

FCC

RF Test Report

Product Type : LE910-NA V2
Applicant : Telit Communications S.p.A.
Address : Viale Stazione di Prosecco 5/B, 34010 Sgonico- Trieste- Italy
Trade Name : Telit
Model Number : LE910-NA V2
Test Specification : FCC 47 CFR PART 22H: Oct, 2014
FCC 47 CFR PART 24E: Oct, 2014
FCC 47 CFR PART 27: Oct. 2014
ANSI/TIA/EIA-603-C
Application Purpose : Original
Receive Date : Jun. 04, 2015
Test Period : Jun. 11 ~ Aug. 03, 2015
Issue Date : Aug. 04, 2015

Issue by

A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jul. 28, 2015	Initial Issue	
01	Aug. 04, 2015	Revised report information.	Snow Wang

Verification of Compliance

Issued Date: 08/04/2015

Product Type : LE910-NA V2
Applicant : Telit Communications S.p.A.
Address : Viale Stazione di Prosecco 5/B, 34010 Sgonico- Trieste- Italy
Trade Name : Telit
Model Number : LE910-NA V2
EUT Rated Voltage : DC 3.4V / 3.8V / 4.2V
Test Voltage : DC 3.8V
Applicable Standard : FCC 47 CFR PART 22H: Oct, 2014
FCC 47 CFR PART 24E: Oct, 2014
FCC 47 CFR PART 27: Oct. 2014
ANSI/TIA/EIA-603-C
Test Result : Complied
Application Purpose : Original
Performing Lab. : A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330
<http://www.atl-lab.com.tw/e-index.htm>

The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI/TIA/EIA-603-C and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 27L. The test results of this report relate only to the tested sample identified in this report.

Approved By : Fly Lu Reviewed By : Eric Ou Yang
(Manager) (Fly Lu) (Testing Engineer) (Eric Ou Yang)

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1 General Information

1.1. EUT Description

Applicant		Telit Communications S.p.A.			
Applicant Address		Viale Stazione di Prosecco 5/B, 34010 Sgonico- Trieste- Italy			
Manufacturer		Telit Communications S.p.A.			
Manufacturer Address		Viale Stazione di Prosecco 5/B, 34010 Sgonico- Trieste- Italy			
Product Type		LE910-NA V2			
Trade Name		Telit			
Model Number		LE910-NA V2			
Mode	LTE	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		2	1850.7 ~ 1909.3	1930.7 ~ 1989.3	QPSK, 16QAM
		4	1710.7 ~ 1754.3	2110.7 ~ 2154.3	QPSK, 16QAM
		5	824.7 ~ 848.3	869.7 ~ 893.3	QPSK, 16QAM
		12	699 ~ 716	729 ~ 746	QPSK, 16QAM
		13	777 ~ 787	746 ~ 756	QPSK, 16QAM
		17	704.0 ~ 715.9	734.0 ~ 745.9	QPSK, 16QAM
Channel Bandwidth		LTE Band 2	1.4M, 3M, 5MHz, 10MHz, 15MHz, 20MHz		
		LTE Band 4	1.4M, 3M, 5MHz, 10MHz, 15MHz, 20MHz		
		LTE Band 5	1.4M, 3M, 5MHz, 10MHz		
		LTE Band 12	1.4M, 3M, 5MHz, 10MHz		
		LTE Band 13	5MHz, 10MHz		
		LTE Band 17	5MHz, 10MHz		
Antenna Gain		LTE Band 2		2.14 dBi	
		LTE Band 4		2.14 dBi	
		LTE Band 5		2.14 dBi	
		LTE Band 12		2.14 dBi	
		LTE Band 13		2.14 dBi	
		LTE Band 17		2.14 dBi	

Max. Conducted Output	LTE Band 2 (Channel Bandwidth 1.4MHz)	0.218	W
Average Power	LTE Band 2 (Channel Bandwidth 3MHz)	0.218	W
	LTE Band 2 (Channel Bandwidth 5MHz)	0.219	W
	LTE Band 2 (Channel Bandwidth 10MHz)	0.214	W
	LTE Band 2 (Channel Bandwidth 15MHz)	0.220	W
	LTE Band 2 (Channel Bandwidth 20MHz)	0.219	W
	LTE Band 4 (Channel Bandwidth 1.4MHz)	0.205	W
	LTE Band 4 (Channel Bandwidth 3MHz)	0.199	W
	LTE Band 4 (Channel Bandwidth 5MHz)	0.200	W
	LTE Band 4 (Channel Bandwidth 10MHz)	0.203	W
	LTE Band 4 (Channel Bandwidth 15MHz)	0.205	W
	LTE Band 4 (Channel Bandwidth 20MHz)	0.203	W
	LTE Band 5 (Channel Bandwidth 1.4MHz)	0.191	W
	LTE Band 5 (Channel Bandwidth 3MHz)	0.195	W
	LTE Band 5 (Channel Bandwidth 5MHz)	0.189	W
	LTE Band 5 (Channel Bandwidth 10MHz)	0.190	W
	LTE Band 12 (Channel Bandwidth 1.4MHz)	0.191	W
	LTE Band 12 (Channel Bandwidth 3MHz)	0.193	W
	LTE Band 12 (Channel Bandwidth 5MHz)	0.189	W
	LTE Band 12 (Channel Bandwidth 10MHz)	0.190	W
	LTE Band 13 (Channel Bandwidth 5MHz)	0.194	W
	LTE Band 13 (Channel Bandwidth 10MHz)	0.188	W
	LTE Band 17 (Channel Bandwidth 5MHz)	0.195	W
	LTE Band 17 (Channel Bandwidth 10MHz)	0.197	W

Max. E.R.P. / E.I.R.P.	LTE Band 2 (Channel Bandwidth 1.4MHz)	0.356	W (E.I.R.P.)
	LTE Band 2 (Channel Bandwidth 3MHz)	0.357	W (E.I.R.P.)
	LTE Band 2 (Channel Bandwidth 5MHz)	0.358	W (E.I.R.P.)
	LTE Band 2 (Channel Bandwidth 10MHz)	0.350	W (E.I.R.P.)
	LTE Band 2 (Channel Bandwidth 15MHz)	0.361	W (E.I.R.P.)
	LTE Band 2 (Channel Bandwidth 20MHz)	0.359	W (E.I.R.P.)
	LTE Band 4 (Channel Bandwidth 1.4MHz)	0.336	W (E.I.R.P.)
	LTE Band 4 (Channel Bandwidth 3MHz)	0.326	W (E.I.R.P.)
	LTE Band 4 (Channel Bandwidth 5MHz)	0.327	W (E.I.R.P.)
	LTE Band 4 (Channel Bandwidth 10MHz)	0.332	W (E.I.R.P.)
	LTE Band 4 (Channel Bandwidth 15MHz)	0.335	W (E.I.R.P.)
	LTE Band 4 (Channel Bandwidth 20MHz)	0.333	W (E.I.R.P.)
	LTE Band 5 (Channel Bandwidth 1.4MHz)	0.191	W (E.R.P.)
	LTE Band 5 (Channel Bandwidth 3MHz)	0.195	W (E.R.P.)
	LTE Band 5 (Channel Bandwidth 5MHz)	0.189	W (E.R.P.)
	LTE Band 5 (Channel Bandwidth 10MHz)	0.190	W (E.R.P.)
	LTE Band 12 (Channel Bandwidth 1.4MHz)	0.313	W (E.R.P.)
	LTE Band 12 (Channel Bandwidth 3MHz)	0.316	W (E.R.P.)
	LTE Band 12 (Channel Bandwidth 5MHz)	0.310	W (E.R.P.)
	LTE Band 12 (Channel Bandwidth 10MHz)	0.311	W (E.R.P.)
	LTE Band 13 (Channel Bandwidth 5MHz)	0.318	W (E.R.P.)
	LTE Band 13 (Channel Bandwidth 10MHz)	0.308	W (E.R.P.)
	LTE Band 17 (Channel Bandwidth 5MHz)	0.195	W (E.R.P.)
	LTE Band 17 (Channel Bandwidth 10MHz)	0.197	W (E.R.P.)

1.2. Mode of Operation

Three channels had been tested for each channel bandwidth.

LTE Band 2						
Channel Bandwidth	1.4MHz		3MHz		5MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	18607	1850.7	18615	1851.5	18625	1852.5
Middle CH	18900	1880.0	18900	1880.0	18900	1880.0
High CH	19193	1909.3	19185	1908.5	19175	1907.5
Channel Bandwidth	10MHz		15MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	18650	1855.0	18675	1857.5	18700	1860.0
Middle CH	18900	1880.0	18900	1880.0	18900	1880.0
High CH	19150	1905.0	19125	1902.5	19100	1900.0

LTE Band 4						
Channel Bandwidth	1.4MHz		3MHz		5MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	19957	1710.7	19965	1711.5	19975	1712.5
Middle CH	20175	1732.5	20175	1732.5	20175	1732.5
High CH	20393	1754.3	20385	1753.5	20375	1752.5
Channel Bandwidth	10MHz		15MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	20000	1715.0	20025	1717.5	20050	1720.0
Middle CH	20175	1732.5	20175	1732.5	20175	1732.5
High CH	20350	1750.0	20325	1747.5	20300	1745.0

LTE Band 5				
Channel Bandwidth	1.4MHz		3MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	20407	824.7	20415	825.5
Middle CH	20525	836.5	20525	836.5
High CH	20643	848.3	20635	847.5
Channel Bandwidth	5MHz		10MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	20425	826.5	20450	829.0
Middle CH	20525	836.5	20525	836.5
High CH	20625	846.5	20600	844.0

LTE Band 12				
Channel Bandwidth	1.4MHz		3MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	23017	699.7	23025	700.5
Middle CH	23095	707.5	23095	707.5
High CH	23173	715.3	23165	714.5
Channel Bandwidth	5MHz		10MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	23035	701.5	23060	704.0
Middle CH	23095	707.5	23095	707.5
High CH	23155	713.5	23130	711.0

LTE Band 13				
Channel Bandwidth	5MHz		10MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	23205	779.5	---	---
Middle CH	23230	782.0	23230	782.0
High CH	23255	784.5	---	---

LTE Band 17				
Channel Bandwidth	5MHz		10MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	23755	706.5	23780	709.0
Middle CH	23790	710.0	23790	710.0
High CH	23825	713.5	23800	711.0

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission: 30MHz to 19000 MHz.

Band	Channel Bandwidth	Test Modes	
LTE Band 2	1.4 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 8) Link ☐ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 4) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK
	15 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 38) Link ☐ LTE(RB Size 1, RB Offset 74) Link ☐ LTE(RB Size 38, RB Offset 0) Link ☐ LTE(RB Size 38, RB Offset 18) Link ☐ LTE(RB Size 38, RB Offset 37) Link ☐ LTE(RB Size 75, RB Offset 0) Link	QPSK
	20 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 1, RB Offset 99) Link ☐ LTE(RB Size 50, RB Offset 0) Link ☐ LTE(RB Size 50, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 50) Link ☐ LTE(RB Size 100, RB Offset 0) Link	QPSK

Band	Channel Bandwidth	Test Modes	
LTE Band 4	1.4 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 8) Link ☐ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 4) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK
	15 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 38) Link ☐ LTE(RB Size 1, RB Offset 74) Link ☐ LTE(RB Size 38, RB Offset 0) Link ☐ LTE(RB Size 38, RB Offset 18) Link ☐ LTE(RB Size 38, RB Offset 37) Link ☐ LTE(RB Size 75, RB Offset 0) Link	QPSK
	20 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 1, RB Offset 99) Link ☐ LTE(RB Size 50, RB Offset 0) Link ☐ LTE(RB Size 50, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 50) Link ☐ LTE(RB Size 100, RB Offset 0) Link	QPSK

Band	Channel Bandwidth	Test Modes	
LTE Band 5	1.4 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 8) Link ☐ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 4) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK

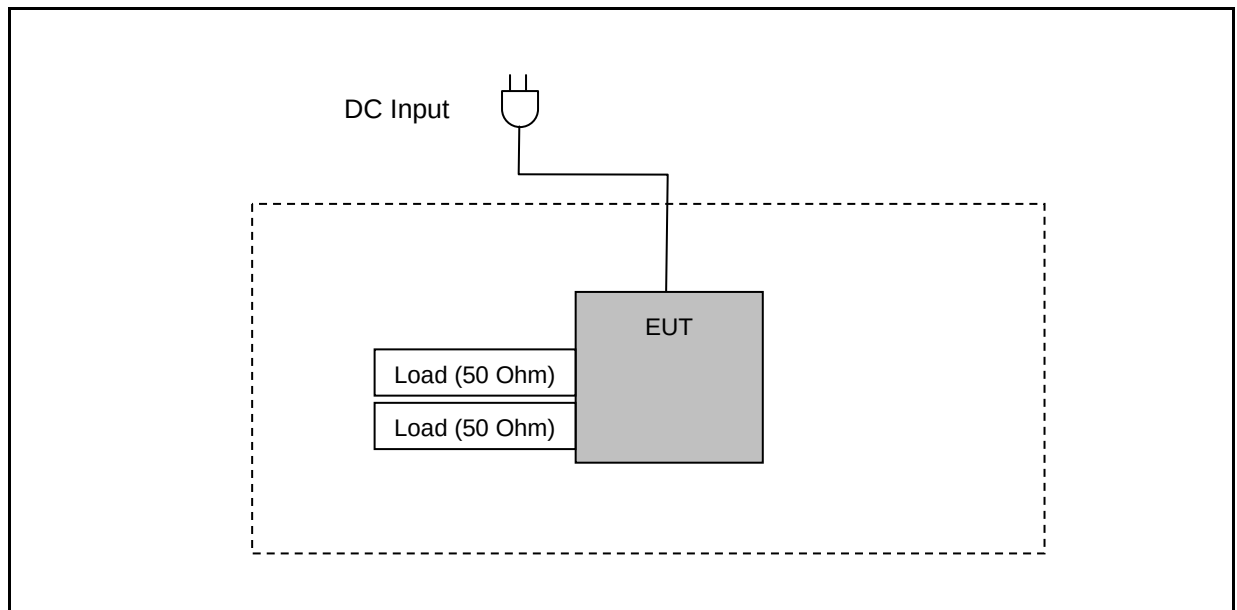
Band	Channel Bandwidth	Test Modes	
LTE Band 12	1.4 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 8) Link ☐ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 4) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK

Band	Channel Bandwidth	Test Modes	
LTE Band 13	5 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK
LTE Band 17	5 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☒ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK

1.3. EUT Exercise Software

1	Setup the EUT and Base Station (CMW500) as shown on 1.4.
2	Turn on the power of all equipment.
3	EUT run test program test.

1.4. Configuration of Test System Details



1.5. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

1.6. Summary of Test Result

FCC Rule	Description	Result
§2.1046	Conducted Output Average Power	Pass
§22.913 §24.232 §27.50	Equivalent Isotropic Radiated Power / Equivalent Radiated Power	Pass
§2.1055 §22.355 §24.235 §27.54	Frequency Stability	Pass
§2.1049	Emission Bandwidth & Occupied Bandwidth	Pass
§24.232 §27.50	Peak to average ratio	Pass
§22.917 §24.238 §27.53	Band Edge	Pass
§2.1051 §22.917 §24.238 §27.53	Conducted Spurious Emissions	Pass
§2.1053 §22.917 §24.238 §27.53	Radiated Spurious Emissions	Pass

2 Conducted Output Average Power Test

2.1. Limit

N/A

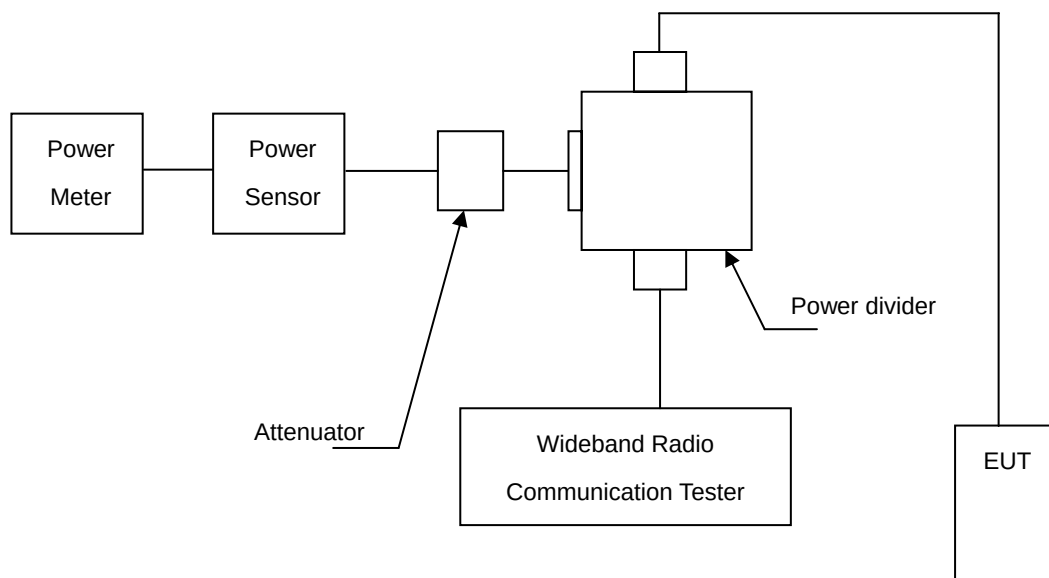
2.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Wideband Radio Communication Tester	R & S	CMW500	103168	11/05/2014	(1)
Wideband Power Sensor	Agilent	N1921A	MY45241957	12/15/2014	(1)
Single Channel PK Power Meter	Agilent	N1911A	MY45101619	12/15/2014	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

2.3. Test Setup



2.4. Test Procedure

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

2.5. Uncertainty

The measurement uncertainty is defined as for Conducted Power measurement is 1.2 dB.

2.6. Test Result

Model Number	LE910-NA V2		
Test Item	Conducted Output Average Power		
Date of Test	06/18/2015	Test Site	TE05

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	1.4 MHz	QPSK	18607	1850.7	1	0	23.25	0.211
					1	2	23.21	0.209
					1	5	23.17	0.207
					3	0	23.14	0.206
					3	1	23.09	0.204
					3	3	23.07	0.203
			18900	1880.0	6	0	22.39	0.173
					1	0	23.38	0.218
					1	2	23.37	0.217
					1	5	23.35	0.216
					3	0	23.31	0.214
					3	1	23.29	0.213
					3	3	23.25	0.211
					6	0	22.42	0.175
			19193	1909.3	1	0	23.09	0.204
					1	2	23.08	0.203
					1	5	23.05	0.202
					3	0	23.04	0.201
					3	1	23.01	0.200
					3	3	22.99	0.199
		16QAM	18607	1850.7	6	0	22.22	0.167
					1	0	22.61	0.182
					1	2	22.35	0.172
					1	5	22.33	0.171
					3	0	22.21	0.166
					3	1	22.20	0.166
			18900	1880.0	3	3	22.18	0.165
					6	0	21.43	0.139
					1	0	22.66	0.185
					1	2	22.64	0.184
					1	5	22.50	0.178
					3	0	22.49	0.177
			19193	1909.3	3	1	22.48	0.177
					3	3	22.17	0.165
					6	0	21.50	0.141
					1	0	22.26	0.168
					1	2	22.12	0.163
					1	5	22.10	0.162
					3	0	22.09	0.162
					3	1	22.06	0.161
					3	3	22.05	0.160
					6	0	21.47	0.140

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	3 MHz	QPSK	18615	1851.5	1	0	23.23	0.210
					1	8	23.21	0.209
					1	14	23.15	0.207
					8	0	22.34	0.171
					8	4	22.32	0.171
					8	7	22.22	0.167
			18900	1880.0	15	0	22.19	0.166
					1	0	23.39	0.218
					1	8	23.30	0.214
					1	14	23.26	0.212
					8	0	22.41	0.174
					8	4	22.40	0.174
					8	7	22.39	0.173
					15	0	22.37	0.173
			19185	1908.5	1	0	23.21	0.209
					1	8	23.10	0.204
					1	14	22.96	0.198
					8	0	22.35	0.172
					8	4	22.32	0.171
					8	7	22.27	0.169
					15	0	22.22	0.167
		16QAM	18615	1851.5	1	0	22.47	0.177
					1	8	22.26	0.168
					1	14	22.09	0.162
					8	0	21.40	0.138
					8	4	21.39	0.138
					8	7	21.37	0.137
			18900	1880.0	15	0	21.29	0.135
					1	0	22.56	0.180
					1	8	22.22	0.167
					1	14	22.12	0.163
					8	0	21.46	0.140
					8	4	21.43	0.139
					8	7	21.42	0.139
					15	0	21.41	0.138
			19185	1908.5	1	0	22.37	0.173
					1	8	22.34	0.171
					1	14	21.79	0.151
					8	0	21.38	0.137
					8	4	21.33	0.136
					8	7	21.32	0.136
					15	0	21.29	0.135

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	5 MHz	QPSK	18625	1852.5	1	0	23.22	0.210
					1	12	23.16	0.207
					1	24	22.95	0.197
					12	0	22.36	0.172
					12	6	22.26	0.168
					12	13	22.25	0.168
			18900	1880.0	25	0	22.18	0.165
					1	0	23.40	0.219
					1	12	23.36	0.217
					1	24	23.21	0.209
					12	0	22.46	0.176
					12	6	22.46	0.176
					12	13	22.44	0.175
					25	0	22.32	0.171
			19175	1907.5	1	0	23.24	0.211
					1	12	23.17	0.207
					1	24	22.98	0.199
					12	0	22.35	0.172
					12	6	22.34	0.171
					12	13	22.31	0.170
		16QAM	18625	1852.5	25	0	22.29	0.169
					1	0	22.46	0.176
					1	12	22.21	0.166
					1	24	22.02	0.159
					12	0	21.44	0.139
					12	6	21.43	0.139
			18900	1880.0	12	13	21.34	0.136
					25	0	21.24	0.133
					1	0	22.67	0.185
					1	12	22.28	0.169
					1	24	22.07	0.161
					12	0	21.44	0.139
					12	6	21.41	0.138
					12	13	21.38	0.137
					25	0	21.37	0.137
			19175	1907.5	1	0	22.49	0.177
					1	12	22.22	0.167
					1	24	21.76	0.150
					12	0	21.53	0.142
					12	6	21.50	0.141
					12	11	21.43	0.139
					25	0	21.34	0.136

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	10 MHz	QPSK	18650	1855.0	1	0	23.30	0.214
					1	24	23.20	0.209
					1	49	23.00	0.200
					25	0	22.33	0.171
					25	12	22.30	0.170
					25	25	22.25	0.168
			18900	1880.0	50	0	22.23	0.167
					1	0	23.29	0.213
					1	24	23.28	0.213
					1	49	23.24	0.211
					25	0	22.41	0.174
					25	12	22.41	0.174
					25	25	22.38	0.173
					50	0	22.36	0.172
		16QAM	19150	1905.0	1	0	23.25	0.211
					1	24	23.17	0.207
					1	49	22.89	0.195
					25	0	22.43	0.175
					25	12	22.29	0.169
					25	25	22.29	0.169
			18650	1855.0	50	0	22.22	0.167
					1	0	22.32	0.171
					1	24	22.19	0.166
					1	49	22.08	0.161
					25	0	21.51	0.142
					25	12	21.51	0.142
			18900	1880.0	25	25	21.31	0.135
					50	0	21.27	0.134
					1	0	22.54	0.179
					1	24	22.51	0.178
					1	49	22.15	0.164
					25	0	21.57	0.144
					25	12	21.48	0.141
					25	25	21.44	0.139
			19150	1905.0	50	0	21.42	0.139
					1	0	22.42	0.175
					1	24	22.23	0.167
					1	49	21.79	0.151
					25	0	21.43	0.139
					25	12	21.41	0.138
					25	25	21.39	0.138
					50	0	21.38	0.137

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	15 MHz	QPSK	18675	1857.5	1	0	23.33	0.215
					1	38	23.29	0.213
					1	74	23.22	0.210
					38	0	22.34	0.171
					38	18	22.32	0.171
					38	37	22.32	0.171
					75	0	22.30	0.170
					1	0	23.43	0.220
			18900	1880.0	1	38	23.32	0.215
					1	74	23.28	0.213
					38	0	22.48	0.177
					38	18	22.43	0.175
					38	37	22.40	0.174
					75	0	22.39	0.173
			19125	1902.5	1	0	23.38	0.218
					1	38	23.14	0.206
					1	74	23.02	0.200
					38	0	22.32	0.171
					38	18	22.31	0.170
					38	37	22.29	0.169
					75	0	22.27	0.169
		16QAM	18675	1857.5	1	0	22.25	0.168
					1	38	22.23	0.167
					1	74	22.00	0.158
					38	0	21.52	0.142
					38	18	21.51	0.142
					38	37	21.37	0.137
					75	0	21.29	0.135
			18900	1880.0	1	0	22.59	0.182
					1	38	22.49	0.177
					1	74	22.29	0.169
					38	0	21.53	0.142
					38	18	21.51	0.142
					38	37	21.48	0.141
					75	0	21.47	0.140
			19125	1902.5	1	0	22.20	0.166
					1	38	22.13	0.163
					1	74	22.09	0.162
					38	0	21.51	0.142
					38	18	21.48	0.141
					38	37	21.46	0.140
					75	0	21.45	0.140

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	20 MHz	QPSK	18700	1860.0	1	0	23.31	0.214
					1	49	23.27	0.212
					1	99	23.22	0.210
					50	0	22.32	0.171
					50	25	22.19	0.166
					50	50	22.19	0.166
			18900	1880.0	100	0	22.17	0.165
					1	0	23.41	0.219
					1	49	23.38	0.218
					1	99	23.24	0.211
					50	0	22.44	0.175
					50	25	22.39	0.173
					50	50	22.33	0.171
					100	0	22.32	0.171
			19100	1900.0	1	0	23.26	0.212
					1	49	23.15	0.207
					1	99	23.02	0.200
					50	0	22.34	0.171
					50	25	22.32	0.171
					50	50	22.28	0.169
					100	0	22.27	0.169
		16QAM	18700	1860.0	1	0	22.37	0.173
					1	49	22.22	0.167
					1	99	22.17	0.165
					50	0	21.41	0.138
					50	25	21.35	0.136
					50	50	21.34	0.136
			18900	1880.0	100	0	21.33	0.136
					1	0	22.38	0.173
					1	49	22.37	0.173
					1	99	22.28	0.169
					50	0	21.49	0.141
					50	25	21.46	0.140
					50	50	21.43	0.139
					100	0	21.35	0.136
			19100	1900.0	1	0	22.77	0.189
					1	49	22.17	0.165
					1	99	22.12	0.163
					50	0	21.44	0.139
					50	25	21.42	0.139
					50	50	21.37	0.137
					100	0	21.35	0.136

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	1.4 MHz	QPSK	19957	1710.7	1	0	23.12	0.205
					1	2	23.09	0.204
					1	5	23.07	0.203
					3	0	23.05	0.202
					3	1	23.01	0.200
					3	3	22.99	0.199
			20175	1732.5	6	0	22.13	0.163
					1	0	22.92	0.196
					1	2	22.89	0.195
					1	5	22.87	0.194
					3	0	22.84	0.192
					3	1	22.81	0.191
					3	3	22.82	0.191
					6	0	22.01	0.159
			20393	1754.3	1	0	22.99	0.199
					1	2	22.90	0.195
					1	5	22.89	0.195
					3	0	22.87	0.194
					3	1	22.86	0.193
					3	3	22.83	0.192
					6	0	21.94	0.156
		16QAM	19957	1710.7	1	0	22.42	0.175
					1	2	22.16	0.164
					1	5	22.11	0.163
					3	0	22.04	0.160
					3	1	21.99	0.158
					3	3	21.93	0.156
			20175	1732.5	6	0	21.06	0.128
					1	0	22.22	0.167
					1	2	22.14	0.164
					1	5	22.11	0.163
					3	0	22.08	0.161
					3	1	21.97	0.157
					3	3	21.75	0.150
					6	0	21.07	0.128
			20393	1754.3	1	0	21.94	0.156
					1	2	21.92	0.156
					1	5	21.92	0.156
					3	0	21.81	0.152
					3	1	21.77	0.150
					3	3	21.73	0.149
					6	0	20.96	0.125

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	3 MHz	QPSK	19965	1711.5	1	0	22.99	0.199
					1	8	22.97	0.198
					1	14	22.92	0.196
					8	0	22.15	0.164
					8	4	22.14	0.164
					8	7	22.13	0.163
					15	0	22.01	0.159
			20175	1732.5	1	0	22.89	0.195
					1	8	22.86	0.193
					1	14	22.84	0.192
					8	0	22.04	0.160
					8	4	21.97	0.157
					8	7	21.93	0.156
					15	0	21.90	0.155
			20385	1753.5	1	0	22.87	0.194
					1	8	22.86	0.193
					1	14	22.84	0.192
					8	0	21.96	0.157
					8	4	21.91	0.155
					8	7	21.87	0.154
					15	0	21.84	0.153
		16QAM	19965	1711.5	1	0	22.41	0.174
					1	8	21.90	0.155
					1	14	21.73	0.149
					8	0	21.17	0.131
					8	4	21.10	0.129
					8	7	21.00	0.126
					15	0	20.94	0.124
			20175	1732.5	1	0	22.22	0.167
					1	8	22.05	0.160
					1	14	21.80	0.151
					8	0	21.00	0.126
					8	4	20.94	0.124
					8	7	20.90	0.123
					15	0	20.87	0.122
			20385	1753.5	1	0	21.96	0.157
					1	8	21.86	0.153
					1	14	21.61	0.145
					8	0	20.92	0.124
					8	4	20.88	0.122
					8	7	20.88	0.122
					15	0	20.83	0.121

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	5 MHz	QPSK	19975	1712.5	1	0	23.01	0.200
					1	12	22.97	0.198
					1	24	22.95	0.197
					12	0	22.08	0.161
					12	6	22.04	0.160
					12	13	21.99	0.158
			20175	1732.5	25	0	21.98	0.158
					1	0	22.89	0.195
					1	12	22.86	0.193
					1	24	22.79	0.190
					12	0	22.03	0.160
					12	6	22.01	0.159
					12	13	22.00	0.158
					25	0	21.92	0.156
			20375	1752.5	1	0	22.88	0.194
					1	12	22.85	0.193
					1	24	22.82	0.191
					12	0	22.02	0.159
					12	6	21.96	0.157
					12	13	21.94	0.156
		16QAM	19975	1712.5	25	0	21.89	0.155
					1	0	22.30	0.170
					1	12	22.05	0.160
					1	24	21.85	0.153
					12	0	21.11	0.129
					12	6	21.09	0.129
			20175	1732.5	12	13	21.04	0.127
					25	0	20.97	0.125
					1	0	22.17	0.165
					1	12	22.06	0.161
					1	24	21.70	0.148
					12	0	21.07	0.128
					12	6	21.01	0.126
					12	13	20.99	0.126
					25	0	20.98	0.125
			20375	1752.5	1	0	21.86	0.153
					1	12	21.83	0.152
					1	24	21.57	0.144
					12	0	20.98	0.125
					12	6	20.95	0.124
					12	11	20.84	0.121
					25	0	20.77	0.119

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	10 MHz	QPSK	2000	1715.0	1	0	23.07	0.203
					1	24	22.93	0.196
					1	49	22.88	0.194
					25	0	22.15	0.164
					25	12	22.06	0.161
					25	25	22.05	0.160
			20175	1732.5	50	0	22.00	0.158
					1	0	22.88	0.194
					1	24	22.86	0.193
					1	49	22.84	0.192
					25	0	21.96	0.157
					25	12	21.96	0.157
					25	25	21.93	0.156
			20350	1750.0	50	0	21.92	0.156
					1	0	22.96	0.198
					1	24	22.86	0.193
					1	49	22.84	0.192
					25	0	21.94	0.156
					25	12	21.91	0.155
					25	25	21.89	0.155
			16QAM	2000	50	0	21.87	0.154
					1	0	22.02	0.159
					1	24	21.88	0.154
					1	49	21.71	0.148
					25	0	21.09	0.129
					25	12	21.07	0.128
					25	25	21.06	0.128
					50	0	21.03	0.127
				20175	1	0	22.21	0.166
					1	24	22.05	0.160
					1	49	21.80	0.151
					25	0	21.03	0.127
					25	12	21.02	0.126
					25	25	20.95	0.124
					50	0	20.91	0.123
				20350	1	0	22.27	0.169
					1	24	22.19	0.166
					1	49	21.82	0.152
					25	0	20.96	0.125
					25	12	20.84	0.121
					25	25	20.83	0.121
					50	0	20.77	0.119

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	15 MHz	QPSK	20025	1717.5	1	0	23.11	0.205
					1	38	23.03	0.201
					1	74	22.90	0.195
					38	0	22.06	0.161
					38	18	22.04	0.160
					38	37	21.99	0.158
			20175	1732.5	75	0	21.96	0.157
					1	0	23.01	0.200
					1	38	22.98	0.199
					1	74	22.86	0.193
					38	0	22.04	0.160
					38	18	22.03	0.160
					38	37	22.02	0.159
					75	0	21.95	0.157
		16QAM	20325	1747.5	1	0	23.07	0.203
					1	38	23.00	0.200
					1	74	22.95	0.197
					38	0	22.03	0.160
					38	18	21.99	0.158
					38	37	21.94	0.156
			20025	1717.5	75	0	21.84	0.153
					1	0	22.37	0.173
					1	38	22.27	0.169
					1	74	21.91	0.155
					38	0	21.08	0.128
					38	18	21.01	0.126
					38	37	21.01	0.126
			20175	1732.5	75	0	20.92	0.124
					1	0	21.91	0.155
					1	38	21.72	0.149
					1	74	21.70	0.148
					38	0	21.11	0.129
					38	18	21.06	0.128
					38	37	20.95	0.124
			20325	1747.5	75	0	20.92	0.124
					1	0	22.35	0.172
					1	38	22.17	0.165
					1	74	22.14	0.164
					38	0	21.02	0.126
					38	18	20.92	0.124
					38	37	20.90	0.123
					75	0	20.75	0.119

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	20 MHz	QPSK	20050	1720.0	1	0	23.08	0.203
					1	49	22.95	0.197
					1	99	22.83	0.192
					50	0	22.08	0.161
					50	25	22.03	0.160
					50	50	22.03	0.160
			20175	1732.5	100	0	22.02	0.159
					1	0	23.02	0.200
					1	49	22.91	0.195
					1	99	22.73	0.187
					50	0	22.04	0.160
					50	25	21.92	0.156
					50	50	21.91	0.155
					100	0	21.91	0.155
			20300	1745.0	1	0	22.99	0.199
					1	49	22.90	0.195
					1	99	22.88	0.194
					50	0	21.96	0.157
					50	25	21.85	0.153
					50	50	21.83	0.152
		16QAM	20050	1720.0	100	0	21.82	0.152
					1	0	22.38	0.173
					1	49	22.31	0.170
					1	99	21.54	0.143
					50	0	21.02	0.126
					50	25	20.97	0.125
			20175	1732.5	50	50	20.95	0.124
					100	0	20.93	0.124
					1	0	22.26	0.168
					1	49	21.96	0.157
					1	99	21.62	0.145
					50	0	21.02	0.126
					50	25	20.99	0.126
					50	50	20.93	0.124
					100	0	20.84	0.121
			20300	1745.0	1	0	22.33	0.171
					1	49	22.23	0.167
					1	99	21.78	0.151
					50	0	20.88	0.122
					50	25	20.87	0.122
					50	50	20.86	0.122
					100	0	20.83	0.121

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 5	1.4 MHz	QPSK	20407	824.7	1	0	22.74	0.188
					1	2	22.72	0.187
					1	5	22.71	0.187
					3	0	22.70	0.186
					3	1	22.69	0.186
					3	3	22.68	0.185
			20525	836.5	6	0	21.73	0.149
					1	0	22.76	0.189
					1	2	22.72	0.187
					1	5	22.69	0.186
					3	0	22.67	0.185
					3	1	22.66	0.185
					3	3	22.60	0.182
					6	0	21.83	0.152
			20643	848.3	1	0	22.81	0.191
					1	2	22.80	0.191
					1	5	22.77	0.189
					3	0	22.76	0.189
					3	1	22.67	0.185
					3	3	22.64	0.184
					6	0	21.81	0.152
		16QAM	20407	824.7	1	0	21.77	0.150
					1	2	21.71	0.148
					1	5	21.65	0.146
					3	0	21.63	0.146
					3	1	21.55	0.143
					3	3	21.31	0.135
			20525	836.5	6	0	20.71	0.118
					1	0	21.86	0.153
					1	2	21.83	0.152
					1	5	21.80	0.151
					3	0	21.68	0.147
					3	1	21.50	0.141
					3	3	21.42	0.139
					6	0	20.64	0.116
			20643	848.3	1	0	21.94	0.156
					1	2	21.93	0.156
					1	5	21.85	0.153
					3	0	21.69	0.148
					3	1	21.63	0.146
					3	3	21.60	0.145
					6	0	20.69	0.117

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 5	3 MHz	QPSK	20415	825.5	1	0	22.71	0.187
					1	8	22.68	0.185
					1	14	22.64	0.184
					8	0	21.74	0.149
					8	4	21.70	0.148
					8	7	21.64	0.146
					15	0	21.62	0.145
			20525	836.5	1	0	22.71	0.187
					1	8	22.71	0.187
					1	14	22.63	0.183
					8	0	21.77	0.150
					8	4	21.76	0.150
					8	7	21.71	0.148
					15	0	21.68	0.147
			20635	847.5	1	0	22.90	0.195
					1	8	22.78	0.190
					1	14	22.71	0.187
					8	0	21.84	0.153
					8	4	21.82	0.152
					8	7	21.76	0.150
					15	0	21.71	0.148
		16QAM	20415	825.5	1	0	21.97	0.157
					1	8	21.52	0.142
					1	14	21.34	0.136
					8	0	20.71	0.118
					8	4	20.57	0.114
					8	7	20.55	0.114
					15	0	20.54	0.113
			20525	836.5	1	0	21.95	0.157
					1	8	21.70	0.148
					1	14	21.29	0.135
					8	0	20.74	0.119
					8	4	20.68	0.117
					8	7	20.59	0.115
					15	0	20.38	0.109
			20635	847.5	1	0	21.70	0.148
					1	8	21.61	0.145
					1	14	21.59	0.144
					8	0	20.80	0.120
					8	4	20.69	0.117
					8	7	20.67	0.117
					15	0	20.61	0.115

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 5	5 MHz	QPSK	20425	826.5	1	0	22.74	0.188
					1	12	22.74	0.188
					1	24	22.65	0.184
					12	0	21.80	0.151
					12	6	21.79	0.151
					12	13	21.69	0.148
			20525	836.5	25	0	21.68	0.147
					1	0	22.61	0.182
					1	12	22.61	0.182
					1	24	22.56	0.180
					12	0	21.78	0.151
					12	6	21.74	0.149
					12	13	21.71	0.148
					25	0	21.70	0.148
		16QAM	20625	846.5	1	0	22.77	0.189
					1	12	22.63	0.183
					1	24	22.61	0.182
					12	0	21.84	0.153
					12	6	21.77	0.150
					12	13	21.70	0.148
			20425	826.5	25	0	21.65	0.146
					1	0	21.93	0.156
					1	12	21.81	0.152
					1	24	21.59	0.144
					12	0	20.71	0.118
					12	6	20.64	0.116
			20525	836.5	12	13	20.59	0.115
					25	0	20.58	0.114
					1	0	21.90	0.155
					1	12	21.65	0.146
					1	24	21.48	0.141
					12	0	20.63	0.116
			20625	846.5	12	6	20.61	0.115
					12	13	20.60	0.115
					25	0	20.53	0.113
					1	0	21.95	0.157
					1	12	21.70	0.148
					1	24	21.58	0.144
					12	0	20.92	0.124
					12	6	20.86	0.122
					12	11	20.74	0.119
					25	0	20.61	0.115

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 5	10 MHz	QPSK	20450	829.0	1	0	22.77	0.189
					1	24	22.60	0.182
					1	49	22.57	0.181
					25	0	21.72	0.149
					25	12	21.70	0.148
					25	25	21.67	0.147
			20525	836.5	50	0	21.62	0.145
					1	0	22.76	0.189
					1	24	22.72	0.187
					1	49	22.59	0.182
					25	0	21.73	0.149
					25	12	21.70	0.148
					25	25	21.66	0.147
					50	0	21.61	0.145
			20600	844.0	1	0	22.79	0.190
					1	24	22.76	0.189
					1	49	22.64	0.184
					25	0	21.72	0.149
					25	12	21.71	0.148
					25	25	21.71	0.148
					50	0	21.68	0.147
		16QAM	20450	829.0	1	0	21.59	0.144
					1	24	21.54	0.143
					1	49	21.49	0.141
					25	0	20.63	0.116
					25	12	20.61	0.115
					25	25	20.58	0.114
			20525	836.5	50	0	20.54	0.113
					1	0	21.92	0.156
					1	24	21.81	0.152
					1	49	21.33	0.136
					25	0	20.64	0.116
					25	12	20.64	0.116
					25	25	20.61	0.115
					50	0	20.57	0.114
			20600	844.0	1	0	21.93	0.156
					1	24	21.80	0.151
					1	49	21.64	0.146
					25	0	20.68	0.117
					25	12	20.67	0.117
					25	25	20.64	0.116
					50	0	20.56	0.114

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 12	1.4 MHz	QPSK	23017	699.7	1	0	22.74	0.188
					1	2	22.72	0.187
					1	5	22.71	0.187
					3	0	22.70	0.186
					3	1	22.69	0.186
					3	3	22.68	0.185
			23095	707.5	6	0	21.73	0.149
					1	0	22.76	0.189
					1	2	22.72	0.187
					1	5	22.69	0.186
					3	0	22.67	0.185
					3	1	22.66	0.185
					3	3	22.60	0.182
					6	0	21.83	0.152
			23173	715.3	1	0	22.81	0.191
					1	2	22.80	0.191
					1	5	22.77	0.189
					3	0	22.76	0.189
					3	1	22.67	0.185
					3	3	22.64	0.184
					6	0	21.81	0.152
		16QAM	23017	699.7	1	0	21.77	0.150
					1	2	21.71	0.148
					1	5	21.65	0.146
					3	0	21.63	0.146
					3	1	21.55	0.143
					3	3	21.31	0.135
			23095	707.5	6	0	20.71	0.118
					1	0	21.86	0.153
					1	2	21.83	0.152
					1	5	21.80	0.151
					3	0	21.68	0.147
					3	1	21.50	0.141
					3	3	21.42	0.139
					6	0	20.64	0.116
			23173	715.3	1	0	21.94	0.156
					1	2	21.93	0.156
					1	5	21.85	0.153
					3	0	21.69	0.148
					3	1	21.63	0.146
					3	3	21.60	0.145
					6	0	20.69	0.117

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 12	3 MHz	QPSK	23025	700.5	1	0	22.71	0.187
					1	8	22.68	0.185
					1	14	22.64	0.184
					8	0	21.74	0.149
					8	4	21.70	0.148
					8	7	21.64	0.146
			23095	707.5	15	0	21.62	0.145
					1	0	22.73	0.187
					1	8	22.71	0.187
					1	14	22.63	0.183
					8	0	21.77	0.150
					8	4	21.76	0.150
					8	7	21.71	0.148
					15	0	21.68	0.147
			23165	714.5	1	0	22.86	0.193
					1	8	22.78	0.190
					1	14	22.71	0.187
					8	0	21.84	0.153
					8	4	21.82	0.152
					8	7	21.76	0.150
					15	0	21.71	0.148
		16QAM	23025	700.5	1	0	21.97	0.157
					1	8	21.52	0.142
					1	14	21.34	0.136
					8	0	20.71	0.118
					8	4	20.57	0.114
					8	7	20.55	0.114
			23095	707.5	15	0	20.54	0.113
					1	0	21.95	0.157
					1	8	21.70	0.148
					1	14	21.29	0.135
					8	0	20.74	0.119
					8	4	20.68	0.117
					8	7	20.59	0.115
					15	0	20.38	0.109
			23165	714.5	1	0	21.70	0.148
					1	8	21.61	0.145
					1	14	21.59	0.144
					8	0	20.80	0.120
					8	4	20.69	0.117
					8	7	20.67	0.117
					15	0	20.61	0.115

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 12	5 MHz	QPSK	23035	701.5	1	0	22.74	0.188
					1	12	22.74	0.188
					1	24	22.65	0.184
					12	0	21.80	0.151
					12	6	21.79	0.151
					12	13	21.69	0.148
			23095	707.5	25	0	21.68	0.147
					1	0	22.61	0.182
					1	12	22.61	0.182
					1	24	22.56	0.180
					12	0	21.78	0.151
					12	6	21.74	0.149
					12	13	21.71	0.148
					25	0	21.70	0.148
		16QAM	23155	713.5	1	0	22.77	0.189
					1	12	22.63	0.183
					1	24	22.61	0.182
					12	0	21.84	0.153
					12	6	21.77	0.150
					12	13	21.70	0.148
			23035	701.5	25	0	21.65	0.146
					1	0	21.93	0.156
					1	12	21.81	0.152
					1	24	21.59	0.144
					12	0	20.71	0.118
					12	6	20.64	0.116
			23095	707.5	12	13	20.59	0.115
					25	0	20.58	0.114
					1	0	21.90	0.155
					1	12	21.65	0.146
					1	24	21.48	0.141
					12	0	20.63	0.116
					12	6	20.61	0.115
					12	13	20.60	0.115
					25	0	20.53	0.113
			23155	713.5	1	0	21.95	0.157
					1	12	21.70	0.148
					1	24	21.58	0.144
					12	0	20.92	0.124
					12	6	20.86	0.122
					12	11	20.74	0.119
					25	0	20.61	0.115

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 12	10 MHz	QPSK	23060	704.0	1	0	22.77	0.189
					1	24	22.60	0.182
					1	49	22.57	0.181
					25	0	21.72	0.149
					25	12	21.70	0.148
					25	25	21.67	0.147
			23095	707.5	50	0	21.62	0.145
					1	0	22.76	0.189
					1	24	22.72	0.187
					1	49	22.59	0.182
					25	0	21.73	0.149
					25	12	21.70	0.148
					25	25	21.66	0.147
					50	0	21.61	0.145
			23130	711.0	1	0	22.79	0.190
					1	24	22.76	0.189
					1	49	22.64	0.184
					25	0	21.72	0.149
					25	12	21.71	0.148
					25	25	21.71	0.148
		16QAM	23060	704.0	50	0	21.68	0.147
					1	0	21.59	0.144
					1	24	21.54	0.143
					1	49	21.49	0.141
					25	0	20.63	0.116
					25	12	20.61	0.115
			23095	707.5	25	25	20.58	0.114
					50	0	20.54	0.113
					1	0	21.92	0.156
					1	24	21.81	0.152
					1	49	21.33	0.136
					25	0	20.64	0.116
					25	12	20.64	0.116
					25	25	20.61	0.115
					50	0	20.57	0.114
			23130	711.0	1	0	21.93	0.156
					1	24	21.80	0.151
					1	49	21.64	0.146
					25	0	20.68	0.117
					25	12	20.67	0.117
					25	25	20.64	0.116
					50	0	20.56	0.114

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 13	5 MHz	QPSK	23205	779.5	1	0	22.82	0.191
					1	12	22.43	0.175
					1	24	22.32	0.171
					12	0	21.93	0.156
					12	6	21.92	0.156
					12	13	21.59	0.144
			23230	782.0	25	0	21.21	0.132
					1	0	22.86	0.193
					1	12	22.84	0.192
					1	24	22.35	0.172
					12	0	22.06	0.161
					12	6	21.90	0.155
					12	13	21.47	0.140
					25	0	21.45	0.140
			23255	784.5	1	0	22.88	0.194
					1	12	22.78	0.190
					1	24	22.75	0.188
					12	0	22.06	0.161
					12	6	21.76	0.150
					12	13	21.48	0.141
					25	0	21.44	0.139
		16QAM	23205	779.5	1	0	21.96	0.157
					1	12	21.88	0.154
					1	24	21.16	0.131
					12	0	21.06	0.128
					12	6	20.87	0.122
					12	13	20.81	0.121
			23230	782.0	25	0	20.61	0.115
					1	0	21.94	0.156
					1	12	21.80	0.151
					1	24	21.66	0.147
					12	0	21.13	0.130
					12	6	20.95	0.124
					12	13	20.56	0.114
					25	0	20.33	0.108
			23255	784.5	1	0	22.02	0.159
					1	12	21.72	0.149
					1	24	21.64	0.146
					12	0	21.05	0.127
					12	6	21.01	0.126
					12	11	20.86	0.122
					25	0	20.49	0.112

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 13	10 MHz	QPSK	23230	782.0	1	0	22.74	0.188
					1	24	22.65	0.184
					1	49	22.59	0.182
					25	0	22.21	0.166
					25	12	22.17	0.165
					25	25	22.12	0.163
					50	0	21.72	0.149
		16QAM	23230	782.0	1	0	21.91	0.155
					1	24	21.75	0.150
					1	49	21.55	0.143
					25	0	21.46	0.140
					25	12	21.35	0.136
					25	25	21.01	0.126
					50	0	20.58	0.114

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 17	5 MHz	QPSK	23755	706.5	1	0	22.90	0.195
					1	12	22.84	0.192
					1	24	22.77	0.189
					12	0	21.86	0.153
					12	6	21.79	0.151
					12	13	21.76	0.150
			23790	710.0	25	0	21.72	0.149
					1	0	22.83	0.192
					1	12	22.82	0.191
					1	24	22.62	0.183
					12	0	21.88	0.154
					12	6	21.84	0.153
					12	13	21.83	0.152
					25	0	21.82	0.152
			23825	713.5	1	0	22.90	0.195
					1	12	22.72	0.187
					1	24	22.53	0.179
					12	0	21.85	0.153
					12	6	21.84	0.153
					12	13	21.80	0.151
		16QAM	23755	706.5	25	0	21.76	0.150
					1	0	22.08	0.161
					1	12	22.02	0.159
					1	24	21.69	0.148
					12	0	20.82	0.121
					12	6	20.78	0.120
			23790	710.0	12	13	20.75	0.119
					25	0	20.74	0.119
					1	0	21.78	0.151
					1	12	21.72	0.149
					1	24	21.44	0.139
					12	0	20.94	0.124
					12	6	20.83	0.121
					12	13	20.65	0.116
					25	0	20.61	0.115
			23825	713.5	1	0	21.97	0.157
					1	12	21.68	0.147
					1	24	21.48	0.141
					12	0	20.96	0.125
					12	6	20.96	0.125
					12	13	20.82	0.121
					25	0	20.78	0.120

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 17	10 MHz	QPSK	23780	709.0	1	0	22.95	0.197
					1	24	22.76	0.189
					1	49	22.65	0.184
					25	0	21.88	0.154
					25	12	21.83	0.152
					25	25	21.82	0.152
			23790	710.0	50	0	21.78	0.151
					1	0	22.92	0.196
					1	24	22.82	0.191
					1	49	22.64	0.184
					25	0	21.82	0.152
					25	12	21.80	0.151
					25	25	21.80	0.151
					50	0	21.76	0.150
			23800	711.0	1	0	22.76	0.189
					1	24	22.65	0.184
					1	49	22.63	0.183
					25	0	21.79	0.151
					25	12	21.77	0.150
					25	25	21.76	0.150
		16QAM	23780	709.0	50	0	21.69	0.148
					1	0	21.83	0.152
					1	24	21.70	0.148
					1	49	21.45	0.140
					25	0	20.85	0.122
					25	12	20.77	0.119
			23790	710.0	25	25	20.72	0.118
					50	0	20.72	0.118
					1	0	22.14	0.164
					1	24	21.96	0.157
					1	49	21.66	0.147
					25	0	20.82	0.121
					25	12	20.81	0.121
					25	25	20.75	0.119
					50	0	20.72	0.118
			23800	711.0	1	0	21.97	0.157
					1	24	21.64	0.146
					1	49	21.52	0.142
					25	0	20.79	0.120
					25	12	20.78	0.120
					25	25	20.73	0.118
					50	0	20.67	0.117

3 Effective Radiated Power / Equivalent Isotropic Radiated Power Test

3.1. Limit

For FCC Part 27: The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 1 Watts.

For FCC Part 27.50(b)(9): Control stations and mobile stations transmitting in the 746-757 MHz, and 776-788 MHz bands are limited to 30 watts ERP.

For FCC Part 27.50(c)(9): Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP.

For FCC Part 27.50(c)(10): Portable stations in the 698-746 MHz band are limited to 3 watts ERP.

For FCC Part 22.913(a)(2): The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(b): The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

3.2. Test Instruments

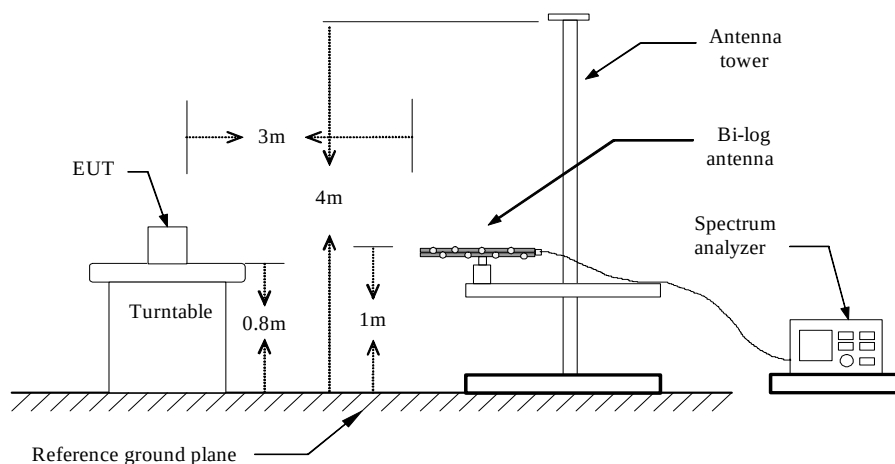
3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/06/2015	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/06/2015	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/24/2015	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/24/2015	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	07/22/2014	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/12/2015	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	07/02/2014	(1)
Test Site	ATL	TE01	888001	08/28/2014	(1)

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

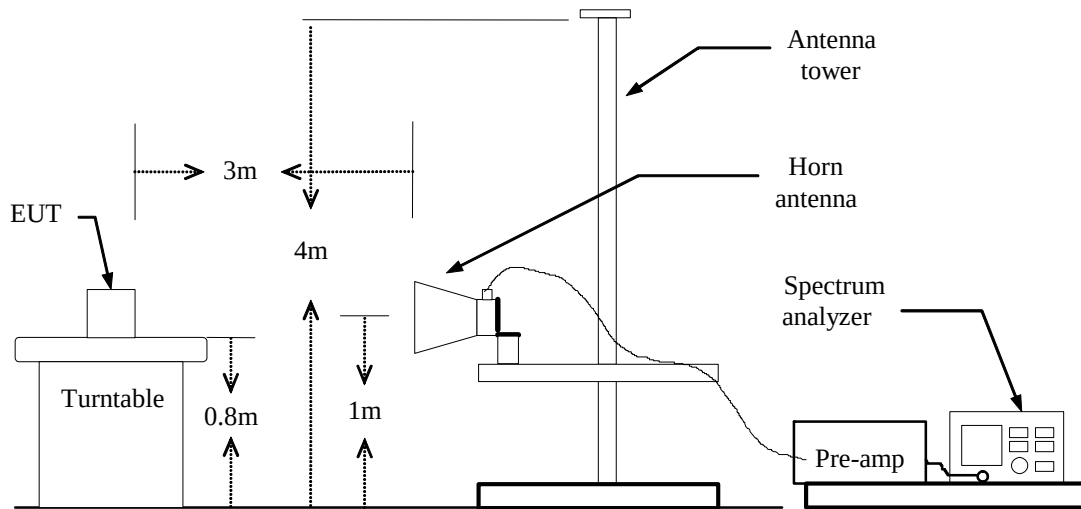
Note: N.C.R. = No Calibration Request.

3.3. Test Setup

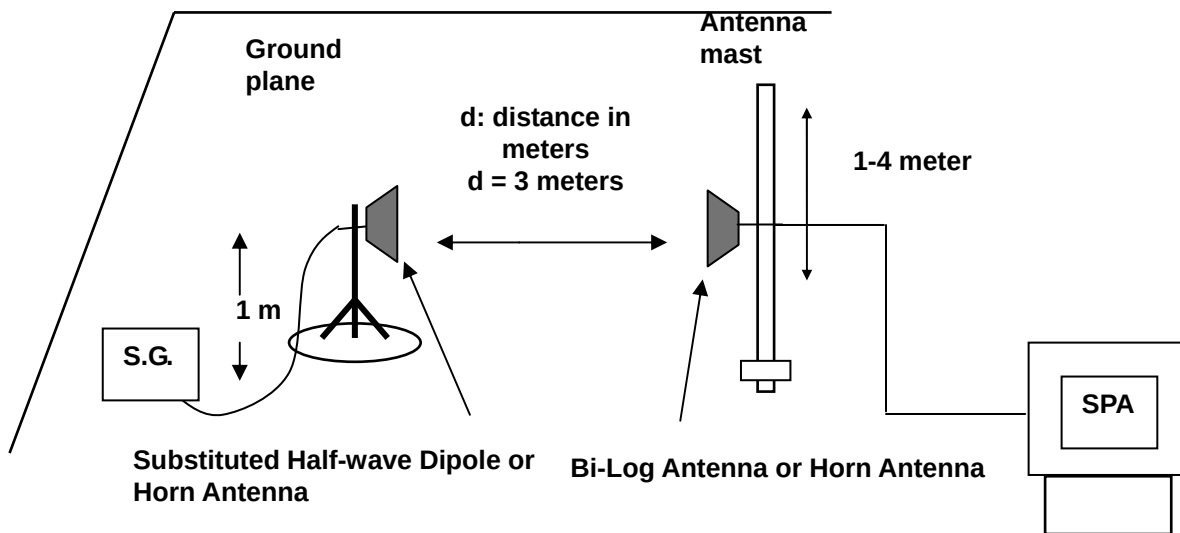
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



3.4. Test Procedure

- a. The EUT was set up for the maximum power with LTE link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range). RWB and VBW is 5MHz for LTE and WCDMA mode.
- b. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- d. $E.I.R.P. = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$
- e. $E.R.P. = E.I.R.P. - 2.15 \text{ dB}$

3.5. Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is $\pm 3.072 \text{ dB}$.

3.6. Test Result

Model Number	LE910-NA V2				
Test Item	E.I.R.P. / E.R.P.				
Date of Test	08/03/2015		Test Site	TC03	

LTE Band 2										
Channel Bandwidth	Modulation	CH	Frequency (MHz)	RB Configuration		Average Power (dBm)	Antenna Gain (dBi)	E.I.R.P.		Limit (W)
				Size	Offset			(dBm)	(W)	
1.4 M	QPSK	18900	1880.0	1	0	23.38	2.14	25.52	0.356	< 2
3 MHz	QPSK	18900	1880.0	1	0	23.39	2.14	25.53	0.357	< 2
5 MHz	QPSK	18900	1880.0	1	0	23.40	2.14	25.54	0.358	< 2
10 MHz	QPSK	18650	1855.0	1	0	23.30	2.14	25.44	0.350	< 2
15 MHz	QPSK	18900	1880.0	1	0	23.43	2.14	25.57	0.361	< 2
20 MHz	QPSK	18900	1880.0	1	0	23.41	2.14	25.55	0.359	< 2

LTE Band 4										
Channel Bandwidth	Modulation	CH	Frequency (MHz)	RB Configuration		Average Power (dBm)	Antenna Gain (dBi)	E.I.R.P.		Limit (W)
				Size	Offset			(dBm)	(W)	
1.4 M	QPSK	19957	1710.7	1	0	23.12	2.14	25.26	0.336	< 1
3 MHz	QPSK	19965	1711.5	1	0	22.99	2.14	25.13	0.326	< 1
5 MHz	QPSK	19975	1712.5	1	0	23.01	2.14	25.15	0.327	< 1
10 MHz	QPSK	20000	1715.0	1	0	23.07	2.14	25.21	0.332	< 1
15 MHz	QPSK	20025	1717.5	1	0	23.11	2.14	25.25	0.335	< 1
20 MHz	QPSK	20050	1720.0	1	0	23.08	2.14	25.22	0.333	< 1

LTE Band 5										
Channel Bandwidth	Modulation	CH	Frequency (MHz)	RB Configuration		Average Power (dBm)	Antenna Gain (dBi)	E.R.P.		Limit (W)
				Size	Offset			(dBm)	(W)	
1.4 M	QPSK	20643	848.3	1	0	22.81	2.14	22.80	0.191	< 7
3 MHz	QPSK	20635	847.5	1	0	22.90	2.14	22.89	0.195	< 7
5 MHz	QPSK	20625	846.5	1	0	22.77	2.14	22.76	0.189	< 7
10 MHz	QPSK	20600	844.0	1	0	22.79	2.14	22.78	0.190	< 7

LTE Band 12										
Channel Bandwidth	Modulation	CH	Frequency (MHz)	RB Configuration		Average Power (dBm)	Antenna Gain (dBi)	E.R.P.		Limit (W)
				Size	Offset			(dBm)	(W)	
1.4 MHz	QPSK	23173	715.3	1	0	22.81	2.14	24.95	0.313	< 30
3 MHz	QPSK	23165	714.5	1	0	22.86	2.14	25.00	0.316	< 30
5 MHz	QPSK	23155	713.5	1	0	22.77	2.14	24.91	0.310	< 30
10 MHz	QPSK	23130	711.0	1	0	22.79	2.14	24.93	0.311	< 30

LTE Band 13										
Channel Bandwidth	Modulation	CH	Frequency (MHz)	RB Configuration		Average Power (dBm)	Antenna Gain (dBi)	E.R.P.		Limit (W)
				Size	Offset			(dBm)	(W)	
5 MHz	QPSK	23255	784.5	1	0	22.88	2.14	25.02	0.318	< 30
10 MHz	QPSK	23230	782.0	1	0	22.74	2.14	24.88	0.308	< 30

LTE Band 17										
Channel Bandwidth	Modulation	CH	Frequency (MHz)	RB Configuration		Average Power (dBm)	Antenna Gain (dBi)	E.R.P.		Limit (W)
				Size	Offset			(dBm)	(W)	
5 MHz	QPSK	23755	706.5	1	0	22.90	2.14	22.89	0.195	< 3
		23825	713.5	1	0	22.90	2.14	22.89	0.195	< 3
10 MHz	QPSK	23780	709.0	1	0	22.95	2.14	22.94	0.197	< 3

4 Frequency Stability Test

4.1. Limit

According to the FCC rule shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation. The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with the 2.1055(a)(1) -30°C ~ 50°C.

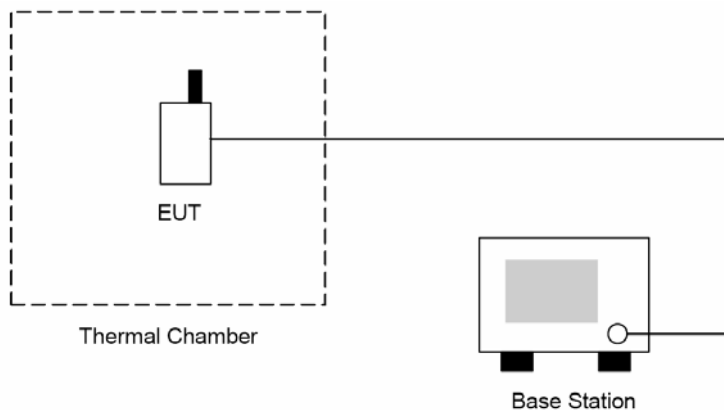
4.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Wideband Radio Communication Test	R & S	CMW500	103168	11/05/2014	(1)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/27/2015	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

4.3. Setup



4.4. Test Procedure

The measurement is made according to FCC rules:

1. The EUT and test equipment were set up as shown on the following section.
2. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute.
3. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The EUT was placed in a temperature chamber at $25 \pm 5^{\circ}\text{C}$ and connected as the following section.
5. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
6. The temperature tests were performed for the worst case.
7. Test data was recorded.

4.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability measurement is $\pm 10\text{Hz}$.

4.6. Test Result

Model Number	LE910-NA V2		
Test Item	Frequency Stability		
Date of Test	06/18/2015	Test Site	TE05

LTE Band 2 _ QPSK						
Voltage						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
20 MHz	1880.0	4.20	20	1.76	0.001	± 2.5
		3.80	20	3.35	0.002	± 2.5
		3.40	20	-3.87	-0.002	± 2.5
Temperature						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
20 MHz	1880.0	3.80	-10	2.11	0.001	± 2.5
		3.80	0	3.04	0.002	± 2.5
		3.80	10	-3.85	-0.002	± 2.5
		3.80	20	-0.56	0.000	± 2.5
		3.80	30	-4.11	-0.002	± 2.5
		3.80	40	1.28	0.001	± 2.5
		3.80	50	6.90	0.004	± 2.5
		3.80	55	-14.24	-0.008	± 2.5

LTE Band 4 _ QPSK						
Voltage						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
20 MHz	1732.5	4.20	20	2.28	0.001	± 2.5
		3.80	20	0.56	0.000	± 2.5
		3.40	20	-6.58	-0.004	± 2.5
Temperature						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
20 MHz	1732.5	3.80	-10	0.78	0.000	± 2.5
		3.80	0	2.75	0.002	± 2.5
		3.80	10	-3.35	-0.002	± 2.5
		3.80	20	2.57	0.001	± 2.5
		3.80	30	-2.75	-0.002	± 2.5
		3.80	40	-0.98	-0.001	± 2.5
		3.80	50	6.29	0.004	± 2.5
		3.80	55	-11.71	-0.007	± 2.5

Note: The device temperature only support -10°C to +55°C.

LTE Band 5 _ QPSK						
Voltage						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	836.5	4.20	20	1.11	0.001	± 2.5
		3.80	20	0.73	0.001	± 2.5
		3.40	20	-3.74	-0.004	± 2.5
Temperature						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	836.5	3.80	-10	1.84	0.002	± 2.5
		3.80	0	1.49	0.002	± 2.5
		3.80	10	-4.86	-0.006	± 2.5
		3.80	20	-0.28	0.000	± 2.5
		3.80	30	-5.47	-0.007	± 2.5
		3.80	40	1.35	0.002	± 2.5
		3.80	50	4.49	0.005	± 2.5
		3.80	55	-13.63	-0.016	± 2.5

LTE Band 12 _ QPSK						
Voltage						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	705.5	4.20	20	2.34	0.003	± 2.5
		3.80	20	2.37	0.003	± 2.5
		3.40	20	-6.77	-0.010	± 2.5
Temperature						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	707.5	3.80	-10	3.41	0.005	± 2.5
		3.80	0	3.39	0.005	± 2.5
		3.80	10	-5.57	-0.008	± 2.5
		3.80	20	0.88	0.001	± 2.5
		3.80	30	-1.58	-0.002	± 2.5
		3.80	40	1.35	0.002	± 2.5
		3.80	50	3.93	0.006	± 2.5
		3.80	55	-12.54	-0.018	± 2.5

Note: The device temperature only support -10°C to +55°C.

LTE Band 13 _ QPSK						
Voltage						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	782.0	4.20	20	1.88	0.002	± 2.5
		3.80	20	1.79	0.002	± 2.5
		3.40	20	-7.01	-0.009	± 2.5
Temperature						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	782.0	3.80	-10	4.05	0.005	± 2.5
		3.80	0	3.80	0.005	± 2.5
		3.80	10	-3.85	-0.005	± 2.5
		3.80	20	1.17	0.001	± 2.5
		3.80	30	-3.84	-0.005	± 2.5
		3.80	40	-0.65	-0.001	± 2.5
		3.80	50	4.50	0.006	± 2.5
		3.80	55	-11.65	-0.015	± 2.5

LTE Band 17 _ QPSK						
Voltage						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	710.0	4.20	20	4.27	0.006	± 2.5
		3.80	20	3.20	0.005	± 2.5
		3.40	20	-3.24	-0.005	± 2.5
Temperature						
Channel Bandwidth	Frequency (MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
10 MHz	710.0	3.80	-10	1.11	0.002	± 2.5
		3.80	0	1.05	0.001	± 2.5
		3.80	10	-4.62	-0.007	± 2.5
		3.80	20	1.40	0.002	± 2.5
		3.80	30	-4.92	-0.007	± 2.5
		3.80	40	-1.28	-0.002	± 2.5
		3.80	50	7.54	0.011	± 2.5
		3.80	55	-12.05	-0.017	± 2.5

Note: The device temperature only support -10°C to +55°C.

5 Emission Bandwidth & Occupied Bandwidth Test

5.1. Limit

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.

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

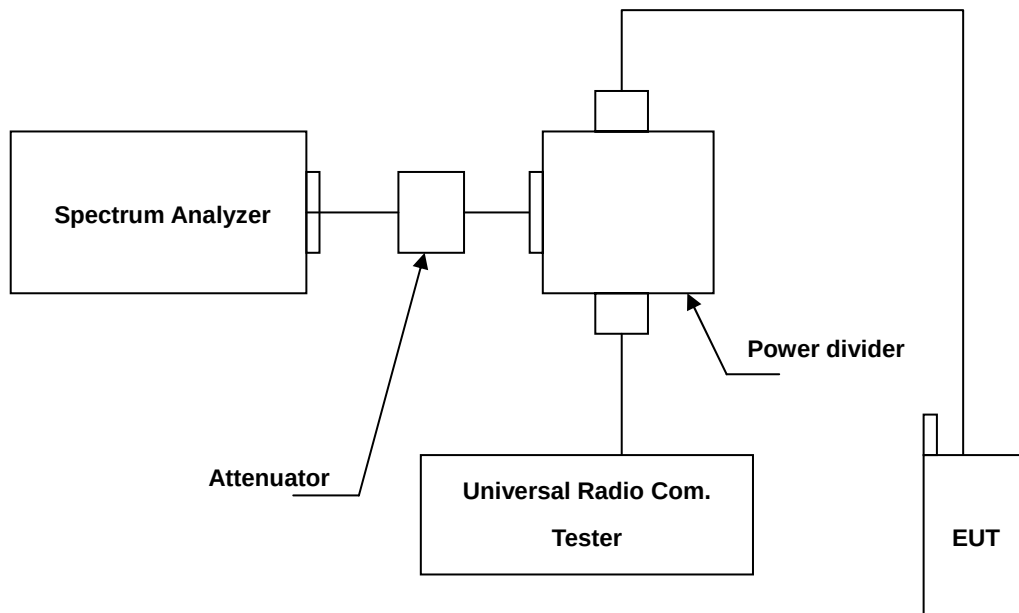
5.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2015	(1)
Wideband Radio Communication Test	R & S	CMW500	103168	11/05/2014	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

5.3. Setup



5.4. Test Procedure

The measurement is made according to FCC rules:

- a. The EUT makes a phone call to the communication simulator. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels. (low, middle and high operational frequency range.)
- b. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

5.5. Uncertainty

The measurement uncertainty is defined as $\pm 10\text{Hz}$

5.6. Test Result

Model Number	LE910-NA V2		
Test Item	Emission Bandwidth & Occupied Bandwidth		
Date of Test	06/11/2015	Test Site	TE05

LTE Band 2				
Modulation	Channel Bandwidth	Frequency (MHz)	26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)
QPSK	1.4 MHz	1850.7	1.248	1.0854
		1880.0	1.248	1.0761
		1909.3	1.247	1.0837
	3 MHz	1851.5	2.965	2.6905
		1880.0	2.937	2.6827
		1908.5	2.971	2.6849
	5 MHz	1852.5	4.991	4.4720
		1880.0	4.849	4.4571
		1907.5	4.949	4.4698
	10 MHz	1855.0	9.863	8.9686
		1880.0	9.815	8.9667
		1905.0	9.778	8.9397
	15 MHz	1857.5	15.371	13.4528
		1880.0	14.617	13.4608
		1902.5	14.589	13.3895
	20 MHz	1860.0	19.361	17.8655
		1880.0	19.324	17.9052
		1900.0	19.538	17.8316
16QAM	1.4 MHz	1850.7	1.248	1.0847
		1880.0	1.248	1.0762
		1909.3	1.245	1.0826
	3 MHz	1851.5	2.973	2.6924
		1880.0	2.938	2.6821
		1908.5	2.932	2.6833
	5 MHz	1852.5	4.950	4.4686
		1880.0	4.871	4.4643
		1907.5	4.975	4.4683
	10 MHz	1855.0	9.821	8.9631
		1880.0	9.831	8.9604
		1905.0	9.742	8.9522
	15 MHz	1857.5	15.265	13.4425
		1880.0	14.837	13.4464
		1902.5	14.730	13.4010
	20 MHz	1860.0	19.203	17.8778
		1880.0	19.383	17.9027
		1900.0	19.538	17.7768

LTE Band 4				
Modulation	Channel Bandwidth	Frequency (MHz)	26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)
QPSK	1.4 MHz	1710.7	1.302	1.0800
		1732.5	1.230	1.0834
		1754.3	1.295	1.0806
	3 MHz	1711.5	2.979	2.6882
		1732.5	2.973	2.6841
		1753.5	2.938	2.6788
	5 MHz	1712.5	4.878	4.4739
		1732.5	4.909	4.4611
		1752.5	4.898	4.4506
	10 MHz	1715.0	9.959	8.9670
		1732.5	9.854	8.9554
		1750.0	9.835	8.9723
	15 MHz	1717.5	15.297	13.4593
		1732.5	14.665	13.4221
		1747.5	15.039	13.4448
	20 MHz	1720.0	19.573	17.8902
		1732.5	19.484	17.8358
		1745.0	19.752	17.9703
16QAM	1.4 MHz	1710.7	1.307	1.0808
		1732.5	1.246	1.0832
		1754.3	1.277	1.0808
	3 MHz	1711.5	2.983	2.6873
		1732.5	2.981	2.6940
		1753.5	2.929	2.6803
	5 MHz	1712.5	4.861	4.4657
		1732.5	4.941	4.4657
		1752.5	4.866	4.4478
	10 MHz	1715.0	9.936	8.9679
		1732.5	9.923	8.9525
		1750.0	9.804	8.9652
	15 MHz	1717.5	14.921	13.4265
		1732.5	14.876	13.4029
		1747.5	15.039	13.4260
	20 MHz	1720.0	19.565	17.8961
		1732.5	19.504	17.8465
		1745.0	19.659	17.9862

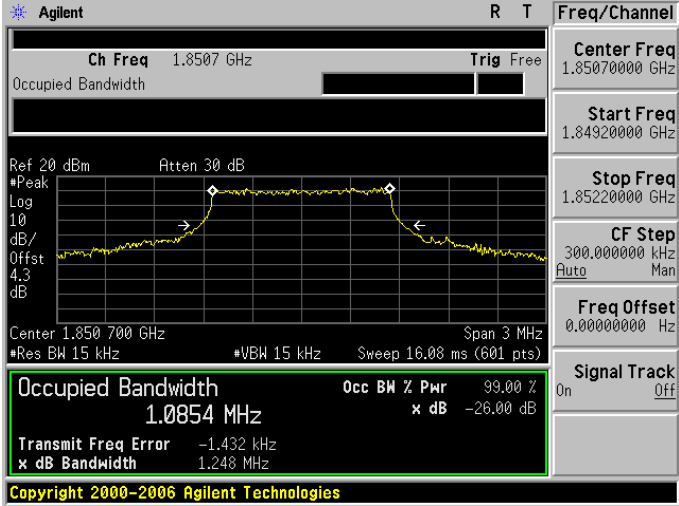
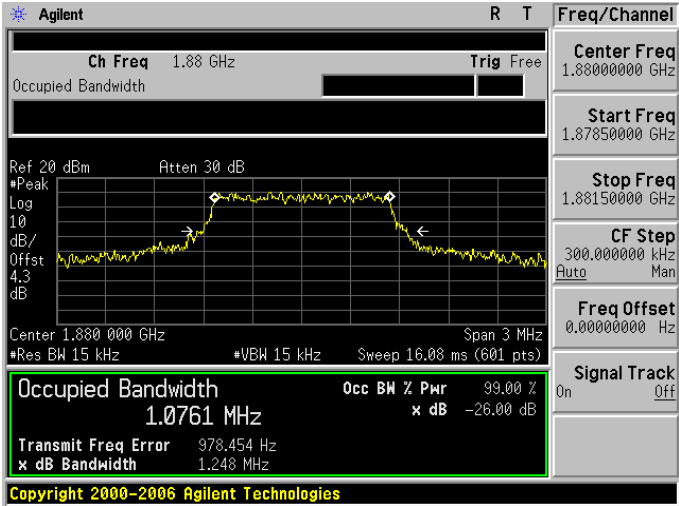
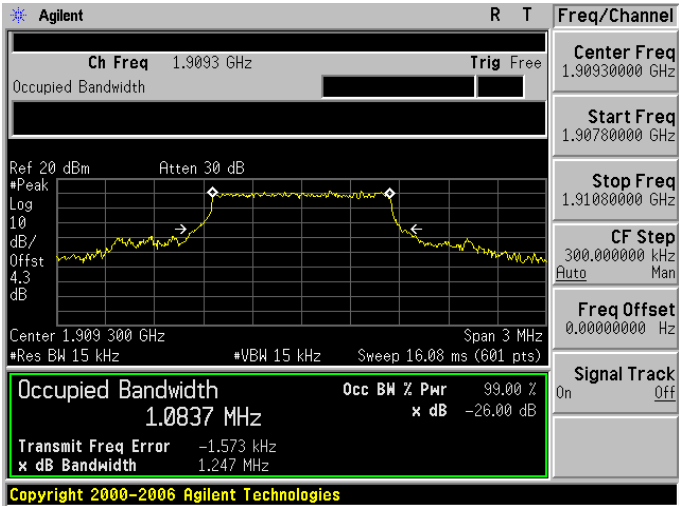
LTE Band 5				
Modulation	Channel Bandwidth	Frequency (MHz)	26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)
QPSK	1.4 MHz	824.7	1.283	1.0815
		836.5	1.222	1.0820
		848.3	1.246	1.0858
	3 MHz	825.5	2.965	2.6901
		836.5	2.953	2.6876
		847.5	2.948	2.6904
	5 MHz	826.5	4.923	4.4747
		836.5	4.891	4.4618
		846.5	4.848	4.4555
	10 MHz	829.0	9.888	8.9697
		836.5	9.813	8.9613
		844.0	9.787	8.9640
16QAM	1.4 MHz	824.7	1.282	1.0814
		836.5	1.232	1.0817
		848.3	1.239	1.0857
	3 MHz	825.5	2.954	2.6906
		836.5	2.966	2.6914
		847.5	2.928	2.6924
	5 MHz	826.5	4.903	4.4558
		836.5	4.915	4.4661
		846.5	4.802	4.4482
	10 MHz	829.0	9.841	8.9701
		836.5	9.768	8.9534
		844.0	9.792	8.9318

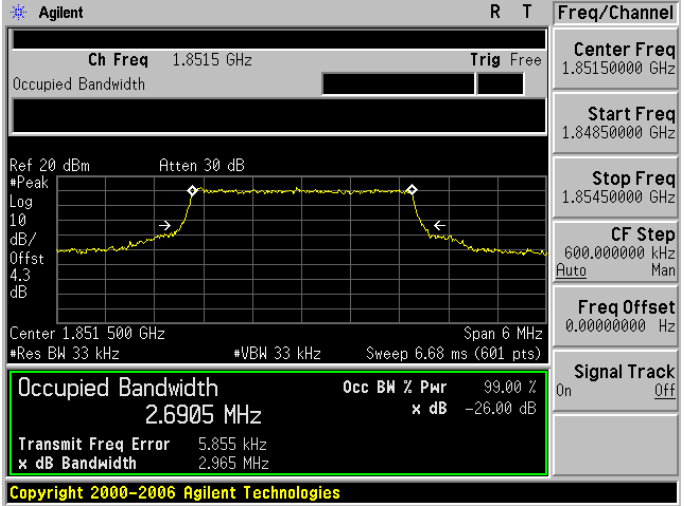
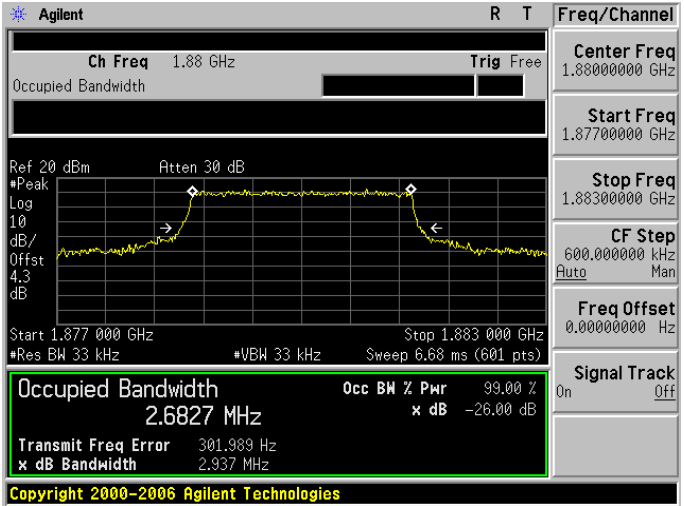
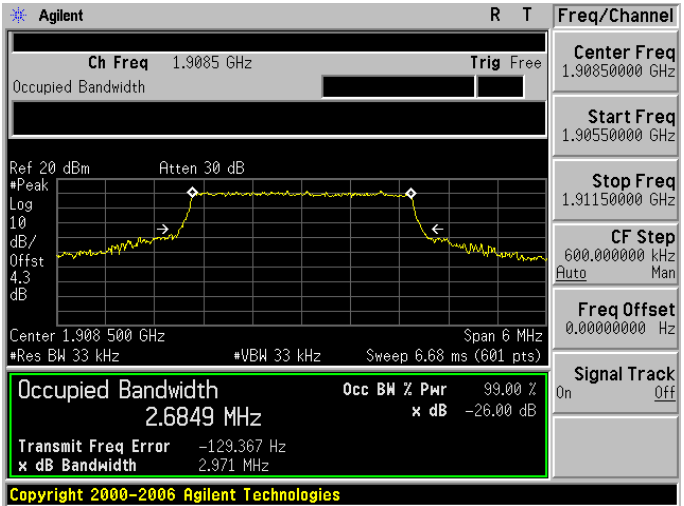
LTE Band 12				
Modulation	Channel Bandwidth	Frequency (MHz)	26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)
QPSK	1.4 MHz	699.7	1.246	1.0891
		707.5	1.294	1.0796
		715.3	1.232	1.0823
	3 MHz	700.5	2.958	2.6928
		707.5	2.963	2.6947
		714.5	2.933	2.6874
	5 MHz	701.5	4.916	4.4600
		707.5	4.907	4.4589
		713.5	4.871	4.4548
	10 MHz	704.0	10.108	8.9831
		707.5	9.675	8.9567
		711.0	9.893	8.9505
16QAM	1.4 MHz	699.7	1.242	1.0870
		707.5	1.296	1.0814
		715.3	1.232	1.0817
	3 MHz	700.5	2.954	2.6919
		707.5	2.965	2.6946
		714.5	2.917	2.6868
	5 MHz	701.5	4.910	4.4605
		707.5	4.966	4.4658
		713.5	4.818	4.4490
	10 MHz	704.0	10.103	8.9834
		707.5	9.911	8.9548
		711.0	9.702	8.9481

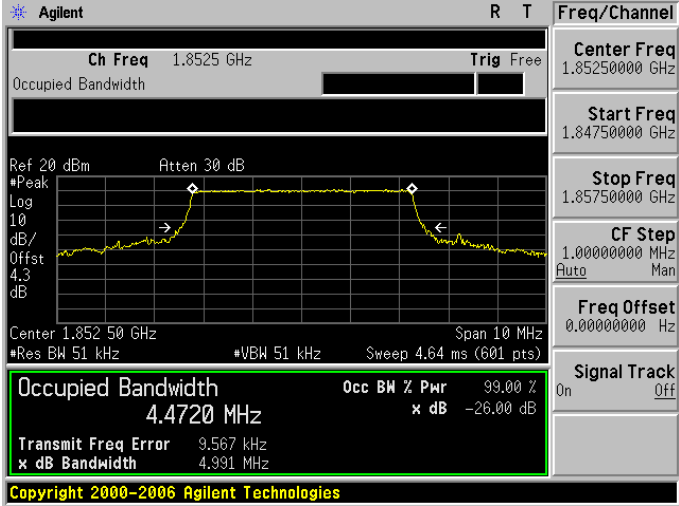
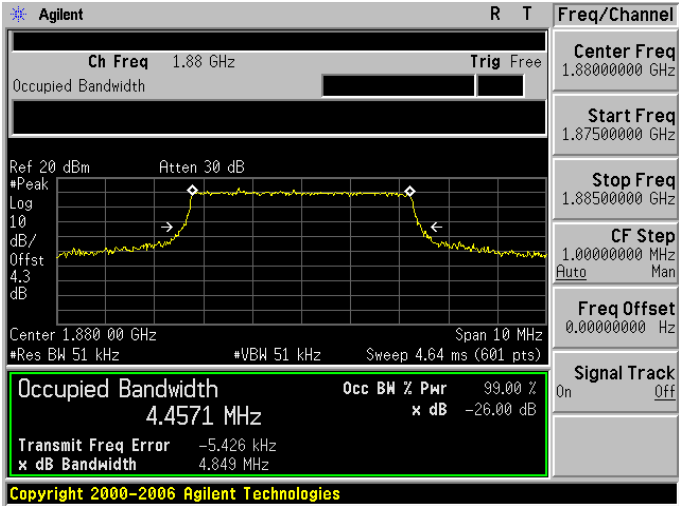
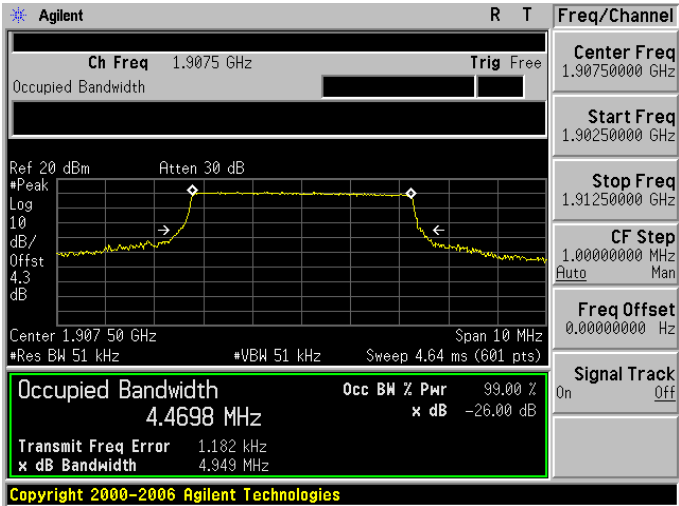
LTE Band 13				
Modulation	Channel Bandwidth	Frequency (MHz)	-26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)
QPSK	5 MHz	779.5	4.840	4.4606
		782.0	4.947	4.4669
		784.5	4.884	4.4500
16QAM		779.5	4.829	4.4560
		782.0	4.964	4.4717
		784.5	4.903	4.4482
QPSK	10 MHz	782.0	9.812	8.9809
16QAM		782.0	9.812	8.9625

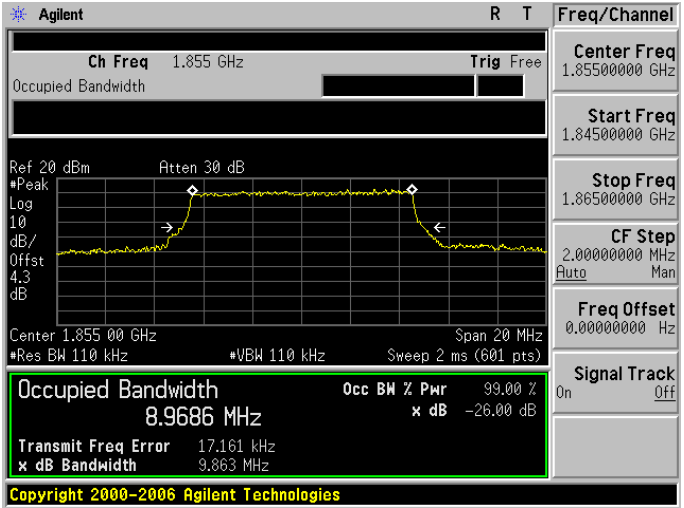
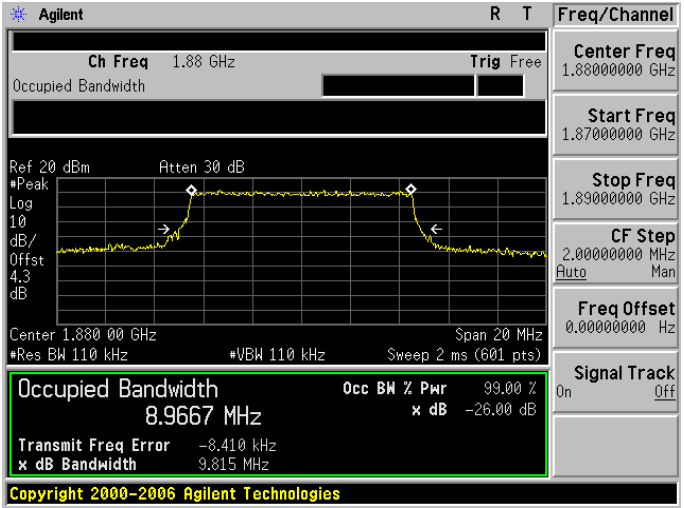
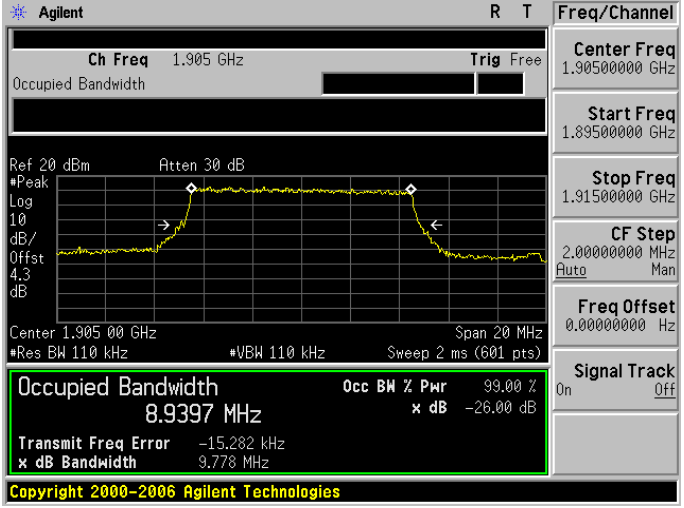
LTE Band 17				
Channel Bandwidth	Modulation	Frequency (MHz)	-26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)
QPSK	5 MHz	706.5	4.990	4.4758
		710.0	4.888	4.4559
		713.5	4.920	4.4752
	10 MHz	706.5	9.775	8.9568
		710.0	9.719	8.9352
		713.5	9.896	8.9558
16QAM	5 MHz	709.0	4.969	4.4770
		710.0	4.888	4.4634
		711.0	4.912	4.4647
	10 MHz	709.0	9.754	8.9507
		710.0	9.864	8.9502
		711.0	9.795	8.9435

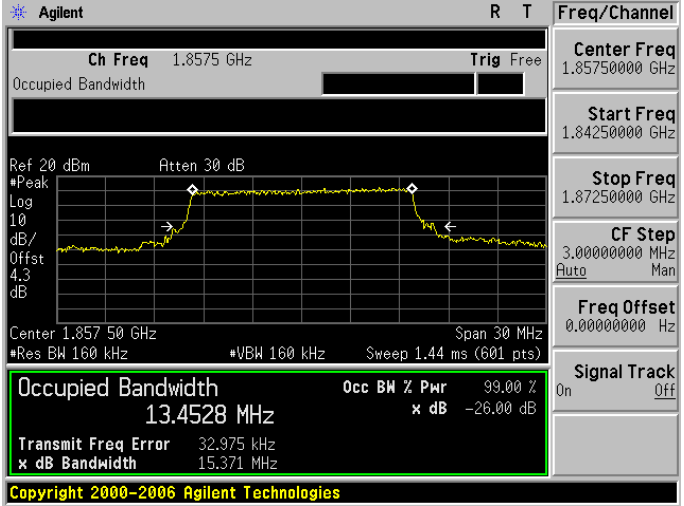
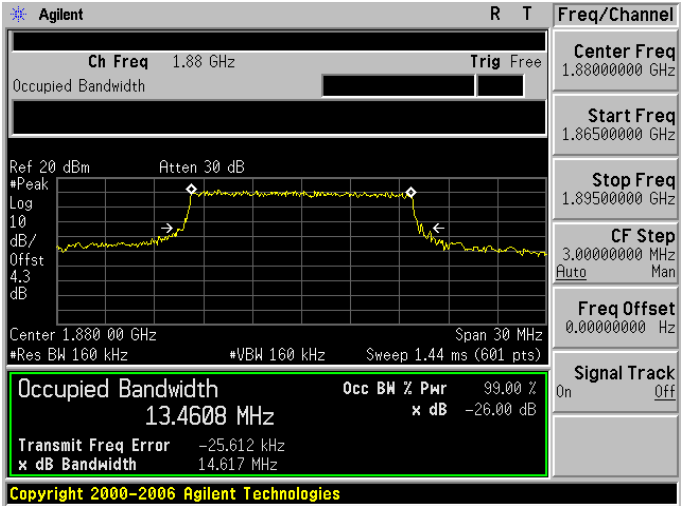
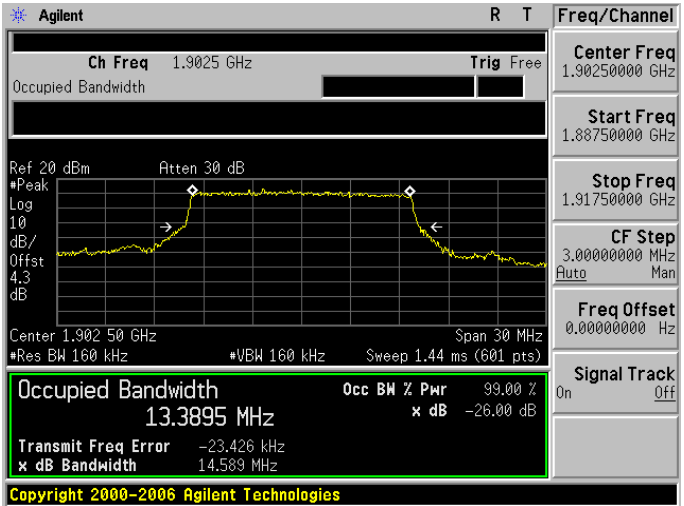
5.7. Test Graphs

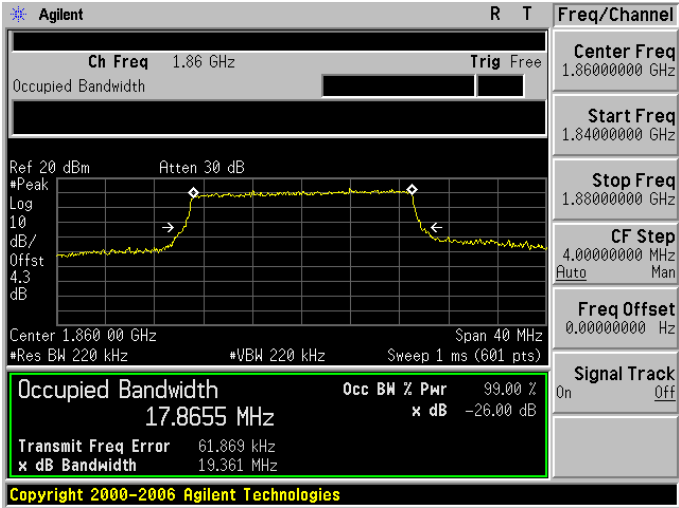
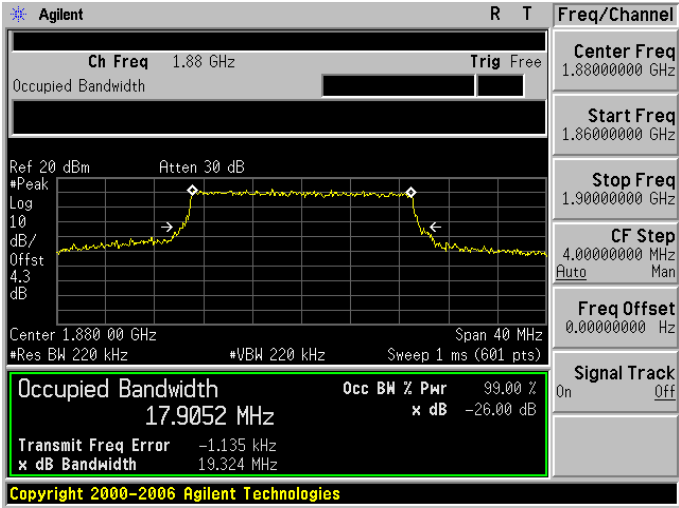
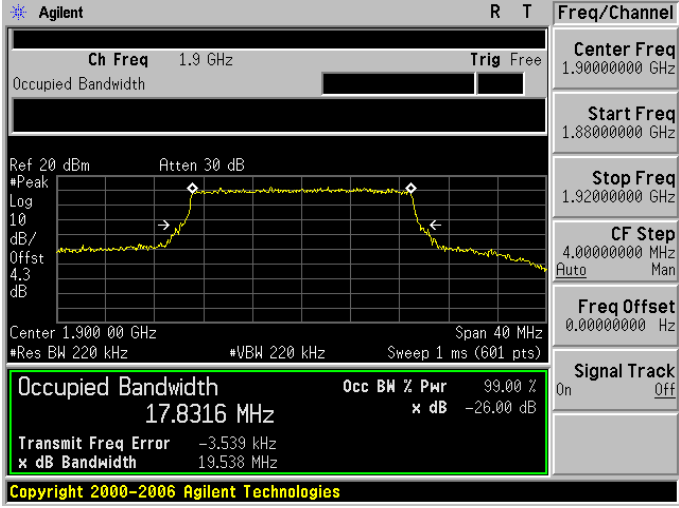
LTE Band 2 (Channel Bandwidth: 1.4 MHz) _ QPSK	
1850.7 MHz	 Agilent R T Freq/Channel Ch Freq 1.8507 GHz Trig Free Center Freq 1.85070000 GHz Start Freq 1.84920000 GHz Stop Freq 1.85220000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.850 700 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0854 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.432 kHz x dB Bandwidth 1.248 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.87850000 GHz Stop Freq 1.88150000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.880 000 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0761 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 978.454 Hz x dB Bandwidth 1.248 MHz Copyright 2000-2006 Agilent Technologies
1909.3 MHz	 Agilent R T Freq/Channel Ch Freq 1.9093 GHz Trig Free Center Freq 1.90930000 GHz Start Freq 1.90780000 GHz Stop Freq 1.91080000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.909 300 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0837 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.573 kHz x dB Bandwidth 1.247 MHz Copyright 2000-2006 Agilent Technologies

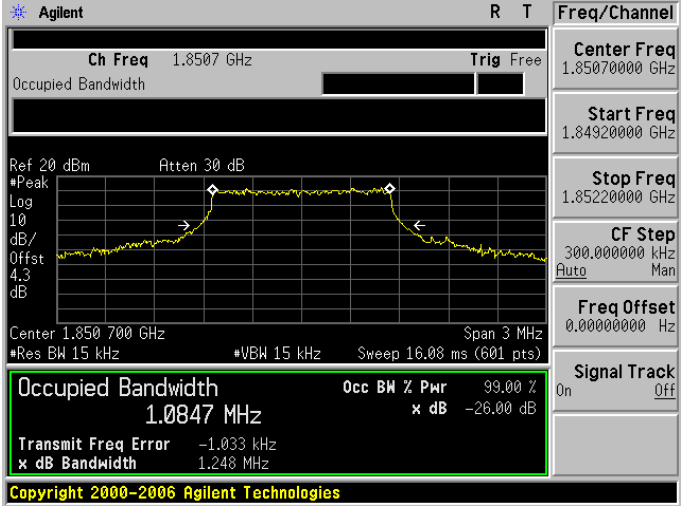
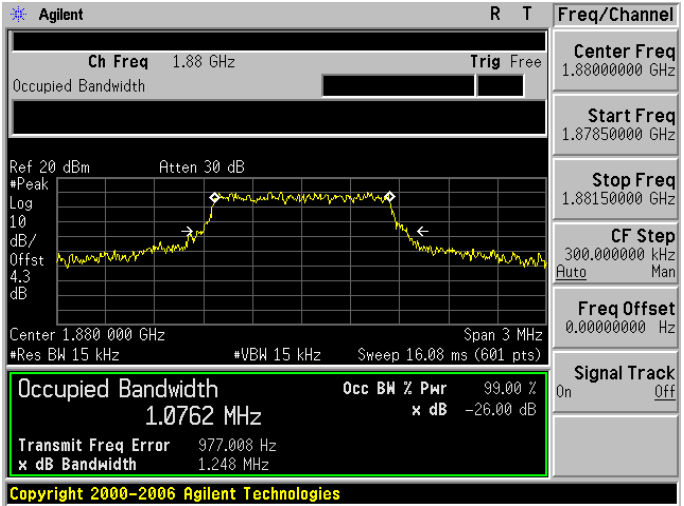
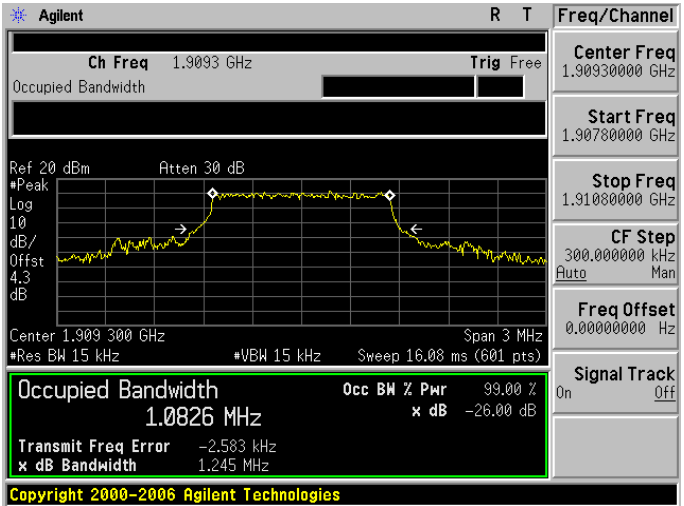
LTE Band 2 (Channel Bandwidth: 3 MHz) _ QPSK	
1851.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.8515 GHz Trig Free Center Freq 1.85150000 GHz Start Freq 1.84850000 GHz Stop Freq 1.85450000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.851 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6905 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 5.855 kHz x dB Bandwidth 2.965 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.87700000 GHz Stop Freq 1.88300000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Start 1.877 000 GHz Stop 1.883 000 GHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6827 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 301.989 Hz x dB Bandwidth 2.937 MHz Copyright 2000-2006 Agilent Technologies
1908.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.9085 GHz Trig Free Center Freq 1.90850000 GHz Start Freq 1.90550000 GHz Stop Freq 1.91150000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.908 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6849 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -129.367 Hz x dB Bandwidth 2.971 MHz Copyright 2000-2006 Agilent Technologies

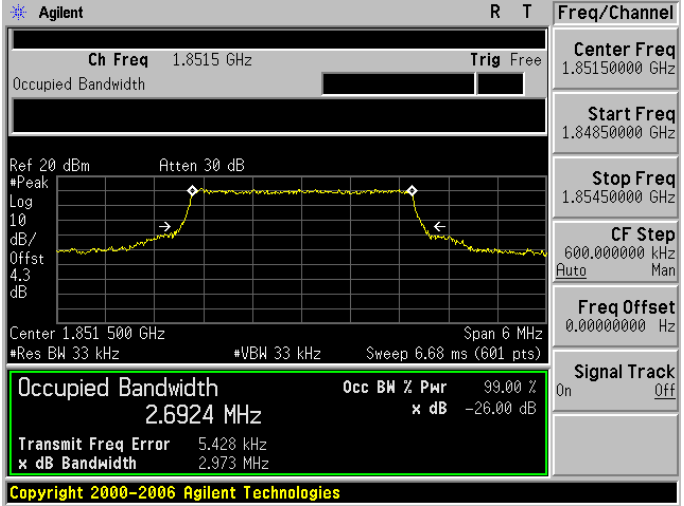
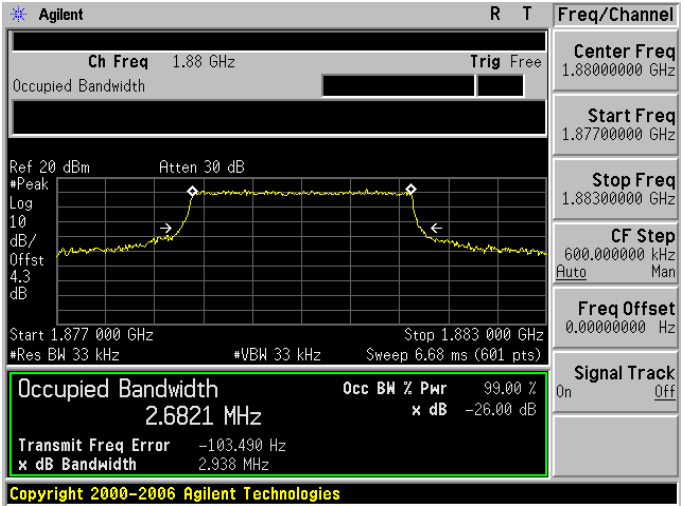
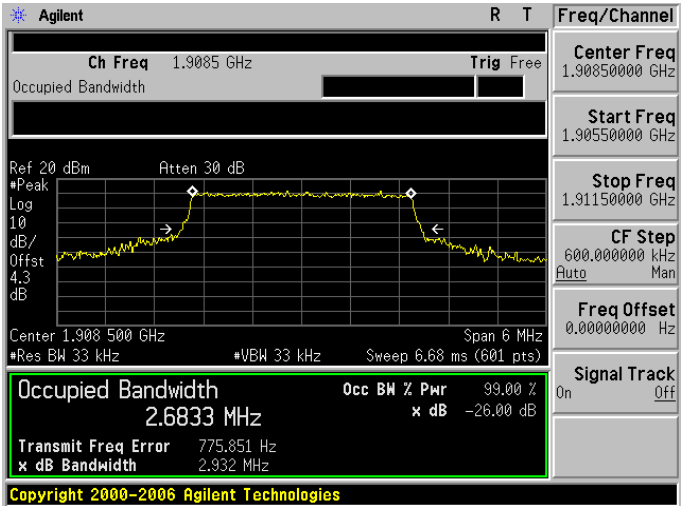
LTE Band 2 (Channel Bandwidth: 5 MHz) _ QPSK	
1852.5 MHz	
1880.0 MHz	
1907.5 MHz	

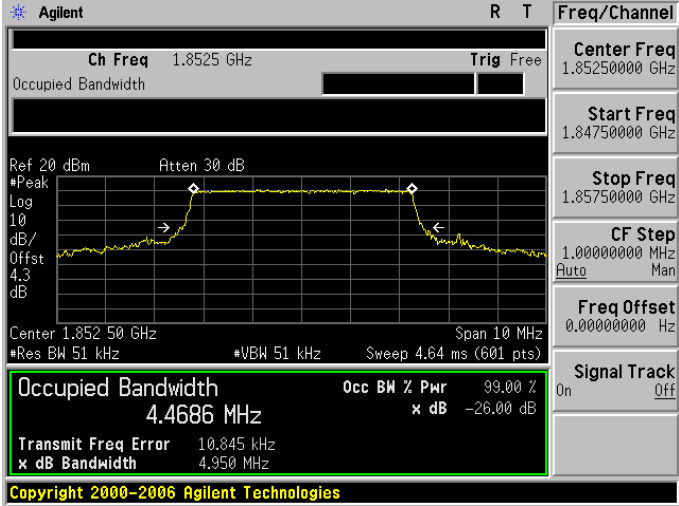
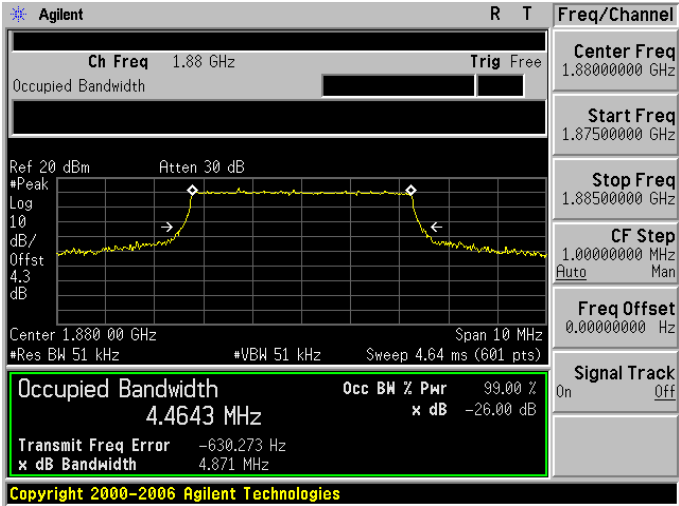
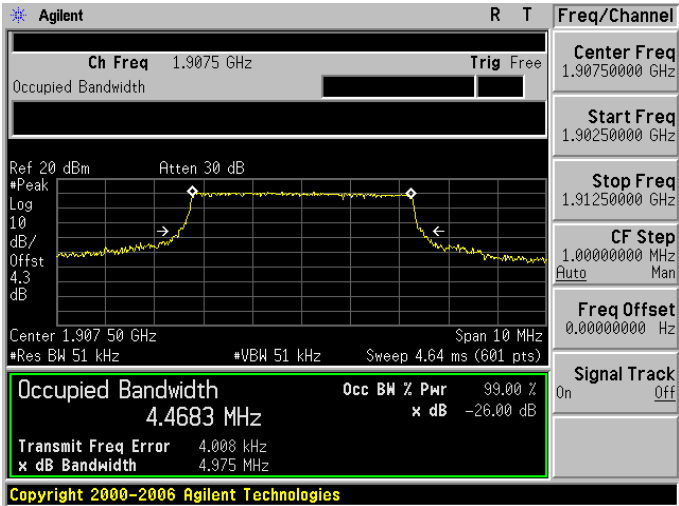
LTE Band 2 (Channel Bandwidth: 10 MHz) _ QPSK	
1855.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.855 GHz Trig Free Center Freq 1.85500000 GHz Start Freq 1.84500000 GHz Stop Freq 1.86500000 GHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.855 00 GHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9686 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 17.161 kHz x dB Bandwidth 9.863 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.87000000 GHz Stop Freq 1.89000000 GHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.880 00 GHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9667 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -8.410 kHz x dB Bandwidth 9.815 MHz Copyright 2000-2006 Agilent Technologies
1905.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.905 GHz Trig Free Center Freq 1.90500000 GHz Start Freq 1.89500000 GHz Stop Freq 1.91500000 GHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.905 00 GHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9397 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -15.282 kHz x dB Bandwidth 9.778 MHz Copyright 2000-2006 Agilent Technologies

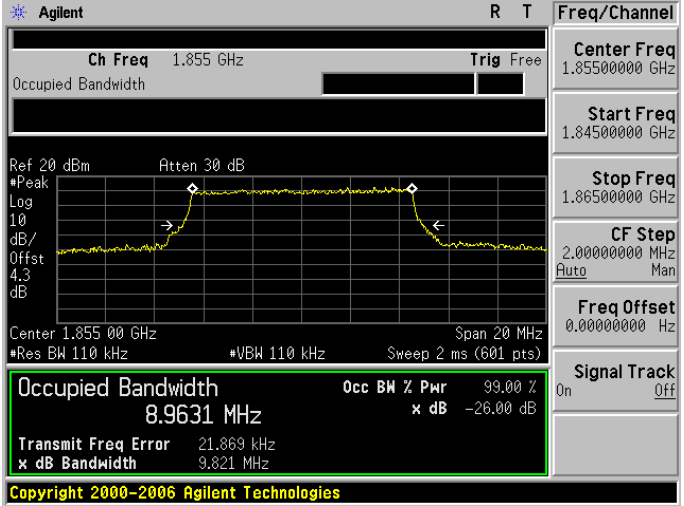
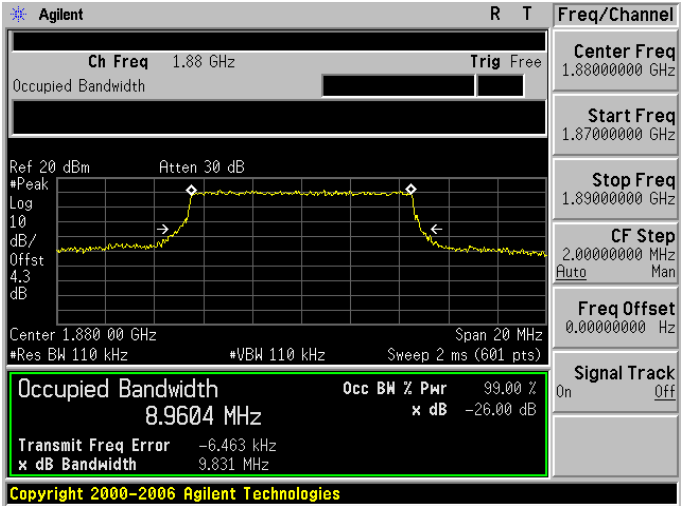
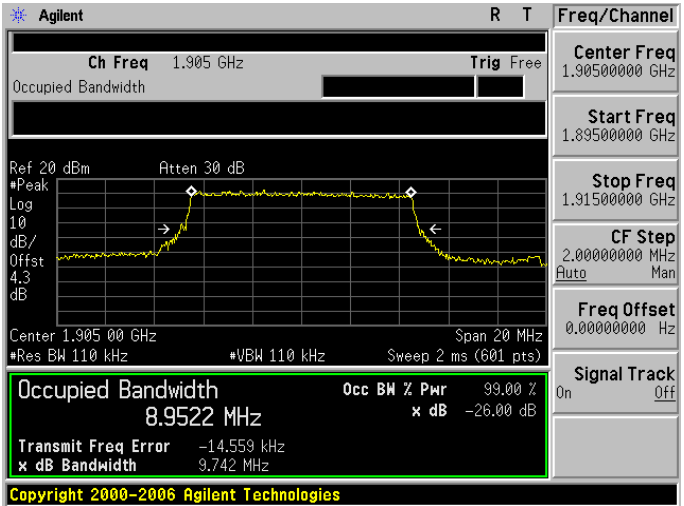
LTE Band 2 (Channel Bandwidth: 15 MHz) _ QPSK	
1857.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.8575 GHz Trig Free Center Freq 1.85750000 GHz Start Freq 1.84250000 GHz Stop Freq 1.87250000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.857 50 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.4528 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 32.975 kHz x dB Bandwidth 15.371 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.86500000 GHz Stop Freq 1.89500000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.880 00 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.4608 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -25.612 kHz x dB Bandwidth 14.617 MHz Copyright 2000-2006 Agilent Technologies
1902.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.9025 GHz Trig Free Center Freq 1.90250000 GHz Start Freq 1.88750000 GHz Stop Freq 1.91750000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.902 50 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.3895 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -23.426 kHz x dB Bandwidth 14.589 MHz Copyright 2000-2006 Agilent Technologies

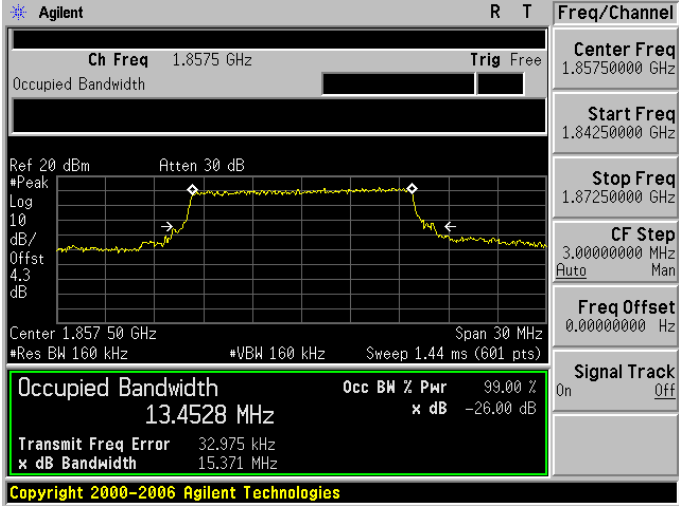
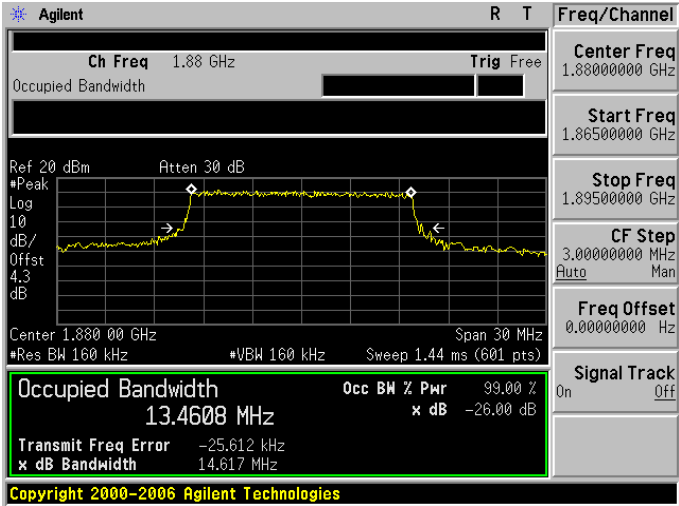
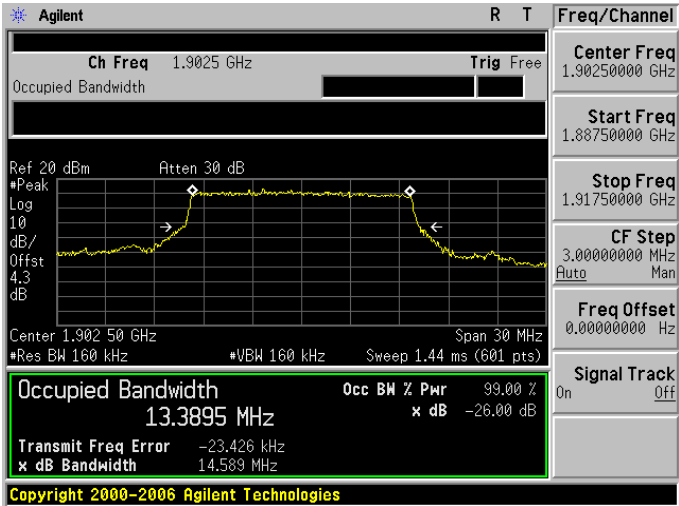
LTE Band 2 (Channel Bandwidth: 20 MHz) _ QPSK	
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1880.0 MHz	 Copyright 2000-2006 Agilent Technologies
1900.0 MHz	 Copyright 2000-2006 Agilent Technologies

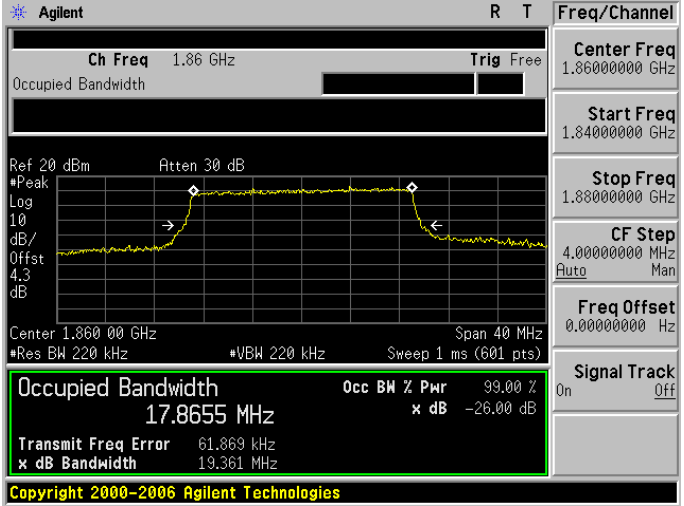
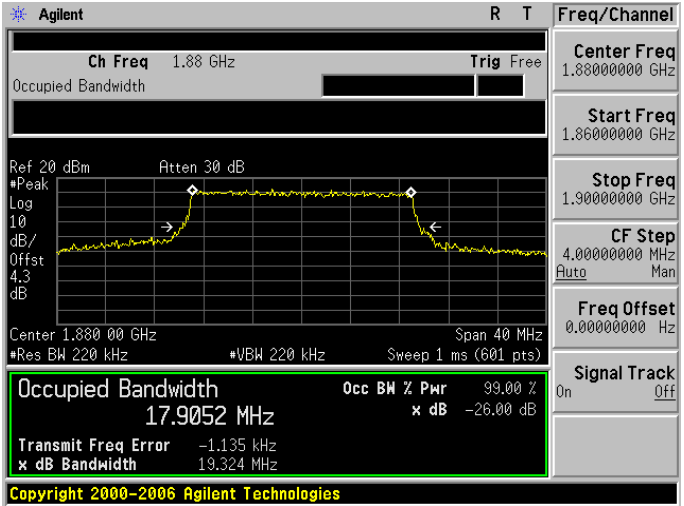
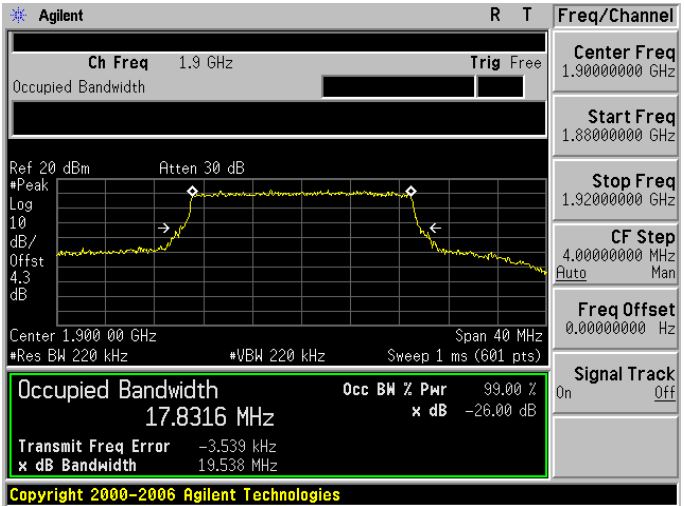
LTE Band 2 (Channel Bandwidth: 1.4 MHz) _ 16QAM	
1850.7 MHz	 Agilent R T Freq/Channel Ch Freq 1.8507 GHz Trig Free Center Freq 1.85070000 GHz Start Freq 1.84920000 GHz Stop Freq 1.85220000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.850 700 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0847 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.033 kHz x dB Bandwidth 1.248 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.87850000 GHz Stop Freq 1.88150000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.880 000 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0762 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 977.008 Hz x dB Bandwidth 1.248 MHz Copyright 2000-2006 Agilent Technologies
1909.3 MHz	 Agilent R T Freq/Channel Ch Freq 1.9093 GHz Trig Free Center Freq 1.90930000 GHz Start Freq 1.90780000 GHz Stop Freq 1.91080000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.909 300 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0826 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.583 kHz x dB Bandwidth 1.245 MHz Copyright 2000-2006 Agilent Technologies

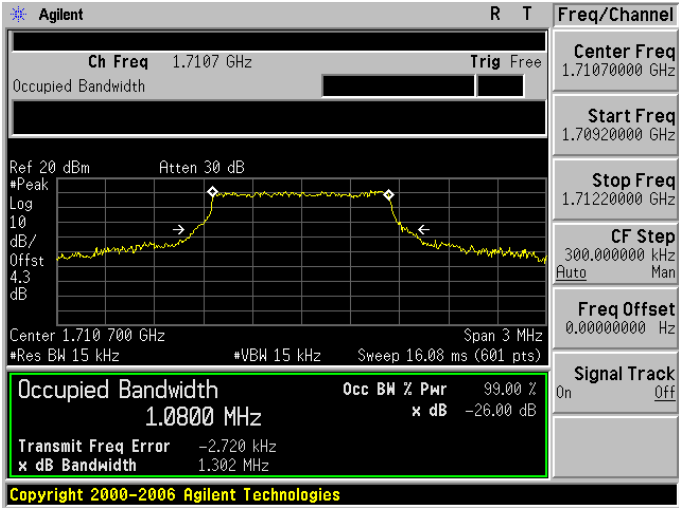
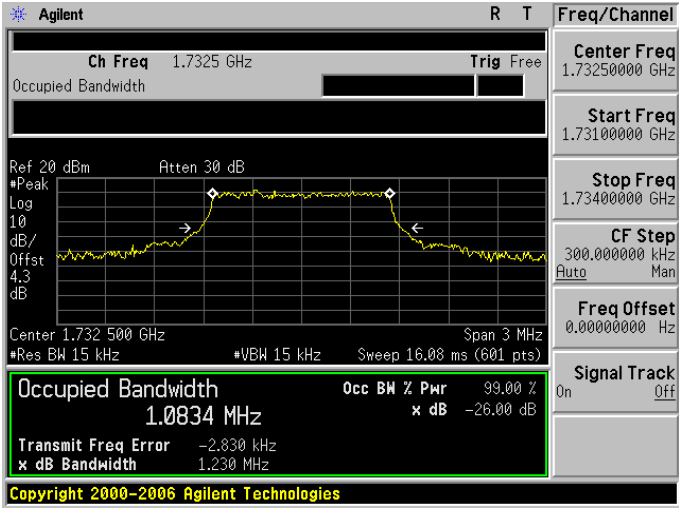
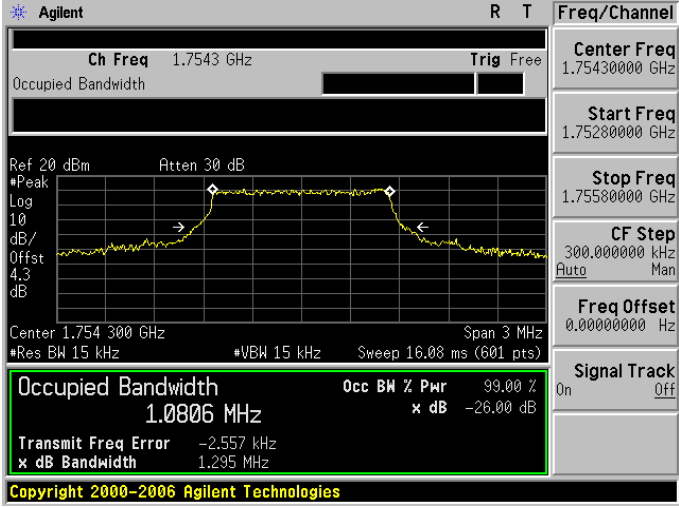
LTE Band 2 (Channel Bandwidth: 3 MHz) _ 16QAM	
1851.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.8515 GHz Trig Free Center Freq 1.85150000 GHz Start Freq 1.84850000 GHz Stop Freq 1.85450000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.851 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6924 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 5.428 kHz x dB Bandwidth 2.973 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.87700000 GHz Stop Freq 1.88300000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Start 1.877 000 GHz Stop 1.883 000 GHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6821 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -103.490 Hz x dB Bandwidth 2.938 MHz Copyright 2000-2006 Agilent Technologies
1908.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.9085 GHz Trig Free Center Freq 1.90850000 GHz Start Freq 1.90550000 GHz Stop Freq 1.91150000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.908 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6833 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 775.851 Hz x dB Bandwidth 2.932 MHz Copyright 2000-2006 Agilent Technologies

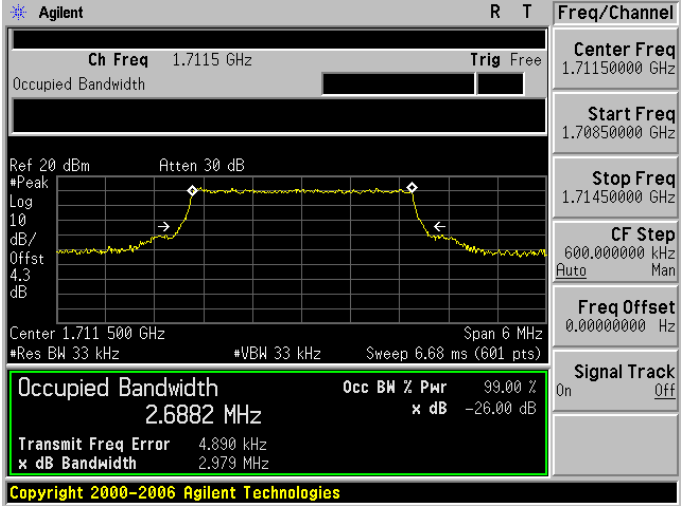
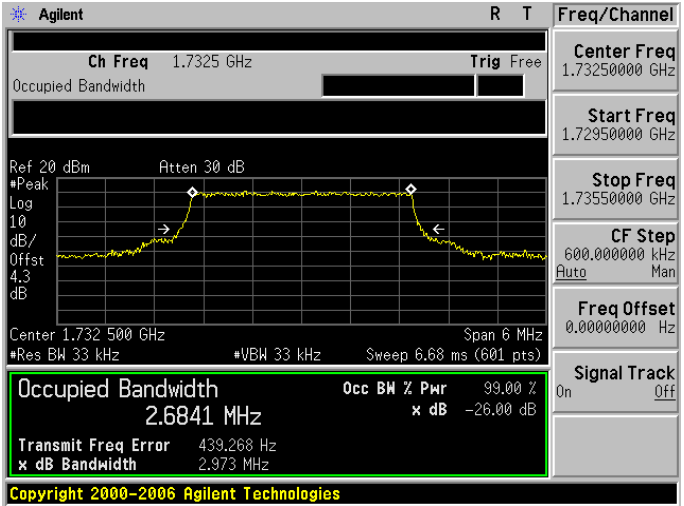
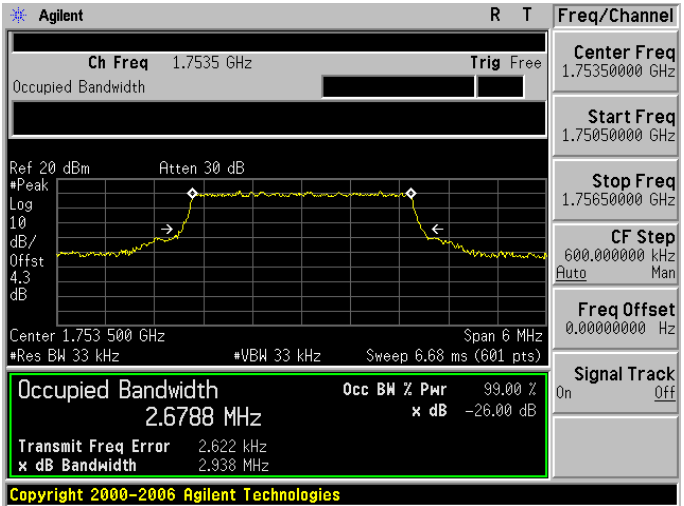
LTE Band 2 (Channel Bandwidth: 5 MHz) _ 16QAM	
1852.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.8525 GHz Trig Free Center Freq 1.85250000 GHz Start Freq 1.84750000 GHz Stop Freq 1.85750000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.852 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4686 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 10.845 kHz x dB Bandwidth 4.950 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.87500000 GHz Stop Freq 1.88500000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.880 00 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4643 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -630.273 Hz x dB Bandwidth 4.871 MHz Copyright 2000-2006 Agilent Technologies
1907.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.9075 GHz Trig Free Center Freq 1.90750000 GHz Start Freq 1.90250000 GHz Stop Freq 1.91250000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.907 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4683 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.008 kHz x dB Bandwidth 4.975 MHz Copyright 2000-2006 Agilent Technologies

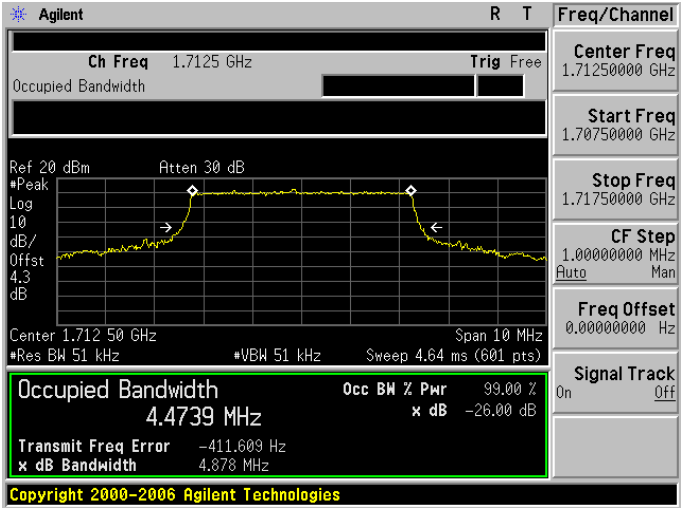
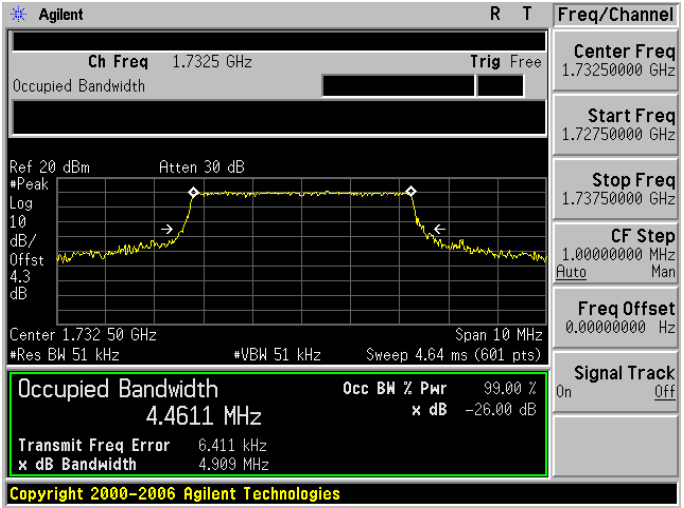
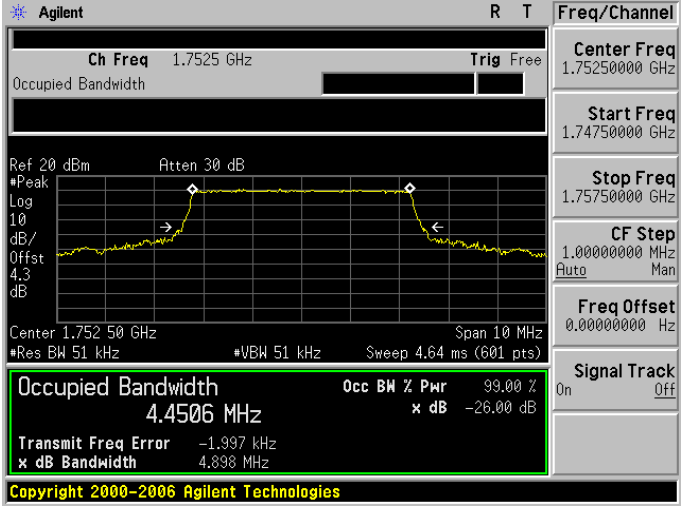
LTE Band 2 (Channel Bandwidth: 10 MHz) _ 16QAM	
1855.0 MHz	 Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Copyright 2000-2006 Agilent Technologies
1905.0 MHz	 Copyright 2000-2006 Agilent Technologies

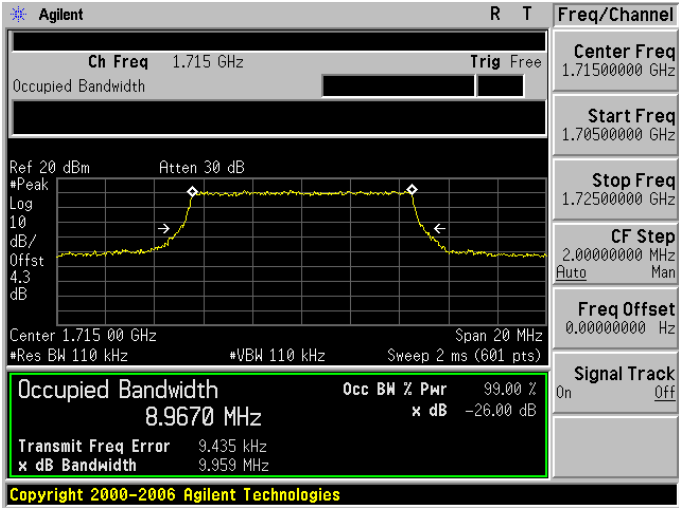
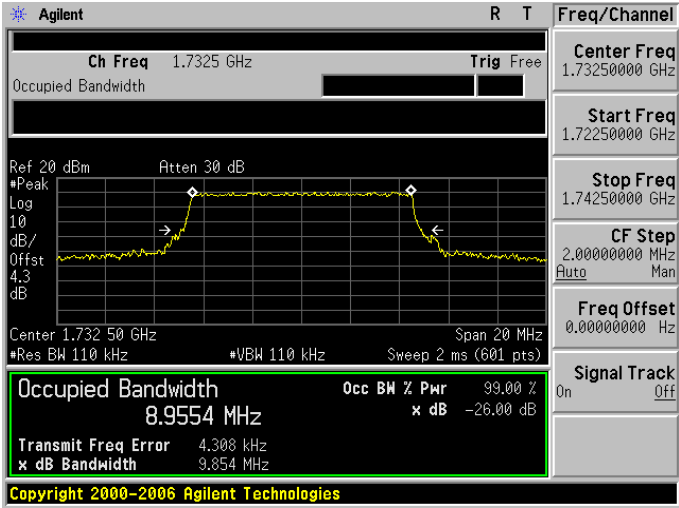
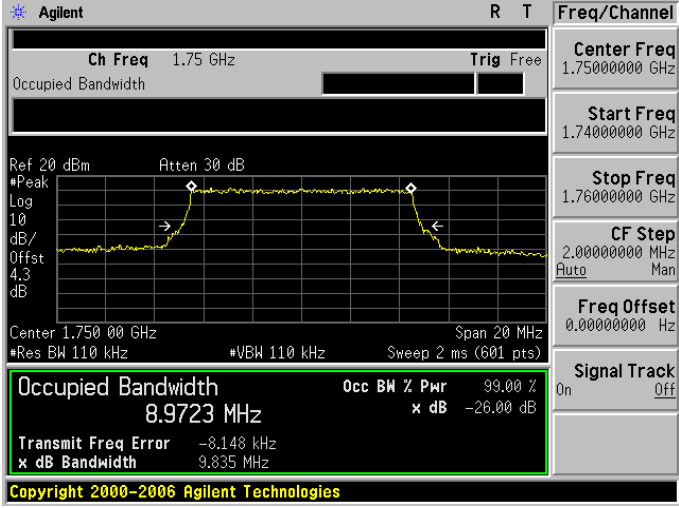
LTE Band 2 (Channel Bandwidth: 15 MHz) _ 16QAM	
1857.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.8575 GHz Trig Free Center Freq 1.85750000 GHz Start Freq 1.84250000 GHz Stop Freq 1.87250000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.857 50 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.4528 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 32.975 kHz x dB Bandwidth 15.371 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.86500000 GHz Stop Freq 1.89500000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.880 00 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.4608 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -25.612 kHz x dB Bandwidth 14.617 MHz Copyright 2000-2006 Agilent Technologies
1902.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.9025 GHz Trig Free Center Freq 1.90250000 GHz Start Freq 1.88750000 GHz Stop Freq 1.91750000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.902 50 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.3895 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -23.426 kHz x dB Bandwidth 14.589 MHz Copyright 2000-2006 Agilent Technologies

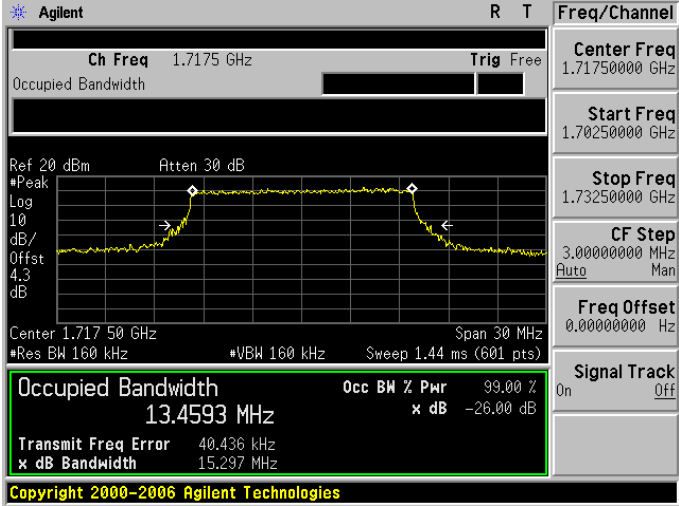
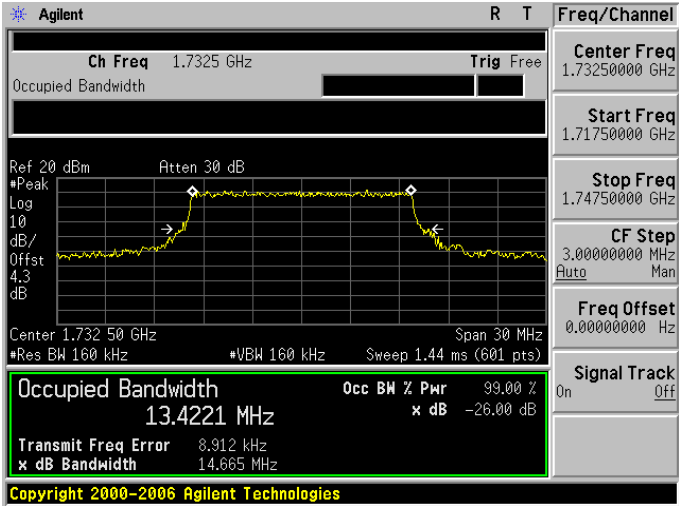
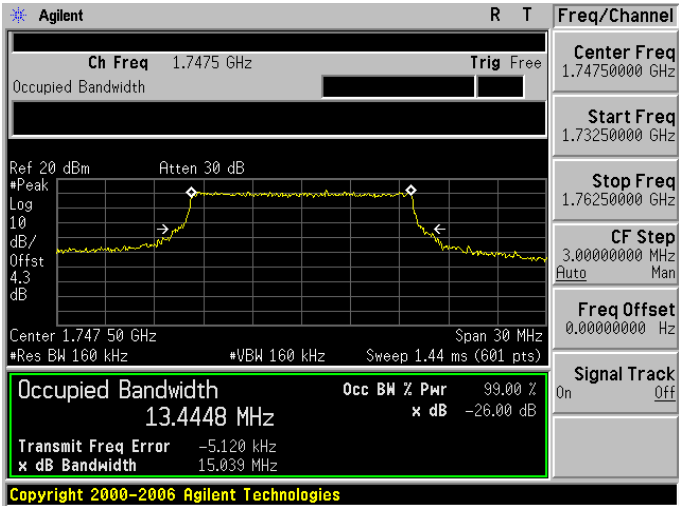
LTE Band 2 (Channel Bandwidth: 20 MHz) _ 16QAM	
1860.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.86 GHz Trig Free Center Freq 1.86000000 GHz Start Freq 1.84000000 GHz Stop Freq 1.88000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.860 00 GHz Span 40 MHz Res BW 220 kHz VBW 220 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 17.8655 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 61.869 kHz x dB Bandwidth 19.361 MHz Copyright 2000-2006 Agilent Technologies
1880.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.86000000 GHz Stop Freq 1.90000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.880 00 GHz Span 40 MHz Res BW 220 kHz VBW 220 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 17.9052 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.135 kHz x dB Bandwidth 19.324 MHz Copyright 2000-2006 Agilent Technologies
1900.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.9 GHz Trig Free Center Freq 1.90000000 GHz Start Freq 1.88000000 GHz Stop Freq 1.92000000 GHz CF Step 4.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.900 00 GHz Span 40 MHz Res BW 220 kHz VBW 220 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 17.8316 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -3.539 kHz x dB Bandwidth 19.538 MHz Copyright 2000-2006 Agilent Technologies

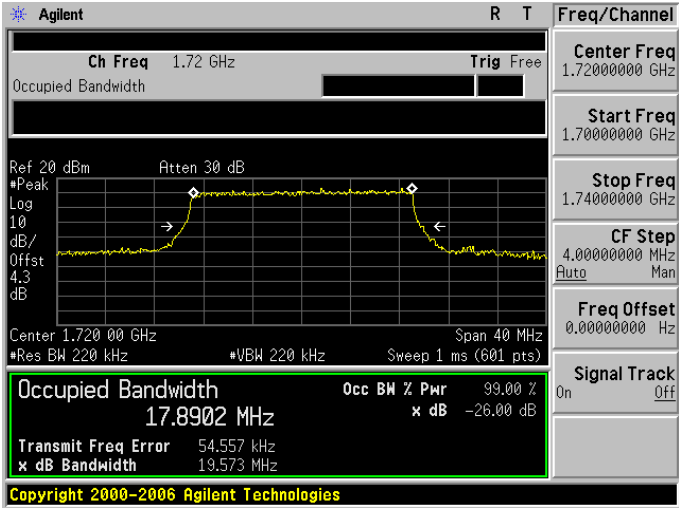
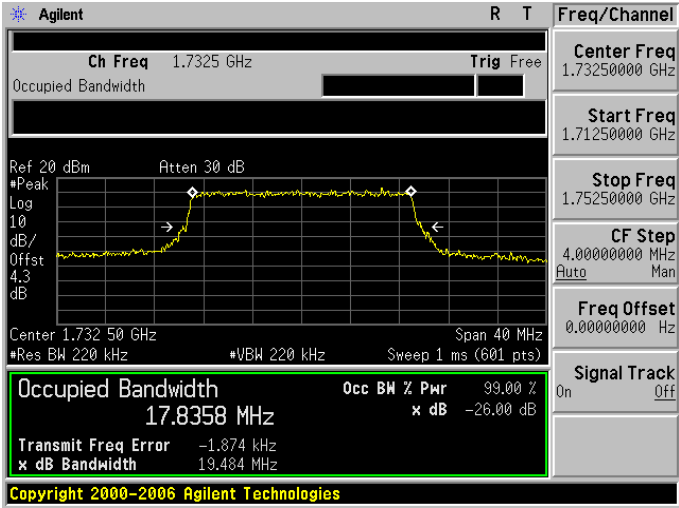
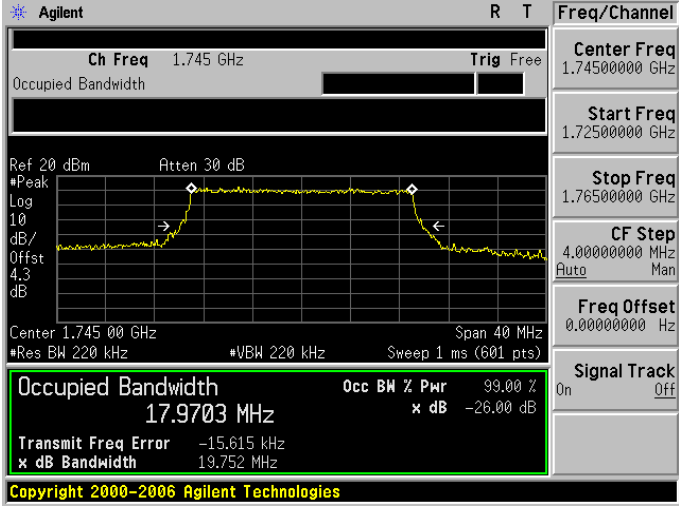
LTE Band 4 (Channel Bandwidth: 1.4 MHz) _ QPSK	
1710.7 MHz	 Agilent R T Freq/Channel Ch Freq 1.7107 GHz Trig Free Center Freq 1.71070000 GHz Start Freq 1.70920000 GHz Stop Freq 1.71220000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.710 700 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0800 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.720 kHz x dB Bandwidth 1.302 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.73250000 GHz Start Freq 1.73100000 GHz Stop Freq 1.73400000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 500 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0834 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.830 kHz x dB Bandwidth 1.230 MHz Copyright 2000-2006 Agilent Technologies
1754.3 MHz	 Agilent R T Freq/Channel Ch Freq 1.7543 GHz Trig Free Center Freq 1.75430000 GHz Start Freq 1.75280000 GHz Stop Freq 1.75580000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.754 300 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0806 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.557 kHz x dB Bandwidth 1.295 MHz Copyright 2000-2006 Agilent Technologies

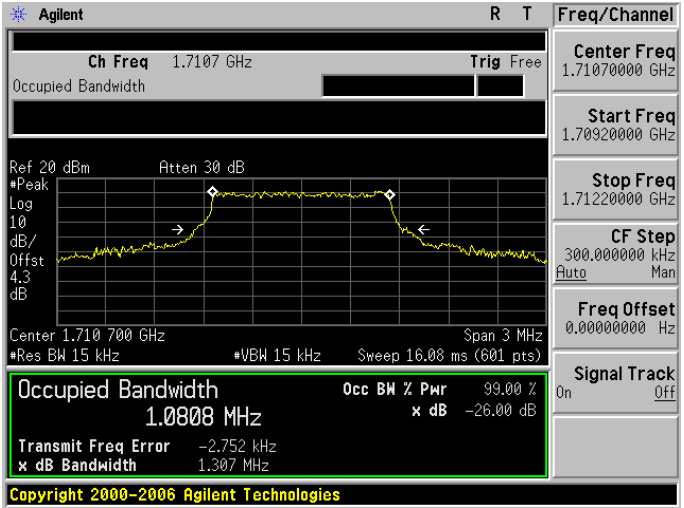
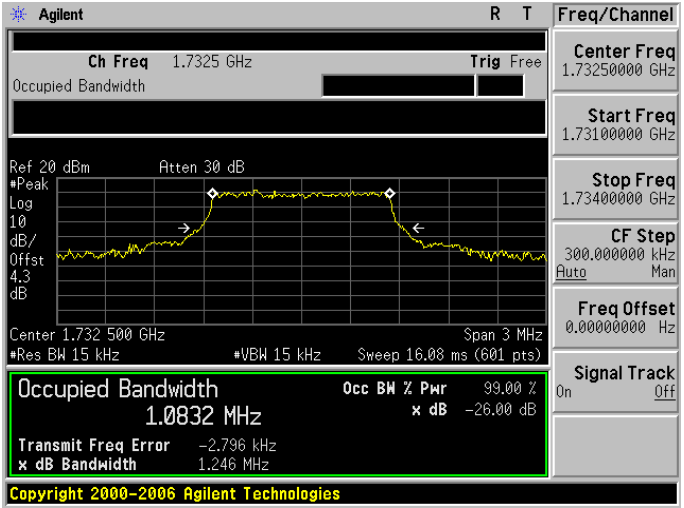
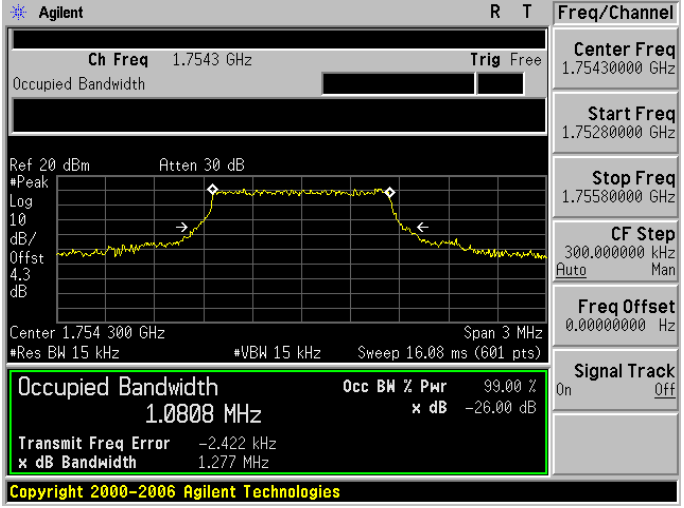
LTE Band 4 (Channel Bandwidth: 3 MHz) _ QPSK	
1711.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7115 GHz Trig Free Center Freq 1.71150000 GHz Start Freq 1.70850000 GHz Stop Freq 1.71450000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.711 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6882 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.890 kHz x dB Bandwidth 2.979 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.73250000 GHz Start Freq 1.72950000 GHz Stop Freq 1.73550000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6841 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 439.268 Hz x dB Bandwidth 2.973 MHz Copyright 2000-2006 Agilent Technologies
1753.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7535 GHz Trig Free Center Freq 1.75350000 GHz Start Freq 1.75050000 GHz Stop Freq 1.75650000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.753 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6788 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.622 kHz x dB Bandwidth 2.938 MHz Copyright 2000-2006 Agilent Technologies

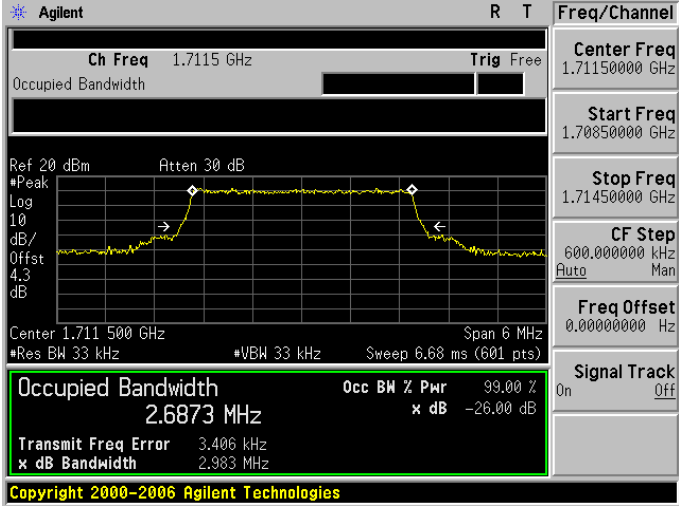
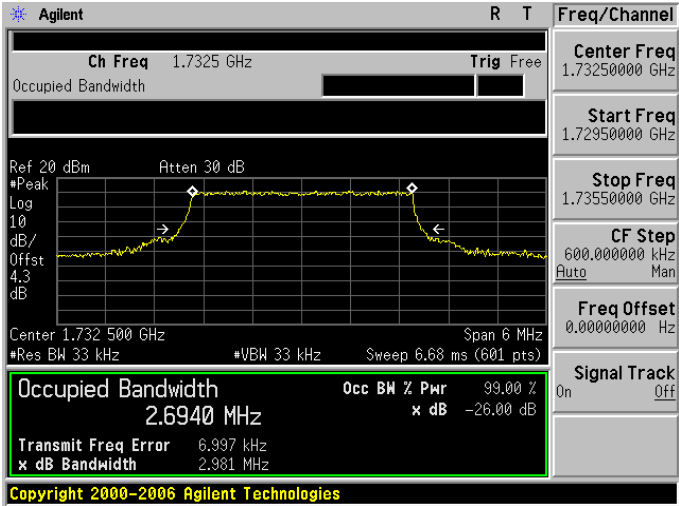
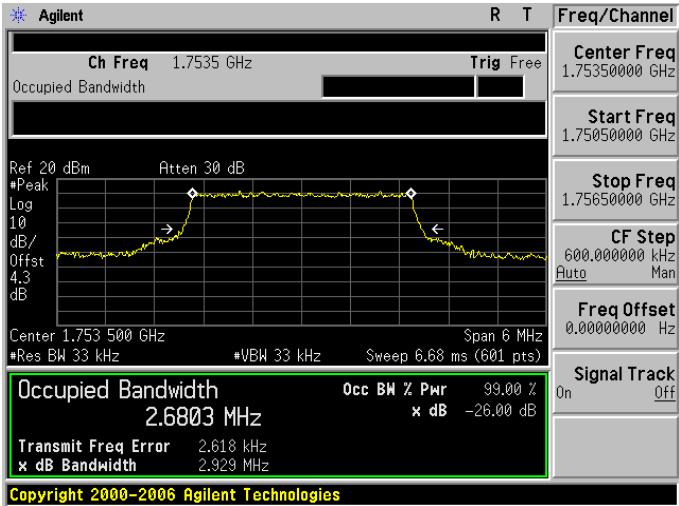
LTE Band 4 (Channel Bandwidth: 5 MHz) _ QPSK	
1712.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7125 GHz Trig Free Center Freq 1.71250000 GHz Start Freq 1.70750000 GHz Stop Freq 1.71750000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.712 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4739 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -411.609 Hz x dB Bandwidth 4.878 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.73250000 GHz Start Freq 1.72750000 GHz Stop Freq 1.73750000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4611 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.411 kHz x dB Bandwidth 4.909 MHz Copyright 2000-2006 Agilent Technologies
1752.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7525 GHz Trig Free Center Freq 1.75250000 GHz Start Freq 1.74750000 GHz Stop Freq 1.75750000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.752 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4506 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.997 kHz x dB Bandwidth 4.898 MHz Copyright 2000-2006 Agilent Technologies

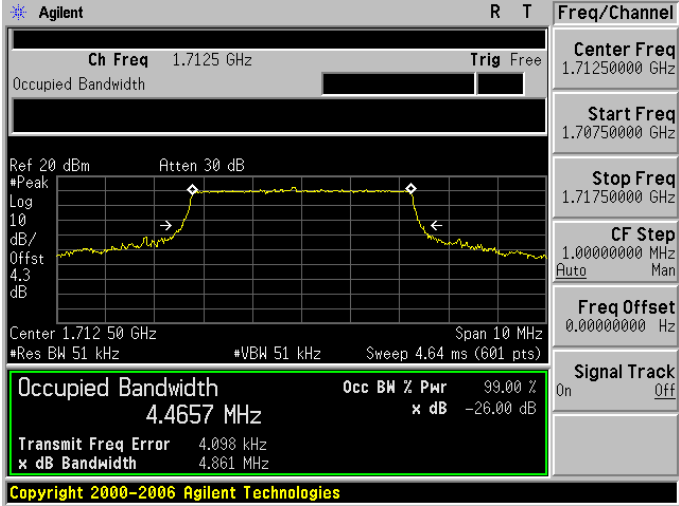
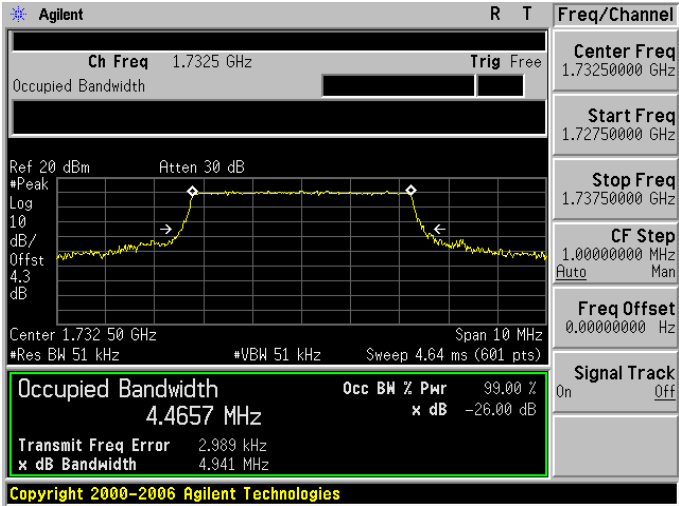
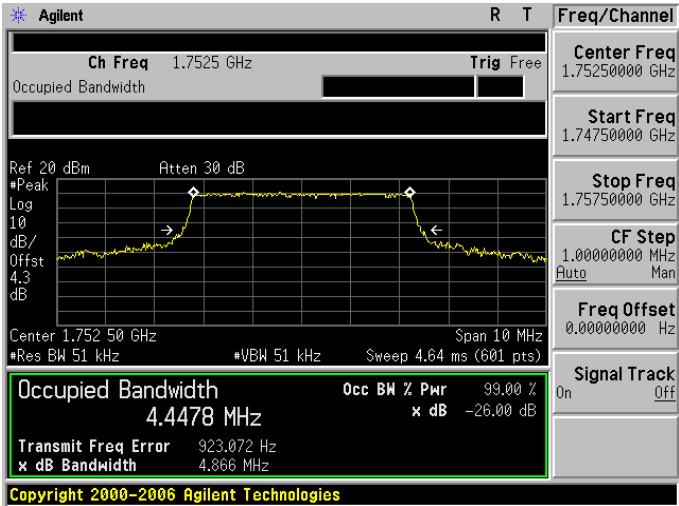
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1715.0 MHz	 Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Copyright 2000-2006 Agilent Technologies
1750.0 MHz	 Copyright 2000-2006 Agilent Technologies

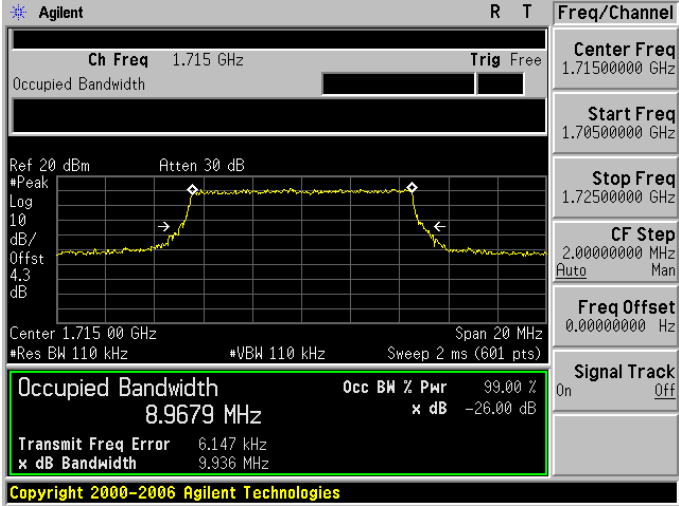
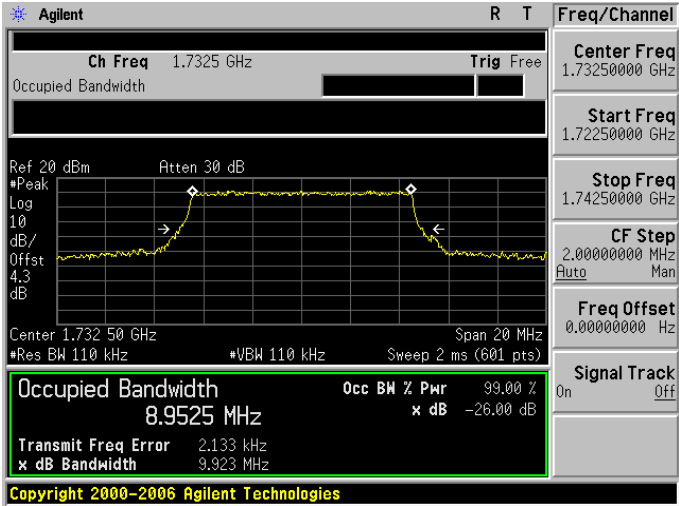
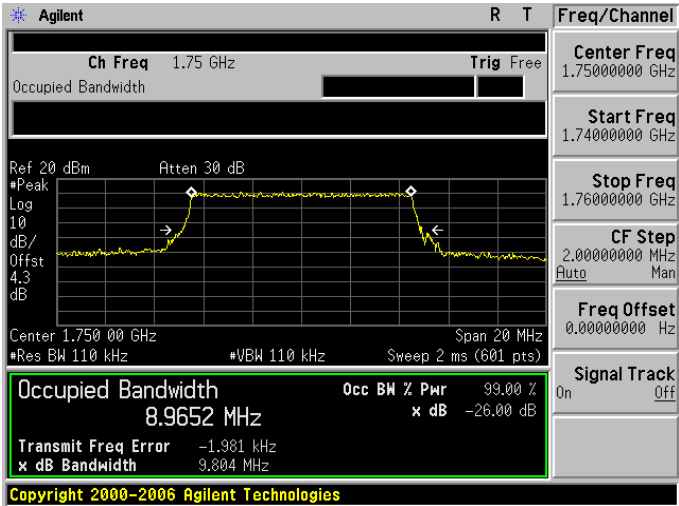
LTE Band 4 (Channel Bandwidth: 15 MHz) _ QPSK	
1717.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7175 GHz Trig Free Center Freq 1.71750000 GHz Start Freq 1.70250000 GHz Stop Freq 1.73250000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.717 50 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.4593 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 40.436 kHz x dB Bandwidth 15.297 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.73250000 GHz Start Freq 1.71750000 GHz Stop Freq 1.74750000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 50 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.4221 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 8.912 kHz x dB Bandwidth 14.665 MHz Copyright 2000-2006 Agilent Technologies
1747.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7475 GHz Trig Free Center Freq 1.74750000 GHz Start Freq 1.73250000 GHz Stop Freq 1.76250000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.747 50 GHz Span 30 MHz Res BW 160 kHz VBW 160 kHz Sweep 1.44 ms (601 pts) Occupied Bandwidth 13.4448 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -5.120 kHz x dB Bandwidth 15.039 MHz Copyright 2000-2006 Agilent Technologies

LTE Band 4 (Channel Bandwidth: 20 MHz) _ QPSK	
1720.0 MHz	
1732.5 MHz	
1745.0 MHz	

LTE Band 4 (Channel Bandwidth: 1.4 MHz) _ 16QAM	
1710.7 MHz	 Agilent R T Freq/Channel Ch Freq 1.7107 GHz Trig Free Center Freq 1.71070000 GHz Start Freq 1.70920000 GHz Stop Freq 1.71220000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.710 700 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0808 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.752 kHz x dB Bandwidth 1.307 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.73250000 GHz Start Freq 1.73100000 GHz Stop Freq 1.73400000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 500 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0832 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.796 kHz x dB Bandwidth 1.246 MHz Copyright 2000-2006 Agilent Technologies
1754.3 MHz	 Agilent R T Freq/Channel Ch Freq 1.7543 GHz Trig Free Center Freq 1.75430000 GHz Start Freq 1.75280000 GHz Stop Freq 1.75580000 GHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.754 300 GHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0808 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.422 kHz x dB Bandwidth 1.277 MHz Copyright 2000-2006 Agilent Technologies

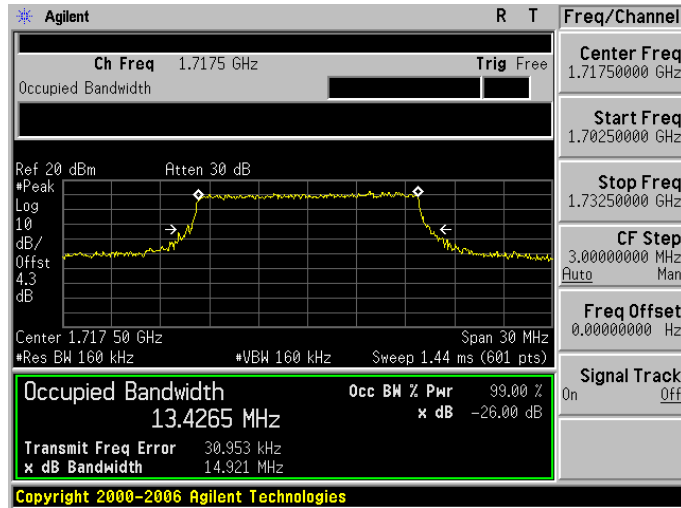
LTE Band 4 (Channel Bandwidth: 3 MHz) _ 16QAM	
1711.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7115 GHz Trig Free Center Freq 1.71150000 GHz Start Freq 1.70850000 GHz Stop Freq 1.71450000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.711 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6873 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 3.406 kHz x dB Bandwidth 2.983 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.73250000 GHz Start Freq 1.72950000 GHz Stop Freq 1.73550000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6940 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.997 kHz x dB Bandwidth 2.981 MHz Copyright 2000-2006 Agilent Technologies
1753.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7535 GHz Trig Free Center Freq 1.75350000 GHz Start Freq 1.75050000 GHz Stop Freq 1.75650000 GHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.753 500 GHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6803 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.618 kHz x dB Bandwidth 2.929 MHz Copyright 2000-2006 Agilent Technologies

LTE Band 4 (Channel Bandwidth: 5 MHz) _ 16QAM	
1712.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7125 GHz Trig Free Center Freq 1.71250000 GHz Start Freq 1.70750000 GHz Stop Freq 1.71750000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.712 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4657 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.098 kHz x dB Bandwidth 4.861 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.73250000 GHz Start Freq 1.72750000 GHz Stop Freq 1.73750000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4657 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.989 kHz x dB Bandwidth 4.941 MHz Copyright 2000-2006 Agilent Technologies
1752.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7525 GHz Trig Free Center Freq 1.75250000 GHz Start Freq 1.74750000 GHz Stop Freq 1.75750000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.752 50 GHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4478 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 923.072 Hz x dB Bandwidth 4.866 MHz Copyright 2000-2006 Agilent Technologies

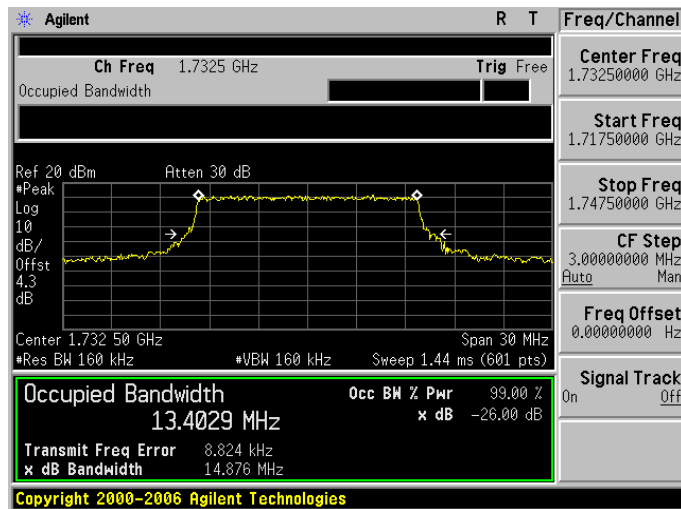
LTE Band 4 (Channel Bandwidth: 10 MHz) _ 16QAM	
1715.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.715 GHz Trig Free Center Freq 1.7150000 GHz Start Freq 1.7050000 GHz Stop Freq 1.7250000 GHz CF Step 2.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.715 00 GHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9679 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.147 kHz x dB Bandwidth 9.936 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.7325000 GHz Start Freq 1.7225000 GHz Stop Freq 1.7425000 GHz CF Step 2.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 50 GHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9525 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.133 kHz x dB Bandwidth 9.923 MHz Copyright 2000-2006 Agilent Technologies
1750.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.75 GHz Trig Free Center Freq 1.7500000 GHz Start Freq 1.7400000 GHz Stop Freq 1.7600000 GHz CF Step 2.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.750 00 GHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9652 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.981 kHz x dB Bandwidth 9.804 MHz Copyright 2000-2006 Agilent Technologies

LTE Band 4 (Channel Bandwidth: 15 MHz) _ 16QAM

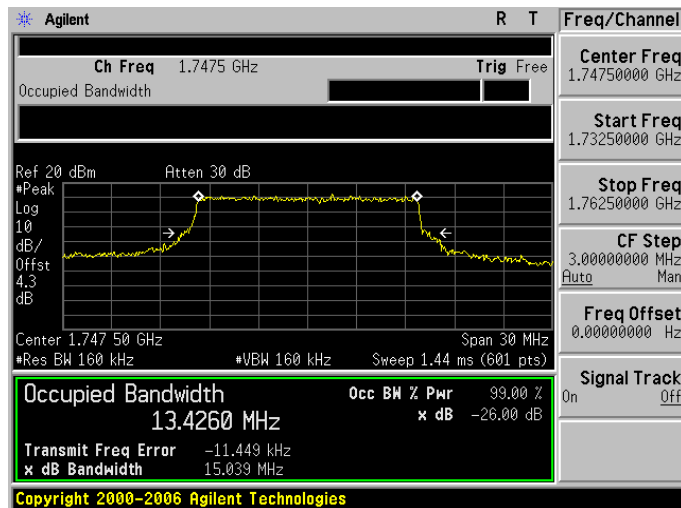
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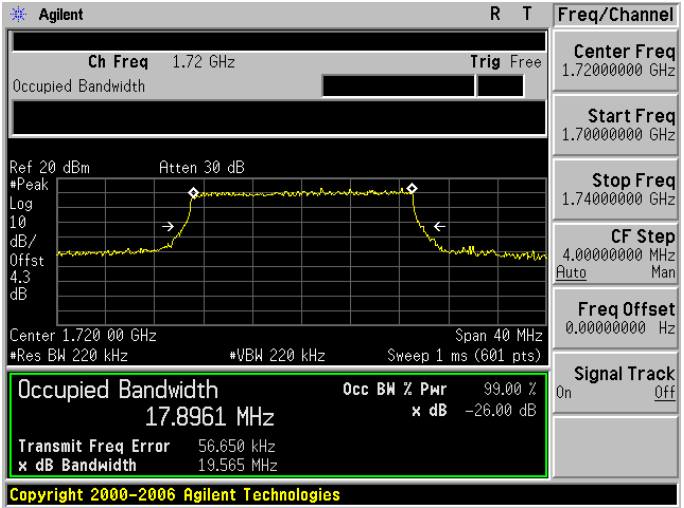
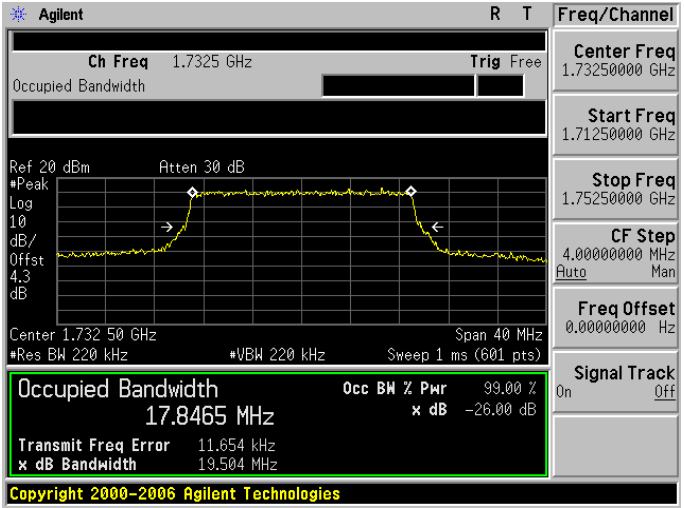
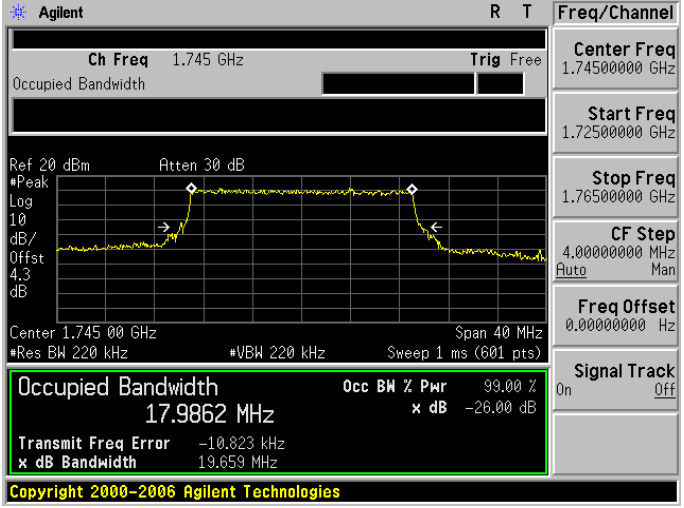


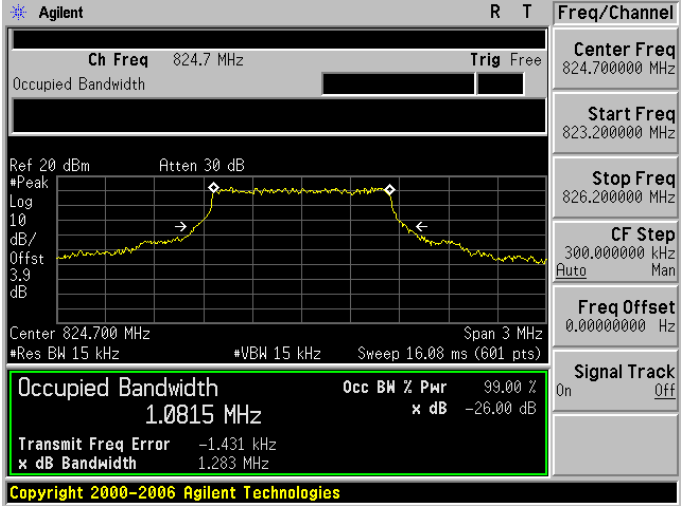
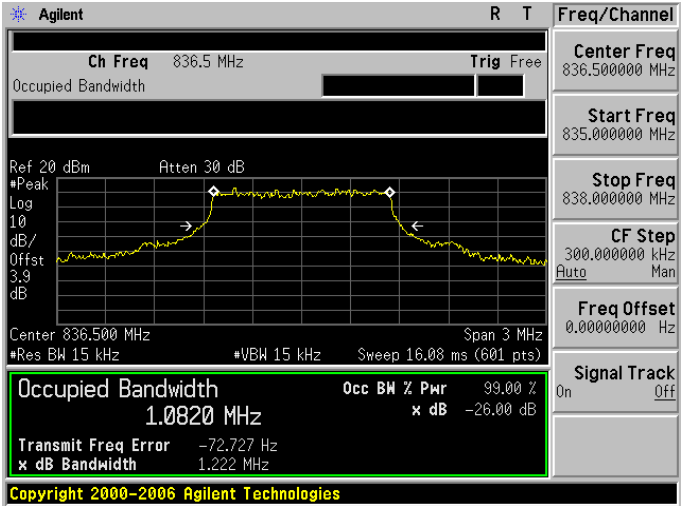
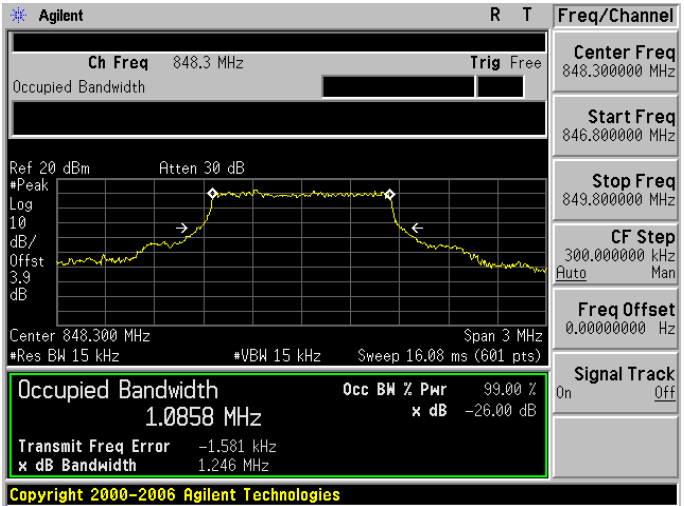
1732.5 MHz

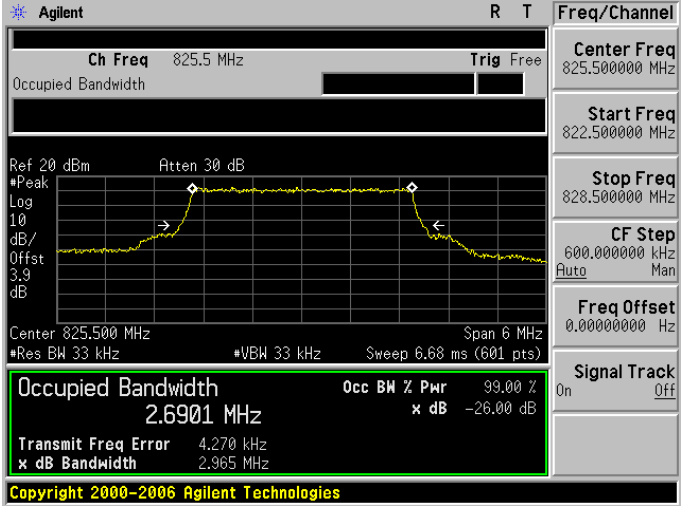
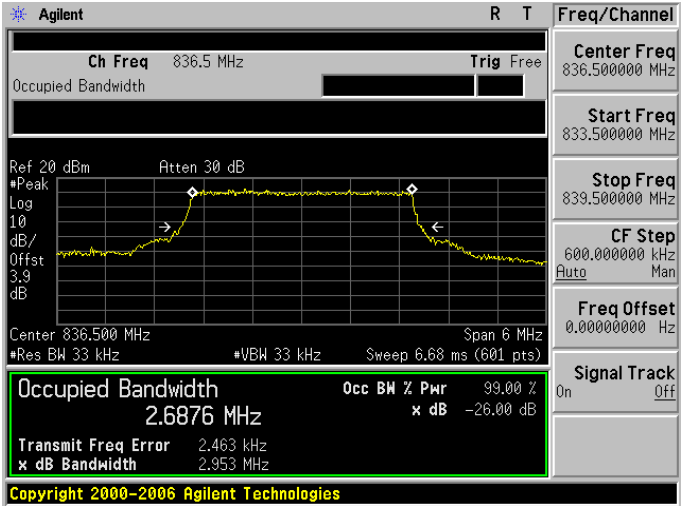
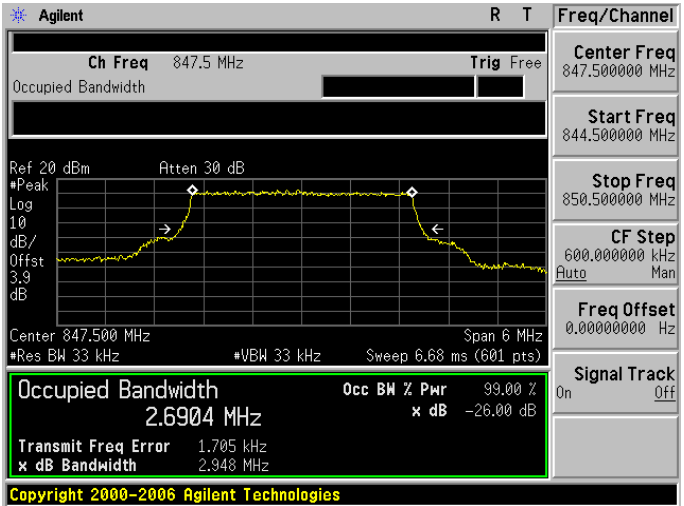


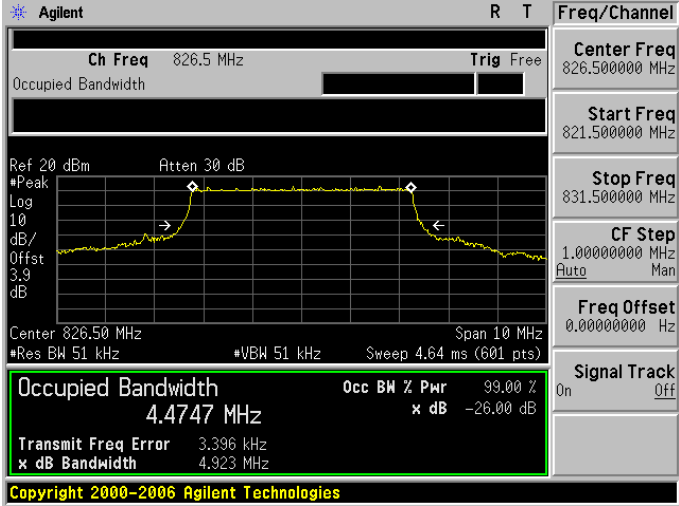
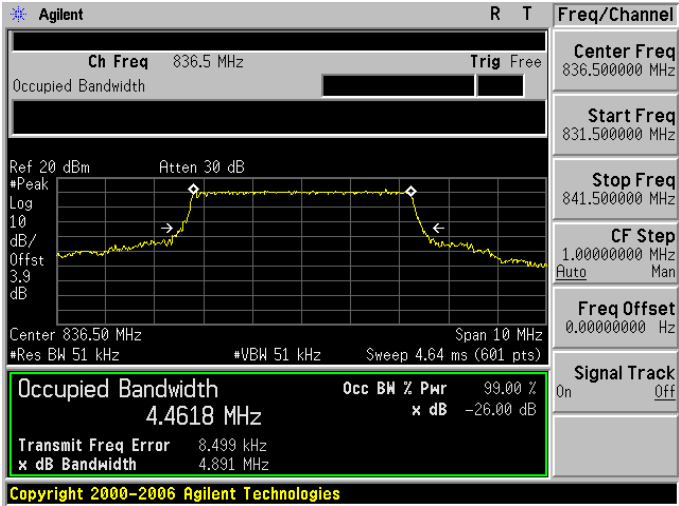
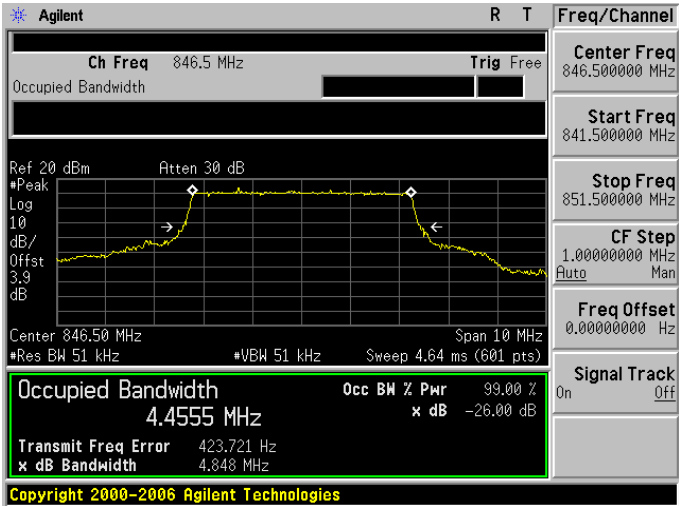
1747.5 MHz

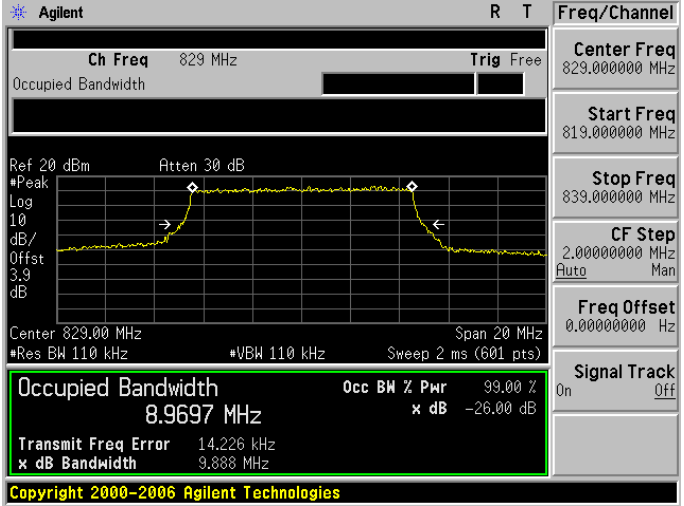
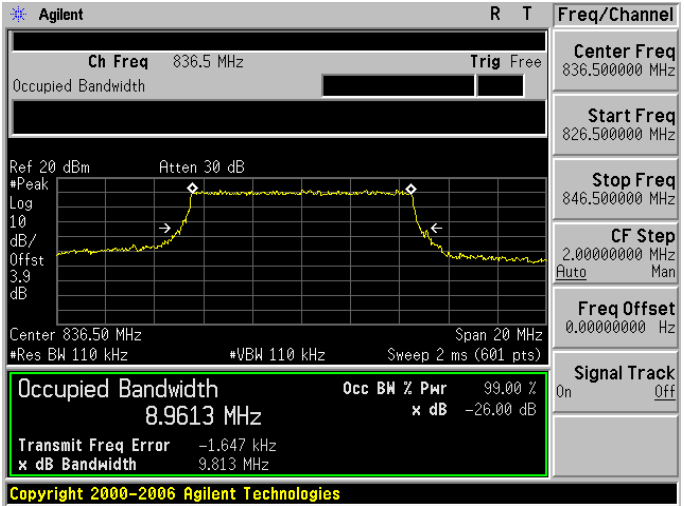
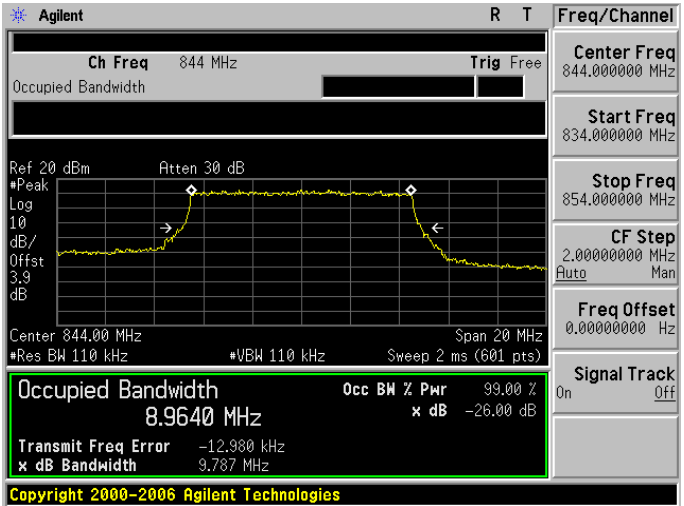


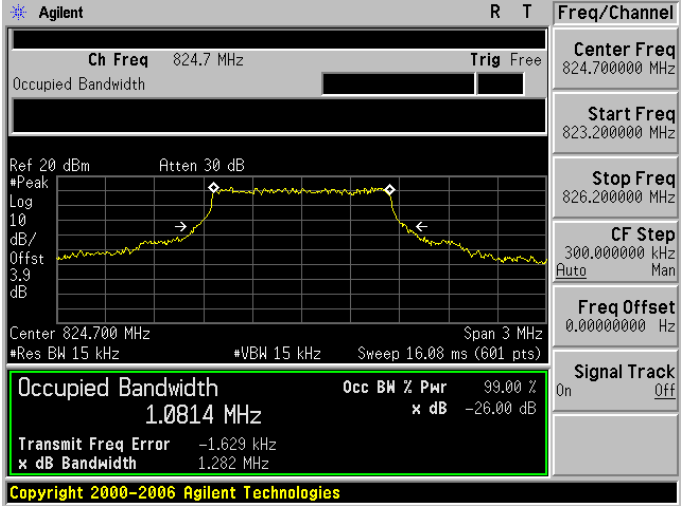
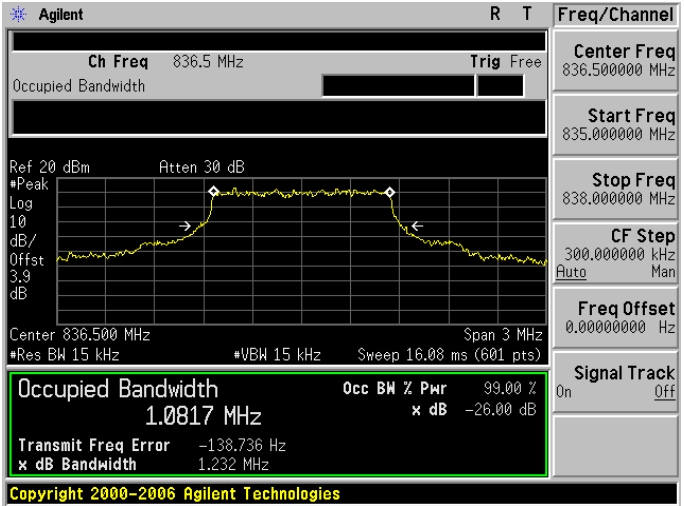
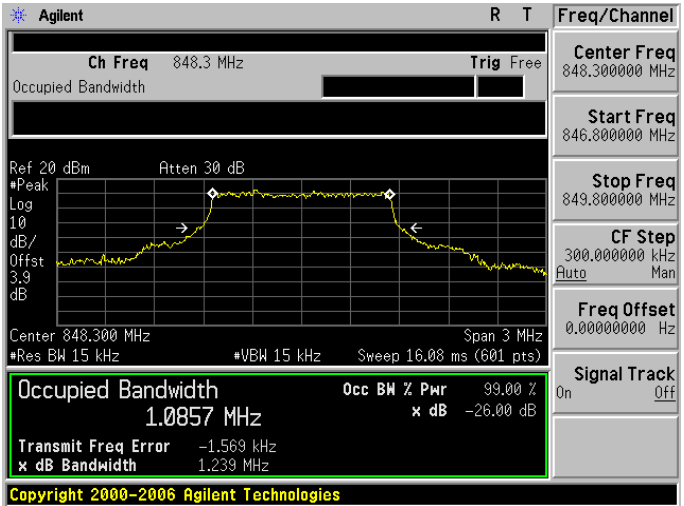
LTE Band 4 (Channel Bandwidth: 20 MHz) _ 16QAM	
1720.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.72 GHz Trig Free Center Freq 1.7200000 GHz Start Freq 1.7000000 GHz Stop Freq 1.7400000 GHz CF Step 4.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.720 00 GHz Span 40 MHz Res BW 220 kHz VBW 220 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 17.8961 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 56.650 kHz x dB Bandwidth 19.565 MHz Copyright 2000-2006 Agilent Technologies
1732.5 MHz	 Agilent R T Freq/Channel Ch Freq 1.7325 GHz Trig Free Center Freq 1.7325000 GHz Start Freq 1.7125000 GHz Stop Freq 1.7525000 GHz CF Step 4.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.732 50 GHz Span 40 MHz Res BW 220 kHz VBW 220 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 17.8465 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 11.654 kHz x dB Bandwidth 19.504 MHz Copyright 2000-2006 Agilent Technologies
1745.0 MHz	 Agilent R T Freq/Channel Ch Freq 1.745 GHz Trig Free Center Freq 1.7450000 GHz Start Freq 1.7250000 GHz Stop Freq 1.7650000 GHz CF Step 4.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 4.3 dB Center 1.745 00 GHz Span 40 MHz Res BW 220 kHz VBW 220 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 17.9862 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -10.823 kHz x dB Bandwidth 19.659 MHz Copyright 2000-2006 Agilent Technologies

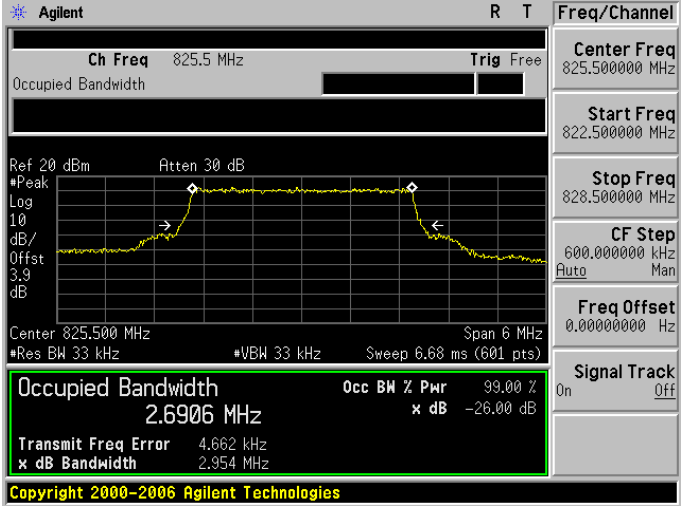
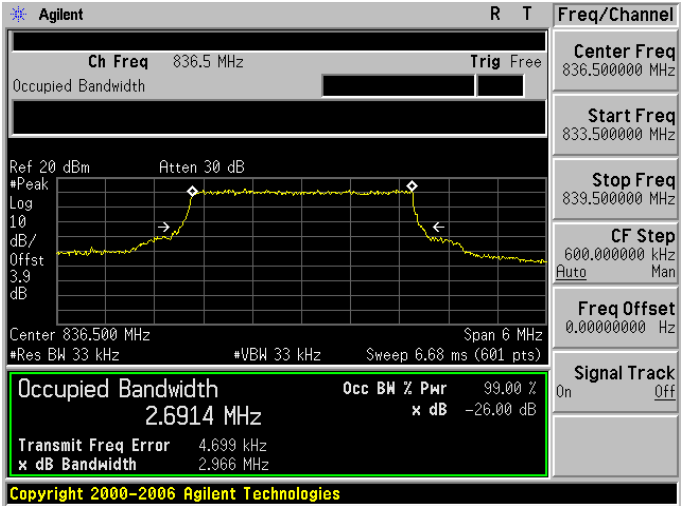
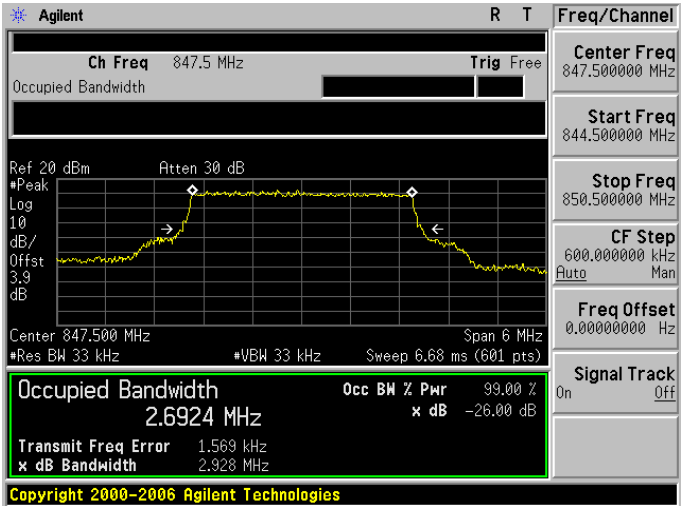
LTE Band 5 (Channel Bandwidth: 1.4 MHz) _ QPSK	
824.7 MHz	 Agilent R T Freq/Channel Ch Freq 824.7 MHz Trig Free Center Freq 824.700000 MHz Start Freq 823.200000 MHz Stop Freq 826.200000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 824.700 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0815 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.431 kHz x dB Bandwidth 1.283 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 835.000000 MHz Stop Freq 838.000000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.500 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0820 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -72.727 Hz x dB Bandwidth 1.222 MHz Copyright 2000-2006 Agilent Technologies
848.3 MHz	 Agilent R T Freq/Channel Ch Freq 848.3 MHz Trig Free Center Freq 848.300000 MHz Start Freq 846.800000 MHz Stop Freq 849.800000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 848.300 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0858 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.581 kHz x dB Bandwidth 1.246 MHz Copyright 2000-2006 Agilent Technologies

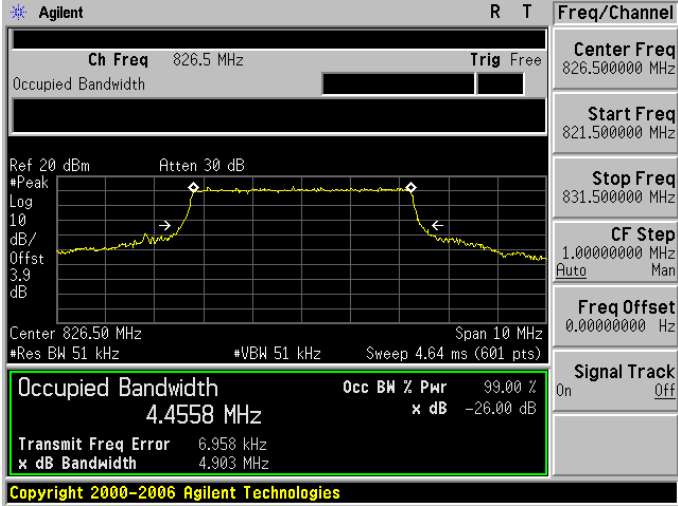
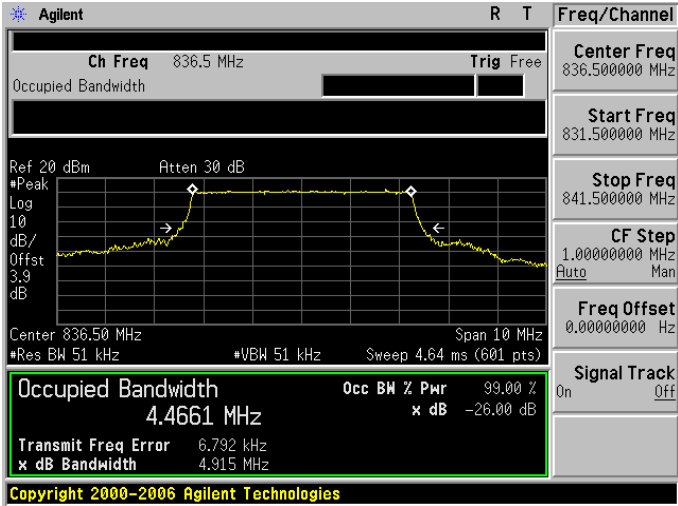
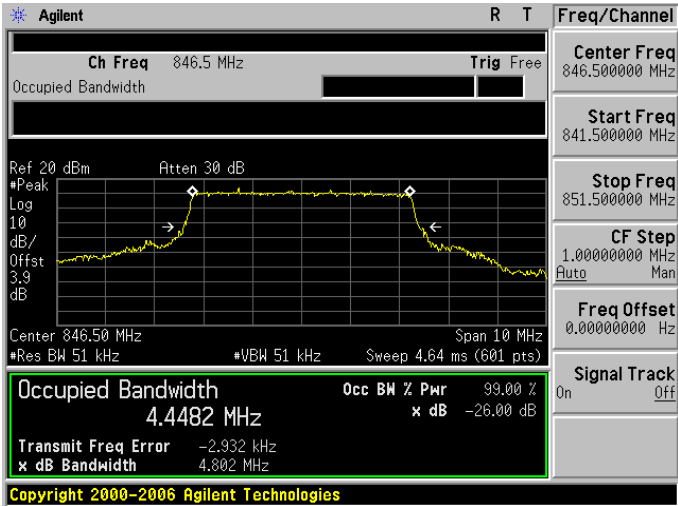
LTE Band 5 (Channel Bandwidth: 3 MHz) _ QPSK	
825.5 MHz	 Agilent R T Freq/Channel Ch Freq 825.5 MHz Trig Free Center Freq 825.500000 MHz Start Freq 822.500000 MHz Stop Freq 828.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 825.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6901 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.270 kHz x dB Bandwidth 2.965 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 833.500000 MHz Stop Freq 839.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6876 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.463 kHz x dB Bandwidth 2.953 MHz Copyright 2000-2006 Agilent Technologies
847.5 MHz	 Agilent R T Freq/Channel Ch Freq 847.5 MHz Trig Free Center Freq 847.500000 MHz Start Freq 844.500000 MHz Stop Freq 850.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 847.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6904 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.705 kHz x dB Bandwidth 2.948 MHz Copyright 2000-2006 Agilent Technologies

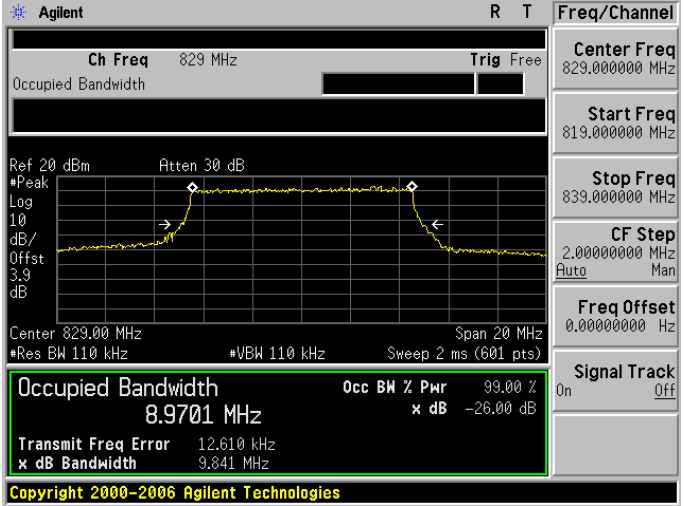
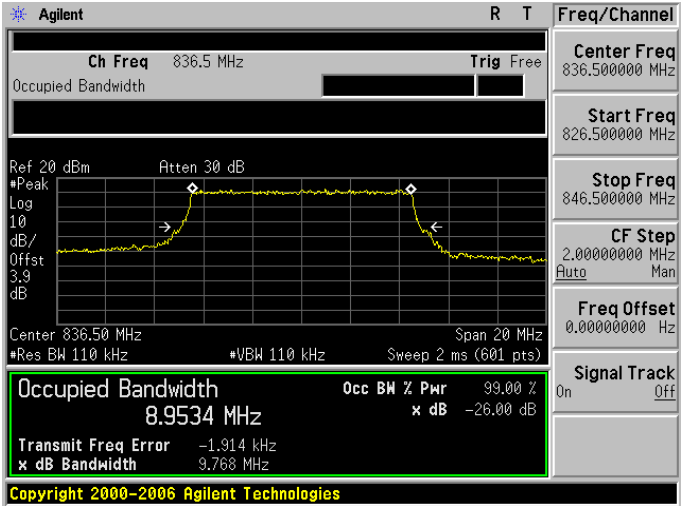
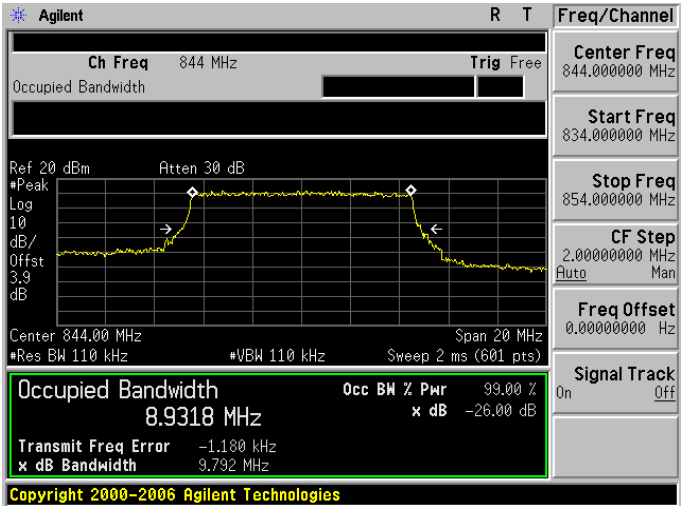
LTE Band 5 (Channel Bandwidth: 5 MHz) _ QPSK	
826.5 MHz	 Agilent R T Freq/Channel Ch Freq 826.5 MHz Trig Free Center Freq 826.500000 MHz Start Freq 821.500000 MHz Stop Freq 831.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 826.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4747 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 3.396 kHz x dB Bandwidth 4.923 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 831.500000 MHz Stop Freq 841.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4618 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 8.499 kHz x dB Bandwidth 4.891 MHz Copyright 2000-2006 Agilent Technologies
846.5 MHz	 Agilent R T Freq/Channel Ch Freq 846.5 MHz Trig Free Center Freq 846.500000 MHz Start Freq 841.500000 MHz Stop Freq 851.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 846.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4555 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 423.721 Hz x dB Bandwidth 4.848 MHz Copyright 2000-2006 Agilent Technologies

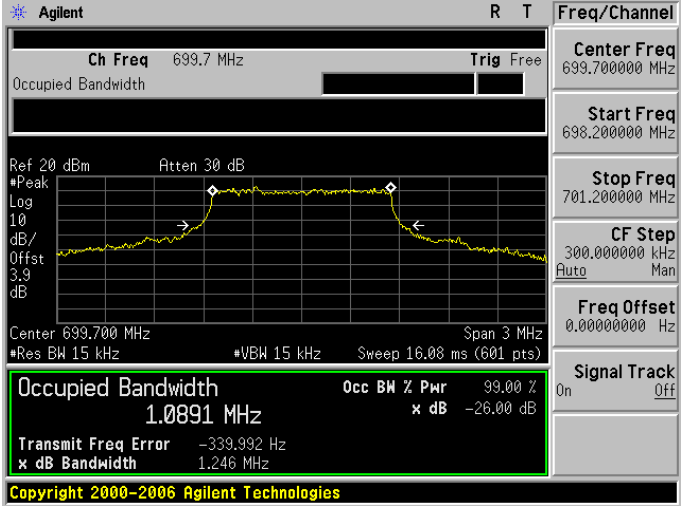
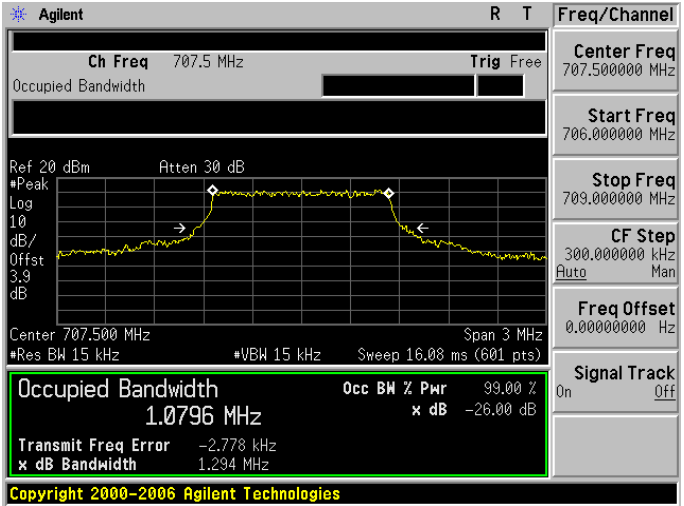
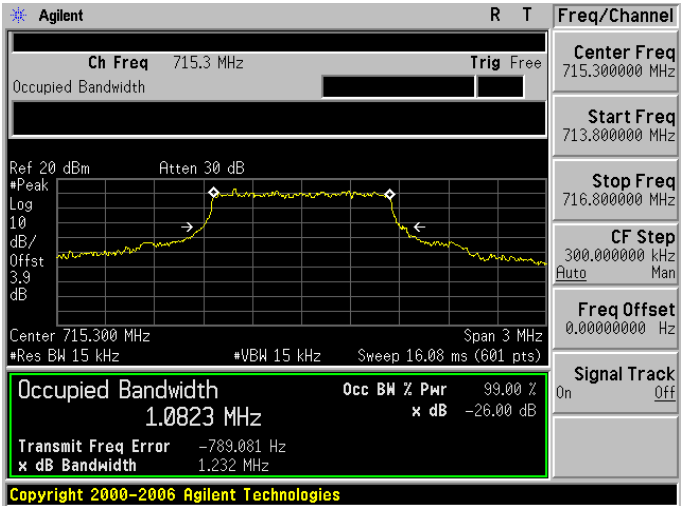
LTE Band 5 (Channel Bandwidth: 10 MHz) _ QPSK	
829.0 MHz	 Agilent R T Freq/Channel Ch Freq 829 MHz Trig Free Center Freq 829.000000 MHz Start Freq 819.000000 MHz Stop Freq 839.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 829.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9697 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 14.226 kHz x dB Bandwidth 9.888 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 826.500000 MHz Stop Freq 846.500000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.50 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9613 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.647 kHz x dB Bandwidth 9.813 MHz Copyright 2000-2006 Agilent Technologies
844.0 MHz	 Agilent R T Freq/Channel Ch Freq 844 MHz Trig Free Center Freq 844.000000 MHz Start Freq 834.000000 MHz Stop Freq 854.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 844.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9640 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -12.980 kHz x dB Bandwidth 9.787 MHz Copyright 2000-2006 Agilent Technologies

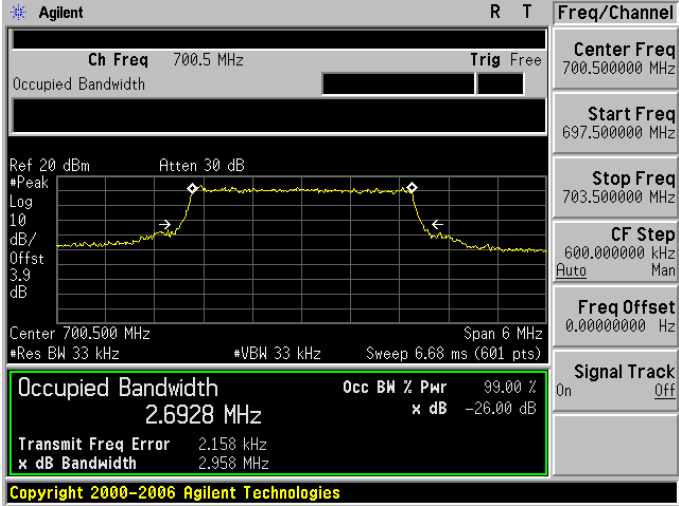
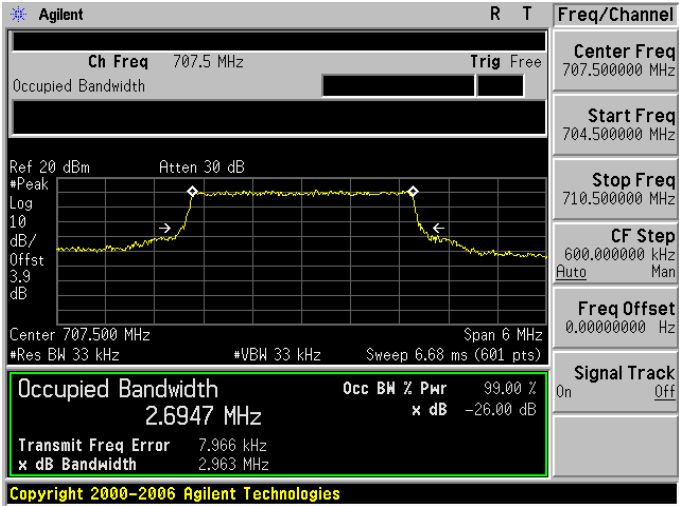
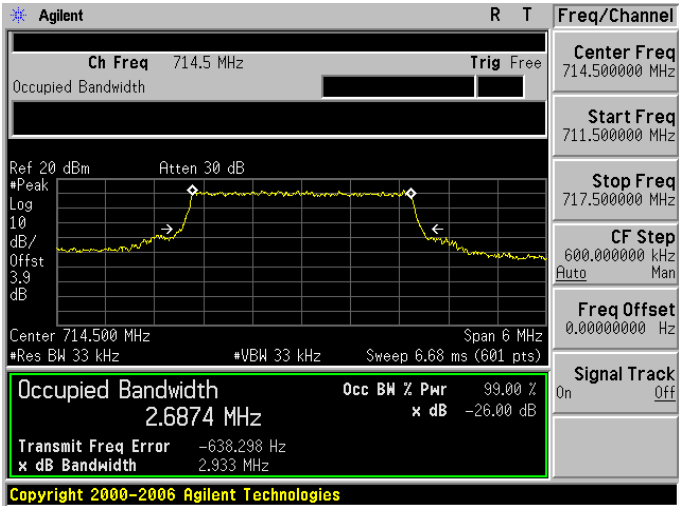
LTE Band 5 (Channel Bandwidth: 1.4 MHz) _ 16QAM	
824.7 MHz	 Agilent R T Freq/Channel Ch Freq 824.7 MHz Trig Free Center Freq 824.700000 MHz Start Freq 823.200000 MHz Stop Freq 826.200000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 824.700 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0814 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.629 kHz x dB Bandwidth 1.282 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 835.000000 MHz Stop Freq 838.000000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.500 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0817 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -138.736 Hz x dB Bandwidth 1.232 MHz Copyright 2000-2006 Agilent Technologies
848.3 MHz	 Agilent R T Freq/Channel Ch Freq 848.3 MHz Trig Free Center Freq 848.300000 MHz Start Freq 846.800000 MHz Stop Freq 849.800000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 848.300 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0857 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.569 kHz x dB Bandwidth 1.239 MHz Copyright 2000-2006 Agilent Technologies

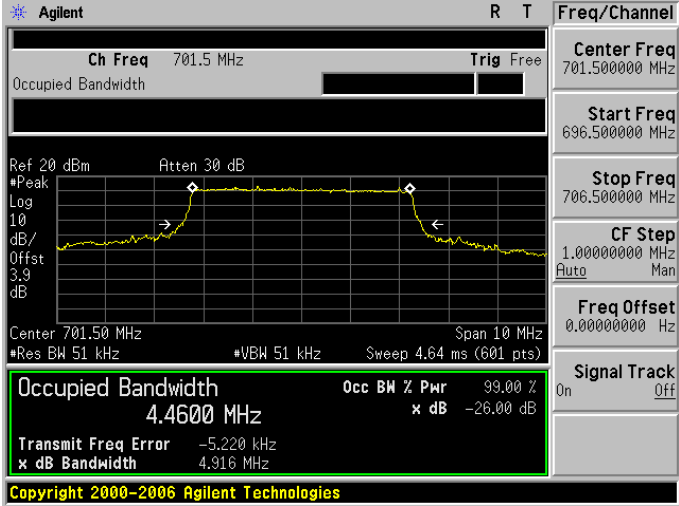
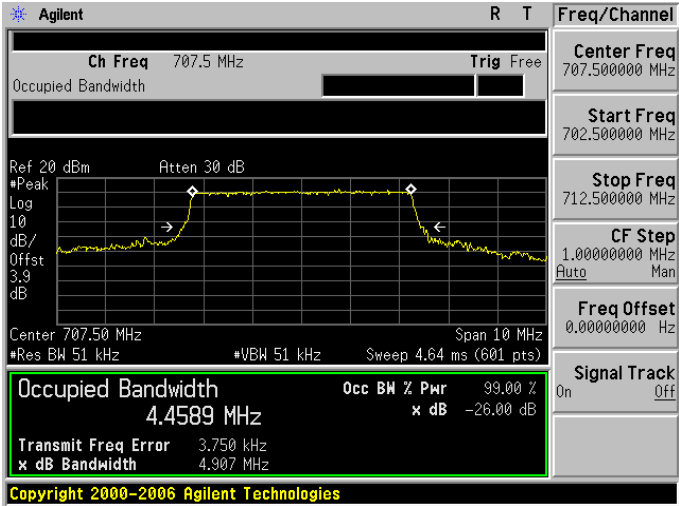
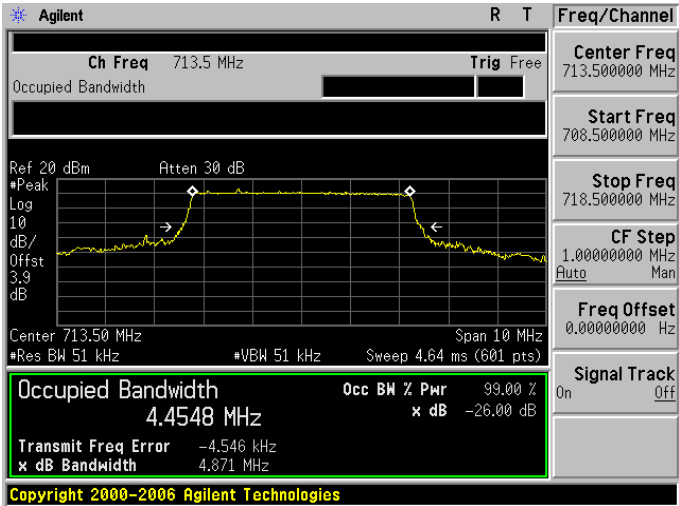
LTE Band 5 (Channel Bandwidth: 3 MHz) _ 16QAM	
825.5 MHz	 Agilent R T Freq/Channel Ch Freq 825.5 MHz Trig Free Center Freq 825.500000 MHz Start Freq 822.500000 MHz Stop Freq 828.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 825.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6906 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.662 kHz x dB Bandwidth 2.954 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 833.500000 MHz Stop Freq 839.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6914 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.699 kHz x dB Bandwidth 2.966 MHz Copyright 2000-2006 Agilent Technologies
847.5 MHz	 Agilent R T Freq/Channel Ch Freq 847.5 MHz Trig Free Center Freq 847.500000 MHz Start Freq 844.500000 MHz Stop Freq 850.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 847.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6924 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.569 kHz x dB Bandwidth 2.928 MHz Copyright 2000-2006 Agilent Technologies

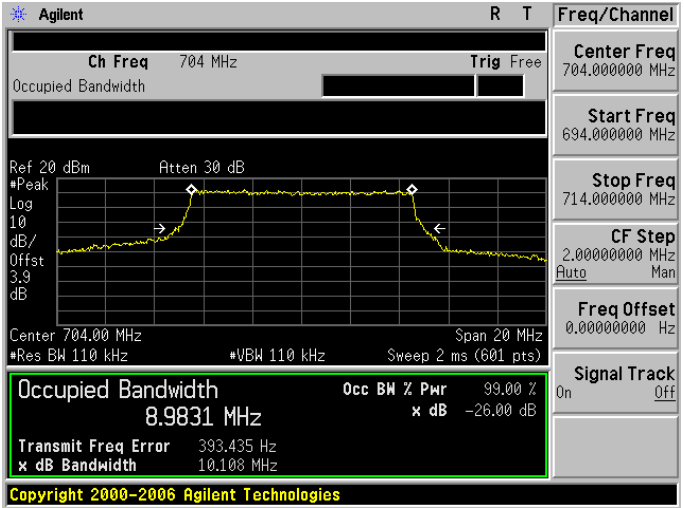
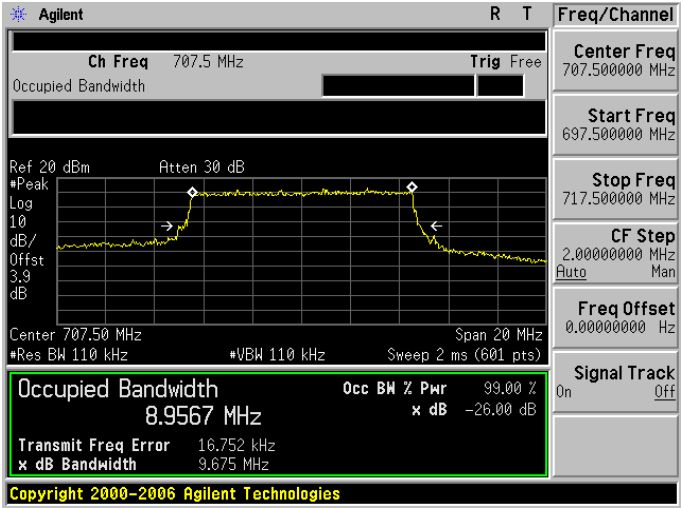
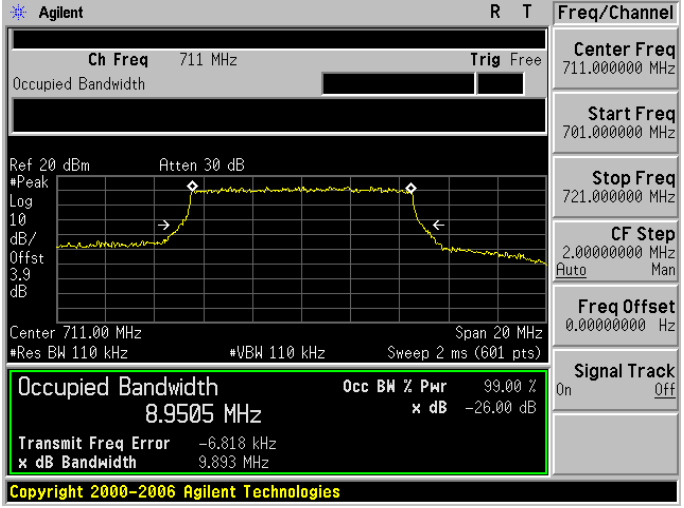
LTE Band 5 (Channel Bandwidth: 5 MHz) _ 16QAM	
826.5 MHz	 Agilent R T Freq/Channel Ch Freq 826.5 MHz Trig Free Center Freq 826.500000 MHz Start Freq 821.500000 MHz Stop Freq 831.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 826.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4558 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.958 kHz x dB Bandwidth 4.903 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 831.500000 MHz Stop Freq 841.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4661 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.792 kHz x dB Bandwidth 4.915 MHz Copyright 2000-2006 Agilent Technologies
846.5 MHz	 Agilent R T Freq/Channel Ch Freq 846.5 MHz Trig Free Center Freq 846.500000 MHz Start Freq 841.500000 MHz Stop Freq 851.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 846.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4482 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.932 kHz x dB Bandwidth 4.802 MHz Copyright 2000-2006 Agilent Technologies

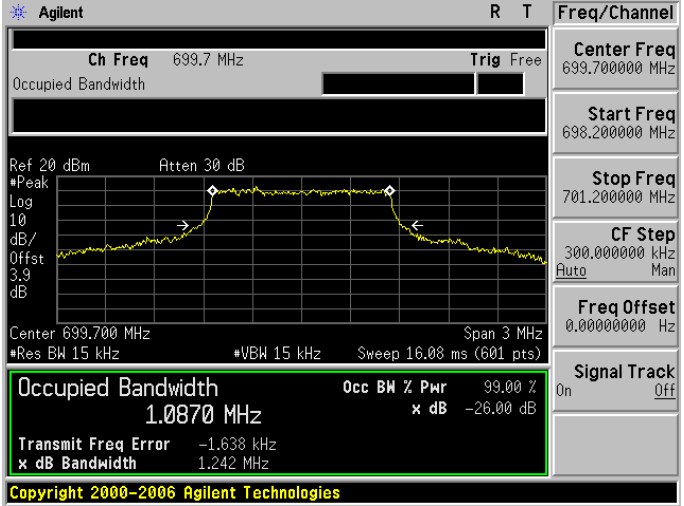
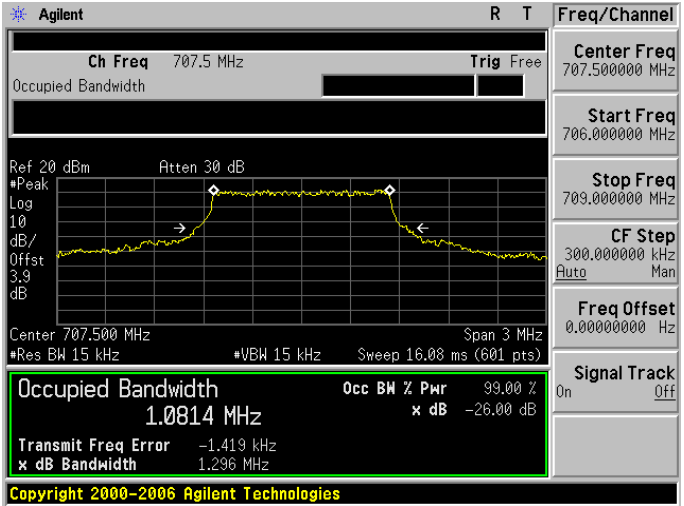
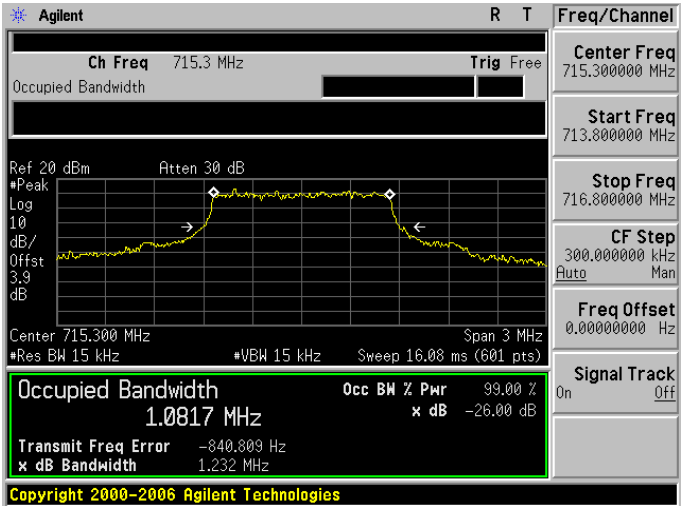
LTE Band 5 (Channel Bandwidth: 10 MHz) _ 16QAM	
829.0 MHz	 Agilent R T Freq/Channel Ch Freq 829 MHz Trig Free Center Freq 829.000000 MHz Start Freq 819.000000 MHz Stop Freq 839.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 829.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9701 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 12.610 kHz x dB Bandwidth 9.841 MHz Copyright 2000-2006 Agilent Technologies
836.5 MHz	 Agilent R T Freq/Channel Ch Freq 836.5 MHz Trig Free Center Freq 836.500000 MHz Start Freq 826.500000 MHz Stop Freq 846.500000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 836.50 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9534 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.914 kHz x dB Bandwidth 9.768 MHz Copyright 2000-2006 Agilent Technologies
844.0 MHz	 Agilent R T Freq/Channel Ch Freq 844 MHz Trig Free Center Freq 844.000000 MHz Start Freq 834.000000 MHz Stop Freq 854.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 844.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9318 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.180 kHz x dB Bandwidth 9.792 MHz Copyright 2000-2006 Agilent Technologies

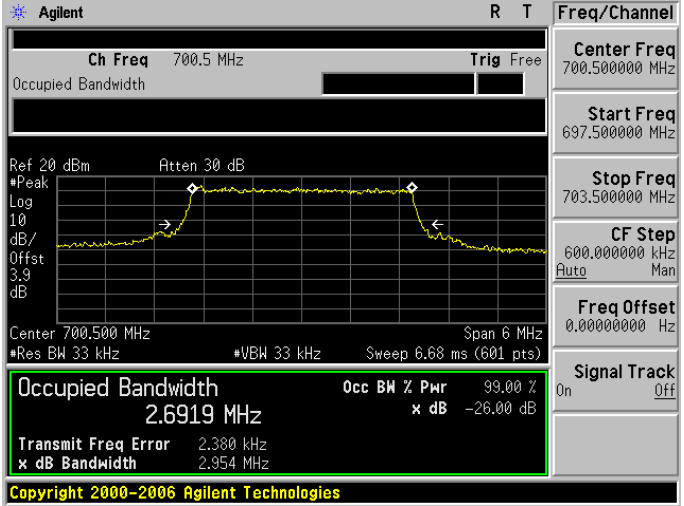
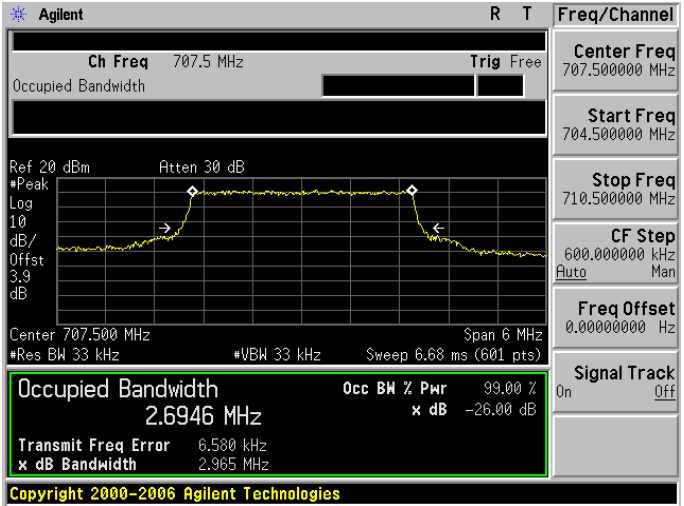
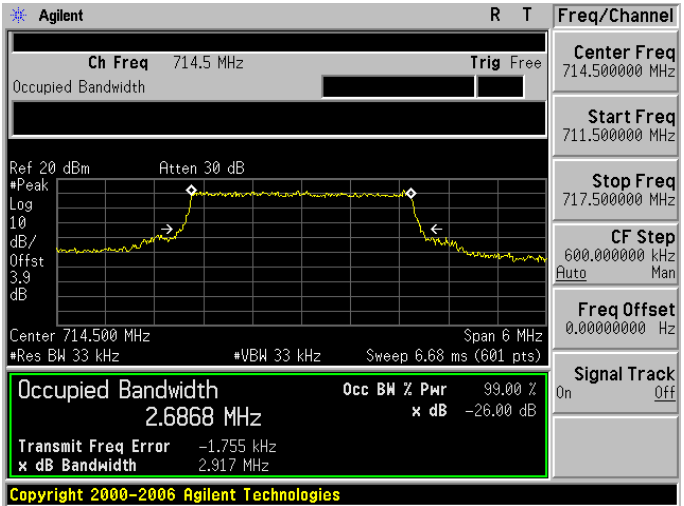
LTE Band 12 (Channel Bandwidth: 1.4 MHz) _ QPSK	
699.7 MHz	 Agilent R T Freq/Channel Ch Freq 699.7 MHz Trig Free Center Freq 699.700000 MHz Start Freq 698.200000 MHz Stop Freq 701.200000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 699.700 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0891 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -339.992 Hz x dB Bandwidth 1.246 MHz Copyright 2000-2006 Agilent Technologies
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Center Freq 707.500000 MHz Start Freq 706.000000 MHz Stop Freq 709.000000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.500 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0796 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.778 kHz x dB Bandwidth 1.294 MHz Copyright 2000-2006 Agilent Technologies
715.3 MHz	 Agilent R T Freq/Channel Ch Freq 715.3 MHz Trig Free Center Freq 715.300000 MHz Start Freq 713.800000 MHz Stop Freq 716.800000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 715.300 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0823 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -789.081 Hz x dB Bandwidth 1.232 MHz Copyright 2000-2006 Agilent Technologies

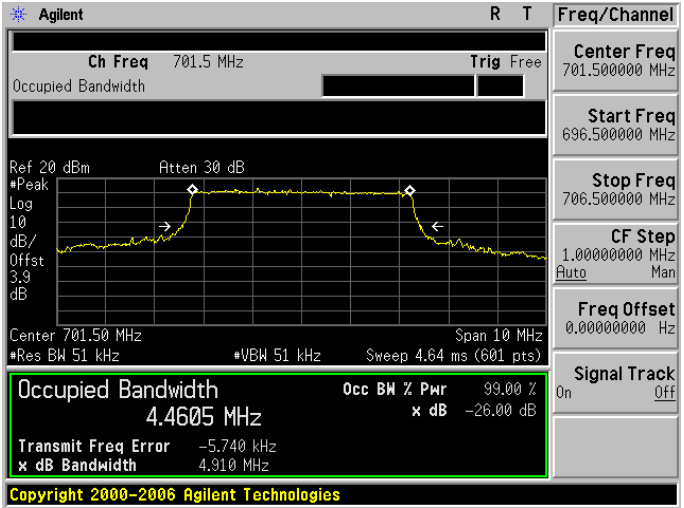
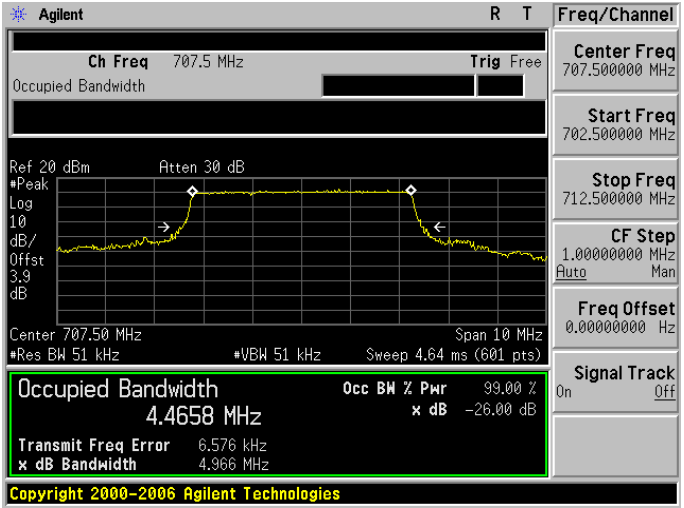
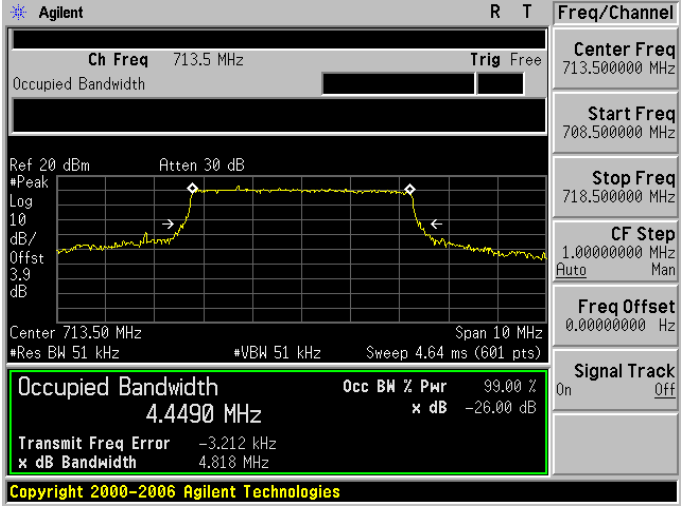
LTE Band 12 (Channel Bandwidth: 3 MHz) _ QPSK	
700.5 MHz	 Agilent R T Freq/Channel Ch Freq 700.5 MHz Trig Free Center Freq 700.500000 MHz Start Freq 697.500000 MHz Stop Freq 703.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 700.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6928 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.158 kHz x dB Bandwidth 2.958 MHz Copyright 2000-2006 Agilent Technologies
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Center Freq 707.500000 MHz Start Freq 704.500000 MHz Stop Freq 710.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6947 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 7.966 kHz x dB Bandwidth 2.963 MHz Copyright 2000-2006 Agilent Technologies
714.5 MHz	 Agilent R T Freq/Channel Ch Freq 714.5 MHz Trig Free Center Freq 714.500000 MHz Start Freq 711.500000 MHz Stop Freq 717.500000 MHz CF Step 600.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 714.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6874 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -638.298 Hz x dB Bandwidth 2.933 MHz Copyright 2000-2006 Agilent Technologies

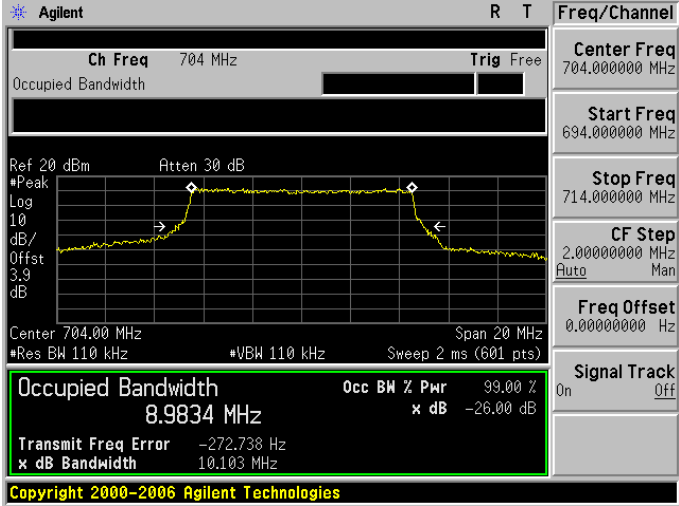
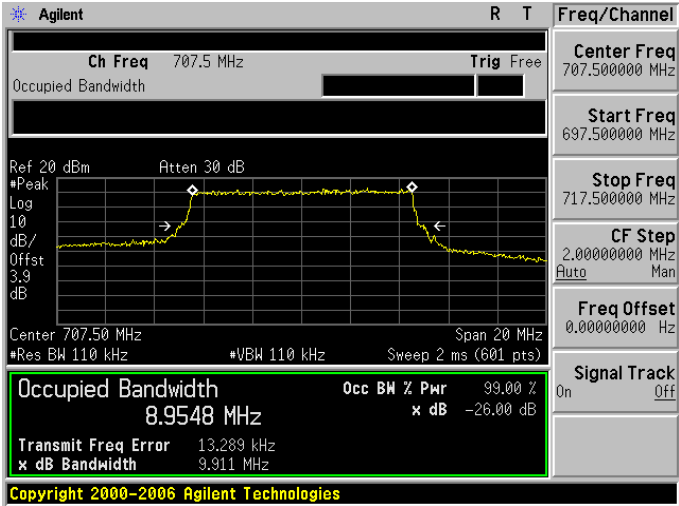
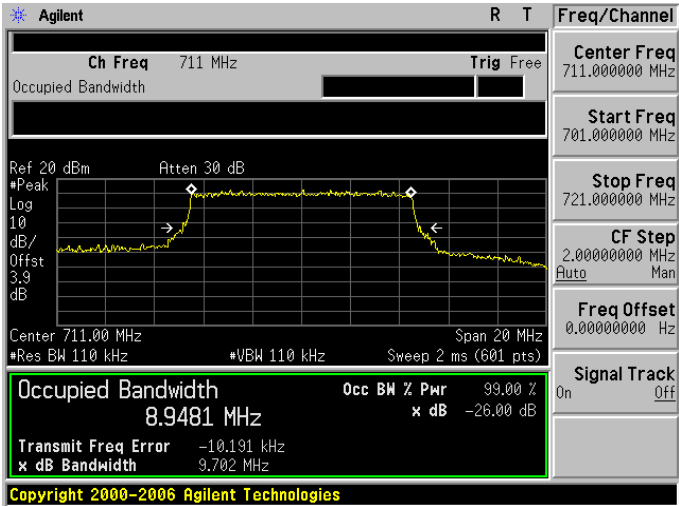
LTE Band 12 (Channel Bandwidth: 5 MHz) _ QPSK	
701.5 MHz	 Agilent R T Freq/Channel Ch Freq 701.5 MHz Trig Free Center Freq 701.500000 MHz Start Freq 696.500000 MHz Stop Freq 706.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 701.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4600 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -5.220 kHz x dB Bandwidth 4.916 MHz Copyright 2000-2006 Agilent Technologies
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Center Freq 707.500000 MHz Start Freq 702.500000 MHz Stop Freq 712.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4589 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 3.750 kHz x dB Bandwidth 4.907 MHz Copyright 2000-2006 Agilent Technologies
713.5 MHz	 Agilent R T Freq/Channel Ch Freq 713.5 MHz Trig Free Center Freq 713.500000 MHz Start Freq 708.500000 MHz Stop Freq 718.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 713.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4548 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -4.546 kHz x dB Bandwidth 4.871 MHz Copyright 2000-2006 Agilent Technologies

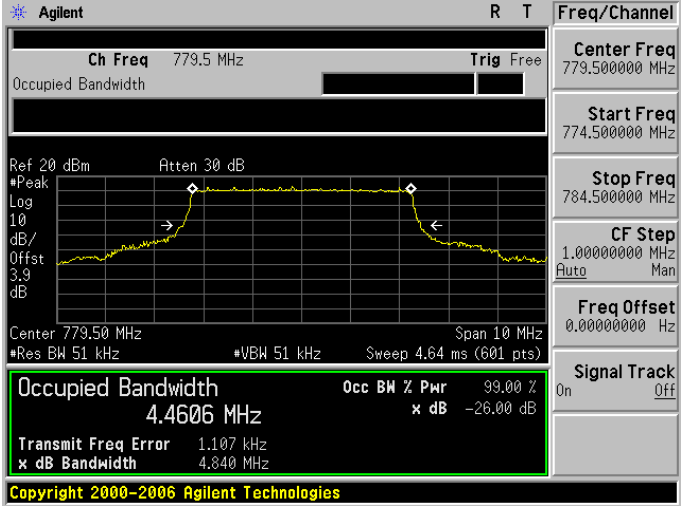
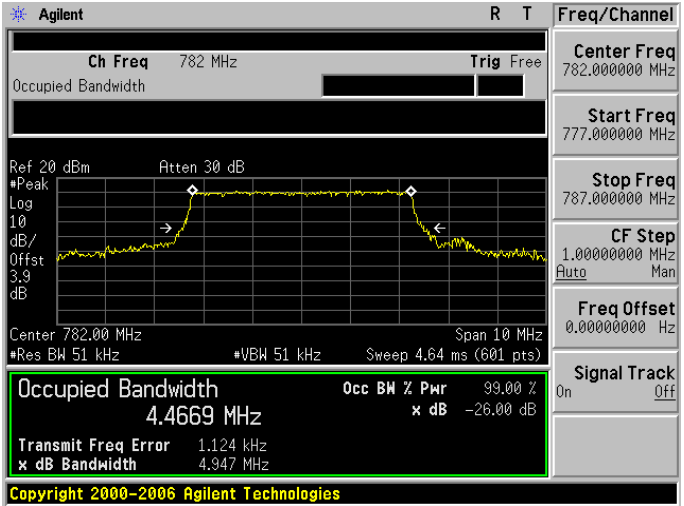
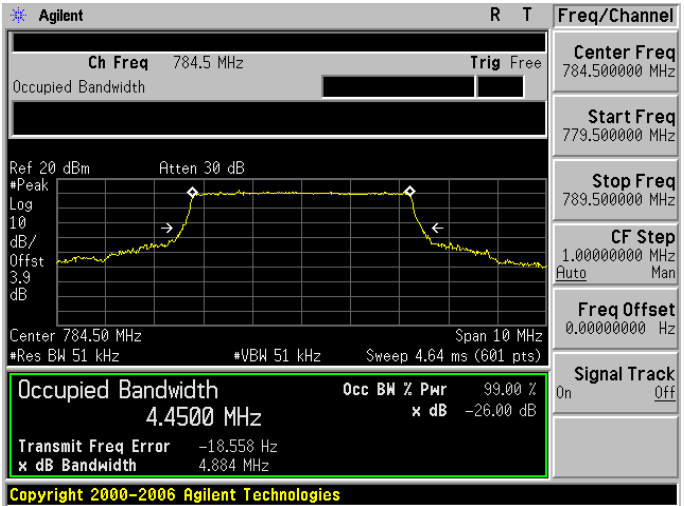
LTE Band 12 (Channel Bandwidth: 10 MHz) _ QPSK	
704.0 MHz	 Agilent R T Freq/Channel Ch Freq 704 MHz Trig Free Center Freq 704.000000 MHz Start Freq 694.000000 MHz Stop Freq 714.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 704.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9831 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 393.435 Hz x dB Bandwidth 10.108 MHz Copyright 2000-2006 Agilent Technologies
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Center Freq 707.500000 MHz Start Freq 697.500000 MHz Stop Freq 717.500000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.50 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9567 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 16.752 kHz x dB Bandwidth 9.675 MHz Copyright 2000-2006 Agilent Technologies
711.0 MHz	 Agilent R T Freq/Channel Ch Freq 711 MHz Trig Free Center Freq 711.000000 MHz Start Freq 701.000000 MHz Stop Freq 721.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 711.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9505 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -6.818 kHz x dB Bandwidth 9.893 MHz Copyright 2000-2006 Agilent Technologies

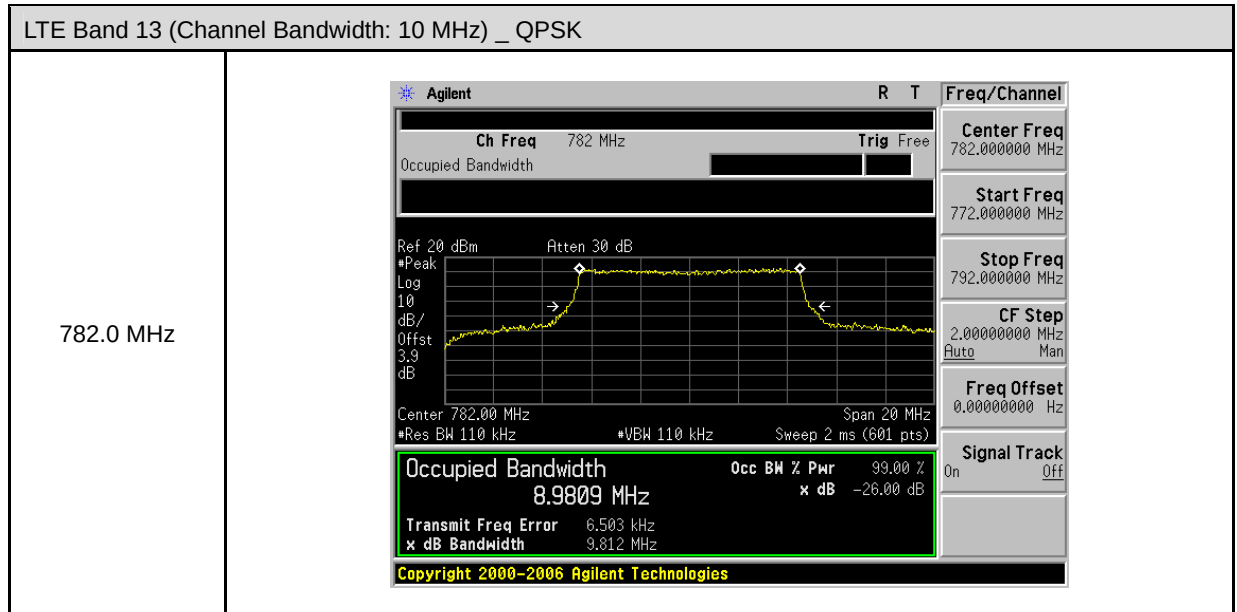
LTE Band 12 (Channel Bandwidth: 1.4 MHz) _ 16QAM	
669.7 MHz	 Agilent R T Freq/Channel Ch Freq 699.7 MHz Trig Free Center Freq 699.700000 MHz Start Freq 698.200000 MHz Stop Freq 701.200000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 699.700 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0870 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.638 kHz x dB Bandwidth 1.242 MHz Copyright 2000-2006 Agilent Technologies
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Center Freq 707.500000 MHz Start Freq 706.000000 MHz Stop Freq 709.000000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.500 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0814 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.419 kHz x dB Bandwidth 1.296 MHz Copyright 2000-2006 Agilent Technologies
715.3 MHz	 Agilent R T Freq/Channel Ch Freq 715.3 MHz Trig Free Center Freq 715.300000 MHz Start Freq 713.800000 MHz Stop Freq 716.800000 MHz CF Step 300.000000 kHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 715.300 MHz Span 3 MHz Res BW 15 kHz VBW 15 kHz Sweep 16.08 ms (601 pts) Occupied Bandwidth 1.0817 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -840.809 Hz x dB Bandwidth 1.232 MHz Copyright 2000-2006 Agilent Technologies

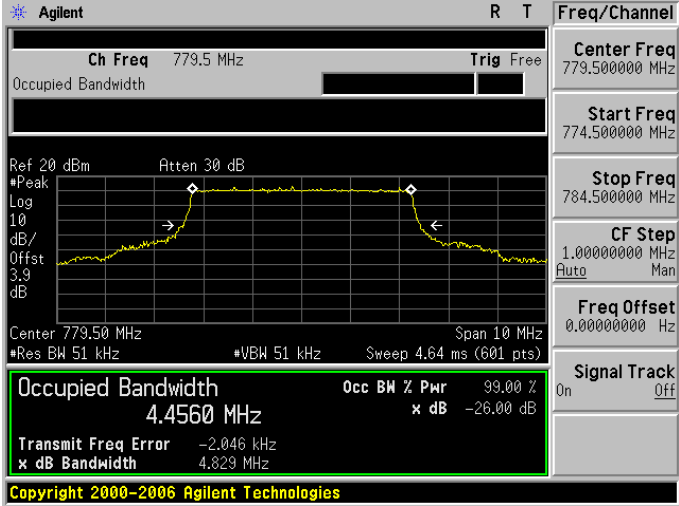
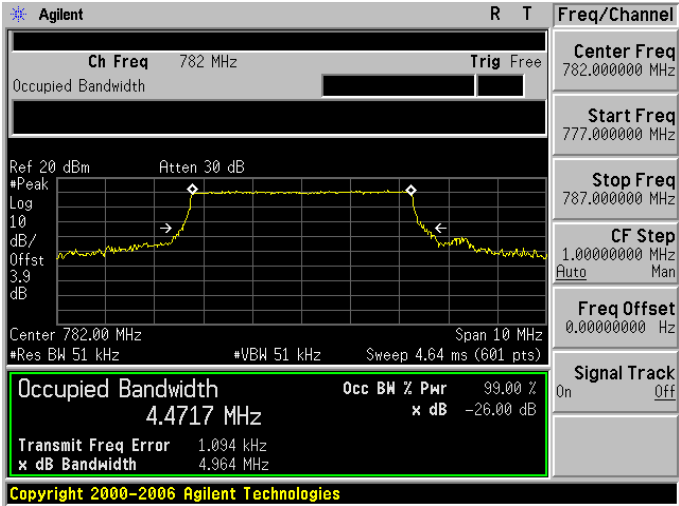
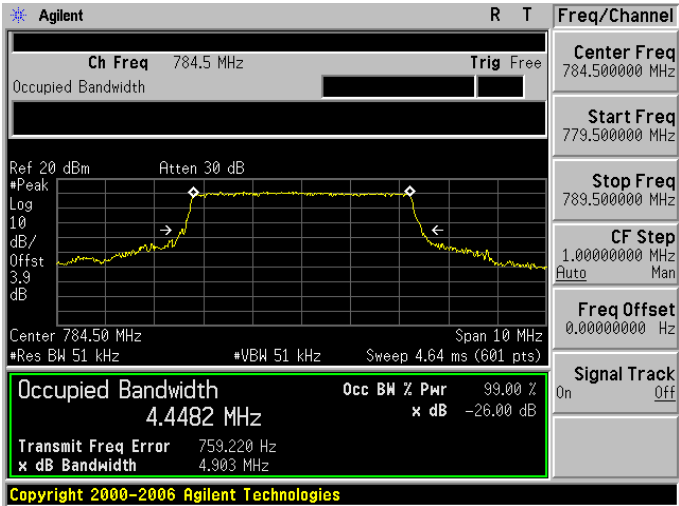
LTE Band 12 (Channel Bandwidth: 3 MHz) _ 16QAM	
700.5 MHz	 Agilent R T Freq/Channel Ch Freq 700.5 MHz Trig Free Center Freq 700.50000 MHz Start Freq 697.50000 MHz Stop Freq 703.50000 MHz CF Step 600.00000 kHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 700.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6919 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.380 kHz x dB Bandwidth 2.954 MHz Copyright 2000-2006 Agilent Technologies
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Center Freq 707.50000 MHz Start Freq 704.50000 MHz Stop Freq 710.50000 MHz CF Step 600.00000 kHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6946 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.580 kHz x dB Bandwidth 2.965 MHz Copyright 2000-2006 Agilent Technologies
714.5 MHz	 Agilent R T Freq/Channel Ch Freq 714.5 MHz Trig Free Center Freq 714.50000 MHz Start Freq 711.50000 MHz Stop Freq 717.50000 MHz CF Step 600.00000 kHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 714.500 MHz Span 6 MHz Res BW 33 kHz VBW 33 kHz Sweep 6.68 ms (601 pts) Occupied Bandwidth 2.6868 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.755 kHz x dB Bandwidth 2.917 MHz Copyright 2000-2006 Agilent Technologies

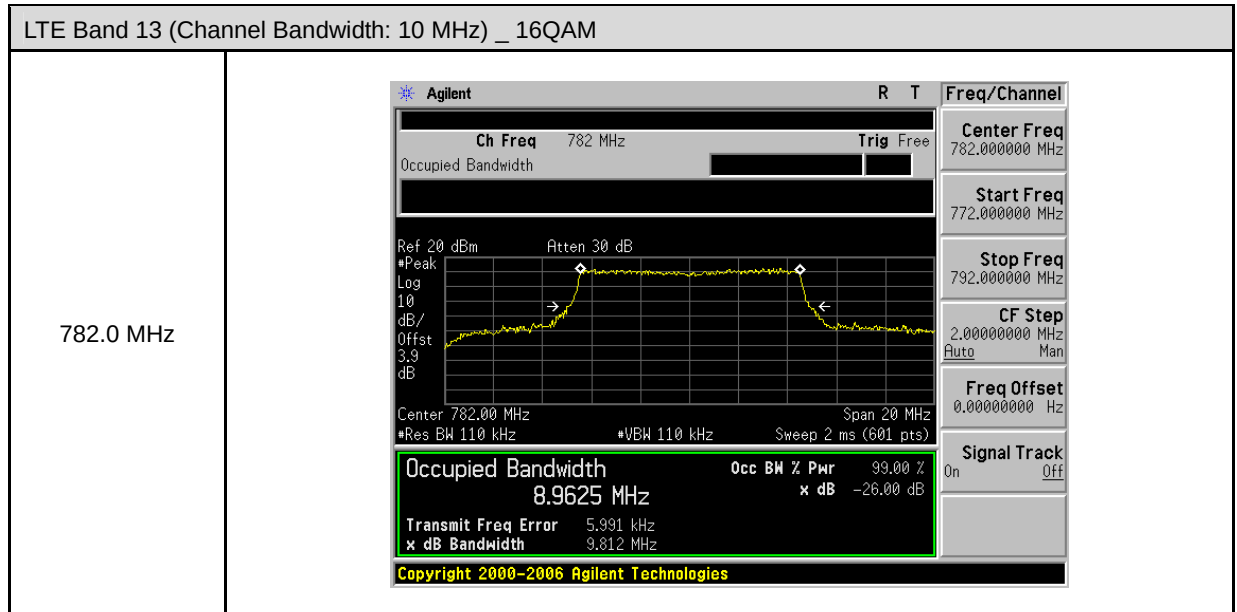
LTE Band 12 (Channel Bandwidth: 5 MHz) _ 16QAM	
701.5 MHz	 Agilent R T Freq/Channel Ch Freq 701.5 MHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 701.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4605 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -5.740 kHz x dB Bandwidth 4.910 MHz Copyright 2000-2006 Agilent Technologies Freq/Channel Center Freq 701.500000 MHz Start Freq 696.500000 MHz Stop Freq 706.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4658 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 6.576 kHz x dB Bandwidth 4.966 MHz Copyright 2000-2006 Agilent Technologies Freq/Channel Center Freq 707.500000 MHz Start Freq 702.500000 MHz Stop Freq 712.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
713.5 MHz	 Agilent R T Freq/Channel Ch Freq 713.5 MHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 713.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4490 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -3.212 kHz x dB Bandwidth 4.818 MHz Copyright 2000-2006 Agilent Technologies Freq/Channel Center Freq 713.500000 MHz Start Freq 708.500000 MHz Stop Freq 718.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

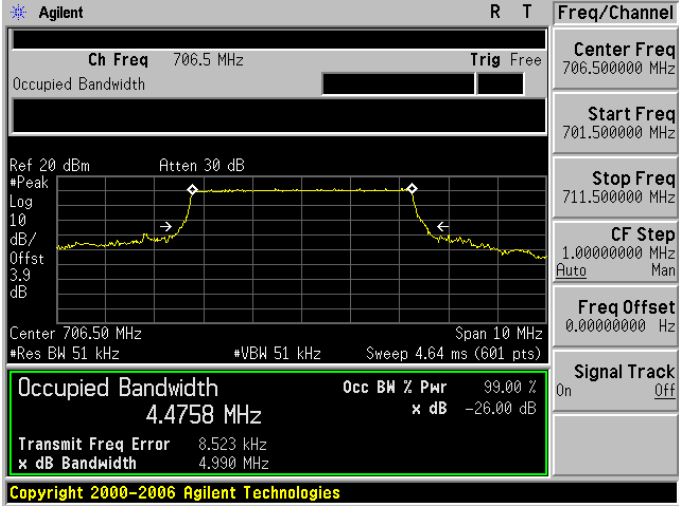
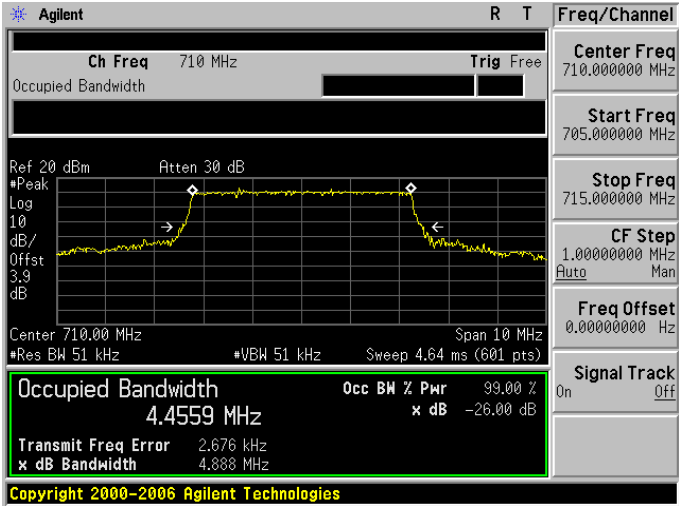
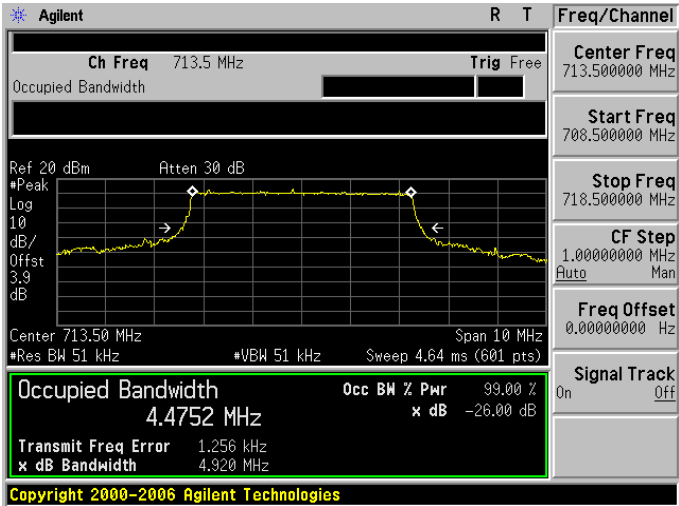
LTE Band 12 (Channel Bandwidth: 10 MHz) _ 16QAM	
704.0 MHz	 Agilent R T Freq/Channel Ch Freq 704 MHz Trig Free Center Freq 704.000000 MHz Start Freq 694.000000 MHz Stop Freq 714.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 704.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9834 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -272.738 Hz x dB Bandwidth 10.103 MHz Copyright 2000-2006 Agilent Technologies
707.5 MHz	 Agilent R T Freq/Channel Ch Freq 707.5 MHz Trig Free Center Freq 707.500000 MHz Start Freq 697.500000 MHz Stop Freq 717.500000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 707.50 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9548 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 13.289 kHz x dB Bandwidth 9.911 MHz Copyright 2000-2006 Agilent Technologies
711.0 MHz	 Agilent R T Freq/Channel Ch Freq 711 MHz Trig Free Center Freq 711.000000 MHz Start Freq 701.000000 MHz Stop Freq 721.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 711.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9481 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -10.191 kHz x dB Bandwidth 9.702 MHz Copyright 2000-2006 Agilent Technologies

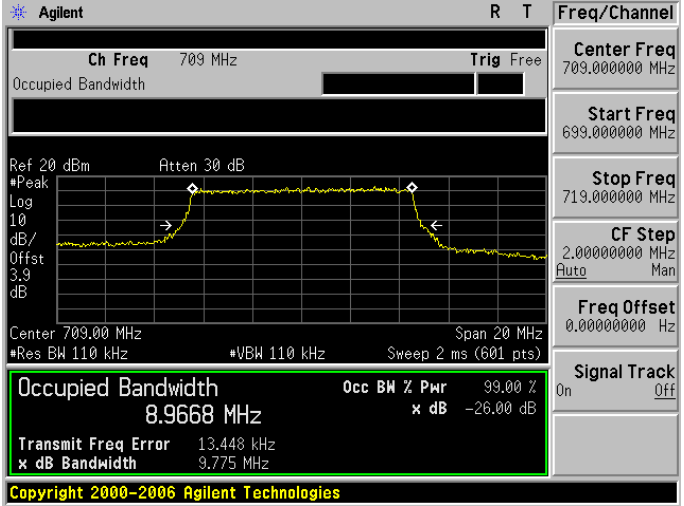
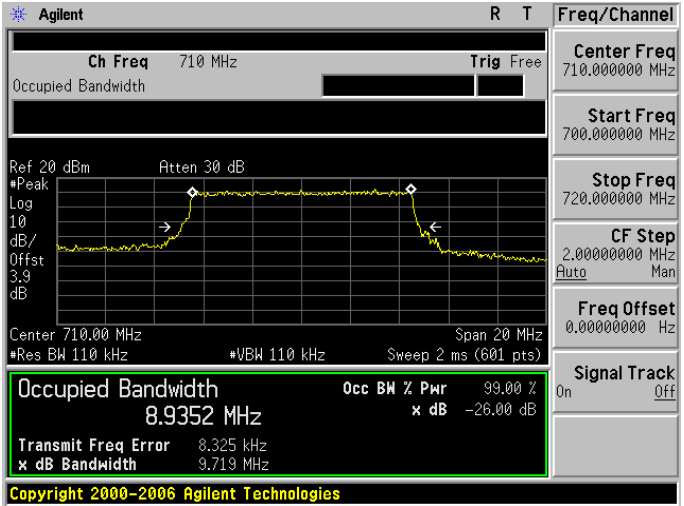
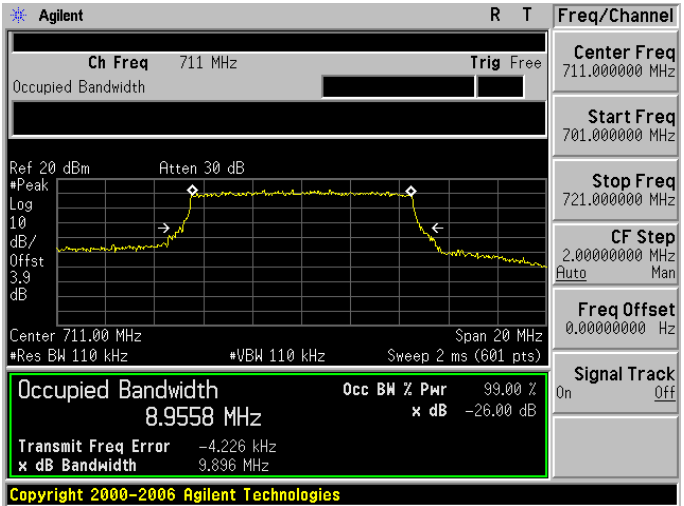
LTE Band 13 (Channel Bandwidth: 5 MHz) _ QPSK	
779.5 MHz	 Agilent R T Freq/Channel Ch Freq 779.5 MHz Trig Free Center Freq 779.500000 MHz Start Freq 774.500000 MHz Stop Freq 784.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 779.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4606 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.107 kHz x dB Bandwidth 4.840 MHz Copyright 2000-2006 Agilent Technologies
782.0 MHz	 Agilent R T Freq/Channel Ch Freq 782 MHz Trig Free Center Freq 782.000000 MHz Start Freq 777.000000 MHz Stop Freq 787.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 782.00 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4669 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.124 kHz x dB Bandwidth 4.947 MHz Copyright 2000-2006 Agilent Technologies
784.5 MHz	 Agilent R T Freq/Channel Ch Freq 784.5 MHz Trig Free Center Freq 784.500000 MHz Start Freq 779.500000 MHz Stop Freq 789.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 784.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4500 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -18.558 Hz x dB Bandwidth 4.884 MHz Copyright 2000-2006 Agilent Technologies

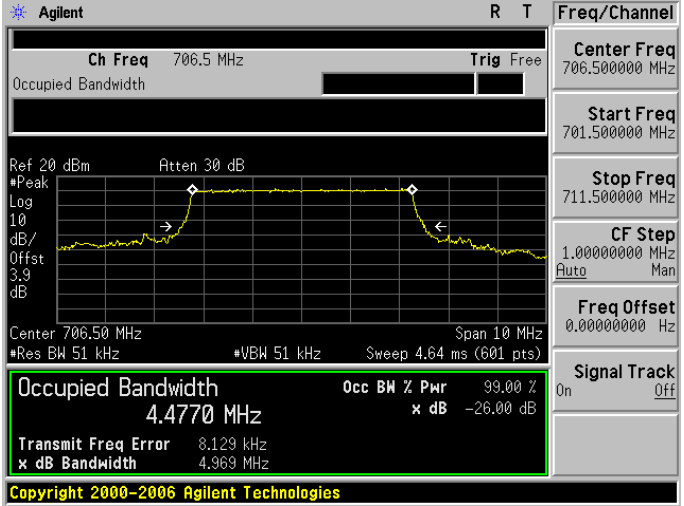
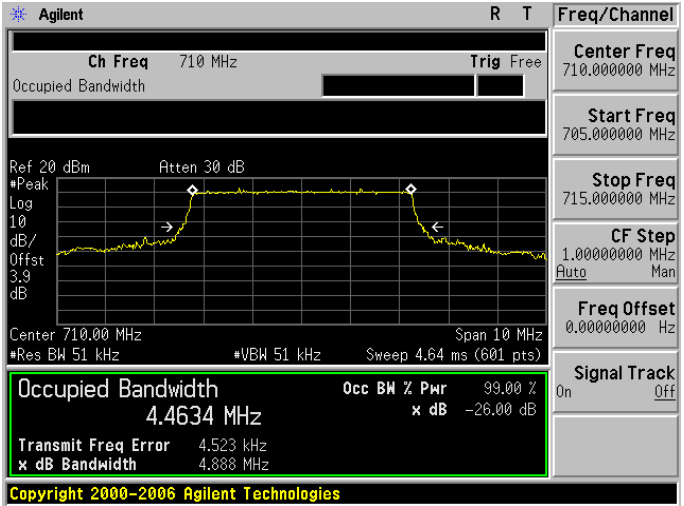
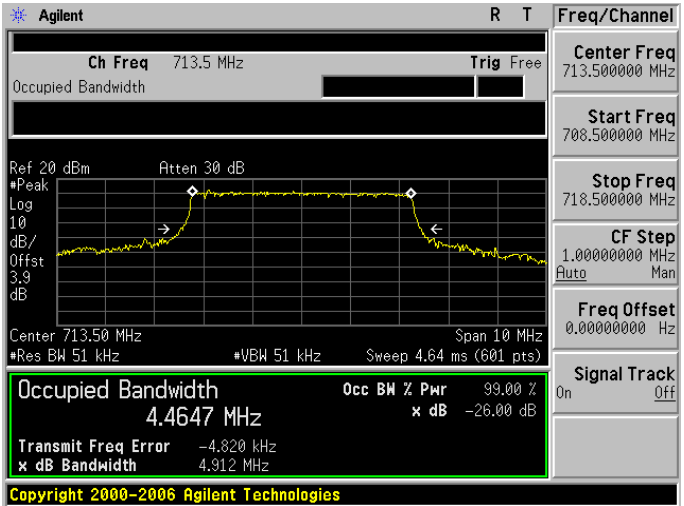


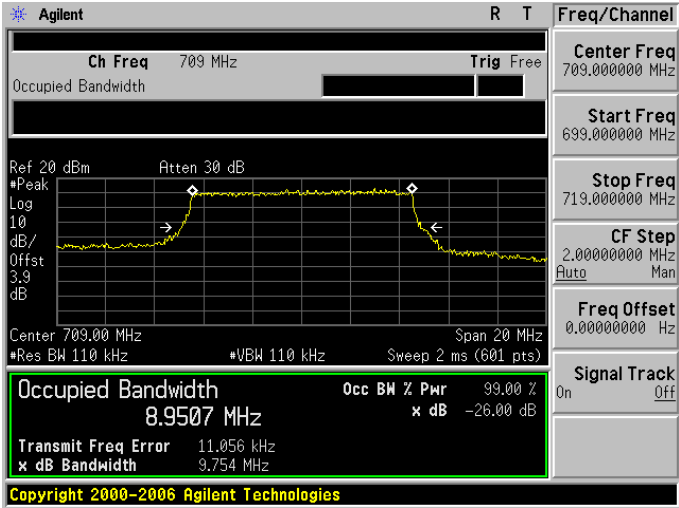
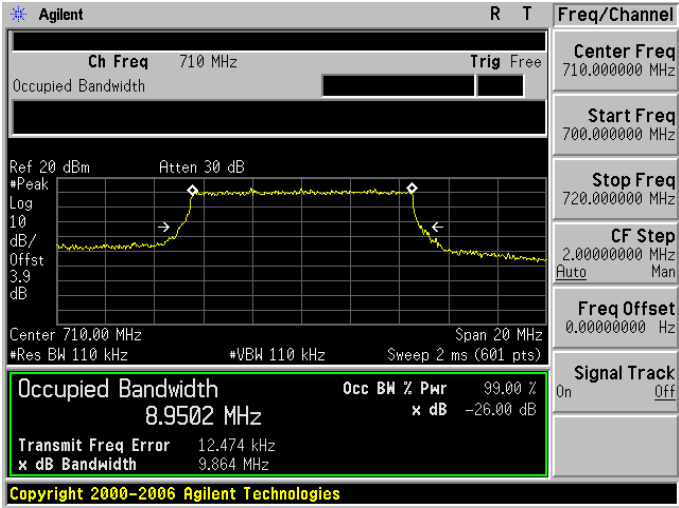
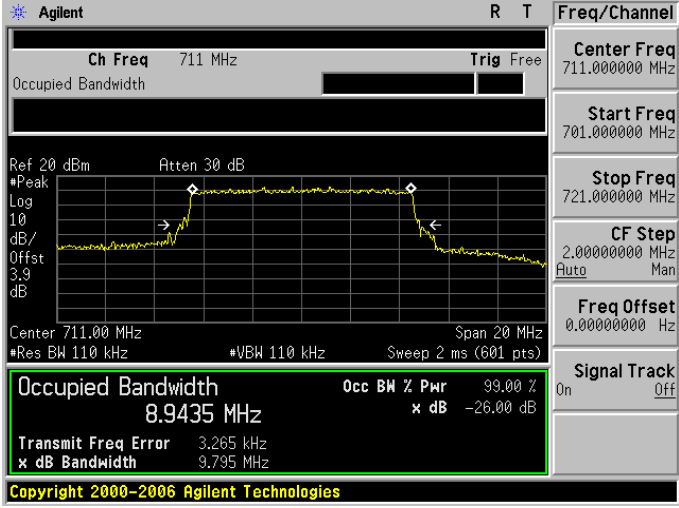
LTE Band 13 (Channel Bandwidth: 5 MHz) _ 16QAM	
779.5 MHz	 Agilent R T Freq/Channel Ch Freq 779.5 MHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 779.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4560 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.046 kHz x dB Bandwidth 4.829 MHz Copyright 2000-2006 Agilent Technologies Freq/Channel Center Freq 779.500000 MHz Start Freq 774.500000 MHz Stop Freq 784.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
782.0 MHz	 Agilent R T Freq/Channel Ch Freq 782 MHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 782.00 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4717 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.094 kHz x dB Bandwidth 4.964 MHz Copyright 2000-2006 Agilent Technologies Freq/Channel Center Freq 782.000000 MHz Start Freq 777.000000 MHz Stop Freq 787.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
784.5 MHz	 Agilent R T Freq/Channel Ch Freq 784.5 MHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 784.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4482 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 759.220 Hz x dB Bandwidth 4.903 MHz Copyright 2000-2006 Agilent Technologies Freq/Channel Center Freq 784.500000 MHz Start Freq 779.500000 MHz Stop Freq 789.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off



LTE Band 17 (Channel Bandwidth: 5 MHz) _ QPSK	
706.5 MHz	 Agilent R T Freq/Channel Ch Freq 706.5 MHz Trig Free Center Freq 706.500000 MHz Start Freq 701.500000 MHz Stop Freq 711.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 706.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4758 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 8.523 kHz x dB Bandwidth 4.990 MHz Copyright 2000-2006 Agilent Technologies
710.0 MHz	 Agilent R T Freq/Channel Ch Freq 710 MHz Trig Free Center Freq 710.000000 MHz Start Freq 705.000000 MHz Stop Freq 715.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 710.00 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4559 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 2.676 kHz x dB Bandwidth 4.888 MHz Copyright 2000-2006 Agilent Technologies
713.5 MHz	 Agilent R T Freq/Channel Ch Freq 713.5 MHz Trig Free Center Freq 713.500000 MHz Start Freq 708.500000 MHz Stop Freq 718.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 713.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4752 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.256 kHz x dB Bandwidth 4.920 MHz Copyright 2000-2006 Agilent Technologies

LTE Band 17 (Channel Bandwidth: 10 MHz) _ QPSK	
709.0 MHz	 Agilent R T Freq/Channel Ch Freq 709 MHz Trig Free Center Freq 709.000000 MHz Start Freq 699.000000 MHz Stop Freq 719.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 709.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9668 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 13.448 kHz x dB Bandwidth 9.775 MHz Copyright 2000-2006 Agilent Technologies
710.0 MHz	 Agilent R T Freq/Channel Ch Freq 710 MHz Trig Free Center Freq 710.000000 MHz Start Freq 700.000000 MHz Stop Freq 720.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 710.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9352 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 8.325 kHz x dB Bandwidth 9.719 MHz Copyright 2000-2006 Agilent Technologies
711.0 MHz	 Agilent R T Freq/Channel Ch Freq 711 MHz Trig Free Center Freq 711.000000 MHz Start Freq 701.000000 MHz Stop Freq 721.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 711.00 MHz Span 20 MHz Res BW 110 kHz VBW 110 kHz Sweep 2 ms (601 pts) Occupied Bandwidth 8.9558 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -4.226 kHz x dB Bandwidth 9.896 MHz Copyright 2000-2006 Agilent Technologies

LTE Band 17 (Channel Bandwidth: 5 MHz) _ 16QAM	
706.5 MHz	 Agilent R T Freq/Channel Ch Freq 706.5 MHz Trig Free Center Freq 706.500000 MHz Start Freq 701.500000 MHz Stop Freq 711.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 706.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4770 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 8.129 kHz x dB Bandwidth 4.969 MHz Copyright 2000-2006 Agilent Technologies
710.0 MHz	 Agilent R T Freq/Channel Ch Freq 710 MHz Trig Free Center Freq 710.000000 MHz Start Freq 705.000000 MHz Stop Freq 715.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 710.00 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4634 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.523 kHz x dB Bandwidth 4.888 MHz Copyright 2000-2006 Agilent Technologies
713.5 MHz	 Agilent R T Freq/Channel Ch Freq 713.5 MHz Trig Free Center Freq 713.500000 MHz Start Freq 708.500000 MHz Stop Freq 718.500000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 20 dBm Atten 30 dB Peak Log 10 dB/Offst 3.9 dB Center 713.50 MHz Span 10 MHz Res BW 51 kHz VBW 51 kHz Sweep 4.64 ms (601 pts) Occupied Bandwidth 4.4647 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -4.820 kHz x dB Bandwidth 4.912 MHz Copyright 2000-2006 Agilent Technologies

LTE Band 17 (Channel Bandwidth: 10 MHz) _ 16QAM	
709.0 MHz	 Copyright 2000-2006 Agilent Technologies
710.0 MHz	 Copyright 2000-2006 Agilent Technologies
711.0 MHz	 Copyright 2000-2006 Agilent Technologies

6 Peak to Average Ratio Test

6.1. Limit

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

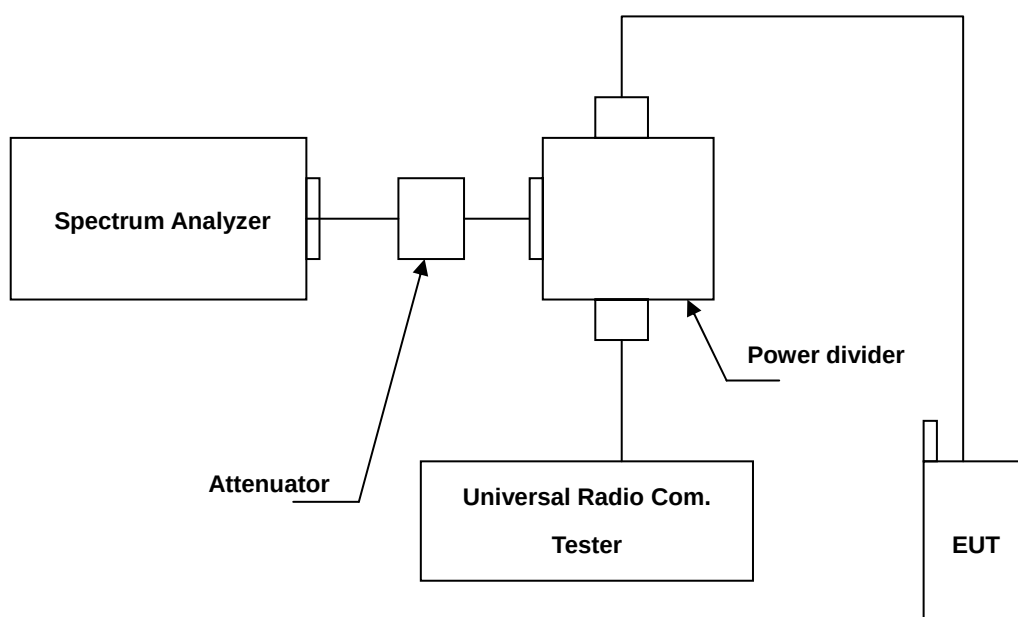
6.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2015	(1)
Wideband Radio Communication Test	R & S	CMW500	103168	11/05/2014	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

6.3. Setup



6.4. Test Procedure

The measurement is made according to FCC rules:

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

6.5. Uncertainty

The measurement uncertainty is defined as for Conducted Power measurement is 1.2 dB.

6.6. Test Result

Model Number	LE910-NA V2		
Test Item	Peak to Average Ratio		
Date of Test	06/12/2015	Test Site	TE05

LTE Band 2				
Modulation	Channel Bandwidth	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)
QPSK	1.4 MHz	1880.0	4.70	< 13
	3 MHz	1880.0	4.46	< 13
	5 MHz	1880.0	3.93	< 13
	10 MHz	1880.0	3.70	< 13
	15 MHz	1880.0	3.47	< 13
	20 MHz	1880.0	3.53	< 13
16QAM	1.4 MHz	1880.0	5.52	< 13
	3 MHz	1880.0	5.21	< 13
	5 MHz	1880.0	4.60	< 13
	10 MHz	1880.0	4.56	< 13
	15 MHz	1880.0	4.29	< 13
	20 MHz	1880.0	4.14	< 13

LTE Band 4				
Modulation	Channel Bandwidth	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)
QPSK	1.4 MHz	1732.5	5.40	< 13
	3 MHz	1732.5	5.22	< 13
	5 MHz	1732.5	5.18	< 13
	10 MHz	1732.5	5.25	< 13
	15 MHz	1732.5	5.24	< 13
	20 MHz	1732.5	5.22	< 13
16QAM	1.4 MHz	1732.5	6.18	< 13
	3 MHz	1732.5	5.95	< 13
	5 MHz	1732.5	5.80	< 13
	10 MHz	1732.5	6.05	< 13
	15 MHz	1732.5	6.14	< 13
	20 MHz	1732.5	5.77	< 13

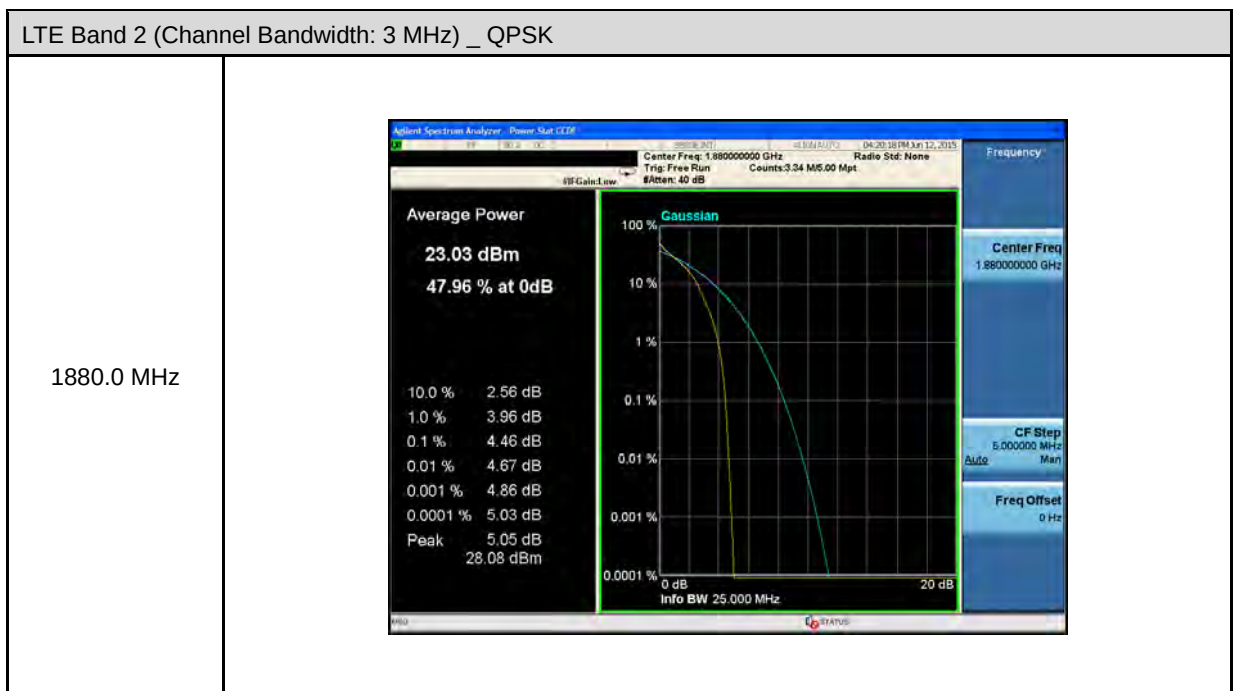
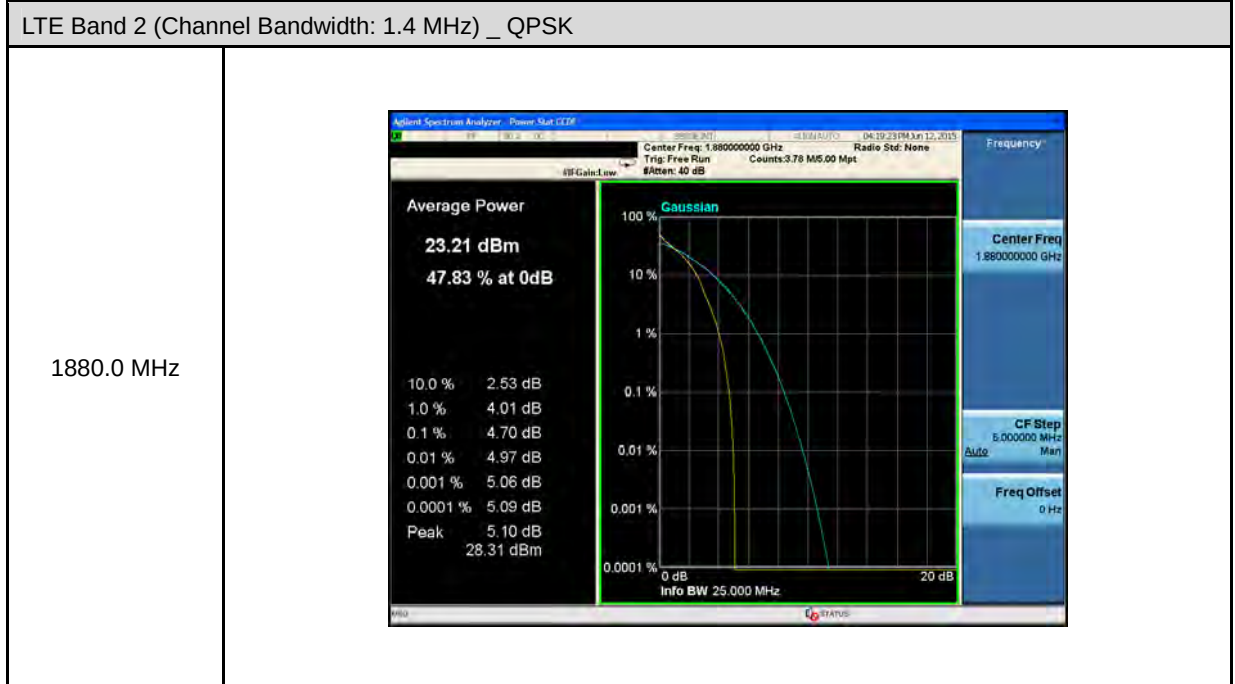
LTE Band 5				
Modulation	Channel Bandwidth	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)
QPSK	1.4 MHz	836.5	6.12	< 13
	3 MHz	836.5	5.67	< 13
	5 MHz	836.5	5.56	< 13
	10 MHz	836.5	5.84	< 13
16QAM	1.4 MHz	836.5	6.71	< 13
	3 MHz	836.5	6.29	< 13
	5 MHz	836.5	6.18	< 13
	10 MHz	836.5	6.53	< 13

LTE Band 12				
Modulation	Channel Bandwidth	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)
QPSK	1.4 MHz	707.5	5.83	< 13
	3 MHz	707.5	5.52	< 13
	5 MHz	707.5	5.57	< 13
	10 MHz	707.5	5.80	< 13
16QAM	1.4 MHz	707.5	6.67	< 13
	3 MHz	707.5	6.25	< 13
	5 MHz	707.5	6.11	< 13
	10 MHz	707.5	6.61	< 13

LTE Band 13				
Modulation	Channel Bandwidth	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)
QPSK	5 MHz	782.0	5.40	< 13
	10 MHz	782.0	5.46	< 13
16QAM	5 MHz	782.0	5.94	< 13
	10 MHz	782.0	6.29	< 13

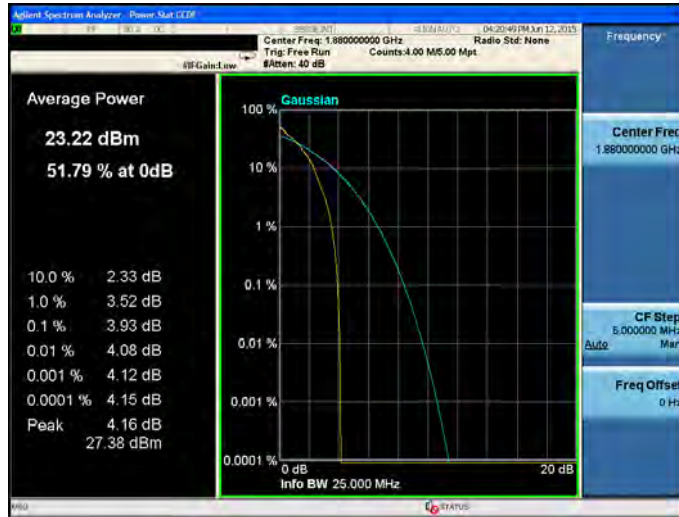
LTE Band 17				
Modulation	Channel Bandwidth	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)
QPSK	5 MHz	710.0	5.43	< 13
	10 MHz	710.0	5.71	< 13
16QAM	5 MHz	710.0	6.03	< 13
	10 MHz	710.0	6.41	< 13

6.7. Test Graphs



LTE Band 2 (Channel Bandwidth: 5 MHz) _ QPSK

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 10 MHz) _ QPSK

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 15 MHz) _ QPSK

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 20 MHz) _ QPSK

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 1.4 MHz) _ 16QAM

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 3 MHz) _ 16QAM

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 5 MHz) _ 16QAM

1880.0 MHz



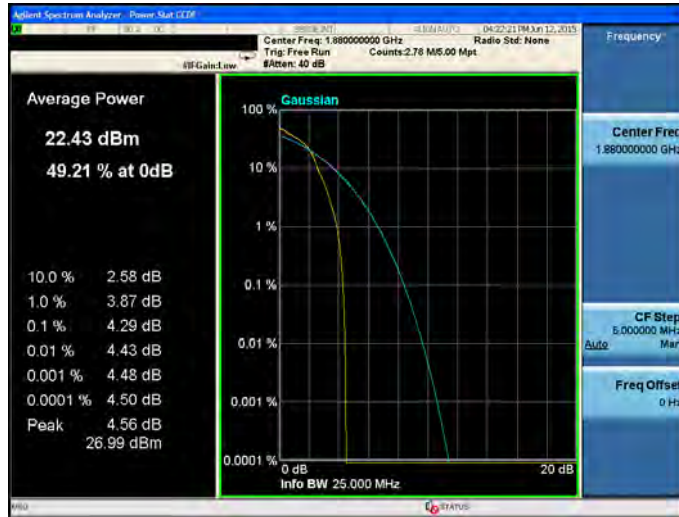
LTE Band 2 (Channel Bandwidth: 10 MHz) _ 16QAM

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 15 MHz) _ 16QAM

1880.0 MHz



LTE Band 2 (Channel Bandwidth: 20 MHz) _ 16QAM

1880.0 MHz



LTE Band 4 (Channel Bandwidth: 1.4 MHz) _ QPSK

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 3 MHz) _ QPSK

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 5 MHz) _ QPSK

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 10 MHz) _ QPSK

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 15 MHz) _ QPSK

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 20 MHz) _ QPSK

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 1.4 MHz) _ 16QAM

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 3 MHz) _ 16QAM

1732.5 MHz



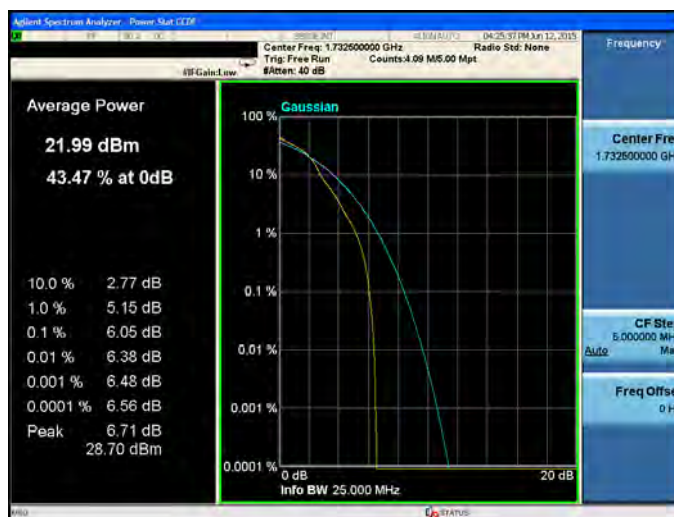
LTE Band 4 (Channel Bandwidth: 5 MHz) _ 16QAM

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 10 MHz) _ 16QAM

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 15 MHz) _ 16QAM

1732.5 MHz



LTE Band 4 (Channel Bandwidth: 20 MHz) _ 16QAM

1732.5 MHz



LTE Band 5 (Channel Bandwidth: 1.4 MHz) _ QPSK

836.5 MHz



LTE Band 5 (Channel Bandwidth: 3 MHz) _ QPSK

836.5 MHz



LTE Band 5 (Channel Bandwidth: 5 MHz) _ QPSK

836.5 MHz



LTE Band 5 (Channel Bandwidth: 10 MHz) _ QPSK

836.5 MHz



LTE Band 5 (Channel Bandwidth: 1.4 MHz) _ 16QAM

836.5 MHz



LTE Band 5 (Channel Bandwidth: 3 MHz) _ 16QAM

836.5 MHz



LTE Band 5 (Channel Bandwidth: 5 MHz) _ 16QAM

836.5 MHz



LTE Band 5 (Channel Bandwidth: 10 MHz) _ 16QAM

836.5 MHz



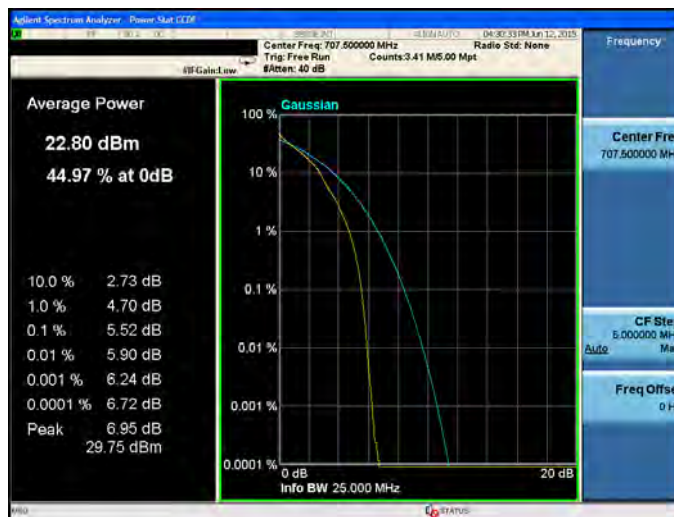
LTE Band 12 (Channel Bandwidth: 1.4 MHz) _ QPSK

707.5 MHz



LTE Band 12 (Channel Bandwidth: 3 MHz) _ QPSK

707.5 MHz



LTE Band 12 (Channel Bandwidth: 5 MHz) _ QPSK

707.5 MHz



LTE Band 12 (Channel Bandwidth: 10 MHz) _ QPSK

707.5 MHz



LTE Band 12 (Channel Bandwidth: 1.4 MHz) _ 16QAM

707.5 MHz



LTE Band 12 (Channel Bandwidth: 3 MHz) _ 16QAM

707.5 MHz



LTE Band 12 (Channel Bandwidth: 5 MHz) _ 16QAM

707.5 MHz



LTE Band 12 (Channel Bandwidth: 10 MHz) _ 16QAM

707.5 MHz



LTE Band 13 (Channel Bandwidth: 5 MHz) _ QPSK

782.0 MHz



LTE Band 13 (Channel Bandwidth: 10 MHz) _ QPSK

782.0 MHz



LTE Band 13 (Channel Bandwidth: 5 MHz) _ 16QAM

782.0 MHz



LTE Band 13 (Channel Bandwidth: 10 MHz) _ 16QAM

782.0 MHz



LTE Band 17 (Channel Bandwidth: 5 MHz) _ QPSK

711.0 MHz



LTE Band 17 (Channel Bandwidth: 10 MHz) _ QPSK

711.0 MHz



LTE Band 17 (Channel Bandwidth: 5 MHz) _ 16QAM

711.0 MHz



LTE Band 17 (Channel Bandwidth: 10 MHz) _ 16QAM

711.0 MHz



7 Band Edge Test

7.1. Limit

The Band Edge Limit:

§22.917(a), §24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

§27.53(c)(2)

On any frequency outside the 777-787 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB.

§27.53(c)(4)

On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

§27.53(g)

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

LTE Band 13_BW=5M				
Frequency (MHz)	RBW=10kHz Measurement (dBm)	RBW=6.25kHz Measurement (dBm)	Limit -35dBm/6.25kHz	Result
763 ~ 775	-51.728	-53.769	-35	PASS
793 ~ 805	-62.278	-64.319	-35	PASS

LTE Band 13_BW=10M				
Frequency (MHz)	RBW=10kHz Measurement (dBm)	RBW=6.25kHz Measurement (dBm)	Limit -35dBm/6.25kHz	Result
763 ~775	-48.597	-50.638	-35	PASS
793 ~805	-51.799	-53.840	-35	PASS

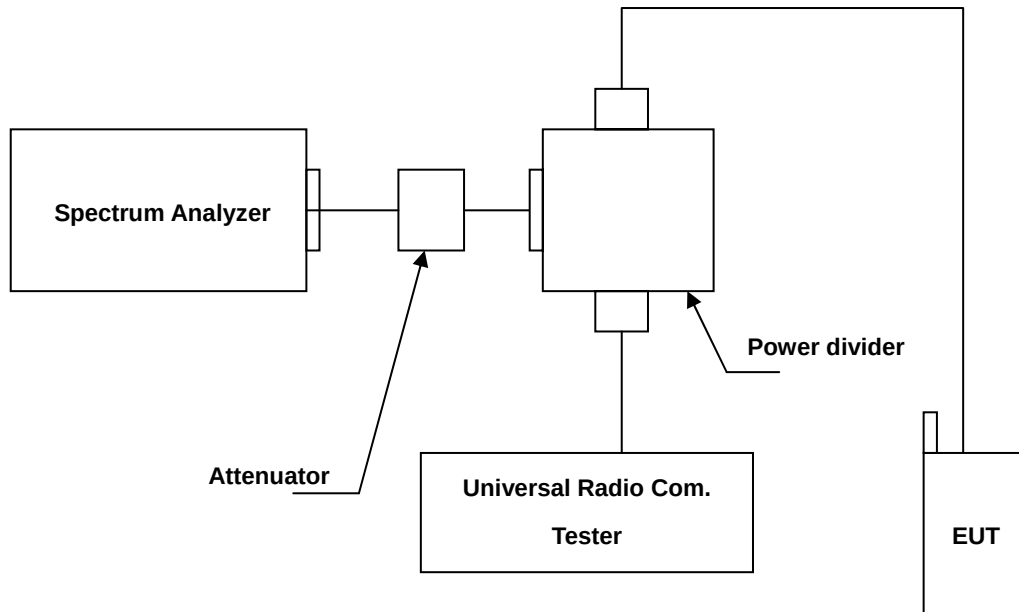
7.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/14/2015	(1)
Wideband Radio Communication Test	R & S	CMW500	103168	11/05/2014	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

7.3. Setup



7.4. Test Procedure

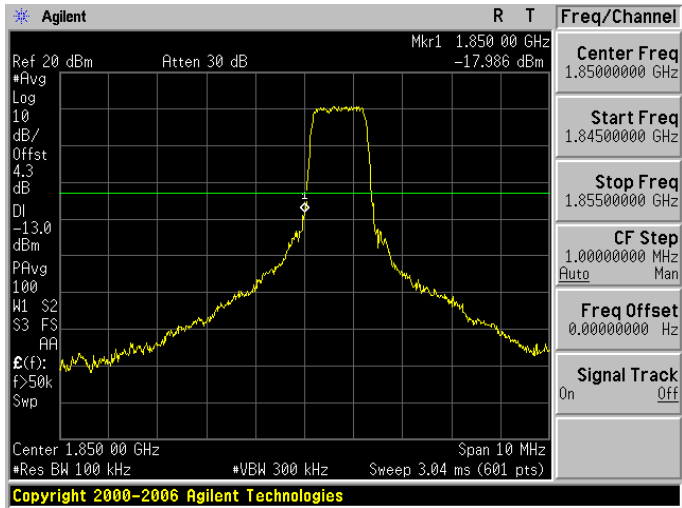
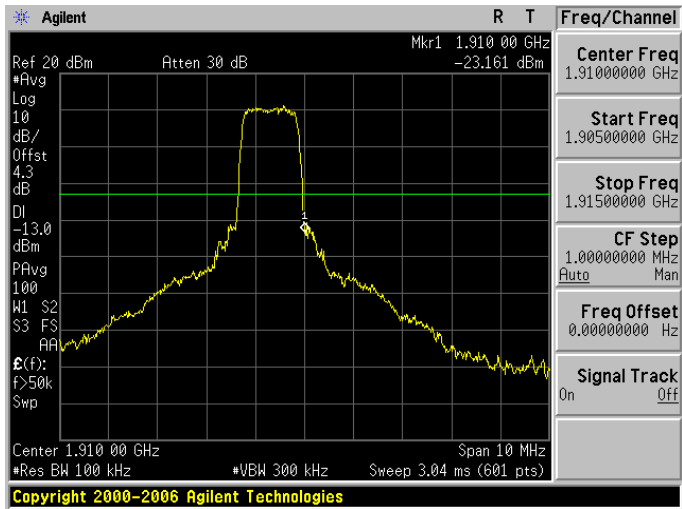
The measurement is made according to FCC rules:

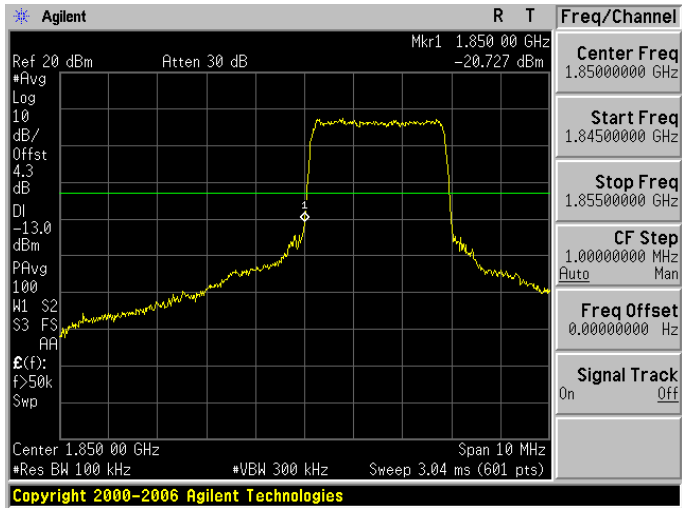
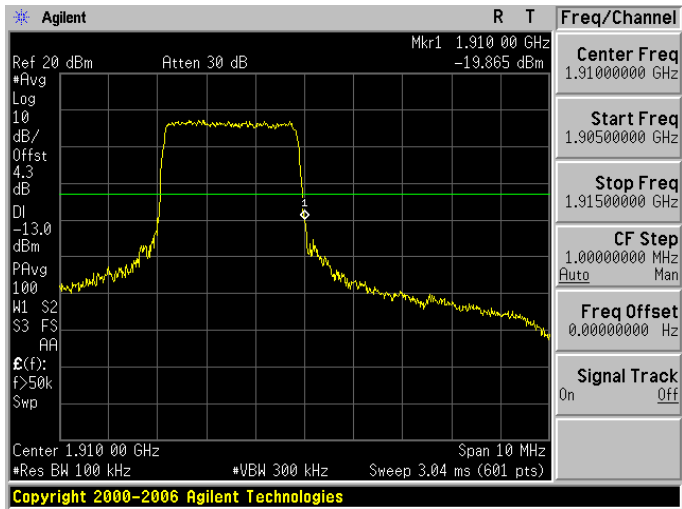
- The EUT was set up for the maximum peak power with LTE/WCDMA link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.)
- The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer. This splitter loss and cable loss are the worst loss in the transmitted path track.
- The center frequency of spectrum is the band edge frequency and span is 10 MHz. RB of the resolution bandwidth of at least one percent of the emission bandwidth.
- Record the max trace plot into the test report.

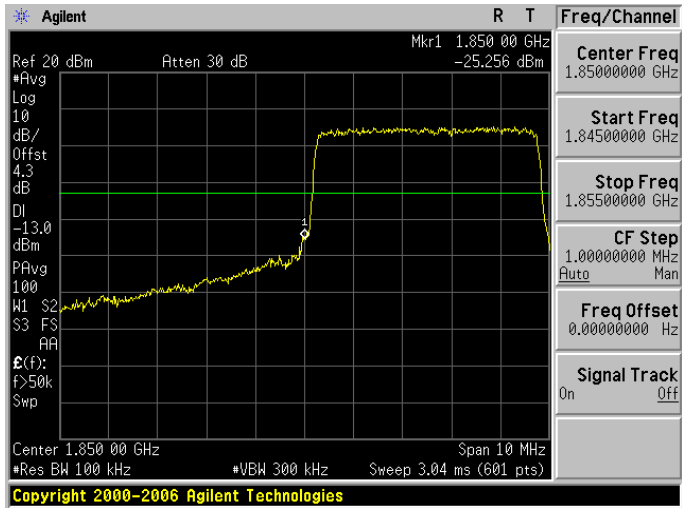
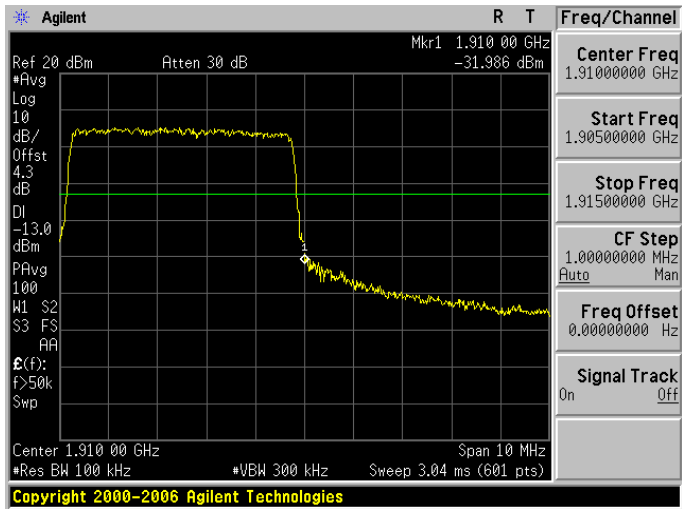
7.5. Uncertainty

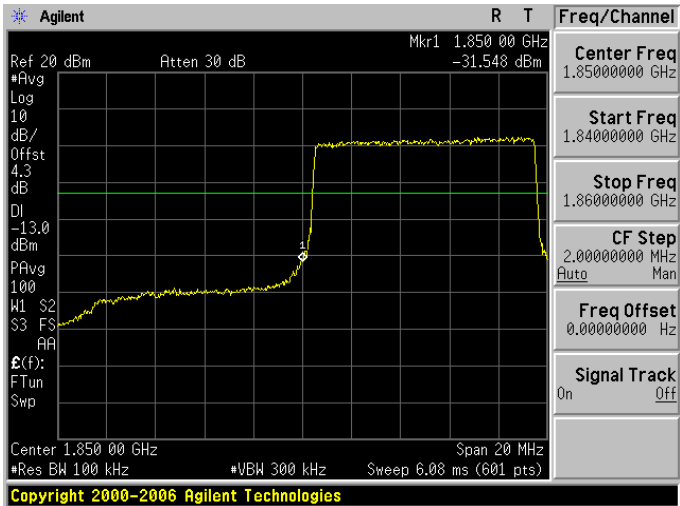
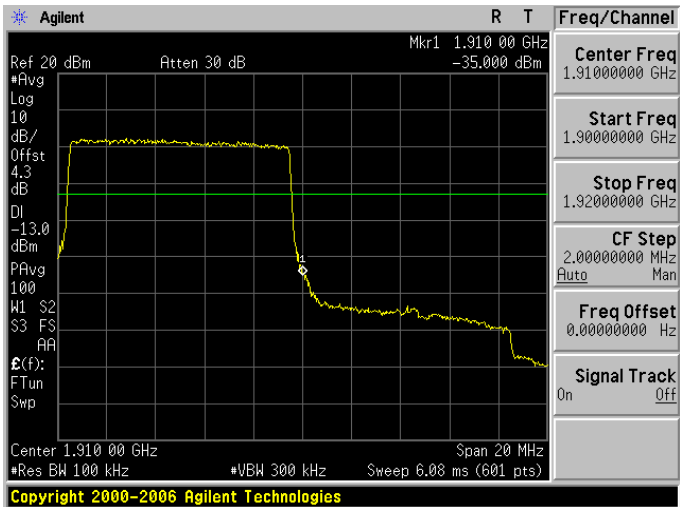
The measurement uncertainty is defined as for Conducted Power measurement is 1.2 dB.

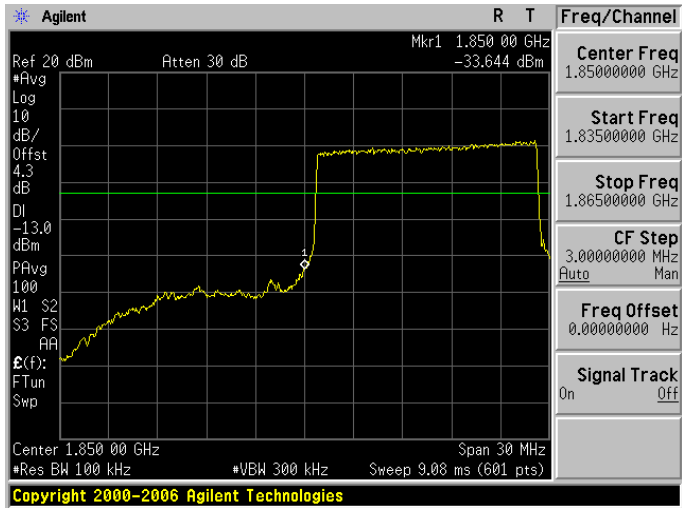
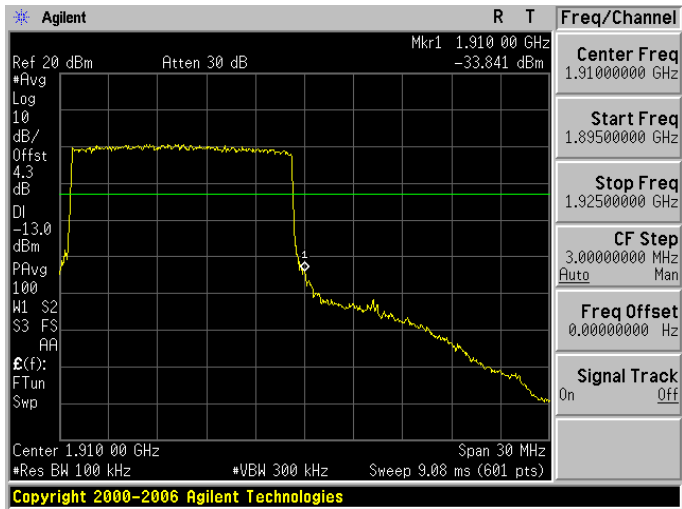
7.6. Test Result

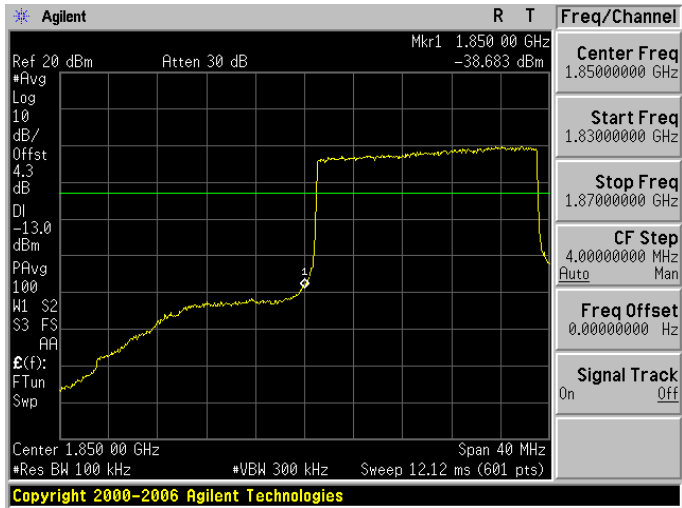
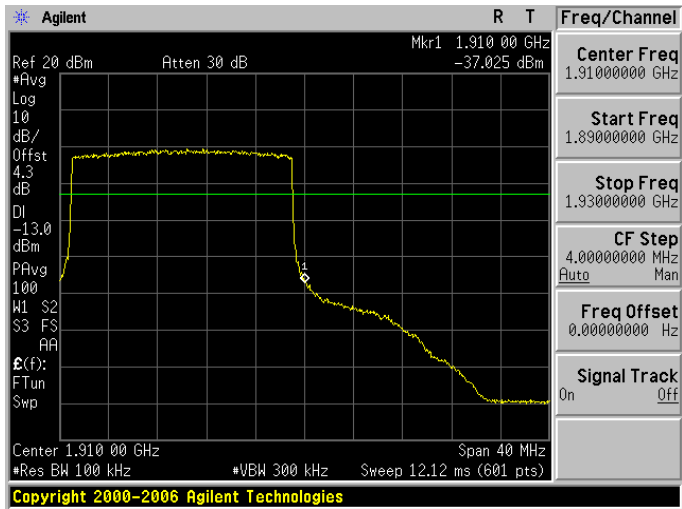
Frequency	LTE Band 2	Channel Bandwidth	1.4 MHz	RB Allocated	6
Lower Band Edge					
Higher Band Edge					

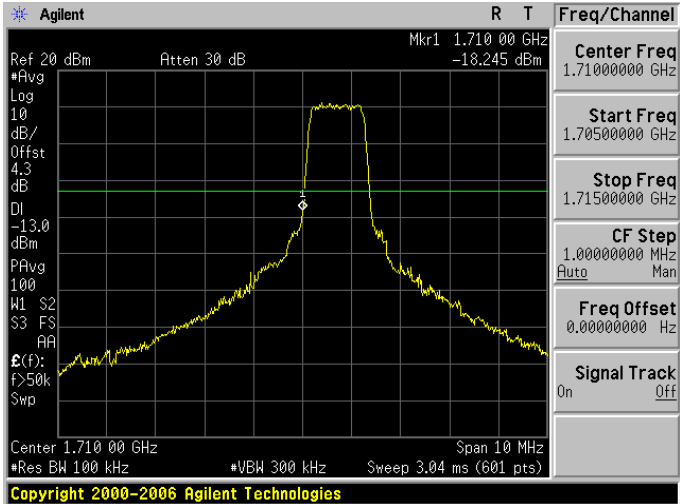
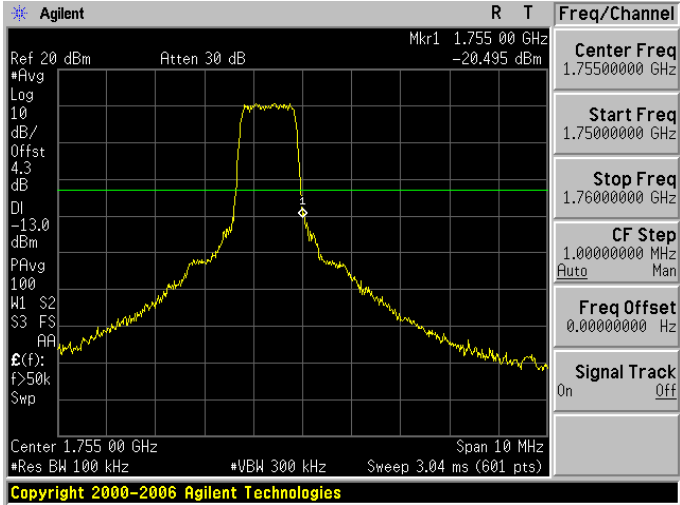
Frequency	LTE Band 2	Channel Bandwidth	3 MHz	RB Allocated	15
Lower Band Edge					
Higher Band Edge					

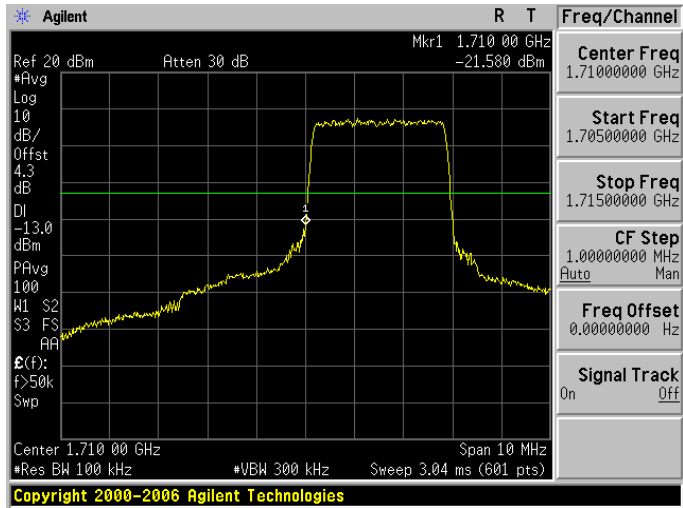
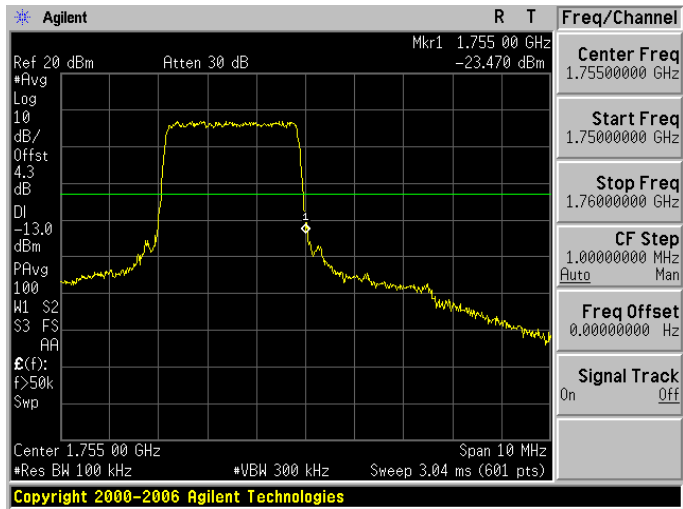
Frequency	LTE Band 2	Channel Bandwidth	5 MHz	RB Allocated	25
Lower Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.850 00 GHz -25.256 dBm Center Freq 1.8500000 GHz Start Freq 1.8450000 GHz Stop Freq 1.8550000 GHz CF Step 1.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Center 1.850 00 GHz Span 10 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies				
Higher Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.910 00 GHz -31.986 dBm Center Freq 1.9100000 GHz Start Freq 1.9050000 GHz Stop Freq 1.9150000 GHz CF Step 1.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Center 1.910 00 GHz Span 10 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies				

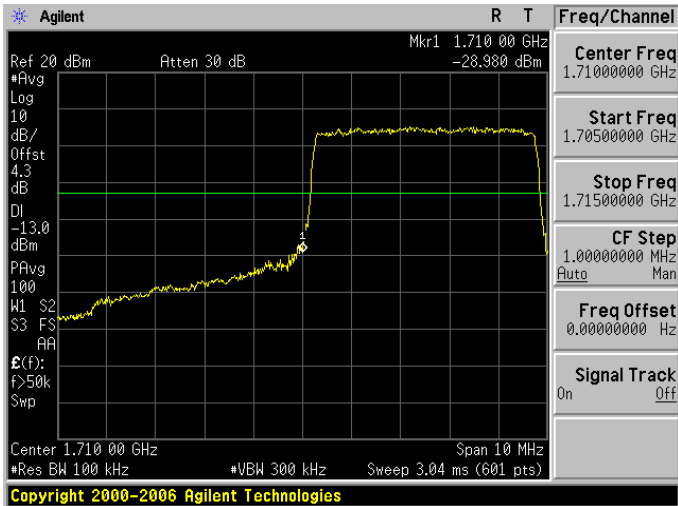
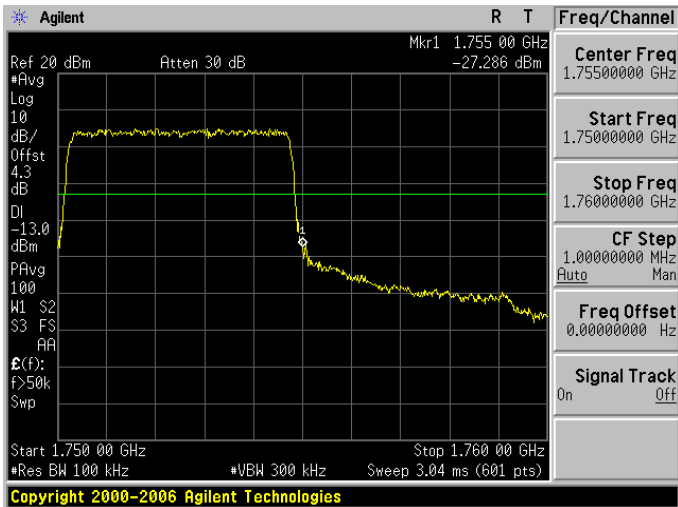
Frequency	LTE Band 2	Channel Bandwidth	10 MHz	RB Allocated	50
Lower Band Edge					
Higher Band Edge					

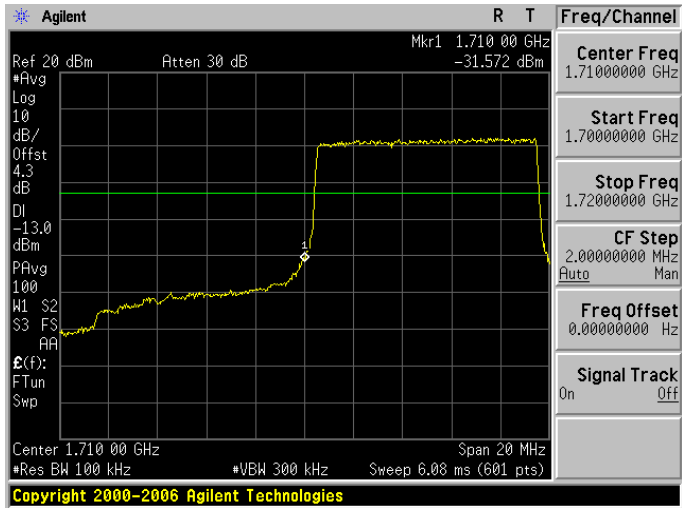
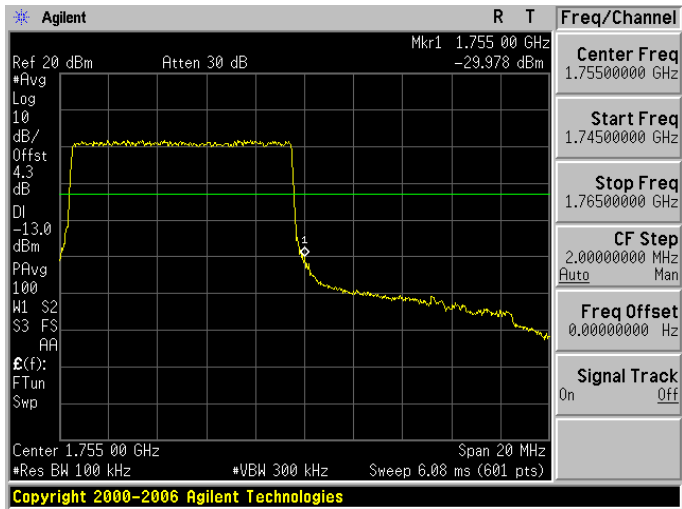
Frequency	LTE Band 2	Channel Bandwidth	15 MHz	RB Allocated	75
Lower Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.850 00 GHz -33.644 dBm Center Freq 1.8500000 GHz Start Freq 1.8350000 GHz Stop Freq 1.8650000 GHz CF Step 3.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Center 1.850 00 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.08 ms (601 pts) Copyright 2000-2006 Agilent Technologies				
Higher Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.910 00 GHz -33.841 dBm Center Freq 1.9100000 GHz Start Freq 1.8950000 GHz Stop Freq 1.9250000 GHz CF Step 3.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off Center 1.910 00 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 9.08 ms (601 pts) Copyright 2000-2006 Agilent Technologies				

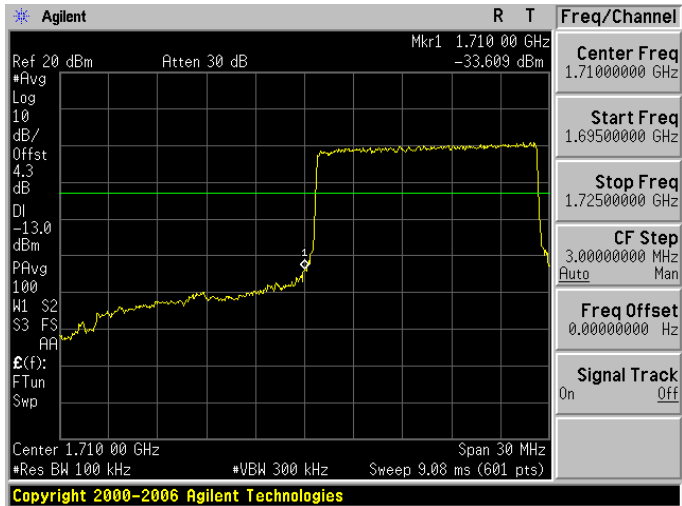
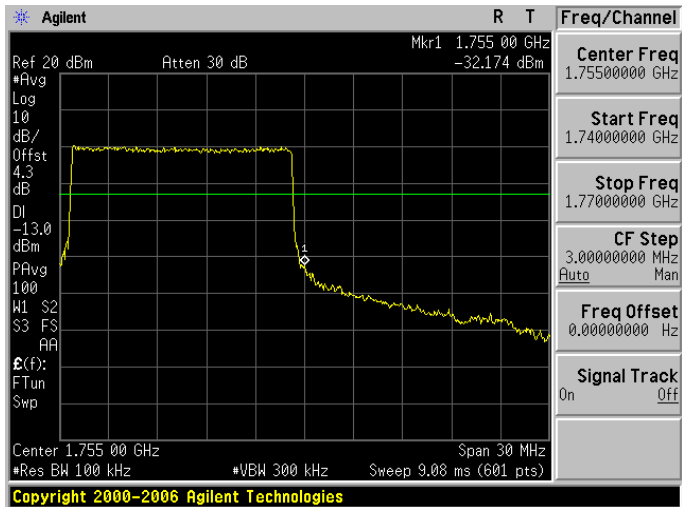
Frequency	LTE Band 2	Channel Bandwidth	20 MHz	RB Allocated	100
Lower Band Edge					
Higher Band Edge					

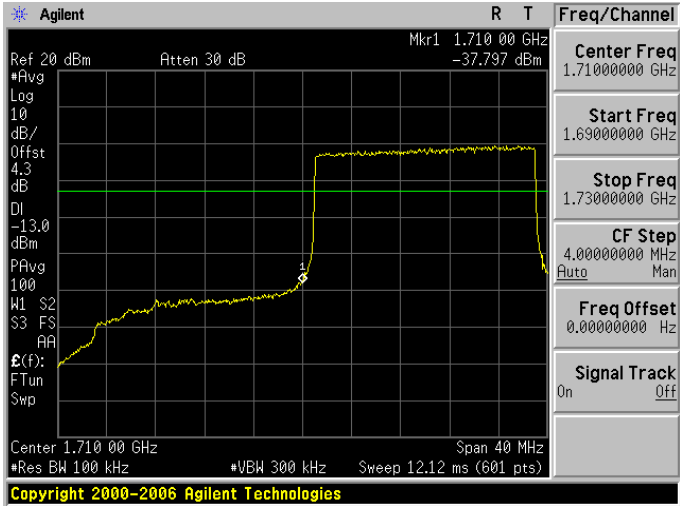
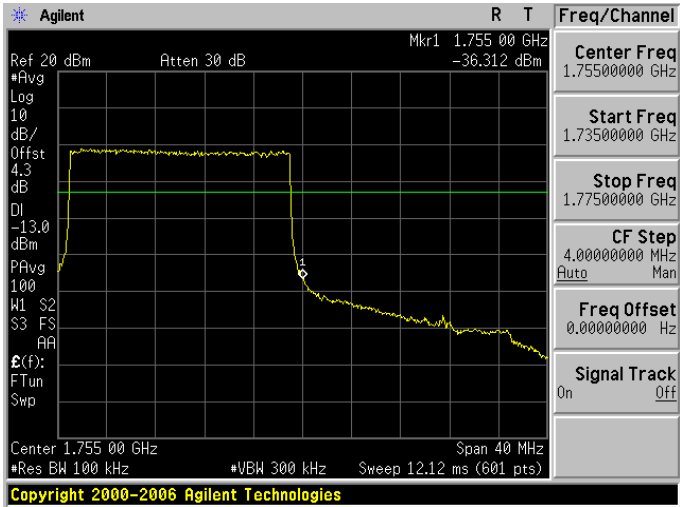
Frequency	LTE Band 4	Channel Bandwidth	1.4 MHz	RB Allocated	6
Lower Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.710 00 GHz -18.245 dBm #Avg Log 10 dB/ Offst 4.3 dB DI -13.0 dBm PAvg 100 W1 S2 S3 FS AA Center 1.710 00 GHz Span 10 MHz #Res BW 100 kHz VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 1.71000000 GHz Start Freq 1.70500000 GHz Stop Freq 1.71500000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				
Higher Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.755 00 GHz -20.495 dBm #Avg Log 10 dB/ Offst 4.3 dB DI -13.0 dBm PAvg 100 W1 S2 S3 FS AA Center 1.755 00 GHz Span 10 MHz #Res BW 100 kHz VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 1.75500000 GHz Start Freq 1.75000000 GHz Stop Freq 1.76000000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				

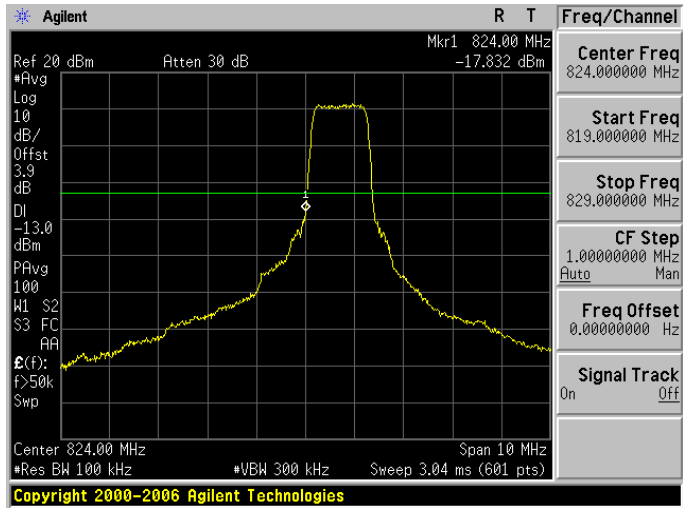
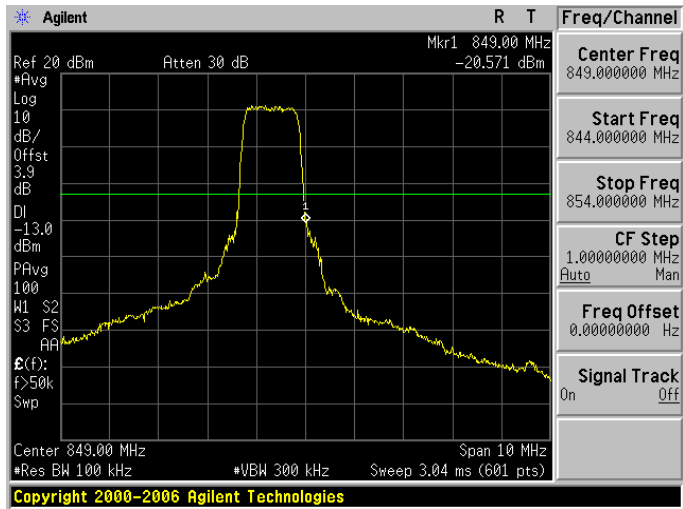
Frequency	LTE Band 4	Channel Bandwidth	3 MHz	RB Allocated	15
Lower Band Edge					
Higher Band Edge					

Frequency	LTE Band 4	Channel Bandwidth	5 MHz	RB Allocated	25
Lower Band Edge					
Higher Band Edge					

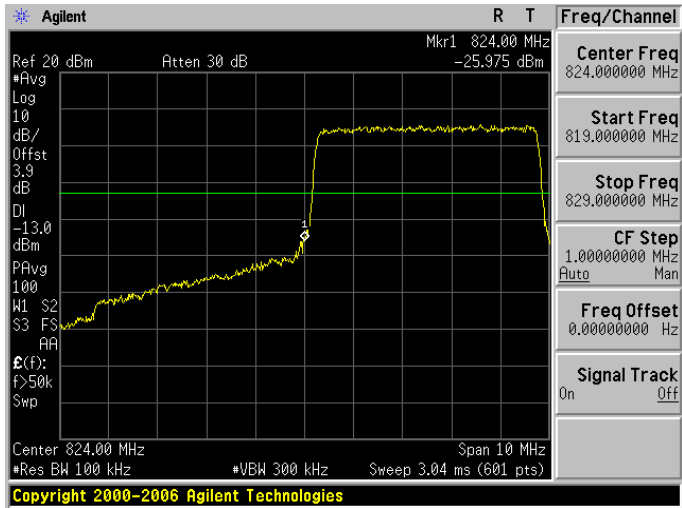
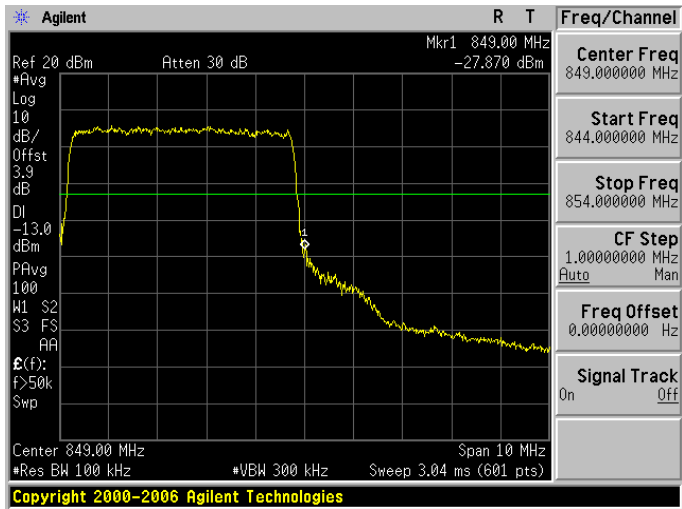
Frequency	LTE Band 4	Channel Bandwidth	10 MHz	RB Allocated	50
Lower Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.710 00 GHz -31.572 dBm *Avg Log 10 dB/Offst 4.3 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA E(f): FTun Swp Center 1.710 00 GHz Span 20 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 6.08 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 1.7100000 GHz Start Freq 1.7000000 GHz Stop Freq 1.7200000 GHz CF Step 2.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off				
Higher Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 1.755 00 GHz -29.978 dBm *Avg Log 10 dB/Offst 4.3 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA E(f): FTun Swp Center 1.755 00 GHz Span 20 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 6.08 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 1.7550000 GHz Start Freq 1.7450000 GHz Stop Freq 1.7650000 GHz CF Step 2.0000000 MHz Auto Man Freq Offset 0.0000000 Hz Signal Track On Off				

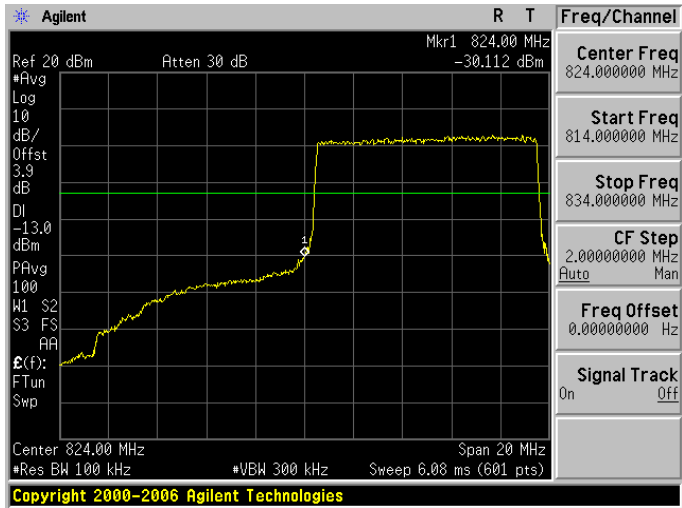
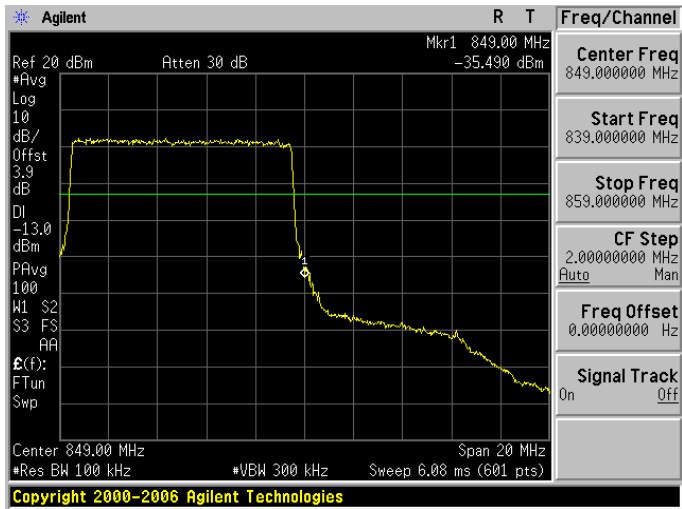
Frequency	LTE Band 4	Channel Bandwidth	15 MHz	RB Allocated	75
Lower Band Edge					
Higher Band Edge					

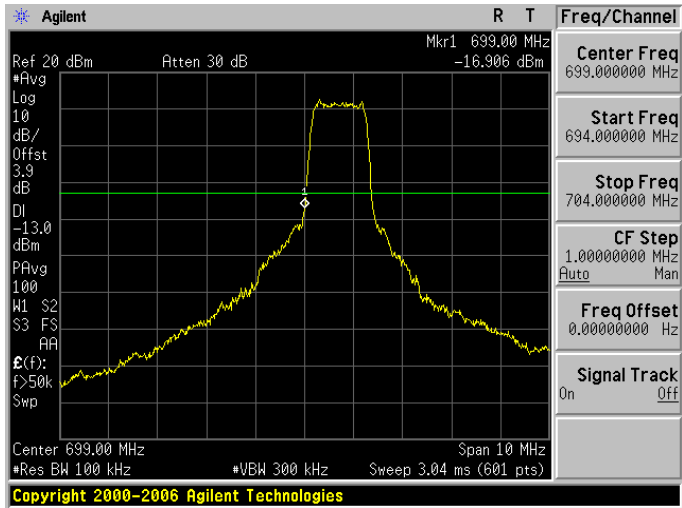
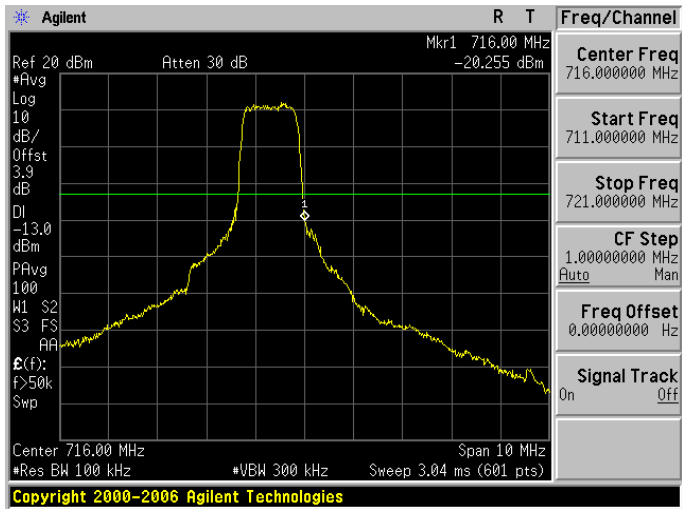
Frequency	LTE Band 4	Channel Bandwidth	20 MHz	RB Allocated	100
Lower Band Edge					
Higher Band Edge					

Frequency	LTE Band 5	Channel Bandwidth	1.4 MHz	RB Allocated	6
Lower Band Edge					
Higher Band Edge					

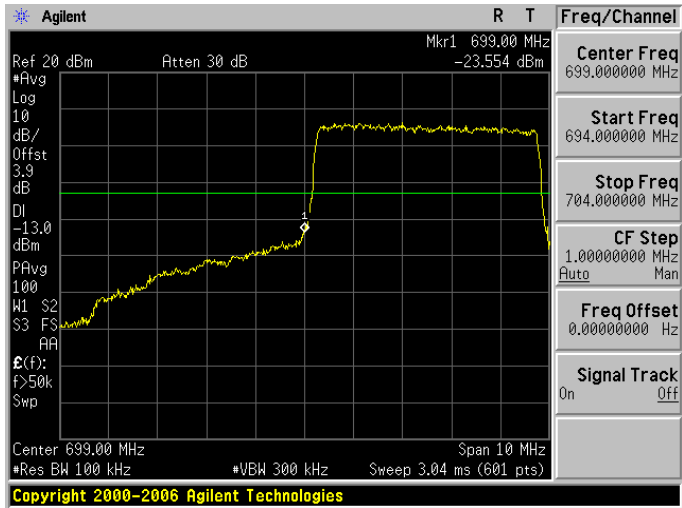
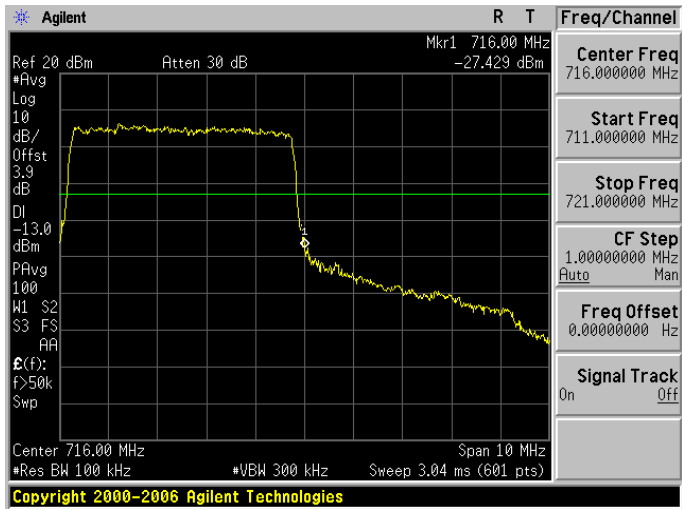
Frequency	LTE Band 5	Channel Bandwidth	3 MHz	RB Allocated	15
Lower Band Edge	Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 824.00 MHz -21.951 dBm *Avg Log 10 dB/ Offst 3.9 dB DI -13.0 dBm PAvg 100 W1 S2 S3 FS AA Center 824.00 MHz Span 10 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 824.000000 MHz Start Freq 819.000000 MHz Stop Freq 829.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				
Higher Band Edge	Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 849.00 MHz -21.594 dBm *Avg Log 10 dB/ Offst 3.9 dB DI -13.0 dBm PAvg 100 W1 S2 S3 FS AA Center 849.00 MHz Span 10 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 849.000000 MHz Start Freq 844.000000 MHz Stop Freq 854.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				

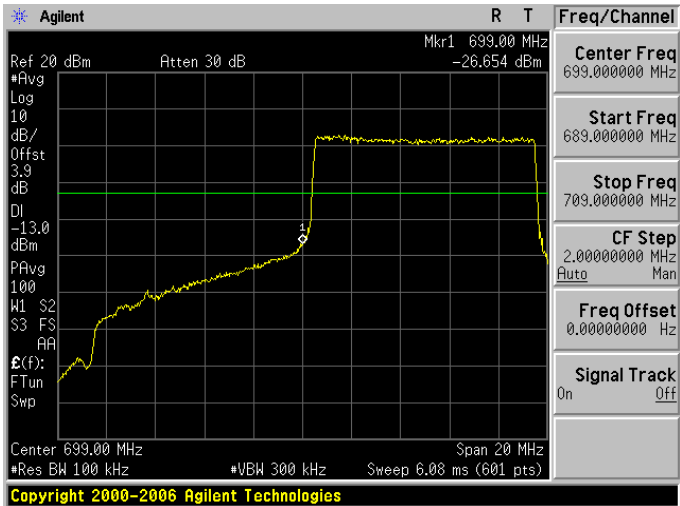
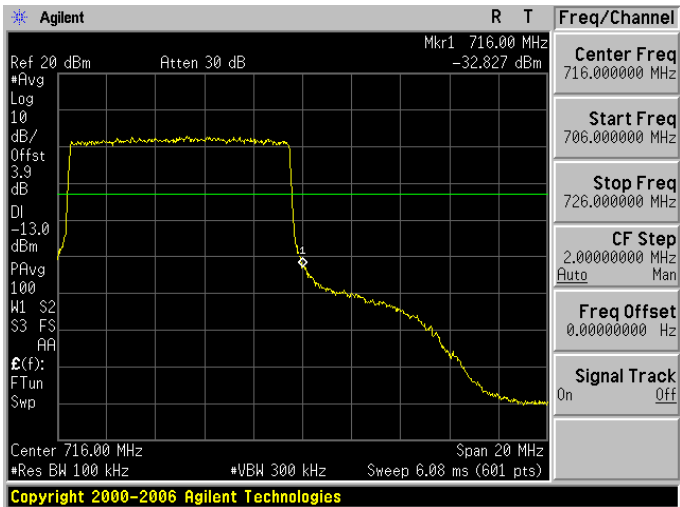
Frequency	LTE Band 5	Channel Bandwidth	5 MHz	RB Allocated	25
Lower Band Edge					
Higher Band Edge					

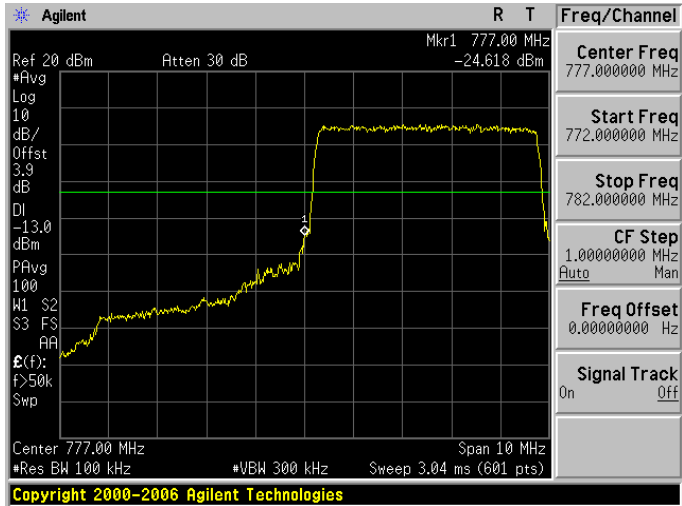
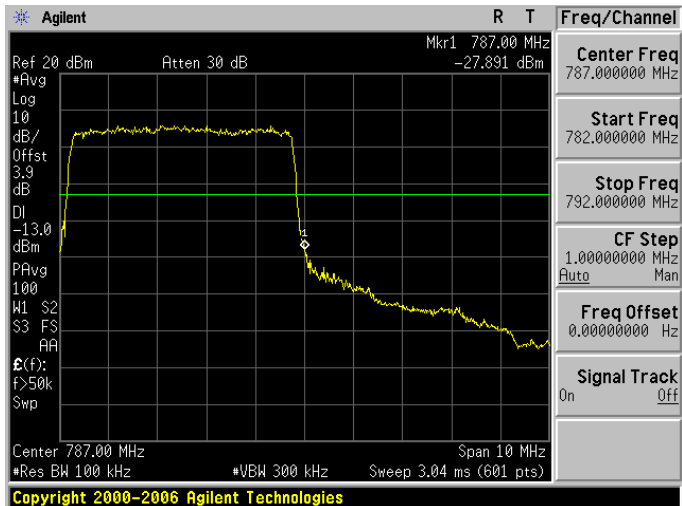
Frequency	LTE Band 5	Channel Bandwidth	10 MHz	RB Allocated	50
Lower Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 824.00 MHz -30.112 dBm *Avg Log 10 dB/ Offst 3.9 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA E(f): FTun Swp Center 824.00 MHz Span 20 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 6.08 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 824.000000 MHz Start Freq 814.000000 MHz Stop Freq 834.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				
Higher Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 849.00 MHz -35.490 dBm *Avg Log 10 dB/ Offst 3.9 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA E(f): FTun Swp Center 849.00 MHz Span 20 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 6.08 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 849.000000 MHz Start Freq 839.000000 MHz Stop Freq 859.000000 MHz CF Step 2.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				

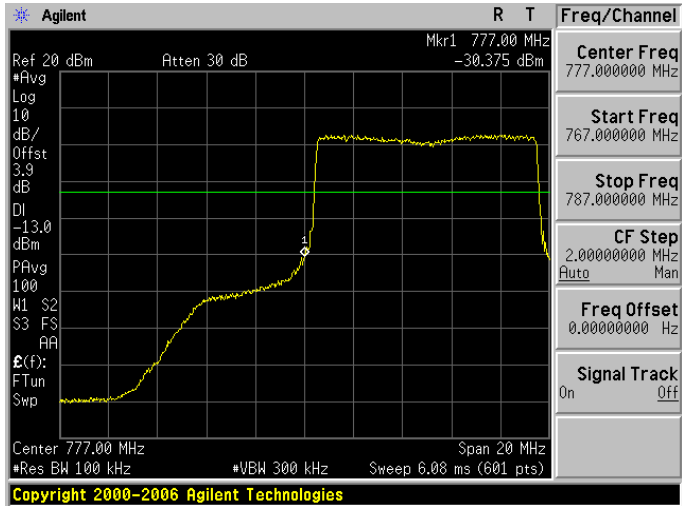
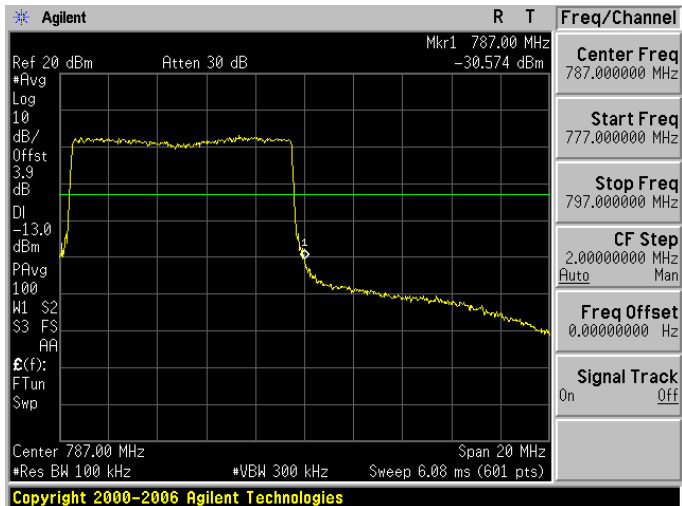
Frequency	LTE Band 12	Channel Bandwidth	1.4 MHz	RB Allocated	6
Lower Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 699.00 MHz -16.906 dBm *Avg Log 10 dB/Offst 3.9 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA Center 699.00 MHz Span 10 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 699.000000 MHz Start Freq 694.000000 MHz Stop Freq 704.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				
Higher Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 716.00 MHz -20.255 dBm *Avg Log 10 dB/Offst 3.9 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA Center 716.00 MHz Span 10 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 716.000000 MHz Start Freq 711.000000 MHz Stop Freq 721.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				

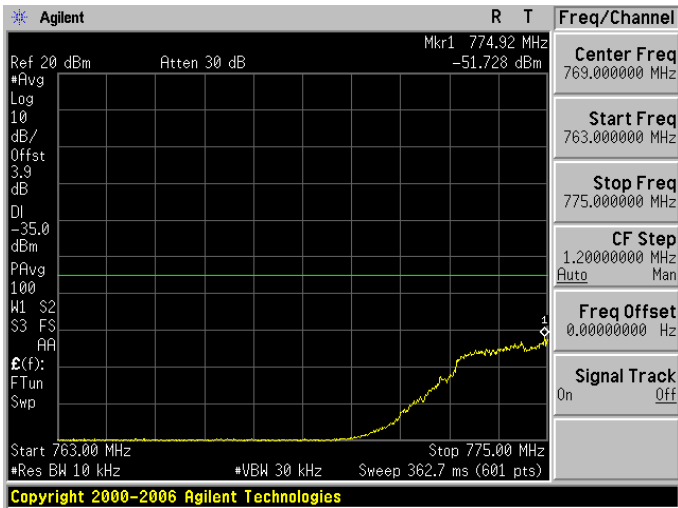
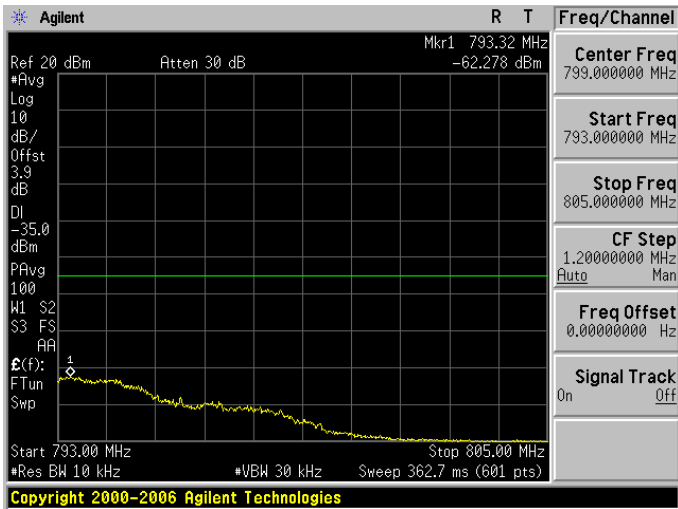
Frequency	LTE Band 12	Channel Bandwidth	3 MHz	RB Allocated	15
Lower Band Edge	Agilent Spectrum Analyzer screenshot for Lower Band Edge. The plot shows a signal rising from -13.0 dBm at 694 MHz to a plateau at -19.674 dBm starting at 699 MHz, then falling. Parameters: Center Freq 699.00 MHz, Span 10 MHz, Res BW 100 kHz, VBW 300 kHz, Sweep 3.04 ms (601 pts).				
Higher Band Edge	Agilent Spectrum Analyzer screenshot for Higher Band Edge. The plot shows a signal rising from -13.0 dBm at 711 MHz to a plateau at -24.862 dBm starting at 716 MHz, then falling. Parameters: Center Freq 716.00 MHz, Span 10 MHz, Res BW 100 kHz, VBW 300 kHz, Sweep 3.04 ms (601 pts).				

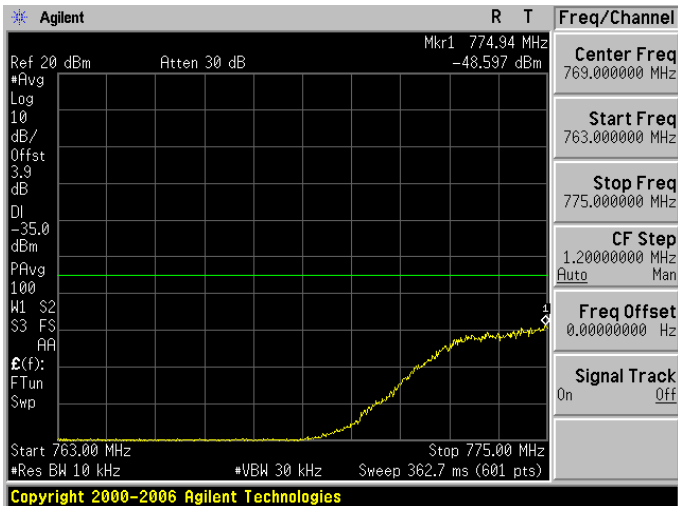
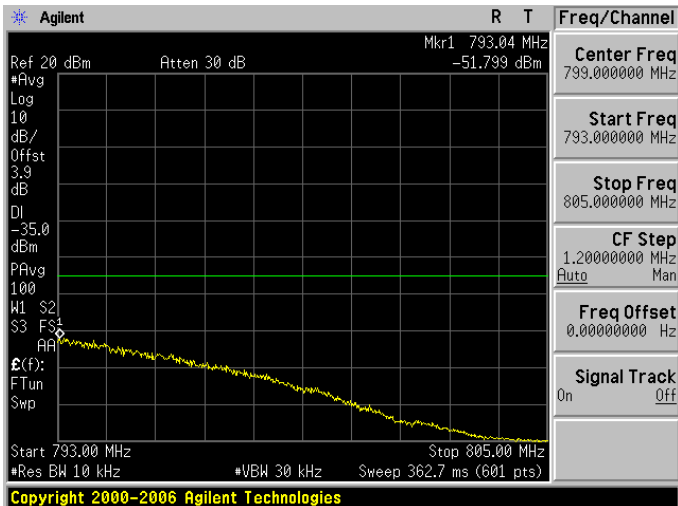
Frequency	LTE Band 12	Channel Bandwidth	5 MHz	RB Allocated	25
Lower Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 699.00 MHz -23.554 dBm *Avg Log 10 dB/ Offst 3.9 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA Center 699.00 MHz Span 10 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 699.000000 MHz Start Freq 694.000000 MHz Stop Freq 704.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				
Higher Band Edge	 Agilent R T Freq/Channel Ref 20 dBm Atten 30 dB Mkr1 716.00 MHz -27.429 dBm *Avg Log 10 dB/ Offst 3.9 dB DI -13.0 dBm PAVg 100 W1 S2 S3 FS AA Center 716.00 MHz Span 10 MHz *Res BW 100 kHz *VBW 300 kHz Sweep 3.04 ms (601 pts) Copyright 2000-2006 Agilent Technologies Center Freq 716.000000 MHz Start Freq 711.000000 MHz Stop Freq 721.000000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off				

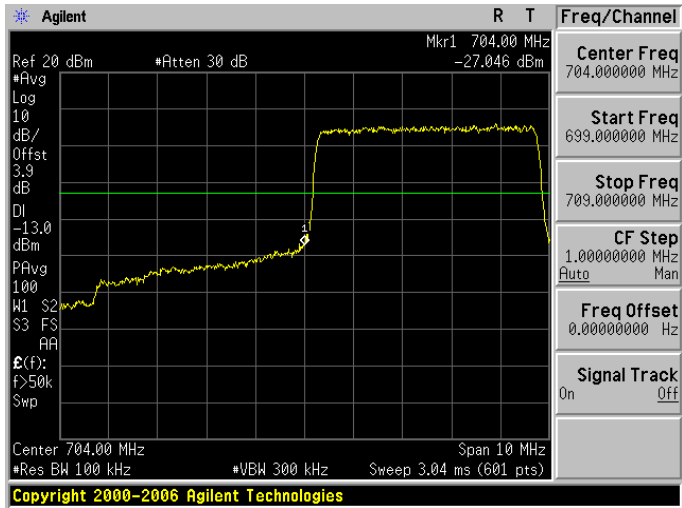
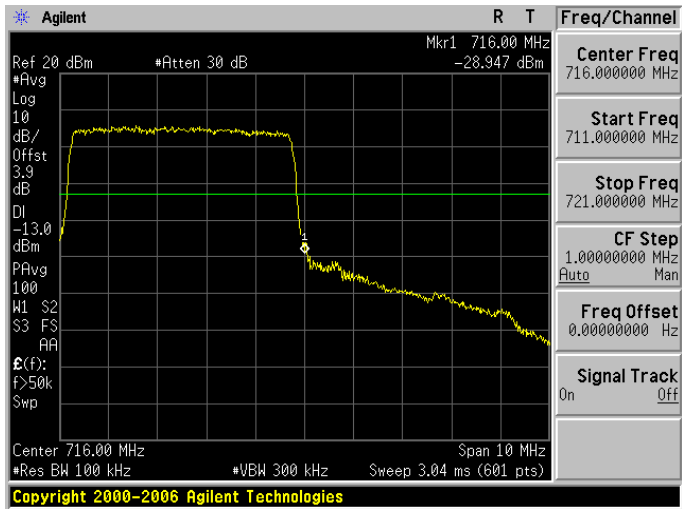
Frequency	LTE Band 12	Channel Bandwidth	10 MHz	RB Allocated	50
Lower Band Edge					
Higher Band Edge					

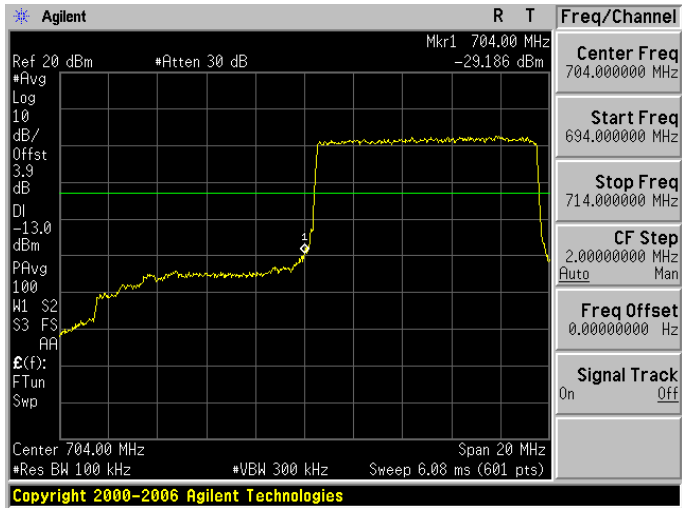
Frequency	LTE Band 13	Channel Bandwidth	5 MHz	RB Allocated	25
Res BW	100kHz				
Lower Band Edge					
Higher Band Edge					

Frequency	LTE Band 13	Channel Bandwidth	10 MHz	RB Allocated	50
Res BW	100kHz				
Lower Band Edge					
Higher Band Edge					

Frequency	LTE Band 13	Channel Bandwidth	5 MHz	RB Allocated	25
Res BW	10kHz				
Lower Band Edge					
Higher Band Edge					

Frequency	LTE Band 13	Channel Bandwidth	10 MHz	RB Allocated	50
Res BW	10kHz				
Lower Band Edge					
Higher Band Edge					

Frequency	LTE Band 17	Channel Bandwidth	5 MHz	RB Allocated	25
Lower Band Edge					
Higher Band Edge					

Frequency	LTE Band 17	Channel Bandwidth	10 MHz	RB Allocated	50
Lower Band Edge					
Higher Band Edge	