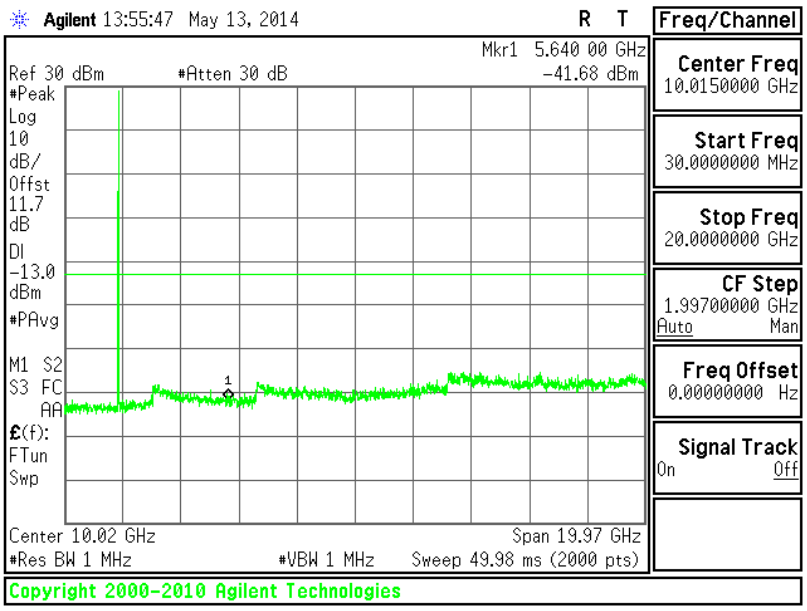
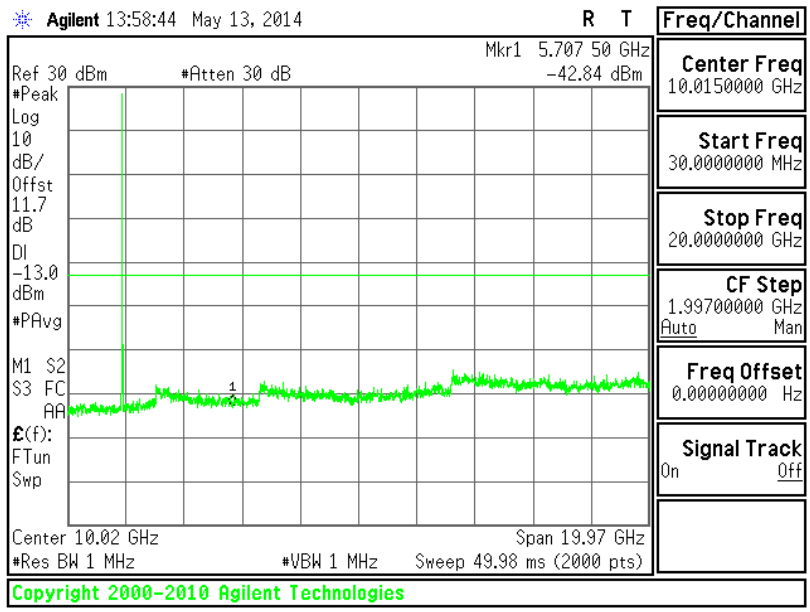
MID, RB1-0, 30 TO 20000 MHz

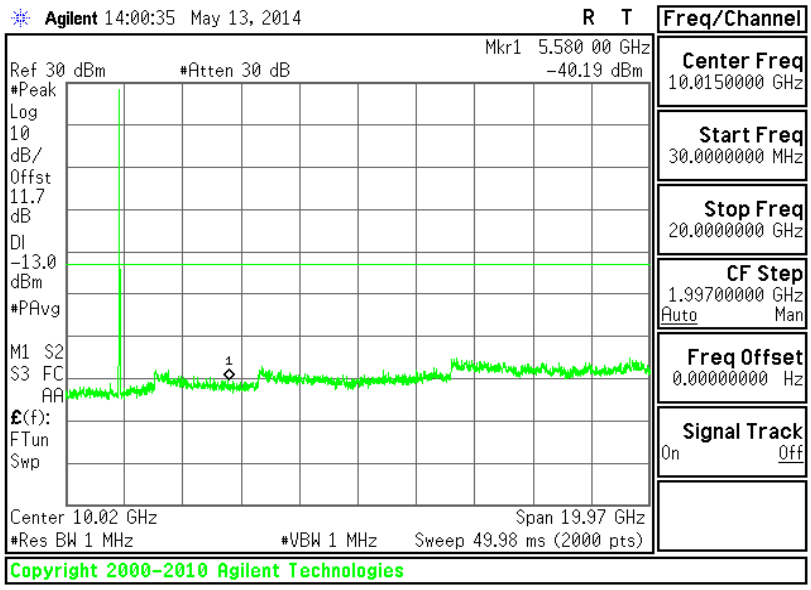


HIGH, RB1-0, 30 TO 20000 MHz

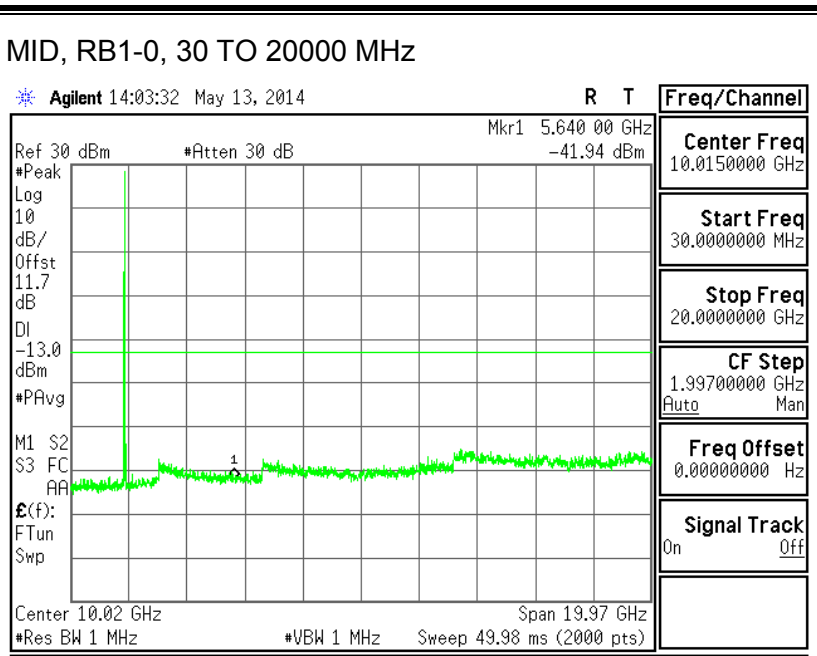


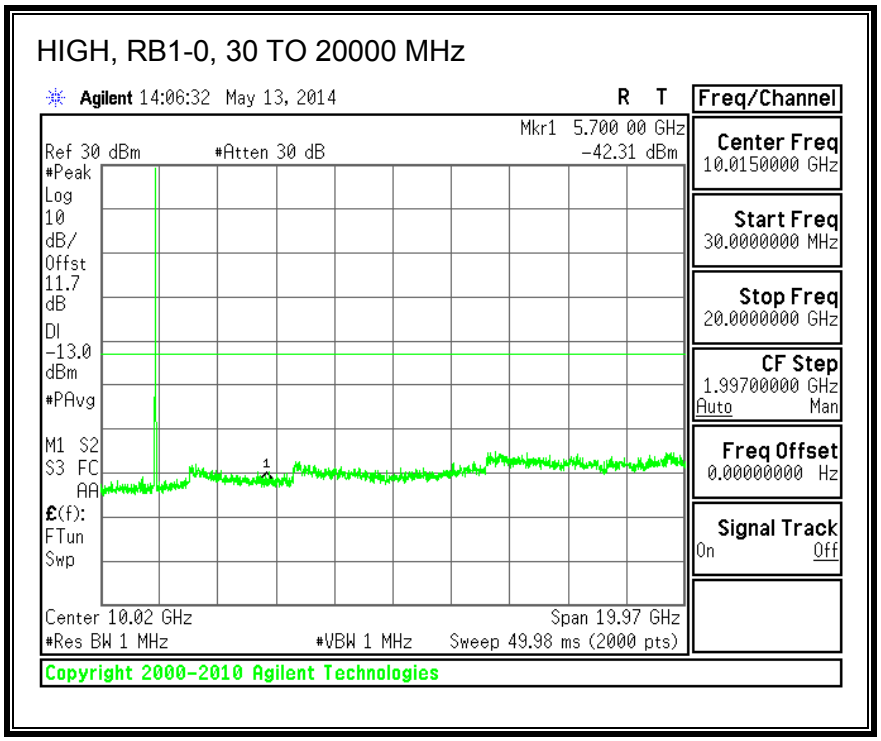
QPSK, (20.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 20000 MHz

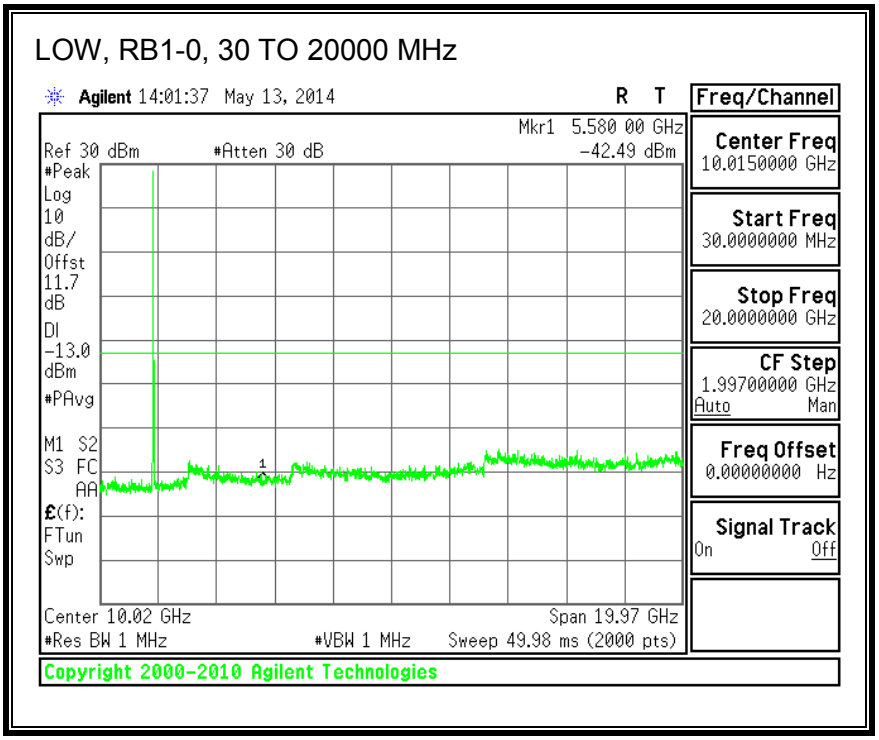


MID, RB1-0, 30 TO 20000 MHz

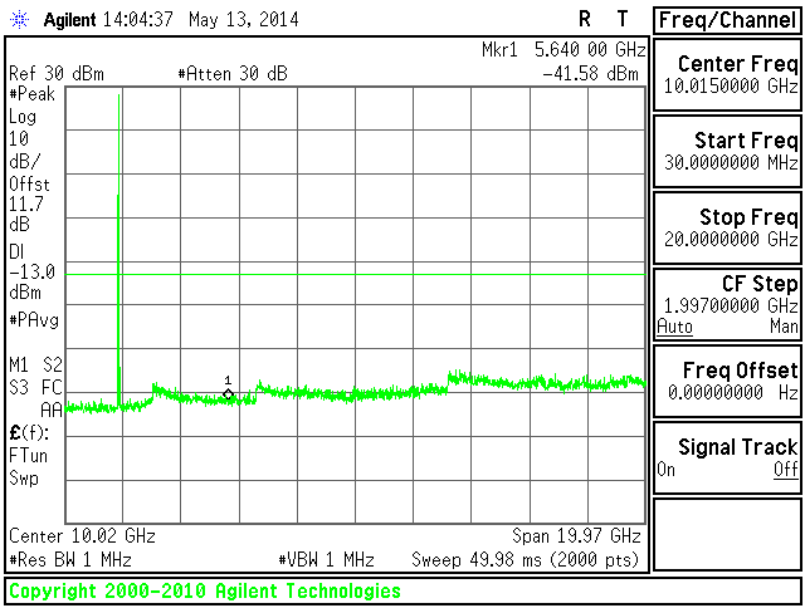




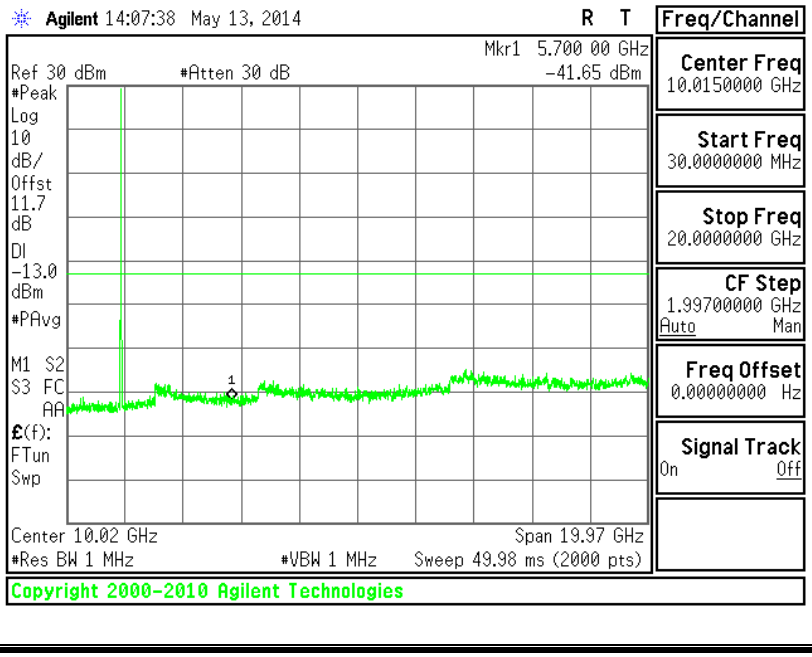
16QAM, (20.0 MHz BAND WIDTH)



MID, RB1-0, 30 TO 20000 MHz



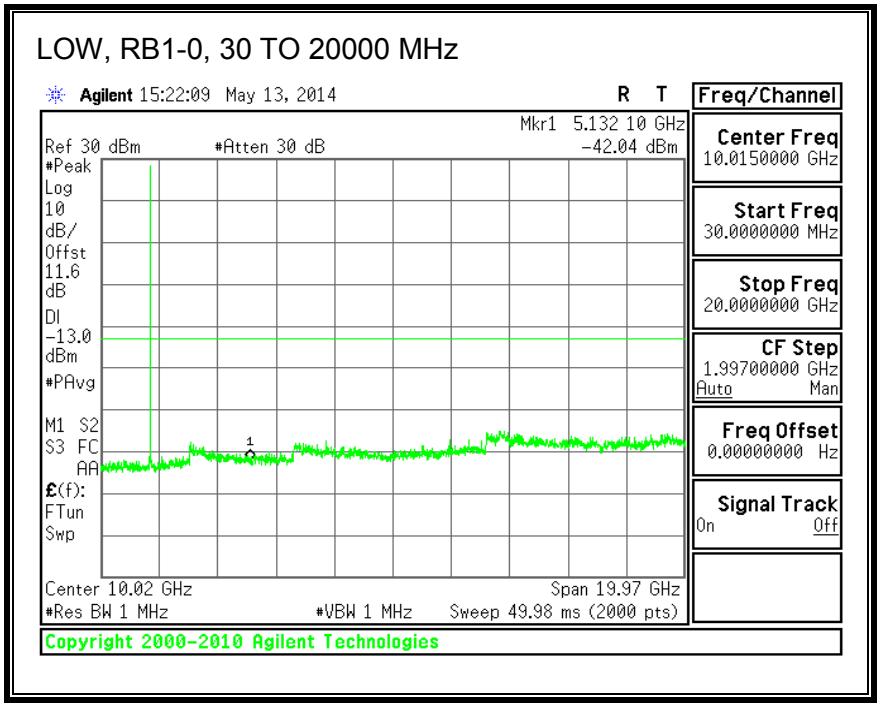
HIGH, RB1-0, 30 TO 20000 MHz



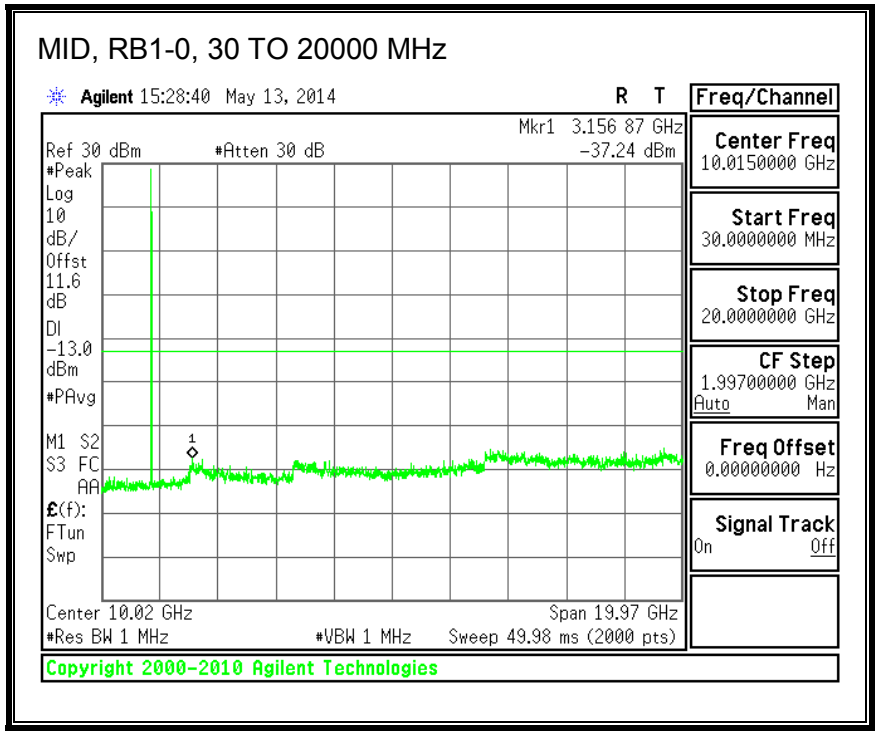
8.3.2. LTE BAND 4

QPSK, (1.4 MHz BAND WIDTH)

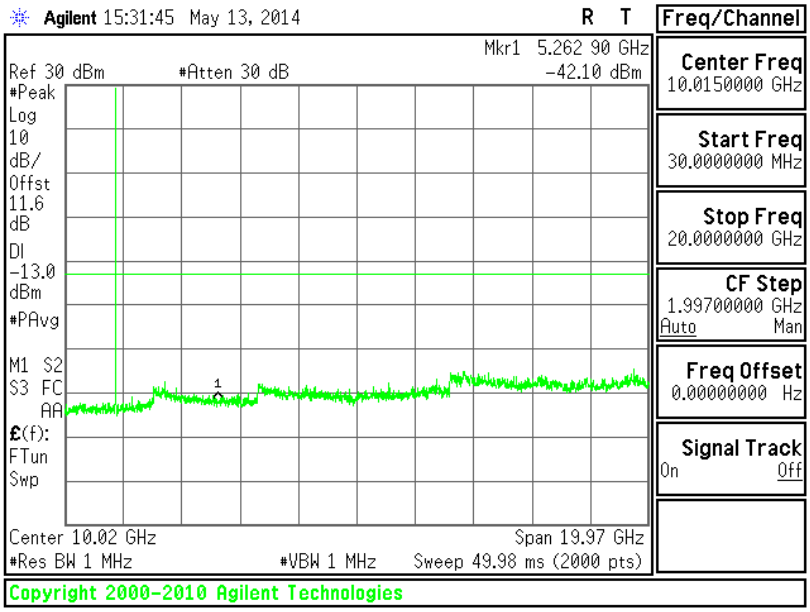
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

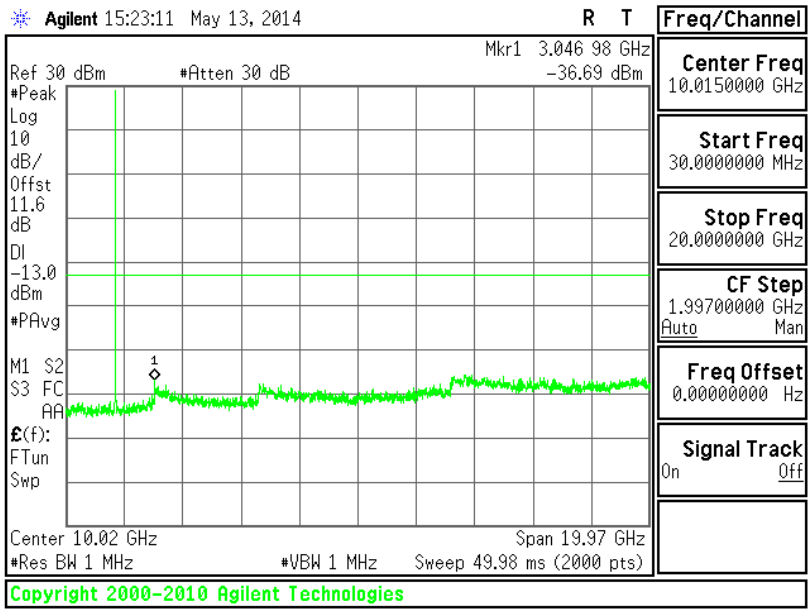


HIGH, RB1-0, 30 TO 20000 MHz

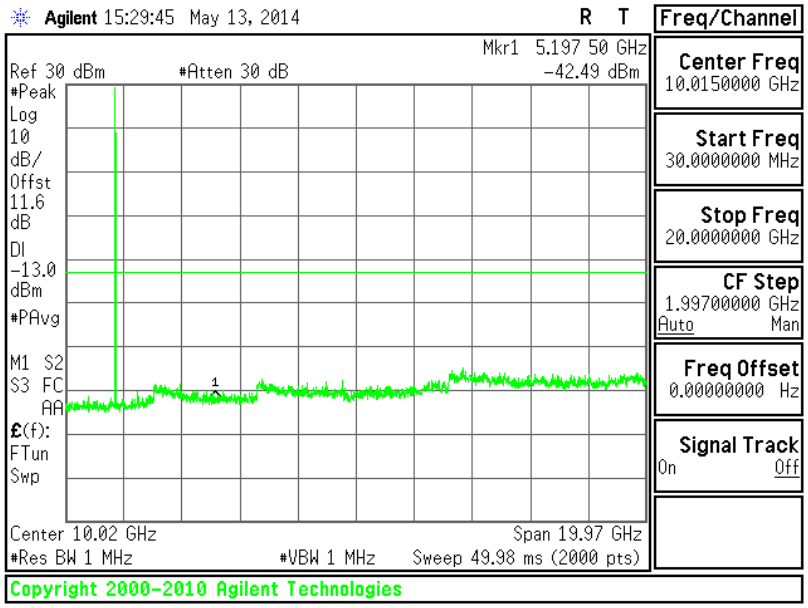


16QAM, (1.4 MHz BAND WIDTH)

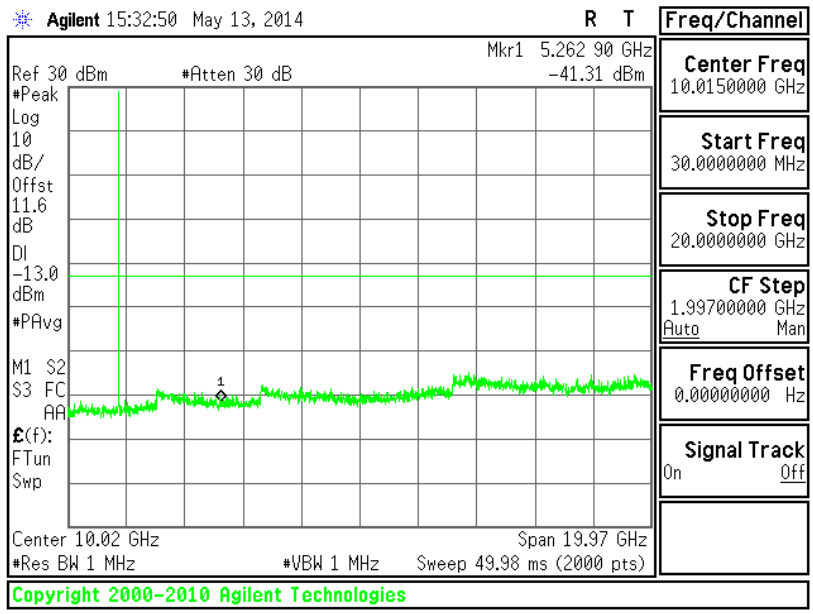
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

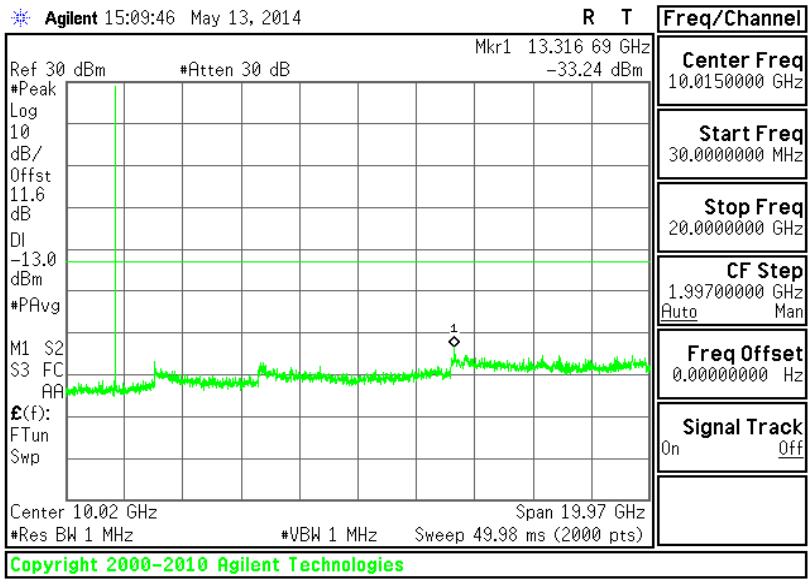


HIGH, RB1-0, 30 TO 20000 MHz

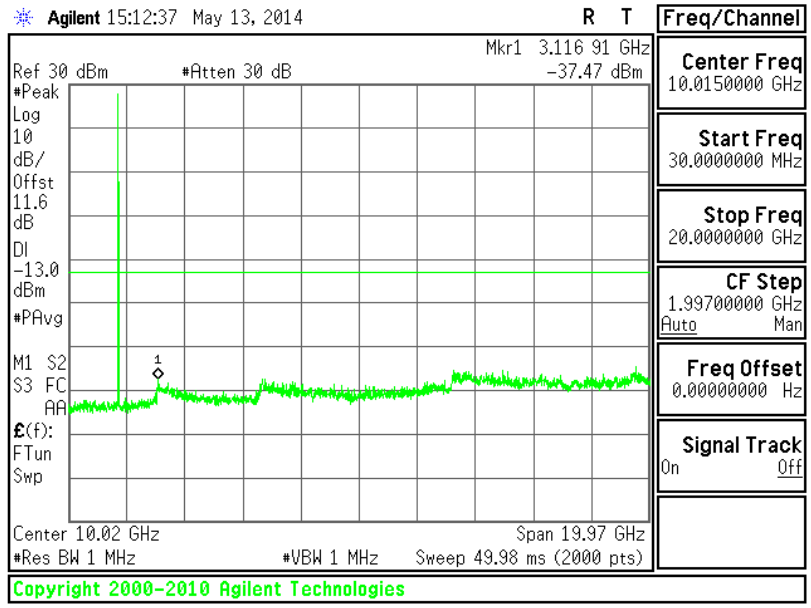


QPSK, (3.0 MHz BAND WIDTH)

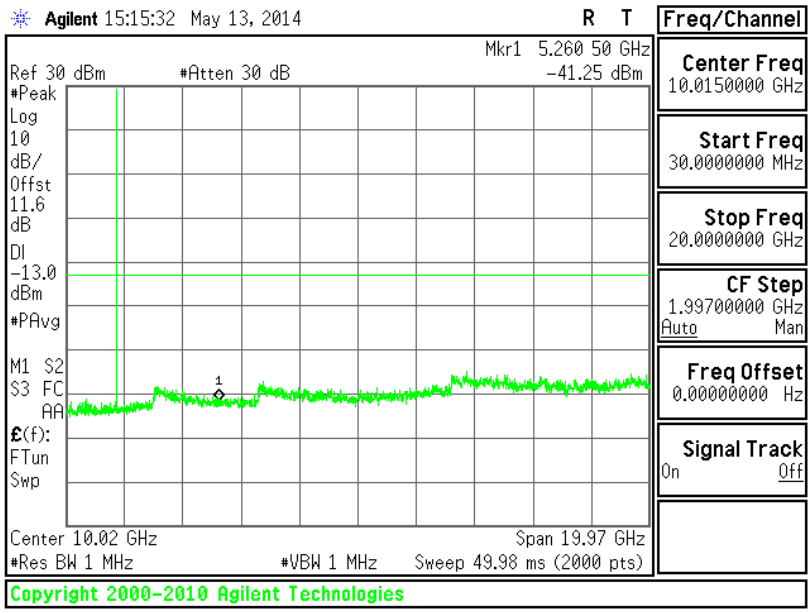
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

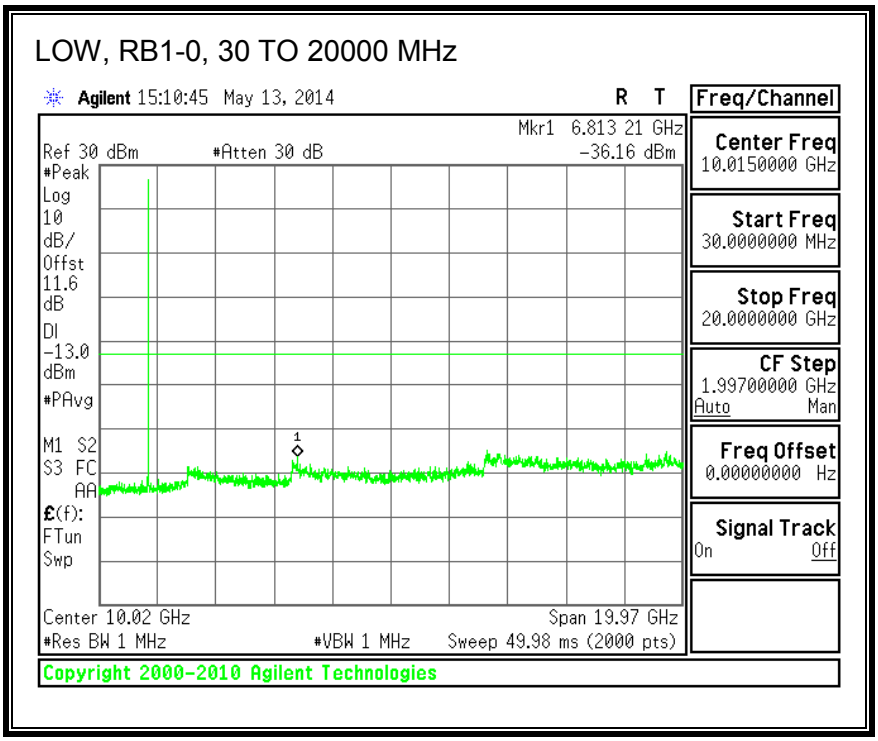


HIGH, RB1-0, 30 TO 20000 MHz

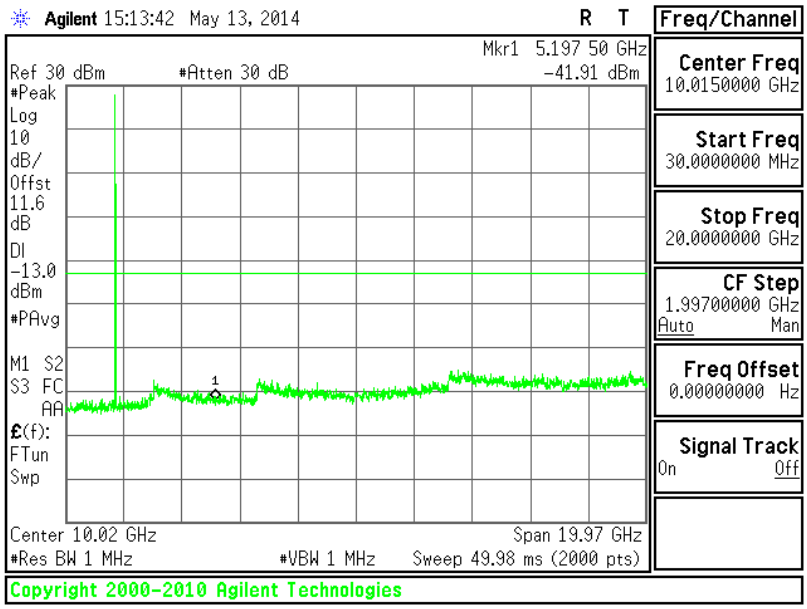


16QAM, (3.0 MHz BAND WIDTH)

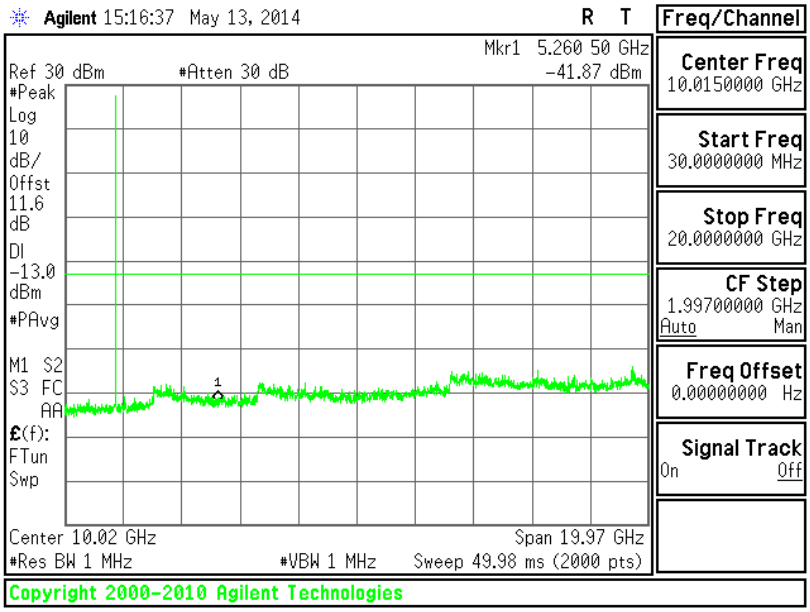
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

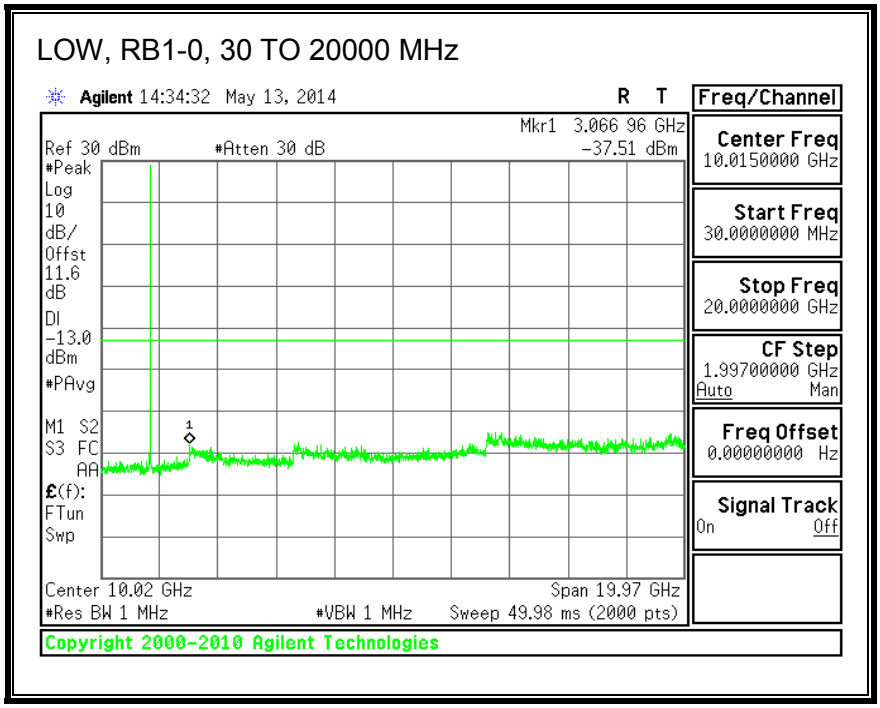


HIGH, RB1-0, 30 TO 20000 MHz

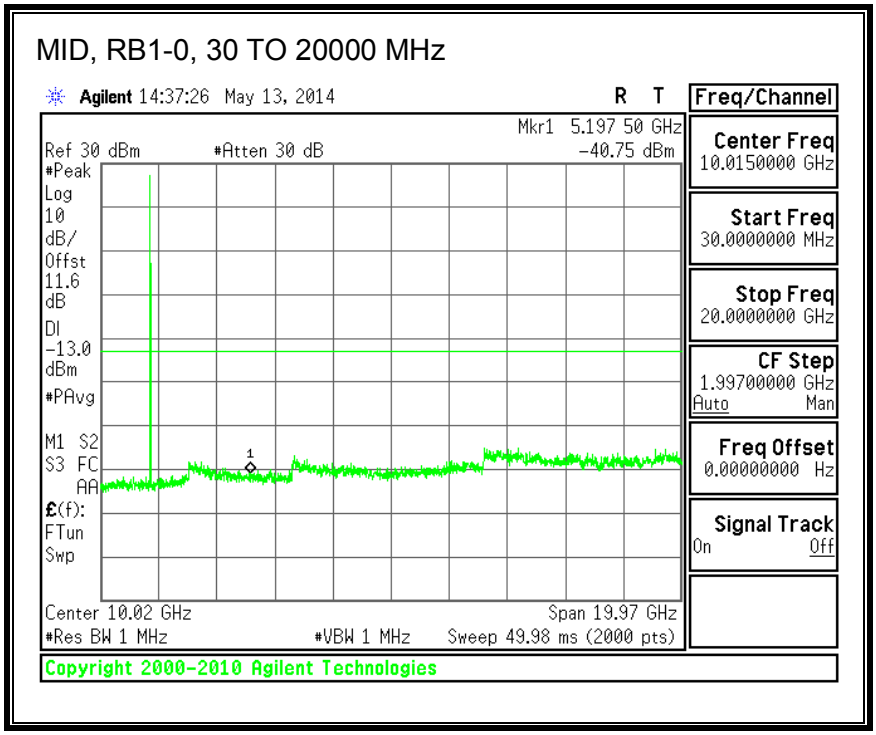


QPSK, (5.0 MHz BAND WIDTH)

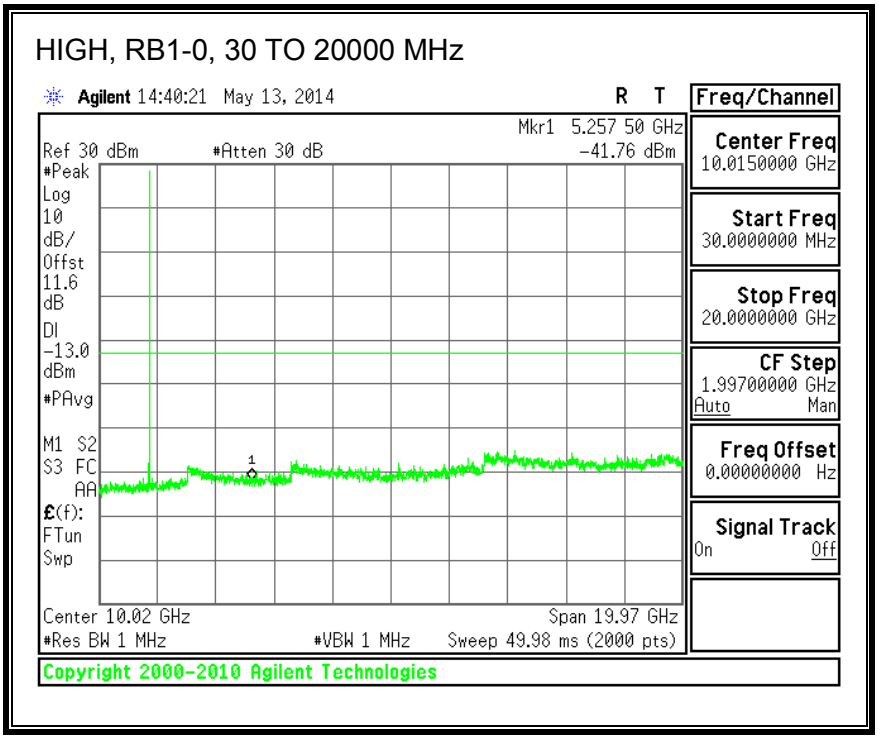
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

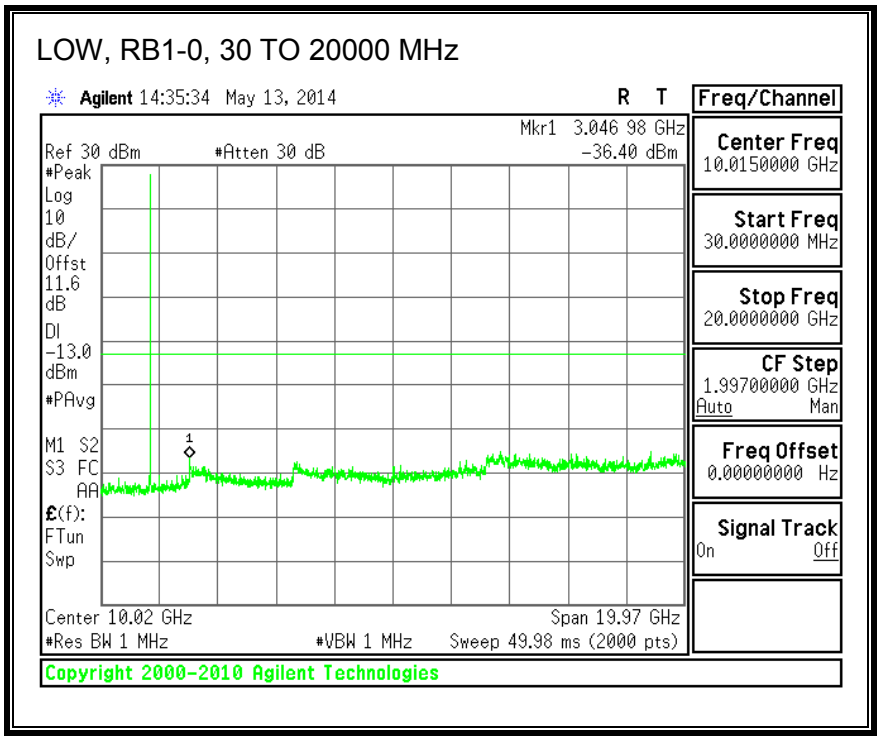


HIGH, RB1-0, 30 TO 20000 MHz

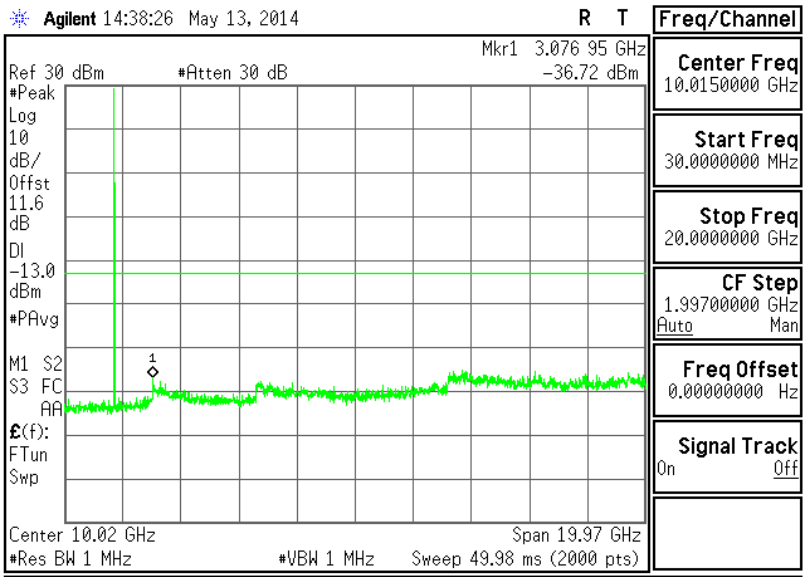


16QAM, (5.0 MHz BAND WIDTH)

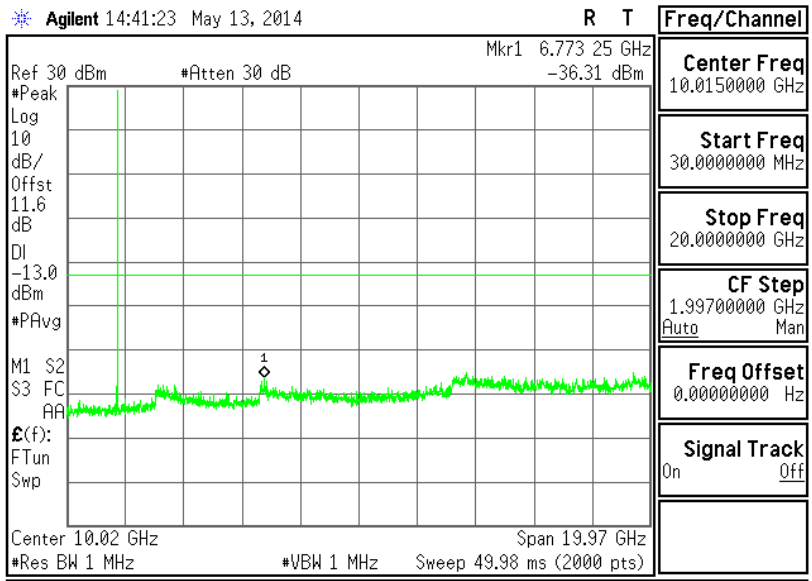
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

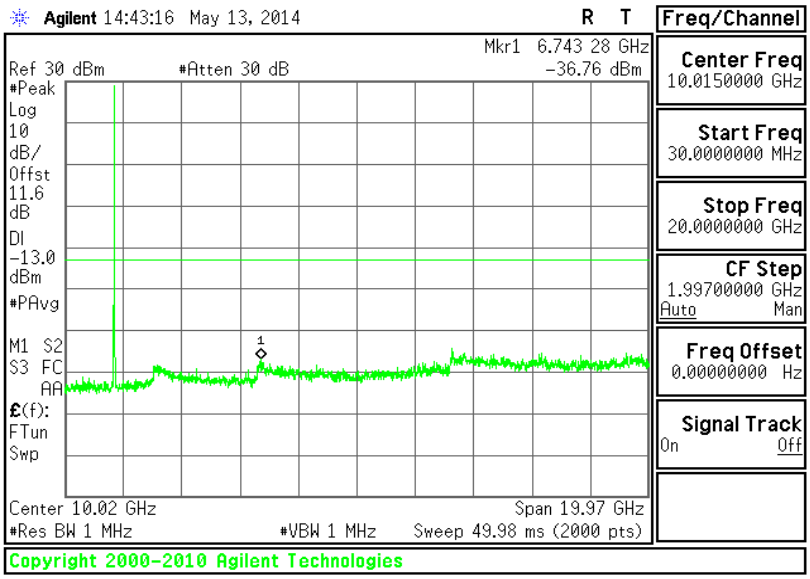


HIGH, RB1-0, 30 TO 20000 MHz

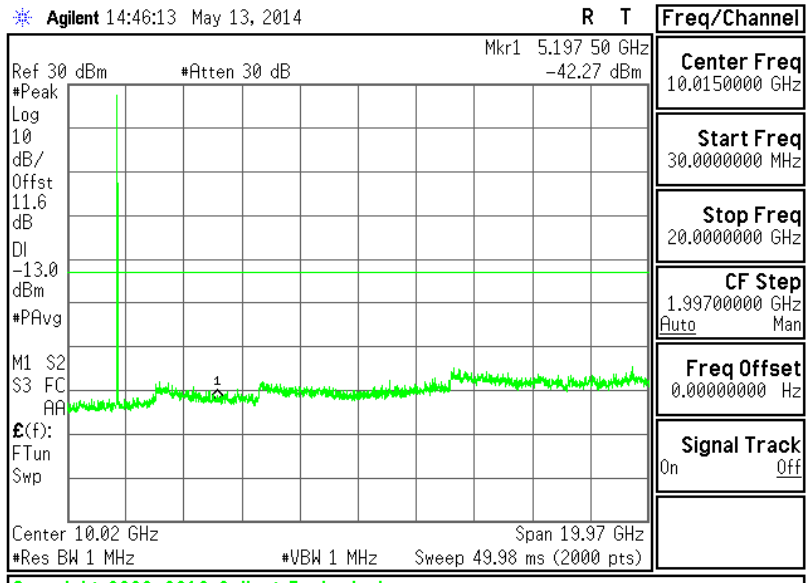


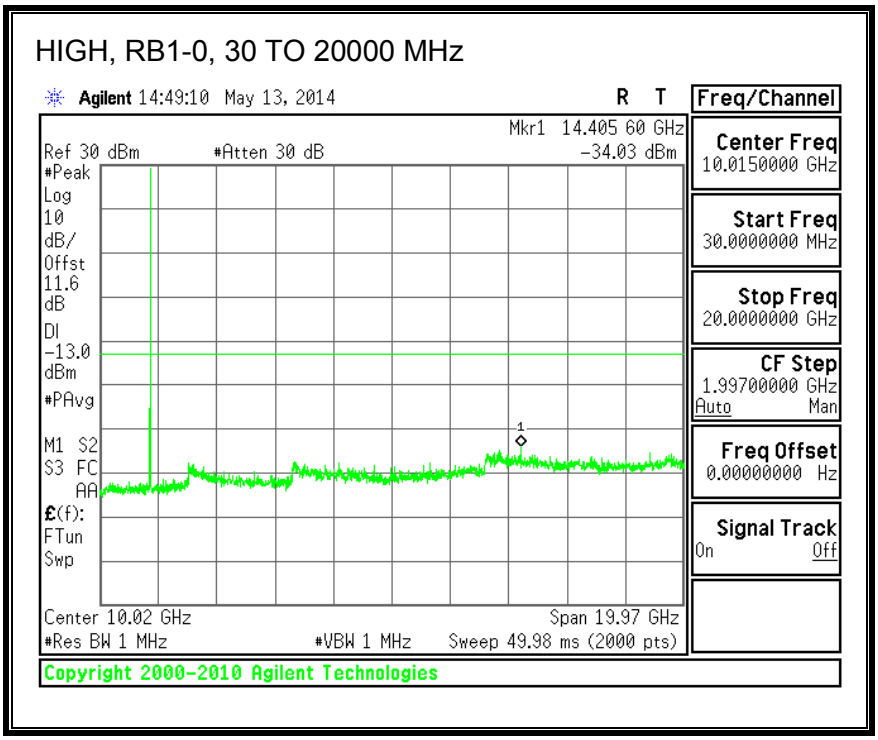
QPSK, (10.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 20000 MHz

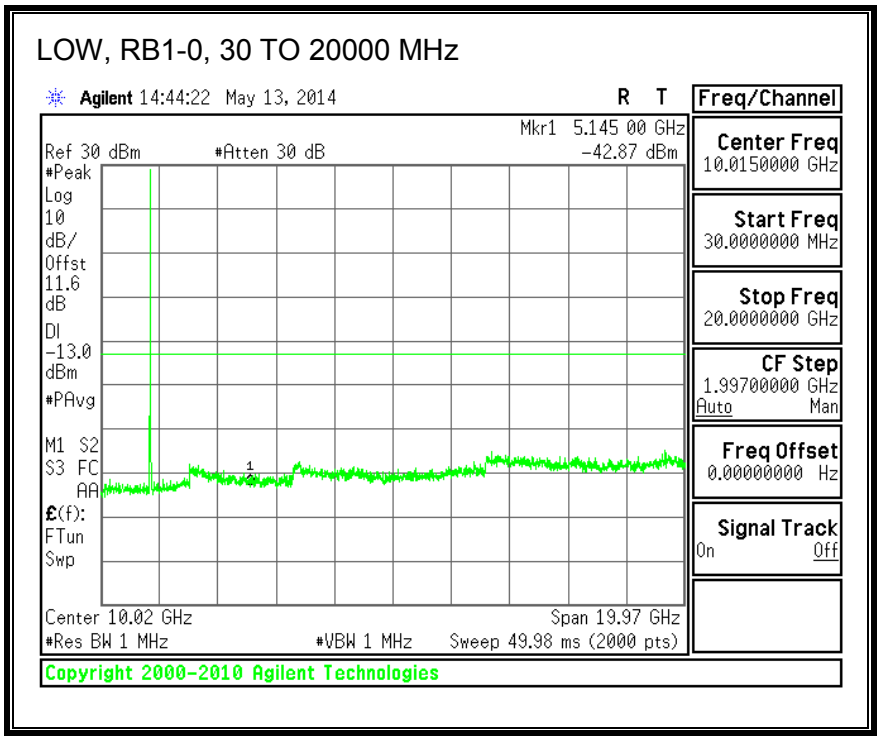


MID, RB1-0, 30 TO 20000 MHz

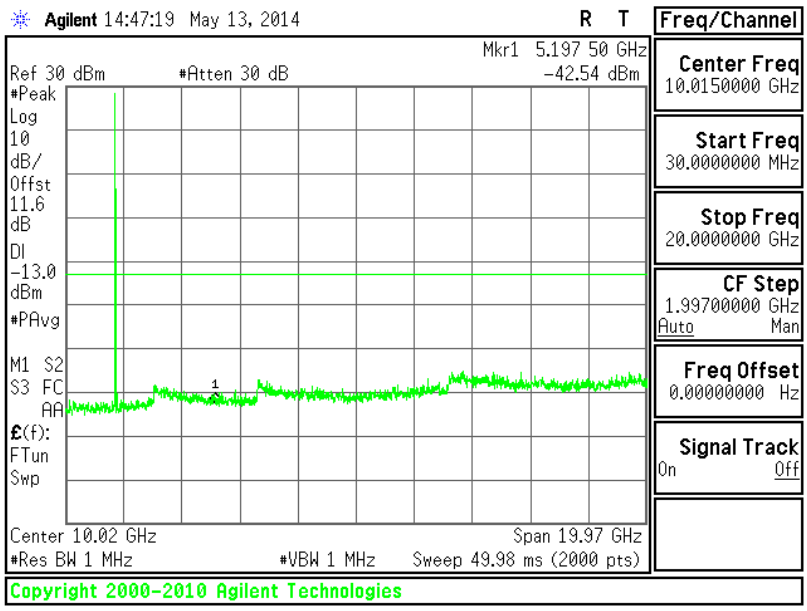




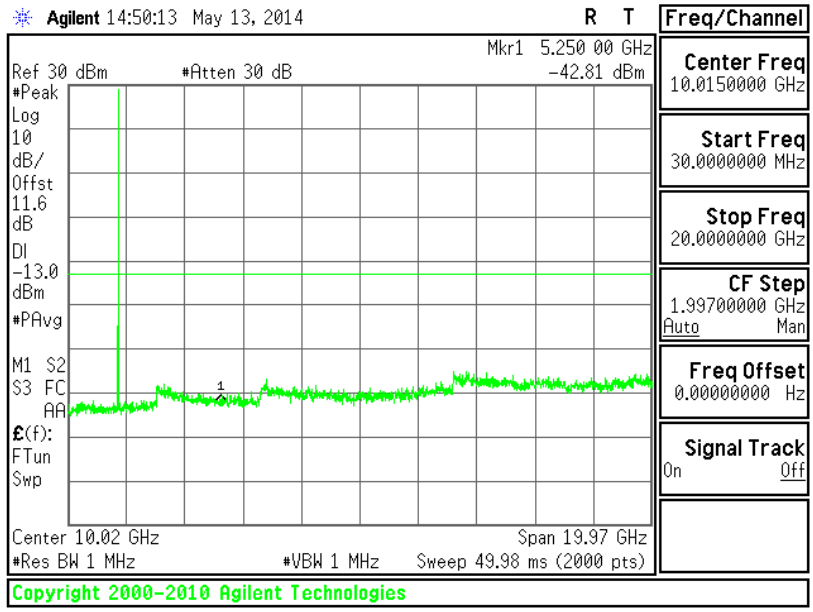
16QAM, (10.0 MHz BAND WIDTH)



MID, RB1-0, 30 TO 20000 MHz

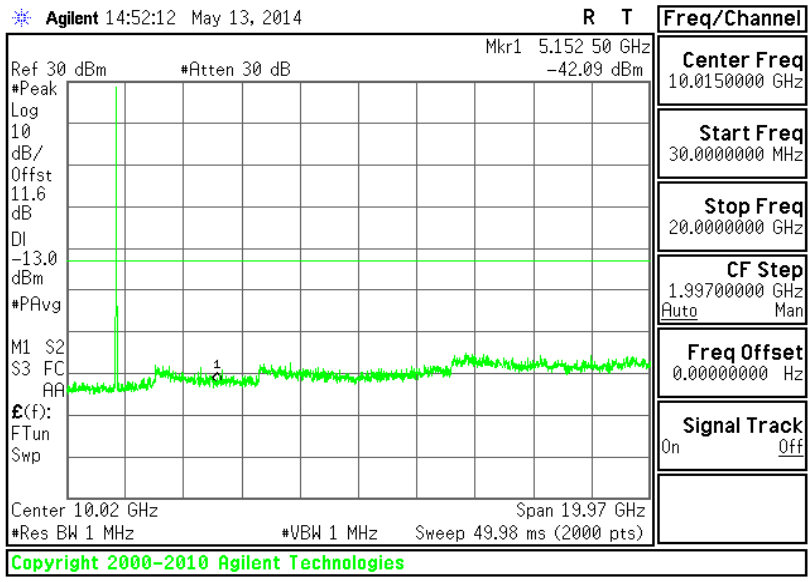


HIGH, RB1-0, 30 TO 20000 MHz

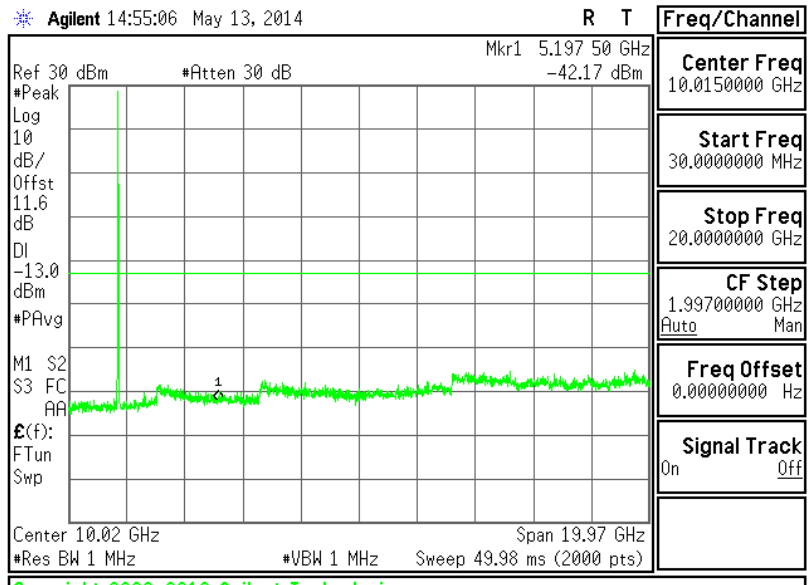


QPSK, (15.0 MHz BAND WIDTH)

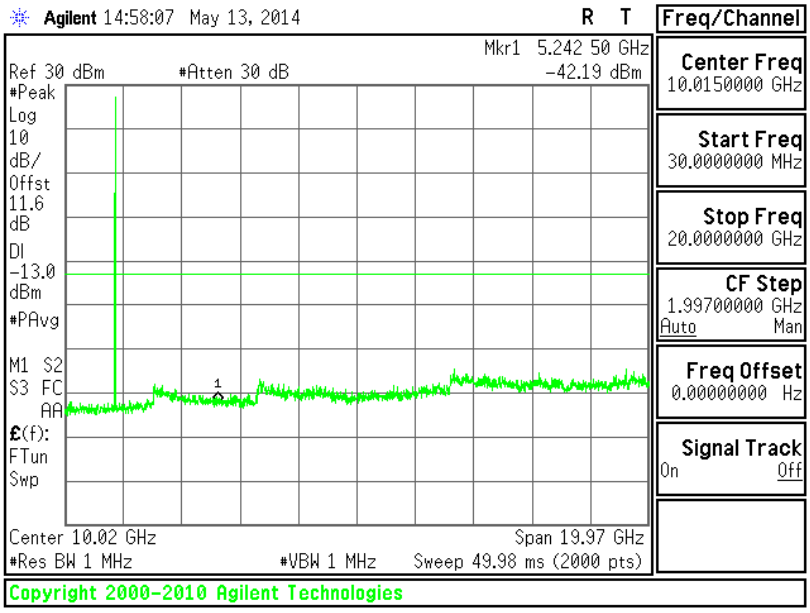
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

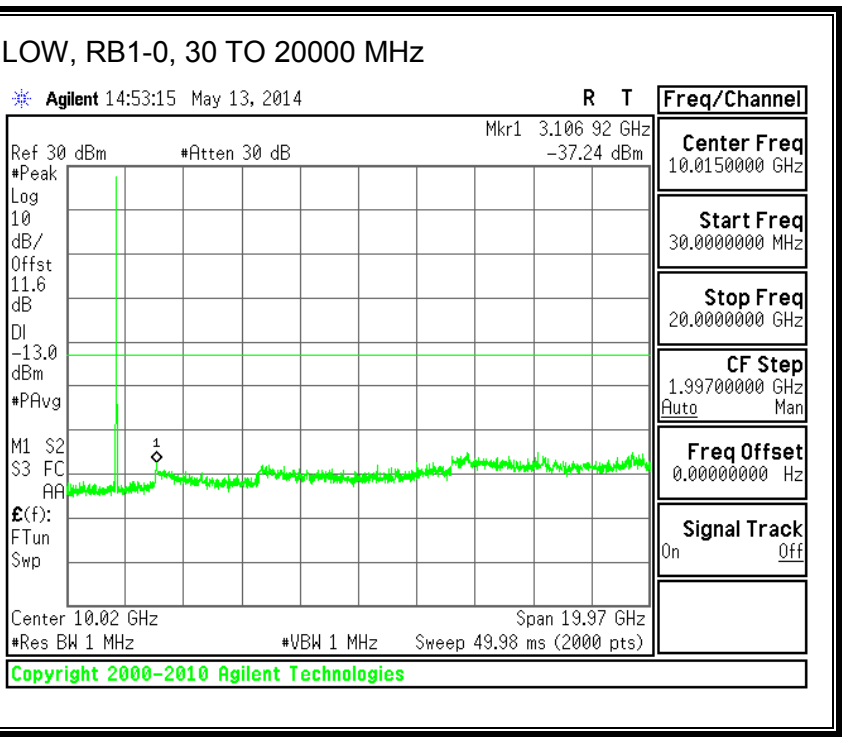


HIGH, RB1-0, 30 TO 20000 MHz

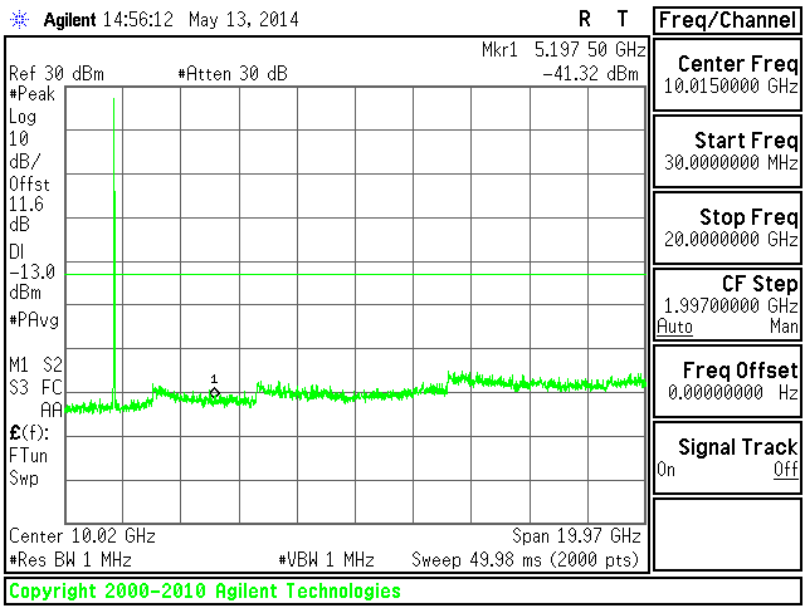


16QAM, (15.0 MHz BAND WIDTH)

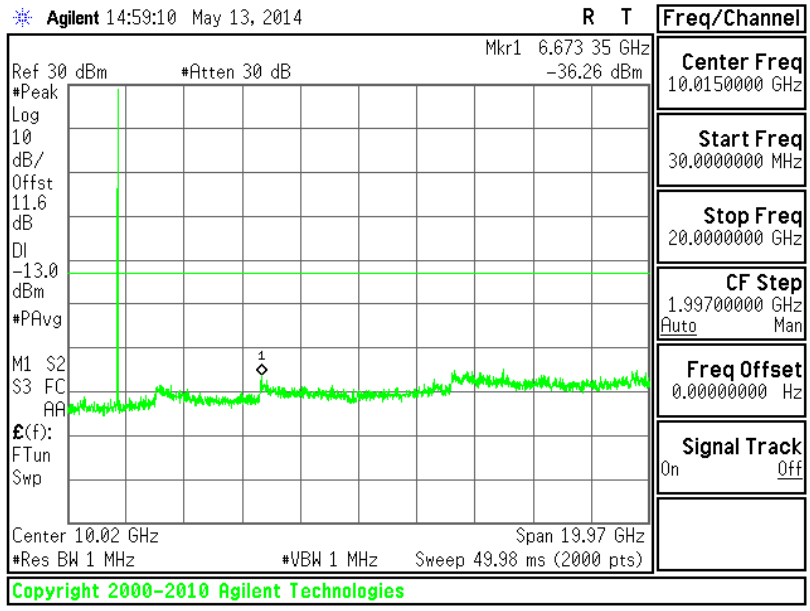
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

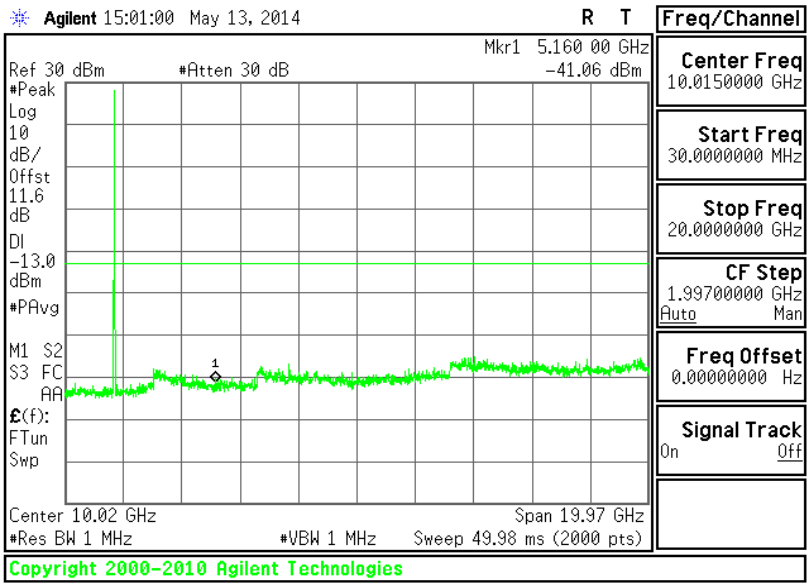


HIGH, RB1-0, 30 TO 20000 MHz

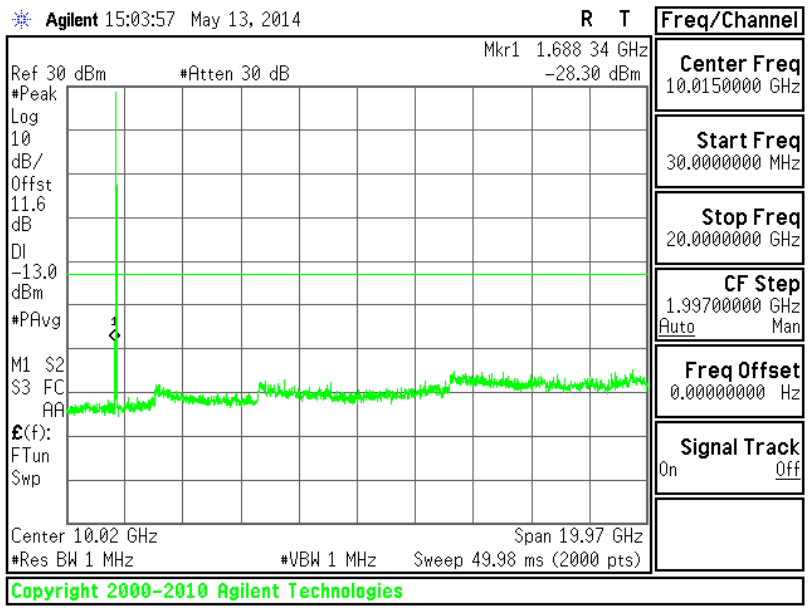


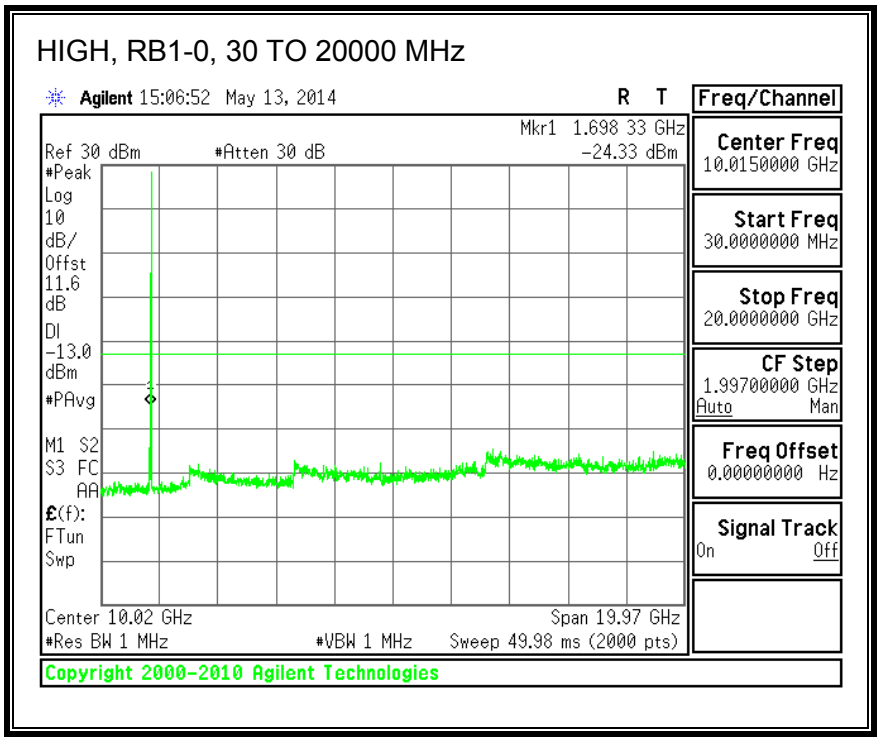
QPSK, (20.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 20000 MHz

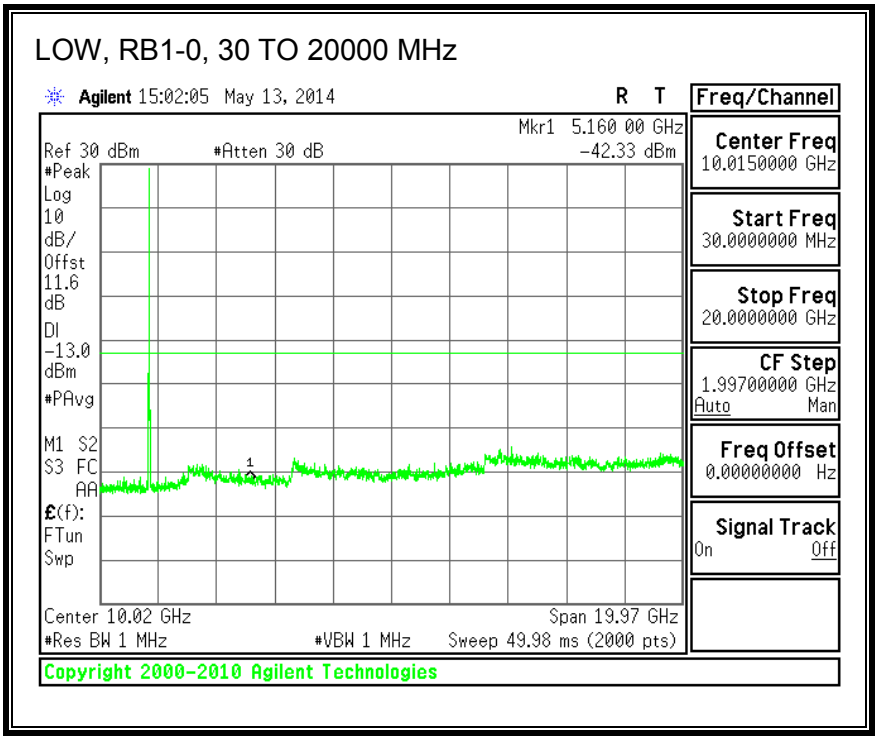


MID, RB1-0, 30 TO 20000 MHz

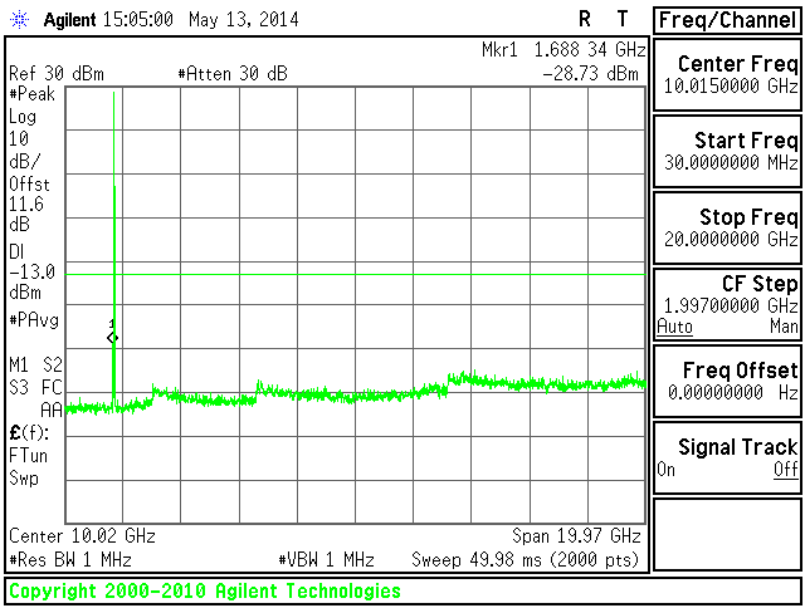




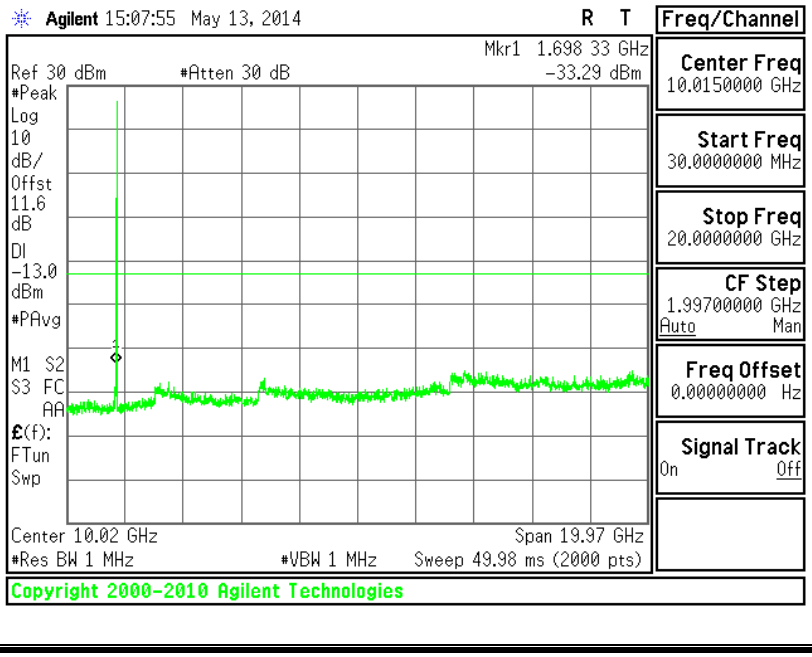
16QAM, (20.0 MHz BAND WIDTH)



MID, RB1-0, 30 TO 20000 MHz



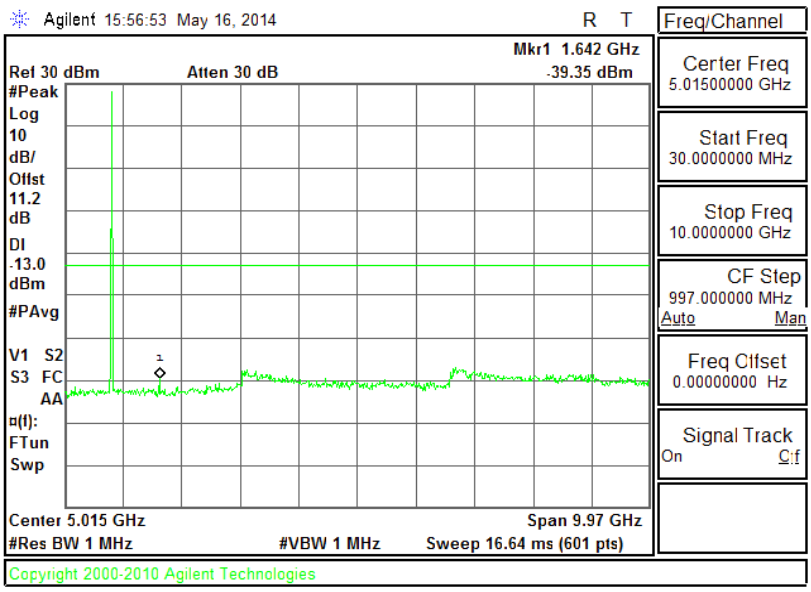
HIGH, RB1-0, 30 TO 20000 MHz



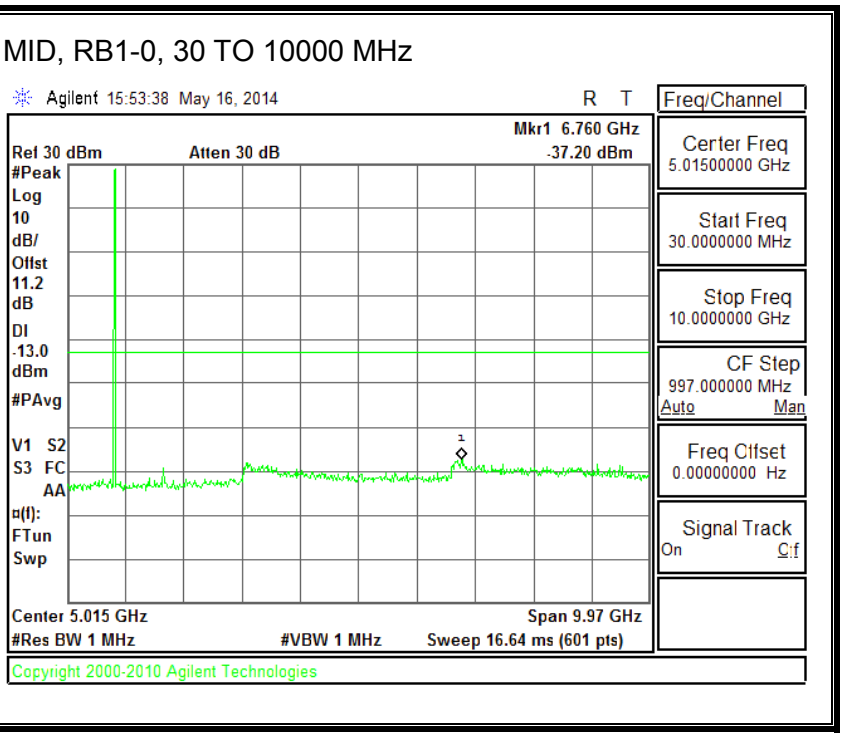
8.3.3. LTE BAND 5

QPSK, (1.4 MHz BAND WIDTH)

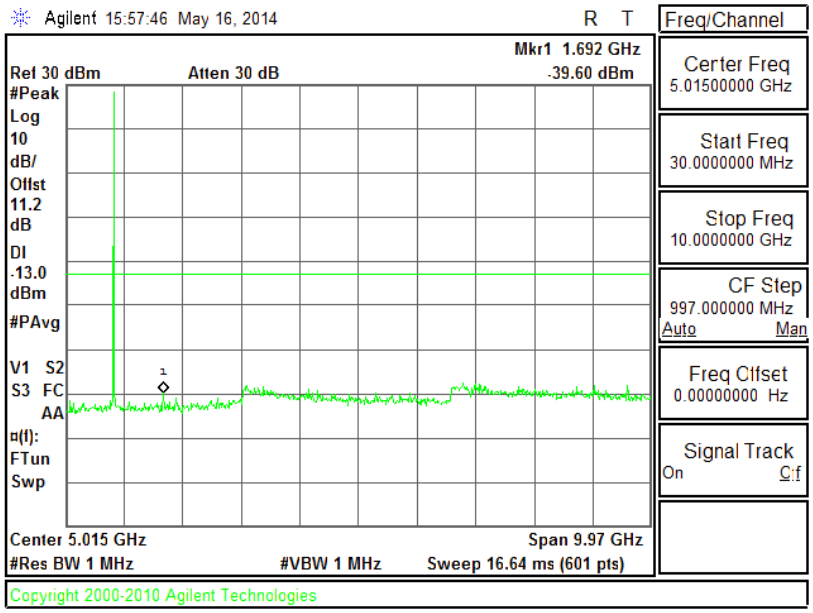
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz

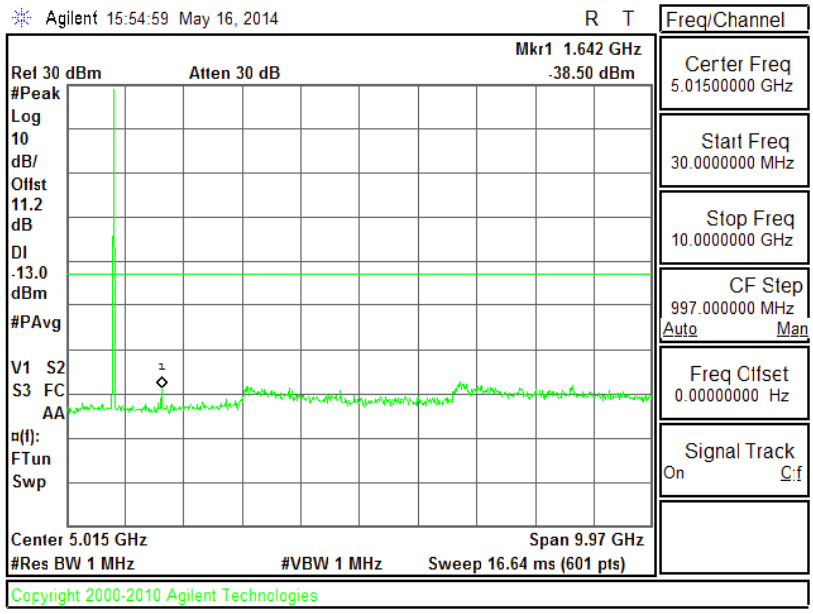


HIGH, RB1-0, 30 TO 10000 MHz

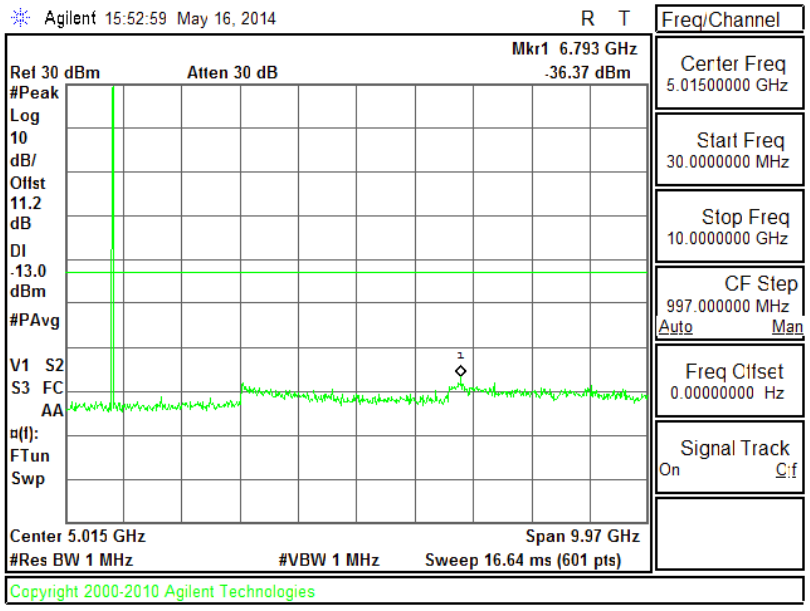


16QAM, (1.4 MHz BAND WIDTH)

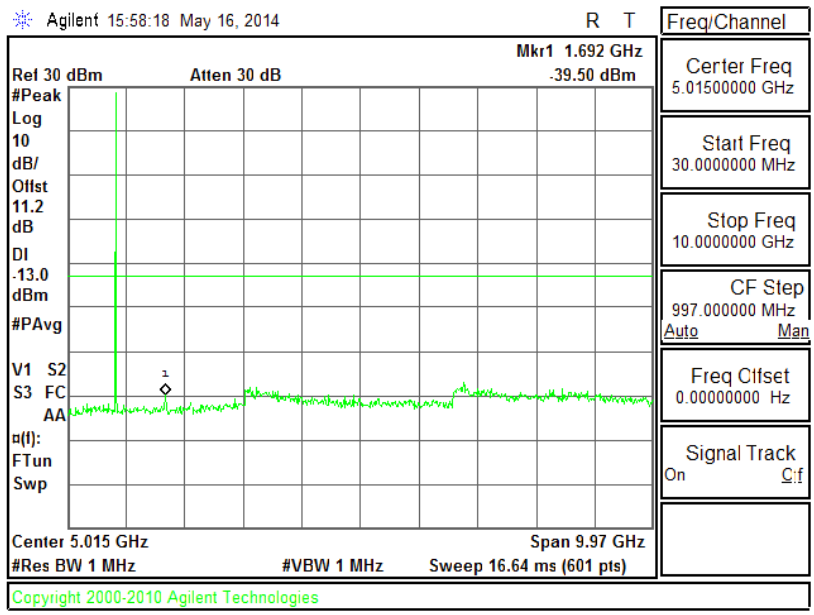
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz

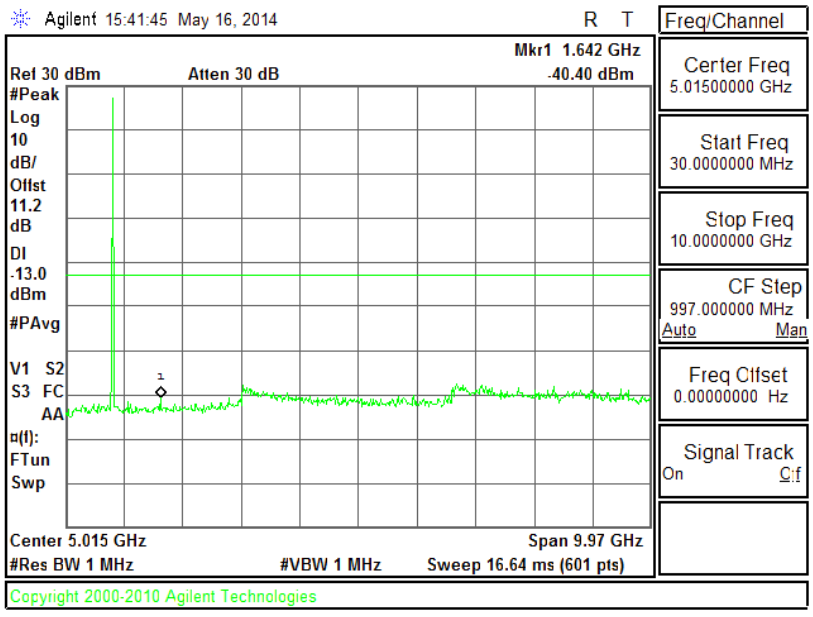


HIGH, RB1-0, 30 TO 10000 MHz

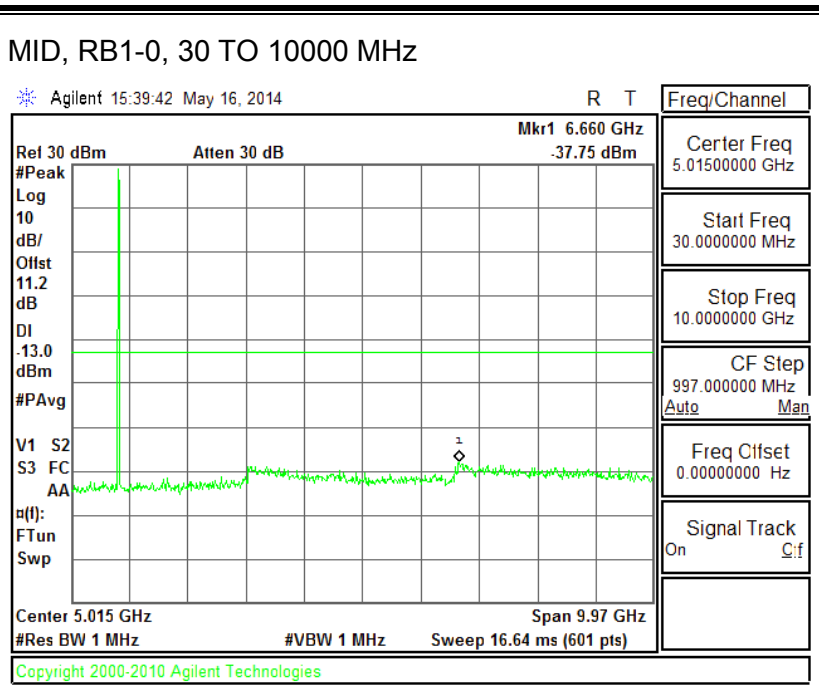


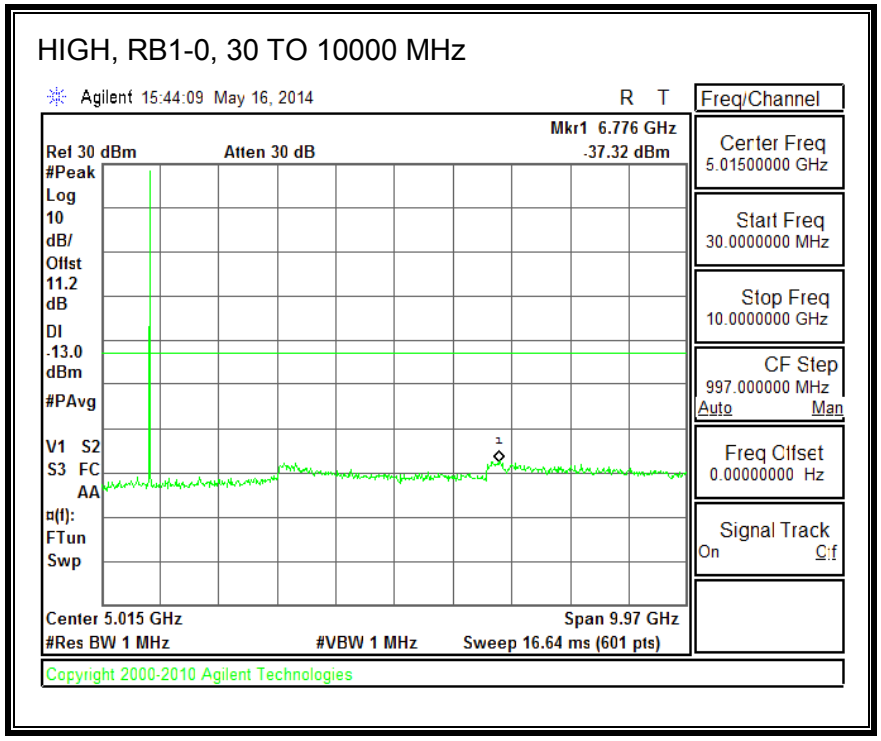
QPSK, (3.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 10000 MHz

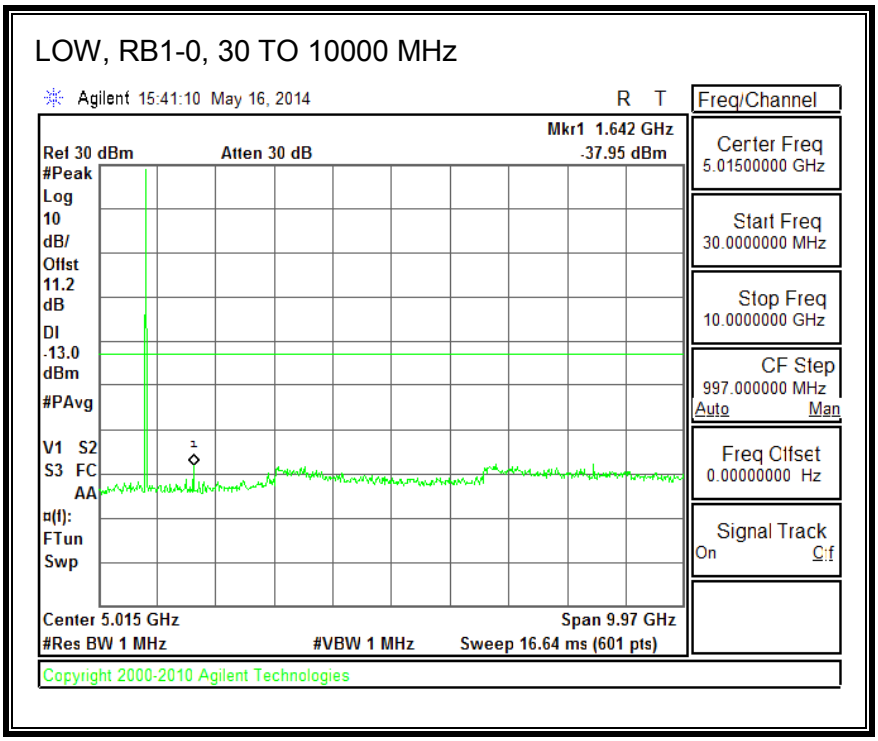


MID, RB1-0, 30 TO 10000 MHz

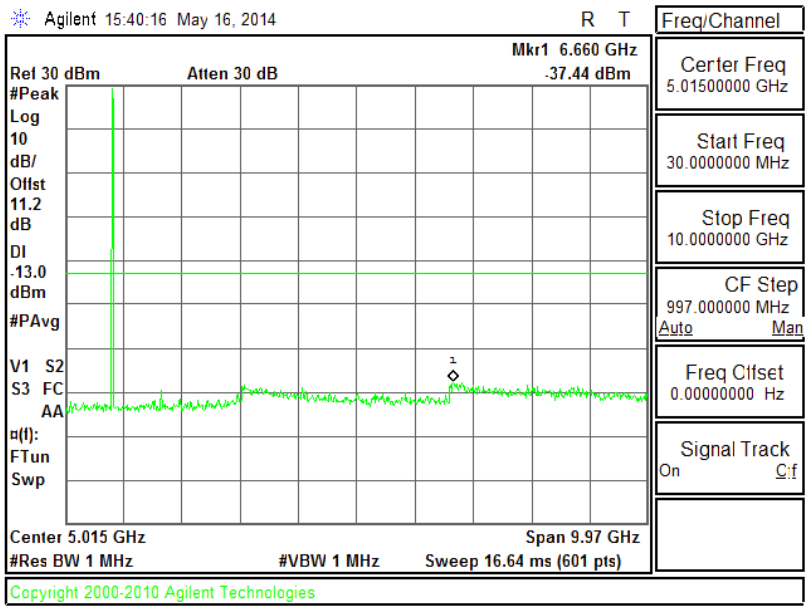




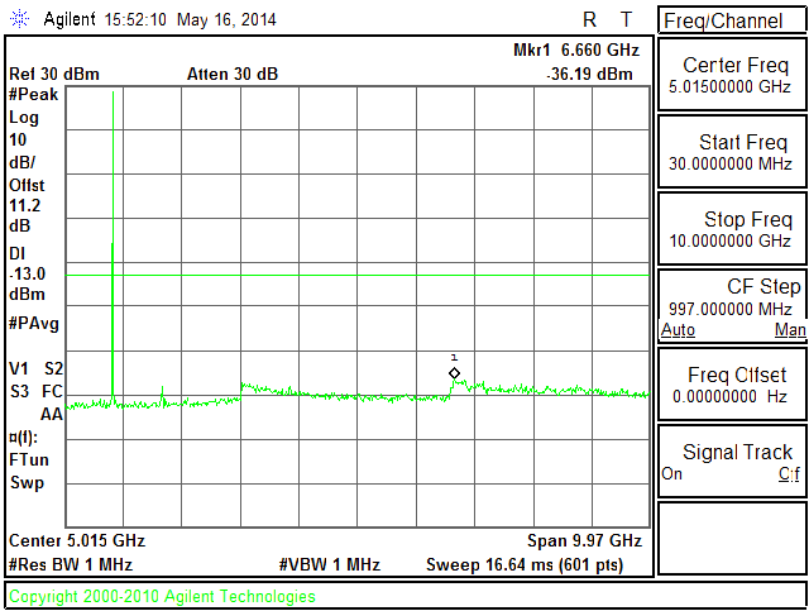
16QAM, (3.0 MHz BAND WIDTH)



MID, RB1-0, 30 TO 10000 MHz

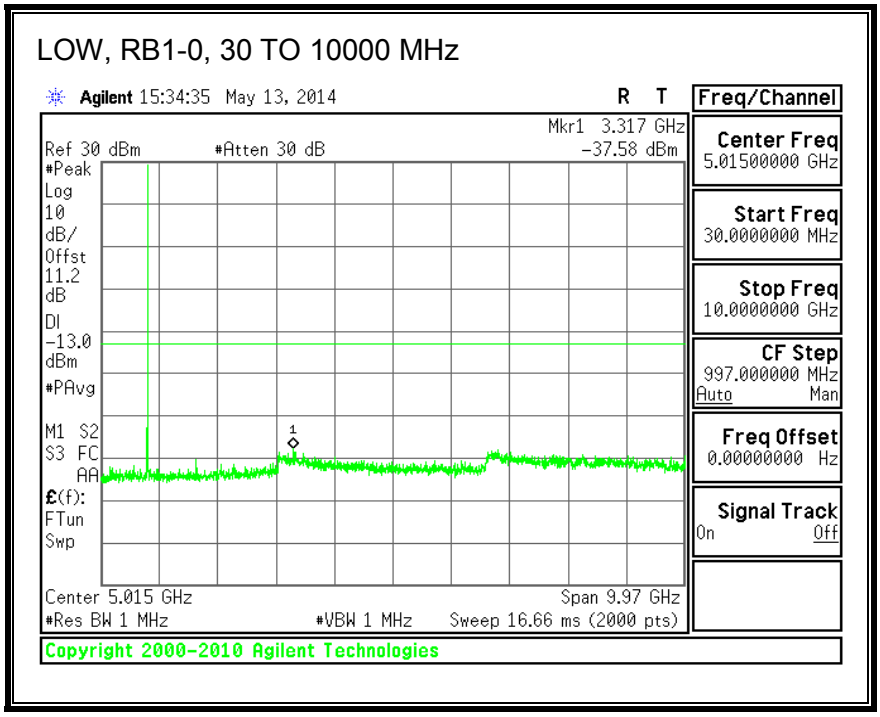


HIGH, RB1-0, 30 TO 10000 MHz

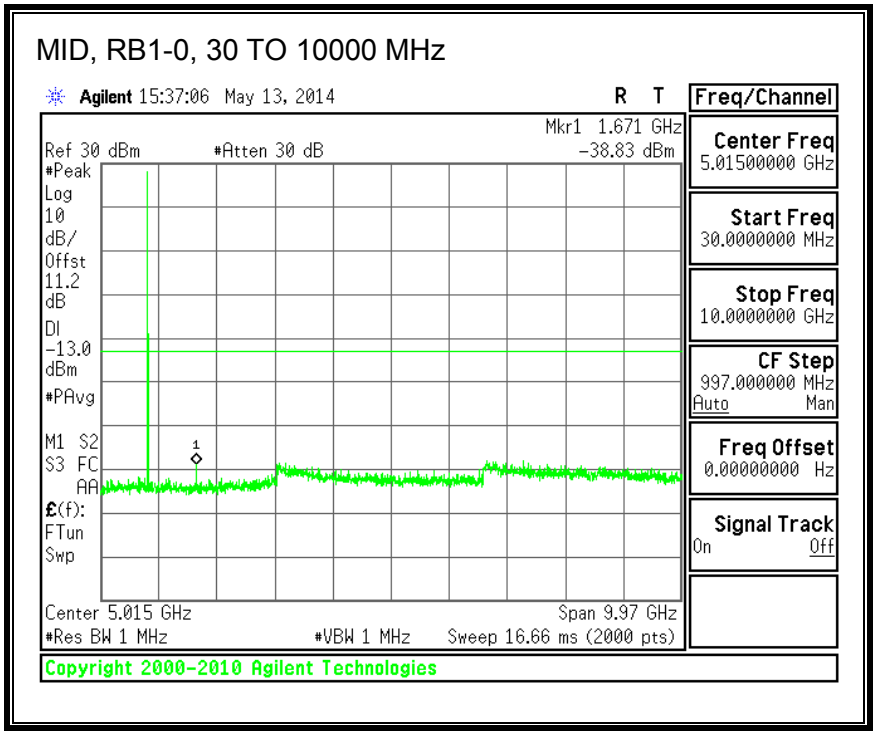


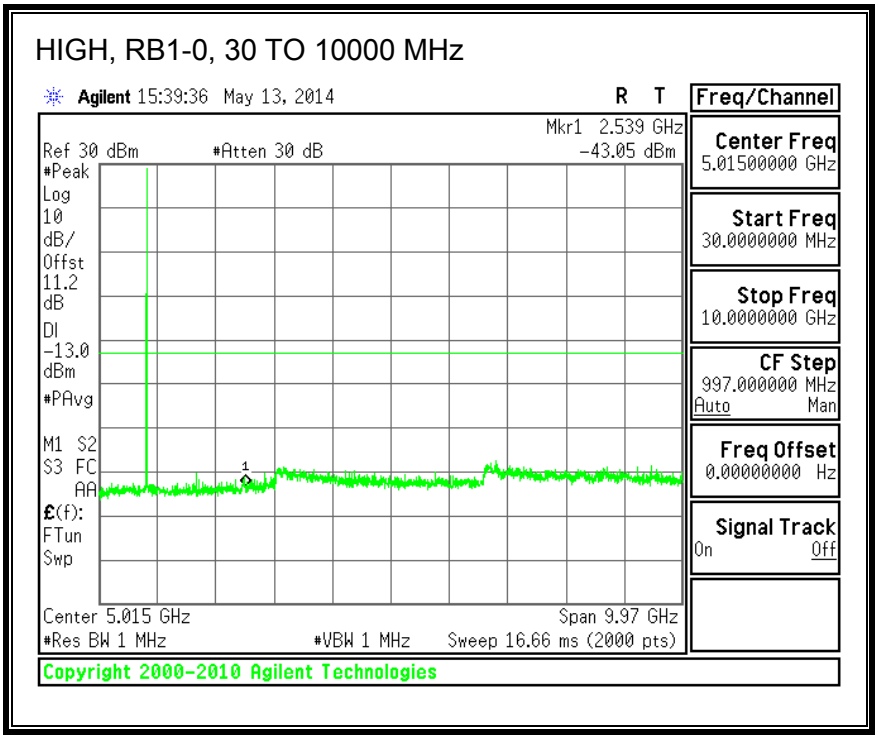
QPSK, (5.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 10000 MHz

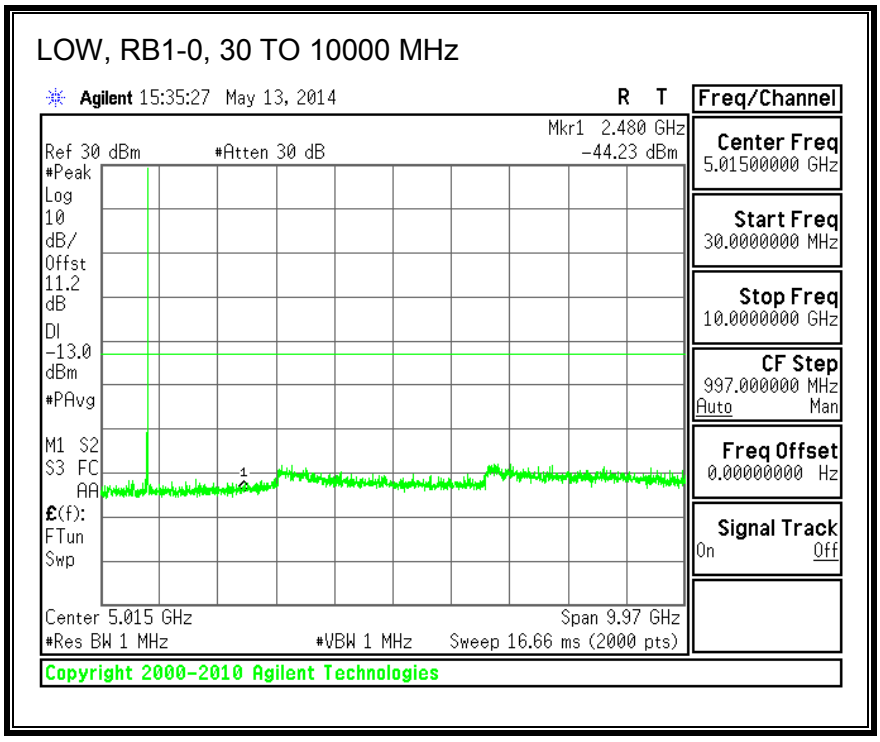


MID, RB1-0, 30 TO 10000 MHz

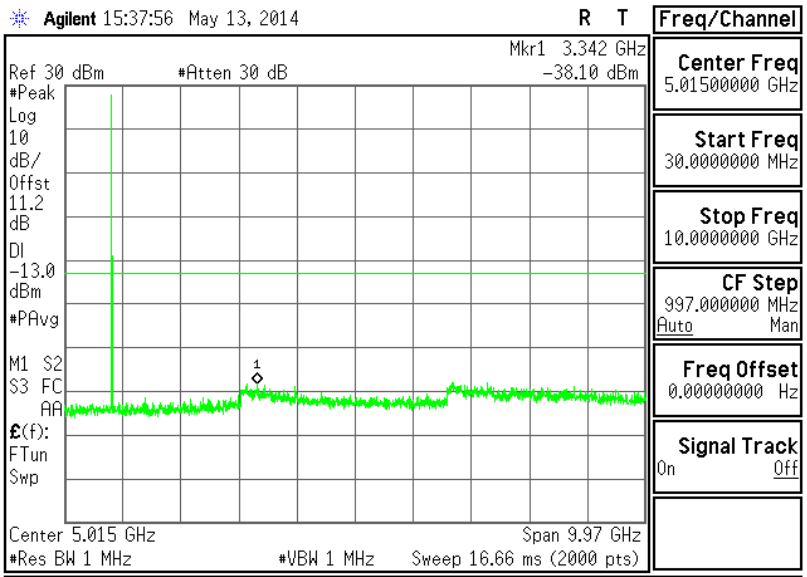




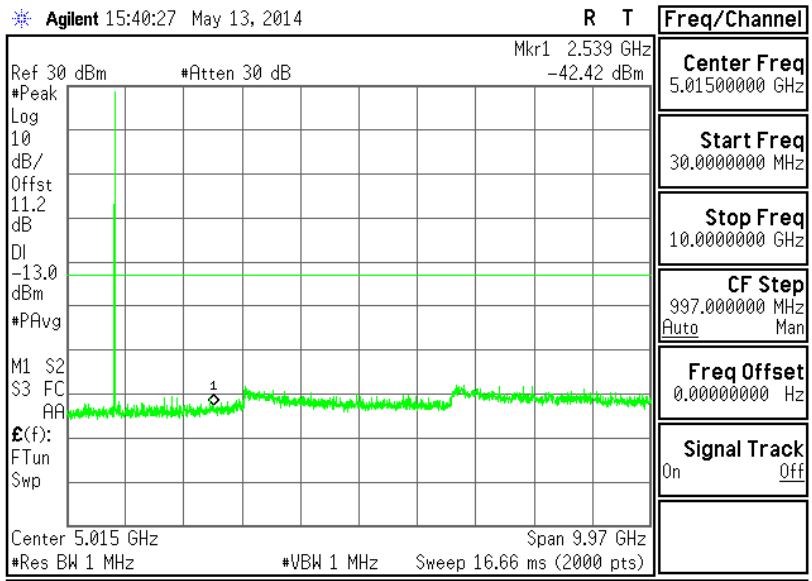
16QAM, (5.0 MHz BAND WIDTH)



MID, RB1-0, 30 TO 10000 MHz

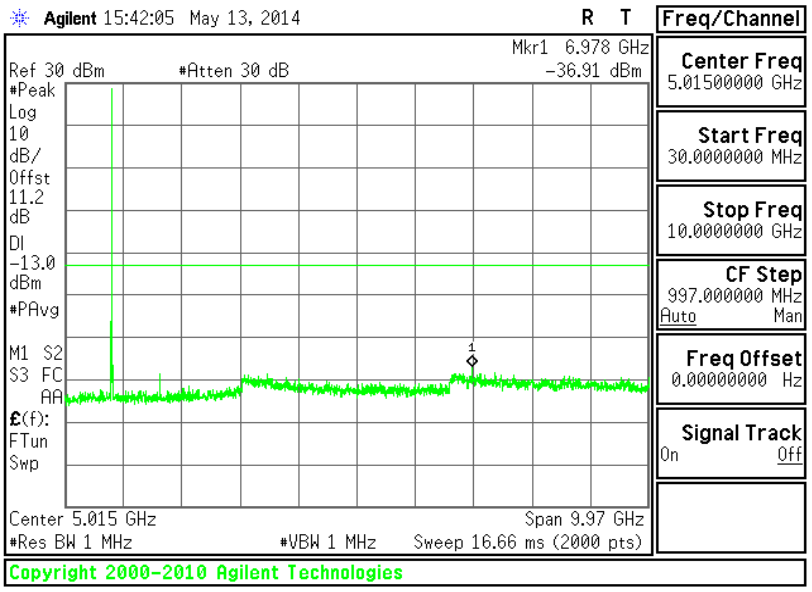


HIGH, RB1-0, 30 TO 10000 MHz

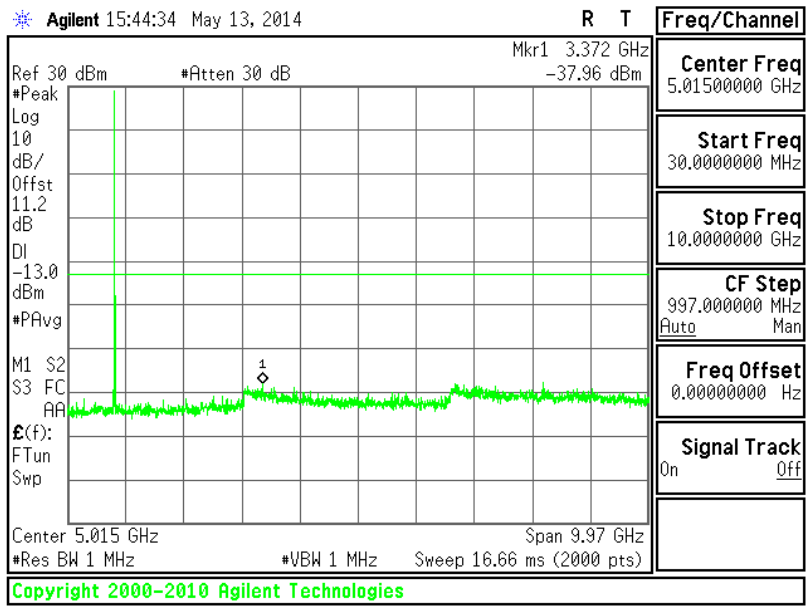


QPSK, (10.0 MHz BAND WIDTH)

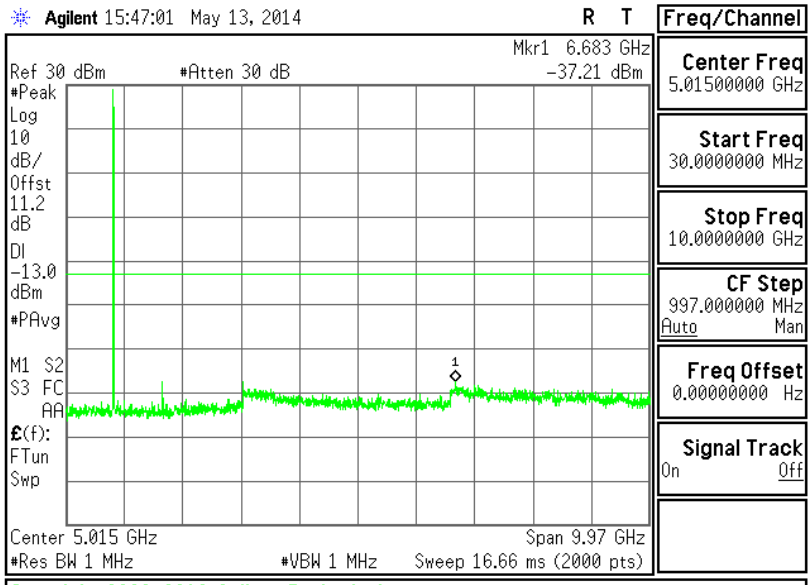
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz

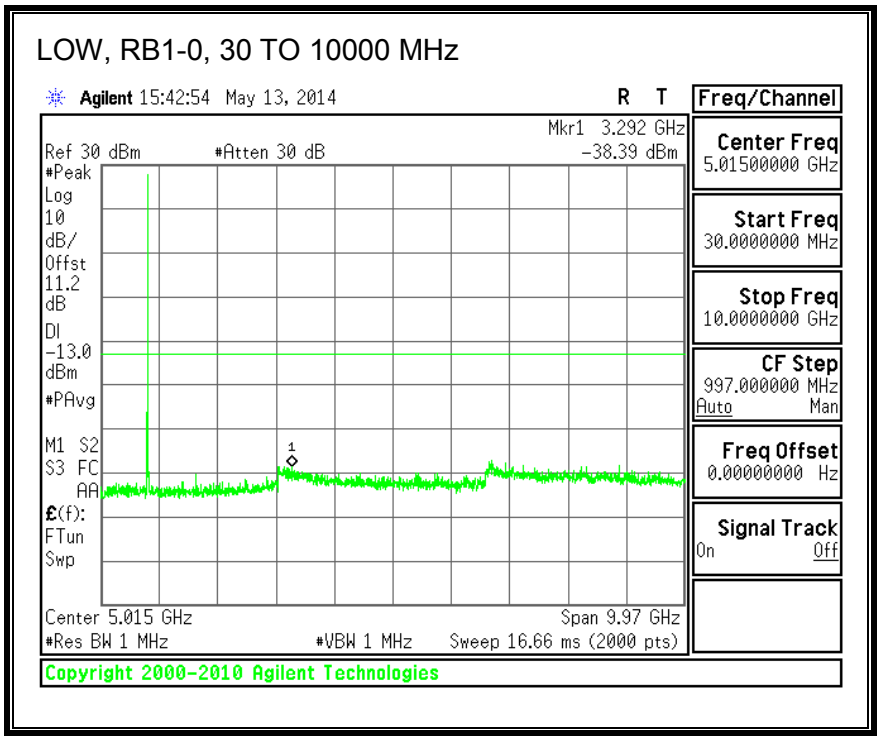


HIGH, RB1-0, 30 TO 10000 MHz

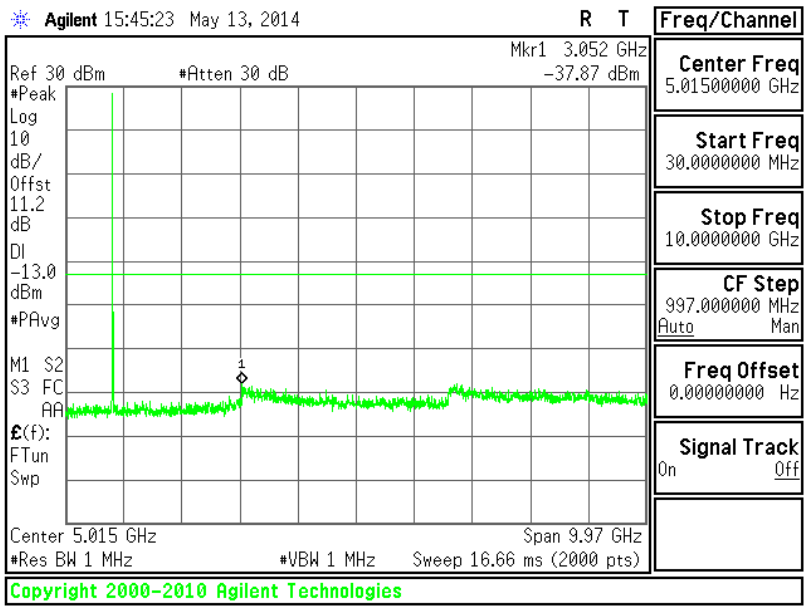


16QAM, (10.0 MHz BAND WIDTH)

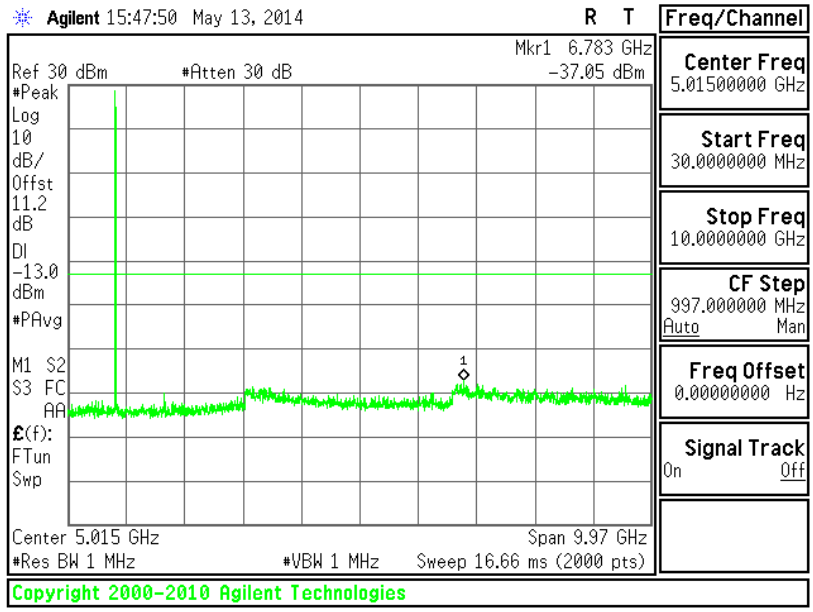
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz



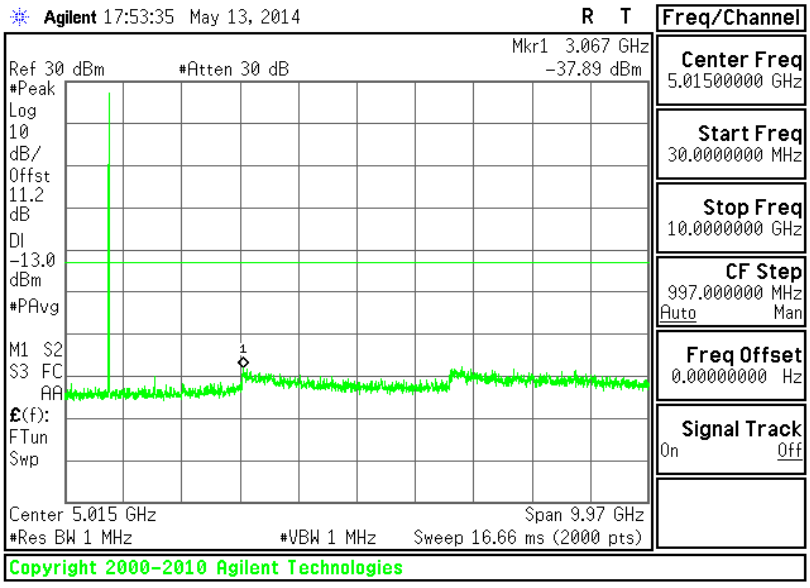
HIGH, RB1-0, 30 TO 10000 MHz



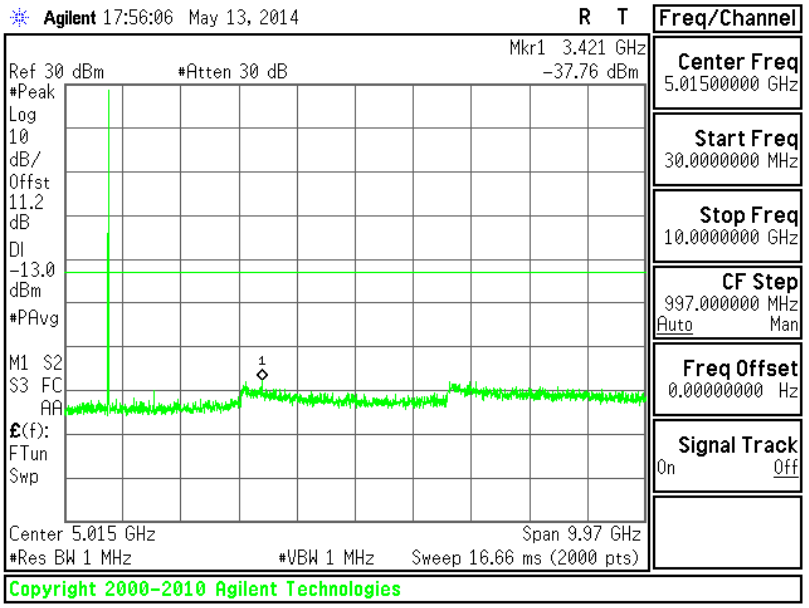
8.3.4. LTE BAND 13

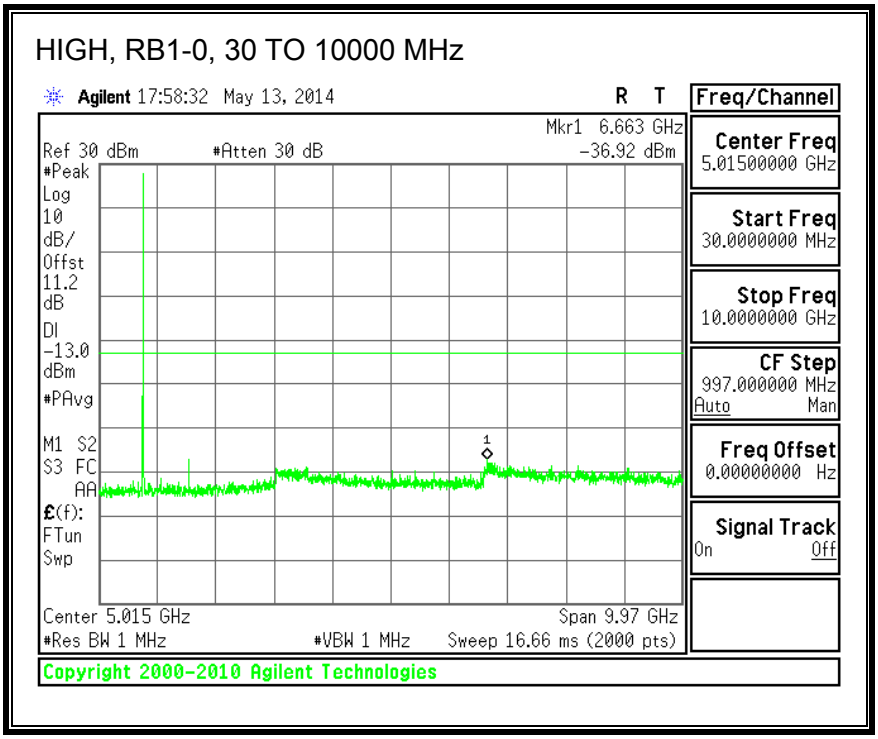
QPSK, (5.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 10000 MHz

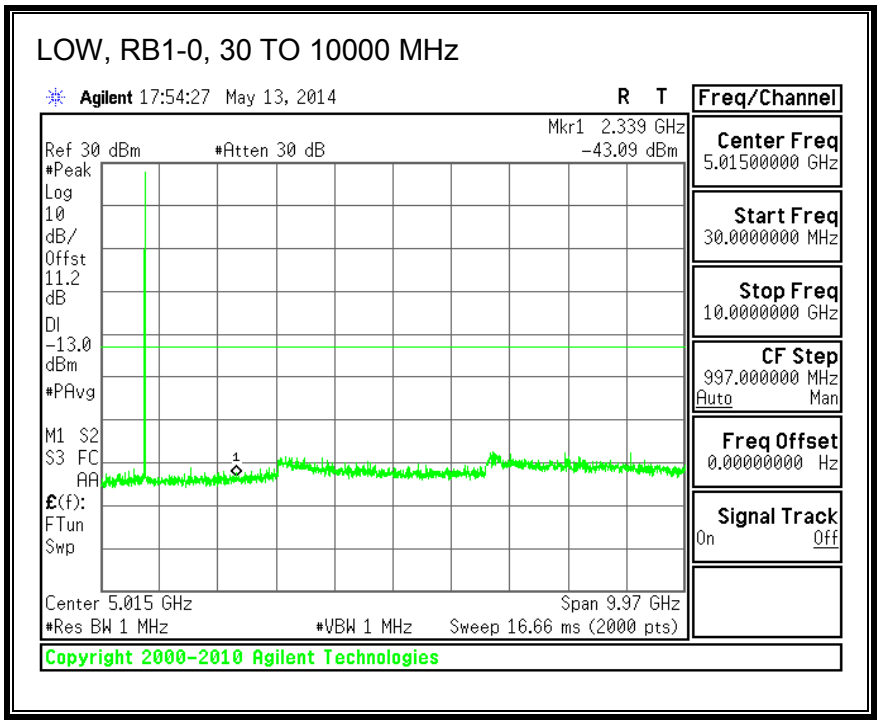


MID, RB1-0, 30 TO 10000 MHz

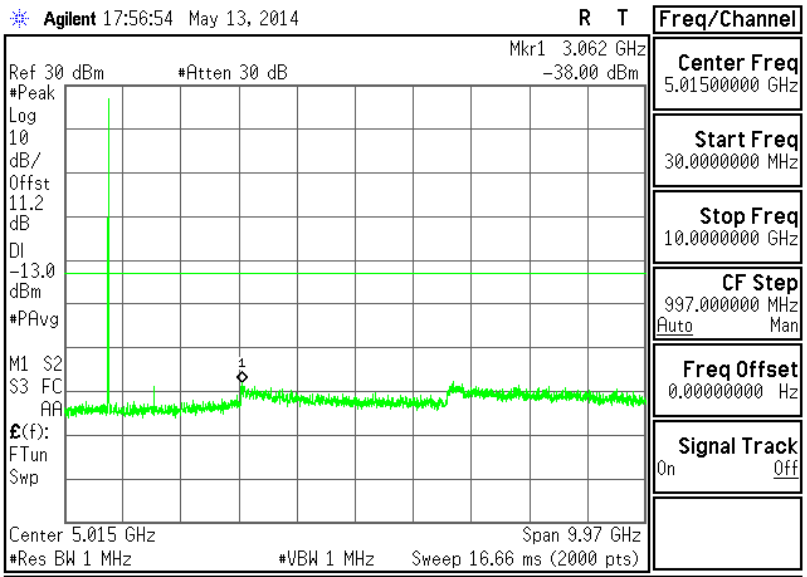




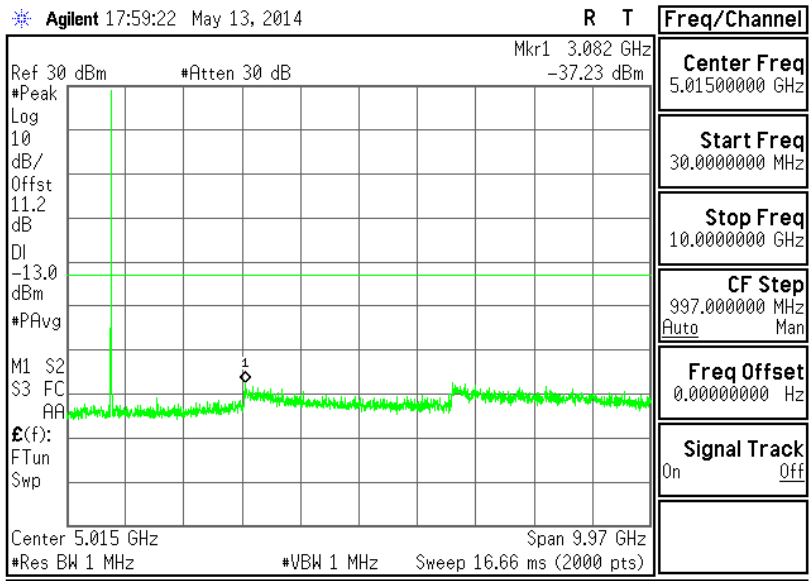
16QAM, (5.0 MHz BAND WIDTH)



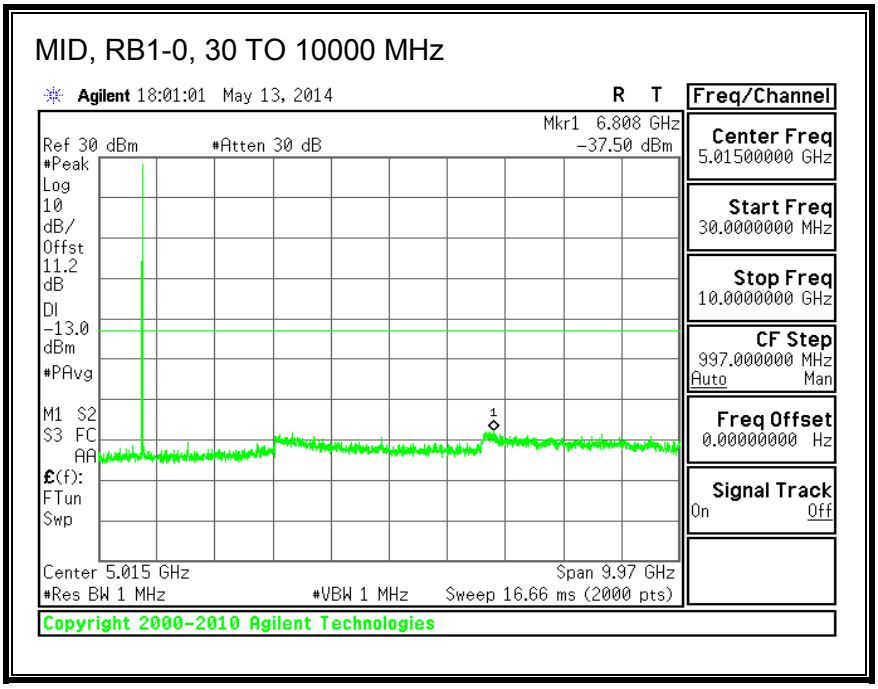
MID, RB1-0, 30 TO 10000 MHz



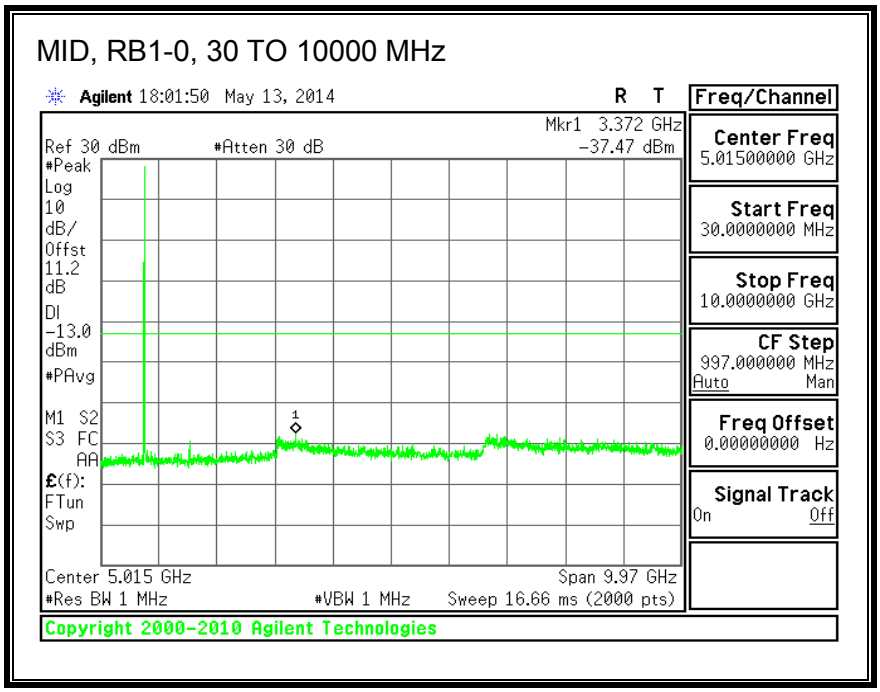
HIGH, RB1-0, 30 TO 10000 MHz



QPSK, (10.0 MHz BAND WIDTH)



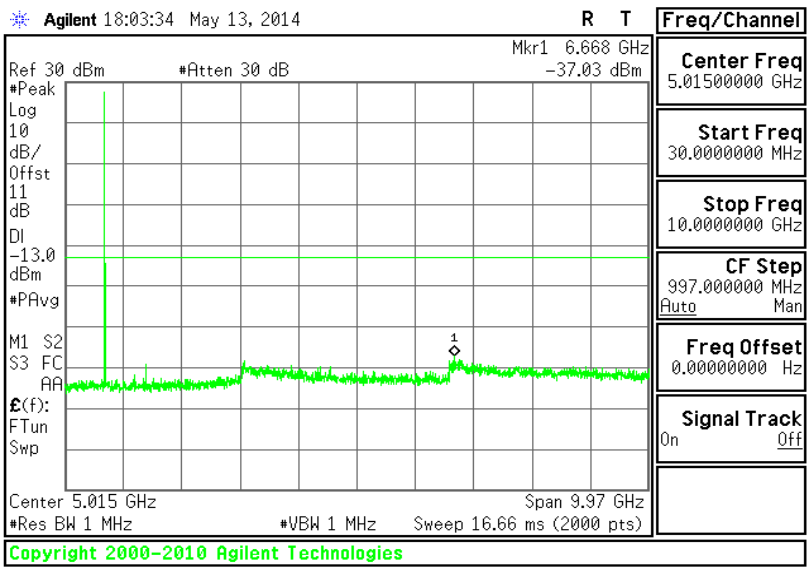
16QAM, (10.0 MHz BAND WIDTH)



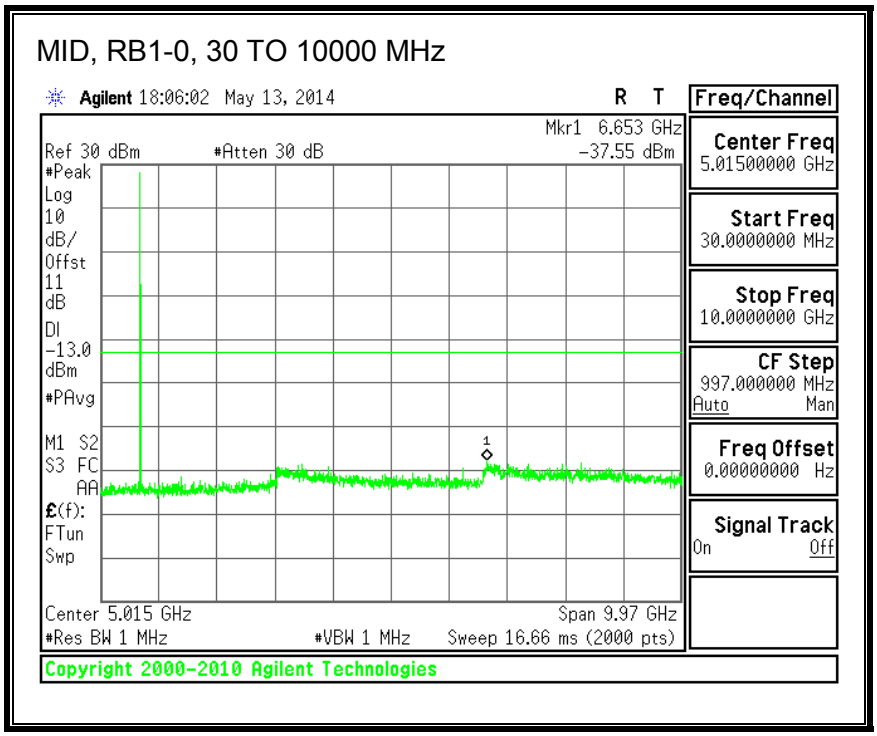
8.3.5. LTE BAND 17

QPSK, (5.0 MHz BAND WIDTH)

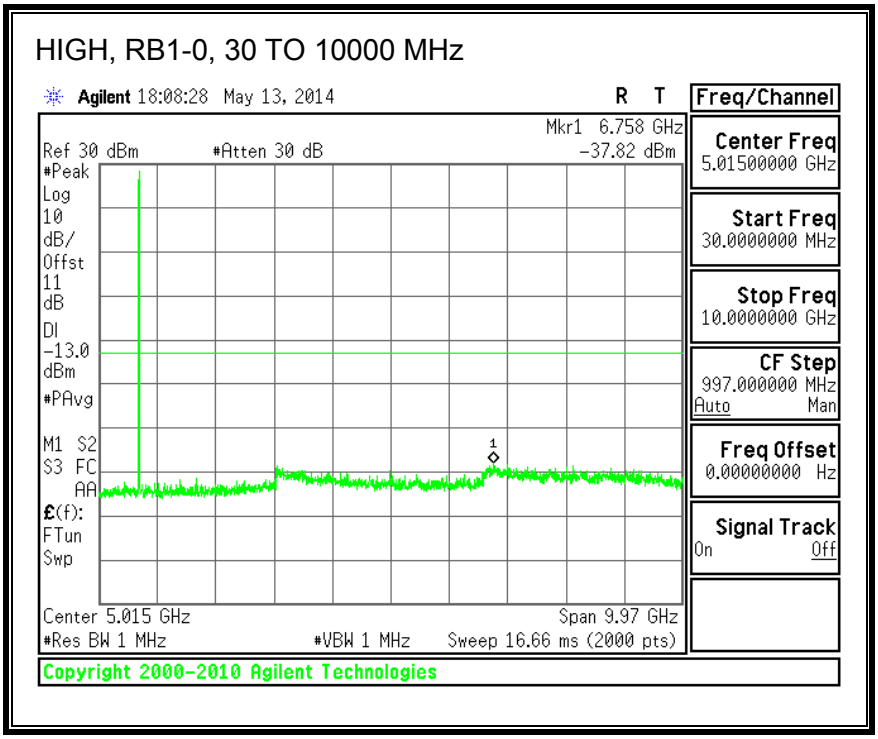
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz

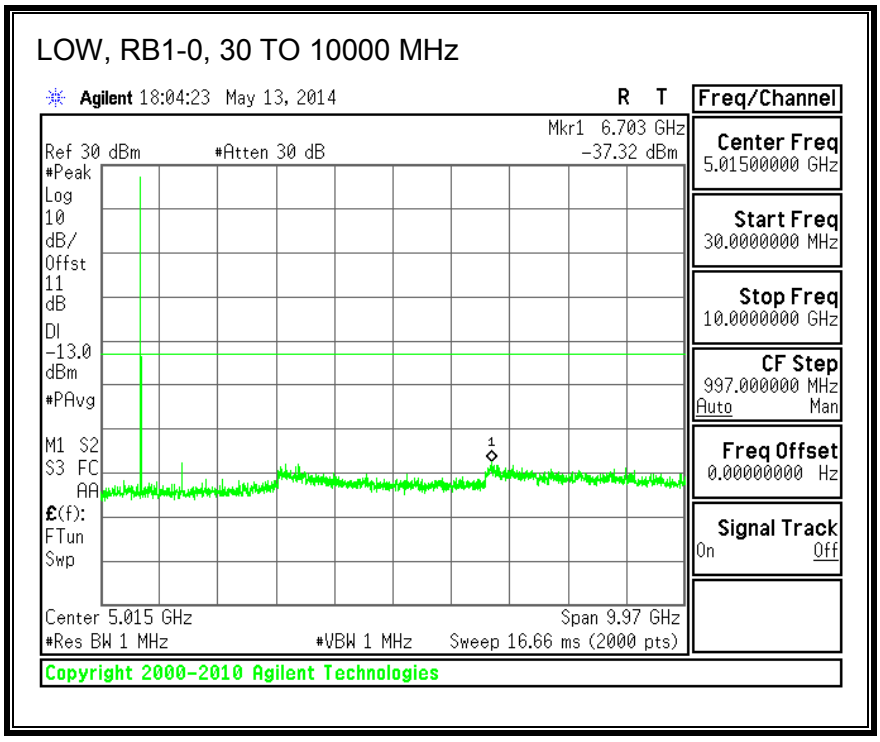


HIGH, RB1-0, 30 TO 10000 MHz

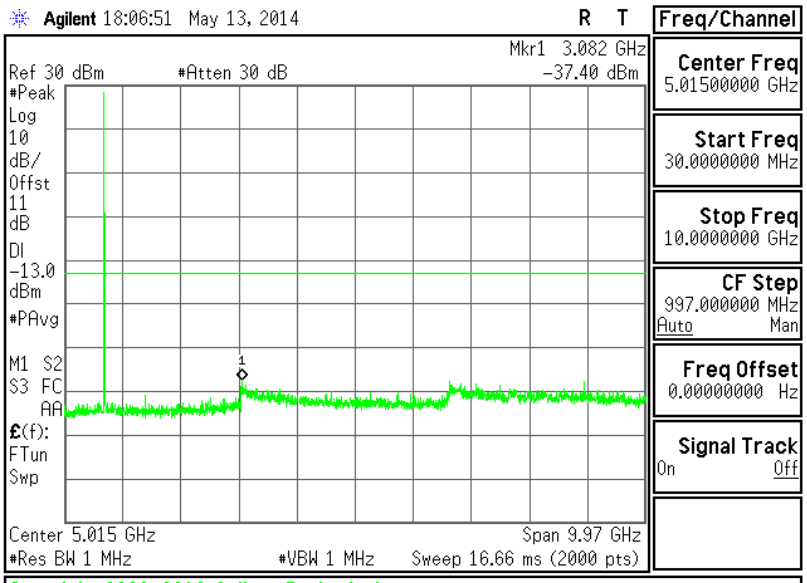


16QAM, (5.0 MHz BAND WIDTH)

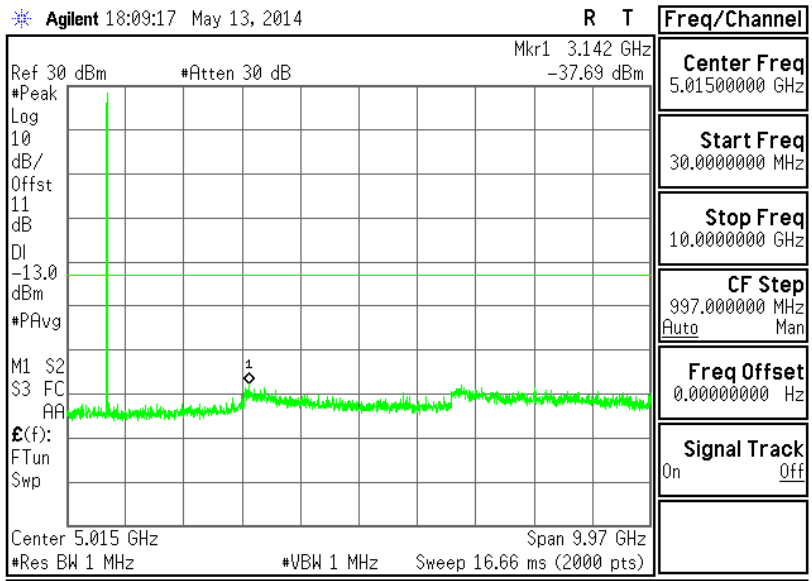
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz

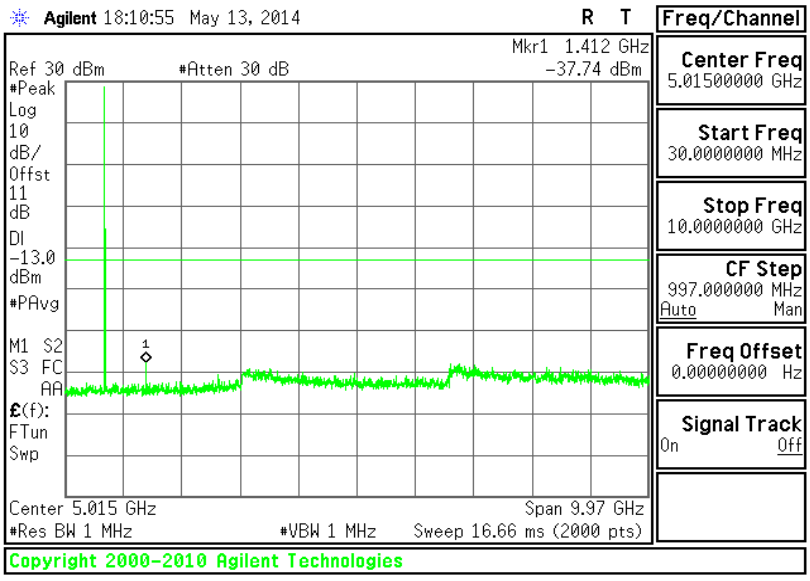


HIGH, RB1-0, 30 TO 10000 MHz

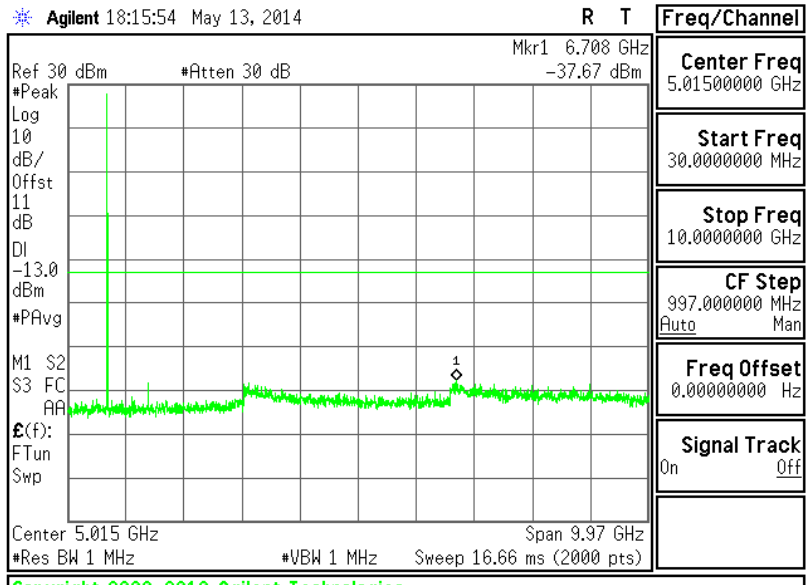


QPSK, (10.0 MHz BAND WIDTH)

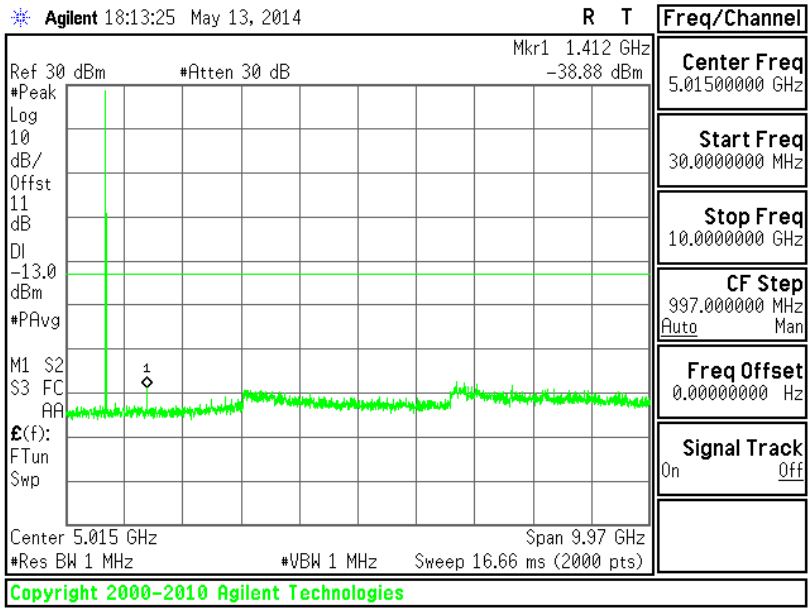
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz

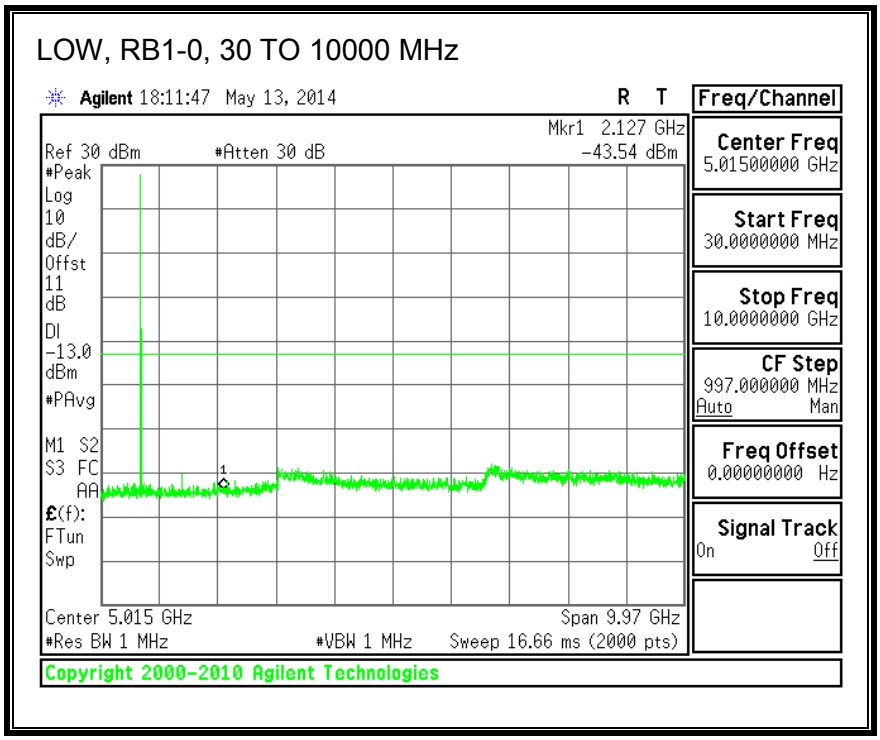


HIGH, RB1-0, 30 TO 10000 MHz

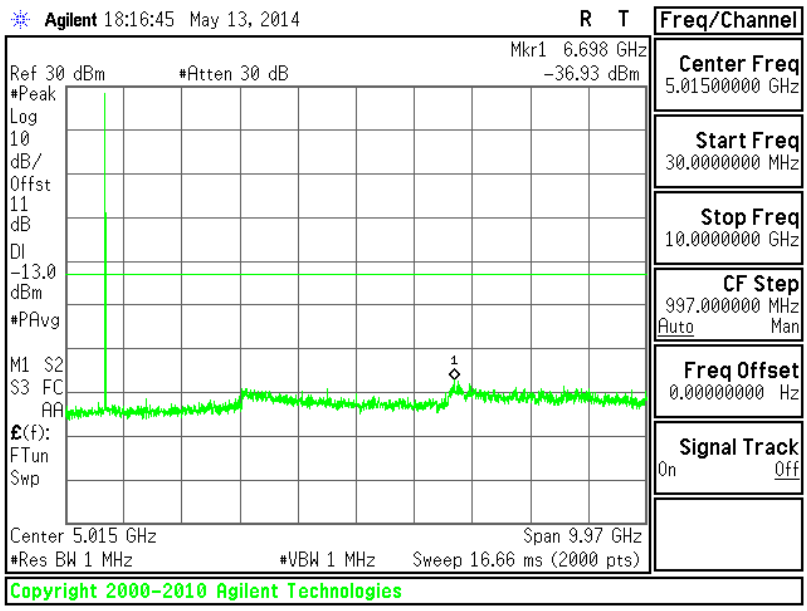


16QAM, (10.0 MHz BAND WIDTH)

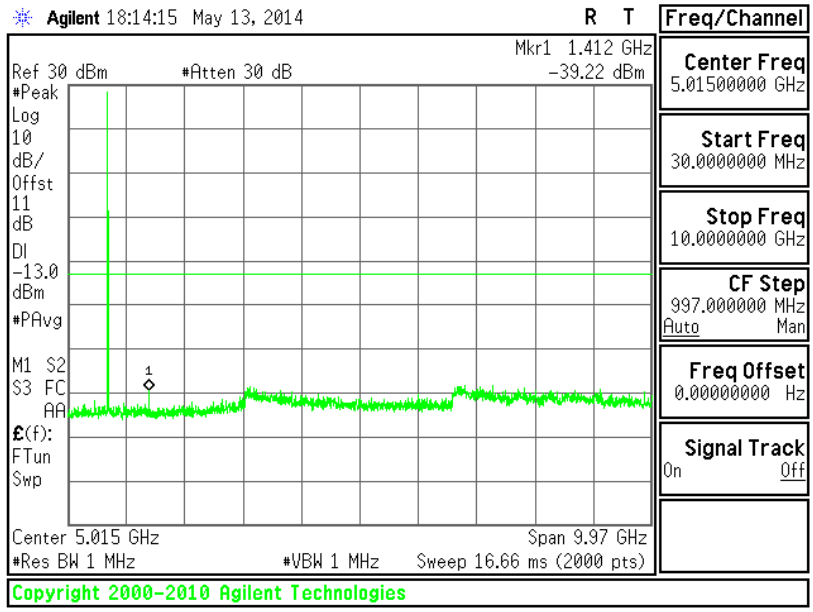
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz



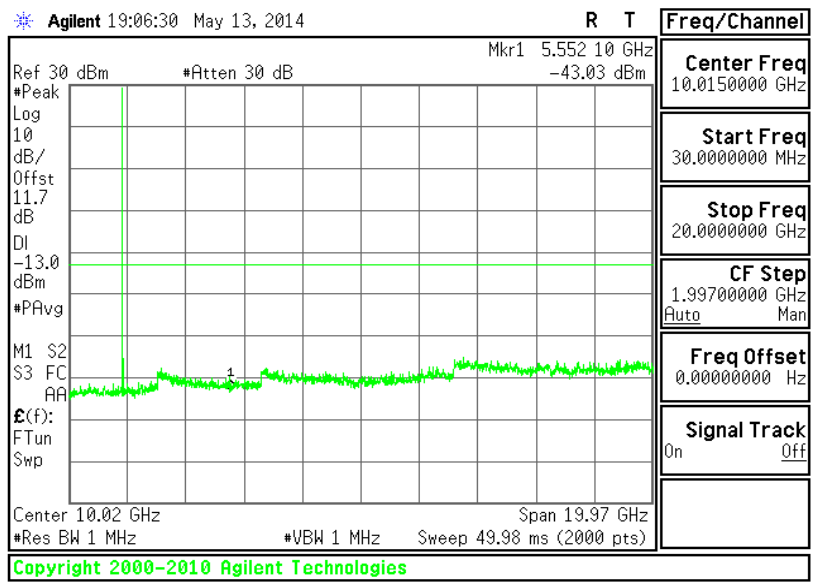
HIGH, RB1-0, 30 TO 10000 MHz



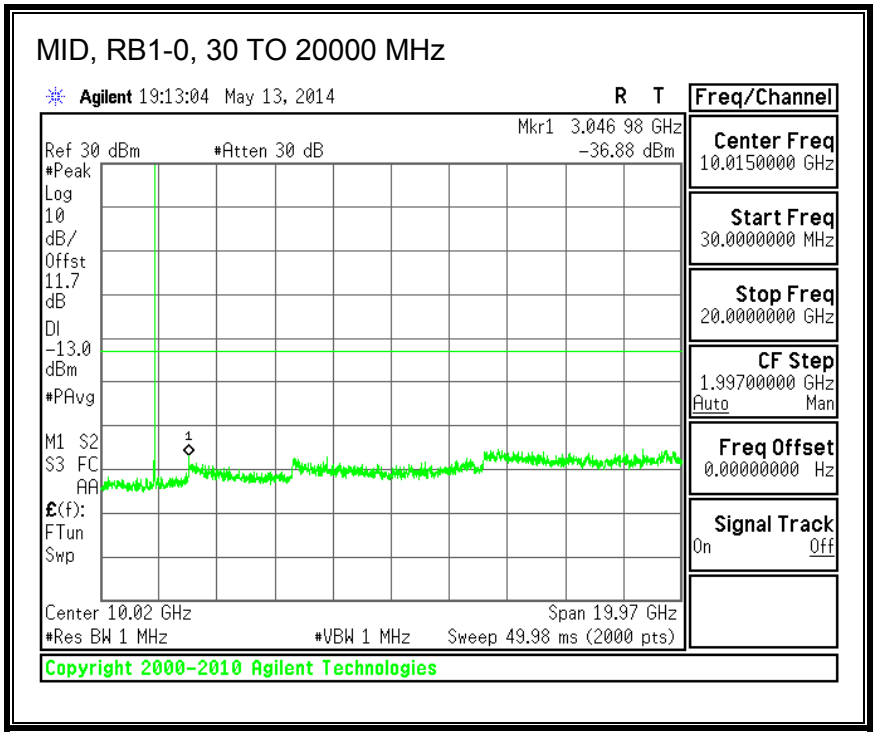
8.3.6. LTE BAND 25

QPSK, (1.4 MHz BAND WIDTH)

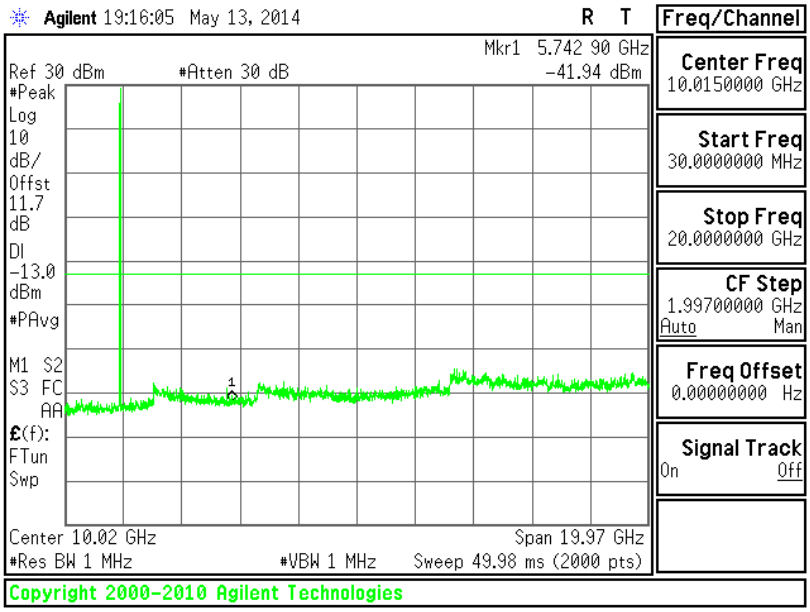
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

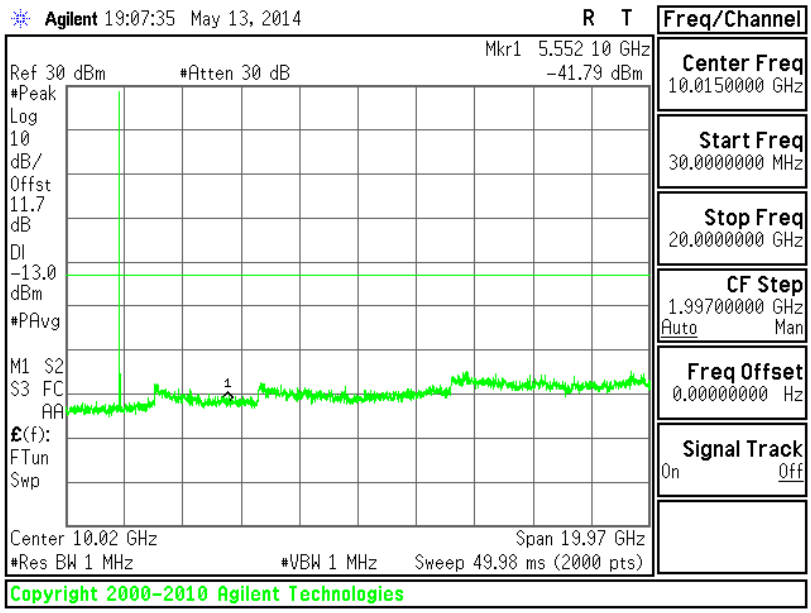


HIGH, RB1-0, 30 TO 20000 MHz

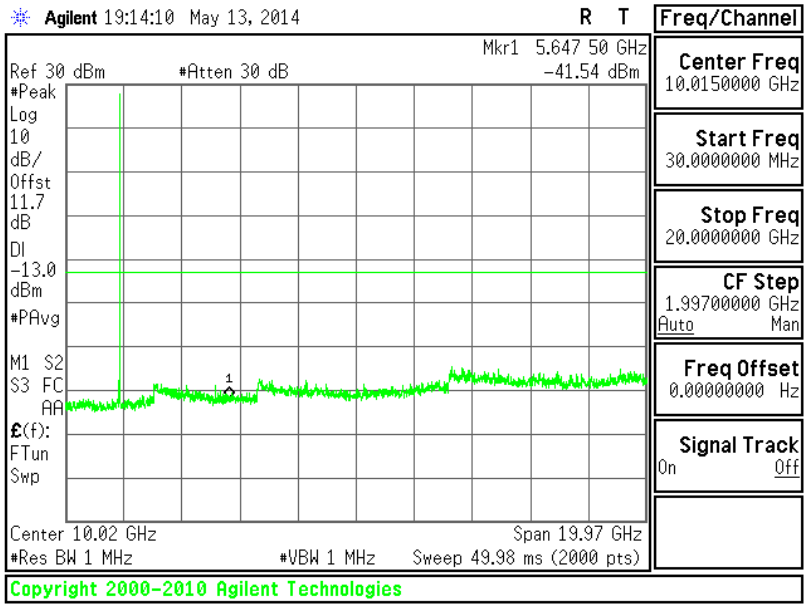


16QAM, (1.4 MHz BAND WIDTH)

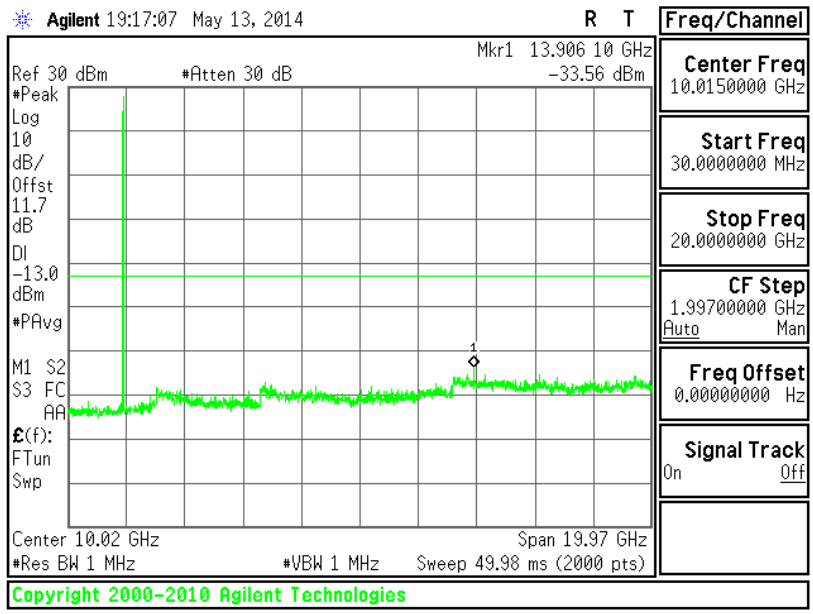
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

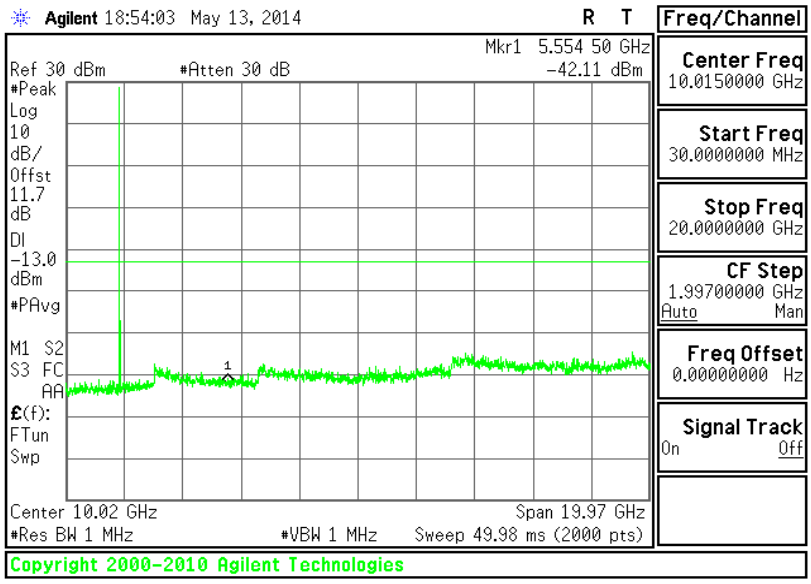


HIGH, RB1-0, 30 TO 20000 MHz

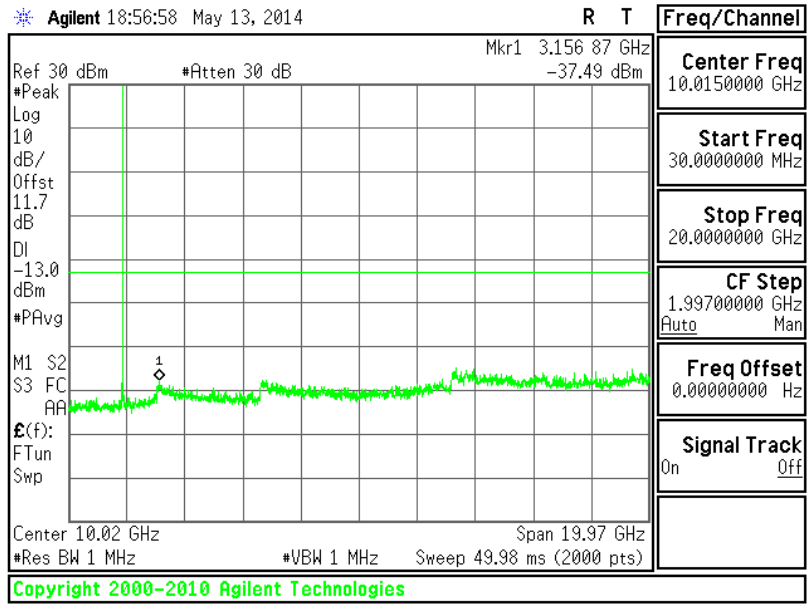


QPSK, (3.0 MHz BAND WIDTH)

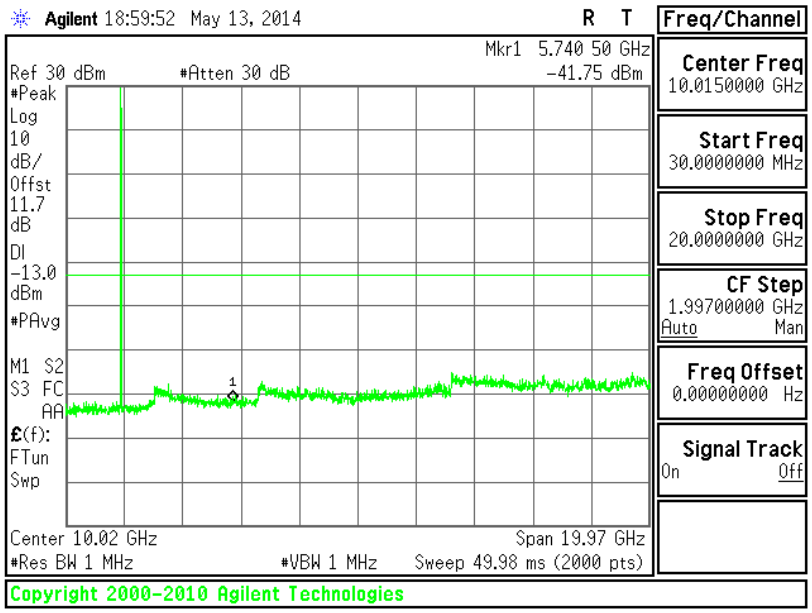
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

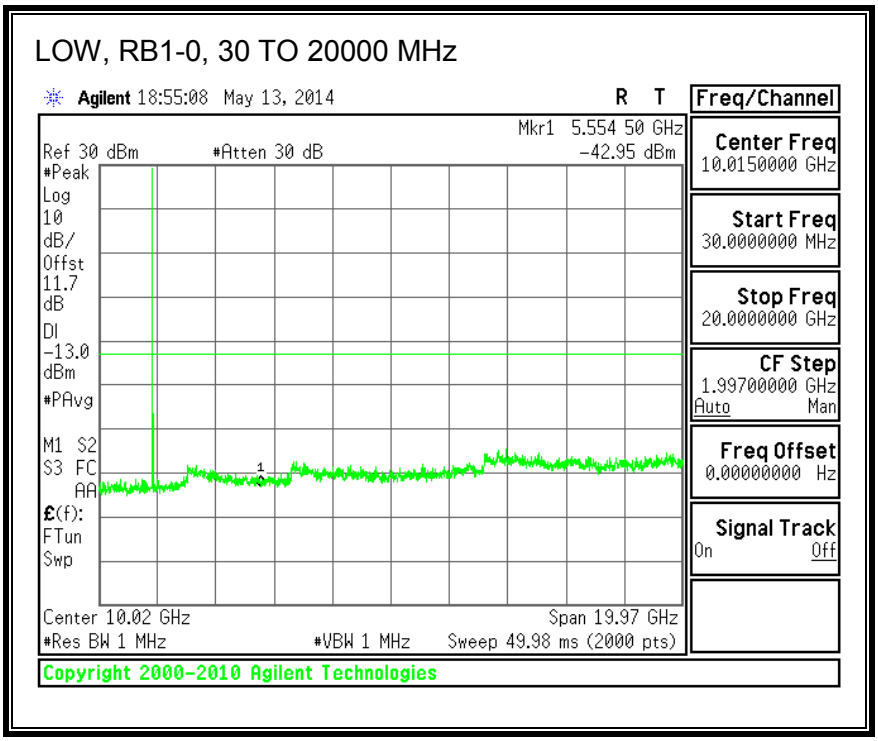


HIGH, RB1-0, 30 TO 20000 MHz

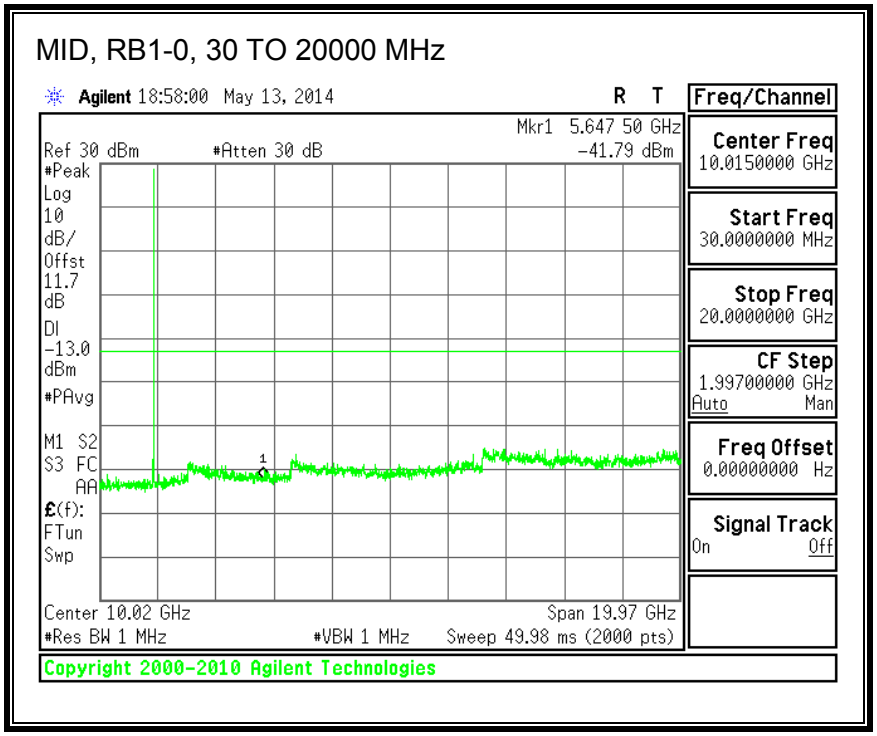


16QAM, (3.0 MHz BAND WIDTH)

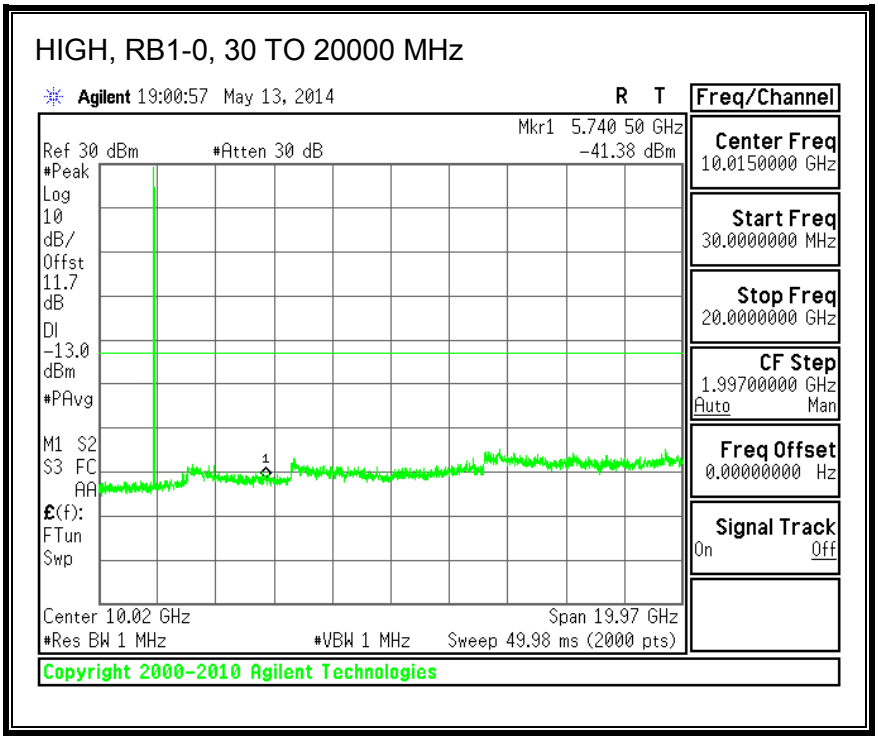
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

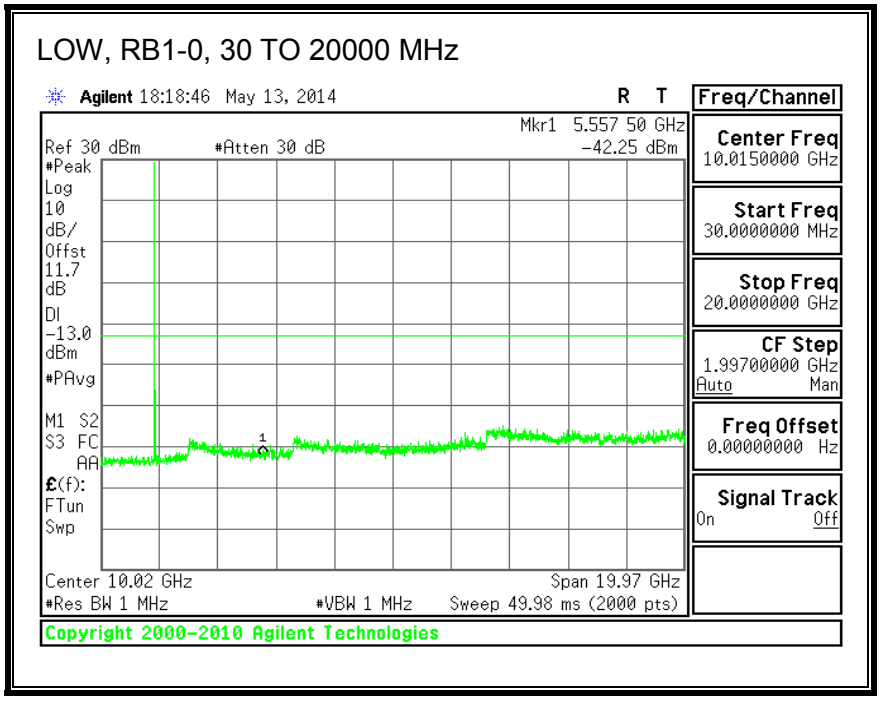


HIGH, RB1-0, 30 TO 20000 MHz

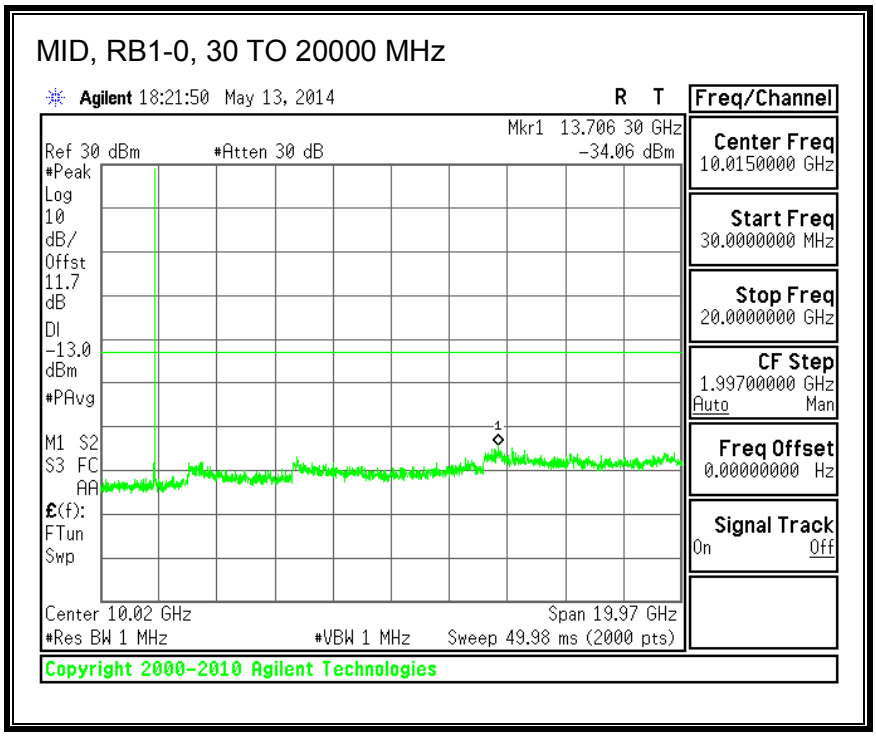


QPSK, (5.0 MHz BAND WIDTH)

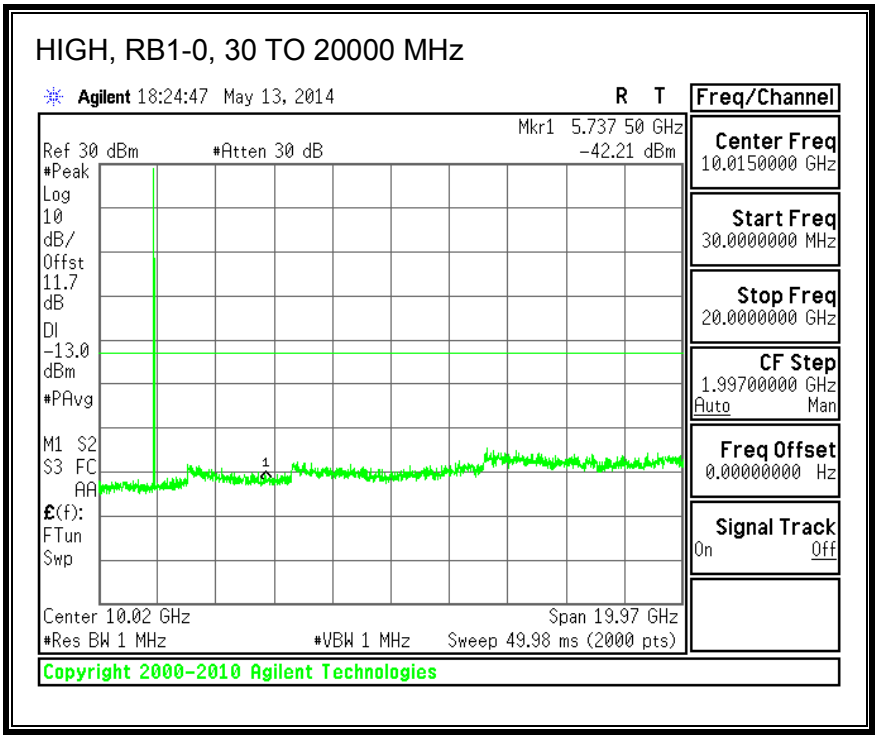
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

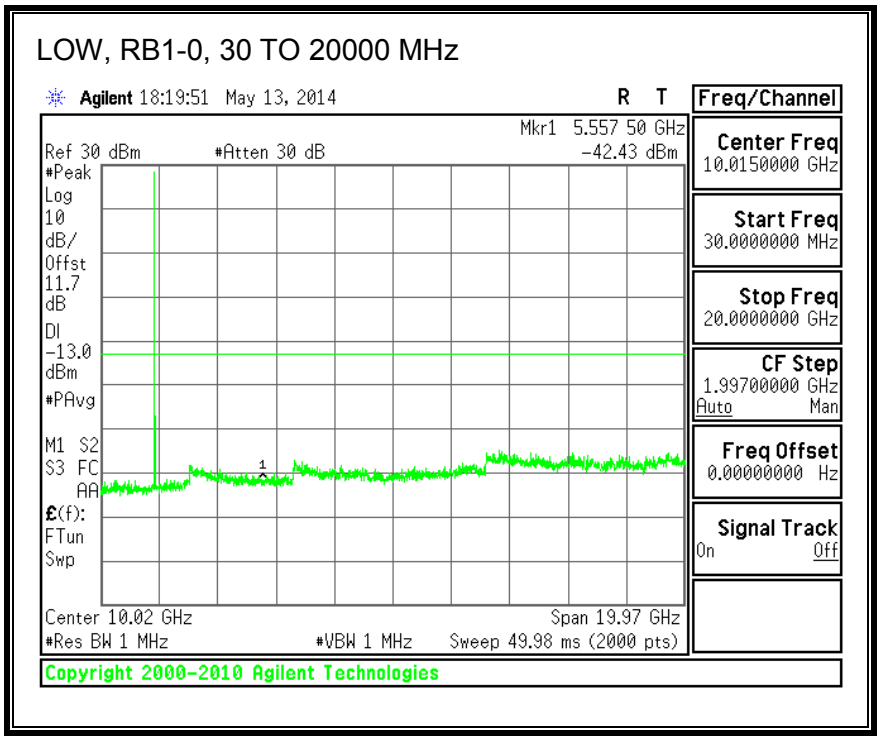


HIGH, RB1-0, 30 TO 20000 MHz

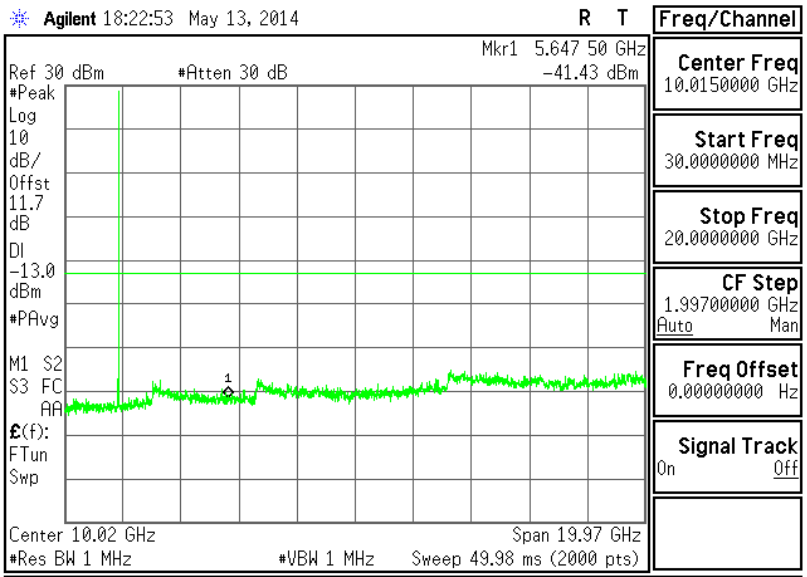


16QAM, (5.0 MHz BAND WIDTH)

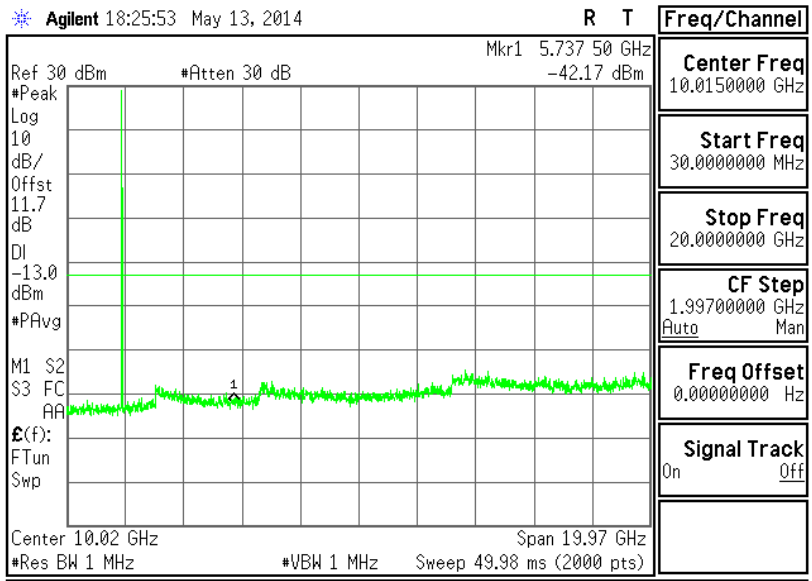
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

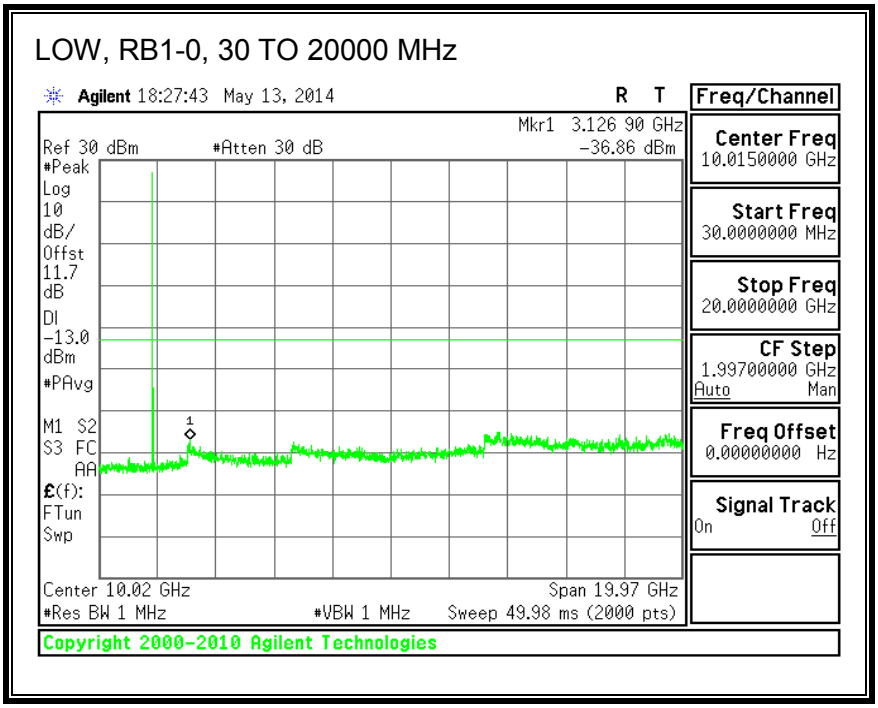


HIGH, RB1-0, 30 TO 20000 MHz

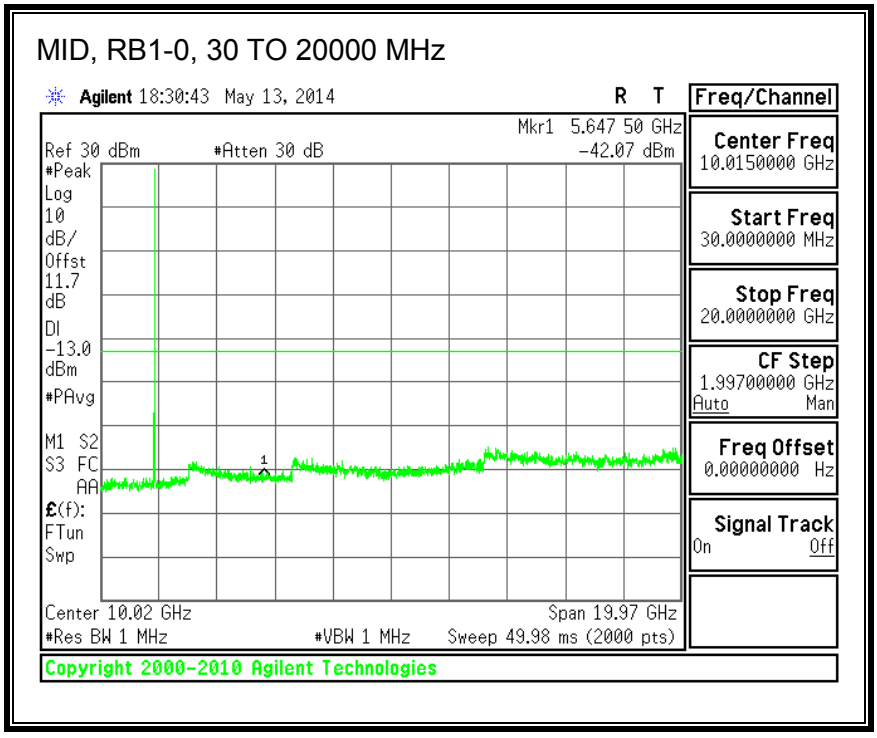


QPSK, (10.0 MHz BAND WIDTH)

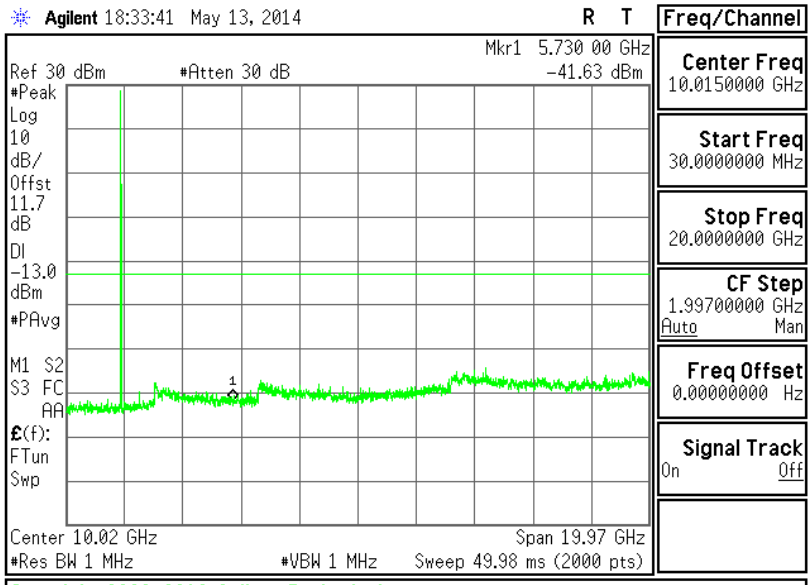
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

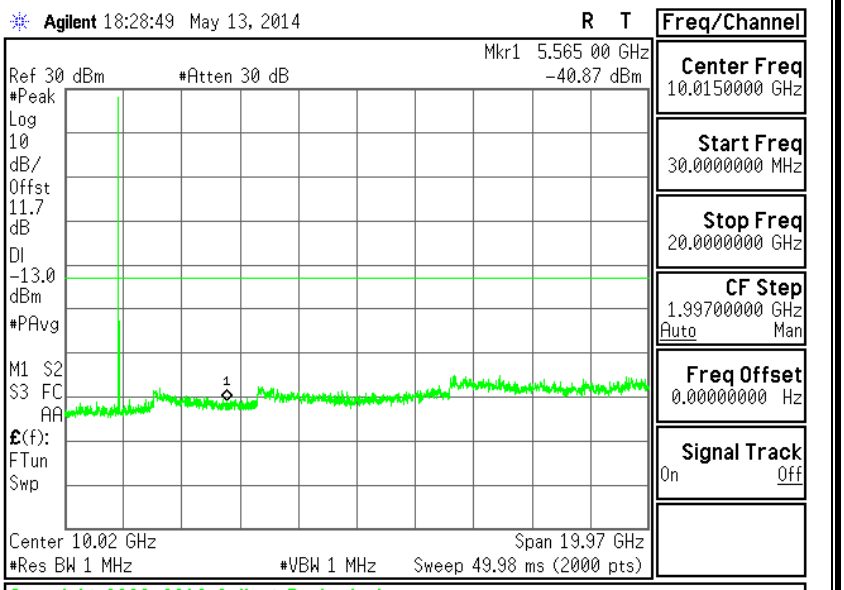


HIGH, RB1-0, 30 TO 20000 MHz

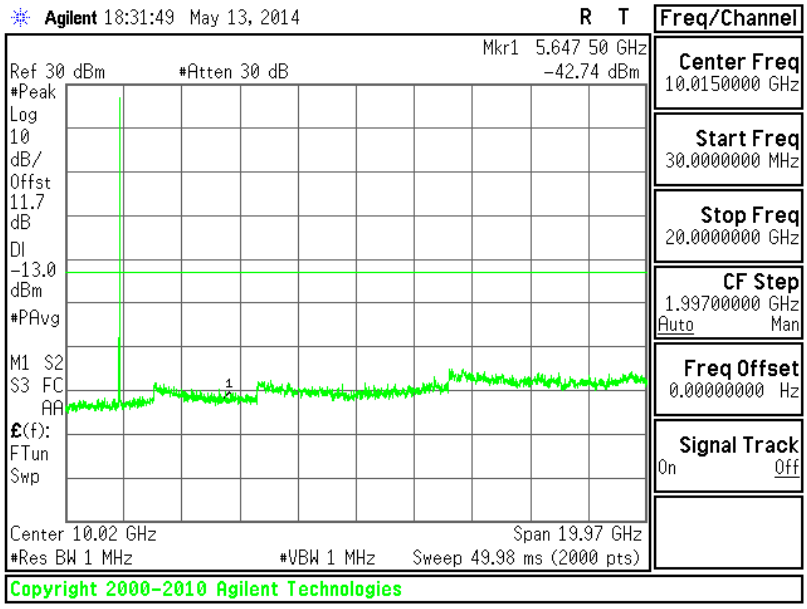


16QAM, (10.0 MHz BAND WIDTH)

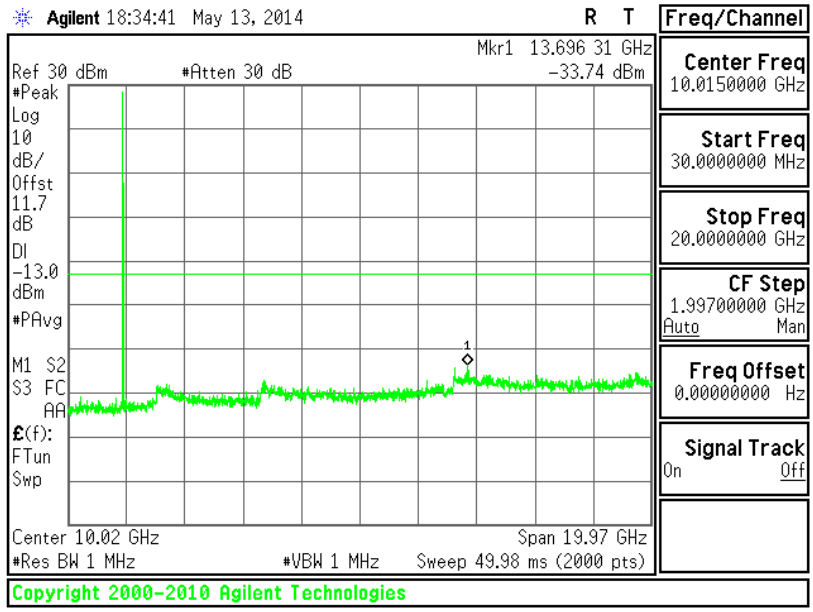
LOW, RB1-0, 30 TO 20000 MHz



MID, RB1-0, 30 TO 20000 MHz

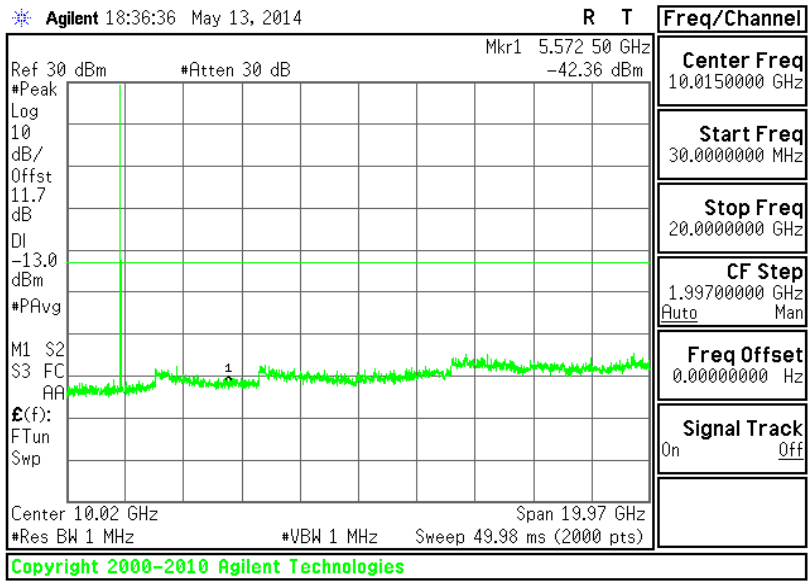


HIGH, RB1-0, 30 TO 20000 MHz

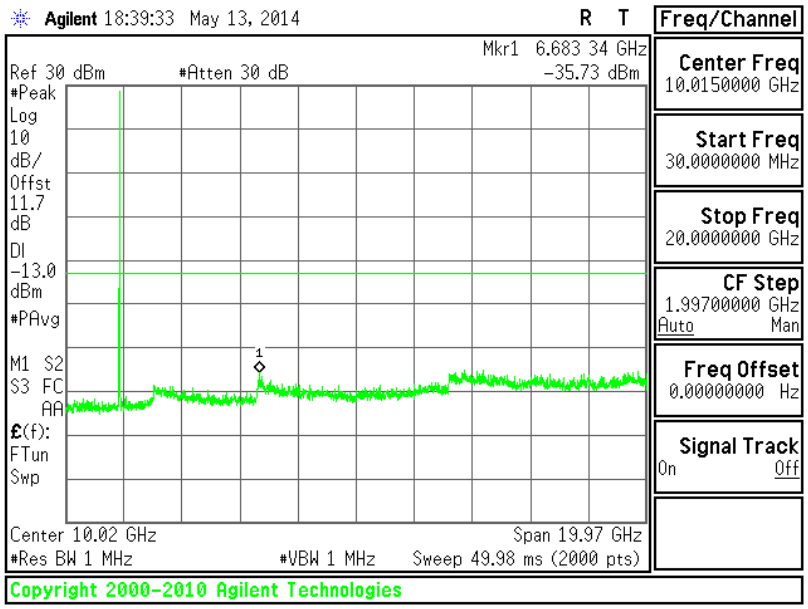


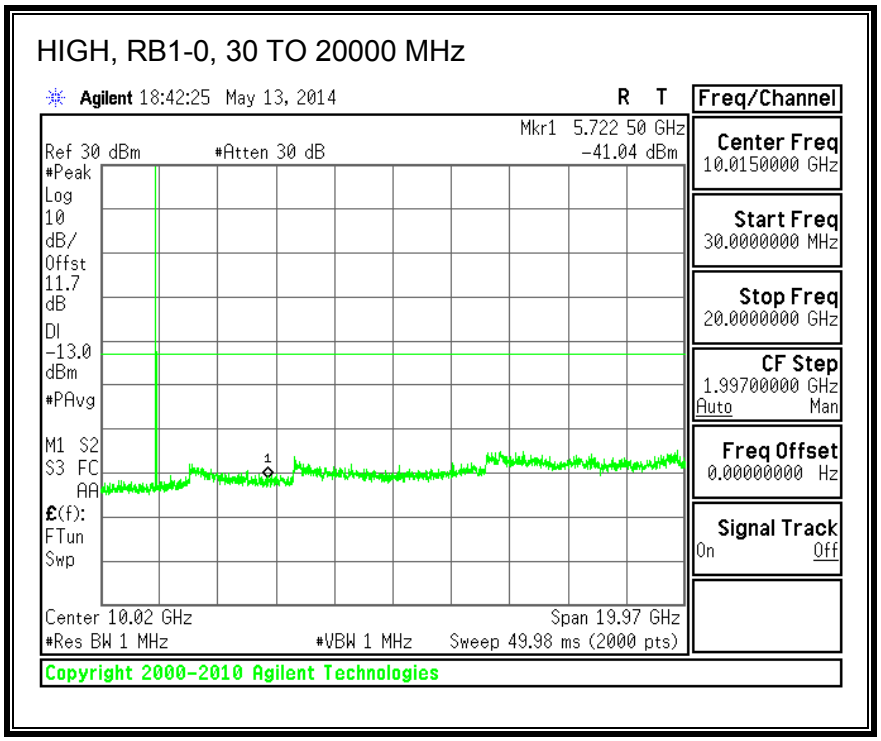
QPSK, (15.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 20000 MHz

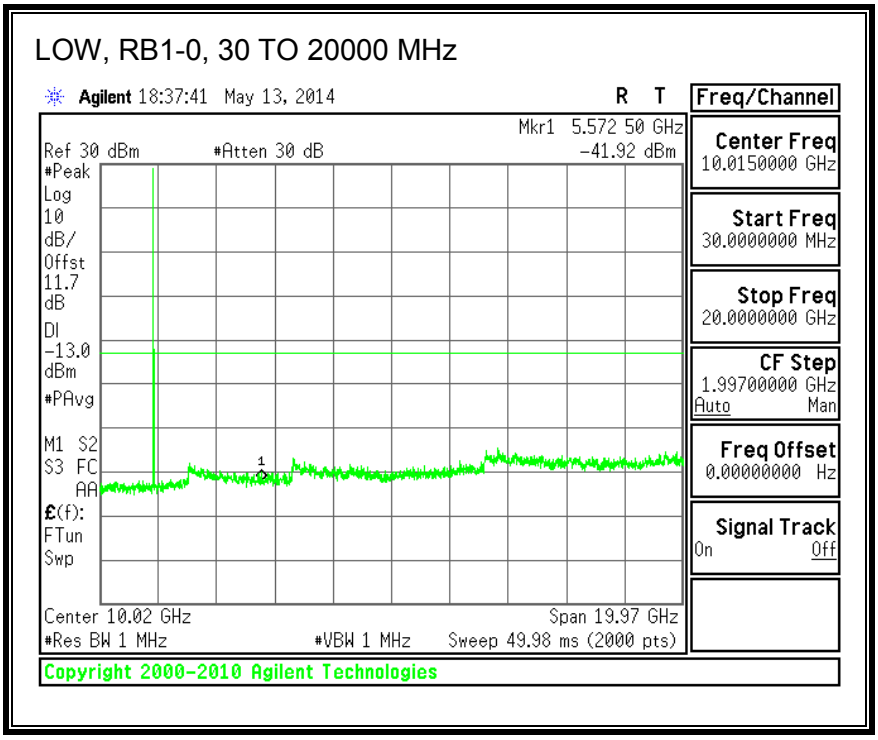


MID, RB1-0, 30 TO 20000 MHz

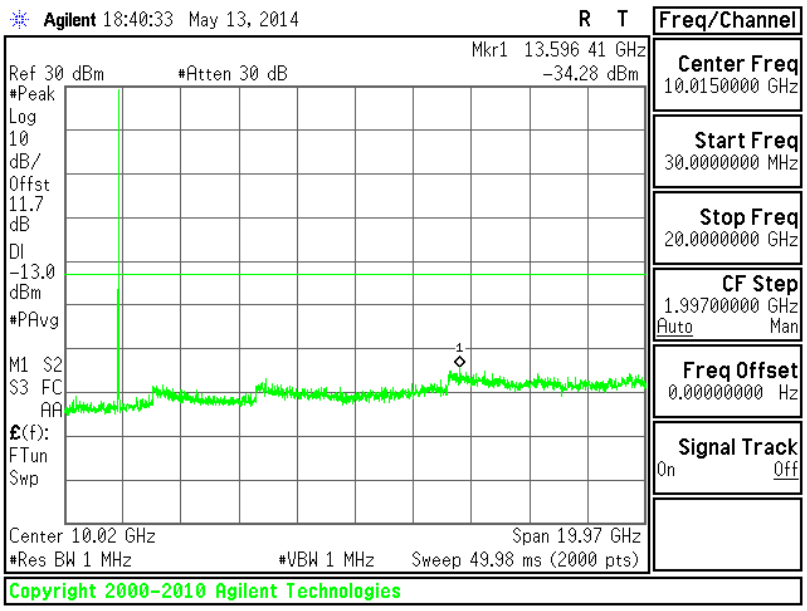




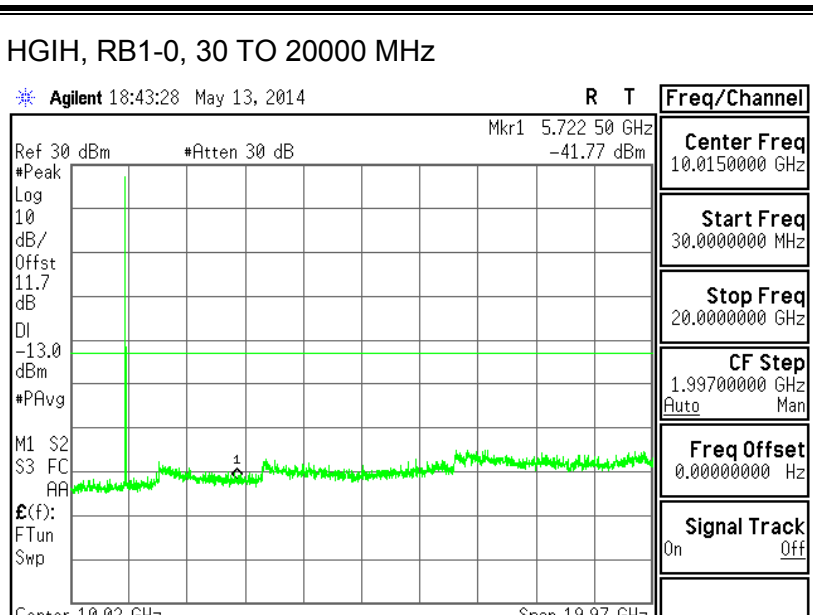
16QAM, (15.0 MHz BAND WIDTH)



MID, RB1-0, 30 TO 20000 MHz

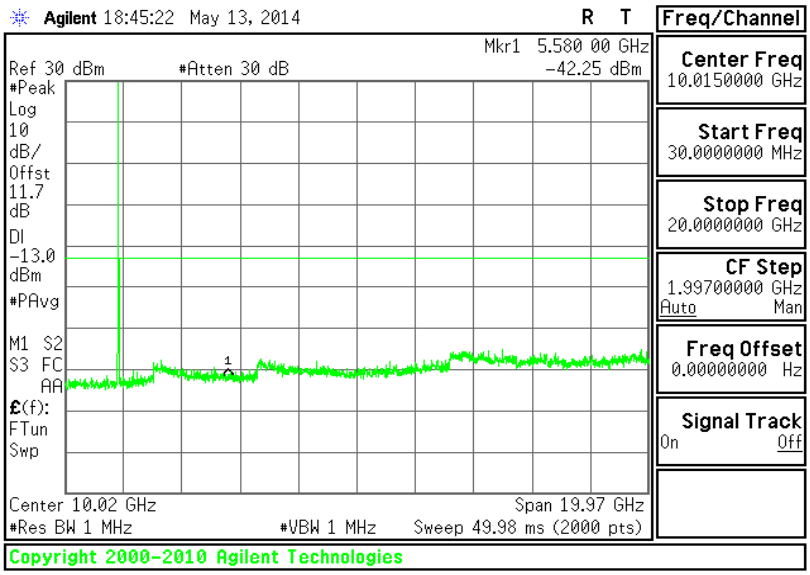


HGIH, RB1-0, 30 TO 20000 MHz

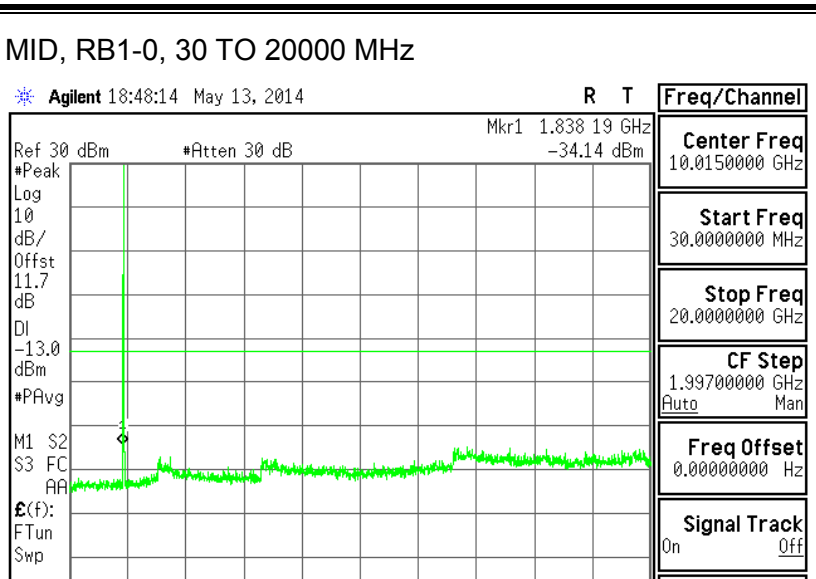


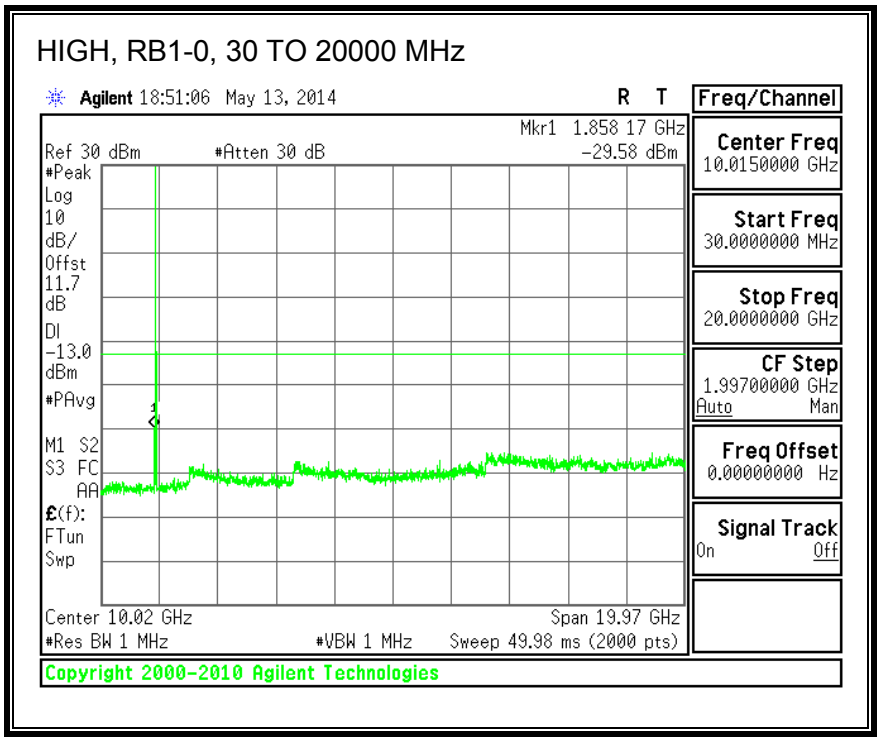
QPSK, (20.0 MHz BAND WIDTH)

LOW, RB1-0, 30 TO 20000 MHz

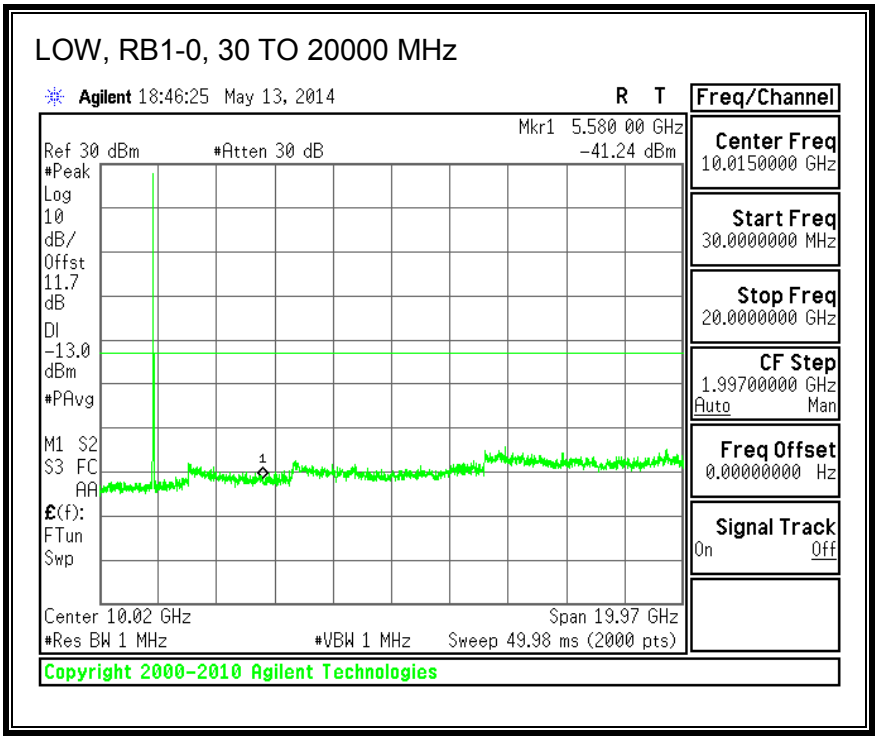


MID, RB1-0, 30 TO 20000 MHz

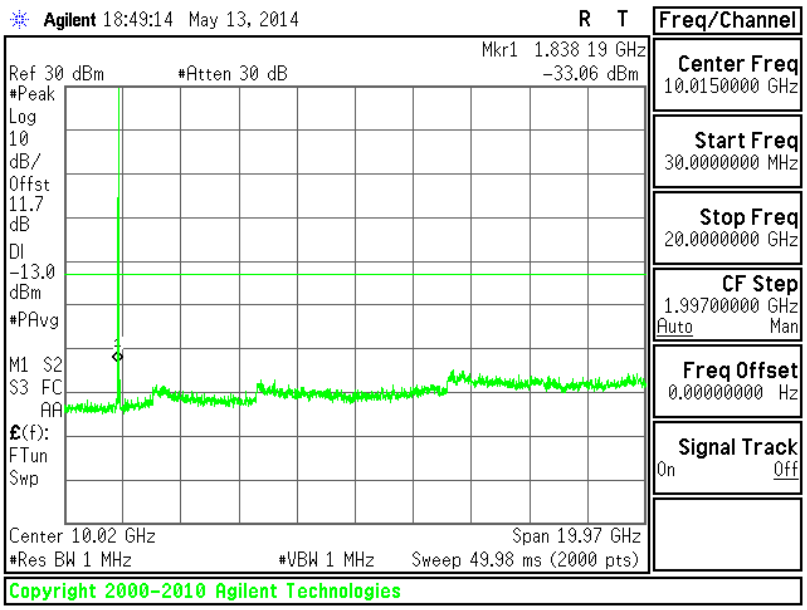




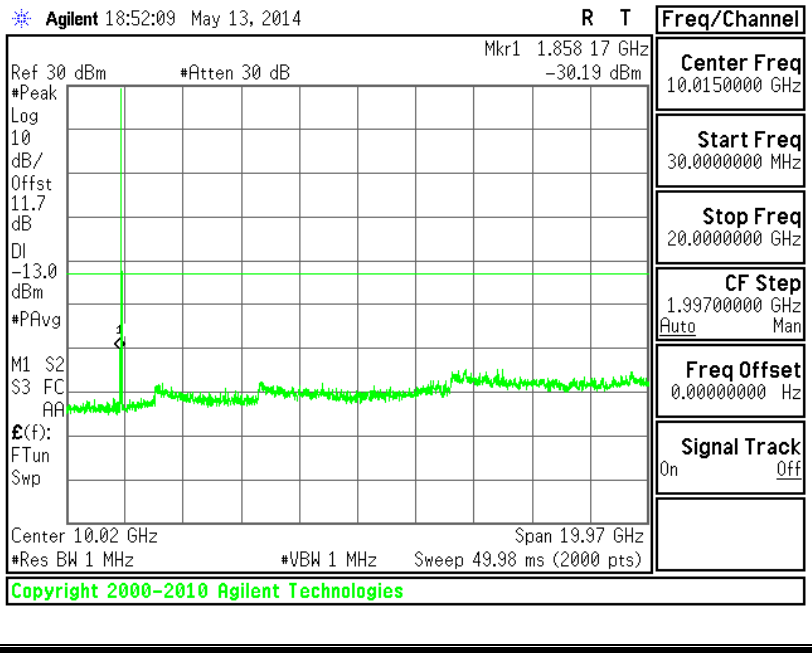
16QAM, (20.0 MHz BAND WIDTH)



MID, RB1-0, 30 TO 20000 MHz



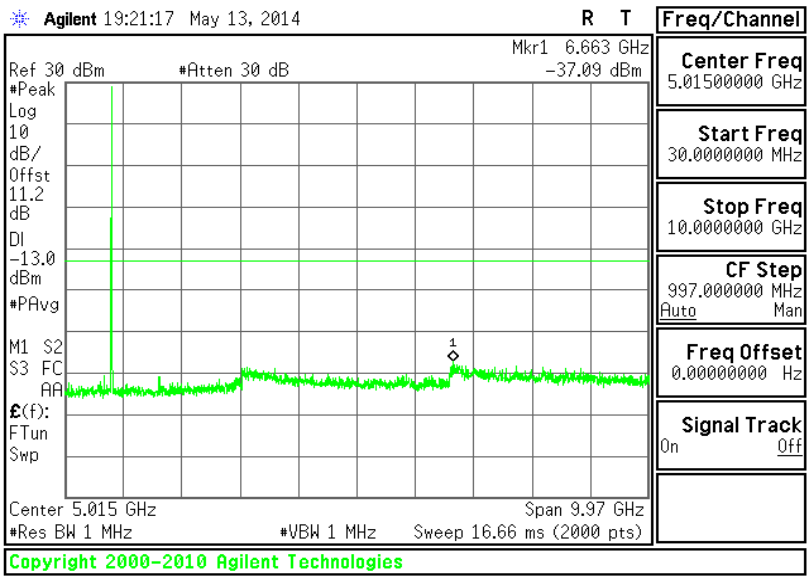
HIGH, RB1-0, 30 TO 20000 MHz



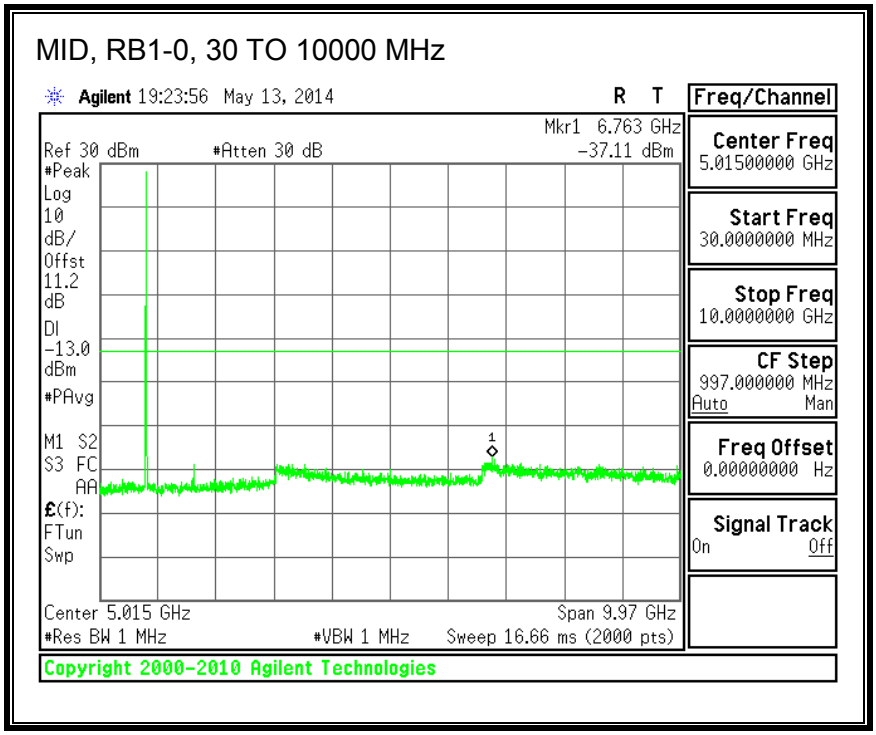
8.3.7. LTE BAND 26

QPSK, (3.0 MHz BAND WIDTH)

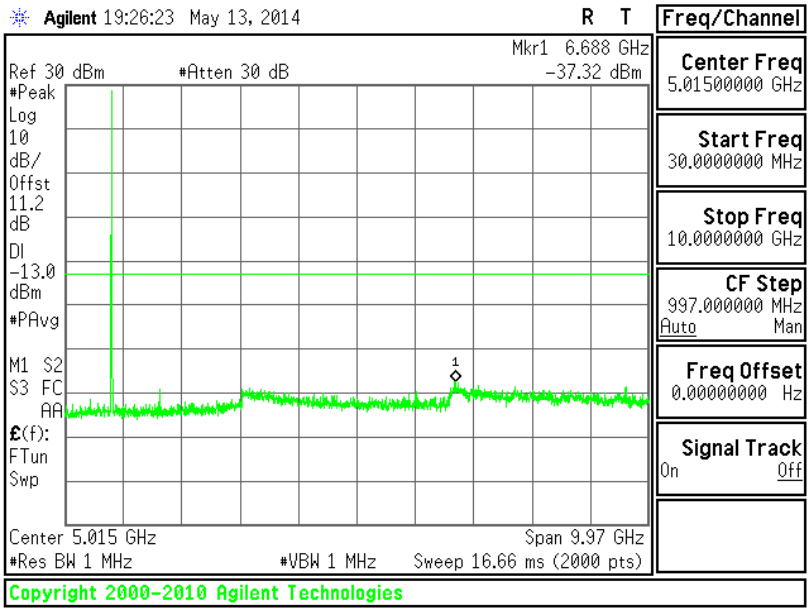
LOW, RB1-0, 30 TO 10000 MHz



MID, RB1-0, 30 TO 10000 MHz

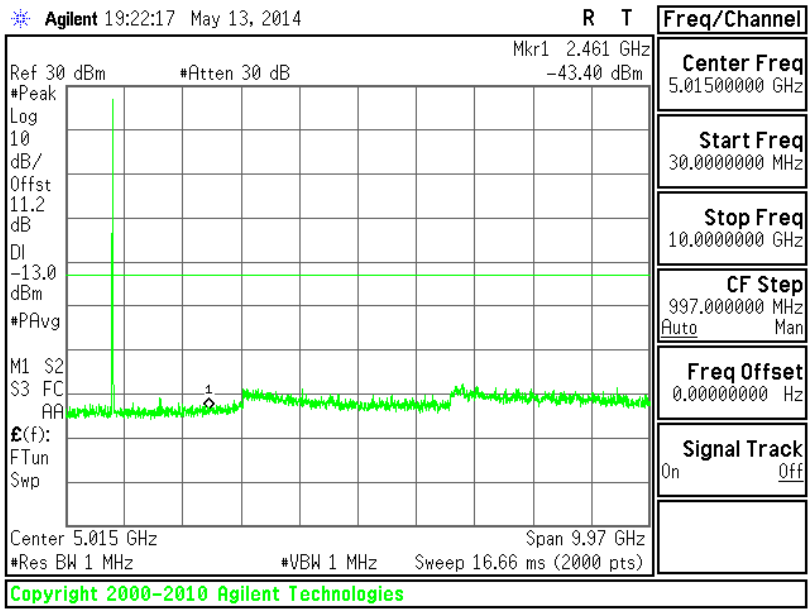


HIGH, RB1-0, 30 TO 10000 MHz

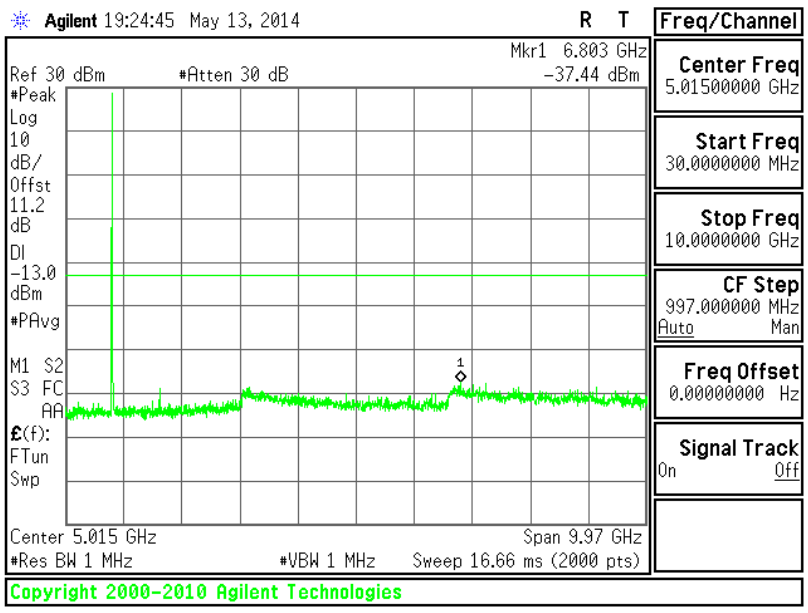


16QAM, (3.0 MHz BAND WIDTH)

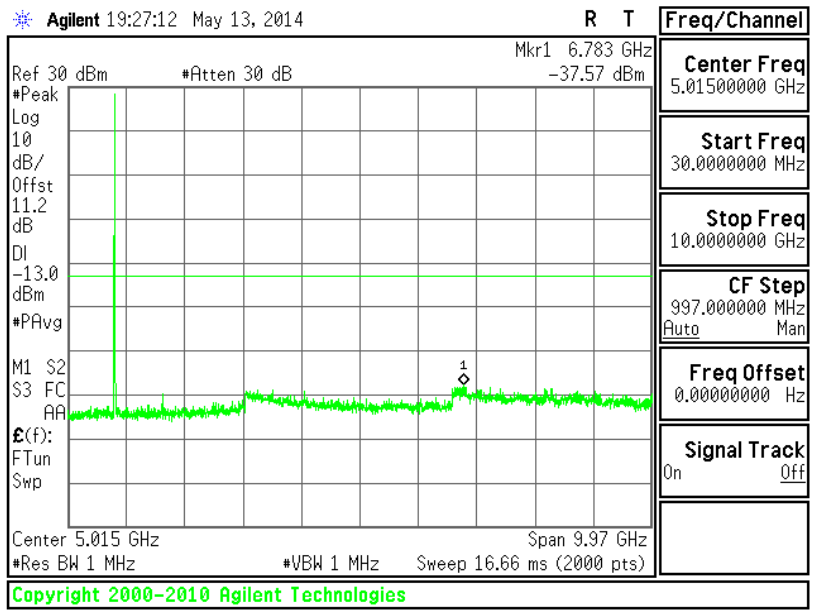
LOW, RB1-0, 30 TO 10000 MHz



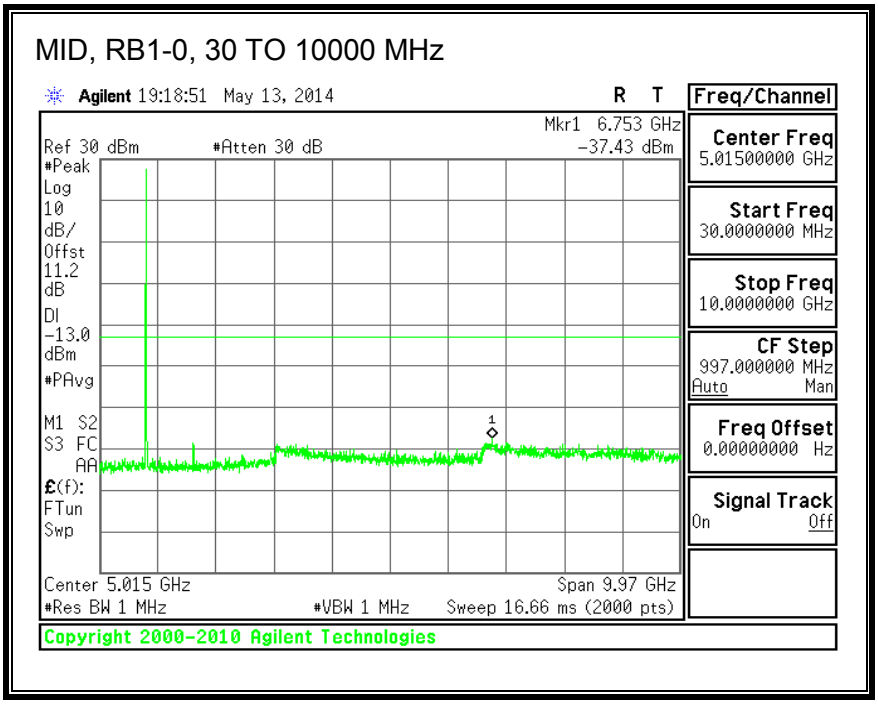
MID, RB1-0, 30 TO 10000 MHz



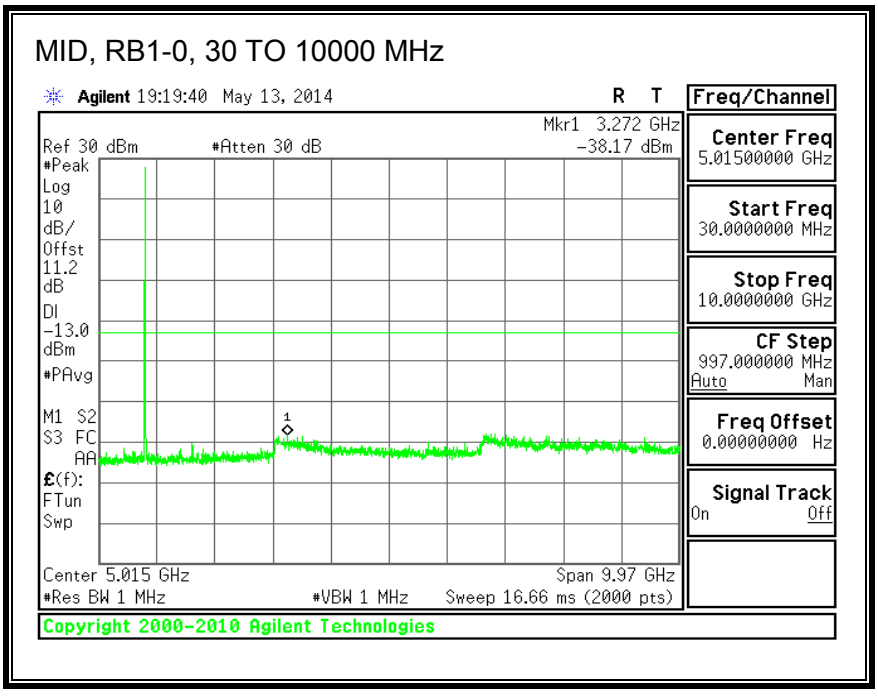
HIGH, RB1-0, 30 TO 10000 MHz



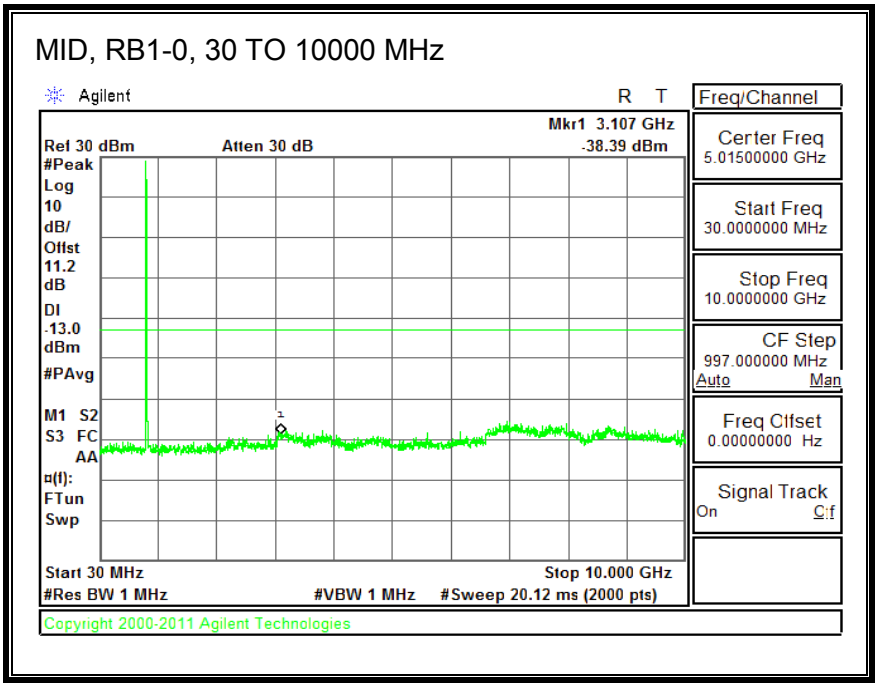
QPSK, (5.0 MHz BAND WIDTH)



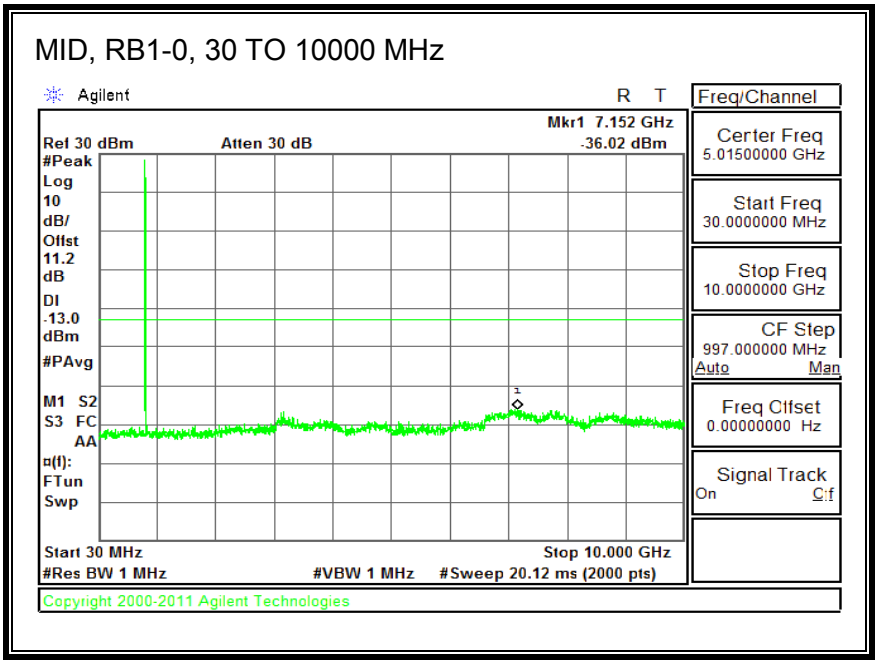
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



8.4. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

§22.355 & RSS-132 4.3 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30° to +50°C
- Voltage =low voltage, 3.4VDC, Normal, 3.8VDC and High voltage, 4.3VDC.

Frequency Stability vs Temperature:
The EUT is place inside a temperature chamber. The temperature is set to 20ºC 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 +50ºC 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 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26

RESULTS

See the following pages.

8.4.1. LTE BAND 2

LTE BAND 2, 10MHz QPSK

Limit		1850	1910	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	1850.7296	1908.9487		
Extreme (50C)		1850.7296	1908.9487	-11.3	-0.006
Extreme (40C)		1850.7296	1908.9487	-12.1	-0.006
Extreme (30C)		1850.7296	1908.9487	-9.8	-0.005
Extreme (10C)		1850.7296	1908.9487	-6.8	-0.004
Extreme (0C)		1850.7296	1908.9487	-7.3	-0.004
Extreme (-10C)		1850.7296	1908.9487	-8.5	-0.005
Extreme (-20C)		1850.7296	1908.9487	8.2	0.004
Extreme (-30C)		1850.7296	1908.9487	-8.6	-0.005
25C	10%	1850.7296	1908.9487	-8.3	-0.004
	-10%	1850.7296	1908.9487	-8.7	-0.005
	End Point	1850.7296	1908.9487	-12.8	-0.007

LTE BAND 2, 10MHz 16QAM

Limit		1850	1910	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	1850.9874	1909.0620		
Extreme (50C)		1850.9874	1909.0620	-12.5	-0.007
Extreme (40C)		1850.9874	1909.0620	-9.8	-0.005
Extreme (30C)		1850.9874	1909.0620	-8.8	-0.005
Extreme (10C)		1850.9874	1909.0620	-6.9	-0.004
Extreme (0C)		1850.9874	1909.0620	-7.8	-0.004
Extreme (-10C)		1850.9874	1909.0620	-8.8	-0.005
Extreme (-20C)		1850.9874	1909.0620	-7.9	-0.004
Extreme (-30C)		1850.9874	1909.0620	-10.5	-0.006
25C	10%	1850.9874	1909.0620	-7.8	-0.004
	-10%	1850.9874	1909.0620	-7.0	-0.004
	End Point	1850.9874	1909.0620	-13.2	-0.007

8.4.2. LTE BAND 4

LTE BAND 4, 10MHz QPSK

Limit		1710	1755	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1710.9286	1753.9566		
Extreme (50C)		1710.9286	1753.9566	-11.2	-0.006
Extreme (40C)		1710.9286	1753.9566	-8.2	-0.005
Extreme (30C)		1710.9286	1753.9566	-7.7	-0.004
Extreme (10C)		1710.9286	1753.9566	-6.0	-0.003
Extreme (0C)		1710.9286	1753.9566	-6.9	-0.004
Extreme (-10C)		1710.9286	1753.9566	-8.6	-0.005
Extreme (-20C)		1710.9286	1753.9566	-9.5	-0.005
Extreme (-30C)		1710.9286	1753.9566	-8.0	-0.005
25C	10%	1710.9286	1753.9566	-7.4	-0.004
	-10%	1710.9286	1753.9566	-8.8	-0.005
	End Point	1710.9286	1753.9566	-15.2	-0.009

LTE BAND 4, 10MHz 16QAM

Limit		1710	1755	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1710.7724	1754.0451		
Extreme (50C)		1710.7724	1754.0451	-8.5	-0.005
Extreme (40C)		1710.7724	1754.0451	-8.0	-0.005
Extreme (30C)		1710.7724	1754.0451	-7.0	-0.004
Extreme (10C)		1710.7724	1754.0451	-6.5	-0.004
Extreme (0C)		1710.7724	1754.0451	-7.8	-0.005
Extreme (-10C)		1710.7724	1754.0451	-11.5	-0.007
Extreme (-20C)		1710.7724	1754.0451	-8.5	-0.005
Extreme (-30C)		1710.7724	1754.0451	-9.6	-0.006
25C	10%	1710.7724	1754.0451	-9.5	-0.005
	-10%	1710.7724	1754.0451	-7.5	-0.004
	End Point	1710.7724	1754.0451	-12.1	-0.007

8.4.3. LTE BAND 5

LTE BAND 5, 10MHz QPSK

Limit		824	849	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	824.4735	848.7212		
Extreme (50C)		824.4735	848.7212	-5.2	-0.006
Extreme (40C)		824.4735	848.7212	-5.3	-0.006
Extreme (30C)		824.4735	848.7212	-4.2	-0.005
Extreme (10C)		824.4735	848.7212	-3.6	-0.004
Extreme (0C)		824.4735	848.7212	-6.2	-0.007
Extreme (-10C)		824.4735	848.7212	-4.2	-0.005
Extreme (-20C)		824.4735	848.7212	-4.3	-0.005
Extreme (-30C)		824.4735	848.7212	-4.8	-0.006
25C	10%	824.4735	848.7212	-4.1	-0.005
	-10%	824.4735	848.7212	-4.9	-0.006
	End Point	824.4735	848.7212	-10.2	-0.012

LTE BAND 5, 10MHz 16QAM

Limit		824	849	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	824.4659	848.5353		
Extreme (50C)		824.4659	848.5353	-5.6	-0.007
Extreme (40C)		824.4659	848.5353	-5.2	-0.006
Extreme (30C)		824.4659	848.5353	-4.1	-0.005
Extreme (10C)		824.4659	848.5353	-3.8	-0.005
Extreme (0C)		824.4659	848.5353	-4.2	-0.005
Extreme (-10C)		824.4659	848.5353	-3.6	-0.004
Extreme (-20C)		824.4659	848.5353	-4.8	-0.006
Extreme (-30C)		824.4659	848.5353	-5.2	-0.006
25C	10%	824.4659	848.5353	-4.2	-0.005
	-10%	824.4659	848.5353	-4.6	-0.005
	End Point	824.4659	848.5353	-11.2	-0.013

8.4.4. LTE BAND 13

LTE BAND 13, 10MHz QPSK

Limit		777	787	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	777.2724	786.7354		
Extreme (50C)		777.2724	786.7354	-5.5	-0.007
Extreme (40C)		777.2724	786.7354	-6.0	-0.008
Extreme (30C)		777.2724	786.7354	-5.8	-0.007
Extreme (10C)		777.2724	786.7354	-5.2	-0.007
Extreme (0C)		777.2724	786.7354	-4.5	-0.006
Extreme (-10C)		777.2724	786.7354	-4.6	-0.006
Extreme (-20C)		777.2724	786.7354	-4.2	-0.005
Extreme (-30C)		777.2724	786.7354	-5.2	-0.007
25C	10%	777.2724	786.7354	-6.6	-0.008
	-10%	777.2724	786.7354	-6.8	-0.009
	End Point	777.2724	786.7354	-12.3	-0.016

LTE BAND 13, 10MHz 16QAM

Limit		777	787	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	777.2731	786.7300		
Extreme (50C)		777.2731	786.7300	-6.3	-0.008
Extreme (40C)		777.2731	786.7300	-5.4	-0.007
Extreme (30C)		777.2731	786.7300	-5.6	-0.007
Extreme (10C)		777.2731	786.7300	-6.0	-0.008
Extreme (0C)		777.2731	786.7300	-5.0	-0.006
Extreme (-10C)		777.2731	786.7300	-4.8	-0.006
Extreme (-20C)		777.2731	786.7300	-4.8	-0.006
Extreme (-30C)		777.2731	786.7300	-5.0	-0.006
25C	10%	777.2731	786.7300	-4.6	-0.006
	-10%	777.2731	786.7300	-5.6	-0.007
	End Point	777.2731	786.7300	-13.2	-0.017

8.4.5. LTE BAND 17

LTE BAND 17, 10MHz QPSK

Limit		704	716	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	704.2263	715.6345		
Extreme (50C)		704.2263	715.6345	-4.5	-0.006
Extreme (40C)		704.2263	715.6345	-3.9	-0.005
Extreme (30C)		704.2263	715.6345	-4.8	-0.007
Extreme (10C)		704.2263	715.6345	-5.6	-0.008
Extreme (0C)		704.2263	715.6345	5.5	0.008
Extreme (-10C)		704.2263	715.6345	5.8	0.008
Extreme (-20C)		704.2263	715.6345	4.8	0.007
Extreme (-30C)		704.2263	715.6345	4.6	0.006
25C	10%	704.2263	715.6345	-3.8	-0.005
	-10%	704.2263	715.6345	-4.8	-0.007
	End Point	704.2263	715.6345	11.2	0.016

LTE BAND 17, 10MHz 16QAM

Limit		704	716	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	704.3853	715.6313		
Extreme (50C)		704.3853	715.6313	-4.8	-0.007
Extreme (40C)		704.3853	715.6313	-4.3	-0.006
Extreme (30C)		704.3853	715.6313	-5.6	-0.008
Extreme (10C)		704.3853	715.6313	-4.1	-0.006
Extreme (0C)		704.3853	715.6313	4.8	0.007
Extreme (-10C)		704.3853	715.6313	4.6	0.006
Extreme (-20C)		704.3853	715.6313	-5.7	-0.008
Extreme (-30C)		704.3853	715.6313	5.2	0.007
25C	10%	704.3853	715.6313	-4.4	-0.006
	-10%	704.3853	715.6313	5.0	0.007
	End Point	704.3853	715.6313	10.8	0.015

8.4.6. LTE BAND 25

LTE BAND 25, 10MHz QPSK

Limit		1850	1915	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	1850.9759	1914.2356		
Extreme (50C)		1850.9759	1914.2356	11.2	0.006
Extreme (40C)		1850.9759	1914.2356	12.4	0.007
Extreme (30C)		1850.9759	1914.2356	11.5	0.006
Extreme (10C)		1850.9759	1914.2356	12.3	0.007
Extreme (0C)		1850.9759	1914.2356	11.2	0.006
Extreme (-10C)		1850.9759	1914.2356	11.7	0.006
Extreme (-20C)		1850.9759	1914.2356	13.5	0.007
Extreme (-30C)		1850.9759	1914.2356	10.6	0.006
25C	10%	1850.9759	1914.2356	11.2	0.006
	-10%	1850.9759	1914.2356	11.6	0.006
	End Point	1850.9759	1914.2356	-21.2	-0.011

LTE BAND 25, 10MHz 16QAM

Limit		1850	1915	Delta (Hz)	Margin (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	1850.9985	1914.1946		
Extreme (50C)		1850.9985	1914.1946	11.8	0.006
Extreme (40C)		1850.9985	1914.1946	11.4	0.006
Extreme (30C)		1850.9985	1914.1946	12.6	0.007
Extreme (10C)		1850.9985	1914.1946	13.8	0.007
Extreme (0C)		1850.9985	1914.1946	11.5	0.006
Extreme (-10C)		1850.9985	1914.1946	13.8	0.007
Extreme (-20C)		1850.9985	1914.1946	11.7	0.006
Extreme (-30C)		1850.9985	1914.1946	13.8	0.007
25C	10%	1850.9985	1914.1946	11.4	0.006
	-10%	1850.9985	1914.1946	14.5	0.008
	End Point	1850.9985	1914.1946	-20.2	-0.011

8.4.7. LTE BAND 26

LTE BAND 26, 10MHz QPSK

Limit		814	824	Delta (Hz)	Margin (ppm)
Condition		F low @ -20dBm	F high @ -20dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	814.3323	823.6559		
Extreme (50C)		814.3323	823.6559	-4.5	-0.01
Extreme (40C)		814.3323	823.6559	4.8	0.01
Extreme (30C)		814.3323	823.6559	-4.2	-0.01
Extreme (10C)		814.3323	823.6559	5.5	0.01
Extreme (0C)		814.3323	823.6559	4.6	0.01
Extreme (-10C)		814.3323	823.6559	4.8	0.01
Extreme (-20C)		814.3323	823.6559	5.6	0.01
Extreme (-30C)		814.3323	823.6559	5.2	0.01
25C	10%	814.3323	823.6559	-3.8	0.00
	-10%	814.3323	823.6559	-4.2	-0.01
	End Point	814.3323	823.6559	-12.7	-0.02

LTE BAND 26, 10MHz 16QAM

Limit		814	824	Delta (Hz)	Margin (ppm)
Condition		F low @ -20dBm	F high @ -20dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (25C)	Normal	814.3520	823.5802		
Extreme (50C)		814.3520	823.5802	-4.5	-0.01
Extreme (40C)		814.3520	823.5802	-4.1	-0.01
Extreme (30C)		814.3520	823.5802	-3.8	0.00
Extreme (10C)		814.3520	823.5802	5.2	0.01
Extreme (0C)		814.3520	823.5802	4.2	0.01
Extreme (-10C)		814.3520	823.5802	5.4	0.01
Extreme (-20C)		814.3520	823.5802	5.8	0.01
Extreme (-30C)		814.3520	823.5802	4.6	0.01
25C	10%	814.3520	823.5802	3.2	0.00
	-10%	814.3520	823.5802	-4.8	-0.01
	End Point	814.3520	823.5801	-13.5	-0.02

9. RADIATED TEST RESULTS

9.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

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.

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 603C Clause 2.2.17
KDB 971168 v02r01 RF power output using broadband peak and average power meter method.
KDB 971168 D01 Power Meas License Digital Systems v02r01, “Measurement Guidance for Certification of Licensed Digital Transmitters”

MODES TESTED

- LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26

RESULTS

LAT EIRP POWER FOR LTE BAND 2 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	6/0	1850.7	**26.85**	484.17
		1880.0	25.96	394.46
		1909.3	26.12	409.26
1.4MHz Band 16QAM	6/0	1850.7	25.79	379.31
		1880.0	**25.35**	342.77
		1909.3	24.74	297.85

LAT EIRP POWER FOR LTE BAND 2 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0MHz Band QPSK	15/0	1851.5	**26.80**	478.63
		1880.0	26.39	435.51
		1908.5	26.28	424.62
3.0MHz Band 16QAM	15/0	1851.5	**25.56**	359.75
		1880.0	24.82	303.39
		1908.5	25.03	318.42

LAT EIRP POWER FOR LTE BAND 2 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0MHz Band QPSK	25/0	1852.5	**26.68**	465.59
		1880.0	26.33	429.54
		1907.5	25.99	397.19
5.0MHz Band 16QAM	25/0	1852.5	**26.00**	398.11
		1880.0	25.52	356.45
		1907.5	25.25	334.97

LAT EIRP POWER FOR LTE BAND 2 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0MHz Band QPSK	50/0	1855.0	**26.77**	475.34
		1880.0	26.50	446.68
		1905.0	25.81	381.07
10.0MHz Band 16QAM	50/0	1855.0	**25.64**	366.44
		1880.0	24.96	313.33
		1905.0	24.82	303.39

LAT EIRP POWER FOR LTE BAND 2 (15.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
15MHz Band QPSK	75/0	1857.5	**26.76**	474.24
		1880.0	26.32	428.55
		1902.5	26.51	447.71
15MHz Band 16QAM	75/0	1857.5	**25.81**	381.07
		1880.0	25.72	373.25
		1902.5	24.88	307.61

LAT EIRP POWER FOR LTE BAND 2 (20.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
20.0MHz Band QPSK	100/0	1860.0	**26.78**	476.43
		1880.0	26.07	404.58
		1900.0	26.18	414.95
20MHz Band 16QAM	100/0	1860.0	**25.78**	378.44
		1880.0	25.10	323.59
		1900.0	25.19	330.37

UAT EIRP POWER FOR LTE BAND 2 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	6/0	1850.7	**22.41**	174.18
		1880.0	21.38	137.40
		1909.3	21.41	138.36
1.4MHz Band 16QAM	6/0	1850.7	**22.10**	162.18
		1880.0	21.07	127.94
		1909.3	21.10	128.82

UAT EIRP POWER FOR LTE BAND 2 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0MHz Band QPSK	15/0	1851.5	**22.95**	197.24
		1880.0	21.61	144.88
		1908.5	21.32	135.52
3.0MHz Band 16QAM	15/0	1851.5	**21.89**	154.53
		1880.0	20.55	113.50
		1908.5	20.26	106.17

UAT EIRP POWER FOR LTE BAND 2 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0MHz Band QPSK	25/0	1852.5	**22.90**	194.98
		1880.0	22.76	188.80
		1907.5	22.53	179.06
5.0MHz Band 16QAM	25/0	1852.5	**22.24**	167.49
		1880.0	21.10	128.82
		1907.5	21.28	134.28

UAT EIRP POWER FOR LTE BAND 2 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0MHz Band QPSK	50/0	1855.0	**22.85**	192.75
		1880.0	22.04	159.96
		1905.0	22.21	166.34
10.0MHz Band 16QAM	50/0	1855.0	**21.74**	149.28
		1880.0	20.93	123.88
		1905.0	21.10	128.82

UAT EIRP POWER FOR LTE BAND 2 (15.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
15MHz Band QPSK	75/0	1857.5	**22.84**	192.31
		1880.0	21.72	148.59
		1902.5	21.92	155.60
15MHz Band 16QAM	75/0	1857.5	**22.30**	169.82
		1880.0	21.34	136.14
		1902.5	21.54	142.56

UAT EIRP POWER FOR LTE BAND 2 (20.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
20.0MHz Band QPSK	100/0	1860.0	**22.68**	185.35
		1880.0	21.64	145.88
		1900.0	21.83	152.41
20MHz Band 16QAM	100/0	1860.0	**21.82**	152.05
		1880.0	20.78	119.67
		1900.0	20.97	125.03

LAT EIRP POWER FOR LTE BAND 4 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1710.7	25.10	323.59
		1732.5	25.96	394.46
		1754.3	**26.30**	426.58
1.4 MHZ BAND 16QAM	6/0	1710.7	24.07	255.27
		1732.5	24.97	314.05
		1754.3	**25.49**	354.00

LAT EIRP POWER FOR LTE BAND 4 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1711.5	25.12	325.09
		1732.5	25.96	394.46
		1753.5	**26.20**	416.87
3.0 MHZ BAND 16QAM	15/0	1711.5	24.78	300.61
		1732.5	25.32	340.41
		1753.5	**25.54**	358.10

LAT EIRP POWER FOR LTE BAND 4 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1712.5	24.90	309.03
		1732.5	25.91	389.94
		1752.5	**26.27**	423.64
5.0 MHZ BAND 16QAM	25/0	1712.5	24.97	314.05
		1732.5	24.45	278.61
		1752.5	**25.71**	372.39

LAT EIRP POWER FOR LTE BAND 4 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1715.0	25.04	319.15
		1732.5	25.97	395.37
		1750.0	**26.25**	421.70
10.0 MHZ BAND 16QAM	50/0	1715.0	24.39	274.79
		1732.5	25.23	333.43
		1750.0	**25.58**	361.41

LAT EIRP POWER FOR LTE BAND 4 (15.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1717.5	25.29	338.06
		1732.5	26.02	399.94
		1747.5	**26.24**	420.73
15.0 MHZ BAND 16QAM	75/0	1717.5	26.03	400.87
		1732.5	26.00	398.11
		1747.5	**26.50**	446.68

LAT EIRP POWER FOR LTE BAND 4 (20.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1720.0	25.12	325.09
		1732.5	25.41	347.54
		1745.0	**26.18**	414.95
20.0 MHZ BAND 16QAM	100/0	1720.0	24.77	299.92
		1732.5	24.89	308.32
		1745.0	**25.19**	330.37

UAT EIRP POWER FOR LTE BAND 4 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1710.7	**22.65**	184.08
		1732.5	21.74	149.28
		1754.3	22.31	170.22
1.4 MHZ BAND 16QAM	6/0	1710.7	**21.80**	151.36
		1732.5	20.89	122.74
		1754.3	21.46	139.96

UAT EIRP POWER FOR LTE BAND 4 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1711.5	**22.69**	185.78
		1732.5	21.76	149.97
		1753.5	21.72	148.59
3.0 MHZ BAND 16QAM	15/0	1711.5	**21.61**	144.88
		1732.5	20.68	116.95
		1753.5	20.64	115.88

UAT EIRP POWER FOR LTE BAND 4 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1712.5	**22.64**	183.65
		1732.5	21.97	157.40
		1752.5	20.85	121.62
5.0 MHZ BAND 16QAM	25/0	1712.5	**21.89**	154.53
		1732.5	21.24	133.05
		1752.5	20.08	101.86

UAT EIRP POWER FOR LTE BAND 4 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1715.0	**22.62**	182.81
		1732.5	22.55	179.89
		1750.0	21.40	138.04
10.0 MHZ BAND 16QAM	50/0	1715.0	**21.57**	143.55
		1732.5	21.56	143.22
		1750.0	20.32	107.65

UAT EIRP POWER FOR LTE BAND 4 (15.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1717.5	**22.65**	184.08
		1732.5	22.22	166.72
		1747.5	21.50	141.25
15.0 MHZ BAND 16QAM	75/0	1717.5	**21.58**	143.88
		1732.5	21.18	131.22
		1747.5	20.46	111.17

UAT EIRP POWER FOR LTE BAND 4 (20.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1720.0	**22.51**	178.24
		1732.5	22.01	158.85
		1745.0	20.99	125.60
20.0 MHZ BAND 16QAM	100/0	1720.0	**21.35**	136.46
		1732.5	20.83	121.06
		1745.0	19.85	96.61

LAT EIRP POWER FOR LTE BAND 5 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	20.80	120.23
		836.5	21.11	129.12
		848.3	**21.62**	145.21
1.4MHz Band 16QAM	1/0	824.7	19.24	83.95
		836.5	19.88	97.27
		848.3	**20.67**	116.68

LAT EIRP POWER FOR LTE BAND 5 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	20.34	108.14
		836.5	20.97	125.03
		847.5	**21.51**	141.58
3.0 MHZ BAND 16QAM	1/0	825.5	19.22	83.56
		836.5	19.78	95.06
		847.5	**20.45**	110.92

LAT EIRP POWER FOR LTE BAND 5 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	20.77	119.40
		836.5	21.02	126.47
		846.5	**21.51**	141.58
5MHz Band 16QAM	1/0	826.5	19.94	98.63
		836.5	20.32	107.65
		846.5	**20.78**	119.67

LAT EIRP POWER FOR LTE BAND 5 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	20.70	117.49
		836.5	21.18	131.22
		844.0	**21.25**	133.35
10.0 MHZ BAND 16QAM	1/0	829.0	19.86	96.83
		836.5	20.35	108.39
		844.0	**20.44**	110.66

UAT EIRP POWER FOR LTE BAND 5 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	18.94	78.34
		836.5	19.66	92.47
		848.3	**19.76**	94.62
1.4MHz Band 16QAM	1/0	824.7	18.04	63.68
		836.5	18.64	73.11
		848.3	**18.76**	75.16

UAT EIRP POWER FOR LTE BAND 5 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	18.96	78.70
		836.5	19.65	92.26
		847.5	**19.68**	92.90
3.0 MHZ BAND 16QAM	1/0	825.5	17.79	60.12
		836.5	18.42	69.50
		847.5	**18.54**	71.45

UAT EIRP POWER FOR LTE BAND 5 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	18.90	77.62
		836.5	19.35	86.10
		846.5	**19.47**	88.51
5MHz Band 16QAM	1/0	826.5	17.49	56.10
		836.5	18.30	67.61
		846.5	**18.39**	69.02

UAT EIRP POWER FOR LTE BAND 5 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	18.79	75.68
		836.5	19.15	82.22
		844.0	**19.27**	84.53
10.0 MHZ BAND 16QAM	1/0	829.0	17.85	60.95
		836.5	18.27	67.14
		844.0	**18.35**	68.39

LAT EIRP POWER FOR LTE BAND 13 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	21.39	137.72
		782.0	**21.84**	152.76
		784.5	21.54	142.56
5.0 MHZ BAND 16QAM	1/0	779.5	20.63	115.61
		782.0	**21.08**	128.23
		784.5	20.78	119.67

LAT EIRP POWER FOR LTE BAND 13 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	**21.64**	145.88
10 MHz BAND 16QAM	1/0		**20.96**	124.74

UAT EIRP POWER FOR LTE BAND 13 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	16.81	47.97
		782.0	16.77	47.53
		784.5	**17.08**	51.05
5.0 MHZ BAND 16QAM	1/0	779.5	15.89	38.82
		782.0	15.79	37.93
		784.5	**16.18**	41.50

UAT EIRP POWER FOR LTE BAND 13 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	**17.01**	50.23
10 MHz BAND 16QAM	1/0		**16.16**	41.30

LAT EIRP POWER FOR LTE BAND 17 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	18.05	63.83
		710.0	18.88	77.27
		713.5	**19.08**	80.91
5MHz Band 16QAM	1/0	706.5	17.43	55.34
		710.0	17.75	59.57
		713.5	**18.17**	65.61

LAT EIRP POWER FOR LTE BAND 17 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	709.0	18.27	67.14
		710.0	18.64	73.11
		711.0	**18.88**	77.27
10.0 MHZ BAND 16QAM	1/0	709.0	17.45	55.59
		710.0	17.77	59.84
		711.0	**18.06**	63.97

UAT EIRP POWER FOR LTE BAND 17 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	17.72	59.16
		710.0	17.88	61.38
		713.5	**18.55**	71.61
5MHz Band 16QAM	1/0	706.5	17.10	51.29
		710.0	17.42	55.21
		713.5	**17.84**	60.81

UAT EIRP POWER FOR LTE BAND 17 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	709.0	18.22	66.37
		710.0	18.38	68.87
		711.0	**18.59**	72.28
10.0 MHZ BAND 16QAM	1/0	709.0	16.72	46.99
		710.0	16.94	49.43
		711.0	**17.41**	55.08

LAT EIRP POWER FOR LTE BAND 25 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1850.7	26.62	459.20
		1880.0	25.92	390.84
		1914.3	**26.78**	476.43
1.4 MHZ BAND 16QAM	6/0	1850.7	25.58	361.41
		1880.0	24.91	309.74
		1914.3	**25.74**	374.97

LAT EIRP POWER FOR LTE BAND 25 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1851.5	**26.73**	470.98
		1880.0	25.99	397.19
		1913.5	26.62	459.20
3.0 MHZ BAND 16QAM	15/0	1851.5	**25.61**	363.92
		1880.0	24.85	305.49
		1913.5	25.45	350.75

LAT EIRP POWER FOR LTE BAND 25 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1852.5	**26.71**	468.81
		1880.0	25.75	375.84
		1912.5	26.41	437.52
5.0 MHZ BAND 16QAM	25/0	1852.5	**26.08**	405.51
		1880.0	25.10	323.59
		1912.5	25.73	374.11

LAT EIRP POWER FOR LTE BAND 25 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1855.0	**26.64**	461.32
		1880.0	25.68	369.83
		1910.0	26.42	438.53
10.0 MHZ BAND 16QAM	50/0	1855.0	**26.00**	398.11
		1880.0	25.02	317.69
		1910.0	25.73	374.11

LAT EIRP POWER FOR LTE BAND 25 (15.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1857.5	**26.83**	481.95
		1880.0	25.93	391.74
		1907.5	26.62	459.20
15.0 MHZ BAND 16QAM	75/0	1857.5	**25.53**	357.27
		1880.0	24.61	289.07
		1907.5	25.27	336.51

LAT EIRP POWER FOR LTE BAND 25 (20.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1860.0	**26.81**	479.73
		1880.0	26.06	403.65
		1905.0	26.69	466.66
20.0 MHZ BAND 16QAM	100/0	1860.0	**25.63**	365.59
		1880.0	24.86	306.20
		1905.0	25.46	351.56

UAT EIRP POWER FOR LTE BAND 25 (1.4 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	6/0	1850.7	**22.94**	196.79
		1880.0	22.52	178.65
		1914.3	22.52	178.65
1.4 MHZ BAND 16QAM	6/0	1850.7	**22.05**	160.32
		1880.0	21.59	144.21
		1914.3	21.63	145.55

UAT EIRP POWER FOR LTE BAND 25 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	15/0	1851.5	**23.04**	201.37
		1880.0	22.23	167.11
		1913.5	22.42	174.58
3.0 MHZ BAND 16QAM	15/0	1851.5	21.44	139.32
		1880.0	21.70	147.91
		1913.5	**21.87**	153.82

UAT EIRP POWER FOR LTE BAND 25 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1852.5	**23.04**	201.37
		1880.0	22.64	183.65
		1912.5	22.40	173.78
5.0 MHZ BAND 16QAM	25/0	1852.5	**22.36**	172.19
		1880.0	21.50	141.25
		1912.5	21.61	144.88

UAT EIRP POWER FOR LTE BAND 25 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1855.0	**23.09**	203.70
		1880.0	22.41	174.18
		1910.0	22.48	177.01
10.0 MHZ BAND 16QAM	50/0	1855.0	**21.88**	154.17
		1880.0	21.23	132.74
		1910.0	21.31	135.21

UAT EIRP POWER FOR LTE BAND 25 (15.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1857.5	**23.03**	200.91
		1880.0	22.30	169.82
		1907.5	22.31	170.22
15.0 MHZ BAND 16QAM	75/0	1857.5	**21.84**	152.76
		1880.0	21.14	130.02
		1907.5	21.14	130.02

UAT EIRP POWER FOR LTE BAND 25 (20.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1860.0	**22.97**	198.15
		1880.0	22.91	195.43
		1905.0	22.65	184.08
20.0 MHZ BAND 16QAM	100/0	1860.0	**21.73**	148.94
		1880.0	21.47	140.28
		1905.0	21.34	136.14

LAT EIRP POWER FOR LTE BAND 26 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	820.3	20.66	116.41
		821.3	**20.94**	124.17
		822.3	20.78	119.67
3.0 MHZ BAND 16QAM	1/0	820.3	19.77	94.84
		821.3	20.02	100.46
		822.3	**20.04**	100.93

LAT EIRP POWER FOR LTE BAND 26 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	821.3	**21.10**	128.82
5.0 MHZ BAND 16QAM	1/0	821.3	**20.13**	103.04

LAT EIRP POWER FOR LTE BAND 26 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	**20.67**	116.68
10.0 MHZ BAND 16QAM	1/0	819.0	**20.08**	101.86

UAT EIRP POWER FOR LTE BAND 26 (3.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	820.3	**18.74**	74.82
		821.3	18.71	74.30
		822.3	18.67	73.62
3.0 MHZ BAND 16QAM	1/0	820.3	17.50	56.23
		821.3	**17.60**	57.54
		822.3	17.58	57.28

UAT EIRP POWER FOR LTE BAND 26 (5.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	820.3	**18.71**	74.30
5.0 MHZ BAND 16QAM	1/0	820.3	**17.92**	61.94

UAT EIRP POWER FOR LTE BAND 26 (10.0 MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	**19.08**	80.91
10.0 MHZ BAND 16QAM	1/0	819.0	**17.87**	61.24

9.1.1. LTE BAND 2

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

High Frequency Fundamental Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	19.0	V	0.98	8.61	26.66	33.0	-6.3	
1.851	19.0	H	0.98	8.81	26.85	33.0	-6.1	
Mid Ch								
1.880	17.1	V	0.98	8.53	24.65	33.0	-8.4	
1.880	18.3	H	0.98	8.68	25.96	33.0	-7.0	
High Ch								
1.909	17.7	V	0.98	8.45	25.21	33.0	-7.8	
1.909	18.6	H	0.98	8.55	26.12	33.0	-6.9	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 6/28/2014
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	16.5	V	0.98	8.61	24.12	33.0	-8.9	
1.851	18.0	H	0.98	8.81	25.79	33.0	-7.2	
Mid Ch								
1.880	15.9	V	0.98	8.53	23.43	33.0	-9.6	
1.880	17.6	H	0.98	8.68	25.35	33.0	-7.7	
High Ch								
1.909	16.4	V	0.98	8.45	23.90	33.0	-9.1	
1.909	17.2	H	0.98	8.55	24.74	33.0	-8.3	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	19.0	V	0.98	8.61	26.64	33.0	-6.4	
1.852	19.0	H	0.98	8.81	26.80	33.0	-6.2	
Mid Ch								
1.880	17.3	V	0.98	8.53	24.85	33.0	-8.2	
1.880	18.7	H	0.98	8.68	26.39	33.0	-6.6	
High Ch								
1.909	17.4	V	0.98	8.45	24.90	33.0	-8.1	
1.909	18.7	H	0.98	8.55	26.28	33.0	-6.7	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
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	17.9	V	0.98	8.61	25.56	33.0	-7.4	
1.852	17.4	H	0.98	8.81	25.23	33.0	-7.8	
Mid Ch								
1.880	15.9	V	0.98	8.53	23.44	33.0	-9.6	
1.880	17.1	H	0.98	8.68	24.82	33.0	-8.2	
High Ch								
1.909	16.2	V	0.98	8.45	23.66	33.0	-9.3	
1.909	17.5	H	0.98	8.55	25.03	33.0	-8.0	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 6/28/2014
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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								
1.853	18.9	V	0.98	8.61	26.51	33.0	-6.5	
1.853	18.9	H	0.98	8.81	26.68	33.0	-6.3	
Mid Ch								
1.880	16.7	V	0.98	8.53	24.21	33.0	-8.8	
1.880	18.6	H	0.98	8.68	26.33	33.0	-6.7	
High Ch								
1.908	17.7	V	0.98	8.45	25.20	33.0	-7.8	
1.908	18.4	H	0.98	8.55	25.99	33.0	-7.0	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 6/28/2014
Test Engineer: F. Guarnero.
Configuration: EUT Only
Mode: LTE Band 2 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	18.1	V	0.98	8.61	25.77	33.0	-7.2	
1.853	18.2	H	0.98	8.81	26.00	33.0	-7.0	
Mid Ch								
1.880	16.1	V	0.98	8.53	23.63	33.0	-9.4	
1.880	17.8	H	0.98	8.68	25.52	33.0	-7.5	
High Ch								
1.908	16.5	V	0.98	8.45	23.93	33.0	-9.1	
1.908	17.7	H	0.98	8.55	25.25	33.0	-7.7	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	18.6	V	0.98	8.61	26.26	33.0	-6.7	
1.855	18.9	H	0.98	8.81	26.77	33.0	-6.2	
Mid Ch								
1.880	17.2	V	0.98	8.53	24.73	33.0	-8.3	
1.880	18.8	H	0.98	8.68	26.50	33.0	-6.5	
High Ch								
1.905	17.1	V	0.98	8.45	24.54	33.0	-8.5	
1.905	18.2	H	0.98	8.55	25.81	33.0	-7.2	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	17.7	V	0.98	8.61	25.33	33.0	-7.7	
1.855	17.8	H	0.98	8.81	25.64	33.0	-7.4	
Mid Ch								
1.880	15.7	V	0.98	8.53	23.27	33.0	-9.7	
1.880	17.3	H	0.98	8.68	24.96	33.0	-8.0	
High Ch								
1.905	16.1	V	0.98	8.45	23.59	33.0	-9.4	
1.905	17.3	H	0.98	8.55	24.82	33.0	-8.2	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	19.0	V	0.98	8.61	26.67	33.0	-6.3	
1.858	18.9	H	0.98	8.81	26.76	33.0	-6.2	
Mid Ch								
1.880	17.3	V	0.98	8.53	24.84	33.0	-8.2	
1.880	18.6	H	0.98	8.68	26.32	33.0	-6.7	
High Ch								
1.903	17.3	V	0.98	8.45	24.80	33.0	-8.2	
1.903	18.9	H	0.98	8.55	26.51	33.0	-6.5	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/143
Test Engineer: F.Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	18.1	V	0.98	8.61	25.77	33.0	-7.2	
1.858	18.0	H	0.98	8.81	25.81	33.0	-7.2	
Mid Ch								
1.880	15.3	V	0.98	8.53	22.81	33.0	-10.2	
1.880	18.0	H	0.98	8.68	25.72	33.0	-7.3	
High Ch								
1.903	16.4	V	0.98	8.45	23.83	33.0	-9.2	
1.903	17.3	H	0.98	8.55	24.88	33.0	-8.1	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	16.7	V	0.98	8.61	24.34	33.0	-8.7	
1.860	19.0	H	0.98	8.81	26.78	33.0	-6.2	
Mid Ch								
1.880	17.0	V	0.98	8.53	24.58	33.0	-8.4	
1.880	18.4	H	0.98	8.68	26.07	33.0	-6.9	
High Ch								
1.900	17.3	V	0.98	8.45	24.78	33.0	-8.2	
1.900	18.6	H	0.98	8.55	26.18	33.0	-6.8	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 06/28/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 2 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	15.6	V	0.98	8.61	23.24	33.0	-9.8	
1.860	18.0	H	0.98	8.81	25.78	33.0	-7.2	
Mid Ch								
1.880	16.0	V	0.98	8.53	23.58	33.0	-9.4	
1.880	17.4	H	0.98	8.68	25.10	33.0	-7.9	
High Ch								
1.900	16.3	V	0.98	8.45	23.76	33.0	-9.2	
1.900	17.6	H	0.98	8.55	25.19	33.0	-7.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.5	V	0.98	7.88	22.41	33.0	-10.6	
1.851	15.4	H	0.98	7.88	22.29	33.0	-10.7	
Mid Ch								
1.880	14.5	V	0.98	7.86	21.38	33.0	-11.6	
1.880	14.2	H	0.98	7.86	21.04	33.0	-12.0	
High Ch								
1.909	14.2	V	0.98	7.84	21.10	33.0	-11.9	
1.909	14.6	H	0.98	7.84	21.41	33.0	-11.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.2	V	0.98	7.88	22.10	33.0	-10.9	
1.851	15.1	H	0.98	7.88	21.98	33.0	-11.0	
Mid Ch								
1.880	14.2	V	0.98	7.86	21.07	33.0	-11.9	
1.880	13.9	H	0.98	7.86	20.73	33.0	-12.3	
High Ch								
1.909	13.9	V	0.98	7.84	20.79	33.0	-12.2	
1.909	14.2	H	0.98	7.84	21.10	33.0	-11.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.1	V	0.98	7.88	22.95	33.0	-10.1	
1.852	15.4	H	0.98	7.88	22.27	33.0	-10.7	
Mid Ch								
1.880	14.7	V	0.98	7.86	21.61	33.0	-11.4	
1.880	14.5	H	0.98	7.86	21.37	33.0	-11.6	
High Ch								
1.909	14.5	V	0.98	7.84	21.32	33.0	-11.7	
1.909	13.6	H	0.98	7.84	20.48	33.0	-12.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.0	V	0.98	7.88	21.89	33.0	-11.1	
1.852	14.3	H	0.98	7.88	21.21	33.0	-11.8	
Mid Ch								
1.880	13.7	V	0.98	7.86	20.55	33.0	-12.5	
1.880	13.4	H	0.98	7.86	20.31	33.0	-12.7	
High Ch								
1.909	13.4	V	0.98	7.84	20.26	33.0	-12.7	
1.909	12.6	H	0.98	7.84	19.42	33.0	-13.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.0	V	0.98	7.88	22.90	33.0	-10.1	
1.853	15.6	H	0.98	7.88	22.45	33.0	-10.6	
Mid Ch								
1.880	15.9	V	0.98	7.86	22.76	33.0	-10.2	
1.880	15.5	H	0.98	7.86	22.40	33.0	-10.6	
High Ch								
1.908	15.7	V	0.98	7.84	22.53	33.0	-10.5	
1.908	15.1	H	0.98	7.84	21.94	33.0	-11.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.3	V	0.98	7.88	22.24	33.0	-10.8	
1.853	13.9	H	0.98	7.88	20.79	33.0	-12.2	
Mid Ch								
1.880	14.2	V	0.98	7.86	21.10	33.0	-11.9	
1.880	13.9	H	0.98	7.86	20.74	33.0	-12.3	
High Ch								
1.908	14.0	V	0.98	7.84	20.87	33.0	-12.1	
1.908	14.4	H	0.98	7.84	21.28	33.0	-11.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.0	V	0.98	7.88	22.85	33.0	-10.2	
1.855	15.9	H	0.98	7.88	22.80	33.0	-10.2	
Mid Ch								
1.880	15.2	V	0.98	7.86	22.04	33.0	-11.0	
1.880	14.7	H	0.98	7.86	21.59	33.0	-11.4	
High Ch								
1.905	15.0	V	0.98	7.84	21.88	33.0	-11.1	
1.905	15.4	H	0.98	7.84	22.21	33.0	-10.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.8	V	0.98	7.88	21.74	33.0	-11.3	
1.855	14.8	H	0.98	7.88	21.69	33.0	-11.3	
Mid Ch								
1.880	14.1	V	0.98	7.86	20.93	33.0	-12.1	
1.880	13.6	H	0.98	7.86	20.48	33.0	-12.5	
High Ch								
1.905	13.9	V	0.98	7.84	20.77	33.0	-12.2	
1.905	14.2	H	0.98	7.84	21.10	33.0	-11.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.9	V	0.98	7.88	22.84	33.0	-10.2	
1.858	15.5	H	0.98	7.88	22.37	33.0	-10.6	
Mid Ch								
1.880	14.8	V	0.98	7.86	21.72	33.0	-11.3	
1.880	14.5	H	0.98	7.86	21.36	33.0	-11.6	
High Ch								
1.903	15.0	V	0.98	7.84	21.86	33.0	-11.1	
1.903	15.1	H	0.98	7.84	21.92	33.0	-11.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.4	V	0.98	7.88	22.30	33.0	-10.7	
1.858	15.1	H	0.98	7.88	21.99	33.0	-11.0	
Mid Ch								
1.880	14.5	V	0.98	7.86	21.34	33.0	-11.7	
1.880	14.1	H	0.98	7.86	20.98	33.0	-12.0	
High Ch								
1.903	14.6	V	0.98	7.84	21.48	33.0	-11.5	
1.903	14.7	H	0.98	7.84	21.54	33.0	-11.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.8	V	0.98	7.88	22.68	33.0	-10.3	
1.860	15.5	H	0.98	7.88	22.35	33.0	-10.7	
Mid Ch								
1.880	14.8	V	0.98	7.86	21.64	33.0	-11.4	
1.880	14.1	H	0.98	7.86	21.01	33.0	-12.0	
High Ch								
1.900	15.0	V	0.98	7.84	21.83	33.0	-11.2	
1.900	14.4	H	0.98	7.84	21.25	33.0	-11.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 2 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.9	V	0.98	7.88	21.82	33.0	-11.2	
1.860	14.6	H	0.98	7.88	21.49	33.0	-11.5	
Mid Ch								
1.880	13.9	V	0.98	7.86	20.78	33.0	-12.2	
1.880	13.3	H	0.98	7.86	20.15	33.0	-12.9	
High Ch								
1.900	14.1	V	0.98	7.84	20.97	33.0	-12.0	
1.900	13.5	H	0.98	7.84	20.39	33.0	-12.6	

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9.1.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
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	15.6	V	0.95	8.42	23.09	30.0	-6.9	
1.711	17.5	H	0.95	8.60	25.10	30.0	-4.9	
Mid Ch								
1.733	16.8	V	0.95	8.50	24.37	30.0	-5.6	
1.733	18.2	H	0.95	8.70	25.96	30.0	-4.0	
High Ch								
1.754	16.2	V	0.95	8.57	23.77	30.0	-6.2	
1.754	18.5	H	0.95	8.80	26.30	30.0	-3.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
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	15.1	V	0.95	8.42	22.53	30.0	-7.5	
1.711	16.4	H	0.95	8.60	24.07	30.0	-5.9	
Mid Ch								
1.733	16.0	V	0.95	8.50	23.50	30.0	-6.5	
1.733	17.2	H	0.95	8.70	24.97	30.0	-5.0	
High Ch								
1.754	15.4	V	0.95	8.57	23.02	30.0	-7.0	
1.754	17.6	H	0.95	8.80	25.49	30.0	-4.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.712	15.6	V	0.95	8.42	23.09	30.0	-6.9	
1.712	17.5	H	0.95	8.60	25.12	30.0	-4.9	
Mid Ch								
1.733	16.6	V	0.95	8.50	24.18	30.0	-5.8	
1.733	18.2	H	0.95	8.70	25.96	30.0	-4.0	
High Ch								
1.754	15.9	V	0.95	8.57	23.54	30.0	-6.5	
1.754	18.4	H	0.95	8.80	26.20	30.0	-3.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.712	15.7	V	0.95	8.42	23.16	30.0	-6.8	
1.712	17.1	H	0.95	8.60	24.78	30.0	-5.2	
Mid Ch								
1.733	15.0	V	0.95	8.50	22.55	30.0	-7.4	
1.733	17.6	H	0.95	8.70	25.32	30.0	-4.7	
High Ch								
1.754	15.5	V	0.95	8.57	23.12	30.0	-6.9	
1.754	17.7	H	0.95	8.80	25.54	30.0	-4.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.713	15.7	V	0.95	8.42	23.14	30.0	-6.9	
1.713	17.3	H	0.95	8.60	24.90	30.0	-5.1	
Mid Ch								
1.733	16.3	V	0.95	8.50	23.89	30.0	-6.1	
1.733	18.2	H	0.95	8.70	25.91	30.0	-4.1	
High Ch								
1.753	15.9	V	0.95	8.57	23.49	30.0	-6.5	
1.753	18.4	H	0.95	8.80	26.27	30.0	-3.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.713	15.8	V	0.95	8.42	23.27	30.0	-6.7	
1.713	17.3	H	0.95	8.60	24.97	30.0	-5.0	
Mid Ch								
1.733	15.2	V	0.95	8.50	22.70	30.0	-7.3	
1.733	16.7	H	0.95	8.70	24.45	30.0	-5.6	
High Ch								
1.753	15.4	V	0.95	8.57	23.06	30.0	-6.9	
1.753	17.9	H	0.95	8.80	25.71	30.0	-4.3	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.715	14.9	V	0.95	8.42	22.42	30.0	-7.6	
1.715	17.4	H	0.95	8.60	25.04	30.0	-5.0	
Mid Ch								
1.733	15.7	V	0.95	8.50	23.21	30.0	-6.8	
1.733	18.2	H	0.95	8.70	25.97	30.0	-4.0	
High Ch								
1.750	16.0	V	0.95	8.57	23.63	30.0	-6.4	
1.750	18.4	H	0.95	8.80	26.25	30.0	-3.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.715	14.5	V	0.95	8.42	21.96	30.0	-8.0	
1.715	16.7	H	0.95	8.60	24.39	30.0	-5.6	
Mid Ch								
1.733	15.5	V	0.95	8.50	23.07	30.0	-6.9	
1.733	17.5	H	0.95	8.70	25.23	30.0	-4.8	
High Ch								
1.750	15.7	V	0.95	8.57	23.35	30.0	-6.6	
1.750	17.7	H	0.95	8.80	25.58	30.0	-4.4	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.718	15.4	V	0.95	8.42	22.85	30.0	-7.2	
1.718	17.6	H	0.95	8.60	25.29	30.0	-4.7	
Mid Ch								
1.733	16.7	V	0.95	8.50	24.21	30.0	-5.8	
1.733	18.3	H	0.95	8.70	26.02	30.0	-4.0	
High Ch								
1.748	17.3	V	0.95	8.57	24.87	30.0	-5.1	
1.748	18.4	H	0.95	8.80	26.24	30.0	-3.8	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Company:
Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.718	16.4	V	0.95	8.42	23.87	30.0	-6.1	
1.718	18.4	H	0.95	8.60	26.03	30.0	-4.0	
Mid Ch								
1.733	16.6	V	0.95	8.50	24.17	30.0	-5.8	
1.733	18.2	H	0.95	8.70	26.00	30.0	-4.0	
High Ch								
1.748	16.9	V	0.95	8.57	24.48	30.0	-5.5	
1.748	18.7	H	0.95	8.80	26.50	30.0	-3.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Company:
Project #: 14U17676
Date: 7/1/2014
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.720	15.7	V	0.95	8.42	23.20	30.0	-6.8	
1.720	17.5	H	0.95	8.60	25.12	30.0	-4.9	
Mid Ch								
1.733	16.5	V	0.95	8.50	24.08	30.0	-5.9	
1.733	17.7	H	0.95	8.70	25.41	30.0	-4.6	
High Ch								
1.745	16.7	V	0.95	8.57	24.36	30.0	-5.6	
1.745	18.3	H	0.95	8.80	26.18	30.0	-3.8	

Rev. 06.19.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 07/01/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 4 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								
1.720	15.0	V	0.95	8.42	22.51	30.0	-7.5	
1.720	17.1	H	0.95	8.60	24.77	30.0	-5.2	
Mid Ch								
1.733	15.7	V	0.95	8.50	23.23	30.0	-6.8	
1.733	17.1	H	0.95	8.70	24.89	30.0	-5.1	
High Ch								
1.745	15.8	V	0.95	8.57	23.41	30.0	-6.6	
1.745	17.3	H	0.95	8.80	25.19	30.0	-4.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.4	V	0.95	8.25	22.65	30.0	-7.4	
1.711	12.1	H	0.95	8.25	19.36	30.0	-10.6	
Mid Ch								
1.733	14.5	V	0.95	8.17	21.74	30.0	-8.3	
1.733	11.5	H	0.95	8.17	18.73	30.0	-11.3	
High Ch								
1.754	15.2	V	0.95	8.09	22.31	30.0	-7.7	
1.754	12.2	H	0.95	8.09	19.33	30.0	-10.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.5	V	0.95	8.25	21.80	30.0	-8.2	
1.711	11.2	H	0.95	8.25	18.51	30.0	-11.5	
Mid Ch								
1.733	13.7	V	0.95	8.17	20.89	30.0	-9.1	
1.733	10.7	H	0.95	8.17	17.88	30.0	-12.1	
High Ch								
1.754	14.3	V	0.95	8.09	21.46	30.0	-8.5	
1.754	11.3	H	0.95	8.09	18.48	30.0	-11.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.4	V	0.95	8.25	22.69	30.0	-7.3	
1.712	11.6	H	0.95	8.25	18.94	30.0	-11.1	
Mid Ch								
1.733	14.5	V	0.95	8.17	21.76	30.0	-8.2	
1.733	11.2	H	0.95	8.17	18.39	30.0	-11.6	
High Ch								
1.754	14.6	V	0.95	8.09	21.72	30.0	-8.3	
1.754	11.1	H	0.95	8.09	18.26	30.0	-11.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.3	V	0.95	8.25	21.61	30.0	-8.4	
1.712	10.6	H	0.95	8.25	17.86	30.0	-12.1	
Mid Ch								
1.733	13.5	V	0.95	8.17	20.68	30.0	-9.3	
1.733	10.1	H	0.95	8.17	17.31	30.0	-12.7	
High Ch								
1.754	13.5	V	0.95	8.09	20.64	30.0	-9.4	
1.754	10.0	H	0.95	8.09	17.18	30.0	-12.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.3	V	0.95	8.25	22.64	30.0	-7.4	
1.713	11.7	H	0.95	8.25	19.04	30.0	-11.0	
Mid Ch								
1.733	14.8	V	0.95	8.17	21.97	30.0	-8.0	
1.733	11.3	H	0.95	8.17	18.54	30.0	-11.5	
High Ch								
1.753	13.7	V	0.95	8.09	20.85	30.0	-9.2	
1.753	11.2	H	0.95	8.09	18.38	30.0	-11.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.6	V	0.95	8.25	21.89	30.0	-8.1	
1.713	11.0	H	0.95	8.25	18.29	30.0	-11.7	
Mid Ch								
1.733	14.0	V	0.95	8.17	21.24	30.0	-8.8	
1.733	10.5	H	0.95	8.17	17.76	30.0	-12.2	
High Ch								
1.753	12.9	V	0.95	8.09	20.08	30.0	-9.9	
1.753	10.5	H	0.95	8.09	17.62	30.0	-12.4	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.3	V	0.95	8.25	22.62	30.0	-7.4	
1.715	11.7	H	0.95	8.25	19.01	30.0	-11.0	
Mid Ch								
1.733	15.3	V	0.95	8.17	22.55	30.0	-7.5	
1.733	11.5	H	0.95	8.17	18.72	30.0	-11.3	
High Ch								
1.750	14.3	V	0.95	8.09	21.40	30.0	-8.6	
1.750	11.8	H	0.95	8.09	18.91	30.0	-11.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.3	V	0.95	8.25	21.57	30.0	-8.4	
1.715	10.7	H	0.95	8.25	17.96	30.0	-12.0	
Mid Ch								
1.733	14.3	V	0.95	8.17	21.56	30.0	-8.4	
1.733	10.6	H	0.95	8.17	17.79	30.0	-12.2	
High Ch								
1.750	13.2	V	0.95	8.09	20.32	30.0	-9.7	
1.750	10.8	H	0.95	8.09	17.89	30.0	-12.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.4	V	0.95	8.25	22.65	30.0	-7.4	
1.718	12.5	H	0.95	8.25	19.75	30.0	-10.3	
Mid Ch								
1.733	15.0	V	0.95	8.17	22.22	30.0	-7.8	
1.733	11.7	H	0.95	8.17	18.90	30.0	-11.1	
High Ch								
1.748	14.4	V	0.95	8.09	21.50	30.0	-8.5	
1.748	11.7	H	0.95	8.09	18.83	30.0	-11.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.3	V	0.95	8.25	21.58	30.0	-8.4	
1.718	11.4	H	0.95	8.25	18.68	30.0	-11.3	
Mid Ch								
1.733	14.0	V	0.95	8.17	21.18	30.0	-8.8	
1.733	10.6	H	0.95	8.17	17.82	30.0	-12.2	
High Ch								
1.748	13.3	V	0.95	8.09	20.46	30.0	-9.5	
1.748	10.7	H	0.95	8.09	17.81	30.0	-12.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.2	V	0.95	8.25	22.51	30.0	-7.5	
1.720	11.5	H	0.95	8.25	18.84	30.0	-11.2	
Mid Ch								
1.733	14.8	V	0.95	8.17	22.01	30.0	-8.0	
1.733	11.3	H	0.95	8.17	18.49	30.0	-11.5	
High Ch								
1.745	13.9	V	0.95	8.09	20.99	30.0	-9.0	
1.745	11.3	H	0.95	8.09	18.40	30.0	-11.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 4 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T344 and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.1	V	0.95	8.25	21.35	30.0	-8.7	
1.720	10.4	H	0.95	8.25	17.68	30.0	-12.3	
Mid Ch								
1.733	13.6	V	0.95	8.17	20.83	30.0	-9.2	
1.733	10.1	H	0.95	8.17	17.31	30.0	-12.7	
High Ch								
1.745	12.7	V	0.95	8.09	19.85	30.0	-10.2	
1.745	10.1	H	0.95	8.09	17.26	30.0	-12.7	

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9.1.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5 QPSK 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERIP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	13.35	V	0.6	0.0	12.73	14.88	38.45	40.60	-25.7	
824.70	19.27	H	0.6	0.0	18.65	20.80	38.45	40.60	-19.8	
Mid Ch										
836.50	13.45	V	0.6	0.0	12.83	14.98	38.45	40.60	-25.6	
836.50	19.58	H	0.6	0.0	18.96	21.11	38.45	40.60	-19.5	
High Ch										
848.30	12.63	V	0.6	0.0	12.01	14.16	38.45	40.60	-26.4	
848.30	20.09	H	0.6	0.0	19.47	21.62	38.45	40.60	-19.0	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5 16QAM 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	11.81	V	0.6	0.0	11.19	13.34	38.45	40.60	-27.3	
824.70	17.71	H	0.6	0.0	17.09	19.24	38.45	40.60	-21.4	
Mid Ch										
836.50	12.06	V	0.6	0.0	11.44	13.59	38.45	40.60	-27.0	
836.50	18.35	H	0.6	0.0	17.73	19.88	38.45	40.60	-20.7	
High Ch										
848.30	11.70	V	0.6	0.0	11.08	13.23	38.45	40.60	-27.4	
848.30	19.14	H	0.6	0.0	18.52	20.67	38.45	40.60	-19.9	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F, Guarnero
Configuration: EUT Only
Mode: LTE Band 5 QPSK 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	13.03	V	0.6	0.0	12.41	14.56	38.45	40.60	-26.0	
825.50	18.81	H	0.6	0.0	18.19	20.34	38.45	40.60	-20.3	
Mid Ch										
836.50	13.04	V	0.6	0.0	12.42	14.57	38.45	40.60	-26.0	
836.50	19.44	H	0.6	0.0	18.82	20.97	38.45	40.60	-19.6	
High Ch										
847.50	12.25	V	0.6	0.0	11.63	13.78	38.45	40.60	-26.8	
847.50	19.98	H	0.6	0.0	19.36	21.51	38.45	40.60	-19.1	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5 16QAM 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.91	V	0.6	0.0	12.29	14.44	38.45	40.60	-26.2	
825.50	17.69	H	0.6	0.0	17.07	19.22	38.45	40.60	-21.4	
Mid Ch										
836.50	11.64	V	0.6	0.0	11.02	13.17	38.45	40.60	-27.4	
836.50	18.25	H	0.6	0.0	17.63	19.78	38.45	40.60	-20.8	
High Ch										
847.50	11.15	V	0.6	0.0	10.53	12.68	38.45	40.60	-27.9	
847.50	18.92	H	0.6	0.0	18.30	20.45	38.45	40.60	-20.1	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.83	V	0.6	0.0	12.21	14.36	38.45	40.60	-26.2	
826.50	19.24	H	0.6	0.0	18.62	20.77	38.45	40.60	-19.8	
Mid Ch										
836.50	13.04	V	0.6	0.0	12.42	14.57	38.45	40.60	-26.0	
836.50	19.49	H	0.6	0.0	18.87	21.02	38.45	40.60	-19.6	
High Ch										
846.50	12.60	V	0.6	0.0	11.98	14.13	38.45	40.60	-26.5	
846.50	19.98	H	0.6	0.0	19.36	21.51	38.45	40.60	-19.1	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.15	V	0.6	0.0	11.53	13.68	38.45	40.60	-26.9	
826.50	18.41	H	0.6	0.0	17.79	19.94	38.45	40.60	-20.7	
Mid Ch										
836.50	12.47	V	0.6	0.0	11.85	14.00	38.45	40.60	-26.6	
836.50	18.79	H	0.6	0.0	18.17	20.32	38.45	40.60	-20.3	
High Ch										
846.50	12.06	V	0.6	0.0	11.44	13.59	38.45	40.60	-27.0	
846.50	19.25	H	0.6	0.0	18.63	20.78	38.45	40.60	-19.8	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.89	V	0.6	0.0	12.27	14.42	38.45	40.60	-26.2	
829.00	19.17	H	0.6	0.0	18.55	20.70	38.45	40.60	-19.9	
Mid Ch										
836.50	13.15	V	0.6	0.0	12.53	14.68	38.45	40.60	-25.9	
836.50	19.65	H	0.6	0.0	19.03	21.18	38.45	40.60	-19.4	
High Ch										
844.00	12.77	V	0.6	0.0	12.15	14.30	38.45	40.60	-26.3	
844.00	19.72	H	0.6	0.0	19.10	21.25	38.45	40.60	-19.3	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 5 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.24	V	0.6	0.0	11.62	13.77	38.45	40.60	-26.8	
829.00	18.33	H	0.6	0.0	17.71	19.86	38.45	40.60	-20.7	
Mid Ch										
836.50	12.30	V	0.6	0.0	11.68	13.83	38.45	40.60	-26.8	
836.50	18.82	H	0.6	0.0	18.20	20.35	38.45	40.60	-20.2	
High Ch										
844.00	12.01	V	0.6	0.0	11.39	13.54	38.45	40.60	-27.1	
844.00	18.91	H	0.6	0.0	18.29	20.44	38.45	40.60	-20.2	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERIP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	12.15	V	0.6	0.0	11.53	13.68	38.45	40.60	-26.9	
824.70	17.41	H	0.6	0.0	16.79	18.94	38.45	40.60	-21.7	
Mid Ch										
836.50	11.94	V	0.6	0.0	11.32	13.47	38.45	40.60	-27.1	
836.50	18.13	H	0.6	0.0	17.51	19.66	38.45	40.60	-20.9	
High Ch										
848.30	11.15	V	0.6	0.0	10.53	12.68	38.45	40.60	-27.9	
848.30	18.23	H	0.6	0.0	17.61	19.76	38.45	40.60	-20.8	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 1.4MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	11.24	V	0.6	0.0	10.62	12.77	38.45	40.60	-27.8	
824.70	16.51	H	0.6	0.0	15.89	18.04	38.45	40.60	-22.6	
Mid Ch										
836.50	11.12	V	0.6	0.0	10.50	12.65	38.45	40.60	-27.9	
836.50	17.11	H	0.6	0.0	16.49	18.64	38.45	40.60	-22.0	
High Ch										
848.30	10.03	V	0.6	0.0	9.41	11.56	38.45	40.60	-29.0	
848.30	17.23	H	0.6	0.0	16.61	18.76	38.45	40.60	-21.8	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.65	V	0.6	0.0	12.03	14.18	38.45	40.60	-26.4	
825.50	17.43	H	0.6	0.0	16.81	18.96	38.45	40.60	-21.6	
Mid Ch										
836.50	12.61	V	0.6	0.0	11.99	14.14	38.45	40.60	-26.5	
836.50	18.12	H	0.6	0.0	17.50	19.65	38.45	40.60	-20.9	
High Ch										
847.50	11.36	V	0.6	0.0	10.74	12.89	38.45	40.60	-27.7	
847.50	18.15	H	0.6	0.0	17.53	19.68	38.45	40.60	-20.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	11.13	V	0.6	0.0	10.51	12.66	38.45	40.60	-27.9	
825.50	16.26	H	0.6	0.0	15.64	17.79	38.45	40.60	-22.8	
Mid Ch										
836.50	11.56	V	0.6	0.0	10.94	13.09	38.45	40.60	-27.5	
836.50	16.89	H	0.6	0.0	16.27	18.42	38.45	40.60	-22.2	
High Ch										
847.50	10.19	V	0.6	0.0	9.57	11.72	38.45	40.60	-28.9	
847.50	17.01	H	0.6	0.0	16.39	18.54	38.45	40.60	-22.1	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.19	V	0.6	0.0	11.57	13.72	38.45	40.60	-26.9	
826.50	17.37	H	0.6	0.0	16.75	18.90	38.45	40.60	-21.7	
Mid Ch										
836.50	12.50	V	0.6	0.0	11.88	14.03	38.45	40.60	-26.6	
836.50	17.82	H	0.6	0.0	17.20	19.35	38.45	40.60	-21.2	
High Ch										
846.50	11.31	V	0.6	0.0	10.69	12.84	38.45	40.60	-27.8	
846.50	17.94	H	0.6	0.0	17.32	19.47	38.45	40.60	-21.1	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	10.93	V	0.6	0.0	10.31	12.46	38.45	40.60	-28.1	
826.50	15.96	H	0.6	0.0	15.34	17.49	38.45	40.60	-23.1	
Mid Ch										
836.50	11.33	V	0.6	0.0	10.71	12.86	38.45	40.60	-27.7	
836.50	16.77	H	0.6	0.0	16.15	18.30	38.45	40.60	-22.3	
High Ch										
846.50	10.36	V	0.6	0.0	9.74	11.89	38.45	40.60	-28.7	
846.50	16.86	H	0.6	0.0	16.24	18.39	38.45	40.60	-22.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	12.06	V	0.6	0.0	11.44	13.59	38.45	40.60	-27.0	
829.00	17.26	H	0.6	0.0	16.64	18.79	38.45	40.60	-21.8	
Mid Ch										
836.50	12.14	V	0.6	0.0	11.52	13.67	38.45	40.60	-26.9	
836.50	17.62	H	0.6	0.0	17.00	19.15	38.45	40.60	-21.4	
High Ch										
844.00	11.22	V	0.6	0.0	10.60	12.75	38.45	40.60	-27.8	
844.00	17.74	H	0.6	0.0	17.12	19.27	38.45	40.60	-21.3	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 5 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	11.21	V	0.6	0.0	10.59	12.74	38.45	40.60	-27.9	
829.00	16.32	H	0.6	0.0	15.70	17.85	38.45	40.60	-22.7	
Mid Ch										
836.50	11.44	V	0.6	0.0	10.82	12.97	38.45	40.60	-27.6	
836.50	16.74	H	0.6	0.0	16.12	18.27	38.45	40.60	-22.3	
High Ch										
844.00	10.46	V	0.6	0.0	9.84	11.99	38.45	40.60	-28.6	
844.00	16.82	H	0.6	0.0	16.20	18.35	38.45	40.60	-22.2	

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9.1.4. LTE BAND 13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

14U17676
07/03/14
er: R.Z
on: EUT Only
LTE Band 13 QPSK 5MHz BW

nent:
Sunol T407, and Chamber D Cable
: Dipole S/N: 00022117, and 8ft SMA Cable

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
13.90	V	0.55	0.0	13.35	15.50	34.77	36.99	-21.5	
19.79	H	0.55	0.0	19.24	21.39	34.77	36.99	-15.6	
14.36	V	0.55	0.0	13.81	15.96	34.77	36.99	-21.0	
20.24	H	0.55	0.0	19.69	21.84	34.77	36.99	-15.2	
14.17	V	0.55	0.0	13.62	15.77	34.77	36.99	-21.2	
19.94	H	0.55	0.0	19.39	21.54	34.77	36.99	-15.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT Only
Mode: LTE Band 13 16QAM5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	13.14	V	0.55	0.0	12.59	14.74	34.77	36.99	-22.3	
779.50	19.03	H	0.55	0.0	18.48	20.63	34.77	36.99	-16.4	
Mid Ch										
782.00	13.60	V	0.55	0.0	13.05	15.20	34.77	36.99	-21.8	
782.00	19.48	H	0.55	0.0	18.93	21.08	34.77	36.99	-15.9	
High Ch										
784.50	13.41	V	0.55	0.0	12.86	15.01	34.77	36.99	-22.0	
784.50	19.18	H	0.55	0.0	18.63	20.78	34.77	36.99	-16.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT Only
Mode: LTE Band 13 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	14.06	V	0.55	0.0	13.51	15.66	34.77	36.99	-21.3	
782.00	20.04	H	0.55	0.0	19.49	21.64	34.77	36.99	-15.4	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT Only
Mode: LTE Band 13 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	13.62	V	0.55	0.0	13.07	15.22	34.77	36.99	-21.8	
782.00	19.36	H	0.55	0.0	18.81	20.96	34.77	36.99	-16.0	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #:	14U17676
Date:	07/02/14
Test Engineer:	M. Hua
Configuration:	EUT Only
Mode:	LTE Band 13 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	9.79	V	0.55	0.0	9.24	11.39	34.77	36.99	-25.6	
779.50	15.21	H	0.55	0.0	14.66	16.81	34.77	36.99	-20.2	
Mid Ch										
782.00	9.82	V	0.55	0.0	9.27	11.42	34.77	36.99	-25.6	
782.00	15.17	H	0.55	0.0	14.62	16.77	34.77	36.99	-20.2	
High Ch										
784.50	10.06	V	0.55	0.0	9.51	11.66	34.77	36.99	-25.3	
784.50	15.48	H	0.55	0.0	14.93	17.08	34.77	36.99	-19.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 13 16QAM5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	8.76	V	0.55	0.0	8.21	10.36	34.77	36.99	-26.6	
779.50	14.29	H	0.55	0.0	13.74	15.89	34.77	36.99	-21.1	
Mid Ch										
782.00	9.48	V	0.55	0.0	8.93	11.08	34.77	36.99	-25.9	
782.00	14.19	H	0.55	0.0	13.64	15.79	34.77	36.99	-21.2	
High Ch										
784.50	9.04	V	0.55	0.0	8.49	10.64	34.77	36.99	-26.4	
784.50	14.58	H	0.55	0.0	14.03	16.18	34.77	36.99	-20.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 13 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	10.41	V	0.55	0.0	9.86	12.01	34.77	36.99	-25.0	
782.00	15.41	H	0.55	0.0	14.86	17.01	34.77	36.99	-20.0	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #:	14U17676
Date:	07/02/14
Test Engineer:	M. Hua
Configuration:	EUT Only
Mode:	LTE Band 13 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	9.61	V	0.55	0.0	9.06	11.21	34.77	36.99	-25.8	
782.00	14.56	H	0.55	0.0	14.01	16.16	34.77	36.99	-20.8	

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9.1.5. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT Only
Mode: LTE Band 17 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	8.80	V	0.55	0.0	8.25	10.40	34.77	36.99	-26.6	
706.50	16.45	H	0.55	0.0	15.90	18.05	34.77	36.99	-18.9	
Mid Ch										
710.00	10.03	V	0.55	0.0	9.48	11.63	34.77	36.99	-25.4	
710.00	17.28	H	0.55	0.0	16.73	18.88	34.77	36.99	-18.1	
High Ch										
713.50	9.47	V	0.55	0.0	8.92	11.07	34.77	36.99	-25.9	
713.50	17.48	H	0.55	0.0	16.93	19.08	34.77	36.99	-17.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT Only
Mode: LTE Band 17 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	7.68	V	0.55	0.0	7.13	9.28	34.77	36.99	-27.7	
706.50	15.83	H	0.55	0.0	15.28	17.43	34.77	36.99	-19.6	
Mid Ch										
710.00	7.79	V	0.55	0.0	7.24	9.39	34.77	36.99	-27.6	
710.00	16.15	H	0.55	0.0	15.60	17.75	34.77	36.99	-19.2	
High Ch										
713.50	8.62	V	0.55	0.0	8.07	10.22	34.77	36.99	-26.8	
713.50	16.57	H	0.55	0.0	16.02	18.17	34.77	36.99	-18.8	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT Only
Mode: LTE Band 17 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
709.00	8.77	V	0.55	0.0	8.22	10.37	34.77	36.99	-26.6	
709.00	16.67	H	0.55	0.0	16.12	18.27	34.77	36.99	-18.7	
Mid Ch										
710.00	8.94	V	0.55	0.0	8.39	10.54	34.77	36.99	-26.5	
710.00	17.04	H	0.55	0.0	16.49	18.64	34.77	36.99	-18.4	
High Ch										
711.00	9.19	V	0.55	0.0	8.64	10.79	34.77	36.99	-26.2	
711.00	17.28	H	0.55	0.0	16.73	18.88	34.77	36.99	-18.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT Only
Mode: LTE Band 17 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
709.00	8.03	V	0.55	0.0	7.48	9.63	34.77	36.99	-27.4	
709.00	15.85	H	0.55	0.0	15.30	17.45	34.77	36.99	-19.5	
Mid Ch										
710.00	8.12	V	0.55	0.0	7.57	9.72	34.77	36.99	-27.3	
710.00	16.17	H	0.55	0.0	15.62	17.77	34.77	36.99	-19.2	
High Ch										
711.00	8.38	V	0.55	0.0	7.83	9.98	34.77	36.99	-27.0	
711.00	16.46	H	0.55	0.0	15.91	18.06	34.77	36.99	-18.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	8.77	V	0.55	0.0	8.22	10.37	34.77	36.99	-26.6	
706.50	16.12	H	0.55	0.0	15.57	17.72	34.77	36.99	-19.3	
Mid Ch										
710.00	9.49	V	0.55	0.0	8.94	11.09	34.77	36.99	-25.9	
710.00	16.28	H	0.55	0.0	15.73	17.88	34.77	36.99	-19.1	
High Ch										
713.50	10.04	V	0.55	0.0	9.49	11.64	34.77	36.99	-25.4	
713.50	16.95	H	0.55	0.0	16.40	18.55	34.77	36.99	-18.4	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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	7.37	V	0.55	0.0	6.82	8.97	34.77	36.99	-28.0	
706.50	15.50	H	0.55	0.0	14.95	17.10	34.77	36.99	-19.9	
Mid Ch										
710.00	8.12	V	0.55	0.0	7.57	9.72	34.77	36.99	-27.3	
710.00	15.82	H	0.55	0.0	15.27	17.42	34.77	36.99	-19.6	
High Ch										
713.50	8.62	V	0.55	0.0	8.07	10.22	34.77	36.99	-26.8	
713.50	16.24	H	0.55	0.0	15.69	17.84	34.77	36.99	-19.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
709.00	7.45	V	0.55	0.0	6.90	9.05	34.77	36.99	-27.9	
709.00	16.62	H	0.55	0.0	16.07	18.22	34.77	36.99	-18.8	
Mid Ch										
710.00	7.81	V	0.55	0.0	7.26	9.41	34.77	36.99	-27.6	
710.00	16.78	H	0.55	0.0	16.23	18.38	34.77	36.99	-18.6	
High Ch										
711.00	8.04	V	0.55	0.0	7.49	9.64	34.77	36.99	-27.4	
711.00	16.99	H	0.55	0.0	16.44	18.59	34.77	36.99	-18.4	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 17 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
709.00	6.12	V	0.55	0.0	5.57	7.72	34.77	36.99	-29.3	
709.00	15.12	H	0.55	0.0	14.57	16.72	34.77	36.99	-20.3	
Mid Ch										
710.00	6.21	V	0.55	0.0	5.66	7.81	34.77	36.99	-29.2	
710.00	15.34	H	0.55	0.0	14.79	16.94	34.77	36.99	-20.1	
High Ch										
711.00	6.53	V	0.55	0.0	5.98	8.13	34.77	36.99	-28.9	
711.00	15.81	H	0.55	0.0	15.26	17.41	34.77	36.99	-19.6	

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9.1.6. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	18.0	V	0.98	7.88	24.87	33.0	-8.1	
1.851	19.7	H	0.98	7.88	26.62	33.0	-6.4	
Mid Ch								
1.883	17.7	V	0.98	7.86	24.62	33.0	-8.4	
1.883	19.0	H	0.98	7.86	25.92	33.0	-7.1	
High Ch								
1.914	19.2	V	0.98	7.84	26.02	33.0	-7.0	
1.914	19.9	H	0.98	7.84	26.78	33.0	-6.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	17.0	V	0.98	7.88	23.91	33.0	-9.1	
1.851	18.7	H	0.98	7.88	25.58	33.0	-7.4	
Mid Ch								
1.883	16.7	V	0.98	7.86	23.61	33.0	-9.4	
1.883	18.0	H	0.98	7.86	24.91	33.0	-8.1	
High Ch								
1.914	18.1	V	0.98	7.84	24.99	33.0	-8.0	
1.914	18.9	H	0.98	7.84	25.74	33.0	-7.3	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	18.0	V	0.98	7.88	24.86	33.0	-8.1	
1.852	19.8	H	0.98	7.88	26.73	33.0	-6.3	
Mid Ch								
1.883	17.7	V	0.98	7.86	24.53	33.0	-8.5	
1.883	19.1	H	0.98	7.86	25.99	33.0	-7.0	
High Ch								
1.914	18.4	V	0.98	7.84	25.27	33.0	-7.7	
1.914	19.8	H	0.98	7.84	26.62	33.0	-6.4	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.9	V	0.98	7.88	23.76	33.0	-9.2	
1.852	18.7	H	0.98	7.88	25.61	33.0	-7.4	
Mid Ch								
1.883	16.5	V	0.98	7.86	23.41	33.0	-9.6	
1.883	18.0	H	0.98	7.86	24.85	33.0	-8.2	
High Ch								
1.914	17.3	V	0.98	7.84	24.11	33.0	-8.9	
1.914	18.6	H	0.98	7.84	25.45	33.0	-7.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	18.0	V	0.98	7.88	24.89	33.0	-8.1	
1.853	19.8	H	0.98	7.88	26.71	33.0	-6.3	
Mid Ch								
1.883	17.9	V	0.98	7.86	24.80	33.0	-8.2	
1.883	18.9	H	0.98	7.86	25.75	33.0	-7.3	
High Ch								
1.913	19.0	V	0.98	7.84	25.86	33.0	-7.1	
1.913	19.6	H	0.98	7.84	26.41	33.0	-6.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	17.4	V	0.98	7.88	24.28	33.0	-8.7	
1.853	19.2	H	0.98	7.88	26.08	33.0	-6.9	
Mid Ch								
1.883	17.3	V	0.98	7.86	24.17	33.0	-8.8	
1.883	18.2	H	0.98	7.86	25.10	33.0	-7.9	
High Ch								
1.913	18.3	V	0.98	7.84	25.19	33.0	-7.8	
1.913	18.9	H	0.98	7.84	25.73	33.0	-7.3	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	17.4	V	0.98	7.88	24.31	33.0	-8.7	
1.855	19.7	H	0.98	7.88	26.64	33.0	-6.4	
Mid Ch								
1.883	16.9	V	0.98	7.86	23.77	33.0	-9.2	
1.883	18.8	H	0.98	7.86	25.68	33.0	-7.3	
High Ch								
1.910	18.8	V	0.98	7.84	25.61	33.0	-7.4	
1.910	19.6	H	0.98	7.84	26.42	33.0	-6.6	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.8	V	0.98	7.88	23.69	33.0	-9.3	
1.855	19.1	H	0.98	7.88	26.00	33.0	-7.0	
Mid Ch								
1.883	16.3	V	0.98	7.86	23.13	33.0	-9.9	
1.883	18.1	H	0.98	7.86	25.02	33.0	-8.0	
High Ch								
1.910	18.1	V	0.98	7.84	24.93	33.0	-8.1	
1.910	18.9	H	0.98	7.84	25.73	33.0	-7.3	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	17.9	V	0.98	7.88	24.76	33.0	-8.2	
1.858	19.9	H	0.98	7.88	26.83	33.0	-6.2	
Mid Ch								
1.883	17.8	V	0.98	7.86	24.69	33.0	-8.3	
1.883	19.1	H	0.98	7.86	25.93	33.0	-7.1	
High Ch								
1.908	18.8	V	0.98	7.84	25.64	33.0	-7.4	
1.908	19.8	H	0.98	7.84	26.62	33.0	-6.4	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.6	V	0.98	7.88	23.48	33.0	-9.5	
1.858	18.6	H	0.98	7.88	25.53	33.0	-7.5	
Mid Ch								
1.883	15.9	V	0.98	7.86	22.82	33.0	-10.2	
1.883	17.7	H	0.98	7.86	24.61	33.0	-8.4	
High Ch								
1.908	17.4	V	0.98	7.84	24.30	33.0	-8.7	
1.908	18.4	H	0.98	7.84	25.27	33.0	-7.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	18.0	V	0.98	7.88	24.93	33.0	-8.1	
1.860	19.9	H	0.98	7.88	26.81	33.0	-6.2	
Mid Ch								
1.883	17.2	V	0.98	7.86	24.06	33.0	-8.9	
1.883	19.2	H	0.98	7.86	26.06	33.0	-6.9	
High Ch								
1.905	19.2	V	0.98	7.84	26.02	33.0	-7.0	
1.905	19.8	H	0.98	7.84	26.69	33.0	-6.3	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.9	V	0.98	7.88	23.77	33.0	-9.2	
1.860	18.7	H	0.98	7.88	25.63	33.0	-7.4	
Mid Ch								
1.883	16.0	V	0.98	7.86	22.88	33.0	-10.1	
1.883	18.0	H	0.98	7.86	24.86	33.0	-8.1	
High Ch								
1.905	17.9	V	0.98	7.84	24.80	33.0	-8.2	
1.905	18.6	H	0.98	7.84	25.46	33.0	-7.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.0	V	0.98	7.88	22.94	33.0	-10.1	
1.851	15.9	H	0.98	7.88	22.75	33.0	-10.3	
Mid Ch								
1.883	15.6	V	0.98	7.86	22.52	33.0	-10.5	
1.883	14.3	H	0.98	7.86	21.19	33.0	-11.8	
High Ch								
1.914	15.7	V	0.98	7.84	22.52	33.0	-10.5	
1.914	14.7	H	0.98	7.84	21.53	33.0	-11.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.2	V	0.98	7.88	22.05	33.0	-11.0	
1.851	15.0	H	0.98	7.88	21.86	33.0	-11.1	
Mid Ch								
1.883	14.7	V	0.98	7.86	21.59	33.0	-11.4	
1.883	13.4	H	0.98	7.86	20.28	33.0	-12.7	
High Ch								
1.914	14.8	V	0.98	7.84	21.63	33.0	-11.4	
1.914	13.6	H	0.98	7.84	20.44	33.0	-12.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.1	V	0.98	7.88	23.04	33.0	-10.0	
1.852	15.8	H	0.98	7.88	22.66	33.0	-10.3	
Mid Ch								
1.883	15.4	V	0.98	7.86	22.23	33.0	-10.8	
1.883	15.1	H	0.98	7.86	22.02	33.0	-11.0	
High Ch								
1.914	15.6	V	0.98	7.84	22.42	33.0	-10.6	
1.914	15.2	H	0.98	7.84	22.06	33.0	-10.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.5	V	0.98	7.88	21.44	33.0	-11.6	
1.852	14.5	H	0.98	7.88	21.40	33.0	-11.6	
Mid Ch								
1.883	14.8	V	0.98	7.86	21.70	33.0	-11.3	
1.883	14.6	H	0.98	7.86	21.46	33.0	-11.5	
High Ch								
1.914	15.0	V	0.98	7.84	21.87	33.0	-11.1	
1.914	14.6	H	0.98	7.84	21.50	33.0	-11.5	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.1	V	0.98	7.88	23.04	33.0	-10.0	
1.853	15.8	H	0.98	7.88	22.69	33.0	-10.3	
Mid Ch								
1.883	15.8	V	0.98	7.86	22.64	33.0	-10.4	
1.883	15.3	H	0.98	7.86	22.19	33.0	-10.8	
High Ch								
1.913	15.5	V	0.98	7.84	22.40	33.0	-10.6	
1.913	15.2	H	0.98	7.84	22.01	33.0	-11.0	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	15.5	V	0.98	7.88	22.36	33.0	-10.6	
1.853	15.0	H	0.98	7.88	21.91	33.0	-11.1	
Mid Ch								
1.883	14.6	V	0.98	7.86	21.50	33.0	-11.5	
1.883	14.4	H	0.98	7.86	21.29	33.0	-11.7	
High Ch								
1.913	14.8	V	0.98	7.84	21.61	33.0	-11.4	
1.913	14.5	H	0.98	7.84	21.31	33.0	-11.7	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.1	V	0.98	7.88	23.02	33.0	-10.0	
1.855	16.2	H	0.98	7.88	23.09	33.0	-9.9	
Mid Ch								
1.883	15.5	V	0.98	7.86	22.41	33.0	-10.6	
1.883	15.1	H	0.98	7.86	21.93	33.0	-11.1	
High Ch								
1.910	15.6	V	0.98	7.84	22.48	33.0	-10.5	
1.910	15.1	H	0.98	7.84	21.92	33.0	-11.1	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.9	V	0.98	7.88	21.81	33.0	-11.2	
1.855	15.0	H	0.98	7.88	21.88	33.0	-11.1	
Mid Ch								
1.883	14.4	V	0.98	7.86	21.23	33.0	-11.8	
1.883	13.9	H	0.98	7.86	20.75	33.0	-12.3	
High Ch								
1.910	14.5	V	0.98	7.84	21.31	33.0	-11.7	
1.910	13.9	H	0.98	7.84	20.74	33.0	-12.3	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.1	V	0.98	7.88	23.03	33.0	-10.0	
1.858	15.7	H	0.98	7.88	22.58	33.0	-10.4	
Mid Ch								
1.883	15.4	V	0.98	7.86	22.30	33.0	-10.7	
1.883	14.0	H	0.98	7.86	20.88	33.0	-12.1	
High Ch								
1.908	15.5	V	0.98	7.84	22.31	33.0	-10.7	
1.908	13.9	H	0.98	7.84	20.77	33.0	-12.2	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.9	V	0.98	7.88	21.84	33.0	-11.2	
1.858	14.5	H	0.98	7.88	21.39	33.0	-11.6	
Mid Ch								
1.883	14.3	V	0.98	7.86	21.14	33.0	-11.9	
1.883	12.9	H	0.98	7.86	19.73	33.0	-13.3	
High Ch								
1.908	14.3	V	0.98	7.84	21.14	33.0	-11.9	
1.908	12.8	H	0.98	7.84	19.61	33.0	-13.4	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	16.1	V	0.98	7.88	22.97	33.0	-10.0	
1.860	15.9	H	0.98	7.88	22.82	33.0	-10.2	
Mid Ch								
1.883	16.0	V	0.98	7.86	22.91	33.0	-10.1	
1.883	15.5	H	0.98	7.86	22.42	33.0	-10.6	
High Ch								
1.905	15.8	V	0.98	7.84	22.65	33.0	-10.4	
1.905	15.6	H	0.98	7.84	22.41	33.0	-10.6	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 06/30/14
Test Engineer: R.Z
Configuration: EUT only
Mode: LTE Band 25 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T344, and Chamber D SMA Cables
Substitution: Horn T60 Substitution, and 8ft SMA Cable

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	14.8	V	0.98	7.88	21.73	33.0	-11.3	
1.860	14.5	H	0.98	7.88	21.37	33.0	-11.6	
Mid Ch								
1.883	14.6	V	0.98	7.86	21.47	33.0	-11.5	
1.883	14.3	H	0.98	7.86	21.20	33.0	-11.8	
High Ch								
1.905	14.5	V	0.98	7.84	21.34	33.0	-11.7	
1.905	14.4	H	0.98	7.84	21.22	33.0	-11.8	

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9.1.7. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 26 QPSK 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
820.30	12.97	V	0.62	0.0	12.35	14.50	38.45	40.60	-26.1	
820.30	19.13	H	0.62	0.0	18.51	20.66	38.45	40.60	-19.9	
Mid Ch										
821.30	16.50	V	0.62	0.0	15.88	18.03	38.45	40.60	-22.6	
821.30	19.41	H	0.62	0.0	18.79	20.94	38.45	40.60	-19.7	
High Ch										
822.30	13.43	V	0.62	0.0	12.81	14.96	38.45	40.60	-25.6	
822.30	19.25	H	0.62	0.0	18.63	20.78	38.45	40.60	-19.8	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/13/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 26 16QAM 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
820.30	12.32	V	0.62	0.0	11.70	13.85	38.45	40.60	-26.8	
820.30	18.24	H	0.62	0.0	17.62	19.77	38.45	40.60	-20.8	
Mid Ch										
821.30	12.59	V	0.62	0.0	11.97	14.12	38.45	40.60	-26.5	
821.30	18.49	H	0.62	0.0	17.87	20.02	38.45	40.60	-20.6	
High Ch										
822.30	12.68	V	0.62	0.0	12.06	14.21	38.45	40.60	-26.4	
822.30	18.51	H	0.62	0.0	17.89	20.04	38.45	40.60	-20.6	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 26 QPSK 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
821.30	14.06	V	0.62	0.0	13.44	15.59	38.45	40.60	-25.0	
821.30	19.57	H	0.62	0.0	18.95	21.10	38.45	40.60	-19.5	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/03/14
Test Engineer: F. Guarnero
Configuration: EUT Only
Mode: LTE Band 26 16QAM 5MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
821.30	13.24	V	0.62	0.0	12.62	14.77	38.45	40.60	-25.8	
821.30	18.60	H	0.62	0.0	17.98	20.13	38.45	40.60	-20.5	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 6/20/2014
Test Engineer: Macie
Configuration: EUT Only
Mode: LTE Band 26 QPSK 10MHz BW

Test Equipment:
Receiving: Sunol T408, and Chamber E 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	12.64	V	0.62	0.0	12.02	14.17	38.45	40.60	-26.4	
819.00	19.14	H	0.62	0.0	18.52	20.67	38.45	40.60	-19.9	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber E

Project #: 14U17676
Date: 6/20/2014
Test Engineer: Macie
Configuration: EUT Only
Mode: LTE Band 26 16QAM 10MHz BW

Test Equipment:
Receiving: Sunol T408, and Chamber E 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										
819.00	11.49	V	0.62	0.0	10.87	13.02	38.45	40.60	-27.6	
819.00	18.55	H	0.62	0.0	17.93	20.08	38.45	40.60	-20.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 26 QPSK 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
820.30	13.08	V	0.62	0.0	12.46	14.61	38.45	40.60	-26.0	
820.30	17.21	H	0.62	0.0	16.59	18.74	38.45	40.60	-21.9	
Mid Ch										
821.30	13.70	V	0.62	0.0	13.08	15.23	38.45	40.60	-25.4	
821.30	17.18	H	0.62	0.0	16.56	18.71	38.45	40.60	-21.9	
High Ch										
822.30	13.86	V	0.62	0.0	13.24	15.39	38.45	40.60	-25.2	
822.30	17.14	H	0.62	0.0	16.52	18.67	38.45	40.60	-21.9	

Rev. 06.18.14

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber D

Project #: 14U17676
Date: 07/02/14
Test Engineer: M. Hua
Configuration: EUT Only
Mode: LTE Band 26 16QAM 3MHz BW

Test Equipment:
Receiving: Sunol T407, and Chamber D Cable
Substitution: Dipole S/N: 00022117, and 8ft SMA Cable

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										
820.30	12.17	V	0.62	0.0	11.55	13.70	38.45	40.60	-26.9	
820.30	15.97	H	0.62	0.0	15.35	17.50	38.45	40.60	-23.1	
Mid Ch										
821.30	12.73	V	0.62	0.0	12.11	14.26	38.45	40.60	-26.3	
821.30	16.07	H	0.62	0.0	15.45	17.60	38.45	40.60	-23.0	
High Ch										
822.30	12.75	V	0.62	0.0	12.13	14.28	38.45	40.60	-26.3	
822.30	16.05	H	0.62	0.0	15.43	17.58	38.45	40.60	-23.0	

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