



REPORT No.: SZ16030142W05

# FCC RF TEST REPORT

**APPLICANT** : ZTE Corporation

**PRODUCT NAME** : LTE Mutil-Mode Digital Mobile Phone

**MODEL NAME** : Z861BL

**TRADE NAME** : ZTE

**BRAND NAME** : ZTE

**FCC ID** : SRQ-Z861BL

**STANDARD(S)** : 47 CFR Part 22, Subpart H  
47 CFR Part 24, Subpart E  
47 CFR Part 27, Subpart H&L

**ISSUE DATE** : 2016-05-19



**SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.**

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# DIRECTORY

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Change History

Issue	Date	Reason for change
1.0	2016-05-19	First edition



### TEST REPORT DECLARATION

Applicant	ZTE Corporation
Applicant Address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R. China
Manufacturer	ZTE Corporation
Manufacturer Address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R. China
Product Name	LTE Mutil-Mode Digital Mobile Phone
Model Name	Z861BL
Brand Name	ZTE
HW Version	Z861BLHWV1.0
SW Version	Z861BLV0.0.0B02
Test Standards	47 CFR Part 22, Subpart H 47 CFR Part 24, Subpart E 47 CFR Part 27, Subpart H&L
Test Date	2016-04-06 to 2016-04-22
Test Result	PASS

Tested by : Yuan Ling  
Yuan Ling

Reviewed by : Qiu Xiaojun  
Qiu Xiaojun

Approved by : Peng Huarui  
Peng Huarui



# 1. GENERAL INFORMATION

## 1.1 EUT Description

EUT Type .....: LTE Mutil-Mode Digital Mobile Phone  
Serial No. ....: (n.a, marked #1 by test site)  
Hardware Version.....: Z861BLHWV1.0  
Software Version..... Z861BLV0.0.0B02  
Applicant .....: ZTE Corporation  
ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan  
District, Shenzhen, Guangdong, P.R.China  
Manufacturer .....: ZTE Corporation  
ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan  
District, Shenzhen, Guangdong, P.R.China  
Modulation Type.....: LTE Band 2: QPSK, 16QAM  
LTE Band 4: QPSK, 16QAM  
LTE Band 5: QPSK, 16QAM  
LTE Band 12: QPSK, 16QAM  
Tx Frequency Range.....: LTE Band 2: 1850MHz ~1910MHz  
LTE Band 4: 1710MHz ~1755MHz  
LTE Band 5: 824MHz ~ 849MHz  
LTE Band 12: 699MHz ~ 716MHz  
Rx Frequency Range .....: LTE Band 2: 1930MHz ~ 1990MHz  
LTE Band 4: 2110MHz ~ 2155MHz  
LTE Band 5: 869MHz ~ 894MHz  
LTE Band 12: 729MHz ~ 746MHz  
Emission Designator .....: 1M10G7D (LTE Band 2, QPSK, BW 1.4MHz)  
1M10W7D (LTE Band 2, 16QAM, BW 1.4MHz)  
2M72G7D (LTE Band 2, QPSK, BW 3MHz)  
2M72 W7D (LTE Band 2, 16QAM, BW 3MHz)  
4M53G7D (LTE Band 2, QPSK, BW 5MHz)  
4M53 W7D (LTE Band 2, 16QAM, BW 5MHz)  
9M00G7D (LTE Band 2, QPSK, BW 10MHz)  
9M00W7D (LTE Band 2, 16QAM, BW 10MHz)  
13M54G7D (LTE Band 2, QPSK, BW 15MHz)  
13M50W7D (LTE Band 2, 16QAM, BW 15MHz)  
18M00G7D (LTE Band 2, QPSK, BW 20MHz)  
18M00W7D (LTE Band 2, 16QAM, BW 20MHz)  
1M10G7D (LTE Band 4, QPSK, BW 1.4MHz)



- 1M11W7D (LTE Band 4, 16QAM, BW 1.4MHz)
- 2M72G7D (LTE Band 4, QPSK, BW 3MHz)
- 2M72W7D (LTE Band 4, 16QAM, BW 3MHz)
- 4M53G7D (LTE Band 4, QPSK, BW 5MHz)
- 4M53W7D (LTE Band 4, 16QAM, BW 5MHz)
- 9M00G7D (LTE Band 4, QPSK, BW 10MHz)
- 9M00W7D (LTE Band 4, 16QAM, BW 10MHz)
- 13M50G7D (LTE Band 4, QPSK, BW 15MHz)
- 13M50W7D (LTE Band 4, 16QAM, BW 15MHz)
- 18M00G7D (LTE Band 4, QPSK, BW 20MHz)
- 18M04W7D (LTE Band 4, 16QAM, BW 20MHz)
- 1M11G7D (LTE Band 5, QPSK, BW 1.4MHz)
- 1M10W7D (LTE Band 5, 16QAM, BW 1.4MHz)
- 2M71G7D (LTE Band 5, QPSK, BW 3MHz)
- 2M72W7D (LTE Band 5, 16QAM, BW 3MHz)
- 4M54G7D (LTE Band 5, QPSK, BW 5MHz)
- 4M53W7D (LTE Band 5, 16QAM, BW 5MHz)
- 9M00G7D (LTE Band 5, QPSK, BW 10MHz)
- 9M00W7D (LTE Band 5, 16QAM, BW 10MHz)
- 1M10G7D (LTE Band 12, QPSK, BW 1.4MHz)
- 1M10W7D (LTE Band 12, 16QAM, BW 1.4MHz)
- 2M72G7D (LTE Band 12, QPSK, BW 3MHz)
- 2M71W7D (LTE Band 12, 16QAM, BW 3MHz)
- 4M53G7D (LTE Band 12, QPSK, BW 5MHz)
- 4M53W7D (LTE Band 12, 16QAM, BW 5MHz)
- 9M01G7D (LTE Band 12, QPSK, BW 10MHz)
- 9M00W7D (LTE Band 12, 16QAM, BW 10MHz)

Antenna Type .....: PIFA Antenna  
Power Supply ..... 3.8V DC Power



## 1.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2 and Part 22, Part 24, Part 27 for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10-1-09 Edition)	Public Mobile Services
3	47 CFR Part 24 (10-1-09 Edition)	Personal Communications Services
4	47 CFR Part 27	Miscellaneous Wireless Communications Services

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	2.1046	Transmitter Conducted Output Power	<u>PASS</u>
2	24.232(d), 27.50(d)(5)	Occupied Bandwidth	<u>PASS</u>
3	2.1049, 22.917 24.238, 27.53(g)	Frequency Stability	<u>PASS</u>
4	2.1055, 22.355 24.235, 27.54	Peak to Average Ratio	<u>PASS</u>
5	2.1051, 2.1057 24.238, 27.53(g)	Conducted Spurious Emissions	<u>PASS</u>
6	2.1051, 2.1057, 22.917, 24.238, 27.53(g)(h), 27.53(m)(4)	Band Edge	<u>PASS</u>
7	22.913, 24.232, 27.50(d)(4)	Equivalent Isotropic Radiated Power	<u>PASS</u>
8	2.1053, 2.1057, 22.917, 24.238, 27.53(g)	Radiated Spurious Emissions	<u>PASS</u>



### 1.3 Facilities and Accreditations

#### 1.3.1 Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101. The test site is constructed in conformance with the requirements of TIA/EIA 603.D: 2010, ANSI C63.4: 2009 and CISPR Publication 22: 2010. The FCC registration number is 695796.

#### 1.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 - 60
Atmospheric Pressure (kPa):	86 - 106

## 2. 47 CFR PART 2, PART 22H & 24E & 27H&L REQUIREMENTS

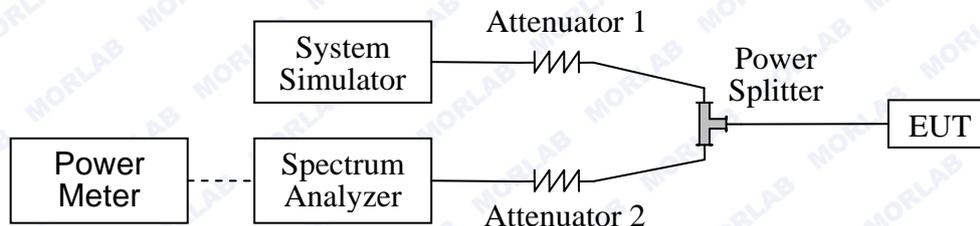
### 2.1 Transmitter Conducted Output Power

#### 2.1.1 Requirement

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

#### 2.1.2 Test Description

Test Setup:



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

Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Rohde& Schwarz	CMW500	1201.0002k5 0/124534/wk	2016.03.02	2017.03.01
Spectrum Analyzer	Rohde& Schwarz	FSL	10246	2016.03.02	2017.03.01
Spectrum Analyzer	Agilent	E4445A	MY44200685	2016.03.02	2017.03.01
Power Meter	Agilent	E4418B	GB43318055	2016.03.02	2017.03.01
Power Meter	Agilent	E4418B	GB43318055	2016.03.02	2017.03.01
Power Sensor	Agilent	8482A	MY41091706	2016.03.02	2017.03.01
Power Splitter	Weinschel	1506A	NW521	2016.03.02	2017.03.01
Attenuator 1	Resnet	20dB	(n.a.)	2016.03.02	2017.03.01
Attenuator 2	Resnet	3dB	(n.a.)	2016.03.02	2017.03.01

#### 2.1.3 Test Results





Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 2	15MHz	L 18675	1857.5	QPSK	1	0	22.02
					1	37	22.11
					1	74	22.32
					36	0	21.89
					36	18	21.67
					36	35	21.51
				75	0	21.26	
				16-QAM	1	0	21.16
					1	37	21.05
					1	74	21.14
					36	0	21.09
					36	18	21.01
		36	35		21.07		
		M 18900	1880	QPSK	1	0	21.66
					1	37	21.78
					1	74	21.59
					36	0	21.48
					36	18	21.63
					36	35	21.02
				75	0	21.03	
				16-QAM	1	0	21.46
					1	37	21.89
					1	74	21.78
					36	0	21.63
					36	18	21.49
		36	35		21.36		
		H 19125	1902.5	QPSK	1	0	21.77
					1	37	21.89
					1	74	21.54
					36	0	21.59
36	18				21.45		
36	35				21.63		
75	0			21.25			
16-QAM	1			0	21.89		
	1			37	21.48		
	1			74	21.57		
	36			0	21.69		
	36			18	21.61		
	36	35	21.42				
75	0	21.23					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 2	10MHz	L 18650	1855	QPSK	1	0	22.38
					1	24	22.43
					1	49	22.12
					25	0	21.35
					25	12	21.23
					25	24	21.15
				50	0	21.24	
				16-QAM	1	0	22.24
					1	24	21.98
					1	49	21.53
					25	0	21.69
					25	12	21.63
		25	24		21.34		
		M 18900	1880	QPSK	1	0	22.25
					1	24	22.24
					1	49	22.26
					25	0	21.32
					25	12	21.35
					25	24	21.36
				50	0	21.36	
				16-QAM	1	0	21.66
					1	24	21.34
					1	49	21.37
					25	0	21.39
					25	12	21.46
		25	24		21.37		
		H 19150	1905	QPSK	1	0	22.39
					1	24	22.66
					1	49	22.47
					25	0	21.23
25	12				21.33		
25	24				21.57		
50	0			21.36			
16-QAM	1			0	21.40		
	1			24	21.38		
	1			49	21.57		
	25			0	21.48		
	25			12	21.36		
	25	24	21.21				
50	0	20.34					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 2	5MHz	L 18625	1852.5	QPSK	1	0	21.66
					1	12	21.79
					1	24	21.54
					12	0	21.13
					12	6	21.26
					12	11	21.24
				16-QAM	25	0	21.05
					1	0	22.56
					1	12	22.45
					1	24	22.39
					12	0	22.58
					12	6	21.96
		M 18900	1880	QPSK	12	11	21.85
					25	0	21.75
					1	0	21.89
					1	12	21.65
					1	24	21.48
					12	0	21.43
				16-QAM	12	6	21.25
					12	11	21.26
					25	0	21.12
					1	0	22.01
					1	12	21.89
					1	24	21.57
		H 19175	1907.5	QPSK	12	0	21.78
					12	6	21.76
					12	11	21.63
					25	0	21.43
					1	0	21.56
					1	12	21.48
16-QAM	1			24	21.59		
	12			0	21.43		
	12			6	21.35		
	12			11	21.22		
	25			0	21.04		
	1			0	21.36		
1	12	21.58					
1	24	21.49					
12	0	21.23					
12	6	21.25					
12	11	21.29					
25	0	20.88					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 2	3MHz	L 18615	1851.5	QPSK	1	0	22.24
					1	7	22.36
					1	14	22.41
					8	0	21.20
					8	4	21.23
					8	7	21.29
				16-QAM	15	0	21.22
					1	0	22.24
					1	7	22.28
					1	14	22.23
					8	0	21.88
					8	4	21.59
		M 18900	1880	QPSK	8	7	21.46
					8	0	20.15
					15	0	20.15
					1	0	22.27
					1	7	22.40
					1	14	22.41
				16-QAM	8	0	21.31
					8	4	21.36
					8	7	21.37
					15	0	21.39
					1	0	21.32
					1	7	21.06
		H 19185	1908.5	QPSK	1	14	21.01
					8	0	21.05
					8	4	21.11
					8	7	21.03
					15	0	20.25
					1	0	22.50
16-QAM	1			7	22.49		
	1			14	22.45		
	8			0	21.48		
	8			4	21.59		
	8			7	21.50		
	15			0	21.49		
16-QAM	1	0	21.42				
	1	7	21.48				
	1	14	21.46				
	8	0	21.56				
	8	4	21.43				
	8	7	21.37				
15	0	20.26					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 2	1.4MHz	L 18607	1850.7	QPSK	1	0	22.10
					1	2	22.23
					1	5	22.32
					3	0	22.40
					3	1	22.21
					3	2	21.13
				16-QAM	6	0	22.25
					1	0	21.34
					1	2	21.40
					1	5	21.36
					3	0	21.37
					3	1	21.26
		M 18900	1880	QPSK	3	2	21.02
					6	0	20.17
					1	0	22.19
					1	2	22.26
					1	5	22.19
					3	0	22.38
				16-QAM	3	1	22.39
					3	2	21.46
					6	0	21.34
					1	0	21.28
					1	2	21.17
					1	5	21.20
		H 19193	1909.3	QPSK	3	0	21.15
					3	2	21.13
					3	5	21.02
					6	0	20.21
					1	0	22.30
					1	2	22.68
16-QAM	1			5	22.61		
	3			0	22.54		
	3			1	22.44		
	3			2	22.47		
	6			0	21.62		
	1			0	21.53		
16-QAM	1	2	21.71				
	1	5	21.58				
	3	0	21.63				
	3	1	21.67				
	3	2	21.32				
	6	0	20.71				



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 4	20MHz	L 20050	1720.0	QPSK	1	0	22.26
					1	49	22.17
					1	99	22.43
					50	0	21.33
					50	25	21.36
					50	49	21.26
				16-QAM	100	0	21.28
					1	0	21.81
					1	49	21.51
					1	99	21.44
					50	0	21.59
					50	25	21.36
		M 20175	1732.5	QPSK	50	49	21.37
					100	0	20.28
					1	0	22.46
					1	49	22.54
					1	99	22.35
					50	0	21.27
				16-QAM	50	25	21.24
					50	49	21.19
					100	0	21.32
					1	0	21.31
					1	49	21.35
					1	99	20.98
		H 20300	1745.0	QPSK	50	0	20.69
					50	25	20.78
					50	49	20.53
					100	0	20.27
					1	0	22.40
					1	49	22.23
16-QAM	1			99	22.17		
	50			0	21.49		
	50			25	21.51		
	50			49	21.22		
	100			0	21.37		
	1			0	21.37		
1	49	21.14					
1	99	20.73					
50	0	20.49					
50	25	20.43					
50	49	20.19					
100	0	20.14					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 4	15MHz	L 20025	1717.5	QPSK	1	0	22.36
					1	37	22.25
					1	74	22.49
					36	0	21.45
					36	18	21.58
					36	35	21.63
				16-QAM	75	0	21.24
					1	0	21.85
					1	37	21.34
					1	74	21.58
					36	0	21.66
					36	18	21.43
		M 20175	1732.5	QPSK	36	35	21.37
					75	0	20.31
					1	0	22.58
					1	37	22.67
					1	74	22.41
					36	0	21.34
				16-QAM	36	18	21.69
					36	35	21.52
					75	0	21.31
					1	0	21.45
					1	37	21.60
					1	74	20.99
		H 20325	1747.5	QPSK	36	0	20.78
					36	18	20.51
					36	35	20.38
					75	0	20.14
					1	0	22.58
					1	37	22.33
16-QAM	1			74	22.21		
	36			0	21.59		
	36			18	21.46		
	36			35	21.38		
	75			0	21.21		
	1			0	21.37		
1	37	21.20					
1	74	20.88					
36	0	20.59					
36	18	20.54					
36	35	20.26					
75	0	20.21					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)	
					RB Size	RB Offset		
LTE Band 4	10MHz	L 20000	1715.0	QPSK	1	0	22.47	
					1	24	22.26	
					1	49	22.01	
					25	0	21.25	
					25	12	21.30	
					25	24	21.21	
				16-QAM	50	0	21.25	
					1	0	21.70	
					1	24	21.63	
					1	49	21.25	
					25	0	21.16	
					25	12	21.11	
		M 20175	1732.5	QPSK	1732.5	25	24	21.03
						50	0	20.21
						1	0	22.19
						1	24	22.38
						1	49	22.34
						25	0	21.34
				16-QAM	25	12	21.19	
					25	24	21.13	
					50	0	21.26	
					1	0	21.45	
					1	24	21.23	
					1	49	21.12	
		H 20350	1750.0	QPSK	1750.0	25	0	21.16
						25	12	21.34
						25	24	21.35
						50	0	20.24
						1	0	22.01
						1	24	22.05
16-QAM	1			49	22.00			
	25			0	21.14			
	25			12	21.11			
	25			24	21.13			
	50			0	21.16			
	1			0	21.25			
				1	24	21.19		
				1	49	21.01		
				25	0	21.05		
				25	12	21.13		
				25	24	21.09		
				50	0	21.01		



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 4	5MHz	L 19975	1712.5	QPSK	1	0	22.47
					1	12	22.51
					1	24	22.31
					12	0	21.69
					12	6	21.87
					12	11	21.56
				16-QAM	25	0	21.23
					1	0	21.67
					1	12	21.78
					1	24	21.89
					12	0	21.85
					12	6	21.53
		M 20175	1732.5	QPSK	12	11	21.50
					25	0	21.43
					1	0	21.78
					1	12	21.63
					1	24	21.59
					12	0	21.61
				16-QAM	12	6	21.64
					12	11	21.55
					25	0	21.41
					1	0	21.36
					1	12	21.44
					1	24	21.39
		H 20375	1752.5	QPSK	12	0	21.35
					12	6	21.12
					12	11	21.14
					25	0	21.18
					1	0	22.19
					1	12	22.10
16-QAM	1			24	22.14		
	12			0	22.05		
	12			6	21.96		
	12			11	21.97		
	25			0	21.85		
	1			0	21.66		
1	12	21.45					
1	24	21.58					
12	0	21.87					
12	6	21.63					
12	11	21.39					
25	0	21.43					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 4	3MHz	L 19965	1711.5	QPSK	1	0	22.46
					1	7	22.32
					1	14	21.81
					8	0	21.34
					8	4	21.33
					8	7	21.09
				16-QAM	15	0	21.32
					1	0	21.77
					1	7	21.97
					1	14	21.96
					8	0	21.84
					8	4	21.76
		M 20175	1732.5	QPSK	8	7	21.55
					8	0	20.48
					15	0	20.48
					1	0	22.34
					1	7	22.19
					1	14	22.32
				16-QAM	8	0	21.28
					8	4	21.23
					8	7	21.22
					15	0	21.29
					1	0	21.24
					1	7	21.23
		H 20385	1753.5	QPSK	1	14	21.04
					8	0	21.06
					8	4	21.11
					8	7	21.13
					15	0	20.42
					1	0	22.08
				16-QAM	1	7	22.19
					1	14	22.15
					8	0	21.24
					8	4	21.28
					8	7	21.09
					15	0	21.17
16-QAM	1	0	21.27				
	1	7	21.05				
	1	14	20.81				
	8	0	20.56				
	8	4	21.03				
	8	7	21.10				
15	0	21.01					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 4	1.4MHz	L 19957	1710.7	QPSK	1	0	22.47
					1	2	22.46
					1	5	22.37
					3	0	22.49
					3	1	22.31
					3	2	22.14
				6	0	22.30	
				16-QAM	1	0	21.97
					1	2	22.01
					1	5	21.98
					3	0	21.78
					3	1	21.85
		3	2		21.63		
		M 20175	1732.5	QPSK	1	0	22.33
					1	2	22.27
					1	5	22.27
					3	0	22.31
					3	1	22.30
					3	2	22.36
				6	0	21.31	
				16-QAM	1	0	21.42
					1	2	21.47
					1	5	21.36
					3	0	21.53
					3	2	21.46
		3	5		21.22		
		H 20393	1754.3	QPSK	1	0	22.09
					1	2	22.27
					1	5	22.16
					3	0	22.12
					3	1	22.16
					3	2	22.18
				6	0	21.16	
				16-QAM	1	0	21.19
					1	2	21.29
					1	5	21.20
3	0				21.21		
3	1				21.24		
3	2	21.23					
6	0	20.33					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 5	10MHz	L 20450	829	QPSK	1	0	22.48
					1	24	22.41
					1	49	22.26
					25	0	21.44
					25	12	21.56
					25	24	21.48
				16-QAM	50	0	21.66
					1	0	21.49
					1	24	21.59
					1	49	21.54
					25	0	21.34
					25	12	21.51
		M 20525	836.5	QPSK	25	24	21.43
					50	0	20.60
					1	0	22.43
					1	24	22.33
					1	49	22.48
					25	0	21.61
				16-QAM	25	12	21.36
					25	24	21.37
					50	0	21.35
					1	0	21.95
					1	24	21.48
					1	49	21.40
H 20600	844	QPSK	25	0	21.48		
			25	12	21.36		
			25	24	21.21		
			50	0	20.44		
			1	0	22.41		
			1	24	22.55		
		16-QAM	1	49	22.39		
			25	0	21.44		
			25	12	21.38		
			25	24	21.25		
			50	0	21.43		
			1	0	21.37		
1	24	21.74					
1	49	21.33					
25	0	21.36					
25	12	21.34					
25	24	21.30					
50	0	20.41					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 5	5MHz	L 20425	826.5	QPSK	1	0	22.48
					1	12	22.43
					1	24	22.45
					12	0	22.36
					12	6	22.21
					12	11	22.31
				25	0	22.12	
				16-QAM	1	0	21.58
					1	12	21.69
					1	24	21.57
					12	0	21.43
					12	6	21.36
		12	11		21.31		
		M 20525	836.5	QPSK	1	0	22.34
					1	12	22.12
					1	24	22.24
					12	0	22.25
					12	6	22.11
					12	11	22.13
				25	0	21.69	
				16-QAM	1	0	21.35
					1	12	21.48
					1	24	21.41
					12	0	21.36
					12	6	21.37
		12	11		21.23		
		25	0	21.10			
		H 20625	846.5	QPSK	1	0	22.49
					1	12	22.36
					1	24	22.31
12	0				22.21		
12	6				22.23		
12	11				22.16		
25	0			21.69			
16-QAM	1			0	21.34		
	1			12	21.56		
	1			24	21.46		
	12			0	21.43		
	12			6	21.37		
	12	11	21.35				
25	0	21.12					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 5	3MHz	L 20415	825.5	QPSK	1	0	22.21
					1	7	22.36
					1	14	22.12
					8	0	22.13
					8	4	22.01
					8	7	21.99
				15	0	21.85	
				16-QAM	1	0	21.76
					1	7	21.71
					1	14	21.53
					8	0	21.64
					8	4	21.68
		8	7		21.63		
		M 20525	836.5	QPSK	1	0	22.34
					1	7	22.36
					1	14	22.38
					8	0	22.23
					8	4	22.21
					8	7	22.19
				15	0	21.89	
				16-QAM	1	0	21.75
					1	7	21.79
					1	14	21.69
					8	0	21.53
					8	4	21.34
		8	7		21.31		
		H 20635	847.5	QPSK	1	0	21.63
					1	7	21.58
					1	14	21.64
					8	0	21.36
8	4				21.34		
8	7				21.23		
15	0			21.25			
16-QAM	1			0	21.16		
	1			7	21.24		
	1			14	21.19		
	8			0	21.05		
	8			4	21.03		
	8	7	21.05				
15	0	21.01					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 5	1.4MHz	L 20407	824.7	QPSK	1	0	22.30
					1	2	22.29
					1	5	22.29
					3	0	22.33
					3	1	22.23
					3	2	22.19
				16-QAM	6	0	21.33
					1	0	21.45
					1	2	21.53
					1	5	21.34
					3	0	21.25
					3	1	21.13
		M 20525	836.5	QPSK	3	2	21.17
					3	0	20.51
					6	0	20.51
					1	0	22.37
					1	2	22.44
					1	5	22.37
				16-QAM	3	0	22.30
					3	1	22.34
					3	2	22.26
					6	0	21.40
					1	0	21.53
					1	2	21.60
		H 20643	848.3	QPSK	1	5	21.41
					3	0	21.36
					3	2	21.49
					3	5	21.53
					6	0	20.72
					1	0	22.26
16-QAM	1			2	22.38		
	1			5	22.02		
	3			0	22.40		
	3			1	22.31		
	3			2	22.32		
	6			0	22.52		
1	0	22.13					
1	2	22.09					
1	5	21.99					
3	0	21.68					
3	1	21.57					
3	2	21.43					
6	0	20.69					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)	
					RB Size	RB Offset		
LTE Band 12	10MHz	L 23060	704	QPSK	1	0	22.32	
					1	24	22.41	
					1	49	22.42	
					25	0	21.45	
					25	12	21.41	
					25	24	21.47	
				16-QAM	50	0	21.36	
					1	0	21.65	
					1	24	22.12	
					1	49	22.29	
					25	0	21.96	
					25	12	21.89	
		M 23095	707.5	QPSK	25	24	21.76	
						50	20.50	
						1	0	22.50
						1	24	22.51
						1	49	22.38
						25	0	21.51
				16-QAM	25	12	21.44	
					25	24	21.36	
					50	0	21.43	
					1	0	21.47	
					1	24	21.54	
					1	49	21.63	
		H 23130	711	QPSK	25	0	21.58	
						25	12	21.36
						25	24	21.43
						50	0	20.41
						1	0	22.48
						1	24	22.81
16-QAM	1			49	22.42			
	25			0	21.54			
	25			12	21.51			
	25			24	21.47			
	50			0	21.45			
	1			0	21.65			
1	24	21.46						
1	49	21.40						
25	0	21.34						
25	12	21.31						
25	24	21.23						
50	0	20.53						



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 12	5MHz	L 23035	701.5	QPSK	1	0	22.41
					1	12	22.34
					1	24	22.22
					12	0	21.92
					12	6	21.86
					12	11	21.54
				16-QAM	25	0	20.61
					1	0	21.95
					1	12	21.96
					1	24	21.91
					12	0	20.87
					12	6	20.74
		M 23095	707.5	QPSK	12	11	20.51
					25	0	20.21
					1	0	22.36
					1	12	22.25
					1	24	22.15
					12	0	21.85
				16-QAM	12	6	21.21
					12	11	21.56
					25	0	20.44
					1	0	21.54
					1	12	21.57
					1	24	21.44
		H 23155	713.5	QPSK	12	0	21.23
					12	6	21.29
					12	11	20.69
					25	0	20.58
					1	0	22.41
					1	12	22.43
				16-QAM	1	24	22.52
					12	0	21.49
					12	6	21.51
					12	11	21.52
					25	0	20.50
					1	0	21.23
16-QAM	1	12	21.25				
	1	24	21.34				
	12	0	21.54				
	12	6	21.12				
	12	11	21.27				
	25	0	21.05				



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 12	3MHz	L 23025	700.5	QPSK	1	0	22.64
					1	7	22.56
					1	14	22.23
					8	0	22.34
					8	4	22.08
					8	7	22.12
				16-QAM	15	0	22.01
					1	0	21.56
					1	7	21.36
					1	14	21.48
					8	0	21.57
					8	4	21.69
		M 23095	707.5	QPSK	8	7	21.32
					8	0	21.23
					15	0	21.23
					1	0	22.34
					1	7	22.36
					1	14	22.31
				16-QAM	8	0	22.12
					8	4	22.28
					8	7	22.27
					15	0	21.96
					1	0	21.12
					1	7	21.36
		H 23165	714.5	QPSK	1	14	21.34
					8	0	21.23
					8	4	20.85
					8	7	20.57
					15	0	20.67
					1	0	22.12
				16-QAM	1	7	22.03
					1	14	21.85
					8	0	21.64
					8	4	22.04
					8	7	21.69
					15	0	21.87
1	0	21.53					
1	7	21.46					
1	14	21.31					
8	0	21.27					
8	4	21.36					
8	7	21.43					
15	0	21.52					



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 12	1.4MHz	L 23017	699.7	QPSK	1	0	22.46
					1	2	22.60
					1	5	22.61
					3	0	22.47
					3	1	22.54
					3	2	22.60
				16-QAM	6	0	21.39
					1	0	21.70
					1	2	21.91
					1	5	22.28
					3	0	22.36
					3	1	21.87
		M 23095	707.5	QPSK	3	2	21.63
					6	0	20.67
					1	0	22.23
					1	2	22.73
					1	5	22.63
					3	0	22.62
				16-QAM	3	1	22.43
					3	2	22.33
					6	0	21.65
					1	0	21.33
					1	2	21.36
					1	5	21.18
		H 23173	715.3	QPSK	3	0	21.23
					3	2	21.10
					3	5	21.03
					6	0	21.01
					1	0	20.26
					1	2	22.49
				16-QAM	1	5	22.64
					3	0	22.52
					3	1	22.53
					3	2	22.41
					6	0	22.40
					1	0	21.55
16-QAM	1	2	21.63				
	1	5	21.56				
	3	0	21.61				
	3	1	21.52				
	3	2	21.43				
	6	0	20.50				



## 2.2 Occupied Bandwidth

### 2.2.1 Definition

According to FCC section 2.1049 and 27.53(g), the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

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

### 2.2.2 Test Description

See section 2.1.2 of this report.

### 2.2.3 Test Results

#### LTE Band 2

##### Low channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18607	1850.7	1.0965	1.1001	18615	1851.5	2.7224	2.7109
Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18607	1850.7	1.294	1.289	18615	1851.5	3.004	3.028

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18625	1852.5	4.5272	4.5322	18650	1855.0	8.9823	8.9753
Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18625	1852.5	5.055	5.027	18650	1855.0	9.803	9.820

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18675	1857.5	13.457	13.502	18700	1860.0	17.966	17.956
Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18675	1857.5	14.55	14.65	18700	1860.0	19.51	19.62



**Middle channel:**

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18900	1880.0	1.0985	1.1042	18900	1880.0	2.7128	2.7231

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18900	1880.0	1.301	1.305	18900	1880.0	3.001	2.986

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18900	1880.0	4.5342	4.5293	18900	1880.0	9.0001	8.9897

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18900	1880.0	5.029	5.040	18900	1880.0	10.010	9.906

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18900	1880.0	13.519	13.501	18900	1880.0	17.981	17.939

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
18900	1880.0	14.87	14.69	18900	1880.0	19.48	19.49



**High channel:**

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19192	1909.2	1.0947	1.1033	19184	1908.4	2.7126	2.7147

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19192	1909.2	1.293	1.295	19184	1908.4	3.009	3.019

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19175	1907.5	4.5206	4.5203	19150	1905.0	8.9792	8.9880

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19175	1907.5	5.001	5.029	19150	1905.0	9.892	9.926

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19125	1902.5	13.541	13.488	19100	1900.0	17.950	18.004

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19125	1902.5	14.88	14.75	19100	1900.0	19.53	19.69

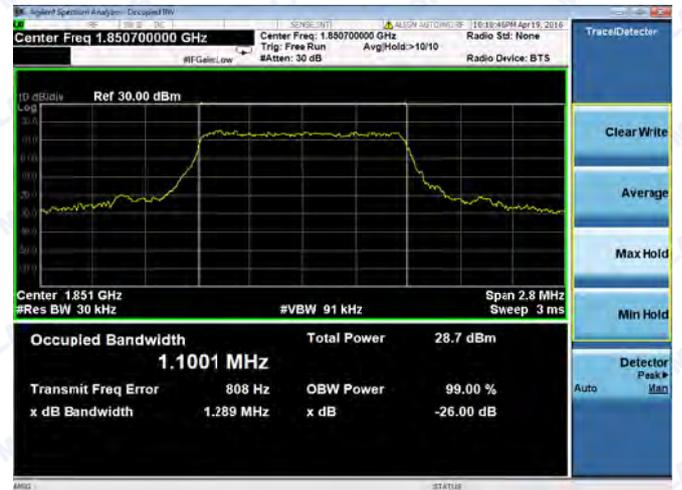
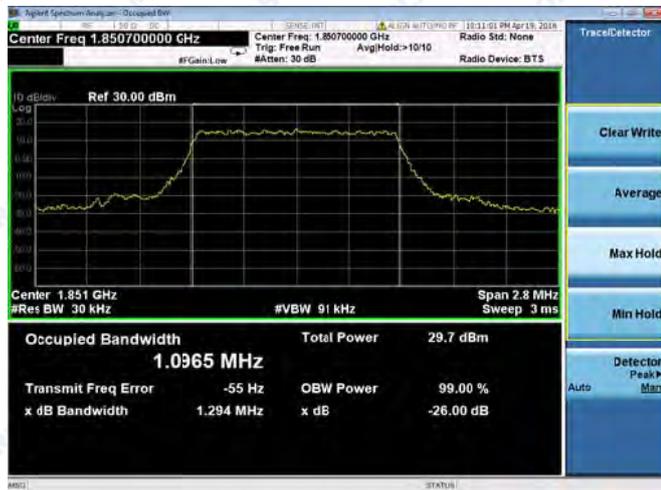


Low channel:

Spectrum Plot of Worst Value

1.4MHz/QPSK

1.4MHz/16QAM



Spectrum Plot of Worst Value

3MHz/QPSK

3MHz/16QAM

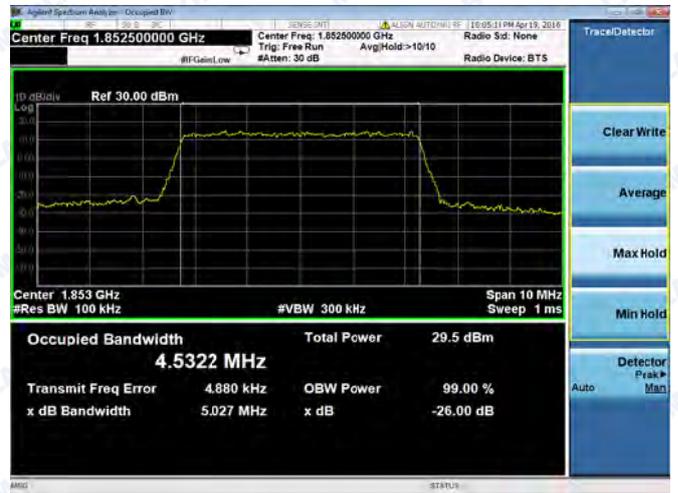




**Spectrum Plot of Worst Value**

**5MHz/QPSK**

**5MHz/16QAM**



**Spectrum Plot of Worst Value**

**10MHz/QPSK**

**10MHz/16QAM**

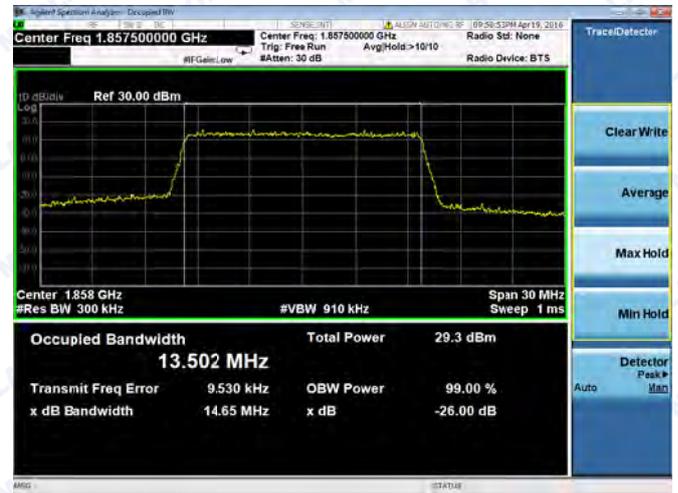
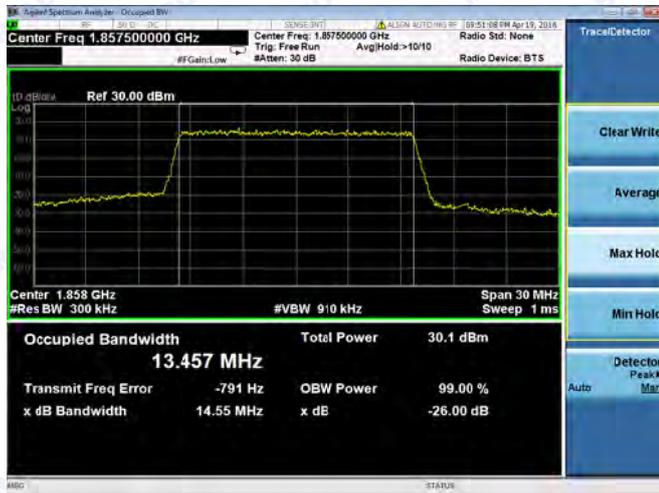




**Spectrum Plot of Worst Value**

**15MHz/QPSK**

**15MHz/16QAM**



**Spectrum Plot of Worst Value**

**20MHz/QPSK**

**20MHz/16QAM**



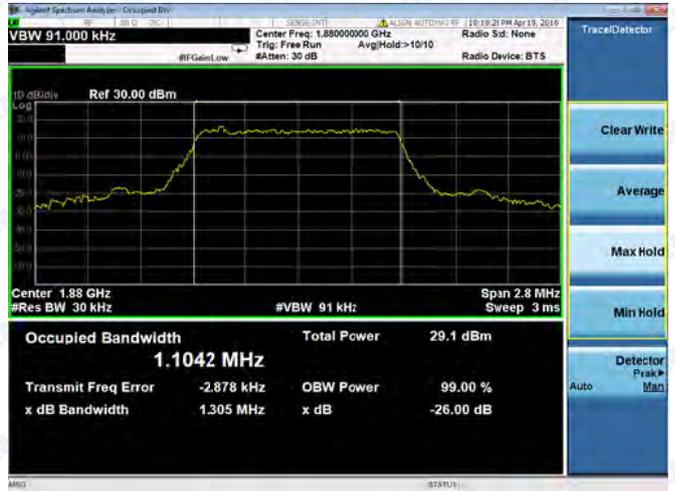
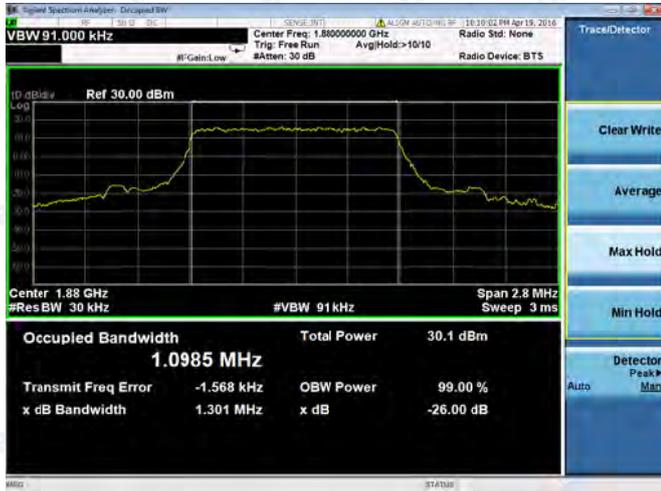


Middle channel:

Spectrum Plot of Worst Value

1.4MHz/QPSK

1.4MHz/16QAM



Spectrum Plot of Worst Value

3MHz/QPSK

3MHz/16QAM

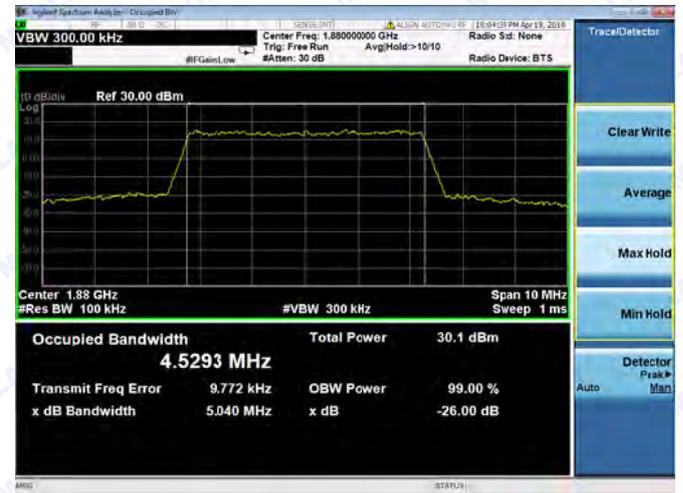




**Spectrum Plot of Worst Value**

**5MHz/QPSK**

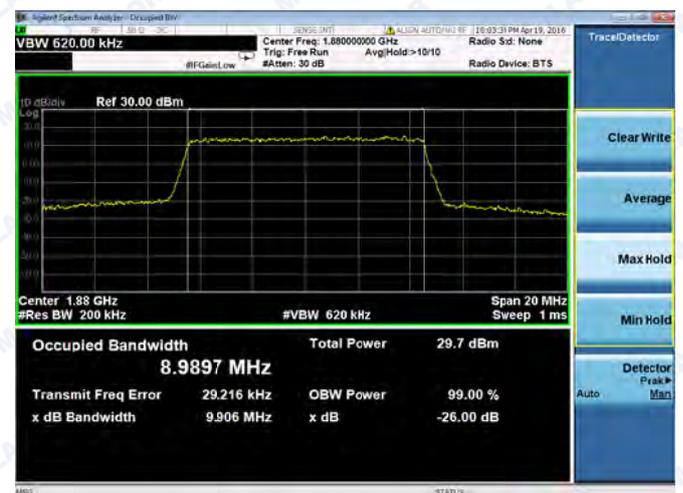
**5MHz/16QAM**



**Spectrum Plot of Worst Value**

**10MHz/QPSK**

**10MHz/16QAM**

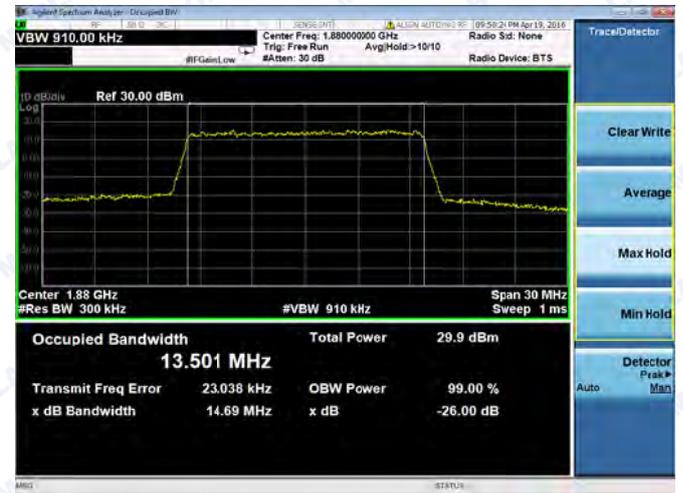
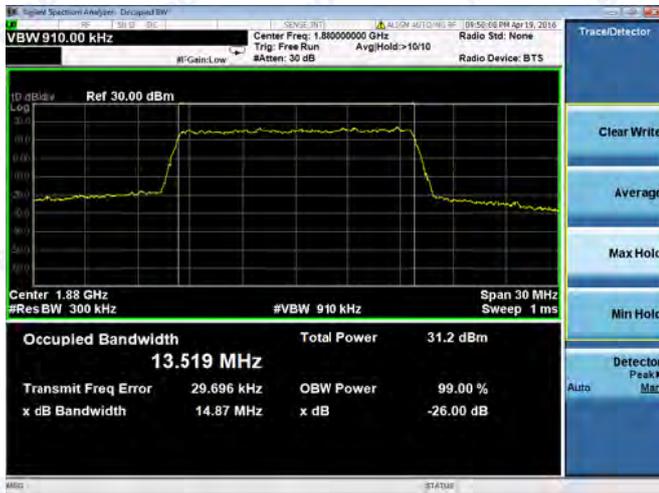




**Spectrum Plot of Worst Value**

**15MHz/QPSK**

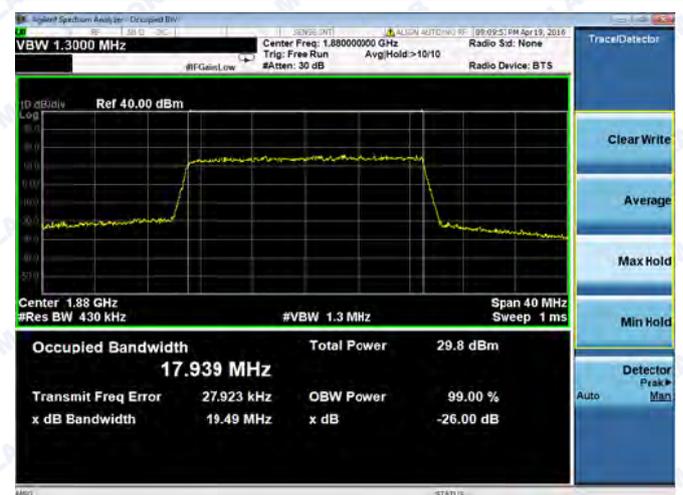
**15MHz/16QAM**



**Spectrum Plot of Worst Value**

**20MHz/QPSK**

**20MHz/16QAM**



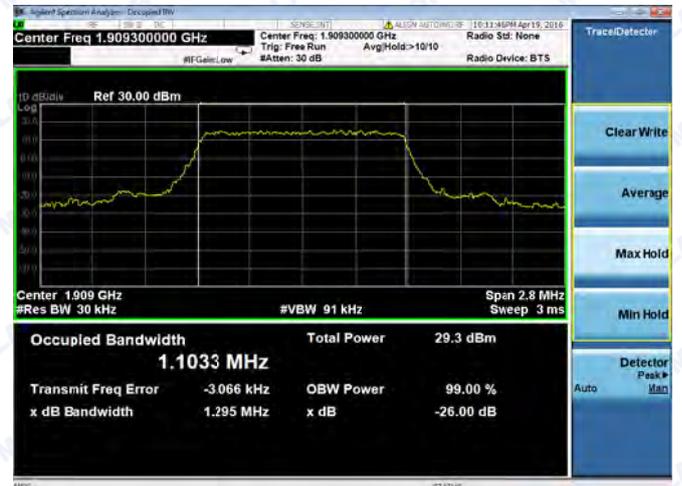
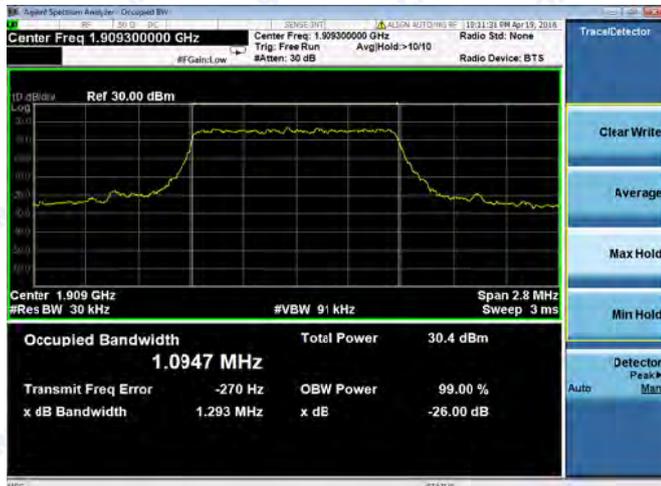


High channel:

Spectrum Plot of Worst Value

1.4MHz/QPSK

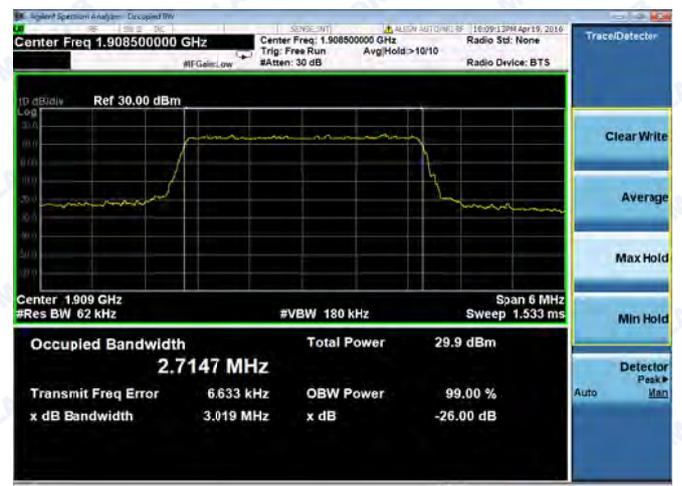
1.4MHz/16QAM



Spectrum Plot of Worst Value

3MHz/QPSK

3MHz/16QAM





**Spectrum Plot of Worst Value**

**5MHz/QPSK**

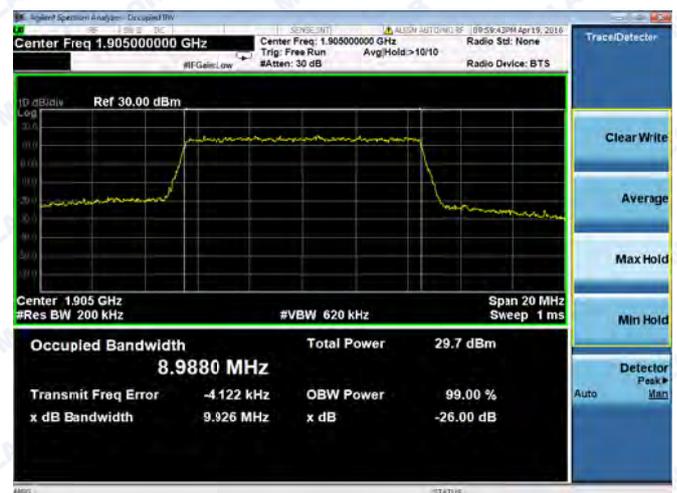
**5MHz/16QAM**



**Spectrum Plot of Worst Value**

**10MHz/QPSK**

**10MHz/16QAM**

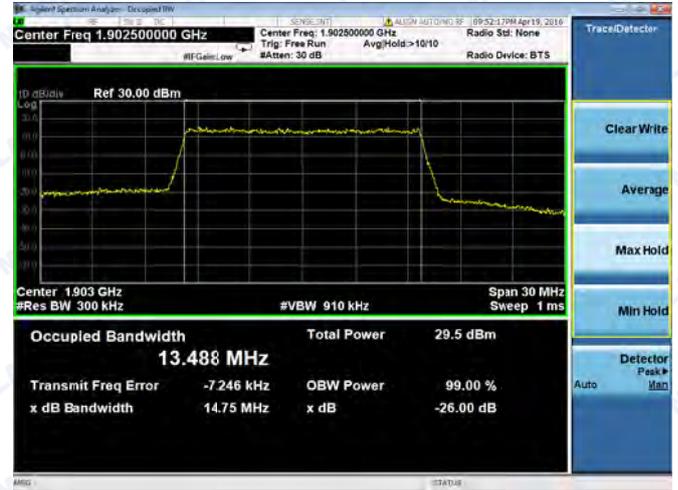
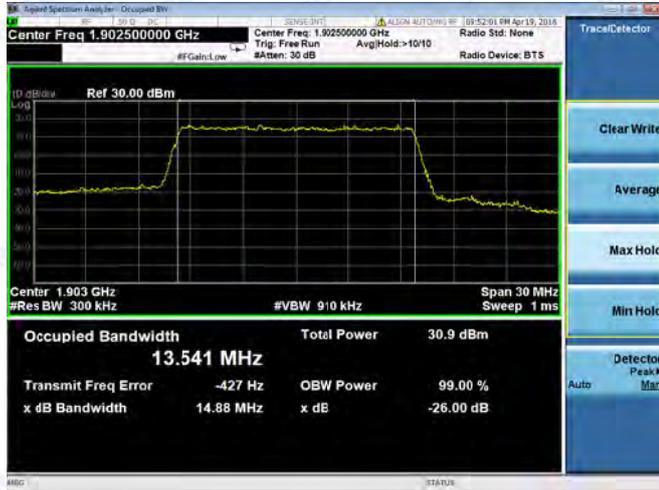




**Spectrum Plot of Worst Value**

**15MHz/QPSK**

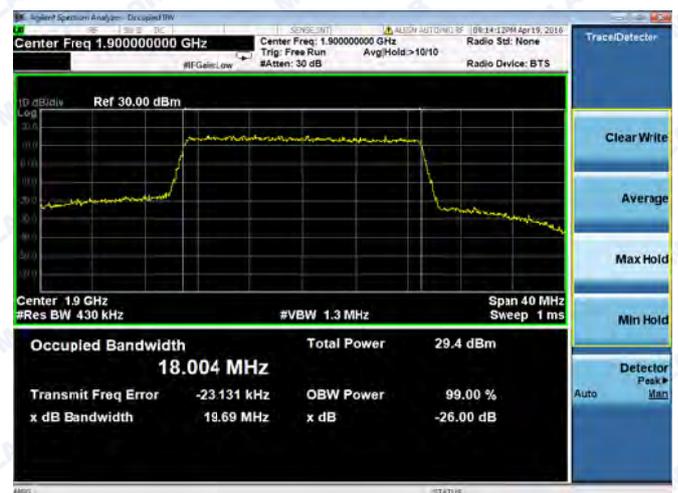
**15MHz/16QAM**



**Spectrum Plot of Worst Value**

**20MHz/QPSK**

**20MHz/16QAM**





**LTE Band 4**

**Low channel:**

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19957	1710.7	1.1025	1.0928	19965	1711.5	2.7163	2.7078

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19957	1710.7	1.307	1.307	19965	1711.5	2.986	2.998

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19975	1712.5	4.5261	4.5213	20000	1715.0	8.9545	8.9749

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
19975	1712.5	5.037	5.021	20000	1715.0	9.855	9.898

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20025	1717.5	13.440	13.453	20050	1720.0	17.954	17.975

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20025	1717.5	14.72	14.66	20050	1720.0	19.60	19.56



**Middle channel:**

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20175	1732.5	1.1001	1.1075	20175	1732.5	2.7148	2.7239

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20175	1732.5	1.356	1.326	20175	1732.5	2.997	3.032

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20175	1732.5	4.5156	4.5281	20175	1732.5	8.9790	8.9865

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20175	1732.5	5.017	5.063	20175	1732.5	9.932	9.894

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20175	1732.5	13.495	13.505	20175	1732.5	17.995	18.040

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20175	1732.5	14.73	14.77	20175	1732.5	19.50	19.62



**High channel:**

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20392	1754.2	1.1001	1.1061	20384	1753.4	2.7135	2.7154
Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20392	1754.2	1.356	1.342	20384	1753.4	2.996	3.043

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20375	1752.5	4.5156	4.5214	20350	1750.0	8.9881	8.9761
Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20375	1752.5	5.010	5.049	20350	1750.0	9.924	9.819

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20325	1747.5	13.450	13.445	20300	1745.0	17.923	17.972
Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
20325	1747.5	14.75	14.66	20300	1745.0	19.36	19.45