

FCC Test Report

(PART 27)

Report No.: RF171013C04B-4

FCC ID: MSQTP370QL

Test Model: TP370QL

Received Date: Oct. 13, 2017

Test Date: Oct. 28, 2017 ~ Jan. 24, 2018

Issued Date: Mar. 06, 2018

Applicant: ASUSTek COMPUTER INC.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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Test Location (1): No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

Test Location (2): No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C

**FCC Registration /
Designation Number:** 427177 / TW0011



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Release Control Record

Issue No.	Description	Date Issued
RF171013C04B-4	Original Release	Mar. 06, 2018

1 Certificate of Conformity

Product: Notebook PC
Brand: ASUS
Test Model: TP370QL
Sample Status: Production Unit
Applicant: ASUSTek COMPUTER INC.
Test Date: Oct. 28, 2017 ~ Jan. 24, 2018
Standards: FCC Part 27, Subpart C, L

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 : Evonne Liu, **Date:** Mar. 06, 2018
Evonne Liu / Specialist

Approved by : Dylan Chiou, **Date:** Mar. 06, 2018
Dylan Chiou / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2 (WCDMA)			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(d)(4)	Equivalent Isotropic Radiated Power	Pass	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 27.53(h)	Occupied Bandwidth	Pass	Meet the requirement of limit.
27.50(d)(5)	Peak to Average Ratio	Pass	Meet the requirement of limit.
27.53(h)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(h)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -23.44 dB at 3505.20 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 4)			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(d)(4)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 27.53(h)	Occupied Bandwidth	Pass	Meet the requirement of limit.
27.50(d)(5)	Peak to Average Ratio	Pass	Meet the requirement of limit.
27.53(h)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(h)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -4.37 dB at 3490 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 12)			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(c)(10)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 27.53(g)	Occupied Bandwidth	Pass	Meet the requirement of limit.
27.50(d)(5)	Peak to Average Ratio	Pass	Meet the requirement of limit.
27.53(g)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(g)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -2.40 dB at 2112 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 13)			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(b)(10)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 27.53(g)	Occupied Bandwidth	Pass	Meet the requirement of limit.
27.50(d)(5)	Peak to Average Ratio	Pass	Meet the requirement of limit.
27.53(g)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(g)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(g)(f)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -7.26 dB at 1564 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 17)

FCC Clause	Test Item	Result	Remarks
2.1046 27.50(c)(10)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 27.53(g)	Occupied Bandwidth	Pass	Meet the requirement of limit.
27.50(d)(5)	Peak to Average Ratio	Pass	Meet the requirement of limit.
27.53(g)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(g)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -2.69 dB at 1422 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 66)

FCC Clause	Test Item	Result	Remarks
2.1046 27.50(d)(4)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 27.53(h)	Occupied Bandwidth	Pass	Meet the requirement of limit.
27.50(d)(5)	Peak to Average Ratio	Pass	Meet the requirement of limit.
27.53(h)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(h)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -1.40 dB at 3490 MHz.

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) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Jul. 05, 2017	Jul. 04, 2018
Spectrum Analyzer Keysight	N9020A	MY57130210	Oct. 30, 2017	Oct. 29, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 13, 2016	Dec. 12, 2017
			Dec. 06, 2017	Dec. 05, 2018
HORN Antenna ETS-Lindgren	3117	00143293	Jun. 26, 2017	Jun. 25, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 14, 2016	Dec. 13, 2017
			Dec. 01, 2017	Nov. 30, 2018
Fixed Attenuator Mini-Circuits	BW-N10W5+	NA	Jul. 07, 2017	Jul. 06, 2018
Preamplifier Agilent	310N	187226	Jun. 23, 2017	Jun. 22, 2018
Preamplifier Agilent	83017A	MY39501357	Jun. 23, 2017	Jun. 22, 2018
Power Meter Anritsu	ML2495A	1012010	Aug. 15, 2017	Aug. 14, 2018
Power Sensor Anritsu	MA2411B	1315050	Aug. 15, 2017	Aug. 14, 2018
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(R FC-SMS-100-SM S-120+RFC-SMS -100-SMS-400)	Jun. 23, 2017	Jun. 22, 2018
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(R FC-SMS-100-SM S-24)	Jun. 23, 2017	Jun. 22, 2018
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Communications Tester-Wireless Agilent	8960 Series 10	MY53201073	Jun. 28, 2017	Jun. 27, 2019
Radio Communication Analyzer Anritsu	MT8820C	6201300638	Jul. 11, 2017	Jul. 10, 2018
Temperature & Humidity Chamber	GTH-120-40-CP-A R	MAA1306-019	Sep. 08, 2017	Sep. 07, 2018
DC Power Supply Topward	33010D	807748	Oct. 25, 2016	Oct. 24, 2018
Digital Multimeter Fluke	87-III	70360742	Jun. 30, 2017	Jun. 29, 2018

- Note:
1. The calibration interval of the above test instruments is 12 / 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HsinTien Chamber 1.
 3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1 GHz if tested.
 4. The IC Site Registration No. is IC7450I-1.

3 General Information

3.1 General Description of EUT

Product	Notebook PC	
Brand	ASUS	
Test Model	TP370QL	
Status of EUT	Production Unit	
Power Supply Rating	15.4 Vdc (Battery) 19.0 Vdc (Adapter)	
Modulation Type	WCDMA	QPSK
	LTE	QPSK, 16QAM, 64QAM
Frequency Range	WCDMA	1712.4 ~ 1752.6 MHz
	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	1710.7 ~ 1754.3 MHz
	LTE Band 4 (Channel Bandwidth: 3 MHz)	1711.5 ~ 1753.5 MHz
	LTE Band 4 (Channel Bandwidth: 5 MHz)	1712.5 ~ 1752.5 MHz
	LTE Band 4 (Channel Bandwidth: 10 MHz)	1715.0 ~ 1750.0 MHz
	LTE Band 4 (Channel Bandwidth: 15 MHz)	1717.5 ~ 1747.5 MHz
	LTE Band 4 (Channel Bandwidth: 20 MHz)	1720.0 ~ 1745.0 MHz
	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	699.7 ~ 715.3 MHz
	LTE Band 12 (Channel Bandwidth: 3 MHz)	700.5 ~ 714.5 MHz
	LTE Band 12 (Channel Bandwidth: 5 MHz)	701.5 ~ 713.5 MHz
	LTE Band 12 (Channel Bandwidth: 10 MHz)	704.0 ~ 711.0 MHz
	LTE Band 13 (Channel Bandwidth: 5 MHz)	779.5 ~ 784.5 MHz
	LTE Band 13 (Channel Bandwidth: 10 MHz)	782.0 MHz
	LTE Band 17 (Channel Bandwidth: 5 MHz)	706.5 ~ 713.5 MHz
	LTE Band 17 (Channel Bandwidth: 10 MHz)	709.0 ~ 711.0 MHz
	LTE Band 66 (Channel Bandwidth: 1.4 MHz)	1710.7 ~ 1779.3 MHz
	LTE Band 66 (Channel Bandwidth: 3 MHz)	1711.5 ~ 1778.5 MHz
	LTE Band 66 (Channel Bandwidth: 5 MHz)	1712.5 ~ 1777.5 MHz
	LTE Band 66 (Channel Bandwidth: 10 MHz)	1715.0 ~ 1775.0 MHz
	LTE Band 66 (Channel Bandwidth: 15 MHz)	1717.5 ~ 1772.5 MHz
LTE Band 66 (Channel Bandwidth: 20 MHz)	1720.0 ~ 1770.0 MHz	
Emission Designator	WCDMA	4M13F9W
	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE Band 4 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE Band 4 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE Band 4 (Channel Bandwidth: 10 MHz)	8M98W7D
	LTE Band 4 (Channel Bandwidth: 15 MHz)	13M49G7D
	LTE Band 4 (Channel Bandwidth: 20 MHz)	18M0W7D
	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE Band 12 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE Band 12 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE Band 12 (Channel Bandwidth: 10 MHz)	9M0W7D
	LTE Band 13 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE Band 13 (Channel Bandwidth: 10 MHz)	8M95W7D

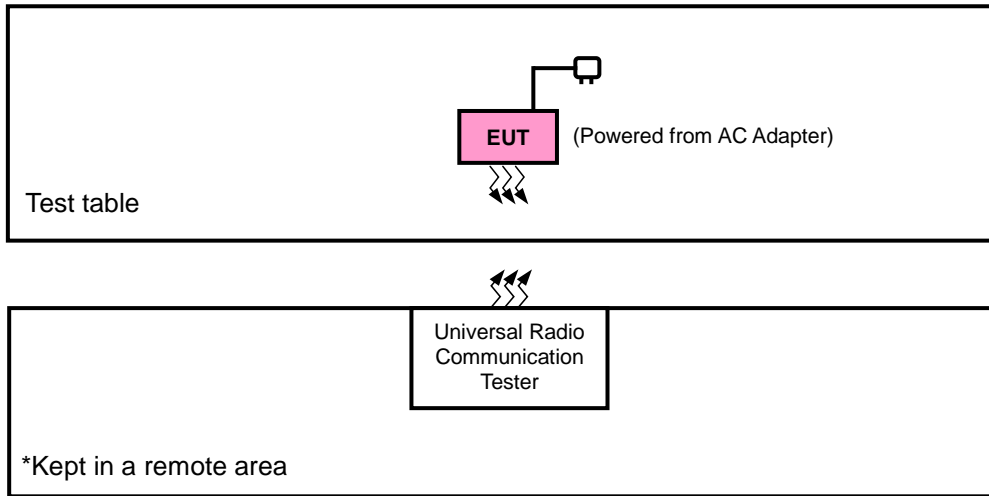
	LTE Band 17 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE Band 17 (Channel Bandwidth: 10 MHz)	8M97W7D
	LTE Band 66 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE Band 66 (Channel Bandwidth: 3 MHz)	2M70W7D
	LTE Band 66 (Channel Bandwidth: 5 MHz)	4M49W7D
	LTE Band 66 (Channel Bandwidth: 10 MHz)	8M97W7D
	LTE Band 66 (Channel Bandwidth: 15 MHz)	13M46G7D
	LTE Band 66 (Channel Bandwidth: 20 MHz)	17M96W7D
Max. ERP Power	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	202.72 mW
	LTE Band 12 (Channel Bandwidth: 3 MHz)	203.19 mW
	LTE Band 12 (Channel Bandwidth: 5 MHz)	205.64 mW
	LTE Band 12 (Channel Bandwidth: 10 MHz)	208.79 mW
	LTE Band 13 (Channel Bandwidth: 5 MHz)	181.18 mW
	LTE Band 13 (Channel Bandwidth: 10 MHz)	184.37 mW
	LTE Band 17 (Channel Bandwidth: 5 MHz)	203.75 mW
	LTE Band 17 (Channel Bandwidth: 10 MHz)	208.88 mW
Max. EIRP Power	WCDMA	243.72 mW
	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	254.68 mW
	LTE Band 4 (Channel Bandwidth: 3 MHz)	254.98 mW
	LTE Band 4 (Channel Bandwidth: 5 MHz)	255.86 mW
	LTE Band 4 (Channel Bandwidth: 10 MHz)	259.24 mW
	LTE Band 4 (Channel Bandwidth: 15 MHz)	255.86 mW
	LTE Band 4 (Channel Bandwidth: 20 MHz)	259.42 mW
	LTE Band 66 (Channel Bandwidth: 1.4 MHz)	321.37 mW
	LTE Band 66 (Channel Bandwidth: 3 MHz)	320.63 mW
	LTE Band 66 (Channel Bandwidth: 5 MHz)	322.85 mW
	LTE Band 66 (Channel Bandwidth: 10 MHz)	322.48 mW
	LTE Band 66 (Channel Bandwidth: 15 MHz)	324.34 mW
	LTE Band 66 (Channel Bandwidth: 20 MHz)	330.37 mW
Antenna Type	Fixed Internal Antenna	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

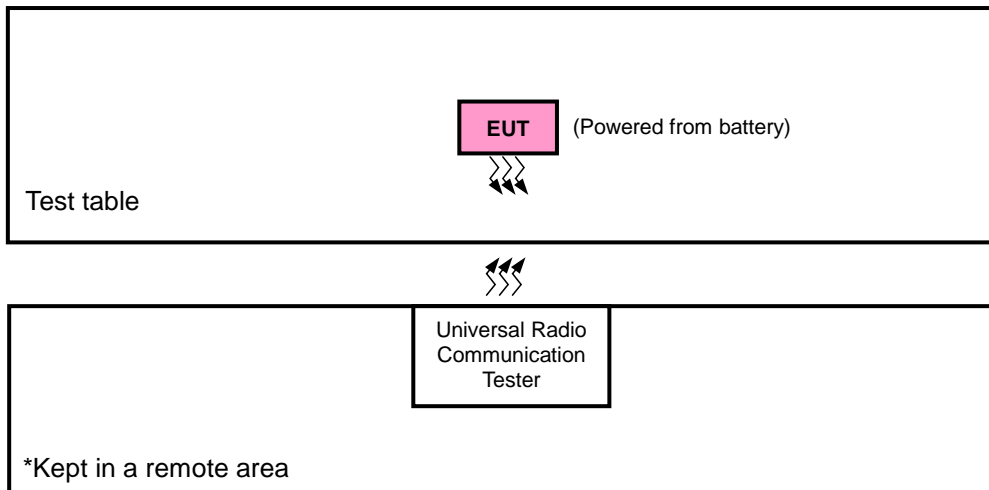
1. The EUT's accessories list refers to Ext. Pho.
2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

<Radiated Emission Test>



<E.R.P. / E.I.R.P. 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.

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 as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	ERP / EIRP	Radiated Emission
WCDMA	X-plane	Z-axis
LTE Band 4	X-plane	X-axis
LTE Band 12	Z-plane	NB-plane
LTE Band 13	Y-plane	Y-axis
LTE Band 17	Z-plane	NB-plane
LTE Band 66	X-plane	Y-axis

WCDMA

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	1312 to 1513	1312, 1413, 1513	WCDMA
-	Frequency Stability	1312 to 1513	1312, 1513	WCDMA
-	Occupied Bandwidth	1312 to 1513	1312, 1413, 1513	WCDMA
-	Band Edge	1312 to 1513	1312, 1513	WCDMA
-	Peak to Average Ratio	1312 to 1513	1312, 1413, 1513	WCDMA
-	Conducted Emission	1312 to 1513	1312, 1413, 1513	WCDMA
-	Radiated Emission	1312 to 1513	1312, 1413, 1513	WCDMA

LTE Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 5 RB Offset
		19965 to 20385	19965, 20175, 20385	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 14 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
		20000 to 20350	20000, 20175, 20350	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset
		20025 to 20325	20025, 20175, 20325	15 MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset
		20050 to 20300	20050, 20175, 20300	20 MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB Offset
-	Frequency Stability	19957 to 20393	19957, 20393	1.4 MHz	QPSK	1 RB / 5 RB Offset
		19965 to 20385	19965, 20385	3 MHz	QPSK	1 RB / 14 RB Offset
		19975 to 20375	19975, 20375	5 MHz	QPSK	1 RB / 24 RB Offset
		20000 to 20350	20000, 20350	10 MHz	QPSK	1 RB / 49 RB Offset
		20025 to 20325	20025, 20325	15 MHz	QPSK	1 RB / 74 RB Offset
		20050 to 20300	20050, 20300	20 MHz	QPSK	1 RB / 99 RB Offset
-	Occupied Bandwidth	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15 MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20 MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
-	Peak to Average Ratio	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 2 RB Offset
		19965 to 20385	19965, 20175, 20385	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 7 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK, 16QAM, 64QAM	12 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
		20025 to 20325	20025, 20175, 20325	15 MHz	QPSK, 16QAM, 64QAM	36 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode		
-	Band Edge	19957 to 20393	19957	1.4 MHz	QPSK	1 RB / 0 RB Offset 6 RB / 0 RB Offset		
			20393	1.4 MHz	QPSK	1 RB / 5 RB Offset 6 RB / 0 RB Offset		
		19965 to 20385	19965	3 MHz	QPSK	1 RB / 0 RB Offset 15 RB / 0 RB Offset		
			20385	3 MHz	QPSK	1 RB / 14 RB Offset 15 RB / 0 RB Offset		
		19975 to 20375	19975	5 MHz	QPSK	1 RB / 0 RB Offset 25 RB / 0 RB Offset		
			20375	5 MHz	QPSK	1 RB / 24 RB Offset 25 RB / 0 RB Offset		
		20000 to 20350	20000	10 MHz	QPSK	1 RB / 0 RB Offset 50 RB / 0 RB Offset		
			20350	10 MHz	QPSK	1 RB / 49 RB Offset 50 RB / 0 RB Offset		
		20025 to 20325	20025	15 MHz	QPSK	1 RB / 0 RB Offset 75 RB / 0 RB Offset		
			20325	15 MHz	QPSK	1 RB / 74 RB Offset 75 RB / 0 RB Offset		
		20050 to 20300	20050	20 MHz	QPSK	1 RB / 0 RB Offset 100 RB / 0 RB Offset		
			20300	20 MHz	QPSK	1 RB / 99 RB Offset 100 RB / 0 RB Offset		
		-	Conducted Emission	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK	1 RB / 2 RB Offset
				19965 to 20385	19965, 20175, 20385	3 MHz	QPSK	1 RB / 7 RB Offset
				19975 to 20375	19975, 20175, 20375	5 MHz	QPSK	12 RB / 0 RB Offset
				20000 to 20350	20000, 20175, 20350	10 MHz	QPSK	50 RB / 0 RB Offset
				20025 to 20325	20025, 20175, 20325	15 MHz	QPSK	36 RB / 0 RB Offset
				20050 to 20300	20050, 20175, 20300	20 MHz	QPSK	50 RB / 0 RB Offset
-	Radiated Emission	20050 to 20300	20050, 20175, 20300	20 MHz	QPSK	1 RB / 99 RB Offset		

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE Band 12

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode		
-	ERP	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 2 RB Offset		
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 7 RB Offset		
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 12 RB Offset		
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset		
-	Frequency Stability	23017 to 23173	23017, 23173	1.4 MHz	QPSK	1 RB / 2 RB Offset		
		23025 to 23165	23025, 23165	3 MHz	QPSK	1 RB / 7 RB Offset		
		23035 to 23155	23035, 23155	5 MHz	QPSK	1 RB / 12 RB Offset		
		23060 to 23130	23060, 23130	10 MHz	QPSK	1 RB / 24 RB Offset		
-	Occupied Bandwidth	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset		
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset		
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset		
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset		
-	Peak to Average Ratio	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset		
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset		
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset		
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset		
-	Band Edge	23017 to 23173	23017	1.4 MHz	QPSK	1 RB / 0 RB Offset 6 RB / 0 RB Offset		
			23173	1.4 MHz	QPSK	1 RB / 5 RB Offset 6 RB / 0 RB Offset		
		23025 to 23165	23025	3 MHz	QPSK	1 RB / 0 RB Offset 15 RB / 0 RB Offset		
			23165	3 MHz	QPSK	1 RB / 14 RB Offset 15 RB / 0 RB Offset		
		23035 to 23155	23035	5 MHz	QPSK	1 RB / 0 RB Offset 25 RB / 0 RB Offset		
			23155	5 MHz	QPSK	1 RB / 24 RB Offset 25 RB / 0 RB Offset		
		23060 to 23130	23060	10 MHz	QPSK	1 RB / 0 RB Offset 50 RB / 0 RB Offset		
			23130	10 MHz	QPSK	1 RB / 49 RB Offset 50 RB / 0 RB Offset		
		-	Conducted Emission	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK	1 RB / 0 RB Offset
				23025 to 23165	23025, 23095, 23165	3 MHz	QPSK	1 RB / 0 RB Offset
				23035 to 23155	23035, 23095, 23155	5 MHz	QPSK	1 RB / 0 RB Offset
				23060 to 23130	23060, 23095, 23130	10 MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission	23060 to 23130	23060, 23095, 23130	10 MHz	QPSK	1 RB / 24 RB Offset		

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE Band 13

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	23205 to 23255	23205, 23230, 23255	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
-	Frequency Stability	23205 to 23255	23205, 23255	5 MHz	QPSK	1 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK	1 RB / 24 RB Offset
-	Occupied Bandwidth	23205 to 23255	23205, 23230, 23255	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
-	Peak to Average Ratio	23205 to 23255	23205, 23230, 23255	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
-	Band Edge	23205 to 23255	23205	5 MHz	QPSK	1 RB / 0 RB Offset 25 RB / 0 RB Offset
			23255	5 MHz	QPSK	1 RB / 24 RB Offset 25 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK	1 RB / 0 RB Offset 50 RB / 0 RB Offset
			23230	10 MHz	QPSK	1 RB / 49 RB Offset 50 RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE Band 17

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode		
-	ERP	23755 to 23825	23755, 23790, 23825	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 12 RB Offset		
		23780 to 23800	23780, 23790, 23800	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset		
-	Frequency Stability	23755 to 23825	23755, 23825	5 MHz	QPSK	1 RB / 12 RB Offset		
		23780 to 23800	23780, 23800	10 MHz	QPSK	1 RB / 24 RB Offset		
-	Occupied Bandwidth	23755 to 23825	23755, 23790, 23825	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset		
		23780 to 23800	23780, 23790, 23800	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset		
-	Peak to Average Ratio	23755 to 23825	23755, 23790, 23825	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 12 RB Offset		
		23780 to 23800	23780, 23790, 23800	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset		
-	Band Edge	23755 to 23825	23755	5 MHz	QPSK	1 RB / 0 RB Offset 25 RB / 0 RB Offset		
			23825	5 MHz	QPSK	1 RB / 24 RB Offset 25 RB / 0 RB Offset		
		23780 to 23800	23780	10 MHz	QPSK	1 RB / 0 RB Offset 50 RB / 0 RB Offset		
			23800	10 MHz	QPSK	1 RB / 49 RB Offset 50 RB / 0 RB Offset		
		-	Conducted Emission	23755 to 23825	23755, 23790, 23825	5 MHz	QPSK	1 RB / 12 RB Offset
				23780 to 23800	23780, 23790, 23800	10 MHz	QPSK	1 RB / 24 RB Offset
-	Radiated Emission	23780 to 23800	23780, 23790, 23800	10 MHz	QPSK	1 RB / 24 RB Offset		

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE Band 66

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	131979 to 132665	131979, 132322, 132665	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 5 RB Offset
		131987 to 132657	131987, 132322, 132657	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 14 RB Offset
		131997 to 132647	131997, 132322, 132647	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
		132022 to 132622	132022, 132322, 132622	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset
		132047 to 132597	132047, 132322, 132597	15 MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset
		132072 to 132572	132072, 132322, 132572	20 MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB Offset
-	Frequency Stability	131979 to 132665	131979, 132665	1.4 MHz	QPSK	1 RB / 5 RB Offset
		131987 to 132657	131987, 132657	3 MHz	QPSK	1 RB / 14 RB Offset
		131997 to 132647	131997, 132647	5 MHz	QPSK	1 RB / 24 RB Offset
		132022 to 132622	132022, 132622	10 MHz	QPSK	1 RB / 49 RB Offset
		132047 to 132597	132047, 132597	15 MHz	QPSK	1 RB / 74 RB Offset
		132072 to 132572	132072, 132572	20 MHz	QPSK	1 RB / 99 RB Offset
-	Occupied Bandwidth	131979 to 132665	131979, 132322, 132665	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		131987 to 132657	131987, 132322, 132657	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		131997 to 132647	131997, 132322, 132647	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		132022 to 132622	132022, 132322, 132622	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		132047 to 132597	132047, 132322, 132597	15 MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		132072 to 132572	132072, 132322, 132572	20 MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
-	Peak to Average Ratio	131979 to 132665	131979, 132322, 132665	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 2 RB Offset
		131987 to 132657	131987, 132322, 132657	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 7 RB Offset
		131997 to 132647	131997, 132322, 132647	5 MHz	QPSK, 16QAM, 64QAM	12 RB / 0 RB Offset
		132022 to 132622	132022, 132322, 132622	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
		132047 to 132597	132047, 132322, 132597	15 MHz	QPSK, 16QAM, 64QAM	36 RB / 0 RB Offset
		132072 to 132572	132072, 132322, 132572	20 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode		
-	Band Edge	131979 to 132665	131979	1.4 MHz	QPSK	1 RB / 0 RB Offset 6 RB / 0 RB Offset		
			132665	1.4 MHz	QPSK	1 RB / 5 RB Offset 6 RB / 0 RB Offset		
		131987 to 132657	131987	3 MHz	QPSK	1 RB / 0 RB Offset 15 RB / 0 RB Offset		
			132657	3 MHz	QPSK	1 RB / 14 RB Offset 15 RB / 0 RB Offset		
		131997 to 132647	131997	5 MHz	QPSK	1 RB / 0 RB Offset 25 RB / 0 RB Offset		
			132647	5 MHz	QPSK	1 RB / 24 RB Offset 25 RB / 0 RB Offset		
		132022 to 132622	132022	10 MHz	QPSK	1 RB / 0 RB Offset 50 RB / 0 RB Offset		
			132622	10 MHz	QPSK	1 RB / 49 RB Offset 50 RB / 0 RB Offset		
		132047 to 132597	132047	15 MHz	QPSK	1 RB / 0 RB Offset 75 RB / 0 RB Offset		
			132597	15 MHz	QPSK	1 RB / 74 RB Offset 75 RB / 0 RB Offset		
		132072 to 132572	132072	20 MHz	QPSK	1 RB / 0 RB Offset 100 RB / 0 RB Offset		
			132572	20 MHz	QPSK	1 RB / 99 RB Offset 100 RB / 0 RB Offset		
		-	Conducted Emission	131979 to 132665	131979, 132322, 132665	1.4 MHz	QPSK	1 RB / 2 RB Offset
				131987 to 132657	131987, 132322, 132657	3 MHz	QPSK	1 RB / 7 RB Offset
				131997 to 132647	131997, 132322, 132647	5 MHz	QPSK	12 RB / 0 RB Offset
				132022 to 132622	132022, 132322, 132622	10 MHz	QPSK	50 RB / 0 RB Offset
				132047 to 132597	132047, 132322, 132597	15 MHz	QPSK	36 RB / 0 RB Offset
				132072 to 132572	132072, 132322, 132572	20 MHz	QPSK	50 RB / 0 RB Offset
-	Radiated Emission	132072 to 132572	132072, 132322, 132572	20 MHz	QPSK	1 RB / 99 RB Offset		

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP / EIRP	25 deg. C, 65 % RH	15.4 Vdc	Anson Lin
Frequency Stability	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Occupied Bandwidth	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Band Edge	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Peak to Average Ratio	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Conducted Emission	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Getaz Yang, Karl Lee, Charles Hsiao

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

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

FCC 47 CFR Part 2

FCC 47 CFR Part 27

KDB 971168 D01 Power Meas License Digital Systems v03

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

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

Portable stations (hand-held devices) operating in the 704-716 MHz band are limited to 3 watts ERP

4.1.2 Test Procedures

EIRP / ERP Measurement:

- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5 MHz for WCDMA and 10 MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) 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 1 m to 4 m 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. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15 \text{ dBi}$.

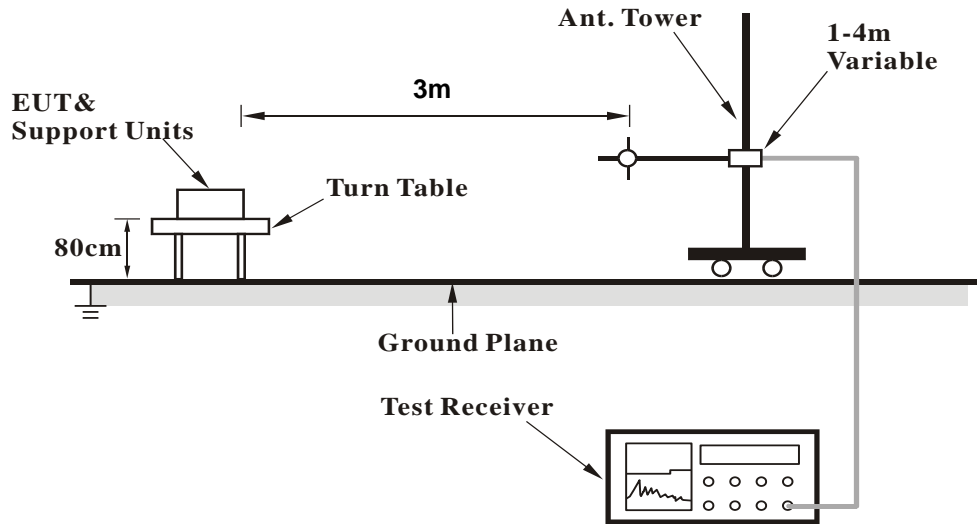
Conducted Power Measurement:

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

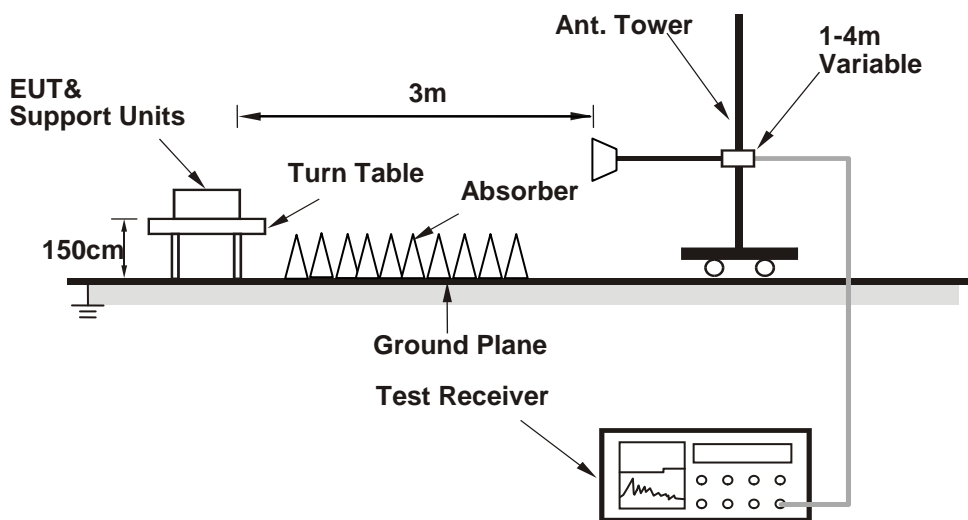
4.1.3 Test Setup

EIRP / ERP Measurement:

<Radiated Emission below or equal 1 GHz>

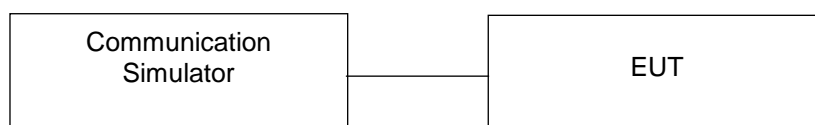


<Radiated Emission above 1 GHz>



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

Conducted Power Measurement:



4.1.4 Test Results

Conducted Output Power (dBm)

Band Channel	WCDMA Band IV			3GPP MPR (dB)
	1312	1413	1513	
Frequency (MHz)	1712.4	1732.6	1752.6	
EUT without Power Reduction (P-Sensor NOT Triggered)				
RMC 12.2K	23.10	23.10	23.19	-
HSDPA Subtest-1	22.13	22.05	22.14	0
HSDPA Subtest-2	22.19	22.04	22.19	0
HSDPA Subtest-3	21.62	21.48	21.63	0.5
HSDPA Subtest-4	21.61	21.49	21.44	0.5
HSUPA Subtest-1	22.03	21.50	21.83	0
HSUPA Subtest-2	19.73	19.52	19.46	2
HSUPA Subtest-3	20.36	20.40	20.43	1
HSUPA Subtest-4	19.41	19.43	19.42	2
HSUPA Subtest-5	22.00	21.30	21.30	0
EUT with Power Reduction (P-Sensor Triggered)				
RMC 12.2K	14.72	14.78	14.62	-
HSDPA Subtest-1	13.75	13.81	13.65	0
HSDPA Subtest-2	13.73	13.79	13.63	0
HSDPA Subtest-3	13.23	13.29	13.13	0.5
HSDPA Subtest-4	13.19	13.25	13.09	0.5
HSUPA Subtest-1	13.12	13.18	13.02	0
HSUPA Subtest-2	11.14	11.20	11.04	2
HSUPA Subtest-3	12.02	12.08	11.92	1
HSUPA Subtest-4	11.05	11.11	10.95	2
HSUPA Subtest-5	12.92	12.98	12.82	0

LTE Band 4

EUT without Power Reduction (P-Sensor NOT Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20050	Mid CH 20175	High CH 20300	3GPP MPR (dB)	Low CH 20050	Mid CH 20175	High CH 20300	3GPP MPR (dB)	Low CH 20050	Mid CH 20175	High CH 20300	3GPP MPR (dB)
			1720.0 MHz	1732.5 MHz	1745.0 MHz		1720.0 MHz	1732.5 MHz	1745.0 MHz		1720.0 MHz	1732.5 MHz	1745.0 MHz	
20	1	0	23.42	23.52	23.44	0	22.61	22.71	22.63	1	21.45	21.67	21.42	2
	1	50	23.28	23.38	23.30	0	22.47	22.57	22.49	1	21.27	21.41	21.45	2
	1	99	23.04	23.14	23.06	0	22.23	22.33	22.25	1	21.14	21.19	21.12	2
	50	0	22.35	22.45	22.37	1	21.54	21.64	21.56	2	20.38	20.53	20.59	3
	50	25	22.25	22.35	22.27	1	21.44	21.54	21.46	2	20.35	20.48	20.30	3
	50	50	22.15	22.25	22.17	1	21.34	21.44	21.36	2	20.01	20.29	20.19	3
	100	0	22.27	22.37	22.29	1	21.46	21.56	21.48	2	20.06	20.12	20.15	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20025	Mid CH 20175	High CH 20325	3GPP MPR (dB)	Low CH 20025	Mid CH 20175	High CH 20325	3GPP MPR (dB)	Low CH 20025	Mid CH 20175	High CH 20325	3GPP MPR (dB)
			1717.5 MHz	1732.5 MHz	1747.5 MHz		1717.5 MHz	1732.5 MHz	1747.5 MHz		1717.5 MHz	1732.5 MHz	1747.5 MHz	
15	1	0	23.34	23.44	23.36	0	22.53	22.63	22.55	1	21.49	21.64	21.49	2
	1	37	23.20	23.30	23.22	0	22.39	22.49	22.41	1	21.42	21.34	21.38	2
	1	74	22.96	23.06	22.98	0	22.15	22.25	22.17	1	21.17	21.11	21.18	2
	36	0	22.27	22.37	22.29	1	21.46	21.56	21.48	2	20.55	20.54	20.44	3
	36	19	22.17	22.27	22.19	1	21.36	21.46	21.38	2	20.33	20.48	20.44	3
	36	39	22.07	22.17	22.09	1	21.26	21.36	21.28	2	20.16	20.17	20.14	3
	75	0	22.19	22.29	22.21	1	21.38	21.48	21.40	2	20.09	20.28	20.07	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20000	Mid CH 20175	High CH 20350	3GPP MPR (dB)	Low CH 20000	Mid CH 20175	High CH 20350	3GPP MPR (dB)	Low CH 20000	Mid CH 20175	High CH 20350	3GPP MPR (dB)
			1715.0 MHz	1732.5 MHz	1750.0 MHz		1715.0 MHz	1732.5 MHz	1750.0 MHz		1715.0 MHz	1732.5 MHz	1750.0 MHz	
10	1	0	23.24	23.34	23.26	0	22.43	22.53	22.45	1	21.40	21.62	21.39	2
	1	24	23.10	23.20	23.12	0	22.29	22.39	22.31	1	21.32	21.53	21.36	2
	1	49	22.86	22.96	22.88	0	22.05	22.15	22.07	1	21.10	21.26	21.08	2
	25	0	22.17	22.27	22.19	1	21.36	21.46	21.38	2	20.49	20.56	20.42	3
	25	12	22.07	22.17	22.09	1	21.26	21.36	21.28	2	20.30	20.47	20.34	3
	25	25	21.97	22.07	21.99	1	21.16	21.26	21.18	2	20.09	20.09	20.17	3
	50	0	22.09	22.19	22.11	1	21.28	21.38	21.30	2	20.07	20.24	20.18	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 19975	Mid CH 20175	High CH 20375	3GPP MPR (dB)	Low CH 19975	Mid CH 20175	High CH 20375	3GPP MPR (dB)	Low CH 19975	Mid CH 20175	High CH 20375	3GPP MPR (dB)
			1712.5 MHz	1732.5 MHz	1752.5 MHz		1712.5 MHz	1732.5 MHz	1752.5 MHz		1712.5 MHz	1732.5 MHz	1752.5 MHz	
5	1	0	23.15	23.25	23.17	0	22.34	22.44	22.36	1	21.44	21.58	21.52	2
	1	12	23.01	23.11	23.03	0	22.20	22.30	22.22	1	21.43	21.51	21.45	2
	1	24	22.77	22.87	22.79	0	21.96	22.06	21.98	1	21.18	21.17	21.17	2
	12	0	22.08	22.18	22.10	1	21.27	21.37	21.29	2	20.41	20.52	20.46	3
	12	6	21.98	22.08	22.00	1	21.17	21.27	21.19	2	20.26	20.52	20.34	3
	12	13	21.88	21.98	21.90	1	21.07	21.17	21.09	2	20.06	20.27	20.18	3
	25	0	22.00	22.10	22.02	1	21.19	21.29	21.21	2	20.01	20.11	20.11	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 19965	Mid CH 20175	High CH 20385	3GPP MPR (dB)	Low CH 19965	Mid CH 20175	High CH 20385	3GPP MPR (dB)	Low CH 19965	Mid CH 20175	High CH 20385	3GPP MPR (dB)
			1711.5 MHz	1732.5 MHz	1753.5 MHz		1711.5 MHz	1732.5 MHz	1753.5 MHz		1711.5 MHz	1732.5 MHz	1753.5 MHz	
3	1	0	23.04	23.14	23.06	0	22.23	22.33	22.25	1	21.41	21.55	21.45	2
	1	7	22.90	23.00	22.92	0	22.09	22.19	22.11	1	21.38	21.53	21.32	2
	1	14	22.66	22.76	22.68	0	21.85	21.95	21.87	1	21.04	21.18	21.17	2
	8	0	21.97	22.07	21.99	1	21.16	21.26	21.18	2	20.43	20.55	20.40	3
	8	3	21.87	21.97	21.89	1	21.06	21.16	21.08	2	20.28	20.42	20.38	3
	8	7	21.77	21.87	21.79	1	20.96	21.06	20.98	2	20.02	20.17	20.02	3
	15	0	21.89	21.99	21.91	1	21.08	21.18	21.10	2	20.05	20.19	20.20	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 19957	Mid CH 20175	High CH 20393	3GPP MPR (dB)	Low CH 19957	Mid CH 20175	High CH 20393	3GPP MPR (dB)	Low CH 19957	Mid CH 20175	High CH 20393	3GPP MPR (dB)
			1710.7 MHz	1732.5 MHz	1754.3 MHz		1710.7 MHz	1732.5 MHz	1754.3 MHz		1710.7 MHz	1732.5 MHz	1754.3 MHz	
1.4	1	0	22.99	23.09	23.01	0	22.29	22.49	22.26	1	21.37	21.47	21.40	2
	1	2	22.85	22.95	22.87	0	22.10	22.35	22.11	1	21.30	21.30	21.39	2
	1	5	22.61	22.71	22.63	0	21.92	22.01	21.86	1	21.01	21.14	21.13	2
	3	0	23.12	22.62	22.54	0	22.39	22.47	22.37	1	21.43	21.51	21.46	2
	3	1	22.42	22.52	22.44	0	22.11	22.38	22.28	1	21.36	21.28	21.36	2
	3	3	22.32	22.42	22.34	0	22.01	21.95	21.86	1	21.04	21.06	21.11	2
	6	0	21.84	21.94	21.86	1	20.90	20.98	20.88	2	20.03	20.13	20.11	3

LTE Band 4

EUT with Power Reduction (P-Sensor Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			20050 MHz	20175 MHz	20300 MHz		20050 MHz	20175 MHz	20300 MHz		20050 MHz	20175 MHz	20300 MHz	
20	1	0	14.73	14.85	14.88	0	13.65	13.77	13.80	1	12.55	12.67	12.70	2
	1	50	14.53	14.65	14.68	0	13.45	13.57	13.60	1	12.35	12.47	12.50	2
	1	99	14.51	14.63	14.66	0	13.43	13.55	13.58	1	12.33	12.45	12.48	2
	50	0	13.68	13.80	13.83	1	12.60	12.72	12.75	2	11.50	11.62	11.65	3
	50	25	13.63	13.75	13.78	1	12.55	12.67	12.70	2	11.45	11.57	11.60	3
	50	50	13.56	13.68	13.71	1	12.48	12.60	12.63	2	11.38	11.50	11.53	3
	100	0	13.70	13.82	13.85	1	12.62	12.74	12.77	2	11.52	11.64	11.67	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			20025 MHz	20175 MHz	20325 MHz		20025 MHz	20175 MHz	20325 MHz		20025 MHz	20175 MHz	20325 MHz	
15	1	0	14.68	14.80	14.83	0	13.60	13.72	13.75	1	12.50	12.62	12.65	2
	1	37	14.48	14.60	14.63	0	13.40	13.52	13.55	1	12.30	12.42	12.45	2
	1	74	14.46	14.58	14.61	0	13.38	13.50	13.53	1	12.28	12.40	12.43	2
	36	0	13.63	13.75	13.78	1	12.55	12.67	12.70	2	11.45	11.57	11.60	3
	36	19	13.58	13.70	13.73	1	12.50	12.62	12.65	2	11.40	11.52	11.55	3
	36	39	13.51	13.63	13.66	1	12.43	12.55	12.58	2	11.33	11.45	11.48	3
	75	0	13.65	13.77	13.80	1	12.57	12.69	12.72	2	11.47	11.59	11.62	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			20000 MHz	20175 MHz	20350 MHz		20000 MHz	20175 MHz	20350 MHz		20000 MHz	20175 MHz	20350 MHz	
10	1	0	14.65	14.77	14.80	0	13.57	13.69	13.72	1	12.47	12.59	12.62	2
	1	24	14.45	14.57	14.60	0	13.37	13.49	13.52	1	12.27	12.39	12.42	2
	1	49	14.43	14.55	14.58	0	13.35	13.47	13.50	1	12.25	12.37	12.40	2
	25	0	13.60	13.72	13.75	1	12.52	12.64	12.67	2	11.42	11.54	11.57	3
	25	12	13.55	13.67	13.70	1	12.47	12.59	12.62	2	11.37	11.49	11.52	3
	25	25	13.48	13.60	13.63	1	12.40	12.52	12.55	2	11.30	11.42	11.45	3
	50	0	13.62	13.74	13.77	1	12.54	12.66	12.69	2	11.44	11.56	11.59	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			19975 MHz	20175 MHz	20375 MHz		19975 MHz	20175 MHz	20375 MHz		19975 MHz	20175 MHz	20375 MHz	
5	1	0	14.60	14.72	14.75	0	13.52	13.64	13.67	1	12.42	12.54	12.57	2
	1	12	14.40	14.52	14.55	0	13.32	13.44	13.47	1	12.22	12.34	12.37	2
	1	24	14.38	14.50	14.53	0	13.30	13.42	13.45	1	12.20	12.32	12.35	2
	12	0	13.55	13.67	13.70	1	12.47	12.59	12.62	2	11.37	11.49	11.52	3
	12	6	13.50	13.62	13.65	1	12.42	12.54	12.57	2	11.32	11.44	11.47	3
	12	13	13.43	13.55	13.58	1	12.35	12.47	12.50	2	11.25	11.37	11.40	3
	25	0	13.57	13.69	13.72	1	12.49	12.61	12.64	2	11.39	11.51	11.54	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			19965 MHz	20175 MHz	20385 MHz		19965 MHz	20175 MHz	20385 MHz		19965 MHz	20175 MHz	20385 MHz	
3	1	0	14.52	14.64	14.67	0	13.44	13.56	13.59	1	12.34	12.46	12.49	2
	1	7	14.32	14.44	14.47	0	13.24	13.36	13.39	1	12.14	12.26	12.29	2
	1	14	14.30	14.42	14.45	0	13.22	13.34	13.37	1	12.12	12.24	12.27	2
	8	0	13.47	13.59	13.62	1	12.39	12.51	12.54	2	11.29	11.41	11.44	3
	8	3	13.42	13.54	13.57	1	12.34	12.46	12.49	2	11.24	11.36	11.39	3
	8	7	13.35	13.47	13.50	1	12.27	12.39	12.42	2	11.17	11.29	11.32	3
	15	0	13.49	13.61	13.64	1	12.41	12.53	12.56	2	11.31	11.43	11.46	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			19957 MHz	20175 MHz	20393 MHz		19957 MHz	20175 MHz	20393 MHz		19957 MHz	20175 MHz	20393 MHz	
1.4	1	0	14.47	14.59	14.62	0	13.39	13.51	13.54	1	12.29	12.41	12.44	2
	1	2	14.27	14.39	14.42	0	13.19	13.31	13.34	1	12.09	12.21	12.24	2
	1	5	14.25	14.37	14.40	0	13.17	13.29	13.32	1	12.07	12.19	12.22	2
	3	0	14.07	14.19	14.22	0	12.99	13.11	13.14	1	11.89	12.01	12.04	2
	3	1	14.02	14.14	14.17	0	12.94	13.06	13.09	1	11.84	11.96	11.99	2
	3	3	13.95	14.07	14.10	0	12.87	12.99	13.02	1	11.77	11.89	11.92	2
	6	0	13.44	13.56	13.59	1	12.36	12.48	12.51	2	11.26	11.38	11.41	3

LTE Band 12

EUT without Power Reduction (P-Sensor NOT Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)	Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)	Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)
			704.0 MHz	707.5 MHz	711.0 MHz		704.0 MHz	707.5 MHz	711.0 MHz		704.0 MHz	707.5 MHz	711.0 MHz	
10	1	0	23.54	23.49	23.23	0	22.82	22.77	22.51	1	21.63	21.45	21.22	2
	1	24	23.35	23.30	23.04	0	22.63	22.58	22.32	1	21.42	21.39	21.19	2
	1	49	23.34	23.29	23.03	0	22.62	22.57	22.31	1	21.47	21.28	21.08	2
	25	0	22.42	22.37	22.11	1	21.70	21.65	21.39	2	20.52	20.48	20.19	3
	25	12	22.41	22.36	22.10	1	21.69	21.64	21.38	2	20.38	20.35	20.08	3
	25	25	22.39	22.34	22.08	1	21.67	21.62	21.36	2	20.45	20.30	20.06	3
50	0	22.40	22.35	22.09	1	21.68	21.63	21.37	2	20.33	20.31	20.14	3	
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)	Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)	Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)
			701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz	
5	1	0	23.45	23.40	23.14	0	22.73	22.68	22.42	1	21.64	21.46	21.28	2
	1	12	23.26	23.21	22.95	0	22.54	22.49	22.23	1	21.50	21.27	21.03	2
	1	24	23.25	23.20	22.94	0	22.53	22.48	22.22	1	21.36	21.43	21.07	2
	12	0	22.33	22.28	22.02	1	21.61	21.56	21.30	2	20.55	20.60	20.27	3
	12	6	22.32	22.27	22.01	1	21.60	21.55	21.29	2	20.47	20.42	20.02	3
	12	13	22.30	22.25	21.99	1	21.58	21.53	21.27	2	20.32	20.29	20.05	3
	25	0	22.31	22.26	22.00	1	21.59	21.54	21.28	2	20.39	20.27	20.03	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)	Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)	Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)
			700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz	
3	1	0	23.32	23.27	23.01	0	22.60	22.55	22.29	1	21.51	21.59	21.34	2
	1	7	23.13	23.08	22.82	0	22.41	22.36	22.10	1	21.42	21.39	21.11	2
	1	14	23.12	23.07	22.81	0	22.40	22.35	22.09	1	21.45	21.37	21.10	2
	8	0	22.20	22.15	21.89	1	21.48	21.43	21.17	2	20.66	20.53	20.26	3
	8	3	22.19	22.14	21.88	1	21.47	21.42	21.16	2	20.39	20.28	20.18	3
	8	7	22.17	22.12	21.86	1	21.45	21.40	21.14	2	20.35	20.24	20.13	3
15	0	22.18	22.13	21.87	1	21.46	21.41	21.15	2	20.35	20.35	20.02	3	
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)	Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)	Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)
			699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz	
1.4	1	0	23.54	23.51	23.21	0	22.53	22.52	22.12	1	21.45	21.55	21.18	2
	1	2	23.43	23.31	22.97	0	22.28	22.21	22.04	1	21.32	21.22	21.06	2
	1	5	23.23	23.24	23.12	0	22.40	22.36	22.09	1	21.30	21.36	21.03	2
	3	0	23.50	23.51	23.12	0	22.50	22.40	22.28	1	21.54	21.53	21.21	2
	3	1	23.31	23.37	23.06	0	22.40	22.38	22.10	1	21.36	21.28	21.09	2
	3	3	23.23	23.33	23.01	0	22.29	22.20	21.96	1	21.25	21.18	21.08	2
6	0	22.43	22.32	22.00	1	21.23	21.21	20.98	2	20.24	20.24	20.01	3	

LTE Band 12

EUT with Power Reduction (P-Sensor Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)	Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)	Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)
			704.0 MHz	707.5 MHz	711.0 MHz		704.0 MHz	707.5 MHz	711.0 MHz		704.0 MHz	707.5 MHz	711.0 MHz	
10	1	0	20.58	20.55	20.52	0	19.56	19.53	19.50	1	18.53	18.50	18.47	2
	1	24	20.48	20.45	20.42	0	19.46	19.43	19.40	1	18.43	18.40	18.37	2
	1	49	20.46	20.43	20.40	0	19.44	19.41	19.38	1	18.41	18.38	18.35	2
	25	0	19.50	19.47	19.44	1	18.48	18.45	18.42	2	17.45	17.42	17.39	3
	25	12	19.48	19.45	19.42	1	18.46	18.43	18.40	2	17.43	17.40	17.37	3
	25	25	19.45	19.42	19.39	1	18.43	18.40	18.37	2	17.40	17.37	17.34	3
50	0	19.46	19.43	19.40	1	18.44	18.41	18.38	2	17.41	17.38	17.35	3	
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)	Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)	Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)
			701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz	
5	1	0	20.53	20.50	20.47	0	19.51	19.48	19.45	1	18.48	18.45	18.42	2
	1	12	20.43	20.40	20.37	0	19.41	19.38	19.35	1	18.38	18.35	18.32	2
	1	24	20.41	20.38	20.35	0	19.39	19.36	19.33	1	18.36	18.33	18.30	2
	12	0	19.45	19.42	19.39	1	18.43	18.40	18.37	2	17.40	17.37	17.34	3
	12	6	19.43	19.40	19.37	1	18.41	18.38	18.35	2	17.38	17.35	17.32	3
	12	13	19.40	19.37	19.34	1	18.38	18.35	18.32	2	17.35	17.32	17.29	3
	25	0	19.41	19.38	19.35	1	18.39	18.36	18.33	2	17.36	17.33	17.30	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)	Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)	Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)
			700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz	
3	1	0	20.46	20.43	20.40	0	19.44	19.41	19.38	1	18.41	18.38	18.35	2
	1	7	20.36	20.33	20.30	0	19.34	19.31	19.28	1	18.31	18.28	18.25	2
	1	14	20.34	20.31	20.28	0	19.32	19.29	19.26	1	18.29	18.26	18.23	2
	8	0	19.38	19.35	19.32	1	18.36	18.33	18.30	2	17.33	17.30	17.27	3
	8	3	19.36	19.33	19.30	1	18.34	18.31	18.28	2	17.31	17.28	17.25	3
	8	7	19.33	19.30	19.27	1	18.31	18.28	18.25	2	17.28	17.25	17.22	3
15	0	19.34	19.31	19.28	1	18.32	18.29	18.26	2	17.29	17.26	17.23	3	
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)	Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)	Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)
			699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz	
1.4	1	0	20.38	20.35	20.32	0	19.36	19.33	19.30	1	18.33	18.30	18.27	2
	1	2	20.28	20.25	20.22	0	19.26	19.23	19.20	1	18.23	18.20	18.17	2
	1	5	20.26	20.23	20.20	0	19.24	19.21	19.18	1	18.21	18.18	18.15	2
	3	0	20.18	20.15	20.12	0	19.16	19.13	19.10	1	18.13	18.10	18.07	2
	3	1	20.16	20.13	20.10	0	19.14	19.11	19.08	1	18.11	18.08	18.05	2
	3	3	20.13	20.10	20.07	0	19.11	19.08	19.05	1	18.08	18.05	18.02	2
6	0	19.26	19.23	19.20	1	18.24	18.21	18.18	2	17.21	17.18	17.15	3	

LTE Band 13

EUT without Power Reduction (P-Sensor NOT Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Mid CH 23230	782.0 MHz		3GPP MPR (dB)	Mid CH 23230	782.0 MHz		3GPP MPR (dB)	Mid CH 23230	782.0 MHz		3GPP MPR (dB)
10	1	0		23.43		0		22.38		1		21.40		2
	1	24		23.40		0		22.35		1		21.40		2
	1	49		23.36		0		22.31		1		21.46		2
	25	0		22.51		1		21.46		2		20.47		3
	25	12		22.41		1		21.36		2		20.43		3
	25	25		22.39		1		21.34		2		20.32		3
	50	0		22.01		1		20.96		2		20.47		3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM				
			Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	
5	1	0	779.5 MHz	782.0 MHz	784.5 MHz	0	779.5 MHz	782.0 MHz	784.5 MHz	1	779.5 MHz	782.0 MHz	784.5 MHz	2	
	1	12		23.20	23.25	23.19	0	22.15	22.20	22.14	1	21.31	21.39	21.20	2
	1	24		23.26	23.31	23.25	0	22.21	22.26	22.20	1	21.30	21.31	21.21	2
	12	0		22.41	22.46	22.40	1	21.36	21.41	21.35	2	20.43	20.34	20.30	3
	12	6		22.40	22.45	22.39	1	21.35	21.40	21.34	2	20.23	20.26	20.29	3
	12	13		22.34	22.39	22.33	1	21.29	21.34	21.28	2	20.35	20.42	20.28	3
	25	0		22.40	22.45	22.39	1	21.35	21.40	21.34	2	20.33	20.35	20.22	3

LTE Band 13

EUT with Power Reduction (P-Sensor Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Mid CH 23230	782.0 MHz		3GPP MPR (dB)	Mid CH 23230	782.0 MHz		3GPP MPR (dB)	Mid CH 23230	782.0 MHz		3GPP MPR (dB)
10	1	0		19.41		0		18.35		1		17.33		2
	1	24		19.35		0		18.29		1		17.27		2
	1	49		19.33		0		18.27		1		17.25		2
	25	0		18.47		1		17.41		2		16.39		3
	25	12		18.45		1		17.39		2		16.37		3
	25	25		18.43		1		17.37		2		16.35		3
	50	0		18.46		1		17.40		2		16.38		3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM				
			Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	
5	1	0	779.5 MHz	782.0 MHz	784.5 MHz	0	779.5 MHz	782.0 MHz	784.5 MHz	1	779.5 MHz	782.0 MHz	784.5 MHz	2	
	1	12		19.24	19.29	19.27	0	18.19	18.24	18.22	1	17.17	17.22	17.20	2
	1	24		19.22	19.27	19.25	0	18.17	18.22	18.20	1	17.15	17.20	17.18	2
	12	0		18.38	18.43	18.41	1	17.33	17.38	17.36	2	16.31	16.36	16.34	3
	12	6		18.36	18.41	18.39	1	17.31	17.36	17.34	2	16.29	16.34	16.32	3
	12	13		18.34	18.39	18.37	1	17.29	17.34	17.32	2	16.27	16.32	16.30	3
	25	0		18.33	18.38	18.36	1	17.28	17.33	17.31	2	16.26	16.31	16.29	3

LTE Band 17																
EUT without Power Reduction (P-Sensor NOT Triggered)																
BW (MHz)	RB Size	RB Offset	QPSK				3GPP MPR (dB)	16QAM				3GPP MPR (dB)	64QAM			
			Low CH 23780	Mid CH 23790	High CH 23800	Low CH 23780		Mid CH 23790	High CH 23800	Low CH 23780	Mid CH 23790		High CH 23800			
			709.0 MHz	710.0 MHz	711.0 MHz	709.0 MHz		710.0 MHz	711.0 MHz	709.0 MHz	710.0 MHz		711.0 MHz			
10	1	0	23.43	23.47	23.33	0	22.65	22.69	22.55	1	21.41	21.55	21.48	2		
	1	24	23.20	23.24	23.10	0	22.42	22.46	22.32	1	21.35	21.29	21.22	2		
	1	49	23.19	23.23	23.09	0	22.41	22.45	22.31	1	21.29	21.26	21.13	2		
	25	0	22.30	22.34	22.20	1	21.52	21.56	21.42	2	20.55	20.59	20.47	3		
	25	12	22.29	22.33	22.19	1	21.51	21.55	21.41	2	20.28	20.21	20.16	3		
	25	25	22.21	22.25	22.11	1	21.43	21.47	21.33	2	20.14	20.24	20.12	3		
50	0	22.25	22.29	22.15	1	21.47	21.51	21.37	2	20.22	20.26	20.22	3			

LTE Band 17																
EUT with Power Reduction (P-Sensor Triggered)																
BW (MHz)	RB Size	RB Offset	QPSK				3GPP MPR (dB)	16QAM				3GPP MPR (dB)	64QAM			
			Low CH 23755	Mid CH 23790	High CH 23825	Low CH 23755		Mid CH 23790	High CH 23825	Low CH 23755	Mid CH 23790		High CH 23825			
			706.5 MHz	710.0 MHz	713.5 MHz	706.5 MHz		710.0 MHz	713.5 MHz	706.5 MHz	710.0 MHz		713.5 MHz			
10	1	0	20.47	20.45	20.46	0	19.45	19.43	19.44	1	18.42	18.40	18.41	2		
	1	24	20.33	20.31	20.32	0	19.31	19.29	19.30	1	18.28	18.26	18.27	2		
	1	49	20.20	20.18	20.19	0	19.18	19.16	19.17	1	18.15	18.13	18.14	2		
	25	0	19.39	19.37	19.38	1	18.37	18.35	18.36	2	17.34	17.32	17.33	3		
	25	12	19.37	19.35	19.36	1	18.35	18.33	18.34	2	17.32	17.30	17.31	3		
	25	25	19.25	19.23	19.24	1	18.23	18.21	18.22	2	17.20	17.18	17.19	3		
50	0	19.33	19.31	19.32	1	18.31	18.29	18.30	2	17.28	17.26	17.27	3			

BW (MHz)	RB Size	RB Offset	QPSK				3GPP MPR (dB)	16QAM				3GPP MPR (dB)	64QAM			
			Low CH 23755	Mid CH 23790	High CH 23825	Low CH 23755		Mid CH 23790	High CH 23825	Low CH 23755	Mid CH 23790		High CH 23825			
			706.5 MHz	710.0 MHz	713.5 MHz	706.5 MHz		710.0 MHz	713.5 MHz	706.5 MHz	710.0 MHz		713.5 MHz			
5	1	0	20.41	20.39	20.40	0	19.39	19.37	19.38	1	18.36	18.34	18.35	2		
	1	12	20.27	20.25	20.26	0	19.25	19.23	19.24	1	18.22	18.20	18.21	2		
	1	24	20.14	20.12	20.13	0	19.12	19.10	19.11	1	18.09	18.07	18.08	2		
	12	0	19.33	19.31	19.32	1	18.31	18.29	18.30	2	17.28	17.26	17.27	3		
	12	6	19.31	19.29	19.30	1	18.29	18.27	18.28	2	17.26	17.24	17.25	3		
	12	13	19.19	19.17	19.18	1	18.17	18.15	18.16	2	17.14	17.12	17.13	3		
25	0	19.27	19.25	19.26	1	18.25	18.23	18.24	2	17.22	17.20	17.21	3			

LTE Band 66

EUT without Power Reduction (P-Sensor NOT Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			132072	132322	132572		132072	132322	132572		132072	132322	132572	
			1720.0 MHz	1745.0 MHz	1770.0 MHz		1720.0 MHz	1745.0 MHz	1770.0 MHz		1720.0 MHz	1745.0 MHz	1770.0 MHz	
20	1	0	23.48	23.51	23.56	0	22.39	22.42	22.47	1	21.49	21.52	21.54	2
	1	50	23.30	23.33	23.38	0	22.21	22.24	22.29	1	21.30	21.42	21.39	2
	1	99	23.21	23.24	23.29	0	22.12	22.15	22.20	1	21.11	21.33	21.30	2
	50	0	22.54	22.57	22.62	1	21.45	21.48	21.53	2	20.41	20.46	20.54	3
	50	25	22.38	22.41	22.46	1	21.29	21.32	21.37	2	20.24	20.23	20.42	3
	50	50	22.25	22.28	22.33	1	21.16	21.19	21.24	2	20.15	20.30	20.21	3
	100	0	22.36	22.39	22.44	1	21.27	21.30	21.35	2	20.11	20.17	20.31	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			132047	132322	132597		132047	132322	132597		132047	132322	132597	
			1717.5 MHz	1745.0 MHz	1772.5 MHz		1717.5 MHz	1745.0 MHz	1772.5 MHz		1717.5 MHz	1745.0 MHz	1772.5 MHz	
15	1	0	23.41	23.44	23.49	0	22.36	22.39	22.44	1	21.31	21.34	21.39	2
	1	37	23.23	23.26	23.31	0	22.18	22.21	22.26	1	21.13	21.16	21.21	2
	1	74	23.14	23.17	23.22	0	22.09	22.12	22.17	1	21.04	21.07	21.12	2
	36	0	22.47	22.50	22.55	1	21.42	21.45	21.50	2	20.37	20.40	20.45	3
	36	19	22.31	22.34	22.39	1	21.26	21.29	21.34	2	20.21	20.24	20.29	3
	36	39	22.18	22.21	22.26	1	21.13	21.16	21.21	2	20.08	20.11	20.16	3
	75	0	22.29	22.32	22.37	1	21.24	21.27	21.32	2	20.19	20.22	20.27	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			132022	132322	132622		132022	132322	132622		132022	132322	132622	
			1715.0 MHz	1745.0 MHz	1775.0 MHz		1715.0 MHz	1745.0 MHz	1775.0 MHz		1715.0 MHz	1745.0 MHz	1775.0 MHz	
10	1	0	23.37	23.40	23.45	0	22.30	22.33	22.38	1	21.21	21.24	21.29	2
	1	24	23.19	23.22	23.27	0	22.12	22.15	22.20	1	21.03	21.06	21.11	2
	1	49	23.10	23.13	23.18	0	22.03	22.06	22.11	1	21.14	21.18	21.28	2
	25	0	22.43	22.46	22.51	1	21.36	21.39	21.44	2	20.27	20.30	20.35	3
	25	12	22.27	22.30	22.35	1	21.20	21.23	21.28	2	20.11	20.14	20.19	3
	25	25	22.14	22.17	22.22	1	21.07	21.10	21.15	2	20.19	20.01	20.06	3
	50	0	22.25	22.28	22.33	1	21.18	21.21	21.26	2	20.09	20.12	20.17	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			131997	132322	132647		131997	132322	132647		131997	132322	132647	
			1712.5 MHz	1745.0 MHz	1777.5 MHz		1712.5 MHz	1745.0 MHz	1777.5 MHz		1712.5 MHz	1745.0 MHz	1777.5 MHz	
5	1	0	23.34	23.37	23.42	0	22.22	22.25	22.30	1	21.19	21.22	21.27	2
	1	12	23.16	23.19	23.24	0	22.04	22.07	22.12	1	21.01	21.04	21.09	2
	1	24	23.07	23.10	23.15	0	21.95	21.98	22.03	1	21.12	21.15	21.18	2
	12	0	22.40	22.43	22.48	1	21.28	21.31	21.36	2	20.25	20.28	20.33	3
	12	6	22.24	22.27	22.32	1	21.12	21.15	21.20	2	20.09	20.12	20.17	3
	12	13	22.11	22.14	22.19	1	20.99	21.02	21.07	2	20.16	20.18	20.04	3
	25	0	22.22	22.25	22.30	1	21.10	21.13	21.18	2	20.07	20.10	20.15	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			131987	132322	132657		131987	132322	132657		131987	132322	132657	
			1711.5 MHz	1745.5 MHz	1778.5 MHz		1711.5 MHz	1745.5 MHz	1778.5 MHz		1711.5 MHz	1745.5 MHz	1778.5 MHz	
3	1	0	23.27	23.30	23.35	0	22.17	22.20	22.25	1	21.12	21.15	21.20	2
	1	7	23.09	23.12	23.17	0	21.99	22.02	22.07	1	21.14	21.17	21.02	2
	1	14	23.00	23.03	23.08	0	21.90	21.93	21.98	1	21.05	21.08	21.13	2
	8	0	22.33	22.36	22.41	1	21.23	21.26	21.31	2	20.18	20.21	20.26	3
	8	3	22.17	22.20	22.25	1	21.07	21.10	21.15	2	20.02	20.05	20.10	3
	8	7	22.04	22.07	22.12	1	20.94	20.97	21.02	2	20.09	20.12	20.17	3
	15	0	22.15	22.18	22.23	1	21.05	21.08	21.13	2	20.21	20.03	20.08	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			131979	132322	132665		131979	132322	132665		131979	132322	132665	
			1710.7 MHz	1745.0 MHz	1779.3 MHz		1710.7 MHz	1745.0 MHz	1779.3 MHz		1710.7 MHz	1745.0 MHz	1779.3 MHz	
1.4	1	0	23.25	23.28	23.33	0	22.10	22.13	22.18	1	21.41	21.49	21.54	2
	1	2	23.07	23.10	23.15	0	21.92	21.95	22.00	1	21.38	21.22	21.38	2
	1	5	22.98	23.01	23.06	0	21.83	21.86	21.91	1	21.24	21.24	21.34	2
	3	0	23.31	23.34	23.33	0	22.16	22.19	22.24	1	21.56	21.53	21.63	2
	3	1	23.15	23.18	23.23	0	22.00	22.03	22.08	1	21.28	21.37	21.46	2
	3	3	23.02	23.05	23.10	0	21.87	21.90	21.95	1	21.28	21.17	21.26	2
	6	0	22.13	22.16	22.21	1	20.98	21.01	21.06	2	20.28	20.25	20.19	3

LTE Band 66

EUT with Power Reduction (P-Sensor Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			132072	132322	132572		132072	132322	132572		132072	132322	132572	
20	1	0	1720.0 MHz	1745.0 MHz	1770.0 MHz	0	14.35	14.45	14.47	1	13.34	13.44	13.46	2
	1	50	15.13	15.23	15.25	0	14.15	14.25	14.27	1	13.14	13.24	13.26	2
	1	99	15.09	15.19	15.21	0	14.11	14.21	14.23	1	13.10	13.20	13.22	2
	50	0	14.31	14.41	14.43	1	13.33	13.43	13.45	2	12.32	12.42	12.44	3
	50	25	14.25	14.35	14.37	1	13.27	13.37	13.39	2	12.26	12.36	12.38	3
	50	50	14.14	14.24	14.26	1	13.16	13.26	13.28	2	12.15	12.25	12.27	3
	100	0	14.26	14.36	14.38	1	13.28	13.38	13.40	2	12.27	12.37	12.39	3
15	1	0	1717.5 MHz	1745.0 MHz	1772.5 MHz	0	14.29	14.39	14.41	1	13.28	13.38	13.40	2
	1	37	15.07	15.17	15.19	0	14.09	14.19	14.21	1	13.08	13.18	13.20	2
	1	74	15.03	15.13	15.15	0	14.05	14.15	14.17	1	13.04	13.14	13.16	2
	36	0	14.25	14.35	14.37	1	13.27	13.37	13.39	2	12.26	12.36	12.38	3
	36	19	14.19	14.29	14.31	1	13.21	13.31	13.33	2	12.20	12.30	12.32	3
	36	39	14.08	14.18	14.20	1	13.10	13.20	13.22	2	12.09	12.19	12.21	3
	75	0	14.20	14.30	14.32	1	13.22	13.32	13.34	2	12.21	12.31	12.33	3
10	1	0	1715.0 MHz	1745.0 MHz	1775.0 MHz	0	14.24	14.34	14.36	1	13.23	13.33	13.35	2
	1	24	15.02	15.12	15.14	0	14.04	14.14	14.16	1	13.03	13.13	13.15	2
	1	49	14.98	15.08	15.10	0	14.00	14.10	14.12	1	12.99	13.09	13.11	2
	25	0	14.20	14.30	14.32	1	13.22	13.32	13.34	2	12.21	12.31	12.33	3
	25	12	14.14	14.24	14.26	1	13.16	13.26	13.28	2	12.15	12.25	12.27	3
	25	25	14.03	14.13	14.15	1	13.05	13.15	13.17	2	12.04	12.14	12.16	3
	50	0	14.15	14.25	14.27	1	13.17	13.27	13.29	2	12.16	12.26	12.28	3
5	1	0	1712.5 MHz	1745.0 MHz	1777.5 MHz	0	14.16	14.26	14.28	1	13.15	13.25	13.27	2
	1	12	14.94	15.04	15.06	0	13.96	14.06	14.08	1	12.95	13.05	13.07	2
	1	24	14.90	15.00	15.02	0	13.92	14.02	14.04	1	12.91	13.01	13.03	2
	12	0	14.12	14.22	14.24	1	13.14	13.24	13.26	2	12.13	12.23	12.25	3
	12	6	14.06	14.16	14.18	1	13.08	13.18	13.20	2	12.07	12.17	12.19	3
	12	13	13.95	14.05	14.07	1	12.97	13.07	13.09	2	11.96	12.06	12.08	3
	25	0	14.07	14.17	14.19	1	13.09	13.19	13.21	2	12.08	12.18	12.20	3
3	1	0	1711.5 MHz	1745.5 MHz	1778.5 MHz	0	14.13	14.23	14.25	1	13.12	13.22	13.24	2
	1	7	14.91	15.01	15.03	0	13.93	14.03	14.05	1	12.92	13.02	13.04	2
	1	14	14.87	14.97	14.99	0	13.89	13.99	14.01	1	12.88	12.98	13.00	2
	8	0	14.09	14.19	14.21	1	13.11	13.21	13.23	2	12.10	12.20	12.22	3
	8	3	14.03	14.13	14.15	1	13.05	13.15	13.17	2	12.04	12.14	12.16	3
	8	7	13.92	14.02	14.04	1	12.94	13.04	13.06	2	11.93	12.03	12.05	3
	15	0	14.04	14.14	14.16	1	13.06	13.16	13.18	2	12.05	12.15	12.17	3
1.4	1	0	1710.7 MHz	1745.0 MHz	1779.3 MHz	0	14.01	14.11	14.13	1	13.00	13.10	13.12	2
	1	2	14.79	14.89	14.91	0	13.81	13.91	13.93	1	12.80	12.90	12.92	2
	1	5	14.75	14.85	14.87	0	13.77	13.87	13.89	1	12.76	12.86	12.88	2
	3	0	14.98	15.08	15.10	0	14.00	14.10	14.12	1	12.99	13.09	13.11	2
	3	1	14.92	15.02	15.04	0	13.94	14.04	14.06	1	12.93	13.03	13.05	2
	3	3	14.81	14.91	14.93	0	13.83	13.93	13.95	1	12.82	12.92	12.94	2
	6	0	13.92	14.02	14.04	1	12.94	13.04	13.06	2	11.93	12.03	12.05	3

ERP Power (dBm)

LTE Band 12							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	23017	699.7	-7.50	32.719	23.07	202.72	H
	23095	707.5	-7.56	32.736	23.03	200.72	
	23173	715.3	-7.41	32.591	23.03	200.96	
	23017	699.7	-13.50	32.69	17.04	50.58	V
	23095	707.5	-13.64	32.81	17.02	50.35	
	23173	715.3	-13.50	32.74	17.09	51.17	
Channel Bandwidth: 1.4 MHz / 16QAM							
Z	23017	699.7	-8.48	32.719	22.09	161.77	H
	23095	707.5	-8.52	32.736	22.07	160.92	
	23173	715.3	-8.39	32.591	22.05	160.36	
	23017	699.7	-14.54	32.69	16.00	39.81	V
	23095	707.5	-14.57	32.81	16.09	40.64	
	23173	715.3	-14.50	32.74	16.09	40.64	
Channel Bandwidth: 1.4 MHz / 64QAM							
Z	23017	699.7	-9.48	32.719	21.09	128.50	H
	23095	707.5	-9.54	32.736	21.05	127.23	
	23173	715.3	-9.32	32.591	21.12	129.45	
	23017	699.7	-15.52	32.69	15.02	31.77	V
	23095	707.5	-15.64	32.81	15.02	31.77	
	23173	715.3	-15.53	32.74	15.06	32.06	

LTE Band 12							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	23025	700.5	-7.49	32.719	23.08	203.19	H
	23095	707.5	-7.54	32.736	23.05	201.65	
	23165	714.5	-7.38	32.591	23.06	202.35	
	23025	700.5	-13.53	32.69	17.01	50.23	V
	23095	707.5	-13.60	32.81	17.06	50.82	
	23165	714.5	-13.52	32.74	17.07	50.93	
Channel Bandwidth: 3 MHz / 16QAM							
Z	23025	700.5	-8.48	32.719	22.09	161.77	H
	23095	707.5	-8.50	32.736	22.09	161.66	
	23165	714.5	-8.34	32.591	22.10	162.22	
	23025	700.5	-14.54	32.69	16.00	39.81	V
	23095	707.5	-14.64	32.81	16.02	39.99	
	23165	714.5	-14.52	32.74	16.07	40.46	
Channel Bandwidth: 3 MHz / 64QAM							
Z	23025	700.5	-9.50	32.719	21.07	127.91	H
	23095	707.5	-9.52	32.736	21.07	127.82	
	23165	714.5	-9.30	32.591	21.14	130.05	
	23025	700.5	-15.52	32.69	15.02	31.77	V
	23095	707.5	-15.60	32.81	15.06	32.06	
	23165	714.5	-15.59	32.74	15.00	31.62	

LTE Band 12							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	23035	701.5	-7.49	32.719	23.08	203.19	H
	23095	707.5	-7.52	32.736	23.07	202.58	
	23155	713.5	-7.31	32.591	23.13	205.64	
	23035	701.5	-13.50	32.69	17.04	50.58	V
	23095	707.5	-13.65	32.81	17.01	50.23	
	23155	713.5	-13.50	32.74	17.09	51.17	
Channel Bandwidth: 5 MHz / 16QAM							
Z	23035	701.5	-8.55	32.719	22.02	159.18	H
	23095	707.5	-8.54	32.736	22.05	160.18	
	23155	713.5	-8.38	32.591	22.06	160.73	
	23035	701.5	-14.51	32.69	16.03	40.09	V
	23095	707.5	-14.60	32.81	16.06	40.36	
	23155	713.5	-14.59	32.74	16.00	39.81	
Channel Bandwidth: 5 MHz / 64QAM							
Z	23035	701.5	-9.52	32.719	21.05	127.32	H
	23095	707.5	-9.50	32.736	21.09	128.41	
	23155	713.5	-9.34	32.591	21.10	128.85	
	23035	701.5	-15.52	32.69	15.02	31.77	V
	23095	707.5	-15.63	32.81	15.03	31.84	
	23155	713.5	-15.54	32.74	15.05	31.99	

LTE Band 12							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	23060	704.0	-7.38	32.727	23.20	208.79	H
	23095	707.5	-7.42	32.739	23.17	207.44	
	23130	711.0	-7.48	32.728	23.10	204.08	
	23060	704.0	-13.43	32.75	17.17	52.12	V
	23095	707.5	-13.57	32.81	17.09	51.17	
	23130	711.0	-13.62	32.84	17.07	50.93	
Channel Bandwidth: 10 MHz / 16QAM							
Z	23060	704.0	-8.40	32.727	22.18	165.08	H
	23095	707.5	-8.59	32.739	22.00	158.45	
	23130	711.0	-8.41	32.728	22.17	164.74	
	23060	704.0	-14.43	32.75	16.17	41.40	V
	23095	707.5	-14.59	32.81	16.07	40.46	
	23130	711.0	-14.60	32.84	16.09	40.64	
Channel Bandwidth: 10 MHz / 64QAM							
Z	23060	704.0	-9.42	32.727	21.16	130.53	H
	23095	707.5	-9.53	32.739	21.06	127.61	
	23130	711.0	-9.41	32.728	21.17	130.86	
	23060	704.0	-15.42	32.75	15.18	32.96	V
	23095	707.5	-15.60	32.81	15.06	32.06	
	23130	711.0	-15.54	32.84	15.15	32.73	

LTE Band 13							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Y	23205	779.5	-8.04	32.771	22.58	181.18	H
	23230	782.0	-8.09	32.741	22.50	177.87	
	23255	784.5	-8.17	32.854	22.53	179.23	
	23205	779.5	-13.82	32.5	16.53	44.98	V
	23230	782.0	-13.82	32.52	16.55	45.19	
	23255	784.5	-13.90	32.62	16.57	45.39	
Channel Bandwidth: 5 MHz / 16QAM							
Y	23205	779.5	-9.17	32.771	21.45	139.67	H
	23230	782.0	-9.10	32.741	21.49	140.96	
	23255	784.5	-9.18	32.854	21.52	142.04	
	23205	779.5	-14.81	32.5	15.54	35.81	V
	23230	782.0	-14.88	32.52	15.49	35.40	
	23255	784.5	-14.94	32.62	15.53	35.73	
Channel Bandwidth: 5 MHz / 64QAM							
Y	23205	779.5	-10.16	32.771	20.46	111.20	H
	23230	782.0	-10.08	32.741	20.51	112.49	
	23255	784.5	-10.20	32.854	20.50	112.31	
	23205	779.5	-15.84	32.5	14.51	28.25	V
	23230	782.0	-15.93	32.52	14.44	27.80	
	23255	784.5	-15.94	32.62	14.53	28.38	

LTE Band 13

Channel Bandwidth: 10 MHz / QPSK

Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Y	23230	782.0	-7.93	32.737	22.66	184.37	H
	23230	782.0	-13.78	32.52	16.59	45.60	V

Channel Bandwidth: 10 MHz / 16QAM

Y	23230	782.0	-8.94	32.737	21.65	146.12	H
	23230	782.0	-14.68	32.52	15.69	37.07	V

Channel Bandwidth: 10 MHz / 64QAM

Y	23230	782.0	-9.97	32.737	20.62	115.27	H
	23230	782.0	-15.72	32.52	14.65	29.17	V

LTE Band 17							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	23755	706.5	-7.52	32.719	23.05	201.79	H
	23790	710.0	-7.56	32.736	23.03	200.72	
	23825	713.5	-7.35	32.591	23.09	203.75	
	23755	706.5	-13.46	32.69	17.08	51.05	V
	23790	710.0	-13.60	32.81	17.06	50.82	
	23825	713.5	-13.57	32.74	17.02	50.35	
Channel Bandwidth: 5 MHz / 16QAM							
Z	23755	706.5	-8.54	32.719	22.03	159.55	H
	23790	710.0	-8.50	32.736	22.09	161.66	
	23825	713.5	-8.36	32.591	22.08	161.47	
	23755	706.5	-14.50	32.69	16.04	40.18	V
	23790	710.0	-14.60	32.81	16.06	40.36	
	23825	713.5	-14.55	32.74	16.04	40.18	
Channel Bandwidth: 5 MHz / 64QAM							
Z	23755	706.5	-9.56	32.719	21.01	126.15	H
	23790	710.0	-9.53	32.736	21.06	127.53	
	23825	713.5	-9.44	32.591	21.00	125.92	
	23755	706.5	-15.54	32.69	15.00	31.62	V
	23790	710.0	-15.64	32.81	15.02	31.77	
	23825	713.5	-15.56	32.74	15.03	31.84	

LTE Band 17							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	23780	709.0	-7.42	32.727	23.16	206.87	H
	23790	710.0	-7.39	32.739	23.20	208.88	
	23800	711.0	-7.41	32.728	23.17	207.40	
	23780	709.0	-13.46	32.75	17.14	51.76	V
	23790	710.0	-13.48	32.81	17.18	52.24	
	23800	711.0	-13.58	32.84	17.11	51.40	
Channel Bandwidth: 10 MHz / 16QAM							
Z	23780	709.0	-8.39	32.727	22.19	165.46	H
	23790	710.0	-8.42	32.739	22.17	164.78	
	23800	711.0	-8.47	32.728	22.11	162.48	
	23780	709.0	-14.42	32.75	16.18	41.50	V
	23790	710.0	-14.52	32.81	16.14	41.11	
	23800	711.0	-14.62	32.84	16.07	40.46	
Channel Bandwidth: 10 MHz / 64QAM							
Z	23780	709.0	-9.39	32.727	21.19	131.43	H
	23790	710.0	-9.45	32.739	21.14	129.99	
	23800	711.0	-9.53	32.728	21.05	127.29	
	23780	709.0	-15.41	32.75	15.19	33.04	V
	23790	710.0	-15.50	32.81	15.16	32.81	
	23800	711.0	-15.60	32.84	15.09	32.28	

EIRP Power (dBm)

WCDMA							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	1312	1712.4	-13.09	36.29	23.20	208.88	H
	1413	1732.6	-13.06	36.69	23.63	230.62	
	1513	1752.6	-13.11	36.98	23.87	243.72	
	1312	1712.4	-19.01	37.11	18.10	64.54	V
	1413	1732.6	-18.95	37.60	18.65	73.28	
	1513	1752.6	-18.88	37.65	18.77	75.32	

LTE Band 4							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	19957	1710.7	-18.49	42.49	24.00	250.90	H
	20175	1732.5	-18.32	42.33	24.01	251.59	
	20393	1754.3	-18.04	42.10	24.06	254.68	
	19957	1710.7	-22.97	42.99	20.02	100.46	V
	20175	1732.5	-22.70	42.74	20.04	100.93	
	20393	1754.3	-22.18	42.21	20.03	100.69	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	19957	1710.7	-19.44	42.49	23.05	201.60	H
	20175	1732.5	-19.28	42.33	23.05	201.70	
	20393	1754.3	-19.07	42.10	23.03	200.91	
	19957	1710.7	-23.97	42.99	19.02	79.80	V
	20175	1732.5	-23.71	42.74	19.03	79.98	
	20393	1754.3	-23.21	42.21	19.00	79.43	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	19957	1710.7	-20.40	42.49	22.09	161.62	H
	20175	1732.5	-20.30	42.33	22.03	159.48	
	20393	1754.3	-20.04	42.10	22.06	160.69	
	19957	1710.7	-24.99	42.99	18.00	63.10	V
	20175	1732.5	-24.72	42.74	18.02	63.39	
	20393	1754.3	-24.16	42.21	18.05	63.83	

LTE Band 4							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	19965	1711.5	-18.42	42.49	24.07	254.98	H
	20175	1732.5	-18.30	42.33	24.03	252.76	
	20385	1753.5	-18.07	42.10	24.03	252.93	
	19965	1711.5	-22.90	42.99	20.09	102.09	V
	20175	1732.5	-22.67	42.74	20.07	101.62	
	20385	1753.5	-22.19	42.21	20.02	100.46	
Channel Bandwidth: 3 MHz / 16QAM							
X	19965	1711.5	-19.40	42.49	23.09	203.47	H
	20175	1732.5	-19.30	42.33	23.03	200.77	
	20385	1753.5	-19.04	42.10	23.06	202.30	
	19965	1711.5	-23.97	42.99	19.02	79.80	V
	20175	1732.5	-23.70	42.74	19.04	80.17	
	20385	1753.5	-23.13	42.21	19.08	80.91	
Channel Bandwidth: 3 MHz / 64QAM							
X	19965	1711.5	-20.43	42.49	22.06	160.51	H
	20175	1732.5	-20.31	42.33	22.02	159.11	
	20385	1753.5	-20.05	42.10	22.05	160.32	
	19965	1711.5	-24.93	42.99	18.06	63.97	V
	20175	1732.5	-24.70	42.74	18.04	63.68	
	20385	1753.5	-24.16	42.21	18.05	63.83	

LTE Band 4							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	19975	1712.5	-18.49	42.49	24.00	250.90	H
	20175	1732.5	-18.27	42.33	24.06	254.51	
	20375	1752.5	-18.02	42.10	24.08	255.86	
	19975	1712.5	-22.93	42.99	20.06	101.39	V
	20175	1732.5	-22.67	42.74	20.07	101.62	
	20375	1752.5	-22.13	42.21	20.08	101.86	
Channel Bandwidth: 5 MHz / 16QAM							
X	19975	1712.5	-19.47	42.49	23.02	200.22	H
	20175	1732.5	-19.24	42.33	23.09	203.56	
	20375	1752.5	-19.06	42.10	23.04	201.37	
	19975	1712.5	-23.94	42.99	19.05	80.35	V
	20175	1732.5	-23.64	42.74	19.10	81.28	
	20375	1752.5	-23.17	42.21	19.04	80.17	
Channel Bandwidth: 5 MHz / 64QAM							
X	19975	1712.5	-20.45	42.49	22.04	159.77	H
	20175	1732.5	-20.28	42.33	22.05	160.21	
	20375	1752.5	-20.01	42.10	22.09	161.81	
	19975	1712.5	-24.96	42.99	18.03	63.53	V
	20175	1732.5	-24.65	42.74	18.09	64.42	
	20375	1752.5	-24.20	42.21	18.01	63.24	

LTE Band 4							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	20000	1715.0	-18.44	42.49	24.05	253.80	H
	20175	1732.5	-18.19	42.33	24.14	259.24	
	20350	1750.0	-18.08	42.10	24.02	252.35	
	20000	1715.0	-22.96	42.99	20.03	100.69	V
	20175	1732.5	-22.68	42.74	20.06	101.39	
	20350	1750.0	-22.20	42.21	20.01	100.23	
Channel Bandwidth: 10 MHz / 16QAM							
X	20000	1715.0	-19.40	42.49	23.09	203.47	H
	20175	1732.5	-19.33	42.33	23.00	199.39	
	20350	1750.0	-19.00	42.10	23.10	204.17	
	20000	1715.0	-23.91	42.99	19.08	80.91	V
	20175	1732.5	-23.67	42.74	19.07	80.72	
	20350	1750.0	-23.19	42.21	19.02	79.80	
Channel Bandwidth: 10 MHz / 64QAM							
X	20000	1715.0	-20.42	42.49	22.07	160.88	H
	20175	1732.5	-20.30	42.33	22.03	159.48	
	20350	1750.0	-20.00	42.10	22.10	162.18	
	20000	1715.0	-24.93	42.99	18.06	63.97	V
	20175	1732.5	-24.67	42.74	18.07	64.12	
	20350	1750.0	-24.21	42.21	18.00	63.10	

LTE Band 4							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	20025	1717.5	-18.49	42.49	24.00	250.90	H
	20175	1732.5	-18.27	42.33	24.06	254.51	
	20325	1747.5	-18.02	42.10	24.08	255.86	
	20025	1717.5	-22.94	42.99	20.05	101.16	V
	20175	1732.5	-22.71	42.74	20.03	100.69	
	20325	1747.5	-22.10	42.21	20.11	102.57	
Channel Bandwidth: 15 MHz / 16QAM							
X	20025	1717.5	-19.41	42.49	23.08	203.00	H
	20175	1732.5	-19.20	42.33	23.13	205.45	
	20325	1747.5	-19.08	42.10	23.02	200.45	
	20025	1717.5	-23.94	42.99	19.05	80.35	V
	20175	1732.5	-23.57	42.74	19.17	82.60	
	20325	1747.5	-23.11	42.21	19.10	81.28	
Channel Bandwidth: 15 MHz / 64QAM							
X	20025	1717.5	-20.41	42.49	22.08	161.25	H
	20175	1732.5	-20.24	42.33	22.09	161.70	
	20325	1747.5	-20.03	42.10	22.07	161.06	
	20025	1717.5	-24.90	42.99	18.09	64.42	V
	20175	1732.5	-24.61	42.74	18.13	65.01	
	20325	1747.5	-24.12	42.21	18.09	64.42	

LTE Band 4							
Channel Bandwidth: 20 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	20050	1720.0	-18.46	42.49	24.03	252.64	H
	20175	1732.5	-18.28	42.33	24.05	253.92	
	20300	1745.0	-17.96	42.10	24.14	259.42	
	20050	1720.0	-22.95	42.99	20.04	100.93	V
	20175	1732.5	-22.72	42.74	20.02	100.46	
	20300	1745.0	-22.01	42.21	20.20	104.71	
Channel Bandwidth: 20 MHz / 16QAM							
X	20050	1720.0	-19.37	42.49	23.12	204.88	H
	20175	1732.5	-19.12	42.33	23.21	209.27	
	20300	1745.0	-19.04	42.10	23.06	202.30	
	20050	1720.0	-23.90	42.99	19.09	81.10	V
	20175	1732.5	-23.54	42.74	19.20	83.18	
	20300	1745.0	-23.05	42.21	19.16	82.41	
Channel Bandwidth: 20 MHz / 64QAM							
X	20050	1720.0	-20.38	42.49	22.11	162.37	H
	20175	1732.5	-20.11	42.33	22.22	166.61	
	20300	1745.0	-20.03	42.10	22.07	161.06	
	20050	1720.0	-24.92	42.99	18.07	64.12	V
	20175	1732.5	-24.58	42.74	18.16	65.46	
	20300	1745.0	-24.02	42.21	18.19	65.92	

LTE Band 66							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	131979	1710.7	-15.42	36.45	21.03	126.77	H
	132322	1745	-15.74	36.80	21.06	127.61	
	132665	1779.3	-15.86	36.94	21.08	128.32	
	131979	1710.7	-12.21	37.28	25.07	321.14	V
	132322	1745	-12.60	37.63	25.03	318.42	
	132665	1779.3	-12.57	37.64	25.07	321.37	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	131979	1710.7	-16.41	36.45	20.04	100.93	H
	132322	1745	-16.75	36.80	20.05	101.13	
	132665	1779.3	-16.84	36.94	20.10	102.40	
	131979	1710.7	-13.24	37.28	24.04	253.34	V
	132322	1745	-13.62	37.63	24.01	251.77	
	132665	1779.3	-13.59	37.64	24.05	254.10	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	131979	1710.7	-17.40	36.45	19.05	80.35	H
	132322	1745	-17.73	36.80	19.07	80.70	
	132665	1779.3	-17.86	36.94	19.08	80.97	
	131979	1710.7	-14.26	37.28	23.02	200.31	V
	132322	1745	-14.60	37.63	23.03	200.91	
	132665	1779.3	-14.57	37.64	23.07	202.77	

LTE Band 66							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	131987	1711.5	-15.44	36.45	21.01	126.18	H
	132322	1745	-15.75	36.80	21.05	127.32	
	132657	1778.5	-15.92	36.94	21.02	126.56	
	131987	1711.5	-12.24	37.28	25.04	318.93	V
	132322	1745	-12.57	37.63	25.06	320.63	
	132657	1778.5	-12.61	37.64	25.03	318.42	
Channel Bandwidth: 3 MHz / 16QAM							
X	131987	1711.5	-16.41	36.45	20.04	100.93	H
	132322	1745	-16.72	36.80	20.08	101.84	
	132657	1778.5	-16.93	36.94	20.01	100.30	
	131987	1711.5	-13.24	37.28	24.04	253.34	V
	132322	1745	-13.58	37.63	24.05	254.10	
	132657	1778.5	-13.60	37.64	24.04	253.51	
Channel Bandwidth: 3 MHz / 64QAM							
X	131987	1711.5	-17.44	36.45	19.01	79.62	H
	132322	1745	-17.75	36.80	19.05	80.33	
	132657	1778.5	-17.90	36.94	19.04	80.22	
	131987	1711.5	-14.26	37.28	23.02	200.31	V
	132322	1745	-14.58	37.63	23.05	201.84	
	132657	1778.5	-14.63	37.64	23.01	199.99	

LTE Band 66							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	131997	1712.5	-15.41	36.45	21.04	127.06	H
	132322	1745	-15.78	36.80	21.02	126.44	
	132647	1777.5	-15.90	36.94	21.04	127.15	
	131997	1712.5	-12.22	37.28	25.06	320.41	V
	132322	1745	-12.58	37.63	25.05	319.89	
	132647	1777.5	-12.55	37.64	25.09	322.85	
Channel Bandwidth: 5 MHz / 16QAM							
X	131997	1712.5	-16.44	36.45	20.01	100.23	H
	132322	1745	-16.80	36.80	20.00	99.98	
	132647	1777.5	-16.92	36.94	20.02	100.53	
	131997	1712.5	-13.20	37.28	24.08	255.68	V
	132322	1745	-13.54	37.63	24.09	256.45	
	132647	1777.5	-13.60	37.64	24.04	253.51	
Channel Bandwidth: 5 MHz / 64QAM							
X	131997	1712.5	-17.41	36.45	19.04	80.17	H
	132322	1745	-17.76	36.80	19.04	80.15	
	132647	1777.5	-17.90	36.94	19.04	80.22	
	131997	1712.5	-14.21	37.28	23.07	202.63	V
	132322	1745	-14.55	37.63	23.08	203.24	
	132647	1777.5	-14.59	37.64	23.05	201.84	

LTE Band 66							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	132022	1715	-15.56	36.64	21.08	128.23	H
	132322	1745	-15.74	36.80	21.06	127.50	
	132622	1775	-15.78	36.80	21.02	126.47	
	132022	1715	-12.44	37.44	25.00	316.15	V
	132322	1745	-12.60	37.63	25.03	318.35	
	132622	1775	-12.55	37.64	25.09	322.48	
Channel Bandwidth: 10 MHz / 16QAM							
X	132022	1715	-16.62	36.64	20.02	100.46	H
	132322	1745	-16.71	36.80	20.09	101.98	
	132622	1775	-16.79	36.80	20.01	100.23	
	132022	1715	-13.40	37.44	24.04	253.45	V
	132322	1745	-13.60	37.63	24.03	252.87	
	132622	1775	-13.56	37.64	24.08	255.56	
Channel Bandwidth: 10 MHz / 64QAM							
X	132022	1715	-17.60	36.64	19.04	80.17	H
	132322	1745	-17.68	36.80	19.12	81.56	
	132622	1775	-17.75	36.80	19.05	80.35	
	132022	1715	-14.42	37.44	23.02	200.40	V
	132322	1745	-14.63	37.63	23.00	199.48	
	132622	1775	-14.58	37.64	23.06	202.07	

LTE Band 66							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	132047	1717.5	-15.36	36.45	21.09	128.53	H
	132322	1745	-15.72	36.80	21.08	128.20	
	132597	1772.5	-15.91	36.94	21.03	126.85	
	132047	1717.5	-12.21	37.28	25.07	321.14	V
	132322	1745	-12.60	37.63	25.03	318.42	
	132597	1772.5	-12.53	37.64	25.11	324.34	
Channel Bandwidth: 15 MHz / 16QAM							
X	132047	1717.5	-16.41	36.45	20.04	100.93	H
	132322	1745	-16.71	36.80	20.09	102.07	
	132597	1772.5	-16.92	36.94	20.02	100.53	
	132047	1717.5	-13.20	37.28	24.08	255.68	V
	132322	1745	-13.58	37.63	24.05	254.10	
	132597	1772.5	-13.55	37.64	24.09	256.45	
Channel Bandwidth: 15 MHz / 64QAM							
X	132047	1717.5	-17.38	36.45	19.07	80.72	H
	132322	1745	-17.74	36.80	19.06	80.52	
	132597	1772.5	-17.88	36.94	19.06	80.59	
	132047	1717.5	-14.25	37.28	23.03	200.77	V
	132322	1745	-14.56	37.63	23.07	202.77	
	132597	1772.5	-14.58	37.64	23.06	202.30	

LTE Band 66							
Channel Bandwidth: 20 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	132072	1720	-15.38	36.45	21.07	127.94	H
	132322	1745	-15.70	36.80	21.10	128.80	
	132572	1770	-15.80	36.94	21.14	130.11	
	132072	1720	-12.19	37.28	25.09	322.63	V
	132322	1745	-12.50	37.63	25.13	325.84	
	132572	1770	-12.45	37.64	25.19	330.37	
Channel Bandwidth: 20 MHz / 16QAM							
X	132072	1720	-16.35	36.45	20.10	102.33	H
	132322	1745	-16.72	36.80	20.08	101.84	
	132572	1770	-16.76	36.94	20.18	104.30	
	132072	1720	-13.16	37.28	24.12	258.05	V
	132322	1745	-13.50	37.63	24.13	258.82	
	132572	1770	-13.48	37.64	24.16	260.62	
Channel Bandwidth: 20 MHz / 64QAM							
X	132072	1720	-17.37	36.45	19.08	80.91	H
	132322	1745	-17.70	36.80	19.10	81.26	
	132572	1770	-17.75	36.94	19.19	83.04	
	132072	1720	-14.18	37.28	23.10	204.03	V
	132322	1745	-14.52	37.63	23.11	204.64	
	132572	1770	-14.46	37.64	23.18	207.97	

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stability Measurement

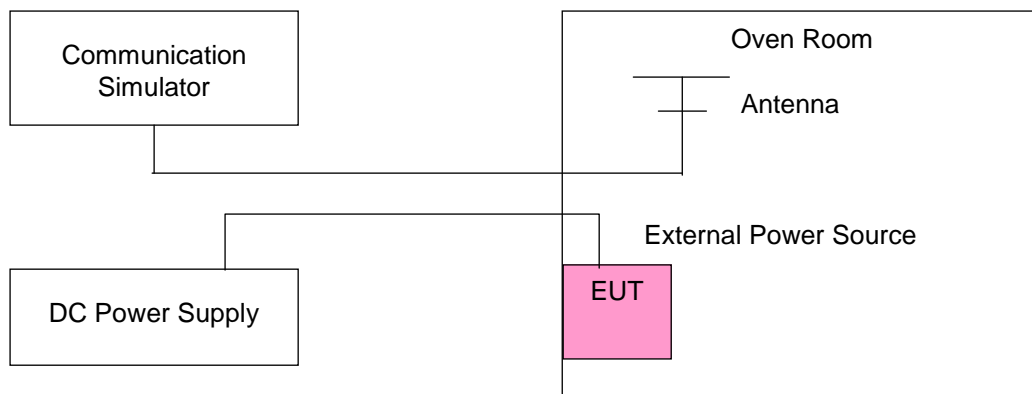
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

4.2.2 Test Procedure

- 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.
- 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.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ± 0.5 °C 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.

4.2.3 Test Setup



4.2.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1712.400002	0.001	1752.600003	0.002	2.5
14.0	1712.400003	0.002	1752.600004	0.002	2.5
17.0	1712.400001	0.001	1752.600002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1712.400004	0.002	1752.600004	0.002	2.5
-20	1712.400003	0.002	1752.600004	0.002	2.5
-10	1712.400004	0.002	1752.600002	0.001	2.5
0	1712.400003	0.002	1752.600003	0.002	2.5
10	1712.399997	-0.002	1752.599997	-0.002	2.5
20	1712.399999	-0.001	1752.599997	-0.002	2.5
30	1712.399998	-0.001	1752.599998	-0.001	2.5
40	1712.399998	-0.001	1752.599999	-0.001	2.5
50	1712.399996	-0.002	1752.599997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1710.700003	0.002	1754.300002	0.001	2.5
14.0	1710.700001	0.001	1754.300003	0.002	2.5
17.0	1710.700002	0.001	1754.300001	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1710.700001	0.001	1754.300004	0.002	2.5
-20	1710.700003	0.002	1754.300003	0.002	2.5
-10	1710.700003	0.001	1754.300002	0.001	2.5
0	1710.700002	0.001	1754.300003	0.002	2.5
10	1710.699997	-0.002	1754.299997	-0.002	2.5
20	1710.699999	-0.001	1754.299996	-0.002	2.5
30	1710.699999	-0.001	1754.299997	-0.002	2.5
40	1710.699998	-0.001	1754.299999	-0.001	2.5
50	1710.699997	-0.002	1754.299998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1711.500003	0.002	1753.500003	0.002	2.5
14.0	1711.500002	0.001	1753.500001	0.001	2.5
17.0	1711.500004	0.002	1753.500003	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1711.500004	0.002	1753.500002	0.001	2.5
-20	1711.500004	0.002	1753.500003	0.002	2.5
-10	1711.500002	0.001	1753.500002	0.001	2.5
0	1711.500002	0.001	1753.500002	0.001	2.5
10	1711.499996	-0.002	1753.499997	-0.002	2.5
20	1711.499997	-0.002	1753.499997	-0.002	2.5
30	1711.499999	-0.001	1753.499999	-0.001	2.5
40	1711.499998	-0.001	1753.499997	-0.002	2.5
50	1711.499998	-0.001	1753.499998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1712.500003	0.002	1752.500003	0.002	2.5
14.0	1712.500002	0.001	1752.500003	0.001	2.5
17.0	1712.500001	0.001	1752.500002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1712.500002	0.001	1752.500002	0.001	2.5
-20	1712.500003	0.002	1752.500003	0.002	2.5
-10	1712.500001	0.001	1752.500001	0.001	2.5
0	1712.500001	0.001	1752.500001	0.001	2.5
10	1712.499996	-0.002	1752.499998	-0.001	2.5
20	1712.499997	-0.002	1752.499998	-0.001	2.5
30	1712.499999	-0.001	1752.499997	-0.002	2.5
40	1712.499996	-0.002	1752.499999	-0.001	2.5
50	1712.499999	-0.001	1752.499997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1715.000003	0.002	1750.000004	0.002	2.5
14.0	1715.000003	0.002	1750.000002	0.001	2.5
17.0	1715.000004	0.002	1750.000002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1715.000004	0.002	1750.000004	0.002	2.5
-20	1715.000001	0.001	1750.000002	0.001	2.5
-10	1715.000003	0.002	1750.000003	0.002	2.5
0	1715.000001	0.001	1750.000003	0.001	2.5
10	1714.999996	-0.002	1749.999998	-0.001	2.5
20	1714.999998	-0.001	1749.999997	-0.002	2.5
30	1714.999996	-0.002	1749.999999	-0.001	2.5
40	1714.999998	-0.001	1749.999997	-0.002	2.5
50	1714.999998	-0.001	1749.999997	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1717.500003	0.002	1747.500003	0.001	2.5
14.0	1717.500004	0.002	1747.500002	0.001	2.5
17.0	1717.500002	0.001	1747.500003	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1717.500002	0.001	1747.500004	0.002	2.5
-20	1717.500002	0.001	1747.500002	0.001	2.5
-10	1717.500004	0.002	1747.500002	0.001	2.5
0	1717.500002	0.001	1747.500001	0.001	2.5
10	1717.499996	-0.002	1747.499996	-0.002	2.5
20	1717.499997	-0.002	1747.499996	-0.002	2.5
30	1717.499998	-0.001	1747.499997	-0.002	2.5
40	1717.499998	-0.001	1747.499997	-0.002	2.5
50	1717.499999	-0.001	1747.499997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 20 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1720.000003	0.002	1745.000004	0.002	2.5
14.0	1720.000002	0.001	1745.000004	0.002	2.5
17.0	1720.000001	0.001	1745.000002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 4				Limit (ppm)
	Channel Bandwidth: 20 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1720.000002	0.001	1745.000003	0.001	2.5
-20	1720.000003	0.002	1745.000004	0.002	2.5
-10	1720.000002	0.001	1745.000002	0.001	2.5
0	1720.000002	0.001	1745.000004	0.002	2.5
10	1719.999996	-0.002	1744.999997	-0.002	2.5
20	1719.999999	-0.001	1744.999996	-0.002	2.5
30	1719.999997	-0.002	1744.999997	-0.002	2.5
40	1719.999996	-0.002	1744.999999	-0.001	2.5
50	1719.999998	-0.001	1744.999997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	699.700001	0.002	715.300003	0.004	2.5
14.0	699.700002	0.003	715.300003	0.004	2.5
17.0	699.700002	0.002	715.300002	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	699.700004	0.005	715.300004	0.005	2.5
-20	699.700001	0.002	715.300002	0.003	2.5
-10	699.700002	0.003	715.300004	0.005	2.5
0	699.700003	0.004	715.300003	0.005	2.5
10	699.699997	-0.004	715.299997	-0.005	2.5
20	699.699997	-0.005	715.299996	-0.005	2.5
30	699.699998	-0.003	715.299997	-0.004	2.5
40	699.699999	-0.002	715.299998	-0.003	2.5
50	699.699997	-0.004	715.299998	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	700.500004	0.005	714.500003	0.004	2.5
14.0	700.500001	0.002	714.500001	0.002	2.5
17.0	700.500001	0.002	714.500001	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	700.500002	0.003	714.500003	0.004	2.5
-20	700.500002	0.002	714.500002	0.002	2.5
-10	700.500002	0.003	714.500003	0.004	2.5
0	700.500001	0.001	714.500002	0.003	2.5
10	700.499997	-0.005	714.499998	-0.002	2.5
20	700.499996	-0.005	714.499999	-0.002	2.5
30	700.499999	-0.002	714.499998	-0.003	2.5
40	700.499998	-0.003	714.499998	-0.002	2.5
50	700.499998	-0.003	714.499996	-0.006	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	701.500001	0.002	713.500003	0.005	2.5
14.0	701.500002	0.003	713.500001	0.002	2.5
17.0	701.500002	0.003	713.500003	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	701.500002	0.002	713.500001	0.002	2.5
-20	701.500003	0.005	713.500004	0.005	2.5
-10	701.500002	0.003	713.500003	0.005	2.5
0	701.500004	0.005	713.500003	0.005	2.5
10	701.499998	-0.003	713.499998	-0.002	2.5
20	701.499999	-0.002	713.499997	-0.004	2.5
30	701.499996	-0.005	713.499999	-0.002	2.5
40	701.499999	-0.002	713.499997	-0.004	2.5
50	701.499997	-0.005	713.499997	-0.005	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	704.000003	0.004	711.000004	0.005	2.5
14.0	704.000003	0.004	711.000001	0.001	2.5
17.0	704.000002	0.003	711.000003	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	704.000002	0.003	711.000002	0.003	2.5
-20	704.000001	0.002	711.000003	0.004	2.5
-10	704.000004	0.005	711.000003	0.004	2.5
0	704.000002	0.003	711.000003	0.004	2.5
10	703.999998	-0.002	710.999997	-0.004	2.5
20	703.999996	-0.005	710.999997	-0.005	2.5
30	703.999999	-0.002	710.999998	-0.003	2.5
40	703.999999	-0.002	710.999998	-0.003	2.5
50	703.999996	-0.006	710.999998	-0.003	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 13				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	779.500002	0.002	784.500002	0.003	2.5
14.0	779.500003	0.004	784.500003	0.003	2.5
17.0	779.500003	0.003	784.500004	0.005	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 13				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	779.500004	0.004	784.500003	0.003	2.5
-20	779.500002	0.002	784.500002	0.002	2.5
-10	779.500001	0.002	784.500001	0.001	2.5
0	779.500004	0.005	784.500001	0.002	2.5
10	779.499996	-0.005	784.499998	-0.003	2.5
20	779.499997	-0.004	784.499998	-0.003	2.5
30	779.499997	-0.004	784.499998	-0.003	2.5
40	779.499997	-0.004	784.499997	-0.004	2.5
50	779.499997	-0.004	784.499999	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 13		Limit (ppm)
	Channel Bandwidth: 10 MHz		
	Frequency (MHz)	Frequency Error (ppm)	
15.5	782.000002	0.003	2.5
14.0	782.000003	0.004	2.5
17.0	782.000002	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 13		Limit (ppm)
	Channel Bandwidth: 10 MHz		
	Frequency (MHz)	Frequency Error (ppm)	
-30	782.000003	0.004	2.5
-20	782.000002	0.003	2.5
-10	782.000002	0.003	2.5
0	782.000002	0.003	2.5
10	781.999996	-0.005	2.5
20	781.999998	-0.002	2.5
30	781.999998	-0.002	2.5
40	781.999997	-0.004	2.5
50	781.999996	-0.005	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 17				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	706.500003	0.005	713.500002	0.002	2.5
14.0	706.500003	0.005	713.500002	0.003	2.5
17.0	706.500003	0.004	713.500002	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 17				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	706.500004	0.005	713.500004	0.005	2.5
-20	706.500001	0.002	713.500003	0.004	2.5
-10	706.500001	0.002	713.500002	0.002	2.5
0	706.500003	0.004	713.500002	0.003	2.5
10	706.499998	-0.003	713.499998	-0.003	2.5
20	706.499999	-0.002	713.499997	-0.004	2.5
30	706.499997	-0.004	713.499996	-0.006	2.5
40	706.499998	-0.003	713.499996	-0.005	2.5
50	706.499996	-0.006	713.499998	-0.003	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 17				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	709.000002	0.003	711.000004	0.005	2.5
14.0	709.000003	0.005	711.000004	0.006	2.5
17.0	709.000001	0.002	711.000003	0.005	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 17				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	709.000002	0.003	711.000002	0.003	2.5
-20	709.000004	0.006	711.000004	0.005	2.5
-10	709.000004	0.006	711.000003	0.004	2.5
0	709.000004	0.005	711.000001	0.002	2.5
10	708.999997	-0.005	710.999997	-0.005	2.5
20	708.999996	-0.006	710.999999	-0.002	2.5
30	708.999997	-0.004	710.999997	-0.004	2.5
40	708.999999	-0.002	710.999997	-0.005	2.5
50	708.999996	-0.005	710.999998	-0.003	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1710.700004	0.002	1779.300004	0.002	2.5
14.0	1710.700003	0.001	1779.300001	0.001	2.5
17.0	1710.700003	0.002	1779.300001	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1710.700001	0.001	1779.300002	0.001	2.5
-20	1710.700002	0.001	1779.300003	0.002	2.5
-10	1710.700002	0.001	1779.300002	0.001	2.5
0	1710.700004	0.002	1779.300001	0.001	2.5
10	1710.699999	-0.001	1779.299997	-0.002	2.5
20	1710.699997	-0.002	1779.299996	-0.002	2.5
30	1710.699999	-0.001	1779.299998	-0.001	2.5
40	1710.699997	-0.002	1779.299998	-0.001	2.5
50	1710.699997	-0.002	1779.299996	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1711.500001	0.001	1778.500003	0.002	2.5
14.0	1711.500004	0.002	1778.500001	0.001	2.5
17.0	1711.500003	0.002	1778.500003	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1711.500003	0.002	1778.500002	0.001	2.5
-20	1711.500002	0.001	1778.500001	0.001	2.5
-10	1711.500001	0.001	1778.500003	0.002	2.5
0	1711.500003	0.002	1778.500001	0.001	2.5
10	1711.499999	-0.001	1778.499997	-0.002	2.5
20	1711.499998	-0.001	1778.499998	-0.001	2.5
30	1711.499997	-0.002	1778.499997	-0.002	2.5
40	1711.499996	-0.002	1778.499997	-0.001	2.5
50	1711.499999	-0.001	1778.499997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1712.500001	0.001	1777.500002	0.001	2.5
14.0	1712.500001	0.001	1777.500003	0.002	2.5
17.0	1712.500002	0.001	1777.500004	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1712.500003	0.002	1777.500001	0.001	2.5
-20	1712.500003	0.002	1777.500002	0.001	2.5
-10	1712.500001	0.001	1777.500002	0.001	2.5
0	1712.500003	0.002	1777.500002	0.001	2.5
10	1712.499997	-0.002	1777.499996	-0.002	2.5
20	1712.499996	-0.002	1777.499997	-0.002	2.5
30	1712.499996	-0.002	1777.499998	-0.001	2.5
40	1712.499998	-0.001	1777.499998	-0.001	2.5
50	1712.499998	-0.001	1777.499998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1715.000002	0.001	1775.000004	0.002	2.5
14.0	1715.000001	0.001	1775.000002	0.001	2.5
17.0	1715.000002	0.001	1775.000001	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1715.000001	0.001	1775.000002	0.001	2.5
-20	1715.000003	0.002	1775.000003	0.002	2.5
-10	1715.000003	0.002	1775.000002	0.001	2.5
0	1715.000002	0.001	1775.000002	0.001	2.5
10	1714.999996	-0.002	1774.999999	-0.001	2.5
20	1714.999998	-0.001	1774.999997	-0.002	2.5
30	1714.999997	-0.002	1774.999996	-0.002	2.5
40	1714.999998	-0.001	1774.999999	-0.001	2.5
50	1714.999999	-0.001	1774.999997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1717.500002	0.001	1772.500004	0.002	2.5
14.0	1717.500002	0.001	1772.500002	0.001	2.5
17.0	1717.500002	0.001	1772.500002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1717.500004	0.002	1772.500003	0.001	2.5
-20	1717.500002	0.001	1772.500004	0.002	2.5
-10	1717.500004	0.002	1772.500002	0.001	2.5
0	1717.500003	0.002	1772.500004	0.002	2.5
10	1717.499998	-0.001	1772.499996	-0.002	2.5
20	1717.499996	-0.002	1772.499998	-0.001	2.5
30	1717.499996	-0.002	1772.499996	-0.002	2.5
40	1717.499997	-0.002	1772.499998	-0.001	2.5
50	1717.499996	-0.002	1772.499998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66				Limit (ppm)
	Channel Bandwidth: 20 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1720.000002	0.001	1770.000001	0.001	2.5
14.0	1720.000004	0.002	1770.000003	0.002	2.5
17.0	1720.000003	0.002	1770.000002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 66				Limit (ppm)
	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	2.5
-20	1720.000002	0.001	1770.000003	0.002	2.5
-10	1720.000001	0.001	1770.000004	0.002	2.5
0	1720.000002	0.001	1770.000001	0.001	2.5
10	1719.999997	-0.002	1769.999997	-0.002	2.5
20	1719.999998	-0.001	1769.999997	-0.002	2.5
30	1719.999997	-0.002	1769.999999	-0.001	2.5
40	1719.999996	-0.002	1769.999997	-0.002	2.5
50	1719.999998	-0.001	1769.999996	-0.002	2.5

4.3 Occupied Bandwidth Measurement

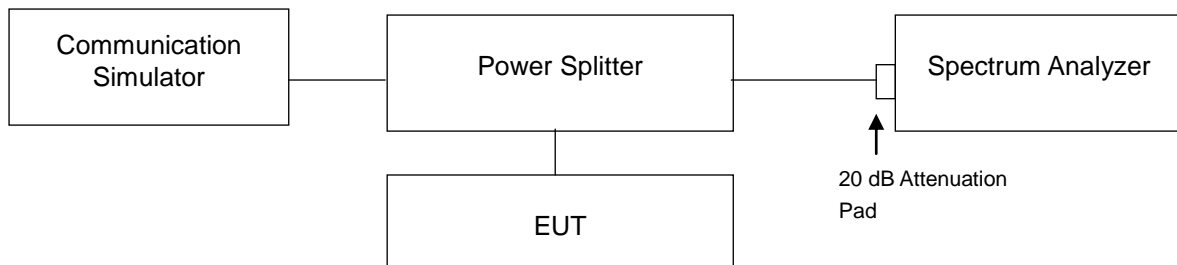
4.3.1 Limits of Occupied Bandwidth Measurement

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.3.2 Test Procedure

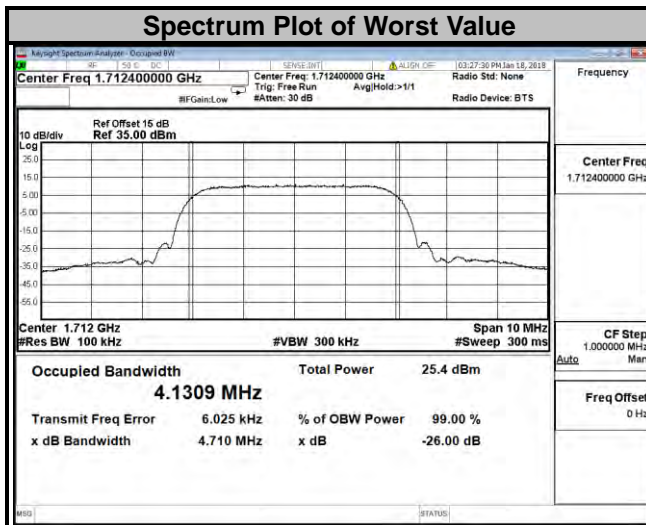
- a. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- b. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.3.3 Test Setup



4.3.4 Test Result

WCDMA		
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)
1312	1712.4	4.1309
1413	1732.6	4.1251
1513	1752.6	4.1252



LTE Band 4

Channel Bandwidth: 1.4 MHz

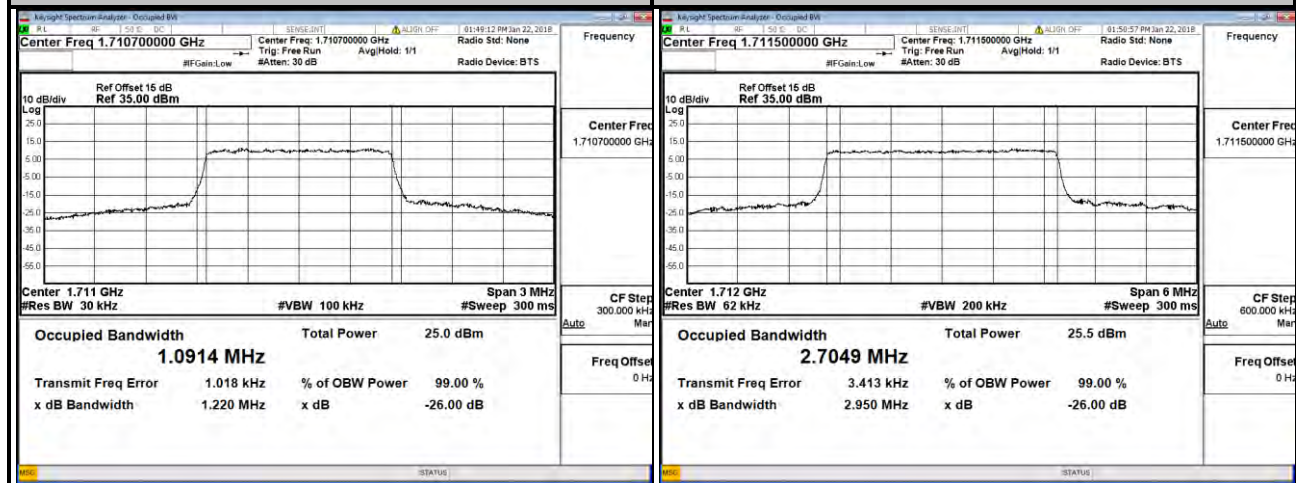
Channel Bandwidth: 3 MHz

Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
19957	1710.7	1.0890	1.0914	1.0890	19965	1711.5	2.7049	2.6995	2.6991
20175	1732.5	1.0879	1.0889	1.0888	20175	1732.5	2.7029	2.7001	2.6996
20393	1754.3	1.0863	1.0889	1.0887	20385	1753.5	2.7011	2.6984	2.6976

Spectrum Plot of Worst Value

1.4 MHz / 16QAM

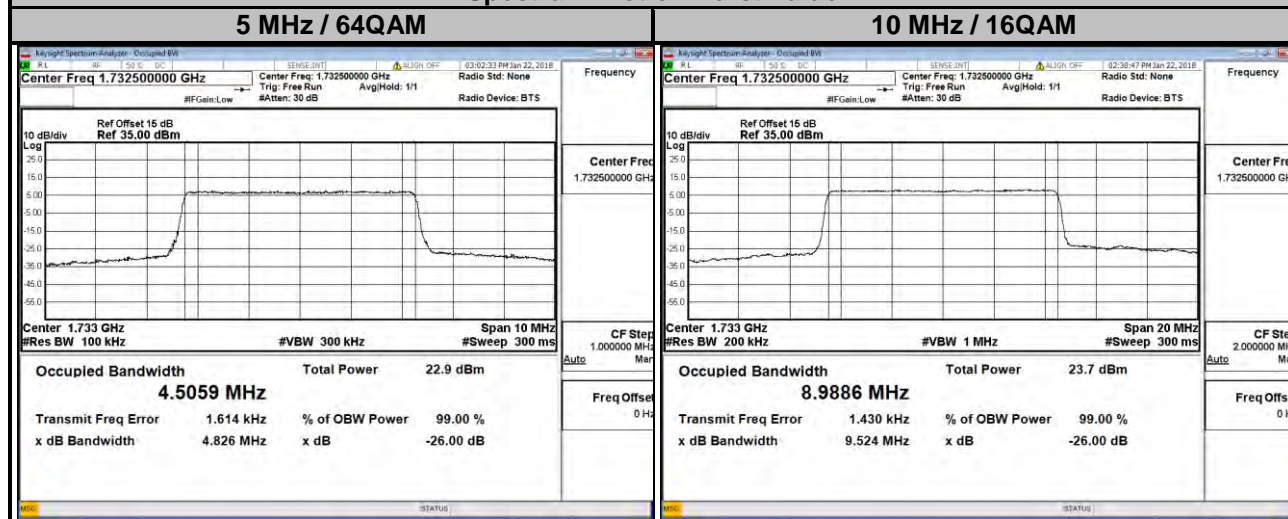
3 MHz / QPSK



LTE Band 4

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
19975	1712.5	4.4968	4.4932	4.5033	20000	1715.0	8.9669	8.9656	8.9634
20175	1732.5	4.4965	4.4982	4.5059	20175	1732.5	8.9841	8.9886	8.9828
20375	1752.5	4.4951	4.4967	4.5052	20350	1750.0	8.9664	8.9697	8.9691

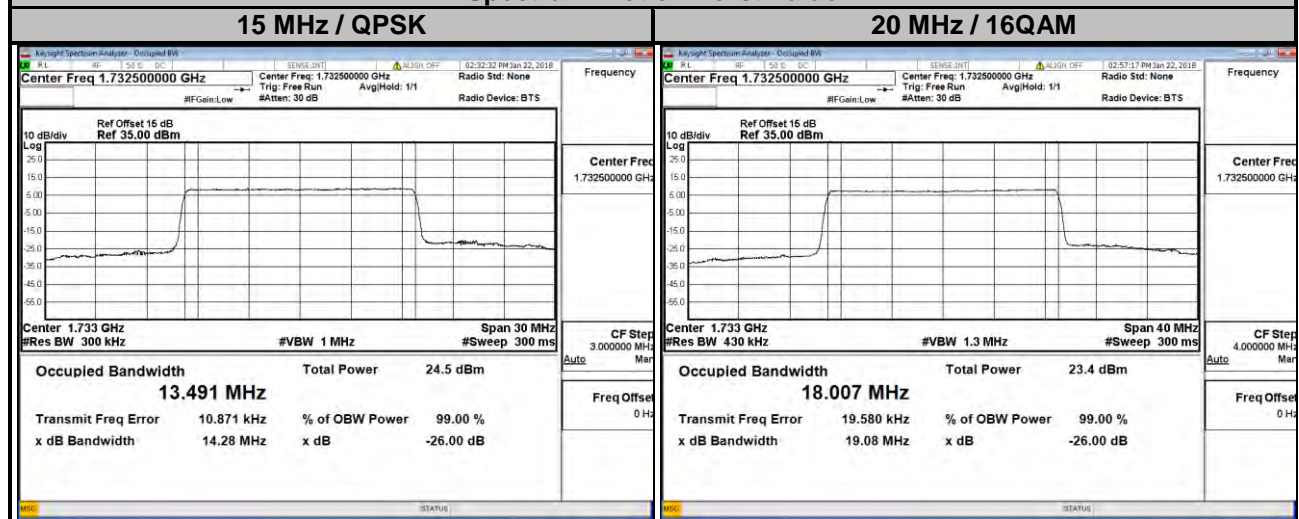
Spectrum Plot of Worst Value



LTE Band 4

Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20025	1717.5	13.426	13.411	13.403	20050	1720.0	17.878	17.903	17.896
20175	1732.5	13.491	13.474	13.464	20175	1732.5	17.995	18.007	17.995
20325	1747.5	13.426	13.412	13.404	20300	1745.0	17.852	17.872	17.866

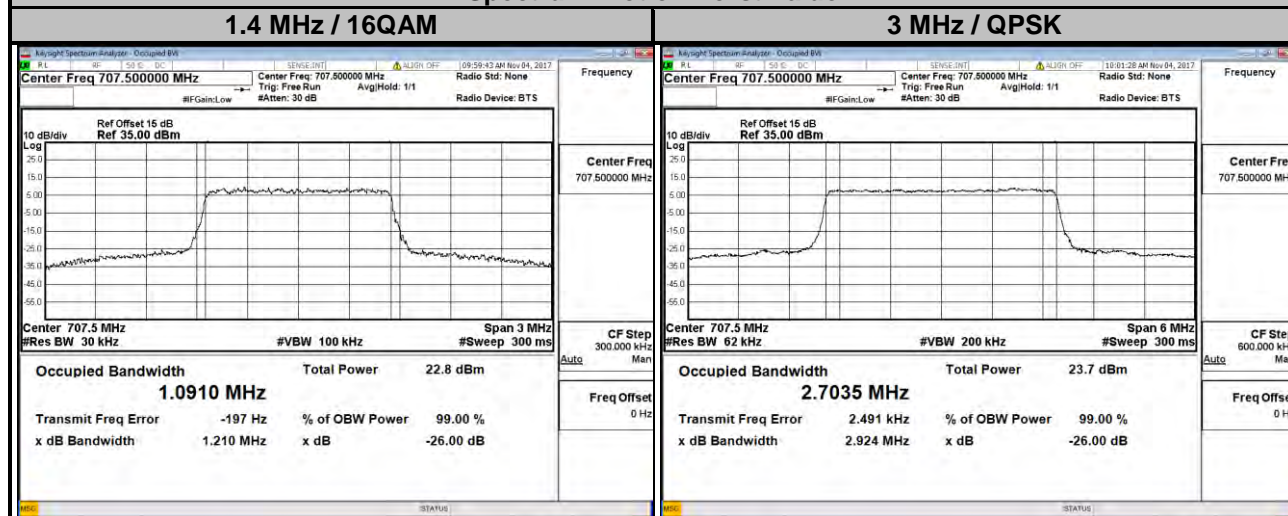
Spectrum Plot of Worst Value



LTE Band 12

Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23017	699.7	1.0864	1.0888	1.0888	23025	700.5	2.6978	2.6938	2.6926
23095	707.5	1.0864	1.0910	1.0878	23095	707.5	2.7035	2.7002	2.6986
23173	715.3	1.0857	1.0886	1.0880	23165	714.5	2.6967	2.6917	2.6927

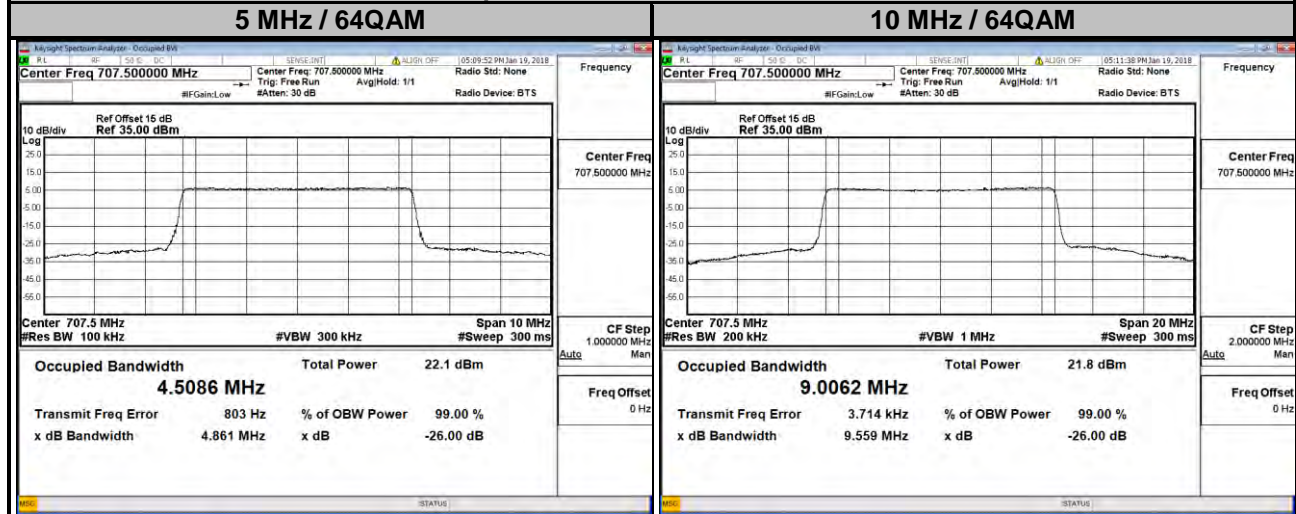
Spectrum Plot of Worst Value



LTE Band 12

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23035	701.5	4.4728	4.4782	4.4868	23060	704.0	8.9436	8.9488	8.9509
23095	707.5	4.4962	4.4990	4.5086	23095	707.5	9.0031	9.0053	9.0062
23155	713.5	4.4713	4.4752	4.4836	23130	711.0	8.9354	8.9422	8.9420

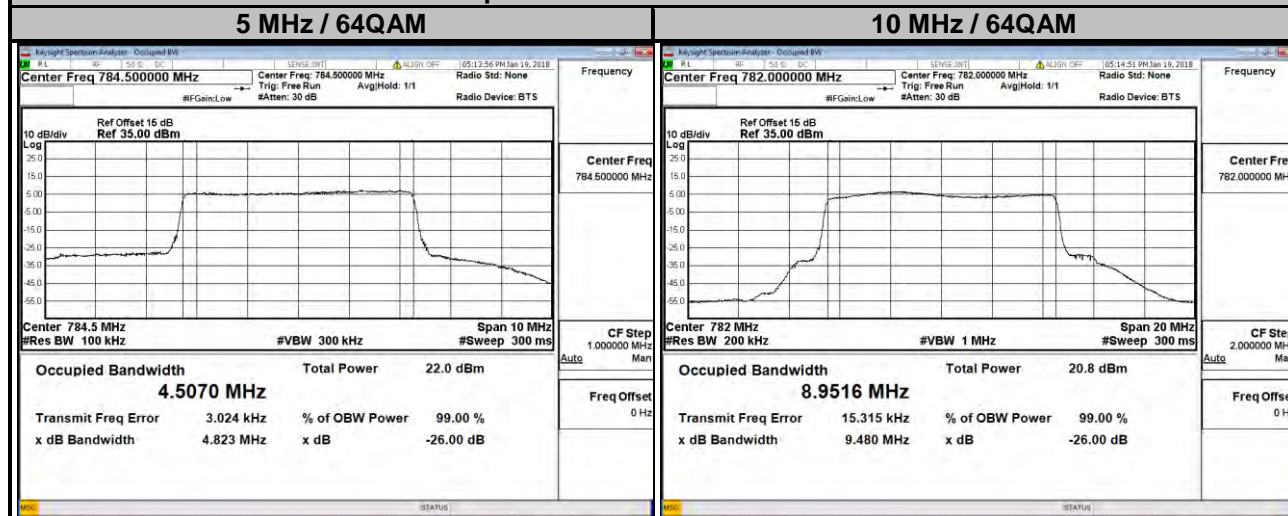
Spectrum Plot of Worst Value



LTE Band 13

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23205	779.5	4.4619	4.4639	4.4760	23230	782.0	8.9422	8.9493	8.9516
23230	782.0	4.4969	4.4953	4.5000					
23255	784.5	4.4940	4.4953	4.5070					

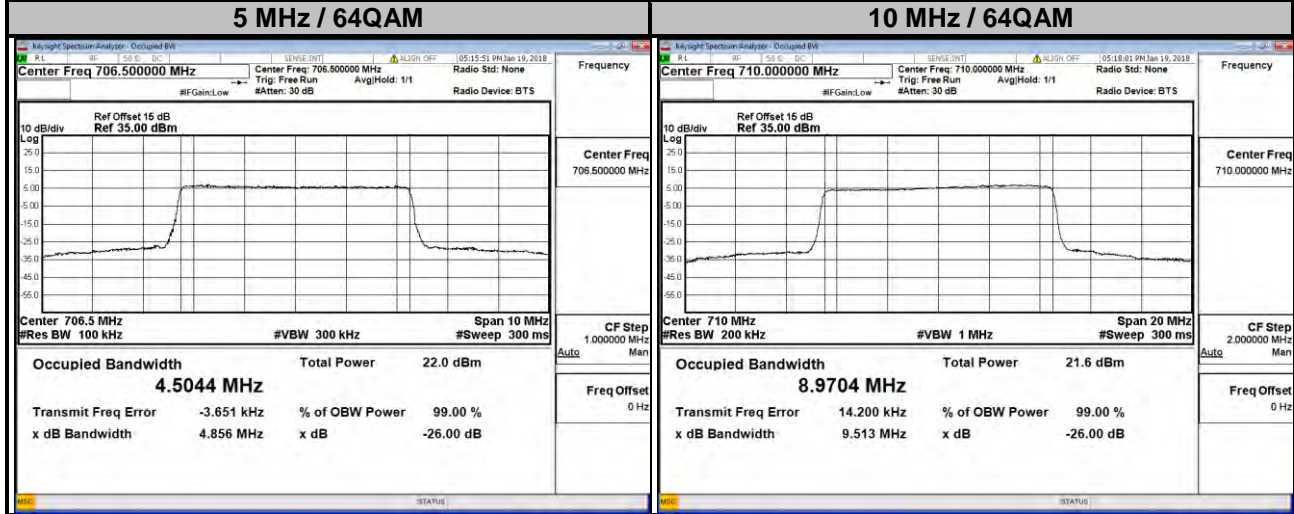
Spectrum Plot of Worst Value



LTE Band 17

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23755	706.5	4.4960	4.4966	4.5044	23780	709.0	8.9905	8.9989	8.9989
23790	710.0	4.4892	4.4928	4.4966	23790	710.0	8.9634	8.9688	8.9704
23825	713.5	4.4712	4.4734	4.4824	23800	711.0	8.9356	8.9447	8.9442

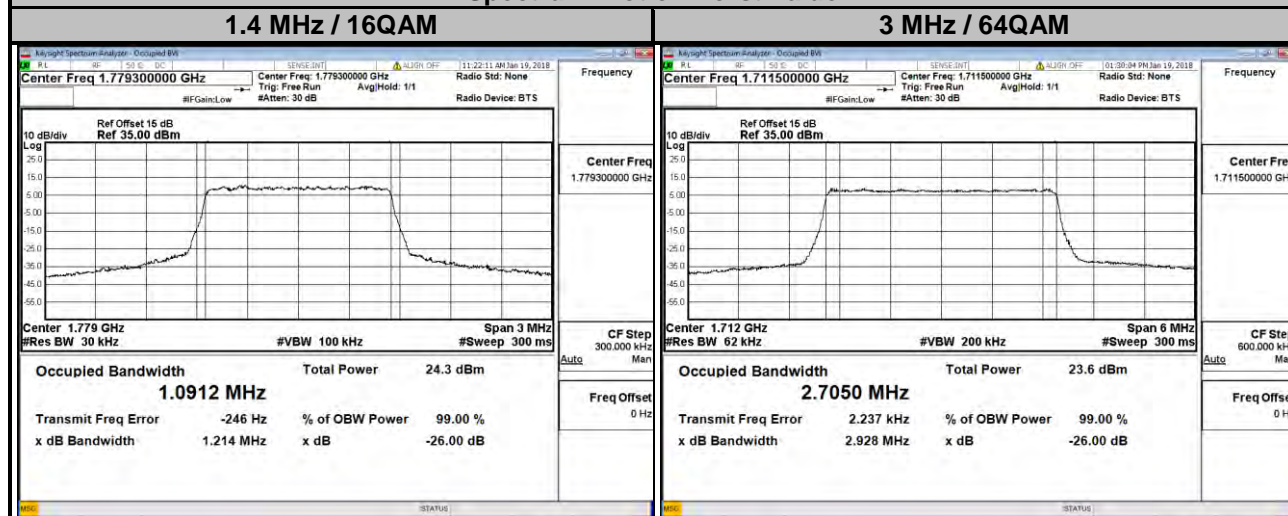
Spectrum Plot of Worst Value



LTE Band 66

Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
131979	1710.7	1.0865	1.0883	1.0870	131987	1711.5	2.7013	2.6990	2.7050
132322	1745.0	1.0860	1.0898	1.0870	132322	1745.0	2.6994	2.6974	2.7025
132665	1779.3	1.0880	1.0912	1.0857	132657	1778.5	2.7008	2.6958	2.7032

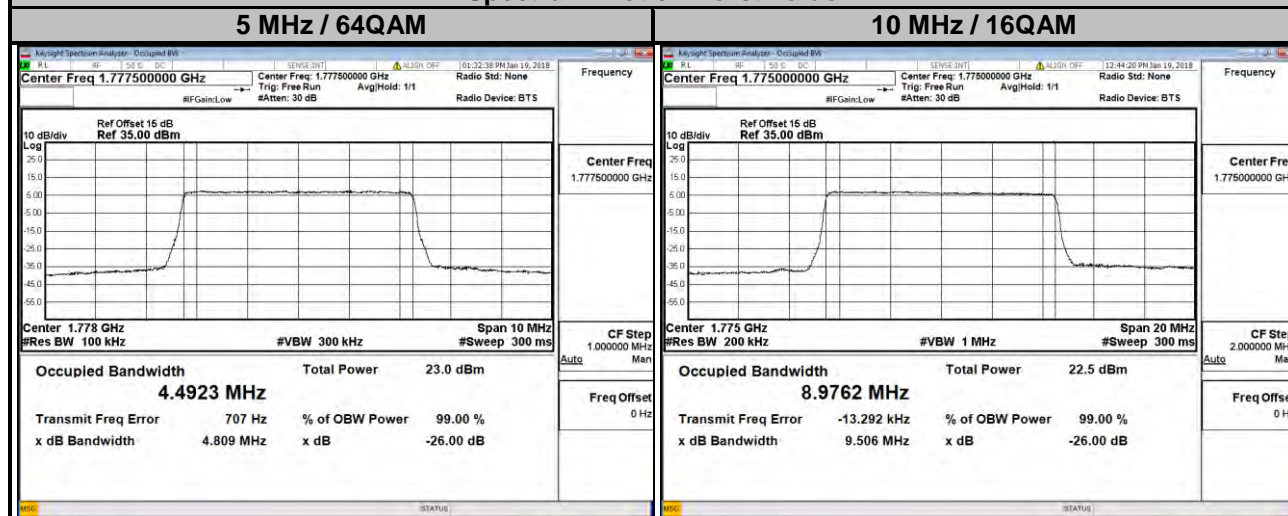
Spectrum Plot of Worst Value



LTE Band 66

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
131997	1712.5	4.4870	4.4888	4.4891	132022	1715.0	8.9665	8.9689	8.9624
132322	1745.0	4.4890	4.4911	4.4895	132322	1745.0	8.9693	8.9734	8.9677
132647	1777.5	4.4883	4.4914	4.4923	132622	1775.0	8.9693	8.9762	8.9671

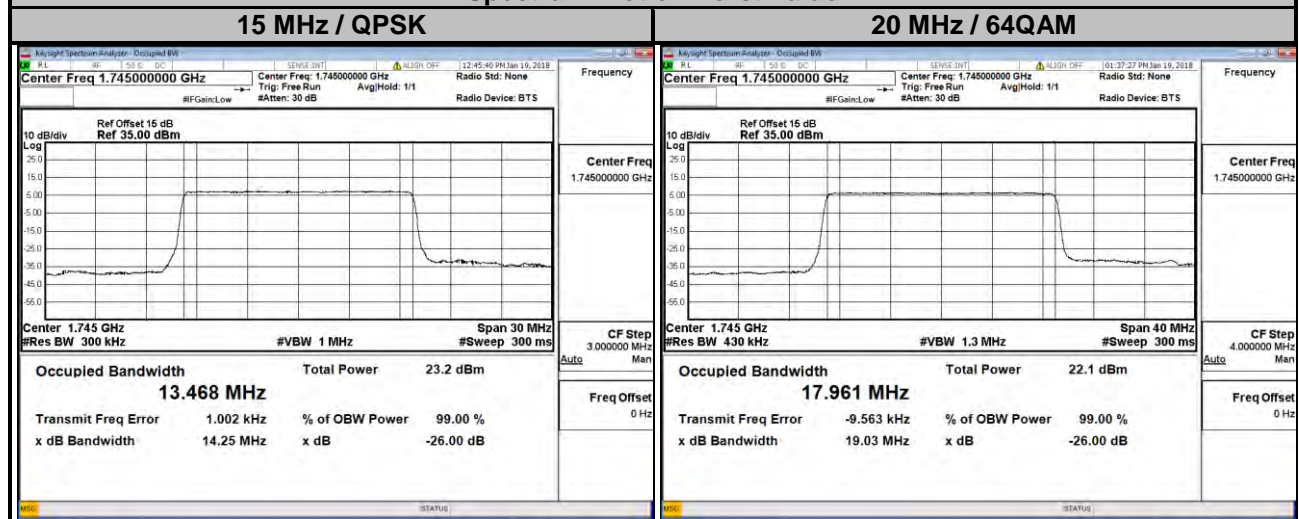
Spectrum Plot of Worst Value



LTE Band 66

Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
132047	1717.5	13.437	13.416	13.425	132072	1720.0	17.850	17.869	17.874
132322	1745.0	13.468	13.451	13.452	132322	1745.0	17.922	17.944	17.961
132597	1772.5	13.453	13.444	13.437	132572	1770.0	17.913	17.933	17.910

Spectrum Plot of Worst Value



4.4 Band Edge Measurement

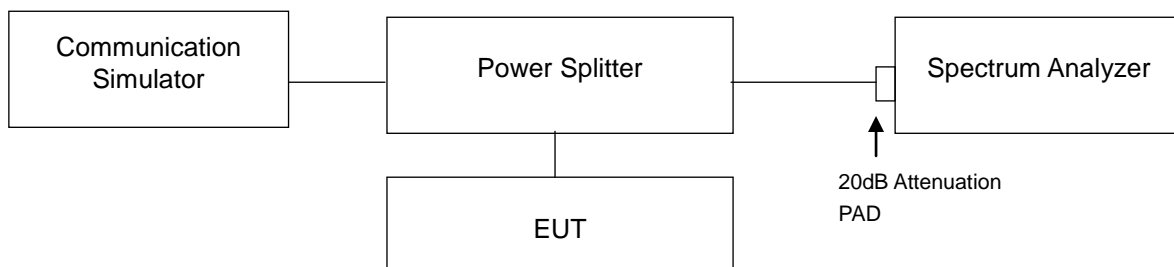
4.4.1 Limits of Band Edge Measurement

For operations in the 704-716 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

For operations in the 1710–1755 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB.

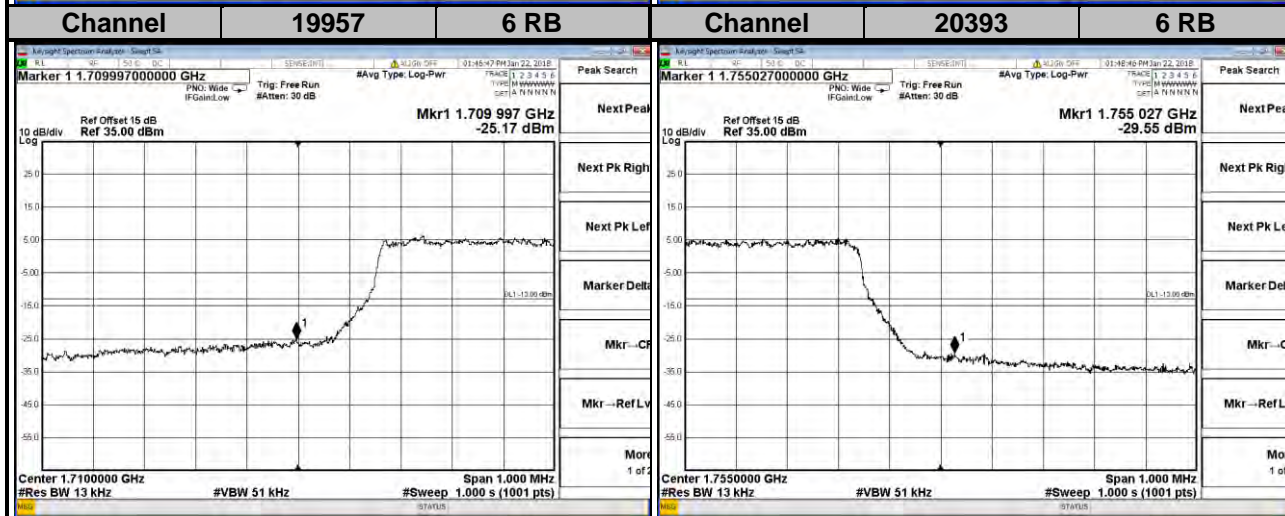
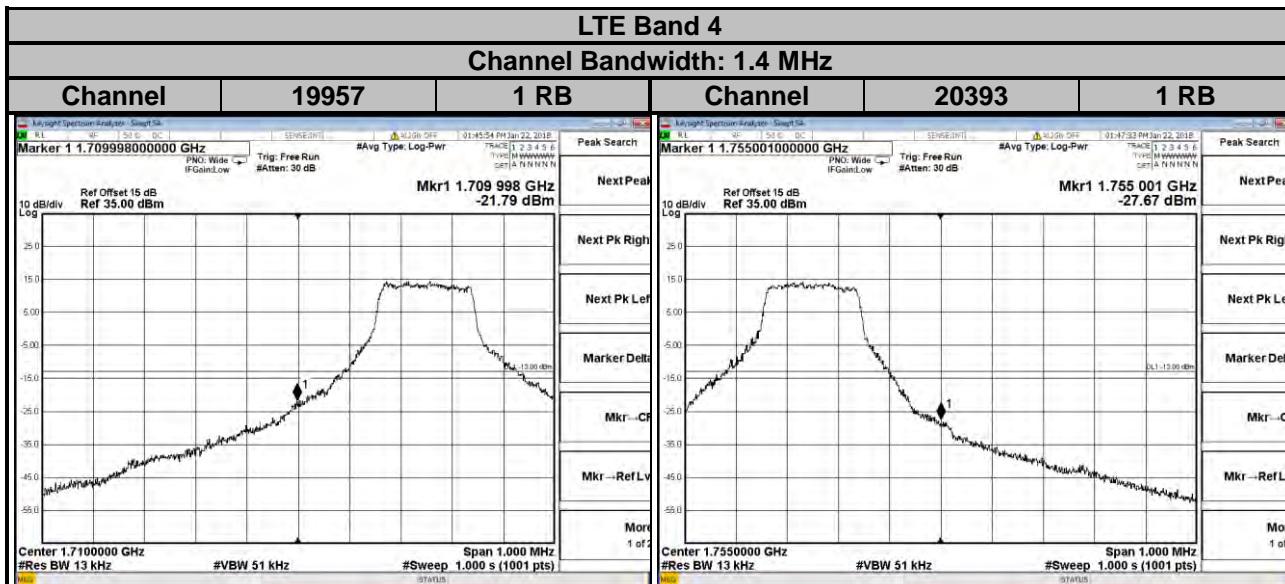
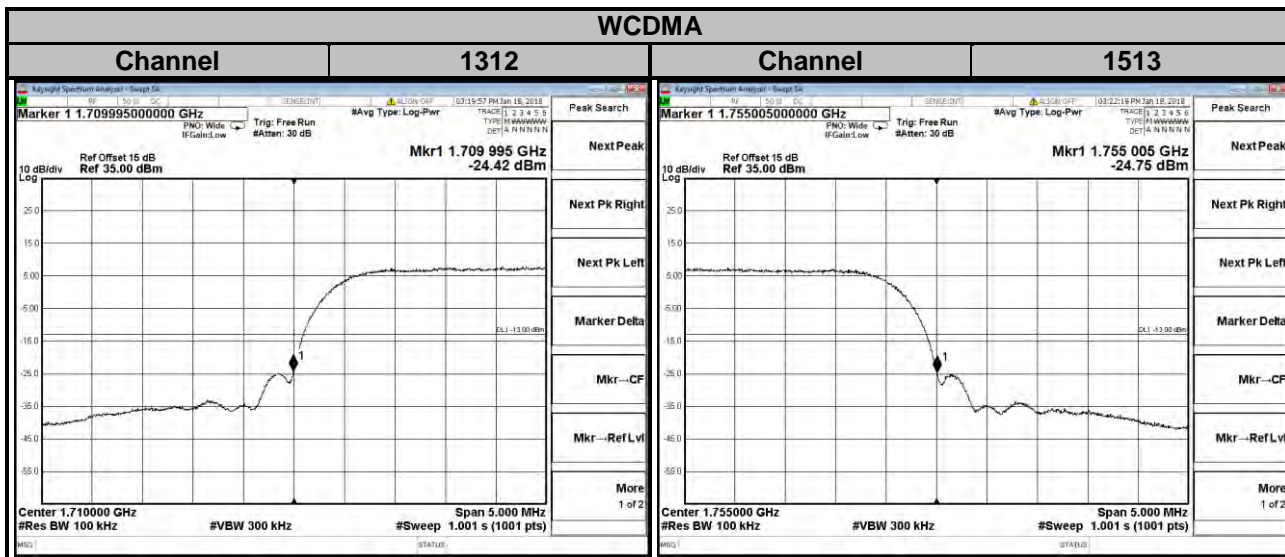
4.4.2 Test Setup



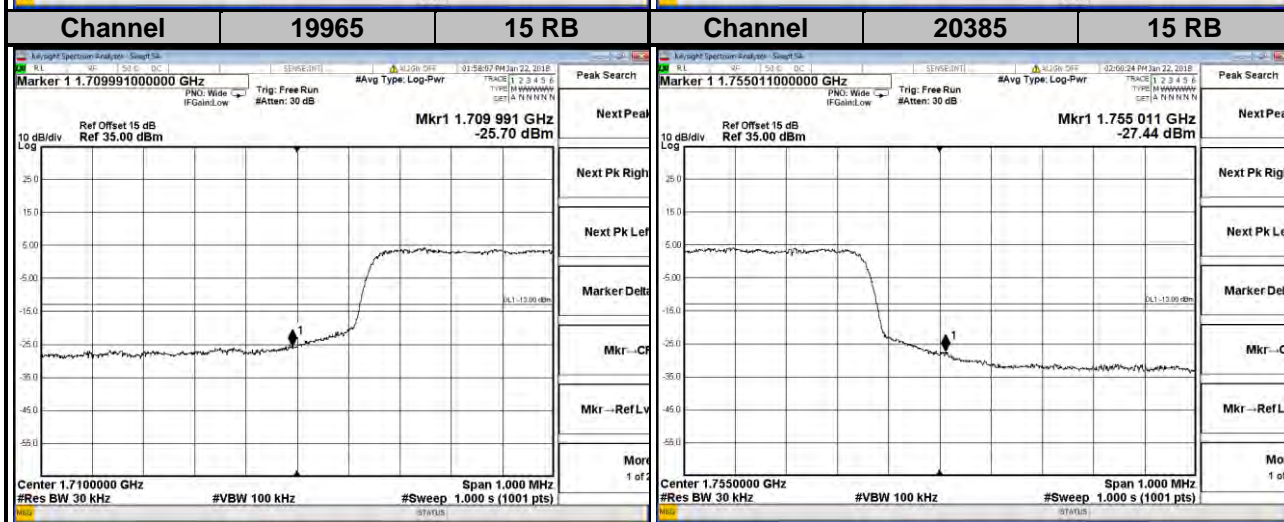
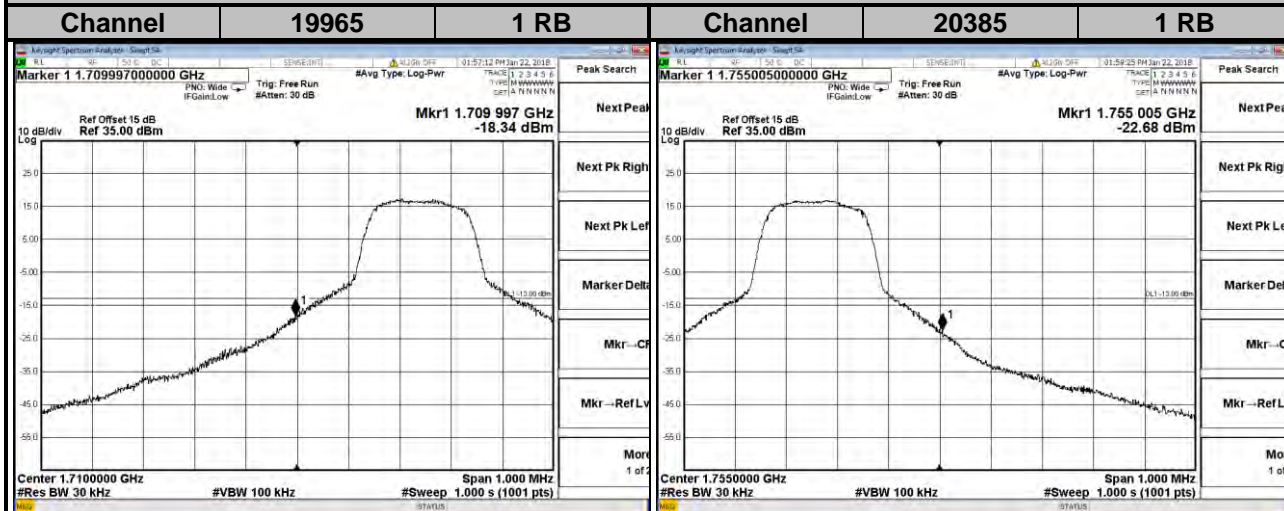
4.4.3 Test Procedures

- a. All measurements were done at low and high operational frequency range.
- b. The center frequency of spectrum is the band edge frequency and span is 5 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (WCDMA).
- c. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 13 kHz and VB of the spectrum is 51 kHz (LTE Bandwidth 1.4 MHz).
- d. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 30 kHz and VB of the spectrum is 100 kHz (LTE Bandwidth 3 MHz).
- e. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (LTE Bandwidth 5 MHz/10 MHz).
- f. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 150 kHz and VB of the spectrum is 470 kHz (LTE Bandwidth 15 MHz).
- g. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 180 kHz and VB of the spectrum is 560 kHz (LTE Bandwidth 20 MHz).
- h. Record the max. trace plot into the test report.

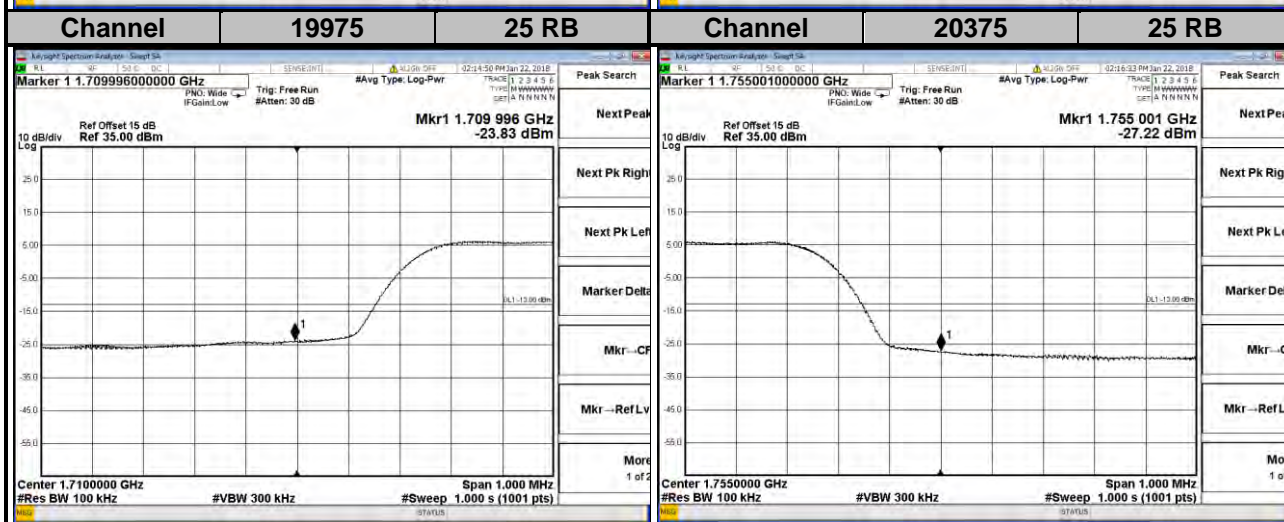
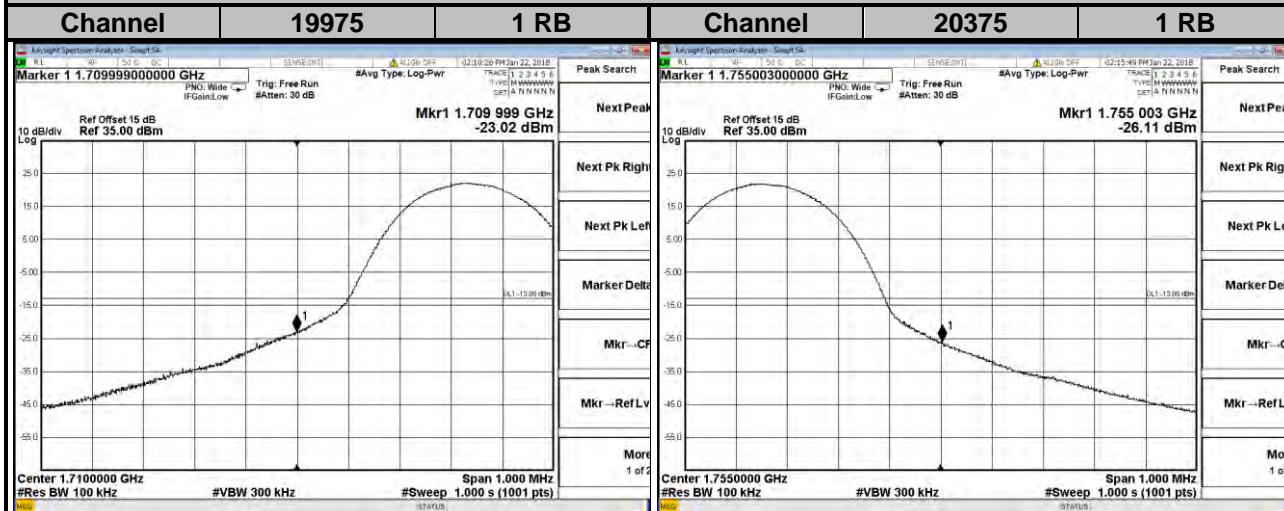
4.4.4 Test Results



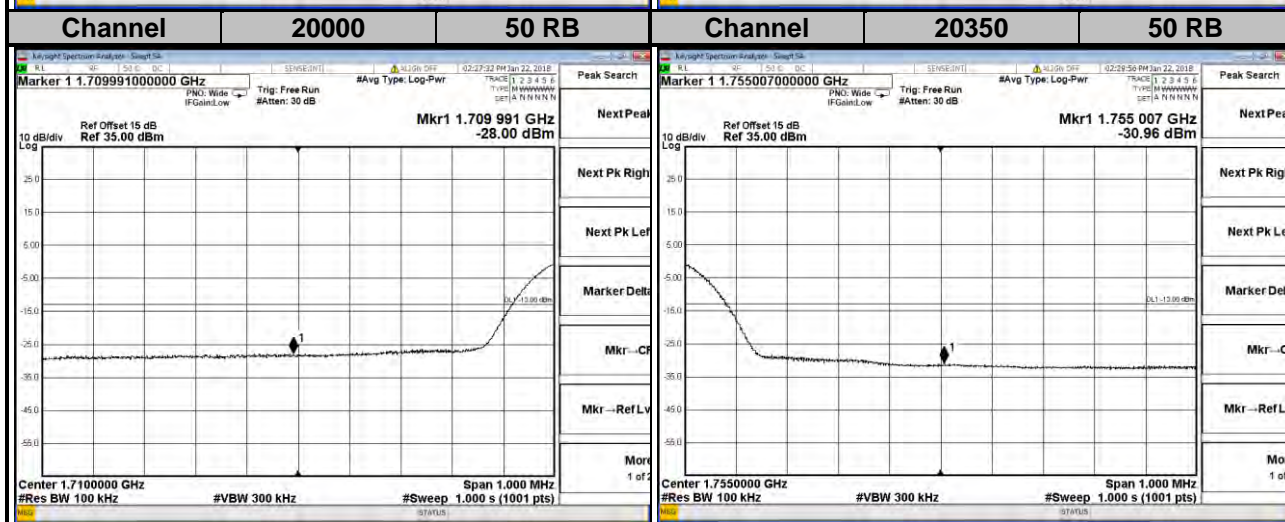
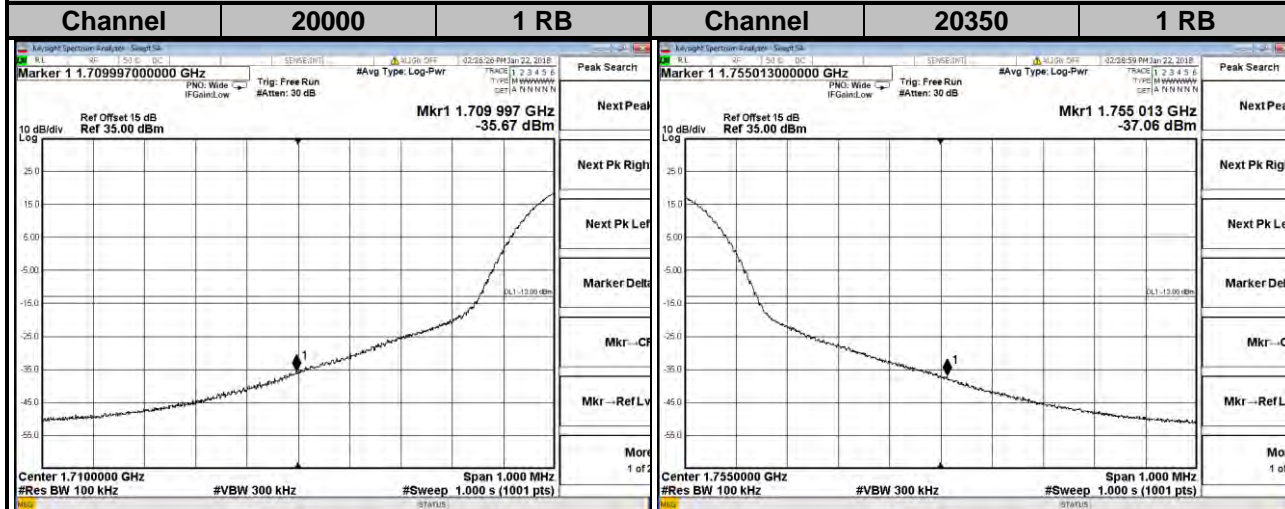
LTE Band 4
Channel Bandwidth: 3 MHz



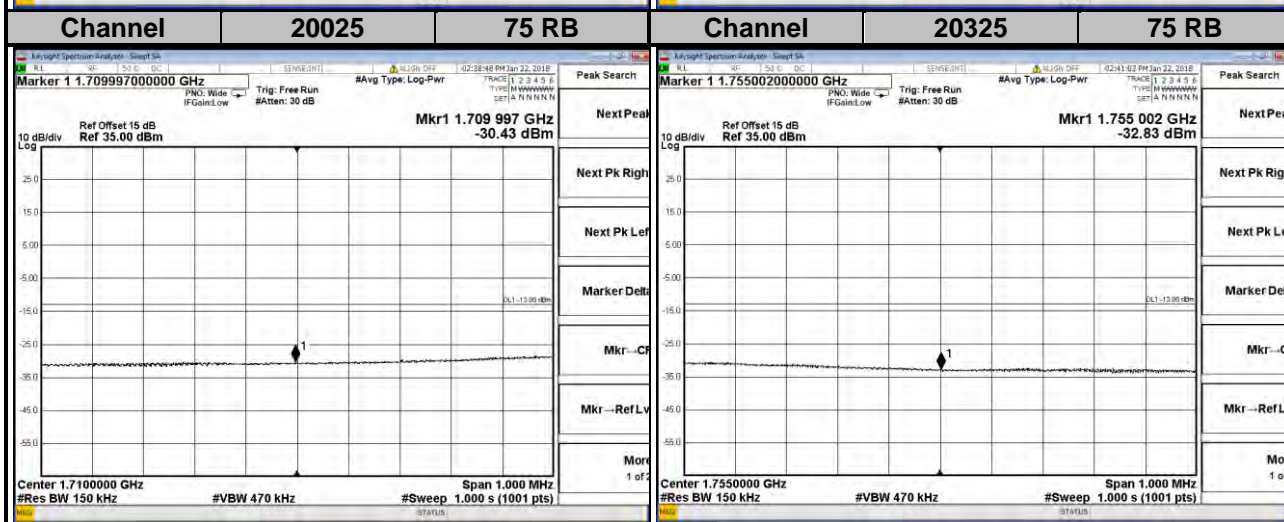
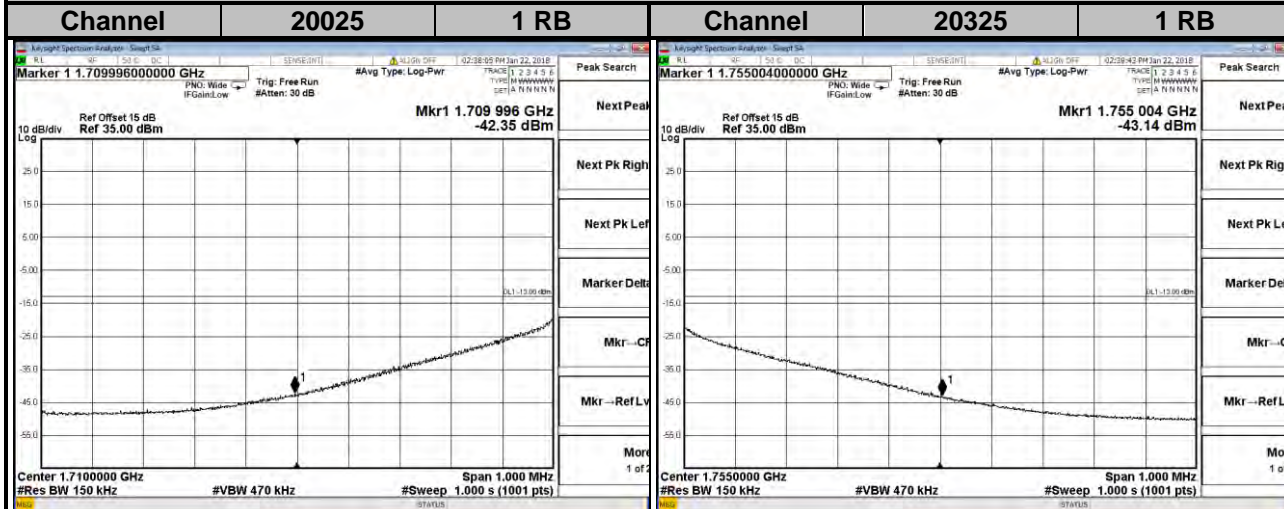
LTE Band 4
Channel Bandwidth: 5 MHz



LTE Band 4
Channel Bandwidth: 10 MHz

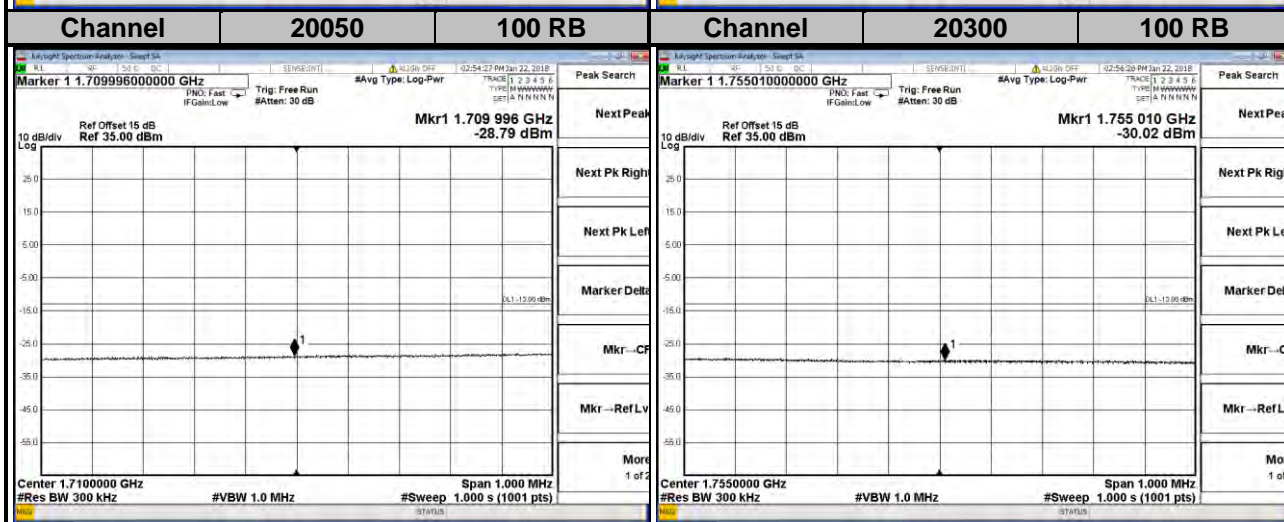
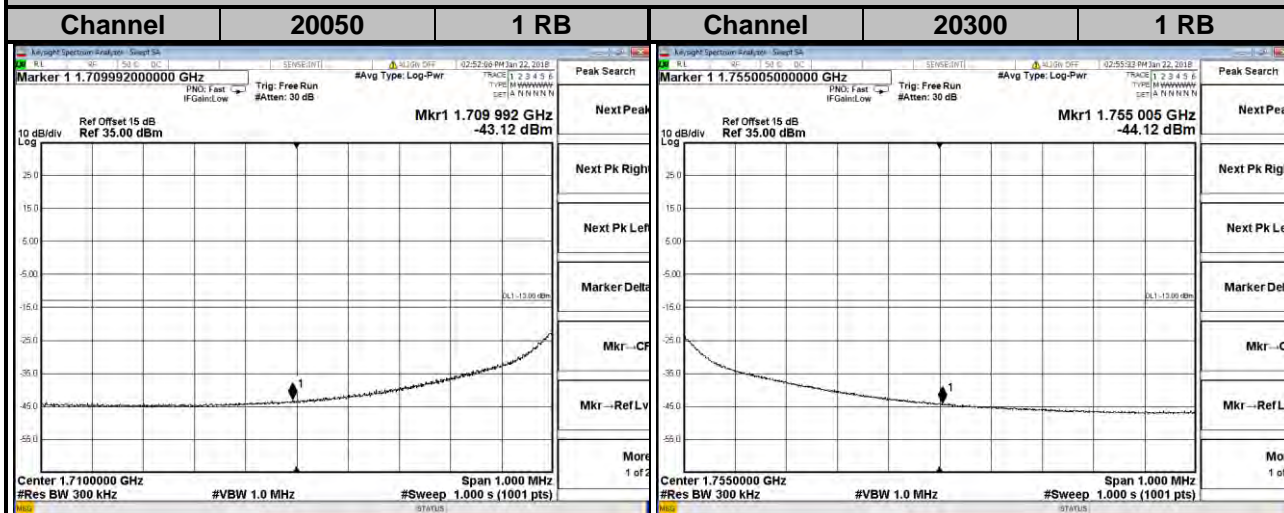


LTE Band 4
Channel Bandwidth: 15 MHz



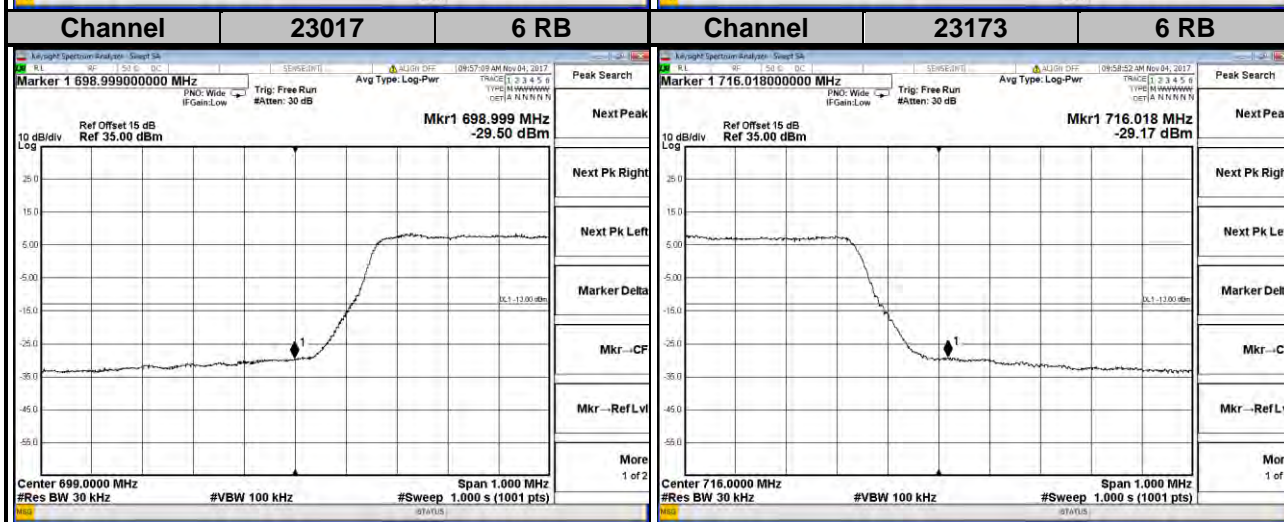
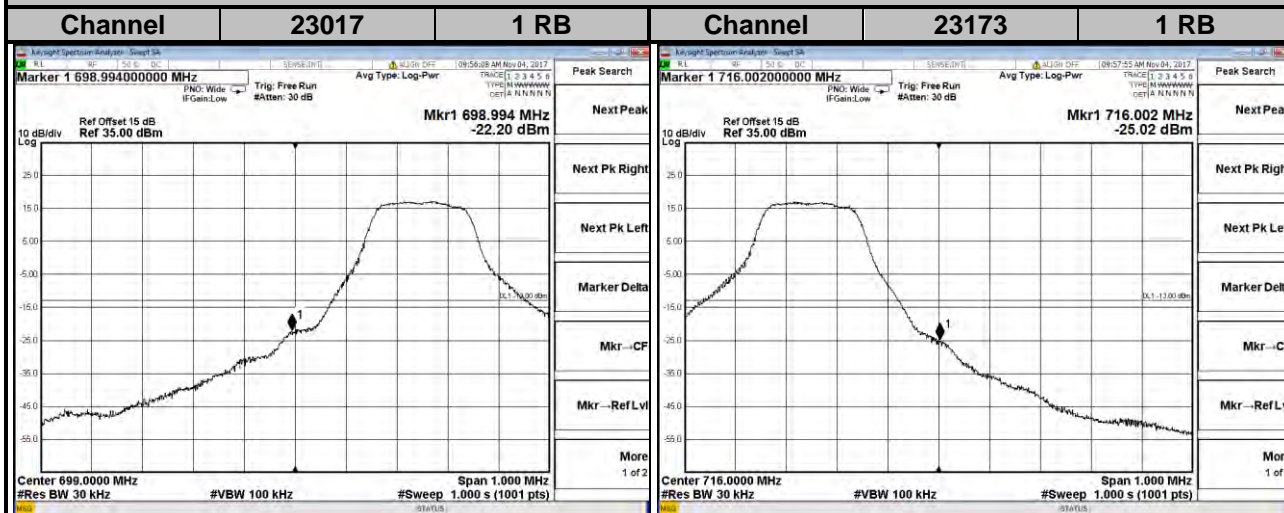
LTE Band 4

Channel Bandwidth: 20 MHz

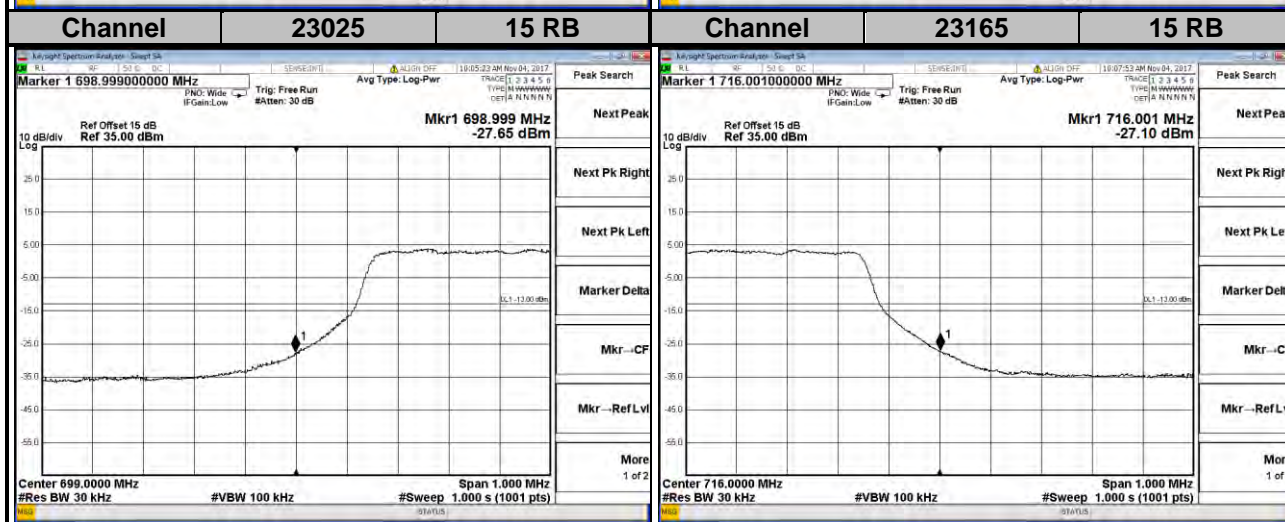
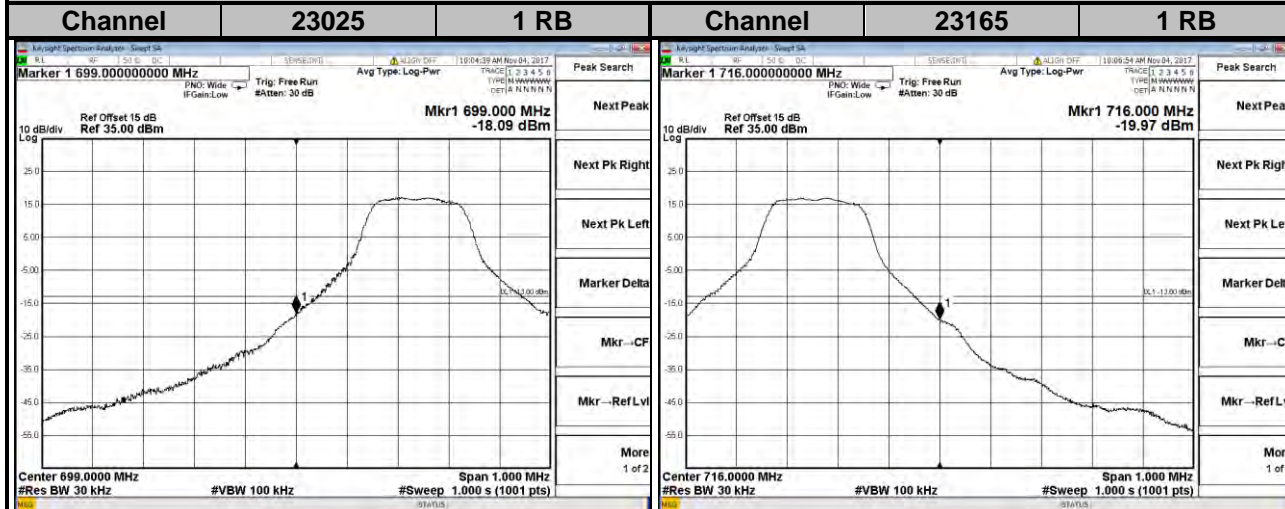


LTE Band 12

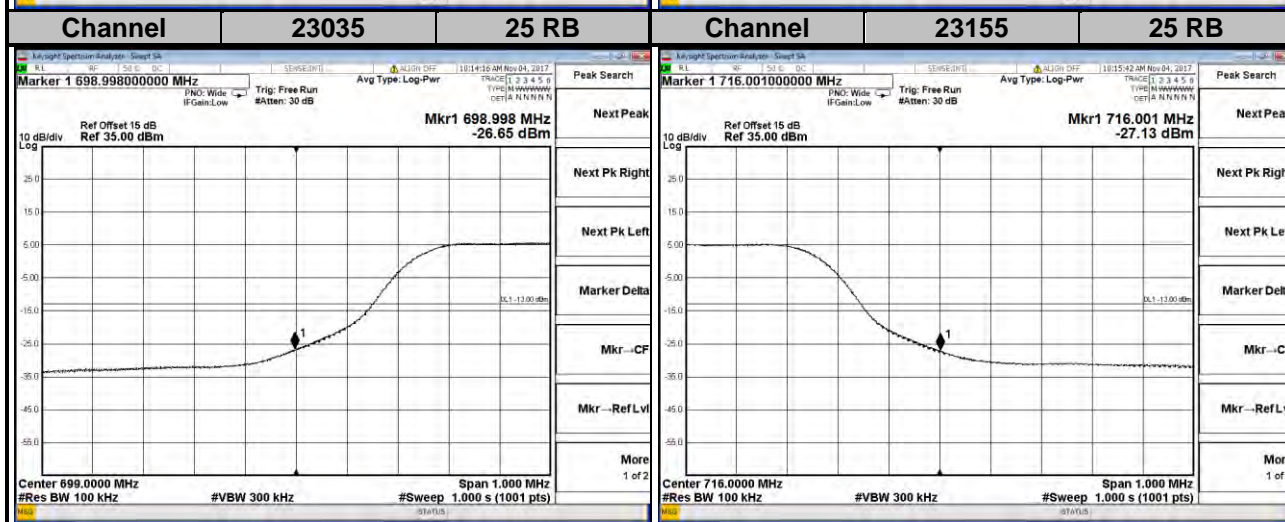
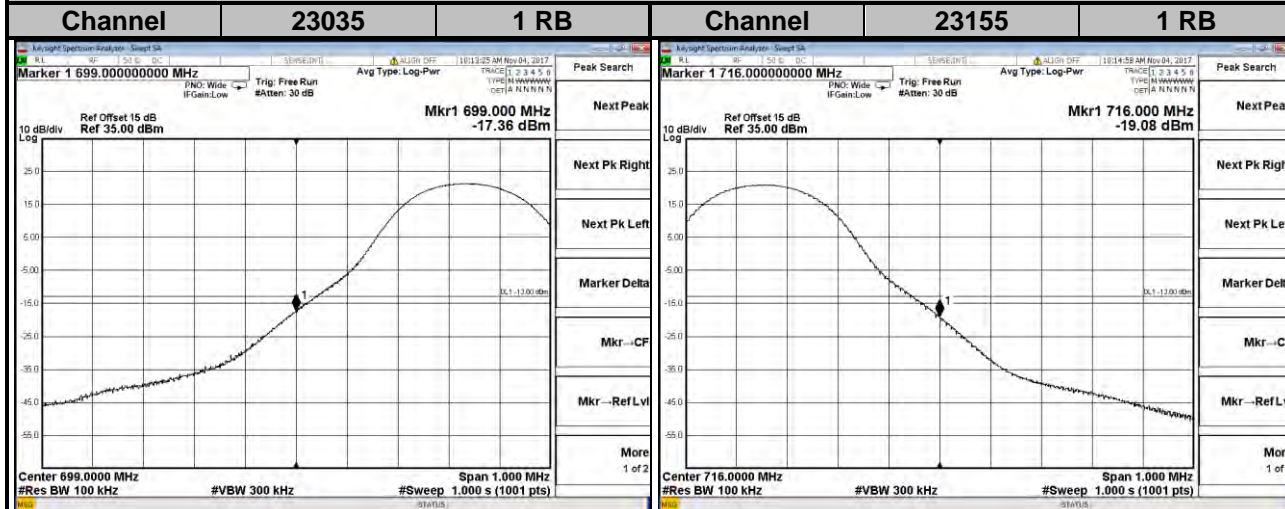
Channel Bandwidth: 1.4 MHz



LTE Band 12
Channel Bandwidth: 3 MHz

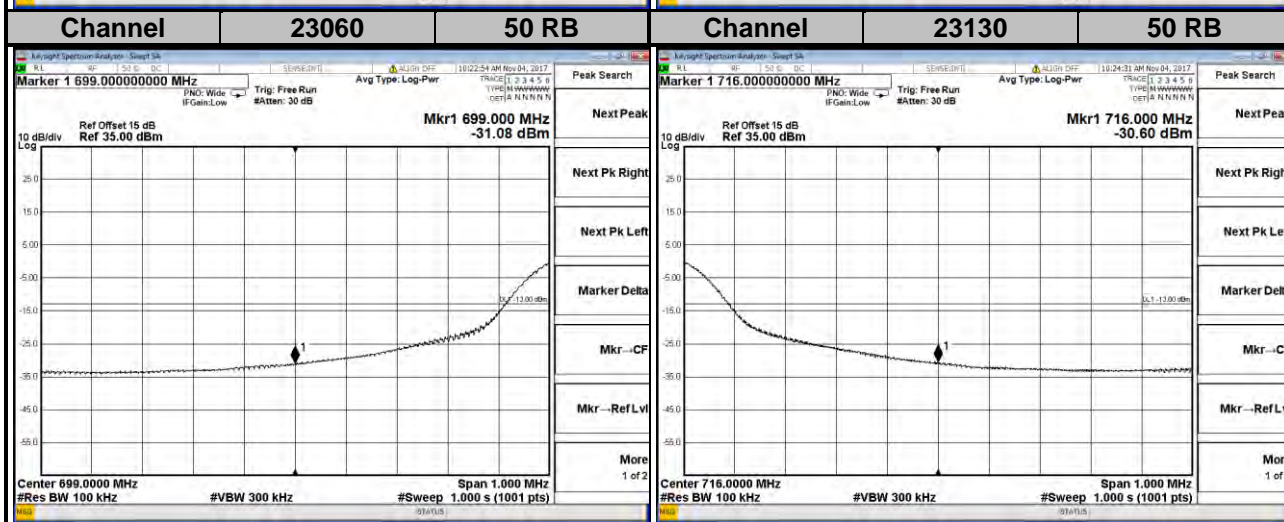
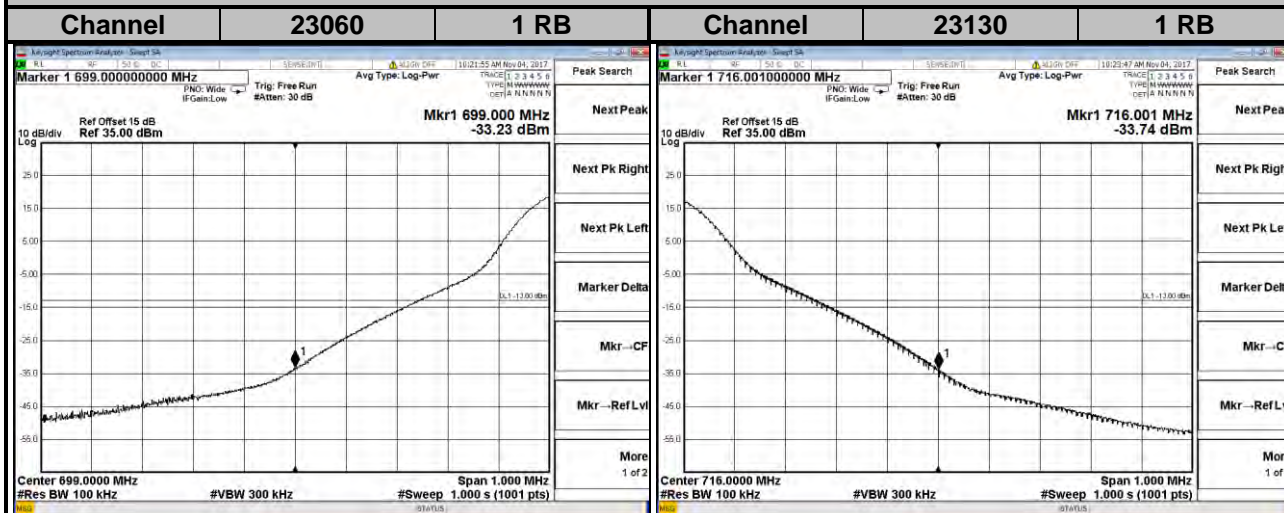


LTE Band 12
Channel Bandwidth: 5 MHz



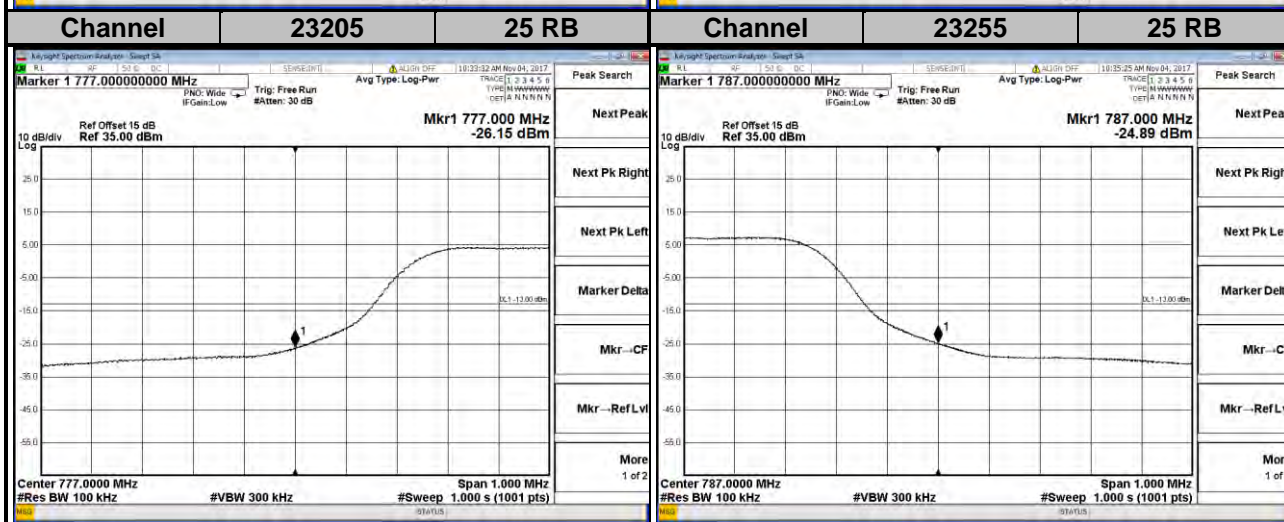
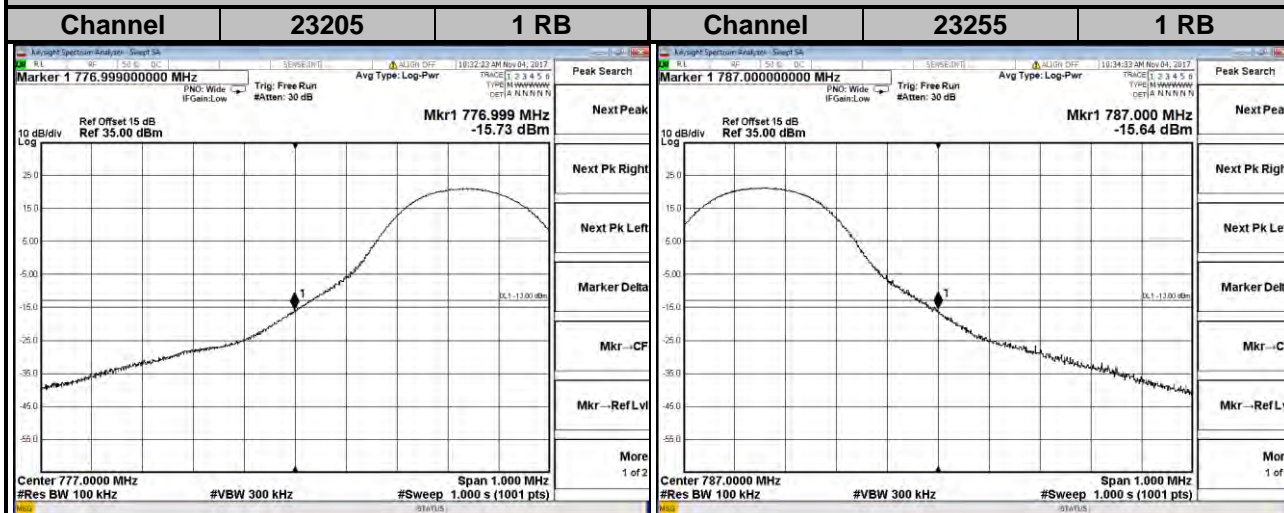
LTE Band 12

Channel Bandwidth: 10 MHz



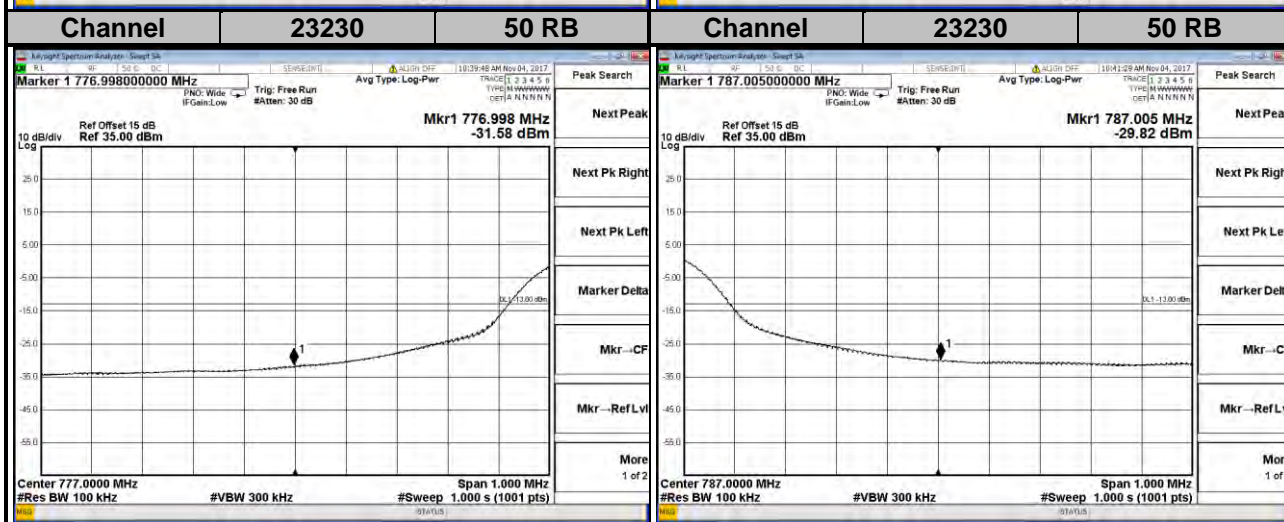
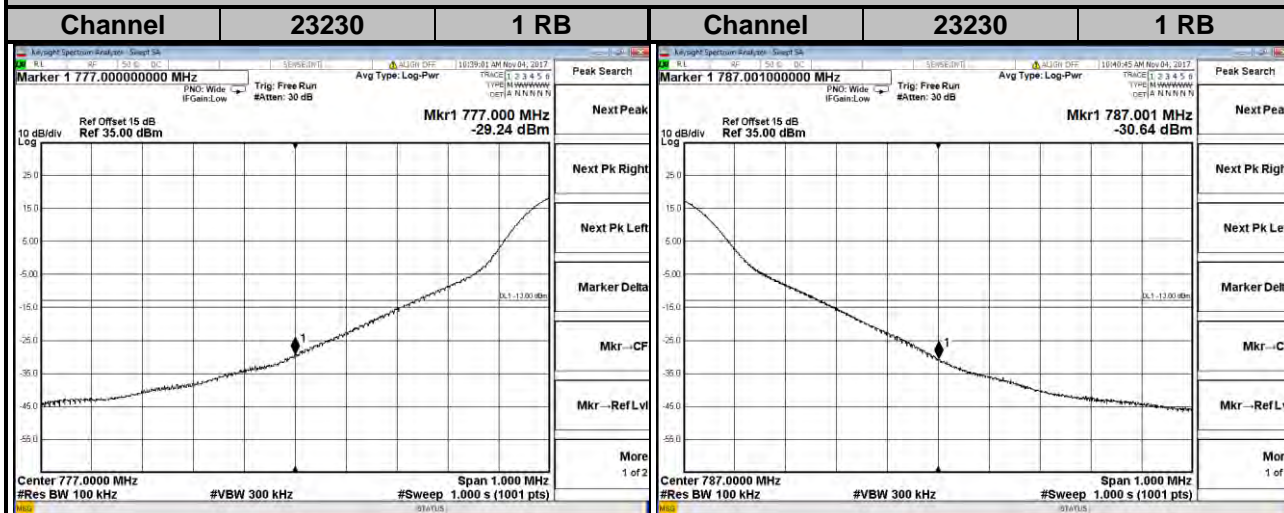
LTE Band 13

Channel Bandwidth: 5 MHz

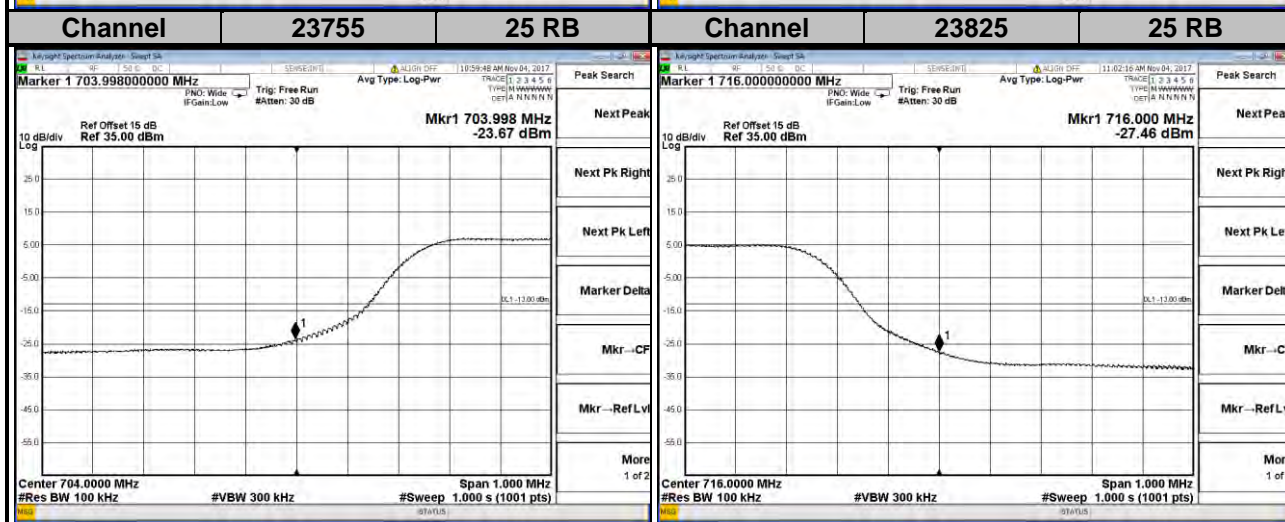
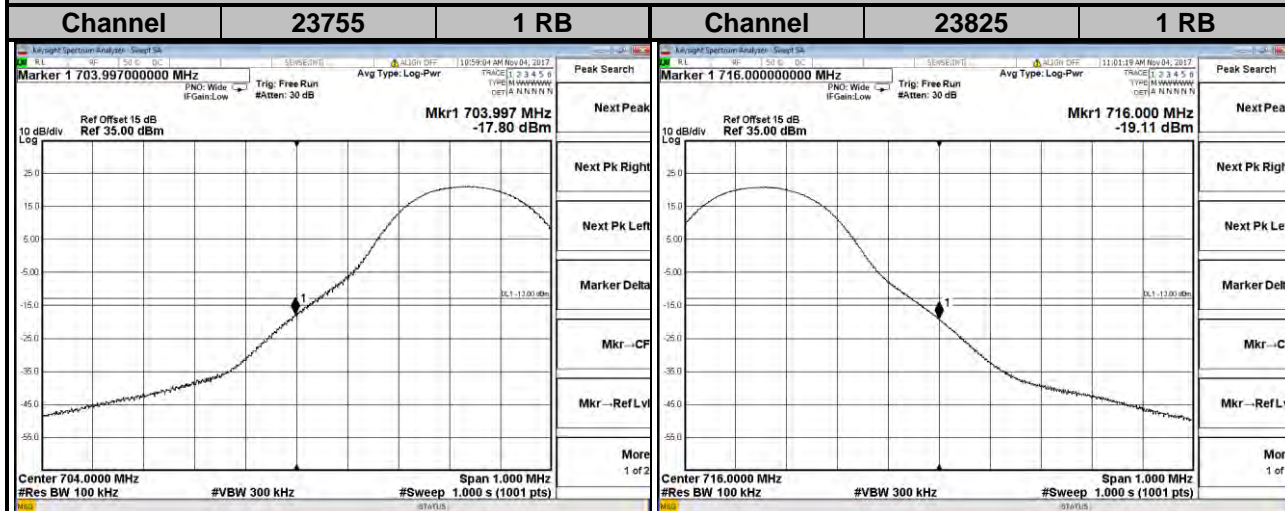


LTE Band 13

Channel Bandwidth: 10 MHz

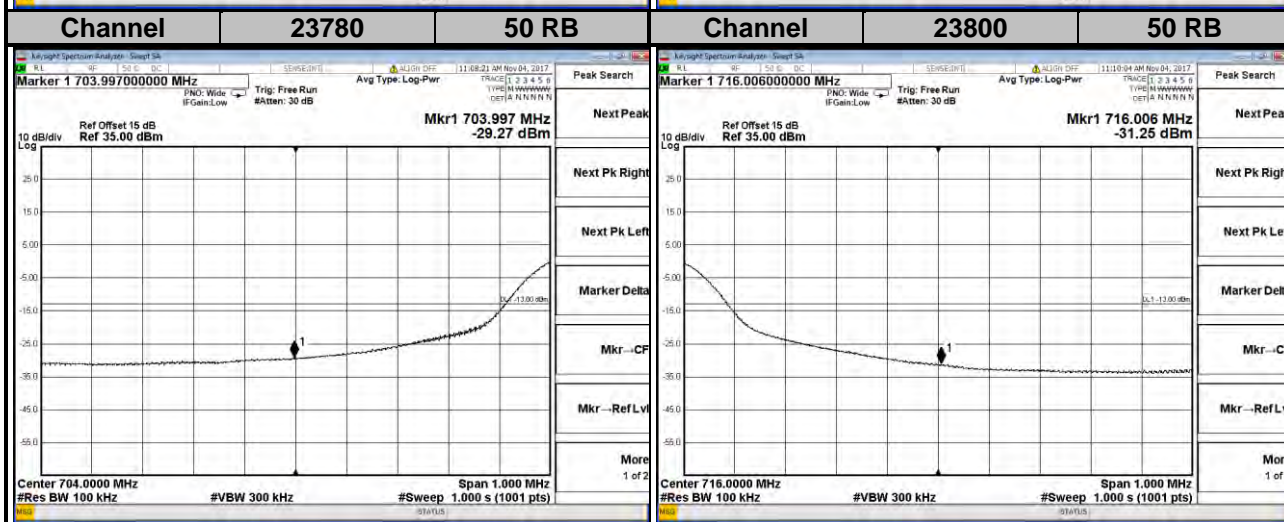
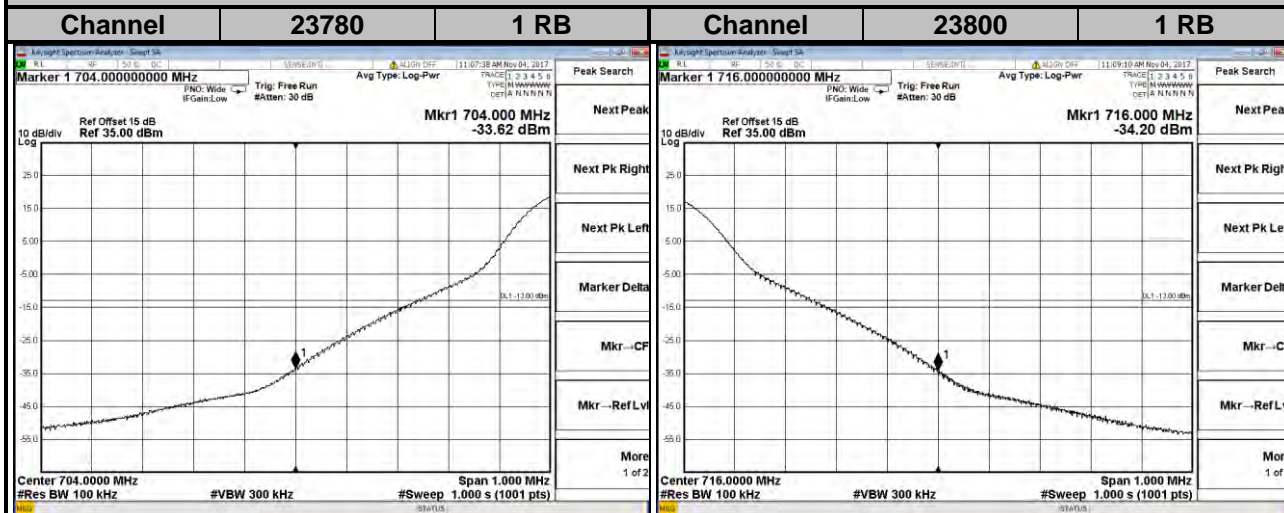


LTE Band 17
Channel Bandwidth: 5 MHz

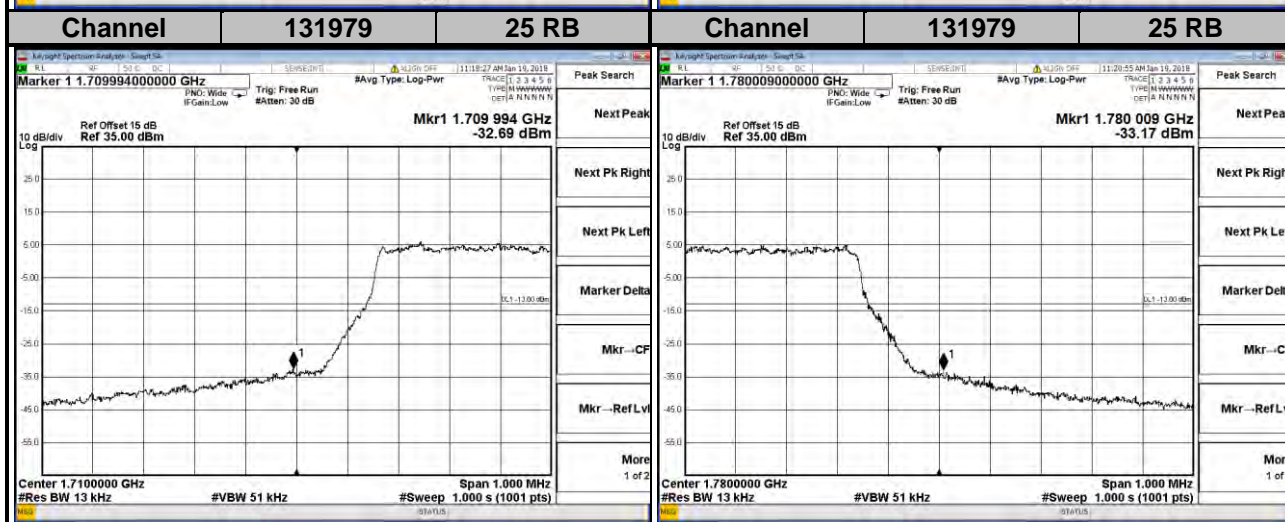
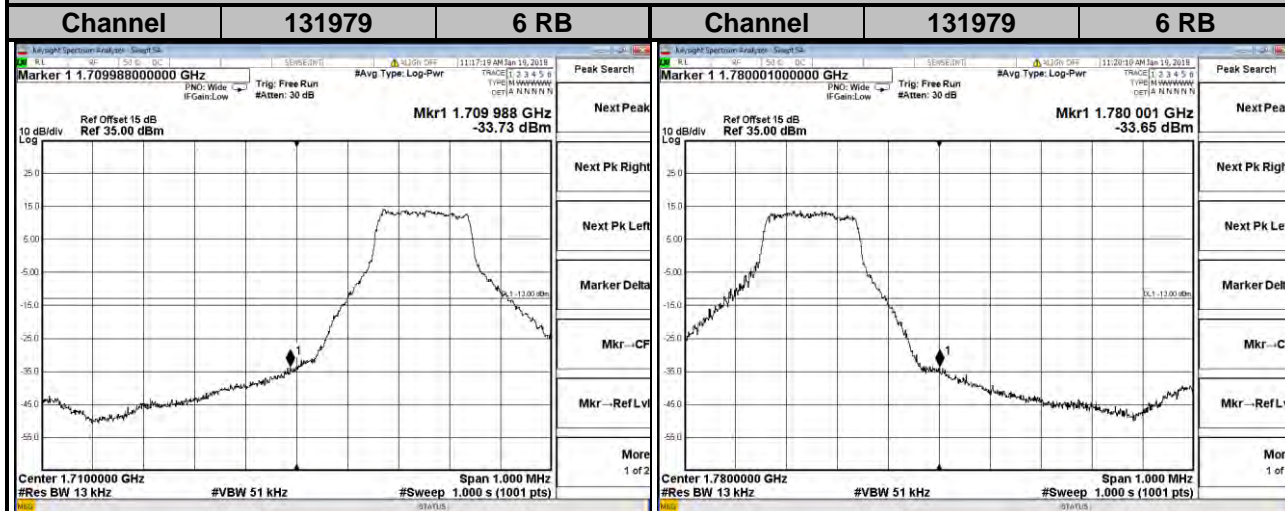


LTE Band 17

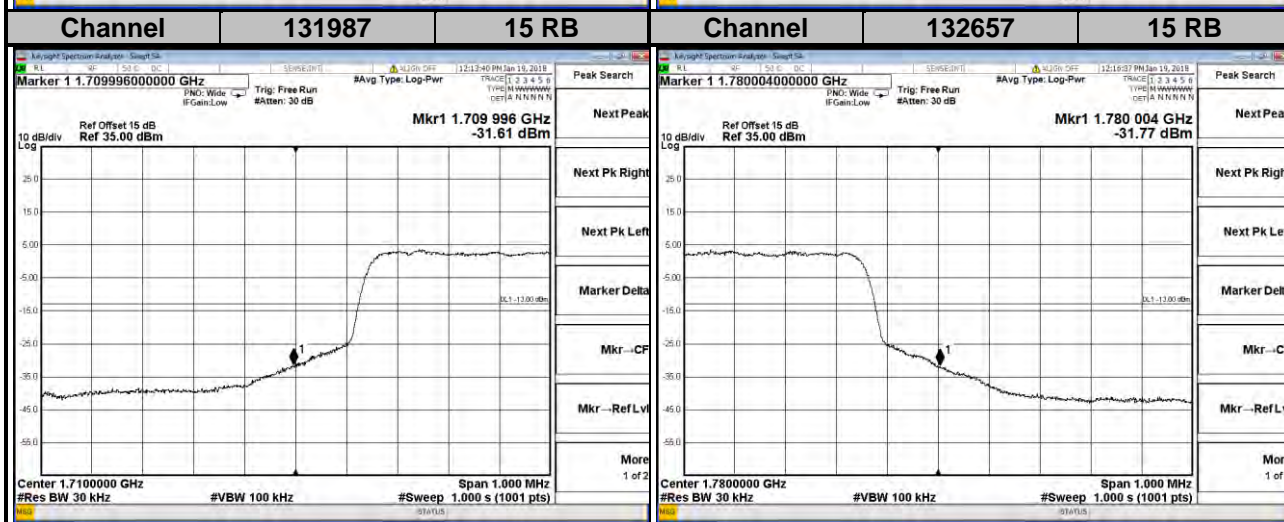
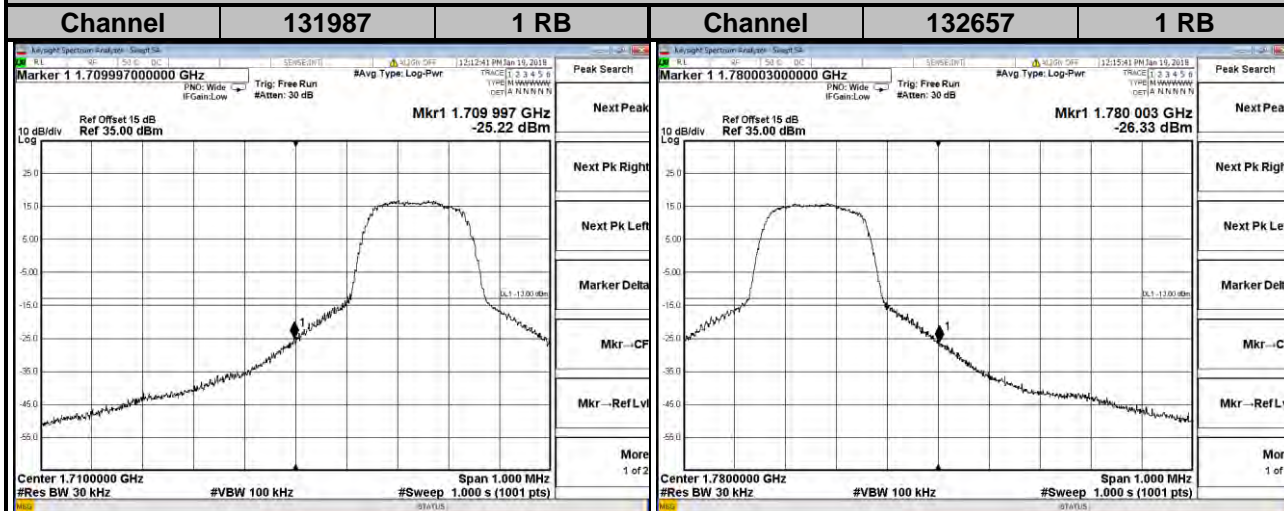
Channel Bandwidth: 10 MHz



LTE Band 66
Channel Bandwidth: 1.4 MHz

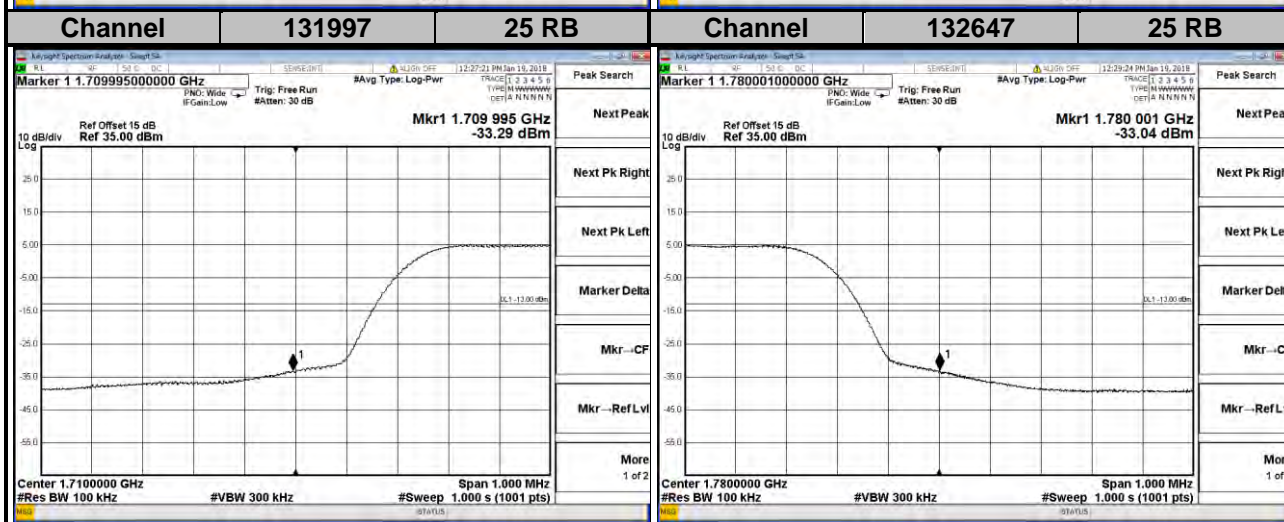
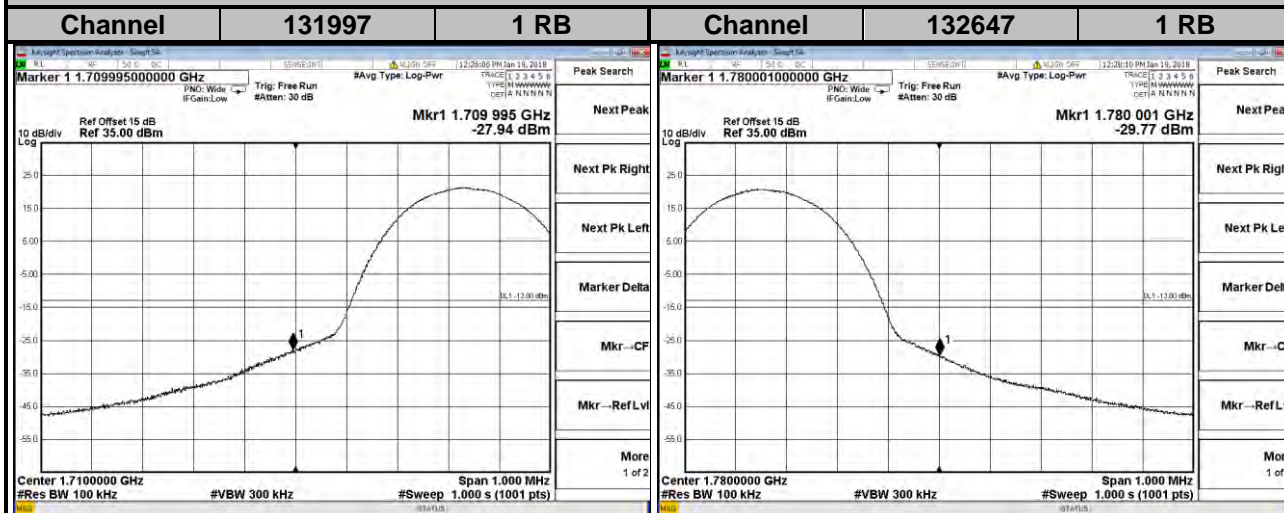


LTE Band 66
Channel Bandwidth: 3 MHz

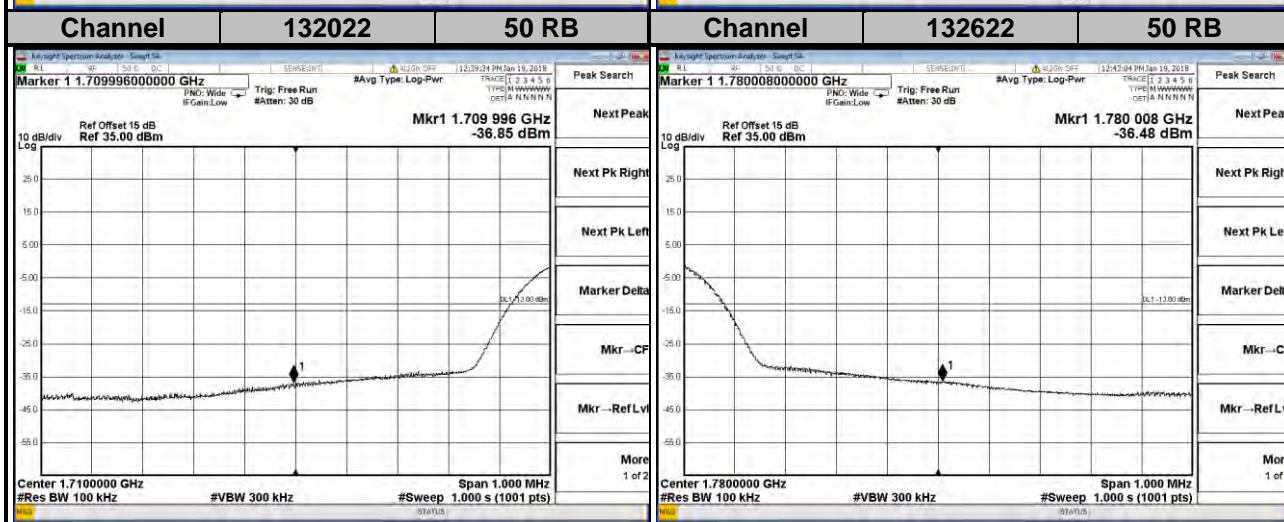
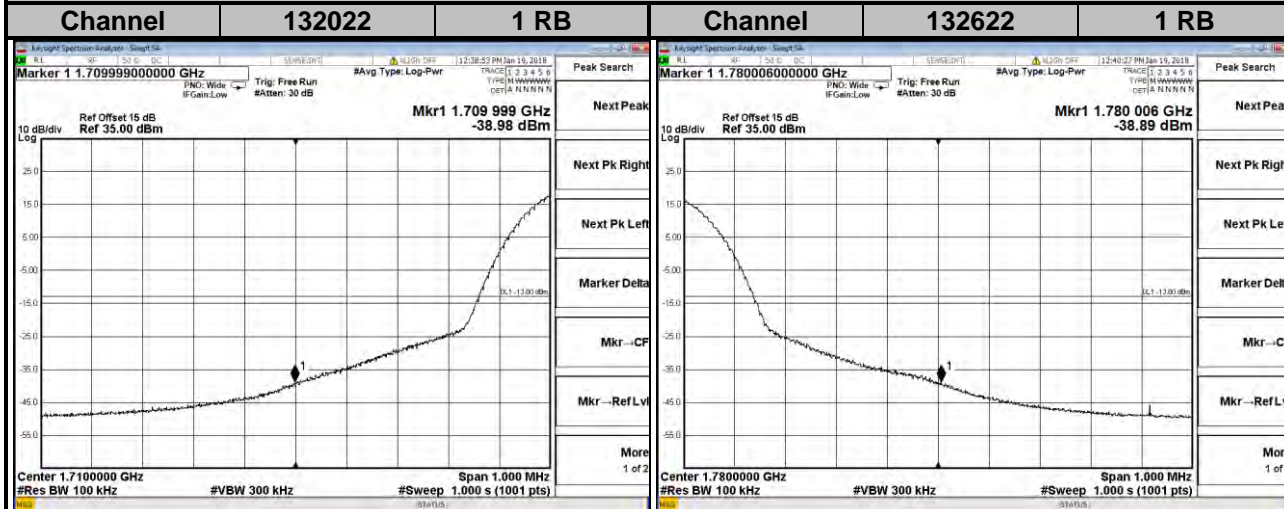


LTE Band 66

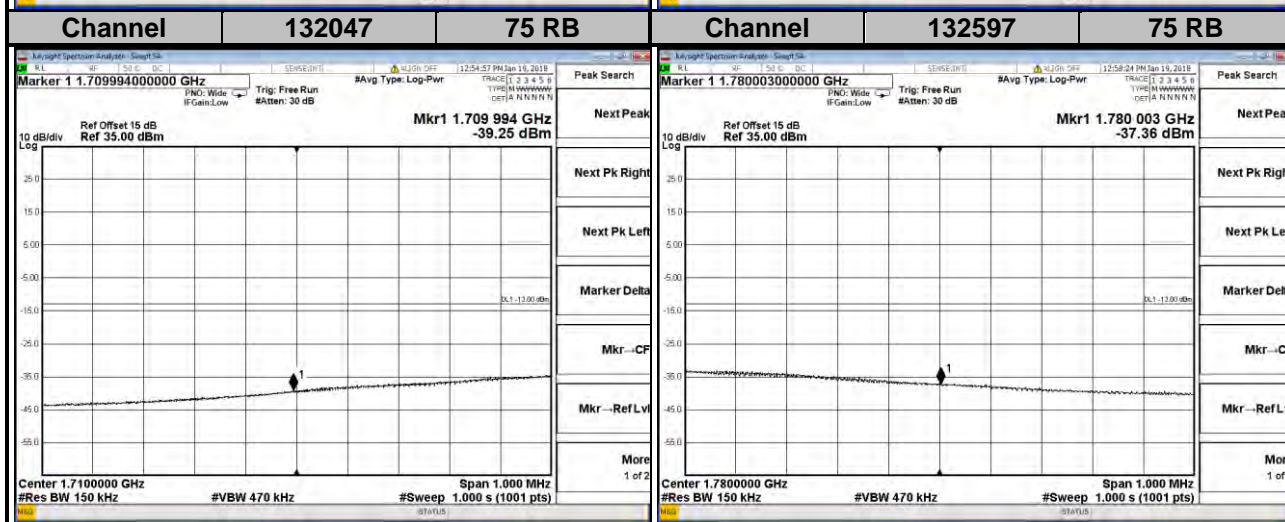
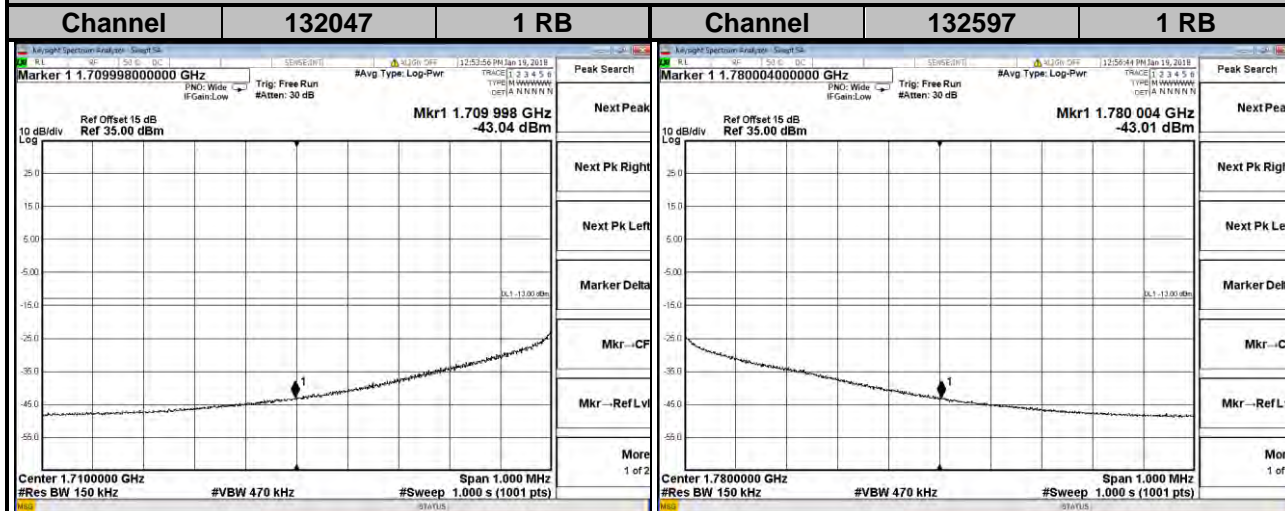
Channel Bandwidth: 5 MHz



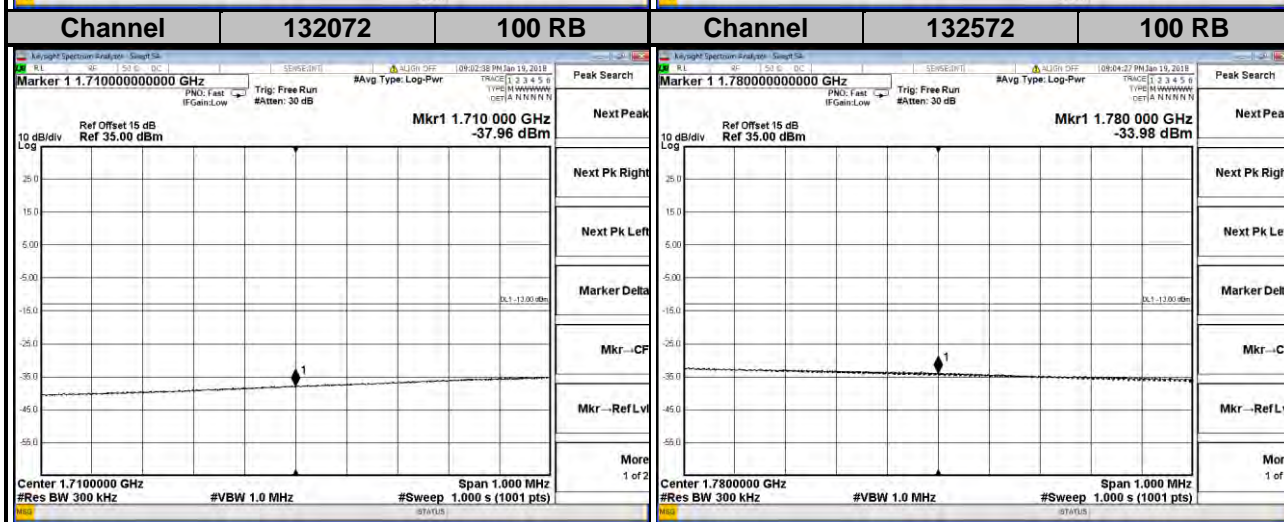
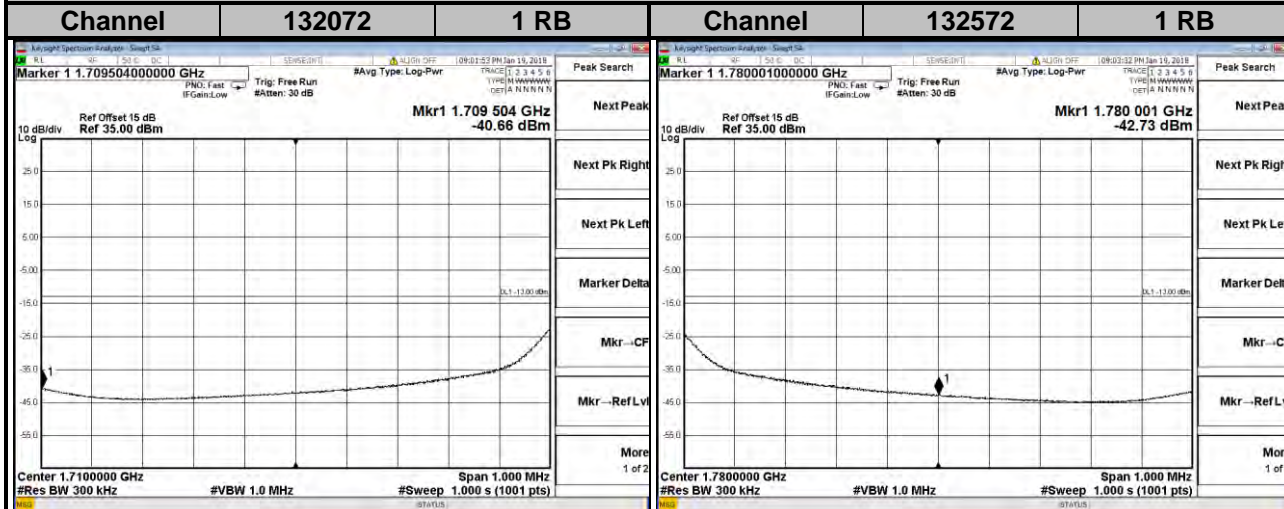
LTE Band 66
Channel Bandwidth: 10 MHz



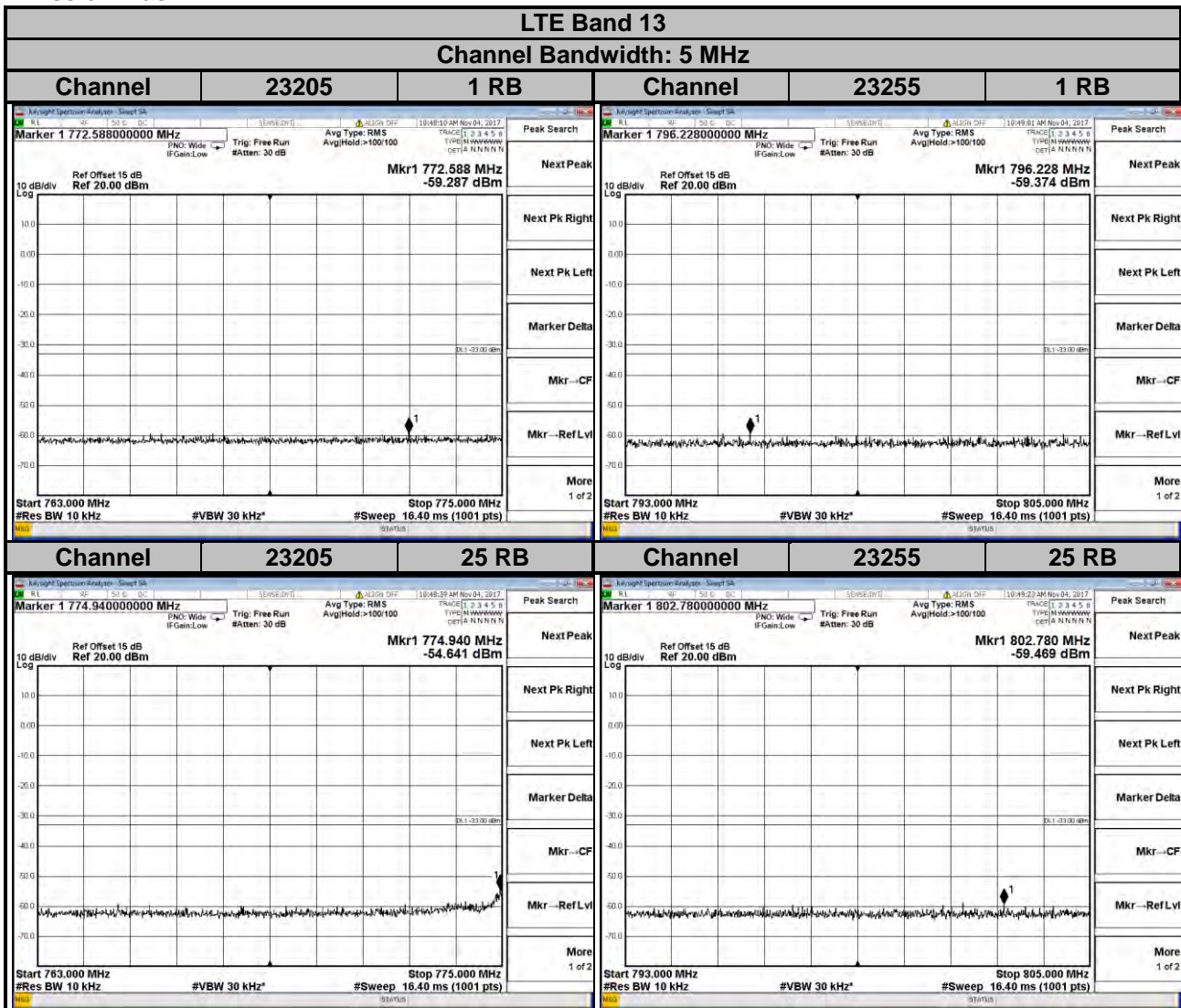
LTE Band 66
Channel Bandwidth: 15 MHz



LTE Band 66
Channel Bandwidth: 20 MHz



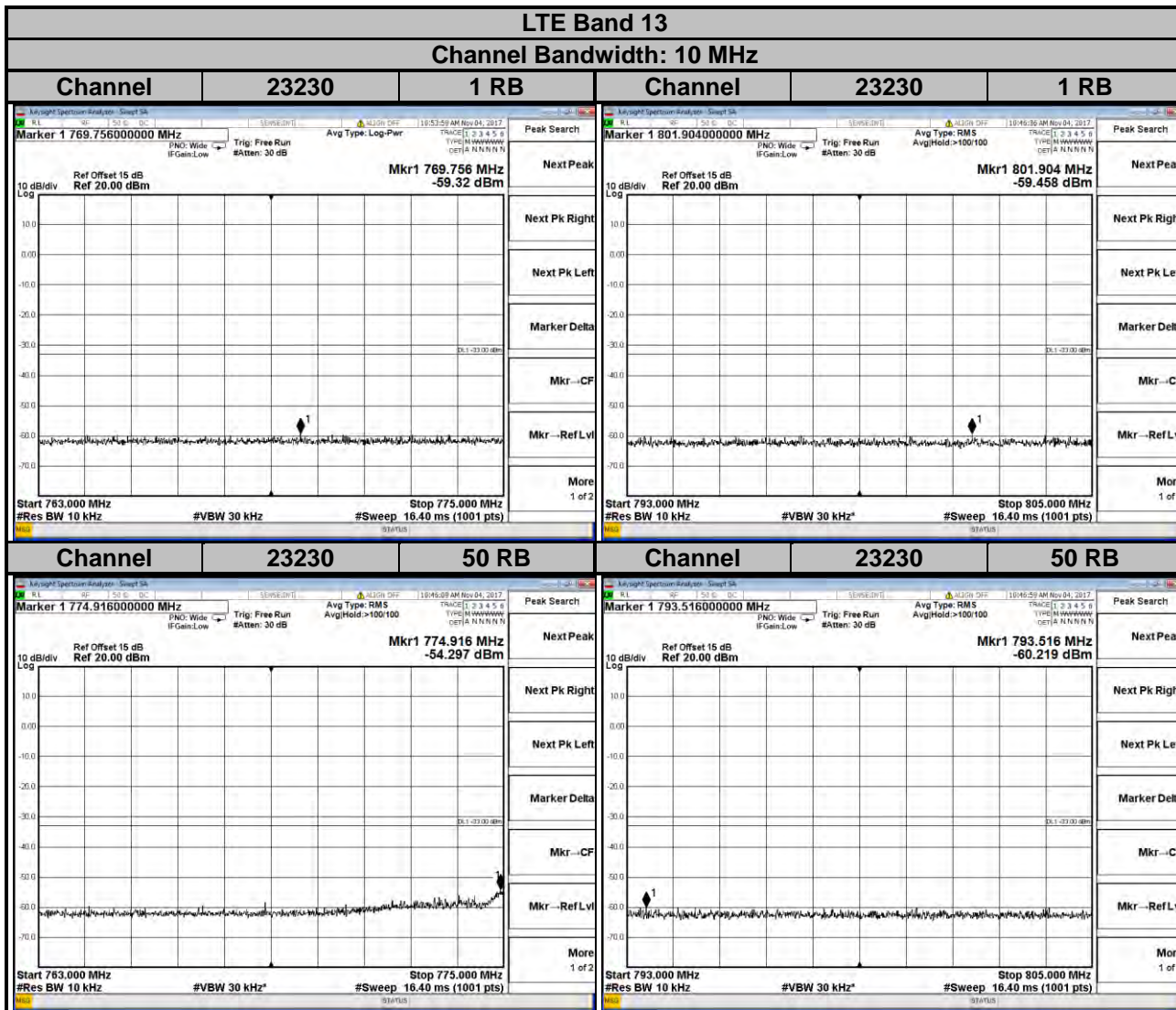
Emission Mask



For the 763 - 775 MHz and 793 - 805 MHz band, the FCC limit is $65 + 10\log(P[\text{watt}])$ in a 6.25 kHz bandwidth. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance. By using a 10 kHz bandwidth on the spectrum analyzer.

$$10\log(10\text{kHz}/6.25\text{kHz}) = 2.04 \text{ dB}$$

$$\text{Limit line} = -35 \text{ dBm} + 2.04 \text{ dB} = -32.96 \text{ dBm}$$



For the 763 - 775 MHz and 793 - 805 MHz band, the FCC limit is $65+10\log(P[\text{watt}])$ in a 6.25 kHz bandwidth. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance. By using a 10 kHz bandwidth on the spectrum analyzer.

$$10\log(10\text{kHz}/6.25\text{kHz}) = 2.04 \text{ dB}$$

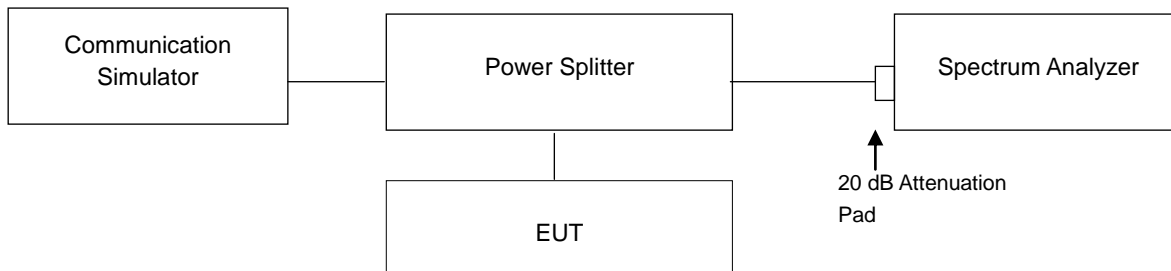
$$\text{Limit line} = -35 \text{ dBm} + 2.04 \text{ dB} = -32.96 \text{ dBm}$$

4.5 Peak to Average Ratio

4.5.1 Limits of Peak to Average Ratio Measurement

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

4.5.2 Test Setup

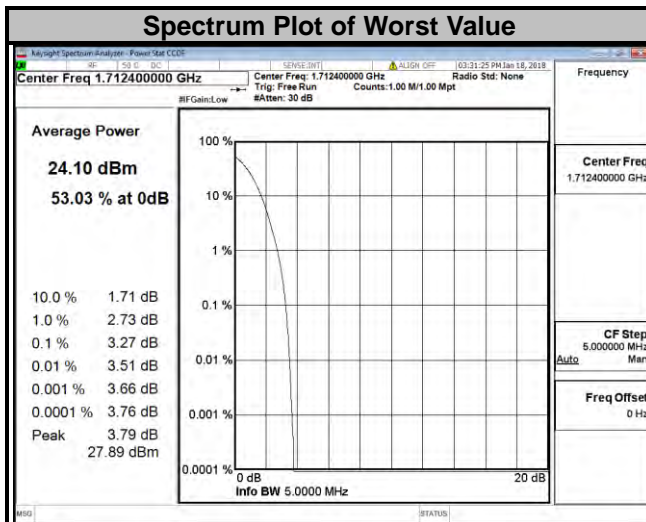


4.5.3 Test Procedures

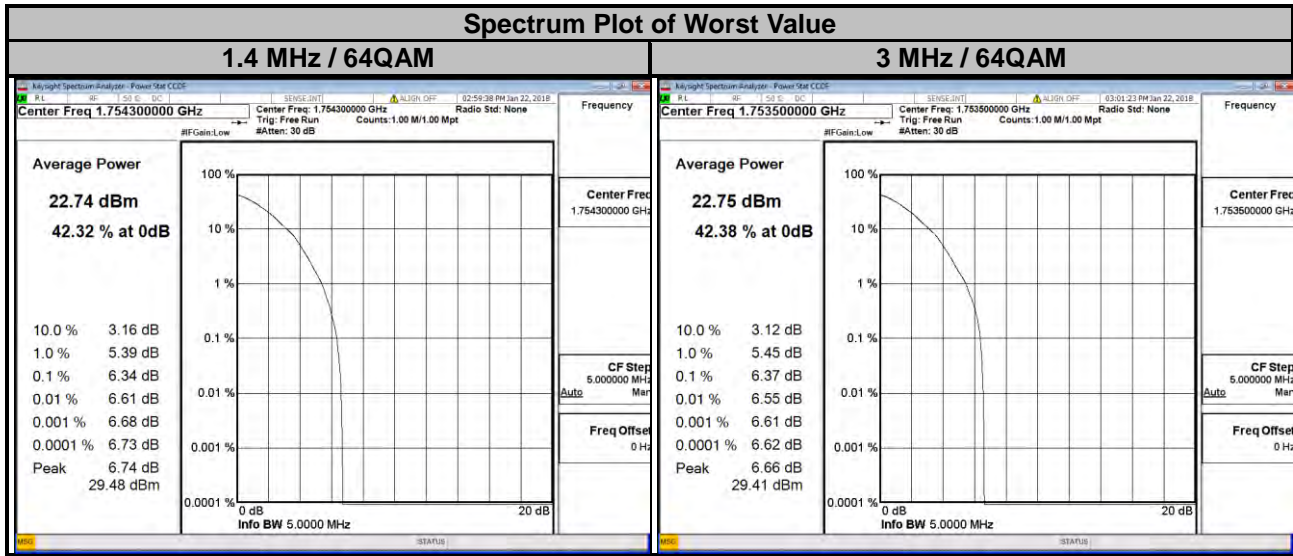
1. Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1 %.

4.5.4 Test Results

WCDMA		
Channel	Frequency (MHz)	Peak to Average Ratio (dB)
1312	1712.4	3.27
1413	1732.6	3.23
1513	1752.6	3.25



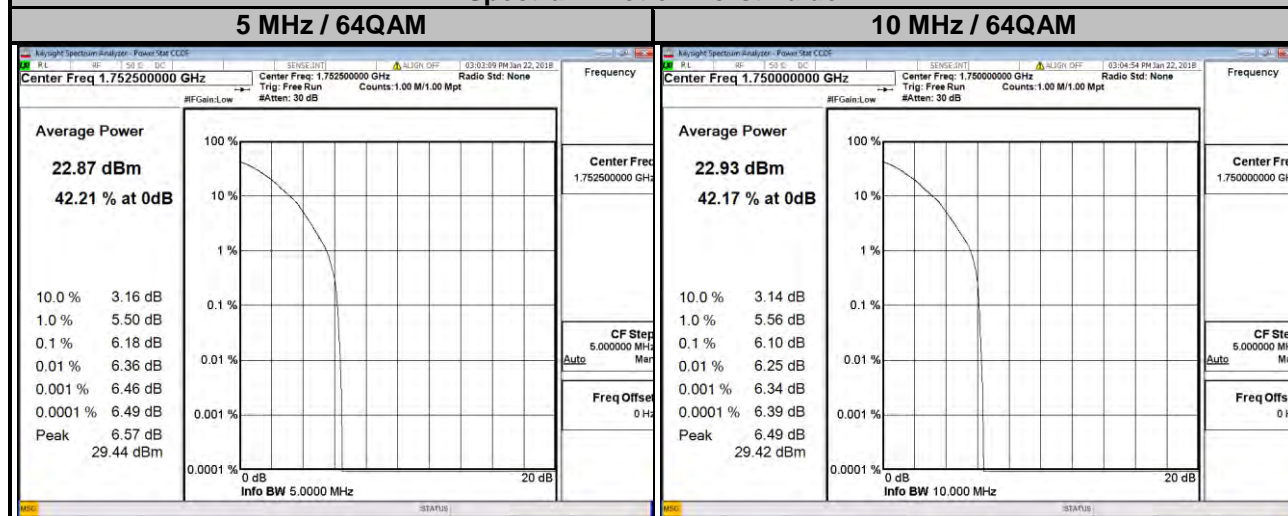
LTE Band 4									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
19957	1710.7	2.58	3.13	5.81	19965	1711.5	2.60	3.11	5.77
20175	1732.5	2.47	3.00	6.09	20175	1732.5	2.44	2.98	6.09
20393	1754.3	2.49	3.00	6.34	20385	1753.5	2.49	2.98	6.37



LTE Band 4

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
19975	1712.5	2.59	3.10	5.56	20000	1715.0	2.56	3.09	5.68
20175	1732.5	2.45	2.95	6.05	20175	1732.5	2.45	2.96	6.02
20375	1752.5	2.51	3.02	6.18	20350	1750.0	2.53	3.02	6.10

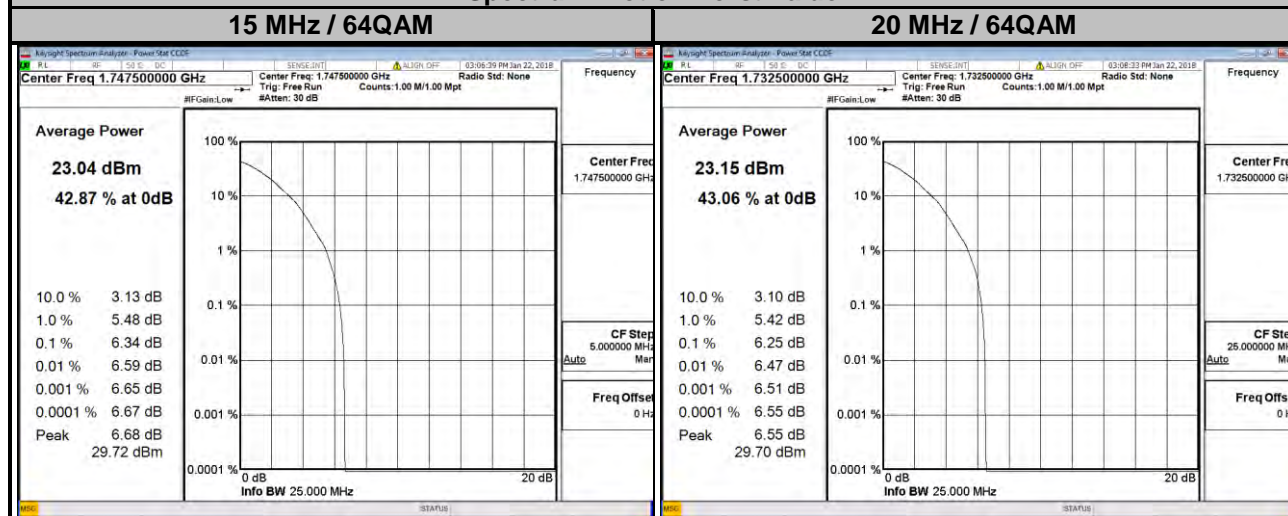
Spectrum Plot of Worst Value



LTE Band 4

Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20025	1717.5	2.55	3.07	5.63	20050	1720.0	2.55	3.05	5.71
20175	1732.5	2.44	2.91	6.14	20175	1732.5	2.45	2.91	6.25
20325	1747.5	2.49	2.99	6.34	20300	1745.0	2.39	2.93	6.10

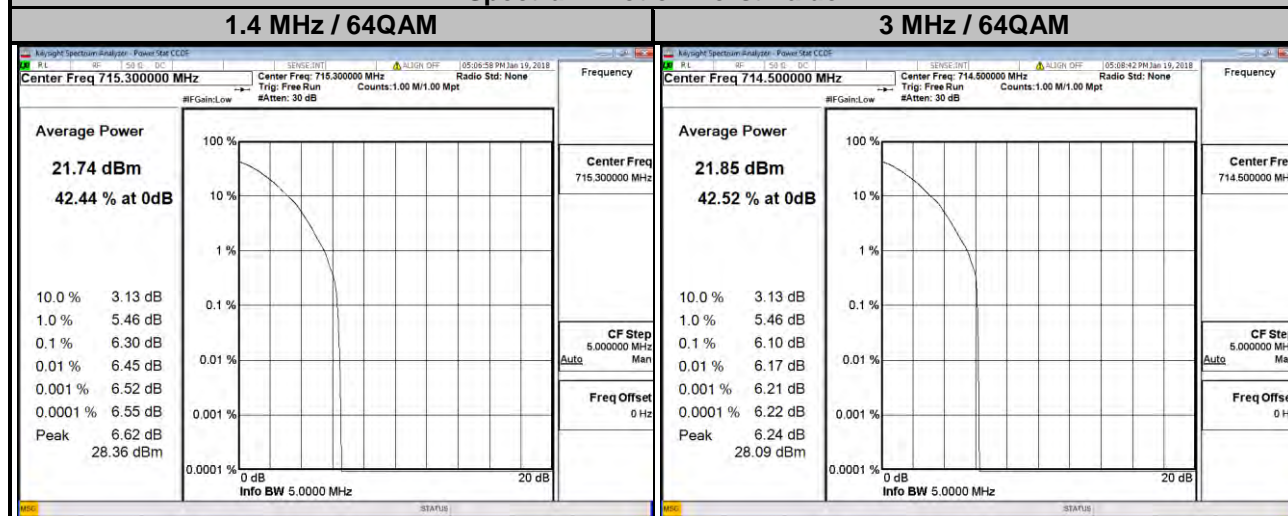
Spectrum Plot of Worst Value



LTE Band 12

Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23017	699.7	4.08	4.84	5.86	23025	700.5	3.99	4.77	5.81
23095	707.5	4.03	4.81	5.84	23095	707.5	3.97	4.76	5.82
23173	715.3	4.51	5.27	6.30	23165	714.5	4.23	5.00	6.10

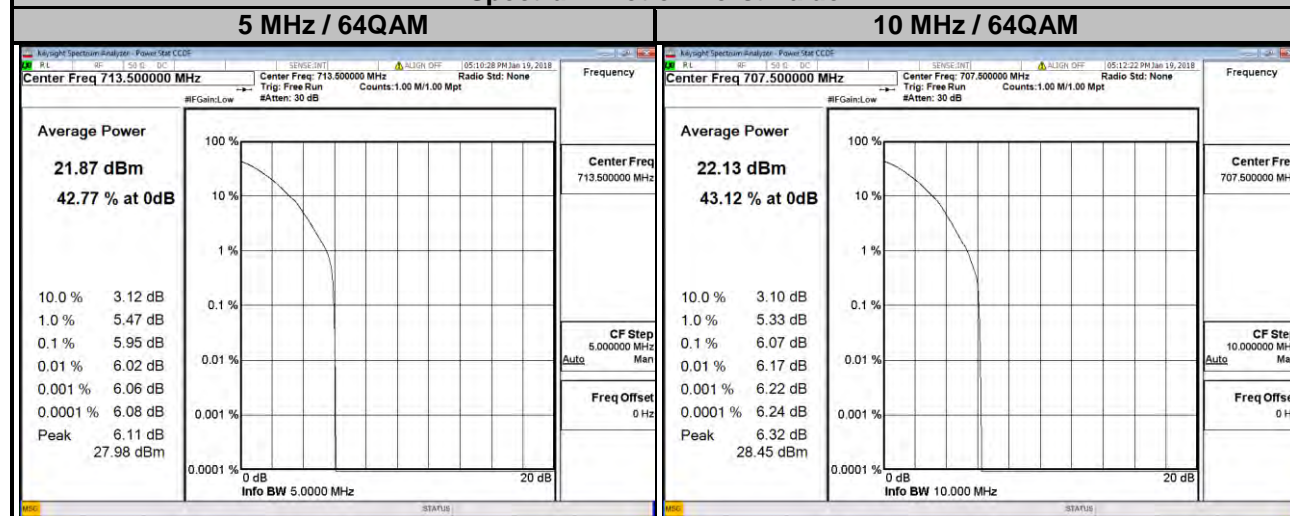
Spectrum Plot of Worst Value



LTE Band 12

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23035	701.5	4.00	4.75	5.81	23060	704.0	3.98	4.72	5.79
23095	707.5	4.10	4.87	5.90	23095	707.5	4.24	5.01	6.07
23155	713.5	4.14	4.87	5.95	23130	711.0	3.85	4.61	5.73

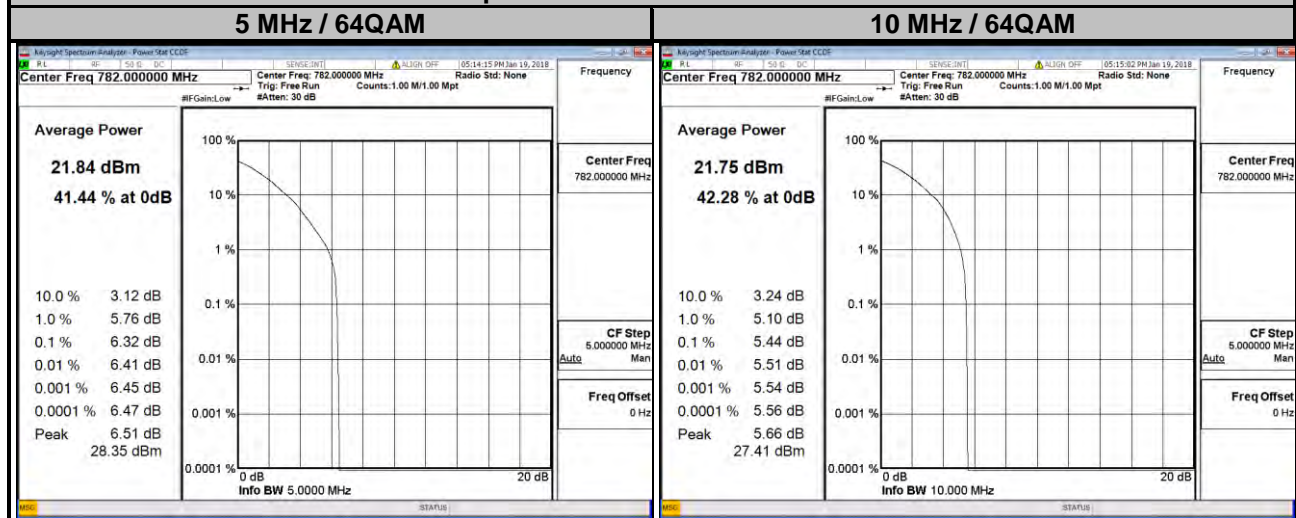
Spectrum Plot of Worst Value



LTE Band 13

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23205	779.5	3.39	4.13	5.21	23230	782.0	3.59	4.33	5.44
23230	782.0	4.50	5.23	6.32					
23255	784.5	3.61	4.33	5.38					

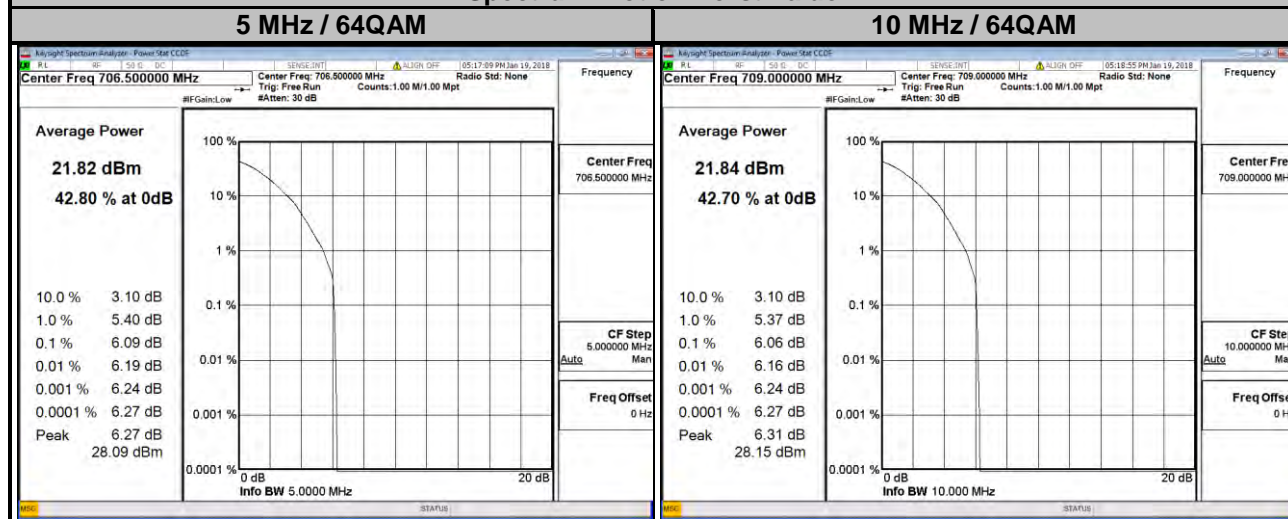
Spectrum Plot of Worst Value



LTE Band 17

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
23755	706.5	4.23	5.03	6.09	23780	709.0	4.15	4.97	6.06
23790	710.0	3.95	4.72	5.79	23790	710.0	4.00	4.81	5.86
23825	713.5	4.16	4.91	6.00	23800	711.0	3.90	4.65	5.74

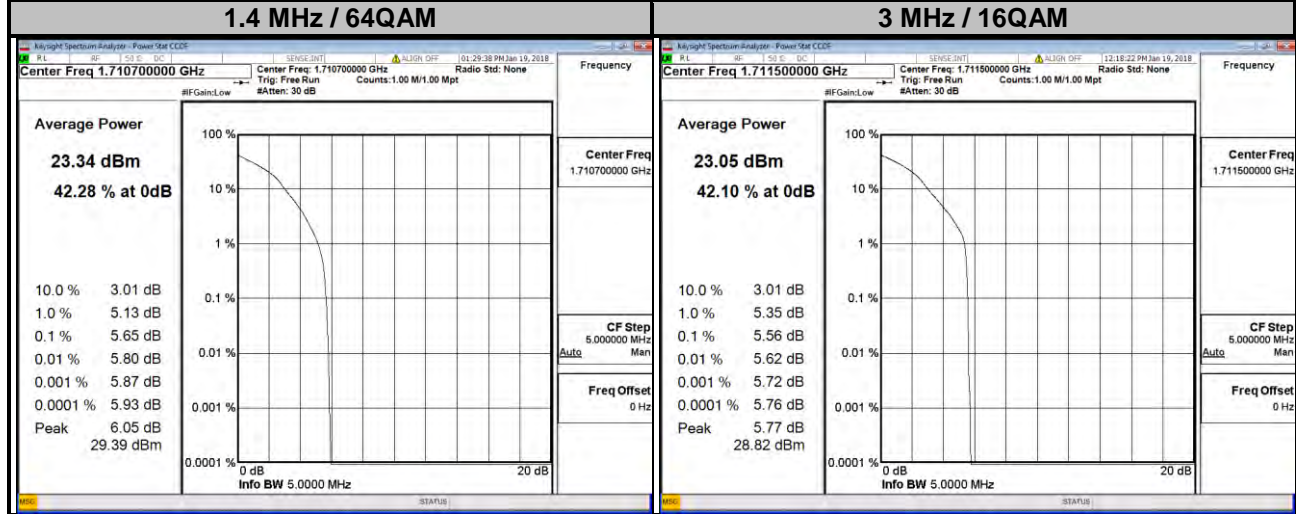
Spectrum Plot of Worst Value



LTE Band 66

Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
131979	1710.7	4.81	5.62	5.65	131987	1711.5	4.68	5.56	5.53
132322	1745	4.74	5.51	5.55	132322	1745	4.59	5.43	5.52
132665	1779.3	4.65	5.41	5.41	132657	1778.5	4.48	5.20	5.32

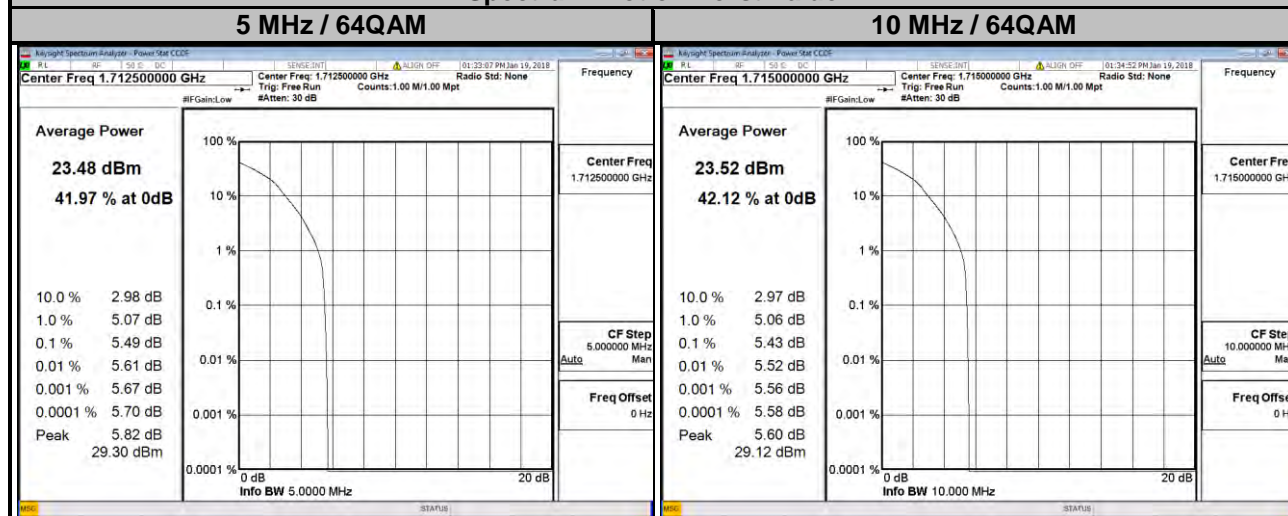
Spectrum Plot of Worst Value



LTE Band 66

Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
131997	1712.5	4.62	5.41	5.49	132022	1715	4.63	5.41	5.43
132322	1745	4.58	5.29	5.40	132322	1745	4.55	5.32	5.43
132647	1777.5	4.48	5.24	5.33	132622	1775	4.55	5.29	5.39

Spectrum Plot of Worst Value



LTE Band 66

Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
132047	1717.5	4.53	5.34	5.43	132072	1720	4.55	5.31	5.35
132322	1745	4.50	5.27	5.28	132322	1745	4.51	5.26	5.35
132597	1772.5	4.48	5.25	5.36	132572	1770	4.48	5.26	5.35

Spectrum Plot of Worst Value

