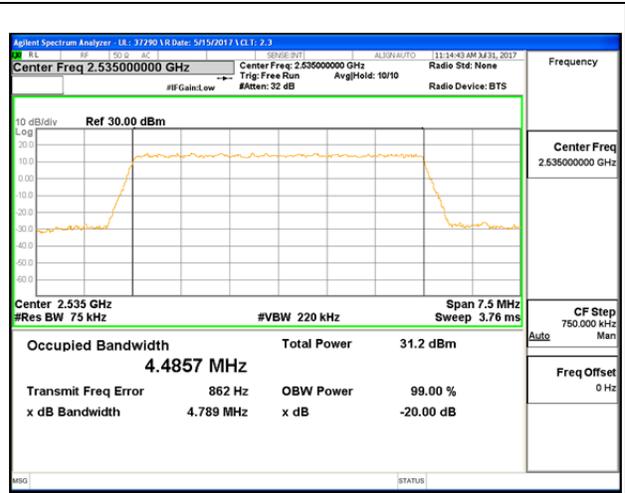
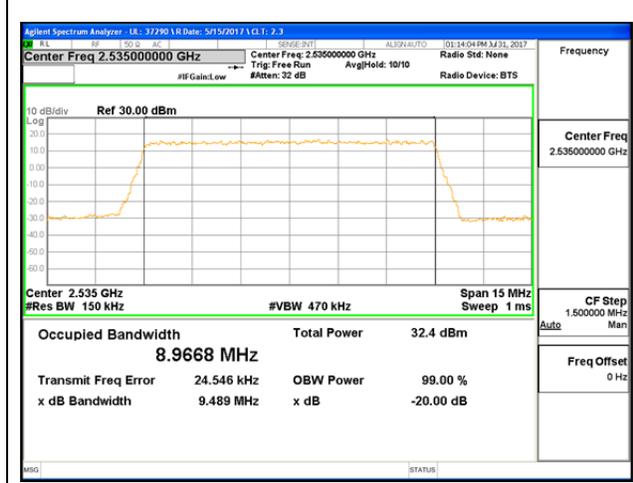


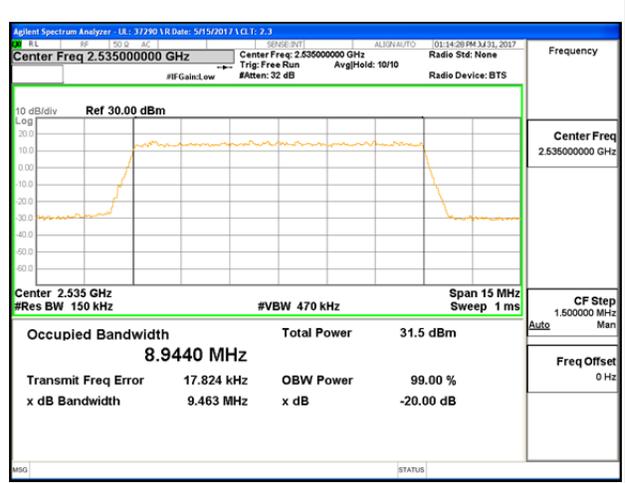
LTE B7 5MHz QPSK Middle Channel



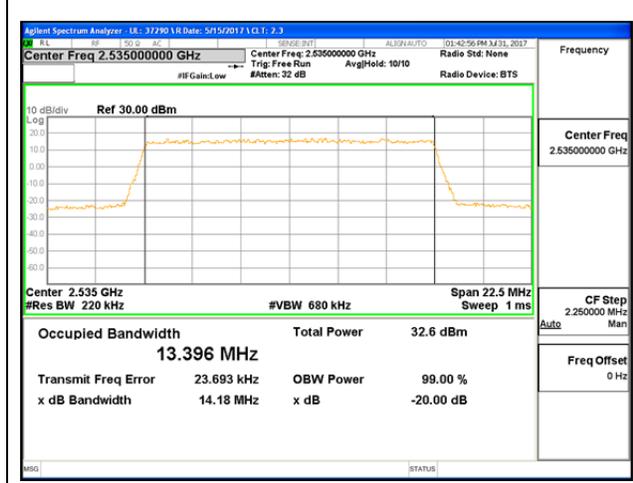
LTE B7 5MHz 16QAM Middle Channel



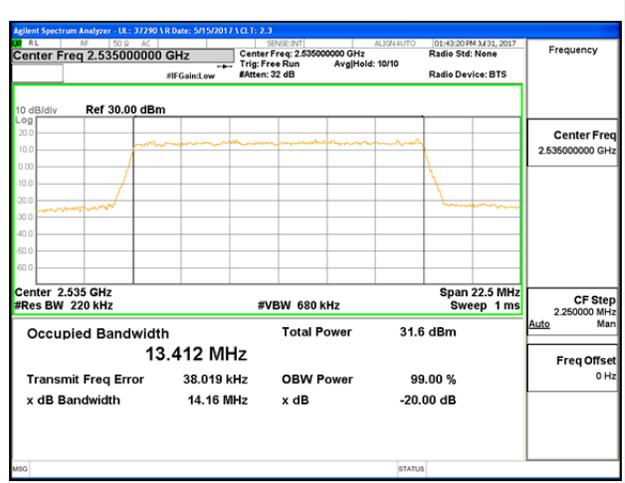
LTE B7 10MHz QPSK Middle Channel



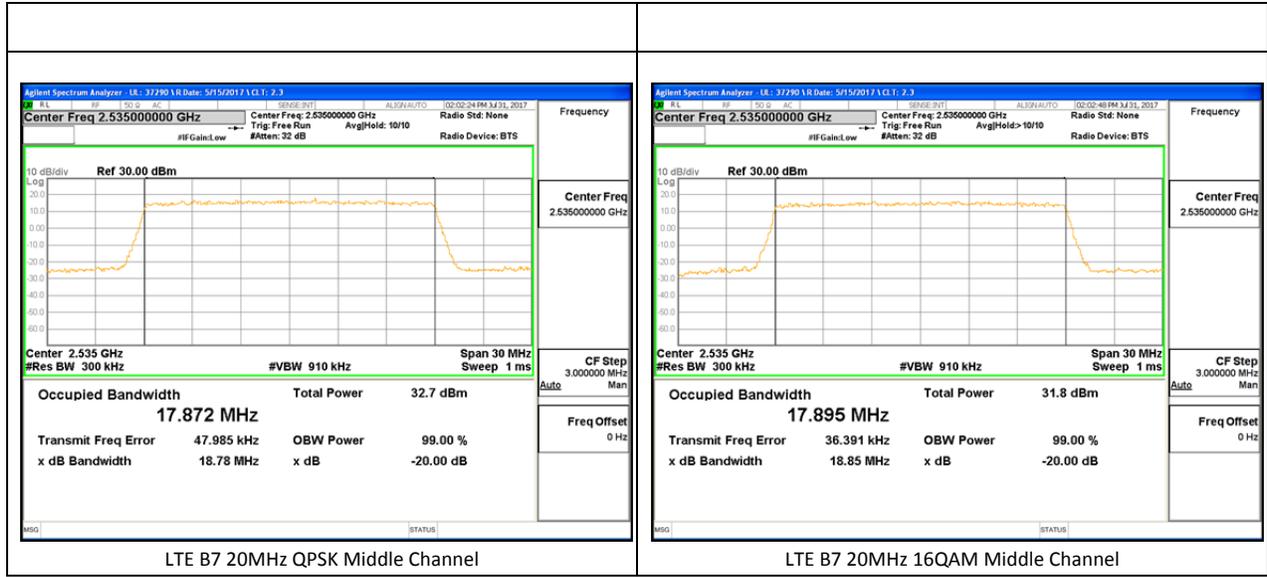
LTE B7 10MHz 16QAM Middle Channel



LTE B7 15MHz QPSK Middle Channel

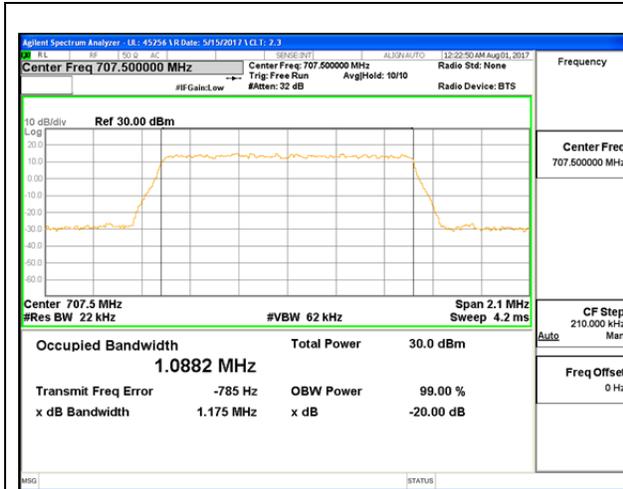


LTE B7 15MHz 16QAM Middle Channel

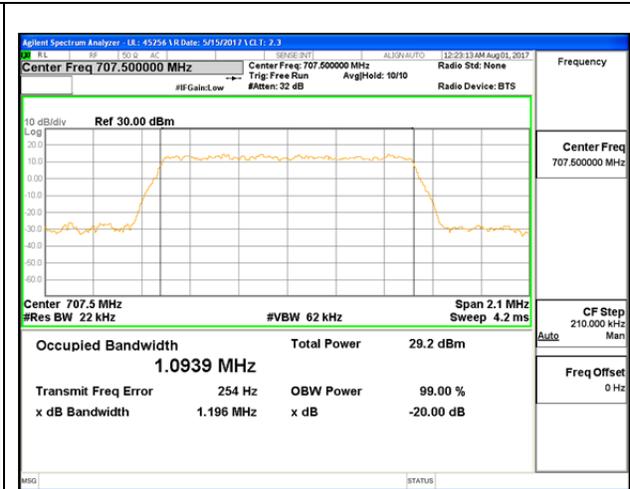


**LTE Band 12**

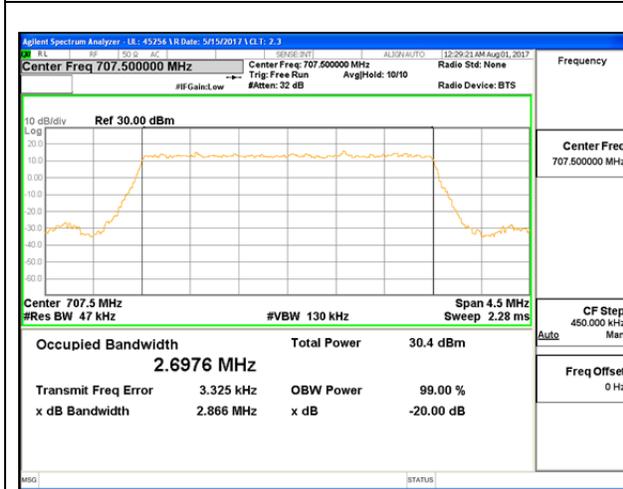
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE12	1.4	QPSK	6/0	699.7	1.0817	1.181
			6/0	707.5	1.0882	1.175
			6/0	715.3	1.0934	1.190
		16QAM	6/0	699.7	1.0843	1.180
			6/0	707.5	1.0939	1.196
			6/0	715.3	1.0830	1.186
	3	QPSK	15/0	700.5	2.6990	2.878
			15/0	707.5	2.6976	2.866
			15/0	714.5	2.6938	2.890
		16QAM	15/0	700.5	2.6944	2.884
			15/0	707.5	2.6940	2.882
			15/0	714.5	2.7026	2.898
	5	QPSK	25/0	701.5	4.4899	4.769
			25/0	707.5	4.4955	4.766
			25/0	713.5	4.5118	4.812
		16QAM	25/0	701.5	4.4868	4.797
			25/0	707.5	4.4837	4.763
			25/0	713.5	4.4985	4.801
	10	QPSK	50/0	704	8.9725	9.481
			50/0	707.5	8.9837	9.446
			50/0	711	8.9487	9.572
16QAM		50/0	704	8.9590	9.513	
		50/0	707.5	8.9828	9.528	
		50/0	711	8.9750	9.544	



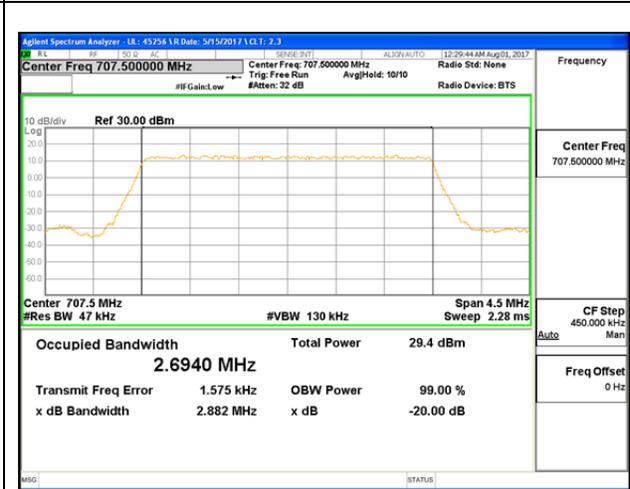
LTE B12 1.4MHz QPSK Middle Channel



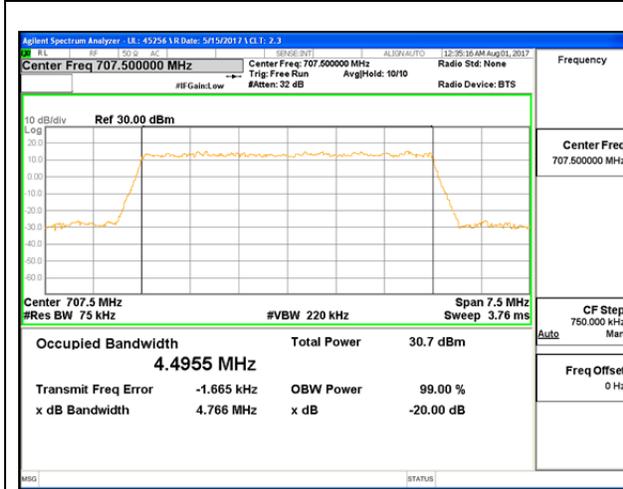
LTE B12 1.4MHz 16QAM Middle Channel



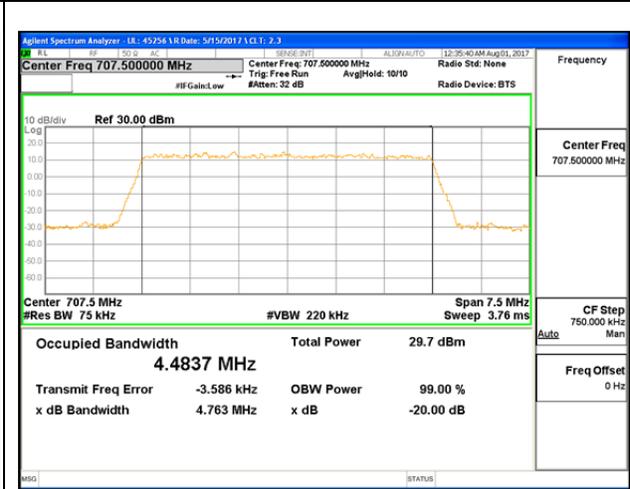
LTE B12 3MHz QPSK Middle Channel



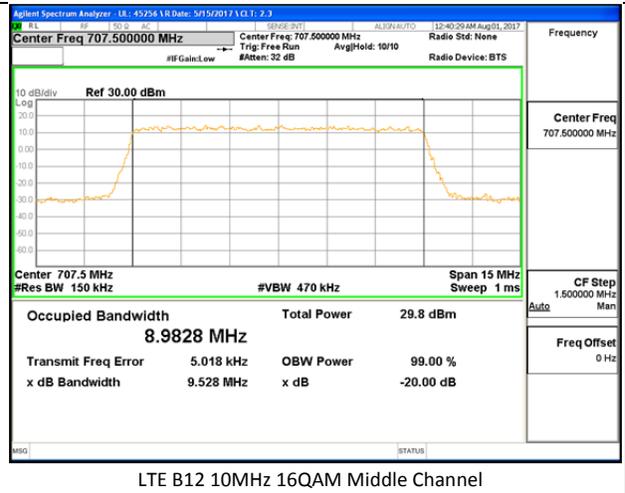
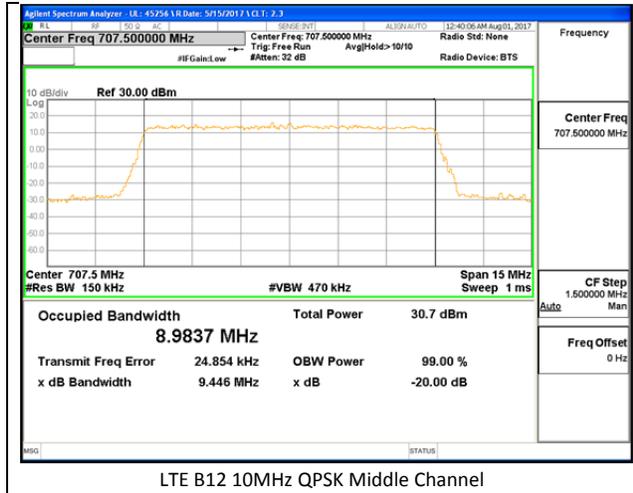
LTE B12 3MHz 16QAM Middle Channel



LTE B12 5MHz QPSK Middle Channel

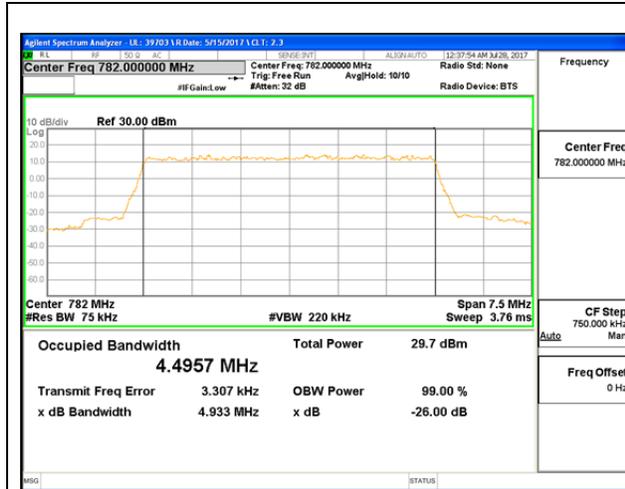


LTE B12 5MHz 16QAM Middle Channel

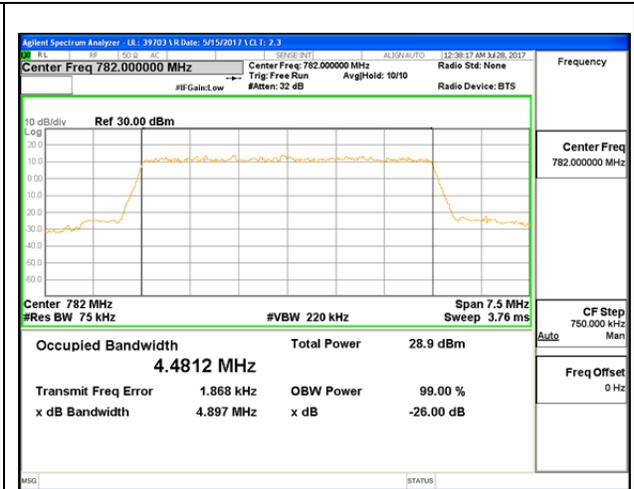


**LTE Band 13**

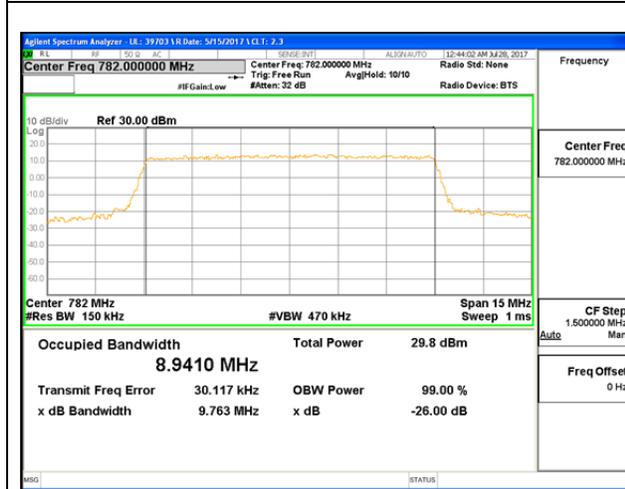
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE13	5	QPSK	25/0	779.5	4.4899	4.926
			25/0	782	4.4957	4.933
			25/0	784.5	4.5158	4.916
		16QAM	25/0	779.5	4.4850	4.923
			25/0	782	4.4812	4.897
			25/0	784.5	4.4932	4.970
	10	QPSK	50/0			
			50/0	782	8.9410	9.763
			50/0			
		16QAM	50/0			
			50/0	782	8.9488	9.758
			50/0			



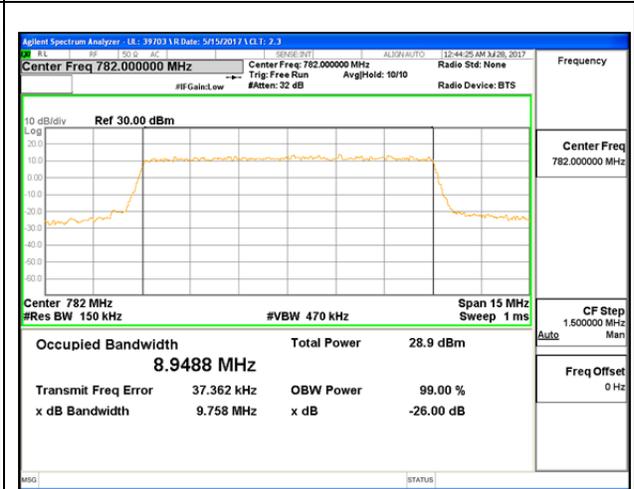
LTE B13 5MHz QPSK Middle Channel



LTE B13 5MHz 16QAM Middle Channel



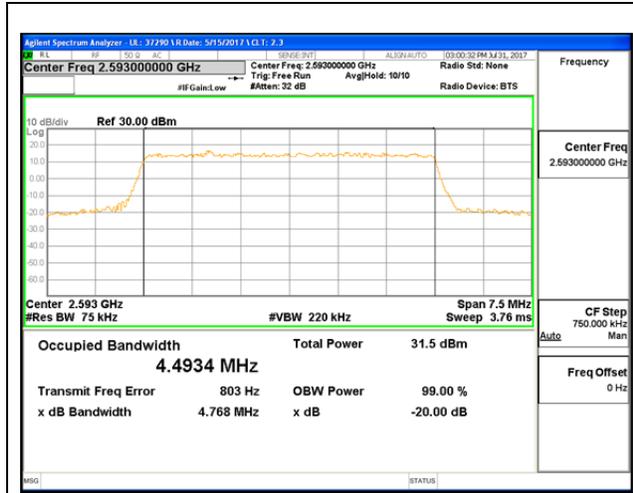
LTE B13 10MHz QPSK Middle Channel



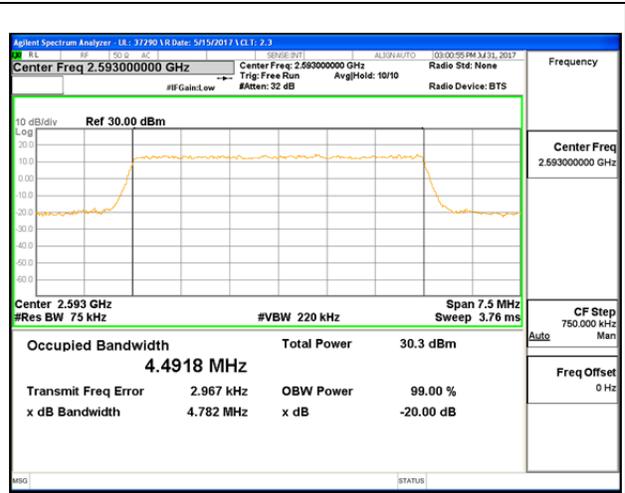
LTE B13 10MHz 16QAM Middle Channel

**LTE Band 41**

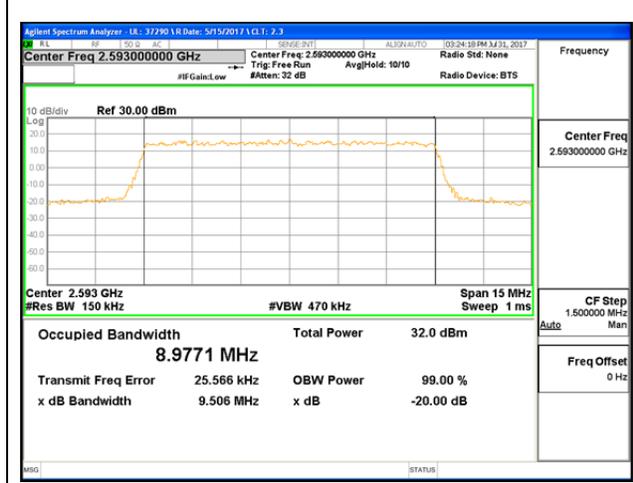
Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE41	5	QPSK	25/0	2498.5	4.5035	4.750
			25/0	2593	4.4934	4.768
			25/0	2687.5	4.5057	4.753
		16QAM	25/0	2498.5	4.4824	4.756
			25/0	2593	4.4918	4.782
			25/0	2687.5	4.4820	4.748
	10	QPSK	50/0	2501	8.9656	9.481
			50/0	2593	8.9771	9.506
			50/0	2685	8.9516	9.553
		16QAM	50/0	2501	8.9605	9.467
			50/0	2593	8.9926	9.537
			50/0	2685	8.9892	9.492
	15	QPSK	75/0	2503.5	13.444	14.14
			75/0	2593	13.422	14.13
			75/0	2682.5	13.435	14.13
		16QAM	75/0	2503.5	13.424	14.21
			75/0	2593	13.442	14.12
			75/0	2682.5	13.441	14.21
	20	QPSK	100/0	2506	17.882	18.81
			100/0	2593	17.886	18.82
			100/0	2680	17.855	18.85
16QAM		100/0	2506	17.893	18.74	
		100/0	2593	17.889	18.81	
		100/0	2680	17.867	18.77	



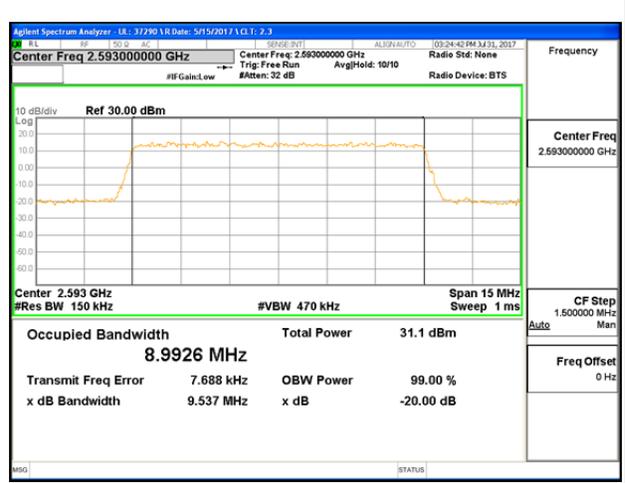
LTE B41 5MHz QPSK Middle Channel



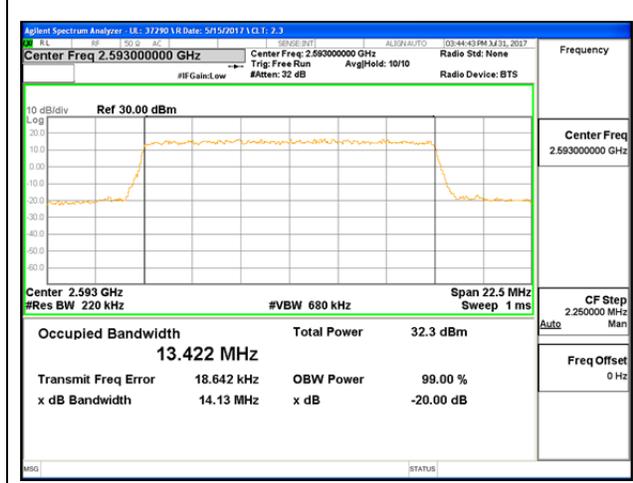
LTE B41 5MHz 16QAM Middle Channel



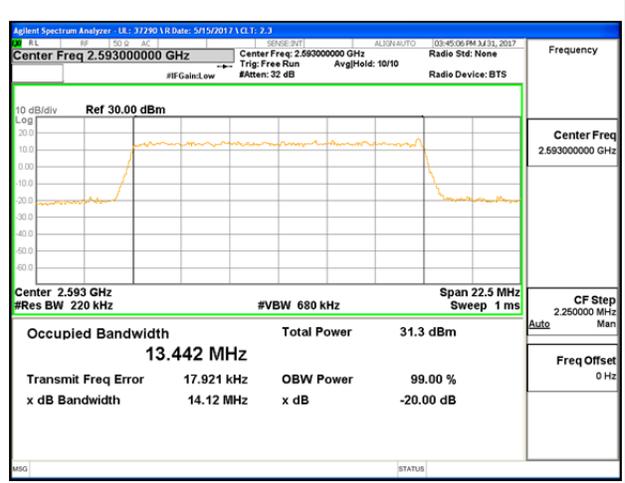
LTE B41 10MHz QPSK Middle Channel



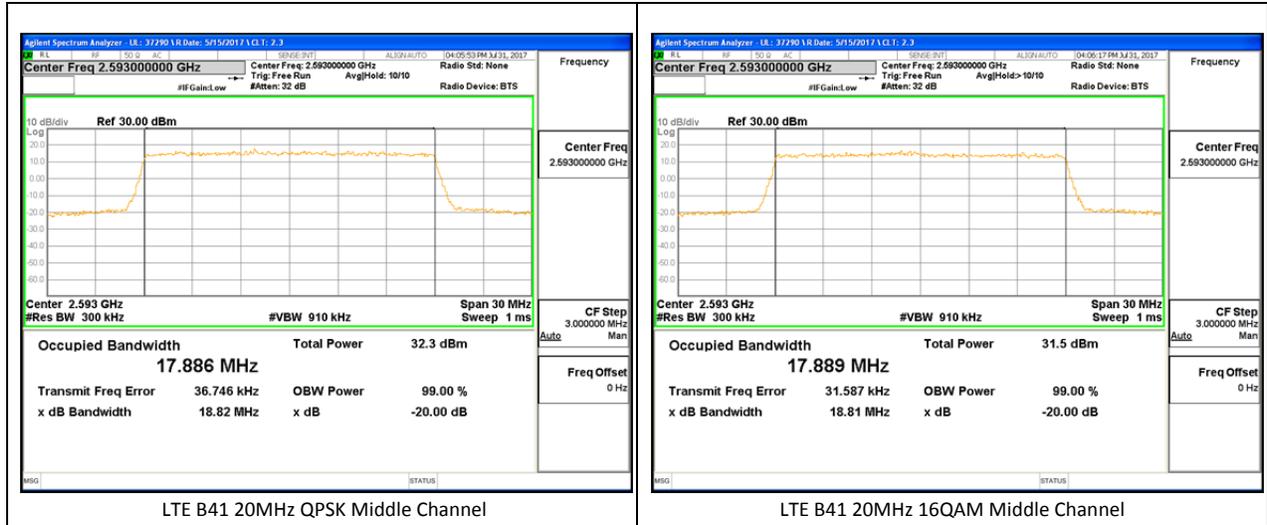
LTE B41 10MHz 16QAM Middle Channel



LTE B41 15MHz QPSK Middle Channel



LTE B41 15MHz 16QAM Middle Channel



## 14. BAND EDGE EMISSIONS

### RULE PART(S)

FCC: §22.359, §24.238, §27.53

### FCC LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

Part 27: (m)(4) (4) For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

### TEST PROCEDURE

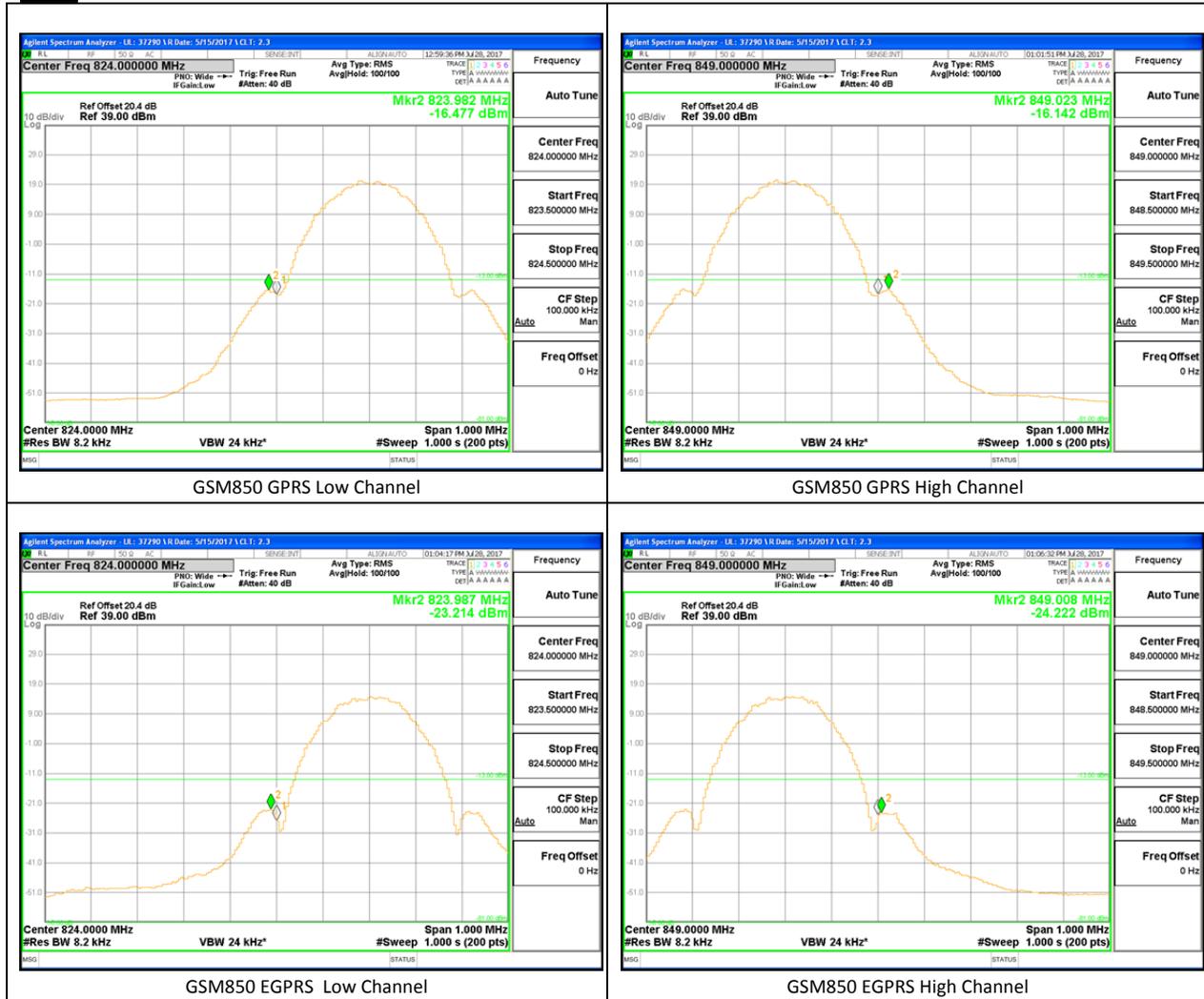
Per KDB 971168 D01 Power Meas License Digital Systems v02r02

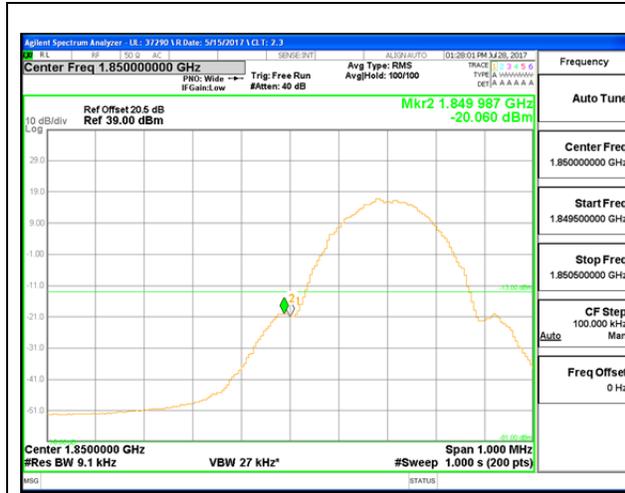
The transmitter output was connected to an Agilent 8960 or a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

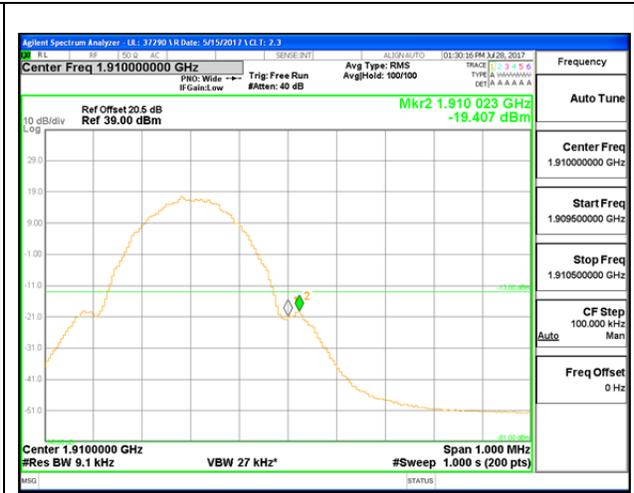
- Set the spectrum analyzer span to include the block edge frequency.
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

# 14.1. BAND EDGE PLOTS GSM





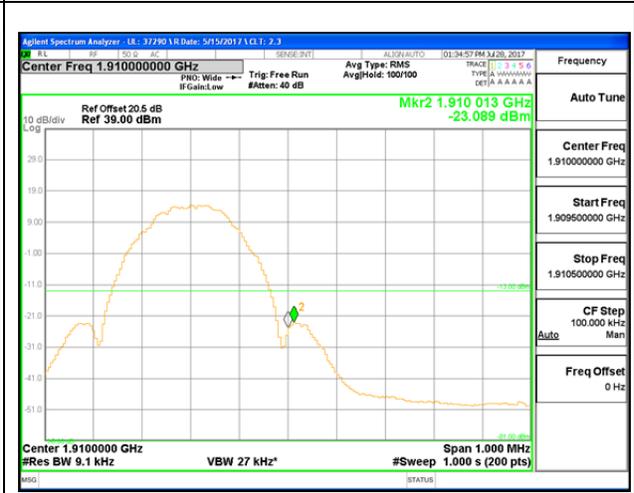
GSM1900 GPRS Low Channel



GSM1900 GPRS High Channel

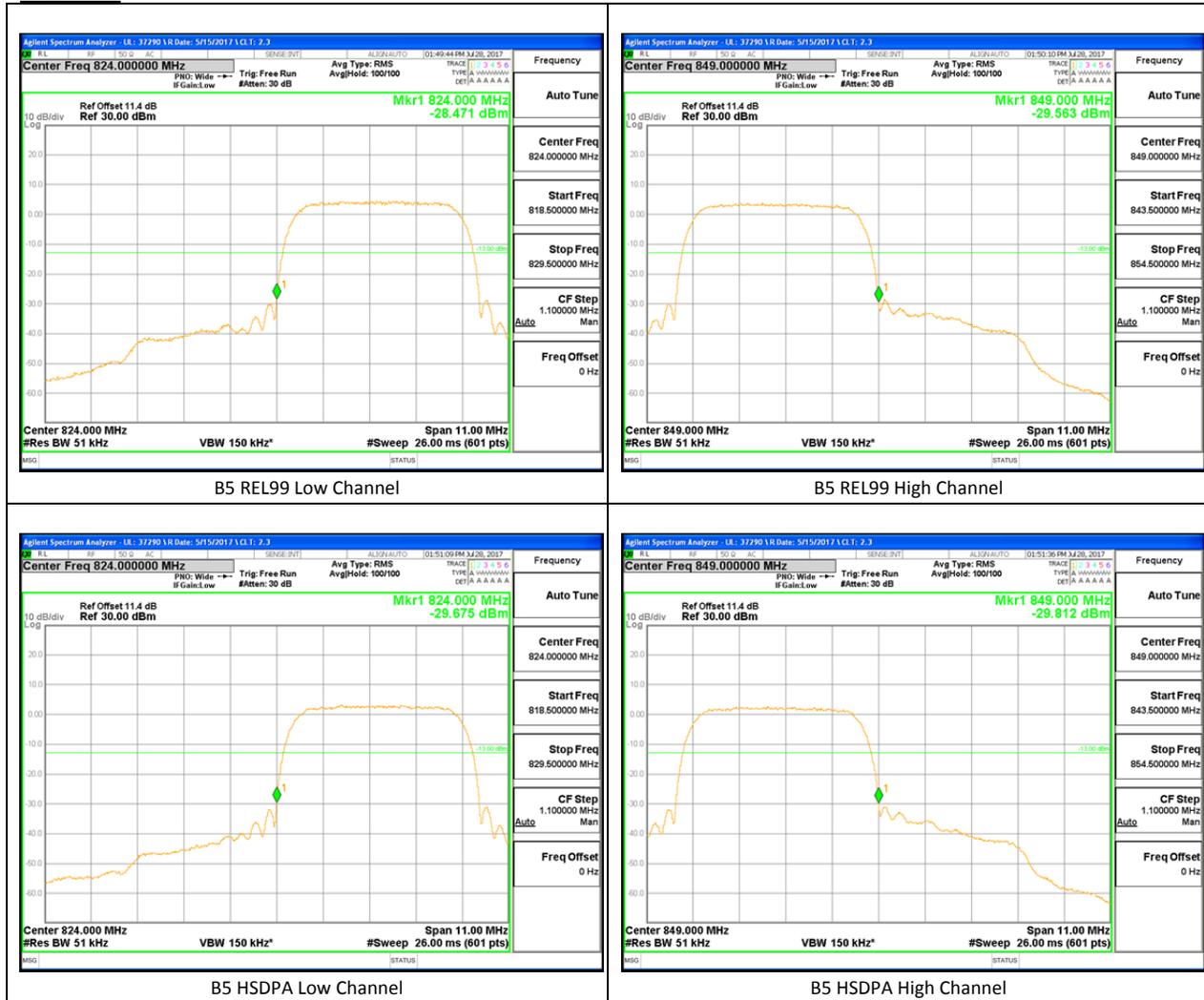


GSM1900 EGPRS Low Channel

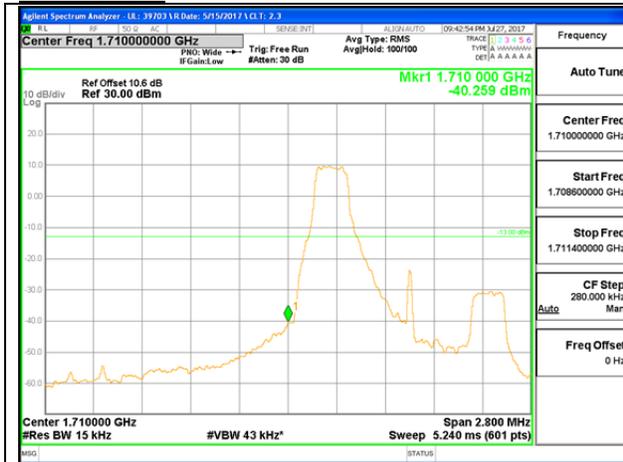


GSM1900 EGPRS High Channel

WCDMA



**LTE Band 4**



LTE B4 1.4MHz QPSK Low Channel 1RB



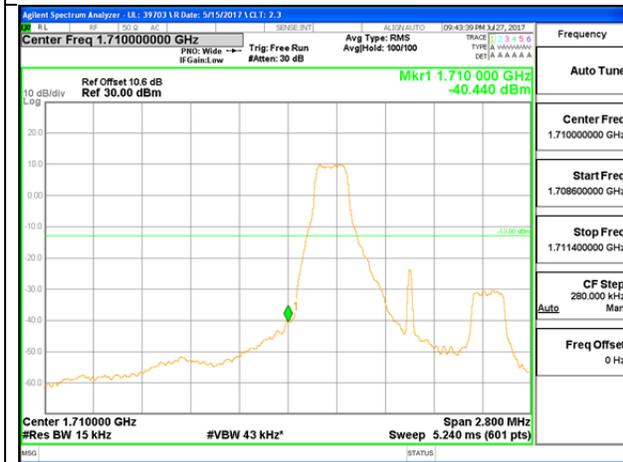
LTE B4 1.4MHz QPSK High Channel 1RB



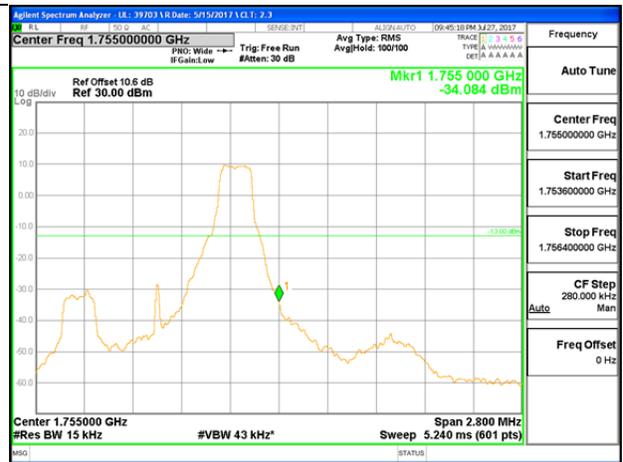
LTE B4 1.4MHz QPSK Low Channel FRB



LTE B4 1.4MHz QPSK High Channel FRB



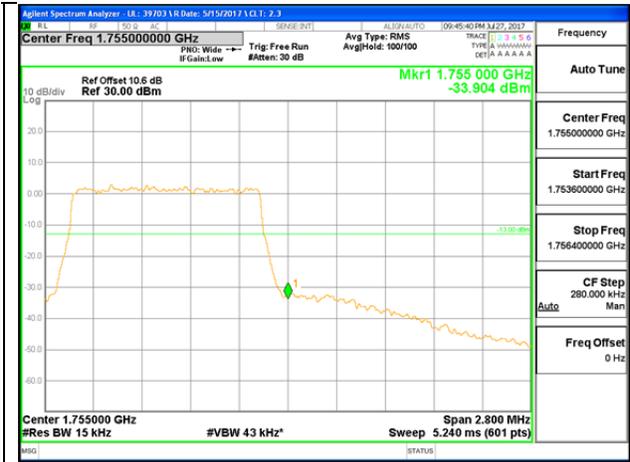
LTE B4 1.4MHz 16QAM Low Channel 1RB



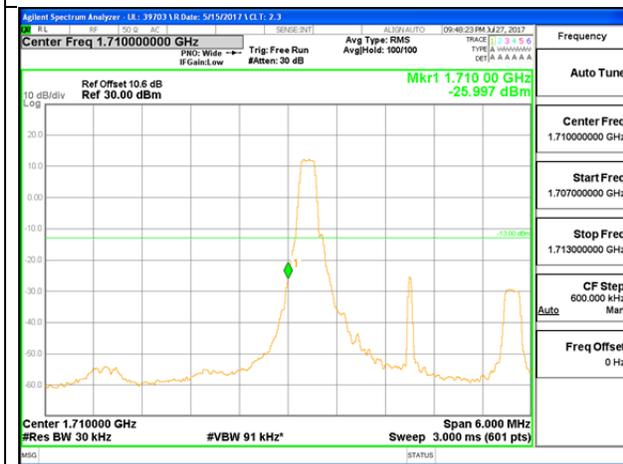
LTE B4 1.4MHz 16QAM High Channel 1RB



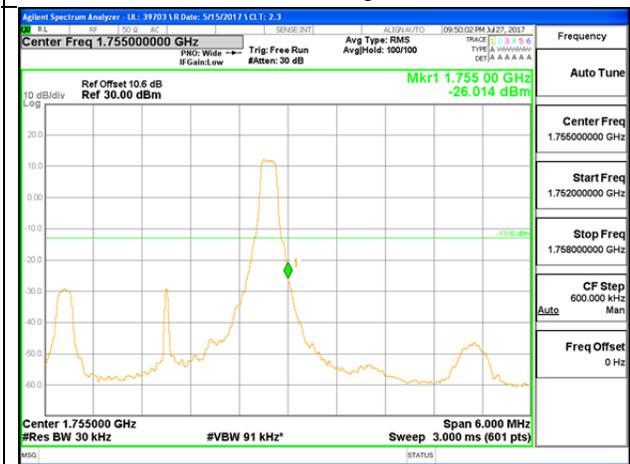
LTE B4 1.4MHz 16QAM Low Channel FRB



LTE B4 1.4MHz 16QAM High Channel FRB



LTE B4 3MHz QPSK Low Channel 1RB



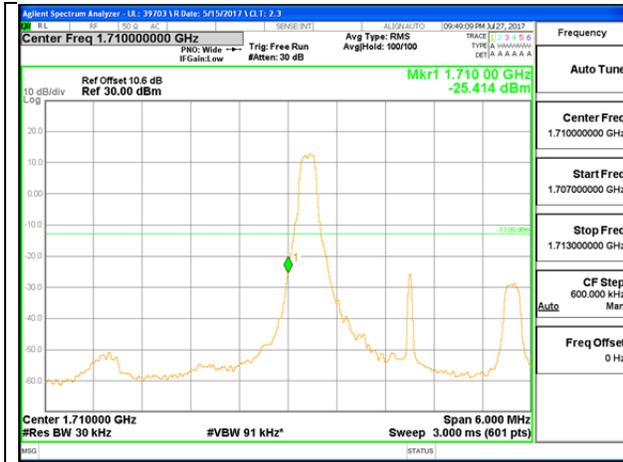
LTE B4 3MHz QPSK High Channel 1RB



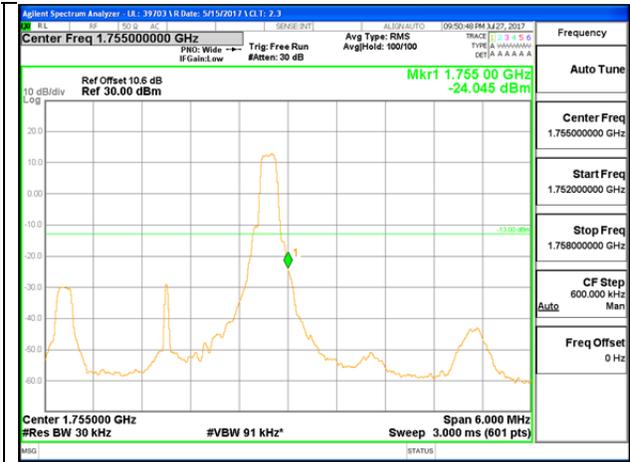
LTE B4 3MHz QPSK Low Channel FRB



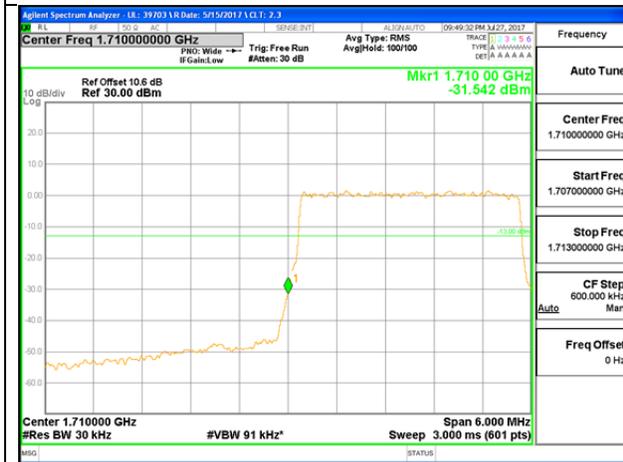
LTE B4 3MHz QPSK High Channel FRB



LTE B4 3MHz 16QAM Low Channel 1RB



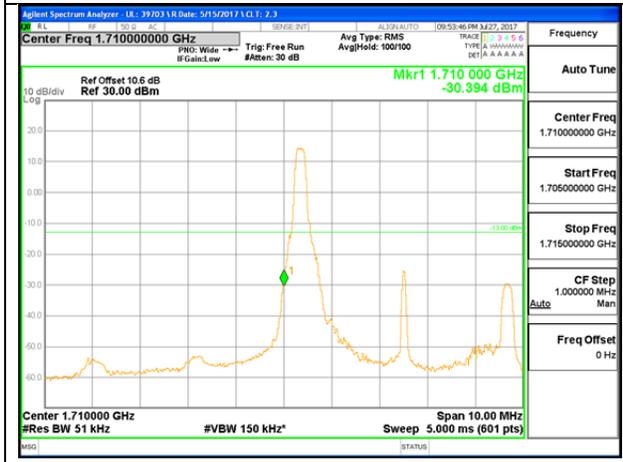
LTE B4 3MHz 16QAM High Channel 1RB



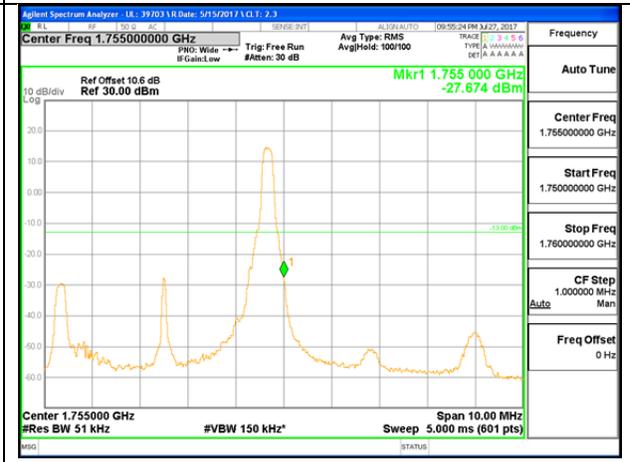
LTE B4 3MHz 16QAM Low Channel FRB



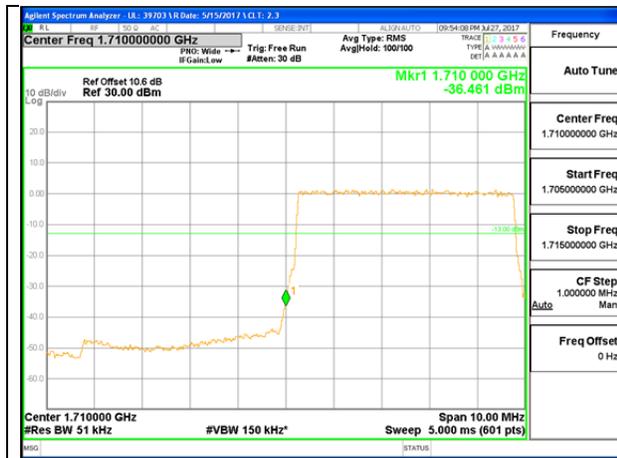
LTE B4 3MHz 16QAM High Channel FRB



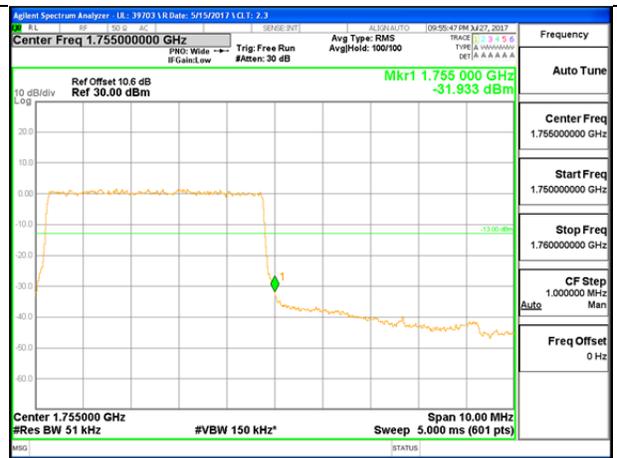
LTE B4 5MHz QPSK Low Channel 1RB



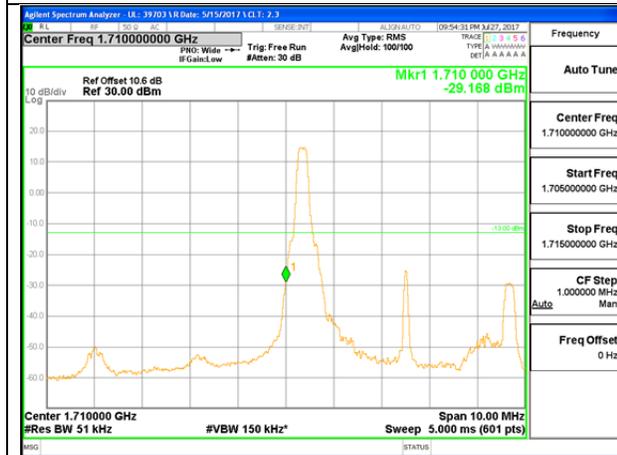
LTE B4 5MHz QPSK High Channel 1RB



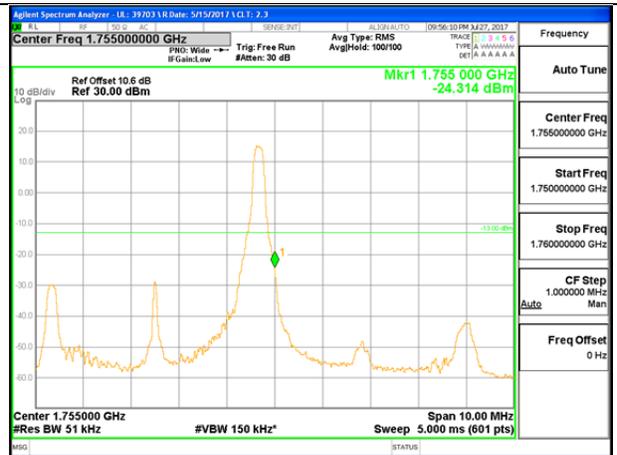
LTE B4 5MHz QPSK Low Channel FRB



LTE B4 5MHz QPSK High Channel FRB



LTE B4 5MHz 16QAM Low Channel 1RB



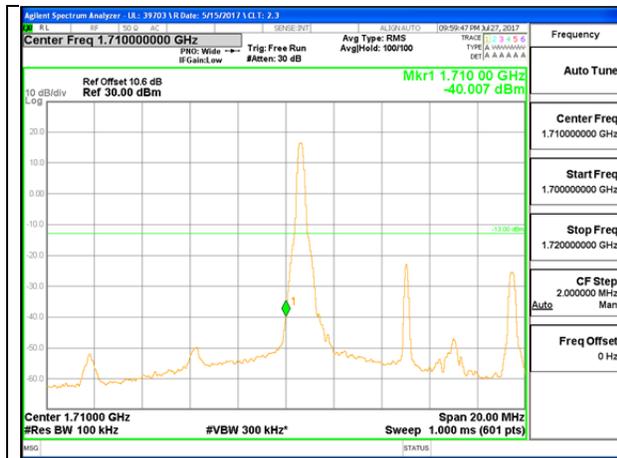
LTE B4 5MHz 16QAM High Channel 1RB



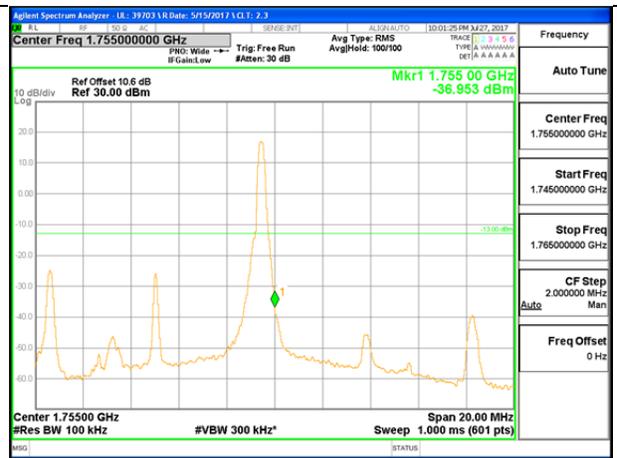
LTE B4 5MHz 16QAM Low Channel FRB



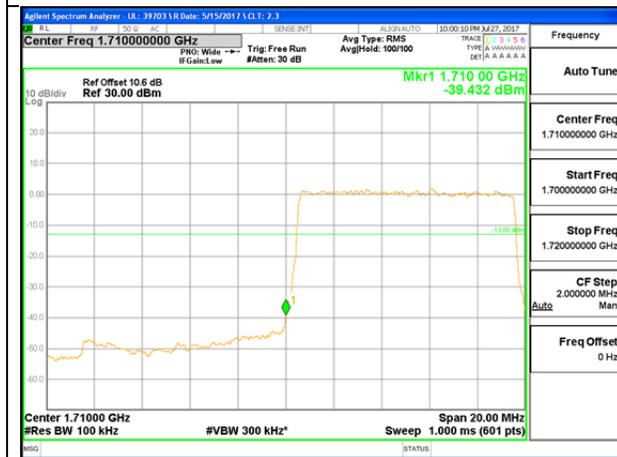
LTE B4 5MHz 16QAM High Channel FRB



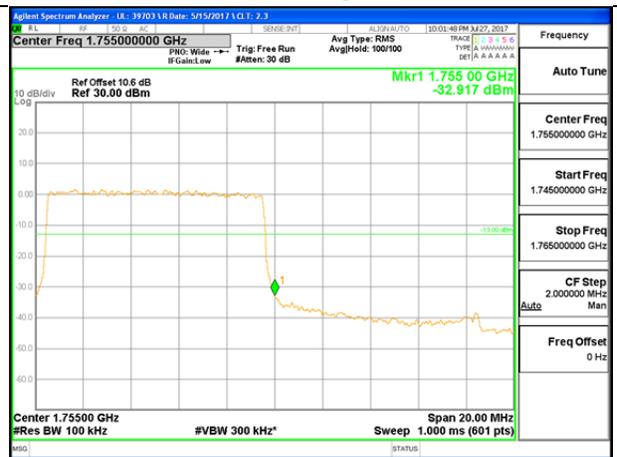
LTE B4 10MHz QPSK Low Channel 1RB



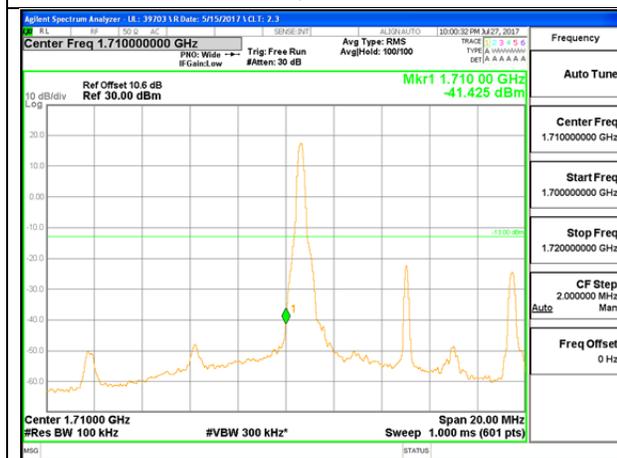
LTE B4 10MHz QPSK High Channel 1RB



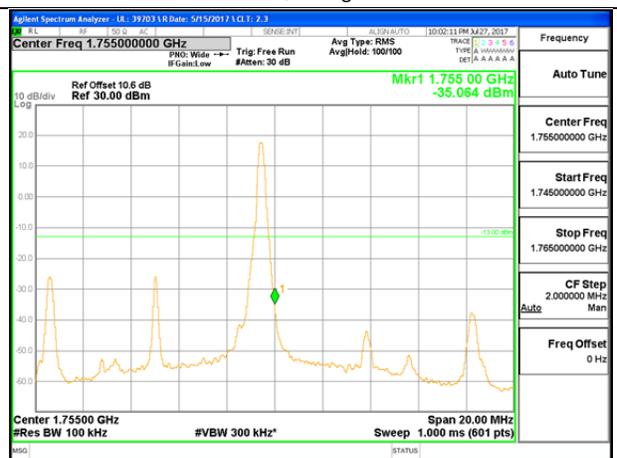
LTE B4 10MHz QPSK Low Channel FRB



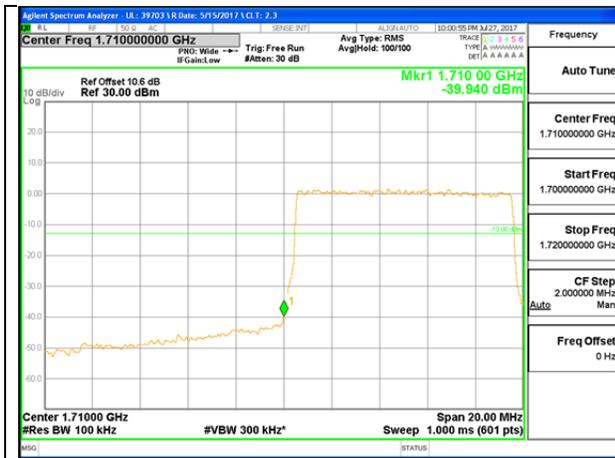
LTE B4 10MHz QPSK High Channel FRB



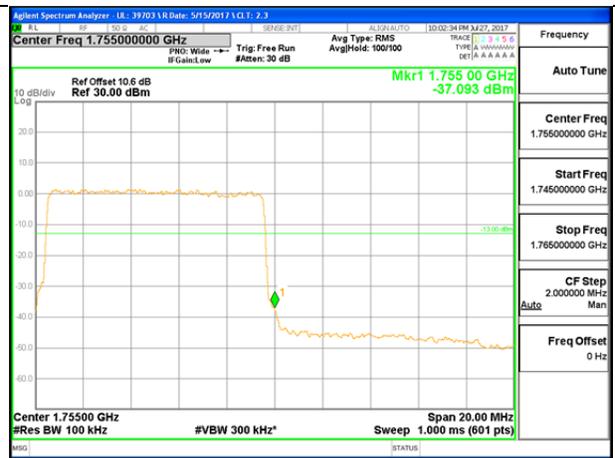
LTE B4 10MHz 16QAM Low Channel 1RB



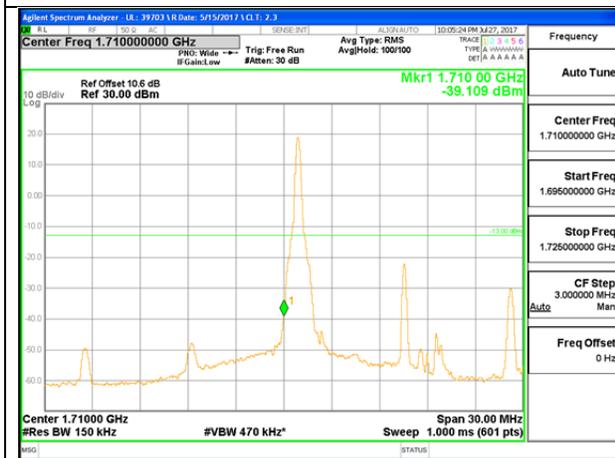
LTE B4 10MHz 16QAM High Channel 1RB



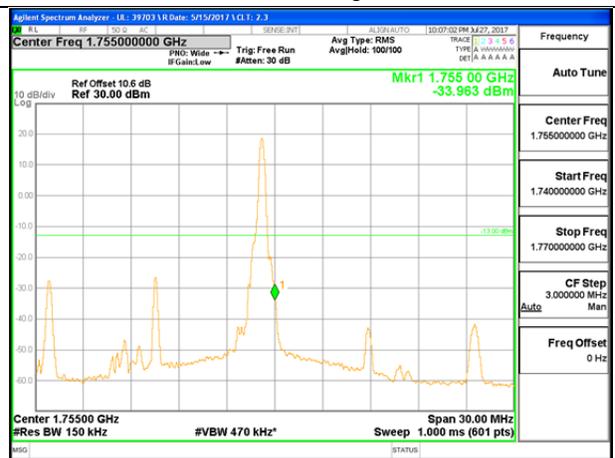
LTE B4 10MHz 16QAM Low Channel FRB



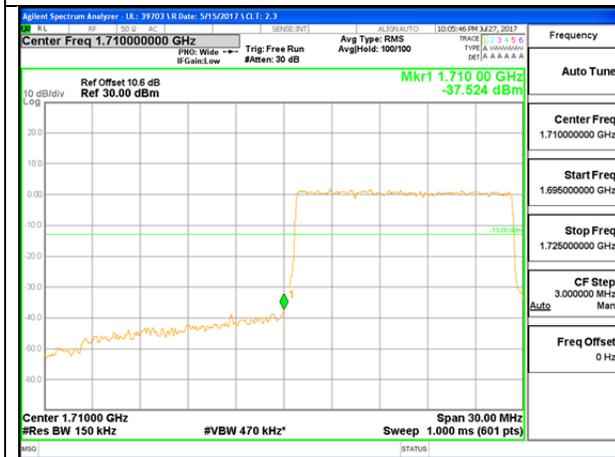
LTE B4 10MHz 16QAM High Channel FRB



LTE B4 15MHz QPSK Low Channel 1RB



LTE B4 15MHz QPSK High Channel 1RB



LTE B4 15MHz QPSK Low Channel FRB



LTE B4 15MHz QPSK High Channel FRB