FCC Test Report
(Part 27)

Report No.:	RF200519C01-3
FCC ID:	A3LSMT975
Test Model:	SM-T975
Received Date:	May 19, 2020
Test Date:	May 20 ~ Jun. 24, 2020
Issued Date:	Jun. 29, 2020
Applicant:	SAMSUNG ELECTRONICS CO. LTD.
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Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
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FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RF200519C01-3	Original release	Jun. 29, 2020

1 Certificate of Conformity

Product: Tablet

Brand: Samsung

Test Model: SM-T975

Sample Status: Engineering Sample

Applicant: SAMSUNG ELECTRONICS CO. LTD.

Test Date: May 20 ~ Jun. 24, 2020

Standards: FCC Part 27, Subpart C, F, H, L, M

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Pettie Chen , **Date:** Jun. 29, 2020

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Jun. 29, 2020

Bruce Chen / Senior Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2							
FCC Clause					Test Item	Result	Remarks
WCDMA B4 / LTE B4	LTE B12	LTE B13	LTE B41	LTE B66			
2.1046 27.50 (d)(4)	2.1046 27.50 (c)	2.1046 27.50 (b)	2.1046 27.50 (h)(2)	2.1046 27.50 (d)(4)	Equivalent Isotropically Radiated Power / Equivalent Radiated Power	Pass	Meet the requirement of limit.
2.1047	2.1047	2.1047	2.1047	2.1047	Modulation Characteristics	Pass	Meet the requirement of limit.
27.50 (d)(5)	----	----	----	27.50 (d)(5)	Peak To Average Ratio	Pass	Meet the requirement of limit.
2.1055 27.54	2.1055 27.54	2.1055 27.54	2.1055 27.54	2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	Pass	Meet the requirement of limit.
2.1049	2.1049	2.1049	2.1049	2.1049	Occupied Bandwidth	Pass	Meet the requirement of limit.
2.1051 27.53(h)	2.1051 27.53(g)	2.1051 27.53(c)	2.1051 27.53 (m)(4)(6)	2.1051 27.53(h)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(h)	2.1051 27.53(g)	2.1051 27.53(c)(f)	2.1051 27.53 (m)(4)(6)	2.1051 27.53(h)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(h)	2.1053 27.53(g)	2.1053 27.53(c)(f)	2.1053 27.53 (m)(4)(6)	2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -6.9dB at 1564.00MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.63 dB
	200MHz ~1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 16, 2020	Apr. 15, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 12, 2019	Jun. 11, 2020
			Jun. 12, 2020	Jun. 11, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101582	Mar. 31, 2020	Mar. 30, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 07, 2019	Nov. 06, 2020
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
BILOG Antenna SCHWARZBECK	VULB9168	9168-158	Nov. 08, 2019	Nov. 07, 2020
Loop Antenna TESEQ	HLA 6121	45745	Jul. 01, 2019	Jun. 30, 2020
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jul. 11, 2019	Jul. 10, 2020
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 18, 2020	Feb. 17, 2021
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 18, 2020	Jan. 17, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Jul. 11, 2019	Jul. 10, 2020
RF signal cable Woken	8D-FB	Cable-CH9-01	Jul. 30, 2019	Jul. 29, 2020
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	BAF-02	5	NA	NA
Standard Temperature And Humidity Chamber TERCHY	HRM-120RF	931022	Dec. 12, 2019	Dec. 11, 2020
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
DC Power Supply Keysight	U8002A	MY56330015	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6201462755	Feb. 13, 2020	Feb. 12, 2021
Digital Multimeter Fluke	87-III	70360742	Jun. 27, 2019	Jun. 26, 2020
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2019	Nov. 24, 2020

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.

3 General Information

3.1 General Description of EUT

Product	Tablet		
Brand	Samsung		
Test Model	SM-T975		
Status of EUT	Engineering Sample		
Power Supply Rating	9.0Vdc or 5.0Vdc (Adapter) 3.86Vdc (Battery)		
Modulation Type	WCDMA: BPSK, QPSK HSDPA: BPSK HSUPA: QPSK LTE: QPSK, 16QAM, 64QAM		
Operating Frequency	WCDMA Band 4		1712.4MHz ~ 1752.6MHz
	LTE Band 4	Channel Bandwidth 1.4MHz	1710.7MHz ~ 1754.3MHz
		Channel Bandwidth 3MHz	1711.5MHz ~ 1753.5MHz
		Channel Bandwidth 5MHz	1712.5MHz ~ 1752.5MHz
		Channel Bandwidth 10MHz	1715.0MHz ~ 1750.0MHz
		Channel Bandwidth 15MHz	1717.5MHz ~ 1747.5MHz
		Channel Bandwidth 20MHz	1720.0MHz ~ 1745.0MHz
	LTE Band 12	Channel Bandwidth 1.4MHz	699.7MHz ~ 715.3MHz
		Channel Bandwidth 3MHz	700.5MHz ~ 714.5MHz
		Channel Bandwidth 5MHz	701.5MHz ~ 713.5MHz
		Channel Bandwidth 10MHz	704.0MHz ~ 711.0MHz
	LTE Band 13	Channel Bandwidth 5MHz	779.5MHz ~ 784.5MHz
		Channel Bandwidth 10MHz	782.0MHz
	LTE Band 41	Channel Bandwidth 5MHz	2498.5MHz ~ 2687.5 MHz
		Channel Bandwidth 10MHz	2501.0MHz ~ 2685.0 MHz
		Channel Bandwidth 15MHz	2503.5MHz ~ 2682.5 MHz
		Channel Bandwidth 20MHz	2506.0MHz ~ 2680.0 MHz
	LTE Band 66	Channel Bandwidth 1.4MHz	1710.7MHz ~ 1779.3MHz
		Channel Bandwidth 3MHz	1711.5MHz ~ 1778.5MHz
		Channel Bandwidth 5MHz	1712.5MHz ~ 1777.5MHz
		Channel Bandwidth 10MHz	1715.0MHz ~ 1775.0MHz
		Channel Bandwidth 15MHz	1717.5MHz ~ 1772.5MHz
		Channel Bandwidth 20MHz	1720.0MHz ~ 1770.0MHz

Max. EIRP Power	WCDMA Band 4		64.565mW (18.1dBm)		
			QPSK	16QAM	64QAM
	LTE Band 4	Channel Bandwidth 1.4MHz	40.738mW (16.1dBm)	33.884mW (15.3dBm)	30.200mW (14.8dBm)
		Channel Bandwidth 3MHz	39.811mW (16.0dBm)	30.903mW (14.9dBm)	26.915mW (14.3dBm)
		Channel Bandwidth 5MHz	36.308mW (15.6dBm)	29.512mW (14.7dBm)	26.303mW (14.2dBm)
		Channel Bandwidth 10MHz	41.687mW (16.2dBm)	33.884mW (15.3dBm)	30.903mW (14.9dBm)
		Channel Bandwidth 15MHz	37.154mW (15.7dBm)	29.512mW (14.7dBm)	26.303mW (14.2dBm)
		Channel Bandwidth 20MHz	42.658mW (16.3dBm)	33.113mW (15.2dBm)	29.512mW (14.7dBm)
	LTE Band 41	Channel Bandwidth 5MHz	61.660mW (17.9dBm)	50.119mW (17.0dBm)	45.709mW (16.6dBm)
		Channel Bandwidth 10MHz	57.544mW (17.6dBm)	43.652mW (16.4dBm)	39.811mW (16.0dBm)
		Channel Bandwidth 15MHz	58.884mW (17.7dBm)	47.863mW (16.8dBm)	42.658mW (16.3dBm)
		Channel Bandwidth 20MHz	63.096mW (18.0dBm)	51.286mW (17.1dBm)	46.774mW (16.7dBm)
	LTE Band 66	Channel Bandwidth 1.4MHz	75.858mW (18.8dBm)	58.884mW (17.7dBm)	53.703mW (17.3dBm)
		Channel Bandwidth 3MHz	64.565mW (18.1dBm)	52.481mW (17.2dBm)	45.709mW (16.6dBm)
		Channel Bandwidth 5MHz	69.183mW (18.4dBm)	56.234mW (17.5dBm)	50.119mW (17.0dBm)
		Channel Bandwidth 10MHz	74.131mW (18.7dBm)	56.234mW (17.5dBm)	51.286mW (17.1dBm)
		Channel Bandwidth 15MHz	64.565mW (18.1dBm)	51.286mW (17.1dBm)	46.774mW (16.7dBm)
		Channel Bandwidth 20MHz	77.625mW (18.9dBm)	61.660mW (17.9dBm)	51.286mW (17.1dBm)
Max. ERP Power			QPSK	16QAM	64QAM
	LTE Band 12	Channel Bandwidth 1.4MHz	67.608mW (18.3dBm)	54.954mW (17.4dBm)	50.119mW (17.0dBm)
		Channel Bandwidth 3MHz	67.608mW (18.3dBm)	51.286mW (17.1dBm)	44.668mW (16.5dBm)
		Channel Bandwidth 5MHz	69.183mW (18.4dBm)	53.703mW (17.3dBm)	46.774mW (16.7dBm)
		Channel Bandwidth 10MHz	70.795mW (18.5dBm)	51.286mW (17.1dBm)	44.668mW (16.5dBm)
	LTE Band 13	Channel Bandwidth 5MHz	81.283mW (19.1dBm)	64.565mW (18.1dBm)	58.884mW (17.7dBm)
		Channel Bandwidth 10MHz	85.114mW (19.3dBm)	66.069mW (18.2dBm)	57.544mW (17.6dBm)

Emission Designator	WCDMA Band 4		4M16F9W		
			QPSK	16QAM	64QAM
	LTE Band 4	Channel Bandwidth 1.4MHz	1M09G7D	1M09D7W	1M09D7W
		Channel Bandwidth 3MHz	2M70G7D	2M69D7W	2M70D7W
		Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M50D7W
		Channel Bandwidth 10MHz	8M96G7D	8M96D7W	8M96D7W
		Channel Bandwidth 15MHz	13M5G7D	13M5D7W	13M5D7W
		Channel Bandwidth 20MHz	17M9G7D	18M0D7W	18M0D7W
	LTE Band 12	Channel Bandwidth 1.4MHz	1M09G7D	1M09D7W	1M09D7W
		Channel Bandwidth 3MHz	2M70G7D	2M69D7W	2M73D7W
		Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M49D7W
		Channel Bandwidth 10MHz	8M96G7D	8M96D7W	8M96D7W
	LTE Band 13	Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M49D7W
		Channel Bandwidth 10MHz	8M93G7D	8M93D7W	8M92D7W
	LTE Band 41	Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M48D7W
		Channel Bandwidth 10MHz	8M96G7D	8M97D7W	8M96D7W
		Channel Bandwidth 15MHz	13M5G7D	13M4D7W	13M4D7W
		Channel Bandwidth 20MHz	17M9G7D	17M9D7W	17M9D7W
	LTE Band 66	Channel Bandwidth 1.4MHz	1M09G7D	1M09D7W	1M09D7W
		Channel Bandwidth 3MHz	2M70G7D	2M70D7W	2M70D7W
		Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M49D7W
		Channel Bandwidth 10MHz	8M96G7D	8M96D7W	8M95D7W
		Channel Bandwidth 15MHz	13M5G7D	13M4D7W	13M4D7W
		Channel Bandwidth 20MHz	17M9G7D	18M0D7W	17M9D7W
Antenna Type	Refer to Note as below				
Antenna Connector	Refer to Note as below				
Accessory Device	Refer to Note as below				
Cable Supplied	Refer to Note as below				

Note:

1. The EUT uses following antenna.

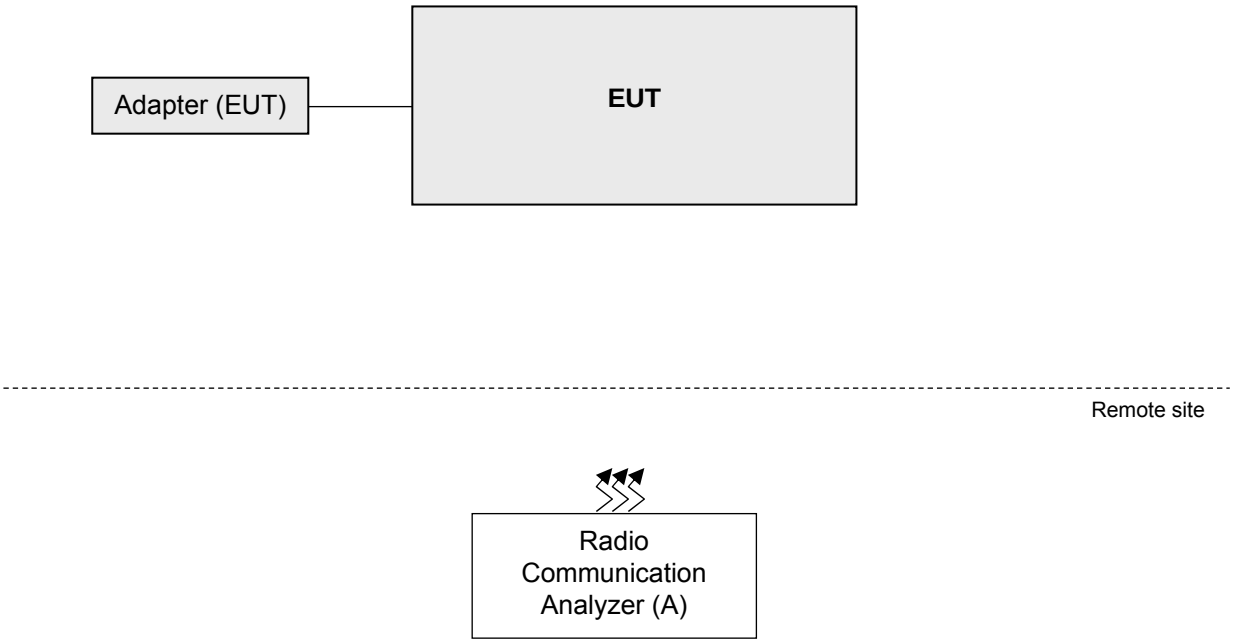
Antenna Type	Connector Type	Band	Freq. (MHz)	Antenna Gain (dBi)
Metal Antenna	C-clip	LTE Band 12	699	-5.86
			707	-5.12
			716	-5.96
			729	-5.80
			737	-5.78
			746	-6.03
		LTE Band 13	746	-6.03
			751	-5.12
			756	-6.04
			777	-5.63
			782	-5.24
			787	-5.36
		LTE Band 4, LTE Band 66, WCDMA Band 4	1710	-5.94
			1745	-5.86
			1780	-5.47
			2110	-5.70
			2155	-5.80
			2200	-5.58
		LTE Band 41	2496	-4.44
			2593	-5.14
			2690	-5.70

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2. The EUT uses following accessory devices.

Accessories	Brand	Model	Manufacturer	Specification
Earphone	Samsung	EHS64	Samsung	3.5mm
S-pen	Samsung	EJ-PT870	Samsung	Bluetooth
Keyboard	Samsung	EF-DT970	Samsung	N/A
Cable	Samsung	EP-DG930M	Samsung	A to C type, shielded, 1.0m
Adapter	Samsung	EP-TA200	Samsung	I/P: 100-240Vac, 50-60Hz, 0.5A O/P: 9.0Vdc, 1.67A or 5.0Vdc, 2.0A
Battery	Samsung	EB-BT975ABY	Samsung	Rating: 3.86Vdc, 9800mAh, 37.83Wh

3.2 Configuration of System under Test



3.2.1 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.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Radio Communication Analyzer	Anritsu	MT8821C	6261806803	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane (For WCDMA Band 4, LTE Band 4, 41, 66) and X-plane (For LTE Band 12, 13). Following channel(s) was (were) selected for the final test as listed below.

WCDMA Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA
-	Modulation Characteristics	1312 to 1513	1413(1732.6MHz)	WCDMA, HSDPA, HSUPA
-	Frequency Stability	1312 to 1513	1312(1712.4MHz), 1513(1752.6MHz)	WCDMA
-	Occupied Bandwidth	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA, HSDPA, HSUPA
-	Band Edge	1312 to 1513	1312(1712.4MHz), 1513(1752.6MHz)	WCDMA, HSDPA, HSUPA
-	Peak To Average Ratio	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA, HSDPA, HSUPA
-	Conducted Emission	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA, HSDPA, HSUPA
-	Radiated Emission Below 1GHz	1312 to 1513	1413(1732.6MHz)	WCDMA
-	Radiated Emission Above 1GHz	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA

LTE Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	19957 to 20393	19957(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		19965 to 20385	19965(1711.5MHz), 20175(1732.5MHz), 20385(1753.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20175(1732.5MHz), 20350(1750.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		20025 to 20325	20025(1717.5MHz), 20175(1732.5MHz), 20325(1747.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset
-	Modulation Characteristics	20050 to 20300	20175(1732.5MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Frequency Stability	19957 to 20393	19957(1710.7MHz), 20393(1754.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		19965 to 20385	19965(1711.5MHz), 20385(1753.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20375(1752.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20350(1750.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
		20025 to 20325	20025(1717.5MHz), 20325(1747.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20300(1745.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Emission Bandwidth	19957 to 20393	19957(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	6 RB / 0RB Offset
		19965 to 20385	19965(1711.5MHz), 20175(1732.5MHz), 20385(1753.5MHz)	3MHz	QPSK / 16QAM / 64QAM	15 RB / 0RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25RB / 0RB Offset
		20000 to 20350	20000(1715.0MHz), 20175(1732.5MHz), 20350(1750.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50RB / 0RB Offset
		20025 to 20325	20025(1717.5MHz), 20175(1732.5MHz), 20325(1747.5MHz)	15MHz	QPSK / 16QAM / 64QAM	75 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Band Edge	19957 to 20393	19957(1710.7MHz), 20393(1754.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset 1 RB / 5 RB Offset 6 RB / 0 RB Offset
		19965 to 20385	19965(1711.5MHz), 20385(1753.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset 1 RB / 14 RB Offset 15 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20375(1752.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20350(1750.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
		20025 to 20325	20025(1717.5MHz), 20325(1747.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset 75 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20300(1745.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset 100 RB / 0 RB Offset
-	Peak To Average Ratio	19957 to 20393	19957(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		19965 to 20385	19965(1711.5MHz), 20175(1732.5MHz), 20385(1753.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20175(1732.5MHz), 20350(1750.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		20025 to 20325	20025(1717.5MHz), 20175(1732.5MHz), 20325(1747.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Conducted Emission	19957 to 20393	19957(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	19965(1711.5MHz), 20175(1732.5MHz), 20385(1753.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20175(1732.5MHz), 20350(1750.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		20025 to 20325	20025(1717.5MHz), 20175(1732.5MHz), 20325(1747.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	20050 to 20300	20050(1720.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	19957 to 20393	19957(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.
2. The conducted output power for QPSK, 16QAM and 64QAM measured value of QPSK is higher than 16QAM and 64QAM mode. Therefore, only EIRP, Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under QPSK mode only.

LTE Band 12

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23095(707.5MHz), 23165(714.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5 MHz), 23130(711.0 MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
-	Modulation Characteristics	23060 to 23130	23095(707.5MHz)	10MHz	QPSK / 16QAM / 64QAM	50 RB / 0 RB Offset
-	Frequency Stability	23017 to 23173	23017(699.7MHz), 23173(715.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23165(714.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23155(713.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23130(711.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
-	Emission Bandwidth	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	6 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23095(707.5MHz), 23165(714.5MHz)	3MHz	QPSK / 16QAM / 64QAM	15 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5MHz), 23130(711.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50 RB / 0 RB Offset
-	Band Edge	23017 to 23173	23017(699.7MHz), 23173(715.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset 1 RB / 5 RB Offset 6 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23165(714.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset 1 RB / 14 RB Offset 15 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23155(713.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23130(711.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Peak to Average Ratio	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23095(707.5MHz), 23165(714.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5MHz), 23130(711.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
-	Conducted Emission	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23095(707.5MHz), 23165(714.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5MHz), 23130(711.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	23017 to 23173	23173(715.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5MHz), 23130(711.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.
2. The conducted output power for QPSK, 16QAM and 64QAM measured value of QPSK is higher than 16QAM and 64QAM mode. Therefore, only ERP, Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under QPSK mode only.

LTE Band 13

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
-	Modulation Characteristics	23230	23230(782.0MHz),	10MHz	QPSK / 16QAM / 64QAM	50 RB / 0 RB Offset
-	Frequency Stability	23205 to 23255	23205(779.5MHz), 23255(784.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		23230	23230(782.0MHz),	10MHz	QPSK	50 RB / 0 RB Offset
-	Emission Bandwidth	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50 RB / 0 RB Offset
-	Band Edge	23205 to 23255	23205(779.5MHz), 23255(784.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
-	Peak to Average Ratio	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
-	Conducted Emission	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	23230	23230(782.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 5MHz & highest channel bandwidth for final test.
2. The conducted output power for QPSK, 16QAM and 64QAM measured value of QPSK is higher than 16QAM and 64QAM mode. Therefore, only ERP, Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under QPSK mode only.

LTE Band 41

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		39700 to 41540	39700 (2501.0MHz), 40620 (2593.0MHz), 41540 (2685.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		39725 to 41515	39725 (2503.5MHz), 40620 (2593.0MHz), 41515 (2682.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset
-	Modulation Characteristics	39750 to 41490	40620 (2593.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Frequency Stability	39675 to 41565	39675 (2498.5MHz), 41565 (2687.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		39700 to 41540	39700 (2501.0MHz), 41540 (2685.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
		39725 to 41515	39725 (2503.5MHz), 41515 (2682.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 41490 (2680.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset
-	Emission Bandwidth	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25RB / 0RB Offset
		39700 to 41540	39700 (2501.0MHz), 40620 (2593.0MHz), 41540 (2685.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50RB / 0RB Offset
		39725 to 41515	39725 (2503.5MHz), 40620 (2593.0MHz), 41515 (2682.5MHz)	15MHz	QPSK / 16QAM / 64QAM	75 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Band Edge	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		39700 to 41540	39700 (2501.0MHz), 40620 (2593.0MHz), 41540 (2685.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
		39725 to 41515	39725 (2503.5MHz), 40620 (2593.0MHz), 41515 (2682.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset 75 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset 100 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Peak to Average Ratio	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		39700 to 41540	39700 (2501.0MHz), 40620 (2593.0MHz), 41540 (2685.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		39725 to 41515	39725 (2503.5MHz), 40620 (2593.0MHz), 41515 (2682.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
-	Conducted Emission	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		39700 to 41540	39700 (2501.0MHz), 40620 (2593.0MHz), 41540 (2685.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		39725 to 41515	39725 (2503.5MHz), 40620 (2593.0MHz), 41515 (2682.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	39675 to 41565	40620 (2593.0MHz)	5MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 5MHz & highest channel bandwidth for final test.
2. The conducted output power for QPSK, 16QAM and 64QAM measured value of QPSK is higher than 16QAM and 64QAM mode. Therefore, only EIRP, Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under QPSK mode only.

LTE Band 66

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132322 (1745.0MHz), 132657 (1778.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132322 (1745.0MHz), 132622 (1775.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132322 (1745.0MHz), 132597 (1772.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		132072 to 132575	132072 (1720.0MHz), 132322 (1745.0MHz), 132575 (1770.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset
-	Modulation Characteristics	132072 to 132575	132322 (1745.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Frequency Stability	131979 to 132665	131979 (1710.7MHz), 132665 (1779.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132657 (1778.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132647 (1777.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132622 (1775.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132597 (1772.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
		132072 to 132575	132072 (1720.0MHz), 132575 (1770.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Emission Bandwidth	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	6 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132322 (1745.0MHz), 132657 (1778.5MHz)	3MHz	QPSK / 16QAM / 64QAM	15 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132322 (1745.0MHz), 132622 (1775.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132322 (1745.0MHz), 132597 (1772.5MHz)	15MHz	QPSK / 16QAM / 64QAM	75 RB / 0 RB Offset
		132072 to 132575	132072 (1720.0MHz), 132322 (1745.0MHz), 132575 (1770.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Band Edge	131979 to 132665	131979 (1710.7MHz), 132665 (1779.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset 1 RB / 5 RB Offset 6 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132657 (1778.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset 1 RB / 14 RB Offset 15 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132647 (1777.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132622 (1775.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132597 (1772.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset 75 RB / 0 RB Offset
		132072 to 132575	132072 (1720.0MHz), 132575 (1770.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset 100 RB / 0 RB Offset
-	Peak to Average Ratio	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132322 (1745.0MHz), 132657 (1778.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132322 (1745.0MHz), 132622 (1775.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132322 (1745.0MHz), 132597 (1772.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset
		132072 to 132575	132072 (1720.0MHz), 132322 (1745.0MHz), 132575 (1770.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Conducted Emission	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132322 (1745.0MHz), 132657 (1778.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132322 (1745.0MHz), 132622 (1775.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132322 (1745.0MHz), 132597 (1772.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset
		132072 to 132575	132072 (1720.0MHz), 132322 (1745.0MHz), 132575 (1770.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	131979 to 132665	131979 (1710.7MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		132072 to 132575	132072 (1720.0MHz), 132322 (1745.0MHz), 132575 (1770.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.
2. The conducted output power for QPSK, 16QAM and 64QAM measured value of QPSK is higher than 16QAM and 64QAM mode. Therefore, only EIRP, Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under QPSK mode only.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP / ERP	22deg. C, 66%RH	120Vac, 60Hz	Han Wu
Modulation characteristics	24deg. C, 64%RH	120Vac, 60Hz	James Yang
Frequency Stability	24deg. C, 64%RH	3.86Vdc	James Yang
Occupied Bandwidth	24deg. C, 64%RH	120Vac, 60Hz	James Yang
Band Edge	24deg. C, 64%RH	120Vac, 60Hz	James Yang
Peak To Average Ratio	24deg. C, 64%RH	120Vac, 60Hz	James Yang
Conducted Emission	24deg. C, 64%RH	120Vac, 60Hz	James Yang
Radiated Emission	22deg. C, 66%RH	120Vac, 60Hz	Greg Lin Han Wu

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and References:

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 27

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

WCDMA, LTE Band 4, LTE Band 66:
Mobile / Portable station are limited to 1 watts e.i.r.p.

LTE Band 12, LTE Band 13:
Control and mobile stations in the 698-746 MHz, 746-757 MHz, 787-788 MHz and 805-806 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, 746-757 MHz,787-788 MHz and 805-806 MHz band are limited to 3 watts ERP.

LTE Band 41:
Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with WCDMA, 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.

EIRP / ERP Measurement:

a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5MHz for WCDMA mode and 20MHz for LTE mode.
b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15dBi.

   Where:

   $ERP/EIRP = P_{Meas} + G_T - L_C$

   P_{Meas} : Measure transmitter output power.
   G_T : Gain of the transmitting antenna.
   L_C : signal attenuation in the connecting cable between the transmitter and antenna.

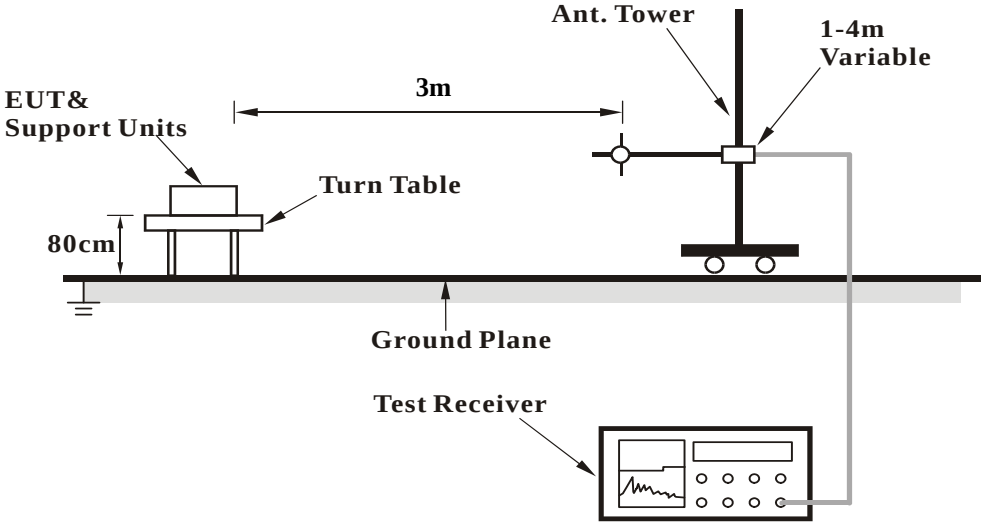
4.1.3 Test Setup

Conducted Power Measurement:

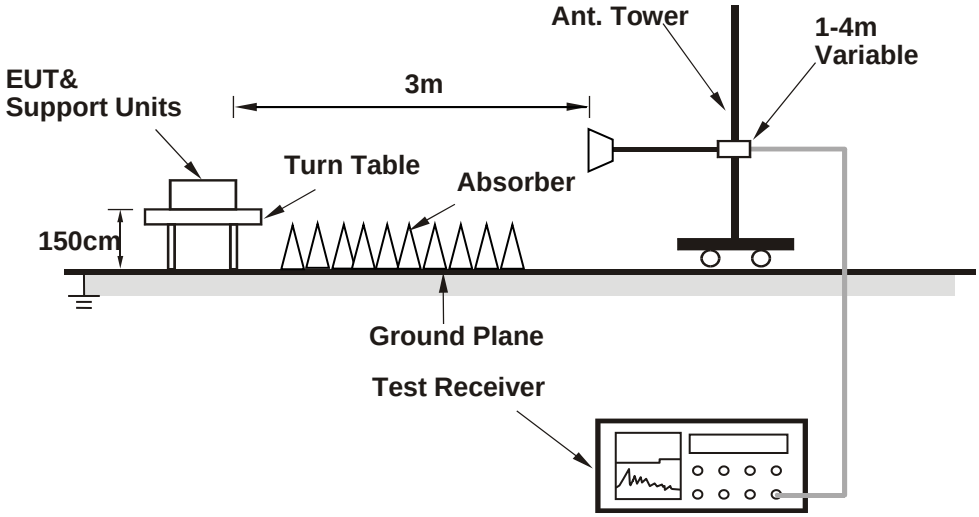
For the actual test configuration, please refer to the attached file (Test Setup Photo).

EIRP / ERP Measurement:

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.4 Test Results

Conducted Output Power (dBm)

Band	WCDMA IV		
Channel	1312	1413	1513
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	23.31	23.29	**23.39**
HSDPA Subtest-1	22.32	22.35	22.41
HSDPA Subtest-2	22.29	22.33	22.42
HSDPA Subtest-3	21.85	21.81	21.87
HSDPA Subtest-4	21.82	21.82	21.89
DC-HSDPA Subtest-1	22.31	22.32	22.38
DC-HSDPA Subtest-2	22.26	22.30	22.39
DC-HSDPA Subtest-3	21.83	21.78	21.86
DC-HSDPA Subtest-4	21.79	21.81	21.88
HSUPA Subtest-1	22.35	22.29	22.35
HSUPA Subtest-2	20.28	20.32	20.36
HSUPA Subtest-3	21.29	21.28	21.35
HSUPA Subtest-4	20.07	20.05	20.15
HSUPA Subtest-5	22.31	22.32	22.41

LTE Band 4						
BW	MCS Index	Channel		19957	20175	20393
		Frequency (MHz)		1710.7	1732.5	1754.3
1.4M	QPSK	1	0	22.86	22.93	23.03
		1	2	22.86	22.86	22.89
		1	5	22.84	22.75	22.89
		3	0	23.03	22.96	23.02
		3	1	22.99	22.95	22.96
		3	3	**23.04**	22.87	22.95
		6	0	21.96	21.84	22.03
	16QAM	1	0	22.00	21.84	21.98
		1	2	21.85	21.81	22.08
		1	5	21.88	21.79	22.00
		3	0	**22.09**	22.00	22.03
		3	1	21.98	22.01	22.05
		3	3	21.98	21.89	22.05
		6	0	20.96	20.80	20.91
	64QAM	1	0	21.16	21.00	**21.21**
		1	2	21.09	20.96	21.18
		1	5	20.91	20.91	20.98
		3	0	20.95	20.91	21.06
		3	1	20.96	20.79	21.07
		3	3	20.87	20.98	20.96
		6	0	19.96	19.97	19.94

LTE Band 4						
BW	**MCS Index**	**Channel**		**19965**	**20175**	**20385**
		Frequency (MHz)		**1711.5**	**1732.5**	**1753.5**
3M	QPSK	1	0	**22.98**	22.80	**22.98**
		1	7	22.89	22.75	22.92
		1	14	22.75	22.60	22.78
		8	0	21.98	21.87	22.03
		8	3	21.89	21.94	22.03
		8	7	22.01	21.88	22.05
		15	0	21.95	21.92	22.09
	16QAM	1	0	21.93	21.79	**22.06**
		1	7	22.00	21.89	22.04
		1	14	21.97	21.78	22.01
		8	0	21.04	20.95	21.09
		8	3	20.98	20.94	21.09
		8	7	20.98	20.86	21.08
		15	0	20.95	20.90	21.01
	64QAM	1	0	21.03	21.13	21.10
		1	7	**21.16**	20.96	21.07
		1	14	20.88	20.87	20.94
		8	0	20.01	20.00	20.07
		8	3	20.01	19.98	19.96
		8	7	19.96	19.90	20.03
		15	0	20.05	19.87	20.01

LTE Band 4						
BW	MCS Index	Channel		19975	20175	20375
		Frequency (MHz)		1712.5	1732.5	1752.5
5M	QPSK	1	0	**22.97**	22.79	22.92
		1	12	22.89	22.81	22.87
		1	24	22.73	22.63	22.84
		12	0	21.99	21.88	21.90
		12	6	22.00	21.98	22.08
		12	13	21.95	21.86	21.93
		25	0	21.95	21.88	21.78
	16QAM	1	0	**21.94**	21.80	21.92
		1	12	21.83	21.91	21.90
		1	24	21.92	21.83	21.90
		12	0	21.01	20.96	21.14
		12	6	21.01	20.87	21.10
		12	13	21.00	20.95	21.01
		25	0	20.92	20.86	20.89
	64QAM	1	0	21.04	21.06	21.17
		1	12	21.17	21.01	**21.25**
		1	24	20.95	21.01	21.06
		12	0	19.97	19.90	20.08
		12	6	19.86	19.98	20.06
		12	13	19.95	19.91	20.00
		25	0	19.92	19.93	20.07

LTE Band 4						
BW	MCS Index	Channel		20000	20175	20350
		Frequency (MHz)		1715	1732.5	1750
10M	QPSK	1	0	22.91	22.93	**23.03**
		1	24	22.90	22.86	22.91
		1	49	22.84	22.70	22.78
		25	0	21.91	21.87	22.04
		25	12	21.96	21.96	21.92
		25	25	21.96	21.93	21.93
		50	0	22.02	21.96	21.95
	16QAM	1	0	21.90	21.93	**22.02**
		1	24	21.96	21.90	21.97
		1	49	21.92	21.93	21.97
		25	0	20.93	20.96	21.02
		25	12	20.99	20.89	21.00
		25	25	20.92	20.97	20.95
		50	0	20.96	20.87	20.99
	64QAM	1	0	**21.18**	21.07	21.16
		1	24	21.09	21.03	21.02
		1	49	21.01	20.86	21.10
		25	0	20.03	19.86	20.07
		25	12	19.94	19.96	20.01
		25	25	19.93	19.99	19.93
		50	0	19.91	19.85	19.97

LTE Band 4						
BW	MCS Index	Channel		20025	20175	20325
		Frequency (MHz)		1717.5	1732.5	1747.5
15M	QPSK	1	0	**23.05**	22.98	23.03
		1	37	23.01	22.98	23.02
		1	74	22.79	22.74	22.87
		36	0	22.03	22.04	22.11
		36	19	22.08	22.02	22.12
		36	39	22.04	22.00	22.05
		75	0	21.97	21.97	22.08
	16QAM	1	0	**22.07**	21.95	**22.07**
		1	37	22.04	21.95	22.03
		1	74	22.03	21.94	22.04
		36	0	21.10	21.07	21.09
		36	19	21.02	20.96	21.06
		36	39	21.02	21.00	21.10
		75	0	21.07	20.94	21.11
	64QAM	1	0	21.19	21.11	**21.25**
		1	37	21.11	21.08	21.21
		1	74	21.03	21.00	21.11
		36	0	20.04	19.96	20.14
		36	19	20.05	20.00	20.08
		36	39	20.03	19.98	20.11
		75	0	20.00	19.97	20.05

LTE Band 4						
BW	MCS Index	Channel		20050	20175	20300
		Frequency (MHz)		1720	1732.5	1745
20M	QPSK	1	0	23.06	23.01	**23.12**
		1	50	23.04	22.99	23.10
		1	99	22.88	22.83	22.94
		50	0	22.10	22.05	22.16
		50	25	22.09	22.04	22.15
		50	50	22.07	22.02	22.13
		100	0	22.06	22.01	22.12
	16QAM	1	0	22.08	22.03	**22.14**
		1	50	22.06	22.01	22.12
		1	99	22.05	22.00	22.11
		50	0	21.13	21.08	21.19
		50	25	21.10	21.05	21.16
		50	50	21.09	21.04	21.15
		100	0	21.07	21.02	21.13
	64QAM	1	0	21.22	21.17	**21.28**
		1	50	21.20	21.15	21.26
		1	99	21.08	21.03	21.14
		50	0	20.10	20.05	20.16
		50	25	20.08	20.03	20.14
		50	50	20.07	20.02	20.13
		100	0	20.06	20.01	20.12

LTE Band 12						
BW	MCS Index	Channel		23017	23095	23173
		Frequency (MHz)		699.7	707.5	715.3
1.4M	QPSK	1	0	23.77	23.90	23.94
		1	2	23.53	23.57	**23.98**
		1	5	23.57	23.61	23.87
		3	0	23.72	23.65	23.95
		3	1	23.58	23.75	23.88
		3	3	23.44	23.52	23.70
		6	0	22.62	22.69	22.72
	16QAM	1	0	23.09	23.27	**23.43**
		1	2	22.81	22.92	23.19
		1	5	22.77	23.00	23.13
		3	0	22.62	22.74	22.85
		3	1	22.75	22.78	22.95
		3	3	22.67	22.67	22.84
		6	0	21.68	21.69	21.95
	64QAM	1	0	21.79	21.99	**22.14**
		1	2	21.80	21.98	22.06
		1	5	21.78	21.77	21.98
		3	0	21.69	21.65	21.87
		3	1	21.74	21.71	21.87
		3	3	21.68	21.80	21.87
		6	0	20.60	20.73	20.83

LTE Band 12						
BW	MCS Index	Channel		23025	23095	23165
		Frequency (MHz)		700.5	707.5	714.5
3M	QPSK	1	0	23.84	23.92	**24.05**
		1	7	23.58	23.75	23.93
		1	14	23.51	23.62	23.75
		8	0	22.68	22.73	22.81
		8	3	22.55	22.77	22.85
		8	7	22.52	22.58	22.78
		15	0	22.61	22.68	22.73
	16QAM	1	0	23.11	23.14	**23.38**
		1	7	22.97	23.02	23.18
		1	14	22.85	22.93	23.10
		8	0	21.67	21.74	21.85
		8	3	21.73	21.86	22.07
		8	7	21.59	21.67	21.76
		15	0	21.69	21.68	22.06
	64QAM	1	0	21.88	21.97	22.10
		1	7	21.81	21.99	**22.11**
		1	14	21.61	21.78	21.94
		8	0	20.64	20.79	20.85
		8	3	20.69	20.69	20.92
		8	7	20.70	20.75	20.85
		15	0	20.57	20.60	20.81

LTE Band 12						
BW	MCS Index	Channel		23035	23095	23155
		Frequency (MHz)		701.5	707.5	713.5
5M	QPSK	1	0	23.85	23.85	**24.08**
		1	12	23.74	23.78	23.92
		1	24	23.68	23.69	23.91
		12	0	22.73	22.77	23.01
		12	6	22.69	22.74	22.89
		12	13	22.60	22.62	22.79
		25	0	22.70	22.75	22.84
	16QAM	1	0	23.23	23.24	**23.45**
		1	12	23.03	23.05	23.23
		1	24	22.94	22.94	23.11
		12	0	21.73	21.77	21.93
		12	6	21.84	21.84	22.10
		12	13	21.72	21.72	21.98
		25	0	21.83	21.83	22.05
	64QAM	1	0	22.01	22.02	**22.20**
		1	12	21.89	22.01	22.11
		1	24	21.72	21.85	22.00
		12	0	20.73	20.79	21.00
		12	6	20.73	20.86	20.99
		12	13	20.73	20.82	20.94
		25	0	20.71	20.83	20.97

LTE Band 12						
BW	MCS Index	Channel		23060	23095	23130
		Frequency (MHz)		704	707.5	711
10M	QPSK	1	0	23.89	23.95	**24.12**
		1	24	23.76	23.82	23.99
		1	49	23.73	23.79	23.96
		25	0	22.78	22.84	23.01
		25	12	22.76	22.82	22.99
		25	25	22.66	22.72	22.89
		50	0	22.73	22.76	22.93
	16QAM	1	0	23.26	23.32	**23.49**
		1	24	23.03	23.09	23.26
		1	49	22.94	23.02	23.17
		25	0	21.82	21.86	22.03
		25	12	21.88	21.94	22.11
		25	25	21.76	21.82	21.99
		50	0	21.83	21.89	22.06
	64QAM	1	0	22.02	22.06	**22.23**
		1	24	21.98	22.04	22.21
		1	49	21.82	21.88	22.05
		25	0	20.78	20.84	21.01
		25	12	20.81	20.86	21.03
		25	25	20.79	20.85	21.02
		50	0	20.74	20.83	20.97

LTE Band 13						
BW	MCS Index	Channel		23205	23230	23255
		Frequency (MHz)		779.5	782	784.5
5M	QPSK	1	0	23.68	**23.85**	23.81
		1	12	23.65	23.83	23.81
		1	24	23.66	23.81	23.79
		12	0	22.83	22.95	22.93
		12	6	22.77	22.92	22.90
		12	13	22.74	22.89	22.87
		25	0	22.76	22.91	22.89
	16QAM	1	0	23.01	23.15	23.13
		1	12	22.93	23.08	23.06
		1	24	23.13	**23.28**	23.26
		12	0	21.78	21.93	21.91
		12	6	21.82	21.97	21.95
		12	13	21.78	21.93	21.91
		25	0	21.84	21.99	21.97
	64QAM	1	0	21.93	22.08	22.06
		1	12	22.06	**22.21**	22.19
		1	24	22.02	22.15	22.13
		12	0	20.81	20.96	20.94
		12	6	20.86	21.01	20.99
		12	13	20.93	21.05	21.03
		25	0	20.83	20.98	20.96

LTE Band 13				
BW	MCS Index	Channel		23230
		Frequency (MHz)		782
10M	QPSK	1	0	**23.87**
		1	24	23.82
		1	49	23.83
		25	0	22.96
		25	12	22.91
		25	25	22.93
		50	0	22.78
	16QAM	1	0	23.25
		1	24	**23.31**
		1	49	23.03
		25	0	22.13
		25	12	21.98
		25	25	21.89
		50	0	21.85
	64QAM	1	0	21.85
		1	24	**22.18**
		1	49	21.89
		25	0	21.01
		25	12	20.99
		25	25	20.97
		50	0	20.88

LTE Band 41						
BW	MCS Index	Channel		39675	40620	41565
		Frequency (MHz)		2498.5	2593	2687.5
5M	QPSK	1	0	23.96	**24.01**	23.59
		1	12	23.96	23.94	23.62
		1	24	23.78	23.79	23.41
		12	0	23.10	23.17	22.73
		12	6	23.00	23.06	22.55
		12	13	22.98	23.00	22.49
		25	0	22.90	23.02	22.59
	16QAM	1	0	**23.01**	22.96	22.59
		1	12	22.95	22.98	22.60
		1	24	22.77	22.84	22.35
		12	0	22.04	22.17	21.70
		12	6	22.01	22.10	21.60
		12	13	21.89	22.02	21.57
		25	0	21.88	22.11	21.66
	64QAM	1	0	21.99	**22.04**	21.54
		1	12	21.97	21.99	21.60
		1	24	21.76	21.79	21.37
		12	0	21.03	21.12	20.64
		12	6	21.05	21.11	20.57
		12	13	20.91	21.02	20.49
		25	0	20.89	21.09	20.68

LTE Band 41						
BW	MCS Index	Channel		39700	40620	41540
		Frequency (MHz)		2501	2593	2685
10M	QPSK	1	0	23.96	**24.04**	23.66
		1	24	23.95	23.96	23.54
		1	49	23.74	23.78	23.42
		25	0	23.01	23.00	22.64
		25	12	23.04	23.05	22.59
		25	25	22.92	23.01	22.60
		50	0	23.02	23.00	22.65
	16QAM	1	0	23.04	**23.09**	22.65
		1	24	22.94	23.00	22.57
		1	49	22.66	22.75	22.42
		25	0	22.01	22.05	21.62
		25	12	22.01	22.05	21.61
		25	25	21.89	22.00	21.58
		50	0	22.00	22.02	21.63
	64QAM	1	0	22.01	**22.09**	21.62
		1	24	21.92	22.03	21.58
		1	49	21.74	21.76	21.38
		25	0	21.06	21.04	20.61
		25	12	21.03	21.06	20.59
		25	25	20.93	21.04	20.57
		50	0	20.98	21.02	20.67

LTE Band 41						
BW	MCS Index	Channel		39725	40620	41515
		Frequency (MHz)		2503.5	2593	2682.5
15M	QPSK	1	0	24.05	**24.13**	23.68
		1	37	24.01	24.06	23.65
		1	74	23.74	23.89	23.39
		36	0	23.05	23.18	22.68
		36	19	23.06	23.07	22.73
		36	39	23.02	22.97	22.58
		75	0	23.00	23.12	22.63
	16QAM	1	0	23.05	**23.08**	22.67
		1	37	23.04	23.03	22.59
		1	74	22.75	22.88	22.44
		36	0	22.07	22.09	21.72
		36	19	22.05	22.06	21.71
		36	39	21.93	22.07	21.64
		75	0	22.02	22.04	21.70
	64QAM	1	0	22.04	22.04	21.70
		1	37	21.94	**22.09**	21.62
		1	74	21.82	21.82	21.42
		36	0	21.08	21.15	20.77
		36	19	21.02	21.14	20.65
		36	39	20.98	20.98	20.59
		75	0	21.05	21.06	20.67

LTE Band 41						
BW	MCS Index	Channel		39750	40620	41490
		Frequency (MHz)		2506	2593	2680
20M	QPSK	1	0	24.08	**24.13**	23.72
		1	50	24.04	24.09	23.68
		1	99	23.84	23.89	23.48
		50	0	23.13	23.18	22.77
		50	25	23.12	23.15	22.74
		50	50	23.02	23.07	22.66
		100	0	23.08	23.13	22.72
	16QAM	1	0	22.93	22.98	22.57
		1	50	22.97	**23.02**	22.61
		1	99	22.88	22.93	22.52
		50	0	22.11	22.15	21.74
		50	25	22.23	22.28	21.87
		50	50	22.12	22.17	21.76
		100	0	22.13	22.18	21.77
	64QAM	1	0	21.42	21.47	21.06
		1	50	21.84	**21.89**	21.48
		1	99	21.43	21.48	21.07
		50	0	21.02	21.07	20.66
		50	25	21.28	21.33	20.92
		50	50	21.07	21.12	20.71
		100	0	21.06	21.11	20.75

LTE Band 66						
BW	MCS Index	Channel		131979	132322	132665
		Frequency (MHz)		1710.7	1745	1779.3
1.4M	QPSK	1	0	22.92	23.01	22.95
		1	2	22.84	22.91	23.09
		1	5	22.82	22.79	22.94
		3	0	23.05	22.95	23.10
		3	1	22.97	**23.11**	23.07
		3	3	22.95	22.99	23.00
		6	0	21.98	21.93	22.11
	16QAM	1	0	22.02	22.05	22.10
		1	2	21.94	22.04	22.11
		1	5	21.92	22.01	22.02
		3	0	22.12	22.10	22.14
		3	1	22.09	22.07	22.17
		3	3	22.02	22.11	**22.20**
		6	0	20.96	21.09	21.16
	64QAM	1	0	20.94	20.94	20.99
		1	2	20.88	20.93	21.07
		1	5	20.87	20.89	21.02
		3	0	21.15	21.11	**21.21**
		3	1	20.95	21.06	21.09
		3	3	20.98	20.99	21.05
		6	0	19.92	20.02	20.09

LTE Band 66						
BW	MCS Index	Channel		131987	132322	132657
		Frequency (MHz)		1711.5	1745	1778.5
3M	QPSK	1	0	22.91	22.87	**23.10**
		1	7	22.91	22.94	23.06
		1	14	22.82	22.80	23.01
		8	0	22.02	21.97	22.04
		8	3	21.95	21.99	22.08
		8	7	21.97	21.97	22.15
		15	0	21.95	21.92	22.09
	16QAM	1	0	21.99	22.03	22.05
		1	7	22.00	22.05	**22.15**
		1	14	22.03	22.01	22.06
		8	0	21.08	21.06	21.16
		8	3	21.12	21.08	21.14
		8	7	21.13	21.11	21.16
		15	0	20.90	21.01	21.21
	64QAM	1	0	20.92	20.98	**21.05**
		1	7	20.97	20.93	**21.05**
		1	14	20.83	21.00	21.00
		8	0	20.06	20.06	20.14
		8	3	20.06	20.04	20.25
		8	7	20.04	20.02	20.11
		15	0	19.98	20.11	20.18

LTE Band 66						
BW	MCS Index	Channel		131997	132322	132647
		Frequency (MHz)		1712.5	1745	1777.5
5M	QPSK	1	0	22.98	**22.99**	22.93
		1	12	22.81	22.95	22.84
		1	24	22.83	22.92	22.82
		12	0	22.08	22.09	21.99
		12	6	21.91	22.01	22.12
		12	13	21.98	22.01	22.07
		25	0	21.86	21.99	21.94
	16QAM	1	0	21.98	22.07	**22.21**
		1	12	22.06	21.98	22.20
		1	24	22.08	22.11	22.13
		12	0	21.11	21.14	21.11
		12	6	21.00	21.01	21.18
		12	13	21.01	21.11	21.14
		25	0	20.94	21.07	21.08
	64QAM	1	0	20.94	21.07	**21.21**
		1	12	20.85	20.95	21.10
		1	24	20.82	20.79	20.98
		12	0	20.01	20.22	20.25
		12	6	20.09	19.97	20.22
		12	13	20.02	20.13	20.23
		25	0	20.04	20.00	20.04

LTE Band 66						
BW	MCS Index	Channel		132022	132322	132622
		Frequency (MHz)		1715	1745	1775
10M	QPSK	1	0	22.99	23.01	23.00
		1	24	22.88	22.80	**23.05**
		1	49	22.92	22.81	22.97
		25	0	22.01	22.01	22.04
		25	12	22.03	21.90	22.08
		25	25	21.96	22.02	22.08
		50	0	21.97	21.88	22.02
	16QAM	1	0	21.97	22.05	22.12
		1	24	22.04	21.99	22.15
		1	49	22.02	21.90	**22.17**
		25	0	21.02	21.15	21.12
		25	12	21.12	21.05	21.25
		25	25	20.94	21.14	21.17
		50	0	20.98	20.95	21.19
	64QAM	1	0	20.92	**21.04**	20.97
		1	24	20.86	20.95	20.98
		1	49	20.83	20.83	20.97
		25	0	20.07	20.04	20.28
		25	12	20.07	20.15	20.14
		25	25	20.05	20.04	20.11
		50	0	20.05	19.98	20.07

LTE Band 66						
BW	**MCS Index**	**Channel**		**132047**	**132322**	**132597**
		Frequency (MHz)		**1717.5**	**1745**	**1772.5**
15M	QPSK	1	0	22.93	22.95	23.05
		1	37	22.98	23.02	**23.13**
		1	74	22.89	22.88	23.06
		36	0	22.07	22.15	22.28
		36	19	22.03	22.08	22.16
		36	39	22.08	22.11	22.21
		75	0	21.95	21.99	22.07
	16QAM	1	0	22.05	22.14	22.22
		1	37	22.03	22.05	22.15
		1	74	22.04	22.07	**22.23**
		36	0	21.13	21.13	21.21
		36	19	21.06	21.09	21.20
		36	39	21.09	21.10	21.21
		75	0	21.04	21.15	21.23
	64QAM	1	0	21.02	21.11	**21.14**
		1	37	20.95	20.98	21.08
		1	74	20.97	21.00	21.03
		36	0	20.17	20.18	20.24
		36	19	20.14	20.18	20.25
		36	39	20.05	20.11	20.15
		75	0	20.07	20.06	20.19

LTE Band 66						
BW	**MCS Index**	**Channel**		**132072**	**132322**	**132575**
		Frequency (MHz)		**1720**	**1745**	**1770**
20M	QPSK	1	0	23.02	23.05	**23.15**
		1	50	23.00	23.03	23.13
		1	99	22.94	22.97	23.07
		50	0	22.15	22.18	22.28
		50	25	22.10	22.13	22.23
		50	50	22.09	22.12	22.22
		100	0	22.04	22.07	22.17
	16QAM	1	0	22.13	22.16	**22.26**
		1	50	22.12	22.15	22.25
		1	99	22.10	22.13	22.23
		50	0	21.18	21.21	21.31
		50	25	21.16	21.19	21.29
		50	50	21.14	21.17	21.27
		100	0	21.12	21.15	21.25
	64QAM	1	0	21.08	21.11	**21.21**
		1	50	21.03	21.06	21.16
		1	99	21.00	21.03	21.13
		50	0	20.19	20.22	20.32
		50	25	20.16	20.19	20.29
		50	50	20.12	20.15	20.25
		100	0	20.10	20.13	20.23

EIRP / ERP Power

WCDMA Band 4

Mode	TX channel 1312, 1413, 1513						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.4	-29.2	8.8	0.7	9.5	30.0	-20.5
2	1732.6	-29.0	9.4	0.6	10.0	30.0	-20.0
3	1752.6	-29.6	9.2	0.5	9.7	30.0	-20.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.4	-20.6	17.2	0.7	17.9	30.0	-12.1
2	1732.6	-20.9	17.5	0.6	18.1	30.0	-11.9
3	1752.6	-21.3	17.5	0.5	18.0	30.0	-12.0

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

Modulation Type: QPSK

LTE Band 4, Channel Bandwidth: 1.4MHz

Mode	TX channel 19957, 20175, 20393						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-28.6	9.4	0.7	10.1	30.0	-19.9
2	1732.5	-28.9	9.5	0.6	10.1	30.0	-19.9
3	1754.3	-29.8	9.0	0.5	9.5	30.0	-20.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-22.4	15.4	0.7	16.1	30.0	-13.9
2	1732.5	-22.8	15.5	0.6	16.1	30.0	-13.9
3	1754.3	-23.4	15.5	0.5	16.0	30.0	-14.0

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 3MHz

Mode	TX channel 19965, 20175, 20385						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-28.9	9.1	0.7	9.8	30.0	-20.2
2	1732.5	-28.6	9.8	0.6	10.4	30.0	-19.6
3	1753.5	-29.3	9.5	0.5	10.0	30.0	-20.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-22.8	15.0	0.7	15.7	30.0	-14.3
2	1732.5	-22.9	15.4	0.6	16.0	30.0	-14.0
3	1753.5	-23.7	15.2	0.5	15.7	30.0	-14.3

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 5MHz

Mode	TX channel 19975, 20175, 20375						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-28.6	9.5	0.7	10.2	30.0	-19.8
2	1732.5	-28.8	9.6	0.6	10.2	30.0	-19.8
3	1752.5	-29.6	9.2	0.5	9.7	30.0	-20.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-23.3	14.6	0.7	15.3	30.0	-14.7
2	1732.5	-23.6	14.7	0.6	15.3	30.0	-14.7
3	1752.5	-23.7	15.1	0.5	15.6	30.0	-14.4

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 10MHz

Mode		TX channel 20000, 20175, 20350					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-28.9	9.2	0.7	9.9	30.0	-20.1
2	1732.5	-29.3	9.1	0.6	9.7	30.0	-20.3
3	1750.0	-29.4	9.4	0.5	9.9	30.0	-20.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-22.4	15.5	0.7	16.2	30.0	-13.8
2	1732.5	-23.3	15.0	0.6	15.6	30.0	-14.4
3	1750.0	-23.2	15.6	0.5	16.1	30.0	-13.9

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 15MHz

Mode		TX channel 20025, 20175, 20325					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-28.5	9.6	0.7	10.3	30.0	-19.7
2	1732.5	-29.3	9.1	0.6	9.7	30.0	-20.3
3	1747.5	-28.9	9.8	0.5	10.3	30.0	-19.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-23.0	15.0	0.7	15.7	30.0	-14.3
2	1732.5	-23.6	14.7	0.6	15.3	30.0	-14.7
3	1747.5	-23.8	14.9	0.5	15.4	30.0	-14.6

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 20MHz

Mode		TX channel 20050, 20175, 20300					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-28.9	9.3	0.7	10.0	30.0	-20.0
2	1732.5	-29.5	8.9	0.6	9.5	30.0	-20.5
3	1745.0	-29.4	9.3	0.5	9.8	30.0	-20.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-22.4	15.6	0.7	16.3	30.0	-13.7
2	1732.5	-23.6	14.7	0.6	15.3	30.0	-14.7
3	1745.0	-23.7	15.0	0.5	15.5	30.0	-14.5

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 1.4MHz

MODE		TX channel 23017, 23095, 23173					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.7	-9.7	14.8	3.5	18.3	34.8	-16.5
2	707.5	-10.1	14.7	3.5	18.2	34.8	-16.6
3	715.3	-10.2	14.8	3.5	18.3	34.8	-16.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm))	Limit (dBm)	Margin (dB)
1	699.7	-20.6	6.9	3.5	10.4	34.8	-24.4
2	707.5	-21.6	6.2	3.5	9.7	34.8	-25.1
3	715.3	-20.8	6.8	3.5	10.3	34.8	-24.5

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 3MHz

MODE		TX channel 23025, 23095, 23165					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	700.5	-9.7	14.8	3.5	18.3	34.8	-16.5
2	707.5	-10.6	14.2	3.5	17.7	34.8	-17.1
3	714.5	-10.9	14.1	3.5	17.6	34.8	-17.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	700.5	-21.5	6.1	3.5	9.6	34.8	-25.2
2	707.5	-20.9	6.8	3.5	10.3	34.8	-24.5
3	714.5	-21.1	6.5	3.5	10.0	34.8	-24.8

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 5MHz

MODE		TX channel 23035, 23095, 23155					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	701.5	-9.8	14.8	3.4	18.2	34.8	-16.6
2	707.5	-10.4	14.3	3.5	17.8	34.8	-17.0
3	713.5	-10.1	14.9	3.5	18.4	34.8	-16.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	701.5	-21.5	6.2	3.4	9.6	34.8	-25.2
2	707.5	-21.1	6.6	3.5	10.1	34.8	-24.7
3	713.5	-20.9	6.8	3.5	10.3	34.8	-24.5

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 10MHz

MODE	TX channel 23060, 23095, 23130						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	704.0	-10.1	14.6	3.5	18.1	34.8	-16.7
2	707.5	-9.8	15.0	3.5	18.5	34.8	-16.3
3	711.0	-11.0	14.0	3.5	17.5	34.8	-17.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	704.0	-21.4	6.2	3.5	9.7	34.8	-25.1
2	707.5	-20.6	7.1	3.5	10.6	34.8	-24.2
3	711.0	-20.6	7.0	3.5	10.5	34.8	-24.3

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 13, Channel Bandwidth: 5MHz

MODE	TX channel 23205, 23230, 23255						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	779.5	-11.0	15.0	4.0	19.0	34.8	-15.8
2	782.0	-10.9	15.1	4.0	19.1	34.8	-15.7
3	784.5	-11.5	14.6	4.0	18.6	34.8	-16.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	779.5	-20.9	7.2	4.0	11.2	34.8	-23.6
2	782.0	-20.9	7.0	4.0	11.0	34.8	-23.8
3	784.5	-21.4	6.5	4.0	10.5	34.8	-24.3

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 13, Channel Bandwidth: 10MHz

MODE	TX channel 23230						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	782.0	-10.7	15.3	4.0	19.3	34.8	-15.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	782.0	-20.4	7.5	4.0	11.5	34.8	-23.3

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 5MHz

MODE		TX channel 39675, 40620, 41565					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2498.5	-25.0	16.4	0.2	16.6	33.0	-16.4
2	2593.0	-25.8	16.4	0.2	16.6	33.0	-16.4
3	2687.5	-27.3	15.7	0.2	15.9	33.0	-17.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2498.5	-26.3	17.2	0.2	17.4	33.0	-15.6
2	2593.0	-26.8	17.0	0.2	17.2	33.0	-15.8
3	2687.5	-26.1	17.7	0.2	17.9	33.0	-15.1

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 10MHz

MODE		TX channel 39700, 40620, 41540					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2501.0	-25.4	16.0	0.2	16.2	33.0	-16.8
2	2593.0	-26.4	15.8	0.2	16.0	33.0	-17.0
3	2685.0	-27.1	15.9	0.2	16.1	33.0	-16.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2501.0	-26.6	16.9	0.2	17.1	33.0	-15.9
2	2593.0	-26.4	17.4	0.2	17.6	33.0	-15.4
3	2685.0	-26.8	17.0	0.2	17.2	33.0	-15.8

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 15MHz

MODE		TX channel 39725, 40620, 41515					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2503.5	-25.7	15.8	0.2	16.0	33.0	-17.0
2	2593.0	-25.8	16.4	0.2	16.6	33.0	-16.4
3	2682.5	-27.2	15.8	0.2	16.0	33.0	-17.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2503.5	-26.4	17.1	0.2	17.3	33.0	-15.7
2	2593.0	-26.3	17.5	0.2	17.7	33.0	-15.3
3	2682.5	-26.3	17.5	0.2	17.7	33.0	-15.3

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 20MHz

MODE	TX channel 39750, 40620, 41490						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2506.0	-24.9	16.6	0.2	16.8	33.0	-16.2
2	2593.0	-26.2	16.0	0.2	16.2	33.0	-16.8
3	2680.0	-26.6	16.4	0.2	16.6	33.0	-16.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2506.0	-26.4	17.1	0.2	17.3	33.0	-15.7
2	2593.0	-26.0	17.8	0.2	18.0	33.0	-15.0
3	2680.0	-26.7	17.1	0.2	17.3	33.0	-15.7

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 1.4MHz

MODE		TX channel 131979, 132322, 132665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-27.0	11.0	0.7	11.7	30.0	-18.3
2	1745.0	-27.8	10.9	0.5	11.4	30.0	-18.6
3	1779.3	-27.9	11.3	0.4	11.7	30.0	-18.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-19.7	18.1	0.7	18.8	30.0	-11.2
2	1745.0	-21.2	17.5	0.5	18.0	30.0	-12.0
3	1779.3	-21.7	17.8	0.4	18.2	30.0	-11.8

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 3MHz

MODE		TX channel 131987, 132322, 132657					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-27.0	11.0	0.7	11.7	30.0	-18.3
2	1745.0	-27.0	11.7	0.5	12.2	30.0	-17.8
3	1778.5	-27.8	11.4	0.4	11.8	30.0	-18.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-20.5	17.3	0.7	18.0	30.0	-12.0
2	1745.0	-21.1	17.6	0.5	18.1	30.0	-11.9
3	1778.5	-21.8	17.7	0.4	18.1	30.0	-11.9

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 5MHz

MODE		TX channel 131997, 132322, 132647					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-27.3	10.8	0.7	11.5	30.0	-18.5
2	1745.0	-27.3	11.4	0.5	11.9	30.0	-18.1
3	1777.5	-28.1	11.1	0.4	11.5	30.0	-18.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-20.4	17.5	0.7	18.2	30.0	-11.8
2	1745.0	-20.8	17.9	0.5	18.4	30.0	-11.6
3	1777.5	-21.4	18.0	0.4	18.4	30.0	-11.6

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 10MHz

MODE		TX channel 132022, 132322, 132622					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-26.6	11.5	0.7	12.2	30.0	-17.8
2	1745.0	-27.7	11.0	0.5	11.5	30.0	-18.5
3	1775.0	-27.7	11.5	0.4	11.9	30.0	-18.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-20.4	17.5	0.7	18.2	30.0	-11.8
2	1745.0	-20.5	18.2	0.5	18.7	30.0	-11.3
3	1775.0	-21.4	18.0	0.4	18.4	30.0	-11.6

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 15MHz

MODE		TX channel 132047, 132322, 132597					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-26.7	11.4	0.7	12.1	30.0	-17.9
2	1745.0	-27.4	11.3	0.5	11.8	30.0	-18.2
3	1772.5	-27.8	11.4	0.4	11.8	30.0	-18.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-20.6	17.4	0.7	18.1	30.0	-11.9
2	1745.0	-21.2	17.5	0.5	18.0	30.0	-12.0
3	1772.5	-21.7	17.6	0.4	18.0	30.0	-12.0

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 20MHz

MODE		TX channel 132072, 132322, 132575					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-26.8	11.4	0.7	12.1	30.0	-17.9
2	1745.0	-26.9	11.8	0.5	12.3	30.0	-17.7
3	1770.0	-28.0	11.0	0.5	11.5	30.0	-18.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-20.7	17.3	0.7	18.0	30.0	-12.0
2	1745.0	-20.3	18.4	0.5	18.9	30.0	-11.1
3	1770.0	-21.1	18.1	0.5	18.6	30.0	-11.4

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

Modulation Type: 16QAM

LTE Band 4, Channel Bandwidth: 1.4MHz

Mode		TX channel 19957, 20175, 20393					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-29.5	8.5	0.7	9.2	30.0	-20.8
2	1732.5	-29.7	8.7	0.6	9.3	30.0	-20.7
3	1754.3	-30.6	8.2	0.5	8.7	30.0	-21.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-23.3	14.5	0.7	15.2	30.0	-14.8
2	1732.5	-23.6	14.7	0.6	15.3	30.0	-14.7
3	1754.3	-24.4	14.5	0.5	15.0	30.0	-15.0

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 3MHz

Mode		TX channel 19965, 20175, 20385					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-29.9	8.1	0.7	8.8	30.0	-21.2
2	1732.5	-29.4	9.0	0.6	9.6	30.0	-20.4
3	1753.5	-30.3	8.5	0.5	9.0	30.0	-21.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-23.7	14.1	0.7	14.8	30.0	-15.2
2	1732.5	-24.0	14.3	0.6	14.9	30.0	-15.1
3	1753.5	-24.6	14.3	0.5	14.8	30.0	-15.2

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 5MHz

Mode		TX channel 19975, 20175, 20375					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-29.7	8.4	0.7	9.1	30.0	-20.9
2	1732.5	-29.7	8.7	0.6	9.3	30.0	-20.7
3	1752.5	-30.8	8.0	0.5	8.5	30.0	-21.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-24.1	13.8	0.7	14.5	30.0	-15.5
2	1732.5	-24.8	13.5	0.6	14.1	30.0	-15.9
3	1752.5	-24.6	14.2	0.5	14.7	30.0	-15.3

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 10MHz

Mode	TX channel 20000, 20175, 20350						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-30.0	8.1	0.7	8.8	30.0	-21.2
2	1732.5	-30.3	8.1	0.6	8.7	30.0	-21.3
3	1750.0	-30.4	8.4	0.5	8.9	30.0	-21.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-23.3	14.6	0.7	15.3	30.0	-14.7
2	1732.5	-24.1	14.2	0.6	14.8	30.0	-15.2
3	1750.0	-24.0	14.8	0.5	15.3	30.0	-14.7

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 15MHz

Mode	TX channel 20025, 20175, 20325						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-29.3	8.8	0.7	9.5	30.0	-20.5
2	1732.5	-30.3	8.1	0.6	8.7	30.0	-21.3
3	1747.5	-29.7	9.0	0.5	9.5	30.0	-20.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-24.0	14.0	0.7	14.7	30.0	-15.3
2	1732.5	-24.5	13.8	0.6	14.4	30.0	-15.6
3	1747.5	-25.0	13.7	0.5	14.2	30.0	-15.8

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 20MHz

Mode	TX channel 20050, 20175, 20300						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-30.1	8.1	0.7	8.8	30.0	-21.2
2	1732.5	-30.6	7.8	0.6	8.4	30.0	-21.6
3	1745.0	-30.6	8.1	0.5	8.6	30.0	-21.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-23.5	14.5	0.7	15.2	30.0	-14.8
2	1732.5	-24.7	13.6	0.6	14.2	30.0	-15.8
3	1745.0	-24.7	14.0	0.5	14.5	30.0	-15.5

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 1.4MHz

MODE	TX channel 23017, 23095, 23173						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.7	-10.8	13.7	3.5	17.2	34.8	-17.6
2	707.5	-10.9	13.8	3.5	17.3	34.8	-17.5
3	715.3	-11.1	13.9	3.5	17.4	34.8	-17.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm))	Limit (dBm)	Margin (dB)
1	699.7	-21.4	6.1	3.5	9.6	34.8	-25.2
2	707.5	-22.8	5.0	3.5	8.5	34.8	-26.3
3	715.3	-21.9	5.7	3.5	9.2	34.8	-25.6

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 3MHz

MODE	TX channel 23025, 23095, 23165						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	700.5	-10.9	13.6	3.5	17.1	34.8	-17.7
2	707.5	-11.6	13.1	3.5	16.6	34.8	-18.2
3	714.5	-12.1	12.9	3.5	16.4	34.8	-18.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	700.5	-22.7	4.9	3.5	8.4	34.8	-26.4
2	707.5	-21.9	5.8	3.5	9.3	34.8	-25.5
3	714.5	-22.0	5.6	3.5	9.1	34.8	-25.7

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 5MHz

MODE	TX channel 23035, 23095, 23155						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	701.5	-10.9	13.7	3.4	17.1	34.8	-17.7
2	707.5	-11.4	13.3	3.5	16.8	34.8	-18.0
3	713.5	-11.2	13.8	3.5	17.3	34.8	-17.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	701.5	-22.3	5.4	3.4	8.8	34.8	-26.0
2	707.5	-22.1	5.7	3.5	9.2	34.8	-25.6
3	713.5	-22.1	5.6	3.5	9.1	34.8	-25.7

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 10MHz

MODE	TX channel 23060, 23095, 23130						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	704.0	-11.1	13.6	3.5	17.1	34.8	-17.7
2	707.5	-11.6	13.2	3.5	16.7	34.8	-18.1
3	711.0	-12.1	12.9	3.5	16.4	34.8	-18.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	704.0	-22.5	5.1	3.5	8.6	34.8	-26.2
2	707.5	-21.9	5.8	3.5	9.3	34.8	-25.5
3	711.0	-21.7	5.9	3.5	9.4	34.8	-25.4

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 13, Channel Bandwidth: 5MHz

MODE	TX channel 23205, 23230, 23255						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	779.5	-11.9	14.1	4.0	18.1	34.8	-16.7
2	782.0	-12.3	13.7	4.0	17.7	34.8	-17.1
3	784.5	-12.6	13.5	4.0	17.5	34.8	-17.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	779.5	-21.7	6.4	4.0	10.4	34.8	-24.4
2	782.0	-21.7	6.2	4.0	10.2	34.8	-24.6
3	784.5	-22.4	5.5	4.0	9.5	34.8	-25.3

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 13, Channel Bandwidth: 10MHz

MODE	TX channel 23230						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	782.0	-11.8	14.2	4.0	18.2	34.8	-16.6
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	782.0	-21.5	6.4	4.0	10.4	34.8	-24.4

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 5MHz

MODE		TX channel 39675, 40620, 41565					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2498.5	-25.9	15.5	0.2	15.7	33.0	-17.3
2	2593.0	-26.6	15.6	0.2	15.8	33.0	-17.2
3	2687.5	-28.2	14.8	0.2	15.0	33.0	-18.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2498.5	-27.4	16.1	0.2	16.3	33.0	-16.7
2	2593.0	-27.7	16.1	0.2	16.3	33.0	-16.7
3	2687.5	-27.0	16.8	0.2	17.0	33.0	-16.0

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 10MHz

MODE		TX channel 39700, 40620, 41540					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2501.0	-26.4	15.0	0.2	15.2	33.0	-17.8
2	2593.0	-27.3	14.9	0.2	15.1	33.0	-17.9
3	2685.0	-28.3	14.7	0.2	14.9	33.0	-18.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2501.0	-27.5	16.0	0.2	16.2	33.0	-16.8
2	2593.0	-27.6	16.2	0.2	16.4	33.0	-16.6
3	2685.0	-27.6	16.2	0.2	16.4	33.0	-16.6

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 15MHz

MODE		TX channel 39725, 40620, 41515					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2503.5	-26.8	14.7	0.2	14.9	33.0	-18.1
2	2593.0	-26.9	15.3	0.2	15.5	33.0	-17.5
3	2682.5	-28.4	14.6	0.2	14.8	33.0	-18.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2503.5	-27.3	16.2	0.2	16.4	33.0	-16.6
2	2593.0	-27.2	16.6	0.2	16.8	33.0	-16.2
3	2682.5	-27.4	16.4	0.2	16.6	33.0	-16.4

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 20MHz

MODE	TX channel 39750, 40620, 41490						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2506.0	-26.1	15.4	0.2	15.6	33.0	-17.4
2	2593.0	-27.3	14.9	0.2	15.1	33.0	-17.9
3	2680.0	-27.4	15.6	0.2	15.8	33.0	-17.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2506.0	-27.4	16.1	0.2	16.3	33.0	-16.7
2	2593.0	-26.9	16.9	0.2	17.1	33.0	-15.9
3	2680.0	-27.5	16.3	0.2	16.5	33.0	-16.5

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 1.4MHz

MODE		TX channel 131979, 132322, 132665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-27.9	10.1	0.7	10.8	30.0	-19.2
2	1745.0	-28.8	9.9	0.5	10.4	30.0	-19.6
3	1779.3	-29.0	10.2	0.4	10.6	30.0	-19.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-20.8	17.0	0.7	17.7	30.0	-12.3
2	1745.0	-22.0	16.7	0.5	17.2	30.0	-12.8
3	1779.3	-22.8	16.7	0.4	17.1	30.0	-12.9

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 3MHz

MODE		TX channel 131987, 132322, 132657					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-28.2	9.8	0.7	10.5	30.0	-19.5
2	1745.0	-27.9	10.8	0.5	11.3	30.0	-18.7
3	1778.5	-28.8	10.4	0.4	10.8	30.0	-19.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-21.3	16.5	0.7	17.2	30.0	-12.8
2	1745.0	-22.2	16.5	0.5	17.0	30.0	-13.0
3	1778.5	-23.0	16.5	0.4	16.9	30.0	-13.1

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 5MHz

MODE		TX channel 131997, 132322, 132647					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-28.5	9.6	0.7	10.3	30.0	-19.7
2	1745.0	-28.3	10.4	0.5	10.9	30.0	-19.1
3	1777.5	-29.3	9.9	0.4	10.3	30.0	-19.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-21.2	16.7	0.7	17.4	30.0	-12.6
2	1745.0	-21.7	17.0	0.5	17.5	30.0	-12.5
3	1777.5	-22.5	16.9	0.4	17.3	30.0	-12.7

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 10MHz

MODE		TX channel 132022, 132322, 132622					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-27.7	10.4	0.7	11.1	30.0	-18.9
2	1745.0	-28.8	9.9	0.5	10.4	30.0	-19.6
3	1775.0	-28.5	10.7	0.4	11.1	30.0	-18.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-21.5	16.4	0.7	17.1	30.0	-12.9
2	1745.0	-21.7	17.0	0.5	17.5	30.0	-12.5
3	1775.0	-22.4	17.0	0.4	17.4	30.0	-12.6

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 15MHz

MODE		TX channel 132047, 132322, 132597					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-27.5	10.6	0.7	11.3	30.0	-18.7
2	1745.0	-28.2	10.5	0.5	11.0	30.0	-19.0
3	1772.5	-28.6	10.6	0.4	11.0	30.0	-19.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-21.6	16.4	0.7	17.1	30.0	-12.9
2	1745.0	-22.1	16.6	0.5	17.1	30.0	-12.9
3	1772.5	-22.6	16.7	0.4	17.1	30.0	-12.9

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 20MHz

MODE		TX channel 132072, 132322, 132575					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-27.8	10.4	0.7	11.1	30.0	-18.9
2	1745.0	-27.9	10.8	0.5	11.3	30.0	-18.7
3	1770.0	-29.0	10.0	0.5	10.5	30.0	-19.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-21.5	16.5	0.7	17.2	30.0	-12.8
2	1745.0	-21.3	17.4	0.5	17.9	30.0	-12.1
3	1770.0	-22.3	16.9	0.5	17.4	30.0	-12.6

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

Modulation Type: 64QAM

LTE Band 4, Channel Bandwidth: 1.4MHz

Mode		TX channel 19957, 20175, 20393					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-29.9	8.1	0.7	8.8	30.0	-21.2
2	1732.5	-30.2	8.2	0.6	8.8	30.0	-21.2
3	1754.3	-31.0	7.8	0.5	8.3	30.0	-21.7
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-23.8	14.0	0.7	14.7	30.0	-15.3
2	1732.5	-24.1	14.2	0.6	14.8	30.0	-15.2
3	1754.3	-25.0	13.9	0.5	14.4	30.0	-15.6

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 3MHz

Mode		TX channel 19965, 20175, 20385					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-30.3	7.7	0.7	8.4	30.0	-21.6
2	1732.5	-29.8	8.6	0.6	9.2	30.0	-20.8
3	1753.5	-30.9	7.9	0.5	8.4	30.0	-21.6
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-24.3	13.5	0.7	14.2	30.0	-15.8
2	1732.5	-24.6	13.7	0.6	14.3	30.0	-15.7
3	1753.5	-25.2	13.7	0.5	14.2	30.0	-15.8

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 5MHz

Mode		TX channel 19975, 20175, 20375					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-30.1	8.0	0.7	8.7	30.0	-21.3
2	1732.5	-30.1	8.3	0.6	8.9	30.0	-21.1
3	1752.5	-31.4	7.4	0.5	7.9	30.0	-22.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-24.7	13.2	0.7	13.9	30.0	-16.1
2	1732.5	-25.4	12.9	0.6	13.5	30.0	-16.5
3	1752.5	-25.1	13.7	0.5	14.2	30.0	-15.8

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 10MHz

Mode	TX channel 20000, 20175, 20350						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-30.6	7.5	0.7	8.2	30.0	-21.8
2	1732.5	-30.9	7.5	0.6	8.1	30.0	-21.9
3	1750.0	-30.8	8.0	0.5	8.5	30.0	-21.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-23.7	14.2	0.7	14.9	30.0	-15.1
2	1732.5	-24.7	13.6	0.6	14.2	30.0	-15.8
3	1750.0	-24.5	14.3	0.5	14.8	30.0	-15.2

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 15MHz

Mode	TX channel 20025, 20175, 20325						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-29.8	8.3	0.7	9.0	30.0	-21.0
2	1732.5	-30.7	7.7	0.6	8.3	30.0	-21.7
3	1747.5	-30.1	8.6	0.5	9.1	30.0	-20.9
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-24.5	13.5	0.7	14.2	30.0	-15.8
2	1732.5	-24.9	13.4	0.6	14.0	30.0	-16.0
3	1747.5	-25.5	13.2	0.5	13.7	30.0	-16.3

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 4, Channel Bandwidth: 20MHz

Mode	TX channel 20050, 20175, 20300						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-30.5	7.7	0.7	8.4	30.0	-21.6
2	1732.5	-31.1	7.3	0.6	7.9	30.0	-22.1
3	1745.0	-31.0	7.7	0.5	8.2	30.0	-21.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-24.1	13.9	0.7	14.6	30.0	-15.4
2	1732.5	-24.2	14.1	0.6	14.7	30.0	-15.3
3	1745.0	-25.2	13.5	0.5	14.0	30.0	-16.0

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 1.4MHz

MODE		TX channel 23017, 23095, 23173					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.7	-11.4	13.1	3.5	16.6	34.8	-18.2
2	707.5	-11.6	13.2	3.5	16.7	34.8	-18.1
3	715.3	-11.5	13.5	3.5	17.0	34.8	-17.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm))	Limit (dBm)	Margin (dB)
1	699.7	-21.8	5.7	3.5	9.2	34.8	-25.6
2	707.5	-23.2	4.5	3.5	8.0	34.8	-26.8
3	715.3	-22.3	5.3	3.5	8.8	34.8	-26.0

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 3MHz

MODE		TX channel 23025, 23095, 23165					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	700.5	-11.5	13.0	3.5	16.5	34.8	-18.3
2	707.5	-12.1	12.7	3.5	16.2	34.8	-18.6
3	714.5	-12.5	12.5	3.5	16.0	34.8	-18.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	700.5	-23.1	4.5	3.5	8.0	34.8	-26.8
2	707.5	-22.4	5.3	3.5	8.8	34.8	-26.0
3	714.5	-22.6	5.0	3.5	8.5	34.8	-26.3

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 5MHz

MODE		TX channel 23035, 23095, 23155					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	701.5	-11.4	13.2	3.4	16.6	34.8	-18.2
2	707.5	-11.9	12.8	3.5	16.3	34.8	-18.5
3	713.5	-11.8	13.2	3.5	16.7	34.8	-18.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	701.5	-22.8	4.9	3.4	8.3	34.8	-26.5
2	707.5	-22.6	5.2	3.5	8.7	34.8	-26.1
3	713.5	-22.6	5.1	3.5	8.6	34.8	-26.2

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 12, Channel Bandwidth: 10MHz

MODE	TX channel 23060, 23095, 23130						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	704.0	-11.7	13.0	3.5	16.5	34.8	-18.3
2	707.5	-12.1	12.7	3.5	16.2	34.8	-18.6
3	711.0	-12.5	12.5	3.5	16.0	34.8	-18.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	704.0	-22.9	4.7	3.5	8.2	34.8	-26.6
2	707.5	-22.4	5.4	3.5	8.9	34.8	-25.9
3	711.0	-22.3	5.3	3.5	8.8	34.8	-26.0

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 13, Channel Bandwidth: 5MHz

MODE	TX channel 23205, 23230, 23255						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	779.5	-12.3	13.7	4.0	17.7	34.8	-17.1
2	782.0	-12.7	13.3	4.0	17.3	34.8	-17.5
3	784.5	-13.1	13.0	4.0	17.0	34.8	-17.8
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	779.5	-22.1	6.0	4.0	10.0	34.8	-24.8
2	782.0	-22.2	5.7	4.0	9.7	34.8	-25.1
3	784.5	-22.9	5.0	4.0	9.0	34.8	-25.8

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 13, Channel Bandwidth: 10MHz

MODE	TX channel 23230						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	782.0	-12.4	13.6	4.0	17.6	34.8	-17.2
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	782.0	-21.9	6.0	4.0	10.0	34.8	-24.8

Note: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 5MHz

MODE		TX channel 39675, 40620, 41565					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2498.5	-26.3	15.1	0.2	15.3	33.0	-17.7
2	2593.0	-27.1	15.1	0.2	15.3	33.0	-17.7
3	2687.5	-28.7	14.3	0.2	14.5	33.0	-18.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2498.5	-27.8	15.7	0.2	15.9	33.0	-17.1
2	2593.0	-28.3	15.5	0.2	15.7	33.0	-17.3
3	2687.5	-27.4	16.4	0.2	16.6	33.0	-16.4

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 10MHz

MODE		TX channel 39700, 40620, 41540					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2501.0	-27.0	14.4	0.2	14.6	33.0	-18.4
2	2593.0	-27.7	14.5	0.2	14.7	33.0	-18.3
3	2685.0	-28.7	14.3	0.2	14.5	33.0	-18.5
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2501.0	-28.1	15.4	0.2	15.6	33.0	-17.4
2	2593.0	-28.0	15.8	0.2	16.0	33.0	-17.0
3	2685.0	-28.2	15.6	0.2	15.8	33.0	-17.2

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 15MHz

MODE		TX channel 39725, 40620, 41515					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2503.5	-27.3	14.2	0.2	14.4	33.0	-18.6
2	2593.0	-27.4	14.8	0.2	15.0	33.0	-18.0
3	2682.5	-28.8	14.2	0.2	14.4	33.0	-18.6
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2503.5	-27.9	15.6	0.2	15.8	33.0	-17.2
2	2593.0	-27.7	16.1	0.2	16.3	33.0	-16.7
3	2682.5	-28.0	15.8	0.2	16.0	33.0	-17.0

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 41, Channel Bandwidth: 20MHz

MODE	TX channel 39750, 40620, 41490						
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2506.0	-26.5	15.0	0.2	15.2	33.0	-17.8
2	2593.0	-27.8	14.4	0.2	14.6	33.0	-18.4
3	2680.0	-27.8	15.2	0.2	15.4	33.0	-17.6
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	2506.0	-28.0	15.5	0.2	15.7	33.0	-17.3
2	2593.0	-27.3	16.5	0.2	16.7	33.0	-16.3
3	2680.0	-27.9	15.9	0.2	16.1	33.0	-16.9

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 1.4MHz

MODE		TX channel 131979, 132322, 132665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-28.4	9.6	0.7	10.3	30.0	-19.7
2	1745.0	-29.2	9.5	0.5	10.0	30.0	-20.0
3	1779.3	-29.6	9.6	0.4	10.0	30.0	-20.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1710.7	-21.2	16.6	0.7	17.3	30.0	-12.7
2	1745.0	-22.5	16.2	0.5	16.7	30.0	-13.3
3	1779.3	-23.3	16.2	0.4	16.6	30.0	-13.4

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 3MHz

MODE		TX channel 131987, 132322, 132657					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-28.8	9.2	0.7	9.9	30.0	-20.1
2	1745.0	-28.4	10.3	0.5	10.8	30.0	-19.2
3	1778.5	-29.2	10.0	0.4	10.4	30.0	-19.6
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1711.5	-21.9	15.9	0.7	16.6	30.0	-13.4
2	1745.0	-22.7	16.0	0.5	16.5	30.0	-13.5
3	1778.5	-23.6	15.9	0.4	16.3	30.0	-13.7

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 5MHz

MODE		TX channel 131997, 132322, 132647					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-29.1	9.0	0.7	9.7	30.0	-20.3
2	1745.0	-28.9	9.8	0.5	10.3	30.0	-19.7
3	1777.5	-29.7	9.5	0.4	9.9	30.0	-20.1
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1712.5	-21.6	16.3	0.7	17.0	30.0	-13.0
2	1745.0	-22.2	16.5	0.5	17.0	30.0	-13.0
3	1777.5	-22.9	16.5	0.4	16.9	30.0	-13.1

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 10MHz

MODE		TX channel 132022, 132322, 132622					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-28.2	9.9	0.7	10.6	30.0	-19.4
2	1745.0	-29.4	9.3	0.5	9.8	30.0	-20.2
3	1775.0	-28.9	10.3	0.4	10.7	30.0	-19.3
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1715.0	-22.0	15.9	0.7	16.6	30.0	-13.4
2	1745.0	-22.1	16.6	0.5	17.1	30.0	-12.9
3	1775.0	-23.0	16.4	0.4	16.8	30.0	-13.2

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 15MHz

MODE		TX channel 132047, 132322, 132597					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-28.0	10.1	0.7	10.8	30.0	-19.2
2	1745.0	-28.8	9.9	0.5	10.4	30.0	-19.6
3	1772.5	-29.0	10.2	0.4	10.6	30.0	-19.4
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1717.5	-22.0	16.0	0.7	16.7	30.0	-13.3
2	1745.0	-22.5	16.2	0.5	16.7	30.0	-13.3
3	1772.5	-23.0	16.3	0.4	16.7	30.0	-13.3

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 66, Channel Bandwidth: 20MHz

MODE		TX channel 132072, 132322, 132575					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-28.2	10.0	0.7	10.7	30.0	-19.3
2	1745.0	-28.5	10.2	0.5	10.7	30.0	-19.3
3	1770.0	-29.5	9.5	0.5	10.0	30.0	-20.0
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1720.0	-22.0	16.0	0.7	16.7	30.0	-13.3
2	1745.0	-22.1	16.6	0.5	17.1	30.0	-12.9
3	1770.0	-22.9	16.3	0.5	16.8	30.0	-13.2

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

4.2 Modulation Characteristics Measurement

4.2.1 Limits of Modulation Characteristics

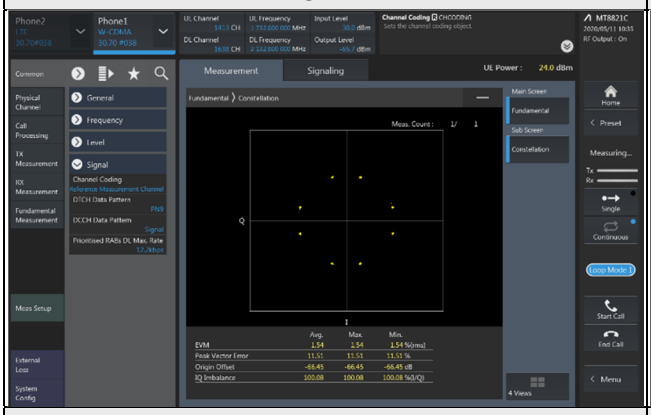
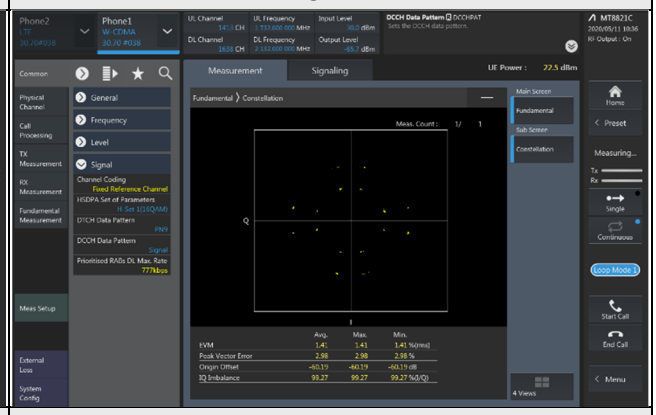
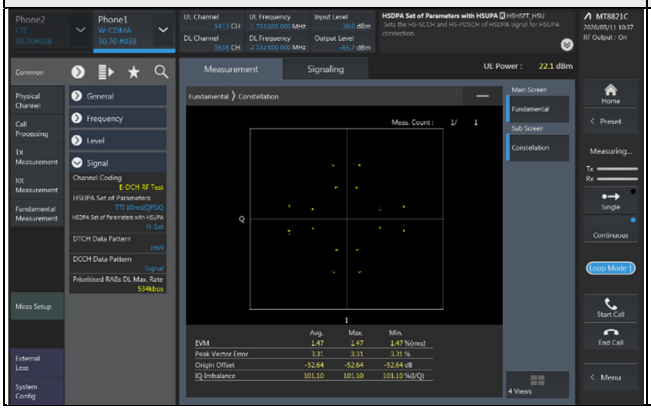
N/A

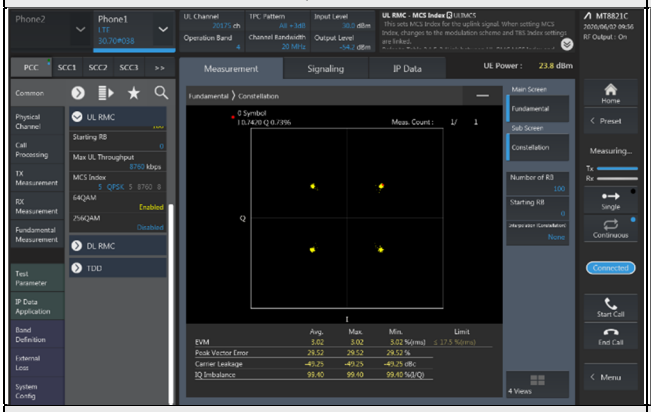
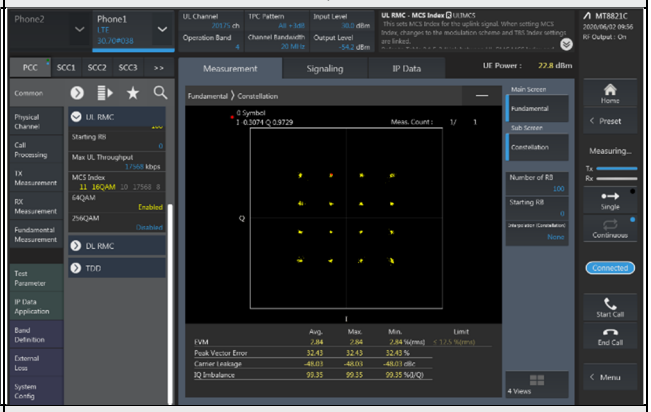
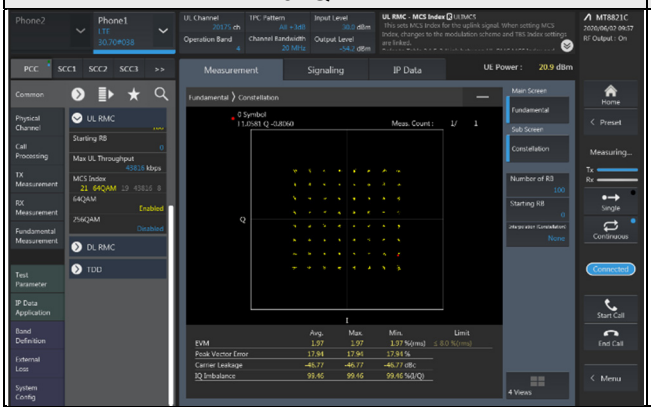
4.2.2 Test Procedure

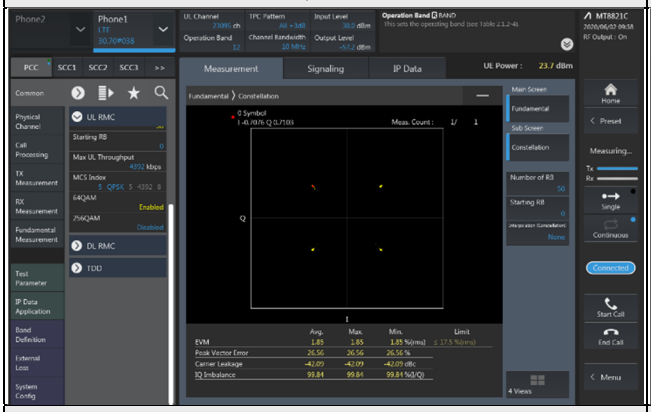
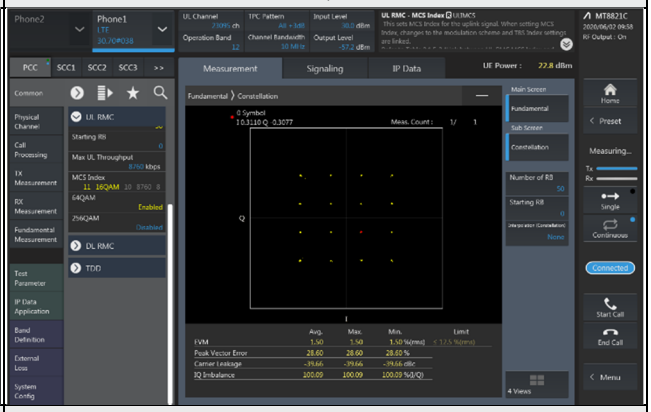
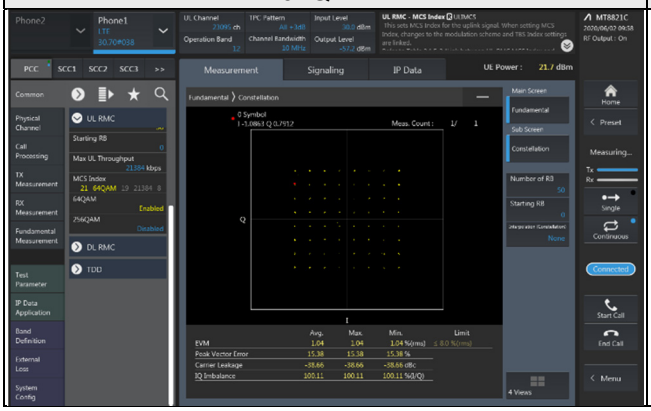
Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

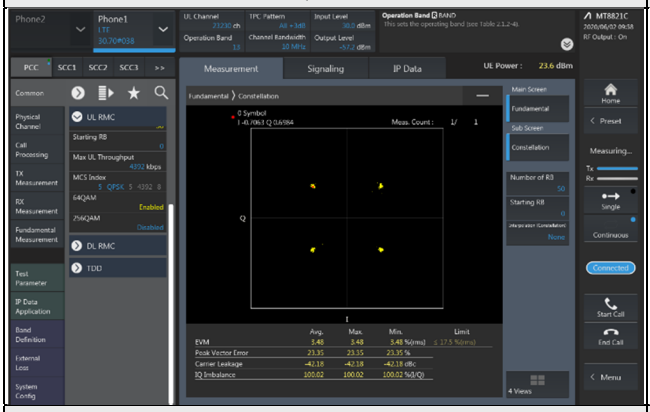
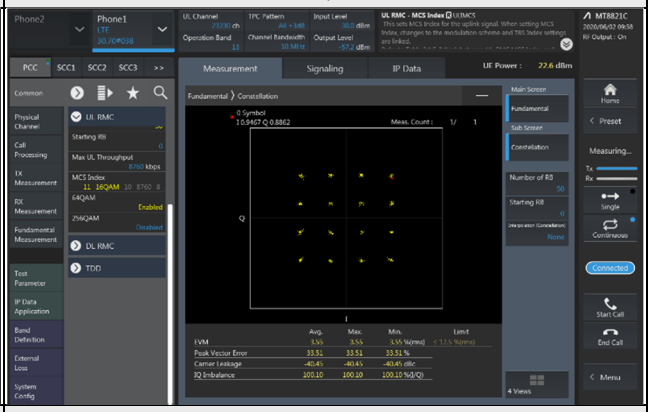
4.2.3 Test Setup

4.2.4 Test Results

WCDMA Band 4	
Spectrum Plot of Measurement Value	
Channel: 1413 / Frequency (MHz): 1732.6MHz	
WCDMA	HSDPA
	
HSUPA	
	

LTE Band 4	
Spectrum Plot of Measurement Value	
Channel: 20175 / Frequency (MHz): 1732.5MHz	
QPSK	16QAM
	
64QAM	
	

LTE Band 12	
Spectrum Plot of Measurement Value	
Channel: 23095 / Frequency (MHz): 707.5 MHz	
QPSK	16QAM
	
64QAM	
	

LTE Band 13	
Spectrum Plot of Measurement Value	
Channel: 23230 / Frequency (MHz): 782.0MHz	
QPSK	16QAM
	
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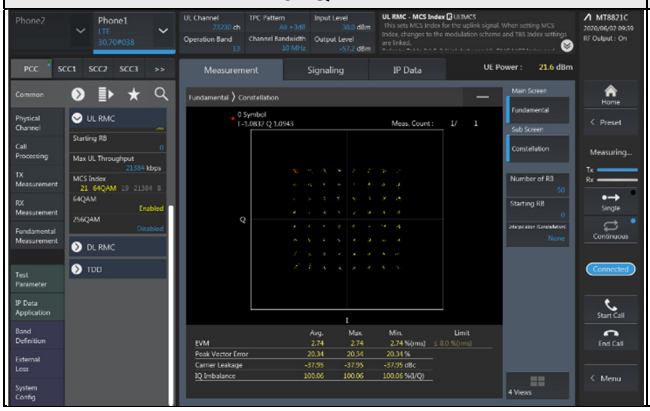
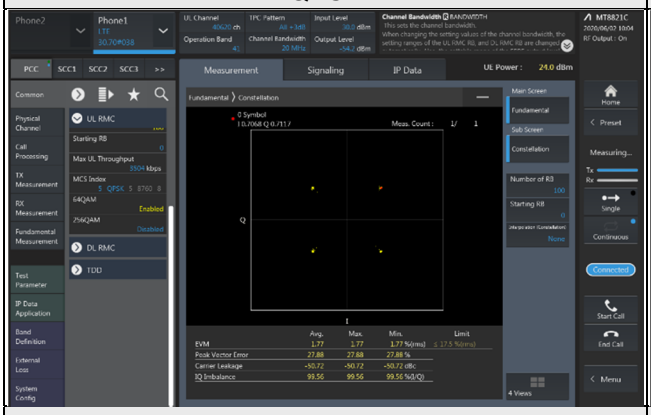
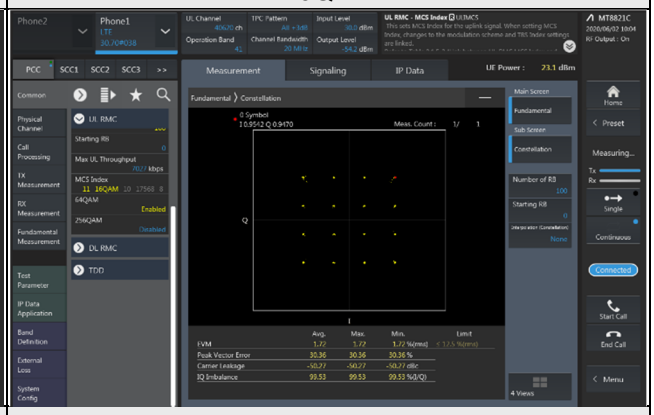
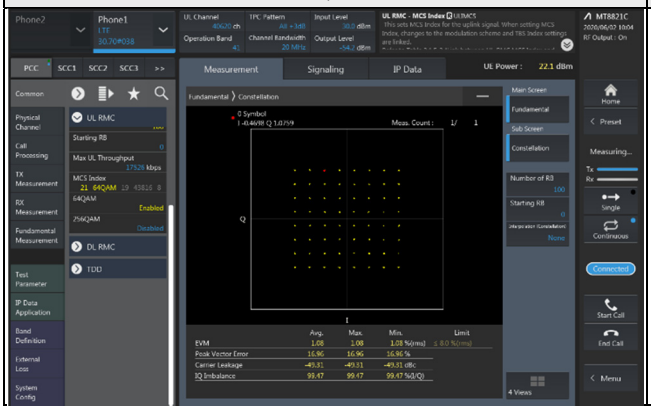
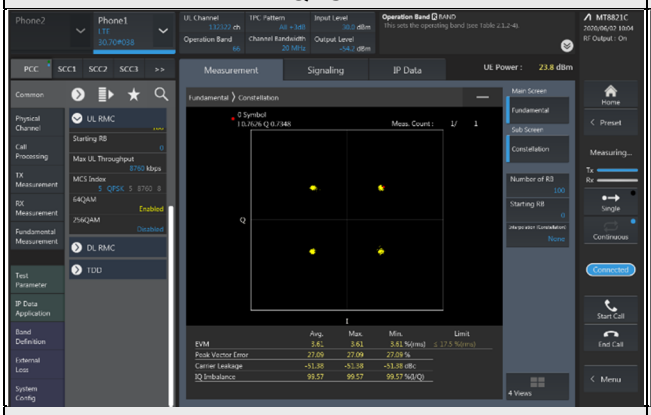
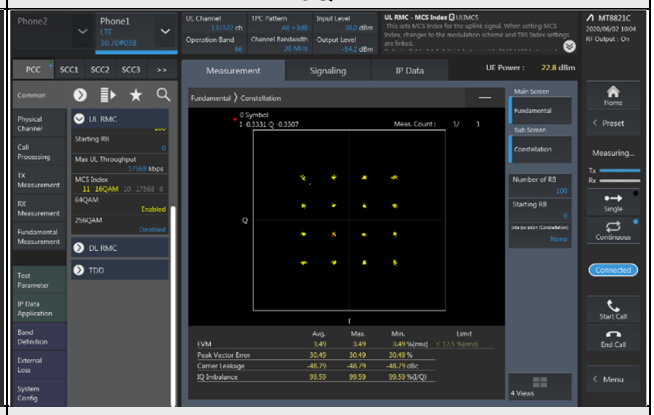
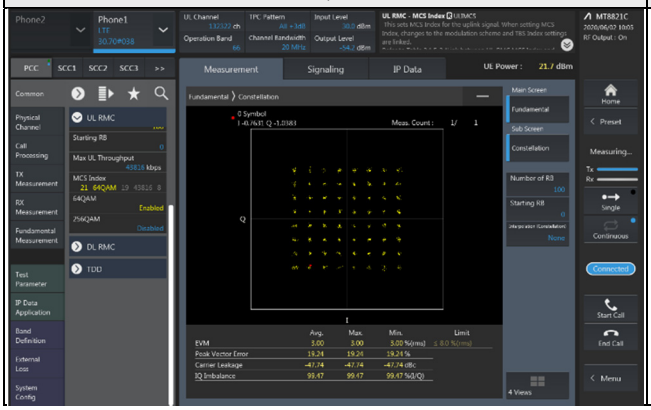
	

LTE Band 41	
Spectrum Plot of Measurement Value	
Channel: 40620 / Frequency (MHz): 2593.0 MHz	
QPSK	16QAM
	
64QAM	
	

LTE Band 66	
Spectrum Plot of Measurement Value	
Channel: 132322 / Frequency (MHz): 1745.0 MHz	
QPSK	16QAM
	
64QAM	
	

4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT -30℃ ~ 50℃.

4.3.2 Test Procedure

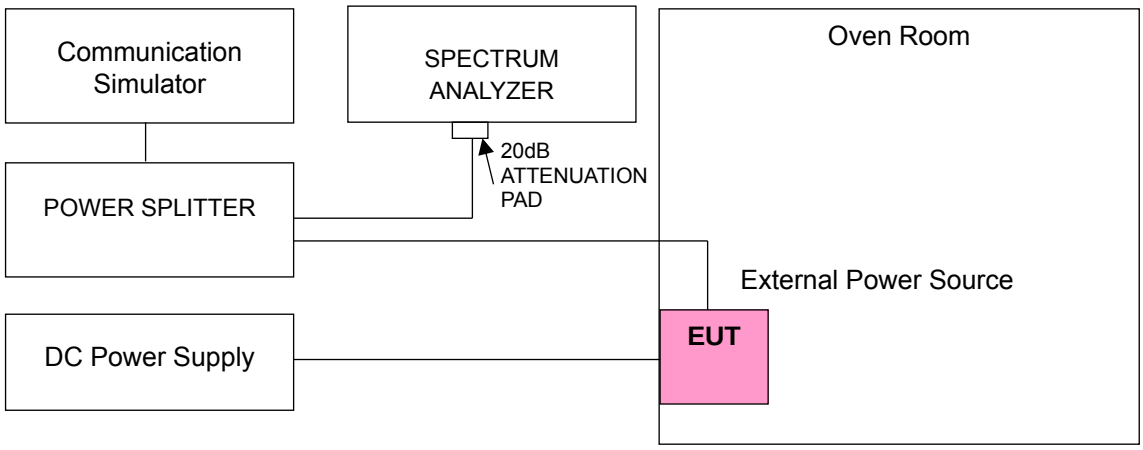
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

Note: The frequency error was recorded frequency error from the communication simulator.

4.3.3 Test Setup



4.3.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	WCDMA Band 4			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1712.400003	0.002	1752.600001	0.001
3.28	1712.400001	0.001	1752.600003	0.002
4.44	1712.400002	0.001	1752.600001	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	WCDMA Band 4			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1712.400003	0.001	1752.600004	0.002
-20	1712.400004	0.002	1752.600003	0.002
-10	1712.400003	0.002	1752.600001	0.001
0	1712.400002	0.001	1752.600002	0.001
10	1712.400003	0.002	1752.600004	0.002
20	1712.399996	-0.002	1752.599996	-0.002
30	1712.399997	-0.002	1752.599997	-0.001
40	1712.399996	-0.002	1752.599996	-0.002
50	1712.399996	-0.002	1752.599998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1710.700003	0.002	1754.300002	0.001
3.28	1710.700003	0.002	1754.300003	0.002
4.44	1710.700004	0.002	1754.300001	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1710.700002	0.001	1754.300001	0.001
-20	1710.700003	0.002	1754.300003	0.002
-10	1710.700003	0.002	1754.300002	0.001
0	1710.700004	0.002	1754.300003	0.001
10	1710.700004	0.002	1754.300002	0.001
20	1710.699997	-0.002	1754.299997	-0.002
30	1710.699998	-0.001	1754.299998	-0.001
40	1710.699998	-0.001	1754.299998	-0.001
50	1710.699996	-0.002	1754.299997	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1711.500003	0.001	1753.500003	0.002
3.28	1711.500002	0.001	1753.500003	0.001
4.44	1711.500003	0.002	1753.500004	0.002

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1711.500003	0.002	1753.500004	0.002
-20	1711.500001	0.001	1753.500004	0.002
-10	1711.500002	0.001	1753.500002	0.001
0	1711.500004	0.002	1753.500002	0.001
10	1711.500001	0.001	1753.500003	0.001
20	1711.499999	-0.001	1753.499999	-0.001
30	1711.499996	-0.002	1753.499996	-0.002
40	1711.499999	-0.001	1753.499997	-0.002
50	1711.499999	-0.001	1753.499997	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1712.500002	0.001	1752.500002	0.001
3.28	1712.500002	0.001	1752.500003	0.002
4.44	1712.500002	0.001	1752.500002	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1712.500003	0.002	1752.500003	0.002
-20	1712.500003	0.002	1752.500001	0.001
-10	1712.500003	0.001	1752.500003	0.002
0	1712.500003	0.002	1752.500003	0.002
10	1712.500003	0.002	1752.500003	0.002
20	1712.499997	-0.002	1752.499998	-0.001
30	1712.499999	-0.001	1752.499997	-0.002
40	1712.499998	-0.001	1752.499999	-0.001
50	1712.499997	-0.002	1752.499998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1715.000002	0.001	1750.000002	0.001
3.28	1715.000003	0.002	1750.000001	0.001
4.44	1715.000002	0.001	1750.000003	0.002

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1715.000002	0.001	1750.000004	0.002
-20	1715.000002	0.001	1750.000002	0.001
-10	1715.000002	0.001	1750.000002	0.001
0	1715.000004	0.002	1750.000002	0.001
10	1715.000002	0.001	1750.000001	0.001
20	1714.999997	-0.002	1749.999997	-0.002
30	1714.999997	-0.002	1749.999998	-0.001
40	1714.999998	-0.001	1749.999999	-0.001
50	1714.999998	-0.001	1749.999998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1717.500002	0.001	1747.500001	0.001
3.28	1717.500002	0.001	1747.500002	0.001
4.44	1717.500003	0.002	1747.500003	0.002

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1717.500002	0.001	1747.500001	0.001
-20	1717.500003	0.002	1747.500001	0.001
-10	1717.500001	0.001	1747.500004	0.002
0	1717.500001	0.001	1747.500001	0.001
10	1717.500003	0.002	1747.500003	0.002
20	1717.499997	-0.002	1747.499996	-0.002
30	1717.499998	-0.001	1747.499998	-0.001
40	1717.499997	-0.002	1747.499996	-0.002
50	1717.499999	-0.001	1747.499996	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1720.000004	0.002	1745.000003	0.002
3.28	1720.000002	0.001	1745.000004	0.002
4.44	1720.000004	0.002	1745.000003	0.002

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1720.000004	0.002	1745.000001	0.001
-20	1720.000003	0.002	1745.000002	0.001
-10	1720.000002	0.001	1745.000004	0.002
0	1720.000002	0.001	1745.000002	0.001
10	1720.000004	0.002	1745.000002	0.001
20	1719.999997	-0.002	1744.999998	-0.001
30	1719.999998	-0.001	1744.999998	-0.001
40	1719.999997	-0.002	1744.999998	-0.001
50	1719.999997	-0.002	1744.999996	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	699.700002	0.003	715.300002	0.002
3.28	699.700003	0.004	715.300001	0.002
4.44	699.700004	0.005	715.300003	0.004

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	699.700002	0.003	715.300002	0.003
-20	699.700002	0.003	715.300002	0.003
-10	699.700003	0.005	715.300002	0.002
0	699.700003	0.004	715.300003	0.003
10	699.700004	0.006	715.300002	0.003
20	699.699999	-0.002	715.299996	-0.005
30	699.699997	-0.005	715.299998	-0.003
40	699.699999	-0.002	715.299999	-0.002
50	699.699997	-0.004	715.299998	-0.003

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	700.500003	0.004	714.500001	0.002
3.28	700.500002	0.002	714.500003	0.004
4.44	700.500002	0.003	714.500003	0.004

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	700.500003	0.004	714.500002	0.003
-20	700.500002	0.003	714.500001	0.002
-10	700.500004	0.005	714.500003	0.003
0	700.500002	0.003	714.500003	0.005
10	700.500002	0.003	714.500002	0.003
20	700.499998	-0.002	714.499998	-0.003
30	700.499999	-0.002	714.499997	-0.004
40	700.499997	-0.005	714.499999	-0.002
50	700.499998	-0.003	714.499998	-0.003

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	701.500001	0.002	713.500003	0.004
3.28	701.500003	0.004	713.500003	0.005
4.44	701.500002	0.003	713.500002	0.003

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	701.500002	0.003	713.500001	0.002
-20	701.500003	0.004	713.500002	0.003
-10	701.500002	0.003	713.500004	0.005
0	701.500004	0.005	713.500004	0.005
10	701.500001	0.002	713.500003	0.004
20	701.499999	-0.002	713.499997	-0.005
30	701.499997	-0.004	713.499997	-0.004
40	701.499998	-0.002	713.499999	-0.002
50	701.499997	-0.004	713.499997	-0.004

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	704.000002	0.003	711.000002	0.002
3.28	704.000002	0.003	711.000004	0.005
4.44	704.000002	0.003	711.000004	0.005

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	704.000004	0.005	711.000001	0.002
-20	704.000004	0.005	711.000002	0.002
-10	704.000003	0.004	711.000001	0.002
0	704.000003	0.004	711.000002	0.002
10	704.000001	0.002	711.000002	0.002
20	703.999998	-0.003	710.999999	-0.002
30	703.999996	-0.005	710.999998	-0.003
40	703.999999	-0.001	710.999996	-0.006
50	703.999997	-0.004	710.999997	-0.004

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 13			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	779.500002	0.003	784.500003	0.004
3.28	779.500003	0.003	784.500001	0.002
4.44	779.500004	0.004	784.500001	0.002

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 13			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	779.500002	0.002	784.500002	0.003
-20	779.500002	0.002	784.500004	0.004
-10	779.500003	0.004	784.500001	0.001
0	779.500003	0.003	784.500001	0.001
10	779.500003	0.004	784.500004	0.005
20	779.499998	-0.003	784.499996	-0.005
30	779.499998	-0.003	784.499997	-0.004
40	779.499997	-0.004	784.499998	-0.003
50	779.499996	-0.005	784.499999	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 13	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
3.86	782.000002	0.003
3.28	782.000001	0.002
4.44	782.000004	0.004

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 13	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
-30	782.000004	0.004
-20	782.000003	0.004
-10	782.000004	0.004
0	782.000004	0.005
10	782.000002	0.003
20	781.999998	-0.002
30	781.999999	-0.001
40	781.999999	-0.002
50	781.999999	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 41			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	2498.500003	0.001	2687.500004	0.001
3.28	2498.500001	0.001	2687.500001	0.001
4.44	2498.500003	0.001	2687.500002	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 41			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	2498.500001	0.001	2687.500003	0.001
-20	2498.500002	0.001	2687.500004	0.001
-10	2498.500002	0.001	2687.500002	0.001
0	2498.500004	0.002	2687.500002	0.001
10	2498.500004	0.001	2687.500002	0.001
20	2498.499999	0.000	2687.499996	-0.001
30	2498.499997	-0.001	2687.499996	-0.001
40	2498.499998	-0.001	2687.499999	-0.001
50	2498.499998	-0.001	2687.499999	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 41			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	2501.000002	0.001	2685.000002	0.001
3.28	2501.000004	0.002	2685.000003	0.001
4.44	2501.000002	0.001	2685.000002	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 41			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	2501.000004	0.002	2685.000002	0.001
-20	2501.000004	0.002	2685.000004	0.001
-10	2501.000002	0.001	2685.000003	0.001
0	2501.000003	0.001	2685.000003	0.001
10	2501.000003	0.001	2685.000003	0.001
20	2500.999998	-0.001	2684.999998	-0.001
30	2500.999999	-0.001	2684.999998	-0.001
40	2500.999998	-0.001	2684.999997	-0.001
50	2500.999999	0.000	2684.999997	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 41			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	2503.500002	0.001	2682.500001	0.000
3.28	2503.500002	0.001	2682.500004	0.001
4.44	2503.500004	0.001	2682.500003	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 41			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	2503.500002	0.001	2682.500002	0.001
-20	2503.500001	0.000	2682.500003	0.001
-10	2503.500001	0.001	2682.500002	0.001
0	2503.500002	0.001	2682.500004	0.001
10	2503.500001	0.000	2682.500002	0.001
20	2503.499998	-0.001	2682.499997	-0.001
30	2503.499998	-0.001	2682.499997	-0.001
40	2503.499998	-0.001	2682.499999	0.000
50	2503.499996	-0.002	2682.499999	0.000

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 41			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	2506.000001	0.000	2680.000003	0.001
3.28	2506.000004	0.001	2680.000003	0.001
4.44	2506.000002	0.001	2680.000004	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 41			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	2506.000003	0.001	2680.000004	0.001
-20	2506.000003	0.001	2680.000003	0.001
-10	2506.000002	0.001	2680.000003	0.001
0	2506.000001	0.000	2680.000001	0.000
10	2506.000003	0.001	2680.000004	0.001
20	2505.999997	-0.001	2679.999999	-0.001
30	2505.999998	-0.001	2679.999999	0.000
40	2505.999999	0.000	2679.999999	0.000
50	2505.999997	-0.001	2679.999998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1710.700001	0.001	1779.300004	0.002
3.28	1710.700004	0.002	1779.300002	0.001
4.44	1710.700004	0.002	1779.300003	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1710.700003	0.002	1779.300003	0.002
-20	1710.700003	0.002	1779.300001	0.001
-10	1710.700003	0.002	1779.300002	0.001
0	1710.700002	0.001	1779.300001	0.001
10	1710.700003	0.002	1779.300003	0.002
20	1710.699998	-0.001	1779.299998	-0.001
30	1710.699997	-0.002	1779.299997	-0.002
40	1710.699998	-0.001	1779.299999	-0.001
50	1710.699997	-0.002	1779.299997	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1711.500002	0.001	1778.500002	0.001
3.28	1711.500002	0.001	1778.500002	0.001
4.44	1711.500003	0.002	1778.500002	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1711.500002	0.001	1778.500003	0.001
-20	1711.500002	0.001	1778.500003	0.002
-10	1711.500001	0.001	1778.500002	0.001
0	1711.500003	0.002	1778.500003	0.001
10	1711.500003	0.002	1778.500002	0.001
20	1711.499999	-0.001	1778.499996	-0.002
30	1711.499998	-0.001	1778.499996	-0.002
40	1711.499998	-0.001	1778.499997	-0.002
50	1711.499997	-0.002	1778.499996	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1712.500004	0.002	1777.500002	0.001
3.28	1712.500004	0.002	1777.500001	0.001
4.44	1712.500002	0.001	1777.500003	0.002

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1712.500003	0.002	1777.500004	0.002
-20	1712.500002	0.001	1777.500004	0.002
-10	1712.500004	0.002	1777.500004	0.002
0	1712.500001	0.001	1777.500004	0.002
10	1712.500001	0.001	1777.500002	0.001
20	1712.499999	-0.001	1777.499999	-0.001
30	1712.499998	-0.001	1777.499998	-0.001
40	1712.499997	-0.002	1777.499997	-0.002
50	1712.499997	-0.002	1777.499999	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1715.000003	0.001	1775.000001	0.001
3.28	1715.000002	0.001	1775.000002	0.001
4.44	1715.000002	0.001	1775.000004	0.002

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1715.000002	0.001	1775.000004	0.002
-20	1715.000004	0.002	1775.000004	0.002
-10	1715.000003	0.002	1775.000004	0.002
0	1715.000004	0.002	1775.000004	0.002
10	1715.000002	0.001	1775.000004	0.002
20	1714.999997	-0.002	1774.999997	-0.002
30	1714.999999	-0.001	1774.999997	-0.002
40	1714.999998	-0.001	1774.999996	-0.002
50	1714.999996	-0.002	1774.999998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1717.500002	0.001	1772.500003	0.002
3.28	1717.500002	0.001	1772.500002	0.001
4.44	1717.500004	0.002	1772.500003	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1717.500003	0.002	1772.500002	0.001
-20	1717.500003	0.002	1772.500002	0.001
-10	1717.500002	0.001	1772.500004	0.002
0	1717.500004	0.002	1772.500001	0.001
10	1717.500003	0.002	1772.500001	0.001
20	1717.499997	-0.002	1772.499997	-0.002
30	1717.499998	-0.001	1772.499999	-0.001
40	1717.499998	-0.001	1772.499998	-0.001
50	1717.499996	-0.002	1772.499998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.86	1720.000004	0.002	1770.000003	0.002
3.28	1720.000002	0.001	1770.000003	0.002
4.44	1720.000003	0.002	1770.000002	0.001

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.44Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1720.000003	0.002	1770.000004	0.002
-20	1720.000003	0.002	1770.000003	0.002
-10	1720.000002	0.001	1770.000002	0.001
0	1720.000003	0.002	1770.000001	0.001
10	1720.000004	0.002	1770.000003	0.002
20	1719.999997	-0.002	1769.999998	-0.001
30	1719.999998	-0.001	1769.999996	-0.002
40	1719.999999	-0.001	1769.999999	-0.001
50	1719.999997	-0.002	1769.999997	-0.002

4.4 Occupied Bandwidth Measurement

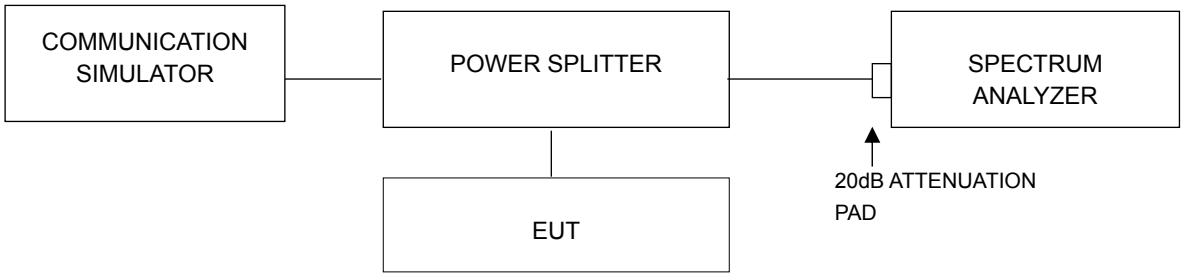
4.4.1 Limits of Occupied Bandwidth Measurement

The occupied bandwidth (OBW), that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission.

4.4.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 51kHz and VBW = 150kHz for WCDMA; with RBW = 30kHz and VBW = 100kHz (Channel Bandwidth: 1.4MHz), RBW = 62kHz and VBW = 200kHz (Channel Bandwidth: 3MHz), RBW = 100kHz and VBW = 300kHz (Channel Bandwidth: 5MHz), RBW = 200kHz and VBW = 1MHz (Channel Bandwidth: 10MHz), RBW = 300kHz and VBW = 1MHz (Channel Bandwidth: 15MHz) and RBW = 430kHz and VBW = 1.3MHz (Channel Bandwidth: 20MHz). The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

4.4.3 Test Setup



4.4.4 Test Result

Occupied Bandwidth

WCDMA Band 4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		WCDMA	HSDPA	HSUPA
1312	1712.4	4.15	4.16	4.16
1413	1732.6	4.15	4.15	4.15
1513	1752.6	4.15	4.15	4.15

Spectrum Plot of Worst Value

WCDMA

HSDPA

HSUPA

LTE Band 4

LTE Band 4, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
19957	1710.7	1.09	1.09	1.09
20175	1732.5	1.09	1.09	1.09
20393	1754.3	1.09	1.09	1.09
LTE Band 4, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
19965	1711.5	2.70	2.69	2.70
20175	1732.5	2.70	2.69	2.70
20385	1753.5	2.70	2.69	2.70
LTE Band 4, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
19975	1712.5	4.48	4.48	4.50
20175	1732.5	4.49	4.49	4.50
20375	1752.5	4.49	4.49	4.49
LTE Band 4, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
20000	1715.0	8.95	8.96	8.96
20175	1732.5	8.96	8.96	8.96
20350	1750.0	8.95	8.95	8.95
LTE Band 4, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
20025	1717.5	13.45	13.44	13.43
20175	1732.5	13.47	13.46	13.46
20325	1747.5	13.45	13.44	13.43

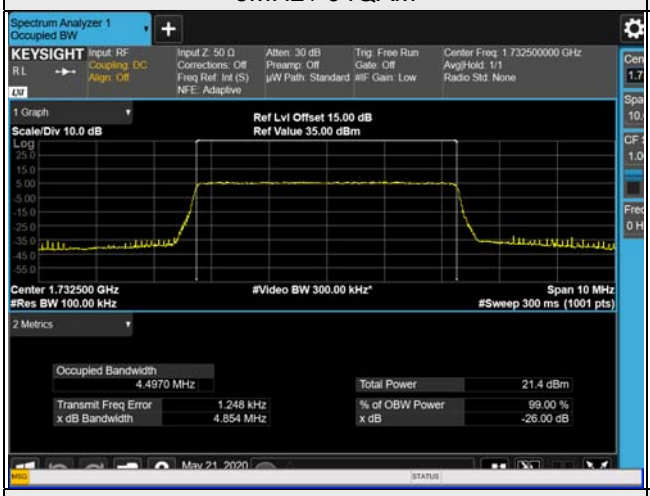
LTE Band 4, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
20050	1720.0	17.91	17.93	17.91
20175	1732.5	17.94	17.96	17.95
20300	1745.0	17.90	17.92	17.92

Spectrum Plot of Worst Value

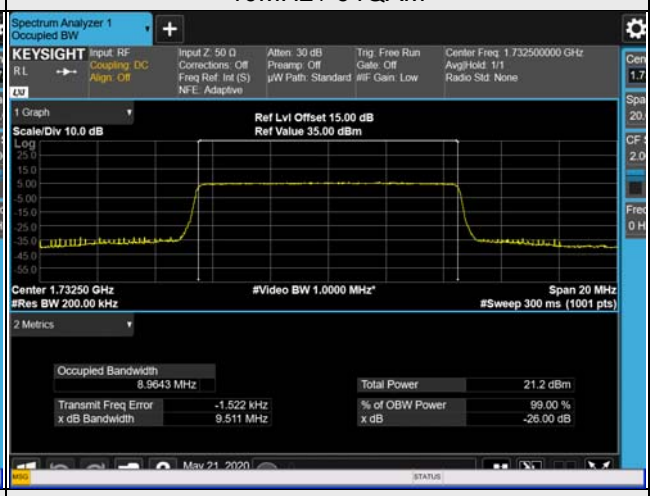
1.4MHz / 16QAM

3MHz / QPSK

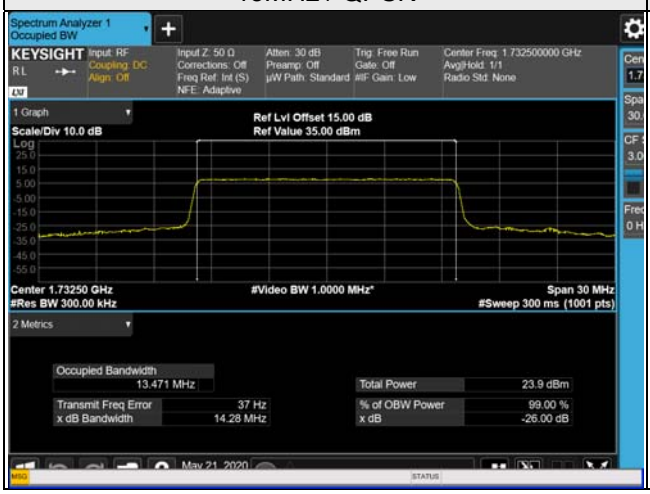
5MHz / 64QAM



10MHz / 64QAM



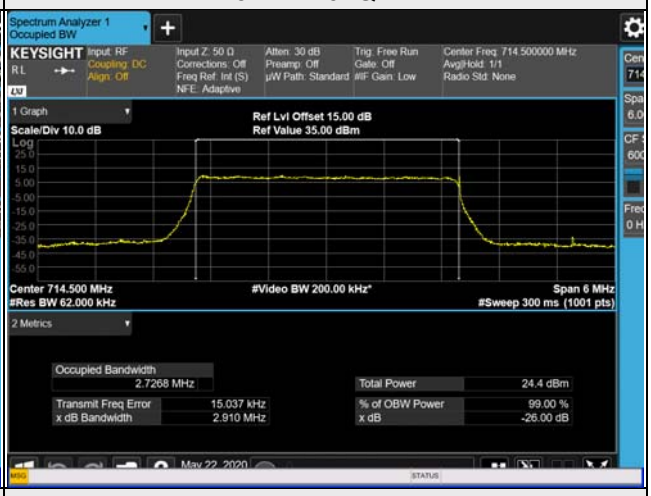
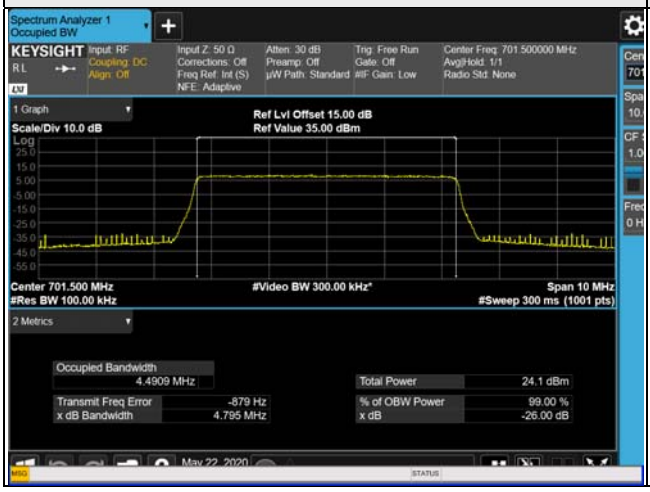
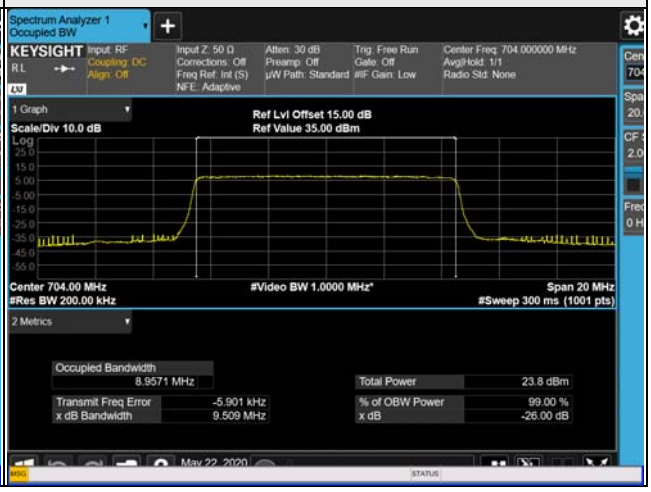
15MHz / QPSK



20MHz / 16QAM

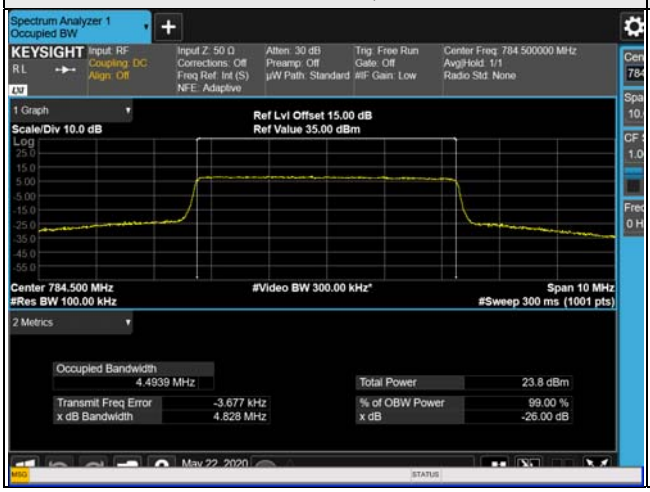
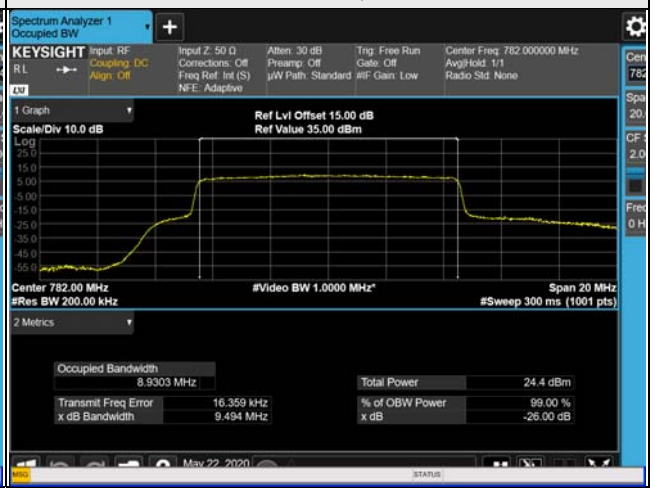
LTE Band 12

LTE Band 12, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23017	699.7	1.09	1.09	1.09
23095	707.5	1.09	1.09	1.09
23173	715.3	1.08	1.09	1.09
LTE Band 12, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23025	700.5	2.70	2.69	2.70
23095	707.5	2.70	2.69	2.70
23165	714.5	2.70	2.69	2.73
LTE Band 12, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23035	701.5	4.49	4.49	4.49
23095	707.5	4.49	4.49	4.49
23155	713.5	4.48	4.48	4.48
LTE Band 12, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23060	704.0	8.96	8.96	8.96
23095	707.5	8.95	8.95	8.95
23130	711.0	8.95	8.95	8.95

Spectrum Plot of Worst Value	
1.4MHz / 64QAM	3MHz / 64QAM
	
5MHz / 64QAM	10MHz / 64QAM
	

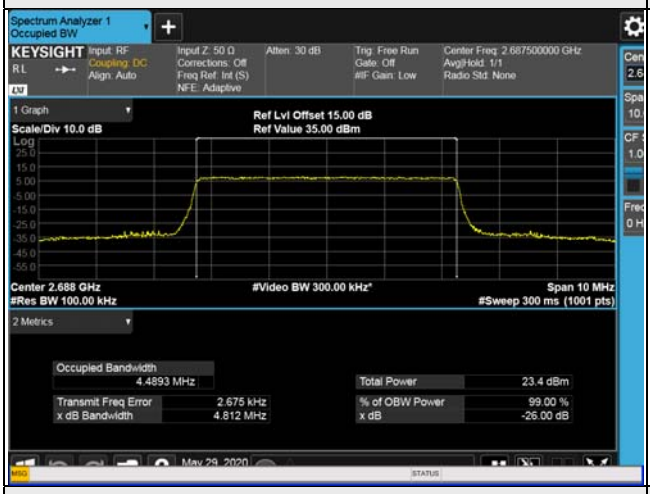
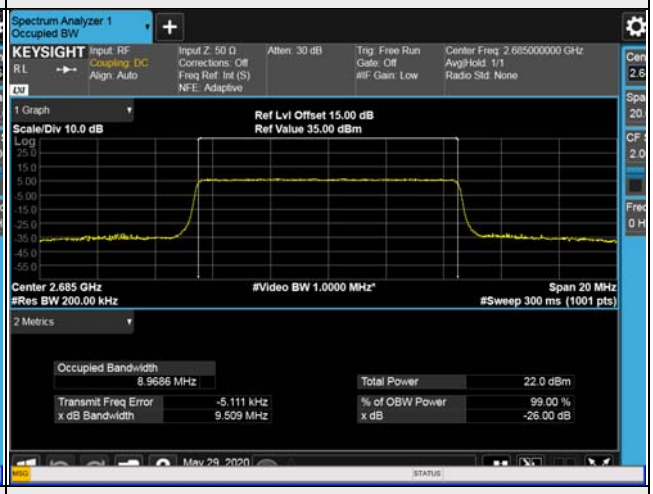
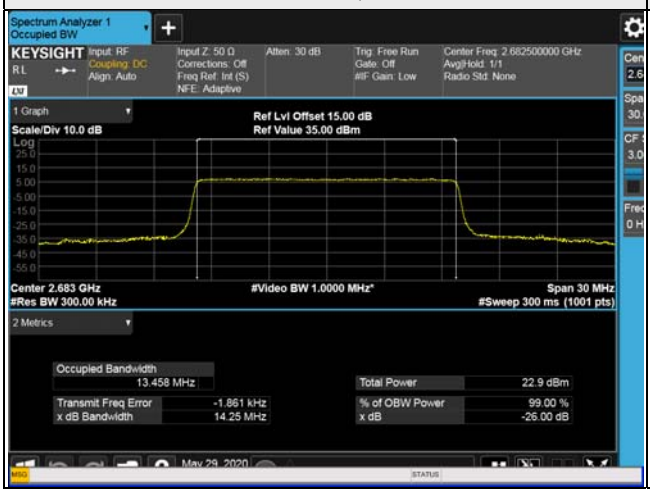
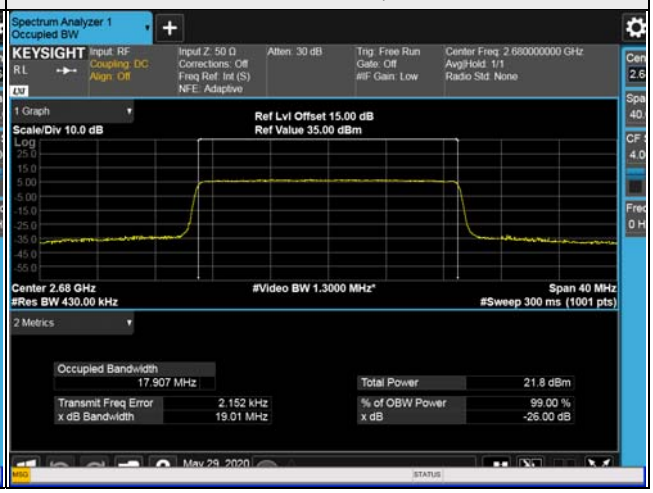
LTE Band 13

LTE Band 13, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23205	779.5	4.48	4.48	4.49
23230	782.0	4.48	4.48	4.48
23255	784.5	4.49	4.49	4.49
LTE Band 13, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23230	782.0	8.93	8.93	8.92

Spectrum Plot of Worst Value	
5MHz / 64QAM	10MHz / QPSK
	

LTE Band 41

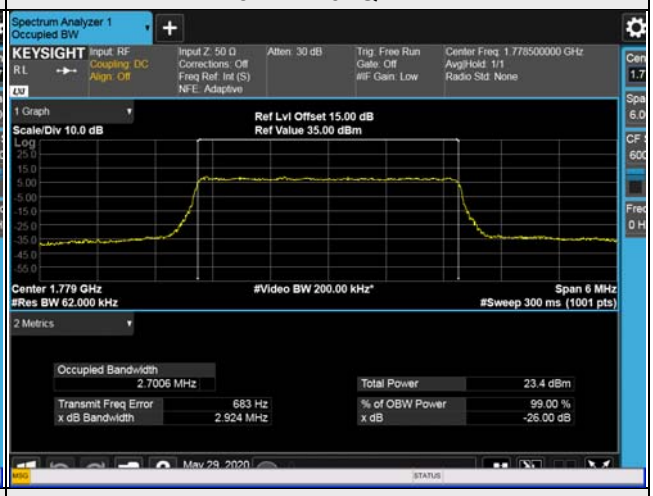
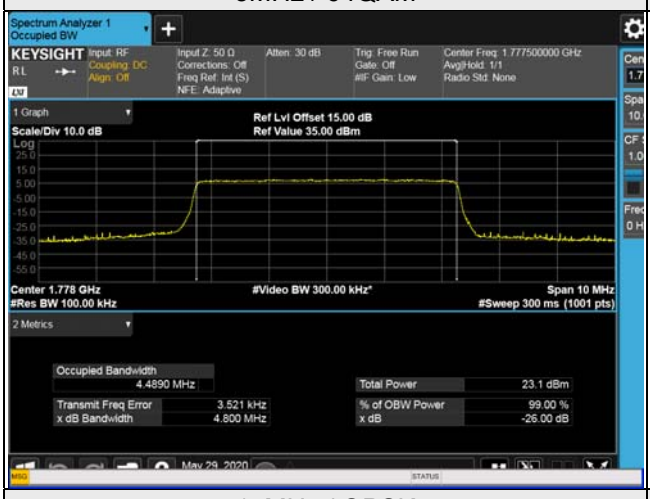
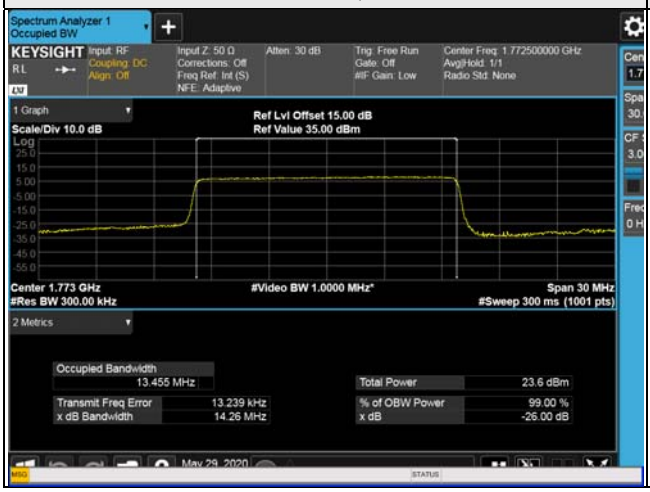
LTE Band 41, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39675	2498.5	4.49	4.49	4.48
40620	2593	4.48	4.48	4.48
41565	2687.5	4.49	4.49	4.48
LTE Band 41, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39700	2501	8.96	8.97	8.96
40620	2593	8.95	8.95	8.96
41540	2685	8.95	8.97	8.96
LTE Band 41, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39725	2503.5	13.45	13.44	13.43
40620	2593	13.45	13.44	13.44
41515	2682.5	13.46	13.44	13.44
LTE Band 41, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39750	2506	17.90	17.89	17.90
40620	2593	17.91	17.90	17.90
41490	2680	17.91	17.89	17.91

Spectrum Plot of Worst Value	
5MHz / QPSK	10MHz / 16QAM
	
15MHz / QPSK	20MHz / 64QAM
	

LTE Band 66

LTE Band 66, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
131979	1710.7	1.09	1.09	1.09
132322	1745.0	1.09	1.09	1.09
132665	1779.3	1.09	1.09	1.09
LTE Band 66, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
131987	1711.5	2.70	2.69	2.70
132322	1745.0	2.70	2.69	2.70
132657	1778.5	2.70	2.70	2.70
LTE Band 66, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
131997	1712.5	4.48	4.48	4.49
132322	1745.0	4.49	4.49	4.49
132647	1777.5	4.48	4.49	4.49
LTE Band 66, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
132022	1715.0	8.95	8.95	8.95
132322	1745.0	8.96	8.96	8.95
132622	1775.0	8.95	8.96	8.95
LTE Band 66, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
132047	1717.5	13.45	13.43	13.43
132322	1745.0	13.45	13.44	13.44
132597	1772.5	13.45	13.44	13.43

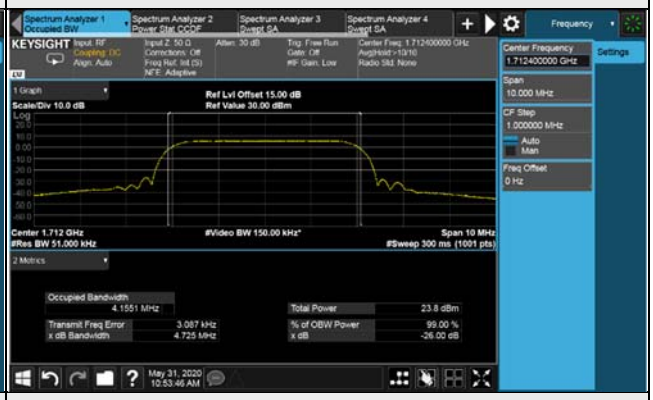
LTE Band 66, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
132072	1720.0	17.91	17.93	17.93
132322	1745.0	17.91	17.92	17.92
132575	1770.0	17.93	17.96	17.94

Spectrum Plot of Worst Value	
1.4MHz / 16QAM	3MHz / 64QAM
	
5MHz / 64QAM	10MHz / 16QAM
	
15MHz / QPSK	20MHz / 16QAM
	

26dB Bandwidth

WCDMA Band 4

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		WCDMA	HSDPA	HSUPA
1312	1712.4	4.72	4.73	4.72
1413	1732.6	4.71	4.72	4.72
1513	1752.6	4.72	4.72	4.72

Spectrum Plot of Worst Value	
WCDMA	HSDPA
	
HSUPA	

LTE Band 4

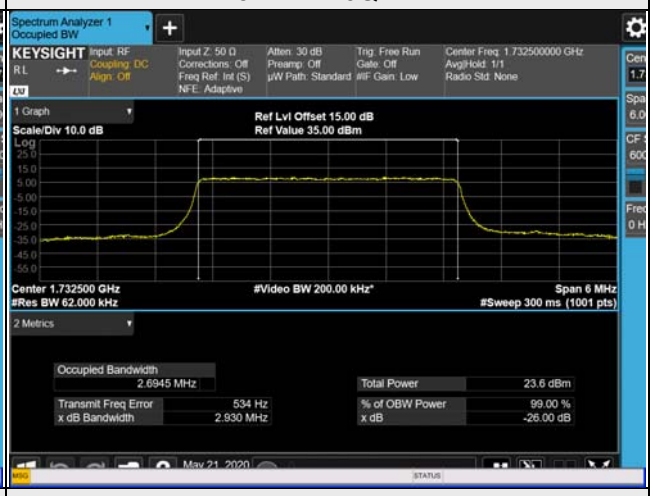
LTE Band 4, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
19957	1710.7	1.21	1.21	1.22
20175	1732.5	1.22	1.21	1.22
20393	1754.3	1.21	1.21	1.22
LTE Band 4, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
19965	1711.5	2.93	2.92	2.91
20175	1732.5	2.93	2.93	2.91
20385	1753.5	2.92	2.92	2.91
LTE Band 4, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
19975	1712.5	4.81	4.79	4.84
20175	1732.5	4.79	4.81	4.85
20375	1752.5	4.81	4.80	4.82
LTE Band 4, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
20000	1715.0	9.50	9.50	9.52
20175	1732.5	9.50	9.52	9.51
20350	1750.0	9.51	9.52	9.50
LTE Band 4, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
20025	1717.5	14.28	14.25	14.24
20175	1732.5	14.28	14.26	14.26
20325	1747.5	14.25	14.25	14.22

LTE Band 4, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
20050	1720.0	19.03	19.04	19.02
20175	1732.5	19.05	19.04	19.05
20300	1745.0	19.02	19.02	19.01

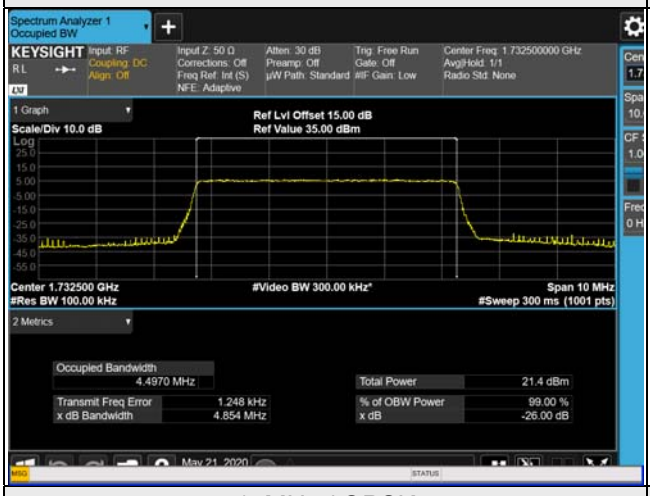
Spectrum Plot of Worst Value

1.4MHz / QPSK

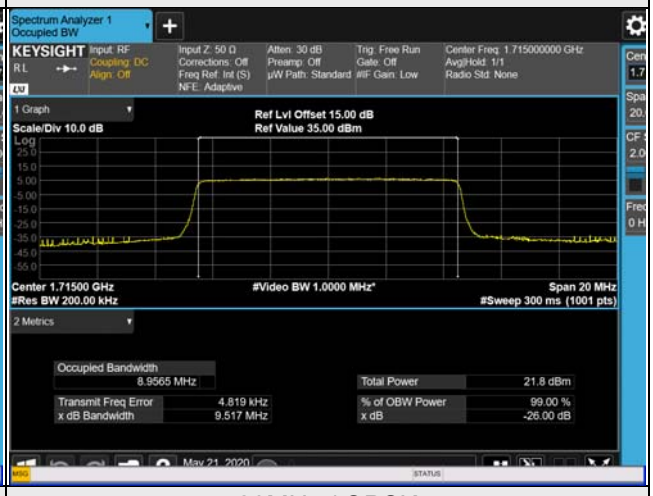
3MHz / 16QAM



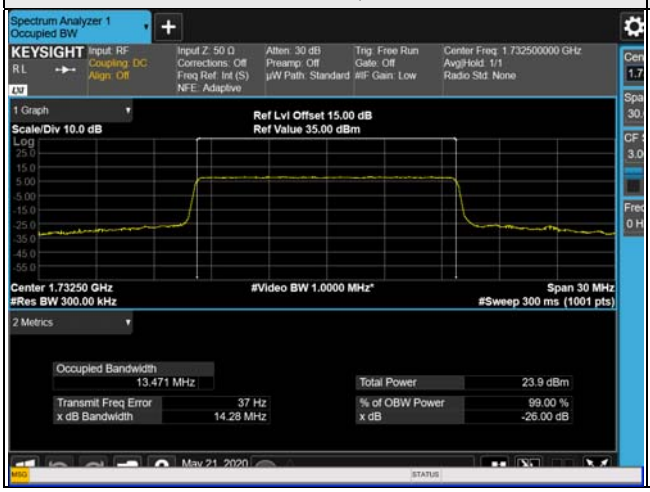
5MHz / 64QAM



10MHz / 64QAM



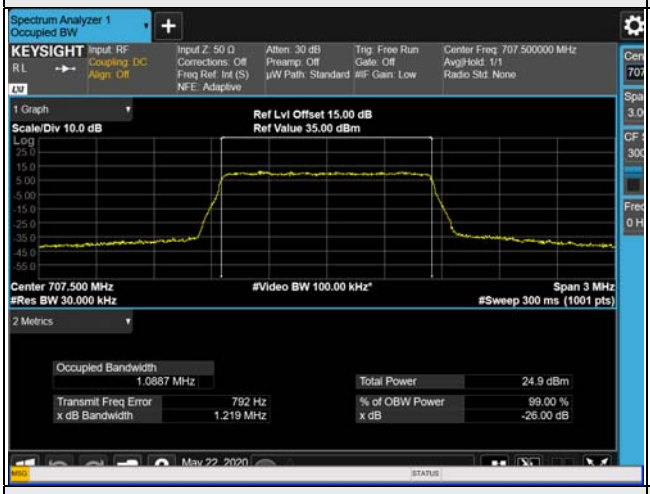
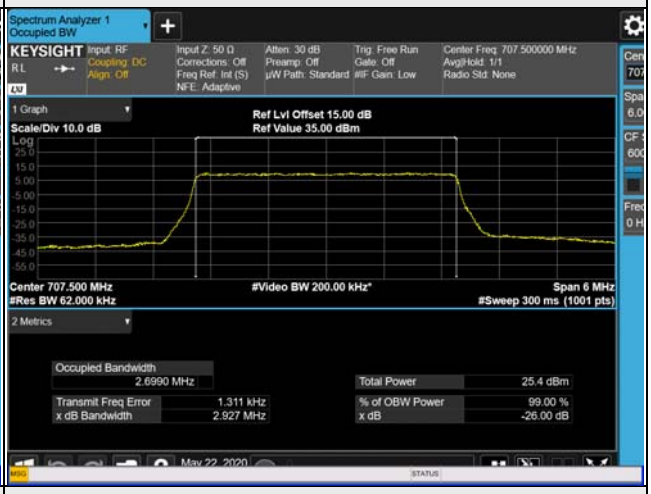
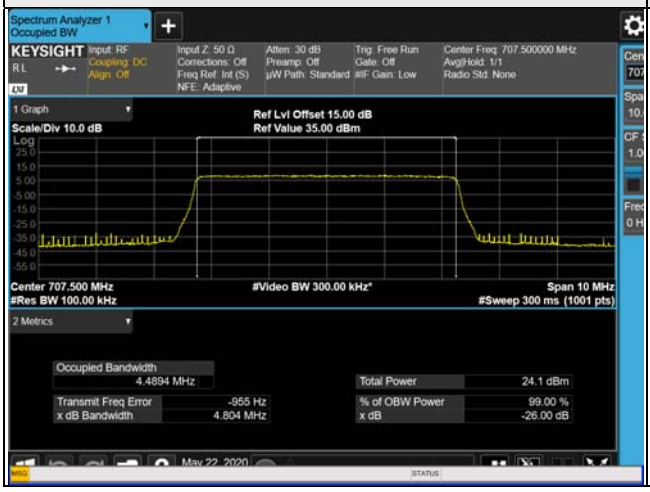
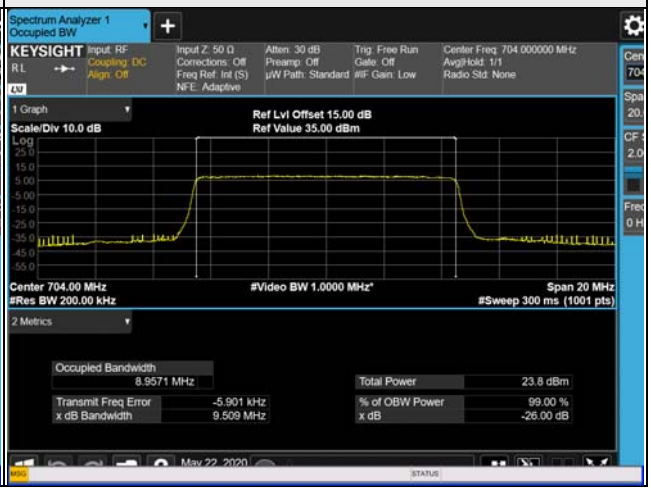
15MHz / QPSK



20MHz / QPSK

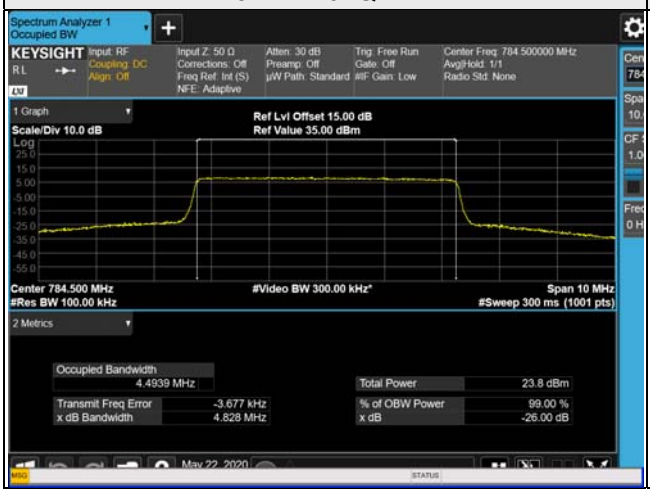
LTE Band 12

LTE Band 12, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23017	699.7	1.21	1.21	1.22
23095	707.5	1.22	1.22	1.17
23173	715.3	1.17	1.21	1.22
LTE Band 12, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23025	700.5	2.92	2.92	2.82
23095	707.5	2.93	2.92	2.92
23165	714.5	2.91	2.92	2.91
LTE Band 12, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23035	701.5	4.79	4.80	4.80
23095	707.5	4.79	4.80	4.80
23155	713.5	4.80	4.79	4.79
LTE Band 12, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23060	704.0	9.50	9.51	9.51
23095	707.5	9.49	9.50	9.50
23130	711.0	9.49	9.50	9.51

Spectrum Plot of Worst Value	
1.4MHz / 16QAM	3MHz / QPSK
	
5MHz / 64QAM	10MHz / 64QAM
	

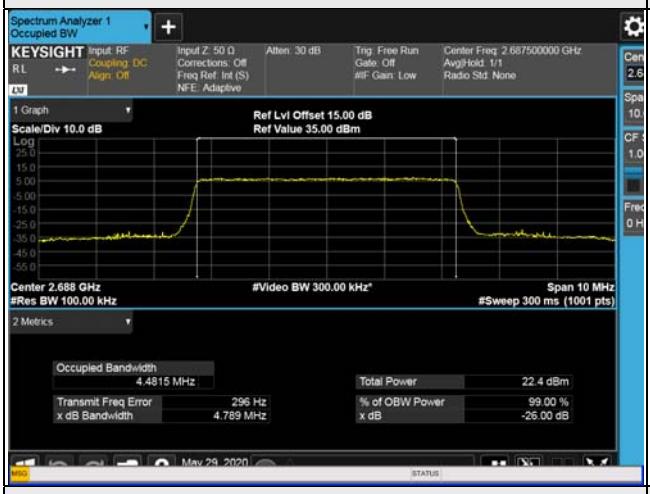
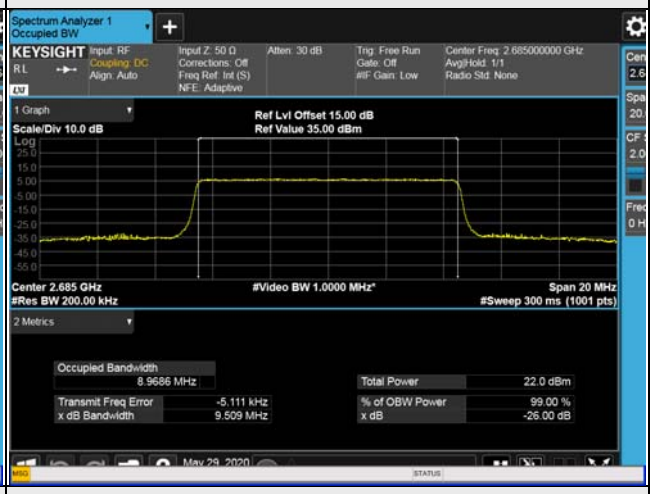
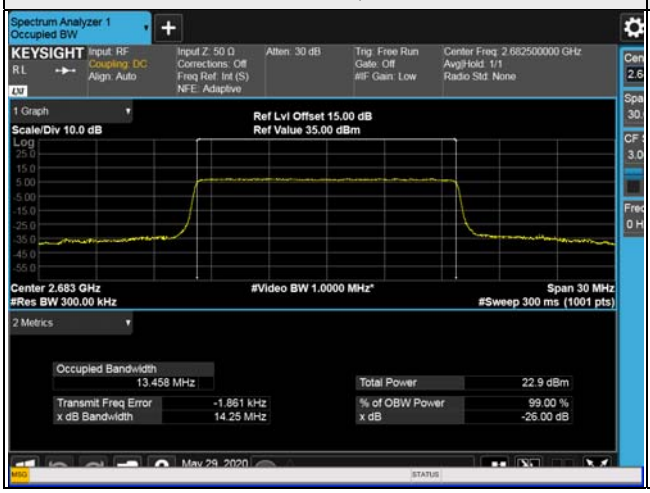
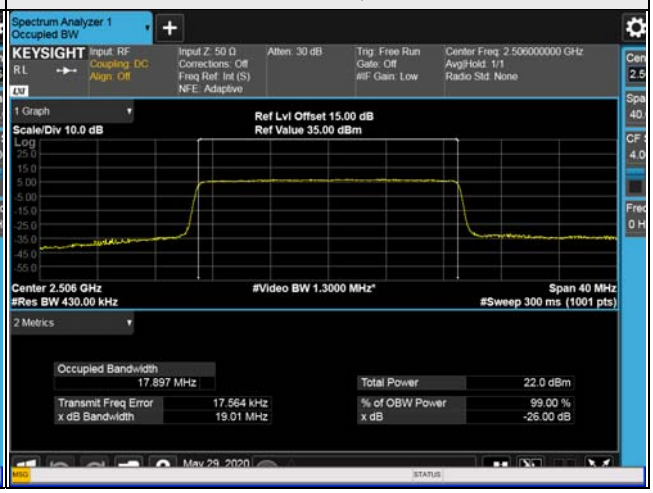
LTE Band 13

LTE Band 13, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23205	779.5	4.81	4.81	4.80
23230	782.0	4.82	4.81	4.80
23255	784.5	4.80	4.82	4.83
LTE Band 13, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
23230	782.0	9.49	9.49	9.49

Spectrum Plot of Worst Value	
5MHz / 64QAM	10MHz / QPSK
	

LTE Band 41

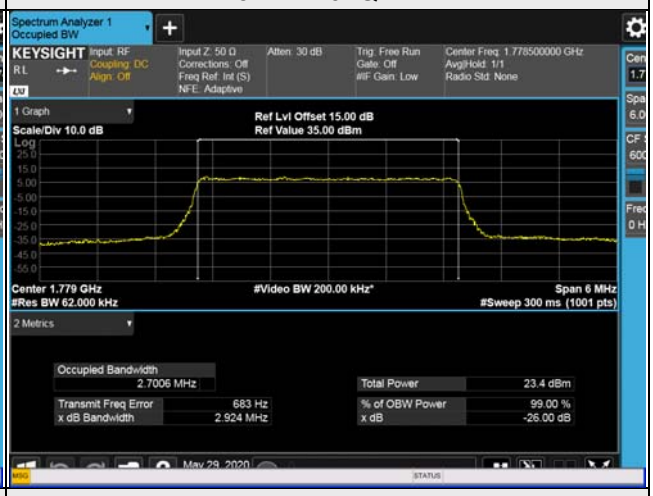
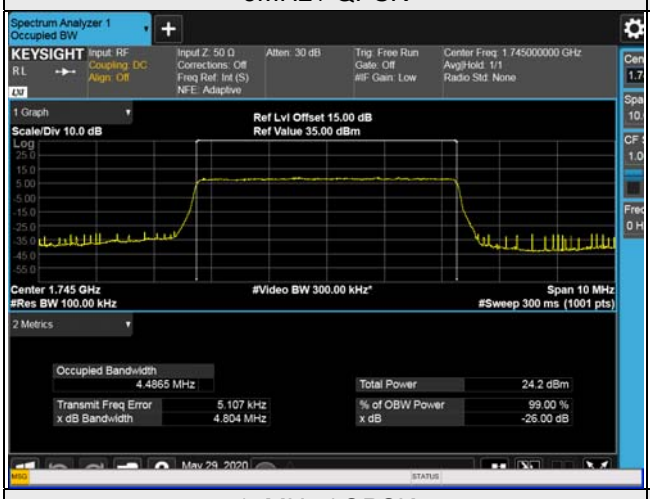
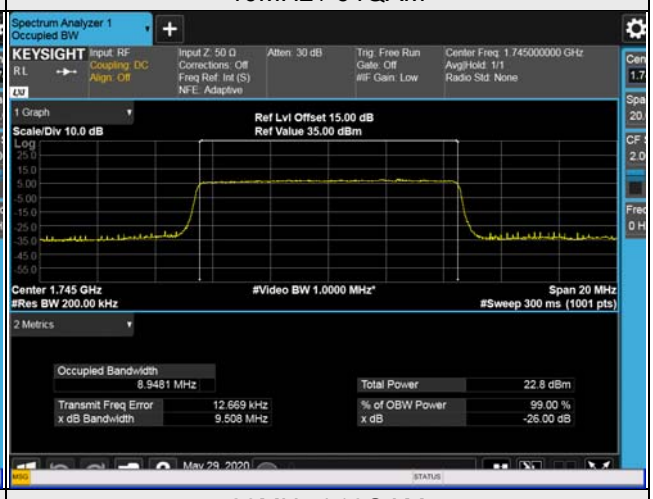
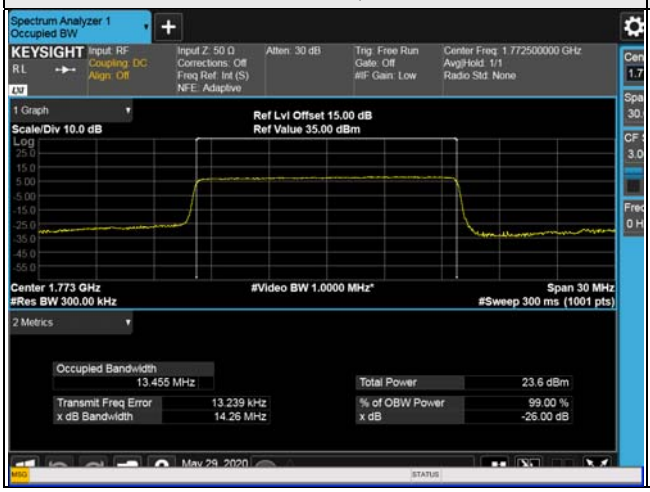
LTE Band 41, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39675	2498.5	4.81	4.79	4.76
40620	2593	4.80	4.79	4.78
41565	2687.5	4.81	4.79	4.79
LTE Band 41, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39700	2501	9.48	9.50	9.51
40620	2593	9.49	9.50	9.50
41540	2685	9.48	9.51	9.51
LTE Band 41, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39725	2503.5	14.25	14.25	14.24
40620	2593	14.24	14.24	14.23
41515	2682.5	14.25	14.23	14.24
LTE Band 41, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
39750	2506	19.00	18.99	19.01
40620	2593	19.01	18.99	19.00
41490	2680	18.99	19.00	19.01

Spectrum Plot of Worst Value	
5MHz / QPSK	10MHz / 16QAM
	
15MHz / QPSK	20MHz / QPSK
	

LTE Band 66

LTE Band 66, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
131979	1710.7	1.22	1.21	1.22
132322	1745.0	1.22	1.22	1.22
132665	1779.3	1.22	1.22	1.22
LTE Band 66, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
131987	1711.5	2.91	2.92	2.91
132322	1745.0	2.92	2.92	2.91
132657	1778.5	2.92	2.92	2.92
LTE Band 66, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
131997	1712.5	4.80	4.80	4.80
132322	1745.0	4.80	4.79	4.80
132647	1777.5	4.80	4.79	4.80
LTE Band 66, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
132022	1715.0	9.50	9.50	9.50
132322	1745.0	9.50	9.50	9.51
132622	1775.0	9.49	9.50	9.50
LTE Band 66, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
132047	1717.5	14.25	14.25	14.26
132322	1745.0	14.25	14.25	14.24
132597	1772.5	14.26	14.24	14.24

LTE Band 66, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
132072	1720.0	19.03	19.02	19.02
132322	1745.0	19.01	19.02	19.01
132575	1770.0	19.03	19.04	19.03

Spectrum Plot of Worst Value	
1.4MHz / 16QAM	3MHz / 64QAM
	
5MHz / QPSK	10MHz / 64QAM
	
15MHz / QPSK	20MHz / 16QAM