

5.5 99%&26DB BANDWIDTH

Test Requirement: FCC 47 CFR Part 2.1049(h),
 GSM 850 & WCDMA Band V & LTE Band 5: FCC 47 CFR Part 22.917(b),
 GSM 1900 & WCDMA Band II & LTE Band 2: FCC 47 CFR Part 24.238(b),
 WCDMA Band IV & LTE Band 4: FCC 47 CFR Part 27.53(h),
 LTE Band 12 & Band 13 & Band 17: FCC 47 CFR Part 27.53(g)
 LTE Band 7: FCC 47 CFR Part 27.50(a)

Test Method: ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01

Limit: No Limit

Test Procedure:

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The 99% and -26dB bandwidths was also measured and recorded.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

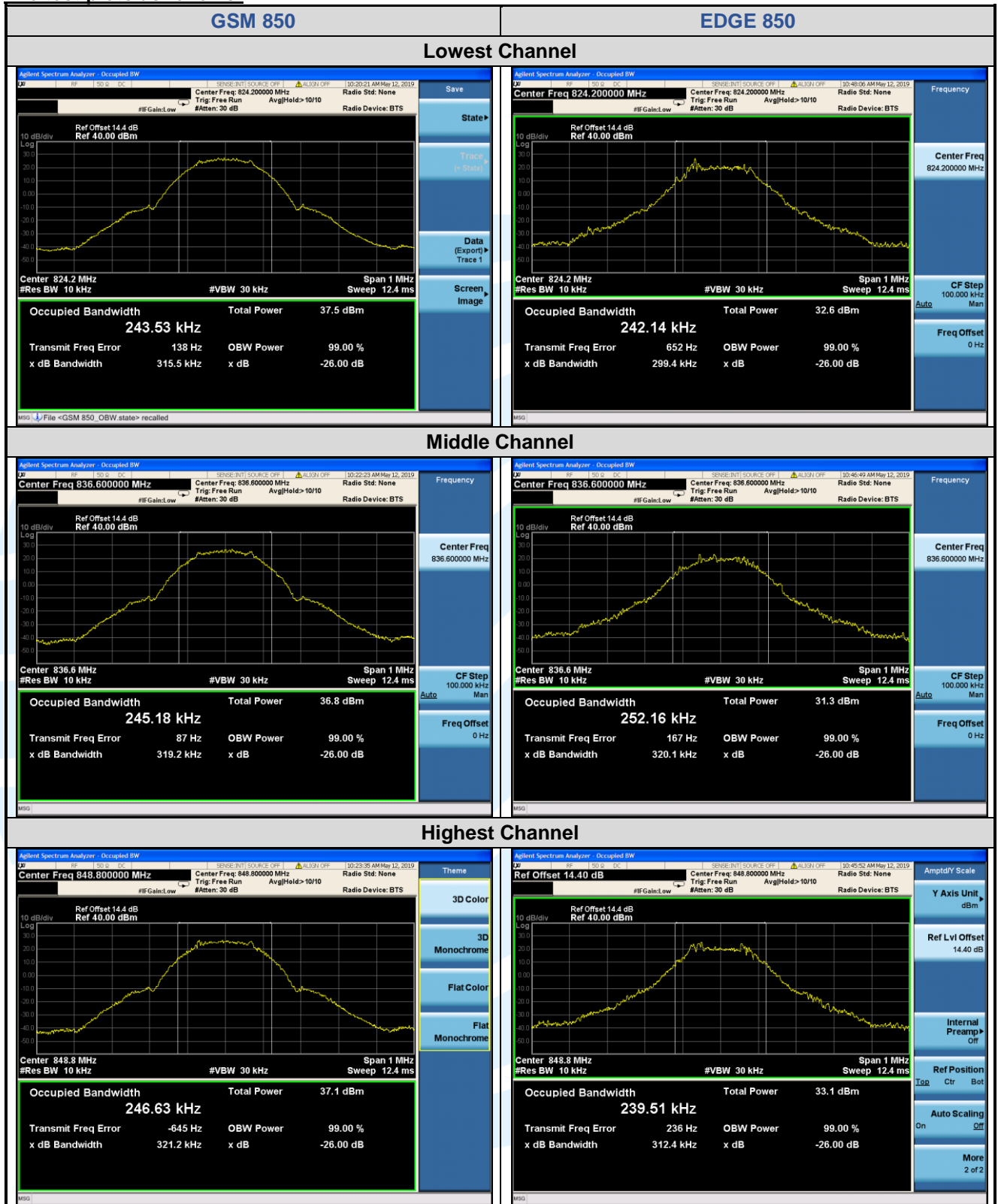
Test Results: Pass

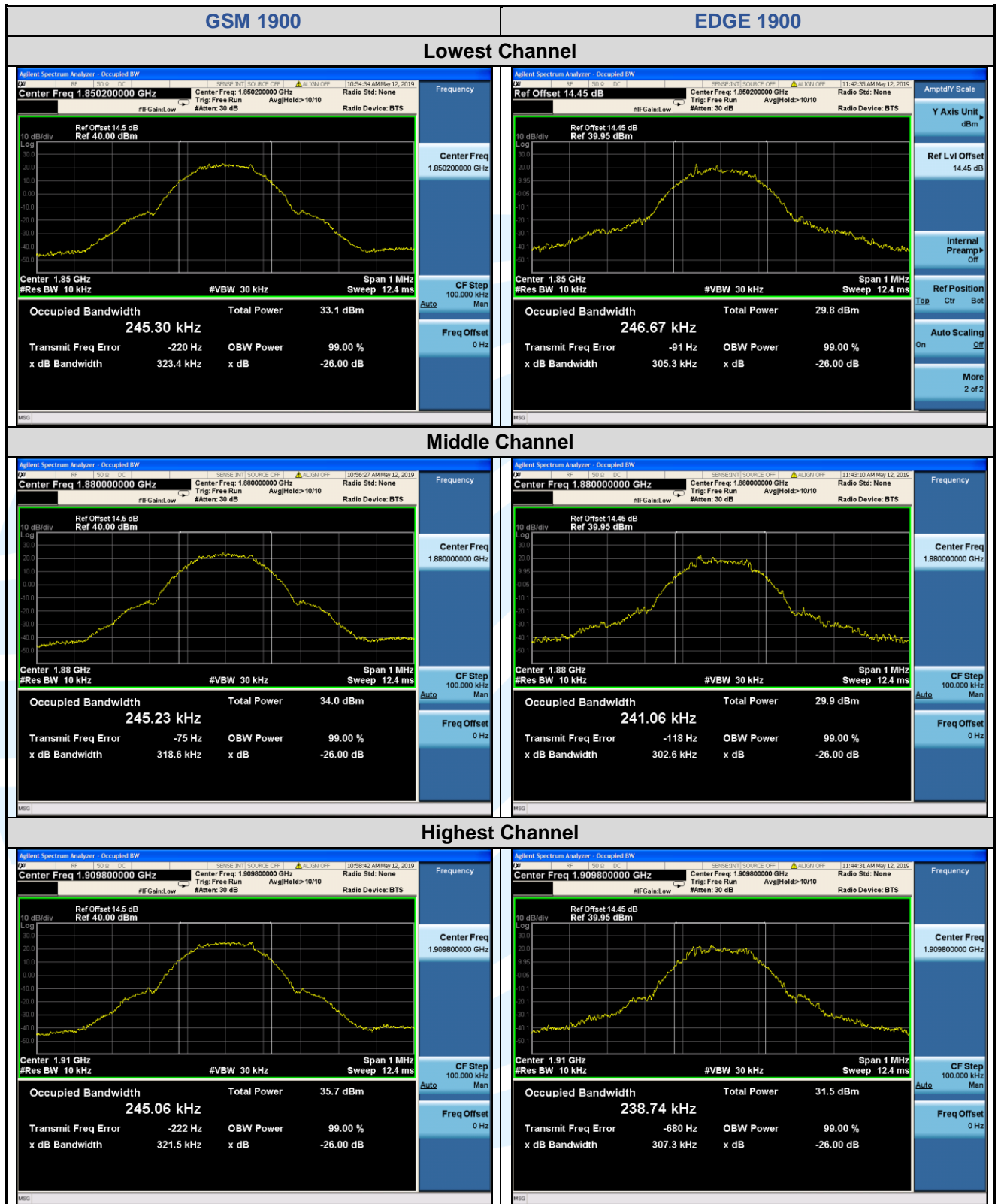
Test Data: See table below

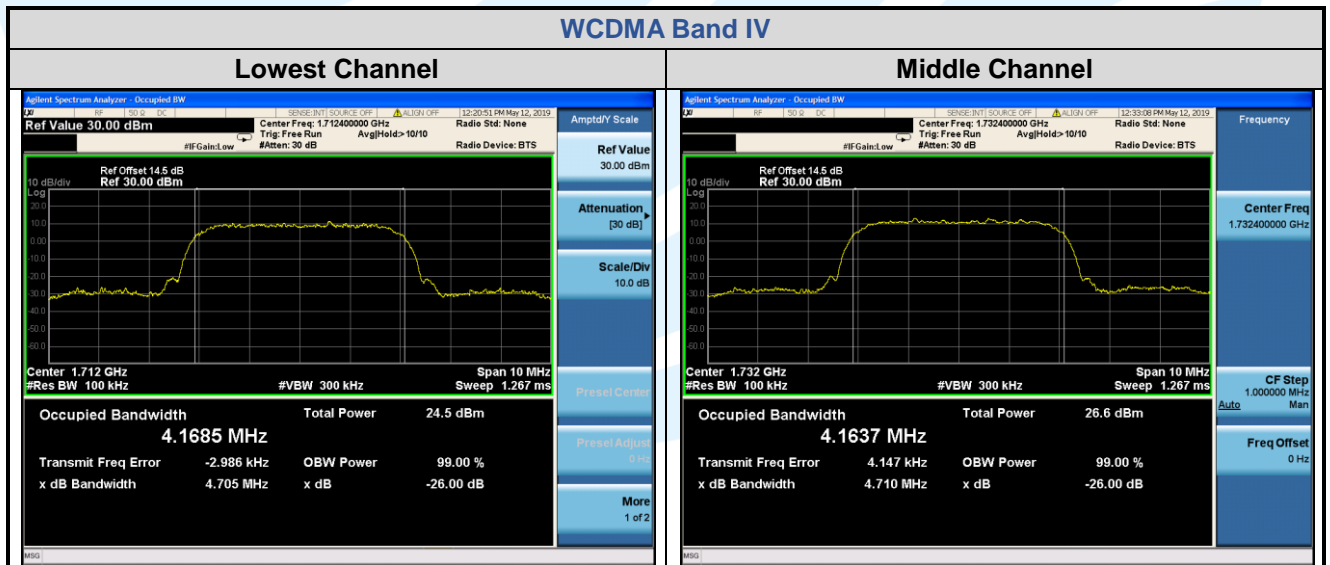
99% & 26 dB Bandwidth				
Test Mode	Channel	Frequency (MHz)	26 dB BW (kHz)	99% BW (kHz)
GSM 850 1Tx-slot	128	824.2	315.5	243.53
	190	836.6	319.2	245.18
	251	848.8	321.2	246.63
EDGE 850 1Tx-slot	128	824.2	299.4	242.14
	190	836.6	320.1	252.16
	251	848.8	312.4	239.51
GSM 1900 1Tx-slot	512	1850.2	323.4	245.30
	661	1880.0	318.6	245.23
	810	1909.8	321.5	245.06
EDGE 1900 1Tx-slot	512	1850.2	305.3	246.67
	661	1880.0	302.6	241.06
	810	1909.8	307.3	238.74

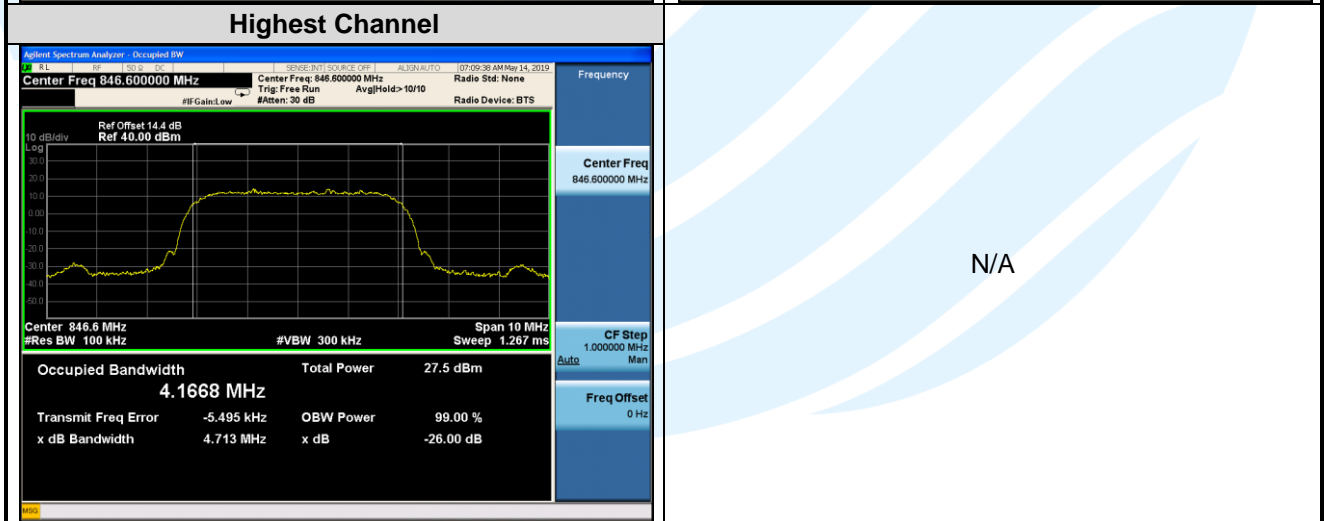
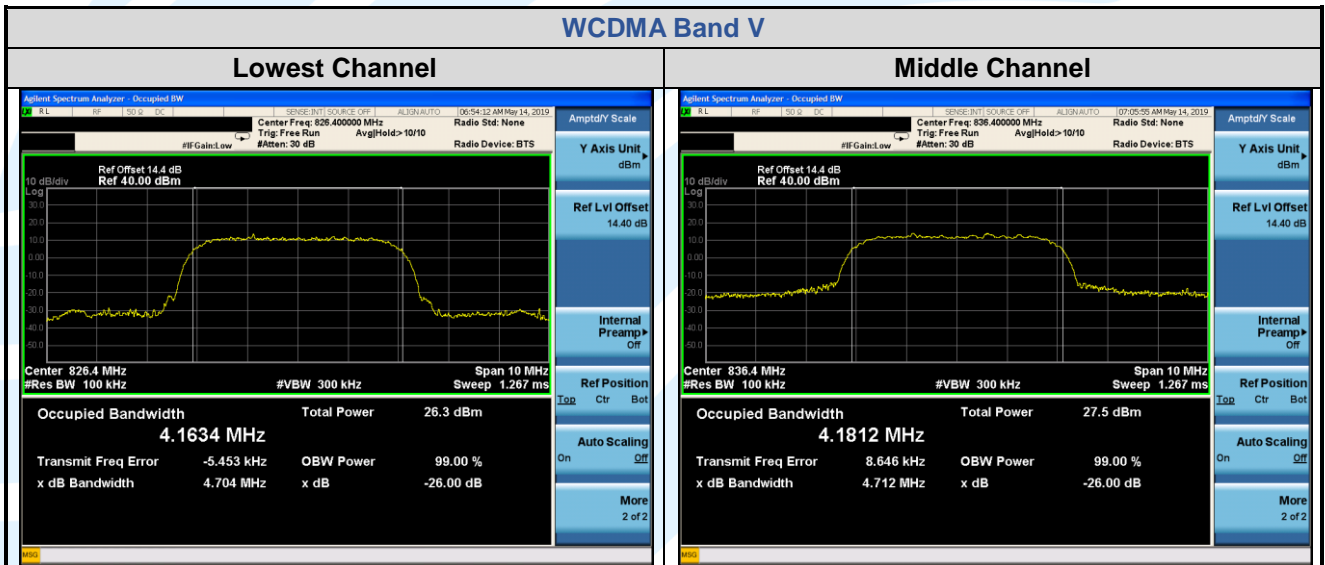
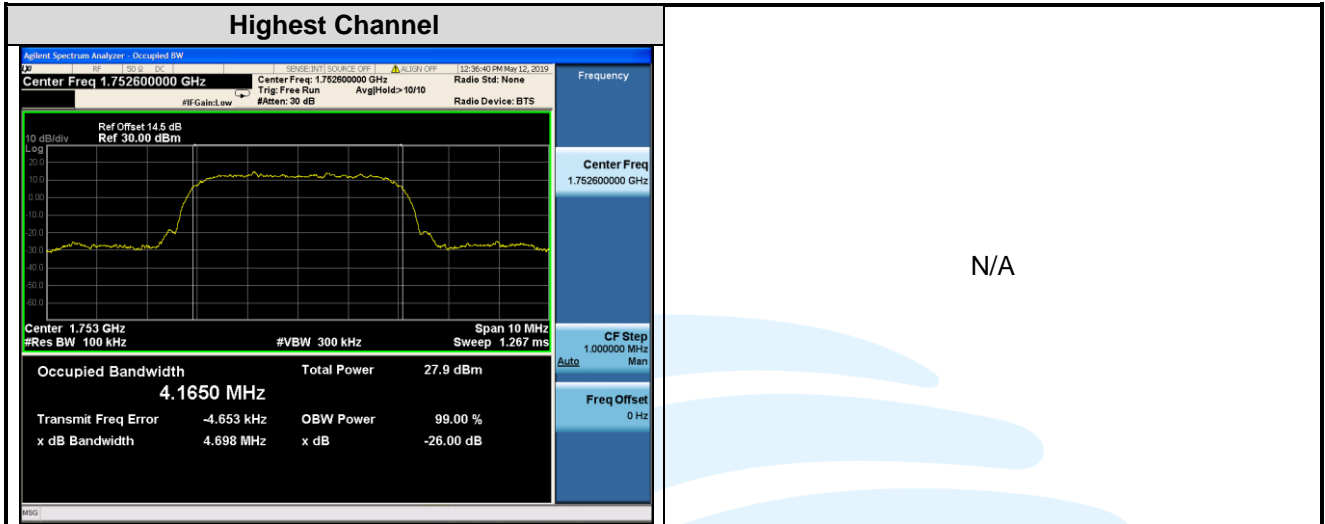
99% & 26 dB Bandwidth				
Test Mode	Channel	Frequency (MHz)	26 dB BW (MHz)	99% BW (MHz)
WCDMA Band II RMC 12.2Kbps	9262	1852.4	4.710	4.1550
	9400	1880.0	4.704	4.1551
	9538	1907.6	4.715	4.1590
WCDMA Band IV RMC 12.2Kbps	1312	1712.4	4.705	4.1685
	1412	1732.4	4.710	4.1637
	1513	1752.6	4.698	4.1650
WCDMA Band V RMC 12.2Kbps	4132	826.4	4.704	4.1634
	4182	836.4	4.712	4.1812
	4233	846.6	4.713	4.1668

The test plots as follows:









Band 2

LTE Band 2								
Channel	RB Configuration		26 dB BW (MHz)			99% BW (MHz)		
	Size	Offset	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Channel Bandwidth: 1.4 MHz								
Lowest	6	0	1.279	1.273	1.270	1.0905	1.0913	1.0954
Middle	6	0	1.274	1.275	1.266	1.0896	1.0901	1.0953
Highest	6	0	1.367	1.331	1.290	1.0996	1.0990	1.0979
Channel Bandwidth: 3 MHz								
Lowest	15	0	2.870	2.869	2.910	2.6841	2.6862	2.6884
Middle	15	0	2.860	2.872	2.919	2.6825	2.6831	2.6900
Highest	15	0	2.923	2.901	2.932	2.6859	2.6856	2.6915
Channel Bandwidth: 5 MHz								
Lowest	25	0	4.968	4.975	5.213	4.4727	4.4705	4.5179
Middle	25	0	4.953	5.011	5.172	4.4735	4.4733	4.5122
Highest	25	0	4.987	4.982	5.289	4.4710	4.4762	4.5254
Channel Bandwidth: 10 MHz								
Lowest	50	0	9.503	9.485	10.09	8.9191	9.9204	9.0400
Middle	50	0	9.417	9.413	10.12	8.9241	8.9182	9.0418
Highest	50	0	9.487	9.498	10.16	8.9267	8.9319	9.0364
Channel Bandwidth: 15 MHz								
Lowest	75	0	14.01	14.02	14.99	13.391	13.383	13.491
Middle	75	0	14.01	14.04	14.96	13.397	13.402	13.507
Highest	75	0	14.13	14.19	15.06	13.431	13.433	13.527
Channel Bandwidth: 20 MHz								
Lowest	100	0	19.77	19.76	19.60	17.973	17.971	17.898
Middle	100	0	19.69	19.79	19.67	17.975	17.984	17.935
Highest	100	0	20.37	30.32	20.02	18.162	18.155	18.041

