TESTING
No. L2264

Part 24

TEST REPORT

Product Name	Tablet
Model Name	P1988
FCC ID	VOB-P1988
Client	NVIDIA CORPORATION
Manufacturer	NVIDIA CORPORATION
Date of issue	March 31, 2014

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Reference Standard(s)	**FCC CFR47 Part 2 (2013)** Frequency Allocations And Radio Treaty Matters; General Rules And Regulations **FCC CFR47 Part 24E (2013)** Personal Communications Services **ANSI/TIA-603-C(2004)** Land mobile FM or PM Communications Equipment Measurements and Performance Standards. **KDB 971168 D01 Power Meas License Digital Systems v02r01** Measurement Guidance for Certification of Licensed Digital Transmitters
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards. General Judgment: **Pass**
Comment	The test result only responds to the measured sample.

Approved by Weizhong Yang	**Revised by** Sheng Zhang	**Performed by** Lingling Kang
Weizhong Yang	Sheng Zhang	Lingling Kang
Director	RF Manager	RF Engineer

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1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS), and accreditation number: L2264.

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements. The site recognition number is 428261.

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement. The site recognition number is 8510A.

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report alone does not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

If the electronic report is inconsistent with the printed one, it should be subject to the latter.

1.2. Testing laboratory

Company:	TA Technology (Shanghai) Co., Ltd.
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1.3. Applicant Information

Company:	NVIDIA CORPORATION
Address:	2701 SAN TOMAS EXPRESSWAY,SANTA CLARA,CALIFORNIA 95050,UNITED STATES OF AMERICA

1.4. Manufacturer Information

Company:	NVIDIA CORPORATION
Address:	2701 SAN TOMAS EXPRESSWAY,SANTA CLARA,CALIFORNIA 95050,UNITED STATES OF AMERICA

1.5. Information of EUT

General information

Product IMEI:	4402351228600		
Hardware Version:	A00		
Software Version:	4.4.2		
Antenna Type:	Internal Antenna		
Device Operating Configurations:			
Operating Mode(s):	LTE Band 2; (tested)		
Bandwidth(s):	LTE System: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz		
Test Modulation:	QPSK, 16QAM		
Maximum E.I.R.P.	23.96 dBm		
Power Supply:	Battery or Charger		
Rated Power Supply Voltage:	3.7V		
Extreme Voltage:	Minimum: 3.5V Maximum: 4.2V		
Extreme Temperature:	Lowest: 0°C Highest: 40°C		
Test Channel: (Low - Middle - High)	18607-18900-19193 (LTE Band 2, 1.4M) (tested) 18615-18900-19185 (LTE Band 2, 3M) (tested) 18625-18900-19175 (LTE Band 2, 5M) (tested) 18650-18900-19150 (LTE Band 2, 10M) (tested) 18675-18900-19125 (LTE Band 2, 15M) (tested) 18700-18900-19100 (LTE Band 2, 20M) (tested)		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	LTE Band 2(1.4MHz)	1850.7 ~1909.3	1930.7~1989.3
	LTE Band 2(3MHz)	1851.5~1908.5	1931.5~1988.5
	LTE Band 2(5MHz)	1852.5~1907.5	1932.5~1987.5
	LTE Band 2(10 MHz)	1855.0~1905.0	1935.0~1985.0
	LTE Band 2(15 MHz)	1857.5~1902.5	1937.5~1982.5
	LTE Band 2(20 MHz)	1860.0~1900.0	1940.0~1980.0

Equipment Under Test (EUT) is tested LTE Band 2 in this report.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. Test Date

The test is performed from March 20, 2014 to March 27, 2014.

2. Test Information

2.1. Summary of test results

Number	Test Case	Clause in FCC rules	Verdict
1	RF power output	2.1046	PASS
2	Effective Isotropic Radiated power	24.232	PASS
3	Occupied Bandwidth	2.1049	PASS
4	Band Edge Compliance	24.238	PASS
5	Peak-to-Average Power Ratio	KDB 971168 D01(5.7)	PASS
6	Frequency Stability	2.1055 / 24.235	PASS
7	Spurious Emissions at Antenna Terminals	2.1051 / 24.238	PASS
8	Radiates Spurious Emission	2.1053 / 24.238	PASS

2.2. RF Power Output

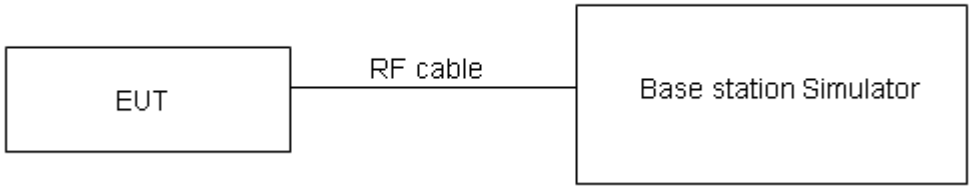
Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure proper test configuration.

Test Setup



The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.

Limits

No specific RF power output requirements in part 2.1046.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.4 dB.

Test Results

LTE Band 2				Average Conducted Power (dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18607	18900	19193
1.4MHz	QPSK	1	0	22.283	22.243	22.045
		1	2	22.353	22.358	22.056
		1	5	22.259	22.335	22.203
		3	0	22.213	21.289	22.132
		3	2	22.157	21.808	22.139
		3	3	22.065	21.013	22.148
		6	0	21.102	20.129	21.134
	16QAM	1	0	21.607	21.592	21.219
		1	2	21.695	21.305	21.469
		1	5	21.773	21.350	21.529
		3	0	21.481	20.639	21.577
		3	2	21.344	20.531	21.341
		3	3	21.496	20.655	21.303
		6	0	20.526	19.617	20.107
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18615	18900	19185
3MHz	QPSK	1	0	22.504	22.279	22.251
		1	7	22.589	22.438	22.136
		1	14	22.531	22.509	22.292
		8	0	21.39	21.312	21.301
		8	4	21.428	21.406	21.287
		8	7	21.444	21.366	21.246
		15	0	21.424	21.315	21.096
	16QAM	1	0	21.519	21.47	21.056
		1	7	21.647	21.083	21.222
		1	14	20.106	21.424	20.898
		8	0	20.442	20.3.3	20.142
		8	4	20.443	20.287	20.148
		8	7	20.381	20.244	20.154
		15	0	20.55	20.257	20.016
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18625	18900	19175
5MHz	QPSK	1	0	22.245	22.287	22.522
		1	13	22.286	22.129	22.574
		1	24	22.299	22.058	22.55
		12	0	21.367	21.124	22.243
		12	6	21.369	21.028	22.339
		12	13	21.373	20.933	22.406
		25	0	21.351	21.215	21.28

	16QAM	1	0	21.891	21.444	21.928
		1	13	21.486	21.272	21.266
		1	24	21.792	21.076	21.107
		12	0	20.227	20.201	20.237
		12	6	20.196	20.08	20.212
		12	13	20.315	20.067	20.329
		25	0	20.436	20.058	20.495
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18650	18900	19150
10MHz	QPSK	1	0	22.389	22.333	22.337
		1	25	22.371	22.222	22.404
		1	49	22.399	22.196	22.36
		25	0	21.352	21.122	21.136
		25	13	21.312	21.087	21.156
		25	25	21.223	21.023	21.191
		50	0	21.187	21.167	21.287
	16QAM	1	0	21.687	21.936	22.155
		1	25	20.966	21.925	22.064
		1	49	21.571	22.05	21.934
		25	0	20.242	20.029	20.243
		25	13	20.272	20.013	20.302
		25	25	20.294	20.138	20.197
		50	0	20.339	20.055	20.213
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18675	18900	19125
15MHz	QPSK	1	0	22.412	22.374	22.441
		1	38	22.509	22.379	22.483
		1	74	22.32	22.406	22.522
		36	0	21.419	21.183	21.25
		36	18	21.512	21.102	21.287
		36	39	21.354	21.039	21.332
		75	0	21.266	21.135	21.229
	16QAM	1	0	21.632	20.988	22.414
		1	38	21.781	21.036	21.91
		1	74	21.664	20.217	21.899
		36	0	20.414	20.101	20.009
		36	18	20.204	20.075	20.058
		36	39	20.202	20.137	19.996
		75	0	20.391	20.167	20.313
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18700	18900	19100
20MHz	QPSK	1	0	22.514	21.951	22.254
		1	50	22.552	22.088	22.329
		1	99	22.644	22.178	22.475

		50	0	21.365	21.155	21.21
		50	25	21.342	21.187	21.225
		50	50	21.313	21.212	21.232
		100	0	21.289	21.092	21.232
	16QAM	1	0	21.85	21.446	21.888
		1	50	21.915	21.134	22.055
		1	99	22.027	21.515	22.176
		50	0	20.127	21.057	20.068
		50	25	20.144	21.087	20.015
		50	50	20.088	21.157	20.108
		100	0	20.47	20.124	20.308

2.3. Effective Isotropic Radiated Power

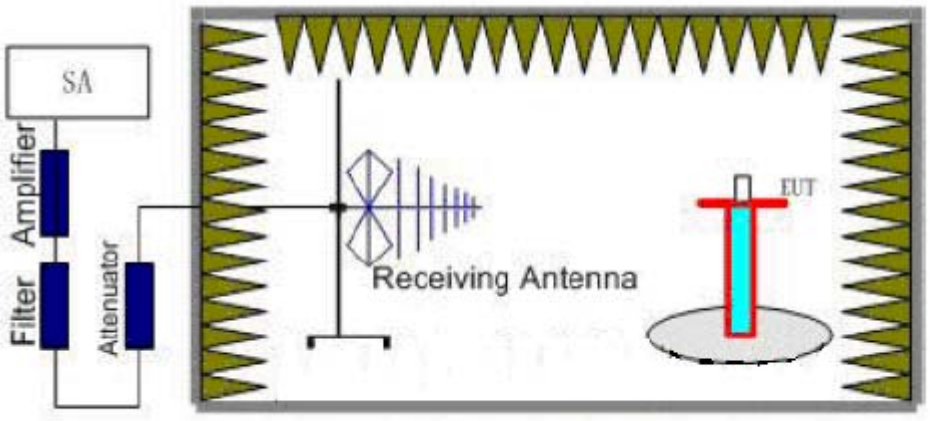
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

The measurement procedures in TIA- 603C are used.
1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. GSM operating modes: Set RBW= 1MHz, VBW= 3MHz, RMS detector over burst;
UMTS operating modes: Set RBW= 100 KHz, VBW= 300 KHz, RMS detector over frame, and use channel power option with bandwidth=5MHz, per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10. ERP/EIRP = Ps + Et – Es + Gs = Ps + Rt – Rs + Gs
Ps (dBm)：Input power to substitution antenna.
Gs (dBi or dBd)：Substitution antenna Gain.
Et = Rt + AF
Es = Rs + AF
AF (dB/m)：Receive antenna factor
Rt：The highest received signal in spectrum analyzer for EUT.
Rs：The highest received signal in spectrum analyzer for substitution antenna.

Test Setup



Limits

Rule Part 24.232(b) specifies that "Mobile/portable stations are limited to 2 watts EIRP. Peak power" and Rule Part 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage".

Limit (EIRP)	≤ 2 W (33 dBm)

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 1.19 dB

Test Results: Pass

LTE Band 2 QPSK

LTE Band 2 Radiated Power EIRP(1.4M)						
Horizontal Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1850.7	-34.88	-53.36	0	1.93	20.41	0.1099
1880	-35.46	-53.84	0	1.94	20.32	0.1076
1909.3	-35.08	-54.30	0	1.92	21.14	0.1300
Vertical Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1850.7	-33.28	-54.79	0	1.93	23.44	0.2208
1880	-33.45	-54.95	0	1.94	23.44	0.2208
1909.3	-33.65	-55.46	0	1.92	23.73	0.2360
LTE Band 2 Radiated Power EIRP(3M)						
Horizontal Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1851.5	-34.65	-53.36	0	1.93	20.64	0.1159
1880	-35.23	-53.84	0	1.94	20.55	0.1135
1908.5	-34.85	-54.30	0	1.92	21.37	0.1371
Vertical Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1851.5	-33.05	-54.79	0	1.93	23.67	0.2328
1880	-33.32	-54.95	0	1.94	23.57	0.2275
1908.5	-33.42	-55.46	0	1.92	23.96	0.2489
LTE Band 2 Radiated Power EIRP(5M)						
Horizontal Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1852.5	-34.76	-53.36	0	1.93	20.53	0.1130
1880	-35.34	-53.84	0	1.94	20.44	0.1107
1907.5	-34.96	-54.30	0	1.92	21.26	0.1337
Vertical Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1852.5	-33.16	-54.79	0	1.93	23.56	0.2270
1880	-33.23	-54.95	0	1.94	23.66	0.2323

1907.5	-33.53	-55.46	0	1.92	23.85	0.2427
LTE Band 2 Radiated Power EIRP(10M)						
Horizontal Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1855	-34.57	-53.36	0	1.94	20.73	0.1183
1880	-35.14	-53.84	0	1.94	20.64	0.1159
1905	-34.86	-54.30	0	1.92	21.36	0.1368
Vertical Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1855	-33.27	-54.79	0	1.94	23.46	0.2218
1880	-33.53	-54.95	0	1.94	23.36	0.2168
1905	-33.73	-55.46	0	1.92	23.65	0.2317
LTE Band 2 Radiated Power EIRP(20M)						
Horizontal Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1857.5	-34.62	-53.36	0	1.94	20.68	0.1169
1880	-35.14	-53.84	0	1.94	20.64	0.1159
1902.5	-34.82	-54.30	0	1.97	21.45	0.1396
Vertical Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1857.5	-33.17	-54.79	0	1.94	23.56	0.2270
1880	-33.37	-54.95	0	1.94	23.52	0.2249
1902.5	-33.76	-55.46	0	1.97	23.67	0.2328
LTE Band 2 Radiated Power EIRP(20M)						
Horizontal Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1860	-34.52	-53.36	0	1.94	20.78	0.1197
1880	-35.24	-53.84	0	1.94	20.54	0.1132
1905	-35.02	-54.30	0	1.97	21.25	0.1334
Vertical Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1855	-32.97	-54.79	0	1.94	23.76	0.2377
1880	-33.27	-54.95	0	1.94	23.62	0.2301
1900	-33.56	-55.46	0	1.97	23.87	0.2438

LTE Band 2 16QAM

LTE Band 2 Radiated Power EIRP(1.4M)						
Horizontal Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1850.7	-35.56	-53.36	0	1.93	19.734	0.0941
1880	-36.11	-53.84	0	1.94	19.669	0.0927
1909.3	-35.91	-54.30	0	1.92	20.314	0.1075
Vertical Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1850.7	-33.96	-54.79	0	1.93	22.764	0.1890
1880	-34.10	-54.95	0	1.94	22.789	0.1901
1909.3	-34.48	-55.46	0	1.92	22.904	0.1952
LTE Band 2 Radiated Power EIRP(3M)						
Horizontal Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1851.5	-35.64	-53.36	0	1.93	19.655	0.0924
1880	-36.04	-53.84	0	1.94	19.741	0.0942
1908.5	-36.05	-54.30	0	1.92	20.175	0.1041
Vertical Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1851.5	-34.04	-54.79	0	1.93	22.685	0.1856
1880	-34.13	-54.95	0	1.94	22.761	0.1888
1908.5	-34.62	-55.46	0	1.92	22.765	0.1890
LTE Band 2 Radiated Power EIRP(5M)						
Horizontal Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1852.5	-35.11	-53.36	0	1.93	20.176	0.1041
1880	-36.18	-53.84	0	1.94	19.597	0.0911
1907.5	-35.55	-54.30	0	1.92	20.666	0.1166
Vertical Polarization						
Frequency(MHz)	**Rt(dBm)**	**Rs(dBm)**	**Ps(dBm)**	**Gs(dBi)**	**EIRP(dBm)**	**RIRP(W)**
1852.5	-33.51	-54.79	0	1.93	23.206	0.2092
1880	-34.07	-54.95	0	1.94	22.817	0.1913
1907.5	-34.12	-55.46	0	1.92	23.256	0.2116

LTE Band 2 Radiated Power EIRP(10M)						
Horizontal Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1855	-35.27	-53.36	0	1.94	20.028	0.1006
1880	-35.54	-53.84	0	1.94	20.243	0.1058
1905	-35.04	-54.30	0	1.92	21.178	0.1312
Vertical Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1855	-33.97	-54.79	0	1.94	22.758	0.1887
1880	-33.93	-54.95	0	1.94	22.963	0.1978
1905	-33.91	-55.46	0	1.92	23.468	0.2222
LTE Band 2 Radiated Power EIRP(15M)						
Horizontal Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1857.5	-35.40	-53.36	0	1.94	19.9	0.0977
1880	-36.53	-53.84	0	1.94	19.254	0.0842
1902.5	-34.85	-54.30	0	1.97	21.423	0.1388
Vertical Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1857.5	-33.95	-54.79	0	1.94	22.78	0.1897
1880	-34.76	-54.95	0	1.94	22.134	0.1635
1902.5	-33.79	-55.46	0	1.97	23.643	0.2314
LTE Band 2 Radiated Power EIRP(20M)						
Horizontal Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1860	-35.22	-53.36	0	1.94	20.076	0.1018
1880	-36.05	-53.84	0	1.94	19.735	0.0941
1900	-35.49	-54.30	0	1.97	20.784	0.1198
Vertical Polarization						
Frequency(MHz)	Rt(dBm)	Rs(dBm)	Ps(dBm)	Gs(dBi)	EIRP(dBm)	RIRP(W)
1860	-33.67	-54.79	0	1.94	23.056	0.2021
1880	-34.08	-54.95	0	1.94	22.815	0.1912
1900	-34.03	-55.46	0	1.97	23.404	0.2190

2.4. Occupied Bandwidth

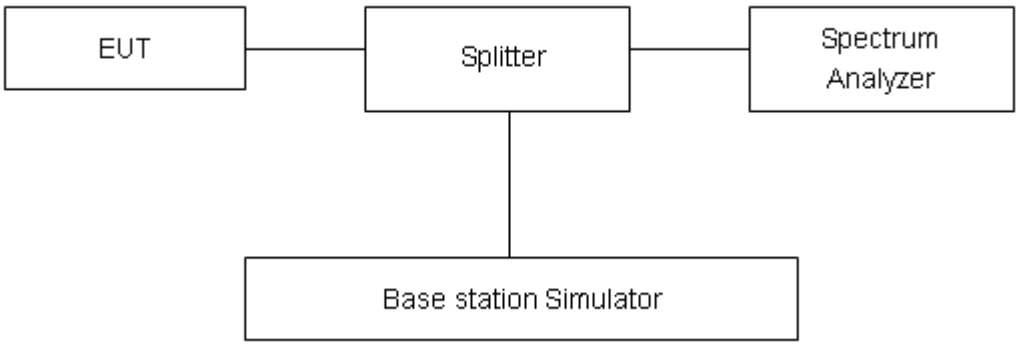
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer. The RBW is set larger than 1% of 26dB bandwidth. 99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

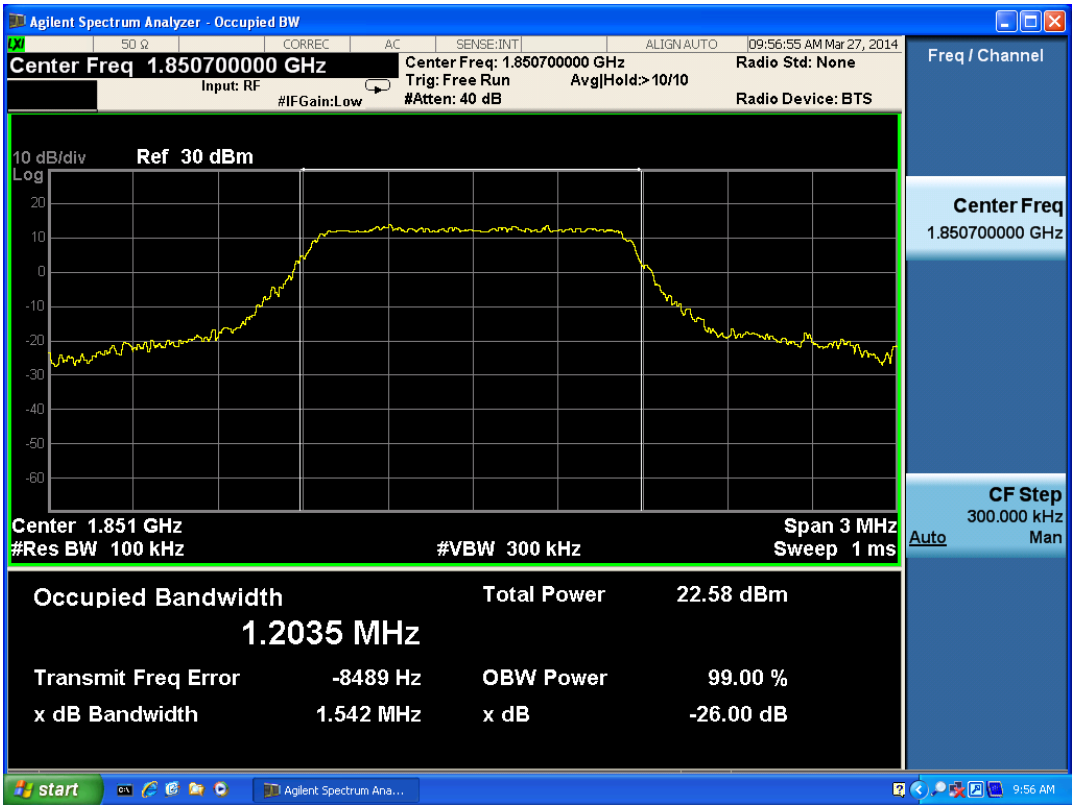
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 624Hz.

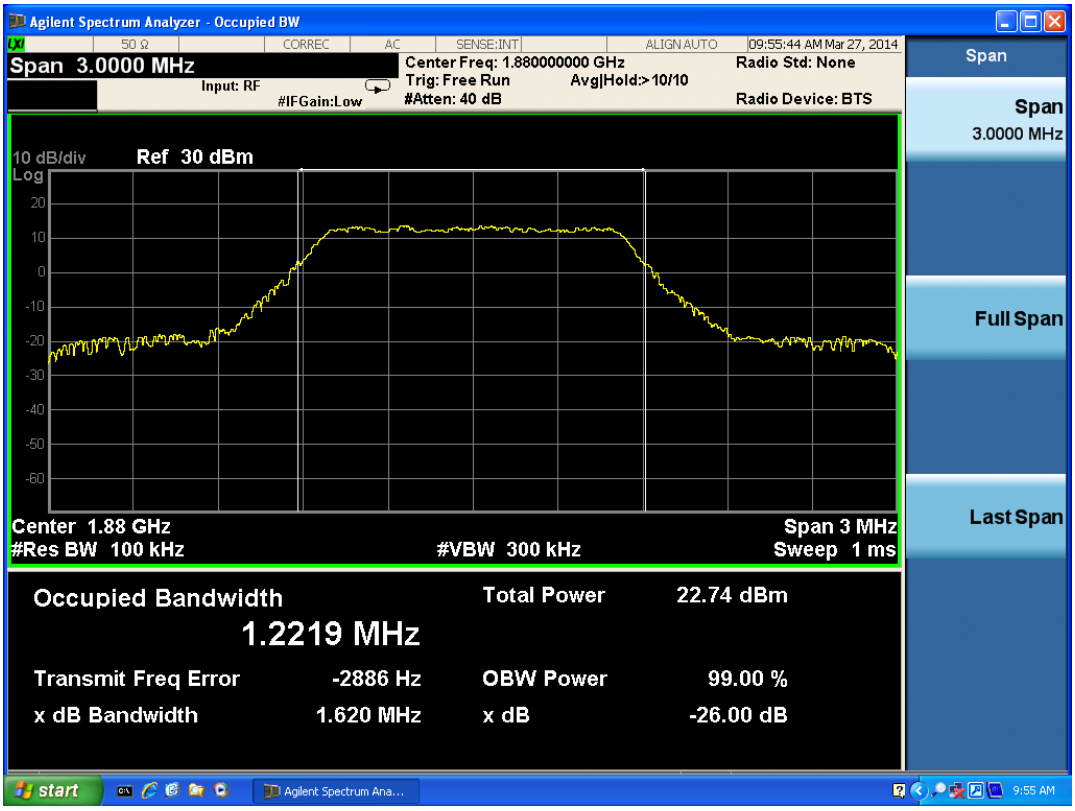
Test Result

LTE Band 2						
RB	**Modulation**	**Bandwidth ((MHz))**	**Channel**	**Frequency (MHz)**	**99% Power Bandwidth (MHz)**	**-26dBc Bandwidth(MHz)**
100%	QPSK	1.4	18607	1850.7	1.2035	1.542
			18900	1880.0	1.2219	1.620
			19193	1909.3	1.2056	1.576
		3	18615	1851.5	2.7540	3.204
			18900	1880.0	2.7566	3.228
			19185	1908.5	2.7525	3.224
		5	18625	1852.5	4.5201	5.131
			18900	1880.0	4.5260	5.027
			19175	1907.5	4.5168	5.018
		10	18650	1855.0	9.0632	10.2
			18900	1880.0	9.0709	10.29
			19150	1905.0	9.0882	10.21
		15	18675	1857.5	13.494	16.25
			18900	1880	13.571	15.87
			19125	1902.5	13.544	15.83
		20	18700	1860	17.876	19.65
			18900	1880	17.997	20.11
			19100	1900	17.916	19.56
	16QAM	1.4	18607	1850.7	1.2049	1.584
			18900	1880.0	1.2225	1.559
			19193	1909.3	1.1863	1.562
		3	18615	1851.5	2.7393	3.218
			18900	1880.0	2.7401	3.158
			19185	1908.5	2.7419	3.159
		5	18625	1852.5	4.5190	5.054
			18900	1880.0	4.5326	5.091
			19175	1907.5	4.5186	5.034

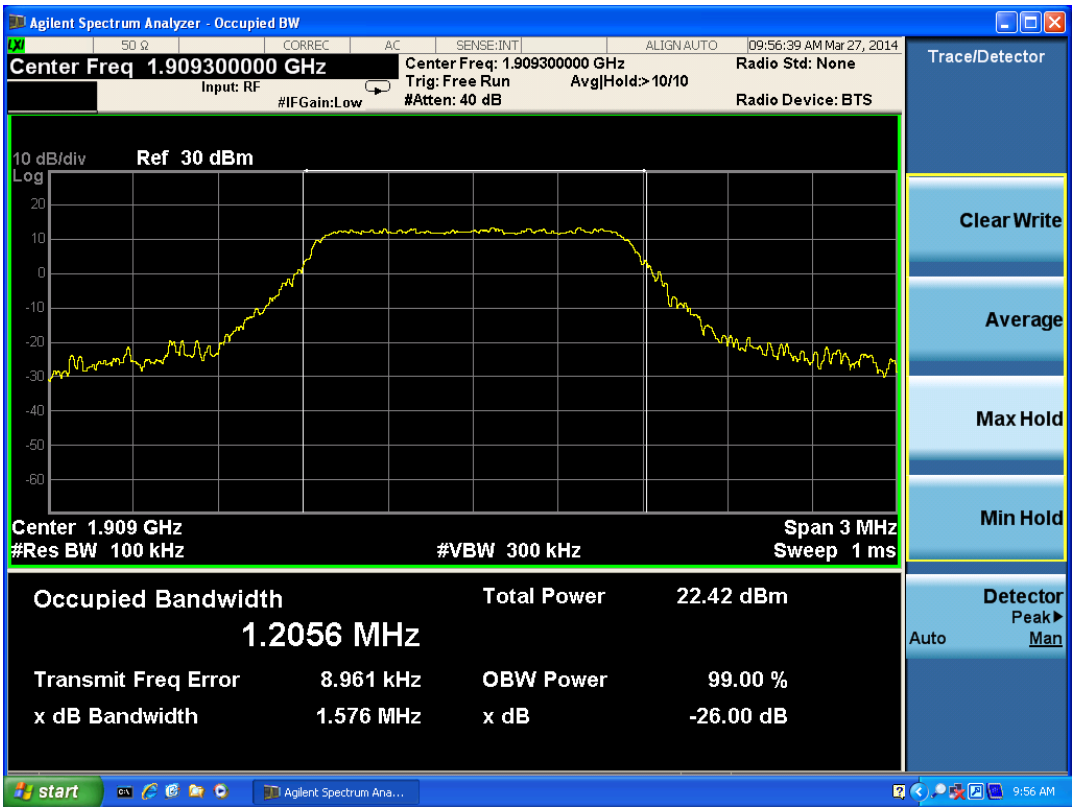
		10	18650	1855.0	9.0904	10.31
			18900	1880.0	9.0824	10.27
			19150	1905.0	9.0934	10.07
		15	18675	1857.5	13.497	15.52
			18900	1880	13.538	15.79
			19125	1902.5	13.523	15.41
		20	18700	1860	17.941	19.68
			18900	1880	17.966	19.95
			19100	1900	17.950	19.67



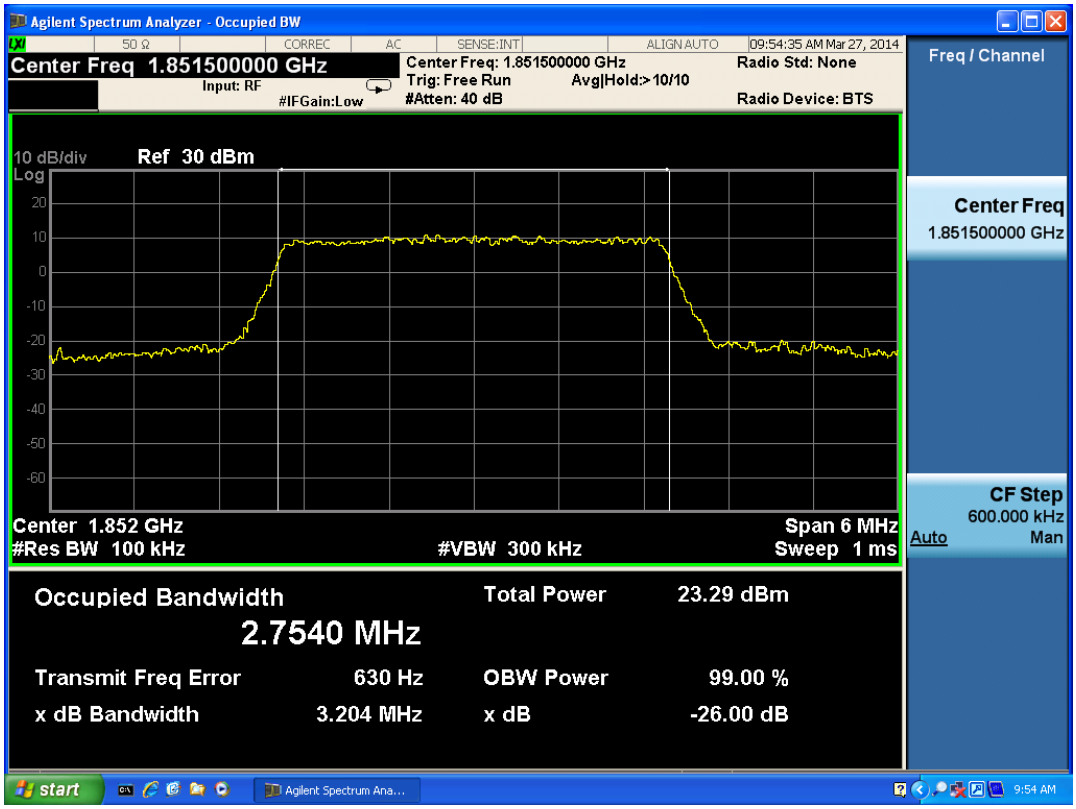
LTE Band 2 QPSK Bandwidth = 1.4MHz CH18607 Occupied Bandwidth



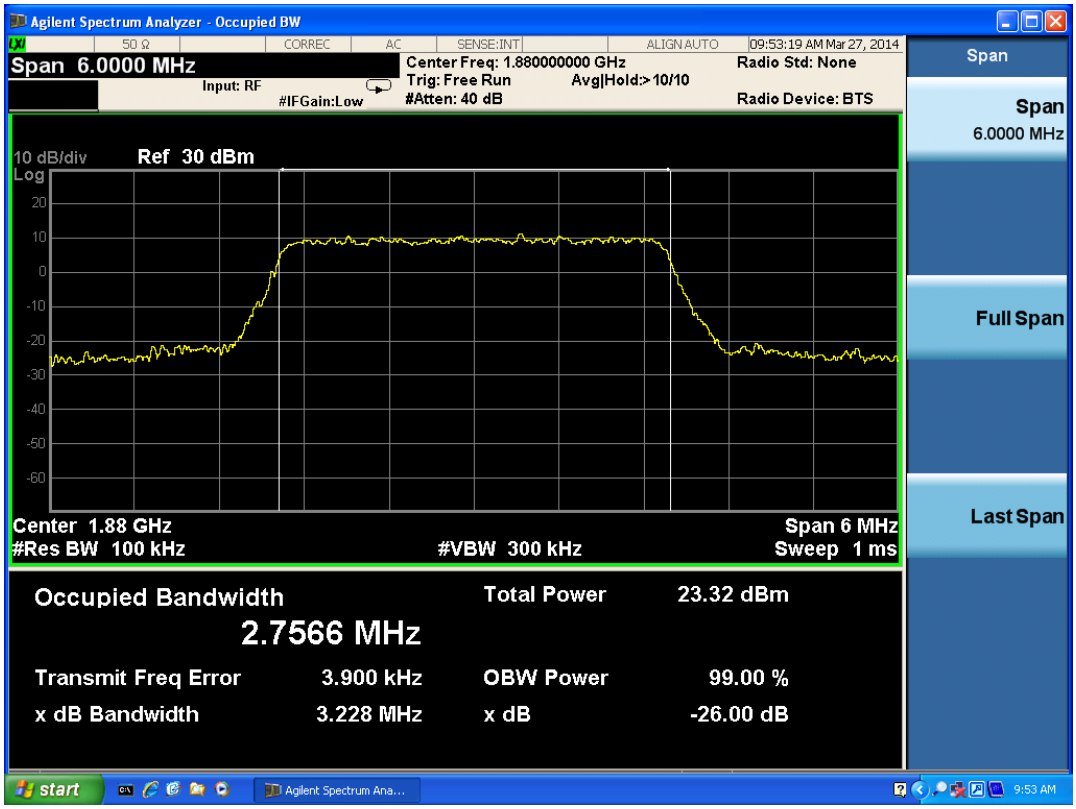
LTE Band 2 QPSK Bandwidth = 1.4MHz CH18900 Occupied Bandwidth



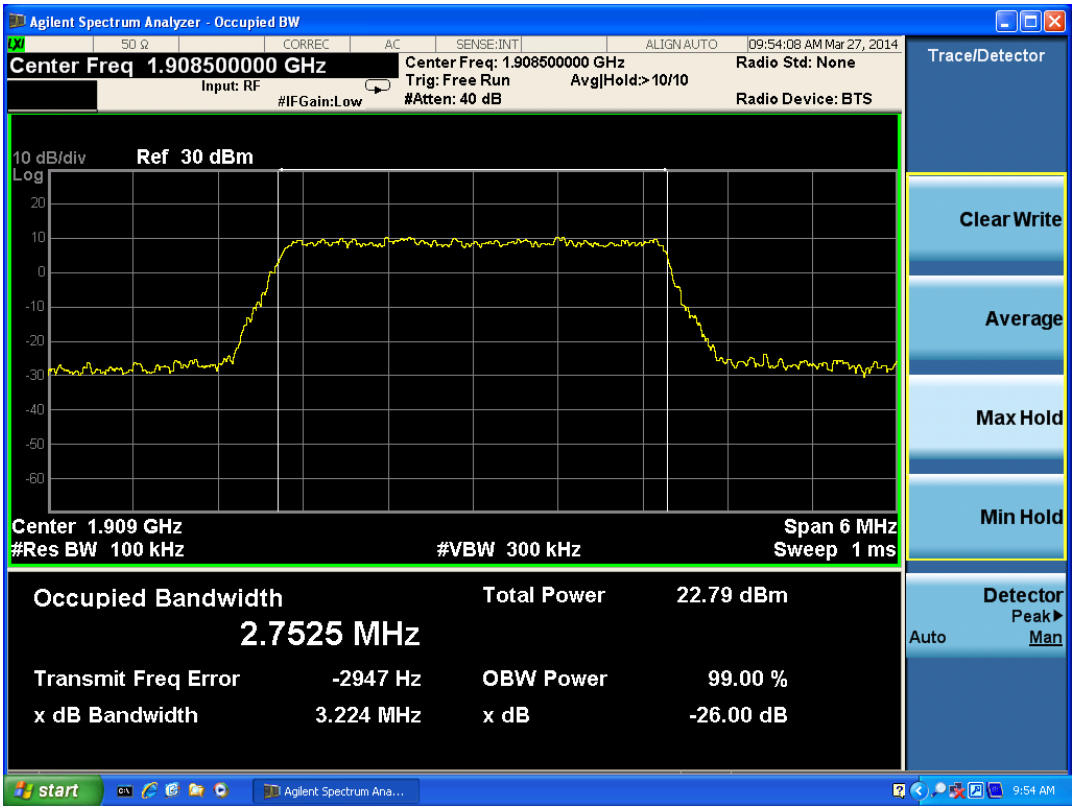
LTE Band 2 QPSK Bandwidth = 1.4MHz CH19193 Occupied Bandwidth



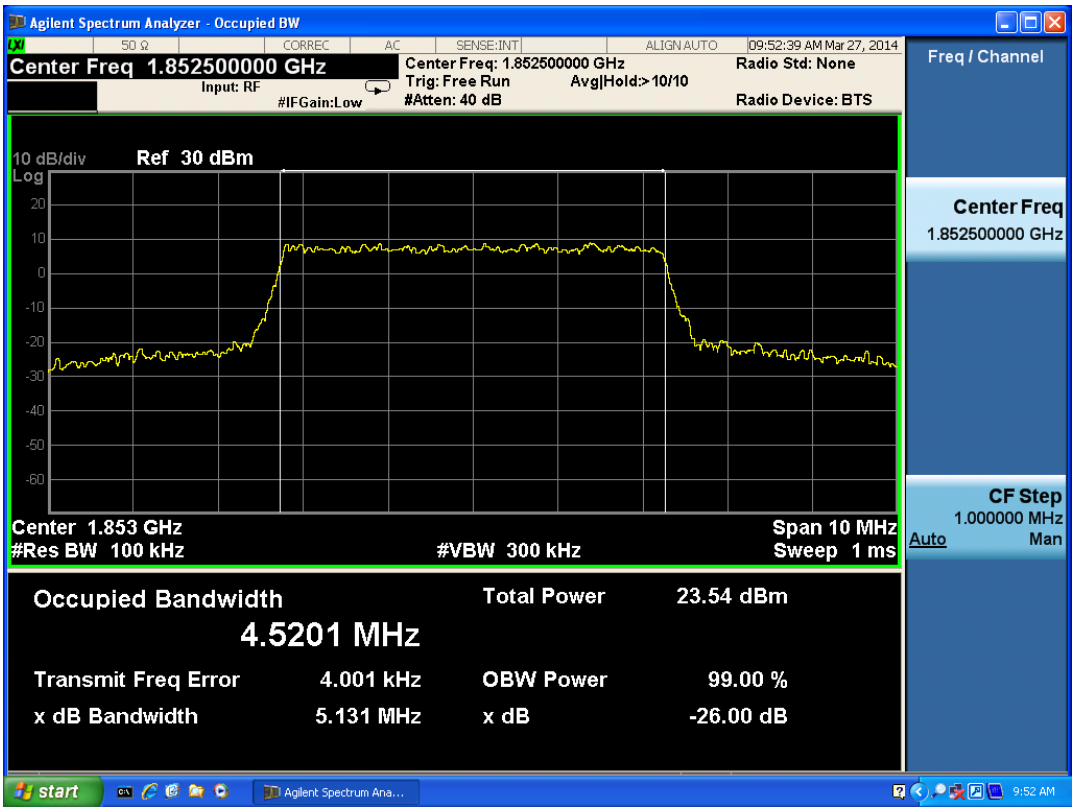
LTE Band 2 QPSK Bandwidth = 3MHz CH18615 Occupied Bandwidth



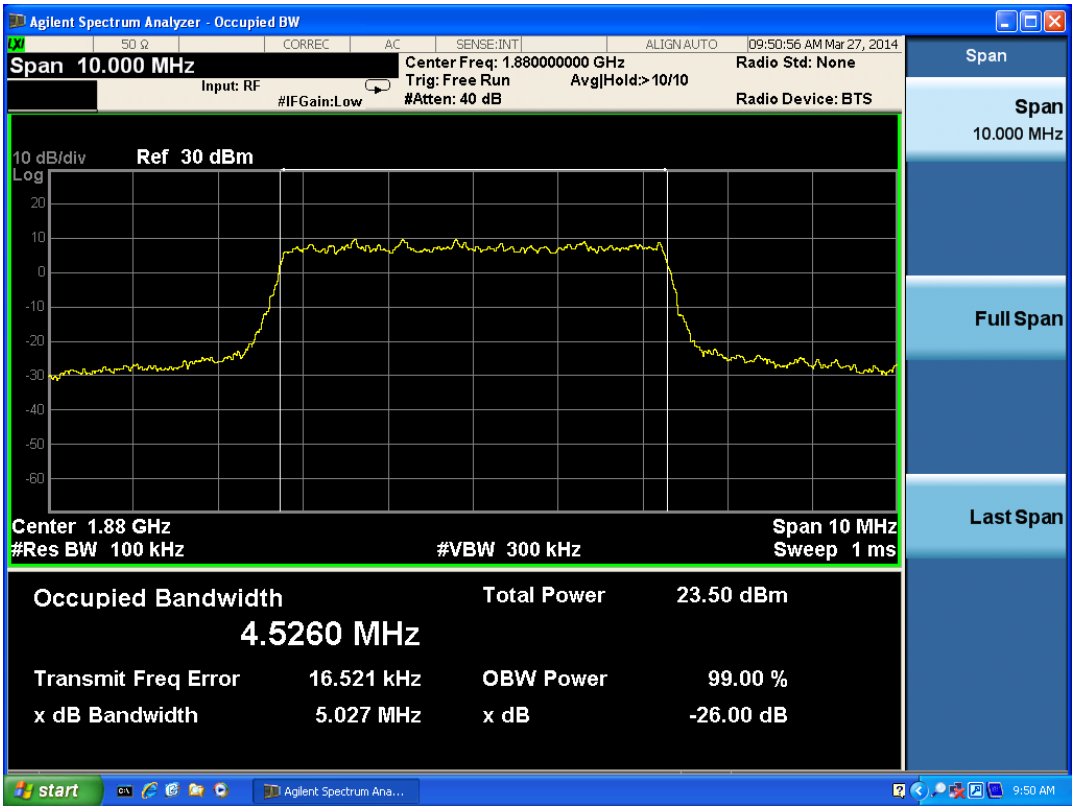
LTE Band 2 QPSK Bandwidth = 3MHz CH18900 Occupied Bandwidth



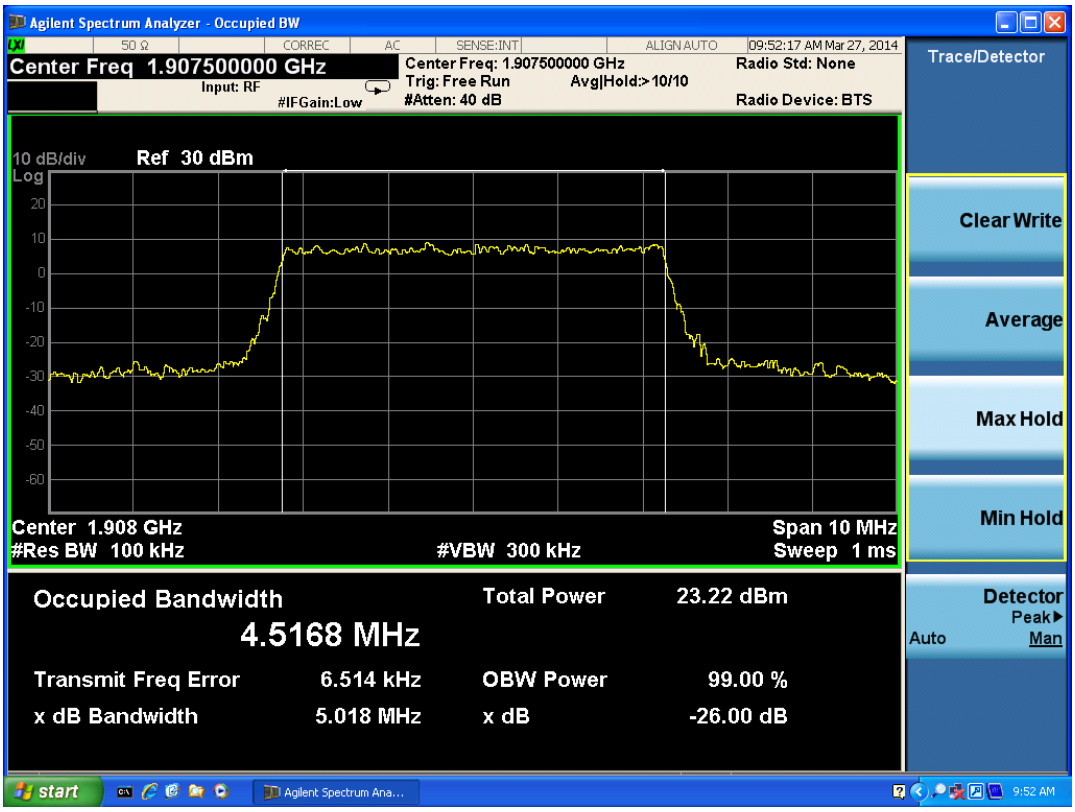
LTE Band 2 QPSK Bandwidth = 3MHz CH19185 Occupied Bandwidth



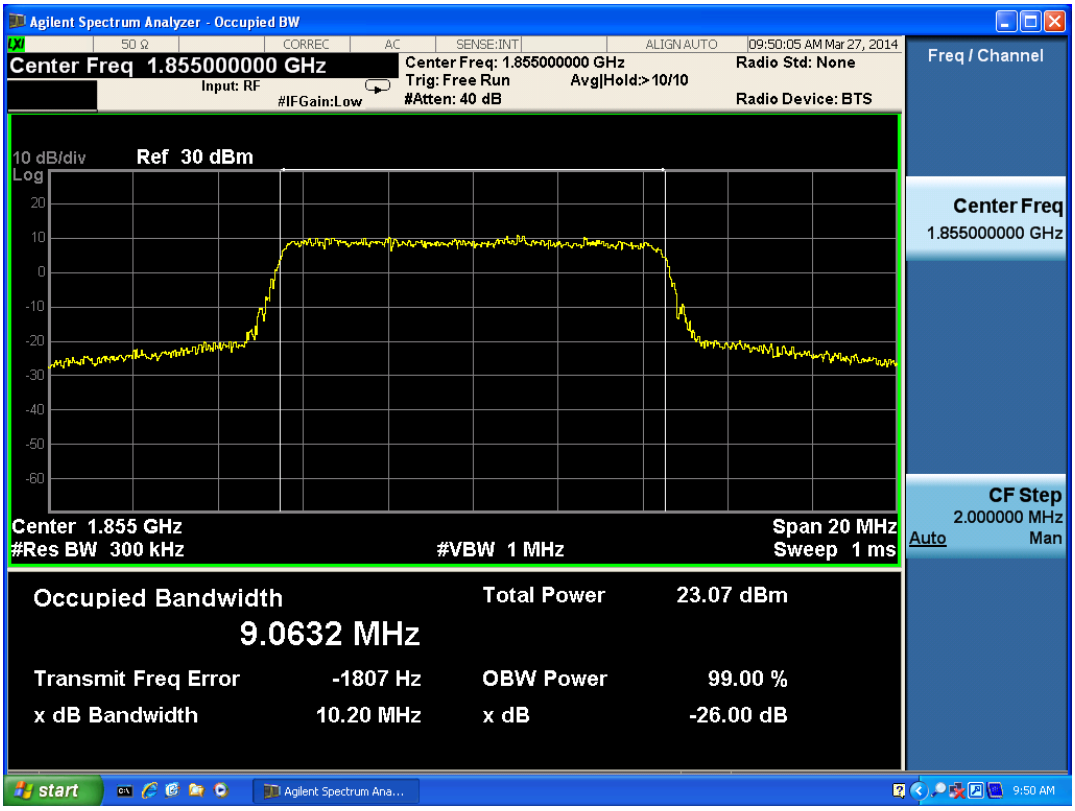
LTE Band 2 QPSK Bandwidth = 5MHz CH18625 Occupied Bandwidth



LTE Band 2 QPSK Bandwidth = 5MHz CH18900 Occupied Bandwidth

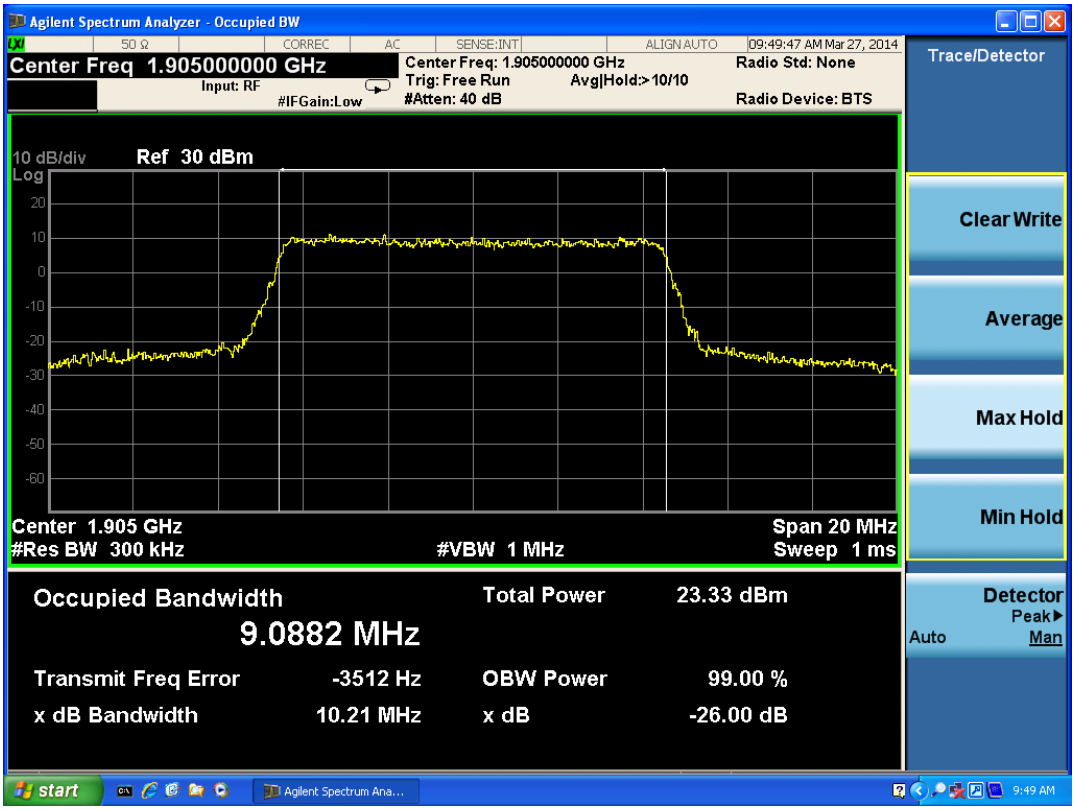


LTE Band 2 QPSK Bandwidth = 5MHz CH19175 Occupied Bandwidth

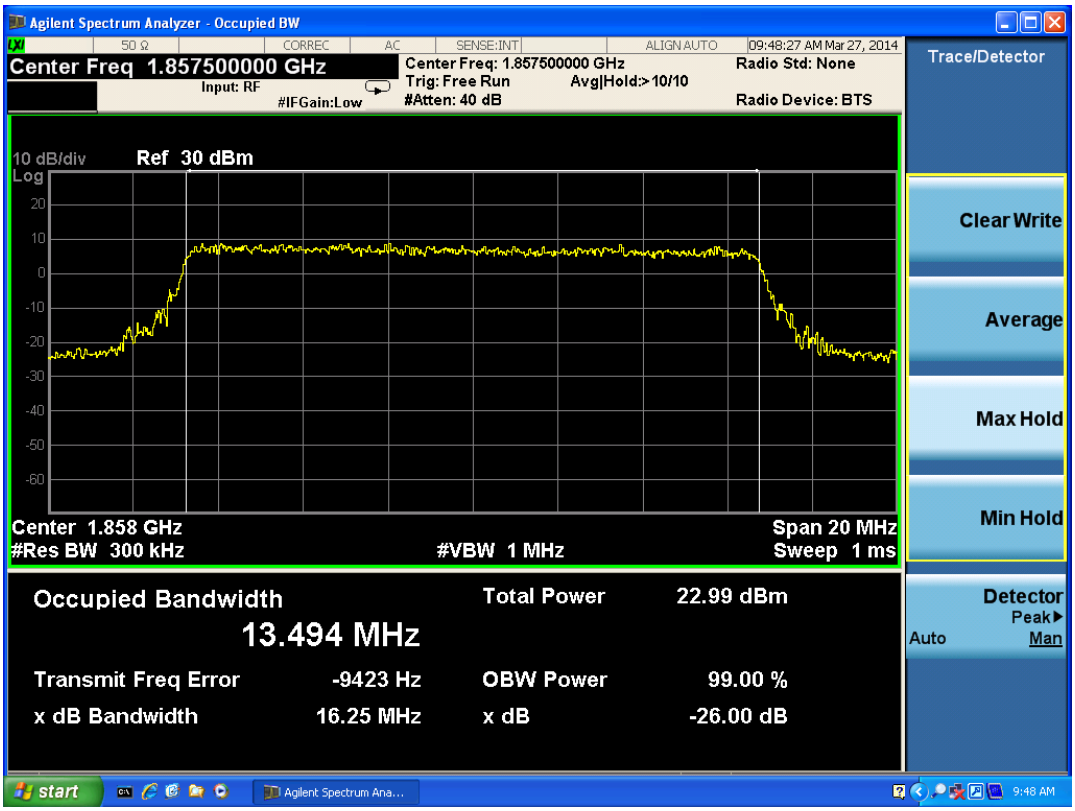


LTE Band 2 QPSK Bandwidth = 10MHz CH18650 Occupied Bandwidth

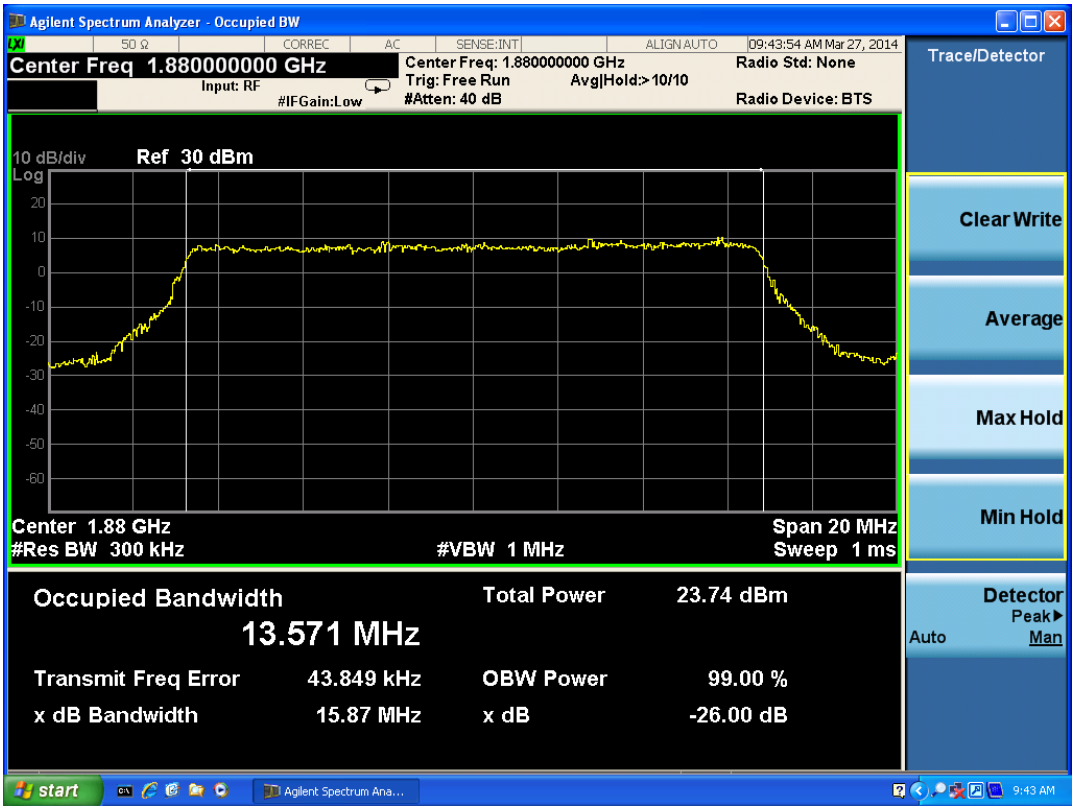
LTE Band 2 QPSK Bandwidth = 10MHz CH18900 Occupied Bandwidth



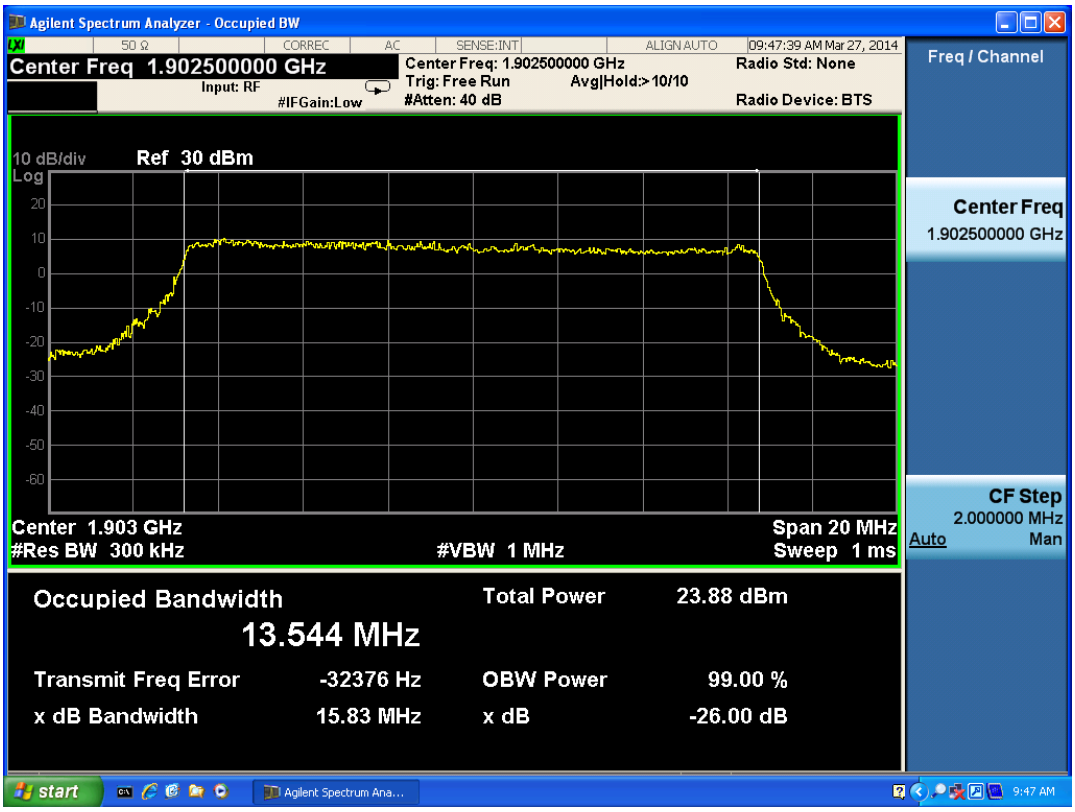
LTE Band 2 QPSK Bandwidth = 10MHz CH19150 Occupied Bandwidth



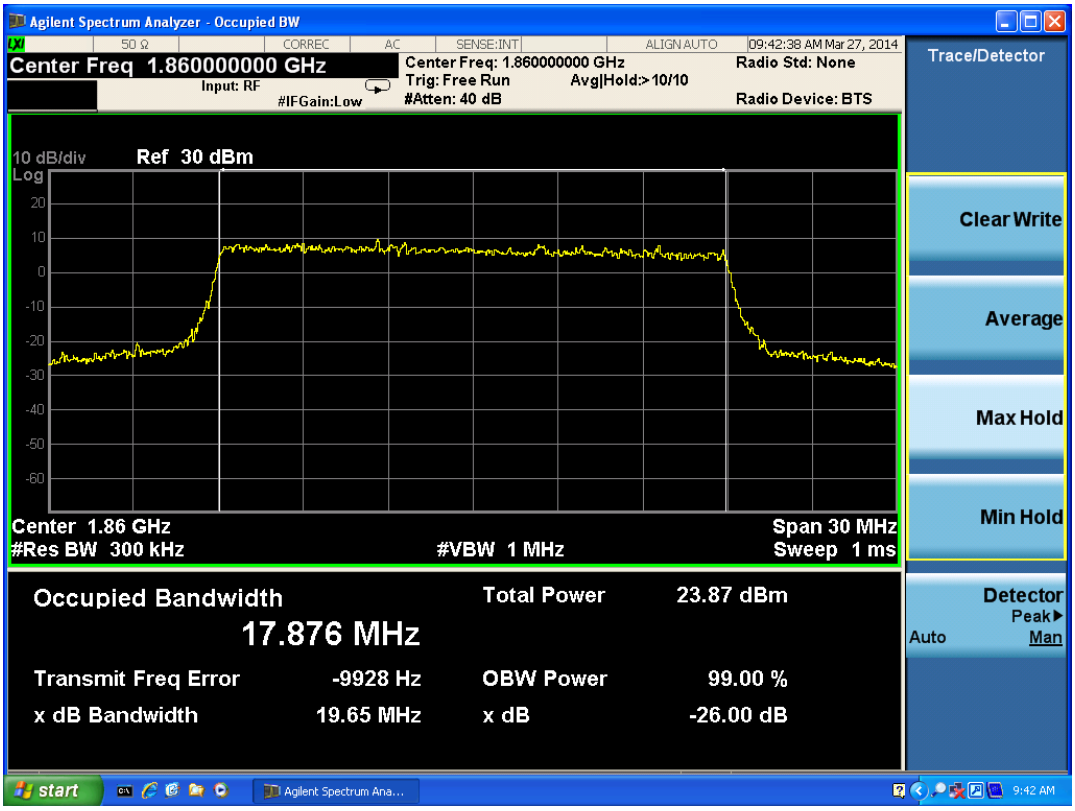
LTE Band 2 QPSK Bandwidth = 15MHz CH18675 Occupied Bandwidth



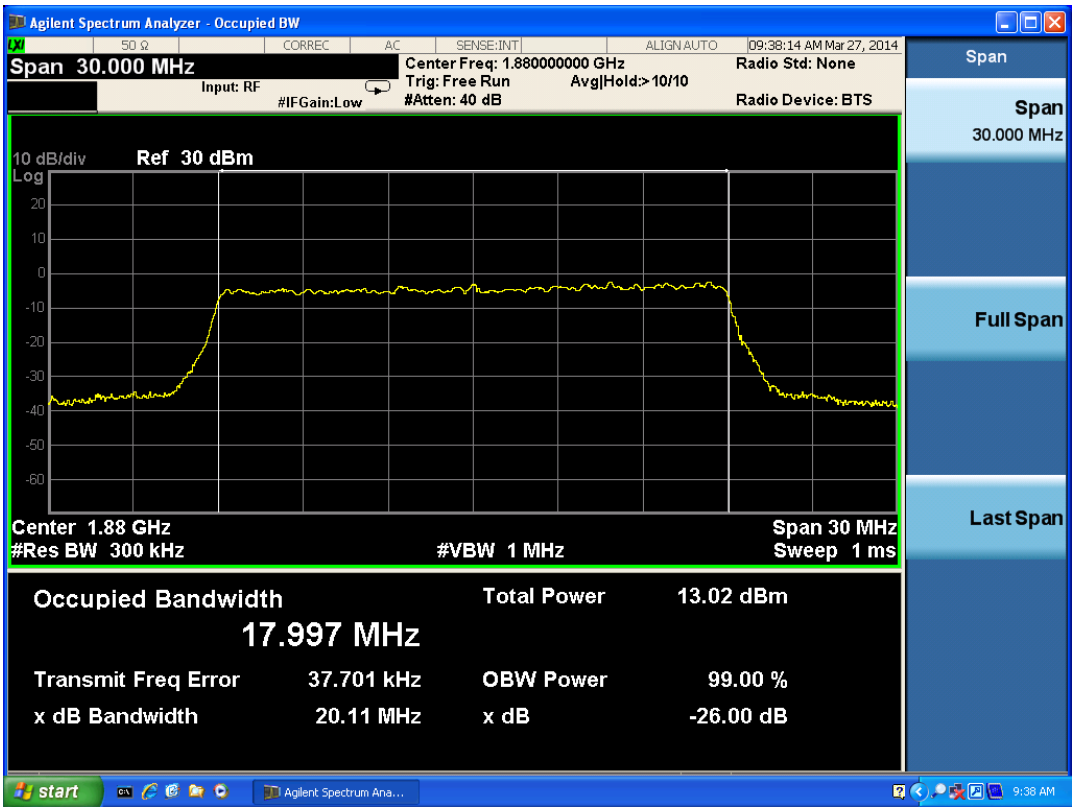
LTE Band 2 QPSK Bandwidth = 15MHz CH18900 Occupied Bandwidth



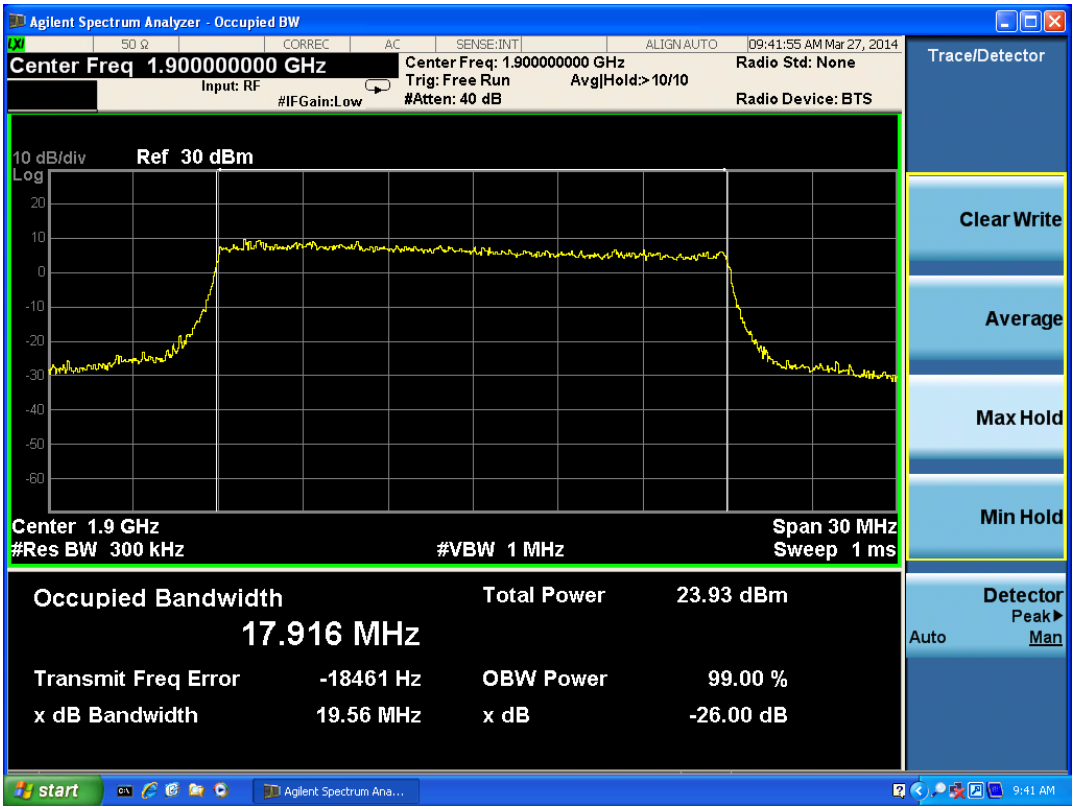
LTE Band 2 QPSK Bandwidth = 15MHz CH19125 Occupied Bandwidth



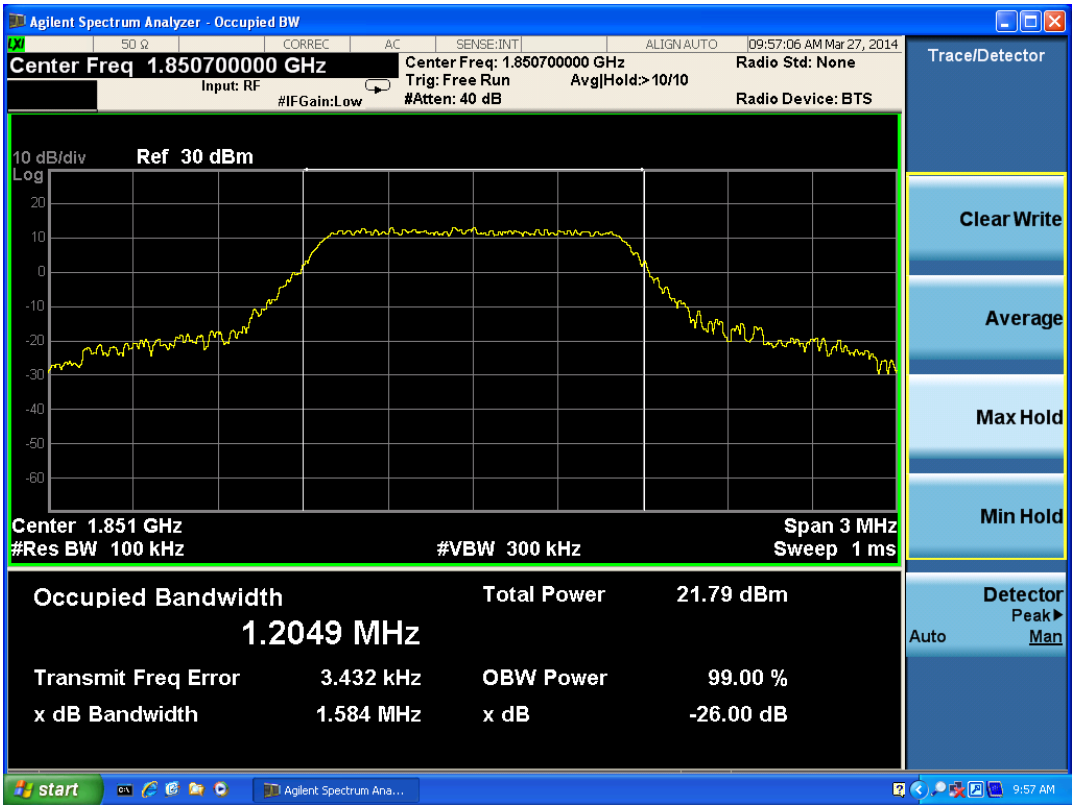
LTE Band 2 QPSK Bandwidth = 20MHz CH18700 Occupied Bandwidth



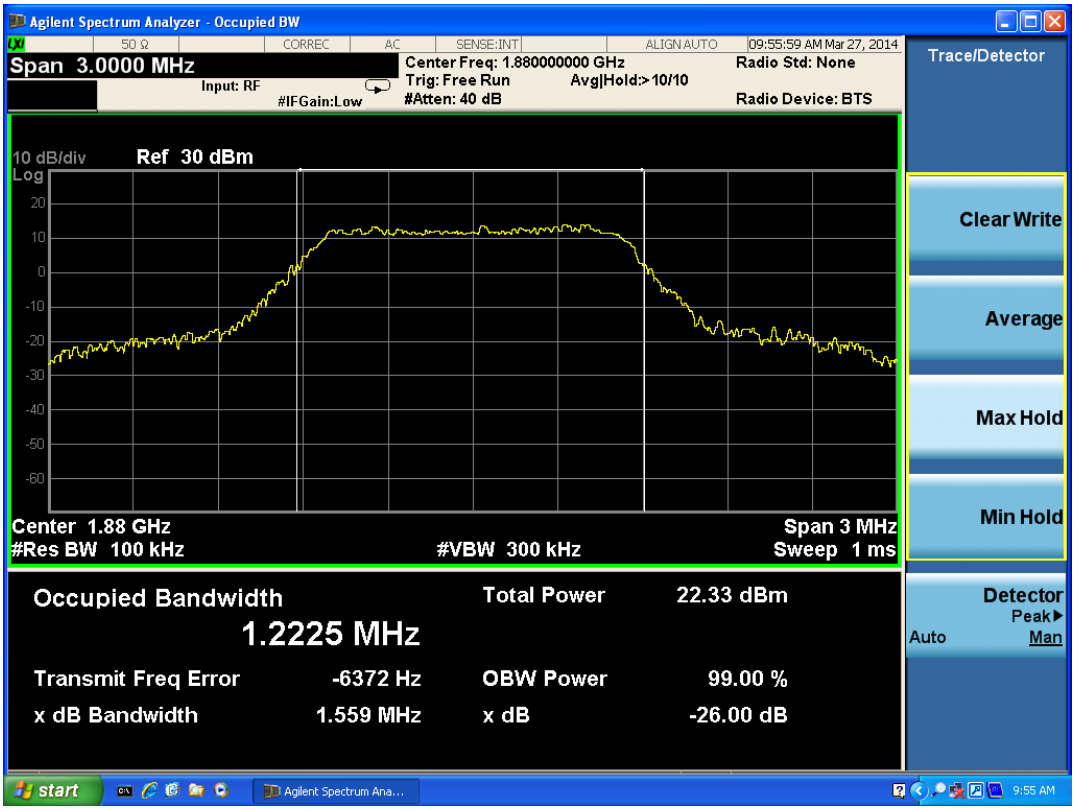
LTE Band 2 QPSK Bandwidth = 20MHz CH18900 Occupied Bandwidth



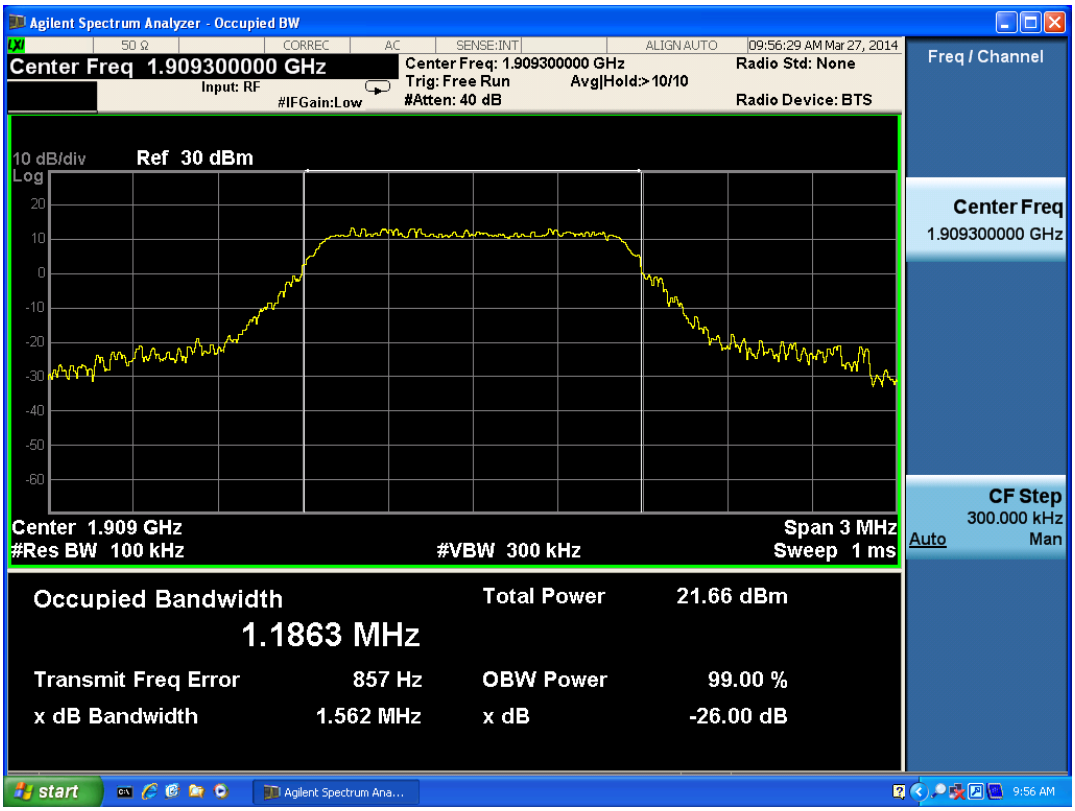
LTE Band 2 QPSK Bandwidth = 20MHz CH19100 Occupied Bandwidth



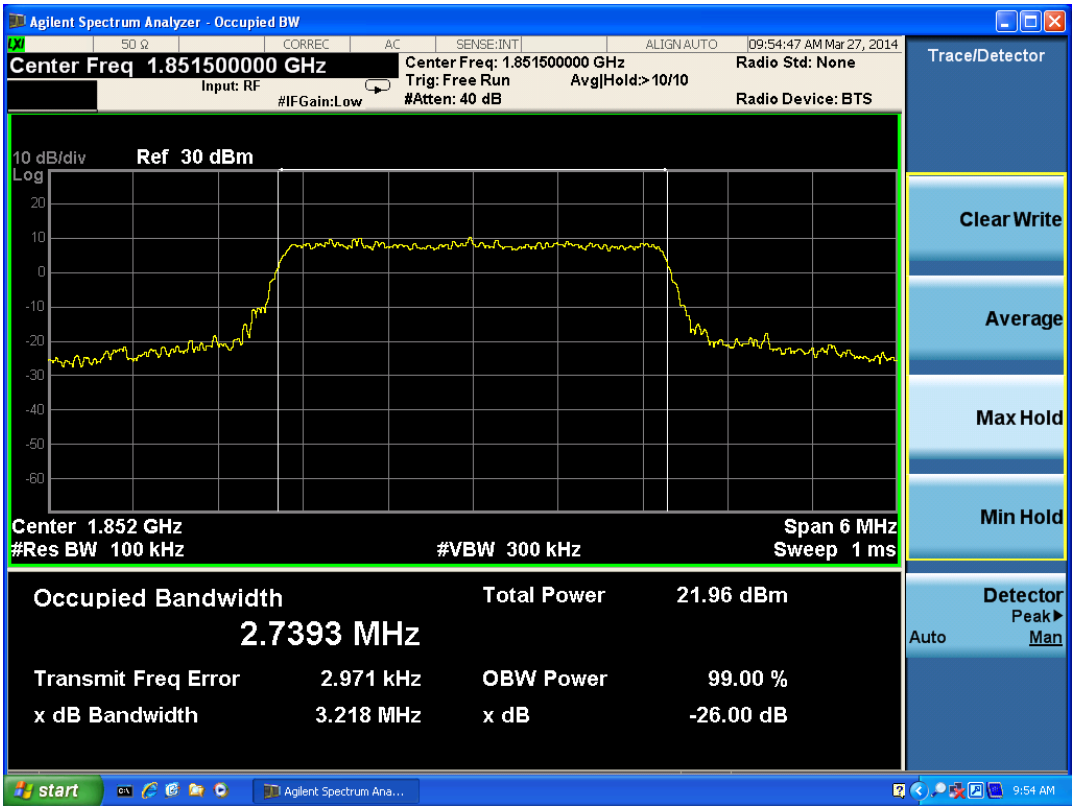
LTE Band 2 16QAM Bandwidth = 1.4MHz CH18607 Occupied Bandwidth



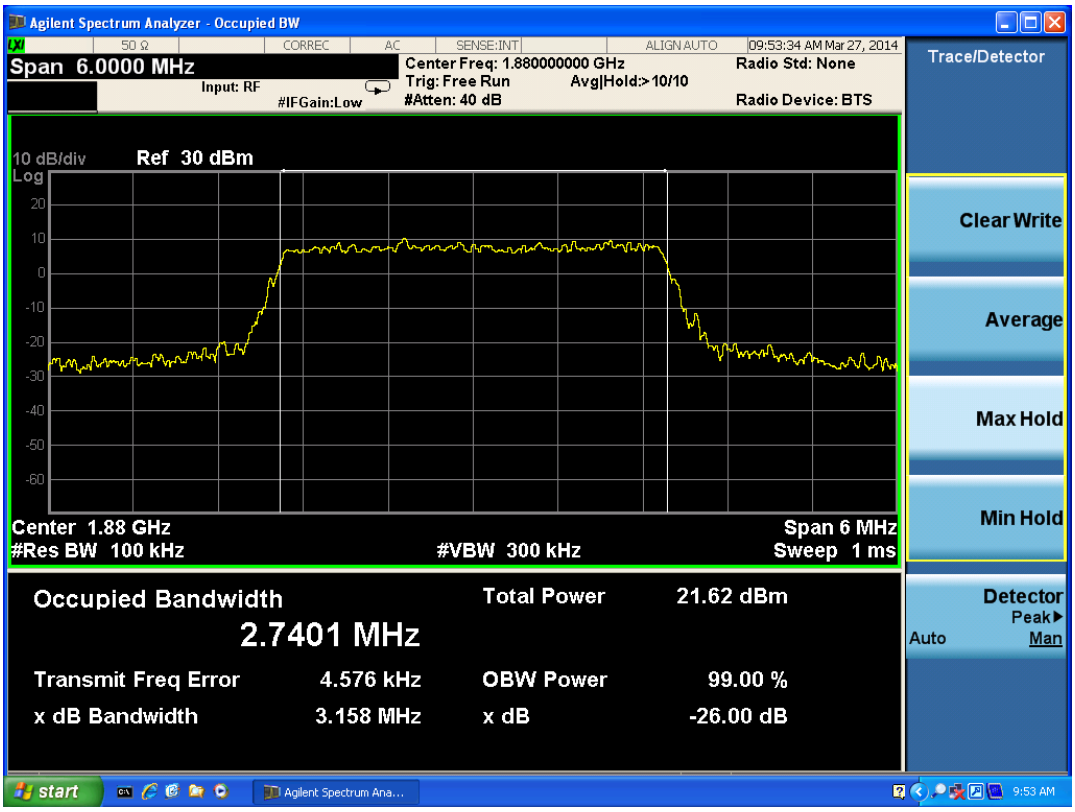
LTE Band 2 16QAM Bandwidth = 1.4MHz CH18900 Occupied Bandwidth



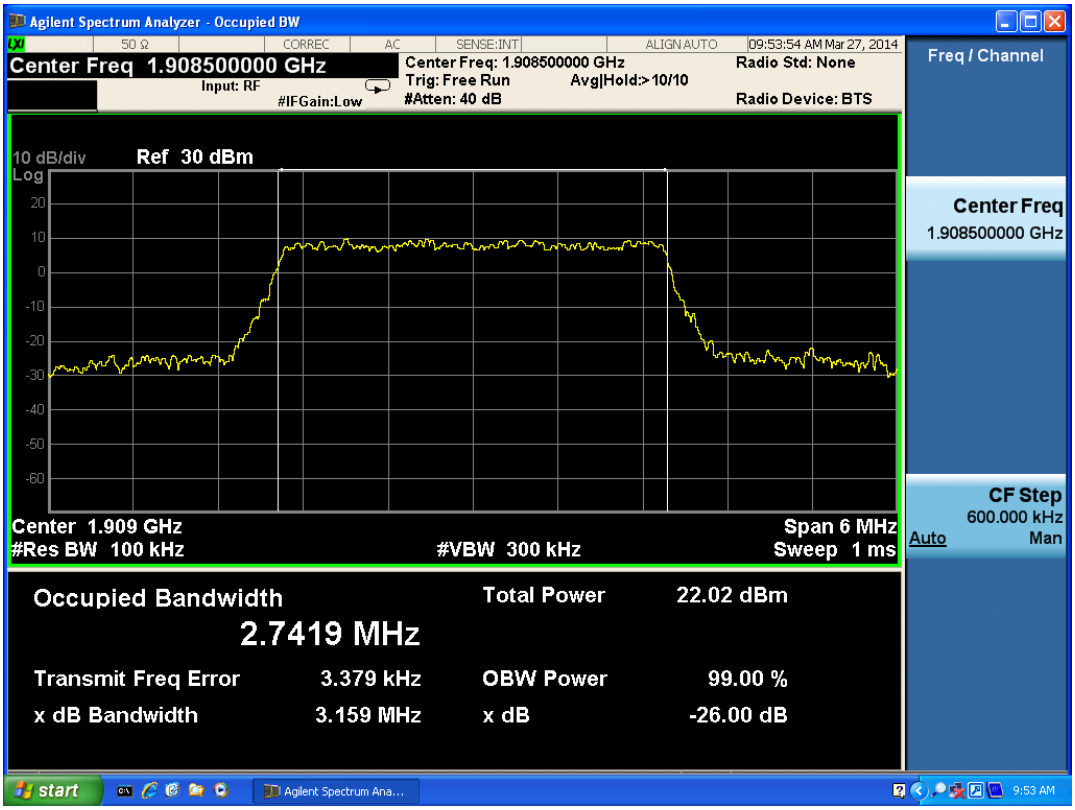
LTE Band 2 16QAM Bandwidth = 1.4MHz CH19193 Occupied Bandwidth



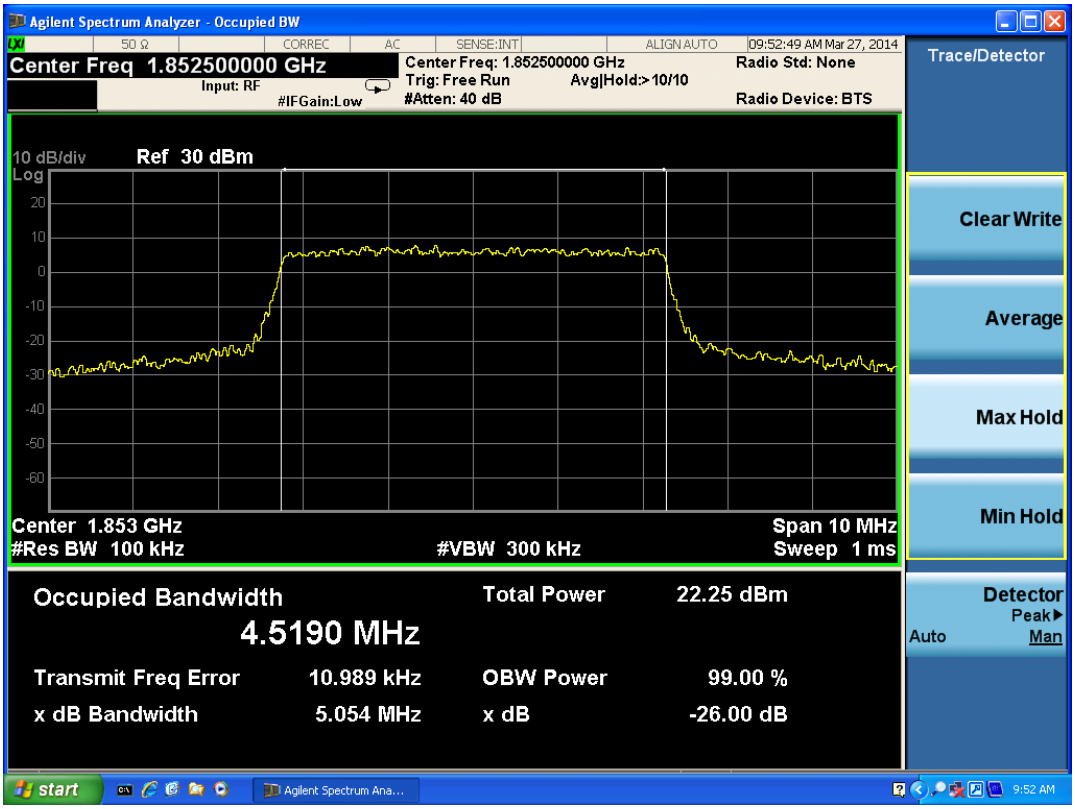
LTE Band 2 16QAM Bandwidth = 3MHz CH18615 Occupied Bandwidth



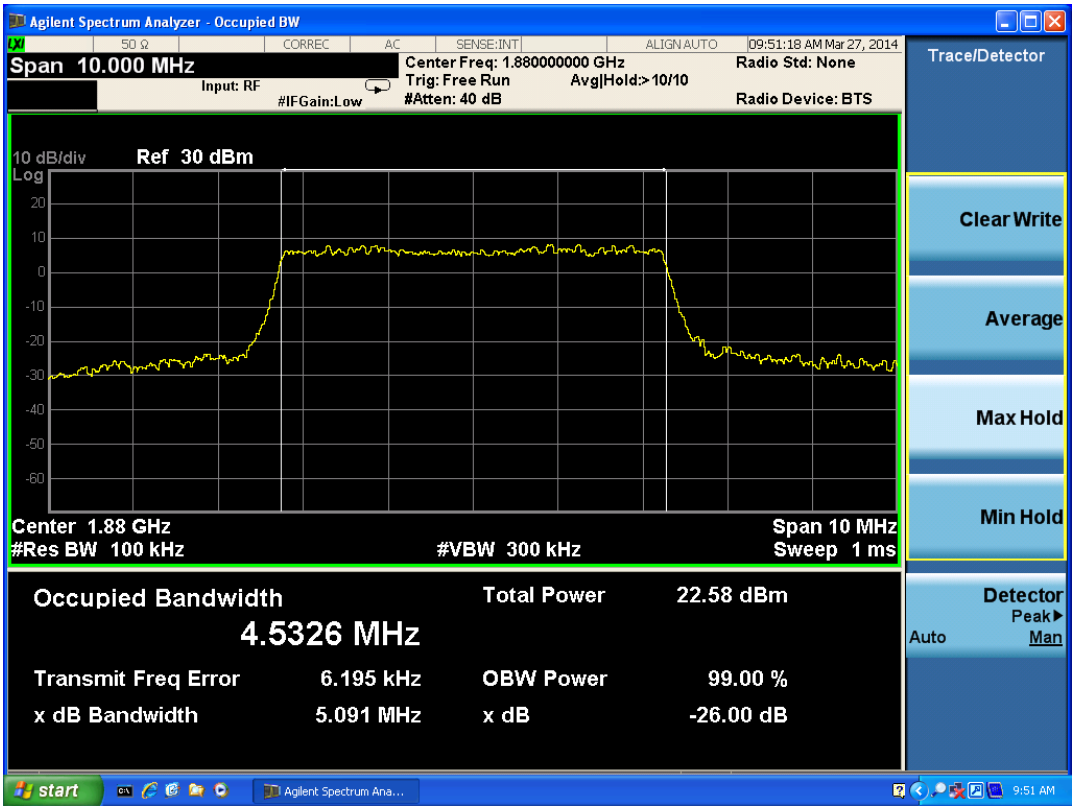
LTE Band 2 16QAM Bandwidth = 3MHz CH18900 Occupied Bandwidth



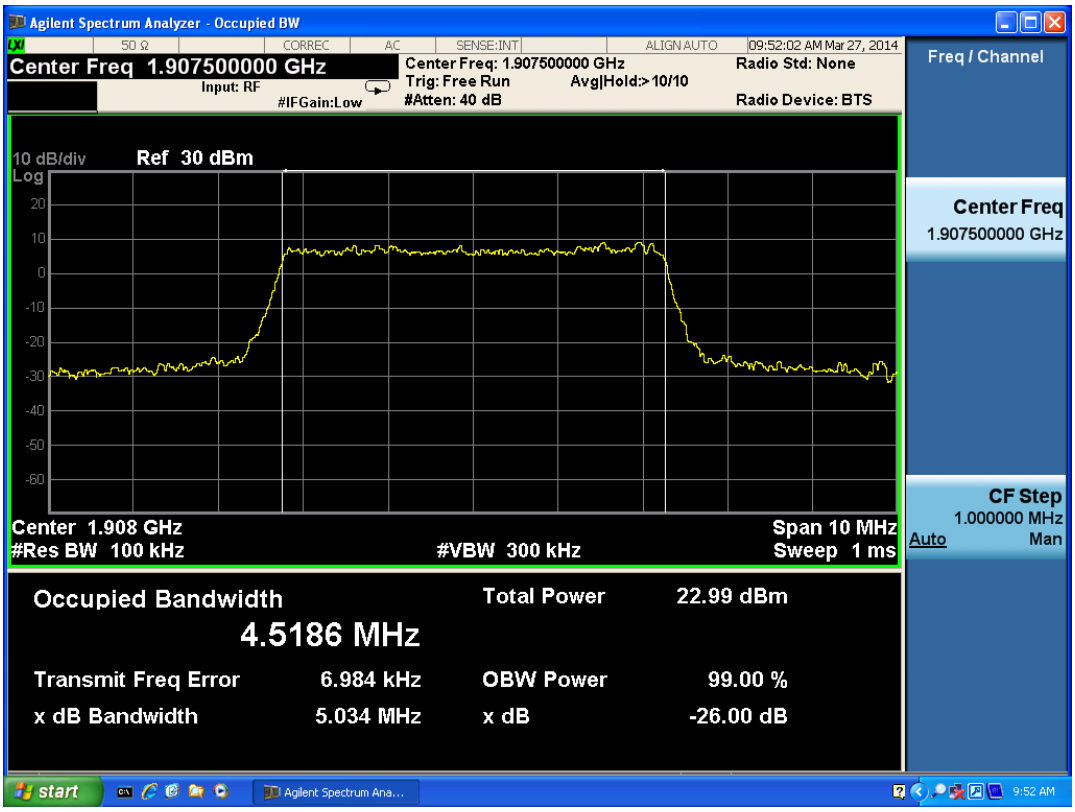
LTE Band 2 16QAM Bandwidth = 3MHz CH19185 Occupied Bandwidth



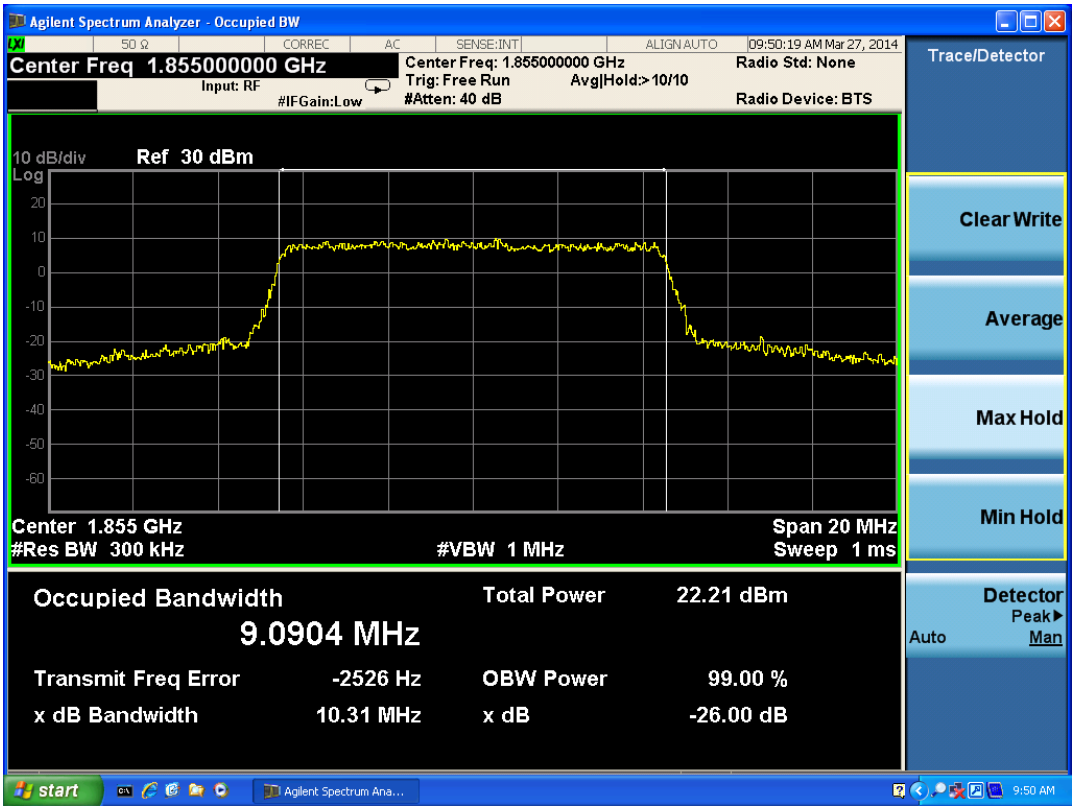
LTE Band 2 16QAM Bandwidth = 5MHz CH18625 Occupied Bandwidth



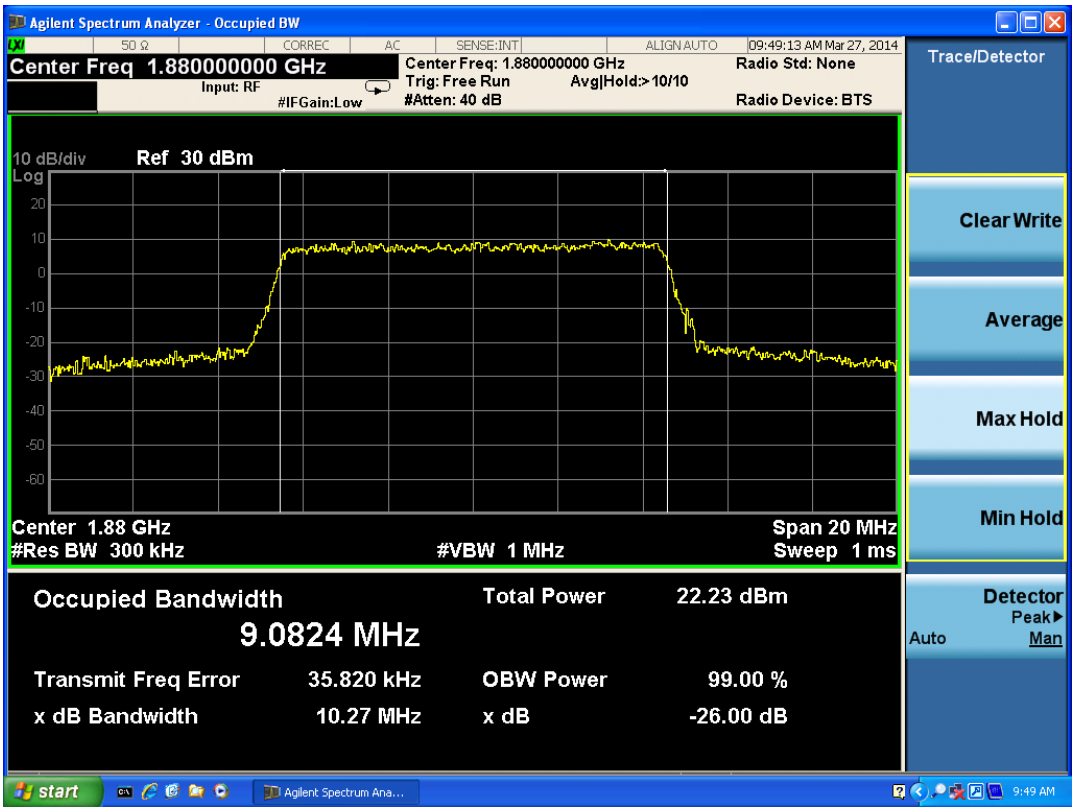
LTE Band 2 16QAM Bandwidth = 5MHz CH18900 Occupied Bandwidth



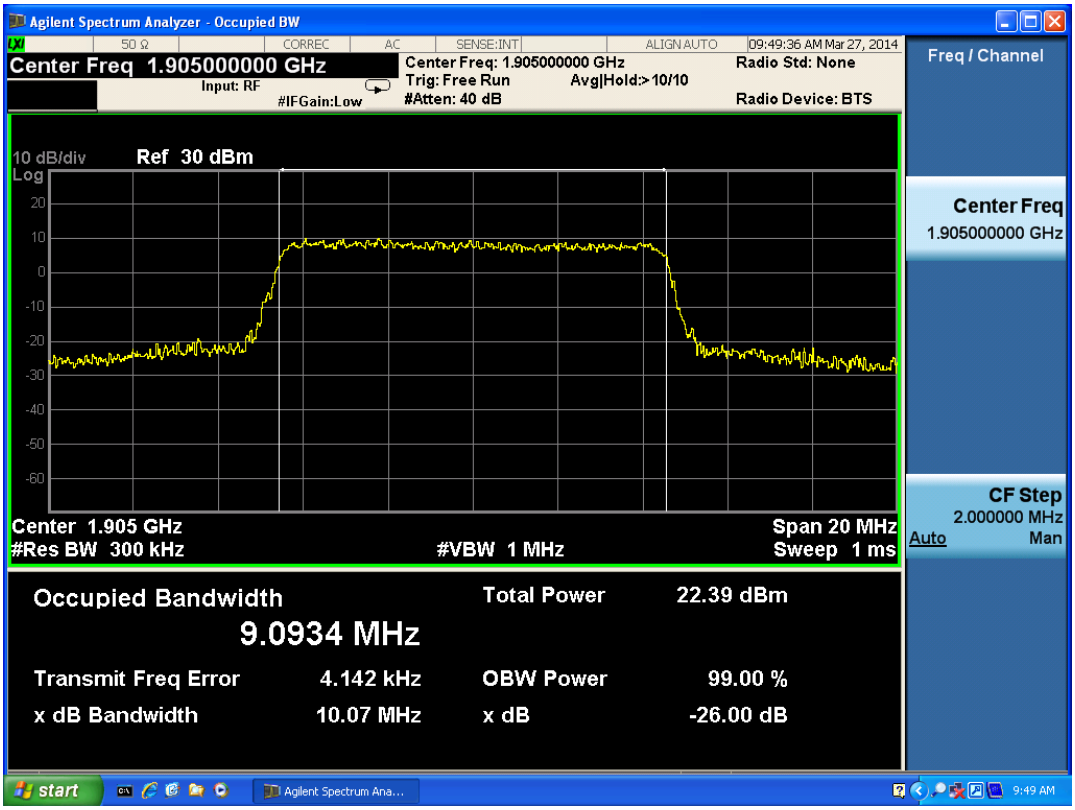
LTE Band 2 16QAM Bandwidth = 5MHz CH19175 Occupied Bandwidth



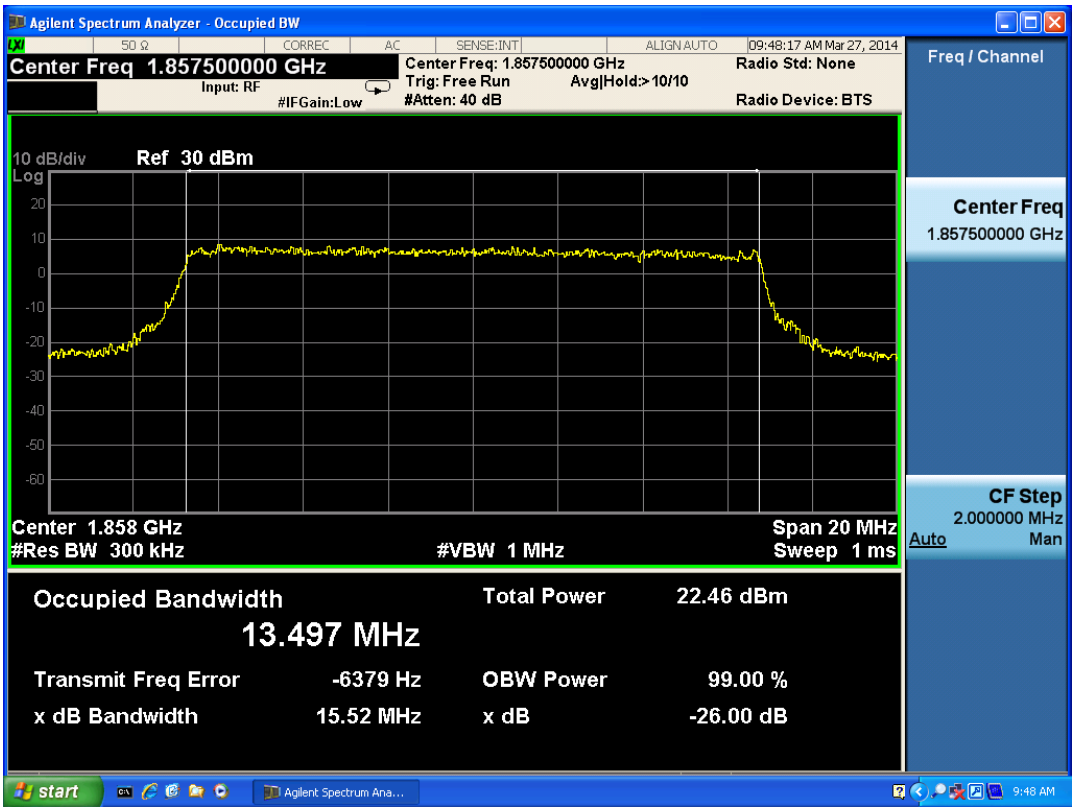
LTE Band 2 16QAM Bandwidth = 10MHz CH18650 Occupied Bandwidth



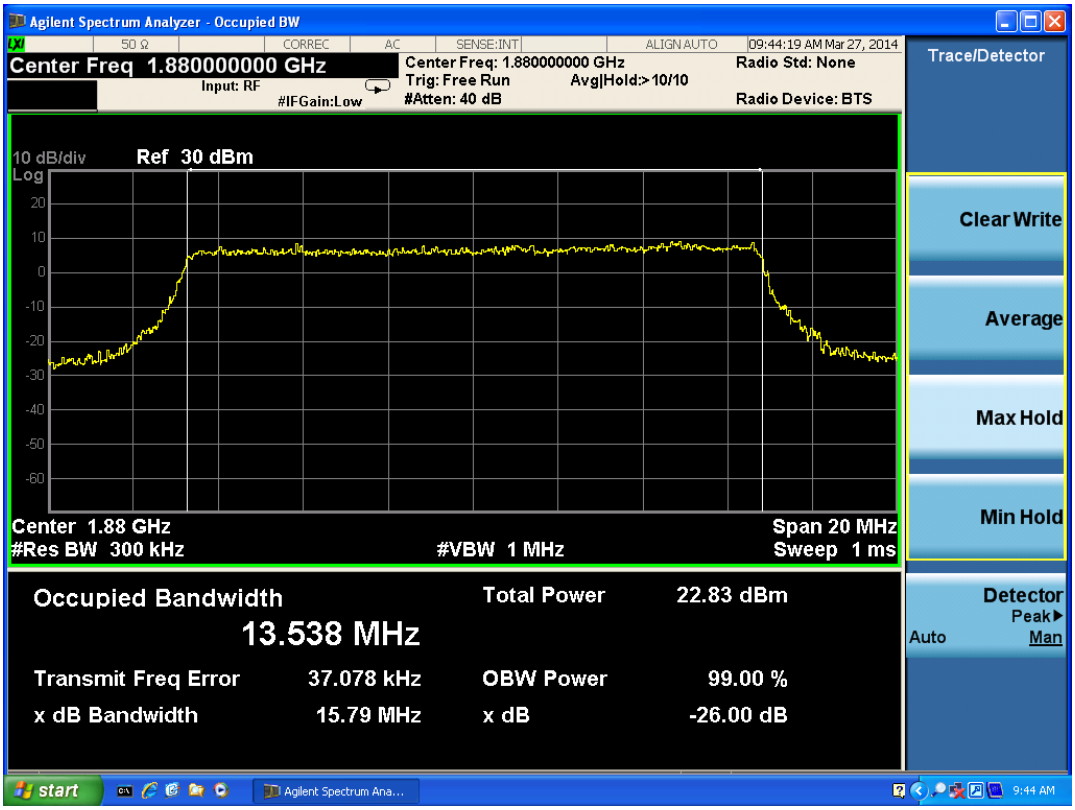
LTE Band 2 16QAM Bandwidth = 10MHz CH18900 Occupied Bandwidth



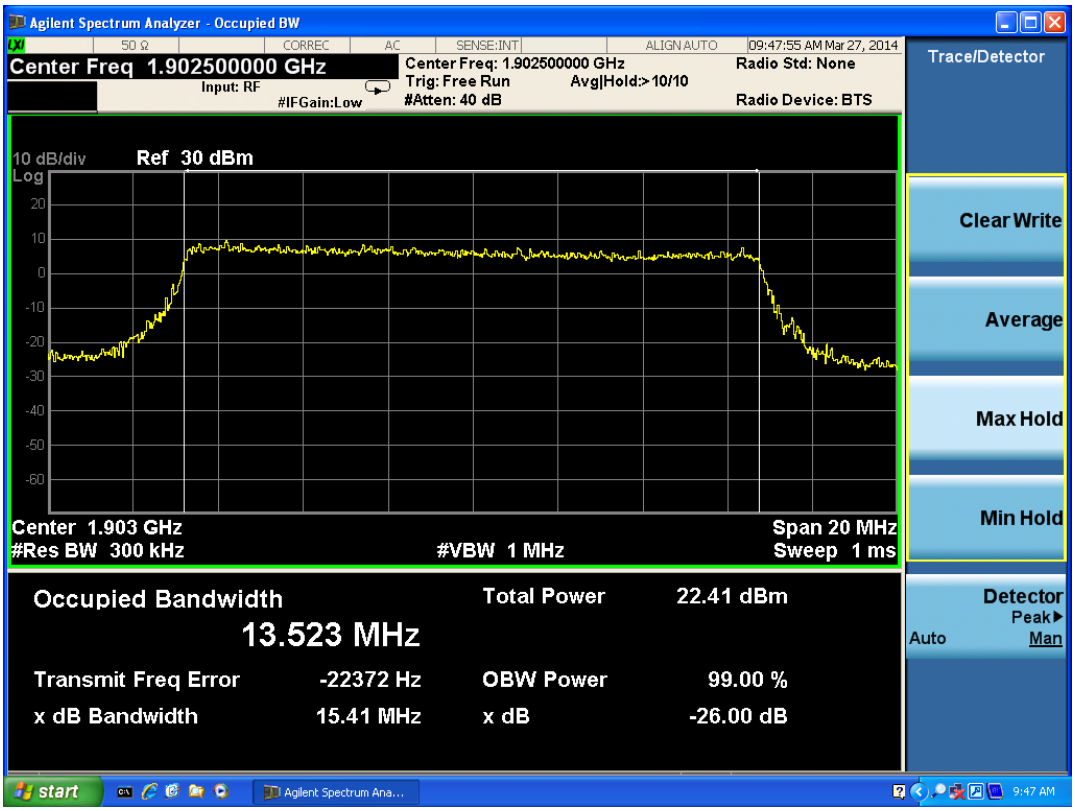
LTE Band 2 16QAM Bandwidth = 10MHz CH19150 Occupied Bandwidth



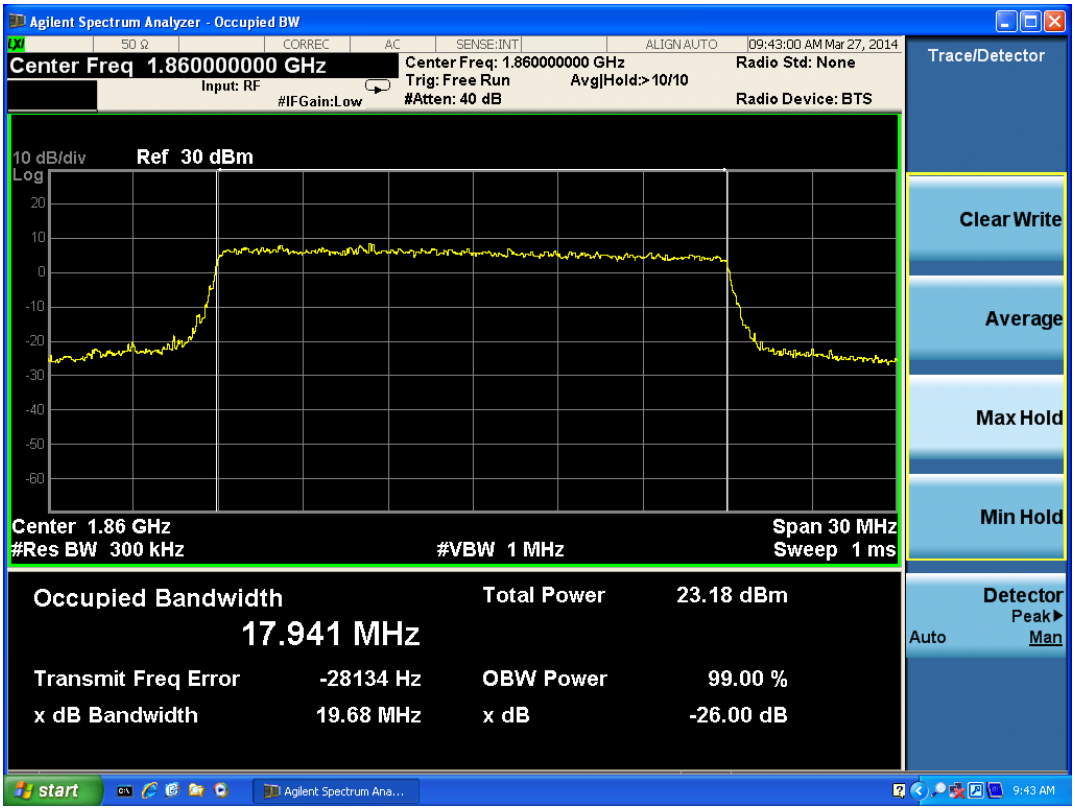
LTE Band 2 16QAM Bandwidth = 15MHz CH18675 Occupied Bandwidth



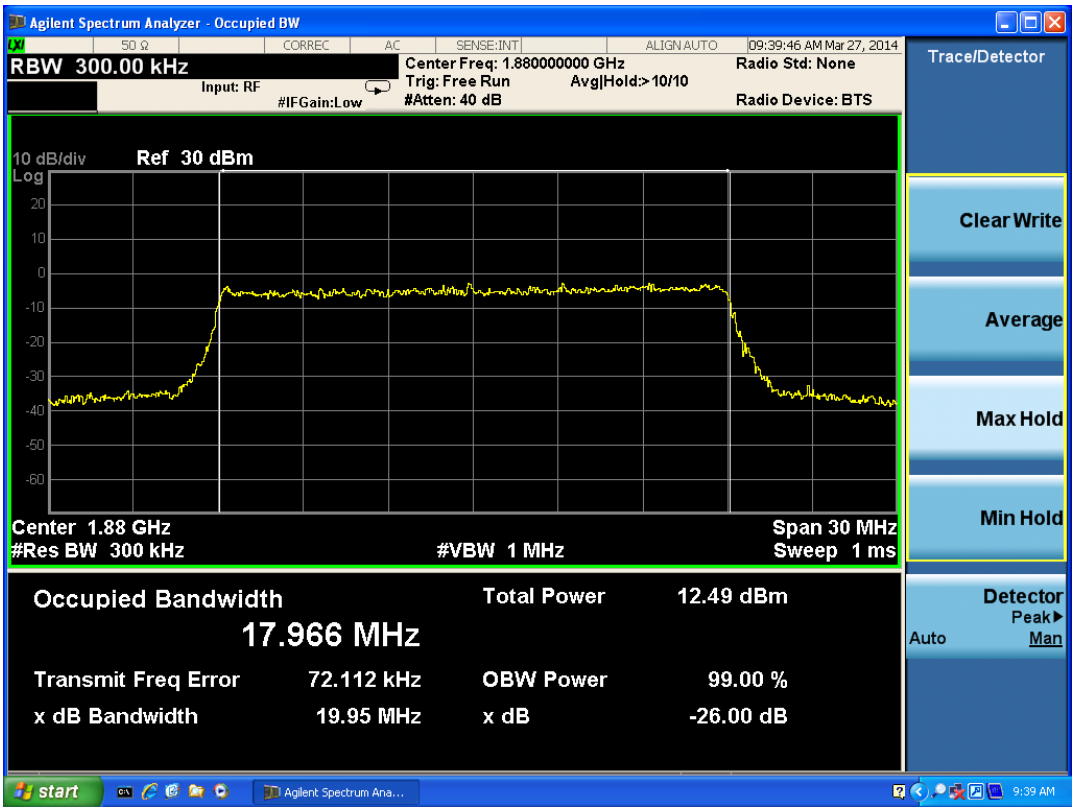
LTE Band 2 16QAM Bandwidth = 15MHz CH18900 Occupied Bandwidth



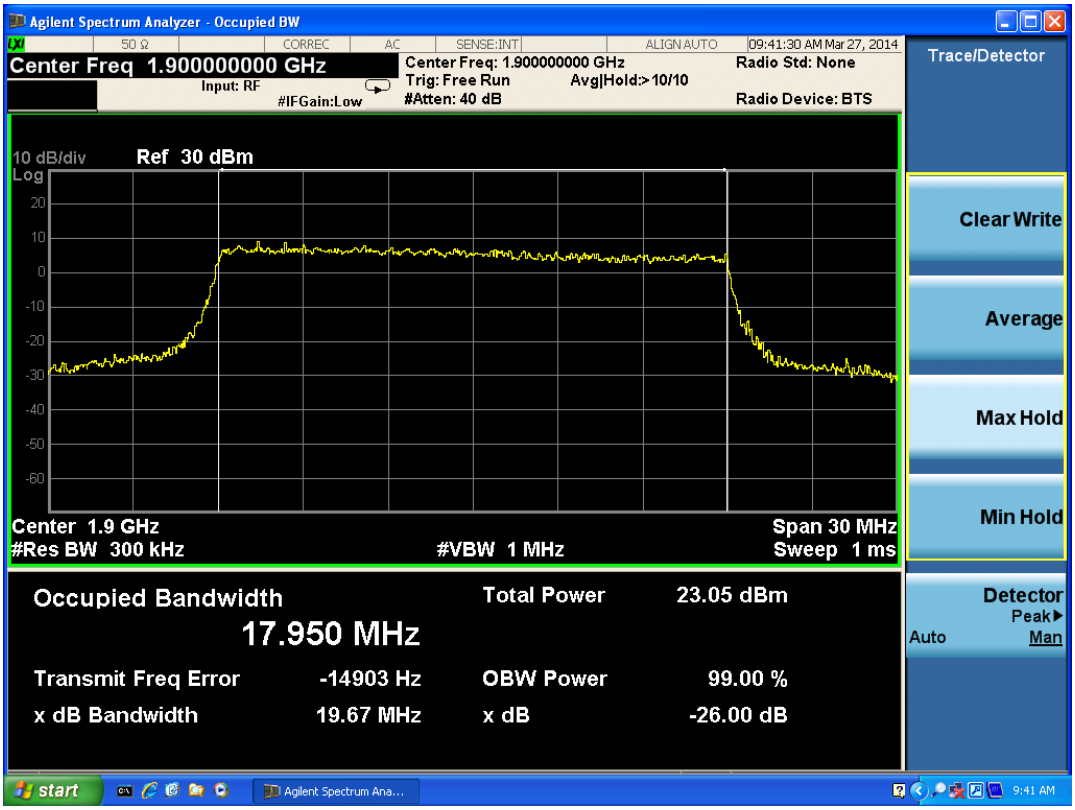
LTE Band 2 16QAM Bandwidth = 15MHz CH19125 Occupied Bandwidth



LTE Band 2 16QAM Bandwidth = 20MHz CH18700 Occupied Bandwidth



LTE Band 2 16QAM Bandwidth = 20MHz CH18900 Occupied Bandwidth



LTE Band 2 16QAM Bandwidth = 20MHz CH19100 Occupied Bandwidth

2.5. Band Edge Compliance

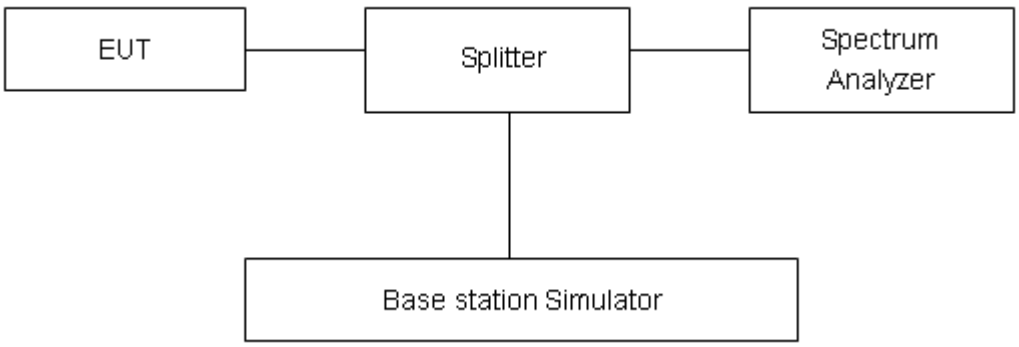
Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The RBW is set larger than 1% of 26dB bandwidth. The Average detector is used. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB.”

Limit	-13 dBm

Measurement Uncertainty

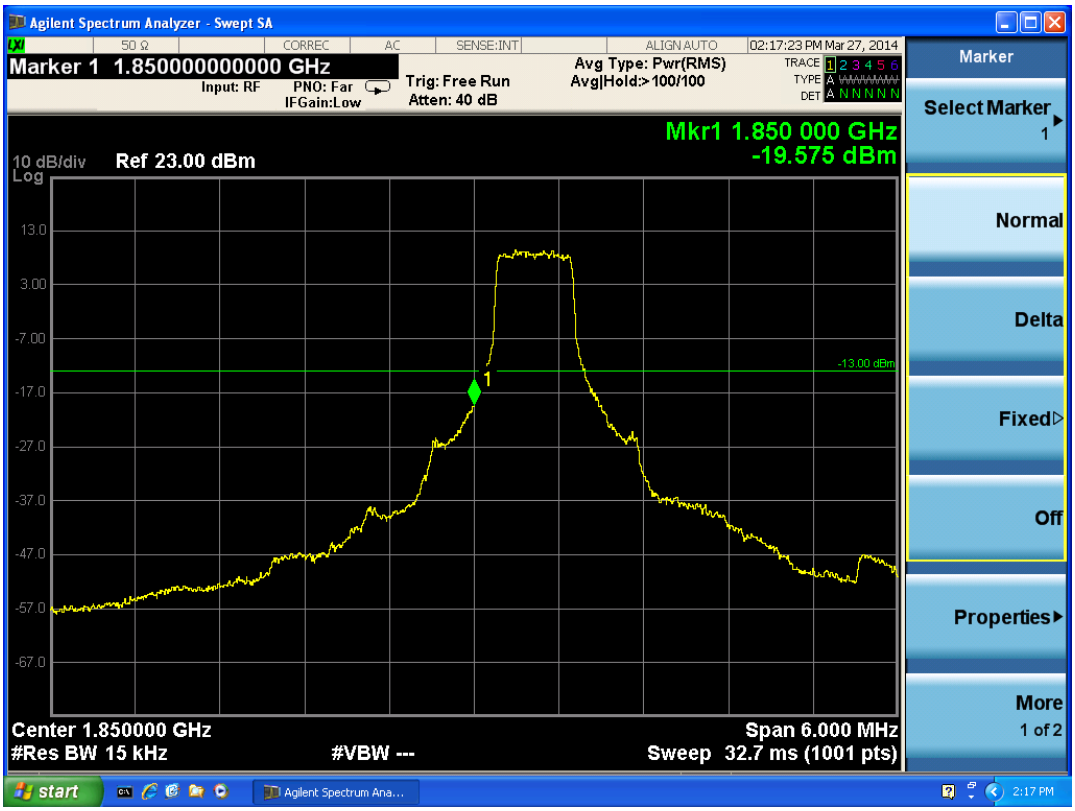
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U=0.684dB.

Test Result:

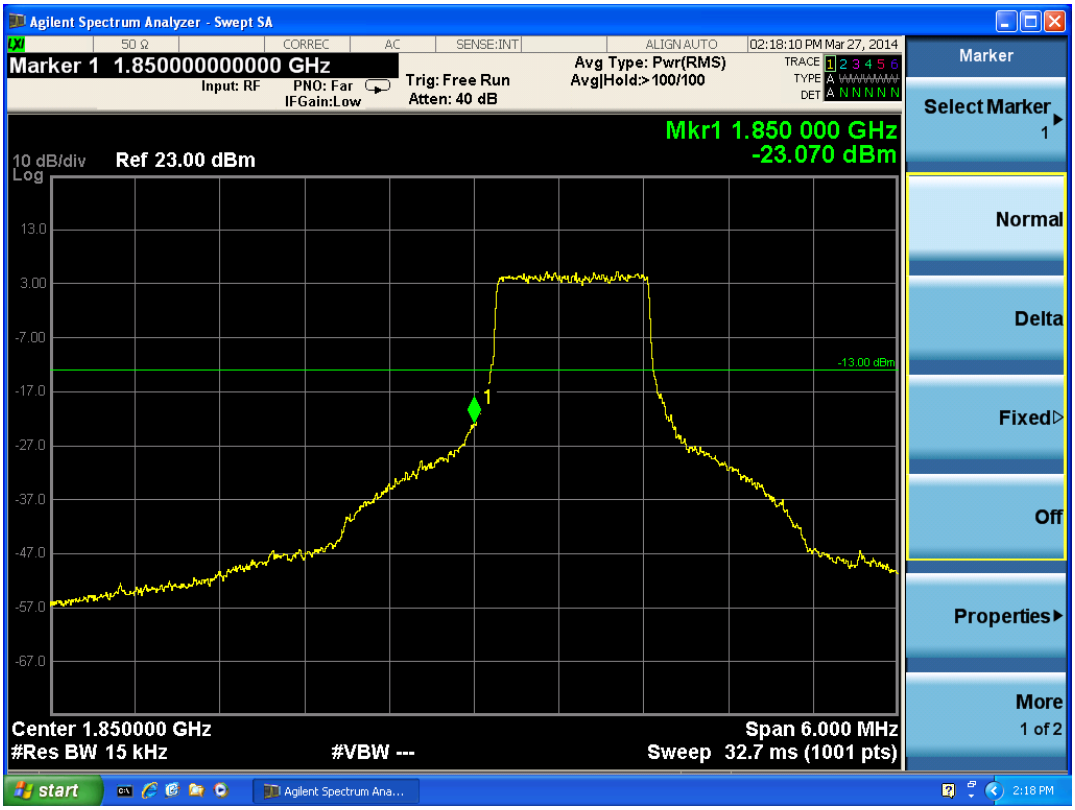
LTE Band 2							
Bandwidth	**Modulation**	**Channel**	**RB**	**RB Start**	**Reference value (dBm)**	**Limit**	**Conclusion**
1.4MHz	QPSK	CH18607	1	0	-16.806	-13	PASS
			3	0	-19.575	-13	PASS
			6	0	-23.070	-13	PASS
		CH19193	1	5	-16.579	-13	PASS
			3	3	-19.386	-13	PASS
			6	0	-23.715	-13	PASS
	16QAM	CH18607	1	0	-16.491	-13	PASS
			3	0	-18.596	-13	PASS
			6	0	-23.157	-13	PASS
		CH19193	1	5	-16.418	-13	PASS
			3	3	-19.493	-13	PASS
			6	0	-23.453	-13	PASS
3MHz	QPSK	CH18615	1	0	-13.229	-13	PASS
			8	0	-18.223	-13	PASS
			15	0	-23.168	-13	PASS
		CH19185	1	14	-13.546	-13	PASS
			8	7	-20.315	-13	PASS
			15	0	-23.747	-13	PASS
	16QAM	CH18615	1	0	-16.186	-13	PASS
			8	0	-20.251	-13	PASS
			15	0	-24.490	-13	PASS
		CH19185	1	14	-13.629	-13	PASS
			8	7	-21.167	-13	PASS
			15	0	-23.468	-13	PASS
5MHz	QPSK	CH18625	1	0	-13.466	-13	PASS
			12	0	-22.101	-13	PASS
			25	0	-25.100	-13	PASS
		CH19175	1	24	-14.561	-13	PASS
			12	13	-21.722	-13	PASS
			25	0	-26.120	-13	PASS
	16QAM	CH18625	1	0	-14.369	-13	PASS
			12	0	-22.035	-13	PASS
			25	0	-25.706	-13	PASS
		CH19175	1	24	-15.011	-13	PASS
			12	13	-23.903	-13	PASS
			25	0	-26.270	-13	PASS
10MHz	QPSK	CH18650	1	0	-16.239	-13	PASS
			25	0	-23.320	-13	PASS
			50	0	-25.247	-13	PASS

		CH19150	1	49	-16.123	-13	PASS
			25	25	-25.746	-13	PASS
			50	0	-26.767	-13	PASS
	16QAM	CH18650	1	0	-14.120	-13	PASS
			25	0	-24.613	-13	PASS
			50	0	-26.103	-13	PASS
		CH19150	1	49	-16.150	-13	PASS
			25	25	-25.424	-13	PASS
			50	0	-27.771	-13	PASS
15MHz	QPSK	CH18675	1	0	-14.266	-13	PASS
			36	0	-21.842	-13	PASS
			75	0	-24.021	-13	PASS
		CH19125	1	74	-13.531	-13	PASS
			36	39	-24.634	-13	PASS
			75	0	-28.044	-13	PASS
	16QAM	CH18675	1	0	-16.486	-13	PASS
			36	0	-23.590	-13	PASS
			75	0	-25.588	-13	PASS
		CH19125	1	74	-16.528	-13	PASS
			36	39	-22.948	-13	PASS
			75	0	-27.437	-13	PASS
20MHz	QPSK	CH18700	1	0	-23.419	-13	PASS
			50	0	-22.862	-13	PASS
			100	0	-23.826	-13	PASS
		CH19100	1	99	-17.553	-13	PASS
			50	50	-25.461	-13	PASS
			100	0	-29.543	-13	PASS
	16QAM	CH18700	1	0	-19.919	-13	PASS
			50	0	-24.104	-13	PASS
			100	0	-24.739	-13	PASS
		CH19100	1	99	-16.821	-13	PASS
			50	50	-27.438	-13	PASS
			100	0	-28.026	-13	PASS

LTE Band 2 QPSK Bandwidth = 1.4MHz CH18607,RB 1

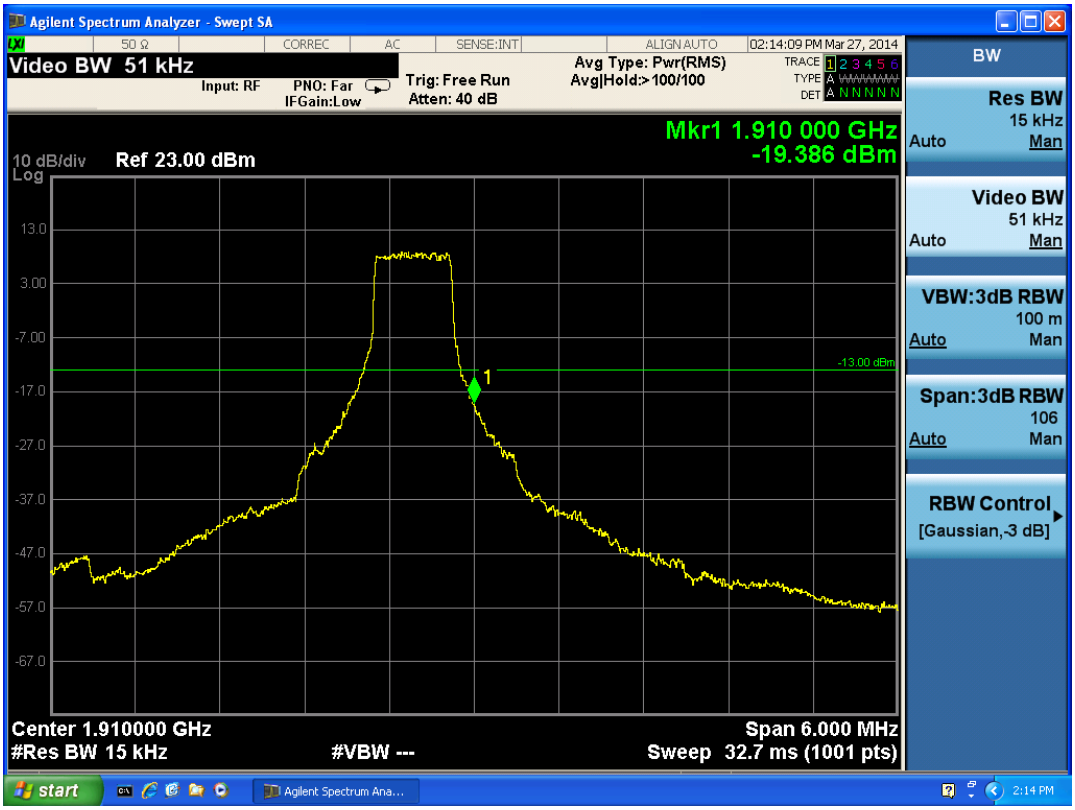


LTE Band 2 QPSK Bandwidth = 1.4MHz CH18607,RB 3



LTE Band 2 QPSK Bandwidth = 1.4MHz CH18607,RB 6

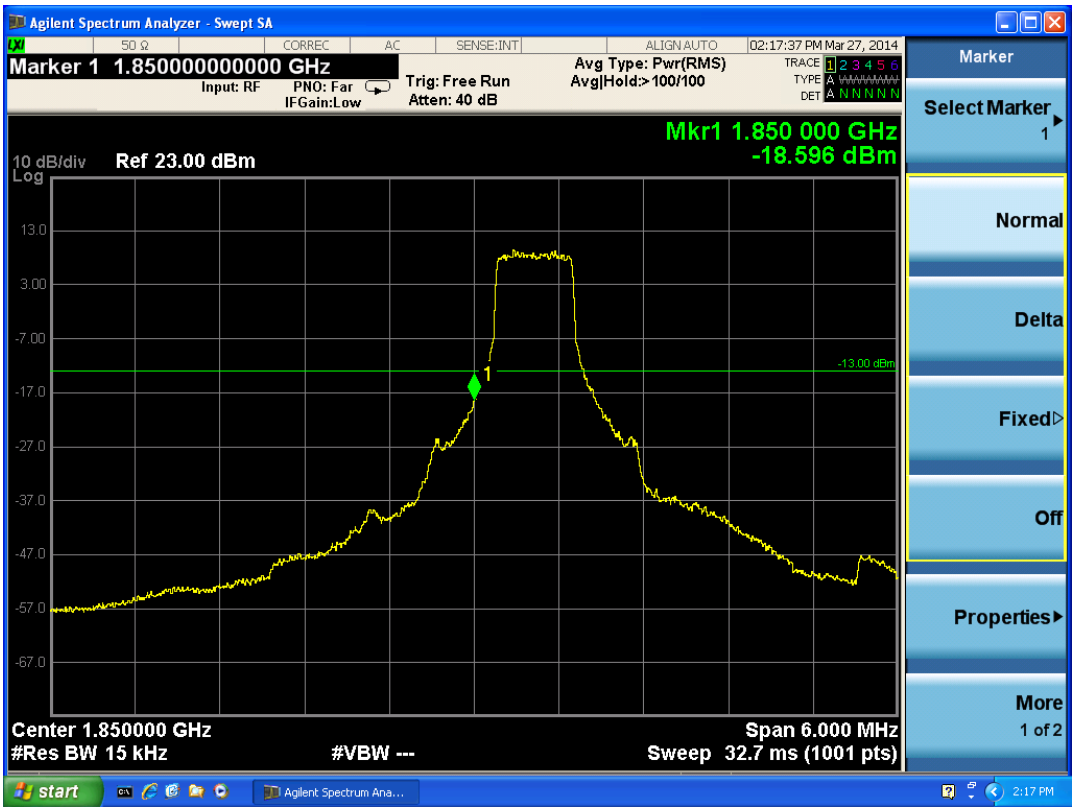
LTE Band 2 QPSK Bandwidth = 1.4MHz CH19193,RB 1



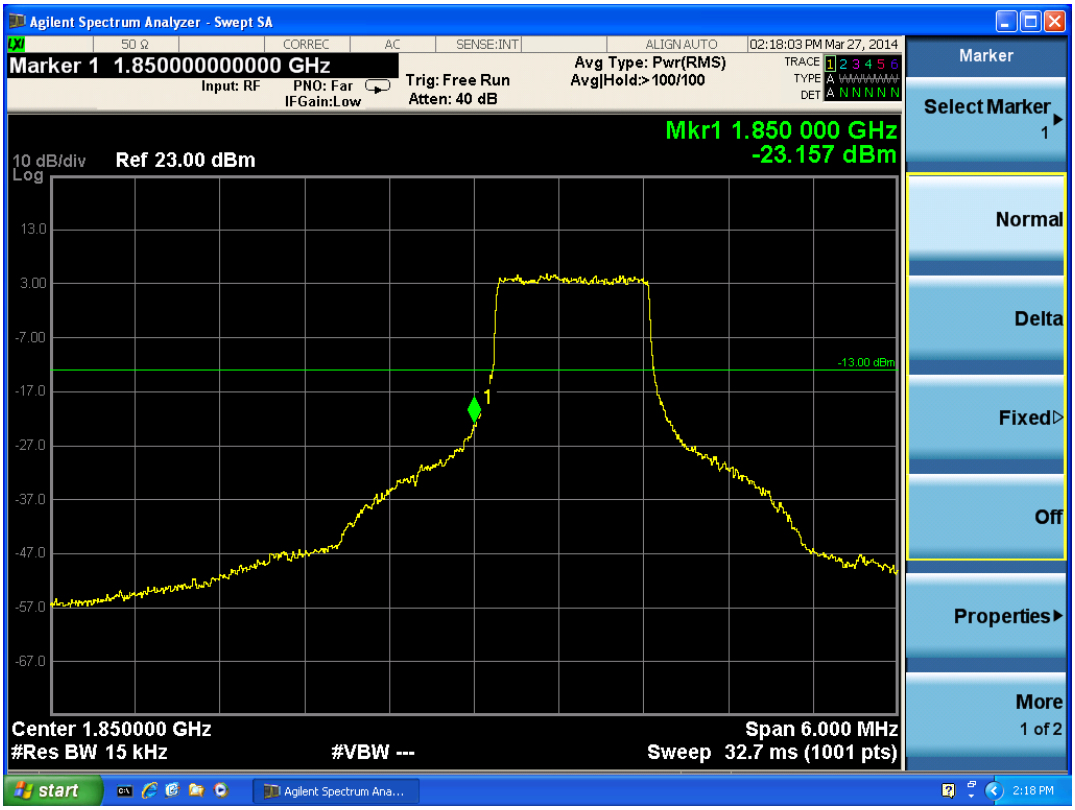
LTE Band 2 QPSK Bandwidth = 1.4MHz CH19193,RB 3

LTE Band 2 QPSK Bandwidth = 1.4MHz CH19193,RB 6

LTE Band 2 16QAM Bandwidth = 1.4MHz CH18607,RB 1

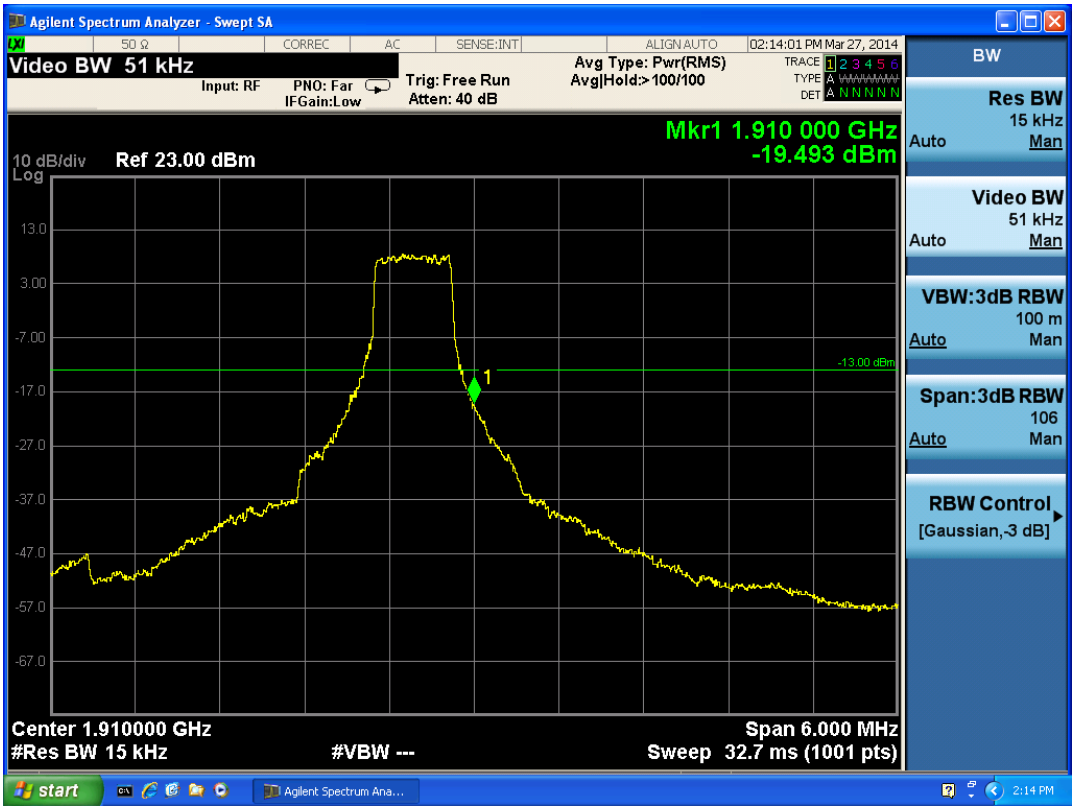


LTE Band 2 16QAM Bandwidth = 1.4MHz CH18607,RB 3



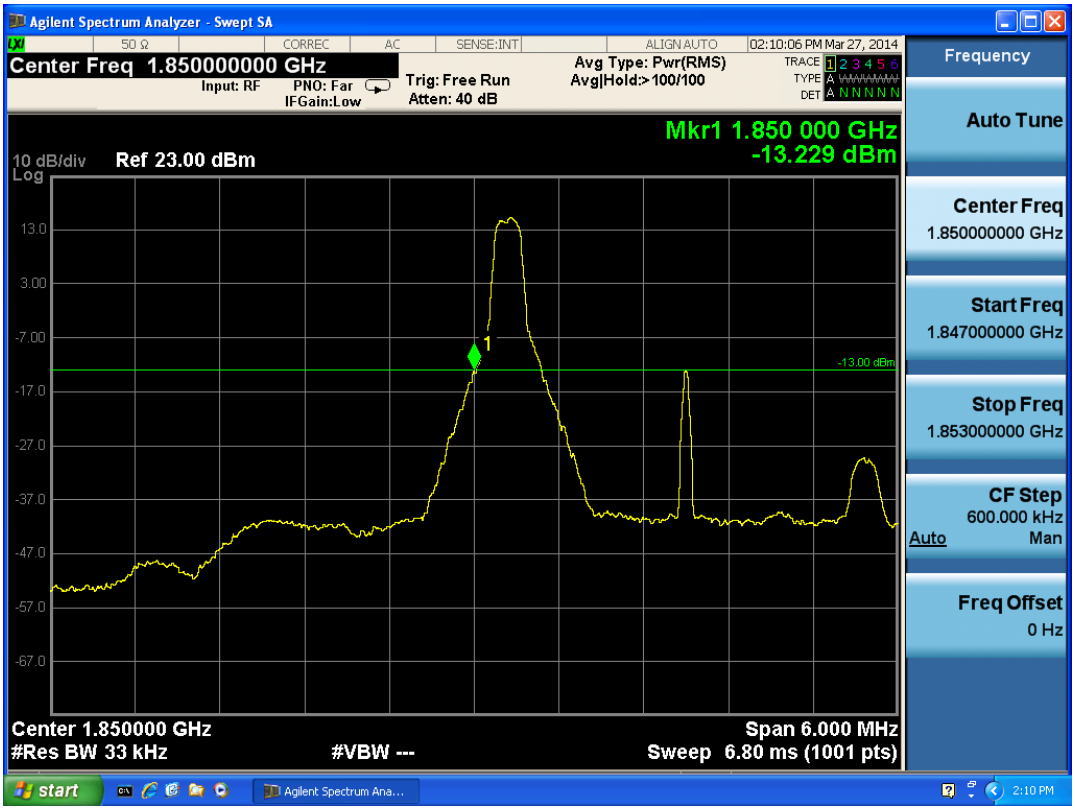
LTE Band 2 16QAM Bandwidth = 1.4MHz CH18607,RB 6

LTE Band 2 16QAM Bandwidth = 1.4MHz CH19193,RB 1



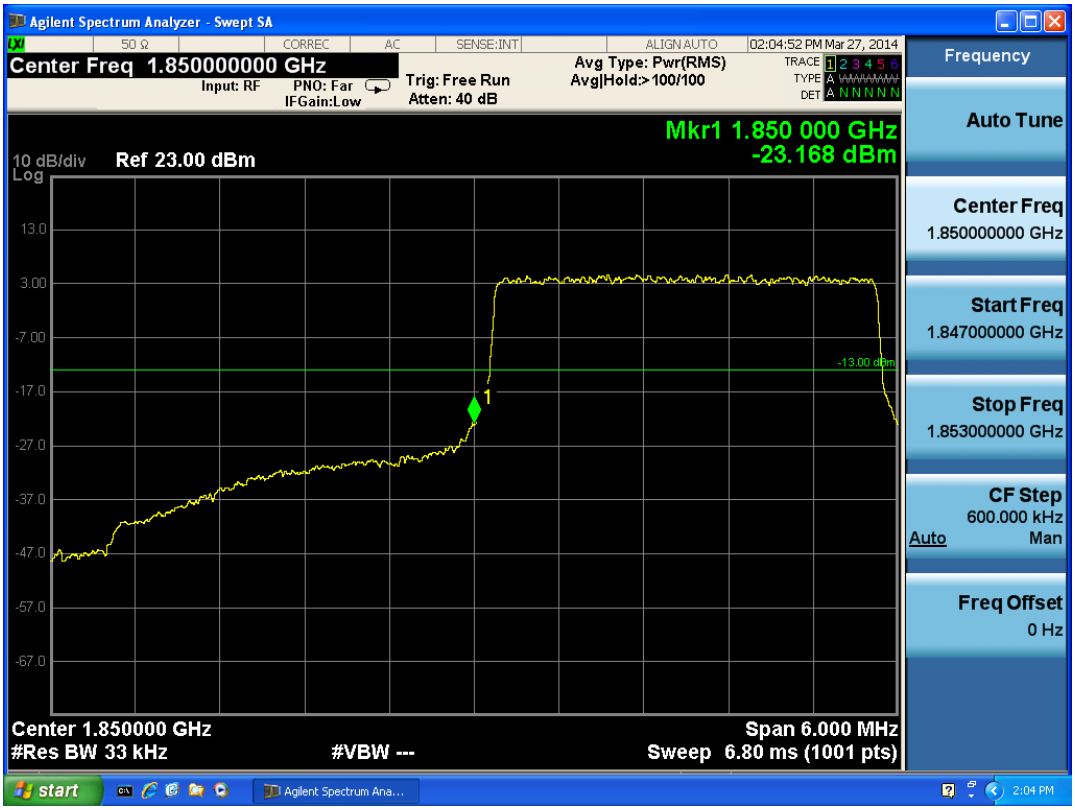
LTE Band 2 16QAM Bandwidth = 1.4MHz CH19193,RB 3

LTE Band 2 16QAM Bandwidth = 1.4MHz CH19193,RB 6

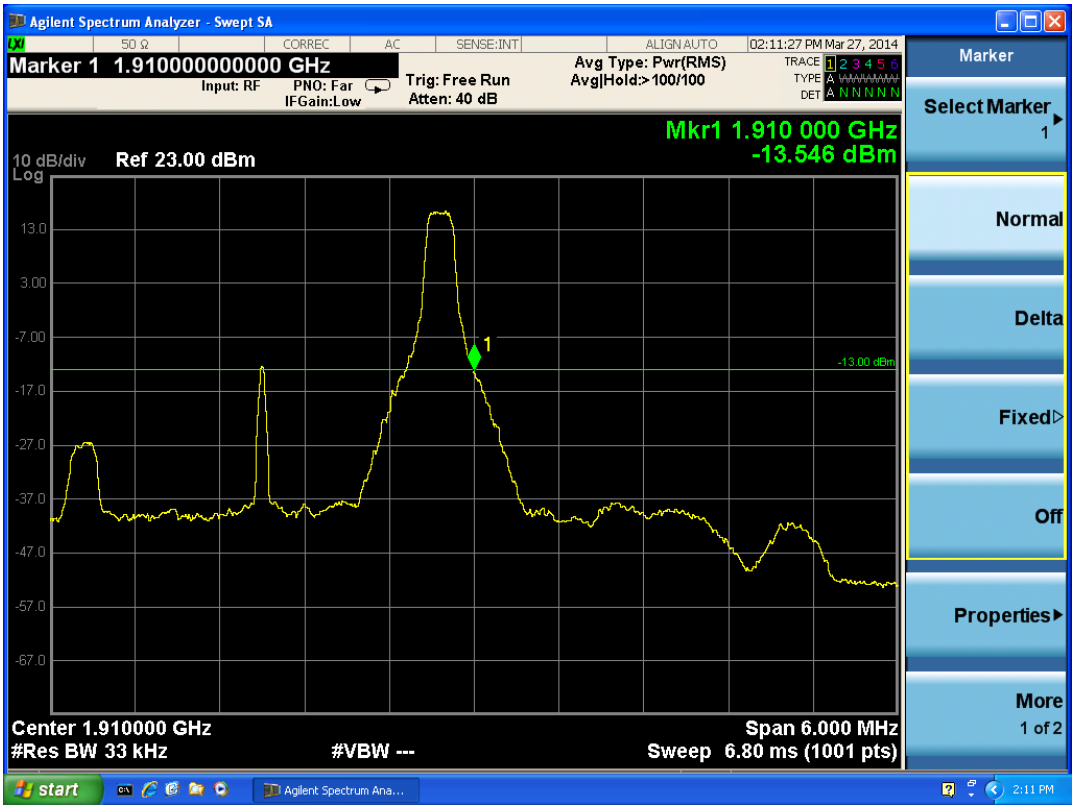


LTE Band 2 QPSK Bandwidth = 3MHz CH18615,RB 1

LTE Band 2 QPSK Bandwidth = 3MHz CH18615,RB 8



LTE Band 2 QPSK Bandwidth = 3MHz CH18615,RB 15



LTE Band 2 QPSK Bandwidth = 3MHz CH19185,RB 1