FCC Test Report
FCC ID: 2BSPJ-Y08

Applicant:	Shenzhen Meibosheng Technology Co., Ltd
Address:	208 Xianyuxing Commercial and Residential Building, Yuhe Road Fourth Industrial Zone, Gonghe Community, Shajing Street, Bao'an District, Shenzhen
Manufacturer:	Shenzhen Meibosheng Technology Co., Ltd
Address:	208 Xianyuxing Commercial and Residential Building, Yuhe Road Fourth Industrial Zone, Gonghe Community, Shajing Street, Bao'an District, Shenzhen
Product Name:	4G Smart Watch
Trade Mark:	N/A
Model Number:	Y08 Y21, Y22, Y23, Y28, Y29, Y31, Y32, Y33, Y36, Y38, Y55, Y56, Y58, Y59, Y60, Y61, Y62, Y63, Y65, Y66, Y68, Y70, Y71, Y73, Y75, Y76, Y78, Y79, Y80, Y82, Y83, Y85, Y86, Y87, Y90, S51, S53, S81, Y20, Y92, Y88, Y89, Y91, Y92, Y93, Y95, Y96, Y97, Y98, Y99
Date of Receipt:	Jun. 25, 2025
Test Date:	Jun. 25, 2025 - Sep. 10, 2025
Date of Report:	Sep. 10, 2025
Prepared By:	Shenzhen DL Testing Technology Co., Ltd.
Address:	101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1 Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China
Applicable Standards:	FCC CFR Title 47 Part22 Subpart H FCC CFR Title 47 Part24 Subpart E FCC CFR Title 47 Part27 ANSI/ TIA/ EIA-603-E-2016 FCC KDB 971168 D01 Power Meas. License Digital Systems v03v01 ANSI C63.26:2015
Test Result:	Pass
Report Number:	DLE-250625039R

Prepared (Test Engineer):	Alisa Song
Reviewer (Supervisor):	Jack Bu
Approved (Manager):	Jade Yang

This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

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1. TEST SUMMARY

Test Items	Test Requirement	Result
Conducted RF Output Power	2.1046	PASS
Peak to Average Radio	2.1055,22.355 24.235,27.54	PASS
99% & -26 dB Occupied Bandwidth	2.1049, 22.917 24.238,	PASS
Frequency Stability	2.1055, 22.355 24.235, 27.54	PASS
Conducted Out of Band Emissions	2.1051,2.1057 22.917, 24.238 27.53(h) /27.53(m)	PASS
Band Edge	2.1051,2.1057 22.917, 24.238 27.53(h) /27.53(m)	PASS
Transmitter Radiated Power (EIPR/ERP)	22.913, 24.232 27.50(d)(4)/27.50(h)(2)	PASS
Radiated Out of Band Emissions	2.1053,2.1057 22.917, 24.238 27.53(h) /27.53(m)	PASS

2. GENERAL PRODUCT INFORMATION

2.1. Description of Device (EUT)

Product Name:	4G Smart Watch
Trademark	N/A
Model No.:	Y08 Y21, Y22, Y23, Y28, Y29, Y31, Y32, Y33, Y36, Y38, Y55, Y56, Y58, Y59, Y60, Y61, Y62, Y63, Y65, Y66, Y68, Y70, Y71, Y73, Y75, Y76, Y78, Y79, Y80, Y82, Y83, Y85, Y86, Y87, Y90, S51, S53, S81, Y20, Y92, Y88, Y89, Y91, Y92, Y93, Y95, Y96, Y97, Y98, Y99
Test Model:	Y08
Model Difference	All models are same as the samples except model name and appearance color, they have the same structure and circuit.
Sample number:	250625038-01
Operation Frequency:	GSM 850: Tx: 824.20 - 848.80MHz; Rx: 869.20 - 893.80MHz GSM 1900: Tx: 1850.20 - 1909.80MHz; Rx: 1930.20 - 1989.80MHz WCDMA Band 2: Tx: 1850.00 - 1910.00MHz; Rx: 1930.00 - 1990.00MHz WCDMA Band 5: Tx: 824.00 - 849.00MHz; Rx: 869.00 - 894.00MHz LTE Band 2: Tx: 1850.00 - 1910.00MHz; Rx: 1930.00 - 1990.00MHz LTE Band 5: Tx: 824.00 - 849.00MHz; Rx: 869.00 - 894.00MHz LTE Band 7: Tx: 2500.00 -2570.00MHz; Rx:2620.00 - 2690.00MHz
Modulation technology:	GSM Mode with GMSK Modulation WCDMA Mode with BPSK Modulation HSDPA Mode with QPSK, 16QAM Modulation HSUPA Mode with QPSK, 16QAM Modulation LTE Mode with QPSK,16QAM
Antenna Type:	Internal Antenna
Antenna gain:	GSM 850: 1.82dBi, GSM 1900: 3.38dBi WCDMA Band 2: 3.38dBi, WCDMA Band 5: 1.82dBi LTE Band 2: 3.38dBi, LTE Band 5: 1.82dBi LTE Band 7: 3.34dBi
Power supply:	DC 3.8V from battery DC 5V from adapter
LTE Category	4
Hardware Version	1.0
Software Version	1.0

Note:

1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.The EUT's all information provided by client.

2.2. Product Function

Refer to Technical Construction Form and User Manual.

2.3. Independent Operation Modes

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Test modes		
Band	Radiated	Conducted
GSM	GSM/GPRS	GSM/GPRS
WCDMA	RMC/ HSDPA/ HSUPA	RMC/ HSDPA/ HSUPA
LTE Band 2	Bandwidth:(MHz)1.4/3/5/10/15/20MHz Modulation: QPSK/16QAM RB:1/100%	Bandwidth:(MHz)1.4/3/5/10/15/20MHz Modulation: QPSK/16QAM RB:1/100%
LTE Band 5	Bandwidth:(MHz)1.4/3/5/10MHz Modulation: QPSK/16QAM RB:1/100%	Bandwidth:(MHz)1.4/3/5/10/15/20MHz Modulation: QPSK/16QAM RB:1/100%
LTE Band7	Bandwidth:(MHz) 5/10/15/20MHz Modulation: QPSK/16QAM RB:1/100%	Bandwidth:(MHz) 5/10/15/20MHz Modulation: QPSK/16QAM RB:1/100%

Note: RB Settings for Conducted RF Output Power are: 1/50/100%, Other test items only reflect the worst-case results.

Test Channel(MHz)			
Band	Low	Middle	High
GSM850	824.20	836.60	848.80
GSM1900	1850.20	1880.00	1909.80
WCDMA Band 2	1852.4	1880	1907.6
WCDMA Band 5	826.4	836.4	846.6
LTE Band 2	1850.7	1880	1909.3
LTE Band 5	824.7	836.5	848.3
LTE Band 7	2502.5	2535	2567.5

Note1: for LTE mode, if the bandwidth is different, the test frequency is changed.

2: we pretest all voltage, only the DC 3.8V was worst mode, and the data show in the report.

3. TEST SITES

3.1. Test Facilities

Site Description

Name of Firm : Shenzhen DL Testing Technology Co., Ltd.

Site Location : 101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1 Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China

FCC Test Firm Registration Number: 854456
Designation Number: CN1307
IC Registered No.: 27485
CAB ID.: CN0118

3.2. Measurement Uncertainty

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%
8	99% & -26 dB Occupied Bandwidth	±0.21MHz
9	Peak to Average Radio	±0.59dB

3.3. List of Test and Measurement Instruments

3.3.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Nov. 05, 2023	Nov. 04, 2026
EMI Receiver	R&S	ESR	101421	Nov. 01, 2024	Oct. 31, 2025
LISN	R&S	ENV216	102417	Nov. 01, 2024	Oct. 31, 2025
843 Cable 1#	ChengYu	CE Cable	001	Nov. 01, 2024	Oct. 31, 2025
843 Cable 1#	FUJIKURA	843C1#	001	Nov. 01, 2024	Oct. 31, 2025

3.3.2. For radiated test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4408B	MY50140780	Nov. 01, 2024	Oct. 31, 2025
Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Nov. 01, 2024	Oct. 31, 2025
Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Nov. 01, 2024	Oct. 31, 2025
Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Nov. 01, 2024	Oct. 31, 2025
Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Nov. 01, 2024	Oct. 31, 2025
Amplifier (9KHz-6GHz)	Schwarzbeck	BBV9743B	00153	Nov. 01, 2024	Oct. 31, 2025
Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Nov. 01, 2024	Oct. 31, 2025
Amplifier(18GHz-40GHz)	Quanjuda	DLE-161	97	Nov. 01, 2024	Oct. 31, 2025
Loop Antenna(9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Nov. 01, 2024	Oct. 31, 2025
RF cables1 (9kHz-1GHz)	ChengYu	966	004	Nov. 01, 2024	Oct. 31, 2025
RF cables2 (1GHz-40GHz)	ChengYu	966	003	Nov. 01, 2024	Oct. 31, 2025
Antenna connector	Florida RF Labs	N/A	RF 01#	Nov. 01, 2024	Oct. 31, 2025
Power probe	KEYSIGHT	U2021XA	MY55210018	Nov. 01, 2024	Oct. 31, 2025
Signal Analyzer	Agilent	N9020A	MY55370280	Nov. 01, 2024	Oct. 31, 2025
Test Receiver	R&S	ESU 40	100376	Nov. 01, 2024	Oct. 31, 2025
D.C. Power Supply	LongWei	PS-305D	010964729	Nov. 01, 2024	Oct. 31, 2025
Signal Amplifier	DAZE	ZN3380B	11235	Nov. 01, 2024	Oct. 31, 2025
High Pass filter	KANGMAI	WHKX1.0/1.5G-10SS	40	Nov. 01, 2024	Oct. 31, 2025
Filter	COM-MW	ZBSF-C836.5-25-X	BCTC042	Nov. 01, 2024	Oct. 31, 2025
Filter	COM-MW	ZBSF-C1747.5-75-X2	BCTC045	Nov. 01, 2024	Oct. 31, 2025
Filter	COM-MW	ZBSF-C1880-60-X2	BCTC047	Nov. 01, 2024	Oct. 31, 2025
Splitter	Agilent	11435B	1125162	Nov. 01, 2024	Oct. 31, 2025
RF CONDUCTED TEST					
System Simulator	Agilent	E5515C	GB43130252	Nov. 01, 2024	Oct. 31, 2025
Spectrum Analyzer	Agilent	N9020A	MY45108040	Nov. 01, 2024	Oct. 31, 2025
DC Power Supply	LongWei	PS-305D	010965682	Nov. 01, 2024	Oct. 31, 2025
Constant temperature and humidity box	GF	GTH-800-40-2P	MAA9906-012	Nov. 01, 2024	Oct. 31, 2025
Universal radio communication tester	R&S	CMW500	115295	Nov. 01, 2024	Oct. 31, 2025

4. TEST SET-UP

4.1. Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

4.2. Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators

EUT

4.3. Test Environment:

Ambient conditions in the test laboratory:

Items	Actual
Temperature (℃)	21~23
Humidity (%RH)	50~65

5. EMISSION TEST RESULTS

5.1. Conducted RF Output Power

5.1.1. Limit

According to FCC section 2.1046(a), FCC part22.913(a), FCC part22.50(a) and FCC part 24.232(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

5.1.2. Test Setup

The EUT, which is powered by the adapter, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power.

5.1.3. Test Result

Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT.

Pass, the table and plot please see annex.

The conducted power tables are as follows:

Average Conducted Power(dBm)						
Band	GSM850			PCS1900		
Channel	128	190	251	512	661	810
Frequency	824.20	836.60	848.80	1850.20	1880.00	1909.80
GSM	32.25	32.11	32.18	29.05	28.86	28.45
GPRS (GMSK, 1 TX slot)	32.24	32.10	32.16	29.06	28.85	28.43
GPRS (GMSK, 2 TX slot)	31.35	31.18	31.24	28.23	28.04	27.65
GPRS (GMSK, 3 TX slot)	29.37	29.20	29.26	26.38	26.26	25.88
GPRS (GMSK, 4 TX slot)	28.21	28.01	28.04	25.29	25.18	24.79
EGPRS(GMSK, 1 TX slot)	26.57	25.90	25.73	26.02	25.72	25.54
EGPRS(GMSK, 2 TX slot)	25.37	24.75	24.91	24.74	24.85	24.28
EGPRS(GMSK, 3 TX slot)	23.42	22.97	23.00	22.32	22.63	22.02
EGPRS(GMSK, 4 TX slot)	21.92	21.95	21.73	20.99	21.08	21.13

Average Conducted Power(dBm)						
Band	WCDMA Band 2			WCDMA Band 5		
Frequency	1852.4	1880.0	1907.6	826.4	836.6	846.6
RMC 12.2Kbps	21.32	21.05	21.55	20.11	20.41	20.34
HSDPA Subtest-1	21.10	21.10	21.05	21.73	21.16	21.45
HSDPA Subtest-2	20.54	20.47	20.72	21.27	20.71	20.98
HSDPA Subtest-3	19.62	19.57	19.16	20.30	19.80	19.78
HSDPA Subtest-4	19.67	19.78	19.62	20.33	19.68	19.74
HSUPA Subtest-1	21.52	21.36	21.41	20.36	21.52	21.26
HSUPA Subtest-2	20.22	21.45	20.52	20.14	21.36	21.24
HSUPA Subtest-3	20.85	20.33	20.36	21.54	21.32	20.32
HSUPA Subtest-4	19.63	20.58	20.58	20.35	20.34	21.46
HSUPA Subtest-5	21.73	21.16	21.45	20.44	21.55	20.84

Average Conducted Power						
Band	LTE Band 2			Channel/Frequency (MHz)		
Bandwidth	Modulation	RB size	RB offset	18607/1850.7	18900/1880	19193/1909.3
1.4MHz	QPSK	1	0	21.26	20.26	21.13
		1	2	21.21	21.15	21.14
		1	5	21.01	21.01	21.16
		3	0	21.03	21.06	21.25
		3	2	21.05	21.05	21.26
		3	3	21.03	21.07	21.25
		6	0	20.15	20.11	20.24
	16QAM	1	0	19.86	20.03	20.41
		1	2	20.02	20.15	20.51
		1	5	19.56	20.52	20.44
		3	0	20.04	20.03	20.38
		3	2	20.11	20.15	20.45
		3	3	20.06	20.06	20.43
		6	0	19.15	19.25	19.29
Bandwidth	Modulation	RB size	RB offset	18615/1851.5	18900/1880	19185/1908.5
3MHz	QPSK	1	0	21.05	21.03	21.17
		1	7	21.31	21.38	21.41
		1	14	21.11	21.02	21.14
		8	0	20.03	20.16	20.25
		8	4	20.05	20.14	20.24
		8	7	20.05	20.12	20.23
		15	0	20.06	20.11	20.21
	16QAM	1	0	20.24	20.26	20.23
		1	7	20.61	20.58	20.54
		1	14	20.33	20.25	20.63
		8	0	19.05	19.16	19.35
		8	4	19.06	19.15	19.32
		8	7	19.08	19.16	19.23
		15	0	19.04	19.00	19.11
Bandwidth	Modulation	RB size	RB offset	18625/1852.5	18900/1880	19175/1907.5
5MHz	QPSK	1	0	21.21	20.21	21.01
		1	13	21.33	21.63	21.53
		1	24	21.05	20.95	21.05
		12	0	20.03	20.14	20.22
		12	6	20.15	20.11	20.30
		12	13	20.14	20.16	20.24
		25	0	20.14	20.15	20.23
	16QAM	1	0	20.16	20.25	20.34
		1	13	20.55	20.61	20.68
		1	24	20.15	20.36	20.26
		12	0	19.16	19.10	19.35
		12	6	19.14	19.15	19.44
		12	13	19.21	19.03	19.14
		25	0	19.06	19.14	19.26

Average Conducted Power						
Band	LTE Band 2			Channel/Frequency (MHz)		
Bandwidth	Modulation	RB size	RB offset	18650/1855	18900/1880	19150/1905
10MHz	QPSK	1	0	20.93	21.03	21.21
		1	25	21.11	21.14	21.16
		1	49	20.93	21.01	21.04
		25	0	20.02	20.23	20.48
		25	13	20.03	20.11	20.22
		25	25	20.21	20.63	20.26
		50	0	20.14	20.15	20.35
	16QAM	1	0	20.01	20.21	20.44
		1	25	20.26	20.33	20.51
		1	49	20.15	20.34	20.36
		25	0	19.12	19.18	19.44
		25	13	19.10	19.06	19.31
		25	25	19.26	19.25	19.36
		50	0	19.16	19.14	19.34
Bandwidth	Modulation	RB size	RB offset	18675/1857.5	18900/1880	19125/1902.5
15MHz	QPSK	1	0	21.12	21.02	21.18
		1	38	21.46	21.33	21.54
		1	74	21.15	21.05	21.04
		36	0	20.06	20.24	20.37
		36	18	20.15	20.22	20.38
		36	39	20.26	20.21	20.30
		75	0	20.14	20.63	20.34
	16QAM	1	0	20.08	20.12	20.31
		1	38	20.43	20.51	20.49
		1	74	20.05	20.34	20.14
		36	0	19.04	19.13	19.36
		36	18	19.21	19.52	19.34
		36	39	19.16	19.23	19.22
		75	0	19.18	19.24	19.31
Bandwidth	Modulation	RB size	RB offset	18700/1860	18900/1880	19100/1900
20MHz	QPSK	1	0	20.93	21.04	21.06
		1	50	21.21	21.24	21.35
		1	99	20.97	21.03	21.05
		50	0	19.91	20.27	20.26
		50	25	20.63	20.18	20.31
		50	50	20.02	20.28	20.23
		100	0	20.01	20.26	20.23
	16QAM	1	0	19.92	20.02	20.31
		1	50	20.33	20.27	20.56
		1	99	19.95	20.15	20.24
		50	0	18.96	19.23	19.21
		50	25	19.18	19.18	19.31
		50	50	19.10	19.33	19.20
		100	0	19.05	19.28	19.21

Note: Measurement Uncertainty: ±2.6 dB.

Average Conducted Power						
Band	LTE Band 5			Channel/Frequency (MHz)		
Bandwidth	Modulation	RB size	RB offset	20407/824.7	20525/836.5	20643/848.3
1.4MHz	QPSK	1	0	21.52	21.42	21.44
		1	2	21.64	21.53	21.44
		1	5	21.51	21.43	21.32
		3	0	21.53	21.62	21.40
		3	2	21.55	21.64	21.35
		3	3	21.52	21.60	21.24
		6	0	20.41	20.52	20.35
	16QAM	1	0	20.42	20.61	20.64
		1	2	20.66	20.76	20.91
		1	5	20.52	20.43	20.69
		3	0	20.67	20.66	20.62
		3	2	20.58	20.61	20.64
		3	3	20.64	20.64	20.64
		6	0	19.67	19.76	19.55
Bandwidth	Modulation	RB size	RB offset	20415/825.5	20525/836.5	20635/847.5
3MHz	QPSK	1	0	21.40	21.54	21.39
		1	7	21.79	21.87	21.61
		1	14	21.44	21.55	21.12
		8	0	20.47	20.54	20.51
		8	4	20.51	20.49	20.49
		8	7	20.48	20.56	20.34
		15	0	20.49	20.57	20.53
	16QAM	1	0	20.57	20.84	20.62
		1	7	20.96	21.09	20.93
		1	14	20.58	20.65	20.69
		8	0	19.57	19.40	19.61
		8	4	19.62	19.51	19.63
		8	7	19.56	19.51	19.54
		15	0	19.41	19.51	19.45

Average Conducted Power						
Band	LTE Band 5			Channel/Frequency (MHz)		
Bandwidth	Modulation	RB size	RB offset	20425/826.5	20525/836.5	20625/846.5
5MHz	QPSK	1	0	21.48	21.46	21.35
		1	13	21.88	21.84	21.60
		1	24	21.43	21.48	21.30
		12	0	20.44	20.65	20.36
		12	6	20.50	20.67	20.55
		12	13	20.53	20.62	20.39
		25	0	20.53	20.53	20.36
	16QAM	1	0	20.57	20.65	20.71
		1	13	20.88	20.96	21.02
		1	24	20.47	20.73	20.38
		12	0	19.57	19.63	19.58
		12	6	19.61	19.44	19.66
		12	13	19.60	19.48	19.47
		25	0	19.50	19.55	19.33
Bandwidth	Modulation	RB size	RB offset	20450/829	20525/836.5	20600/844
10MHz	QPSK	1	0	21.44	21.54	21.43
		1	25	21.53	21.64	21.53
		1	49	21.43	21.59	21.23
		25	0	20.34	20.86	20.20
		25	13	20.48	20.60	20.49
		25	25	20.35	20.62	20.39
		50	0	20.36	20.76	20.41
	16QAM	1	0	20.64	20.77	20.53
		1	25	20.65	20.96	20.64
		1	49	20.57	20.93	20.47
		25	0	19.42	19.72	19.34
		25	13	19.46	19.66	19.48
		25	25	19.37	19.73	19.55
		50	0	19.38	19.72	19.46

Note: Measurement Uncertainty: ±2.6 dB.

Average Conducted Power(dBm)						
Band	LTE Band 7			Channel/Frequency (MHz)		
Bandwidth	Modulation	RB size	RB offset	20775/2502.5	21100/2535.0	21425/2567.5
5MHz	QPSK	1	0	21.50	21.47	21.34
		1	12	21.91	21.87	21.64
		1	24	21.46	21.38	21.10
		12	0	20.51	20.45	20.24
		12	6	20.55	20.54	20.29
		12	13	20.46	20.49	20.25
		25	0	20.52	20.50	20.25
	16QAM	1	0	20.69	20.53	20.29
		1	12	20.96	20.91	20.74
		1	24	20.66	20.43	20.25
		12	0	19.39	19.54	19.40
		12	6	19.43	19.60	19.40
		12	13	19.35	19.49	19.30
		25	0	19.43	19.49	19.28
Bandwidth	Modulation	RB size	RB offset	20800/2505.0	21100/2535.0	21400/2565.0
10MHz	QPSK	1	0	21.64	21.54	20.85
		1	24	21.73	21.52	20.95
		1	49	21.62	21.43	20.91
		25	0	20.60	20.52	19.82
		25	12	20.53	20.54	19.84
		25	25	20.49	20.47	19.79
		50	0	20.48	20.57	19.83
	16QAM	1	0	20.63	20.42	19.99
		1	24	20.57	20.63	20.09
		1	49	20.41	20.40	19.89
		25	0	19.54	19.47	18.86
		25	12	19.43	19.49	18.87
		25	25	19.40	19.48	18.85
		50	0	19.36	19.51	18.90

Average Conducted Power(dBm)						
Band	LTE Band 7			Channel/Frequency (MHz)		
Bandwidth	Modulation	RB size	RB offset	20825/2507.5	21100/2535.0	21375/2562.5
15MHz	QPSK	1	0	21.24	21.10	20.91
		1	38	21.35	21.28	21.03
		1	74	21.13	20.90	20.87
		38	0	20.16	20.09	19.91
		38	18	20.15	20.11	19.90
		38	37	20.08	20.02	19.88
		75	0	20.13	20.09	19.91
	16QAM	1	0	19.93	20.19	19.73
		1	38	20.17	20.39	19.92
		1	74	19.94	19.96	19.63
		38	0	18.98	19.01	18.86
		38	18	18.98	19.02	18.86
		38	37	18.94	18.92	18.85
		75	0	18.98	19.04	18.85
Bandwidth	Modulation	RB size	RB offset	20850/2510.0	21100/2535.0	21350/2560.0
20MHz	QPSK	1	0	21.05	21.09	20.87
		1	49	21.23	21.10	20.97
		1	99	21.04	20.85	20.81
		50	0	20.11	19.94	19.83
		50	25	20.00	20.01	19.84
		50	50	19.94	19.84	19.79
		100	0	20.02	19.92	19.84
	16QAM	1	0	19.99	19.98	19.79
		1	49	20.15	20.12	19.87
		1	99	19.98	19.78	19.67
		50	0	19.01	18.96	18.91
		50	25	18.87	19.02	18.93
		50	50	18.87	18.80	18.91
		100	0	18.95	18.90	18.80

Note: Measurement Uncertainty: ±2.6 dB.

5.2. -26dB and 99% Occupied Bandwidth

5.2.1. Limit

According to FCC section 2.1049 and FCC part22.99 and FCC part24.131, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth,

5.2.2. Test Setup

The EUT, which is powered by the adapter, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power.

5.2.3. Test Result

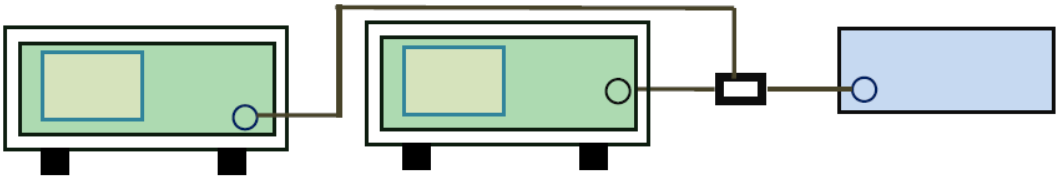
All channels have been tested and only the worst channels are represented in the report.
Pass, the table and plot please see annex.

5.3. Peak to Average Radio

5.3.1. Limit

According to FCC section 27.50(d)(5), 22.99, 24.131 the peak to average ratio(PAR) of the transmission may not exceed 13dB.

5.3.2. Test Setup



5.3.3. Test Procedure

According with KDB 971168 v02r02

1. The signal analyzer' s CCDF measurement profile is enabled

2. Frequency = carrier center frequency

3. Measurement BW > Emission bandwidth of signal

4. The signal analyzer was set to collect one million samples to generate the CCDF curve

5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal " RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the " on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

5.3.4. Test Result

Pass, the table and plot please see annex.

5.4. Frequency Stability

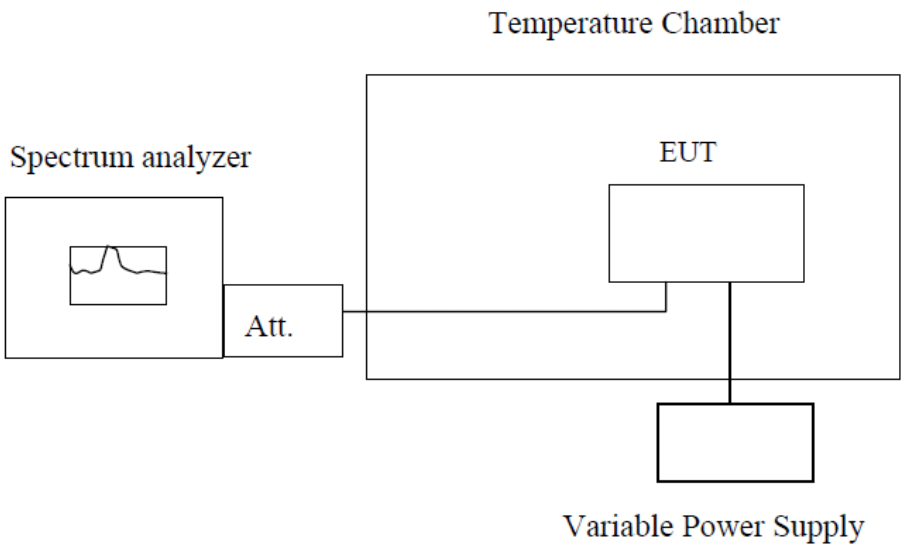
5.4.1. Limit

According to FCC section 22.355 and FCC section 24.235, FCC section 27.54 the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

(a) The temperature is varied from -40℃ to +80℃ at intervals of not more than 10℃.

(b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

5.4.2. Test Setup



Note : Measurement setup for testing on Antenna connector

The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber.

The EUT is commanded by the System Simulator (SS) to operate at the maximum output power

5.4.3. Test Result

The nominal, highest and lowest extreme voltages are separately 3.7VDC, 4.25VDC and 3.34VDC

which are specified by the applicant; the normal temperature here used is 25℃. The frequency

deviation limit of 850MHz band is ±2.5ppm, and 1900MHz is ±1ppm

For LTE mode, only test the max bandwidth.

The table and plot please see annex.

Test Conditions			Frequency Deviation			Result
Band	Power(Vdc)	Temperature(℃)	Frequency Error(Hz)	ppm	Limit	
GSM850 Middle channel 836.6MHz	3.7	-40	42	0.0502	±2.5	PASS
	3.7	-30	56	0.0669		
	3.7	-20	67	0.0801		
	3.7	-10	34	0.0406		
	3.7	0	112	0.1339		
	3.7	10	23	0.0275		
	3.7	20	45	0.0538		
	3.7	30	66	0.0789		
	3.7	40	54	0.0646		
	3.7	50	21	0.0251		
	3.7	60	34	0.0406		
	3.7	70	43	0.0514		
	3.7	80	78	0.0932		
	4.25	25	126	0.1506		
	3.7	25	32	0.0383		
	3.34	25	76	0.0909		
GPRS850 Middle channel 836.6MHz	3.7	-40	65	0.0777	±2.5	PASS
	3.7	-30	32	0.0383		
	3.7	-20	76	0.0909		
	3.7	-10	89	0.1064		
	3.7	0	23	0.0275		
	3.7	10	46	0.0550		
	3.7	20	75	0.0897		
	3.7	30	22	0.0263		
	3.7	40	78	0.0932		
	3.7	50	32	0.0383		
	3.7	60	78	0.0932		
	3.7	70	21	0.0251		
	3.7	80	89	0.1064		
	4.25	25	119	0.1423		
	3.7	25	32	0.0383		
	3.34	25	98	0.1172		

Test Conditions			Frequency Deviation			Result
Band	Power(Vdc)	Temperature(℃)	Frequency Error(Hz)	ppm	Limit	
GSM1900 Middle channel 1880.0MHz	3.7	-40	67	0.0356	±2.5	PASS
	3.7	-30	56	0.0298		
	3.7	-20	65	0.0346		
	3.7	-10	78	0.0415		
	3.7	0	98	0.0521		
	3.7	10	86	0.0457		
	3.7	20	66	0.0351		
	3.7	30	82	0.0436		
	3.7	40	69	0.0367		
	3.7	50	73	0.0388		
	3.7	60	77	0.0410		
	3.7	70	89	0.0473		
	3.7	80	112	0.0596		
	4.25	25	121	0.0644		
	3.7	25	77	0.0410		
	3.34	25	89	0.0473		
GPRS1900 Middle channel 1880.0MHz	3.7	-40	56	0.0298	±2.5	PASS
	3.7	-30	78	0.0415		
	3.7	-20	23	0.0122		
	3.7	-10	87	0.0463		
	3.7	0	32	0.0170		
	3.7	10	51	0.0271		
	3.7	20	43	0.0229		
	3.7	30	57	0.0303		
	3.7	40	88	0.0468		
	3.7	50	54	0.0287		
	3.7	60	63	0.0335		
	3.7	70	57	0.0303		
	3.7	80	34	0.0181		
	4.25	25	132	0.0702		
	3.7	25	78	0.0415		
	3.34	25	99	0.0527		

Test Conditions			Frequency Deviation			Result
Band	Power(Vdc)	Temperature(℃)	Frequency Error(Hz)	ppm	Limit	
WCDMA Band 2 Middle channel 1880MHz	3.7	-40	32	0.0170	±2.5	PASS
	3.7	-30	45	0.0239		
	3.7	-20	21	0.0112		
	3.7	-10	56	0.0298		
	3.7	0	67	0.0356		
	3.7	10	65	0.0346		
	3.7	20	34	0.0181		
	3.7	30	23	0.0122		
	3.7	40	76	0.0404		
	3.7	50	75	0.0399		
	3.7	60	75	0.0399		
	3.7	70	78	0.0415		
	3.7	80	76	0.0404		
	4.25	25	124	0.0660		
	3.7	25	78	0.0415		
	3.34	25	89	0.0473		
WCDMA Band 5 Middle channel 836.6MHz	3.7	-40	75	0.0896	±2.5	PASS
	3.7	-30	88	0.1052		
	3.7	-20	32	0.0383		
	3.7	-10	76	0.0908		
	3.7	0	56	0.0669		
	3.7	10	78	0.0932		
	3.7	20	78	0.0932		
	3.7	30	54	0.0645		
	3.7	40	123	0.1470		
	3.7	50	32	0.0383		
	3.7	60	87	0.1040		
	3.7	70	45	0.0538		
	3.7	80	76	0.0908		
	4.25	25	165	0.1972		
	3.7	25	78	0.0932		
	3.34	25	97	0.1159		

Test Conditions			Frequency Deviation			Result
Band	Power(Vdc)	Temperature(℃)	Frequency Error(Hz)	ppm	Limit	
LTE Band 2 Bandwidth 20MHz QPSK Middle channel 1880MHz	3.7	-40	64	0.0340	±1	PASS
	3.7	-30	35	0.0186		
	3.7	-20	78	0.0415		
	3.7	-10	66	0.0351		
	3.7	0	65	0.0346		
	3.7	10	46	0.0245		
	3.7	20	67	0.0356		
	3.7	30	98	0.0521		
	3.7	40	73	0.0388		
	3.7	50	67	0.0356		
	3.7	60	54	0.0287		
	3.7	70	56	0.0298		
	3.7	80	79	0.0420		
	4.25	25	54	0.0287		
	3.7	25	66	0.0351		
	3.34	25	178	0.0947		
LTE Band 2 Bandwidth 20MHz 16QAM Middle channel 1880MHz	3.7	-40	67	0.0356	±1	PASS
	3.7	-30	83	0.0441		
	3.7	-20	72	0.0383		
	3.7	-10	73	0.0388		
	3.7	0	43	0.0229		
	3.7	10	67	0.0356		
	3.7	20	82	0.0436		
	3.7	30	36	0.0191		
	3.7	40	55	0.0293		
	3.7	50	39	0.0207		
	3.7	60	54	0.0287		
	3.7	70	53	0.0282		
	3.7	80	21	0.0112		
	4.25	25	67	0.0356		
	3.7	25	21	0.0112		
	3.34	25	98	0.0521		

Test Conditions			Frequency Deviation			Result
Band	Power(Vdc)	Temperature(℃)	Frequency Error(Hz)	ppm	Limit	
LTE Band 5 Bandwidth 10MHz QPSK Middle channel 836.5MHz	3.7	-40	65	0.0777	±2.5	PASS
	3.7	-30	43	0.0514		
	3.7	-20	45	0.0538		
	3.7	-10	32	0.0383		
	3.7	0	67	0.0801		
	3.7	10	75	0.0897		
	3.7	20	35	0.0418		
	3.7	30	68	0.0813		
	3.7	40	32	0.0383		
	3.7	50	56	0.0669		
	3.7	60	78	0.0932		
	3.7	70	46	0.0550		
	3.7	80	87	0.1040		
	4.25	25	35	0.0418		
	3.7	25	87	0.1040		
	3.34	25	43	0.0514		
LTE Band 5 Bandwidth 10MHz 16QAM Middle channel 836.5MHz	3.7	-40	34	0.0406	±2.5	PASS
	3.7	-30	65	0.0777		
	3.7	-20	67	0.0801		
	3.7	-10	67	0.0801		
	3.7	0	87	0.1040		
	3.7	10	54	0.0646		
	3.7	20	21	0.0251		
	3.7	30	67	0.0801		
	3.7	40	43	0.0514		
	3.7	50	89	0.1064		
	3.7	60	54	0.0646		
	3.7	70	78	0.0932		
	3.7	80	45	0.0538		
	4.25	25	89	0.1064		
	3.7	25	46	0.0550		
	3.34	25	89	0.1064		

Note: Measurement Uncertainty: ±20Hz.

Test Conditions			Frequency Deviation			Result
Band	Power(Vdc)	Temperature(℃)	Frequency Error(Hz)	ppm	Limit	
LTE Band 7 Bandwidth 20MHz QPSK Middle channel 2535.0MHz	3.7	-40	78	0.0308	±2.5	PASS
	3.7	-30	97	0.0383		
	3.7	-20	67	0.0264		
	3.7	-10	76	0.0300		
	3.7	0	34	0.0134		
	3.7	10	35	0.0138		
	3.7	20	86	0.0339		
	3.7	30	43	0.0170		
	3.7	40	78	0.0308		
	3.7	50	78	0.0308		
	3.7	60	43	0.0170		
	3.7	70	78	0.0308		
	3.7	80	65	0.0256		
	4.25	25	112	0.0442		
	3.7	25	68	0.0268		
	3.34	25	65	0.0256		
LTE Band 7 Bandwidth 20MHz 16QAM Middle channel 2535.0MHz	3.7	-40	64	0.0252	±2.5	PASS
	3.7	-30	45	0.0178		
	3.7	-20	78	0.0308		
	3.7	-10	32	0.0126		
	3.7	0	76	0.0300		
	3.7	10	86	0.0339		
	3.7	20	43	0.0170		
	3.7	30	78	0.0308		
	3.7	40	67	0.0264		
	3.7	50	53	0.0209		
	3.7	60	75	0.0296		
	3.7	70	54	0.0213		
	3.7	80	75	0.0296		
	4.25	25	123	0.0485		
	3.7	25	67	0.0264		
	3.34	25	78	0.0308		

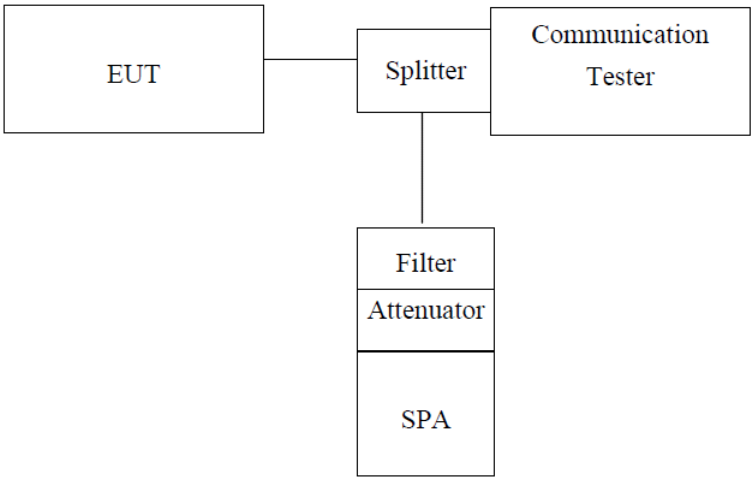
Note: Measurement Uncertainty: ±20Hz.

5.5. Conducted Spurious Emissions

5.5.1. Limit

According to FCC section 22.917(a) and FCC section 24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

5.5.2. Test Setup



Note: *Measurement setup for testing on Antenna connector*

5.5.3. Measurement Procedure

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

For the out of band: Set the RBW, VBW = 100KHz, Start=30MHz, Stop= 10th harmonic.

Limit = -13dBm

5.5.4. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

For LTE mode, the plot only show the min and max bandwidth's data.

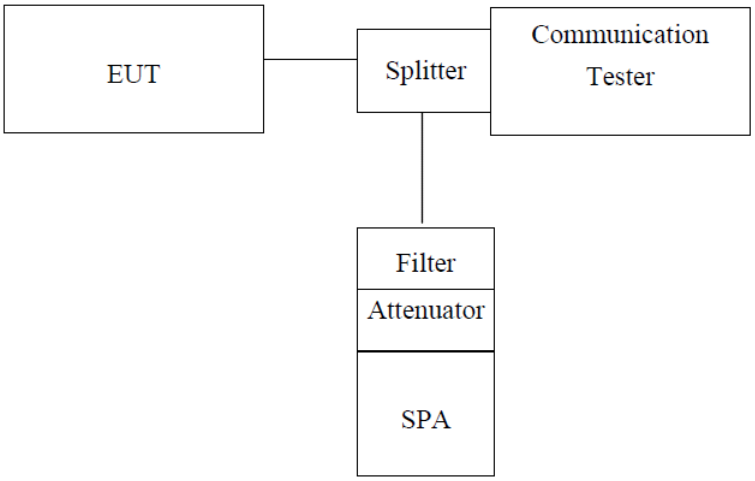
Pass, the table and plot please see annex.

5.6. Conducted Out of Band Emissions

5.6.1. Limit

According to FCC section 22.917(b) and FCC section 24.238(b), 27.53(g)(h) in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

5.6.2. Test Setup



Note: *Measurement setup for testing on Antenna connector*

5.6.3. Measurement Procedure

The EUT, which is powered by the adapter, is coupled to the Spectrum Analyzer and the System Simulator with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the System Simulator to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the System Simulator.

RBW is set to 3kHz,VBW is set to 10kHz for GSM 850, GSM 1900
RBW is set to 51kHz,VBW is set to 160kHz for WCDMA Band 5, WCDMA Band 2
RBW is set to 15 kHz, VBW is set to 51 kHz for LTE Band 2, LTE Band 5 (1.4MHz),
RBW is set to 30 kHz, VBW is set to 100 kHz for LTE Band 2, LTE Band 5 (3MHz),
RBW is set to 51 kHz, VBW is set to 160 kHz for LTE Band 2, LTE Band 5 (5MHz),
RBW is set to 100 kHz, VBW is set to 300 kHz for LTE Band 2, LTE Band 5 (10MHz),
RBW is set to 150 kHz, VBW is set to 510 kHz for LTE Band 2,
RBW is set to 200 kHz, VBW is set to 620 kHz for LTE Band 2,
RBW is set to 50 kHz, VBW is set to 200 kHz for LTE Band 7 (5MHz).
RBW is set to 100 kHz, VBW is set to 300kHz for LTE Band 7 (10MHz).
RBW is set to 200 kHz, VBW is set to 1MHz for LTE Band 7 (15MHz/20MHz)

5.6.4. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

Pass, the table and plot please see annex.

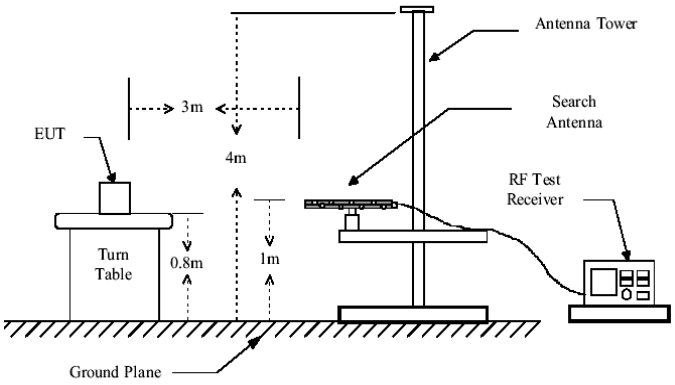
5.7. Transmitter Radiated Power (EIRP/ERP)

5.7.1. Limit

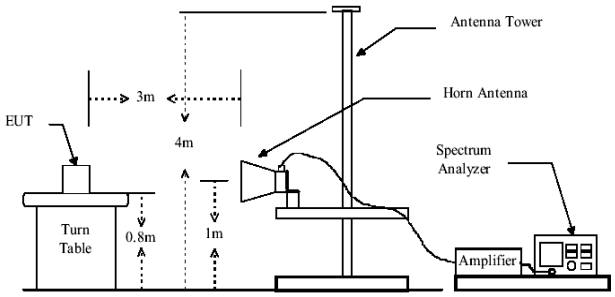
According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7Watts, and FCC section 24.232, FCC section 27.50 the broadband PCS mobile station is limited to 2 Watts e.i.r.p. peak power.

5.7.2. Test Setup

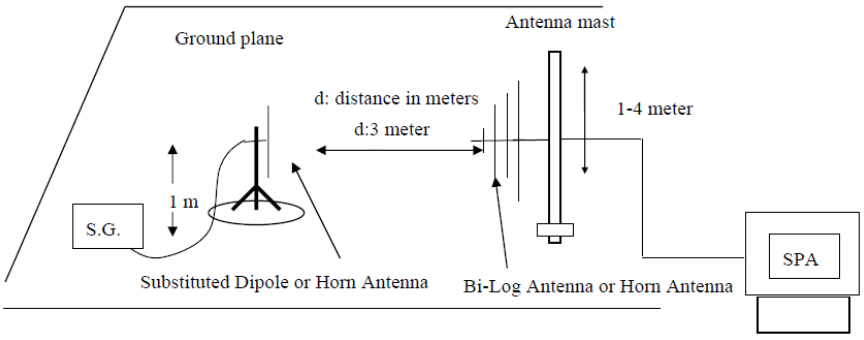
Below 1GHz



Above 1GHz



Substituted method:



5.7.3. Measurement Procedure

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. all test in Full-Anechoic Chamber.

During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824.2 –848.80.8MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

5.7.4. Test Result

Pass, the table and plot please see annex.

EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Result
GSM 850	Lowest	V	2.14	19.33	2.52	18.95	38.45	Pass
		H	2.04	19.33	2.52	18.85		
	Middle	V	2.25	19.5	2.6	19.15	38.45	Pass
		H	2.36	19.5	2.6	19.26		
	Highest	V	2.41	19.94	2.71	19.64	38.45	Pass
		H	2.55	19.94	2.71	**19.78**		
GPRS850	Lowest	V	2.47	19.33	2.52	19.28	38.45	Pass
		H	2.68	19.33	2.52	19.49		
	Middle	V	2.74	19.5	2.6	19.64	38.45	Pass
		H	2.22	19.5	2.6	19.12		
	Highest	V	2.37	19.94	2.71	19.6	38.45	Pass
		H	2.39	19.94	2.71	19.62		
EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Result
GSM1900	Lowest	V	4.26	15.68	1.65	18.29	33.00	Pass
		H	4.35	15.68	1.65	18.38		
	Middle	V	4.19	15.7	1.67	18.22	33.00	Pass
		H	4.28	15.7	1.67	18.31		
	Highest	V	4.33	15.7	1.71	18.32	33.00	Pass
		H	4.28	15.7	1.71	18.27		
GPRS1900	Lowest	V	4.69	15.68	1.65	**18.72**	33.00	Pass
		H	4.57	15.68	1.65	18.6		
	Middle	V	4.39	15.7	1.67	18.42	33.00	Pass
		H	4.24	15.7	1.67	18.27		
	Highest	V	4.39	15.7	1.71	18.38	33.00	Pass
		H	4.52	15.7	1.71	18.51		

EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Result
WCDMA Band 2	Lowest	V	1.55	19.33	1.65	19.23	33.00	Pass
		H	1.39	19.33	1.65	19.07		
	Middle	V	1.57	19.5	1.67	19.4	33.00	Pass
		H	1.41	19.5	1.67	19.24		
	Highest	V	1.19	19.94	1.71	19.42	33.00	Pass
		H	1.23	19.94	1.71	**19.46**		

EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Result
WCDMA Band 5	Lowest	V	3.58	15.68	2.52	16.74	38.45	Pass
		H	3.69	15.68	2.52	**16.85**		
	Middle	V	3.27	15.7	2.6	16.37	38.45	Pass
		H	3.29	15.7	2.6	16.39		
	Highest	V	3.64	15.7	2.71	16.63	38.45	Pass
		H	3.57	15.7	2.71	16.56		

EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Result
LTE BAND 2 1.4MHz QPSK	Lowest	V	2.69	19.35	2.54	19.50	33.00	Pass
		H	2.48	19.35	2.54	19.29		
	Middle	V	2.33	19.51	2.62	19.22	33.00	Pass
		H	2.36	19.51	2.62	19.25		
	Highest	V	2.41	19.96	2.69	19.68	33.00	Pass
		H	2.18	19.96	2.69	19.45		
LTE BAND 2 3MHz QPSK	Lowest	V	2.36	19.35	2.54	19.17	33.00	Pass
		H	2.41	19.35	2.54	19.22		
	Middle	V	2.11	19.51	2.62	19.00	33.00	Pass
		H	2.47	19.51	2.62	19.36		
	Highest	V	2.39	19.96	2.69	19.66	33.00	Pass
		H	2.32	19.96	2.69	19.59		
LTE BAND 2 5MHz QPSK	Lowest	V	2.49	19.35	2.54	19.30	33.00	Pass
		H	2.18	19.35	2.54	18.99		
	Middle	V	2.39	19.51	2.62	19.28	33.00	Pass
		H	2.17	19.51	2.62	19.06		
	Highest	V	2.09	19.96	2.69	19.36	33.00	Pass
		H	2.39	19.96	2.69	19.66		
LTE BAND 2 10MHz QPSK	Lowest	V	2.37	19.35	2.54	19.18	33.00	Pass
		H	2.52	19.35	2.54	19.33		
	Middle	V	2.47	19.51	2.62	19.36	33.00	Pass
		H	2.37	19.51	2.62	19.26		
	Highest	V	2.41	19.96	2.69	19.68	33.00	Pass
		H	2.39	19.96	2.69	19.66		
LTE BAND 2 15MHz QPSK	Lowest	V	2.41	19.35	2.54	19.22	33.00	Pass
		H	2.39	19.35	2.54	19.20		
	Middle	V	2.74	19.51	2.62	19.63	33.00	Pass
		H	2.19	19.51	2.62	19.08		
	Highest	V	2.07	19.96	2.69	19.34	33.00	Pass
		H	2.39	19.96	2.69	19.66		
LTE BAND 2 20MHz QPSK	Lowest	V	2.41	19.35	2.54	19.22	33.00	Pass
		H	2.63	19.35	2.54	19.44		
	Middle	V	2.18	19.51	2.62	19.07	33.00	Pass
		H	2.19	19.51	2.62	19.08		
	Highest	V	2.41	19.96	2.69	**19.68**	33.00	Pass
		H	2.09	19.96	2.69	19.36		

EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Result
LTE BAND 2 1.4MHz 16QAM	Lowest	V	2.33	19.35	2.54	19.14	33.00	Pass
		H	2.17	19.35	2.54	18.98		
	Middle	V	2.39	19.51	2.62	19.28	33.00	Pass
		H	2.08	19.51	2.62	18.97		
	Highest	V	2.39	19.96	2.69	**19.66**	33.00	Pass
		H	2.17	19.96	2.69	19.44		
LTE BAND 2 3MHz 16QAM	Lowest	V	2.39	19.35	2.54	19.20	33.00	Pass
		H	2.48	19.35	2.54	19.29		
	Middle	V	2.33	19.51	2.62	19.22	33.00	Pass
		H	2.19	19.51	2.62	19.08		
	Highest	V	2.37	19.96	2.69	19.64	33.00	Pass
		H	2.09	19.96	2.69	19.36		
LTE BAND 2 5MHz 16QAM	Lowest	V	2.37	19.35	2.54	19.18	33.00	Pass
		H	2.16	19.35	2.54	18.97		
	Middle	V	2.37	19.51	2.62	19.26	33.00	Pass
		H	2.17	19.51	2.62	19.06		
	Highest	V	2.05	19.96	2.69	19.32	33.00	Pass
		H	2.09	19.96	2.69	19.36		
LTE BAND 2 10MHz 16QAM	Lowest	V	2.16	19.33	2.52	18.97	33.00	Pass
		H	2.13	19.33	2.52	18.94		
	Middle	V	2.09	19.5	2.6	18.99	33.00	Pass
		H	2.17	19.5	2.6	19.07		
	Highest	V	2.13	19.94	2.71	19.36	33.00	Pass
		H	2.17	19.94	2.71	19.40		
LTE BAND 2 15MHz 16QAM	Lowest	V	2.09	19.33	2.52	18.90	33.00	Pass
		H	2.34	19.33	2.52	19.15		
	Middle	V	2.29	19.5	2.6	19.19	33.00	Pass
		H	2.34	19.5	2.6	19.24		
	Highest	V	2.17	19.94	2.71	19.40	33.00	Pass
		H	2.39	19.94	2.71	19.62		
LTE BAND 2 20MHz 16QAM	Lowest	V	2.41	19.33	2.52	19.22	33.00	Pass
		H	2.09	19.33	2.52	18.90		
	Middle	V	2.37	19.5	2.6	19.27	33.00	Pass
		H	2.09	19.5	2.6	18.99		
	Highest	V	2.13	19.94	2.71	19.36	33.00	Pass
		H	2.19	19.94	2.71	**19.42**		

EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)	Result
LTE BAND 5 1.4MHz QPSK	Lowest	V	2.37	19.35	2.54	19.18	38.45	Pass
		H	2.09	19.35	2.54	18.90		
	Middle	V	2.19	19.51	2.62	19.08	38.45	Pass
		H	2.01	19.51	2.62	18.90		
	Highest	V	2.13	19.96	2.69	19.40	38.45	Pass
		H	2.19	19.96	2.69	**19.46**		
LTE BAND 5 3MHz QPSK	Lowest	V	2.08	19.35	2.54	18.89	38.45	Pass
		H	2.13	19.35	2.54	18.94		
	Middle	V	2.19	19.51	2.62	19.08	38.45	Pass
		H	2.33	19.51	2.62	19.22		
	Highest	V	2.07	19.96	2.69	19.34	38.45	Pass
		H	2.16	19.96	2.69	19.43		
LTE BAND 5 5MHz QPSK	Lowest	V	2.34	19.35	2.54	19.15	38.45	Pass
		H	2.35	19.35	2.54	19.16		
	Middle	V	2.47	19.51	2.62	19.36	38.45	Pass
		H	2.39	19.51	2.62	19.28		
	Highest	V	2.13	19.96	2.69	19.40	38.45	Pass
		H	2.06	19.96	2.69	19.33		
LTE BAND 5 10MHz QPSK	Lowest	V	2.27	19.33	2.52	19.08	38.45	Pass
		H	2.13	19.33	2.52	18.94		
	Middle	V	2.07	19.5	2.6	18.97	38.45	Pass
		H	2.16	19.5	2.6	19.06		
	Highest	V	2.05	19.94	2.71	19.28	38.45	Pass
		H	2.09	19.94	2.71	19.32		
LTE BAND 5 1.4MHz 16QAM	Lowest	V	2.16	19.33	2.52	18.97	38.45	Pass
		H	2.14	19.33	2.52	18.95		
	Middle	V	2.07	19.5	2.6	18.97	38.45	Pass
		H	2.03	19.5	2.6	18.93		
	Highest	V	2.19	19.94	2.71	19.42	38.45	Pass
		H	2.17	19.94	2.71	19.40		
LTE BAND 5 3MHz 16QAM	Lowest	V	2.06	19.33	2.52	18.87	38.45	Pass
		H	2.07	19.33	2.52	18.88		
	Middle	V	2.15	19.5	2.6	19.05	38.45	Pass
		H	2.23	19.5	2.6	19.13		
	Highest	V	2.22	19.94	2.71	**19.45**	38.45	Pass
		H	2.15	19.94	2.71	19.38		
LTE BAND 5 5MHz 16QAM	Lowest	V	2.34	19.35	2.54	19.15	38.45	Pass
		H	2.08	19.35	2.54	18.89		
	Middle	V	2.14	19.51	2.62	19.03	38.45	Pass
		H	2.06	19.51	2.62	18.95		
	Highest	V	2.14	19.96	2.69	19.41	38.45	Pass
		H	2.05	19.96	2.69	19.32		
LTE BAND 5 10MHz 16QAM	Lowest	V	2.01	19.35	2.54	18.82	38.45	Pass
		H	2.03	19.35	2.54	18.84		
	Middle	V	2.09	19.51	2.62	18.98	38.45	Pass
		H	2.04	19.51	2.62	18.93		
	Highest	V	2.09	19.96	2.69	19.36	38.45	Pass
		H	2.14	19.96	2.69	**19.41**		

EUT mode	Channel	Antenna Pol.	S.G. output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Result
LTE BAND 7 5MHz QPSK	Lowest	V	2.16	19.35	2.54	18.97	33.00	Pass
		H	2.13	19.35	2.54	18.94		
	Middle	V	2.18	19.51	2.62	19.07	33.00	Pass
		H	2.09	19.51	2.62	18.98		
	Highest	V	2.14	19.96	2.69	19.41	33.00	Pass
		H	2.16	19.96	2.69	19.43		
LTE BAND 7 10MHz QPSK	Lowest	V	2.07	19.33	2.52	18.88	33.00	Pass
		H	2.03	19.33	2.52	18.84		
	Middle	V	2.03	19.5	2.6	18.93	33.00	Pass
		H	2.04	19.5	2.6	18.94		
	Highest	V	2.07	19.94	2.71	19.30	33.00	Pass
		H	2.09	19.94	2.71	19.32		
LTE BAND 7 15MHz QPSK	Lowest	V	2.07	19.33	2.52	18.88	33.00	Pass
		H	2.11	19.33	2.52	18.92		
	Middle	V	2.34	19.5	2.6	19.24	33.00	Pass
		H	2.28	19.5	2.6	19.18		
	Highest	V	2.34	19.94	2.71	**19.57**	33.00	Pass
		H	2.17	19.94	2.71	19.40		
LTE BAND 7 20MHz QPSK	Lowest	V	2.39	19.33	2.52	19.20	33.00	Pass
		H	2.18	19.33	2.52	18.99		
	Middle	V	2.39	19.5	2.6	19.29	33.00	Pass
		H	2.41	19.5	2.6	19.31		
	Highest	V	2.16	19.94	2.71	**19.39**	33.00	Pass
		H	2.06	19.94	2.71	19.29		
LTE BAND 7 5MHz 16QAM	Lowest	V	2.15	19.35	2.54	18.96	33.00	Pass
		H	2.52	19.35	2.54	19.33		
	Middle	V	2.63	19.51	2.62	19.52	33.00	Pass
		H	2.14	19.51	2.62	19.03		
	Highest	V	2.33	19.96	2.69	19.60	33.00	Pass
		H	2.37	19.96	2.69	**19.64**		
LTE BAND 7 10MHz 16QAM	Lowest	V	2.53	19.35	2.54	19.34	33.00	Pass
		H	2.05	19.35	2.54	18.86		
	Middle	V	2.16	19.51	2.62	19.05	33.00	Pass
		H	2.15	19.51	2.62	19.04		
	Highest	V	2.16	19.96	2.69	19.43	33.00	Pass
		H	2.17	19.96	2.69	19.44		
LTE BAND 7 15MHz 16QAM	Lowest	V	2.14	19.35	2.54	18.95	33.00	Pass
		H	2.16	19.35	2.54	18.97		
	Middle	V	2.18	19.51	2.62	19.07	33.00	Pass
		H	2.19	19.51	2.62	19.08		
	Highest	V	2.13	19.96	2.69	19.40	33.00	Pass
		H	2.11	19.96	2.69	19.38		
LTE BAND 7 20MHz 16QAM	Lowest	V	2.16	19.35	2.54	18.97	33.00	Pass
		H	2.18	19.35	2.54	18.99		
	Middle	V	2.16	19.51	2.62	19.05	33.00	Pass
		H	2.13	19.51	2.62	19.02		
	Highest	V	2.18	19.96	2.69	19.45	33.00	Pass
		H	2.19	19.96	2.69	19.46		

5.8. Radiated Out of Band Emissions

5.8.1. Limit

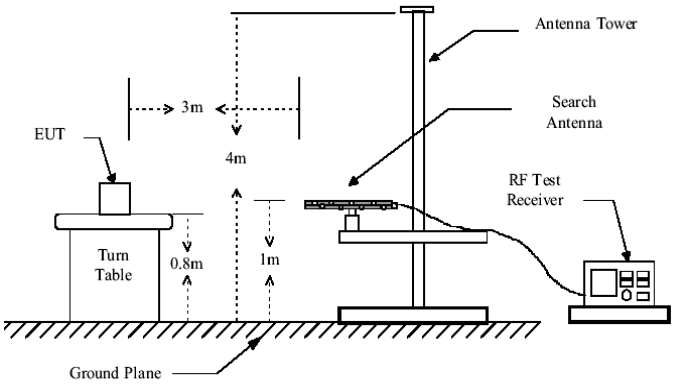
According to FCC section 22.917(a) and section 24.238(a), 27.53(g) the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power

(P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

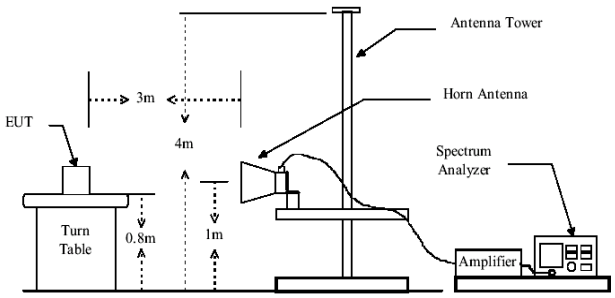
The spurious emission with frequency band 1900 according to FCC section 2.1057.

5.8.2. Test Setup

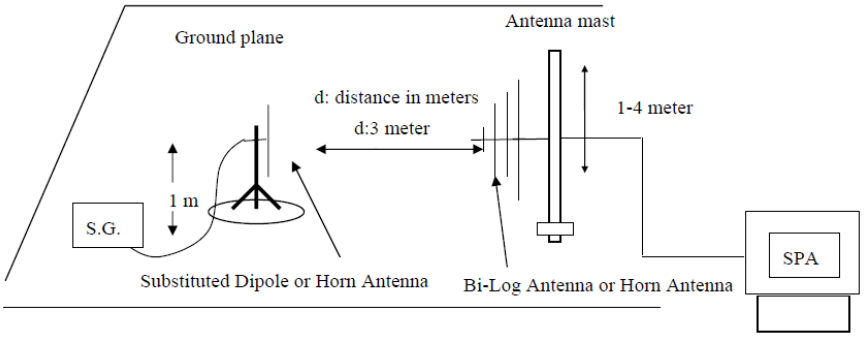
Below 1GHz



Above 1GHz



Substituted method:



5.8.3. Measurement Procedure

The EUT was placed on a non-conductive, The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations. all test in Full-Anechoic Chamber.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

EIRP (Level)= S.G. output (dBm) + Antenna Gain(dBi) – Cable Loss (dB)

Note: Measurement Uncertainty: ±3.6 dB.
The data show only the worst results, and the other results are very low and not shown in the report.

5.8.4. Test Result

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
GSM850 Lowest	87.53	Vertical	-75.62	3.35	0.38	-72.65	-13	PASS
	1648.40	Vertical	-46.29	7.76	3.75	-42.28		
	2472.60	Vertical	-47.40	9.84	4.94	-42.50		
	3296.80	Vertical	-39.82	10.21	5.32	-34.93		
	4121.00	Vertical	-43.20	11.36	6.02	-37.86		
	4945.20	Vertical	-44.74	14.52	6.68	-36.90		
GSM850 Middle	88.46	Vertical	-75.62	3.35	0.38	-72.65	-13	PASS
	1673.20	Vertical	-47.61	7.76	3.75	-43.60		
	2509.80	Vertical	-47.20	9.84	4.94	-42.30		
	3346.40	Vertical	-42.81	10.21	5.32	-37.92		
	4183.00	Vertical	-42.22	11.36	6.02	-36.88		
	5019.60	Vertical	-46.19	14.52	6.68	-38.35		
GSM850 Highest	88.65	Vertical	-75.58	3.35	0.38	-72.61	-13	PASS
	1697.60	Vertical	-47.20	7.79	3.53	-42.94		
	2546.40	Vertical	-41.66	9.88	5.02	-36.80		
	3395.20	Vertical	-37.85	10.25	5.54	-33.14		
	4244.00	Vertical	-44.71	11.38	6.16	-39.49		
	5092.80	Vertical	-47.15	14.56	6.72	-39.31		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
GSM1900 Lowest	87.54	Vertical	-75.19	3.35	0.38	-72.22	-13	PASS
	3700.40	Vertical	-46.02	7.76	3.75	-42.01		
	5550.60	Vertical	-47.13	9.84	4.94	-42.23		
	7400.80	Vertical	-39.59	10.21	5.32	-34.70		
	9251.00	Vertical	-42.96	11.36	6.02	-37.62		
	11101.20	Vertical	-44.49	14.52	6.68	-36.65		
GSM1900 Middle	88.70	Vertical	-75.19	3.35	0.38	-72.22	-13	PASS
	3760.00	Vertical	-47.34	7.76	3.75	-43.33		
	5640.00	Vertical	-46.94	9.84	4.94	-42.04		
	7520.00	Vertical	-42.57	10.21	5.32	-37.68		
	9400.00	Vertical	-41.98	11.36	6.02	-36.64		
	11280.00	Vertical	-45.92	14.52	6.68	-38.08		
GSM1900 Highest	88.76	Vertical	-75.15	3.35	0.38	-72.18	-13	PASS
	3819.60	Vertical	-46.94	7.79	3.53	-42.68		
	5729.40	Vertical	-41.41	9.88	5.02	-36.55		
	7639.20	Vertical	-37.62	10.25	5.54	-32.91		
	9549.00	Vertical	-44.46	11.38	6.16	-39.24		
	11458.80	Vertical	-46.89	14.56	6.72	-39.05		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
LTE BAND 2 1.4MHz Lowest	87.15	Vertical	-75.24	3.35	0.38	-72.27	-13	PASS
	3701.40	Vertical	-46.04	7.76	3.75	-42.03		
	5552.10	Vertical	-47.16	9.84	4.94	-42.26		
	7402.80	Vertical	-39.61	10.21	5.32	-34.72		
	9253.50	Vertical	-42.99	11.36	6.02	-37.65		
	11104.20	Vertical	-44.52	14.52	6.68	-36.68		
LTE BAND 2 1.4MHz Middle	88.27	Vertical	-75.24	3.35	0.38	-72.27	-13	PASS
	3760.00	Vertical	-47.37	7.76	3.75	-43.36		
	5640.00	Vertical	-46.97	9.84	4.94	-42.07		
	7520.00	Vertical	-42.60	10.21	5.32	-37.71		
	9400.00	Vertical	-42.01	11.36	6.02	-36.67		
	11280.00	Vertical	-45.94	14.52	6.68	-38.10		
LTE BAND 2 1.4MHz Highest	88.21	Vertical	-75.20	3.35	0.38	-72.23	-13	PASS
	3819.60	Vertical	-46.97	7.79	3.53	-42.71		
	5729.40	Vertical	-41.44	9.88	5.02	-36.58		
	7639.20	Vertical	-37.65	10.25	5.54	-32.94		
	9549.00	Vertical	-44.49	11.38	6.16	-39.27		
	11458.80	Vertical	-46.91	14.56	6.72	-39.07		
LTE BAND 2 3MHz Lowest	87.33	Vertical	-75.24	3.35	0.38	-72.27	-13	PASS
	3700.40	Vertical	-46.04	7.76	3.75	-42.03		
	5550.60	Vertical	-46.84	9.84	4.94	-41.94		
	7400.80	Vertical	-39.35	10.21	5.32	-34.46		
	9251.00	Vertical	-42.70	11.36	6.02	-37.36		
	11101.20	Vertical	-44.22	14.52	6.68	-36.38		
LTE BAND 2 3MHz Middle	88.32	Vertical	-74.82	3.35	0.38	-71.85	-13	PASS
	3760.00	Vertical	-47.11	7.76	3.75	-43.10		
	5640.00	Vertical	-46.70	9.84	4.94	-41.80		
	7520.00	Vertical	-42.36	10.21	5.32	-37.47		
	9400.00	Vertical	-41.78	11.36	6.02	-36.44		
	11280.00	Vertical	-45.69	14.52	6.68	-37.85		
LTE BAND 2 3MHz Highest	88.45	Vertical	-74.78	3.35	0.38	-71.81	-13	PASS
	3819.60	Vertical	-46.70	7.79	3.53	-42.44		
	5729.40	Vertical	-41.21	9.88	5.02	-36.35		
	7639.20	Vertical	-37.44	10.25	5.54	-32.73		
	9549.00	Vertical	-44.24	11.38	6.16	-39.02		
	11458.80	Vertical	-46.65	14.56	6.72	-38.81		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
LTE BAND 2 5MHz Lowest	87.54	Vertical	-74.86	3.35	0.38	-71.89	-13	PASS
	3700.40	Vertical	-45.82	7.76	3.75	-41.81		
	5550.60	Vertical	-46.92	9.84	4.94	-42.02		
	7400.80	Vertical	-39.42	10.21	5.32	-34.53		
	9251.00	Vertical	-42.77	11.36	6.02	-37.43		
	11101.20	Vertical	-44.29	14.52	6.68	-36.45		
LTE BAND 2 5MHz Middle	88.76	Vertical	-74.86	3.35	0.38	-71.89	-13	PASS
	3760.00	Vertical	-47.13	7.76	3.75	-43.12		
	5640.00	Vertical	-46.73	9.84	4.94	-41.83		
	7520.00	Vertical	-42.38	10.21	5.32	-37.49		
	9400.00	Vertical	-41.80	11.36	6.02	-36.46		
	11280.00	Vertical	-45.72	14.52	6.68	-37.88		
LTE BAND 2 5MHz Highest	88.56	Vertical	-74.82	3.35	0.38	-71.85	-13	PASS
	3819.60	Vertical	-46.73	7.79	3.53	-42.47		
	5729.40	Vertical	-41.23	9.88	5.02	-36.37		
	7639.20	Vertical	-37.46	10.25	5.54	-32.75		
	9549.00	Vertical	-44.26	11.38	6.16	-39.04		
	11458.80	Vertical	-46.68	14.56	6.72	-38.84		
LTE BAND 2 10MHz Lowest	87.23	Vertical	-74.86	3.35	0.38	-71.89	-13	PASS
	3700.40	Vertical	-46.07	7.76	3.75	-42.06		
	5550.60	Vertical	-46.87	9.84	4.94	-41.97		
	7400.80	Vertical	-39.37	10.21	5.32	-34.48		
	9251.00	Vertical	-42.72	11.36	6.02	-37.38		
	11101.20	Vertical	-44.24	14.52	6.68	-36.40		
LTE BAND 2 10MHz Middle	88.56	Vertical	-74.91	3.35	0.38	-71.94	-13	PASS
	3760.00	Vertical	-47.16	7.76	3.75	-43.15		
	5640.00	Vertical	-46.76	9.84	4.94	-41.86		
	7520.00	Vertical	-42.41	10.21	5.32	-37.52		
	9400.00	Vertical	-41.82	11.36	6.02	-36.48		
	11280.00	Vertical	-45.75	14.52	6.68	-37.91		
LTE BAND 2 10MHz Highest	88.54	Vertical	-74.87	3.35	0.38	-71.90	-13	PASS
	3819.60	Vertical	-46.76	7.79	3.53	-42.50		
	5729.40	Vertical	-41.26	9.88	5.02	-36.40		
	7639.20	Vertical	-37.48	10.25	5.54	-32.77		
	9549.00	Vertical	-44.29	11.38	6.16	-39.07		
	11458.80	Vertical	-46.71	14.56	6.72	-38.87		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
LTE BAND 2 15MHz Lowest	87.41	Vertical	-74.68	3.35	0.38	-71.71	-13	PASS
	3700.40	Vertical	-45.75	7.76	3.75	-41.74		
	5550.60	Vertical	-46.85	9.84	4.94	-41.95		
	7400.80	Vertical	-39.36	10.21	5.32	-34.47		
	9251.00	Vertical	-42.71	11.36	6.02	-37.37		
	11101.20	Vertical	-44.22	14.52	6.68	-36.38		
LTE BAND 2 15MHz Middle	88.14	Vertical	-74.75	3.35	0.38	-71.78	-13	PASS
	3760.00	Vertical	-47.06	7.76	3.75	-43.05		
	5640.00	Vertical	-46.66	9.84	4.94	-41.76		
	7520.00	Vertical	-42.32	10.21	5.32	-37.43		
	9400.00	Vertical	-41.74	11.36	6.02	-36.40		
	11280.00	Vertical	-45.65	14.52	6.68	-37.81		
LTE BAND 2 15MHz Highest	88.62	Vertical	-74.71	3.35	0.38	-71.74	-13	PASS
	3819.60	Vertical	-46.66	7.79	3.53	-42.40		
	5729.40	Vertical	-41.17	9.88	5.02	-36.31		
	7639.20	Vertical	-37.40	10.25	5.54	-32.69		
	9549.00	Vertical	-44.19	11.38	6.16	-38.97		
	11458.80	Vertical	-46.61	14.56	6.72	-38.77		
LTE BAND 2 20MHz Lowest	87.53	Vertical	-74.72	3.35	0.38	-71.75	-13	PASS
	3700.40	Vertical	-45.73	7.76	3.75	-41.72		
	5550.60	Vertical	-46.83	9.84	4.94	-41.93		
	7400.80	Vertical	-39.35	10.21	5.32	-34.46		
	9251.00	Vertical	-42.69	11.36	6.02	-37.35		
	11101.20	Vertical	-44.21	14.52	6.68	-36.37		
LTE BAND 2 20MHz Middle	88.65	Vertical	-74.72	3.35	0.38	-71.75	-13	PASS
	3760.00	Vertical	-47.04	7.76	3.75	-43.03		
	5640.00	Vertical	-46.64	9.84	4.94	-41.74		
	7520.00	Vertical	-42.30	10.21	5.32	-37.41		
	9400.00	Vertical	-41.72	11.36	6.02	-36.38		
	11280.00	Vertical	-45.63	14.52	6.68	-37.79		
LTE BAND 2 20MHz Highest	88.34	Vertical	-74.68	3.35	0.38	-71.71	-13	PASS
	3819.60	Vertical	-46.64	7.79	3.53	-42.38		
	5729.40	Vertical	-41.15	9.88	5.02	-36.29		
	7639.20	Vertical	-37.38	10.25	5.54	-32.67		
	9549.00	Vertical	-44.17	11.38	6.16	-38.95		
	11458.80	Vertical	-46.59	14.56	6.72	-38.75		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
LTE BAND 5 1.4MHz Lowest	87.45	Vertical	-74.79	3.35	0.38	-71.82	-13	PASS
	3700.40	Vertical	-45.78	7.76	3.75	-41.77		
	5550.60	Vertical	-46.88	9.84	4.94	-41.98		
	7400.80	Vertical	-39.38	10.21	5.32	-34.49		
	9251.00	Vertical	-42.73	11.36	6.02	-37.39		
	11101.20	Vertical	-44.25	14.52	6.68	-36.41		
LTE BAND 5 1.4MHz Middle	88.21	Vertical	-74.79	3.35	0.38	-71.82	-13	PASS
	3760.00	Vertical	-47.09	7.76	3.75	-43.08		
	5640.00	Vertical	-46.69	9.84	4.94	-41.79		
	7520.00	Vertical	-42.34	10.21	5.32	-37.45		
	9400.00	Vertical	-41.76	11.36	6.02	-36.42		
	11280.00	Vertical	-45.68	14.52	6.68	-37.84		
LTE BAND 5 1.4MHz Highest	88.77	Vertical	-74.75	3.35	0.38	-71.78	-13	PASS
	3819.60	Vertical	-46.69	7.79	3.53	-42.43		
	5729.40	Vertical	-41.19	9.88	5.02	-36.33		
	7639.20	Vertical	-37.42	10.25	5.54	-32.71		
	9549.00	Vertical	-44.22	11.38	6.16	-39.00		
	11458.80	Vertical	-46.64	14.56	6.72	-38.80		
LTE BAND 5 3MHz Lowest	87.98	Vertical	-74.74	3.35	0.38	-71.77	-13	PASS
	3700.40	Vertical	-45.74	7.76	3.75	-41.73		
	5550.60	Vertical	-46.85	9.84	4.94	-41.95		
	7400.80	Vertical	-39.36	10.21	5.32	-34.47		
	9251.00	Vertical	-42.70	11.36	6.02	-37.36		
	11101.20	Vertical	-44.22	14.52	6.68	-36.38		
LTE BAND 5 3MHz Middle	88.78	Vertical	-74.87	3.35	0.38	-71.90	-13	PASS
	3760.00	Vertical	-47.14	7.76	3.75	-43.13		
	5640.00	Vertical	-46.74	9.84	4.94	-41.84		
	7520.00	Vertical	-42.39	10.21	5.32	-37.50		
	9400.00	Vertical	-41.80	11.36	6.02	-36.46		
	11280.00	Vertical	-45.72	14.52	6.68	-37.88		
LTE BAND 5 3MHz Highest	88.67	Vertical	-74.83	3.35	0.38	-71.86	-13	PASS
	3819.60	Vertical	-46.74	7.79	3.53	-42.48		
	5729.40	Vertical	-41.23	9.88	5.02	-36.37		
	7639.20	Vertical	-37.46	10.25	5.54	-32.75		
	9549.00	Vertical	-44.27	11.38	6.16	-39.05		
	11458.80	Vertical	-46.69	14.56	6.72	-38.85		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
LTE BAND 5 5MHz Lowest	87.66	Vertical	-74.35	3.35	0.38	-71.38	-13	PASS
	3700.40	Vertical	-45.50	7.76	3.75	-41.49		
	5550.60	Vertical	-46.60	9.84	4.94	-41.70		
	7400.80	Vertical	-39.15	10.21	5.32	-34.26		
	9251.00	Vertical	-42.48	11.36	6.02	-37.14		
	11101.20	Vertical	-43.99	14.52	6.68	-36.15		
LTE BAND 5 5MHz Middle	88.32	Vertical	-74.35	3.35	0.38	-71.38	-13	PASS
	3760.00	Vertical	-46.81	7.76	3.75	-42.80		
	5640.00	Vertical	-46.42	9.84	4.94	-41.52		
	7520.00	Vertical	-42.09	10.21	5.32	-37.20		
	9400.00	Vertical	-41.51	11.36	6.02	-36.17		
	11280.00	Vertical	-45.40	14.52	6.68	-37.56		
LTE BAND 5 5MHz Highest	88.32	Vertical	-74.31	3.35	0.38	-71.34	-13	PASS
	3819.60	Vertical	-46.42	7.79	3.53	-42.16		
	5729.40	Vertical	-40.95	9.88	5.02	-36.09		
	7639.20	Vertical	-37.20	10.25	5.54	-32.49		
	9549.00	Vertical	-43.96	11.38	6.16	-38.74		
	11458.80	Vertical	-46.37	14.56	6.72	-38.53		
LTE BAND 5 10MHz Lowest	87.23	Vertical	-74.38	3.35	0.38	-71.41	-13	PASS
	3700.40	Vertical	-45.52	7.76	3.75	-41.51		
	5550.60	Vertical	-46.61	9.84	4.94	-41.71		
	7400.80	Vertical	-39.16	10.21	5.32	-34.27		
	9251.00	Vertical	-42.50	11.36	6.02	-37.16		
	11101.20	Vertical	-44.01	14.52	6.68	-36.17		
LTE BAND 5 10MHz Middle	88.21	Vertical	-74.45	3.35	0.38	-71.48	-13	PASS
	3760.00	Vertical	-46.87	7.76	3.75	-42.86		
	5640.00	Vertical	-46.47	9.84	4.94	-41.57		
	7520.00	Vertical	-42.16	10.21	5.32	-37.27		
	9400.00	Vertical	-41.57	11.36	6.02	-36.23		
	11280.00	Vertical	-45.46	14.52	6.68	-37.62		
LTE BAND 5 10MHz Highest	88.15	Vertical	-74.41	3.35	0.38	-71.44	-13	PASS
	3819.60	Vertical	-46.47	7.79	3.53	-42.21		
	5729.40	Vertical	-41.01	9.88	5.02	-36.15		
	7639.20	Vertical	-37.26	10.25	5.54	-32.55		
	9549.00	Vertical	-44.02	11.38	6.16	-38.80		
	11458.80	Vertical	-46.42	14.56	6.72	-38.58		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
LTE BAND 7 5MHz Lowest	87.89	Vertical	-74.62	3.35	0.38	-71.65	-25	PASS
	5005.00	Vertical	-45.64	7.76	3.75	-41.63		
	7507.50	Vertical	-46.74	9.84	4.94	-41.84		
	10010.00	Vertical	-39.27	10.21	5.32	-34.38		
	12512.50	Vertical	-42.61	11.36	6.02	-37.27		
	15015.00	Vertical	-44.13	14.52	6.68	-36.29		
LTE BAND 7 5MHz Middle	87.87	Vertical	-74.58	3.35	0.38	-71.61	-25	PASS
	5070.00	Vertical	-46.96	7.76	3.75	-42.95		
	7605.00	Vertical	-46.55	9.84	4.94	-41.65		
	10140.00	Vertical	-42.22	10.21	5.32	-37.33		
	12675.00	Vertical	-41.64	11.36	6.02	-36.30		
	15210.00	Vertical	-45.54	14.52	6.68	-37.70		
LTE BAND 7 5MHz Highest	88.87	Vertical	-74.54	3.35	0.38	-71.57	-25	PASS
	5135.00	Vertical	-46.55	7.79	3.53	-42.29		
	7702.50	Vertical	-41.08	9.88	5.02	-36.22		
	10270.00	Vertical	-37.32	10.25	5.54	-32.61		
	12837.50	Vertical	-44.10	11.38	6.16	-38.88		
	15405.00	Vertical	-46.50	14.56	6.72	-38.66		
LTE BAND 7 10MHz Lowest	87.53	Vertical	-73.74	3.35	0.38	-70.77	-25	PASS
	5010.00	Vertical	-45.13	7.76	3.75	-41.12		
	7515.00	Vertical	-46.21	9.84	4.94	-41.31		
	10020.00	Vertical	-38.83	10.21	5.32	-33.94		
	12525.00	Vertical	-42.13	11.36	6.02	-36.79		
	15030.00	Vertical	-43.63	14.52	6.68	-35.79		
LTE BAND 7 10MHz Middle	88.23	Vertical	-74.64	3.35	0.38	-71.67	-25	PASS
	5070.00	Vertical	-46.99	7.76	3.75	-42.98		
	7605.00	Vertical	-46.59	9.84	4.94	-41.69		
	10140.00	Vertical	-42.26	10.21	5.32	-37.37		
	12675.00	Vertical	-41.68	11.36	6.02	-36.34		
	15210.00	Vertical	-45.58	14.52	6.68	-37.74		
LTE BAND 7 10MHz Highest	88.23	Vertical	-74.60	3.35	0.38	-71.63	-25	PASS
	5130.00	Vertical	-46.59	7.79	3.53	-42.33		
	7695.00	Vertical	-41.11	9.88	5.02	-36.25		
	10260.00	Vertical	-37.35	10.25	5.54	-32.64		
	12825.00	Vertical	-44.14	11.38	6.16	-38.92		
	15390.00	Vertical	-46.54	14.56	6.72	-38.70		

Band	Frequency (MHz)	Spurious Emission					Limit (dBm)	Result
		Polarization	S.G. output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	Level (dBm)		
LTE BAND 7 15MHz Lowest	87.12	Vertical	-74.32	3.35	0.38	-71.35	-25	PASS
	5015.00	Vertical	-45.49	7.76	3.75	-41.48		
	7522.50	Vertical	-46.58	9.84	4.94	-41.68		
	10030.00	Vertical	-39.14	10.21	5.32	-34.25		
	12537.50	Vertical	-42.46	11.36	6.02	-37.12		
	15045.00	Vertical	-43.98	14.52	6.68	-36.14		
LTE BAND 7 15MHz Middle	88.87	Vertical	-74.32	3.35	0.38	-71.35	-25	PASS
	5070.00	Vertical	-46.79	7.76	3.75	-42.78		
	7605.00	Vertical	-46.39	9.84	4.94	-41.49		
	10140.00	Vertical	-42.08	10.21	5.32	-37.19		
	12675.00	Vertical	-41.50	11.36	6.02	-36.16		
	15210.00	Vertical	-45.39	14.52	6.68	-37.55		
LTE BAND 7 15MHz Highest	88.29	Vertical	-74.28	3.35	0.38	-71.31	-25	PASS
	5125.00	Vertical	-46.39	7.79	3.53	-42.13		
	7687.50	Vertical	-40.94	9.88	5.02	-36.08		
	10250.00	Vertical	-37.20	10.25	5.54	-32.49		
	12812.50	Vertical	-43.95	11.38	6.16	-38.73		
	15375.00	Vertical	-46.34	14.56	6.72	-38.50		
LTE BAND 7 20MHz Lowest	87.81	Vertical	-74.29	3.35	0.38	-71.32	-25	PASS
	5020.00	Vertical	-45.47	7.76	3.75	-41.46		
	7530.00	Vertical	-46.56	9.84	4.94	-41.66		
	10040.00	Vertical	-39.12	10.21	5.32	-34.23		
	12550.00	Vertical	-42.45	11.36	6.02	-37.11		
	15060.00	Vertical	-43.96	14.52	6.68	-36.12		
LTE BAND 7 20MHz Middle	88.56	Vertical	-74.49	3.35	0.38	-71.52	-25	PASS
	5070.00	Vertical	-46.89	7.76	3.75	-42.88		
	7605.00	Vertical	-46.49	9.84	4.94	-41.59		
	10140.00	Vertical	-42.18	10.21	5.32	-37.29		
	12675.00	Vertical	-41.60	11.36	6.02	-36.26		
	15210.00	Vertical	-45.49	14.52	6.68	-37.65		
LTE BAND 7 20MHz Highest	88.22	Vertical	-74.45	3.35	0.38	-71.48	-25	PASS
	5120.00	Vertical	-46.49	7.79	3.53	-42.23		
	7680.00	Vertical	-41.04	9.88	5.02	-36.18		
	10240.00	Vertical	-37.27	10.25	5.54	-32.56		
	12800.00	Vertical	-44.05	11.38	6.16	-38.83		
	15360.00	Vertical	-46.44	14.56	6.72	-38.60		

6. PHOTOGRAPHS OF TEST SET-UP

Reference to the appendix I for details.

7. PHOTOGRAPHS OF THE EUT

Reference to the appendix II for details.

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