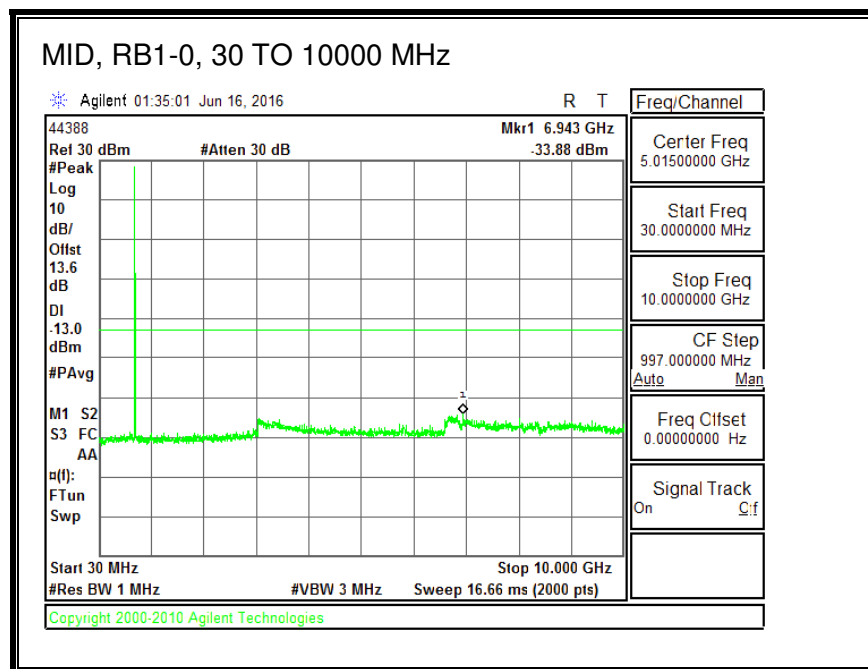
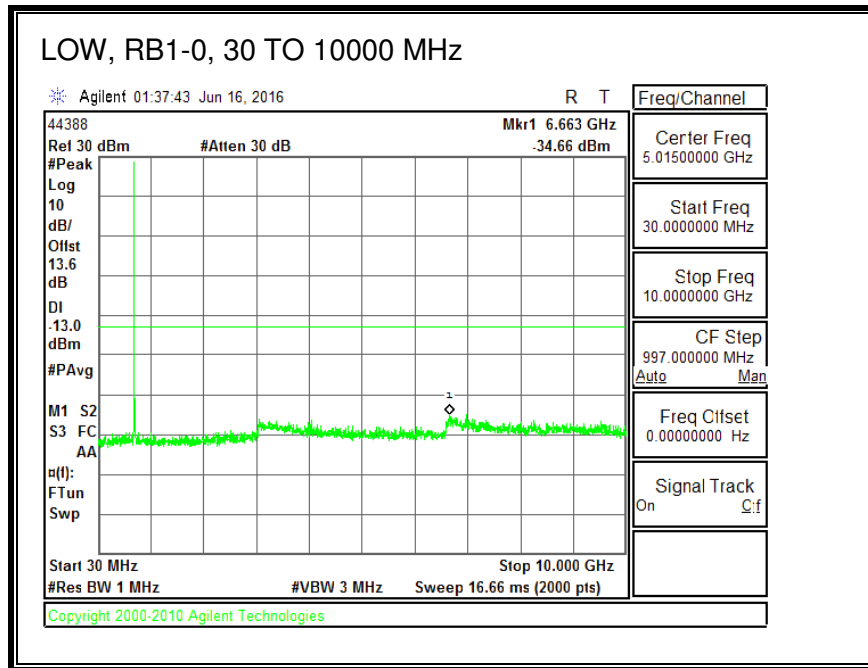
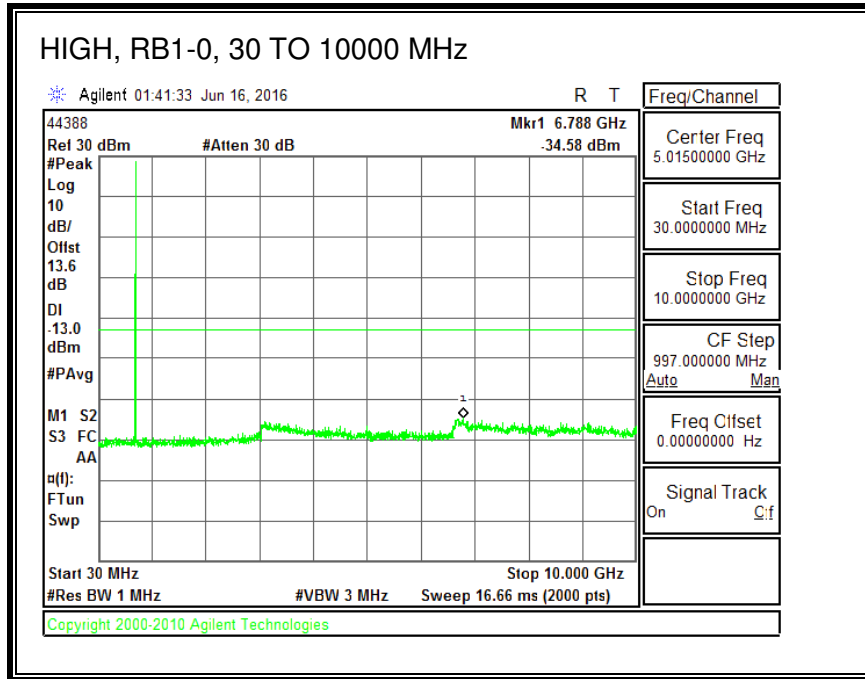


8.3.5. LTE BAND 12

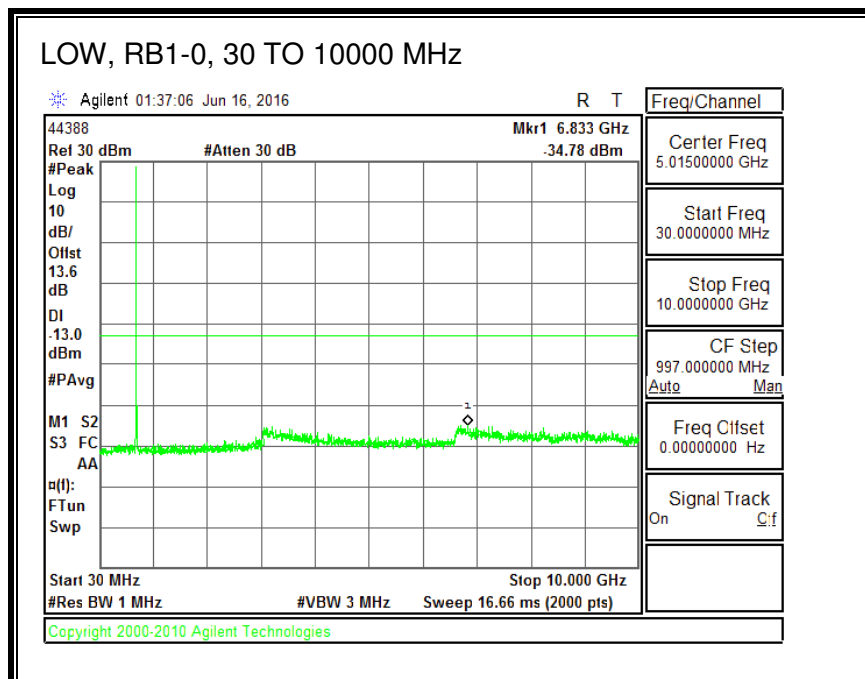
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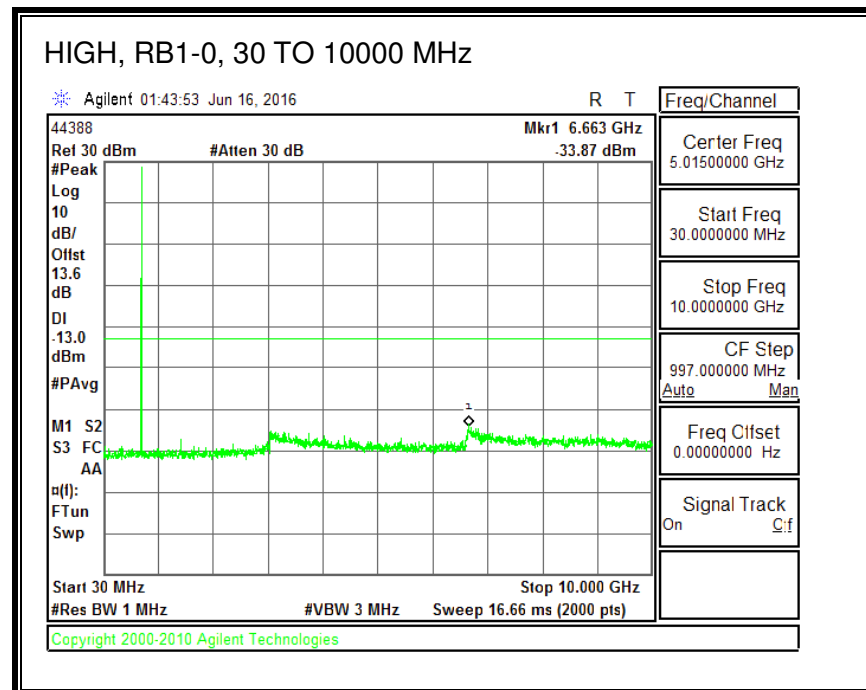
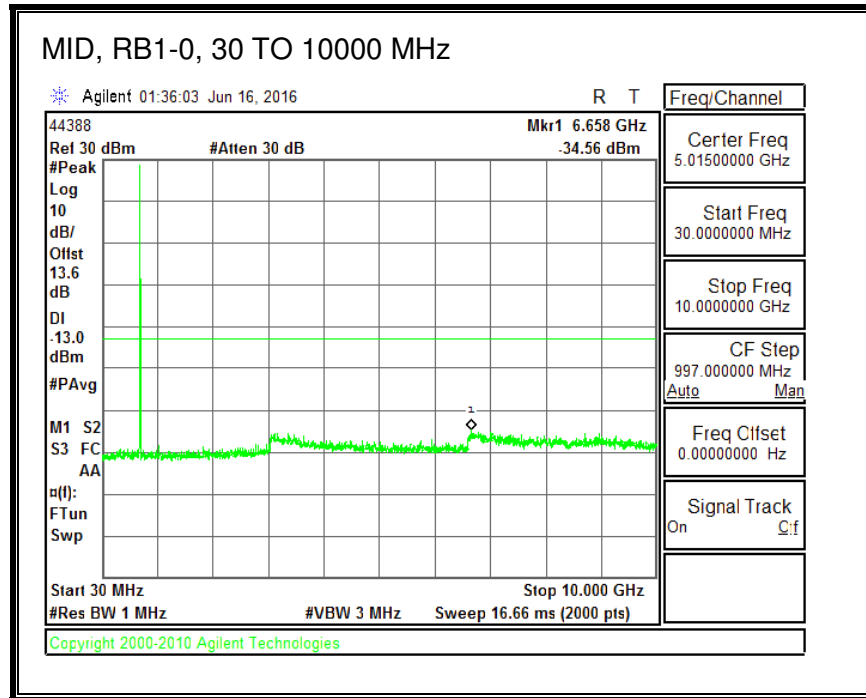
QPSK, (1.4 MHz BAND WIDTH)



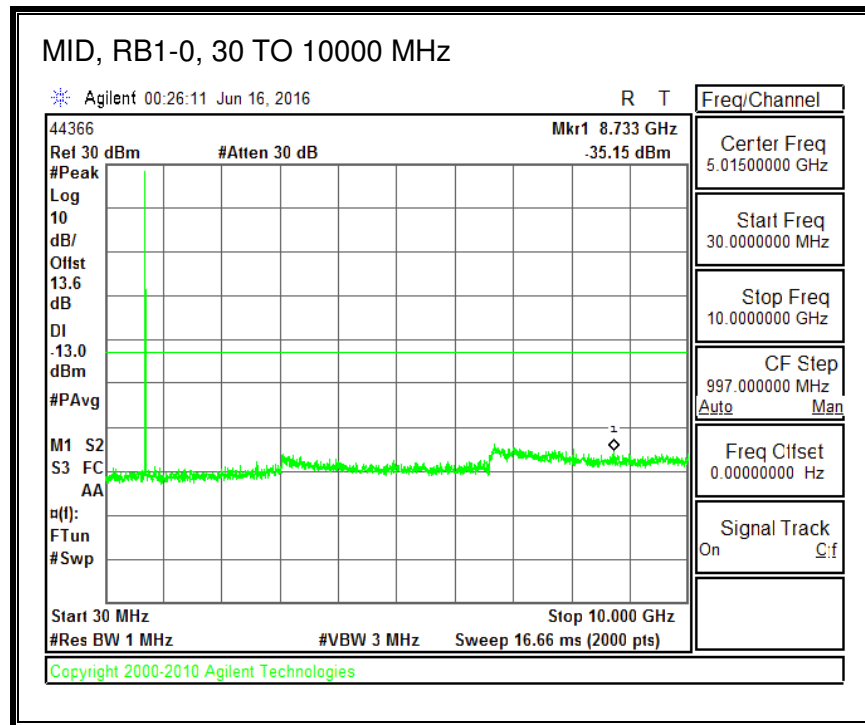
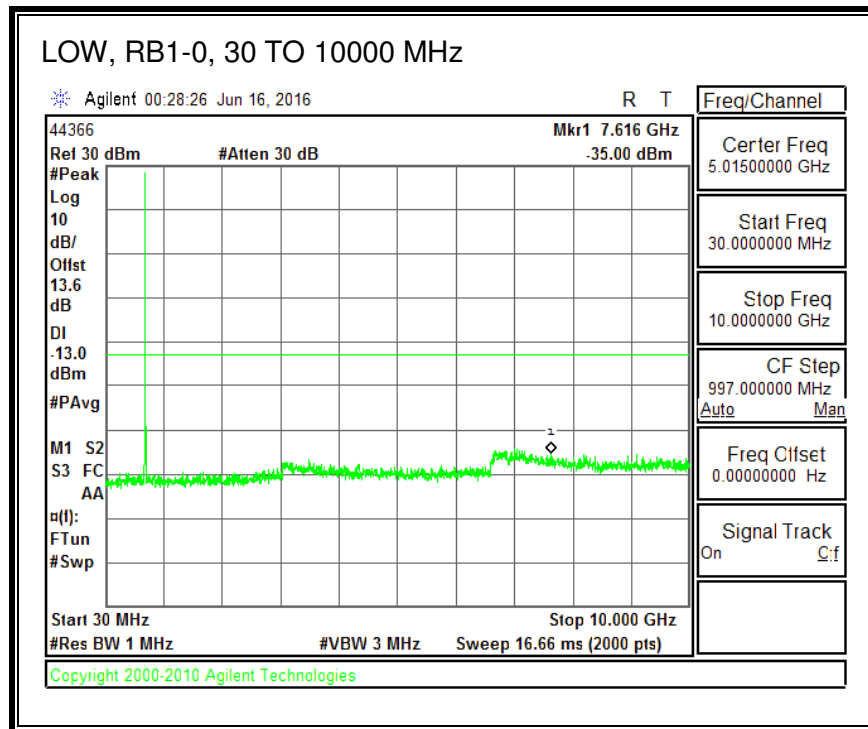


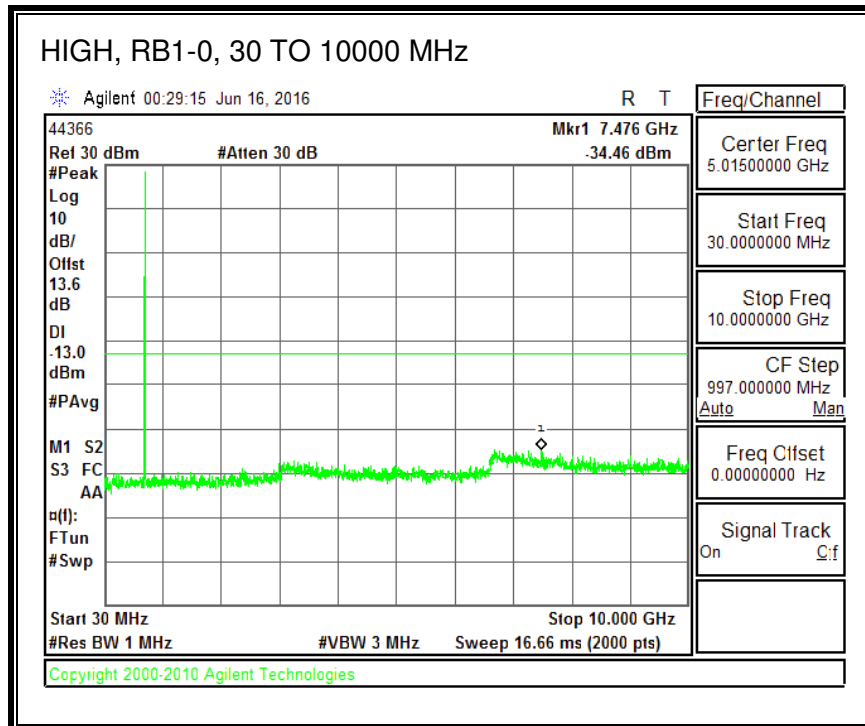
16QAM, (1.4 MHz BAND WIDTH)



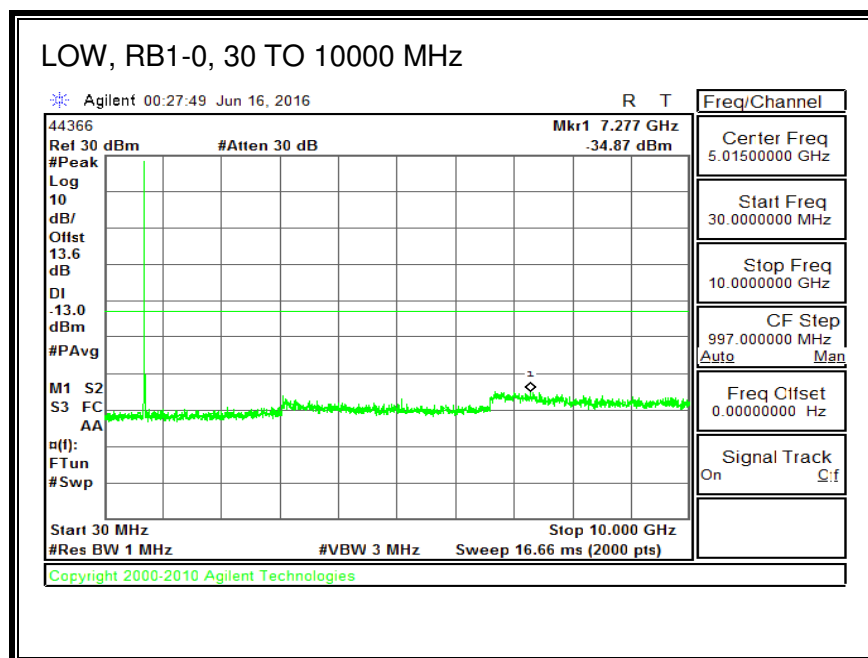


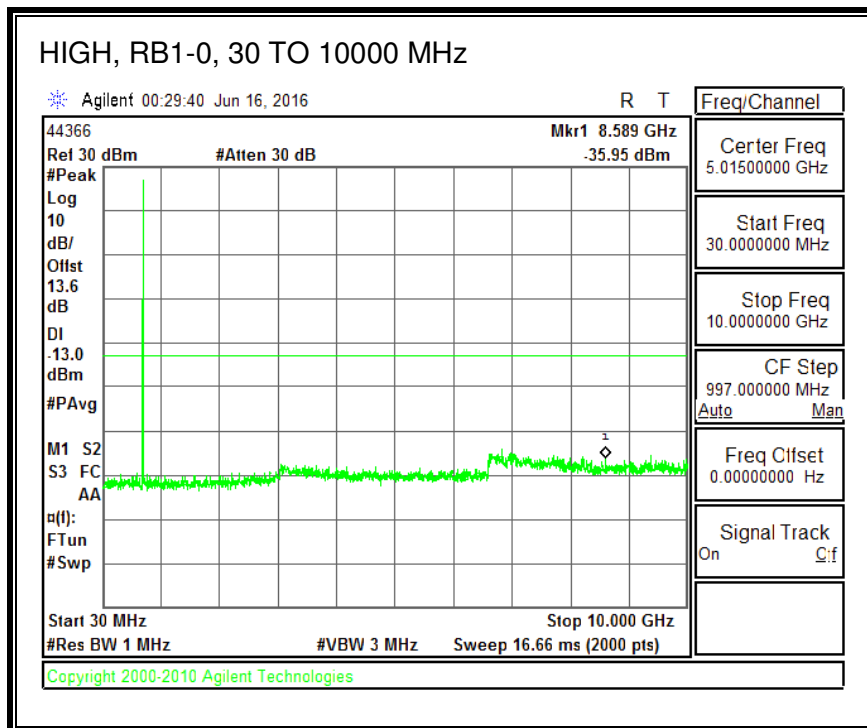
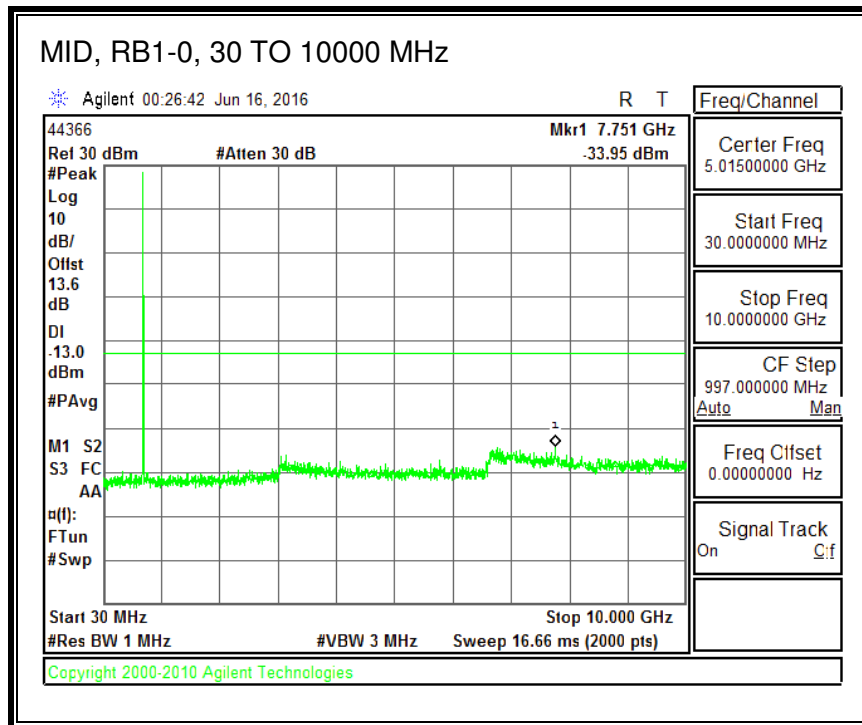
QPSK, (3.0 MHz BAND WIDTH)



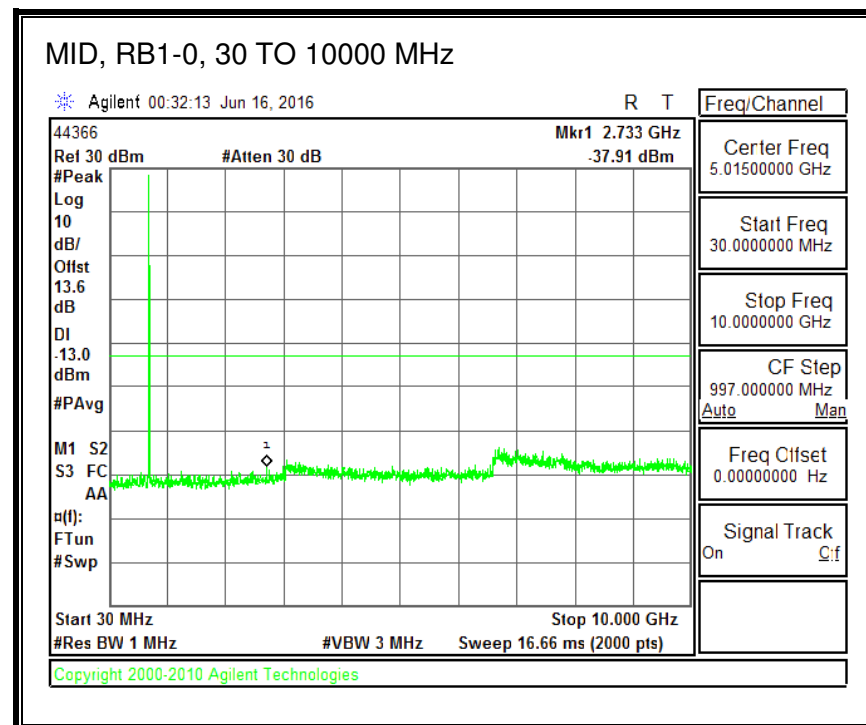
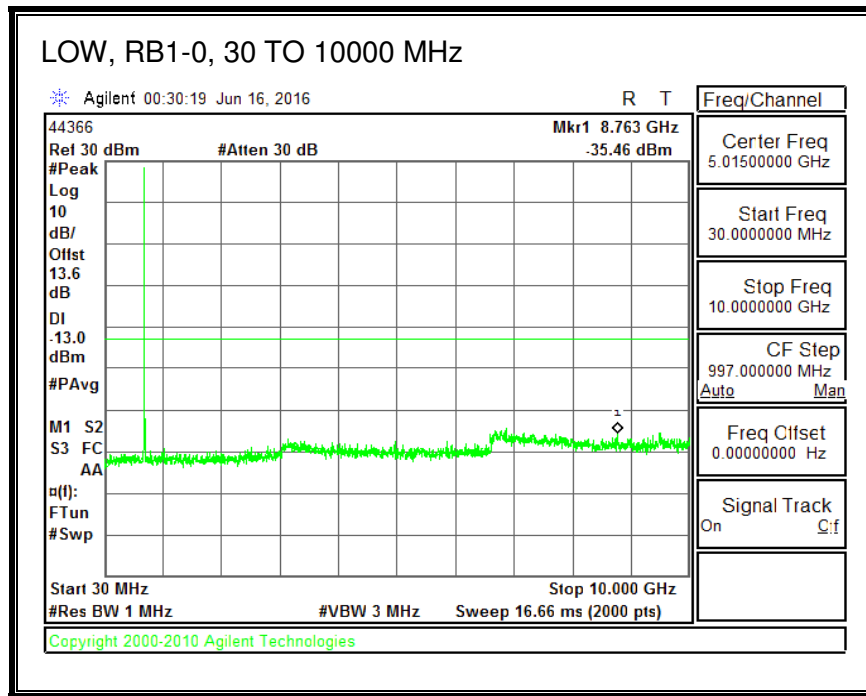


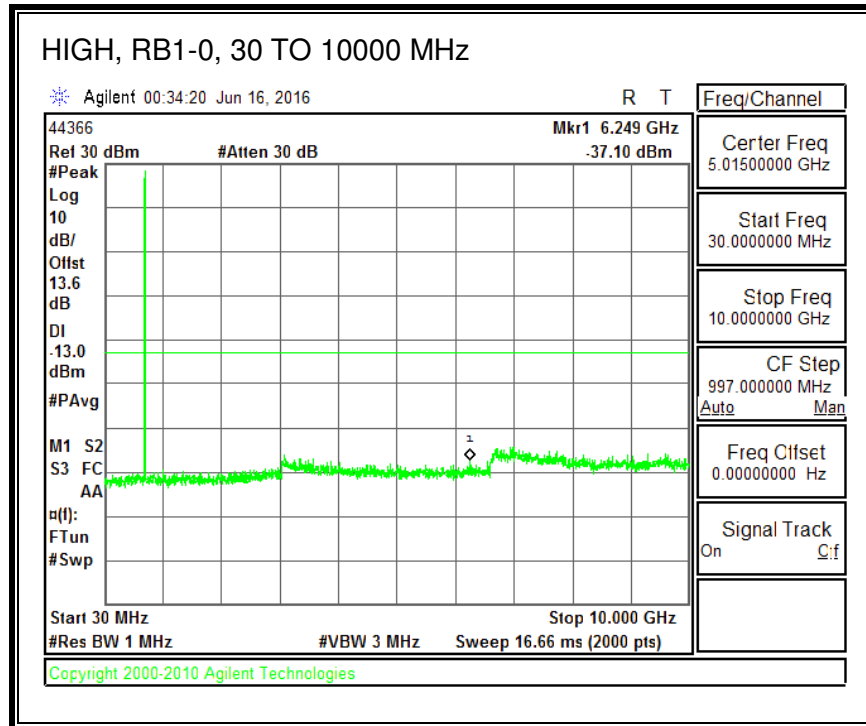
16QAM, (3.0 MHz BAND WIDTH)



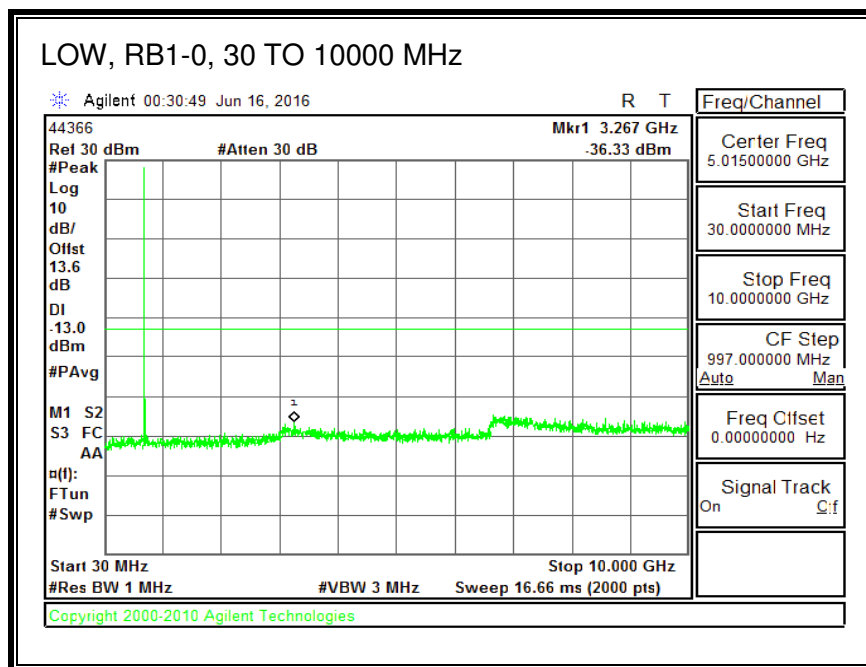


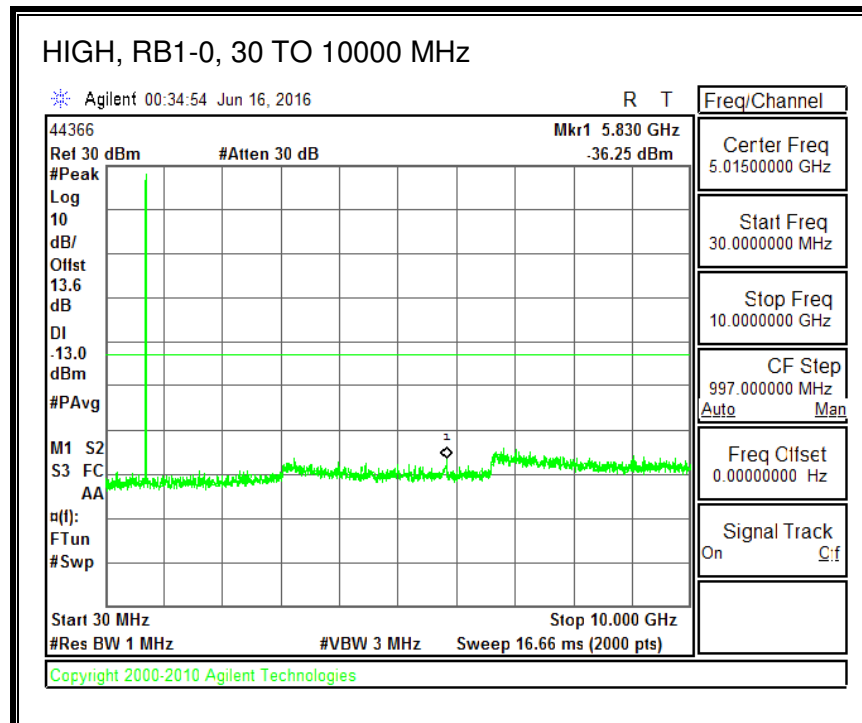
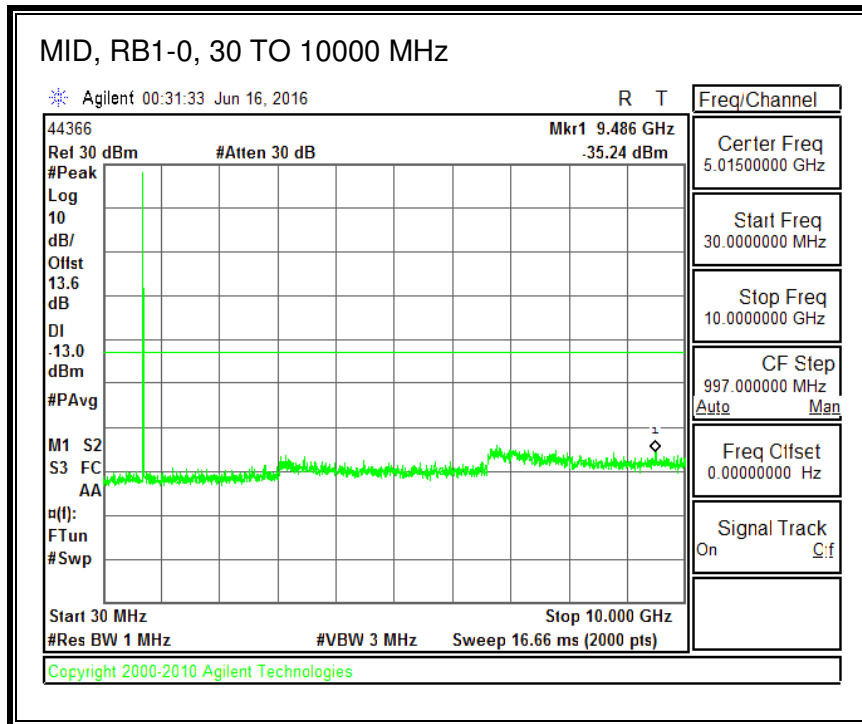
QPSK, (5.0 MHz BAND WIDTH)



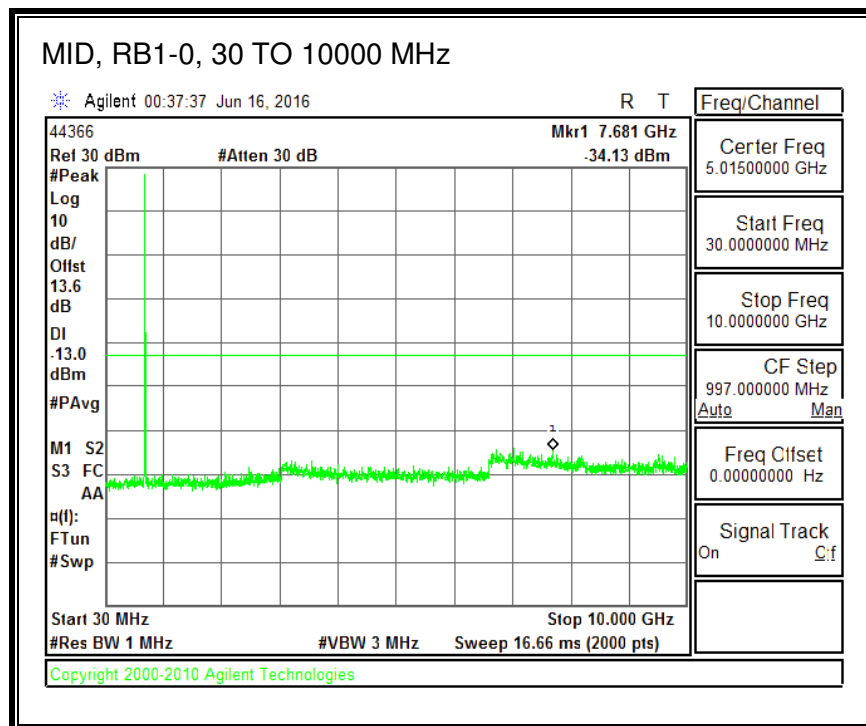
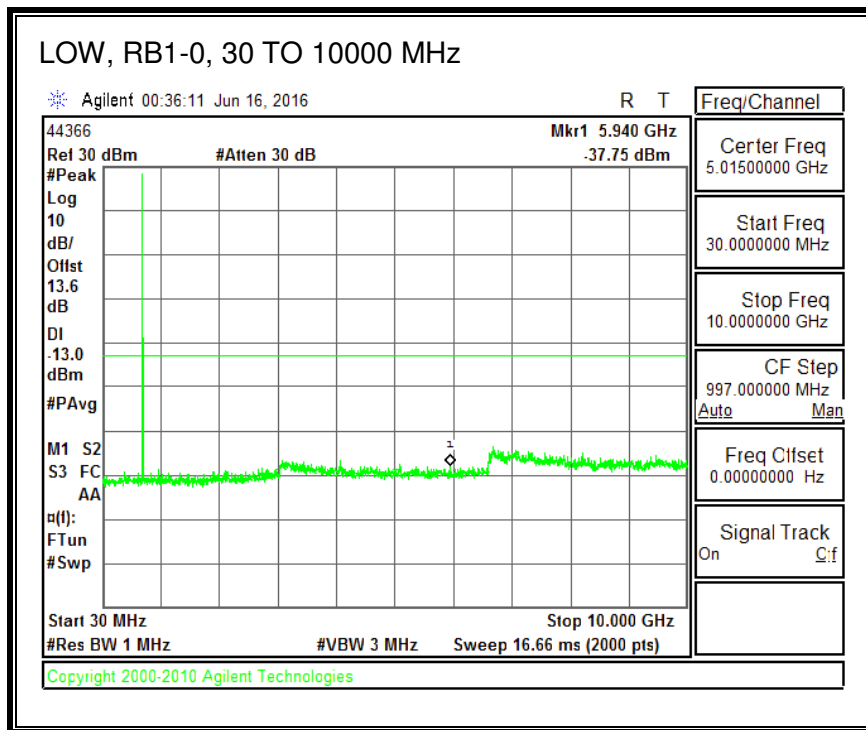


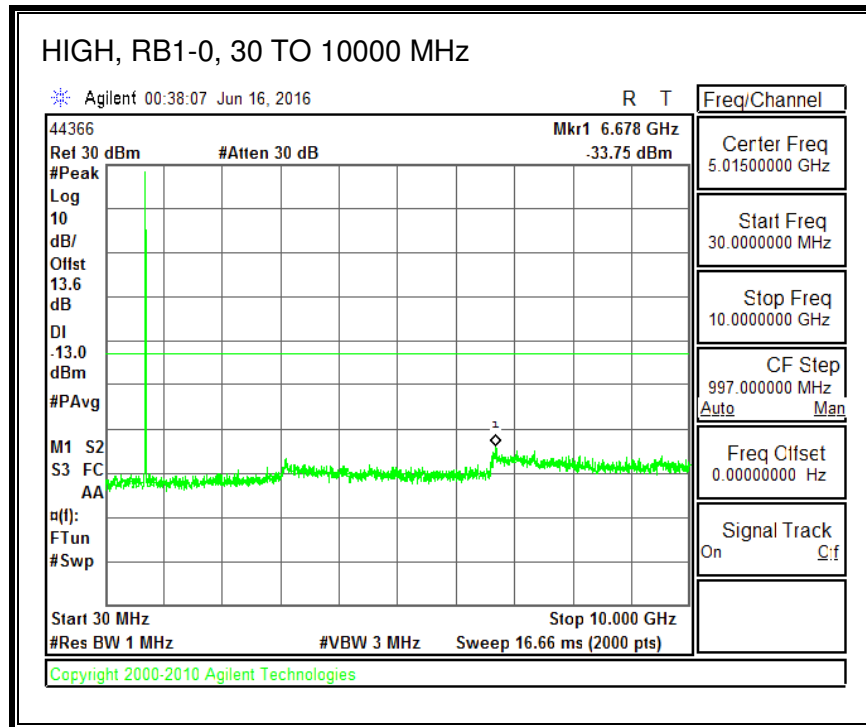
16QAM, (5.0 MHz BAND WIDTH)



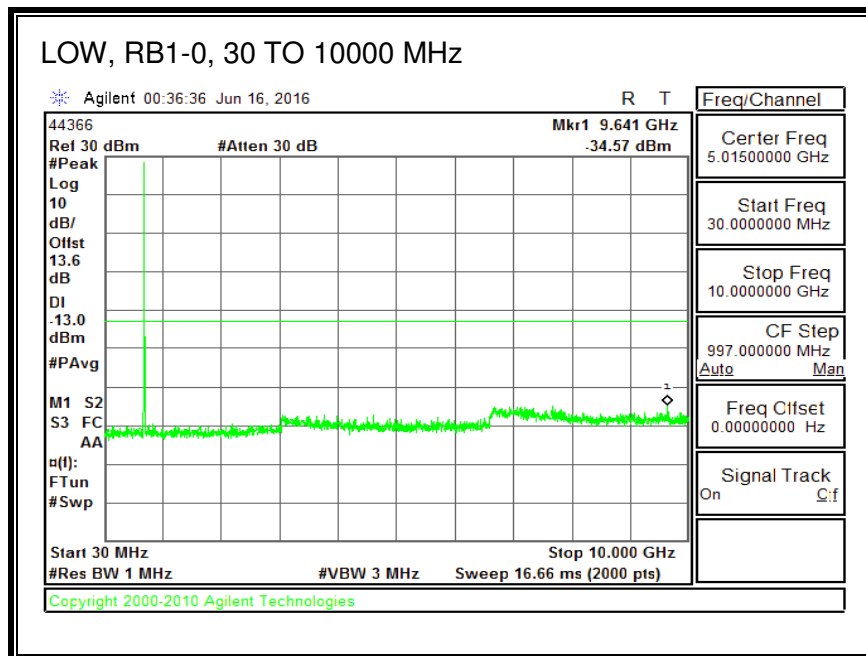


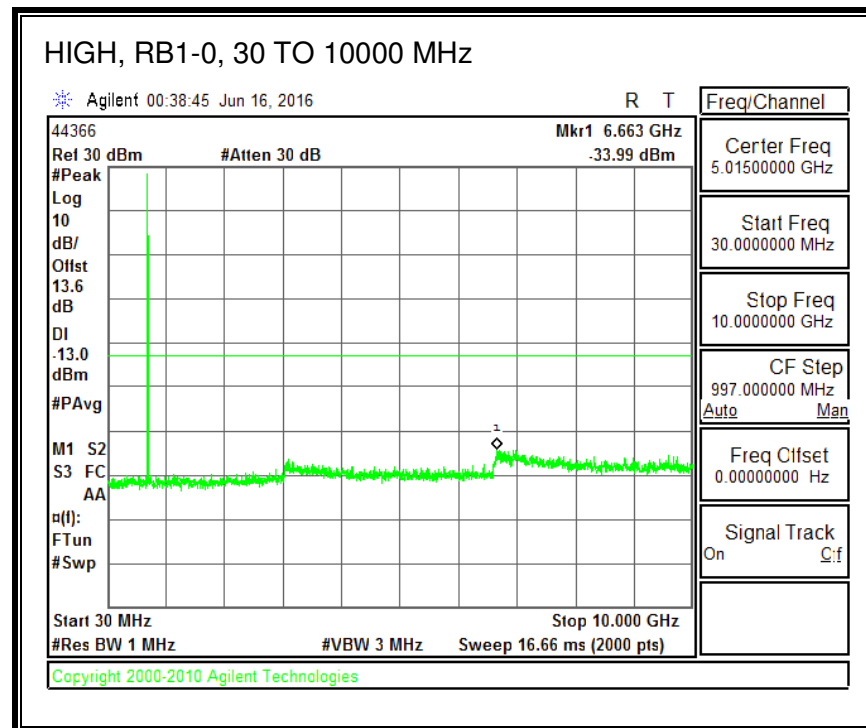
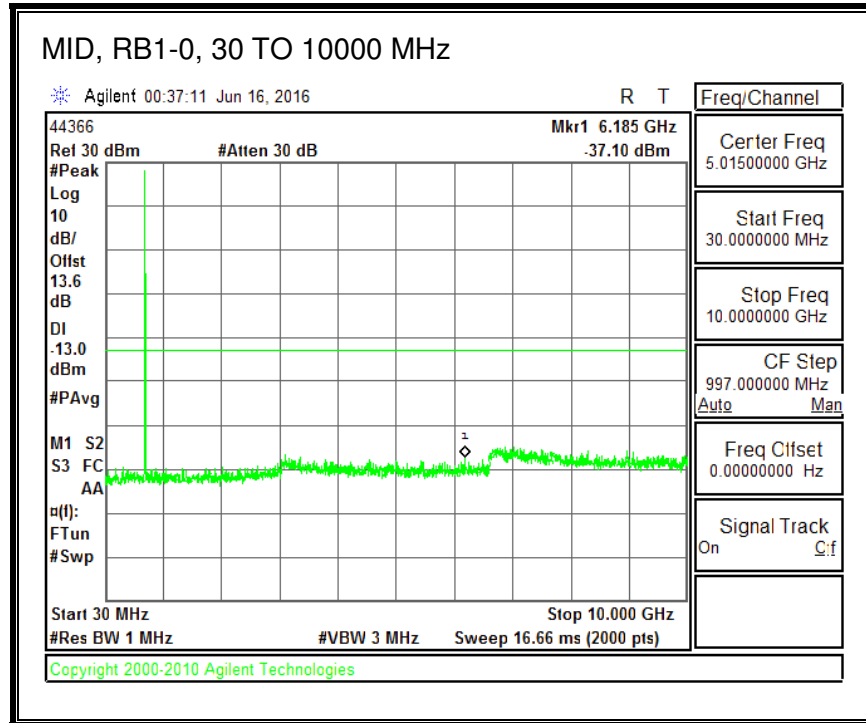
QPSK, (10.0 MHz BAND WIDTH)





16QAM, (10.0 MHz BAND WIDTH)

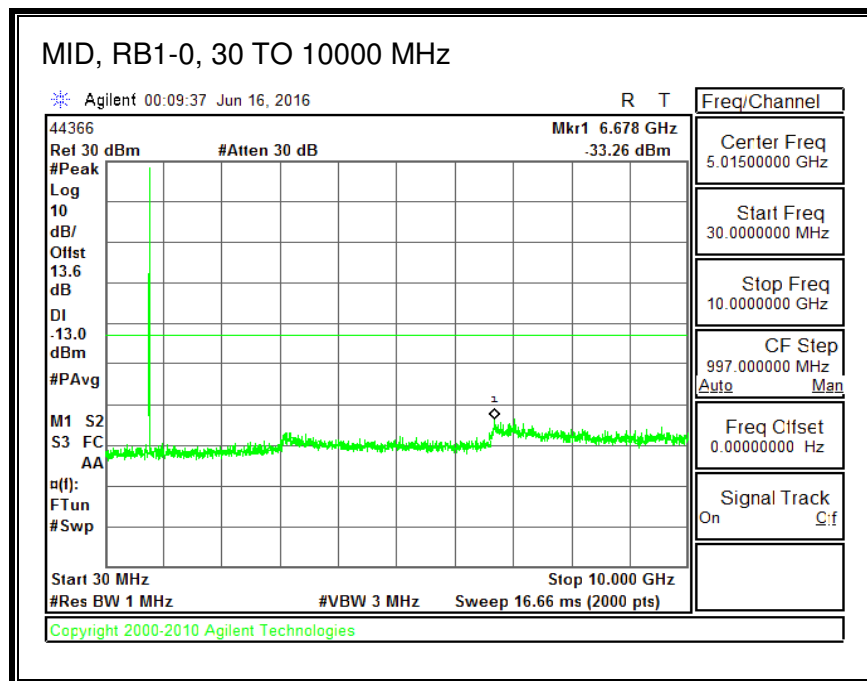
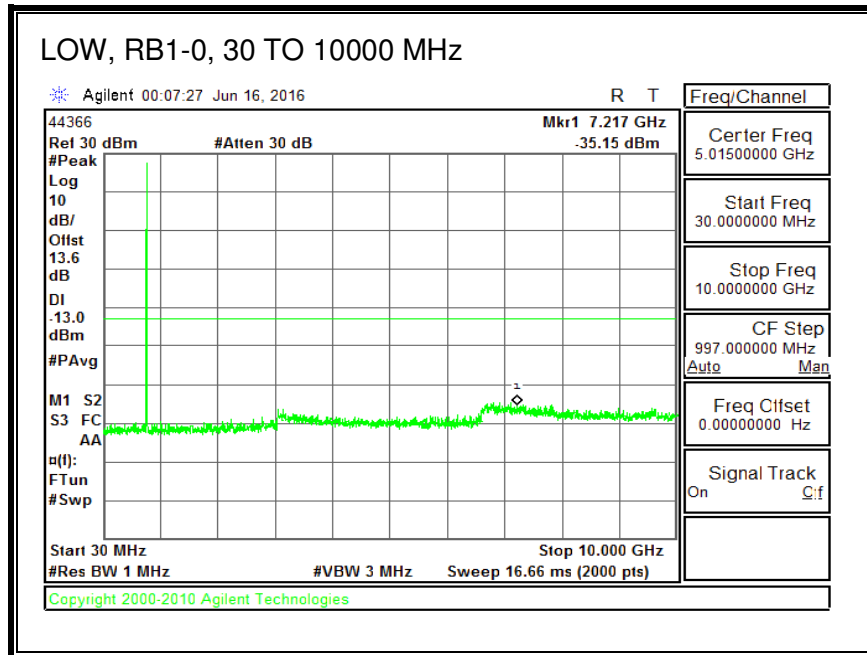


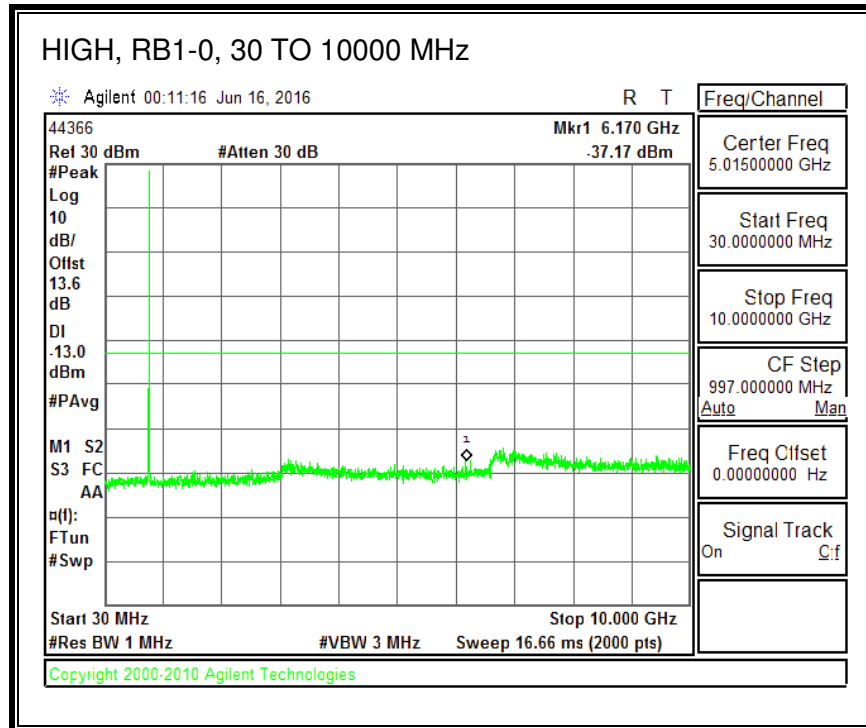


8.3.6. LTE BAND 13

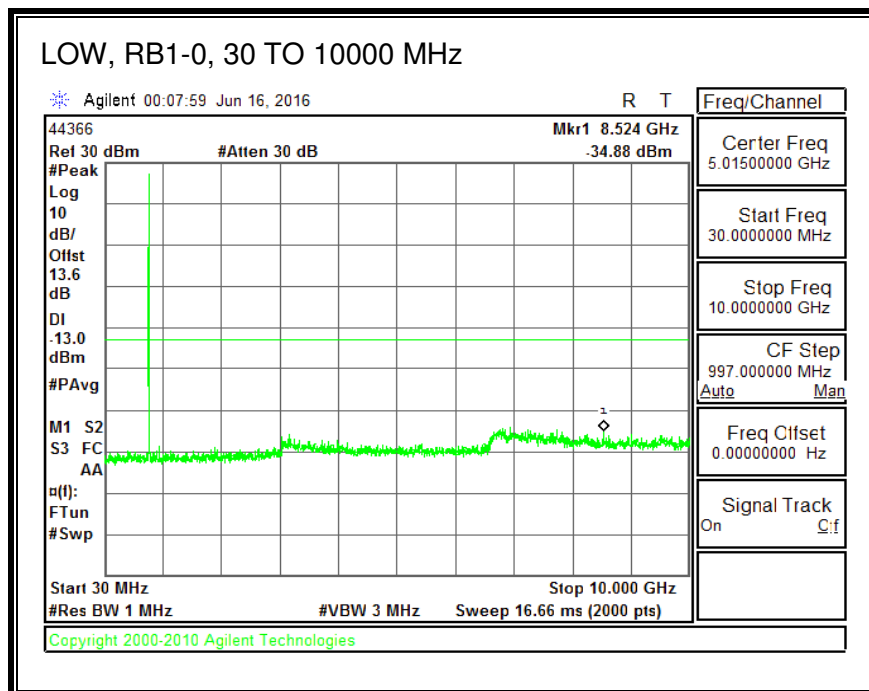
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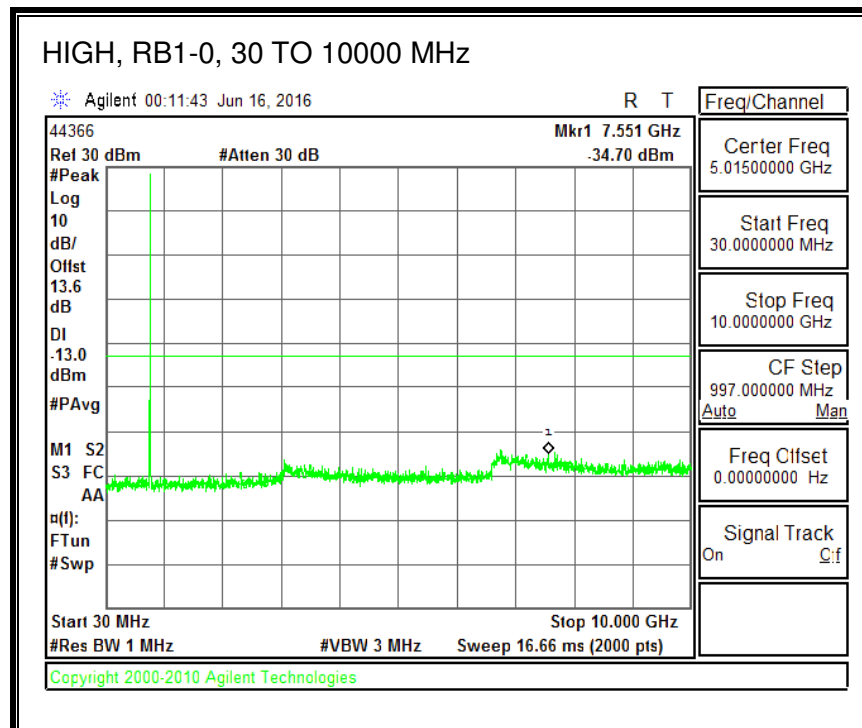
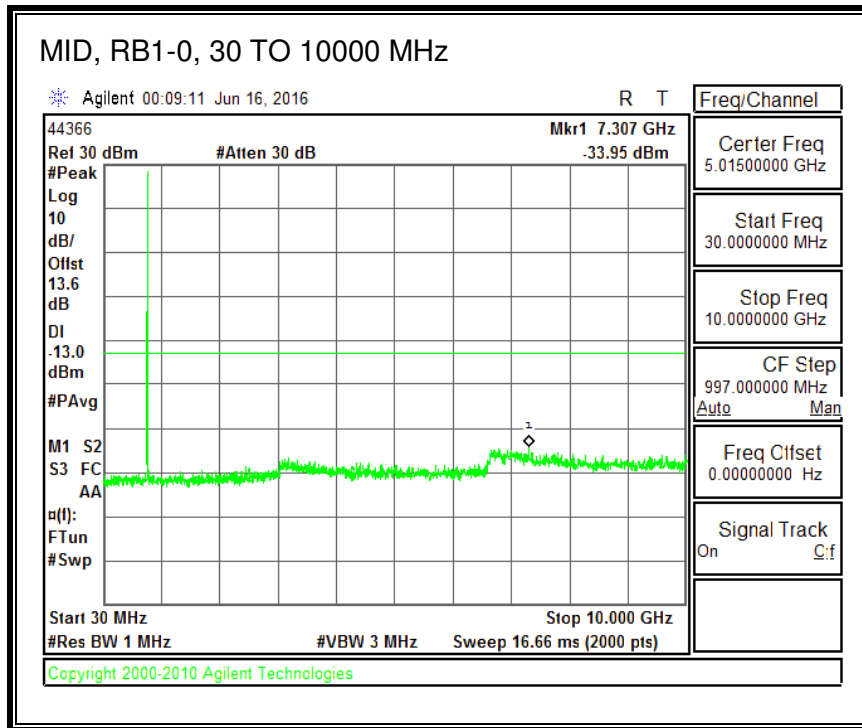
QPSK, (5.0 MHz BAND WIDTH)



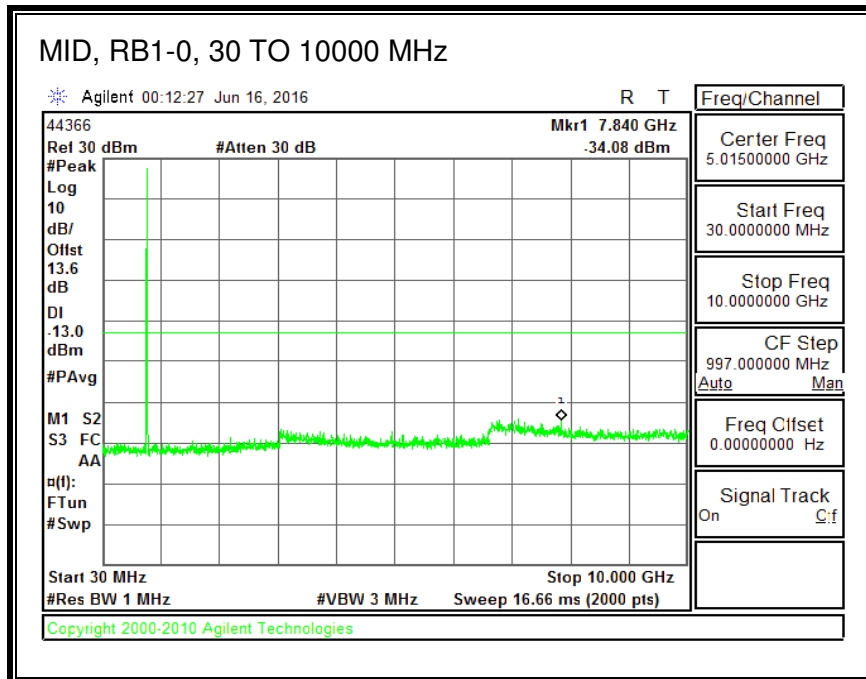


16QAM, (5.0 MHz BAND WIDTH)

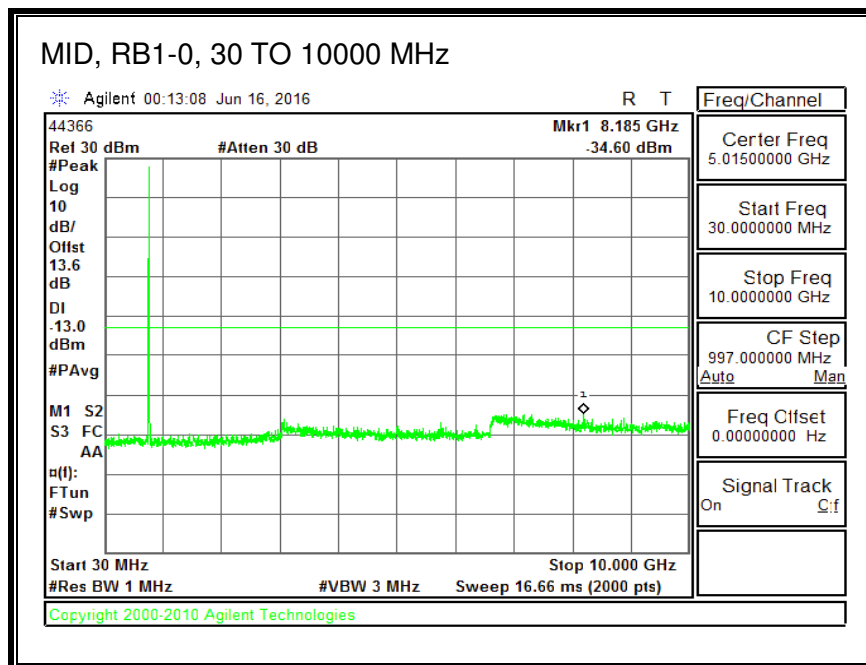




QPSK, (10.0 MHz BAND WIDTH)



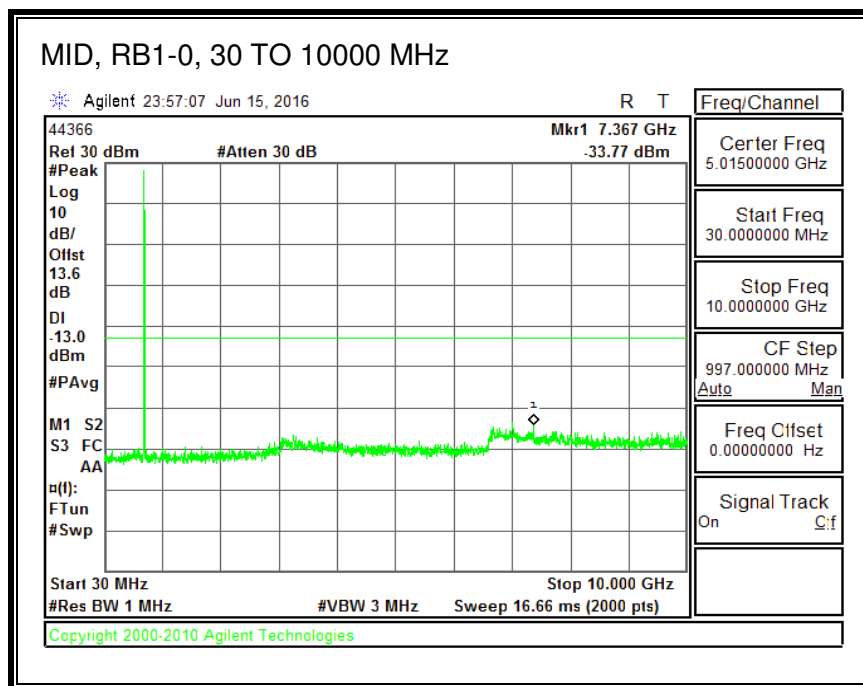
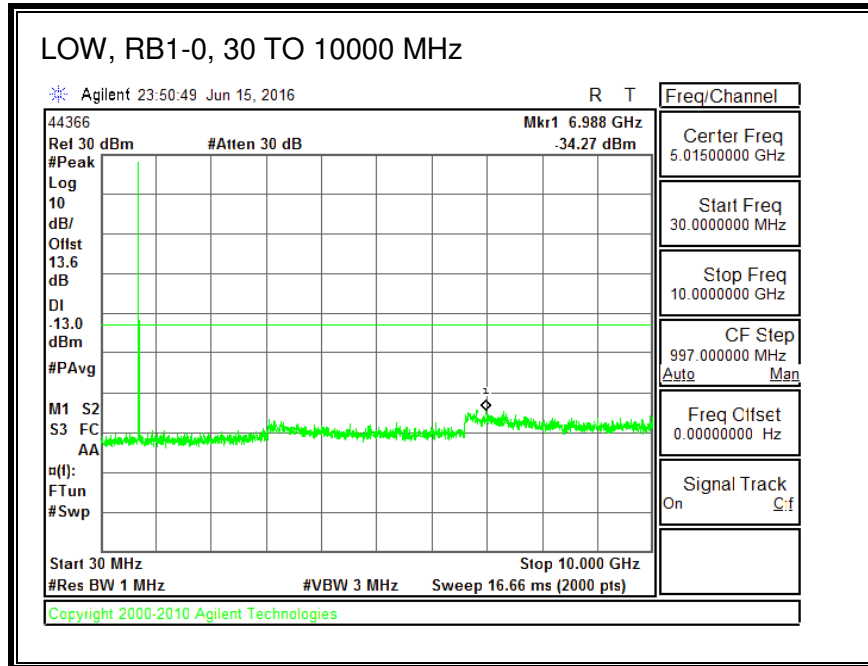
16QAM, (10.0 MHz BAND WIDTH)

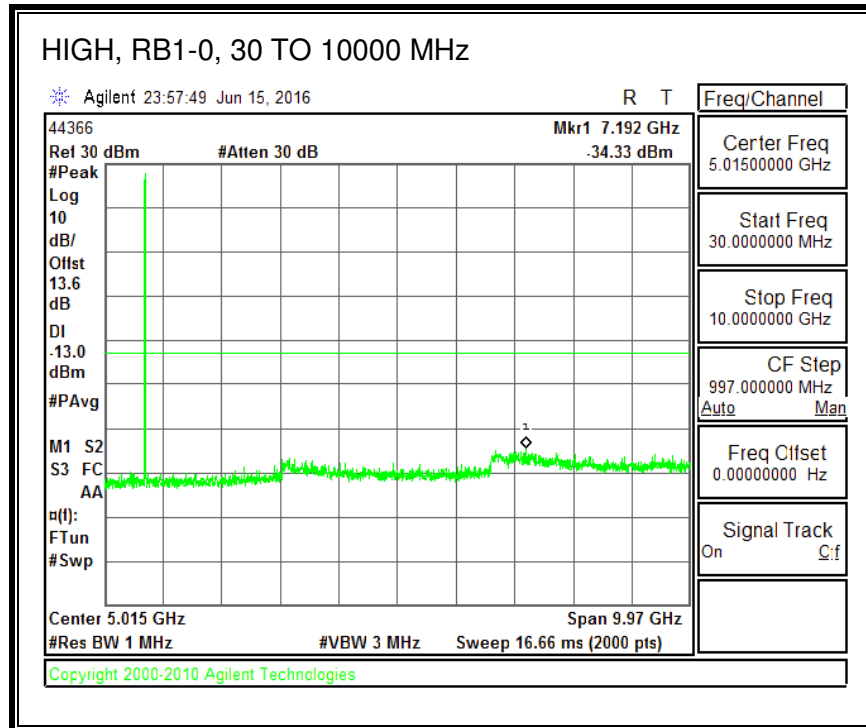


8.3.7. LTE BAND 17

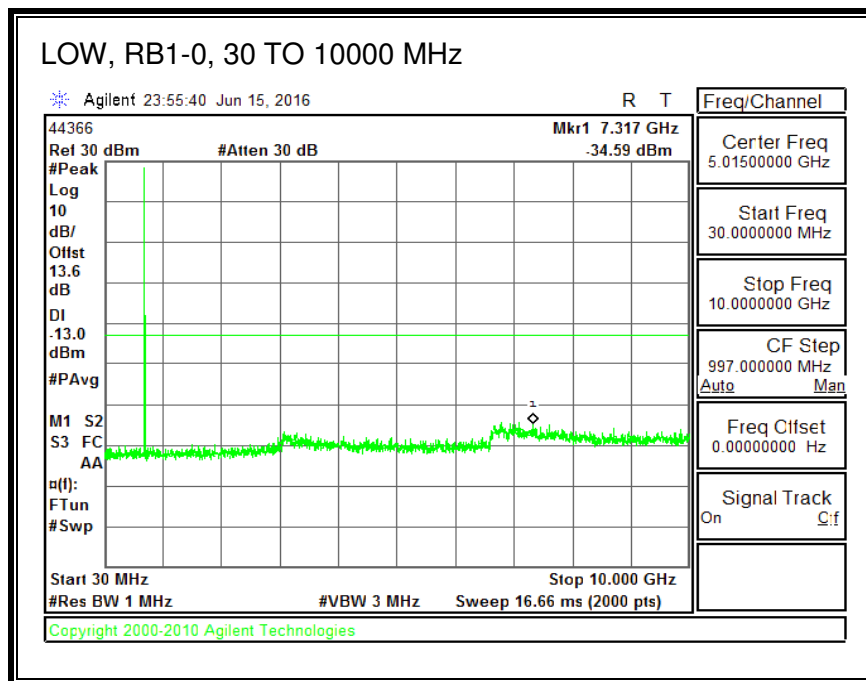
ID:	39472	Date:	6/15/16
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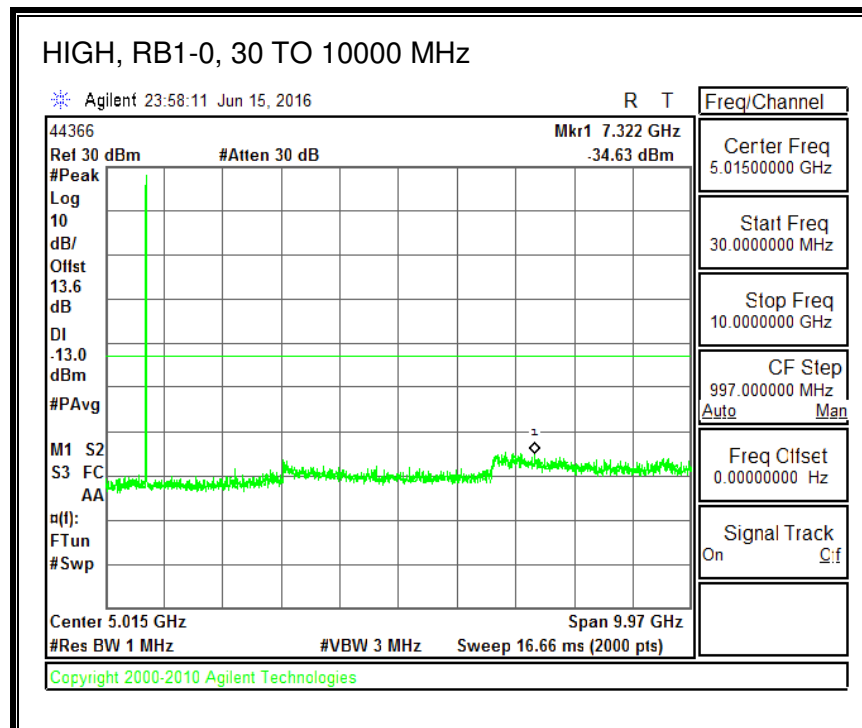
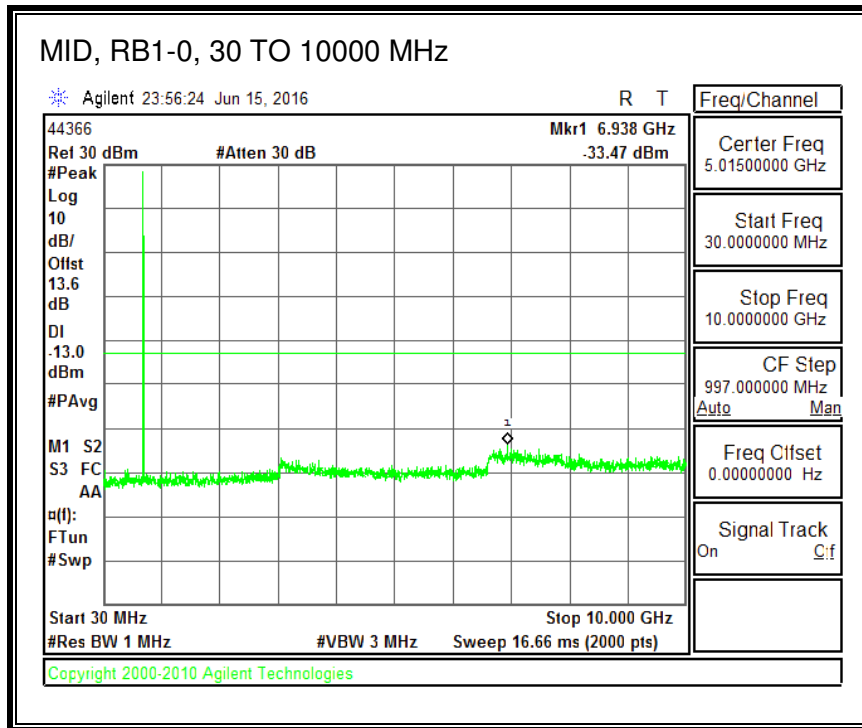
QPSK, (5.0 MHz BAND WIDTH)



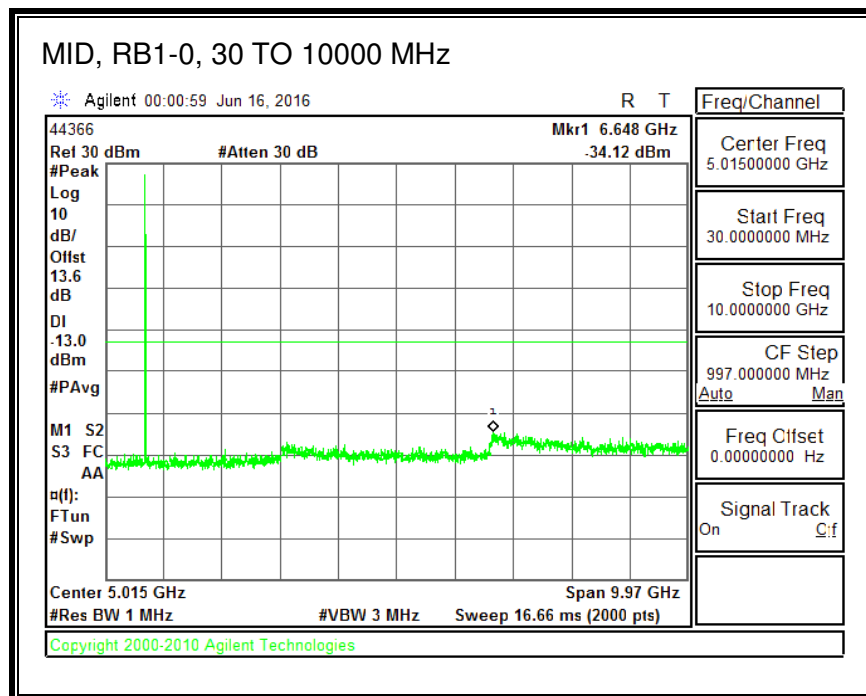
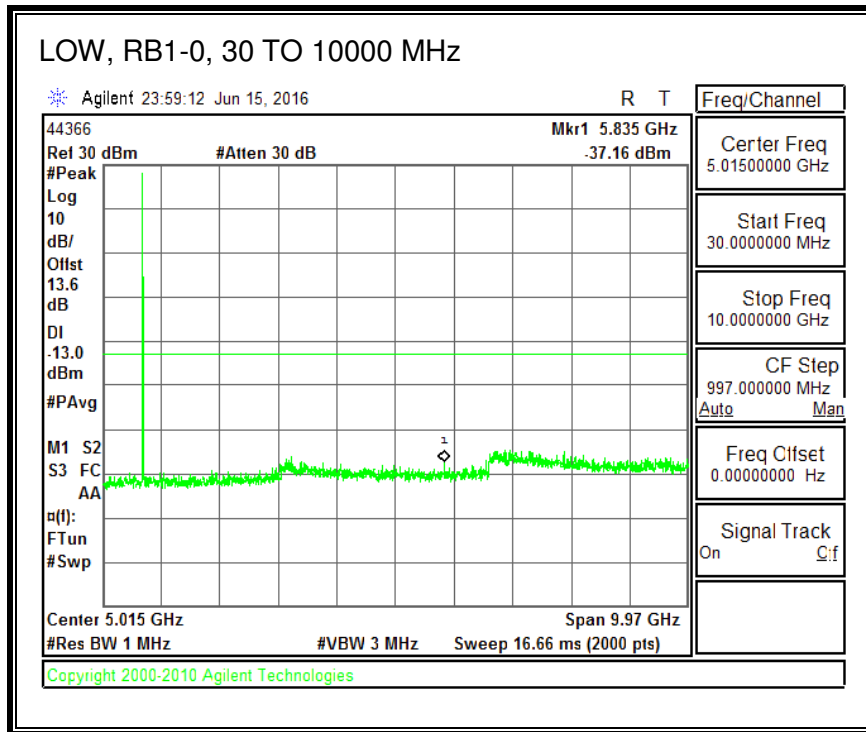


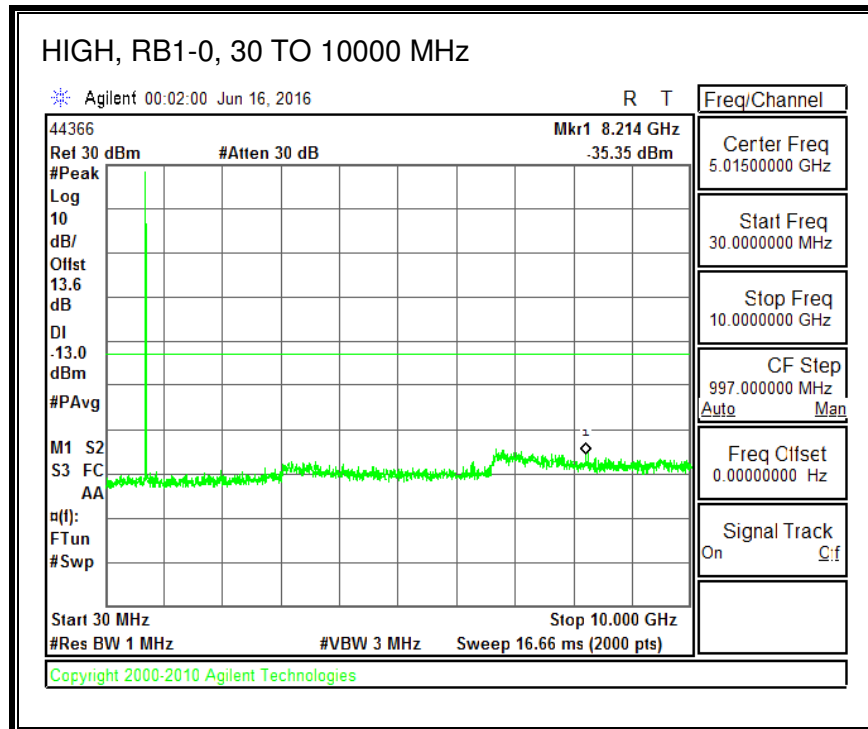
16QAM, (5.0 MHz BAND WIDTH)



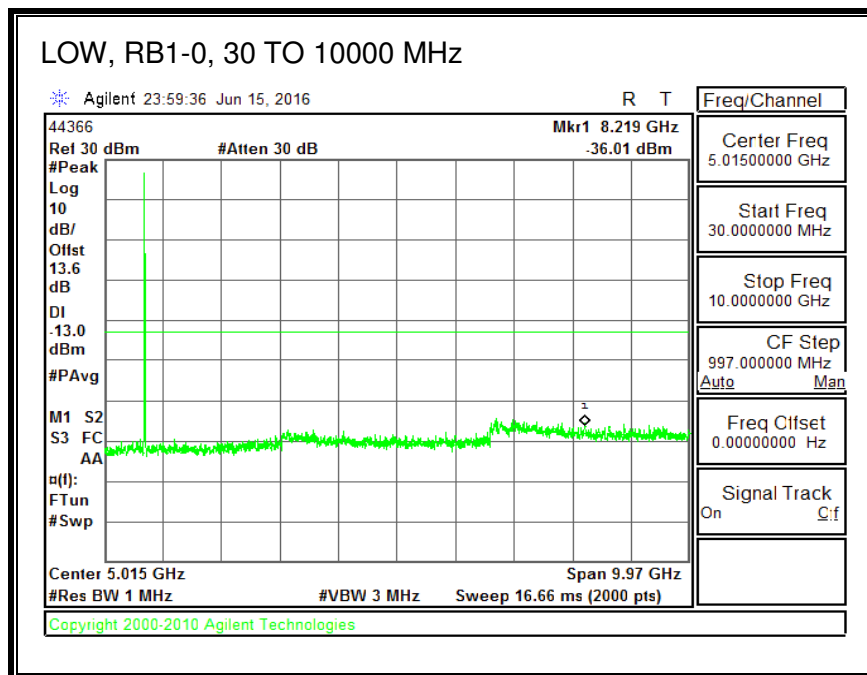


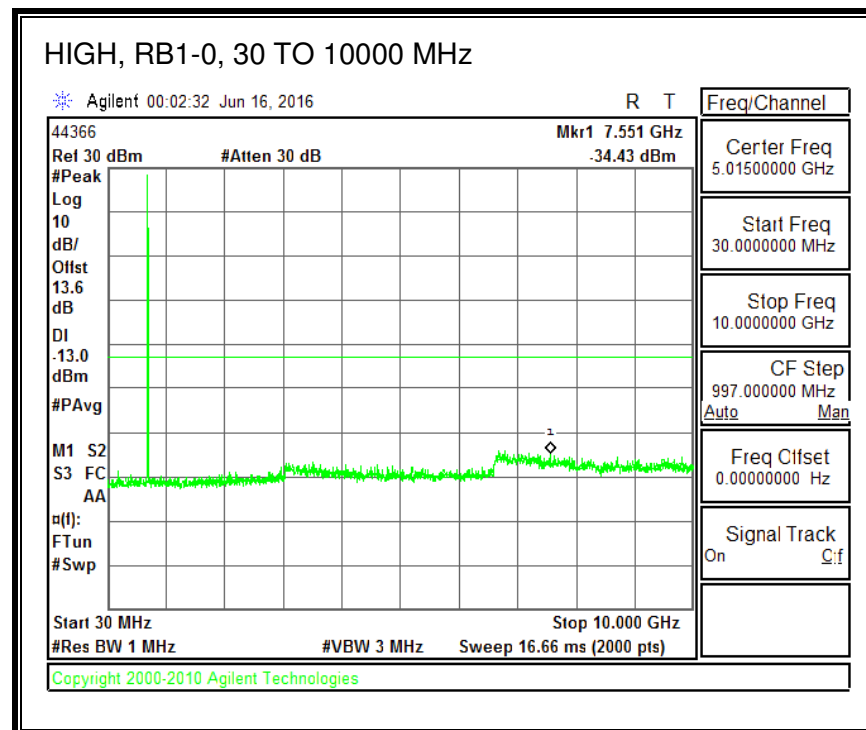
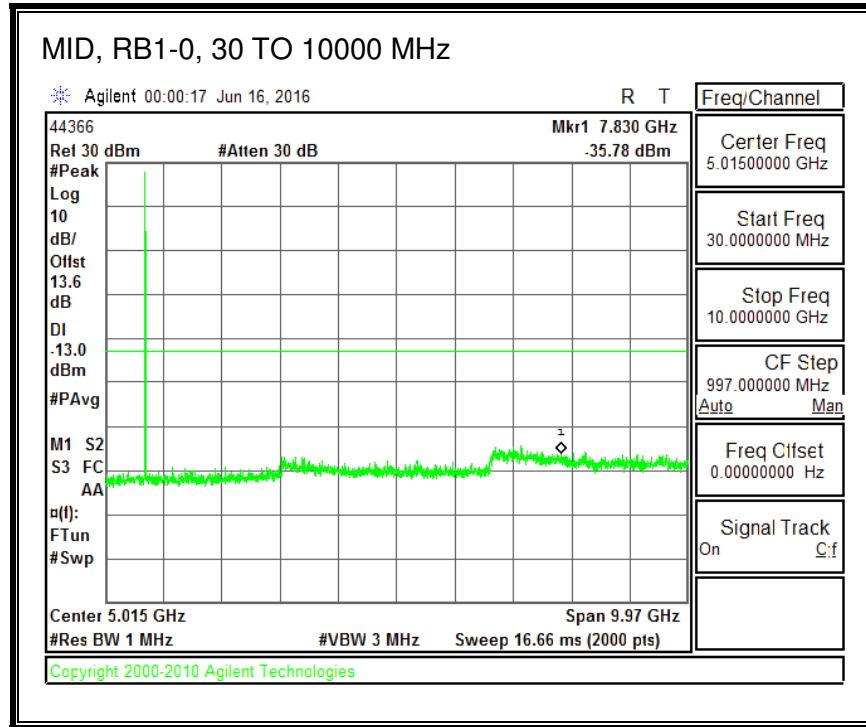
QPSK, (10.0 MHz BAND WIDTH)





16QAM, (10.0 MHz BAND WIDTH)

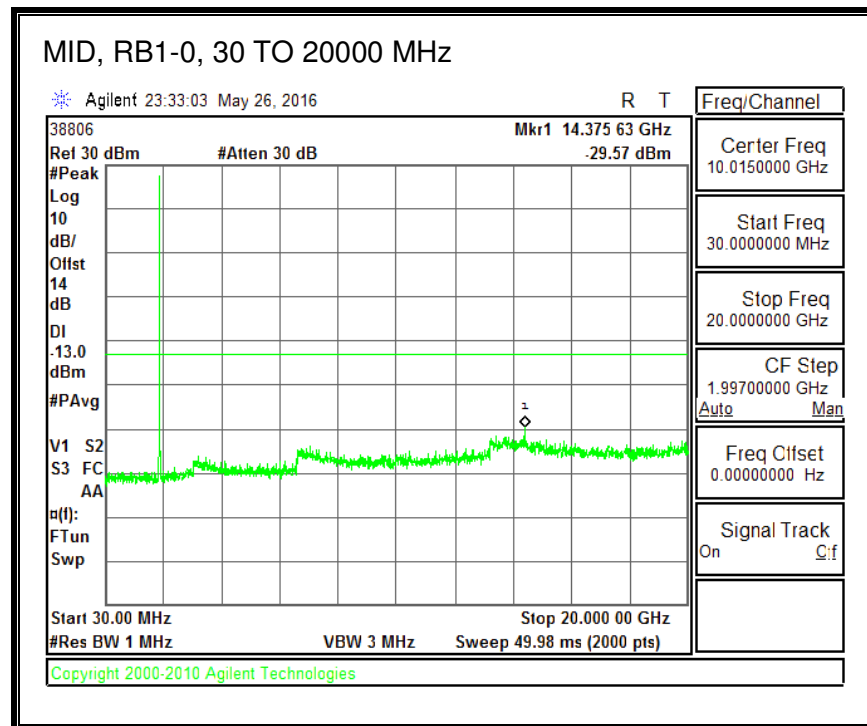
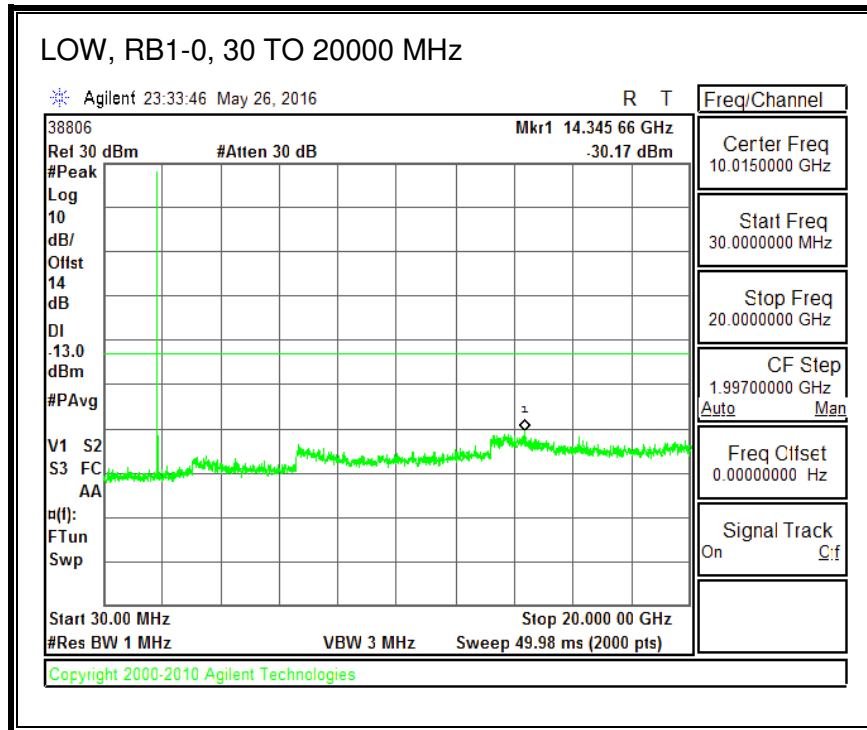


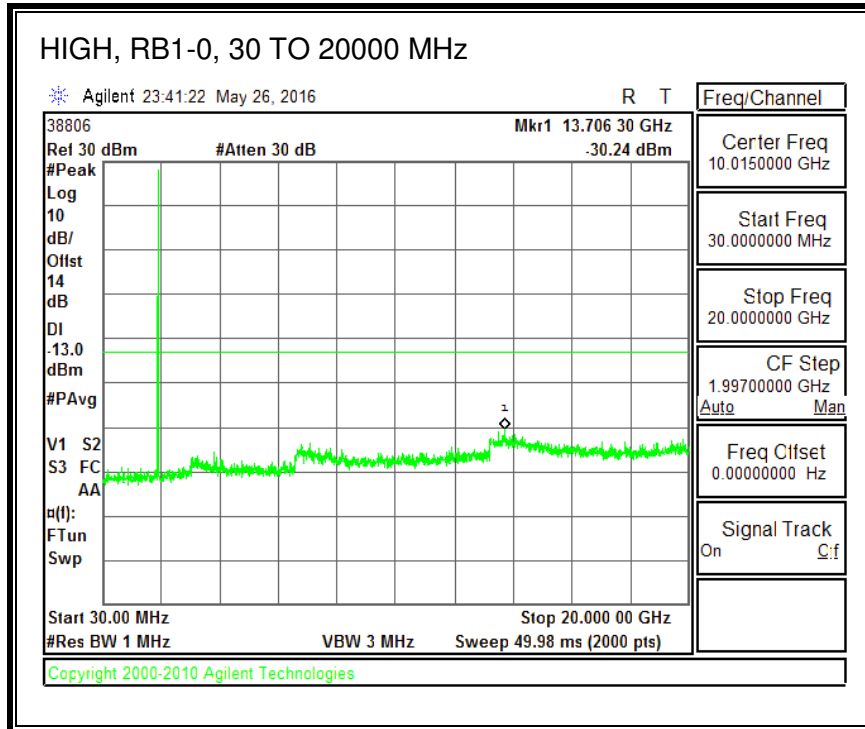


8.3.8. LTE BAND 25

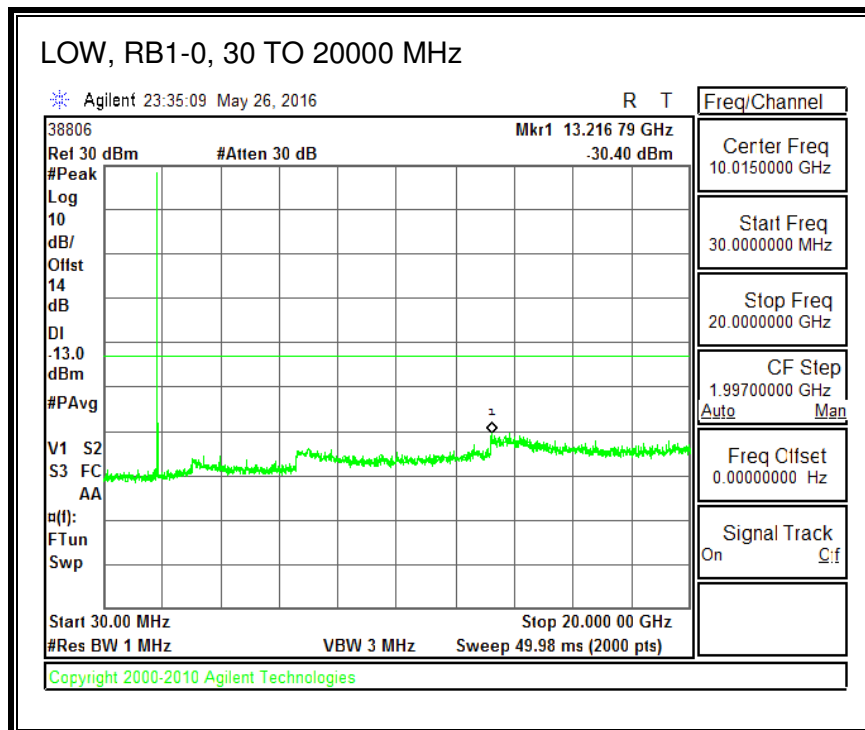
ID:	39472	Date:	5/26/16
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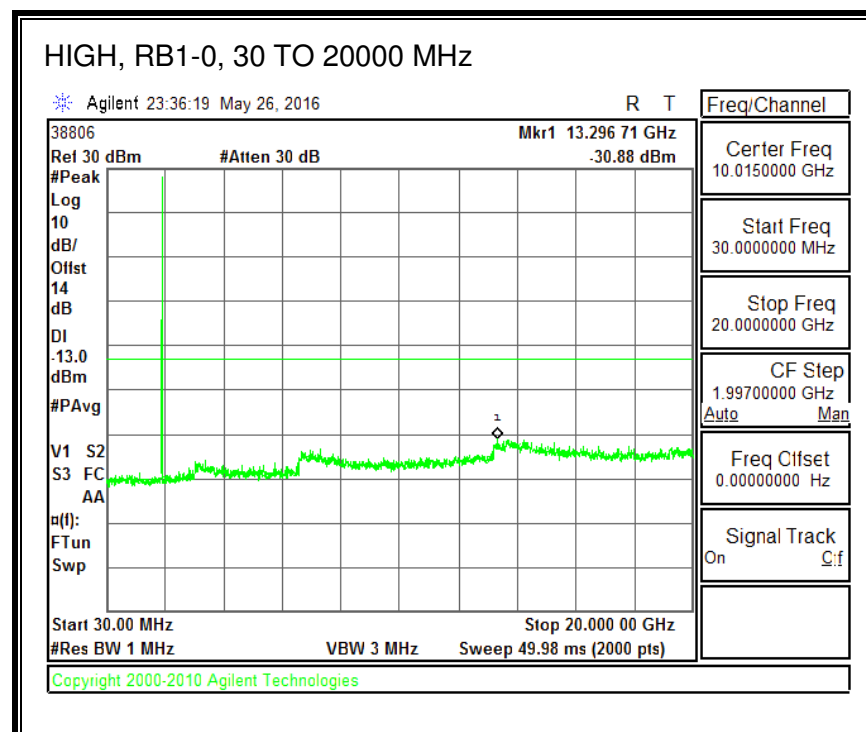
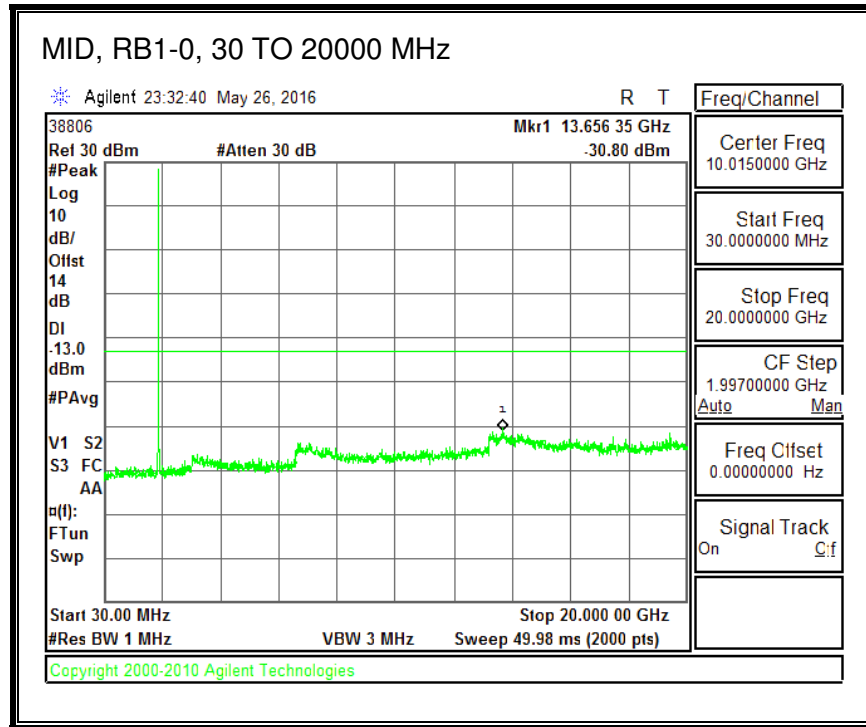
QPSK, (1.4 MHz BAND WIDTH)



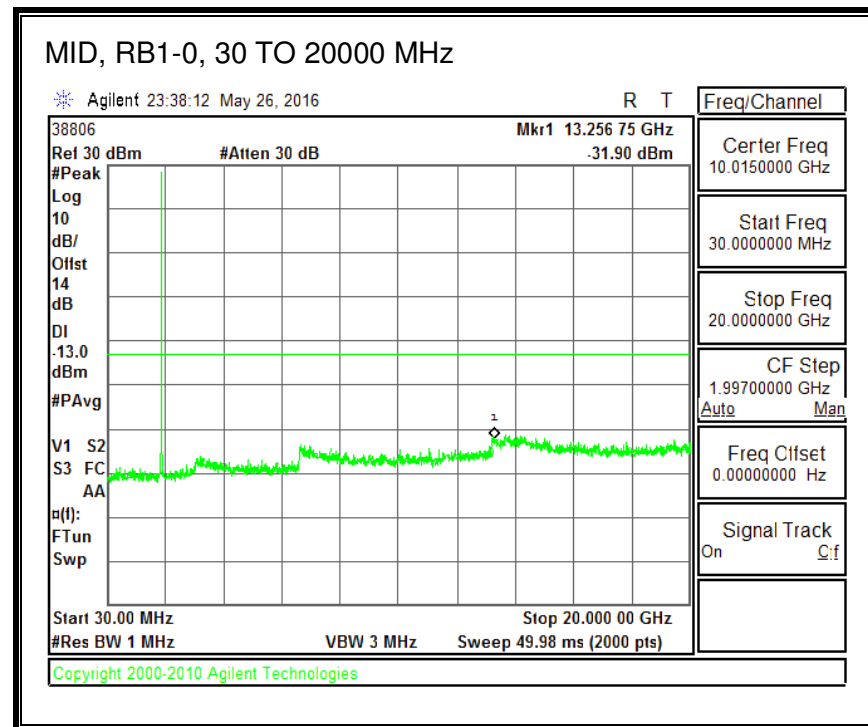
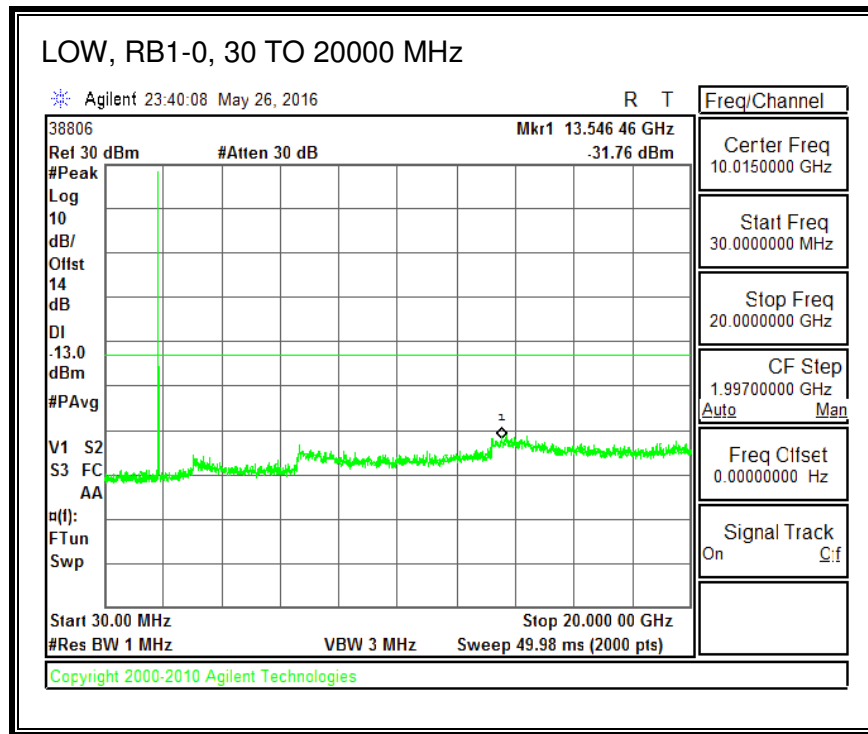


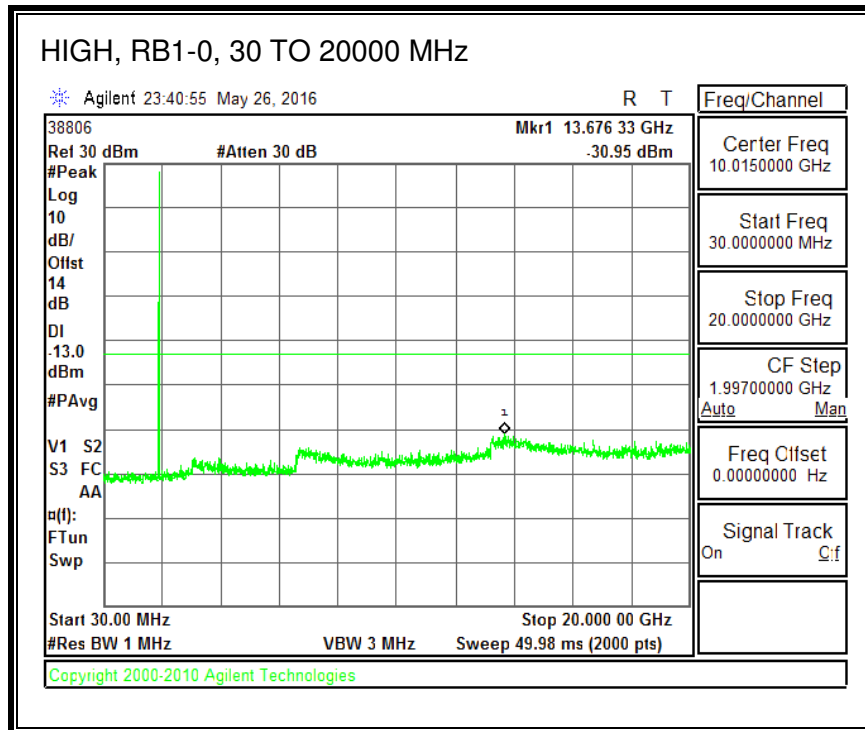
16QAM, (1.4 MHz BAND WIDTH)



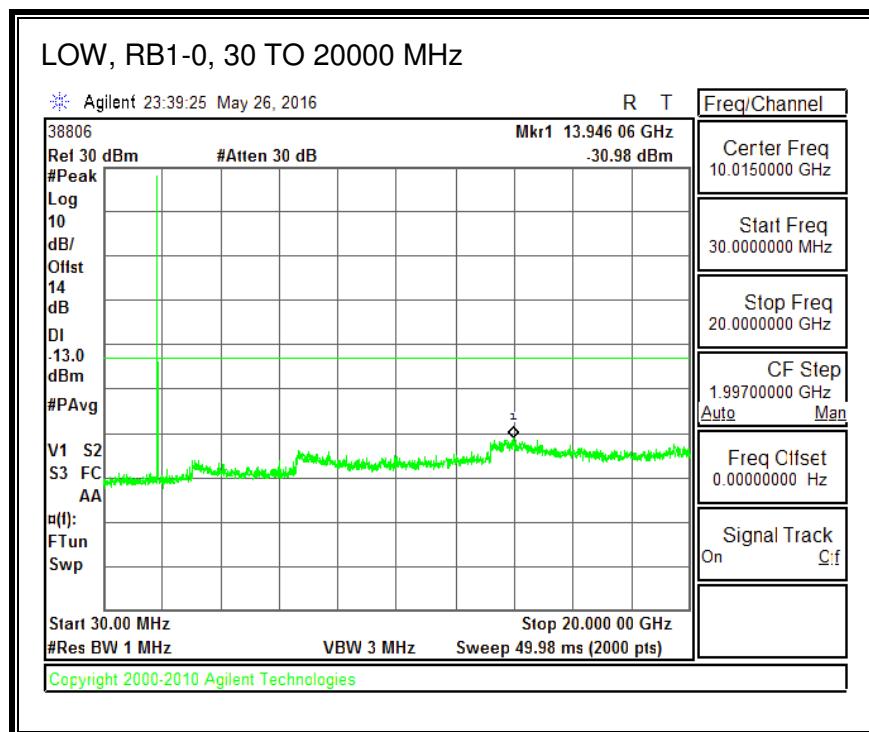


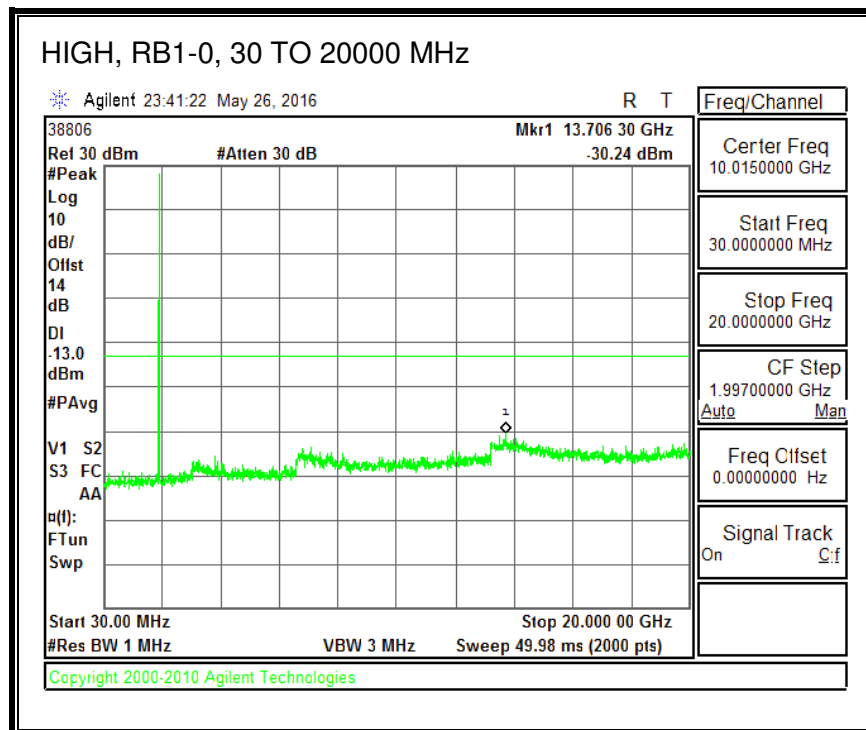
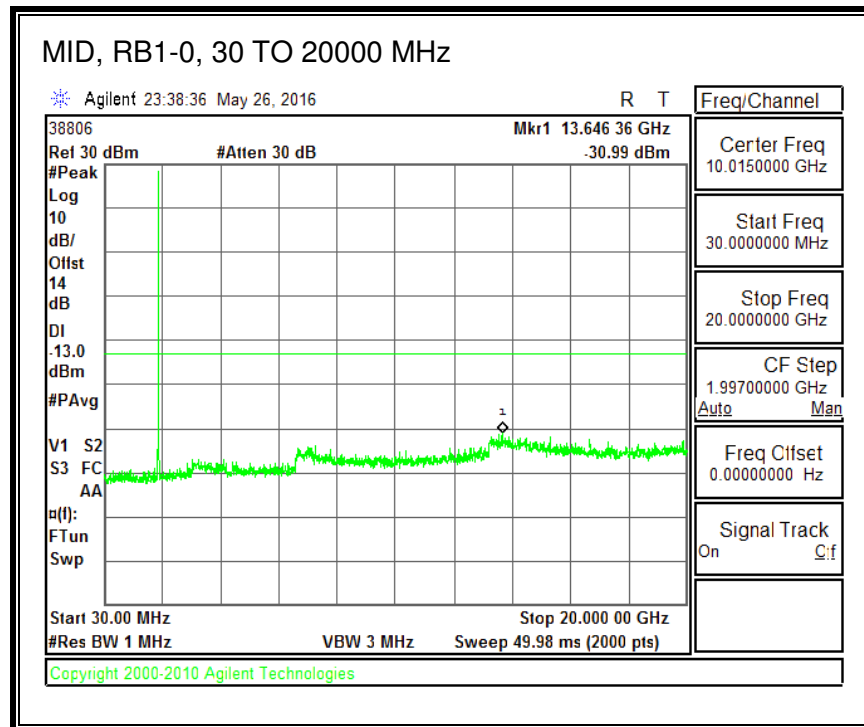
QPSK, (3.0 MHz BAND WIDTH)



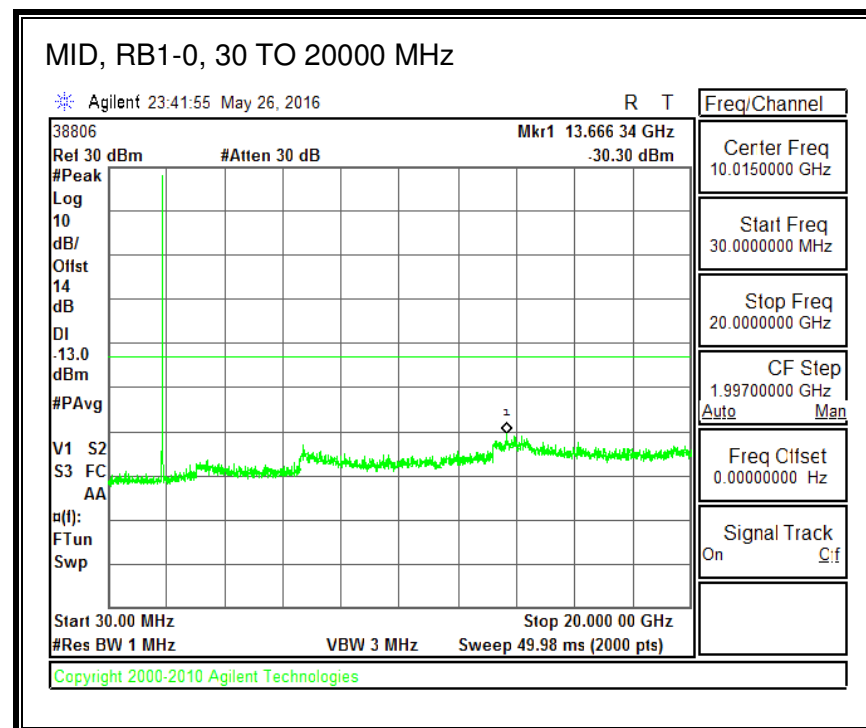
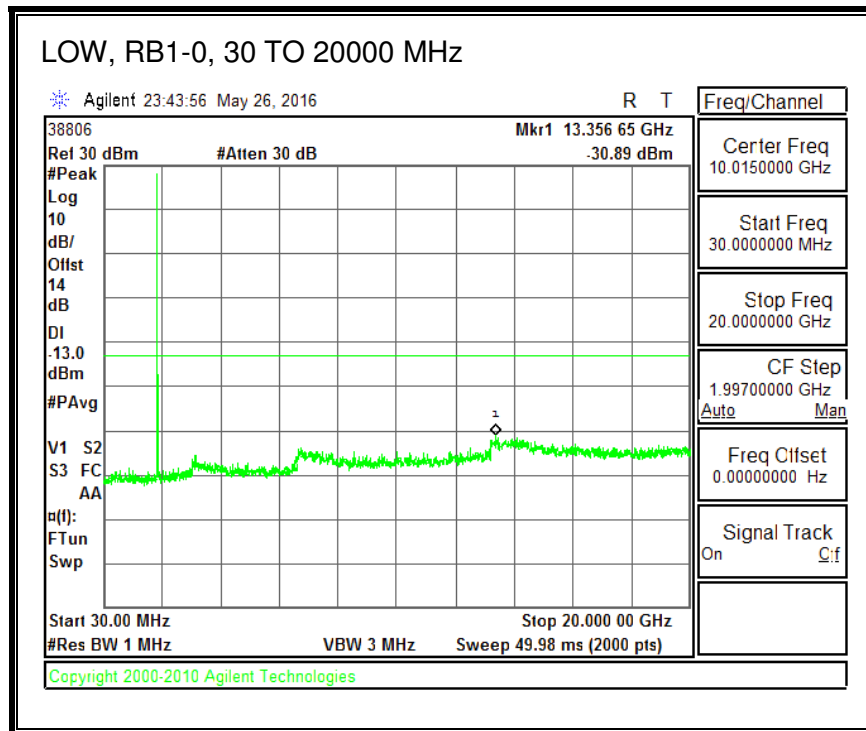


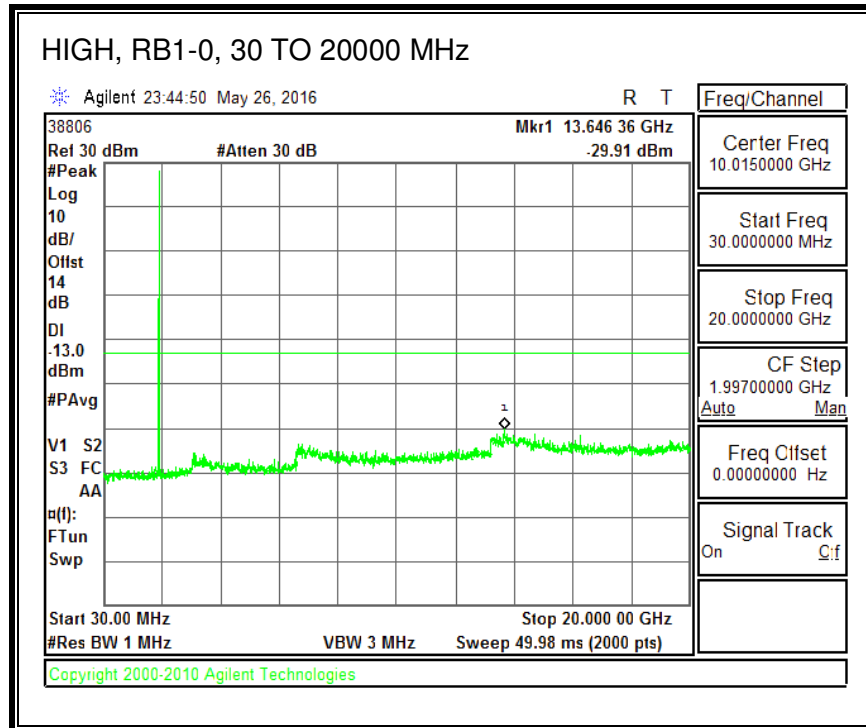
16QAM, (3.0 MHz BAND WIDTH)



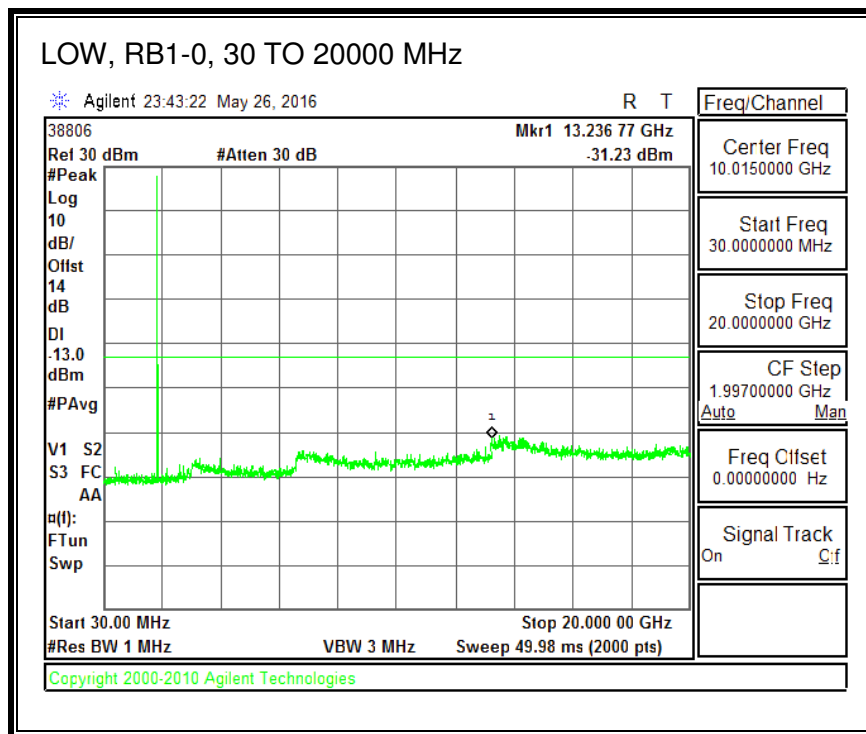


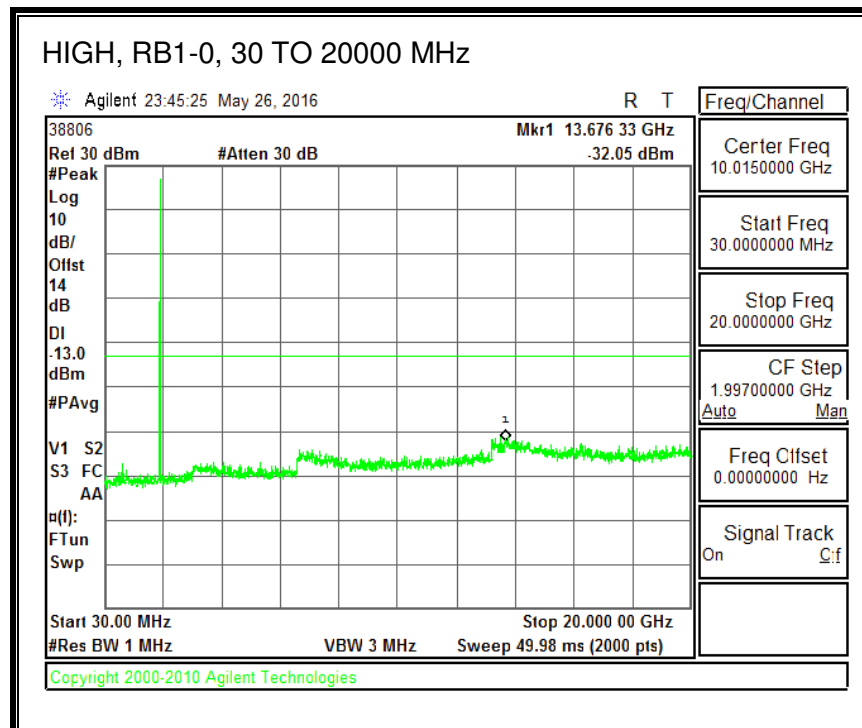
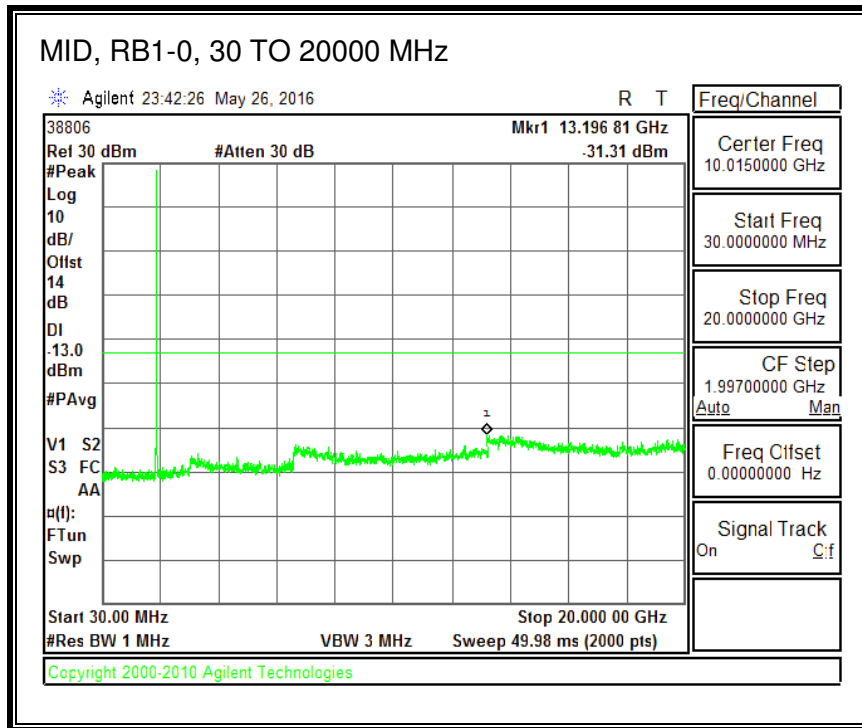
QPSK, (5.0 MHz BAND WIDTH)



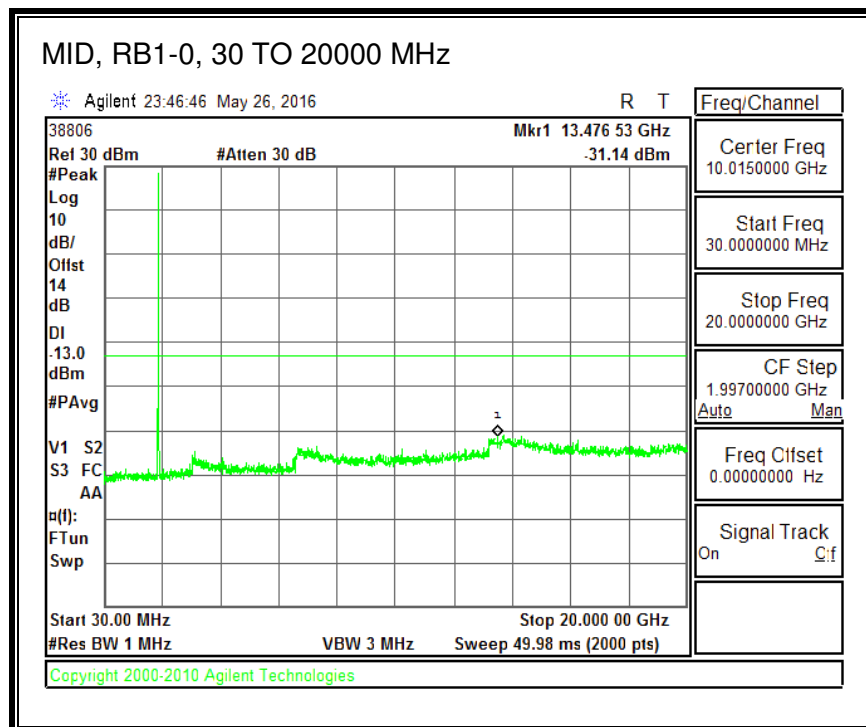
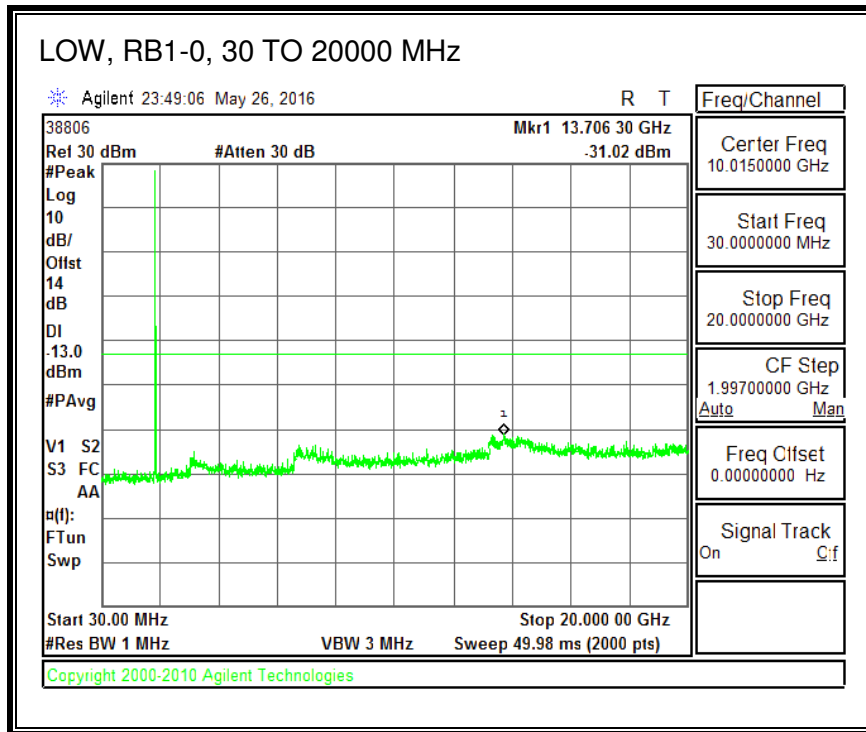


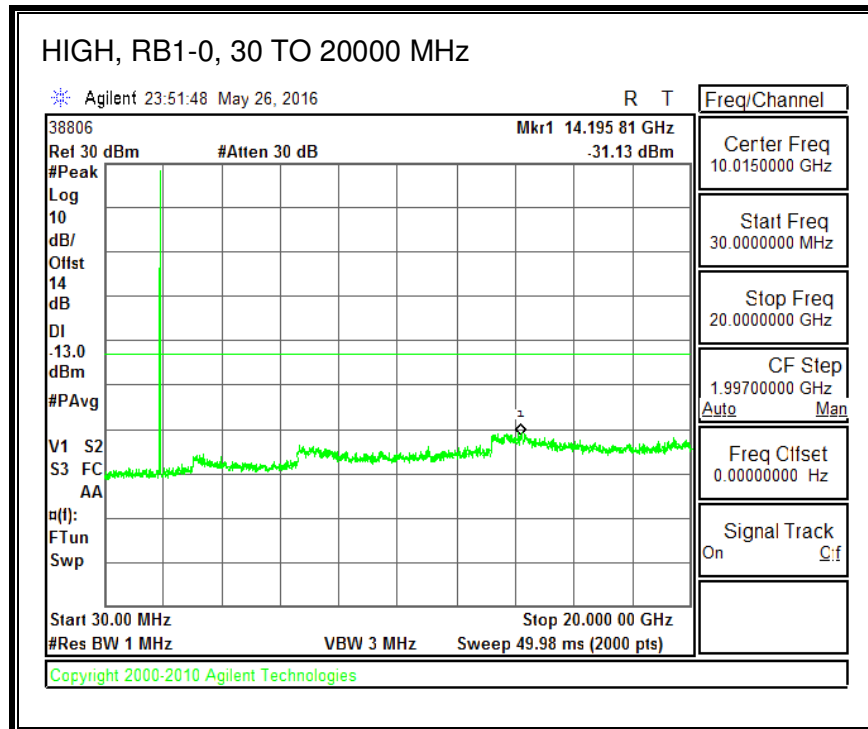
16QAM, (5.0 MHz BAND WIDTH)



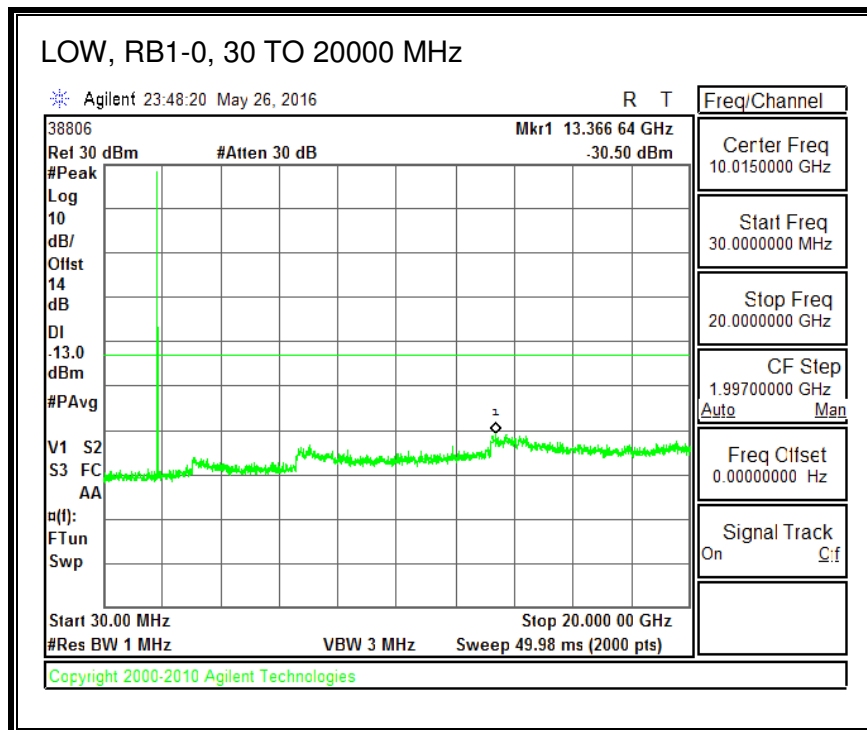


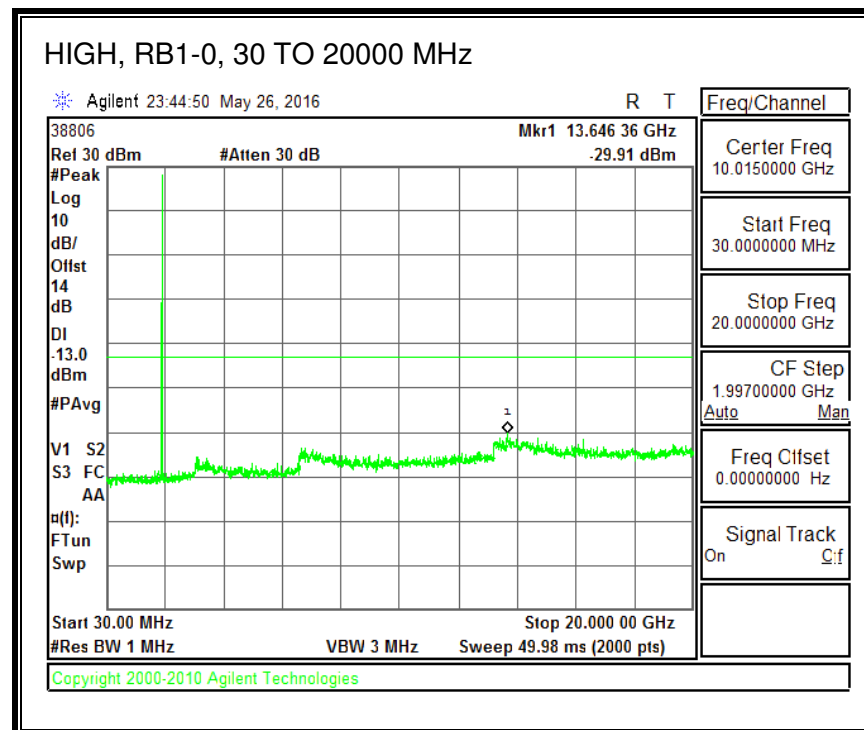
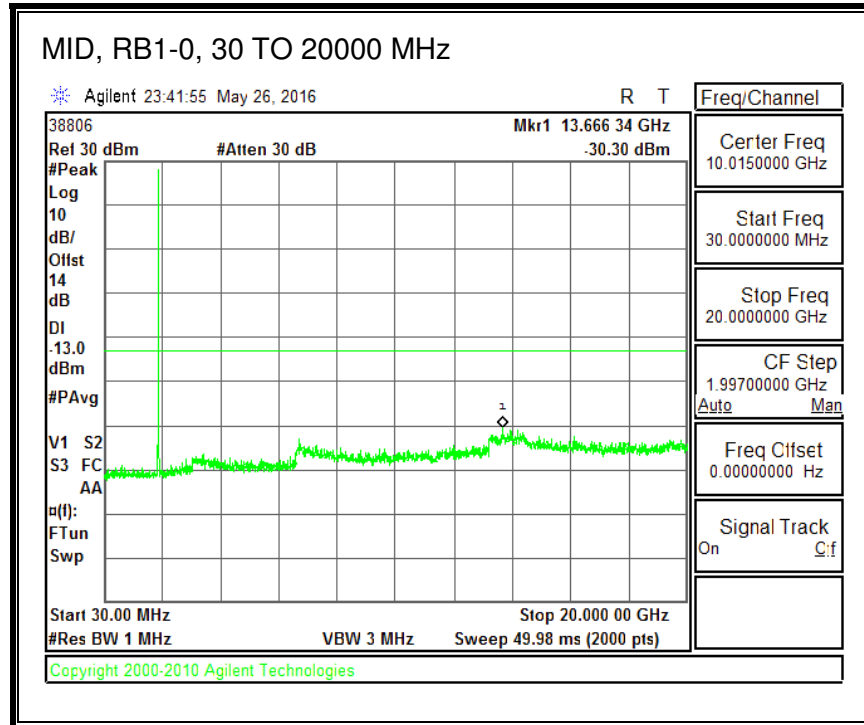
QPSK, (10.0 MHz BAND WIDTH)



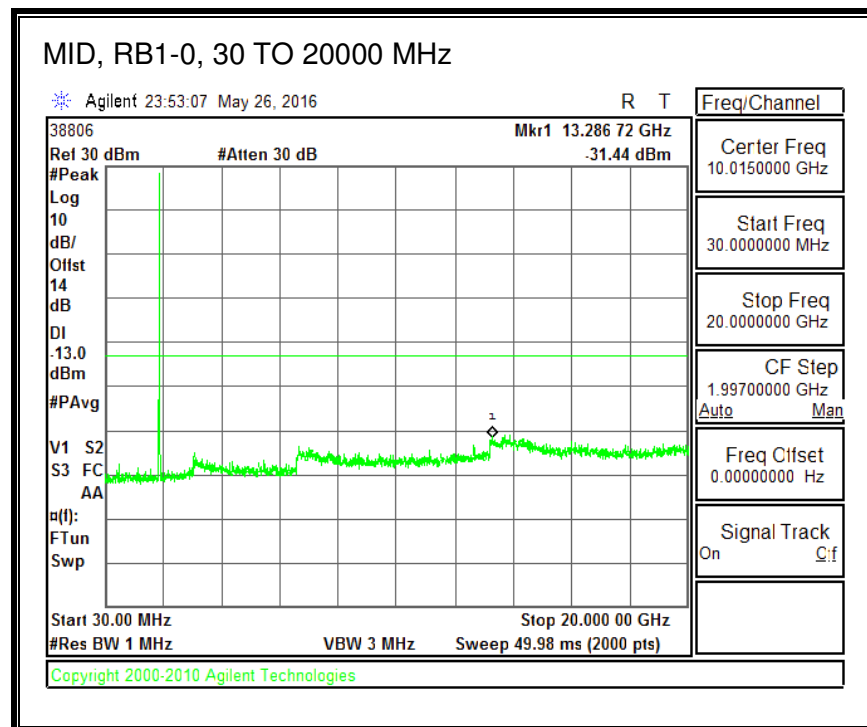
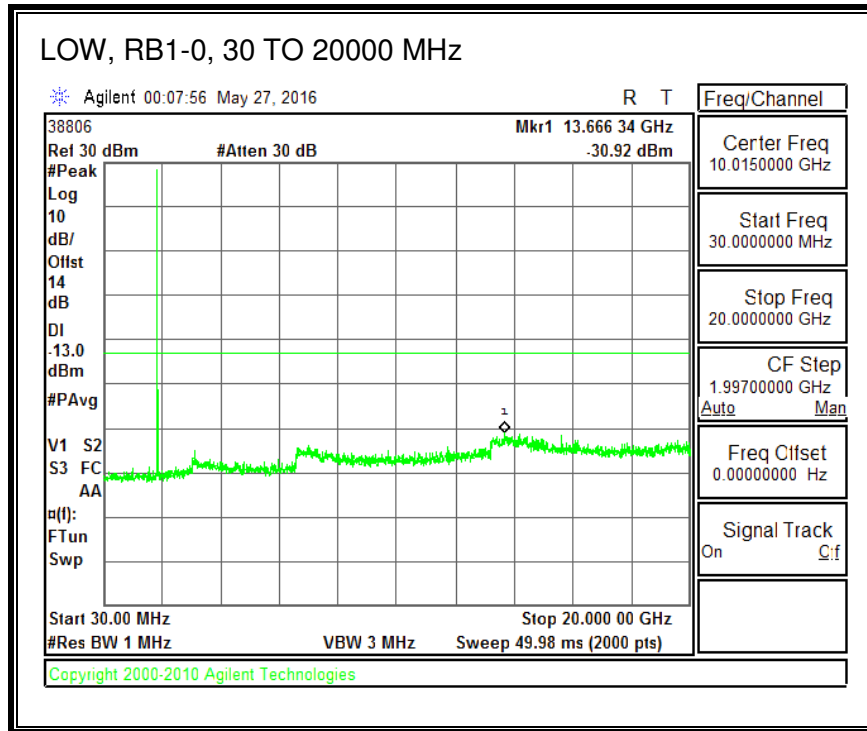


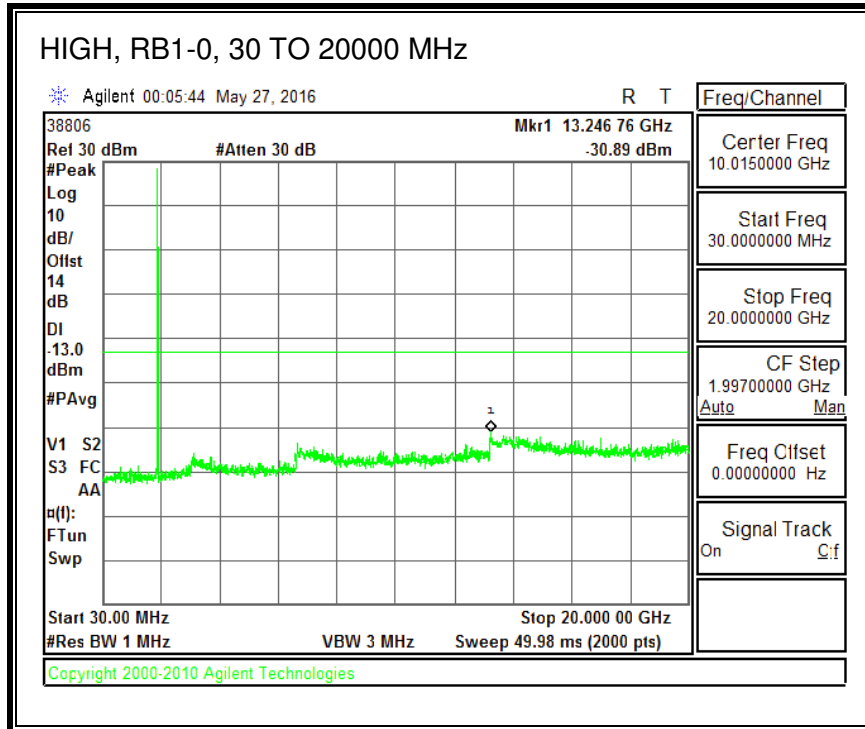
16QAM, (10.0 MHz BAND WIDTH)



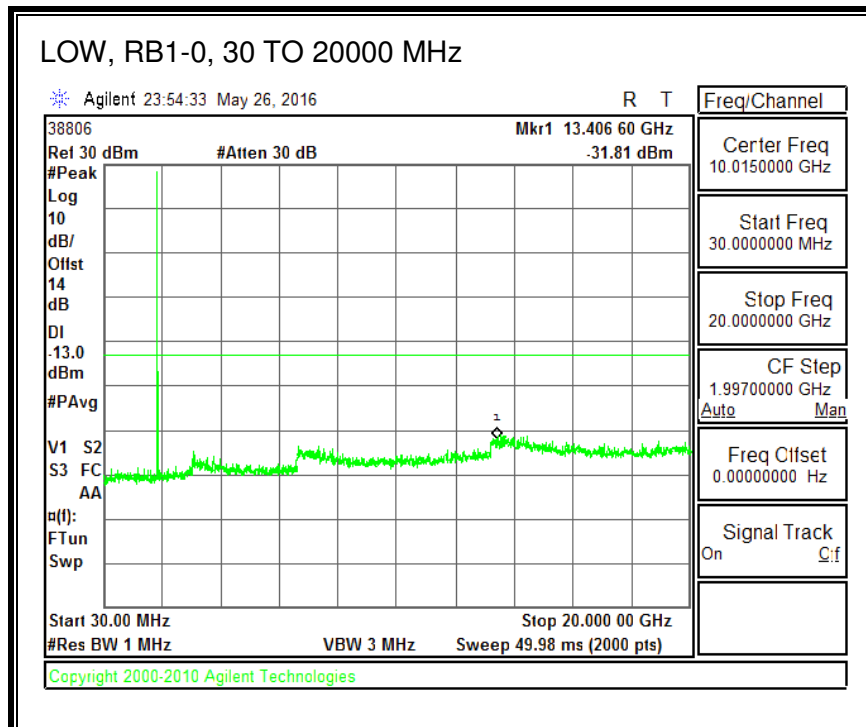


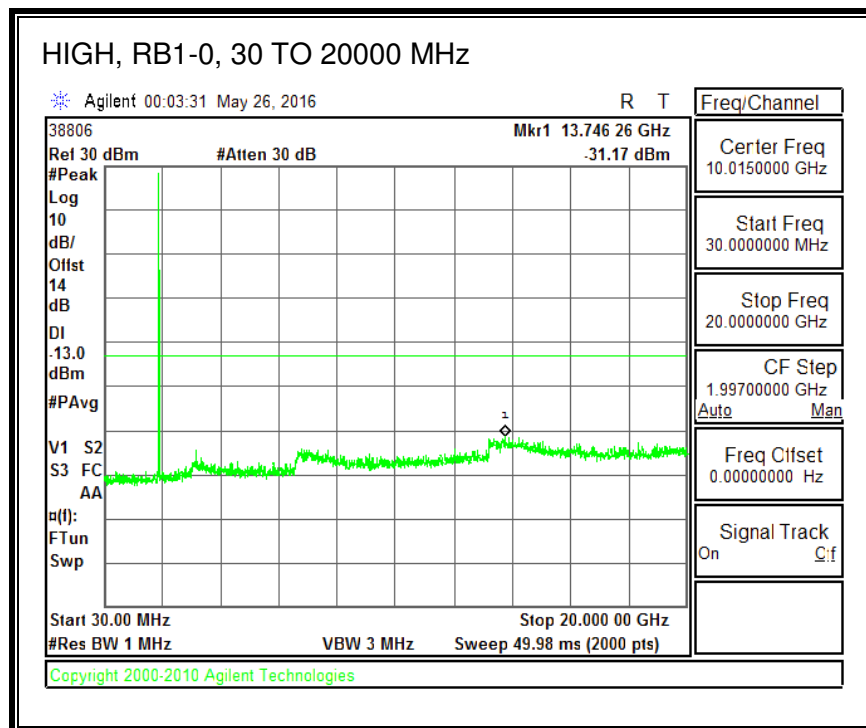
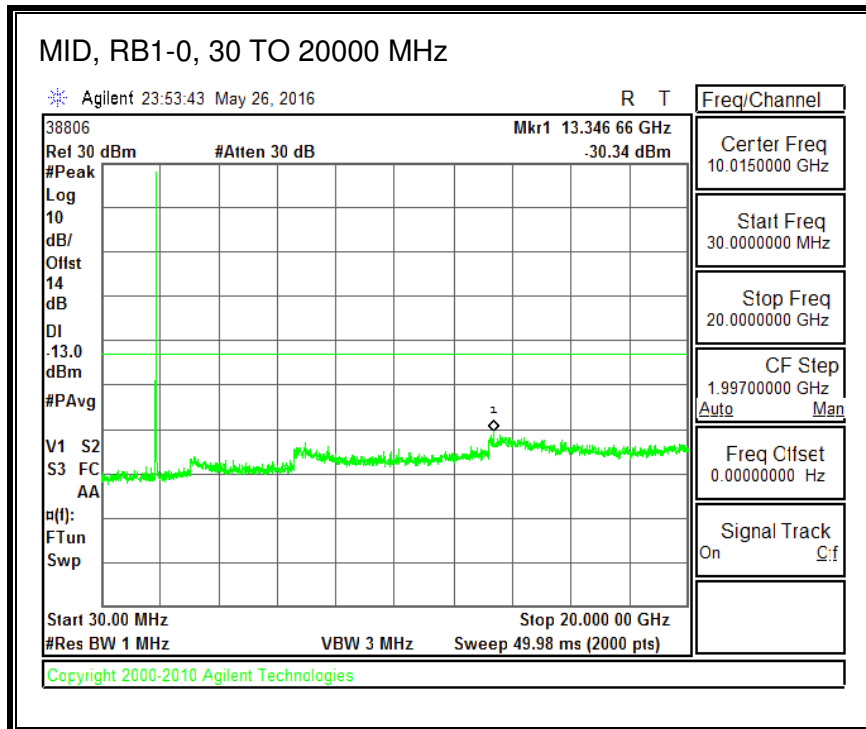
QPSK, (15.0 MHz BAND WIDTH)



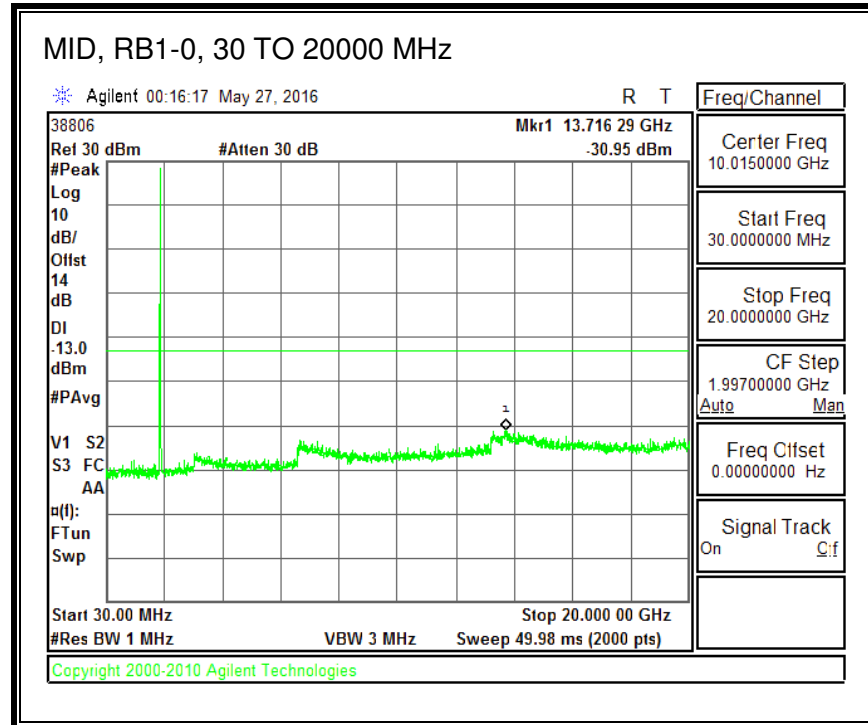
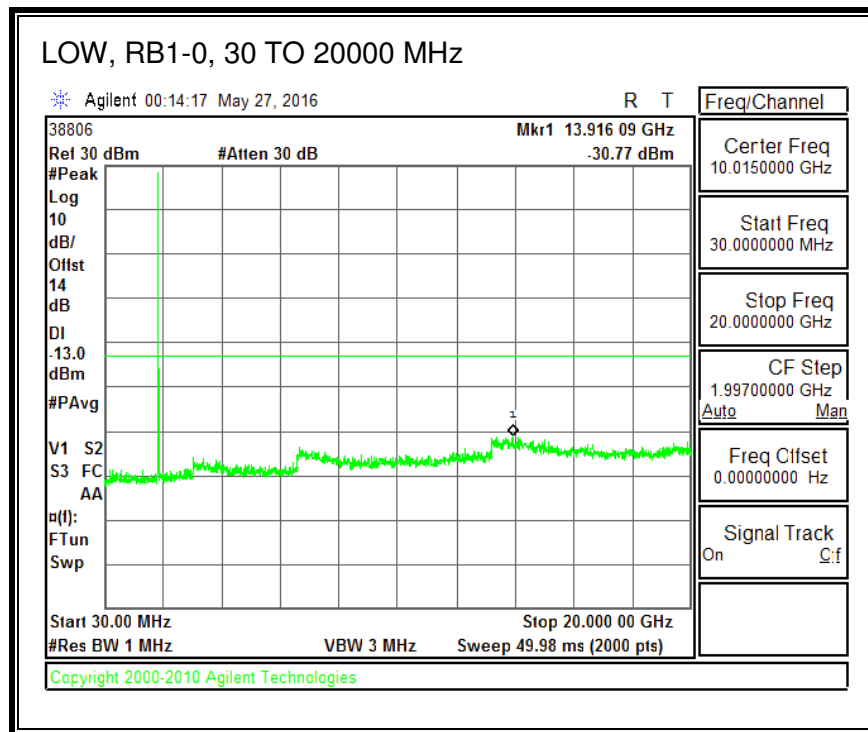


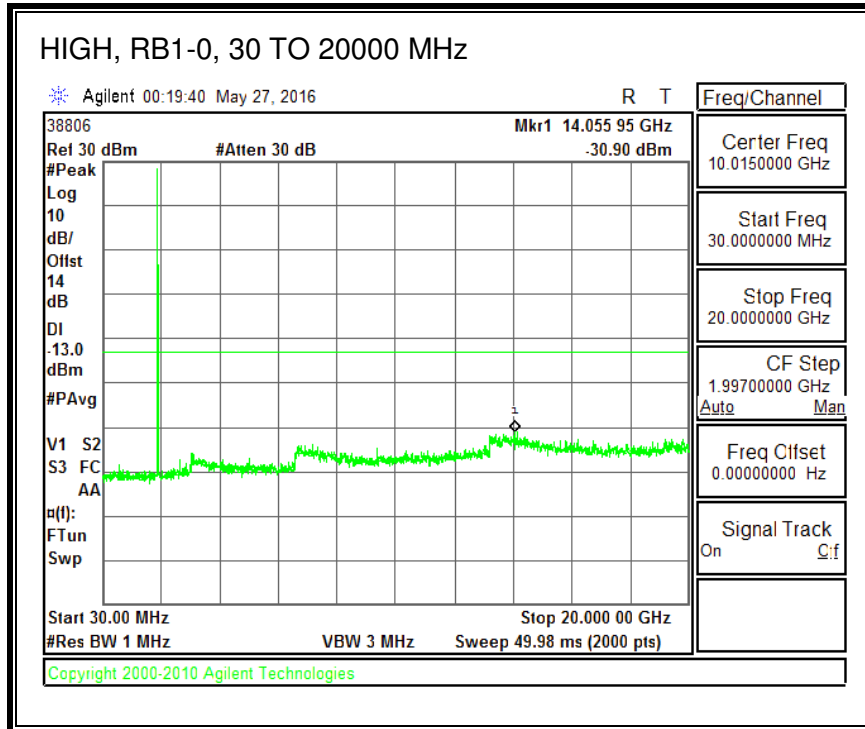
16QAM, (15.0 MHz BAND WIDTH)



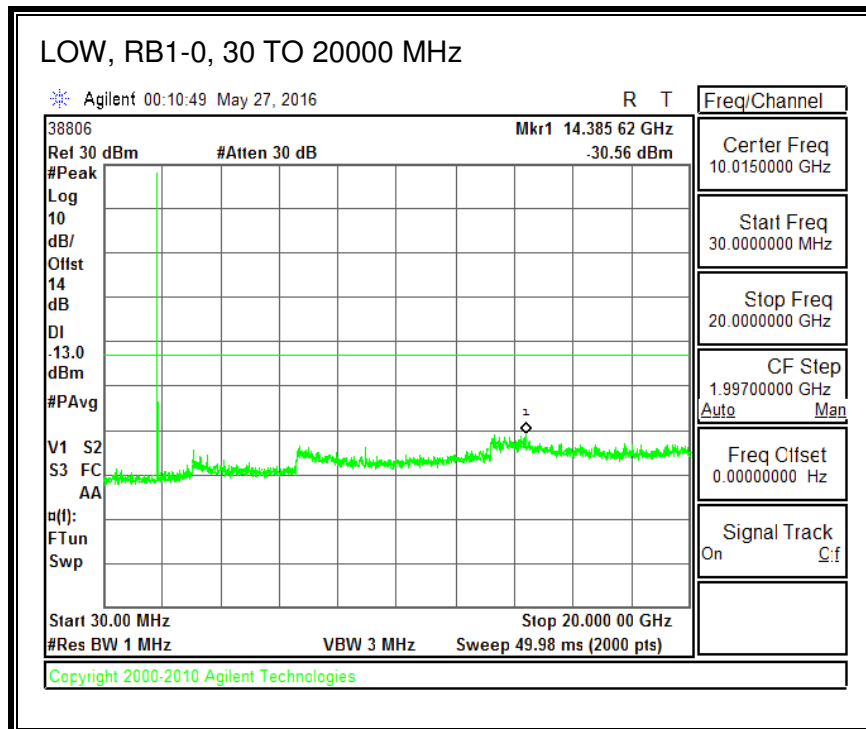


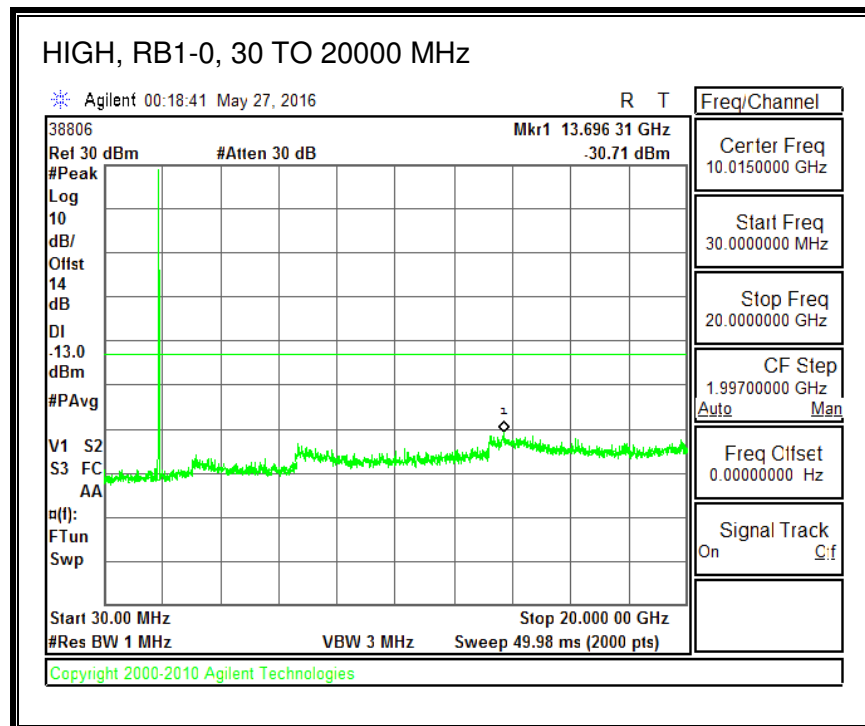
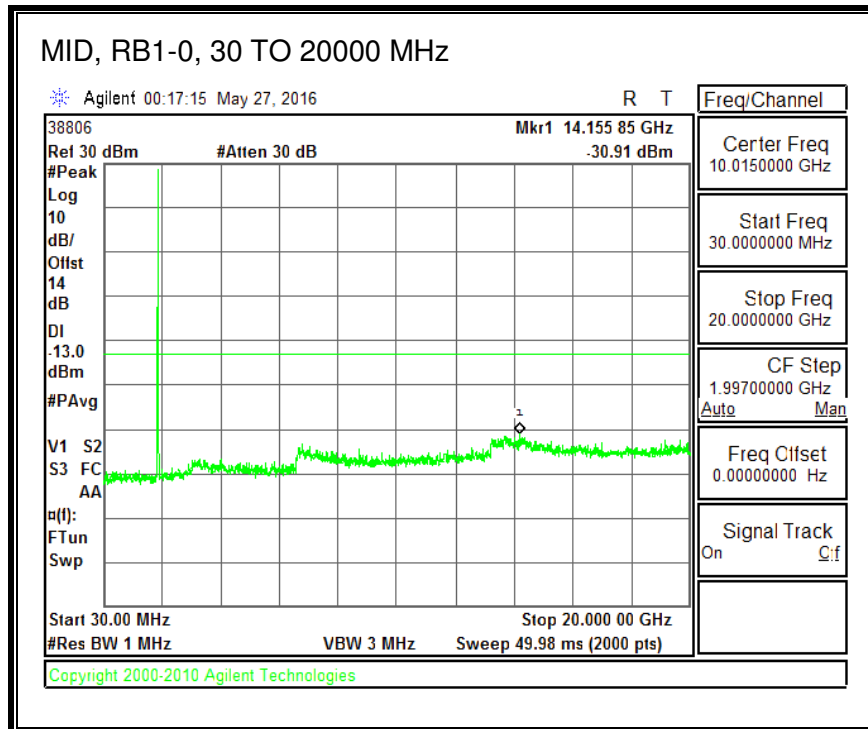
QPSK, (20.0 MHz BAND WIDTH)





16QAM, (20.0 MHz BAND WIDTH)

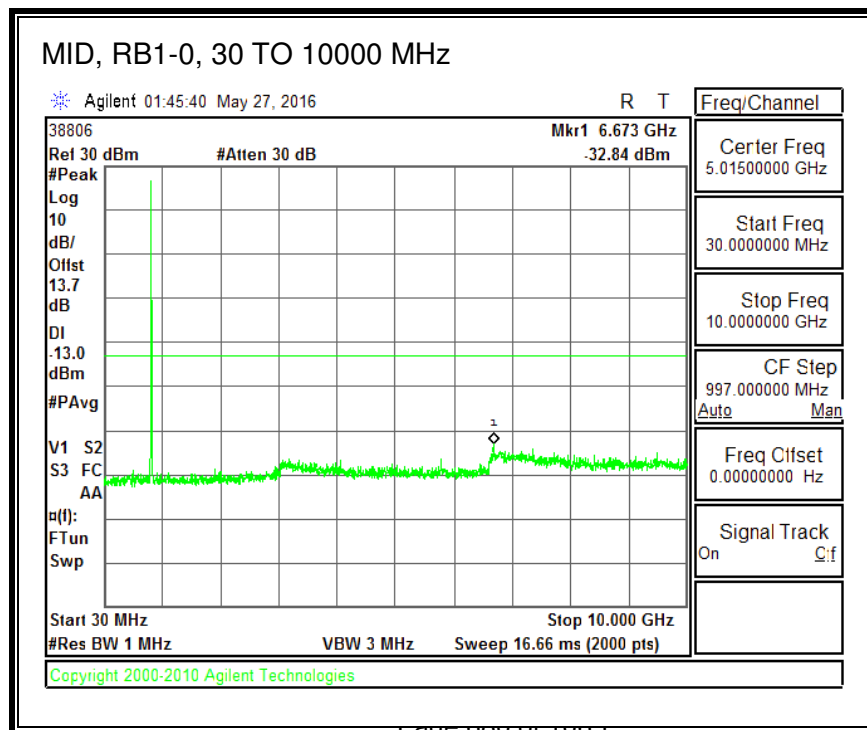
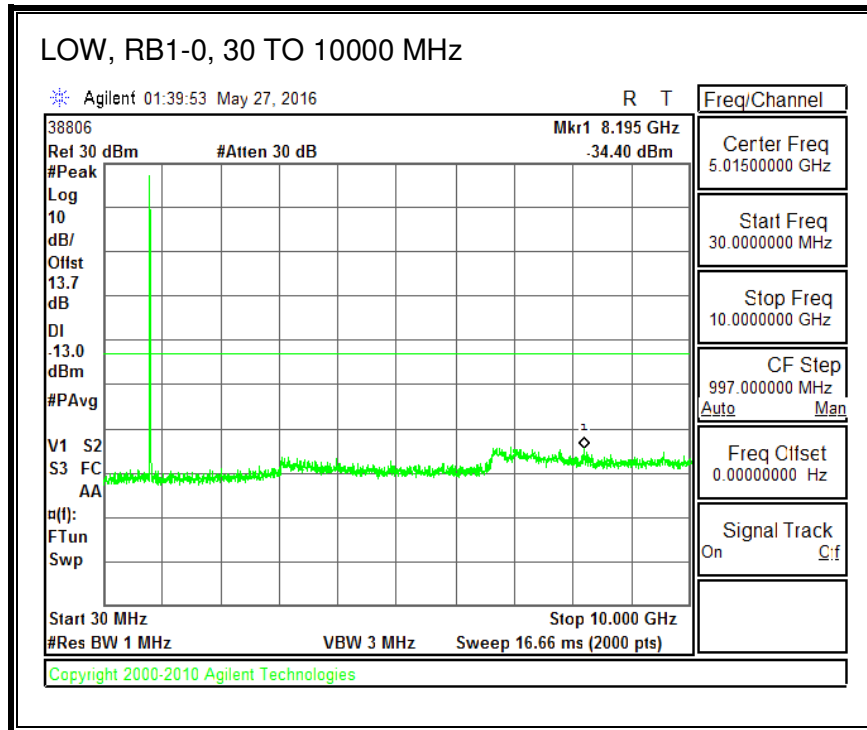


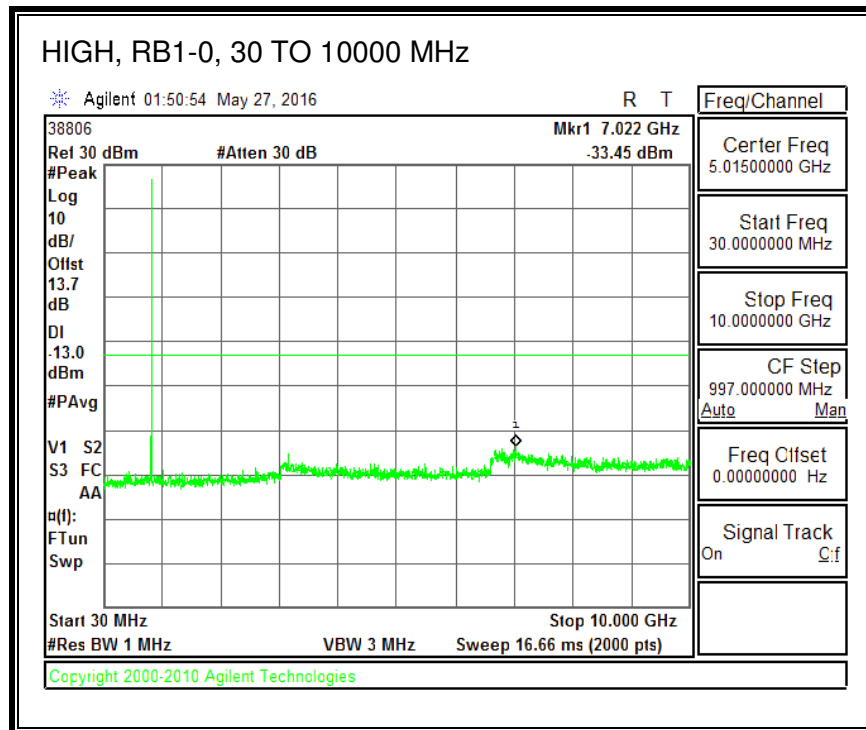


8.3.9. LTE BAND 26

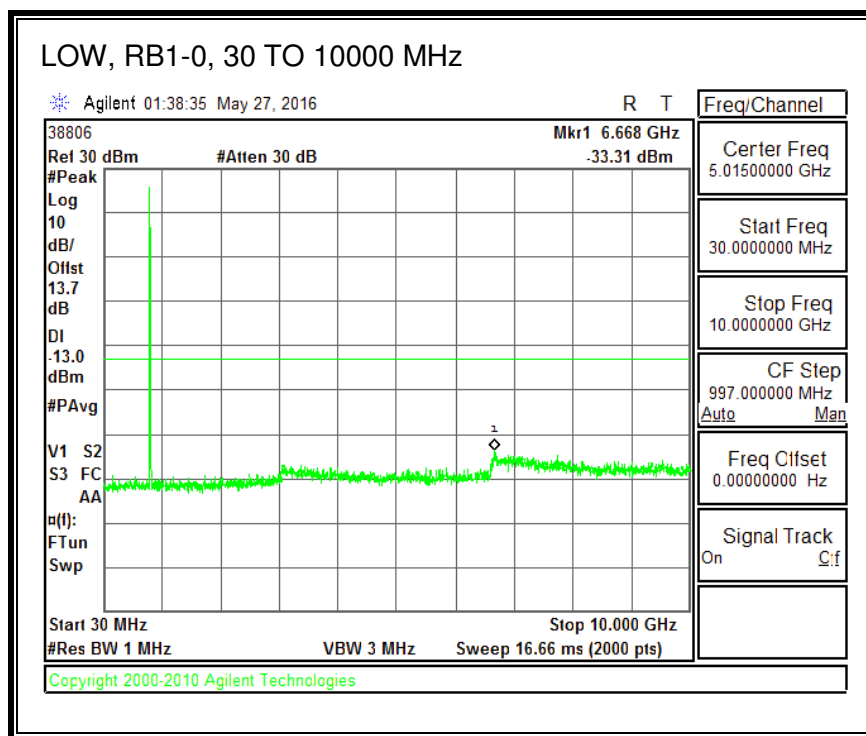
ID:	39472	Date:	5/27/16
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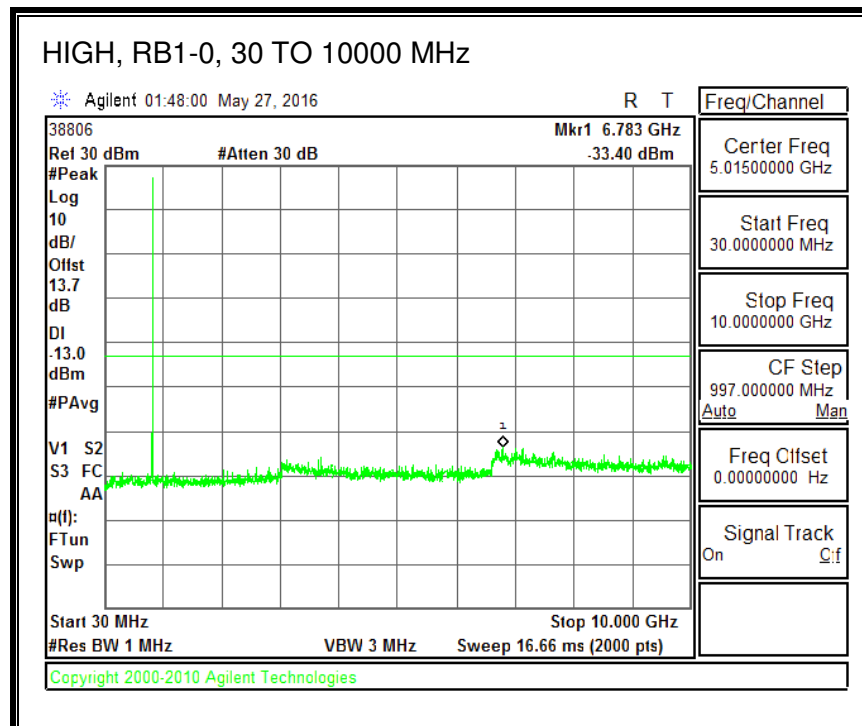
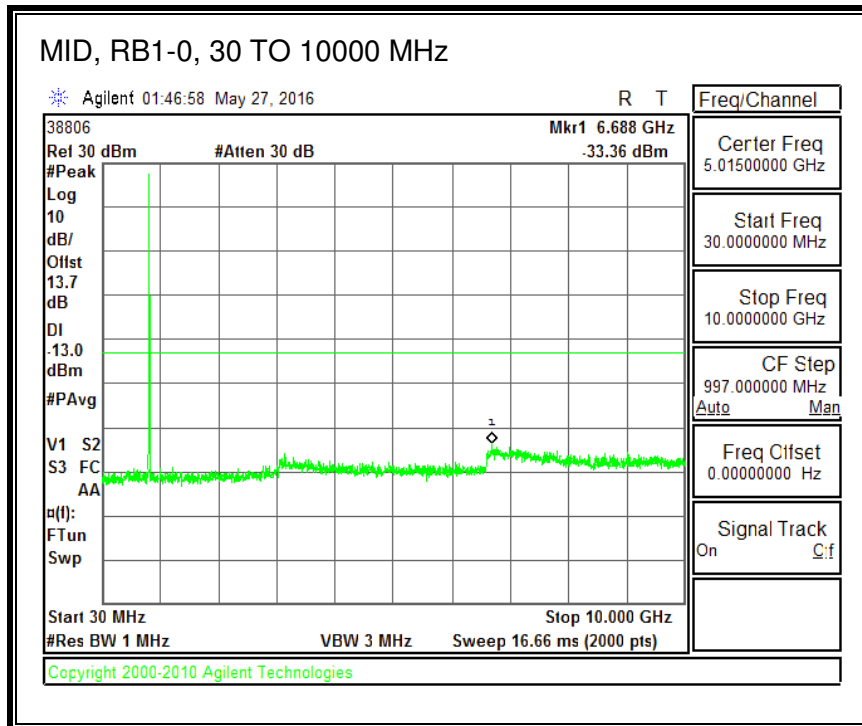
QPSK, (1.4 MHz BAND WIDTH)



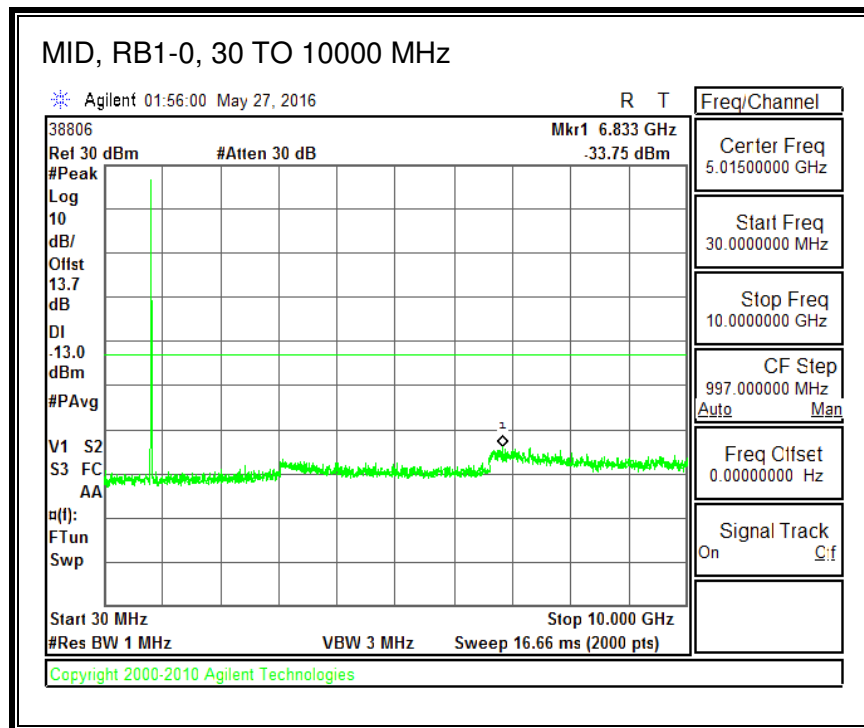
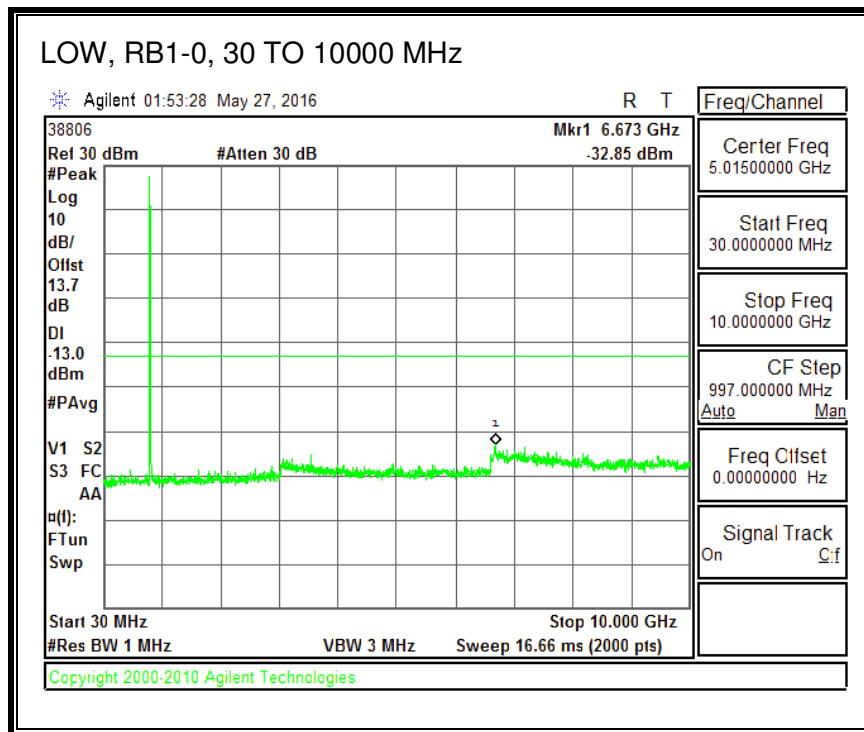


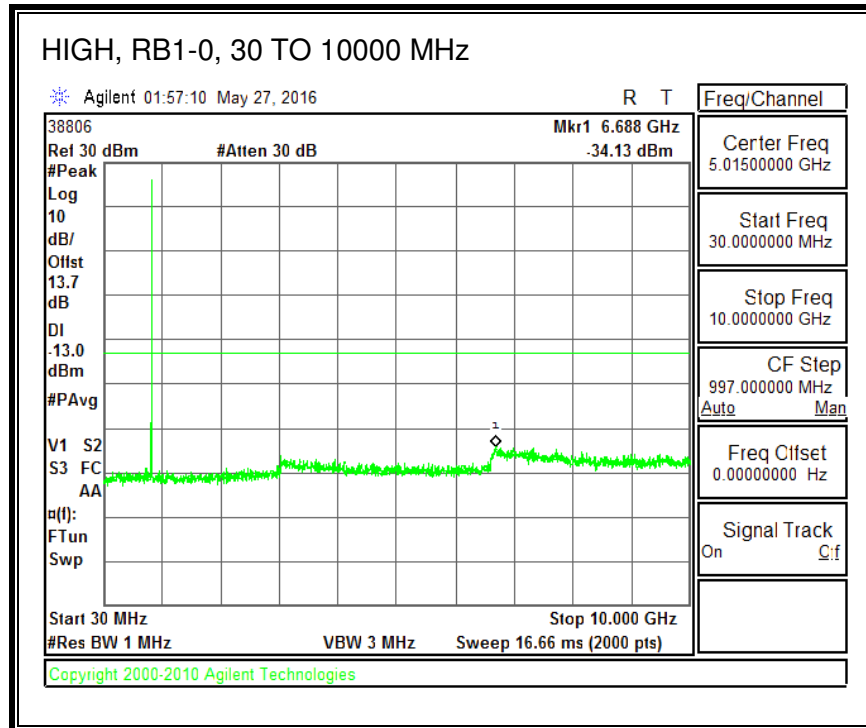
16QAM, (1.4 MHz BAND WIDTH)



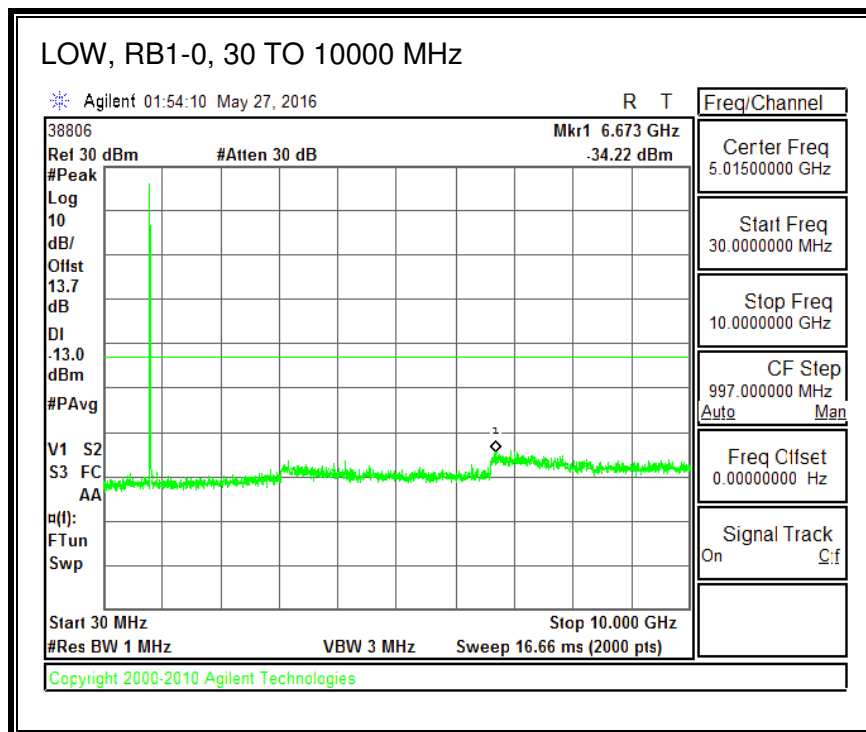


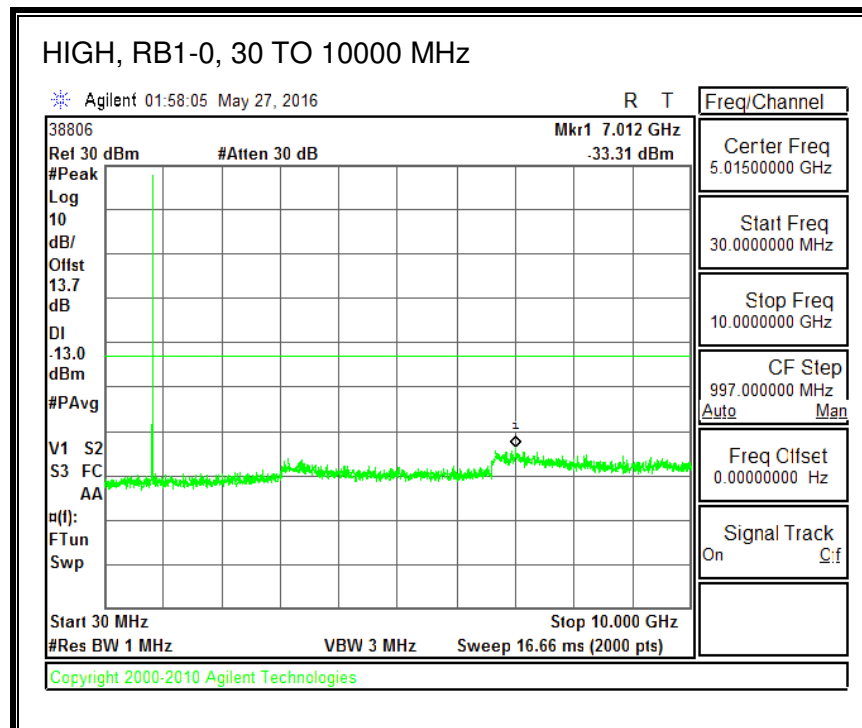
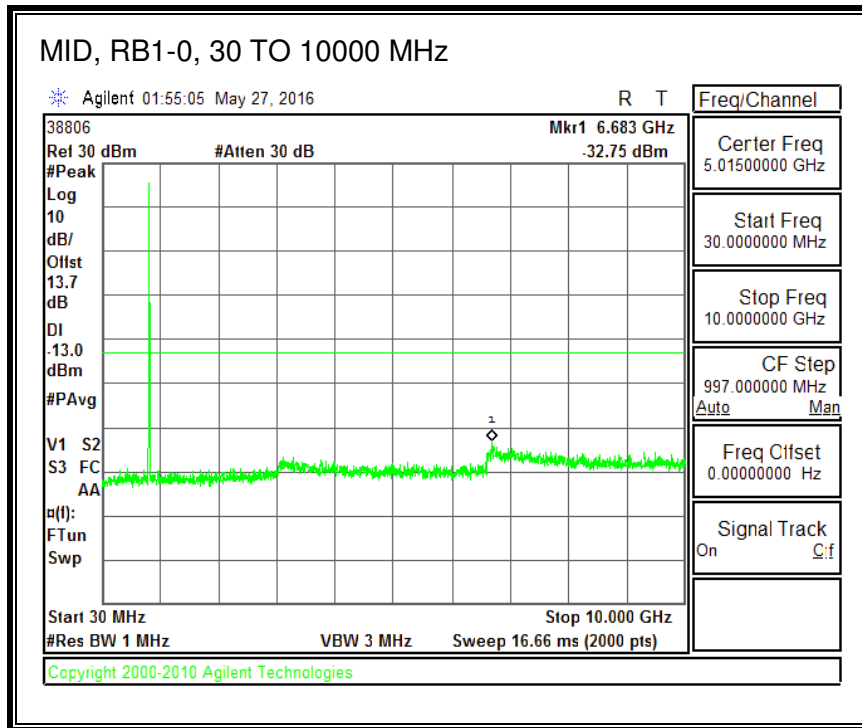
QPSK, (3.0 MHz BAND WIDTH)



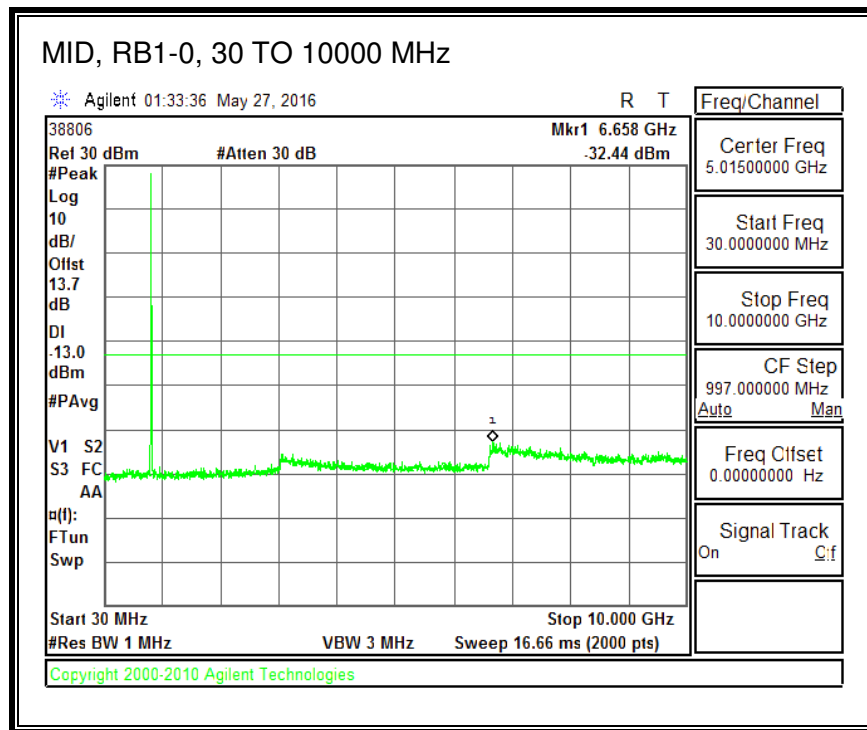
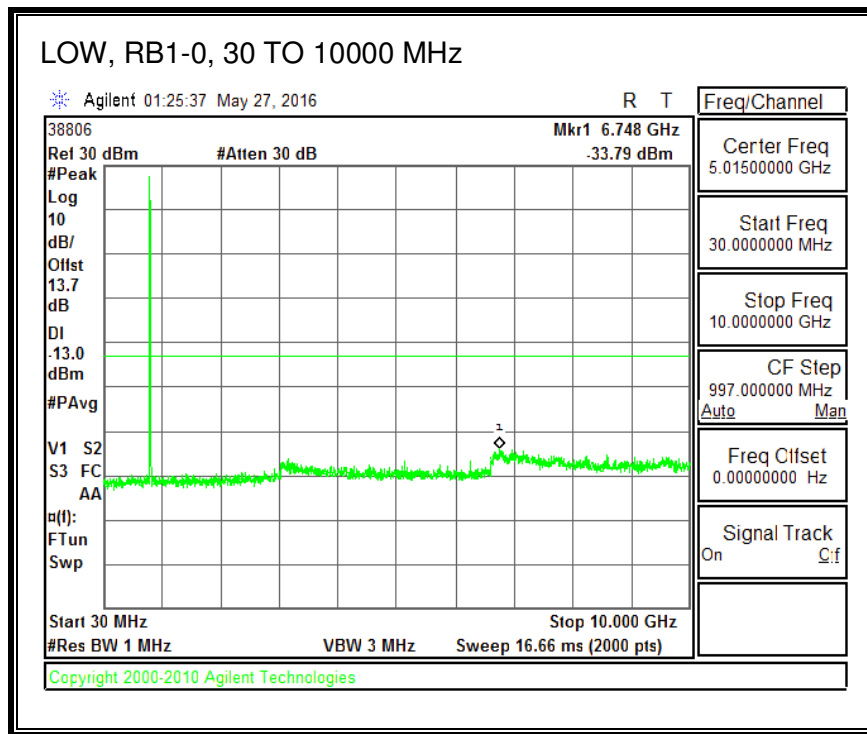


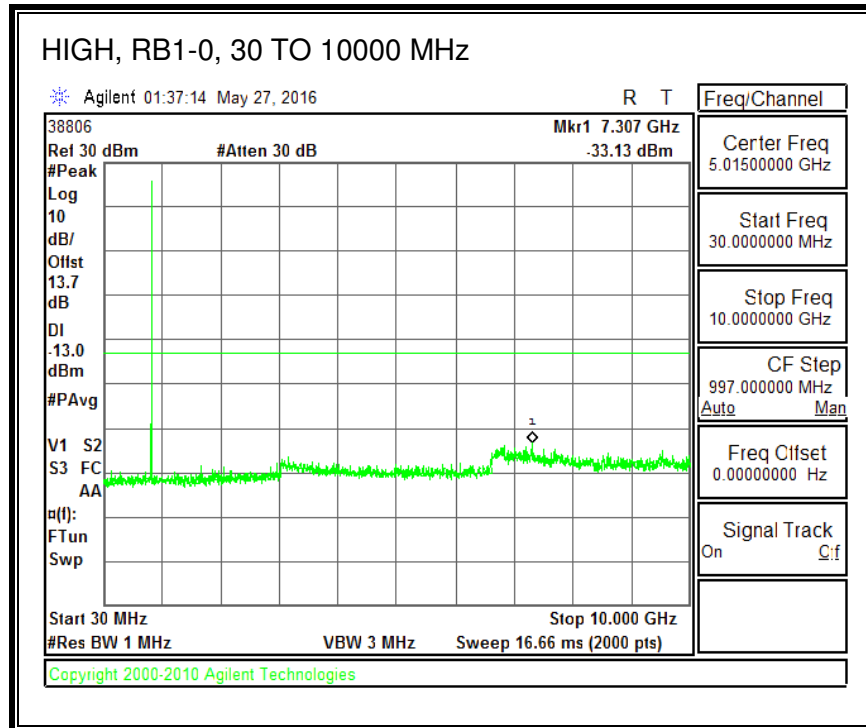
16QAM, (3.0 MHz BAND WIDTH)



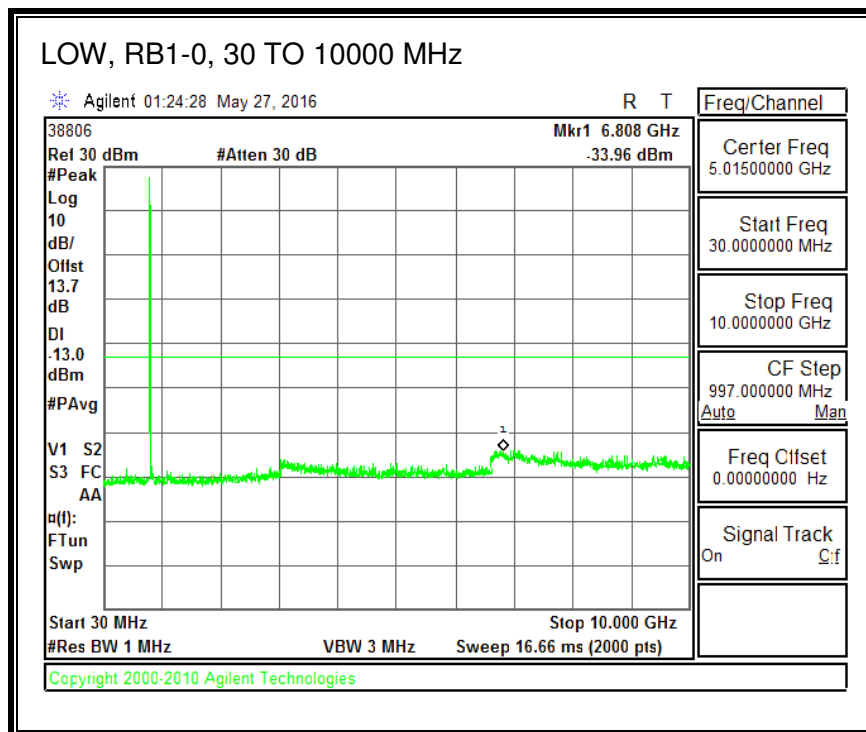


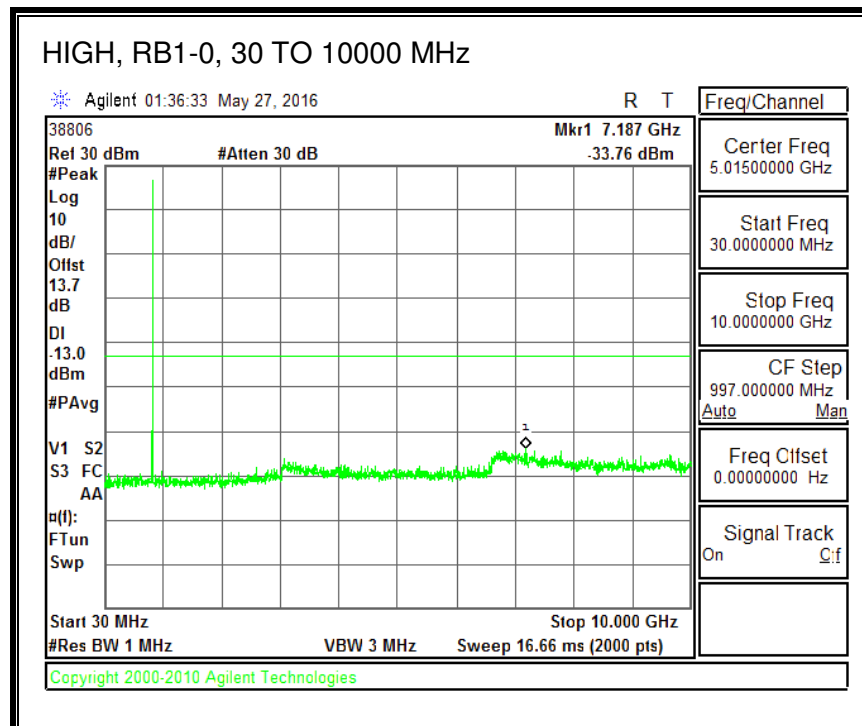
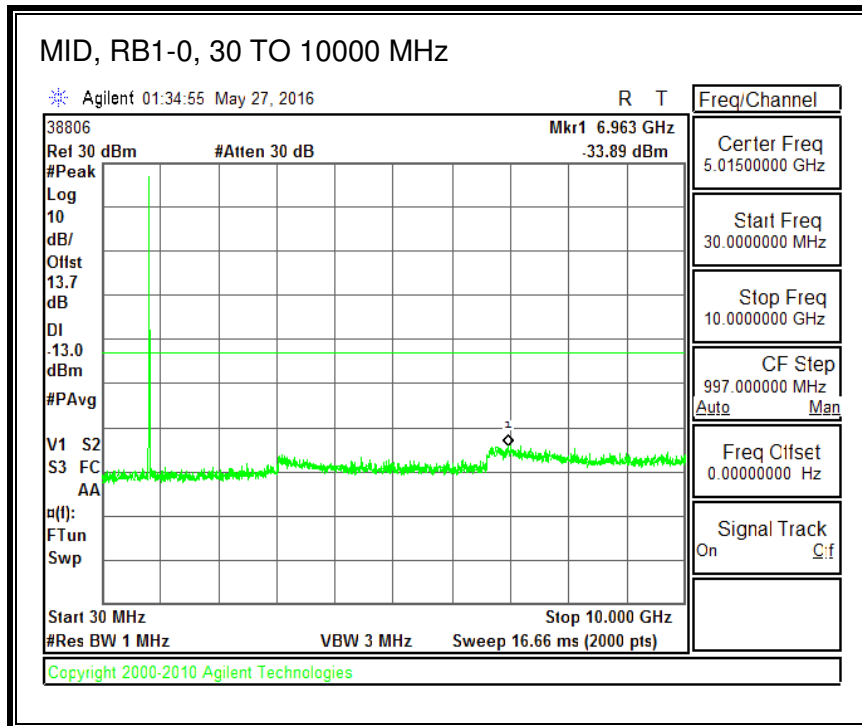
QPSK, (5.0 MHz BAND WIDTH)



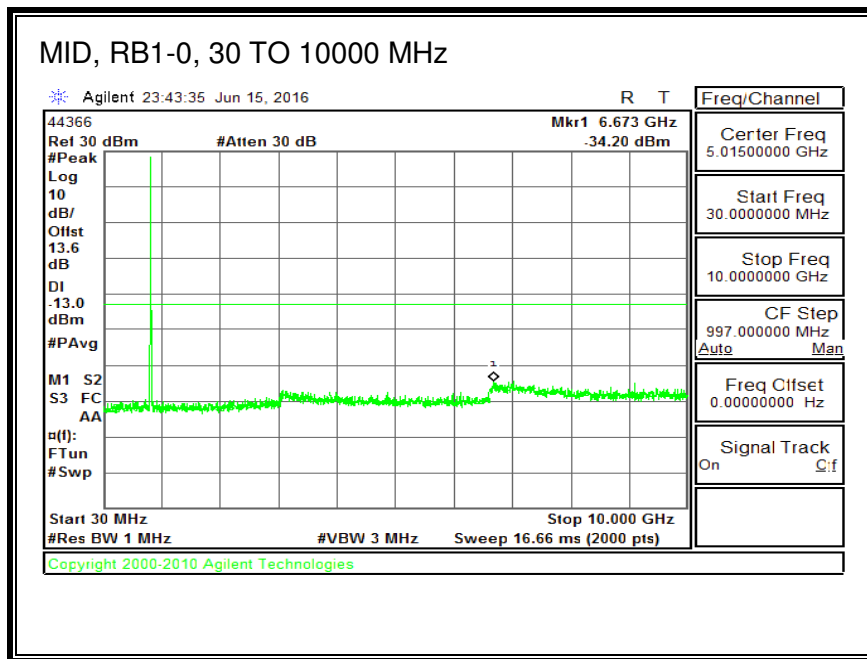


16QAM, (5.0 MHz BAND WIDTH)

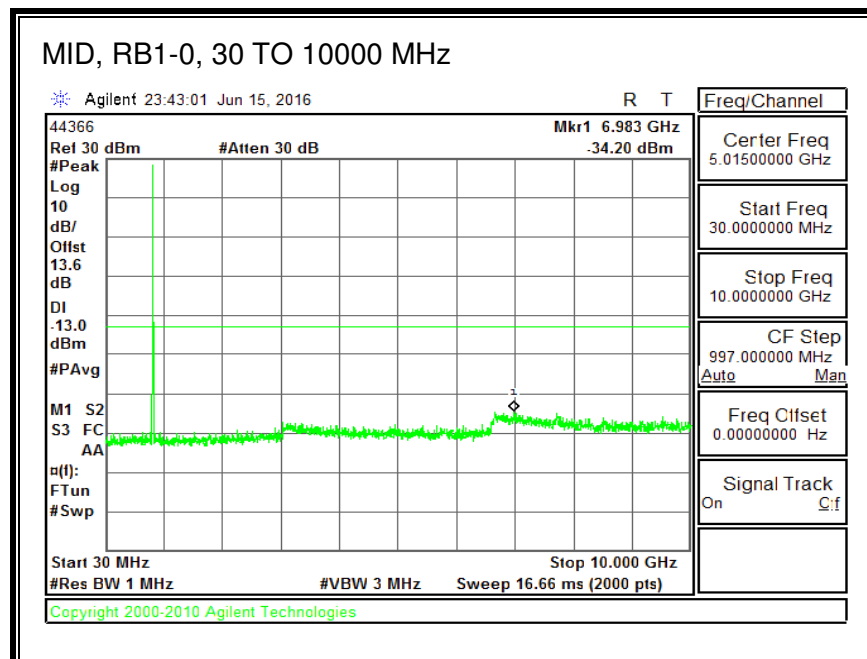




QPSK, (10.0 MHz BAND WIDTH)



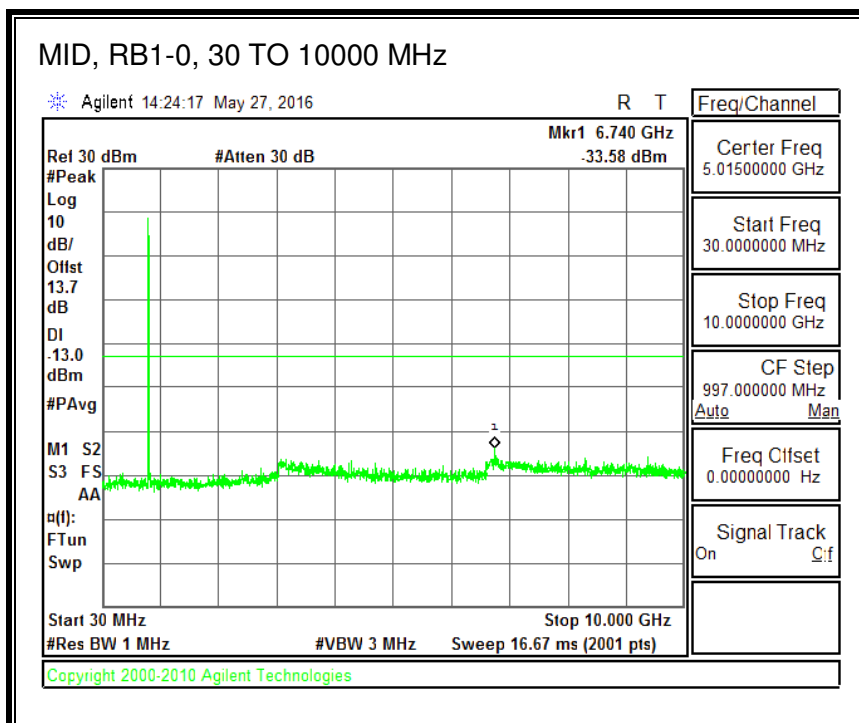
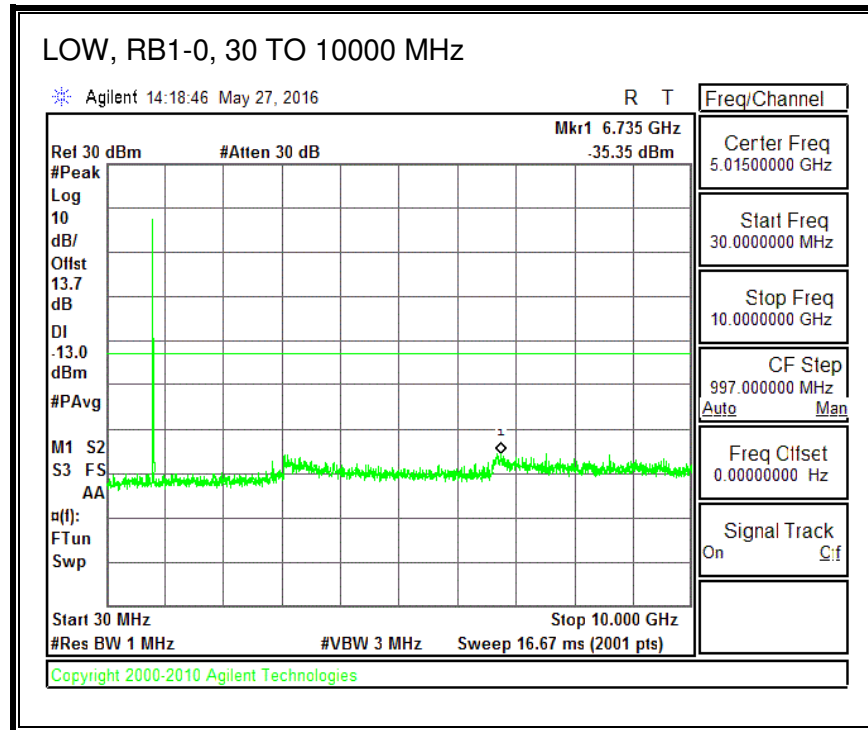
16QAM, (10.0 MHz BAND WIDTH)

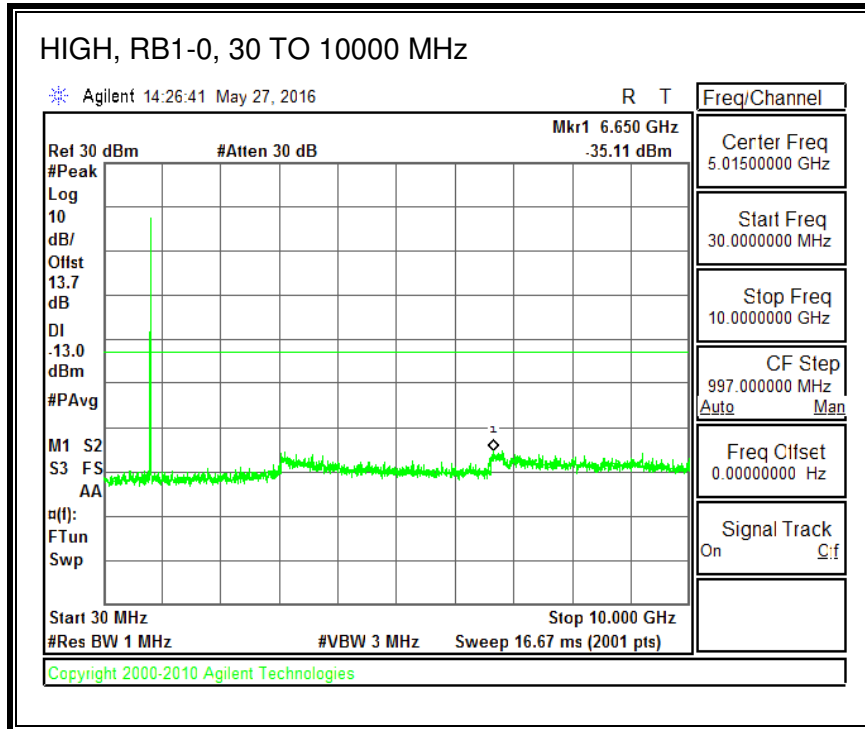


8.3.10. LTE BAND 27

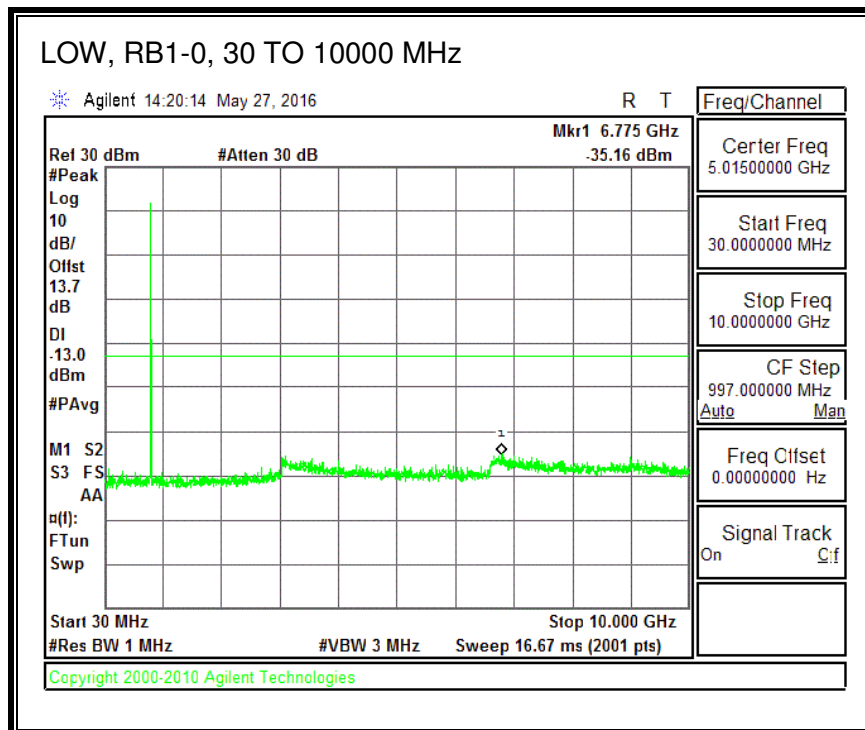
ID:	39472	Date:	5/27/16
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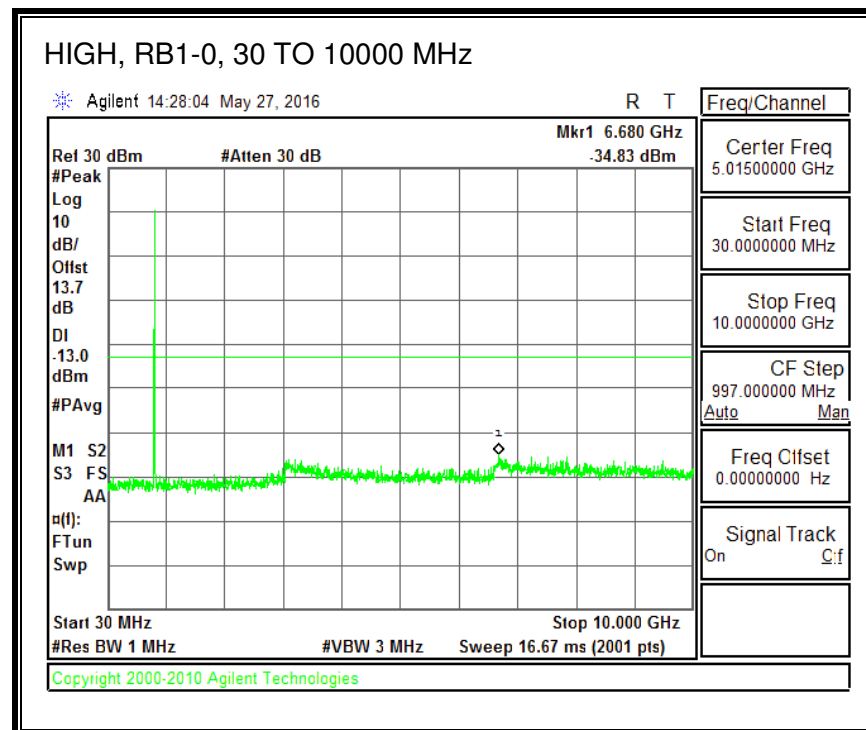
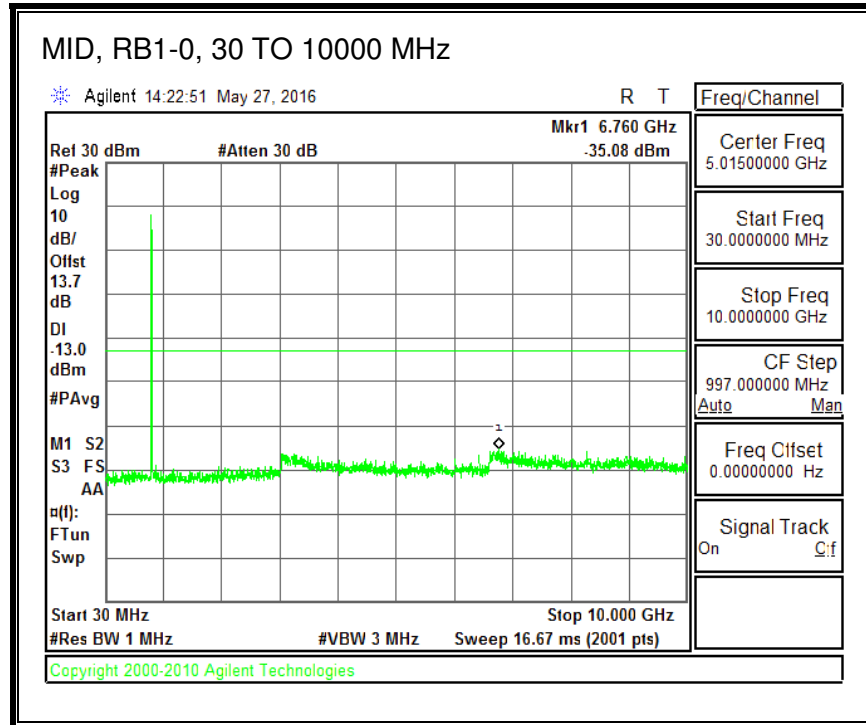
QPSK, (1.4 MHz BAND WIDTH)



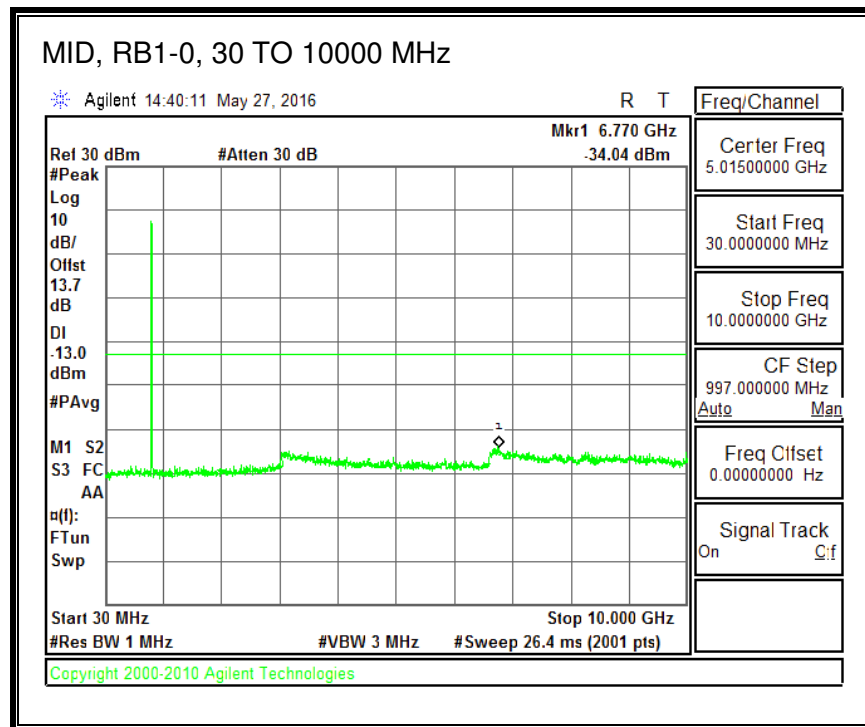
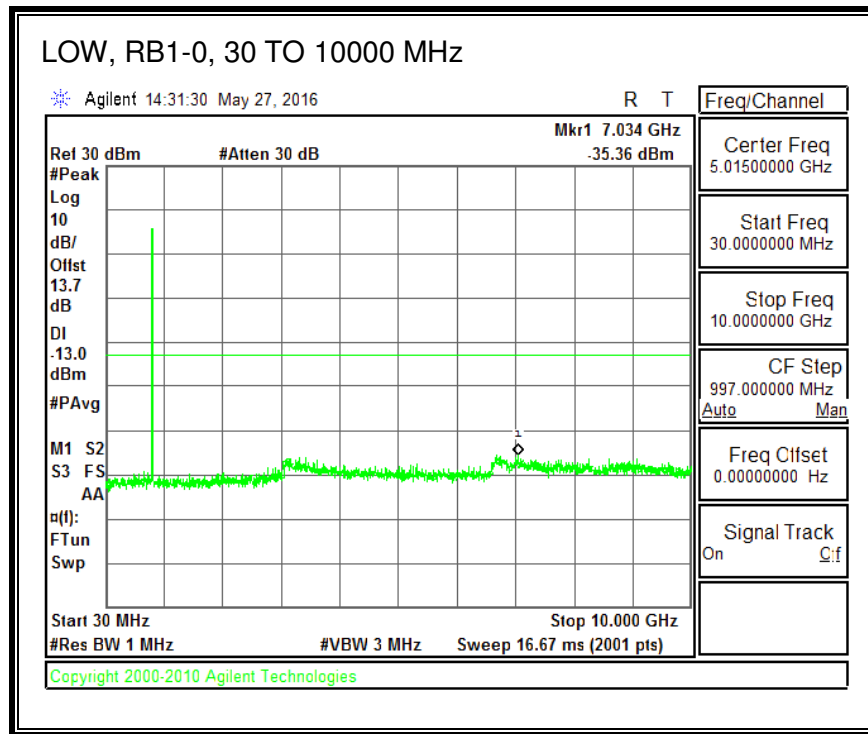


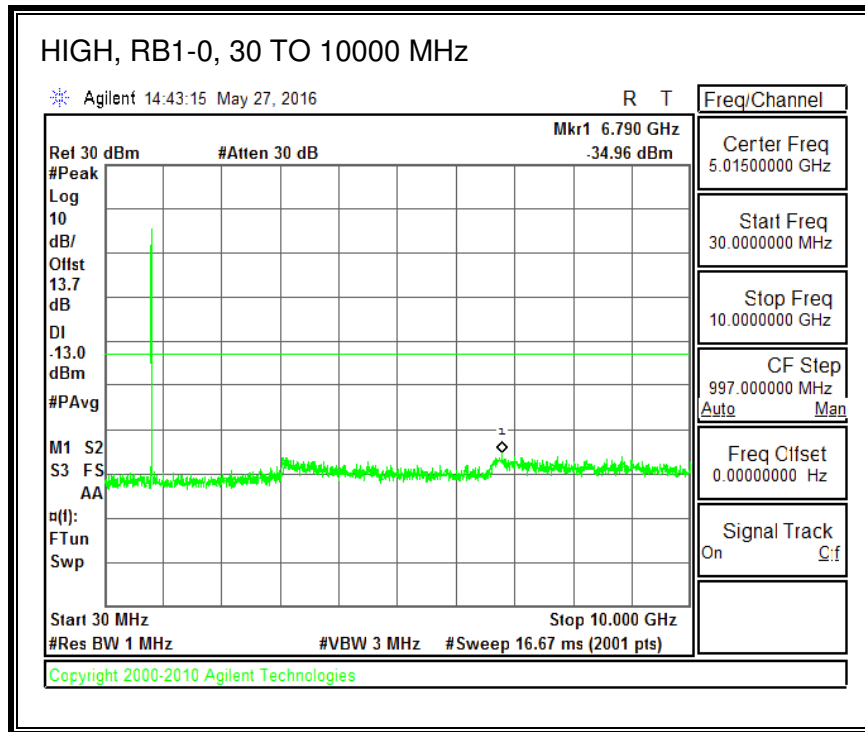
16QAM, (1.4 MHz BAND WIDTH)



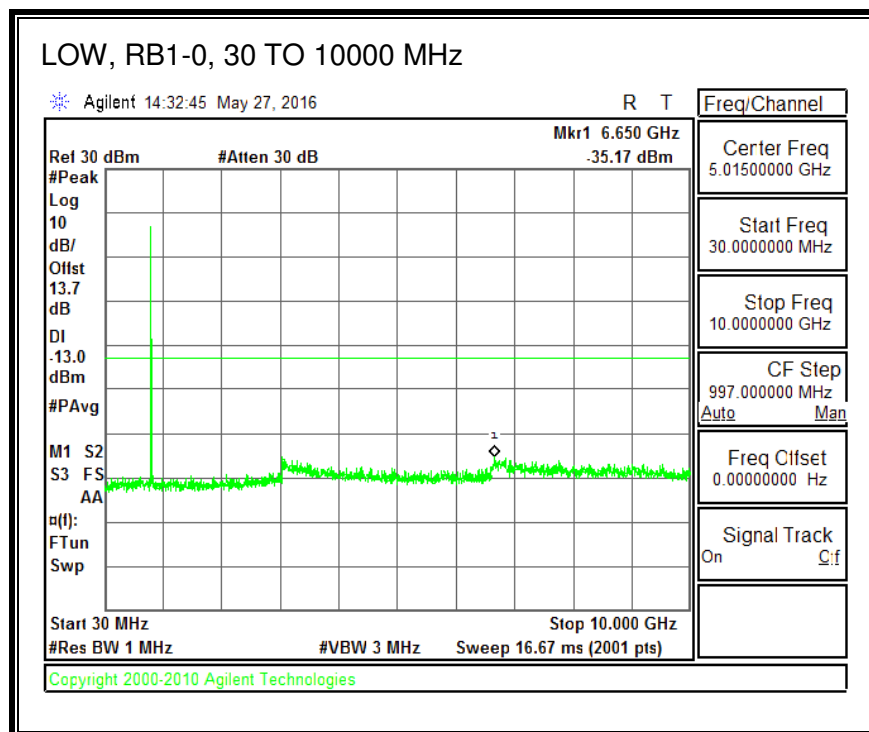


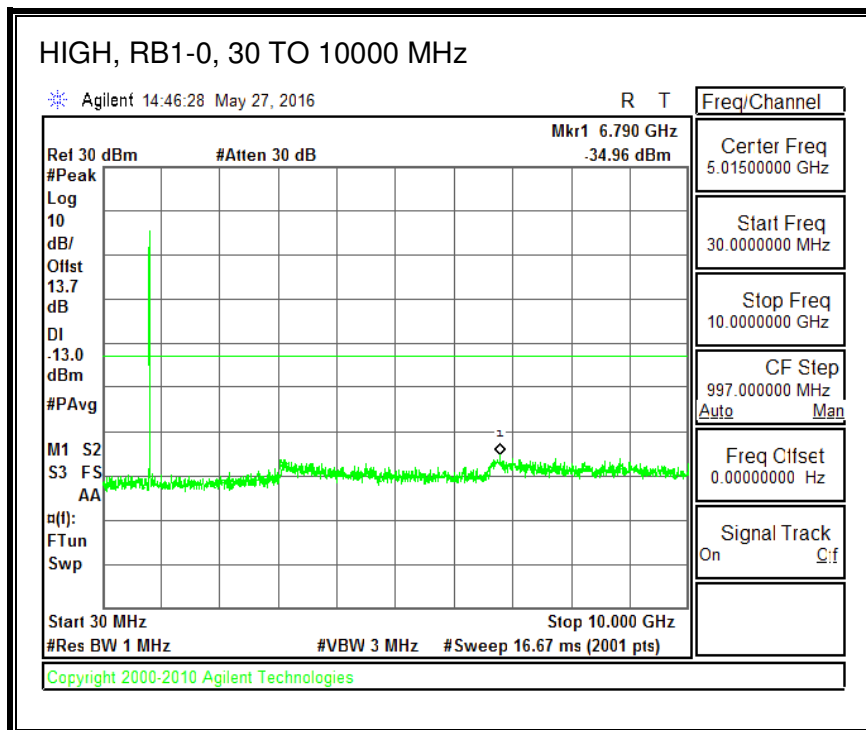
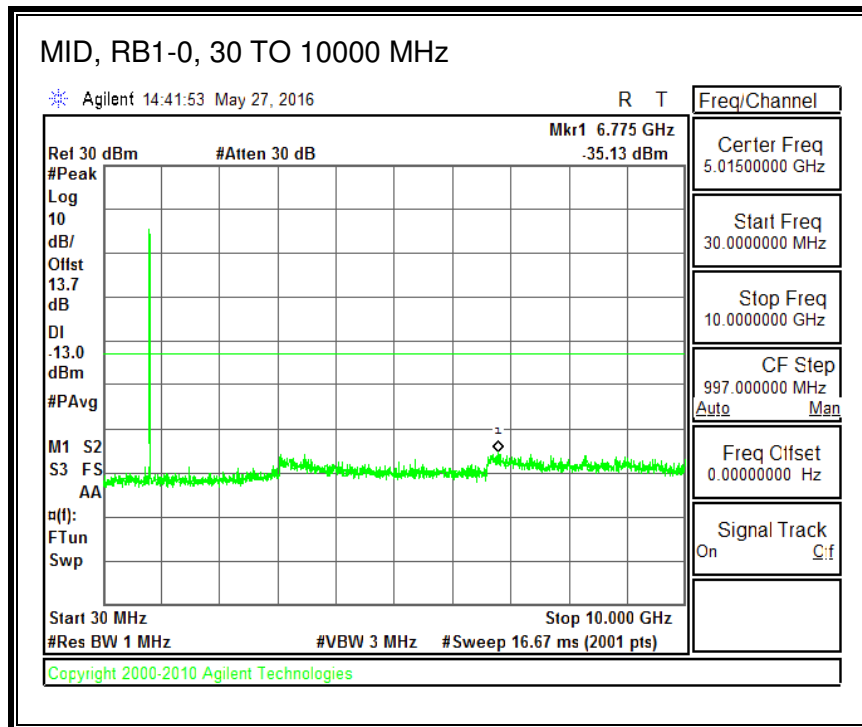
QPSK, (3.0 MHz BAND WIDTH)



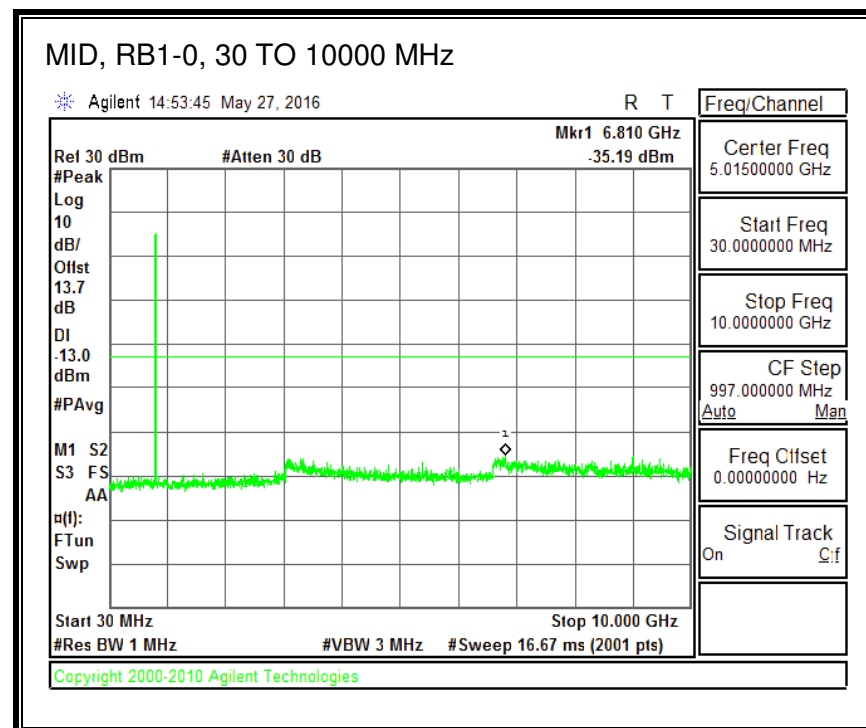
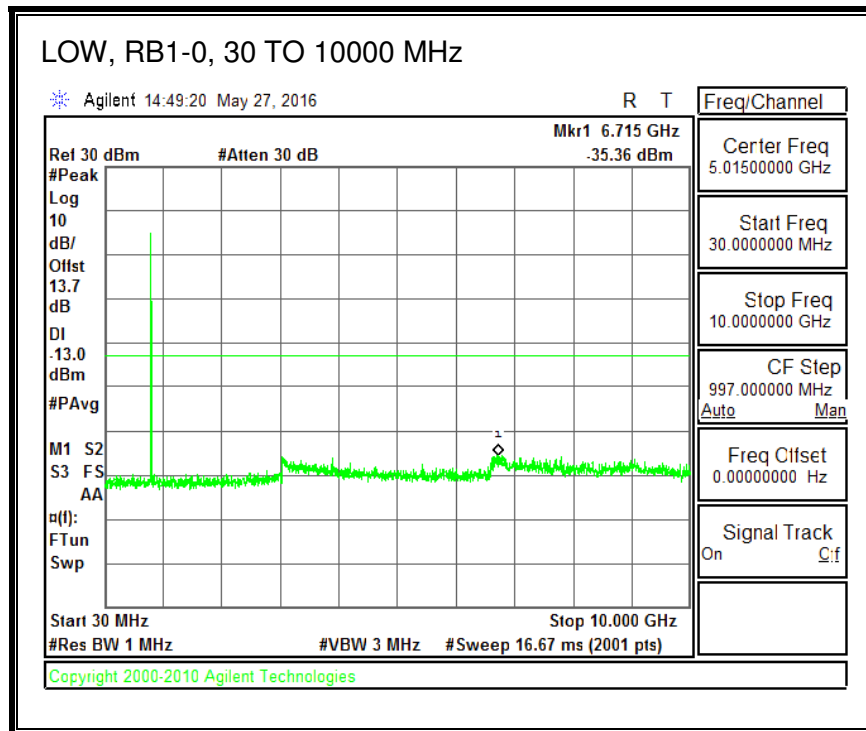


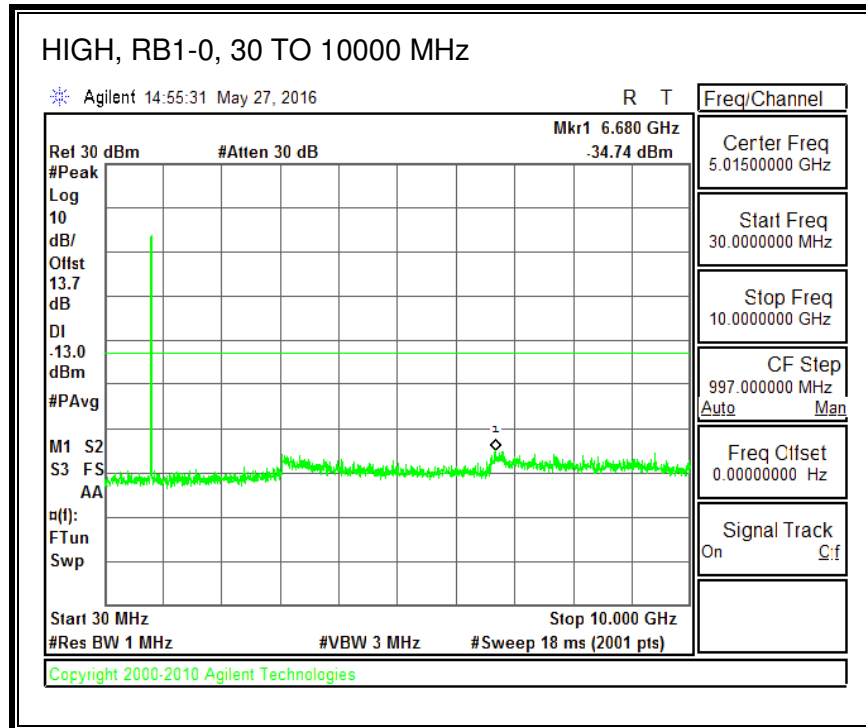
16QAM, (3.0 MHz BAND WIDTH)



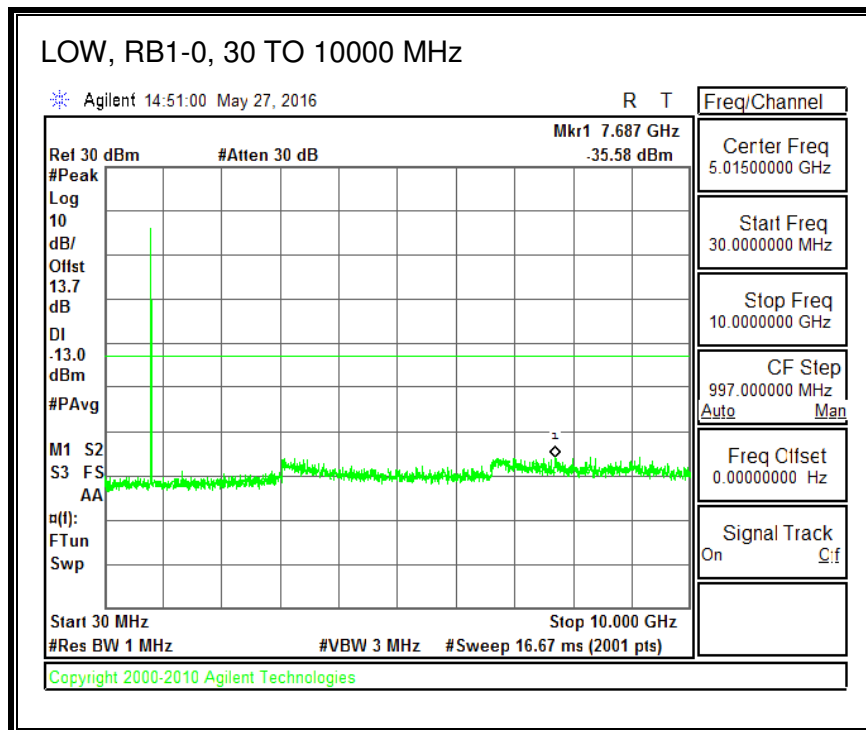


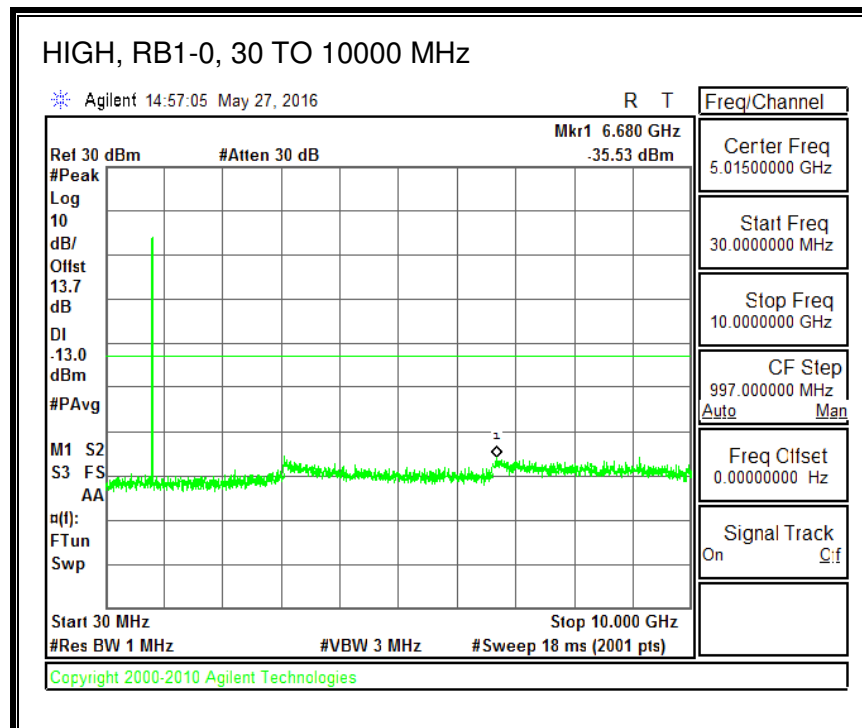
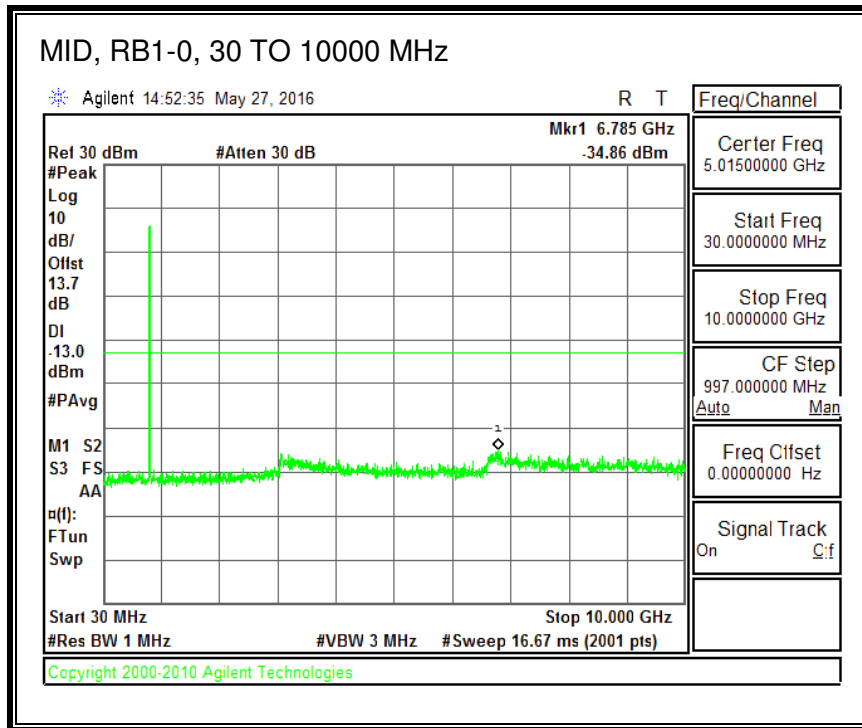
QPSK, (5.0 MHz BAND WIDTH)



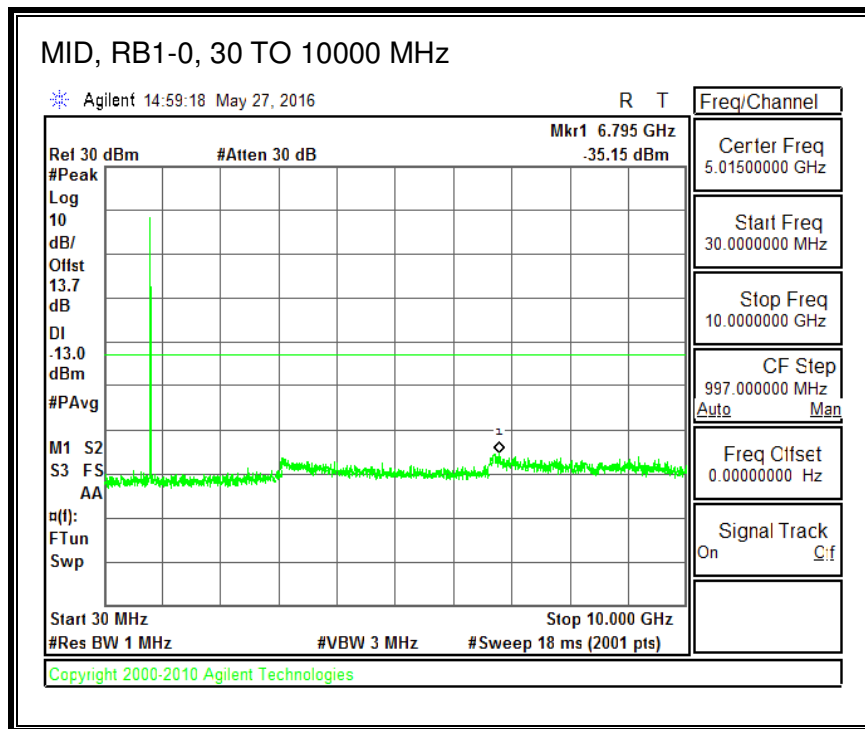


16QAM, (5.0 MHz BAND WIDTH)

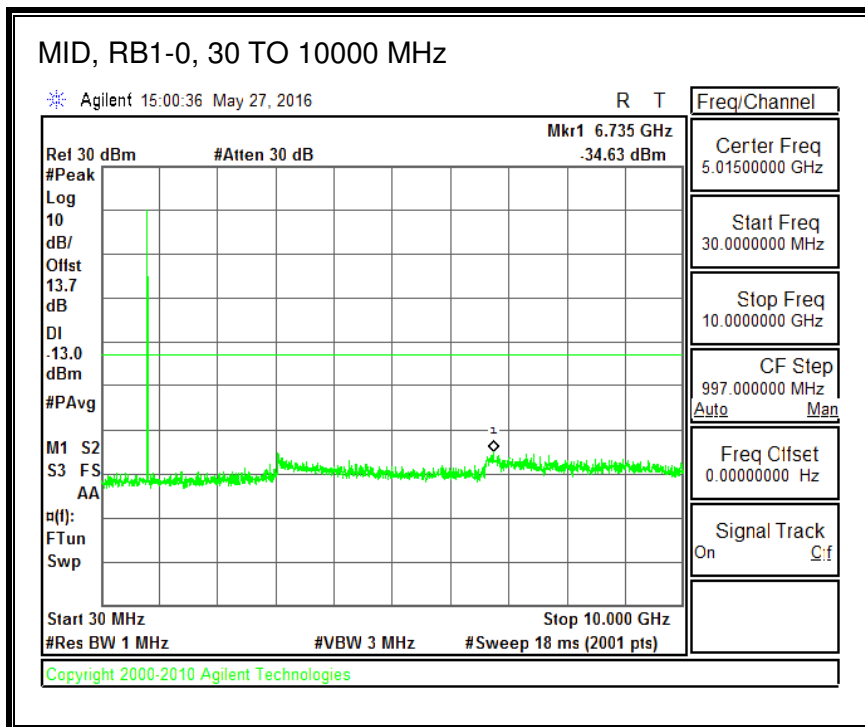




QPSK, (10.0 MHz BAND WIDTH)



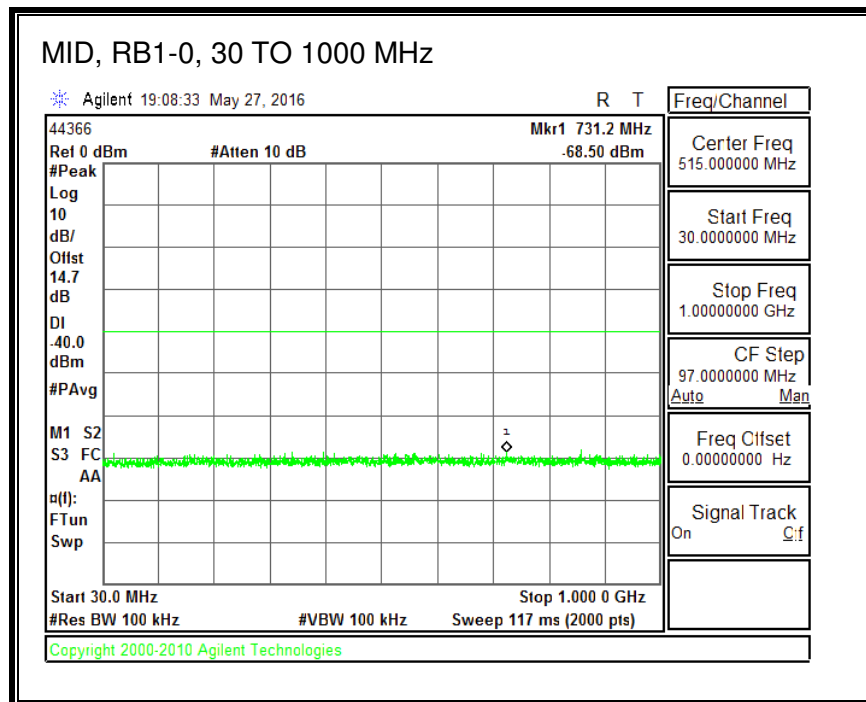
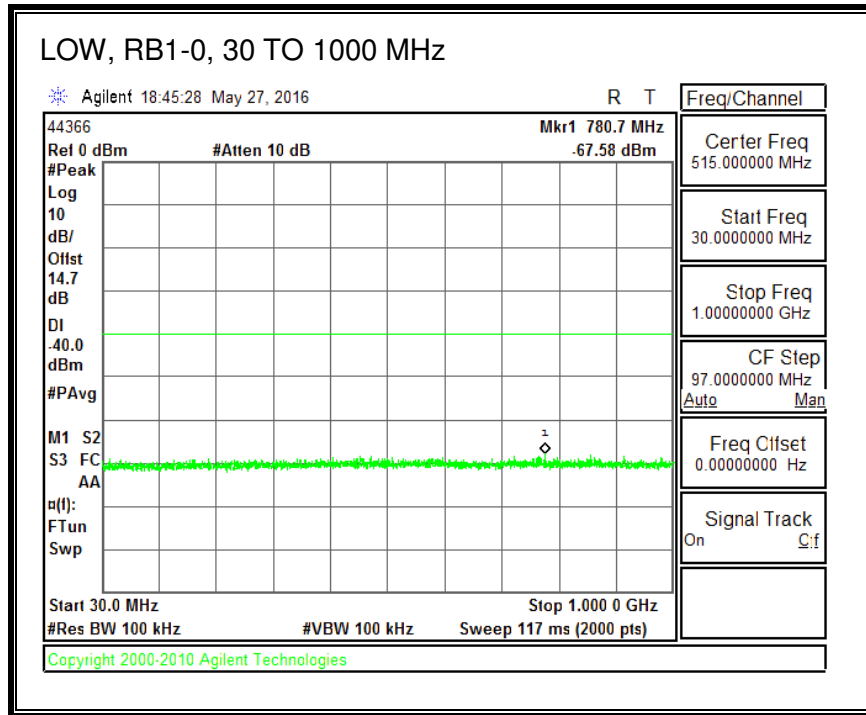
16QAM, (10.0 MHz BAND WIDTH)

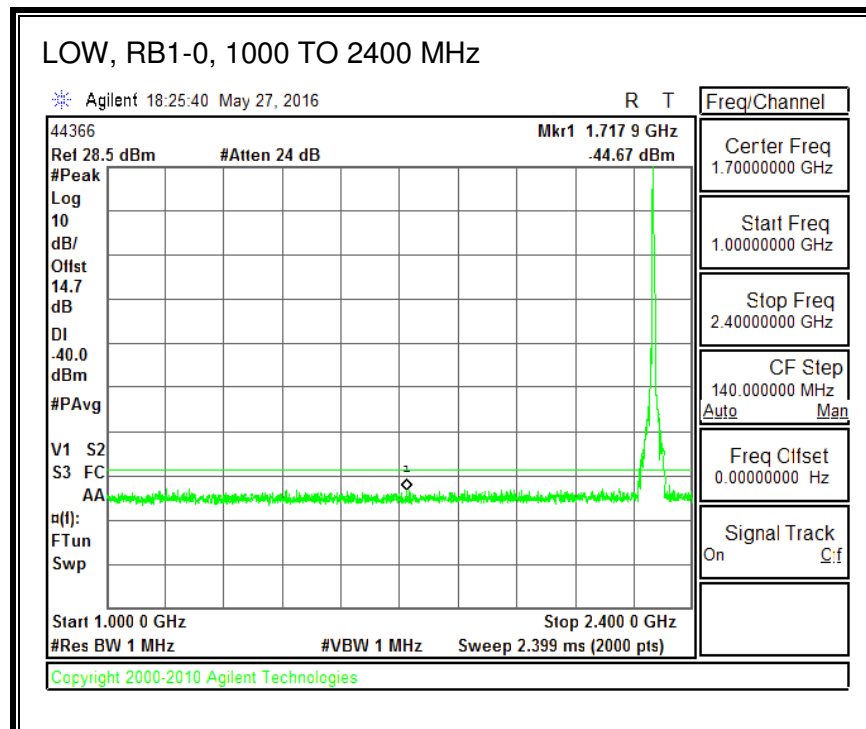
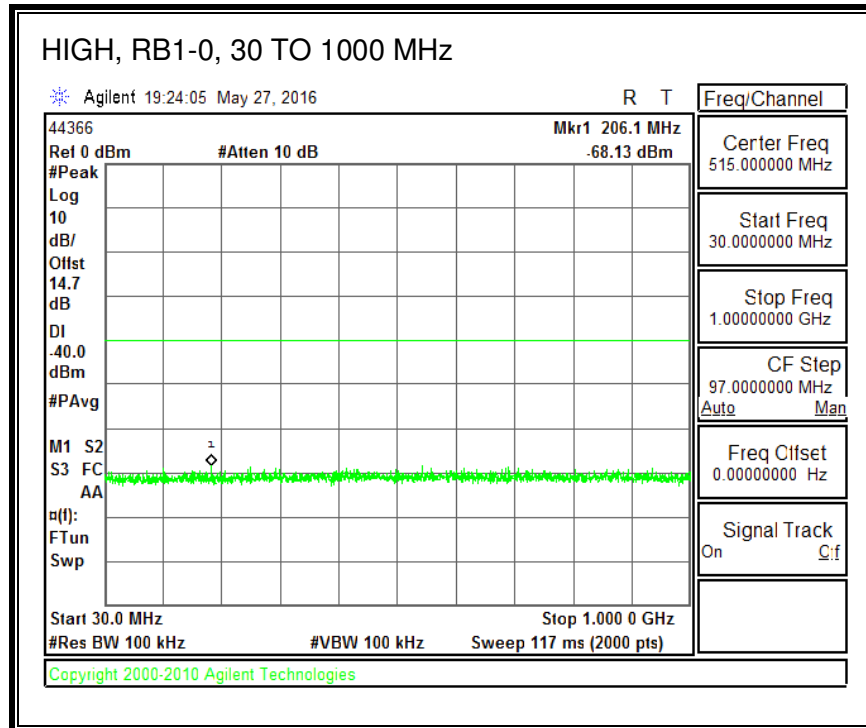


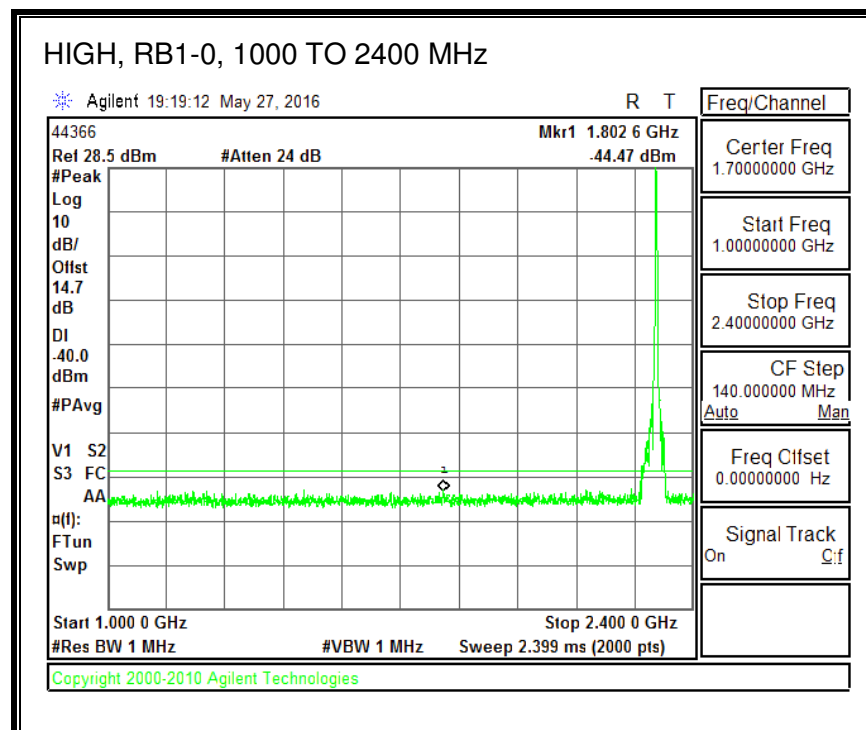
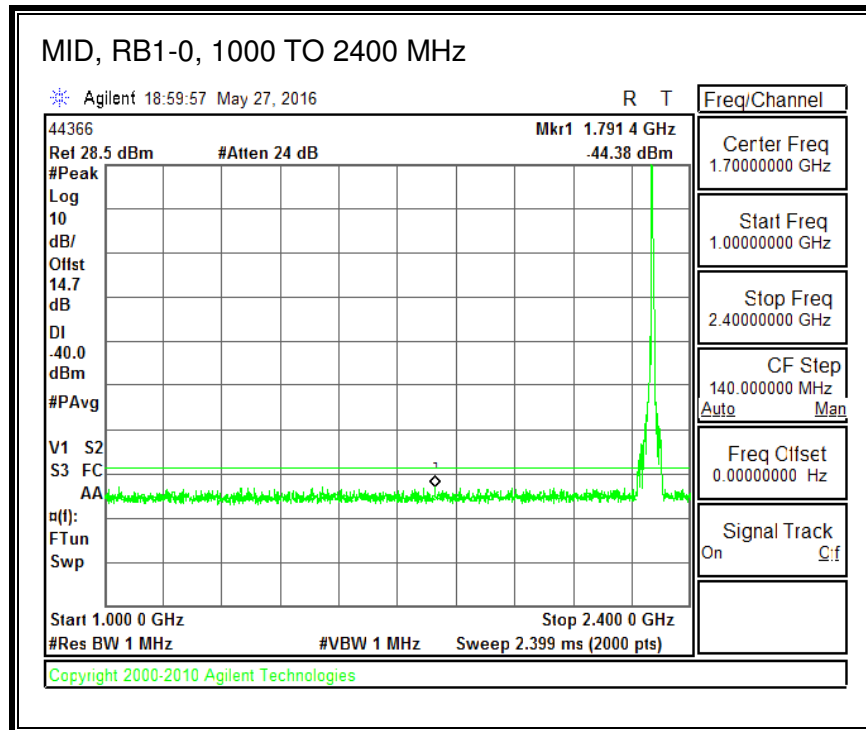
8.3.11. LTE BAND 30

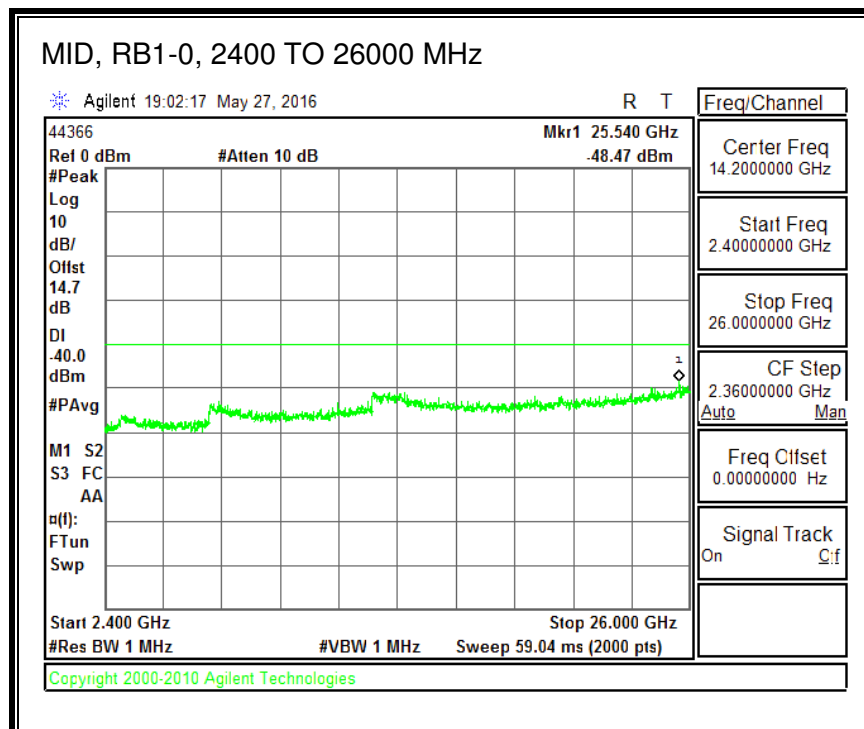
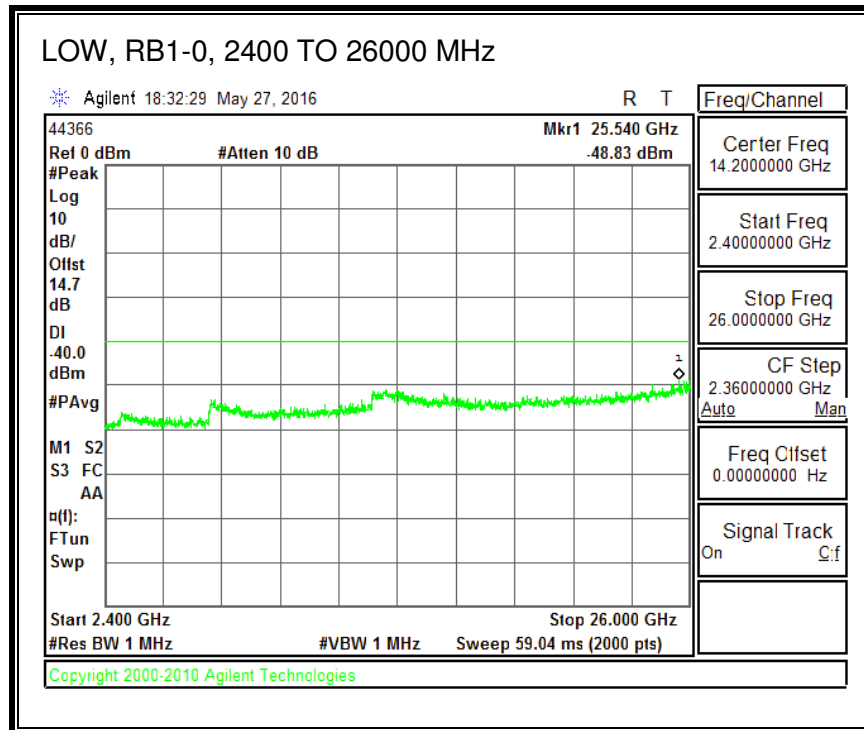
ID:	38806	Date:	5/27/16
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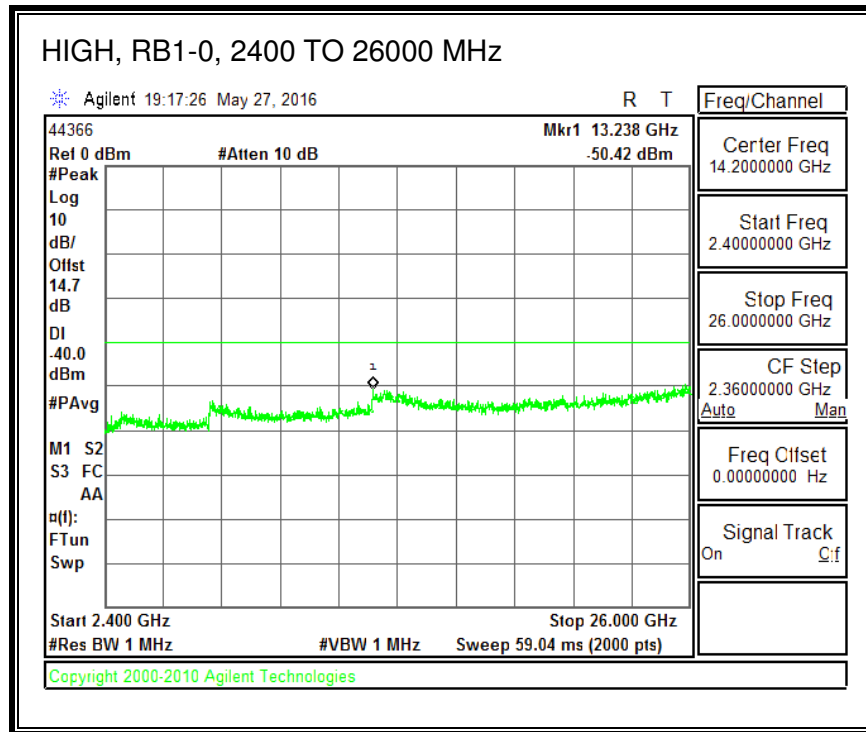
QPSK, (5.0 MHz BAND WIDTH)



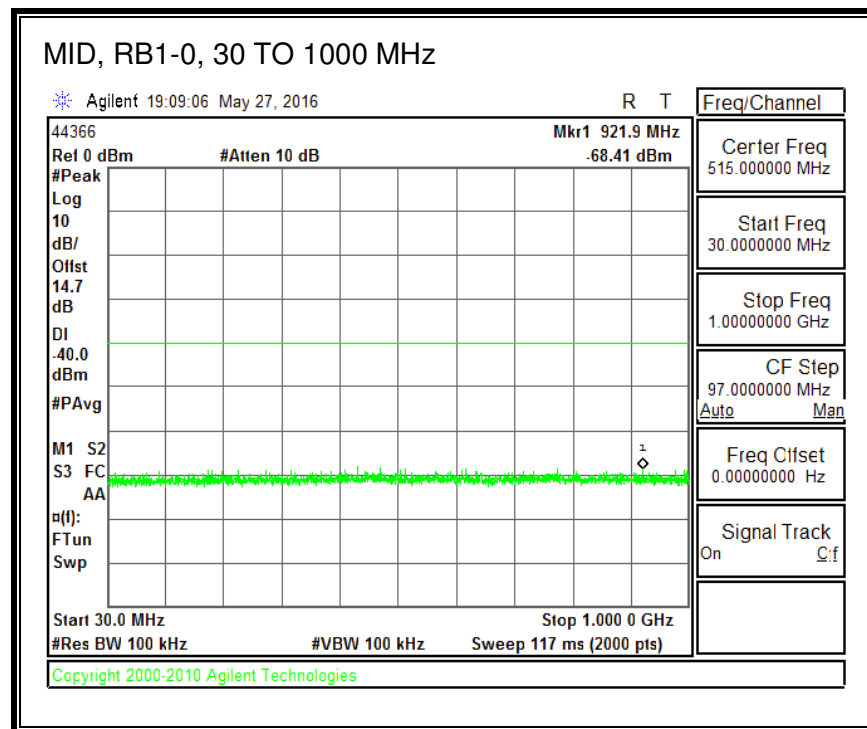
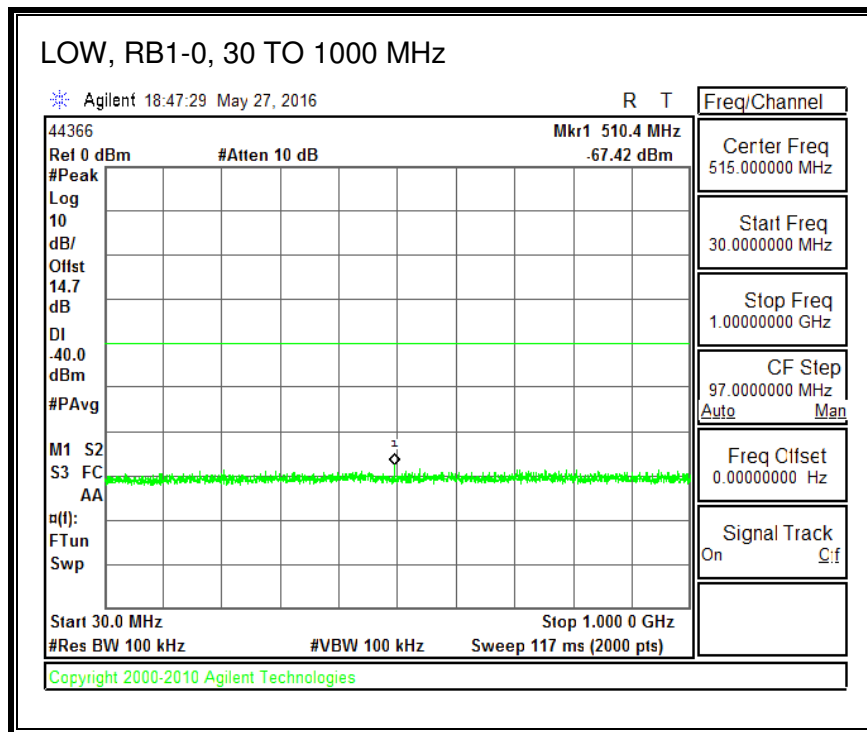


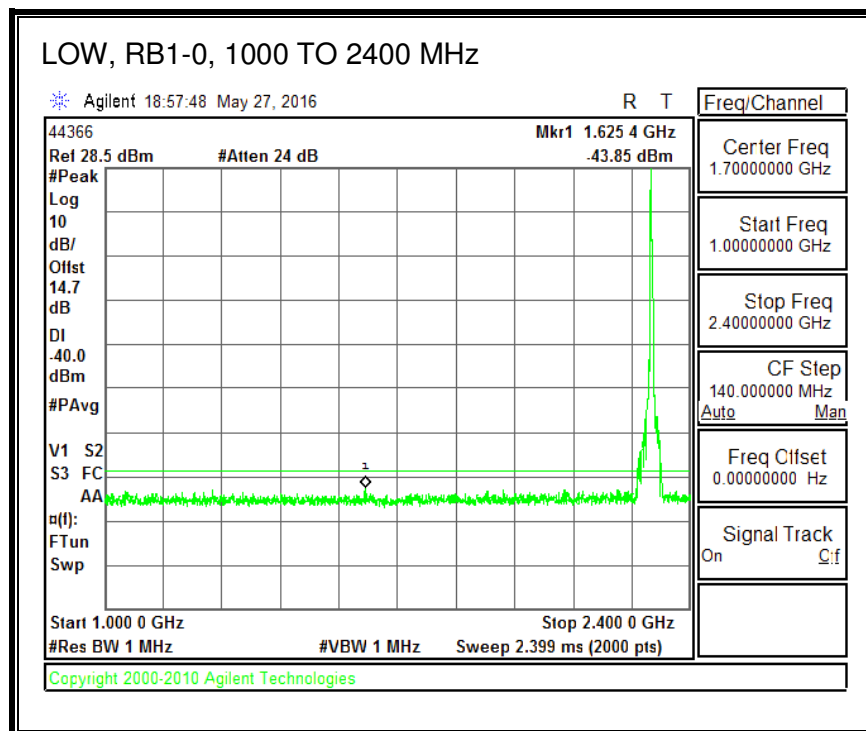
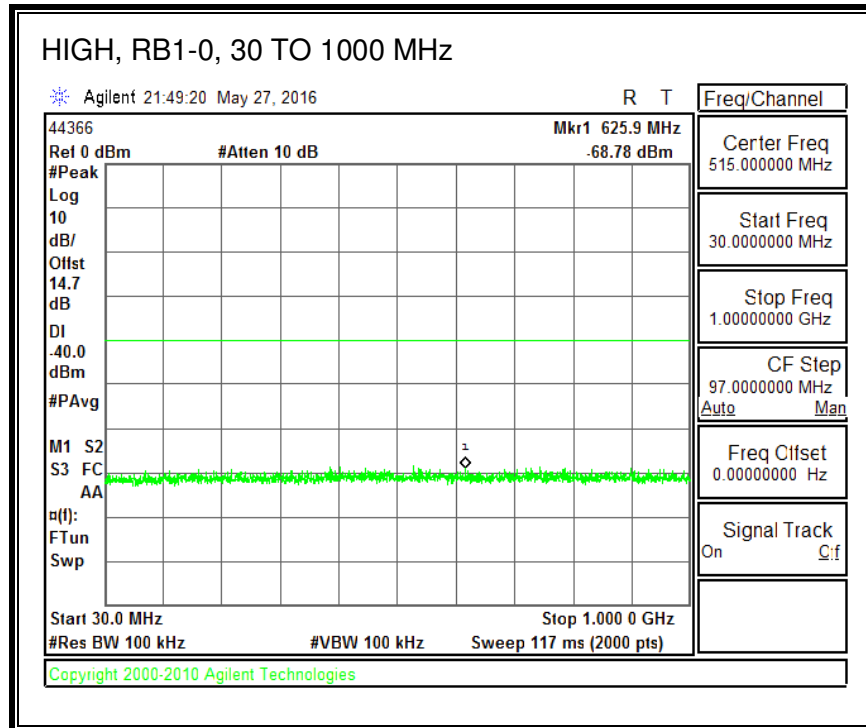


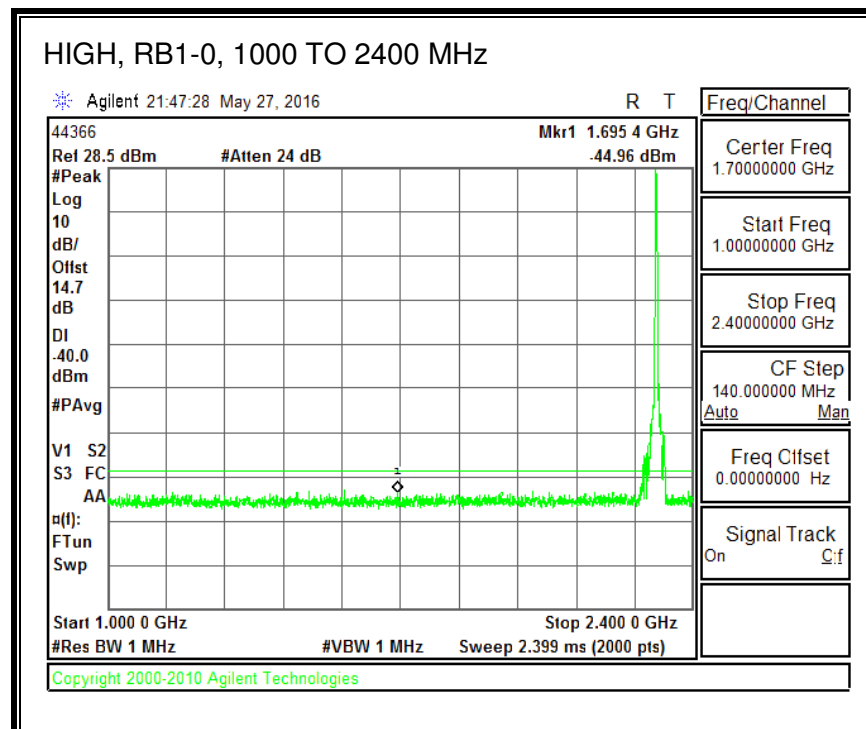
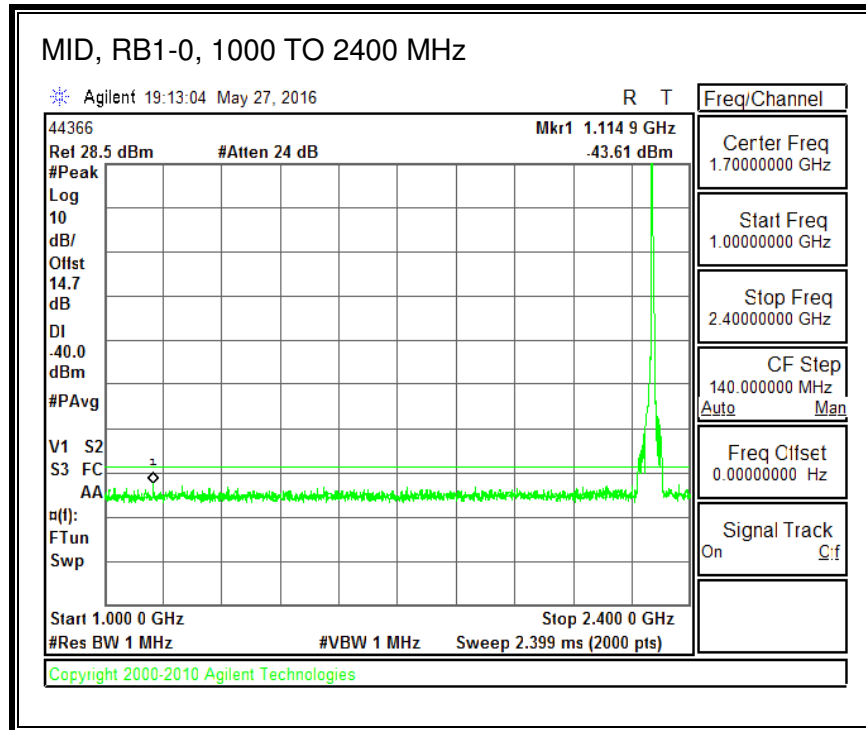


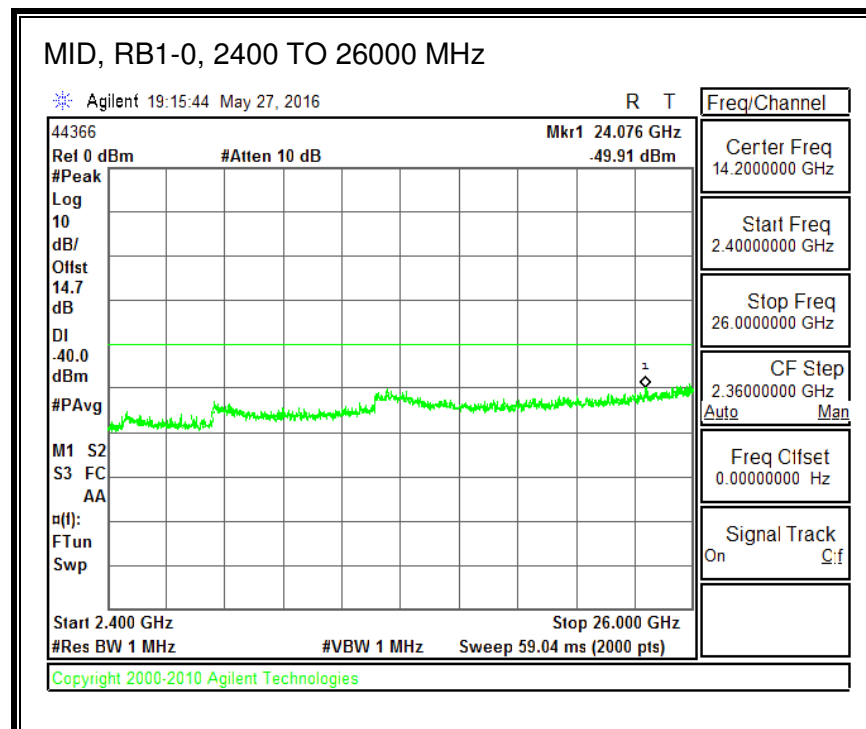
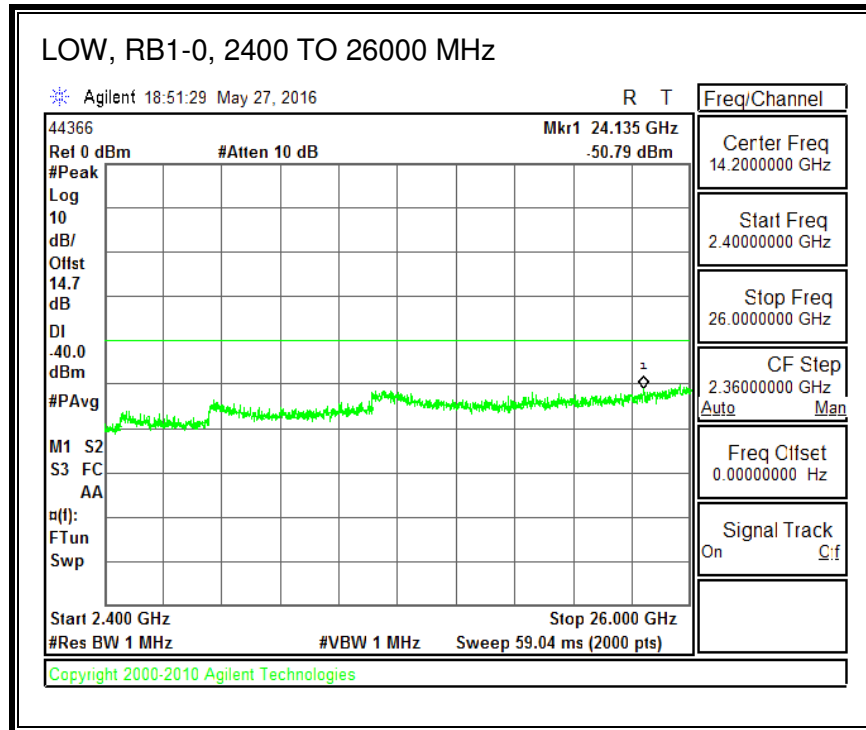


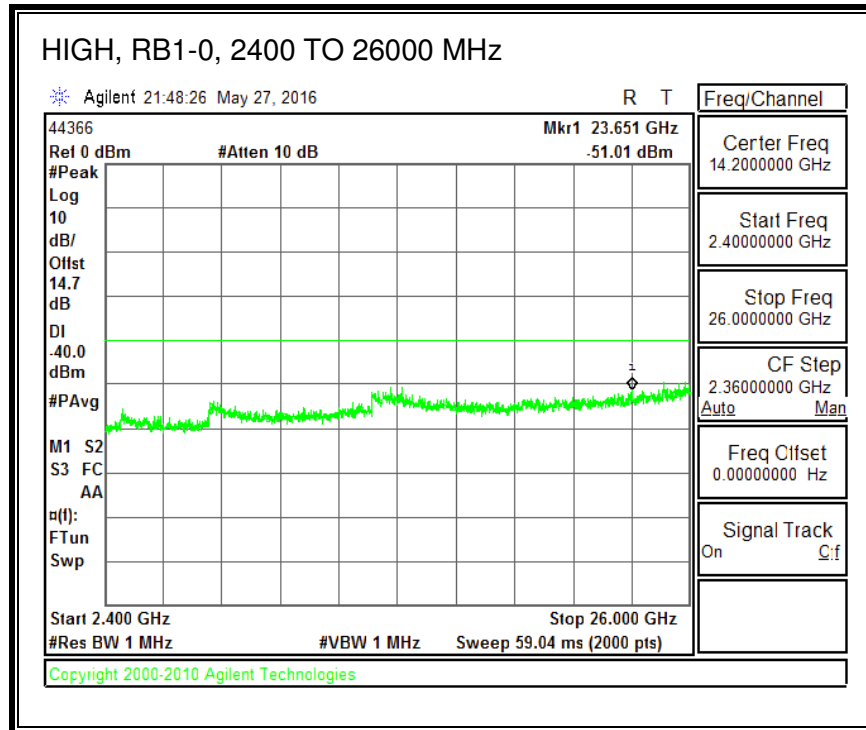
16QAM, (5.0 MHz BAND WIDTH)



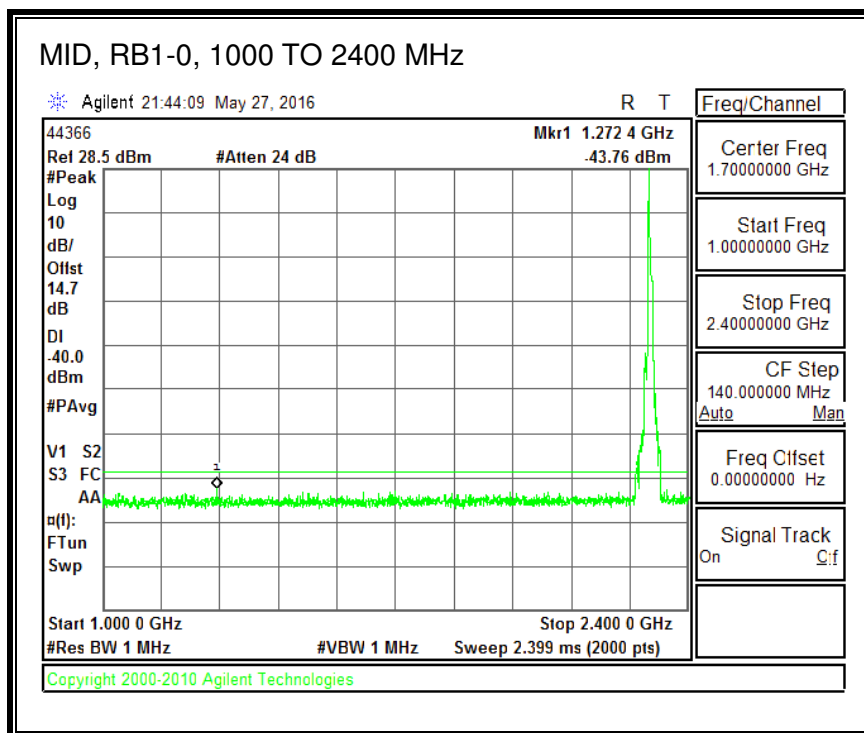
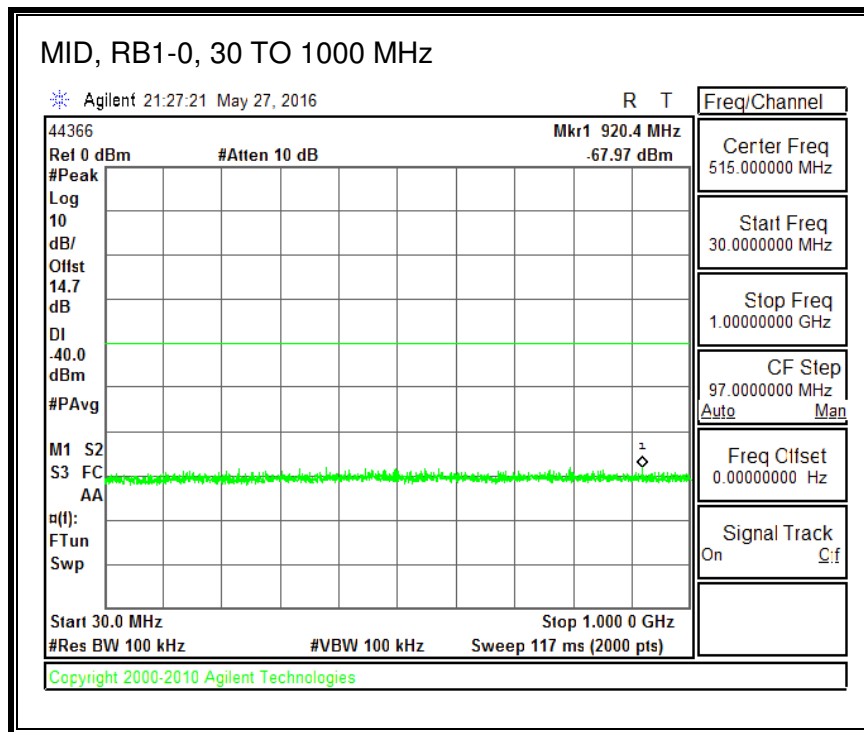


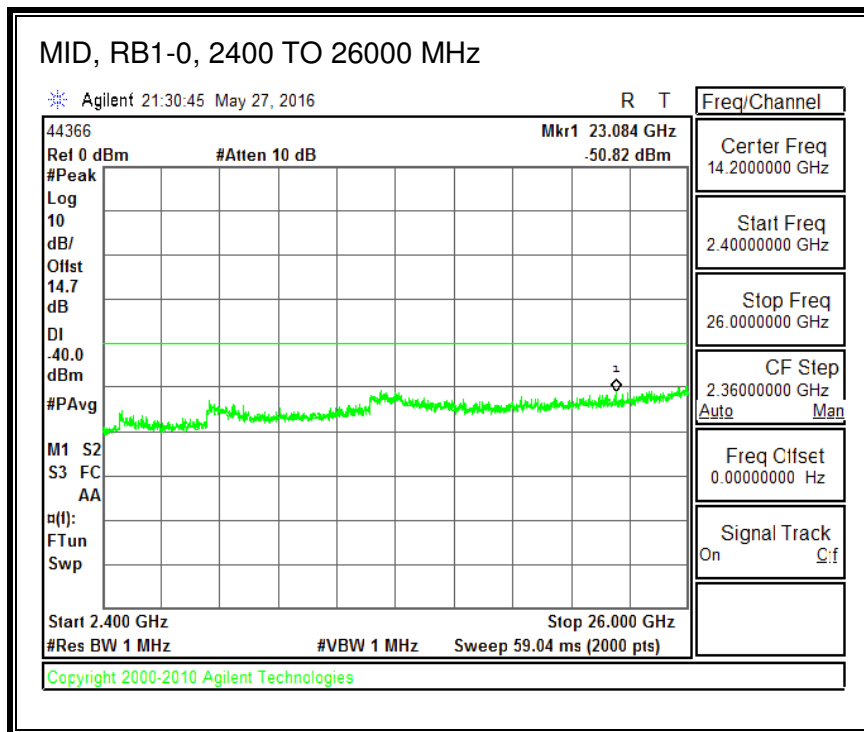




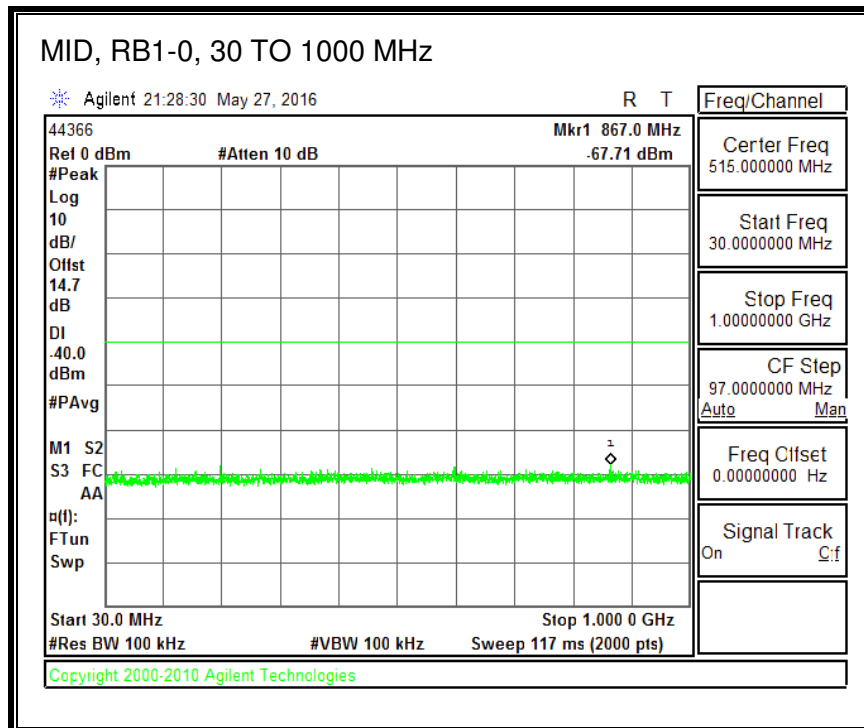


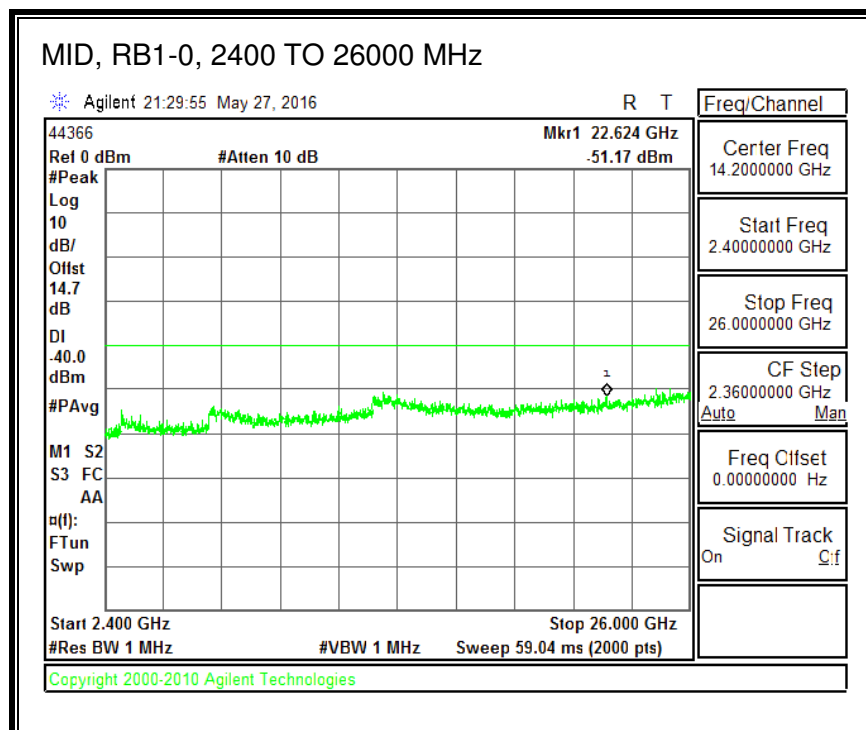
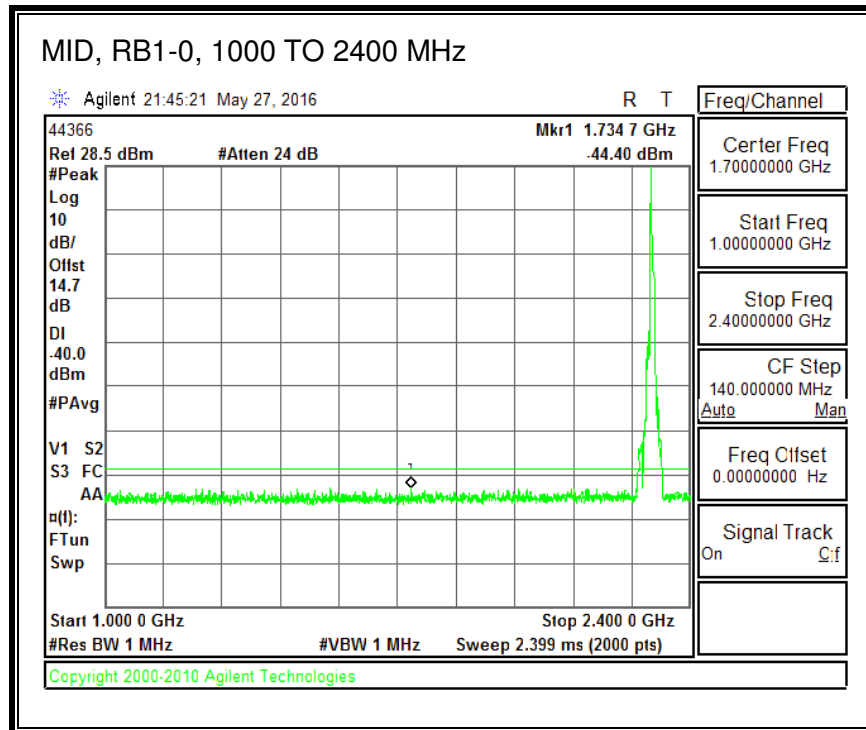
QPSK, (10.0 MHz BAND WIDTH)





16QAM, (10.0 MHz BAND WIDTH)

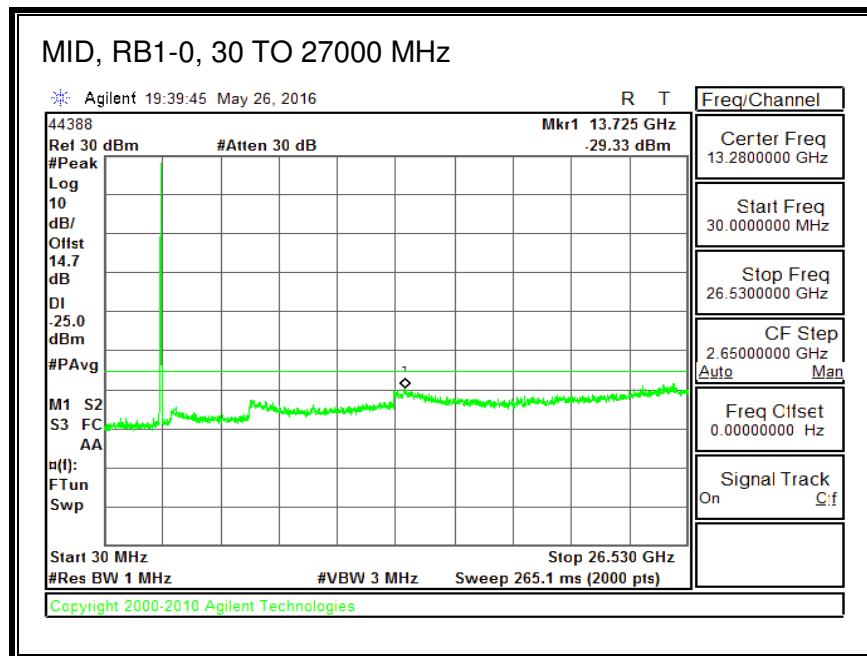
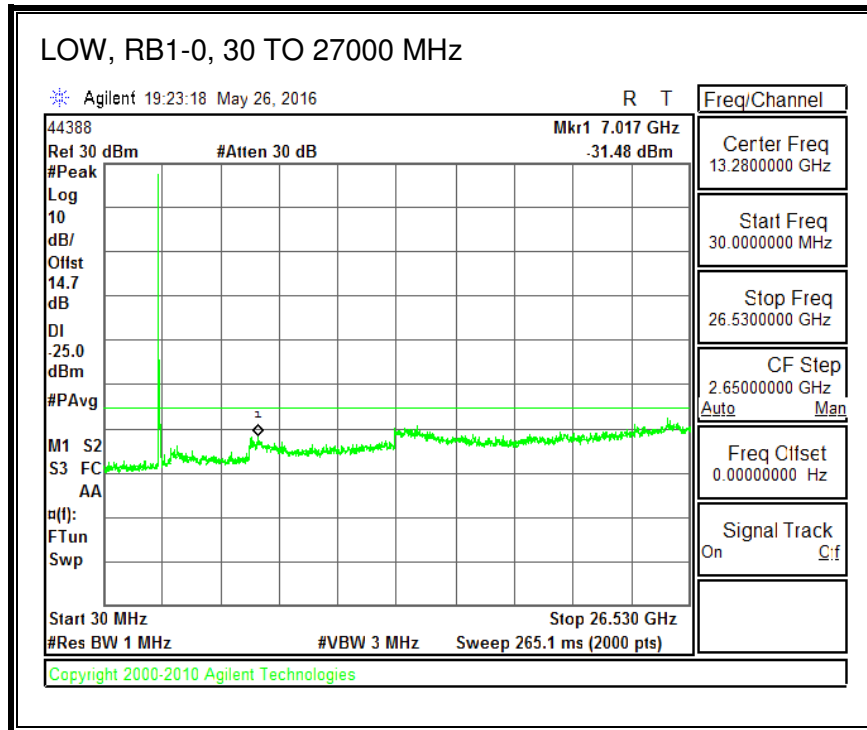


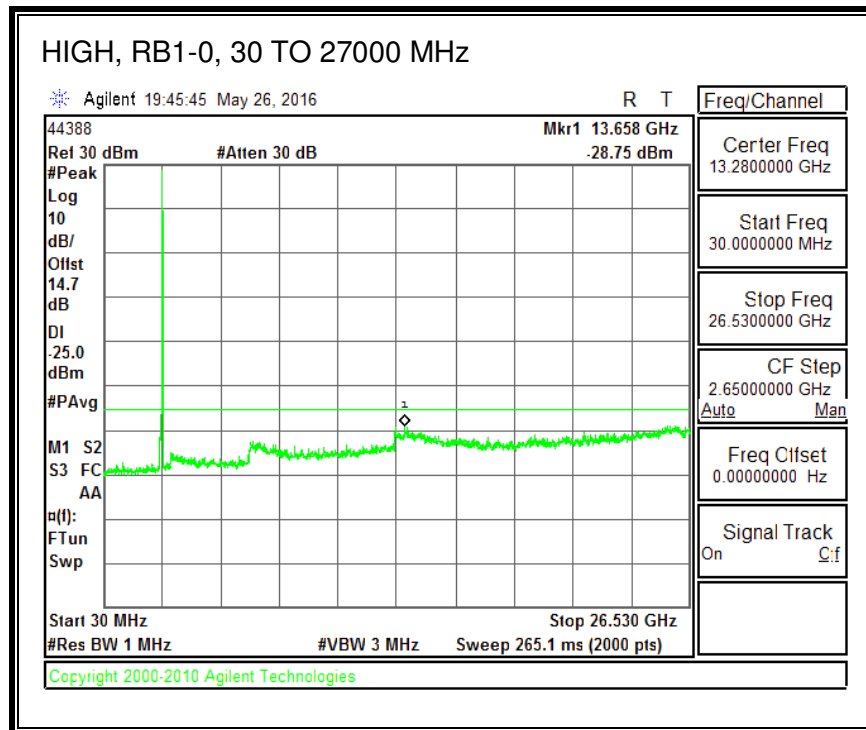


8.3.12. LTE BAND 41

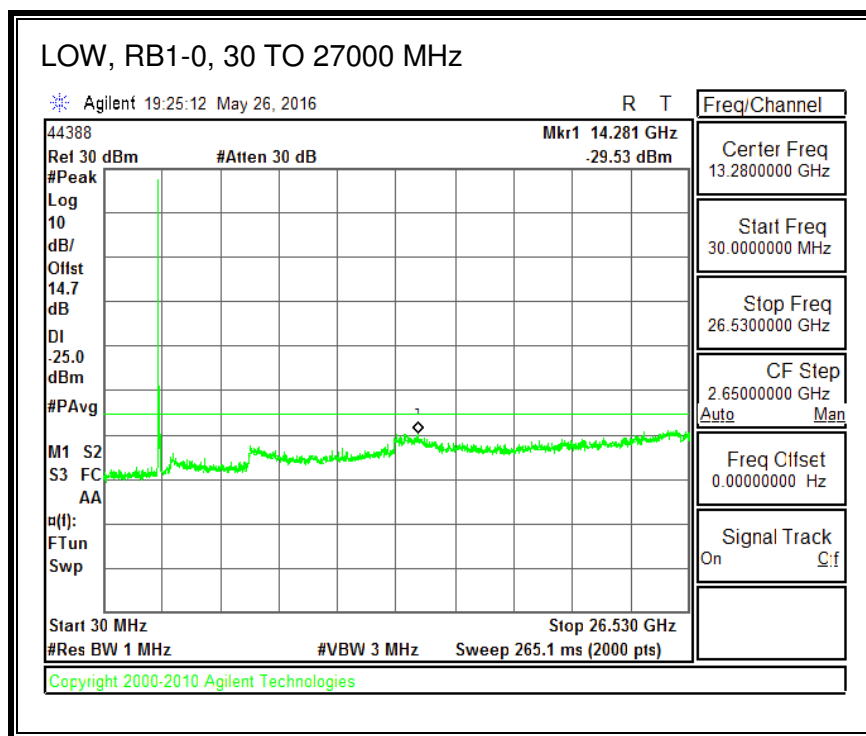
ID:	38806	Date:	5/26/16
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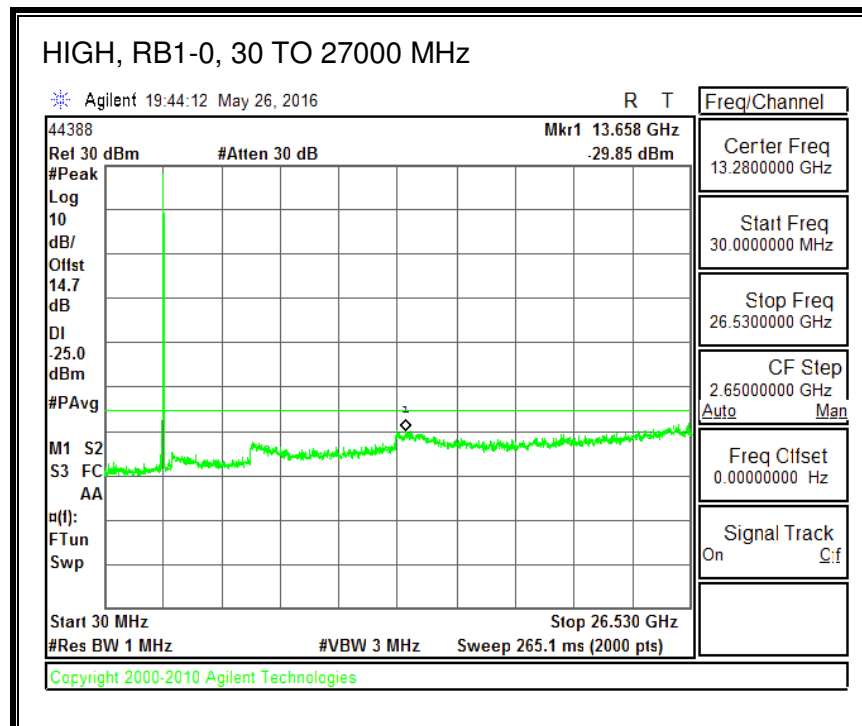
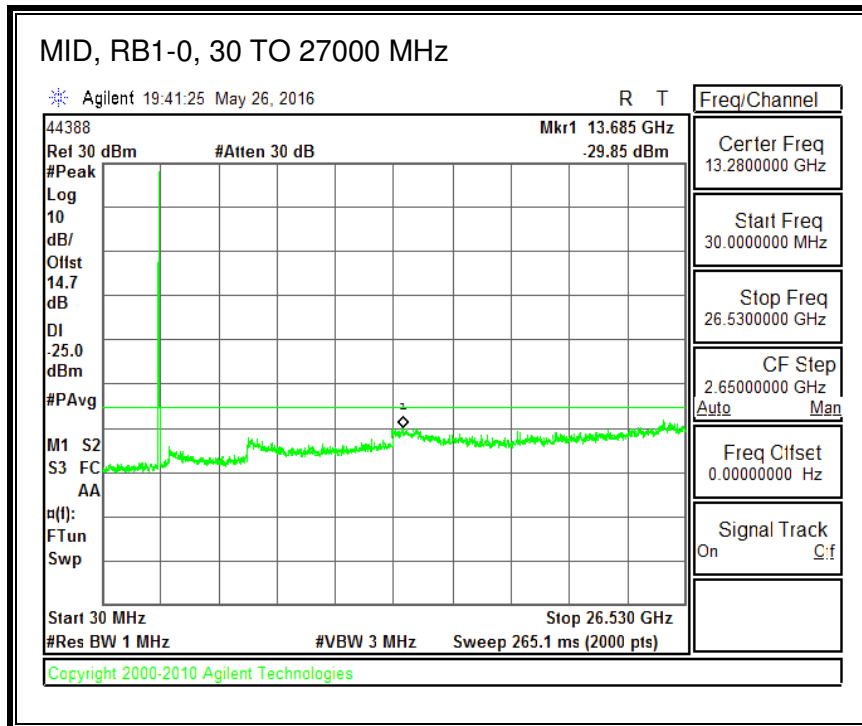
QPSK, (5.0 MHz BAND WIDTH)



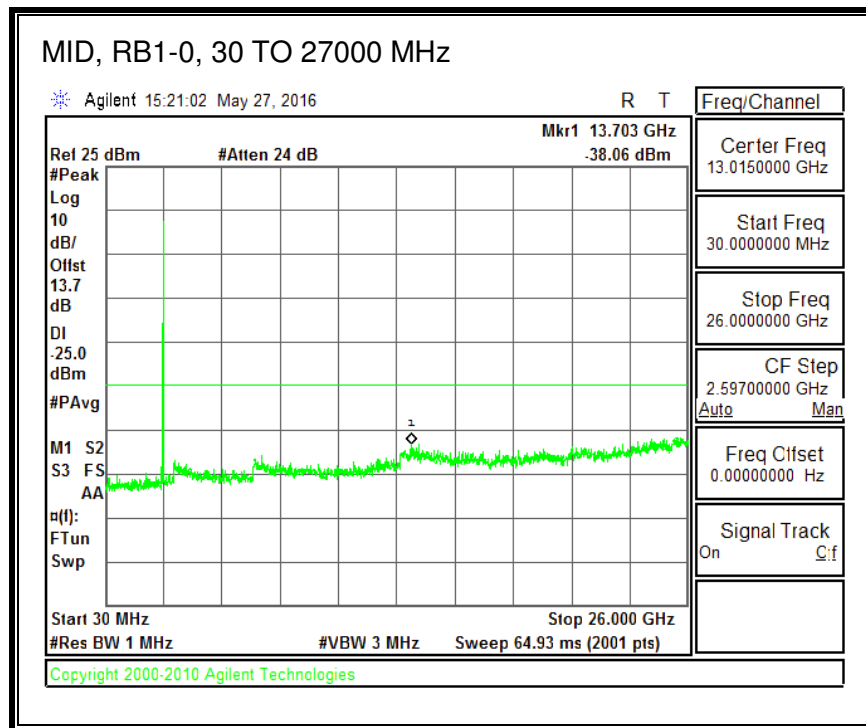
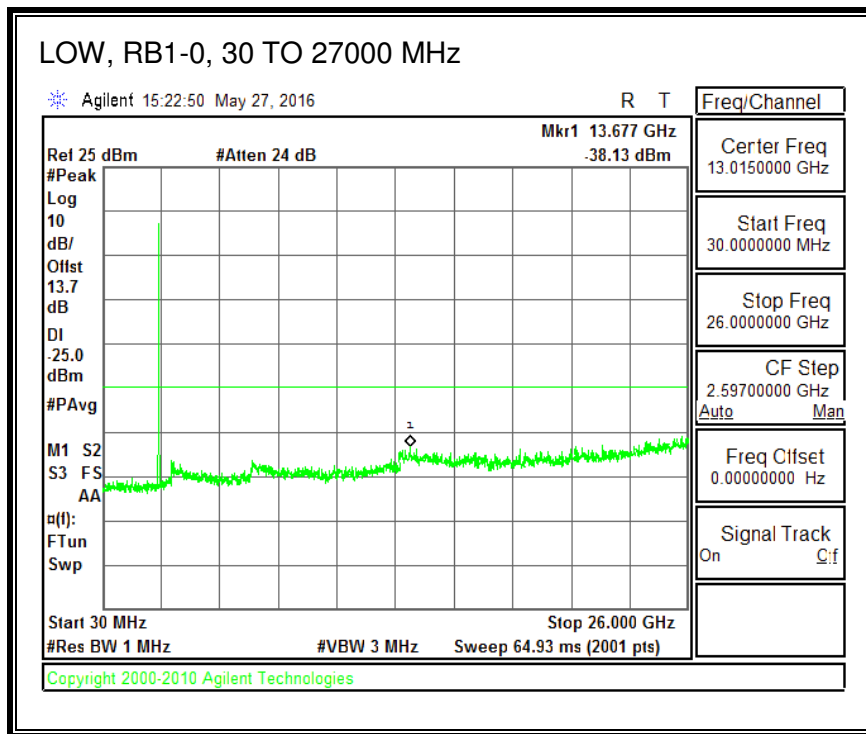


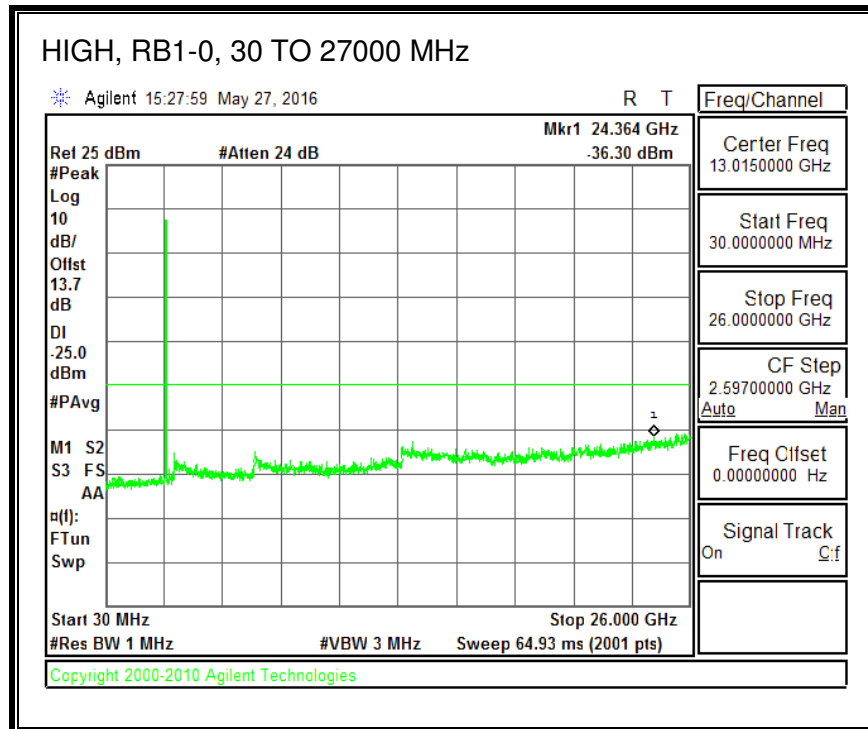
16QAM, (5.0 MHz BAND WIDTH)



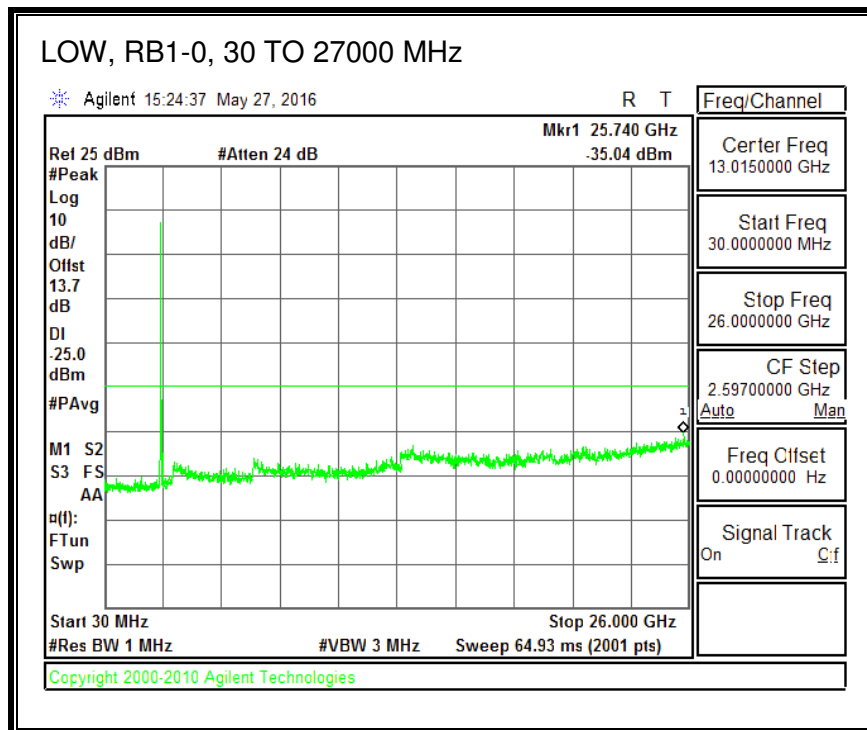


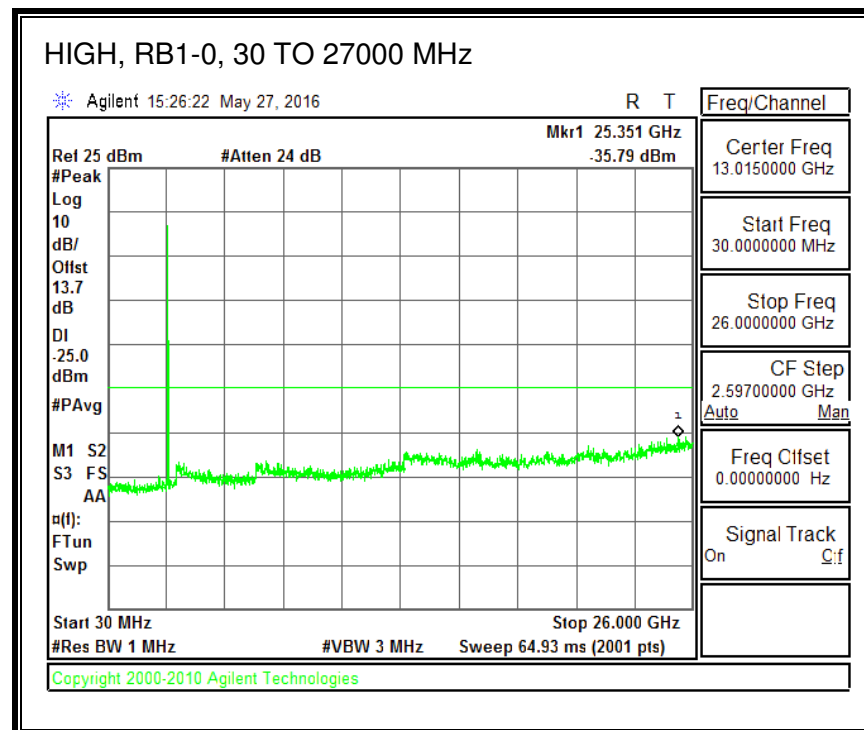
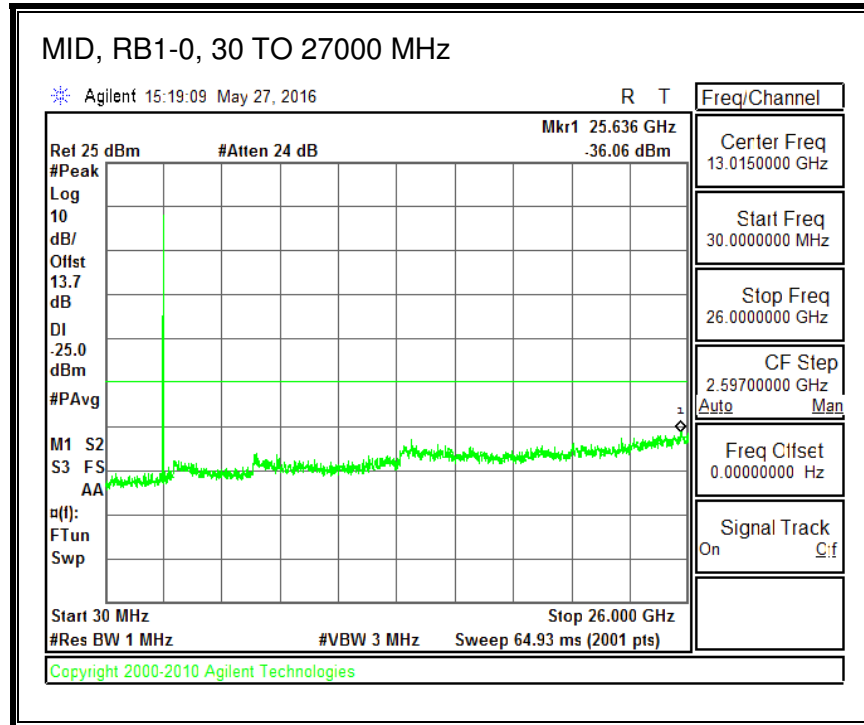
QPSK, (10.0 MHz BAND WIDTH)



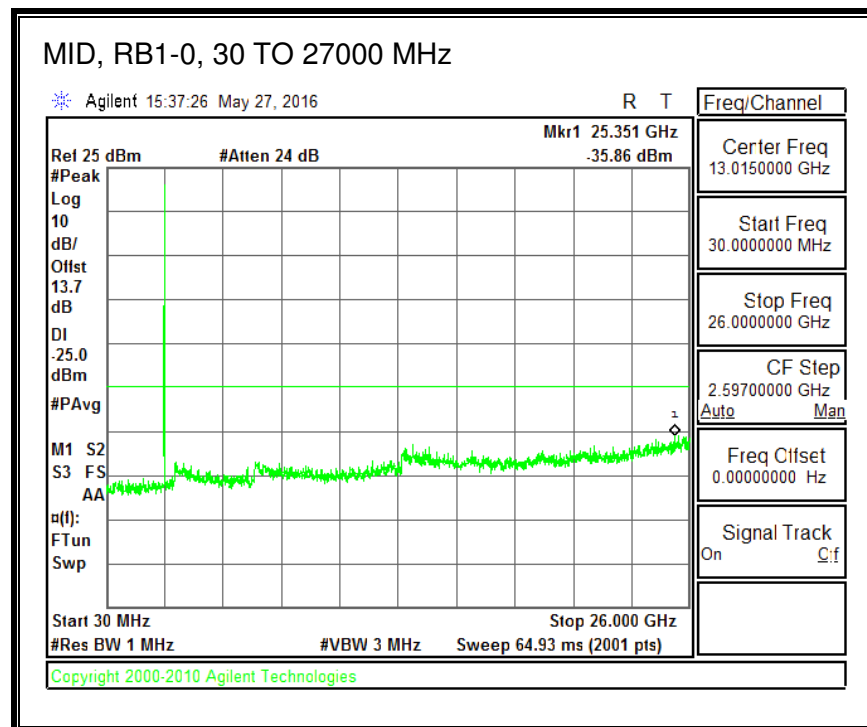
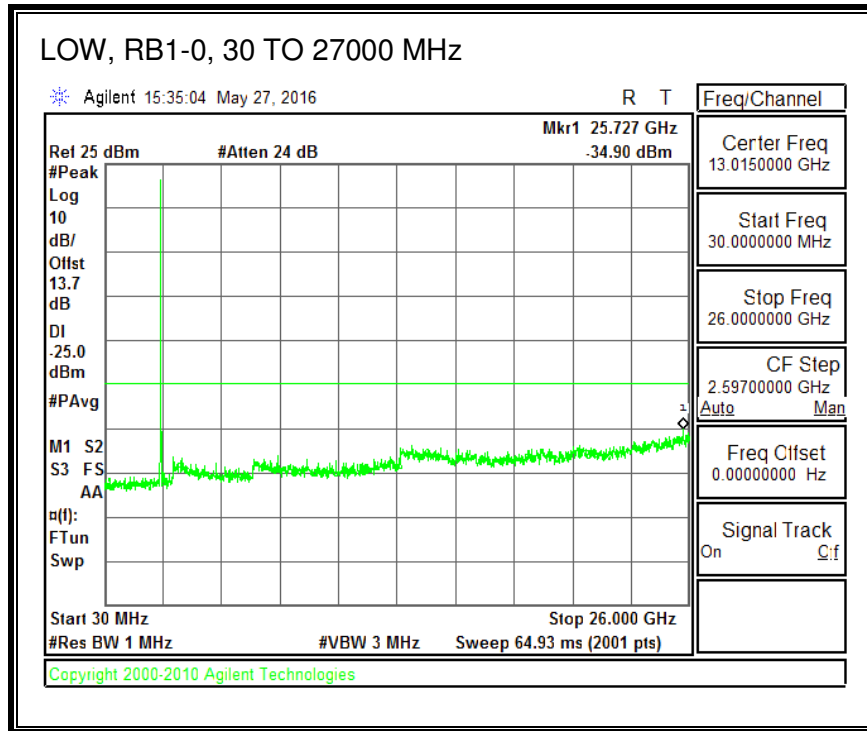


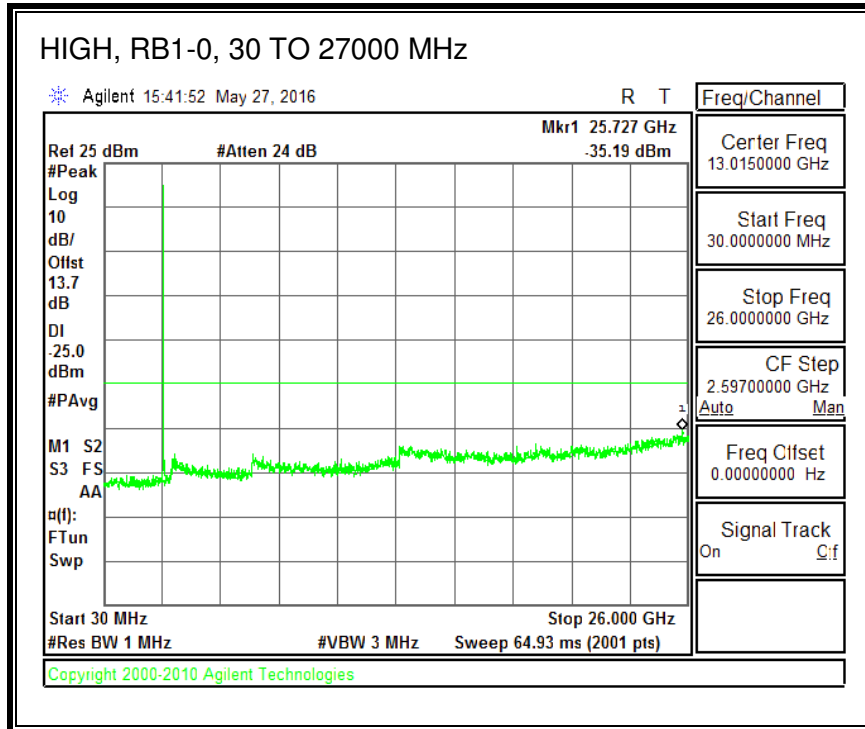
16QAM, (10.0 MHz BAND WIDTH)



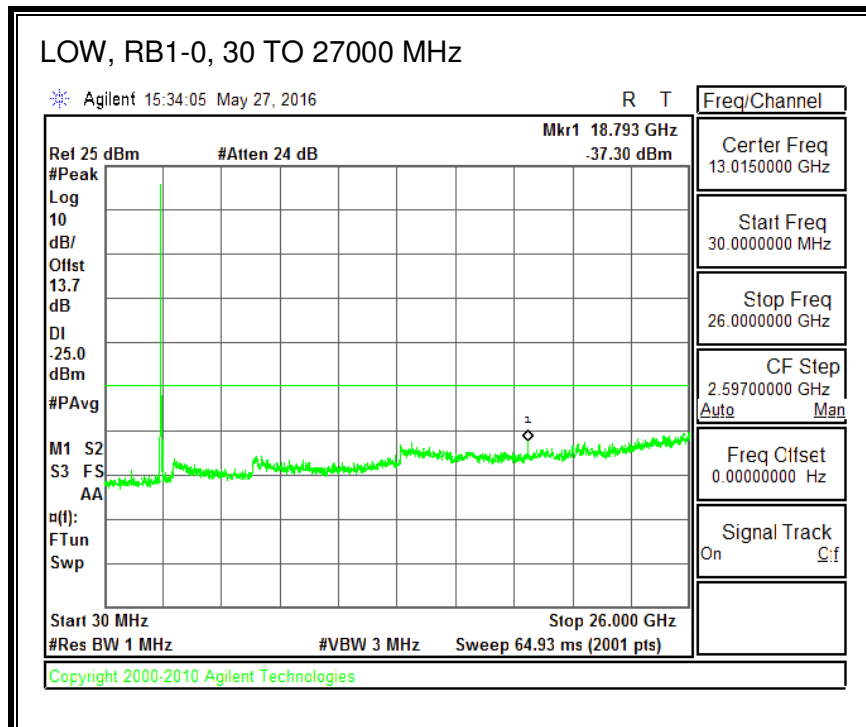


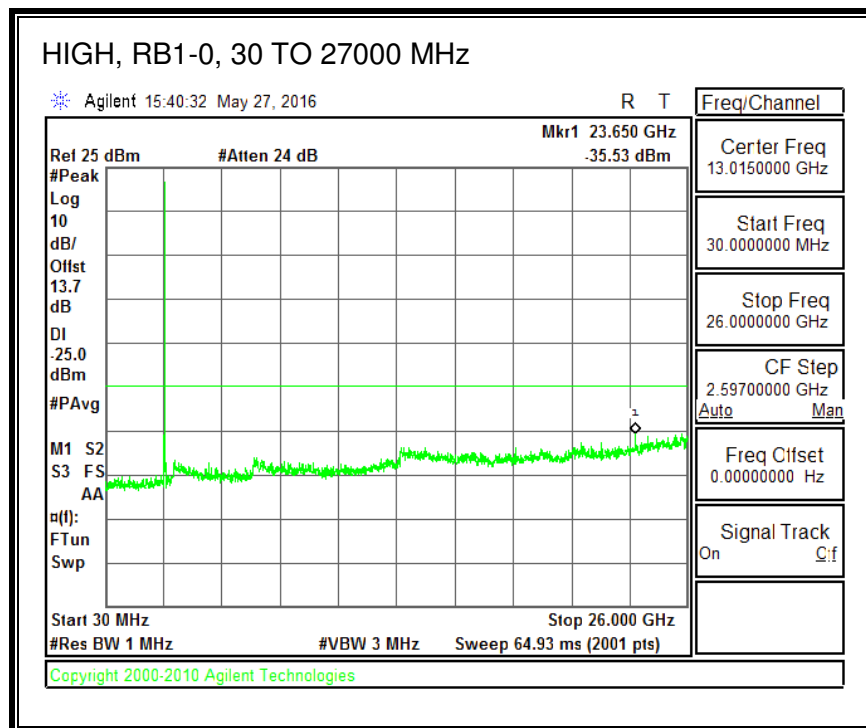
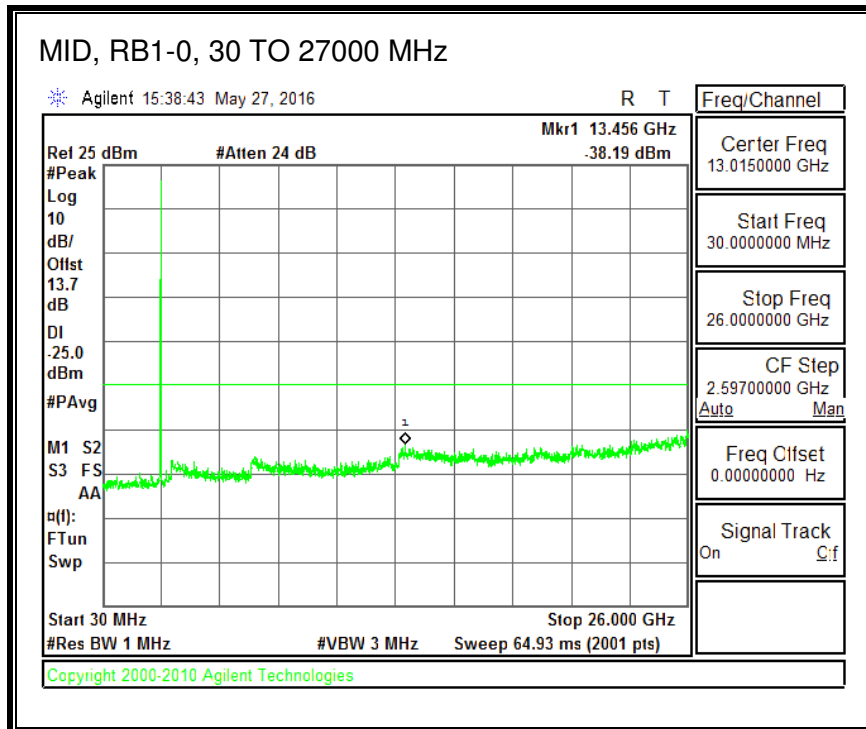
QPSK, (15.0 MHz BAND WIDTH)



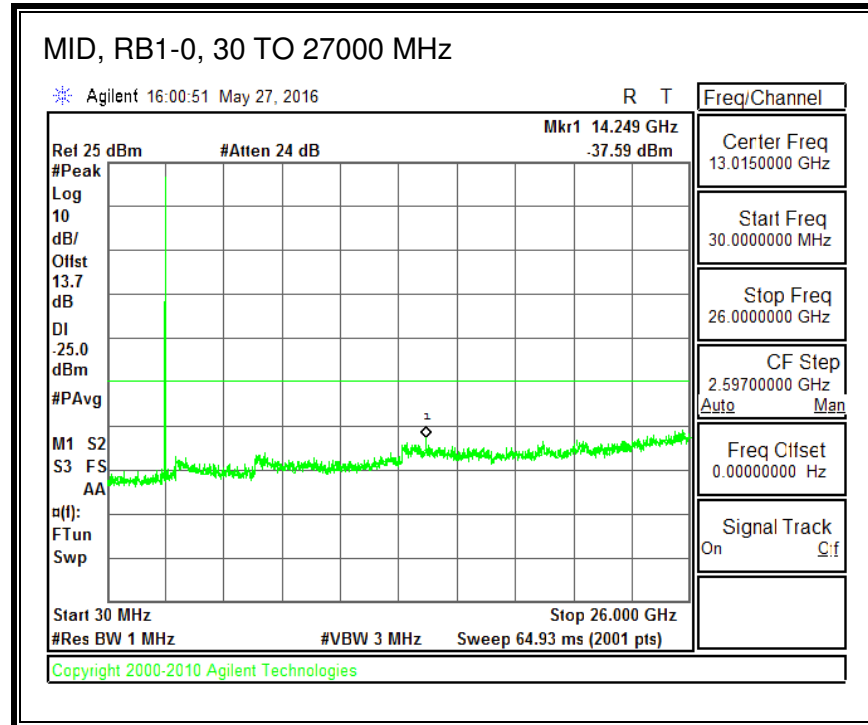
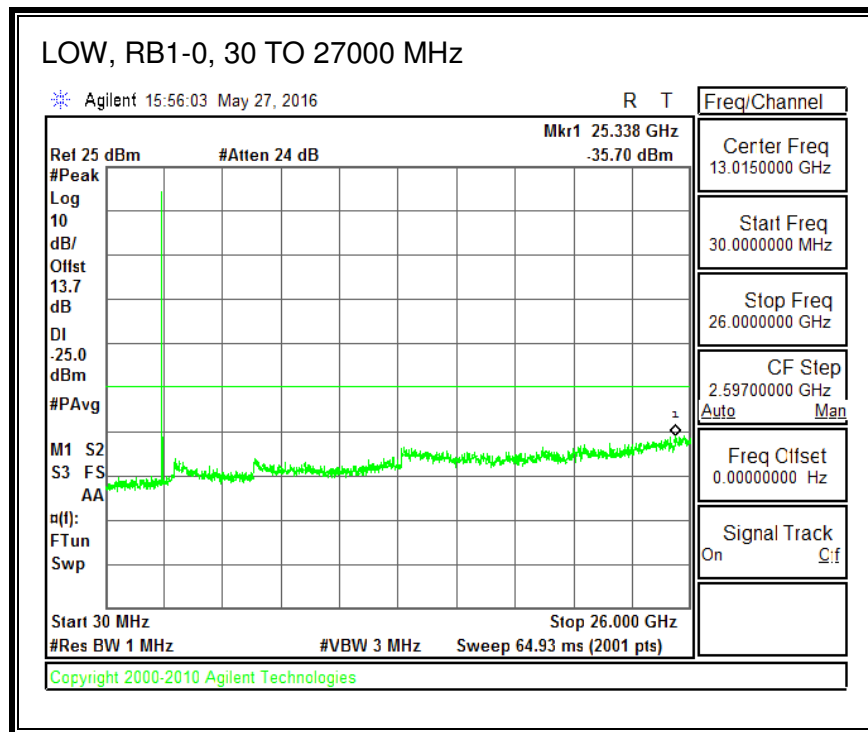


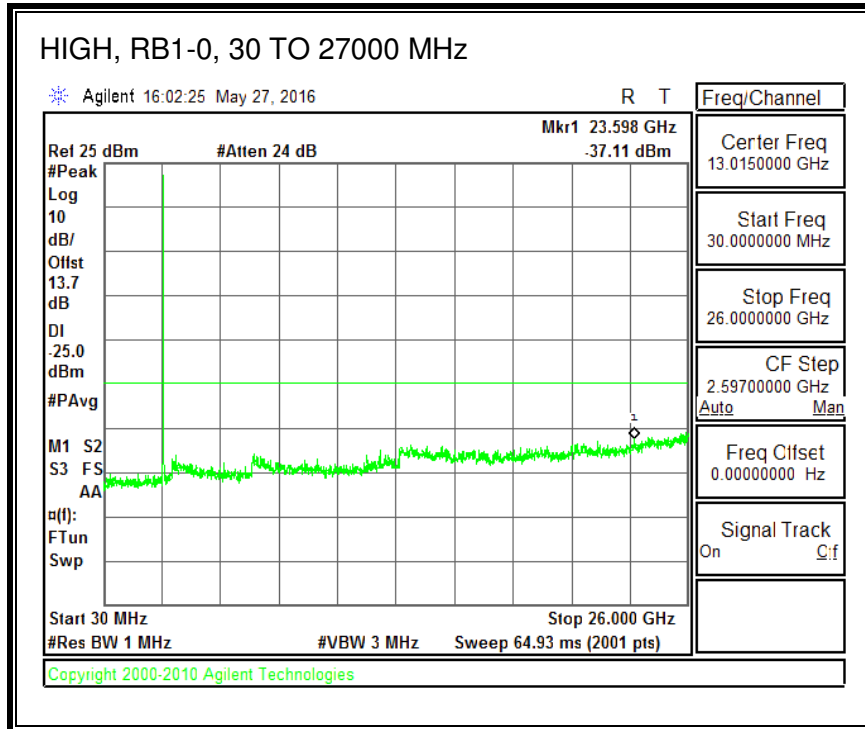
16QAM, (15.0 MHz BAND WIDTH)



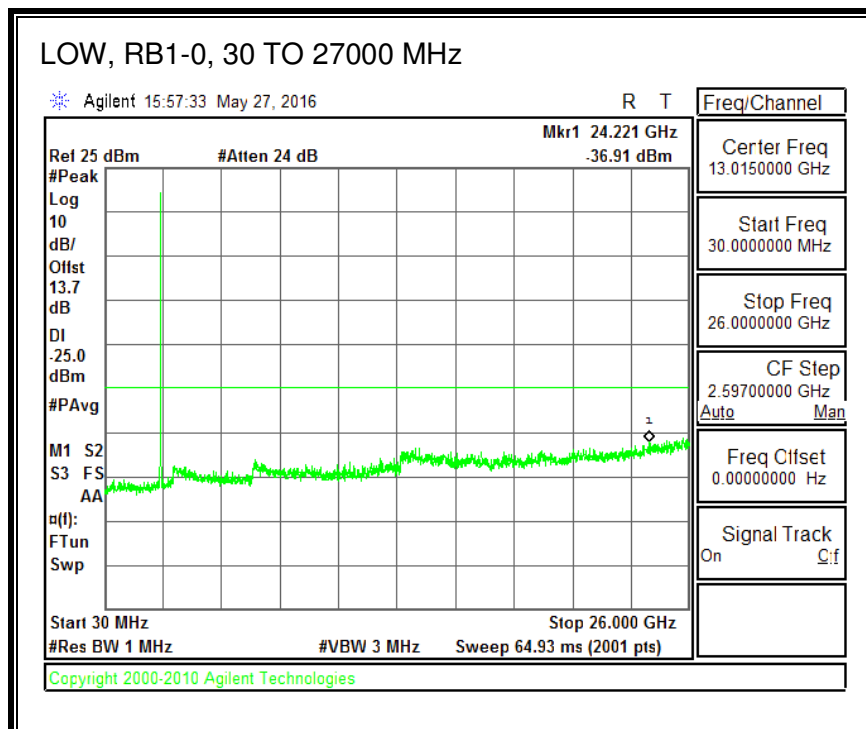


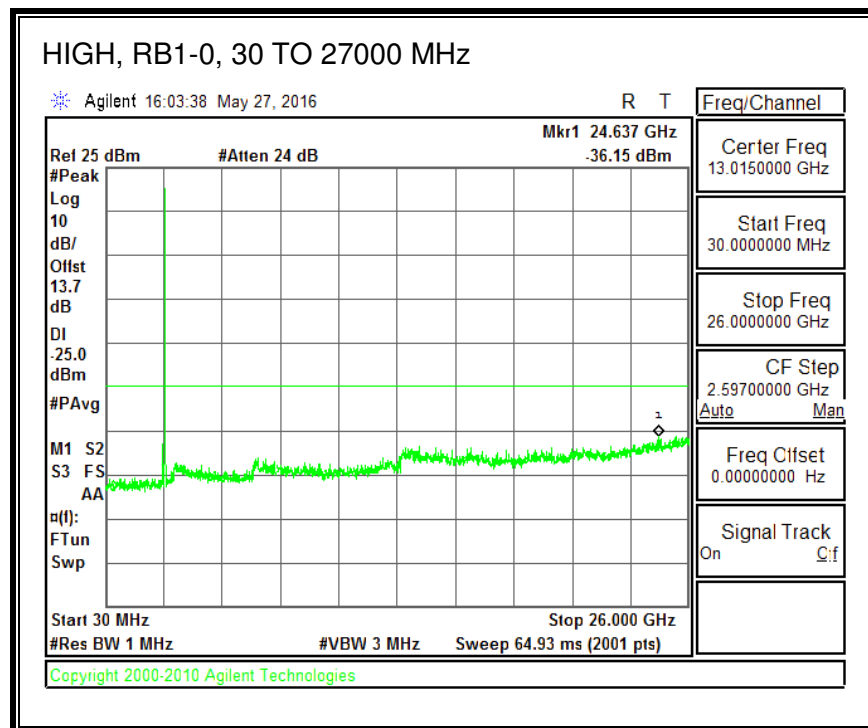
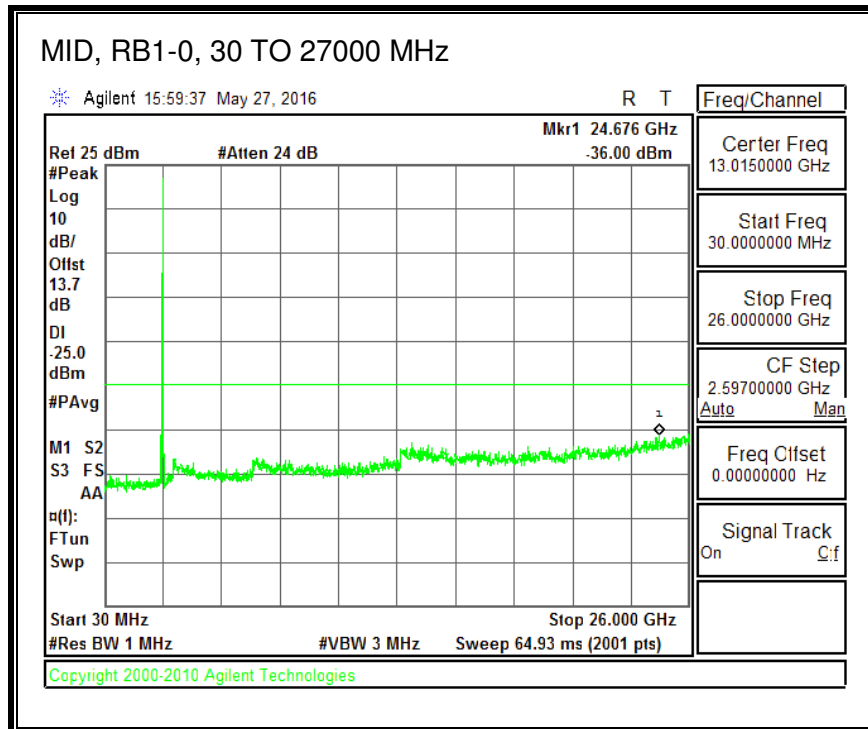
QPSK, (20.0 MHz BAND WIDTH)





16QAM, (20.0 MHz BAND WIDTH)





9. FREQUENCY STABILITY

FCC: §2.1055, §22.355, §24.235, §27.54 and §90.691

LIMITS

§22.355

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 & §27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

§90.213 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = -30° to $+50^{\circ}\text{C}$
- Voltage = low voltage, 3.4VDC, Normal, 3.8VDC and High voltage, 4.3VDC.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

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

See the following pages.

9.1. LTE BAND 2

ID:	39270	Date:	4/7/16
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QPSK, (20MHz BANDWIDTH)

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0506	1908.9572		
Extreme (50C)		1851.0506	1908.9572	23.9	0.013
Extreme (40C)		1851.0506	1908.9572	20.5	0.011
Extreme (30C)		1851.0506	1908.9572	20.5	0.011
Extreme (10C)		1851.0506	1908.9572	20.5	0.011
Extreme (0C)		1851.0506	1908.9572	18.7	0.010
Extreme (-10C)		1851.0506	1908.9572	18.0	0.010
Extreme (-20C)		1851.0506	1908.9572	19.2	0.010
Extreme (-30C)		1851.0506	1908.9572	20.9	0.011
25C	10%	1851.0506	1908.9572	20.4	0.011
	-10%	1851.0506	1908.9572	20.3	0.011
	End Point	1851.0506	1908.9572	20.5	0.011

16QAM, (20MHz BANDWIDTH)

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0550	1908.9520		
Extreme (50C)		1851.0550	1908.9520	23.2	0.012
Extreme (40C)		1851.0550	1908.9520	22.1	0.012
Extreme (30C)		1851.0550	1908.9520	23.8	0.013
Extreme (10C)		1851.0550	1908.9520	20.0	0.011
Extreme (0C)		1851.0550	1908.9520	17.9	0.010
Extreme (-10C)		1851.0550	1908.9520	18.9	0.010
Extreme (-20C)		1851.0550	1908.9520	21.9	0.012
Extreme (-30C)		1851.0550	1908.9520	21.2	0.011
25C	10%	1851.0550	1908.9520	20.9	0.011
	-10%	1851.0550	1908.9520	21.9	0.012
	End Point	1851.0550	1908.9520	21.8	0.012

9.2. LTE BAND 4

ID:	39270	Date:	4/7/16
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QPSK, (20MHz BANDWIDTH)

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1711.0155	1754.0315		
Extreme (50C)		1711.0156	1754.0315	14.7	0.008
Extreme (40C)		1711.0156	1754.0315	14.4	0.008
Extreme (30C)		1711.0156	1754.0315	10.9	0.006
Extreme (10C)		1711.0156	1754.0315	12.1	0.007
Extreme (0C)		1711.0156	1754.0315	12.0	0.007
Extreme (-10C)		1711.0156	1754.0315	11.7	0.007
Extreme (-20C)		1711.0156	1754.0315	12.2	0.007
Extreme (-30C)		1711.0156	1754.0315	10.6	0.006
25C	10%	1711.0156	1754.0315	12.6	0.007
	-10%	1711.0156	1754.0315	11.6	0.007
	End Point	1711.0156	1754.0315	15.3	0.009

16QAM, (20MHz BANDWIDTH)

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1711.0155	1753.9869		
Extreme (50C)		1711.0155	1753.9870	14.5	0.008
Extreme (40C)		1711.0155	1753.9870	14.9	0.009
Extreme (30C)		1711.0155	1753.9869	8.7	0.005
Extreme (10C)		1711.0155	1753.9869	9.6	0.006
Extreme (0C)		1711.0155	1753.9870	14.0	0.008
Extreme (-10C)		1711.0155	1753.9870	16.0	0.009
Extreme (-20C)		1711.0155	1753.9870	15.3	0.009
Extreme (-30C)		1711.0155	1753.9869	10.5	0.006
25C	10%	1711.0155	1753.9869	9.3	0.005
	-10%	1711.0155	1753.9869	10.8	0.006
	End Point	1711.0155	1753.9870	14.7	0.008

9.3. LTE BAND 5

ID:	39270	Date:	4/13/16
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QPSK, (10MHz BANDWIDTH)

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	824.4955	848.7019		
Extreme (50C)		824.4955	848.7019	11.4	0.014
Extreme (40C)		824.4955	848.7019	12.7	0.015
Extreme (30C)		824.4955	848.7019	12.3	0.015
Extreme (10C)		824.4955	848.7019	12.2	0.015
Extreme (0C)		824.4955	848.7019	11.9	0.014
Extreme (-10C)		824.4955	848.7019	13.5	0.016
Extreme (-20C)		824.4955	848.7019	11.9	0.014
Extreme (-30C)		824.4955	848.7019	11.9	0.014
25C	10%	824.4955	848.7019	12.7	0.015
	-10%	824.4955	848.7019	14.6	0.017
	End Point	824.4955	848.7019	21.5	0.026

16QAM, (10MHz BANDWIDTH)

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	824.4968	848.5129		
Extreme (50C)		824.4968	848.5129	16.5	0.020
Extreme (40C)		824.4968	848.5129	17.6	0.021
Extreme (30C)		824.4968	848.5129	16.7	0.020
Extreme (10C)		824.4968	848.5129	16.1	0.019
Extreme (0C)		824.4968	848.5129	16.9	0.020
Extreme (-10C)		824.4968	848.5129	17.3	0.021
Extreme (-20C)		824.4968	848.5129	16.0	0.019
Extreme (-30C)		824.4968	848.5129	17.4	0.021
25C	10%	824.4968	848.5129	17.2	0.021
	-10%	824.4968	848.5129	18.4	0.022
	End Point	824.4968	848.5129	19.7	0.024

9.4. LTE BAND 7

ID:	39270	Date:	4/13/16
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QPSK, (20MHz BANDWIDTH)

Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2501.0189	2568.9804		
Extreme (50C)		2501.0189	2568.9804	13.8	0.005
Extreme (40C)		2501.0189	2568.9804	15.2	0.006
Extreme (30C)		2501.0189	2568.9804	14.6	0.006
Extreme (10C)		2501.0189	2568.9804	15.4	0.006
Extreme (0C)		2501.0189	2568.9804	15.3	0.006
Extreme (-10C)		2501.0189	2568.9804	20.4	0.008
Extreme (-20C)		2501.0189	2568.9804	14.4	0.006
Extreme (-30C)		2501.0189	2568.9804	16.5	0.007
25C	10%	2501.0189	2568.9804	15.4	0.006
	-10%	2501.0189	2568.9804	16.3	0.006
	End Point	2501.0189	2568.9804	18.2	0.007

16QAM, (20MHz BANDWIDTH)

Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2501.0191	2568.9803		
Extreme (50C)		2501.0191	2568.9803	16.2	0.006
Extreme (40C)		2501.0191	2568.9803	16.6	0.007
Extreme (30C)		2501.0191	2568.9803	16.2	0.006
Extreme (10C)		2501.0191	2568.9803	15.2	0.006
Extreme (0C)		2501.0191	2568.9803	16.3	0.006
Extreme (-10C)		2501.0191	2568.9803	14.2	0.006
Extreme (-20C)		2501.0191	2568.9803	15.4	0.006
Extreme (-30C)		2501.0191	2568.9803	15.8	0.006
25C	10%	2501.0191	2568.9803	16.8	0.007
	-10%	2501.0191	2568.9803	18.8	0.007
	End Point	2501.0191	2568.9803	20.5	0.008

9.5. LTE BAND 12

ID:	39270	Date:	4/13/16
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QPSK, (10MHz BANDWIDTH)

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	699.5263	715.4713		
Extreme (50C)		699.5263	715.4713	8.9	0.01
Extreme (40C)		699.5263	715.4713	11.0	0.02
Extreme (30C)		699.5263	715.4713	8.3	0.01
Extreme (10C)		699.5263	715.4713	8.3	0.01
Extreme (0C)		699.5263	715.4713	8.9	0.01
Extreme (-10C)		699.5263	715.4713	8.5	0.01
Extreme (-20C)		699.5263	715.4713	7.5	0.01
Extreme (-30C)		699.5263	715.4713	7.8	0.01
25C	10%	699.5263	715.4713	8.6	0.01
	-10%	699.5263	715.4713	7.6	0.01
	End Point	699.5263	715.4713	7.2	0.01

16QAM, (10MHz BANDWIDTH)

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	699.5354	715.4721		
Extreme (50C)		699.5354	715.4721	16.3	0.02
Extreme (40C)		699.5354	715.4721	12.4	0.02
Extreme (30C)		699.5354	715.4721	12.0	0.02
Extreme (10C)		699.5354	715.4721	15.3	0.02
Extreme (0C)		699.5354	715.4721	17.2	0.02
Extreme (-10C)		699.5354	715.4721	16.6	0.02
Extreme (-20C)		699.5354	715.4721	12.6	0.02
Extreme (-30C)		699.5354	715.4721	13.4	0.02
25C	10%	699.5354	715.4721	12.6	0.02
	-10%	699.5354	715.4721	12.9	0.02
	End Point	699.5354	715.4721	11.3	0.02

9.6. LTE BAND 13

ID:	39270	Date:	4/13/16
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QPSK, (10MHz BANDWIDTH)

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	777.4971	786.5022		
Extreme (50C)		777.4971	786.5022	7.0	0.01
Extreme (40C)		777.4971	786.5022	7.5	0.01
Extreme (30C)		777.4971	786.5022	8.0	0.01
Extreme (10C)		777.4971	786.5022	6.6	0.01
Extreme (0C)		777.4971	786.5022	7.1	0.01
Extreme (-10C)		777.4971	786.5022	7.1	0.01
Extreme (-20C)		777.4971	786.5022	7.2	0.01
Extreme (-30C)		777.4971	786.5022	6.2	0.01
25C	10%	777.4971	786.5022	9.5	0.01
	-10%	777.4971	786.5022	10.4	0.01
	End Point	777.4971	786.5022	12.6	0.02

16QAM, (10MHz BANDWIDTH)

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	777.5051	786.5069		
Extreme (50C)		777.5051	786.5069	-13.0	-0.02
Extreme (40C)		777.5051	786.5069	-13.1	-0.02
Extreme (30C)		777.5051	786.5069	-13.2	-0.02
Extreme (10C)		777.5051	786.5069	-13.5	-0.02
Extreme (0C)		777.5051	786.5069	15.8	0.02
Extreme (-10C)		777.5051	786.5069	15.4	0.02
Extreme (-20C)		777.5051	786.5069	14.5	0.02
Extreme (-30C)		777.5051	786.5069	14.2	0.02
25C	10%	777.5051	786.5069	-15.3	-0.02
	-10%	777.5051	786.5069	-16.2	-0.02
	End Point	777.5051	786.5069	-17.5	-0.02

9.7. LTE BAND 17

ID:	39270	Date:	4/13/16
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QPSK, (10MHz BANDWIDTH)

Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	705.5044	714.4972		
Extreme (50C)		705.5044	714.4972	10.1	0.014
Extreme (40C)		705.5044	714.4972	8.3	0.012
Extreme (30C)		705.5044	714.4972	11.0	0.016
Extreme (10C)		705.5044	714.4972	10.1	0.014
Extreme (0C)		705.5044	714.4972	9.4	0.013
Extreme (-10C)		705.5044	714.4972	9.1	0.013
Extreme (-20C)		705.5044	714.4972	8.3	0.012
Extreme (-30C)		705.5044	714.4972	9.1	0.013
25C	10%	705.5044	714.4972	12.6	0.018
	-10%	705.5044	714.4972	13.7	0.019
	End Point	705.5044	714.4972	16.4	0.023

16QAM, (10MHz BANDWIDTH)

Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	705.5025	714.4967		
Extreme (50C)		705.5025	714.4967	17.0	0.024
Extreme (40C)		705.5025	714.4967	17.3	0.024
Extreme (30C)		705.5025	714.4967	18.2	0.026
Extreme (10C)		705.5025	714.4967	18.1	0.025
Extreme (0C)		705.5025	714.4967	19.1	0.027
Extreme (-10C)		705.5025	714.4967	19.3	0.027
Extreme (-20C)		705.5025	714.4967	13.4	0.019
Extreme (-30C)		705.5025	714.4967	13.2	0.019
25C	10%	705.5025	714.4967	19.3	0.027
	-10%	705.5025	714.4967	20.5	0.029
	End Point	705.5025	714.4967	22.7	0.032

9.8. LTE BAND 25

ID:	30606	Date:	4/13/16
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QPSK, (20MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	1851.0750	1913.9578		
Extreme (50C)		1851.0751	1913.9578	11.5	0.006
Extreme (40C)		1851.0751	1913.9578	12.0	0.006
Extreme (30C)		1851.0751	1913.9578	11.9	0.006
Extreme (10C)		1851.0751	1913.9578	12.1	0.006
Extreme (0C)		1851.0750	1913.9578	-14.1	-0.007
Extreme (-10C)		1851.0751	1913.9578	11.4	0.006
Extreme (-20C)		1851.0750	1913.9578	-13.2	-0.007
Extreme (-30C)		1851.0751	1913.9578	10.7	0.006
25C	10%	1851.0751	1913.9578	12.2	0.006
	-10%	1851.0751	1913.9578	13.5	0.007
	End Point	1851.0751	1913.9578	10.4	0.006

16QAM, (20MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0822	1913.9329		
Extreme (50C)		1851.0822	1913.9329	10.6	0.006
Extreme (40C)		1851.0822	1913.9328	-10.8	-0.006
Extreme (30C)		1851.0822	1913.9329	10.8	0.006
Extreme (10C)		1851.0822	1913.9328	-10.8	-0.006
Extreme (0C)		1851.0822	1913.9329	9.8	0.005
Extreme (-10C)		1851.0822	1913.9329	13.9	0.007
Extreme (-20C)		1851.0822	1913.9329	12.7	0.007
Extreme (-30C)		1851.0822	1913.9329	13.1	0.007
25C	10%	1851.0822	1913.9329	11.3	0.006
	-10%	1851.0822	1913.9329	12.5	0.007
	End Point	1851.0822	1913.9329	15.6	0.008

9.9. LTE BAND 26

ID:	30606	Date:	4/13/16
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QPSK, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.4981	823.5444		
Extreme (50C)		814.4981	823.5444	10.2	0.012
Extreme (40C)		814.4981	823.5444	8.8	0.011
Extreme (30C)		814.4981	823.5444	7.8	0.010
Extreme (10C)		814.4981	823.5444	6.9	0.008
Extreme (0C)		814.4981	823.5444	10.9	0.013
Extreme (-10C)		814.4981	823.5444	9.9	0.012
Extreme (-20C)		814.4981	823.5444	9.7	0.012
Extreme (-30C)		814.4981	823.5444	11.4	0.014
25C	10%	814.4981	823.5444	10.3	0.013
	-10%	814.4981	823.5444	9.0	0.011
	End Point	814.4981	823.5444	9.1	0.011

16QAM, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.5001	823.5126		
Extreme (50C)		814.5001	823.5126	9.0	0.011
Extreme (40C)		814.5001	823.5126	9.1	0.011
Extreme (30C)		814.5001	823.5126	9.2	0.011
Extreme (10C)		814.5001	823.5126	9.0	0.011
Extreme (0C)		814.5001	823.5126	9.9	0.012
Extreme (-10C)		814.5001	823.5126	10.2	0.012
Extreme (-20C)		814.5001	823.5126	8.7	0.011
Extreme (-30C)		814.5001	823.5126	9.1	0.011
25C	10%	814.5001	823.5126	9.3	0.011
	-10%	814.5001	823.5126	8.7	0.011
	End Point	814.5001	823.5126	8.0	0.010

9.10. LTE BAND 27

ID:	30606	Date:	4/13/16
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QPSK, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.5010	823.5073		
Extreme (50C)		814.5010	823.5073	10.6	0.013
Extreme (40C)		814.5010	823.5073	10.4	0.013
Extreme (30C)		814.5010	823.5073	11.3	0.014
Extreme (10C)		814.5010	823.5073	10.4	0.013
Extreme (0C)		814.5010	823.5073	10.2	0.012
Extreme (-10C)		814.5010	823.5073	10.3	0.013
Extreme (-20C)		814.5010	823.5073	9.9	0.012
Extreme (-30C)		814.5010	823.5073	9.7	0.012
25C	10%	814.5010	823.5073	1.1	0.001
	-10%	814.5010	823.5073	9.2	0.011
	End Point	814.5010	823.5073	7.5	0.009

16QAM, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.0000	823.4989		
Extreme (50C)		814.0000	823.4989	10.0	0.012
Extreme (40C)		814.0000	823.4989	10.0	0.012
Extreme (30C)		814.0000	823.4989	9.0	0.011
Extreme (10C)		814.0000	823.4989	9.7	0.012
Extreme (0C)		814.0000	823.4989	11.2	0.014
Extreme (-10C)		814.0000	823.4989	11.1	0.014
Extreme (-20C)		814.0000	823.4989	9.3	0.011
Extreme (-30C)		814.0000	823.4989	9.6	0.012
25C	10%	814.0000	823.4989	10.6	0.013
	-10%	814.0000	823.4989	8.6	0.011
	End Point	814.0000	823.4989	7.8	0.010

9.11. LTE BAND 30

ID:	30606	Date:	4/13/16
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QPSK, (20MHz BANDWIDTH)

Limit		2305	2315	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2305.5063	2314.4973		
Extreme (50C)		2305.5063	2314.4973	12.3	0.005
Extreme (40C)		2305.5063	2314.4973	13.4	0.006
Extreme (30C)		2305.5063	2314.4973	12.7	0.006
Extreme (10C)		2305.5063	2314.4973	10.3	0.004
Extreme (0C)		2305.5063	2314.4973	11.1	0.005
Extreme (-10C)		2305.5063	2314.4973	10.8	0.005
Extreme (-20C)		2305.5063	2314.4973	10.6	0.005
Extreme (-30C)		2305.5063	2314.4973	9.9	0.004
25C	10%	2305.5063	2314.4973	12.0	0.005
	-10%	2305.5063	2314.4973	10.2	0.004
	End Point	2305.5063	2314.4973	8.7	0.004

16QAM, (20MHz BANDWIDTH)

Limit		2305	2315	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2305.5083	2314.4968		
Extreme (50C)		2305.5083	2314.4968	12.4	0.005
Extreme (40C)		2305.5083	2314.4968	13.2	0.006
Extreme (30C)		2305.5083	2314.4968	12.4	0.005
Extreme (10C)		2305.5083	2314.4968	11.1	0.005
Extreme (0C)		2305.5083	2314.4968	12.2	0.005
Extreme (-10C)		2305.5083	2314.4968	10.3	0.004
Extreme (-20C)		2305.5083	2314.4968	11.9	0.005
Extreme (-30C)		2305.5083	2314.4968	10.9	0.005
25C	10%	2305.5083	2314.4968	11.1	0.005
	-10%	2305.5083	2314.4968	10.8	0.005
	End Point	2305.5083	2314.4968	8.0	0.003

9.12. LTE BAND 41

ID:	30606	Date:	4/13/16
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QPSK, (20MHz BANDWIDTH)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2496.9387	2689.0750		
Extreme (50C)		2496.9387	2689.0750	18.6	0.007
Extreme (40C)		2496.9387	2689.0750	18.4	0.007
Extreme (30C)		2496.9387	2689.0750	17.6	0.007
Extreme (10C)		2496.9387	2689.0750	17.3	0.007
Extreme (0C)		2496.9387	2689.0750	17.8	0.007
Extreme (-10C)		2496.9387	2689.0750	17.4	0.007
Extreme (-20C)		2496.9387	2689.0750	18.7	0.007
Extreme (-30C)		2496.9387	2689.0750	18.8	0.007
25C	10%	2496.9387	2689.0750	16.2	0.006
	-10%	2496.9387	2689.0750	14.2	0.005
	End Point	2496.9387	2689.0750	11.0	0.004

16QAM, (20MHz BANDWIDTH)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2496.9385	2689.0767		
Extreme (50C)		2496.9385	2689.0767	18.3	0.007
Extreme (40C)		2496.9385	2689.0767	17.6	0.007
Extreme (30C)		2496.9385	2689.0767	17.5	0.007
Extreme (10C)		2496.9385	2689.0767	18.1	0.007
Extreme (0C)		2496.9385	2689.0767	17.6	0.007
Extreme (-10C)		2496.9385	2689.0767	16.0	0.006
Extreme (-20C)		2496.9385	2689.0767	15.9	0.006
Extreme (-30C)		2496.9385	2689.0767	18.3	0.007
25C	10%	2496.9385	2689.0767	12.6	0.005
	-10%	2496.9385	2689.0767	14.5	0.006
	End Point	2496.9385	2689.0767	11.2	0.004

10. RADIATED TEST RESULTS

10.1. RADIATED POWER (ERP & EIRP), LAT

FCC: §2.1046, §22.913, §24.232, §27.50 and §90.635

LIMITS:

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.

27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP

§90.635 Limitations on power and antenna height.

(a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested.

(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

Table—Equivalent Power and Antenna Heights for Base Stations in the 851–869 MHz and 935–940 MHz Bands Which Have a Requirement for a 32 km (20 mi) Service Area Radius

Antenna height (ATT) meters (feet)	Effective radiated power (watts) ^{1,2,4}
Above 1,372 (4,500)	65
Above 1,220 (4,000) to 1,372 (4,500)	70
Above 1,067 (3,500) to 1,220 (4,000)	75
Above 915 (3,000) to 1,067 (3,500)	100
Above 763 (2,500) to 915 (3,000)	140
Above 610 (2,000) to 763 (2,500)	200
Above 458 (1,500) to 610 (2,000)	350
Above 305 (1,000) to 458 (1,500)	600
Up to 305 (1,000)	31,000

1 Power is given in terms of effective radiated power (ERP).

2 Applicants in the Los Angeles, CA, area who demonstrate a need to serve both the downtown and fringe areas will be permitted to utilize an ERP of 1 kw at the following mountaintop sites: Santiago Park, Sierra Peak, Mount Lukens, and Mount Wilson.

3 Stations with antennas below 305 m (1,000 ft) (AAT) will be restricted to a maximum power of 1 kw (ERP). In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

TEST PROCEDURE

ANSI / TIA / EIA 603-D Clause 2.2.17

KDB 971168 D01 RF power output using broadband peak and average power meter method.

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

EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	1850.7	24.74	297.85
		1880.0	24.95	312.61
		1909.3	24.79	301.30
1.4MHz Band 16QAM	1/0	1850.7	23.84	242.10
		1880.0	24.05	254.10
		1909.3	23.89	244.91

EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0MHz Band QPSK	1/0	1851.5	24.84	304.79
		1880.0	24.90	309.03
		1908.5	24.98	314.77
3.0MHz Band 16QAM	1/0	1851.5	23.94	247.74
		1880.0	24.00	251.19
		1908.5	24.08	255.86

EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0MHz Band QPSK	1/0	1852.5	24.54	284.45
		1880.0	24.95	312.61
		1907.5	24.57	286.42
5.0MHz Band 16QAM	1/0	1852.5	23.64	231.21
		1880.0	24.05	254.10
		1907.5	23.67	232.81

EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0MHz Band QPSK	1/0	1855.0	24.84	304.79
		1880.0	24.93	311.17
		1905.0	24.77	299.92
10.0MHz Band 16QAM	1/0	1855.0	23.94	247.74
		1880.0	24.03	252.93
		1905.0	23.87	243.78

EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15MHz Band QPSK	1/0	1857.5	24.64	291.07
		1880.0	24.85	305.49
		1902.5	24.81	302.69
15MHz Band 16QAM	1/0	1857.5	23.74	236.59
		1880.0	23.95	248.31
		1902.5	23.91	246.04

EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0MHz Band QPSK	1/0	1860.0	24.33	271.02
		1880.0	24.65	291.74
		1900.0	24.96	313.33
20MHz Band 16QAM	1/0	1860.0	23.43	220.29
		1880.0	23.75	237.14
		1900.0	24.06	254.68

EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1710.7	23.48	222.84
		1732.5	23.59	228.56
		1754.3	23.65	231.74
1.4 MHZ BAND 16QAM	1/0	1710.7	22.78	189.67
		1732.5	22.89	194.54
		1754.3	22.95	197.24

EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1711.5	23.45	221.31
		1732.5	23.42	219.79
		1753.5	23.55	226.46
3.0 MHZ BAND 16QAM	1/0	1711.5	22.75	188.36
		1732.5	22.72	187.07
		1753.5	22.85	192.75

EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1712.5	23.35	216.27
		1732.5	23.31	214.29
		1752.5	23.45	221.31
5.0 MHZ BAND 16QAM	1/0	1712.5	22.65	184.08
		1732.5	22.61	182.39
		1752.5	22.75	188.36

EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1715.0	23.42	219.79
		1732.5	23.47	222.33
		1750.0	23.48	222.84
10.0 MHZ BAND 16QAM	1/0	1715.0	22.72	187.07
		1732.5	22.77	189.23
		1750.0	22.78	189.67

EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1717.5	23.36	216.77
		1732.5	23.40	218.78
		1747.5	23.51	224.39
15.0 MHZ BAND 16QAM	1/0	1717.5	22.66	184.50
		1732.5	22.70	186.21
		1747.5	22.81	190.99

EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1720.0	23.46	221.82
		1732.5	23.32	214.78
		1745.0	23.52	224.91
20.0 MHZ BAND 16QAM	1/0	1720.0	22.66	184.50
		1732.5	22.52	178.65
		1745.0	22.72	187.07

ERP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	19.47	88.51
		836.5	20.06	101.39
		848.3	19.98	99.54
1.4MHz Band 16QAM	1/0	824.7	19.96	99.08
		836.5	20.28	106.66
		848.3	20.14	103.28

ERP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	21.61	144.88
		836.5	21.34	136.14
		847.5	20.82	120.78
3.0 MHZ BAND 16QAM	1/0	825.5	20.71	117.76
		836.5	20.44	110.66
		847.5	19.92	98.17

ERP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	20.96	124.74
		836.5	20.84	121.34
		846.5	20.85	121.62
5MHz Band 16QAM	1/0	826.5	19.96	99.08
		836.5	19.84	96.38
		846.5	19.85	96.61

ERP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	20.81	120.50
		836.5	20.84	121.34
		844.0	20.72	118.03
10.0 MHZ BAND 16QAM	1/0	829.0	19.91	97.95
		836.5	19.84	96.38
		844.0	19.82	95.94

EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2502.5	25.36	343.56
		2535.0	25.68	369.83
		2567.5	26.65	462.38
5.0 MHZ BAND 16QAM	25/0	2502.5	24.56	285.76
		2535.0	24.88	307.61
		2567.5	25.85	384.59

EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2505.0	25.47	352.37
		2535.0	25.71	372.39
		2565.0	26.54	450.82
10.0 MHZ BAND 16QAM	50/0	2505.0	24.77	299.92
		2535.0	25.01	316.96
		2565.0	25.84	383.71

EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2507.5	25.18	329.61
		2535.0	25.48	353.18
		2562.5	26.62	459.20
15.0 MHZ BAND 16QAM	75/0	2507.5	24.48	280.54
		2535.0	24.78	300.61
		2562.5	25.92	390.84

EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2510.0	25.38	345.14
		2535.0	25.70	371.54
		2560.0	26.43	439.54
20.0 MHZ BAND 16QAM	100/0	2510.0	24.68	293.76
		2535.0	25.00	316.23
		2560.0	25.73	374.11

ERP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	699.7	17.20	52.48
		707.5	17.12	51.52
		715.3	17.11	51.40
1.4MHz Band 16QAM	1/0	699.7	16.90	48.98
		707.5	16.71	46.88
		715.3	16.81	47.97

ERP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	700.5	15.23	33.34
		707.5	15.16	32.81
		714.5	15.25	33.50
3.0 MHZ BAND 16QAM	1/0	700.5	14.29	26.85
		707.5	14.22	26.42
		714.5	14.14	25.94

ERP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	701.5	15.25	33.50
		707.5	15.15	32.73
		713.5	15.31	33.96
5MHz Band 16QAM	1/0	701.5	14.24	26.55
		707.5	14.24	26.55
		713.5	14.30	26.92

ERP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	704.0	15.30	33.88
		707.5	15.38	34.51
		711.0	15.55	35.89
10.0 MHZ BAND 16QAM	1/0	704.0	14.23	26.49
		707.5	14.33	27.10
		711.0	14.62	28.97

ERP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	15.90	38.90
		782.0	15.64	36.64
		784.5	15.76	37.67
5.0 MHZ BAND 16QAM	1/0	779.5	14.94	31.19
		782.0	14.65	29.17
		784.5	14.71	29.58

ERP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	15.75	37.58
10 MHZ BAND 16QAM	1/0		14.85	30.55

ERP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	17.76	59.70
		710.0	18.06	63.97
		713.5	18.15	65.31
5MHz Band 16QAM	1/0	706.5	16.96	49.66
		710.0	17.26	53.21
		713.5	17.35	54.33

EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	710.0	18.10	64.57
10.0 MHZ BAND 16QAM		710.0	17.33	54.08

EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1850.7	23.14	206.06
		1882.5	23.35	216.27
		1914.3	23.40	218.78
1.4 MHZ BAND 16QAM	1/0	1850.7	22.29	169.43
		1882.5	22.40	173.78
		1914.3	22.45	175.79

EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1851.5	23.00	199.53
		1882.5	23.05	201.84
		1913.5	23.35	216.27
3.0 MHZ BAND 16QAM	1/0	1851.5	22.19	165.58
		1882.5	22.25	167.88
		1913.5	22.45	175.79

EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1852.5	23.04	201.37
		1882.5	23.16	207.01
		1912.5	23.17	207.49
5.0 MHZ BAND 16QAM	1/0	1852.5	22.09	161.81
		1882.5	22.30	169.82
		1912.5	22.25	167.88

EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1855.0	23.14	206.06
		1882.5	23.11	204.64
		1910.0	23.23	210.38
10.0 MHZ BAND 16QAM	1/0	1855.0	22.24	167.49
		1882.5	22.30	169.82
		1910.0	22.34	171.40

EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1857.5	23.02	200.45
		1882.5	23.32	214.78
		1907.5	23.33	215.28
15.0 MHZ BAND 16QAM	1/0	1857.5	22.14	163.68
		1882.5	22.35	171.79
		1907.5	22.38	172.98

EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1860.0	23.22	209.89
		1882.5	23.35	216.27
		1905.0	23.44	220.80
20.0 MHZ BAND 16QAM	1/0	1860.0	22.33	171.00
		1882.5	22.43	174.98
		1905.0	22.62	182.81

ERP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	814.7	18.41	69.34
		819.0	18.56	71.78
		823.3	18.71	74.30
1.4 MHZ BAND 16QAM	1/0	814.7	17.56	57.02
		819.0	17.78	59.98
		823.3	17.92	61.94

ERP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	815.5	18.02	63.39
		819.0	18.28	67.30
		822.5	18.50	70.79
3.0 MHZ BAND 16QAM	1/0	815.5	17.11	51.40
		819.0	17.38	54.70
		822.5	17.53	56.62

ERP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	816.5	18.12	64.86
		819.0	18.31	67.76
		821.5	18.46	70.15
5.0 MHZ BAND 16QAM	1/0	816.5	17.22	52.72
		819.0	17.40	54.95
		821.5	17.53	56.62

ERP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	18.31	67.76
10.0 MHZ BAND 16QAM	1/0	819.0	17.40	54.95

ERP POWER FOR LTE BAND 27 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	814.7	18.48	70.47
		819.0	18.54	71.45
		823.3	18.66	73.45
1.4 MHZ BAND 16QAM	1/0	814.7	17.69	58.75
		819.0	17.77	59.84
		823.3	17.86	61.09

ERP POWER FOR LTE BAND 27 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	815.5	19.97	99.31
		819.0	19.43	87.70
		822.5	20.11	102.57
3.0 MHZ BAND 16QAM	1/0	815.5	19.03	79.98
		819.0	18.46	70.15
		822.5	19.17	82.60

ERP POWER FOR LTE BAND 27 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	816.5	20.01	100.23
		819.0	19.51	89.33
		821.5	20.10	102.33
5.0 MHZ BAND 16QAM	1/0	816.5	19.02	79.80
		819.0	18.53	71.29
		821.5	19.13	81.85

ERP POWER FOR LTE BAND 27 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	19.49	88.92
10.0 MHZ BAND 16QAM	1/0	819.0	18.59	72.28

EIRP POWER FOR LTE BAND 30 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	2307.5	20.70	117.49
		2310.0	20.87	122.18
		2312.5	20.63	115.61
5MHz Band 16QAM	1/0	2307.5	19.90	97.72
		2310.0	20.07	101.62
		2312.5	19.83	96.16

EIRP POWER FOR LTE BAND 30 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	2310.0	20.97	125.03
10.0 MHZ BAND 16QAM		2310.0	20.17	103.99

EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2498.5	25.56	359.75
		2593.0	26.50	446.68
		2687.5	25.20	331.13
5.0 MHZ BAND 16QAM	25/0	2498.5	24.84	304.79
		2593.0	25.78	378.44
		2687.5	24.52	283.14

EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2501.0	25.79	379.31
		2593.0	26.56	452.90
		2685.0	25.05	319.89
10.0 MHZ BAND 16QAM	50/0	2501.0	25.09	322.85
		2593.0	25.86	385.48
		2685.0	24.35	272.27

EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2503.5	25.86	385.48
		2593.0	26.38	434.51
		2682.5	25.10	323.59
15.0 MHZ BAND 16QAM	75/0	2503.5	25.06	320.63
		2593.0	25.58	361.41
		2682.5	24.30	269.15

EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2506.0	25.81	381.07
		2593.0	26.38	434.51
		2680.0	25.22	332.66
20.0 MHZ BAND 16QAM	100/0	2506.0	25.11	324.34
		2593.0	25.68	369.83
		2680.0	24.52	283.14

10.1.1. LTE BAND 2

QPSK EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

High Frequency Fundamental Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 2 QPSK 1.4MHz BW								
<u>Test Equipment:</u>								
Receiving: Horn T346 and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	6.5	V	0.98	8.05	13.55	33.0	-19.5	
1.851	17.7	H	0.98	8.05	24.74	33.0	-8.3	
Mid Ch								
1.880	7.1	V	0.98	8.03	14.11	33.0	-18.9	
1.880	17.9	H	0.98	8.03	24.95	33.0	-8.1	
High Ch								
1.909	6.8	V	0.98	8.05	13.85	33.0	-19.1	
1.909	17.7	H	0.98	8.05	24.79	33.0	-8.2	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 2 16QAM 1.4MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	5.6	V	0.98	8.05	12.65	33.0	-20.4	
1.851	16.8	H	0.98	8.05	23.84	33.0	-9.2	
Mid Ch								
1.880	6.2	V	0.98	8.03	13.21	33.0	-19.8	
1.880	17.0	H	0.98	8.03	24.05	33.0	-9.0	
High Ch								
1.909	5.9	V	0.98	8.05	12.95	33.0	-20.0	
1.909	16.8	H	0.98	8.05	23.89	33.0	-9.1	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 2 QPSK 3MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	6.9	V	0.98	8.05	13.95	33.0	-19.1	
1.852	17.8	H	0.98	8.05	24.84	33.0	-8.2	
Mid Ch								
1.880	6.9	V	0.98	8.03	13.97	33.0	-19.0	
1.880	17.9	H	0.98	8.03	24.90	33.0	-8.1	
High Ch								
1.909	6.9	V	0.98	8.05	13.96	33.0	-19.0	
1.909	17.9	H	0.98	8.05	24.98	33.0	-8.0	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 3MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	6.0	V	0.98	8.05	13.05	33.0	-20.0	
1.852	16.9	H	0.98	8.05	23.94	33.0	-9.1	
Mid Ch								
1.880	6.0	V	0.98	8.03	13.07	33.0	-19.9	
1.880	17.0	H	0.98	8.03	24.00	33.0	-9.0	
High Ch								
1.909	6.0	V	0.98	8.05	13.06	33.0	-19.9	
1.909	17.0	H	0.98	8.05	24.08	33.0	-8.9	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 2 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	6.6	V	0.98	8.05	13.70	33.0	-19.3	
1.853	17.5	H	0.98	8.05	24.54	33.0	-8.5	
Mid Ch								
1.880	6.9	V	0.98	8.03	13.95	33.0	-19.0	
1.880	17.9	H	0.98	8.03	24.95	33.0	-8.1	
High Ch								
1.908	7.0	V	0.98	8.04	14.04	33.0	-19.0	
1.908	17.5	H	0.98	8.04	24.57	33.0	-8.4	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 2 16QAM 5MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	5.7	V	0.98	8.05	12.80	33.0	-20.2	
1.853	16.6	H	0.98	8.05	23.64	33.0	-9.4	
Mid Ch								
1.880	6.0	V	0.98	8.03	13.05	33.0	-19.9	
1.880	17.0	H	0.98	8.03	24.05	33.0	-9.0	
High Ch								
1.908	6.1	V	0.98	8.04	13.14	33.0	-19.9	
1.908	16.6	H	0.98	8.04	23.67	33.0	-9.3	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 2 QPSK 10MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	6.7	V	0.98	8.05	13.80	33.0	-19.2	
1.855	17.8	H	0.98	8.05	24.84	33.0	-8.2	
Mid Ch								
1.880	6.7	V	0.98	8.03	13.73	33.0	-19.3	
1.880	17.9	H	0.98	8.03	24.93	33.0	-8.1	
High Ch								
1.905	6.7	V	0.98	8.04	13.76	33.0	-19.2	
1.905	17.7	H	0.98	8.04	24.77	33.0	-8.2	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 2 16QAM 10MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	5.8	V	0.98	8.05	12.90	33.0	-20.1	
1.855	16.9	H	0.98	8.05	23.94	33.0	-9.1	
Mid Ch								
1.880	5.8	V	0.98	8.03	12.83	33.0	-20.2	
1.880	17.0	H	0.98	8.03	24.03	33.0	-9.0	
High Ch								
1.905	5.8	V	0.98	8.04	12.86	33.0	-20.1	
1.905	16.8	H	0.98	8.04	23.87	33.0	-9.1	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 2 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	6.6	V	0.98	8.04	13.69	33.0	-19.3	
1.858	17.6	H	0.98	8.04	24.64	33.0	-8.4	
Mid Ch								
1.880	6.8	V	0.98	8.03	13.87	33.0	-19.1	
1.880	17.8	H	0.98	8.03	24.85	33.0	-8.2	
High Ch								
1.903	7.4	V	0.98	8.03	14.40	33.0	-18.6	
1.903	17.8	H	0.98	8.03	24.81	33.0	-8.2	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	5.7	V	0.98	8.04	12.79	33.0	-20.2	
1.858	16.7	H	0.98	8.04	23.74	33.0	-9.3	
Mid Ch								
1.880	5.9	V	0.98	8.03	12.97	33.0	-20.0	
1.880	16.9	H	0.98	8.03	23.95	33.0	-9.1	
High Ch								
1.903	6.5	V	0.98	8.03	13.50	33.0	-19.5	
1.903	16.9	H	0.98	8.03	23.91	33.0	-9.1	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 2 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	7.2	V	0.98	8.04	14.21	33.0	-18.8	
1.860	17.3	H	0.98	8.04	24.33	33.0	-8.7	
Mid Ch								
1.880	7.5	V	0.98	8.03	14.53	33.0	-18.5	
1.880	17.6	H	0.98	8.03	24.65	33.0	-8.4	
High Ch								
1.900	8.3	V	0.98	8.02	15.33	33.0	-17.7	
1.900	17.9	H	0.98	8.02	24.96	33.0	-8.0	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 20MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	6.3	V	0.98	8.04	13.31	33.0	-19.7	
1.860	16.4	H	0.98	8.04	23.43	33.0	-9.6	
Mid Ch								
1.880	6.6	V	0.98	8.03	13.63	33.0	-19.4	
1.880	16.7	H	0.98	8.03	23.75	33.0	-9.3	
High Ch								
1.900	7.4	V	0.98	8.02	14.43	33.0	-18.6	
1.900	17.0	H	0.98	8.02	24.06	33.0	-8.9	
Rev. 10.24.13								

10.1.2. LTE BAND 4

QPSK EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 1.4MHz BW								
Test Equipment:								
Receiving: Horn T346 and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	4.3	V	0.95	8.27	11.66	30.0	-18.3	
1.711	16.2	H	0.95	8.27	23.48	30.0	-6.5	
Mid Ch								
1.733	4.1	V	0.95	8.23	11.39	30.0	-18.6	
1.733	16.3	H	0.95	8.23	23.59	30.0	-6.4	
High Ch								
1.754	4.4	V	0.95	8.18	11.64	30.0	-18.4	
1.754	16.4	H	0.95	8.18	23.65	30.0	-6.4	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 4 16QAM 1.4MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	3.6	V	0.95	8.27	10.96	30.0	-19.0	
1.711	15.5	H	0.95	8.27	22.78	30.0	-7.2	
Mid Ch								
1.733	3.4	V	0.95	8.23	10.69	30.0	-19.3	
1.733	15.6	H	0.95	8.23	22.89	30.0	-7.1	
High Ch								
1.754	3.7	V	0.95	8.18	10.94	30.0	-19.1	
1.754	15.7	H	0.95	8.18	22.95	30.0	-7.1	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 3MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	3.4	V	0.95	8.27	10.75	30.0	-19.2	
1.712	16.1	H	0.95	8.27	23.45	30.0	-6.5	
Mid Ch								
1.733	3.5	V	0.95	8.23	10.74	30.0	-19.3	
1.733	16.1	H	0.95	8.23	23.42	30.0	-6.6	
High Ch								
1.754	3.6	V	0.95	8.18	10.85	30.0	-19.1	
1.754	16.3	H	0.95	8.18	23.55	30.0	-6.5	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 4 16QAM 3MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	2.7	V	0.95	8.27	10.05	30.0	-19.9	
1.712	15.4	H	0.95	8.27	22.75	30.0	-7.2	
Mid Ch								
1.733	2.8	V	0.95	8.23	10.04	30.0	-20.0	
1.733	15.4	H	0.95	8.23	22.72	30.0	-7.3	
High Ch								
1.754	2.9	V	0.95	8.18	10.15	30.0	-19.8	
1.754	15.6	H	0.95	8.18	22.85	30.0	-7.2	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 5MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	3.3	V	0.95	8.27	10.66	30.0	-19.3	
1.713	16.0	H	0.95	8.27	23.35	30.0	-6.6	
Mid Ch								
1.733	3.5	V	0.95	8.23	10.79	30.0	-19.2	
1.733	16.0	H	0.95	8.23	23.31	30.0	-6.7	
High Ch								
1.753	3.6	V	0.95	8.18	10.85	30.0	-19.2	
1.753	16.2	H	0.95	8.18	23.45	30.0	-6.6	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 5MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	2.6	V	0.95	8.27	9.96	30.0	-20.0	
1.713	15.3	H	0.95	8.27	22.65	30.0	-7.3	
Mid Ch								
1.733	2.8	V	0.95	8.23	10.09	30.0	-19.9	
1.733	15.3	H	0.95	8.23	22.61	30.0	-7.4	
High Ch								
1.753	2.9	V	0.95	8.18	10.15	30.0	-19.9	
1.753	15.5	H	0.95	8.18	22.75	30.0	-7.3	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 4 QPSK 10MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.715	4.0	V	0.95	8.26	11.31	30.0	-18.7	
1.715	16.1	H	0.95	8.26	23.42	30.0	-6.6	
Mid Ch								
1.733	4.3	V	0.95	8.23	11.59	30.0	-18.4	
1.733	16.2	H	0.95	8.23	23.47	30.0	-6.5	
High Ch								
1.750	4.4	V	0.95	8.19	11.65	30.0	-18.3	
1.750	16.2	H	0.95	8.19	23.48	30.0	-6.5	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 10MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.715	3.3	V	0.95	8.26	10.61	30.0	-19.4	
1.715	15.4	H	0.95	8.26	22.72	30.0	-7.3	
Mid Ch								
1.733	3.6	V	0.95	8.23	10.89	30.0	-19.1	
1.733	15.5	H	0.95	8.23	22.77	30.0	-7.2	
High Ch								
1.750	3.7	V	0.95	8.19	10.95	30.0	-19.0	
1.750	15.5	H	0.95	8.19	22.78	30.0	-7.2	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 39004 Configuration: EUT only Mode: LTE Band 4 QPSK 15MHz BW								
Test Equipment: Receiving: Horn T346, and Chamber H SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	3.8	V	0.95	8.26	11.15	30.0	-18.9	
1.718	16.1	H	0.95	8.26	23.36	30.0	-6.6	
Mid Ch								
1.733	4.1	V	0.95	8.23	11.36	30.0	-18.6	
1.733	16.1	H	0.95	8.23	23.40	30.0	-6.6	
High Ch								
1.748	3.8	V	0.95	8.19	11.08	30.0	-18.9	
1.748	16.3	H	0.95	8.19	23.51	30.0	-6.5	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	3.1	V	0.95	8.26	10.45	30.0	-19.6	
1.718	15.4	H	0.95	8.26	22.66	30.0	-7.3	
Mid Ch								
1.733	3.4	V	0.95	8.23	10.66	30.0	-19.3	
1.733	15.4	H	0.95	8.23	22.70	30.0	-7.3	
High Ch								
1.748	3.1	V	0.95	8.19	10.38	30.0	-19.6	
1.748	15.6	H	0.95	8.19	22.81	30.0	-7.2	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	3.9	V	0.95	8.25	11.22	30.0	-18.8	
1.720	16.2	H	0.95	8.25	23.46	30.0	-6.5	
Mid Ch								
1.733	4.0	V	0.95	8.23	11.29	30.0	-18.7	
1.733	16.0	H	0.95	8.23	23.32	30.0	-6.7	
High Ch								
1.745	4.2	V	0.95	8.20	11.40	30.0	-18.6	
1.745	16.3	H	0.95	8.20	23.52	30.0	-6.5	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 39004								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 20MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber H SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	3.1	V	0.95	8.25	10.42	30.0	-19.6	
1.720	15.4	H	0.95	8.25	22.66	30.0	-7.3	
Mid Ch								
1.733	3.2	V	0.95	8.23	10.49	30.0	-19.5	
1.733	15.2	H	0.95	8.23	22.52	30.0	-7.5	
High Ch								
1.745	3.4	V	0.95	8.20	10.60	30.0	-19.4	
1.745	15.5	H	0.95	8.20	22.72	30.0	-7.3	
Rev. 10.24.13								

10.1.3. LTE BAND 5

QPSK EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/11/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 5 QPSK 1.4MHz BW										
Test Equipment: Receiving: Sunoi T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	13.80	V	0.6	0.0	13.18	15.33	38.45	40.60	-25.3	
824.70	20.09	H	0.6	0.0	19.47	21.62	38.45	40.60	-19.0	
Mid Ch										
836.50	13.25	V	0.6	0.0	12.63	14.78	38.45	40.60	-25.8	
836.50	20.68	H	0.6	0.0	20.06	22.21	38.45	40.60	-18.4	
High Ch										
848.30	11.82	V	0.6	0.0	11.20	13.35	38.45	40.60	-27.2	
848.30	20.60	H	0.6	0.0	19.98	22.13	38.45	40.60	-18.5	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/11/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 5 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	14.04	V	0.6	0.0	13.42	15.57	38.45	40.60	-25.0	
824.70	20.58	H	0.6	0.0	19.96	22.11	38.45	40.60	-18.5	
Mid Ch										
836.50	13.56	V	0.6	0.0	12.94	15.09	38.45	40.60	-25.5	
836.50	20.90	H	0.6	0.0	20.28	22.43	38.45	40.60	-18.2	
High Ch										
848.30	12.15	V	0.6	0.0	11.53	13.68	38.45	40.60	-26.9	
848.30	20.76	H	0.6	0.0	20.14	22.29	38.45	40.60	-18.3	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/6/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 5 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	11.03	V	0.6	0.0	10.41	12.56	38.45	40.60	-28.0	
825.50	22.23	H	0.6	0.0	21.61	23.76	38.45	40.60	-16.8	
Mid Ch										
836.50	10.91	V	0.6	0.0	10.29	12.44	38.45	40.60	-28.2	
836.50	21.96	H	0.6	0.0	21.34	23.49	38.45	40.60	-17.1	
High Ch										
847.50	10.76	V	0.6	0.0	10.14	12.29	38.45	40.60	-28.3	
847.50	21.43	H	0.6	0.0	20.82	22.97	38.45	40.60	-17.6	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/6/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 5 16QAM 3MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	10.13	V	0.6	0.0	9.51	11.66	38.45	40.60	-28.9	
825.50	21.33	H	0.6	0.0	20.71	22.86	38.45	40.60	-17.7	
Mid Ch										
836.50	10.01	V	0.6	0.0	9.39	11.54	38.45	40.60	-29.1	
836.50	21.06	H	0.6	0.0	20.44	22.59	38.45	40.60	-18.0	
High Ch										
847.50	9.76	V	0.6	0.0	9.14	11.29	38.45	40.60	-29.3	
847.50	20.53	H	0.6	0.0	19.92	22.07	38.45	40.60	-18.5	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/6/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 5 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	13.91	V	0.6	0.0	13.29	15.44	38.45	40.60	-25.2	
826.50	21.58	H	0.6	0.0	20.96	23.11	38.45	40.60	-17.5	
Mid Ch										
836.50	13.45	V	0.6	0.0	12.83	14.98	38.45	40.60	-25.6	
836.50	21.46	H	0.6	0.0	20.84	22.99	38.45	40.60	-17.6	
High Ch										
846.50	12.96	V	0.6	0.0	12.34	14.49	38.45	40.60	-26.1	
846.50	21.46	H	0.6	0.0	20.85	23.00	38.45	40.60	-17.6	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/6/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 5 16QAM 5MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	12.91	V	0.6	0.0	12.29	14.44	38.45	40.60	-26.2	
826.50	20.58	H	0.6	0.0	19.96	22.11	38.45	40.60	-18.5	
Mid Ch										
836.50	12.45	V	0.6	0.0	11.83	13.98	38.45	40.60	-26.6	
836.50	20.46	H	0.6	0.0	19.84	21.99	38.45	40.60	-18.6	
High Ch										
846.50	11.96	V	0.6	0.0	11.34	13.49	38.45	40.60	-27.1	
846.50	20.46	H	0.6	0.0	19.85	22.00	38.45	40.60	-18.6	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/6/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 5 QPSK 10MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	12.79	V	0.6	0.0	12.17	14.32	38.45	40.60	-26.3	
829.00	21.43	H	0.6	0.0	20.81	22.96	38.45	40.60	-17.6	
Mid Ch										
836.50	12.24	V	0.6	0.0	11.62	13.77	38.45	40.60	-26.8	
836.50	21.46	H	0.6	0.0	20.84	22.99	38.45	40.60	-17.6	
High Ch										
844.00	12.41	V	0.6	0.0	11.79	13.94	38.45	40.60	-26.7	
844.00	21.33	H	0.6	0.0	20.72	22.87	38.45	40.60	-17.7	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/6/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 5 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	11.79	V	0.6	0.0	11.17	13.32	38.45	40.60	-27.3	
829.00	20.53	H	0.6	0.0	19.91	22.06	38.45	40.60	-18.5	
Mid Ch										
836.50	11.31	V	0.6	0.0	10.69	12.84	38.45	40.60	-27.8	
836.50	20.46	H	0.6	0.0	19.84	21.99	38.45	40.60	-18.6	
High Ch										
844.00	11.56	V	0.6	0.0	10.94	13.09	38.45	40.60	-27.5	
844.00	20.43	H	0.6	0.0	19.82	21.97	38.45	40.60	-18.6	
Rev. 10.24.13										

10.1.4. LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 7 QPSK 5MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	14.6	V	1.15	9.34	22.82	33.0	-10.2	
2.503	17.2	H	1.15	9.34	25.36	33.0	-7.6	
Mid Ch								
2.535	14.8	V	1.16	9.38	23.05	33.0	-10.0	
2.535	17.5	H	1.16	9.38	25.68	33.0	-7.3	
High Ch								
2.568	14.9	V	1.17	9.43	23.13	33.0	-9.9	
2.568	18.4	H	1.17	9.43	26.65	33.0	-6.4	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		44373						
Configuration:		EUT only						
Mode:		LTE Band 7 16QAM 5MHz BW						
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	13.8	V	1.15	9.34	22.02	33.0	-11.0	
2.503	16.4	H	1.15	9.34	24.56	33.0	-8.4	
Mid Ch								
2.535	14.0	V	1.16	9.38	22.25	33.0	-10.8	
2.535	16.7	H	1.16	9.38	24.88	33.0	-8.1	
High Ch								
2.568	14.1	V	1.17	9.43	22.33	33.0	-10.7	
2.568	17.6	H	1.17	9.43	25.85	33.0	-7.2	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		44373						
Configuration:		EUT only						
Mode:		LTE Band 7 QPSK 10MHz BW						
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	14.5	V	1.15	9.34	22.67	33.0	-10.3	
2.505	17.3	H	1.15	9.34	25.47	33.0	-7.5	
Mid Ch								
2.535	14.9	V	1.16	9.38	23.11	33.0	-9.9	
2.535	17.5	H	1.16	9.38	25.71	33.0	-7.3	
High Ch								
2.565	14.4	V	1.17	9.43	22.62	33.0	-10.4	
2.565	18.3	H	1.17	9.43	26.54	33.0	-6.5	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		44373						
Configuration:		EUT only						
Mode:		LTE Band 7 16QAM 10MHz BW						
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	13.8	V	1.15	9.34	21.97	33.0	-11.0	
2.505	16.6	H	1.15	9.34	24.77	33.0	-8.2	
Mid Ch								
2.535	14.2	V	1.16	9.38	22.41	33.0	-10.6	
2.535	16.8	H	1.16	9.38	25.01	33.0	-8.0	
High Ch								
2.565	13.7	V	1.17	9.43	21.92	33.0	-11.1	
2.565	17.6	H	1.17	9.43	25.84	33.0	-7.2	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/30/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 7 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	14.2	V	1.15	9.34	22.38	33.0	-10.6	
2.508	17.0	H	1.15	9.34	25.18	33.0	-7.8	
Mid Ch								
2.535	14.2	V	1.16	9.38	22.46	33.0	-10.5	
2.535	17.3	H	1.16	9.38	25.48	33.0	-7.5	
High Ch								
2.563	13.4	V	1.17	9.42	21.68	33.0	-11.3	
2.563	18.4	H	1.17	9.42	26.62	33.0	-6.4	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		44373						
Configuration:		EUT only						
Mode:		LTE Band 7 16QAM 15MHz BW						
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	13.5	V	1.15	9.34	21.68	33.0	-11.3	
2.508	16.3	H	1.15	9.34	24.48	33.0	-8.5	
Mid Ch								
2.535	13.5	V	1.16	9.38	21.76	33.0	-11.2	
2.535	16.6	H	1.16	9.38	24.78	33.0	-8.2	
High Ch								
2.563	12.7	V	1.17	9.42	20.98	33.0	-12.0	
2.563	17.7	H	1.17	9.42	25.92	33.0	-7.1	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		44373						
Configuration:		EUT only						
Mode:		LTE Band 7 QPSK 20MHz BW						
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	14.5	V	1.15	9.35	22.73	33.0	-10.3	
2.510	17.2	H	1.15	9.35	25.38	33.0	-7.6	
Mid Ch								
2.535	14.4	V	1.16	9.38	22.60	33.0	-10.4	
2.535	17.5	H	1.16	9.38	25.70	33.0	-7.3	
High Ch								
2.560	14.5	V	1.17	9.42	22.71	33.0	-10.3	
2.560	18.2	H	1.17	9.42	26.43	33.0	-6.6	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		44373						
Configuration:		EUT only						
Mode:		LTE Band 7 16QAM 20MHz BW						
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	13.8	V	1.15	9.35	22.03	33.0	-11.0	
2.510	16.5	H	1.15	9.35	24.68	33.0	-8.3	
Mid Ch								
2.535	13.7	V	1.16	9.38	21.90	33.0	-11.1	
2.535	16.8	H	1.16	9.38	25.00	33.0	-8.0	
High Ch								
2.560	13.8	V	1.17	9.42	22.01	33.0	-11.0	
2.560	17.5	H	1.17	9.42	25.73	33.0	-7.3	
Rev. 10.24.13								

10.1.5. LTE BAND 12

QPSK EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/11/2016										
Test Engineer: 52279										
Configuration: EUT only										
Mode: LTE Band 12 QPSK 1.4MHz BW										
Test Equipment:										
Receiving: Sunoi T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
699.70	8.39	V	0.55	0.0	7.84	9.99	34.77	36.99	-27.0	
699.70	17.75	H	0.55	0.0	17.20	19.35	34.77	36.99	-17.6	
Mid Ch										
707.50	8.42	V	0.55	0.0	7.87	10.02	34.77	36.99	-27.0	
707.50	17.67	H	0.55	0.0	17.12	19.27	34.77	36.99	-17.7	
High Ch										
715.30	9.14	V	0.55	0.0	8.59	10.74	34.77	36.99	-26.2	
715.30	17.66	H	0.55	0.0	17.11	19.26	34.77	36.99	-17.7	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/11/2016										
Test Engineer: 52279										
Configuration: EUT only										
Mode: LTE Band 12 16QAM 1.4MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
699.70	8.05	V	0.55	0.0	7.50	9.65	34.77	36.99	-27.3	
699.70	17.45	H	0.55	0.0	16.90	19.05	34.77	36.99	-17.9	
Mid Ch										
707.50	8.11	V	0.55	0.0	7.56	9.71	34.77	36.99	-27.3	
707.50	17.26	H	0.55	0.0	16.71	18.86	34.77	36.99	-18.1	
High Ch										
715.30	8.63	V	0.55	0.0	8.08	10.23	34.77	36.99	-26.8	
715.30	17.36	H	0.55	0.0	16.81	18.96	34.77	36.99	-18.0	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 12 QPSK 3MHz BW										
Test Equipment: Receiving: Sunoi T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
700.50	6.72	V	0.55	0.0	6.17	8.32	34.77	36.99	-28.7	
700.50	15.78	H	0.55	0.0	15.23	17.38	34.77	36.99	-19.6	
Mid Ch										
707.50	6.82	V	0.55	0.0	6.27	8.42	34.77	36.99	-28.6	
707.50	15.71	H	0.55	0.0	15.16	17.31	34.77	36.99	-19.7	
High Ch										
714.50	6.76	V	0.55	0.0	6.21	8.36	34.77	36.99	-28.6	
714.50	15.80	H	0.55	0.0	15.25	17.40	34.77	36.99	-19.6	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 12 16QAM 3MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
700.50	5.72	V	0.55	0.0	5.17	7.32	34.77	36.99	-29.7	
700.50	14.80	H	0.55	0.0	14.25	16.40	34.77	36.99	-20.6	
Mid Ch										
707.50	5.92	V	0.55	0.0	5.37	7.52	34.77	36.99	-29.5	
707.50	14.76	H	0.55	0.0	14.21	16.36	34.77	36.99	-20.6	
High Ch										
714.50	5.85	V	0.55	0.0	5.30	7.45	34.77	36.99	-29.5	
714.50	14.69	H	0.55	0.0	14.14	16.29	34.77	36.99	-20.7	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 12 QPSK 5MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	6.98	V	0.55	0.0	6.43	8.58	34.77	36.99	-28.4	
701.50	15.80	H	0.55	0.0	15.25	17.40	34.77	36.99	-19.6	
Mid Ch										
707.50	7.08	V	0.55	0.0	6.53	8.68	34.77	36.99	-28.3	
707.50	15.70	H	0.55	0.0	15.15	17.30	34.77	36.99	-19.7	
High Ch										
713.50	7.16	V	0.55	0.0	6.61	8.76	34.77	36.99	-28.2	
713.50	15.86	H	0.55	0.0	15.31	17.46	34.77	36.99	-19.5	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 12 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	5.95	V	0.55	0.0	5.40	7.55	34.77	36.99	-29.4	
701.50	14.79	H	0.55	0.0	14.24	16.39	34.77	36.99	-20.6	
Mid Ch										
707.50	6.09	V	0.55	0.0	5.54	7.69	34.77	36.99	-29.3	
707.50	14.79	H	0.55	0.0	14.24	16.39	34.77	36.99	-20.6	
High Ch										
713.50	6.15	V	0.55	0.0	5.60	7.75	34.77	36.99	-29.2	
713.50	14.85	H	0.55	0.0	14.30	16.45	34.77	36.99	-20.5	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 12 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
704.00	6.97	V	0.55	0.0	6.42	8.57	34.77	36.99	-28.4	
704.00	15.85	H	0.55	0.0	15.30	17.45	34.77	36.99	-19.5	
Mid Ch										
707.50	6.76	V	0.55	0.0	6.21	8.36	34.77	36.99	-28.6	
707.50	15.93	H	0.55	0.0	15.38	17.53	34.77	36.99	-19.5	
High Ch										
711.00	7.20	V	0.55	0.0	6.65	8.80	34.77	36.99	-28.2	
711.00	16.10	H	0.55	0.0	15.55	17.70	34.77	36.99	-19.3	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 12 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
704.00	5.95	V	0.55	0.0	5.40	7.55	34.77	36.99	-29.4	
704.00	14.78	H	0.55	0.0	14.23	16.38	34.77	36.99	-20.6	
Mid Ch										
707.50	5.82	V	0.55	0.0	5.27	7.42	34.77	36.99	-29.6	
707.50	14.88	H	0.55	0.0	14.33	16.48	34.77	36.99	-20.5	
High Ch										
711.00	6.17	V	0.55	0.0	5.62	7.77	34.77	36.99	-29.2	
711.00	15.17	H	0.55	0.0	14.62	16.77	34.77	36.99	-20.2	
Rev. 10.24.13										

10.1.6. LTE BAND 13

QPSK EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 13 QPSK 5MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	9.49	V	0.55	0.0	8.94	11.09	34.77	36.99	-25.9	
779.50	16.45	H	0.55	0.0	15.90	18.05	34.77	36.99	-18.9	
Mid Ch										
782.00	9.58	V	0.55	0.0	9.03	11.18	34.77	36.99	-25.8	
782.00	16.19	H	0.55	0.0	15.64	17.79	34.77	36.99	-19.2	
High Ch										
784.50	9.98	V	0.55	0.0	9.43	11.58	34.77	36.99	-25.4	
784.50	16.31	H	0.55	0.0	15.76	17.91	34.77	36.99	-19.1	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 13 16QAM 5MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	8.59	V	0.55	0.0	8.04	10.19	34.77	36.99	-26.8	
779.50	15.49	H	0.55	0.0	14.94	17.09	34.77	36.99	-19.9	
Mid Ch										
782.00	8.43	V	0.55	0.0	7.88	10.03	34.77	36.99	-27.0	
782.00	15.20	H	0.55	0.0	14.65	16.80	34.77	36.99	-20.2	
High Ch										
784.50	9.02	V	0.55	0.0	8.47	10.62	34.77	36.99	-26.4	
784.50	15.26	H	0.55	0.0	14.71	16.86	34.77	36.99	-20.1	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 13 QPSK 10MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	9.67	V	0.55	0.0	9.12	11.27	34.77	36.99	-25.7	
782.00	16.30	H	0.55	0.0	15.75	17.90	34.77	36.99	-19.1	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 13 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	8.83	V	0.55	0.0	8.28	10.43	34.77	36.99	-26.6	
782.00	15.40	H	0.55	0.0	14.85	17.00	34.77	36.99	-20.0	
Rev. 10.24.13										

10.1.7. LTE BAND 17

QPSK EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 17 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	11.86	V	0.55	0.0	11.31	13.46	34.77	36.99	-23.5	
706.50	18.31	H	0.55	0.0	17.76	19.91	34.77	36.99	-17.1	
Mid Ch										
710.00	12.03	V	0.55	0.0	11.48	13.63	34.77	36.99	-23.4	
710.00	18.61	H	0.55	0.0	18.06	20.21	34.77	36.99	-16.8	
High Ch										
713.50	12.10	V	0.55	0.0	11.55	13.70	34.77	36.99	-23.3	
713.50	18.70	H	0.55	0.0	18.15	20.30	34.77	36.99	-16.7	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 17 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	11.06	V	0.55	0.0	10.51	12.66	34.77	36.99	-24.3	
706.50	17.51	H	0.55	0.0	16.96	19.11	34.77	36.99	-17.9	
Mid Ch										
710.00	11.23	V	0.55	0.0	10.68	12.83	34.77	36.99	-24.2	
710.00	17.81	H	0.55	0.0	17.26	19.41	34.77	36.99	-17.6	
High Ch										
713.50	11.30	V	0.55	0.0	10.75	12.90	34.77	36.99	-24.1	
713.50	17.90	H	0.55	0.0	17.35	19.50	34.77	36.99	-17.5	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #:		16U23328								
Date:		6/4/2016								
Test Engineer:		38602								
Configuration:		EUT only								
Mode:		LTE Band 17 QPSK 10MHz BW								
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	11.91	V	0.55	0.0	11.36	13.51	34.77	36.99	-23.5	
710.00	18.65	H	0.55	0.0	18.10	20.25	34.77	36.99	-16.7	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 17 16QAM 10MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	11.06	V	0.55	0.0	10.51	12.66	34.77	36.99	-24.3	
710.00	17.88	H	0.55	0.0	17.33	19.48	34.77	36.99	-17.5	
Rev. 10.24.13										

10.1.8. LTE BAND 25

QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 1.4MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	13.5	V	0.98	8.05	20.60	33.0	-12.4	
1.851	16.1	H	0.98	8.05	23.14	33.0	-9.9	
Mid Ch								
1.883	13.1	V	0.98	8.03	20.11	33.0	-12.9	
1.883	16.3	H	0.98	8.03	23.35	33.0	-9.7	
High Ch								
1.914	13.6	V	0.98	8.07	20.64	33.0	-12.4	
1.914	16.3	H	0.98	8.07	23.40	33.0	-9.6	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373.0								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	12.8	V	0.98	8.05	19.90	33.0	-13.1	
1.851	15.2	H	0.98	8.05	22.29	33.0	-10.7	
Mid Ch								
1.883	12.3	V	0.98	8.03	19.33	33.0	-13.7	
1.883	15.4	H	0.98	8.03	22.40	33.0	-10.6	
High Ch								
1.914	12.7	V	0.98	8.07	19.74	33.0	-13.3	
1.914	15.4	H	0.98	8.07	22.45	33.0	-10.5	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 3MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	13.0	V	0.98	8.05	20.10	33.0	-12.9	
1.852	15.9	H	0.98	8.05	23.00	33.0	-10.0	
Mid Ch								
1.883	13.1	V	0.98	8.03	20.18	33.0	-12.8	
1.883	16.0	H	0.98	8.03	23.05	33.0	-10.0	
High Ch								
1.914	13.6	V	0.98	8.07	20.64	33.0	-12.4	
1.914	16.3	H	0.98	8.07	23.35	33.0	-9.6	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E									
Company:									
Project #: 16U23328									
Date: 6/3/2016									
Test Engineer: 44373									
Configuration: EUT only									
Mode: LTE Band 25 16QAM 3MHz BW									
Test Equipment:									
Receiving: Horn T346, and Chamber E SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.852	12.2	V	0.98	8.05	19.30	33.0	-13.7		
1.852	15.1	H	0.98	8.05	22.19	33.0	-10.8		
Mid Ch									
1.883	12.3	V	0.98	8.03	19.33	33.0	-13.7		
1.883	15.2	H	0.98	8.03	22.25	33.0	-10.8		
High Ch									
1.914	12.9	V	0.98	8.07	19.94	33.0	-13.1		
1.914	15.4	H	0.98	8.07	22.45	33.0	-10.5		
Rev. 10.24.13									

QPSK EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 5MHz BW								
<u>Test Equipment:</u>								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	13.1	V	0.98	8.05	20.20	33.0	-12.8	
1.853	16.0	H	0.98	8.05	23.04	33.0	-10.0	
Mid Ch								
1.883	13.2	V	0.98	8.03	20.29	33.0	-12.7	
1.883	16.1	H	0.98	8.03	23.16	33.0	-9.8	
High Ch								
1.913	13.4	V	0.98	8.06	20.43	33.0	-12.6	
1.913	16.1	H	0.98	8.06	23.17	33.0	-9.8	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 5MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	12.2	V	0.98	8.05	19.30	33.0	-13.7	
1.853	15.0	H	0.98	8.05	22.09	33.0	-10.9	
Mid Ch								
1.883	12.4	V	0.98	8.03	19.43	33.0	-13.6	
1.883	15.3	H	0.98	8.03	22.30	33.0	-10.7	
High Ch								
1.913	12.5	V	0.98	8.06	19.53	33.0	-13.5	
1.913	15.2	H	0.98	8.06	22.25	33.0	-10.8	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 10MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	13.5	V	0.98	8.05	20.60	33.0	-12.4	
1.855	16.1	H	0.98	8.05	23.14	33.0	-9.9	
Mid Ch								
1.883	13.2	V	0.98	8.03	20.29	33.0	-12.7	
1.883	16.1	H	0.98	8.03	23.11	33.0	-9.9	
High Ch								
1.910	13.8	V	0.98	8.05	20.83	33.0	-12.2	
1.910	16.2	H	0.98	8.05	23.23	33.0	-9.8	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 10MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	12.6	V	0.98	8.05	19.70	33.0	-13.3	
1.855	15.2	H	0.98	8.05	22.24	33.0	-10.8	
Mid Ch								
1.883	12.4	V	0.98	8.03	19.43	33.0	-13.6	
1.883	15.3	H	0.98	8.03	22.30	33.0	-10.7	
High Ch								
1.910	12.8	V	0.98	8.05	19.89	33.0	-13.1	
1.910	15.3	H	0.98	8.05	22.34	33.0	-10.7	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	13.6	V	0.98	8.04	20.69	33.0	-12.3	
1.858	16.0	H	0.98	8.04	23.02	33.0	-10.0	
Mid Ch								
1.883	13.1	V	0.98	8.03	20.11	33.0	-12.9	
1.883	16.3	H	0.98	8.03	23.32	33.0	-9.7	
High Ch								
1.908	13.9	V	0.98	8.04	20.92	33.0	-12.1	
1.908	16.3	H	0.98	8.04	23.33	33.0	-9.7	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	12.8	V	0.98	8.04	19.89	33.0	-13.1	
1.858	15.1	H	0.98	8.04	22.14	33.0	-10.9	
Mid Ch								
1.883	12.2	V	0.98	8.03	19.28	33.0	-13.7	
1.883	15.3	H	0.98	8.03	22.35	33.0	-10.7	
High Ch								
1.908	13.1	V	0.98	8.04	20.12	33.0	-12.9	
1.908	15.3	H	0.98	8.04	22.38	33.0	-10.6	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	13.2	V	0.98	8.04	20.29	33.0	-12.7	
1.860	16.2	H	0.98	8.04	23.22	33.0	-9.8	
Mid Ch								
1.883	13.1	V	0.98	8.03	20.16	33.0	-12.8	
1.883	16.3	H	0.98	8.03	23.35	33.0	-9.7	
High Ch								
1.905	13.6	V	0.98	8.04	20.61	33.0	-12.4	
1.905	16.4	H	0.98	8.04	23.44	33.0	-9.6	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/3/2016								
Test Engineer: 44373								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 20MHz BW								
Test Equipment:								
Receiving: Horn T346, and Chamber E SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	12.3	V	0.98	8.04	19.39	33.0	-13.6	
1.860	15.3	H	0.98	8.04	22.33	33.0	-10.7	
Mid Ch								
1.883	12.2	V	0.98	8.03	19.23	33.0	-13.8	
1.883	15.4	H	0.98	8.03	22.43	33.0	-10.6	
High Ch								
1.905	12.6	V	0.98	8.04	19.68	33.0	-13.3	
1.905	15.6	H	0.98	8.04	22.62	33.0	-10.4	
Rev. 10.24.13								

10.1.9. LTE BAND 26

QPSK EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/11/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 26 QPSK 1.4MHz BW Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
814.70	12.91	V	0.62	0.0	12.29	14.44	38.45	40.60	-26.2	
814.70	19.03	H	0.62	0.0	18.41	20.56	38.45	40.60	-20.0	
Mid Ch										
819.00	13.09	V	0.62	0.0	12.47	14.62	38.45	40.60	-26.0	
819.00	19.18	H	0.62	0.0	18.56	20.71	38.45	40.60	-19.9	
High Ch										
823.30	12.99	V	0.62	0.0	12.37	14.52	38.45	40.60	-26.1	
823.30	19.33	H	0.62	0.0	18.71	20.86	38.45	40.60	-19.7	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/11/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 26 16QAM 1.4MHz BW Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
814.70	12.03	V	0.62	0.0	11.41	13.56	38.45	40.60	-27.0	
814.70	18.18	H	0.62	0.0	17.56	19.71	38.45	40.60	-20.9	
Mid Ch										
819.00	12.17	V	0.62	0.0	11.55	13.70	38.45	40.60	-26.9	
819.00	18.40	H	0.62	0.0	17.78	19.93	38.45	40.60	-20.7	
High Ch										
823.30	12.07	V	0.62	0.0	11.45	13.60	38.45	40.60	-27.0	
823.30	18.54	H	0.62	0.0	17.92	20.07	38.45	40.60	-20.5	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 26 QPSK 3MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
815.50	12.66	V	0.62	0.0	12.04	14.19	38.45	40.60	-26.4	
815.50	18.64	H	0.62	0.0	18.02	20.17	38.45	40.60	-20.4	
Mid Ch										
819.00	12.63	V	0.62	0.0	12.01	14.16	38.45	40.60	-26.4	
819.00	18.90	H	0.62	0.0	18.28	20.43	38.45	40.60	-20.2	
High Ch										
822.50	12.52	V	0.62	0.0	11.90	14.05	38.45	40.60	-26.5	
822.50	19.12	H	0.62	0.0	18.50	20.65	38.45	40.60	-19.9	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 26 16QAM 3MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
815.50	11.77	V	0.62	0.0	11.15	13.30	38.45	40.60	-27.3	
815.50	17.73	H	0.62	0.0	17.11	19.26	38.45	40.60	-21.3	
Mid Ch										
819.00	11.63	V	0.62	0.0	11.01	13.16	38.45	40.60	-27.4	
819.00	18.00	H	0.62	0.0	17.38	19.53	38.45	40.60	-21.1	
High Ch										
822.50	11.58	V	0.62	0.0	10.96	13.11	38.45	40.60	-27.5	
822.50	18.15	H	0.62	0.0	17.53	19.68	38.45	40.60	-20.9	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 26 QPSK 5MHz BW										
Test Equipment:										
Receiving: Sunoi T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limi (dBm)	Margin (dB)	Notes
Low Ch										
816.50	12.76	V	0.62	0.0	12.14	14.29	38.45	40.60	-26.3	
816.50	18.74	H	0.62	0.0	18.12	20.27	38.45	40.60	-20.3	
Mid Ch										
819.00	12.70	V	0.62	0.0	12.08	14.23	38.45	40.60	-26.4	
819.00	18.93	H	0.62	0.0	18.31	20.46	38.45	40.60	-20.1	
High Ch										
821.50	12.71	V	0.62	0.0	12.09	14.24	38.45	40.60	-26.4	
821.50	19.08	H	0.62	0.0	18.46	20.61	38.45	40.60	-20.0	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 26 16QAM 5MHz BW										
Test Equipment:										
Receiving: Sunoi T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
816.50	11.85	V	0.62	0.0	11.23	13.38	38.45	40.60	-27.2	
816.50	17.84	H	0.62	0.0	17.22	19.37	38.45	40.60	-21.2	
Mid Ch										
819.00	11.73	V	0.62	0.0	11.11	13.26	38.45	40.60	-27.3	
819.00	18.02	H	0.62	0.0	17.40	19.55	38.45	40.60	-21.0	
High Ch										
821.50	11.78	V	0.62	0.0	11.16	13.31	38.45	40.60	-27.3	
821.50	18.15	H	0.62	0.0	17.53	19.68	38.45	40.60	-20.9	
Rev. 10.24.13										

QPSK EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 16U23328 Date: 6/4/2016 Test Engineer: 38602 Configuration: EUT only Mode: LTE Band 26 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin EIRP (dB)	Notes
Mid Ch										
819.00	12.69	V	0.62	0.0	12.07	14.22	38.45	40.60	-26.4	
819.00	18.93	H	0.62	0.0	18.31	20.46	38.45	40.60	-20.1	
Rev. 10.24.13										

16QAM EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 16U23328										
Date: 6/4/2016										
Test Engineer: 38602										
Configuration: EUT only										
Mode: LTE Band 26 16QAM 10MHz BW										
Test Equipment:										
Receiving: Sunol T900, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Mid Ch										
819.00	11.75	V	0.62	0.0	11.13	13.28	38.45	40.60	-27.3	
819.00	18.02	H	0.62	0.0	17.40	19.55	38.45	40.60	-21.0	
Rev. 10.24.13										

10.1.10. LTE BAND 27

QPSK EIRP POWER FOR LTE BAND 27 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 16U23328 Date: 6/11/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 27 QPSK 1.4MHz BW								
Test Equipment: Receiving: Sunol T900, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Low Ch								
814.70	15.09	V	0.62	0.0	14.47	50.00	-35.5	
814.70	19.10	H	0.62	0.0	18.48	50.00	-31.5	
Mid Ch								
819.00	15.24	V	0.62	0.0	14.62	50.00	-35.4	
819.00	19.16	H	0.62	0.0	18.54	50.00	-31.5	
High Ch								
823.30	14.92	V	0.62	0.0	14.30	50.00	-35.7	
823.30	19.28	H	0.62	0.0	18.66	50.00	-31.3	
Rev. 04.28.15								

16QAM EIRP POWER FOR LTE BAND 27 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/11/2016								
Test Engineer: 52279								
Configuration: EUT only								
Mode: LTE Band 27 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Sunol T900, and Chamber G Cable								
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Low Ch								
814.70	14.39	V	0.62	0.0	13.77	50.00	-36.2	
814.70	18.31	H	0.62	0.0	17.69	50.00	-32.3	
Mid Ch								
819.00	14.22	V	0.62	0.0	13.60	50.00	-36.4	
819.00	18.39	H	0.62	0.0	17.77	50.00	-32.2	
High Ch								
823.30	14.04	V	0.62	0.0	13.42	50.00	-36.6	
823.30	18.48	H	0.62	0.0	17.86	50.00	-32.1	
Rev. 04.28.15								

QPSK EIRP POWER FOR LTE BAND 27 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/4/2016								
Test Engineer: 38602								
Configuration: EUT only								
Mode: LTE Band 27 QPSK 3MHz BW								
Test Equipment:								
Receiving: Sunol T900, and Chamber G Cable								
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Low Ch								
815.50	12.31	V	0.62	0.0	11.70	50.00	-38.3	
815.50	20.59	H	0.62	0.0	19.97	50.00	-30.0	
Mid Ch								
819.00	12.01	V	0.62	0.0	11.39	50.00	-38.6	
819.00	20.05	H	0.62	0.0	19.43	50.00	-30.6	
High Ch								
822.50	11.86	V	0.62	0.0	11.25	50.00	-38.8	
822.50	20.73	H	0.62	0.0	20.11	50.00	-29.9	
Rev. 04.28.15								

16QAM EIRP POWER FOR LTE BAND 27 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/4/2016								
Test Engineer: 38602								
Configuration: EUT only								
Mode: LTE Band 27 16QAM 3MHz BW								
Test Equipment:								
Receiving: Sunol T900, and Chamber G Cable								
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Low Ch								
815.50	11.39	V	0.62	0.0	10.78	50.00	-39.2	
815.50	19.65	H	0.62	0.0	19.03	50.00	-31.0	
Mid Ch								
819.00	11.04	V	0.62	0.0	10.42	50.00	-39.6	
819.00	19.08	H	0.62	0.0	18.46	50.00	-31.5	
High Ch								
822.50	10.97	V	0.62	0.0	10.36	50.00	-39.6	
822.50	19.79	H	0.62	0.0	19.17	50.00	-30.8	
Rev. 04.28.15								

QPSK EIRP POWER FOR LTE BAND 27 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/4/2016								
Test Engineer: 38602								
Configuration: EUT only								
Mode: LTE Band 27 QPSK 5MHz BW								
<u>Test Equipment:</u>								
Receiving: Sunol T900, and Chamber G Cable								
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Low Ch								
816.50	12.28	V	0.62	0.0	11.67	50.00	-38.3	
816.50	20.63	H	0.62	0.0	20.01	50.00	-30.0	
Mid Ch								
819.00	12.15	V	0.62	0.0	11.53	50.00	-38.5	
819.00	20.13	H	0.62	0.0	19.51	50.00	-30.5	
High Ch								
821.50	11.80	V	0.62	0.0	11.19	50.00	-38.8	
821.50	20.72	H	0.62	0.0	20.10	50.00	-29.9	
Rev. 04.28.15								

16QAM EIRP POWER FOR LTE BAND 27 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/4/2016								
Test Engineer: 38602								
Configuration: EUT only								
Mode: LTE Band 27 16QAM 5MHz BW								
<u>Test Equipment:</u>								
Receiving: Sunol T900, and Chamber G Cable								
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Low Ch								
816.50	11.39	V	0.62	0.0	10.78	50.00	-39.2	
816.50	19.64	H	0.62	0.0	19.02	50.00	-31.0	
Mid Ch								
819.00	11.18	V	0.62	0.0	10.56	50.00	-39.4	
819.00	19.15	H	0.62	0.0	18.53	50.00	-31.5	
High Ch								
821.50	10.88	V	0.62	0.0	10.27	50.00	-39.7	
821.50	19.75	H	0.62	0.0	19.13	50.00	-30.9	
Rev. 04.28.15								

QPSK EIRP POWER FOR LTE BAND 27 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/4/2016								
Test Engineer: 38602								
Configuration: EUT only								
Mode: LTE Band 27 QPSK 10MHz BW								
Test Equipment:								
Receiving: Sunol T900, and Chamber G Cable								
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Mid Ch								
819.00	12.23	V	0.62	0.0	11.61	50.00	-38.4	
819.00	20.11	H	0.62	0.0	19.49	50.00	-30.5	
Rev. 04.28.15								

16QAM EIRP POWER FOR LTE BAND 27 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/4/2016								
Test Engineer: 38602								
Configuration: EUT only								
Mode: LTE Band 27 16QAM 10MHz BW								
Test Equipment:								
Receiving: Sunol T900, and Chamber G Cable								
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP Limit (dBm)	Margin (dB)	Notes
Mid Ch								
819.00	11.33	V	0.62	0.0	10.71	50.00	-39.3	
819.00	19.21	H	0.62	0.0	18.59	50.00	-31.4	
Rev. 04.28.15								

10.1.11. LTE BAND 30

QPSK EIRP POWER FOR LTE BAND 30 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company: Project #: 16U23328 Date: 6/30/2016 Test Engineer: 52268 Configuration: EUT only Mode: LTE Band 30 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T136, and Chamber G SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.308	11.4	V	1.15	9.37	19.62	24.0	-4.4	
2.308	12.5	H	1.15	9.37	20.70	24.0	-3.3	
Mid Ch								
2.310	11.8	V	1.16	9.37	20.04	24.0	-4.0	
2.310	12.7	H	1.16	9.37	20.87	24.0	-3.1	
High Ch								
2.313	11.4	V	1.17	9.37	19.56	24.0	-4.4	
2.313	12.4	H	1.17	9.37	20.63	24.0	-3.4	
Rev. 06.06.16								

16QAM EIRP POWER FOR LTE BAND 30 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		52268						
Configuration:		EUT only						
Mode:		LTE Band 30 16QAM 5MHz BW						
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.308	10.6	V	1.15	9.37	18.82	24.0	-5.2	
2.308	11.7	H	1.15	9.37	19.90	24.0	-4.1	
Mid Ch								
2.310	11.0	V	1.16	9.37	19.24	24.0	-4.8	
2.310	11.9	H	1.16	9.37	20.07	24.0	-3.9	
High Ch								
2.313	10.6	V	1.17	9.37	18.76	24.0	-5.2	
2.313	11.6	H	1.17	9.37	19.83	24.0	-4.2	
Rev. 06.06.16								

QPSK EIRP POWER FOR LTE BAND 30 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company: Project #: 16U23328 Date: 6/30/2016 Test Engineer: 52268 Configuration: EUT only Mode: LTE Band 30 QPSK 10MHz BW								
Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
2.310	11.7	V	1.15	9.37	19.88	24.0	-4.1	
2.310	12.7	H	1.15	9.37	20.97	24.0	-3.0	
Rev. 06.06.16								

16QAM EIRP POWER FOR LTE BAND 30 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber E								
Company:								
Project #: 16U23328								
Date: 6/30/2016								
Test Engineer: 52268								
Configuration: EUT only								
Mode: LTE Band 30 16QAM 10MHz BW								
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
2.310	10.9	V	1.15	9.37	19.08	24.0	-4.9	
2.310	11.9	H	1.15	9.37	20.17	24.0	-3.8	
Rev. 06.06.16								

10.1.12. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 16U23328 Date: 6/30/2016 Test Engineer: 52268 Configuration: EUT only Mode: LTE Band 41 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T136, and Chamber G SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	16.9	V	1.15	9.33	25.08	33.0	-7.9	
2.499	17.4	H	1.15	9.33	25.56	33.0	-7.4	
Mid Ch								
2.593	16.2	V	1.16	9.47	24.46	33.0	-8.5	
2.593	18.2	H	1.16	9.47	26.50	33.0	-6.5	
High Ch								
2.688	15.4	V	1.17	9.78	24.03	33.0	-9.0	
2.688	16.6	H	1.17	9.78	25.20	33.0	-7.8	
Rev. 05/26/16								

16QAM EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		52268						
Configuration:		EUT only						
Mode:		LTE Band 41 16QAM 5MHz BW						
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	16.2	V	1.15	9.33	24.36	33.0	-8.6	
2.499	16.7	H	1.15	9.33	24.84	33.0	-8.2	
Mid Ch								
2.593	15.4	V	1.16	9.47	23.74	33.0	-9.3	
2.593	17.5	H	1.16	9.47	25.78	33.0	-7.2	
High Ch								
2.688	14.7	V	1.17	9.78	23.31	33.0	-9.7	
2.688	15.9	H	1.17	9.78	24.52	33.0	-8.5	
Rev. 05/26/16								

QPSK EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		52268						
Configuration:		EUT only						
Mode:		LTE Band 41 QPSK 10MHz BW						
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	17.2	V	1.15	9.33	25.36	33.0	-7.6	
2.501	17.6	H	1.15	9.33	25.79	33.0	-7.2	
Mid Ch								
2.593	16.3	V	1.16	9.47	24.61	33.0	-8.4	
2.593	18.3	H	1.16	9.47	26.56	33.0	-6.4	
High Ch								
2.685	15.5	V	1.17	9.77	24.09	33.0	-8.9	
2.685	16.5	H	1.17	9.77	25.05	33.0	-7.9	
Rev. 05/26/16								

16QAM EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 16U23328								
Date: 6/30/2016								
Test Engineer: 52268								
Configuration: EUT only								
Mode: LTE Band 41 16QAM 10MHz BW								
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	16.5	V	1.15	9.33	24.66	33.0	-8.3	
2.501	16.9	H	1.15	9.33	25.09	33.0	-7.9	
Mid Ch								
2.593	15.6	V	1.16	9.47	23.91	33.0	-9.1	
2.593	17.6	H	1.16	9.47	25.86	33.0	-7.1	
High Ch								
2.685	14.8	V	1.17	9.77	23.39	33.0	-9.6	
2.685	15.8	H	1.17	9.77	24.35	33.0	-8.6	
Rev. 05/26/16								

QPSK EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		52268						
Configuration:		EUT only						
Mode:		LTE Band 41 QPSK 15MHz BW						
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	16.8	V	1.15	9.34	25.00	33.0	-8.0	
2.504	17.7	H	1.15	9.34	25.86	33.0	-7.1	
Mid Ch								
2.593	16.3	V	1.16	9.47	24.65	33.0	-8.4	
2.593	18.1	H	1.16	9.47	26.38	33.0	-6.6	
High Ch								
2.683	15.4	V	1.17	9.76	24.01	33.0	-9.0	
2.683	16.5	H	1.17	9.76	25.10	33.0	-7.9	
Rev. 05/26/16								

16QAM EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		52268						
Configuration:		EUT only						
Mode:		LTE Band 41 16QAM 15MHz BW						
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	16.0	V	1.15	9.34	24.20	33.0	-8.8	
2.504	16.9	H	1.15	9.34	25.06	33.0	-7.9	
Mid Ch								
2.593	15.5	V	1.16	9.47	23.85	33.0	-9.2	
2.593	17.3	H	1.16	9.47	25.58	33.0	-7.4	
High Ch								
2.683	14.6	V	1.17	9.76	23.21	33.0	-9.8	
2.683	15.7	H	1.17	9.76	24.30	33.0	-8.7	
Rev. 05/26/16								

QPSK EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		52268						
Configuration:		EUT only						
Mode:		LTE Band 41 QPSK 20MHz BW						
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	16.8	V	1.15	9.34	24.98	33.0	-8.0	
2.506	17.6	H	1.15	9.34	25.81	33.0	-7.2	
Mid Ch								
2.593	16.3	V	1.16	9.47	24.63	33.0	-8.4	
2.593	18.1	H	1.16	9.47	26.38	33.0	-6.6	
High Ch								
2.680	15.7	V	1.17	9.76	24.28	33.0	-8.7	
2.680	16.6	H	1.17	9.76	25.22	33.0	-7.8	
Rev. 05.26.16								

16QAM EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		16U23328						
Date:		6/30/2016						
Test Engineer:		52268						
Configuration:		EUT only						
Mode:		LTE Band 41 16QAM 20MHz BW						
Test Equipment:								
Receiving: Horn T136, and Chamber G SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	16.1	V	1.15	9.34	24.28	33.0	-8.7	
2.506	16.9	H	1.15	9.34	25.11	33.0	-7.9	
Mid Ch								
2.593	15.6	V	1.16	9.47	23.93	33.0	-9.1	
2.593	17.4	H	1.16	9.47	25.68	33.0	-7.3	
High Ch								
2.680	15.0	V	1.17	9.76	23.58	33.0	-9.4	
2.680	15.9	H	1.17	9.76	24.52	33.0	-8.5	
Rev. 05/26/16								