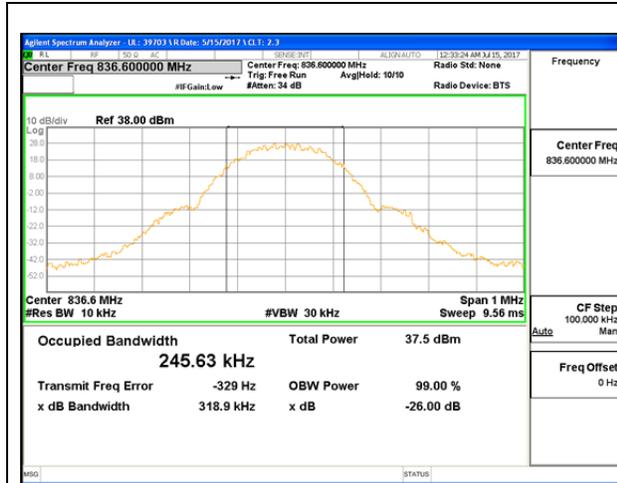


### 13.1. OCCUPIED BANDWIDTH RESULTS AND PLOTS

**GSM**

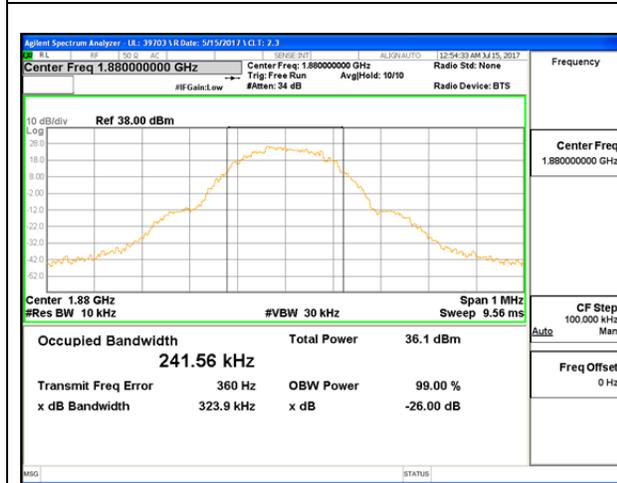
Band	Mode	Channel	f (MHz)	99% BW (kHz)	-26dB (kHz)
GSM 850	GPRS	128	824.2	244.4	319
		190	836.6	245.6	318.9
		251	848.8	243.9	310.4
	EGPRS	128	824.2	229.1	295
		190	836.6	240.5	320.1
		251	848.8	237.2	286.7
GSM 1900	GPRS	512	1850.2	244.4	319
		661	1880	245.6	318.9
		810	1909.8	243.9	310.4
	EGPRS	512	1850.2	229.1	295
		661	1880	240.5	320.1
		810	1909.8	237.2	286.7



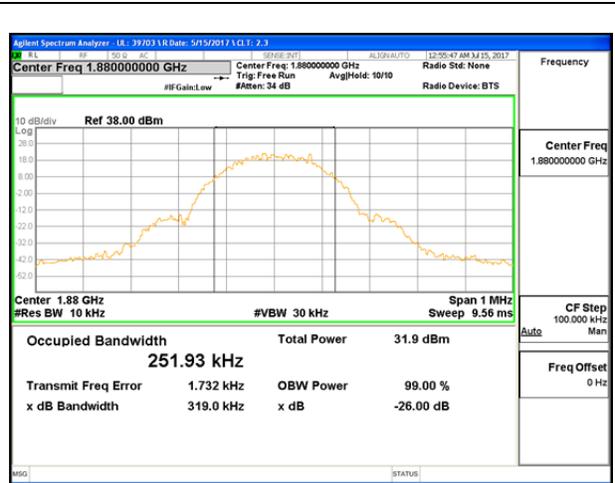
GSM850 GPRS Middle Channel



GSM850 EGPRS Middle Channel



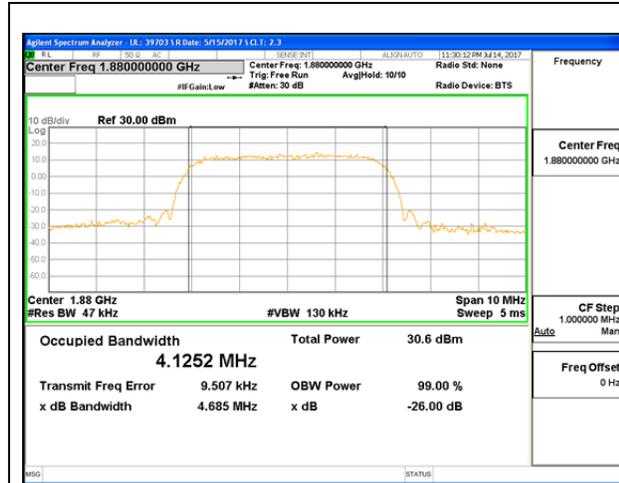
GSM1900 GPRS Middle Channel



GSM1900 EGPRS Middle Channel

**WCDMA**

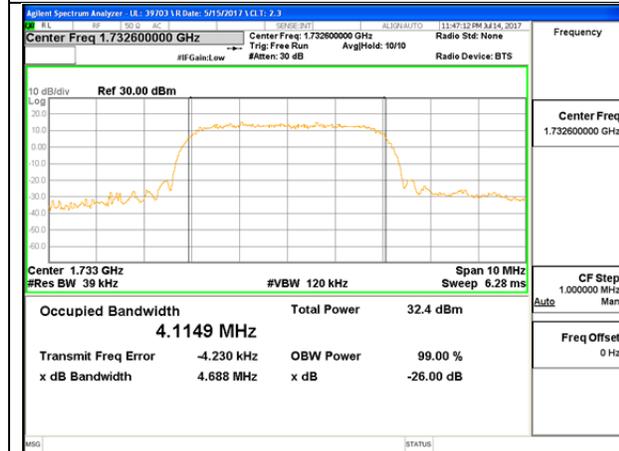
Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB (MHz)
Band 2	REL99	9262	1852.4	4.127	4.686
		9400	1880	4.125	4.685
		9538	1907.6	4.114	4.689
	HSDPA	9262	1852.4	4.119	4.665
		9400	1880	4.13	4.687
		9538	1907.6	4.135	4.675
Band 4	REL99	9262	1712.4	4.132	4.659
		9400	1732.6	4.115	4.688
		9538	1752.6	4.137	4.7
	HSDPA	9262	1712.4	4.138	4.672
		9400	1732.6	4.138	4.682
		9538	1752.6	4.14	4.68
Band 5	REL99	4132	826.4	4.129	4.699
		4183	836.6	4.122	4.674
		4233	846.6	4.131	4.69
	HSDPA	4132	826.4	4.121	4.703
		4183	836.6	4.127	4.698
		4233	846.6	4.119	4.693



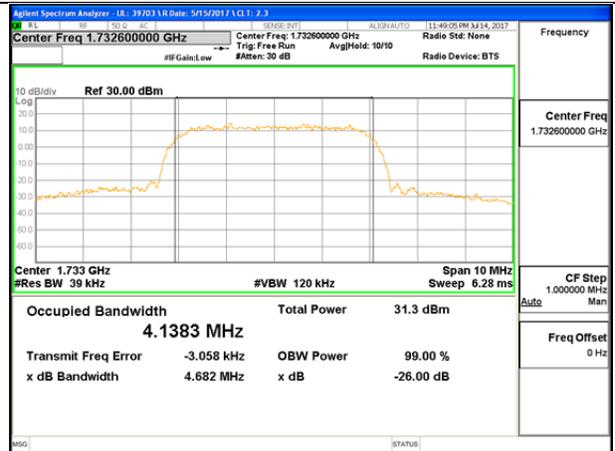
B2 REL99 Middle Channel



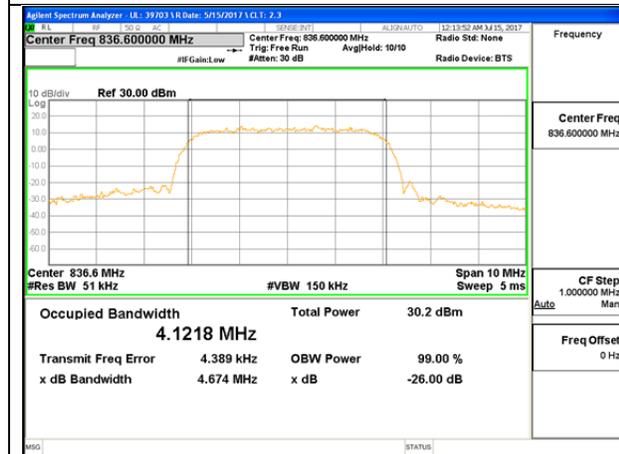
B2 HSDPA Middle Channel



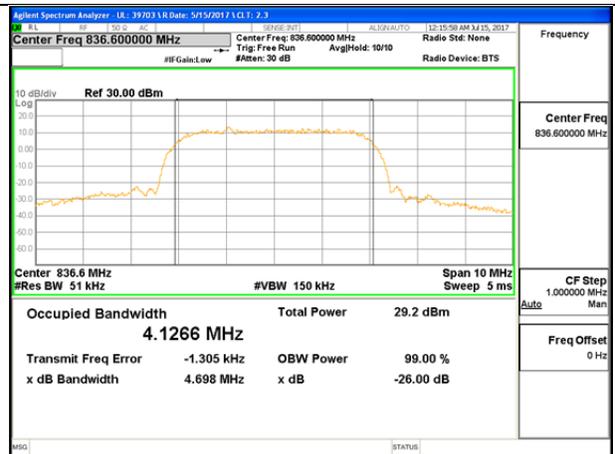
B4 REL99 Middle Channel



B4 HSDPA Middle Channel



B5 REL99 Middle Channel

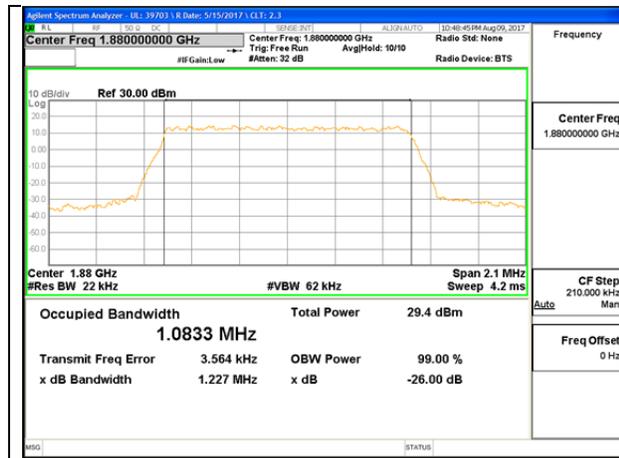


B5 HSDPA Middle Channel

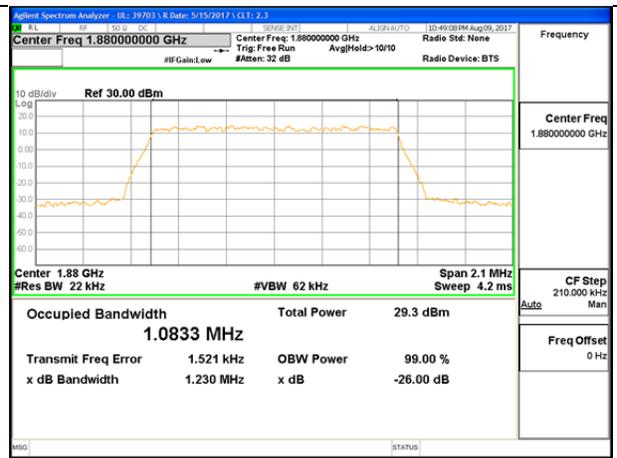
**LTE Band 2**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE2	1.4	QPSK	6/0	1850.7	1.09	1.23
			6/0	1880	1.08	1.23
			6/0	1909.3	1.09	1.24
		16QAM	6/0	1850.7	1.08	1.23
			6/0	1880	1.08	1.23
			6/0	1909.3	1.09	1.23
	3	QPSK	15/0	1851.5	2.69	2.95
			15/0	1880	2.70	2.97
			15/0	1908.5	2.70	2.98
		16QAM	15/0	1851.5	2.70	3.00
			15/0	1880	2.70	2.95
			15/0	1908.5	2.70	2.99
	5	QPSK	25/0	1852.5	4.50	4.90
			25/0	1880	4.51	4.94
			25/0	1907.5	4.49	4.92
		16QAM	25/0	1852.5	4.48	4.91
			25/0	1880	4.50	4.96
			25/0	1907.5	4.49	4.93
	10	QPSK	50/0	1855	8.98	9.72
			50/0	1880	8.97	9.83
			50/0	1905	8.97	9.81
16QAM		50/0	1855	9.00	9.75	
		50/0	1880	8.97	9.81	
		50/0	1905	8.96	9.77	

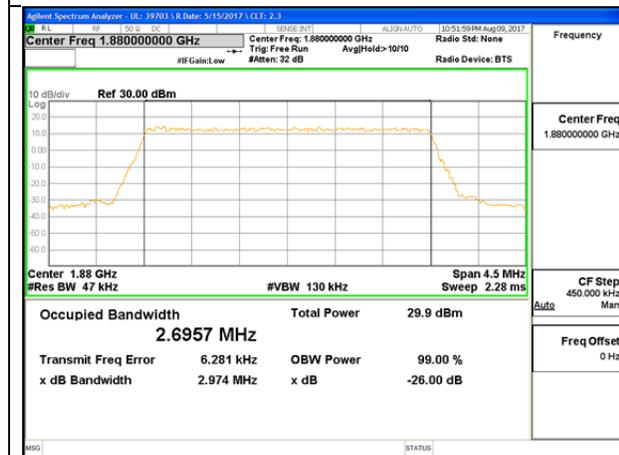
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE2	15	QPSK	75/0	1857.5	13.41	14.53
			75/0	1880	13.43	14.48
			75/0	1902.5	13.43	14.61
		16QAM	75/0	1857.5	13.42	14.53
			75/0	1880	13.44	14.63
			75/0	1902.5	13.42	14.58
	20	QPSK	100/0	1860	17.86	19.28
			100/0	1880	17.93	19.62
			100/0	1900	17.94	19.41
		16QAM	100/0	1860	17.88	19.36
			100/0	1880	17.93	19.34
			100/0	1900	17.92	19.22



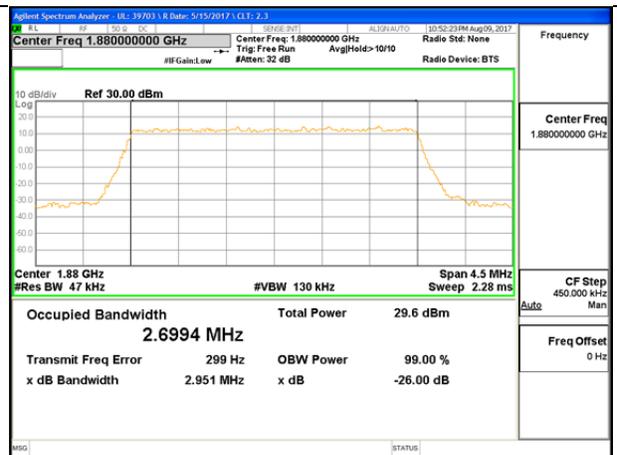
LTE B2 1.4MHz QPSK Middle Channel



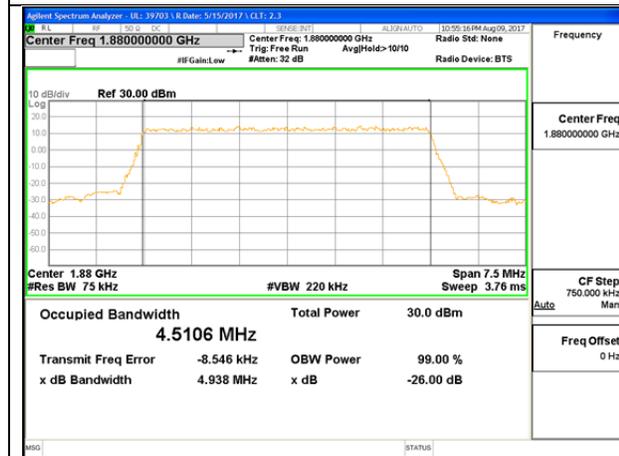
LTE B2 1.4MHz 16QAM Middle Channel



LTE B2 3MHz QPSK Middle Channel



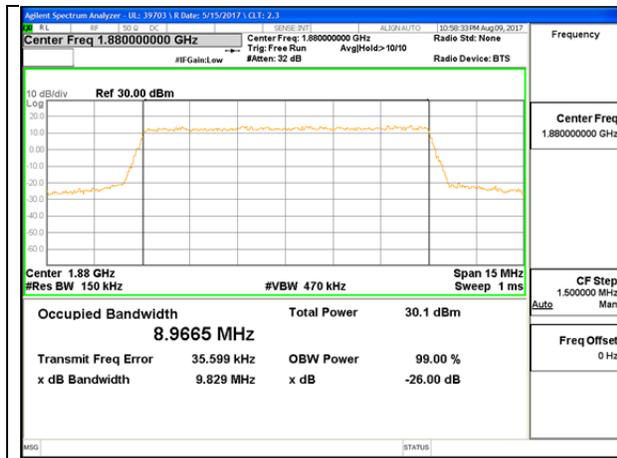
LTE B2 3MHz 16QAM Middle Channel



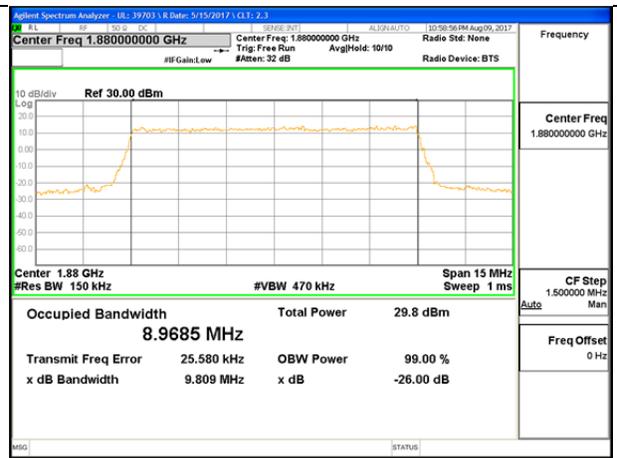
LTE B2 5MHz QPSK Middle Channel



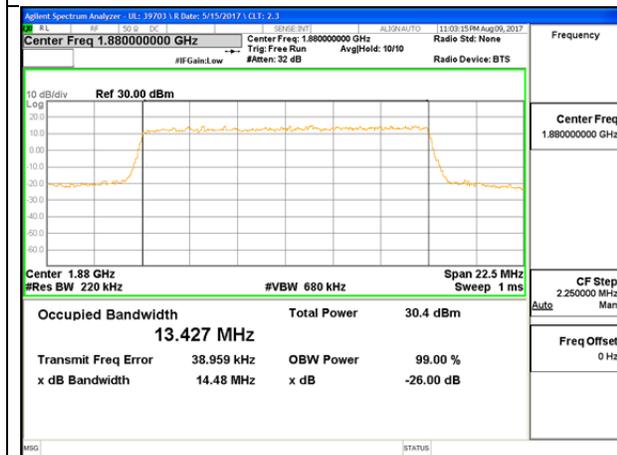
LTE B2 5MHz 16QAM Middle Channel



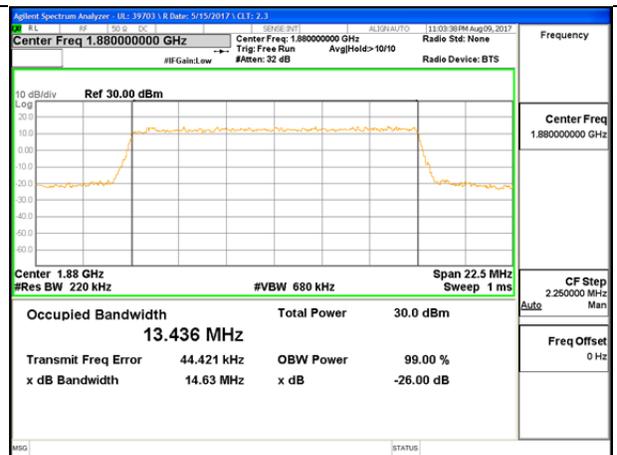
LTE B2 10MHz QPSK Middle Channel



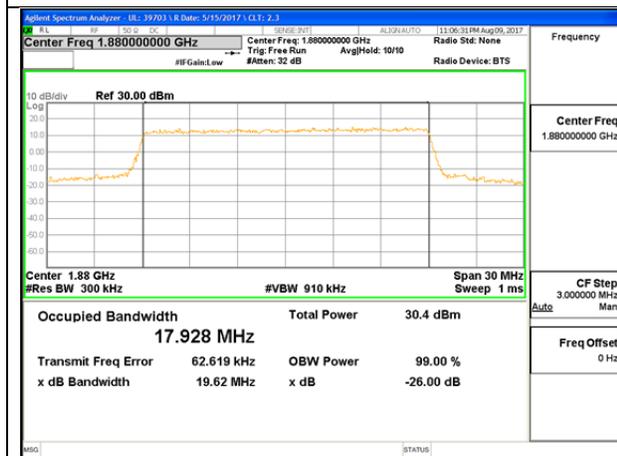
LTE B2 10MHz 16QAM Middle Channel



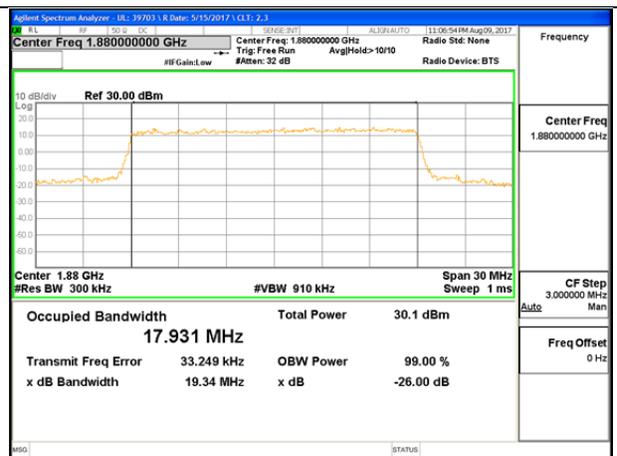
LTE B2 15MHz QPSK Middle Channel



LTE B2 15MHz 16QAM Middle Channel



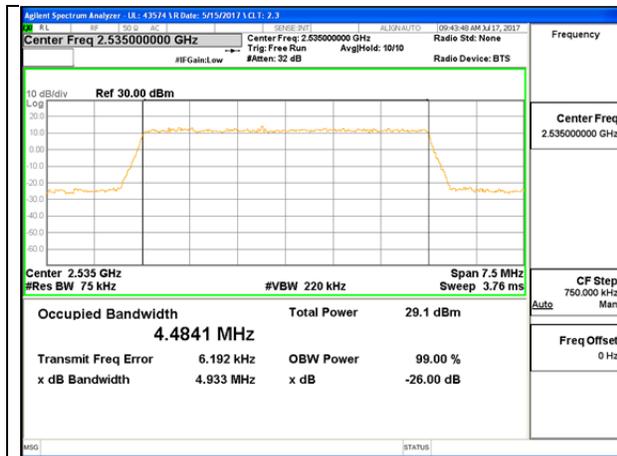
LTE B25 20MHz QPSK Middle Channel



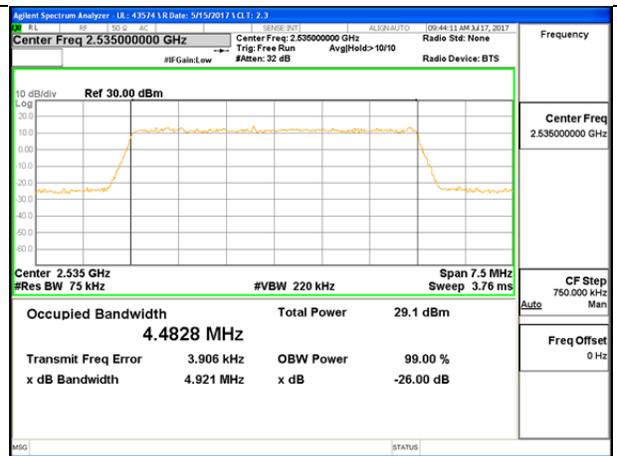
LTE B2 20MHz 16QAM Middle Channel

**LTE Band 7**

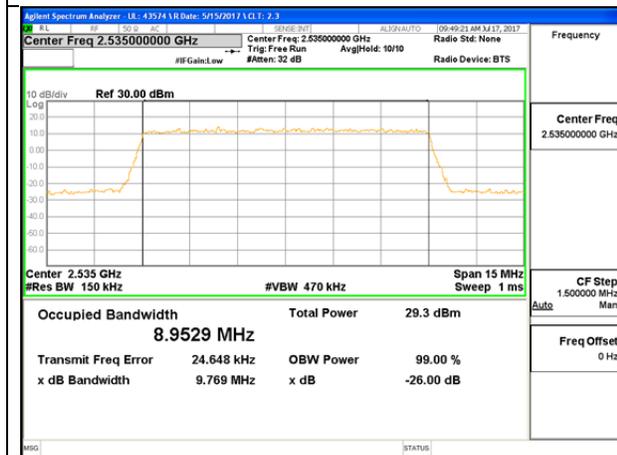
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE7	5	QPSK	50/0	2502.5	4.50	4.94
			50/0	2535	4.48	4.92
			50/0	2567.5	4.50	4.95
		16QAM	25/0	2502.5	4.49	4.93
			25/0	2535	4.48	4.93
			25/0	2567.5	4.49	4.95
	10	QPSK	1/0	2505	8.96	9.76
			50/0	2535	8.96	9.78
			1/0	2565	8.96	9.77
		16QAM	50/0	2505	8.96	9.68
			50/0	2535	8.95	9.77
			50/0	2565	8.96	9.72
	15	QPSK	1/0	2507.5	13.43	14.53
			75/0	2535	13.40	14.52
			1/0	2562.5	13.43	14.63
		16QAM	1/0	2507.5	13.45	14.53
			75/0	2535	13.41	14.54
			75/0	2562.5	13.42	14.49
	20	QPSK	1/0	2510	17.87	19.21
			100/0	2535	17.87	19.18
			1/0	2560	17.92	19.30
16QAM		100/0	2510	17.92	19.20	
		100/0	2535	17.85	19.17	
		100/0	2560	17.91	19.30	



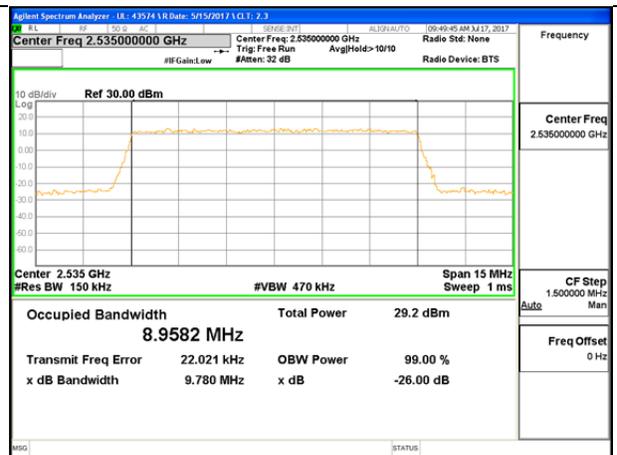
LTE B7 5MHz QPSK Middle Channel



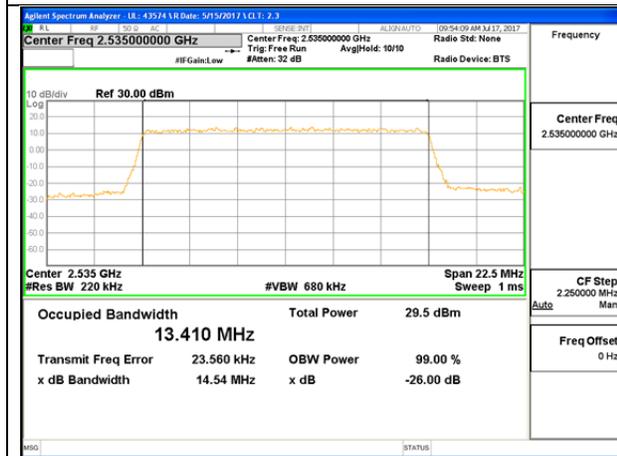
LTE B7 5MHz 16QAM Middle Channel



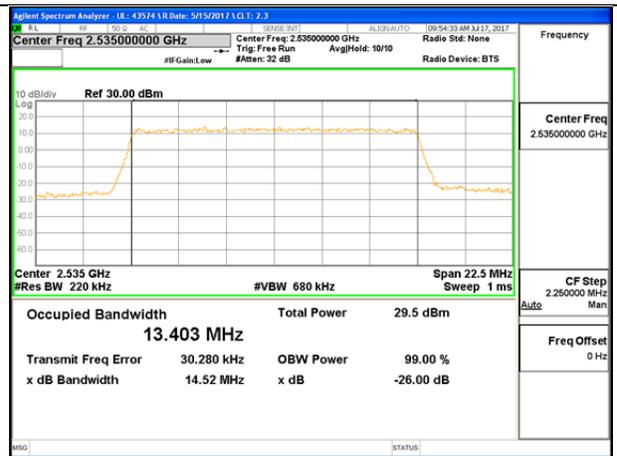
LTE B7 10MHz QPSK Middle Channel



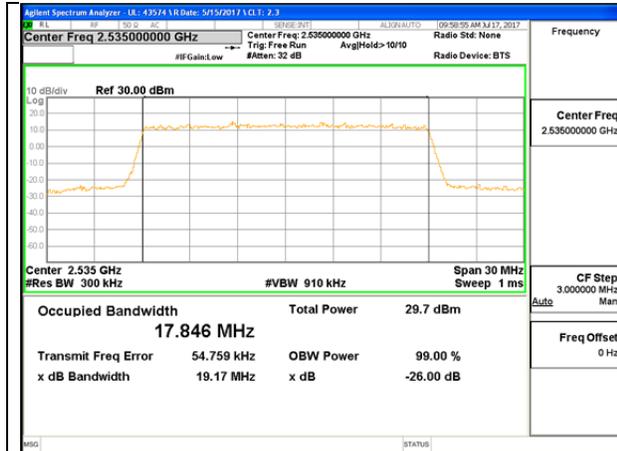
LTE B7 10MHz 16QAM Middle Channel



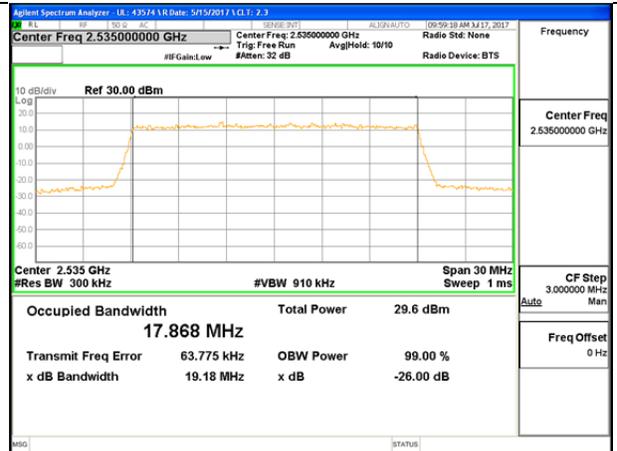
LTE B7 15MHz QPSK Middle Channel



LTE B7 15MHz 16QAM Middle Channel



LTE B7 20MHz QPSK Middle Channel



LTE B7 20MHz 16QAM Middle Channel

**LTE Band 12**

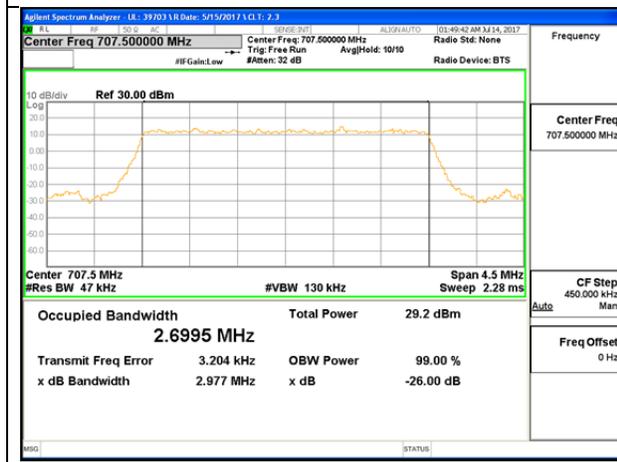
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE12	1.4	QPSK	6/0	699.7	1.08	1.23
			6/0	707.5	1.08	1.23
			6/0	715.3	1.10	1.24
		16QAM	6/0	699.7	1.09	1.24
			6/0	707.5	1.08	1.23
			6/0	715.3	1.09	1.23
	3	QPSK	15/0	700.5	2.70	3.00
			15/0	707.5	2.70	3.01
			15/0	714.5	2.70	3.00
		16QAM	15/0	700.5	2.70	3.00
			15/0	707.5	2.70	2.98
			15/0	714.5	2.70	3.00
	5	QPSK	25/0	701.5	4.48	4.91
			25/0	707.5	4.50	4.97
			25/0	713.5	4.49	4.92
		16QAM	25/0	701.5	4.50	4.91
			25/0	707.5	4.52	4.96
			25/0	713.5	4.49	4.91
	10	QPSK	50/0	704	8.96	9.82
			50/0	707.5	8.94	9.76
			50/0	711	8.97	9.79
16QAM		50/0	704	8.96	9.84	
		50/0	707.5	8.98	9.74	
		50/0	711	8.96	9.88	



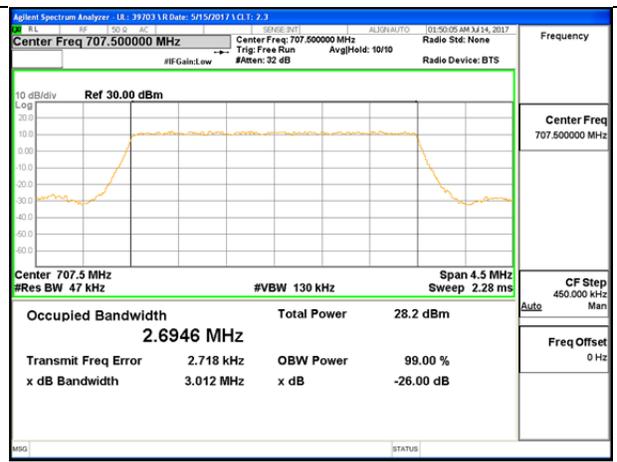
LTE B12 1.4MHz QPSK Middle Channel



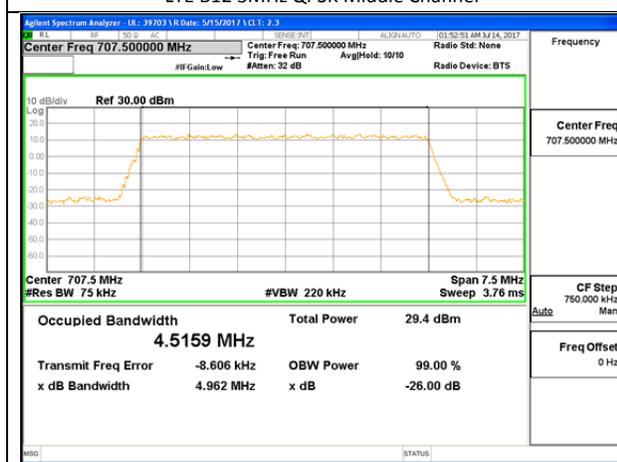
LTE B12 1.4MHz 16QAM Middle Channel



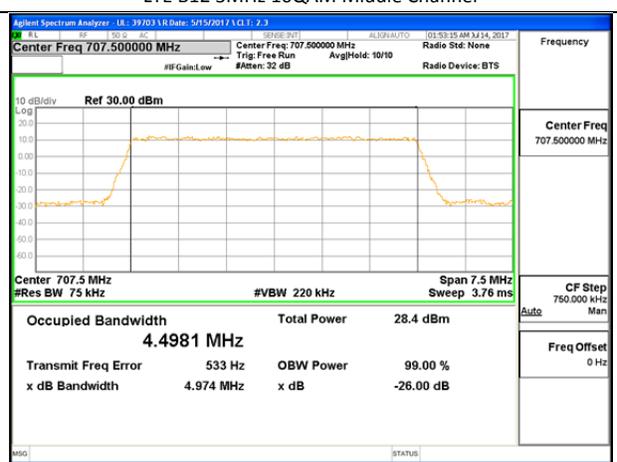
LTE B12 3MHz QPSK Middle Channel



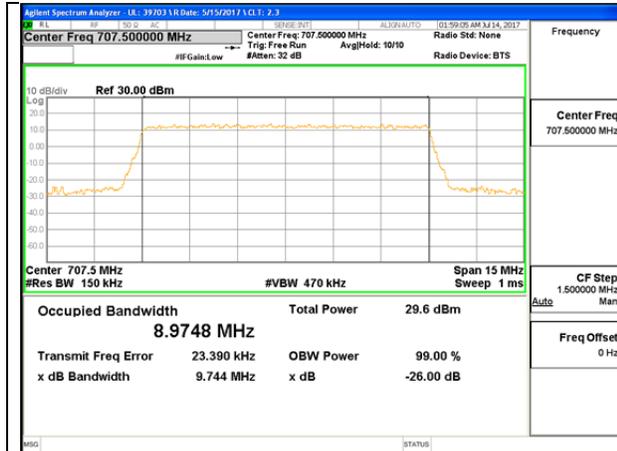
LTE B12 3MHz 16QAM Middle Channel



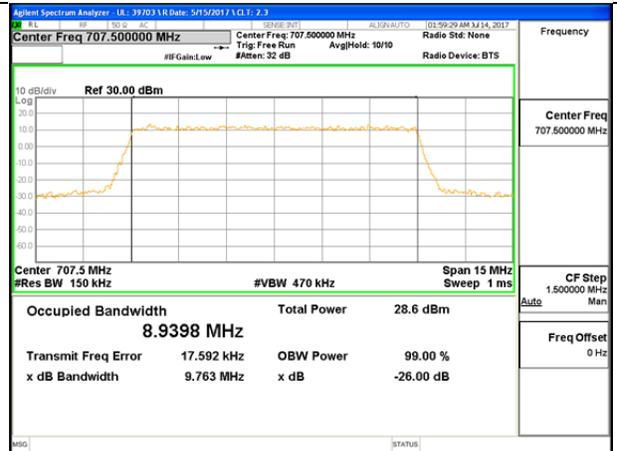
LTE B12 5MHz QPSK Middle Channel



LTE B12 5MHz 16QAM Middle Channel



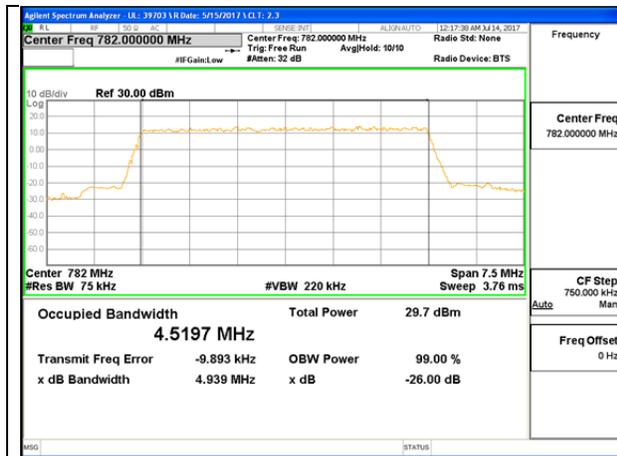
LTE B12 10MHz QPSK Middle Channel



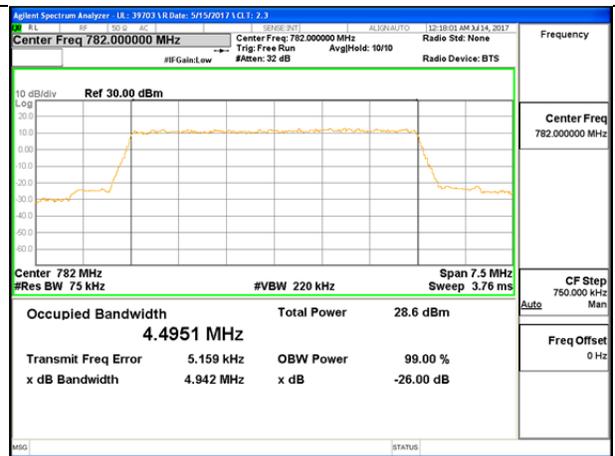
LTE B12 10MHz 16QAM Middle Channel

**LTE Band 13**

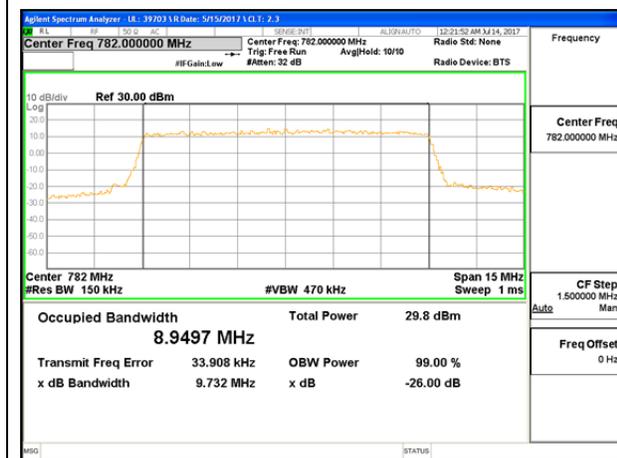
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE13	5	QPSK	25/0	779.5	4.48	4.91
			25/0	782	4.50	4.94
			25/0	784.5	4.48	4.91
		16QAM	25/0	779.5	4.49	4.91
			25/0	782	4.52	4.94
			25/0	784.5	4.49	4.92
	10	QPSK	50/0			
			50/0	782	8.98	9.75
			50/0			
		16QAM	50/0			
			50/0	782	8.94	9.69
			50/0			



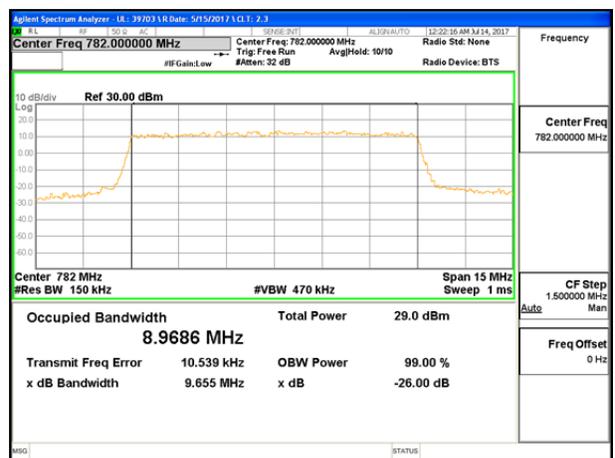
LTE B13 5MHz QPSK Middle Channel



LTE B13 5MHz 16QAM Middle Channel



LTE B13 10MHz QPSK Middle Channel

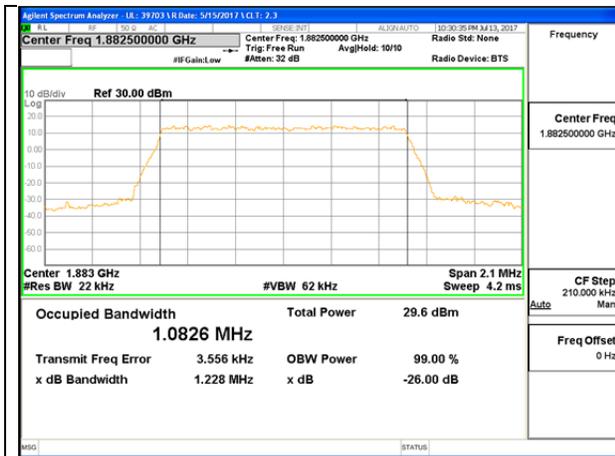


LTE B13 10MHz 16QAM Middle Channel

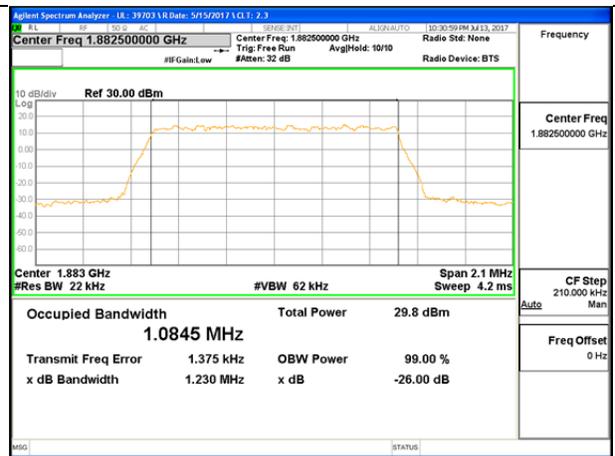
**LTE Band 25**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE25	1.4	QPSK	6/0	1850.7	1.08	1.23
			6/0	1882.5	1.08	1.23
			6/0	1914.3	1.09	1.24
		16QAM	6/0	1850.7	1.10	1.24
			6/0	1882.5	1.08	1.23
			6/0	1914.3	1.09	1.23
	3	QPSK	15/0	1851.5	2.69	2.99
			15/0	1882.5	2.70	2.97
			15/0	1913.5	2.69	3.01
		16QAM	15/0	1851.5	2.70	2.96
			15/0	1882.5	2.69	3.00
			15/0	1913.5	2.70	2.99
	5	QPSK	25/0	1852.5	4.48	4.91
			25/0	1882.5	4.50	4.98
			25/0	1912.5	4.49	4.92
		16QAM	25/0	1852.5	4.50	4.92
			25/0	1882.5	4.50	4.97
			25/0	1912.5	4.50	4.93
	10	QPSK	50/0	1855	8.98	9.76
			50/0	1882.5	8.95	9.72
			50/0	1910	8.98	9.77
16QAM		50/0	1855	8.97	9.88	
		50/0	1882.5	8.97	9.77	
		50/0	1910	8.96	9.82	

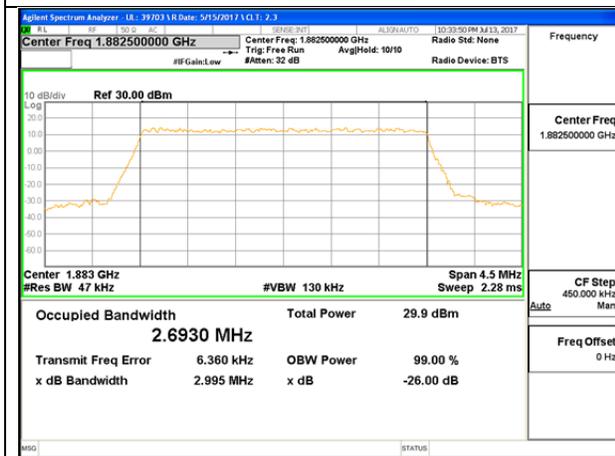
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE25	15	QPSK	75/0	1857.5	13.40	14.55
			75/0	1882.5	13.43	14.62
			75/0	1907.5	13.42	14.54
		16QAM	75/0	1857.5	13.41	14.61
			75/0	1882.5	13.44	14.64
			75/0	1907.5	13.42	14.55
	20	QPSK	100/0	1860	17.91	19.29
			100/0	1882.5	17.90	19.42
			100/0	1905	17.88	19.23
		16QAM	100/0	1860	17.89	19.35
			100/0	1882.5	17.90	19.24
			100/0	1905	17.86	19.22



LTE B2 1.4MHz QPSK Middle Channel



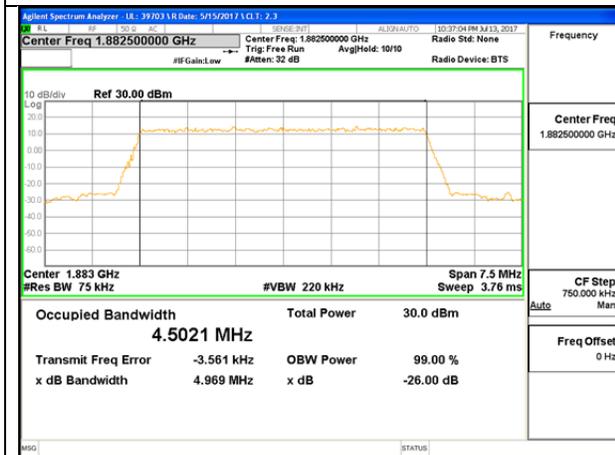
LTE B2 1.4MHz 16QAM Middle Channel



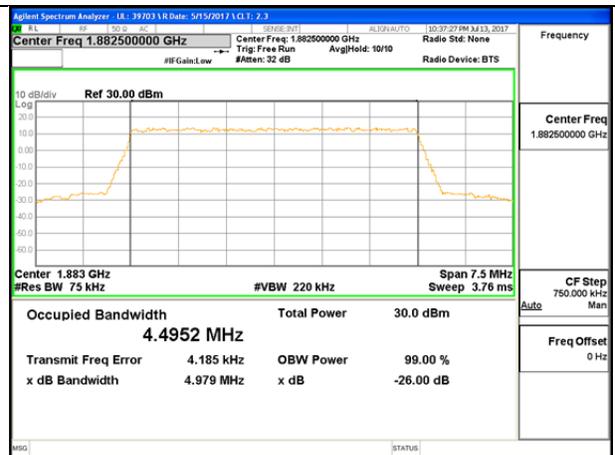
LTE B2 3MHz QPSK Middle Channel



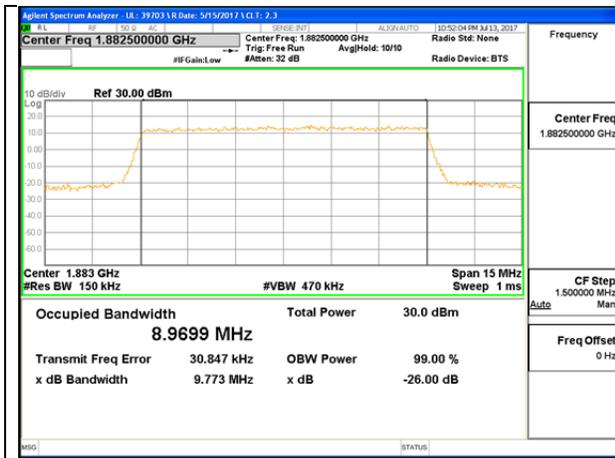
LTE B2 3MHz 16QAM Middle Channel



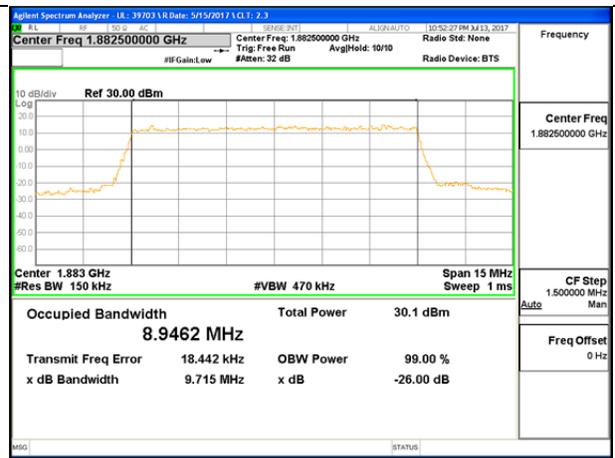
LTE B2 5MHz QPSK Middle Channel



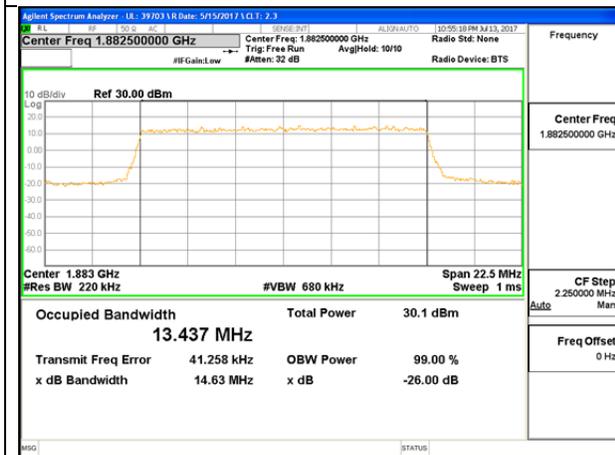
LTE B2 5MHz 16QAM Middle Channel



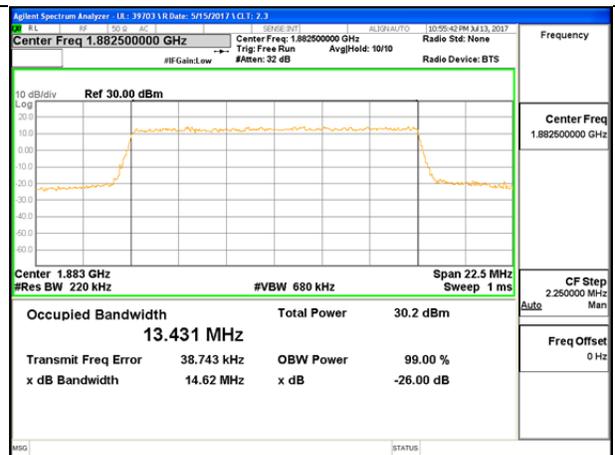
LTE B2 10MHz QPSK Middle Channel



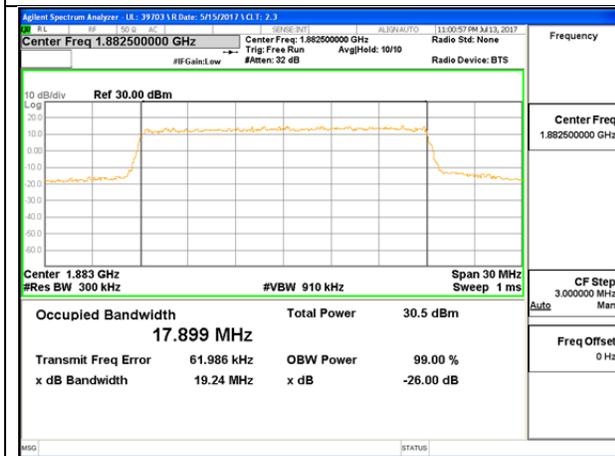
LTE B2 10MHz 16QAM Middle Channel



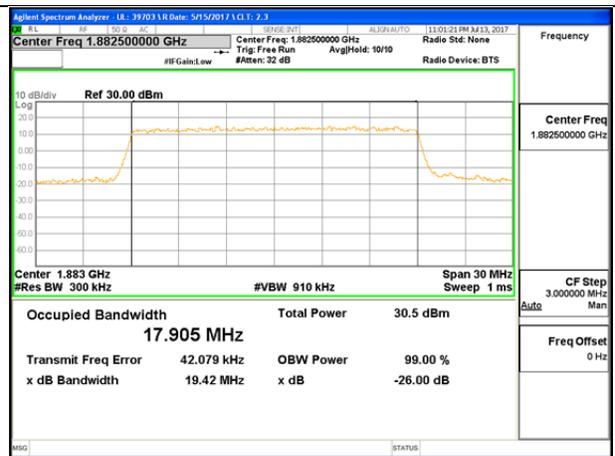
LTE B2 15MHz QPSK Middle Channel



LTE B2 15MHz 16QAM Middle Channel



LTE B2 20MHz QPSK Middle Channel

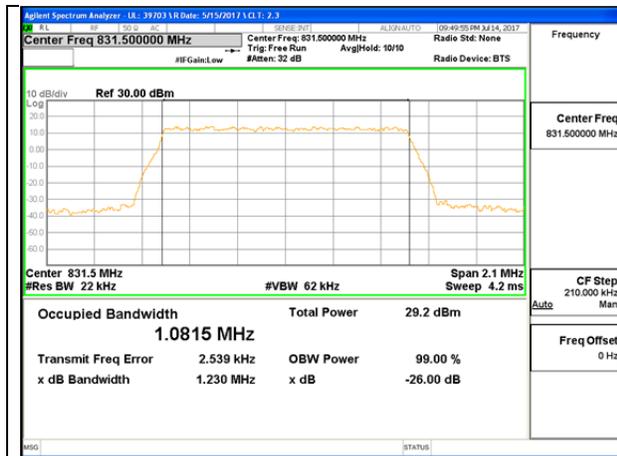


LTE B2 20MHz 16QAM Middle Channel

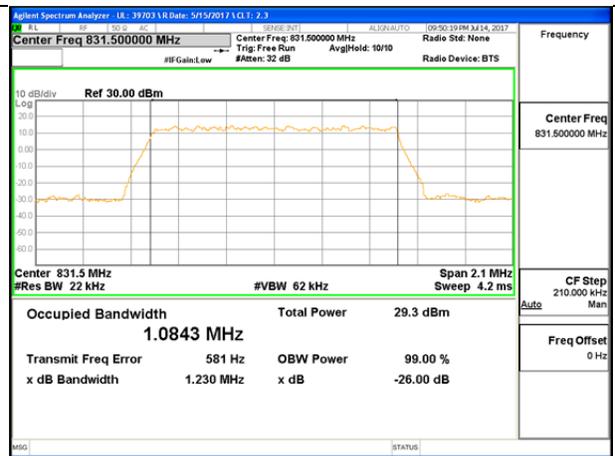
**LTE Band 26**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE26	1.4	QPSK	6/0	814.7	1.08	1.23
			6/0	831.5	1.08	1.23
			6/0	848.3	1.09	1.24
		16QAM	6/0	814.7	1.09	1.24
			6/0	831.5	1.08	1.23
			6/0	848.3	1.09	1.23
	3	QPSK	25/0	815.5	2.70	2.99
			25/0	831.5	2.70	2.99
			25/0	847.5	2.69	3.00
		16QAM	25/0	815.5	2.70	3.00
			25/0	831.5	2.70	2.98
			25/0	847.5	2.70	2.98
	5	QPSK	25/0	816.5	4.48	4.91
			25/0	831.5	4.50	4.96
			25/0	846.5	4.49	4.92
		16QAM	25/0	816.5	4.50	4.92
			25/0	831.5	4.52	4.94
			25/0	846.5	4.49	4.93
	10	QPSK	50/0	819	8.98	9.74
			50/0	831.5	8.97	9.78
			50/0	844	8.95	9.76
		16QAM	50/0	819	8.96	9.74
			50/0	831.5	8.95	9.82
			50/0	844	8.98	9.80

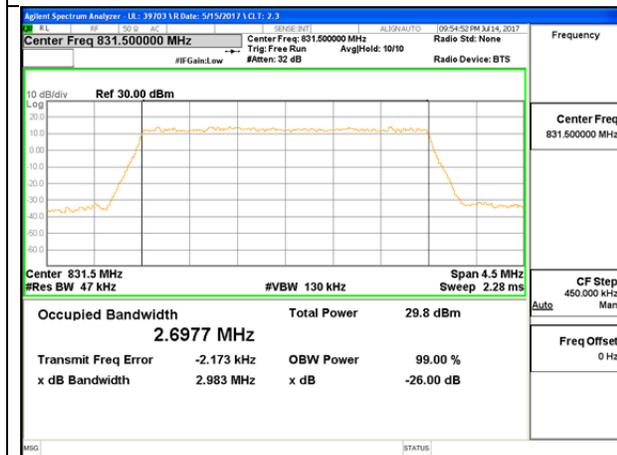
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
	15	QPSK	75/0	831.5	13.42	14.55
			75/0	836.5	13.44	14.56
			75/0	841.5	13.44	14.64
		16QAM	75/0	831.5	13.43	14.56
			75/0	836.5	13.44	14.55
			75/0	841.5	13.46	14.51



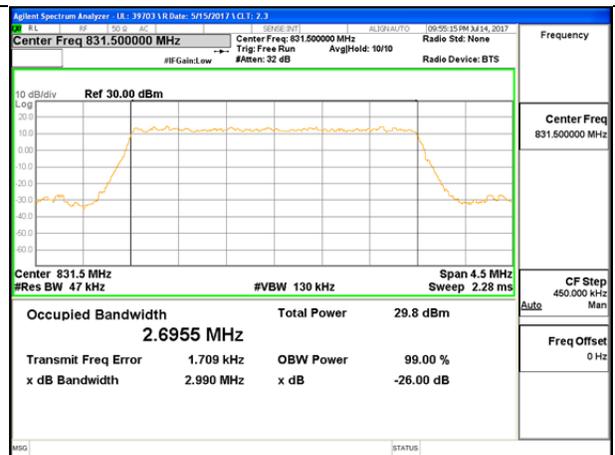
LTE B26 1.4MHz QPSK Middle Channel



LTE B26 1.4MHz 16QAM Middle Channel



LTE B26 3MHz QPSK Middle Channel



LTE B26 3MHz 16QAM Middle Channel



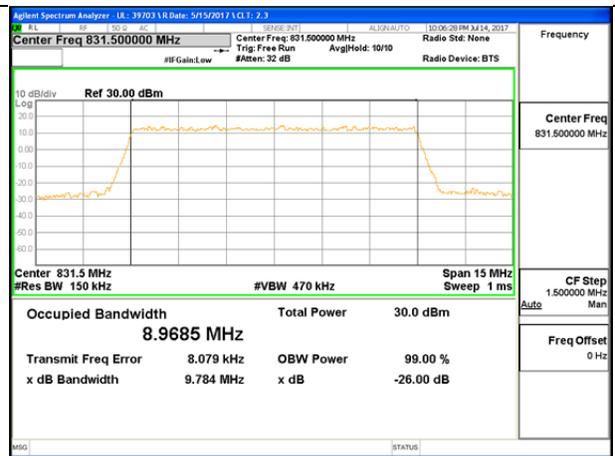
LTE B26 5MHz QPSK Middle Channel



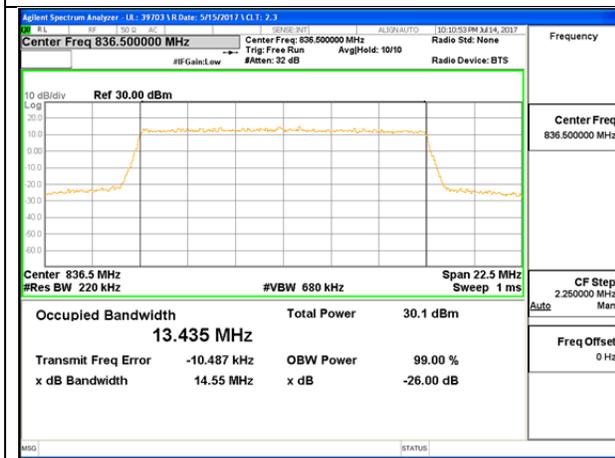
LTE B26 5MHz 16QAM Middle Channel



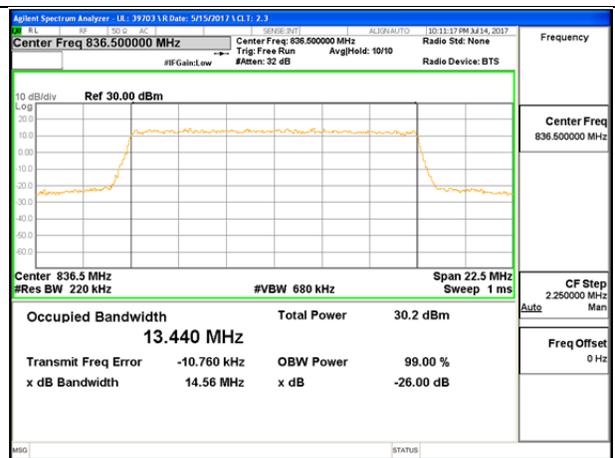
LTE B26 10MHz QPSK Middle Channel



LTE B26 10MHz 16QAM Middle Channel



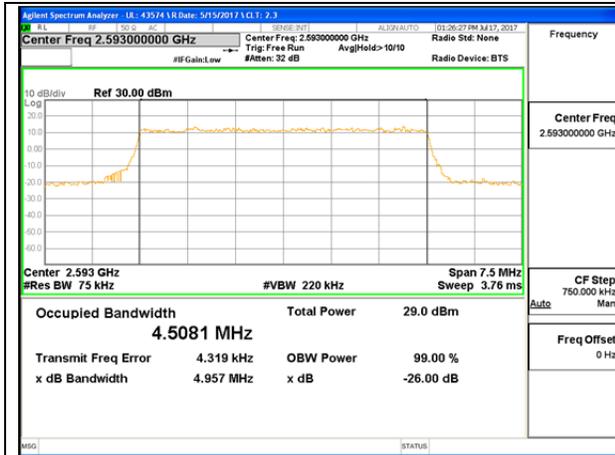
LTE B26 15MHz QPSK Middle Channel



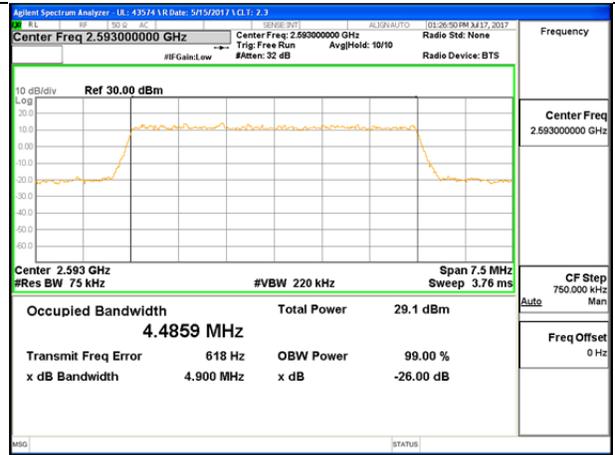
LTE B26 15MHz 16QAM Middle Channel

**LTE Band 41**

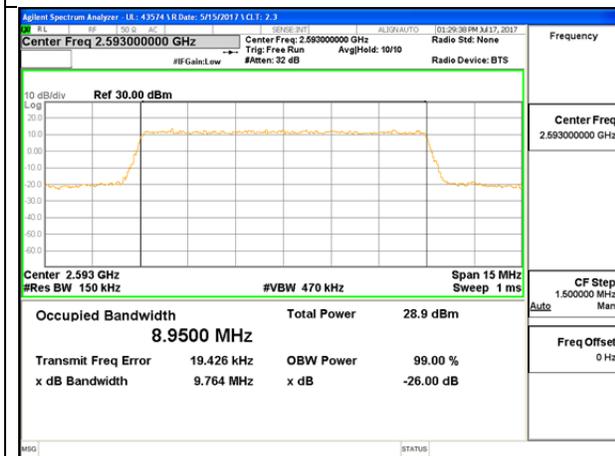
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE41	5	QPSK	25/0	2498.5	4.49	4.92
			25/0	2593	4.49	4.90
			25/0	2687.5	4.50	4.96
		16QAM	25/0	2498.5	4.49	4.91
			25/0	2593	4.51	4.96
			25/0	2687.5	4.50	5.08
	10	QPSK	50/0	2501	9.00	9.66
			50/0	2593	8.96	9.71
			50/0	2685	8.95	9.73
		16QAM	50/0	2501	9.01	9.85
			50/0	2593	8.95	9.76
			50/0	2685	8.95	9.71
	15	QPSK	75/0	2503.5	13.43	14.52
			75/0	2593	13.45	14.56
			75/0	2682.5	13.42	14.54
		16QAM	75/0	2503.5	13.43	14.53
			75/0	2593	13.43	14.60
			75/0	2682.5	13.45	14.53
	20	QPSK	100/0	2506	17.89	19.27
			100/0	2593	17.88	19.29
			100/0	2680	17.86	19.16
16QAM		100/0	2506	17.89	19.32	
		100/0	2593	17.89	19.24	
		100/0	2680	17.84	19.13	



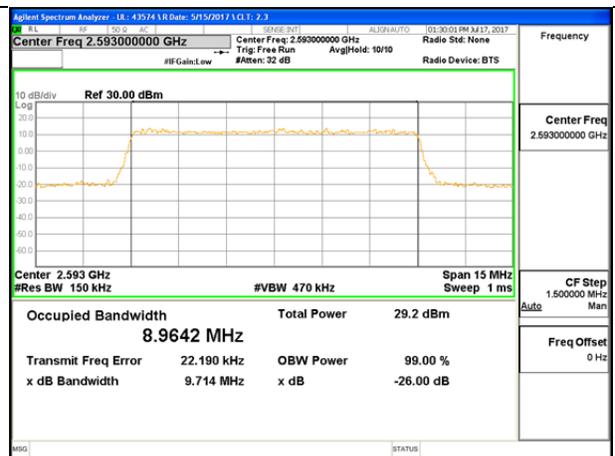
LTE B41 5MHz QPSK Middle Channel



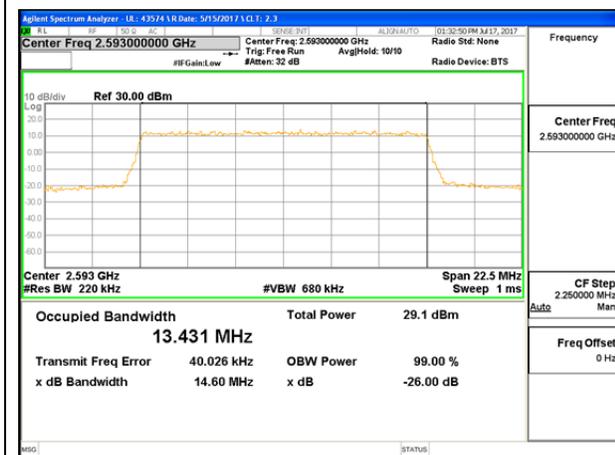
LTE B41 5MHz 16QAM Middle Channel



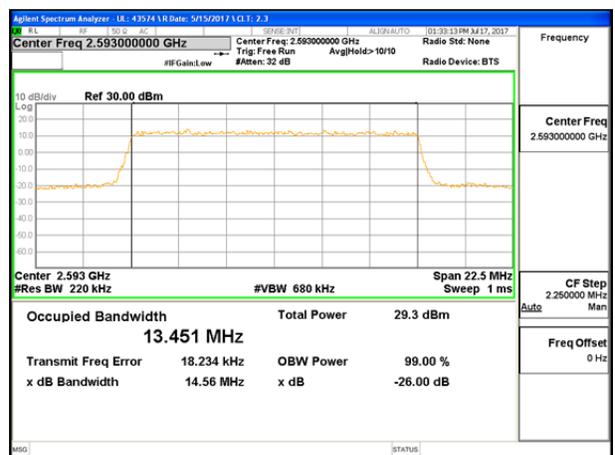
LTE B41 10MHz QPSK Middle Channel



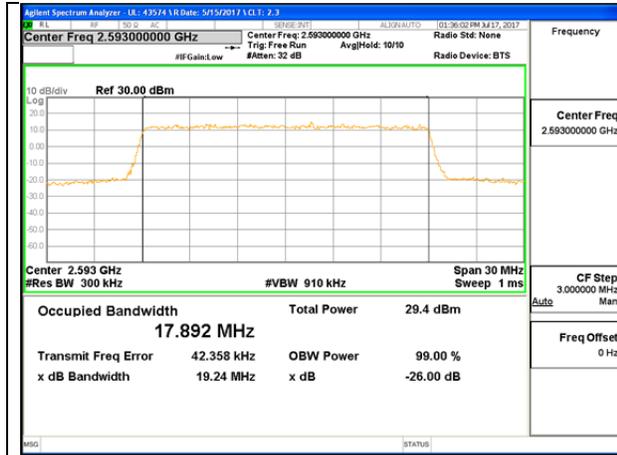
LTE B41 10MHz 16QAM Middle Channel



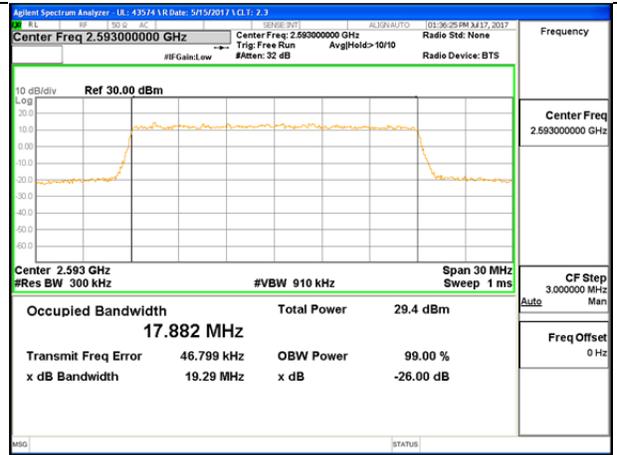
LTE B41 15MHz QPSK Middle Channel



LTE B41 15MHz 16QAM Middle Channel



LTE B41 20MHz QPSK Middle Channel

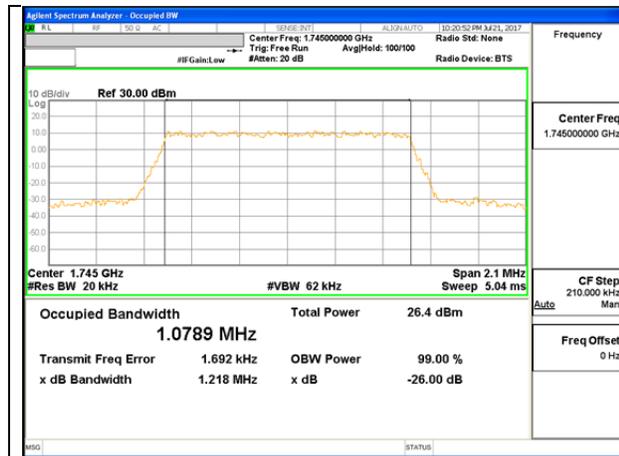


LTE B41 20MHz 16QAM Middle Channel

**LTE Band 66**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE66	1.4	QPSK	6/0	1710.7	1.09	1.24
			6/0	1745	1.08	1.22
			6/0	1779.3	1.09	1.22
		16QAM	6/0	1710.7	1.08	1.23
			6/0	1745	1.08	1.23
			6/0	1779.3	1.08	1.22
	3	QPSK	15/0	1711.5	2.69	2.94
			15/0	1745	2.69	2.95
			15/0	1778.5	2.69	2.93
		16QAM	15/0	1711.5	2.68	2.99
			15/0	1745	2.68	2.92
			15/0	1778.5	2.70	2.99
	5	QPSK	25/0	1712.5	4.49	4.90
			25/0	1745	4.50	4.89
			25/0	1777.5	4.49	4.89
		16QAM	25/0	1712.5	4.48	4.92
			25/0	1745	4.50	4.97
			25/0	1777.5	4.48	4.90
	10	QPSK	50/0	1715	8.96	9.77
			50/0	1745	8.97	9.74
			50/0	1775	8.97	9.50
16QAM		50/0	1715	8.97	9.71	
		50/0	1745	8.96	9.71	
		50/0	1775	8.95	9.63	

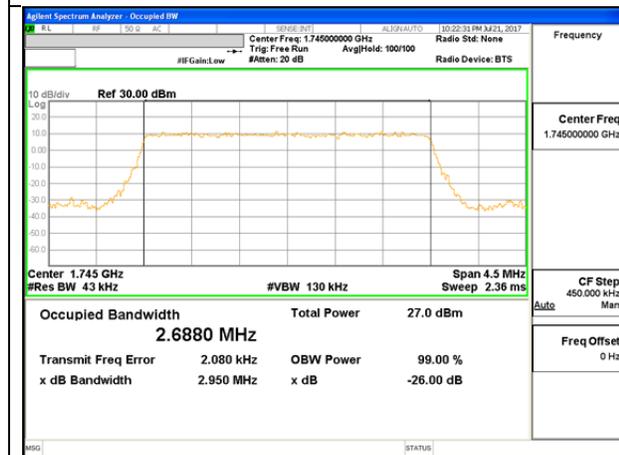
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE66	15	QPSK	75/0	1717.5	13.42	14.58
			75/0	1745	13.40	14.52
			75/0	1772.5	13.36	14.31
		16QAM	75/0	1717.5	13.45	14.28
			75/0	1745	13.43	14.41
			75/0	1772.5	13.43	14.30
	20	QPSK	100/0	1720	17.89	19.04
			100/0	1745	17.83	19.13
			100/0	1770	17.82	19.30
		16QAM	100/0	1720	17.92	19.34
			100/0	1745	17.85	19.09
			100/0	1770	17.89	19.29



LTE B66 1.4MHz QPSK Middle Channel



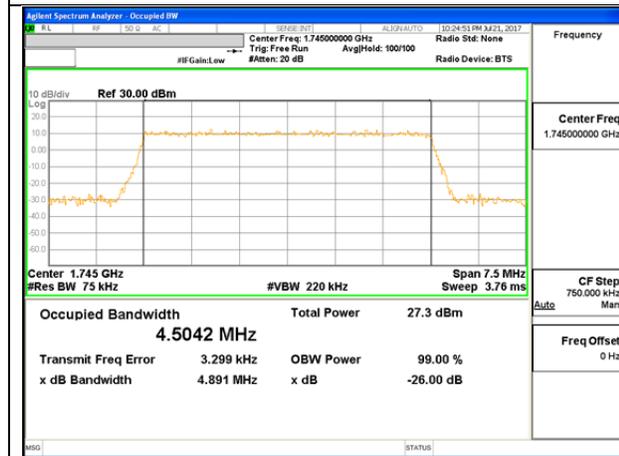
LTE B66 1.4MHz 16QAM Middle Channel



LTE B66 3MHz QPSK Middle Channel



LTE B66 3MHz 16QAM Middle Channel



LTE B66 5MHz QPSK Middle Channel



LTE B66 5MHz 16QAM Middle Channel