REPORT No.: SZ14100117W01

FCC TEST REPORT

APPLICANT	:	ZTE Corporation
PRODUCT NAME	:	WCDMA Digital Mobile Phone Handset
MODEL NAME	:	ZTE Blade C330
TRADE NAME	:	ZTE
BRAND NAME	:	ZTE
FCC ID	:	SRQ-C330
STANDARD(S)	:	47 CFR Part 22 Subpart H 47 CFR Part 24 Subpart E
ISSUE DATE	:	2014-11-11

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

NOTE: This document is issued by MORLAB, the test report shall not be reproduced except in full without prior written permission of the company. The test results apply only to the particular sample(s) tested and to the specific tests carried out which is available on request for validation and information confirmed at our website.

MORLAB GROUP FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen, GuangDong Province, P. R. China Tel: 86-755-36698555 Http://www.morlab.com Fax: 86-755-36698525 E-mail: service@morlab.cn

TABLE OF CONTENTS

1. GENERAL INFORMATION 4

1.1 EUT DESCRIPTION 4
1.2 TEST STANDARDS AND RESULTS 6
1.3 FACILITIES AND ACCREDITATIONS 7

2. 47 CFR PART 2, PART 22H & 24E REQUIREMENTS 8

2.1 CONDUCTED RF OUTPUT POWER 8
2.2 PEAK TO AVERAGE RADIO 20
2.3 99% OCCUPIED BANDWIDTH 26
2.4 FREQUENCY STABILITY 49
2.5 CONDUCTED OUT OF BAND EMISSIONS 56
2.6 BAND EDGE 94
2.7 TRANSMITTER RADIATED POWER (EIRP/ERP) 107
2.8 RADIATED OUT OF BAND EMISSIONS 118

Change History		
Issue	Date	Reason for change
1.0	Nov 11, 2014	First edition

Test Report Declaration

Applicant	ZTE Corporation
Applicant Address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,Nanshan District,Shenzhen,Guangdong,P.R.China
Manufacturer	ZTE Corporation
Manufacturer Address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,Nanshan District,Shenzhen,Guangdong,P.R.China
Product Name	WCDMA Digital Mobile Phone Handset
Model Name	ZTE Blade C330
Brand Name	ZTE
HW Version	C330_V1BMB
SW Version	C330_MXCommon_1.00
Test Standards	47 CFR Part 22 Subpart H 47 CFR Part 24 Subpart E
Test Date	2014-10-28 to 2014-11-11
Test Result	PASS

Tested by : Liu Zhisen

Reviewed by : Peng Huarui

Approved by : Zeng Dexin

1. GENERAL INFORMATION

1.1 EUT Description

Frequency Range ..... :	GSM 850MHz: Tx: 824.20 - 848.80MHz (at intervals of 200kHz); Rx: 869.20 - 893.80MHz (at intervals of 200kHz) GSM 1900MHz: Tx: 1850.20 - 1909.80MHz (at intervals of 200kHz); Rx: 1930.20 - 1989.80MHz (at intervals of 200kHz) WCDMA 850MHz Tx: 826.4 - 846.6MHz (at intervals of 200kHz); Rx: 871.4 - 891.6MHz (at intervals of 200kHz) WCDMA 1900MHz Tx: 1852.4 - 1907.6MHz (at intervals of 200kHz); Rx: 1932.4 - 1987.6MHz (at intervals of 200kHz)
Modulation Type..... :	GSM,GPRS Mode with GMSK Modulation EDGE Mode with 8PSK Modulation WCDMA Mode with QPSK Modulation HSDPA Mode with QPSK Modulation HSUPA Mode with QPSK Modulation HSPA+ Mode with QPSK Modulation
Multislot Class..... :	GPRS: Multislot Class 12,EGPRS: Multislot Class 12
Antenna Type..... :	PIFA Antenna
Emission Designators ..... :	GSM 850:253KGXW,GSM 1900:250KGXW EGPRS850:250KG7W, EGPRS1900:249KG7W, WCDMA 850:4M18F9W ,WCDMA1900:4M17F9W

Note 1: The transmitter (Tx) frequency arrangement of the Cellular 850MHz band used by the EUT can be represented with the formula F(n)=824.2+0.2*(n-128), 128<=n<=251; the lowest, middle, highest channel numbers (ARFCHs) used and tested in this report are separately 128 (824.2MHz), 190 (836.6MHz) and 251 (848.8MHz).

Note 2: The transmitter (Tx) frequency arrangement of the PCS 1900MHz band used by the EUT can be represented with the formula F(n)=1850.2+0.2*(n-512), 512<=n<=810; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 512 (1850.2MHz), 661 (1880.0MHz) and 810 (1909.8MHz).

Note 3: The transmitter (Tx) frequency arrangement of the WCDMA 850MHz band used by the EUT can be represented with the formula F(n)=826.4+0.2*(n-4132), 4132<=n<=4233; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 4132 (826.4MHz), 4175(835MHz) and 4233 (846.6MHz).

Note 4: The transmitter (Tx) frequency arrangement of the WCDMA 1900MHz band used by the EUT can

be represented with the formula F(n)=1852.4+0.2*(n-9262), 9262<=n<=9538; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 9262 (1852.4MHz), 9400 (1880MHz) and 9538 (1907.6MHz).

Note 5: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.2 Test Standards and Results

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

No.	Identity	Document Title
1	47 CFR Part 2 (10-1-13 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10-1-13 Edition)	Public Mobile Services
3	47 CFR Part 24 (10-1-13 Edition)	Personal Communications Services

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

No.	Section	Description	Result
1	2.1046	Conducted RF Output Power	PASS
2.	24.232(d)	Peak to average radio	PASS
2	2.1049,22.917 24.238	99% Occupied Bandwidth	PASS
3	2.1055,22.355 24.235	Frequency Stability	PASS
4	2.1051,2.1057 22.917,24.238,	Conducted Out of Band Emissions	PASS
5	2.1051,2.1057 22.917,24.238	Band Edge	PASS
6	22.913,24.232	Transmitter Radiated Power (EIPR/ERP)	PASS
7	2.1053,2.1057 22.917,24.238	Radiated Out of Band Emissions	PASS

NOTE: Measurement method according to TIA/EIA 603.D-2010

1.3 Facilities and Accreditations

1.3.1 Facilities

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, No.8 LongChang Road,Block 67, BaoAn District, ShenZhen, GuangDong Province,P. R. China 518101. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 695796.

1.3.2 Test Environment Conditions

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

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

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

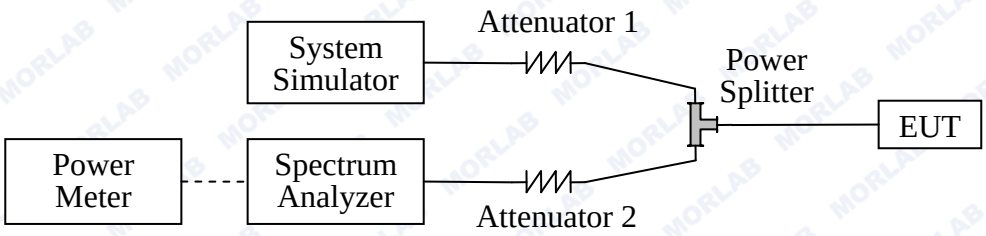
2.1 Conducted RF Output Power

2.1.1 Requirement

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

2.1.2 Test Description

1. Test Setup:



The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

The Power Meter was just used for the Conducted RF Output Power test of WCDMA Model.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2014.02.26	2015.02.25
Spectrum Analyzer	Agilent	E7405A	US44210471	2014.02.26	2015.02.25
Power Meter	Agilent	E4418B	GB43318055	2014.02.26	2015.02.25
Power Sensor	Agilent	8482A	MY41091706	2014.02.26	2015.02.25
Power Splitter	Weinschel	1506A	NW521	2014.02.26	2015.02.25
Attenuator 1	Resnet	20dB	(n.a.)	2014.02.26	2015.02.25
Attenuator 2	Resnet	3dB	(n.a.)	2014.02.26	2015.02.25

2.1.3 Test Results

Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT.

1. GSM Model Test Verdict:

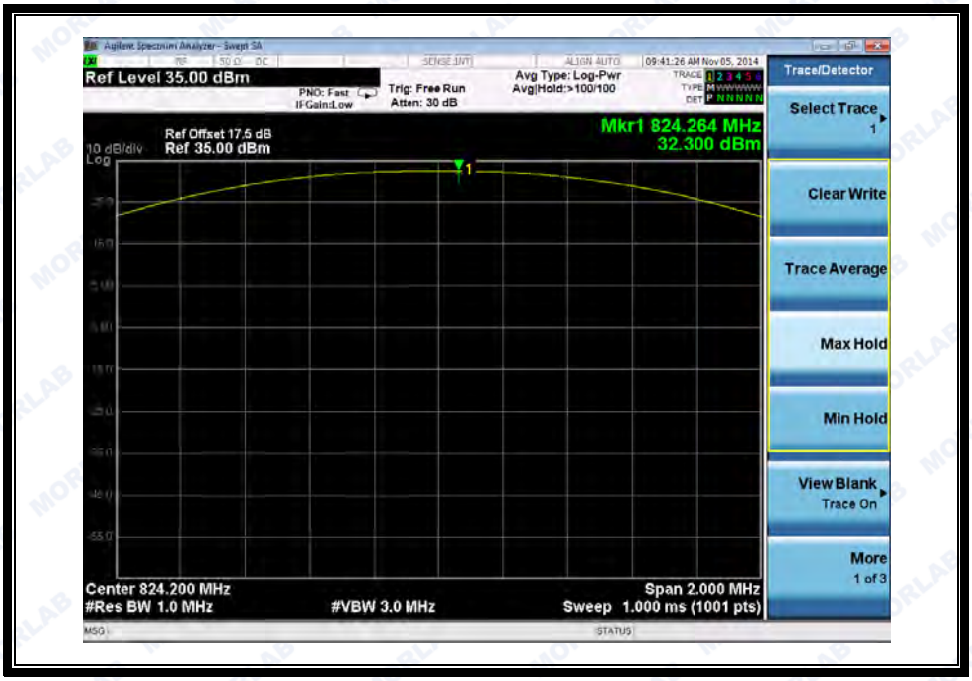
Band	Channel	Frequency (MHz)	Measured Output Power		Limit	Verdict
			dBm	Refer to Plot	dBm	
GSM 850MHz	128	824.2	32.30	Plot A1 to A3	35	PASS
	190	836.6	32.48			PASS
	251	848.8	32.46			PASS
GSM 1900MHz	512	1850.2	28.83	Plot B1 to B3	32	PASS
	661	1880.0	29.40			PASS
	810	1909.8	29.45			PASS
GPRS 850MHz	128	824.2	29.91	Plot C1 to C3 Note 1	35	PASS
	190	836.6	30.04			PASS
	251	848.8	29.97			PASS
GPRS 1900MHz	512	1850.2	26.46	Plot D1 to D3 Note 1	32	PASS
	661	1880.0	26.23			PASS
	810	1909.8	26.45			PASS
EGPRS 850MHz	128	824.2	31.67	Plot E1 to E3 Note 1	35	PASS
	190	836.6	31.77			PASS
	251	848.8	31.67			PASS
EGPRS 1900MHz	512	1850.2	28.36	Plot F1 to F3 Note 1	32	PASS
	661	1880.0	28.18			PASS
	810	1909.8	28.39			PASS

Note 1: For the GPRS and EGPRS model, all the slots were tested and just the worst data was record in this report.

2. WCDMA Model Test Verdict:

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	24.40	24.25	24.29	23.27	23.80	23.38
HSDPA	1	23.61	23.36	23.42	23.18	22.90	22.85
	2	23.59	23.35	23.41	23.17	22.88	22.84
	3	23.09	22.85	22.91	22.67	22.37	22.33
	4	23.08	22.34	22.90	22.68	22.36	22.35
HSUPA	1	23.63	23.29	23.43	22.87	22.93	22.81
	2	21.62	21.28	21.40	20.88	20.93	20.80
	3	22.61	22.29	22.42	21.86	21.92	21.81
	4	21.60	21.28	21.41	20.87	20.93	20.80
	5	23.62	23.28	23.42	22.86	22.82	21.80
HSPA+	1	23.61	23.31	23.51	22.84	22.47	21.82
Note:	The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA /HSPA+ was tested by power meter.						

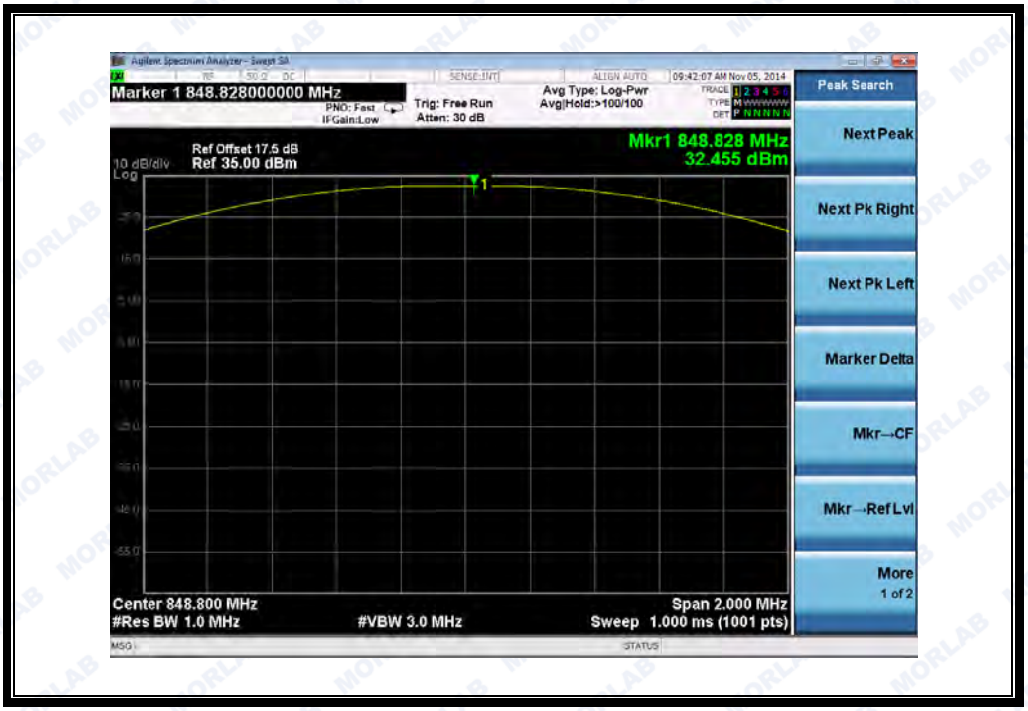
3. GSM Model Test Plots:



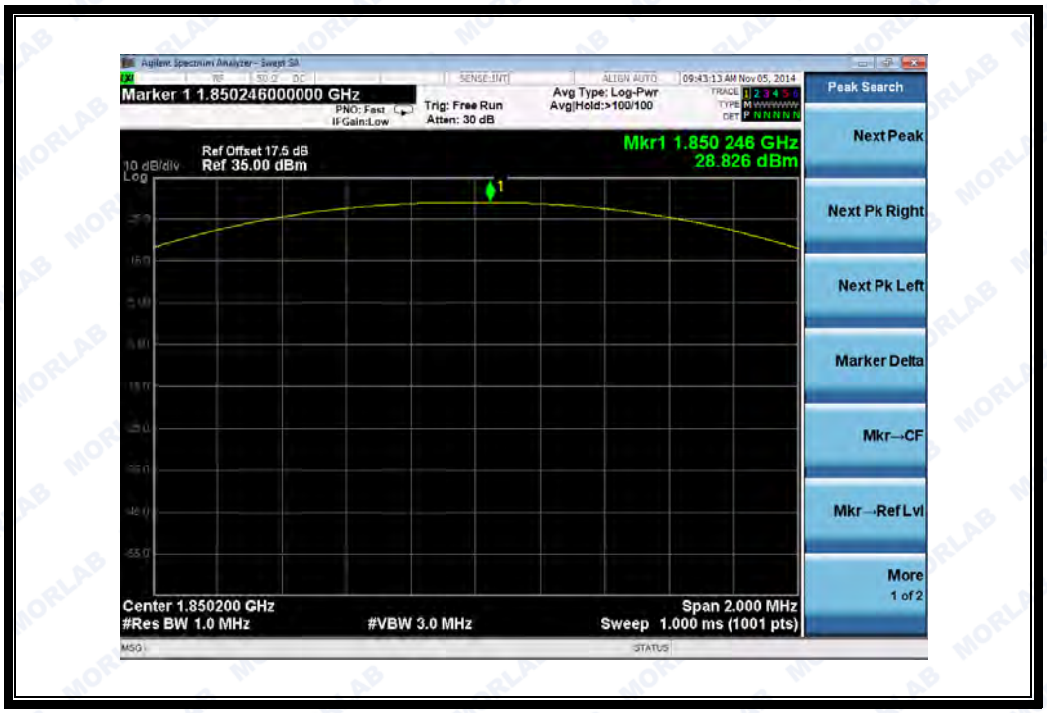
(Plot A1:GSM 850MHz Channel = 128)

8

(Plot A2:GSM 850MHz Channel = 190)



(Plot A3:GSM 850MHz Channel = 251)



(Plot B1: GSM 1900MHz Channel = 512)

(Plot B2: GSM 1900MHz Channel = 661)

(Plot B3: GSM 1900Hz Channel = 810)

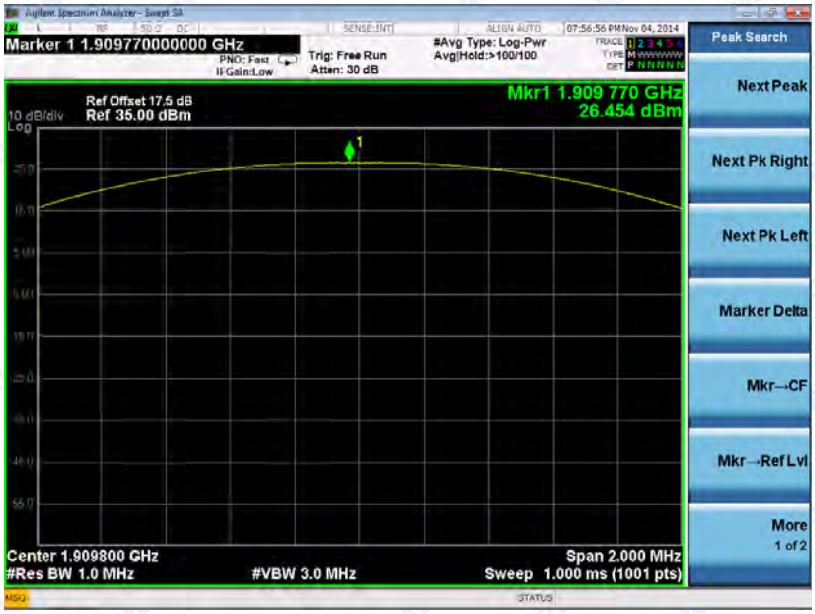
(Plot C 1: GPRS 850MHz Channel = 128)

(Plot C 2: GPRS 850MHz Channel = 190)

(Plot C 3: GPRS 850MHz Channel = 251)

(Plot D 1: GPRS 1900MHz Channel = 512)

(Plot D 2: GPRS 1900MHz Channel = 661)



(Plot D 3: GPRS 1900MHz Channel = 810)

(Plot E1: EGPRS 850MHz Channel = 128)

(Plot E2: EGPRS 850MHz Channel = 190)

(Plot E3: EGPRS 850MHz Channel = 251)

(Plot F1:EGPRS 1900MHz Channel = 512)

(Plot F2:EGPRS 1900MHz Channel = 661)

(Plot F3:EGPRS 1900Hz Channel = 810)

2.2 Peak to Average Radio

2.2.1 Definition

According to FCC section 2.1049 and FCC 24.232(d) the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

2.2.2 Test Description

See section 2.1.2 of this report.

2.2.3 Test Verdict

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

Test procedures:

A .For GSM/EGPRS operating mode:

a. Set RBW=1MHz, VBW=1MHz, peak detector in spectrum analyzer.

b. Set EUT in maximum output power, and triggered the bust signal.

c. Measured respectively the peak level and mean level, and the deviation was recorded as Peak to Average radio.

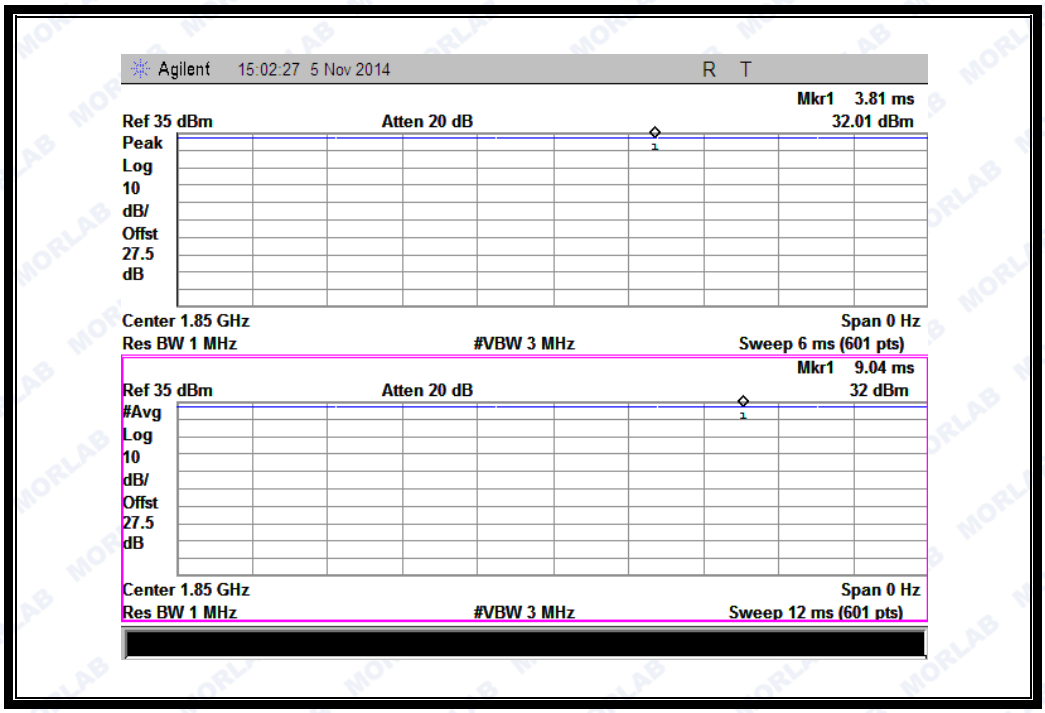
B. For UMTS operating mode:

a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.

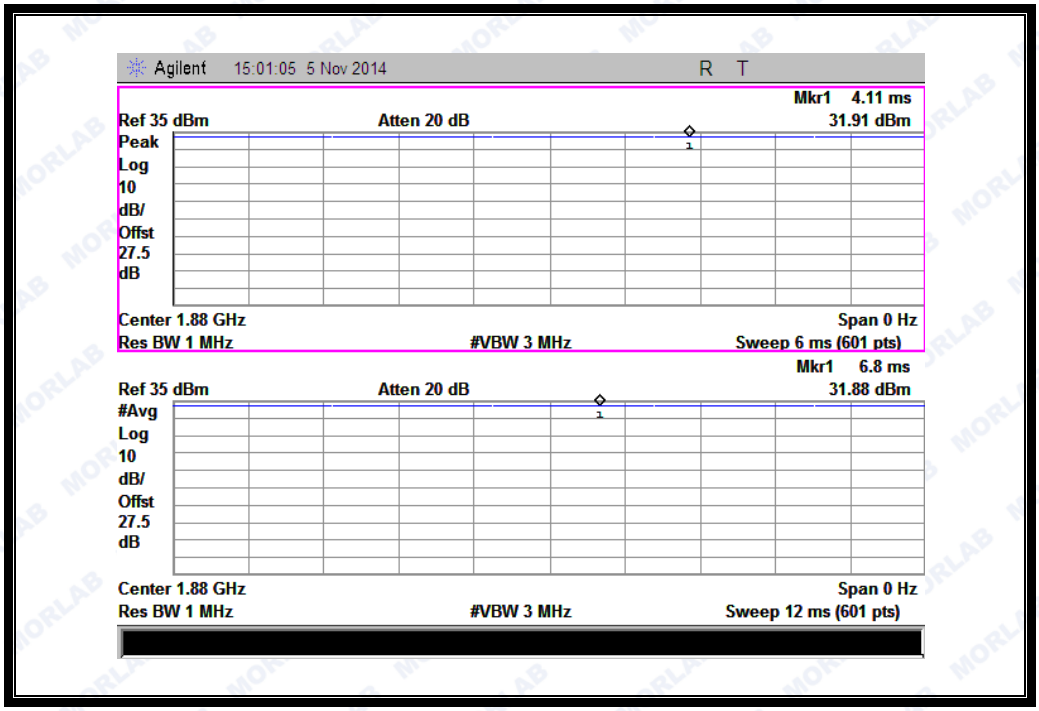
b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%.

1. Test Verdict:

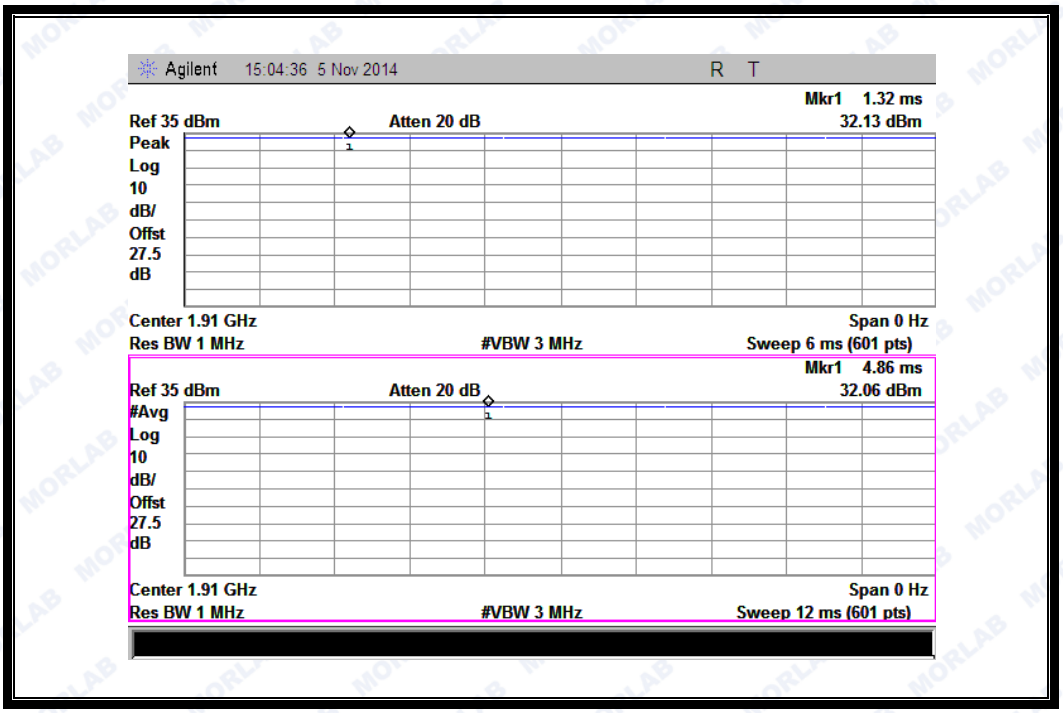
Band	Channel	Frequency (MHz)	Peak to Average radio		Limit	Verdict
			dBm	Refer to Plot	dBm	
GSM 1900MHz	512	1850.2	0.01	Plot A1 to A3	13	PASS
	661	1880.0	0.03			PASS
	810	1909.8	0.07			PASS
EGPRS 1900MHz	512	1850.2	0.03	Plot B1 to B3	13	PASS
	661	1880.0	0.02			PASS
	810	1909.8	0.04			PASS
WCDMA 1900MHz	9262	1852.4	2.93	Plot C1 toC3	13	PASS
	9400	1880	2.94			PASS
	9538	1907.6	2.69			PASS



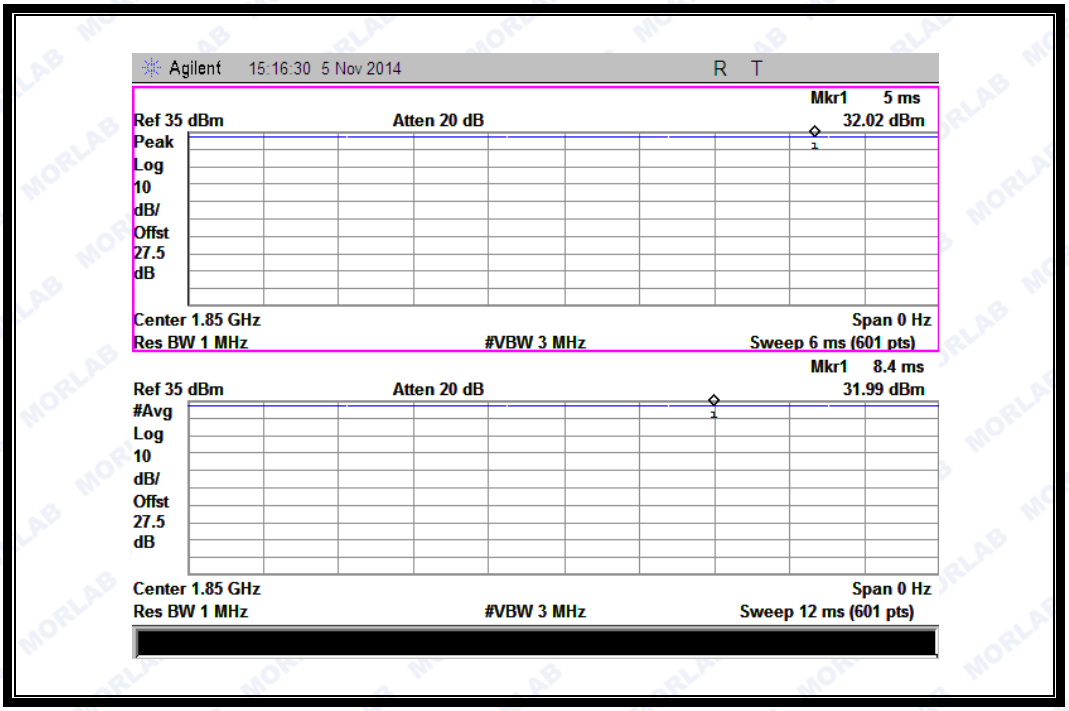
(Plot A1:GSM 1900 MHz Channel = 512)



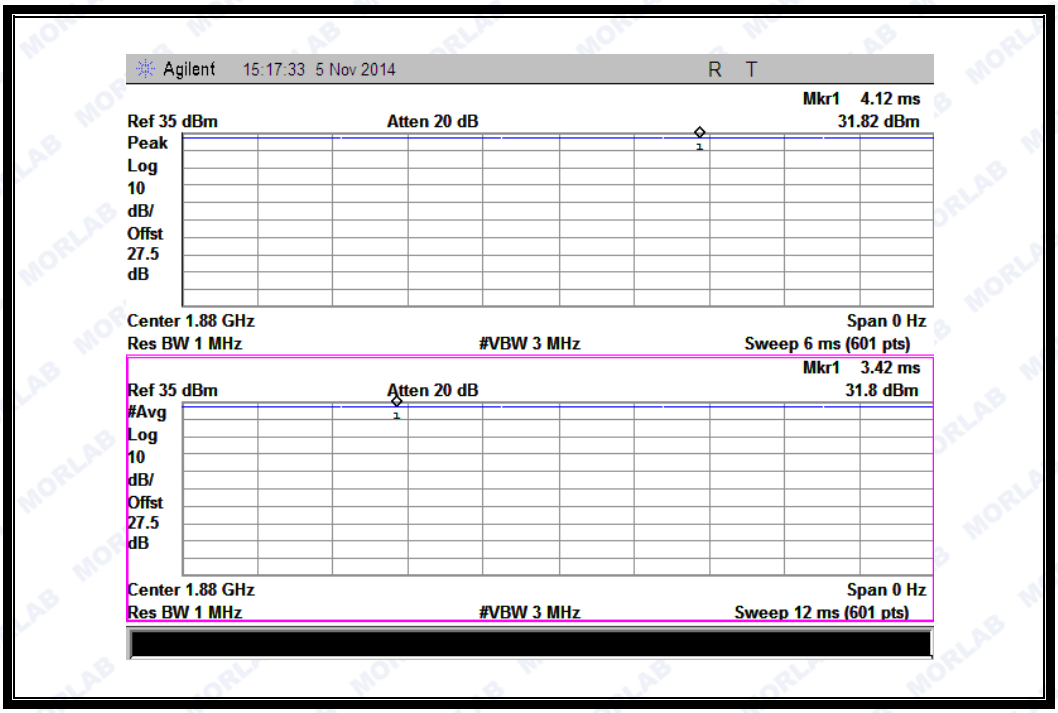
(Plot A2:GSM 1900 MHz Channel = 661)



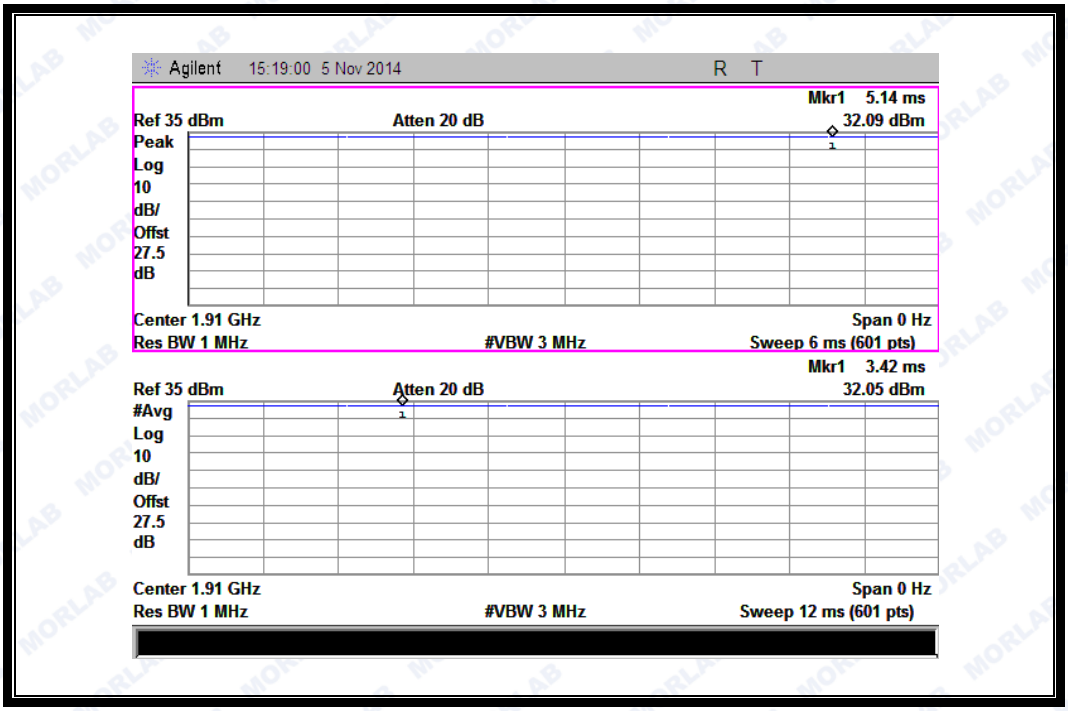
(Plot A3:GSM 1900MHz Channel = 810)



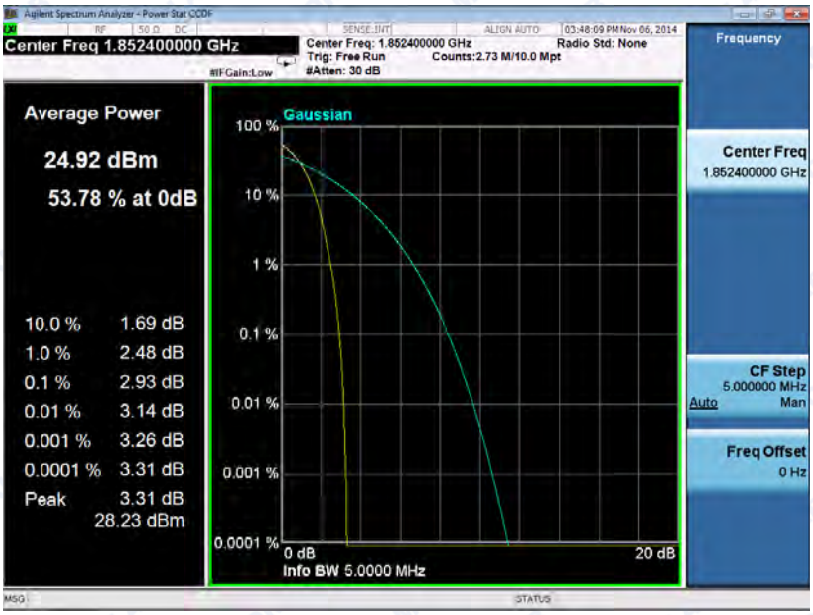
(Plot B1: EGPRS 1900MHz Channel = 512)



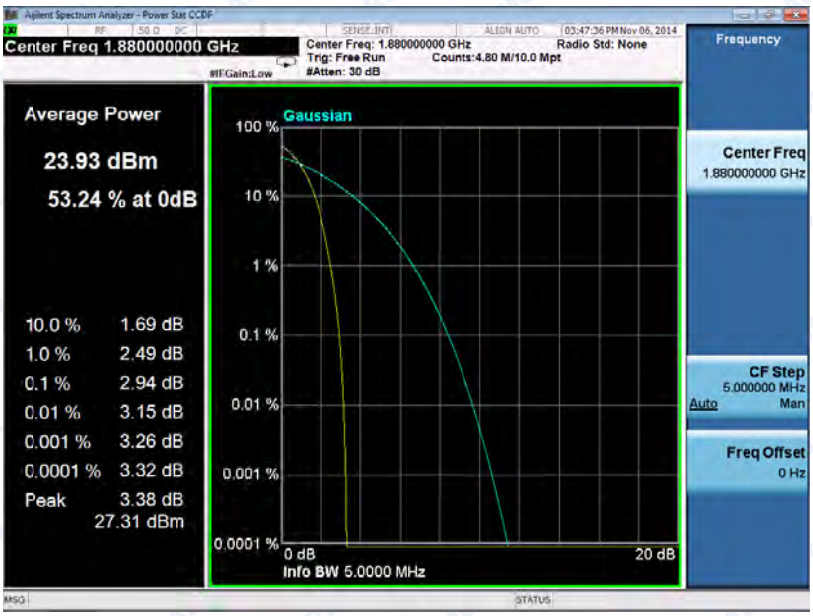
(Plot B2: EGPRS 1900MHz Channel = 661)



(Plot B3: EGPRS 1900MHz Channel = 810)

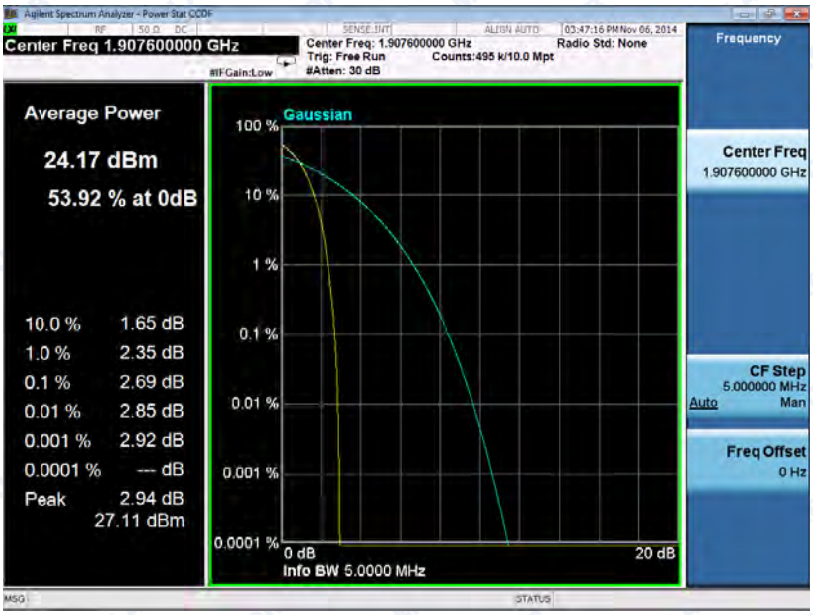


(Plot C1: WCDMA 1900MHz Channel = 9262)



8

(Plot C2: WCDMA 1900MHz Channel = 9400)



(Plot C3: WCDMA 1900MHz Channel = 9538)

2.3 99% Occupied Bandwidth

2.3.1 Definition

According to FCC section 2.1049 and FCC § 22.917 &24.238 the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

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

2.3.2 Test Description

See section 2.1.2 of this report.

2.3.3 Test Verdict

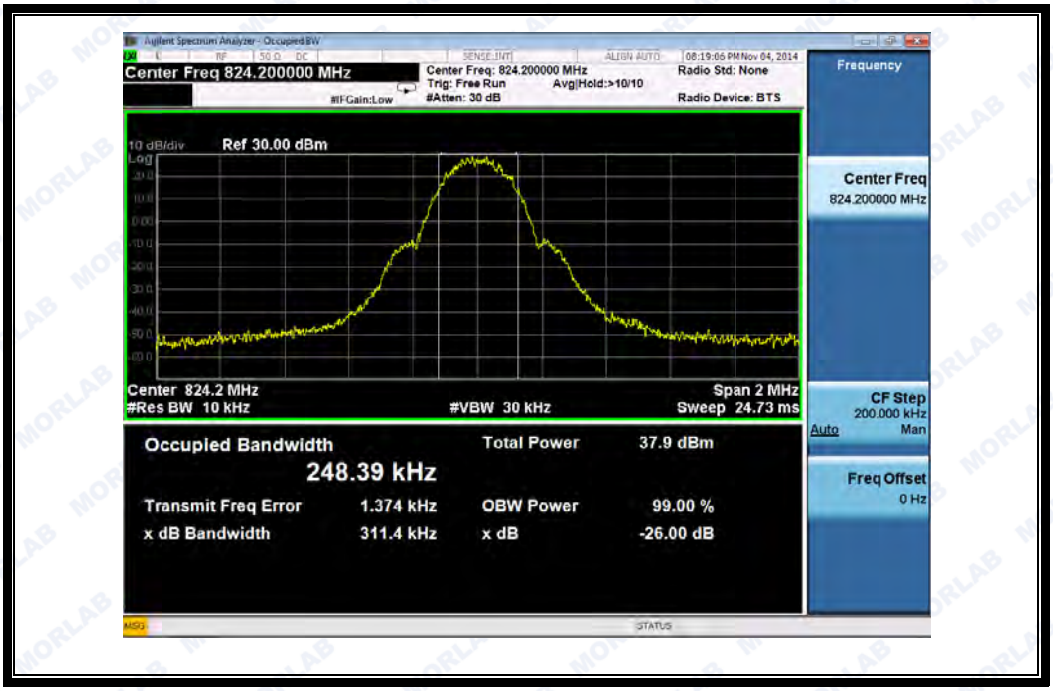
Here the lowest, middle and highest channels are selected to perform testing to verify the 99% occupied bandwidth.

2. Test Verdict:

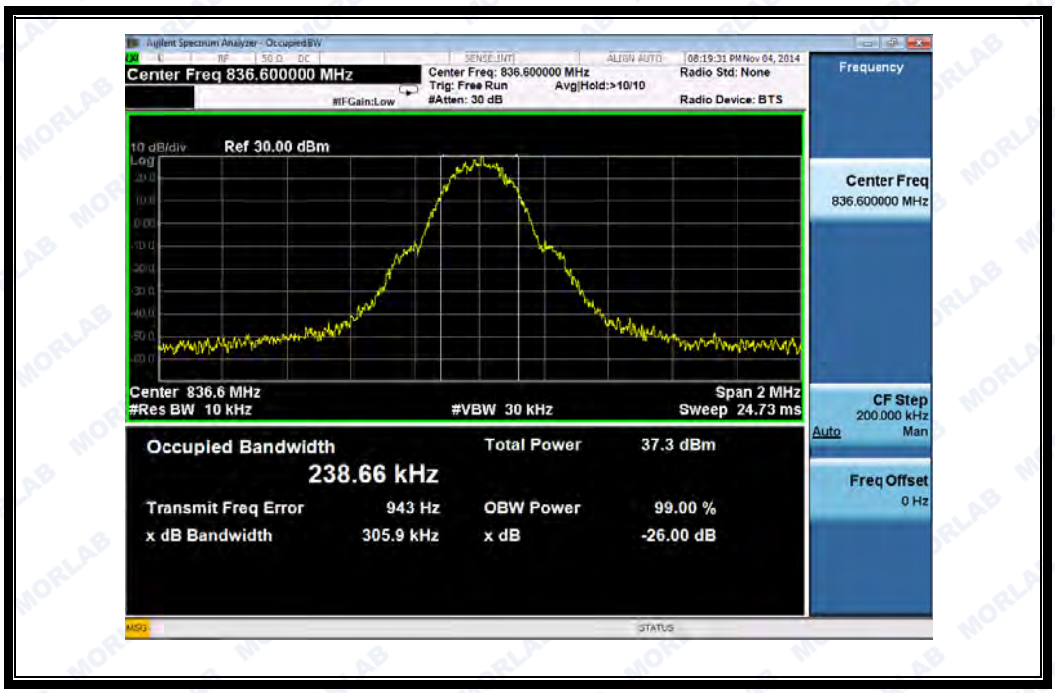
Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
EDGE 850MHz	128	824.2	311.4 KHz	248.39 KHz	Plot A
	190	836.6	305.9 KHz	238.66 KHz	Plot B
	251	848.8	320.5 KHz	249.85 KHz	Plot C
EDGE 1900MHz	512	1850.2	318.8 KHz	249.28 KHz	Plot D
	661	1880.0	318.3 KHz	244.88 KHz	Plot E
	810	1909.8	313.5 KHz	244.78 KHz	Plot F
WCDMA 850MHz	4132	826.4	4.657 MHz	4.1349 MHz	Plot G
	4175	835	4.653 MHz	4.1780 MHz	Plot H
	4233	846.6	4.643 MHz	4.1674 MHz	Plot I
WCDMA 1900MHz	9262	1852.4	4.654 MHz	4.1676 MHz	Plot J
	9400	1880	4.662 MHz	4.1496 MHz	Plot K
	9538	1907.6	4.671 MHz	4.1477 MHz	Plot L
HSDPA 850MHz	4132	826.4	4.653 MHz	4.1614 MHz	Plot M
	4175	835	4.641 MHz	4.1672 MHz	Plot N
	4233	846.6	4.660 MHz	4.1665 MHz	Plot O
HSDPA 1900MHz	9262	1852.4	4.639 MHz	4.1687 MHz	Plot P
	9400	1880	4.651 MHz	4.1471 MHz	Plot Q
	9538	1907.6	4.661 MHz	4.1390 MHz	Plot R
HSUPA 850MHz	4132	826.4	4.645 MHz	4.1514 MHz	Plot S
	4175	835	4.649 MHz	4.1564 MHz	Plot T
	4233	846.6	4.651 MHz	4.1527 MHz	Plot U

Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
HSUPA 1900MHz	9262	1852.4	4.639 MHz	4.1489 MHz	Plot V
	9400	1880	4.636 MHz	4.1514 MHz	Plot W
	9538	1907.6	4.661 MHz	4.1514 MHz	Plot X
HSPA+ 850MHz	4132	826.4	4.653 MHz	4.1458 MHz	Plot Y
	4175	835	4.638 MHz	4.1478 MHz	Plot Z
	4233	846.6	4.649 MHz	4.1651 MHz	Plot A1
HSPA+ 1900MHz	9262	1852.4	4.655 MHz	4.1540 MHz	Plot B1
	9400	1880	4.645 MHz	4.1553 MHz	Plot C1
	9538	1907.6	4.674 MHz	4.1481 MHz	Plot D1
GSM 850MHz	128	824.2	316.5 KHz	245.05 KHz	Plot E1
	190	836.6	311.3 KHz	247.42 KHz	Plot F1
	251	848.8	322.1 KHz	252.92 KHz	Plot G1
GSM 1900MHz	512	1850.2	319.3 KHz	245.04 KHz	Plot H1
	661	1880.0	312.4 KHz	249.97 KHz	Plot I1
	810	1909.8	319.2 KHz	246.37 KHz	Plot J2
GPRS 850MHz	128	824.2	316.5 KHz	249.97 KHz	Plot K1
	190	836.6	319.7 KHz	250.55 KHz	Plot L1
	251	848.8	316.0 KHz	243.65 KHz	Plot M1
GPRS 1900MHz	512	1850.2	316.8 KHz	245.36 KHz	Plot N1
	661	1880.0	314.2 KHz	248.47 KHz	Plot O1
	810	1909.8	310.9 KHz	243.91 KHz	Plot P1

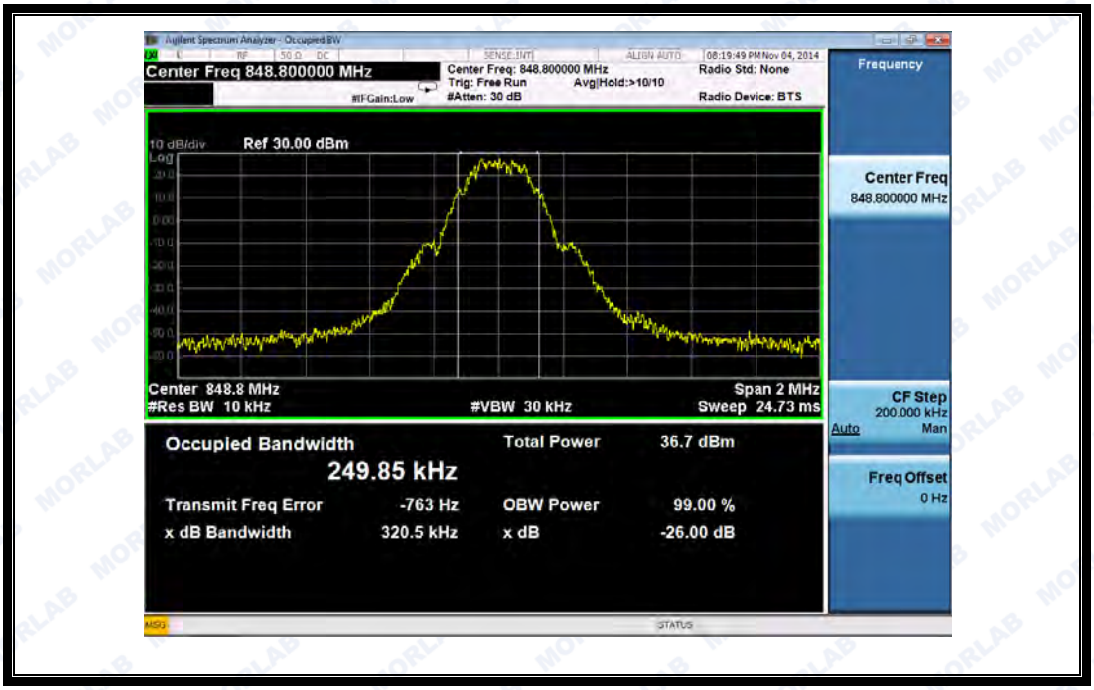
3. Test Plots:



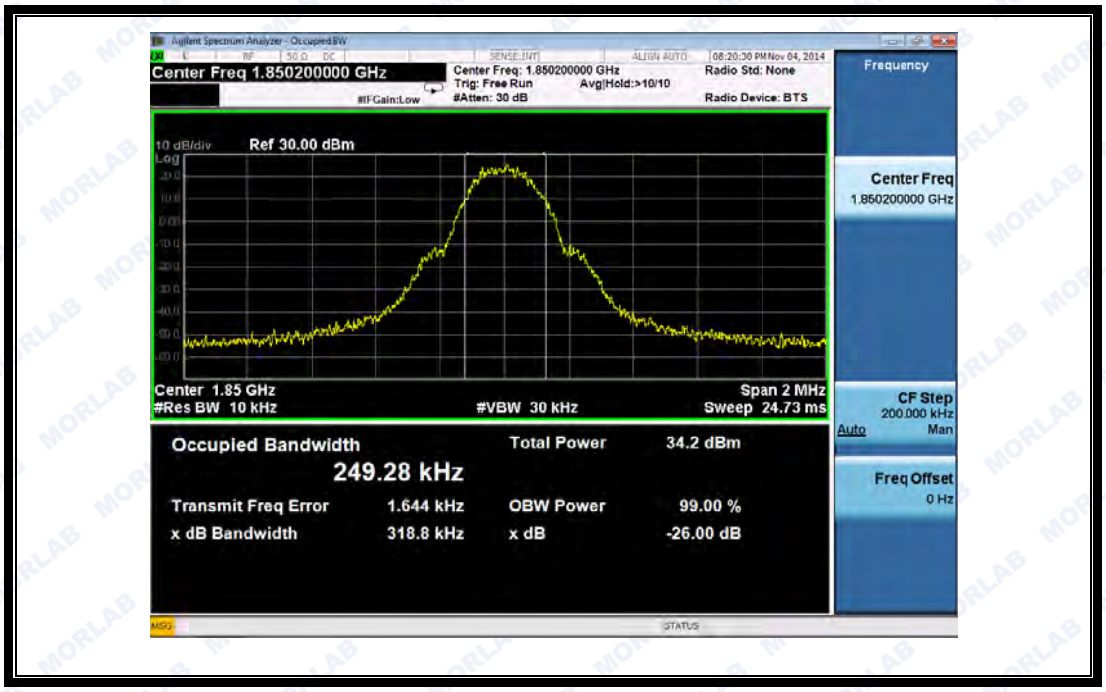
(Plot A: EGPRS 850MHz Channel = 128)



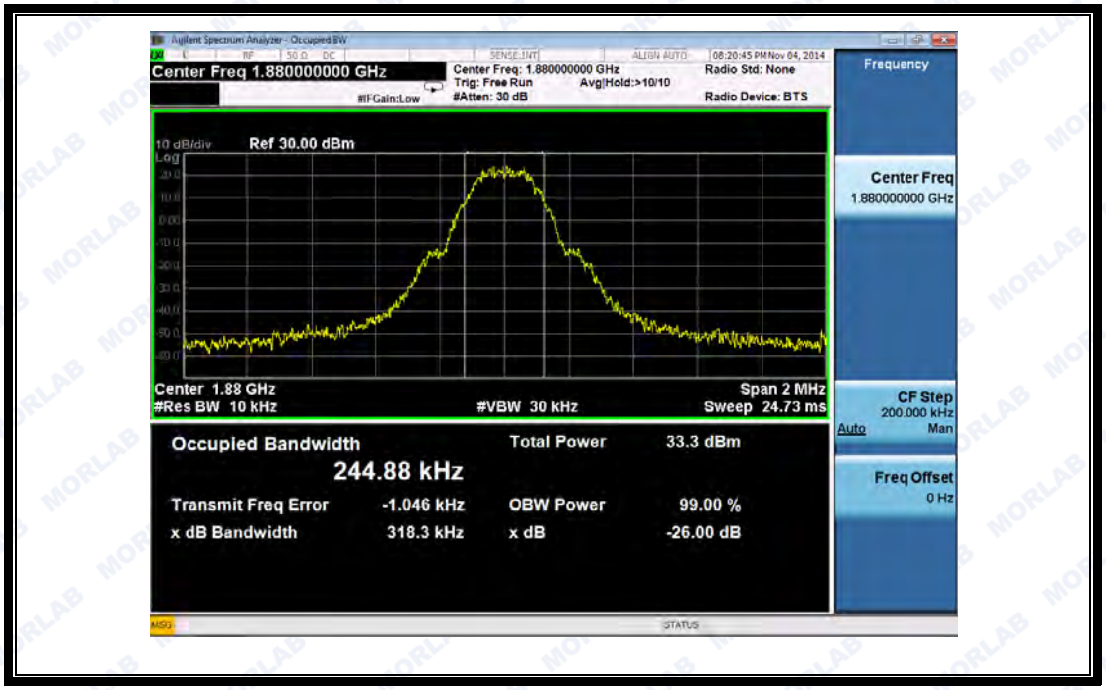
(Plot B: EGPRS 850MHz Channel = 190)



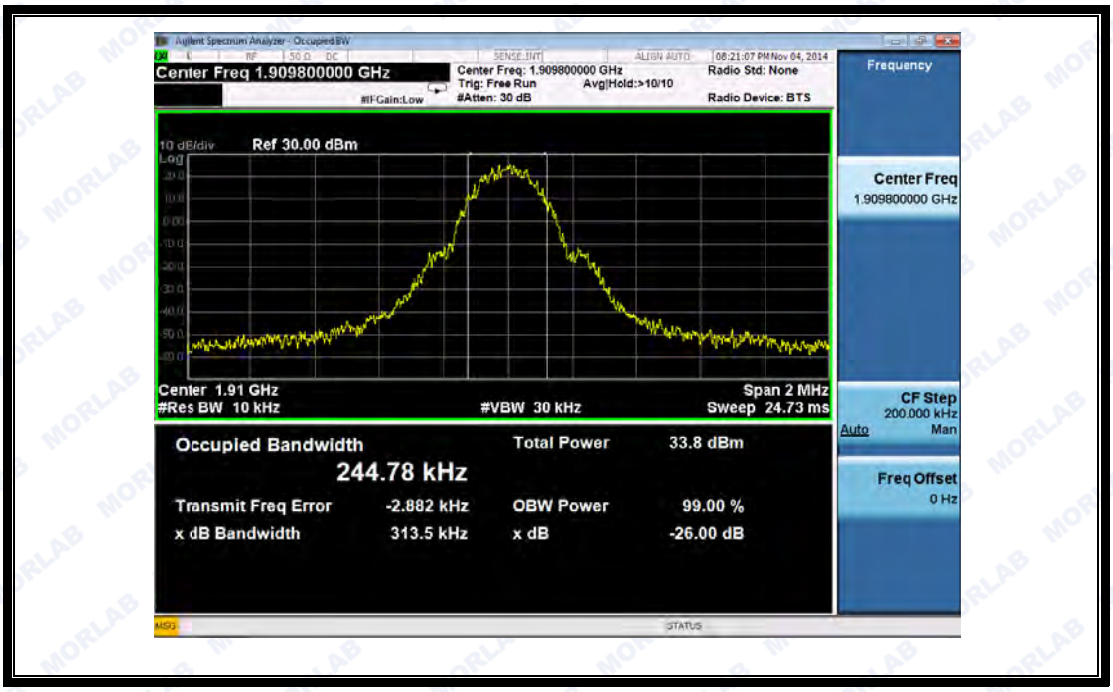
(Plot C: EGPRS 850MHz Channel = 251)



(Plot D: EGPRS1900MHz Channel = 512)



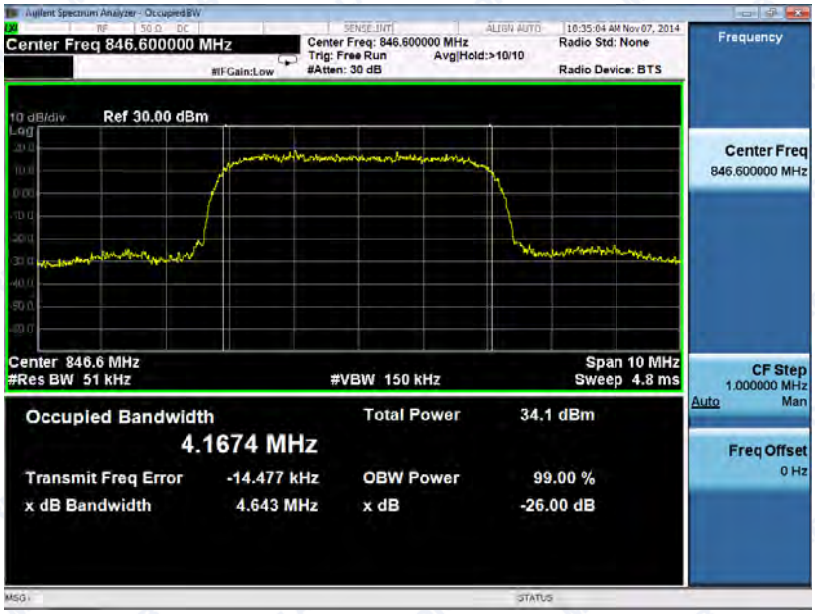
(Plot E: EGPRS1900MHz Channel = 661)



(Plot F: EGPRS 1900MHz Channel = 810)

(Plot G: WCDMA 850MHz Channel = 4132)

(Plot H: WCDMA 850 MHz Channel = 4175)



(Plot I: WCDMA 850MHz Channel = 4233)

(Plot J: WCDMA 1900MHz Channel = 9262)

(Plot K: WCDMA 1900 MHz Channel = 9400)

(Plot L: WCDMA1900MHz Channel = 9538)

(Plot M: HSDPA 850MHz Channel = 4132)

(Plot N: HSDPA850 MHz Channel = 4175)

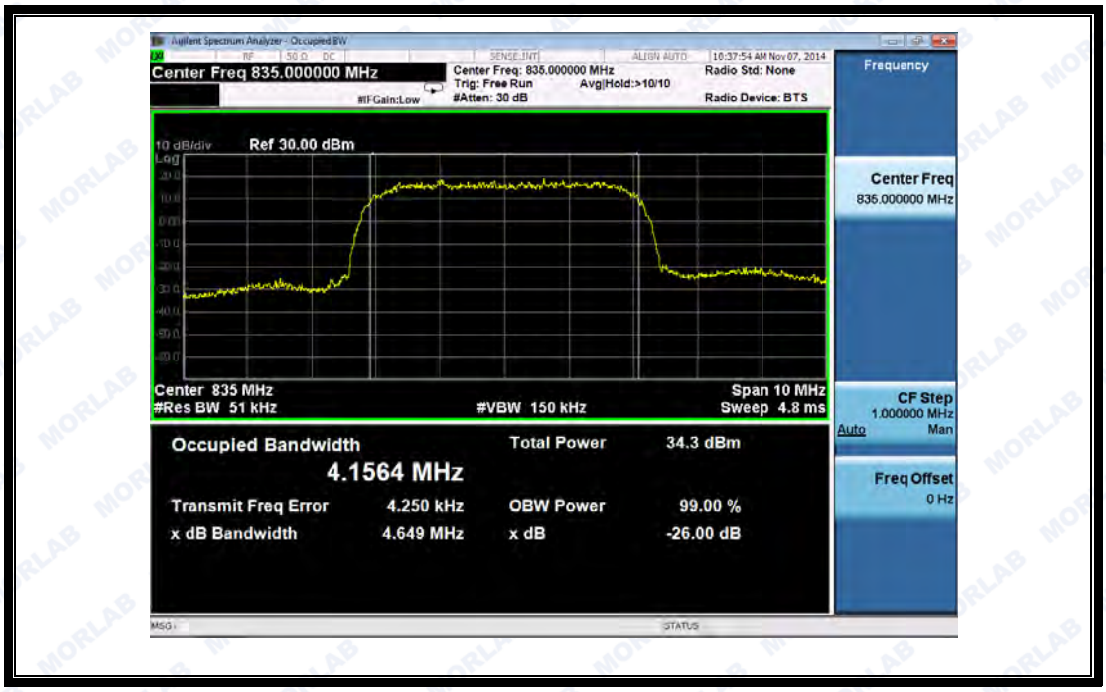
(Plot O: HSDPA 850 MHz Channel = 4233)

(Plot P: HSDPA1900 MHz Channel = 9262)

(Plot Q: HSDPA1900 MHz Channel = 9400)

(Plot R: HSDPA 1900 MHz Channel = 9538)

(Plot S: HSUPA850 MHz Channel = 4132)

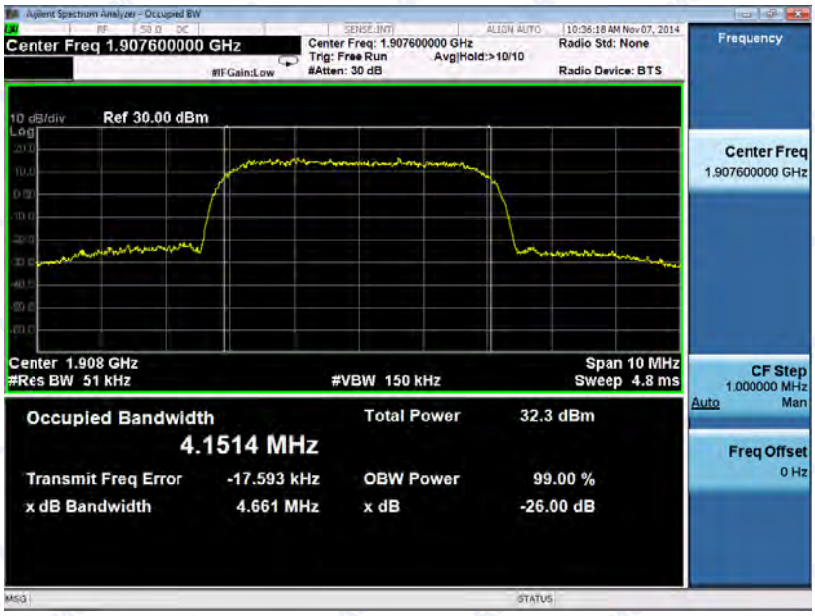


(Plot T: HSUPA850 MHz Channel = 4175)

(Plot U: HSUPA850 MHz Channel = 4233)

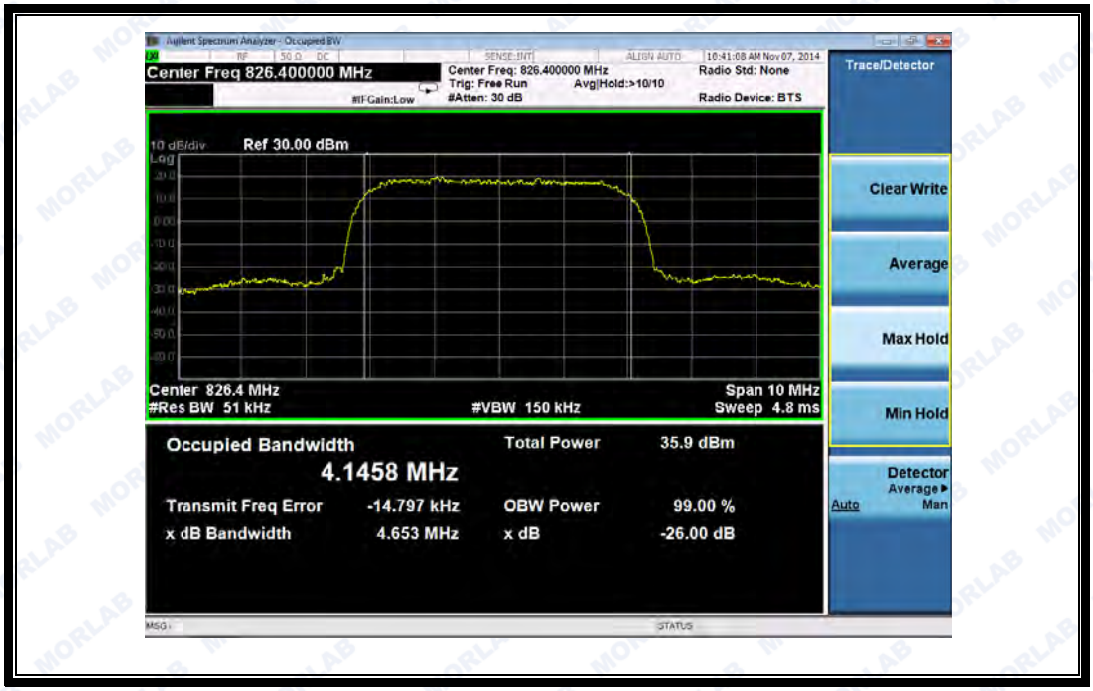
(Plot V: HSUPA1900 MHz Channel = 9262)

(Plot W: HSUPA1900 MHz Channel = 9400)



8

(Plot X: HSUPA1900 MHz Channel = 9538)



(Plot Y: HSPA+850 MHz Channel = 4132)

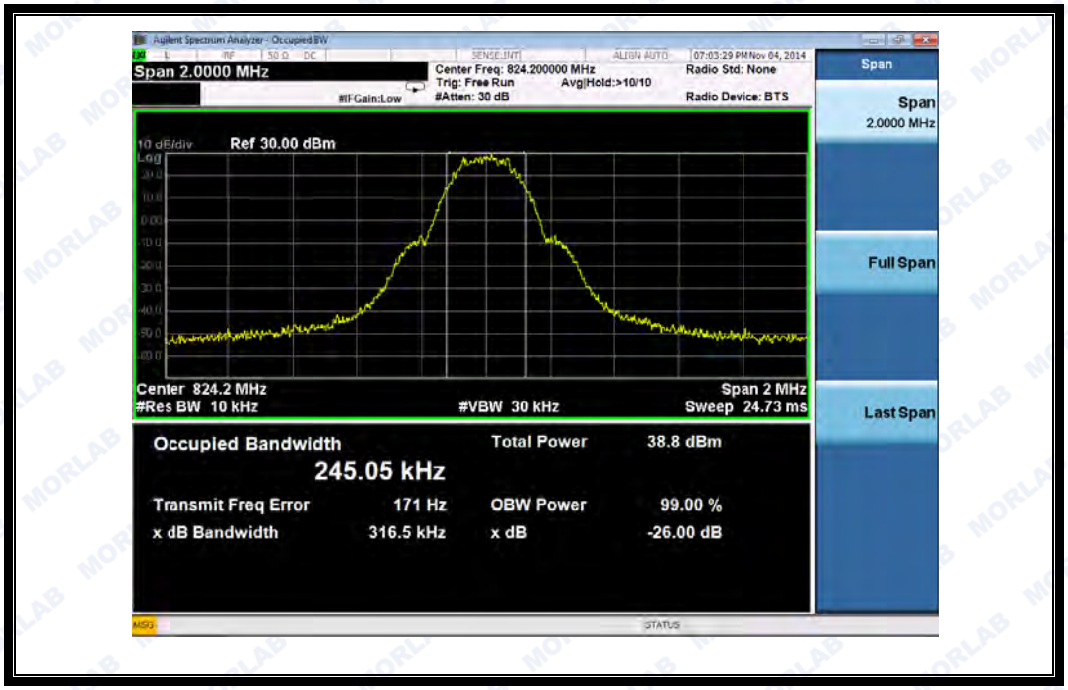
(Plot Z: HSPA+850 MHz Channel = 4175)

(Plot A1:HSPA+850 MHz Channel = 4233)

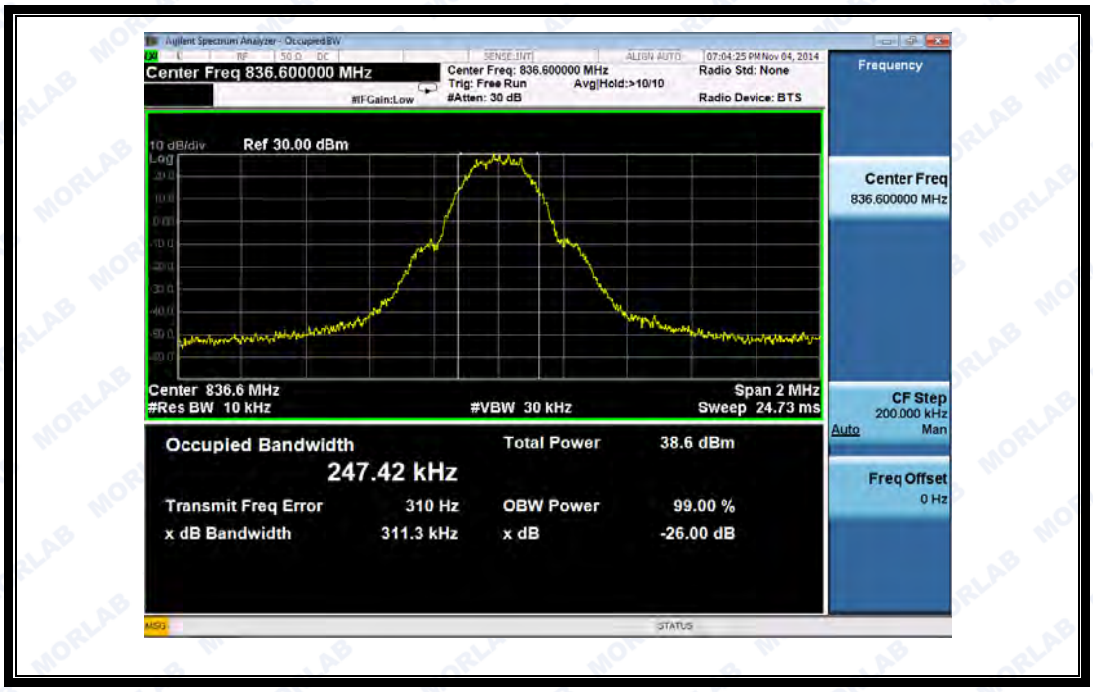
(Plot B1: HSPA+1900 MHz Channel = 9262)

(Plot C1: HSPA+1900 MHz Channel = 9400)

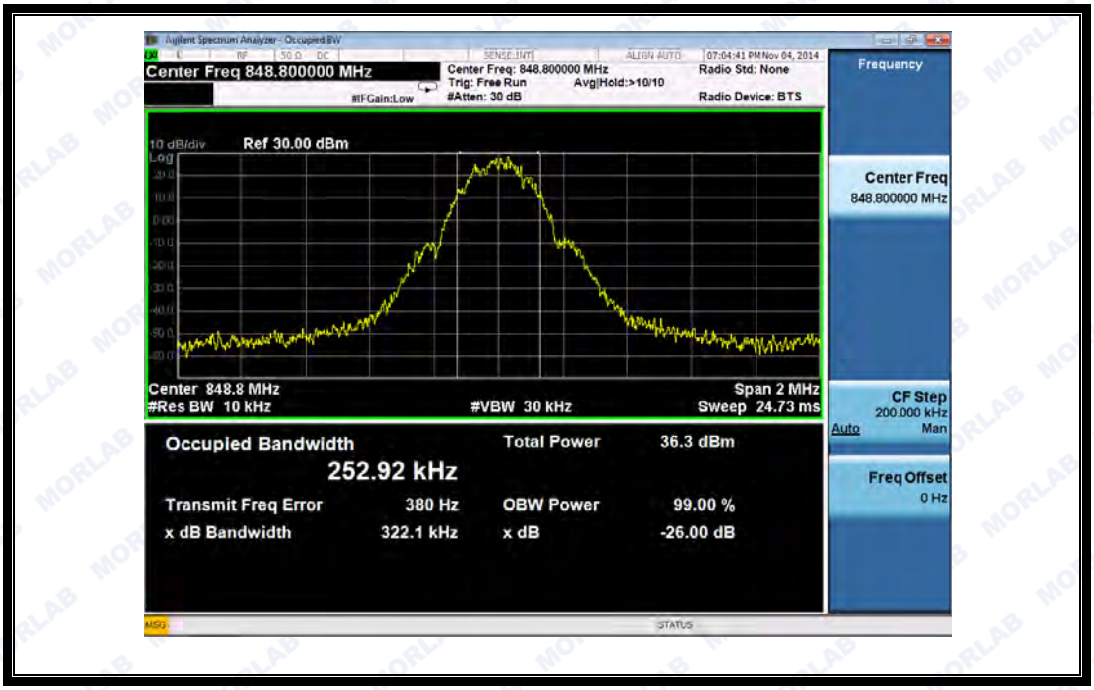
(Plot D1: HSPA+1900 MHz Channel = 9538)



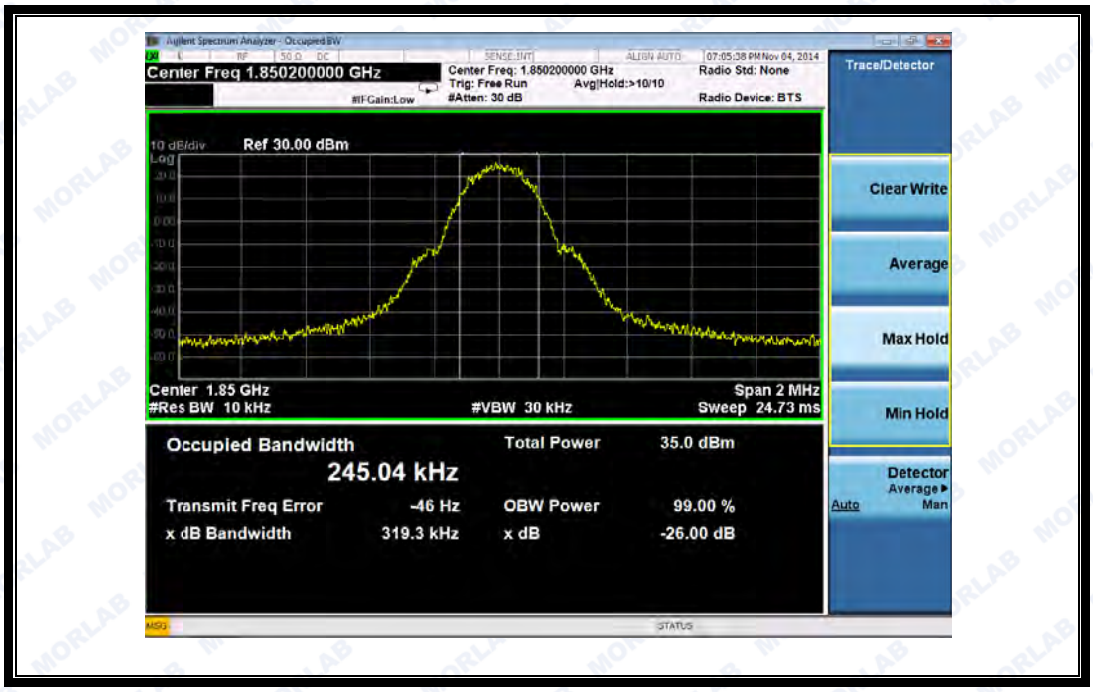
(Plot E1: GSM 850MHz Channel = 128)



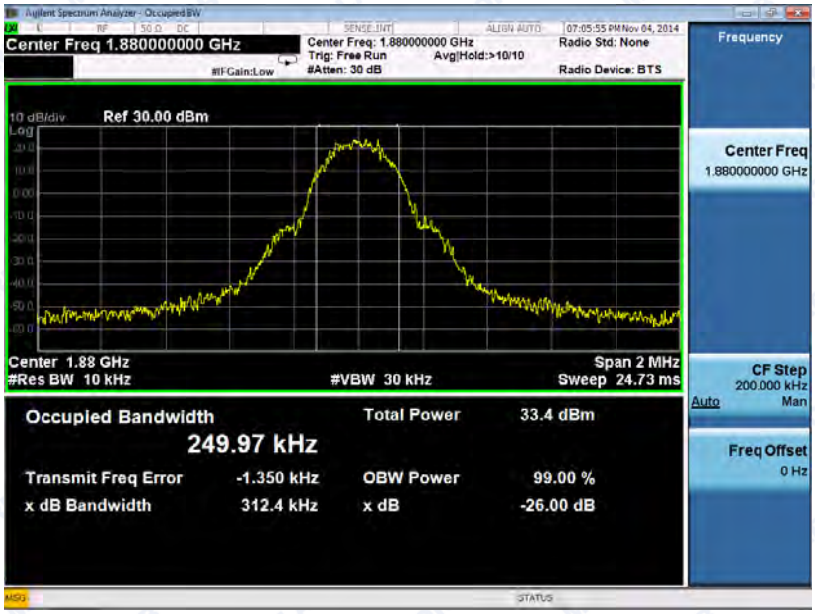
(Plot F1:GSM 850MHz Channel = 190)



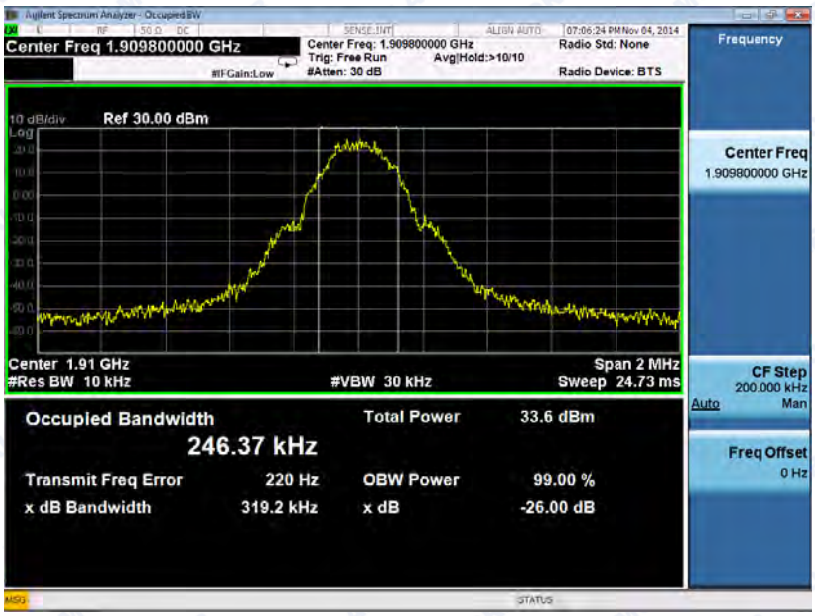
(Plot G1: GSM 850MHz Channel = 251)



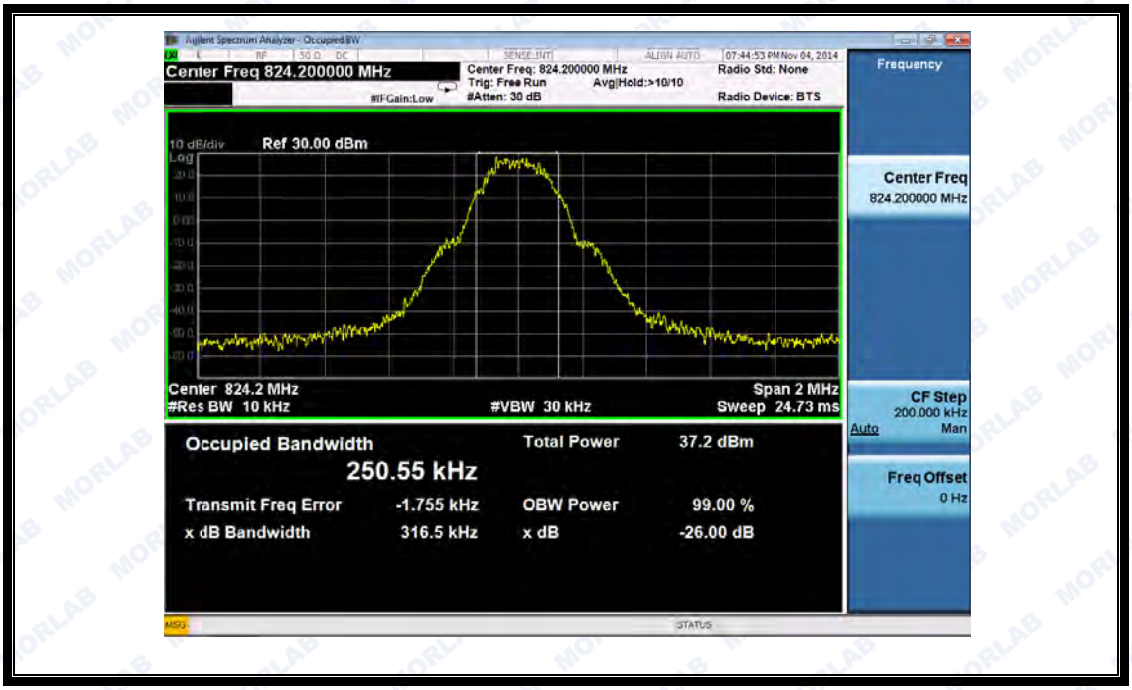
(Plot H1: GSM 1900MHz Channel = 512)



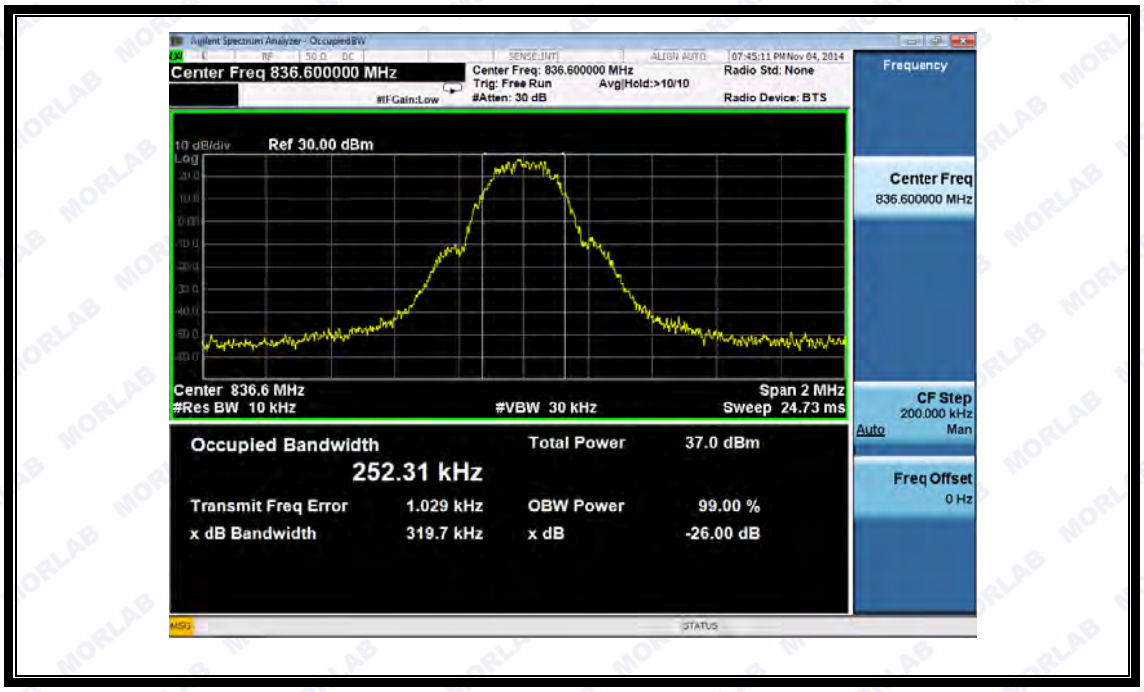
(Plot I1: GSM 1900MHz Channel = 661)



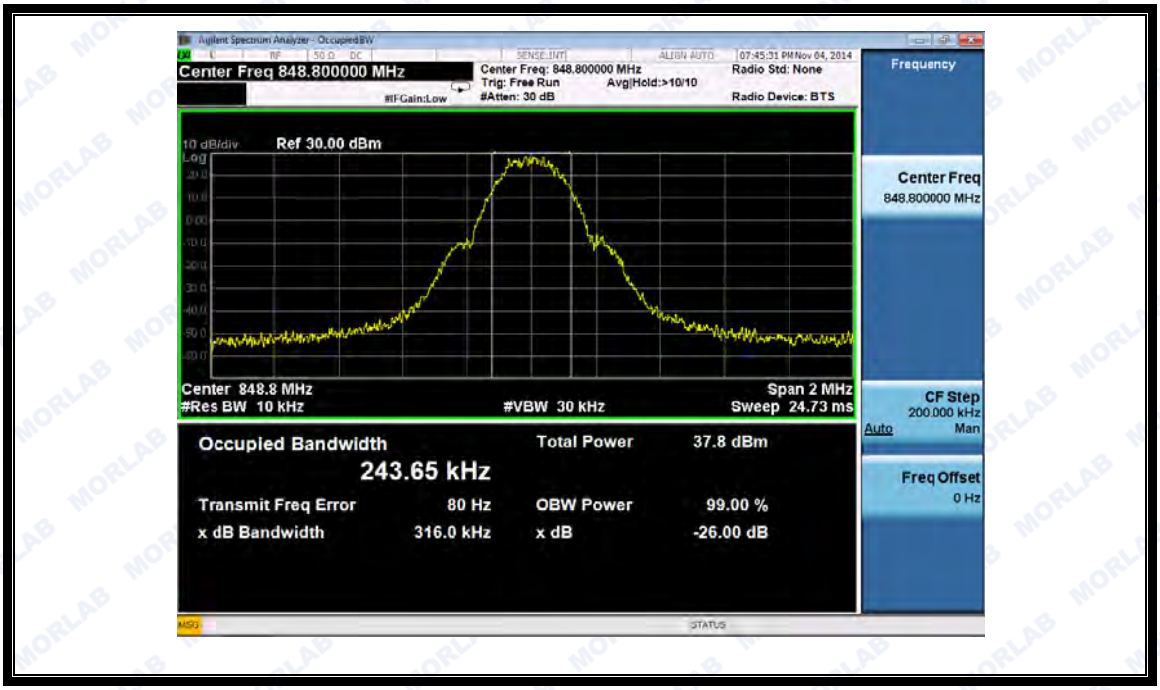
(Plot J1: GSM 1900MHz Channel = 810)



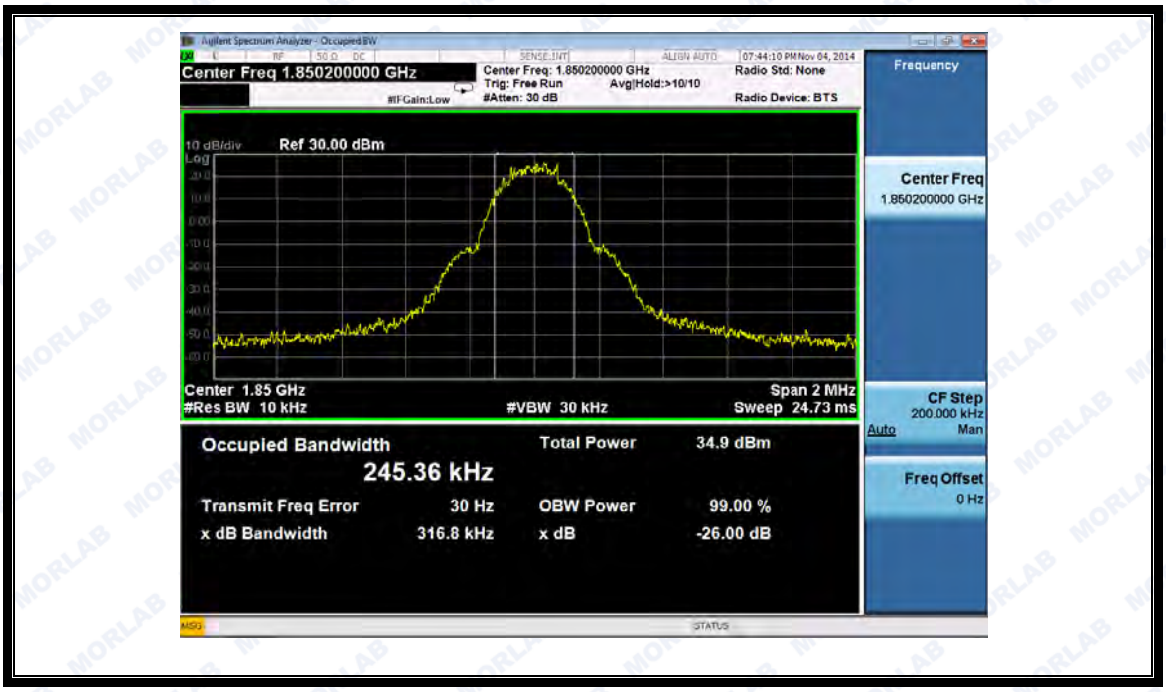
(Plot K1: GPRS 850MHz Channel = 128)



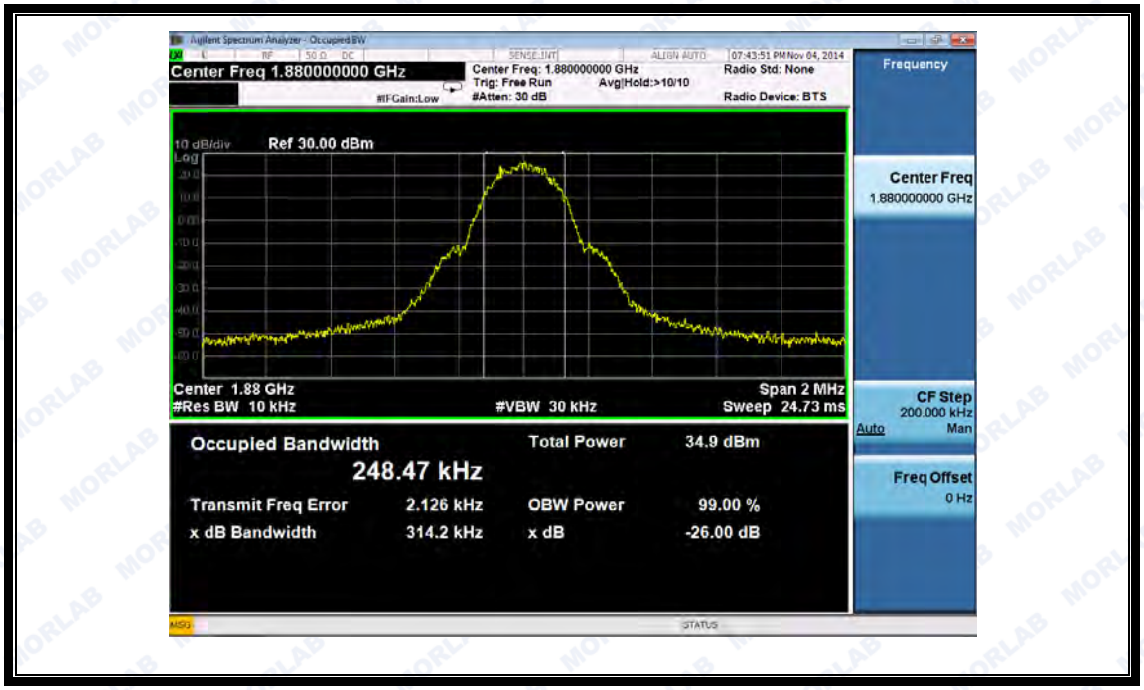
(Plot L1: GPRS 850MHz Channel = 190)



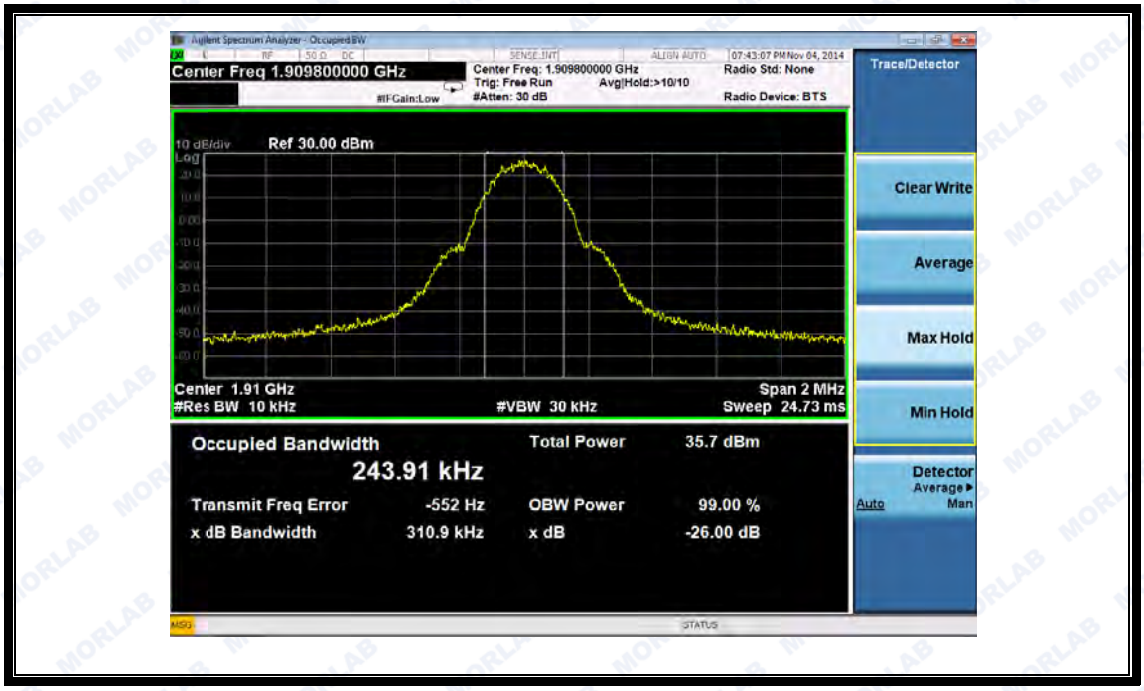
(Plot M1: GPRS850MHz Channel = 251)



(Plot N1: GPRS 1900MHz Channel = 512)



(Plot O1: GPRS 1900MHz Channel = 661)



(Plot P1: GPRS 1900MHz Channel = 810)