OUTPUT POWER FOR LTE BAND 12 (10.0 MHz)

Antenna Gain (dBi)	0.87								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10.0	23060	704.0	QPSK	1	0	**22.9**	**21.6**	34.77	-13.2
				1	24	22.7	21.5	34.77	-13.3
				1	49	22.7	21.4	34.77	-13.4
				25	0	21.9	20.6	34.77	-14.2
				25	12	21.9	20.6	34.77	-14.2
				25	24	21.8	20.5	34.77	-14.3
				50	0	21.8	20.5	34.77	-14.2
			16QAM	1	0	21.8	20.5	34.77	-14.2
				1	24	21.7	20.5	34.77	-14.3
				1	49	21.7	20.4	34.77	-14.4
				25	0	20.9	19.6	34.77	-15.2
				25	12	20.9	19.6	34.77	-15.1
				25	24	20.9	19.6	34.77	-15.2
				50	0	20.8	19.6	34.77	-15.2
10.0	23095	707.5	QPSK	1	0	22.7	21.4	34.77	-13.4
				1	24	22.6	21.3	34.77	-13.4
				1	49	22.6	21.3	34.77	-13.5
				25	0	21.7	20.5	34.77	-14.3
				25	12	21.7	20.4	34.77	-14.3
				25	24	21.6	20.3	34.77	-14.4
				50	0	21.8	20.5	34.77	-14.3
			16QAM	1	0	21.6	20.3	34.77	-14.5
				1	24	21.6	20.4	34.77	-14.4
				1	49	21.5	20.2	34.77	-14.6
				25	0	20.7	19.4	34.77	-15.4
				25	12	20.6	19.4	34.77	-15.4
				25	24	20.6	19.3	34.77	-15.4
				50	0	20.6	19.4	34.77	-15.4
10.0	23130	711.0	QPSK	1	0	22.5	21.3	34.77	-13.5
				1	24	22.6	21.3	34.77	-13.4
				1	49	22.6	21.3	34.77	-13.5
				25	0	21.7	20.5	34.77	-14.3
				25	12	21.7	20.5	34.77	-14.3
				25	24	21.7	20.4	34.77	-14.4
				50	0	21.8	20.5	34.77	-14.3
			16QAM	1	0	**22.0**	**20.7**	34.77	-14.1
				1	24	21.9	20.6	34.77	-14.1
				1	49	21.9	20.6	34.77	-14.1
				25	0	20.7	19.4	34.77	-15.3
				25	12	20.7	19.4	34.77	-15.4
				25	24	20.7	19.4	34.77	-15.4
				50	0	20.7	19.4	34.77	-15.4

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7.2.6. LTE BAND 13

ID:	43575	Date:	12/1/2016

OUTPUT POWER FOR LTE BAND 13 (5.0 MHz)

Antenna Gain (dBi)	0.67								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5.0	23207	779.5	QPSK	1	0	21.8	20.4	34.77	-14.4
				1	12	22.7	21.2	34.77	-13.6
				1	24	22.7	21.2	34.77	-13.6
				12	0	21.8	20.3	34.77	-14.5
				12	6	21.8	20.4	34.77	-14.4
				12	11	21.8	20.3	34.77	-14.5
				25	0	21.8	20.3	34.77	-14.5
			16QAM	1	0	21.0	19.5	34.77	-15.2
				1	12	21.8	20.4	34.77	-14.4
				1	24	21.9	20.4	34.77	-14.3
				12	0	20.9	19.4	34.77	-15.4
				12	6	21.0	19.5	34.77	-15.3
				12	11	20.9	19.4	34.77	-15.3
				25	0	20.8	19.3	34.77	-15.5
5.0	23230	782.0	QPSK	1	0	22.8	21.3	34.77	-13.5
				1	12	22.7	21.2	34.77	-13.6
				1	24	22.8	21.3	34.77	-13.4
				12	0	21.8	20.3	34.77	-14.4
				12	6	21.8	20.3	34.77	-14.5
				12	11	21.9	20.4	34.77	-14.4
				25	0	21.8	20.3	34.77	-14.5
			16QAM	1	0	**22.4**	**20.9**	34.77	-13.9
				1	12	22.3	20.9	34.77	-13.9
				1	24	22.3	20.9	34.77	-13.9
				12	0	21.0	19.5	34.77	-15.3
				12	6	20.9	19.4	34.77	-15.3
				12	11	21.0	19.5	34.77	-15.3
				25	0	20.9	19.4	34.77	-15.4
5.0	23255	784.5	QPSK	1	0	**23.0**	**21.5**	34.77	-13.3
				1	12	22.8	21.4	34.77	-13.4
				1	24	22.8	21.3	34.77	-13.4
				12	0	21.8	20.4	34.77	-14.4
				12	6	21.9	20.4	34.77	-14.3
				12	11	21.7	20.2	34.77	-14.5
				25	0	21.9	20.4	34.77	-14.4
			16QAM	1	0	21.9	20.5	34.77	-14.3
				1	12	21.9	20.5	34.77	-14.3
				1	24	22.0	20.5	34.77	-14.3
				12	0	20.9	19.4	34.77	-15.3
				12	6	21.0	19.5	34.77	-15.3
				12	11	20.9	19.4	34.77	-15.4
				25	0	20.9	19.4	34.77	-15.4

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OUTPUT POWER FOR LTE BAND 13 (10.0 MHz)

Antenna Gain (dBi)		0.67							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10.0	23230	782.0	QPSK	1	0	**22.8**	**21.3**	34.77	-13.5
				1	24	22.4	21.0	34.77	-13.8
				1	49	22.7	21.2	34.77	-13.5
				25	0	22.0	20.5	34.77	-14.3
				25	12	21.9	20.4	34.77	-14.4
				25	24	21.8	20.4	34.77	-14.4
				50	0	21.8	20.3	34.77	-14.4
			16QAM	1	0	**21.9**	**20.5**	34.77	-14.3
				1	24	21.4	19.9	34.77	-14.8
				1	49	21.8	20.3	34.77	-14.5
				25	0	21.8	20.3	34.77	-14.5
				25	12	20.9	19.5	34.77	-15.3
				25	24	20.9	19.4	34.77	-15.3
				50	0	20.9	19.4	34.77	-15.4

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7.2.7. LTE BAND 17

ID:	43575	Date:	12/1/2016

OUTPUT POWER FOR LTE BAND 17 (5.0 MHz)

Antenna Gain (dBi)		0.87							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5.0	23755	706.5	QPSK	1	0	**22.8**	**21.6**	34.77	-13.2
				1	12	22.8	21.5	34.77	-13.3
				1	24	22.8	21.5	34.77	-13.3
				12	0	21.8	20.5	34.77	-14.2
				12	6	21.8	20.5	34.77	-14.2
				12	11	21.8	20.5	34.77	-14.3
				25	0	21.8	20.5	34.77	-14.3
			16QAM	1	0	22.0	20.8	34.77	-14.0
				1	12	21.9	20.7	34.77	-14.1
				1	24	22.0	20.7	34.77	-14.1
				12	0	20.9	19.6	34.77	-15.1
				12	6	20.9	19.6	34.77	-15.2
				12	11	20.8	19.6	34.77	-15.2
				25	0	20.8	19.5	34.77	-15.2
5.0	23790	710.0	QPSK	1	0	22.8	21.5	34.77	-13.2
				1	12	22.7	21.4	34.77	-13.3
				1	24	22.8	21.5	34.77	-13.2
				12	0	21.8	20.6	34.77	-14.2
				12	6	21.8	20.5	34.77	-14.2
				12	11	21.7	20.5	34.77	-14.3
				25	0	21.8	20.5	34.77	-14.3
			16QAM	1	0	**22.4**	**21.1**	34.77	-13.7
				1	12	22.3	21.0	34.77	-13.7
				1	24	22.3	21.0	34.77	-13.7
				12	0	20.9	19.7	34.77	-15.1
				12	6	20.9	19.7	34.77	-15.1
				12	11	20.9	19.6	34.77	-15.1
				25	0	20.8	19.5	34.77	-15.2
5.0	23825	713.5	QPSK	1	0	22.8	21.5	34.77	-13.2
				1	12	22.7	21.5	34.77	-13.3
				1	24	22.8	21.5	34.77	-13.2
				12	0	21.8	20.5	34.77	-14.2
				12	6	21.8	20.5	34.77	-14.2
				12	11	21.8	20.5	34.77	-14.3
				25	0	21.8	20.5	34.77	-14.3
			16QAM	1	0	22.0	20.7	34.77	-14.1
				1	12	21.9	20.6	34.77	-14.2
				1	24	21.9	20.6	34.77	-14.1
				12	0	20.8	19.6	34.77	-15.2
				12	6	20.9	19.6	34.77	-15.2
				12	11	20.8	19.5	34.77	-15.2
				25	0	20.8	19.5	34.77	-15.3

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OUTPUT POWER FOR LTE BAND 17 (10.0 MHz)

Antenna Gain (dBi)	0.87								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10.0	23780	709.0	QPSK	1	0	**22.8**	**21.5**	34.77	-13.3
				1	24	22.8	21.5	34.77	-13.3
				1	49	22.7	21.4	34.77	-13.3
				25	0	21.8	20.6	34.77	-14.2
				25	12	21.9	20.6	34.77	-14.2
				25	24	21.9	20.6	34.77	-14.2
				50	0	21.8	20.5	34.77	-14.2
			16QAM	1	0	21.8	20.5	34.77	-14.3
				1	24	21.7	20.5	34.77	-14.3
				1	49	21.7	20.4	34.77	-14.3
				25	0	20.9	19.6	34.77	-15.1
				25	12	20.9	19.6	34.77	-15.1
				25	24	20.8	19.6	34.77	-15.2
				50	0	20.8	19.5	34.77	-15.2
10.0	23790	710.0	QPSK	1	0	22.7	21.4	34.77	-13.4
				1	24	22.7	21.4	34.77	-13.4
				1	49	22.7	21.4	34.77	-13.3
				25	0	21.9	20.6	34.77	-14.2
				25	12	21.9	20.6	34.77	-14.2
				25	24	21.8	20.5	34.77	-14.3
				50	0	21.9	20.6	34.77	-14.2
			16QAM	1	0	21.7	20.4	34.77	-14.3
				1	24	21.6	20.3	34.77	-14.5
				1	49	21.6	20.3	34.77	-14.4
				25	0	20.8	19.6	34.77	-15.2
				25	12	20.8	19.6	34.77	-15.2
				25	24	20.8	19.5	34.77	-15.3
				50	0	20.8	19.5	34.77	-15.2
10.0	23800	711.0	QPSK	1	0	22.7	21.4	34.77	-13.3
				1	24	22.7	21.5	34.77	-13.3
				1	49	22.7	21.4	34.77	-13.4
				25	0	21.9	20.6	34.77	-14.2
				25	12	21.9	20.6	34.77	-14.2
				25	24	21.8	20.6	34.77	-14.2
				50	0	21.8	20.6	34.77	-14.2
			16QAM	1	0	**22.2**	**20.9**	34.77	-13.9
				1	24	22.1	20.8	34.77	-14.0
				1	49	22.1	20.8	34.77	-14.0
				25	0	20.8	19.6	34.77	-15.2
				25	12	20.8	19.5	34.77	-15.2
				25	24	20.8	19.5	34.77	-15.2
				50	0	20.8	19.5	34.77	-15.3

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7.2.8. LTE BAND 25

ID:	38806	Date:	11/29/16

OUTPUT POWER FOR LTE BAND 25 (1.4MHz)

Antenna Gain (dBi)		1.07							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
1.4	26047	1850.7	QPSK	1	0	**22.4**	**23.5**	33.0	-9.5
				1	2	22.3	23.3	33.0	-9.7
				1	5	22.2	23.3	33.0	-9.7
				3	0	22.4	23.5	33.0	-9.6
				3	1	22.4	23.4	33.0	-9.6
				3	2	22.4	23.5	33.0	-9.5
				6	0	21.3	22.4	33.0	-10.6
			16QAM	1	0	21.4	22.5	33.0	-10.5
				1	2	21.4	22.5	33.0	-10.5
				1	5	21.4	22.5	33.0	-10.6
				3	0	21.5	22.5	33.0	-10.5
				3	1	21.5	22.6	33.0	-10.5
				3	2	21.5	22.6	33.0	-10.5
				6	0	20.5	21.5	33.0	-11.5
1.4	26365	1882.5	QPSK	1	0	22.2	23.3	33.0	-9.7
				1	2	22.2	23.3	33.0	-9.7
				1	5	22.2	23.2	33.0	-9.8
				3	0	22.3	23.3	33.0	-9.7
				3	1	22.3	23.4	33.0	-9.6
				3	2	22.3	23.4	33.0	-9.7
				6	0	21.2	22.3	33.0	-10.7
			16QAM	1	0	**21.7**	**22.7**	33.0	-10.3
				1	2	21.6	22.7	33.0	-10.4
				1	5	21.5	22.6	33.0	-10.4
				3	0	21.5	22.5	33.0	-10.5
				3	1	21.5	22.6	33.0	-10.5
				3	2	21.5	22.5	33.0	-10.5
				6	0	20.1	21.2	33.0	-11.8
1.4	26683	1914.3	QPSK	1	0	22.0	23.1	33.0	-9.9
				1	2	21.9	23.0	33.0	-10.1
				1	5	21.6	22.7	33.0	-10.3
				3	0	21.9	22.9	33.0	-10.1
				3	1	21.8	22.9	33.0	-10.1
				3	2	21.7	22.8	33.0	-10.2
				6	0	20.9	21.9	33.0	-11.1
			16QAM	1	0	20.9	22.0	33.0	-11.0
				1	2	20.9	22.0	33.0	-11.0
				1	5	20.7	21.8	33.0	-11.2
				3	0	21.0	22.1	33.0	-10.9
				3	1	21.1	22.1	33.0	-10.9
				3	2	21.0	22.1	33.0	-10.9
				6	0	20.1	21.2	33.0	-11.8

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OUTPUT POWER FOR LTE BAND 25 (3.0 MHz)

Antenna Gain (dBi)	1.07								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
3.0	26055	1851.5	QPSK	1	0	**22.4**	**23.5**	33.0	-9.5
				1	7	22.4	23.4	33.0	-9.6
				1	14	22.3	23.3	33.0	-9.7
				8	0	21.4	22.5	33.0	-10.5
				8	4	21.4	22.5	33.0	-10.5
				8	7	21.4	22.5	33.0	-10.5
				15	0	21.4	22.4	33.0	-10.6
			16QAM	1	0	21.4	22.5	33.0	-10.5
				1	7	21.5	22.6	33.0	-10.4
				1	14	21.3	22.4	33.0	-10.6
				8	0	20.6	21.7	33.0	-11.3
				8	4	20.6	21.7	33.0	-11.3
				8	7	20.6	21.7	33.0	-11.3
				15	0	20.3	21.4	33.0	-11.6
3.0	26365	1882.5	QPSK	1	0	22.3	23.3	33.0	-9.7
				1	7	22.3	23.4	33.0	-9.6
				1	14	22.1	23.2	33.0	-9.8
				8	0	21.4	22.4	33.0	-10.6
				8	4	21.3	22.4	33.0	-10.6
				8	7	21.3	22.4	33.0	-10.6
				15	0	21.3	22.3	33.0	-10.7
			16QAM	1	0	21.2	22.3	33.0	-10.8
				1	7	21.3	22.4	33.0	-10.6
				1	14	21.1	22.1	33.0	-10.9
				8	0	20.4	21.5	33.0	-11.5
				8	4	20.4	21.5	33.0	-11.5
				8	7	20.4	21.5	33.0	-11.5
				15	0	20.3	21.4	33.0	-11.6
3.0	26675	1913.5	QPSK	1	0	22.2	23.3	33.0	-9.7
				1	7	22.0	23.1	33.0	-9.9
				1	14	21.7	22.7	33.0	-10.3
				8	0	21.2	22.2	33.0	-10.8
				8	4	21.2	22.2	33.0	-10.8
				8	7	21.2	22.2	33.0	-10.8
				15	0	21.1	22.2	33.0	-10.8
			16QAM	1	0	**21.5**	**22.6**	33.0	-10.4
				1	7	21.5	22.6	33.0	-10.5
				1	14	21.1	22.2	33.0	-10.8
				8	0	20.1	21.1	33.0	-11.9
				8	4	20.1	21.1	33.0	-11.9
				8	7	20.1	21.1	33.0	-11.9
				15	0	20.2	21.3	33.0	-11.7

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OUTPUT POWER FOR LTE BAND 25 (5.0 MHz)

Antenna Gain (dBi)	1.07								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
5.0	26065	1852.5	QPSK	1	0	**22.4**	**23.5**	33.0	-9.5
				1	12	22.4	23.5	33.0	-9.6
				1	24	22.4	23.5	33.0	-9.6
				12	0	21.4	22.5	33.0	-10.5
				12	6	21.4	22.5	33.0	-10.5
				12	11	21.4	22.5	33.0	-10.5
				25	0	21.4	22.5	33.0	-10.5
			16QAM	1	0	**22.0**	**23.1**	33.0	-9.9
				1	12	22.0	23.1	33.0	-10.0
				1	24	21.9	23.0	33.0	-10.0
				12	0	20.6	21.6	33.0	-11.4
				12	6	20.6	21.6	33.0	-11.4
				12	11	20.6	21.6	33.0	-11.4
				25	0	20.5	21.5	33.0	-11.5
5.0	26365	1882.5	QPSK	1	0	22.3	23.4	33.0	-9.6
				1	12	22.3	23.3	33.0	-9.7
				1	24	22.2	23.3	33.0	-9.7
				12	0	21.3	22.3	33.0	-10.7
				12	6	21.3	22.4	33.0	-10.6
				12	11	21.2	22.3	33.0	-10.7
				25	0	21.3	22.4	33.0	-10.6
			16QAM	1	0	21.5	22.5	33.0	-10.5
				1	12	21.4	22.5	33.0	-10.5
				1	24	21.4	22.5	33.0	-10.5
				12	0	20.3	21.4	33.0	-11.6
				12	6	20.4	21.5	33.0	-11.5
				12	11	20.3	21.4	33.0	-11.6
				25	0	20.3	21.4	33.0	-11.6
5.0	26665	1912.5	QPSK	1	0	22.2	23.2	33.0	-9.8
				1	12	22.1	23.2	33.0	-9.8
				1	24	21.6	22.7	33.0	-10.3
				12	0	21.1	22.2	33.0	-10.8
				12	6	21.1	22.2	33.0	-10.8
				12	11	21.1	22.2	33.0	-10.8
				25	0	21.1	22.2	33.0	-10.8
			16QAM	1	0	21.3	22.4	33.0	-10.6
				1	12	21.3	22.3	33.0	-10.7
				1	24	20.9	21.9	33.0	-11.1
				12	0	20.2	21.3	33.0	-11.7
				12	6	20.3	21.3	33.0	-11.7
				12	11	20.2	21.3	33.0	-11.7
				25	0	20.2	21.2	33.0	-11.8

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OUTPUT POWER FOR LTE BAND 25 (10.0 MHz)

Antenna Gain (dBi)	1.07								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
10.0	26090	1855.0	QPSK	1	0	**22.4**	**23.5**	33.0	-9.5
				1	24	22.4	23.4	33.0	-9.6
				1	49	22.3	23.4	33.0	-9.6
				25	0	21.5	22.5	33.0	-10.5
				25	12	21.5	22.5	33.0	-10.5
				25	24	21.3	22.4	33.0	-10.6
				50	0	21.5	22.5	33.0	-10.5
			16QAM	1	0	**21.8**	**22.8**	33.0	-10.2
				1	24	21.8	22.8	33.0	-10.2
				1	49	21.7	22.8	33.0	-10.2
				25	0	20.5	21.6	33.0	-11.5
				25	12	20.5	21.6	33.0	-11.5
				25	24	20.4	21.5	33.0	-11.5
				50	0	20.4	21.5	33.0	-11.5
10.0	26365	1882.5	QPSK	1	0	22.4	23.5	33.0	-9.5
				1	24	22.3	23.3	33.0	-9.7
				1	49	22.2	23.3	33.0	-9.8
				25	0	21.3	22.4	33.0	-10.6
				25	12	21.4	22.4	33.0	-10.6
				25	24	21.3	22.4	33.0	-10.6
				50	0	21.3	22.4	33.0	-10.6
			16QAM	1	0	21.4	22.5	33.0	-10.5
				1	24	21.3	22.4	33.0	-10.7
				1	49	21.2	22.2	33.0	-10.8
				25	0	20.4	21.5	33.0	-11.5
				25	12	20.4	21.5	33.0	-11.5
				25	24	20.3	21.4	33.0	-11.6
				50	0	20.4	21.4	33.0	-11.6
10.0	26640	1910.0	QPSK	1	0	22.2	23.3	33.0	-9.7
				1	24	22.1	23.2	33.0	-9.8
				1	49	21.7	22.7	33.0	-10.3
				25	0	21.2	22.2	33.0	-10.8
				25	12	21.2	22.2	33.0	-10.8
				25	24	21.1	22.2	33.0	-10.8
				50	0	21.2	22.3	33.0	-10.8
			16QAM	1	0	21.1	22.1	33.0	-10.9
				1	24	21.0	22.1	33.0	-10.9
				1	49	20.6	21.7	33.0	-11.3
				25	0	20.2	21.3	33.0	-11.7
				25	12	20.2	21.3	33.0	-11.7
				25	24	20.2	21.2	33.0	-11.8
				50	0	20.2	21.2	33.0	-11.8

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OUTPUT POWER FOR LTE BAND 25 (15.0 MHz)

Antenna Gain (dBi)	1.07								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
15.0	26115	1857.5	QPSK	1	0	22.5	23.5	33.0	-9.5
				1	37	22.3	23.3	33.0	-9.7
				1	74	22.4	23.4	33.0	-9.6
				36	0	21.6	22.7	33.0	-10.3
				36	16	21.6	22.7	33.0	-10.3
				36	35	21.7	22.7	33.0	-10.3
				75	0	21.6	22.6	33.0	-10.4
			16-QAM	1	0	21.4	22.4	33.0	-10.6
				1	37	21.4	22.5	33.0	-10.5
				1	74	21.2	22.3	33.0	-10.7
				36	0	20.6	21.7	33.0	-11.4
				36	16	20.6	21.7	33.0	-11.3
				36	35	20.6	21.7	33.0	-11.3
				75	0	20.6	21.6	33.0	-11.4
15.0	26365	1882.5	QPSK	1	0	**22.5**	**23.5**	33.0	-9.5
				1	37	22.2	23.3	33.0	-9.7
				1	74	22.4	23.4	33.0	-9.6
				36	0	21.5	22.6	33.0	-10.4
				36	16	21.6	22.7	33.0	-10.4
				36	35	21.5	22.5	33.0	-10.5
				75	0	21.5	22.6	33.0	-10.4
			16-QAM	1	0	**21.9**	**23.0**	33.0	-10.0
				1	37	21.8	22.9	33.0	-10.1
				1	74	21.7	22.8	33.0	-10.2
				36	0	20.5	21.6	33.0	-11.4
				36	16	20.6	21.7	33.0	-11.3
				36	35	20.5	21.6	33.0	-11.4
				75	0	20.5	21.6	33.0	-11.4
15.0	26615	1907.5	QPSK	1	0	22.3	23.3	33.0	-9.7
				1	37	22.2	23.2	33.0	-9.8
				1	74	22.1	23.2	33.0	-9.8
				36	0	21.4	22.5	33.0	-10.5
				36	16	21.4	22.5	33.0	-10.5
				36	35	21.3	22.4	33.0	-10.6
				75	0	21.3	22.4	33.0	-10.6
			16-QAM	1	0	21.7	22.8	33.0	-10.2
				1	37	21.7	22.8	33.0	-10.3
				1	74	21.4	22.5	33.0	-10.5
				36	0	20.4	21.4	33.0	-11.6
				36	16	20.3	21.4	33.0	-11.6
				36	35	20.3	21.3	33.0	-11.7
				75	0	20.3	21.4	33.0	-11.6

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OUTPUT POWER FOR LTE BAND 25 (20.0 MHz)

Antenna Gain (dBi)	1.07								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
20.0	26140	1860.0	QPSK	1	0	**22.5**	**23.5**	33.0	-9.5
				1	49	22.4	23.4	33.0	-9.6
				1	99	22.2	23.3	33.0	-9.7
				50	0	21.4	22.5	33.0	-10.5
				50	24	21.5	22.6	33.0	-10.4
				50	49	21.4	22.5	33.0	-10.5
				100	0	21.4	22.5	33.0	-10.5
			16-QAM	1	0	**21.9**	**23.0**	33.0	-10.1
				1	49	21.8	22.9	33.0	-10.1
				1	99	21.6	22.7	33.0	-10.3
				50	0	20.4	21.5	33.0	-11.5
				50	24	20.5	21.6	33.0	-11.4
				50	49	20.4	21.5	33.0	-11.5
				100	0	20.4	21.5	33.0	-11.5
20.0	26365	1882.5	QPSK	1	0	22.4	23.4	33.0	-9.6
				1	49	22.3	23.4	33.0	-9.6
				1	99	22.0	23.1	33.0	-9.9
				50	0	21.4	22.5	33.0	-10.6
				50	24	21.4	22.4	33.0	-10.6
				50	49	21.2	22.3	33.0	-10.7
				100	0	21.3	22.4	33.0	-10.6
			16-QAM	1	0	21.8	22.9	33.0	-10.2
				1	49	21.7	22.8	33.0	-10.2
				1	99	21.5	22.6	33.0	-10.5
				50	0	20.4	21.5	33.0	-11.6
				50	24	20.4	21.4	33.0	-11.6
				50	49	20.3	21.3	33.0	-11.7
				100	0	20.3	21.4	33.0	-11.6
20.0	26590	1905.0	QPSK	1	0	22.1	23.2	33.0	-9.8
				1	49	22.2	23.2	33.0	-9.8
				1	99	21.9	23.0	33.0	-10.0
				50	0	21.2	22.3	33.0	-10.8
				50	24	21.2	22.3	33.0	-10.7
				50	49	21.1	22.2	33.0	-10.8
				100	0	21.2	22.3	33.0	-10.8
			16-QAM	1	0	21.7	22.8	33.0	-10.2
				1	49	21.8	22.8	33.0	-10.2
				1	99	21.4	22.5	33.0	-10.5
				50	0	20.2	21.3	33.0	-11.7
				50	24	20.2	21.3	33.0	-11.7
				50	49	20.2	21.2	33.0	-11.8
				100	0	20.2	21.3	33.0	-11.7

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7.2.9. LTE BAND 26

ID:	43575	Date:	12/1/2016

OUTPUT POWER FOR LTE BAND 26 (1.4 MHz)

Antenna Gain (dBi)	0.48								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
1.4	26697	814.7	QPSK	1	0	**24.0**	**22.3**	38.45	-16.1
				1	2	23.9	22.2	38.45	-16.3
				1	5	23.8	22.1	38.45	-16.3
				3	0	24.0	22.3	38.45	-16.2
				3	1	23.8	22.1	38.45	-16.3
				3	2	24.0	22.3	38.45	-16.1
				6	0	22.8	21.1	38.45	-17.3
			16QAM	1	0	**23.1**	**21.5**	38.45	-17.0
				1	2	22.8	21.2	38.45	-17.3
				1	5	22.8	21.2	38.45	-17.3
				3	0	23.0	21.3	38.45	-17.2
				3	1	22.8	21.1	38.45	-17.3
				3	2	23.0	21.3	38.45	-17.1
				6	0	22.0	20.3	38.45	-18.2
1.4	26740	819.0	QPSK	1	0	23.6	21.9	38.45	-16.5
				1	2	23.6	22.0	38.45	-16.5
				1	5	23.6	21.9	38.45	-16.5
				3	0	23.7	22.0	38.45	-16.4
				3	1	23.7	22.0	38.45	-16.4
				3	2	23.7	22.1	38.45	-16.4
				6	0	22.6	21.0	38.45	-17.5
			16QAM	1	0	22.7	21.1	38.45	-17.4
				1	2	22.8	21.1	38.45	-17.4
				1	5	22.7	21.1	38.45	-17.4
				3	0	22.7	21.1	38.45	-17.4
				3	1	22.8	21.1	38.45	-17.4
				3	2	22.8	21.1	38.45	-17.4
				6	0	21.7	20.1	38.45	-18.4
1.4	26783	823.3	QPSK	1	0	23.4	21.7	38.45	-16.7
				1	2	23.3	21.6	38.45	-16.8
				1	5	23.0	21.3	38.45	-17.1
				3	0	23.3	21.7	38.45	-16.8
				3	1	23.3	21.6	38.45	-16.8
				3	2	23.2	21.6	38.45	-16.9
				6	0	22.4	20.7	38.45	-17.8
			16QAM	1	0	22.8	21.1	38.45	-17.3
				1	2	22.8	21.1	38.45	-17.4
				1	5	22.5	20.8	38.45	-17.7
				3	0	22.6	21.0	38.45	-17.5
				3	1	22.6	20.9	38.45	-17.5
				3	2	22.5	20.8	38.45	-17.6
				6	0	21.4	19.7	38.45	-18.8

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OUTPUT POWER FOR LTE BAND 26 (3.0 MHz)

Antenna Gain (dBi)	0.48								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
3.0	26705	815.5	QPSK	1	0	**24.0**	**22.3**	38.45	-16.1
				1	7	24.0	22.3	38.45	-16.2
				1	14	23.9	22.2	38.45	-16.2
				8	0	22.9	21.3	38.45	-17.2
				8	4	22.9	21.2	38.45	-17.2
				8	7	22.9	21.3	38.45	-17.2
				15	0	22.9	21.3	38.45	-17.2
			16QAM	1	0	**23.4**	**21.7**	38.45	-16.8
				1	7	23.2	21.6	38.45	-16.9
				1	14	23.3	21.6	38.45	-16.9
				8	0	21.8	20.2	38.45	-18.3
				8	4	21.8	20.2	38.45	-18.3
				8	7	21.8	20.1	38.45	-18.3
				15	0	22.0	20.3	38.45	-18.2
3.0	26740	819.0	QPSK	1	0	23.7	22.1	38.45	-16.4
				1	7	23.8	22.1	38.45	-16.3
				1	14	23.7	22.0	38.45	-16.4
				8	0	22.7	21.1	38.45	-17.4
				8	4	22.7	21.0	38.45	-17.4
				8	7	22.7	21.1	38.45	-17.4
				15	0	22.8	21.1	38.45	-17.4
			16QAM	1	0	22.8	21.1	38.45	-17.4
				1	7	22.8	21.2	38.45	-17.3
				1	14	22.7	21.1	38.45	-17.4
				8	0	21.9	20.2	38.45	-18.2
				8	4	21.9	20.2	38.45	-18.2
				8	7	21.9	20.2	38.45	-18.2
				15	0	21.7	20.0	38.45	-18.5
3.0	26775	822.5	QPSK	1	0	23.6	21.9	38.45	-16.6
				1	7	23.6	21.9	38.45	-16.6
				1	14	23.1	21.5	38.45	-17.0
				8	0	22.6	20.9	38.45	-17.6
				8	4	22.5	20.9	38.45	-17.6
				8	7	22.6	20.9	38.45	-17.6
				15	0	22.6	20.9	38.45	-17.6
			16QAM	1	0	22.4	20.7	38.45	-17.7
				1	7	22.4	20.8	38.45	-17.7
				1	14	22.1	20.5	38.45	-18.0
				8	0	21.6	20.0	38.45	-18.5
				8	4	21.6	19.9	38.45	-18.5
				8	7	21.6	20.0	38.45	-18.5
				15	0	21.6	19.9	38.45	-18.5

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OUTPUT POWER FOR LTE BAND 26 (5.0 MHz)

Antenna Gain (dBi)	0.48								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5.0	26715	816.5	QPSK	1	0	**24.0**	**22.3**	38.45	-16.1
				1	12	23.9	22.3	38.45	-16.2
				1	24	24.0	22.3	38.45	-16.2
				12	0	23.0	21.3	38.45	-17.2
				12	6	22.9	21.3	38.45	-17.2
				12	11	22.9	21.2	38.45	-17.2
				25	0	22.9	21.2	38.45	-17.2
			16QAM	1	0	**23.5**	**21.8**	38.45	-16.6
				1	12	23.5	21.8	38.45	-16.6
				1	24	23.4	21.7	38.45	-16.7
				12	0	22.1	20.4	38.45	-18.1
				12	6	22.0	20.4	38.45	-18.1
				12	11	22.0	20.4	38.45	-18.1
				25	0	22.0	20.3	38.45	-18.2
5.0	26740	819.0	QPSK	1	0	23.8	22.2	38.45	-16.3
				1	12	23.7	22.0	38.45	-16.4
				1	24	23.7	22.0	38.45	-16.4
				12	0	22.8	21.1	38.45	-17.4
				12	6	22.8	21.1	38.45	-17.4
				12	11	22.7	21.1	38.45	-17.4
				25	0	22.7	21.0	38.45	-17.4
			16QAM	1	0	23.0	21.3	38.45	-17.2
				1	12	22.8	21.2	38.45	-17.3
				1	24	22.9	21.2	38.45	-17.3
				12	0	21.8	20.1	38.45	-18.3
				12	6	21.8	20.1	38.45	-18.3
				12	11	21.8	20.1	38.45	-18.4
				25	0	21.7	20.0	38.45	-18.4
5.0	26765	821.5	QPSK	1	0	23.7	22.0	38.45	-16.5
				1	12	23.4	21.8	38.45	-16.7
				1	24	23.2	21.5	38.45	-17.0
				12	0	22.5	20.8	38.45	-17.6
				12	6	22.6	20.9	38.45	-17.5
				12	11	22.5	20.9	38.45	-17.6
				25	0	22.6	20.9	38.45	-17.5
			16QAM	1	0	22.8	21.1	38.45	-17.3
				1	12	22.7	21.0	38.45	-17.5
				1	24	22.4	20.8	38.45	-17.7
				12	0	21.7	20.0	38.45	-18.5
				12	6	21.6	20.0	38.45	-18.5
				12	11	21.6	19.9	38.45	-18.5
				25	0	21.5	19.9	38.45	-18.6

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OUTPUT POWER FOR LTE BAND 26 (10.0 MHz)

Antenna Gain (dBi)		0.48							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10.0	26740	819.0	QPSK	1	0	**24.0**	**22.3**	38.45	-16.2
				1	24	24.0	22.3	38.45	-16.2
				1	49	23.9	22.2	38.45	-16.3
				25	0	23.1	21.4	38.45	-17.1
				25	12	23.0	21.4	38.45	-17.1
				25	24	23.0	21.3	38.45	-17.1
				50	0	23.1	21.5	38.45	-17.0
			16QAM	1	0	**23.0**	**21.3**	38.45	-17.1
				1	24	23.0	21.3	38.45	-17.2
				1	49	22.9	21.2	38.45	-17.3
				25	0	22.1	20.4	38.45	-18.0
				25	12	22.1	20.4	38.45	-18.0
				25	24	22.0	20.3	38.45	-18.1
				50	0	22.1	20.4	38.45	-18.0

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7.2.10. LTE BAND 27

ID:	43575	Date:	12/1/2016

OUTPUT POWER FOR LTE BAND 27 (1.4 MHz)

Antenna Gain (dBi)		0.48							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
1.4	27117	814.7	QPSK	1	0	**21.9**	**20.3**	50.00	-29.7
				1	2	21.8	20.2	50.00	-29.8
				1	5	21.8	20.1	50.00	-29.9
				3	0	21.9	20.2	50.00	-29.8
				3	1	21.9	20.3	50.00	-29.7
				3	2	21.8	20.1	50.00	-29.9
				6	0	20.8	19.2	50.00	-30.8
			16QAM	1	0	20.9	19.3	50.00	-30.7
				1	2	21.0	19.3	50.00	-30.7
				1	5	20.9	19.3	50.00	-30.7
				3	0	20.9	19.3	50.00	-30.7
				3	1	21.0	19.3	50.00	-30.7
				3	2	21.0	19.3	50.00	-30.7
				6	0	20.0	18.3	50.00	-31.7
1.4	27160	819.0	QPSK	1	0	21.8	20.2	50.00	-29.8
				1	2	21.8	20.2	50.00	-29.8
				1	5	21.7	20.1	50.00	-29.9
				3	0	21.9	20.2	50.00	-29.8
				3	1	21.9	20.2	50.00	-29.8
				3	2	21.9	20.2	50.00	-29.8
				6	0	20.9	19.2	50.00	-30.8
			16QAM	1	0	**21.3**	**19.6**	50.00	-30.4
				1	2	21.2	19.5	50.00	-30.5
				1	5	21.1	19.5	50.00	-30.5
				3	0	21.1	19.4	50.00	-30.6
				3	1	21.1	19.4	50.00	-30.6
				3	2	21.1	19.4	50.00	-30.6
				6	0	19.8	18.1	50.00	-31.9
1.4	27203	823.3	QPSK	1	0	21.7	20.1	50.00	-29.9
				1	2	21.8	20.1	50.00	-29.9
				1	5	21.6	19.9	50.00	-30.1
				3	0	21.9	20.2	50.00	-29.8
				3	1	21.9	20.3	50.00	-29.7
				3	2	21.9	20.2	50.00	-29.8
				6	0	20.7	19.0	50.00	-31.0
			16QAM	1	0	20.7	19.1	50.00	-30.9
				1	2	20.8	19.1	50.00	-30.9
				1	5	20.8	19.1	50.00	-30.9
				3	0	20.8	19.1	50.00	-30.9
				3	1	20.9	19.2	50.00	-30.8
				3	2	20.9	19.2	50.00	-30.8
				6	0	19.8	18.2	50.00	-31.8

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OUTPUT POWER FOR LTE BAND 27 (3.0 MHz)

Antenna Gain (dBi)	0.48								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
3.0	27125	815.5	QPSK	1	0	**21.9**	**20.3**	50.00	-29.7
				1	7	21.9	20.2	50.00	-29.8
				1	14	21.8	20.2	50.00	-29.8
				8	0	20.9	19.2	50.00	-30.8
				8	4	20.9	19.2	50.00	-30.8
				8	7	20.9	19.2	50.00	-30.8
				15	0	20.8	19.2	50.00	-30.8
			16QAM	1	0	20.9	19.2	50.00	-30.8
				1	7	21.0	19.3	50.00	-30.7
				1	14	20.9	19.2	50.00	-30.8
				8	0	20.1	18.4	50.00	-31.6
				8	4	20.1	18.4	50.00	-31.6
				8	7	20.1	18.4	50.00	-31.6
				15	0	19.8	18.2	50.00	-31.8
3.0	27160	819.0	QPSK	1	0	21.8	20.1	50.00	-29.9
				1	7	21.9	20.2	50.00	-29.8
				1	14	21.7	20.1	50.00	-29.9
				8	0	20.9	19.2	50.00	-30.8
				8	4	20.9	19.2	50.00	-30.8
				8	7	20.9	19.2	50.00	-30.8
				15	0	20.9	19.2	50.00	-30.8
			16QAM	1	0	20.8	19.1	50.00	-30.9
				1	7	20.9	19.2	50.00	-30.8
				1	14	20.7	19.0	50.00	-31.0
				8	0	20.0	18.3	50.00	-31.7
				8	4	20.0	18.3	50.00	-31.7
				8	7	20.0	18.3	50.00	-31.7
				15	0	19.9	18.3	50.00	-31.7
3.0	27195	822.5	QPSK	1	0	21.7	20.1	50.00	-29.9
				1	7	21.8	20.1	50.00	-29.9
				1	14	21.7	20.1	50.00	-29.9
				8	0	20.8	19.1	50.00	-30.9
				8	4	20.8	19.1	50.00	-30.9
				8	7	20.8	19.1	50.00	-30.9
				15	0	20.7	19.1	50.00	-30.9
			16QAM	1	0	**21.1**	**19.5**	50.00	-30.5
				1	7	21.1	19.5	50.00	-30.5
				1	14	21.1	19.5	50.00	-30.5
				8	0	19.7	18.0	50.00	-32.0
				8	4	19.7	18.0	50.00	-32.0
				8	7	19.7	18.0	50.00	-32.0
				15	0	19.8	18.1	50.00	-31.9

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OUTPUT POWER FOR LTE BAND 27 (5.0 MHz)

Antenna Gain (dBi)	0.48								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5.0	27135	816.5	QPSK	1	0	**22.0**	**20.3**	50.00	-29.7
				1	12	21.9	20.2	50.00	-29.8
				1	24	21.9	20.3	50.00	-29.7
				12	0	21.0	19.3	50.00	-30.7
				12	6	20.9	19.3	50.00	-30.7
				12	11	20.9	19.2	50.00	-30.8
				25	0	20.9	19.3	50.00	-30.7
			16QAM	1	0	21.1	19.4	50.00	-30.6
				1	12	21.0	19.4	50.00	-30.6
				1	24	21.0	19.4	50.00	-30.6
				12	0	20.0	18.4	50.00	-31.6
				12	6	20.0	18.3	50.00	-31.7
				12	11	20.0	18.3	50.00	-31.7
				25	0	19.9	18.3	50.00	-31.7
5.0	27160	819.0	QPSK	1	0	22.0	20.3	50.00	-29.7
				1	12	21.9	20.3	50.00	-29.7
				1	24	21.8	20.2	50.00	-29.8
				12	0	20.9	19.2	50.00	-30.8
				12	6	21.0	19.3	50.00	-30.7
				12	11	20.9	19.2	50.00	-30.8
				25	0	20.9	19.3	50.00	-30.7
			16QAM	1	0	21.2	19.5	50.00	-30.5
				1	12	21.1	19.4	50.00	-30.6
				1	24	21.1	19.4	50.00	-30.6
				12	0	20.0	18.3	50.00	-31.7
				12	6	20.1	18.4	50.00	-31.6
				12	11	20.0	18.3	50.00	-31.7
				25	0	20.0	18.3	50.00	-31.7
5.0	27185	821.5	QPSK	1	0	21.8	20.2	50.00	-29.8
				1	12	21.8	20.1	50.00	-29.9
				1	24	21.8	20.1	50.00	-29.9
				12	0	20.8	19.2	50.00	-30.8
				12	6	20.8	19.2	50.00	-30.8
				12	11	20.8	19.1	50.00	-30.9
				25	0	20.8	19.1	50.00	-30.9
			16QAM	1	0	**21.4**	**19.7**	50.00	-30.3
				1	12	21.4	19.7	50.00	-30.3
				1	24	21.4	19.7	50.00	-30.3
				12	0	20.0	18.3	50.00	-31.7
				12	6	20.0	18.3	50.00	-31.7
				12	11	20.0	18.3	50.00	-31.7
				25	0	19.9	18.2	50.00	-31.8

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OUTPUT POWER FOR LTE BAND 27 (10.0 MHz)

Antenna Gain (dBi)		0.48							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10.0	27160	819.0	QPSK	1	0	**21.9**	**20.2**	50.00	-29.8
				1	24	21.8	20.1	50.00	-29.9
				1	49	21.7	20.1	50.00	-29.9
				25	0	21.1	19.4	50.00	-30.6
				25	12	21.0	19.3	50.00	-30.7
				25	24	20.9	19.2	50.00	-30.8
				50	0	21.0	19.3	50.00	-30.7
			16QAM	1	0	**21.3**	**19.6**	50.00	-30.4
				1	24	21.2	19.5	50.00	-30.5
				1	49	21.1	19.4	50.00	-30.6
				25	0	20.1	18.4	50.00	-31.6
				25	12	19.9	18.2	50.00	-31.8
				25	24	19.9	18.2	50.00	-31.8
				50	0	20.0	18.3	50.00	-31.7

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7.2.11. LTE BAND 30

ID:	43575	Date:	12/1/2016

OUTPUT POWER FOR LTE BAND 30 (5.0 MH)

Antenna Gain (dBi)		0.75							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
5.0	27685	2307.5	QPSK	1	0	21.7	22.5	24.0	-1.5
				1	12	21.6	22.3	24.0	-1.7
				1	24	21.5	22.2	24.0	-1.8
				12	0	20.6	21.3	24.0	-2.7
				12	6	20.6	21.4	24.0	-2.6
				12	11	20.5	21.2	24.0	-2.8
				25	0	20.6	21.3	24.0	-2.7
			16QAM	1	0	20.8	21.6	24.0	-2.4
				1	12	20.7	21.4	24.0	-2.6
				1	24	20.6	21.3	24.0	-2.7
				12	0	19.7	20.4	24.0	-3.6
				12	6	19.7	20.5	24.0	-3.5
				12	11	19.6	20.3	24.0	-3.7
				25	0	19.6	20.4	24.0	-3.6
5.0	27710	2310.0	QPSK	1	0	21.7	22.4	24.0	-1.6
				1	12	21.6	22.3	24.0	-1.7
				1	24	21.6	22.3	24.0	-1.7
				12	0	20.6	21.4	24.0	-2.6
				12	6	20.5	21.3	24.0	-2.7
				12	11	20.6	21.3	24.0	-2.7
				25	0	20.6	21.3	24.0	-2.7
			16QAM	1	0	20.8	21.6	24.0	-2.4
				1	12	20.7	21.5	24.0	-2.5
				1	24	20.7	21.5	24.0	-2.5
				12	0	19.7	20.5	24.0	-3.5
				12	6	19.7	20.4	24.0	-3.6
				12	11	19.7	20.4	24.0	-3.6
				25	0	19.6	20.3	24.0	-3.7
5.0	27735	2312.5	QPSK	1	0	**21.7**	**22.5**	24.0	-1.5
				1	12	21.7	22.4	24.0	-1.6
				1	24	21.6	22.4	24.0	-1.6
				12	0	20.6	21.4	24.0	-2.6
				12	6	20.6	21.3	24.0	-2.7
				12	11	20.6	21.4	24.0	-2.6
				25	0	20.7	21.4	24.0	-2.6
			16QAM	1	0	**21.2**	**21.9**	24.0	-2.1
				1	12	21.2	21.9	24.0	-2.1
				1	24	21.2	21.9	24.0	-2.1
				12	0	19.8	20.6	24.0	-3.4
				12	6	19.7	20.5	24.0	-3.5
				12	11	19.8	20.5	24.0	-3.5
				25	0	19.7	20.5	24.0	-3.5

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OUTPUT POWER FOR LTE BAND 30 (10.0 MHz)

Antenna Gain (dBi)		0.75							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
10.0	27710	2310.0	QPSK	1	0	**21.7**	**22.5**	24.0	-1.5
				1	24	21.5	22.3	24.0	-1.7
				1	49	21.6	22.4	24.0	-1.6
				25	0	20.7	21.4	24.0	-2.6
				25	12	20.6	21.4	24.0	-2.6
				25	24	20.5	21.3	24.0	-2.7
				50	0	20.6	21.4	24.0	-2.6
			16QAM	1	0	**20.7**	**21.5**	24.0	-2.5
				1	24	20.5	21.3	24.0	-2.7
				1	49	20.6	21.3	24.0	-2.7
				25	0	19.7	20.5	24.0	-3.5
				25	12	19.7	20.4	24.0	-3.6
				25	24	19.6	20.3	24.0	-3.7
				50	0	19.7	20.4	24.0	-3.6

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7.2.12. LTE BAND 41

ID:	29439	Date:	12/1/2016

OUTPUT POWER FOR LTE BAND 41 (5.0 MHz)

Antenna Gain (dBi)	0.35								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
5.0	39675	2498.5	QPSK	1	0	**22.0**	**22.3**	33.0	-10.7
				1	12	21.6	21.9	33.0	-11.1
				1	24	21.5	21.9	33.0	-11.1
				12	0	21.0	21.4	33.0	-11.6
				12	6	21.0	21.4	33.0	-11.7
				12	11	21.0	21.3	33.0	-11.7
				25	0	21.0	21.3	33.0	-11.7
			16QAM	1	0	**21.4**	**21.7**	33.0	-11.3
				1	12	21.3	21.7	33.0	-11.3
				1	24	21.3	21.7	33.0	-11.3
				12	0	20.1	20.5	33.0	-12.5
				12	6	20.1	20.4	33.0	-12.6
				12	11	20.0	20.4	33.0	-12.6
				25	0	20.0	20.3	33.0	-12.7
5.0	40620	2593.0	QPSK	1	0	22.0	22.3	33.0	-10.7
				1	12	21.9	22.2	33.0	-10.8
				1	24	21.8	22.2	33.0	-10.8
				12	0	21.9	22.2	33.0	-10.8
				12	6	21.9	22.2	33.0	-10.8
				12	11	21.9	22.2	33.0	-10.8
				25	0	21.8	22.1	33.0	-10.9
			16QAM	1	0	21.3	21.6	33.0	-11.4
				1	12	21.2	21.6	33.0	-11.5
				1	24	21.2	21.6	33.0	-11.5
				12	0	20.3	20.7	33.0	-12.3
				12	6	20.3	20.7	33.0	-12.4
				12	11	20.3	20.7	33.0	-12.4
				25	0	20.3	20.7	33.0	-12.4
5.0	41565	2687.5	QPSK	1	0	22.0	22.3	33.0	-10.7
				1	12	21.9	22.2	33.0	-10.8
				1	24	21.9	22.2	33.0	-10.8
				12	0	20.8	21.2	33.0	-11.8
				12	6	20.8	21.2	33.0	-11.8
				12	11	20.8	21.1	33.0	-11.9
				25	0	20.8	21.1	33.0	-11.9
			16QAM	1	0	21.1	21.5	33.0	-11.5
				1	12	21.2	21.5	33.0	-11.5
				1	24	21.0	21.4	33.0	-11.6
				12	0	19.8	20.1	33.0	-12.9
				12	6	19.8	20.2	33.0	-12.8
				12	11	19.8	20.1	33.0	-12.9
				25	0	19.9	20.2	33.0	-12.8

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OUTPUT POWER FOR LTE BAND 41 (10.0 MHz)

Antenna Gain (dBi)	0.35								
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
10.0	39700	2501.0	QPSK	1	0	21.9	22.3	33.0	-10.8
				1	24	21.7	22.1	33.0	-10.9
				1	49	21.7	22.1	33.0	-10.9
				25	0	21.1	21.4	33.0	-11.6
				25	12	21.1	21.4	33.0	-11.6
				25	24	21.0	21.3	33.0	-11.7
				50	0	21.1	21.4	33.0	-11.6
			16QAM	1	0	**21.6**	**22.0**	33.0	-11.0
				1	24	21.4	21.7	33.0	-11.3
				1	49	21.4	21.8	33.0	-11.2
				25	0	20.0	20.4	33.0	-12.6
				25	12	20.0	20.4	33.0	-12.6
				25	24	20.0	20.3	33.0	-12.7
				50	0	20.0	20.4	33.0	-12.7
10.0	40620	2593.0	QPSK	1	0	**22.0**	**22.3**	33.0	-10.7
				1	24	21.5	21.8	33.0	-11.2
				1	49	21.5	21.9	33.0	-11.2
				25	0	21.8	22.2	33.0	-10.9
				25	12	21.9	22.2	33.0	-10.8
				25	24	21.9	22.2	33.0	-10.8
				50	0	21.9	22.3	33.0	-10.8
			16QAM	1	0	21.3	21.6	33.0	-11.4
				1	24	21.2	21.6	33.0	-11.4
				1	49	21.2	21.6	33.0	-11.4
				25	0	20.9	21.3	33.0	-11.8
				25	12	20.9	21.2	33.0	-11.8
				25	24	20.8	21.2	33.0	-11.9
				50	0	21.0	21.3	33.0	-11.7
10.0	41540	2685.0	QPSK	1	0	21.8	22.1	33.0	-10.9
				1	24	21.9	22.2	33.0	-10.8
				1	49	21.8	22.2	33.0	-10.8
				25	0	20.9	21.3	33.0	-11.7
				25	12	20.8	21.2	33.0	-11.8
				25	24	20.7	21.1	33.0	-11.9
				50	0	20.9	21.2	33.0	-11.8
			16QAM	1	0	21.3	21.6	33.0	-11.4
				1	24	21.0	21.4	33.0	-11.6
				1	49	21.0	21.4	33.0	-11.6
				25	0	19.9	20.2	33.0	-12.8
				25	12	19.8	20.2	33.0	-12.8
				25	24	19.7	20.1	33.0	-12.9
				50	0	19.9	20.2	33.0	-12.8

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OUTPUT POWER FOR LTE BAND 41 (15.0 MHz)

Antenna Gain (dBi)		0.35							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
15.0	39725	2503.5	QPSK	1	0	21.6	21.9	33.0	-11.1
				1	37	21.4	21.7	33.0	-11.3
				1	74	21.2	21.6	33.0	-11.4
				36	0	21.2	21.5	33.0	-11.5
				36	16	21.0	21.4	33.0	-11.7
				36	35	21.0	21.3	33.0	-11.7
				75	0	21.0	21.4	33.0	-11.6
			16-QAM	1	0	21.1	21.5	33.0	-11.6
				1	37	21.2	21.5	33.0	-11.5
				1	74	20.9	21.2	33.0	-11.8
				36	0	20.1	20.4	33.0	-12.6
				36	16	19.9	20.3	33.0	-12.7
				36	35	19.9	20.2	33.0	-12.8
				75	0	20.1	20.4	33.0	-12.6
15.0	40620	2593.0	QPSK	1	0	**21.8**	**22.2**	33.0	-10.9
				1	37	21.3	21.7	33.0	-11.4
				1	74	21.5	21.9	33.0	-11.1
				36	0	21.3	21.6	33.0	-11.4
				36	16	21.3	21.6	33.0	-11.4
				36	35	21.1	21.5	33.0	-11.5
				75	0	21.2	21.5	33.0	-11.5
			16-QAM	1	0	**21.5**	**21.8**	33.0	-11.2
				1	37	21.5	21.8	33.0	-11.2
				1	74	21.5	21.8	33.0	-11.2
				36	0	21.1	21.5	33.0	-11.5
				36	16	21.0	21.4	33.0	-11.7
				36	35	20.9	21.3	33.0	-11.7
				75	0	21.0	21.4	33.0	-11.6
15.0	41515	2682.5	QPSK	1	0	21.1	21.5	33.0	-11.5
				1	37	21.7	22.1	33.0	-10.9
				1	74	20.8	21.2	33.0	-11.8
				36	0	20.9	21.2	33.0	-11.8
				36	16	20.9	21.3	33.0	-11.7
				36	35	20.8	21.1	33.0	-11.9
				75	0	20.9	21.2	33.0	-11.8
			16-QAM	1	0	21.3	21.7	33.0	-11.4
				1	37	21.2	21.6	33.0	-11.4
				1	74	21.0	21.3	33.0	-11.7
				36	0	19.9	20.2	33.0	-12.8
				36	16	19.9	20.2	33.0	-12.8
				36	35	19.8	20.1	33.0	-12.9
				75	0	19.8	20.2	33.0	-12.8

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OUTPUT POWER FOR LTE BAND 41 (20.0 MHz)

Antenna Gain (dBi)		0.35							
Bandwidth	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
20.0	39750	2506.0	QPSK	1	0	21.7	22.1	33.0	-11.0
				1	49	21.8	22.1	33.0	-10.9
				1	99	21.9	22.2	33.0	-10.8
				50	0	21.0	21.4	33.0	-11.6
				50	24	21.1	21.5	33.0	-11.6
				50	49	20.9	21.3	33.0	-11.7
				100	0	21.0	21.3	33.0	-11.7
			16-QAM	1	0	21.4	21.7	33.0	-11.3
				1	49	21.5	21.8	33.0	-11.2
				1	99	21.3	21.6	33.0	-11.4
				50	0	20.0	20.4	33.0	-12.6
				50	24	20.1	20.4	33.0	-12.6
				50	49	19.9	20.3	33.0	-12.7
				100	0	19.9	20.3	33.0	-12.7
20.0	40620	2593.0	QPSK	1	0	**22.0**	**22.3**	33.0	-10.7
				1	49	21.5	21.8	33.0	-11.2
				1	99	21.3	21.7	33.0	-11.4
				50	0	20.8	21.1	33.0	-11.9
				50	24	20.5	20.9	33.0	-12.1
				50	49	20.4	20.8	33.0	-12.2
				100	0	20.6	20.9	33.0	-12.1
			16-QAM	1	0	**21.7**	**22.0**	33.0	-11.0
				1	49	21.1	21.4	33.0	-11.6
				1	99	21.0	21.4	33.0	-11.7
				50	0	20.4	20.8	33.0	-12.2
				50	24	20.2	20.6	33.0	-12.4
				50	49	20.1	20.5	33.0	-12.5
				100	0	20.2	20.6	33.0	-12.4
20.0	41490	2680.0	QPSK	1	0	21.9	22.2	33.0	-10.8
				1	49	21.8	22.1	33.0	-10.9
				1	99	21.6	22.0	33.0	-11.0
				50	0	20.8	21.2	33.0	-11.8
				50	24	20.8	21.1	33.0	-11.9
				50	49	20.7	21.1	33.0	-11.9
				100	0	20.8	21.1	33.0	-11.9
			16-QAM	1	0	21.0	21.4	33.0	-11.6
				1	49	21.0	21.3	33.0	-11.7
				1	99	20.8	21.2	33.0	-11.8
				50	0	19.8	20.1	33.0	-12.9
				50	24	19.7	20.1	33.0	-12.9
				50	49	19.7	20.0	33.0	-13.0
				100	0	19.8	20.2	33.0	-12.8

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8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §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 -26dB bandwidth was also measured and recorded.

MODES TESTED

- LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 27
- LTE Band 30
- LTE Band 41

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 SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 2	1.4 MHz, QPSK	6/0	1880.0	1.0860	1.229
	1.4 MHz,16QAM			1.0835	1.231
	3 MHz, QPSK	15/0		2.6953	2.982
	3 MHz, 16QAM			2.6956	2.980
	5 MHz, QPSK	25/0		4.4977	4.945
	5 MHz, 16QAM			4.4974	4.963
	10 MHz, QPSK	50/0		8.9612	9.758
	10 MHz, 16QAM			8.9576	9.759
	15 MHz, QPSK	75/0		13.447	14.50
	15 MHz, 16QAM			13.427	14.60
	20 MHz, QPSK	100/0		17.907	19.29
	20 MHz, 16QAM			17.897	19.34

LTE BAND 4

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 4	1.4 MHz, QPSK	6/0	1732.5	1.0854	1.229
	1.4 MHz,16QAM			1.0828	1.231
	3 MHz, QPSK	15/0		2.6956	2.979
	3 MHz, 16QAM			2.6976	2.999
	5 MHz, QPSK	25/0		4.4929	4.927
	5 MHz, 16QAM			4.4841	4.938
	10 MHz, QPSK	50/0		8.9763	9.732
	10 MHz, 16QAM			8.9608	9.765
	15 MHz, QPSK	75/0		13.442	14.57
	15 MHz, 16QAM			13.447	14.64
	20 MHz, QPSK	100/0		17.902	19.50
	20 MHz, 16QAM			17.904	19.36

LTE BAND 5

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 5	1.4 MHz, QPSK	6/0	836.5	1.0854	1.232
	1.4 MHz,16QAM			1.0837	1.232
	3 MHz, QPSK	15/0		2.6991	2.983
	3 MHz, 16QAM			2.6984	3.000
	5 MHz, QPSK	25/0		4.5033	4.930
	5 MHz, 16QAM			4.4945	4.974
	10 MHz, QPSK	50/0		8.9516	9.792
	10 MHz, 16QAM			8.9866	9.765

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LTE BAND 7

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 7	5 MHz, QPSK	25/0	2535.0	4.4820	4.913
	5 MHz, 16QAM			4.4783	4.922
	10 MHz, QPSK	50/0		8.9644	9.737
	10 MHz, 16QAM			8.9723	9.751
	15 MHz, QPSK	75/0		13.447	14.66
	15 MHz, 16QAM			13.443	14.61
	20 MHz, QPSK	100/0		17.902	19.31
	20 MHz, 16QAM			17.906	19.32

LTE BAND 12

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 12	1.4 MHz, QPSK	6/0	707.5	1.0856	1.223
	1.4 MHz,16QAM			1.0852	1.221
	3 MHz, QPSK	15/0		2.6740	2.960
	3 MHz, 16QAM			2.6931	2.975
	5 MHz, QPSK	25/0		4.4939	4.936
	5 MHz, 16QAM			4.4856	4.922
	10 MHz, QPSK	50/0		8.9320	9.672
	10 MHz, 16QAM			8.9286	9.597

LTE BAND 13

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 13	5 MHz, QPSK	25/0	782.0	4.4746	4.918
	5 MHz, 16QAM			4.4786	4.893
	10 MHz, QPSK	50/0		8.9544	9.741
	10 MHz, 16QAM			8.9686	9.758

LTE BAND 17

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 17	5 MHz, QPSK	25/0	710.0	4.4920	4.940
	5 MHz, 16QAM			4.4906	4.918
	10 MHz, QPSK	50/0		8.9621	9.776
	10 MHz, 16QAM			8.9970	9.771

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LTE BAND 25

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 25	1.4 MHz, QPSK	6/0	1882.5	1.0810	1.227
	1.4 MHz,16QAM			1.0844	1.231
	3 MHz, QPSK	15/0		2.6966	2.973
	3 MHz, 16QAM			2.7013	2.991
	5 MHz, QPSK	25/0		4.5006	4.936
	5 MHz, 16QAM			4.5008	4.954
	10 MHz, QPSK	50/0		8.9718	9.768
	10 MHz, 16QAM			8.9661	9.782
	15 MHz, QPSK	75/0		13.438	14.58
	15 MHz, 16QAM			13.463	14.60
	20 MHz, QPSK	100/0		17.921	19.42
	20 MHz, 16QAM			17.943	19.41

LTE BAND 26

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 26	1.4 MHz, QPSK	6/0	819.0	1.0888	1.232
	1.4 MHz,16QAM			1.0950	1.240
	3 MHz, QPSK	15/0		2.7044	2.984
	3 MHz, 16QAM			2.7015	2.995
	5 MHz, QPSK	25/0		4.5048	4.956
	5 MHz, 16QAM			4.4977	4.946
	10 MHz, QPSK	50/0		8.9351	9.780
	10 MHz, 16QAM			8.9189	9.725

LTE BAND 27

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 27	1.4 MHz, QPSK	6/0	819.0	1.0894	1.226
	1.4 MHz,16QAM			1.0841	1.158
	3 MHz, QPSK	15/0		2.6867	2.800
	3 MHz, 16QAM			2.6835	2.933
	5 MHz, QPSK	25/0		4.4659	4.828
	5 MHz, 16QAM			4.4560	4.793
	10 MHz, QPSK	50/0		8.9210	9.550
	10 MHz, 16QAM			8.9410	9.374

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LTE BAND 30

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 30	5 MHz, QPSK	25/0	2310.0	4.4627	4.881
	5 MHz, 16QAM			4.4730	4.885
	10 MHz, QPSK	50/0		8.9209	9.571
	10 MHz, 16QAM			8.9236	9.650

LTE BAND 41

BAND	MODE	RB SIZE/RB OFFSET	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 41	5 MHz, QPSK	25/0	2593.0	4.4897	4.933
	5 MHz, 16QAM			4.4946	4.971
	10 MHz, QPSK	50/0		8.9509	9.627
	10 MHz, 16QAM			8.9828	9.849
	15 MHz, QPSK	75/0		13.416	14.55
	15 MHz, 16QAM			13.425	14.52
	20 MHz, QPSK	100/0		17.932	19.83
	20 MHz, 16QAM			17.941	19.83

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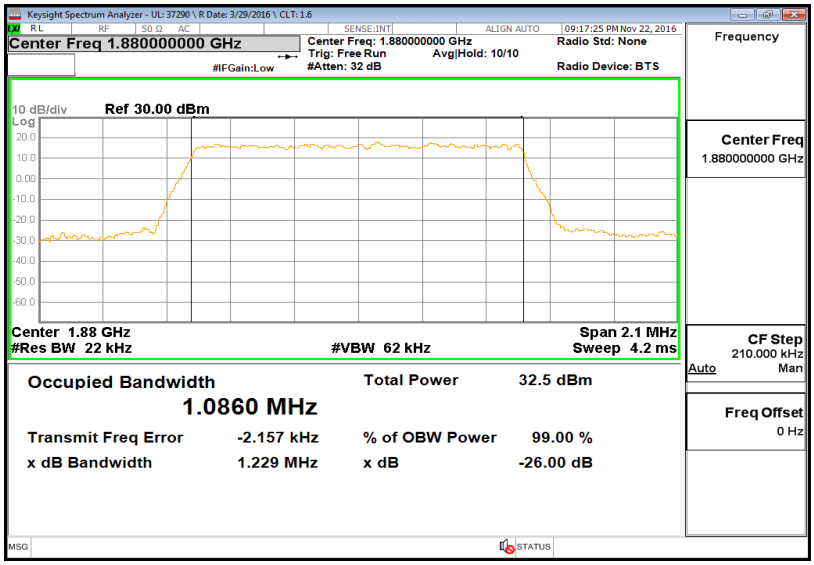
8.1.1. LTE BAND 2

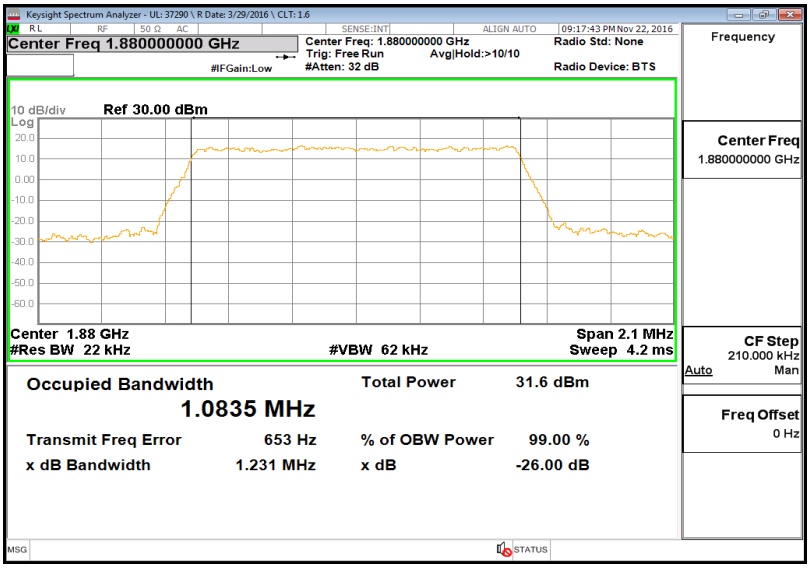
QPSK, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



16QAM, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



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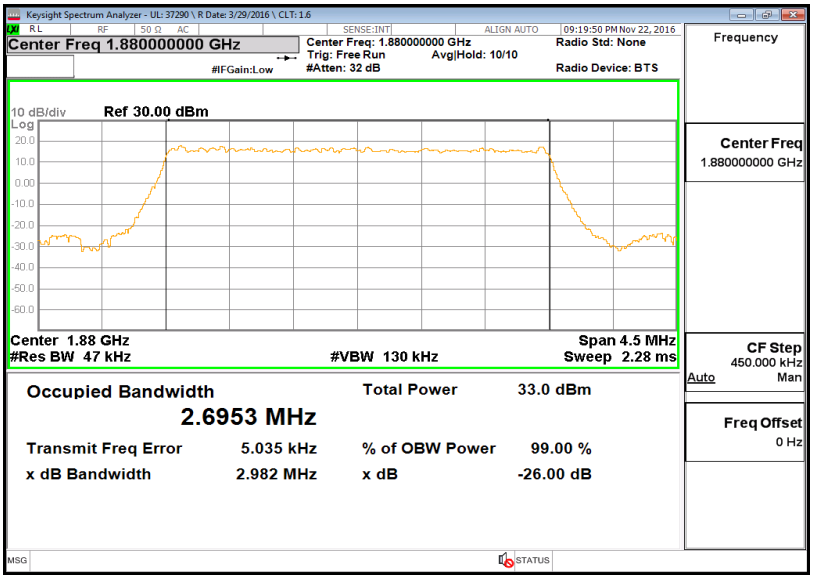
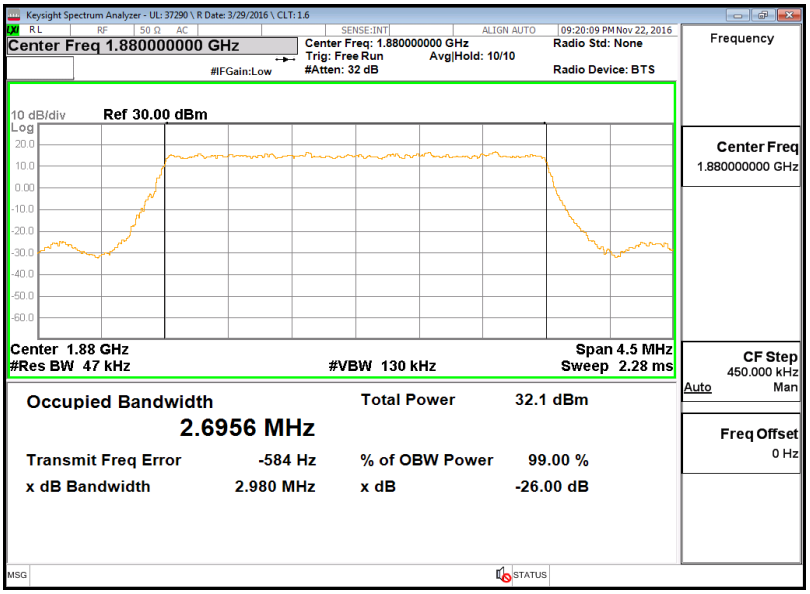
QPSK, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



16QAM, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



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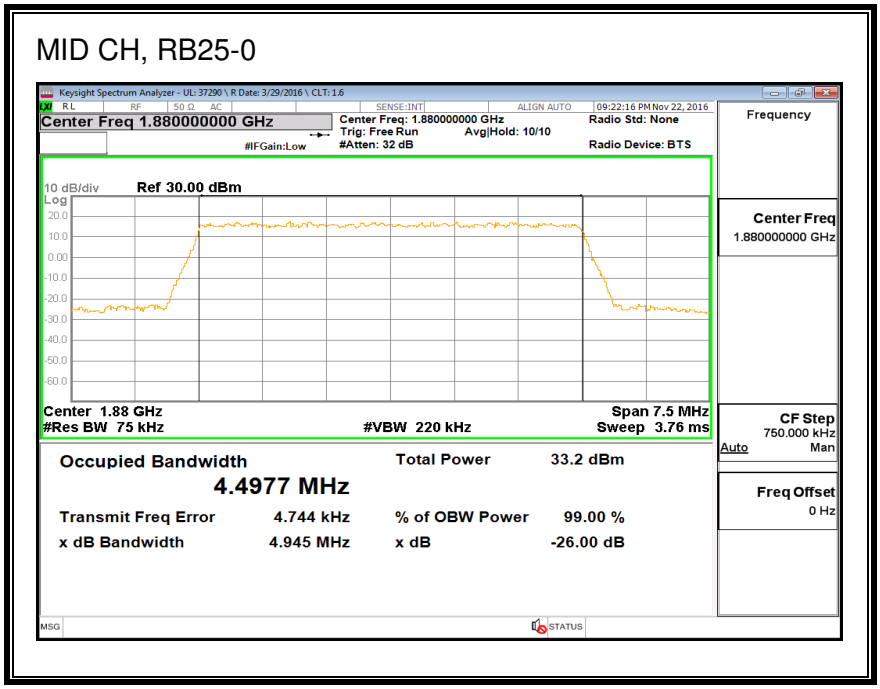
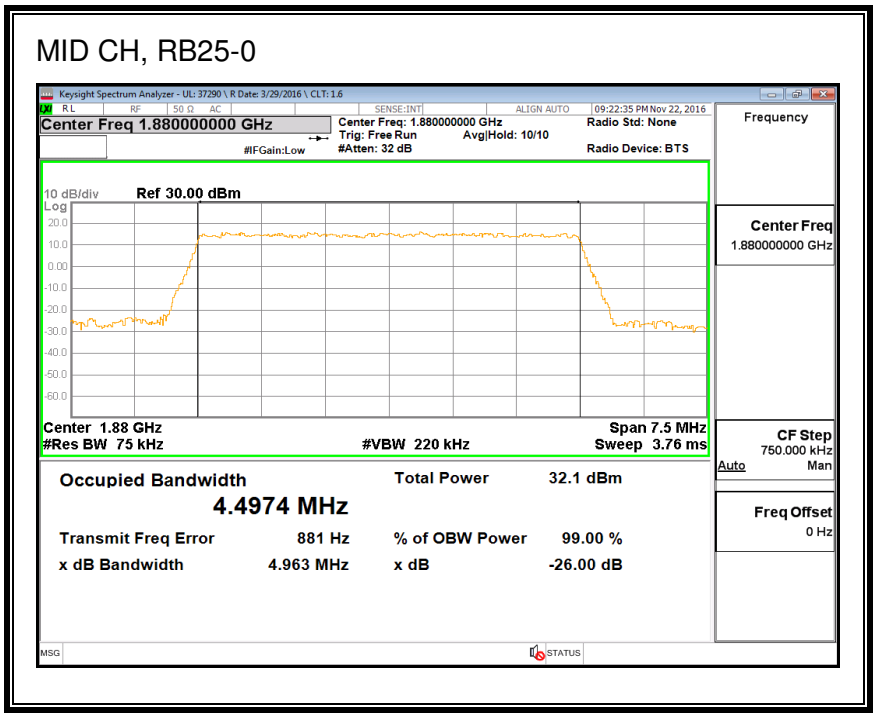
QPSK, (5.0 MHz BAND WIDTH)



16QAM, (5.0 MHz BAND WIDTH)



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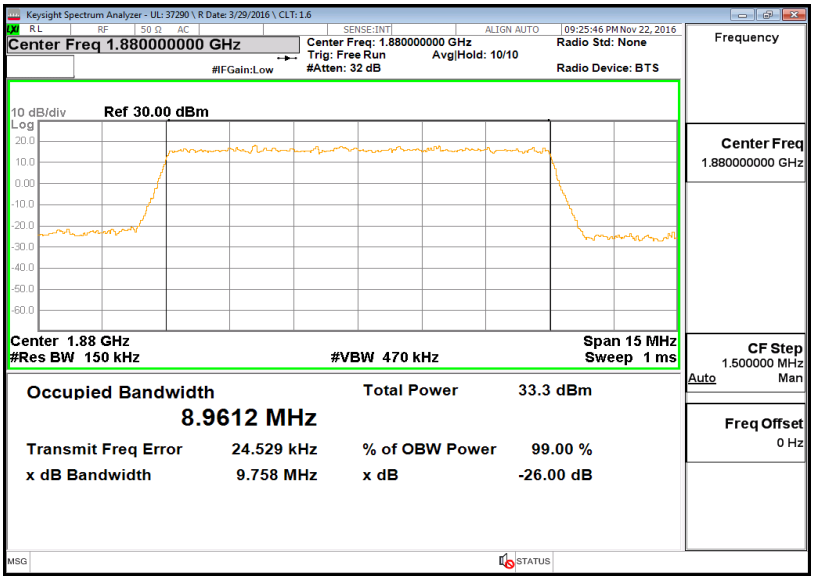
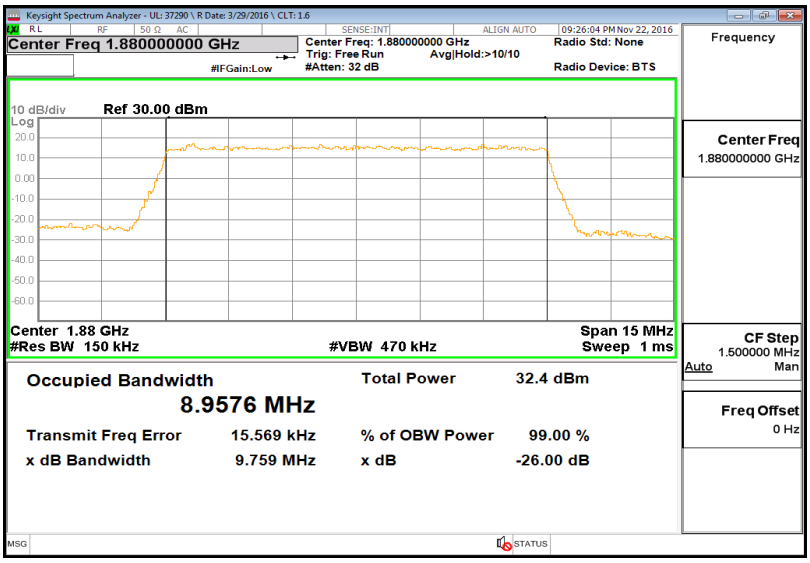
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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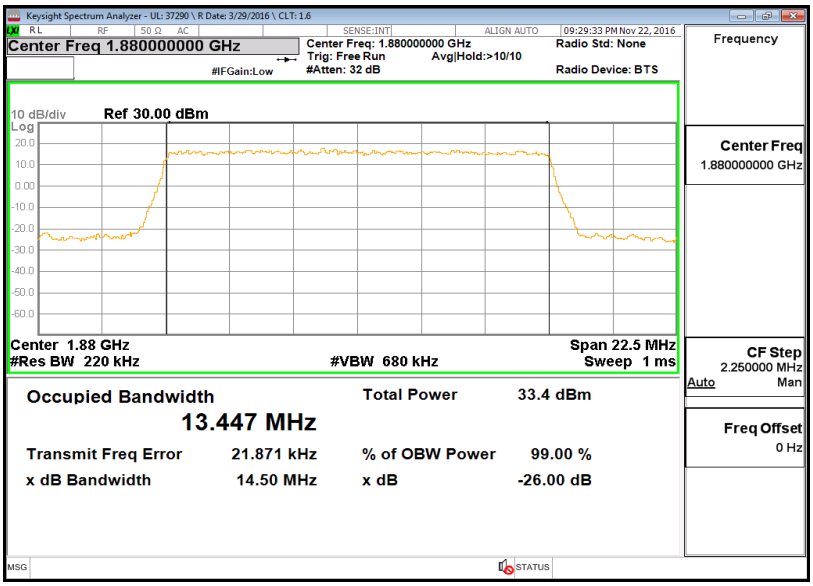
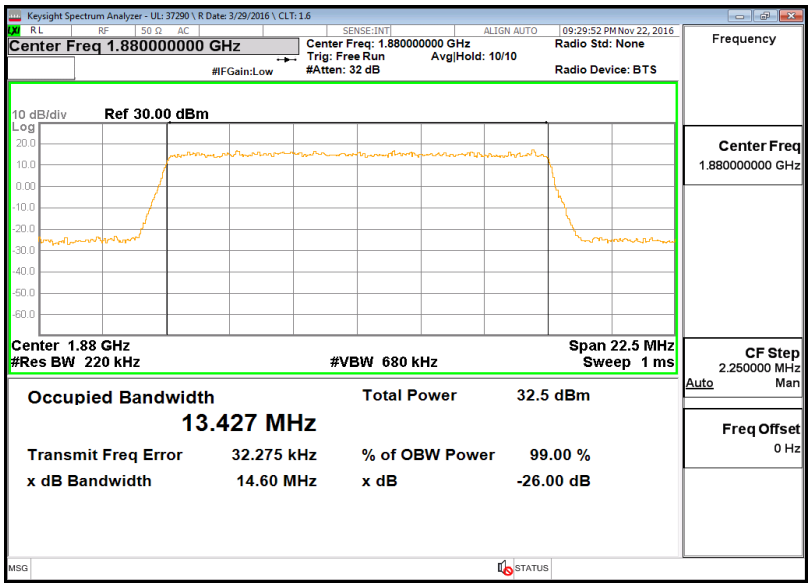
QPSK, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



16QAM, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



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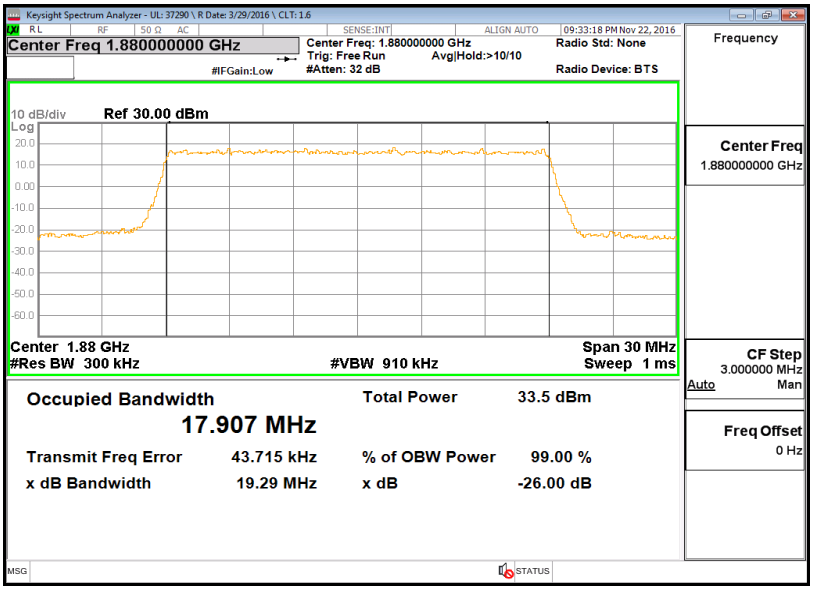
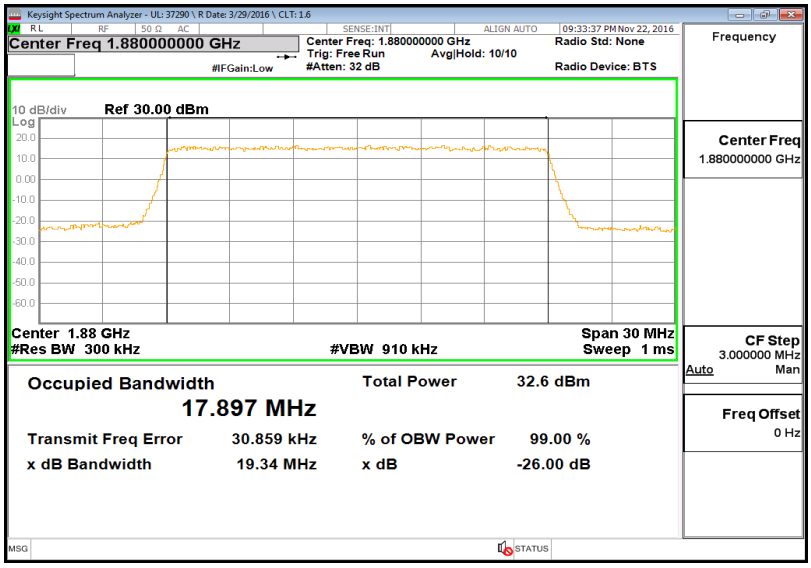
QPSK, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



16QAM, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



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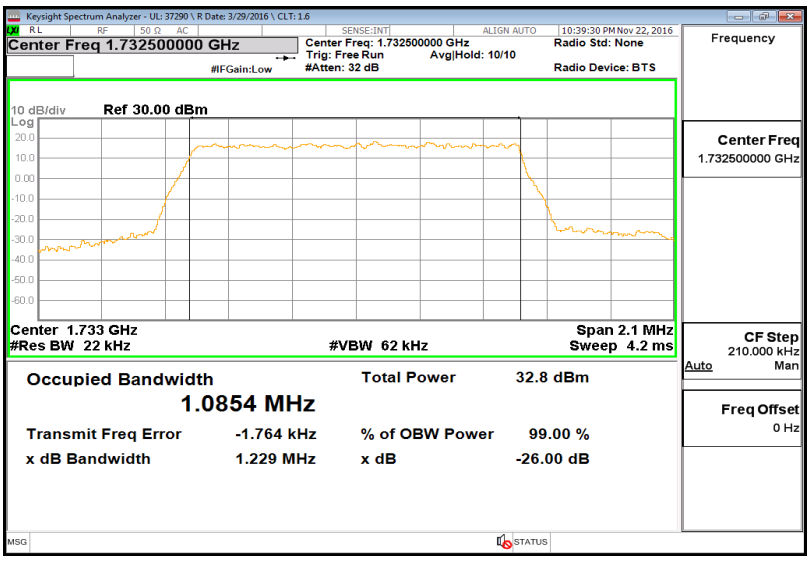
8.1.2. LTE BAND 4

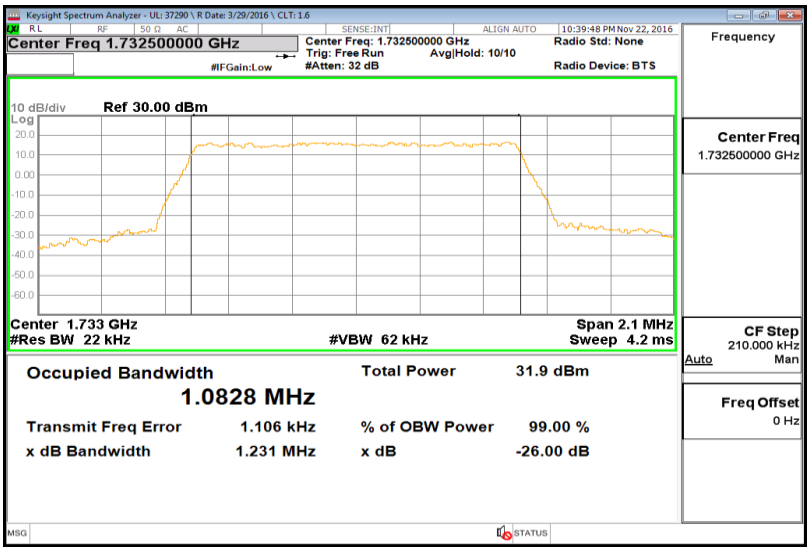
QPSK, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



16QAM, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



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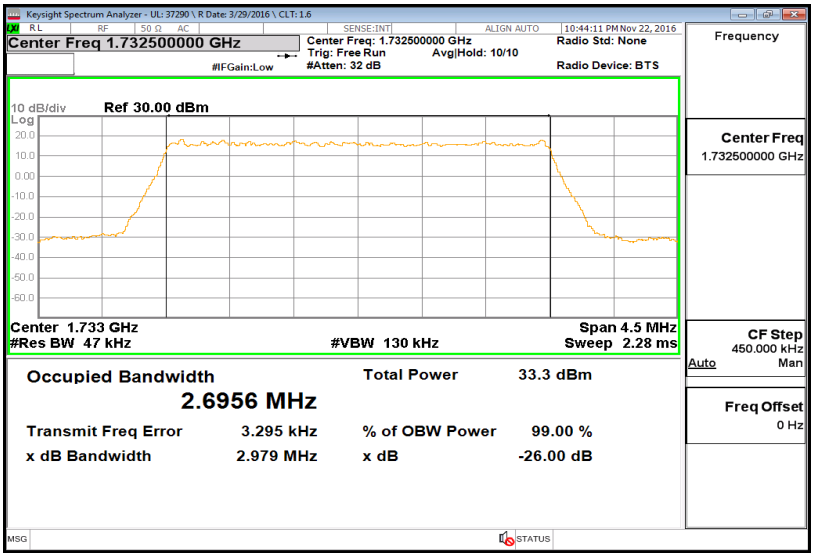
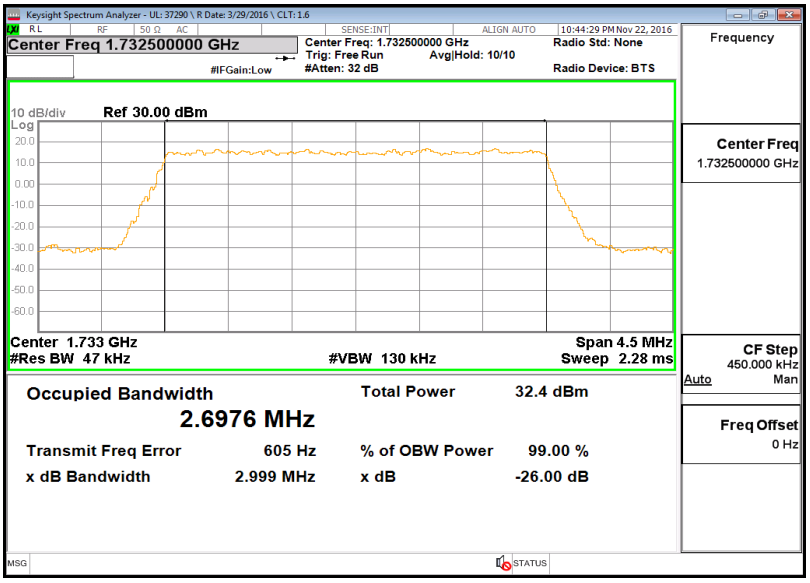
QPSK, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



16QAM, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



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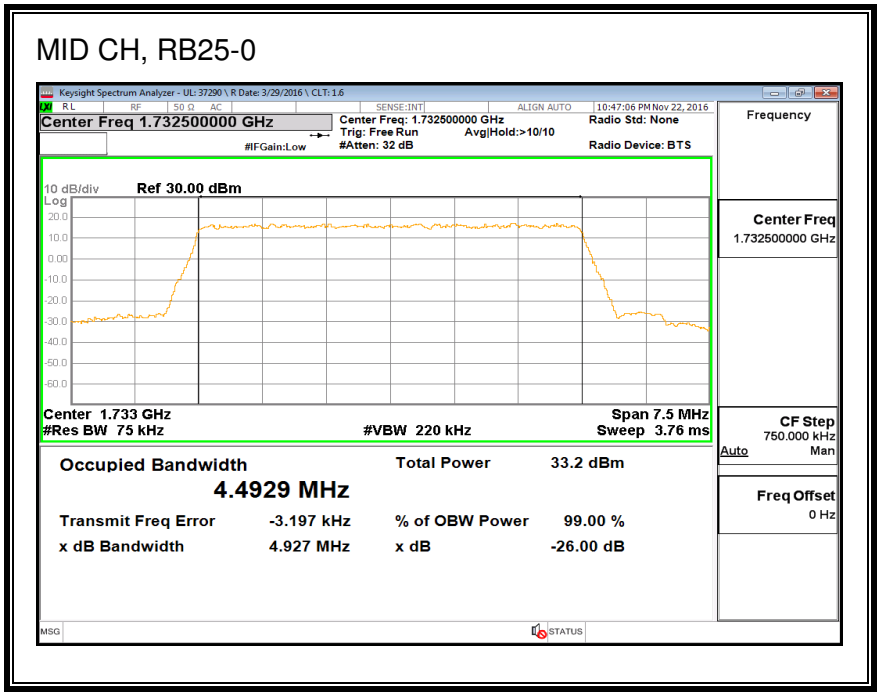
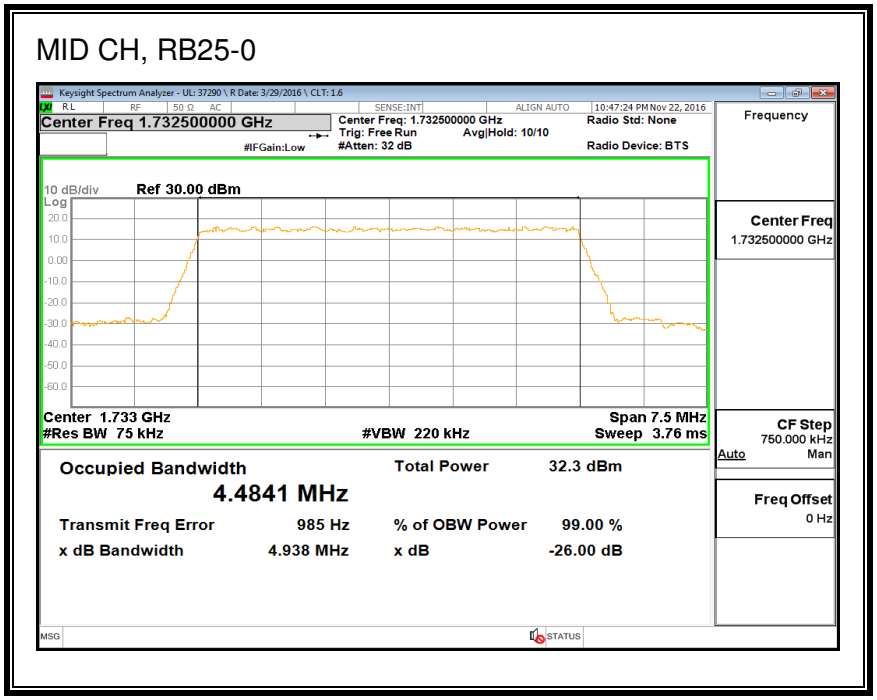
QPSK, (5.0 MHz BAND WIDTH)



16QAM, (5.0 MHz BAND WIDTH)



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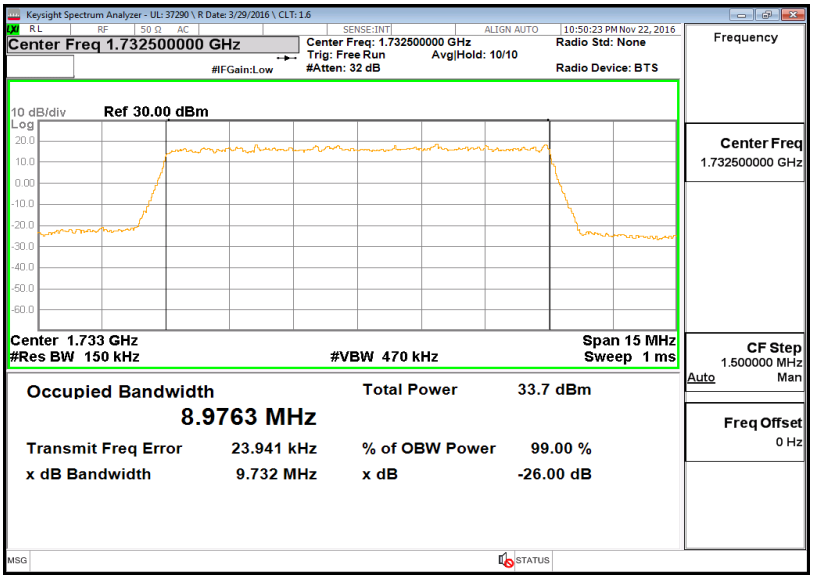
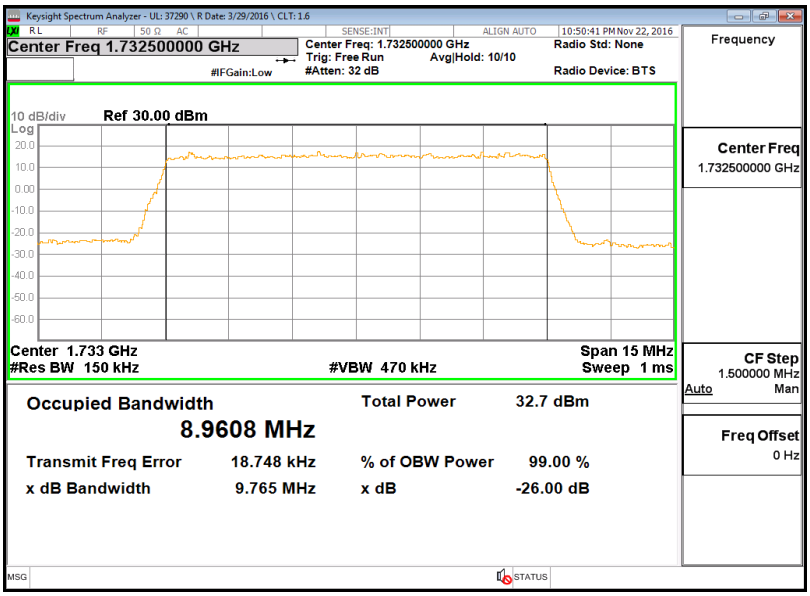
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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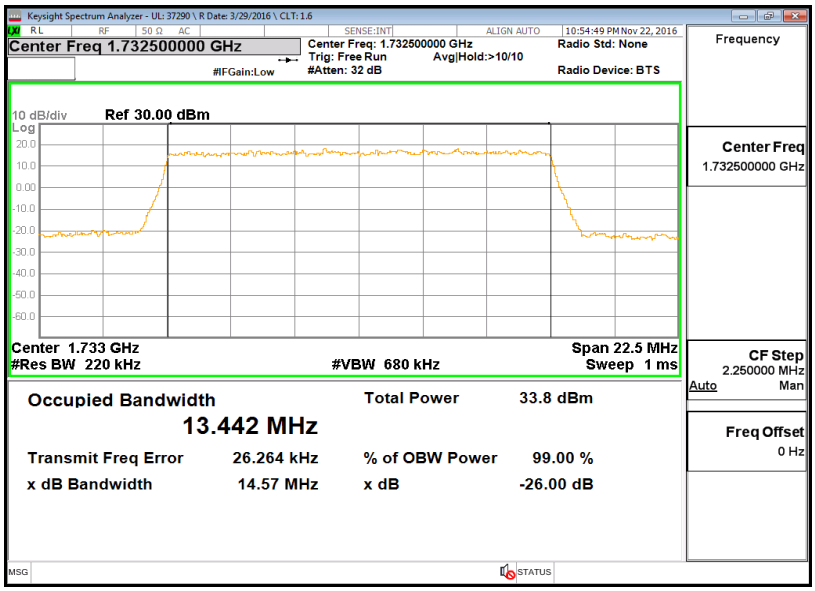
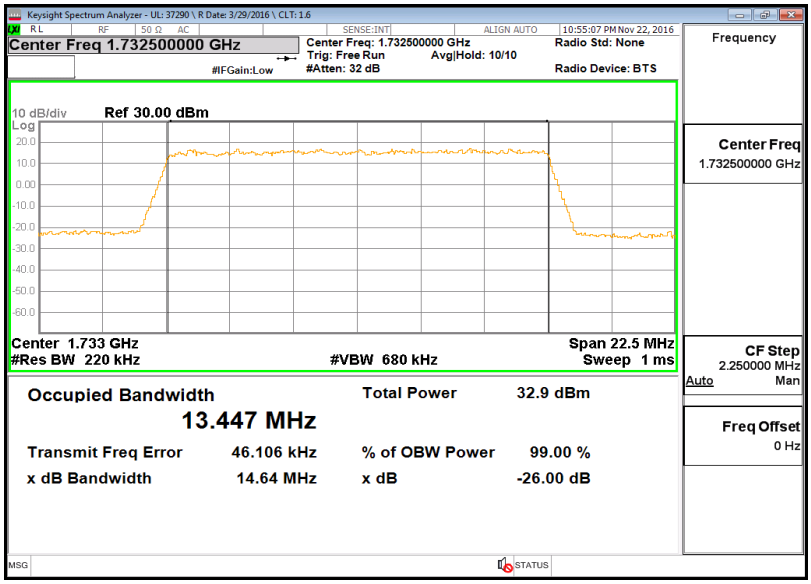
QPSK, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



16QAM, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



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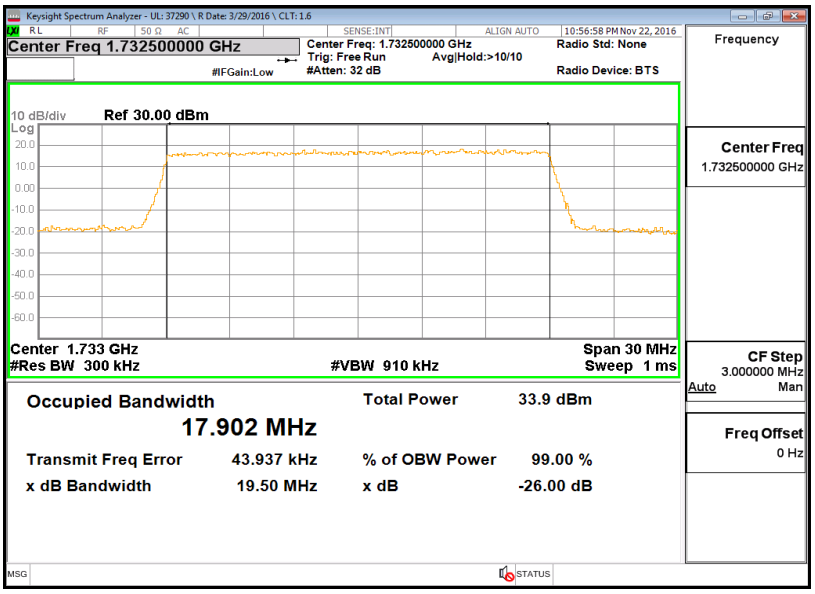
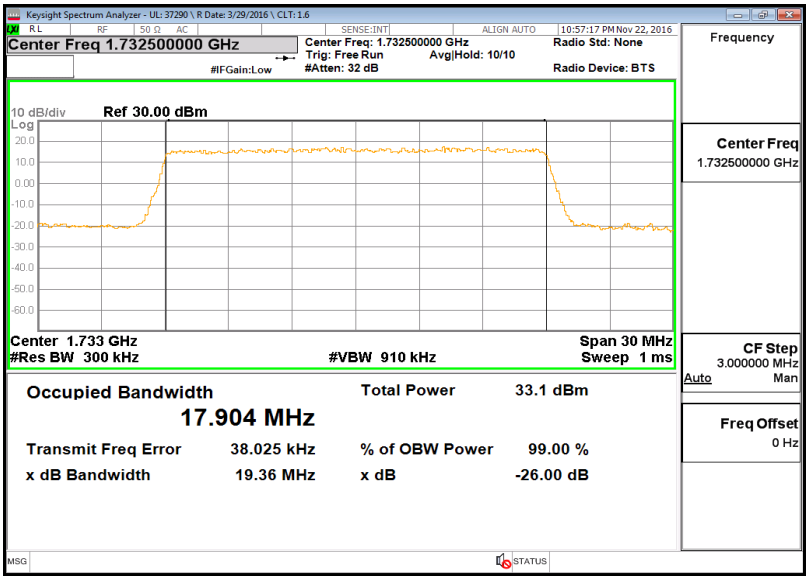
QPSK, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



16QAM, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



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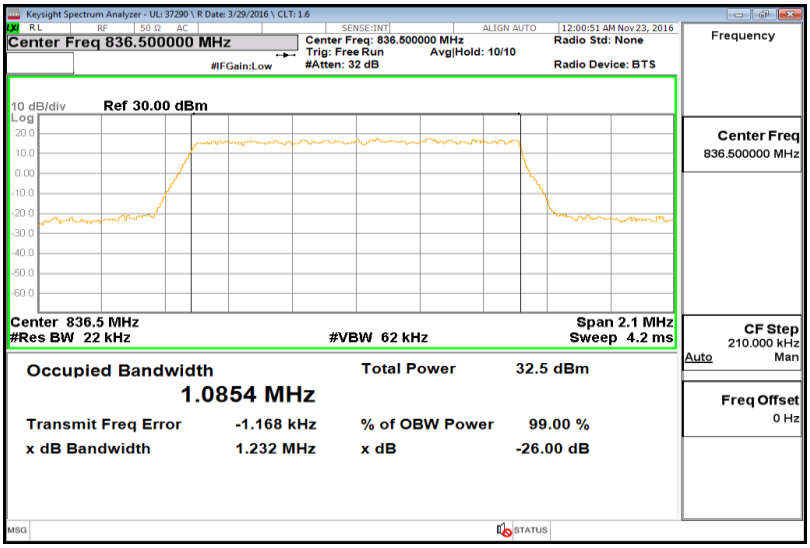
8.1.3. LTE BAND 5

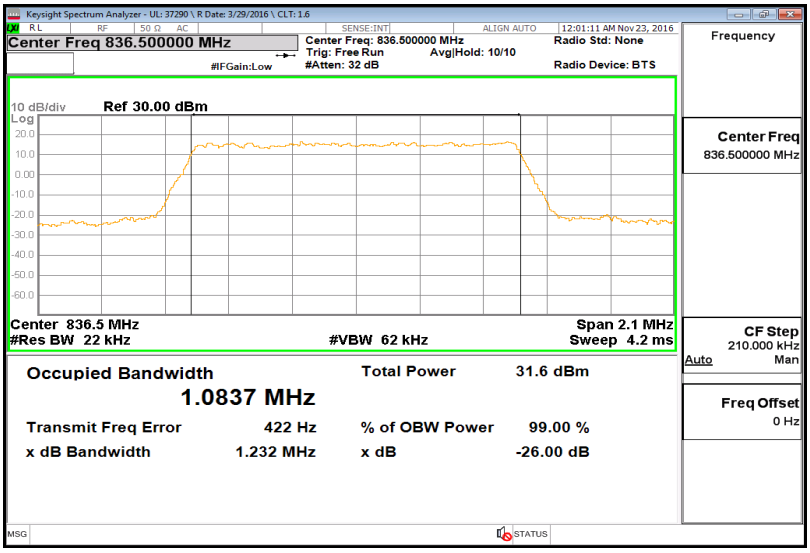
QPSK, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



16QAM, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



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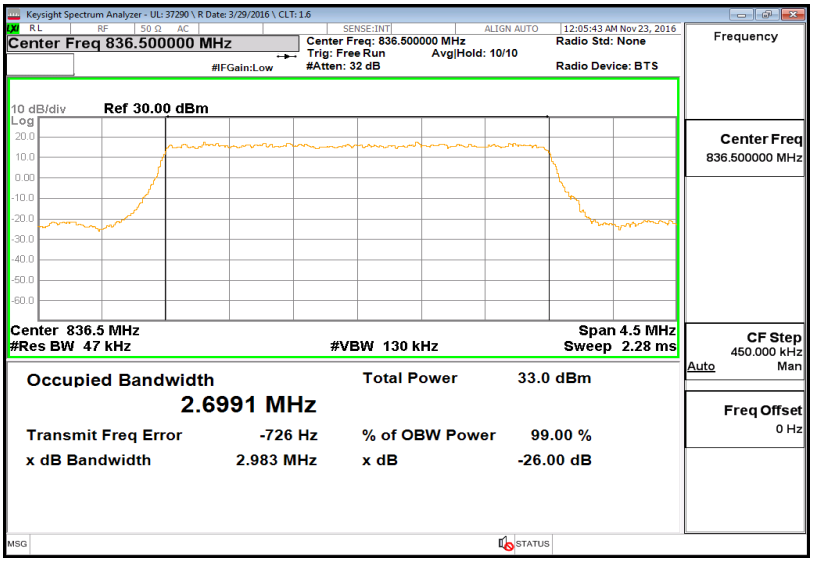
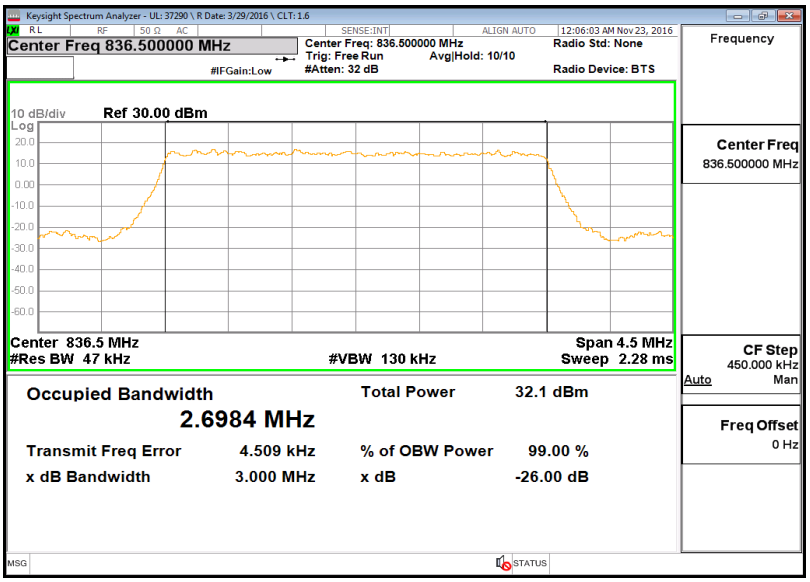
QPSK, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



16QAM, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



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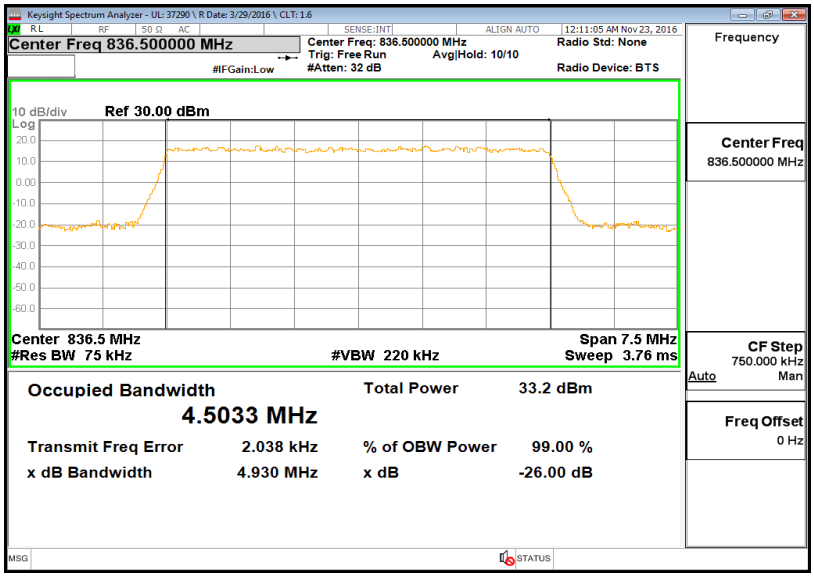
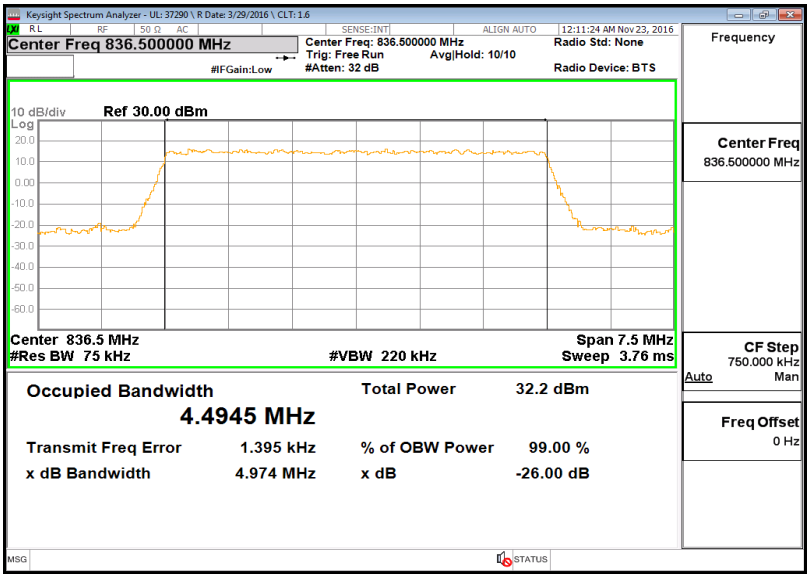
QPSK, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



16QAM, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



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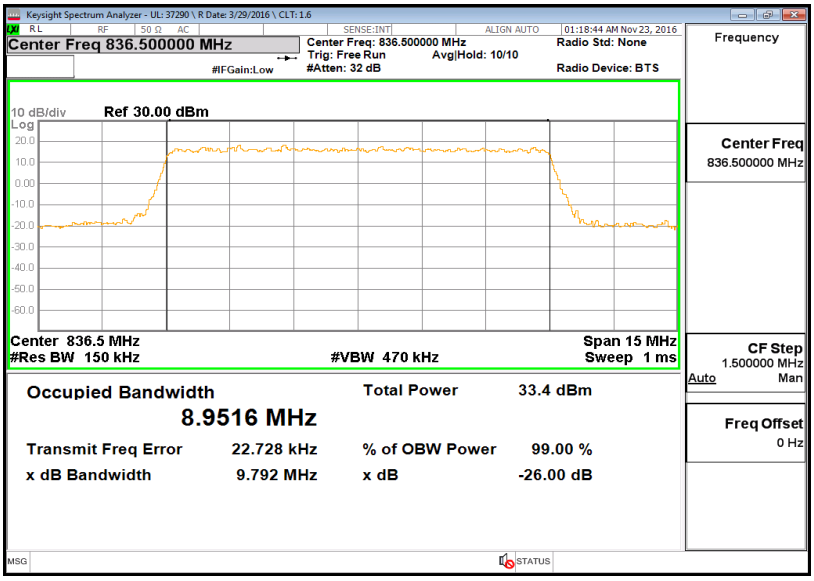
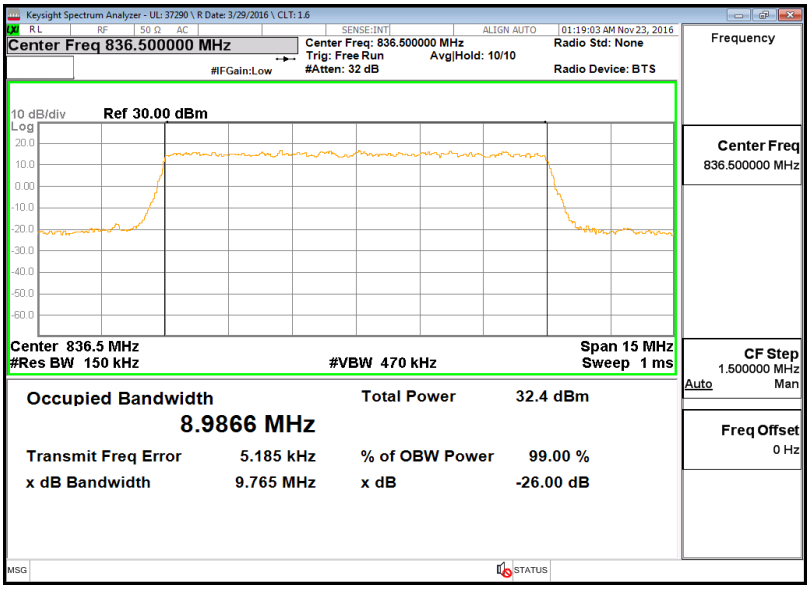
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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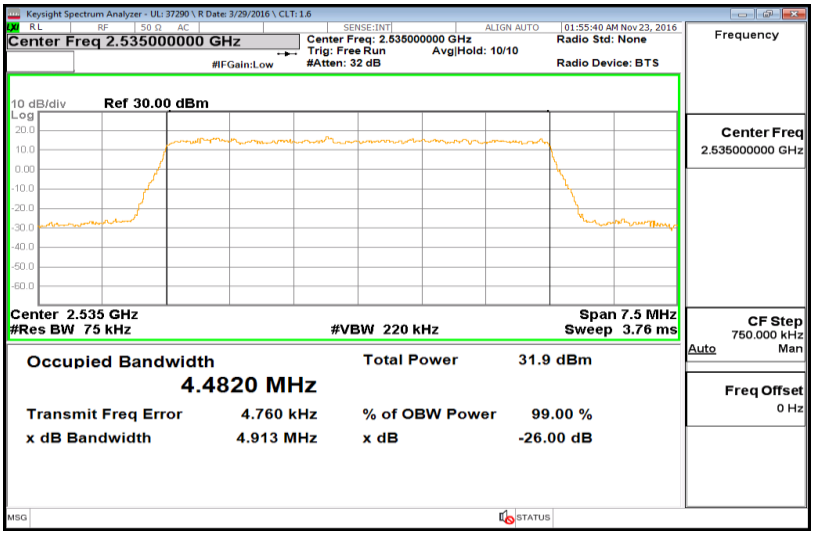
8.1.4. LTE BAND 7

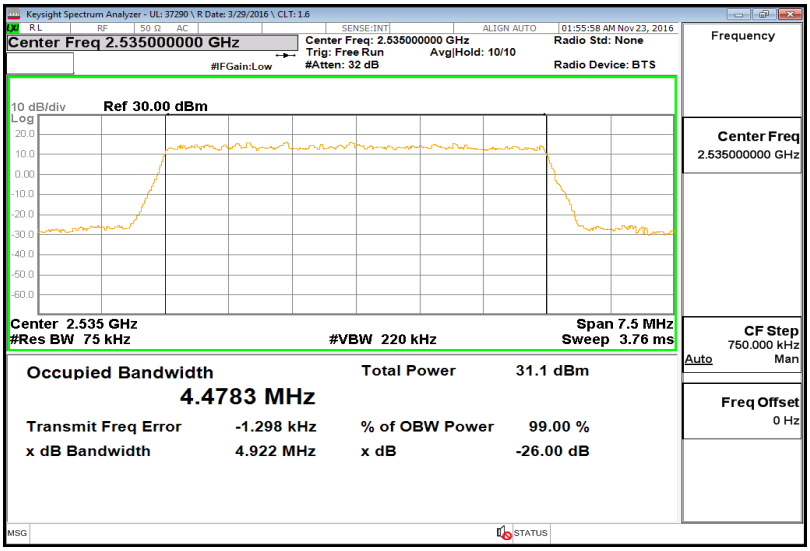
QPSK, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



16QAM, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



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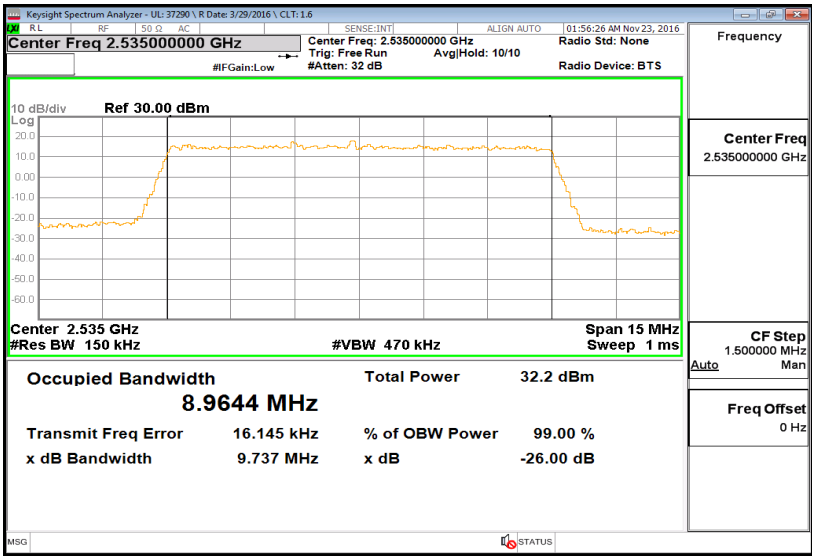
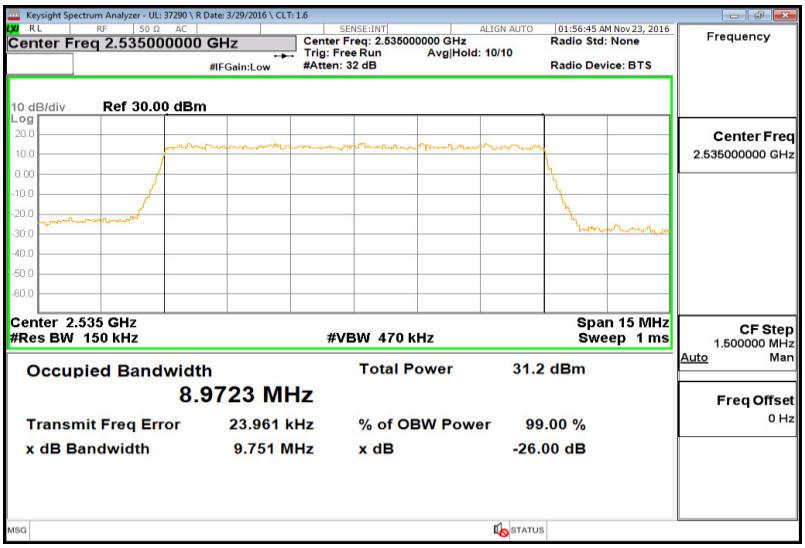
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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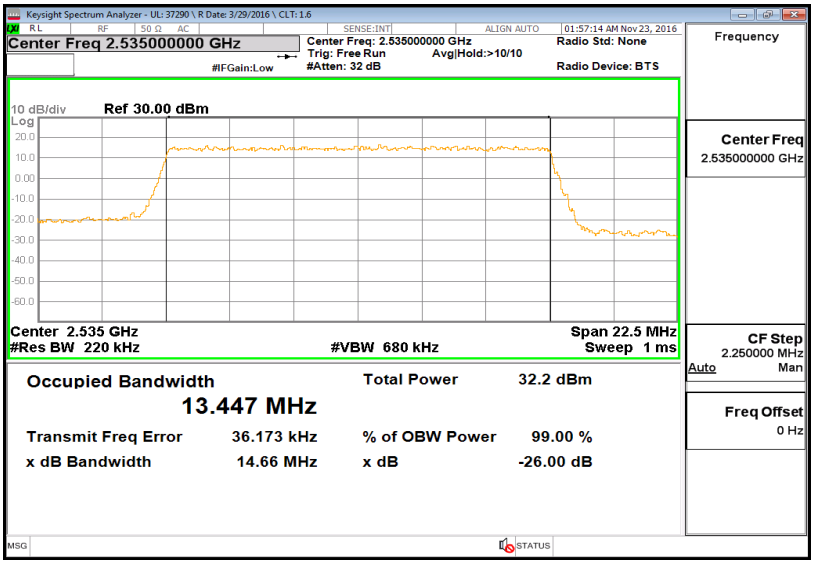
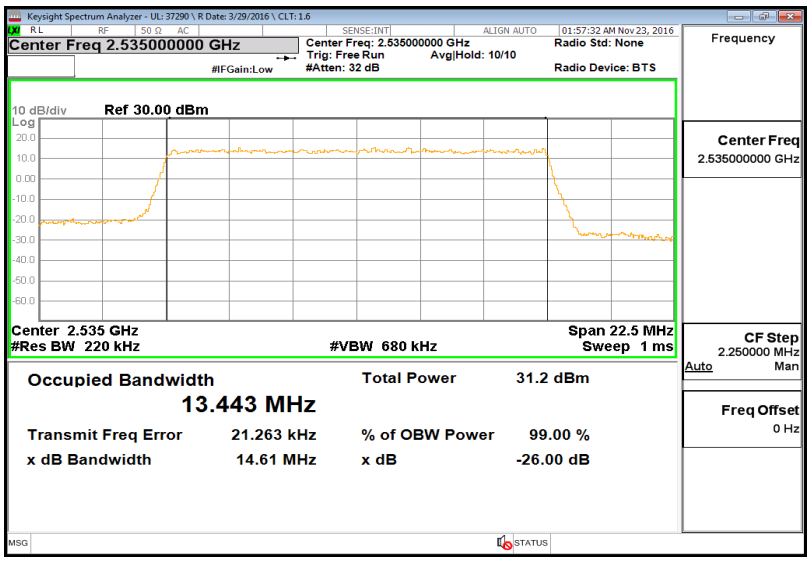
QPSK, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



16QAM, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



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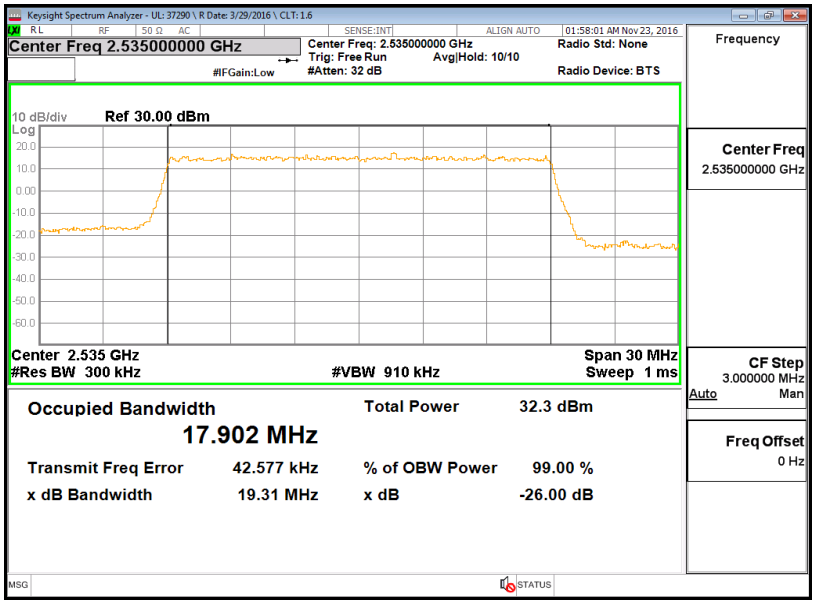
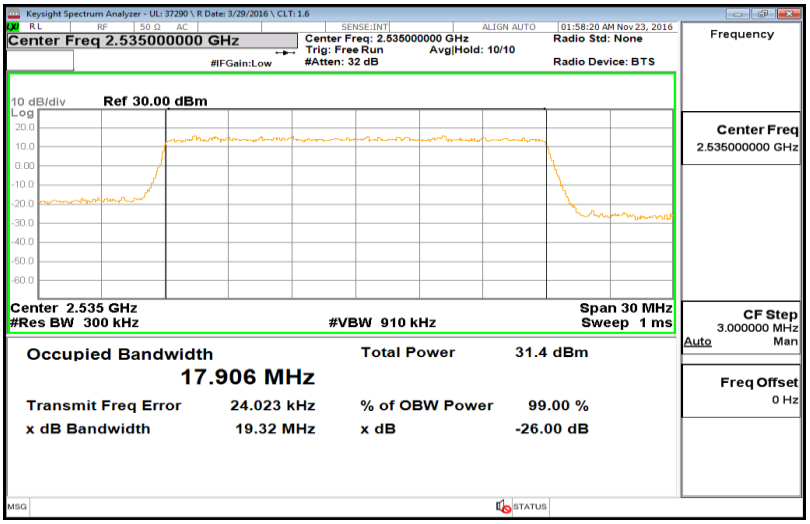
QPSK, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



16QAM, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



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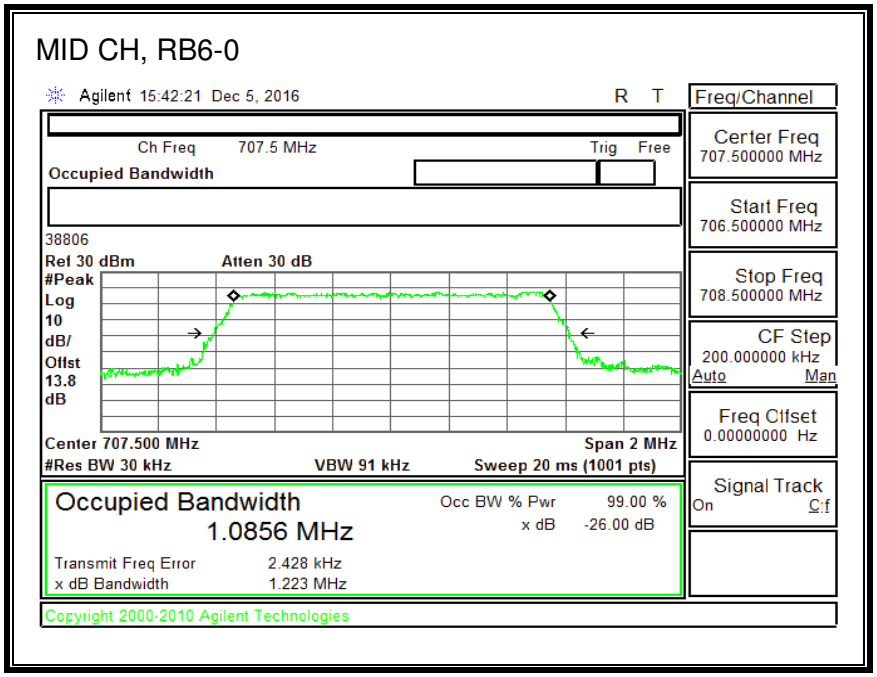
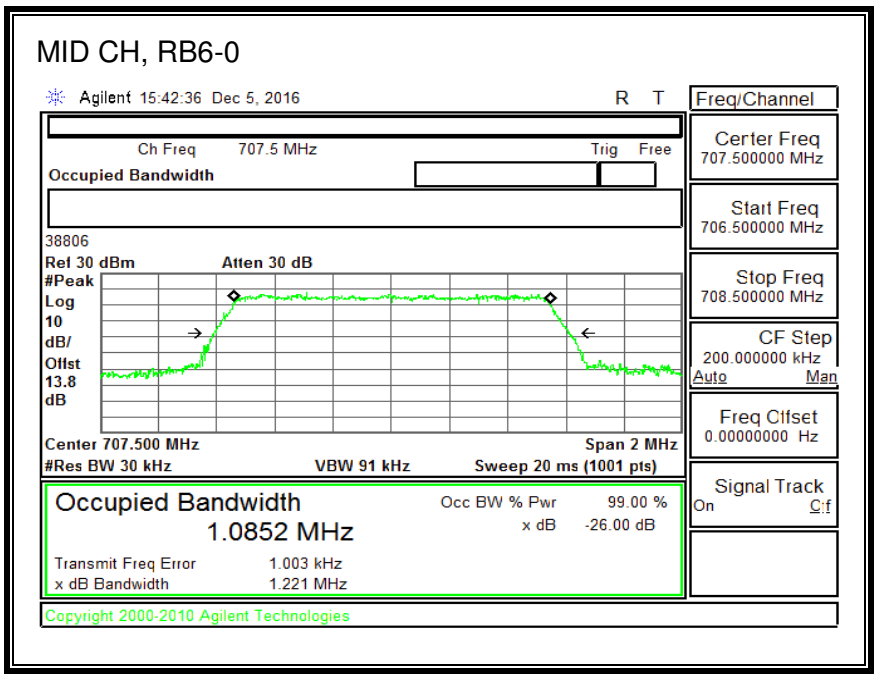
8.1.5. LTE BAND 12

QPSK, (1.4 MHz BAND WIDTH)



16QAM, (1.4 MHz BAND WIDTH)



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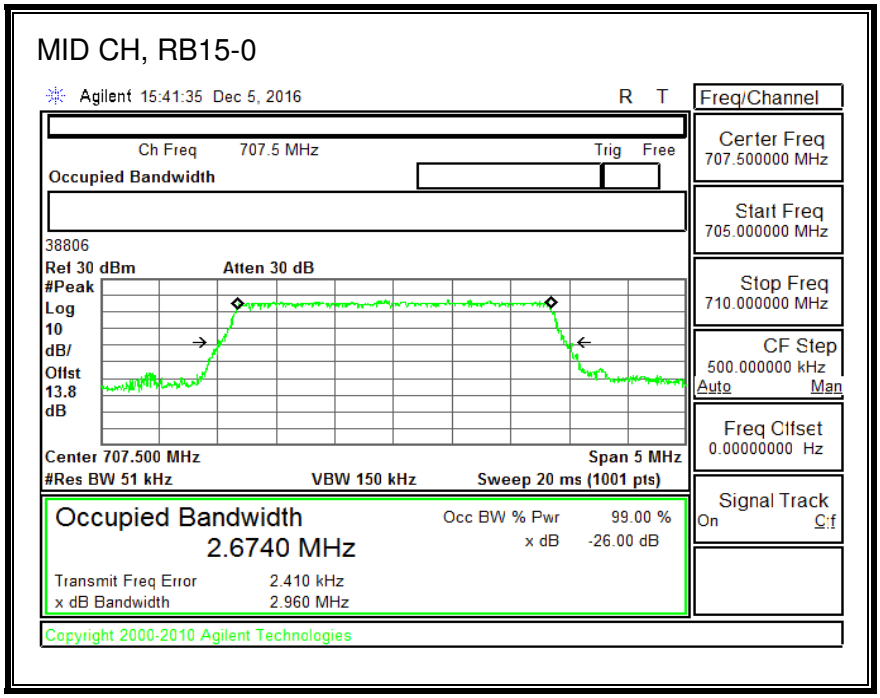
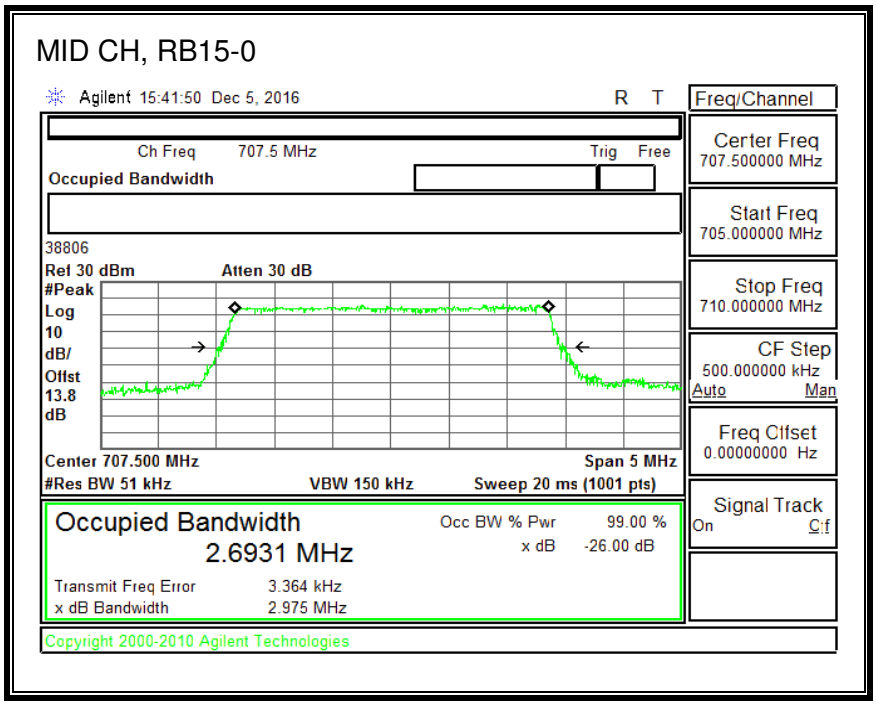
QPSK, (3.0 MHz BAND WIDTH)



16QAM, (3.0 MHz BAND WIDTH)



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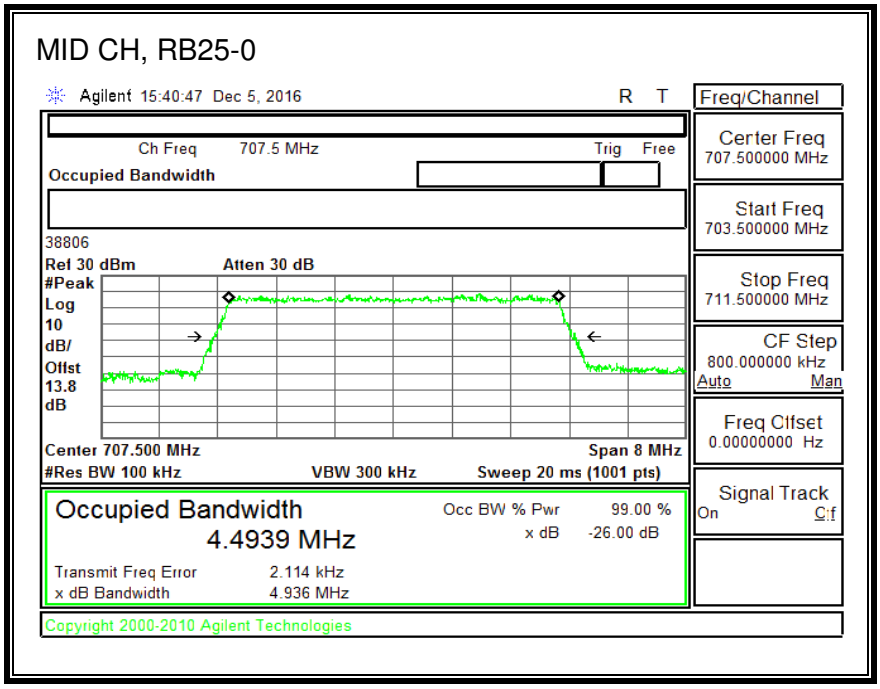
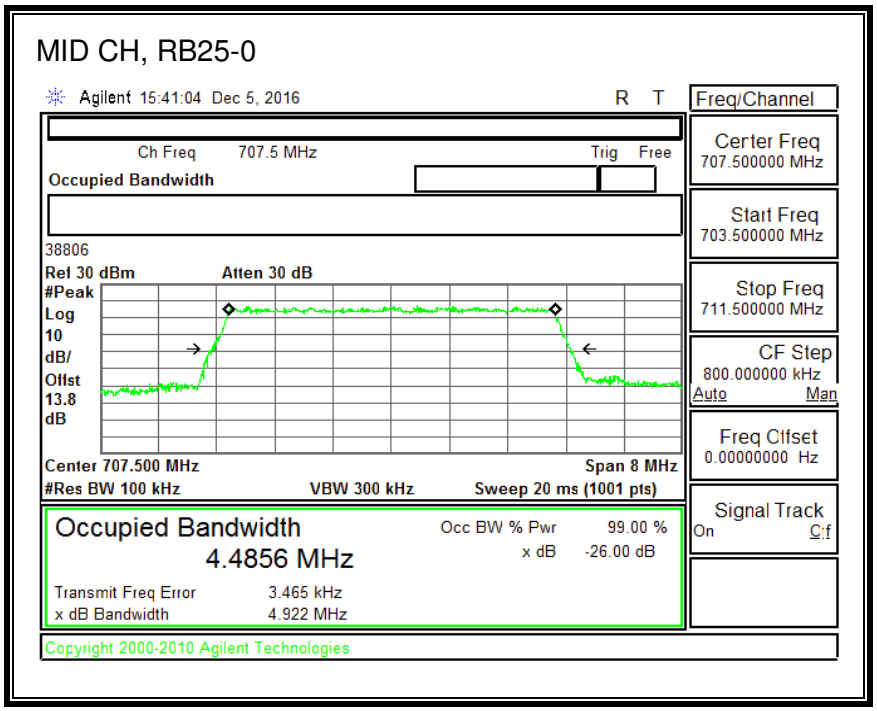
QPSK, (5.0 MHz BAND WIDTH)



16QAM, (5.0 MHz BAND WIDTH)



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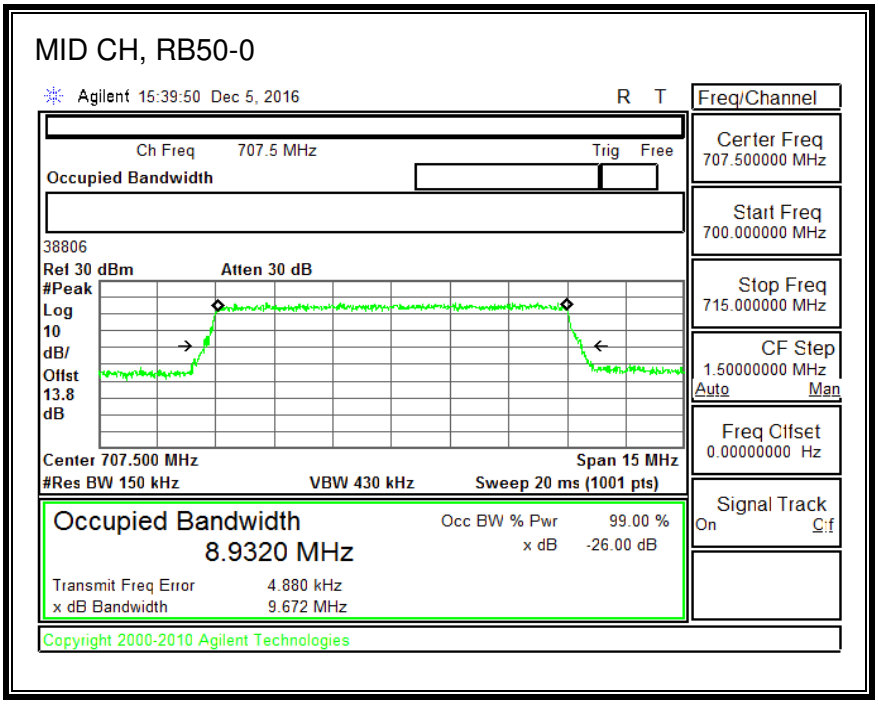
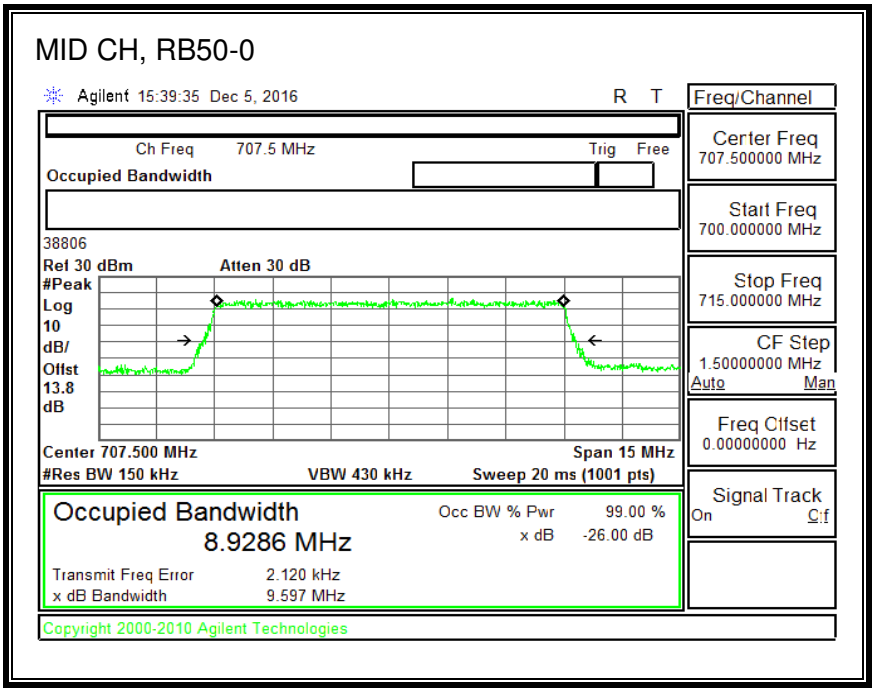
QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



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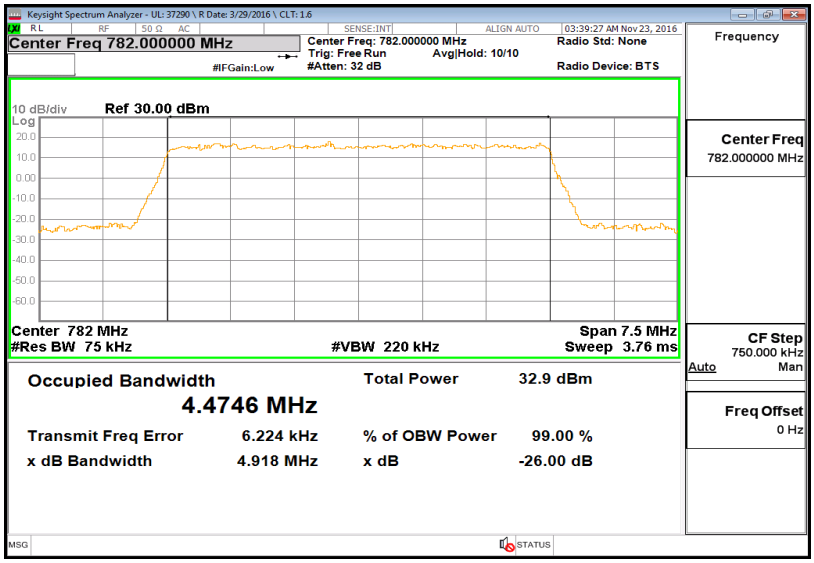
8.1.6. LTE BAND 13

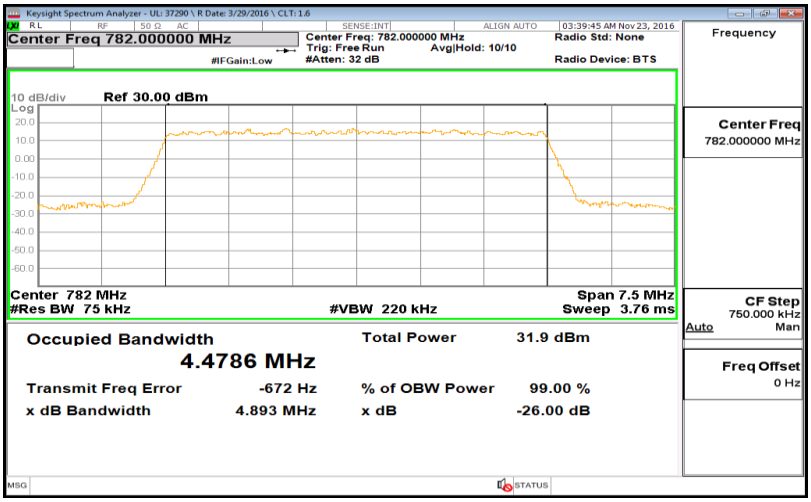
QPSK, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



16QAM, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



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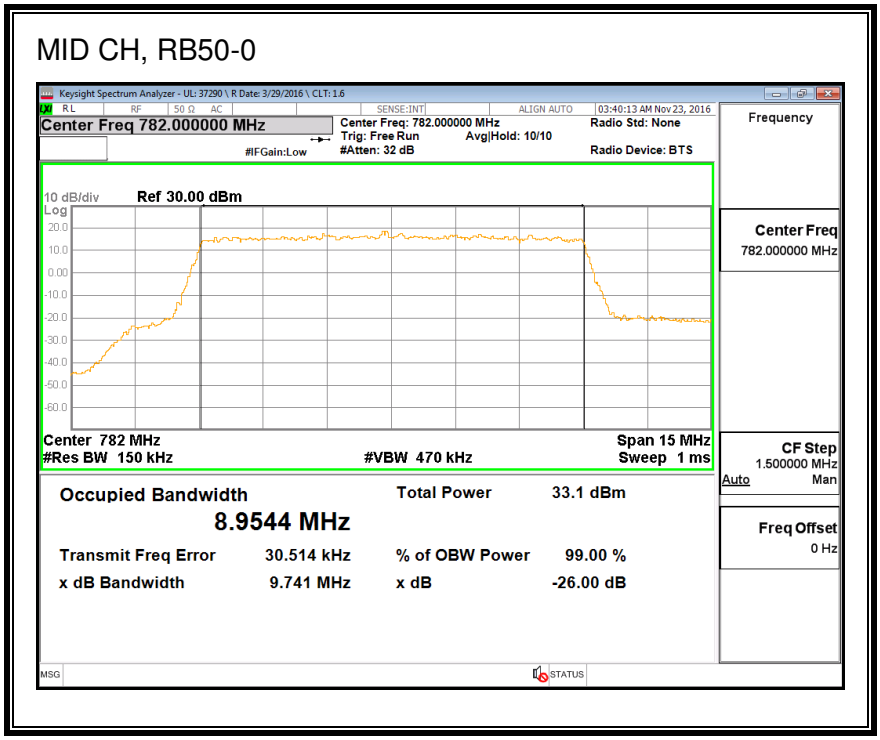
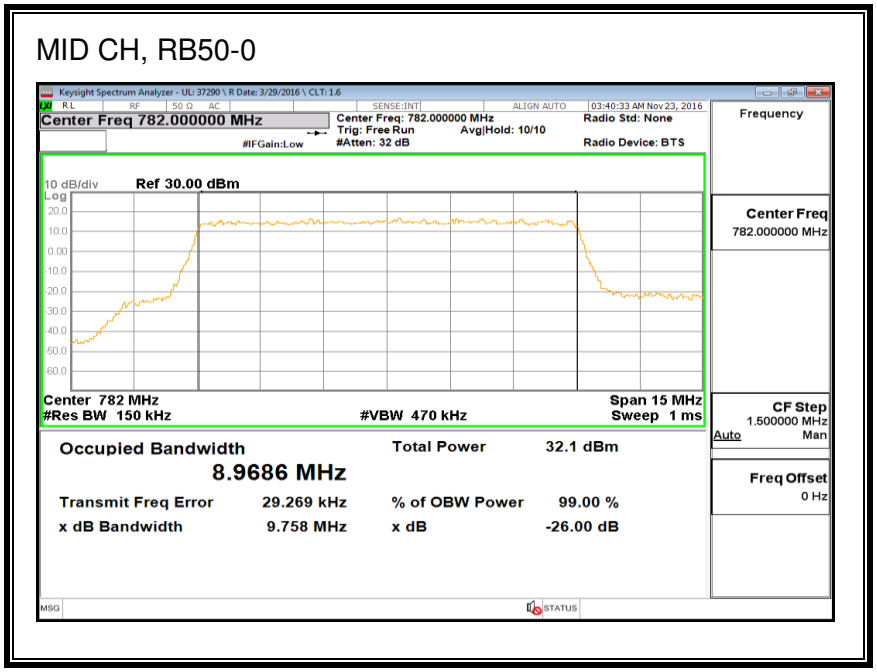
QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



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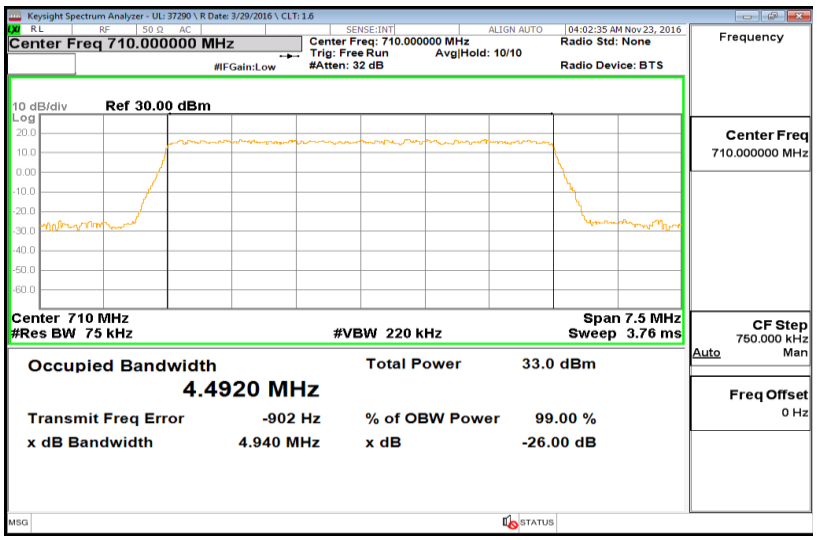
8.1.7. LTE BAND 17

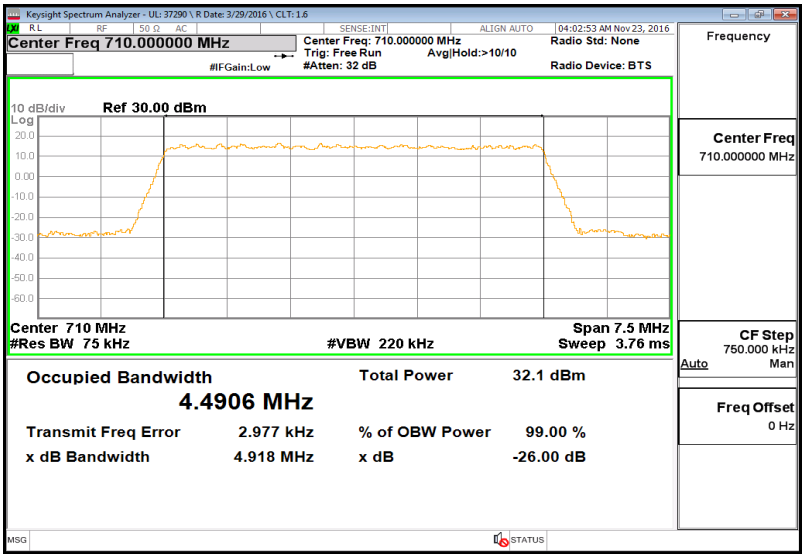
QPSK, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



16QAM, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



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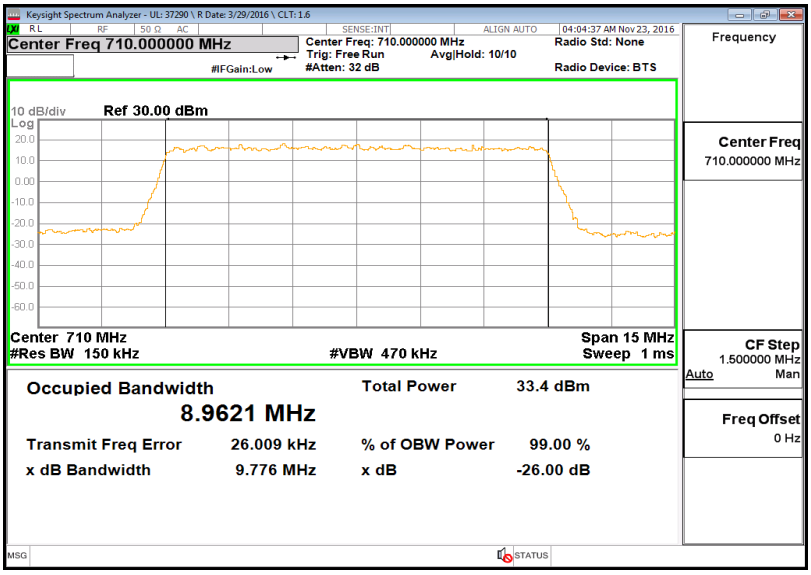
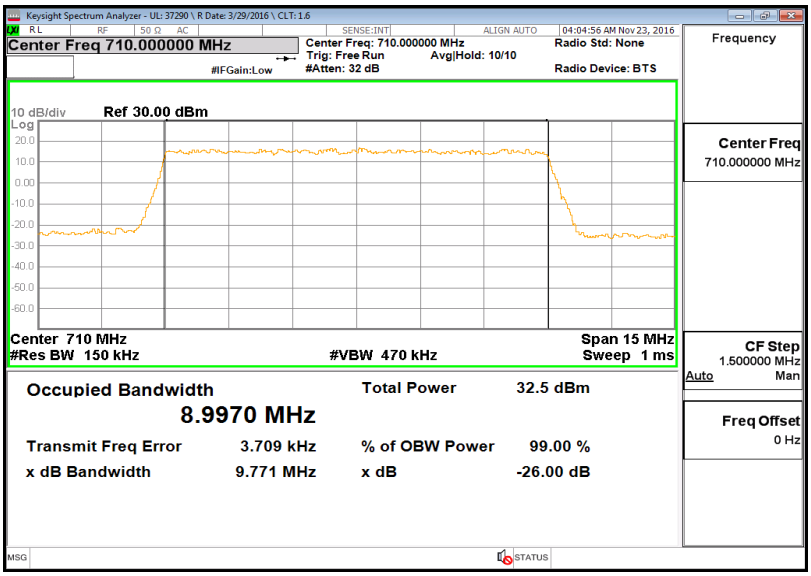
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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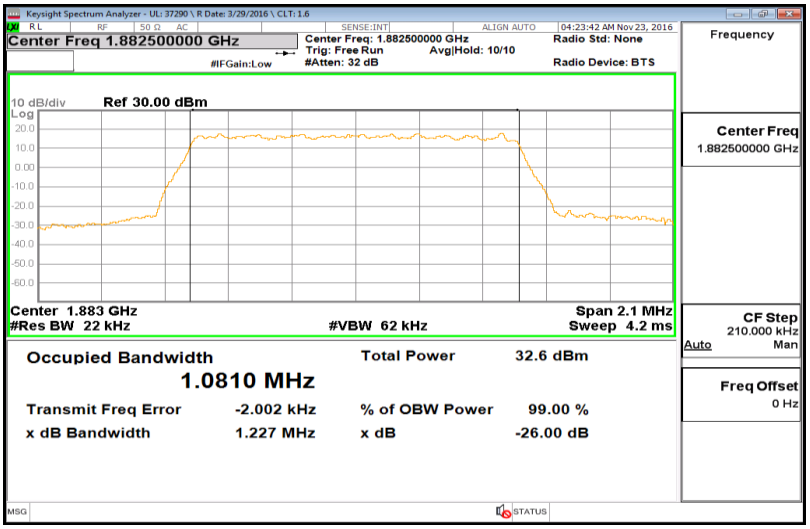
8.1.8. LTE BAND 25

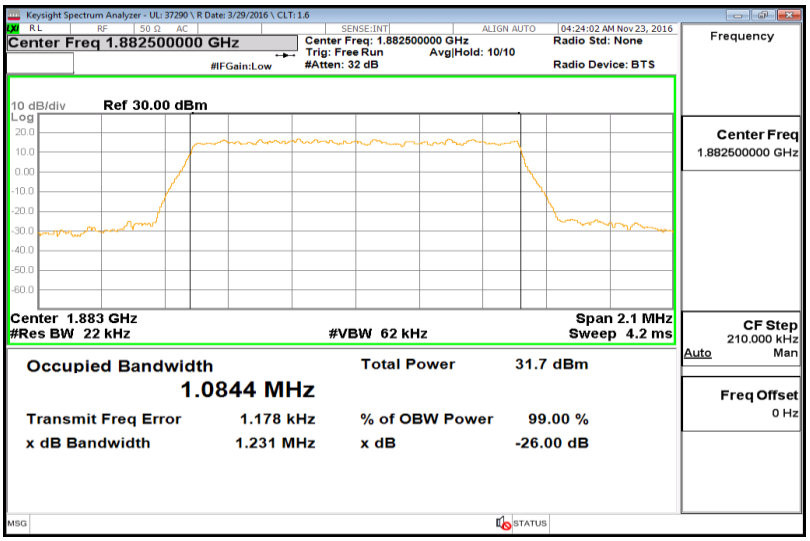
QPSK, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



16QAM, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



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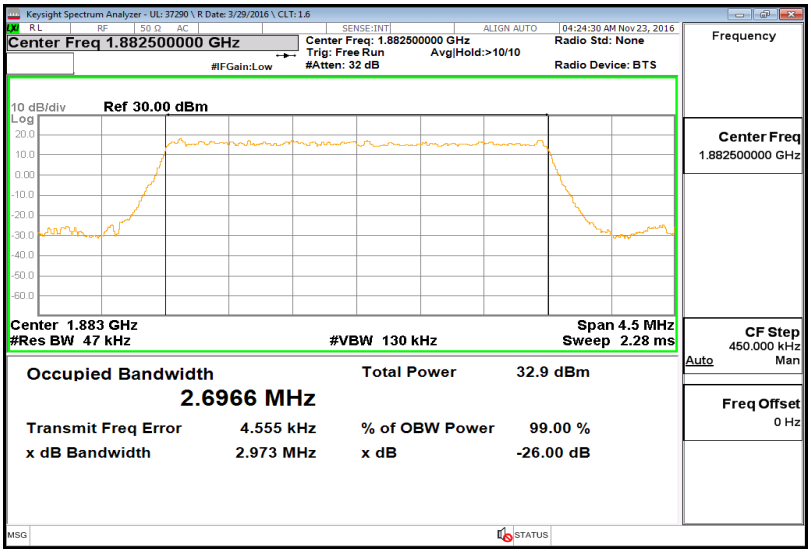
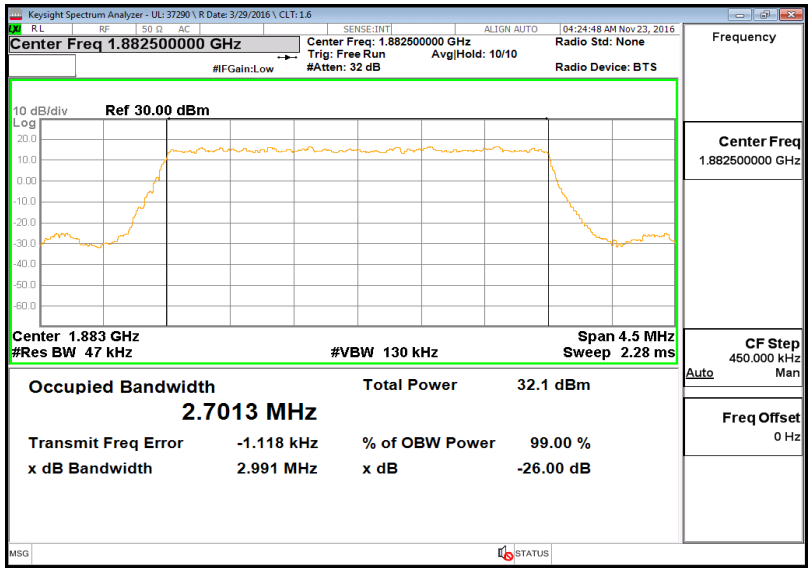
QPSK, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



16QAM, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



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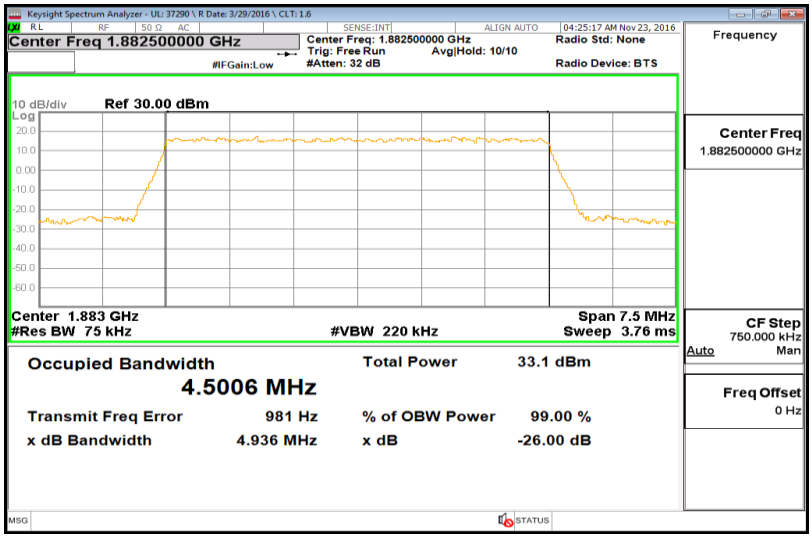
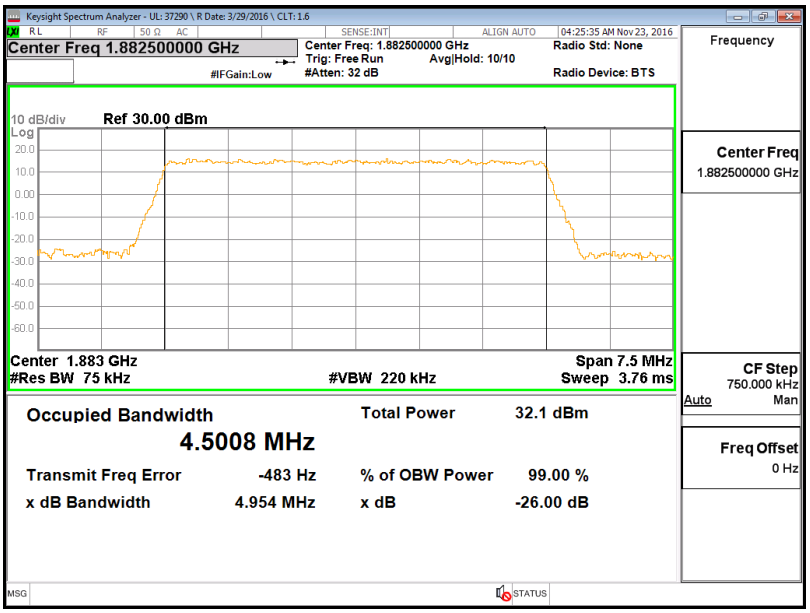
QPSK, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



16QAM, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



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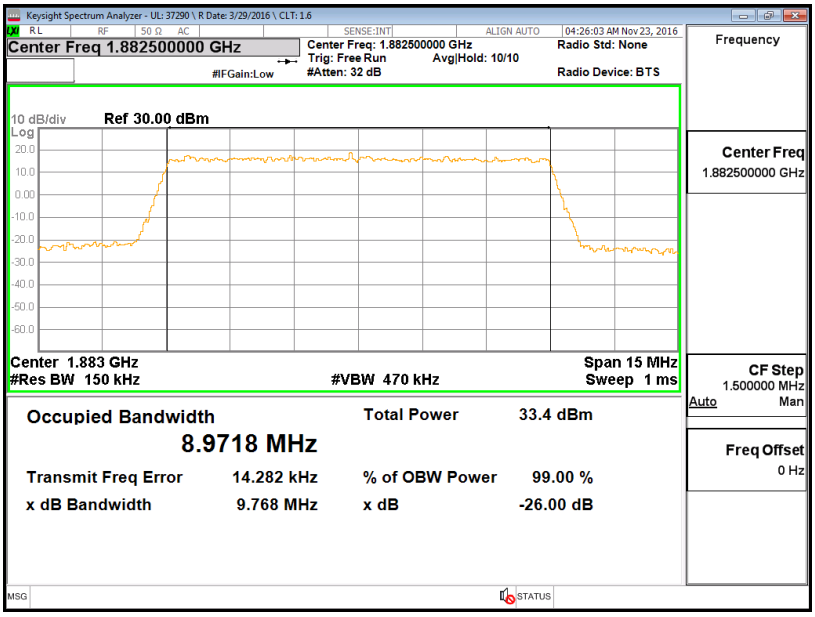
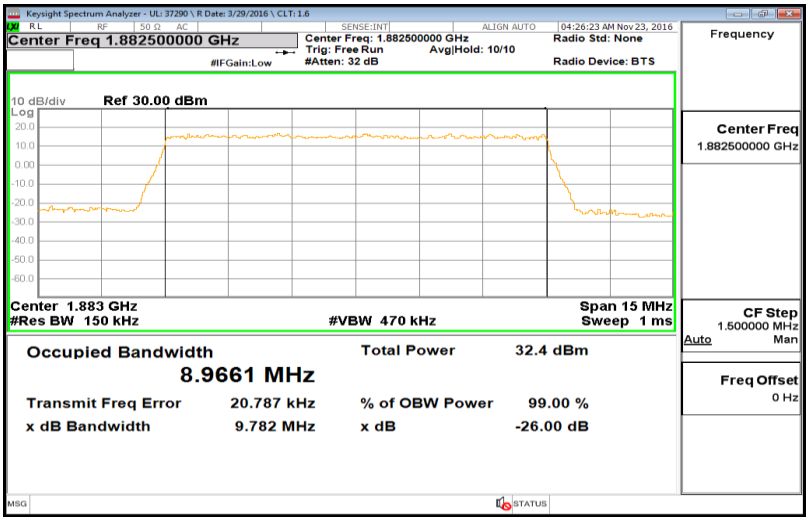
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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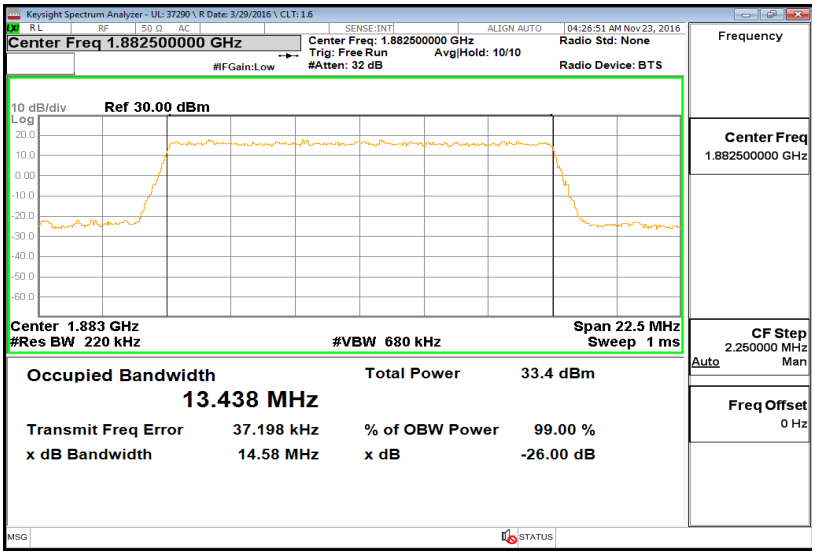
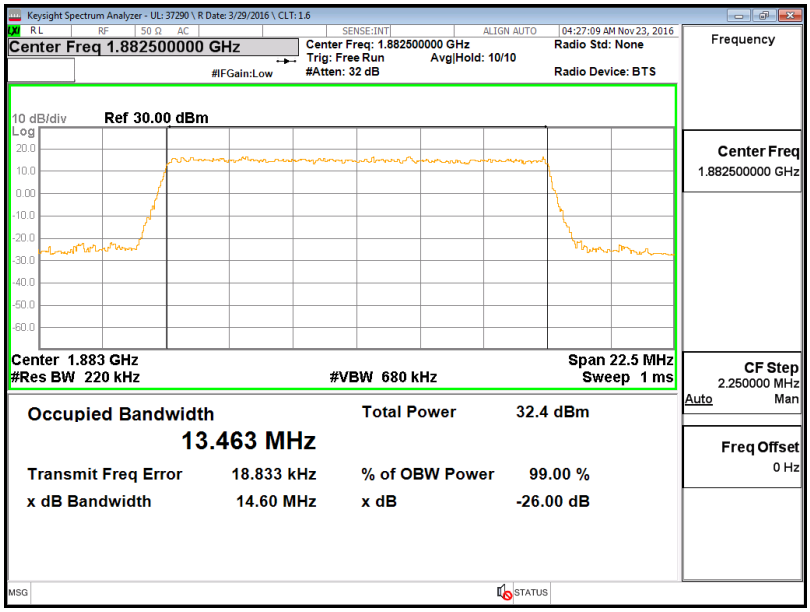
QPSK, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



16QAM, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



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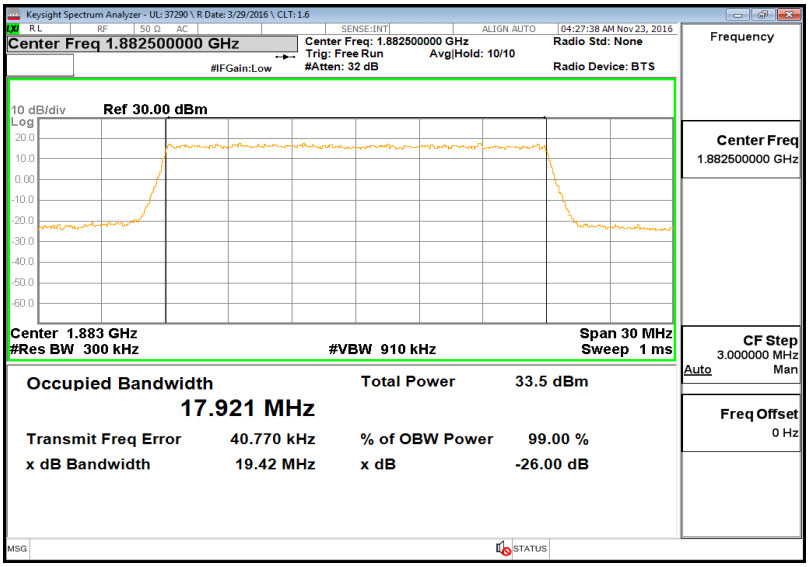
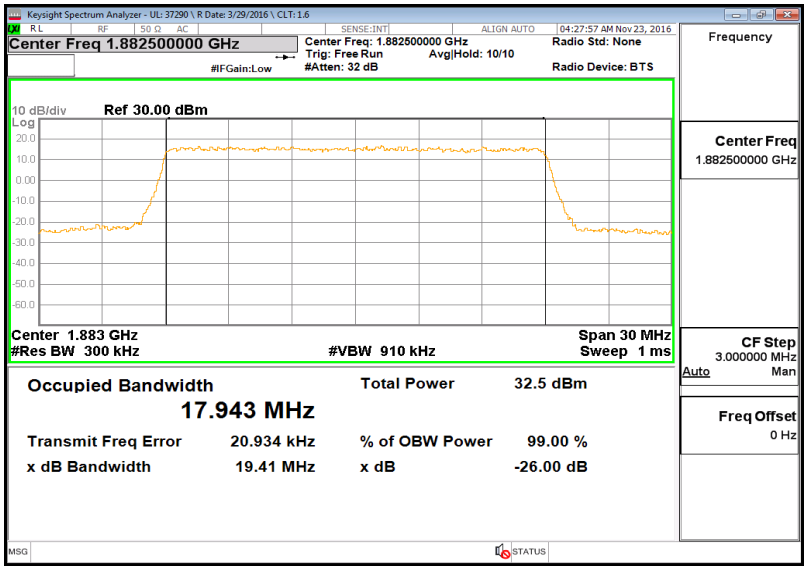
QPSK, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



16QAM, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



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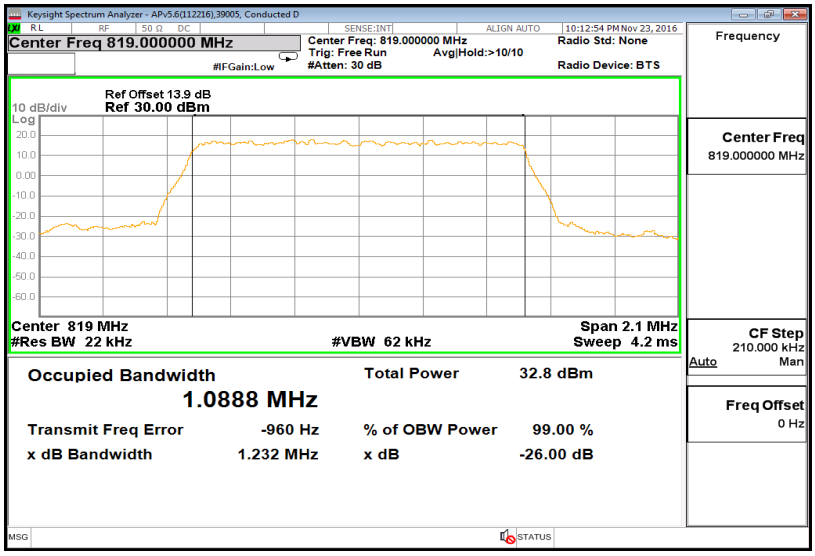
8.1.9. LTE BAND 26

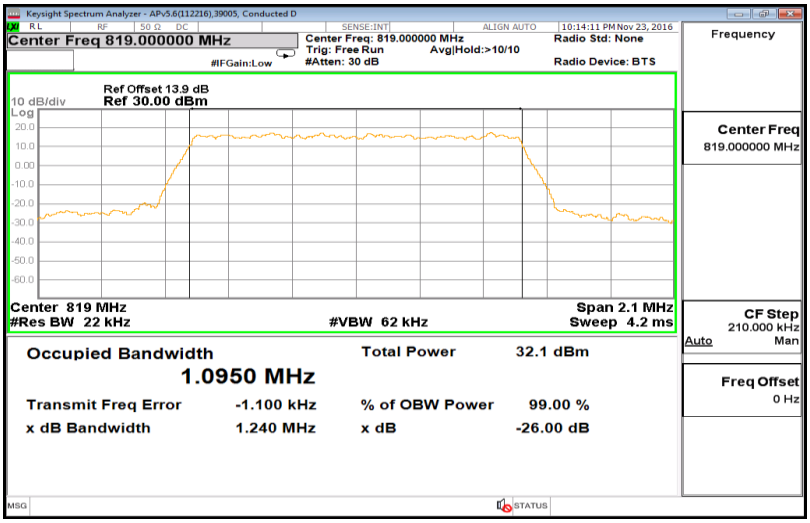
QPSK, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



16QAM, (1.4 MHz BAND WIDTH)

MID CH, RB6-0



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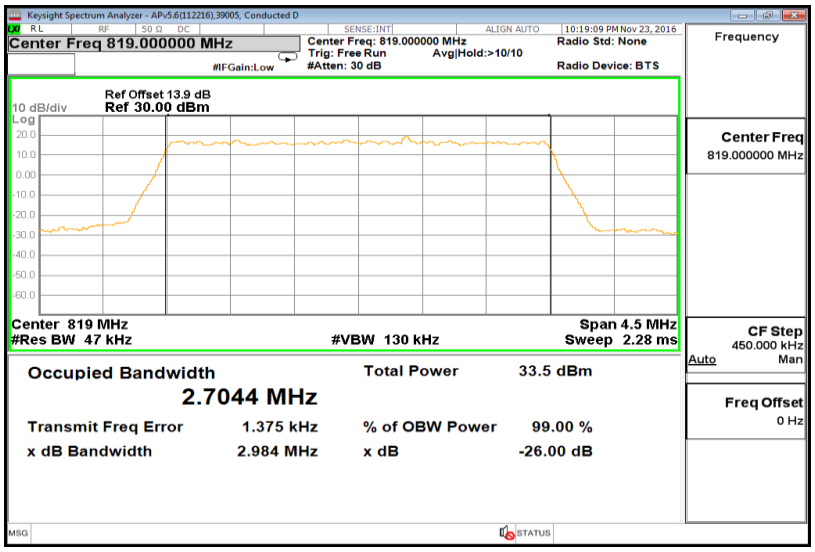
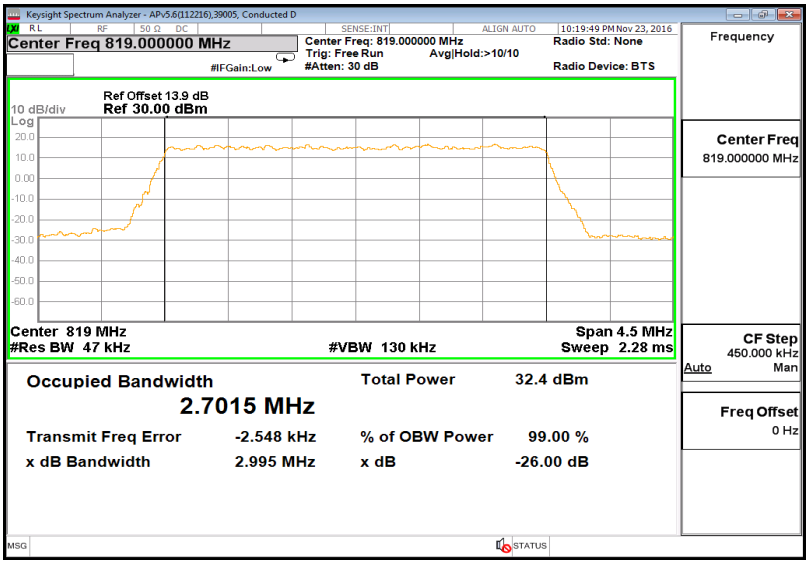
QPSK, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



16QAM, (3.0 MHz BAND WIDTH)

MID CH, RB15-0



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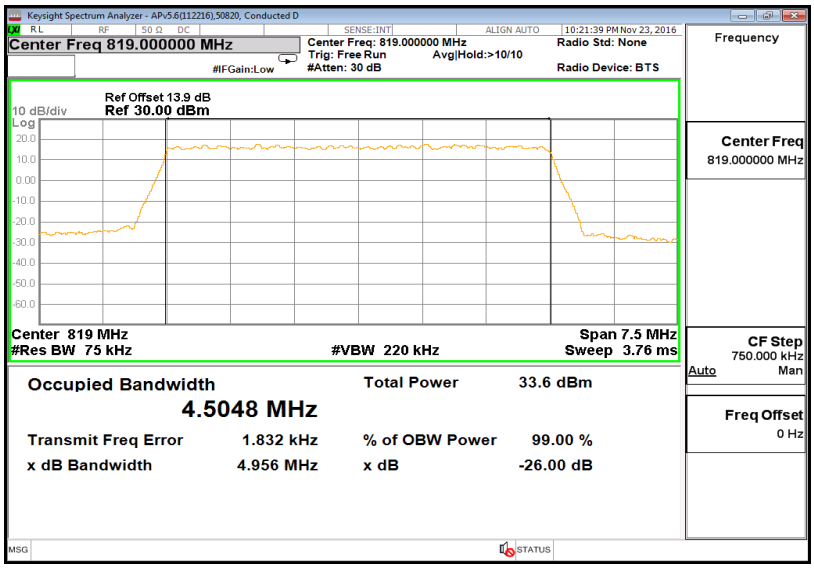
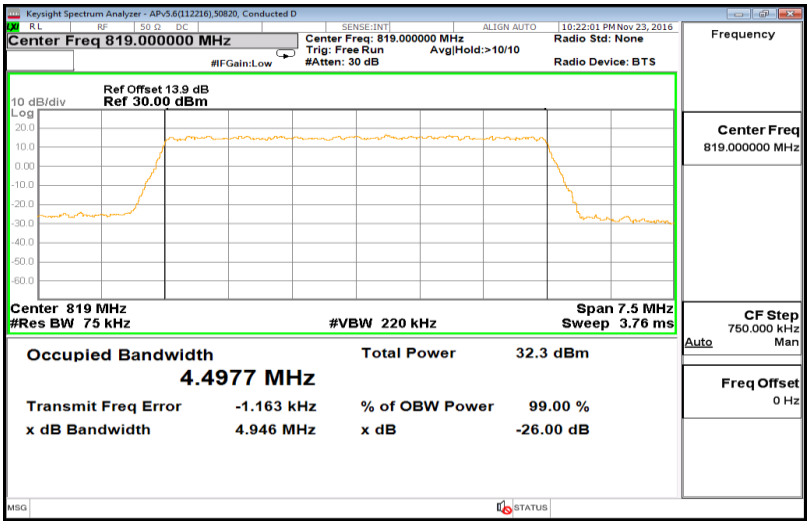
QPSK, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



16QAM, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



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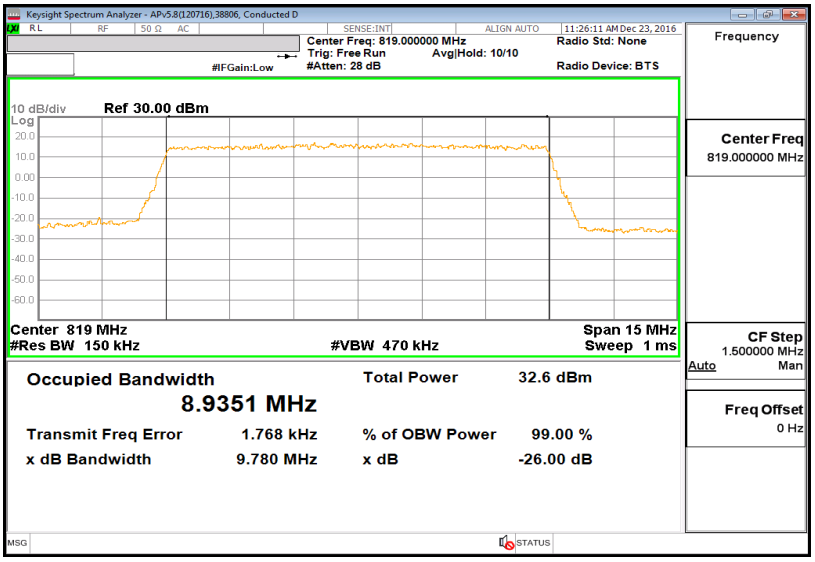
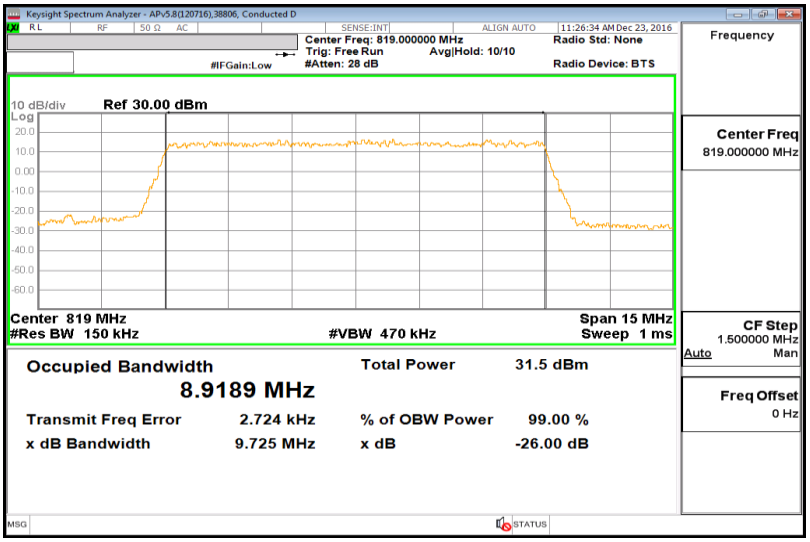
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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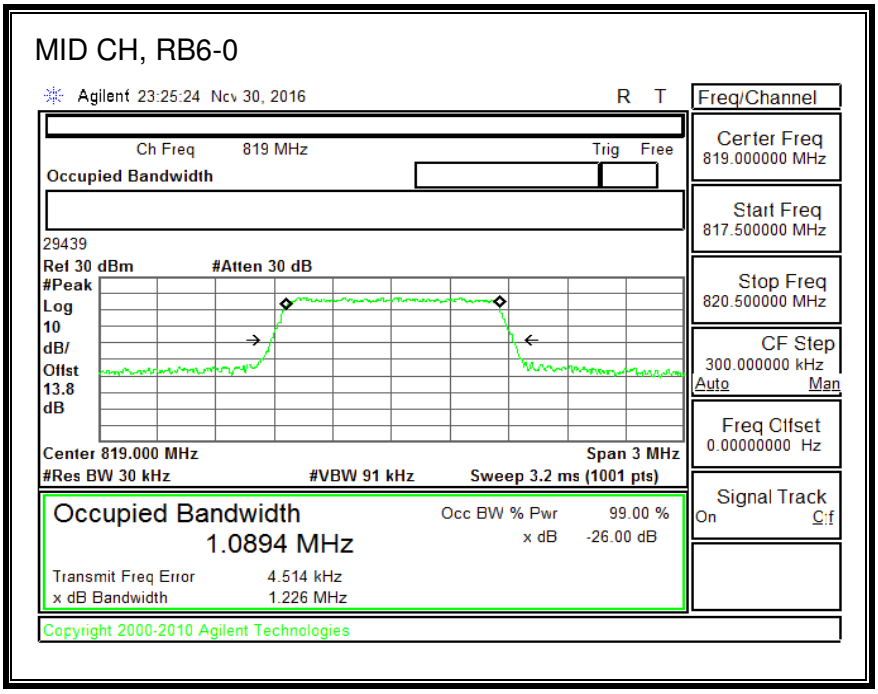
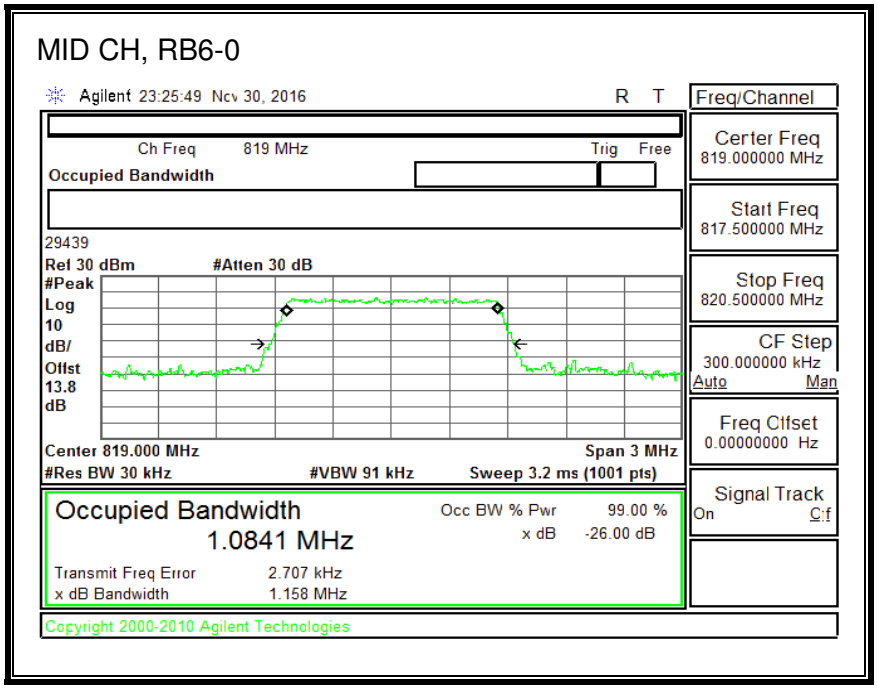
8.1.10. LTE BAND 27

QPSK, (1.4 MHz BAND WIDTH)



16QAM, (1.4 MHz BAND WIDTH)



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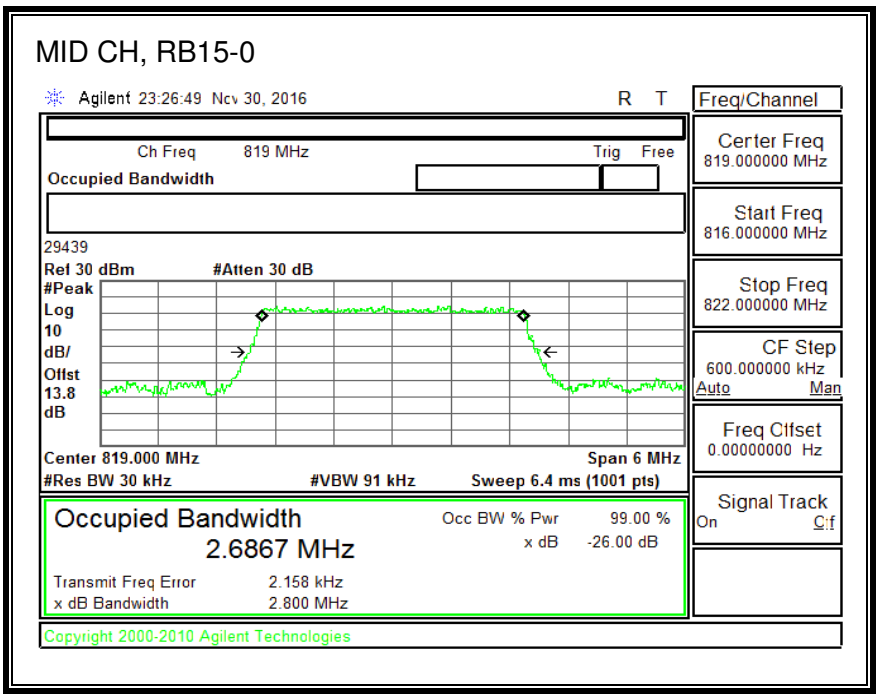
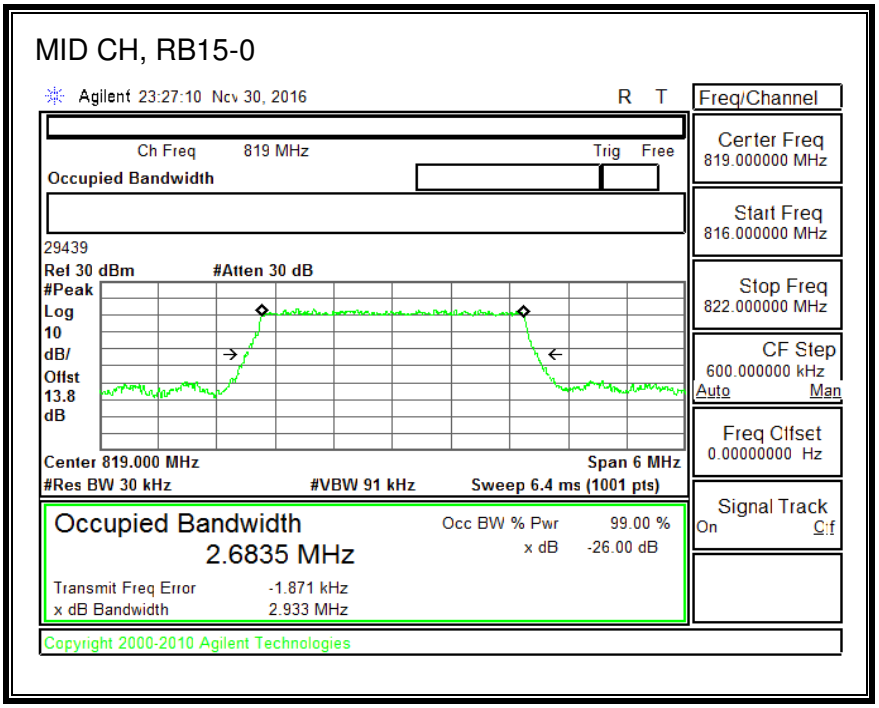
QPSK, (3.0 MHz BAND WIDTH)



16QAM, (3.0 MHz BAND WIDTH)



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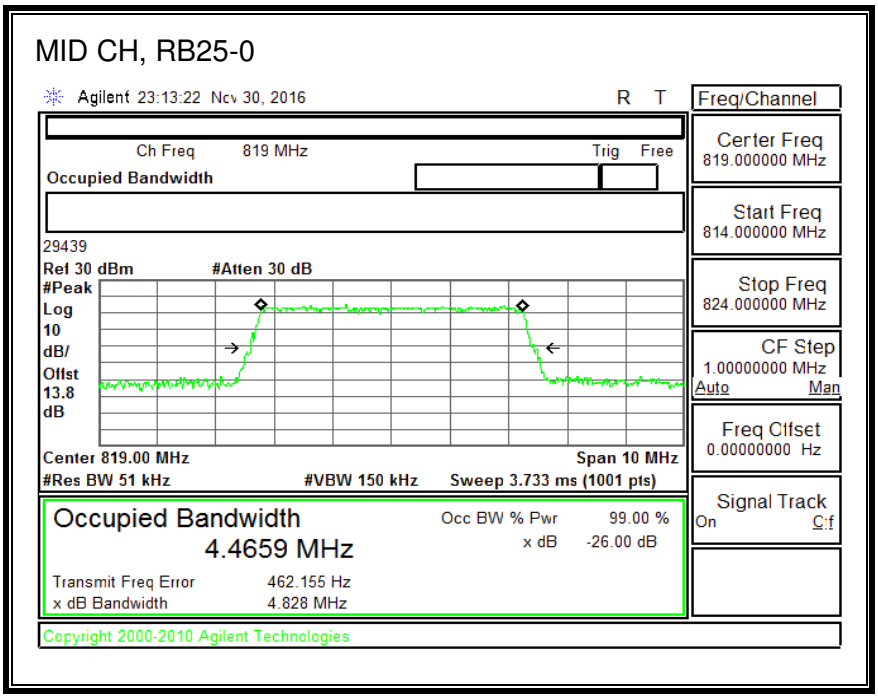
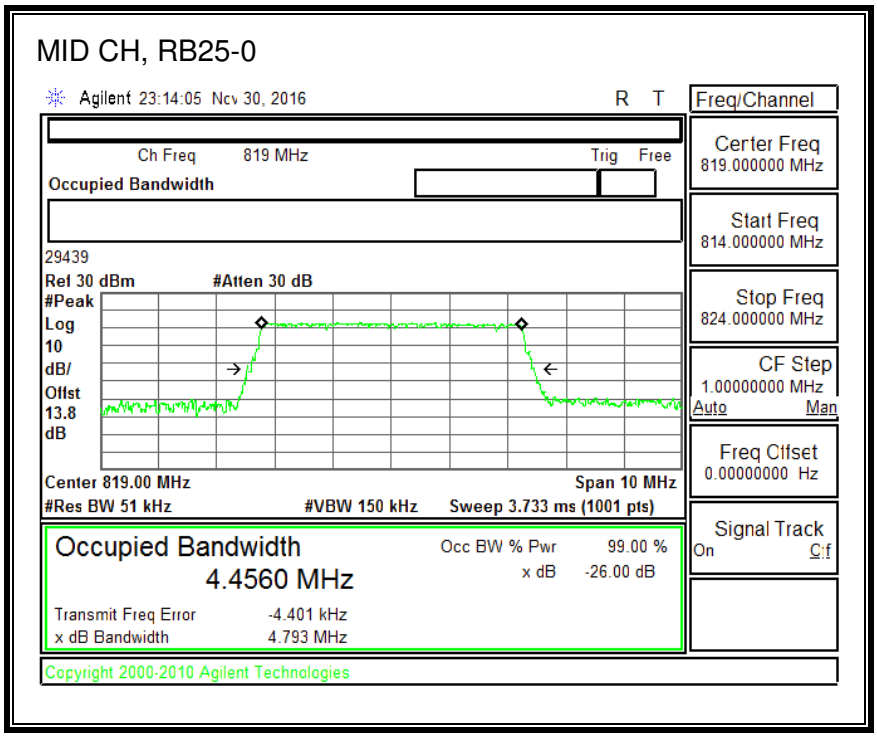
QPSK, (5.0 MHz BAND WIDTH)



16QAM, (5.0 MHz BAND WIDTH)



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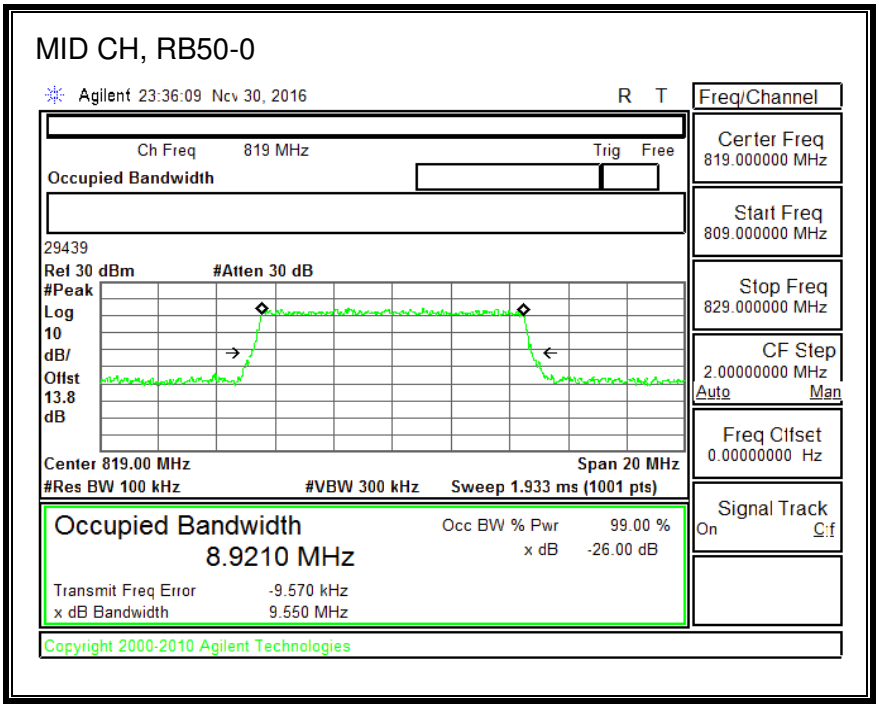
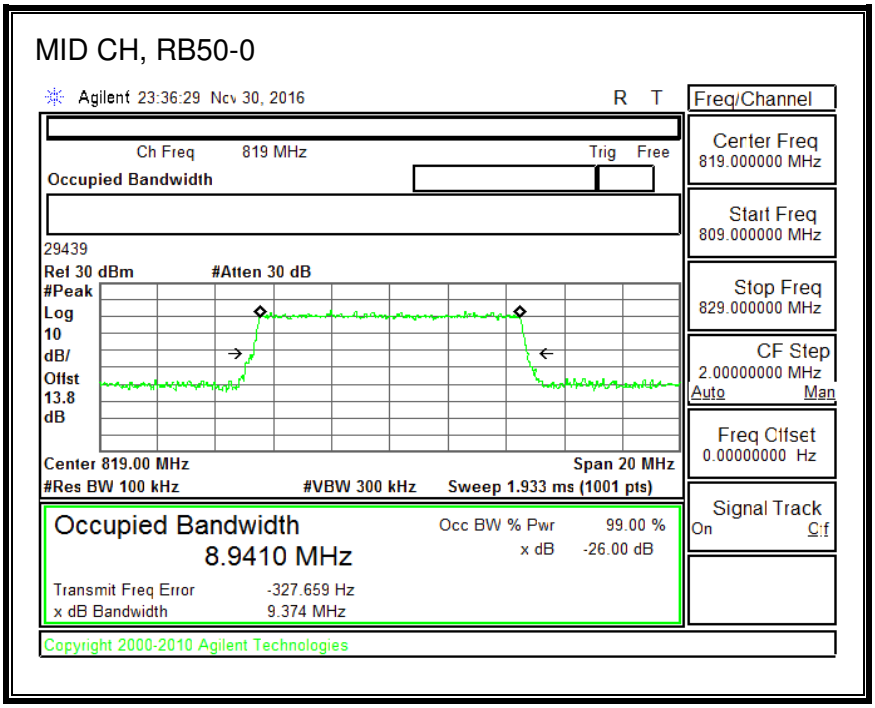
QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



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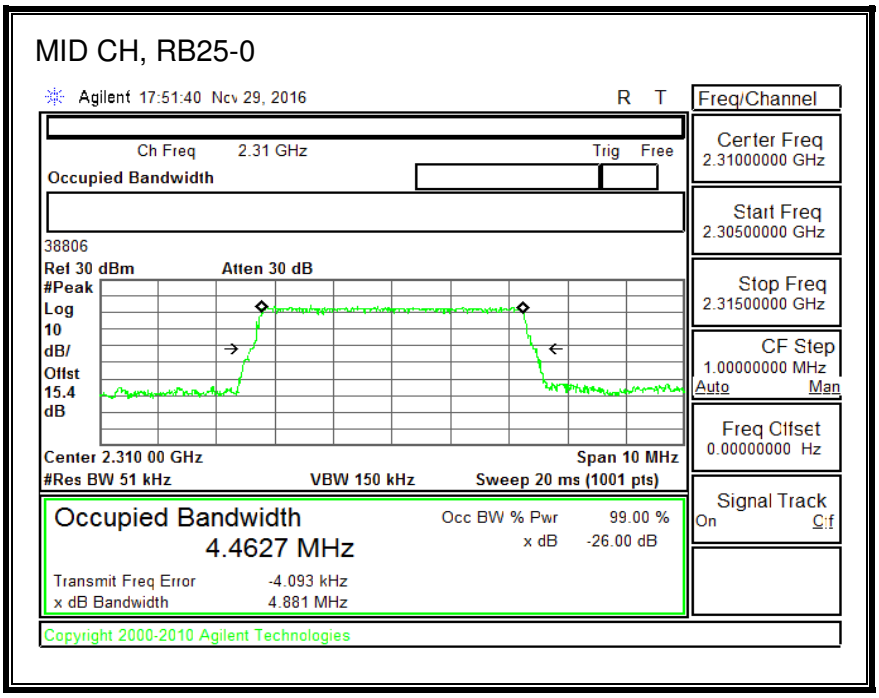
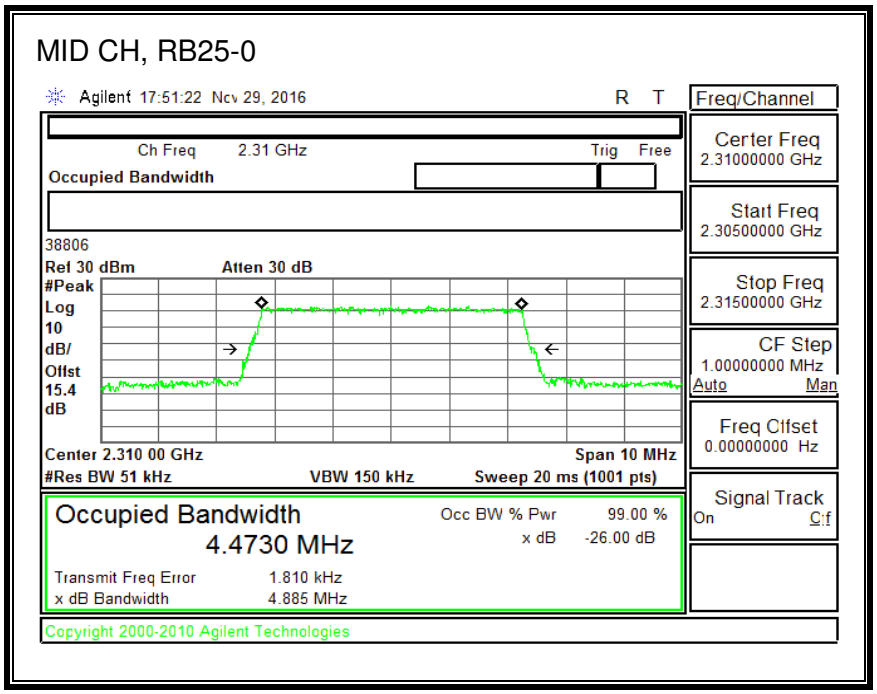
8.1.11. LTE BAND 30

QPSK, (5.0 MHz BAND WIDTH)



16QAM, (5.0 MHz BAND WIDTH)



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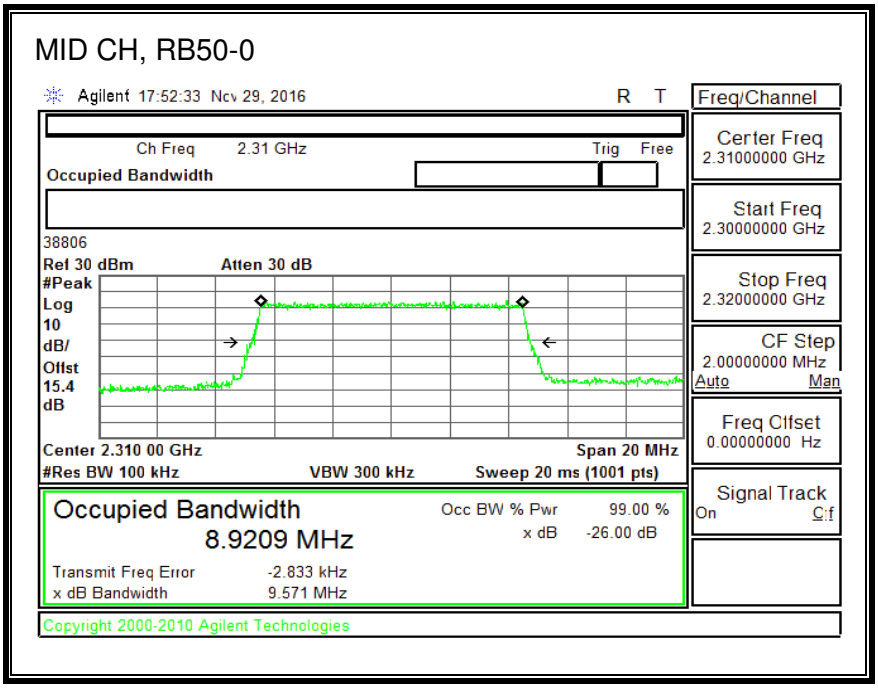
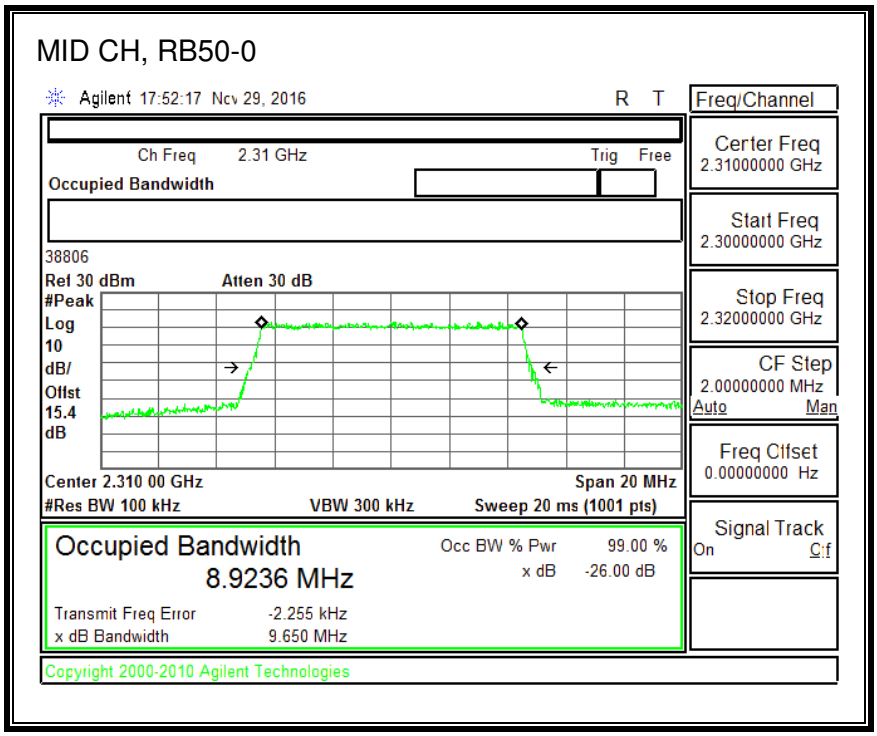
QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



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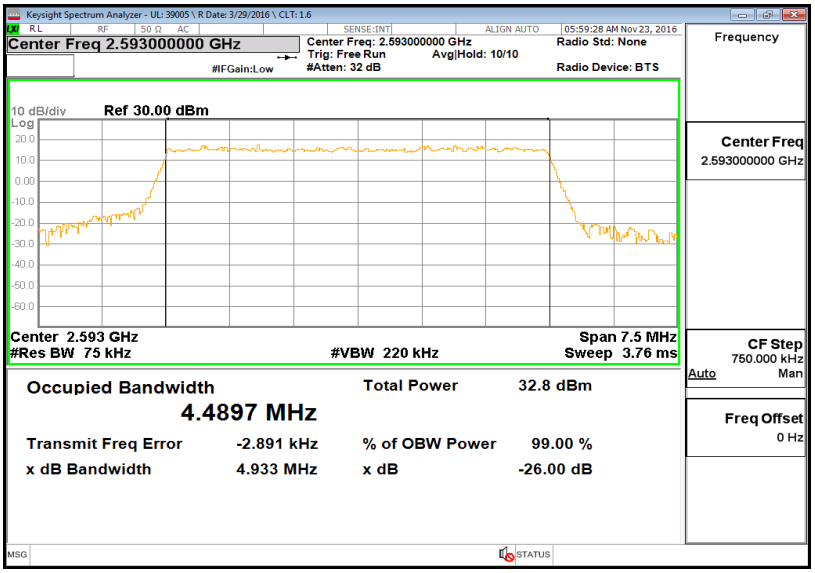
8.1.12. LTE BAND 41

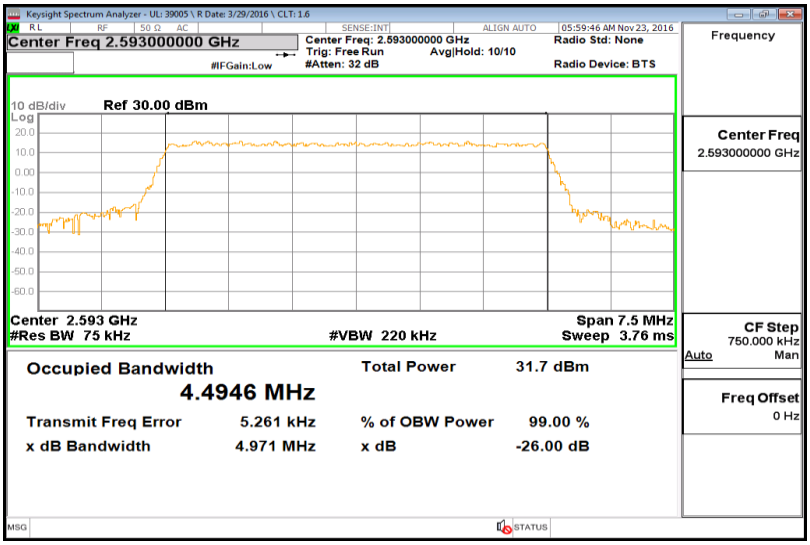
QPSK, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



16QAM, (5.0 MHz BAND WIDTH)

MID CH, RB25-0



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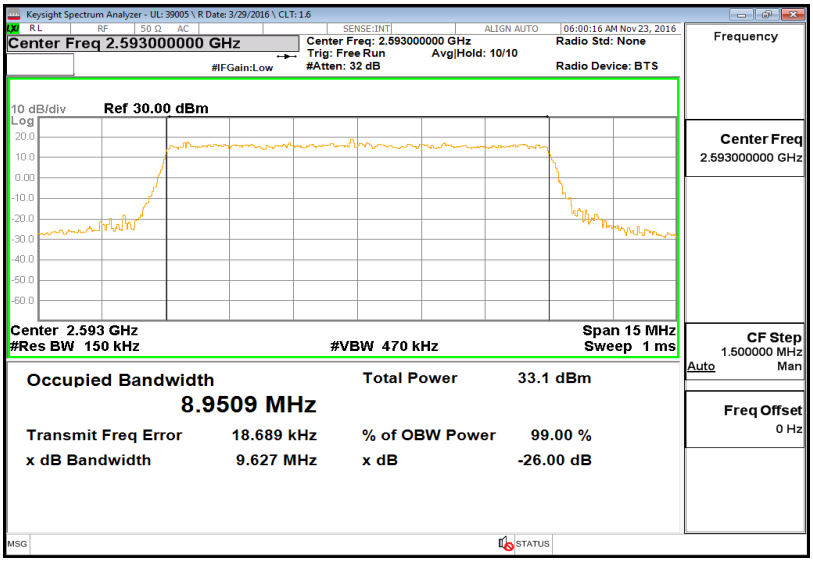
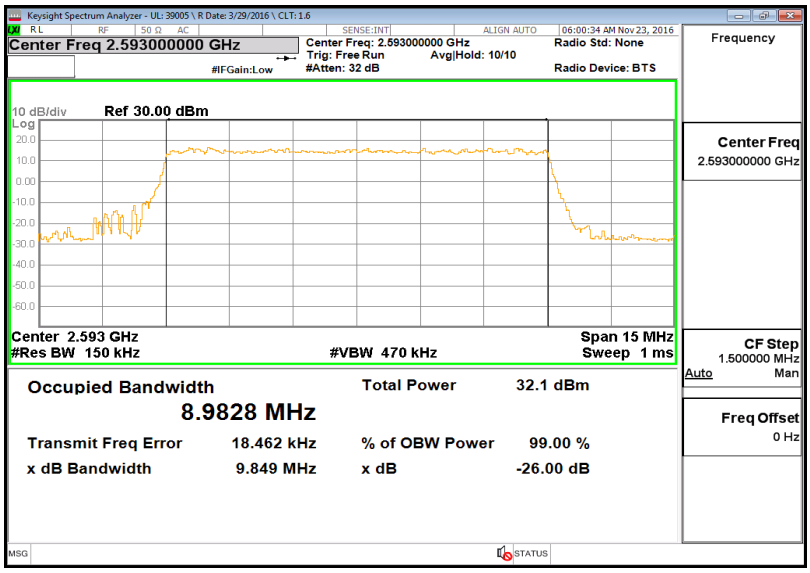
QPSK, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



16QAM, (10.0 MHz BAND WIDTH)

MID CH, RB50-0



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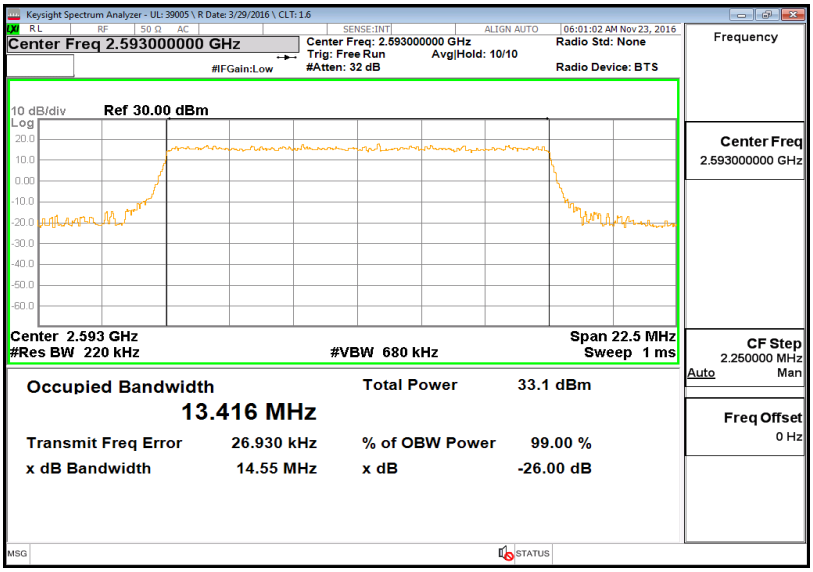
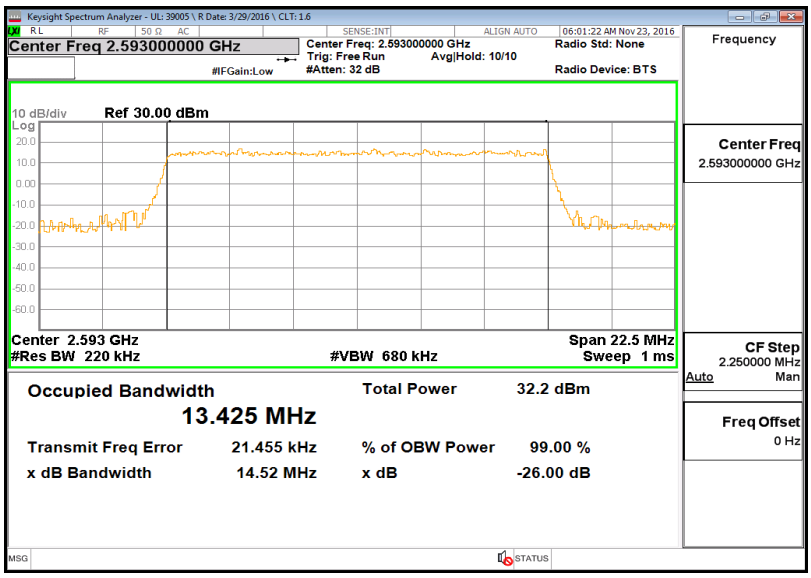
QPSK, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



16QAM, (15.0 MHz BAND WIDTH)

MID CH, RB75-0



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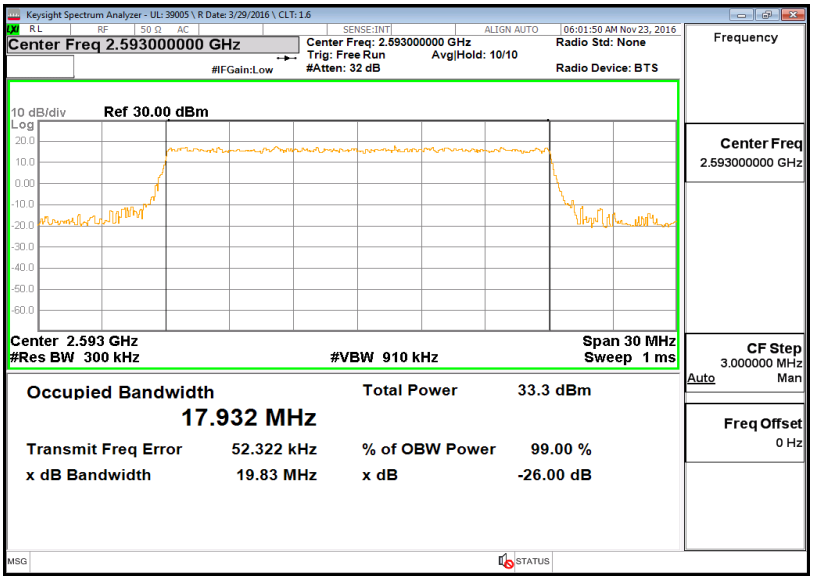
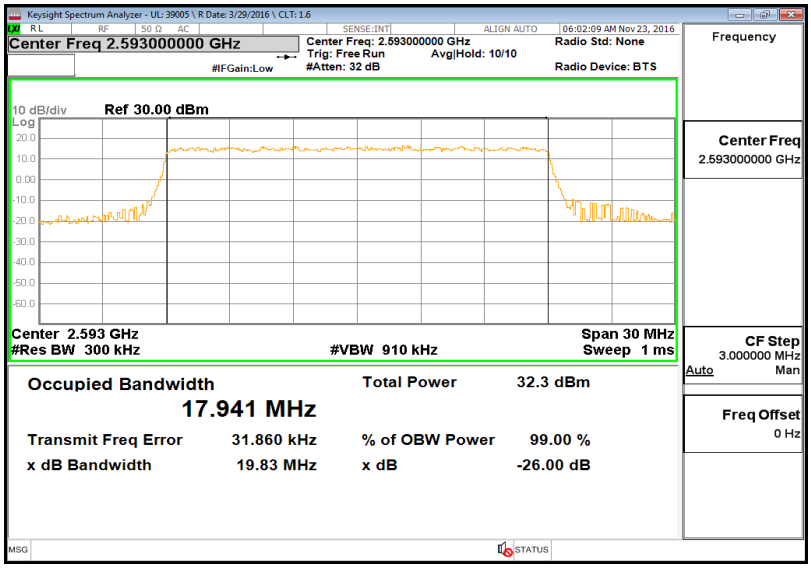
QPSK, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



16QAM, (20.0 MHz BAND WIDTH)

MID CH, RB100-0



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8.2. BANDEDGE AND EMISSION MASK

RULE PART(S)

FCC: §2.1051, §22.359, §22.917, §24.238, §27.53, and §90.691

LIMITS

FCC: §22.359, §22.917, §24.238, §27.53
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.

FCC: §90.210, and §90.691 (LTE BAND 26)
(a)(1)For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10 (f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
(a)(2)For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

FCC: §27.53
(c) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;
(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

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FCC: §27.53 (LTE BAND 41)
(m)(6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

(m)(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 that 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.Show citation box.

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TEST PROCEDURE

The transmitter output was connected to a CMW500Test 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:

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

MODES TESTED

- LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 27
- LTE Band 30
- LTE Band 41

RESULTS

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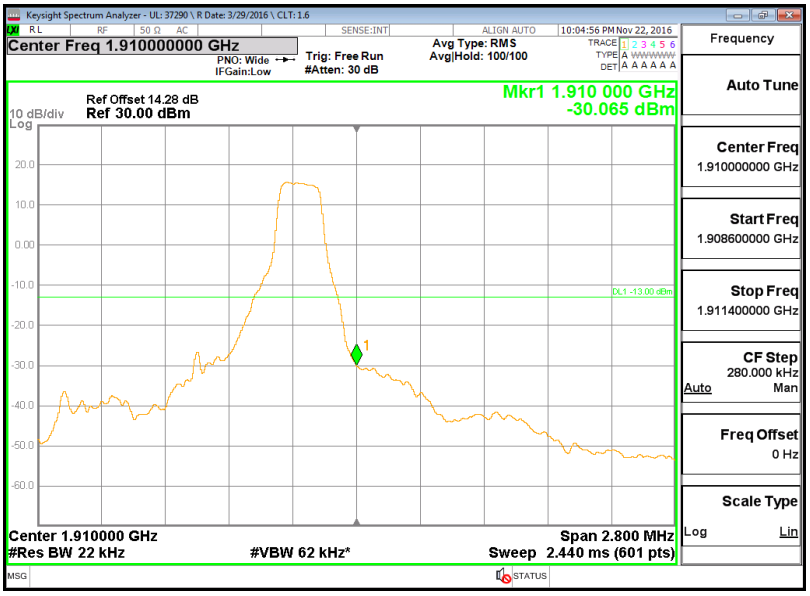
8.2.1. LTE BAND 2 BANDEDGE

QPSK, (1.4 MHz BAND WIDTH)

LOW CH, RB1-0

HIGH CH, RB1-5



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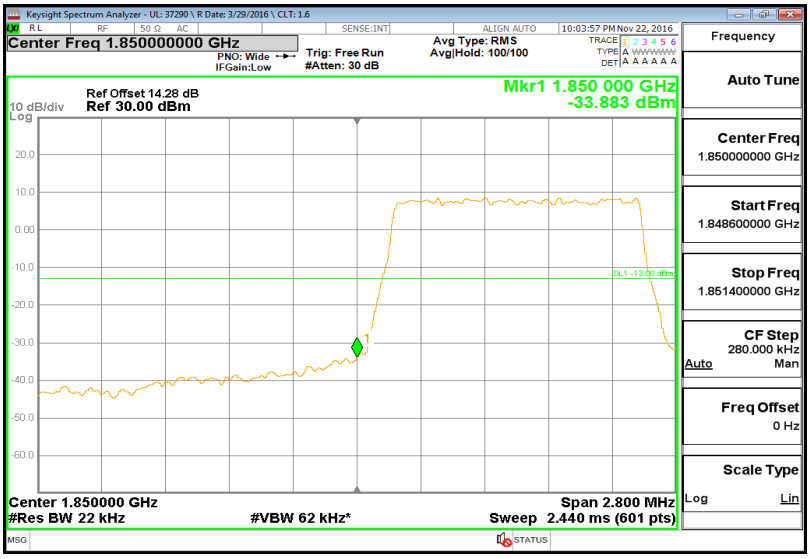
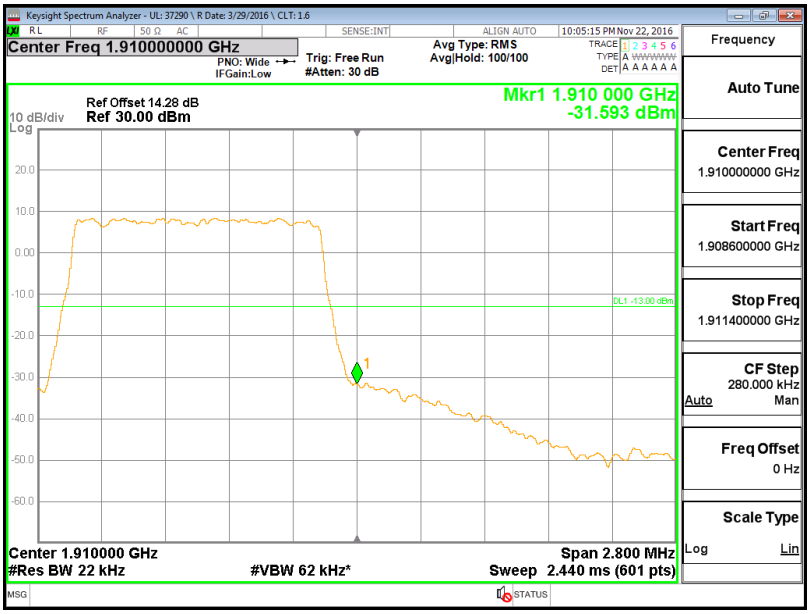
LOW CH, RB6-0



HIGH CH, RB6-0



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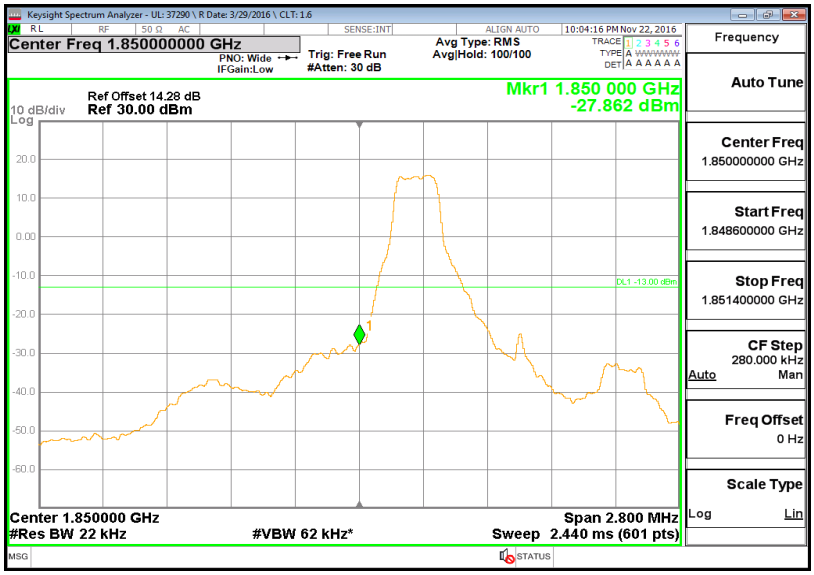
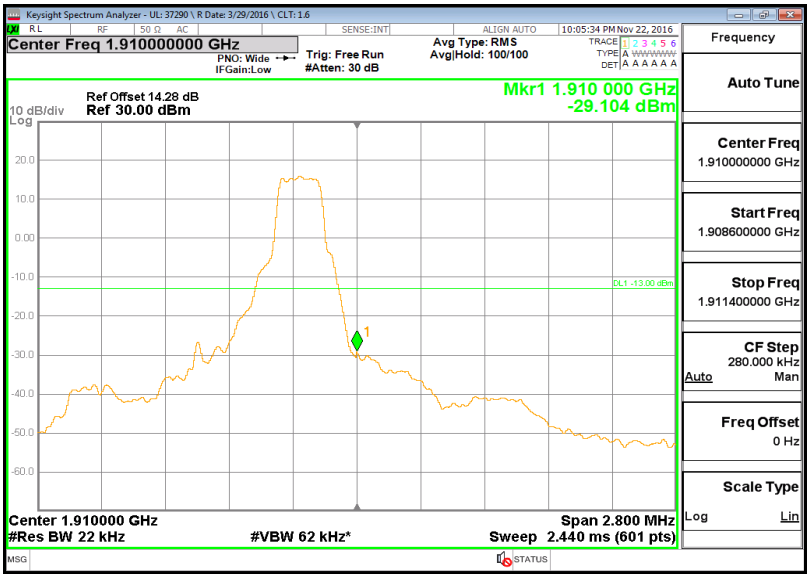
16QAM, (1.4 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-5



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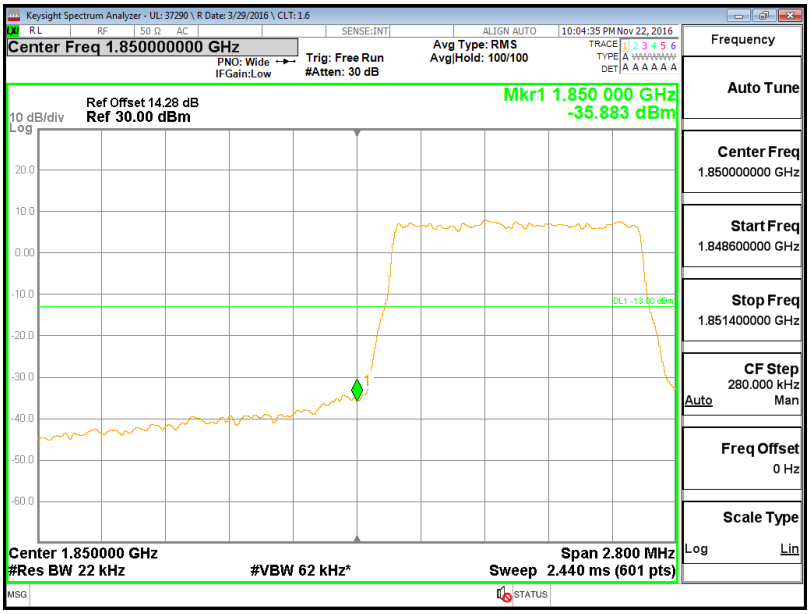
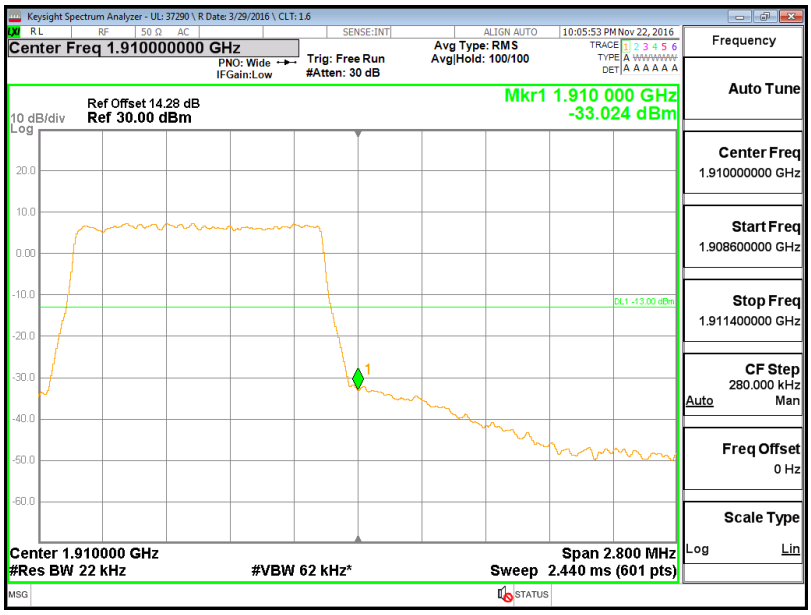
LOW CH, RB6-0



HIGH CH, RB6-0



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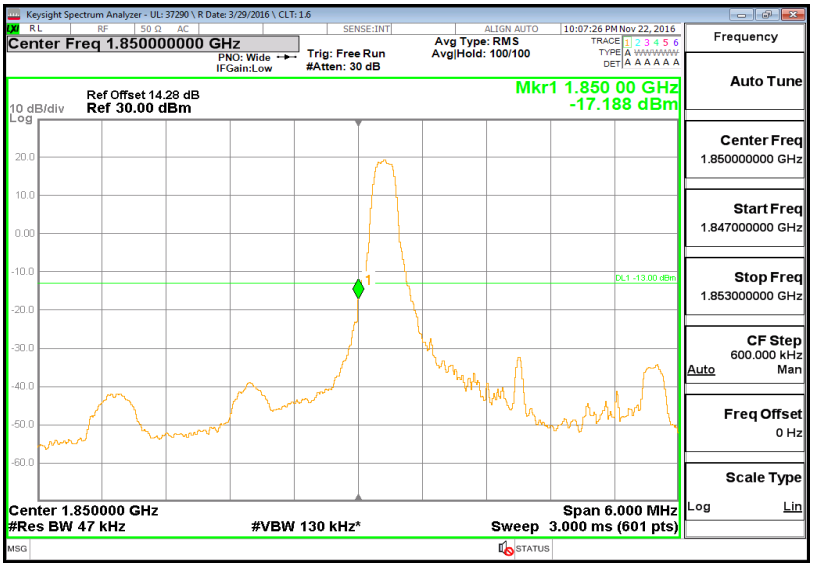
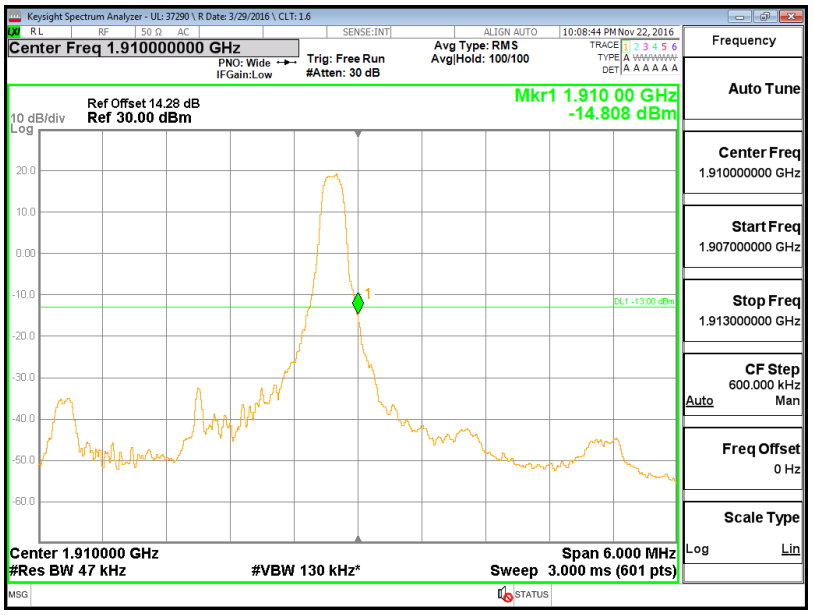
QPSK, (3.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-14



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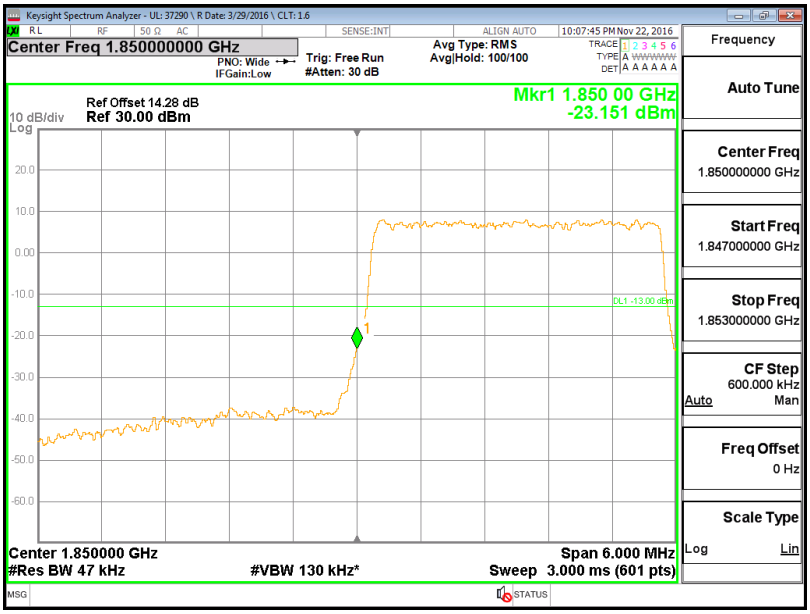
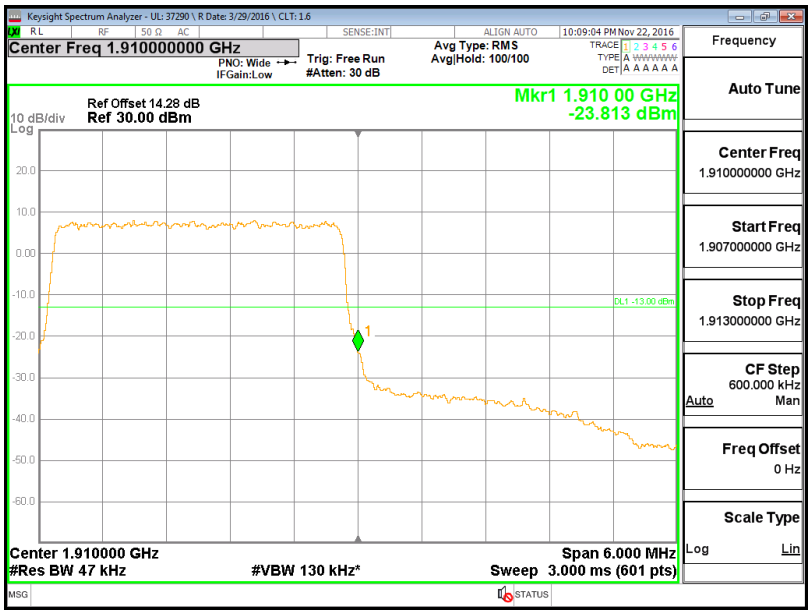
LOW CH, RB15-0



HIGH CH, RB15-0



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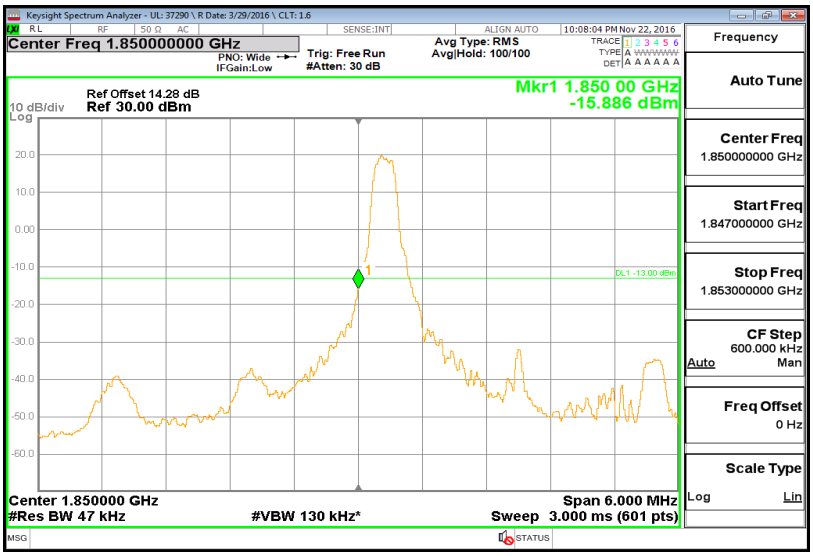
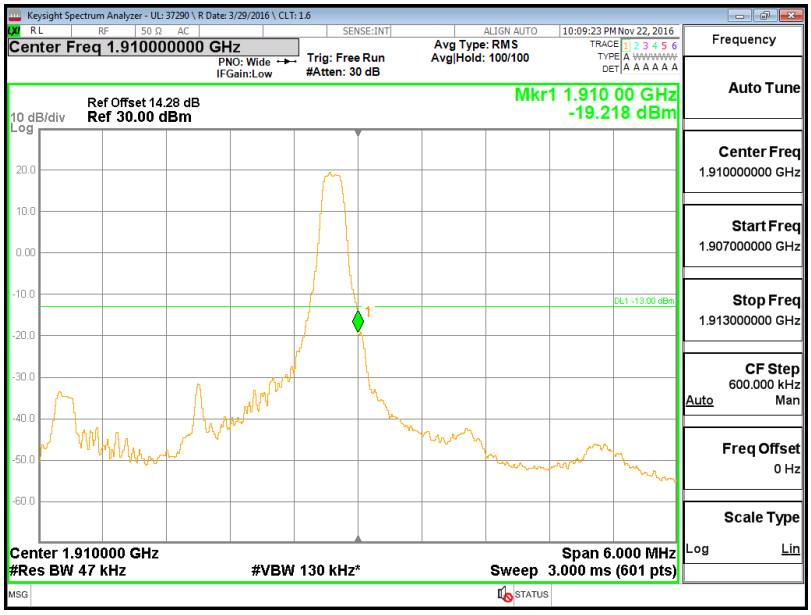
16QAM, (3.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-14



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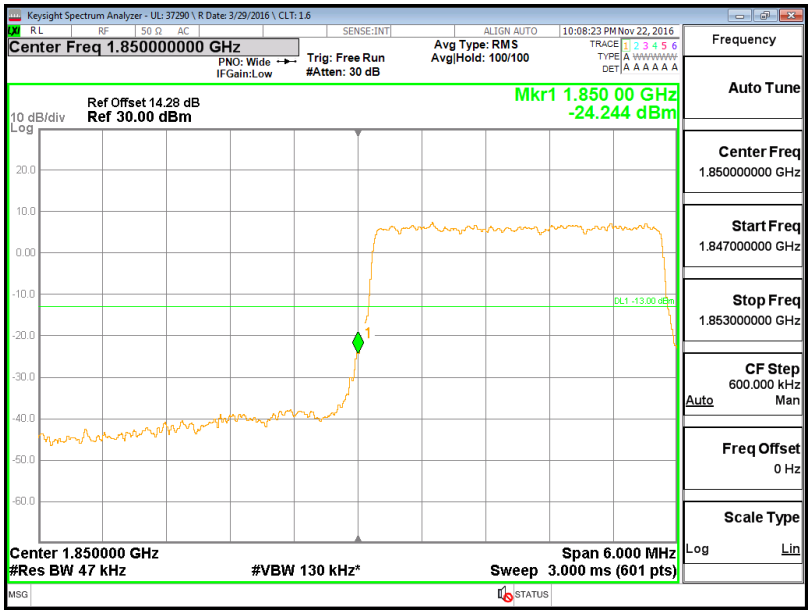
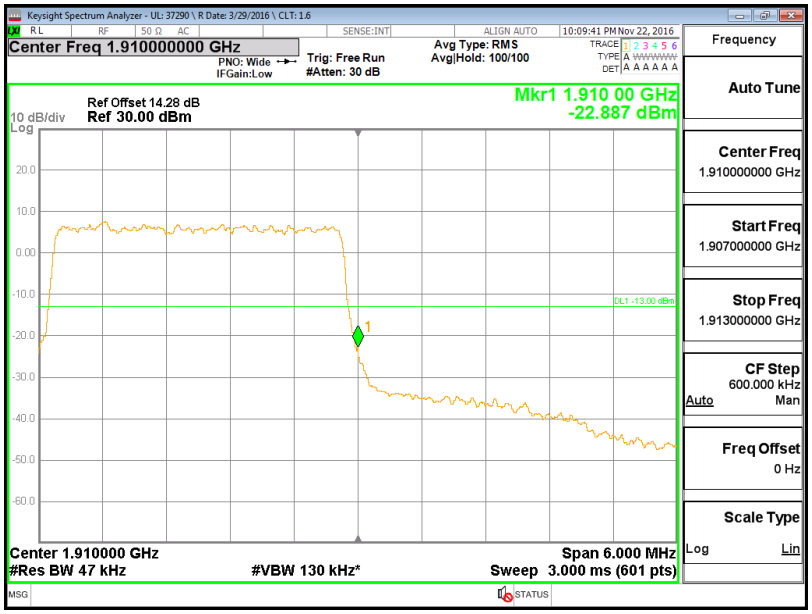
LOW CH, RB15-0



HIGH CH, RB15-0



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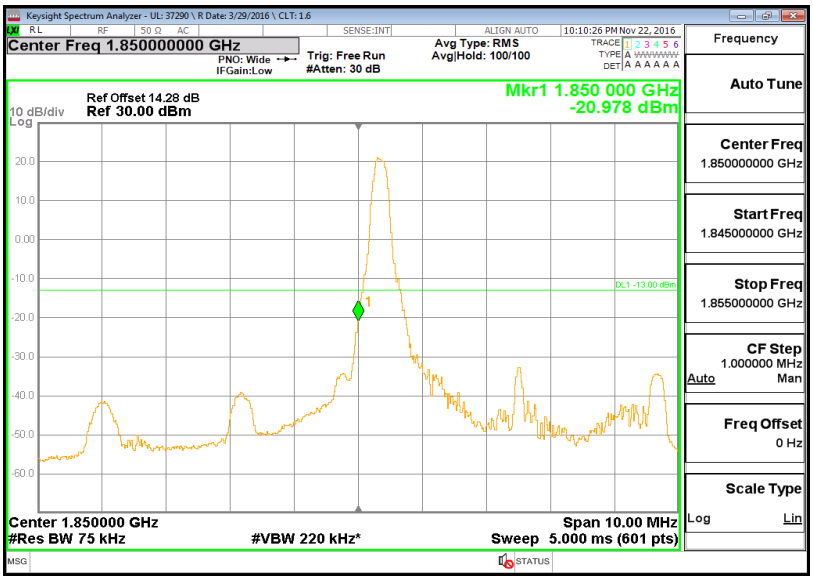
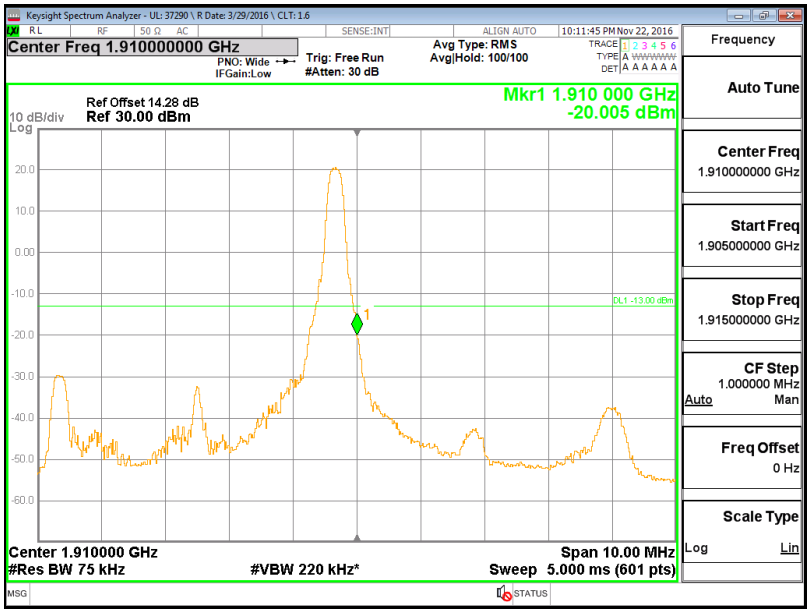
QPSK, (5.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-24



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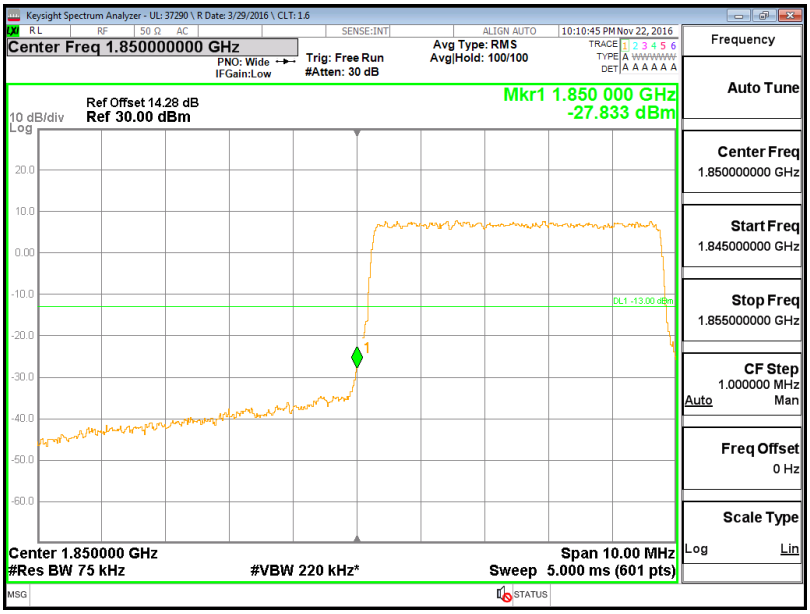
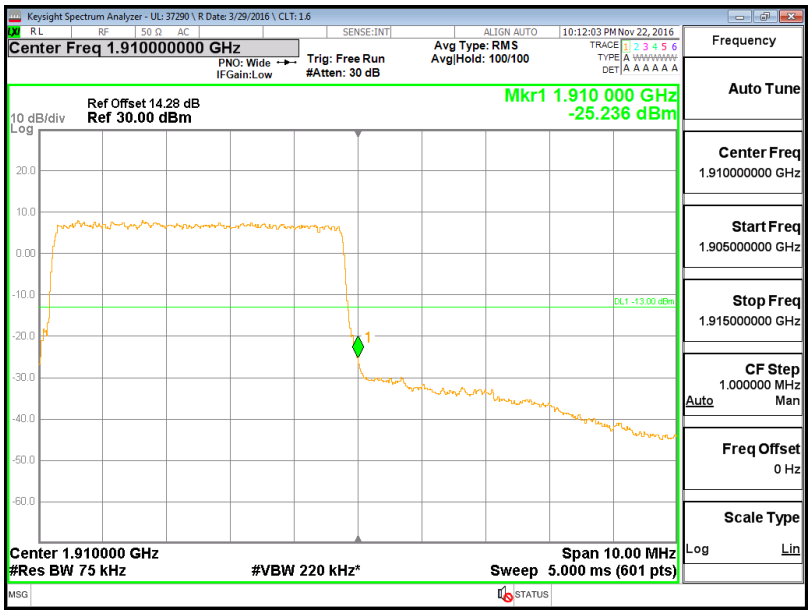
LOW CH, RB25-0



HIGH CH, RB25-0



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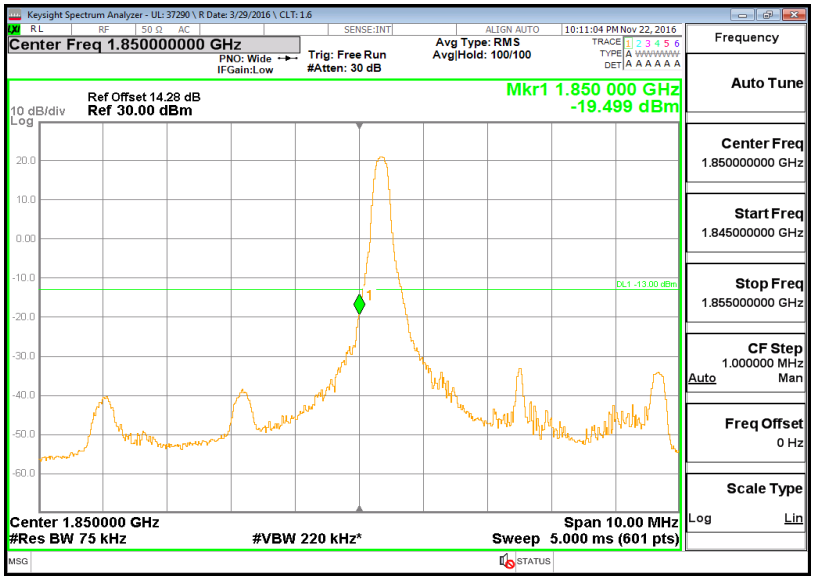
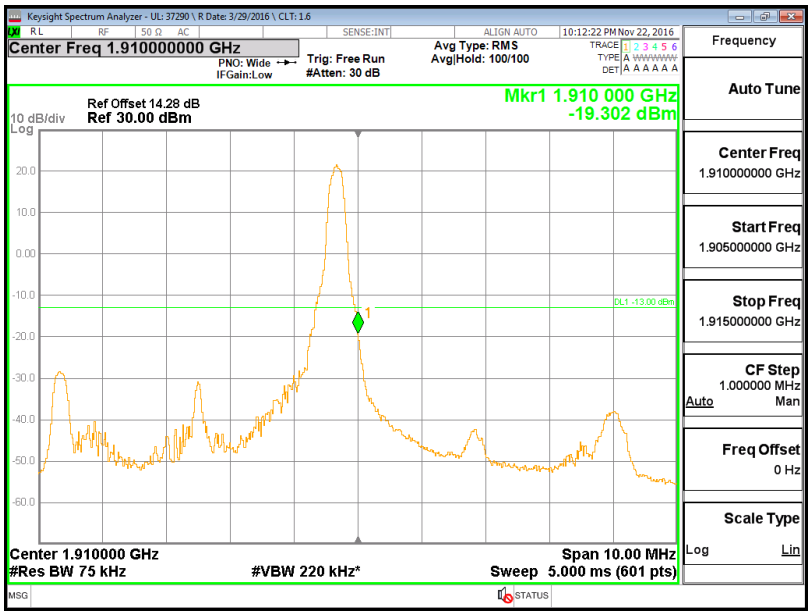
16QAM, (5.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-24



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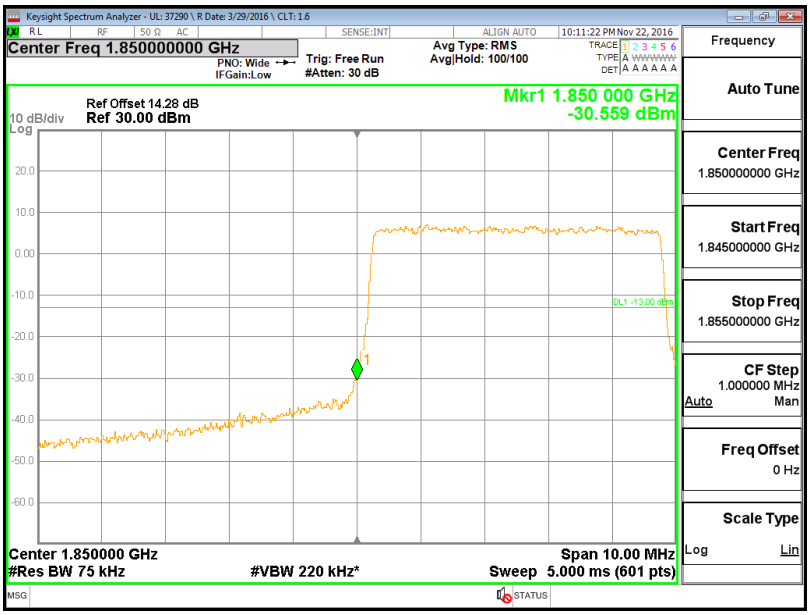
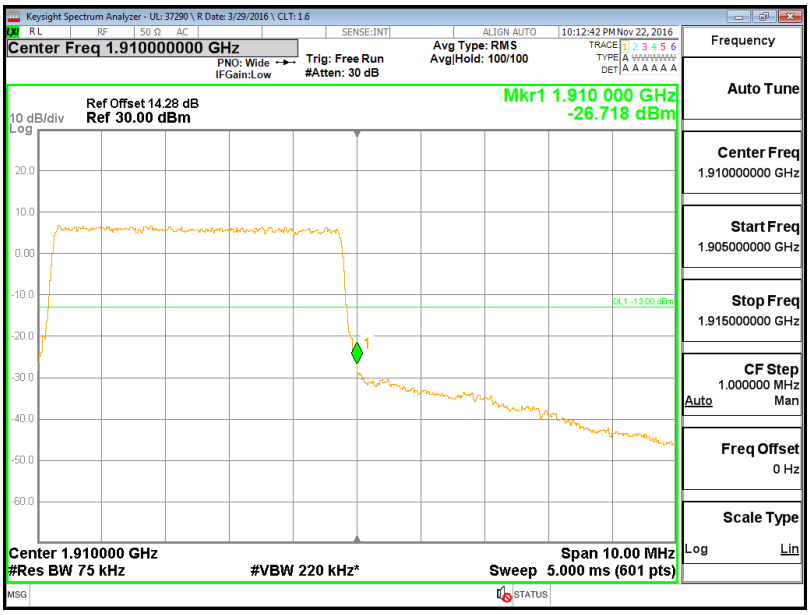
LOW CH, RB25-0



HIGH CH, RB25-0



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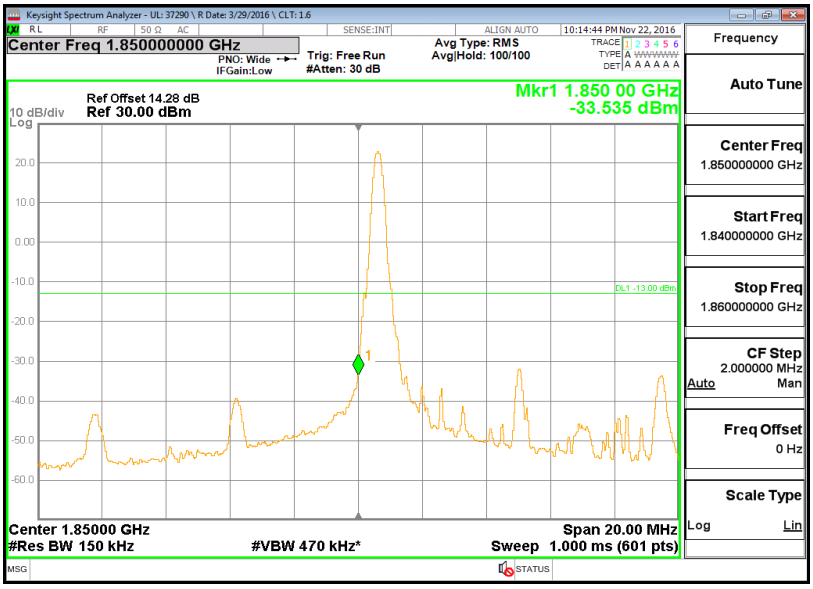
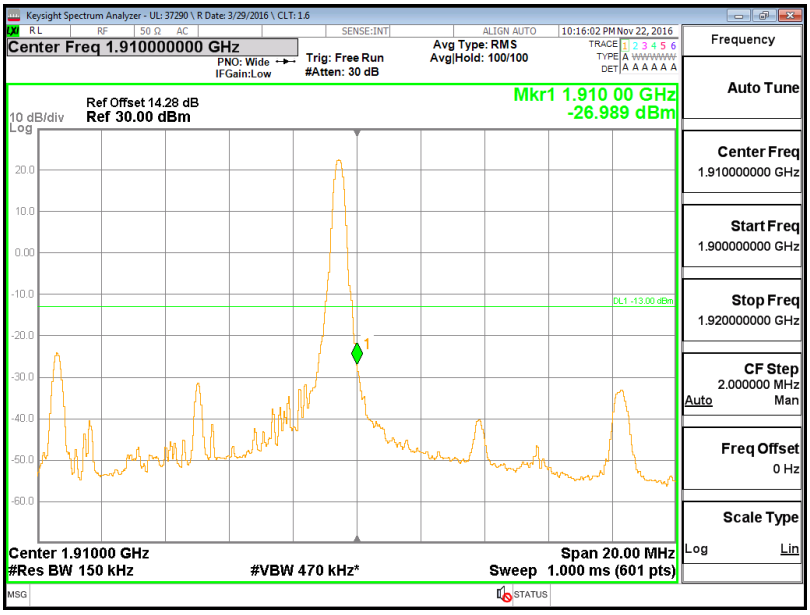
QPSK, (10.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-49



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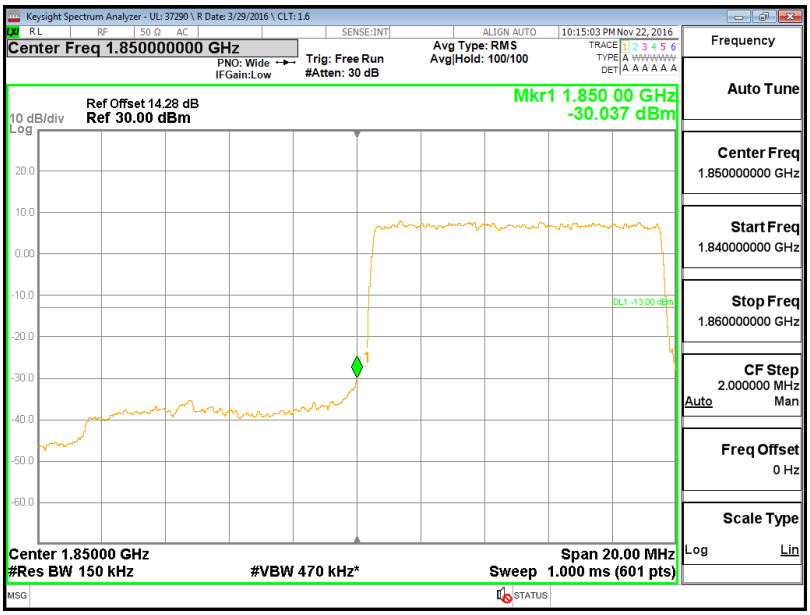
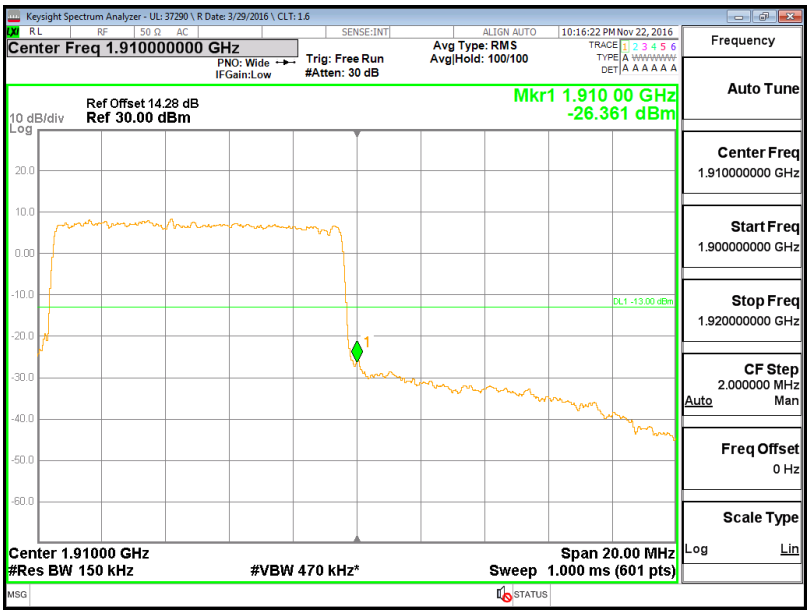
LOW CH, RB50-0



HIGH CH, RB50-0



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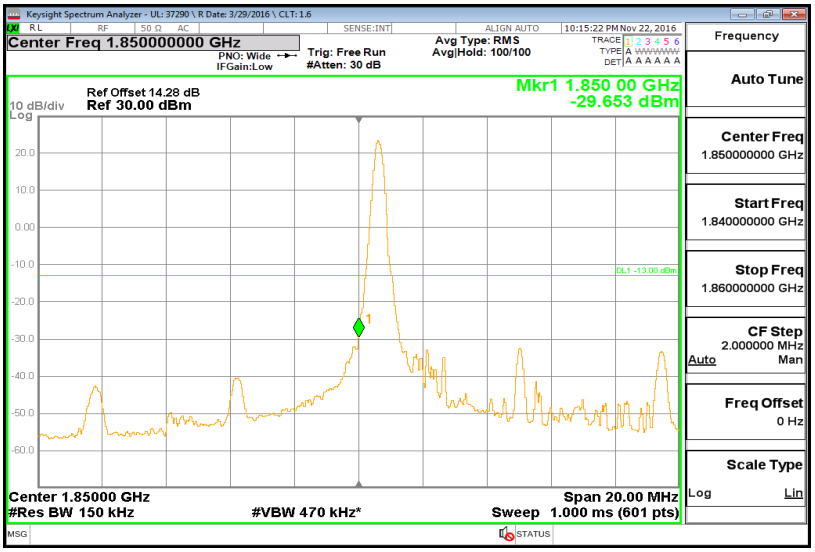
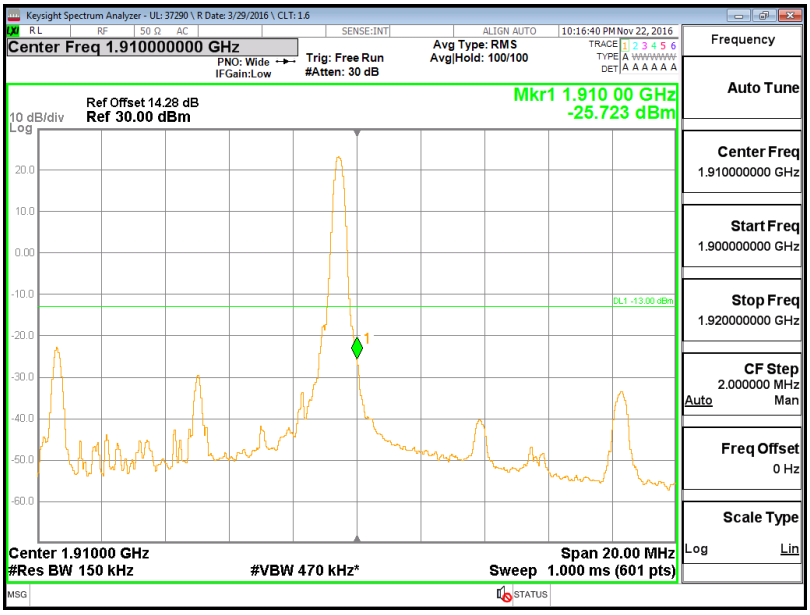
16QAM, (10.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-49



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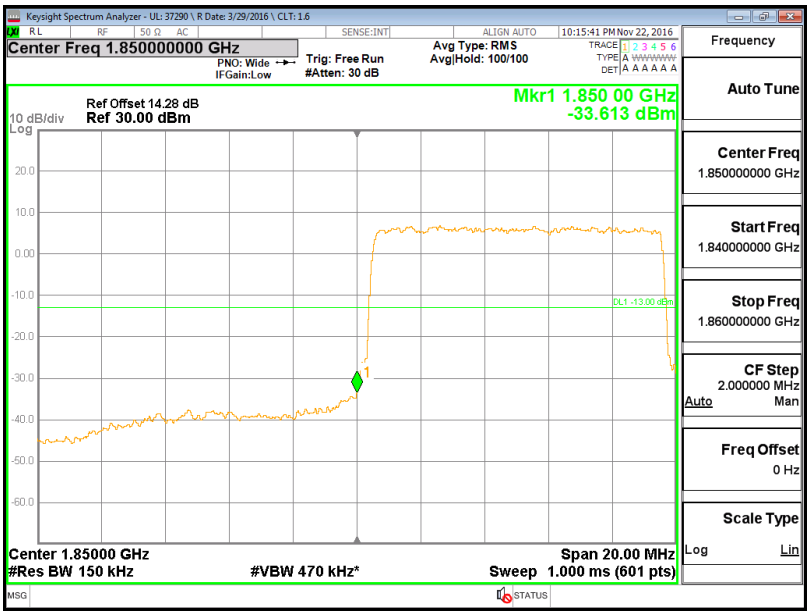
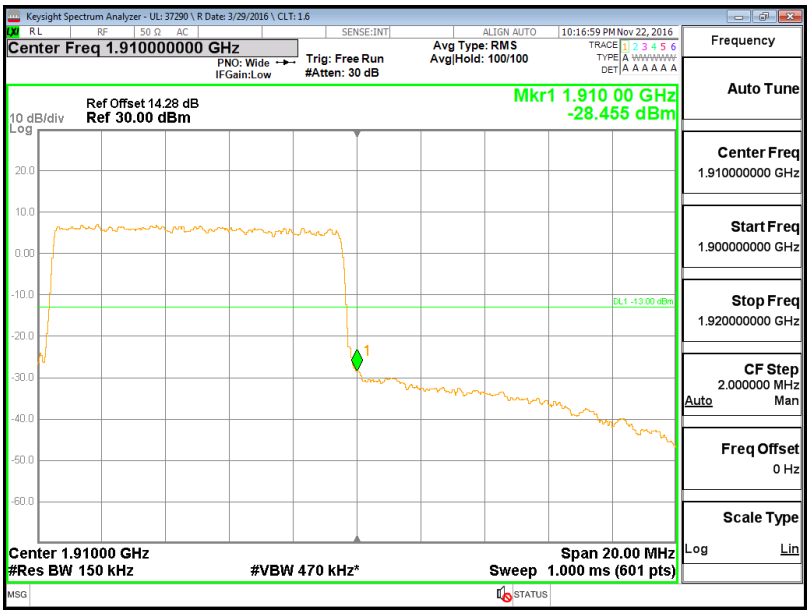
LOW CH, RB50-0



HIGH CH, RB50-0



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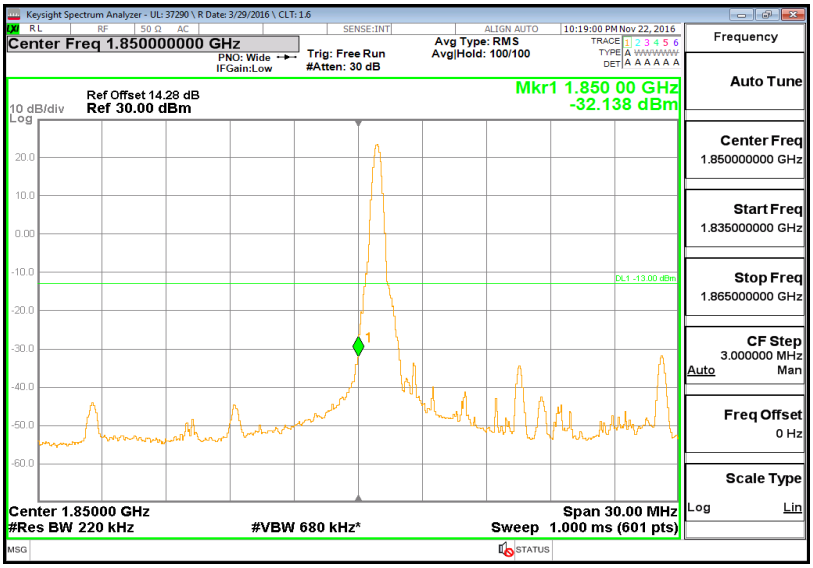
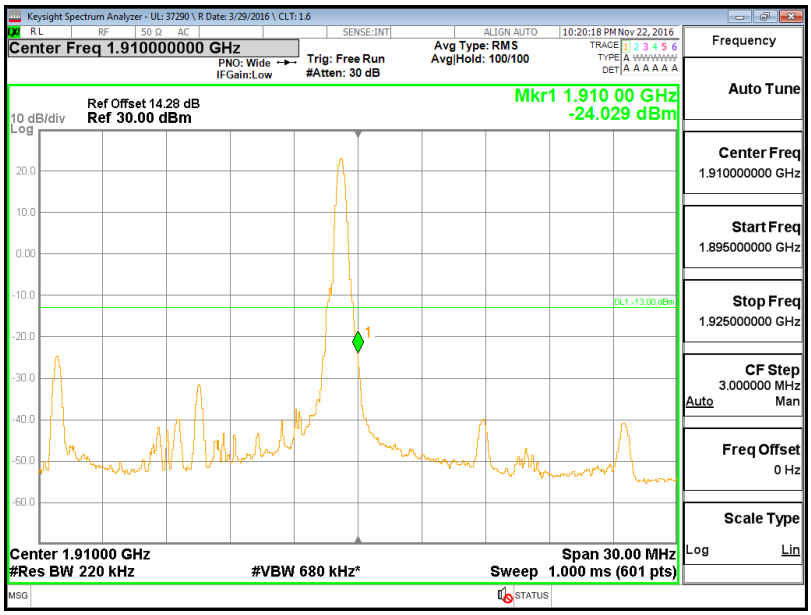
QPSK, (15.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-74



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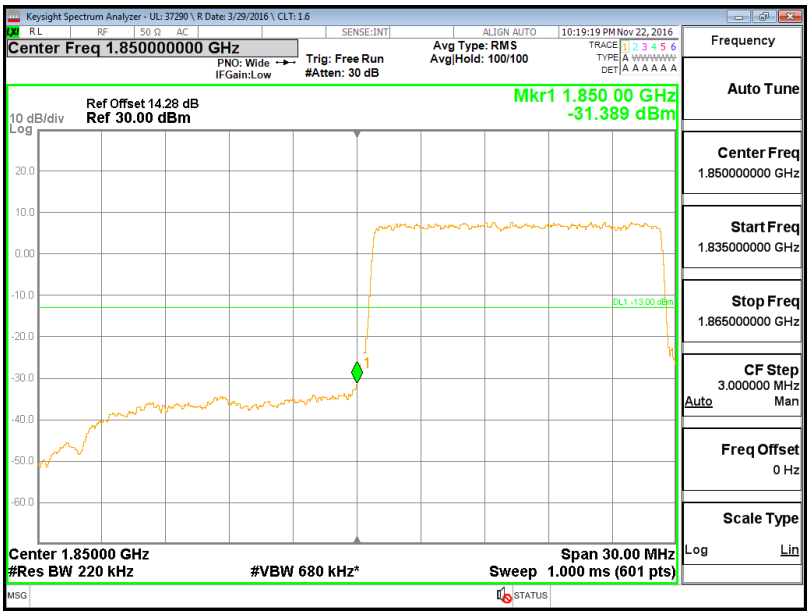
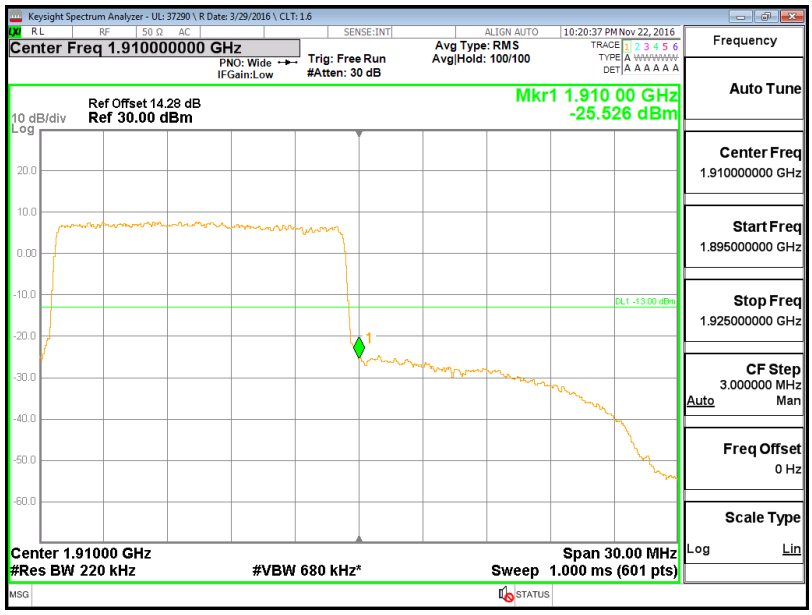
LOW CH, RB75-0



HIGH CH, RB75-0



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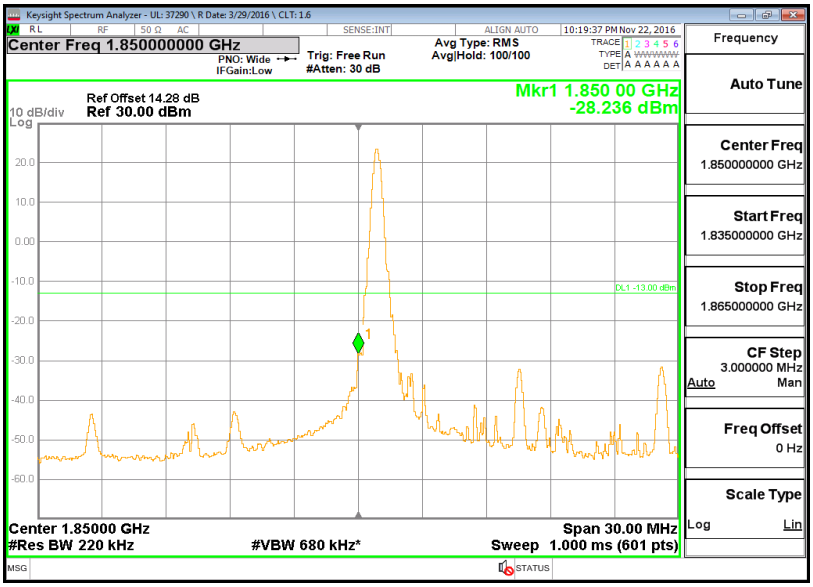
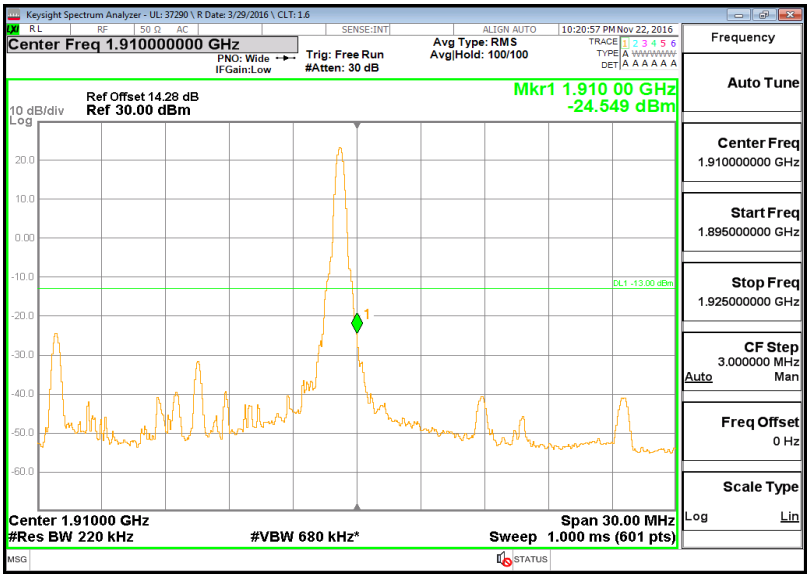
16QAM, (15.0 MHz BAND WIDTH)

LOW CH, RB1-0



HIGH CH, RB1-74



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