8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

§2.1049

LIMITS

For reporting purposes only.

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 middle channel in each band. The 99% and -26dB bandwidths was also measured and recorded.

MODES TESTED

- LTE Band 2
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 14
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41
- LTE Band 66
- LTE Band 71

RESULTS

There is no limit required and power is the same for low, middle and high channel; therefore, only middle channel was tested.

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LTE BAND 2

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 2	1.4 MHz, QPSK	6/0	1880.0	1.0930	1.247
	1.4 MHz,16QAM			1.0974	1.243
	1.4MHz 64QAM			1.0923	1.249
	3 MHz, QPSK	15/0		2.7038	2.991
	3 MHz, 16QAM			2.7097	2.987
	3MHz 64QAM			2.7078	2.991
	5 MHz, QPSK	25/0		4.4966	4.925
	5 MHz, 16QAM			4.5021	4.940
	5MHz 64QAM			4.4976	4.932
	10 MHz, QPSK	50/0		9.0083	10.45
	10 MHz, 16QAM			9.0196	10.57
	10MHz 64QAM			9.0120	10.47
	15 MHz, QPSK	75/0		13.499	15.52
	15 MHz, 16QAM			13.495	15.43
	15MHz 64QAM			13.490	15.45
	20 MHz, QPSK	100/0		17.966	19.69
	20 MHz, 16QAM			18.021	19.88
	20MHz 64QAM			17.8626	18.703

LTE BAND 5

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 5	1.4 MHz, QPSK	6/0	836.5	1.0909	1.245
	1.4 MHz,16QAM			1.0936	1.248
	1.4MHz 64QAM			1.0906	1.247
	3 MHz, QPSK	15/0		2.7029	2.981
	3 MHz, 16QAM			2.7135	2.990
	3MHz 64QAM			2.7126	2.992
	5 MHz, QPSK	25/0		4.4939	4.933
	5 MHz, 16QAM			4.4976	4.968
	5MHz 64QAM			4.4969	4.922
	10 MHz, QPSK	50/0		8.9959	10.37
	10 MHz, 16QAM			9.0168	10.47
	10MHz 64QAM			8.9359	9.370

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LTE BAND 7

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 7	5 MHz, QPSK	25/0	2535.0	4.4952	4.943
	5 MHz, 16QAM			4.5016	4.930
	5MHz 64QAM			4.4986	4.962
	10 MHz, QPSK	50/0		9.0118	10.46
	10 MHz, 16QAM			8.9940	10.41
	10MHz 64QAM			9.0277	10.41
	15 MHz, QPSK	75/0		13.471	15.57
	15 MHz, 16QAM			13.481	15.63
	15MHz 64QAM			13.469	15.28
	20 MHz, QPSK	100/0		17.955	19.93
	20 MHz, 16QAM			17.943	20.03
	20MHz 64QAM			17.8535	18.784

LTE BAND 12

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 12	1.4 MHz, QPSK	6/0	707.5	1.0932	1.242
	1.4 MHz,16QAM			1.0910	1.248
	1.4MHz 64QAM			1.0910	1.248
	3 MHz, QPSK	15/0		2.7067	2.987
	3 MHz, 16QAM			2.7143	2.992
	3MHz 64QAM			2.7094	2.984
	5 MHz, QPSK	25/0		4.5060	4.926
	5 MHz, 16QAM			4.5057	4.954
	5MHz 64QAM			4.5058	4.940
	10 MHz, QPSK	50/0		9.0003	10.41
	10 MHz, 16QAM			9.0018	10.45
	10MHz 64QAM			8.9355	9.559

LTE BAND 13

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 13	5 MHz, QPSK	25/0	782.0	4.4988	4.916
	5 MHz, 16QAM			4.5011	4.913
	5MHz 64QAM			4.4928	4.926
	10 MHz, QPSK	50/0		8.9835	10.28
	10 MHz, 16QAM			8.9831	10.35
	10MHz 64QAM			8.9209	9.356

LTE BAND 14

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 14	5 MHz, QPSK	25/0	793	4.5034	4.936
	5 MHz, 16QAM			4.5037	4.960
	5MHz 64QAM			4.5051	4.922
	10 MHz, QPSK	50/0		9.0322	10.430
	10 MHz, 16QAM			9.0226	10.530
	10MHz 64QAM			8.9380	9.363

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LTE BAND 17

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 17	5 MHz, QPSK	25/0	710.0	4.5061	4.947
	5 MHz, 16QAM			4.5007	4.939
	5MHz 64QAM			4.4986	4.927
	10 MHz, QPSK	50/0		9.0169	10.34
	10 MHz, 16QAM			9.0190	10.38
	10MHz 64QAM			8.9304	9.366

LTE BAND 25

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 25	1.4 MHz, QPSK	6/0	1882.5	1.0907	1.248
	1.4 MHz,16QAM			1.0923	1.243
	1.4MHz 64QAM			1.0922	1.245
	3 MHz, QPSK	15/0		2.7055	2.974
	3 MHz, 16QAM			2.7083	2.988
	3MHz 64QAM			2.7036	2.987
	5 MHz, QPSK	25/0		4.5025	4.939
	5 MHz, 16QAM			4.5002	4.928
	5MHz 64QAM			4.4091	4.926
	10 MHz, QPSK	50/0		9.0250	10.34
	10 MHz, 16QAM			9.0076	10.39
	10MHz 64QAM			9.0253	10.45
	15 MHz, QPSK	75/0		13.489	15.60
	15 MHz, 16QAM			13.492	15.52
	15MHz 64QAM			13.486	15.47
	20 MHz, QPSK	100/0		17.982	19.62
	20 MHz, 16QAM			17.955	20.07
	20MHz 64QAM			17.8537	18.697

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LTE BAND 26(PART 90S)

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 26	1.4 MHz, QPSK	1/0	819.0	0.24825	0.36030
	1.4 MHz,16QAM			0.26130	0.37818
	1.4 MHz, 64QAM			0.2949	0.4115
	1.4 MHz, QPSK	6/0		1.0903	1.2430
	1.4 MHz,16QAM			1.0940	1.2410
	1.4MHz 64QAM			1.0952	1.247
	3 MHz, QPSK	1/0		0.28689	0.42410
	3 MHz, 16QAM			0.27182	0.38730
	3 MHz, 64QAM			0.3010	0.4294
	3 MHz, QPSK	15/0		2.6848	2.912
	3 MHz, 16QAM			2.6804	2.943
	3MHz 64QAM			2.7052	2.990
	5 MHz, QPSK	1/0		0.22967	0.4100
	5 MHz, 16QAM			0.24081	0.4337
	5 MHz, 64QAM			0.2516	0.4340
	5 MHz, QPSK	25/0		4.4665	4.761
	5 MHz, 16QAM			4.4708	4.803
	5MHz 64QAM			4.4885	4.915
	10 MHz, QPSK	1/0		0.28922	0.4433
	10 MHz, 16QAM			0.29669	0.4725
	10 MHz, 64QAM			0.3233	0.5129
	10 MHz, QPSK	50/0		8.9409	9.792
	10 MHz, 16QAM			8.9430	9.456
	10MHz 64QAM			8.9865	10.31

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LTE BAND 30

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 30	5 MHz, QPSK	25/0	2310.0	4.4960	4.935
	5 MHz, 16QAM			4.4971	4.955
	5MHz 64QAM			4.4995	4.963
	10 MHz, QPSK	50/0		9.0262	10.44
	10 MHz, 16QAM			9.0416	10.45
	10MHz 64QAM			8.9296	9.381

LTE BAND 41

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 41	5 MHz, QPSK	25/0	2593.0	4.4604	4.751
	5 MHz, 16QAM			4.5026	4.849
	5MHz 64QAM			4.4902	5.030
	10 MHz, QPSK	50/0		8.9896	10.123
	10 MHz, 16QAM			8.9704	10.100
	10MHz 64QAM			8.9929	10.19
	15 MHz, QPSK	75/0		13.3601	14.842
	15 MHz, 16QAM			13.4324	14.533
	15MHz 64QAM			13.480	15.44
	20 MHz, QPSK	100/0		17.8950	18.779
	20 MHz, 16QAM			17.8049	19.286
	20MHz 64QAM			17.8685	18.951

LTE BAND 66

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 66	1.4 MHz, QPSK	6/0	1732.5	1.0856	1.242
	1.4 MHz,16QAM			1.0877	1.243
	1.4MHz 64QAM			1.0865	1.240
	3 MHz, QPSK	15/0		2.6889	2.900
	3 MHz, 16QAM			2.6871	2.909
	3MHz 64QAM			2.6891	2.976
	5 MHz, QPSK	25/0		4.4983	4.906
	5 MHz, 16QAM			4.5048	4.947
	5MHz 64QAM			4.4960	4.937
	10 MHz, QPSK	50/0		9.0209	10.39
	10 MHz, 16QAM			9.0138	10.40
	10MHz 64QAM			9.0076	10.50
	15 MHz, QPSK	75/0		13.463	15.40
	15 MHz, 16QAM			13.501	13.36
	15MHz 64QAM			13.466	15.32
	20 MHz, QPSK	100/0		17.930	19.80
	20 MHz, 16QAM			17.945	20.02
	20MHz 64QAM			17.9880	18.971

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LTE BAND 71

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 71	5 MHz, QPSK	1/0	680.5	0.24391	0.4433
	5 MHz, 16QAM			0.24486	0.4260
	5 MHz, QPSK	25/0		4.5120	4.950
	5 MHz, 16QAM			4.4958	4.942
	5 MHz, 64QAM			4.5030	4.885
	10 MHz, QPSK	1/0		0.27162	0.4533
	10 MHz, 16QAM			0.30565	0.4993
	10 MHz, QPSK	50/0		9.0307	10.490
	10 MHz, 16QAM			9.0150	10.380
	10 MHz, 64QAM			9.0036	10.294
	15 MHz, QPSK	1/0		0.27849	0.4463
	15 MHz, 16QAM			0.28889	0.4912
	15 MHz, QPSK	75/0		13.5010	15.580
	15 MHz, 16QAM			13.4940	15.360
	15 MHz, 64QAM			13.3950	14.530
	20 MHz, QPSK	1/0		0.27622	0.4725
	20 MHz, 16QAM			0.28395	0.4995
	20 MHz, QPSK	100/0		17.9690	20.070
	20 MHz, 16QAM			18.0060	21.850
	20 MHz, 64QAM			17.9610	19.680

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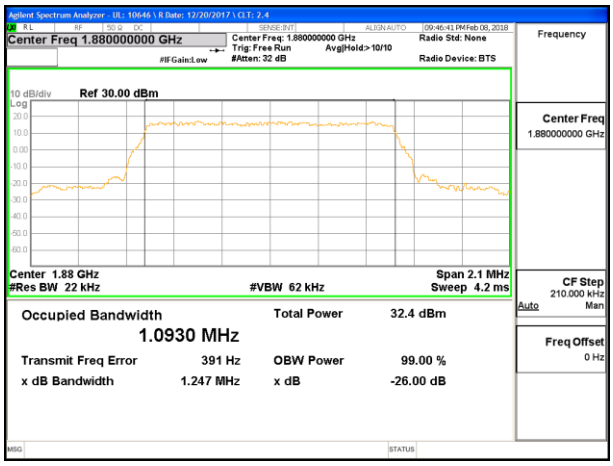
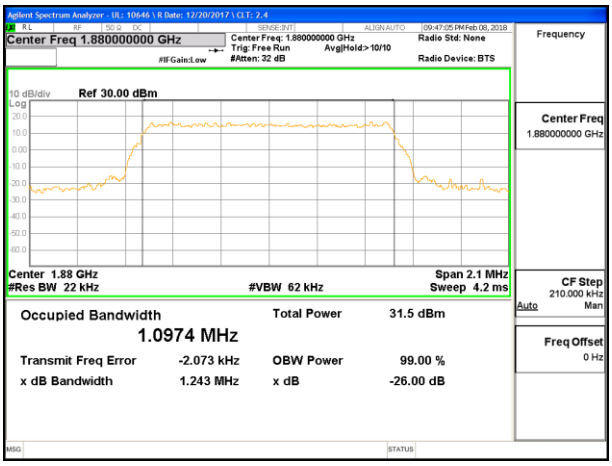
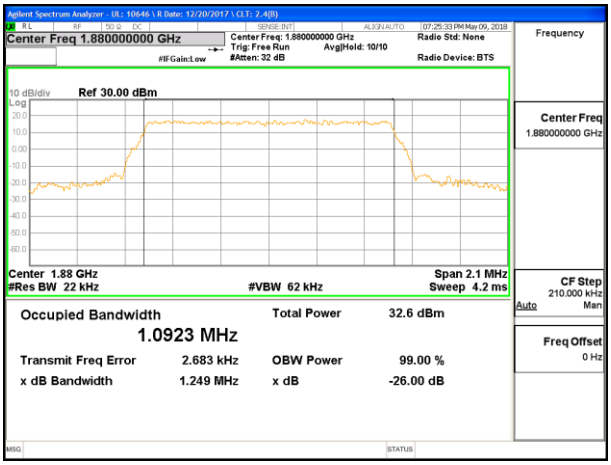
8.1.1. LTE BAND 2



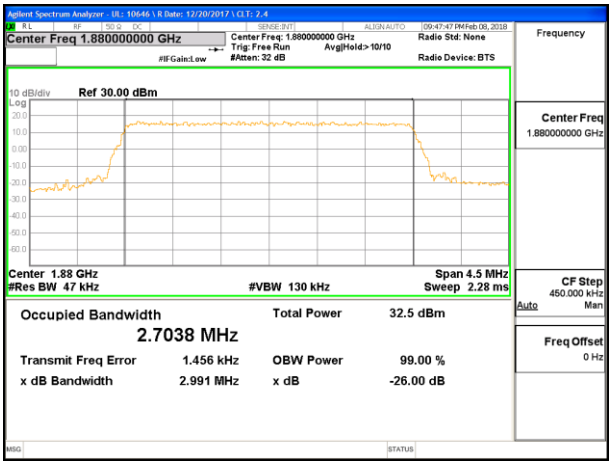
LTE B2 1.4MHz QPSK Middle Channel RB6-0



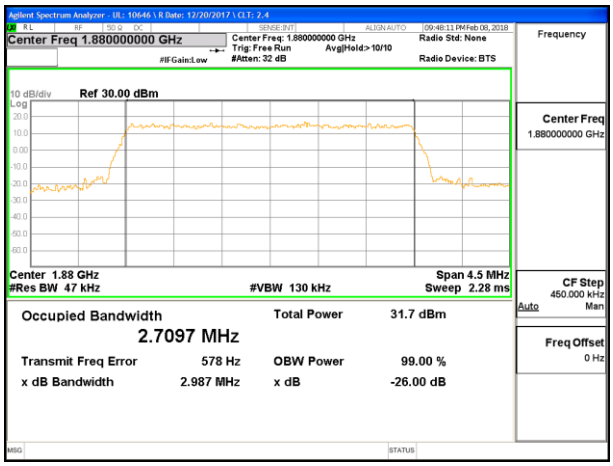
LTE B2 1.4MHz 16QAM Middle Channel RB6-0



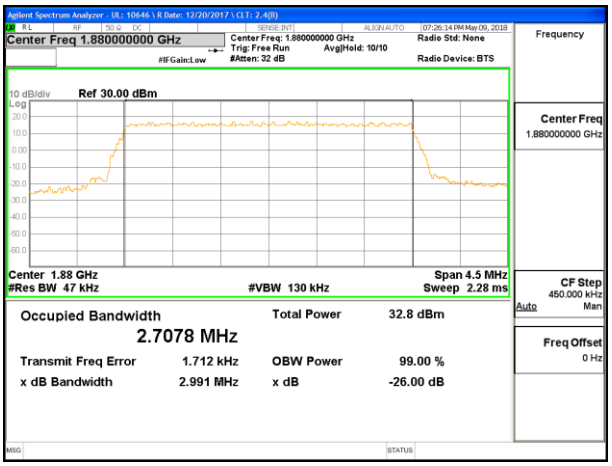
LTE B2 1.4MHz 64QAM Middle Channel RB6-0



LTE B2 3MHz QPSK Middle Channel RB15-0



LTE B2 3MHz 16QAM Middle Channel RB15-0



LTE B2 3MHz 64QAM Middle Channel RB15-0

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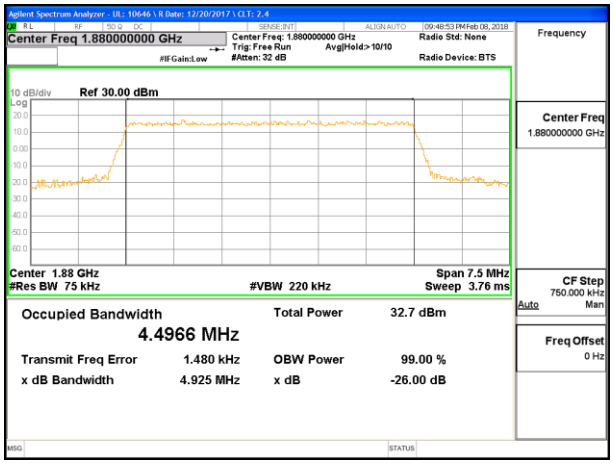
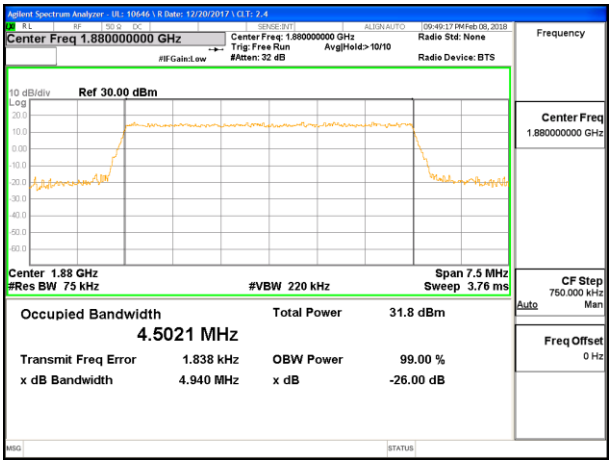
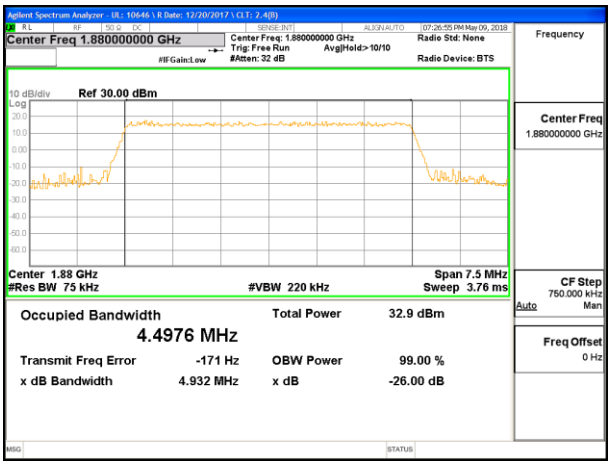


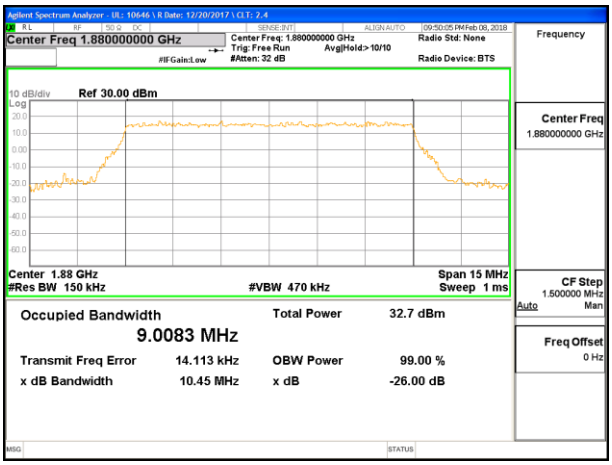
LTE B2 5MHz QPSK Middle Channel RB25-0



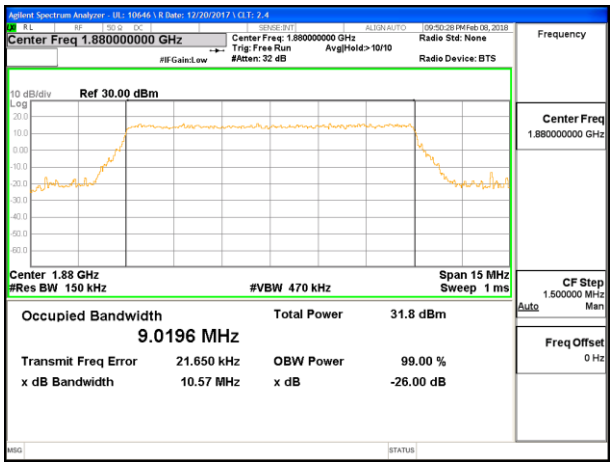
LTE B2 5MHz 16QAM Middle Channel RB25-0



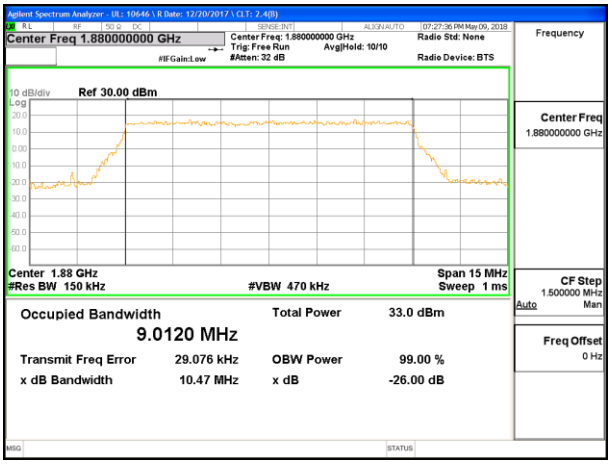
LTE B2 5MHz 64QAM Middle Channel RB25-0



LTE B2 10MHz QPSK Middle Channel RB50-0



LTE B2 10MHz 16QAM Middle Channel RB50-0



LTE B2 10MHz 64QAM Middle Channel RB50-0

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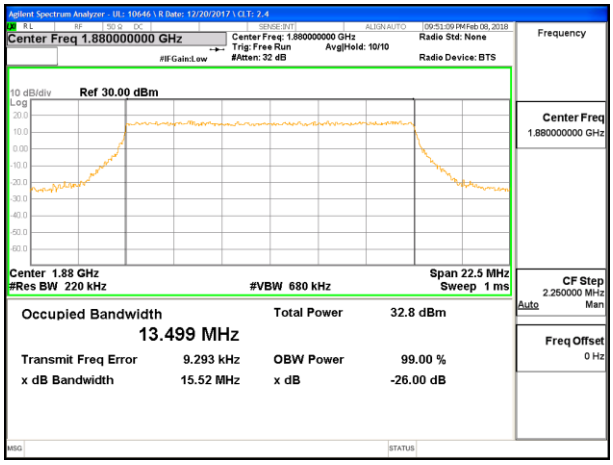
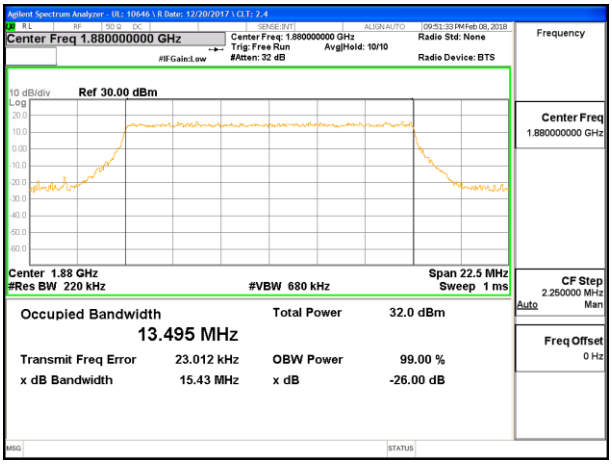
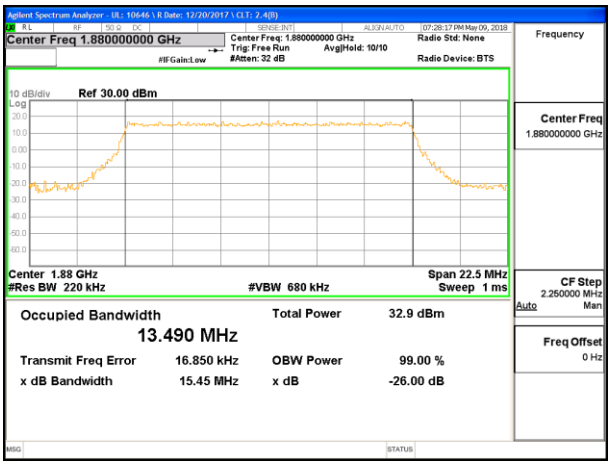


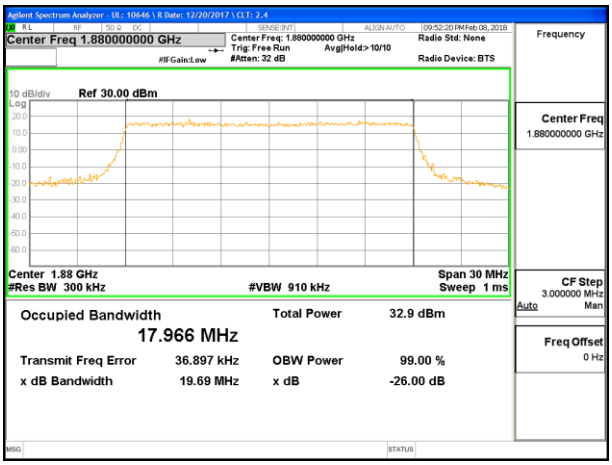
LTE B2 15MHz QPSK Middle Channel RB75-0



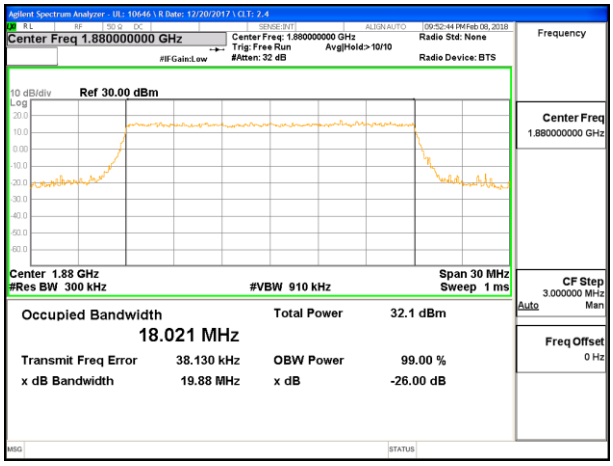
LTE B2 15MHz 16QAM Middle Channel RB75-0



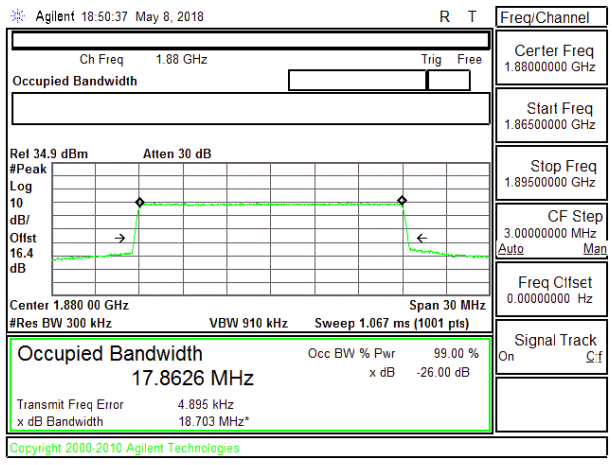
LTE B2 15MHz 64QAM Middle Channel RB75-0



LTE B2 20MHz QPSK Middle Channel RB100-0



LTE B2 20MHz 16QAM Middle Channel RB100-0



LTE B2 20MHz 64QAM Middle Channel RB100-0

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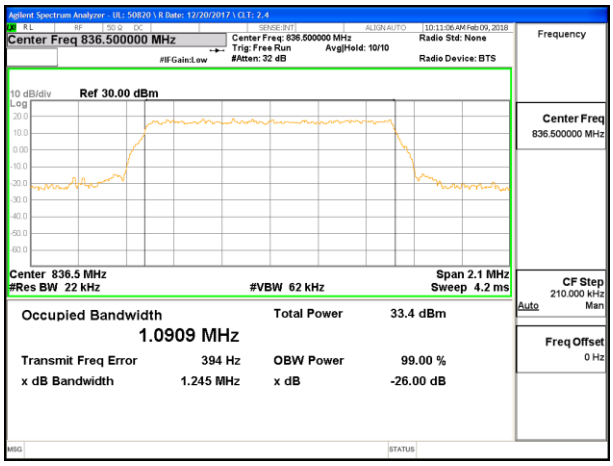
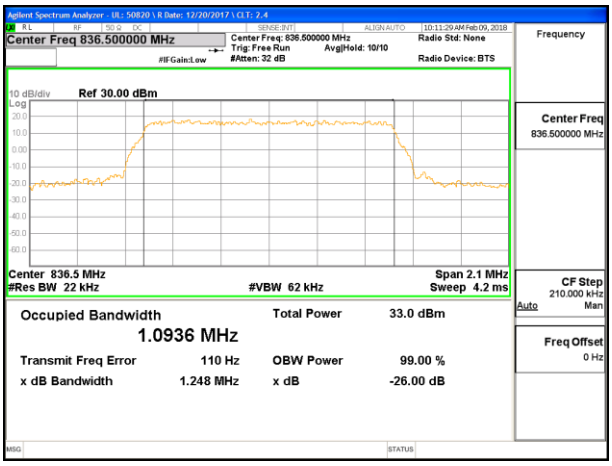
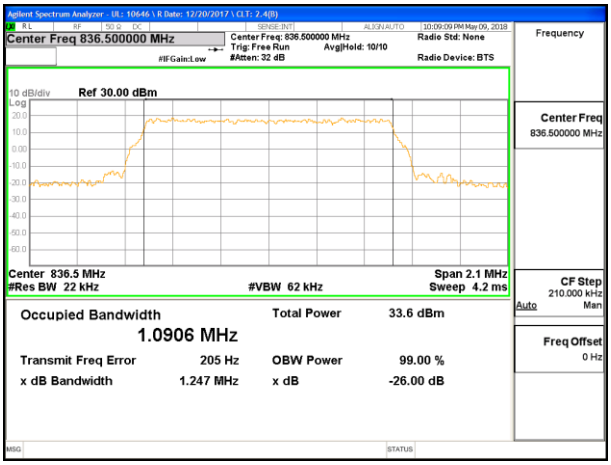
8.1.2. LTE BAND 5



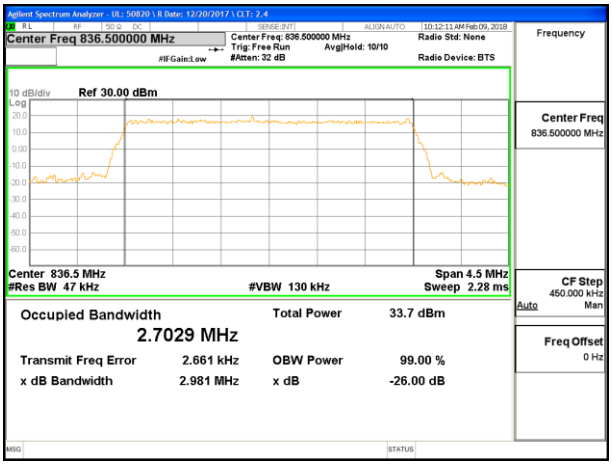
LTE B5 1.4MHz QPSK Middle Channel RB6-0



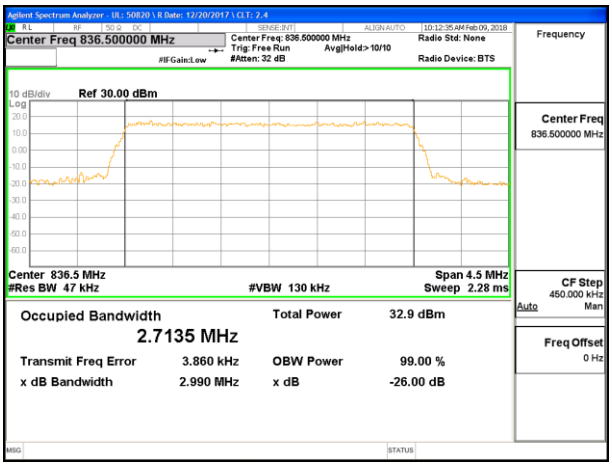
LTE B5 1.4MHz 16QAM Middle Channel RB6-0



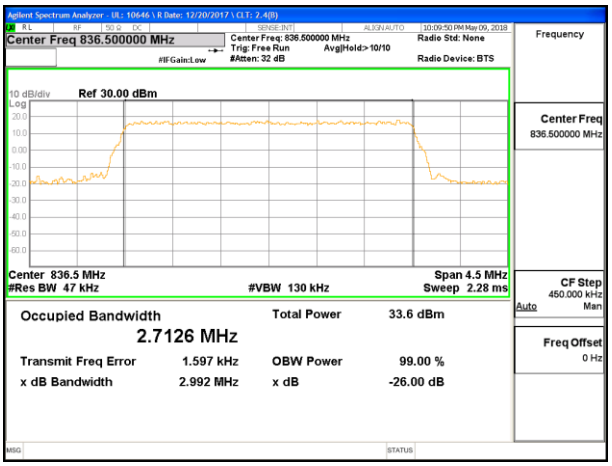
LTE B5 1.4MHz 64QAM Middle Channel RB6-0



LTE B5 3MHz QPSK Middle Channel RB15-0



LTE B5 3MHz 16QAM Middle Channel RB15-0



LTE B5 3MHz 64QAM Middle Channel RB15-0

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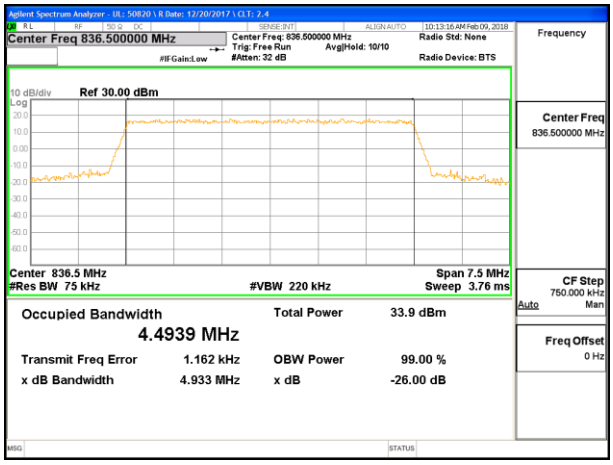
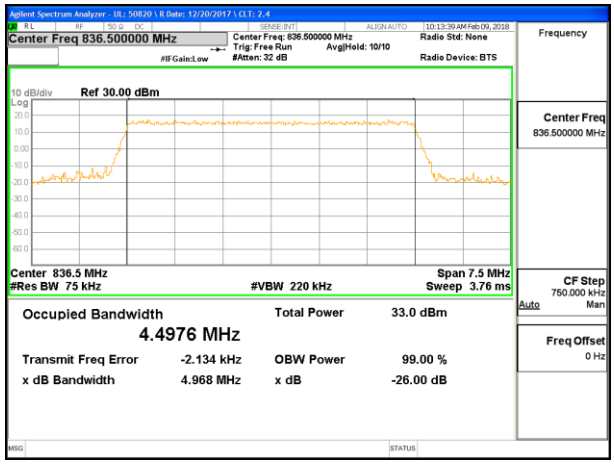
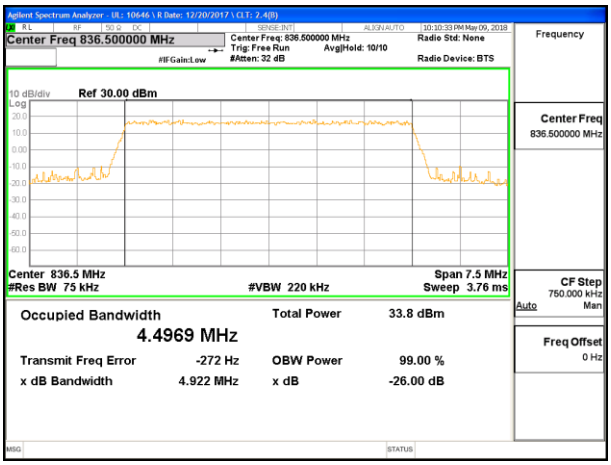


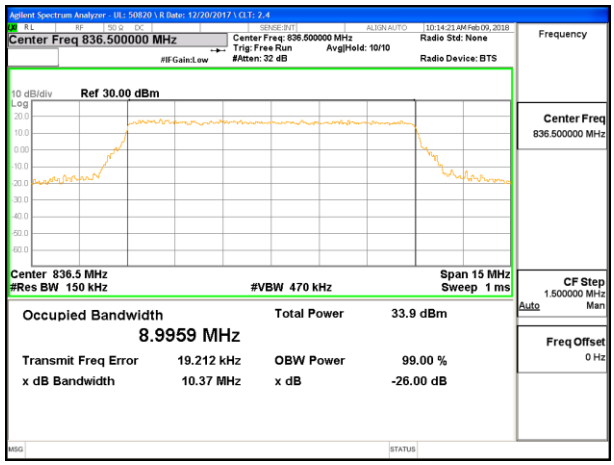
LTE B5 5MHz QPSK Middle Channel RB25-0



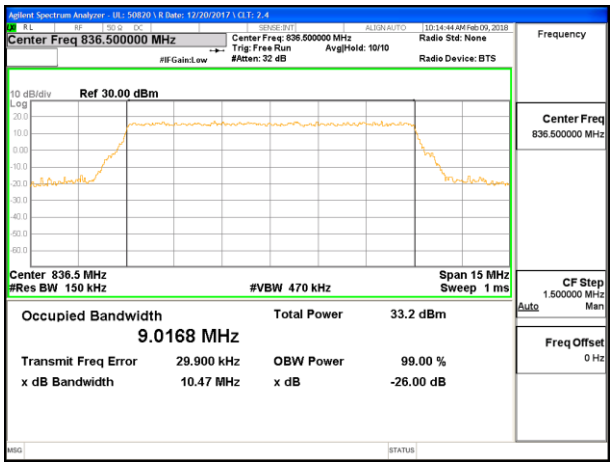
LTE B5 5MHz 16QAM Middle Channel RB25-0



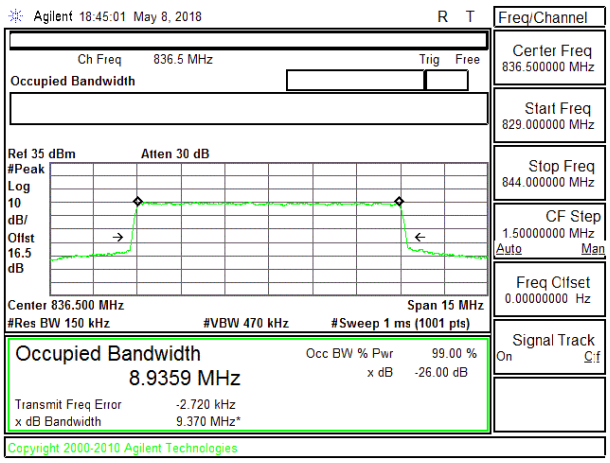
LTE B5 5MHz 64QAM Middle Channel RB25-0



LTE B5 10MHz QPSK Middle Channel RB50-0



LTE B5 10MHz 16QAM Middle Channel RB50-0



LTE B5 10MHz 64QAM Middle Channel RB50-0

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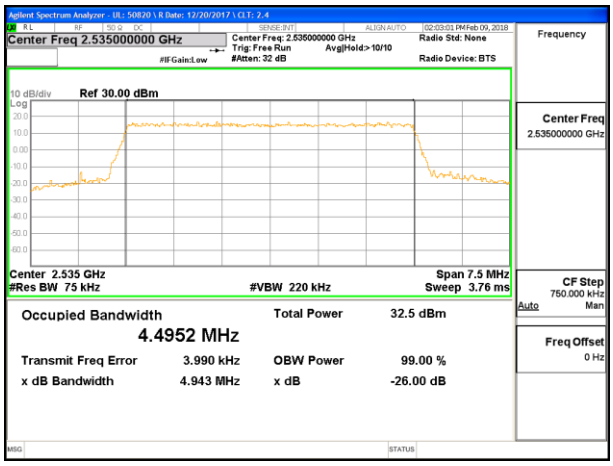
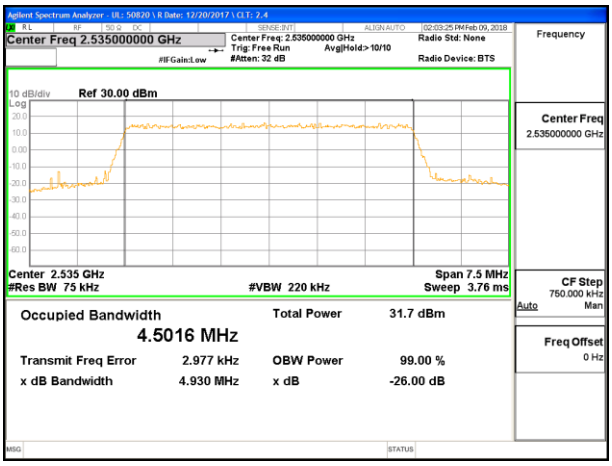
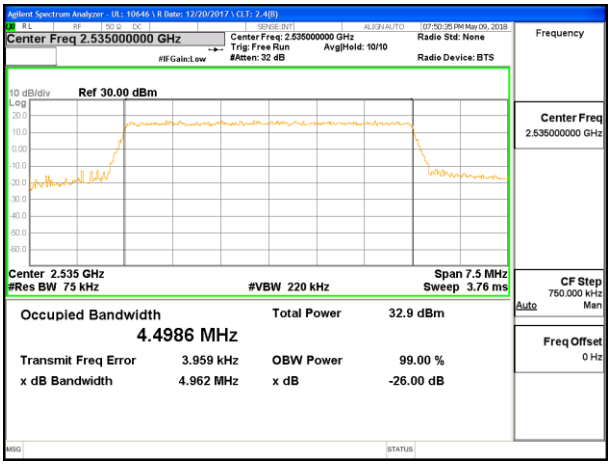
8.1.3. LTE BAND 7



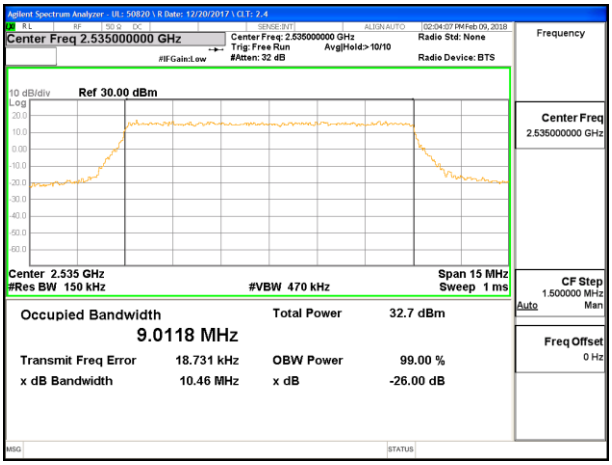
LTE B7 5MHz QPSK Middle Channel RB25-0



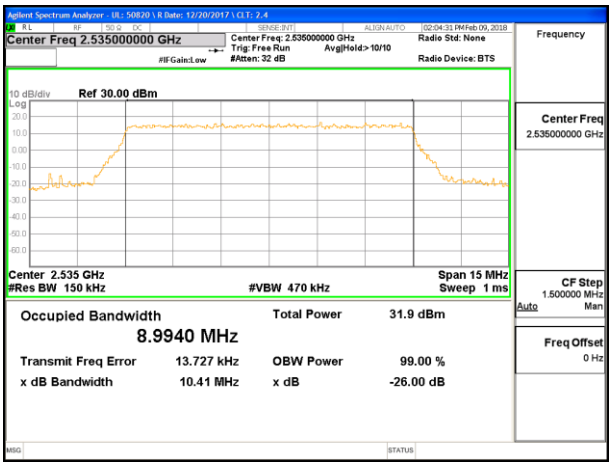
LTE B7 5MHz 16QAM Middle Channel RB25-0



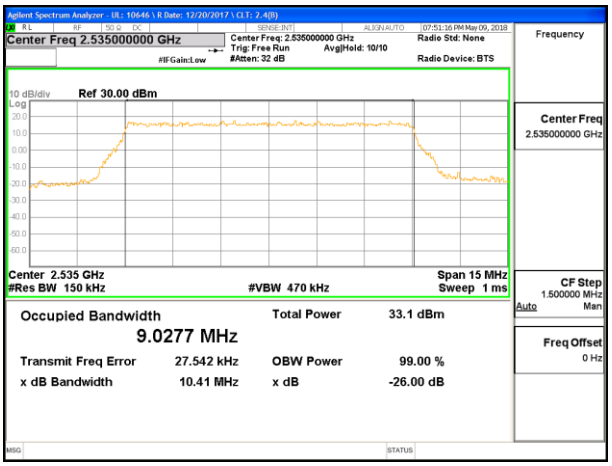
LTE B7 5MHz 64QAM Middle Channel RB25-0



LTE B7 10MHz QPSK Middle Channel RB50-0



LTE B7 10MHz 16QAM Middle Channel RB50-0



LTE B7 10MHz 64QAM Middle Channel RB50-0

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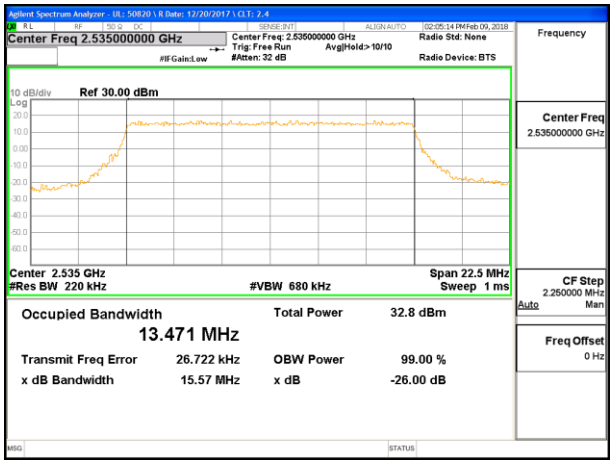
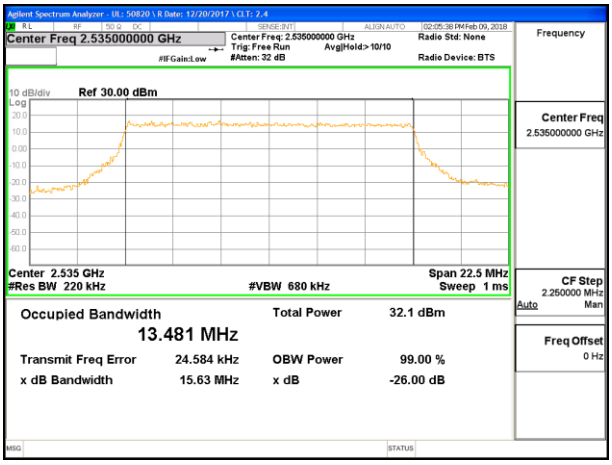
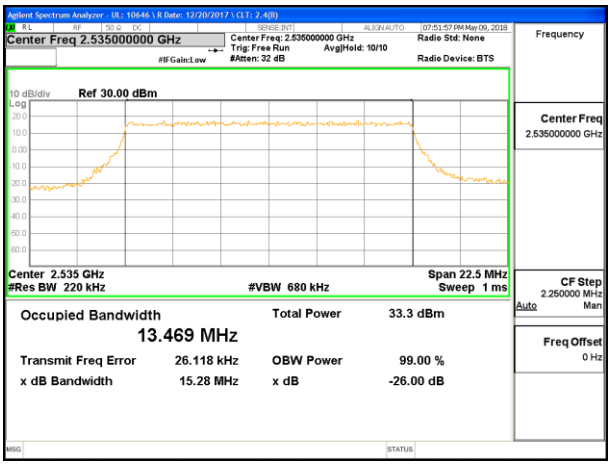


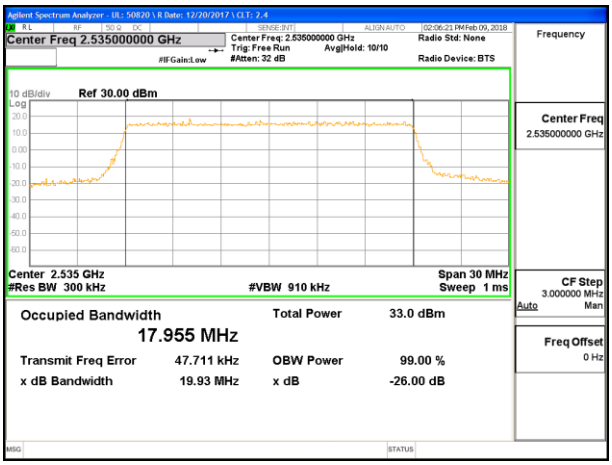
LTE B7 15MHz QPSK Middle Channel RB75-0



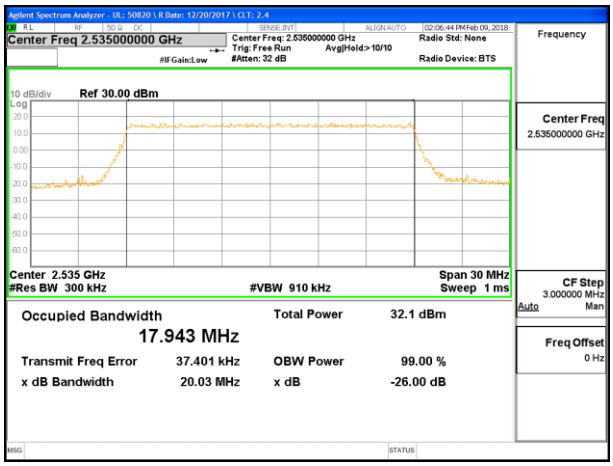
LTE B7 15MHz 16QAM Middle Channel RB75-0



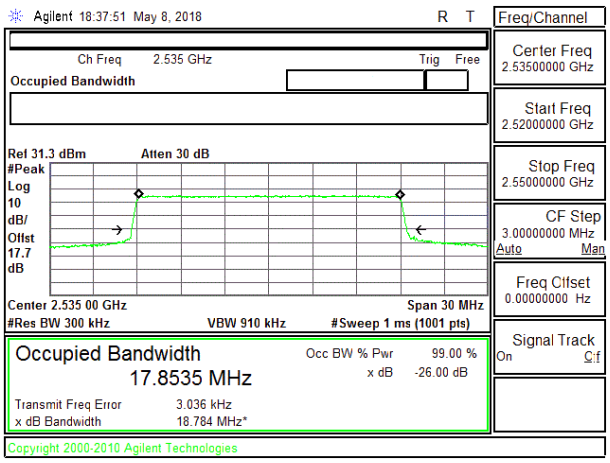
LTE B7 15MHz 64QAM Middle Channel RB75-0



LTE B7 20MHz QPSK Middle Channel RB100-0



LTE B7 20MHz 16QAM Middle Channel RB100-0



LTE B7 20MHz 64QAM Middle Channel RB100-0

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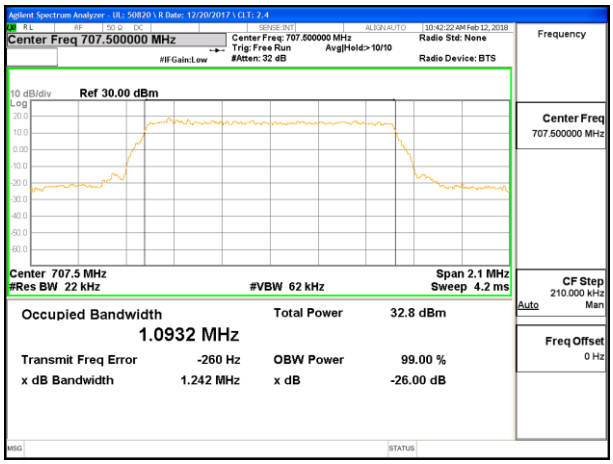
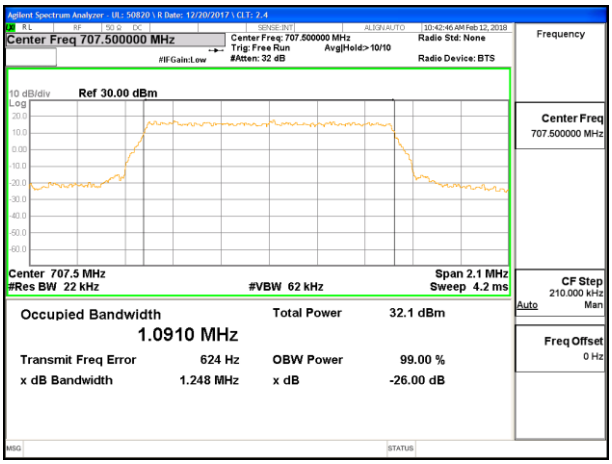
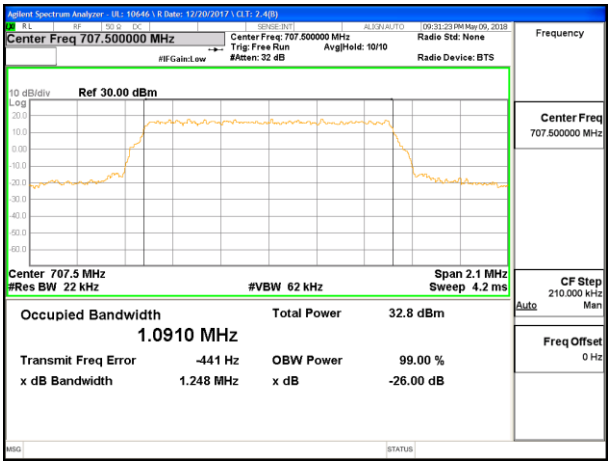
8.1.4. LTE BAND 12



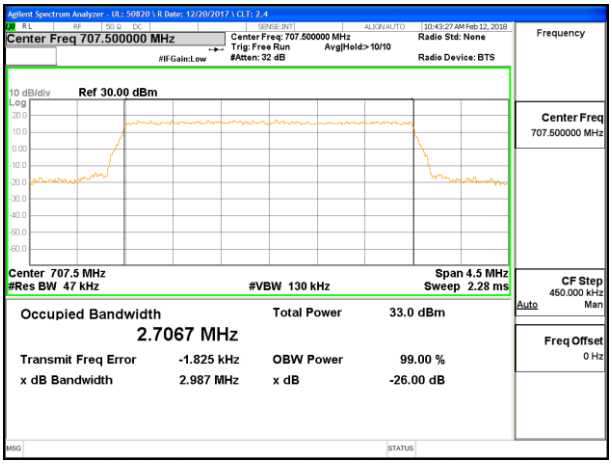
LTE B12 1.4MHz QPSK Middle Channel RB6-0



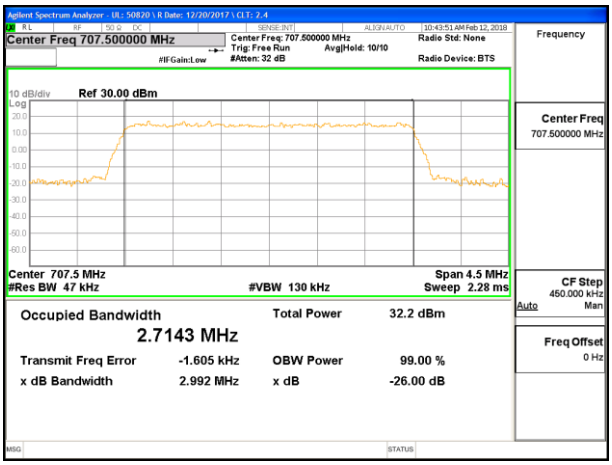
LTE B12 1.4MHz 16QAM Middle Channel RB6-0



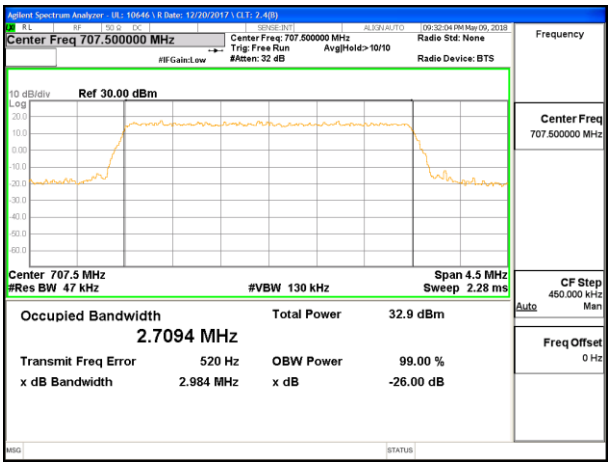
LTE B12 1.4MHz 64QAM Middle Channel RB6-0



LTE B12 3MHz QPSK Middle Channel RB15-0



LTE B12 3MHz 16QAM Middle Channel RB15-0



LTE B12 3MHz 64QAM Middle Channel RB15-0

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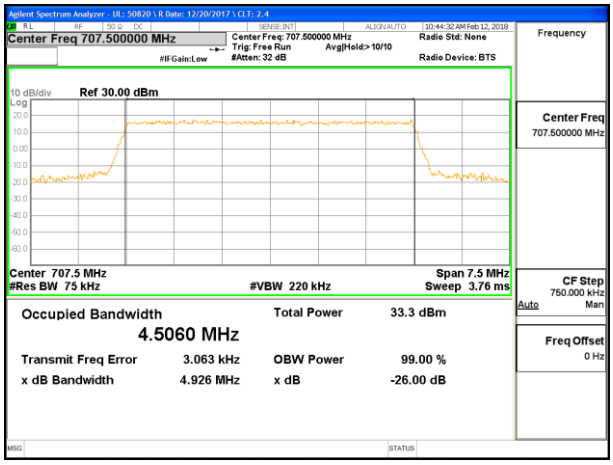
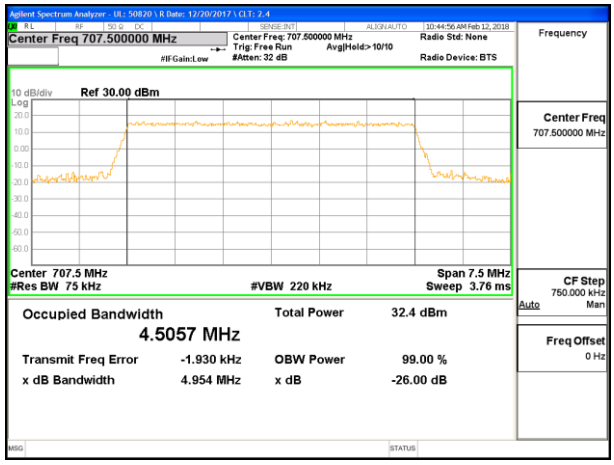
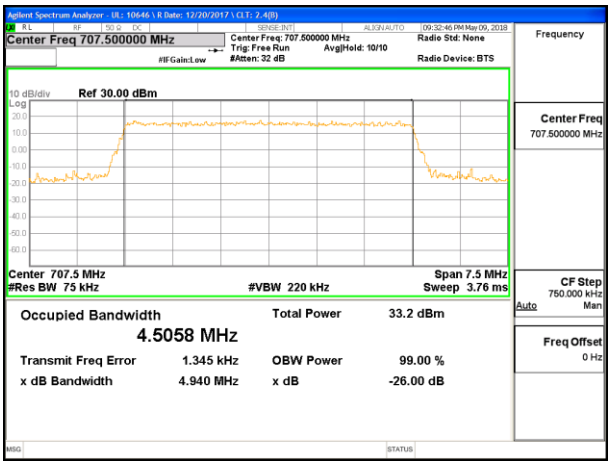


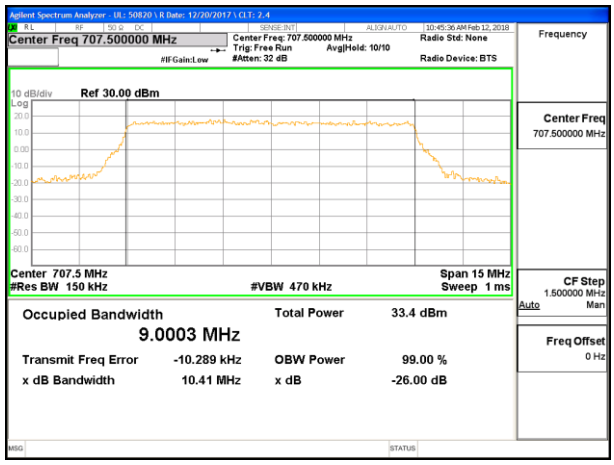
LTE B12 5MHz QPSK Middle Channel RB25-0



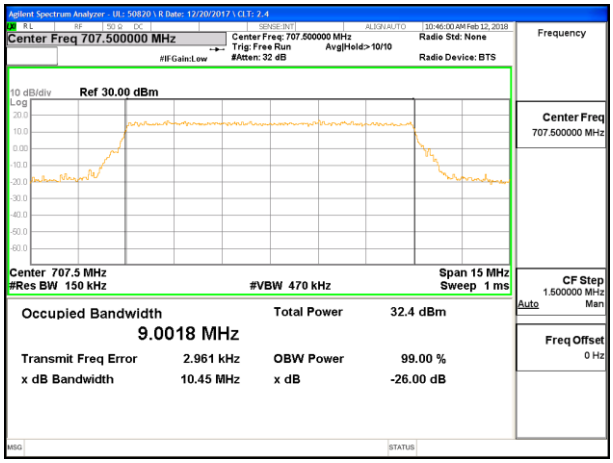
LTE B12 5MHz 16QAM Middle Channel RB25-0



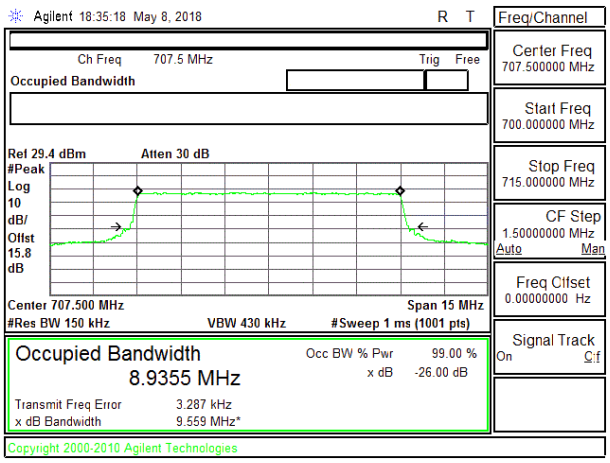
LTE B12 5MHz 64QAM Middle Channel RB25-0



LTE B12 10MHz QPSK Middle Channel RB50-0



LTE B12 10MHz 16QAM Middle Channel RB50-0



LTE B12 10MHz 64QAM Middle Channel RB50-0

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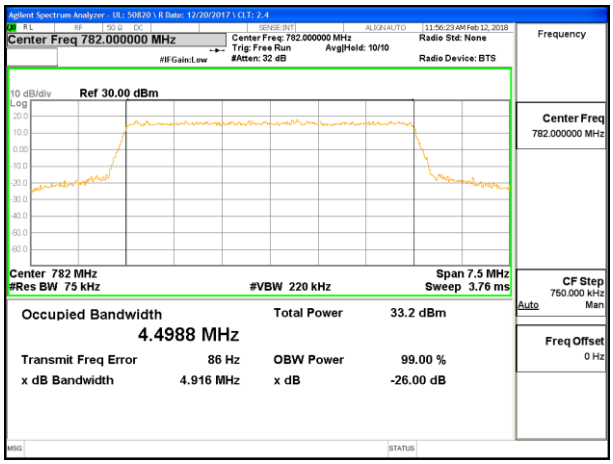
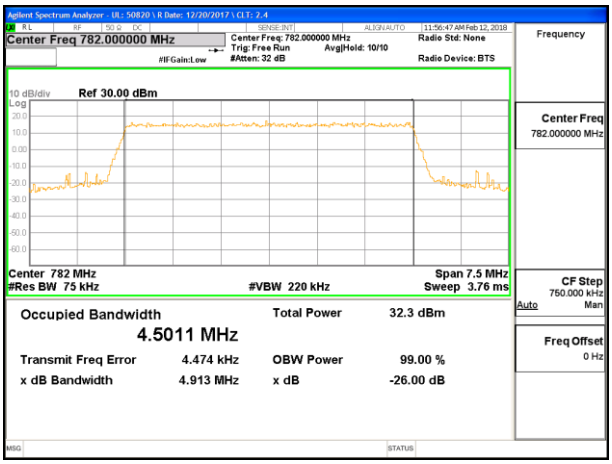
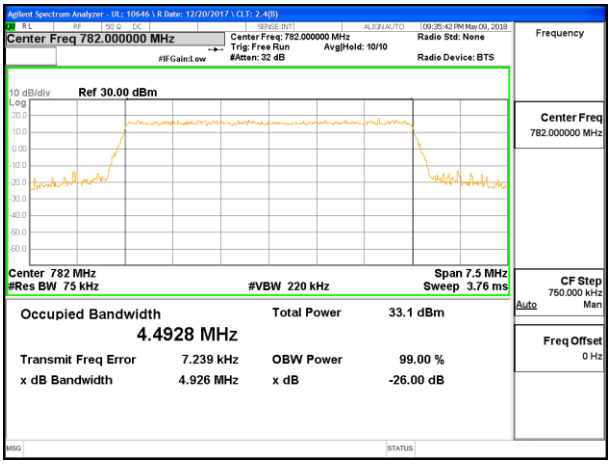
8.1.5. LTE BAND 13



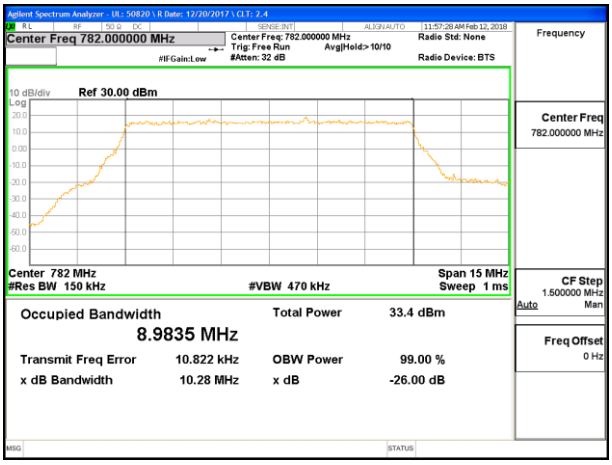
LTE B13 5MHz QPSK Middle Channel RB25-0



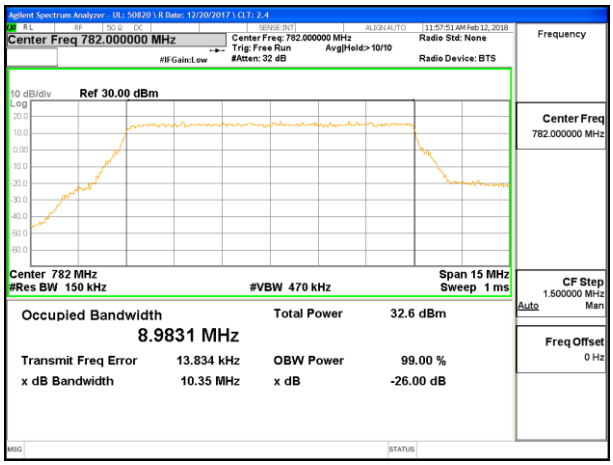
LTE B13 5MHz 16QAM Middle Channel RB25-0



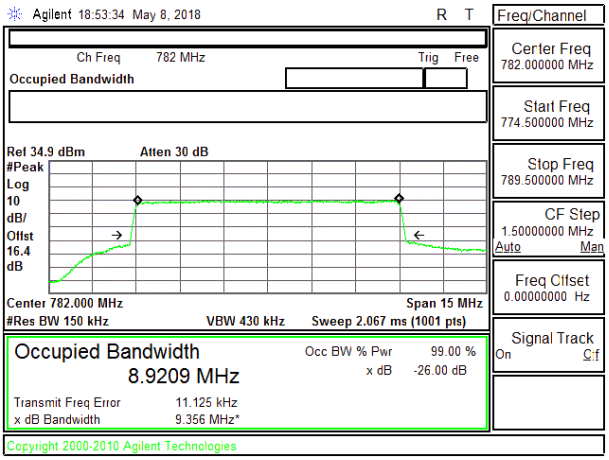
LTE B13 5MHz 64QAM Middle Channel RB25-0



LTE B13 10MHz QPSK Middle Channel RB50-0



LTE B13 10MHz 16QAM Middle Channel RB50-0



LTE B13 10MHz 64QAM Middle Channel RB50-0

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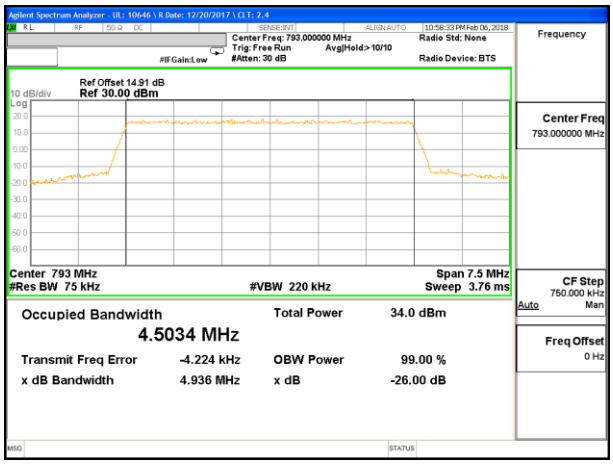
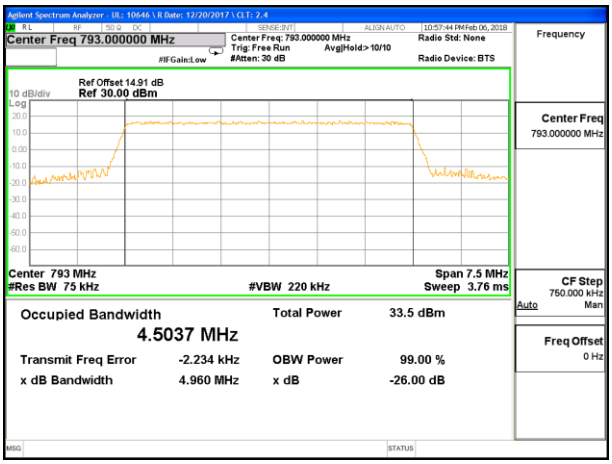
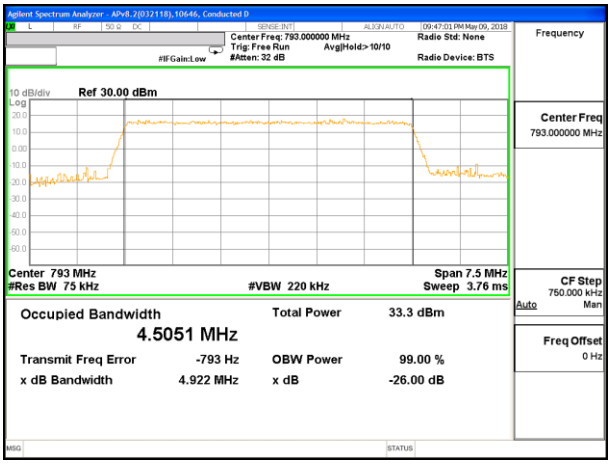
8.1.6. LTE BAND 14



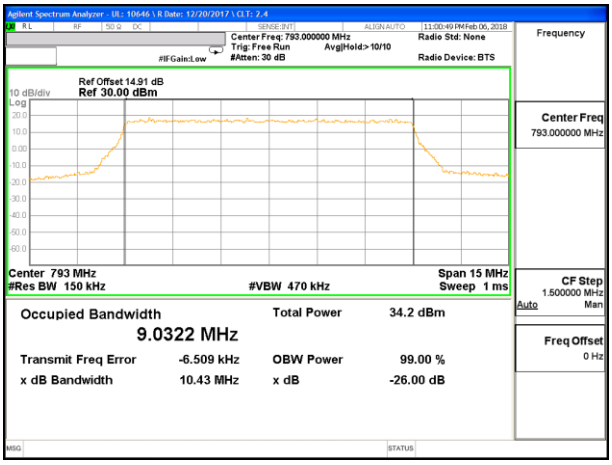
LTE B14 5MHz QPSK Middle Channel RB25-0



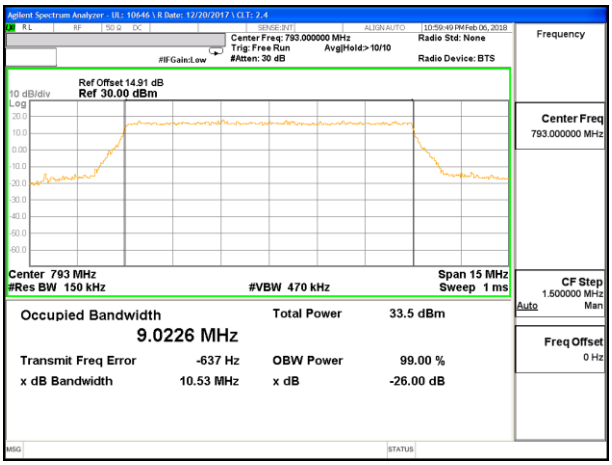
LTE B14 5MHz 16QAM Middle Channel RB25-0



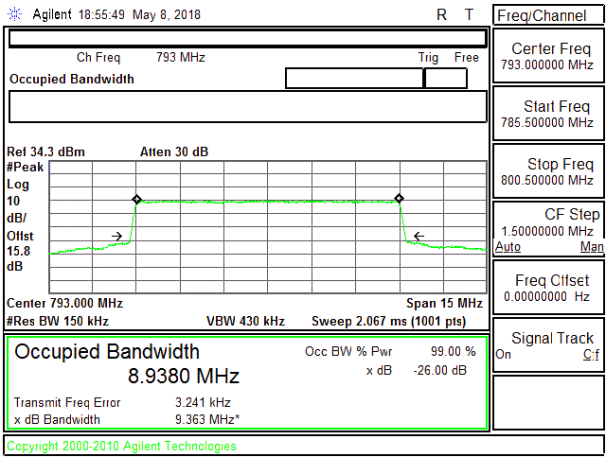
LTE B14 5MHz 64QAM Middle Channel RB25-0



LTE B14 10MHz QPSK Middle Channel RB50-0



LTE B14 10MHz 16QAM Middle Channel RB50-0



LTE B14 10MHz 64QAM Middle Channel RB50-0

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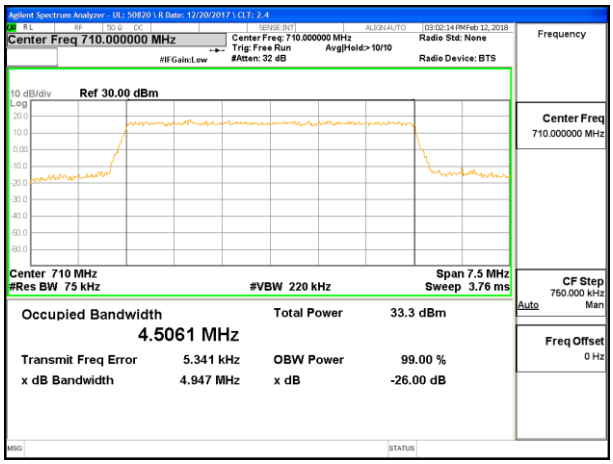
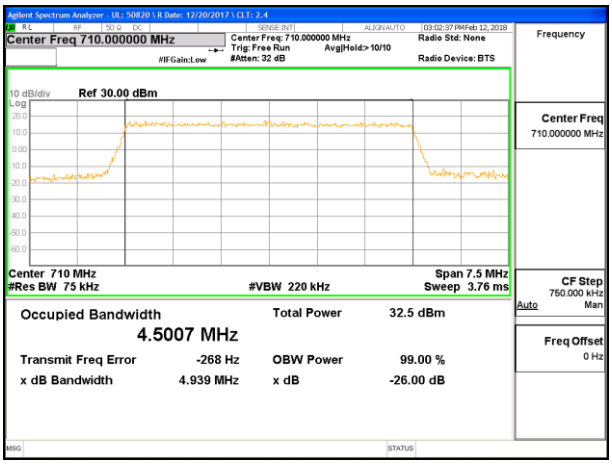
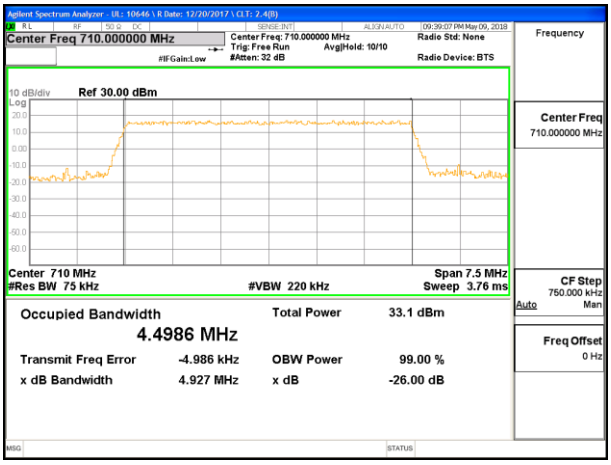
8.1.7. LTE BAND 17



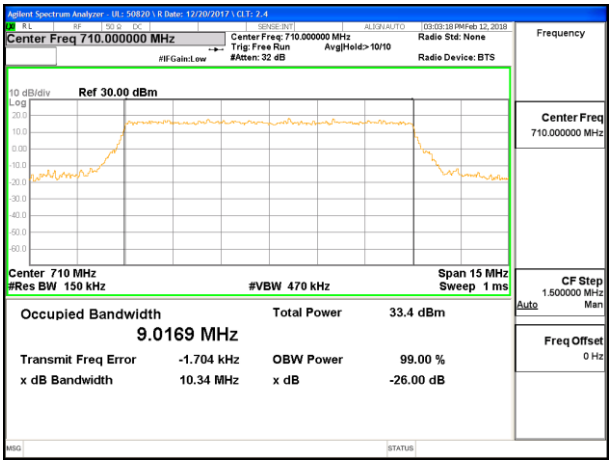
LTE B17 5MHz QPSK Middle Channel RB25-0



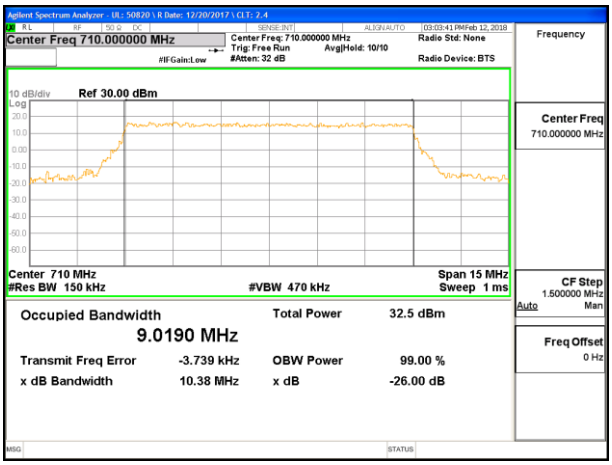
LTE B17 5MHz 16QAM Middle Channel RB25-0



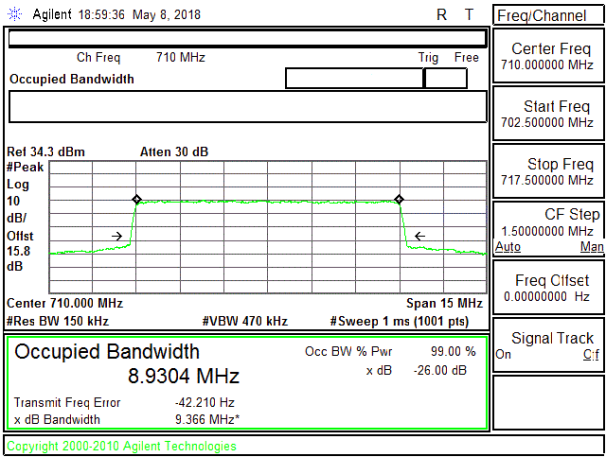
LTE B17 5MHz 64QAM Middle Channel RB25-0



LTE B17 10MHz QPSK Middle Channel RB50-0



LTE B17 10MHz 16QAM Middle Channel RB50-0



LTE B17 10MHz 64QAM Middle Channel RB50-0

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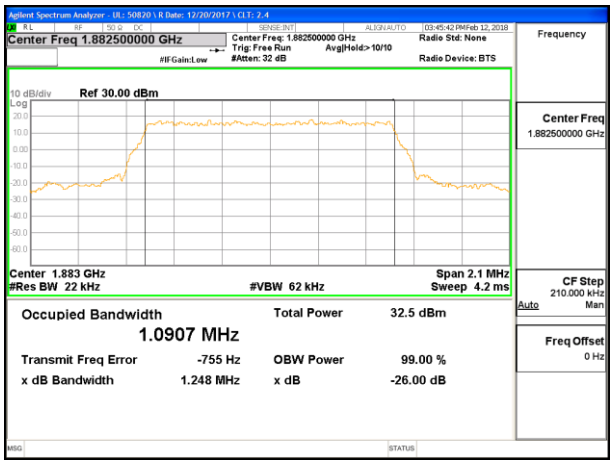
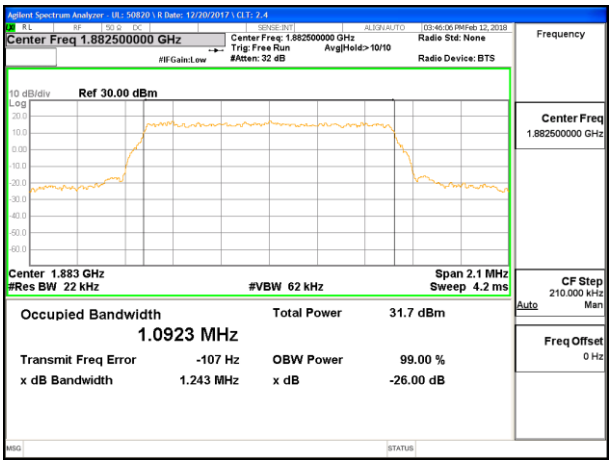
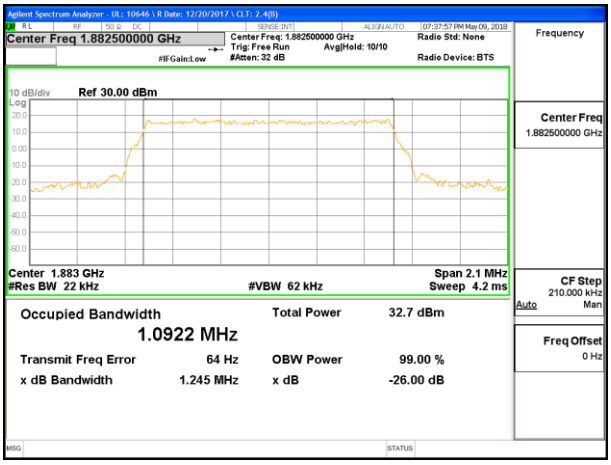
8.1.8. LTE BAND 25



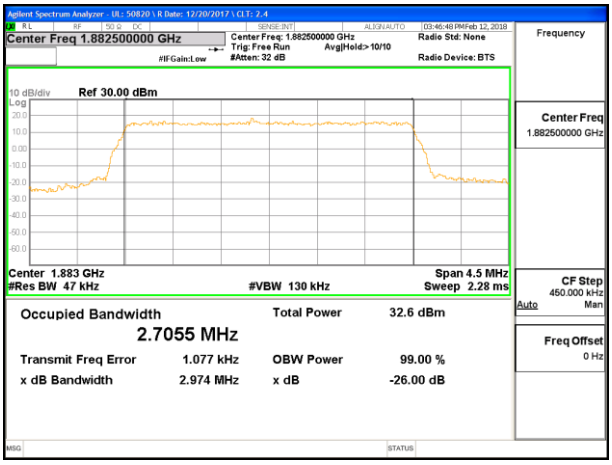
LTE B25 1.4MHz QPSK Middle Channel RB6-0



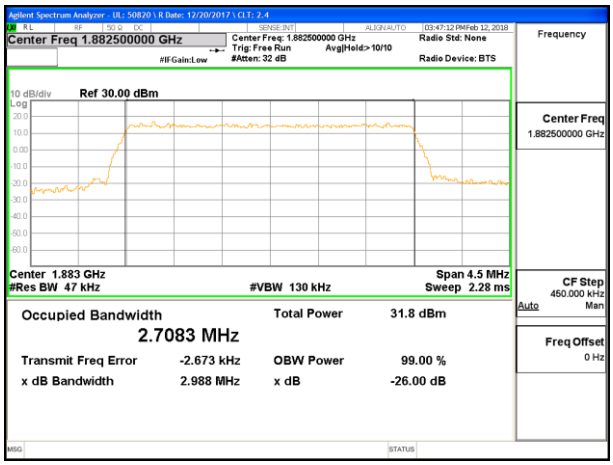
LTE B25 1.4MHz 16QAM Middle Channel RB6-0



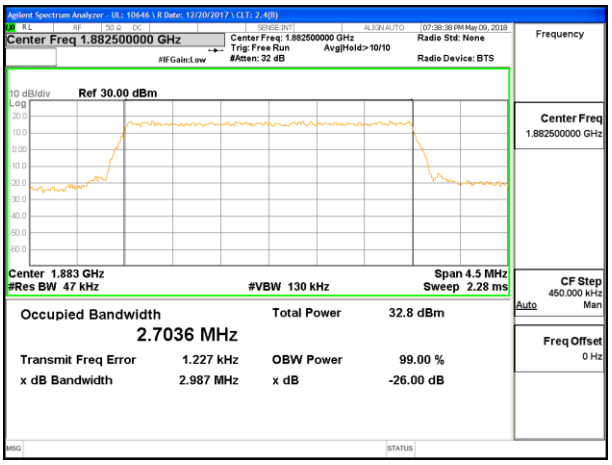
LTE B25 1.4MHz 64QAM Middle Channel RB6-0



LTE B25 3MHz QPSK Middle Channel RB15-0



LTE B25 3MHz 16QAM Middle Channel RB15-0



LTE B25 3MHz 64QAM Middle Channel RB15-0

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