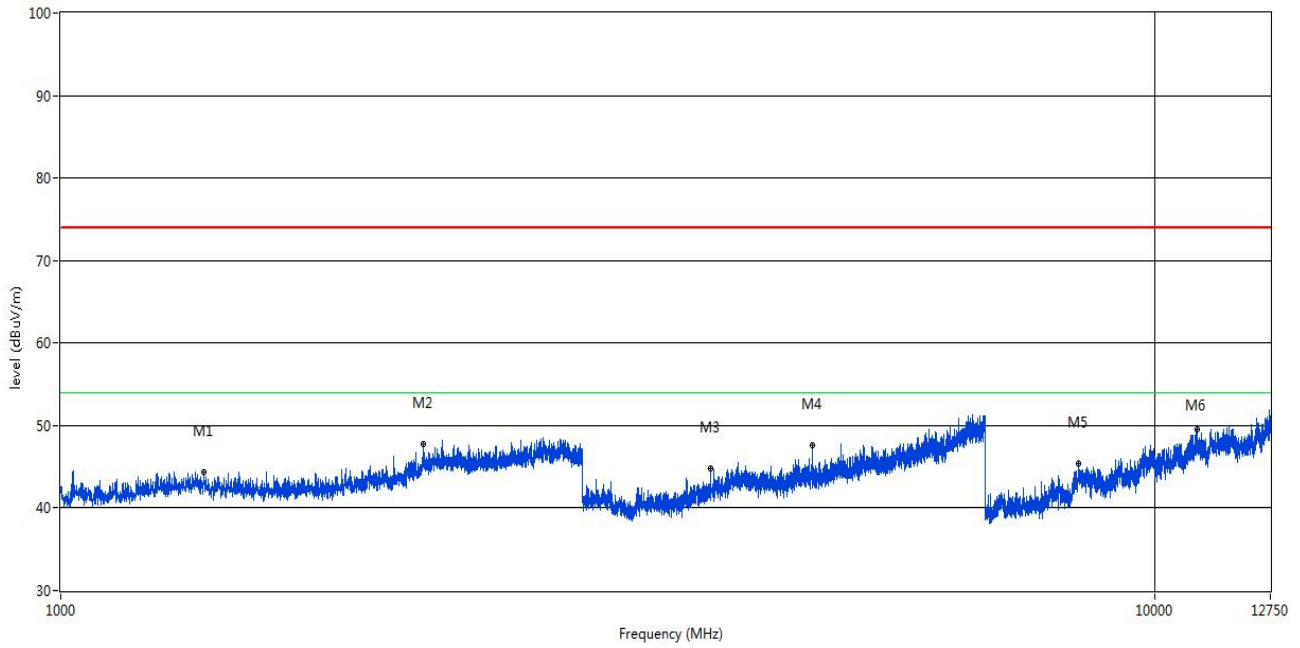
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	135.002	30.32	11.55	43.5	13.18	Peak	323.20	200	Horizontal	Pass
2	200.962	39.66	15.08	43.5	3.84	Peak	298.30	200	Horizontal	Pass
3	237.337	38.81	15.97	46.0	7.19	Peak	98.90	100	Horizontal	Pass
4	279.047	38.86	17.01	46.0	7.14	Peak	351.20	100	Horizontal	Pass
5	358.345	39.93	19.44	46.0	6.07	Peak	64.70	100	Horizontal	Pass
6	824.673	38.53	27.66	46.0	7.47	Peak	14.20	200	Horizontal	Pass

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



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1264.000	44.79	-3.56	74.0	29.21	Peak	356.00	100	Vertical	Pass
2	2175.000	47.54	0.26	74.0	26.46	Peak	228.00	100	Vertical	Pass
3	4027.000	45.19	11.75	74.0	28.81	Peak	4.00	100	Vertical	Pass
4	5514.000	47.73	15.19	74.0	26.27	Peak	317.00	100	Vertical	Pass
5	7981.813	43.28	23.15	74.0	30.72	Peak	316.00	100	Vertical	Pass
6	11081.062	49.02	29.84	74.0	24.98	Peak	359.00	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)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1352.500	44.34	-3.28	74.0	29.66	Peak	53.00	100	Horizontal	Pass
2	2145.500	47.80	-0.01	74.0	26.20	Peak	359.00	100	Horizontal	Pass
3	3926.000	44.79	11.41	74.0	29.21	Peak	237.00	100	Horizontal	Pass
4	4866.000	47.63	13.84	74.0	26.37	Peak	175.00	100	Horizontal	Pass
5	8522.313	45.38	24.36	74.0	28.62	Peak	167.00	100	Horizontal	Pass
6	10941.625	49.46	29.81	74.0	24.54	Peak	0.00	100	Horizontal	Pass

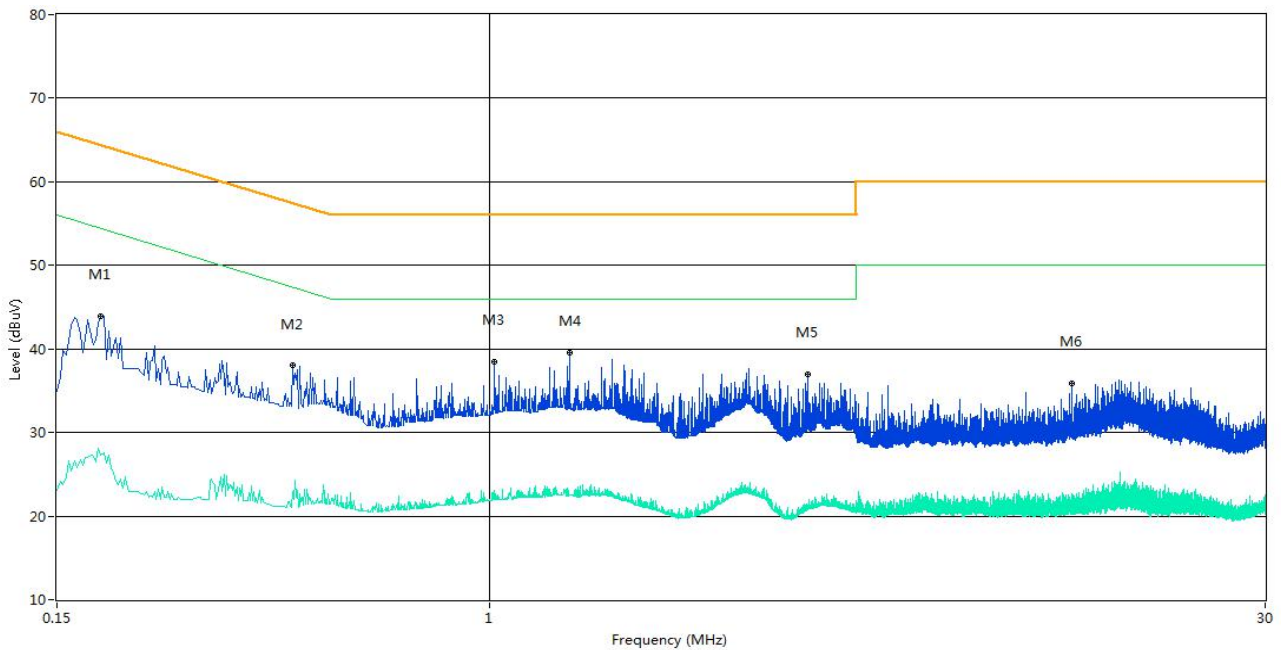
A.2 Conducted Emission

Test Data and Plots

The Camera Test Mode

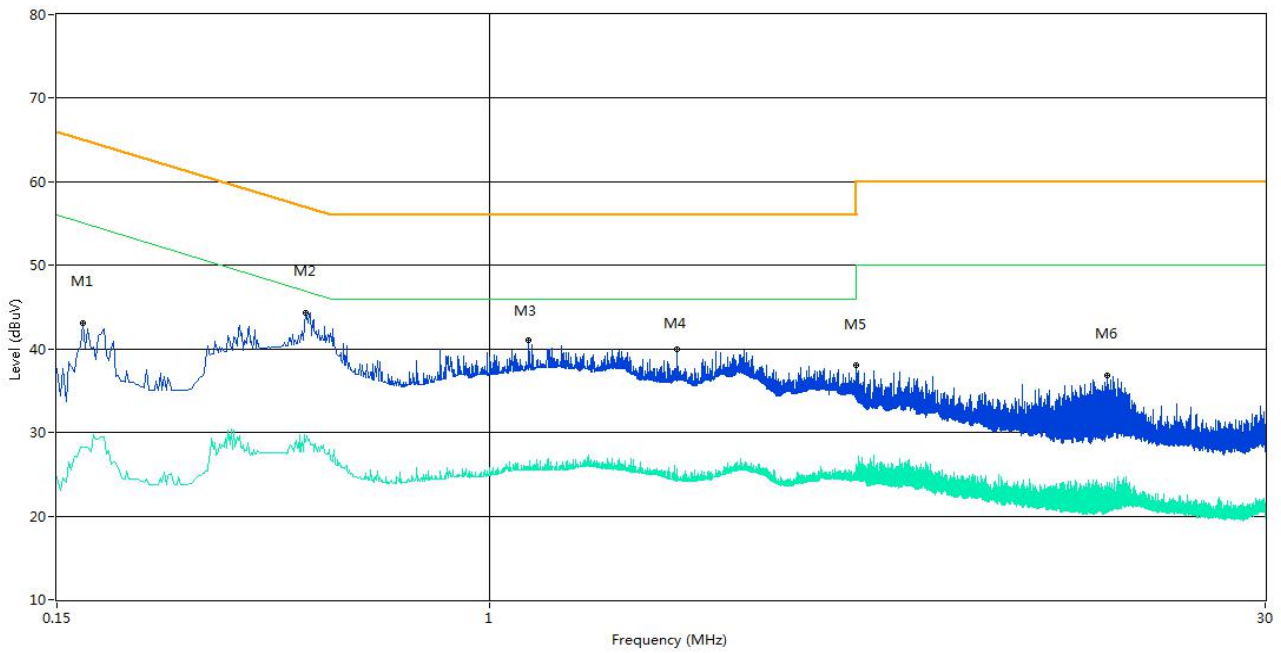
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst 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	0.182	43.9	10.04	64.4	20.50	Peak	L Line	Pass
1**	0.182	27.3	10.04	54.4	27.10	AV	L Line	Pass
2	0.422	38.0	10.04	57.4	19.40	Peak	L Line	Pass
2**	0.422	22.9	10.04	47.4	24.50	AV	L Line	Pass
3	1.022	38.5	10.06	56.0	17.50	Peak	L Line	Pass
3**	1.022	21.8	10.06	46.0	24.20	AV	L Line	Pass
4	1.418	39.5	10.07	56.0	16.50	Peak	L Line	Pass
4**	1.418	22.5	10.07	46.0	23.50	AV	L Line	Pass
5	4.032	37.0	10.14	56.0	19.00	Peak	L Line	Pass
5**	4.032	21.2	10.14	46.0	24.80	AV	L Line	Pass
6	12.862	35.9	10.39	60.0	24.10	Peak	L Line	Pass
6**	12.862	22.7	10.39	50.0	27.30	AV	L Line	Pass

A.2.2 N Phase

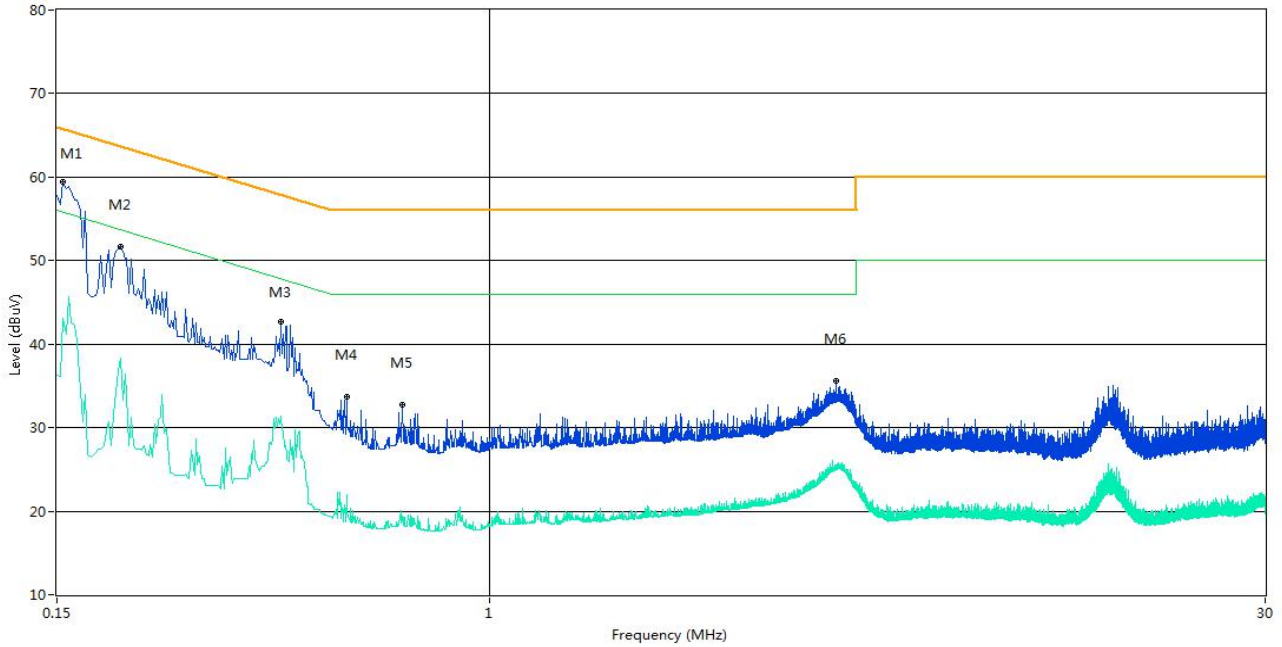


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.168	43.2	10.04	65.1	21.90	Peak	N Line	Pass
1**	0.168	28.3	10.04	55.1	26.80	AV	N Line	Pass
2	0.446	44.4	10.04	56.9	12.50	Peak	N Line	Pass
2**	0.446	28.9	10.04	46.9	18.00	AV	N Line	Pass
3	1.188	41.0	10.07	56.0	15.00	Peak	N Line	Pass
3**	1.188	25.6	10.07	46.0	20.40	AV	N Line	Pass
4	2.276	40.0	10.10	56.0	16.00	Peak	N Line	Pass
4**	2.276	25.6	10.10	46.0	20.40	AV	N Line	Pass
5	4.994	38.0	10.17	56.0	18.00	Peak	N Line	Pass
5**	4.994	24.4	10.17	46.0	21.60	AV	N Line	Pass
6	14.990	36.8	10.45	60.0	23.20	Peak	N Line	Pass
6**	14.990	23.3	10.45	50.0	26.70	AV	N Line	Pass

Test Data and Plots

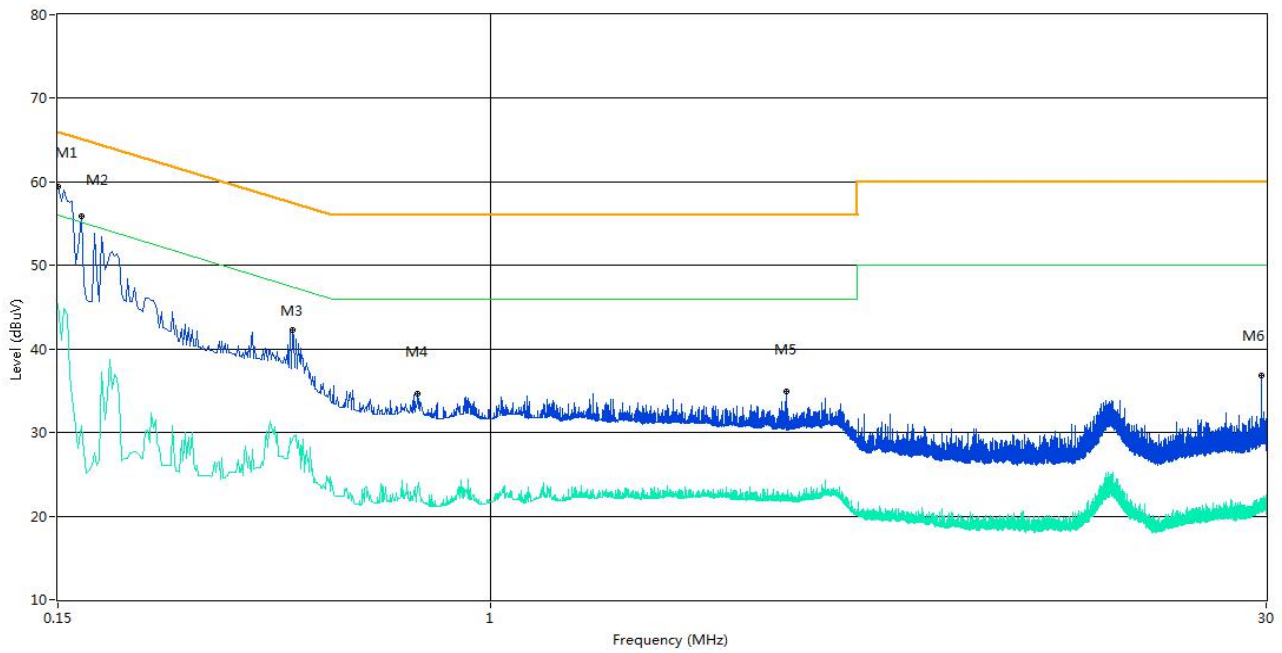
The USB Test Mode

A.2.3 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.154	59.5	10.04	65.8	6.30	Peak	L Line	Pass
1**	0.154	43.1	10.04	55.8	12.70	AV	L Line	Pass
2	0.198	51.7	10.04	63.7	12.00	Peak	L Line	Pass
2**	0.198	38.4	10.04	53.7	15.30	AV	L Line	Pass
3	0.400	42.7	10.04	57.9	15.20	Peak	L Line	Pass
3**	0.400	31.4	10.04	47.9	16.50	AV	L Line	Pass
4	0.534	33.7	10.05	56.0	22.30	Peak	L Line	Pass
4**	0.534	22.0	10.05	46.0	24.00	AV	L Line	Pass
5	0.682	32.7	10.05	56.0	23.30	Peak	L Line	Pass
5**	0.682	19.4	10.05	46.0	26.60	AV	L Line	Pass
6	4.570	35.6	10.16	56.0	20.40	Peak	L Line	Pass
6**	4.570	25.2	10.16	46.0	20.80	AV	L Line	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	59.5	10.04	66.0	6.50	Peak	N Line	Pass
1**	0.150	45.4	10.04	56.0	10.60	AV	N Line	Pass
2	0.166	55.8	10.04	65.2	9.40	Peak	N Line	Pass
2**	0.166	30.8	10.04	55.2	24.40	AV	N Line	Pass
3	0.420	42.3	10.04	57.4	15.10	Peak	N Line	Pass
3**	0.420	29.1	10.04	47.4	18.30	AV	N Line	Pass
4	0.726	34.6	10.05	56.0	21.40	Peak	N Line	Pass
4**	0.726	22.8	10.05	46.0	23.20	AV	N Line	Pass
5	3.658	34.9	10.13	56.0	21.10	Peak	N Line	Pass
5**	3.658	22.0	10.13	46.0	24.00	AV	N Line	Pass
6	29.378	36.8	10.85	60.0	23.20	Peak	N Line	Pass
6**	29.378	22.0	10.85	50.0	28.00	AV	N Line	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-SZ17A0392-AE.PDF".

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ17A0392-AW.PDF".

ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL-SZ17A0392-AI.PDF".

--END OF REPORT--