

9.1.5. LTE BAND 12

QPSK, (10MHz BANDWIDTH)

Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage				
Normal (25C)	Normal	699.5050	715.4947		
Extreme (50C)		699.5050	715.4947	-1.0	0.00
Extreme (40C)		699.5050	715.4947	-0.5	0.00
Extreme (30C)		699.5050	715.4947	-1.4	0.00
Extreme (10C)		699.5050	715.4947	-1.3	0.00
Extreme (0C)		699.5050	715.4947	0.6	0.00
Extreme (-10C)		699.5050	715.4947	0.2	0.00
Extreme (-20C)		699.5050	715.4947	-0.7	0.00
Extreme (-30C)		699.5050	715.4947	1.6	0.00
25C	10%	699.5050	715.4947	-1.1	0.00
	-10%	699.5050	715.4947	-1.9	0.00
	End Point	699.5050	715.4947	-0.9	0.00

16QAM, (10MHz BANDWIDTH)

Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage				
Normal (25C)	Normal	699.5100	715.4917		
Extreme (50C)		699.5100	715.4917	-0.8	0.00
Extreme (40C)		699.5100	715.4917	-0.7	0.00
Extreme (30C)		699.5100	715.4917	-1.1	0.00
Extreme (10C)		699.5100	715.4917	1.0	0.00
Extreme (0C)		699.5100	715.4917	2.2	0.00
Extreme (-10C)		699.5100	715.4917	1.3	0.00
Extreme (-20C)		699.5100	715.4917	2.5	0.00
Extreme (-30C)		699.5100	715.4917	1.9	0.00
25C	10%	699.5100	715.4917	-1.2	0.00
	-10%	699.5100	715.4917	-0.9	0.00
	End Point	699.5100	715.4917	-0.5	0.00

9.1.6. LTE BAND 13

QPSK, (10MHz BANDWIDTH)

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	777.5060	786.4938		
Extreme (50C)		777.5060	786.4938	-0.8	0.00
Extreme (40C)		777.5060	786.4938	-1.4	0.00
Extreme (30C)		777.5060	786.4938	-0.7	0.00
Extreme (10C)		777.5060	786.4938	-0.7	0.00
Extreme (0C)		777.5060	786.4938	-0.6	0.00
Extreme (-10C)		777.5060	786.4938	0.7	0.00
Extreme (-20C)		777.5060	786.4938	1.4	0.00
Extreme (-30C)		777.5060	786.4938	-0.9	0.00
25C	10%	777.5060	786.4938	-0.5	0.00
	-10%	777.5060	786.4938	-1.0	0.00
	End Point	777.5060	786.4938	-2.0	0.00

16QAM, (10MHz BANDWIDTH)

Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage				
Normal (25C)	Normal	777.5077	786.4923		
Extreme (50C)		777.5077	786.4923	-1.2	0.00
Extreme (40C)		777.5077	786.4923	-0.8	0.00
Extreme (30C)		777.5077	786.4923	-1.0	0.00
Extreme (10C)		777.5077	786.4923	-0.9	0.00
Extreme (0C)		777.5077	786.4923	1.2	0.00
Extreme (-10C)		777.5077	786.4923	1.4	0.00
Extreme (-20C)		777.5077	786.4923	1.8	0.00
Extreme (-30C)		777.5077	786.4923	2.0	0.00
25C	10%	777.5077	786.4923	-0.5	0.00
	-10%	777.5077	786.4923	-1.0	0.00
	End Point	777.5077	786.4923	-0.9	0.00

9.1.7. LTE BAND 17

QPSK, (10MHz BANDWIDTH)

Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	704.5032	715.4929		
Extreme (50C)		704.5032	715.4929	0.9	0.001
Extreme (40C)		704.5032	715.4929	-1.0	-0.001
Extreme (30C)		704.5032	715.4929	-0.8	-0.001
Extreme (10C)		704.5032	715.4929	-0.8	-0.001
Extreme (0C)		704.5032	715.4929	0.9	0.001
Extreme (-10C)		704.5032	715.4929	-0.1	0.000
Extreme (-20C)		704.5032	715.4929	1.0	0.001
Extreme (-30C)		704.5032	715.4929	1.3	0.002
25C	10%	704.5032	715.4929	-0.8	-0.001
	-10%	704.5032	715.4929	-0.9	-0.001
	End Point	704.5032	715.4929	-1.3	-0.002

16QAM, (10MHz BANDWIDTH)

Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage				
Normal (25C)	Normal	704.5046	715.4911		
Extreme (50C)		704.5046	715.4911	-1.5	-0.002
Extreme (40C)		704.5046	715.4911	0.3	0.000
Extreme (30C)		704.5046	715.4911	-0.4	-0.001
Extreme (10C)		704.5046	715.4911	-1.0	-0.001
Extreme (0C)		704.5046	715.4911	-2.1	-0.003
Extreme (-10C)		704.5046	715.4911	1.7	0.002
Extreme (-20C)		704.5046	715.4911	0.7	0.001
Extreme (-30C)		704.5046	715.4911	1.3	0.002
25C	10%	704.5046	715.4911	-0.9	-0.001
	-10%	704.5046	715.4911	-0.8	-0.001
	End Point	704.5046	715.4911	-0.6	-0.001

9.1.8. LTE BAND 25

QPSK, (20MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0187	1913.9816		
Extreme (50C)		1851.0187	1913.9816	2.1	0.001
Extreme (40C)		1851.0187	1913.9816	1.4	0.001
Extreme (30C)		1851.0187	1913.9816	1.2	0.001
Extreme (10C)		1851.0187	1913.9816	1.3	0.001
Extreme (0C)		1851.0187	1913.9816	1.1	0.001
Extreme (-10C)		1851.0187	1913.9816	-0.3	0.000
Extreme (-20C)		1851.0187	1913.9816	1.6	0.001
Extreme (-30C)		1851.0187	1913.9816	1.2	0.001
25C	10%	1851.0187	1913.9816	2.1	0.001
	-10%	1851.0187	1913.9816	2.0	0.001
	End Point	1851.0187	1913.9816	1.0	0.001

16QAM, (20MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0210	1913.9814		
Extreme (50C)		1851.0210	1913.9814	1.3	0.001
Extreme (40C)		1851.0210	1913.9814	1.0	0.001
Extreme (30C)		1851.0210	1913.9814	1.1	0.001
Extreme (10C)		1851.0210	1913.9814	0.9	0.000
Extreme (0C)		1851.0210	1913.9814	0.5	0.000
Extreme (-10C)		1851.0210	1913.9814	2.6	0.001
Extreme (-20C)		1851.0210	1913.9814	3.0	0.002
Extreme (-30C)		1851.0210	1913.9814	3.3	0.002
25C	10%	1851.0210	1913.9814	3.1	0.002
	-10%	1851.0210	1913.9814	1.5	0.001
	End Point	1851.0210	1913.9814	1.5	0.001

9.1.9. LTE BAND 26

QPSK, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.5051	823.4952		
Extreme (50C)		814.5051	823.4952	-1.9	-0.002
Extreme (40C)		814.5051	823.4952	-2.2	-0.003
Extreme (30C)		814.5051	823.4952	-1.8	-0.002
Extreme (10C)		814.5051	823.4952	-2.0	-0.002
Extreme (0C)		814.5051	823.4952	-1.2	-0.001
Extreme (-10C)		814.5051	823.4952	2.0	0.002
Extreme (-20C)		814.5051	823.4952	1.5	0.002
Extreme (-30C)		814.5051	823.4952	1.4	0.002
25C	10%	814.5051	823.4952	-0.2	0.000
	-10%	814.5051	823.4952	-2.1	-0.003
	End Point	814.5051	823.4952	-1.9	-0.002

16QAM, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.5072	823.4915		
Extreme (50C)		814.5072	823.4915	-1.5	-0.002
Extreme (40C)		814.5072	823.4915	-1.8	-0.002
Extreme (30C)		814.5072	823.4915	-1.9	-0.002
Extreme (10C)		814.5072	823.4915	-1.6	-0.002
Extreme (0C)		814.5072	823.4915	0.1	0.000
Extreme (-10C)		814.5072	823.4915	1.2	0.002
Extreme (-20C)		814.5072	823.4915	2.4	0.003
Extreme (-30C)		814.5072	823.4915	2.7	0.003
25C	10%	814.5072	823.4915	-0.8	-0.001
	-10%	814.5072	823.4915	-0.1	0.000
	End Point	814.5072	823.4915	0.5	0.001

9.1.10. LTE BAND 30

QPSK, (20MHz BANDWIDTH)

Limit		2305	2315	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2305.5046	2314.4928		
Extreme (50C)		2305.5046	2314.4928	5.7	0.002
Extreme (40C)		2305.5046	2314.4928	10.5	0.005
Extreme (30C)		2305.5046	2314.4928	12.0	0.005
Extreme (10C)		2305.5046	2314.4928	-7.2	-0.003
Extreme (0C)		2305.5046	2314.4928	-4.0	-0.002
Extreme (-10C)		2305.5046	2314.4928	-5.3	-0.002
Extreme (-20C)		2305.5046	2314.4928	-3.9	-0.002
Extreme (-30C)		2305.5046	2314.4928	-4.9	-0.002
25C	10%	2305.5046	2314.4928	11.7	0.005
	-10%	2305.5046	2314.4928	6.9	0.003
	End Point	2305.5046	2314.4928	-7.5	-0.003

16QAM, (20MHz BANDWIDTH)

Limit		2305	2315	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2305.5092	2314.4922		
Extreme (50C)		2305.5092	2314.4922	20.4	0.009
Extreme (40C)		2305.5092	2314.4922	16.0	0.007
Extreme (30C)		2305.5092	2314.4922	14.6	0.006
Extreme (10C)		2305.5092	2314.4922	7.7	0.003
Extreme (0C)		2305.5092	2314.4922	-9.4	-0.004
Extreme (-10C)		2305.5092	2314.4922	-9.2	-0.004
Extreme (-20C)		2305.5092	2314.4922	-8.2	-0.004
Extreme (-30C)		2305.5092	2314.4922	-8.9	-0.004
25C	10%	2305.5092	2314.4922	13.5	0.006
	-10%	2305.5092	2314.4922	12.3	0.005
	End Point	2305.5092	2314.4922	-12.5	-0.005

9.1.11. LTE BAND 41

QPSK, (20MHz BANDWIDTH)

Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage				
Normal (25C)	Normal	2496.9546	2689.0814		
Extreme (50C)		2496.9546	2689.0814	9.9	0.004
Extreme (40C)		2496.9546	2689.0814	8.5	0.003
Extreme (30C)		2496.9546	2689.0814	9.9	0.004
Extreme (10C)		2496.9546	2689.0814	8.1	0.003
Extreme (0C)		2496.9546	2689.0814	9.9	0.004
Extreme (-10C)		2496.9546	2689.0814	11.6	0.004
Extreme (-20C)		2496.9546	2689.0814	9.9	0.004
Extreme (-30C)		2496.9546	2689.0814	10.3	0.004
25C	10%	2496.9546	2689.0814	9.8	0.004
	-10%	2496.9546	2689.0814	10.9	0.004
	End Point	2496.9546	2689.0814	8.8	0.003

16QAM, (20MHz BANDWIDTH)

Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage				
Normal (25C)	Normal	2496.9588	2689.0767		
Extreme (50C)		2496.9588	2689.0767	10.8	0.004
Extreme (40C)		2496.9588	2689.0767	11.6	0.004
Extreme (30C)		2496.9588	2689.0767	11.1	0.004
Extreme (10C)		2496.9588	2689.0767	9.2	0.004
Extreme (0C)		2496.9588	2689.0767	7.1	0.003
Extreme (-10C)		2496.9588	2689.0767	9.0	0.003
Extreme (-20C)		2496.9588	2689.0767	10.1	0.004
Extreme (-30C)		2496.9588	2689.0767	9.5	0.004
25C	10%	2496.9588	2689.0767	7.2	0.003
	-10%	2496.9588	2689.0767	6.8	0.003
	End Point	2496.9588	2689.0767	6.0	0.002

9.2.MODEL: A1687

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

LIMITS

§22.355 & RSS-132 5.3

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

§24.235 & §27.54

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

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

Frequency Stability vs Temperature:

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

Frequency Stability vs Voltage:

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

MODES TESTED

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

RESULTS

9.2.1. LTE BAND 2

QPSK, (20MHz BANDWIDTH)

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0091	1908.9949		
Extreme (50C)		1851.0091	1908.9949	-5.1	-0.003
Extreme (40C)		1851.0091	1908.9949	-4.9	-0.003
Extreme (30C)		1851.0091	1908.9949	-4.0	-0.002
Extreme (10C)		1851.0091	1908.9949	-3.8	-0.002
Extreme (0C)		1851.0091	1908.9949	-3.2	-0.002
Extreme (-10C)		1851.0091	1908.9949	-2.4	-0.001
Extreme (-20C)		1851.0091	1908.9949	-2.6	-0.001
Extreme (-30C)		1851.0091	1908.9949	-2.8	-0.001
25C	10%	1851.0091	1908.9949	-3.3	-0.002
	-10%	1851.0091	1908.9949	-4.5	-0.002
	End Point	1851.0091	1908.9949	-4.8	-0.003

16QAM, (20MHz BANDWIDTH)

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0203	1908.9836		
Extreme (50C)		1851.0203	1908.9836	-5.1	-0.003
Extreme (40C)		1851.0203	1908.9836	-5.1	-0.003
Extreme (30C)		1851.0203	1908.9836	-5.5	-0.003
Extreme (10C)		1851.0203	1908.9836	-4.7	-0.003
Extreme (0C)		1851.0203	1908.9836	-2.5	-0.001
Extreme (-10C)		1851.0203	1908.9836	-2.4	-0.001
Extreme (-20C)		1851.0203	1908.9836	-2.6	-0.001
Extreme (-30C)		1851.0203	1908.9836	2.5	0.001
25C	10%	1851.0203	1908.9836	-3.2	-0.002
	-10%	1851.0203	1908.9836	-4.2	-0.002
	End Point	1851.0203	1908.9836	-4.1	-0.002

9.2.2. LTE BAND 4

QPSK, (20MHz BANDWIDTH)

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1711.0208	1753.9850		
Extreme (50C)		1711.0208	1753.9850	1.8	0.001
Extreme (40C)		1711.0208	1753.9850	1.7	0.001
Extreme (30C)		1711.0208	1753.9850	-2.5	-0.001
Extreme (10C)		1711.0208	1753.9850	-0.4	0.000
Extreme (0C)		1711.0208	1753.9850	-2.3	-0.001
Extreme (-10C)		1711.0208	1753.9850	-2.2	-0.001
Extreme (-20C)		1711.0208	1753.9850	2.3	0.001
Extreme (-30C)		1711.0208	1753.9850	-1.2	-0.001
25C	10%	1711.0208	1753.9850	1.4	0.001
	-10%	1711.0208	1753.9850	1.6	0.001
	End Point	1711.0208	1753.9850	1.7	0.001

16QAM, (20MHz BANDWIDTH)

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1711.0179	1753.9944		
Extreme (50C)		1711.0179	1753.9944	1.5	0.001
Extreme (40C)		1711.0179	1753.9944	-1.8	-0.001
Extreme (30C)		1711.0179	1753.9944	2.0	0.001
Extreme (10C)		1711.0179	1753.9944	0.8	0.000
Extreme (0C)		1711.0179	1753.9944	2.5	0.001
Extreme (-10C)		1711.0179	1753.9944	1.9	0.001
Extreme (-20C)		1711.0179	1753.9944	1.9	0.001
Extreme (-30C)		1711.0179	1753.9944	2.1	0.001
25C	10%	1711.0179	1753.9944	1.1	0.001
	-10%	1711.0179	1753.9944	1.8	0.001
	End Point	1711.0179	1753.9944	1.7	0.001

9.2.3. LTE BAND 5

QPSK, (10MHz BANDWIDTH)

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	824.5037	848.4938		
Extreme (50C)		824.5037	848.4938	-1.1	-0.001
Extreme (40C)		824.5037	848.4938	-1.6	-0.002
Extreme (30C)		824.5037	848.4938	-0.8	-0.001
Extreme (10C)		824.5037	848.4938	-0.6	-0.001
Extreme (0C)		824.5037	848.4938	-0.4	0.000
Extreme (-10C)		824.5037	848.4938	-0.6	-0.001
Extreme (-20C)		824.5037	848.4938	0.6	0.001
Extreme (-30C)		824.5037	848.4938	0.7	0.001
25C	10%	824.5037	848.4938	-2.9	-0.003
	-10%	824.5037	848.4938	-3.5	-0.004
	End Point	824.5037	848.4938	-2.7	-0.003

16QAM, (10MHz BANDWIDTH)

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	824.5050	848.4932		
Extreme (50C)		824.5050	848.4932	-0.1	0.000
Extreme (40C)		824.5050	848.4932	-0.3	0.000
Extreme (30C)		824.5050	848.4932	-0.9	-0.001
Extreme (10C)		824.5050	848.4932	-0.3	0.000
Extreme (0C)		824.5050	848.4932	-0.4	0.000
Extreme (-10C)		824.5050	848.4932	-0.4	0.000
Extreme (-20C)		824.5050	848.4932	-0.7	-0.001
Extreme (-30C)		824.5050	848.4932	-1.2	-0.001
25C	10%	824.5050	848.4932	-3.0	-0.004
	-10%	824.5050	848.4932	-3.2	-0.004
	End Point	824.5050	848.4932	-2.8	-0.003

9.2.4. LTE BAND 7

QPSK, (10MHz BANDWIDTH)

Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2501.0138	2568.9856		
Extreme (50C)		2501.0138	2568.9856	-3.6	-0.001
Extreme (40C)		2501.0138	2568.9856	-3.4	-0.001
Extreme (30C)		2501.0138	2568.9856	-2.2	-0.001
Extreme (10C)		2501.0138	2568.9856	-3.1	-0.001
Extreme (0C)		2501.0138	2568.9856	-2.4	-0.001
Extreme (-10C)		2501.0138	2568.9856	-3.2	-0.001
Extreme (-20C)		2501.0138	2568.9856	-1.8	-0.001
Extreme (-30C)		2501.0138	2568.9856	-2.4	-0.001
25C	10%	2501.0138	2568.9856	-0.3	0.000
	-10%	2501.0138	2568.9856	-2.6	-0.001
	End Point	2501.0138	2568.9856	-3.3	-0.001

16QAM, (10MHz BANDWIDTH)

Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2501.0181	2568.9823		
Extreme (50C)		2501.0181	2568.9823	-4.2	-0.002
Extreme (40C)		2501.0181	2568.9823	-3.5	-0.001
Extreme (30C)		2501.0181	2568.9823	-3.7	-0.001
Extreme (10C)		2501.0181	2568.9823	-4.3	-0.002
Extreme (0C)		2501.0181	2568.9823	-3.3	-0.001
Extreme (-10C)		2501.0181	2568.9823	-4.1	-0.002
Extreme (-20C)		2501.0181	2568.9823	-2.2	-0.001
Extreme (-30C)		2501.0181	2568.9823	-3.4	-0.001
25C	10%	2501.0181	2568.9823	-3.0	-0.001
	-10%	2501.0181	2568.9823	-3.0	-0.001
	End Point	2501.0181	2568.9823	-3.6	-0.001

9.2.5. LTE BAND 12

QPSK, (10MHz BANDWIDTH)

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	699.5015	715.4970		
Extreme (50C)		699.5015	715.4970	-1.9	0.00
Extreme (40C)		699.5015	715.4970	-1.8	0.00
Extreme (30C)		699.5015	715.4970	-1.2	0.00
Extreme (10C)		699.5015	715.4970	-1.5	0.00
Extreme (0C)		699.5015	715.4970	1.9	0.00
Extreme (-10C)		699.5015	715.4970	-2.4	0.00
Extreme (-20C)		699.5015	715.4970	0.1	0.00
Extreme (-30C)		699.5015	715.4970	0.9	0.00
25C	10%	699.5015	715.4970	-1.9	0.00
	-10%	699.5015	715.4970	-2.4	0.00
	End Point	699.5015	715.4970	-1.3	0.00

16QAM, (10MHz BANDWIDTH)

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	699.5076	715.4927		
Extreme (50C)		699.5076	715.4927	-2.0	0.00
Extreme (40C)		699.5076	715.4927	-1.0	0.00
Extreme (30C)		699.5076	715.4927	-1.6	0.00
Extreme (10C)		699.5076	715.4927	-1.2	0.00
Extreme (0C)		699.5076	715.4927	-1.3	0.00
Extreme (-10C)		699.5076	715.4927	-2.3	0.00
Extreme (-20C)		699.5076	715.4927	-0.6	0.00
Extreme (-30C)		699.5076	715.4927	1.9	0.00
25C	10%	699.5076	715.4927	-1.5	0.00
	-10%	699.5076	715.4927	0.5	0.00
	End Point	699.5076	715.4927	0.8	0.00

9.2.6. LTE BAND 13

QPSK, (10MHz BANDWIDTH)

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	777.5028	786.5102		
Extreme (50C)		777.5028	786.5102	-1.3	0.00
Extreme (40C)		777.5028	786.5102	0.8	0.00
Extreme (30C)		777.5028	786.5102	-1.4	0.00
Extreme (10C)		777.5028	786.5102	-1.5	0.00
Extreme (0C)		777.5028	786.5102	1.6	0.00
Extreme (-10C)		777.5028	786.5102	0.9	0.00
Extreme (-20C)		777.5028	786.5102	-0.8	0.00
Extreme (-30C)		777.5028	786.5102	-0.7	0.00
25C	10%	777.5028	786.5102	0.2	0.00
	-10%	777.5028	786.5102	0.2	0.00
	End Point	777.5028	786.5102	-0.2	0.00

16QAM, (10MHz BANDWIDTH)

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	777.5072	786.5063		
Extreme (50C)		777.5072	786.5063	-1.9	0.00
Extreme (40C)		777.5072	786.5063	-1.0	0.00
Extreme (30C)		777.5072	786.5063	-1.9	0.00
Extreme (10C)		777.5072	786.5063	1.2	0.00
Extreme (0C)		777.5072	786.5063	1.2	0.00
Extreme (-10C)		777.5072	786.5063	1.7	0.00
Extreme (-20C)		777.5072	786.5063	-1.6	0.00
Extreme (-30C)		777.5072	786.5063	2.2	0.00
25C	10%	777.5072	786.5063	-0.3	0.00
	-10%	777.5072	786.5063	-0.5	0.00
	End Point	777.5072	786.5063	-0.1	0.00

9.2.7. LTE BAND 17

QPSK, (10MHz BANDWIDTH)

Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	705.5016	714.4993		
Extreme (50C)		705.5016	714.4993	-0.9	-0.001
Extreme (40C)		705.5016	714.4993	-0.8	-0.001
Extreme (30C)		705.5016	714.4993	-0.7	-0.001
Extreme (10C)		705.5016	714.4993	1.0	0.001
Extreme (0C)		705.5016	714.4993	-0.7	-0.001
Extreme (-10C)		705.5016	714.4993	-0.4	-0.001
Extreme (-20C)		705.5016	714.4993	1.7	0.002
Extreme (-30C)		705.5016	714.4993	1.2	0.002
25C	10%	705.5016	714.4993	0.2	0.000
	-10%	705.5016	714.4993	0.5	0.001
	End Point	705.5016	714.4993	0.2	0.000

16QAM, (10MHz BANDWIDTH)

Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	705.5058	714.4950		
Extreme (50C)		705.5058	714.4950	-1.2	-0.002
Extreme (40C)		705.5058	714.4950	-0.9	-0.001
Extreme (30C)		705.5058	714.4950	-0.7	-0.001
Extreme (10C)		705.5059	714.4950	0.9	0.001
Extreme (0C)		705.5058	714.4950	-1.0	-0.001
Extreme (-10C)		705.5058	714.4950	-2.3	-0.003
Extreme (-20C)		705.5059	714.4950	1.1	0.002
Extreme (-30C)		705.5058	714.4950	-3.0	-0.004
25C	10%	705.5058	714.4950	-1.2	-0.002
	-10%	705.5058	714.4950	-1.3	-0.002
	End Point	705.5058	714.4950	-0.5	-0.001

9.2.8. LTE BAND 25

QPSK, (20MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0157	1914.0015		
Extreme (50C)		1851.0157	1914.0015	0.9	0.000
Extreme (40C)		1851.0157	1914.0015	0.7	0.000
Extreme (30C)		1851.0157	1914.0015	-0.5	0.000
Extreme (10C)		1851.0157	1914.0015	0.6	0.000
Extreme (0C)		1851.0157	1914.0015	2.2	0.001
Extreme (-10C)		1851.0157	1914.0015	1.2	0.001
Extreme (-20C)		1851.0157	1914.0015	1.0	0.001
Extreme (-30C)		1851.0157	1914.0015	1.3	0.001
25C	10%	1851.0157	1914.0015	1.1	0.001
	-10%	1851.0157	1914.0015	1.1	0.001
	End Point	1851.0157	1914.0015	1.2	0.001

16QAM, (20MHz BANDWIDTH)

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	1851.0198	1913.9954		
Extreme (50C)		1851.0198	1913.9954	1.1	0.001
Extreme (40C)		1851.0198	1913.9954	0.8	0.000
Extreme (30C)		1851.0198	1913.9954	2.1	0.001
Extreme (10C)		1851.0198	1913.9954	1.6	0.001
Extreme (0C)		1851.0198	1913.9954	1.4	0.001
Extreme (-10C)		1851.0198	1913.9954	1.4	0.001
Extreme (-20C)		1851.0198	1913.9954	0.6	0.000
Extreme (-30C)		1851.0198	1913.9954	-0.2	0.000
25C	10%	1851.0198	1913.9954	1.1	0.001
	-10%	1851.0198	1913.9954	0.9	0.000
	End Point	1851.0198	1913.9954	0.8	0.000

9.2.9. LTE BAND 26

QPSK, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.5038	823.4989		
Extreme (50C)		814.5038	823.4989	-2.8	-0.003
Extreme (40C)		814.5038	823.4989	-1.8	-0.002
Extreme (30C)		814.5038	823.4989	-0.8	-0.001
Extreme (10C)		814.5038	823.4989	-1.3	-0.002
Extreme (0C)		814.5038	823.4989	-1.0	-0.001
Extreme (-10C)		814.5038	823.4989	1.3	0.002
Extreme (-20C)		814.5038	823.4989	0.6	0.001
Extreme (-30C)		814.5038	823.4989	1.5	0.002
25C	10%	814.5038	823.4989	-0.9	-0.001
	-10%	814.5038	823.4989	-0.2	0.000
	End Point	814.5038	823.4989	1.0	0.001

16QAM, (10MHz BANDWIDTH)

Limit		814	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	814.5098	823.4969		
Extreme (50C)		814.5098	823.4969	-2.2	-0.003
Extreme (40C)		814.5098	823.4969	-0.4	-0.001
Extreme (30C)		814.5098	823.4969	-0.8	-0.001
Extreme (10C)		814.5098	823.4969	0.9	0.001
Extreme (0C)		814.5098	823.4969	1.6	0.002
Extreme (-10C)		814.5098	823.4969	0.2	0.000
Extreme (-20C)		814.5098	823.4969	0.8	0.001
Extreme (-30C)		814.5098	823.4969	0.7	0.001
25C	10%	814.5098	823.4969	0.8	0.001
	-10%	814.5098	823.4969	0.4	0.001
	End Point	814.5098	823.4969	-0.8	-0.001

9.2.10. LTE BAND 41

QPSK, (20MHz BANDWIDTH)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2496.9511	2689.0601		
Extreme (50C)		2496.9511	2689.0601	11.2	0.004
Extreme (40C)		2496.9511	2689.0601	10.4	0.004
Extreme (30C)		2496.9511	2689.0601	9.0	0.003
Extreme (10C)		2496.9511	2689.0601	7.9	0.003
Extreme (0C)		2496.9511	2689.0601	7.6	0.003
Extreme (-10C)		2496.9511	2689.0601	8.1	0.003
Extreme (-20C)		2496.9511	2689.0601	9.6	0.004
Extreme (-30C)		2496.9511	2689.0601	10.3	0.004
25C	10%	2496.9511	2689.0601	11.8	0.005
	-10%	2496.9511	2689.0601	12.2	0.005
	End Point	2496.9511	2689.0601	9.6	0.004

16QAM, (20MHz BANDWIDTH)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (25C)	Normal	2496.9573	2689.0474		
Extreme (50C)		2496.9573	2689.0474	10.1	0.004
Extreme (40C)		2496.9573	2689.0474	9.8	0.004
Extreme (30C)		2496.9573	2689.0474	8.0	0.003
Extreme (10C)		2496.9573	2689.0474	10.5	0.004
Extreme (0C)		2496.9573	2689.0474	11.5	0.004
Extreme (-10C)		2496.9573	2689.0474	9.9	0.004
Extreme (-20C)		2496.9573	2689.0474	10.2	0.004
Extreme (-30C)		2496.9573	2689.0474	11.0	0.004
25C	10%	2496.9573	2689.0474	11.7	0.005
	-10%	2496.9573	2689.0474	12.5	0.005
	End Point	2496.9573	2689.0474	14.6	0.006

10. RADIATED TEST RESULTS

10.1. POWER (ERP & EIRP), MODEL: A1634 (LAT)

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-

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17

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

MODES TESTED

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

RESULTS

EIRP POWER FOR LTE BAND 2 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	1850.7	24.30	269.15
		1880.0	24.14	259.42
		1909.3	24.49	281.19
1.4MHz Band 16QAM	1/0	1850.7	23.30	213.80
		1880.0	23.15	206.54
		1909.3	23.50	223.87

EIRP POWER FOR LTE BAND 2 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0MHz Band QPSK	1/0	1851.5	24.29	268.53
		1880.0	24.24	265.46
		1908.5	24.48	280.54
3.0MHz Band 16QAM	1/0	1851.5	23.31	214.29
		1880.0	23.24	210.86
		1908.5	23.49	223.36

EIRP POWER FOR LTE BAND 2 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0MHz Band QPSK	1/0	1852.5	24.50	281.84
		1880.0	24.24	265.46
		1907.5	24.38	274.16
5.0MHz Band 16QAM	1/0	1852.5	23.49	223.36
		1880.0	23.25	211.35
		1907.5	23.48	222.84

EIRP POWER FOR LTE BAND 2 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0MHz Band QPSK	1/0	1855.0	24.50	281.84
		1880.0	24.33	271.02
		1905.0	24.40	275.42
10.0MHz Band 16QAM	1/0	1855.0	23.49	223.36
		1880.0	23.33	215.28
		1905.0	23.40	218.78

EIRP POWER FOR LTE BAND 2 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15MHz Band QPSK	1/0	1857.5	24.19	262.42
		1880.0	24.34	271.64
		1902.5	24.49	281.19
15MHz Band 16QAM	1/0	1857.5	23.20	208.93
		1880.0	23.35	216.27
		1902.5	23.50	223.87

EIRP POWER FOR LTE BAND 2 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0MHz Band QPSK	1/0	1860.0	23.59	228.56
		1880.0	24.51	282.49
		1900.0	24.28	267.92
20MHz Band 16QAM	1/0	1860.0	23.21	209.41
		1880.0	23.52	224.91
		1900.0	23.27	212.32

EIRP POWER FOR LTE BAND 4 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1710.7	21.49	140.93
		1732.5	21.37	137.09
		1754.3	21.25	133.35
1.4 MHZ BAND 16QAM	1/0	1710.7	20.51	112.46
		1732.5	20.37	108.89
		1754.3	20.25	105.93

EIRP POWER FOR LTE BAND 4 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1711.5	21.50	141.25
		1732.5	21.34	136.14
		1753.5	21.24	133.05
3.0 MHZ BAND 16QAM	1/0	1711.5	20.51	112.46
		1732.5	20.37	108.89
		1753.5	20.25	105.93

EIRP POWER FOR LTE BAND 4 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1712.5	21.48	140.60
		1732.5	21.37	137.09
		1752.5	21.27	133.97
5.0 MHZ BAND 16QAM	1/0	1712.5	20.48	111.69
		1732.5	20.36	108.64
		1752.5	20.26	106.17

EIRP POWER FOR LTE BAND 4 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1715.0	21.40	138.04
		1732.5	21.51	141.58
		1750.0	21.19	131.52
10.0 MHZ BAND 16QAM	1/0	1715.0	20.41	109.90
		1732.5	20.51	112.46
		1750.0	20.19	104.47

EIRP POWER FOR LTE BAND 4 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1717.5	21.49	140.93
		1732.5	21.34	136.14
		1747.5	21.25	133.35
15.0 MHZ BAND 16QAM	1/0	1717.5	20.49	111.94
		1732.5	20.34	108.14
		1747.5	20.24	105.68

EIRP POWER FOR LTE BAND 4 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1720.0	21.50	141.25
		1732.5	21.36	136.77
		1745.0	21.28	134.28
20.0 MHZ BAND 16QAM	1/0	1720.0	20.51	112.46
		1732.5	20.36	108.64
		1745.0	20.27	106.41

ERP POWER FOR LTE BAND 5 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	18.43	69.66
		836.5	18.77	75.34
		848.3	19.09	81.10
1.4MHz Band 16QAM	1/0	824.7	17.50	56.23
		836.5	17.67	58.48
		848.3	18.15	65.31

ERP POWER FOR LTE BAND 5 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	18.17	65.61
		836.5	18.87	77.09
		847.5	19.05	80.35
3.0 MHZ BAND 16QAM	1/0	825.5	17.33	54.08
		836.5	17.77	59.84
		847.5	18.02	63.39

ERP POWER FOR LTE BAND 5 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	18.23	66.53
		836.5	18.76	75.16
		846.5	19.08	80.91
5MHz Band 16QAM	1/0	826.5	18.05	63.83
		836.5	17.84	60.81
		846.5	18.21	66.22

ERP POWER FOR LTE BAND 5 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	18.33	68.08
		836.5	19.07	80.72
		844.0	18.75	74.99
10.0 MHZ BAND 16QAM	1/0	829.0	17.40	54.95
		836.5	18.14	65.16
		844.0	17.94	62.23

EIRP POWER FOR LTE BAND 7 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2502.5	28.64	731.14
		2535.0	29.50	891.25
		2567.5	29.48	887.16
5.0 MHZ BAND 16QAM	25/0	2502.5	27.64	580.76
		2535.0	28.67	736.21
		2567.5	28.58	721.11

EIRP POWER FOR LTE BAND 7 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2505.0	29.44	879.02
		2535.0	30.50	1122.02
		2565.0	30.58	1142.88
10.0 MHZ BAND 16QAM	50/0	2505.0	28.74	748.17
		2535.0	29.10	812.83
		2565.0	29.78	950.60

EIRP POWER FOR LTE BAND 7 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2507.5	28.44	698.23
		2535.0	29.15	822.24
		2562.5	30.02	1004.62
15.0 MHZ BAND 16QAM	75/0	2507.5	27.54	567.54
		2535.0	28.00	630.96
		2562.5	29.27	845.28

EIRP POWER FOR LTE BAND 7 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2510.0	29.55	901.57
		2535.0	29.40	870.96
		2560.0	30.12	1028.02
20.0 MHZ BAND 16QAM	100/0	2510.0	28.55	716.14
		2535.0	28.40	691.83
		2560.0	29.27	845.28

ERP POWER FOR LTE BAND 12 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	699.7	18.87	77.09
		707.5	18.82	76.21
		715.3	19.42	87.50
1.4MHz Band 16QAM	1/0	699.7	17.86	61.09
		707.5	17.88	61.38
		715.3	18.12	64.86

ERP POWER FOR LTE BAND 12 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	700.5	18.67	73.62
		707.5	19.18	82.79
		714.5	19.41	87.30
3.0 MHZ BAND 16QAM	1/0	700.5	17.65	58.21
		707.5	18.28	67.30
		714.5	18.41	69.34

ERP POWER FOR LTE BAND 12 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	701.5	18.73	74.64
		707.5	19.28	84.72
		713.5	19.45	88.10
5MHz Band 16QAM	1/0	701.5	17.85	60.95
		707.5	18.38	68.87
		713.5	18.42	69.50

ERP POWER FOR LTE BAND 12 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	704.0	19.44	87.90
		707.5	18.96	78.70
		711.0	19.32	85.51
10.0 MHZ BAND 16QAM	1/0	704.0	18.49	70.63
		707.5	17.97	62.66
		711.0	18.36	68.55

ERP POWER FOR LTE BAND 13 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	19.08	80.91
		782.0	18.90	77.62
		784.5	19.27	84.53
5.0 MHZ BAND 16QAM	1/0	779.5	18.15	65.31
		782.0	17.98	62.81
		784.5	18.29	67.45

ERP POWER FOR LTE BAND 13 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	19.29	84.92
10 MHZ BAND 16QAM	1/0		18.32	67.92

ERP POWER FOR LTE BAND 17 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	18.86	76.91
		710.0	19.27	84.53
		713.5	19.45	88.10
5MHz Band 16QAM	1/0	706.5	17.90	61.66
		710.0	18.30	67.61
		713.5	18.47	70.31

ERP POWER FOR LTE BAND 17 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	710.0	19.42	87.50
10.0 MHZ BAND 16QAM		710.0	18.37	68.71

EIRP POWER FOR LTE BAND 25 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1850.7	24.51	282.49
		1880.0	24.39	274.79
		1914.3	24.15	260.02
1.4 MHZ BAND 16QAM	1/0	1850.7	23.48	222.84
		1880.0	23.39	218.27
		1914.3	23.18	207.97

EIRP POWER FOR LTE BAND 25 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1851.5	24.10	257.04
		1880.0	24.31	269.77
		1913.5	24.49	281.19
3.0 MHZ BAND 16QAM	1/0	1851.5	23.10	204.17
		1880.0	23.30	213.80
		1913.5	23.47	222.33

EIRP POWER FOR LTE BAND 25 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1852.5	24.15	260.02
		1880.0	24.48	280.54
		1912.5	24.29	268.53
5.0 MHZ BAND 16QAM	1/0	1852.5	23.16	207.01
		1880.0	23.48	222.84
		1912.5	23.29	213.30

EIRP POWER FOR LTE BAND 25 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1855.0	24.07	255.27
		1880.0	24.50	281.84
		1910.0	24.39	274.79
10.0 MHZ BAND 16QAM	1/0	1855.0	23.07	202.77
		1880.0	23.51	224.39
		1910.0	23.38	217.77

EIRP POWER FOR LTE BAND 25 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1857.5	24.23	264.85
		1880.0	24.30	269.15
		1907.5	24.49	281.19
15.0 MHZ BAND 16QAM	1/0	1857.5	23.25	211.35
		1880.0	23.31	214.29
		1907.5	23.49	223.36

EIRP POWER FOR LTE BAND 25 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1860.0	24.27	267.30
		1880.0	24.38	274.16
		1905.0	24.51	282.49
20.0 MHZ BAND 16QAM	1/0	1860.0	23.28	212.81
		1880.0	23.38	217.77
		1905.0	23.51	224.39

ERP POWER FOR LTE BAND 26 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	814.7	18.98	79.07
		819.0	18.94	78.34
		823.3	19.08	80.91
1.4 MHZ BAND 16QAM	1/0	814.7	18.01	63.24
		819.0	18.04	63.68
		823.3	18.12	64.86

ERP POWER FOR LTE BAND 26 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	815.5	18.91	77.80
		819.0	18.74	74.82
		822.5	19.07	80.72
3.0 MHZ BAND 16QAM	1/0	815.5	17.91	61.80
		819.0	17.84	60.81
		822.5	18.12	64.86

ERP POWER FOR LTE BAND 26 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	816.5	18.91	77.80
		819.0	18.74	74.82
		821.5	19.09	81.10
5.0 MHZ BAND 16QAM	1/0	816.5	17.91	61.80
		819.0	17.74	59.43
		821.5	18.12	64.86

ERP POWER FOR LTE BAND 26 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	19.06	80.54
10.0 MHZ BAND 16QAM	1/0	819.0	18.11	64.71

EIRP POWER FOR LTE BAND 30 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	2307.5	21.30	134.90
		2310.0	21.13	129.72
		2312.5	21.05	127.35
5MHz Band 16QAM	1/0	2307.5	20.30	107.15
		2310.0	20.14	103.28
		2312.5	20.06	101.39

EIRP POWER FOR LTE BAND 30 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	2310.0	21.28	134.28
10.0 MHZ BAND 16QAM		2310.0	20.34	108.14

EIRP POWER FOR LTE BAND 41 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2498.5	28.38	688.65
		2593.0	29.34	859.01
		2687.5	29.15	822.24
5.0 MHZ BAND 16QAM	25/0	2498.5	27.48	559.76
		2593.0	28.34	682.34
		2687.5	28.15	653.13

EIRP POWER FOR LTE BAND 41 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2501.0	28.98	790.68
		2593.0	29.94	986.28
		2685.0	29.54	899.50
10.0 MHZ BAND 16QAM	50/0	2501.0	28.18	657.66
		2593.0	28.94	783.43
		2685.0	28.54	714.50

EIRP POWER FOR LTE BAND 41(15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2503.5	30.48	1116.86
		2593.0	31.04	1270.57
		2682.5	31.63	1455.46
15.0 MHZ BAND 16QAM	75/0	2503.5	29.38	866.96
		2593.0	30.24	1056.82
		2682.5	30.53	1129.80

EIRP POWER FOR LTE BAND 41 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2506.0	31.07	1279.38
		2593.0	32.24	1674.94
		2680.0	32.33	1710.02
20.0 MHZ BAND 16QAM	100/0	2506.0	30.07	1016.25
		2593.0	31.24	1330.45
		2680.0	31.33	1358.31

10.1.1. LTE BAND 2

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

High Frequency Fundamental Measurement UL Fremont Radiated Chamber H								
Company:								
Project #:		15U20162						
Date:		6/20/2015						
Test Engineer:		R.Z						
Configuration:		EUT only						
Mode:		LTE Band 2 QPSK 1.4MHz BW						
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	16.7	V	0.98	8.05	23.76	33.0	-9.2	
1.851	17.2	H	0.98	8.05	24.30	33.0	-8.7	
Mid Ch								
1.880	16.2	V	0.98	8.03	23.29	33.0	-9.7	
1.880	17.1	H	0.98	8.03	24.14	33.0	-8.9	
High Ch								
1.909	16.7	V	0.98	8.05	23.73	33.0	-9.3	
1.909	17.4	H	0.98	8.05	24.49	33.0	-8.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	15.7	V	0.98	8.05	22.76	33.0	-10.2	
1.851	16.2	H	0.98	8.05	23.30	33.0	-9.7	
Mid Ch								
1.880	15.3	V	0.98	8.03	22.31	33.0	-10.7	
1.880	16.1	H	0.98	8.03	23.15	33.0	-9.9	
High Ch								
1.909	15.7	V	0.98	8.05	22.81	33.0	-10.2	
1.909	16.4	H	0.98	8.05	23.50	33.0	-9.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 2 QPSK 3MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	16.5	V	0.98	8.05	23.56	33.0	-9.4	
1.852	17.2	H	0.98	8.05	24.29	33.0	-8.7	
Mid Ch								
1.880	16.4	V	0.98	8.03	23.49	33.0	-9.5	
1.880	17.2	H	0.98	8.03	24.24	33.0	-8.8	
High Ch								
1.909	16.9	V	0.98	8.05	23.93	33.0	-9.1	
1.909	17.4	H	0.98	8.05	24.48	33.0	-8.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #:		15U20162						
Date:		6/20/2015						
Test Engineer:		R.Z						
Configuration:		EUT only						
Mode:		LTE Band 2 16QAM 3MHz BW						
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	15.5	V	0.98	8.05	22.58	33.0	-10.4	
1.852	16.2	H	0.98	8.05	23.31	33.0	-9.7	
Mid Ch								
1.880	15.5	V	0.98	8.03	22.51	33.0	-10.5	
1.880	16.2	H	0.98	8.03	23.24	33.0	-9.8	
High Ch								
1.909	15.9	V	0.98	8.05	22.94	33.0	-10.1	
1.909	16.4	H	0.98	8.05	23.49	33.0	-9.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 2 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	16.7	V	0.98	8.05	23.76	33.0	-9.2	
1.853	17.4	H	0.98	8.05	24.50	33.0	-8.5	
Mid Ch								
1.880	16.6	V	0.98	8.03	23.69	33.0	-9.3	
1.880	17.2	H	0.98	8.03	24.24	33.0	-8.8	
High Ch								
1.908	16.7	V	0.98	8.04	23.72	33.0	-9.3	
1.908	17.3	H	0.98	8.04	24.38	33.0	-8.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 5MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	15.8	V	0.98	8.05	22.86	33.0	-10.1	
1.853	16.4	H	0.98	8.05	23.49	33.0	-9.5	
Mid Ch								
1.880	15.7	V	0.98	8.03	22.70	33.0	-10.3	
1.880	16.2	H	0.98	8.03	23.25	33.0	-9.8	
High Ch								
1.908	15.7	V	0.98	8.05	22.73	33.0	-10.3	
1.908	16.4	H	0.98	8.04	23.48	33.0	-9.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 2 QPSK 10MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	16.4	V	0.98	8.05	23.46	33.0	-9.5	
1.855	17.4	H	0.98	8.05	24.50	33.0	-8.5	
Mid Ch								
1.880	16.0	V	0.98	8.03	23.09	33.0	-9.9	
1.880	17.3	H	0.98	8.03	24.33	33.0	-8.7	
High Ch								
1.905	16.6	V	0.98	8.04	23.62	33.0	-9.4	
1.905	17.3	H	0.98	8.04	24.40	33.0	-8.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 2 16QAM 10MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	15.4	V	0.98	8.05	22.47	33.0	-10.5	
1.855	16.4	H	0.98	8.05	23.49	33.0	-9.5	
Mid Ch								
1.880	15.1	V	0.98	8.03	22.10	33.0	-10.9	
1.880	16.3	H	0.98	8.03	23.33	33.0	-9.7	
High Ch								
1.905	15.6	V	0.98	8.04	22.63	33.0	-10.4	
1.905	16.3	H	0.98	8.04	23.40	33.0	-9.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 2 QPSK 15MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	16.0	V	0.98	8.04	23.04	33.0	-10.0	
1.858	17.1	H	0.98	8.04	24.19	33.0	-8.8	
Mid Ch								
1.880	16.1	V	0.98	8.03	23.15	33.0	-9.9	
1.880	17.3	H	0.98	8.03	24.34	33.0	-8.7	
High Ch								
1.903	16.5	V	0.98	8.03	23.56	33.0	-9.4	
1.903	17.4	H	0.98	8.03	24.49	33.0	-8.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 2 16QAM 15MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	15.0	V	0.98	8.04	22.05	33.0	-10.9	
1.858	16.1	H	0.98	8.04	23.20	33.0	-9.8	
Mid Ch								
1.880	15.1	V	0.98	8.03	22.15	33.0	-10.9	
1.880	16.3	H	0.98	8.03	23.35	33.0	-9.7	
High Ch								
1.903	15.5	V	0.98	8.03	22.56	33.0	-10.4	
1.903	16.5	H	0.98	8.03	23.50	33.0	-9.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 2 QPSK 20MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	16.5	V	0.98	8.04	23.58	33.0	-9.4	
1.860	16.5	H	0.98	8.04	23.59	33.0	-9.4	
Mid Ch								
1.880	16.3	V	0.98	8.03	23.39	33.0	-9.6	
1.880	17.5	H	0.98	8.03	24.51	33.0	-8.5	
High Ch								
1.900	16.6	V	0.98	8.02	23.60	33.0	-9.4	
1.900	17.2	H	0.98	8.02	24.28	33.0	-8.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 2 16QAM 20MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	15.5	V	0.98	8.04	22.55	33.0	-10.4	
1.860	16.1	H	0.98	8.04	23.21	33.0	-9.8	
Mid Ch								
1.880	15.3	V	0.98	8.03	22.39	33.0	-10.6	
1.880	16.5	H	0.98	8.03	23.52	33.0	-9.5	
High Ch								
1.900	15.6	V	0.98	8.02	22.61	33.0	-10.4	
1.900	16.2	H	0.98	8.02	23.27	33.0	-9.7	
Rev. 10.24.13								

10.1.2. LTE BAND 4

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 1.4MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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								
1.7107	12.9	V	0.95	8.27	20.20	30.0	-9.8	
1.7107	14.2	H	0.95	8.27	21.49	30.0	-8.5	
Mid Ch								
1.7325	13.2	V	0.95	8.23	20.43	30.0	-9.6	
1.7325	14.1	H	0.95	8.23	21.37	30.0	-8.6	
High Ch								
1.7543	13.0	V	0.95	8.18	20.28	30.0	-9.7	
1.7543	14.0	H	0.95	8.18	21.25	30.0	-8.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	11.9	V	0.95	8.27	19.21	30.0	-10.8	
1.711	13.2	H	0.95	8.27	20.51	30.0	-9.5	
Mid Ch								
1.733	12.2	V	0.95	8.23	19.44	30.0	-10.6	
1.733	13.1	H	0.95	8.23	20.37	30.0	-9.6	
High Ch								
1.754	12.1	V	0.95	8.18	19.30	30.0	-10.7	
1.754	13.0	H	0.95	8.18	20.25	30.0	-9.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 3MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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								
1.7115	12.8	V	0.95	8.27	20.16	30.0	-9.8	
1.7115	14.2	H	0.95	8.27	21.50	30.0	-8.5	
Mid Ch								
1.7325	13.0	V	0.95	8.23	20.31	30.0	-9.7	
1.7325	14.1	H	0.95	8.23	21.34	30.0	-8.7	
High Ch								
1.7535	13.3	V	0.95	8.18	20.58	30.0	-9.4	
1.7535	14.0	H	0.95	8.18	21.24	30.0	-8.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	11.9	V	0.95	8.27	19.21	30.0	-10.8	
1.711	13.2	H	0.95	8.27	20.51	30.0	-9.5	
Mid Ch								
1.733	12.2	V	0.95	8.23	19.44	30.0	-10.6	
1.733	13.1	H	0.95	8.23	20.37	30.0	-9.6	
High Ch								
1.754	12.1	V	0.95	8.18	19.30	30.0	-10.7	
1.754	13.0	H	0.95	8.18	20.25	30.0	-9.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 4 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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								
1.7125	13.0	V	0.95	8.27	20.34	30.0	-9.7	
1.7125	14.2	H	0.95	8.27	21.48	30.0	-8.5	
Mid Ch								
1.7325	13.1	V	0.95	8.23	20.36	30.0	-9.6	
1.7325	14.1	H	0.95	8.23	21.37	30.0	-8.6	
High Ch								
1.7525	13.3	V	0.95	8.18	20.56	30.0	-9.4	
1.7525	14.0	H	0.95	8.18	21.27	30.0	-8.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 4 16QAM 5MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	12.0	V	0.95	8.27	19.34	30.0	-10.7	
1.713	13.2	H	0.95	8.27	20.48	30.0	-9.5	
Mid Ch								
1.733	12.1	V	0.95	8.23	19.37	30.0	-10.6	
1.733	13.1	H	0.95	8.23	20.36	30.0	-9.6	
High Ch								
1.753	12.3	V	0.95	8.18	19.57	30.0	-10.4	
1.753	13.0	H	0.95	8.18	20.26	30.0	-9.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 10MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	12.9	V	0.95	8.26	20.23	30.0	-9.8	
1.715	14.1	H	0.95	8.26	21.40	30.0	-8.6	
Mid Ch								
1.7325	13.2	V	0.95	8.23	20.45	30.0	-9.6	
1.7325	14.2	H	0.95	8.23	21.51	30.0	-8.5	
High Ch								
1.750	13.1	V	0.95	8.19	20.39	30.0	-9.6	
1.750	13.9	H	0.95	8.19	21.19	30.0	-8.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 4 16QAM 10MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	11.9	V	0.95	8.26	19.24	30.0	-10.8	
1.715	13.1	H	0.95	8.26	20.41	30.0	-9.6	
Mid Ch								
1.733	12.2	V	0.95	8.23	19.45	30.0	-10.6	
1.733	13.2	H	0.95	8.23	20.51	30.0	-9.5	
High Ch								
1.750	12.2	V	0.95	8.19	19.40	30.0	-10.6	
1.750	12.9	H	0.95	8.19	20.19	30.0	-9.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 4 QPSK 15MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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								
1.7175	12.8	V	0.95	8.26	20.14	30.0	-9.9	
1.7175	14.2	H	0.95	8.26	21.49	30.0	-8.5	
Mid Ch								
1.7325	13.0	V	0.95	8.23	20.31	30.0	-9.7	
1.7325	14.1	H	0.95	8.23	21.34	30.0	-8.7	
High Ch								
1.7475	13.3	V	0.95	8.19	20.59	30.0	-9.4	
1.7475	14.0	H	0.95	8.19	21.25	30.0	-8.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/20/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	11.8	V	0.95	8.26	19.14	30.0	-10.9	
1.718	13.2	H	0.95	8.26	20.49	30.0	-9.5	
Mid Ch								
1.733	12.0	V	0.95	8.23	19.32	30.0	-10.7	
1.733	13.1	H	0.95	8.23	20.34	30.0	-9.7	
High Ch								
1.748	12.3	V	0.95	8.19	19.58	30.0	-10.4	
1.748	13.0	H	0.95	8.19	20.24	30.0	-9.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 4 QPSK 20MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	13.0	V	0.95	8.25	20.33	30.0	-9.7	
1.720	14.2	H	0.95	8.25	21.50	30.0	-8.5	
Mid Ch								
1.7325	13.0	V	0.95	8.23	20.26	30.0	-9.7	
1.7325	14.1	H	0.95	8.23	21.36	30.0	-8.6	
High Ch								
1.745	13.3	V	0.95	8.20	20.53	30.0	-9.5	
1.745	14.0	H	0.95	8.20	21.28	30.0	-8.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 4 16QAM 20MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	12.0	V	0.95	8.25	19.34	30.0	-10.7	
1.720	13.2	H	0.95	8.25	20.51	30.0	-9.5	
Mid Ch								
1.733	12.0	V	0.95	8.23	19.26	30.0	-10.7	
1.733	13.1	H	0.95	8.23	20.36	30.0	-9.6	
High Ch								
1.745	13.3	V	0.95	8.20	20.52	30.0	-9.5	
1.745	13.0	H	0.95	8.20	20.27	30.0	-9.7	
Rev. 10.24.13								

10.1.3. LTE BAND 5

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/18/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 5 QPSK 1.4MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole T416, 4ft 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	19.05	V	0.6	0.0	18.43	20.58	38.45	40.60	-20.0	
824.70	2.97	H	0.6	0.0	2.35	4.50	38.45	40.60	-36.1	
Mid Ch										
836.50	19.38	V	0.6	0.0	18.77	20.92	38.45	40.60	-19.7	
836.50	3.98	H	0.6	0.0	3.36	5.51	38.45	40.60	-35.1	
High Ch										
848.30	19.71	V	0.6	0.0	19.09	21.24	38.45	40.60	-19.4	
848.30	4.13	H	0.6	0.0	3.51	5.66	38.45	40.60	-34.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/18/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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	18.12	V	0.6	0.0	17.50	19.65	38.45	40.60	-21.0	
824.70	1.87	H	0.6	0.0	1.25	3.40	38.45	40.60	-37.2	
Mid Ch										
836.50	18.28	V	0.6	0.0	17.67	19.82	38.45	40.60	-20.8	
836.50	2.88	H	0.6	0.0	2.26	4.41	38.45	40.60	-36.2	
High Ch										
848.30	18.77	V	0.6	0.0	18.15	20.30	38.45	40.60	-20.3	
848.30	3.10	H	0.6	0.0	2.48	4.63	38.45	40.60	-36.0	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/18/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	18.79	V	0.6	0.0	18.17	20.32	38.45	40.60	-20.3	
825.50	1.87	H	0.6	0.0	1.25	3.40	38.45	40.60	-37.2	
Mid Ch										
836.50	19.48	V	0.6	0.0	18.87	21.02	38.45	40.60	-19.6	
836.50	2.78	H	0.6	0.0	2.16	4.31	38.45	40.60	-36.3	
High Ch										
847.50	19.67	V	0.6	0.0	19.05	21.20	38.45	40.60	-19.4	
847.50	3.50	H	0.6	0.0	2.88	5.03	38.45	40.60	-35.6	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/18/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	17.95	V	0.6	0.0	17.33	19.48	38.45	40.60	-21.1	
825.50	0.97	H	0.6	0.0	0.35	2.50	38.45	40.60	-38.1	
Mid Ch										
836.50	18.38	V	0.6	0.0	17.77	19.92	38.45	40.60	-20.7	
836.50	1.88	H	0.6	0.0	1.26	3.41	38.45	40.60	-37.2	
High Ch										
847.50	18.64	V	0.6	0.0	18.02	20.17	38.45	40.60	-20.4	
847.50	2.56	H	0.6	0.0	1.94	4.09	38.45	40.60	-36.5	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/18/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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	18.85	V	0.6	0.0	18.23	20.38	38.45	40.60	-20.2	
826.50	1.77	H	0.6	0.0	1.15	3.30	38.45	40.60	-37.3	
Mid Ch										
836.50	19.37	V	0.6	0.0	18.76	20.91	38.45	40.60	-19.7	
836.50	3.06	H	0.6	0.0	2.44	4.59	38.45	40.60	-36.0	
High Ch										
846.50	19.70	V	0.6	0.0	19.08	21.23	38.45	40.60	-19.4	
846.50	3.20	H	0.6	0.0	2.58	4.73	38.45	40.60	-35.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/18/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	18.67	V	0.6	0.0	18.05	20.20	38.45	40.60	-20.4	
826.50	0.87	H	0.6	0.0	0.25	2.40	38.45	40.60	-38.2	
Mid Ch										
836.50	18.45	V	0.6	0.0	17.84	19.99	38.45	40.60	-20.6	
836.50	2.08	H	0.6	0.0	1.46	3.61	38.45	40.60	-37.0	
High Ch										
846.50	18.83	V	0.6	0.0	18.21	20.36	38.45	40.60	-20.2	
846.50	2.30	H	0.6	0.0	1.68	3.83	38.45	40.60	-36.8	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/18/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	18.95	V	0.6	0.0	18.33	20.48	38.45	40.60	-20.1	
829.00	2.37	H	0.6	0.0	1.75	3.90	38.45	40.60	-36.7	
Mid Ch										
836.50	19.68	V	0.6	0.0	19.07	21.22	38.45	40.60	-19.4	
836.50	2.84	H	0.6	0.0	2.22	4.37	38.45	40.60	-36.2	
High Ch										
844.00	19.37	V	0.6	0.0	18.75	20.90	38.45	40.60	-19.7	
844.00	3.60	H	0.6	0.0	2.98	5.13	38.45	40.60	-35.5	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/18/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	18.02	V	0.6	0.0	17.40	19.55	38.45	40.60	-21.1	
829.00	1.47	H	0.6	0.0	0.85	3.00	38.45	40.60	-37.6	
Mid Ch										
836.50	18.75	V	0.6	0.0	18.14	20.29	38.45	40.60	-20.3	
836.50	1.97	H	0.6	0.0	1.35	3.50	38.45	40.60	-37.1	
High Ch										
844.00	18.56	V	0.6	0.0	17.94	20.09	38.45	40.60	-20.5	
844.00	2.70	H	0.6	0.0	2.08	4.23	38.45	40.60	-36.4	
Rev. 10.24.13										

10.1.4. LTE BAND 7

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 7 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	17.2	V	1.15	9.34	25.35	33.0	-7.7	
2.503	20.5	H	1.15	9.34	28.64	33.0	-4.4	
Mid Ch								
2.535	17.4	V	1.16	9.38	25.61	33.0	-7.4	
2.535	21.3	H	1.16	9.38	29.50	33.0	-3.5	
High Ch								
2.568	16.5	V	1.17	9.43	24.73	33.0	-8.3	
2.568	21.2	H	1.17	9.43	29.48	33.0	-3.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 7 16QAM 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	16.4	V	1.15	9.34	24.60	33.0	-8.4	
2.503	19.5	H	1.15	9.34	27.64	33.0	-5.4	
Mid Ch								
2.535	16.4	V	1.16	9.38	24.61	33.0	-8.4	
2.535	20.5	H	1.16	9.38	28.67	33.0	-4.3	
High Ch								
2.568	15.5	V	1.17	9.43	23.73	33.0	-9.3	
2.568	20.3	H	1.17	9.43	28.58	33.0	-4.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 7 QPSK 10MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	20.9	V	1.15	9.34	29.05	33.0	-3.9	
2.505	21.3	H	1.15	9.34	29.44	33.0	-3.6	
Mid Ch								
2.535	21.6	V	1.16	9.38	29.81	33.0	-3.2	
2.535	22.3	H	1.16	9.38	30.50	33.0	-2.5	
High Ch								
2.565	21.1	V	1.17	9.43	29.33	33.0	-3.7	
2.565	22.3	H	1.17	9.43	30.58	33.0	-2.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 7 16QAM 10MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	15.3	V	1.15	9.34	23.45	33.0	-9.5	
2.505	20.6	H	1.15	9.34	28.74	33.0	-4.3	
Mid Ch								
2.535	20.8	V	1.16	9.38	29.01	33.0	-4.0	
2.535	20.9	H	1.16	9.38	29.10	33.0	-3.9	
High Ch								
2.565	20.4	V	1.17	9.43	28.63	33.0	-4.4	
2.565	21.5	H	1.17	9.43	29.78	33.0	-3.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: T Wang Configuration: EUT Only Mode: LTE Band 7 QPSK 15MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	17.4	V	1.15	9.34	25.54	33.0	-7.5	
2.508	20.3	H	1.15	9.34	28.44	33.0	-4.6	
Mid Ch								
2.535	18.0	V	1.16	9.38	26.19	33.0	-6.8	
2.535	20.9	H	1.16	9.38	29.15	33.0	-3.8	
High Ch								
2.563	17.4	V	1.17	9.42	25.60	33.0	-7.4	
2.563	21.8	H	1.17	9.42	30.02	33.0	-3.0	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: T Wang Configuration: EUT Only Mode: LTE Band 7 16QAM 15MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	16.6	V	1.15	9.34	24.75	33.0	-8.2	
2.508	19.4	H	1.15	9.34	27.54	33.0	-5.5	
Mid Ch								
2.535	16.8	V	1.16	9.38	25.06	33.0	-7.9	
2.535	19.8	H	1.16	9.38	28.00	33.0	-5.0	
High Ch								
2.563	16.5	V	1.17	9.42	24.72	33.0	-8.3	
2.563	21.0	H	1.17	9.42	29.27	33.0	-3.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/16/2015								
Test Engineer: T Wang								
Configuration: EUT Only								
Mode: LTE Band 7 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	21.1	V	1.15	9.35	29.26	33.0	-3.7	
2.510	21.4	H	1.15	9.35	29.55	33.0	-3.5	
Mid Ch								
2.535	21.0	V	1.16	9.38	29.21	33.0	-3.8	
2.535	21.2	H	1.16	9.38	29.40	33.0	-3.6	
High Ch								
2.560	21.1	V	1.17	9.42	29.32	33.0	-3.7	
2.560	21.9	H	1.17	9.42	30.12	33.0	-2.9	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: T Wang Configuration: EUT Only Mode: LTE Band 7 16QAM 20MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	20.0	V	1.15	9.35	28.16	33.0	-4.8	
2.510	20.4	H	1.15	9.35	28.55	33.0	-4.5	
Mid Ch								
2.535	20.0	V	1.16	9.38	28.21	33.0	-4.8	
2.535	20.2	H	1.16	9.38	28.40	33.0	-4.6	
High Ch								
2.560	20.1	V	1.17	9.42	28.32	33.0	-4.7	
2.560	21.0	H	1.17	9.42	29.27	33.0	-3.7	
Rev. 10.24.13								

10.1.5. LTE BAND 12

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/19/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 12 QPSK 1.4MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole T416, 4ft 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										
699.70	19.42	V	0.55	0.0	18.87	21.02	34.77	36.99	-16.0	
699.70	0.88	H	0.55	0.0	0.33	2.48	34.77	36.99	-34.5	
Mid Ch										
707.50	19.37	V	0.55	0.0	18.82	20.97	34.77	36.99	-16.0	
707.50	1.36	H	0.55	0.0	0.81	2.96	34.77	36.99	-34.0	
High Ch										
715.30	19.97	V	0.55	0.0	19.42	21.57	34.77	36.99	-15.4	
715.30	1.23	H	0.55	0.0	0.68	2.83	34.77	36.99	-34.2	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limi (dBm)	EIRP Limi (dBm)	Margin EIRP (dB)	Notes
Low Ch										
699.70	18.4	V	0.55	0.0	17.86	20.01	34.77	36.99	-17.0	
699.70	0.0	H	0.55	0.0	-0.57	1.58	34.77	36.99	-35.4	
Mid Ch										
707.50	18.4	V	0.55	0.0	17.88	20.03	34.77	36.99	-17.0	
707.50	0.3	H	0.55	0.0	-0.22	1.93	34.77	36.99	-35.1	
High Ch										
715.30	18.7	V	0.55	0.0	18.12	20.27	34.77	36.99	-16.7	
715.30	0.4	H	0.55	0.0	-0.11	2.04	34.77	36.99	-35.0	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
700.50	19.22	V	0.55	0.0	18.67	20.82	34.77	36.99	-16.2	
700.50	1.38	H	0.55	0.0	0.83	2.98	34.77	36.99	-34.0	
Mid Ch										
707.50	19.73	V	0.55	0.0	19.18	21.33	34.77	36.99	-15.7	
707.50	1.13	H	0.55	0.0	0.58	2.73	34.77	36.99	-34.3	
High Ch										
714.50	19.96	V	0.55	0.0	19.41	21.56	34.77	36.99	-15.4	
714.50	0.84	H	0.55	0.0	0.29	2.44	34.77	36.99	-34.6	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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										
700.50	18.20	V	0.55	0.0	17.65	19.80	34.77	36.99	-17.2	
700.50	0.46	H	0.55	0.0	-0.09	2.06	34.77	36.99	-34.9	
Mid Ch										
707.50	18.83	V	0.55	0.0	18.28	20.43	34.77	36.99	-16.6	
707.50	0.20	H	0.55	0.0	-0.35	1.80	34.77	36.99	-35.2	
High Ch										
714.50	18.96	V	0.55	0.0	18.41	20.56	34.77	36.99	-16.4	
714.50	-0.16	H	0.55	0.0	-0.71	1.44	34.77	36.99	-35.6	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 5MHz BW Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
701.50	19.28	V	0.55	0.0	18.73	20.88	34.77	36.99	-16.1	
701.50	2.21	H	0.55	0.0	1.66	3.81	34.77	36.99	-33.2	
Mid Ch										
707.50	19.83	V	0.55	0.0	19.28	21.43	34.77	36.99	-15.6	
707.50	1.72	H	0.55	0.0	1.17	3.32	34.77	36.99	-33.7	
High Ch										
713.50	20.00	V	0.55	0.0	19.45	21.60	34.77	36.99	-15.4	
713.50	0.49	H	0.55	0.0	-0.06	2.09	34.77	36.99	-34.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
701.50	18.40	V	0.55	0.0	17.85	20.00	34.77	36.99	-17.0	
701.50	1.18	H	0.55	0.0	0.63	2.78	34.77	36.99	-34.2	
Mid Ch										
707.50	18.93	V	0.55	0.0	18.38	20.53	34.77	36.99	-16.5	
707.50	0.81	H	0.55	0.0	0.26	2.41	34.77	36.99	-34.6	
High Ch										
713.50	18.97	V	0.55	0.0	18.42	20.57	34.77	36.99	-16.4	
713.50	-0.40	H	0.55	0.0	-0.95	1.20	34.77	36.99	-35.8	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
704.00	19.99	V	0.55	0.0	19.44	21.59	34.77	36.99	-15.4	
704.00	2.08	H	0.55	0.0	1.53	3.68	34.77	36.99	-33.3	
Mid Ch										
707.50	19.51	V	0.55	0.0	18.96	21.11	34.77	36.99	-15.9	
707.50	2.02	H	0.55	0.0	1.47	3.62	34.77	36.99	-33.4	
High Ch										
711.00	19.87	V	0.55	0.0	19.32	21.47	34.77	36.99	-15.5	
711.00	1.76	H	0.55	0.0	1.21	3.36	34.77	36.99	-33.6	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
704.00	19.04	V	0.55	0.0	18.49	20.64	34.77	36.99	-16.4	
704.00	1.07	H	0.55	0.0	0.52	2.67	34.77	36.99	-34.3	
Mid Ch										
707.50	18.52	V	0.55	0.0	17.97	20.12	34.77	36.99	-16.9	
707.50	1.03	H	0.55	0.0	0.48	2.63	34.77	36.99	-34.4	
High Ch										
711.00	18.91	V	0.55	0.0	18.36	20.51	34.77	36.99	-16.5	
711.00	0.84	H	0.55	0.0	0.29	2.44	34.77	36.99	-34.6	
Rev. 10.24.13										

10.1.6. LTE BAND 13

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	19.63	V	0.55	0.0	19.08	21.23	34.77	36.99	-15.8	
779.50	4.42	H	0.55	0.0	3.87	6.02	34.77	36.99	-31.0	
Mid Ch										
782.00	19.45	V	0.55	0.0	18.90	21.05	34.77	36.99	-15.9	
782.00	4.43	H	0.55	0.0	3.88	6.03	34.77	36.99	-31.0	
High Ch										
784.50	19.82	V	0.55	0.0	19.27	21.42	34.77	36.99	-15.6	
784.50	5.89	H	0.55	0.0	5.34	7.49	34.77	36.99	-29.5	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 16QAM5MHz BW										
Test Equipment: Receiving: Sunoi T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	18.70	V	0.55	0.0	18.15	20.30	34.77	36.99	-16.7	
779.50	3.50	H	0.55	0.0	2.95	5.10	34.77	36.99	-31.9	
Mid Ch										
782.00	18.53	V	0.55	0.0	17.98	20.13	34.77	36.99	-16.9	
782.00	3.49	H	0.55	0.0	2.94	5.09	34.77	36.99	-31.9	
High Ch										
784.50	18.84	V	0.55	0.0	18.29	20.44	34.77	36.99	-16.6	
784.50	4.56	H	0.55	0.0	4.01	6.16	34.77	36.99	-30.8	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/20/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 13 QPSK 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	19.84	V	0.55	0.0	19.29	21.44	34.77	36.99	-15.5	
782.00	3.97	H	0.55	0.0	3.42	5.57	34.77	36.99	-31.4	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	18.87	V	0.55	0.0	18.32	20.47	34.77	36.99	-16.5	
782.00	2.99	H	0.55	0.0	2.44	4.59	34.77	36.99	-32.4	
Rev. 10.24.13										

10.1.7. LTE BAND 17

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 17 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	19.41	V	0.55	0.0	18.86	21.01	34.77	36.99	-16.0	
706.50	-1.68	H	0.55	0.0	-2.23	-0.08	34.77	36.99	-37.1	
Mid Ch										
710.00	19.82	V	0.55	0.0	19.27	21.42	34.77	36.99	-15.6	
710.00	-1.77	H	0.55	0.0	-2.32	-0.17	34.77	36.99	-37.2	
High Ch										
713.50	20.00	V	0.55	0.0	19.45	21.60	34.77	36.99	-15.4	
713.50	-1.86	H	0.55	0.0	-2.41	-0.26	34.77	36.99	-37.2	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/20/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 17 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	18.45	V	0.55	0.0	17.90	20.05	34.77	36.99	-16.9	
706.50	-2.60	H	0.55	0.0	-3.15	-1.00	34.77	36.99	-38.0	
Mid Ch										
710.00	18.85	V	0.55	0.0	18.30	20.45	34.77	36.99	-16.5	
710.00	-2.57	H	0.55	0.0	-3.12	-0.97	34.77	36.99	-38.0	
High Ch										
713.50	19.02	V	0.55	0.0	18.47	20.62	34.77	36.99	-16.4	
713.50	-2.76	H	0.55	0.0	-3.31	-1.16	34.77	36.99	-38.1	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/20/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 17 QPSK 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	19.97	V	0.55	0.0	19.42	21.57	34.77	36.99	-15.4	
710.00	-1.67	H	0.55	0.0	-2.22	-0.07	34.77	36.99	-37.1	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #:		15U20162								
Date:		6/20/2015								
Test Engineer:		E. Lee								
Configuration:		EUT only								
Mode:		LTE Band 17 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	18.92	V	0.55	0.0	18.37	20.52	34.77	36.99	-16.5	
710.00	-2.57	H	0.55	0.0	-3.12	-0.97	34.77	36.99	-38.0	
Rev. 10.24.13										

10.1.8. LTE BAND 25

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/22/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 25 QPSK 1.4MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	17.4	V	0.98	8.05	24.51	33.0	-8.5	
1.851	15.6	H	0.98	8.05	22.70	33.0	-10.3	
Mid Ch								
1.883	17.3	V	0.98	8.03	24.39	33.0	-8.6	
1.883	15.5	H	0.98	8.03	22.53	33.0	-10.5	
High Ch								
1.914	17.1	V	0.98	8.07	24.15	33.0	-8.9	
1.914	15.3	H	0.98	8.07	22.40	33.0	-10.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	16.4	V	0.98	8.05	23.48	33.0	-9.5	
1.851	15.6	H	0.98	8.05	22.70	33.0	-10.3	
Mid Ch								
1.883	16.3	V	0.98	8.03	23.39	33.0	-9.6	
1.883	14.5	H	0.98	8.03	21.53	33.0	-11.5	
High Ch								
1.914	16.1	V	0.98	8.07	23.18	33.0	-9.8	
1.914	14.4	H	0.98	8.07	21.50	33.0	-11.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/22/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 25 QPSK 3MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	16.7	V	0.98	8.05	23.76	33.0	-9.2	
1.852	17.0	H	0.98	8.05	24.10	33.0	-8.9	
Mid Ch								
1.883	16.6	V	0.98	8.03	23.69	33.0	-9.3	
1.883	17.3	H	0.98	8.03	24.31	33.0	-8.7	
High Ch								
1.914	16.9	V	0.98	8.07	23.95	33.0	-9.1	
1.914	17.4	H	0.98	8.07	24.49	33.0	-8.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 3MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	15.7	V	0.98	8.05	22.76	33.0	-10.2	
1.852	16.0	H	0.98	8.05	23.10	33.0	-9.9	
Mid Ch								
1.883	15.6	V	0.98	8.03	22.69	33.0	-10.3	
1.883	16.3	H	0.98	8.03	23.30	33.0	-9.7	
High Ch								
1.914	15.8	V	0.98	8.07	22.93	33.0	-10.1	
1.914	16.4	H	0.98	8.07	23.47	33.0	-9.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 5MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	16.1	V	0.98	8.05	23.13	33.0	-9.9	
1.853	17.1	H	0.98	8.05	24.15	33.0	-8.9	
Mid Ch								
1.883	15.4	V	0.98	8.03	22.45	33.0	-10.6	
1.883	17.4	H	0.98	8.03	24.48	33.0	-8.5	
High Ch								
1.913	16.1	V	0.98	8.06	23.14	33.0	-9.9	
1.913	17.2	H	0.98	8.06	24.29	33.0	-8.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 5MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	15.1	V	0.98	8.05	22.13	33.0	-10.9	
1.853	16.1	H	0.98	8.05	23.16	33.0	-9.8	
Mid Ch								
1.883	14.4	V	0.98	8.03	21.46	33.0	-11.5	
1.883	16.4	H	0.98	8.03	23.48	33.0	-9.5	
High Ch								
1.913	15.1	V	0.98	8.06	22.15	33.0	-10.8	
1.913	16.2	H	0.98	8.06	23.29	33.0	-9.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/22/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 25 QPSK 10MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	16.1	V	0.98	8.05	23.14	33.0	-9.9	
1.855	17.0	H	0.98	8.05	24.07	33.0	-8.9	
Mid Ch								
1.883	15.6	V	0.98	8.03	22.69	33.0	-10.3	
1.883	17.5	H	0.98	8.03	24.50	33.0	-8.5	
High Ch								
1.910	16.2	V	0.98	8.05	23.23	33.0	-9.8	
1.910	17.3	H	0.98	8.05	24.39	33.0	-8.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 10MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	15.1	V	0.98	8.05	22.15	33.0	-10.9	
1.855	16.0	H	0.98	8.05	23.07	33.0	-9.9	
Mid Ch								
1.883	14.6	V	0.98	8.03	21.69	33.0	-11.3	
1.883	16.5	H	0.98	8.03	23.51	33.0	-9.5	
High Ch								
1.910	15.2	V	0.98	8.05	22.24	33.0	-10.8	
1.910	16.3	H	0.98	8.05	23.38	33.0	-9.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	16.1	V	0.98	8.04	23.15	33.0	-9.8	
1.858	17.2	H	0.98	8.04	24.23	33.0	-8.8	
Mid Ch								
1.883	16.1	V	0.98	8.03	23.10	33.0	-9.9	
1.883	17.3	H	0.98	8.03	24.30	33.0	-8.7	
High Ch								
1.908	16.3	V	0.98	8.04	23.32	33.0	-9.7	
1.908	17.4	H	0.98	8.04	24.49	33.0	-8.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	15.1	V	0.98	8.04	22.16	33.0	-10.8	
1.858	16.2	H	0.98	8.04	23.25	33.0	-9.7	
Mid Ch								
1.883	15.1	V	0.98	8.03	22.19	33.0	-10.8	
1.883	16.3	H	0.98	8.03	23.31	33.0	-9.7	
High Ch								
1.908	15.3	V	0.98	8.04	22.32	33.0	-10.7	
1.908	16.4	H	0.98	8.04	23.49	33.0	-9.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/22/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 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	16.3	V	0.98	8.04	23.31	33.0	-9.7	
1.860	17.2	H	0.98	8.04	24.27	33.0	-8.7	
Mid Ch								
1.883	16.4	V	0.98	8.03	23.43	33.0	-9.6	
1.883	17.3	H	0.98	8.03	24.38	33.0	-8.6	
High Ch								
1.905	16.5	V	0.98	8.04	23.52	33.0	-9.5	
1.905	17.5	H	0.98	8.04	24.51	33.0	-8.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/22/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 25 16QAM 20MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 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	15.3	V	0.98	8.04	22.31	33.0	-10.7	
1.860	16.2	H	0.98	8.04	23.28	33.0	-9.7	
Mid Ch								
1.883	15.4	V	0.98	8.03	22.44	33.0	-10.6	
1.883	16.3	H	0.98	8.03	23.38	33.0	-9.6	
High Ch								
1.905	15.5	V	0.98	8.04	22.51	33.0	-10.5	
1.905	16.5	H	0.98	8.04	23.51	33.0	-9.5	
Rev. 10.24.13								

10.1.9. LTE BAND 26

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/23/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 QPSK 1.4MHz BW Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
814.70	19.60	V	0.62	0.0	18.98	21.13	38.45	40.60	-19.5	
814.70	-0.57	H	0.62	0.0	-1.19	0.96	38.45	40.60	-39.6	
Mid Ch										
819.00	19.56	V	0.62	0.0	18.94	21.09	38.45	40.60	-19.5	
819.00	2.50	H	0.62	0.0	1.88	4.03	38.45	40.60	-36.6	
High Ch										
823.30	19.70	V	0.62	0.0	19.08	21.23	38.45	40.60	-19.4	
823.30	-0.32	H	0.62	0.0	-0.94	1.21	38.45	40.60	-39.4	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/23/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunoi T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
814.70	18.63	V	0.62	0.0	18.01	20.16	38.45	40.60	-20.4	
814.70	-1.37	H	0.62	0.0	-1.99	0.16	38.45	40.60	-40.4	
Mid Ch										
819.00	18.66	V	0.62	0.0	18.04	20.19	38.45	40.60	-20.4	
819.00	2.50	H	0.62	0.0	1.88	4.03	38.45	40.60	-36.6	
High Ch										
823.30	18.74	V	0.62	0.0	18.12	20.27	38.45	40.60	-20.3	
823.30	-1.22	H	0.62	0.0	-1.84	0.31	38.45	40.60	-40.3	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/23/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 QPSK 3MHz BW Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
815.50	19.53	V	0.62	0.0	18.91	21.06	38.45	40.60	-19.5	
815.50	-0.37	H	0.62	0.0	-0.99	1.16	38.45	40.60	-39.4	
Mid Ch										
819.00	19.36	V	0.62	0.0	18.74	20.89	38.45	40.60	-19.7	
819.00	-0.17	H	0.62	0.0	-0.79	1.36	38.45	40.60	-39.2	
High Ch										
822.50	19.69	V	0.62	0.0	19.07	21.22	38.45	40.60	-19.4	
822.50	0.08	H	0.62	0.0	-0.54	1.61	38.45	40.60	-39.0	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/23/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 16QAM 3MHz BW										
Test Equipment: Receiving: Sunoi T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limi (dBm)	Margin (dB)	Notes
Low Ch										
815.50	18.53	V	0.62	0.0	17.91	20.06	38.45	40.60	-20.5	
815.50	-1.27	H	0.62	0.0	-1.89	0.26	38.45	40.60	-40.3	
Mid Ch										
819.00	18.46	V	0.62	0.0	17.84	19.99	38.45	40.60	-20.6	
819.00	-1.17	H	0.62	0.0	-1.79	0.36	38.45	40.60	-40.2	
High Ch										
822.50	18.74	V	0.62	0.0	18.12	20.27	38.45	40.60	-20.3	
822.50	-0.92	H	0.62	0.0	-1.54	0.61	38.45	40.60	-40.0	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/23/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
816.50	19.53	V	0.62	0.0	18.91	21.06	38.45	40.60	-19.5	
816.50	-0.37	H	0.62	0.0	-0.99	1.16	38.45	40.60	-39.4	
Mid Ch										
819.00	19.36	V	0.62	0.0	18.74	20.89	38.45	40.60	-19.7	
819.00	-0.37	H	0.62	0.0	-0.99	1.16	38.45	40.60	-39.4	
High Ch										
821.50	19.71	V	0.62	0.0	19.09	21.24	38.45	40.60	-19.4	
821.50	0.18	H	0.62	0.0	-0.44	1.71	38.45	40.60	-38.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/23/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 16QAM 5MHz BW										
Test Equipment: Receiving: Sunoi T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
816.50	18.53	V	0.62	0.0	17.91	20.06	38.45	40.60	-20.5	
816.50	-1.27	H	0.62	0.0	-1.89	0.26	38.45	40.60	-40.3	
Mid Ch										
819.00	18.36	V	0.62	0.0	17.74	19.89	38.45	40.60	-20.7	
819.00	-1.47	H	0.62	0.0	-2.09	0.06	38.45	40.60	-40.5	
High Ch										
821.50	18.74	V	0.62	0.0	18.12	20.27	38.45	40.60	-20.3	
821.50	-0.82	H	0.62	0.0	-1.44	0.71	38.45	40.60	-39.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/23/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 26 QPSK 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin EIRP (dB)	Notes
Mid Ch										
819.00	19.68	V	0.62	0.0	19.06	21.21	38.45	40.60	-19.4	
819.00	-0.87	H	0.62	0.0	-1.49	0.66	38.45	40.60	-39.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #:		15U20162								
Date:		6/23/2015								
Test Engineer:		E. Lee								
Configuration:		EUT only								
Mode:		LTE Band 26 16QAM 10MHz BW								
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Mid Ch										
819.00	18.73	V	0.62	0.0	18.11	20.26	38.45	40.60	-20.3	
819.00	-2.07	H	0.62	0.0	-2.69	-0.54	38.45	40.60	-41.1	
Rev. 10.24.13										

10.1.10. LTE BAND 30

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #:		15U20162						
Date:		6/16/2015						
Test Engineer:		R.Z						
Configuration:		EUT only						
Mode:		LTE Band 30 QPSK 5MHz BW						
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.308	13.1	V	1.15	9.37	21.30	24.0	-2.7	
2.308	12.1	H	1.15	9.37	20.29	24.0	-3.7	
Mid Ch								
2.310	12.9	V	1.16	9.37	21.13	24.0	-2.9	
2.310	12.2	H	1.16	9.37	20.38	24.0	-3.6	
High Ch								
2.313	12.9	V	1.17	9.37	21.05	24.0	-2.9	
2.313	12.2	H	1.17	9.37	20.42	24.0	-3.6	
Rev. 04.24.15								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #:		15U20162						
Date:		6/16/2015						
Test Engineer:		R.Z						
Configuration:		EUT only						
Mode:		LTE Band 30 16QAM 5MHz BW						
<u>Test Equipment:</u>								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.308	12.1	V	1.15	9.37	20.30	24.0	-3.7	
2.308	11.1	H	1.15	9.37	19.30	24.0	-4.7	
Mid Ch								
2.310	11.9	V	1.16	9.37	20.14	24.0	-3.9	
2.310	11.2	H	1.16	9.37	19.38	24.0	-4.6	
High Ch								
2.313	11.9	V	1.17	9.37	20.06	24.0	-3.9	
2.313	11.2	H	1.17	9.37	19.42	24.0	-4.6	
Rev. 04.24.15								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #:		15U20162						
Date:		6/18/2015						
Test Engineer:		R.Z						
Configuration:		EUT only						
Mode:		LTE Band 30 QPSK 10MHz BW						
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
2.310	13.1	V	1.15	9.37	21.28	24.0	-2.7	
2.310	12.4	H	1.15	9.37	20.62	24.0	-3.4	
Rev. 04.24.15								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 30 16QAM 10MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
2.310	12.1	V	1.15	9.37	20.34	24.0	-3.7	
2.310	11.4	H	1.15	9.37	19.59	24.0	-4.4	
Rev. 04.24.15								

10.1.11. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (5MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #:		15U20162						
Date:		6/17/2015						
Test Engineer:		R.Z						
Configuration:		EUT only						
Mode:		LTE Band 41 QPSK 5MHz BW						
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	20.2	V	1.15	9.33	28.38	33.0	-4.6	
2.499	19.3	H	1.15	9.33	27.46	33.0	-5.5	
Mid Ch								
2.593	20.7	V	1.16	9.47	29.01	33.0	-4.0	
2.593	21.0	H	1.16	9.47	29.34	33.0	-3.7	
High Ch								
2.688	19.2	V	1.17	9.78	27.83	33.0	-5.2	
2.688	20.5	H	1.17	9.78	29.15	33.0	-3.8	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 41 (5 MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 41 16QAM 5MHz BW								
<u>Test Equipment:</u>								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	19.3	V	1.15	9.33	27.48	33.0	-5.5	
2.499	18.4	H	1.15	9.33	26.56	33.0	-6.4	
Mid Ch								
2.593	19.8	V	1.16	9.47	28.11	33.0	-4.9	
2.593	20.0	H	1.16	9.47	28.34	33.0	-4.7	
High Ch								
2.688	18.4	V	1.17	9.78	27.03	33.0	-6.0	
2.688	19.5	H	1.17	9.78	28.15	33.0	-4.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 41 QPSK 10MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	20.8	V	1.15	9.33	28.98	33.0	4.0	
2.501	20.3	H	1.15	9.33	28.47	33.0	4.5	
Mid Ch								
2.593	21.2	V	1.16	9.47	29.51	33.0	3.5	
2.593	21.6	H	1.16	9.47	29.94	33.0	3.1	
High Ch								
2.685	19.8	V	1.17	9.77	28.42	33.0	4.6	
2.685	20.9	H	1.17	9.77	29.54	33.0	3.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 41 16QAM 10MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	20.0	V	1.15	9.33	28.18	33.0	-4.8	
2.501	19.4	H	1.15	9.33	27.57	33.0	-5.4	
Mid Ch								
2.593	20.3	V	1.16	9.47	28.61	33.0	-4.4	
2.593	20.6	H	1.16	9.47	28.94	33.0	-4.1	
High Ch								
2.685	18.9	V	1.17	9.77	27.52	33.0	-5.5	
2.685	19.9	H	1.17	9.77	28.54	33.0	-4.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 41 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	22.3	V	1.15	9.34	30.48	33.0	-2.5	
2.504	22.1	H	1.15	9.34	30.27	33.0	-2.7	
Mid Ch								
2.593	22.7	V	1.16	9.47	31.01	33.0	-2.0	
2.593	22.7	H	1.16	9.47	31.04	33.0	-2.0	
High Ch								
2.683	21.3	V	1.17	9.76	29.91	33.0	-3.1	
2.683	23.0	H	1.17	9.76	31.63	33.0	-1.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 41 16QAM 15MHz BW								
<u>Test Equipment:</u>								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	21.2	V	1.15	9.34	29.38	33.0	-3.6	
2.504	21.2	H	1.15	9.34	29.37	33.0	-3.6	
Mid Ch								
2.593	21.7	V	1.16	9.47	30.01	33.0	-3.0	
2.593	21.9	H	1.16	9.47	30.24	33.0	-2.8	
High Ch								
2.683	20.5	V	1.17	9.76	29.11	33.0	-3.9	
2.683	21.9	H	1.17	9.76	30.53	33.0	-2.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company: Project #: 15U20162 Date: 6/17/2015 Test Engineer: R.Z Configuration: EUT only Mode: LTE Band 41 QPSK 20MHz BW								
Test Equipment: Receiving: Horn T863, and Chamber H SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	22.0	V	1.15	9.34	30.19	33.0	-2.8	
2.506	22.9	H	1.15	9.34	31.07	33.0	-1.9	
Mid Ch								
2.593	20.5	V	1.16	9.47	28.81	33.0	-4.2	
2.593	23.9	H	1.16	9.47	32.24	33.0	-0.8	
High Ch								
2.680	20.9	V	1.17	9.76	29.51	33.0	-3.5	
2.680	23.7	H	1.17	9.76	32.33	33.0	-0.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber H								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: R.Z								
Configuration: EUT only								
Mode: LTE Band 41 16QAM 20MHz BW								
<u>Test Equipment:</u>								
Receiving: Horn T863, and Chamber H SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	21.1	V	1.15	9.34	29.29	33.0	-3.7	
2.506	21.9	H	1.15	9.34	30.07	33.0	-2.9	
Mid Ch								
2.593	19.6	V	1.16	9.47	27.91	33.0	-5.1	
2.593	22.9	H	1.16	9.47	31.24	33.0	-1.8	
High Ch								
2.680	20.0	V	1.17	9.76	28.61	33.0	-4.4	
2.680	22.7	H	1.17	9.76	31.33	33.0	-1.7	
Rev. 10.24.13								

10.2. RADIATED POWER (ERP & EIRP), MODEL: A1634 (UAT)

EIRP POWER FOR LTE BAND 2 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	1850.7	18.46	70.15
		1880.0	18.03	63.53
		1909.3	17.40	54.95
1.4MHz Band 16QAM	1/0	1850.7	17.76	59.70
		1880.0	17.54	56.75
		1909.3	16.97	49.77

EIRP POWER FOR LTE BAND 2 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0MHz Band QPSK	1/0	1851.5	18.46	70.15
		1880.0	17.89	61.52
		1908.5	17.62	57.81
3.0MHz Band 16QAM	1/0	1851.5	17.80	60.26
		1880.0	17.22	52.72
		1908.5	16.84	48.31

EIRP POWER FOR LTE BAND 2 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0MHz Band QPSK	1/0	1852.5	18.45	69.98
		1880.0	17.58	57.28
		1907.5	17.42	55.21
5.0MHz Band 16QAM	1/0	1852.5	17.68	58.61
		1880.0	17.09	51.17
		1907.5	16.47	44.36

EIRP POWER FOR LTE BAND 2 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0MHz Band QPSK	1/0	1855.0	18.43	69.66
		1880.0	17.44	55.46
		1905.0	17.50	56.23
10.0MHz Band 16QAM	1/0	1855.0	17.79	60.12
		1880.0	16.89	48.87
		1905.0	17.11	51.40

EIRP POWER FOR LTE BAND 2 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15MHz Band QPSK	1/0	1857.5	18.46	70.15
		1880.0	18.45	69.98
		1902.5	18.39	69.02
15MHz Band 16QAM	1/0	1857.5	17.85	60.95
		1880.0	17.89	61.52
		1902.5	17.82	60.53

EIRP POWER FOR LTE BAND 2 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0MHz Band QPSK	1/0	1860.0	18.45	69.98
		1880.0	18.47	70.31
		1900.0	18.44	69.82
20MHz Band 16QAM	1/0	1860.0	17.95	62.37
		1880.0	18.01	63.24
		1900.0	18.27	67.14

EIRP POWER FOR LTE BAND 4 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1710.7	20.55	113.50
		1732.5	20.03	100.69
		1754.3	20.56	113.76
1.4 MHZ BAND 16QAM	1/0	1710.7	19.55	90.16
		1732.5	19.13	81.85
		1754.3	19.56	90.36

EIRP POWER FOR LTE BAND 4 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1711.5	20.15	103.51
		1732.5	20.13	103.04
		1753.5	20.26	106.17
3.0 MHZ BAND 16QAM	1/0	1711.5	19.25	84.14
		1732.5	19.03	79.98
		1753.5	19.66	92.47

EIRP POWER FOR LTE BAND 4 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1712.5	20.45	110.92
		1732.5	19.73	93.97
		1752.5	20.36	108.64
5.0 MHZ BAND 16QAM	1/0	1712.5	19.45	88.10
		1732.5	18.83	76.38
		1752.5	19.26	84.33

EIRP POWER FOR LTE BAND 4 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1715.0	20.14	103.28
		1732.5	20.13	103.04
		1750.0	20.77	119.40
10.0 MHZ BAND 16QAM	1/0	1715.0	19.04	80.17
		1732.5	19.23	83.75
		1750.0	19.77	94.84

EIRP POWER FOR LTE BAND 4 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1717.5	20.74	118.58
		1732.5	20.53	112.98
		1747.5	20.57	114.02
15.0 MHZ BAND 16QAM	1/0	1717.5	19.74	94.19
		1732.5	19.43	87.70
		1747.5	19.57	90.57

EIRP POWER FOR LTE BAND 4 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1720.0	20.83	121.06
		1732.5	20.43	110.41
		1745.0	20.88	122.46
20.0 MHZ BAND 16QAM	1/0	1720.0	19.93	98.40
		1732.5	19.33	85.70
		1745.0	19.88	97.27

ERP POWER FOR LTE BAND 5 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	13.63	23.07
		836.5	14.27	26.73
		848.3	14.43	27.73
1.4MHz Band 16QAM	1/0	824.7	12.73	18.75
		836.5	13.27	21.23
		848.3	13.95	24.83

ERP POWER FOR LTE BAND 5 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	13.43	22.03
		836.5	14.43	27.73
		847.5	14.44	27.80
3.0 MHZ BAND 16QAM	1/0	825.5	12.53	17.91
		836.5	13.67	23.28
		847.5	13.74	23.66

ERP POWER FOR LTE BAND 5 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	14.03	25.29
		836.5	14.27	26.73
		846.5	14.24	26.55
5MHz Band 16QAM	1/0	826.5	13.13	20.56
		836.5	13.47	22.23
		846.5	13.44	22.08

ERP POWER FOR LTE BAND 5 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	13.83	24.15
		836.5	14.17	26.12
		844.0	14.44	27.80
10.0 MHZ BAND 16QAM	1/0	829.0	14.03	25.29
		836.5	13.82	24.10
		844.0	14.04	25.35

EIRP POWER FOR LTE BAND 7 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2502.5	21.25	133.35
		2535.0	21.41	138.36
		2567.5	21.13	129.72
5.0 MHZ BAND 16QAM	25/0	2502.5	20.35	108.39
		2535.0	20.91	123.31
		2567.5	20.13	103.04

EIRP POWER FOR LTE BAND 7 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2505.0	21.35	136.46
		2535.0	21.71	148.25
		2565.0	20.93	123.88
10.0 MHZ BAND 16QAM	50/0	2505.0	20.65	116.14
		2535.0	21.11	129.12
		2565.0	20.03	100.69

EIRP POWER FOR LTE BAND 7 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2507.5	21.45	139.64
		2535.0	21.71	148.25
		2562.5	20.82	120.78
15.0 MHZ BAND 16QAM	75/0	2507.5	20.45	110.92
		2535.0	20.71	117.76
		2562.5	19.82	95.94

EIRP POWER FOR LTE BAND 7 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2510.0	21.36	136.77
		2535.0	21.51	141.58
		2560.0	20.92	123.59
20.0 MHZ BAND 16QAM	100/0	2510.0	20.86	121.90
		2535.0	21.11	129.12
		2560.0	20.22	105.20

ERP POWER FOR LTE BAND 12 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	699.7	14.87	30.69
		707.5	14.52	28.31
		715.3	14.42	27.67
1.4MHz Band 16QAM	1/0	699.7	14.10	25.70
		707.5	14.10	25.70
		715.3	13.70	23.44

ERP POWER FOR LTE BAND 12 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHz BAND QPSK	1/0	700.5	14.77	29.99
		707.5	14.71	29.58
		714.5	14.79	30.13
3.0 MHz BAND 16QAM	1/0	700.5	14.07	25.53
		707.5	13.98	25.00
		714.5	13.99	25.06

ERP POWER FOR LTE BAND 12 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	701.5	14.17	26.12
		707.5	14.40	27.54
		713.5	13.89	24.49
5MHz Band 16QAM	1/0	701.5	13.17	20.75
		707.5	13.70	23.44
		713.5	13.09	20.37

ERP POWER FOR LTE BAND 12 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	704.0	14.83	30.41
		707.5	14.65	29.17
		711.0	14.80	30.20
10.0 MHZ BAND 16QAM	1/0	704.0	14.54	28.44
		707.5	14.12	25.82
		711.0	14.10	25.70

ERP POWER FOR LTE BAND 13 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	14.53	28.38
		782.0	14.55	28.51
		784.5	14.67	29.31
5.0 MHZ BAND 16QAM	1/0	779.5	13.53	22.54
		782.0	13.55	22.65
		784.5	13.67	23.28

ERP POWER FOR LTE BAND 13 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	14.45	27.86
10 MHZ BAND 16QAM	1/0		13.45	22.13

ERP POWER FOR LTE BAND 17 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	15.01	31.70
		710.0	15.02	31.77
		713.5	15.35	34.28
5MHz Band 16QAM	1/0	706.5	14.01	25.18
		710.0	14.02	25.23
		713.5	14.35	27.23

ERP POWER FOR LTE BAND 17 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	710.0	15.22	33.27
10.0 MHZ BAND 16QAM		710.0	14.22	26.42

EIRP POWER FOR LTE BAND 25 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1850.7	18.47	70.31
		1880.0	18.17	65.61
		1914.3	17.88	61.38
1.4 MHZ BAND 16QAM	1/0	1850.7	17.77	59.84
		1880.0	17.67	58.48
		1914.3	17.18	52.24

EIRP POWER FOR LTE BAND 25 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1851.5	18.37	68.71
		1880.0	17.87	61.24
		1913.5	17.78	59.98
3.0 MHZ BAND 16QAM	1/0	1851.5	17.57	57.15
		1880.0	17.17	52.12
		1913.5	17.18	52.24

EIRP POWER FOR LTE BAND 25 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1852.5	18.27	67.14
		1880.0	17.87	61.24
		1912.5	18.17	65.61
5.0 MHZ BAND 16QAM	1/0	1852.5	17.47	55.85
		1880.0	17.17	52.12
		1912.5	17.97	62.66

EIRP POWER FOR LTE BAND 25 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1855.0	18.16	65.46
		1880.0	17.07	50.93
		1910.0	17.66	58.34
10.0 MHZ BAND 16QAM	1/0	1855.0	17.56	57.02
		1880.0	16.37	43.35
		1910.0	17.06	50.82

EIRP POWER FOR LTE BAND 25 (15.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1857.5	18.36	68.55
		1880.0	18.37	68.71
		1907.5	18.45	69.98
15.0 MHZ BAND 16QAM	1/0	1857.5	17.56	57.02
		1880.0	17.67	58.48
		1907.5	17.80	60.26

EIRP POWER FOR LTE BAND 25 (20.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1860.0	18.39	69.02
		1880.0	18.42	69.50
		1905.0	18.45	69.98
20.0 MHZ BAND 16QAM	1/0	1860.0	17.79	60.12
		1880.0	17.85	60.95
		1905.0	17.85	60.95

ERP POWER FOR LTE BAND 26 (1.4MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	814.7	13.66	23.23
		819.0	13.79	23.93
		823.3	13.87	24.38
1.4 MHZ BAND 16QAM	1/0	814.7	12.66	18.45
		819.0	12.39	17.34
		823.3	13.27	21.23

ERP POWER FOR LTE BAND 26 (3.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	815.5	13.76	23.77
		819.0	13.19	20.84
		822.5	13.77	23.82
3.0 MHZ BAND 16QAM	1/0	815.5	12.76	18.88
		819.0	12.19	16.56
		822.5	12.77	18.92

ERP POWER FOR LTE BAND 26 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	816.5	13.59	22.86
		819.0	13.19	20.84
		821.5	13.70	23.44
5.0 MHZ BAND 16QAM	1/0	816.5	12.60	18.20
		819.0	12.19	16.56
		821.5	12.71	18.66

ERP POWER FOR LTE BAND 26 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	13.89	24.49
10.0 MHZ BAND 16QAM	1/0	819.0	12.99	19.91

EIRP POWER FOR LTE BAND 30 (5.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	2307.5	21.14	130.02
		2310.0	20.87	122.18
		2312.5	21.00	125.89
5MHz Band 16QAM	1/0	2307.5	20.14	103.28
		2310.0	19.90	97.72
		2312.5	20.10	102.33

EIRP POWER FOR LTE BAND 30 (10.0MHz BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	2310.0	21.12	129.42
10.0 MHZ BAND 16QAM		2310.0	20.18	104.23

EIRP POWER FOR LTE BAND 41 (5.0MHz BANDWIDTH) (FCC)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2498.5	18.33	68.08
		2593.0	18.21	66.22
		2687.5	17.01	50.23
5.0 MHZ BAND 16QAM	25/0	2498.5	17.03	50.47
		2593.0	17.11	51.40
		2687.5	15.91	38.99

EIRP POWER FOR LTE BAND 41 (10.0MHz BANDWIDTH) (FCC)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2501.0	18.23	66.53
		2593.0	18.11	64.71
		2685.0	17.60	57.54
10.0 MHZ BAND 16QAM	50/0	2501.0	17.13	51.64
		2593.0	17.01	50.23
		2685.0	16.90	48.98

EIRP POWER FOR LTE BAND 41(15.0MHz BANDWIDTH) (FCC)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2503.5	18.37	68.71
		2593.0	18.21	66.22
		2682.5	18.39	69.02
15.0 MHZ BAND 16QAM	75/0	2503.5	17.24	52.97
		2593.0	17.21	52.60
		2682.5	17.49	56.10

EIRP POWER FOR LTE BAND 41 (20.0MHz BANDWIDTH) (FCC)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2506.0	18.47	70.31
		2593.0	18.41	69.34
		2680.0	18.14	65.16
20.0 MHZ BAND 16QAM	100/0	2506.0	17.24	52.97
		2593.0	17.61	57.68
		2680.0	17.39	54.83

10.2.1. LTE BAND 2

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

High Frequency Fundamental Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/17/2015						
Test Engineer:		J. Liu						
Configuration:		EUT only						
Mode:		LTE Band 2 QPSK 1.4MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	11.0	V	0.98	8.05	18.11	33.0	-14.9	
1.851	11.4	H	0.98	8.05	18.46	33.0	-14.5	
Mid Ch								
1.880	8.6	V	0.98	8.03	15.67	33.0	-17.3	
1.880	11.0	H	0.98	8.03	18.03	33.0	-15.0	
High Ch								
1.909	9.0	V	0.98	8.05	16.02	33.0	-17.0	
1.909	10.3	H	0.98	8.05	17.40	33.0	-15.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: J. Liu								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.4	V	0.98	8.05	17.51	33.0	-15.5	
1.851	10.7	H	0.98	8.05	17.76	33.0	-15.2	
Mid Ch								
1.880	8.2	V	0.98	8.03	15.20	33.0	-17.8	
1.880	10.5	H	0.98	8.03	17.54	33.0	-15.5	
High Ch								
1.909	8.4	V	0.98	8.05	15.47	33.0	-17.5	
1.909	9.9	H	0.98	8.05	16.97	33.0	-16.0	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/17/2015 Test Engineer: J. Liu Configuration: EUT only Mode: LTE Band 2 QPSK 3MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 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	10.7	V	0.98	8.05	17.81	33.0	-15.2	
1.852	11.4	H	0.98	8.05	18.46	33.0	-14.5	
Mid Ch								
1.880	9.0	V	0.98	8.03	16.07	33.0	-16.9	
1.880	10.8	H	0.98	8.03	17.89	33.0	-15.1	
High Ch								
1.909	9.8	V	0.98	8.05	16.91	33.0	-16.1	
1.909	10.6	H	0.98	8.05	17.62	33.0	-15.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: J. Liu								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 3MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	9.9	V	0.98	8.05	16.95	33.0	-16.1	
1.852	10.7	H	0.98	8.05	17.80	33.0	-15.2	
Mid Ch								
1.880	8.4	V	0.98	8.03	15.47	33.0	-17.5	
1.880	10.2	H	0.98	8.03	17.22	33.0	-15.8	
High Ch								
1.909	9.3	V	0.98	8.05	16.35	33.0	-16.7	
1.909	9.8	H	0.98	8.05	16.84	33.0	-16.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/17/2015						
Test Engineer:		J. Liu						
Configuration:		EUT only						
Mode:		LTE Band 2 QPSK 5MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.6	V	0.98	8.05	17.71	33.0	-15.3	
1.853	11.4	H	0.98	8.05	18.45	33.0	-14.6	
Mid Ch								
1.880	8.9	V	0.98	8.03	15.93	33.0	-17.1	
1.880	10.5	H	0.98	8.03	17.58	33.0	-15.4	
High Ch								
1.908	9.7	V	0.98	8.04	16.74	33.0	-16.3	
1.908	10.4	H	0.98	8.04	17.42	33.0	-15.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/17/2015						
Test Engineer:		J. Liu						
Configuration:		EUT only						
Mode:		LTE Band 2 16QAM 5MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.0	V	0.98	8.05	17.04	33.0	-16.0	
1.853	10.6	H	0.98	8.05	17.68	33.0	-15.3	
Mid Ch								
1.880	8.2	V	0.98	8.03	15.24	33.0	-17.8	
1.880	10.0	H	0.98	8.03	17.09	33.0	-15.9	
High Ch								
1.908	9.2	V	0.98	8.04	16.23	33.0	-16.8	
1.908	9.4	H	0.98	8.04	16.47	33.0	-16.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/17/2015						
Test Engineer:		J. Liu						
Configuration:		EUT only						
Mode:		LTE Band 2 QPSK 10MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.7	V	0.98	8.05	17.81	33.0	-15.2	
1.855	11.4	H	0.98	8.05	18.43	33.0	-14.6	
Mid Ch								
1.880	9.1	V	0.98	8.03	16.15	33.0	-16.9	
1.880	10.4	H	0.98	8.03	17.44	33.0	-15.6	
High Ch								
1.905	9.9	V	0.98	8.04	16.94	33.0	-16.1	
1.905	10.4	H	0.98	8.04	17.50	33.0	-15.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/17/2015						
Test Engineer:		J. Liu						
Configuration:		EUT only						
Mode:		LTE Band 2 16QAM 10MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.0	V	0.98	8.05	17.05	33.0	-16.0	
1.855	10.7	H	0.98	8.05	17.79	33.0	-15.2	
Mid Ch								
1.880	8.3	V	0.98	8.03	15.37	33.0	-17.6	
1.880	9.8	H	0.98	8.03	16.89	33.0	-16.1	
High Ch								
1.905	9.5	V	0.98	8.04	16.56	33.0	-16.4	
1.905	10.1	H	0.98	8.04	17.11	33.0	-15.9	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: J. Liu								
Configuration: EUT only								
Mode: LTE Band 2 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.9	V	0.98	8.04	18.00	33.0	-15.0	
1.858	11.4	H	0.98	8.04	18.46	33.0	-14.5	
Mid Ch								
1.880	10.6	V	0.98	8.03	17.67	33.0	-15.3	
1.880	11.4	H	0.98	8.03	18.45	33.0	-14.6	
High Ch								
1.903	11.3	V	0.98	8.03	18.35	33.0	-14.7	
1.903	11.3	H	0.98	8.03	18.39	33.0	-14.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: J. Liu								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.0	V	0.98	8.04	17.10	33.0	-15.9	
1.858	10.8	H	0.98	8.04	17.85	33.0	-15.1	
Mid Ch								
1.880	10.0	V	0.98	8.03	17.07	33.0	-15.9	
1.880	10.8	H	0.98	8.03	17.89	33.0	-15.1	
High Ch								
1.903	10.6	V	0.98	8.03	17.65	33.0	-15.4	
1.903	10.8	H	0.98	8.03	17.82	33.0	-15.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: J. Liu								
Configuration: EUT only								
Mode: LTE Band 2 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.8	V	0.98	8.04	17.83	33.0	-15.2	
1.860	11.4	H	0.98	8.04	18.45	33.0	-14.5	
Mid Ch								
1.880	11.0	V	0.98	8.03	18.04	33.0	-15.0	
1.880	11.4	H	0.98	8.03	18.47	33.0	-14.5	
High Ch								
1.900	11.4	V	0.98	8.02	18.44	33.0	-14.6	
1.900	11.3	H	0.98	8.02	18.34	33.0	-14.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: J. Liu								
Configuration: EUT only								
Mode: LTE Band 2 16QAM 20MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.2	V	0.98	8.04	17.30	33.0	-15.7	
1.860	10.9	H	0.98	8.04	17.95	33.0	-15.0	
Mid Ch								
1.880	10.2	V	0.98	8.03	17.27	33.0	-15.7	
1.880	11.0	H	0.98	8.03	18.01	33.0	-15.0	
High Ch								
1.900	11.2	V	0.98	8.02	18.27	33.0	-14.7	
1.900	10.8	H	0.98	8.02	17.79	33.0	-15.2	
Rev. 10.24.13								

10.2.2. LTE BAND 4

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 4 QPSK 1.4MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 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								
1.7107	10.6	V	0.95	8.27	17.92	30.0	-12.1	
1.7107	13.2	H	0.95	8.27	20.55	30.0	-9.4	
Mid Ch								
1.7325	10.2	V	0.95	8.23	17.43	30.0	-12.6	
1.7325	12.8	H	0.95	8.23	20.03	30.0	-10.0	
High Ch								
1.7543	10.3	V	0.95	8.18	17.51	30.0	-12.5	
1.7543	13.3	H	0.95	8.18	20.56	30.0	-9.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 1.4MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	9.7	V	0.95	8.27	17.02	30.0	-13.0	
1.711	12.2	H	0.95	8.27	19.55	30.0	-10.4	
Mid Ch								
1.733	9.3	V	0.95	8.23	16.53	30.0	-13.5	
1.733	11.9	H	0.95	8.23	19.13	30.0	-10.9	
High Ch								
1.754	9.4	V	0.95	8.18	16.61	30.0	-13.4	
1.754	12.3	H	0.95	8.18	19.56	30.0	-10.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 3MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
1.7115	10.5	V	0.95	8.27	17.82	30.0	-12.2	
1.7115	12.8	H	0.95	8.27	20.15	30.0	-9.8	
Mid Ch								
1.7325	9.8	V	0.95	8.23	17.03	30.0	-13.0	
1.7325	12.9	H	0.95	8.23	20.13	30.0	-9.9	
High Ch								
1.7535	9.5	V	0.95	8.18	16.71	30.0	-13.3	
1.7535	13.0	H	0.95	8.18	20.26	30.0	-9.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/19/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 4 16QAM 3MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	9.6	V	0.95	8.27	16.92	30.0	-13.1	
1.712	11.9	H	0.95	8.27	19.25	30.0	-10.7	
Mid Ch								
1.733	8.7	V	0.95	8.23	15.93	30.0	-14.1	
1.733	11.8	H	0.95	8.23	19.03	30.0	-11.0	
High Ch								
1.754	8.6	V	0.95	8.18	15.81	30.0	-14.2	
1.754	12.4	H	0.95	8.18	19.66	30.0	-10.3	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/19/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 4 QPSK 5MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
1.7125	11.0	V	0.95	8.27	18.32	30.0	-11.7	
1.7125	13.1	H	0.95	8.27	20.45	30.0	-9.6	
Mid Ch								
1.7325	9.9	V	0.95	8.23	17.13	30.0	-12.9	
1.7325	12.5	H	0.95	8.23	19.73	30.0	-10.3	
High Ch								
1.7525	9.8	V	0.95	8.18	17.01	30.0	-13.0	
1.7525	13.1	H	0.95	8.18	20.36	30.0	-9.6	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 4 16QAM 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 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	10.1	V	0.95	8.27	17.42	30.0	-12.6	
1.713	12.1	H	0.95	8.27	19.45	30.0	-10.6	
Mid Ch								
1.733	9.1	V	0.95	8.23	16.33	30.0	-13.7	
1.733	11.6	H	0.95	8.23	18.83	30.0	-11.2	
High Ch								
1.753	8.9	V	0.95	8.18	16.11	30.0	-13.9	
1.753	12.0	H	0.95	8.18	19.26	30.0	-10.7	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 10MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.6	V	0.95	8.26	17.91	30.0	-12.1	
1.715	12.8	H	0.95	8.26	20.14	30.0	-9.9	
Mid Ch								
1.7325	10.3	V	0.95	8.23	17.53	30.0	-12.5	
1.7325	12.9	H	0.95	8.23	20.13	30.0	-9.9	
High Ch								
1.750	11.0	V	0.95	8.19	18.22	30.0	-11.8	
1.750	13.5	H	0.95	8.19	20.77	30.0	-9.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 10MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.0	V	0.95	8.26	17.31	30.0	-12.7	
1.715	11.7	H	0.95	8.26	19.04	30.0	-11.0	
Mid Ch								
1.733	9.6	V	0.95	8.23	16.83	30.0	-13.2	
1.733	12.0	H	0.95	8.23	19.23	30.0	-10.8	
High Ch								
1.750	10.1	V	0.95	8.19	17.32	30.0	-12.7	
1.750	12.5	H	0.95	8.19	19.77	30.0	-10.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
1.7175	12.2	V	0.95	8.26	19.51	30.0	-10.5	
1.7175	13.4	H	0.95	8.26	20.74	30.0	-9.3	
Mid Ch								
1.7325	12.1	V	0.95	8.23	19.33	30.0	-10.7	
1.7325	13.3	H	0.95	8.23	20.53	30.0	-9.5	
High Ch								
1.7475	12.0	V	0.95	8.19	19.22	30.0	-10.8	
1.7475	13.3	H	0.95	8.19	20.57	30.0	-9.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	11.2	V	0.95	8.26	18.51	30.0	-11.5	
1.718	12.4	H	0.95	8.26	19.74	30.0	-10.3	
Mid Ch								
1.733	11.0	V	0.95	8.23	18.23	30.0	-11.8	
1.733	12.2	H	0.95	8.23	19.43	30.0	-10.6	
High Ch								
1.748	10.9	V	0.95	8.19	18.12	30.0	-11.9	
1.748	12.3	H	0.95	8.19	19.57	30.0	-10.4	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	12.0	V	0.95	8.25	19.30	30.0	-10.7	
1.720	13.5	H	0.95	8.25	20.83	30.0	-9.2	
Mid Ch								
1.7325	11.8	V	0.95	8.23	19.03	30.0	-11.0	
1.7325	13.2	H	0.95	8.23	20.43	30.0	-9.6	
High Ch								
1.745	11.7	V	0.95	8.20	18.93	30.0	-11.1	
1.745	13.6	H	0.95	8.20	20.88	30.0	-9.1	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 4 16QAM 20MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	11.1	V	0.95	8.25	18.40	30.0	-11.6	
1.720	12.6	H	0.95	8.25	19.93	30.0	-10.1	
Mid Ch								
1.733	11.0	V	0.95	8.23	18.23	30.0	-11.8	
1.733	12.1	H	0.95	8.23	19.33	30.0	-10.7	
High Ch								
1.745	10.8	V	0.95	8.20	18.03	30.0	-12.0	
1.745	12.6	H	0.95	8.20	19.88	30.0	-10.1	
Rev. 10.24.13								

10.2.3. LTE BAND 5

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/15/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 5 QPSK 1.4MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole T416, 4ft 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	14.25	V	0.6	0.0	13.63	15.78	38.45	40.60	-24.8	
824.70	-4.23	H	0.6	0.0	-4.85	-2.70	38.45	40.60	-43.3	
Mid Ch										
836.50	14.88	V	0.6	0.0	14.27	16.42	38.45	40.60	-24.2	
836.50	-3.82	H	0.6	0.0	-4.44	-2.29	38.45	40.60	-42.9	
High Ch										
848.30	15.05	V	0.6	0.0	14.43	16.58	38.45	40.60	-24.0	
848.30	-1.60	H	0.6	0.0	-2.22	-0.07	38.45	40.60	-40.7	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/15/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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	13.35	V	0.6	0.0	12.73	14.88	38.45	40.60	-25.7	
824.70	-5.13	H	0.6	0.0	-5.75	-3.60	38.45	40.60	-44.2	
Mid Ch										
836.50	13.88	V	0.6	0.0	13.27	15.42	38.45	40.60	-25.2	
836.50	-4.72	H	0.6	0.0	-5.34	-3.19	38.45	40.60	-43.8	
High Ch										
848.30	14.57	V	0.6	0.0	13.95	16.10	38.45	40.60	-24.5	
848.30	-2.60	H	0.6	0.0	-3.22	-1.07	38.45	40.60	-41.7	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/15/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	14.05	V	0.6	0.0	13.43	15.58	38.45	40.60	-25.0	
825.50	-3.73	H	0.6	0.0	-4.35	-2.20	38.45	40.60	-42.8	
Mid Ch										
836.50	15.04	V	0.6	0.0	14.43	16.58	38.45	40.60	-24.0	
836.50	-4.42	H	0.6	0.0	-5.04	-2.89	38.45	40.60	-43.5	
High Ch										
847.50	15.06	V	0.6	0.0	14.44	16.59	38.45	40.60	-24.0	
847.50	-1.90	H	0.6	0.0	-2.52	-0.37	38.45	40.60	-41.0	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/15/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	13.15	V	0.6	0.0	12.53	14.68	38.45	40.60	-25.9	
825.50	-4.73	H	0.6	0.0	-5.35	-3.20	38.45	40.60	-43.8	
Mid Ch										
836.50	14.28	V	0.6	0.0	13.67	15.82	38.45	40.60	-24.8	
836.50	-5.32	H	0.6	0.0	-5.94	-3.79	38.45	40.60	-44.4	
High Ch										
847.50	14.36	V	0.6	0.0	13.74	15.89	38.45	40.60	-24.7	
847.50	-2.80	H	0.6	0.0	-3.42	-1.27	38.45	40.60	-41.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/15/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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	14.65	V	0.6	0.0	14.03	16.18	38.45	40.60	-24.4	
826.50	-3.03	H	0.6	0.0	-3.65	-1.50	38.45	40.60	-42.1	
Mid Ch										
836.50	14.88	V	0.6	0.0	14.27	16.42	38.45	40.60	-24.2	
836.50	-4.32	H	0.6	0.0	-4.94	-2.79	38.45	40.60	-43.4	
High Ch										
846.50	14.86	V	0.6	0.0	14.24	16.39	38.45	40.60	-24.2	
846.50	-2.20	H	0.6	0.0	-2.82	-0.67	38.45	40.60	-41.3	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/15/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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	13.75	V	0.6	0.0	13.13	15.28	38.45	40.60	-25.3	
826.50	-3.93	H	0.6	0.0	-4.55	-2.40	38.45	40.60	-43.0	
Mid Ch										
836.50	14.08	V	0.6	0.0	13.47	15.62	38.45	40.60	-25.0	
836.50	-5.22	H	0.6	0.0	-5.84	-3.69	38.45	40.60	-44.3	
High Ch										
846.50	14.06	V	0.6	0.0	13.44	15.59	38.45	40.60	-25.0	
846.50	-3.19	H	0.6	0.0	-3.81	-1.66	38.45	40.60	-42.3	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/15/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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	14.45	V	0.6	0.0	13.83	15.98	38.45	40.60	-24.6	
829.00	-4.73	H	0.6	0.0	-5.35	-3.20	38.45	40.60	-43.8	
Mid Ch										
836.50	14.78	V	0.6	0.0	14.17	16.32	38.45	40.60	-24.3	
836.50	1.28	H	0.6	0.0	0.66	2.81	38.45	40.60	-37.8	
High Ch										
844.00	15.06	V	0.6	0.0	14.44	16.59	38.45	40.60	-24.0	
844.00	-3.20	H	0.6	0.0	-3.82	-1.67	38.45	40.60	-42.3	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/15/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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	14.65	V	0.6	0.0	14.03	16.18	38.45	40.60	-24.4	
829.00	-3.73	H	0.6	0.0	-4.35	-2.20	38.45	40.60	-42.8	
Mid Ch										
836.50	14.44	V	0.6	0.0	13.82	15.97	38.45	40.60	-24.6	
836.50	-3.82	H	0.6	0.0	-4.44	-2.29	38.45	40.60	-42.9	
High Ch										
844.00	14.66	V	0.6	0.0	14.04	16.19	38.45	40.60	-24.4	
844.00	-2.20	H	0.6	0.0	-2.82	-0.67	38.45	40.60	-41.3	
Rev. 10.24.13										

10.2.4. LTE BAND 7

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/17/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 7 QPSK 5MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	13.1	V	1.15	9.34	21.25	33.0	-11.8	
2.503	11.6	H	1.15	9.34	19.74	33.0	-13.3	
Mid Ch								
2.535	13.2	V	1.16	9.38	21.41	33.0	-11.6	
2.535	12.3	H	1.16	9.38	20.50	33.0	-12.5	
High Ch								
2.568	12.9	V	1.17	9.43	21.13	33.0	-11.9	
2.568	11.9	H	1.17	9.43	20.18	33.0	-12.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/16/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 7 16QAM 5MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	12.2	V	1.15	9.34	20.35	33.0	-12.7	
2.503	10.6	H	1.15	9.34	18.74	33.0	-14.3	
Mid Ch								
2.535	12.7	V	1.16	9.38	20.91	33.0	-12.1	
2.535	11.2	H	1.16	9.38	19.40	33.0	-13.6	
High Ch								
2.568	11.9	V	1.17	9.43	20.13	33.0	-12.9	
2.568	10.8	H	1.17	9.43	19.08	33.0	-13.9	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 7 QPSK 10MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	13.2	V	1.15	9.34	21.35	33.0	-11.6	
2.505	12.4	H	1.15	9.34	20.54	33.0	-12.5	
Mid Ch								
2.535	13.5	V	1.16	9.38	21.71	33.0	-11.3	
2.535	12.6	H	1.16	9.38	20.80	33.0	-12.2	
High Ch								
2.565	12.7	V	1.17	9.43	20.93	33.0	-12.1	
2.565	11.8	H	1.17	9.43	20.08	33.0	-12.9	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/16/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 7 16QAM 10MHz BW								
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	12.5	V	1.15	9.34	20.65	33.0	-12.3	
2.505	11.5	H	1.15	9.34	19.64	33.0	-13.4	
Mid Ch								
2.535	12.9	V	1.16	9.38	21.11	33.0	-11.9	
2.535	12.1	H	1.16	9.38	20.30	33.0	-12.7	
High Ch								
2.565	11.8	V	1.17	9.43	20.03	33.0	-13.0	
2.565	10.9	H	1.17	9.43	19.18	33.0	-13.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: T Wang								
Configuration: EUT Only								
Mode: LTE Band 7 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	13.3	V	1.15	9.34	21.45	33.0	-11.5	
2.508	11.8	H	1.15	9.34	19.94	33.0	-13.1	
Mid Ch								
2.535	13.5	V	1.16	9.38	21.71	33.0	-11.3	
2.535	12.6	H	1.16	9.38	20.80	33.0	-12.2	
High Ch								
2.563	12.6	V	1.17	9.42	20.82	33.0	-12.2	
2.563	11.9	H	1.17	9.42	20.17	33.0	-12.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/16/2015								
Test Engineer: T Wang								
Configuration: EUT Only								
Mode: LTE Band 7 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	12.3	V	1.15	9.34	20.45	33.0	-12.5	
2.508	10.8	H	1.15	9.34	18.94	33.0	-14.1	
Mid Ch								
2.535	12.5	V	1.16	9.38	20.71	33.0	-12.3	
2.535	11.6	H	1.16	9.38	19.80	33.0	-13.2	
High Ch								
2.563	11.6	V	1.17	9.42	19.82	33.0	-13.2	
2.563	10.9	H	1.17	9.42	19.17	33.0	-13.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/17/2015								
Test Engineer: T Wang								
Configuration: EUT Only								
Mode: LTE Band 7 QPSK 20MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	13.2	V	1.15	9.35	21.36	33.0	-11.6	
2.510	11.5	H	1.15	9.35	19.65	33.0	-13.4	
Mid Ch								
2.535	13.3	V	1.16	9.38	21.51	33.0	-11.5	
2.535	12.5	H	1.16	9.38	20.70	33.0	-12.3	
High Ch								
2.560	12.7	V	1.17	9.42	20.92	33.0	-12.1	
2.560	11.5	H	1.17	9.42	19.77	33.0	-13.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/16/2015								
Test Engineer: T Wang								
Configuration: EUT Only								
Mode: LTE Band 7 16QAM 20MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	12.7	V	1.15	9.35	20.86	33.0	-12.1	
2.510	10.7	H	1.15	9.35	18.85	33.0	-14.2	
Mid Ch								
2.535	12.9	V	1.16	9.38	21.11	33.0	-11.9	
2.535	11.6	H	1.16	9.38	19.80	33.0	-13.2	
High Ch								
2.560	12.0	V	1.17	9.42	20.22	33.0	-12.8	
2.560	10.6	H	1.17	9.42	18.87	33.0	-14.1	
Rev. 10.24.13								

10.2.5. LTE BAND 12

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/16/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 12 QPSK 1.4MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole T416, 4ft 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										
699.70	15.42	V	0.55	0.0	14.87	17.02	34.77	36.99	-20.0	
699.70	-2.62	H	0.55	0.0	-3.17	-1.02	34.77	36.99	-38.0	
Mid Ch										
707.50	15.07	V	0.55	0.0	14.52	16.67	34.77	36.99	-20.3	
707.50	-2.67	H	0.55	0.0	-3.22	-1.07	34.77	36.99	-38.1	
High Ch										
715.30	14.97	V	0.55	0.0	14.42	16.57	34.77	36.99	-20.4	
715.30	-2.66	H	0.55	0.0	-3.21	-1.06	34.77	36.99	-38.1	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limi (dBm)	EIRP Limi (dBm)	Margin EIRP (dB)	Notes
Low Ch										
699.70	14.6	V	0.55	0.0	14.1	16.22	34.77	36.99	-20.8	
699.70	-3.5	H	0.55	0.0	-4.1	-1.92	34.77	36.99	-38.9	
Mid Ch										
707.50	14.7	V	0.55	0.0	14.1	16.27	34.77	36.99	-20.7	
707.50	-3.6	H	0.55	0.0	-4.1	-1.97	34.77	36.99	-39.0	
High Ch										
715.30	14.3	V	0.55	0.0	13.7	15.87	34.77	36.99	-21.1	
715.30	-3.9	H	0.55	0.0	-4.4	-2.26	34.77	36.99	-39.3	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
700.50	15.32	V	0.55	0.0	14.77	16.92	34.77	36.99	-20.1	
700.50	-2.12	H	0.55	0.0	-2.67	-0.52	34.77	36.99	-37.5	
Mid Ch										
707.50	15.26	V	0.55	0.0	14.71	16.86	34.77	36.99	-20.1	
707.50	-2.67	H	0.55	0.0	-3.22	-1.07	34.77	36.99	-38.1	
High Ch										
714.50	15.34	V	0.55	0.0	14.79	16.94	34.77	36.99	-20.0	
714.50	-3.46	H	0.55	0.0	-4.01	-1.86	34.77	36.99	-38.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft 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										
700.50	14.62	V	0.55	0.0	14.07	16.22	34.77	36.99	-20.8	
700.50	-2.82	H	0.55	0.0	-3.37	-1.22	34.77	36.99	-38.2	
Mid Ch										
707.50	14.53	V	0.55	0.0	13.98	16.13	34.77	36.99	-20.9	
707.50	-3.37	H	0.55	0.0	-3.92	-1.77	34.77	36.99	-38.8	
High Ch										
714.50	14.54	V	0.55	0.0	13.99	16.14	34.77	36.99	-20.8	
714.50	-3.16	H	0.55	0.0	-3.71	-1.56	34.77	36.99	-38.6	
Rev. 10.24.13										

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

High Frequency Substitution Measurement

UL Fremont Radiated Chamber G

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

15U20162

6/16/2015

E. Lee

EUT only

LTE Band 12 QPSK 5MHz BW

Test Equipment:

Receiving: Sunol T899, and Chamber G Cable

Substitution: DipoleT416, 4ft 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										
701.50	14.72	V	0.55	0.0	14.17	16.32	34.77	36.99	-20.7	
701.50	-5.72	H	0.55	0.0	-6.27	-4.12	34.77	36.99	-41.1	
Mid Ch										
707.50	14.95	V	0.55	0.0	14.40	16.55	34.77	36.99	-20.4	
707.50	-5.17	H	0.55	0.0	-5.72	-3.57	34.77	36.99	-40.6	
High Ch										
713.50	14.44	V	0.55	0.0	13.89	16.04	34.77	36.99	-20.9	
713.50	-5.15	H	0.55	0.0	-5.70	-3.55	34.77	36.99	-40.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
701.50	13.72	V	0.55	0.0	13.17	15.32	34.77	36.99	-21.7	
701.50	-6.32	H	0.55	0.0	-6.87	-4.72	34.77	36.99	-41.7	
Mid Ch										
707.50	14.25	V	0.55	0.0	13.70	15.85	34.77	36.99	-21.1	
707.50	-5.87	H	0.55	0.0	-6.42	-4.27	34.77	36.99	-41.3	
High Ch										
713.50	13.64	V	0.55	0.0	13.09	15.24	34.77	36.99	-21.7	
713.50	-5.96	H	0.55	0.0	-6.51	-4.36	34.77	36.99	-41.4	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
704.00	15.38	V	0.55	0.0	14.83	16.98	34.77	36.99	-20.0	
704.00	-1.72	H	0.55	0.0	-2.27	-0.12	34.77	36.99	-37.1	
Mid Ch										
707.50	15.20	V	0.55	0.0	14.65	16.80	34.77	36.99	-20.2	
707.50	-1.97	H	0.55	0.0	-2.52	-0.37	34.77	36.99	-37.4	
High Ch										
711.00	15.35	V	0.55	0.0	14.80	16.95	34.77	36.99	-20.0	
711.00	-2.07	H	0.55	0.0	-2.62	-0.47	34.77	36.99	-37.5	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft 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										
704.00	15.09	V	0.55	0.0	14.54	16.69	34.77	36.99	-20.3	
704.00	-2.22	H	0.55	0.0	-2.77	-0.62	34.77	36.99	-37.6	
Mid Ch										
707.50	14.67	V	0.55	0.0	14.12	16.27	34.77	36.99	-20.7	
707.50	-2.47	H	0.55	0.0	-3.02	-0.87	34.77	36.99	-37.9	
High Ch										
711.00	14.65	V	0.55	0.0	14.10	16.25	34.77	36.99	-20.7	
711.00	-2.76	H	0.55	0.0	-3.31	-1.16	34.77	36.99	-38.2	
Rev. 10.24.13										

10.2.6. LTE BAND 13

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	15.08	V	0.55	0.0	14.53	16.68	34.77	36.99	-20.3	
779.50	-1.39	H	0.55	0.0	-1.94	0.21	34.77	36.99	-36.8	
Mid Ch										
782.00	15.10	V	0.55	0.0	14.55	16.70	34.77	36.99	-20.3	
782.00	-0.59	H	0.55	0.0	-1.14	1.01	34.77	36.99	-36.0	
High Ch										
784.50	15.22	V	0.55	0.0	14.67	16.82	34.77	36.99	-20.2	
784.50	-0.40	H	0.55	0.0	-0.95	1.20	34.77	36.99	-35.8	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 16QAM5MHz BW										
Test Equipment: Receiving: Sunoi T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	14.08	V	0.55	0.0	13.53	15.68	34.77	36.99	-21.3	
779.50	-1.92	H	0.55	0.0	-2.47	-0.32	34.77	36.99	-37.3	
Mid Ch										
782.00	14.10	V	0.55	0.0	13.55	15.70	34.77	36.99	-21.3	
782.00	-1.48	H	0.55	0.0	-2.03	0.12	34.77	36.99	-36.9	
High Ch										
784.50	14.22	V	0.55	0.0	13.67	15.82	34.77	36.99	-21.2	
784.50	-1.19	H	0.55	0.0	-1.74	0.41	34.77	36.99	-36.6	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/16/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 13 QPSK 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	15.00	V	0.55	0.0	14.45	16.60	34.77	36.99	-20.4	
782.00	-1.18	H	0.55	0.0	-1.73	0.42	34.77	36.99	-36.6	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/16/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 13 16QAM 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	14.00	V	0.55	0.0	13.45	15.60	34.77	36.99	-21.4	
782.00	-2.01	H	0.55	0.0	-2.56	-0.41	34.77	36.99	-37.4	
Rev. 10.24.13										

10.2.7. LTE BAND 17

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 17 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	15.56	V	0.55	0.0	15.01	17.16	34.77	36.99	-19.8	
706.50	-4.83	H	0.55	0.0	-5.38	-3.23	34.77	36.99	-40.2	
Mid Ch										
710.00	15.57	V	0.55	0.0	15.02	17.17	34.77	36.99	-19.8	
710.00	-5.52	H	0.55	0.0	-6.07	-3.92	34.77	36.99	-40.9	
High Ch										
713.50	15.90	V	0.55	0.0	15.35	17.50	34.77	36.99	-19.5	
713.50	-6.11	H	0.55	0.0	-6.66	-4.51	34.77	36.99	-41.5	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20162 Date: 6/16/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 17 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	14.56	V	0.55	0.0	14.01	16.16	34.77	36.99	-20.8	
706.50	-5.53	H	0.55	0.0	-6.08	-3.93	34.77	36.99	-40.9	
Mid Ch										
710.00	14.57	V	0.55	0.0	14.02	16.17	34.77	36.99	-20.8	
710.00	-6.12	H	0.55	0.0	-6.67	-4.52	34.77	36.99	-41.5	
High Ch										
713.50	14.90	V	0.55	0.0	14.35	16.50	34.77	36.99	-20.5	
713.50	-6.61	H	0.55	0.0	-7.16	-5.01	34.77	36.99	-42.0	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #:		15U20162								
Date:		6/16/2015								
Test Engineer:		E. Lee								
Configuration:		EUT only								
Mode:		LTE Band 17 QPSK 10MHz BW								
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	15.77	V	0.55	0.0	15.22	17.37	34.77	36.99	-19.6	
710.00	-4.88	H	0.55	0.0	-5.43	-3.28	34.77	36.99	-40.3	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20162										
Date: 6/16/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 17 16QAM 10MHz BW										
Test Equipment:										
Receiving: Sunoi T408, and Chamber E Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	14.77	V	0.55	0.0	14.22	16.37	34.77	36.99	-20.6	
710.00	-5.52	H	0.55	0.0	-6.07	-3.92	34.77	36.99	-40.9	
Rev. 10.24.13										

10.2.8. LTE BAND 25

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 1.4MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 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	11.0	V	0.98	8.05	18.06	33.0	-14.9	
1.851	11.4	H	0.98	8.05	18.47	33.0	-14.5	
Mid Ch								
1.883	9.1	V	0.98	8.03	16.16	33.0	-16.8	
1.883	11.1	H	0.98	8.03	18.17	33.0	-14.8	
High Ch								
1.914	9.6	V	0.98	8.07	16.70	33.0	-16.3	
1.914	10.8	H	0.98	8.07	17.88	33.0	-15.1	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 1.4MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 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	10.6	V	0.98	8.05	17.66	33.0	-15.3	
1.851	10.7	H	0.98	8.05	17.77	33.0	-15.2	
Mid Ch								
1.883	8.4	V	0.98	8.03	15.46	33.0	-17.5	
1.883	10.6	H	0.98	8.03	17.67	33.0	-15.3	
High Ch								
1.914	9.0	V	0.98	8.07	16.10	33.0	-16.9	
1.914	10.1	H	0.98	8.07	17.18	33.0	-15.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20162 Date: 6/19/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 3MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 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	11.0	V	0.98	8.05	18.06	33.0	-14.9	
1.852	11.3	H	0.98	8.05	18.37	33.0	-14.6	
Mid Ch								
1.883	8.8	V	0.98	8.03	15.86	33.0	-17.1	
1.883	10.8	H	0.98	8.03	17.87	33.0	-15.1	
High Ch								
1.914	9.5	V	0.98	8.07	16.60	33.0	-16.4	
1.914	10.7	H	0.98	8.07	17.78	33.0	-15.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 3MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.5	V	0.98	8.05	17.56	33.0	-15.4	
1.852	10.5	H	0.98	8.05	17.57	33.0	-15.4	
Mid Ch								
1.883	8.2	V	0.98	8.03	15.26	33.0	-17.7	
1.883	10.1	H	0.98	8.03	17.17	33.0	-15.8	
High Ch								
1.914	9.0	V	0.98	8.07	16.10	33.0	-16.9	
1.914	10.1	H	0.98	8.07	17.18	33.0	-15.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/19/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 25 QPSK 5MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.9	V	0.98	8.05	17.96	33.0	-15.0	
1.853	11.2	H	0.98	8.05	18.27	33.0	-14.7	
Mid Ch								
1.883	8.7	V	0.98	8.03	15.76	33.0	-17.2	
1.883	10.8	H	0.98	8.03	17.87	33.0	-15.1	
High Ch								
1.913	9.4	V	0.98	8.06	16.49	33.0	-16.5	
1.913	11.1	H	0.98	8.06	18.17	33.0	-14.8	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 5MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.4	V	0.98	8.05	17.46	33.0	-15.5	
1.853	10.4	H	0.98	8.05	17.47	33.0	-15.5	
Mid Ch								
1.883	8.2	V	0.98	8.03	15.26	33.0	-17.7	
1.883	10.1	H	0.98	8.03	17.17	33.0	-15.8	
High Ch								
1.913	9.0	V	0.98	8.06	16.09	33.0	-16.9	
1.913	10.9	H	0.98	8.06	17.97	33.0	-15.0	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 25 QPSK 10MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	11.1	V	0.98	8.05	18.16	33.0	-14.8	
1.855	11.0	H	0.98	8.05	18.07	33.0	-14.9	
Mid Ch								
1.883	9.0	V	0.98	8.03	16.08	33.0	-16.9	
1.883	10.0	H	0.98	8.03	17.07	33.0	-15.9	
High Ch								
1.910	9.8	V	0.98	8.05	16.88	33.0	-16.1	
1.910	10.6	H	0.98	8.05	17.66	33.0	-15.3	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/19/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 25 16QAM 10MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.5	V	0.98	8.05	17.56	33.0	-15.4	
1.855	10.4	H	0.98	8.05	17.47	33.0	-15.5	
Mid Ch								
1.883	8.6	V	0.98	8.03	15.66	33.0	-17.3	
1.883	9.3	H	0.98	8.03	16.37	33.0	-16.6	
High Ch								
1.910	9.5	V	0.98	8.05	16.58	33.0	-16.4	
1.910	10.0	H	0.98	8.05	17.06	33.0	-15.9	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/19/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 25 QPSK 15MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	11.3	V	0.98	8.04	18.35	33.0	-14.6	
1.858	11.3	H	0.98	8.04	18.36	33.0	-14.6	
Mid Ch								
1.883	10.8	V	0.98	8.03	17.86	33.0	-15.1	
1.883	11.3	H	0.98	8.03	18.37	33.0	-14.6	
High Ch								
1.908	10.8	V	0.98	8.04	17.87	33.0	-15.1	
1.908	11.4	H	0.98	8.04	18.45	33.0	-14.5	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20162								
Date: 6/19/2015								
Test Engineer: T Wang								
Configuration: EUT only								
Mode: LTE Band 25 16QAM 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.5	V	0.98	8.04	17.55	33.0	-15.4	
1.858	10.5	H	0.98	8.04	17.56	33.0	-15.4	
Mid Ch								
1.883	10.1	V	0.98	8.03	17.16	33.0	-15.8	
1.883	10.6	H	0.98	8.03	17.67	33.0	-15.3	
High Ch								
1.908	10.1	V	0.98	8.04	17.12	33.0	-15.9	
1.908	10.7	H	0.98	8.04	17.80	33.0	-15.2	
Rev. 10.24.13								

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:		15U20162						
Date:		6/19/2015						
Test Engineer:		T Wang						
Configuration:		EUT only						
Mode:		LTE Band 25 QPSK 20MHz BW						
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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	10.9	V	0.98	8.04	17.97	33.0	-15.0	
1.860	11.3	H	0.98	8.04	18.39	33.0	-14.6	
Mid Ch								
1.883	11.4	V	0.98	8.03	18.42	33.0	-14.6	
1.883	11.2	H	0.98	8.03	18.25	33.0	-14.8	
High Ch								
1.905	10.9	V	0.98	8.04	17.96	33.0	-15.0	
1.905	11.4	H	0.98	8.04	18.45	33.0	-14.6	
Rev. 10.24.13								