EMC
Measurement and Test Report

For

Vonino Electronics LTD.

Miramar Tower 10F- NO.1010, 132 Nathan Road, Tsim Sha Tsui,

Kowloon, Hong Kong

Test Standards:	EN 301 489-1 V1.9.2 (2011-09) EN 301 489-3 V1.6.1 (2013-08) EN 301 489-7 V1.3.1 (2005-11) EN 301 489-17 V2.2.1 (2012-09) EN 301 489-24 V1.5.1 (2010-10)
Product Description:	Smart Phone
Tested Model:	JAX S
Report No.:	STR16108061E-6
Tested Date:	2016-10-13 to 2016-10-14
Issued Date:	2016-10-14
Tested By:	Iven Guo / Engineer
Reviewed By:	Silin Chen / EMC Manager
Approved & Authorized By:	Jandy So / PSQ Manager
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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM. Test Technology Co., Ltd.

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Vonino Electronics LTD.
Address of applicant:	Miramar Tower 10F- NO.1010, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer:	Shenzhen Fortuneship Technology Co., Ltd
Address of manufacturer:	Room 701-716, 7th Floor, Kanghesheng Building, No.1 ChuangSheng Road, Nanshan District, Shenzhen, Guangdong, P. R. China

General Description of EUT	
Product Name:	Smart Phone
Brand Name:	VONINO
Model No.:	JAX S
Adding Model(s):	/
Rated Voltage:	DC 3.8V Rechargeable Li-Polymer Battery
Battery Capacity:	2000mAh
Power Adapter:	VNA-V50JS
	Input: 100-240Vac, 50/60Hz, 0.2A; Output: 5.0V⎓ 1.0A, L.P.S
Software Version:	MEDIACOM_M_PPXG515_V01_20160409_171404_ZH066_CF9_KS671HD_DATAMATIC_W18_B65003_20160409_16G2G_64P8_DDR3_HD_W18_ALS_Hall_171404_OTA
Hardware Version:	ZH066V3.0
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
2G	
Support Networks:	GSM, GPRS, EDGE(Only Downlink)
Support Bands:	GSM900, DCS1800
Frequency Range:	GSM900: Tx: 880-915MHz, Rx: 925-960MHz
	DCS1800: Tx: 1710-1785MHz, Rx: 1805-1880MHz
Max.RF Output Power:	GSM900: 32.40dBm, GSM1800: 29.78dBm
Modulation Type:	GMSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM900:0.3dBi, DCS1800:0.6dBi
GPRS Class:	Class 12

3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Bands:	WCDMA Band 1, WCDMA Band 8
Frequency Range:	WCDMA Band 1: Tx: 1920-1980MHz, Rx: 2110-2170MHz
	WCDMA Band 8: Tx: 880-915MHz, Rx: 925-960MHz
Max.RF Output Power:	WCDMA Band I:22.92dBm; WCDMA Band VIII: 22.52dBm
Modulation Type:	BPSK, QPSK, 16QAM
Type of Antenna:	Integral Antenna
Antenna Gain:	Band I: 0.7dBi; Band VIII: 0.3dBi
Bluetooth	
Bluetooth Version:	Bluetooth 4.0
Frequency Range:	2402-2480MHz
Max.RF Output Power:	4.07dBm (EIRP)
Type of Modulation:	GFSK, Pi/4 DQPSK, 8DPSK
Data Rate:	1Mbps, 2Mbps, 3Mbps
Quantity of Channels	79/40
Channel Separation:	1MHz/2MHz
Type of Antenna:	Integral Antenna
Antenna Gain:	0.7dbi
Wi-Fi	
Support Standards:	802.11b, 802.11g, 802.11n-HT20/40
Frequency Range:	2412-2472MHz for 802.11b/g/n(HT20) 2422-2462MHz for 802.11b/g/n(HT40)
Max.RF Output Power:	15.21dBm (EIRP)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels	13 for 802.11b/g/n(HT20) 9 for 802.11b/g/n(HT40)
Channel Separation:	5MHz
Type of Antenna:	Integral Antenna
Antenna Gain:	0.68dbi
GPS	
Frequency Range:	1.575GHz Receiving
Type of Antenna:	Integral Antenna

1.2 Test Standards

The following report is prepared on behalf of the Vonino Electronics LTD. In accordance with ETSI EN 301 489-1 V1.9.2, Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; ETSI EN 301 489-3, Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz.; ETSI EN 301 489-7 V1.3.1, Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 7: Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS); and ETSI EN 301 489-17 V2.2.1, Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment and and ETSI EN 301 489-24 V1.5.1, Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 24: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) for Mobile andportable (UE) radio and ancillary equipment.

The objective of the manufacturer is to demonstrate compliance with the standards ETSI EN 301489-1, ETSI EN301 489-3, ETSI EN 301489-7, ETSI EN 301489-17 and ETSI EN 301 489-24.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with the standard ETSI EN 301489-1, Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.

1.4 Test Facility

- **FCC – Registration No.: 934118**
  Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

- **Industry Canada (IC) Registration No.: 11464A**
  The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101)

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission/immunity level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	Charging & Playing	AC Adapter, Connect to Charger
TM2	Downloading	Connected to PC
TM3	Front Camera	/
TM4	Back Camera	/
TM5	FM	Receive 98.0MHz
TM6	GPS	Receive
TM7	GSM900	TT, CT, TR, CR for EMS testing
TM8	GSM1800	TT, CT, TR, CR for EMS testing
TM9	GPRS900	TT, CT, TR, CR for EMS testing
TM10	GPRS1800	TT, CT, TR, CR for EMS testing
TM11	WCDMA Band 1	TT, CT, TR, CR for EMS testing
TM12	HSDPA Band 1	TT, CT, TR, CR for EMS testing
TM13	HSUPA Band 1	TT, CT, TR, CR for EMS testing
TM14	WCDMA Band 8	TT, CT, TR, CR for EMS testing
TM15	HSDPA Band 8	TT, CT, TR, CR for EMS testing
TM16	HSUPA Band 8	TT, CT, TR, CR for EMS testing
TM17	Bluetooth	TT, CT, TR, CR for EMS testing
TM18	Wi-Fi	TT, CT, TR, CR for EMS testing

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB Cable	1.0	Shielded	Without Ferrite
Earplug Cable	1.4	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	T410	/

1.6 Performance Criteria for EMS

According Clause 6.1 of EN 301 489-3, the performance criteria are:
-performance criteria A for immunity tests with phenomena of a continuous nature;
-performance criteria B for immunity tests with phenomena of a transient nature;
-performance criteria C for immunity tests with power interruptions exceeding a certain time.

Device Type 1		
Criteria	**During test**	**After test**
A	Operate as intended No loss of function For equipment with primary function type II the minimum performance shall be 12 dB SINAD No unintentional responses	Operate as intended For equipment with primary function type II the communication link shall be maintained No loss of function No degradation of performance No loss of stored data or user programmable functions
B	May be loss of function (one or more) No unintentional responses	Operate as intended Lost function(s) shall be self-recoverable No degradation of performance No loss of stored data or user programmable functions
Device Type 2		
Criteria	**During test**	**After test**
A	Operate as intended No loss of function For equipment with primary function type II the minimum performance shall be 6 dB SINAD No unintentional responses	Operate as intended For equipment with primary function type II the communication link shall be maintained No loss of function No degradation of performance No loss of stored data or user programmable functions
B	May be loss of function (one or more) No unintentional responses	Operate as intended Lost function(s) shall be self-recoverable No degradation of performance No loss of stored data or user programmable functions

Device Type 3		
Criteria	**During test**	**After test**
A and B	May be loss of function (one or more) No unintentional responses	Operate as intended, for equipment with primary function type II the communication link may be lost, but shall be recoverable by user No degradation of performance Lost functions shall be self-recoverable

According to the section 6.1 to 6.4 of EN301489-7, the test data has been collected, reduced, and analyzed within this report in accordance with Immunity requires the following as specific performance criteria:

6.1 Performance criteria for Continuous phenomena applied to Transmitters (CT)

A communication link shall be established at the start of the test, and maintained during the test, see clauses 4.2.2 to 4.2.5.

During the test, the uplink speech output level shall be at least 35 dB less than the previously recorded reference levels, when measured through an audio band pass filter of width 200 Hz, centred on 1 kHz (audio breakthrough check).

NOTE: When there is a high level background noise present the filter bandwidth can be reduced down to a minimum of 40 Hz.

At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data, and the communication link shall have been maintained. In addition to confirming the above performance during a call, the test shall also be performed in idle mode, and the transmitter shall not unintentionally operate.

6.2 Performance criteria for Transient phenomena applied to Transmitters (TT)

A communications link shall be established at the start of the test, see clauses 4.2.2 to 4.2.5.

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communication link.

At the conclusion of the total test comprising the series of individual exposures, the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communication link shall have been maintained.

In addition to confirming the above performance during a call, the test shall also be performed in idle mode, and the transmitter shall not unintentionally operate.

6.3 Performance criteria for Continuous phenomena applied to Receivers (CR)

A communications link shall be established at the start of the test, clauses 4.2.1 to 4.2.4.

During the test, the RXQUAL of the downlink shall not exceed the value of three, measured during each individual exposure in the test sequence.

During the test, the downlink speech output level shall be at least 35 dB less than the previously recorded reference levels, when measured through an audio band pass filter of width 200 Hz, centred on 1 kHz (audio breakthrough check).

NOTE: When there is a high level background noise present the filter bandwidth can be reduced down to a minimum of 40 Hz.

At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data, and the communication link shall have been maintained.

6.4 Performance criteria for Transient phenomena applied to Receivers (TR)

A communications link shall be established at the start of the test, clauses 4.2.1 to 4.2.4.

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communication link.

At the conclusion of the total test comprising the series of individual exposures, the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communication link shall have been maintained.

According Clause 6.1 of EN 301 489-17,

The performance criteria are:

-performance criteria A for immunity tests with phenomena of a continuous nature;

-performance criteria B for immunity tests with phenomena of a transient nature;

-performance criteria C for immunity tests with power interruptions exceeding a certain time.

Table 1: Performance criteria

Criteria	During test	After test
A	Shall operate as intended May show degradation of performance (note 1) Shall be no loss of function Shall be no unintentional transmissions	Shall operate as intended Shall be no degradation of performance (note 2) Shall be no loss of function Shall be no loss of stored data or user programmable functions
B	May show loss of function (one or more) May show degradation of performance (note 1) No unintentional transmissions	Functions shall be self-recoverable Shall operate as intended after recovering Shall be no degradation of performance (note 2) Shall be no loss of stored data or user programmable functions
C	May be loss of function (one or more)	Functions shall be recoverable by the operator Shall operate as intended after recovering Shall be no degradation of performance (note 2)

NOTE 1: Degradation of performance during the test is understood as a degradation to a level not below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance.
If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

NOTE 2: No degradation of performance after the test is understood as no degradation below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. After the test no change of actual operating data or user retrievable data is allowed.
If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.

According to the section 6.1 and 6.2 EN301489-24, the test data has been collected, reduced, and analyzed within this report in accordance with Immunity requires the following as specific performance criteria:

6.1 Performance criteria for continuous phenomena

A communication link shall be established at the start of the test, and maintained during the test, clauses 4.1 and 4.2.

In the data transfer mode, the performance criteria can be one of the following:

- if the BER (as referred in TS 134 109 [8]) is used, it shall not exceed 0,001 during the test sequence;
- if the BLER (as referred in TS 134 109 [8]) is used, it shall not exceed 0,01 during the test sequence.

The BLER calculation shall be based on evaluating the CRC on each transport block.

In the speech mode, the performance criteria shall be that the up link and downlink speech output levels shall be at least 35 dB less than the recorded reference levels, when measured through an audio band pass filter of width 200 Hz, centred on 1 kHz (annex B).

NOTE: When there is a high level of background audio noise present, the filter bandwidth can be reduced down to a minimum of 40 Hz.

At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data, and the communication link shall have been maintained.

In addition to confirming the above performance in traffic mode, the test shall be performed in idle mode, and the transmitter shall not unintentionally operate.

6.2 Performance criteria for Transient phenomena

A communications link shall be established at the start of the test, clauses 4.1 and 4.2.

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communication link.

At the conclusion of the total test comprising the series of individual exposures, the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communication link shall have been maintained.

In addition to confirming the above performance in traffic mode, the test shall also be performed in idle mode, and the transmitter shall not unintentionally operate.

1.7 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2016-06-04	2017-06-03
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2016-06-04	2017-06-03
Amplifier	Agilent	8447F	3113A06717	2016-06-04	2017-06-03
Amplifier	C&D	PAP-1G18	2002	2016-06-04	2017-06-03
Broadband Antenna	Schwarz beck	VULB9163	9163-333	2016-06-04	2017-06-03
Horn Antenna	ETS	3117	00086197	2016-06-04	2017-06-03
Loop Antenna	Schwarz beck	FMZB 1516	9773	2016-06-04	2017-06-03
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2016-06-04	2017-06-03
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2016-06-04	2017-06-03
AC LISN	Schwarz beck	NSLK8126	8126-224	2016-06-04	2017-06-03
DC LISN	Schwarz beck	NNBM8126D	279	2016-06-04	2017-06-03
8-WIRE LISN	Schwarz beck	8158	CAT3-8158-0059	2016-06-04	2017-06-03
8-WIRE LISN	Schwarz beck	8158	CAT5-8158-0117	2016-06-04	2017-06-03
Digital Power Analyzer	California Instrument	PACS-1	72831	2016-06-04	2017-06-03
Power Source	California Instrument	5001iX	25965	2016-06-04	2017-06-03
ESD Generator	TESQ AG	NSG 437	161	2016-06-04	2017-06-03
Signal Generator	Rohde & Schwarz	SMT03	100059	2016-06-04	2017-06-03
Voltage Probe	Rohde & Schwarz	URV5-Z2	100013	2016-06-04	2017-06-03
Power Amplifier	AR	150W1000	300999	2016-06-04	2017-06-03
Power Amplifier	AR	25S1G4AM1	305993	2016-06-04	2017-06-03
Transient 2000	EMC PARTNER	TRA2000	863	2016-06-04	2017-06-03
CW Simulator	EM Test	CWS 500C	0900-03	2016-06-04	2017-06-03
EMCPRO	KEYTEK	EMCPro	0509124	2016-06-04	2017-06-03
Coil	KEYTEK	F-1000-4-8	0533	2016-06-04	2017-06-03
Audio analyzer	Rohde & Schwarz	UPA	829743/001	2016-06-04	2017-06-03
GSM Tester	Rhode & Schwarz	CMU200	112012	2016-06-04	2017-06-03
Communication Tester	Rohde & Schwarz	CMW500	148650	2016-06-04	2017-06-03
Audio Power Amplifier	B&K	2716-C-001	/	2016-06-04	2017-06-03
Conditioning Amplifier	B&K	2690-0S2	/	2016-06-04	2017-06-03
Mouth Simulator	B&K	4227	/	2016-06-04	2017-06-03
Sound Calibrator	B&K	4231	/	2016-06-04	2017-06-03
1/2″ Pressure-field Microphone	B&K	4192	/	2016-06-04	2017-06-03
Ear Simulator for Telephonometry	B&K	4185	/	2016-06-04	2017-06-03
Telephone Test Head	B&K	4206 B	/	2016-06-04	2017-06-03
Anechoic chamber	Albatross Projects	MCDC	----	2016-06-04	2017-06-03

2. SUMMARY OF TEST RESULTS

Standards	Reference	Description of Test Item	Result
EN 301489-1 V1.9.2 (2011-09)	8.2	Radiated Emissions	Pass
	8.3	Conducted Emissions for DC Power Port	N/A
	8.4	Conducted Emissions for AC Power Port	Pass
	8.5	Harmonic Current Emissions	Pass
	8.6	Voltage Fluctuations and Flicker	Pass
	8.7	Telecommunication Ports	N/A
	9.2	Radio Frequency Electromagnetic Field	Pass
	9.3	Electrostatic Discharge	Pass
	9.4	Fast Transients, Common Mode	Pass
	9.5	Radio Frequency, Common Mode	Pass
	9.6	Transient and Surges in the Vehicular Environment	N/A
	9.7	Voltage Dips and Interruptions	Pass
	9.8	Surges	Pass

Pass: The EUT complies with the essential requirements in the standard
Fail: The EUT does not comply with the essential requirements in the standard
N/A: not applicable

3. Conducted Emissions

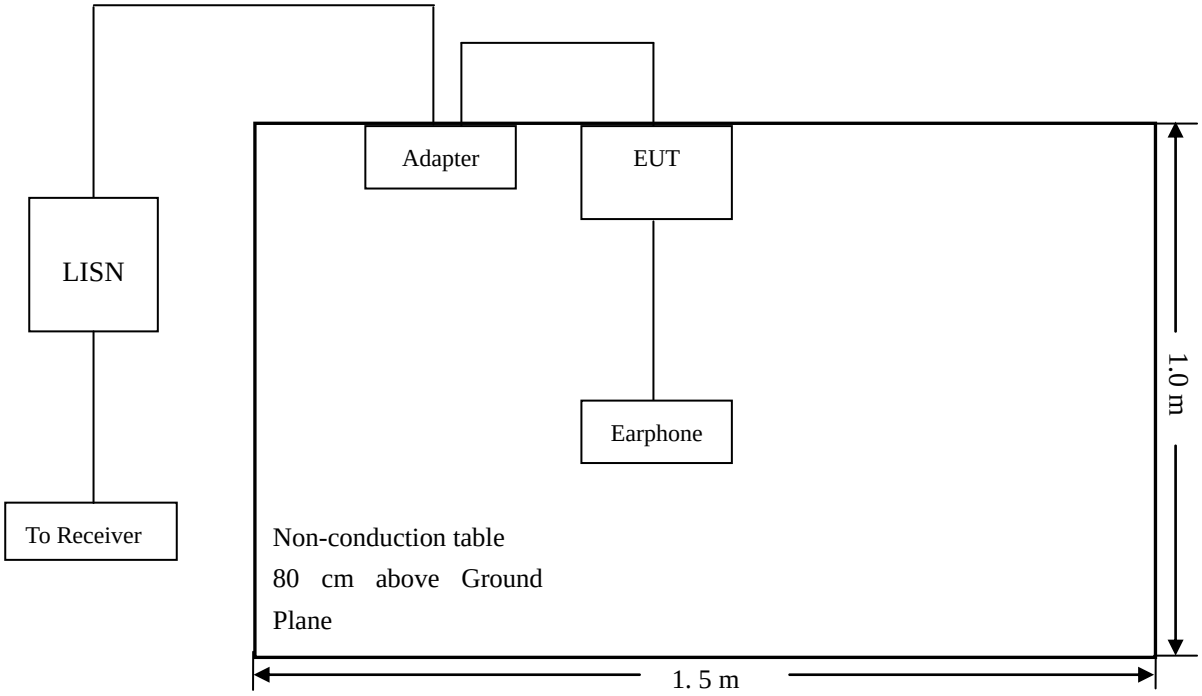
3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

3.2 Test Procedure

Test is conducting under the description of EN55022 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement.

3.3 Basic Test Setup Block Diagram



3.4 Environmental Conditions

Temperature:	22 ° C
Relative Humidity:	55 %
ATM Pressure:	1015 mbar

3.5 Summary of Test Results/Plots

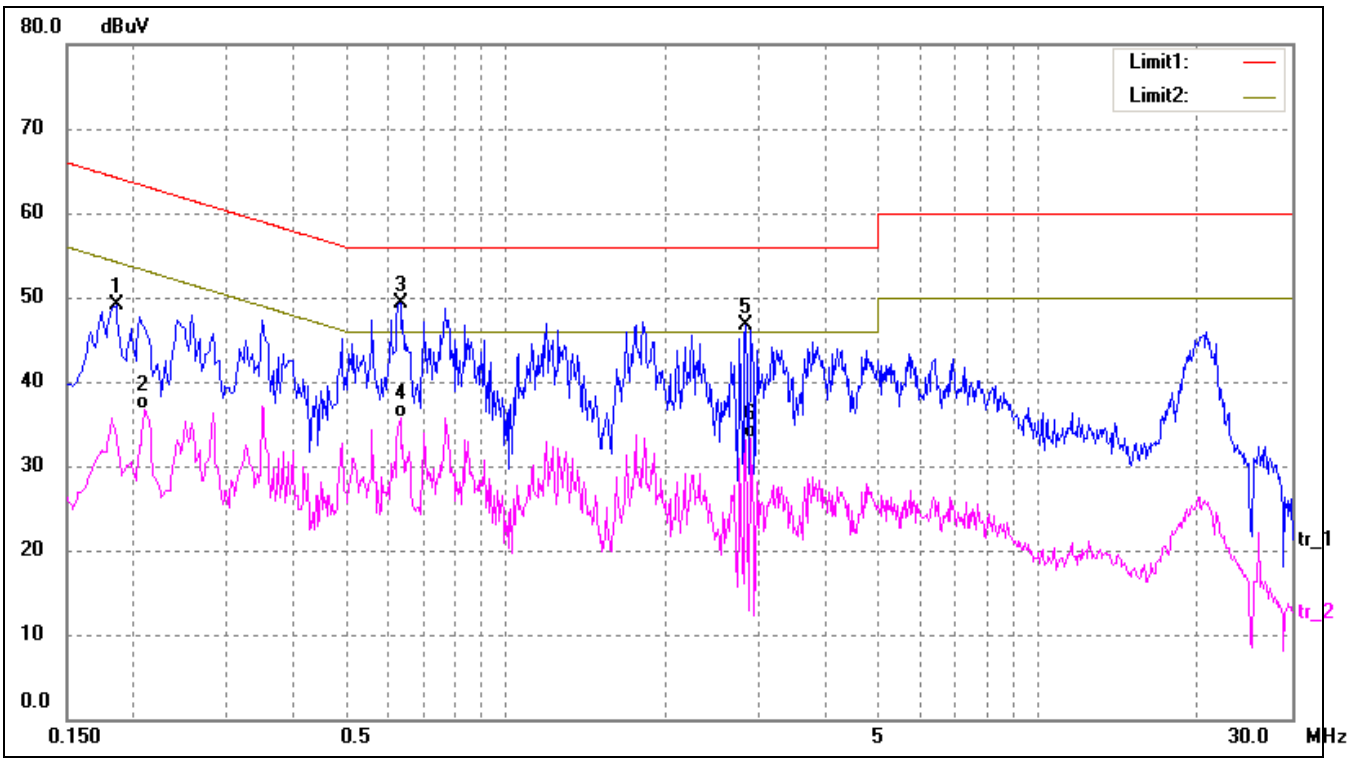
According to the data in section 3.7, the EUT complied with the EN 301489 Conducted margin for a Class B device, with the *worst* margin reading of:

-6.67 dB at **0.6340 MHz** in the Line mode, peak detector, **0.15-30MHz**

3.6 Conducted Emissions Test Data

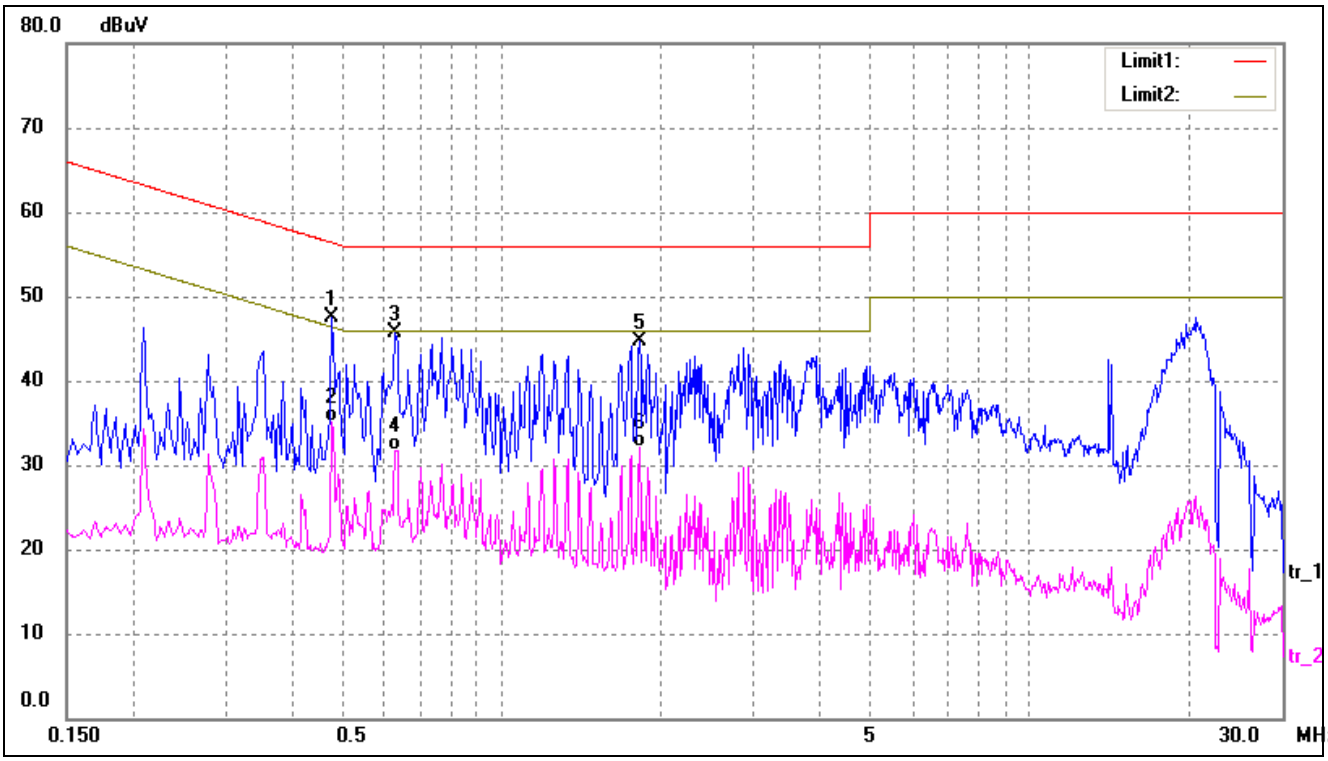
Plot of Conducted Emissions Test Data

EUT: *Smart Phone*
Tested Model: *JAX S*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz; adapter DC 5V*
Test Specification: *Line*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1860	39.59	9.50	49.09	64.21	-15.12	peak
2	0.2100	27.16	9.50	36.66	53.21	-16.55	AVG
3*	0.6340	39.74	9.59	49.33	56.00	-6.67	peak
4	0.6340	26.21	9.59	35.80	46.00	-10.20	AVG
5	2.8300	36.70	9.94	46.64	56.00	-9.36	peak
6	2.8980	23.33	9.95	33.28	46.00	-12.72	AVG

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.4780	37.96	9.55	47.51	56.37	-8.86	peak
2	0.4780	25.52	9.55	35.07	46.37	-11.30	AVG
3	0.6300	36.04	9.59	45.63	56.00	-10.37	peak
4	0.6300	22.11	9.59	31.70	46.00	-14.30	AVG
5	1.8220	34.99	9.80	44.79	56.00	-11.21	peak
6	1.8220	22.31	9.80	32.11	46.00	-13.89	AVG

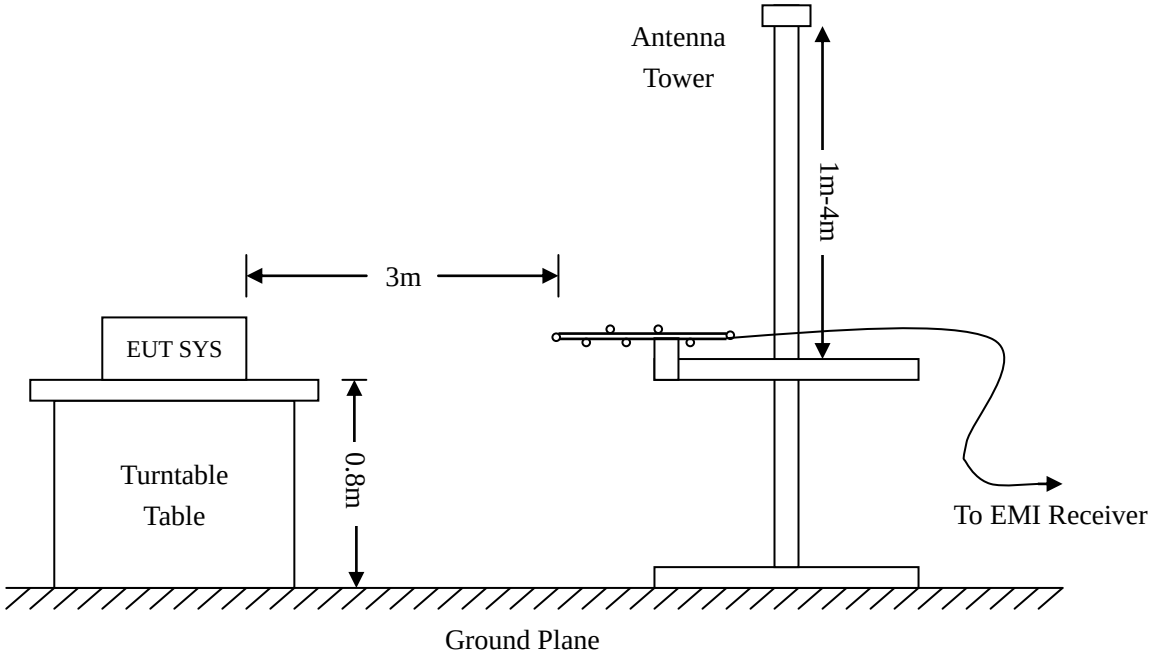
4. Radiated Emissions

4.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Procedure

Test is conducting under the description of EN55022 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement.



4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – EN 301489 Class B Limit

4.4 Environmental Conditions

Temperature:	23° C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

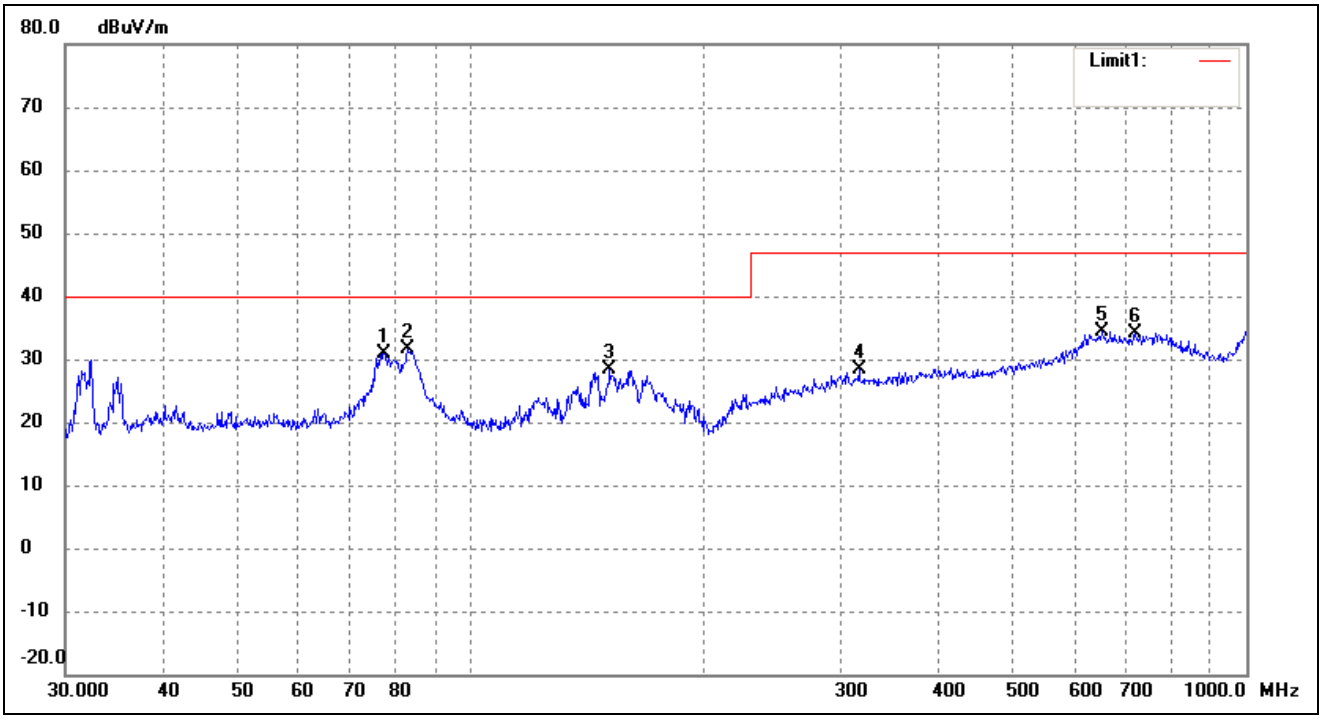
4.5 Summary of Test Results/Plots

According to the data in section 4.6, the EUT complied with the EN 301489 Class B standards, and had the worst margin is:

-0.98 dB at **774.1584 MHz** in the, **Horizontal** polarization, **TM2** mode, **30 MHz to 6 GHz, 3Meters**

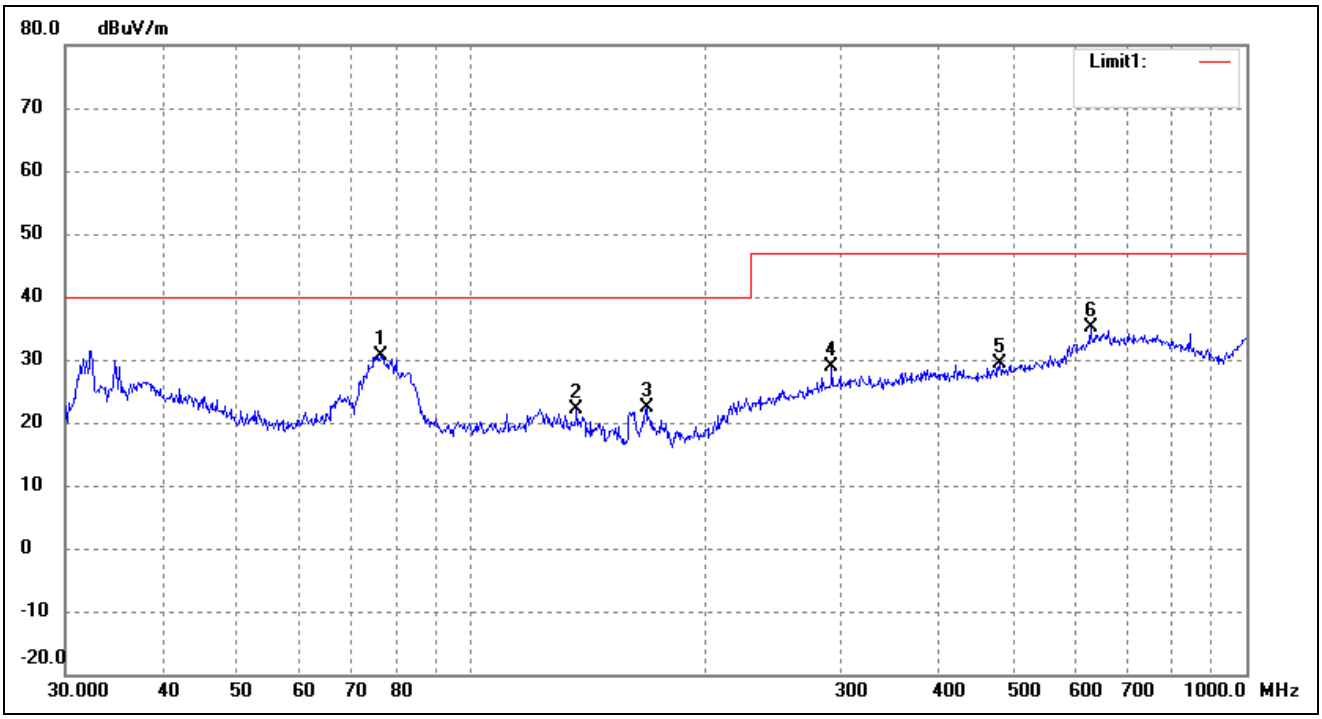
Plot of Radiated Emissions Test Data (Below 1GHz)

EUT: *Smart Phone*
Tested Model: *JAX S*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz, adapter DC 5V*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	77.3212	28.90	2.03	30.93	40.00	-9.07	0	100	peak
2	82.9385	29.38	2.21	31.59	40.00	-8.41	0	100	peak
3	151.0666	25.54	2.72	28.26	40.00	-11.74	0	100	peak
4	316.5890	16.45	11.96	28.41	47.00	-18.59	0	100	peak
5	651.9417	16.66	17.77	34.43	47.00	-12.57	0	100	peak
6	719.1995	16.36	17.79	34.15	47.00	-12.85	0	100	peak

Test Specification: *Vertical*



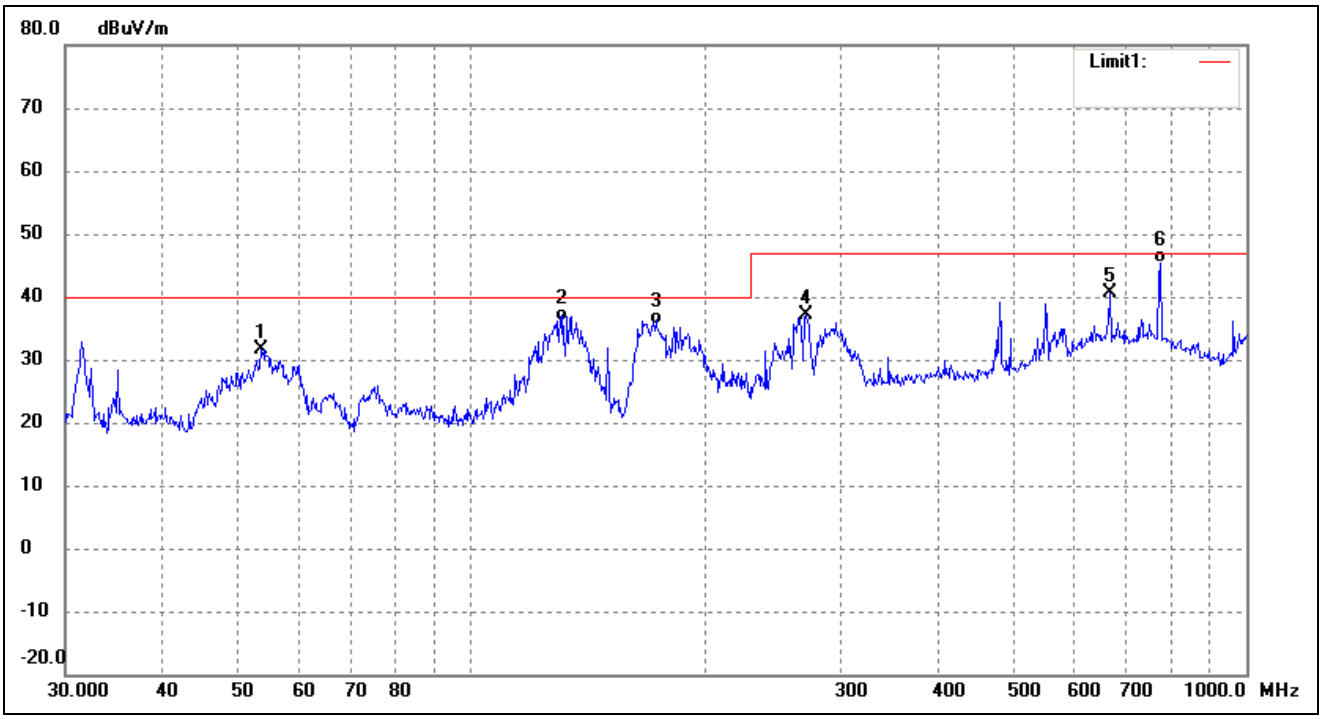
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	76.5121	28.48	2.12	30.60	40.00	-9.40	0	100	peak
2	136.9392	18.78	3.40	22.18	40.00	-17.82	0	100	peak
3	168.4138	19.86	2.47	22.33	40.00	-17.67	0	100	peak
4	292.0583	17.32	11.65	28.97	47.00	-18.03	0	100	peak
5	480.5276	16.92	12.58	29.50	47.00	-17.50	0	100	peak
6	629.4772	17.53	17.70	35.23	47.00	-11.77	0	100	peak

Plot of Radiated Emissions Test Data (Below 1GHz)

EUT: *Smart Phone*
Tested Model: *JAX S*
Operating Condition: *TM2*
Comment: *AC 230V/50Hz, adapter DC 5V*
Test Specification: *Horizontal*

No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	55.2207	26.52	5.02	31.54	40.00	-8.46	0	100	peak
2	129.0146	28.22	4.06	32.28	40.00	-7.72	0	100	peak
3	165.4866	36.10	2.45	38.55	40.00	-1.45	0	100	QP
4	289.0021	24.85	11.52	36.37	47.00	-10.63	0	100	peak
5	665.8035	21.98	17.90	39.88	47.00	-7.12	0	100	peak
6	774.1584	28.83	17.19	46.02	47.00	-0.98	0	100	QP

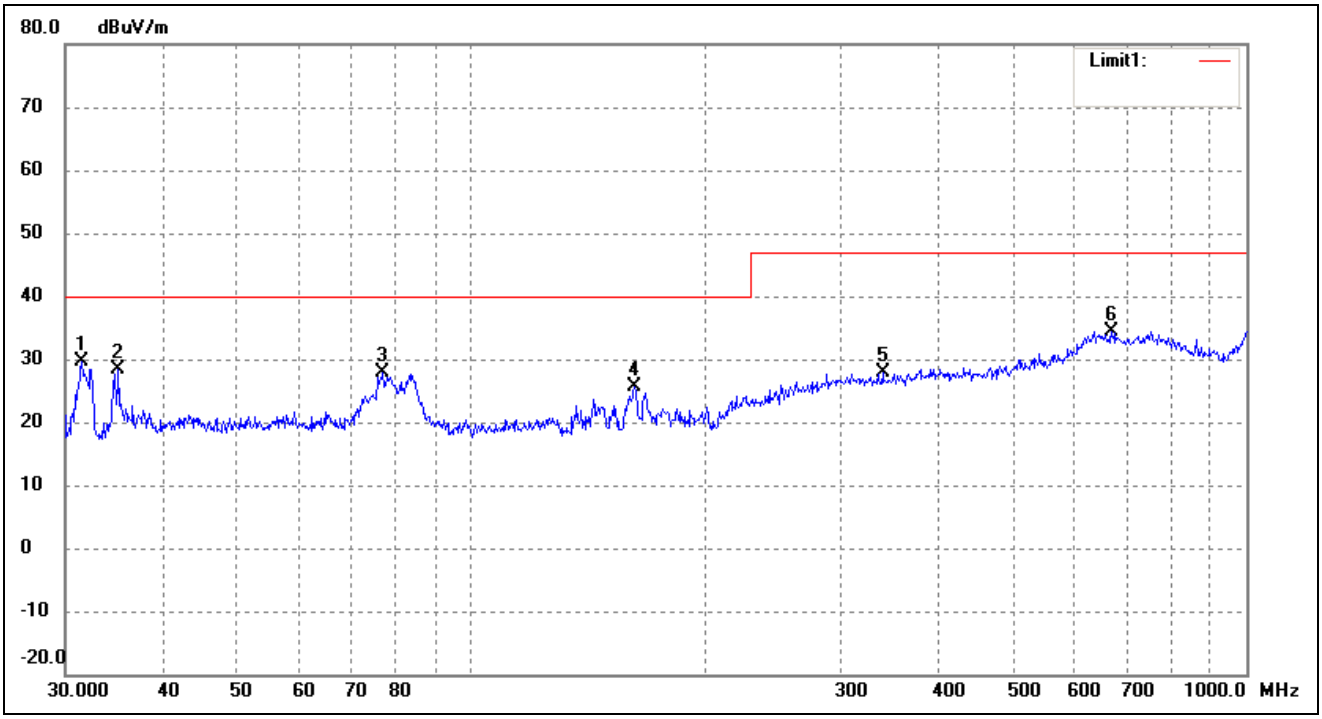
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	53.6932	26.69	5.05	31.74	40.00	-8.26	0	100	peak
2	131.2965	32.21	3.88	36.09	40.00	-3.91	0	100	QP
3	173.2051	33.05	2.46	35.51	40.00	-4.49	0	100	QP
4	270.3748	26.65	10.44	37.09	47.00	-9.91	0	100	peak
5	668.1423	22.51	18.03	40.54	47.00	-6.46	0	100	peak
6	774.1584	28.08	17.19	45.27	47.00	-1.73	0	100	QP

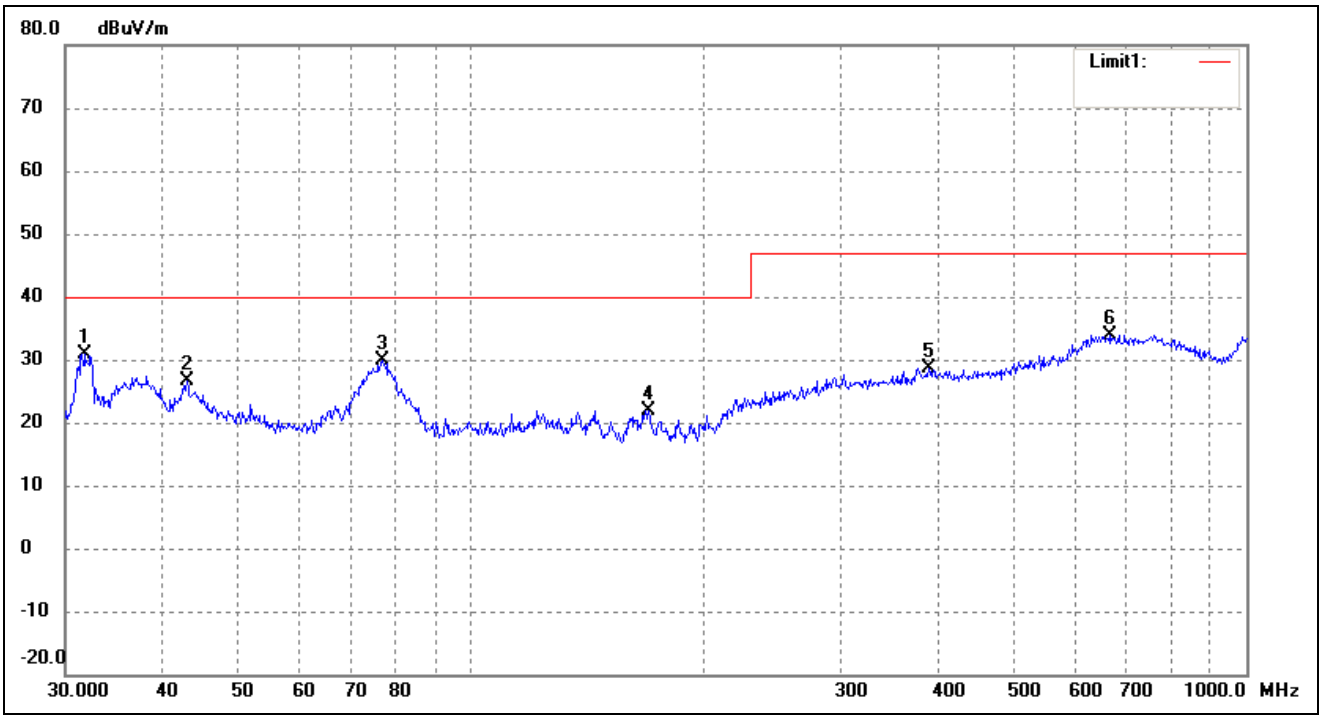
Plot of Radiated Emissions Test Data (Below 1GHz)

EUT: *Smart Phone*
Tested Model: *JAX S*
Operating Condition: *TM3*
Comment: *AC 230V/50Hz, adapter DC 5V*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.5095	25.95	3.61	29.56	40.00	-10.44	0	100	peak
2	35.1278	24.27	4.20	28.47	40.00	-11.53	0	100	peak
3	77.0505	25.87	2.06	27.93	40.00	-12.07	0	100	peak
4	162.6106	23.29	2.42	25.71	40.00	-14.29	0	100	peak
5	339.5888	16.48	11.38	27.86	47.00	-19.14	0	100	peak
6	670.4893	16.18	18.16	34.34	47.00	-12.66	0	100	peak

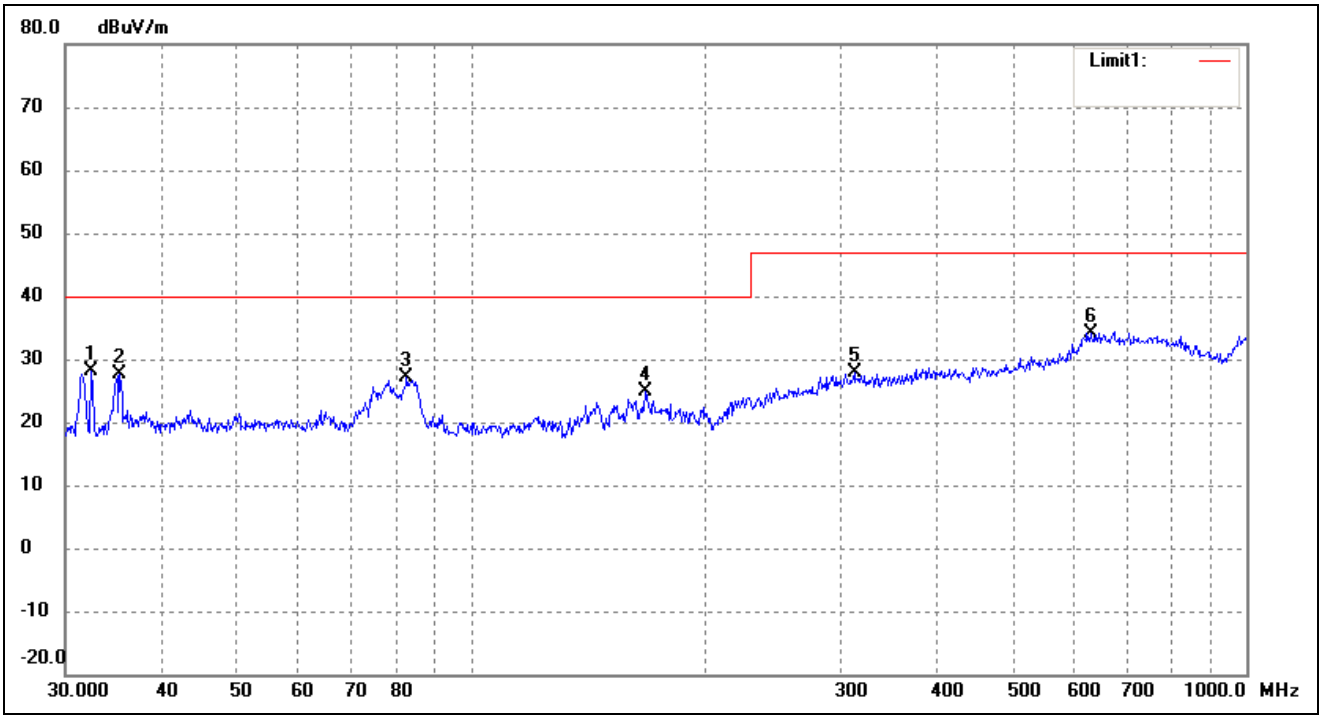
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.7313	27.36	3.64	31.00	40.00	-9.00	0	100	peak
2	43.0505	21.58	4.94	26.52	40.00	-13.48	0	100	peak
3	76.7808	27.91	2.09	30.00	40.00	-10.00	0	100	peak
4	169.5990	19.38	2.46	21.84	40.00	-18.16	0	100	peak
5	389.3549	16.39	12.20	28.59	47.00	-18.41	0	100	peak
6	668.1423	15.91	18.03	33.94	47.00	-13.06	0	100	peak

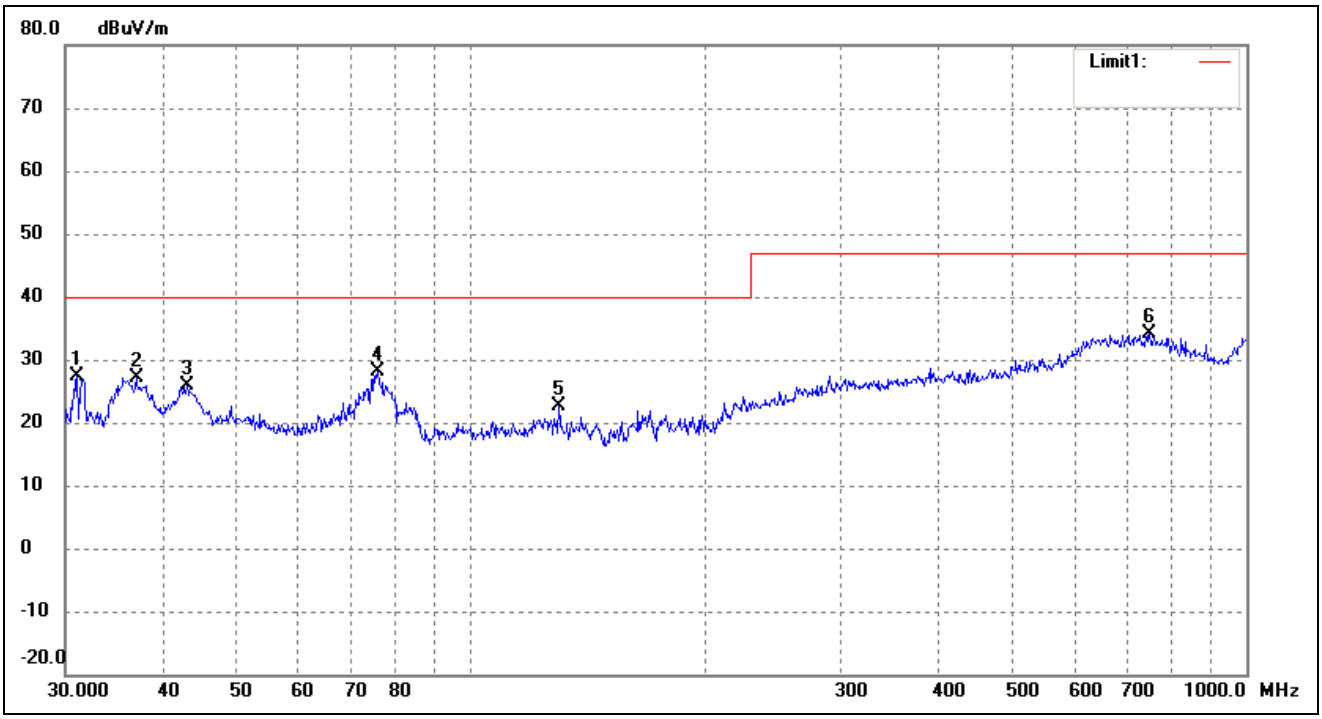
Plot of Radiated Emissions Test Data (Below 1GHz)

EUT: *Smart Phone*
Tested Model: *JAX S*
Operating Condition: *TM4*
Comment: *AC 230V/50Hz, adapter DC 5V*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.4059	24.33	3.76	28.09	40.00	-11.91	0	100	peak
2	35.2512	23.48	4.22	27.70	40.00	-12.30	0	100	peak
3	82.6482	25.03	2.16	27.19	40.00	-12.81	0	100	peak
4	167.8243	22.35	2.47	24.82	40.00	-15.18	0	100	peak
5	312.1794	15.92	11.95	27.87	47.00	-19.13	0	100	peak
6	629.4772	16.36	17.70	34.06	47.00	-12.94	0	100	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.0706	23.92	3.52	27.44	40.00	-12.56	0	100	peak
2	37.0249	22.57	4.49	27.06	40.00	-12.94	0	100	peak
3	43.0505	20.84	4.94	25.78	40.00	-14.22	0	100	peak
4	75.7114	25.80	2.21	28.01	40.00	-11.99	0	100	peak
5	129.9226	18.52	3.99	22.51	40.00	-17.49	0	100	peak
6	750.1083	15.43	18.58	34.01	47.00	-12.99	0	100	peak

Emissions 1 - 6 GHz

During measurements from 1 GHz to 6 GHz, only base noise was detected.

5. Harmonic Current Emissions

5.1 Test Procedure

Test is conducting under the description of EN61000-3-2.

5.2 Test Standards

EN61000-3-2, Clause 7.1 Limits for Class A equipment.

Environmental Conditions

Temperature:	22 °C
Relative Humidity:	48%
ATM Pressure:	1022 mbar

5.3 Harmonic Current Emissions Test Data

According to Clause 7 of EN61000-3-2, the EUT rated power is less than 75W, belong to ‘equipment with a rated power of 75W or less’, therefore ‘limits are not specified in this edition of the standards’. It is deem to full fit the requirements of the standards.

Result: The EUT complies with the requirements of this section.

6. Voltage Fluctuation and Flicker

6.1 Test Procedure

Test is conducting under the description of EN61000-3-3.

6.2 Test Standards

EN61000-3-3, Limit: Clause 5.

Environmental Conditions

Temperature:	22 °C
Relative Humidity:	48%
ATM Pressure:	1022 mbar

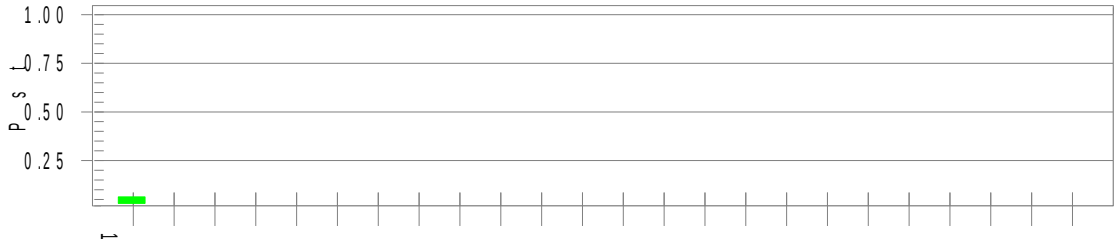
6.3 Voltage Fluctuation and Flicker Test Data

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

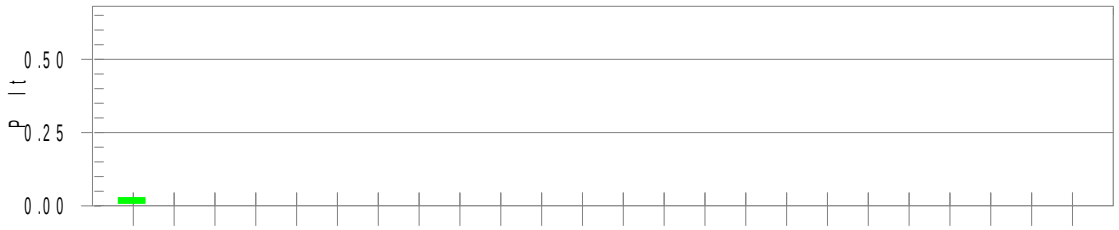
EUT: Smart Phone | Tested by: Iven
Test category: All parameters (European limits) | Test Margin: 100
Test date: 2016-10-13 | Start time: 15:28:19 AM | End time: 15:38:47 AM
Test duration (min): 10 | Data file name: F-000095.cts_data
Comment: TM1
Customer: Vonino Electronics LTD.

Test Result: Pass | Status: Test Completed

Pst_j and limit line | European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	231.011			
Highest dt (%):	0.00	Test limit (%):	3.30	Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.063	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.031	Test limit:	0.630	Pass

7. Electrostatic Discharge (ESD)

7.1 Test Procedure

Test is conducting under the description of IEC61000-4-2.

7.2 Test Performance

Performance Criterion: PASS for GSM_TT & TR
PASS for WCDMA_TT & TR
B for BT_TT, TR
B for Wi-Fi_TT, TR
B for Charging & Playing & Camera
B for Downloading
B for GPS
B for FM

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	55%
ATM Pressure:	1011 mbar

7.3 Electrostatic Discharge Immunity Test Data

Test mode: GSM900_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: GSM1800_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: GPRS900_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: GPRS1800_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: WCDMA Band 1_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: HSDPA Band 1_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: HSUPA Band 1_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: WCDMA Band 8_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: HSDPA Band 8_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: HSUPA Band 8_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Buttons	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Flashlight	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
loudspeaker	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
I/O Port	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Direct Contact Discharge								
Camera	PASS	PASS	PASS	PASS	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Top Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Back Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Left Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Right Side	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test mode: BT_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	A	A	A	A	A	A	A	A
Buttons	A	A	A	A	A	A	A	A
Flashlight	A	A	A	A	A	A	A	A
loudspeaker	A	A	A	A	A	A	A	A
I/O Port	A	A	A	A	A	A	A	A
Direct Contact Discharge								
Camera	A	A	A	A	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	A	A	A	A	A	A	A	A
Top Side	A	A	A	A	A	A	A	A
Back Side	A	A	A	A	A	A	A	A
Left Side	A	A	A	A	A	A	A	A
Right Side	A	A	A	A	A	A	A	A

Test mode: Wi-Fi_TT & TR

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	A	A	A	A	A	A	A	A
Buttons	A	A	A	A	A	A	A	A
Flashlight	A	A	A	A	A	A	A	A
loudspeaker	A	A	A	A	A	A	A	A
I/O Port	A	A	A	A	A	A	A	A
Direct Contact Discharge								
Camera	A	A	A	A	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	A	A	A	A	A	A	A	A
Top Side	A	A	A	A	A	A	A	A
Back Side	A	A	A	A	A	A	A	A
Left Side	A	A	A	A	A	A	A	A
Right Side	A	A	A	A	A	A	A	A

Test mode: Charging & Playing & Camera

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	A	A	A	A	A	A	A	A
Buttons	A	A	A	A	A	A	A	A
Flashlight	A	A	A	A	A	A	A	A
loudspeaker	A	A	A	A	A	A	A	A
I/O Port	A	A	A	A	A	A	A	A
Direct Contact Discharge								
Camera	A	A	A	A	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	A	A	A	A	A	A	A	A
Top Side	A	A	A	A	A	A	A	A
Back Side	A	A	A	A	A	A	A	A
Left Side	A	A	A	A	A	A	A	A
Right Side	A	A	A	A	A	A	A	A

Test mode: Downloading

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	A	A	A	A	A	A	A	A
Buttons	A	A	A	A	A	A	A	A
Flashlight	A	A	A	A	A	A	A	A
loudspeaker	A	A	A	A	A	A	A	A
I/O Port	A	A	A	A	A	A	A	A
Direct Contact Discharge								
Camera	A	A	A	A	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	A	A	A	A	A	A	A	A
Top Side	A	A	A	A	A	A	A	A
Back Side	A	A	A	A	A	A	A	A
Left Side	A	A	A	A	A	A	A	A
Right Side	A	A	A	A	A	A	A	A

Test mode: GPS

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	A	A	A	A	A	A	A	A
Buttons	A	A	A	A	A	A	A	A
Flashlight	A	A	A	A	A	A	A	A
loudspeaker	A	A	A	A	A	A	A	A
I/O Port	A	A	A	A	A	A	A	A
Direct Contact Discharge								
Camera	A	A	A	A	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	A	A	A	A	A	A	A	A
Top Side	A	A	A	A	A	A	A	A
Back Side	A	A	A	A	A	A	A	A
Left Side	A	A	A	A	A	A	A	A
Right Side	A	A	A	A	A	A	A	A

Test mode: FM

EN 61000-4-2 Test Points	Test Levels (kV)							
	-2	+2	-4	+4	-6	+6	-8	+8
Air Discharge								
Screen	A	A	A	A	A	A	A	A
Buttons	A	A	A	A	A	A	A	A
Flashlight	A	A	A	A	A	A	A	A
loudspeaker	A	A	A	A	A	A	A	A
I/O Port	A	A	A	A	A	A	A	A
Direct Contact Discharge								
Camera	A	A	A	A	/	/	/	/

EN 61000-4-2 Test Points	Test Levels (kV)							
	Indirect Contact Discharge (HCP)				Indirect Contact Discharge (VCP)			
	-2	+2	-4	+4	-2	+2	-4	+4
Front Side	A	A	A	A	A	A	A	A
Top Side	A	A	A	A	A	A	A	A
Back Side	A	A	A	A	A	A	A	A
Left Side	A	A	A	A	A	A	A	A
Right Side	A	A	A	A	A	A	A	A

Test Result: Pass

8. Radio Frequency Electromagnetic Field (R/S)

8.1 Test Procedure

Test is conducting under the description of IEC61000-4-3.

8.2 Test Performance

Performance Criterion: PASS for GSM_CT, CR
PASS for WCDMA_CT, CR
A for BT_CT, CR
A for Wi-Fi_CT, CR
A for Charging & Playing & Camera
A for Downloading
A for GPS
A for FM

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1010 mbar

8.3 Continuous Radiated Disturbances Test Data

Frequency step: 1% of fundamental
Dwell time: 1 second
Modulation: AM by 1kHz sine wave with 80% modulation depth

Test model: GSM900_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: GSM1800_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: GPRS900_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: GPRS1800_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: WCDMA Band 1_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: HSDPA Band 1_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: HSUPA Band 1_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: WCDMA Band 8_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: HSDPA Band 8_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: HSUPA Band 8_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
1400-2700	3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Test model: BT_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	A	A	A	A	A	A	A	A
1400-2700	3	A	A	A	A	A	A	A	A

Test model: Wi-Fi_CT, CR

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	A	A	A	A	A	A	A	A
1400-2700	3	A	A	A	A	A	A	A	A

Test model: Charging & Playing & Camera

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	A	A	A	A	A	A	A	A
1400-2700	3	A	A	A	A	A	A	A	A

Test model: Downloading

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	A	A	A	A	A	A	A	A
1400-2700	3	A	A	A	A	A	A	A	A

Test model: GPS

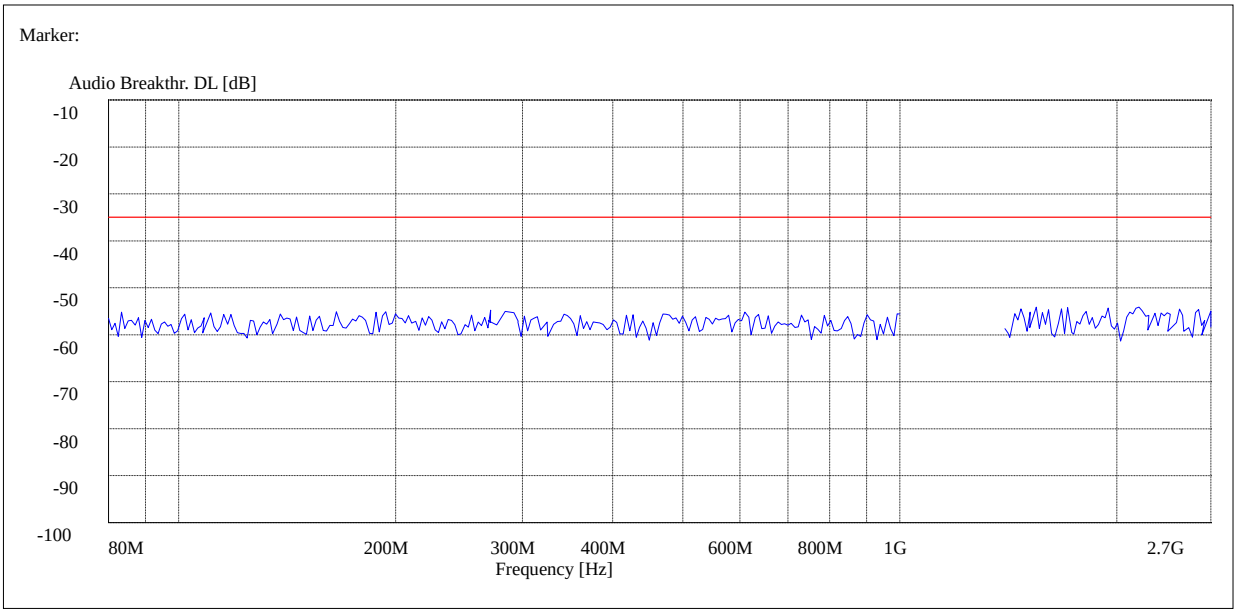
Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	A	A	A	A	A	A	A	A
1400-2700	3	A	A	A	A	A	A	A	A

Test model: FM

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	A	A	A	A	A	A	A	A
1400-2700	3	A	A	A	A	A	A	A	A

Test Result: Pass

GSM900 Mode: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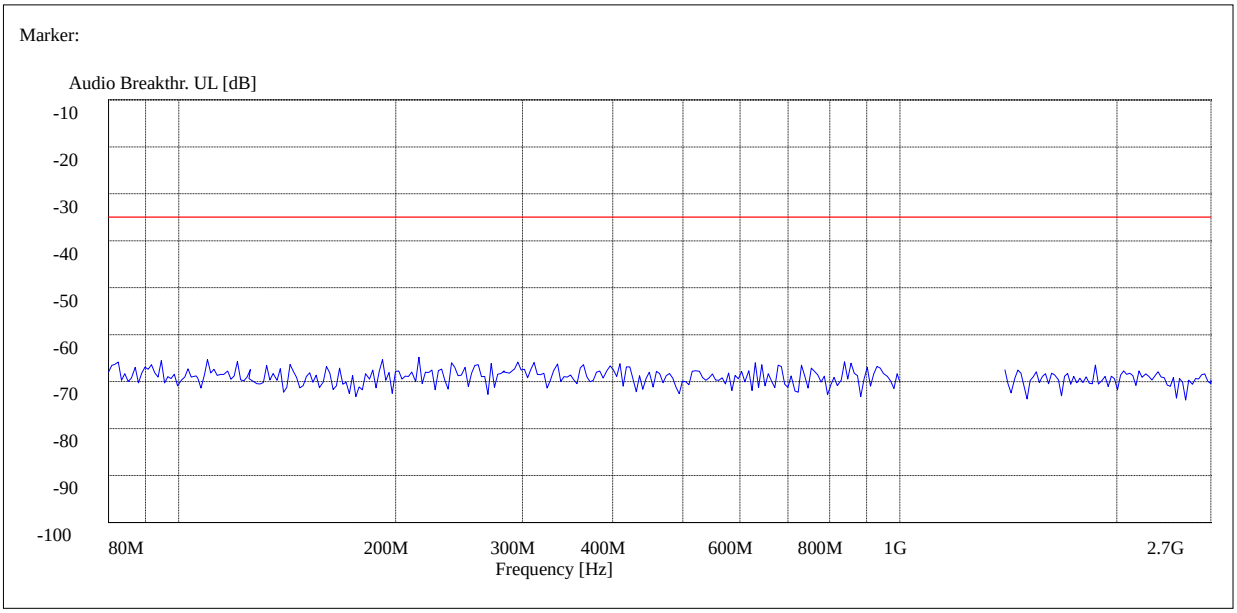
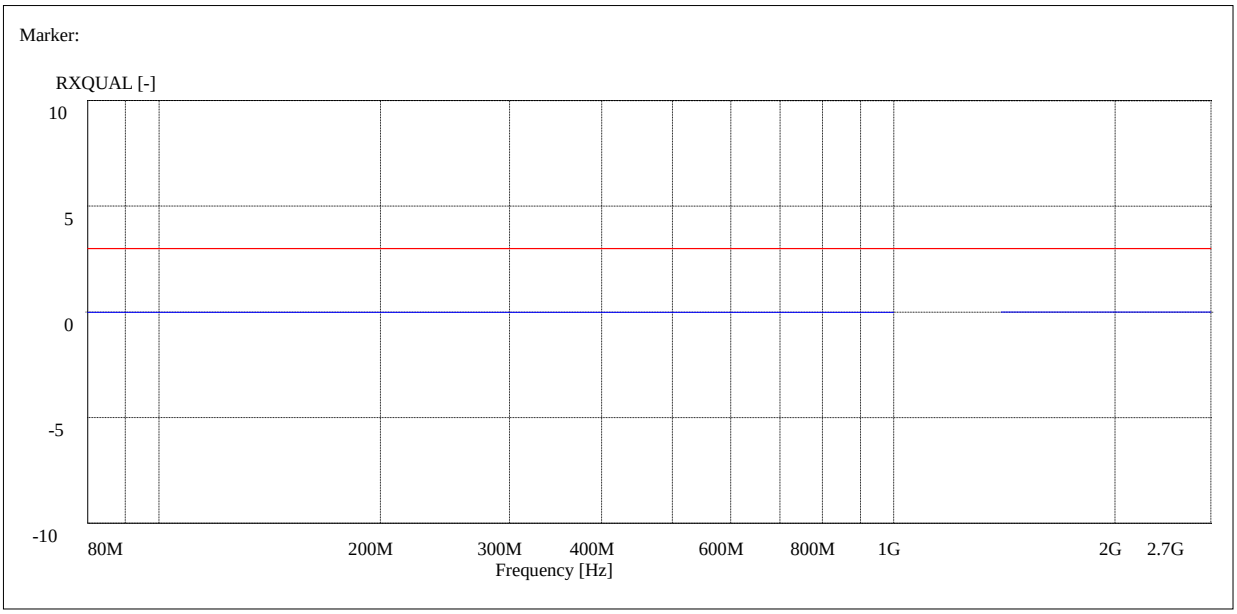
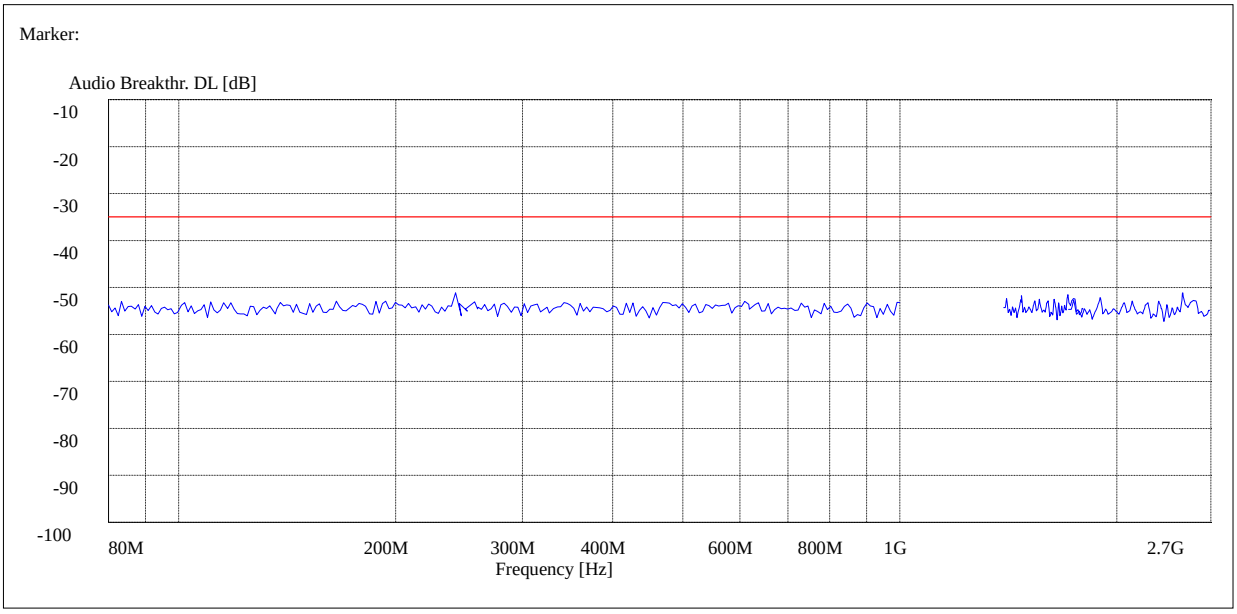
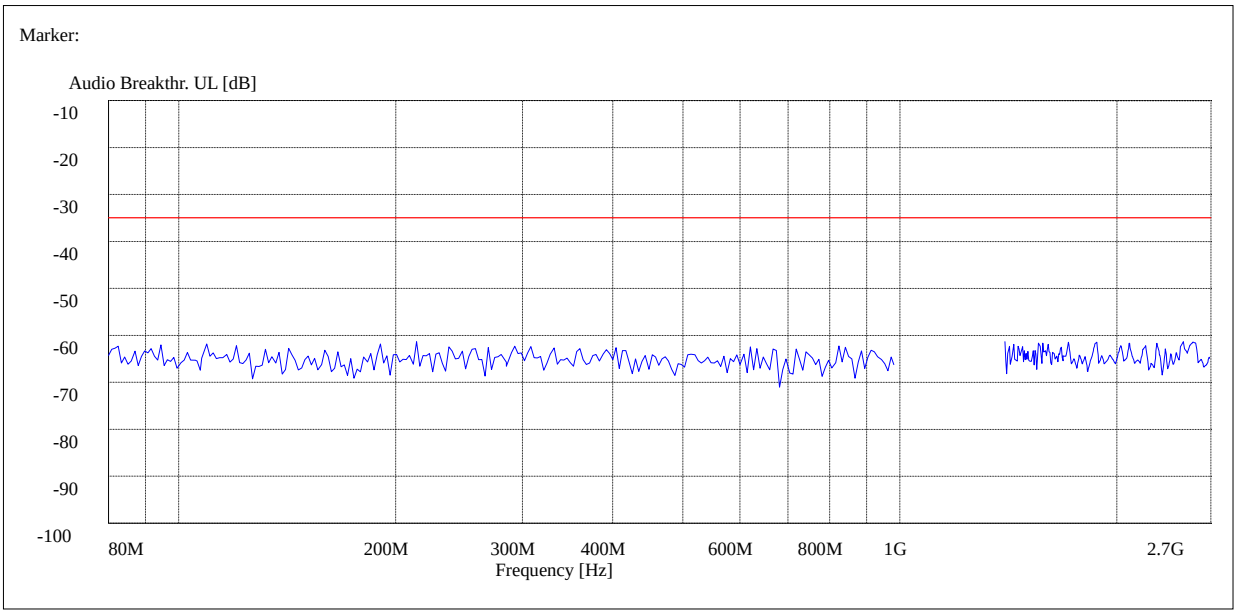
Audio Breakthr. DL [dB]
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
80M
200M
300M
400M
600M
800M
1G
2.7G
Frequency [Hz]

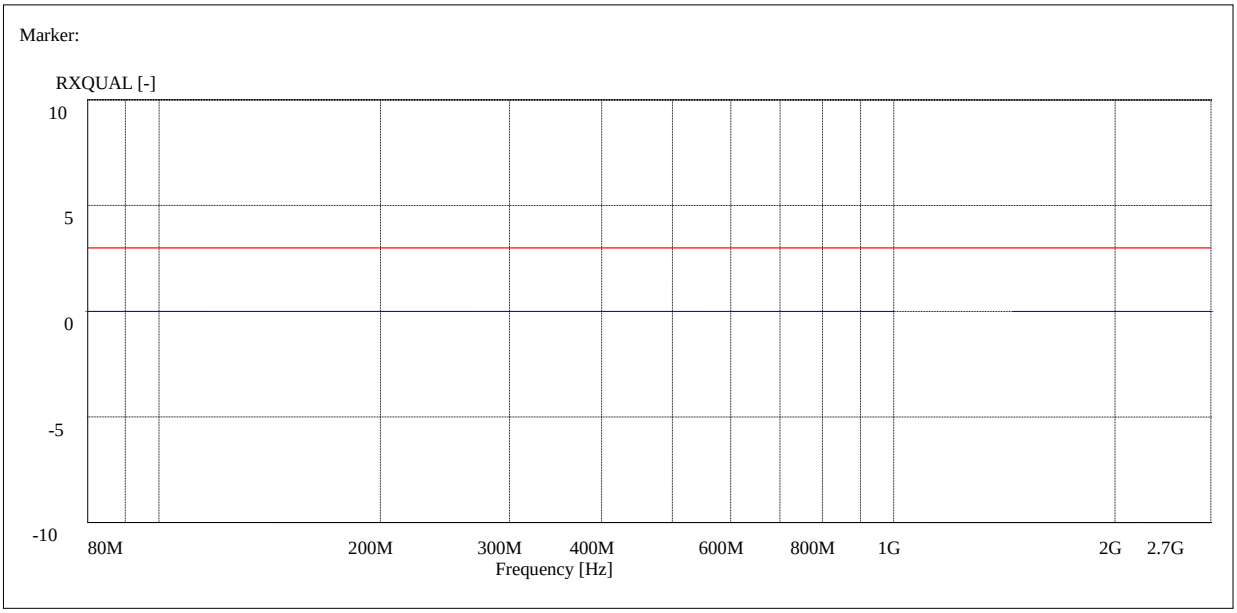

Marker:
Audio Breakthr. UL [dB]
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
80M
200M
300M
400M
600M
800M
1G
2.7G
Frequency [Hz]



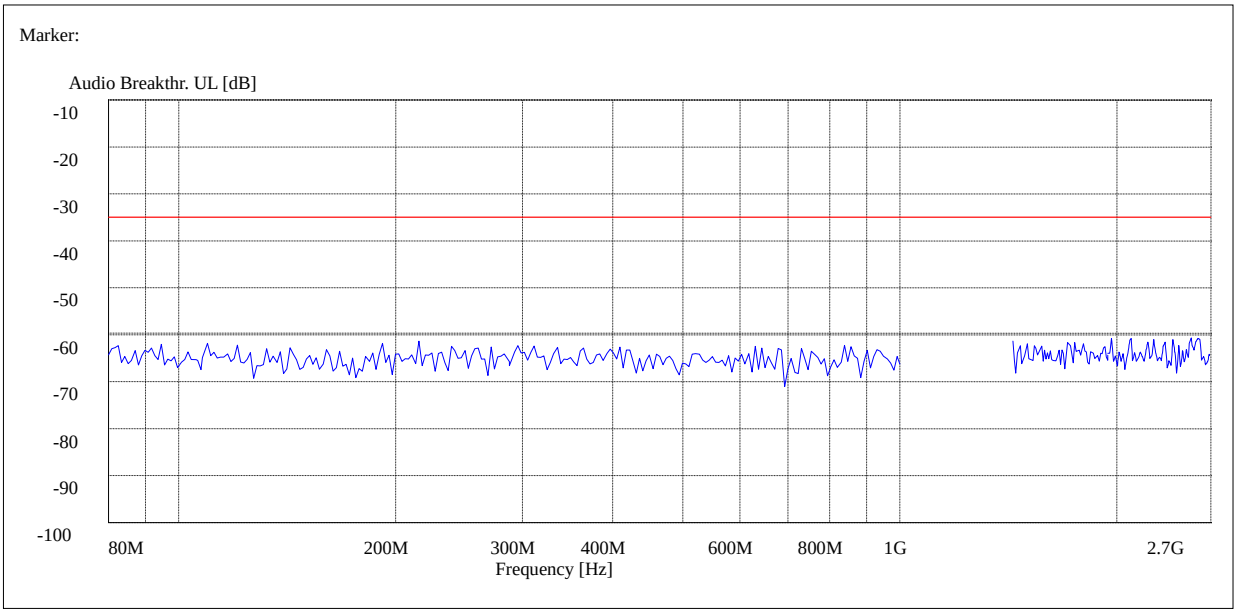
DCS1800 Mode:

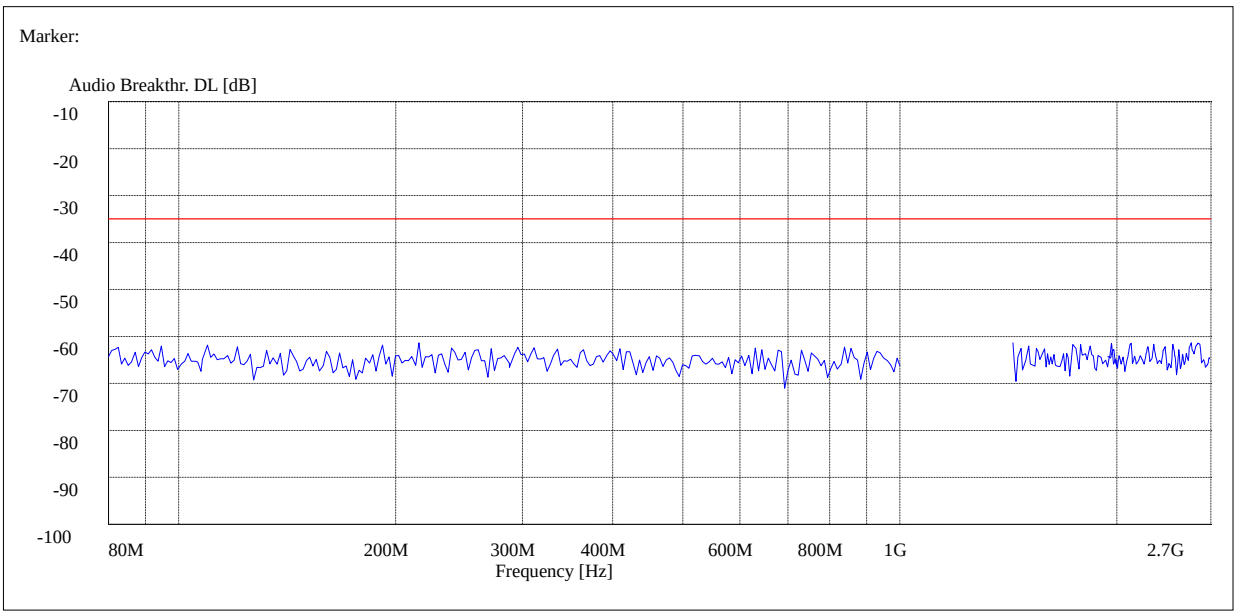


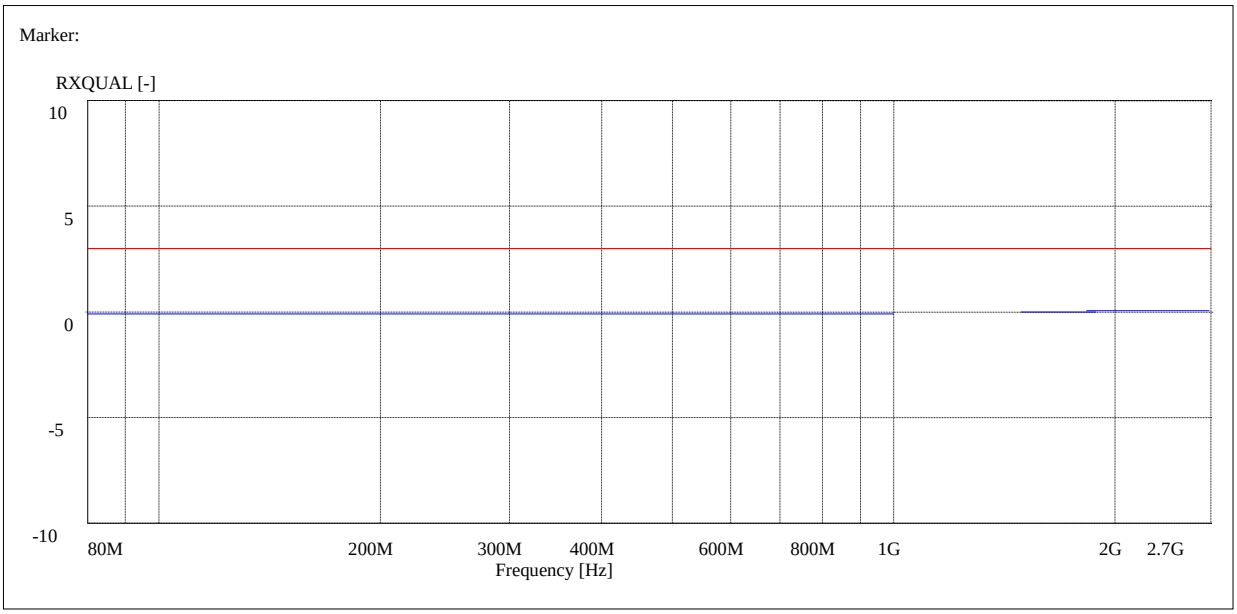

Marker:
Audio Breakthr. UL [dB]
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
80M
200M
300M
400M
600M
800M
1G
2.7G
Frequency [Hz]


Marker:
RXQUAL [-]
10
5
0
-5
-10
80M
200M
300M
400M
600M
800M
1G
2G
2.7G
Frequency [Hz]

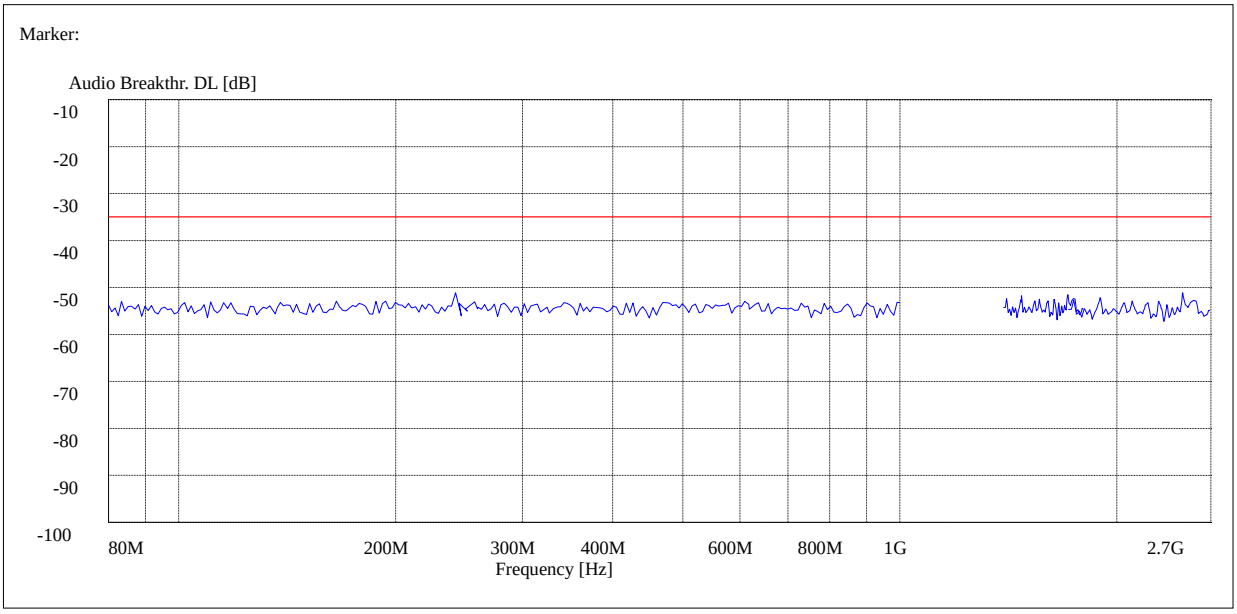
WCDMA Band 1

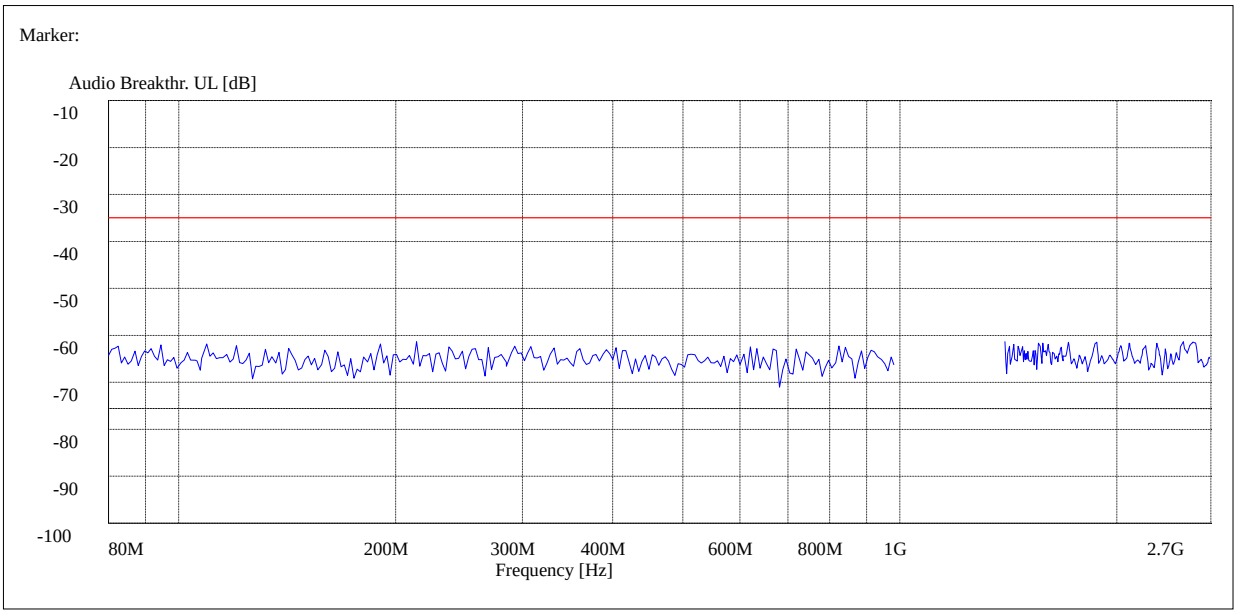

Marker:
Audio Breakthr. UL [dB]
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
80M
200M
300M
400M
600M
800M
1G
2.7G
Frequency [Hz]

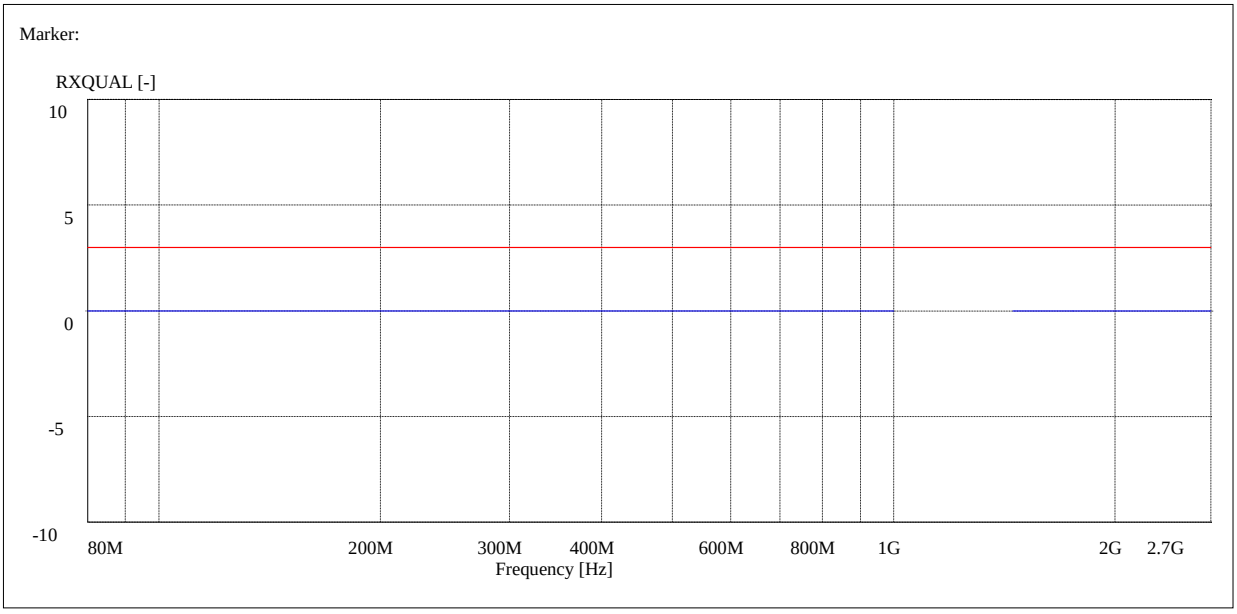

Marker:
Audio Breakthr. DL [dB]
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
80M
200M
300M
400M
600M
800M
1G
2.7G
Frequency [Hz]



WCDMA Band 8 Mode:







Idle mode cannot get any unintentionally operation.

Test Result: Pass

9. Fast Transients, Common Mode (EFT)

9.1 Test Procedure

Test is conducting under the description of IEC61000-4-4.

9.2 Test Performance

Performance Criterion: PASS for GSM_TT, TR
PASS for WCDMA_TT, TR
B for BT_TT, TR
B for Wi-Fi_TT, TR
B for Charging & Playing & Camera
B for Downloading
B for GPS
B for FM

Environmental Conditions

Temperature:	22 °C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

9.3 Electrical Fast Transients Test Data

Test mode: GSM900_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	-0.5	+1.0	-1.0	+2.0	-2.0	+4.0	-4.0
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: GSM1800_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: GPRS900_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: GPRS1800_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: WCDMA Band 1_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: HSDPA Band 1_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: HSUPA Band 1_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: WCDMA Band 8_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: HSDPA Band 8_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: HSUPA Band 8_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	PASS	PASS	PASS	PASS	/	/	/	/
	L2	PASS	PASS	PASS	PASS	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	PASS	PASS	PASS	PASS	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: BT_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	A	A	A	A	/	/	/	/
	L2	A	A	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: Wi-Fi_TT, TR

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	A	A	A	A	/	/	/	/
	L2	A	A	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: Charging & Playing & Camera

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	A	A	A	A	/	/	/	/
	L2	A	A	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: Downloading

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	A	A	A	A	/	/	/	/
	L2	A	A	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: GPS

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	A	A	A	A	/	/	/	/
	L2	A	A	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test mode: FM

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	A	A	A	A	/	/	/	/
	L2	A	A	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test Result: Pass

10. Surges

10.1 Test Procedure

Test is conducting under the description of IEC 61000-4-5.

10.2 Test Performance

Performance Criterion: PASS for GSM_TT, TR
PASS for WCDMA_TT, TR
B for BT_TT, TR
B for Wi-Fi_TT, TR
B for Charging & Playing & Camera
B for Downloading
B for GPS
B for FM

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

10.3 Surge Test Data

Test mode: GSM900_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: GSM1800_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: GPRS900_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: GPRS1800_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: WCDMA Band 1_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: HSDPA Band 1_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: HSUPA Band 1_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: WCDMA Band 8_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: HSDPA Band 8_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: HSUPA Band 8_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	PASS	/
2	1kV	±	L-N	PASS	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: BT_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	A	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: Wi-Fi_TT, TR

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	A	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: Charging & Playing & Camera

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	A	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: Downloading

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	B	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: GPS

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	B	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test mode: FM

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	B	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test Result: Pass

11. Radio Frequency, Common Mode (C/S)

11.1 Test Procedure

Test is conducting under the description of IEC 61000-4-6.

11.2 Test Performance

Performance Criterion: PASS for GSM_CT, CR
PASS for WCDMA_CT, CR
A for BT_CT, CR
A for Wi-Fi_CT, CR
A for Charging & Playing & Camera
A for Downloading
A for GPS
A for FM

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

11.3 Continuous Conducted Disturbances Test Data

Sweep frequency range: 150kHz~80MHz
Frequency step: 1% of fundamental
Dwell time: 1 second

Test mode: GSM900_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: GSM1800_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: GPRS900_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: GPRS1800_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: WCDMA Band 1_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: HSDPA Band 1_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: HSUPA Band 1_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: WCDMA Band 8_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: HSDPA Band 8_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: HSUPA Band 8_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	PASS	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: BT_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	A	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: Wi-Fi_CT, CR

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	A	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: Charging & Playing & Camera

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	A	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: Downloading

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	A	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: GPS

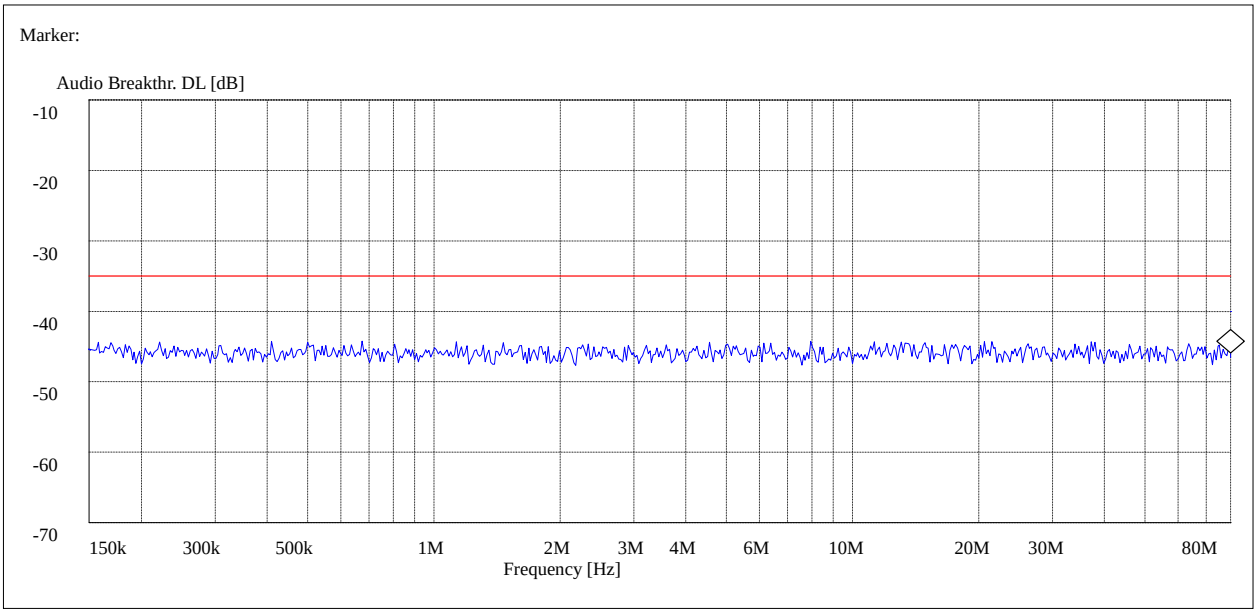
Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	A	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test mode: FM

Level	Voltage (V) (rms, unmodulated)	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	A	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Test Result: Pass

GSM900 Mode: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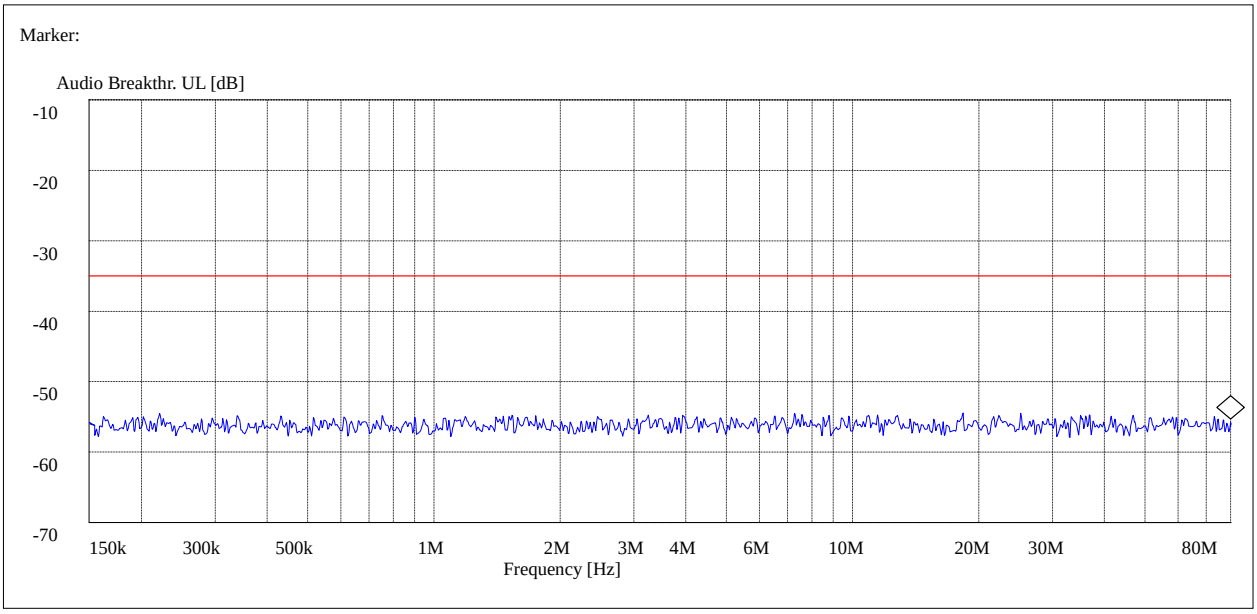
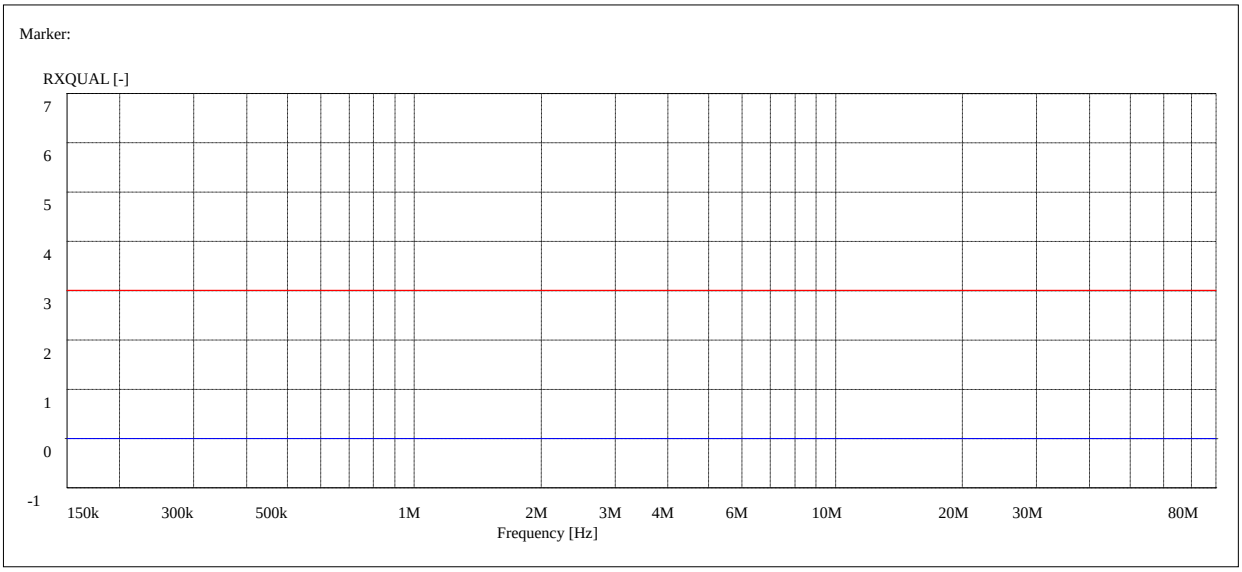
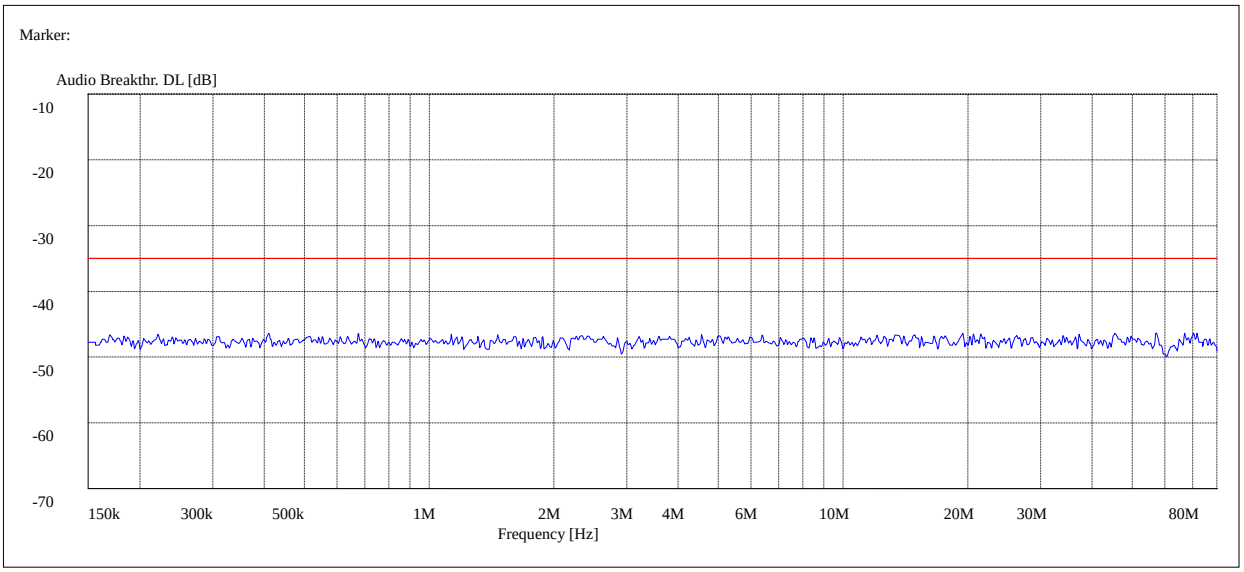
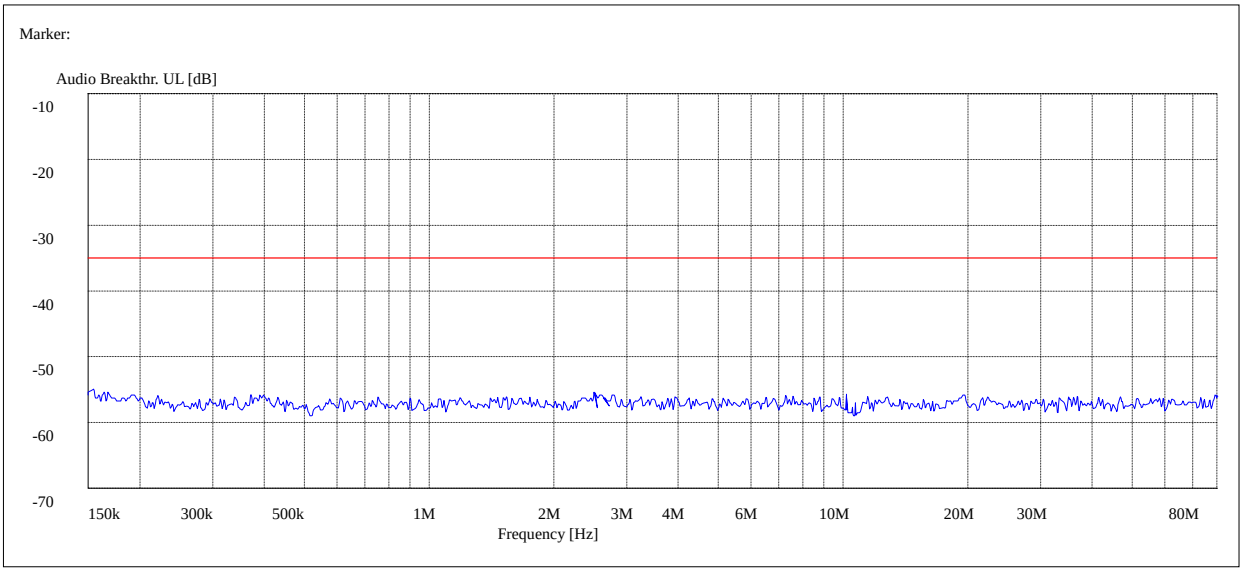
Audio Breakthr. DL [dB]
-10
-20
-30
-40
-50
-60
-70
150k
300k
500k
1M
2M
3M
4M
6M
10M
20M
30M
80M
Frequency [Hz]

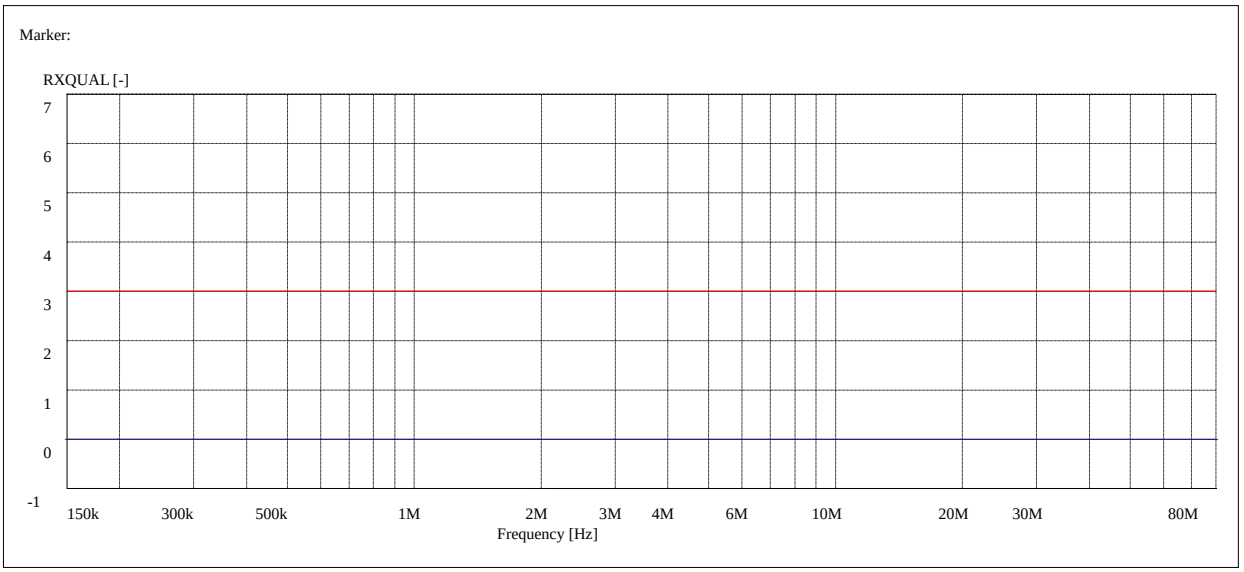

Marker:
Audio Breakthr. UL [dB]
-10
-20
-30
-40
-50
-60
-70
150k
300k
500k
1M
2M
3M
4M
6M
10M
20M
30M
80M
Frequency [Hz]


Marker:
RXQUAL [-]
7
6
5
4
3
2
1
0
-1
150k
300k
500k
1M
2M
3M
4M
6M
10M
20M
30M
80M
Frequency [Hz]

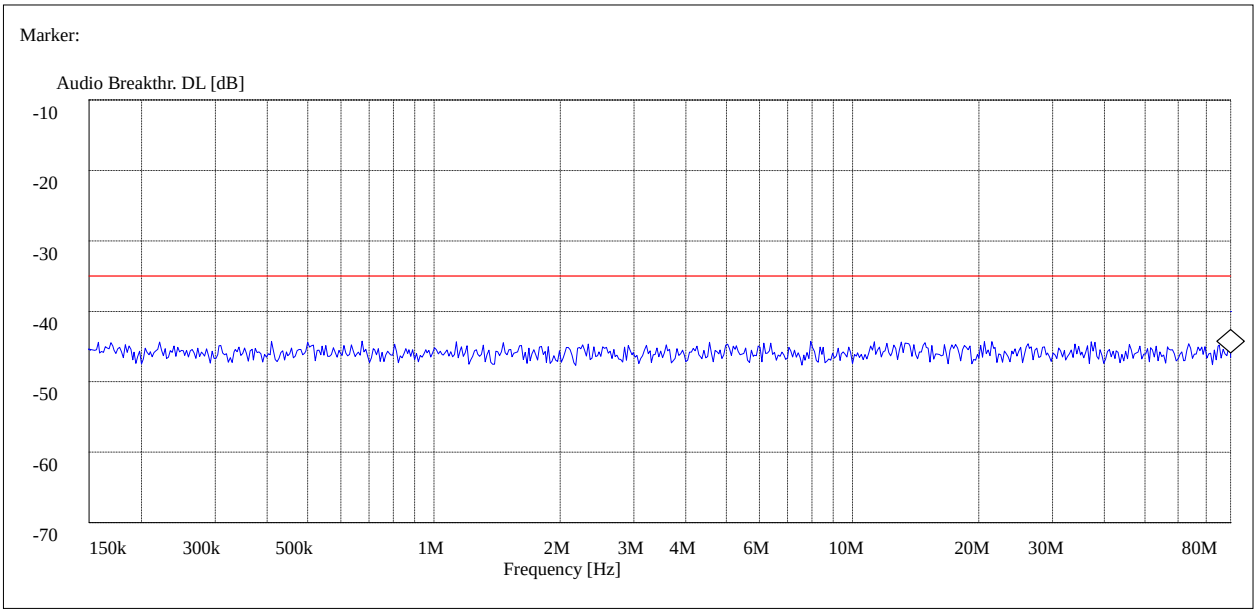
DCS1800:

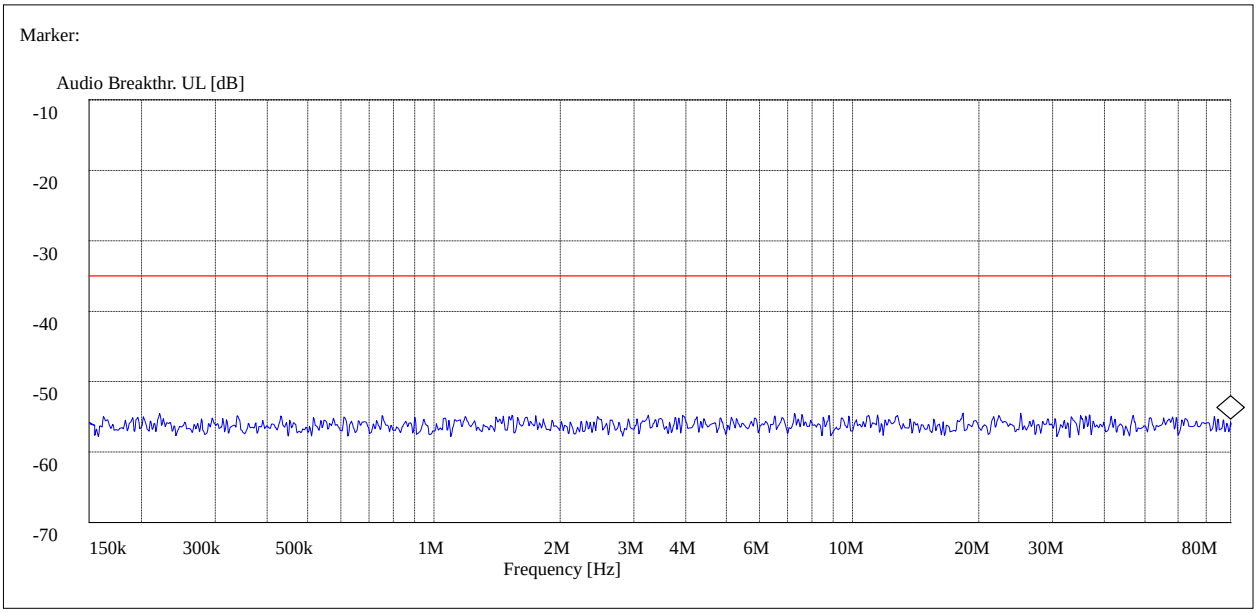

Marker:
Audio Breakthr. DL [dB]
-10
-20
-30
-40
-50
-60
-70
150k
300k
500k
1M
2M
3M
4M
6M
10M
20M
30M
80M
Frequency [Hz]

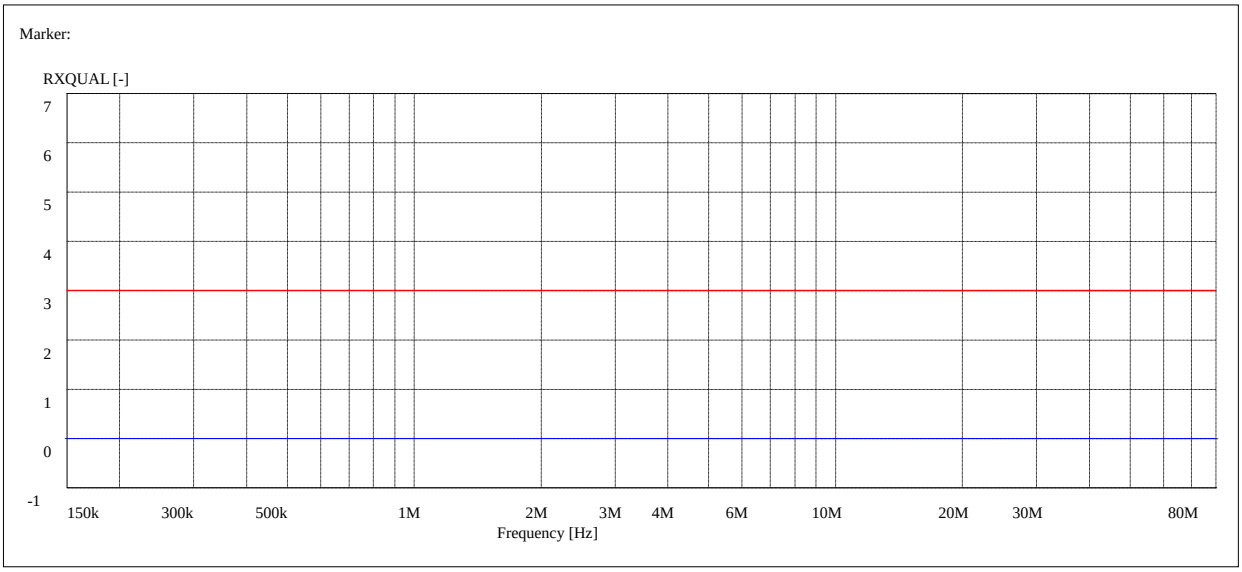

Marker:
Audio Breakthr. UL [dB]
-10
-20
-30
-40
-50
-60
-70
150k
300k
500k
1M
2M
3M
4M
6M
10M
20M
30M
80M
Frequency [Hz]


Marker:
RXQUAL [-]
7
6
5
4
3
2
1
0
-1
150k
300k
500k
1M
2M
3M
4M
6M
10M
20M
30M
80M
Frequency [Hz]

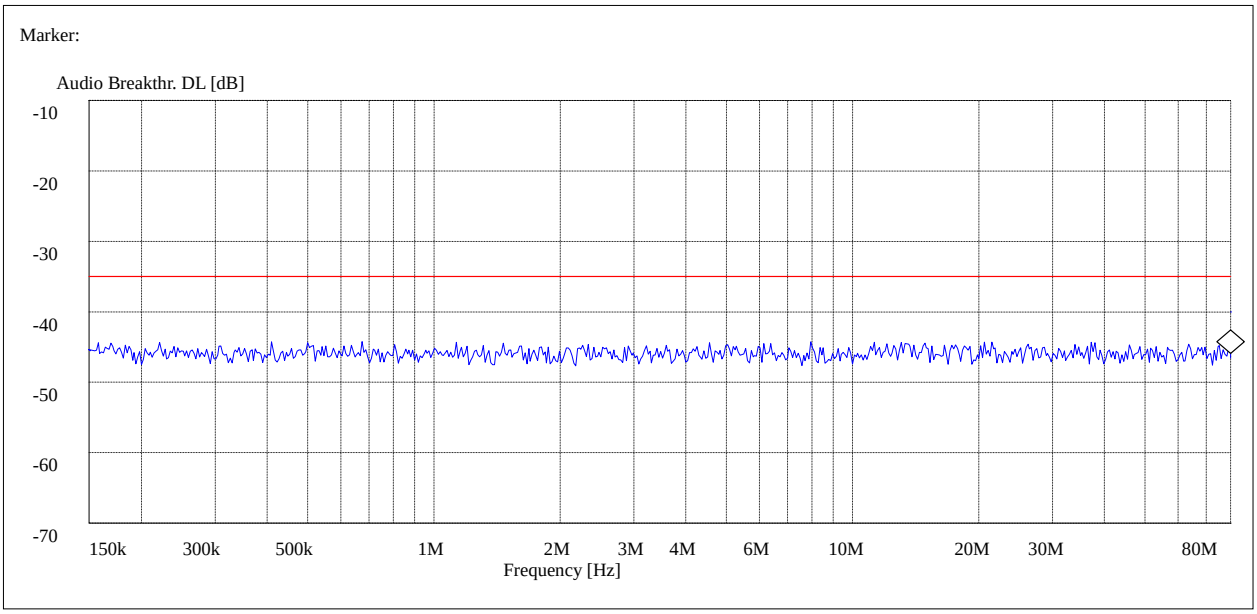
WCDMA Band 1 Mode:

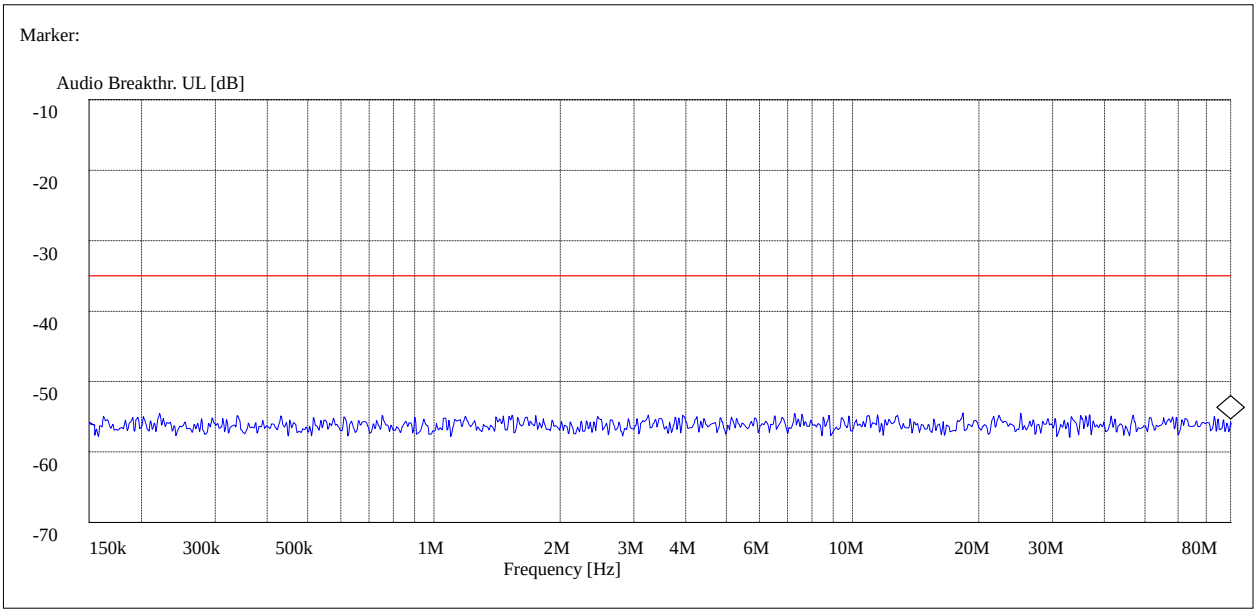


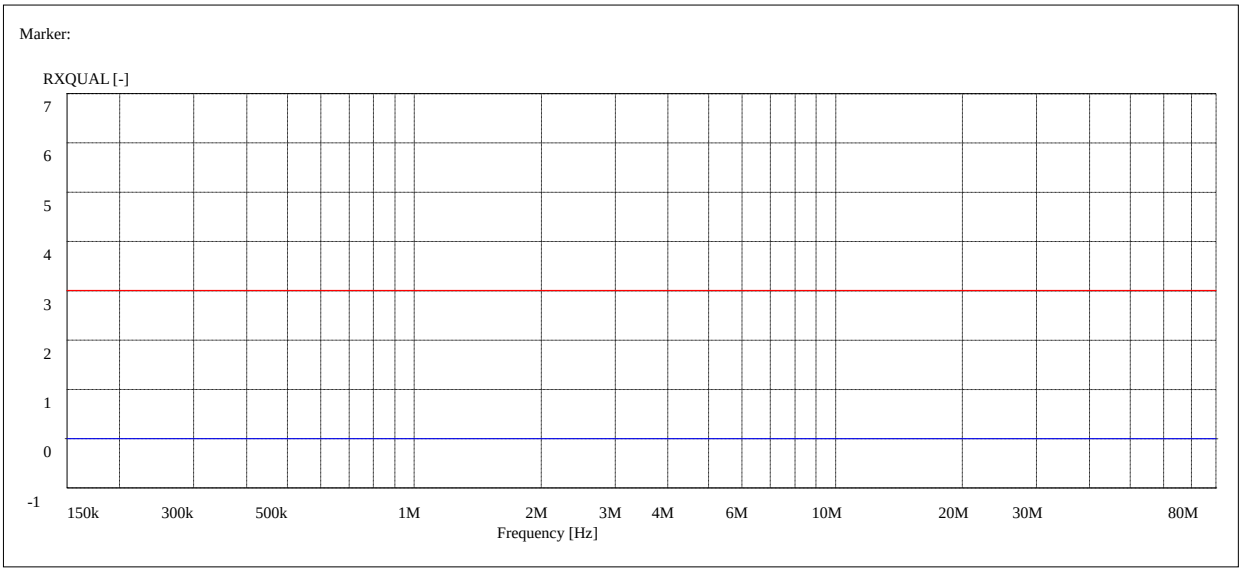




WCDMA Band 8 Mode:







Idle mode cannot get any unintentionally operation.

Test Result: Pass

EXHIBIT 1 - PRODUCT LABELING

Proposed CE Label Format

Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. The 'CE' marking must be affixed to the EUT or to its data plate. Where this is not possible or not warranted on account of the nature of the apparatus, it must be affixed to the packaging, if any, and to the accompanying documents. The 'CE' marking is allowed less than 5 mm but must clear. If the 'CE' marking is reduced or enlarged the proportions given in the above graduated drawing must be respected. The Importer name, address and Manufacturer name and address should indicate on marking label or packaging or in a document accompanying

Proposed Label Location on EUT

CE Label Location

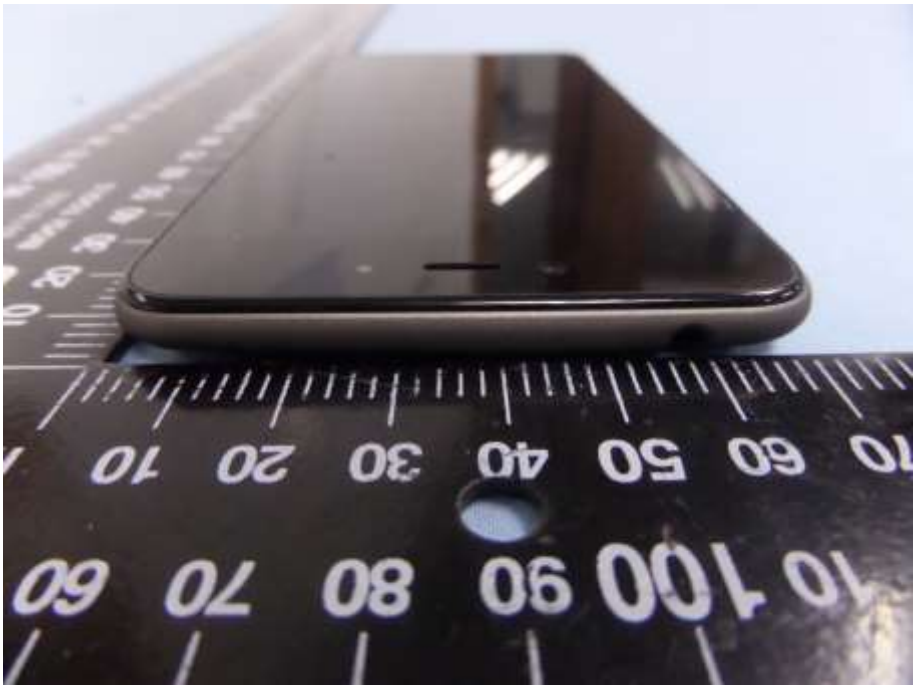
EXHIBIT 2 - EUT PHOTOGRAPHS

EUT View 1

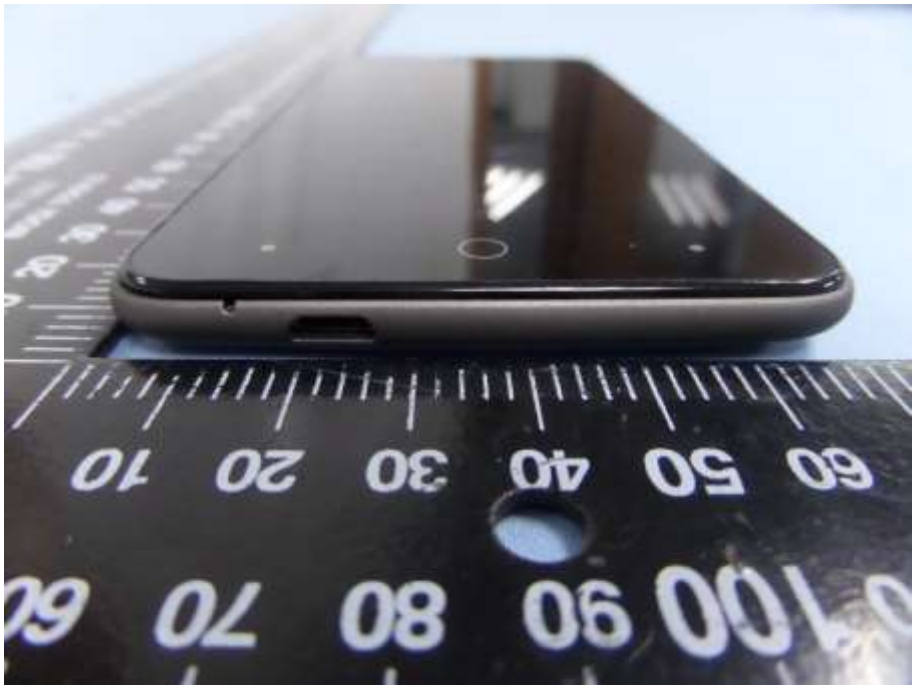
EUT View 2

EUT View 3

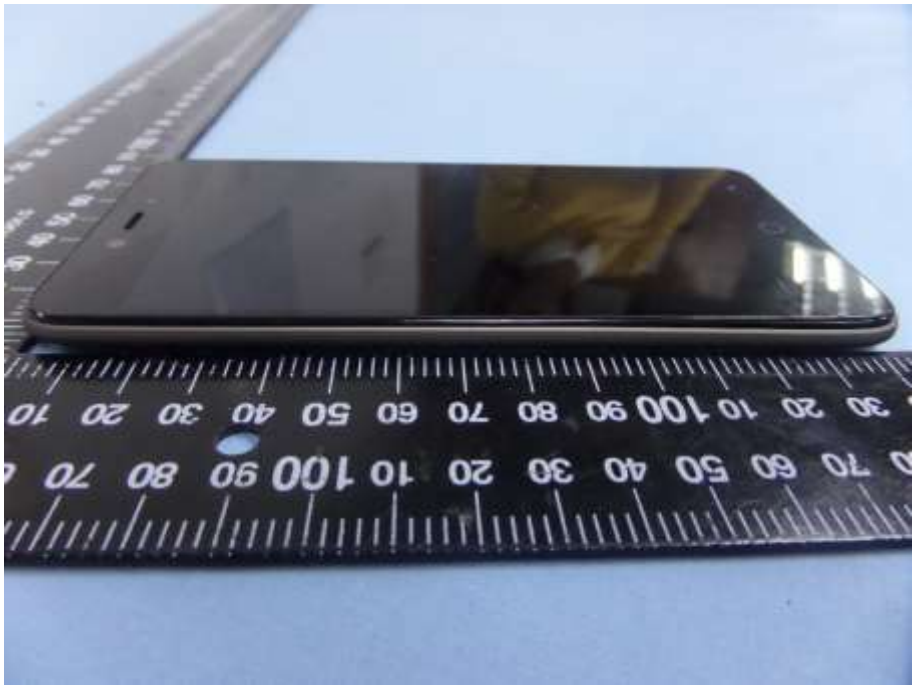
EUT View 4



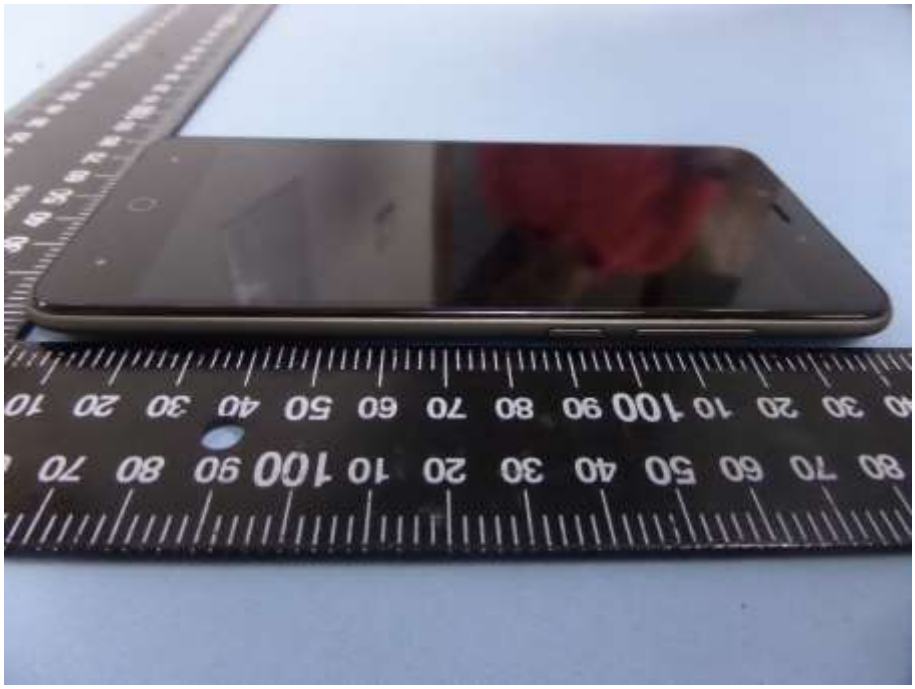
EUT View 5



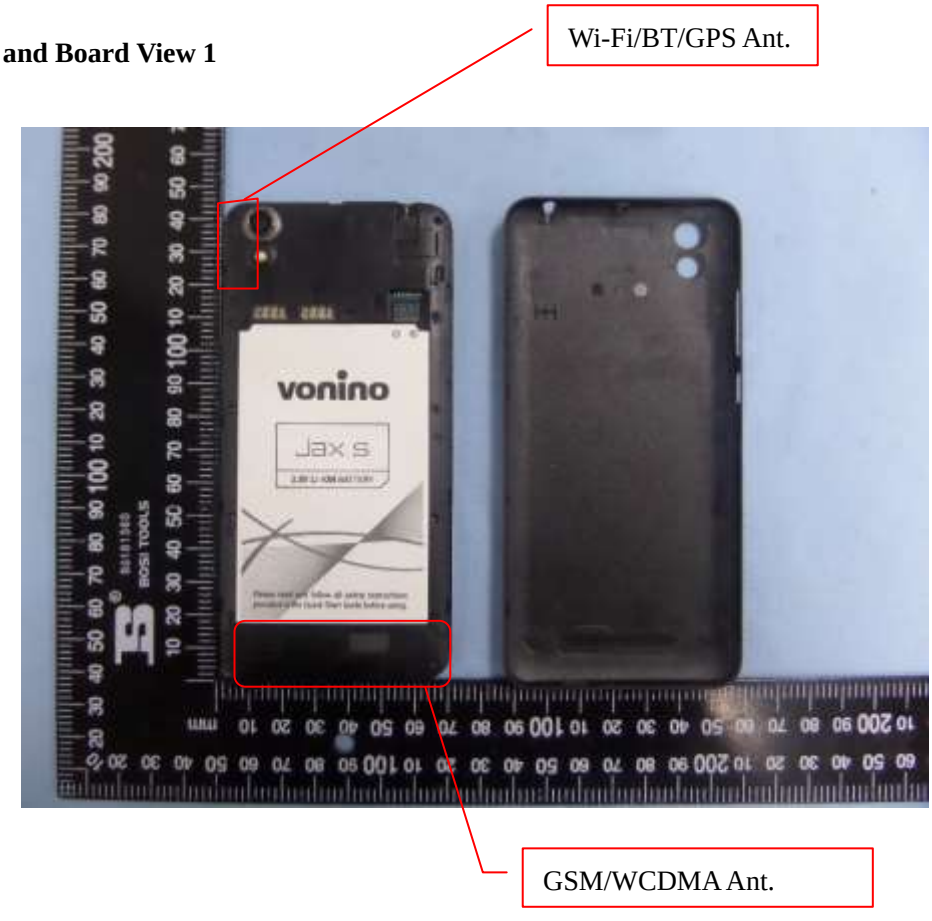
EUT View 6



EUT View 7

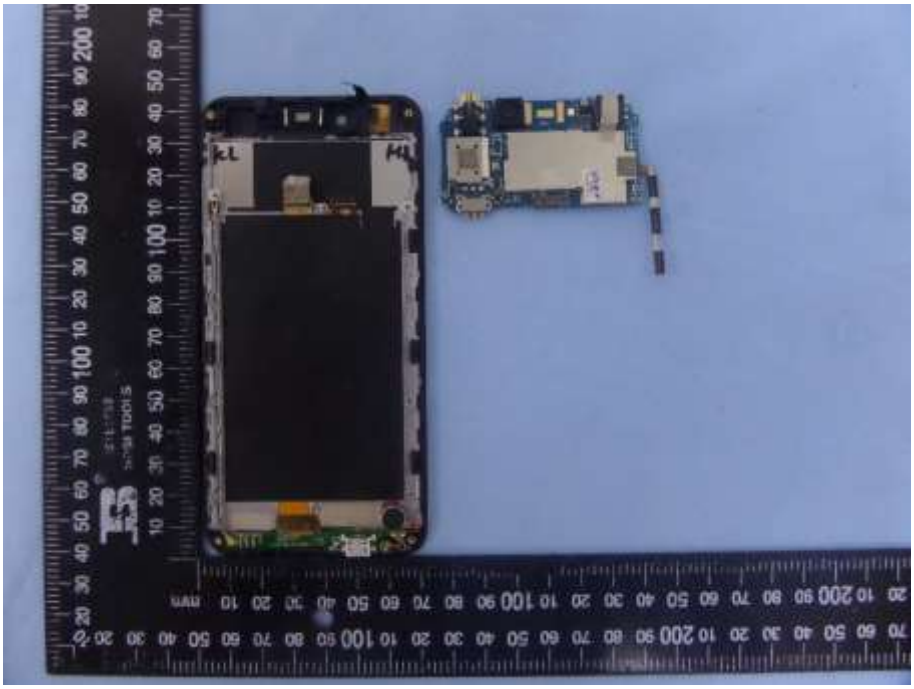


EUT Housing and Board View 1

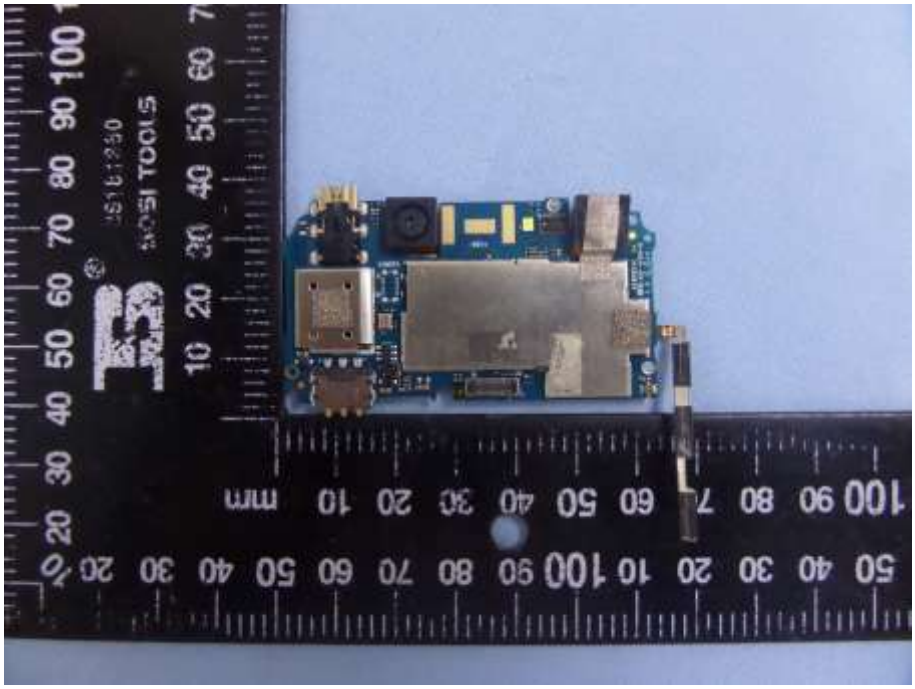


EUT Housing and Board View 2

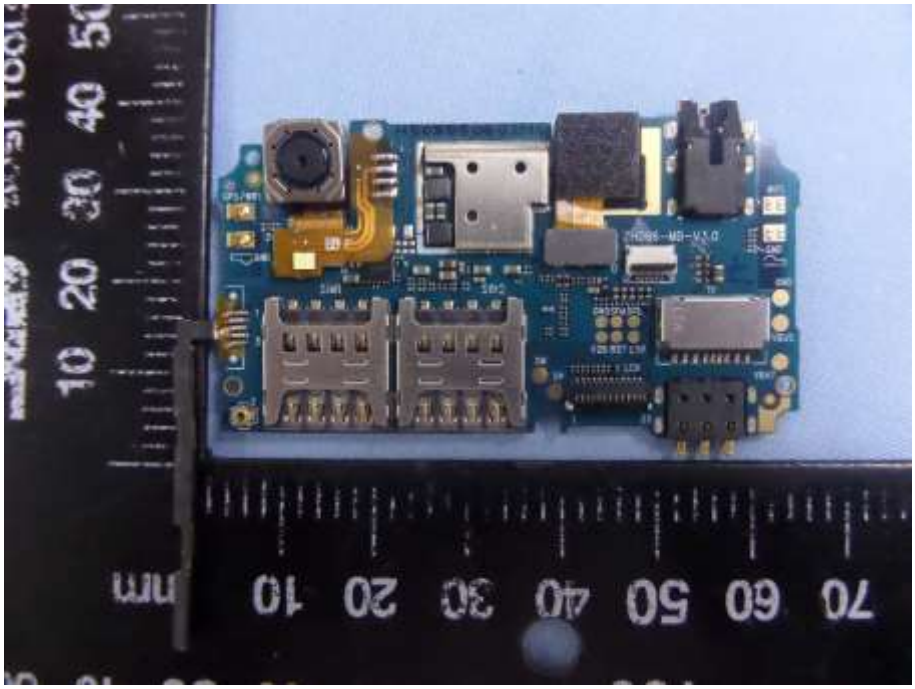
EUT Housing and Board View 3



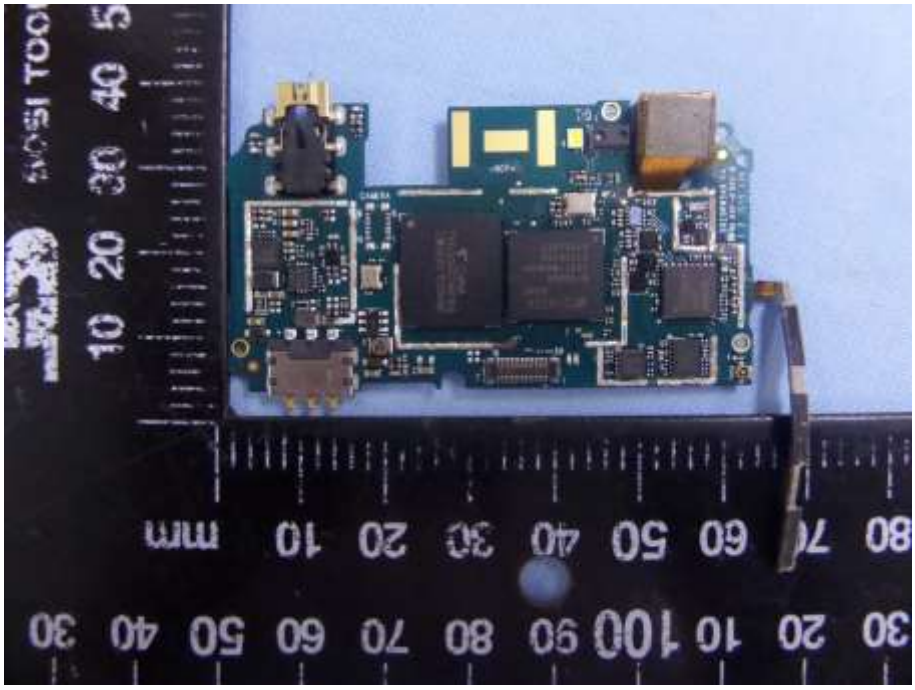
Solder Board-Component View 1



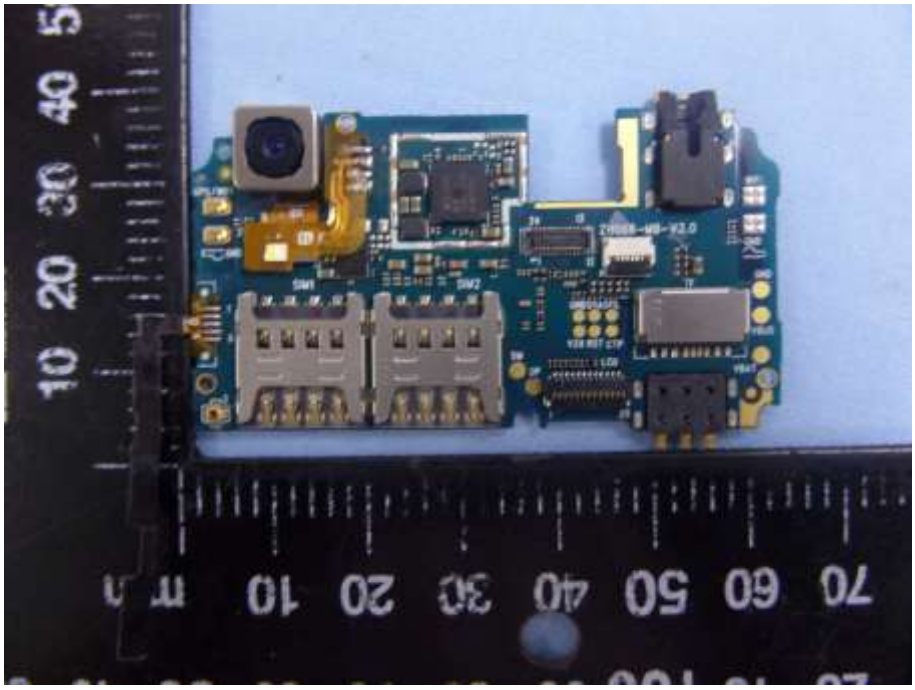
Solder Board-Component View 2



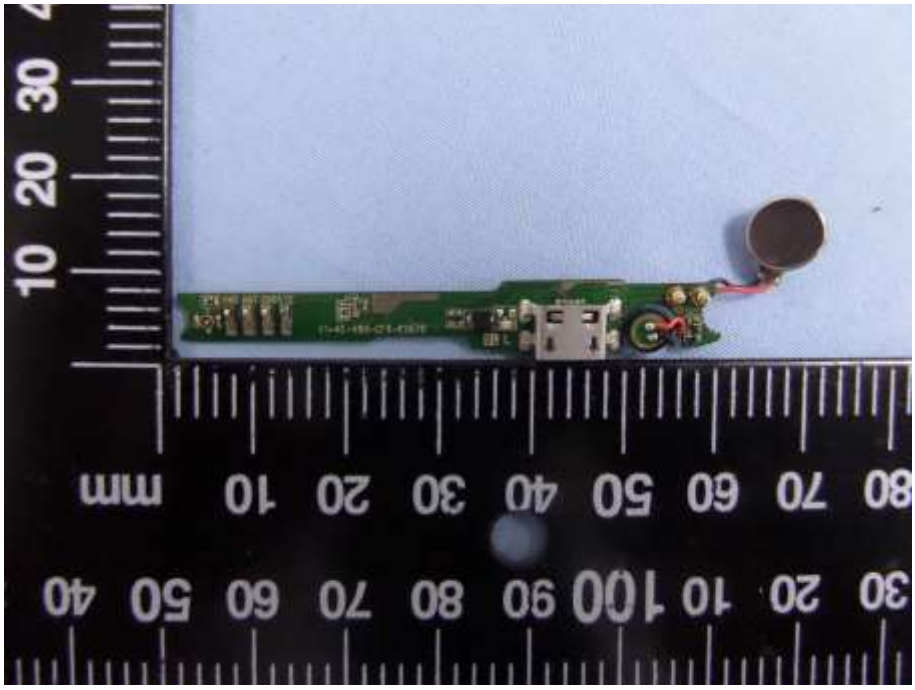
Solder Board-Component View 3



Solder Board-Component View 4



Solder Board-Component View 5



Solder Board-Component View 6

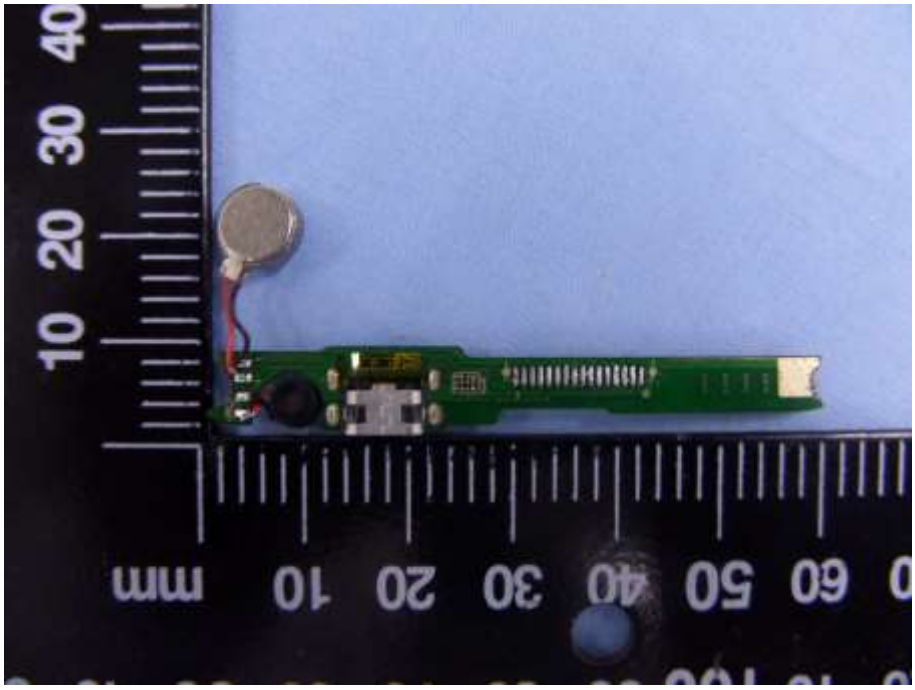
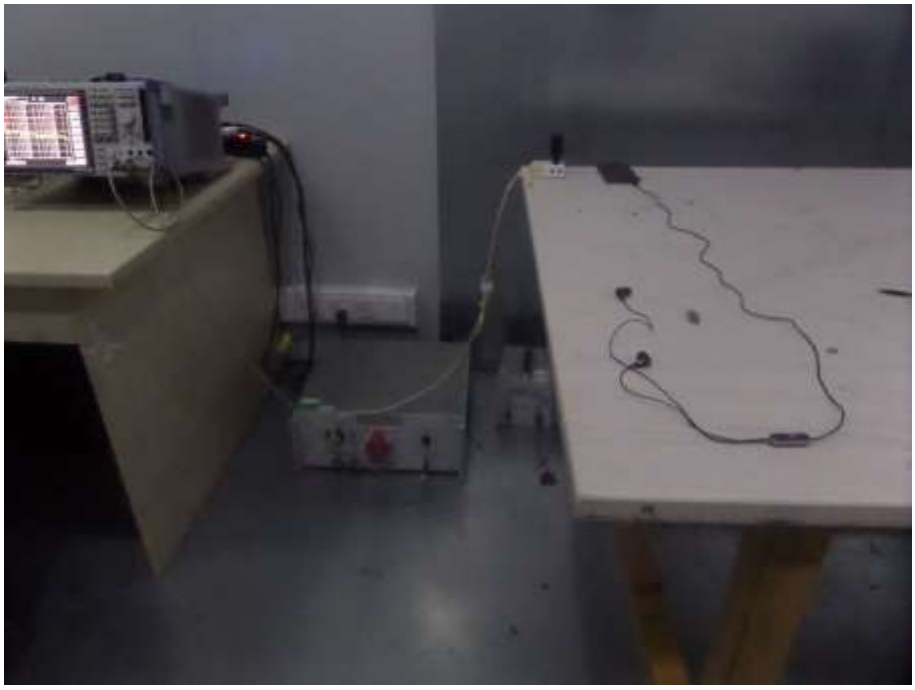
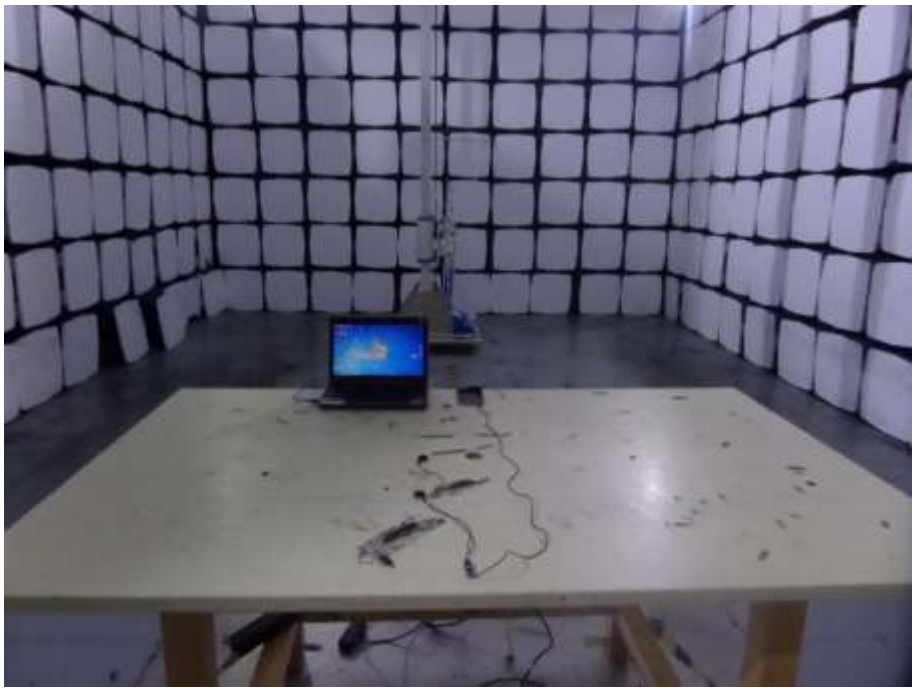


EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

Conduction Emission Test View

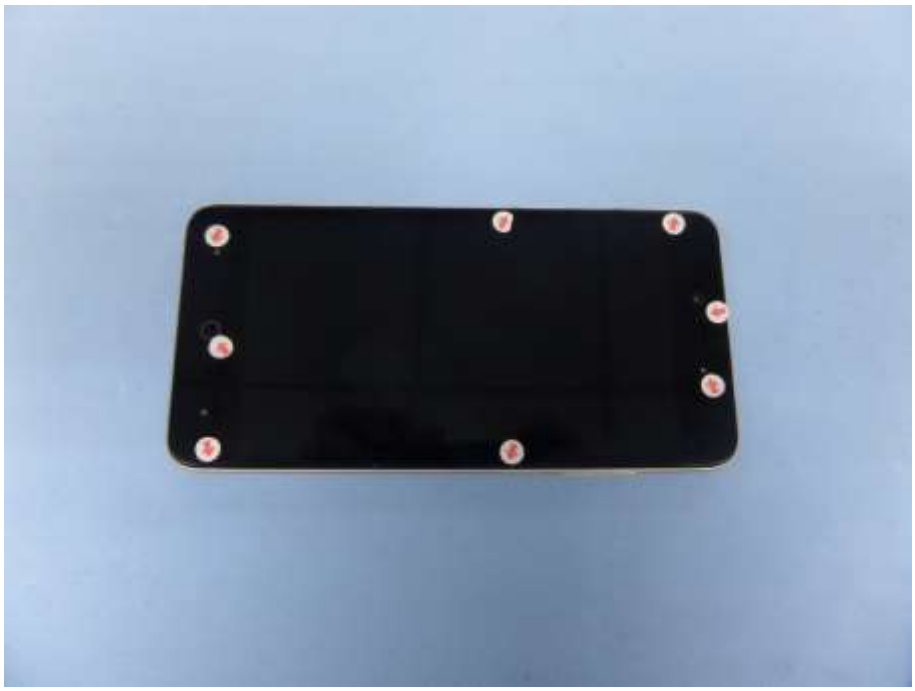


Radiation Emission Test View



Harmonic/Flicker Test View

IEC61000-4-2 Test View

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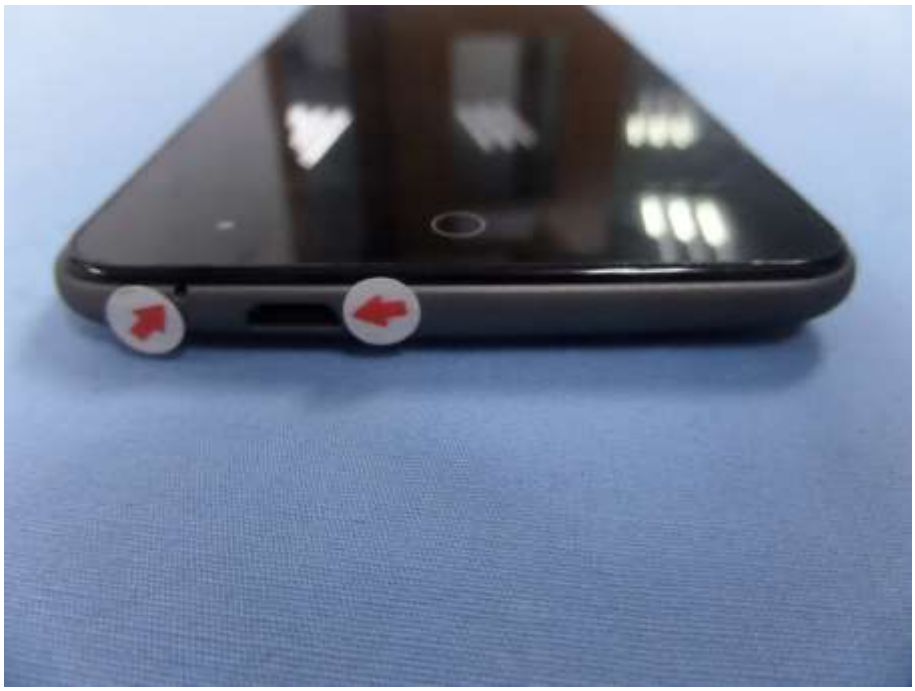
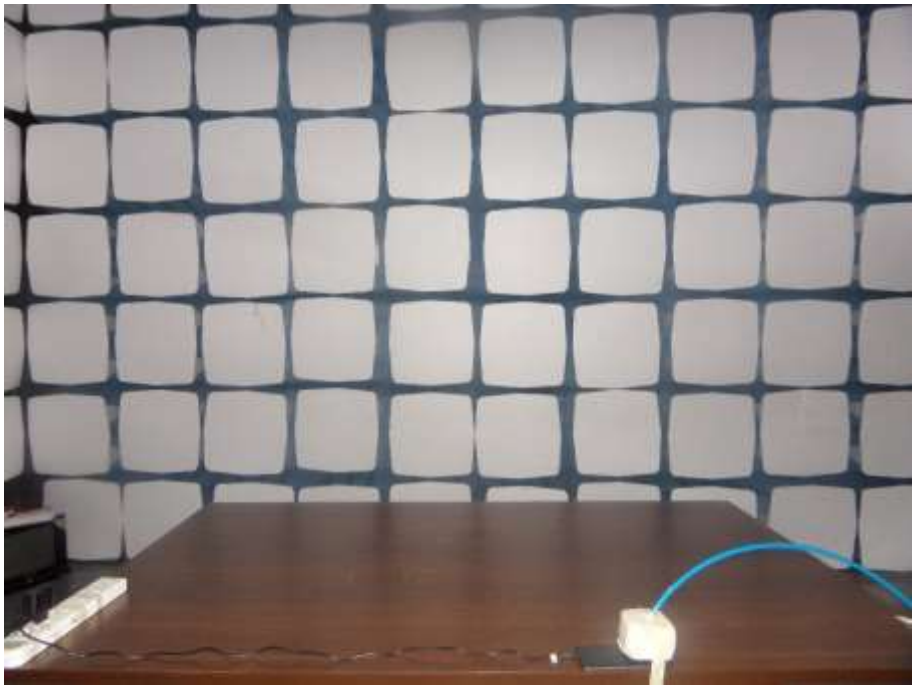
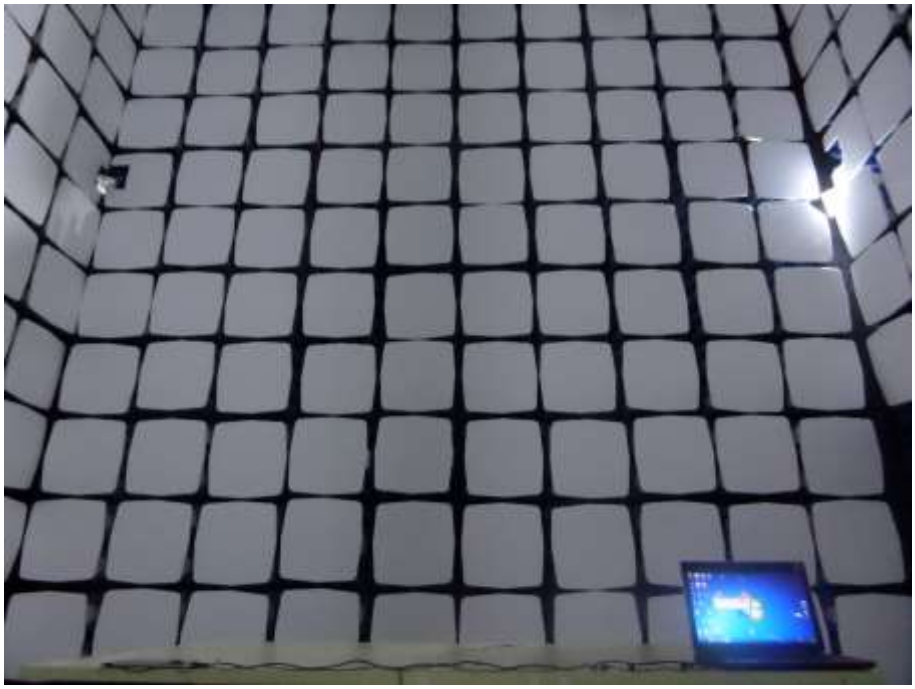


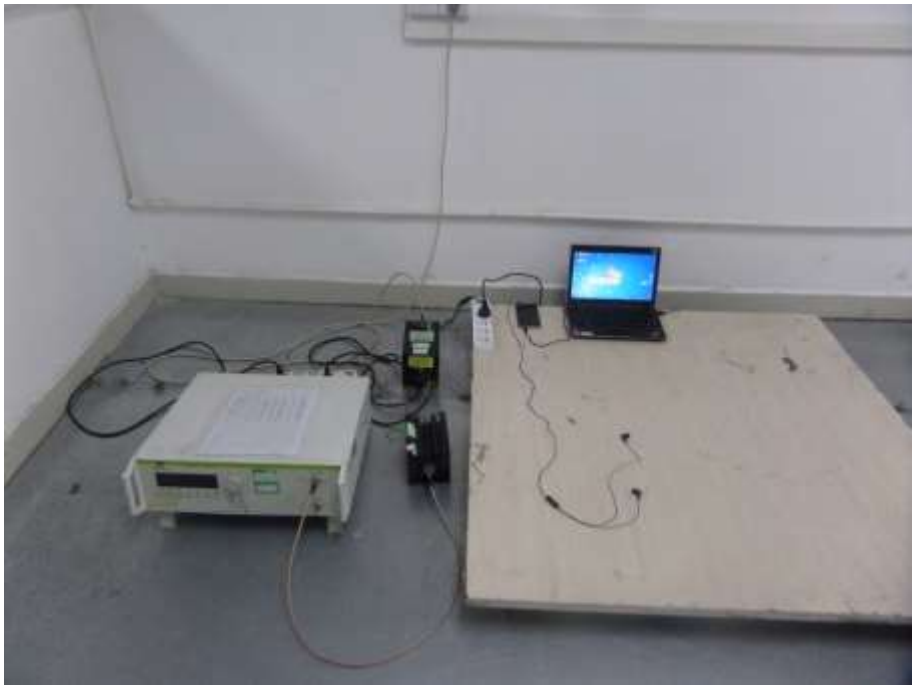
IEC61000-4-3 Test View





IEC61000-4-4/5/11 Test View

IEC61000-4-6 Test View



******* END OF REPORT *******