2.3 99% Occupied Bandwidth

2.3.1 Definition

According to FCC section 2.1049 and FCC § 22.917 &24.238 and 27.53(g), the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

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

2.3.2 Test Description

See section 2.1.2 of this report.

2.3.3 Test Verdict

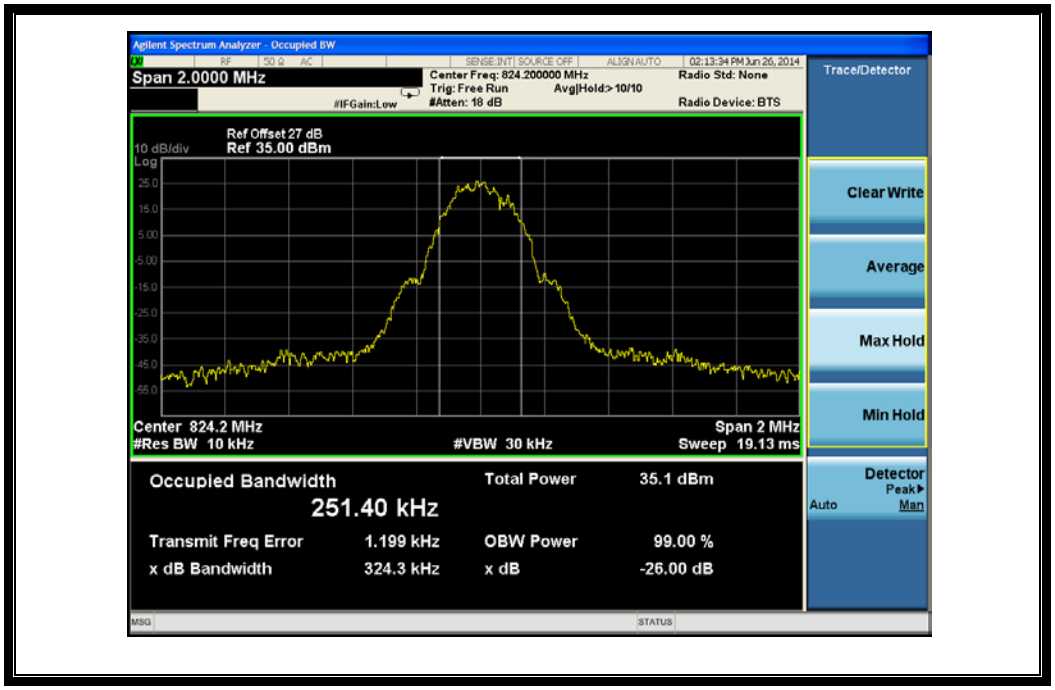
Here the lowest, middle and highest channels are selected to perform testing to verify the 99% occupied bandwidth.

2. Test Verdict:

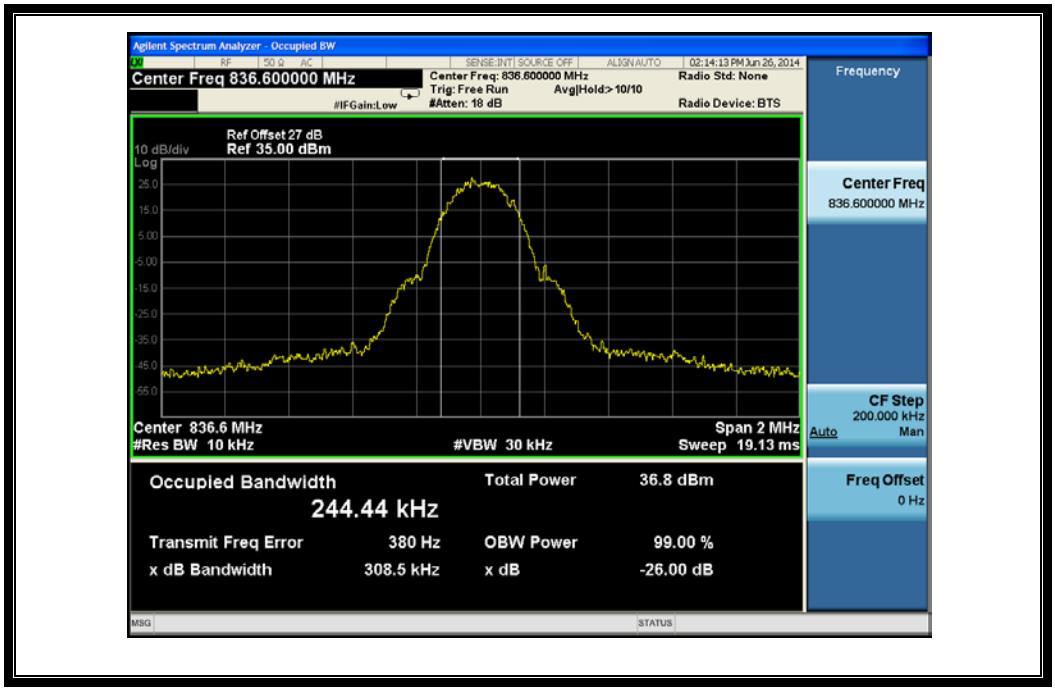
Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
EDGE 850MHz	128	824.2	324.3 KHz	251.40 KHz	Plot A
	190	836.6	308.5 KHz	244.44 KHz	Plot B
	251	848.8	312.3 KHz	247.41 KHz	Plot C
EDGE 1900MHz	512	1850.2	309.0 KHz	244.59 KHz	Plot D
	661	1880.0	307.4 KHz	240.26 KHz	Plot E
	810	1909.8	313.4 KHz	241.12 KHz	Plot F
WCDMA 850MHz	4132	826.4	4.675 MHz	4.1485 MHz	Plot G
	4175	835	4.698 MHz	4.1440 MHz	Plot H
	4233	846.6	4.663 MHz	4.1442 MHz	Plot I
WCDMA1900MHz	9262	1852.4	4.734 MHz	4.1895 MHz	Plot J
	9400	1880	4.746 MHz	4.1751 MHz	Plot K
	9538	1907.6	4.743 MHz	4.1619 MHz	Plot L
HSDPA 850MHz	4132	826.4	4.677 MHz	4.1329 MHz	Plot M
	4175	835	4.703 MHz	4.1450 MHz	Plot N
	4233	846.6	4.672 MHz	4.1329 MHz	Plot O
HSDPA 1900MHz	9262	1852.4	4.727 MHz	4.1620 MHz	Plot P
	9400	1880	4.707 MHz	4.1620 MHz	Plot Q
	9538	1907.6	4.747 MHz	4.1583 MHz	Plot R
HSUPA 850MHz	4132	826.4	4.675 MHz	4.1370 MHz	Plot S
	4175	835	4.669 MHz	4.1502 MHz	Plot T
	4233	846.6	4.681 MHz	4.1283 MHz	Plot U
HSUPA 1900MHz	9262	1852.4	4.745 MHz	4.1566 MHz	Plot V
	9400	1880	4.724 MHz	4.1416 MHz	Plot W

Band	Channel	Frequency (MHz)	26dB bandwidth	99% Occupied Bandwidth	Refer to Plot
	9538	1907.6	4.734 MHz	4.1561 MHz	Plot X
HSPA+ 850MHz	4132	826.4	4.672 MHz	4.1402 MHz	Plot Y
	4175	835	4.685 MHz	4.1427 MHz	Plot Z
	4233	846.6	4.676 MHz	4.1437 MHz	Plot A1
HSPA+ 1900MHz	9262	1852.4	4.736 MHz	4.1496 MHz	Plot B1
	9400	1880	4.724 MHz	4.1577 MHz	Plot C1
	9538	1907.6	4.732 MHz	4.1576 MHz	Plot D1
GSM 850MHz	128	824.2	306.0 KHz	236.26 KHz	Plot E1
	190	836.6	319.5 KHz	242.58 KHz	Plot F1
	251	848.8	317.3 KHz	239.77 KHz	Plot G1
GSM 1900MHz	512	1850.2	303.0 KHz	244.18 KHz	Plot H1
	661	1880.0	307.7 KHz	245.25 KHz	Plot I1
	810	1909.8	309.8 KHz	242.26 KHz	Plot J1
WCDMA 1700MHz	1312	1712.4	4.714 MHz	4.1530 MHz	Plot K1
	1412	1732.4	4.697 MHz	4.1495 MHz	Plot L1
	1513	1752.6	4.727 MHz	4.1430 MHz	Plot M1
HSDPA 1700MHz	1312	1712.4	4.659 MHz	4.1343 MHz	Plot N1
	1412	1732.4	4.679 MHz	4.1495 MHz	Plot O1
	1513	1752.6	4.701 MHz	4.1342 MHz	Plot P1
HSUPA 1700MHz	1312	1712.4	4.715 MHz	4.1565 MHz	Plot Q1
	1412	1732.4	4.604 MHz	4.1462 MHz	Plot R1
	1513	1752.6	4.707 MHz	4.1544 MHz	Plot S1
HSPA+ 1700MHz	1312	1712.4	4.709 MHz	4.1478 MHz	Plot T1
	1412	1732.4	4.713 MHz	4.1620 MHz	Plot U1
	1513	1752.6	4.680 MHz	4.1666 MHz	Plot V1
GPRS 850MHz	128	824.2	310.6 KHz	242.26 KHz	Plot W1
	190	836.6	316.2 KHz	241.47 KHz	Plot X1
	251	848.8	309.7 KHz	243.02 KHz	Plot Y1
GPRS 1900MHz	512	1850.2	311.0 KHz	242.84 KHz	Plot Z1
	661	1880.0	311.7 KHz	242.56 KHz	Plot A2
	810	1909.8	306.4 KHz	242.56 KHz	Plot B2

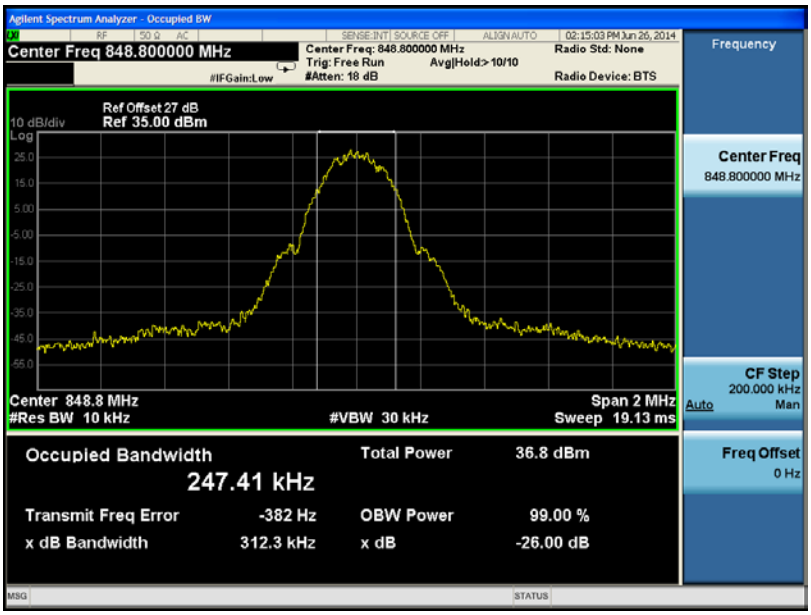
3. Test Plots:



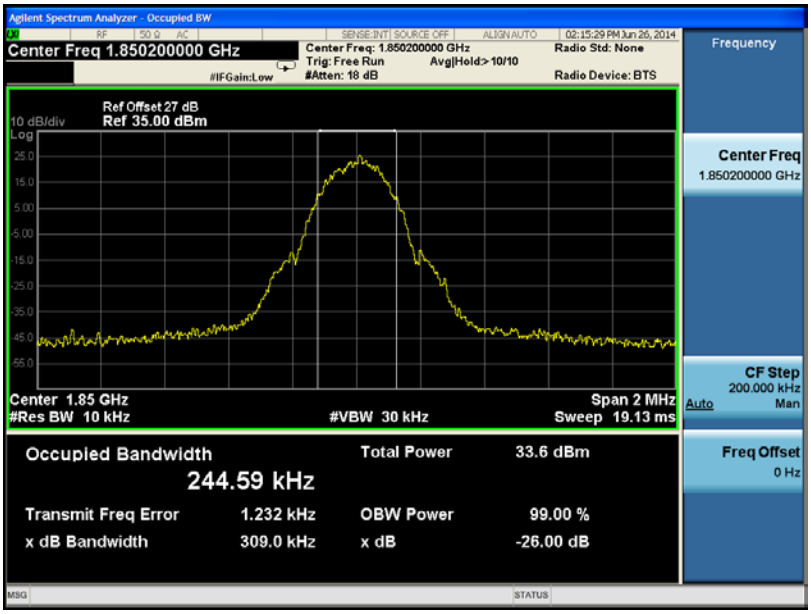
(Plot A: EGPRS 850MHz Channel = 128)



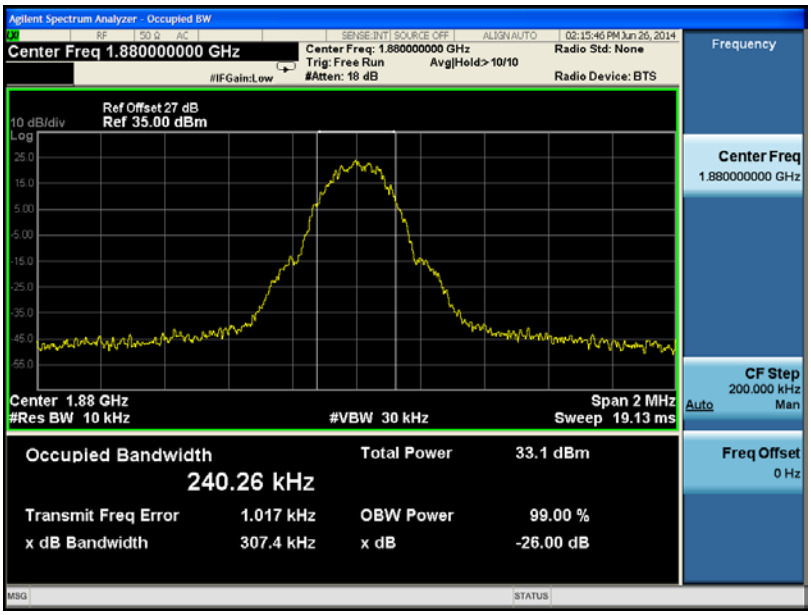
(Plot B: EGPRS 850MHz Channel = 190)



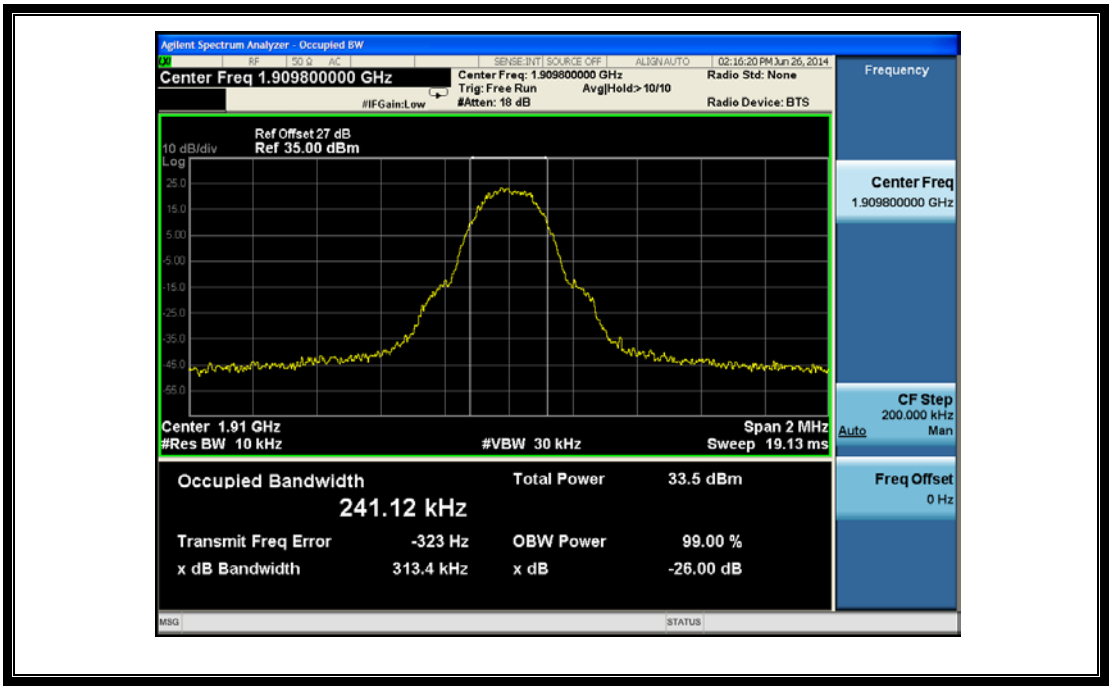
(Plot C: EGPRS 850MHz Channel = 251)



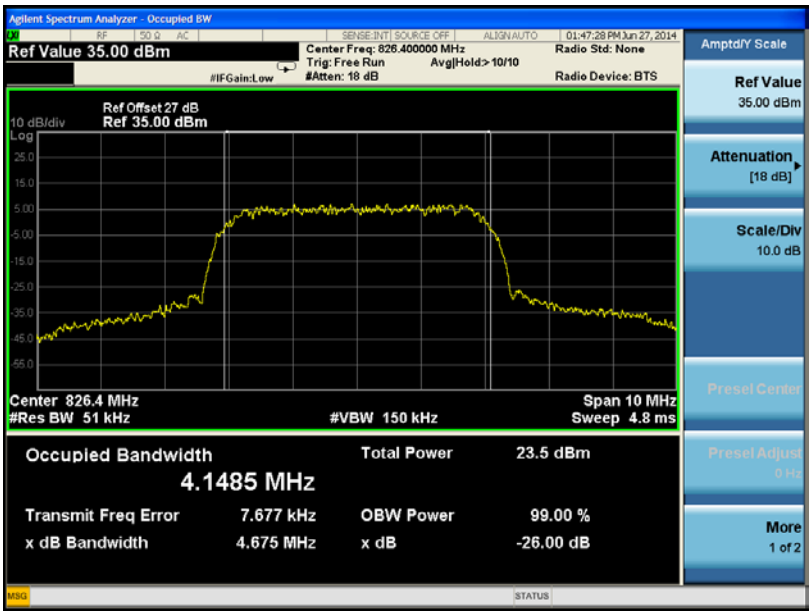
(Plot D: EGPRS1900MHz Channel = 512)



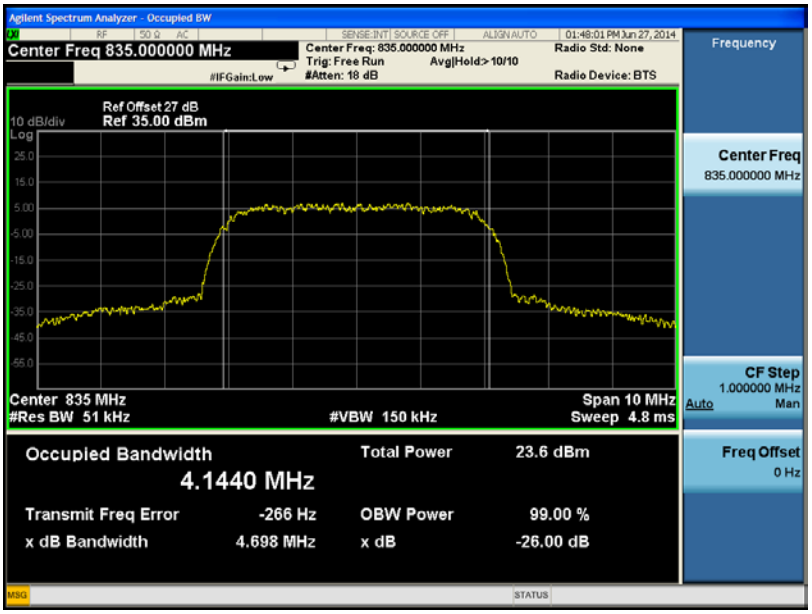
(Plot E: EGPRS1900MHz Channel = 661)



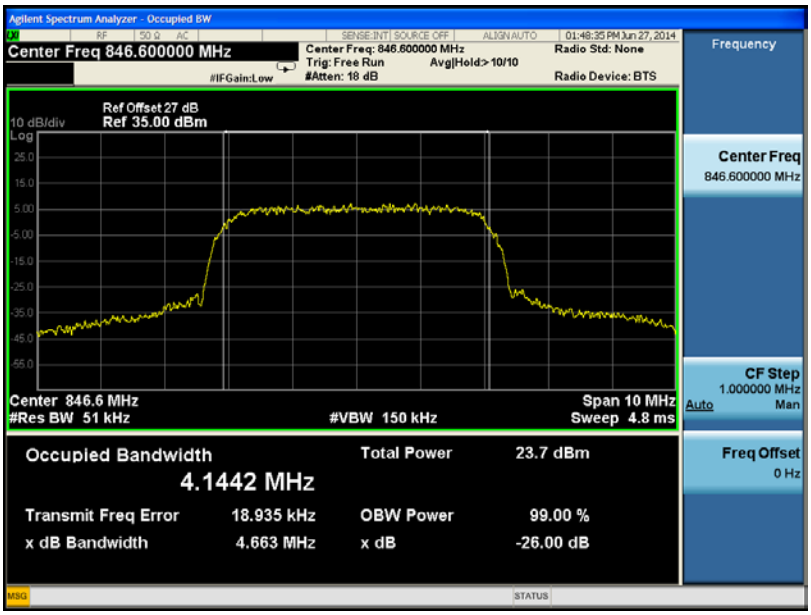
(Plot F: EGPRS 1900MHz Channel = 810)



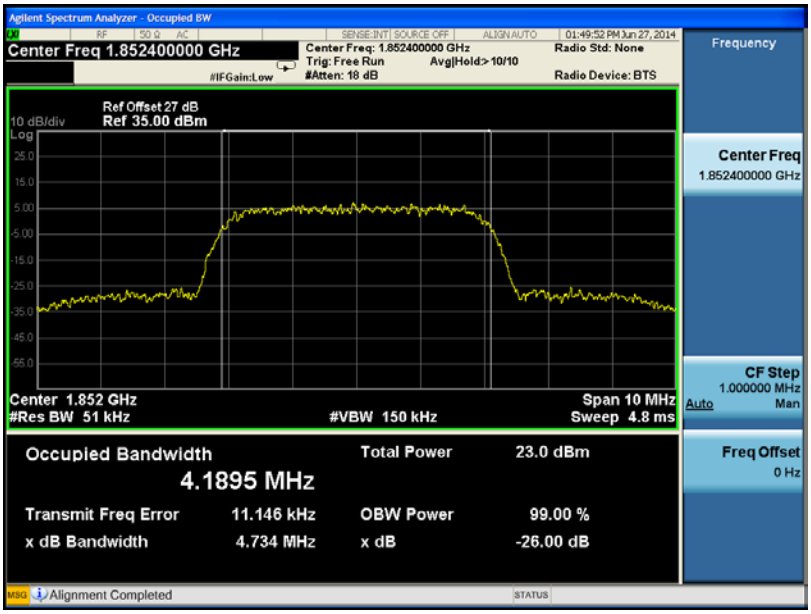
(Plot G: WCDMA 850MHz Channel = 4132)



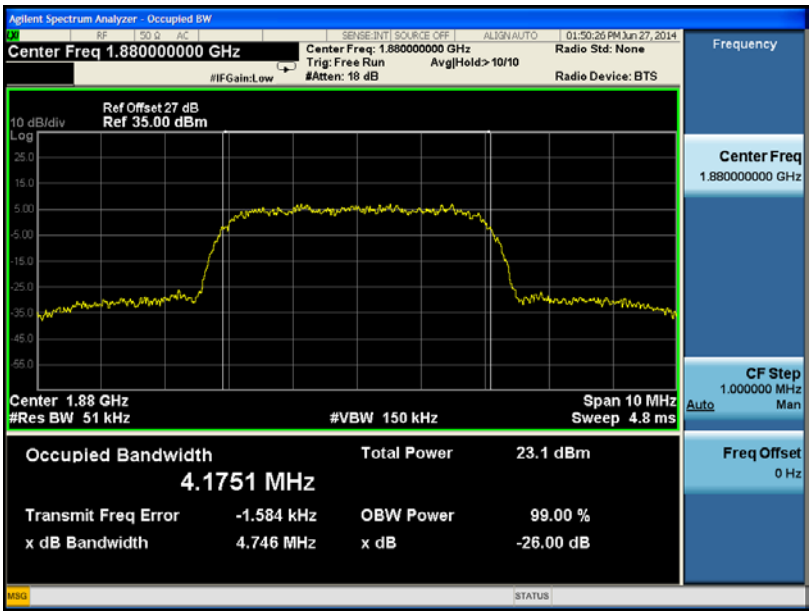
(Plot H: WCDMA 850 MHz Channel = 4175)



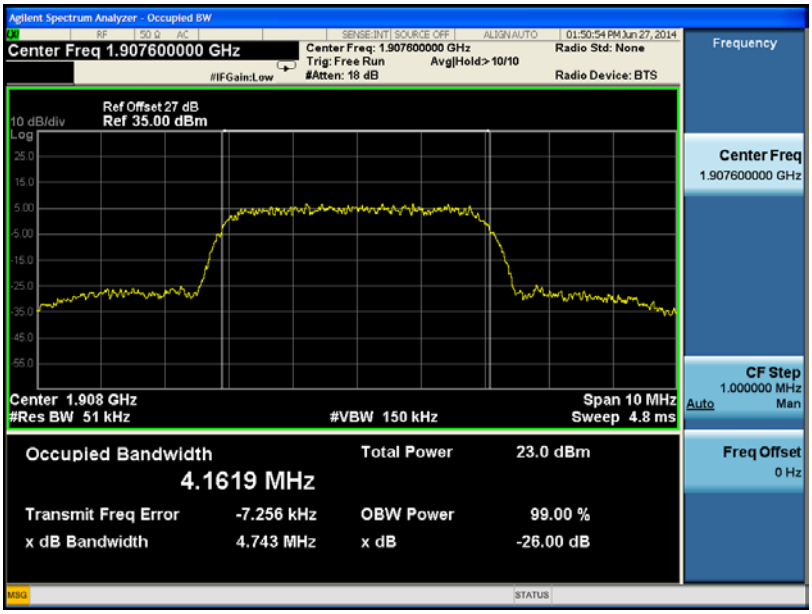
(Plot I: WCDMA 850MHz Channel = 4233)



(Plot J: WCDMA 1900MHz Channel = 9262)

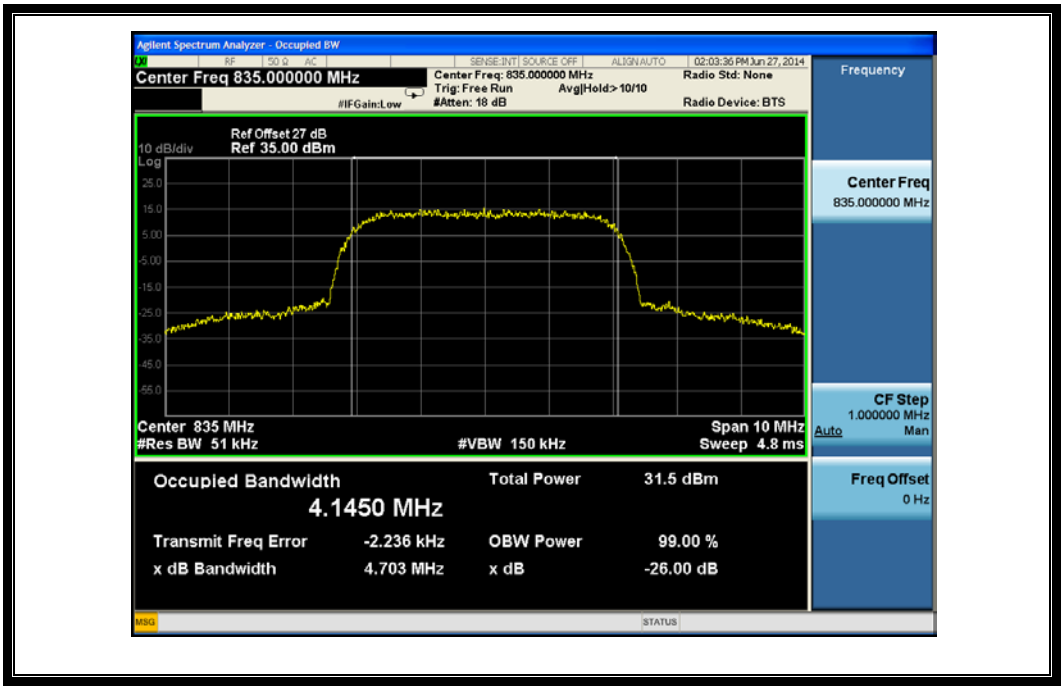


(Plot K: WCDMA 1900 MHz Channel = 9400)

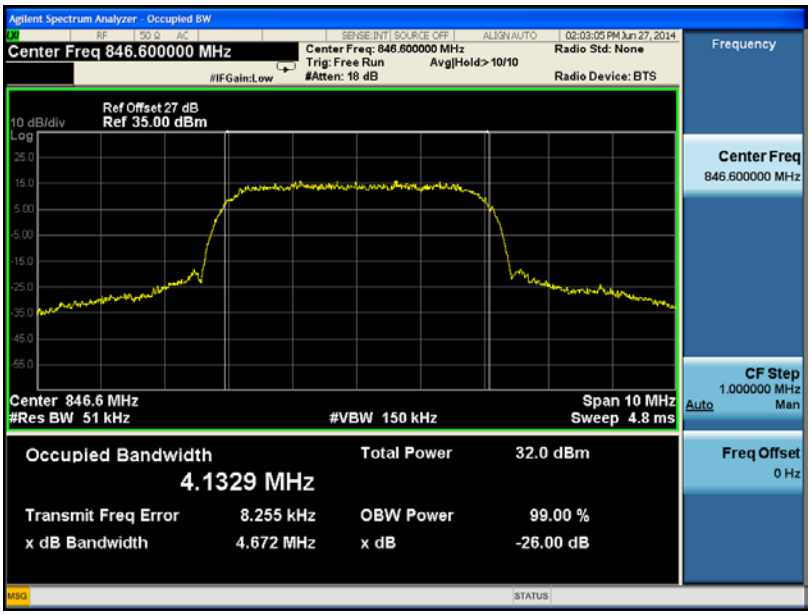


(Plot L: WCDMA1900MHz Channel = 9538)

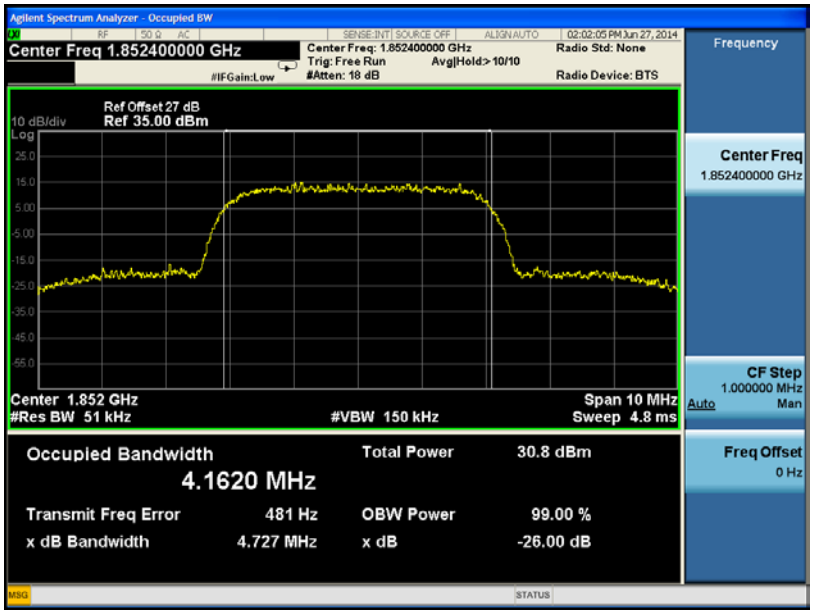
(Plot M: HSDPA 850MHz Channel = 4132)



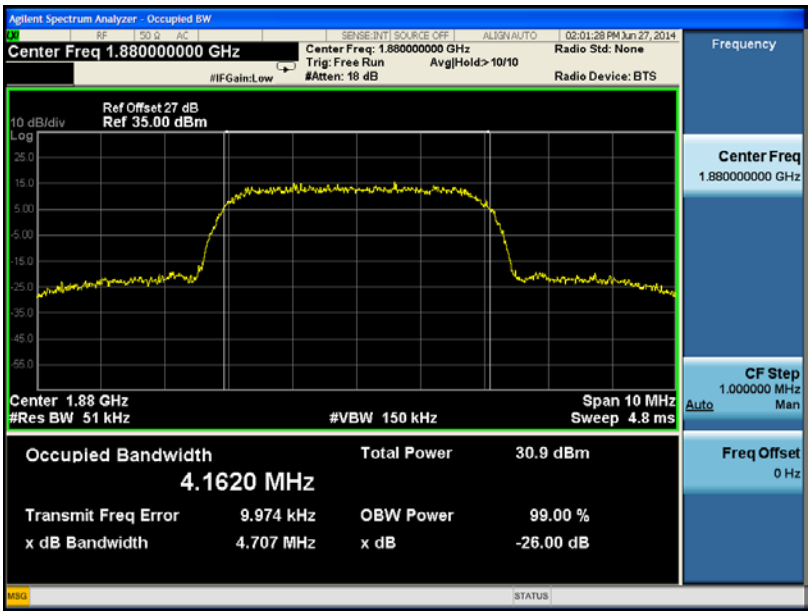
(Plot N: HSDPA850 MHz Channel = 4175)



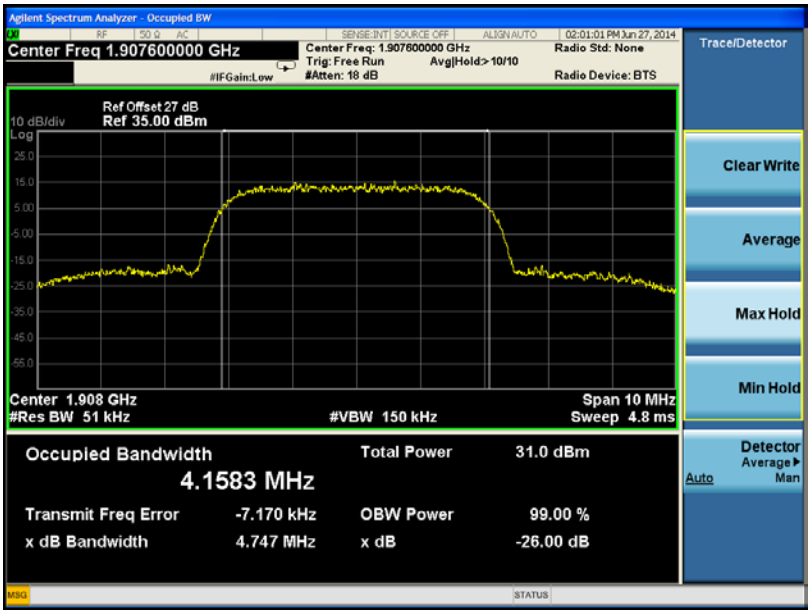
(Plot O: HSDPA 850 MHz Channel = 4233)



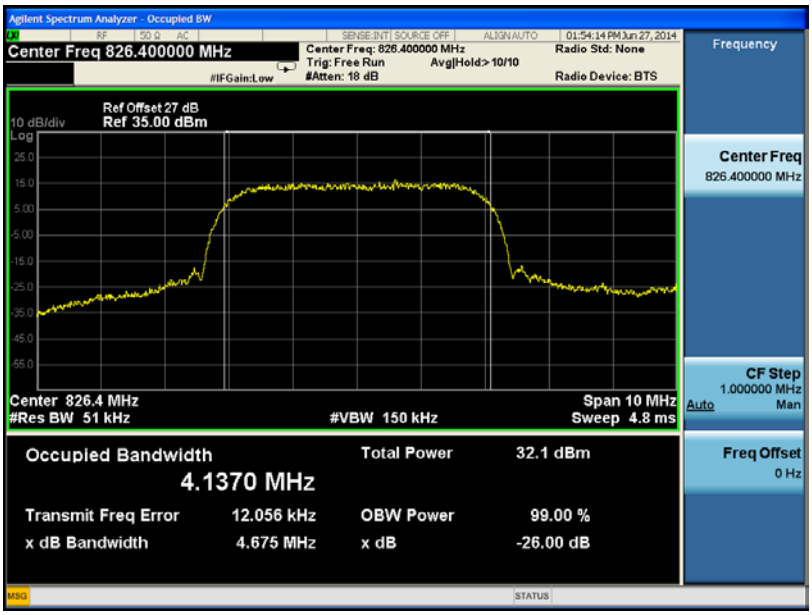
(Plot P: HSDPA1900 MHz Channel = 9262)



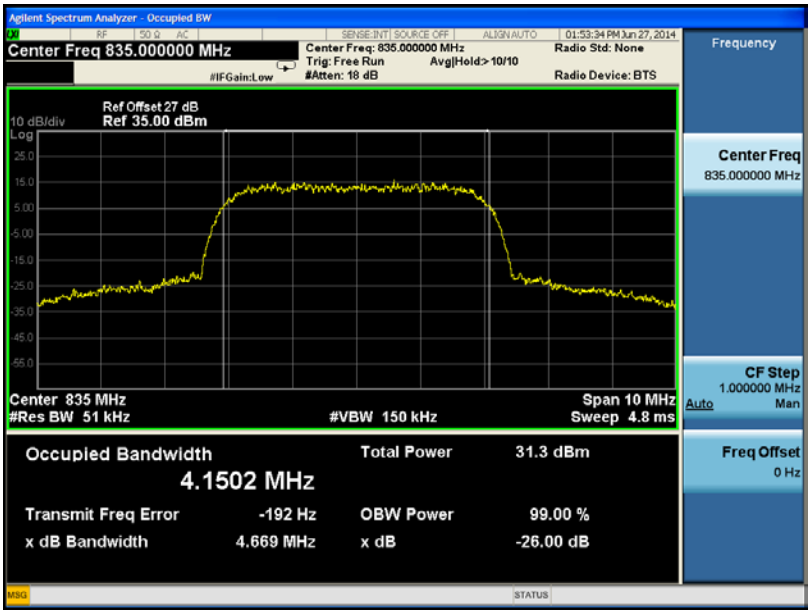
(Plot Q: HSDPA1900 MHz Channel = 9400)



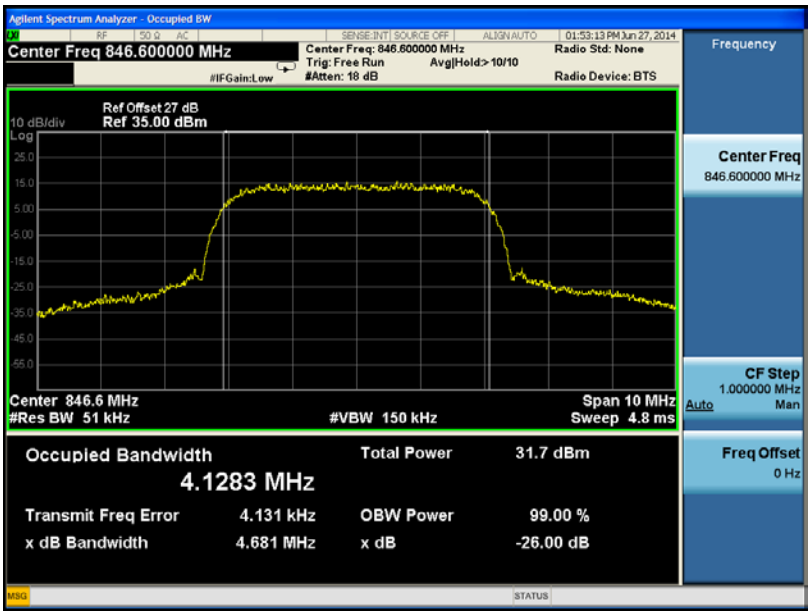
(Plot R: HSDPA 1900 MHz Channel = 9538)



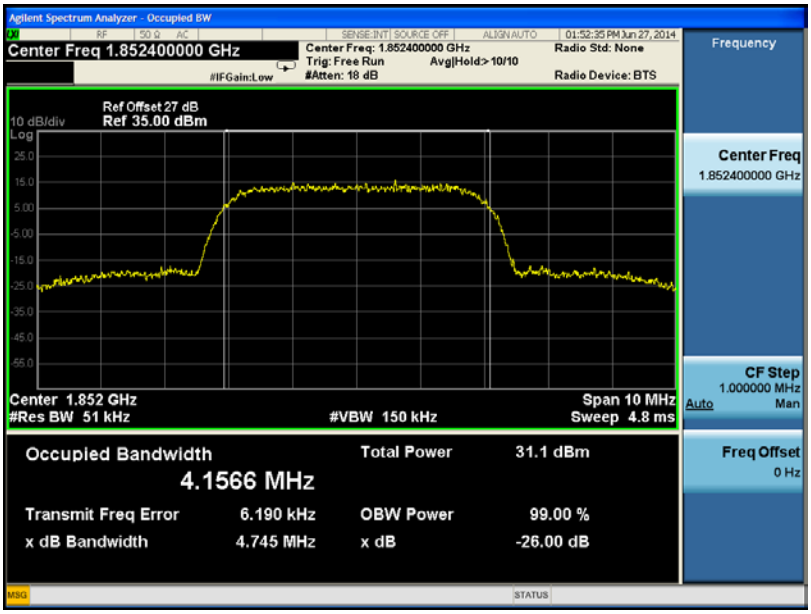
(Plot S: HSUPA850 MHz Channel = 4132)



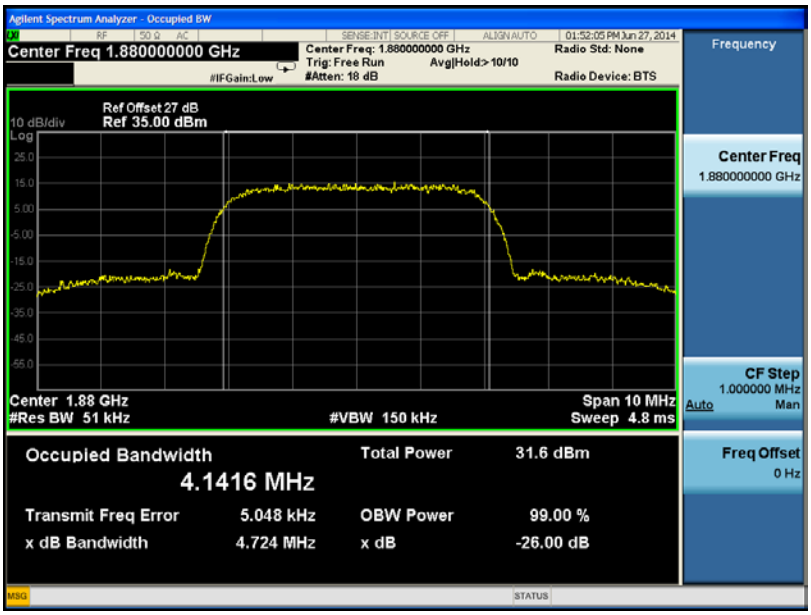
(Plot T: HSUPA850 MHz Channel = 4175)



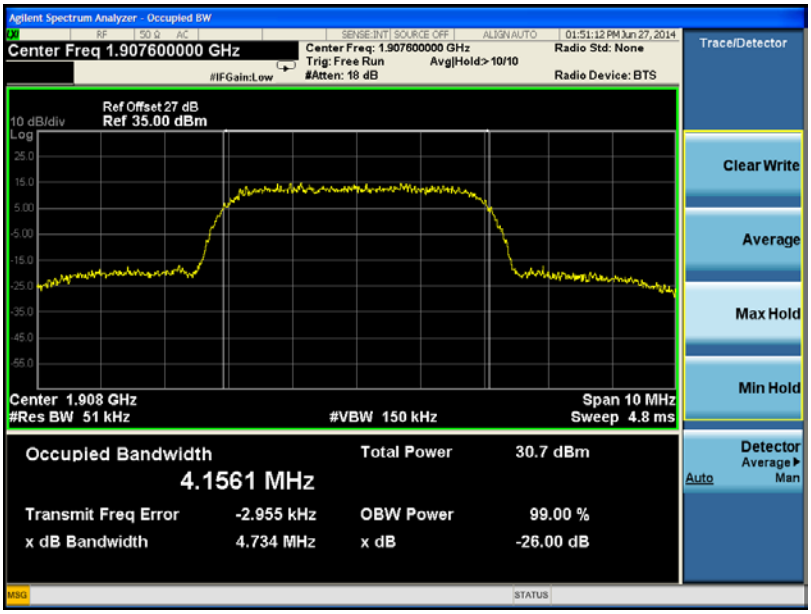
(Plot U: HSUPA850 MHz Channel = 4233)



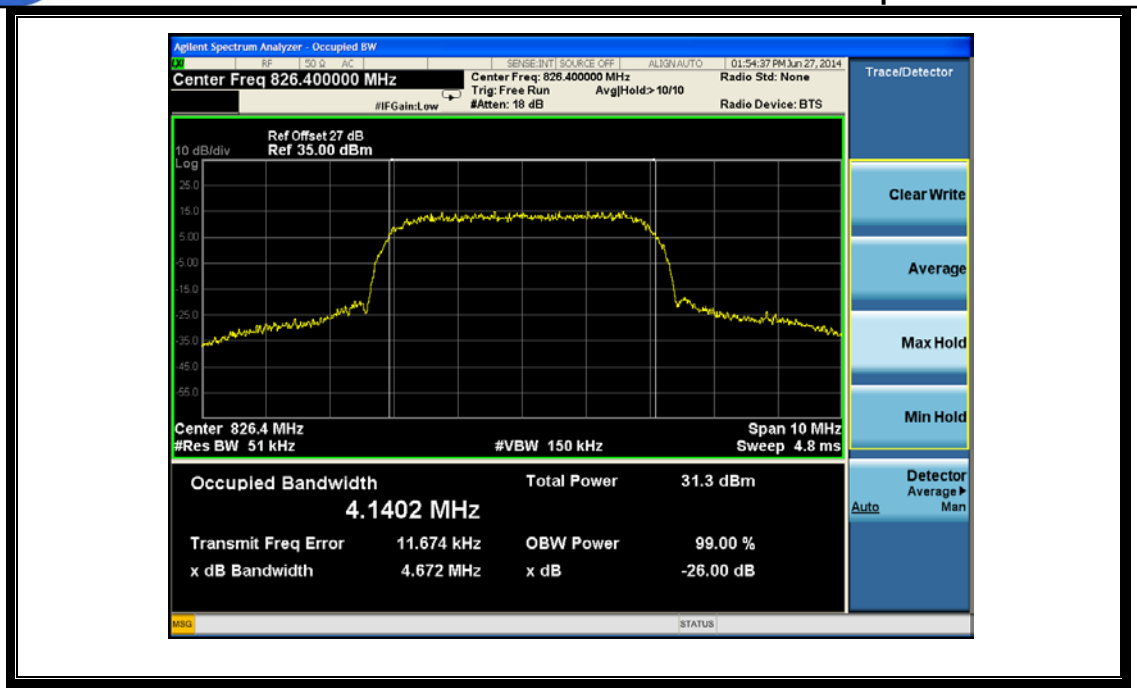
(Plot V: HSUPA1900 MHz Channel = 9262)



(Plot W: HSUPA1900 MHz Channel = 9400)

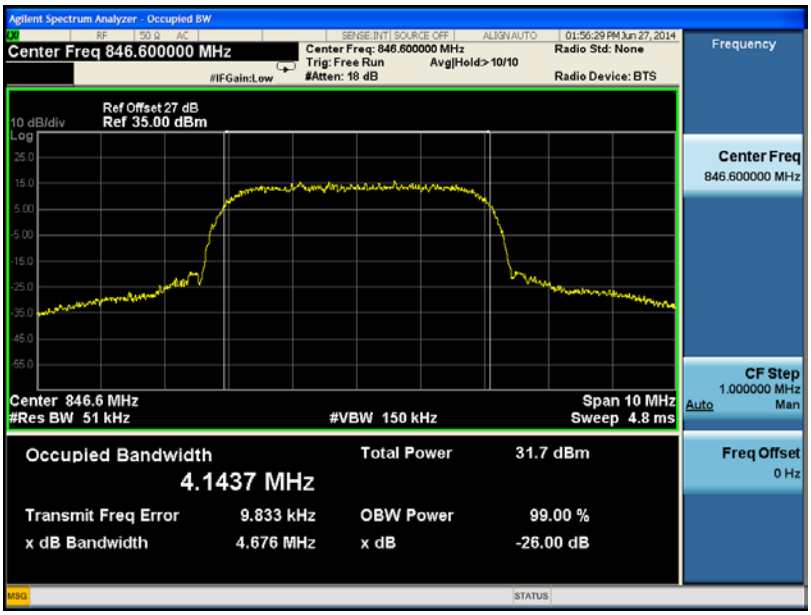


(Plot X: HSUPA1900 MHz Channel = 9538)

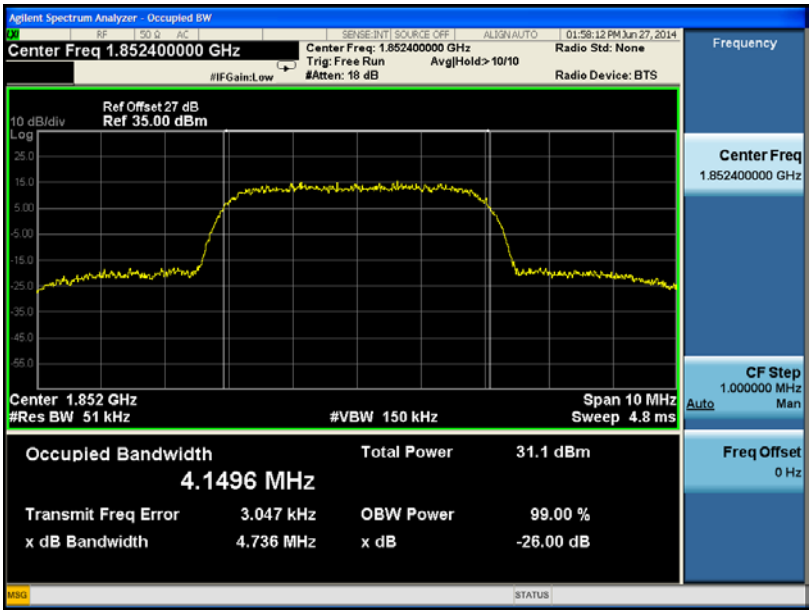


(Plot Y: HSPA+ 850 MHz Channel = 4132)

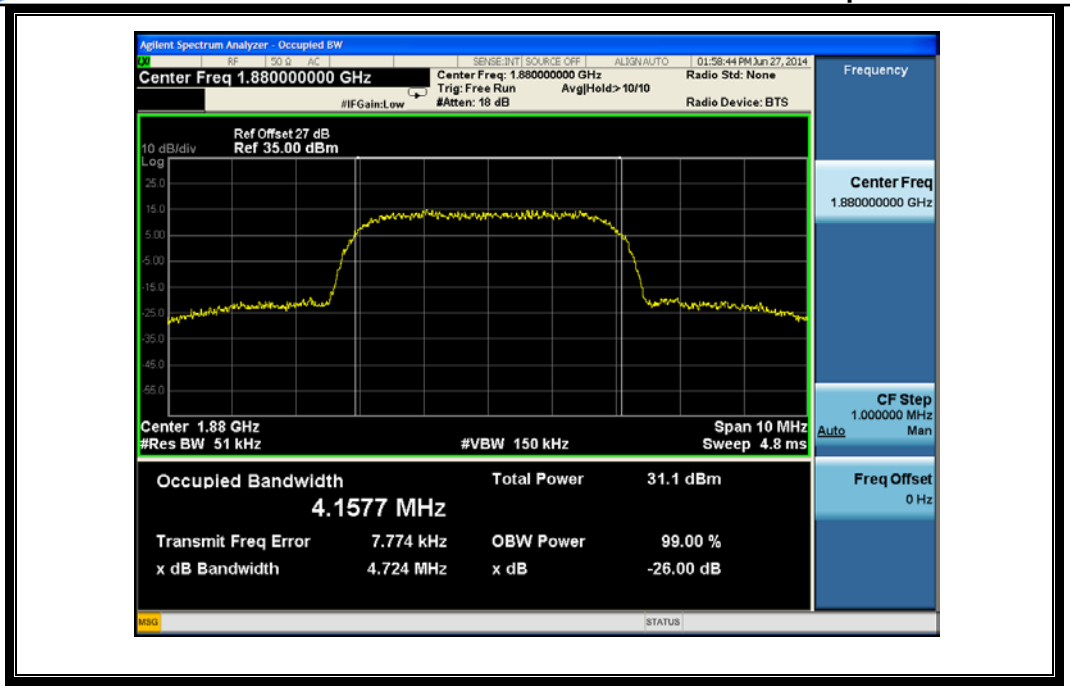
(Plot Z: HSPA+850 MHz Channel = 4175)



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

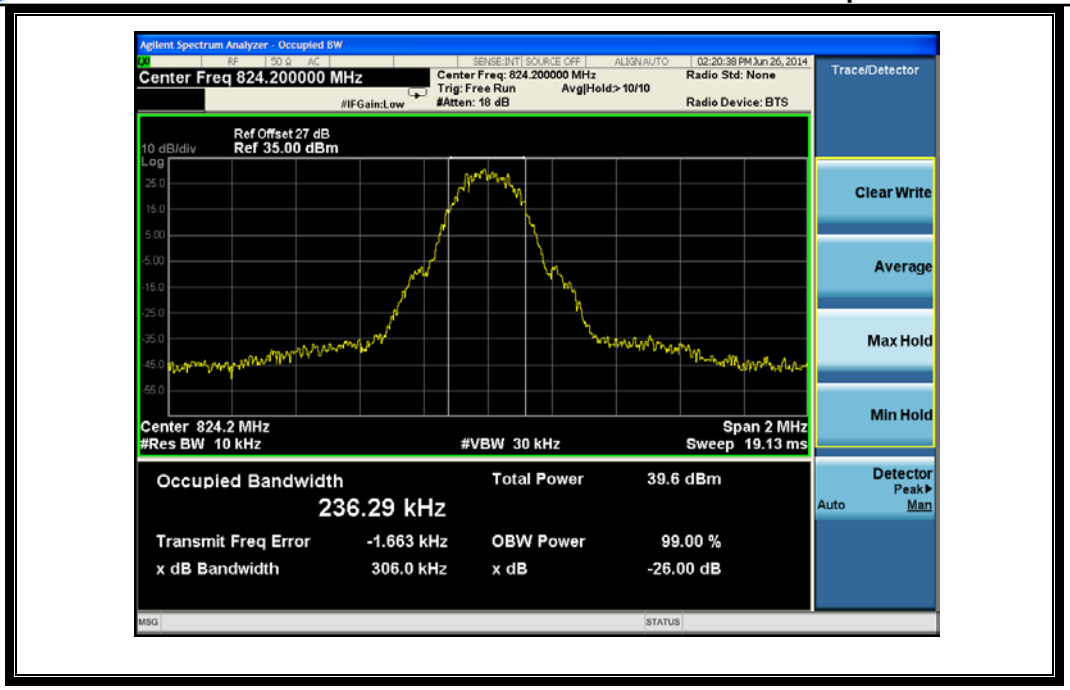


(Plot B1: HSPA+1900 MHz Channel = 9262)

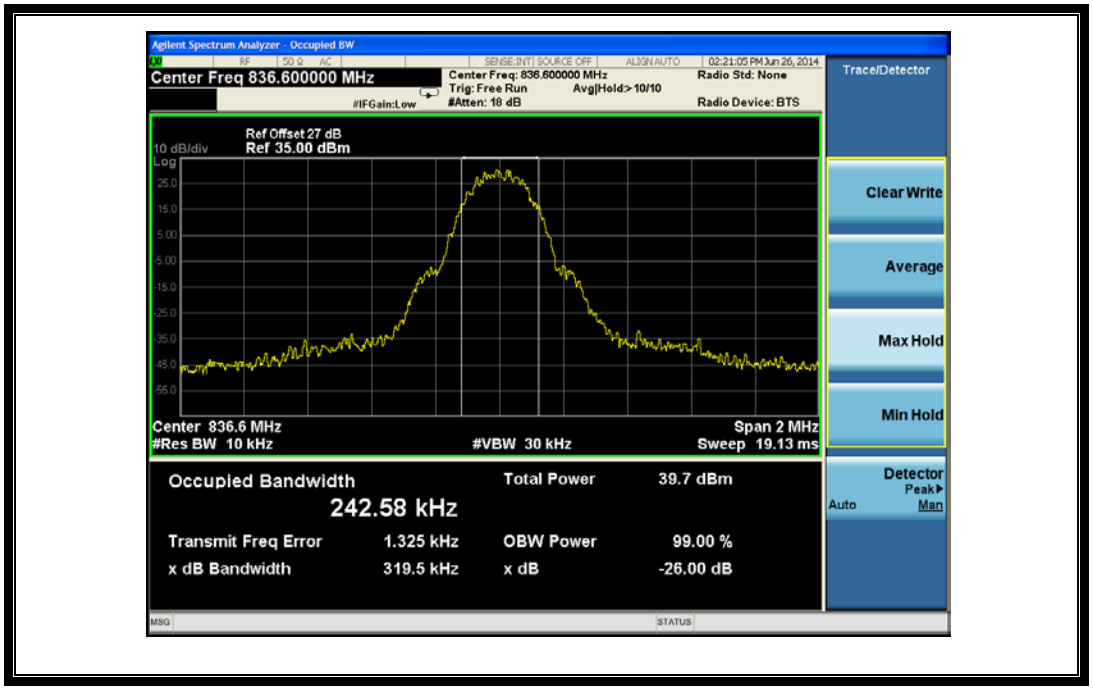


(Plot C1: HSPA+1900 MHz Channel = 9400)

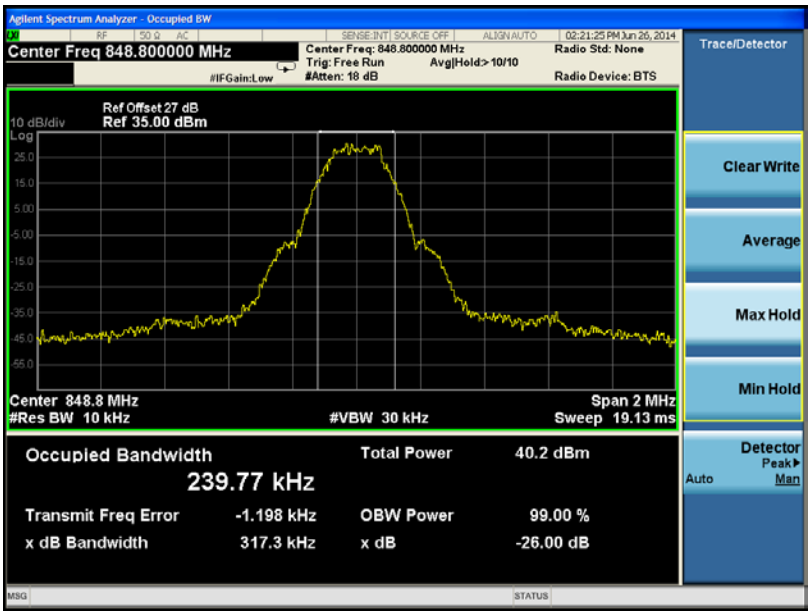
(Plot D1: HSPA+1900 MHz Channel = 9538)



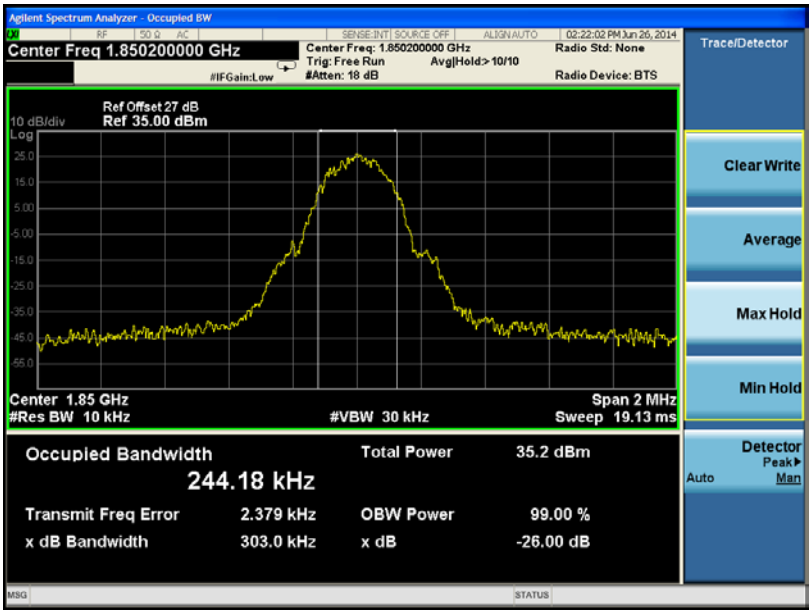
(Plot E1: GSM 850MHz Channel = 128)



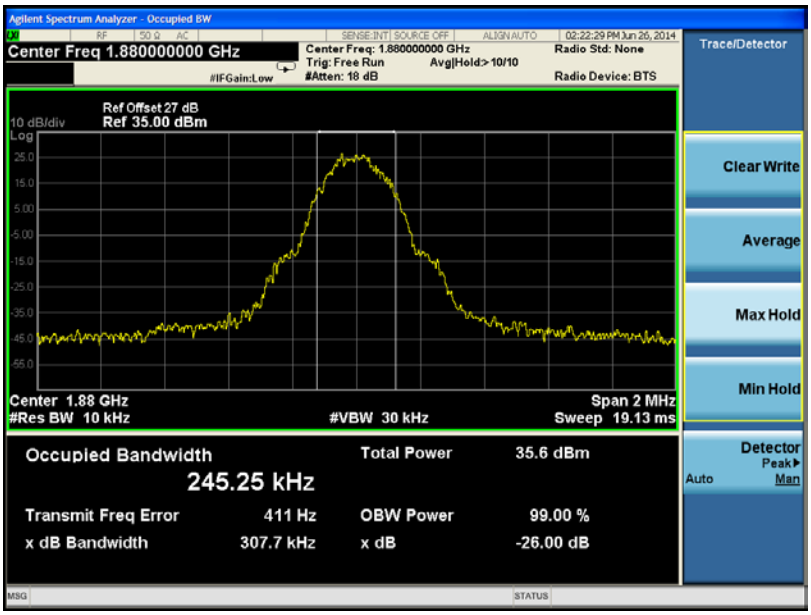
(Plot F1:GSM 850MHz Channel = 190)



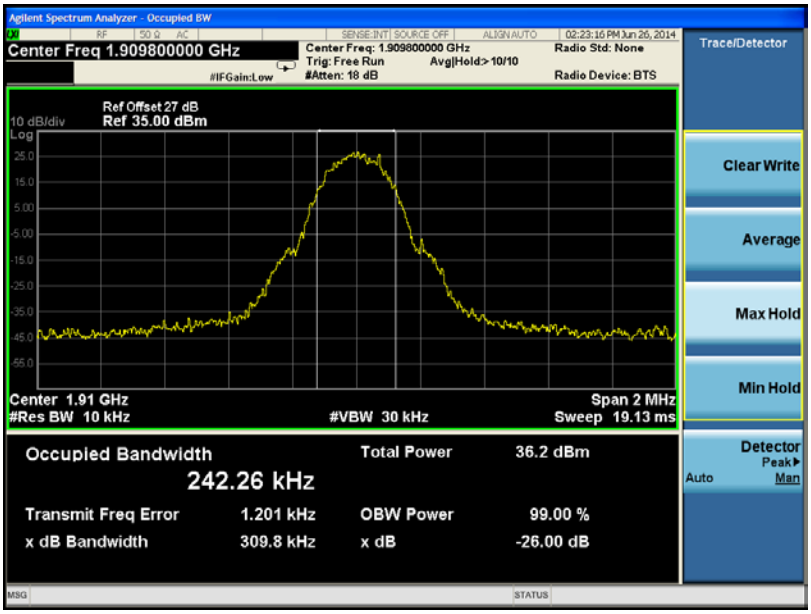
(Plot G1: GSM 850MHz Channel = 251)



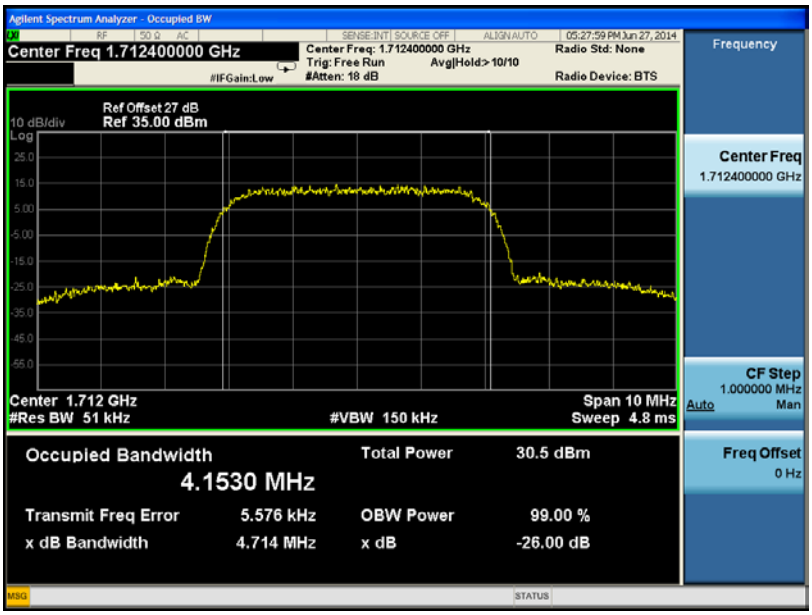
(Plot H1: GSM 1900MHz Channel = 512)



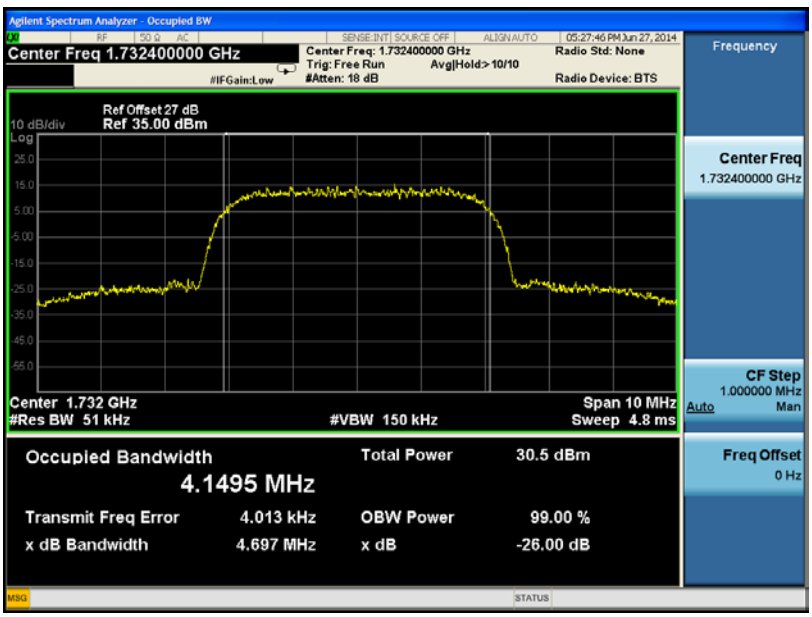
(Plot I1: GSM 1900MHz Channel = 661)



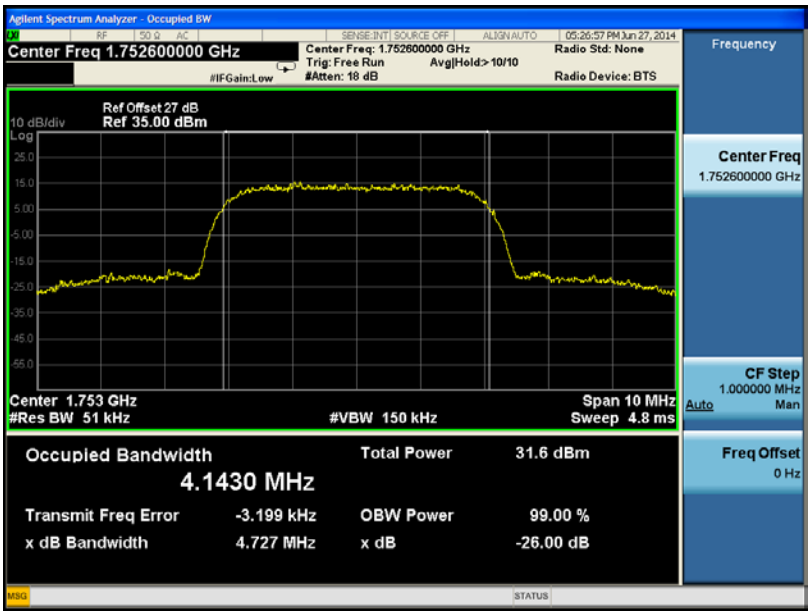
(Plot J1: GSM 1900MHz Channel = 810)



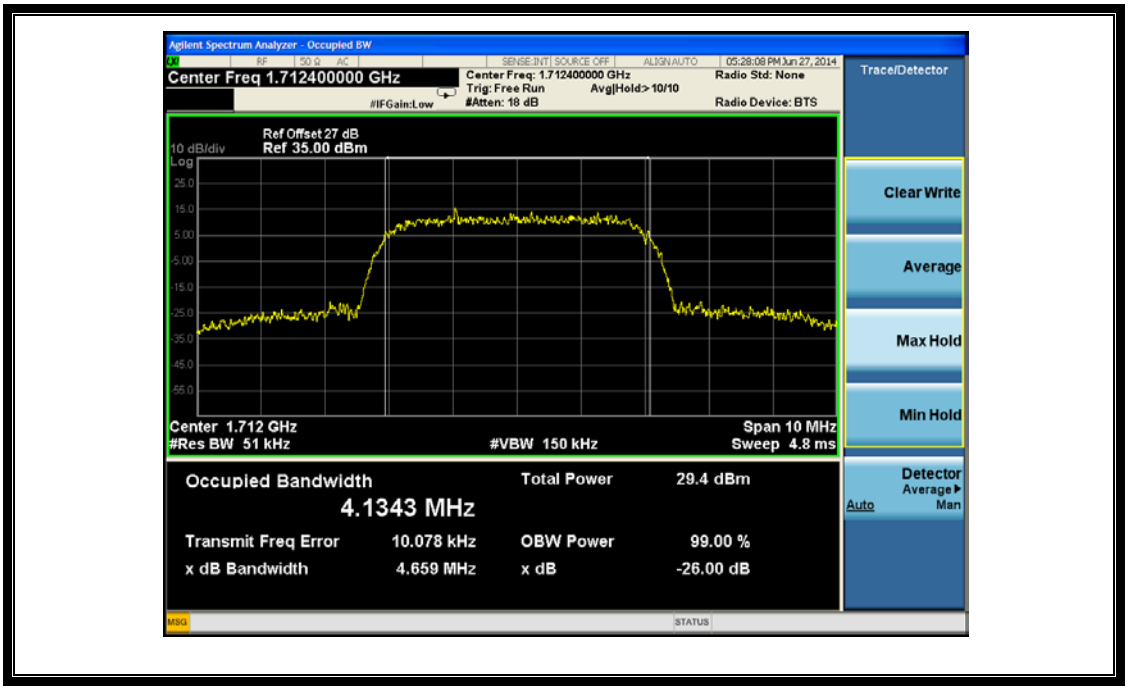
(Plot K1: WCDMA 1700MHz Channel = 1312)



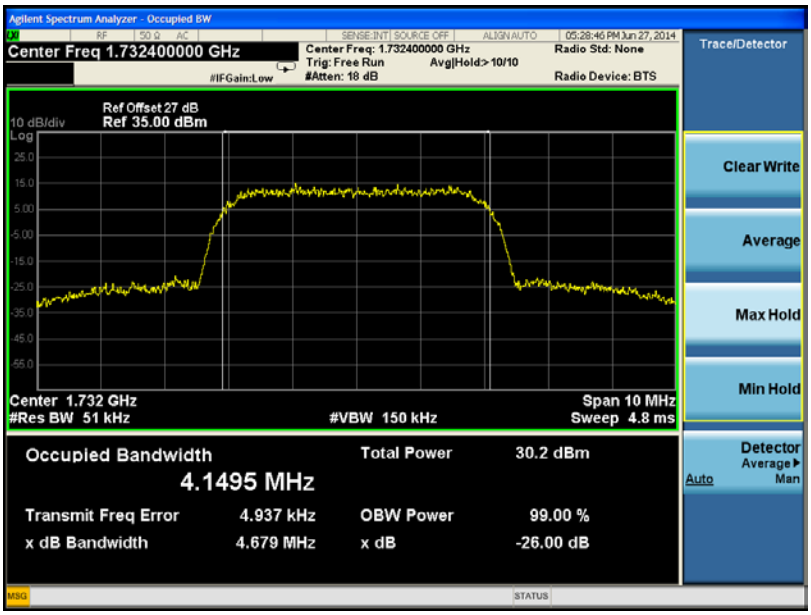
(Plot L1: WCDMA 1700 MHz Channel = 1412)



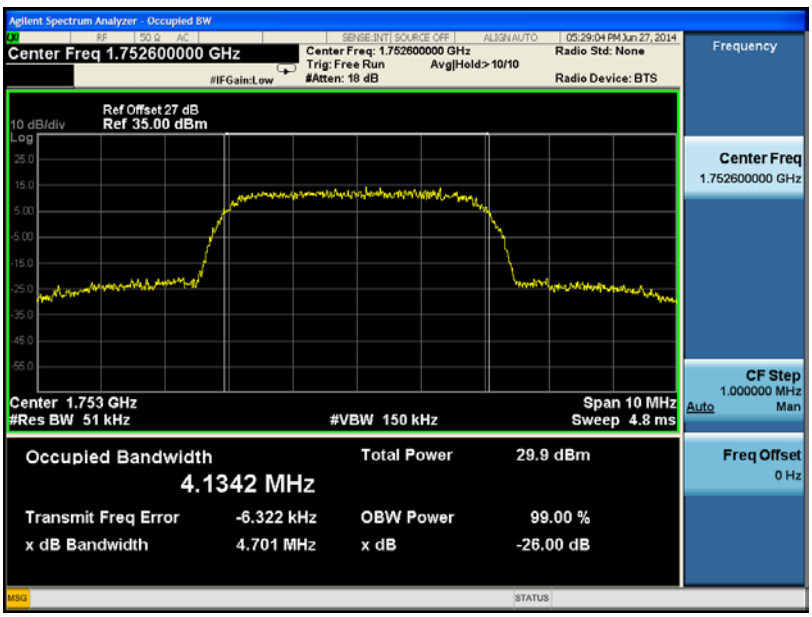
(Plot M1: WCDMA 1700MHz Channel = 1513)



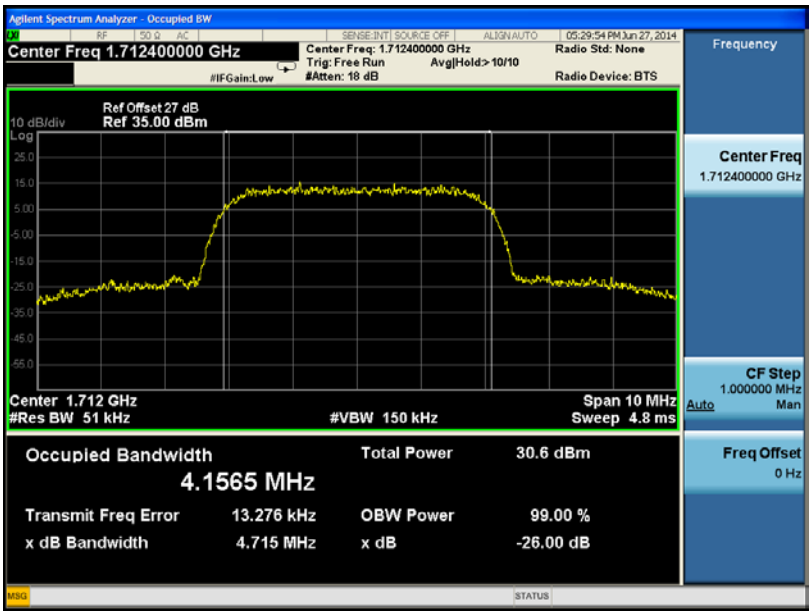
(Plot N1: HSDPA 1700MHz Channel = 1312)



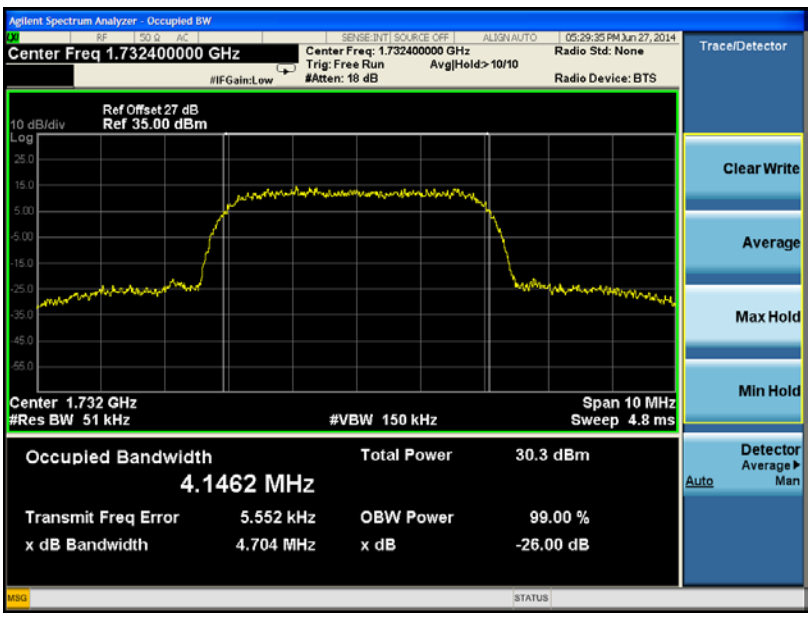
(Plot O1: HSDPA 1700 MHz Channel = 1412)



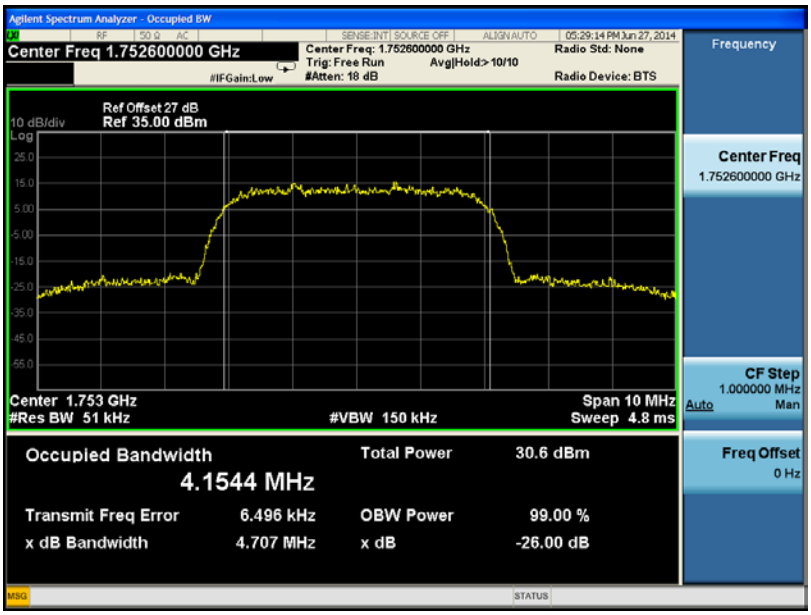
(Plot P1: HSDPA 1700MHz Channel = 1513)



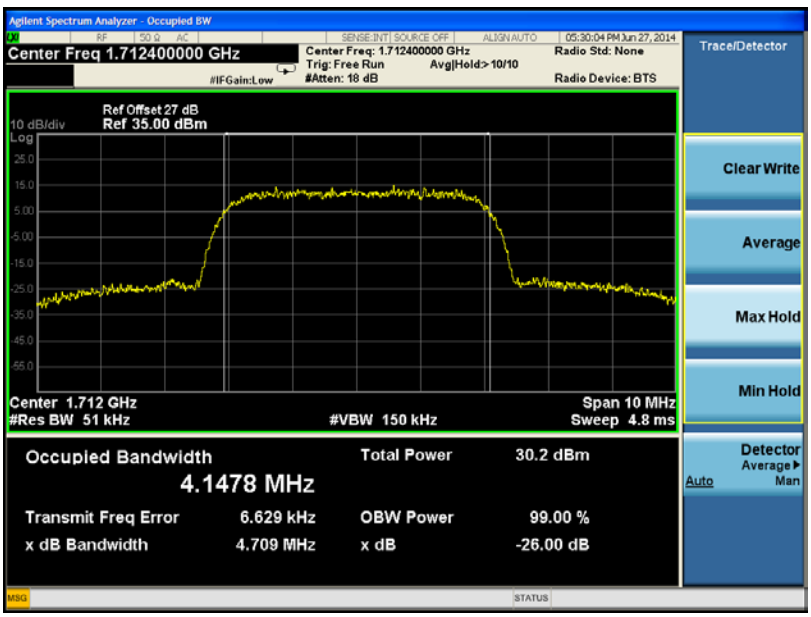
(Plot Q1: HSUPA 1700MHz Channel = 1312)



(Plot R1: HSUPA1700 MHz Channel = 1412)



(Plot S1: HSUPA 1700 MHz Channel = 1513)



(Plot T1:HSPA+1700 MHz Channel = 1312)