FCC TEST REPORT

Product Name:	Mobile Phone
Trade Mark:	BOLD, BLU
Model No.:	N1
Add. Model No.:	N/A
Report Number:	190510013RFM-1
Test Standards:	FCC 47 CFR Part 22 Subpart H FCC 47 CFR Part 24 Subpart E FCC 47 CFR Part 27 FCC 47 CFR Part 2
FCC ID:	YHLBOLDN1
Test Result:	PASS
Date of Issue:	July 9, 2019

Prepared for:

BLU Products, Inc
10814 NW 33rd St # 100 Doral, FL 33172, USA

Prepared by:

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Date: July 9, 2019

Version

Version No.	Date	Description
V1.0	July 9, 2019	Original

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1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	BLU Products, Inc
Address of Applicant:	10814 NW 33rd St # 100 Doral, FL 33172, USA
Manufacturer:	BLU Products, Inc
Address of Manufacturer:	10814 NW 33rd St # 100 Doral, FL 33172, USA

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	Mobile Phone	
Model No.:	N1	
Add. Model No.:	N/A	
Trade Mark:	BOLD, BLU	
DUT Stage:	Identical Prototype	
EUT Supports Function:	GSM Bands:	GSM850/1900
	UTRA Bands:	Band II/ Band IV/ Band V
	E-UTRA Bands:	FDD Band 2/ Band 4/ Band 5/ Band 7/ Band 12/ Band 13/ Band 17
	2.4 GHz ISM Band:	IEEE 802.11b/g/n
		Bluetooth V4.2
Sample Received Date:	May 10, 2019	
Sample Tested Date:	May 10, 2019 to July 7, 2019	

1.2.2 Description of Accessories

Adapter	
Model No.:	US-KB-2000
Input:	100-240 V~50/60 Hz 0.6 A
Output:	3.6-6 V~3A, 6-9 V~2A, 9-12 V~1.5A

Battery	
Model No.:	C736048350L
Battery Type:	Lithium-ion Rechargeable Battery
Rated Voltage:	3.8 Vdc
Limited Charge Voltage:	4.35 Vdc
Rated Capacity:	3400 mAh

Cable	
Description:	USB Type-C Plug Cable
Cable Type:	Unshielded without ferrite
Length:	1.00 Meter

Earphone	
Cable Type:	Unshielded
Length:	1.20 Meter

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Support Networks:	GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA, LTE	
Type of Uplink Modulation:	GSM/GPRS:	GMSK
	EDGE:	GMSK, 8PSK
	WCDMA	QPSK
	HSDPA	QPSK
	HSUPA:	QPSK
	LTE	QPSK, 16QAM, 64QAM
Frequency Range:	GSM/GPRS/EDGE 850:	824.2-848.8 MHz
	GSM/GPRS/EDGE 1900:	1850.2-1909.8 MHz
	WCDMA Band II:	1852.4-1907.6 MHz
	WCDMA Band IV:	1712.4-1752.6 MHz
	WCDMA Band V:	826.4-846.6 MHz
	LTE	See Note 1
Max RF Output Power:	GSM/GPRS 850:	33.07dBm
	EDGE 850:	27.92dBm
	GSM/GPRS 1900:	29.99dBm
	EDGE 1900:	27.82dBm
	WCDMA Band II:	22.96dBm
	WCDMA Band IV:	23.75dBm
	WCDMA Band V:	22.80dBm
	LTE	See Note 1
Type of Emission:	GSM/GPRS 850:	247KGXW
	EDGE 850:	252KG7W
	GSM/GPRS 1900:	245KGXW
	EDGE 1900:	247KG7W
	WCDMA Band II:	4M16F9W
	WCDMA Band IV:	4M17F9W
	WCDMA Band V:	4M18F9W
	LTE	See Note 1
IEMI:	Radiation: 866757040359257, 866757040359265	
	Conducted: 869899031635142, 869899031635142	
Antenna Type:	Integral Antenna	
Antenna Gain:	GSM 850:	-0.7 dBi
	GSM 1900:	1.1 dBi
	WCDMA Band II:	1.0 dBi
	WCDMA Band IV:	0.8 dBi
	WCDMA Band V:	-0.8 dBi
	LTE Band 2:	1.5 dBi
	LTE Band 4:	1.0 dBi
	LTE Band 5:	0.8 dBi
	LTE Band 7:	-0.8 dBi
	LTE Band 12:	-2.8 dBi
	LTE Band 13:	-2.7 dBi
	LTE Band 17:	-3.1 dBi
Normal Test Voltage:	3.8 Vdc	

Extreme Test Voltage:	3.6 Vdc to 4.4 Vdc
Extreme Test Temperature:	-10 °C to +55 °C

Note 1:

Summary of Results:							
Band	**BW (MHz)**	**Frequency Range (MHz)**	**Max RF Output Power (dBm)**		**Type of Emission**		
			Conducted (Average)	**ERP/EIRP (Average)**	**QPSK**	**16QAM**	**64QAM**
LTE Band 2	1.4	1850.7-1909.3	22.80	24.30	1M10G7D	1M10W7D	1M10D7W
	3	1851.5-1908.5	22.77	24.27	2M69G7D	2M69W7D	2M69D7W
	5	1852.5-1907.5	22.78	24.28	4M47G7D	4M48W7D	4M53D7W
	10	1855.0-1905.0	22.78	24.28	8M93G7D	9M92W7D	9M04D7W
	15	1857.5-1902.5	22.80	24.30	13M4G7D	13M4W7D	13M5D7W
	20	1860.0-1900.0	22.84	24.34	18M2G7D	18M0W7D	18M0D7W
LTE Band 4	1.4	1710.7-1754.3	22.76	23.76	1M09G7W	1M09D7W	1M10D7W
	3	1711.5-1753.5	22.77	23.77	2M68G7W	2M68D7W	2M69D7W
	5	1712.5-1752.5	22.78	23.78	4M47G7W	4M47D7W	4M52D7W
	10	1715-1750	22.76	23.76	8M92G7W	8M92D7W	9M04D7W
	15	1717.5-1747.5	22.73	23.73	13M5G7W	13M5D7W	13M5D7W
	20	1720-1745	22.79	23.79	18M0G7W	18M0D7W	18M0D7W
LTE Band 5	1.4	824.7-848.3	24.03	22.68	1M11G7D	1M11W7D	1M10D7W
	3	825.5-847.5	23.91	22.56	2M71G7D	2M71W7D	2M69D7W
	5	826.5-846.5	23.90	22.55	4M54G7D	4M54W7D	4M53D7W
	10	829-844	23.99	22.64	9M04G7D	9M03W7D	9M03D7W
LTE Band 7	5	2502.5-2567.5	20.19	19.39	4M54G7W	4M54D7W	4M51D7W
	10	2505-2565	20.30	19.50	9M03G7W	9M03D7W	9M01D7W
	15	2507.5-2562.5	20.19	19.39	13M5G7W	13M5D7W	13M5D7W
	20	2510-2560	20.37	19.57	18M0G7W	18M1D7W	18M2D7W
LTE Band 12	1.4	699.7-715.3	23.92	18.97	1M10G7W	1M10D7W	1M10D7W
	3	700.5-714.5	23.69	18.74	2M70G7W	2M70D7W	2M70D7W
	5	701.5-713.5	23.76	18.81	4M55G7W	4M54D7W	4M51D7W
	10	704-711	23.79	18.84	9M03G7W	9M03D7W	9M08D7W
LTE Band 13	5	779.5-784.5	23.66	18.81	4M51G7W	4M51D7W	4M52D7W
	10	782-782	23.54	18.69	8M94G7W	8M94D7W	8M95D7W
LTE Band 17	5	706.5-713.5	23.83	18.58	4M52G7W	4M52D7W	4M51D7W
	10	709-711	23.86	18.61	9M03G7W	9M03D7W	9M05D7W

1.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested independently

1.5 TEST LOCATION

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China 518109
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

1.6 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L9069
The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC/EN 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01
Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories
CAB identifier: CN0032

FCC Accredited Lab.
Designation Number: CN1194
Test Firm Registration Number: 259480

1.7 DEVIATION FROM STANDARDS

None.

1.8 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.10 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Measurement Uncertainty
1	Conducted emission 9KHz-150KHz	±3.8 dB
2	Conducted emission 150KHz-30MHz	±3.4 dB
3	Radiated emission 9KHz-30MHz	±4.9 dB
4	Radiated emission 30MHz-1GHz	±4.7 dB
5	Radiated emission 1GHz-18GHz	±5.1 dB
6	Radiated emission 18GHz-26GHz	±5.2 dB
7	Radiated emission 26GHz-40GHz	±5.2 dB

2. TEST SUMMARY

FCC 47 CFR Part 22 Subpart H Test Cases (GSM 850/WCDMA Band V/LTE Band 5)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 22.913(a)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)(b)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 22.917(a)(b)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 22.355	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 24 Subpart E Test Cases (GSM 1900/WCDMA Band II/LTE Band 2)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 24.232(d)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 24.238(b)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)(b)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 24.238(a)(b)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 24.235	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (WCDMA Band IV/LTE Band 4)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(h)(1)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 13)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(b)(10)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(b)(10)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(c)(2)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(c)(2)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(c)(2)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 12/Band 17)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(g)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(g)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(g)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(g)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 7)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(h)(2)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(h)(2)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(m)(4)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(m)(4)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(m)(4)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	3M Chamber & Accessory Equipment	ETS-LINDGREN	3M	N/A	Dec. 03, 2018	Dec. 03, 2021
☒	Receiver	R&S	ESIB26	100114	Nov. 24, 2018	Nov. 24, 2019
☒	Loop Antenna	ETS-LINDGREN	6502	00202525	Dec. 03, 2018	Dec. 03, 2019
☒	Broadband Antenna	ETS-LINDGREN	3142E	00201566	Dec. 08, 2018	Dec. 08, 2019
☒	6dB Attenuator	Talent	RA6A5-N-18	18103001	Dec. 08, 2018	Dec. 08, 2019
☒	Preamplifier	HP	8447F	2805A02960	Nov. 24, 2018	Nov. 24, 2019
☒	Horn Antenna	ETS-LINDGREN	3117	00164202	Dec. 08, 2018	Dec. 08, 2019
☒	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	Jan. 05, 2019	Jan. 05, 2020
☒	Wideband Radio Communication Tester	R&S	CMW500	116254	Jun. 07, 2019	Jun. 07, 2020
☒	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
☒	Highpass Filter (1.2GHz~18GHz)	Micro-Tronics	HPM50108	G552	Nov. 29, 2018	Nov. 29, 2019
☒	Highpass Filter (3GHz~18GHz)	Micro-Tronics	HPM50117	G005	Nov. 29, 2018	Nov. 29, 2019
☒	Test Software	Audix	e3	Software Version: 9.160333		

RF Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	Receiver	R&S	ESR7	1316.3003K07 -101181-K3	Nov. 24, 2018	Nov. 24, 2019
☒	EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY51440197	Nov. 24, 2018	Nov. 24, 2019
☒	EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY57471561	Nov. 24, 2018	Nov. 24, 2019
☒	Wideband Radio Communication Tester	R&S	CMW500	116254	Jun. 07, 2019	Jun. 07, 2020
☒	DC Source	KIKUSUI	PWR400L	LK003024	Sep. 18, 2018	Sep. 18, 2019
☒	Temp & Humidity chamber	Votisch	VT4002	58566133290 020	Jun. 05, 2018	Jun. 05, 2020

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

4.1.1 Normal or Extreme Test Conditions

Test Environment	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
TN/VN	+15 to +35	3.8	20 to 75
TL/VL	-10	3.6	20 to 75
TH/VL	+55	3.6	20 to 75
TL/VH	-10	4.4	20 to 75
TH/VH	+55	4.4	20 to 75

Remark:

1) The EUT just work in such extreme temperature of -10 °C to +55 °C and the extreme voltage of 3.6 V to 4.4 V, so here the EUT is tested in the temperature of -10 °C to +55 °C and the voltage of 3.6 V to 4.4 V.
2) VN: Normal Voltage; TN: Normal Temperature;
TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature;
VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage.

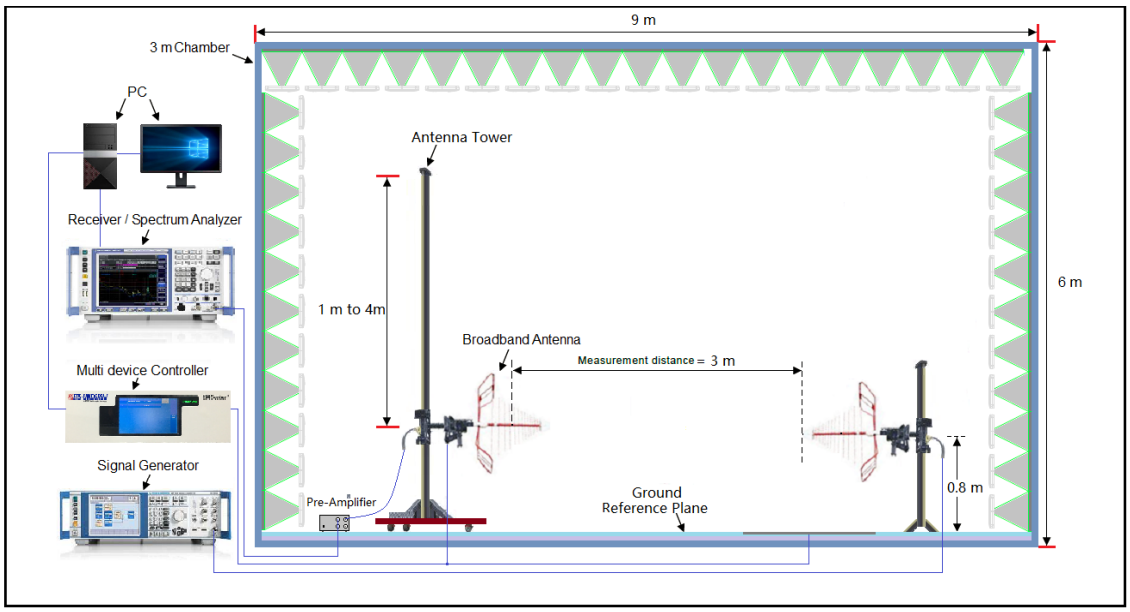
4.1.2 Record of Normal Environment

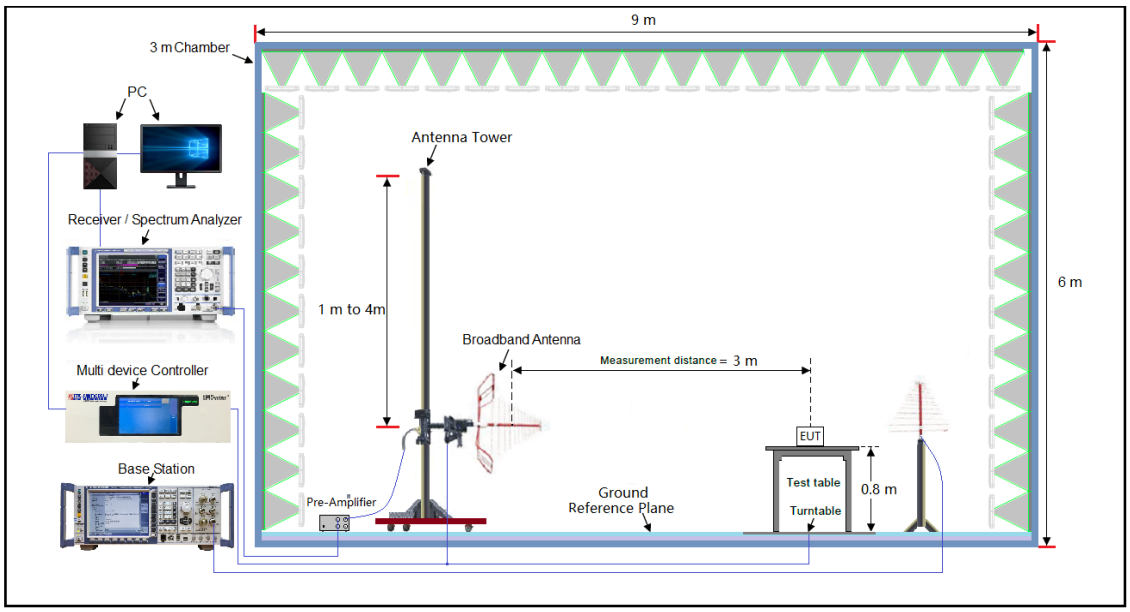
Test Item	Temperature (°C)	Relative Humidity (%)	Pressure (kPa)	Tested by
Equivalent Isotropic Radiated Power (EIRP)	24.3	53	100.01	Gemini Huang
Conducted Output Power				
Peak-to-average ratio				
99%&26dB Bandwidth				
Band Edge at antenna terminals				
Spurious emissions at antenna terminals				
Field strength of spurious radiation	25.2	52	100.02	Fire Huo
Frequency stability				

4.2 TEST SETUP

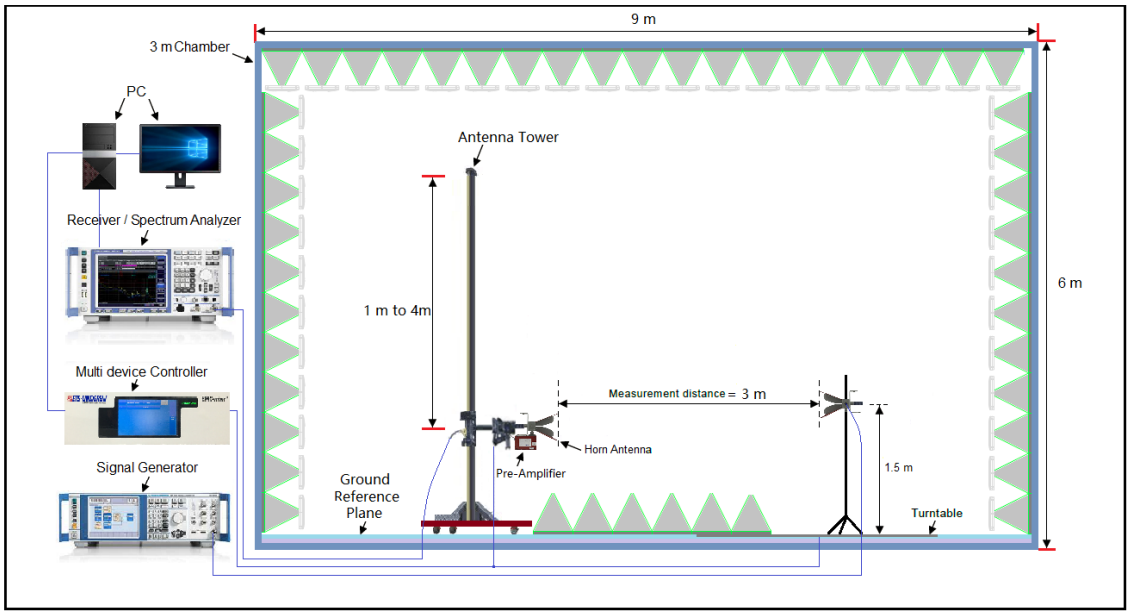
4.2.1 For Radiated Emissions test setup

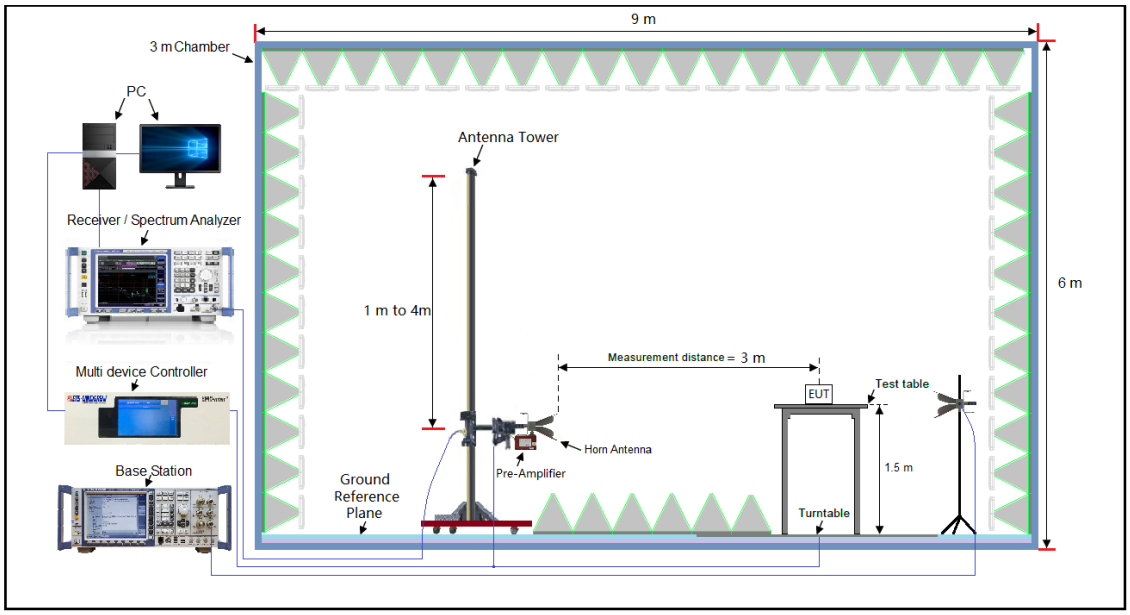
Setup - 1_ERP Test setup



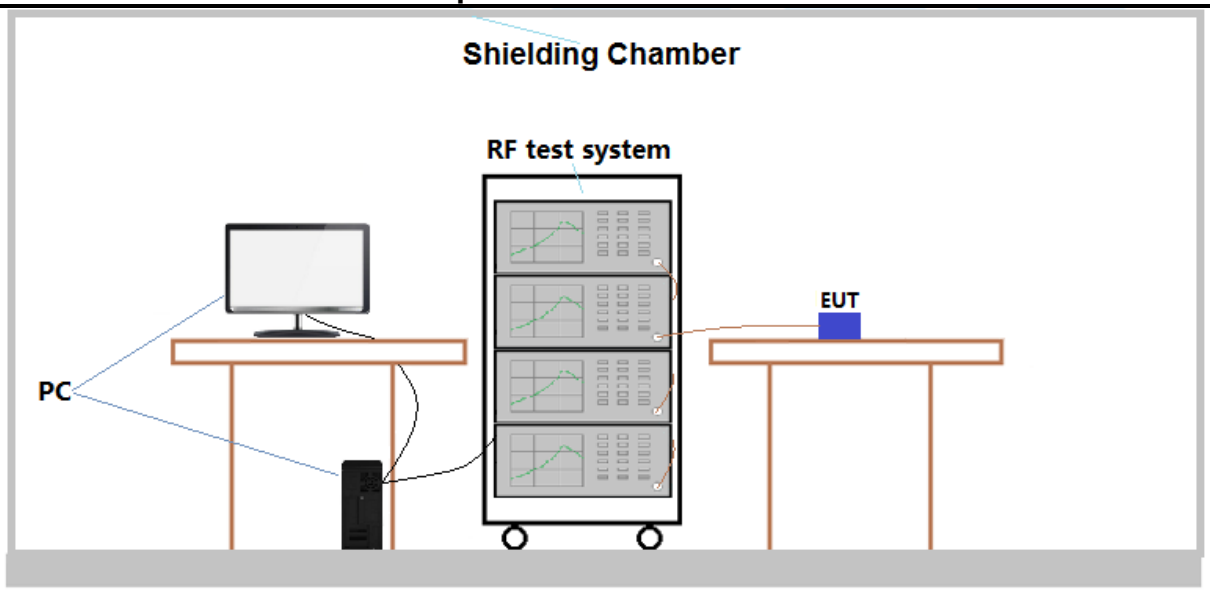


Setup - 2_EIRP Test setup

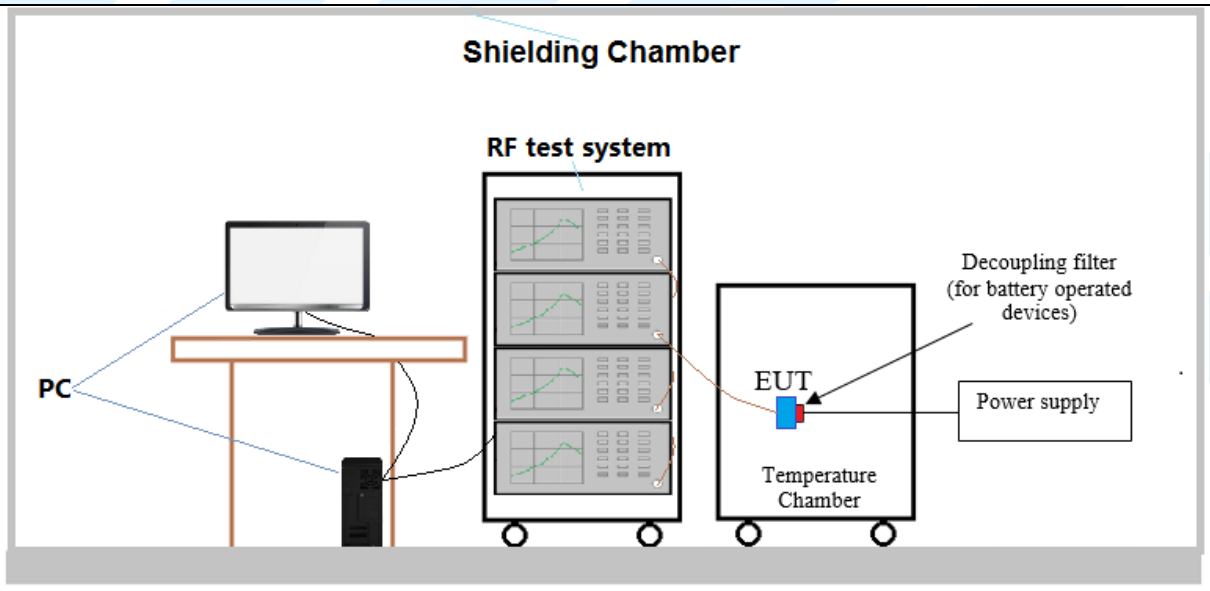




4.2.2 For Conducted RF test setup



Normal Environment



Extreme Environment

4.3 TEST CHANNELS

Band	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS/ EDGE850	Tx (824 MHz ~ 849 MHz)	Channel 128	Channel 190	Channel 251
		824.2 MHz	836.6 MHz	848.8 MHz
WCDMA band V	Tx (824 MHz ~ 849 MHz)	Channel 4132	Channel 4182	Channel 4233
		826.4 MHz	836.4 MHz	846.6 MHz

Band	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS/ EDGE1900	Tx (1850 MHz-1910 MHz)	Channel 512	Channel 661	Channel 810
		1850.2 MHz	1880.0 MHz	1909.8 MHz
WCDMA Band II	Tx (1850 MHz-1910 MHz)	Channel 9262	Channel 9400	Channel 9538
		1852.4 MHz	1880.0 MHz	1907.6 MHz

Band	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
WCDMA Band IV	Tx (1710 MHz-1755 MHz)	Channel 1312	Channel 1412	Channel 1513
		1712.4 MHz	1732.4 MHz	1752.6 MHz

Band	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink (MHz)
LTE Band 2 TX: 1850-1910MHz	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Middle Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900
LTE Band 4 TX:1710-1755MHz	Low Range	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle Range	1.4/3/5/10/ 15/20	20175	1732.5
	High Range	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5

		20	20300	1745
LTE band 5 TX:824–849 MHz	Low Range	1.4	20407	824.7
		3	20415	825.5
		5	20425	826.5
		10	20450	829
	Middle Range	1.4/3/5/10	20525	836.5
	High Range	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844
LTE Band 7 TX:2500-2570MHz	Low Range	5	20775	2502.5
		10	20800	2505
		15	20825	2507.5
		20	20850	2510
	Middle Range	5/10/15/20	21100	2535
	High Range	5	21425	2567.5
		10	21400	2565
		15	21375	2562.5
		20	21350	2560
LTE Band 12 TX:699-716MHz	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Middle Range	1.4/3/5/10	23095	707.5
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5
		10	23130	711
LTE Band 13 TX:777-787MHz	Low Range	5	23205	779.5
		10	23230	782
	Middle Range	5/10	23230	782
	High Range	5	23255	784.5
		10	23230	782
LTE Band 17 TX:704-716MHz	Low Range	5	23755	706.5
		10	23780	709
	Middle Range	5/10	23790	710
	High Range	5	23825	713.5
		10	23800	711

4.4 SYSTEM TEST CONFIGURATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. It was powered by a 3.8Vdc rechargeable Li-on battery. Only the worst case data were recorded in this test report.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X/Y/Z axis, and antenna ports.
The worst case was found when positioned as the table below.

Band	Mode	Antenna Port	Worst-case axis positioning
GSM 850	1TX	Chain 0	Y axis
GSM 1900	1TX	Chain 0	Y axis
WCDMA Band II	1TX	Chain 0	Y axis
WCDMA Band IV	1TX	Chain 0	Y axis
WCDMA Band V	1TX	Chain 0	Y axis
LTE Band 2	1TX	Chain 0	Y axis
LTE Band 4	1TX	Chain 0	Y axis
LTE Band 5	1TX	Chain 0	Y axis
LTE Band 12	1TX	Chain 0	Y axis
LTE Band 13	1TX	Chain 0	Y axis
LTE Band 17	1TX	Chain 0	Y axis

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000MHz. The resolution is 1 MHz or greater for frequencies above 1000MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4.5 PRE-SCAN

Pre-scan under all rate at lowest middle and highest channel, find the transmitter power as below:

GSM 850 Maximum Average Power (dBm)			
Channel	**128**	**190**	**251**
Frequency(MHz)	**824.2 MHz**	**836.6 MHz**	**848.8 MHz**
GSM (GMSK, 1Tx-slot)	32.99	33.04	33.06
GPRS (GMSK, 1Tx-slot)	33.03	33.07	32.48
GPRS (GMSK, 2Tx-slot)	32.14	32.18	32.20
GPRS (GMSK, 3Tx-slot)	30.31	30.34	30.35
GPRS (GMSK, 4Tx-slot)	29.27	29.20	29.19
EDGE (8PSK, 1Tx-slot)	27.92	27.82	27.64
EDGE (8PSK, 2Tx-slot)	27.01	26.90	26.71
EDGE (8PSK, 3Tx-slot)	25.07	24.92	24.69
EDGE (8PSK, 4Tx-slot)	23.93	23.77	23.57

GSM 1900 Maximum Average Power (dBm)			
Channel	**512**	**661**	**810**
Frequency(MHz)	**1850.2 MHz**	**1880.0 MHz**	**1909.8 MHz**
GSM (GMSK, 1Tx-slot)	29.85	29.93	29.95
GPRS (GMSK, 1Tx-slot)	29.90	29.96	29.99
GPRS (GMSK, 2Tx-slot)	27.30	27.52	27.57
GPRS (GMSK, 3Tx-slot)	27.23	27.45	27.41
GPRS (GMSK, 4Tx-slot)	26.14	26.36	26.42
EDGE (8PSK, 1Tx-slot)	27.82	27.42	27.02
EDGE (8PSK, 2Tx-slot)	26.22	25.62	25.11
EDGE (8PSK, 3Tx-slot)	24.10	23.51	22.94
EDGE (8PSK, 4Tx-slot)	22.96	22.31	21.74

WCDMA Band II Maximum Average Power (dBm)			
Channel	**9262**	**9400**	**9538**
Frequency(MHz)	**1852.4 MHz**	**1880.0 MHz**	**1907.6 MHz**
RMC 12.2K	22.93	22.96	22.94
HSDPA Subtest-1	21.90	21.95	21.99
HSDPA Subtest-2	21.87	21.92	21.79
HSDPA Subtest-3	21.36	21.35	21.41
HSDPA Subtest-4	21.33	21.39	21.42
HSUPA Subtest-1	19.91	19.96	19.94
HSUPA Subtest-2	19.87	19.94	19.89
HSUPA Subtest-3	20.91	20.85	20.99
HSUPA Subtest-4	19.49	19.52	19.54
HSUPA Subtest-5	21.43	21.45	21.37

WCDMA Band IV Maximum Average Power (dBm)			
Channel	**1312**	**1412**	**1513**
Frequency(MHz)	**1712.4 MHz**	**1732.4 MHz**	**1752.6 MHz**
RMC 12.2K	23.15	23.67	23.75
HSDPA Subtest-1	22.23	22.69	22.81
HSDPA Subtest-2	22.18	22.64	22.79
HSDPA Subtest-3	21.76	22.17	22.27
HSDPA Subtest-4	21.74	22.18	22.33
HSUPA Subtest-1	21.73	22.66	22.72
HSUPA Subtest-2	22.20	22.68	22.81
HSUPA Subtest-3	21.72	22.29	22.35
HSUPA Subtest-4	22.21	22.68	22.84
HSUPA Subtest-5	21.68	22.18	22.21

WCDMA Band V Maximum Average Power (dBm)			
Channel	**4132**	**4182**	**4233**
Frequency(MHz)	**826.4 MHz**	**836.4 MHz**	**846.6 MHz**
RMC 12.2K	22.59	22.80	22.57
HSDPA Subtest-1	21.57	21.63	21.59
HSDPA Subtest-2	21.61	21.55	21.51
HSDPA Subtest-3	21.02	21.03	21.07
HSDPA Subtest-4	21.17	20.95	21.05
HSUPA Subtest-1	19.77	19.64	19.57
HSUPA Subtest-2	19.63	19.57	19.69
HSUPA Subtest-3	20.65	20.61	20.55
HSUPA Subtest-4	19.32	19.23	19.07
HSUPA Subtest-5	21.22	21.22	21.07

LTE Band 2 Maximum Average Power (dBm)										
Modulation	**RB**		**Test Channel**			**RB**		**Test Channel**		
	Size	**Offset**	**Low**	**Mid**	**High**	**Size**	**Offset**	**Low**	**Mid**	**High**
Channel Bandwidth: 1.4 MHz						**Channel Bandwidth: 3 MHz**				
QPSK	1	0	22.59	22.80	22.57	1	0	22.39	22.42	22.41
	1	2	21.57	21.63	21.59	1	7	22.77	22.74	22.71
	1	5	21.61	21.55	21.51	1	14	22.42	22.38	22.55
	3	0	21.02	21.03	21.07	8	0	21.80	21.50	21.97
	3	1	21.17	20.95	21.05	8	3	21.71	21.60	21.82
	3	3	19.77	19.64	19.57	8	7	21.48	21.80	21.88
	6	0	19.63	19.57	19.69	15	0	21.70	21.66	21.87
16QAM	1	0	21.65	21.84	21.51	1	0	21.74	21.87	21.52
	1	2	21.95	21.92	22.01	1	7	21.99	22.01	21.85
	1	5	21.75	21.57	21.52	1	14	21.66	21.62	21.60
	3	0	21.84	21.65	21.95	8	0	20.81	20.65	21.00
	3	1	21.80	21.70	21.86	8	3	20.66	20.59	20.83
	3	3	21.50	21.65	22.05	8	7	20.53	20.77	21.01
	6	0	20.78	20.68	21.05	15	0	20.66	20.69	20.98
64QAM	1	0	20.86	20.69	20.52	1	0	20.83	20.66	20.59
	1	2	20.82	20.63	20.71	1	7	20.88	20.64	20.74
	1	5	20.71	20.67	20.68	1	14	20.72	20.67	20.55
	3	0	20.93	20.85	20.63	8	0	19.87	19.93	19.60
	3	1	20.80	20.59	20.56	8	3	19.82	19.57	19.57
	3	3	20.61	20.47	20.54	8	7	19.58	19.49	19.46
	6	0	19.80	19.59	19.51	15	0	19.74	19.65	19.66
Channel Bandwidth: 5 MHz						**Channel Bandwidth: 10 MHz**				
QPSK	1	0	22.41	22.43	22.50	1	0	22.55	22.43	22.51
	1	12	22.77	22.74	22.78	1	24	22.62	22.78	22.70
	1	24	22.35	22.46	22.51	1	49	22.37	22.54	22.41
	12	0	21.86	21.42	22.10	25	0	21.76	21.60	21.98
	12	6	21.78	21.63	21.93	25	12	21.65	21.62	21.76
	12	13	21.42	21.65	22.01	25	25	21.60	21.71	21.93
	25	0	21.64	21.67	22.00	50	0	21.64	21.72	21.96
16QAM	1	0	21.65	21.88	21.49	1	0	21.68	21.75	21.49
	1	12	21.84	21.85	21.89	1	24	21.99	21.96	21.99
	1	24	21.76	21.66	21.56	1	49	21.63	21.62	21.62
	12	0	20.79	20.50	21.01	25	0	20.75	20.59	20.89
	12	6	20.70	20.62	20.74	25	12	20.65	20.64	20.87
	12	13	20.57	20.68	20.94	25	25	20.55	20.66	20.94
	25	0	20.72	20.71	21.05	50	0	20.63	20.61	21.02

64QAM	1	0	20.73	20.58	20.53	1	0	20.79	20.69	20.67
	1	12	20.89	20.74	20.80	1	24	20.79	20.76	20.79
	1	24	20.62	20.69	20.74	1	49	20.70	20.56	20.65
	12	0	19.81	19.78	19.79	25	0	19.77	19.76	19.76
	12	6	19.77	19.60	19.66	25	12	19.66	19.55	19.64
	12	13	19.47	19.59	19.46	25	25	19.49	19.41	19.52
	25	0	19.67	19.63	19.67	50	0	19.73	19.56	19.56
Channel Bandwidth: 15 MHz						**Channel Bandwidth: 20 MHz**				
QPSK	1	0	22.48	22.39	22.52	1	0	22.57	22.54	22.57
	1	37	22.75	22.77	22.80	1	50	22.79	22.80	22.84
	1	74	22.37	22.49	22.49	1	99	22.46	22.55	22.57
	37	0	21.71	21.48	22.09	50	0	21.90	21.61	22.10
	37	19	21.74	21.74	21.91	50	25	21.85	21.78	21.94
	37	39	21.52	21.66	22.00	50	50	21.61	21.81	22.06
	75	0	21.74	21.71	22.02	100	0	21.78	21.83	22.07
16QAM	1	0	21.68	21.75	21.52	1	0	21.82	21.92	21.68
	1	37	21.90	22.02	21.95	1	50	22.01	22.05	22.02
	1	74	21.64	21.58	21.57	1	99	21.80	21.71	21.63
	37	0	20.82	20.64	21.05	50	0	20.89	20.65	21.08
	37	19	20.78	20.77	20.90	50	25	20.82	20.77	20.92
	37	39	20.62	20.71	20.90	50	50	20.65	20.79	21.05
	75	0	20.69	20.68	20.97	100	0	20.81	20.76	21.07
64QAM	1	0	20.81	20.70	20.67	1	0	20.87	20.71	20.71
	1	37	20.86	20.62	20.85	1	50	20.95	20.81	20.88
	1	74	20.71	20.60	20.56	1	99	20.76	20.74	20.74
	37	0	19.89	19.91	19.74	50	0	19.95	19.94	19.80
	37	19	19.73	19.52	19.64	50	25	19.85	19.70	19.74
	37	39	19.59	19.49	19.63	50	50	19.65	19.61	19.63
	75	0	19.80	19.53	19.50	100	0	19.82	19.68	19.69

LTE Band 4 Maximum Average Power (dBm)										
Modulation	**RB**		**Test Channel**			**RB**		**Test Channel**		
	Size	**Offset**	**Low**	**Mid**	**High**	**Size**	**Offset**	**Low**	**Mid**	**High**
Channel Bandwidth: 1.4 MHz						**Channel Bandwidth: 3 MHz**				
QPSK	1	0	22.41	22.39	22.38	1	0	22.54	22.42	22.33
	1	2	22.73	22.68	22.49	1	7	22.61	22.77	22.56
	1	5	22.21	22.29	22.08	1	14	22.30	22.24	22.23
	3	0	22.76	22.62	22.57	8	0	21.61	21.67	21.51
	3	1	22.71	22.58	22.61	8	3	21.77	21.66	21.55
	3	3	22.70	22.68	22.46	8	7	21.68	21.55	21.61
	6	0	21.64	21.62	21.50	15	0	21.65	21.65	21.50
16QAM	1	0	21.76	21.70	21.73	1	0	21.70	21.59	21.63
	1	2	21.77	21.90	21.63	1	7	21.90	21.91	21.70
	1	5	21.58	21.49	21.43	1	14	21.68	21.57	21.42
	3	0	21.65	21.60	21.51	8	0	20.67	20.56	20.48
	3	1	21.59	21.60	21.68	8	3	20.73	20.64	20.67
	3	3	21.47	21.57	21.52	8	7	20.56	20.59	20.50
	6	0	20.67	20.60	20.45	15	0	20.55	20.58	20.52
64QAM	1	0	21.02	20.79	20.89	1	0	20.95	20.66	20.83
	1	2	21.14	20.91	20.92	1	7	21.08	20.88	20.96
	1	5	20.72	20.62	20.47	1	14	20.70	20.61	20.59
	3	0	20.81	19.94	19.87	8	0	19.82	19.88	19.74
	3	1	20.98	19.80	19.82	8	3	19.89	19.79	19.82
	3	3	20.88	19.61	19.67	8	7	19.87	19.73	19.79
	6	0	19.91	19.71	19.77	15	0	19.91	19.78	19.68

Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.49	22.42	22.47	1	0	22.46	22.43	22.33
	1	12	22.78	22.75	22.62	1	24	22.76	22.75	22.62
	1	24	22.30	22.32	22.12	1	49	22.32	22.32	22.19
	12	0	21.71	21.60	21.55	25	0	21.59	21.65	21.52
	12	6	21.79	21.66	21.57	25	12	21.75	21.77	21.60
	12	13	21.67	21.65	21.61	25	25	21.64	21.57	21.65
	25	0	21.52	21.62	21.49	50	0	21.67	21.64	21.44
16QAM	1	0	21.72	21.58	21.66	1	0	21.63	21.63	21.68
	1	12	21.86	21.86	21.63	1	24	21.86	21.81	21.65
	1	24	21.66	21.43	21.36	1	49	21.51	21.49	21.35
	12	0	20.61	20.69	20.60	25	0	20.60	20.62	20.51
	12	6	20.66	20.68	20.57	25	12	20.61	20.62	20.53
	12	13	20.62	20.67	20.48	25	25	20.58	20.67	20.46
	25	0	20.64	20.62	20.54	50	0	20.58	20.66	20.48
64QAM	1	0	20.93	20.65	21.01	1	0	20.95	20.66	20.96
	1	12	21.06	21.05	20.93	1	24	20.99	20.89	20.98
	1	24	20.71	20.53	20.63	1	49	20.64	20.53	20.63
	12	0	19.88	19.82	19.90	25	0	19.83	19.92	19.87
	12	6	19.93	19.87	19.84	25	12	19.86	19.87	19.85
	12	13	19.78	19.68	19.75	25	25	19.89	19.78	19.61
	25	0	19.92	19.86	19.64	50	0	19.93	19.81	19.65
Channel Bandwidth: 15 MHz						**Channel Bandwidth: 20 MHz**				
QPSK	1	0	22.54	22.33	22.35	1	0	22.61	22.53	22.47
	1	37	22.62	22.73	22.55	1	50	22.78	22.79	22.69
	1	74	22.20	22.24	22.11	1	99	22.37	22.35	22.27
	37	0	21.60	21.62	21.64	50	0	21.77	21.78	21.70
	37	19	21.75	21.69	21.66	50	25	21.80	21.78	21.74
	37	39	21.61	21.62	21.62	50	50	21.72	21.72	21.66
	75	0	21.53	21.66	21.55	100	0	21.72	21.74	21.63
16QAM	1	0	21.68	21.57	21.66	1	0	21.82	21.76	21.74
	1	37	21.76	21.95	21.64	1	50	21.91	21.98	21.78
	1	74	21.53	21.42	21.34	1	99	21.71	21.58	21.45
	37	0	20.57	20.68	20.49	50	0	20.74	20.76	20.67
	37	19	20.73	20.53	20.65	50	25	20.78	20.73	20.71
	37	39	20.56	20.60	20.42	50	50	20.65	20.69	20.58
	75	0	20.57	20.61	20.48	100	0	20.74	20.72	20.63
64QAM	1	0	20.95	20.65	20.81	1	0	21.03	20.83	21.01
	1	37	21.09	21.05	20.90	1	50	21.15	21.06	21.06
	1	74	20.73	20.47	20.65	1	99	20.84	20.65	20.67
	37	0	19.94	19.78	19.90	50	0	19.98	19.95	19.92
	37	19	19.99	19.80	19.76	50	25	20.03	19.98	19.93
	37	39	19.92	19.66	19.79	50	50	19.94	19.78	19.80
	75	0	19.86	19.76	19.68	100	0	19.94	19.90	19.79

LTE Band 5 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
QPSK	1	0	23.73	23.83	23.66	1	0	23.80	23.85	23.75
	1	2	23.87	23.82	23.85	1	7	23.74	23.84	23.75
	1	5	23.82	23.77	23.74	1	14	23.91	23.71	23.72
	3	0	23.83	24.00	24.03	8	0	22.91	22.86	23.01
	3	1	23.96	23.95	23.82	8	3	22.93	22.84	22.92
	3	3	23.99	23.85	23.96	8	7	22.91	22.86	22.80
	6	0	23.00	22.93	23.02	15	0	22.95	22.94	22.96
16QAM	1	0	23.01	22.93	22.85	1	0	22.85	22.81	22.81
	1	2	23.00	22.97	22.96	1	7	23.10	23.14	23.14
	1	5	22.93	22.88	22.75	1	14	22.96	22.89	22.78
	3	0	22.92	22.92	22.94	8	0	21.80	21.89	22.03
	3	1	22.92	22.86	22.89	8	3	21.85	21.85	21.84
	3	3	22.93	22.96	22.82	8	7	21.90	22.01	21.84
	6	0	21.93	21.90	21.87	15	0	22.00	21.93	21.99
64QAM	1	0	21.93	21.76	21.82	1	0	21.95	21.73	21.86
	1	2	22.05	21.92	21.97	1	7	22.07	21.88	22.04
	1	5	21.84	21.73	21.84	1	14	21.92	21.82	21.84
	3	0	21.84	21.81	21.66	8	0	20.84	20.63	20.81
	3	1	21.87	21.70	21.77	8	3	20.94	20.68	20.68
	3	3	21.83	21.63	21.85	8	7	20.77	20.57	20.85
	6	0	20.91	20.84	20.67	15	0	20.89	20.80	20.85
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	23.70	23.73	23.83	1	0	23.88	23.88	23.83
	1	12	23.81	23.90	23.85	1	24	23.89	23.99	23.95
	1	24	23.89	23.76	23.80	1	49	23.93	23.81	23.85
	12	0	22.97	22.95	22.94	25	0	23.00	23.00	23.11
	12	6	22.86	22.98	22.86	25	12	23.02	23.02	23.02
	12	13	22.97	22.94	22.82	25	25	23.03	23.02	22.96
	25	0	22.85	22.95	23.07	50	0	23.05	23.07	23.09
16QAM	1	0	22.95	22.87	22.78	1	0	23.02	23.01	22.97
	1	12	23.11	23.00	23.13	1	24	23.16	23.17	23.15
	1	24	22.94	22.92	22.86	1	49	22.97	22.98	22.93
	12	0	21.88	21.90	22.00	25	0	21.98	21.98	22.09
	12	6	21.95	21.79	21.95	25	12	22.00	21.98	22.04
	12	13	21.96	21.91	21.89	25	25	22.00	22.02	21.97
	25	0	21.83	21.94	22.00	50	0	22.02	22.01	22.03
64QAM	1	0	21.88	21.84	21.81	1	0	22.02	21.85	21.94
	1	12	21.98	21.90	22.06	1	24	22.12	21.97	22.12
	1	24	21.93	21.75	21.72	1	49	21.98	21.91	21.92
	12	0	20.92	20.72	20.80	25	0	20.95	20.82	20.81
	12	6	20.89	20.68	20.58	25	12	20.95	20.80	20.77
	12	13	20.85	20.70	20.74	25	25	20.91	20.75	20.90
	25	0	20.94	20.89	20.70	50	0	20.96	20.95	20.87

LTE Band 7 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	20.01	19.92	19.74	1	0	20.03	19.82	19.80
	1	12	20.19	20.05	19.73	1	24	20.30	20.04	19.77
	1	24	19.97	19.81	19.54	1	49	19.96	19.88	19.67
	12	0	18.97	19.28	18.87	25	0	19.05	19.30	18.81
	12	6	19.21	19.20	18.96	25	12	19.22	19.11	18.89
	12	13	19.23	18.99	18.60	25	25	19.22	18.98	18.64
	25	0	19.23	19.17	18.66	50	0	19.27	19.03	18.79
16QAM	1	0	19.34	18.97	18.88	1	0	19.38	18.87	18.93
	1	12	19.64	19.27	18.97	1	24	19.53	19.27	18.85
	1	24	19.11	19.01	18.89	1	49	19.08	19.02	18.73
	12	0	18.01	18.24	17.75	25	0	17.99	18.15	17.85
	12	6	18.25	18.14	17.95	25	12	18.35	18.10	17.79
	12	13	18.37	18.01	17.65	25	25	18.36	18.09	17.65
	25	0	18.32	18.11	17.74	50	0	18.26	18.24	17.68
64QAM	1	0	18.38	18.37	18.41	1	0	18.34	18.38	18.30
	1	12	18.61	18.61	18.53	1	24	18.71	18.59	18.46
	1	24	18.38	18.11	18.15	1	49	18.36	18.24	18.21
	12	0	17.28	17.12	16.95	25	0	17.27	17.19	17.06
	12	6	17.40	17.37	17.36	25	12	17.46	17.40	17.37
	12	13	17.47	17.57	17.49	25	25	17.50	17.48	17.43
	25	0	17.42	17.41	17.30	50	0	17.40	17.44	17.23
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	19.97	19.86	19.78	1	0	20.16	19.98	19.81
	1	37	20.19	20.15	19.84	1	50	20.37	20.16	19.93
	1	74	20.01	19.75	19.64	1	99	20.01	19.89	19.73
	37	0	19.04	19.22	18.93	50	0	19.15	19.30	18.95
	37	19	19.34	19.14	18.89	50	25	19.35	19.20	19.01
	37	39	19.37	19.00	18.67	50	50	19.40	19.17	18.67
	75	0	19.17	19.05	18.63	100	0	19.28	19.23	18.81
16QAM	1	0	19.49	18.91	18.92	1	0	19.50	19.01	19.03
	1	37	19.63	19.43	19.02	1	50	19.67	19.44	19.03
	1	74	19.04	19.06	18.78	1	99	19.15	19.12	18.91
	37	0	17.98	18.24	17.90	50	0	18.14	18.28	17.94
	37	19	18.39	18.10	17.90	50	25	18.39	18.16	17.98
	37	39	18.39	18.03	17.47	50	50	18.42	18.19	17.66
	75	0	18.25	18.11	17.71	100	0	18.33	18.26	17.79
64QAM	1	0	18.48	18.41	18.38	1	0	18.54	18.49	18.43
	1	37	18.60	18.63	18.44	1	50	18.74	18.68	18.62
	1	74	18.40	18.14	18.15	1	99	18.43	18.30	18.35
	37	0	17.25	17.05	17.14	50	0	17.31	17.22	17.14
	37	19	17.41	17.45	17.37	50	25	17.57	17.47	17.40
	37	39	17.49	17.42	17.43	50	50	17.61	17.59	17.58
	75	0	17.48	17.38	17.16	100	0	17.50	17.47	17.34

LTE Band 12 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
QPSK	1	0	23.67	23.57	23.46	1	0	23.59	23.62	23.60
	1	2	23.69	23.70	23.65	1	7	23.61	23.69	23.60
	1	5	23.52	23.62	23.68	1	14	23.68	23.56	23.54
	3	0	23.69	23.67	23.56	8	0	22.81	22.69	22.47
	3	1	23.81	23.81	23.67	8	3	22.80	22.65	22.75
	3	3	23.87	23.92	23.59	8	7	22.80	22.92	22.58
	6	0	22.76	22.79	22.53	15	0	22.83	22.84	22.63
16QAM	1	0	22.62	22.54	22.73	1	0	22.69	22.67	22.75
	1	2	22.76	22.87	22.74	1	7	22.76	22.91	22.73
	1	5	22.76	22.56	22.59	1	14	22.73	22.50	22.69
	3	0	22.67	22.61	22.51	8	0	21.70	21.68	21.43
	3	1	22.85	22.64	22.61	8	3	21.76	21.78	21.54
	3	3	22.73	22.92	22.49	8	7	21.73	21.94	21.63
	6	0	21.86	21.85	21.52	15	0	21.87	21.72	21.53
64QAM	1	0	21.86	21.69	21.63	1	0	21.77	21.78	21.59
	1	2	21.82	21.68	21.93	1	7	21.87	21.81	21.86
	1	5	21.79	21.74	21.75	1	14	21.81	21.88	21.66
	3	0	21.88	21.63	21.70	8	0	20.83	20.64	20.65
	3	1	21.85	21.80	21.87	8	3	20.83	20.80	20.89
	3	3	21.96	21.89	21.76	8	7	20.85	20.95	20.63
	6	0	20.76	20.77	20.80	15	0	20.92	20.89	20.66
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	23.60	23.44	23.44	1	0	23.68	23.63	23.64
	1	12	23.60	23.76	23.74	1	24	23.79	23.79	23.78
	1	24	23.71	23.49	23.52	1	49	23.72	23.64	23.69
	12	0	22.87	22.76	22.43	25	0	22.88	22.77	22.60
	12	6	22.79	22.74	22.67	25	12	22.87	22.82	22.76
	12	13	22.77	22.94	22.71	25	25	22.93	22.94	22.75
	25	0	22.84	22.78	22.59	50	0	22.93	22.89	22.67
16QAM	1	0	22.59	22.64	22.61	1	0	22.72	22.72	22.76
	1	12	22.77	22.94	22.62	1	24	22.89	22.96	22.78
	1	24	22.67	22.55	22.51	1	49	22.81	22.65	22.71
	12	0	21.76	21.70	21.58	25	0	21.83	21.77	21.60
	12	6	21.74	21.75	21.71	25	12	21.87	21.80	21.72
	12	13	21.80	21.87	21.48	25	25	21.91	21.95	21.65
	25	0	21.84	21.77	21.48	50	0	21.89	21.86	21.64
64QAM	1	0	21.85	21.84	21.67	1	0	21.89	21.85	21.71
	1	12	21.92	21.84	21.77	1	24	22.00	21.85	21.95
	1	24	21.75	21.71	21.77	1	49	21.90	21.88	21.85
	12	0	20.82	20.69	20.76	25	0	20.92	20.77	20.77
	12	6	20.87	20.80	20.90	25	12	20.95	20.94	20.94
	12	13	20.96	20.92	20.78	25	25	20.98	20.97	20.79
	25	0	20.85	20.86	20.73	50	0	20.96	20.95	20.81

LTE Band 13 Maximum Average Power (dBm)								
Modulation	RB		Test Channel			RB		Test Channel
	Size	Offset	Low	Mid	High	Size	Offset	Low / Mid / High
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz		
QPSK	1	0	23.41	23.48	23.37	1	0	23.51
	1	12	23.66	23.45	23.60	1	24	23.54
	1	24	23.64	23.38	23.30	1	49	23.39
	12	0	22.58	22.66	22.46	25	0	22.66
	12	6	22.65	22.50	22.53	25	12	22.62
	12	13	22.54	22.43	22.45	25	25	22.62
	25	0	22.60	22.52	22.48	50	0	22.67
16QAM	1	0	22.36	22.37	22.50	1	0	22.47
	1	12	22.78	22.66	22.53	1	24	22.66
	1	24	22.42	22.31	22.30	1	49	22.34
	12	0	21.51	21.47	21.37	25	0	21.59
	12	6	21.58	21.49	21.43	25	12	21.57
	12	13	21.49	21.44	21.32	25	25	21.53
	25	0	21.55	21.54	21.40	50	0	21.57
64QAM	1	0	21.49	21.53	21.54	1	0	21.63
	1	12	21.71	21.75	21.81	1	24	21.85
	1	24	21.47	21.39	21.55	1	49	21.59
	12	0	20.53	20.68	20.55	25	0	20.72
	12	6	20.64	20.69	20.60	25	12	20.74
	12	13	20.68	20.73	20.75	25	25	20.76
	25	0	20.76	20.60	20.73	50	0	20.78

LTE Band 17 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	23.54	23.67	23.50	1	0	23.70	23.70	23.66
	1	12	23.83	23.66	23.72	1	24	23.86	23.82	23.80
	1	24	23.57	23.54	23.67	1	49	23.73	23.70	23.78
	12	0	22.50	22.54	22.66	25	0	22.70	22.68	22.68
	12	6	22.79	22.79	22.70	25	12	22.85	22.85	22.84
	12	13	22.87	22.69	22.64	25	25	22.89	22.85	22.81
	25	0	22.64	22.75	22.72	50	0	22.81	22.82	22.75
16QAM	1	0	22.71	22.64	22.61	1	0	22.75	22.81	22.75
	1	12	22.88	22.89	22.73	1	24	22.95	22.93	22.83
	1	24	22.61	22.57	22.65	1	49	22.80	22.75	22.85
	12	0	21.57	21.56	21.66	25	0	21.69	21.66	21.68
	12	6	21.74	21.79	21.76	25	12	21.79	21.81	21.80
	12	13	21.80	21.74	21.63	25	25	21.87	21.79	21.76
	25	0	21.72	21.60	21.73	50	0	21.78	21.75	21.74
64QAM	1	0	21.81	21.81	21.76	1	0	21.97	21.98	21.80
	1	12	21.89	21.96	21.74	1	24	21.93	22.07	21.88
	1	24	21.72	21.84	21.74	1	49	21.83	21.85	21.78
	12	0	20.53	20.67	20.57	25	0	20.67	20.79	20.62
	12	6	20.65	20.91	20.85	25	12	20.72	20.91	20.88
	12	13	20.66	20.72	20.66	25	25	20.85	20.90	20.71
	25	0	20.68	20.76	20.72	50	0	20.72	20.87	20.86

Pre-scan all bandwidth and RB, find worse case mode are chosen to the report, the worse mode applicability and tested channel detail as below:

Band	Radiated	Conducted
GSM/GPRS/ EDGE 850/1900	1) GSM (GMSK, 1Tx-slot) Link 2) GPRS (GMSK, 1Tx-slot) Link 3) EDGE (8PSK, 1Tx-slot) Link	1) GSM (GMSK,1Tx-slot) Link 2) GPRS (GMSK, 1Tx-slot) Link 3) EDGE (8PSK, 1Tx-slot) Link
WCDMA Band II/IVV	RMC 12.2Kbps Link	RMC 12.2Kbps Link

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
ERP/EIRP	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	5	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	13	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
Conducted output power	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	5	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	13	-	-	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
99%&26dB Bandwidth	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	5	☒	☒	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
	13	-	-	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
peak-to-average ratio	2	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☒	☒
	4	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☒	☒

	5	☐	☐	☐	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☒	☒
	7	-	-	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☒	☒
	12	☐	☐	☐	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☒	☒
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	17	-	-	☐	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☒	☒
Band Edge at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
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Spurious emissions at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
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	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
Field strength of spurious radiation	2	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☐	☐	☐	☒	☐
	4	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☐	☐	☐	☒	☐
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	17	-	-	☒	☒	-	-	☒	☐	☐	☒	☐	☐	☐	☒	☐
Frequency stability	2	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	4	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
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	17	-	-	☒	☒	-	-	☒	☐	☐	☐	☐	☒	☐	☒	☐
Remark: The mark "☒" means is chosen for testing; The mark "☐" means is not chosen for testing; The mark "-" means is not supported bandwidth																