

10.2. RADIATED POWER (ERP & EIRP), 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 | 21.98 | 157.76 |
| | | 1880.0 | 22.31 | 170.22 |
| | | 1909.3 | 22.42 | 174.58 |
| 1.4MHz Band 16QAM | 1/0 | 1850.7 | 21.08 | 128.23 |
| | | 1880.0 | 21.43 | 139.00 |
| | | 1909.3 | 21.55 | 142.89 |

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 | 22.68 | 185.35 |
| | | 1880.0 | 22.63 | 183.23 |
| | | 1908.5 | 22.55 | 179.89 |
| 3.0MHz Band 16QAM | 1/0 | 1851.5 | 21.98 | 157.76 |
| | | 1880.0 | 21.83 | 152.41 |
| | | 1908.5 | 21.75 | 149.62 |

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 | 22.78 | 189.67 |
| | | 1880.0 | 22.83 | 191.87 |
| | | 1907.5 | 22.84 | 192.31 |
| 5.0MHz Band 16QAM | 1/0 | 1852.5 | 21.98 | 157.76 |
| | | 1880.0 | 22.03 | 159.59 |
| | | 1907.5 | 22.04 | 159.96 |

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 | 22.52 | 178.65 |
| | | 1880.0 | 22.63 | 183.23 |
| | | 1905.0 | 22.78 | 189.67 |
| 10.0MHz Band 16QAM | 1/0 | 1855.0 | 21.58 | 143.88 |
| | | 1880.0 | 21.73 | 148.94 |
| | | 1905.0 | 21.88 | 154.17 |

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 | 22.76 | 188.80 |
| | | 1880.0 | 22.78 | 189.67 |
| | | 1902.5 | 22.83 | 191.87 |
| 15MHz Band 16QAM | 1/0 | 1857.5 | 21.78 | 150.66 |
| | | 1880.0 | 21.98 | 157.76 |
| | | 1902.5 | 21.93 | 155.96 |

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 | 22.68 | 185.35 |
| | | 1880.0 | 22.50 | 177.83 |
| | | 1900.0 | 22.82 | 191.43 |
| 20MHz Band 16QAM | 1/0 | 1860.0 | 21.88 | 154.17 |
| | | 1880.0 | 21.73 | 148.94 |
| | | 1900.0 | 21.97 | 157.40 |

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 | 21.08 | 128.23 |
| | | 1732.5 | 21.36 | 136.77 |
| | | 1754.3 | 21.57 | 143.55 |
| 1.4 MHZ BAND 16QAM | 1/0 | 1710.7 | 20.28 | 106.66 |
| | | 1732.5 | 20.49 | 111.94 |
| | | 1754.3 | 20.67 | 116.68 |

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 | 21.03 | 126.77 |
| | | 1732.5 | 21.27 | 133.97 |
| | | 1753.5 | 21.59 | 144.21 |
| 3.0 MHZ BAND 16QAM | 1/0 | 1711.5 | 20.08 | 101.86 |
| | | 1732.5 | 20.49 | 111.94 |
| | | 1753.5 | 20.76 | 119.12 |

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 | 20.99 | 125.60 |
| | | 1732.5 | 21.46 | 139.96 |
| | | 1752.5 | 21.60 | 144.54 |
| 5.0 MHZ BAND 16QAM | 1/0 | 1712.5 | 20.28 | 106.66 |
| | | 1732.5 | 20.64 | 115.88 |
| | | 1752.5 | 20.77 | 119.40 |

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 | 21.18 | 131.22 |
| | | 1732.5 | 21.74 | 149.28 |
| | | 1750.0 | 21.65 | 146.22 |
| 10.0 MHZ BAND 16QAM | 1/0 | 1715.0 | 20.37 | 108.89 |
| | | 1732.5 | 21.09 | 128.53 |
| | | 1750.0 | 20.75 | 118.85 |

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 | 21.06 | 127.64 |
| | | 1732.5 | 21.44 | 139.32 |
| | | 1747.5 | 21.35 | 136.46 |
| 15.0 MHZ BAND 16QAM | 1/0 | 1717.5 | 20.26 | 106.17 |
| | | 1732.5 | 20.59 | 114.55 |
| | | 1747.5 | 20.60 | 114.82 |

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 | 21.88 | 154.17 |
| | | 1732.5 | 21.94 | 156.31 |
| | | 1745.0 | 21.62 | 145.21 |
| 20.0 MHZ BAND 16QAM | 1/0 | 1720.0 | 21.06 | 127.64 |
| | | 1732.5 | 21.09 | 128.53 |
| | | 1745.0 | 20.76 | 119.12 |

ERP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | ERP (Average) | |
|-------------------|------------|---------|---------------|-------|
| | | | dBm | mW |
| 1.4MHz Band QPSK | 1/0 | 824.7 | 19.39 | 86.90 |
| | | 836.5 | 19.48 | 88.72 |
| | | 848.3 | 18.91 | 77.80 |
| 1.4MHz Band 16QAM | 1/0 | 824.7 | 18.59 | 72.28 |
| | | 836.5 | 18.78 | 75.51 |
| | | 848.3 | 18.01 | 63.24 |

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 | 19.19 | 82.99 |
| | | 836.5 | 19.39 | 86.90 |
| | | 847.5 | 18.63 | 72.95 |
| 3.0 MHZ BAND 16QAM | 1/0 | 825.5 | 18.39 | 69.02 |
| | | 836.5 | 18.48 | 70.47 |
| | | 847.5 | 17.81 | 60.39 |

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 | 19.59 | 90.99 |
| | | 836.5 | 19.63 | 91.83 |
| | | 846.5 | 19.11 | 81.47 |
| 5MHz Band 16QAM | 1/0 | 826.5 | 18.69 | 73.96 |
| | | 836.5 | 18.78 | 75.51 |
| | | 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 | 19.59 | 90.99 |
| | | 836.5 | 19.28 | 84.72 |
| | | 844.0 | 19.31 | 85.31 |
| 10.0 MHZ BAND 16QAM | 1/0 | 829.0 | 18.69 | 73.96 |
| | | 836.5 | 18.48 | 70.47 |
| | | 844.0 | 18.51 | 70.96 |

EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|-----------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 5.0 MHZ BAND QPSK | 25/0 | 2502.5 | 20.07 | 101.62 |
| | | 2535.0 | 20.12 | 102.80 |
| | | 2567.5 | 20.65 | 116.14 |
| 5.0 MHZ BAND 16QAM | 25/0 | 2502.5 | 19.42 | 87.50 |
| | | 2535.0 | 19.47 | 88.51 |
| | | 2567.5 | 20.00 | 100.00 |

EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|------------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 10.0 MHZ BAND QPSK | 50/0 | 2505.0 | 19.86 | 96.83 |
| | | 2535.0 | 20.55 | 113.50 |
| | | 2565.0 | 20.41 | 109.90 |
| 10.0 MHZ BAND 16QAM | 50/0 | 2505.0 | 19.21 | 83.37 |
| | | 2535.0 | 19.90 | 97.72 |
| | | 2565.0 | 19.76 | 94.62 |

EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|------------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 15.0 MHZ BAND QPSK | 75/0 | 2507.5 | 19.56 | 90.36 |
| | | 2535.0 | 20.34 | 108.14 |
| | | 2562.5 | 20.28 | 106.66 |
| 15.0 MHZ BAND 16QAM | 75/0 | 2507.5 | 18.96 | 78.70 |
| | | 2535.0 | 19.74 | 94.19 |
| | | 2562.5 | 19.68 | 92.90 |

EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|------------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 20.0 MHZ BAND QPSK | 100/0 | 2510.0 | 19.50 | 89.13 |
| | | 2535.0 | 20.43 | 110.41 |
| | | 2560.0 | 20.33 | 107.89 |
| 20.0 MHZ BAND 16QAM | 100/0 | 2510.0 | 18.95 | 78.52 |
| | | 2535.0 | 20.05 | 101.16 |
| | | 2560.0 | 20.04 | 100.93 |

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 | 18.02 | 63.39 |
| | | 707.5 | 17.87 | 61.24 |
| | | 715.3 | 17.82 | 60.53 |
| 1.4MHz Band 16QAM | 1/0 | 699.7 | 17.23 | 52.84 |
| | | 707.5 | 16.82 | 48.08 |
| | | 715.3 | 17.05 | 50.70 |

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 | 17.80 | 60.26 |
| | | 707.5 | 18.00 | 63.10 |
| | | 714.5 | 17.83 | 60.67 |
| 3.0 MHZ BAND 16QAM | 1/0 | 700.5 | 17.03 | 50.47 |
| | | 707.5 | 17.22 | 52.72 |
| | | 714.5 | 17.05 | 50.70 |

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 | 17.89 | 61.52 |
| | | 707.5 | 17.90 | 61.66 |
| | | 713.5 | 18.05 | 63.83 |
| 5MHz Band 16QAM | 1/0 | 701.5 | 17.13 | 51.64 |
| | | 707.5 | 17.12 | 51.52 |
| | | 713.5 | 17.25 | 53.09 |

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 | 18.07 | 64.12 |
| | | 707.5 | 17.92 | 61.94 |
| | | 711.0 | 18.05 | 63.83 |
| 10.0 MHZ BAND 16QAM | 1/0 | 704.0 | 17.23 | 52.84 |
| | | 707.5 | 17.02 | 50.35 |
| | | 711.0 | 17.25 | 53.09 |

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 | 18.07 | 64.12 |
| | | 782.0 | 17.90 | 61.66 |
| | | 784.5 | 17.97 | 62.66 |
| 5.0 MHZ BAND 16QAM | 1/0 | 779.5 | 17.28 | 53.46 |
| | | 782.0 | 17.01 | 50.23 |
| | | 784.5 | 17.06 | 50.82 |

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 | 18.71 | 74.30 |
| | | | 17.91 | 61.80 |

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 | 16.27 | 42.36 |
| | | 710.0 | 16.30 | 42.66 |
| | | 713.5 | 16.20 | 41.69 |
| 5MHz Band 16QAM | 1/0 | 706.5 | 15.57 | 36.06 |
| | | 710.0 | 15.60 | 36.31 |
| | | 713.5 | 15.50 | 35.48 |

EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | ERP(Average) | |
|-----------------------|------------|---------|--------------|-------|
| | | | dBm | mW |
| 10.0 MHZ BAND QPSK | 1/0 | 710.0 | 16.27 | 42.36 |
| | | 710.0 | 15.56 | 35.97 |

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 | 21.45 | 139.64 |
| | | 1882.5 | 21.46 | 139.96 |
| | | 1914.3 | 21.49 | 140.93 |
| 1.4 MHZ BAND 16QAM | 1/0 | 1850.7 | 20.65 | 116.14 |
| | | 1882.5 | 20.66 | 116.41 |
| | | 1914.3 | 20.69 | 117.22 |

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 | 20.65 | 116.14 |
| | | 1882.5 | 20.58 | 114.29 |
| | | 1913.5 | 21.08 | 128.23 |
| 3.0 MHZ BAND 16QAM | 1/0 | 1851.5 | 19.86 | 96.83 |
| | | 1882.5 | 19.79 | 95.28 |
| | | 1913.5 | 20.29 | 106.91 |

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 | 20.12 | 102.80 |
| | | 1882.5 | 20.58 | 114.29 |
| | | 1912.5 | 21.39 | 137.72 |
| 5.0 MHZ BAND 16QAM | 1/0 | 1852.5 | 19.31 | 85.31 |
| | | 1882.5 | 19.77 | 94.84 |
| | | 1912.5 | 20.58 | 114.29 |

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 | 20.38 | 109.14 |
| | | 1882.5 | 20.12 | 102.80 |
| | | 1910.0 | 20.81 | 120.50 |
| 10.0 MHZ BAND 16QAM | 1/0 | 1855.0 | 19.60 | 91.20 |
| | | 1882.5 | 19.34 | 85.90 |
| | | 1910.0 | 20.03 | 100.69 |

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 | 21.22 | 132.43 |
| | | 1882.5 | 21.17 | 130.92 |
| | | 1907.5 | 21.31 | 135.21 |
| 15.0 MHZ BAND 16QAM | 1/0 | 1857.5 | 20.42 | 110.15 |
| | | 1882.5 | 20.37 | 108.89 |
| | | 1907.5 | 20.51 | 112.46 |

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 | 21.11 | 129.12 |
| | | 1882.5 | 21.41 | 138.36 |
| | | 1905.0 | 20.99 | 125.60 |
| 20.0 MHZ BAND 16QAM | 1/0 | 1860.0 | 20.32 | 107.65 |
| | | 1882.5 | 20.62 | 115.35 |
| | | 1905.0 | 20.20 | 104.71 |

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 | 20.31 | 107.40 |
| | | 819.0 | 20.31 | 107.40 |
| | | 823.3 | 20.26 | 106.17 |
| 1.4 MHZ BAND 16QAM | 1/0 | 814.7 | 19.49 | 88.92 |
| | | 819.0 | 19.49 | 88.92 |
| | | 823.3 | 19.44 | 87.90 |

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 | 20.55 | 113.50 |
| | | 819.0 | 20.40 | 109.65 |
| | | 822.5 | 20.10 | 102.33 |
| 3.0 MHZ BAND 16QAM | 1/0 | 815.5 | 19.74 | 94.19 |
| | | 819.0 | 19.59 | 90.99 |
| | | 822.5 | 19.29 | 84.92 |

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 | 20.71 | 117.76 |
| | | 819.0 | 20.62 | 115.35 |
| | | 821.5 | 20.43 | 110.41 |
| 5.0 MHZ BAND 16QAM | 1/0 | 816.5 | 19.92 | 98.17 |
| | | 819.0 | 19.83 | 96.16 |
| | | 821.5 | 19.64 | 92.04 |

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 | 20.53 | 112.98 |
| 10.0 MHZ BAND 16QAM | 1/0 | 819.0 | 19.72 | 93.76 |

ERP POWER FOR LTE BAND 27 (1.4MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | ERP(Average) | |
|-----------------------|------------|---------|--------------|--------|
| | | | dBm | mW |
| 1.4 MHZ BAND QPSK | 1/0 | 814.7 | 22.11 | 162.55 |
| | | 819.0 | 22.20 | 165.96 |
| | | 823.3 | 21.74 | 149.28 |
| 1.4 MHZ BAND 16QAM | 1/0 | 814.7 | 21.68 | 147.23 |
| | | 819.0 | 21.76 | 149.97 |
| | | 823.3 | 21.24 | 133.05 |

ERP POWER FOR LTE BAND 27 (3.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | ERP(Average) | |
|-----------------------|------------|---------|--------------|--------|
| | | | dBm | mW |
| 3.0 MHZ BAND QPSK | 1/0 | 815.5 | 21.64 | 145.88 |
| | | 819.0 | 21.02 | 126.47 |
| | | 822.5 | 20.42 | 110.15 |
| 3.0 MHZ BAND 16QAM | 1/0 | 815.5 | 21.13 | 129.72 |
| | | 819.0 | 20.80 | 120.23 |
| | | 822.5 | 20.79 | 119.95 |

ERP POWER FOR LTE BAND 27 (5.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | ERP(Average) | |
|-----------------------|------------|---------|--------------|--------|
| | | | dBm | mW |
| 5.0 MHZ BAND QPSK | 1/0 | 816.5 | 21.58 | 143.88 |
| | | 819.0 | 20.80 | 120.23 |
| | | 821.5 | 20.24 | 105.68 |
| 5.0 MHZ BAND 16QAM | 1/0 | 816.5 | 21.23 | 132.74 |
| | | 819.0 | 20.80 | 120.23 |
| | | 821.5 | 20.77 | 119.40 |

ERP POWER FOR LTE BAND 27 (10.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | ERP(Average) | |
|------------------------|------------|---------|--------------|--------|
| | | | dBm | mW |
| 10.0 MHZ BAND QPSK | 1/0 | 819.0 | 20.79 | 119.95 |
| 10.0 MHZ BAND 16QAM | 1/0 | 819.0 | 20.42 | 110.15 |

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 | 19.67 | 92.68 |
| | | 2310.0 | 19.31 | 85.31 |
| | | 2312.5 | 19.30 | 85.11 |
| 5MHz Band 16QAM | 1/0 | 2307.5 | 18.93 | 78.16 |
| | | 2310.0 | 18.57 | 71.94 |
| | | 2312.5 | 18.56 | 71.78 |

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 | 19.30 | 85.11 |
| 10.0 MHZ BAND 16QAM | | 2310.0 | 18.60 | 72.44 |

EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|-----------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 5.0 MHZ BAND QPSK | 25/0 | 2498.5 | 19.72 | 93.76 |
| | | 2593.0 | 20.12 | 102.80 |
| | | 2687.5 | 21.66 | 146.55 |
| 5.0 MHZ BAND 16QAM | 25/0 | 2498.5 | 19.06 | 80.54 |
| | | 2593.0 | 19.72 | 93.76 |
| | | 2687.5 | 21.12 | 129.42 |

EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|------------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 10.0 MHZ BAND QPSK | 50/0 | 2501.0 | 19.52 | 89.54 |
| | | 2593.0 | 20.88 | 122.46 |
| | | 2685.0 | 21.04 | 127.06 |
| 10.0 MHZ BAND 16QAM | 50/0 | 2501.0 | 19.19 | 82.99 |
| | | 2593.0 | 20.58 | 114.29 |
| | | 2685.0 | 20.71 | 117.76 |

EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|------------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 15.0 MHZ BAND QPSK | 75/0 | 2503.5 | 19.43 | 87.70 |
| | | 2593.0 | 21.48 | 140.60 |
| | | 2682.5 | 21.55 | 142.89 |
| 15.0 MHZ BAND 16QAM | 75/0 | 2503.5 | 18.93 | 78.16 |
| | | 2593.0 | 19.55 | 90.16 |
| | | 2682.5 | 20.88 | 122.46 |

EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

| Mode | RB/RB SIZE | f (MHz) | EIRP(Average) | |
|------------------------|------------|---------|---------------|--------|
| | | | dBm | mW |
| 20.0 MHZ BAND QPSK | 100/0 | 2506.0 | 19.29 | 84.92 |
| | | 2593.0 | 20.98 | 125.31 |
| | | 2680.0 | 21.53 | 142.23 |
| 20.0 MHZ BAND 16QAM | 100/0 | 2506.0 | 18.69 | 73.96 |
| | | 2593.0 | 19.52 | 89.54 |
| | | 2680.0 | 20.47 | 111.43 |

10.2.1. LTE BAND 2

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

| High Frequency Fundamental Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/2/2016 Test Engineer: 45200 Configuration: EUT Only Mode: LTE Band 2 QPSK 1.4MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.851 | 14.0 | V | 0.98 | 8.05 | 21.05 | 33.0 | -12.0 | |
| 1.851 | 14.9 | H | 0.98 | 8.05 | 21.98 | 33.0 | -11.0 | |
| Mid Ch | | | | | | | | |
| 1.880 | 13.8 | V | 0.98 | 8.03 | 20.89 | 33.0 | -12.1 | |
| 1.880 | 15.3 | H | 0.98 | 8.03 | 22.31 | 33.0 | -10.7 | |
| High Ch | | | | | | | | |
| 1.909 | 13.7 | V | 0.98 | 8.05 | 20.75 | 33.0 | -12.3 | |
| 1.909 | 15.3 | H | 0.98 | 8.05 | 22.42 | 33.0 | -10.6 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/2/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 2 16QAM 1.4MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.851 | 13.2 | V | 0.98 | 8.05 | 20.25 | 33.0 | -12.8 | | | | | | | | | |
| 1.851 | 14.0 | H | 0.98 | 8.05 | 21.08 | 33.0 | -11.9 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.880 | 12.9 | V | 0.98 | 8.03 | 19.96 | 33.0 | -13.0 | | | | | | | | | |
| 1.880 | 14.4 | H | 0.98 | 8.03 | 21.43 | 33.0 | -11.6 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.909 | 12.9 | V | 0.98 | 8.05 | 19.95 | 33.0 | -13.1 | | | | | | | | | |
| 1.909 | 14.5 | H | 0.98 | 8.05 | 21.55 | 33.0 | -11.4 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|-------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/2/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 2 QPSK 3MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.852 | 13.7 | V | 0.98 | 8.05 | 20.75 | 33.0 | -12.3 | | | | | | | | | |
| 1.852 | 15.6 | H | 0.98 | 8.05 | 22.68 | 33.0 | -10.3 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.880 | 13.9 | V | 0.98 | 8.03 | 20.96 | 33.0 | -12.0 | | | | | | | | | |
| 1.880 | 15.6 | H | 0.98 | 8.03 | 22.63 | 33.0 | -10.4 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.909 | 13.7 | V | 0.98 | 8.05 | 20.74 | 33.0 | -12.3 | | | | | | | | | |
| 1.909 | 15.5 | H | 0.98 | 8.05 | 22.55 | 33.0 | -10.5 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/2/2016 Test Engineer: 45200 Configuration: EUT Only Mode: LTE Band 2 16QAM 3MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.852 | 13.0 | V | 0.98 | 8.05 | 20.05 | 33.0 | -13.0 | |
| 1.852 | 14.9 | H | 0.98 | 8.05 | 21.98 | 33.0 | -11.0 | |
| Mid Ch | | | | | | | | |
| 1.880 | 13.1 | V | 0.98 | 8.03 | 20.16 | 33.0 | -12.8 | |
| 1.880 | 14.8 | H | 0.98 | 8.03 | 21.83 | 33.0 | -11.2 | |
| High Ch | | | | | | | | |
| 1.909 | 12.9 | V | 0.98 | 8.05 | 19.95 | 33.0 | -13.1 | |
| 1.909 | 14.7 | H | 0.98 | 8.05 | 21.75 | 33.0 | -11.3 | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|-------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/2/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 2 QPSK 5MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.853 | 13.3 | V | 0.98 | 8.05 | 20.35 | 33.0 | -12.7 | | | | | | | | | |
| 1.853 | 15.7 | H | 0.98 | 8.05 | 22.78 | 33.0 | -10.2 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.880 | 13.2 | V | 0.98 | 8.03 | 20.25 | 33.0 | -12.8 | | | | | | | | | |
| 1.880 | 15.8 | H | 0.98 | 8.03 | 22.83 | 33.0 | -10.2 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.908 | 13.0 | V | 0.98 | 8.04 | 20.04 | 33.0 | -13.0 | | | | | | | | | |
| 1.908 | 15.8 | H | 0.98 | 8.04 | 22.84 | 33.0 | -10.2 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/2/2016 Test Engineer: 45200 Configuration: EUT only Mode: LTE Band 2 16QAM 5MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.853 | 12.4 | V | 0.98 | 8.05 | 19.45 | 33.0 | -13.6 | |
| 1.853 | 14.9 | H | 0.98 | 8.05 | 21.98 | 33.0 | -11.0 | |
| Mid Ch | | | | | | | | |
| 1.880 | 12.4 | V | 0.98 | 8.03 | 19.46 | 33.0 | -13.5 | |
| 1.880 | 15.0 | H | 0.98 | 8.03 | 22.03 | 33.0 | -11.0 | |
| High Ch | | | | | | | | |
| 1.908 | 12.3 | V | 0.98 | 8.04 | 19.34 | 33.0 | -13.7 | |
| 1.908 | 15.0 | H | 0.98 | 8.04 | 22.04 | 33.0 | -11.0 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|
| Company: Project #: 16U23328 Date: 6/2/2016 Test Engineer: 45200 Configuration: EUT Only Mode: LTE Band 2 QPSK 10MHz BW | | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | |
| Low Ch | | | | | | | | | |
| 1.855 | 14.7 | V | 0.98 | 8.05 | 21.79 | 33.0 | -11.2 | | |
| 1.855 | 15.5 | H | 0.98 | 8.05 | 22.52 | 33.0 | -10.5 | | |
| Mid Ch | | | | | | | | | |
| 1.880 | 14.2 | V | 0.98 | 8.03 | 21.21 | 33.0 | -11.8 | | |
| 1.880 | 15.6 | H | 0.98 | 8.03 | 22.63 | 33.0 | -10.4 | | |
| High Ch | | | | | | | | | |
| 1.905 | 14.2 | V | 0.98 | 8.04 | 21.23 | 33.0 | -11.8 | | |
| 1.905 | 15.7 | H | 0.98 | 8.04 | 22.78 | 33.0 | -10.2 | | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/2/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 2 16QAM 10MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.855 | 14.0 | V | 0.98 | 8.05 | 21.05 | 33.0 | -12.0 | | | | | | | | | |
| 1.855 | 14.5 | H | 0.98 | 8.05 | 21.58 | 33.0 | -11.4 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.880 | 13.4 | V | 0.98 | 8.03 | 20.46 | 33.0 | -12.5 | | | | | | | | | |
| 1.880 | 14.7 | H | 0.98 | 8.03 | 21.73 | 33.0 | -11.3 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.905 | 13.3 | V | 0.98 | 8.04 | 20.33 | 33.0 | -12.7 | | | | | | | | | |
| 1.905 | 14.8 | H | 0.98 | 8.04 | 21.88 | 33.0 | -11.1 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/2/2016 | | | | | | | |
| Test Engineer: | 45200 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 2 QPSK 15MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.858 | 14.8 | V | 0.98 | 8.04 | 21.87 | 33.0 | -11.1 | |
| 1.858 | 15.7 | H | 0.98 | 8.04 | 22.76 | 33.0 | -10.2 | |
| Mid Ch | | | | | | | | |
| 1.880 | 14.3 | V | 0.98 | 8.03 | 21.36 | 33.0 | -11.6 | |
| 1.880 | 15.7 | H | 0.98 | 8.03 | 22.78 | 33.0 | -10.2 | |
| High Ch | | | | | | | | |
| 1.903 | 14.7 | V | 0.98 | 8.03 | 21.72 | 33.0 | -11.3 | |
| 1.903 | 15.8 | H | 0.98 | 8.03 | 22.83 | 33.0 | -10.2 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/2/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 2 16QAM 15MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.858 | 14.0 | V | 0.98 | 8.04 | 21.04 | 33.0 | -12.0 | | | | | | | | | |
| 1.858 | 14.7 | H | 0.98 | 8.04 | 21.78 | 33.0 | -11.2 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.880 | 13.4 | V | 0.98 | 8.03 | 20.46 | 33.0 | -12.5 | | | | | | | | | |
| 1.880 | 14.9 | H | 0.98 | 8.03 | 21.98 | 33.0 | -11.0 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.903 | 13.9 | V | 0.98 | 8.03 | 20.92 | 33.0 | -12.1 | | | | | | | | | |
| 1.903 | 14.9 | H | 0.98 | 8.03 | 21.93 | 33.0 | -11.1 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/2/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 2 QPSK 20MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.860 | 14.8 | V | 0.98 | 8.04 | 21.84 | 33.0 | -11.2 | | | | | | | | | |
| 1.860 | 15.6 | H | 0.98 | 8.04 | 22.68 | 33.0 | -10.3 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.880 | 14.3 | V | 0.98 | 8.03 | 21.40 | 33.0 | -11.6 | | | | | | | | | |
| 1.880 | 15.4 | H | 0.98 | 8.03 | 22.50 | 33.0 | -10.5 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.900 | 15.5 | V | 0.98 | 8.02 | 22.52 | 33.0 | -10.5 | | | | | | | | | |
| 1.900 | 15.8 | H | 0.98 | 8.02 | 22.82 | 33.0 | -10.2 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/2/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 2 16QAM 20MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.860 | 14.0 | V | 0.98 | 8.04 | 21.04 | 33.0 | -12.0 | | | | | | | | | |
| 1.860 | 14.8 | H | 0.98 | 8.04 | 21.88 | 33.0 | -11.1 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.880 | 13.4 | V | 0.98 | 8.03 | 20.46 | 33.0 | -12.5 | | | | | | | | | |
| 1.880 | 14.7 | H | 0.98 | 8.03 | 21.73 | 33.0 | -11.3 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.900 | 14.7 | V | 0.98 | 8.02 | 21.72 | 33.0 | -11.3 | | | | | | | | | |
| 1.900 | 14.9 | H | 0.98 | 8.02 | 21.97 | 33.0 | -11.0 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

10.2.2. LTE BAND 4

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/3/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 4 QPSK 1.4MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.711 | 6.9 | V | 0.95 | 8.27 | 14.20 | 30.0 | -15.8 | |
| 1.711 | 13.8 | H | 0.95 | 8.27 | 21.08 | 30.0 | -8.9 | |
| Mid Ch | | | | | | | | |
| 1.733 | 7.5 | V | 0.95 | 8.23 | 14.76 | 30.0 | -15.2 | |
| 1.733 | 14.1 | H | 0.95 | 8.23 | 21.36 | 30.0 | -8.6 | |
| High Ch | | | | | | | | |
| 1.754 | 6.9 | V | 0.95 | 8.18 | 14.16 | 30.0 | -15.8 | |
| 1.754 | 14.3 | H | 0.95 | 8.18 | 21.57 | 30.0 | -8.4 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 4 16QAM 1.4MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.711 | 6.1 | V | 0.95 | 8.27 | 13.40 | 30.0 | -16.6 | | | | | | | | | |
| 1.711 | 13.0 | H | 0.95 | 8.27 | 20.28 | 30.0 | -9.7 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.733 | 6.7 | V | 0.95 | 8.23 | 13.96 | 30.0 | -16.0 | | | | | | | | | |
| 1.733 | 13.2 | H | 0.95 | 8.23 | 20.49 | 30.0 | -9.5 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.754 | 6.2 | V | 0.95 | 8.18 | 13.38 | 30.0 | -16.6 | | | | | | | | | |
| 1.754 | 13.4 | H | 0.95 | 8.18 | 20.67 | 30.0 | -9.3 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|-------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 4 QPSK 3MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.712 | 7.1 | V | 0.95 | 8.27 | 14.45 | 30.0 | -15.6 | | | | | | | | | |
| 1.712 | 13.7 | H | 0.95 | 8.27 | 21.03 | 30.0 | -9.0 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.733 | 8.1 | V | 0.95 | 8.23 | 15.41 | 30.0 | -14.6 | | | | | | | | | |
| 1.733 | 14.0 | H | 0.95 | 8.23 | 21.27 | 30.0 | -8.7 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.754 | 7.5 | V | 0.95 | 8.18 | 14.71 | 30.0 | -15.3 | | | | | | | | | |
| 1.754 | 14.4 | H | 0.95 | 8.18 | 21.59 | 30.0 | -8.4 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|--|-------|
| Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 30554 Configuration: EUT Only Mode: LTE Band 4 16QAM 3MHz BW | | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | | Notes |
| Low Ch | | | | | | | | | |
| 1.712 | 6.4 | V | 0.95 | 8.27 | 13.70 | 30.0 | -16.3 | | |
| 1.712 | 12.8 | H | 0.95 | 8.27 | 20.08 | 30.0 | -9.9 | | |
| Mid Ch | | | | | | | | | |
| 1.733 | 7.2 | V | 0.95 | 8.23 | 14.46 | 30.0 | -15.5 | | |
| 1.733 | 13.2 | H | 0.95 | 8.23 | 20.49 | 30.0 | -9.5 | | |
| High Ch | | | | | | | | | |
| 1.754 | 6.8 | V | 0.95 | 8.18 | 13.98 | 30.0 | -16.0 | | |
| 1.754 | 13.5 | H | 0.95 | 8.18 | 20.76 | 30.0 | -9.2 | | |
| Rev. 10.24.13 | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|-------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 4 QPSK 5MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.713 | 7.4 | V | 0.95 | 8.27 | 14.74 | 30.0 | -15.3 | | | | | | | | | |
| 1.713 | 13.7 | H | 0.95 | 8.27 | 20.99 | 30.0 | -9.0 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.733 | 8.5 | V | 0.95 | 8.23 | 15.79 | 30.0 | -14.2 | | | | | | | | | |
| 1.733 | 14.2 | H | 0.95 | 8.23 | 21.46 | 30.0 | -8.5 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.753 | 7.8 | V | 0.95 | 8.18 | 15.00 | 30.0 | -15.0 | | | | | | | | | |
| 1.753 | 14.4 | H | 0.95 | 8.18 | 21.60 | 30.0 | -8.4 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 4 16QAM 5MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.713 | 6.6 | V | 0.95 | 8.27 | 13.89 | 30.0 | -16.1 | | | | | | | | | |
| 1.713 | 13.0 | H | 0.95 | 8.27 | 20.28 | 30.0 | -9.7 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.733 | 7.6 | V | 0.95 | 8.23 | 14.86 | 30.0 | -15.1 | | | | | | | | | |
| 1.733 | 13.4 | H | 0.95 | 8.23 | 20.64 | 30.0 | -9.4 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.753 | 7.1 | V | 0.95 | 8.18 | 14.29 | 30.0 | -15.7 | | | | | | | | | |
| 1.753 | 13.5 | H | 0.95 | 8.18 | 20.77 | 30.0 | -9.2 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|
| Company: Project #: 16U23328 Date: 6/3/2016 Test Engineer: 30554 Configuration: EUT Only Mode: LTE Band 4 QPSK 10MHz BW | | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | |
| Low Ch | | | | | | | | | |
| 1.715 | 8.3 | V | 0.95 | 8.26 | 15.64 | 30.0 | -14.4 | | |
| 1.715 | 13.9 | H | 0.95 | 8.26 | 21.18 | 30.0 | -8.8 | | |
| Mid Ch | | | | | | | | | |
| 1.733 | 8.4 | V | 0.95 | 8.23 | 15.71 | 30.0 | -14.3 | | |
| 1.733 | 14.5 | H | 0.95 | 8.23 | 21.74 | 30.0 | -8.3 | | |
| High Ch | | | | | | | | | |
| 1.750 | 8.3 | V | 0.95 | 8.19 | 15.51 | 30.0 | -14.5 | | |
| 1.750 | 14.4 | H | 0.95 | 8.19 | 21.65 | 30.0 | -8.4 | | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 4 16QAM 10MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.715 | 7.7 | V | 0.95 | 8.26 | 15.04 | 30.0 | -15.0 | | | | | | | | | |
| 1.715 | 13.1 | H | 0.95 | 8.26 | 20.37 | 30.0 | -9.6 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.733 | 7.5 | V | 0.95 | 8.23 | 14.76 | 30.0 | -15.2 | | | | | | | | | |
| 1.733 | 13.8 | H | 0.95 | 8.23 | 21.09 | 30.0 | -8.9 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.750 | 7.7 | V | 0.95 | 8.19 | 14.89 | 30.0 | -15.1 | | | | | | | | | |
| 1.750 | 13.5 | H | 0.95 | 8.19 | 20.75 | 30.0 | -9.3 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/3/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 4 QPSK 15MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.718 | 8.2 | V | 0.95 | 8.26 | 15.55 | 30.0 | -14.4 | |
| 1.718 | 13.8 | H | 0.95 | 8.26 | 21.06 | 30.0 | -8.9 | |
| Mid Ch | | | | | | | | |
| 1.733 | 8.9 | V | 0.95 | 8.23 | 16.21 | 30.0 | -13.8 | |
| 1.733 | 14.2 | H | 0.95 | 8.23 | 21.44 | 30.0 | -8.6 | |
| High Ch | | | | | | | | |
| 1.748 | 8.5 | V | 0.95 | 8.19 | 15.76 | 30.0 | -14.2 | |
| 1.748 | 14.1 | H | 0.95 | 8.19 | 21.35 | 30.0 | -8.6 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|
| Company: 16U23328 | | | | | | | | | |
| Project #: 16U23328 | | | | | | | | | |
| Date: 6/3/2016 | | | | | | | | | |
| Test Engineer: 30554 | | | | | | | | | |
| Configuration: EUT Only | | | | | | | | | |
| Mode: LTE Band 4 16QAM 15MHz BW | | | | | | | | | |
| Test Equipment: | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | |
| Low Ch | | | | | | | | | |
| 1.718 | 7.4 | V | 0.95 | 8.26 | 14.68 | 30.0 | -15.3 | | |
| 1.718 | 13.0 | H | 0.95 | 8.26 | 20.26 | 30.0 | -9.7 | | |
| Mid Ch | | | | | | | | | |
| 1.733 | 8.2 | V | 0.95 | 8.23 | 15.46 | 30.0 | -14.5 | | |
| 1.733 | 13.3 | H | 0.95 | 8.23 | 20.59 | 30.0 | -9.4 | | |
| High Ch | | | | | | | | | |
| 1.748 | 7.7 | V | 0.95 | 8.19 | 14.90 | 30.0 | -15.1 | | |
| 1.748 | 13.4 | H | 0.95 | 8.19 | 20.60 | 30.0 | -9.4 | | |
| Rev. 10.24.13 | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/3/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 4 QPSK 20MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.720 | 8.2 | V | 0.95 | 8.25 | 15.47 | 30.0 | -14.5 | |
| 1.720 | 14.6 | H | 0.95 | 8.25 | 21.88 | 30.0 | -8.1 | |
| Mid Ch | | | | | | | | |
| 1.733 | 8.5 | V | 0.95 | 8.23 | 15.81 | 30.0 | -14.2 | |
| 1.733 | 14.7 | H | 0.95 | 8.23 | 21.94 | 30.0 | -8.1 | |
| High Ch | | | | | | | | |
| 1.745 | 8.0 | V | 0.95 | 8.20 | 15.28 | 30.0 | -14.7 | |
| 1.745 | 14.4 | H | 0.95 | 8.20 | 21.62 | 30.0 | -8.4 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: 16U23328 | | | | | | | | |
| Project #: 16U23328 | | | | | | | | |
| Date: 6/3/2016 | | | | | | | | |
| Test Engineer: 30554 | | | | | | | | |
| Configuration: EUT Only | | | | | | | | |
| Mode: LTE Band 4 16QAM 20MHz BW | | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.720 | 7.7 | V | 0.95 | 8.25 | 15.03 | 30.0 | -15.0 | |
| 1.720 | 13.8 | H | 0.95 | 8.25 | 21.06 | 30.0 | -8.9 | |
| Mid Ch | | | | | | | | |
| 1.733 | 7.7 | V | 0.95 | 8.23 | 14.96 | 30.0 | -15.0 | |
| 1.733 | 13.8 | H | 0.95 | 8.23 | 21.09 | 30.0 | -8.9 | |
| High Ch | | | | | | | | |
| 1.745 | 7.4 | V | 0.95 | 8.20 | 14.60 | 30.0 | -15.4 | |
| 1.745 | 13.5 | H | 0.95 | 8.20 | 20.76 | 30.0 | -9.2 | |
| 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 D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: | | | | | | | | | | |
| Project #: 16U23328 | | | | | | | | | | |
| Date: 6/6/2016 | | | | | | | | | | |
| Test Engineer: 52279 | | | | | | | | | | |
| Configuration: EUT only | | | | | | | | | | |
| Mode: LTE Band 5 QPSK 1.4MHz 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 |
| Low Ch | | | | | | | | | | |
| 824.70 | 5.74 | V | 0.6 | 0.0 | 5.12 | 7.27 | 38.45 | 40.60 | -33.3 | |
| 824.70 | 20.01 | H | 0.6 | 0.0 | 19.39 | 21.54 | 38.45 | 40.60 | -19.1 | |
| Mid Ch | | | | | | | | | | |
| 836.50 | 5.64 | V | 0.6 | 0.0 | 5.02 | 7.17 | 38.45 | 40.60 | -33.4 | |
| 836.50 | 20.10 | H | 0.6 | 0.0 | 19.48 | 21.63 | 38.45 | 40.60 | -19.0 | |
| High Ch | | | | | | | | | | |
| 848.30 | 5.89 | V | 0.6 | 0.0 | 5.27 | 7.42 | 38.45 | 40.60 | -33.2 | |
| 848.30 | 19.53 | H | 0.6 | 0.0 | 18.91 | 21.06 | 38.45 | 40.60 | -19.5 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| 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 |
| Low Ch | | | | | | | | | | |
| 824.70 | 4.36 | V | 0.6 | 0.0 | 3.74 | 5.89 | 38.45 | 40.60 | -34.7 | |
| 824.70 | 19.21 | H | 0.6 | 0.0 | 18.59 | 20.74 | 38.45 | 40.60 | -19.9 | |
| Mid Ch | | | | | | | | | | |
| 836.50 | 4.87 | V | 0.6 | 0.0 | 4.25 | 6.40 | 38.45 | 40.60 | -34.2 | |
| 836.50 | 19.40 | H | 0.6 | 0.0 | 18.78 | 20.93 | 38.45 | 40.60 | -19.7 | |
| High Ch | | | | | | | | | | |
| 848.30 | 5.01 | V | 0.6 | 0.0 | 4.39 | 6.54 | 38.45 | 40.60 | -34.1 | |
| 848.30 | 18.63 | H | 0.6 | 0.0 | 18.01 | 20.16 | 38.45 | 40.60 | -20.4 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/6/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 5 QPSK 3MHz 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 |
| Low Ch | | | | | | | | | | |
| 825.50 | 11.98 | V | 0.6 | 0.0 | 11.36 | 13.51 | 38.45 | 40.60 | -27.1 | |
| 825.50 | 19.81 | H | 0.6 | 0.0 | 19.19 | 21.34 | 38.45 | 40.60 | -19.3 | |
| Mid Ch | | | | | | | | | | |
| 836.50 | 12.76 | V | 0.6 | 0.0 | 12.14 | 14.29 | 38.45 | 40.60 | -26.3 | |
| 836.50 | 20.01 | H | 0.6 | 0.0 | 19.39 | 21.54 | 38.45 | 40.60 | -19.1 | |
| High Ch | | | | | | | | | | |
| 847.50 | 11.71 | V | 0.6 | 0.0 | 11.09 | 13.24 | 38.45 | 40.60 | -27.4 | |
| 847.50 | 19.25 | H | 0.6 | 0.0 | 18.63 | 20.78 | 38.45 | 40.60 | -19.8 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/6/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 52279 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 5 16QAM 3MHz 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 | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | |
| 825.50 | 11.36 | V | 0.6 | 0.0 | 10.74 | 12.89 | 38.45 | 40.60 | -27.7 | | | | | | | | | | | |
| 825.50 | 19.01 | H | 0.6 | 0.0 | 18.39 | 20.54 | 38.45 | 40.60 | -20.1 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 11.87 | V | 0.6 | 0.0 | 11.25 | 13.40 | 38.45 | 40.60 | -27.2 | | | | | | | | | | | |
| 836.50 | 19.10 | H | 0.6 | 0.0 | 18.48 | 20.63 | 38.45 | 40.60 | -20.0 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 847.50 | 11.01 | V | 0.6 | 0.0 | 10.39 | 12.54 | 38.45 | 40.60 | -28.1 | | | | | | | | | | | |
| 847.50 | 18.43 | H | 0.6 | 0.0 | 17.81 | 19.96 | 38.45 | 40.60 | -20.6 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| <u>Company:</u> Project #: 16U23328 Date: 6/6/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 5 QPSK 5MHz BW | | | | | | | | | | |
| <u>Test Equipment:</u> 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 |
| Low Ch | | | | | | | | | | |
| 826.50 | 12.02 | V | 0.6 | 0.0 | 11.40 | 13.55 | 38.45 | 40.60 | -27.0 | |
| 826.50 | 20.21 | H | 0.6 | 0.0 | 19.59 | 21.74 | 38.45 | 40.60 | -18.9 | |
| Mid Ch | | | | | | | | | | |
| 836.50 | 13.00 | V | 0.6 | 0.0 | 12.38 | 14.53 | 38.45 | 40.60 | -26.1 | |
| 836.50 | 20.25 | H | 0.6 | 0.0 | 19.63 | 21.78 | 38.45 | 40.60 | -18.8 | |
| High Ch | | | | | | | | | | |
| 846.50 | 12.55 | V | 0.6 | 0.0 | 11.93 | 14.08 | 38.45 | 40.60 | -26.5 | |
| 846.50 | 19.73 | H | 0.6 | 0.0 | 19.11 | 21.26 | 38.45 | 40.60 | -19.3 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/6/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 52279 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 5 16QAM 5MHz BW | | | | | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | |
| 826.50 | 11.36 | V | 0.6 | 0.0 | 10.74 | 12.89 | 38.45 | 40.60 | -27.7 | | | | | | | | | | | |
| 826.50 | 19.31 | H | 0.6 | 0.0 | 18.69 | 20.84 | 38.45 | 40.60 | -19.8 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 12.27 | V | 0.6 | 0.0 | 11.65 | 13.80 | 38.45 | 40.60 | -26.8 | | | | | | | | | | | |
| 836.50 | 19.40 | H | 0.6 | 0.0 | 18.78 | 20.93 | 38.45 | 40.60 | -19.7 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 846.50 | 12.01 | V | 0.6 | 0.0 | 11.39 | 13.54 | 38.45 | 40.60 | -27.1 | | | | | | | | | | | |
| 846.50 | 18.83 | H | 0.6 | 0.0 | 18.21 | 20.36 | 38.45 | 40.60 | -20.2 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 6/6/2016 | | | | | | | | | |
| Test Engineer: | 52279 | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | |
| Mode: | LTE Band 5 QPSK 10MHz BW | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D Cable | | | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | | | |
| 829.00 | 12.36 | V | 0.6 | 0.0 | 11.74 | 13.89 | 38.45 | 40.60 | -26.7 | |
| 829.00 | 20.21 | H | 0.6 | 0.0 | 19.59 | 21.74 | 38.45 | 40.60 | -18.9 | |
| Mid Ch | | | | | | | | | | |
| 836.50 | 12.57 | V | 0.6 | 0.0 | 11.95 | 14.10 | 38.45 | 40.60 | -26.5 | |
| 836.50 | 19.90 | H | 0.6 | 0.0 | 19.28 | 21.43 | 38.45 | 40.60 | -19.2 | |
| High Ch | | | | | | | | | | |
| 844.00 | 12.21 | V | 0.6 | 0.0 | 11.59 | 13.74 | 38.45 | 40.60 | -26.9 | |
| 844.00 | 19.93 | H | 0.6 | 0.0 | 19.31 | 21.46 | 38.45 | 40.60 | -19.1 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/6/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 52279 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 5 16QAM 10MHz BW | | | | | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | |
| 829.00 | 11.56 | V | 0.6 | 0.0 | 10.94 | 13.09 | 38.45 | 40.60 | -27.5 | | | | | | | | | | | |
| 829.00 | 19.31 | H | 0.6 | 0.0 | 18.69 | 20.84 | 38.45 | 40.60 | -19.8 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 11.67 | V | 0.6 | 0.0 | 11.05 | 13.20 | 38.45 | 40.60 | -27.4 | | | | | | | | | | | |
| 836.50 | 19.10 | H | 0.6 | 0.0 | 18.48 | 20.63 | 38.45 | 40.60 | -20.0 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 844.00 | 11.41 | V | 0.6 | 0.0 | 10.79 | 12.94 | 38.45 | 40.60 | -27.7 | | | | | | | | | | | |
| 844.00 | 19.13 | H | 0.6 | 0.0 | 18.51 | 20.66 | 38.45 | 40.60 | -19.9 | | | | | | | | | | | |
| 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 D | | | | | | | | |
|--|-------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/3/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT only | | | | | | | |
| Mode: | LTE Band 7 QPSK 5MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.503 | 9.7 | V | 1.15 | 9.34 | 17.87 | 33.0 | -15.1 | |
| 2.503 | 11.9 | H | 1.15 | 9.34 | 20.07 | 33.0 | -12.9 | |
| Mid Ch | | | | | | | | |
| 2.535 | 10.5 | V | 1.16 | 9.38 | 18.73 | 33.0 | -14.3 | |
| 2.535 | 11.9 | H | 1.16 | 9.38 | 20.12 | 33.0 | -12.9 | |
| High Ch | | | | | | | | |
| 2.568 | 10.4 | V | 1.17 | 9.43 | 18.68 | 33.0 | -14.3 | |
| 2.568 | 12.4 | H | 1.17 | 9.43 | 20.65 | 33.0 | -12.3 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 52291 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 7 16QAM 5MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 2.503 | 9.0 | V | 1.15 | 9.34 | 17.22 | 33.0 | -15.8 | | | | | | | | | |
| 2.503 | 11.2 | H | 1.15 | 9.34 | 19.42 | 33.0 | -13.6 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 2.535 | 9.9 | V | 1.16 | 9.38 | 18.08 | 33.0 | -14.9 | | | | | | | | | |
| 2.535 | 11.2 | H | 1.16 | 9.38 | 19.47 | 33.0 | -13.5 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 2.568 | 9.8 | V | 1.17 | 9.43 | 18.03 | 33.0 | -15.0 | | | | | | | | | |
| 2.568 | 11.7 | H | 1.17 | 9.43 | 20.00 | 33.0 | -13.0 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 52291 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 7 QPSK 10MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 2.505 | 9.1 | V | 1.15 | 9.34 | 17.28 | 33.0 | -15.7 | | | | | | | | | |
| 2.505 | 11.7 | H | 1.15 | 9.34 | 19.86 | 33.0 | -13.1 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 2.535 | 9.8 | V | 1.16 | 9.38 | 18.00 | 33.0 | -15.0 | | | | | | | | | |
| 2.535 | 12.3 | H | 1.16 | 9.38 | 20.55 | 33.0 | -12.5 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 2.565 | 10.3 | V | 1.17 | 9.43 | 18.57 | 33.0 | -14.4 | | | | | | | | | |
| 2.565 | 12.2 | H | 1.17 | 9.43 | 20.41 | 33.0 | -12.6 | | | | | | | | | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 52291 | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 7 16QAM 10MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 2.505 | 8.4 | V | 1.15 | 9.34 | 16.63 | 33.0 | -16.4 | | | | | | | | | |
| 2.505 | 11.0 | H | 1.15 | 9.34 | 19.21 | 33.0 | -13.8 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 2.535 | 9.1 | V | 1.16 | 9.38 | 17.35 | 33.0 | -15.7 | | | | | | | | | |
| 2.535 | 11.7 | H | 1.16 | 9.38 | 19.90 | 33.0 | -13.1 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 2.565 | 9.7 | V | 1.17 | 9.43 | 17.92 | 33.0 | -15.1 | | | | | | | | | |
| 2.565 | 11.5 | H | 1.17 | 9.43 | 19.76 | 33.0 | -13.2 | | | | | | | | | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 52291 | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 7 QPSK 15MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 2.508 | 8.9 | V | 1.15 | 9.34 | 17.08 | 33.0 | -15.9 | | | | | | | | | |
| 2.508 | 11.4 | H | 1.15 | 9.34 | 19.56 | 33.0 | -13.4 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 2.535 | 9.5 | V | 1.16 | 9.38 | 17.71 | 33.0 | -15.3 | | | | | | | | | |
| 2.535 | 12.1 | H | 1.16 | 9.38 | 20.34 | 33.0 | -12.7 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 2.563 | 9.7 | V | 1.17 | 9.42 | 17.97 | 33.0 | -15.0 | | | | | | | | | |
| 2.563 | 12.0 | H | 1.17 | 9.42 | 20.28 | 33.0 | -12.7 | | | | | | | | | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/3/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 52291 | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 7 16QAM 15MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 2.508 | 8.3 | V | 1.15 | 9.34 | 16.48 | 33.0 | -16.5 | | | | | | | | | |
| 2.508 | 10.8 | H | 1.15 | 9.34 | 18.96 | 33.0 | -14.0 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 2.535 | 8.9 | V | 1.16 | 9.38 | 17.11 | 33.0 | -15.9 | | | | | | | | | |
| 2.535 | 11.5 | H | 1.16 | 9.38 | 19.74 | 33.0 | -13.3 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 2.563 | 9.1 | V | 1.17 | 9.42 | 17.37 | 33.0 | -15.6 | | | | | | | | | |
| 2.563 | 11.4 | H | 1.17 | 9.42 | 19.68 | 33.0 | -13.3 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/3/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT only | | | | | | | |
| Mode: | LTE Band 7 QPSK 20MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.510 | 8.8 | V | 1.15 | 9.35 | 16.99 | 33.0 | -16.0 | |
| 2.510 | 11.3 | H | 1.15 | 9.35 | 19.50 | 33.0 | -13.5 | |
| Mid Ch | | | | | | | | |
| 2.535 | 9.6 | V | 1.16 | 9.38 | 17.84 | 33.0 | -15.2 | |
| 2.535 | 12.2 | H | 1.16 | 9.38 | 20.43 | 33.0 | -12.6 | |
| High Ch | | | | | | | | |
| 2.560 | 9.7 | V | 1.17 | 9.42 | 17.97 | 33.0 | -15.0 | |
| 2.560 | 12.1 | H | 1.17 | 9.42 | 20.33 | 33.0 | -12.7 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/3/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT only | | | | | | | |
| Mode: | LTE Band 7 16QAM 20MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.510 | 8.2 | V | 1.15 | 9.35 | 16.44 | 33.0 | -16.6 | |
| 2.510 | 10.8 | H | 1.15 | 9.35 | 18.95 | 33.0 | -14.1 | |
| Mid Ch | | | | | | | | |
| 2.535 | 9.1 | V | 1.16 | 9.38 | 17.29 | 33.0 | -15.7 | |
| 2.535 | 11.8 | H | 1.16 | 9.38 | 20.05 | 33.0 | -13.0 | |
| High Ch | | | | | | | | |
| 2.560 | 9.2 | V | 1.17 | 9.42 | 17.42 | 33.0 | -15.6 | |
| 2.560 | 11.8 | H | 1.17 | 9.42 | 20.04 | 33.0 | -13.0 | |
| 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 D | | | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|----------------|--------------------|---------------------|----------------------------|-------|--|--|
| Company: | | | | | | | | | | | | |
| Project #: | 16U23328 | Date: | 6/7/2016 | Test Engineer: | 30554 | Configuration: | EUT ONLY | Mode: | LTE Band 12 QPSK 1.4MHz BW | | | |
| Test Equipment: | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D Cable | | | | | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes | | |
| Low Ch | | | | | | | | | | | | |
| 699.70 | 8.79 | V | 0.55 | 0.0 | 8.24 | 10.39 | 34.77 | 36.99 | -26.6 | | | |
| 699.70 | 18.56 | H | 0.55 | 0.0 | 18.02 | 20.17 | 34.77 | 36.99 | -16.8 | | | |
| Mid Ch | | | | | | | | | | | | |
| 707.50 | 8.74 | V | 0.55 | 0.0 | 8.19 | 10.34 | 34.77 | 36.99 | -26.6 | | | |
| 707.50 | 18.42 | H | 0.55 | 0.0 | 17.87 | 20.02 | 34.77 | 36.99 | -17.0 | | | |
| High Ch | | | | | | | | | | | | |
| 715.30 | 9.15 | V | 0.55 | 0.0 | 8.60 | 10.75 | 34.77 | 36.99 | -26.2 | | | |
| 715.30 | 18.37 | H | 0.55 | 0.0 | 17.82 | 19.97 | 34.77 | 36.99 | -17.0 | | | |
| Rev. 10.24.13 | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/7/2016 Test Engineer: 30554 Configuration: EUT ONLY Mode: LTE Band 12 16QAM 1.4MHz BW | | | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber D Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | | | |
| 699.70 | 8.11 | V | 0.55 | 0.0 | 7.56 | 9.71 | 34.77 | 36.99 | -27.3 | |
| 699.70 | 17.77 | H | 0.55 | 0.0 | 17.23 | 19.38 | 34.77 | 36.99 | -17.6 | |
| Mid Ch | | | | | | | | | | |
| 707.50 | 8.08 | V | 0.55 | 0.0 | 7.53 | 9.68 | 34.77 | 36.99 | -27.3 | |
| 707.50 | 17.37 | H | 0.55 | 0.0 | 16.82 | 18.97 | 34.77 | 36.99 | -18.0 | |
| High Ch | | | | | | | | | | |
| 715.30 | 8.37 | V | 0.55 | 0.0 | 7.82 | 9.97 | 34.77 | 36.99 | -27.0 | |
| 715.30 | 17.60 | H | 0.55 | 0.0 | 17.05 | 19.20 | 34.77 | 36.99 | -17.8 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/7/2016 Test Engineer: 30554 Configuration: EUT ONLY Mode: LTE Band 12 QPSK 3MHz BW | | | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber D Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | | | |
| 700.50 | 8.77 | V | 0.55 | 0.0 | 8.22 | 10.37 | 34.77 | 36.99 | -26.6 | |
| 700.50 | 18.34 | H | 0.55 | 0.0 | 17.80 | 19.95 | 34.77 | 36.99 | -17.0 | |
| Mid Ch | | | | | | | | | | |
| 707.50 | 8.66 | V | 0.55 | 0.0 | 8.11 | 10.26 | 34.77 | 36.99 | -26.7 | |
| 707.50 | 18.55 | H | 0.55 | 0.0 | 18.00 | 20.15 | 34.77 | 36.99 | -16.8 | |
| High Ch | | | | | | | | | | |
| 714.50 | 9.14 | V | 0.55 | 0.0 | 8.59 | 10.74 | 34.77 | 36.99 | -26.3 | |
| 714.50 | 18.38 | H | 0.55 | 0.0 | 17.83 | 19.98 | 34.77 | 36.99 | -17.0 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/7/2016 Test Engineer: 30554 Configuration: EUT ONLY Mode: LTE Band 12 16QAM 3MHz BW | | | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber D Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | | | |
| 700.50 | 8.11 | V | 0.55 | 0.0 | 7.56 | 9.71 | 34.77 | 36.99 | -27.3 | |
| 700.50 | 17.57 | H | 0.55 | 0.0 | 17.03 | 19.18 | 34.77 | 36.99 | -17.8 | |
| Mid Ch | | | | | | | | | | |
| 707.50 | 7.98 | V | 0.55 | 0.0 | 7.43 | 9.58 | 34.77 | 36.99 | -27.4 | |
| 707.50 | 17.77 | H | 0.55 | 0.0 | 17.22 | 19.37 | 34.77 | 36.99 | -17.6 | |
| High Ch | | | | | | | | | | |
| 714.50 | 8.37 | V | 0.55 | 0.0 | 7.82 | 9.97 | 34.77 | 36.99 | -27.0 | |
| 714.50 | 17.60 | H | 0.55 | 0.0 | 17.05 | 19.20 | 34.77 | 36.99 | -17.8 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/7/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 12 QPSK 5MHz BW | | | | | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D Cable | | | | | | | | | | | | | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | |
| 701.50 | 8.85 | V | 0.55 | 0.0 | 8.30 | 10.45 | 34.77 | 36.99 | -26.5 | | | | | | | | | | | |
| 701.50 | 18.43 | H | 0.55 | 0.0 | 17.89 | 20.04 | 34.77 | 36.99 | -17.0 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 707.50 | 8.76 | V | 0.55 | 0.0 | 8.21 | 10.36 | 34.77 | 36.99 | -26.6 | | | | | | | | | | | |
| 707.50 | 18.45 | H | 0.55 | 0.0 | 17.90 | 20.05 | 34.77 | 36.99 | -16.9 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 713.50 | 9.37 | V | 0.55 | 0.0 | 8.82 | 10.97 | 34.77 | 36.99 | -26.0 | | | | | | | | | | | |
| 713.50 | 18.60 | H | 0.55 | 0.0 | 18.05 | 20.20 | 34.77 | 36.99 | -16.8 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/7/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 12 16QAM 5MHz BW | | | | | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D Cable | | | | | | | | | | | | | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | |
| 701.50 | 8.11 | V | 0.55 | 0.0 | 7.56 | 9.71 | 34.77 | 36.99 | -27.3 | | | | | | | | | | | |
| 701.50 | 17.67 | H | 0.55 | 0.0 | 17.13 | 19.28 | 34.77 | 36.99 | -17.7 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 707.50 | 8.38 | V | 0.55 | 0.0 | 7.83 | 9.98 | 34.77 | 36.99 | -27.0 | | | | | | | | | | | |
| 707.50 | 17.67 | H | 0.55 | 0.0 | 17.12 | 19.27 | 34.77 | 36.99 | -17.7 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 713.50 | 8.57 | V | 0.55 | 0.0 | 8.02 | 10.17 | 34.77 | 36.99 | -26.8 | | | | | | | | | | | |
| 713.50 | 17.80 | H | 0.55 | 0.0 | 17.25 | 19.40 | 34.77 | 36.99 | -17.6 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/7/2016 Test Engineer: 30554 Configuration: EUT ONLY Mode: LTE Band 12 QPSK 10MHz BW | | | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber D Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | | | |
| 704.00 | 8.22 | V | 0.55 | 0.0 | 7.67 | 9.82 | 34.77 | 36.99 | 27.2 | |
| 704.00 | 18.61 | H | 0.55 | 0.0 | 18.07 | 20.22 | 34.77 | 36.99 | -16.8 | |
| Mid Ch | | | | | | | | | | |
| 707.50 | 8.86 | V | 0.55 | 0.0 | 8.31 | 10.46 | 34.77 | 36.99 | -26.5 | |
| 707.50 | 18.47 | H | 0.55 | 0.0 | 17.92 | 20.07 | 34.77 | 36.99 | -16.9 | |
| High Ch | | | | | | | | | | |
| 711.00 | 9.14 | V | 0.55 | 0.0 | 8.59 | 10.74 | 34.77 | 36.99 | -26.3 | |
| 711.00 | 18.60 | H | 0.55 | 0.0 | 18.05 | 20.20 | 34.77 | 36.99 | -16.8 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/7/2016 Test Engineer: 30554 Configuration: EUT ONLY Mode: LTE Band 12 16QAM 10MHz BW | | | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber D Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | | | |
| 704.00 | 7.41 | V | 0.55 | 0.0 | 6.86 | 9.01 | 34.77 | 36.99 | 28.0 | |
| 704.00 | 17.77 | H | 0.55 | 0.0 | 17.23 | 19.38 | 34.77 | 36.99 | -17.6 | |
| Mid Ch | | | | | | | | | | |
| 707.50 | 8.08 | V | 0.55 | 0.0 | 7.53 | 9.68 | 34.77 | 36.99 | -27.3 | |
| 707.50 | 17.57 | H | 0.55 | 0.0 | 17.02 | 19.17 | 34.77 | 36.99 | -17.8 | |
| High Ch | | | | | | | | | | |
| 711.00 | 8.37 | V | 0.55 | 0.0 | 7.82 | 9.97 | 34.77 | 36.99 | -27.0 | |
| 711.00 | 17.80 | H | 0.55 | 0.0 | 17.25 | 19.40 | 34.77 | 36.99 | -17.6 | |
| 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 D | | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/6/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 13 QPSK 5MHz 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 |
| Low Ch | | | | | | | | | | |
| 779.50 | 11.24 | V | 0.55 | 0.0 | 10.69 | 12.84 | 34.77 | 36.99 | -24.2 | |
| 779.50 | 18.62 | H | 0.55 | 0.0 | 18.07 | 20.22 | 34.77 | 36.99 | -16.8 | |
| Mid Ch | | | | | | | | | | |
| 782.00 | 11.41 | V | 0.55 | 0.0 | 10.86 | 13.01 | 34.77 | 36.99 | -24.0 | |
| 782.00 | 18.45 | H | 0.55 | 0.0 | 17.90 | 20.05 | 34.77 | 36.99 | -16.9 | |
| High Ch | | | | | | | | | | |
| 784.50 | 11.13 | V | 0.55 | 0.0 | 10.58 | 12.73 | 34.77 | 36.99 | -24.3 | |
| 784.50 | 18.52 | H | 0.55 | 0.0 | 17.97 | 20.12 | 34.77 | 36.99 | -16.9 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/6/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 52279 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 13 16QAM 5MHz BW | | | | | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | |
| 779.50 | 10.38 | V | 0.55 | 0.0 | 9.83 | 11.98 | 34.77 | 36.99 | -25.0 | | | | | | | | | | | |
| 779.50 | 17.83 | H | 0.55 | 0.0 | 17.28 | 19.43 | 34.77 | 36.99 | -17.6 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 782.00 | 9.61 | V | 0.55 | 0.0 | 9.06 | 11.21 | 34.77 | 36.99 | -25.8 | | | | | | | | | | | |
| 782.00 | 17.56 | H | 0.55 | 0.0 | 17.01 | 19.16 | 34.77 | 36.99 | -17.8 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 784.50 | 10.26 | V | 0.55 | 0.0 | 9.71 | 11.86 | 34.77 | 36.99 | -25.1 | | | | | | | | | | | |
| 784.50 | 17.61 | H | 0.55 | 0.0 | 17.06 | 19.21 | 34.77 | 36.99 | -17.8 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/6/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 13 QPSK 10MHz BW | | | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber E Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | |
| f 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 | 11.55 | V | 0.55 | 0.0 | 11.00 | 13.15 | 34.77 | 36.99 | -23.8 | |
| 782.00 | 19.26 | H | 0.55 | 0.0 | 18.71 | 20.86 | 34.77 | 36.99 | -16.1 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/6/2016 Test Engineer: 52279 Configuration: EUT only Mode: LTE Band 13 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 |
| 782.00 | 10.74 | V | 0.55 | 0.0 | 10.19 | 12.34 | 34.77 | 36.99 | -24.7 | |
| 782.00 | 18.46 | H | 0.55 | 0.0 | 17.91 | 20.06 | 34.77 | 36.99 | -16.9 | |

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 D | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/6/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 52279 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 17 QPSK 5MHz BW | | | | | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D 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 (dBi) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | |
| 706.50 | 9.17 | V | 0.55 | 0.0 | 8.62 | 10.77 | 34.77 | 36.99 | -26.2 | | | | | | | | | | | |
| 706.50 | 16.82 | H | 0.55 | 0.0 | 16.27 | 18.42 | 34.77 | 36.99 | -18.6 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 710.00 | 9.32 | V | 0.55 | 0.0 | 8.77 | 10.92 | 34.77 | 36.99 | -26.1 | | | | | | | | | | | |
| 710.00 | 16.85 | H | 0.55 | 0.0 | 16.30 | 18.45 | 34.77 | 36.99 | -18.5 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 713.50 | 9.24 | V | 0.55 | 0.0 | 8.69 | 10.84 | 34.77 | 36.99 | -26.1 | | | | | | | | | | | |
| 713.50 | 16.75 | H | 0.55 | 0.0 | 16.20 | 18.35 | 34.77 | 36.99 | -18.6 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Test Equipment: Receiving: Sunol T408, and Chamber D 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 | 8.47 | V | 0.55 | 0.0 | 7.92 | 10.07 | 34.77 | 36.99 | -26.9 | |
| 706.50 | 16.12 | H | 0.55 | 0.0 | 15.57 | 17.72 | 34.77 | 36.99 | -19.3 | |
| Mid Ch | | | | | | | | | | |
| 710.00 | 8.62 | V | 0.55 | 0.0 | 8.07 | 10.22 | 34.77 | 36.99 | -26.8 | |
| 710.00 | 16.15 | H | 0.55 | 0.0 | 15.60 | 17.75 | 34.77 | 36.99 | -19.2 | |
| High Ch | | | | | | | | | | |
| 713.50 | 8.54 | V | 0.55 | 0.0 | 7.99 | 10.14 | 34.77 | 36.99 | -26.8 | |
| 713.50 | 16.05 | H | 0.55 | 0.0 | 15.50 | 17.65 | 34.77 | 36.99 | -19.3 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Test Equipment: Receiving: Sunol T408, and Chamber D 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 | 9.70 | V | 0.55 | 0.0 | 9.15 | 11.30 | 34.77 | 36.99 | -25.7 | |
| 710.00 | 16.82 | H | 0.55 | 0.0 | 16.27 | 18.42 | 34.77 | 36.99 | -18.6 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|----------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/6/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 52279 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 17 16QAM 10MHz BW | | | | | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D 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 | 8.99 | V | 0.55 | 0.0 | 8.44 | 10.59 | 34.77 | 36.99 | -26.4 | | | | | | | | | | | |
| 710.00 | 16.11 | H | 0.55 | 0.0 | 15.56 | 17.71 | 34.77 | 36.99 | -19.3 | | | | | | | | | | | |
| 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 D | | | | | | | | |
|--|----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 QPSK 1.4MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.851 | 14.4 | V | 0.98 | 8.05 | 21.45 | 33.0 | -11.5 | |
| 1.851 | 12.0 | H | 0.98 | 8.05 | 19.10 | 33.0 | -13.9 | |
| Mid Ch | | | | | | | | |
| 1.883 | 14.4 | V | 0.98 | 8.03 | 21.46 | 33.0 | -11.5 | |
| 1.883 | 13.6 | H | 0.98 | 8.03 | 20.60 | 33.0 | -12.4 | |
| High Ch | | | | | | | | |
| 1.914 | 14.4 | V | 0.98 | 8.07 | 21.49 | 33.0 | -11.5 | |
| 1.914 | 12.1 | H | 0.98 | 8.07 | 19.16 | 33.0 | -13.8 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|-----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 16QAM 1.4MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.851 | 13.6 | V | 0.98 | 8.05 | 20.65 | 33.0 | -12.3 | |
| 1.851 | 11.2 | H | 0.98 | 8.05 | 18.30 | 33.0 | -14.7 | |
| Mid Ch | | | | | | | | |
| 1.883 | 13.6 | V | 0.98 | 8.03 | 20.66 | 33.0 | -12.3 | |
| 1.883 | 12.8 | H | 0.98 | 8.03 | 19.80 | 33.0 | -13.2 | |
| High Ch | | | | | | | | |
| 1.914 | 13.6 | V | 0.98 | 8.07 | 20.69 | 33.0 | -12.3 | |
| 1.914 | 11.3 | H | 0.98 | 8.07 | 18.36 | 33.0 | -14.6 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 QPSK 3MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.852 | 13.6 | V | 0.98 | 8.05 | 20.65 | 33.0 | -12.3 | |
| 1.852 | 11.1 | H | 0.98 | 8.05 | 18.21 | 33.0 | -14.8 | |
| Mid Ch | | | | | | | | |
| 1.883 | 13.5 | V | 0.98 | 8.03 | 20.58 | 33.0 | -12.4 | |
| 1.883 | 12.5 | H | 0.98 | 8.03 | 19.56 | 33.0 | -13.4 | |
| High Ch | | | | | | | | |
| 1.914 | 14.0 | V | 0.98 | 8.07 | 21.08 | 33.0 | -11.9 | |
| 1.914 | 12.3 | H | 0.98 | 8.07 | 19.39 | 33.0 | -13.6 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 16QAM 3MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.852 | 12.8 | V | 0.98 | 8.05 | 19.86 | 33.0 | -13.1 | |
| 1.852 | 10.4 | H | 0.98 | 8.05 | 17.42 | 33.0 | -15.6 | |
| Mid Ch | | | | | | | | |
| 1.883 | 12.7 | V | 0.98 | 8.03 | 19.79 | 33.0 | -13.2 | |
| 1.883 | 11.7 | H | 0.98 | 8.03 | 18.77 | 33.0 | -14.2 | |
| High Ch | | | | | | | | |
| 1.914 | 13.2 | V | 0.98 | 8.07 | 20.29 | 33.0 | -12.7 | |
| 1.914 | 11.5 | H | 0.98 | 8.07 | 18.60 | 33.0 | -14.4 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 QPSK 5MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.853 | 13.1 | V | 0.98 | 8.05 | 20.12 | 33.0 | -12.9 | |
| 1.853 | 11.1 | H | 0.98 | 8.05 | 18.20 | 33.0 | -14.8 | |
| Mid Ch | | | | | | | | |
| 1.883 | 13.5 | V | 0.98 | 8.03 | 20.58 | 33.0 | -12.4 | |
| 1.883 | 12.2 | H | 0.98 | 8.03 | 19.26 | 33.0 | -13.7 | |
| High Ch | | | | | | | | |
| 1.913 | 14.3 | V | 0.98 | 8.06 | 21.39 | 33.0 | -11.6 | |
| 1.913 | 11.1 | H | 0.98 | 8.06 | 18.20 | 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 D | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 16QAM 5MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.853 | 12.2 | V | 0.98 | 8.05 | 19.31 | 33.0 | -13.7 | |
| 1.853 | 10.3 | H | 0.98 | 8.05 | 17.39 | 33.0 | -15.6 | |
| Mid Ch | | | | | | | | |
| 1.883 | 12.7 | V | 0.98 | 8.03 | 19.77 | 33.0 | -13.2 | |
| 1.883 | 11.4 | H | 0.98 | 8.03 | 18.45 | 33.0 | -14.5 | |
| High Ch | | | | | | | | |
| 1.913 | 13.5 | V | 0.98 | 8.06 | 20.58 | 33.0 | -12.4 | |
| 1.913 | 10.3 | H | 0.98 | 8.06 | 17.39 | 33.0 | -15.6 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 QPSK 10MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.855 | 13.3 | V | 0.98 | 8.05 | 20.38 | 33.0 | -12.6 | |
| 1.855 | 11.1 | H | 0.98 | 8.05 | 18.12 | 33.0 | -14.9 | |
| Mid Ch | | | | | | | | |
| 1.883 | 13.1 | V | 0.98 | 8.03 | 20.12 | 33.0 | -12.9 | |
| 1.883 | 11.6 | H | 0.98 | 8.03 | 18.67 | 33.0 | -14.3 | |
| High Ch | | | | | | | | |
| 1.910 | 13.7 | V | 0.98 | 8.05 | 20.81 | 33.0 | -12.2 | |
| 1.910 | 10.8 | H | 0.98 | 8.05 | 17.90 | 33.0 | -15.1 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 16QAM 10MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.855 | 12.5 | V | 0.98 | 8.05 | 19.60 | 33.0 | -13.4 | |
| 1.855 | 10.3 | H | 0.98 | 8.05 | 17.34 | 33.0 | -15.7 | |
| Mid Ch | | | | | | | | |
| 1.883 | 12.3 | V | 0.98 | 8.03 | 19.34 | 33.0 | -13.7 | |
| 1.883 | 10.8 | H | 0.98 | 8.03 | 17.89 | 33.0 | -15.1 | |
| High Ch | | | | | | | | |
| 1.910 | 13.0 | V | 0.98 | 8.05 | 20.03 | 33.0 | -13.0 | |
| 1.910 | 10.1 | H | 0.98 | 8.05 | 17.12 | 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 D | | | | | | | | | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/30/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | '52291 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 25 QPSK 15MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 1.858 | 14.2 | V | 0.98 | 8.04 | 21.22 | 33.0 | -11.8 | | | | | | | | | |
| 1.858 | 12.2 | H | 0.98 | 8.04 | 19.22 | 33.0 | -13.8 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 1.883 | 14.1 | V | 0.98 | 8.03 | 21.17 | 33.0 | -11.8 | | | | | | | | | |
| 1.883 | 12.3 | H | 0.98 | 8.03 | 19.38 | 33.0 | -13.6 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 1.908 | 14.2 | V | 0.98 | 8.04 | 21.31 | 33.0 | -11.7 | | | | | | | | | |
| 1.908 | 11.8 | H | 0.98 | 8.04 | 18.89 | 33.0 | -14.1 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 16QAM 15MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.858 | 13.4 | V | 0.98 | 8.04 | 20.42 | 33.0 | -12.6 | |
| 1.858 | 11.4 | H | 0.98 | 8.04 | 18.42 | 33.0 | -14.6 | |
| Mid Ch | | | | | | | | |
| 1.883 | 13.3 | V | 0.98 | 8.03 | 20.37 | 33.0 | -12.6 | |
| 1.883 | 11.5 | H | 0.98 | 8.03 | 18.58 | 33.0 | -14.4 | |
| High Ch | | | | | | | | |
| 1.908 | 13.4 | V | 0.98 | 8.04 | 20.51 | 33.0 | -12.5 | |
| 1.908 | 11.0 | H | 0.98 | 8.04 | 18.09 | 33.0 | -14.9 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|---------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 QPSK 20MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.860 | 14.0 | V | 0.98 | 8.04 | 21.11 | 33.0 | -11.9 | |
| 1.860 | 12.4 | H | 0.98 | 8.04 | 19.45 | 33.0 | -13.5 | |
| Mid Ch | | | | | | | | |
| 1.883 | 14.4 | V | 0.98 | 8.03 | 21.41 | 33.0 | -11.6 | |
| 1.883 | 12.3 | H | 0.98 | 8.03 | 19.31 | 33.0 | -13.7 | |
| High Ch | | | | | | | | |
| 1.905 | 13.9 | V | 0.98 | 8.04 | 20.99 | 33.0 | -12.0 | |
| 1.905 | 12.0 | H | 0.98 | 8.04 | 19.05 | 33.0 | -14.0 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/30/2016 | | | | | | | |
| Test Engineer: | 52291 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 25 16QAM 20MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 1.860 | 13.3 | V | 0.98 | 8.04 | 20.32 | 33.0 | -12.7 | |
| 1.860 | 11.6 | H | 0.98 | 8.04 | 18.66 | 33.0 | -14.3 | |
| Mid Ch | | | | | | | | |
| 1.883 | 13.6 | V | 0.98 | 8.03 | 20.62 | 33.0 | -12.4 | |
| 1.883 | 11.5 | H | 0.98 | 8.03 | 18.52 | 33.0 | -14.5 | |
| High Ch | | | | | | | | |
| 1.905 | 13.1 | V | 0.98 | 8.04 | 20.20 | 33.0 | -12.8 | |
| 1.905 | 11.2 | H | 0.98 | 8.04 | 18.26 | 33.0 | -14.7 | |
| Rev. 10.24.13 | | | | | | | | |

10.2.9. LTE BAND 26

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| <u>Company:</u> Project #: 16U23328 Date: 6/30/2016 <u>Test Engineer:</u> 45200 <u>Configuration:</u> EUT Only <u>Mode:</u> LTE Band 26 QPSK 1.4MHz BW | | | | | | | | | | |
| <u>Test Equipment:</u> Receiving: Sunol T408, and Chamber D 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 | 11.79 | V | 0.62 | 0.0 | 11.17 | 13.32 | 38.45 | 40.60 | -27.3 | |
| 814.70 | 20.93 | H | 0.62 | 0.0 | 20.31 | 22.46 | 38.45 | 40.60 | -18.1 | |
| Mid Ch | | | | | | | | | | |
| 819.00 | 10.81 | V | 0.62 | 0.0 | 10.19 | 12.34 | 38.45 | 40.60 | -28.3 | |
| 819.00 | 20.93 | H | 0.62 | 0.0 | 20.31 | 22.46 | 38.45 | 40.60 | -18.1 | |
| High Ch | | | | | | | | | | |
| 823.30 | 11.07 | V | 0.62 | 0.0 | 10.45 | 12.60 | 38.45 | 40.60 | -28.0 | |
| 823.30 | 20.88 | H | 0.62 | 0.0 | 20.26 | 22.41 | 38.45 | 40.60 | -18.2 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/30/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 45200 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 26 16QAM 1.4MHz BW | | | | | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D 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 | 10.97 | V | 0.62 | 0.0 | 10.35 | 12.50 | 38.45 | 40.60 | -28.1 | | | | | | | | | | | |
| 814.70 | 20.11 | H | 0.62 | 0.0 | 19.49 | 21.64 | 38.45 | 40.60 | -19.0 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 819.00 | 9.99 | V | 0.62 | 0.0 | 9.37 | 11.52 | 38.45 | 40.60 | -29.1 | | | | | | | | | | | |
| 819.00 | 20.11 | H | 0.62 | 0.0 | 19.49 | 21.64 | 38.45 | 40.60 | -19.0 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 823.30 | 10.25 | V | 0.62 | 0.0 | 9.63 | 11.78 | 38.45 | 40.60 | -28.8 | | | | | | | | | | | |
| 823.30 | 20.06 | H | 0.62 | 0.0 | 19.44 | 21.59 | 38.45 | 40.60 | -19.0 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | | | |
| Date: | 6/30/2016 | | | | | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 26 QPSK 3MHz BW | | | | | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D 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 | 10.88 | V | 0.62 | 0.0 | 10.26 | 12.41 | 38.45 | 40.60 | -28.2 | | | | | | | | | | | |
| 815.50 | 21.17 | H | 0.62 | 0.0 | 20.55 | 22.70 | 38.45 | 40.60 | -17.9 | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | |
| 819.00 | 11.75 | V | 0.62 | 0.0 | 11.13 | 13.28 | 38.45 | 40.60 | -27.3 | | | | | | | | | | | |
| 819.00 | 21.02 | H | 0.62 | 0.0 | 20.40 | 22.55 | 38.45 | 40.60 | -18.0 | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | |
| 822.50 | 10.95 | V | 0.62 | 0.0 | 10.33 | 12.48 | 38.45 | 40.60 | -28.1 | | | | | | | | | | | |
| 822.50 | 20.72 | H | 0.62 | 0.0 | 20.10 | 22.25 | 38.45 | 40.60 | -18.4 | | | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/30/2016 Test Engineer: 30554 Configuration: EUT ONLY Mode: LTE Band 26 16QAM 3MHz BW | | | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber D 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 | 10.07 | V | 0.62 | 0.0 | 9.45 | 11.60 | 38.45 | 40.60 | -29.0 | |
| 815.50 | 20.36 | H | 0.62 | 0.0 | 19.74 | 21.89 | 38.45 | 40.60 | -18.7 | |
| Mid Ch | | | | | | | | | | |
| 819.00 | 10.94 | V | 0.62 | 0.0 | 10.32 | 12.47 | 38.45 | 40.60 | -28.1 | |
| 819.00 | 20.21 | H | 0.62 | 0.0 | 19.59 | 21.74 | 38.45 | 40.60 | -18.9 | |
| High Ch | | | | | | | | | | |
| 822.50 | 10.14 | V | 0.62 | 0.0 | 9.52 | 11.67 | 38.45 | 40.60 | -28.9 | |
| 822.50 | 19.91 | H | 0.62 | 0.0 | 19.29 | 21.44 | 38.45 | 40.60 | -19.2 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | | | |
| Date: | 6/30/2016 | | | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | | | | | | | | | | | |
| Mode: | LTE Band 26 QPSK 5MHz BW | | | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D Cable | | | | | | | | | | | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | EIRP (dBm) | ERP Limit (dBm) | EIRP Limit (dBm) | Margin (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | |
| 816.50 | 11.66 | V | 0.62 | 0.0 | 11.04 | 13.19 | 38.45 | 40.60 | -27.4 | | | | | | | | | |
| 816.50 | 21.33 | H | 0.62 | 0.0 | 20.71 | 22.86 | 38.45 | 40.60 | -17.7 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | |
| 819.00 | 11.51 | V | 0.62 | 0.0 | 10.89 | 13.04 | 38.45 | 40.60 | -27.6 | | | | | | | | | |
| 819.00 | 21.24 | H | 0.62 | 0.0 | 20.62 | 22.77 | 38.45 | 40.60 | -17.8 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | |
| 821.50 | 11.45 | V | 0.62 | 0.0 | 10.83 | 12.98 | 38.45 | 40.60 | -27.6 | | | | | | | | | |
| 821.50 | 21.05 | H | 0.62 | 0.0 | 20.43 | 22.58 | 38.45 | 40.60 | -18.0 | | | | | | | | | |
| Rev. 10.24.13 | | | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Test Equipment: Receiving: Sunol T408, and Chamber D 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 | 10.87 | V | 0.62 | 0.0 | 10.25 | 12.40 | 38.45 | 40.60 | -28.2 | |
| 816.50 | 20.54 | H | 0.62 | 0.0 | 19.92 | 22.07 | 38.45 | 40.60 | -18.5 | |
| Mid Ch | | | | | | | | | | |
| 819.00 | 10.72 | V | 0.62 | 0.0 | 10.10 | 12.25 | 38.45 | 40.60 | -28.3 | |
| 819.00 | 20.45 | H | 0.62 | 0.0 | 19.83 | 21.98 | 38.45 | 40.60 | -18.6 | |
| High Ch | | | | | | | | | | |
| 821.50 | 10.66 | V | 0.62 | 0.0 | 10.04 | 12.19 | 38.45 | 40.60 | -28.4 | |
| 821.50 | 20.26 | H | 0.62 | 0.0 | 19.64 | 21.79 | 38.45 | 40.60 | -18.8 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|---------------------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 6/30/2016 | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | | | |
| Mode: | LTE Band 26 QPSK 10MHz BW | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D 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 | 11.54 | V | 0.62 | 0.0 | 10.92 | 13.07 | 38.45 | 40.60 | -27.5 | |
| 819.00 | 21.15 | H | 0.62 | 0.0 | 20.53 | 22.68 | 38.45 | 40.60 | -17.9 | |
| Rev. 10.24.13 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|---------------|--------------------|---------------------|----------------|-------|
| Company: | | | | | | | | | | |
| Project #: 16U23328 | | | | | | | | | | |
| Date: 6/30/2016 | | | | | | | | | | |
| Test Engineer: 30554 | | | | | | | | | | |
| Configuration: EUT ONLY | | | | | | | | | | |
| Mode: LTE Band 26 16QAM 10MHz BW | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Receiving: Sunol T408, and Chamber D 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 | 10.73 | V | 0.62 | 0.0 | 10.11 | 12.26 | 38.45 | 40.60 | -28.3 | |
| 819.00 | 20.34 | H | 0.62 | 0.0 | 19.72 | 21.87 | 38.45 | 40.60 | -18.7 | |
| Rev. 10.24.13 | | | | | | | | | | |

10.2.10. LTE BAND 27

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|--|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/11/2016 | | | | | | | |
| Test Engineer: | 45200 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 27 QPSK 1.4MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: | Sunol T408, and Chamber D Cable | | | | | | | |
| Substitution: | Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUKOFLLEX 104PEA) | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | |
| 814.70 | 11.26 | V | 0.62 | 0.0 | 10.64 | 50.00 | -39.4 | |
| 814.70 | 22.73 | H | 0.62 | 0.0 | 22.11 | 50.00 | -27.9 | |
| Mid Ch | | | | | | | | |
| 819.00 | 12.75 | V | 0.62 | 0.0 | 12.13 | 50.00 | -37.9 | |
| 819.00 | 22.82 | H | 0.62 | 0.0 | 22.20 | 50.00 | -27.8 | |
| High Ch | | | | | | | | |
| 823.30 | 12.68 | V | 0.62 | 0.0 | 12.06 | 50.00 | -37.9 | |
| 823.30 | 22.36 | H | 0.62 | 0.0 | 21.74 | 50.00 | -28.3 | |
| Rev. 04.28.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|-----------------------------|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/11/2016 | | | | | | | |
| Test Engineer: | 45200 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 27 16QAM 1.4MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Sunol T408, and Chamber D Cable | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | |
| 814.70 | 10.86 | V | 0.62 | 0.0 | 10.24 | 50.00 | -39.8 | |
| 814.70 | 22.30 | H | 0.62 | 0.0 | 21.68 | 50.00 | -28.3 | |
| Mid Ch | | | | | | | | |
| 819.00 | 12.62 | V | 0.62 | 0.0 | 12.00 | 50.00 | -38.0 | |
| 819.00 | 22.38 | H | 0.62 | 0.0 | 21.76 | 50.00 | -28.2 | |
| High Ch | | | | | | | | |
| 823.30 | 12.08 | V | 0.62 | 0.0 | 11.46 | 50.00 | -38.5 | |
| 823.30 | 21.86 | H | 0.62 | 0.0 | 21.24 | 50.00 | -28.8 | |
| Rev. 04.28.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/7/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | |
| Mode: | LTE Band 27 QPSK 3MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Sunol T408, and Chamber E Cable | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | |
| 815.50 | 10.68 | V | 0.62 | 0.0 | 10.06 | 50.00 | -39.9 | |
| 815.50 | 22.26 | H | 0.62 | 0.0 | 21.64 | 50.00 | -28.4 | |
| Mid Ch | | | | | | | | |
| 819.00 | 11.84 | V | 0.62 | 0.0 | 11.22 | 50.00 | -38.8 | |
| 819.00 | 21.64 | H | 0.62 | 0.0 | 21.02 | 50.00 | -29.0 | |
| High Ch | | | | | | | | |
| 822.50 | 11.94 | V | 0.62 | 0.0 | 11.32 | 50.00 | -38.7 | |
| 822.50 | 21.04 | H | 0.62 | 0.0 | 20.42 | 50.00 | -29.6 | |
| Rev. 04.28.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/7/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | |
| Mode: | LTE Band 27 16QAM 3MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Sunol T408, and Chamber E Cable | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | |
| 815.50 | 10.76 | V | 0.62 | 0.0 | 10.14 | 50.00 | -39.9 | |
| 815.50 | 21.75 | H | 0.62 | 0.0 | 21.13 | 50.00 | -28.9 | |
| Mid Ch | | | | | | | | |
| 819.00 | 11.62 | V | 0.62 | 0.0 | 11.00 | 50.00 | -39.0 | |
| 819.00 | 21.42 | H | 0.62 | 0.0 | 20.80 | 50.00 | -29.2 | |
| High Ch | | | | | | | | |
| 822.50 | 11.57 | V | 0.62 | 0.0 | 10.95 | 50.00 | -39.1 | |
| 822.50 | 21.41 | H | 0.62 | 0.0 | 20.79 | 50.00 | -29.2 | |
| Rev. 04.28.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|--------------------------|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/7/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | |
| Mode: | LTE Band 27 QPSK 5MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Sunol T408, and Chamber E Cable | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | |
| 816.50 | 11.00 | V | 0.62 | 0.0 | 10.38 | 50.00 | -39.6 | |
| 816.50 | 22.20 | H | 0.62 | 0.0 | 21.58 | 50.00 | -28.4 | |
| Mid Ch | | | | | | | | |
| 819.00 | 11.03 | V | 0.62 | 0.0 | 10.41 | 50.00 | -39.6 | |
| 819.00 | 21.42 | H | 0.62 | 0.0 | 20.80 | 50.00 | -29.2 | |
| High Ch | | | | | | | | |
| 821.50 | 10.86 | V | 0.62 | 0.0 | 10.24 | 50.00 | -39.8 | |
| 821.50 | 20.86 | H | 0.62 | 0.0 | 20.24 | 50.00 | -29.8 | |
| Rev. 04.28.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| <u>Company:</u> | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/7/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | |
| Mode: | LTE Band 27 16QAM 5MHz BW | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | |
| Receiving: Sunol T408, and Chamber E Cable | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Low Ch | | | | | | | | |
| 816.50 | 11.17 | V | 0.62 | 0.0 | 10.55 | 50.00 | -39.5 | |
| 816.50 | 21.85 | H | 0.62 | 0.0 | 21.23 | 50.00 | -28.8 | |
| Mid Ch | | | | | | | | |
| 819.00 | 12.23 | V | 0.62 | 0.0 | 11.61 | 50.00 | -38.4 | |
| 819.00 | 21.42 | H | 0.62 | 0.0 | 20.80 | 50.00 | -29.2 | |
| High Ch | | | | | | | | |
| 821.50 | 12.23 | V | 0.62 | 0.0 | 11.61 | 50.00 | -38.4 | |
| 821.50 | 21.39 | H | 0.62 | 0.0 | 20.77 | 50.00 | -29.2 | |
| Rev. 04.28.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------------|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/7/2016 | | | | | | | |
| Test Engineer: | 30554 | | | | | | | |
| Configuration: | EUT ONLY | | | | | | | |
| Mode: | LTE Band 27 QPSK 10MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Sunol T408, and Chamber E Cable | | | | | | | | |
| Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Mid Ch | | | | | | | | |
| 819.00 | 11.97 | V | 0.62 | 0.0 | 11.35 | 50.00 | -38.7 | |
| 819.00 | 21.41 | H | 0.62 | 0.0 | 20.79 | 50.00 | -29.2 | |
| Rev. 04.28.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|--------------|--------------------|----------------|-------|
| Company: Project #: 16U23328 Date: 6/7/2016 Test Engineer: 30554 Configuration: EUT ONLY Mode: LTE Band 27 16QAM 10MHz BW | | | | | | | | |
| Test Equipment: Receiving: Sunol T408, and Chamber E Cable Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) | Notes |
| Mid Ch | | | | | | | | |
| 819.00 | 12.34 | V | 0.62 | 0.0 | 11.72 | 50.00 | -38.3 | |
| 819.00 | 21.04 | H | 0.62 | 0.0 | 20.42 | 50.00 | -29.6 | |

Rev. 04.28.15

10.2.11. LTE BAND 30

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/30/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 30 QPSK 5MHz BW | | | | | | | | | | | | | | | |
| Test Equipment: | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | |
| 2.308 | 1.0 | V | 1.15 | 9.37 | 9.20 | 24.0 | -14.8 | | | | | | | | | |
| 2.308 | 11.4 | H | 1.15 | 9.37 | 19.67 | 24.0 | -4.3 | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | |
| 2.310 | 1.4 | V | 1.16 | 9.37 | 9.58 | 24.0 | -14.4 | | | | | | | | | |
| 2.310 | 11.1 | H | 1.16 | 9.37 | 19.31 | 24.0 | -4.7 | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | |
| 2.313 | 1.8 | V | 1.17 | 9.37 | 10.03 | 24.0 | -14.0 | | | | | | | | | |
| 2.313 | 11.1 | H | 1.17 | 9.37 | 19.30 | 24.0 | -4.7 | | | | | | | | | |
| Rev. 04.24.15 | | | | | | | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/30/2016 Test Engineer: 30554 Configuration: EUT Only Mode: LTE Band 30 16QAM 5MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.308 | 0.2 | V | 1.15 | 9.37 | 8.46 | 24.0 | -15.5 | |
| 2.308 | 10.7 | H | 1.15 | 9.37 | 18.93 | 24.0 | -5.1 | |
| Mid Ch | | | | | | | | |
| 2.310 | 0.6 | V | 1.16 | 9.37 | 8.84 | 24.0 | -15.2 | |
| 2.310 | 10.4 | H | 1.16 | 9.37 | 18.57 | 24.0 | -5.4 | |
| High Ch | | | | | | | | |
| 2.313 | 1.1 | V | 1.17 | 9.37 | 9.29 | 24.0 | -14.7 | |
| 2.313 | 10.4 | H | 1.17 | 9.37 | 18.56 | 24.0 | -5.4 | |
| Rev. 04.24.15 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/30/2016 Test Engineer: 30554 Configuration: EUT Only Mode: LTE Band 30 QPSK 10MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T712, and Chamber D SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| 2.310 | 0.6 | V | 1.15 | 9.37 | 8.86 | 24.0 | -15.1 | |
| 2.310 | 11.1 | H | 1.15 | 9.37 | 19.30 | 24.0 | -4.7 | |

Rev. 04.24.15

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber D | | | | | | | | | | | | | | | | |
|--|----------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|--|--|--|--|--|--|--|--|
| Company: | | | | | | | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | | | | | | | |
| Date: | 6/30/2016 | | | | | | | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | | | | | | | |
| Mode: | LTE Band 30 16QAM 10MHz BW | | | | | | | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | | | | | | | |
| Receiving: Horn T712, and Chamber D SMA Cables | | | | | | | | | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes | | | | | | | | |
| 2.310 | -0.1 | V | 1.15 | 9.37 | 8.16 | 24.0 | -15.8 | | | | | | | | | |
| 2.310 | 10.4 | H | 1.15 | 9.37 | 18.60 | 24.0 | -5.4 | | | | | | | | | |
| Rev. 04.24.15 | | | | | | | | | | | | | | | | |

10.2.12. LTE BAND 41

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|--|--------------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: | | | | | | | | |
| Project #: | 16U23328 | | | | | | | |
| Date: | 6/20/2016 | | | | | | | |
| Test Engineer: | 39004 | | | | | | | |
| Configuration: | EUT Only | | | | | | | |
| Mode: | LTE Band 41 QPSK 5MHz BW | | | | | | | |
| Test Equipment: | | | | | | | | |
| Receiving: Horn T711, and Chamber E SMA Cables | | | | | | | | |
| Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.499 | 9.4 | V | 1.15 | 9.33 | 17.62 | 33.0 | -15.4 | |
| 2.499 | 11.5 | H | 1.15 | 9.33 | 19.72 | 33.0 | -13.3 | |
| Mid Ch | | | | | | | | |
| 2.593 | 9.3 | V | 1.16 | 9.47 | 17.61 | 33.0 | -15.4 | |
| 2.593 | 11.8 | H | 1.16 | 9.47 | 20.12 | 33.0 | -12.9 | |
| High Ch | | | | | | | | |
| 2.688 | 9.2 | V | 1.17 | 9.78 | 17.84 | 33.0 | -15.2 | |
| 2.688 | 13.0 | H | 1.17 | 9.78 | 21.66 | 33.0 | -11.3 | |
| Rev. 10.24.13 | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/20/2016 Test Engineer: 39004 Configuration: EUT Only Mode: LTE Band 41 16QAM 5MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.499 | 9.0 | V | 1.15 | 9.33 | 17.16 | 33.0 | -15.8 | |
| 2.499 | 10.9 | H | 1.15 | 9.33 | 19.06 | 33.0 | -13.9 | |
| Mid Ch | | | | | | | | |
| 2.593 | 8.7 | V | 1.16 | 9.47 | 17.01 | 33.0 | -16.0 | |
| 2.593 | 11.4 | H | 1.16 | 9.47 | 19.72 | 33.0 | -13.3 | |
| High Ch | | | | | | | | |
| 2.688 | 9.0 | V | 1.17 | 9.78 | 17.58 | 33.0 | -15.4 | |
| 2.688 | 12.5 | H | 1.17 | 9.78 | 21.12 | 33.0 | -11.9 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/20/2016 Test Engineer: 39004 Configuration: EUT Only Mode: LTE Band 41 QPSK 10MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.501 | 9.2 | V | 1.15 | 9.33 | 17.39 | 33.0 | -15.6 | |
| 2.501 | 11.3 | H | 1.15 | 9.33 | 19.52 | 33.0 | -13.5 | |
| Mid Ch | | | | | | | | |
| 2.593 | 9.6 | V | 1.16 | 9.47 | 17.91 | 33.0 | -15.1 | |
| 2.593 | 12.6 | H | 1.16 | 9.47 | 20.88 | 33.0 | -12.1 | |
| High Ch | | | | | | | | |
| 2.685 | 9.9 | V | 1.17 | 9.77 | 18.49 | 33.0 | -14.5 | |
| 2.685 | 12.4 | H | 1.17 | 9.77 | 21.04 | 33.0 | -12.0 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/20/2016 Test Engineer: 39004 Configuration: EUT Only Mode: LTE Band 41 16QAM 10MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.501 | 8.3 | V | 1.15 | 9.33 | 16.51 | 33.0 | -16.5 | |
| 2.501 | 11.0 | H | 1.15 | 9.33 | 19.19 | 33.0 | -13.8 | |
| Mid Ch | | | | | | | | |
| 2.593 | 9.0 | V | 1.16 | 9.47 | 17.32 | 33.0 | -15.7 | |
| 2.593 | 12.3 | H | 1.16 | 9.47 | 20.58 | 33.0 | -12.4 | |
| High Ch | | | | | | | | |
| 2.685 | 9.2 | V | 1.17 | 9.77 | 17.80 | 33.0 | -15.2 | |
| 2.685 | 12.1 | H | 1.17 | 9.77 | 20.71 | 33.0 | -12.3 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/20/2016 Test Engineer: 39004 Configuration: EUT Only Mode: LTE Band 41 QPSK 15MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.504 | 9.5 | V | 1.15 | 9.34 | 17.67 | 33.0 | -15.3 | |
| 2.504 | 11.2 | H | 1.15 | 9.34 | 19.43 | 33.0 | -13.6 | |
| Mid Ch | | | | | | | | |
| 2.593 | 10.8 | V | 1.16 | 9.47 | 19.09 | 33.0 | -13.9 | |
| 2.593 | 13.2 | H | 1.16 | 9.47 | 21.48 | 33.0 | -11.5 | |
| High Ch | | | | | | | | |
| 2.683 | 9.6 | V | 1.17 | 9.76 | 18.21 | 33.0 | -14.8 | |
| 2.683 | 13.0 | H | 1.17 | 9.76 | 21.55 | 33.0 | -11.4 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/20/2016 Test Engineer: 39004 Configuration: EUT Only Mode: LTE Band 41 16QAM 15MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.504 | 8.7 | V | 1.15 | 9.34 | 16.87 | 33.0 | -16.1 | |
| 2.504 | 10.7 | H | 1.15 | 9.34 | 18.93 | 33.0 | -14.1 | |
| Mid Ch | | | | | | | | |
| 2.593 | 9.2 | V | 1.16 | 9.47 | 17.46 | 33.0 | -15.5 | |
| 2.593 | 11.2 | H | 1.16 | 9.47 | 19.55 | 33.0 | -13.5 | |
| High Ch | | | | | | | | |
| 2.683 | 9.1 | V | 1.17 | 9.76 | 17.71 | 33.0 | -15.3 | |
| 2.683 | 12.3 | H | 1.17 | 9.76 | 20.88 | 33.0 | -12.1 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|--|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/20/2016 Test Engineer: 39004 Configuration: EUT Only Mode: LTE Band 41 QPSK 20MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.506 | 9.8 | V | 1.15 | 9.34 | 17.98 | 33.0 | -15.0 | |
| 2.506 | 11.1 | H | 1.15 | 9.34 | 19.29 | 33.0 | -13.7 | |
| Mid Ch | | | | | | | | |
| 2.593 | 9.7 | V | 1.16 | 9.47 | 17.99 | 33.0 | -15.0 | |
| 2.593 | 12.7 | H | 1.16 | 9.47 | 20.98 | 33.0 | -12.0 | |
| High Ch | | | | | | | | |
| 2.680 | 10.1 | V | 1.17 | 9.76 | 18.71 | 33.0 | -14.3 | |
| 2.680 | 12.9 | H | 1.17 | 9.76 | 21.53 | 33.0 | -11.5 | |

Rev. 10.24.13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber E | | | | | | | | |
|---|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------------|-------|
| Company: Project #: 16U23328 Date: 6/20/2016 Test Engineer: 39004 Configuration: EUT Only Mode: LTE Band 41 16QAM 20MHz BW | | | | | | | | |
| Test Equipment: Receiving: Horn T711, and Chamber E SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA) | | | | | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin EIRP (dB) | Notes |
| Low Ch | | | | | | | | |
| 2.506 | 9.4 | V | 1.15 | 9.34 | 17.59 | 33.0 | -15.4 | |
| 2.506 | 10.5 | H | 1.15 | 9.34 | 18.69 | 33.0 | -14.3 | |
| Mid Ch | | | | | | | | |
| 2.593 | 8.8 | V | 1.16 | 9.47 | 17.11 | 33.0 | -15.9 | |
| 2.593 | 11.2 | H | 1.16 | 9.47 | 19.52 | 33.0 | -13.5 | |
| High Ch | | | | | | | | |
| 2.680 | 9.5 | V | 1.17 | 9.76 | 18.11 | 33.0 | -14.9 | |
| 2.680 | 11.9 | H | 1.17 | 9.76 | 20.47 | 33.0 | -12.5 | |

Rev. 10.24.13

10.3. PEAK-TO-AVERAGE RATIO

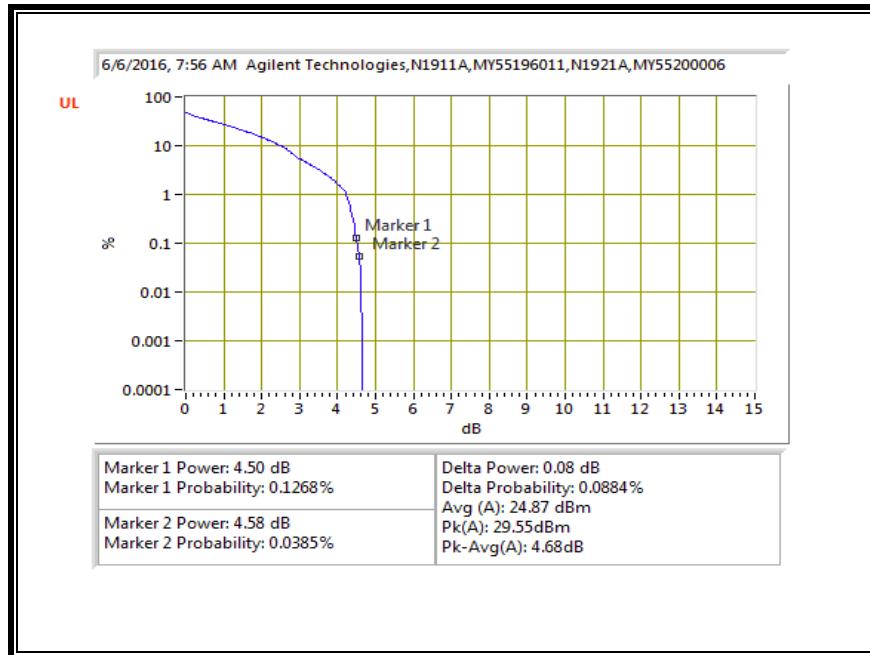
In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB

RESULT

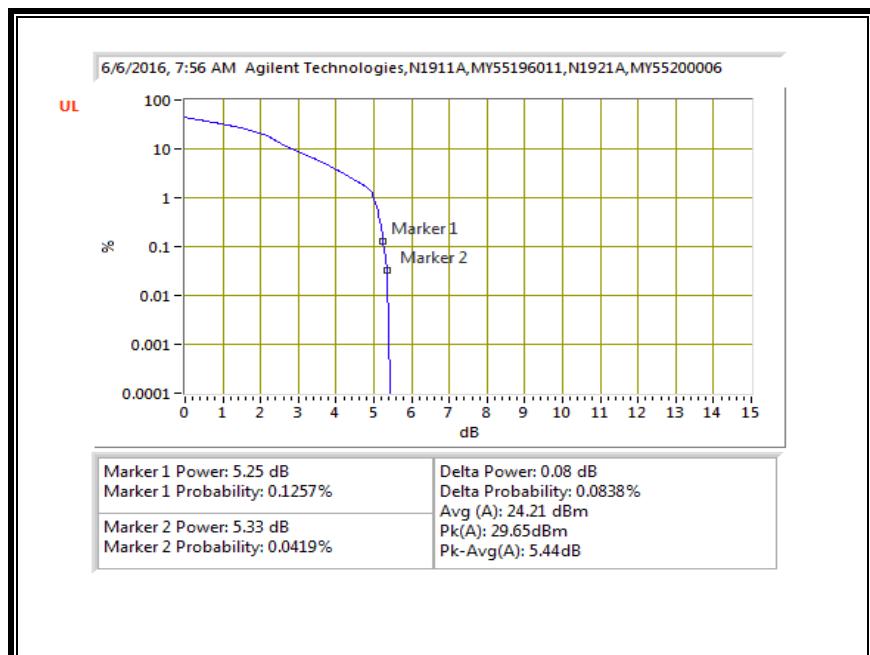
The results from all CCDF plots are passed with 13dB peak-to-average ratio criteria.

10.3.1. LTE BAND 2

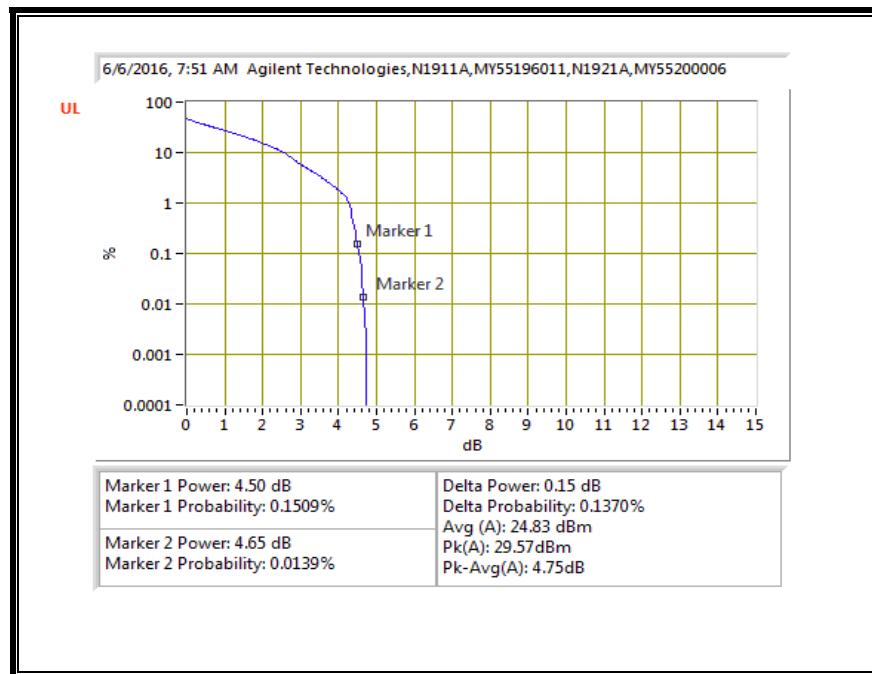
QPSK, (1.4 MHz BAND WIDTH)



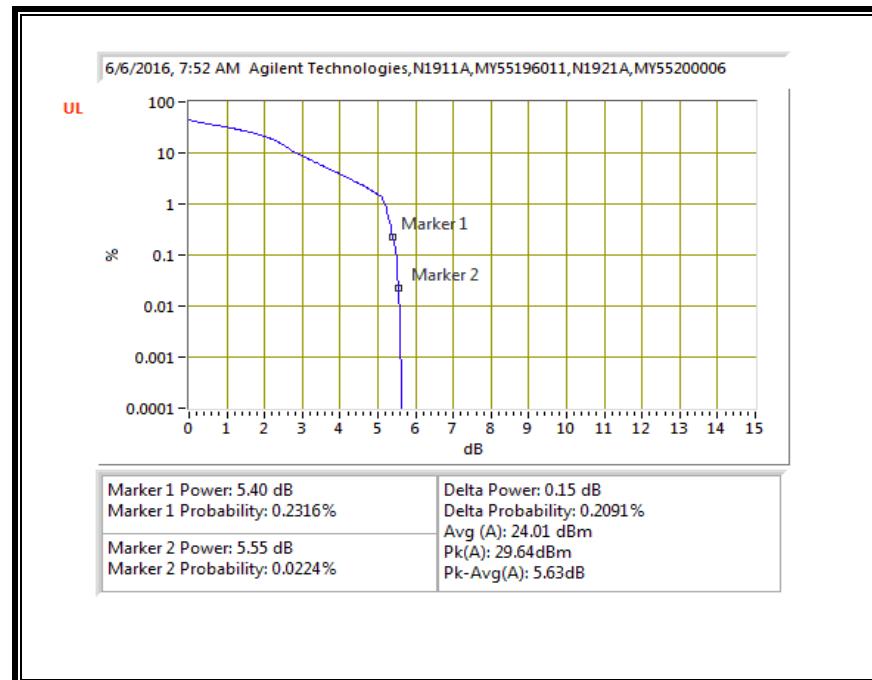
16QAM, (1.4 MHz BAND WIDTH)



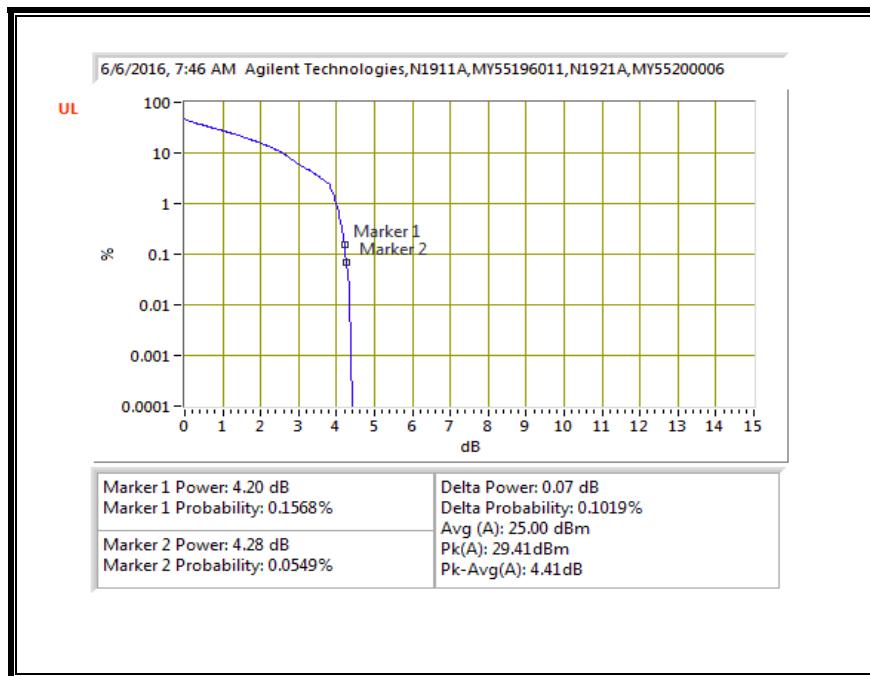
QPSK, (3.0 MHz BAND WIDTH)



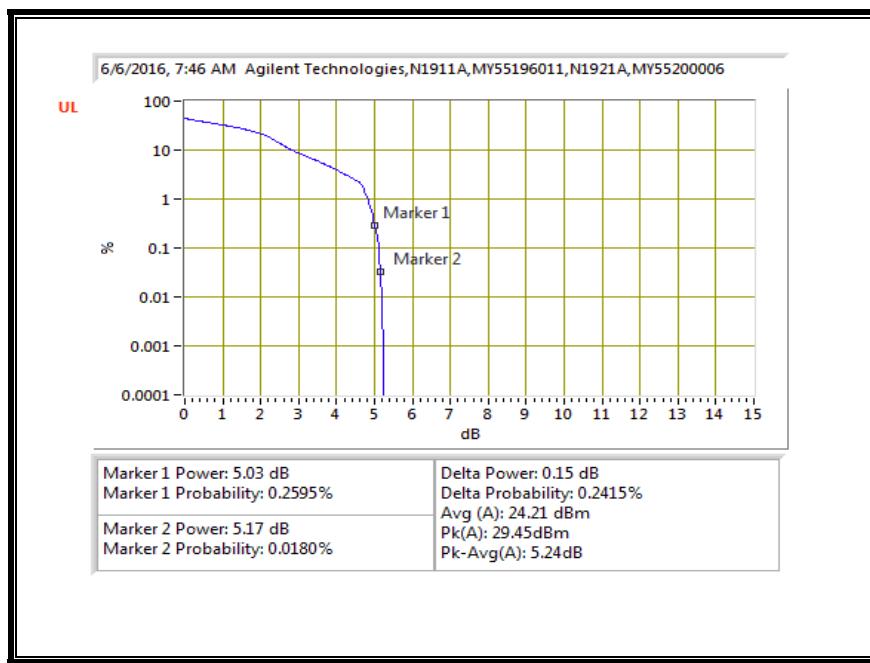
16QAM, (3.0 MHz BAND WIDTH)



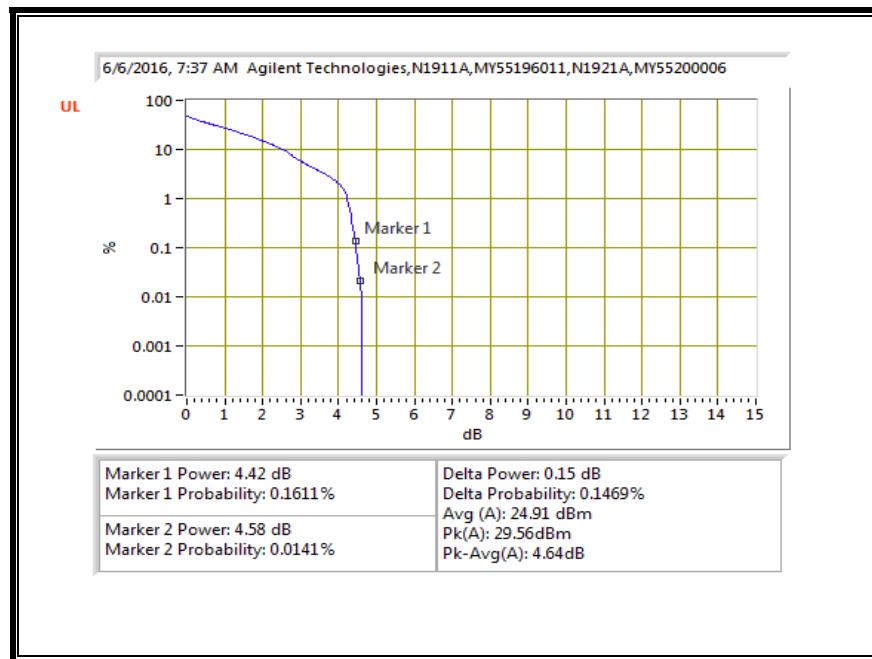
QPSK, (5.0 MHz BAND WIDTH)



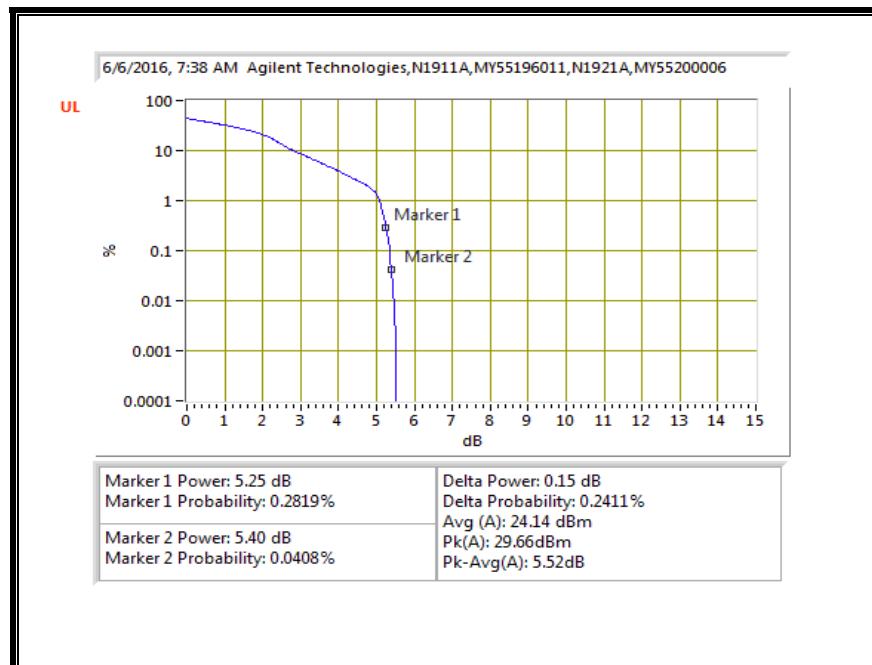
16QAM, (5.0 MHz BAND WIDTH)



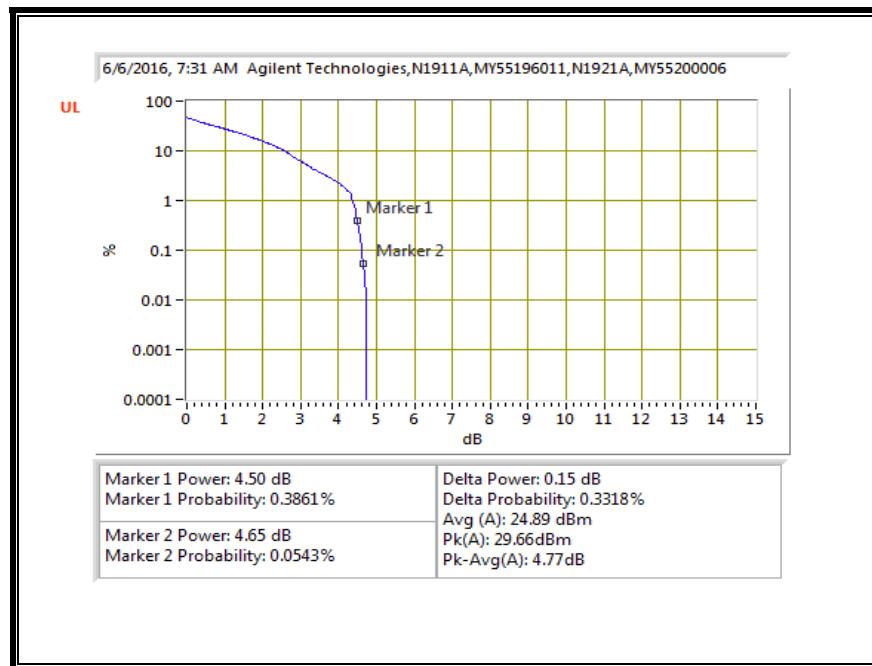
QPSK, (10.0 MHz BAND WIDTH)



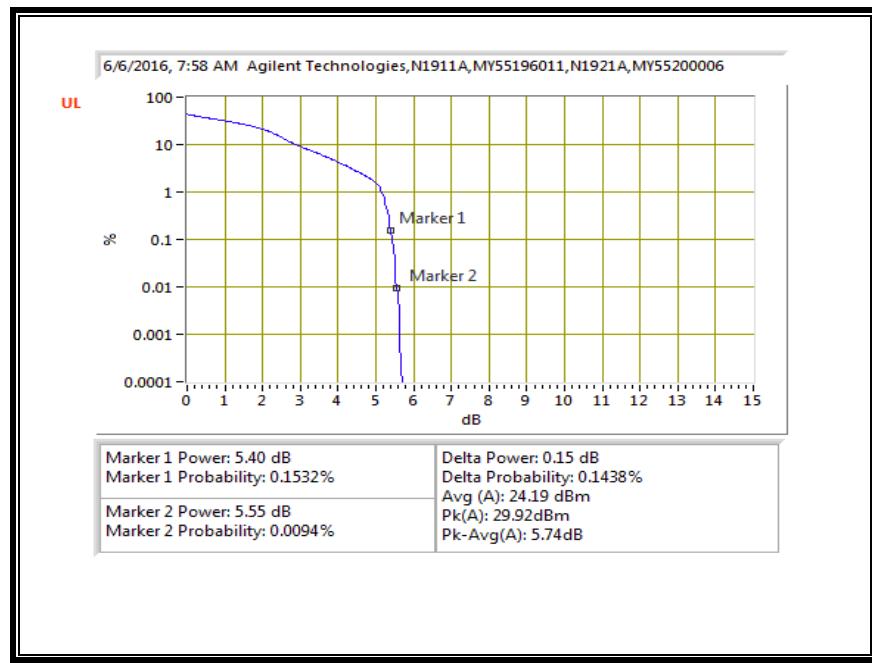
16QAM, (10.0 MHz BAND WIDTH)



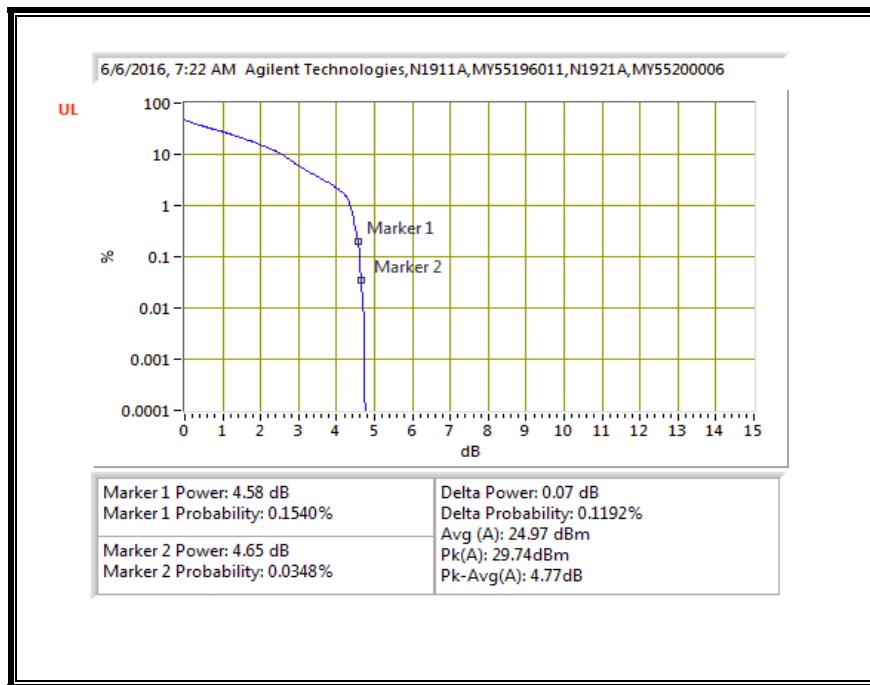
QPSK, (15.0 MHz BAND WIDTH)



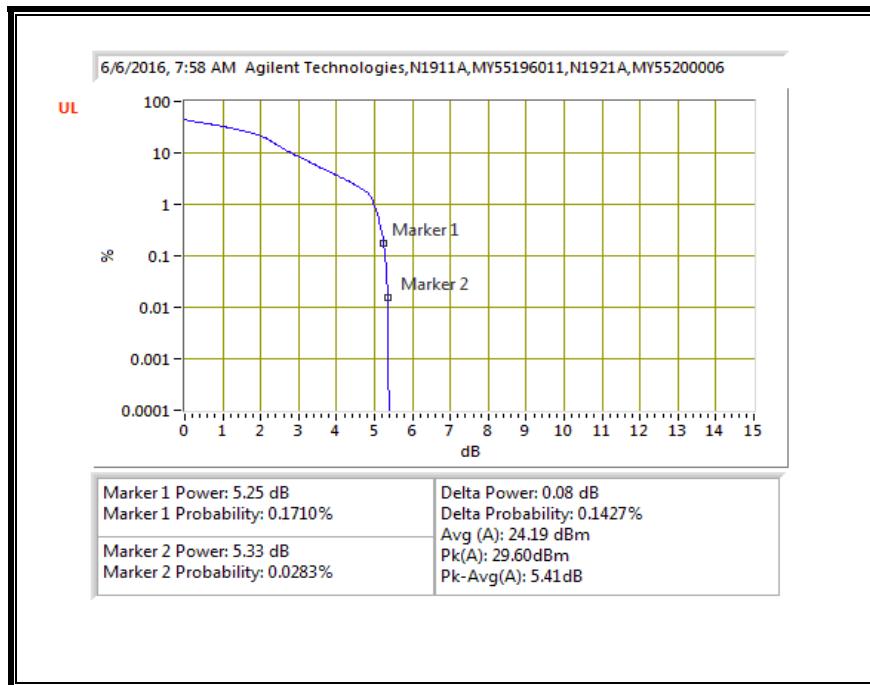
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

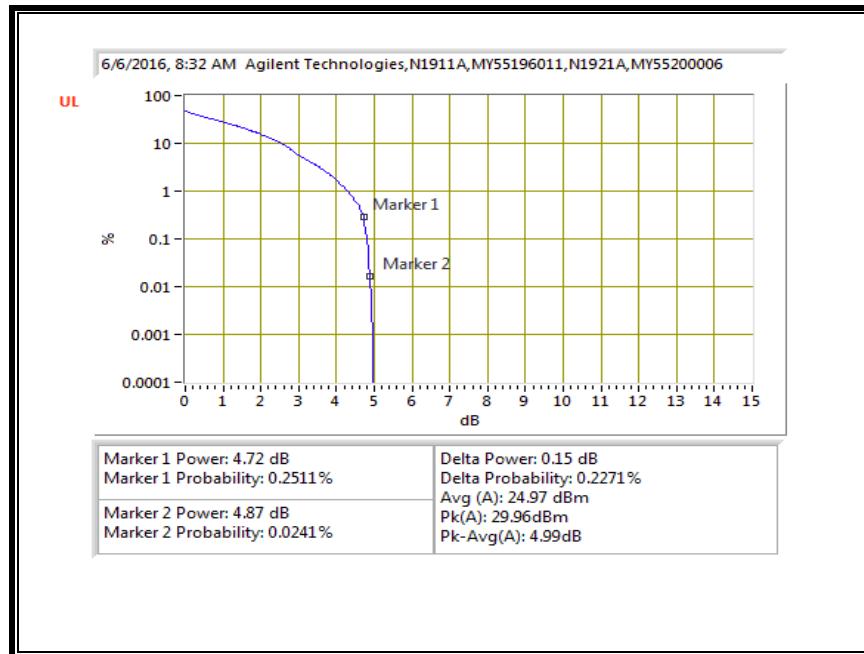


16QAM, (20.0 MHz BAND WIDTH)

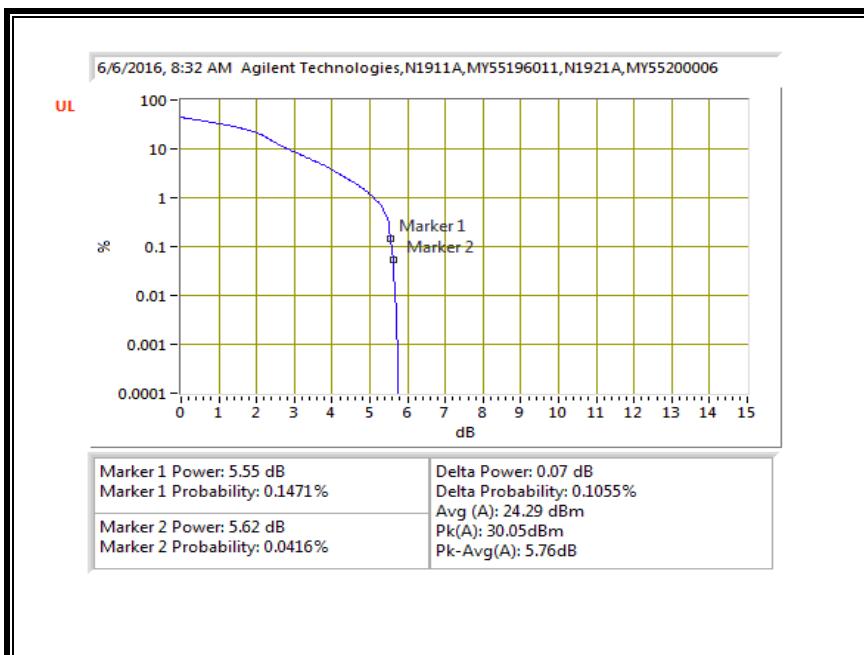


10.3.2. LTE BAND 4

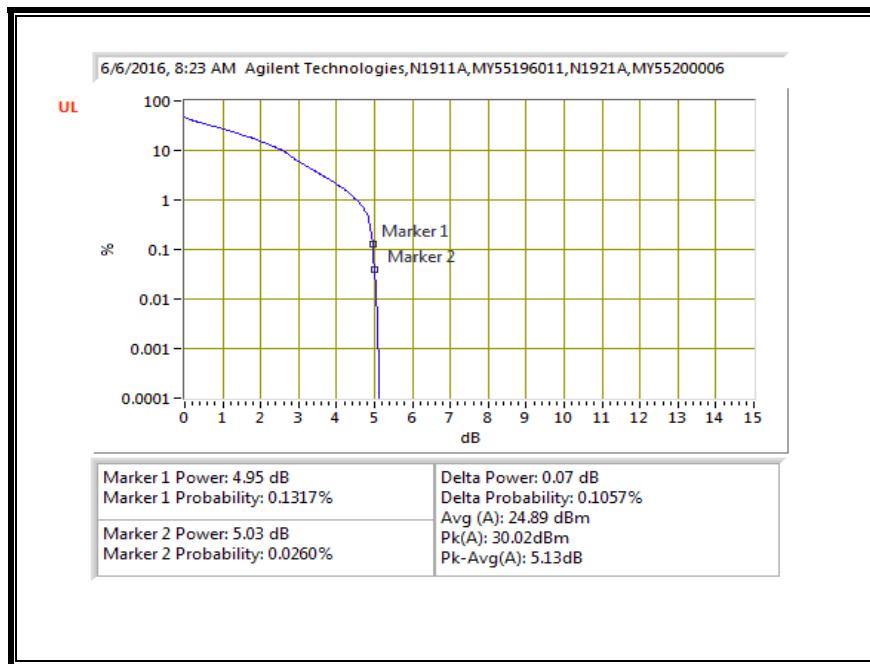
QPSK, (1.4 MHz BAND WIDTH)



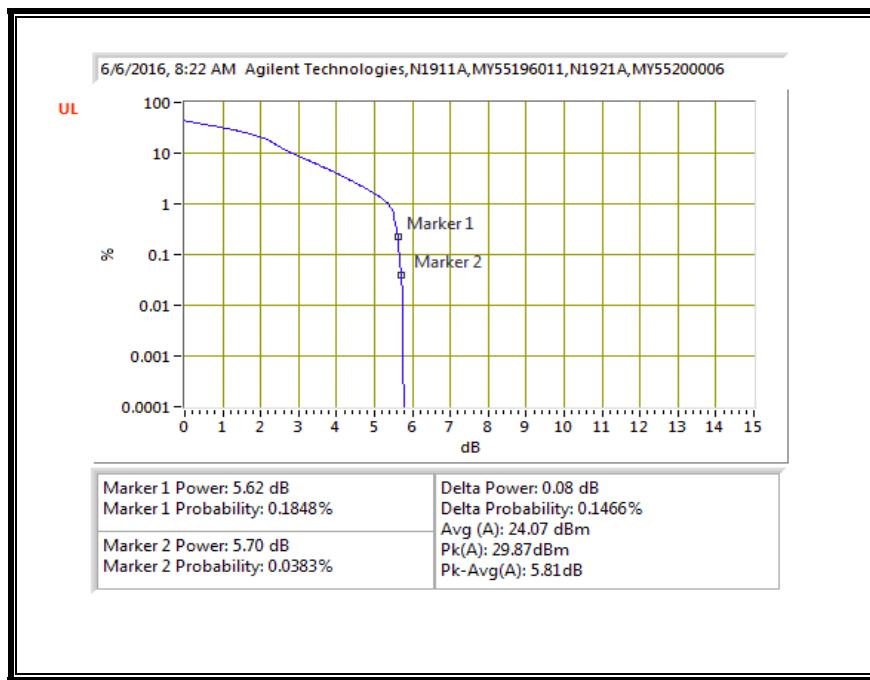
16QAM, (1.4 MHz BAND WIDTH)



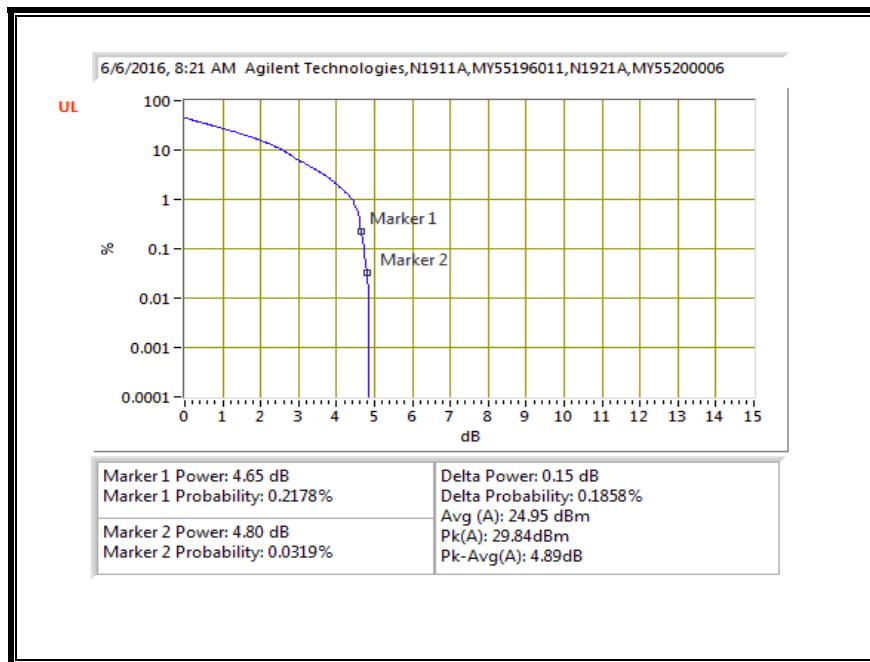
QPSK, (3.0 MHz BAND WIDTH)



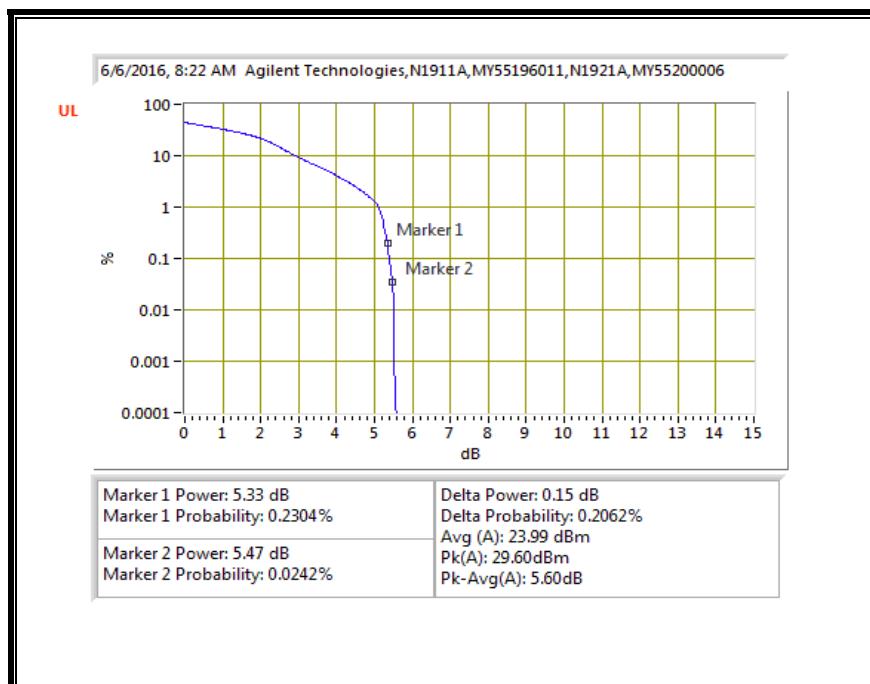
16QAM, (3.0 MHz BAND WIDTH)



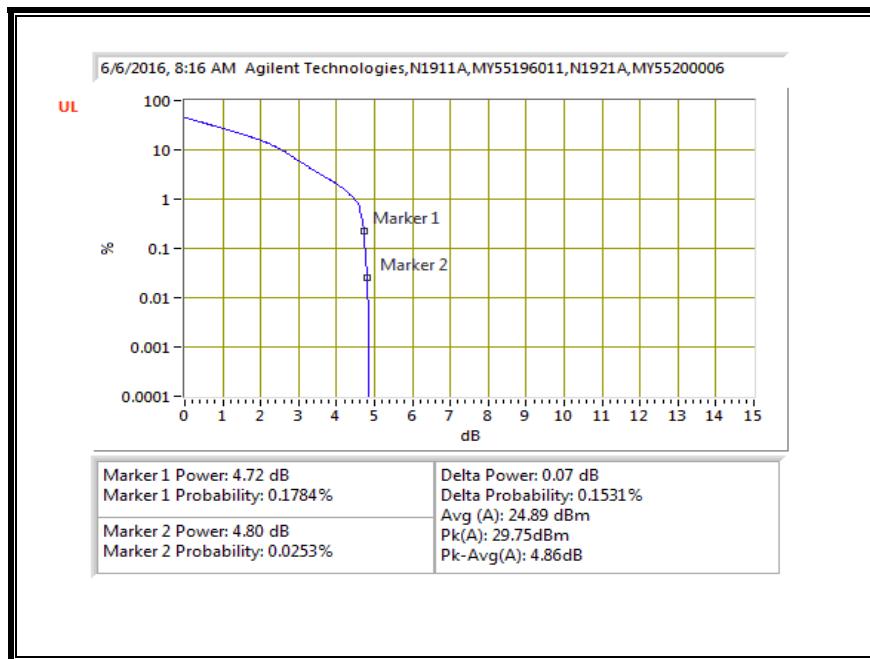
QPSK, (5.0 MHz BAND WIDTH)



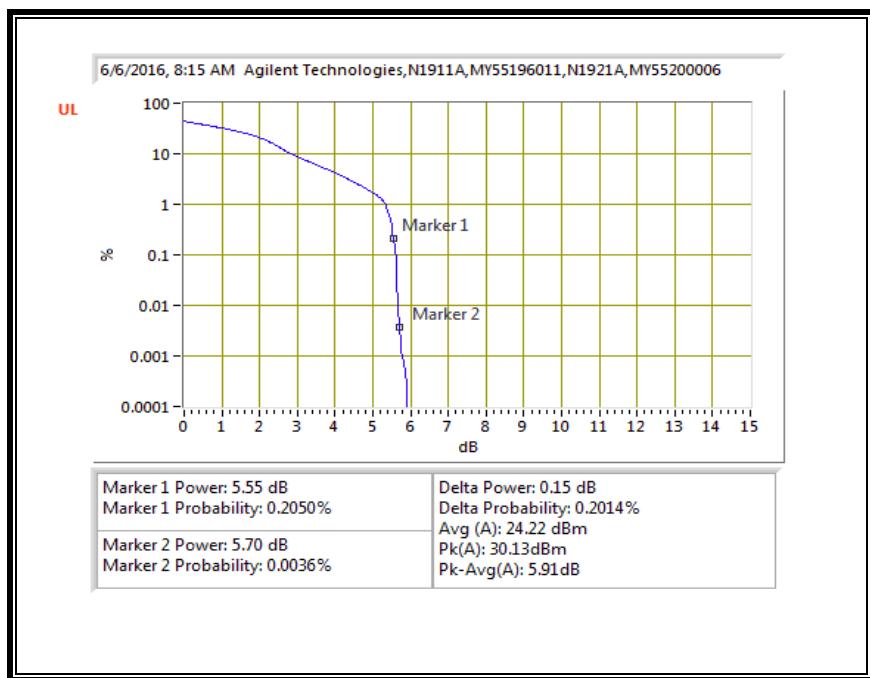
16QAM, (5.0 MHz BAND WIDTH)



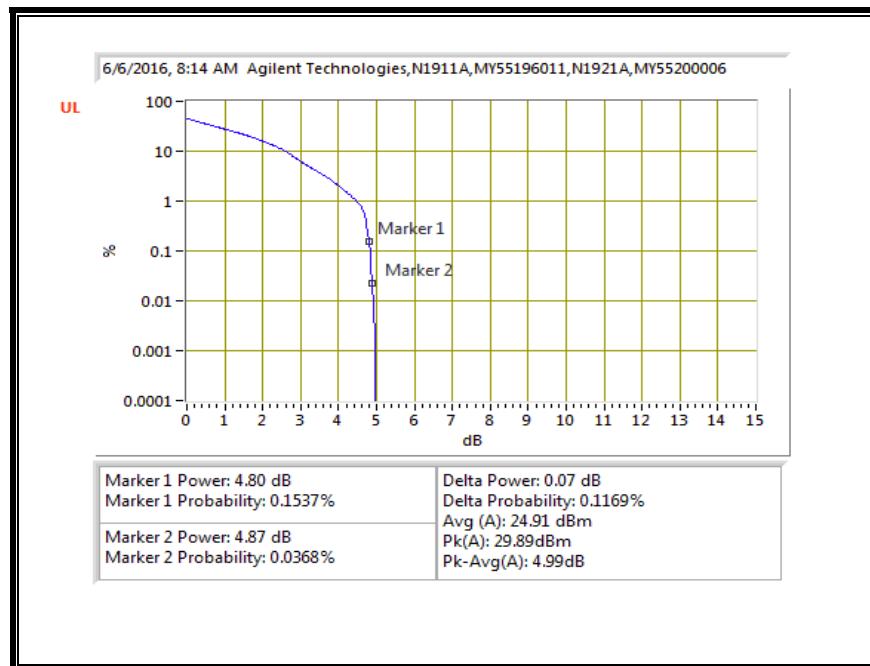
QPSK, (10.0 MHz BAND WIDTH)



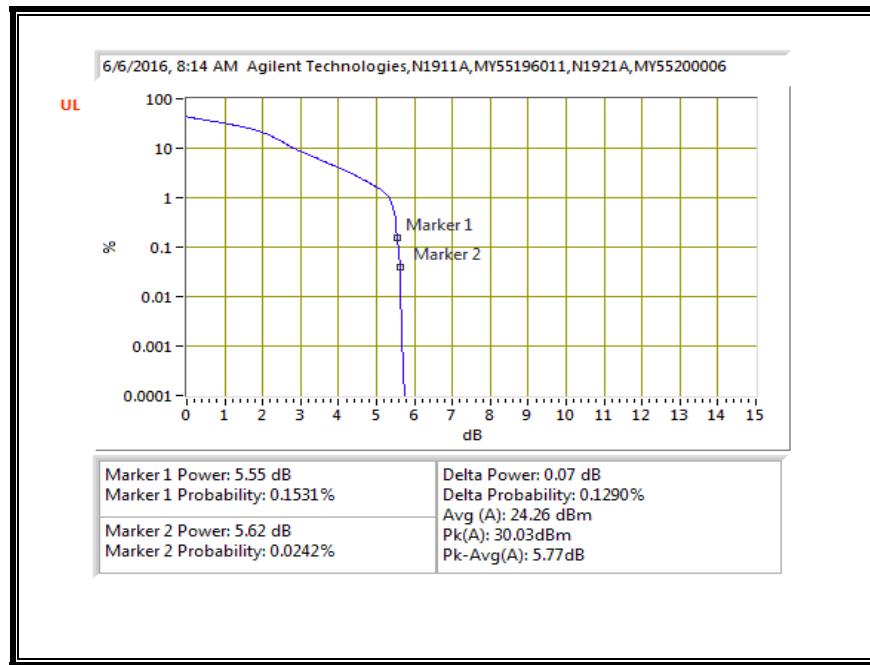
16QAM, (10.0 MHz BAND WIDTH)



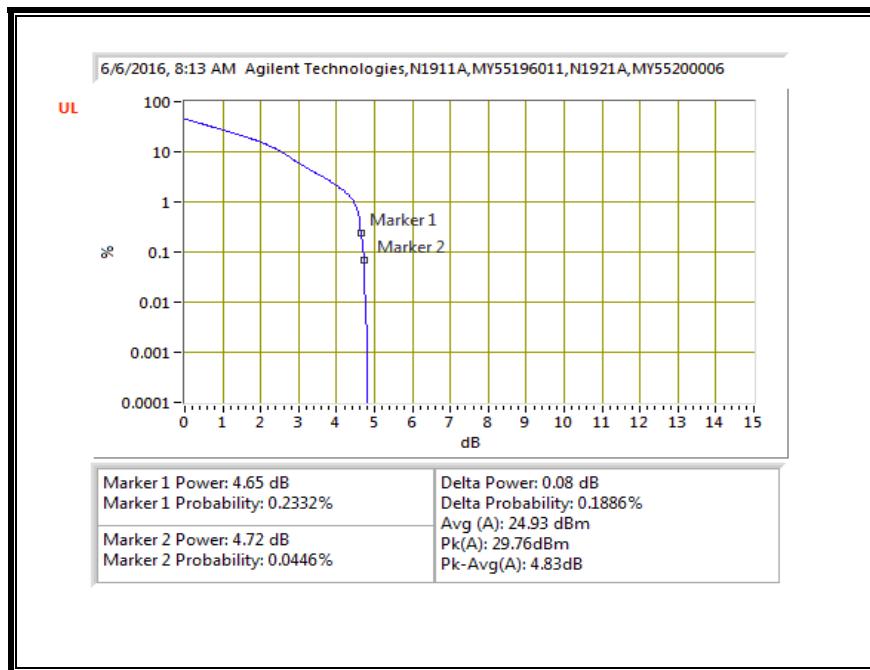
QPSK, (15.0 MHz BAND WIDTH)



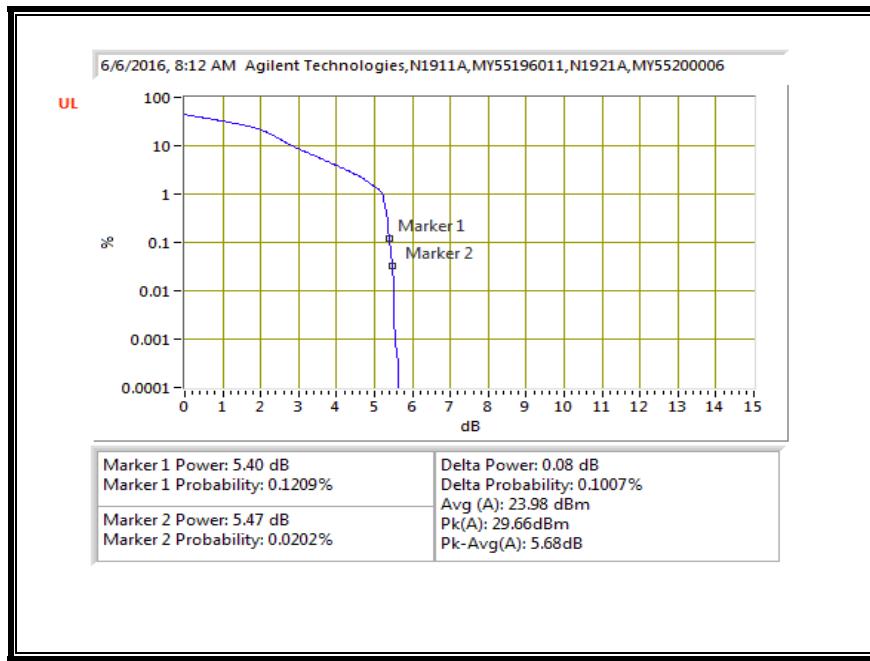
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

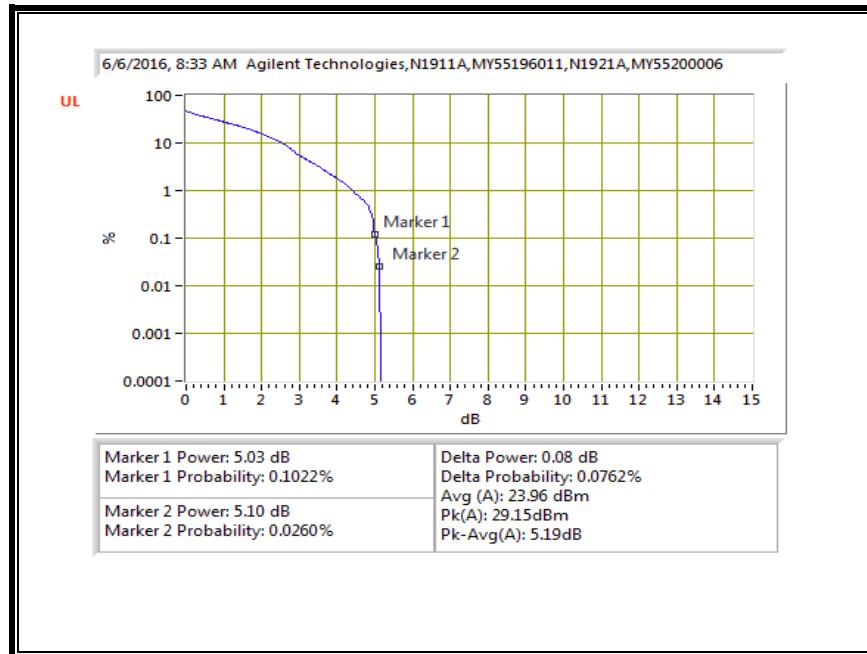


16QAM, (20.0 MHz BAND WIDTH)

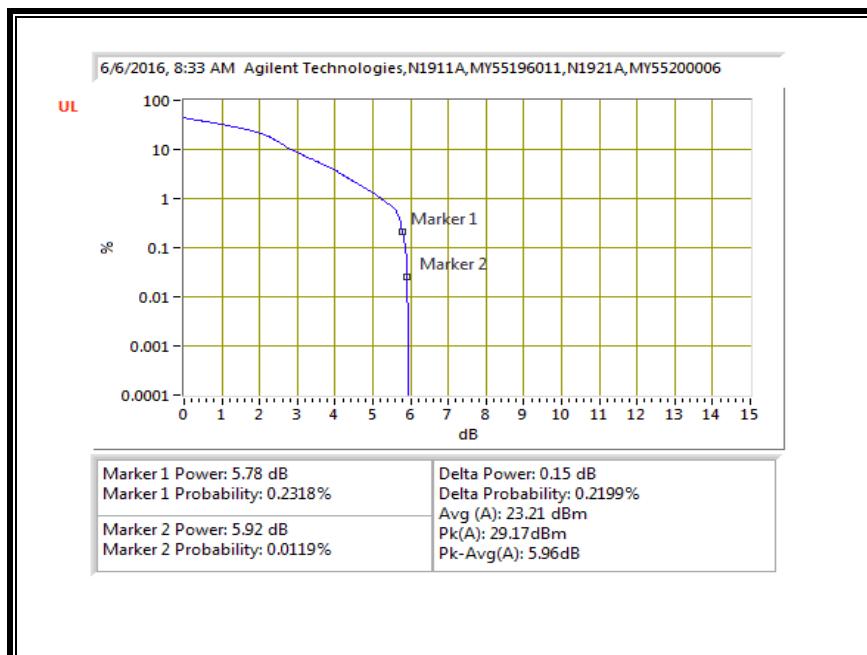


10.3.3. LTE BAND 5

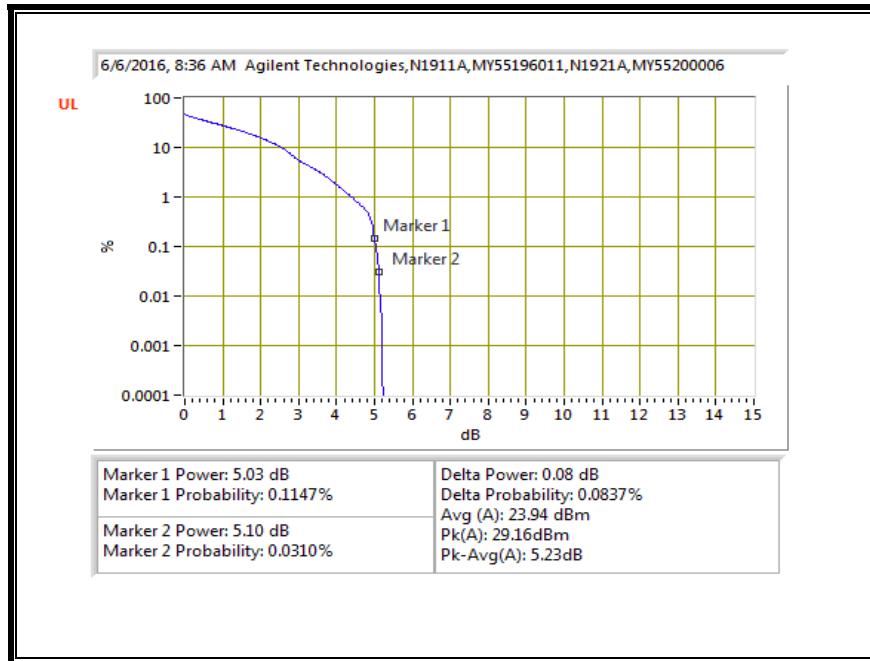
QPSK, (1.4 MHz BAND WIDTH)



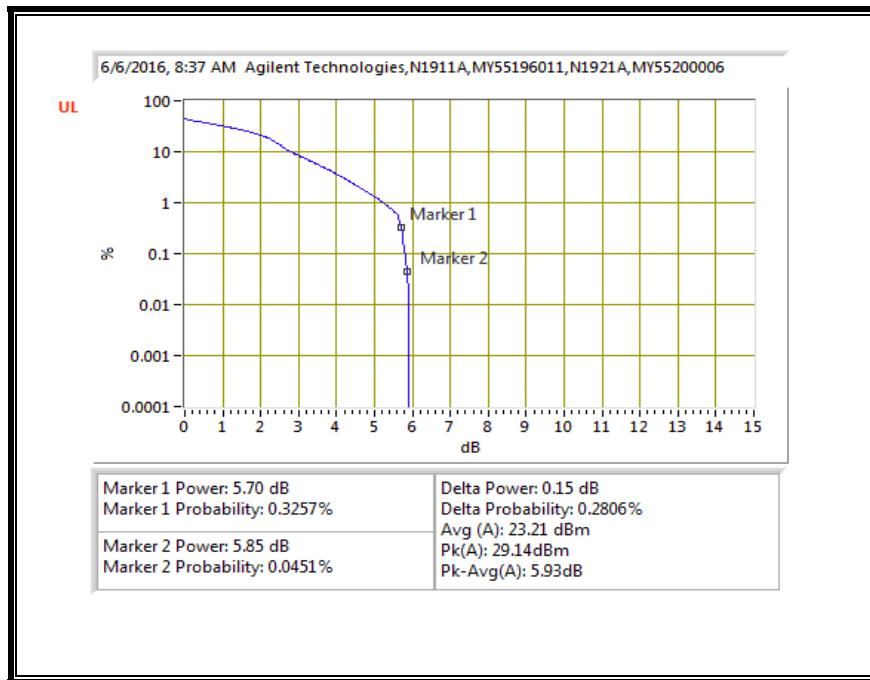
16QAM, (1.4 MHz BAND WIDTH)



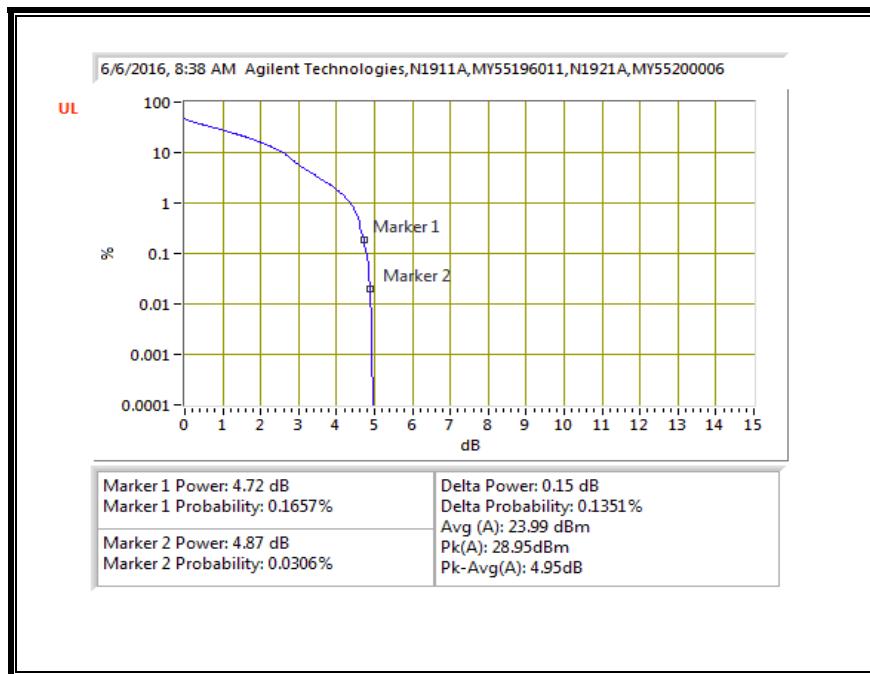
QPSK, (3.0 MHz BAND WIDTH)



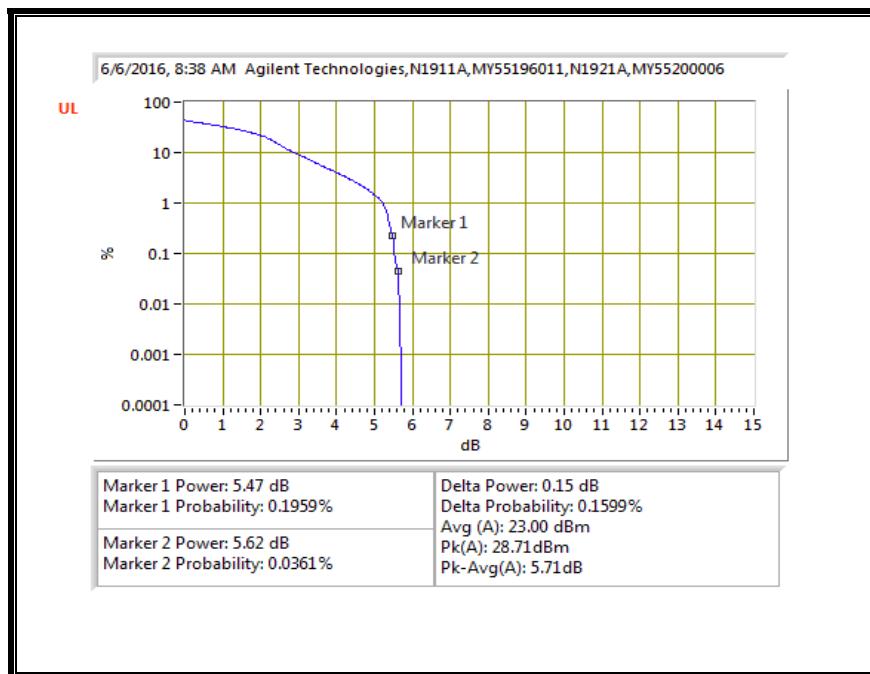
16QAM, (3.0 MHz BAND WIDTH)



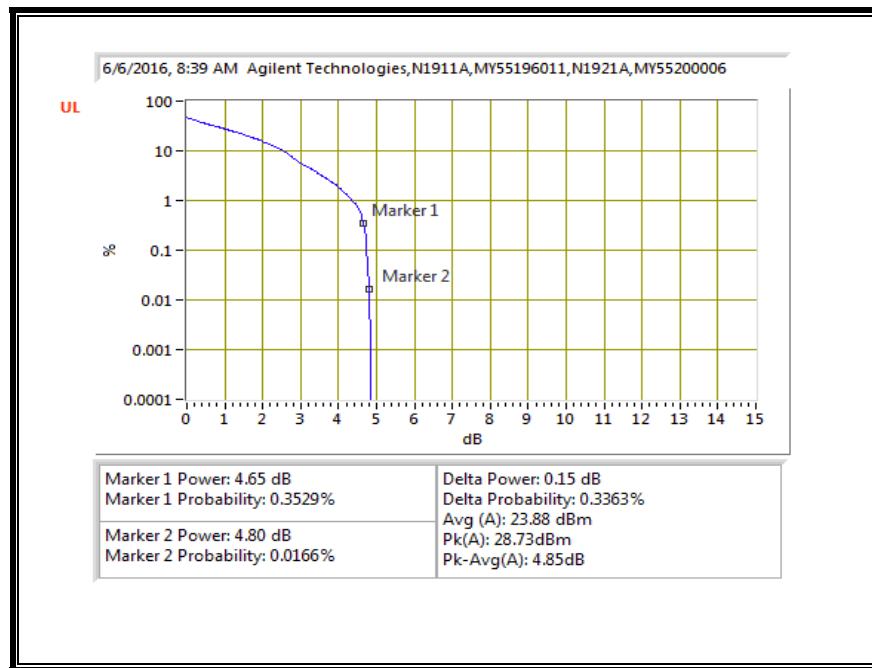
QPSK, (5.0 MHz BAND WIDTH)



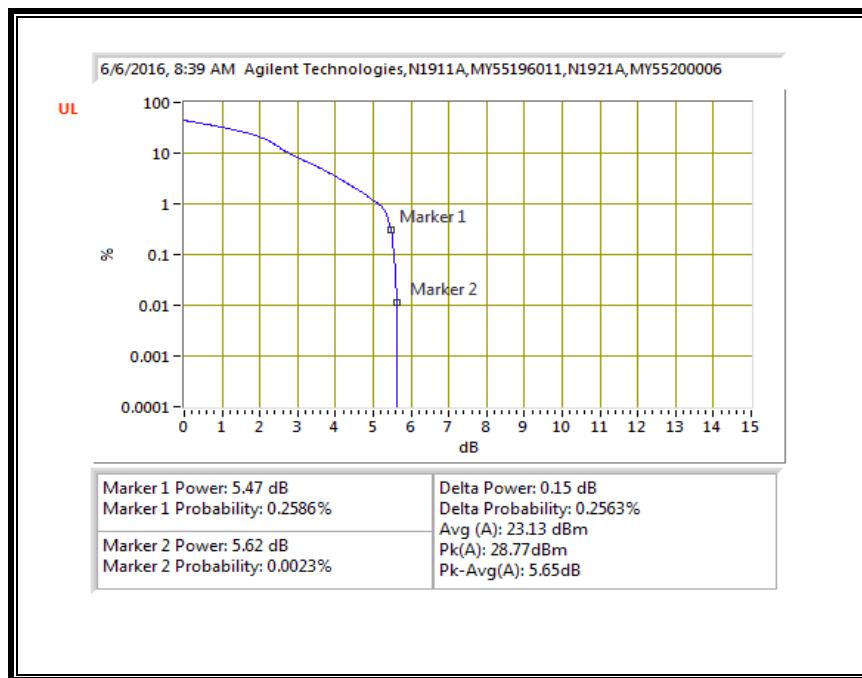
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

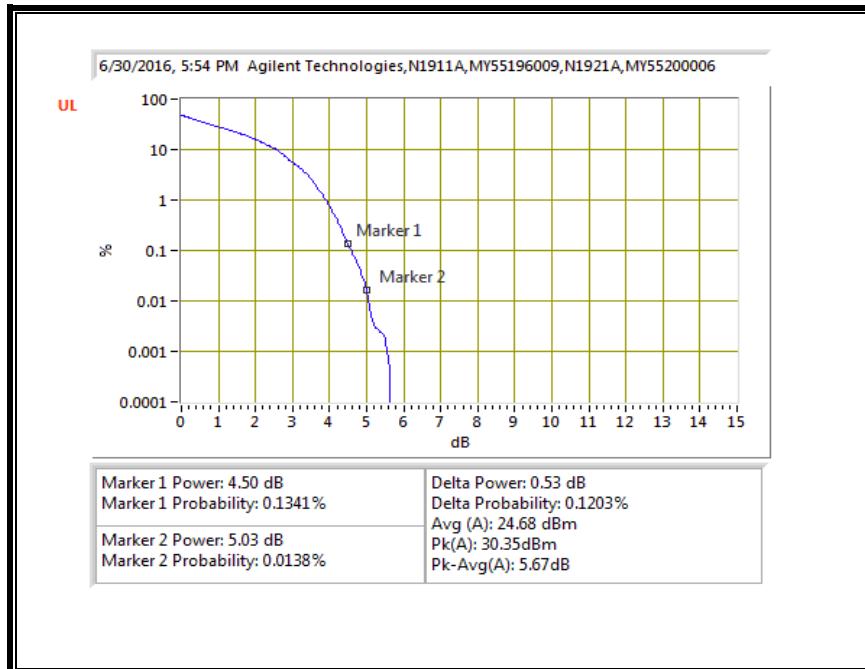


16QAM, (10.0 MHz BAND WIDTH)

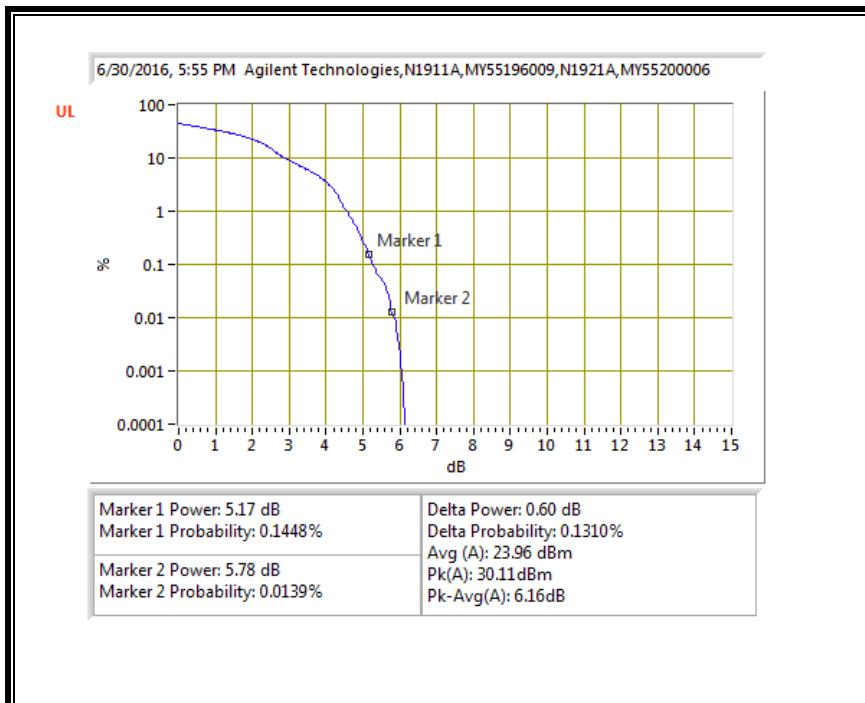


10.3.4. LTE BAND 7

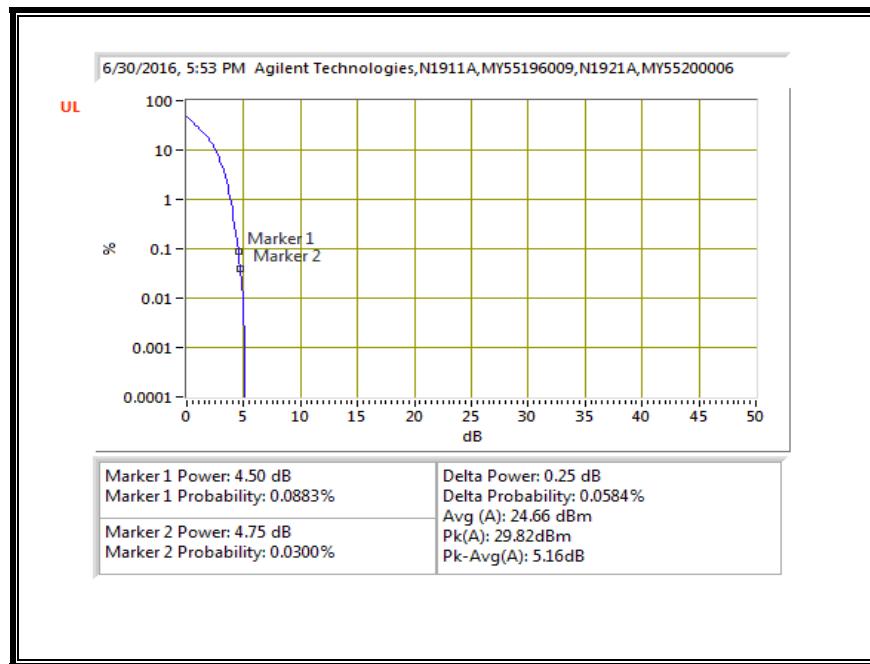
QPSK, (5.0 MHz BAND WIDTH)



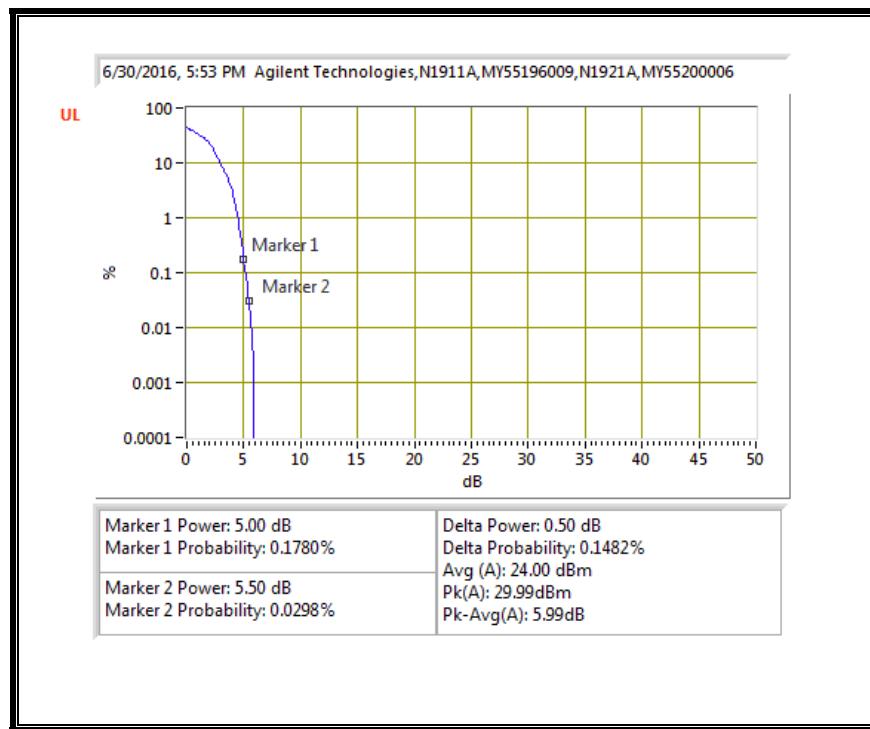
16QAM, (5.0 MHz BAND WIDTH)



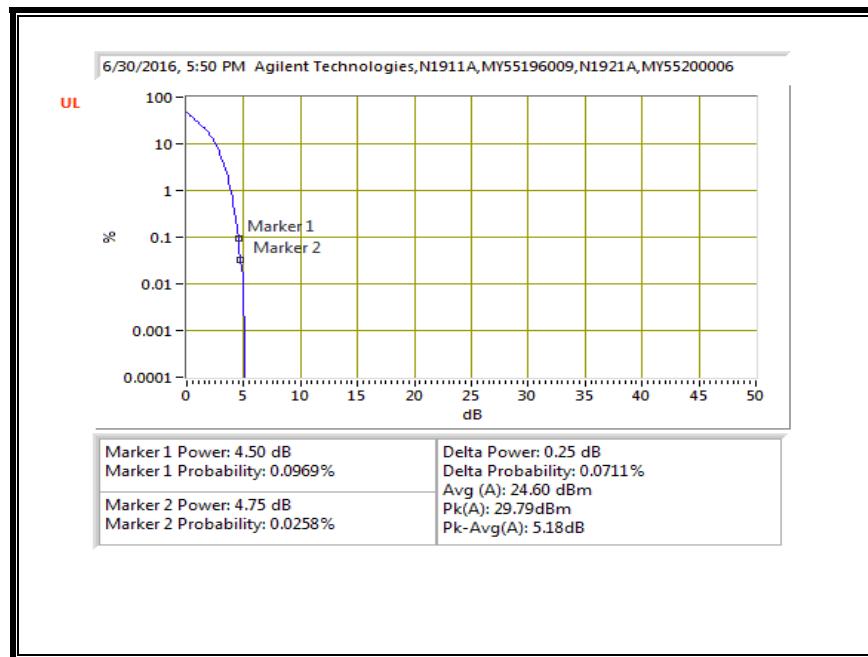
QPSK, (10.0 MHz BAND WIDTH)



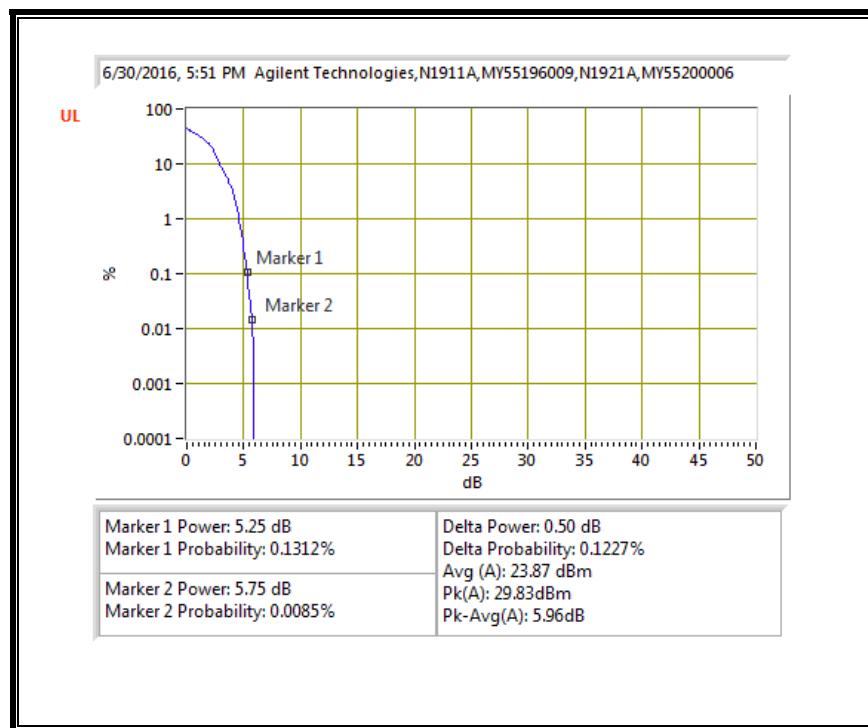
16QAM, (10.0 MHz BAND WIDTH)



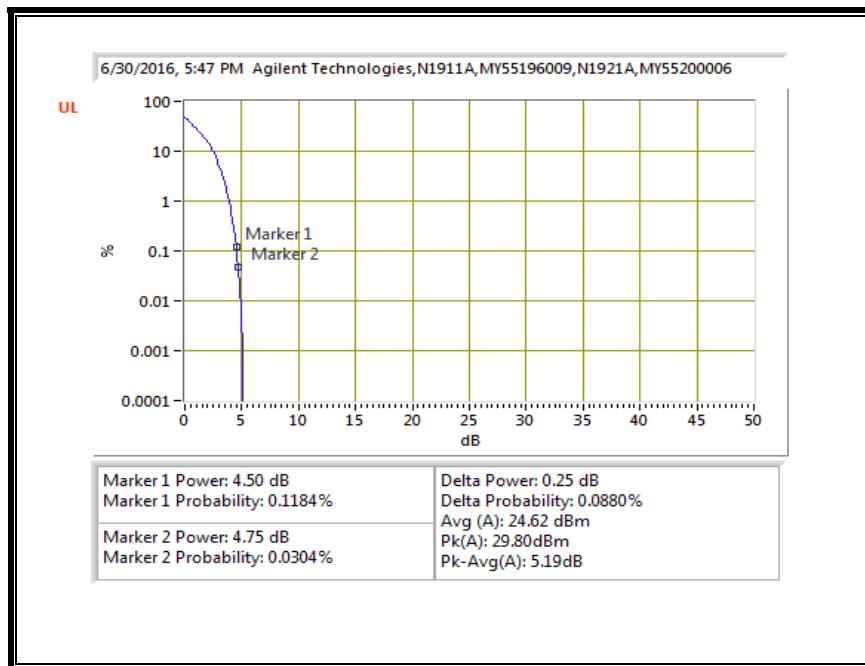
QPSK, (15.0 MHz BAND WIDTH)



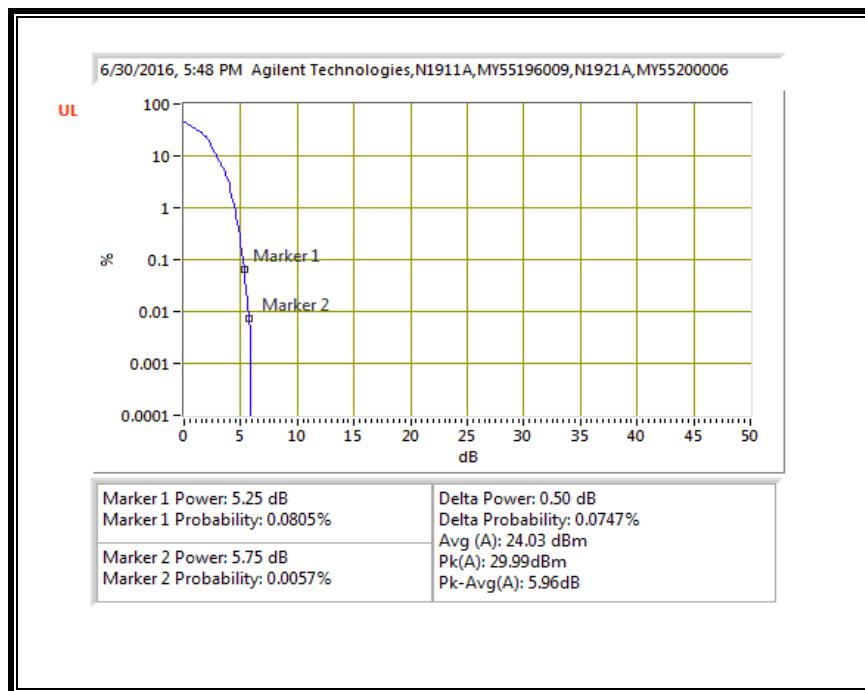
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

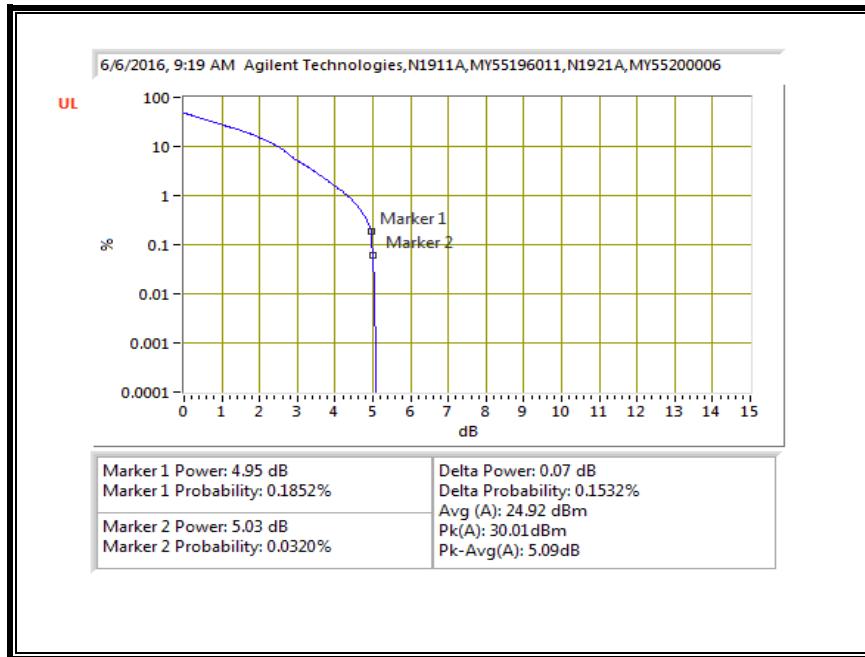


16QAM, (20.0 MHz BAND WIDTH)

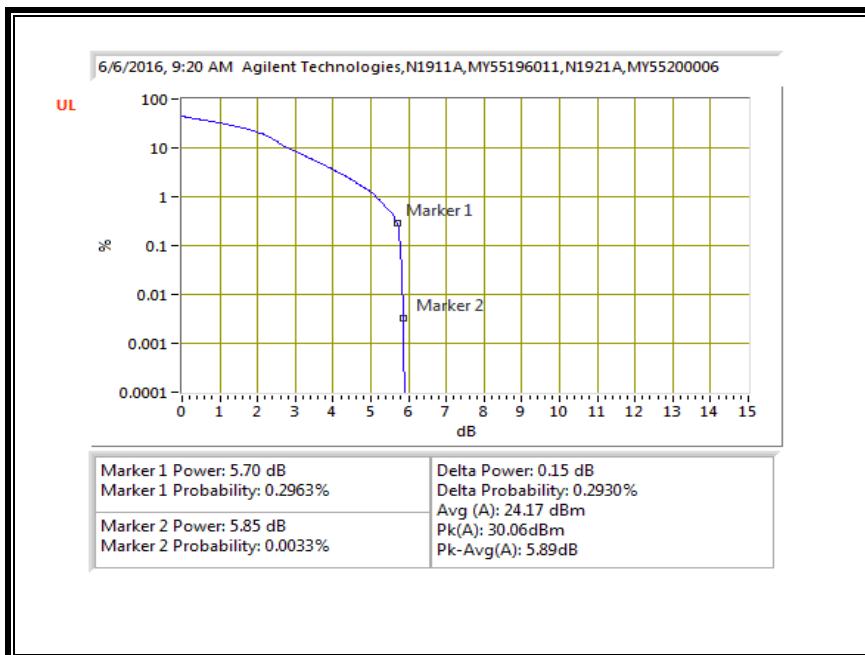


10.3.5. LTE BAND 12

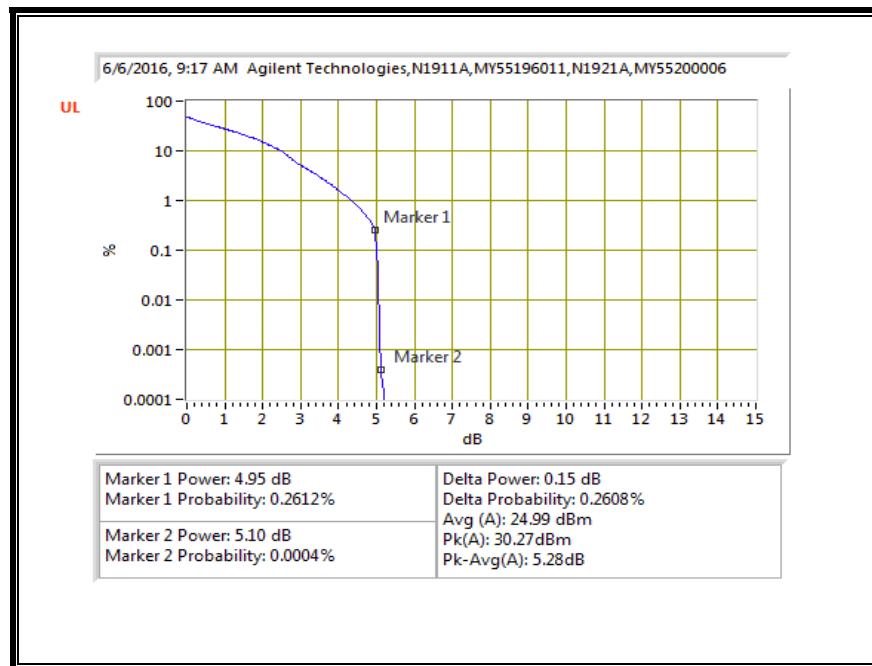
QPSK, (1.4 MHz BAND WIDTH)



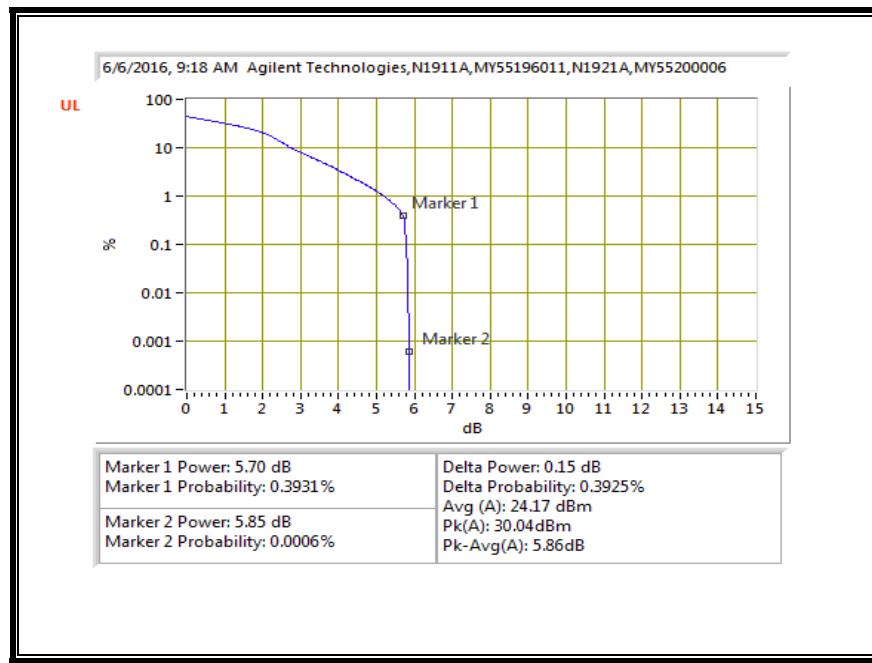
16QAM, (1.4 MHz BAND WIDTH)



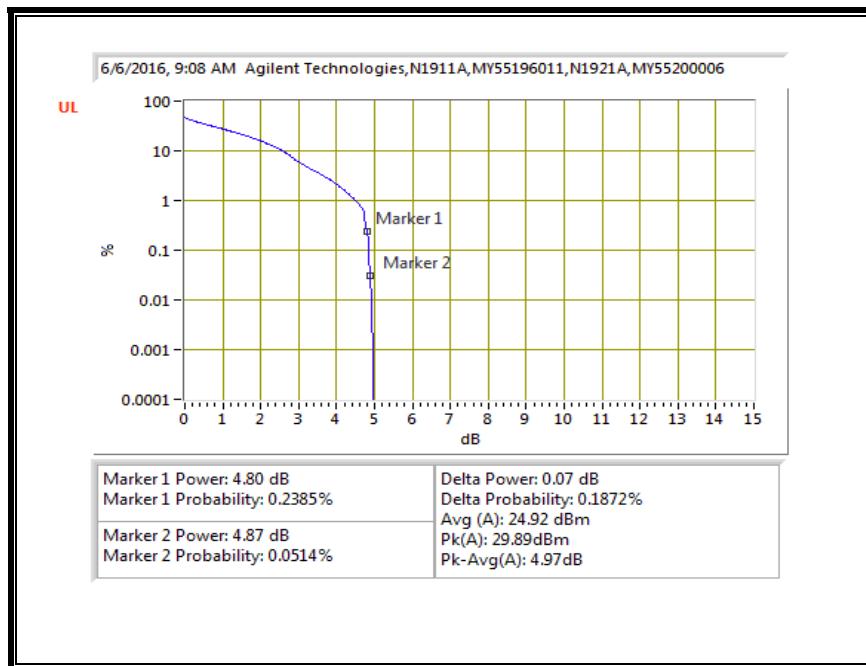
QPSK, (3.0 MHz BAND WIDTH)



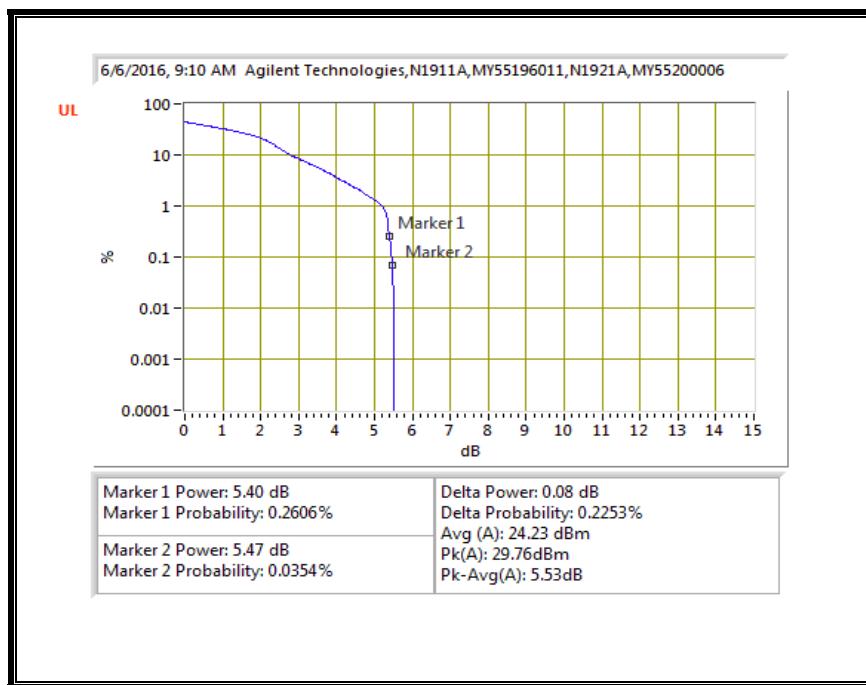
16QAM, (3.0 MHz BAND WIDTH)



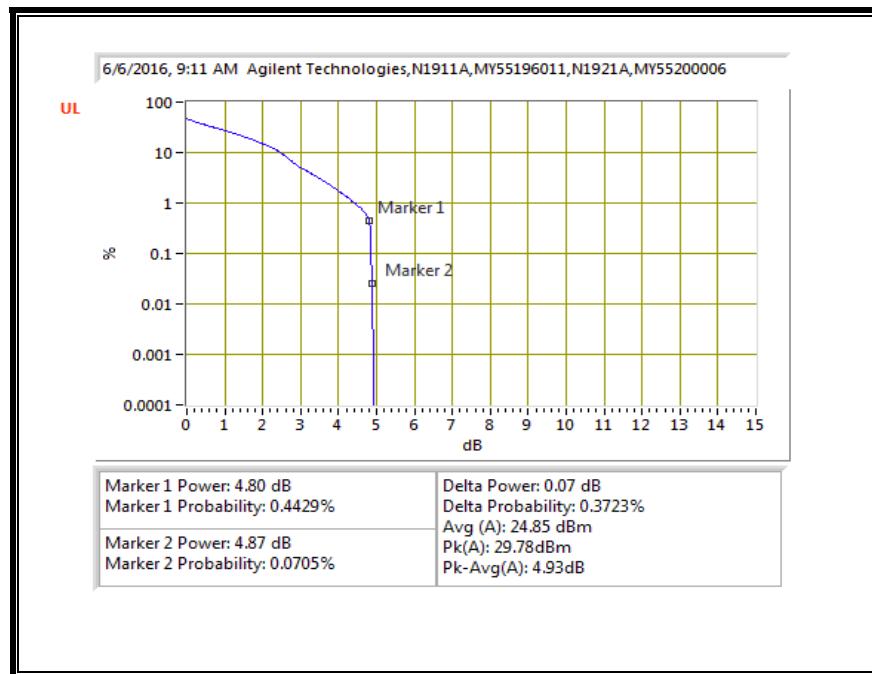
QPSK, (5.0 MHz BAND WIDTH)



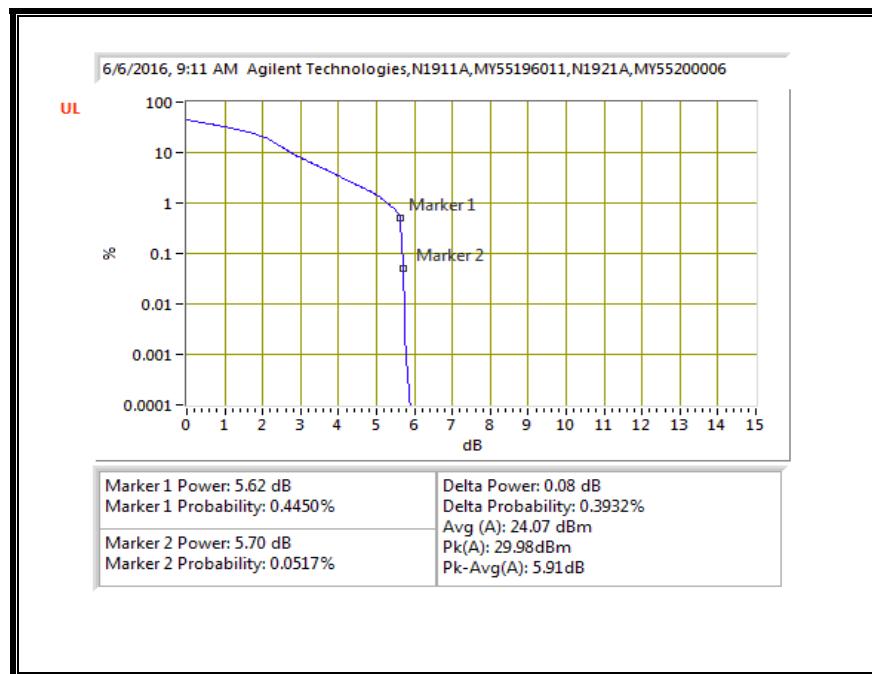
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

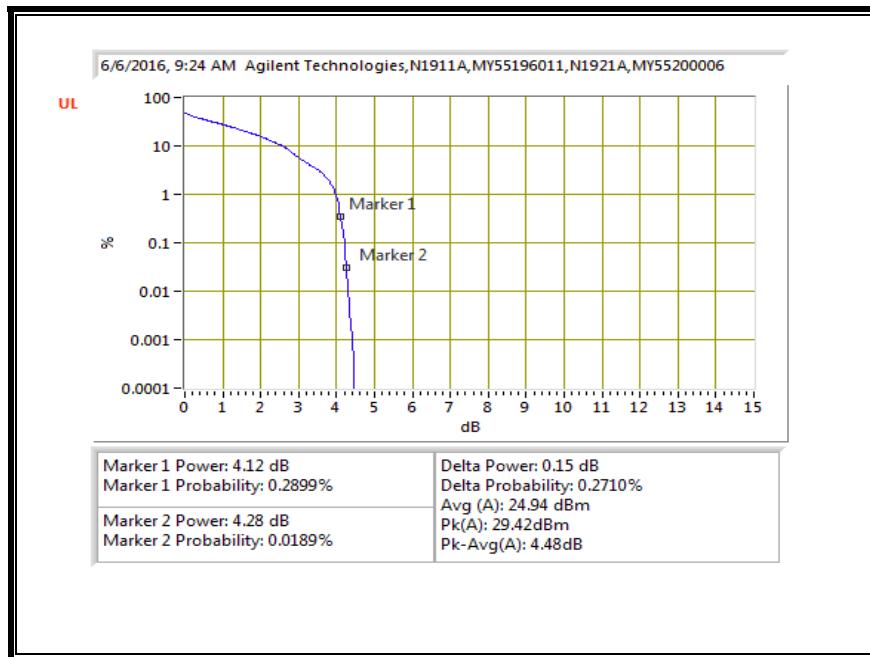


16QAM, (10.0 MHz BAND WIDTH)

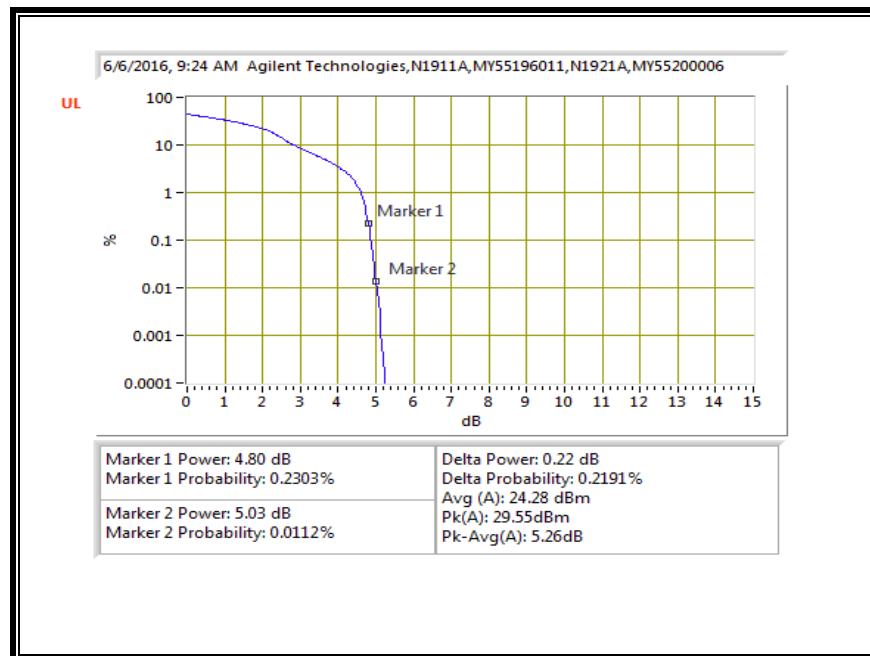


10.3.6. LTE BAND 13

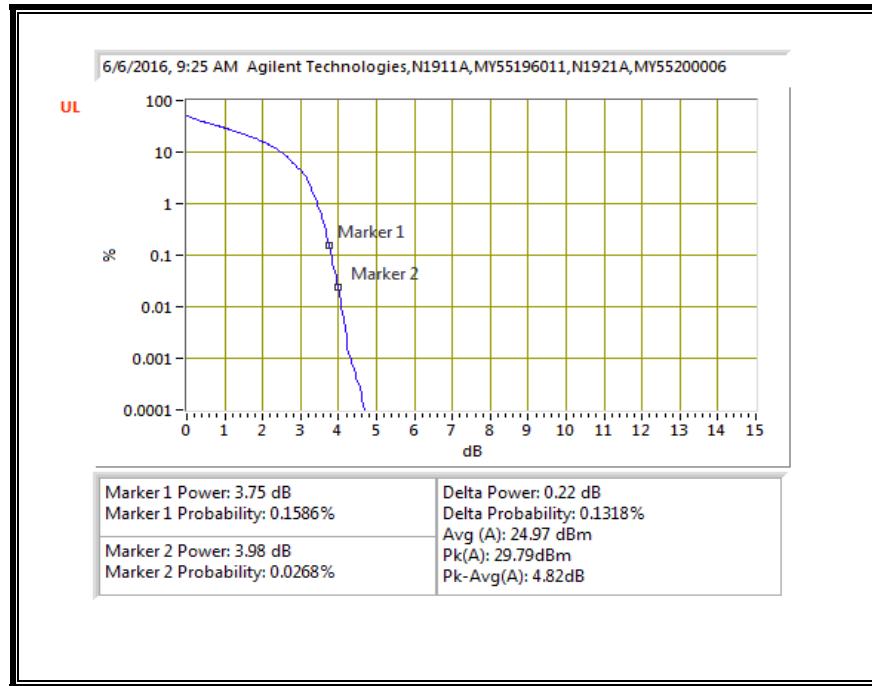
QPSK, (5.0 MHz BAND WIDTH)



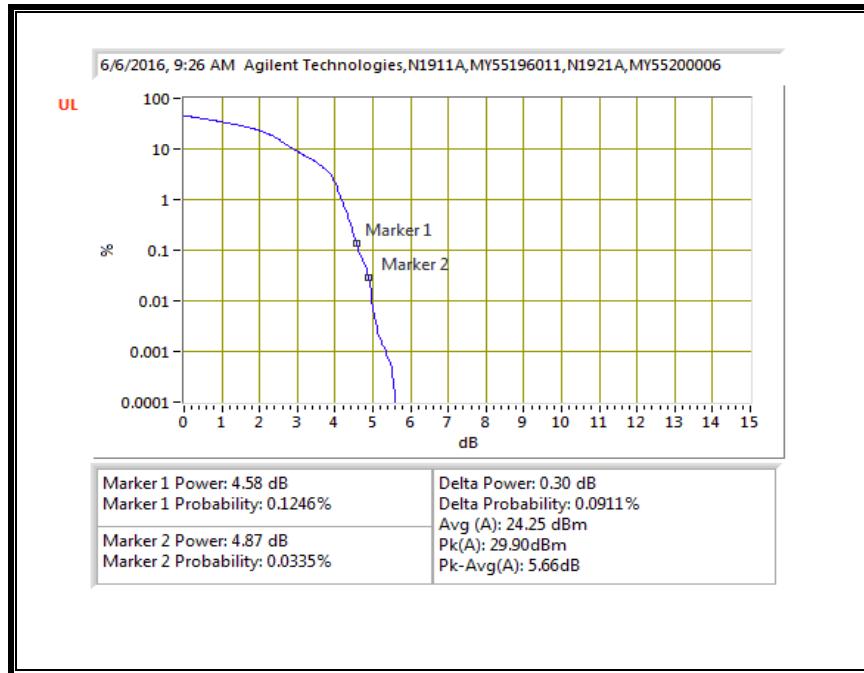
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

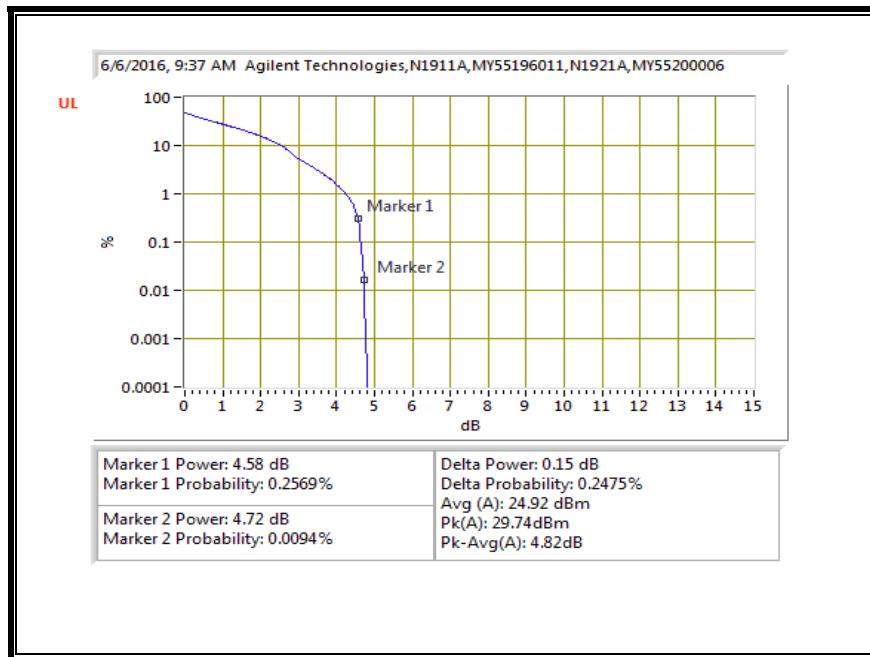


16QAM, (10.0 MHz BAND WIDTH)

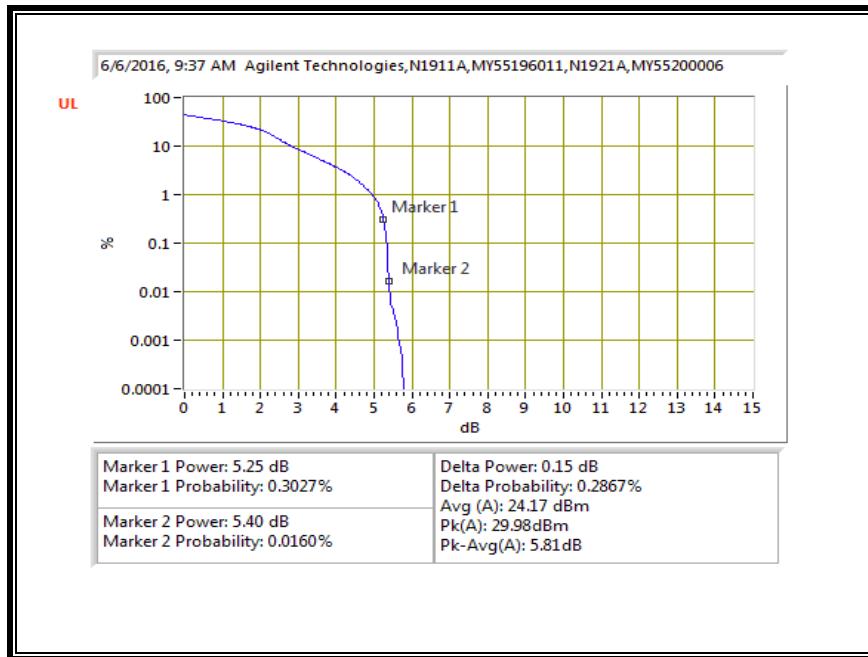


10.3.7. LTE BAND 17

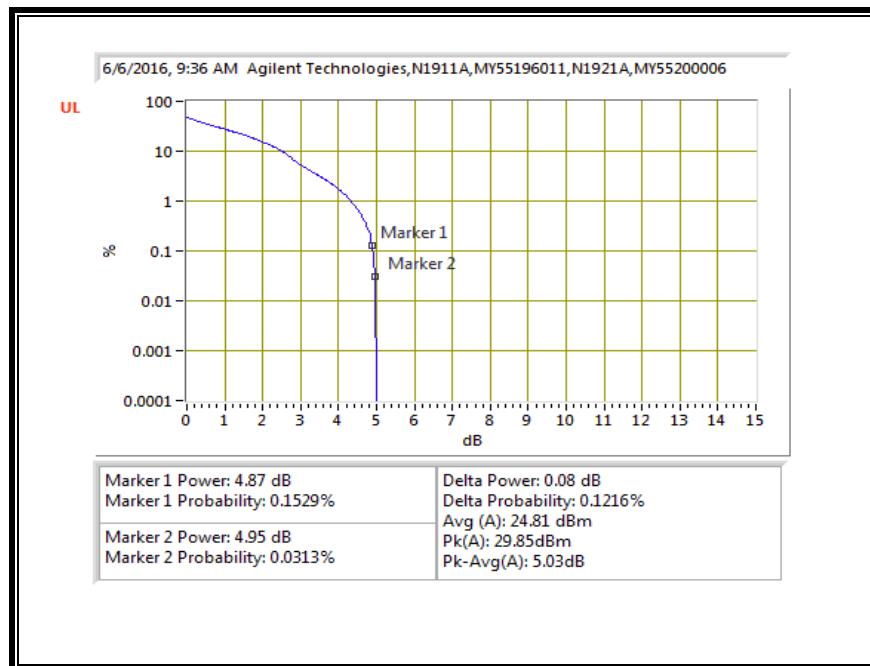
QPSK, (5.0 MHz BAND WIDTH)



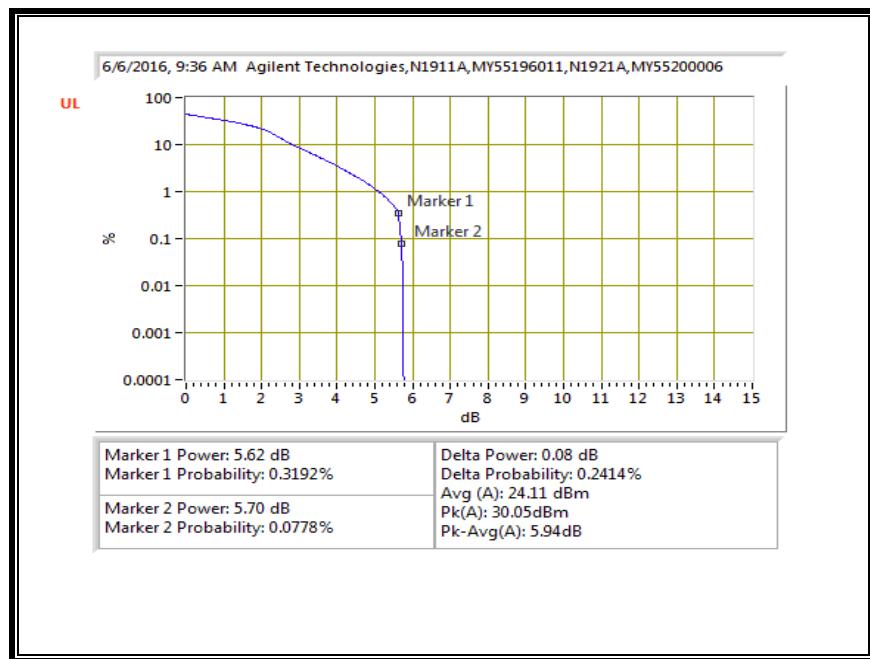
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

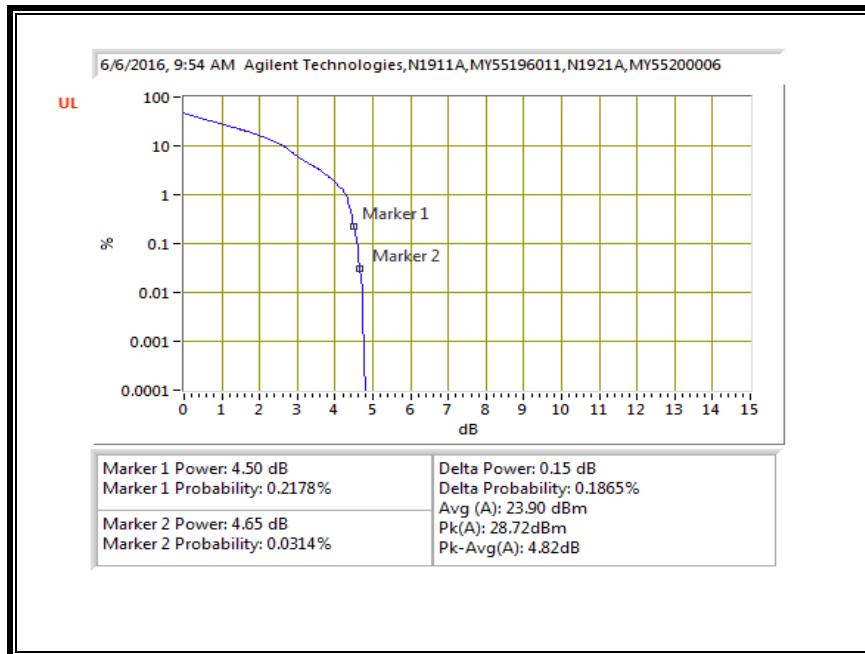


16QAM, (10.0 MHz BAND WIDTH)

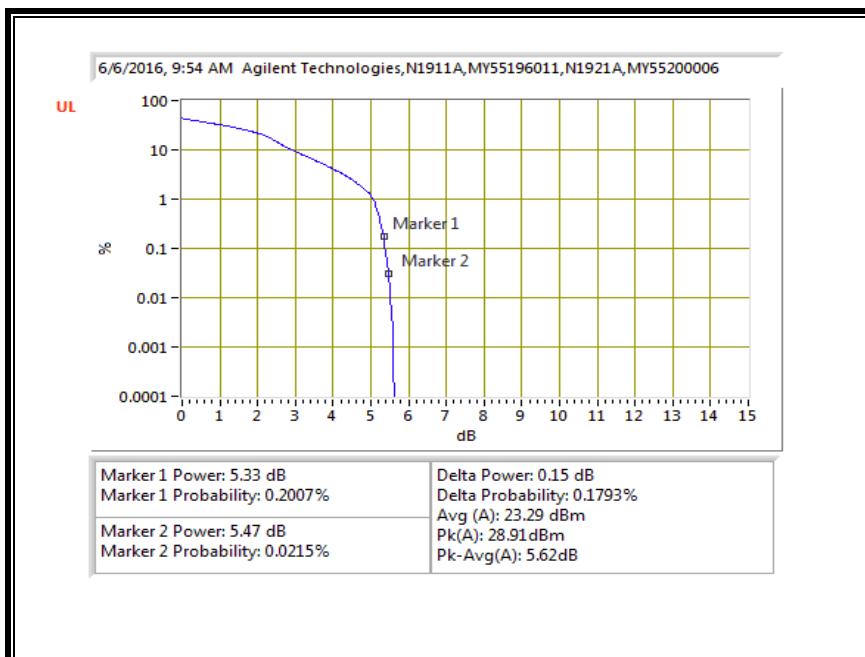


10.3.8. LTE BAND 25

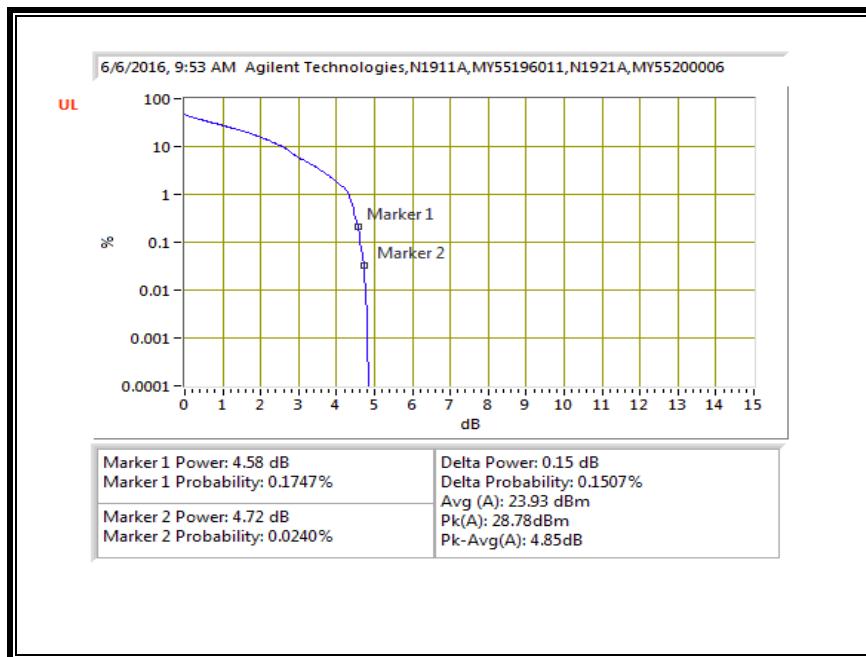
QPSK, (1.4 MHz BAND WIDTH)



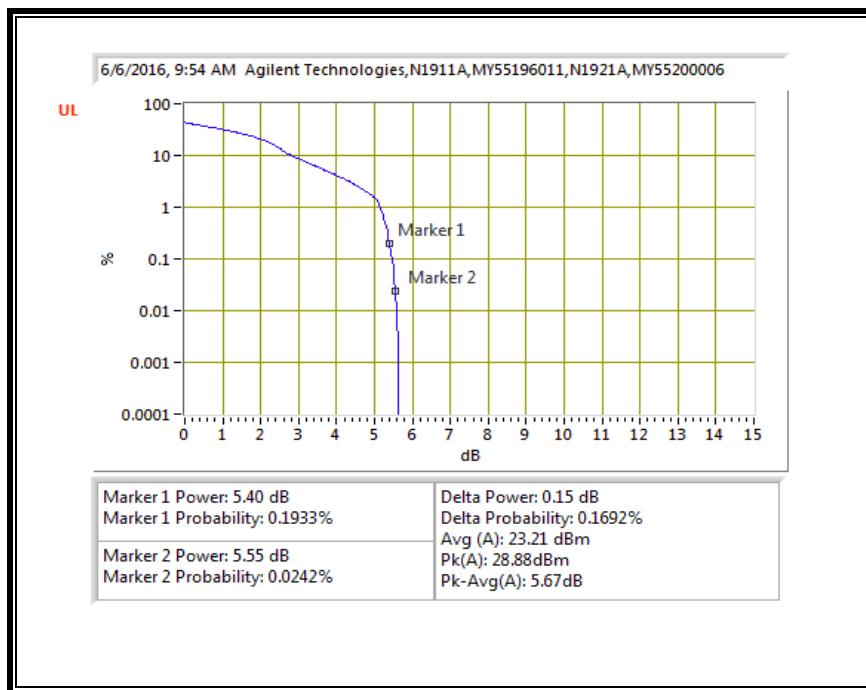
16QAM, (1.4 MHz BAND WIDTH)



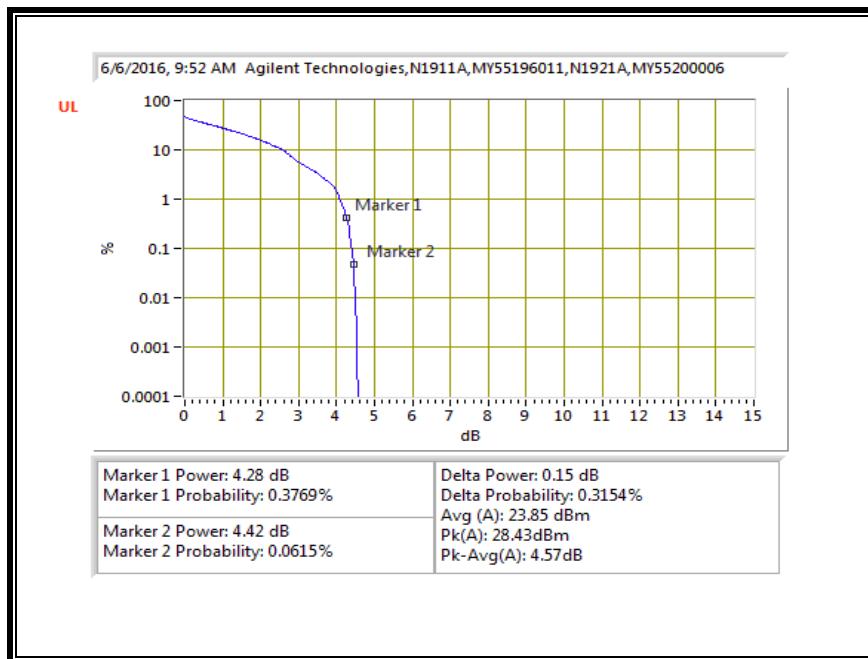
QPSK, (3.0 MHz BAND WIDTH)



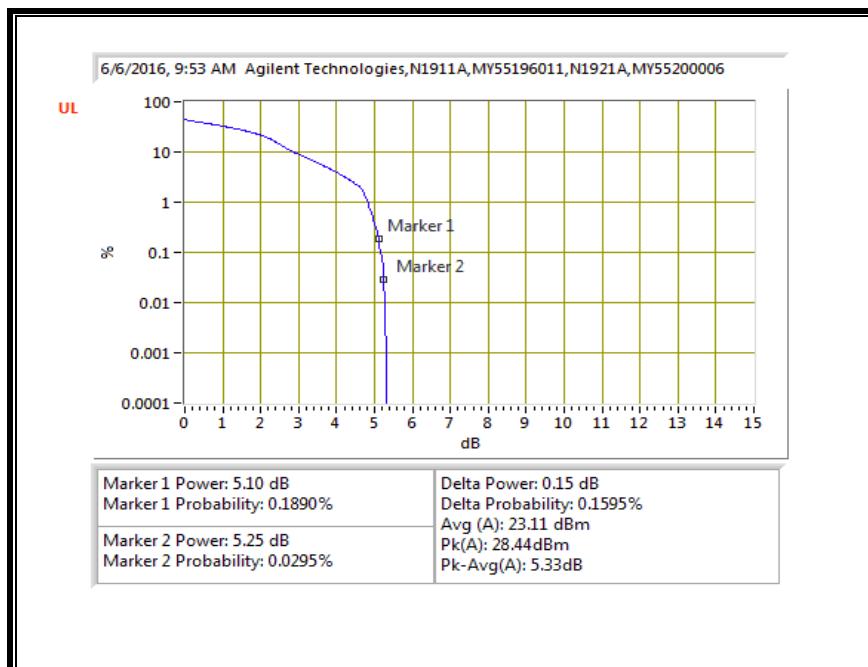
16QAM, (3.0 MHz BAND WIDTH)



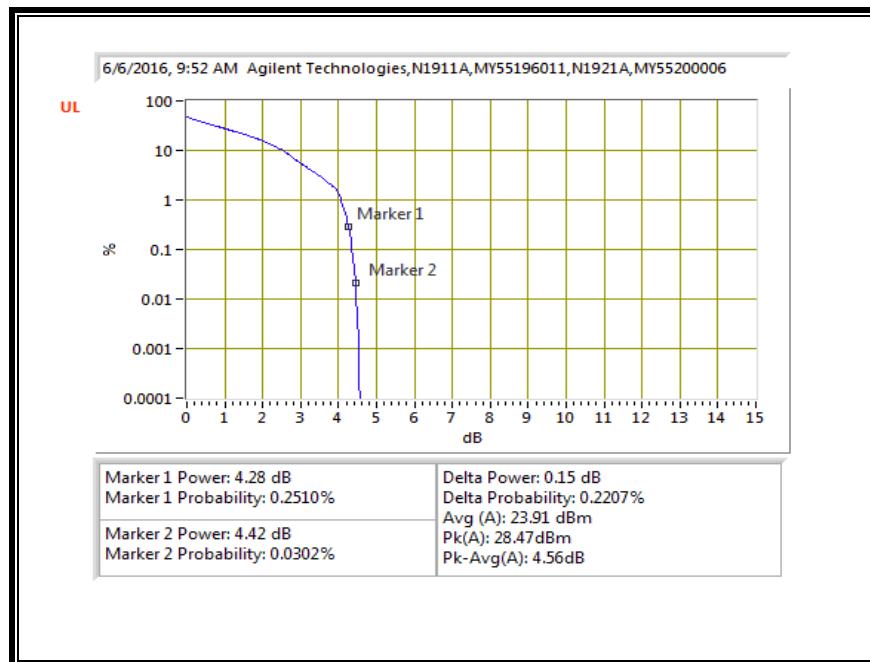
QPSK, (5.0 MHz BAND WIDTH)



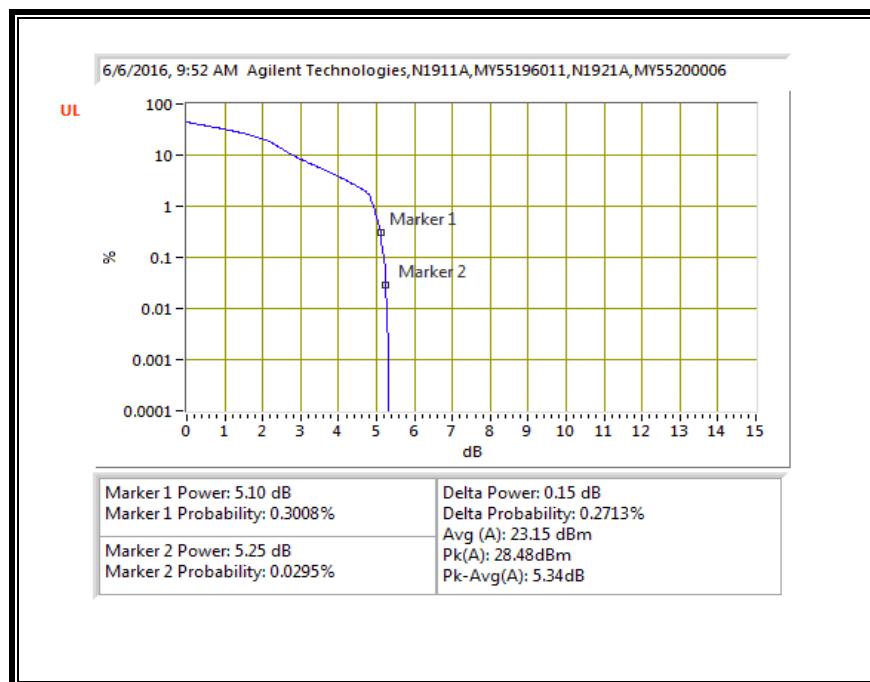
16QAM, (5.0 MHz BAND WIDTH)



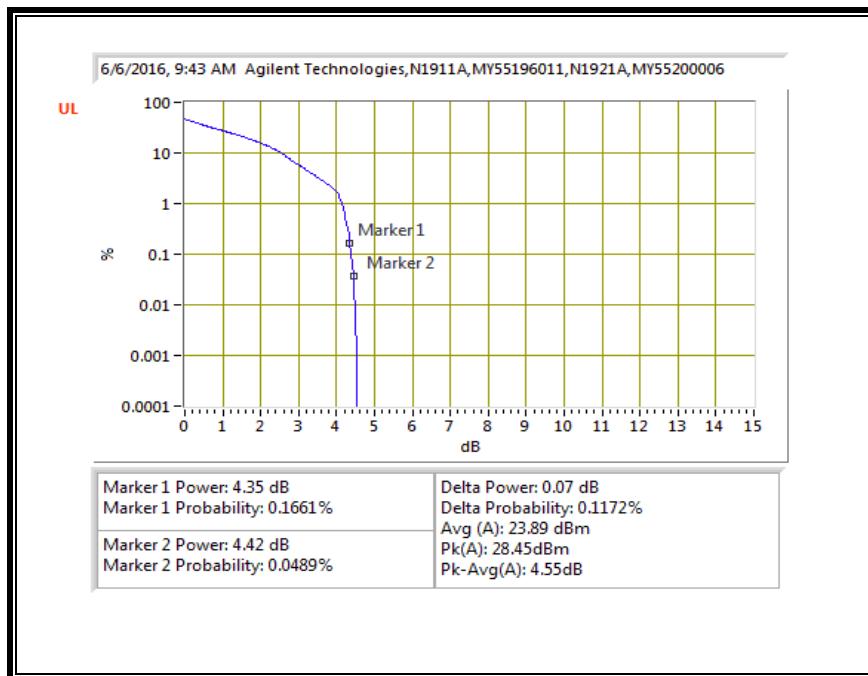
QPSK, (10.0 MHz BAND WIDTH)



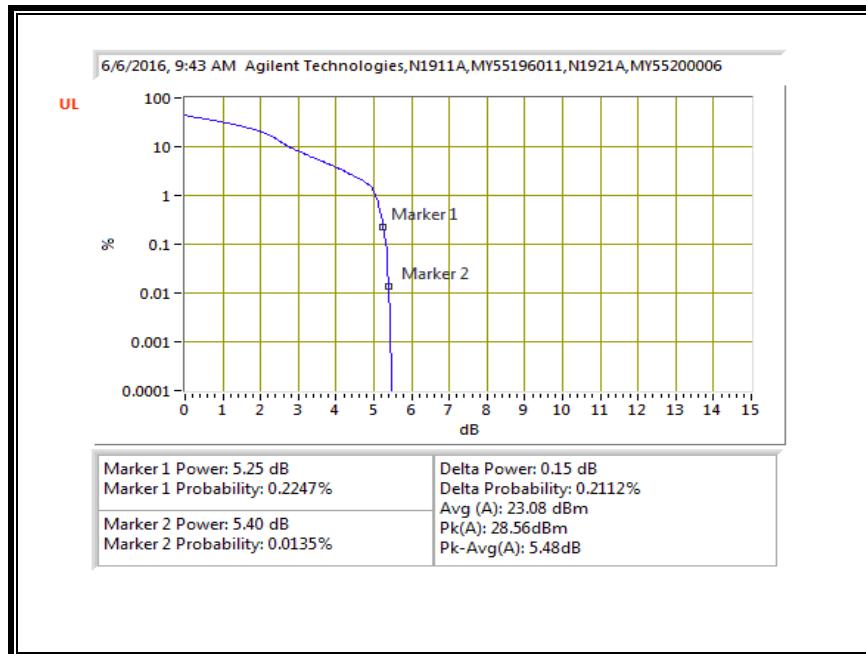
16QAM, (10.0 MHz BAND WIDTH)



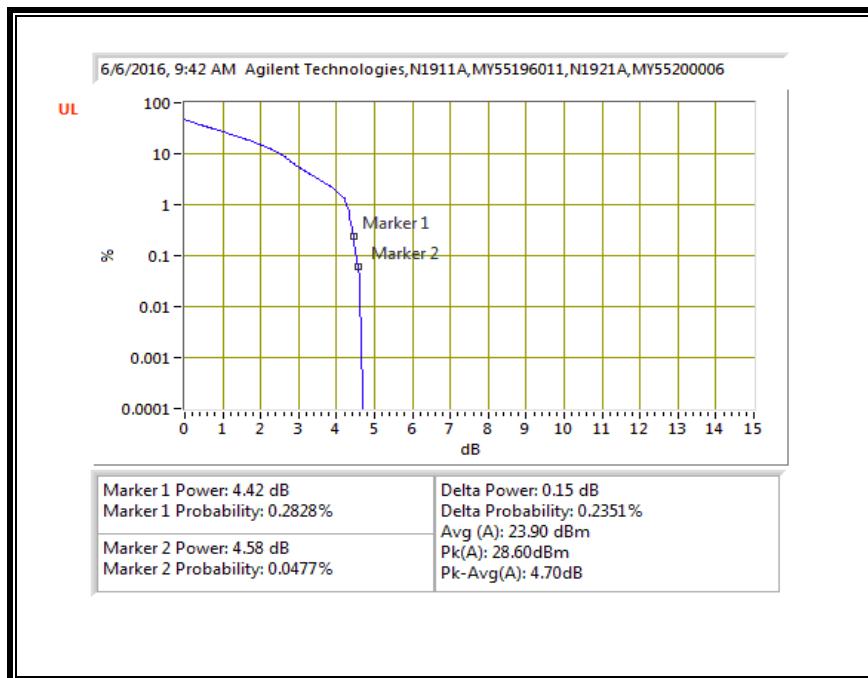
QPSK, (15.0 MHz BAND WIDTH)



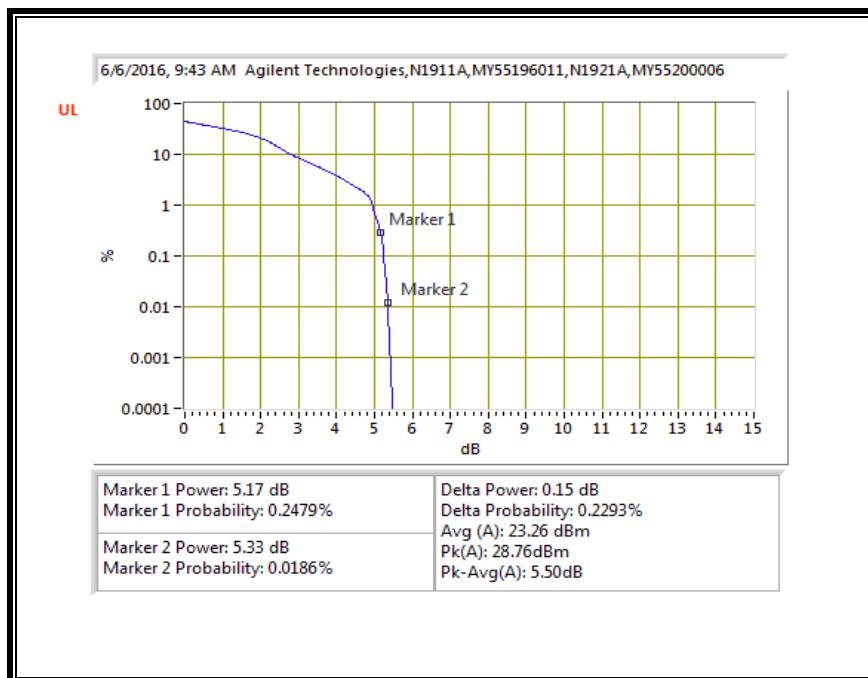
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

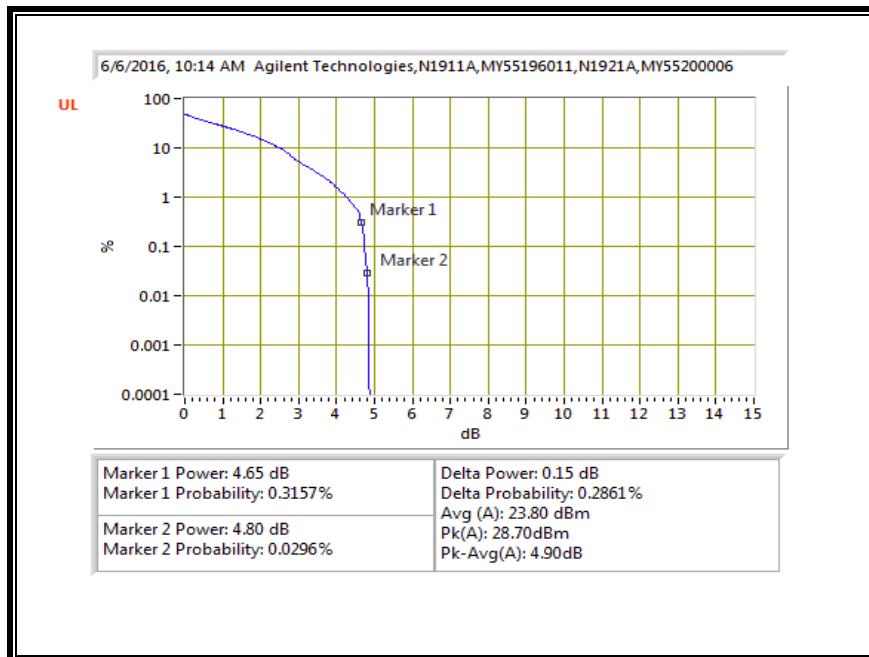


16QAM, (20.0 MHz BAND WIDTH)

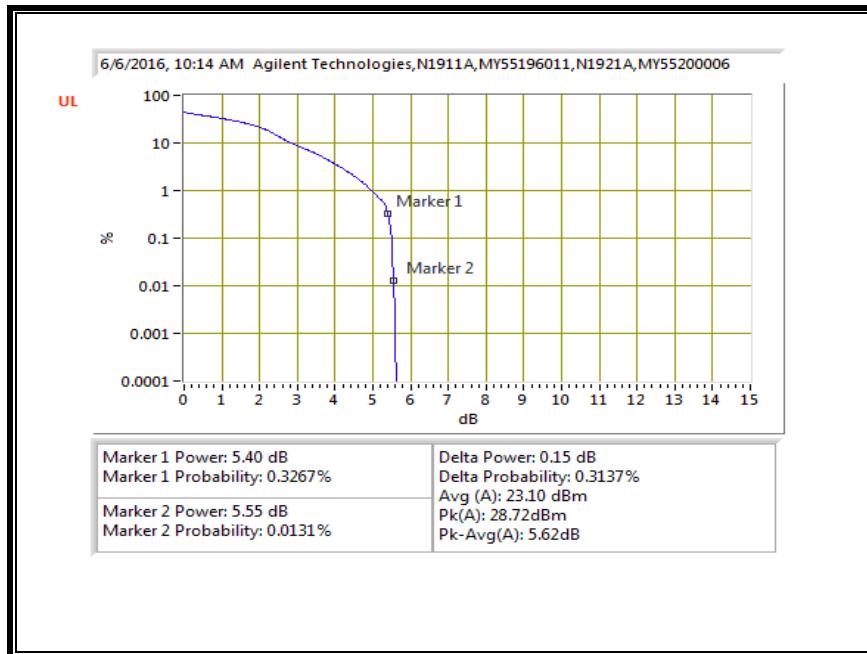


10.3.9. LTE BAND 26

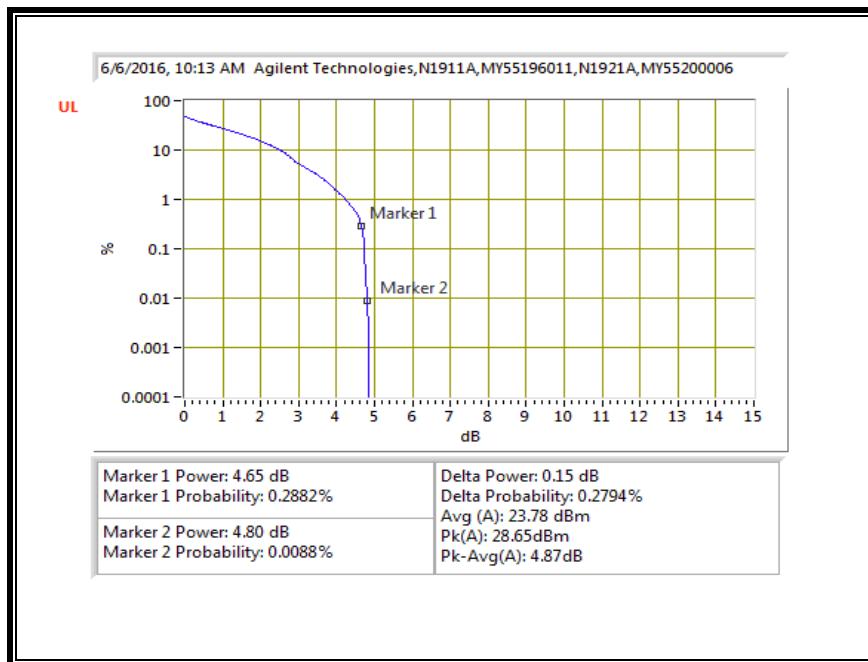
QPSK, (1.4 MHz BAND WIDTH)



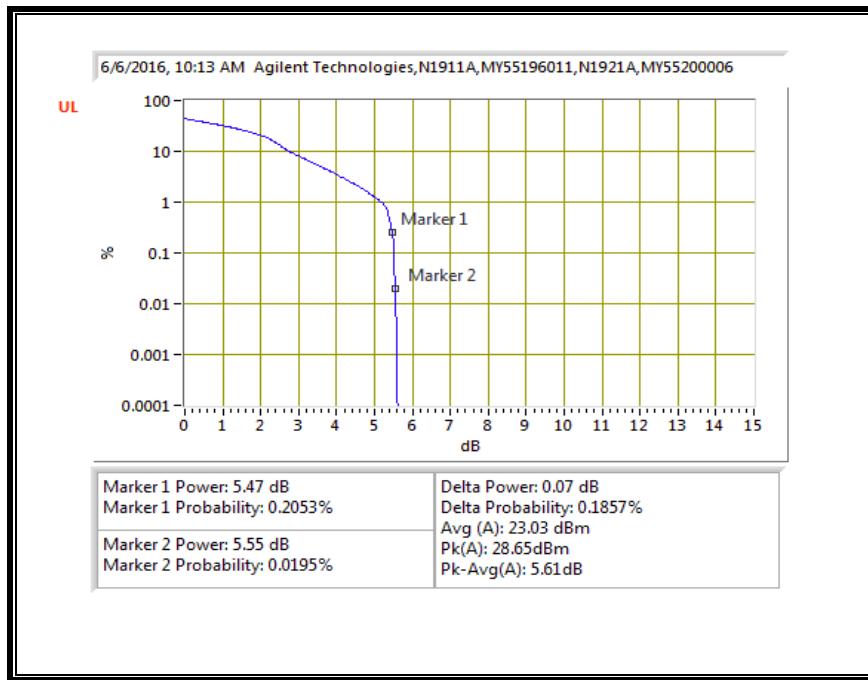
16QAM, (1.4 MHz BAND WIDTH)



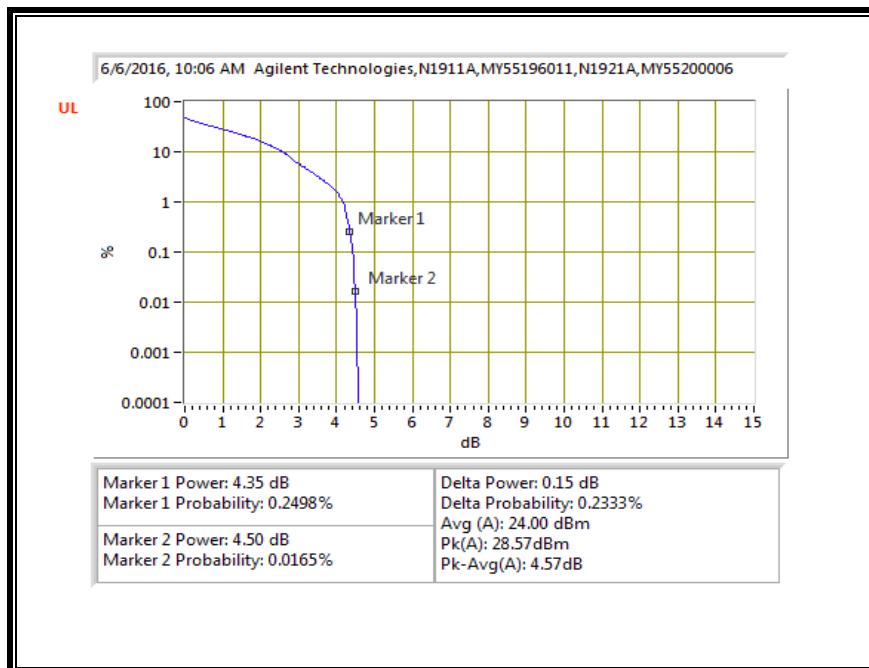
QPSK, (3.0 MHz BAND WIDTH)



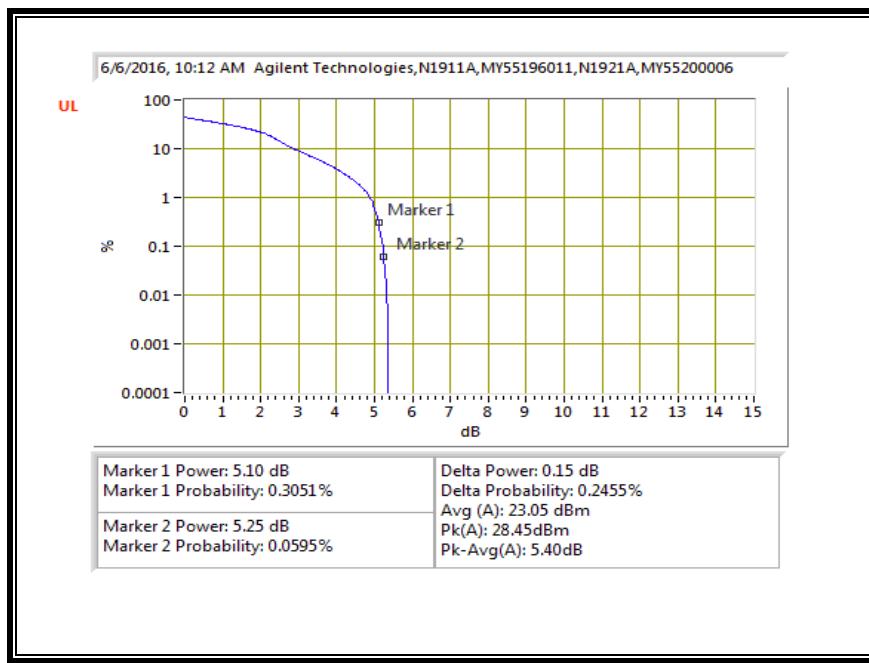
16QAM, (3.0 MHz BAND WIDTH)



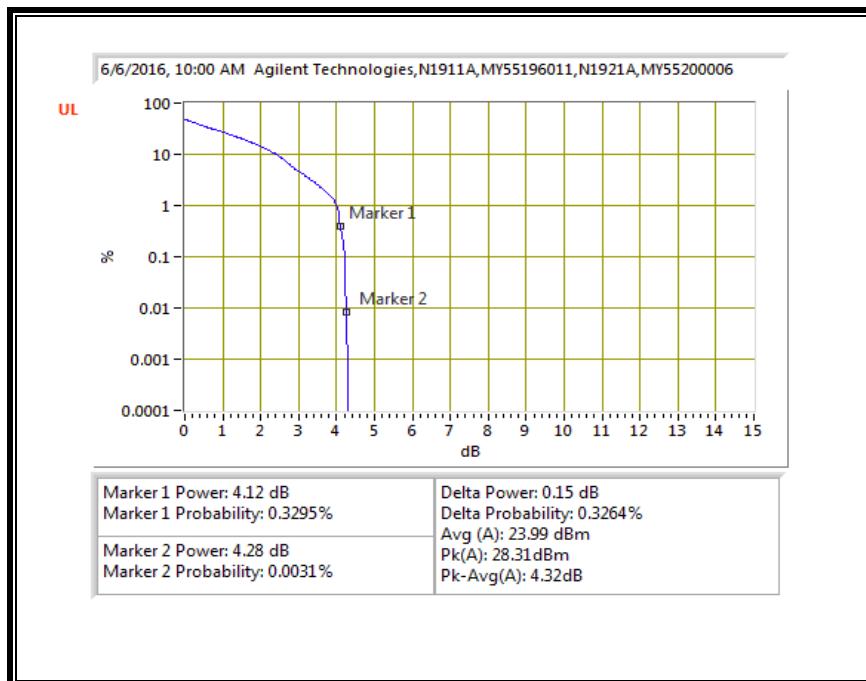
QPSK, (5.0 MHz BAND WIDTH)



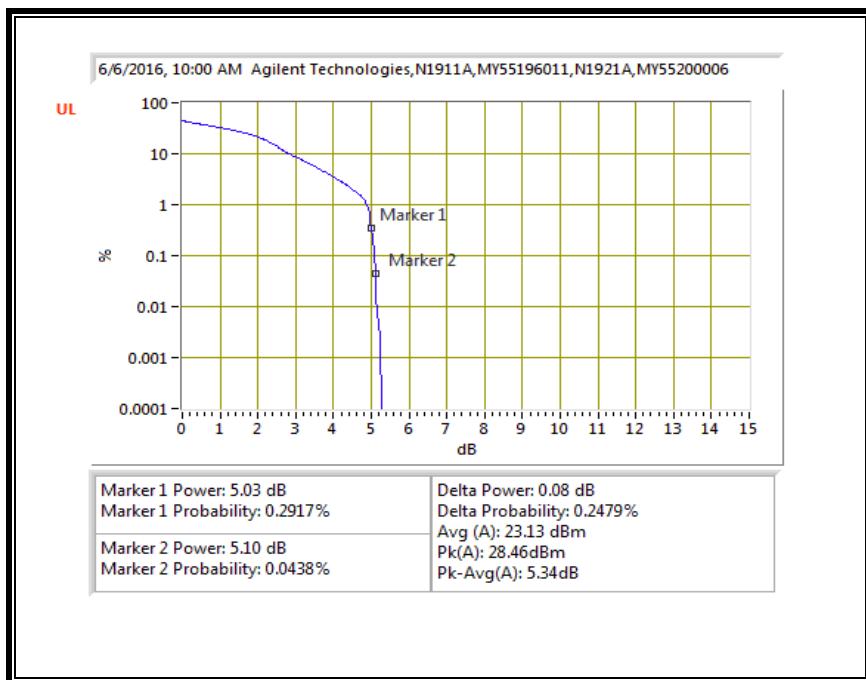
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

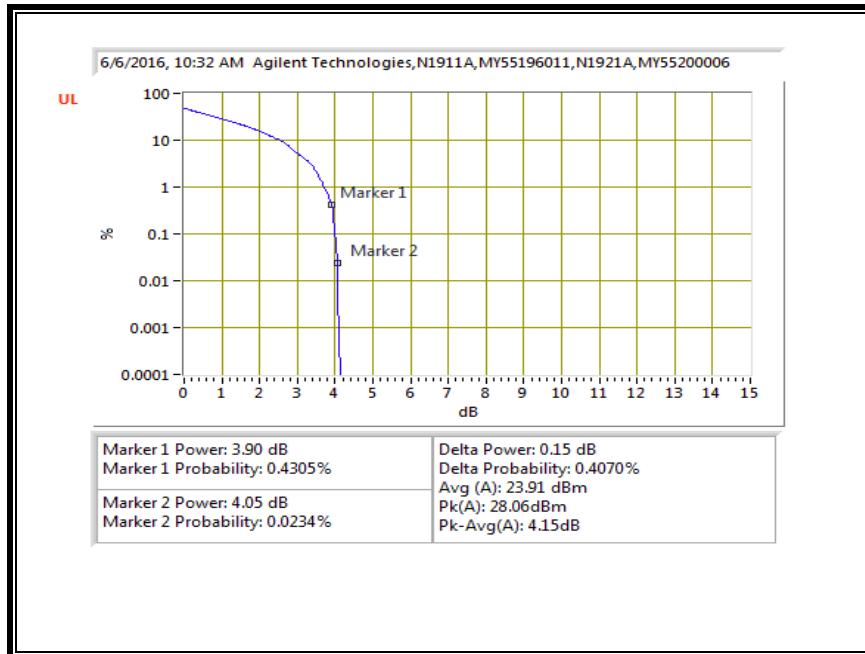


16QAM, (10.0 MHz BAND WIDTH)

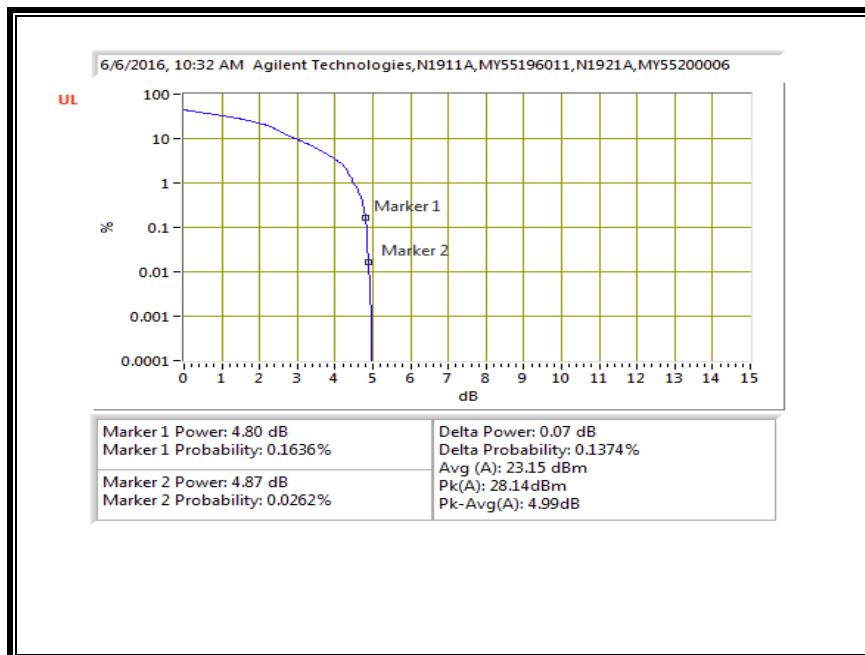


10.3.10. LTE BAND 27

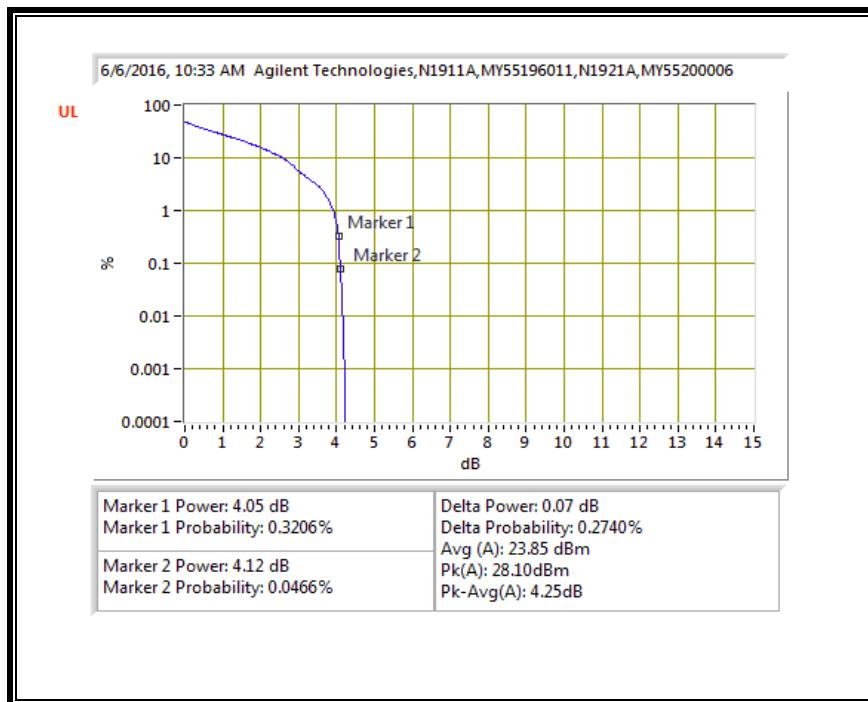
QPSK, (1.4 MHz BAND WIDTH)



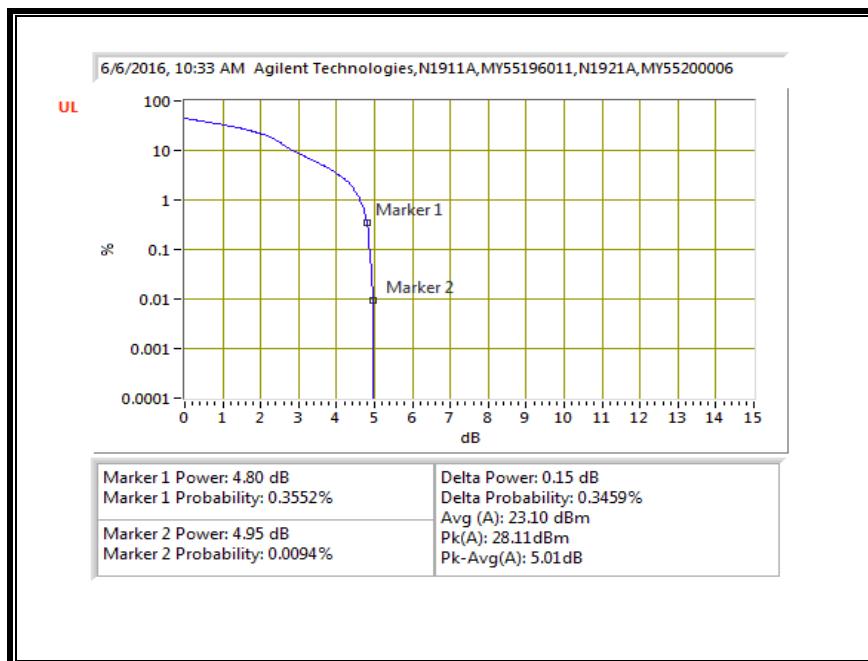
16QAM, (1.4 MHz BAND WIDTH)



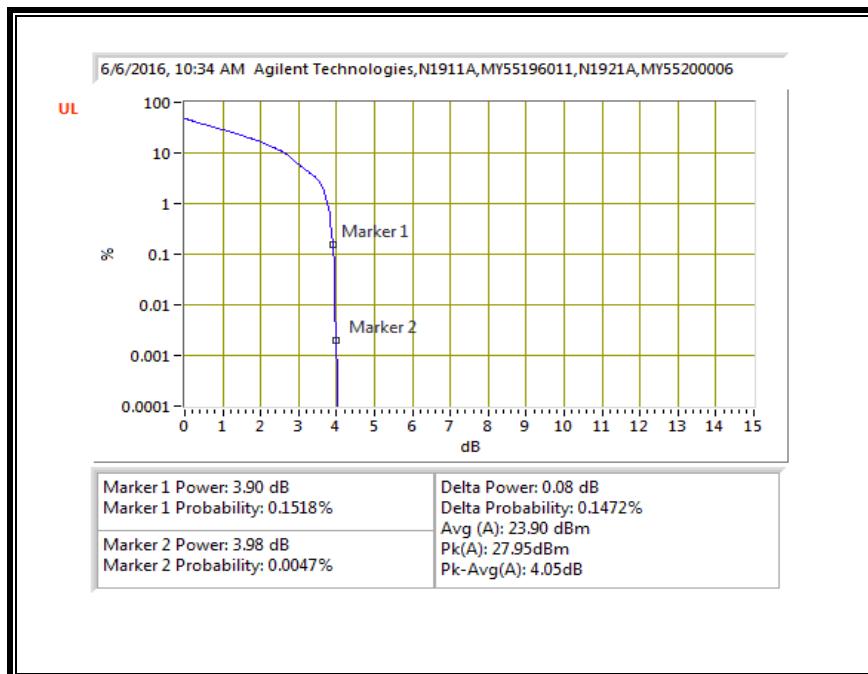
QPSK, (3.0 MHz BAND WIDTH)



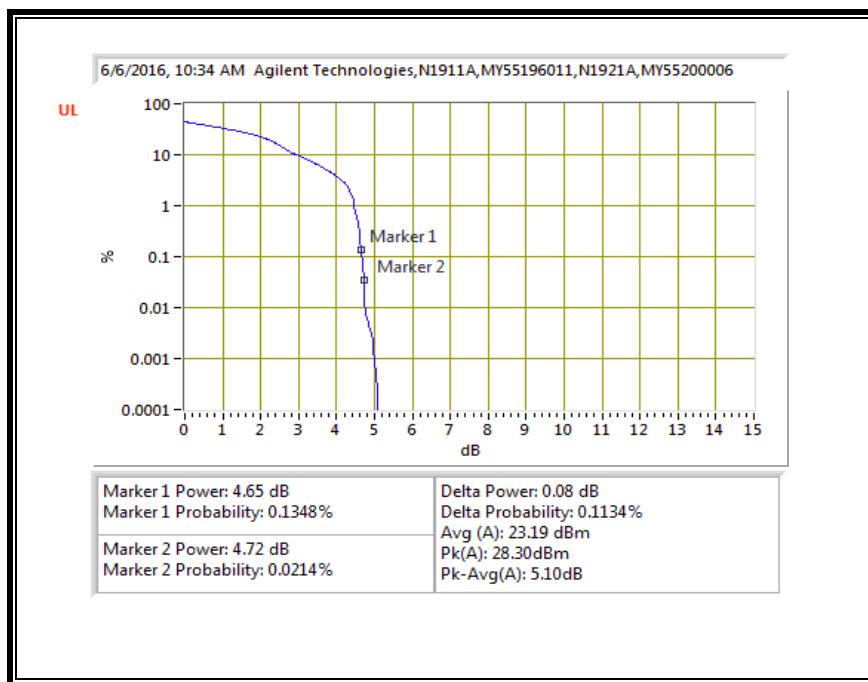
16QAM, (3.0 MHz BAND WIDTH)



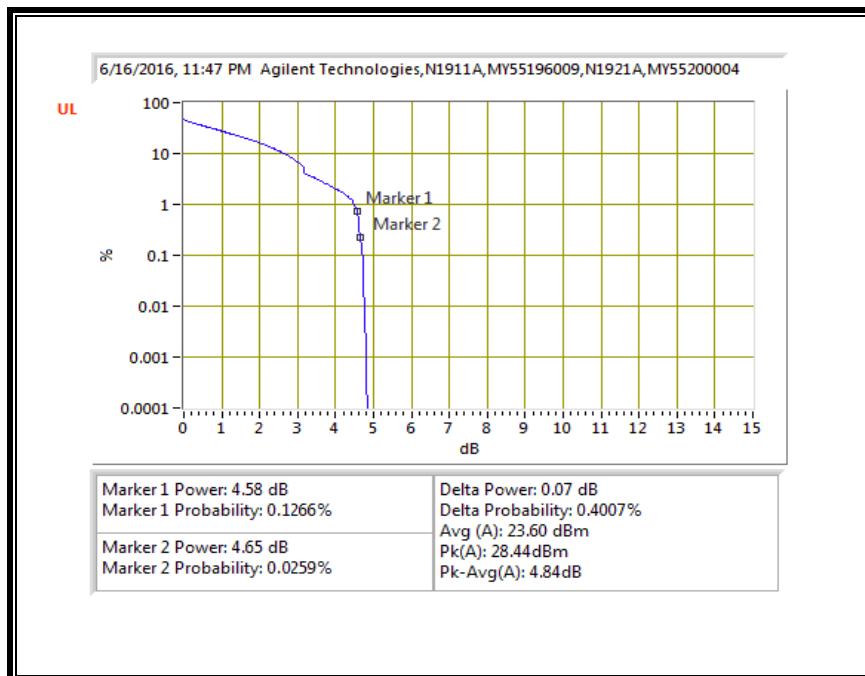
QPSK, (5.0 MHz BAND WIDTH)



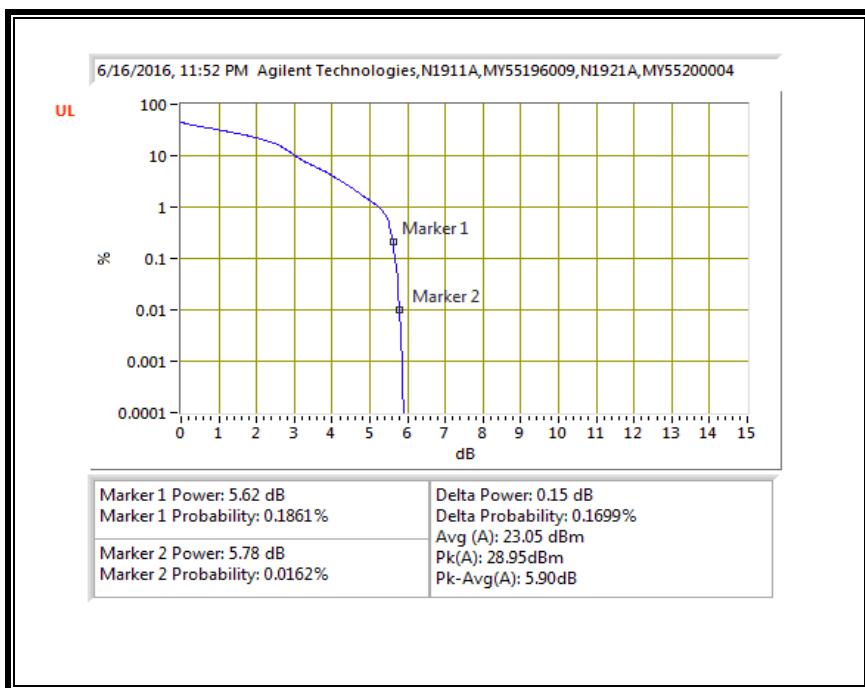
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

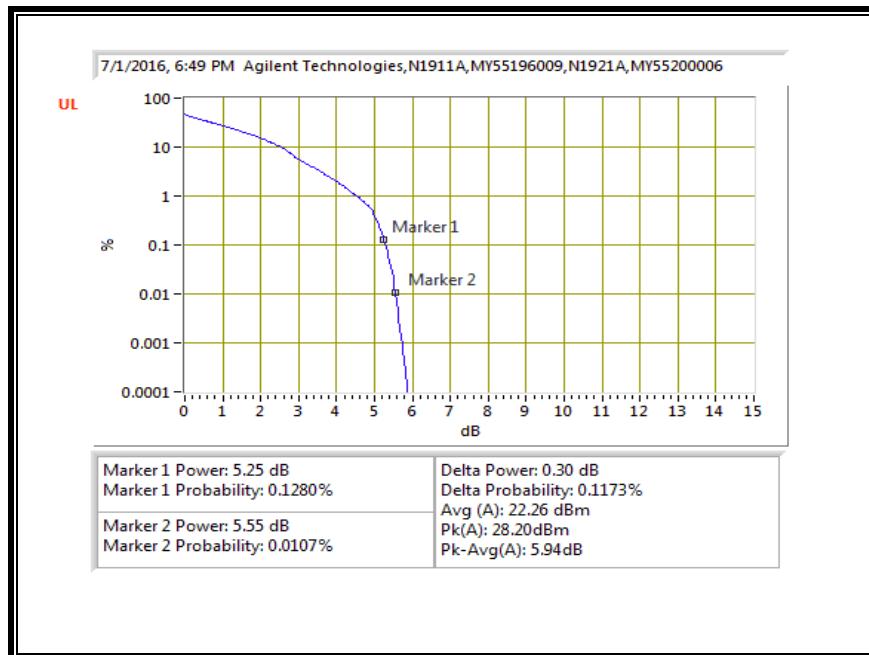


16QAM, (10.0 MHz BAND WIDTH)

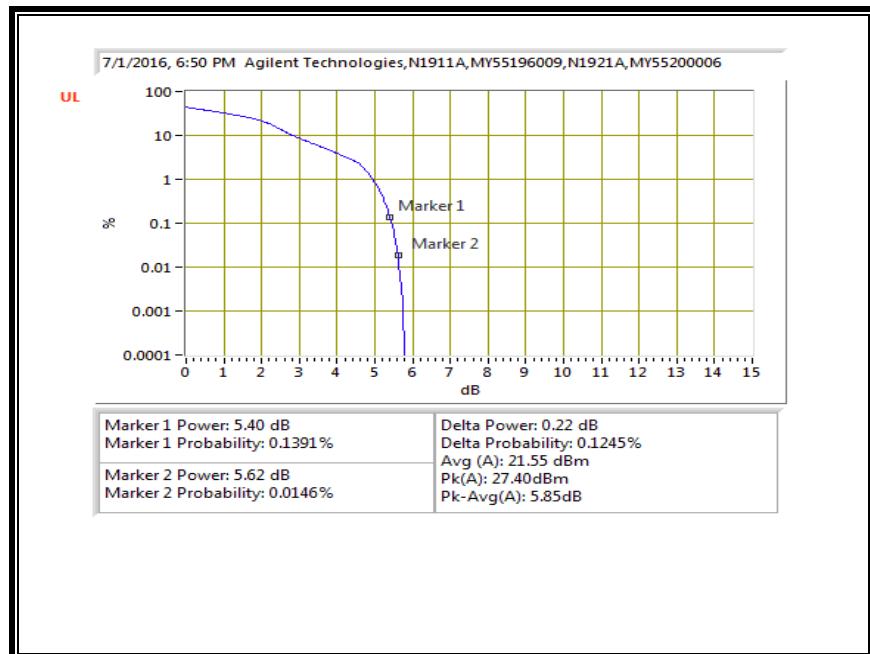


10.3.11. LTE BAND 30

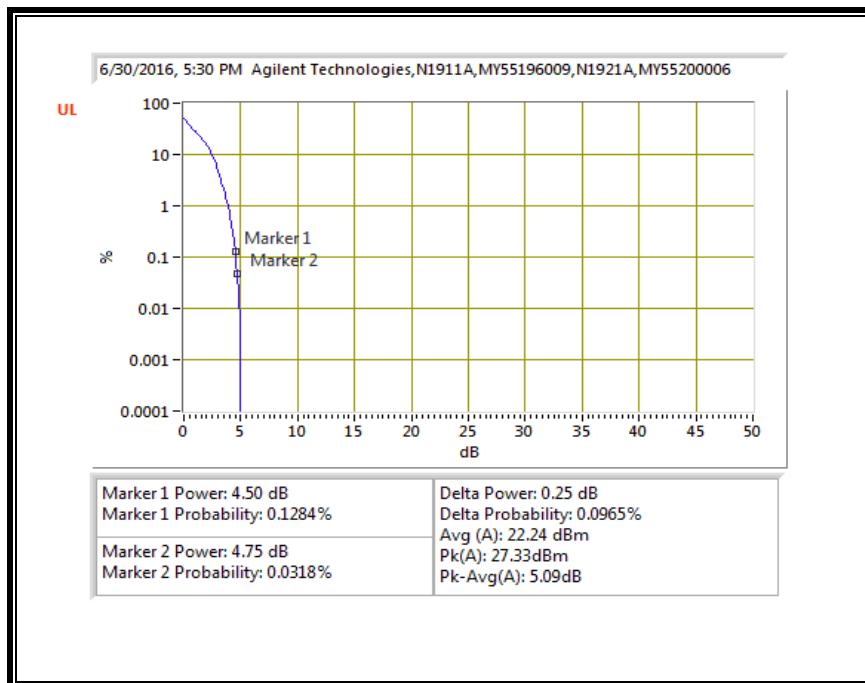
QPSK, (5.0 MHz BAND WIDTH)



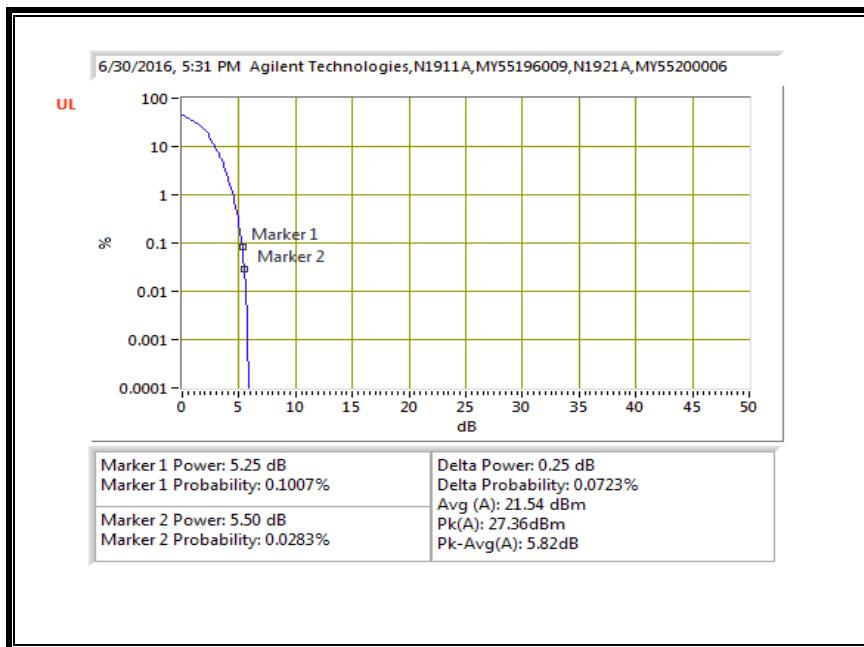
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

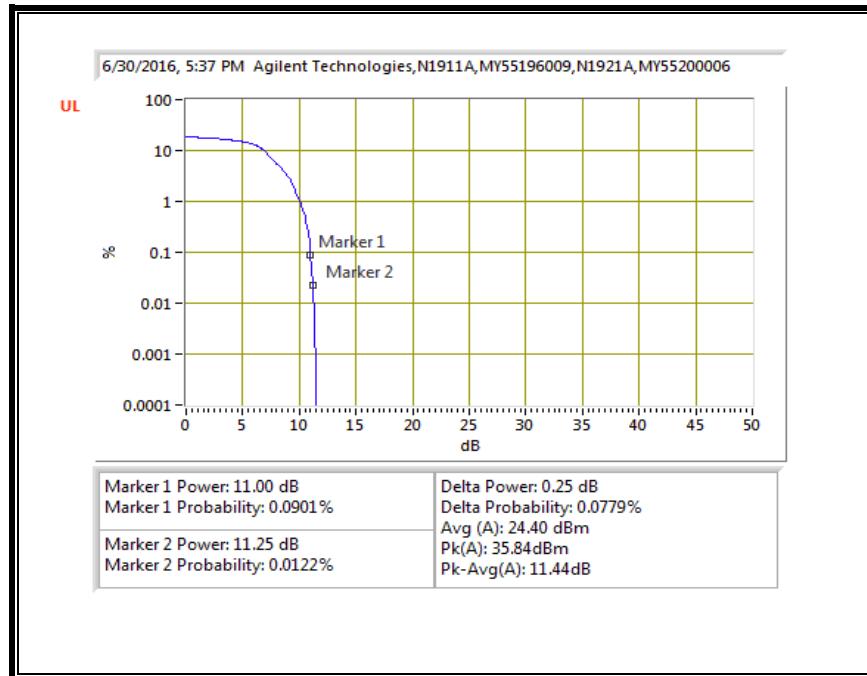


16QAM, (10.0 MHz BAND WIDTH)

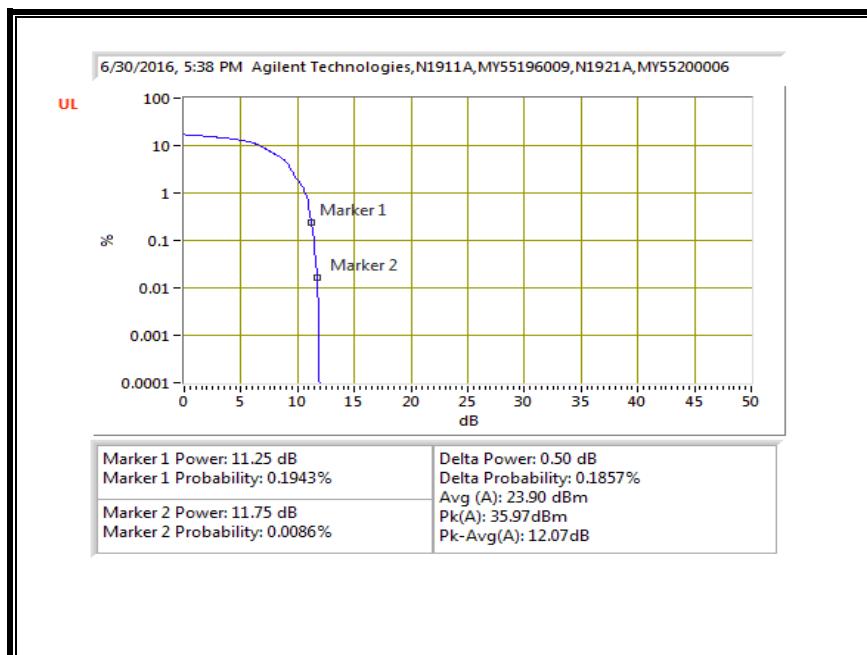


10.3.12. LTE BAND 41

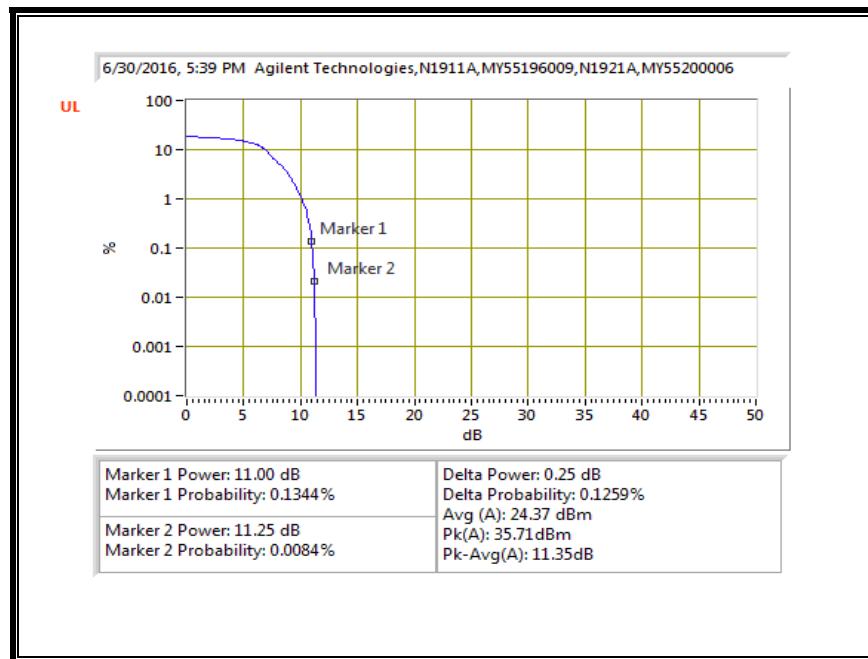
QPSK, (5.0 MHz BAND WIDTH)



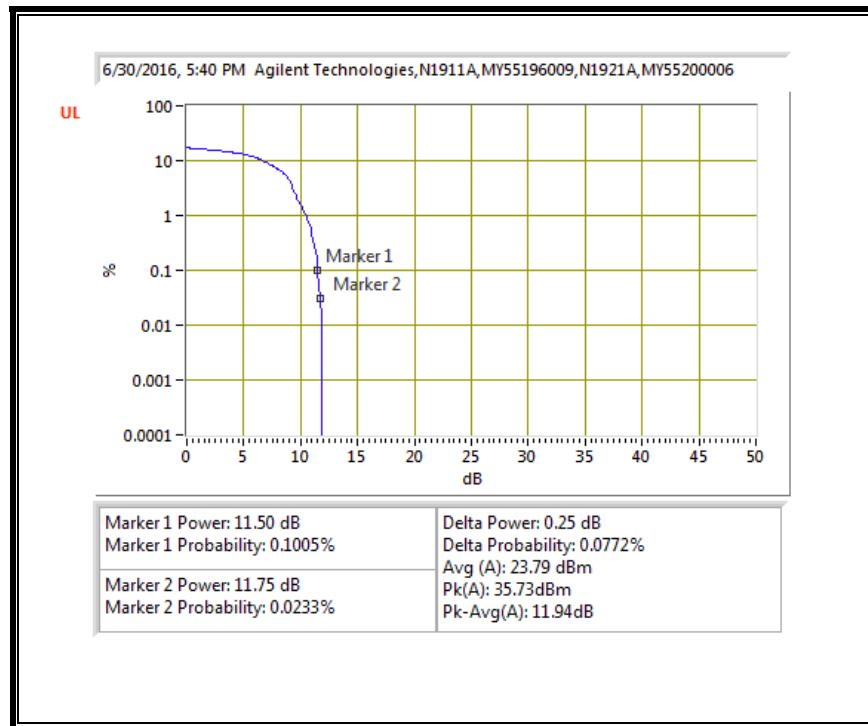
16QAM, (5.0 MHz BAND WIDTH)



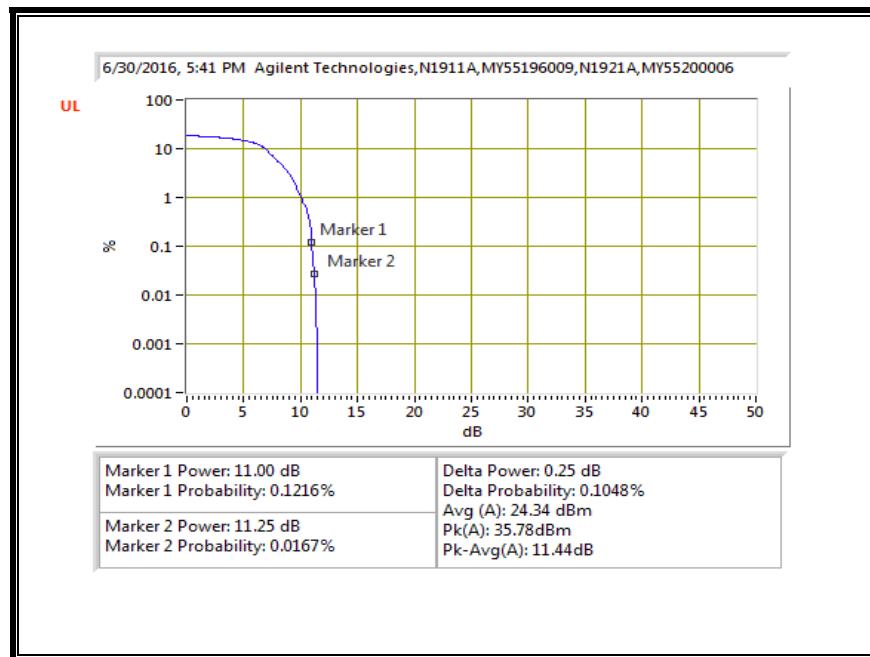
QPSK, (10.0 MHz BAND WIDTH)



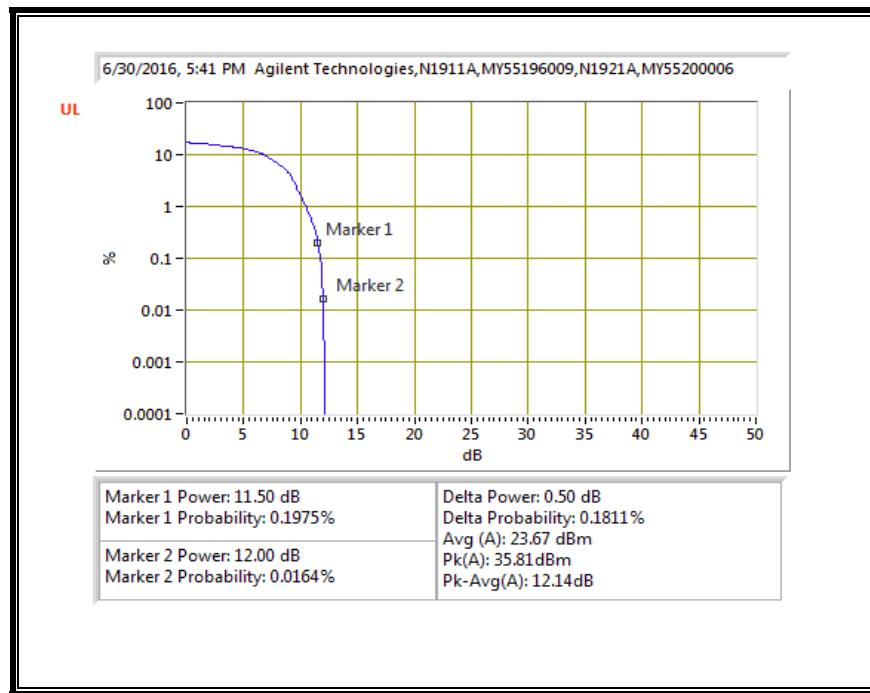
16QAM, (10.0 MHz BAND WIDTH)



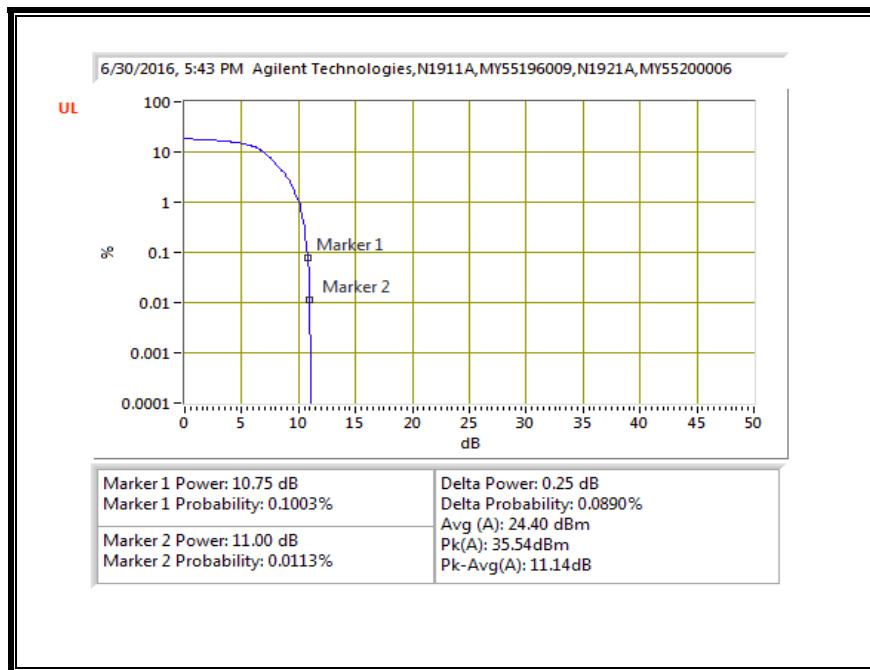
QPSK, (15.0 MHz BAND WIDTH)



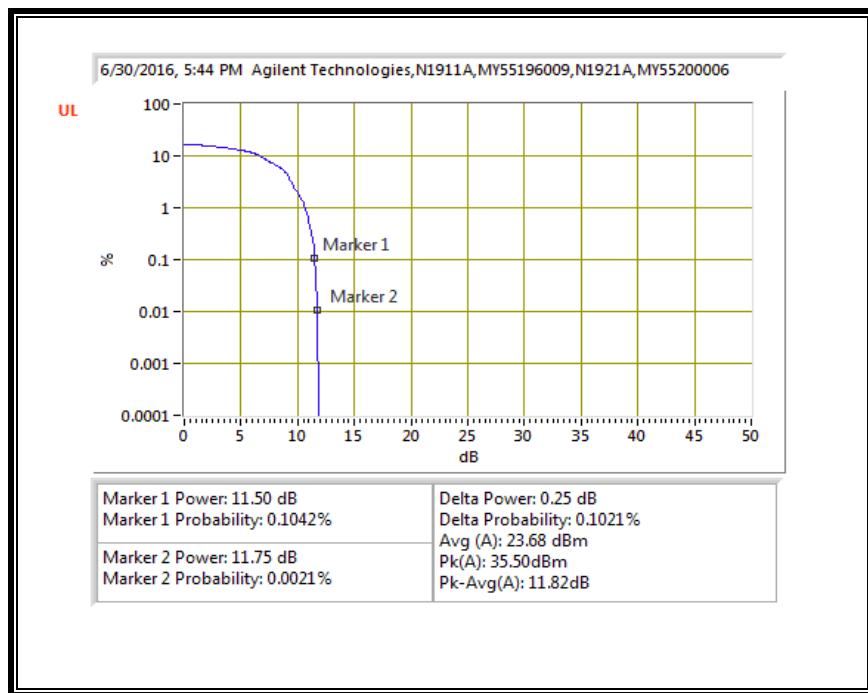
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)



16QAM, (20.0 MHz BAND WIDTH)



10.4. FIELD STRENGTH OF SPURIOUS RADIATION, LAT

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53 and §90.691

LIMIT

§22.917 (e) and §24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

§27.53 (g) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB.

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB.

§90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10} (f/6.1)$ decibels or $50 + 10 \log_{10} (P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The unwanted emission power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth in the 1 MHz band immediately outside and adjacent to the channel edge of the equipment. Beyond the 1 MHz band immediately outside the channel edge of the equipment, a resolution bandwidth of 1 MHz shall be employed. A narrower resolution bandwidth is allowed to be used provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz or 1% of the occupied bandwidth as applicable.

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:

- a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than $43 + 10 \log_{10} (p)$, dB; and
- b. for mobile subscriber equipment, the attenuation shall not be less than $43 + 10 \log_{10} (p)$, dB at the channel edges and $55 + 10 \log_{10} (p)$ at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

MODES TESTED

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

RESULTS

10.4.1. LTE BAND 2

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/05/16 | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 2, 20MHz QPSK | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -65.0 | H | 3.0 | -15.2 | 34.4 | 1.0 | -48.6 | -13.0 | -35.6 | |
| 5.58 | -62.2 | H | 3.0 | -8.7 | 34.1 | 1.0 | -41.8 | -13.0 | -28.8 | |
| 7.44 | -61.2 | H | 3.0 | -4.8 | 33.6 | 1.0 | -37.4 | -13.0 | -24.4 | |
| 3.72 | -63.2 | V | 3.0 | -13.3 | 34.4 | 1.0 | -46.7 | -13.0 | -33.7 | |
| 5.58 | -63.9 | V | 3.0 | -10.2 | 34.1 | 1.0 | -43.3 | -13.0 | -30.3 | |
| 7.44 | -62.1 | V | 3.0 | -5.9 | 33.6 | 1.0 | -38.5 | -13.0 | -25.5 | |
| Mid Channel (1880MHz) | | | | | | | | | | |
| 3.76 | -62.8 | H | 3.0 | -12.8 | 34.4 | 1.0 | -46.2 | -13.0 | -33.2 | |
| 5.64 | -61.3 | H | 3.0 | -7.7 | 34.1 | 1.0 | -40.8 | -13.0 | -27.8 | |
| 7.52 | -63.3 | H | 3.0 | -6.8 | 33.5 | 1.0 | -39.3 | -13.0 | -26.3 | |
| 3.76 | -62.5 | V | 3.0 | -12.4 | 34.4 | 1.0 | -45.8 | -13.0 | -32.8 | |
| 5.64 | -61.4 | V | 3.0 | -7.6 | 34.1 | 1.0 | -40.7 | -13.0 | -27.7 | |
| 7.52 | -62.7 | V | 3.0 | -6.4 | 33.5 | 1.0 | -39.0 | -13.0 | -26.0 | |
| High Channel (1900MHz) | | | | | | | | | | |
| 3.80 | -62.4 | H | 3.0 | -12.3 | 34.4 | 1.0 | -45.7 | -13.0 | -32.7 | |
| 5.70 | -63.5 | H | 3.0 | -9.8 | 34.1 | 1.0 | -42.9 | -13.0 | -29.9 | |
| 7.60 | -64.1 | H | 3.0 | -7.5 | 33.5 | 1.0 | -40.0 | -13.0 | -27.0 | |
| 3.80 | -62.1 | V | 3.0 | -11.9 | 34.4 | 1.0 | -45.3 | -13.0 | -32.3 | |
| 5.70 | -61.9 | V | 3.0 | -8.0 | 34.1 | 1.0 | -41.1 | -13.0 | -28.1 | |
| 7.60 | -62.9 | V | 3.0 | -6.5 | 33.5 | 1.0 | -39.0 | -13.0 | -26.0 | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------|-----------------|---------------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/05/16 Test Engineer: 30554 Configuration: EUT Only Mode: LTE Band 2, 20MHz 16QAM | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | | Pre-amplifier | | Filter | | Limit | | | |
| 3m Chamber F | 3m Chamber F | Filter | EIRP | | Limit | | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -62.4 | H | 3.0 | -12.6 | 34.4 | 1.0 | -46.0 | -13.0 | -33.0 | |
| 5.58 | -62.7 | H | 3.0 | -9.2 | 34.1 | 1.0 | -42.4 | -13.0 | -29.4 | |
| 7.44 | -61.7 | H | 3.0 | -5.3 | 33.6 | 1.0 | -37.9 | -13.0 | -24.9 | |
| 3.72 | -61.6 | V | 3.0 | -11.6 | 34.4 | 1.0 | -45.1 | -13.0 | -32.1 | |
| 5.58 | -61.4 | V | 3.0 | -7.7 | 34.1 | 1.0 | -40.8 | -13.0 | -27.8 | |
| 7.44 | -62.6 | V | 3.0 | -6.4 | 33.6 | 1.0 | -39.0 | -13.0 | -26.0 | |
| Mid Channel (1880MHz) | | | | | | | | | | |
| 3.76 | -62.1 | H | 3.0 | -12.2 | 34.4 | 1.0 | -45.6 | -13.0 | -32.6 | |
| 5.64 | -63.3 | H | 3.0 | -9.8 | 34.1 | 1.0 | -42.9 | -13.0 | -29.9 | |
| 7.52 | -61.2 | H | 3.0 | -4.7 | 33.5 | 1.0 | -37.3 | -13.0 | -24.3 | |
| 3.76 | -62.9 | V | 3.0 | -12.8 | 34.4 | 1.0 | -46.2 | -13.0 | -33.2 | |
| 5.64 | -62.5 | V | 3.0 | -8.8 | 34.1 | 1.0 | -41.9 | -13.0 | -28.9 | |
| 7.52 | -62.4 | V | 3.0 | -6.1 | 33.5 | 1.0 | -38.7 | -13.0 | -25.7 | |
| High Channel (1900MHz) | | | | | | | | | | |
| 3.80 | -63.2 | H | 3.0 | -13.0 | 34.4 | 1.0 | -46.4 | -13.0 | -33.4 | |
| 5.70 | -62.2 | H | 3.0 | -8.5 | 34.1 | 1.0 | -41.6 | -13.0 | -28.6 | |
| 7.60 | -61.6 | H | 3.0 | -5.0 | 33.5 | 1.0 | -37.5 | -13.0 | -24.5 | |
| 3.80 | -63.2 | V | 3.0 | -13.0 | 34.4 | 1.0 | -46.4 | -13.0 | -33.4 | |
| 5.70 | -62.8 | V | 3.0 | -9.0 | 34.1 | 1.0 | -42.1 | -13.0 | -29.1 | |
| 7.60 | -63.7 | V | 3.0 | -7.3 | 33.5 | 1.0 | -39.8 | -13.0 | -26.8 | |
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10.4.2. LTE BAND 4

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|---|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/05/16 Test Engineer: 30554 Configuration: EUT Only Mode: LTE Band 4, 20MHz QPSK | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1720MHz) | | | | | | | | | | |
| 3.44 | -62.2 | H | 3.0 | -13.4 | 34.6 | 1.0 | -47.0 | -13.0 | -34.0 | |
| 5.16 | -63.2 | H | 3.0 | -10.4 | 34.2 | 1.0 | -43.6 | -13.0 | -30.6 | |
| 6.88 | -61.8 | H | 3.0 | -6.2 | 33.9 | 1.0 | -39.2 | -13.0 | -26.2 | |
| 3.44 | -62.6 | V | 3.0 | -13.6 | 34.6 | 1.0 | -47.2 | -13.0 | -34.2 | |
| 5.16 | -62.3 | V | 3.0 | -9.2 | 34.2 | 1.0 | -42.4 | -13.0 | -29.4 | |
| 6.88 | -62.4 | V | 3.0 | -7.0 | 33.9 | 1.0 | -39.9 | -13.0 | -26.9 | |
| Mid Channel (1732.5MHz) | | | | | | | | | | |
| 3.47 | -62.4 | H | 3.0 | -13.5 | 34.6 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 5.20 | -62.5 | H | 3.0 | -9.6 | 34.2 | 1.0 | -42.8 | -13.0 | -29.8 | |
| 6.93 | -61.4 | H | 3.0 | -5.7 | 33.9 | 1.0 | -38.6 | -13.0 | -25.6 | |
| 3.47 | -62.4 | V | 3.0 | -13.3 | 34.6 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 5.20 | -63.3 | V | 3.0 | -10.2 | 34.2 | 1.0 | -43.3 | -13.0 | -30.3 | |
| 6.93 | -62.9 | V | 3.0 | -7.4 | 33.9 | 1.0 | -40.3 | -13.0 | -27.3 | |
| High Channel (1745MHz) | | | | | | | | | | |
| 3.50 | -63.2 | H | 3.0 | -14.2 | 34.6 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 5.25 | -64.6 | H | 3.0 | -11.6 | 34.2 | 1.0 | -44.8 | -13.0 | -31.8 | |
| 7.00 | -61.4 | H | 3.0 | -5.6 | 33.9 | 1.0 | -38.5 | -13.0 | -25.5 | |
| 3.50 | -62.8 | H | 3.0 | -13.8 | 34.6 | 1.0 | -47.4 | -13.0 | -34.4 | |
| 5.25 | -62.4 | H | 3.0 | -9.4 | 34.2 | 1.0 | -42.6 | -13.0 | -29.6 | |
| 7.00 | -63.1 | V | 3.0 | -7.5 | 33.9 | 1.0 | -40.5 | -13.0 | -27.5 | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/05/16 | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 4, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | |
| Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1720MHz) | | | | | | | | | | |
| 3.44 | -62.1 | H | 3.0 | -13.4 | 34.6 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 5.16 | -63.2 | H | 3.0 | -10.4 | 34.2 | 1.0 | -43.6 | -13.0 | -30.6 | |
| 6.88 | -62.4 | H | 3.0 | -6.9 | 33.9 | 1.0 | -39.8 | -13.0 | -26.8 | |
| 3.44 | -63.3 | V | 3.0 | -14.3 | 34.6 | 1.0 | -47.9 | -13.0 | -34.9 | |
| 5.16 | -63.2 | V | 3.0 | -10.1 | 34.2 | 1.0 | -43.3 | -13.0 | -30.3 | |
| 6.88 | -62.8 | V | 3.0 | -7.4 | 33.9 | 1.0 | -40.3 | -13.0 | -27.3 | |
| Mid Channel (1732.5MHz) | | | | | | | | | | |
| 3.47 | -62.7 | H | 3.0 | -13.8 | 34.6 | 1.0 | -47.4 | -13.0 | -34.4 | |
| 5.20 | -63.2 | H | 3.0 | -10.3 | 34.2 | 1.0 | -43.5 | -13.0 | -30.5 | |
| 6.93 | -62.8 | H | 3.0 | -7.1 | 33.9 | 1.0 | -40.0 | -13.0 | -27.0 | |
| 3.47 | -61.5 | V | 3.0 | -12.5 | 34.6 | 1.0 | -46.0 | -13.0 | -33.0 | |
| 5.20 | -63.3 | V | 3.0 | -10.1 | 34.2 | 1.0 | -43.3 | -13.0 | -30.3 | |
| 6.93 | -62.2 | V | 3.0 | -6.7 | 33.9 | 1.0 | -39.6 | -13.0 | -26.6 | |
| High Channel (1745MHz) | | | | | | | | | | |
| 3.50 | -62.4 | H | 3.0 | -13.4 | 34.6 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 5.25 | -61.9 | H | 3.0 | -8.9 | 34.2 | 1.0 | -42.1 | -13.0 | -29.1 | |
| 7.00 | -61.5 | H | 3.0 | -5.7 | 33.9 | 1.0 | -38.6 | -13.0 | -25.6 | |
| 3.50 | -62.2 | V | 3.0 | -13.0 | 34.6 | 1.0 | -46.6 | -13.0 | -33.6 | |
| 5.25 | -62.7 | V | 3.0 | -9.4 | 34.2 | 1.0 | -42.6 | -13.0 | -29.6 | |
| 7.00 | -63.2 | V | 3.0 | -7.7 | 33.9 | 1.0 | -40.6 | -13.0 | -27.6 | |

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10.4.3. LTE BAND 5

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|---|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/06/16 Test Engineer: 29435 Configuration: EUT Only Mode: LTE Band 5, 10MHz QPSK | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (829MHz) | | | | | | | | | | |
| 1.70 | 66.2 | H | 3.0 | -24.7 | 33.7 | 1.0 | -57.4 | -13.0 | -44.4 | |
| 2.47 | -64.3 | H | 3.0 | -20.2 | 34.1 | 1.0 | -53.3 | -13.0 | -40.3 | |
| 3.36 | -62.8 | H | 3.0 | -14.3 | 34.6 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 1.65 | -67.2 | V | 3.0 | -23.8 | 33.7 | 1.0 | -56.5 | -13.0 | -43.5 | |
| 2.47 | -64.7 | V | 3.0 | -20.0 | 34.1 | 1.0 | -53.1 | -13.0 | -40.1 | |
| 3.36 | -62.9 | V | 3.0 | -14.2 | 34.6 | 1.0 | -47.8 | -13.0 | -34.8 | |
| Mid Channel (836.5MHz) | | | | | | | | | | |
| 1.72 | -66.5 | H | 3.0 | -24.9 | 33.7 | 1.0 | -57.5 | -13.0 | -44.5 | |
| 2.59 | -63.9 | H | 3.0 | -19.3 | 34.2 | 1.0 | -52.5 | -13.0 | -39.5 | |
| 3.38 | -64.0 | H | 3.0 | -15.5 | 34.6 | 1.0 | -49.1 | -13.0 | -36.1 | |
| 1.72 | -66.2 | V | 3.0 | -22.8 | 33.7 | 1.0 | -55.4 | -13.0 | -42.4 | |
| 2.52 | -64.1 | V | 3.0 | -19.2 | 34.1 | 1.0 | -52.3 | -13.0 | -39.3 | |
| 3.31 | -63.6 | V | 3.0 | -15.0 | 34.7 | 1.0 | -48.7 | -13.0 | -35.7 | |
| High Channel (844MHz) | | | | | | | | | | |
| 1.71 | -65.6 | H | 3.0 | -24.0 | 33.7 | 1.0 | -56.7 | -13.0 | -43.7 | |
| 2.55 | -63.2 | H | 3.0 | -18.7 | 34.2 | 1.0 | -51.9 | -13.0 | -38.9 | |
| 3.36 | -63.1 | H | 3.0 | -14.6 | 34.6 | 1.0 | -48.3 | -13.0 | -35.3 | |
| 1.72 | -65.7 | V | 3.0 | -22.3 | 33.7 | 1.0 | -54.9 | -13.0 | -41.9 | |
| 2.51 | -63.2 | V | 3.0 | -18.4 | 34.1 | 1.0 | -51.5 | -13.0 | -38.5 | |
| 3.39 | -62.9 | V | 3.0 | -14.1 | 34.6 | 1.0 | -47.7 | -13.0 | -34.7 | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|---|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/06/16 Test Engineer: 29435 Configuration: EUT Only Mode: LTE Band 5, 10MHz 16QAM | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (829MHz) | | | | | | | | | | |
| 1.65 | -66.8 | H | 3.0 | -25.2 | 33.7 | 1.0 | -57.9 | -13.0 | -44.9 | |
| 2.47 | -64.9 | H | 3.0 | -20.8 | 34.1 | 1.0 | -53.9 | -13.0 | -40.9 | |
| 3.36 | -63.9 | H | 3.0 | -15.4 | 34.6 | 1.0 | -49.1 | -13.0 | -36.1 | |
| 1.66 | -66.7 | V | 3.0 | -23.3 | 33.7 | 1.0 | -56.0 | -13.0 | -43.0 | |
| 2.49 | -64.6 | V | 3.0 | -19.8 | 34.1 | 1.0 | -52.9 | -13.0 | -39.9 | |
| 3.32 | -63.6 | V | 3.0 | -15.0 | 34.6 | 1.0 | -48.6 | -13.0 | -35.6 | |
| Mid Channel (836.5MHz) | | | | | | | | | | |
| 1.67 | -66.6 | H | 3.0 | -24.8 | 33.7 | 1.0 | -57.5 | -13.0 | -44.5 | |
| 2.51 | -63.8 | H | 3.0 | -19.2 | 34.1 | 1.0 | -52.3 | -13.0 | -39.3 | |
| 3.35 | -63.5 | H | 3.0 | -15.0 | 34.6 | 1.0 | -48.6 | -13.0 | -35.6 | |
| 1.67 | -66.2 | V | 3.0 | -22.6 | 33.7 | 1.0 | -55.3 | -13.0 | -42.3 | |
| 2.51 | -63.2 | V | 3.0 | -18.3 | 34.1 | 1.0 | -51.4 | -13.0 | -38.4 | |
| 3.35 | -64.5 | V | 3.0 | -15.9 | 34.6 | 1.0 | -49.6 | -13.0 | -36.6 | |
| High Channel (844MHz) | | | | | | | | | | |
| 1.69 | -66.0 | H | 3.0 | -24.3 | 33.7 | 1.0 | -57.0 | -13.0 | -44.0 | |
| 2.53 | -64.4 | H | 3.0 | -20.0 | 34.1 | 1.0 | -53.1 | -13.0 | -40.1 | |
| 3.38 | -62.7 | H | 3.0 | -14.2 | 34.6 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 1.69 | -66.7 | V | 3.0 | -23.2 | 33.7 | 1.0 | -55.9 | -13.0 | -42.9 | |
| 2.53 | -63.1 | V | 3.0 | -18.2 | 34.1 | 1.0 | -51.4 | -13.0 | -38.4 | |
| 3.38 | -63.9 | V | 3.0 | -15.1 | 34.6 | 1.0 | -48.7 | -13.0 | -35.7 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.4. LTE BAND 7

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 7, 20MHz QPSK | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Substitution: Horn T69 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B7 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2510MHz) | | | | | | | | | | |
| 5.01 | -64.1 | H | 3.0 | -11.6 | 34.2 | 1.0 | -44.8 | -25.0 | -19.8 | |
| 7.62 | -67.1 | H | 3.0 | -10.5 | 33.4 | 1.0 | -42.9 | -25.0 | -17.9 | |
| 10.11 | -67.7 | H | 3.0 | -7.9 | 31.7 | 1.0 | -38.6 | -25.0 | -13.6 | |
| 5.04 | -64.2 | V | 3.0 | -11.4 | 34.2 | 1.0 | -44.5 | -25.0 | -19.5 | |
| 7.61 | -67.5 | V | 3.0 | -11.1 | 33.5 | 1.0 | -43.6 | -25.0 | -18.6 | |
| 10.14 | -68.0 | V | 3.0 | -8.2 | 31.7 | 1.0 | -38.9 | -25.0 | -13.9 | |
| Mid Channel (2535MHz) | | | | | | | | | | |
| 5.00 | -64.4 | H | 3.0 | -11.8 | 34.2 | 1.0 | -45.0 | -25.0 | -20.0 | |
| 7.69 | -67.0 | H | 3.0 | -10.3 | 33.4 | 1.0 | -42.7 | -25.0 | -17.7 | |
| 10.15 | -67.3 | H | 3.0 | -7.4 | 31.7 | 1.0 | -38.1 | -25.0 | -13.1 | |
| 5.04 | -64.0 | V | 3.0 | -11.1 | 34.2 | 1.0 | -44.3 | -25.0 | -19.3 | |
| 7.70 | -67.2 | V | 3.0 | -10.7 | 33.4 | 1.0 | -43.1 | -25.0 | -18.1 | |
| 10.14 | -67.1 | V | 3.0 | -7.3 | 31.7 | 1.0 | -38.0 | -25.0 | -13.0 | |
| High Channel (2560MHz) | | | | | | | | | | |
| 5.08 | -64.6 | H | 3.0 | -11.9 | 34.2 | 1.0 | -45.1 | -25.0 | -20.1 | |
| 7.67 | -66.9 | H | 3.0 | -10.2 | 33.4 | 1.0 | -42.6 | -25.0 | -17.6 | |
| 10.22 | -67.1 | H | 3.0 | -7.2 | 31.8 | 1.0 | -38.0 | -25.0 | -13.0 | |
| 5.07 | -65.0 | V | 3.0 | -12.1 | 34.2 | 1.0 | -45.3 | -25.0 | -20.3 | |
| 7.63 | -66.6 | V | 3.0 | -10.2 | 33.4 | 1.0 | -42.6 | -25.0 | -17.6 | |
| 10.19 | -66.9 | V | 3.0 | -7.0 | 31.8 | 1.0 | -37.8 | -25.0 | -12.8 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 7, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B7 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2510MHz) | | | | | | | | | | |
| 4.96 | -65.2 | H | 3.0 | -12.7 | 34.2 | 1.0 | -45.9 | -25.0 | -20.9 | |
| 7.59 | -67.3 | H | 3.0 | -10.8 | 33.5 | 1.0 | -43.2 | -25.0 | -18.2 | |
| 10.11 | -68.0 | H | 3.0 | -8.1 | 31.7 | 1.0 | -38.9 | -25.0 | -13.9 | |
| 5.01 | -64.5 | V | 3.0 | -11.7 | 34.2 | 1.0 | -44.9 | -25.0 | -19.9 | |
| 7.61 | -66.7 | V | 3.0 | -10.3 | 33.5 | 1.0 | -42.7 | -25.0 | -17.7 | |
| 10.10 | -68.1 | V | 3.0 | -8.2 | 31.7 | 1.0 | -38.9 | -25.0 | -13.9 | |
| Mid Channel (2535MHz) | | | | | | | | | | |
| 5.09 | -64.3 | H | 3.0 | -11.6 | 34.2 | 1.0 | -44.8 | -25.0 | -19.8 | |
| 7.68 | -66.7 | H | 3.0 | -10.0 | 33.4 | 1.0 | -42.4 | -25.0 | -17.4 | |
| 10.18 | -68.5 | H | 3.0 | -8.5 | 31.8 | 1.0 | -39.3 | -25.0 | -14.3 | |
| 5.12 | -65.0 | V | 3.0 | -12.0 | 34.2 | 1.0 | -45.1 | -25.0 | -20.1 | |
| 7.63 | -66.4 | V | 3.0 | 9.9 | 33.4 | 1.0 | -42.4 | -25.0 | -17.4 | |
| 10.19 | -66.9 | V | 3.0 | -7.0 | 31.8 | 1.0 | -37.8 | -25.0 | -12.8 | |
| High Channel (2560MHz) | | | | | | | | | | |
| 5.04 | -65.1 | H | 3.0 | -12.5 | 34.2 | 1.0 | -45.7 | -25.0 | -20.7 | |
| 7.78 | -67.0 | H | 3.0 | -10.2 | 33.3 | 1.0 | -42.5 | -25.0 | -17.5 | |
| 10.30 | -67.0 | H | 3.0 | -7.0 | 31.9 | 1.0 | -37.9 | -25.0 | -12.9 | |
| 5.03 | -65.1 | V | 3.0 | -12.3 | 34.2 | 1.0 | -45.4 | -25.0 | -20.4 | |
| 7.66 | -67.0 | V | 3.0 | -10.5 | 33.4 | 1.0 | -42.9 | -25.0 | -17.9 | |
| 10.19 | -67.5 | V | 3.0 | -7.6 | 31.8 | 1.0 | -38.4 | -25.0 | -13.4 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.5. LTE BAND 12

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|---------------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 12, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | |
| Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | | Pre-amplifier | | Filter | | Limit | | | |
| 3m Chamber F | 3m Chamber F | Filter | EIRP | | | | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (704MHz) | | | | | | | | | | |
| 1.44 | -65.5 | H | 3.0 | -25.6 | 34.0 | 1.0 | 58.6 | -13.0 | -45.6 | |
| 2.06 | -65.3 | H | 3.0 | -21.7 | 33.6 | 1.0 | 54.3 | -13.0 | -41.3 | |
| 2.83 | -65.7 | H | 3.0 | -19.6 | 34.6 | 1.0 | 53.1 | -13.0 | -40.1 | |
| 1.38 | -65.7 | V | 3.0 | -23.6 | 34.1 | 1.0 | 56.7 | -13.0 | -43.7 | |
| 2.20 | -66.1 | V | 3.0 | -22.0 | 33.8 | 1.0 | 54.8 | -13.0 | -41.8 | |
| 2.72 | -65.6 | V | 3.0 | -19.6 | 34.4 | 1.0 | 53.1 | -13.0 | -40.1 | |
| Mid Channel (707.5MHz) | | | | | | | | | | |
| 1.48 | -65.3 | H | 3.0 | -25.2 | 33.9 | 1.0 | 58.1 | -13.0 | -45.1 | |
| 2.12 | -66.0 | H | 3.0 | -22.4 | 33.7 | 1.0 | 55.0 | -13.0 | -42.0 | |
| 2.85 | -65.7 | H | 3.0 | -19.5 | 34.6 | 1.0 | 53.1 | -13.0 | -40.1 | |
| 1.48 | -65.1 | V | 3.0 | -22.0 | 33.9 | 1.0 | 54.8 | -13.0 | -41.8 | |
| 2.12 | -65.3 | V | 3.0 | -21.4 | 33.7 | 1.0 | 54.1 | -13.0 | -41.1 | |
| 2.80 | -66.2 | V | 3.0 | -19.8 | 34.5 | 1.0 | 53.3 | -13.0 | -40.3 | |
| High Channel (711MHz) | | | | | | | | | | |
| 1.32 | -65.3 | H | 3.0 | -26.0 | 34.2 | 1.0 | 59.2 | -13.0 | -46.2 | |
| 2.17 | -66.0 | H | 3.0 | -22.3 | 33.8 | 1.0 | 55.0 | -13.0 | -42.0 | |
| 2.91 | -65.8 | H | 3.0 | -19.2 | 34.7 | 1.0 | 52.9 | -13.0 | -39.9 | |
| 1.48 | -65.7 | V | 3.0 | -22.6 | 33.9 | 1.0 | 55.4 | -13.0 | -42.4 | |
| 2.05 | -65.7 | V | 3.0 | -22.0 | 33.6 | 1.0 | 54.6 | -13.0 | -41.6 | |
| 2.83 | -65.4 | V | 3.0 | -18.9 | 34.6 | 1.0 | 52.5 | -13.0 | -39.5 | |

Rev. 05.21.15

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 12, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (704MHz) | | | | | | | | | | |
| 1.35 | -65.5 | H | 3.0 | -26.1 | 34.2 | 1.0 | 59.3 | -13.0 | 46.3 | |
| 2.07 | -65.5 | H | 3.0 | -21.9 | 33.6 | 1.0 | -54.5 | -13.0 | -41.5 | |
| 2.82 | -65.4 | H | 3.0 | -19.4 | 34.5 | 1.0 | -53.0 | -13.0 | -40.0 | |
| 1.43 | -65.3 | V | 3.0 | -22.6 | 34.0 | 1.0 | -55.6 | -13.0 | -42.6 | |
| 2.20 | -65.8 | V | 3.0 | -21.7 | 33.8 | 1.0 | -54.5 | -13.0 | -41.5 | |
| 2.88 | -66.0 | V | 3.0 | -19.2 | 34.6 | 1.0 | -52.8 | -13.0 | -39.8 | |
| Mid Channel (707.5MHz) | | | | | | | | | | |
| 1.34 | -64.9 | H | 3.0 | -25.5 | 34.2 | 1.0 | 58.7 | -13.0 | 45.7 | |
| 2.17 | -65.3 | H | 3.0 | -21.6 | 33.8 | 1.0 | -54.4 | -13.0 | -41.4 | |
| 2.91 | -65.2 | H | 3.0 | -18.6 | 34.7 | 1.0 | -52.3 | -13.0 | -39.3 | |
| 1.34 | -65.3 | V | 3.0 | -23.5 | 34.2 | 1.0 | -56.6 | -13.0 | -43.6 | |
| 2.17 | -65.5 | V | 3.0 | -21.5 | 33.8 | 1.0 | -54.2 | -13.0 | -41.2 | |
| 2.92 | -65.7 | V | 3.0 | -18.6 | 34.7 | 1.0 | -52.3 | -13.0 | -39.3 | |
| High Channel (711MHz) | | | | | | | | | | |
| 1.46 | -65.8 | H | 3.0 | -25.8 | 33.9 | 1.0 | 58.7 | -13.0 | 45.7 | |
| 2.21 | -65.7 | H | 3.0 | -21.9 | 33.8 | 1.0 | -54.8 | -13.0 | -41.8 | |
| 2.93 | -65.9 | H | 3.0 | -19.2 | 34.7 | 1.0 | -52.9 | -13.0 | -39.9 | |
| 1.44 | -66.0 | V | 3.0 | -23.2 | 34.0 | 1.0 | -56.2 | -13.0 | -43.2 | |
| 2.17 | -66.0 | V | 3.0 | -21.9 | 33.8 | 1.0 | -54.7 | -13.0 | -41.7 | |
| 2.84 | -65.8 | V | 3.0 | -19.2 | 34.6 | 1.0 | -52.8 | -13.0 | -39.8 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.6. LTE BAND 13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 13, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B13 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (782MHz) | | | | | | | | | | |
| 1.56 | -65.2 | H | 3.0 | -24.6 | 33.8 | 1.0 | -57.4 | -40.0 | -17.4 | |
| 2.25 | -66.2 | H | 3.0 | -22.4 | 33.9 | 1.0 | -55.3 | -43.0 | -42.3 | |
| 3.19 | -65.1 | H | 3.0 | -17.2 | 34.7 | 1.0 | -51.0 | -43.0 | -38.0 | |
| 1.56 | -65.6 | V | 3.0 | -22.2 | 33.8 | 1.0 | -55.0 | -40.0 | -15.0 | |
| 2.42 | -63.0 | V | 3.0 | -18.3 | 34.2 | 1.0 | -51.5 | -43.0 | -38.5 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 13, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B13 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (782MHz) | | | | | | | | | | |
| 1.56 | -65.6 | H | 3.0 | -25.0 | 33.8 | 1.0 | -57.8 | -40.0 | -17.8 | |
| 2.35 | -63.4 | H | 3.0 | -19.5 | 34.1 | 1.0 | -52.6 | -13.0 | -39.6 | |
| 3.22 | -62.9 | H | 3.0 | -15.0 | 34.7 | 1.0 | -48.7 | -13.0 | -35.7 | |
| 1.56 | -65.2 | V | 3.0 | -21.9 | 33.8 | 1.0 | -54.7 | -40.0 | -14.7 | |
| 2.28 | -64.0 | V | 3.0 | -19.7 | 34.0 | 1.0 | -52.6 | -13.0 | -39.6 | |
| 3.22 | -65.0 | V | 3.0 | -16.8 | 34.7 | 1.0 | -50.5 | -13.0 | -37.5 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.7. LTE BAND 17

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 17, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> | | | | | | | | | | |
| Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (710MHz) | | | | | | | | | | |
| 1.38 | -66.2 | H | 3.0 | -26.6 | 34.1 | 1.0 | -59.6 | -13.0 | -46.6 | |
| 2.12 | -66.1 | H | 3.0 | -22.4 | 33.7 | 1.0 | -55.1 | -13.0 | -42.1 | |
| 2.82 | -65.6 | H | 3.0 | -19.6 | 34.6 | 1.0 | -53.1 | -13.0 | -40.1 | |
| 1.47 | -65.5 | V | 3.0 | -22.4 | 33.9 | 1.0 | -55.3 | -13.0 | -42.3 | |
| 2.21 | -66.0 | V | 3.0 | -21.9 | 33.8 | 1.0 | -54.7 | -13.0 | -41.7 | |
| 2.92 | -65.5 | V | 3.0 | -18.5 | 34.7 | 1.0 | -52.2 | -13.0 | -39.2 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 17, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (710MHz) | | | | | | | | | | |
| 1.39 | -65.3 | H | 3.0 | -25.6 | 34.1 | 1.0 | -58.7 | -13.0 | -45.7 | |
| 2.04 | -65.8 | H | 3.0 | -22.2 | 33.5 | 1.0 | -54.8 | -13.0 | -41.8 | |
| 2.85 | -66.2 | H | 3.0 | -19.9 | 34.6 | 1.0 | -53.5 | -13.0 | -40.5 | |
| 1.43 | -65.7 | V | 3.0 | -23.1 | 34.0 | 1.0 | -56.0 | -13.0 | -43.0 | |
| 2.19 | -65.0 | V | 3.0 | -20.9 | 33.8 | 1.0 | -53.7 | -13.0 | -40.7 | |
| 2.76 | -66.1 | V | 3.0 | -19.9 | 34.5 | 1.0 | -53.4 | -13.0 | -40.4 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.8. LTE BAND 25

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/05/16 | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | |
| Mode: | LTE Band 25, 20MHz QPSK | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Substitution: Horn T69 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -63.5 | H | 3.0 | -13.6 | 34.4 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 5.58 | -64.4 | H | 3.0 | -10.9 | 34.1 | 1.0 | -44.0 | -13.0 | -31.0 | |
| 7.44 | -64.7 | H | 3.0 | -8.3 | 33.6 | 1.0 | -40.9 | -13.0 | -27.9 | |
| 3.72 | -63.4 | V | 3.0 | -13.5 | 34.4 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 5.58 | -64.3 | V | 3.0 | -10.7 | 34.1 | 1.0 | -43.8 | -13.0 | -30.8 | |
| 7.44 | -64.7 | V | 3.0 | -8.5 | 33.6 | 1.0 | -41.1 | -13.0 | -28.1 | |
| Mid Channel (1882.5MHz) | | | | | | | | | | |
| 3.77 | -63.9 | H | 3.0 | -13.9 | 34.4 | 1.0 | -47.3 | -13.0 | -34.3 | |
| 5.65 | -64.0 | H | 3.0 | -10.4 | 34.1 | 1.0 | -43.5 | -13.0 | -30.5 | |
| 7.53 | -64.5 | H | 3.0 | -8.1 | 33.5 | 1.0 | -40.6 | -13.0 | -27.6 | |
| 3.77 | -63.6 | V | 3.0 | -13.5 | 34.4 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 5.65 | -64.8 | V | 3.0 | -11.0 | 34.1 | 1.0 | -44.1 | -13.0 | -31.1 | |
| 7.53 | -65.3 | V | 3.0 | -9.0 | 33.5 | 1.0 | -41.5 | -13.0 | -28.5 | |
| High Channel (1905MHz) | | | | | | | | | | |
| 3.81 | -63.9 | H | 3.0 | -13.7 | 34.4 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 5.72 | -64.2 | H | 3.0 | -10.5 | 34.1 | 1.0 | -43.6 | -13.0 | -30.6 | |
| 7.62 | -65.5 | H | 3.0 | -8.9 | 33.4 | 1.0 | -41.3 | -13.0 | -28.3 | |
| 3.81 | -63.4 | V | 3.0 | -13.1 | 34.4 | 1.0 | -46.5 | -13.0 | -33.5 | |
| 5.72 | -64.2 | V | 3.0 | -10.4 | 34.1 | 1.0 | -43.5 | -13.0 | -30.5 | |
| 7.62 | -65.2 | V | 3.0 | -8.8 | 33.4 | 1.0 | -41.2 | -13.0 | -28.2 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/05/16 | | | | | | | | | |
| Test Engineer: | 30554 | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | |
| Mode: | LTE Band 25, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -62.3 | H | 3.0 | -12.5 | 34.4 | 1.0 | -45.9 | -13.0 | -32.9 | |
| 5.58 | -61.8 | H | 3.0 | -8.3 | 34.1 | 1.0 | -41.4 | -13.0 | -28.4 | |
| 7.44 | -63.4 | H | 3.0 | -7.1 | 33.6 | 1.0 | -39.6 | -13.0 | -26.6 | |
| 3.72 | -62.9 | V | 3.0 | -12.9 | 34.4 | 1.0 | -46.4 | -13.0 | -33.4 | |
| 5.58 | -62.5 | V | 3.0 | -8.8 | 34.1 | 1.0 | -41.9 | -13.0 | -28.9 | |
| 7.44 | -63.4 | V | 3.0 | -7.3 | 33.6 | 1.0 | -39.8 | -13.0 | -26.8 | |
| Mid Channel (1882.5MHz) | | | | | | | | | | |
| 3.77 | -62.2 | H | 3.0 | -12.2 | 34.4 | 1.0 | -45.6 | -13.0 | -32.6 | |
| 5.65 | -62.4 | H | 3.0 | -8.8 | 34.1 | 1.0 | -41.9 | -13.0 | -28.9 | |
| 7.53 | -63.2 | H | 3.0 | -6.7 | 33.5 | 1.0 | -39.2 | -13.0 | -26.2 | |
| 3.77 | -64.9 | V | 3.0 | -14.8 | 34.4 | 1.0 | -48.2 | -13.0 | -35.2 | |
| 5.65 | -63.2 | V | 3.0 | -9.5 | 34.1 | 1.0 | -42.6 | -13.0 | -29.6 | |
| 7.53 | -62.8 | V | 3.0 | -6.5 | 33.5 | 1.0 | -39.0 | -13.0 | -26.0 | |
| High Channel (1905MHz) | | | | | | | | | | |
| 3.81 | -61.8 | H | 3.0 | -11.6 | 34.4 | 1.0 | -45.0 | -13.0 | -32.0 | |
| 5.72 | -61.6 | H | 3.0 | -7.9 | 34.1 | 1.0 | -41.0 | -13.0 | -28.0 | |
| 7.62 | -62.6 | H | 3.0 | -6.0 | 33.4 | 1.0 | -38.4 | -13.0 | -25.4 | |
| 3.81 | -63.3 | V | 3.0 | -13.0 | 34.4 | 1.0 | -46.4 | -13.0 | -33.4 | |
| 5.72 | -61.6 | V | 3.0 | -7.7 | 34.1 | 1.0 | -40.8 | -13.0 | -27.8 | |
| 7.62 | -61.2 | V | 3.0 | -4.8 | 33.4 | 1.0 | -37.2 | -13.0 | -24.2 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.9. LTE BAND 26

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------------|--|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 26 (90S), 10MHz QPSK | | | | | | | | | |
| Test Equipment: | | Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819MHz) | | | | | | | | | | |
| 1.58 | -66.0 | H | 3.0 | -25.3 | 33.8 | 1.0 | -58.1 | -13.0 | -45.1 | |
| 2.54 | -65.8 | H | 3.0 | -21.4 | 34.1 | 1.0 | -54.6 | -13.0 | -41.6 | |
| 3.22 | -62.9 | H | 3.0 | -15.0 | 34.7 | 1.0 | -48.7 | -13.0 | -35.7 | |
| 1.63 | -63.3 | V | 3.0 | -19.9 | 33.7 | 1.0 | -52.6 | -13.0 | -39.6 | |
| 2.37 | -64.2 | V | 3.0 | -19.6 | 34.1 | 1.0 | -52.7 | -13.0 | -39.7 | |
| 3.29 | -63.5 | V | 3.0 | -15.1 | 34.7 | 1.0 | -48.8 | -13.0 | -35.8 | |

Rev. 05.21.15

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 26 (90S), 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819MHz) | | | | | | | | | | |
| 1.57 | -65.0 | H | 3.0 | -24.4 | 33.8 | 1.0 | -57.2 | -13.0 | -44.2 | |
| 2.36 | -65.5 | H | 3.0 | -21.6 | 34.1 | 1.0 | -54.7 | -13.0 | -41.7 | |
| 3.22 | -65.4 | H | 3.0 | -17.5 | 34.7 | 1.0 | -51.2 | -13.0 | -38.2 | |
| 1.62 | -65.3 | V | 3.0 | -21.9 | 33.7 | 1.0 | -54.7 | -13.0 | -41.7 | |
| 2.51 | -65.1 | V | 3.0 | -20.2 | 34.1 | 1.0 | -53.3 | -13.0 | -40.3 | |
| 3.21 | -65.5 | V | 3.0 | -17.3 | 34.7 | 1.0 | -51.0 | -13.0 | -38.0 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.10. LTE BAND 27

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/06/16 Test Engineer: 43575 Configuration: EUT Only Mode: LTE Band 27, 10MHz QPSK | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819.0MHz) | | | | | | | | | | |
| 1.61 | -65.8 | H | 3.0 | -24.9 | 33.7 | 1.0 | -57.6 | -13.0 | -44.6 | |
| 2.35 | -63.6 | H | 3.0 | -19.7 | 34.1 | 1.0 | -52.8 | -13.0 | -39.8 | |
| 3.23 | -62.8 | H | 3.0 | -14.8 | 34.7 | 1.0 | -48.5 | -13.0 | -35.5 | |
| 1.71 | -65.1 | V | 3.0 | -21.7 | 33.7 | 1.0 | -54.3 | -13.0 | -41.3 | |
| 2.49 | -64.2 | V | 3.0 | -19.5 | 34.1 | 1.0 | -52.5 | -13.0 | -39.5 | |
| 3.21 | -63.4 | V | 3.0 | -15.2 | 34.7 | 1.0 | -48.9 | -13.0 | -35.9 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 27, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819.0MHz) | | | | | | | | | | |
| 1.71 | -63.9 | H | 3.0 | -22.3 | 33.7 | 1.0 | -55.0 | -13.0 | -42.0 | |
| 2.48 | 64.0 | H | 3.0 | -19.9 | 34.1 | 1.0 | -53.0 | -13.0 | -40.0 | |
| 3.21 | 64.2 | H | 3.0 | -16.3 | 34.7 | 1.0 | -50.0 | -13.0 | -37.0 | |
| 1.73 | 64.4 | V | 3.0 | -21.0 | 33.7 | 1.0 | -53.6 | -13.0 | -40.6 | |
| 2.43 | 64.2 | V | 3.0 | -19.5 | 34.2 | 1.0 | -52.6 | -13.0 | -39.6 | |
| 3.21 | -64.3 | V | 3.0 | -16.1 | 34.7 | 1.0 | -49.8 | -13.0 | -36.8 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.4.11. LTE BAND 30

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|--------------------|----------|-------------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 30, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B30 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (2310MHz) | | | | | | | | | | |
| 4.71 | -65.6 | H | 3.0 | -11.6 | 38.0 | 1.0 | -48.6 | 40.0 | -8.6 | |
| 6.98 | -67.1 | H | 3.0 | -8.4 | 36.4 | 1.0 | -43.8 | 40.0 | -3.8 | |
| 9.25 | -70.2 | H | 3.0 | -8.6 | 34.9 | 1.0 | -42.5 | 40.0 | -2.5 | |
| 4.71 | -65.3 | V | 3.0 | -11.4 | 38.0 | 1.0 | -48.4 | 40.0 | -8.4 | |
| 6.90 | -67.2 | V | 3.0 | -7.8 | 36.5 | 1.0 | -43.3 | 40.0 | -3.3 | |
| 9.25 | -70.3 | V | 3.0 | -8.5 | 34.9 | 1.0 | -42.4 | 40.0 | -2.4 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|--------------------|----------|-------------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 30, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B30 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (2310MHz) | | | | | | | | | | |
| 4.58 | -65.7 | H | 3.0 | -11.8 | 38.0 | 1.0 | -48.8 | -40.0 | -8.8 | |
| 7.00 | -67.4 | H | 3.0 | -8.7 | 36.4 | 1.0 | -44.1 | -40.0 | -4.1 | |
| 9.32 | -70.3 | H | 3.0 | -8.7 | 34.9 | 1.0 | -42.6 | -40.0 | -2.6 | |
| 4.64 | -66.5 | V | 3.0 | -12.7 | 38.0 | 1.0 | -49.7 | -40.0 | -9.7 | |
| 6.91 | -67.7 | V | 3.0 | -8.3 | 36.5 | 1.0 | -43.8 | -40.0 | -3.8 | |
| 9.33 | -70.4 | V | 3.0 | -8.6 | 34.9 | 1.0 | -42.4 | -40.0 | -2.4 | |

Rev. 05.21.15

10.4.12. LTE BAND 41

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 41, 20MHz QPSK | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B41 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2506MHz) | | | | | | | | | | |
| 5.04 | -64.9 | H | 3.0 | -12.3 | 34.2 | 1.0 | -45.5 | -25.0 | -20.5 | |
| 7.47 | -67.1 | H | 3.0 | -10.7 | 33.6 | 1.0 | -43.2 | -25.0 | -18.2 | |
| 10.06 | -68.4 | H | 3.0 | -8.6 | 31.7 | 1.0 | -39.2 | -25.0 | -14.2 | |
| 5.01 | -64.6 | V | 3.0 | -11.9 | 34.2 | 1.0 | -45.0 | -25.0 | -20.0 | |
| 7.48 | -67.3 | V | 3.0 | -11.1 | 33.5 | 1.0 | -43.6 | -25.0 | -18.6 | |
| 10.01 | -67.7 | V | 3.0 | -8.0 | 31.6 | 1.0 | -38.6 | -25.0 | -13.6 | |
| Mid Channel (2593MHz) | | | | | | | | | | |
| 5.10 | -65.2 | H | 3.0 | -12.5 | 34.2 | 1.0 | -45.7 | -25.0 | -20.7 | |
| 7.69 | -66.5 | H | 3.0 | -9.8 | 33.4 | 1.0 | -42.2 | -25.0 | -17.2 | |
| 10.32 | -67.9 | H | 3.0 | -7.9 | 31.9 | 1.0 | -38.8 | -25.0 | -13.8 | |
| 5.20 | -65.5 | V | 3.0 | -12.3 | 34.2 | 1.0 | -45.5 | -25.0 | -20.5 | |
| 7.69 | -66.4 | V | 3.0 | -9.9 | 33.4 | 1.0 | -42.3 | -25.0 | -17.3 | |
| 10.34 | -67.5 | V | 3.0 | -7.5 | 31.9 | 1.0 | -38.4 | -25.0 | -13.4 | |
| High Channel (2680MHz) | | | | | | | | | | |
| 5.41 | -66.6 | H | 3.0 | -13.4 | 34.1 | 1.0 | -46.5 | -25.0 | -21.5 | |
| 8.13 | -67.2 | H | 3.0 | -9.9 | 33.1 | 1.0 | -42.0 | -25.0 | -17.0 | |
| 10.71 | -68.3 | H | 3.0 | -8.0 | 32.2 | 1.0 | -39.2 | -25.0 | -14.2 | |
| 5.29 | -65.9 | V | 3.0 | -12.6 | 34.2 | 1.0 | -45.8 | -25.0 | -20.8 | |
| 8.07 | -66.8 | V | 3.0 | -9.7 | 33.1 | 1.0 | -41.8 | -25.0 | -16.8 | |
| 10.79 | -67.8 | V | 3.0 | -7.3 | 32.3 | 1.0 | -38.6 | -25.0 | -13.6 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 41, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B41 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2506MHz) | | | | | | | | | | |
| 5.01 | -64.6 | H | 3.0 | -12.1 | 34.2 | 1.0 | -45.3 | -25.0 | -20.3 | |
| 7.59 | -67.7 | H | 3.0 | -11.2 | 33.5 | 1.0 | -43.6 | -25.0 | -18.6 | |
| 10.07 | -68.4 | H | 3.0 | -8.5 | 31.7 | 1.0 | -39.2 | -25.0 | -14.2 | |
| 5.02 | -64.4 | V | 3.0 | -11.6 | 34.2 | 1.0 | -44.8 | -25.0 | -19.8 | |
| 7.55 | -66.8 | V | 3.0 | -10.5 | 33.5 | 1.0 | -43.0 | -25.0 | -18.0 | |
| 10.03 | -68.4 | V | 3.0 | -8.6 | 31.6 | 1.0 | -39.3 | -25.0 | -14.3 | |
| Mid Channel (2593MHz) | | | | | | | | | | |
| 5.09 | -65.3 | H | 3.0 | -12.6 | 34.2 | 1.0 | -45.8 | -25.0 | -20.8 | |
| 7.76 | -66.6 | H | 3.0 | -9.8 | 33.3 | 1.0 | -42.2 | -25.0 | -17.2 | |
| 10.45 | -67.8 | H | 3.0 | -7.7 | 32.0 | 1.0 | -38.7 | -25.0 | -13.7 | |
| 5.13 | -66.1 | V | 3.0 | -13.1 | 34.2 | 1.0 | -46.3 | -25.0 | -21.3 | |
| 7.79 | -66.2 | V | 3.0 | -9.5 | 33.3 | 1.0 | -41.9 | -25.0 | -16.9 | |
| 10.31 | -67.3 | V | 3.0 | -7.3 | 31.9 | 1.0 | -38.1 | -25.0 | -13.1 | |
| High Channel (2680MHz) | | | | | | | | | | |
| 5.29 | -65.6 | H | 3.0 | -12.6 | 34.2 | 1.0 | -45.8 | -25.0 | -20.8 | |
| 8.05 | -66.8 | H | 3.0 | -9.6 | 33.1 | 1.0 | -41.8 | -25.0 | -16.8 | |
| 10.78 | -68.5 | H | 3.0 | -8.2 | 32.3 | 1.0 | -39.4 | -25.0 | -14.4 | |
| 5.30 | -66.3 | V | 3.0 | -13.0 | 34.2 | 1.0 | -46.2 | -25.0 | -21.2 | |
| 8.06 | -66.7 | V | 3.0 | -9.6 | 33.1 | 1.0 | -41.8 | -25.0 | -16.8 | |
| 10.76 | -67.8 | V | 3.0 | -7.4 | 32.2 | 1.0 | -38.7 | -25.0 | -13.7 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, UAT

10.5.1. LTE BAND 2

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/09/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 2, 20MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -67.8 | H | 3.0 | -18.0 | 34.4 | 1.0 | -51.4 | -13.0 | -38.4 | |
| 5.58 | -68.4 | H | 3.0 | -14.9 | 34.1 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 7.44 | -71.8 | H | 3.0 | -15.4 | 33.6 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 3.72 | -67.1 | V | 3.0 | -17.2 | 34.4 | 1.0 | -50.6 | -13.0 | -37.6 | |
| 5.58 | -68.5 | V | 3.0 | -14.8 | 34.1 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 7.44 | -72.3 | V | 3.0 | -16.1 | 33.6 | 1.0 | -48.7 | -13.0 | -35.7 | |
| Mid Channel (1880MHz) | | | | | | | | | | |
| 3.76 | -67.4 | H | 3.0 | -17.4 | 34.4 | 1.0 | -50.8 | -13.0 | -37.8 | |
| 5.64 | -67.6 | H | 3.0 | -14.0 | 34.1 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 7.52 | -71.2 | H | 3.0 | -14.7 | 33.5 | 1.0 | -47.2 | -13.0 | -34.2 | |
| 3.76 | -67.7 | V | 3.0 | -17.6 | 34.4 | 1.0 | -51.0 | -13.0 | -38.0 | |
| 5.64 | -67.9 | V | 3.0 | -14.2 | 34.1 | 1.0 | -47.3 | -13.0 | -34.3 | |
| 7.52 | -70.5 | V | 3.0 | -14.2 | 33.5 | 1.0 | -46.7 | -13.0 | -33.7 | |
| High Channel (1900MHz) | | | | | | | | | | |
| 3.80 | -66.7 | H | 3.0 | -16.6 | 34.4 | 1.0 | -50.0 | -13.0 | -37.0 | |
| 5.70 | -67.7 | H | 3.0 | -14.0 | 34.1 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 7.60 | -70.4 | H | 3.0 | -13.8 | 33.5 | 1.0 | -46.3 | -13.0 | -33.3 | |
| 3.80 | -67.6 | V | 3.0 | -17.4 | 34.4 | 1.0 | -50.8 | -13.0 | -37.8 | |
| 5.70 | -69.0 | V | 3.0 | -15.2 | 34.1 | 1.0 | -48.3 | -13.0 | -35.3 | |
| 7.60 | -71.6 | V | 3.0 | -15.2 | 33.5 | 1.0 | -47.7 | -13.0 | -34.7 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/09/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 2, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -67.7 | H | 3.0 | -17.9 | 34.4 | 1.0 | -51.3 | -13.0 | -38.3 | |
| 5.58 | -69.4 | H | 3.0 | -15.9 | 34.1 | 1.0 | -49.0 | -13.0 | -36.0 | |
| 7.44 | -70.7 | H | 3.0 | -14.3 | 33.6 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 3.72 | -65.7 | V | 3.0 | -15.8 | 34.4 | 1.0 | -49.2 | -13.0 | -36.2 | |
| 5.58 | -68.7 | V | 3.0 | -15.0 | 34.1 | 1.0 | -48.2 | -13.0 | -35.2 | |
| 7.44 | -70.9 | V | 3.0 | -14.7 | 33.6 | 1.0 | -47.3 | -13.0 | -34.3 | |
| Mid Channel (1880MHz) | | | | | | | | | | |
| 3.76 | -66.6 | H | 3.0 | -16.6 | 34.4 | 1.0 | -50.0 | -13.0 | -37.0 | |
| 5.64 | -68.5 | H | 3.0 | -14.9 | 34.1 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 7.52 | -70.9 | H | 3.0 | -14.4 | 33.5 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 3.76 | -67.4 | V | 3.0 | -17.3 | 34.4 | 1.0 | -50.7 | -13.0 | -37.7 | |
| 5.64 | -69.4 | V | 3.0 | -15.7 | 34.1 | 1.0 | -48.8 | -13.0 | -35.8 | |
| 7.52 | -70.1 | V | 3.0 | -13.8 | 33.5 | 1.0 | -46.3 | -13.0 | -33.3 | |
| High Channel (1900MHz) | | | | | | | | | | |
| 3.80 | -66.9 | H | 3.0 | -16.8 | 34.4 | 1.0 | -50.2 | -13.0 | -37.2 | |
| 5.70 | -68.1 | H | 3.0 | -14.4 | 34.1 | 1.0 | -47.5 | -13.0 | -34.5 | |
| 7.60 | -70.8 | H | 3.0 | -14.2 | 33.5 | 1.0 | -46.7 | -13.0 | -33.7 | |
| 3.80 | -67.4 | V | 3.0 | -17.2 | 34.4 | 1.0 | -50.6 | -13.0 | -37.6 | |
| 5.70 | -69.2 | V | 3.0 | -15.4 | 34.1 | 1.0 | -48.5 | -13.0 | -35.5 | |
| 7.60 | -70.7 | V | 3.0 | -14.3 | 33.5 | 1.0 | -46.8 | -13.0 | -33.8 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5.2. LTE BAND 4

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|---|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/09/16 Test Engineer: 29435 Configuration: EUT Only Mode: LTE Band 4, 20MHz QPSK | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1720MHz) | | | | | | | | | | |
| 3.44 | -67.2 | H | 3.0 | -18.4 | 34.6 | 1.0 | -52.0 | -13.0 | -39.0 | |
| 5.16 | -68.5 | H | 3.0 | -15.7 | 34.2 | 1.0 | -48.9 | -13.0 | -35.9 | |
| 6.88 | -70.5 | H | 3.0 | -14.9 | 33.9 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 3.44 | -66.2 | V | 3.0 | -17.2 | 34.6 | 1.0 | -50.8 | -13.0 | -37.8 | |
| 5.16 | -68.7 | V | 3.0 | -15.6 | 34.2 | 1.0 | -48.8 | -13.0 | -35.8 | |
| 6.88 | -71.1 | V | 3.0 | -15.7 | 33.9 | 1.0 | -48.7 | -13.0 | -35.7 | |
| Mid Channel (1732.5MHz) | | | | | | | | | | |
| 3.47 | -66.8 | H | 3.0 | -17.9 | 34.6 | 1.0 | -51.5 | -13.0 | -38.5 | |
| 5.20 | -68.5 | H | 3.0 | -15.6 | 34.2 | 1.0 | -48.8 | -13.0 | -35.8 | |
| 6.93 | -70.7 | H | 3.0 | -15.0 | 33.9 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 3.47 | -66.7 | V | 3.0 | -17.6 | 34.6 | 1.0 | -51.2 | -13.0 | -38.2 | |
| 5.20 | -68.6 | V | 3.0 | -15.4 | 34.2 | 1.0 | -48.6 | -13.0 | -35.6 | |
| 6.93 | -70.5 | V | 3.0 | -15.0 | 33.9 | 1.0 | -48.0 | -13.0 | -35.0 | |
| High Channel (1745MHz) | | | | | | | | | | |
| 3.50 | -67.5 | H | 3.0 | -18.5 | 34.6 | 1.0 | -52.0 | -13.0 | -39.0 | |
| 5.25 | -68.8 | H | 3.0 | -15.8 | 34.2 | 1.0 | -49.0 | -13.0 | -36.0 | |
| 7.00 | -69.9 | H | 3.0 | -14.1 | 33.9 | 1.0 | -47.0 | -13.0 | -34.0 | |
| 3.50 | -67.2 | V | 3.0 | -18.0 | 34.6 | 1.0 | -51.5 | -13.0 | -38.5 | |
| 5.25 | -68.4 | V | 3.0 | -15.2 | 34.2 | 1.0 | -48.3 | -13.0 | -35.3 | |
| 7.00 | -70.8 | V | 3.0 | -15.2 | 33.9 | 1.0 | -48.1 | -13.0 | -35.1 | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------|--|---------------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | | 16U23328 | | | | | | | | |
| Date: | | 05/09/16 | | | | | | | | |
| Test Engineer: | | 29435 | | | | | | | | |
| Configuration: | | EUT Only | | | | | | | | |
| Mode: | | LTE Band 4, 20MHz 16QAM | | | | | | | | |
| <u>Test Equipment:</u> | | Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | |
| Chamber | | | Pre-amplifier | | | Filter | | | Limit | |
| 3m Chamber F | | | 3m Chamber F | | | Filter | | | EIRP | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1720MHz) | | | | | | | | | | |
| 3.44 | -67.7 | H | 3.0 | -18.9 | 34.6 | 1.0 | -52.5 | -13.0 | -39.5 | |
| 5.16 | -68.6 | H | 3.0 | -15.8 | 34.2 | 1.0 | -49.0 | -13.0 | -36.0 | |
| 6.88 | -70.4 | H | 3.0 | -14.8 | 33.9 | 1.0 | -47.7 | -13.0 | -34.7 | |
| 3.44 | -66.8 | V | 3.0 | -17.8 | 34.6 | 1.0 | -51.4 | -13.0 | -38.4 | |
| 5.16 | -68.5 | V | 3.0 | -15.4 | 34.2 | 1.0 | -48.6 | -13.0 | -35.6 | |
| 6.88 | -70.1 | V | 3.0 | -14.7 | 33.9 | 1.0 | -47.6 | -13.0 | -34.6 | |
| Mid Channel (1732.5MHz) | | | | | | | | | | |
| 3.47 | -66.8 | H | 3.0 | -17.9 | 34.6 | 1.0 | -51.5 | -13.0 | -38.5 | |
| 5.20 | -68.0 | H | 3.0 | -15.2 | 34.2 | 1.0 | -48.3 | -13.0 | -35.3 | |
| 6.93 | -70.9 | H | 3.0 | -15.2 | 33.9 | 1.0 | -48.2 | -13.0 | -35.2 | |
| 3.47 | -67.2 | V | 3.0 | -18.1 | 34.6 | 1.0 | -51.7 | -13.0 | -38.7 | |
| 5.20 | -69.3 | V | 3.0 | -16.1 | 34.2 | 1.0 | -49.3 | -13.0 | -36.3 | |
| 6.93 | -70.4 | V | 3.0 | -14.9 | 33.9 | 1.0 | -47.9 | -13.0 | -34.9 | |
| High Channel (1745MHz) | | | | | | | | | | |
| 3.50 | -67.3 | H | 3.0 | -18.2 | 34.6 | 1.0 | -51.8 | -13.0 | -38.8 | |
| 5.25 | -69.6 | H | 3.0 | -16.6 | 34.2 | 1.0 | -49.8 | -13.0 | -36.8 | |
| 7.00 | -69.9 | H | 3.0 | -14.1 | 33.9 | 1.0 | -47.0 | -13.0 | -34.0 | |
| 3.50 | -67.2 | V | 3.0 | -18.0 | 34.6 | 1.0 | -51.6 | -13.0 | -38.6 | |
| 5.25 | -67.9 | V | 3.0 | -14.7 | 34.2 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 7.00 | -69.6 | V | 3.0 | -14.1 | 33.9 | 1.0 | -47.0 | -13.0 | -34.0 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5.3. LTE BAND 5

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|---|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/10/16 Test Engineer: 29435 Configuration: EUT Only Mode: LTE Band 5, 10MHz QPSK | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (829MHz) | | | | | | | | | | |
| 1.66 | 67.7 | H | 3.0 | -26.5 | 33.7 | 1.0 | -59.2 | -13.0 | -46.2 | |
| 2.49 | -64.9 | H | 3.0 | -20.7 | 34.1 | 1.0 | -53.8 | -13.0 | -40.8 | |
| 3.32 | 63.2 | H | 3.0 | -14.9 | 34.6 | 1.0 | -48.5 | -13.0 | -35.5 | |
| 1.66 | 66.3 | V | 3.0 | -22.9 | 33.7 | 1.0 | -55.6 | -13.0 | -42.6 | |
| 2.49 | -65.5 | V | 3.0 | -20.7 | 34.1 | 1.0 | -53.8 | -13.0 | -40.8 | |
| 3.32 | -65.0 | V | 3.0 | -16.5 | 34.6 | 1.0 | -50.1 | -13.0 | -37.1 | |
| Mid Channel (836.5MHz) | | | | | | | | | | |
| 1.67 | -67.6 | H | 3.0 | -26.2 | 33.7 | 1.0 | -58.9 | -13.0 | -45.9 | |
| 2.51 | -65.3 | H | 3.0 | -21.1 | 34.1 | 1.0 | -54.1 | -13.0 | -41.1 | |
| 3.35 | 64.3 | H | 3.0 | -15.9 | 34.6 | 1.0 | -49.5 | -13.0 | -36.5 | |
| 1.67 | -67.2 | V | 3.0 | -23.7 | 33.7 | 1.0 | -56.4 | -13.0 | -43.4 | |
| 2.51 | -65.3 | V | 3.0 | -20.4 | 34.1 | 1.0 | -53.5 | -13.0 | -40.5 | |
| 3.35 | 64.5 | V | 3.0 | -15.8 | 34.6 | 1.0 | -49.4 | -13.0 | -36.4 | |
| High Channel (844MHz) | | | | | | | | | | |
| 1.69 | -67.5 | H | 3.0 | -26.1 | 33.7 | 1.0 | -58.7 | -13.0 | -45.7 | |
| 2.53 | -66.2 | H | 3.0 | -21.9 | 34.1 | 1.0 | -55.0 | -13.0 | -42.0 | |
| 3.38 | -64.9 | H | 3.0 | -16.4 | 34.6 | 1.0 | -50.0 | -13.0 | -37.0 | |
| 1.69 | -67.5 | V | 3.0 | -24.0 | 33.7 | 1.0 | -56.7 | -13.0 | -43.7 | |
| 2.53 | -65.4 | V | 3.0 | -20.4 | 34.1 | 1.0 | -53.5 | -13.0 | -40.5 | |
| 3.38 | -63.7 | V | 3.0 | -14.9 | 34.6 | 1.0 | -48.5 | -13.0 | -35.5 | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 5, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| <u>Low Channel (829MHz)</u> | | | | | | | | | | |
| 1.65 | -68.1 | H | 3.0 | -26.9 | 33.7 | 1.0 | -59.6 | -13.0 | -46.6 | |
| 2.47 | -65.3 | H | 3.0 | -21.2 | 34.1 | 1.0 | -54.3 | -13.0 | -41.3 | |
| 3.36 | -63.6 | H | 3.0 | -15.2 | 34.6 | 1.0 | -48.9 | -13.0 | -35.9 | |
| 1.66 | -66.7 | V | 3.0 | -23.3 | 33.7 | 1.0 | -56.0 | -13.0 | -43.0 | |
| 2.49 | -65.9 | V | 3.0 | -21.1 | 34.1 | 1.0 | -54.2 | -13.0 | -41.2 | |
| 3.32 | -65.4 | V | 3.0 | -16.9 | 34.6 | 1.0 | -50.5 | -13.0 | -37.5 | |
| <u>Mid Channel (836.5MHz)</u> | | | | | | | | | | |
| 1.67 | -68.0 | H | 3.0 | -26.7 | 33.7 | 1.0 | -59.4 | -13.0 | -46.4 | |
| 2.51 | -65.7 | H | 3.0 | -21.5 | 34.1 | 1.0 | -54.6 | -13.0 | -41.6 | |
| 3.35 | -64.7 | H | 3.0 | -16.3 | 34.6 | 1.0 | -49.9 | -13.0 | -36.9 | |
| 1.67 | -67.6 | V | 3.0 | -24.2 | 33.7 | 1.0 | -56.9 | -13.0 | -43.9 | |
| 2.51 | -65.7 | V | 3.0 | -20.9 | 34.1 | 1.0 | -54.0 | -13.0 | -41.0 | |
| 3.35 | -64.9 | V | 3.0 | -16.3 | 34.6 | 1.0 | -49.9 | -13.0 | -36.9 | |
| <u>High Channel (844MHz)</u> | | | | | | | | | | |
| 1.69 | -67.9 | H | 3.0 | -26.5 | 33.7 | 1.0 | -59.2 | -13.0 | -46.2 | |
| 2.53 | -66.6 | H | 3.0 | -22.2 | 34.1 | 1.0 | -55.4 | -13.0 | -42.4 | |
| 3.38 | -65.3 | H | 3.0 | -16.8 | 34.6 | 1.0 | -50.4 | -13.0 | -37.4 | |
| 1.69 | -67.9 | V | 3.0 | -24.5 | 33.7 | 1.0 | -57.2 | -13.0 | -44.2 | |
| 2.53 | -65.8 | V | 3.0 | -20.9 | 34.1 | 1.0 | -54.0 | -13.0 | -41.0 | |
| 3.38 | -64.1 | V | 3.0 | -15.3 | 34.6 | 1.0 | -49.0 | -13.0 | -36.0 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5.4. LTE BAND 7

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------------|-----------------|---------------|-------------------------|--------|------------|-------|-------|--------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 7, 20MHz QPSK | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Substitution: Horn T69 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | | Pre-amplifier | | Filter | | Limit | | | |
| 3m Chamber F | | | 3m Chamber F | | | Filter | | | LTE B7 | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2510MHz) | | | | | | | | | | |
| 5.01 | -67.8 | H | 3.0 | -15.2 | 34.2 | 1.0 | -48.4 | -25.0 | -23.4 | |
| 7.62 | -68.5 | H | 3.0 | -11.9 | 33.4 | 1.0 | -44.3 | -25.0 | -19.3 | |
| 10.11 | -69.1 | H | 3.0 | -9.2 | 31.7 | 1.0 | -39.9 | -25.0 | -14.9 | |
| 5.04 | -67.6 | V | 3.0 | -14.7 | 34.2 | 1.0 | -47.9 | -25.0 | -22.9 | |
| 7.61 | -66.9 | V | 3.0 | -10.5 | 33.5 | 1.0 | -42.9 | -25.0 | -17.9 | |
| 10.14 | -67.3 | V | 3.0 | -7.5 | 31.7 | 1.0 | -38.2 | -25.0 | -13.2 | |
| Mid Channel (2535MHz) | | | | | | | | | | |
| 5.07 | -68.2 | H | 3.0 | -15.5 | 34.2 | 1.0 | -48.7 | -25.0 | -23.7 | |
| 7.61 | -68.4 | H | 3.0 | -11.8 | 33.5 | 1.0 | -44.3 | -25.0 | -19.3 | |
| 10.14 | -69.2 | H | 3.0 | -9.3 | 31.7 | 1.0 | -40.0 | -25.0 | -15.0 | |
| 5.07 | -67.6 | V | 3.0 | -14.7 | 34.2 | 1.0 | -47.9 | -25.0 | -22.9 | |
| 7.61 | -67.6 | V | 3.0 | -11.2 | 33.5 | 1.0 | -43.6 | -25.0 | -18.6 | |
| 10.14 | -68.7 | V | 3.0 | -8.9 | 31.7 | 1.0 | -39.6 | -25.0 | -14.6 | |
| High Channel (2560MHz) | | | | | | | | | | |
| 5.12 | -68.2 | H | 3.0 | -15.5 | 34.2 | 1.0 | -48.6 | -25.0 | -23.6 | |
| 7.68 | -67.6 | H | 3.0 | -10.9 | 33.4 | 1.0 | -43.3 | -25.0 | -18.3 | |
| 10.24 | -69.8 | H | 3.0 | -9.8 | 31.8 | 1.0 | -40.7 | -25.0 | -15.7 | |
| 5.12 | -66.8 | V | 3.0 | -13.8 | 34.2 | 1.0 | -47.0 | -25.0 | -22.0 | |
| 7.68 | -68.0 | V | 3.0 | -11.5 | 33.4 | 1.0 | -43.9 | -25.0 | -18.9 | |
| 10.24 | -68.4 | V | 3.0 | -8.4 | 31.8 | 1.0 | -39.2 | -25.0 | -14.2 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 7, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B7 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2510MHz) | | | | | | | | | | |
| 5.02 | -66.5 | H | 3.0 | -13.9 | 34.2 | 1.0 | -47.1 | -25.0 | -22.1 | |
| 7.53 | -67.1 | H | 3.0 | -10.6 | 33.5 | 1.0 | -43.1 | -25.0 | -18.1 | |
| 10.04 | -68.5 | H | 3.0 | -8.7 | 31.7 | 1.0 | -39.3 | -25.0 | -14.3 | |
| 5.02 | -67.3 | V | 3.0 | -14.5 | 34.2 | 1.0 | -47.6 | -25.0 | -22.6 | |
| 7.53 | -67.6 | V | 3.0 | -11.3 | 33.5 | 1.0 | -43.8 | -25.0 | -18.8 | |
| 10.04 | -69.0 | V | 3.0 | -9.2 | 31.7 | 1.0 | -39.9 | -25.0 | -14.9 | |
| Mid Channel (2535MHz) | | | | | | | | | | |
| 5.07 | -66.9 | H | 3.0 | -14.2 | 34.2 | 1.0 | -47.4 | -25.0 | -22.4 | |
| 7.61 | -67.6 | H | 3.0 | -11.0 | 33.5 | 1.0 | -43.5 | -25.0 | -18.5 | |
| 10.14 | -69.2 | H | 3.0 | -9.3 | 31.7 | 1.0 | -40.1 | -25.0 | -15.1 | |
| 5.07 | -67.8 | V | 3.0 | -14.9 | 34.2 | 1.0 | -48.1 | -25.0 | -23.1 | |
| 7.61 | -67.4 | V | 3.0 | -11.0 | 33.5 | 1.0 | -43.4 | -25.0 | -18.4 | |
| 10.14 | -68.3 | V | 3.0 | -8.5 | 31.7 | 1.0 | -39.2 | -25.0 | -14.2 | |
| High Channel (2560MHz) | | | | | | | | | | |
| 5.12 | -67.3 | H | 3.0 | -14.6 | 34.2 | 1.0 | -47.8 | -25.0 | -22.8 | |
| 7.68 | -68.2 | H | 3.0 | -11.5 | 33.4 | 1.0 | -43.9 | -25.0 | -18.9 | |
| 10.24 | -68.8 | H | 3.0 | -8.8 | 31.8 | 1.0 | -39.6 | -25.0 | -14.6 | |
| 5.12 | -68.5 | V | 3.0 | -15.5 | 34.2 | 1.0 | -48.7 | -25.0 | -23.7 | |
| 7.68 | -67.8 | V | 3.0 | -11.3 | 33.4 | 1.0 | -43.7 | -25.0 | -18.7 | |
| 10.24 | -69.6 | V | 3.0 | -9.7 | 31.8 | 1.0 | -40.5 | -25.0 | -15.5 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5.5. LTE BAND 12

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber F | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 12, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (704MHz) | | | | | | | | | | |
| 1.44 | -67.0 | H | 3.0 | -27.1 | 34.0 | 1.0 | 60.1 | -13.0 | -47.1 | |
| 2.06 | -65.1 | H | 3.0 | -21.5 | 33.6 | 1.0 | 54.1 | -13.0 | -41.1 | |
| 2.83 | -65.2 | H | 3.0 | -19.1 | 34.6 | 1.0 | 52.7 | -13.0 | -39.7 | |
| 1.38 | -67.8 | V | 3.0 | -25.6 | 34.1 | 1.0 | 58.7 | -13.0 | -45.7 | |
| 2.20 | -65.7 | V | 3.0 | -21.6 | 33.8 | 1.0 | 54.4 | -13.0 | -41.4 | |
| 2.72 | -64.9 | V | 3.0 | -18.9 | 34.4 | 1.0 | 52.3 | -13.0 | -39.3 | |
| Mid Channel (707.5MHz) | | | | | | | | | | |
| 1.48 | -68.2 | H | 3.0 | -28.1 | 33.9 | 1.0 | 60.9 | -13.0 | -47.9 | |
| 2.12 | -63.7 | H | 3.0 | -20.0 | 33.7 | 1.0 | 52.7 | -13.0 | -39.7 | |
| 2.85 | -65.2 | H | 3.0 | -18.9 | 34.6 | 1.0 | 52.5 | -13.0 | -39.5 | |
| 1.48 | -69.1 | V | 3.0 | -26.0 | 33.9 | 1.0 | 58.8 | -13.0 | -45.8 | |
| 2.12 | -65.4 | V | 3.0 | -21.5 | 33.7 | 1.0 | 54.2 | -13.0 | -41.2 | |
| 2.80 | -64.2 | V | 3.0 | -17.8 | 34.5 | 1.0 | 51.3 | -13.0 | -38.3 | |
| High Channel (711MHz) | | | | | | | | | | |
| 1.32 | -68.1 | H | 3.0 | -28.8 | 34.2 | 1.0 | 62.0 | -13.0 | -49.0 | |
| 2.17 | -65.9 | H | 3.0 | -22.2 | 33.8 | 1.0 | 55.0 | -13.0 | -42.0 | |
| 2.91 | -64.5 | H | 3.0 | -17.9 | 34.7 | 1.0 | 51.6 | -13.0 | -38.6 | |
| 1.48 | -68.1 | V | 3.0 | -24.9 | 33.9 | 1.0 | 57.8 | -13.0 | -44.8 | |
| 2.05 | -66.2 | V | 3.0 | -22.4 | 33.6 | 1.0 | 55.0 | -13.0 | -42.0 | |
| 2.83 | -65.7 | V | 3.0 | -19.2 | 34.6 | 1.0 | 52.7 | -13.0 | -39.7 | |

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 16U23328
Date: 05/10/16
Test Engineer: 29435
Configuration: EUT Only
Mode: LTE Band 12, 10MHz 16QAM

Test Equipment:
Substitution: Horn T59 Substitution, and 8ft SMA Cable

| Chamber | Pre-amplifier | Filter | Limit |
|--------------|---------------|--------|-------|
| 3m Chamber F | 3m Chamber F | Filter | EIRP |

| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
|-------------------------------|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Low Channel (704MHz) | | | | | | | | | | |
| 1.35 | -68.1 | H | 3.0 | -28.7 | 34.2 | 1.0 | -61.9 | -13.0 | 48.9 | |
| 2.07 | -65.3 | H | 3.0 | -21.7 | 33.6 | 1.0 | -54.3 | -13.0 | 41.3 | |
| 2.82 | -63.6 | H | 3.0 | -17.6 | 34.5 | 1.0 | -51.1 | -13.0 | 38.1 | |
| 1.43 | -66.7 | V | 3.0 | -24.0 | 34.0 | 1.0 | -57.0 | -13.0 | 44.0 | |
| 2.20 | -65.9 | V | 3.0 | -21.8 | 33.8 | 1.0 | -54.6 | -13.0 | 41.6 | |
| 2.88 | -65.4 | V | 3.0 | -18.6 | 34.6 | 1.0 | -52.2 | -13.0 | 39.2 | |
| Mid Channel (707.5MHz) | | | | | | | | | | |
| 1.34 | -68.0 | H | 3.0 | -28.6 | 34.2 | 1.0 | -61.8 | -13.0 | 48.8 | |
| 2.17 | -65.7 | H | 3.0 | -22.0 | 33.8 | 1.0 | -54.8 | -13.0 | 41.8 | |
| 2.91 | -64.7 | H | 3.0 | -18.1 | 34.7 | 1.0 | -51.8 | -13.0 | 38.8 | |
| 1.34 | -67.6 | V | 3.0 | -25.8 | 34.2 | 1.0 | -58.9 | -13.0 | 45.9 | |
| 2.17 | -65.7 | V | 3.0 | -21.7 | 33.8 | 1.0 | -54.4 | -13.0 | 41.4 | |
| 2.92 | -64.9 | V | 3.0 | -17.9 | 34.7 | 1.0 | -51.6 | -13.0 | 38.6 | |
| High Channel (711MHz) | | | | | | | | | | |
| 1.46 | -67.9 | H | 3.0 | -27.9 | 33.9 | 1.0 | -60.8 | -13.0 | 47.8 | |
| 2.21 | -66.6 | H | 3.0 | -22.8 | 33.8 | 1.0 | -55.7 | -13.0 | 42.7 | |
| 2.93 | -65.3 | H | 3.0 | -18.6 | 34.7 | 1.0 | -52.3 | -13.0 | 39.3 | |
| 1.44 | -67.9 | V | 3.0 | -25.2 | 34.0 | 1.0 | -58.1 | -13.0 | 45.1 | |
| 2.17 | -65.8 | V | 3.0 | -21.8 | 33.8 | 1.0 | -54.5 | -13.0 | 41.5 | |
| 2.84 | -64.1 | V | 3.0 | -17.5 | 34.6 | 1.0 | -51.1 | -13.0 | 38.1 | |

Rev. 05.21.15

10.5.6. LTE BAND 13

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 13, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B13 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (782MHz) | | | | | | | | | | |
| 1.56 | -67.4 | H | 3.0 | -26.8 | 33.8 | 1.0 | -59.6 | -40.0 | -19.6 | |
| 2.25 | -66.3 | H | 3.0 | -22.5 | 33.9 | 1.0 | -55.4 | -13.0 | -42.4 | |
| 3.19 | -64.9 | H | 3.0 | -17.1 | 34.7 | 1.0 | -50.8 | -13.0 | -37.8 | |
| 1.56 | -66.5 | V | 3.0 | -23.2 | 33.8 | 1.0 | -55.9 | -40.0 | -15.9 | |
| 2.42 | -65.0 | V | 3.0 | -20.3 | 34.2 | 1.0 | -53.4 | -13.0 | -40.4 | |
| 3.17 | -64.2 | V | 3.0 | -16.2 | 34.7 | 1.0 | -49.9 | -13.0 | -36.9 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 13, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B13 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (782MHz) | | | | | | | | | | |
| 1.56 | -68.1 | H | 3.0 | -27.5 | 33.8 | 1.0 | -60.3 | -40.0 | -20.3 | |
| 2.35 | -65.3 | H | 3.0 | -21.4 | 34.1 | 1.0 | -54.5 | -13.0 | -41.5 | |
| 3.22 | -63.6 | H | 3.0 | -15.7 | 34.7 | 1.0 | -49.4 | -13.0 | -36.4 | |
| 1.56 | -66.7 | V | 3.0 | -23.3 | 33.8 | 1.0 | -56.1 | -40.0 | -16.1 | |
| 2.28 | -65.9 | V | 3.0 | -21.6 | 34.0 | 1.0 | -54.5 | -13.0 | -41.5 | |
| 3.22 | -65.4 | V | 3.0 | -17.2 | 34.7 | 1.0 | -50.9 | -13.0 | -37.9 | |

10.5.7. LTE BAND 17

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 17, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (710MHz) | | | | | | | | | | |
| 1.38 | -68.3 | H | 3.0 | -28.7 | 34.1 | 1.0 | -61.8 | -13.0 | -48.8 | |
| 2.12 | -65.5 | H | 3.0 | -21.9 | 33.7 | 1.0 | -54.5 | -13.0 | -41.5 | |
| 2.82 | -63.8 | H | 3.0 | -17.7 | 34.6 | 1.0 | -51.3 | -13.0 | -38.3 | |
| 1.47 | -66.9 | V | 3.0 | -23.8 | 33.9 | 1.0 | -56.7 | -13.0 | -43.7 | |
| 2.21 | -66.1 | V | 3.0 | -21.9 | 33.8 | 1.0 | -54.8 | -13.0 | -41.8 | |
| 2.92 | -65.6 | V | 3.0 | -18.6 | 34.7 | 1.0 | -52.3 | -13.0 | -39.3 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 17, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (710MHz) | | | | | | | | | | |
| 1.39 | -68.3 | H | 3.0 | -28.7 | 34.1 | 1.0 | -61.7 | -13.0 | -48.7 | |
| 2.04 | -65.5 | H | 3.0 | -21.9 | 33.5 | 1.0 | -54.5 | -13.0 | -41.5 | |
| 2.85 | -63.8 | H | 3.0 | -17.6 | 34.6 | 1.0 | -51.2 | -13.0 | -38.2 | |
| 1.43 | -66.9 | V | 3.0 | -24.2 | 34.0 | 1.0 | -57.2 | -13.0 | -44.2 | |
| 2.19 | -66.1 | V | 3.0 | -22.0 | 33.8 | 1.0 | -54.8 | -13.0 | -41.8 | |
| 2.76 | -65.6 | V | 3.0 | -19.4 | 34.5 | 1.0 | -52.9 | -13.0 | -39.9 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5.8. LTE BAND 25

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/09/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | |
| Mode: | LTE Band 25, 20MHz QPSK | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Substitution: Horn T69 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -66.6 | H | 3.0 | -16.8 | 34.4 | 1.0 | -50.2 | -13.0 | -37.2 | |
| 5.58 | -68.5 | H | 3.0 | -15.0 | 34.1 | 1.0 | -48.1 | -13.0 | -35.1 | |
| 7.44 | -70.3 | H | 3.0 | -13.9 | 33.6 | 1.0 | -46.5 | -13.0 | -33.5 | |
| 3.72 | -67.1 | V | 3.0 | -17.2 | 34.4 | 1.0 | -50.6 | -13.0 | -37.6 | |
| 5.58 | -67.1 | V | 3.0 | -13.4 | 34.1 | 1.0 | -46.5 | -13.0 | -33.5 | |
| 7.44 | -70.1 | V | 3.0 | -14.0 | 33.6 | 1.0 | -46.5 | -13.0 | -33.5 | |
| Mid Channel (1882.5MHz) | | | | | | | | | | |
| 3.77 | -66.6 | H | 3.0 | -16.6 | 34.4 | 1.0 | -50.0 | -13.0 | -37.0 | |
| 5.65 | -68.9 | H | 3.0 | -15.3 | 34.1 | 1.0 | -48.4 | -13.0 | -35.4 | |
| 7.53 | -70.9 | H | 3.0 | -14.4 | 33.5 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 3.77 | -67.6 | V | 3.0 | -17.5 | 34.4 | 1.0 | -50.9 | -13.0 | -37.9 | |
| 5.65 | -68.5 | V | 3.0 | -14.7 | 34.1 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 7.53 | -70.4 | V | 3.0 | -14.1 | 33.5 | 1.0 | -46.6 | -13.0 | -33.6 | |
| High Channel (1905MHz) | | | | | | | | | | |
| 3.81 | -67.9 | H | 3.0 | -17.7 | 34.4 | 1.0 | -51.1 | -13.0 | -38.1 | |
| 5.72 | -68.4 | H | 3.0 | -14.7 | 34.1 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 7.62 | -70.9 | H | 3.0 | -14.3 | 33.4 | 1.0 | -46.7 | -13.0 | -33.7 | |
| 3.81 | -67.8 | V | 3.0 | -17.6 | 34.4 | 1.0 | -50.9 | -13.0 | -37.9 | |
| 5.72 | -68.7 | V | 3.0 | -14.9 | 34.1 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 7.62 | -70.6 | V | 3.0 | -14.2 | 33.4 | 1.0 | -46.6 | -13.0 | -33.6 | |

Rev. 05.21.15

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/09/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT only | | | | | | | | | |
| Mode: | LTE Band 25, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (1860MHz) | | | | | | | | | | |
| 3.72 | -67.9 | H | 3.0 | -18.1 | 34.4 | 1.0 | -51.5 | -13.0 | -38.5 | |
| 5.58 | -68.8 | H | 3.0 | -15.3 | 34.1 | 1.0 | -48.4 | -13.0 | -35.4 | |
| 7.44 | -70.9 | H | 3.0 | -14.5 | 33.6 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 3.72 | -67.2 | V | 3.0 | -17.3 | 34.4 | 1.0 | -50.7 | -13.0 | -37.7 | |
| 5.58 | -68.7 | V | 3.0 | -15.0 | 34.1 | 1.0 | -48.2 | -13.0 | -35.2 | |
| 7.44 | -70.1 | V | 3.0 | -13.9 | 33.6 | 1.0 | -46.5 | -13.0 | -33.5 | |
| Mid Channel (1882.5MHz) | | | | | | | | | | |
| 3.77 | -67.5 | H | 3.0 | -17.5 | 34.4 | 1.0 | -50.9 | -13.0 | -37.9 | |
| 5.65 | -66.8 | H | 3.0 | -13.2 | 34.1 | 1.0 | -46.3 | -13.0 | -33.3 | |
| 7.53 | -69.6 | H | 3.0 | -13.1 | 33.5 | 1.0 | -45.6 | -13.0 | -32.6 | |
| 3.77 | -67.4 | V | 3.0 | -17.3 | 34.4 | 1.0 | -50.7 | -13.0 | -37.7 | |
| 5.65 | -68.8 | V | 3.0 | -15.0 | 34.1 | 1.0 | -48.2 | -13.0 | -35.2 | |
| 7.53 | -71.3 | V | 3.0 | -15.0 | 33.5 | 1.0 | -47.5 | -13.0 | -34.5 | |
| High Channel (1905MHz) | | | | | | | | | | |
| 3.81 | -67.7 | H | 3.0 | -17.5 | 34.4 | 1.0 | -50.9 | -13.0 | -37.9 | |
| 5.72 | -67.8 | H | 3.0 | -14.1 | 34.1 | 1.0 | -47.2 | -13.0 | -34.2 | |
| 7.62 | -70.2 | H | 3.0 | -13.6 | 33.4 | 1.0 | -46.0 | -13.0 | -33.0 | |
| 3.81 | -65.9 | V | 3.0 | -15.7 | 34.4 | 1.0 | -49.0 | -13.0 | -36.0 | |
| 5.72 | -67.7 | V | 3.0 | -13.9 | 34.1 | 1.0 | -47.0 | -13.0 | -34.0 | |
| 7.62 | -69.6 | V | 3.0 | -13.2 | 33.4 | 1.0 | -45.6 | -13.0 | -32.6 | |

Rev. 05.21.15

10.5.9. LTE BAND 26

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------------|--|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 26 (90S), 10MHz QPSK | | | | | | | | | |
| Test Equipment: | | Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819MHz) | | | | | | | | | | |
| 1.58 | -67.9 | H | 3.0 | -27.2 | 33.8 | 1.0 | -60.0 | -13.0 | -47.0 | |
| 2.54 | -65.1 | H | 3.0 | -20.7 | 34.1 | 1.0 | -53.8 | -13.0 | -40.8 | |
| 3.22 | -63.4 | H | 3.0 | -15.5 | 34.7 | 1.0 | -49.1 | -13.0 | -36.1 | |
| 1.63 | -66.5 | V | 3.0 | -23.1 | 33.7 | 1.0 | -55.8 | -13.0 | -42.8 | |
| 2.37 | -65.7 | V | 3.0 | -21.1 | 34.1 | 1.0 | -54.2 | -13.0 | -41.2 | |
| 3.29 | -65.2 | V | 3.0 | -16.8 | 34.7 | 1.0 | -50.4 | -13.0 | -37.4 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/06/16 | | | | | | | | | |
| Test Engineer: | 43575 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 26 (90S), 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819MHz) | | | | | | | | | | |
| 1.57 | -68.4 | H | 3.0 | -27.8 | 33.8 | 1.0 | -60.5 | -13.0 | -47.5 | |
| 2.36 | -66.1 | H | 3.0 | -22.2 | 34.1 | 1.0 | -55.3 | -13.0 | -42.3 | |
| 3.22 | -65.1 | H | 3.0 | -17.2 | 34.7 | 1.0 | -50.9 | -13.0 | -37.9 | |
| 1.62 | -68.0 | V | 3.0 | -24.6 | 33.7 | 1.0 | -57.3 | -13.0 | -44.3 | |
| 2.51 | -66.1 | V | 3.0 | -21.3 | 34.1 | 1.0 | -54.4 | -13.0 | -41.4 | |
| 3.21 | -65.3 | V | 3.0 | -17.1 | 34.7 | 1.0 | -50.8 | -13.0 | -37.8 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5.10. LTE BAND 27

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: Project #: 16U23328 Date: 05/10/16 Test Engineer: 29435 Configuration: EUT Only Mode: LTE Band 27, 10MHz QPSK | | | | | | | | | | |
| Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819.0MHz) | | | | | | | | | | |
| 1.61 | -67.0 | H | 3.0 | -26.1 | 33.7 | 1.0 | -58.9 | -13.0 | -45.9 | |
| 2.35 | -64.7 | H | 3.0 | -20.8 | 34.1 | 1.0 | -53.9 | -13.0 | -40.9 | |
| 3.23 | -63.7 | H | 3.0 | -15.7 | 34.7 | 1.0 | -49.4 | -13.0 | -36.4 | |
| 1.71 | -66.6 | V | 3.0 | -23.2 | 33.7 | 1.0 | -55.8 | -13.0 | -42.8 | |
| 2.49 | -64.7 | V | 3.0 | -19.9 | 34.1 | 1.0 | -53.0 | -13.0 | -40.0 | |
| 3.21 | -63.9 | V | 3.0 | -15.7 | 34.7 | 1.0 | -49.4 | -13.0 | -36.4 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 27, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | EIRP | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (819.0MHz) | | | | | | | | | | |
| 1.71 | -67.6 | H | 3.0 | -26.0 | 33.7 | 1.0 | -58.7 | -13.0 | -45.7 | |
| 2.48 | 65.3 | H | 3.0 | -21.2 | 34.1 | 1.0 | -54.3 | -13.0 | -41.3 | |
| 3.21 | -64.3 | H | 3.0 | -16.4 | 34.7 | 1.0 | -50.1 | -13.0 | -37.1 | |
| 1.73 | -67.2 | V | 3.0 | -23.8 | 33.7 | 1.0 | -56.4 | -13.0 | -43.4 | |
| 2.43 | 65.3 | V | 3.0 | -20.6 | 34.2 | 1.0 | -53.7 | -13.0 | -40.7 | |
| 3.21 | -64.5 | V | 3.0 | -16.3 | 34.7 | 1.0 | -50.0 | -13.0 | -37.0 | |
| Rev. 05.21.15 | | | | | | | | | | |

10.5.11. LTE BAND 30

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|--------------------|----------|-------------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 30, 10MHz QPSK | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B30 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (2310MHz) | | | | | | | | | | |
| 4.71 | -68.6 | H | 3.0 | -14.6 | 38.0 | 1.0 | -51.6 | 40.0 | -11.6 | |
| 6.98 | -68.8 | H | 3.0 | -10.1 | 36.4 | 1.0 | -45.5 | 40.0 | -5.5 | |
| 9.25 | -70.7 | H | 3.0 | -9.1 | 34.9 | 1.0 | -43.0 | 40.0 | -3.0 | |
| 4.71 | -68.2 | V | 3.0 | -14.3 | 38.0 | 1.0 | -51.3 | 40.0 | -11.3 | |
| 6.90 | -67.2 | V | 3.0 | -7.8 | 36.5 | 1.0 | -43.3 | 40.0 | -3.3 | |
| 9.25 | -70.4 | V | 3.0 | -8.6 | 34.9 | 1.0 | -42.5 | 40.0 | -2.5 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|--------------------|----------|-------------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 30, 10MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B30 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Mid Channel (2310MHz) | | | | | | | | | | |
| 4.62 | -67.0 | H | 3.0 | -13.1 | 38.0 | 1.0 | -50.1 | -40.0 | -10.1 | |
| 6.93 | -67.3 | H | 3.0 | -8.6 | 36.4 | 1.0 | -44.0 | -40.0 | -4.0 | |
| 9.24 | -70.4 | H | 3.0 | -8.8 | 34.9 | 1.0 | -42.7 | -40.0 | -2.7 | |
| 4.62 | -68.0 | V | 3.0 | -14.2 | 38.0 | 1.0 | -51.2 | -40.0 | -11.2 | |
| 6.93 | -68.4 | V | 3.0 | -9.0 | 36.5 | 1.0 | -44.5 | -40.0 | -4.5 | |
| 9.24 | -70.5 | V | 3.0 | -8.7 | 34.9 | 1.0 | -42.6 | -40.0 | -2.6 | |

Rev. 05.21.15

10.5.12. LTE BAND 41

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|-------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 41, 20MHz QPSK | | | | | | | | | |
| Test Equipment: | | | | | | | | | | |
| Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B41 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2506MHz) | | | | | | | | | | |
| 5.01 | -67.6 | H | 3.0 | -15.0 | 34.2 | 1.0 | -48.2 | -25.0 | -23.2 | |
| 7.52 | -67.4 | H | 3.0 | -10.9 | 33.5 | 1.0 | -43.5 | -25.0 | -18.5 | |
| 10.02 | -68.3 | H | 3.0 | -8.5 | 31.6 | 1.0 | -39.1 | -25.0 | -14.1 | |
| 5.01 | -67.5 | V | 3.0 | -14.7 | 34.2 | 1.0 | -47.8 | -25.0 | -22.8 | |
| 7.52 | -68.5 | V | 3.0 | -12.2 | 33.5 | 1.0 | -44.8 | -25.0 | -19.8 | |
| 10.02 | -69.9 | V | 3.0 | -10.2 | 31.6 | 1.0 | -40.8 | -25.0 | -15.8 | |
| Mid Channel (2593MHz) | | | | | | | | | | |
| 5.19 | -66.8 | H | 3.0 | -14.0 | 34.2 | 1.0 | -47.1 | -25.0 | -22.1 | |
| 7.78 | -67.8 | H | 3.0 | -11.0 | 33.3 | 1.0 | -43.3 | -25.0 | -18.3 | |
| 10.37 | 68.5 | H | 3.0 | 128.6 | 31.9 | 1.0 | 97.6 | -25.0 | 122.6 | |
| 5.19 | -67.8 | V | 3.0 | -14.6 | 34.2 | 1.0 | -47.8 | -25.0 | -22.8 | |
| 7.78 | 68.1 | V | 3.0 | -11.5 | 33.3 | 1.0 | -43.8 | -25.0 | -18.8 | |
| 10.37 | -68.7 | V | 3.0 | -8.7 | 31.9 | 1.0 | -39.6 | -25.0 | -14.6 | |
| High Channel (2680MHz) | | | | | | | | | | |
| 5.36 | -66.7 | H | 3.0 | -13.5 | 34.2 | 1.0 | -46.7 | -25.0 | -21.7 | |
| 8.04 | -67.9 | H | 3.0 | -10.7 | 33.1 | 1.0 | -42.9 | -25.0 | -17.9 | |
| 10.72 | 67.5 | H | 3.0 | -7.2 | 32.2 | 1.0 | -38.4 | -25.0 | -13.4 | |
| 5.36 | -67.3 | V | 3.0 | -13.9 | 34.2 | 1.0 | -47.1 | -25.0 | -22.1 | |
| 8.04 | -68.3 | V | 3.0 | -11.3 | 33.1 | 1.0 | -43.4 | -25.0 | -18.4 | |
| 10.72 | -69.8 | V | 3.0 | -9.4 | 32.2 | 1.0 | -40.6 | -25.0 | -15.6 | |
| Rev. 05.21.15 | | | | | | | | | | |

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

| High Frequency Substitution Measurement UL Fremont Radiated Chamber | | | | | | | | | | |
|--|--------------------------|-----------------|----------|-------------------------|--------|------------|-------|-------|-------|-------|
| Company: | | | | | | | | | | |
| Project #: | 16U23328 | | | | | | | | | |
| Date: | 05/10/16 | | | | | | | | | |
| Test Engineer: | 29435 | | | | | | | | | |
| Configuration: | EUT Only | | | | | | | | | |
| Mode: | LTE Band 41, 20MHz 16QAM | | | | | | | | | |
| <u>Test Equipment:</u> Substitution: Horn T59 Substitution, and 8ft SMA Cable | | | | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| 3m Chamber F | | 3m Chamber F | | Filter | | LTE B41 | | | | |
| Frequency (GHz) | SA reading (dBm) | Ant. Pol. (H/V) | Distance | EIRP @ TX Ant End (dBm) | Preamp | Attenuator | EIRP | Limit | Delta | Notes |
| Low Channel (2506MHz) | | | | | | | | | | |
| 5.01 | -67.4 | H | 3.0 | -14.9 | 34.2 | 1.0 | -48.1 | -25.0 | -23.1 | |
| 7.52 | -68.4 | H | 3.0 | -11.9 | 33.5 | 1.0 | -44.5 | -25.0 | -19.5 | |
| 10.02 | -68.8 | H | 3.0 | -9.0 | 31.6 | 1.0 | -39.6 | -25.0 | -14.6 | |
| 5.01 | -67.3 | V | 3.0 | -14.5 | 34.2 | 1.0 | -47.7 | -25.0 | -22.7 | |
| 7.52 | -69.7 | V | 3.0 | -13.4 | 33.5 | 1.0 | -45.9 | -25.0 | -20.9 | |
| 10.02 | -70.2 | V | 3.0 | -10.4 | 31.6 | 1.0 | -41.1 | -25.0 | -16.1 | |
| Mid Channel (2593MHz) | | | | | | | | | | |
| 5.19 | -66.3 | H | 3.0 | -13.5 | 34.2 | 1.0 | -46.7 | -25.0 | -21.7 | |
| 7.78 | -68.1 | H | 3.0 | -11.3 | 33.3 | 1.0 | -43.6 | -25.0 | -18.6 | |
| 10.37 | -68.1 | H | 3.0 | -8.0 | 31.9 | 1.0 | -38.9 | -25.0 | -13.9 | |
| 5.19 | -67.3 | V | 3.0 | -14.1 | 34.2 | 1.0 | -47.3 | -25.0 | -22.3 | |
| 7.78 | -69.5 | V | 3.0 | -12.8 | 33.3 | 1.0 | -45.2 | -25.0 | -20.2 | |
| 10.37 | -69.9 | V | 3.0 | -9.8 | 31.9 | 1.0 | -40.7 | -25.0 | -15.7 | |
| High Channel (2680MHz) | | | | | | | | | | |
| 5.36 | -67.6 | H | 3.0 | -14.5 | 34.2 | 1.0 | -47.6 | -25.0 | -22.6 | |
| 8.04 | -68.5 | H | 3.0 | -11.4 | 33.1 | 1.0 | -43.5 | -25.0 | -18.5 | |
| 10.72 | -69.3 | H | 3.0 | -9.0 | 32.2 | 1.0 | -40.3 | -25.0 | -15.3 | |
| 5.36 | -67.5 | V | 3.0 | -14.1 | 34.2 | 1.0 | -47.3 | -25.0 | -22.3 | |
| 8.04 | -67.8 | V | 3.0 | -10.8 | 33.1 | 1.0 | -42.9 | -25.0 | -17.9 | |
| 10.72 | -67.9 | V | 3.0 | -7.5 | 32.2 | 1.0 | -38.7 | -25.0 | -13.7 | |
| Rev. 05.21.15 | | | | | | | | | | |