



FCC Radio Test Report

FCC ID: ZMOSC228GL

This report concerns: Original Grant

Project No. : 2403G086
Equipment : LTE Module
Brand Name : Fibocom
Test Model : SC228-GL
Series Model : N/A
Applicant : Fibocom Wireless Inc.
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Manufacturer : Fibocom Wireless Inc.
Address : 1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China
Factory : Fibocom Wireless Inc.
Address : 1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China
Date of Receipt : Mar. 14, 2024
Date of Test : Mar. 14, 2024 ~ Jun. 13, 2024
Sep. 29, 2024
Issued Date : Sep. 30, 2024
Report Version : R01
Test Sample : Engineering Sample No.: SSL20240314104 for radiated, SSL20240314102 for conducted.
Standard(s) : 47 CFR FCC Part 27 Subpart L, 47 CFR FCC Part 27 Subpart M
47 CFR FCC Part 27 Subpart N, 47 CFR FCC Part 27 Subpart H
47 CFR FCC Part 27 Subpart F, 47 CFR FCC Part 2

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

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BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025: 2017 requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-3-2403G086	R00	Original Report.	Sep. 23, 2024	Invalid
BTL-FCCP-3-2403G086	R01	Modified the comments.	Sep. 30, 2024	Valid

1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

ANSI C63.26-2015

The following reference test guidance is not within the scope of accreditation of A2LA:

FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 27 Subpart L, M, N, H, F & Part 2			
Standard(s) Section	Test Item	Judgment	Remark
2.1046	Output Power	PASS	-----
27.50(d)(4) 27.50(c)(10) 27.50(b)(10) 27.50(h)(2)	Equivalent Isotropic Radiated Power & Equivalent Radiated Power	PASS	-----
2.1049	Occupied Bandwidth	PASS	-----
2.1051 27.53(h) 27.53(g) 27.53(c)(2)(f) 27.53(m)(4)&(m)(6)	Conducted Spurious Emissions	PASS	-----
2.1053 27.53(h) 27.53(m)(4)&(m)(6)	Radiated Spurious Emissions	PASS	-----
2.1051 27.53(h) 27.53(g) 27.53(c)(2)(f) 27.53(m)(4)&(m)(6)	Band Edge Measurements	PASS	-----
27.50(d)(5)	Peak To Average Ratio	PASS	-----
2.1055 27.54	Frequency Stability	PASS	-----

Note:

(1) "N/A" denotes test is not applicable in this test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of Room 108, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong, People's Republic of China.
BTL's Registration Number for FCC: 747969
BTL's Designation Number for FCC: CN1377

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	U_i (dB)
SSL-CB01	CISPR	9kHz ~ 30MHz	2.74

Test Site	Method	Measurement Frequency Range	Ant. H / V	U_i (dB)
SSL-CB01 (3m)	CISPR	30MHz ~ 200MHz	V	4.70
		30MHz ~ 200MHz	H	3.56
		200MHz ~ 1,000MHz	V	4.92
		200MHz ~ 1,000MHz	H	4.54

Test Site	Method	Measurement Frequency Range	U_i (dB)
SSL-CB01 (3m)	CISPR	1GHz ~ 6GHz	4.56
		6GHz ~ 18GHz	5.14

Test Site	Method	Measurement Frequency Range	U_i (dB)
SSL-CB01 (1m)	CISPR	18 ~ 26.5 GHz	3.30
		26.5 ~ 40 GHz	3.82

B. Other Measurement:

Parameter	Uncertainty
Spectrum Bandwidth	±1.74%
Maximum Output Power	±0.87dB
Frequency Stability	±53.10 Hz
Temperature	±0.48 °C
Humidity	±1.37 %

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
Output Power & ERP	24°C	41%	DC 3.8V	Gavin Ge	Mar. 14, 2024~ Apr. 01, 2024
Occupied Bandwidth	24°C	41%	DC 3.8V	Gavin Ge	Mar. 14, 2024~ Apr. 01, 2024
Conducted Spurious Emissions	24°C	41%	DC 3.8V	Gavin Ge	Mar. 14, 2024~ Apr. 01, 2024 Apr. 11, 2024 Jun. 13, 2024
Radiated Spurious Emissions (9 kHz to 30 MHz)	24°C	54%	DC 3.8V	Hayden Chen	Apr. 03, 2024
Radiated Spurious Emissions (30 MHz to 1000 MHz)	23°C	50%	DC 3.8V	Max Wang	Mar. 22, 2024~ Mar. 31, 2024
Radiated Spurious Emissions (Above 1000 MHz)	23°C	50-55%	DC 3.8V	Max Wang	Mar. 19, 2024~ Mar. 31, 2024
	23°C	45%	DC 3.8V	Nolan Zhang	Sep. 29, 2024
Band Edge	24°C	41%	DC 3.8V	Gavin Ge	Mar. 14, 2024~ Apr. 01, 2024
Peak to Average Ratio	24°C	41%	DC 3.8V	Gavin Ge	Mar. 14, 2024~ Apr. 01, 2024
Frequency Stability	Normal & Extreme	41%	Normal & Extreme	Gavin Ge	Mar. 14, 2024~ Apr. 01, 2024

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	LTE Module		
Brand Name	Fibocom		
Test Model	SC228-GL		
Series Model	N/A		
Model Difference(s)	N/A		
Hardware Version	V1.1		
Software Version	SC228-GL-T16.12.034		
Power Source	DC voltage supplied from external power supply.		
Power Rating	DC 3.5V - 4.35V, Typical: 3.8V		
IMEI No.	Radiated	864712070000□49	
	Conducted	864712070000927	
Modulation Type	WCDMA/HSDPA/HSUPA		UL: QPSK,16QAM DL: QPSK,16QAM,64QAM
	LTE		UL: QPSK,16QAM DL: QPSK,16QAM,64QAM
Max. EIRP (dBm)	WCDMA Band IV		QPSK 26.87
	HSDPA Band IV		QPSK 25.38
	HSUPA Band IV		QPSK 25.53
	LTE	Channel Bandwidth (MHz)	QPSK 16QAM
	Band 4	1.4	26.51 25.73
		3	26.48 25.76
		5	26.60 25.87
		10	26.87 26.09
		15	26.41 25.85
		20	26.43 25.87
	Band 7	5	25.51 24.70
		10	25.51 24.75
		15	25.45 24.63
		20	25.67 24.96
	Band 38	5	24.87 24.17
		10	25.04 24.50
		15	25.56 24.88
		20	25.40 24.75
	Band 41	5	25.46 24.80
		10	25.33 24.69
		15	26.22 25.67
		20	26.22 25.69
	Band 66	1.4	26.07 25.35
		3	26.09 25.41
		5	26.29 25.62
		10	26.45 25.73
		15	23.13 22.47
		20	26.24 25.65

Max. ERP	LTE	Channel Bandwidth (MHz)	QPSK	16QAM
	Band 12	1.4	22.49	21.89
		3	22.51	21.87
		5	22.61	21.91
		10	22.67	21.94
	Band 13	5	22.84	22.25
		10	22.84	21.73
	Band 17	5	22.38	21.78
		10	22.47	21.88
	Band 71	5	22.73	22.04
		10	22.85	22.18
		15	22.37	21.88
		20	22.34	22.03

Note:

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

2. Channel List:

WCDMA Band IV(UL: 1712.4-1752.6MHz, DL: 2112.4-2152.6MHz)				
Test Frequency ID	UARFCN	Frequency of Uplink (MHz)	UARFCN	Frequency of Downlink (MHz)
Low Range	1312	1712.4	1537	2112.4
Mid Range	1413	1732.6	1638	2132.6
High Range	1513	1752.6	1738	2152.6

LTE Band 4(UL: 1710-1755MHz, DL: 2110-2155MHz)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	19957	1710.7	1957	2110.7
	3	19965	1711.5	1965	2111.5
	5	19975	1712.5	1975	2112.5
	10	20000	1715	2000	2115
	15	20025	1717.5	2025	2117.5
	20	20050	1720	2050	2120
Mid Range	1.4/3/5/10/15/20	20175	1732.5	2175	2132.5
High Range	1.4	20393	1754.3	2393	2154.3
	3	20385	1753.5	2385	2153.5
	5	20375	1752.5	2375	2152.5
	10	20350	1750	2350	2150
	15	20325	1747.5	2325	2147.5
	20	20300	1740	2300	2145

LTE Band 7(UL: 2500-2570MHz, DL: 2620-2690MHz)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	5	20775	2502.5	2775	2622.5
	10	20800	2505	2800	2625
	15	20825	2507.5	2825	2627.5
	20	20850	2510	2850	2630
Mid Range	5/10/15/20	21100	2535	3100	2655
High Range	5	21425	2567.5	3425	2687.5
	10	21400	2565	3400	2685
	15	21375	2562.5	3375	2682.5
	20	21350	2560	3350	2680

LTE Band 12(UL: 699-716 MHz, DL: 729-746MHz)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	23017	699.7	5017	729.7
	3	23025	700.5	5025	730.5
	5	23035	701.5	5035	731.5
	10	23060	704.0	5060	734
Mid Range	1.4/3/5/10	23095	707.5	5095	737.5
High Range	1.4	23173	715.3	5173	745.3
	3	23165	714.5	5165	744.5
	5	23155	713.5	5155	743.5
	10	23130	711.0	5130	741

LTE Band 13(UL: 777-787MHz, DL: 746-756MHz)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	5	23205	779.5	5205	748.5
Mid Range	5/10	23230	782.0	5230	751
High Range	5	23255	784.5	5255	753.5

LTE Band 17(UL: 704-716 MHz, DL: 734-746MHz)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	5	23755	706.5	5755	736.5
	10	23780	709	5780	739
Mid Range	5/10	23790	710	5790	740
High Range	5	23825	713.5	5825	743.5
	10	23800	711	5800	741

LTE Band 38(UL/DL: 2570-2620MHz)			
Test Frequency ID	Bandwidth (MHz)	EARFCN	Frequency (UL and DL) (MHz)
Low Range	5	37775	2572.5
	10	37800	2575
	15	37825	2577.5
	20	37850	2580
Mid Range	5/10/15/20	38000	2600
High Range	5	38225	2617.5
	10	38200	2615
	15	38175	2612.5
	20	38150	2610

LTE Band 41(UL/DL: 2496-2690MHz)			
Test Frequency ID	Bandwidth (MHz)	EARFCN	Frequency (UL and DL) (MHz)
Low Range	5	39675	2498.5
	10	39700	2501.0
	15	39725	2503.5
	20	39750	2506.0
Mid Range	5/10/15/20	40620	2593
High Range	5	41565	2687.5
	10	41540	2685.0
	15	41515	2682.5
	20	41490	2680.0

LTE Band 66(UL: 1710-1780MHz, DL: 2110-2200MHz)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	131979	1710.7	66443	2110.7
	3	131987	1711.5	66451	2111.5
	5	131997	1712.5	66461	2112.5
	10	132022	1715	66486	2115
	15	132047	1717.5	66511	2117.5
	20	132072	1720	66536	2120
Mid Range	1.4/3/5/10/15/20	132322	1745	66786	2145
High Range	1.4	132665	1779.3	67129	2179.3
	3	132657	1778.5	67121	2178.5
	5	132647	1777.5	67111	2177.5
	10	132622	1775	67086	2175
	15	132597	1772.5	67061	2172.5
	20	132572	1770	67036	2170

LTE Band 71(UL: 663-698MHz, DL: 617-652MHz)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	5	133147	665.5	68611	619.5
	10	133172	668	68636	622
	15	133197	670.5	68661	624.5
	20	133222	673	68686	627
Mid Range	5/10/15	133297	680.5	68761	634.5
	20	133322	683	68786	637
High Range	5	133447	695.5	68911	649.5
	10	133422	693	68886	647
	15	133397	690.5	68861	644.5
	20	133372	688	68836	642

3. Table for Filed Antenna:

Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)	Note
Shenzhen Bogesi Communication Technology Co., Ltd	GHT-019A	Dipole	SMA Male J	2.98	WCDMA Band IV
				2.98	LTE Band 4
				2.21	LTE Band 7
				1.61	LTE Band 12
				1.83	LTE Band 13
				1.58	LTE Band 17
				1.71	LTE Band 38
				2.21	LTE Band 41
				2.98	LTE Band 66
				1.61	LTE Band 71

Note: The antenna gain is provided by the manufacturer.

3.2 DESCRIPTION OF TEST MODES

Following mode(s) is (were) found to be the worst case(s) and selected for the final test.

WCDMA BAND IV MODE			
Test Item	Available Channel	Tested Channel	Mode
Output Power & EIRP	1312 to 1513	1312, 1413, 1513	WCDMA, HSDPA, HSUPA
Occupied Bandwidth	1312 to 1513	1312, 1413, 1513	WCDMA
Conducted Spurious Emissions	1312 to 1513	1413	WCDMA
Radiated Spurious Emissions	1312 to 1513	1413	WCDMA
Band Edge	1312 to 1513	1312, 1513	WCDMA
Peak To Average Ratio	1312 to 1513	1312, 1413, 1513	WCDMA
Frequency Stability	1312 to 1513	1312, 1513	WCDMA

LTE BAND 4 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & EIRP	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	6RB
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	15RB
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	25RB
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	50RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	75RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emissions	19957 to 20393	20175	1.4MHz	QPSK	1RB
	19975 to 20375	20175	5MHz	QPSK	1RB
	20050 to 20300	20175	20MHz	QPSK	1RB
Radiated Spurious Emissions	19957 to 20393	20175	1.4MHz	QPSK	1RB
	19975 to 20375	20175	5MHz	QPSK	1RB
	20050 to 20300	20175	20MHz	QPSK	1RB
Band Edge	19957 to 20393	19957, 20393	1.4MHz	QPSK	1RB/6RB
	19965 to 20385	19965, 20385	3MHz	QPSK	1RB/15RB
	19975 to 20375	19975, 20375	5MHz	QPSK	1RB/25RB
	20000 to 20350	20000, 20350	10MHz	QPSK	1RB/50RB
	20025 to 20325	20025, 20325	15MHz	QPSK	1RB/75RB
	20050 to 20300	20050, 20300	20MHz	QPSK	1RB/100RB
Peak To Average Ratio	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	1RB
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	1RB
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1RB
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1RB
Frequency Stability	20050 to 20300	20050, 20300	20MHz	QPSK	100RB

LTE BAND 7 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	25RB
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	50RB
	20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM	75RB
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emissions	20775 to 21425	21100	5MHz	QPSK	1RB
	20850 to 21350	21100	20MHz	QPSK	1RB
Radiated Spurious Emissions	20775 to 21425	21100	5MHz	QPSK	1RB
	20850 to 21350	21100	20MHz	QPSK	1RB
Band Edge	20775 to 21425	20775, 21425	5MHz	QPSK	1RB/25RB
	20800 to 21400	20800, 21400	10MHz	QPSK	1RB/50RB
	20825 to 21375	20825, 21375	15MHz	QPSK	1RB/75RB
	20850 to 21350	20850, 21350	20MHz	QPSK	1RB/100RB
Peak To Average Ratio	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	1RB
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	1RB
	20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM	1RB
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	1RB
Frequency Stability	20850 to 21350	20850, 21350	20MHz	QPSK	100RB

LTE BAND 12 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & ERP	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	1RB/25RB/50RB
Frequency Stability	23060 to 23130	23060,23130	10MHz	QPSK	50RB
Occupied Bandwidth	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	6RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	15RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	25RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	50RB
Peak to Average Ratio	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	1RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	1RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	1RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	1RB
Band Edge	23017 to 23173	23017,23173	1.4MHz	QPSK	1RB/6RB
	23025 to 23165	23025,23165	3MHz	QPSK	1RB/15RB
	23035 to 23155	23035,23155	5MHz	QPSK	1RB/25RB
	23060 to 23130	23060,23130	10MHz	QPSK	1RB/50RB
Conducted Emission	23017 to 23173	23095	1.4MHz	QPSK	1RB
	23025 to 23165	23095	3MHz	QPSK	1RB
	23035 to 23155	23095	5MHz	QPSK	1RB
	23060 to 23130	23095	10MHz	QPSK	1RB
Radiated Emission	23017 to 23173	23095	1.4MHz	QPSK	1RB
	23017 to 23173	23095	5MHz	QPSK	1RB
	23060 to 23130	23095	10MHz	QPSK	1RB

LTE BAND 13 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & ERP	23205 to 23255	23205, 23230, 23255	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	23230	23230	10MHz	QPSK, 16QAM	1RB/25RB/50RB
Occupied Bandwidth	23205 to 23255	23205, 23230, 23255	5MHz	QPSK, 16QAM	25RB
	23230	23230	10MHz	QPSK, 16QAM	50RB
Band Edge	23205 to 23255	23205, 23255	5MHz	QPSK	1RB/25RB
	23230	23230	10MHz	QPSK	1RB/50RB
Conducted Emission	23205 to 23255	23230	5MHz	QPSK	1RB
	23230	23230	10MHz	QPSK	1RB
Radiated Emission	23205 to 23255	23230	5MHz	QPSK	1RB
	23230	23230	10MHz	QPSK	1RB
Peak to Average Ratio	23205 to 23255	23205, 23230, 23255	5MHz	QPSK, 16QAM	1RB
	23230	23230	10MHz	QPSK, 16QAM	1RB
Frequency Stability	23230	23230	10MHz	QPSK	50RB

LTE BAND 17 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & ERP	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	1RB/25RB/50RB
Occupied Bandwidth	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	25RB
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	50RB
Conducted Spurious Emissions	23755 to 23825	23790	5MHz	QPSK	1RB
	23780 to 23800	23790	20MHz	QPSK	1RB
Radiated Spurious Emissions	23755 to 23825	23790	5MHz	QPSK	1RB
	23780 to 23800	23790	20MHz	QPSK	1RB
Band Edge	23755 to 23825	23755, 23825	5MHz	QPSK	1RB/25RB
	23780 to 23800	23780, 23800	10MHz	QPSK	1RB/50RB
Peak to Average Ratio	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	1RB
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	1RB
Frequency Stability	23780 to 23800	23780, 23800	10MHz	QPSK	50RB

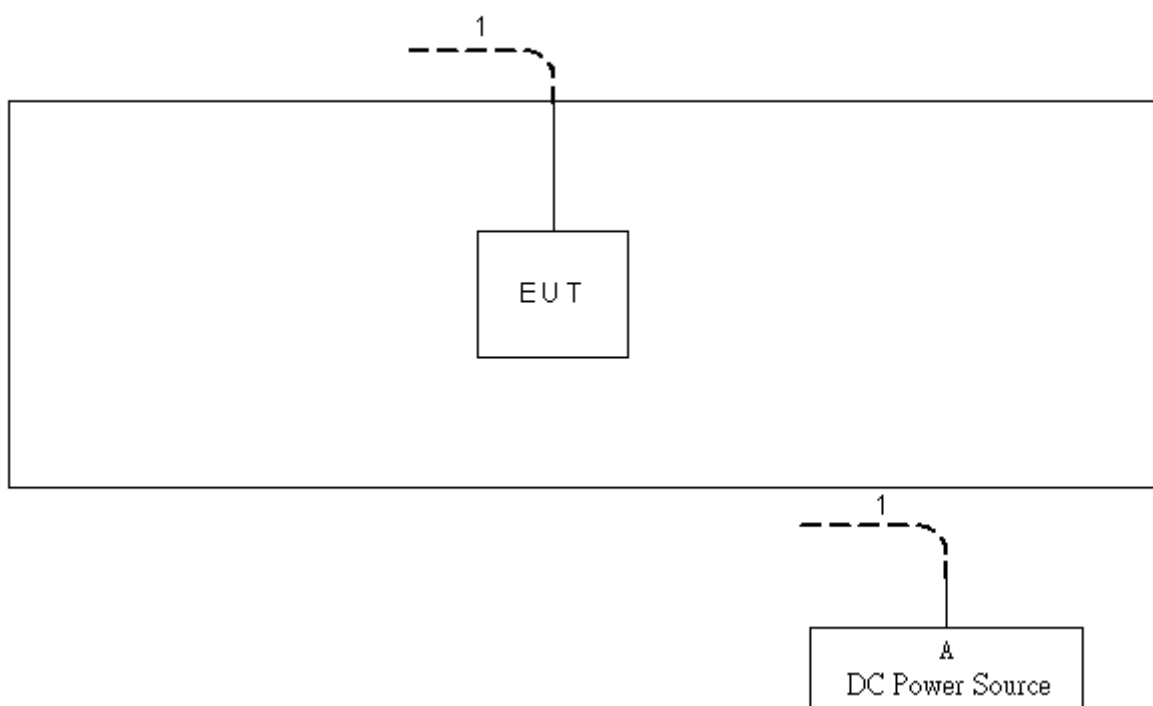
LTE BAND 38 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	37850 to 38150	37850, 38000, 38150	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	25RB
	37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM	50RB
	37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM	75RB
	37850 to 38150	37850, 38000, 38150	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emissions	37850 to 38150	38000	5MHz	QPSK	1RB
	37850 to 38150	38000	20MHz	QPSK	1RB
Radiated Spurious Emissions	37850 to 38150	38000	5MHz	QPSK	1RB
	37850 to 38150	38000	20MHz	QPSK	1RB
Band Edge	37775 to 38225	37775, 38225	5MHz	QPSK	1RB/25RB
	37800 to 38200	37800, 38200	10MHz	QPSK	1RB/50RB
	37825 to 38175	37825, 38175	15MHz	QPSK	1RB/75RB
	37850 to 38150	37850, 38150	20MHz	QPSK	1RB/100RB
Peak to Average Ratio	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	1RB
	37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM	1RB
	37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM	1RB
	37850 to 38150	37850, 38000, 38150	20MHz	QPSK, 16QAM	1RB
Frequency Stability	37850 to 38150	37850, 38150	20MHz	QPSK	100RB

LTE BAND 41 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & EIRP	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM	25RB
	39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM	50RB
	39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM	75RB
	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emissions	39675 to 41565	40620	5MHz	QPSK	1RB
	39750 to 41490	40620	20MHz	QPSK	1RB
Radiated Spurious Emissions	39675 to 41565	40620	5MHz	QPSK	1RB
	39750 to 41490	40620	20MHz	QPSK	1RB
Band Edge	39675 to 41565	39675, 41565	5MHz	QPSK	1RB/25RB
	39700 to 41540	39700, 41540	10MHz	QPSK	1RB/50RB
	39725 to 41515	39725, 41515	15MHz	QPSK	1RB/75RB
	39750 to 41490	39750, 41490	20MHz	QPSK	1RB/100RB
Peak to Average Ratio	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM	1RB
	39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM	1RB
	39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM	1RB
	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM	1RB
Frequency Stability	39750 to 41490	39750, 41490	20MHz	QPSK	100RB

LTE BAND 66 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & EIRP	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM	6RB
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM	15RB
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM	25RB
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM	50RB
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM	75 RB
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emissions	131979 to 132665	132322	1.4MHz	QPSK	1RB
	131997 to 132647	132322	5MHz	QPSK	1RB
	132072 to 132572	132322	20MHz	QPSK	1RB
Radiated Spurious Emissions	131979 to 132665	132322	1.4MHz	QPSK	1RB
	131997 to 132647	132322	5MHz	QPSK	1RB
	132072 to 132572	132322	20MHz	QPSK	1RB
Band Edge	131979 to 132665	131979, 132665	1.4MHz	QPSK	1RB/6RB
	131987 to 132657	131987, 132657	3MHz	QPSK	1RB/15RB
	131997 to 132647	131997, 132647	5MHz	QPSK	1RB/25RB
	132022 to 132622	132022, 132622	10MHz	QPSK	1RB/50RB
	132047 to 132597	132047, 132597	15MHz	QPSK	1RB/75RB
	132072 to 132572	132072, 132572	20MHz	QPSK	1RB/100RB
Peak to Average Ratio	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Frequency Stability	132072 to 132572	132072, 132572	20MHz	QPSK	100RB

LTE BAND 71 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & ERP	133147 to 133447	133147, 133297, 133447	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	133172 to 133422	133172, 133297, 133422	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	133197 to 133397	133197, 133297, 133397	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	133222 to 133372	133222, 133322, 133372	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	133147 to 133447	133147, 133297, 133447	5MHz	QPSK, 16QAM	25RB
	133172 to 133422	133172, 133297, 133422	10MHz	QPSK, 16QAM	50RB
	133197 to 133397	133197, 133297, 133397	15MHz	QPSK, 16QAM	75RB
	133222 to 133372	133222, 133322, 133372	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emissions	133147 to 133447	133297	5MHz	QPSK	1RB
	133172 to 133422	133297	20MHz	QPSK	1RB
Radiated Spurious Emissions	133197 to 133397	133297	5MHz	QPSK	1RB
	133222 to 133372	133322	20MHz	QPSK	1RB
Band Edge	133147 to 133447	133147, 133447	5MHz	QPSK	1RB/25RB
	133172 to 133422	133172, 133422	10MHz	QPSK	1RB/50RB
	133197 to 133397	133197, 133397	15MHz	QPSK	1RB/75RB
	133222 to 133372	133222, 133372	20MHz	QPSK	1RB/100RB
Peak to Average Ratio	133147 to 133447	133147, 133297, 133447	5MHz	QPSK, 16QAM	1RB
	133172 to 133422	133172, 133297, 133422	10MHz	QPSK, 16QAM	1RB
	133197 to 133397	133197, 133297, 133397	15MHz	QPSK, 16QAM	1RB
	133222 to 133372	133222, 133322, 133372	20MHz	QPSK, 16QAM	1RB
Frequency Stability	133222 to 133372	133222, 133372	20MHz	QPSK	100RB

3.3 BLOCK DIGRAM SHOWING THECONFIGURATIONOFSYSTEMTESTED



2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
A	DC Power Source	TRUE-POWER	GPC30300N	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	10m

4. TEST RESULT

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMIT

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695–1710 MHz and 1755–1780 MHz bands are limited to 1 watt EIRP.

Mobile stations of BRS/EBS are operating in the 2496–2690 MHz band limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

Control stations and mobile stations transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands and fixed stations transmitting in the 787–788 MHz and 805–806 MHz bands are limited to 30 watts ERP.

Portable stations (hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

Control and mobile stations in the 698–746 MHz band are limited to 30 watts ERP.

Portable stations (hand-held devices) in the 600 MHz uplink band and the 698–746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

For mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305–2315 MHz and 2350–2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305–2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

4.1.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5 or ANSI C63.26-2015 Section 5.2.

EIRP:

$\text{EIRP} = \text{Output Power} + \text{Antenan gain}$

ERP:

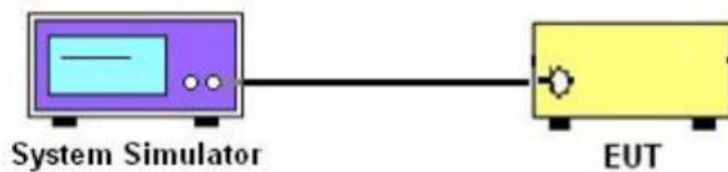
$\text{ERP} = \text{EIRP} - 2.15$

Output Power:

The EUT was set up for the maximum power with WCDMA and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 TEST SETUP LAYOUT

Output Power Measurement



4.1.4 TEST DEVIATION

No deviation.

4.1.5 TEST RESULTS

Please refer to the APPENDIX A.

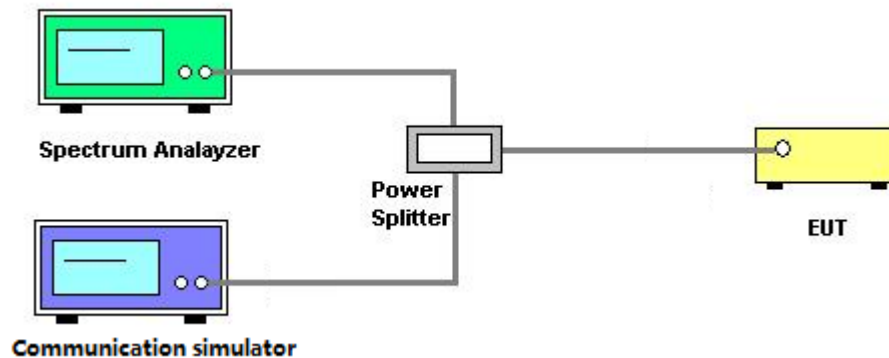
4.2 OCCUPIED BANDWIDTH MEASUREMENT

4.2.1 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 4 or ANSI C63.26-2015 Section 5.4.

1. The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth and 26dB bandwidth.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. $RBW = (1\% \sim 5\%) \cdot EBW$
 $VBW \geq 3 \cdot RBW$
4. Set spectrum analyzer with Peak detector.

4.2.2 TEST SETUP LAYOUT



4.2.3 TEST DEVIATION

No deviation.

4.2.4 TEST RESULTS

Please refer to the APPENDIX B.

4.3 CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

4.3.1 LIMIT

For operations in the 600MHz band and 698 -746 MHz band, 776-788 MHz band, 1710-1755 MHz band:
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. The emission limit equal to -13dBm.

For operations in the 2496 -2690 MHz band:

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 $55 + 10 \log(P)$ dB. The emission limit equal to -25dBm.

For operations in the 2305-2315 MHz and 2350-2360 MHz bands:

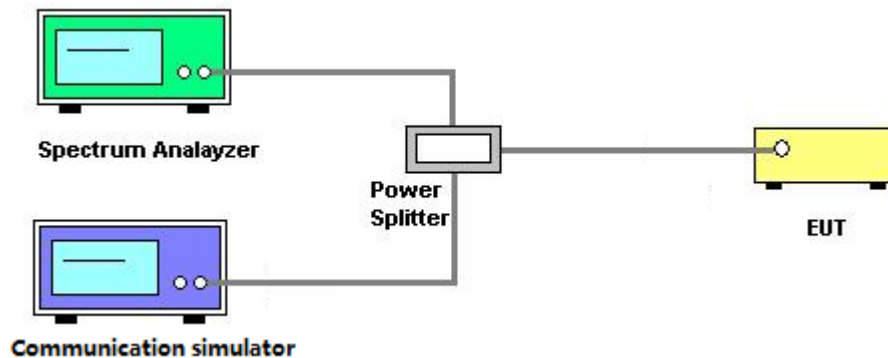
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $70 + 10 \log(P)$ dB. The emission limit equal to -40dBm.

4.3.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6 or ANSI C63.26-2015 Section 5.7.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW>=1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with Peak or RMS detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

4.3.3 TEST SETUP LAYOUT



4.3.4 TEST DEVIATION

No deviation.

4.3.5 TEST RESULTS

Please refer to the APPENDIX C.

4.4 RADIATED SPURIOUS EMISSIONS MEASUREMENT

4.4.1 LIMIT

For band 4,12,13,17,71,66,85, 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. The emission limit equal to -13dBm.

For Band 13, the operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz (-40dBm/MHz) equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW (-50dBm) EIRP for discrete emissions of less than 700 Hz bandwidth.

For Band 7, 38,41, 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 $55 + 10 \log(P)$ dB. The emission limit equal to -25dBm.

For Band 30,40, 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 $70 + 10 \log(P)$ dB. The emission limit equal to -40dBm.

$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$; where D is the measurement distance in meters. The emission limit equal to 82.26dB μ V/m or 70.26dB μ V/m or 55.26dB μ V/m.

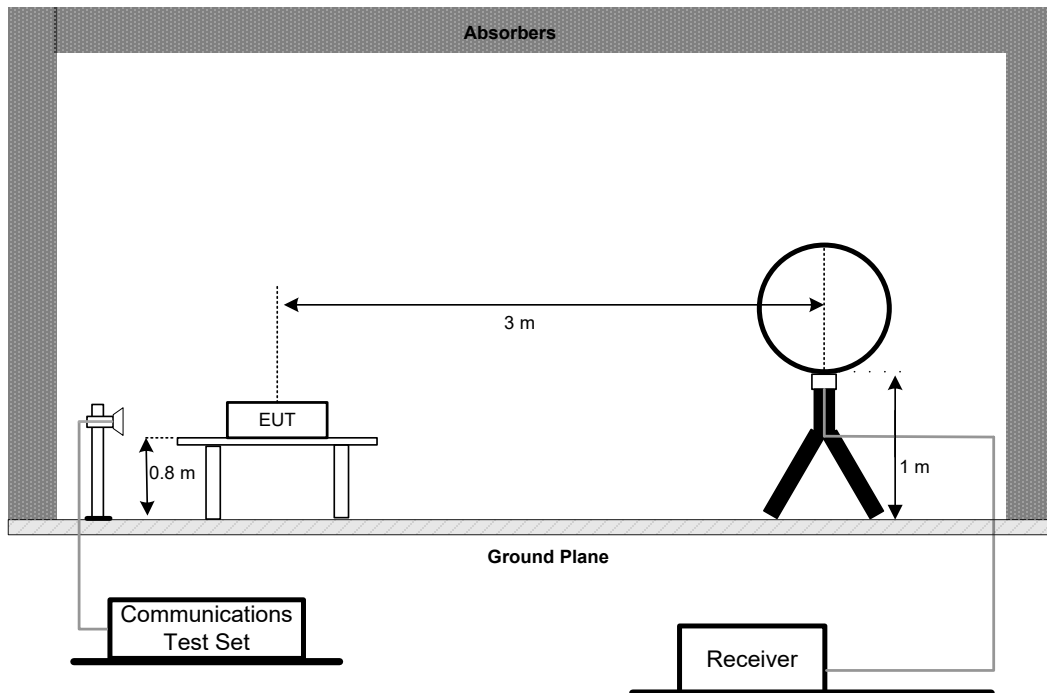
4.4.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.2 or ANSI C63.26-2015 Section 5.5.

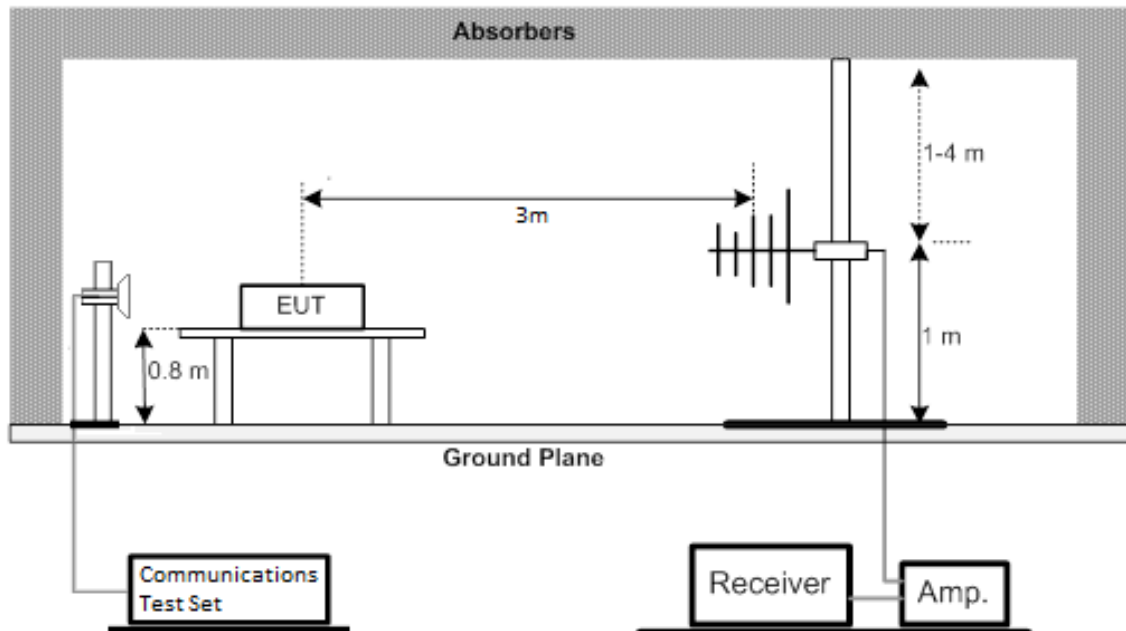
1. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
4. Start the test, rotate the table 360° to find the worst Angle, maintain the worst Angle, raise the antenna to 1-4m to find the worst height, maintain the worst height, then rotate the table to determine the final worst Angle, grab the spectrum diagram.
5. EUT shall be placed in accordance with X,Y,Z as required by Figure 5 in ANSI C63.26. Repeat Step 5 above to find the worst placement. Test all bands according to the worst placement.
6. Then EIRP is then converted to field strength as follows in Equation
7. $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log(D) + 104.8$; where D is the measurement distance (in the far field region) in m. The emission limit equal to 82.26dB μ V/m or 70.26dB μ V/m or 55.26dB μ V/m.

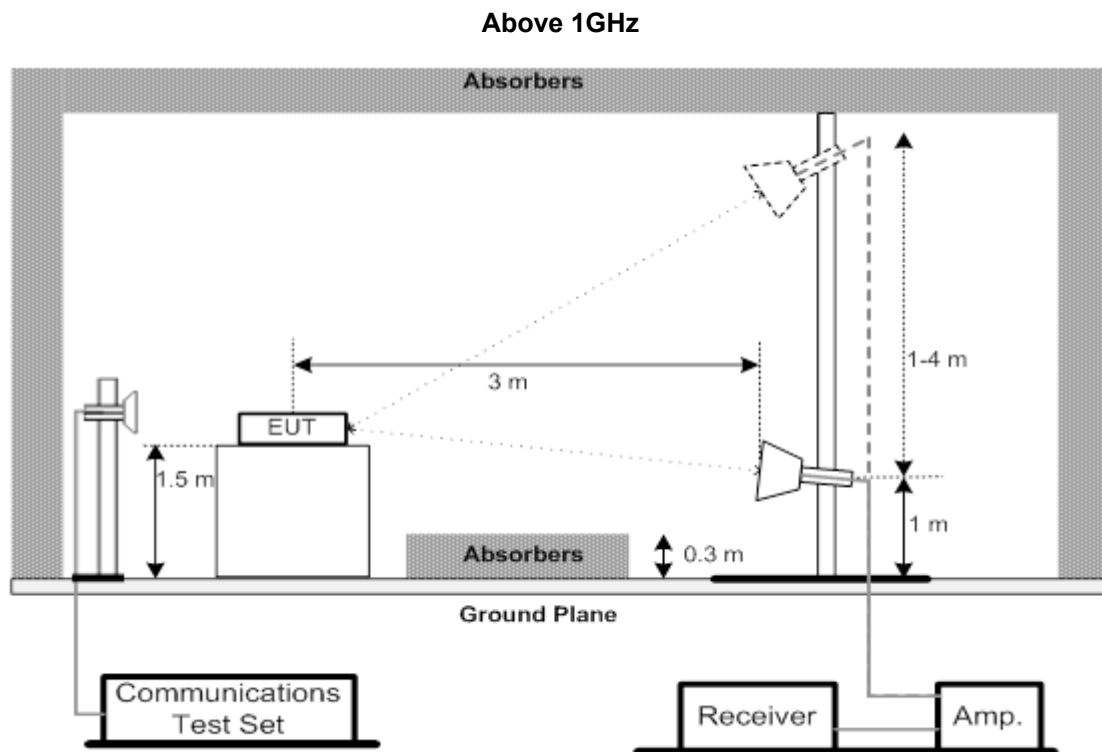
4.4.3 TEST SETUP LAYOUT

Below 30MHz



30MHz to 1GHz





4.4.4 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the APPENDIX D.

4.4.5 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the APPENDIX E.

4.4.6 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the APPENDIX F.

4.5 BAND EDGE MEASUREMENT

4.5.1 LIMIT

For operations in the 776-788 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least $65 + 10 \log_{10} p(\text{watts})$, dB, for mobile and portable equipment.

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(i) By a factor of

not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation,

not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz,

not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz,

and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of

not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz,

$55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz,

$61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz,

$67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz,

and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

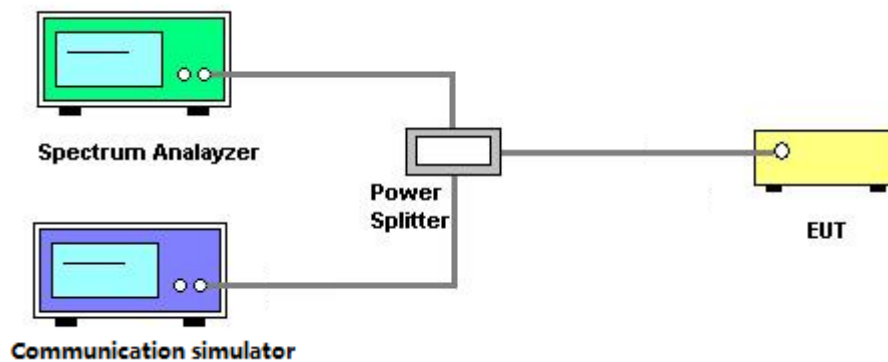
- (i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;
- (ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz;
- (iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

4.5.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6 or ANSI C63.26-2015 Section 5.7.

1. All measurements were done at low and high operational frequency range.
2. Record the max trace plot into the test report.

4.5.3 TEST SETUP LAYOUT



4.5.4 TEST DEVIATION

No deviation.

4.5.5 TEST RESULTS

Please refer to the APPENDIX G.

4.6 PEAK TO AVERAGE RATIO MEASUREMENT

4.6.1 LIMIT

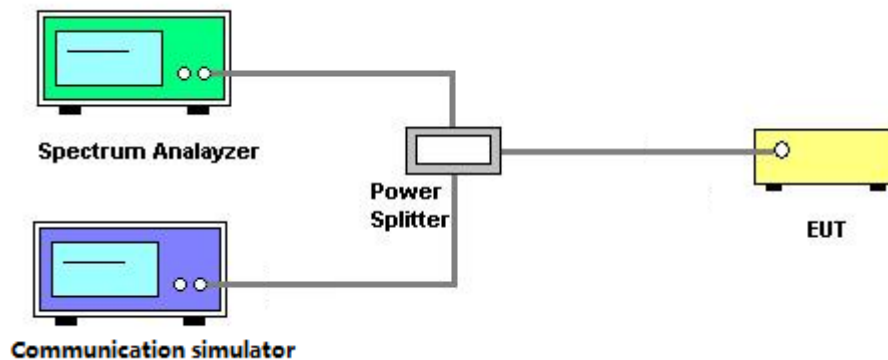
In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.6.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 5.7 or ANSI C63.26-2015 Section 5.2.6.

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

4.6.3 TEST SETUP LAYOUT



4.6.4 TEST DEVIATION

No deviation.

4.6.5 TEST RESULTS

Please refer to the APPENDIX H.

4.7 FREQUENCY STABILITY MEASUREMENT

4.7.1 LIMIT

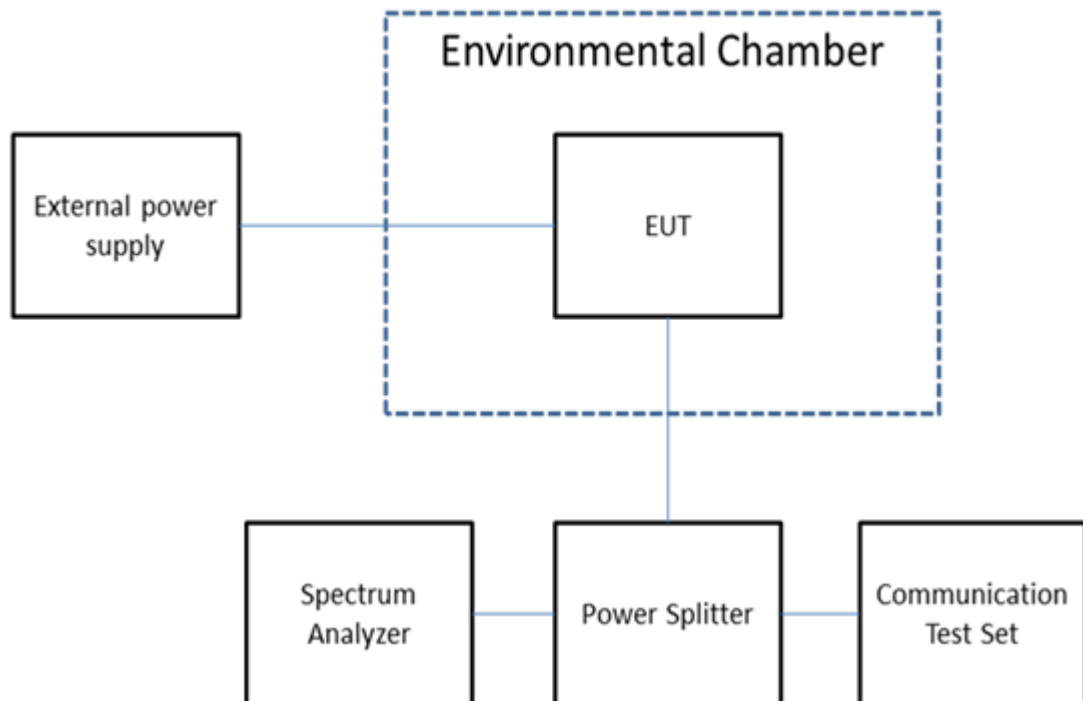
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.7.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 9 or ANSI C63.26-2015 Section 5.6.

1. A reference point shall be established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as f_L and f_H respectively. The worst-case frequency offset determined in the above methods shall be added or subtracted from the values of f_L and f_H and the resulting frequencies must remain within the band.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

4.7.3 TEST SETUP LAYOUT



4.7.4 TEST DEVIATION

No deviation.

4.7.5 TEST RESULTS

Please refer to the APPENDIX I.

4. LIST OF MEASUREMENT EQUIPMENTS

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	Schwarzbeck	FMZB 1513-60	25	Mar. 30, 2025
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024
3	Cable	N/A	RW2350-3.8A-N MBM-1.5M	N/A	Jun. 10, 2024
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chamber room	ETS	9*6*6	N/A	Jul. 11, 2024

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB9168	01269	May 15, 2024
2	Attenuator	EMCI	EMCI-N-6-06	AN-N0697	May 15, 2024
3	MXE EMI Receiver	Keysight	N9038A	MY59050118	Sep. 26, 2024
4	Preamplifier	EMC INSTRUMENT	EMC001330	980825	Jan. 19, 2025
5	Cable	EMC INSTRUMENT	EMCCFD400-N M-NM-2500	N/A	Jun. 08, 2024
6	Cable	EMC INSTRUMENT	EMCCFD400-N M-NM-7000	N/A	Jun. 08, 2024
7	Cable	EMC INSTRUMENT	EMCCFD400-N M-NM-3000	N/A	Jun. 08, 2024
8	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
9	966 Chamber room	Tai He	9*6*6 (NSA&VSWR)	N/A	Jun. 07, 2024

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	MXE EMI Receiver	Keysight	N9038A	MY59050118	Sep. 26, 2024
2	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
3	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980739	Jan. 19, 2025
4	Cable	EMC INSTRUMENT	EMC104-SM-SM-1 0000	N/A	Jun. 08, 2024
5	Cable	EMC INSTRUMENT	EMC104-SM-SM-3 000	N/A	Jun. 08, 2024
6	Cable	EMC INSTRUMENT	EMC104-SM-SM-8 00	N/A	Jun. 08, 2024
7	Double Ridged Broadband Horn Antenna	RF SPIN	DRH18-E	210106A18E	Jul. 04, 2024
8	Preamplifier	EMC INSTRUMENT	EMC184045SE	980793	Jan. 19, 2025
9	Cable	EMC INSTRUMENT	EMC101G-KM-KM- 800	N/A	Aug. 13, 2024
10	Cable	EMC INSTRUMENT	EMC101G-KM-KM- 6000	N/A	Aug. 13, 2024
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	01046	Jul. 05, 2024
12	Band Reject Filter	COM-MW	ZHPF6-C3000-180 00-174	7213126	Jul. 07, 2024
13	Band Reject Filter	COM-MW	ZHPF6-M6500-180 00-547	7213124	Jul. 07, 2024
14	Attenuator	Talent Microwave	ATT-18G2W-10	N/A	N/A
15	966 Chamber room	Tai He	9*6*6 (NSA&VSWR)	N/A	Jun. 07, 2024

Radiated Emissions - Above 1 GHz (Test Date: Sep. 29, 2024)					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Cable	EMC INSTRUMENT	EMC104-35M-35M- 4000	230607	Aug. 13, 2025
2	Cable	EMC INSTRUMENT	EMC104-35M-35M- 1000	230608	Aug. 13, 2025
3	MXE EMI Receiver	Keysight	N9038A	MY59050118	Jun. 28, 2025
4	Preamplifier	EMC INSTRUMENT	EMC184045SE	980793	Jan. 19, 2025
5	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	01046	Jul. 22, 2025
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Wideband Radio Communication Tester	R&S	CWM 500	104462	Jun. 28, 2025

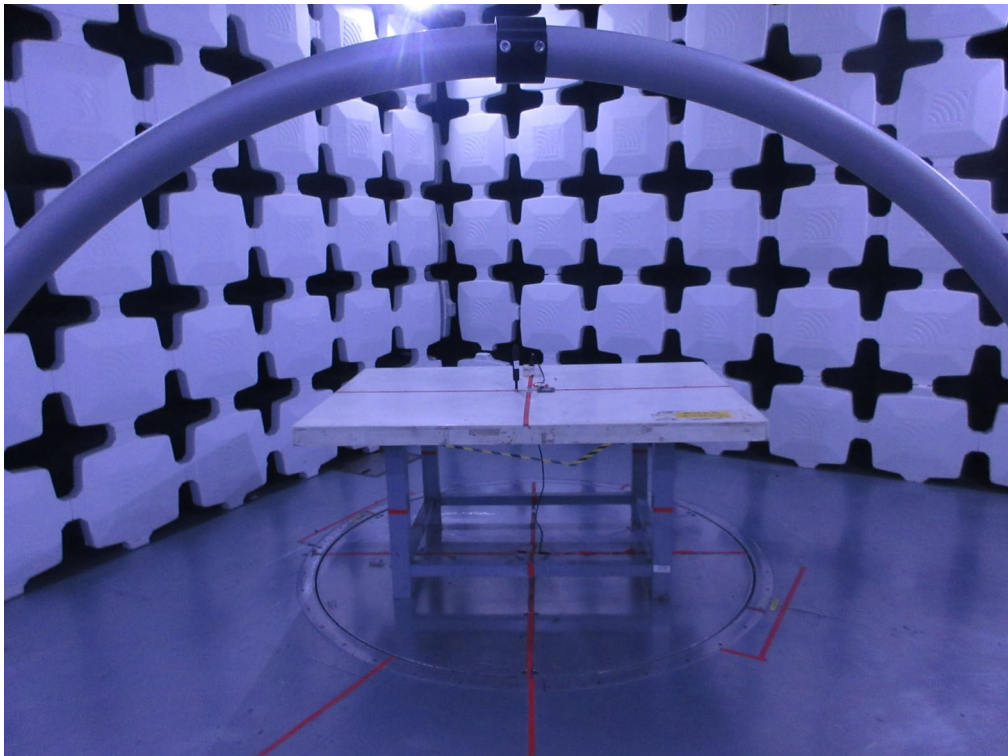
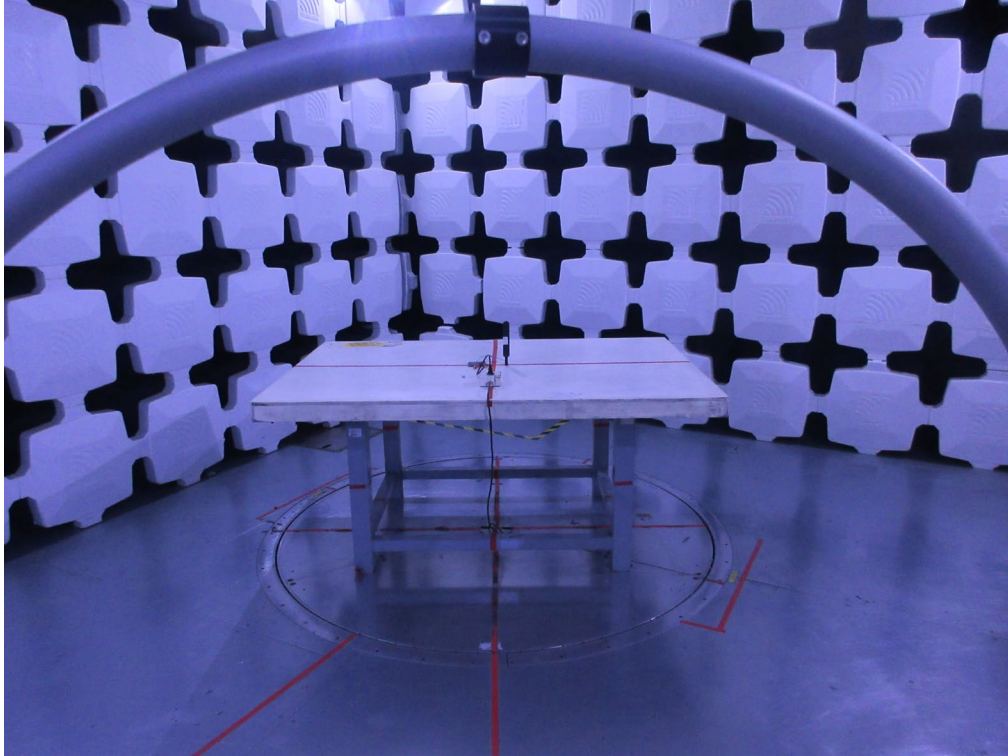
Conducted Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wideband Radio Communication Tester	R&S	CWM 500	131463	Jan. 19, 2025
2	Signal Analyzer	R&S	FSV 40	100948	Jul. 07, 2024
3	Temperature Chamber	ESPEC	SU-242	93018786	Jul. 07, 2024
4	MXA Signal Analyzer	Agilent Technologies	N9020A	MY49100060	Jul. 07, 2024
5	DC Source meter	Iteck	IT6154	00610412676820100 1	Jul. 08, 2024

Remark: "N/A" denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

5. EUT TEST PHOTO

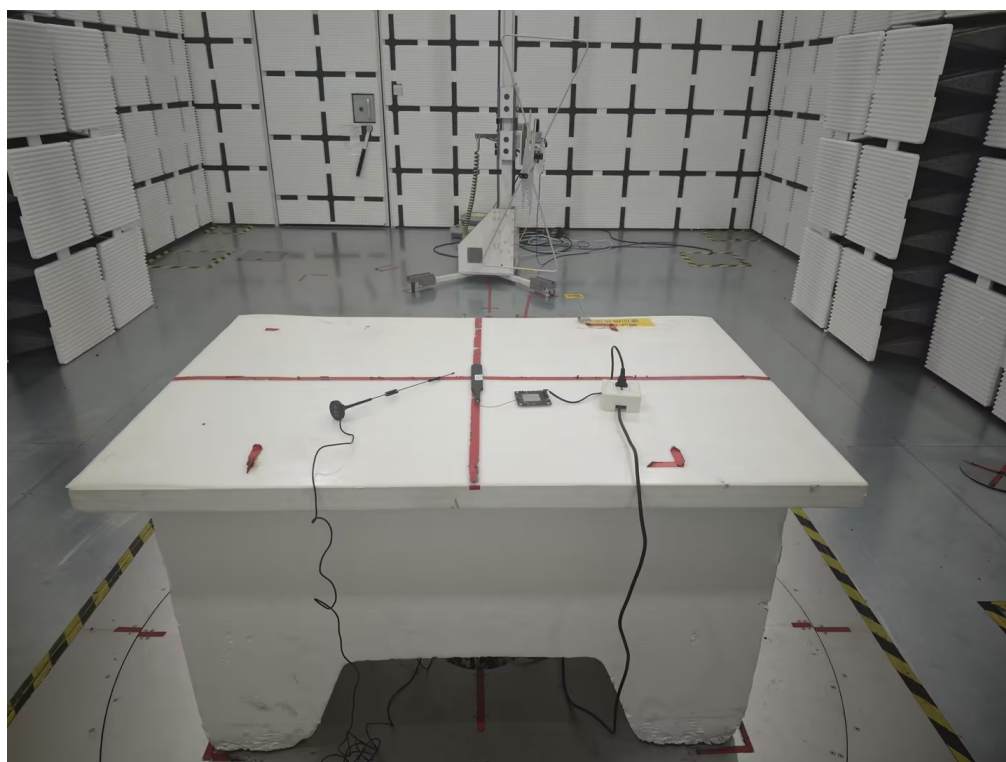
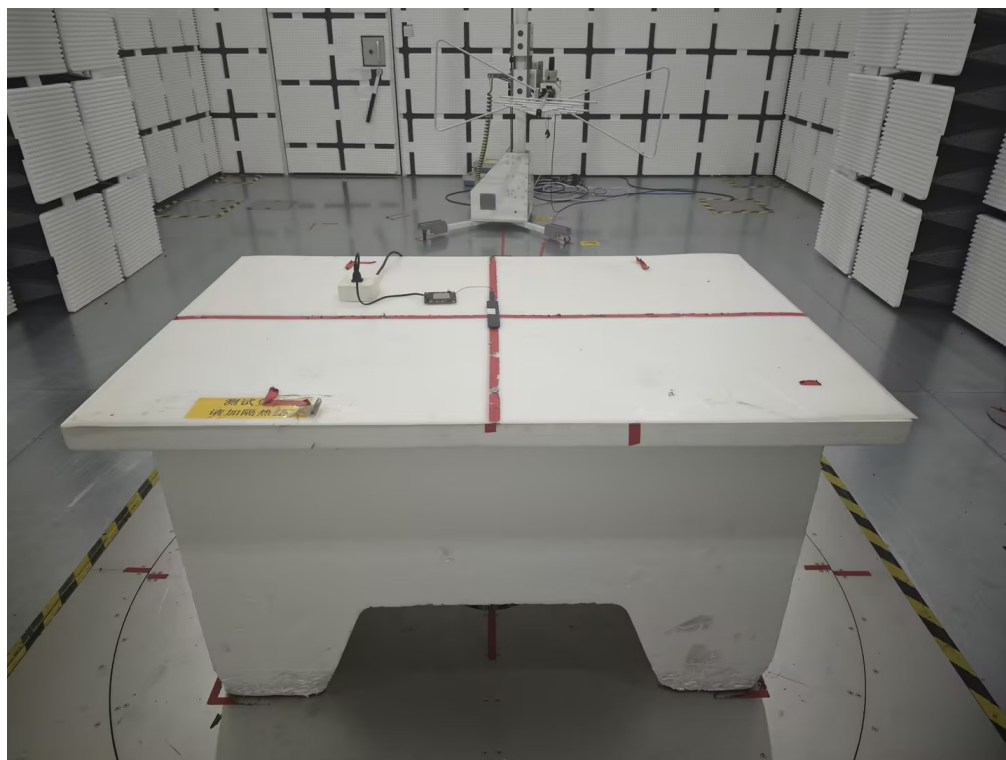
Radiated Emissions Test Photos

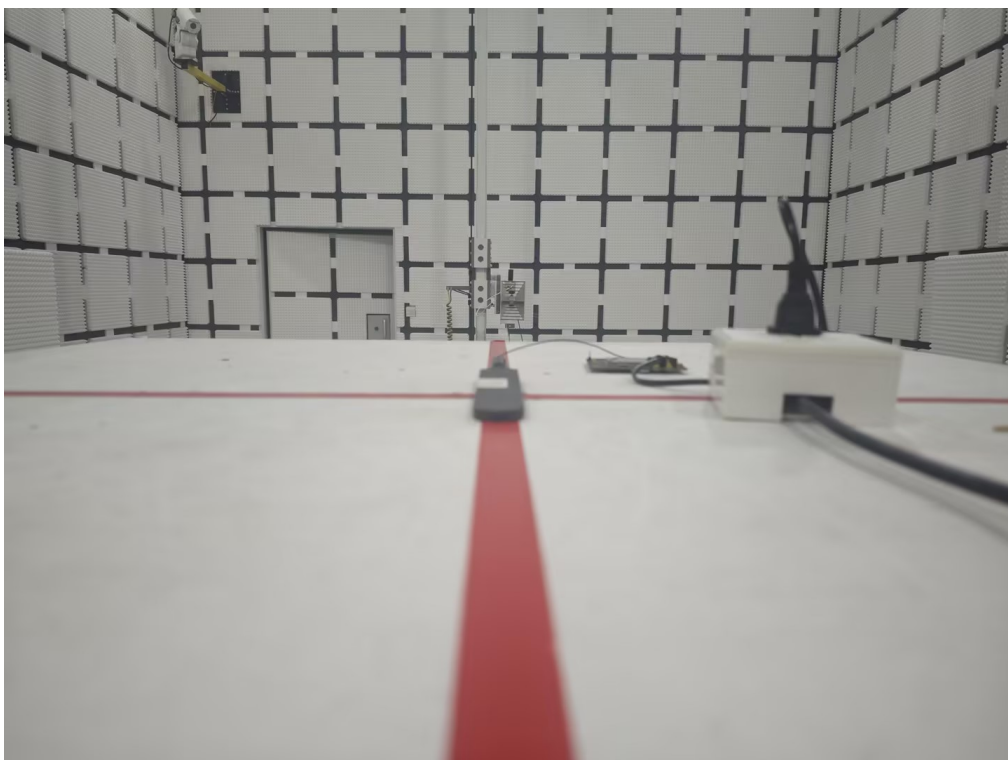
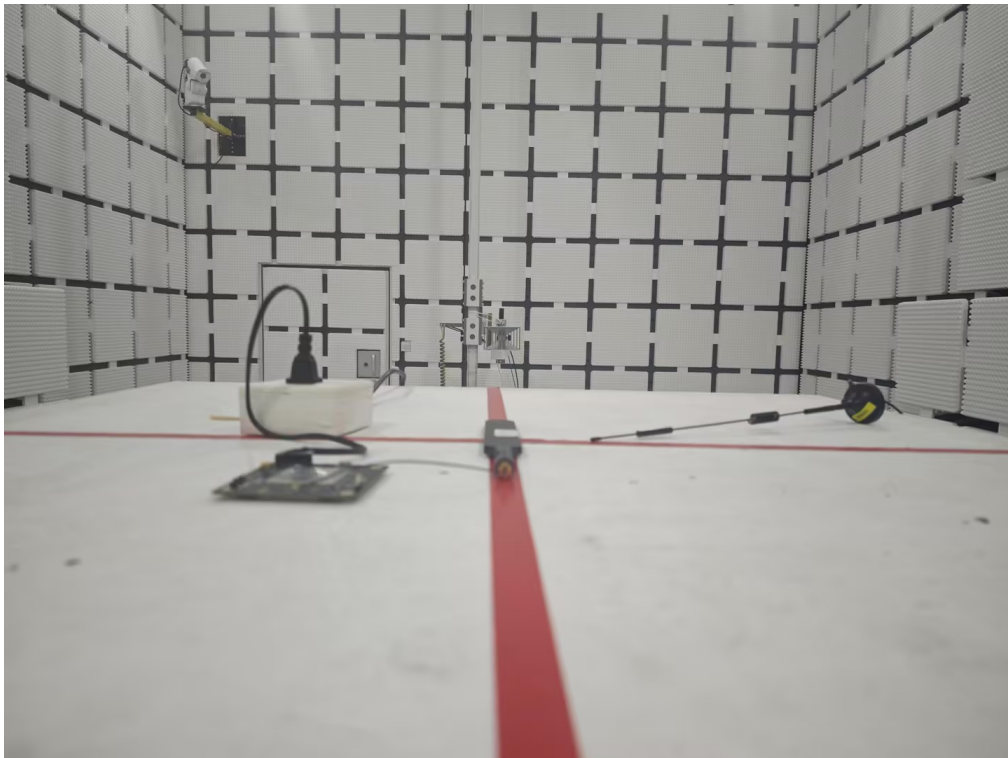
9 kHz to 30 MHz



Radiated Emissions Test Photos

30 MHz to 1 GHz



Radiated Emissions Test Photos**Above 1 GHz**

APPENDIX A - OUTPUT POWER

Output Power(dBm)

Modulation	Band	WCDMA Band IV		
	Tx Channel	1312CH	1413CH	1513CH
	Frequency	1712.4MHz	1732.6MHz	1752.6MHz
QPSK	RMC 12.2K	23.19	23.77	23.89
	RMC 64K	23.1	23.67	23.81
	RMC 144K	23.05	23.62	23.76
	RMC 384K	23.04	23.63	23.77
	HSDPA Subtest-1	21.82	22.28	22.35
	HSDPA Subtest-2	21.81	22.32	22.4
	HSDPA Subtest-3	21.28	21.83	21.9
	HSDPA Subtest-4	21.27	21.82	21.89
	HSUPA Subtest-1	21.67	22.3	22.45
	HSUPA Subtest-2	19.52	20.24	20.36
	HSUPA Subtest-3	20.6	21.29	21.42
	HSUPA Subtest-4	19.49	20.21	20.32
	HSUPA Subtest-5	21.75	22.44	22.55

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19957CH	20175CH	20393CH
				1710.7MHz	1732.5MHz	1754.3MHz
4 / 1.4MHz	QPSK	1	0	23.31	23.34	23.46
		1	2	23.37	23.32	23.53
		1	5	23.25	23.39	23.38
		3	0	23.32	23.22	23.36
		3	1	23.37	23.27	23.46
		3	2	23.21	23.33	23.41
		6	0	22.21	22.32	22.39
	16QAM	1	0	22.69	22.29	22.50
		1	2	22.75	22.23	22.54
		1	5	22.63	22.38	22.48
		3	0	22.48	22.41	22.46
		3	1	22.51	22.49	22.48
		3	2	22.37	22.48	22.46
		6	0	21.20	21.54	21.54

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19965CH	20175CH	20385CH
				1711.5MHz	1732.5MHz	1753.5MHz
4 / 3MHz	QPSK	1	0	23.26	23.48	23.47
		1	7	23.26	23.41	23.50
		1	14	23.28	23.42	23.44
		8	0	22.32	22.39	22.40
		8	4	22.27	22.39	22.48
		8	7	22.26	22.44	22.45
		15	0	22.22	22.45	22.44
	16QAM	1	0	22.26	22.72	22.51
		1	7	22.19	22.78	22.51
		1	14	22.22	22.69	22.40
		8	0	21.46	21.41	21.47
		8	4	21.39	21.40	21.54
		8	7	21.37	21.44	21.49
		15	0	21.29	21.41	21.46

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19975CH	20175CH	20375CH
				1712.5MHz	1732.5MHz	1752.5MHz
4 / 5MHz	QPSK	1	0	23.55	23.62	23.56
		1	13	23.50	23.58	23.50
		1	24	23.49	23.54	23.53
		12	0	22.38	22.43	22.51
		12	6	22.44	22.40	22.44
		12	11	22.33	22.43	22.41
		25	0	22.41	22.50	22.43
	16QAM	1	0	22.56	22.89	22.56
		1	13	22.52	22.85	22.50
		1	24	22.51	22.75	22.55
		12	0	21.39	21.52	21.56
		12	6	21.41	21.46	21.50
		12	11	21.37	21.51	21.45
		25	0	21.34	21.49	21.38

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20000CH	20175CH	20350CH
				1715MHz	1732.5MHz	1750MHz
4 / 10MHz	QPSK	1	0	23.56	23.68	23.58
		1	25	23.31	23.49	23.34
		1	49	23.78	23.89	23.87
		25	0	22.43	22.36	22.40
		25	13	22.36	22.51	22.39
		25	25	22.50	22.55	22.55
		50	0	22.43	22.53	22.41
	16QAM	1	0	22.47	22.99	22.62
		1	25	22.18	22.70	22.34
		1	49	22.61	23.11	22.84
		25	0	21.34	21.31	21.55
		25	13	21.31	21.41	21.51
		25	25	21.41	21.40	21.59
		50	0	21.31	21.47	21.46

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20025CH	20175CH	20325CH
				1717.5MHz	1732.5MHz	1747.5MHz
4 / 15MHz	QPSK	1	0	23.13	23.25	23.19
		1	38	23.22	23.43	23.38
		1	74	23.09	23.29	23.24
		36	0	22.22	22.30	22.35
		36	18	22.37	22.36	22.34
		36	39	22.26	22.37	22.35
		75	0	22.17	22.38	22.30
	16QAM	1	0	22.12	22.65	22.67
		1	38	22.19	22.81	22.87
		1	74	22.05	22.68	22.72
		36	0	21.23	21.39	21.36
		36	18	21.36	21.41	21.34
		36	39	21.29	21.42	21.36
		75	0	21.22	21.41	21.33

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20050CH	20175CH	20300CH
				1720MHz	1732.5MHz	1740MHz
4 / 20MHz	QPSK	1	0	22.77	22.94	22.92
		1	50	23.35	23.45	23.40
		1	99	23.12	23.07	23.16
		50	0	22.11	22.22	22.16
		50	25	22.24	22.39	22.33
		50	50	22.20	22.28	22.21
		100	0	22.16	22.32	22.23
	16QAM	1	0	22.26	22.36	22.41
		1	50	22.78	22.78	22.89
		1	99	22.54	22.48	22.65
		50	0	21.16	21.17	21.26
		50	25	21.31	21.41	21.42
		50	50	21.27	21.30	21.29
		100	0	21.21	21.30	21.31

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20775CH	21100CH	21425CH
				2502.5MHz	2535MHz	2567.5MHz
7 / 5MHz	QPSK	1	0	23.15	23.12	23.08
		1	13	23.30	23.02	23.03
		1	24	23.28	22.99	23.03
		12	0	22.21	22.04	22.00
		12	6	22.21	22.03	21.99
		12	11	22.17	22.04	21.99
		25	0	22.19	22.03	21.97
	16QAM	1	0	22.29	22.30	22.49
		1	13	22.30	22.19	22.45
		1	24	22.26	22.13	22.40
		12	0	21.32	21.09	21.12
		12	6	21.30	21.11	21.12
		12	11	21.25	21.08	21.09
		25	0	21.19	21.02	21.01

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20800CH	21100CH	21400CH
				2505MHz	2535MHz	2565MHz
7 / 10MHz	QPSK	1	0	23.30	23.20	23.05
		1	25	23.15	23.01	22.87
		1	49	23.28	23.03	22.96
		25	0	22.20	22.10	21.96
		25	13	22.18	21.97	21.93
		25	25	22.14	21.96	21.88
		50	0	22.19	21.98	21.95
	16QAM	1	0	22.29	22.54	22.11
		1	25	22.14	22.36	21.92
		1	49	22.22	22.38	22.02
		25	0	21.23	21.14	21.02
		25	13	21.21	21.04	21.00
		25	25	21.19	20.97	20.98
		50	0	21.18	21.05	20.96

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20825CH	21100CH	21375CH
				2507.5MHz	2535MHz	2562.5MHz
7 / 15MHz	QPSK	1	0	23.10	22.93	22.74
		1	38	23.24	23.02	22.92
		1	74	22.98	22.72	22.65
		36	0	22.29	22.00	21.88
		36	18	22.32	22.05	21.94
		36	39	22.27	21.93	21.84
		75	0	22.28	21.94	21.91
	16QAM	1	0	22.05	22.37	22.17
		1	38	22.19	22.42	22.29
		1	74	22.00	22.15	22.08
		36	0	21.34	21.08	20.87
		36	18	21.39	21.09	20.97
		36	39	21.30	20.97	20.84
		75	0	21.28	21.04	20.83

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20850CH	21100CH	21350CH
				2510MHz	2535MHz	2560MHz
7 / 20MHz	QPSK	1	0	23.06	22.84	22.62
		1	50	23.46	22.95	22.83
		1	99	23.01	22.52	22.52
		50	0	22.26	22.05	21.83
		50	25	22.27	22.02	21.89
		50	50	22.20	21.86	21.79
		100	0	22.17	21.90	21.81
	16QAM	1	0	22.55	22.35	22.02
		1	50	22.75	22.48	22.25
		1	99	22.40	22.06	21.90
		50	0	21.28	21.09	20.83
		50	25	21.30	21.05	20.93
		50	50	21.22	20.85	20.81
		100	0	21.26	20.94	20.83

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23017CH	23095CH	23173CH
				699.7MHz	707.5MHz	715.3MHz
12 / 1.4MHz	QPSK	1	0	22.92	22.80	22.96
		1	2	22.99	22.85	23.03
		1	5	22.84	22.85	22.89
		3	0	22.94	22.83	22.92
		3	1	22.95	22.91	22.97
		3	2	22.93	22.89	22.87
		6	0	21.89	21.84	21.86
	16QAM	1	0	22.38	21.87	22.07
		1	2	22.43	21.92	22.09
		1	5	22.32	21.95	22.02
		3	0	22.12	22.03	22.02
		3	1	22.17	22.08	22.04
		3	2	22.10	22.06	21.93
		6	0	20.83	21.05	21.04

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23025CH	23095CH	23165CH
				700.5MHz	707.5MHz	714.5MHz
12 / 3MHz	QPSK	1	0	22.90	22.94	23.05
		1	7	22.89	22.96	23.05
		1	14	22.91	22.89	22.97
		8	0	21.96	21.92	22.04
		8	4	21.87	21.88	22.00
		8	7	21.88	21.92	22.00
		15	0	21.87	21.87	21.97
	16QAM	1	0	21.94	22.40	22.09
		1	7	21.91	22.41	22.07
		1	14	21.91	22.35	21.95
		8	0	21.09	21.03	21.04
		8	4	21.02	20.97	21.01
		8	7	21.01	20.97	21.06
		15	0	20.90	20.90	20.92

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23035CH	23095CH	23155CH
				701.5MHz	707.5MHz	713.5MHz
12 / 5MHz	QPSK	1	0	23.07	22.90	23.10
		1	13	23.06	22.93	23.15
		1	24	22.99	22.96	22.98
		12	0	21.88	21.92	21.95
		12	6	21.93	21.87	22.04
		12	11	21.95	21.95	22.01
		25	0	21.91	21.89	22.01
	16QAM	1	0	22.13	22.38	22.20
		1	13	22.16	22.43	22.20
		1	24	22.11	22.45	22.05
		12	0	20.98	21.05	21.07
		12	6	21.01	21.00	21.12
		12	11	21.04	21.05	21.07
		25	0	20.92	20.92	20.97

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23060CH	23095CH	23130CH
				704MHz	707.5MHz	711MHz
12 / 10MHz	QPSK	1	0	23.11	23.16	23.21
		1	25	22.87	22.94	22.97
		1	49	23.05	23.12	22.97
		25	0	21.99	21.95	21.91
		25	13	21.86	21.93	21.86
		25	25	21.95	21.99	21.90
		50	0	21.98	21.92	21.98
	16QAM	1	0	22.17	22.48	22.28
		1	25	21.89	22.22	22.07
		1	49	22.02	22.39	21.96
		25	0	20.97	20.96	20.98
		25	13	20.86	20.98	20.99
		25	25	20.96	21.01	21.03
		50	0	20.95	20.95	21.03

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				CH23205	CH23230	CH23255
				779.5MHz	782MHz	784.5MHz
13 / 5MHz	QPSK	1	0	22.98	22.95	23.00
		1	13	22.85	22.94	23.10
		1	24	22.90	23.00	23.16
		12	0	21.84	21.91	21.95
		12	6	21.81	21.93	22.07
		12	11	21.74	21.98	22.05
		25	0	21.84	21.95	21.95
	16QAM	1	0	21.96	22.09	22.38
		1	13	21.89	22.08	22.45
		1	24	21.98	22.12	22.57
		12	0	20.97	20.99	21.03
		12	6	20.88	21.02	21.09
		12	11	20.79	21.02	21.09
		25	0	20.76	20.95	21.00

LTE Band / BW	Modulation	RB Size	RB Offset	Mid CH
				CH23230
				782MHz
13 / 10MHz	QPSK	1	0	23.11
		1	25	22.90
		1	49	23.16
		25	0	21.99
		25	13	21.93
		25	25	21.92
		50	0	22.05
	16QAM	1	0	22.03
		1	25	21.81
		1	49	22.05
		25	0	20.96
		25	13	20.85
		25	25	20.95
		50	0	20.98

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23755CH	23790CH	23825CH
				706.5MHz	710MHz	713.5MHz
17 / 5MHz	QPSK	1	0	22.93	22.86	22.81
		1	13	22.92	22.80	22.87
		1	24	22.95	22.80	22.81
		12	0	21.90	21.81	21.76
		12	6	21.87	21.77	21.87
		12	11	21.86	21.82	21.75
		25	0	21.88	21.77	21.84
	16QAM	1	0	21.98	22.03	22.28
		1	13	22.00	22.00	22.35
		1	24	21.97	21.99	22.20
		12	0	20.94	20.90	20.91
		12	6	20.92	20.88	20.96
		12	11	20.92	20.93	20.92
		25	0	20.75	20.81	20.89

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23780CH	23790CH	23800CH
				709MHz	710MHz	711MHz
17 / 10MHz	QPSK	1	0	23.04	23.03	23.01
		1	25	22.76	22.81	22.76
		1	49	22.88	22.88	22.81
		25	0	21.93	21.80	21.86
		25	13	21.88	21.78	21.77
		25	25	21.81	21.85	21.78
		50	0	21.89	21.86	21.91
	16QAM	1	0	22.09	22.13	22.45
		1	25	21.76	21.83	22.11
		1	49	21.87	21.89	22.27
		25	0	20.94	20.87	20.96
		25	13	20.84	20.87	20.84
		25	25	20.82	20.90	20.84
		50	0	20.88	20.87	20.95

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				37775CH	38000CH	38225CH
				2572.5MHz	2593MHz	2617.5MHz
38 / 5MHz	QPSK	1	0	23.27	22.97	22.92
		1	13	23.19	22.89	22.85
		1	24	23.14	22.83	22.79
		12	0	22.21	22.01	21.86
		12	6	22.17	22.03	21.84
		12	11	22.17	22.05	21.83
		25	0	22.19	22.06	21.84
	16QAM	1	0	22.57	22.44	22.19
		1	13	22.51	22.43	22.14
		1	24	22.42	22.33	22.09
		12	0	21.21	21.15	20.94
		12	6	21.16	21.15	20.88
		12	11	21.14	21.11	20.91
		25	0	21.17	21.02	20.87

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				37800CH	38000CH	38200CH
				2575MHz	2593MHz	2615MHz
38 / 10MHz	QPSK	1	0	23.29	23.22	23.44
		1	25	23.05	23.05	23.00
		1	49	23.33	23.41	23.28
		25	0	22.18	22.04	22.01
		25	13	22.15	22.08	21.94
		25	25	22.18	22.04	21.93
		50	0	22.23	22.06	21.93
	16QAM	1	0	22.89	22.43	22.62
		1	25	22.54	22.31	22.36
		1	49	22.90	22.65	22.57
		25	0	21.25	21.00	20.99
		25	13	21.19	21.09	20.93
		25	25	21.23	21.10	20.91
		50	0	21.27	21.08	20.94

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				37825CH	38000CH	38175CH
				2577.5MHz	2593MHz	2612.5MHz
38 / 15MHz	QPSK	1	0	23.96	23.65	23.12
		1	38	23.86	23.47	22.88
		1	74	23.61	22.98	22.58
		36	0	22.96	22.67	22.13
		36	18	22.92	22.60	22.06
		36	39	22.77	22.32	21.86
		75	0	22.81	22.49	21.96
	16QAM	1	0	23.28	22.95	22.68
		1	38	23.17	22.78	22.47
		1	74	22.90	22.29	22.17
		36	0	22.03	21.70	21.16
		36	18	22.00	21.64	21.09
		36	39	21.84	21.36	20.89
		75	0	21.86	21.55	21.01

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				37850CH	38000CH	38150CH
				2580MHz	2593MHz	2610MHz
38 / 20MHz	QPSK	1	0	23.80	23.69	23.25
		1	50	23.71	23.50	22.87
		1	99	23.24	22.88	22.57
		50	0	22.87	22.65	22.27
		50	25	22.81	22.54	22.01
		50	50	22.52	22.27	21.81
		100	0	22.73	22.47	22.03
	16QAM	1	0	23.15	22.87	22.73
		1	50	23.06	22.69	22.36
		1	99	22.59	22.09	22.06
		50	0	21.89	21.69	21.31
		50	25	21.84	21.58	21.07
		50	50	21.56	21.31	20.88
		100	0	21.76	21.51	21.07

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				39675CH	40620CH	41565CH
				2498.5MHz	2593MHz	2687.5MHz
41 / 5MHz	QPSK	1	0	23.25	22.85	22.86
		1	13	23.21	22.95	22.81
		1	24	23.20	22.78	22.79
		12	0	22.18	21.91	21.78
		12	6	22.14	21.92	21.78
		12	11	22.17	21.95	21.80
		25	0	22.18	21.95	21.85
	16QAM	1	0	22.55	22.22	22.21
		1	13	22.56	22.24	22.21
		1	24	22.59	22.13	22.22
		12	0	21.29	20.93	20.95
		12	6	21.29	20.95	20.94
		12	11	21.28	20.97	20.89
		25	0	21.18	20.99	20.84

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				39700CH	40620CH	41540CH
				2501.0MHz	2593MHz	2685.0MHz
41 / 10MHz	QPSK	1	0	22.96	22.75	23.05
		1	25	23.07	23.00	23.12
		1	49	22.95	22.85	22.90
		25	0	22.17	21.87	21.85
		25	13	22.20	21.98	21.80
		25	25	22.07	21.81	21.77
		50	0	22.20	21.87	21.72
	16QAM	1	0	22.28	22.19	22.20
		1	25	22.48	22.38	22.18
		1	49	22.28	22.24	22.15
		25	0	21.17	20.85	20.83
		25	13	21.22	20.95	20.83
		25	25	21.10	20.87	20.78
		50	0	21.18	20.90	20.75

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				39725CH	40620CH	41515CH
				2503.5MHz	2593MHz	2682.5MHz
41 / 15MHz	QPSK	1	0	23.58	24.01	23.39
		1	38	23.45	23.62	23.38
		1	74	23.15	23.09	22.98
		36	0	22.47	22.76	22.36
		36	18	22.47	22.70	22.32
		36	39	22.30	22.39	22.31
		75	0	22.40	22.60	22.40
	16QAM	1	0	23.00	23.46	22.80
		1	38	22.86	23.07	22.79
		1	74	22.55	22.55	22.40
		36	0	21.52	21.80	21.47
		36	18	21.53	21.76	21.43
		36	39	21.34	21.44	21.42
		75	0	21.47	21.67	21.49

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				39750CH	40620CH	41490CH
				2506.0MHz	2593MHz	2680.0MHz
41 / 20MHz	QPSK	1	0	23.62	24.01	23.27
		1	50	23.43	23.61	23.30
		1	99	22.99	22.92	22.95
		50	0	22.45	22.85	22.35
		50	25	22.35	22.72	22.33
		50	50	22.21	22.31	22.32
		100	0	22.41	22.64	22.20
	16QAM	1	0	23.00	23.48	22.57
		1	50	22.82	23.08	22.60
		1	99	22.39	22.39	22.27
		50	0	21.52	21.90	21.44
		50	25	21.42	21.79	21.40
		50	50	21.28	21.35	21.40
		100	0	21.47	21.69	21.28

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				131979CH	132322CH	132665CH
				1710.7MHz	1745MHz	1779.3MHz
66 / 1.4MHz	QPSK	1	0	22.92	23.02	22.99
		1	2	23.00	23.09	22.91
		1	5	22.96	22.97	22.68
		3	0	22.89	22.99	22.88
		3	1	22.93	23.02	22.84
		3	2	22.90	22.97	22.67
		6	0	21.85	21.93	21.96
	16QAM	1	0	22.00	22.33	21.97
		1	2	22.01	22.37	21.98
		1	5	22.02	22.31	21.87
		3	0	21.94	22.21	22.09
		3	1	21.96	22.22	22.17
		3	2	21.95	22.14	22.05
		6	0	21.03	20.90	21.09

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				131987CH	132322CH	132657CH
				1711.5MHz	1745MHz	1778.5MHz
66 / 3MHz	QPSK	1	0	22.90	23.11	23.09
		1	7	22.94	23.07	22.97
		1	14	22.87	22.98	22.50
		8	0	21.93	22.02	22.00
		8	4	21.97	22.01	22.02
		8	7	21.84	21.96	22.02
		15	0	21.94	21.99	21.97
	16QAM	1	0	21.88	22.43	22.07
		1	7	21.85	22.37	21.99
		1	14	21.82	22.30	21.78
		8	0	21.03	21.13	21.06
		8	4	21.07	21.11	21.07
		8	7	20.94	21.09	21.04
		15	0	20.99	21.02	20.98

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				131997CH	132322CH	132647CH
				1712.5MHz	1745MHz	1777.5MHz
66 / 5MHz	QPSK	1	0	23.09	23.31	23.08
		1	13	23.00	23.11	23.05
		1	24	22.92	23.07	22.45
		12	0	21.99	22.08	22.13
		12	6	21.92	22.03	22.08
		12	11	21.91	22.00	22.06
		25	0	21.91	22.05	22.04
	16QAM	1	0	22.17	22.64	22.14
		1	13	22.11	22.53	22.08
		1	24	22.06	22.47	21.75
		12	0	21.06	21.24	21.13
		12	6	20.97	21.20	21.04
		12	11	21.01	21.13	21.02
		25	0	20.89	21.13	20.96

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				132022CH	132322CH	132622CH
				1715MHz	1745MHz	1775MHz
66 / 10MHz	QPSK	1	0	22.22	22.40	22.33
		1	25	22.86	23.00	22.94
		1	49	23.28	23.47	22.14
		25	0	21.85	21.99	21.96
		25	13	21.96	22.08	22.04
		25	25	22.02	22.10	22.17
		50	0	21.93	22.03	21.97
	16QAM	1	0	21.21	21.73	21.34
		1	25	21.81	22.32	21.92
		1	49	22.21	22.75	21.40
		25	0	20.85	21.01	20.98
		25	13	20.95	21.08	21.11
		25	25	21.05	21.05	21.18
		50	0	20.92	21.05	21.00

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				132047CH	132322CH	132597CH
				1717.5MHz	1745MHz	1772.5MHz
66 / 15MHz	QPSK	1	0	23.01	23.13	23.07
		1	38	22.85	22.90	22.93
		1	74	22.96	22.85	22.36
		36	0	21.99	21.89	21.96
		36	18	21.92	21.88	21.96
		36	39	21.88	21.82	21.88
		75	0	21.86	21.83	21.88
	16QAM	1	0	22.01	22.46	22.47
		1	38	21.84	22.26	22.33
		1	74	21.93	22.21	22.02
		36	0	20.99	20.93	20.97
		36	18	20.95	20.95	20.99
		36	39	20.90	20.85	20.92
		75	0	20.86	20.86	20.93

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				132072CH	132322CH	132572CH
				1720MHz	1745MHz	1770MHz
66 / 20MHz	QPSK	1	0	22.61	22.57	22.52
		1	50	22.97	22.87	22.88
		1	99	23.26	22.98	22.29
		50	0	21.83	21.77	21.77
		50	25	21.95	21.88	21.89
		50	50	21.90	21.83	21.88
		100	0	21.83	21.81	21.83
	16QAM	1	0	22.05	22.04	21.88
		1	50	22.46	22.34	22.19
		1	99	22.67	22.49	21.93
		50	0	20.87	20.81	20.75
		50	25	21.01	20.92	20.89
		50	50	20.92	20.87	20.88
		100	0	20.91	20.80	20.81

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				133147CH	133297CH	133447CH
				665.5MHz	680.5MHz	695.5MHz
71 / 5MHz	QPSK	1	0	23.23	23.11	23.06
		1	13	23.27	23.09	23.04
		1	24	23.25	23.07	23.00
		12	0	22.12	22.02	22.09
		12	6	22.15	22.04	22.02
		12	11	22.12	21.98	21.99
		25	0	22.15	22.03	22.03
	16QAM	1	0	22.24	22.23	22.58
		1	13	22.33	22.23	22.57
		1	24	22.31	22.23	22.50
		12	0	21.24	21.12	21.22
		12	6	21.22	21.13	21.17
		12	11	21.20	21.06	21.14
		25	0	21.11	21.07	21.10

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				133172CH	133297CH	133422CH
				668MHz	680.5MHz	693MHz
71 / 10MHz	QPSK	1	0	22.10	22.07	22.02
		1	25	23.03	23.02	23.02
		1	49	23.33	23.36	23.39
		25	0	21.94	21.82	21.85
		25	13	22.07	22.07	22.10
		25	25	22.10	22.10	22.10
		50	0	21.98	21.96	21.95
	16QAM	1	0	21.09	21.47	21.15
		1	25	21.99	22.40	22.09
		1	49	22.30	22.72	22.31
		25	0	20.95	20.88	20.96
		25	13	21.12	21.11	21.15
		25	25	21.13	21.12	21.22
		50	0	21.01	20.99	21.01

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				133197CH	133297CH	133397CH
				670.5MHz	680.5MHz	690.5MHz
71 / 15MHz	QPSK	1	0	22.48	22.44	22.41
		1	38	22.90	22.89	22.91
		1	74	22.57	22.71	22.59
		36	0	21.64	21.65	21.59
		36	18	21.93	21.86	21.90
		36	39	21.75	21.73	21.82
		75	0	21.77	21.72	21.71
	16QAM	1	0	21.50	21.87	21.90
		1	38	21.99	22.34	22.42
		1	74	21.70	22.07	22.11
		36	0	20.69	20.70	20.57
		36	18	20.99	20.92	20.90
		36	39	20.82	20.74	20.78
		75	0	20.78	20.75	20.70

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				133222CH	133322CH	133372CH
				673MHz	683MHz	688MHz
71 / 20MHz	QPSK	1	0	21.56	21.62	21.52
		1	50	22.88	22.88	22.87
		1	99	22.57	22.62	22.54
		50	0	21.41	21.39	21.28
		50	25	21.91	21.83	21.81
		50	50	21.75	21.72	21.70
		100	0	21.66	21.56	21.54
	16QAM	1	0	21.17	21.26	21.27
		1	50	22.53	22.45	22.57
		1	99	22.14	22.22	22.18
		50	0	20.51	20.46	20.44
		50	25	20.94	20.89	20.96
		50	50	20.76	20.80	20.81
		100	0	20.70	20.57	20.58

EIRP (dBm)				
Modulation	Band	WCDMA Band IV		
	Tx Channel	1312CH	1413CH	1513CH
	Frequency	1712.4MHz	1732.6MHz	1752.6MHz
QPSK	RMC 12.2K	26.17	26.75	26.87
	RMC 64K	26.08	26.65	26.79
	RMC 144K	26.03	26.60	26.74
	RMC 384K	26.02	26.61	26.75
	HSDPA Subtest-1	24.80	25.26	25.33
	HSDPA Subtest-2	24.79	25.30	25.38
	HSDPA Subtest-3	24.26	24.81	24.88
	HSDPA Subtest-4	24.25	24.80	24.87
	HSUPA Subtest-1	24.65	25.28	25.43
	HSUPA Subtest-2	22.50	23.22	23.34
	HSUPA Subtest-3	23.58	24.27	24.40
	HSUPA Subtest-4	22.47	23.19	23.30
	HSUPA Subtest-5	24.73	25.42	25.53

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19957CH	20175CH	20393CH
				1710.7MHz	1732.5MHz	1754.3MHz
4 / 1.4MHz	QPSK	1	0	26.29	26.32	26.44
		1	2	26.35	26.30	26.51
		1	5	26.23	26.37	26.36
		3	0	26.30	26.20	26.34
		3	1	26.35	26.25	26.44
		3	2	26.19	26.31	26.39
		6	0	25.19	25.30	25.37
	16QAM	1	0	25.67	25.27	25.48
		1	2	25.73	25.21	25.52
		1	5	25.61	25.36	25.46
		3	0	25.46	25.39	25.44
		3	1	25.49	25.47	25.46
		3	2	25.35	25.46	25.44
		6	0	24.18	24.52	24.52

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19965CH	20175CH	20385CH
				1711.5MHz	1732.5MHz	1753.5MHz
4 / 3MHz	QPSK	1	0	26.24	26.46	26.45
		1	7	26.24	26.39	26.48
		1	14	26.26	26.40	26.42
		8	0	25.30	25.37	25.38
		8	4	25.25	25.37	25.46
		8	7	25.24	25.42	25.43
		15	0	25.20	25.43	25.42
	16QAM	1	0	25.24	25.70	25.49
		1	7	25.17	25.76	25.49
		1	14	25.20	25.67	25.38
		8	0	24.44	24.39	24.45
		8	4	24.37	24.38	24.52
		8	7	24.35	24.42	24.47
		15	0	24.27	24.39	24.44

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19975CH	20175CH	20375CH
				1712.5MHz	1732.5MHz	1752.5MHz
4 / 5MHz	QPSK	1	0	26.53	26.60	26.54
		1	13	26.48	26.56	26.48
		1	24	26.47	26.52	26.51
		12	0	25.36	25.41	25.49
		12	6	25.42	25.38	25.42
		12	11	25.31	25.41	25.39
		25	0	25.39	25.48	25.41
	16QAM	1	0	25.54	25.87	25.54
		1	13	25.50	25.83	25.48
		1	24	25.49	25.73	25.53
		12	0	24.37	24.50	24.54
		12	6	24.39	24.44	24.48
		12	11	24.35	24.49	24.43
		25	0	24.32	24.47	24.36

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20000CH	20175CH	20350CH
				1715MHz	1732.5MHz	1750MHz
4 / 10MHz	QPSK	1	0	26.54	26.66	26.56
		1	25	26.29	26.47	26.32
		1	49	26.76	26.87	26.85
		25	0	25.41	25.34	25.38
		25	13	25.34	25.49	25.37
		25	25	25.48	25.53	25.53
		50	0	25.41	25.51	25.39
	16QAM	1	0	25.45	25.97	25.60
		1	25	25.16	25.68	25.32
		1	49	25.59	26.09	25.82
		25	0	24.32	24.29	24.53
		25	13	24.29	24.39	24.49
		25	25	24.39	24.38	24.57
		50	0	24.29	24.45	24.44

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20025CH	20175CH	20325CH
				1717.5MHz	1732.5MHz	1747.5MHz
4 / 15MHz	QPSK	1	0	26.11	26.23	26.17
		1	38	26.20	26.41	26.36
		1	74	26.07	26.27	26.22
		36	0	25.20	25.28	25.33
		36	18	25.35	25.34	25.32
		36	39	25.24	25.35	25.33
		75	0	25.15	25.36	25.28
	16QAM	1	0	25.10	25.63	25.65
		1	38	25.17	25.79	25.85
		1	74	25.03	25.66	25.70
		36	0	24.21	24.37	24.34
		36	18	24.34	24.39	24.32
		36	39	24.27	24.40	24.34
		75	0	24.20	24.39	24.31

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20050CH	20175CH	20300CH
				1720MHz	1732.5MHz	1740MHz
4 / 20MHz	QPSK	1	0	25.75	25.92	25.90
		1	50	26.33	26.43	26.38
		1	99	26.10	26.05	26.14
		50	0	25.09	25.20	25.14
		50	25	25.22	25.37	25.31
		50	50	25.18	25.26	25.19
		100	0	25.14	25.30	25.21
	16QAM	1	0	25.24	25.34	25.39
		1	50	25.76	25.76	25.87
		1	99	25.52	25.46	25.63
		50	0	24.14	24.15	24.24
		50	25	24.29	24.39	24.40
		50	50	24.25	24.28	24.27
		100	0	24.19	24.28	24.29

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20775CH	21100CH	21425CH
				2502.5MHz	2535MHz	2567.5MHz
7 / 5MHz	QPSK	1	0	25.36	25.33	25.29
		1	13	25.51	25.23	25.24
		1	24	25.49	25.20	25.24
		12	0	24.42	24.25	24.21
		12	6	24.42	24.24	24.20
		12	11	24.38	24.25	24.20
		25	0	24.40	24.24	24.18
	16QAM	1	0	24.50	24.51	24.70
		1	13	24.51	24.40	24.66
		1	24	24.47	24.34	24.61
		12	0	23.53	23.30	23.33
		12	6	23.51	23.32	23.33
		12	11	23.46	23.29	23.30
		25	0	23.40	23.23	23.22

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20800CH	21100CH	21400CH
				2505MHz	2535MHz	2565MHz
7 / 10MHz	QPSK	1	0	25.51	25.41	25.26
		1	25	25.36	25.22	25.08
		1	49	25.49	25.24	25.17
		25	0	24.41	24.31	24.17
		25	13	24.39	24.18	24.14
		25	25	24.35	24.17	24.09
		50	0	24.40	24.19	24.16
	16QAM	1	0	24.50	24.75	24.32
		1	25	24.35	24.57	24.13
		1	49	24.43	24.59	24.23
		25	0	23.44	23.35	23.23
		25	13	23.42	23.25	23.21
		25	25	23.40	23.18	23.19
		50	0	23.39	23.26	23.17

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20825CH	21100CH	21375CH
				2507.5MHz	2535MHz	2562.5MHz
7 / 15MHz	QPSK	1	0	25.31	25.14	24.95
		1	38	25.45	25.23	25.13
		1	74	25.19	24.93	24.86
		36	0	24.50	24.21	24.09
		36	18	24.53	24.26	24.15
		36	39	24.48	24.14	24.05
		75	0	24.49	24.15	24.12
	16QAM	1	0	24.26	24.58	24.38
		1	38	24.40	24.63	24.50
		1	74	24.21	24.36	24.29
		36	0	23.55	23.29	23.08
		36	18	23.60	23.30	23.18
		36	39	23.51	23.18	23.05
		75	0	23.49	23.25	23.04

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20850CH	21100CH	21350CH
				2510MHz	2535MHz	2560MHz
7 / 20MHz	QPSK	1	0	25.27	25.05	24.83
		1	50	25.67	25.16	25.04
		1	99	25.22	24.73	24.73
		50	0	24.47	24.26	24.04
		50	25	24.48	24.23	24.10
		50	50	24.41	24.07	24.00
		100	0	24.38	24.11	24.02
	16QAM	1	0	24.76	24.56	24.23
		1	50	24.96	24.69	24.46
		1	99	24.61	24.27	24.11
		50	0	23.49	23.30	23.04
		50	25	23.51	23.26	23.14
		50	50	23.43	23.06	23.02
		100	0	23.47	23.15	23.04

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				37775CH	38000CH	38225CH
				2572.5MHz	2593MHz	2617.5MHz
38 / 5MHz	QPSK	1	0	24.87	24.57	24.52
		1	13	24.79	24.49	24.45
		1	24	24.74	24.43	24.39
		12	0	23.81	23.61	23.46
		12	6	23.77	23.63	23.44
		12	11	23.77	23.65	23.43
		25	0	23.79	23.66	23.44
	16QAM	1	0	24.17	24.04	23.79
		1	13	24.11	24.03	23.74
		1	24	24.02	23.93	23.69
		12	0	22.81	22.75	22.54
		12	6	22.76	22.75	22.48
		12	11	22.74	22.71	22.51
		25	0	22.77	22.62	22.47

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				37800CH	38000CH	38200CH
				2575MHz	2593MHz	2615MHz
38 / 10MHz	QPSK	1	0	24.89	24.82	25.04
		1	25	24.65	24.65	24.60
		1	49	24.93	25.01	24.88
		25	0	23.78	23.64	23.61
		25	13	23.75	23.68	23.54
		25	25	23.78	23.64	23.53
		50	0	23.83	23.66	23.53
	16QAM	1	0	24.49	24.03	24.22
		1	25	24.14	23.91	23.96
		1	49	24.50	24.25	24.17
		25	0	22.85	22.60	22.59
		25	13	22.79	22.69	22.53
		25	25	22.83	22.70	22.51
		50	0	22.87	22.68	22.54

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				37825CH	38000CH	38175CH
				2577.5MHz	2593MHz	2612.5MHz
38 / 15MHz	QPSK	1	0	25.56	25.25	24.72
		1	38	25.46	25.07	24.48
		1	74	25.21	24.58	24.18
		36	0	24.56	24.27	23.73
		36	18	24.52	24.20	23.66
		36	39	24.37	23.92	23.46
		75	0	24.41	24.09	23.56
	16QAM	1	0	24.88	24.55	24.28
		1	38	24.77	24.38	24.07
		1	74	24.50	23.89	23.77
		36	0	23.63	23.30	22.76
		36	18	23.60	23.24	22.69
		36	39	23.44	22.96	22.49
		75	0	23.46	23.15	22.61

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				37850CH	38000CH	38150CH
				2580MHz	2593MHz	2610MHz
38 / 20MHz	QPSK	1	0	25.40	25.29	24.85
		1	50	25.31	25.10	24.47
		1	99	24.84	24.48	24.17
		50	0	24.47	24.25	23.87
		50	25	24.41	24.14	23.61
		50	50	24.12	23.87	23.41
		100	0	24.33	24.07	23.63
	16QAM	1	0	24.75	24.47	24.33
		1	50	24.66	24.29	23.96
		1	99	24.19	23.69	23.66
		50	0	23.49	23.29	22.91
		50	25	23.44	23.18	22.67
		50	50	23.16	22.91	22.48
		100	0	23.36	23.11	22.67

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				39675CH	40620CH	41565CH
				2498.5MHz	2593MHz	2687.5MHz
41 / 5MHz	QPSK	1	0	25.46	25.06	25.07
		1	13	25.42	25.16	25.02
		1	24	25.41	24.99	25.00
		12	0	24.39	24.12	23.99
		12	6	24.35	24.13	23.99
		12	11	24.38	24.16	24.01
		25	0	24.39	24.16	24.06
	16QAM	1	0	24.76	24.43	24.42
		1	13	24.77	24.45	24.42
		1	24	24.80	24.34	24.43
		12	0	23.50	23.14	23.16
		12	6	23.50	23.16	23.15
		12	11	23.49	23.18	23.10
		25	0	23.39	23.20	23.05

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				39700CH	40620CH	41540CH
				2501.0MHz	2593MHz	2685.0MHz
41 / 10MHz	QPSK	1	0	25.17	24.96	25.26
		1	25	25.28	25.21	25.33
		1	49	25.16	25.06	25.11
		25	0	24.38	24.08	24.06
		25	13	24.41	24.19	24.01
		25	25	24.28	24.02	23.98
		50	0	24.41	24.08	23.93
	16QAM	1	0	24.49	24.40	24.41
		1	25	24.69	24.59	24.39
		1	49	24.49	24.45	24.36
		25	0	23.38	23.06	23.04
		25	13	23.43	23.16	23.04
		25	25	23.31	23.08	22.99
		50	0	23.39	23.11	22.96

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				39725CH	40620CH	41515CH
				2503.5MHz	2593MHz	2682.5MHz
41 / 15MHz	QPSK	1	0	25.79	26.22	25.60
		1	38	25.66	25.83	25.59
		1	74	25.36	25.30	25.19
		36	0	24.68	24.97	24.57
		36	18	24.68	24.91	24.53
		36	39	24.51	24.60	24.52
		75	0	24.61	24.81	24.61
	16QAM	1	0	25.21	25.67	25.01
		1	38	25.07	25.28	25.00
		1	74	24.76	24.76	24.61
		36	0	23.73	24.01	23.68
		36	18	23.74	23.97	23.64
		36	39	23.55	23.65	23.63
		75	0	23.68	23.88	23.70

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				39750CH	40620CH	41490CH
				2506.0MHz	2593MHz	2680.0MHz
41 / 20MHz	QPSK	1	0	25.83	26.22	25.48
		1	50	25.64	25.82	25.51
		1	99	25.20	25.13	25.16
		50	0	24.66	25.06	24.56
		50	25	24.56	24.93	24.54
		50	50	24.42	24.52	24.53
		100	0	24.62	24.85	24.41
	16QAM	1	0	25.21	25.69	24.78
		1	50	25.03	25.29	24.81
		1	99	24.60	24.60	24.48
		50	0	23.73	24.11	23.65
		50	25	23.63	24.00	23.61
		50	50	23.49	23.56	23.61
		100	0	23.68	23.90	23.49

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				131979CH	132322CH	132665CH
				1710.7MHz	1745MHz	1779.3MHz
66 / 1.4MHz	QPSK	1	0	25.90	26.00	25.97
		1	2	25.98	26.07	25.89
		1	5	25.94	25.95	25.66
		3	0	25.87	25.97	25.86
		3	1	25.91	26.00	25.82
		3	2	25.88	25.95	25.65
		6	0	24.83	24.91	24.94
	16QAM	1	0	24.98	25.31	24.95
		1	2	24.99	25.35	24.96
		1	5	25.00	25.29	24.85
		3	0	24.92	25.19	25.07
		3	1	24.94	25.20	25.15
		3	2	24.93	25.12	25.03
		6	0	24.01	23.88	24.07

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				131987CH	132322CH	132657CH
				1711.5MHz	1745MHz	1778.5MHz
66 / 3MHz	QPSK	1	0	25.88	26.09	26.07
		1	7	25.92	26.05	25.95
		1	14	25.85	25.96	25.48
		8	0	24.91	25.00	24.98
		8	4	24.95	24.99	25.00
		8	7	24.82	24.94	25.00
		15	0	24.92	24.97	24.95
	16QAM	1	0	24.86	25.41	25.05
		1	7	24.83	25.35	24.97
		1	14	24.80	25.28	24.76
		8	0	24.01	24.11	24.04
		8	4	24.05	24.09	24.05
		8	7	23.92	24.07	24.02
		15	0	23.97	24.00	23.96

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				131997CH	132322CH	132647CH
				1712.5MHz	1745MHz	1777.5MHz
66 / 5MHz	QPSK	1	0	26.07	26.29	26.06
		1	13	25.98	26.09	26.03
		1	24	25.90	26.05	25.43
		12	0	24.97	25.06	25.11
		12	6	24.90	25.01	25.06
		12	11	24.89	24.98	25.04
		25	0	24.89	25.03	25.02
	16QAM	1	0	25.15	25.62	25.12
		1	13	25.09	25.51	25.06
		1	24	25.04	25.45	24.73
		12	0	24.04	24.22	24.11
		12	6	23.95	24.18	24.02
		12	11	23.99	24.11	24.00
		25	0	23.87	24.11	23.94

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				132022CH	132322CH	132622CH
				1715MHz	1745MHz	1775MHz
66 / 10MHz	QPSK	1	0	25.20	25.38	25.31
		1	25	25.84	25.98	25.92
		1	49	26.26	26.45	25.12
		25	0	24.83	24.97	24.94
		25	13	24.94	25.06	25.02
		25	25	25.00	25.08	25.15
		50	0	24.91	25.01	24.95
	16QAM	1	0	24.19	24.71	24.32
		1	25	24.79	25.30	24.90
		1	49	25.19	25.73	24.38
		25	0	23.83	23.99	23.96
		25	13	23.93	24.06	24.09
		25	25	24.03	24.03	24.16
		50	0	23.90	24.03	23.98

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				132047CH	132322CH	132597CH
				1717.5MHz	1745MHz	1772.5MHz
66 / 15MHz	QPSK	1	0	23.01	23.13	23.07
		1	38	22.85	22.90	22.93
		1	74	22.96	22.85	22.36
		36	0	21.99	21.89	21.96
		36	18	21.92	21.88	21.96
		36	39	21.88	21.82	21.88
		75	0	21.86	21.83	21.88
	16QAM	1	0	22.01	22.46	22.47
		1	38	21.84	22.26	22.33
		1	74	21.93	22.21	22.02
		36	0	20.99	20.93	20.97
		36	18	20.95	20.95	20.99
		36	39	20.90	20.85	20.92
		75	0	20.86	20.86	20.93

LTE Band / BW	Modulation	RB Siset	RB Offset	Low CH	Mid CH	High CH
				132072CH	132322CH	132572CH
				1720MHz	1745MHz	1770MHz
66 / 20MHz	QPSK	1	0	25.59	25.55	25.50
		1	50	25.95	25.85	25.86
		1	99	26.24	25.96	25.27
		50	0	24.81	24.75	24.75
		50	25	24.93	24.86	24.87
		50	50	24.88	24.81	24.86
		100	0	24.81	24.79	24.81
	16QAM	1	0	25.03	25.02	24.86
		1	50	25.44	25.32	25.17
		1	99	25.65	25.47	24.91
		50	0	23.85	23.79	23.73
		50	25	23.99	23.90	23.87
		50	50	23.90	23.85	23.86
		100	0	23.89	23.78	23.79

ERP (dBm)

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23017CH	23095CH	23173CH
				699.7MHz	707.5MHz	715.3MHz
12 / 1.4MHz	QPSK	1	0	22.38	22.26	22.42
		1	2	22.45	22.31	22.49
		1	5	22.30	22.31	22.35
		3	0	22.40	22.29	22.38
		3	1	22.41	22.37	22.43
		3	2	22.39	22.35	22.33
		6	0	21.35	21.30	21.32
	16QAM	1	0	21.84	21.33	21.53
		1	2	21.89	21.38	21.55
		1	5	21.78	21.41	21.48
		3	0	21.58	21.49	21.48
		3	1	21.63	21.54	21.50
		3	2	21.56	21.52	21.39
		6	0	20.29	20.51	20.50

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23025CH	23095CH	23165CH
				700.5MHz	707.5MHz	714.5MHz
12 / 3MHz	QPSK	1	0	22.36	22.40	22.51
		1	7	22.35	22.42	22.51
		1	14	22.37	22.35	22.43
		8	0	21.42	21.38	21.50
		8	4	21.33	21.34	21.46
		8	7	21.34	21.38	21.46
		15	0	21.33	21.33	21.43
	16QAM	1	0	21.40	21.86	21.55
		1	7	21.37	21.87	21.53
		1	14	21.37	21.81	21.41
		8	0	20.55	20.49	20.50
		8	4	20.48	20.43	20.47
		8	7	20.47	20.43	20.52
		15	0	20.36	20.36	20.38

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23035CH	23095CH	23155CH
				701.5MHz	707.5MHz	713.5MHz
12 / 5MHz	QPSK	1	0	22.53	22.36	22.56
		1	13	22.52	22.39	22.61
		1	24	22.45	22.42	22.44
		12	0	21.34	21.38	21.41
		12	6	21.39	21.33	21.50
		12	11	21.41	21.41	21.47
		25	0	21.37	21.35	21.47
	16QAM	1	0	21.59	21.84	21.66
		1	13	21.62	21.89	21.66
		1	24	21.57	21.91	21.51
		12	0	20.44	20.51	20.53
		12	6	20.47	20.46	20.58
		12	11	20.50	20.51	20.53
		25	0	20.38	20.38	20.43

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23060CH	23095CH	23130CH
				704MHz	707.5MHz	711MHz
12 / 10MHz	QPSK	1	0	22.57	22.62	22.67
		1	25	22.33	22.40	22.43
		1	49	22.51	22.58	22.43
		25	0	21.45	21.41	21.37
		25	13	21.32	21.39	21.32
		25	25	21.41	21.45	21.36
		50	0	21.44	21.38	21.44
	16QAM	1	0	21.63	21.94	21.74
		1	25	21.35	21.68	21.53
		1	49	21.48	21.85	21.42
		25	0	20.43	20.42	20.44
		25	13	20.32	20.44	20.45
		25	25	20.42	20.47	20.49
		50	0	20.41	20.41	20.49

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				CH23205	CH23230	CH23255
				779.5MHz	782MHz	784.5MHz
13 / 5MHz	QPSK	1	0	22.66	22.63	22.68
		1	13	22.53	22.62	22.78
		1	24	22.58	22.68	22.84
		12	0	21.52	21.59	21.63
		12	6	21.49	21.61	21.75
		12	11	21.42	21.66	21.73
		25	0	21.52	21.63	21.63
	16QAM	1	0	21.64	21.77	22.06
		1	13	21.57	21.76	22.13
		1	24	21.66	21.80	22.25
		12	0	20.65	20.67	20.71
		12	6	20.56	20.70	20.77
		12	11	20.47	20.70	20.77
		25	0	20.44	20.63	20.68

LTE Band / BW	Modulation	RB Size	RB Offset	Mid CH
				CH23230
				782MHz
13 / 10MHz	QPSK	1	0	22.79
		1	25	22.58
		1	49	22.84
		25	0	21.67
		25	13	21.61
		25	25	21.60
		50	0	21.73
	16QAM	1	0	21.71
		1	25	21.49
		1	49	21.73
		25	0	20.64
		25	13	20.53
		25	25	20.63
		50	0	20.66

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23755CH	23790CH	23825CH
				706.5MHz	710MHz	713.5MHz
17 / 5MHz	QPSK	1	0	22.36	22.29	22.24
		1	13	22.35	22.23	22.30
		1	24	22.38	22.23	22.24
		12	0	21.33	21.24	21.19
		12	6	21.30	21.20	21.30
		12	11	21.29	21.25	21.18
		25	0	21.31	21.20	21.27
	16QAM	1	0	21.41	21.46	21.71
		1	13	21.43	21.43	21.78
		1	24	21.40	21.42	21.63
		12	0	20.37	20.33	20.34
		12	6	20.35	20.31	20.39
		12	11	20.35	20.36	20.35
		25	0	20.18	20.24	20.32

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23780CH	23790CH	23800CH
				709MHz	710MHz	711MHz
17 / 10MHz	QPSK	1	0	22.47	22.46	22.44
		1	25	22.19	22.24	22.19
		1	49	22.31	22.31	22.24
		25	0	21.36	21.23	21.29
		25	13	21.31	21.21	21.20
		25	25	21.24	21.28	21.21
		50	0	21.32	21.29	21.34
	16QAM	1	0	21.52	21.56	21.88
		1	25	21.19	21.26	21.54
		1	49	21.30	21.32	21.70
		25	0	20.37	20.30	20.39
		25	13	20.27	20.30	20.27
		25	25	20.25	20.33	20.27
		50	0	20.31	20.30	20.38

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				133147CH	133297CH	133447CH
				665.5MHz	680.5MHz	695.5MHz
71 / 5MHz	QPSK	1	0	22.69	22.57	22.52
		1	13	22.73	22.55	22.50
		1	24	22.71	22.53	22.46
		12	0	21.58	21.48	21.55
		12	6	21.61	21.50	21.48
		12	11	21.58	21.44	21.45
		25	0	21.61	21.49	21.49
	16QAM	1	0	21.70	21.69	22.04
		1	13	21.79	21.69	22.03
		1	24	21.77	21.69	21.96
		12	0	20.70	20.58	20.68
		12	6	20.68	20.59	20.63
		12	11	20.66	20.52	20.60
		25	0	20.57	20.53	20.56

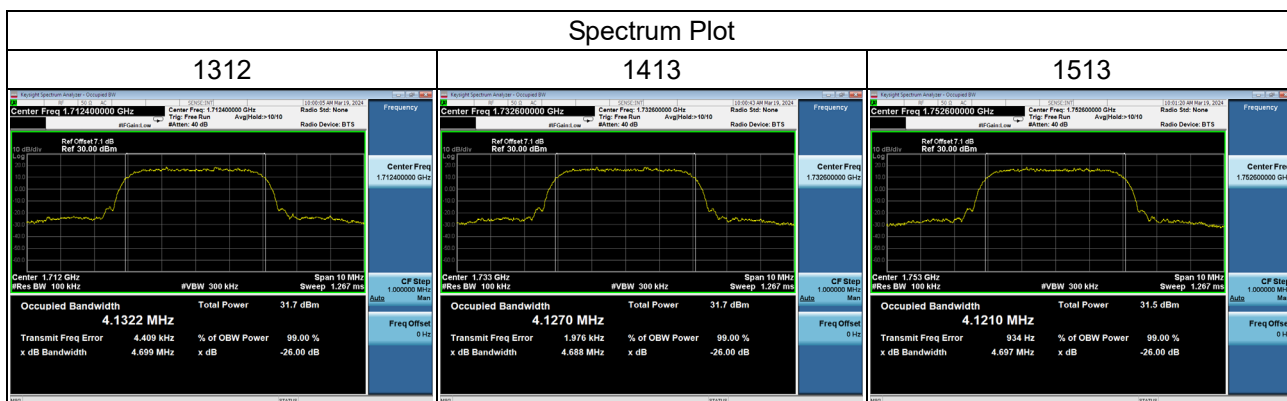
LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				133172CH	133297CH	133422CH
				668MHz	680.5MHz	693MHz
71 / 10MHz	QPSK	1	0	21.56	21.53	21.48
		1	25	22.49	22.48	22.48
		1	49	22.79	22.82	22.85
		25	0	21.40	21.28	21.31
		25	13	21.53	21.53	21.56
		25	25	21.56	21.56	21.56
		50	0	21.44	21.42	21.41
	16QAM	1	0	20.55	20.93	20.61
		1	25	21.45	21.86	21.55
		1	49	21.76	22.18	21.77
		25	0	20.41	20.34	20.42
		25	13	20.58	20.57	20.61
		25	25	20.59	20.58	20.68
		50	0	20.47	20.45	20.47

LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				133197CH	133297CH	133397CH
				670.5MHz	680.5MHz	690.5MHz
71 / 15MHz	QPSK	1	0	21.94	21.90	21.87
		1	38	22.36	22.35	22.37
		1	74	22.03	22.17	22.05
		36	0	21.10	21.11	21.05
		36	18	21.39	21.32	21.36
		36	39	21.21	21.19	21.28
		75	0	21.23	21.18	21.17
	16QAM	1	0	20.96	21.33	21.36
		1	38	21.45	21.80	21.88
		1	74	21.16	21.53	21.57
		36	0	20.15	20.16	20.03
		36	18	20.45	20.38	20.36
		36	39	20.28	20.20	20.24
		75	0	20.24	20.21	20.16

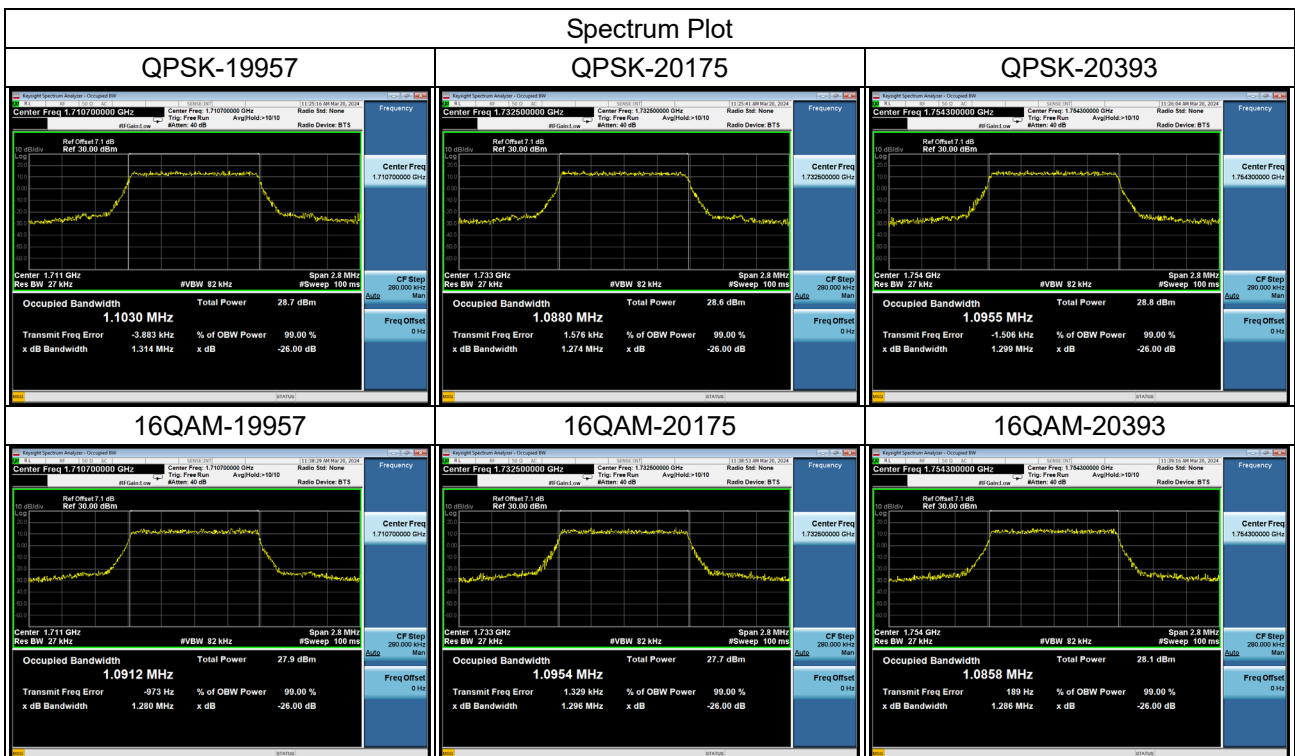
LTE Band / BW	Modulation	RB Sizer	RB Offset	Low CH	Mid CH	High CH
				133222CH	133322CH	133372CH
				673MHz	683MHz	688MHz
71 / 20MHz	QPSK	1	0	21.02	21.08	20.98
		1	50	22.34	22.34	22.33
		1	99	22.03	22.08	22.00
		50	0	20.87	20.85	20.74
		50	25	21.37	21.29	21.27
		50	50	21.21	21.18	21.16
		100	0	21.12	21.02	21.00
	16QAM	1	0	20.63	20.72	20.73
		1	50	21.99	21.91	22.03
		1	99	21.60	21.68	21.64
		50	0	19.97	19.92	19.90
		50	25	20.40	20.35	20.42
		50	50	20.22	20.26	20.27
		100	0	20.16	20.03	20.04

APPENDIX B - OCCUPIED BANDWIDTH

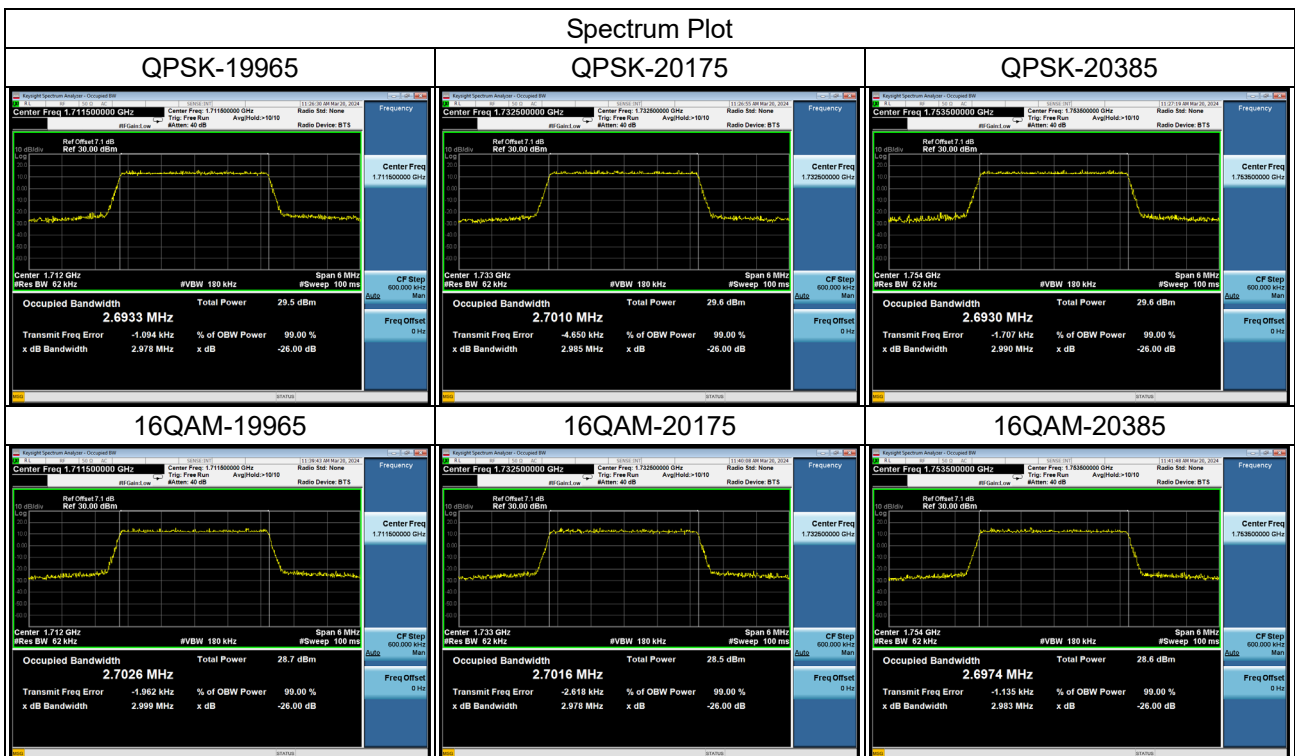
WCDMA Band IV_WCDMA			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK	QPSK
1312	1712.4	4.1322	4.699
1413	1732.6	4.1270	4.688
1513	1752.6	4.1210	4.697



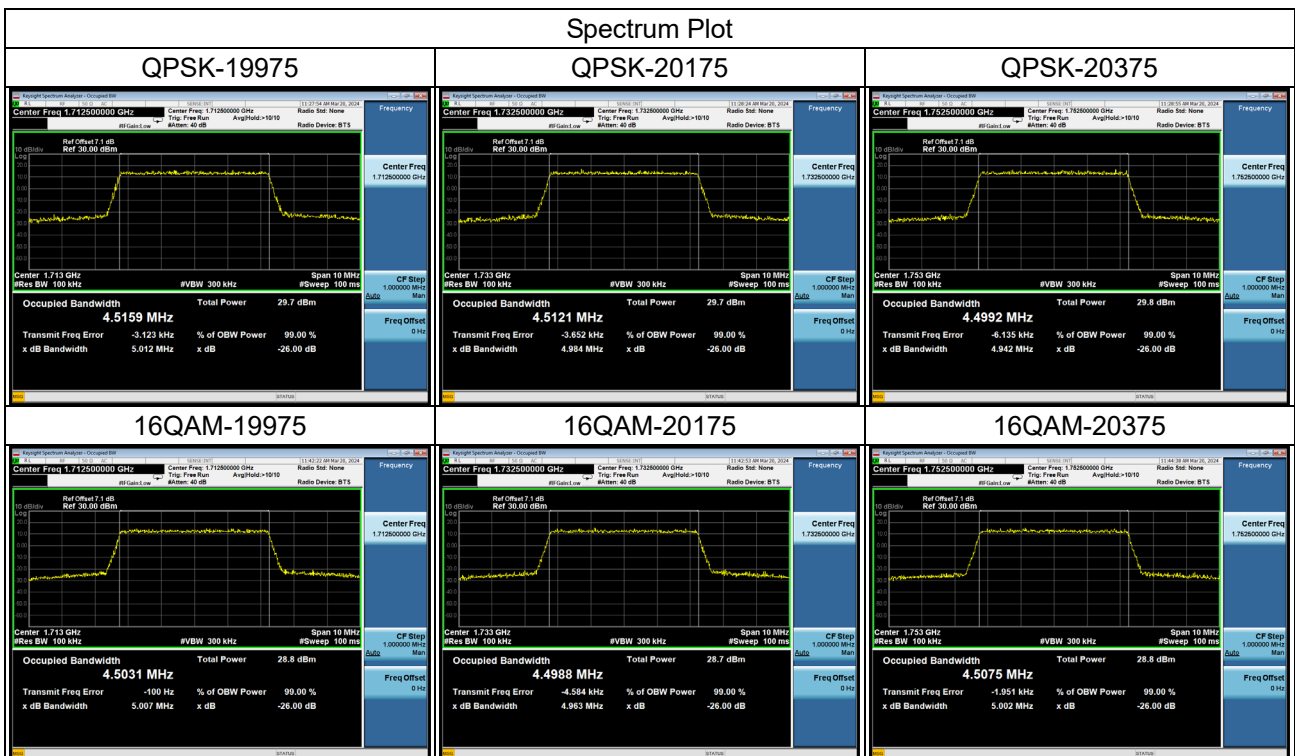
LTE Band 4_1.4MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
19957	1710.7	1.1030	1.0912	1.314	1.280
20175	1732.5	1.0880	1.0954	1.274	1.296
20393	1754.3	1.0955	1.0858	1.299	1.286



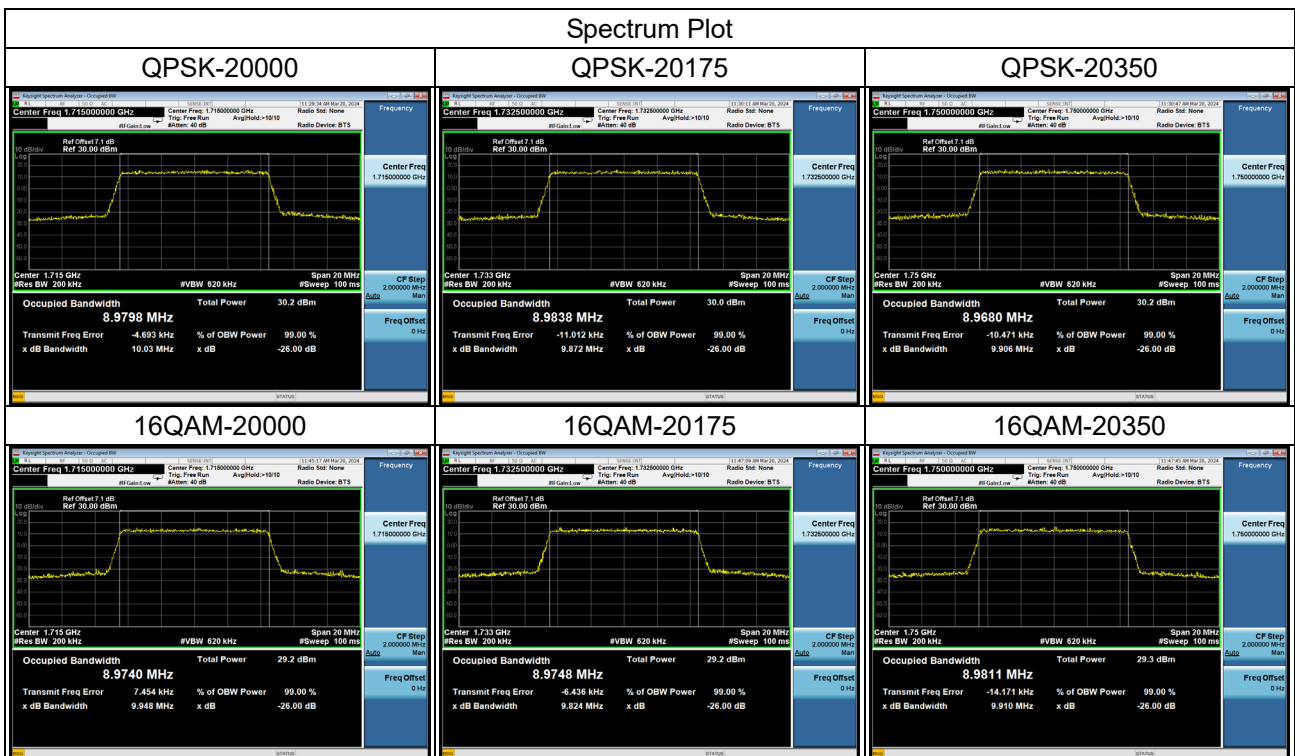
LTE Band 4_3MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
19965	1711.5	2.6933	2.7026	2.978	2.999
20175	1732.5	2.7010	2.7016	2.985	2.978
20385	1753.5	2.6930	2.6974	2.990	2.983



LTE Band 4_5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
19975	1712.5	4.5159	4.5031	5.012	5.007
20175	1732.5	4.5121	4.4988	4.984	4.963
20375	1752.5	4.4992	4.5075	4.942	5.002



LTE Band 4_10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
20000	1715	8.9798	8.9740	10.03	9.948
20175	1732.5	8.9838	8.9748	9.872	9.824
20350	1715	8.9680	8.9811	9.906	9.910



LTE Band 4_15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
20025	1717.5	13.466	13.439	14.69	14.74
20175	1732.5	13.447	13.454	14.69	14.63
20325	1747.5	13.443	13.462	14.68	14.61

