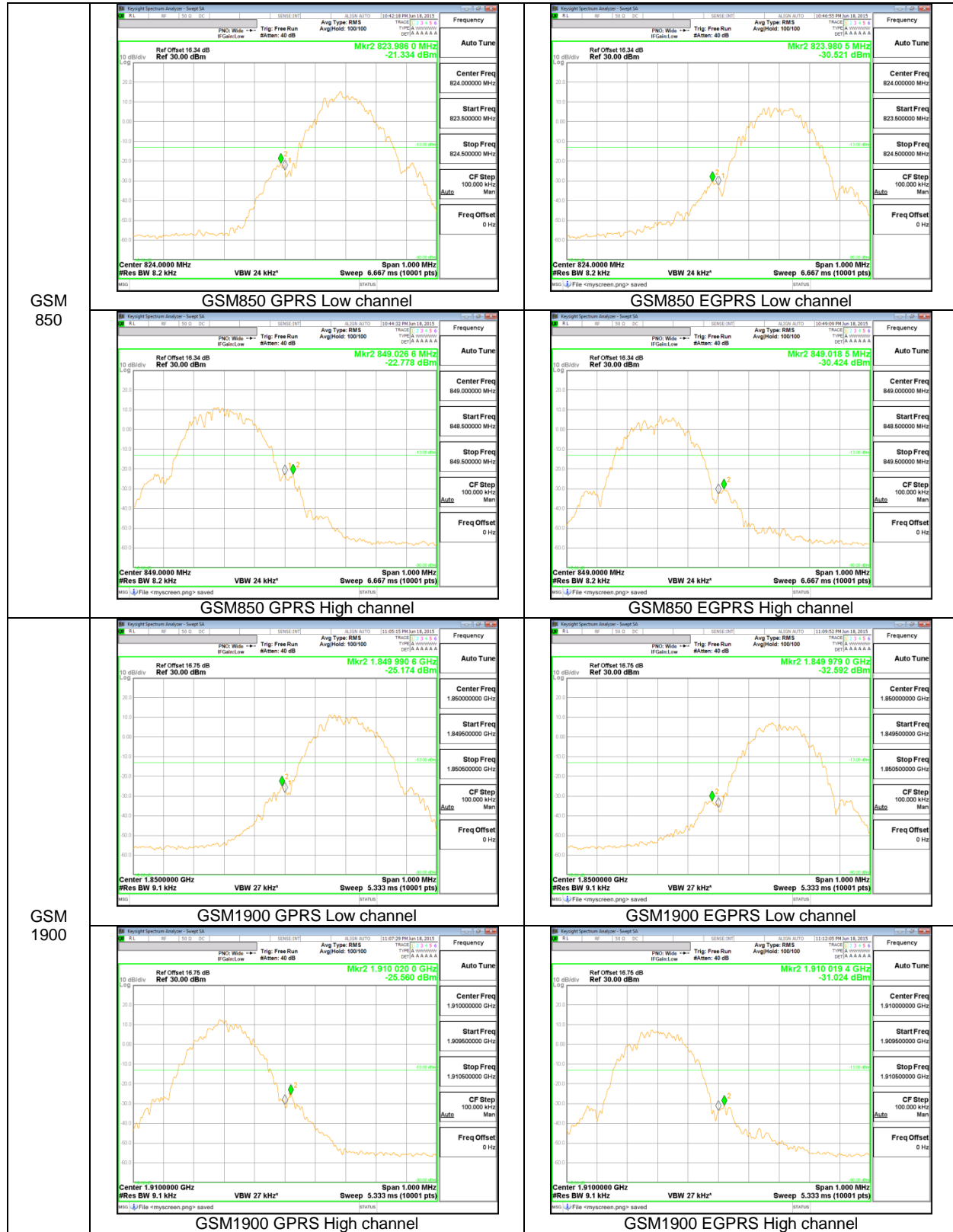
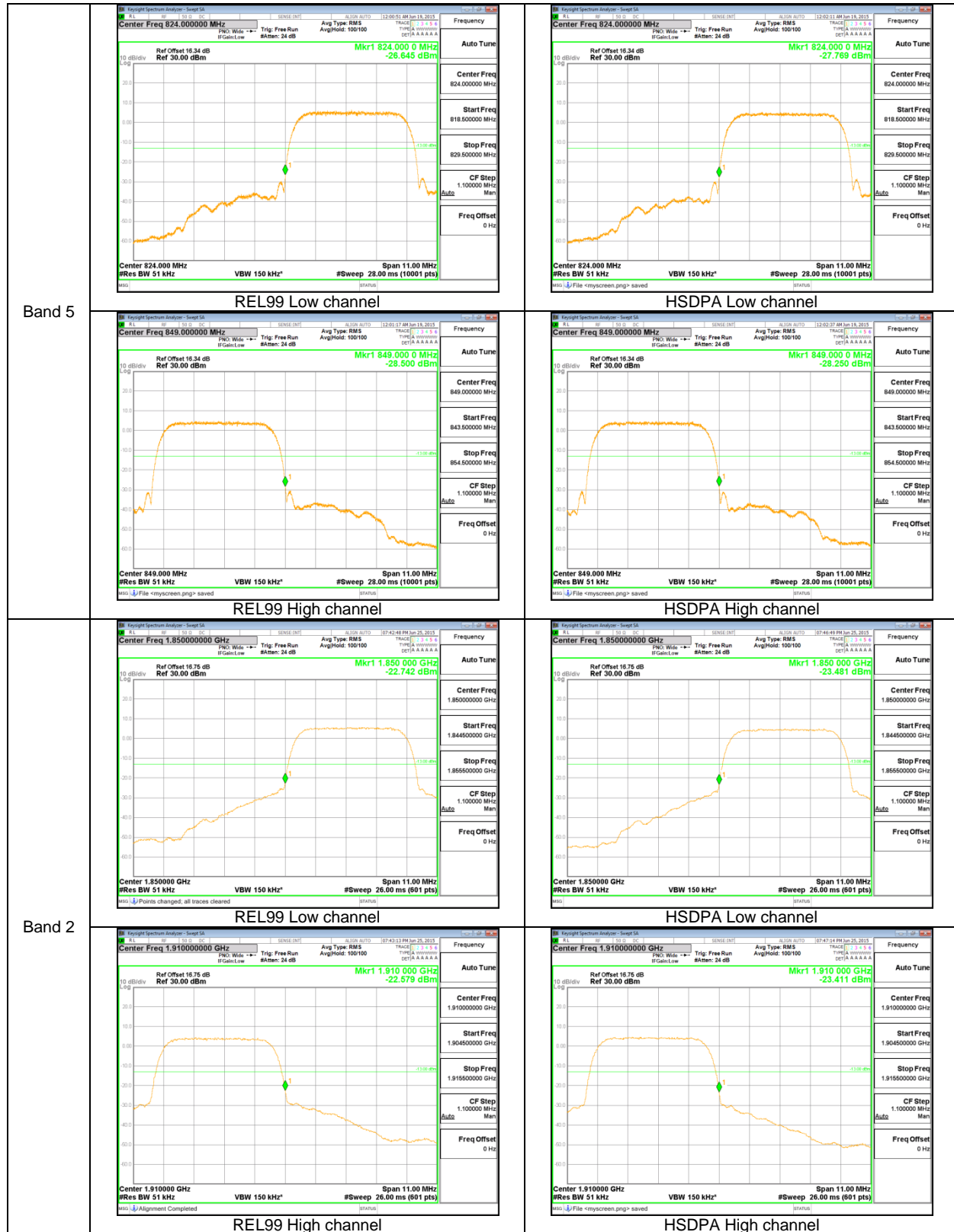


10.2.1. BAND EDGE PLOTS

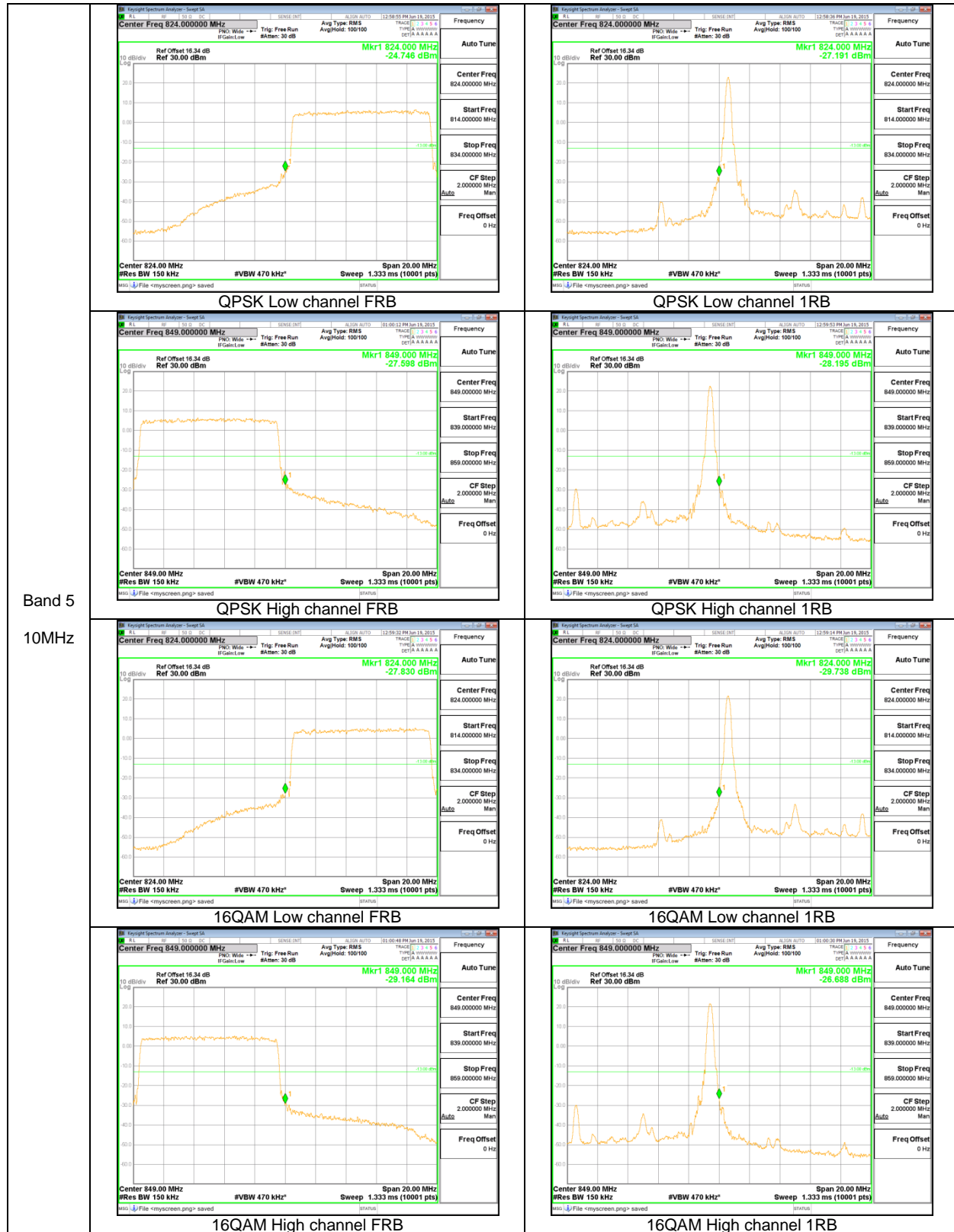
GSM



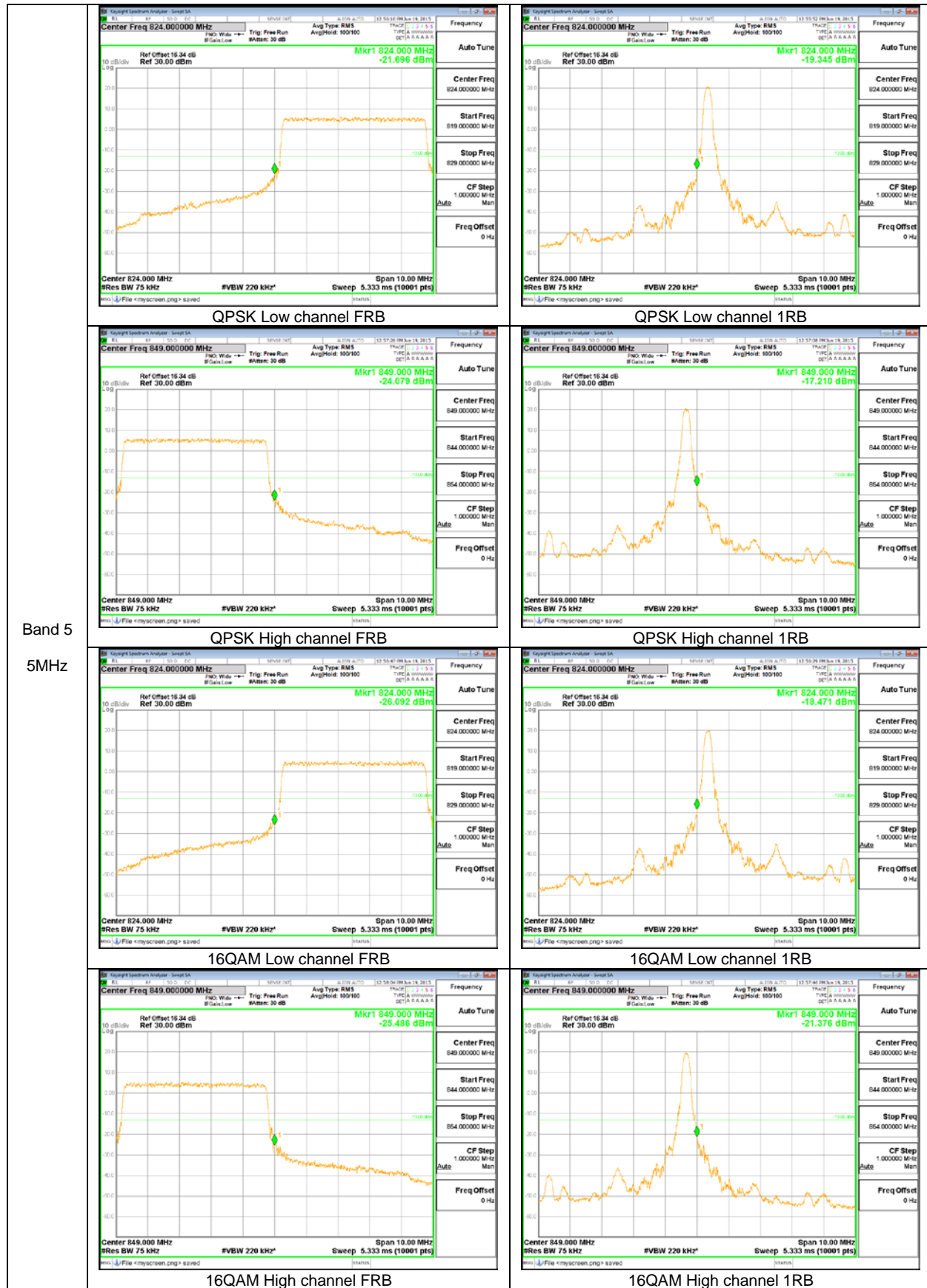
WCDMA



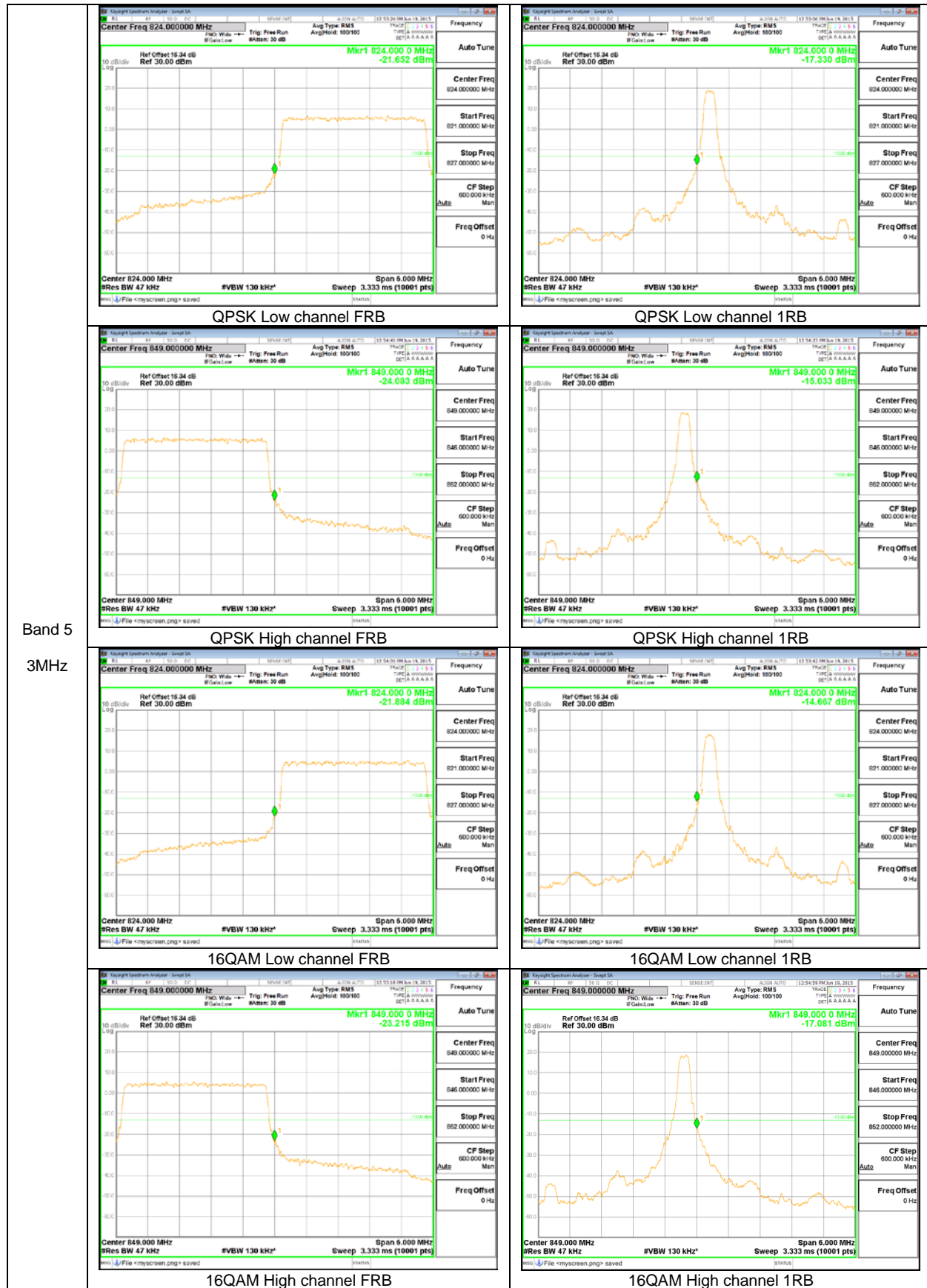
LTE Band 5



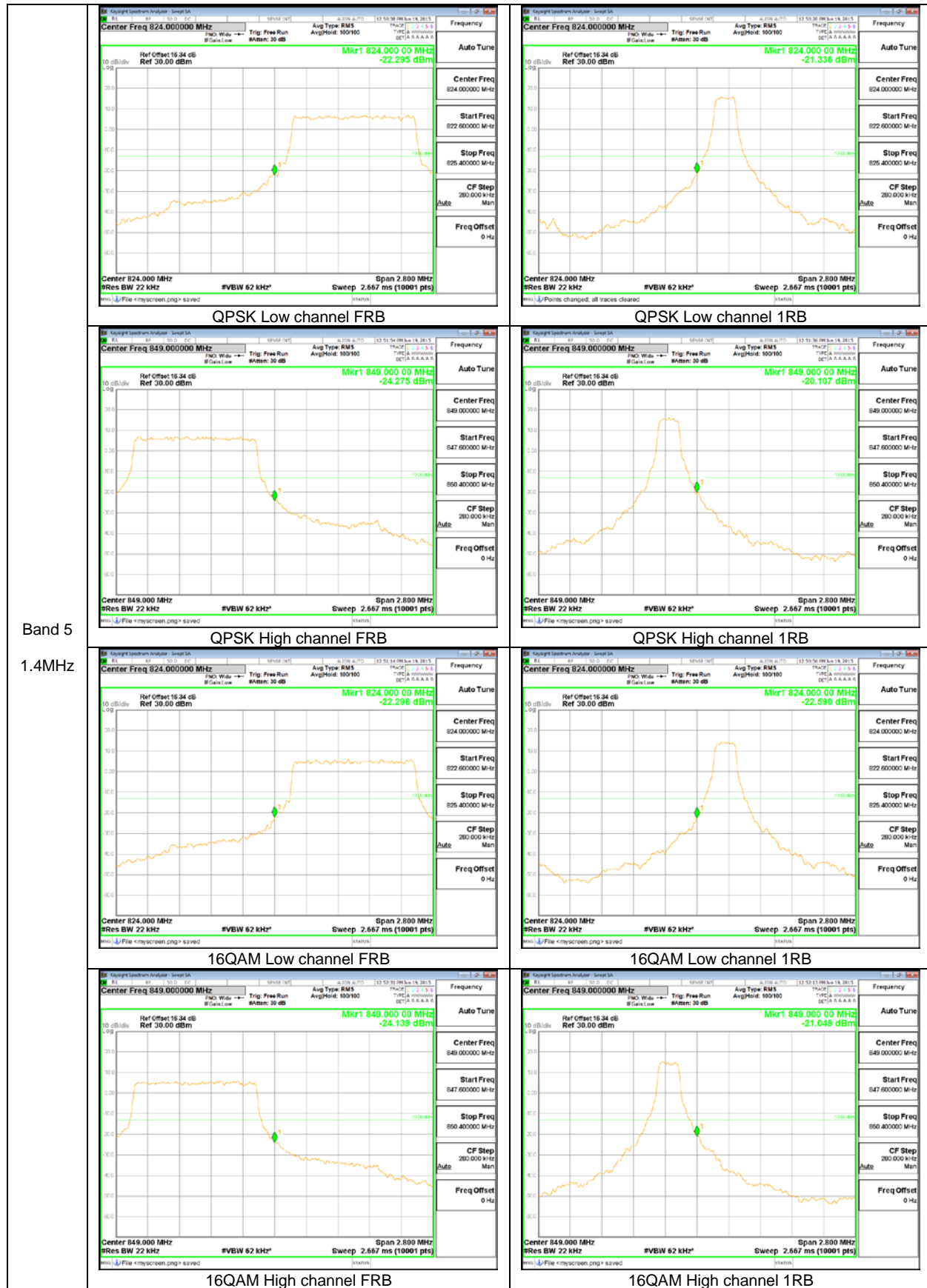
Band 5
 10MHz



Band 5
5MHz



Band 5
 3MHz



Band 5
 1.4MHz

10.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238

LIMITS

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.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r02

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

RESULTS

10.3.1. OUT OF BAND EMISSIONS RESULT

GSM

| Band | Mode | f [MHz] | Spurious [dBm] | Limit [dBm] | Margin [dB] | |
|---------|-------|---------|----------------|-------------|-------------|------|
| GSM850 | GPRS | 824.2 | -22.56 | -13.00 | 9.56 | |
| | | 836.6 | -22.67 | | 9.67 | |
| | | 848.8 | -22.96 | | 9.96 | |
| | EGPRS | 824.2 | -22.47 | | 9.47 | |
| | | 836.6 | -23.18 | | 10.18 | |
| | | 848.8 | -22.66 | | 9.66 | |
| GSM1900 | GPRS | 1850.2 | -22.52 | | -13.00 | 9.52 |
| | | 1880.0 | -22.69 | | | 9.69 |
| | | 1909.8 | -21.83 | | | 8.83 |
| | EGPRS | 1850.2 | -22.71 | 9.71 | | |
| | | 1880.0 | -22.49 | 9.49 | | |
| | | 1909.8 | -22.22 | 9.22 | | |

WCDMA

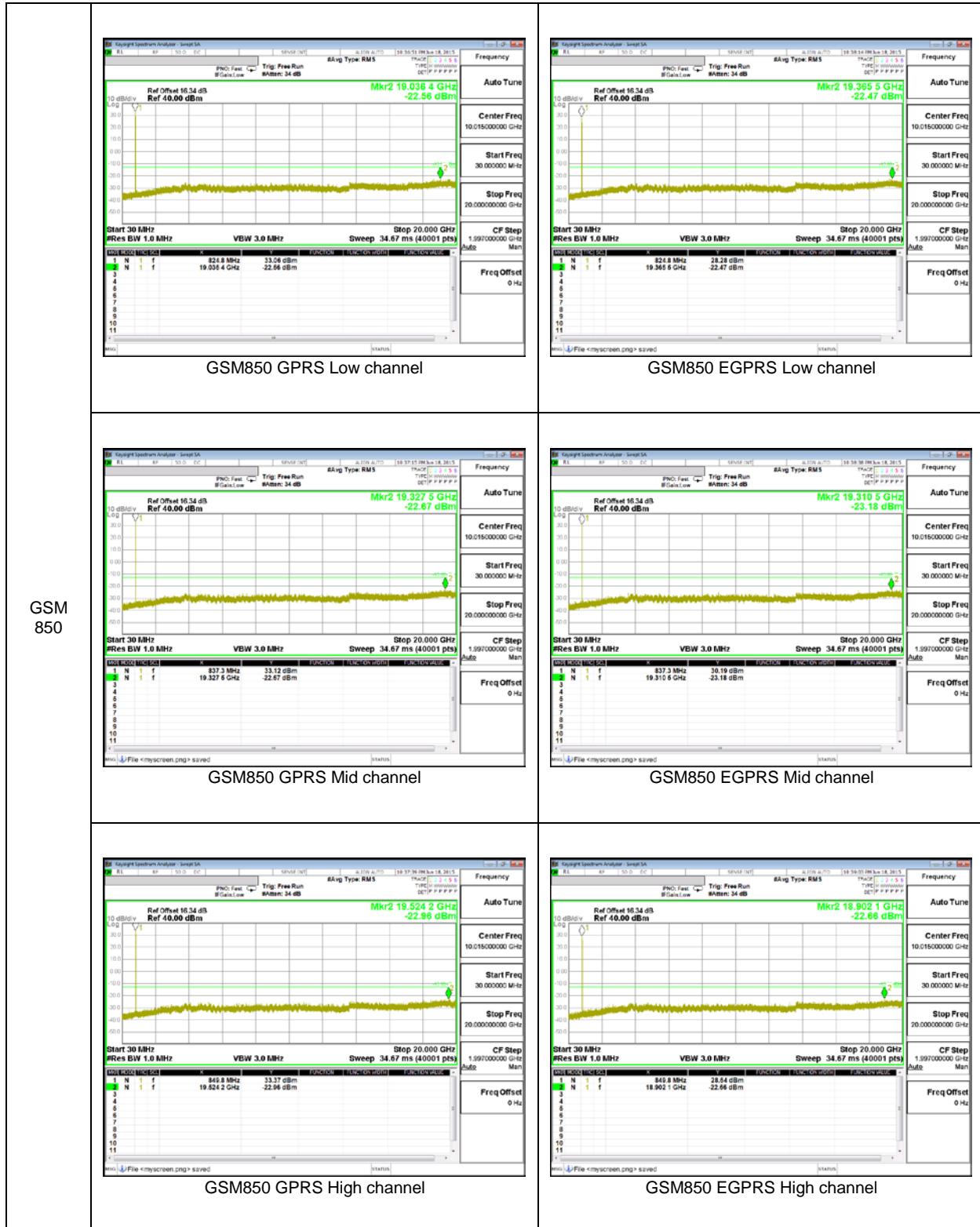
| Band | Mode | f [MHz] | Spurious [dBm] | Limit [dBm] | Margin [dB] | |
|--------|-------|---------|----------------|-------------|-------------|-------|
| Band 5 | REL99 | 826.4 | -32.21 | -13.00 | 19.21 | |
| | | 836.6 | -33.55 | | 20.55 | |
| | | 846.6 | -32.68 | | 19.68 | |
| | HSDPA | 826.4 | -33.13 | | 20.13 | |
| | | 836.6 | -33.02 | | 20.02 | |
| | | 846.6 | -33.24 | | 20.24 | |
| Band 2 | REL99 | 1852.4 | -32.10 | | -13.00 | 19.10 |
| | | 1880.0 | -32.80 | | | 19.80 |
| | | 1907.6 | -30.46 | | | 17.46 |
| | HSDPA | 1852.4 | -32.92 | 19.92 | | |
| | | 1880.0 | -32.29 | 19.29 | | |
| | | 1907.6 | -31.27 | 18.27 | | |

LTE 5

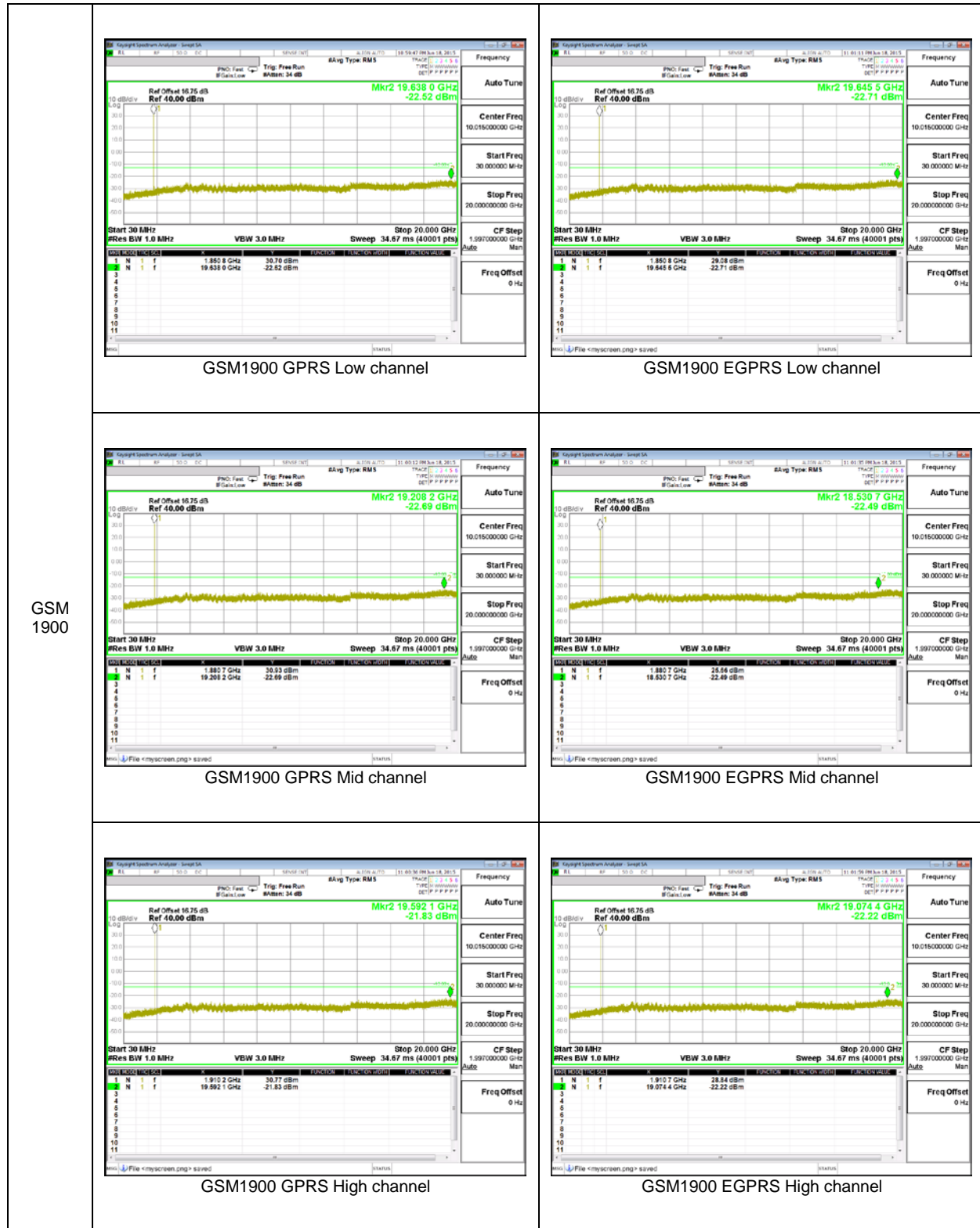
| Bandwidth | Mode | f [MHz] | Spurious [dBm] | Limit [dBm] | Margin [dB] |
|-----------|-------|---------|----------------|-------------|-------------|
| 10 MHz | QPSK | 829.0 | -26.97 | -13.00 | 13.97 |
| | | 836.5 | -27.29 | | 14.29 |
| | | 844.0 | -26.48 | | 13.48 |
| | 16QAM | 829.0 | -26.28 | | 13.28 |
| | | 836.5 | -26.65 | | 13.65 |
| | | 844.0 | -27.05 | | 14.05 |
| 5 MHz | QPSK | 826.5 | -27.48 | | 14.21 |
| | | 836.5 | -27.06 | | 14.06 |
| | | 846.5 | -26.49 | | 13.49 |
| | 16QAM | 826.5 | -26.93 | | 13.93 |
| | | 836.5 | -26.56 | | 13.56 |
| | | 846.5 | -27.02 | | 14.02 |
| 3 MHz | QPSK | 825.5 | -27.51 | | 14.51 |
| | | 836.5 | -26.59 | | 13.59 |
| | | 847.5 | -27.72 | | 14.72 |
| | 16QAM | 825.5 | -27.51 | | 14.51 |
| | | 836.5 | -27.19 | | 14.19 |
| | | 847.5 | -27.00 | | 14.00 |
| 1.4 MHz | QPSK | 824.7 | -26.78 | 13.78 | |
| | | 836.5 | -26.61 | 13.61 | |
| | | 848.3 | -27.23 | 14.23 | |
| | 16QAM | 824.7 | -27.74 | 14.74 | |
| | | 836.5 | -27.46 | 14.46 | |
| | | 848.3 | -26.11 | 13.11 | |

10.3.2. OUT OF BAND EMISSIONS PLOTS

GSM 850



GSM 1900



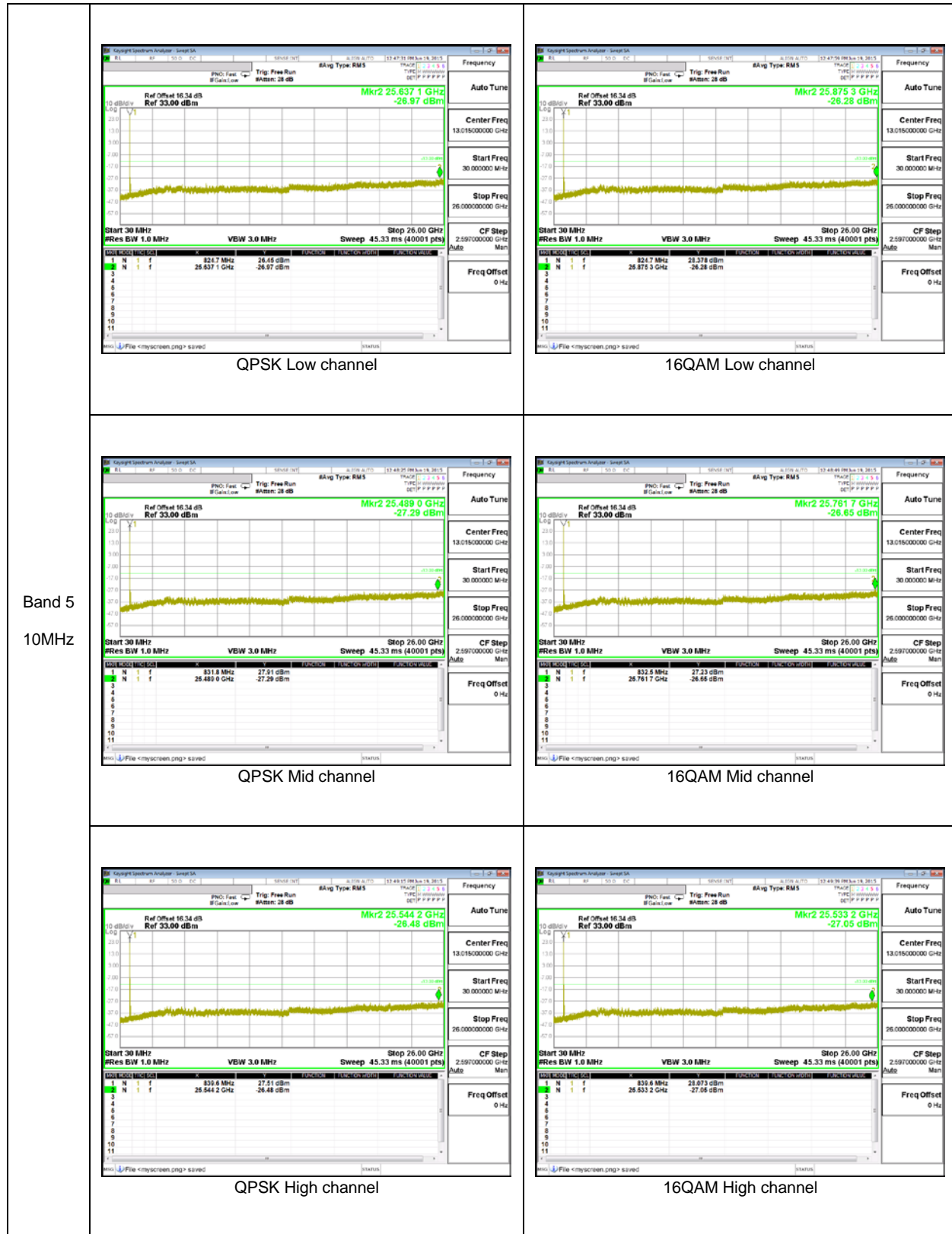
WCDMA Band 5

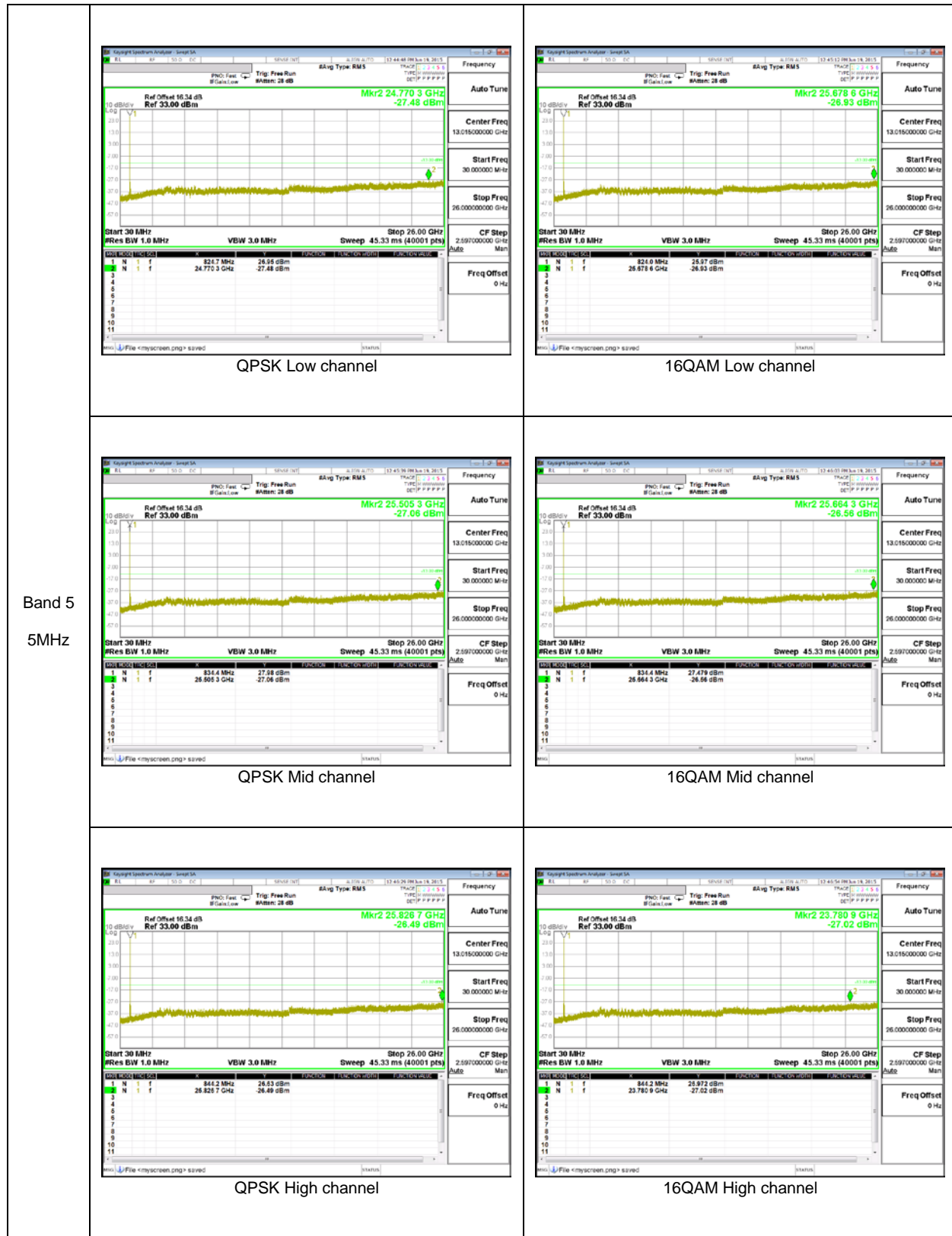


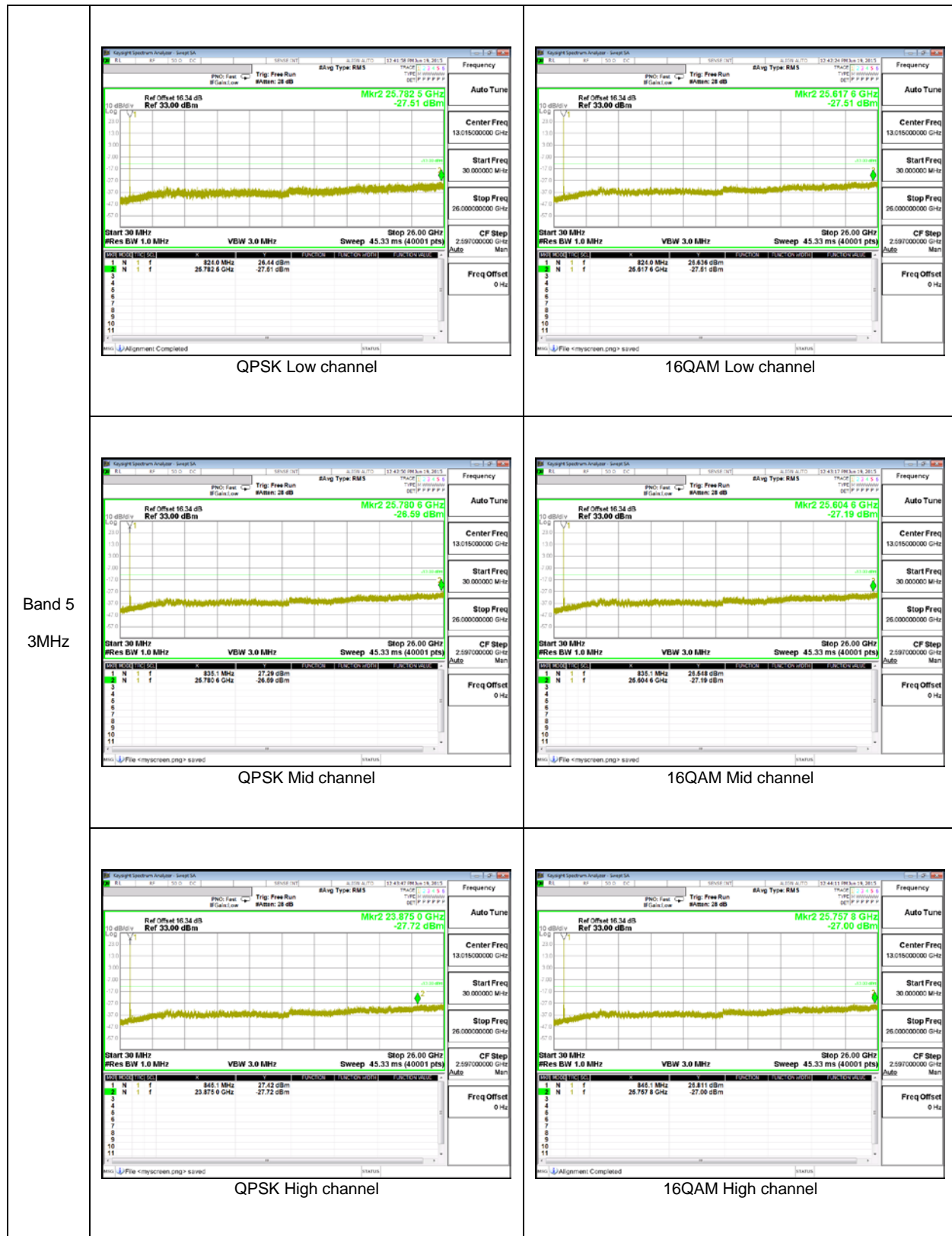
WCDMA Band 2

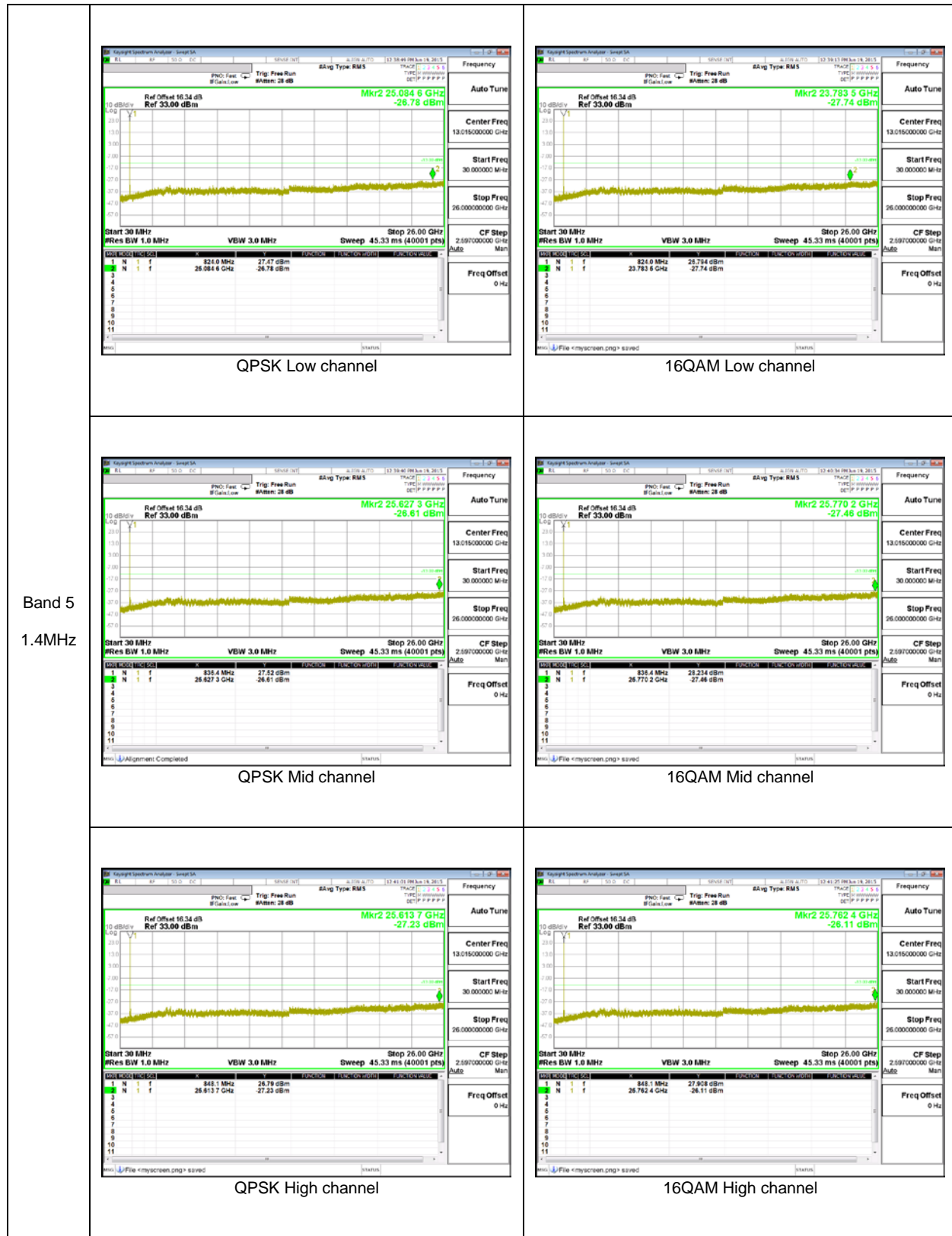


LTE Band 5









Band 5
 1.4MHz

10.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235

LIMITS

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

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

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r02

RESULTS

See the following pages.

10.4.1. FREQUENCY STABILITY RESULTS

LTE Band 5, Channel 20524, Frequency 836.5 MHz

WCDMA Band 5, Channel 4183, Frequency 836.6 MHz

GSM 850, Channel 190, Frequency 836.6 MHz

| Reference Frequency: CELL Mid Channel 836.6 MHz @ 20°C | | | | |
|--|------------------------------|---|-------------|-------------|
| Limit: ± 2.5 ppm = 2091.500 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 50 | 836.59996457 | 0.010 | 2.5 |
| 3.80 | 40 | 836.59998495 | -0.014 | 2.5 |
| 3.80 | 30 | 836.59997415 | -0.001 | 2.5 |
| 3.80 | 20 | 836.59997311 | 0 | 2.5 |
| 3.80 | 10 | 836.59998282 | -0.012 | 2.5 |
| 3.80 | 0 | 836.59998144 | -0.010 | 2.5 |
| 3.80 | -10 | 836.59997027 | 0.003 | 2.5 |
| 3.80 | -20 | 836.59998043 | -0.009 | 2.5 |
| 3.80 | -30 | 836.59997575 | -0.003 | 2.5 |

| Reference Frequency: CELL Mid Channel 836.6 MHz @ 20°C | | | | |
|--|------------------------------|---|-------------|-------------|
| Limit: ± 2.5 ppm = 2091.500 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 20 | 836.59997311 | 0 | 2.5 |
| 4.20 | 20 | 836.59998657 | -0.016 | 2.5 |
| 3.40 | 20 | 836.59998009 | -0.008 | 2.5 |

WCDMA Band 2, Channel 9400, Frequency 1880.0 MHz

GSM 1900, Channel 661, Frequency 1880.0 MHz

| Reference Frequency: PCS Mid Channel 1880 MHz @ 20°C | | | | |
|--|------------------------------|---|-------------|-------------|
| Limit: ± 2.5 ppm = 4700.000 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 50 | 1879.99995190 | 0.003 | 2.5 |
| 3.80 | 40 | 1879.99995574 | 0.001 | 2.5 |
| 3.80 | 30 | 1879.99995745 | 0.000 | 2.5 |
| 3.80 | 20 | 1879.99995745 | 0 | 2.5 |
| 3.80 | 10 | 1879.99995811 | 0.000 | 2.5 |
| 3.80 | 0 | 1879.99995871 | -0.001 | 2.5 |
| 3.80 | -10 | 1879.99995683 | 0.000 | 2.5 |
| 3.80 | -20 | 1879.99994726 | 0.005 | 2.5 |
| 3.80 | -30 | 1879.99994658 | 0.006 | 2.5 |

| Reference Frequency: PCS Mid Channel 1880 MHz @ 20°C | | | | |
|--|------------------------------|---|-------------|-------------|
| Limit: ± 2.5 ppm = 4700.000 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 20 | 1879.99995745 | 0 | 2.5 |
| 4.20 | 20 | 1879.99995717 | 0.000 | 2.5 |
| 3.40 | 20 | 1879.99995858 | -0.001 | 2.5 |

11. RADIATED TEST RESULTS

11.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232

LIMITS

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

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

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

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17; MXA setting reference to 971168 D01 v02r02

For peak power measurement with a MXA:

a) Set the RBW \geq OBW; b) Set VBW $\geq 3 \times$ RBW; c) Set span $\geq 2 \times$ RBW; d) Sweep time = auto couple; e) Detector = peak; f) Ensure that the number of measurement points \geq span/RBW; g) Trace mode = max hold;

For average power measurement with a MXA:

a) Set span to at least 1.5 times the OBW; b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz; c) Set VBW $\geq 3 \times$ RBW; d) Set number of points in sweep $\geq 2 \times$ span / RBW; e) Sweep time = auto-couple; f) Detector = RMS (power averaging); g) Use free run trigger If burst duty cycle ≥ 98 ; h) Use trigger to capture bursts If burst duty cycle < 98 ; i) Trace average at least 100 traces in power averaging (*i.e.*, RMS) mode. j) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

TEST RESULTS

11.1.1. ERP/EIRP Results

GSM

| Band | Mode | Channel | f [MHz] | ERP / EIRP | |
|---------|-------|---------|---------|------------|---------|
| | | | | [dBm] | [mW] |
| GSM850 | GPRS | 128 | 824.2 | 30.57 | 1140.25 |
| | | 190 | 836.6 | 31.02 | 1264.74 |
| | | 251 | 848.8 | 31.61 | 1448.77 |
| | EGPRS | 128 | 824.2 | 24.93 | 311.17 |
| | | 190 | 836.6 | 24.67 | 293.09 |
| | | 251 | 848.8 | 25.34 | 341.98 |
| GSM1900 | GPRS | 512 | 1850.2 | 28.23 | 665.27 |
| | | 661 | 1880.0 | 29.99 | 997.70 |
| | | 810 | 1909.8 | 27.52 | 564.94 |
| | EGPRS | 512 | 1850.2 | 21.15 | 130.32 |
| | | 661 | 1880.0 | 23.52 | 224.91 |
| | | 810 | 1909.8 | 21.20 | 131.83 |

WCDMA

| Band | Mode | Channel | f [MHz] | ERP / EIRP | |
|--------|-------|---------|---------|------------|--------|
| | | | | [dBm] | [mW] |
| Band 5 | REL99 | 4132 | 826.4 | 18.68 | 73.79 |
| | | 4183 | 836.6 | 19.52 | 89.54 |
| | | 4233 | 846.6 | 20.69 | 117.22 |
| | HSDPA | 4132 | 826.4 | 19.28 | 84.72 |
| | | 4183 | 836.6 | 19.57 | 90.57 |
| | | 4233 | 846.6 | 20.72 | 118.03 |
| Band 2 | REL99 | 9262 | 1852.4 | 20.53 | 112.98 |
| | | 9400 | 1880.0 | 20.75 | 118.85 |
| | | 9538 | 1907.6 | 20.25 | 105.93 |
| | HSDPA | 9262 | 1852.4 | 20.20 | 104.71 |
| | | 9400 | 1880.0 | 20.43 | 110.41 |
| | | 9538 | 1907.6 | 19.77 | 94.84 |

LTE Band 5

| Band | BW [MHz] | Mode | RB/RB Size | f [MHz] | ERP / EIRP | |
|--------|----------|-------|------------|---------|------------|-------|
| | | | Full RB | | [dBm] | [mW] |
| Band 5 | 10 | QPSK | 50/0 | 1860.0 | 18.45 | 69.98 |
| | | | 50/0 | 1880.0 | 18.44 | 69.82 |
| | | | 50/0 | 1900.0 | 19.12 | 81.66 |
| | | 16QAM | 50/0 | 1860.0 | 17.16 | 52.00 |
| | | | 50/0 | 1880.0 | 17.06 | 50.82 |
| | | | 50/0 | 1900.0 | 17.93 | 62.09 |
| | 5 | QPSK | 25/0 | 1852.5 | 18.22 | 66.37 |
| | | | 25/0 | 1880.0 | 18.27 | 67.14 |
| | | | 25/0 | 1907.5 | 18.82 | 76.21 |
| | | 16QAM | 25/0 | 1852.5 | 17.14 | 51.76 |
| | | | 25/0 | 1880.0 | 16.96 | 49.66 |
| | | | 25/0 | 1907.5 | 18.67 | 73.62 |
| | 3 | QPSK | 15/0 | 1815.5 | 17.86 | 61.09 |
| | | | 15/0 | 1880.0 | 18.29 | 67.45 |
| | | | 15/0 | 1908.5 | 18.78 | 75.51 |
| | | 16QAM | 15/0 | 1815.5 | 17.01 | 50.23 |
| | | | 15/0 | 1880.0 | 16.97 | 49.77 |
| | | | 15/0 | 1908.5 | 18.06 | 63.97 |
| | 1.4 | QPSK | 6/0 | 1850.7 | 15.85 | 38.46 |
| | | | 6/0 | 1880.0 | 15.96 | 39.45 |
| | | | 6/0 | 1909.3 | 16.76 | 47.42 |
| | | 16QAM | 6/0 | 1850.7 | 14.94 | 31.19 |
| | | | 6/0 | 1880.0 | 15.19 | 33.04 |
| | | | 6/0 | 1909.3 | 16.04 | 40.18 |

11.1.2. ERP/EIRP DATA

GSM 850

| | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
|---|--|-----------------|-----------------|--------------------|-----------|-------------|-------------|-------|--|
| | Company: Samsung | | | | | | | | |
| Project #: 15K21054 | | | | | | | | | |
| Date: 06-18-15 | | | | | | | | | |
| Test Engineer: Steven Kim | | | | | | | | | |
| Configuration: EUT ONLY, Y Position | | | | | | | | | |
| Mode: GPRS 850 MHz | | | | | | | | | |
| Test Equipment: | | | | | | | | | |
| Receiving: VULB9163-750, and 3m Chamber N-type Cable (Setup this one for testing EUT) | | | | | | | | | |
| Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | |
| Low Ch | | | | | | | | | |
| 824.20 | 27.26 | V | 1.1 | -1.6 | 24.64 | 38.5 | -13.8 | | |
| 824.20 | 33.19 | H | 1.1 | -1.6 | 30.57 | 38.5 | -7.9 | | |
| Mid Ch | | | | | | | | | |
| 836.60 | 26.53 | V | 1.1 | -1.4 | 24.04 | 38.5 | -14.4 | | |
| 836.60 | 33.51 | H | 1.1 | -1.4 | 31.02 | 38.5 | -7.4 | | |
| High Ch | | | | | | | | | |
| 848.80 | 26.60 | V | 1.1 | -1.3 | 24.24 | 38.5 | -14.2 | | |
| 848.80 | 33.97 | H | 1.1 | -1.3 | 31.61 | 38.5 | -6.8 | | |
| Rev. 3.17.11 | | | | | | | | | |

GSM
 GSM850
 GPRS

| | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
|---|--|-----------------|-----------------|--------------------|-----------|-------------|-------------|-------|--|
| | Company: Samsung | | | | | | | | |
| Project #: 15K21054 | | | | | | | | | |
| Date: 06-20-15 | | | | | | | | | |
| Test Engineer: Steven Kim | | | | | | | | | |
| Configuration: EUT ONLY, X Position | | | | | | | | | |
| Mode: GPRS 850 MHz | | | | | | | | | |
| Test Equipment: | | | | | | | | | |
| Receiving: VULB9163-750, and 3m Chamber N-type Cable (Setup this one for testing EUT) | | | | | | | | | |
| Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | |
| Low Ch | | | | | | | | | |
| 824.20 | 21.47 | V | 1.1 | -1.6 | 18.85 | 38.5 | -19.6 | | |
| 824.20 | 27.55 | H | 1.1 | -1.6 | 24.93 | 38.5 | -13.5 | | |
| Mid Ch | | | | | | | | | |
| 836.60 | 21.24 | V | 1.1 | -1.4 | 18.75 | 38.5 | -19.7 | | |
| 836.60 | 27.16 | H | 1.1 | -1.4 | 24.67 | 38.5 | -13.8 | | |
| High Ch | | | | | | | | | |
| 848.80 | 21.31 | V | 1.1 | -1.3 | 18.95 | 38.5 | -19.5 | | |
| 848.80 | 27.70 | H | 1.1 | -1.3 | 25.34 | 38.5 | -13.1 | | |
| Rev. 3.17.11 | | | | | | | | | |

GSM
 GSM850
 EGPRS

GSM 1900

| GSM GSM1900 GPRS | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|-----------------|------------------|--------------------|-----------------|--------------------|------------|-------------|------------|-------|---------------|--|--|--|--|--|--|--|--|---------|------|---|------|------|-------|------|-------|--|---------|------|---|------|------|-------|------|-------|--|---------------|--|--|--|--|--|--|--|--|---------|------|---|------|------|-------|------|------|--|---------|------|---|------|------|-------|------|-------|--|----------------|--|--|--|--|--|--|--|--|---------|------|---|------|------|-------|------|-------|--|---------|------|---|------|------|-------|------|-------|
| | <p> Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, X Position Mode: GPRS 1900MHz </p> <p> Test Equipment: Receiving: 3117, and Chamber 1 SMA Cables Substitution: 3115[00161451] Substitution, 3m SMA Cable Warehouse </p> <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1850.20</td> <td>17.7</td> <td>V</td> <td>1.60</td> <td>8.80</td> <td>24.88</td> <td>33.0</td> <td>-8.1</td> <td></td> </tr> <tr> <td>1850.20</td> <td>21.0</td> <td>H</td> <td>1.60</td> <td>8.80</td> <td>28.23</td> <td>33.0</td> <td>-4.8</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1880.00</td> <td>20.5</td> <td>V</td> <td>1.62</td> <td>8.62</td> <td>27.52</td> <td>33.0</td> <td>-5.5</td> <td></td> </tr> <tr> <td>1880.00</td> <td>23.0</td> <td>H</td> <td>1.62</td> <td>8.62</td> <td>29.99</td> <td>33.0</td> <td>-3.0</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1909.80</td> <td>19.4</td> <td>V</td> <td>1.63</td> <td>8.44</td> <td>26.17</td> <td>33.0</td> <td>-6.8</td> <td></td> </tr> <tr> <td>1909.80</td> <td>20.7</td> <td>H</td> <td>1.63</td> <td>8.44</td> <td>27.52</td> <td>33.0</td> <td>-5.5</td> <td></td> </tr> </tbody> </table> <p>Rev. 3.17.11</p> | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Ch | | | | | | | | | 1850.20 | 17.7 | V | 1.60 | 8.80 | 24.88 | 33.0 | -8.1 | | 1850.20 | 21.0 | H | 1.60 | 8.80 | 28.23 | 33.0 | -4.8 | | Mid Ch | | | | | | | | | 1880.00 | 20.5 | V | 1.62 | 8.62 | 27.52 | 33.0 | -5.5 | | 1880.00 | 23.0 | H | 1.62 | 8.62 | 29.99 | 33.0 | -3.0 | | High Ch | | | | | | | | | 1909.80 | 19.4 | V | 1.63 | 8.44 | 26.17 | 33.0 | -6.8 | | 1909.80 | 20.7 | H | 1.63 | 8.44 | 27.52 | 33.0 | -5.5 |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1850.20 | 17.7 | V | 1.60 | 8.80 | 24.88 | 33.0 | -8.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1850.20 | 21.0 | H | 1.60 | 8.80 | 28.23 | 33.0 | -4.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1880.00 | 20.5 | V | 1.62 | 8.62 | 27.52 | 33.0 | -5.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1880.00 | 23.0 | H | 1.62 | 8.62 | 29.99 | 33.0 | -3.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1909.80 | 19.4 | V | 1.63 | 8.44 | 26.17 | 33.0 | -6.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1909.80 | 20.7 | H | 1.63 | 8.44 | 27.52 | 33.0 | -5.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GSM GSM1900 EGPRS | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <p> Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, X Position Mode: EGPRS 1900MHz </p> <p> Test Equipment: Receiving: 3117, and Chamber 1 SMA Cables Substitution: 3115 Substitution, 3m SMA Cable Warehouse </p> <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1850.20</td> <td>13.7</td> <td>V</td> <td>1.60</td> <td>8.80</td> <td>20.92</td> <td>33.0</td> <td>-12.1</td> <td></td> </tr> <tr> <td>1850.20</td> <td>14.0</td> <td>H</td> <td>1.60</td> <td>8.80</td> <td>21.15</td> <td>33.0</td> <td>-11.9</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1880.00</td> <td>16.5</td> <td>V</td> <td>1.62</td> <td>8.62</td> <td>23.52</td> <td>33.0</td> <td>-9.5</td> <td></td> </tr> <tr> <td>1880.00</td> <td>15.8</td> <td>H</td> <td>1.62</td> <td>8.62</td> <td>22.80</td> <td>33.0</td> <td>-10.2</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1909.80</td> <td>14.4</td> <td>V</td> <td>1.63</td> <td>8.44</td> <td>21.20</td> <td>33.0</td> <td>-11.8</td> <td></td> </tr> <tr> <td>1909.80</td> <td>13.6</td> <td>H</td> <td>1.63</td> <td>8.44</td> <td>20.41</td> <td>33.0</td> <td>-12.6</td> <td></td> </tr> </tbody> </table> <p>Rev. 3.17.11</p> | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Ch | | | | | | | | | 1850.20 | 13.7 | V | 1.60 | 8.80 | 20.92 | 33.0 | -12.1 | | 1850.20 | 14.0 | H | 1.60 | 8.80 | 21.15 | 33.0 | -11.9 | | Mid Ch | | | | | | | | | 1880.00 | 16.5 | V | 1.62 | 8.62 | 23.52 | 33.0 | -9.5 | | 1880.00 | 15.8 | H | 1.62 | 8.62 | 22.80 | 33.0 | -10.2 | | High Ch | | | | | | | | | 1909.80 | 14.4 | V | 1.63 | 8.44 | 21.20 | 33.0 | -11.8 | | 1909.80 | 13.6 | H | 1.63 | 8.44 | 20.41 | 33.0 | -12.6 |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1850.20 | 13.7 | V | 1.60 | 8.80 | 20.92 | 33.0 | -12.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1850.20 | 14.0 | H | 1.60 | 8.80 | 21.15 | 33.0 | -11.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1880.00 | 16.5 | V | 1.62 | 8.62 | 23.52 | 33.0 | -9.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1880.00 | 15.8 | H | 1.62 | 8.62 | 22.80 | 33.0 | -10.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1909.80 | 14.4 | V | 1.63 | 8.44 | 21.20 | 33.0 | -11.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1909.80 | 13.6 | H | 1.63 | 8.44 | 20.41 | 33.0 | -12.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

WCDMA Band 5

| WCDMA Band 5 REL99 | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|--------------------|---------------------|-----------------------|--------------------|-----------------------|----------------|----------------|----------------|-------|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|---------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|
| | <p> Company: Samsung Project #: 15K21054 Date: 06-18-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: Rel 99_850 MHz </p> <p> Test Equipment: Receiving: VULB9163-750, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. </p> <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>Low Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>826.40</td> <td>16.77</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>14.16</td> <td>38.5</td> <td>-24.3</td> <td></td> </tr> <tr> <td>826.40</td> <td>21.29</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>18.68</td> <td>38.5</td> <td>-19.8</td> <td></td> </tr> <tr> <td>Mid Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>836.60</td> <td>16.09</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>13.60</td> <td>38.5</td> <td>-24.9</td> <td></td> </tr> <tr> <td>836.60</td> <td>22.01</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>19.52</td> <td>38.5</td> <td>-18.9</td> <td></td> </tr> <tr> <td>High Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>846.60</td> <td>16.19</td> <td>V</td> <td>1.1</td> <td>-1.3</td> <td>13.81</td> <td>38.5</td> <td>-24.6</td> <td></td> </tr> <tr> <td>846.60</td> <td>23.07</td> <td>H</td> <td>1.1</td> <td>-1.3</td> <td>20.69</td> <td>38.5</td> <td>-17.8</td> <td></td> </tr> </tbody> </table> <p>Rev. 3.17.11</p> | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 826.40 | 16.77 | V | 1.1 | -1.5 | 14.16 | 38.5 | -24.3 | | 826.40 | 21.29 | H | 1.1 | -1.5 | 18.68 | 38.5 | -19.8 | | Mid Ch | | | | | | | | | 836.60 | 16.09 | V | 1.1 | -1.4 | 13.60 | 38.5 | -24.9 | | 836.60 | 22.01 | H | 1.1 | -1.4 | 19.52 | 38.5 | -18.9 | | High Ch | | | | | | | | | 846.60 | 16.19 | V | 1.1 | -1.3 | 13.81 | 38.5 | -24.6 | | 846.60 | 23.07 | H | 1.1 | -1.3 | 20.69 | 38.5 | -17.8 | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.40 | 16.77 | V | 1.1 | -1.5 | 14.16 | 38.5 | -24.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.40 | 21.29 | H | 1.1 | -1.5 | 18.68 | 38.5 | -19.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.60 | 16.09 | V | 1.1 | -1.4 | 13.60 | 38.5 | -24.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.60 | 22.01 | H | 1.1 | -1.4 | 19.52 | 38.5 | -18.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.60 | 16.19 | V | 1.1 | -1.3 | 13.81 | 38.5 | -24.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.60 | 23.07 | H | 1.1 | -1.3 | 20.69 | 38.5 | -17.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WCDMA Band 5 HSDPA | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <p> Company: Samsung Project #: 15K21054 Date: 06-18-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: HSDPA_850 MHz </p> <p> Test Equipment: Receiving: VULB9163-750, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. </p> <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>Low Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>826.40</td> <td>16.81</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>14.20</td> <td>38.5</td> <td>-24.3</td> <td></td> </tr> <tr> <td>826.40</td> <td>21.89</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>19.28</td> <td>38.5</td> <td>-19.2</td> <td></td> </tr> <tr> <td>Mid Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>836.60</td> <td>16.19</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>13.70</td> <td>38.5</td> <td>-24.8</td> <td></td> </tr> <tr> <td>836.60</td> <td>22.06</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>19.57</td> <td>38.5</td> <td>-18.9</td> <td></td> </tr> <tr> <td>High Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>846.60</td> <td>16.34</td> <td>V</td> <td>1.1</td> <td>-1.3</td> <td>13.96</td> <td>38.5</td> <td>-24.5</td> <td></td> </tr> <tr> <td>846.60</td> <td>23.10</td> <td>H</td> <td>1.1</td> <td>-1.3</td> <td>20.72</td> <td>38.5</td> <td>-17.7</td> <td></td> </tr> </tbody> </table> <p>Rev. 3.17.11</p> | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 826.40 | 16.81 | V | 1.1 | -1.5 | 14.20 | 38.5 | -24.3 | | 826.40 | 21.89 | H | 1.1 | -1.5 | 19.28 | 38.5 | -19.2 | | Mid Ch | | | | | | | | | 836.60 | 16.19 | V | 1.1 | -1.4 | 13.70 | 38.5 | -24.8 | | 836.60 | 22.06 | H | 1.1 | -1.4 | 19.57 | 38.5 | -18.9 | | High Ch | | | | | | | | | 846.60 | 16.34 | V | 1.1 | -1.3 | 13.96 | 38.5 | -24.5 | | 846.60 | 23.10 | H | 1.1 | -1.3 | 20.72 | 38.5 | -17.7 | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.40 | 16.81 | V | 1.1 | -1.5 | 14.20 | 38.5 | -24.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.40 | 21.89 | H | 1.1 | -1.5 | 19.28 | 38.5 | -19.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.60 | 16.19 | V | 1.1 | -1.4 | 13.70 | 38.5 | -24.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.60 | 22.06 | H | 1.1 | -1.4 | 19.57 | 38.5 | -18.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.60 | 16.34 | V | 1.1 | -1.3 | 13.96 | 38.5 | -24.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.60 | 23.10 | H | 1.1 | -1.3 | 20.72 | 38.5 | -17.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

WCDMA Band 2

| | | | | | | | | | |
|--------------------------|---|-------------------|------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| WCDMA Band 2 REL99 | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, X Position Mode: REL99_1900 MHz Test Equipment: Receiving: 3117, and Chamber 1 SMA Cables Substitution: 3115 Substitution, 3m SMA Cable Warehouse | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | EIRP | Limit | Margin | Notes |
| | MHz | (dBm) | (H/V) | (dB) | (dBi) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 1852.40 | 9.58 | V | 1.60 | 8.79 | 16.77 | 33.0 | -16.2 | |
| | 1852.40 | 13.34 | H | 1.60 | 8.79 | 20.53 | 33.0 | -12.5 | |
| | Mid Ch | | | | | | | | |
| | 1880.00 | 12.95 | V | 1.62 | 8.62 | 19.95 | 33.0 | -13.0 | |
| | 1880.00 | 13.75 | H | 1.62 | 8.62 | 20.75 | 33.0 | -12.2 | |
| | High Ch | | | | | | | | |
| | 1907.60 | 13.43 | V | 1.63 | 8.45 | 20.25 | 33.0 | -12.7 | |
| | 1907.60 | 13.03 | H | 1.63 | 8.45 | 19.85 | 33.0 | -13.1 | |
| | Rev. 3.17.11 | | | | | | | | |

| | | | | | | | | | |
|--------------------------|---|-------------------|------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| WCDMA Band 2 HSDPA | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, X Position Mode: HSDPA_1900 MHz Test Equipment: Receiving: 3117, and Chamber 1 SMA Cables Substitution: 3115 Substitution, 3m SMA Cable Warehouse | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | EIRP | Limit | Margin | Notes |
| | MHz | (dBm) | (H/V) | (dB) | (dBi) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 1852.40 | 9.32 | V | 1.60 | 8.79 | 16.51 | 33.0 | -16.5 | |
| | 1852.40 | 13.01 | H | 1.60 | 8.79 | 20.20 | 33.0 | -12.8 | |
| | Mid Ch | | | | | | | | |
| | 1880.00 | 13.07 | V | 1.62 | 8.62 | 20.07 | 33.0 | -12.9 | |
| | 1880.00 | 13.43 | H | 1.62 | 8.62 | 20.43 | 33.0 | -12.6 | |
| | High Ch | | | | | | | | |
| | 1907.60 | 12.95 | V | 1.63 | 8.45 | 19.77 | 33.0 | -13.2 | |
| | 1907.60 | 12.69 | H | 1.63 | 8.45 | 19.51 | 33.0 | -13.5 | |
| | Rev. 3.17.11 | | | | | | | | |
| | Note: For Band 2 EIRP limit is 33dBm | | | | | | | | |

LTE Band 5

| LTE Band 5 10MHz QPSK | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--|-----------------|------------------|--------------------|-----------------|--------------------|-------------|-------------|-------------|-------|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|---------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|
| | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: LTE5 1.4MHz FUND QPSK Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>829.00</td> <td>14.17</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>11.59</td> <td>38.5</td> <td>-26.9</td> <td></td> </tr> <tr> <td>829.00</td> <td>21.03</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>18.45</td> <td>38.5</td> <td>-20.0</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.50</td> <td>13.43</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>10.94</td> <td>38.5</td> <td>-27.5</td> <td></td> </tr> <tr> <td>836.50</td> <td>20.93</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>18.44</td> <td>38.5</td> <td>-20.0</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>844.00</td> <td>13.22</td> <td>V</td> <td>1.1</td> <td>-1.3</td> <td>10.83</td> <td>38.5</td> <td>-27.6</td> <td></td> </tr> <tr> <td>844.00</td> <td>21.54</td> <td>H</td> <td>1.1</td> <td>-1.3</td> <td>19.12</td> <td>38.5</td> <td>-19.3</td> <td></td> </tr> </tbody> </table> Rev. 3.17.11 | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 829.00 | 14.17 | V | 1.1 | -1.5 | 11.59 | 38.5 | -26.9 | | 829.00 | 21.03 | H | 1.1 | -1.5 | 18.45 | 38.5 | -20.0 | | Mid Ch | | | | | | | | | 836.50 | 13.43 | V | 1.1 | -1.4 | 10.94 | 38.5 | -27.5 | | 836.50 | 20.93 | H | 1.1 | -1.4 | 18.44 | 38.5 | -20.0 | | High Ch | | | | | | | | | 844.00 | 13.22 | V | 1.1 | -1.3 | 10.83 | 38.5 | -27.6 | | 844.00 | 21.54 | H | 1.1 | -1.3 | 19.12 | 38.5 | -19.3 | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 829.00 | 14.17 | V | 1.1 | -1.5 | 11.59 | 38.5 | -26.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 829.00 | 21.03 | H | 1.1 | -1.5 | 18.45 | 38.5 | -20.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 13.43 | V | 1.1 | -1.4 | 10.94 | 38.5 | -27.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 20.93 | H | 1.1 | -1.4 | 18.44 | 38.5 | -20.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 844.00 | 13.22 | V | 1.1 | -1.3 | 10.83 | 38.5 | -27.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 844.00 | 21.54 | H | 1.1 | -1.3 | 19.12 | 38.5 | -19.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LTE Band 5 10MHz 16QAM | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: LTE5 1.4MHz FUND QPSK Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>829.00</td> <td>12.97</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>10.39</td> <td>38.5</td> <td>-28.1</td> <td></td> </tr> <tr> <td>829.00</td> <td>19.74</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>17.16</td> <td>38.5</td> <td>-21.3</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.50</td> <td>12.18</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>9.67</td> <td>38.5</td> <td>-28.8</td> <td></td> </tr> <tr> <td>836.50</td> <td>19.57</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>17.06</td> <td>38.5</td> <td>-21.4</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>844.00</td> <td>11.79</td> <td>V</td> <td>1.1</td> <td>-1.3</td> <td>9.37</td> <td>38.5</td> <td>-29.1</td> <td></td> </tr> <tr> <td>844.00</td> <td>20.35</td> <td>H</td> <td>1.1</td> <td>-1.3</td> <td>17.93</td> <td>38.5</td> <td>-20.5</td> <td></td> </tr> </tbody> </table> Rev. 3.17.11 | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 829.00 | 12.97 | V | 1.1 | -1.5 | 10.39 | 38.5 | -28.1 | | 829.00 | 19.74 | H | 1.1 | -1.5 | 17.16 | 38.5 | -21.3 | | Mid Ch | | | | | | | | | 836.50 | 12.18 | V | 1.1 | -1.4 | 9.67 | 38.5 | -28.8 | | 836.50 | 19.57 | H | 1.1 | -1.4 | 17.06 | 38.5 | -21.4 | | High Ch | | | | | | | | | 844.00 | 11.79 | V | 1.1 | -1.3 | 9.37 | 38.5 | -29.1 | | 844.00 | 20.35 | H | 1.1 | -1.3 | 17.93 | 38.5 | -20.5 | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 829.00 | 12.97 | V | 1.1 | -1.5 | 10.39 | 38.5 | -28.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 829.00 | 19.74 | H | 1.1 | -1.5 | 17.16 | 38.5 | -21.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 12.18 | V | 1.1 | -1.4 | 9.67 | 38.5 | -28.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 19.57 | H | 1.1 | -1.4 | 17.06 | 38.5 | -21.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 844.00 | 11.79 | V | 1.1 | -1.3 | 9.37 | 38.5 | -29.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 844.00 | 20.35 | H | 1.1 | -1.3 | 17.93 | 38.5 | -20.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| LTE Band 5 5MHz QPSK | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|-----------------|------------------|--------------------|-----------------|--------------------|-------------|-------------|-------------|-------|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|---------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|
| | <p> Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: LTE5 5MHz FUND QPSK </p> <p> Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. </p> <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>826.50</td> <td>13.67</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>11.07</td> <td>38.5</td> <td>-27.4</td> <td></td> </tr> <tr> <td>826.50</td> <td>20.82</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>18.22</td> <td>38.5</td> <td>-20.2</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.50</td> <td>13.29</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>10.80</td> <td>38.5</td> <td>-27.7</td> <td></td> </tr> <tr> <td>836.50</td> <td>20.76</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>18.27</td> <td>38.5</td> <td>-20.2</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>846.50</td> <td>13.57</td> <td>V</td> <td>1.6</td> <td>-1.3</td> <td>10.69</td> <td>38.5</td> <td>-27.8</td> <td></td> </tr> <tr> <td>846.50</td> <td>21.70</td> <td>H</td> <td>1.6</td> <td>-1.3</td> <td>18.82</td> <td>38.5</td> <td>-19.6</td> <td></td> </tr> </tbody> </table> <p>Rev. 3.17.11</p> | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 826.50 | 13.67 | V | 1.1 | -1.5 | 11.07 | 38.5 | -27.4 | | 826.50 | 20.82 | H | 1.1 | -1.5 | 18.22 | 38.5 | -20.2 | | Mid Ch | | | | | | | | | 836.50 | 13.29 | V | 1.1 | -1.4 | 10.80 | 38.5 | -27.7 | | 836.50 | 20.76 | H | 1.1 | -1.4 | 18.27 | 38.5 | -20.2 | | High Ch | | | | | | | | | 846.50 | 13.57 | V | 1.6 | -1.3 | 10.69 | 38.5 | -27.8 | | 846.50 | 21.70 | H | 1.6 | -1.3 | 18.82 | 38.5 | -19.6 |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.50 | 13.67 | V | 1.1 | -1.5 | 11.07 | 38.5 | -27.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.50 | 20.82 | H | 1.1 | -1.5 | 18.22 | 38.5 | -20.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 13.29 | V | 1.1 | -1.4 | 10.80 | 38.5 | -27.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 20.76 | H | 1.1 | -1.4 | 18.27 | 38.5 | -20.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.50 | 13.57 | V | 1.6 | -1.3 | 10.69 | 38.5 | -27.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.50 | 21.70 | H | 1.6 | -1.3 | 18.82 | 38.5 | -19.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LTE Band 5 5MHz 16QAM | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <p> Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: LTE5 5MHz FUND 16QAM </p> <p> Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. </p> <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>826.50</td> <td>12.75</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>10.15</td> <td>38.5</td> <td>-28.3</td> <td></td> </tr> <tr> <td>826.50</td> <td>19.74</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>17.14</td> <td>38.5</td> <td>-21.3</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.50</td> <td>12.31</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>9.81</td> <td>38.5</td> <td>-28.6</td> <td></td> </tr> <tr> <td>836.50</td> <td>19.45</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>16.96</td> <td>38.5</td> <td>-21.5</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>846.50</td> <td>12.48</td> <td>V</td> <td>1.1</td> <td>-1.3</td> <td>10.10</td> <td>38.5</td> <td>-28.4</td> <td></td> </tr> <tr> <td>846.50</td> <td>21.05</td> <td>H</td> <td>1.1</td> <td>-1.3</td> <td>18.67</td> <td>38.5</td> <td>-19.8</td> <td></td> </tr> </tbody> </table> <p>Rev. 3.17.11</p> | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 826.50 | 12.75 | V | 1.1 | -1.5 | 10.15 | 38.5 | -28.3 | | 826.50 | 19.74 | H | 1.1 | -1.5 | 17.14 | 38.5 | -21.3 | | Mid Ch | | | | | | | | | 836.50 | 12.31 | V | 1.1 | -1.4 | 9.81 | 38.5 | -28.6 | | 836.50 | 19.45 | H | 1.1 | -1.4 | 16.96 | 38.5 | -21.5 | | High Ch | | | | | | | | | 846.50 | 12.48 | V | 1.1 | -1.3 | 10.10 | 38.5 | -28.4 | | 846.50 | 21.05 | H | 1.1 | -1.3 | 18.67 | 38.5 | -19.8 |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.50 | 12.75 | V | 1.1 | -1.5 | 10.15 | 38.5 | -28.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 826.50 | 19.74 | H | 1.1 | -1.5 | 17.14 | 38.5 | -21.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 12.31 | V | 1.1 | -1.4 | 9.81 | 38.5 | -28.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 19.45 | H | 1.1 | -1.4 | 16.96 | 38.5 | -21.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.50 | 12.48 | V | 1.1 | -1.3 | 10.10 | 38.5 | -28.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 846.50 | 21.05 | H | 1.1 | -1.3 | 18.67 | 38.5 | -19.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| LTE Band 5 3MHz QPSK | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|------------------|-----------------|-----------------|--------------------|-----------|-------------|-------------|-------|-------|------------------|-----------------|-----------------|--------------------|-----------|-------------|-------------|-------|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|---------|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-------|------|-------|--|--------|-------|---|-----|------|-------|------|-------|--|
| | Company: Samsung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: 15K21054 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: 06-20-15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: Steven Kim | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: EUT ONLY, Y Position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: LTE5 3MHz FUND QPSK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>825.50</td> <td>14.55</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>11.95</td> <td>38.5</td> <td>-26.5</td> <td></td> </tr> <tr> <td>825.50</td> <td>20.46</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>17.86</td> <td>38.5</td> <td>-20.6</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.50</td> <td>14.18</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>11.69</td> <td>38.5</td> <td>-26.8</td> <td></td> </tr> <tr> <td>836.50</td> <td>20.78</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>18.29</td> <td>38.5</td> <td>-20.2</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>847.50</td> <td>13.49</td> <td>V</td> <td>1.6</td> <td>-1.3</td> <td>10.61</td> <td>38.5</td> <td>-27.8</td> <td></td> </tr> <tr> <td>847.50</td> <td>21.66</td> <td>H</td> <td>1.6</td> <td>-1.3</td> <td>18.78</td> <td>38.5</td> <td>-19.7</td> <td></td> </tr> </tbody> </table> | | | | | | | | | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 825.50 | 14.55 | V | 1.1 | -1.5 | 11.95 | 38.5 | -26.5 | | 825.50 | 20.46 | H | 1.1 | -1.5 | 17.86 | 38.5 | -20.6 | | Mid Ch | | | | | | | | | 836.50 | 14.18 | V | 1.1 | -1.4 | 11.69 | 38.5 | -26.8 | | 836.50 | 20.78 | H | 1.1 | -1.4 | 18.29 | 38.5 | -20.2 | | High Ch | | | | | | | | | 847.50 | 13.49 | V | 1.6 | -1.3 | 10.61 | 38.5 | -27.8 | | 847.50 | 21.66 | H | 1.6 | -1.3 | 18.78 | 38.5 | -19.7 | |
| | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825.50 | 14.55 | V | 1.1 | -1.5 | 11.95 | 38.5 | -26.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825.50 | 20.46 | H | 1.1 | -1.5 | 17.86 | 38.5 | -20.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 14.18 | V | 1.1 | -1.4 | 11.69 | 38.5 | -26.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 20.78 | H | 1.1 | -1.4 | 18.29 | 38.5 | -20.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 847.50 | 13.49 | V | 1.6 | -1.3 | 10.61 | 38.5 | -27.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 847.50 | 21.66 | H | 1.6 | -1.3 | 18.78 | 38.5 | -19.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LTE Band 5 3MHz 16QAM | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Company: Samsung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: 15K21054 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: 06-20-15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: Steven Kim | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: EUT ONLY, Y Position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: LTE5 3MHz FUND 16QAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>825.50</td> <td>13.46</td> <td>V</td> <td>1.1</td> <td>-1.5</td> <td>10.86</td> <td>38.5</td> <td>-27.6</td> <td></td> </tr> <tr> <td>825.50</td> <td>19.61</td> <td>H</td> <td>1.1</td> <td>-1.5</td> <td>17.01</td> <td>38.5</td> <td>-21.4</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.50</td> <td>13.51</td> <td>V</td> <td>1.1</td> <td>-1.4</td> <td>11.02</td> <td>38.5</td> <td>-27.4</td> <td></td> </tr> <tr> <td>836.50</td> <td>19.46</td> <td>H</td> <td>1.1</td> <td>-1.4</td> <td>16.97</td> <td>38.5</td> <td>-21.5</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>847.50</td> <td>12.87</td> <td>V</td> <td>1.1</td> <td>-1.3</td> <td>10.49</td> <td>38.5</td> <td>-28.0</td> <td></td> </tr> <tr> <td>847.50</td> <td>20.44</td> <td>H</td> <td>1.1</td> <td>-1.3</td> <td>18.06</td> <td>38.5</td> <td>-20.4</td> <td></td> </tr> </tbody> </table> | | | | | | | | | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 825.50 | 13.46 | V | 1.1 | -1.5 | 10.86 | 38.5 | -27.6 | | 825.50 | 19.61 | H | 1.1 | -1.5 | 17.01 | 38.5 | -21.4 | | Mid Ch | | | | | | | | | 836.50 | 13.51 | V | 1.1 | -1.4 | 11.02 | 38.5 | -27.4 | | 836.50 | 19.46 | H | 1.1 | -1.4 | 16.97 | 38.5 | -21.5 | | High Ch | | | | | | | | | 847.50 | 12.87 | V | 1.1 | -1.3 | 10.49 | 38.5 | -28.0 | | 847.50 | 20.44 | H | 1.1 | -1.3 | 18.06 | 38.5 | -20.4 | |
| | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825.50 | 13.46 | V | 1.1 | -1.5 | 10.86 | 38.5 | -27.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825.50 | 19.61 | H | 1.1 | -1.5 | 17.01 | 38.5 | -21.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 13.51 | V | 1.1 | -1.4 | 11.02 | 38.5 | -27.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.50 | 19.46 | H | 1.1 | -1.4 | 16.97 | 38.5 | -21.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 847.50 | 12.87 | V | 1.1 | -1.3 | 10.49 | 38.5 | -28.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 847.50 | 20.44 | H | 1.1 | -1.3 | 18.06 | 38.5 | -20.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | |
|----------------------------------|---|-------------------|------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| LTE Band 5 1.4MHz QPSK | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: LTE5 1.4MHz FUND QPSK Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | ERP | Limit | Margin | Notes |
| | MHz | (dBm) | (H/V) | (dB) | (dBd) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 824.70 | 11.43 | V | 1.1 | -1.5 | 8.83 | 38.5 | -29.6 | |
| | 824.70 | 18.45 | H | 1.1 | -1.5 | 15.85 | 38.5 | -22.6 | |
| | Mid Ch | | | | | | | | |
| | 836.50 | 11.52 | V | 1.1 | -1.4 | 9.03 | 38.5 | -29.4 | |
| | 836.50 | 18.45 | H | 1.1 | -1.4 | 15.96 | 38.5 | -22.5 | |
| | High Ch | | | | | | | | |
| | 844.30 | 10.01 | V | 1.6 | -1.3 | 7.13 | 38.5 | -31.3 | |
| | 844.30 | 19.64 | H | 1.6 | -1.3 | 16.76 | 38.5 | -21.7 | |
| | Rev. 3.17.11 | | | | | | | | |
| LTE Band 5 1.4MHz 16QAM | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT ONLY, Y Position Mode: LTE5 1.4MHz FUND 16QAM Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | ERP | Limit | Margin | Notes |
| | MHz | (dBm) | (H/V) | (dB) | (dBd) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 824.70 | 10.36 | V | 1.1 | -1.5 | 7.76 | 38.5 | -30.7 | |
| | 824.70 | 17.54 | H | 1.1 | -1.5 | 14.94 | 38.5 | -23.5 | |
| | Mid Ch | | | | | | | | |
| | 836.50 | 10.43 | V | 1.1 | -1.4 | 7.94 | 38.5 | -30.5 | |
| | 836.50 | 17.68 | H | 1.1 | -1.4 | 15.19 | 38.5 | -23.3 | |
| | High Ch | | | | | | | | |
| | 844.30 | 9.99 | V | 1.1 | -1.3 | 7.61 | 38.5 | -30.8 | |
| | 844.30 | 18.42 | H | 1.1 | -1.3 | 16.04 | 38.5 | -22.4 | |
| | Rev. 3.17.11 | | | | | | | | |

11.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238

LIMIT

Part 22.917(a) & Part 24.238(a) 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.

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.

RESULTS

11.2.1. SPURIOUS RADIATION PLOTS

GSM 850

| UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
|--|------------------|---|--------------|-------------|-------------|------------|-------------|------------|-------|
| Company: | | Samsung | | | | | | | |
| Project #: | | 15K21054 | | | | | | | |
| Date: | | 06-19-15 | | | | | | | |
| Test Engineer: | | Steven Kim | | | | | | | |
| Configuration: | | EUT / AC Adapter / Earphone, Y Position | | | | | | | |
| Mode: | | GPRS 850 MHz | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| Low Ch, 824.2MHz | | | | | | | | | |
| 1.6484 | -5.1 | V | 3.0 | 39.1 | 1.0 | -43.2 | -13.0 | -30.2 | |
| 2.4726 | -7.4 | V | 3.0 | 39.5 | 1.0 | -45.9 | -13.0 | -32.9 | |
| 3.2968 | -27.3 | V | 3.0 | 40.1 | 1.0 | -66.3 | -13.0 | -53.3 | |
| 1.6484 | -8.1 | H | 3.0 | 39.1 | 1.0 | -46.3 | -13.0 | -33.3 | |
| 2.4726 | -8.4 | H | 3.0 | 39.5 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 3.2968 | -27.4 | H | 3.0 | 40.1 | 1.0 | -66.5 | -13.0 | -53.5 | |
| Mid Ch, 836.6MHz | | | | | | | | | |
| 1.6730 | -7.8 | V | 3.0 | 39.1 | 1.0 | -45.9 | -13.0 | -32.9 | |
| 2.5098 | -9.3 | V | 3.0 | 39.5 | 1.0 | -47.9 | -13.0 | -34.9 | |
| 3.3464 | -26.1 | V | 3.0 | 40.1 | 1.0 | -65.2 | -13.0 | -52.2 | |
| 1.6730 | -9.4 | H | 3.0 | 39.1 | 1.0 | -47.5 | -13.0 | -34.5 | |
| 2.5098 | -10.9 | H | 3.0 | 39.5 | 1.0 | -49.5 | -13.0 | -36.5 | |
| 3.3464 | -26.9 | H | 3.0 | 40.1 | 1.0 | -66.0 | -13.0 | -53.0 | |
| High Ch, 848.8MHz | | | | | | | | | |
| 1.6976 | -10.7 | V | 3.0 | 39.1 | 1.0 | -48.9 | -13.0 | -35.9 | |
| 2.5466 | -1.0 | V | 3.0 | 39.6 | 1.0 | -39.6 | -13.0 | -26.6 | |
| 3.3952 | -26.5 | V | 3.0 | 40.2 | 1.0 | -65.7 | -13.0 | -52.7 | |
| 1.6976 | -9.6 | H | 3.0 | 39.1 | 1.0 | -47.7 | -13.0 | -34.7 | |
| 2.5466 | -0.6 | H | 3.0 | 39.6 | 1.0 | -39.2 | -13.0 | -26.2 | |
| 3.3952 | -27.4 | H | 3.0 | 40.2 | 1.0 | -66.6 | -13.0 | -53.6 | |

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

| UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
|--|------------------|---|--------------|-------------|-------------|------------|-------------|------------|-------|
| Company: | | Samsung | | | | | | | |
| Project #: | | 15K21054 | | | | | | | |
| Date: | | 06-19-15 | | | | | | | |
| Test Engineer: | | Steven Kim | | | | | | | |
| Configuration: | | EUT / AC Adapter / Earphone, Y Position | | | | | | | |
| Mode: | | EGPRS 850 MHz | | | | | | | |
| Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| Low Ch, 824.2MHz | | | | | | | | | |
| 1.6484 | -11.0 | V | 3.0 | 39.1 | 1.0 | -49.1 | -13.0 | -36.1 | |
| 2.4726 | -14.8 | V | 3.0 | 39.5 | 1.0 | -53.4 | -13.0 | -40.4 | |
| 3.2968 | -28.2 | V | 3.0 | 40.1 | 1.0 | -67.3 | -13.0 | -54.3 | |
| 1.6484 | -12.5 | H | 3.0 | 39.1 | 1.0 | -50.6 | -13.0 | -37.6 | |
| 2.4726 | -15.5 | H | 3.0 | 39.5 | 1.0 | -54.0 | -13.0 | -41.0 | |
| 3.2968 | -27.7 | H | 3.0 | 40.1 | 1.0 | -66.8 | -13.0 | -53.8 | |
| Mid Ch, 836.6MHz | | | | | | | | | |
| 1.6730 | -12.0 | V | 3.0 | 39.1 | 1.0 | -50.1 | -13.0 | -37.1 | |
| 2.5098 | -20.6 | V | 3.0 | 39.5 | 1.0 | -59.1 | -13.0 | -46.1 | |
| 3.3464 | -27.0 | V | 3.0 | 40.1 | 1.0 | -66.2 | -13.0 | -53.2 | |
| 1.6730 | -13.4 | H | 3.0 | 39.1 | 1.0 | -51.5 | -13.0 | -38.5 | |
| 2.5098 | -23.8 | H | 3.0 | 39.5 | 1.0 | -62.3 | -13.0 | -49.3 | |
| 3.3464 | -27.9 | H | 3.0 | 40.1 | 1.0 | -67.0 | -13.0 | -54.0 | |
| High Ch, 848.8MHz | | | | | | | | | |
| 1.6976 | -14.7 | V | 3.0 | 39.1 | 1.0 | -52.8 | -13.0 | -39.8 | |
| 2.5466 | -20.6 | V | 3.0 | 39.6 | 1.0 | -59.2 | -13.0 | -46.2 | |
| 3.3952 | -27.9 | V | 3.0 | 40.2 | 1.0 | -67.1 | -13.0 | -54.1 | |
| 1.6976 | -13.4 | H | 3.0 | 39.1 | 1.0 | -51.5 | -13.0 | -38.5 | |
| 2.5466 | -20.9 | H | 3.0 | 39.6 | 1.0 | -59.4 | -13.0 | -46.4 | |
| 3.3952 | -27.7 | H | 3.0 | 40.2 | 1.0 | -66.9 | -13.0 | -53.9 | |

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

GSM 1900

| UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
|---|------------------|---|--------------|-------------|-------------|------------|-------------|------------|-------|--|
| Company: | | Samsung | | | | | | | | |
| Project #: | | 15K21054 | | | | | | | | |
| Date: | | 06-20-15 | | | | | | | | |
| Test Engineer: | | Steven Kim | | | | | | | | |
| Configuration: | | EUT / AC Adapter / Earphone, X Position | | | | | | | | |
| Mode: | | GPRS 1900 | | | | | | | | |
| Chamber | | Pre-amplifier | | | Filter | | Limit | | | |
| Chamber 2 | | AFS42 | | | Filter 1 | | Part 24 | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | |
| Low Ch, 1850.2MHz | | | | | | | | | | |
| 3.7004 | -26.7 | V | 3.0 | 40.5 | 1.0 | -66.2 | -13.0 | -53.2 | | |
| 5.5506 | -23.8 | V | 3.0 | 40.8 | 1.0 | -63.6 | -13.0 | -50.6 | | |
| 7.4008 | -21.4 | V | 3.0 | 40.8 | 1.0 | -61.2 | -13.0 | -48.2 | | |
| 3.7004 | -27.1 | H | 3.0 | 40.5 | 1.0 | -66.6 | -13.0 | -53.6 | | |
| 5.5506 | -23.8 | H | 3.0 | 40.8 | 1.0 | -63.6 | -13.0 | -50.6 | | |
| 7.4008 | -21.3 | H | 3.0 | 40.8 | 1.0 | -61.1 | -13.0 | -48.1 | | |
| Mid Ch, 1880.0MHz | | | | | | | | | | |
| 3.7600 | -26.1 | V | 3.0 | 40.5 | 1.0 | -65.6 | -13.0 | -52.6 | | |
| 5.6400 | -23.8 | V | 3.0 | 40.8 | 1.0 | -63.6 | -13.0 | -50.6 | | |
| 7.5200 | -21.1 | V | 3.0 | 40.7 | 1.0 | -60.8 | -13.0 | -47.8 | | |
| 3.7600 | -26.4 | H | 3.0 | 40.5 | 1.0 | -65.9 | -13.0 | -52.9 | | |
| 5.6400 | -23.9 | H | 3.0 | 40.8 | 1.0 | -63.7 | -13.0 | -50.7 | | |
| 7.5200 | -21.0 | H | 3.0 | 40.7 | 1.0 | -60.7 | -13.0 | -47.7 | | |
| High Ch, 1909.8 MHz | | | | | | | | | | |
| 3.8196 | -25.3 | V | 3.0 | 40.6 | 1.0 | -64.9 | -13.0 | -51.9 | | |
| 5.7294 | -23.6 | V | 3.0 | 40.8 | 1.0 | -63.4 | -13.0 | -50.4 | | |
| 7.6392 | -21.3 | V | 3.0 | 40.7 | 1.0 | -61.0 | -13.0 | -48.0 | | |
| 3.8196 | -25.6 | H | 3.0 | 40.6 | 1.0 | -65.2 | -13.0 | -52.2 | | |
| 5.7294 | -23.7 | H | 3.0 | 40.8 | 1.0 | -63.5 | -13.0 | -50.5 | | |
| 7.6392 | -21.2 | H | 3.0 | 40.7 | 1.0 | -60.8 | -13.0 | -47.8 | | |
| Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |

| UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
|---|------------------|---|--------------|-------------|-------------|------------|-------------|------------|-------|--|
| Company: | | Samsung | | | | | | | | |
| Project #: | | 15K21054 | | | | | | | | |
| Date: | | 06-20-15 | | | | | | | | |
| Test Engineer: | | Steven Kim | | | | | | | | |
| Configuration: | | EUT / AC Adapter / Earphone, X Position | | | | | | | | |
| Mode: | | EGPRS 1900 MHz | | | | | | | | |
| Chamber | | Pre-amplifier | | | Filter | | Limit | | | |
| Chamber 2 | | AFS42 | | | Filter 1 | | Part 24 | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | |
| Low Ch, 1850.2MHz | | | | | | | | | | |
| 3.7004 | -26.8 | V | 3.0 | 40.5 | 1.0 | -66.3 | -13.0 | -53.3 | | |
| 5.5506 | -23.8 | V | 3.0 | 40.8 | 1.0 | -63.7 | -13.0 | -50.7 | | |
| 7.4008 | -21.5 | V | 3.0 | 40.8 | 1.0 | -61.2 | -13.0 | -48.2 | | |
| 3.7004 | -27.2 | H | 3.0 | 40.5 | 1.0 | -66.7 | -13.0 | -53.7 | | |
| 5.5506 | -23.7 | H | 3.0 | 40.8 | 1.0 | -63.6 | -13.0 | -50.6 | | |
| 7.4008 | -21.0 | H | 3.0 | 40.8 | 1.0 | -60.8 | -13.0 | -47.8 | | |
| Mid Ch, 1880.0MHz | | | | | | | | | | |
| 3.7600 | -26.0 | V | 3.0 | 40.5 | 1.0 | -65.5 | -13.0 | -52.5 | | |
| 5.6400 | -23.8 | V | 3.0 | 40.8 | 1.0 | -63.6 | -13.0 | -50.6 | | |
| 7.5200 | -21.1 | V | 3.0 | 40.7 | 1.0 | -60.8 | -13.0 | -47.8 | | |
| 3.7600 | -26.3 | H | 3.0 | 40.5 | 1.0 | -65.8 | -13.0 | -52.8 | | |
| 5.6400 | -23.7 | H | 3.0 | 40.8 | 1.0 | -63.5 | -13.0 | -50.5 | | |
| 7.5200 | 133.2 | H | 3.0 | 40.7 | 1.0 | 93.5 | -13.0 | 106.5 | | |
| High Ch, 1909.8 MHz | | | | | | | | | | |
| 3.8196 | -25.2 | V | 3.0 | 40.6 | 1.0 | -64.8 | -13.0 | -51.8 | | |
| 5.7294 | -23.8 | V | 3.0 | 40.8 | 1.0 | -63.5 | -13.0 | -50.5 | | |
| 7.6392 | -21.3 | V | 3.0 | 40.7 | 1.0 | -60.9 | -13.0 | -47.9 | | |
| 3.8196 | -25.7 | H | 3.0 | 40.6 | 1.0 | -65.3 | -13.0 | -52.3 | | |
| 5.7294 | -23.7 | H | 3.0 | 40.8 | 1.0 | -63.5 | -13.0 | -50.5 | | |
| 7.6392 | -21.1 | H | 3.0 | 40.7 | 1.0 | -60.8 | -13.0 | -47.8 | | |
| Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |

WCDMA Band 5

| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
|---|------------------|---|--------------|---|-------------|---|-------------|---|-------|--|--|--|
| WCDMA | Band 5 REL99 | Company: Samsung | | | | | | | | | | |
| | | Project #: 15K21054 | | | | | | | | | | |
| | | Date: 06-18-15 | | | | | | | | | | |
| | | Test Engineer: Steven Kim | | | | | | | | | | |
| | | Configuration: EUT / AC Adapter / Earphone / Y Position | | | | | | | | | | |
| | | Mode: Tx, REL99,850MHz | | | | | | | | | | |
| | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Chamber</div> Chamber 1 | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Pre-amplifier</div> AFS42 | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Filter</div> Filter 1 | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Limit</div> Part 22 | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | |
| Low Ch, 826.40MHz | | | | | | | | | | | | |
| 1.6520 | -24.4 | V | 3.0 | 39.1 | 1.0 | -62.5 | -13.0 | -49.5 | | | | |
| 2.4790 | -24.7 | V | 3.0 | 39.5 | 1.0 | -63.2 | -13.0 | -50.2 | | | | |
| 3.3056 | -25.8 | V | 3.0 | 40.1 | 1.0 | -64.9 | -13.0 | -51.9 | | | | |
| 1.6520 | -26.0 | H | 3.0 | 39.1 | 1.0 | -64.1 | -13.0 | -51.1 | | | | |
| 2.4790 | -25.2 | H | 3.0 | 39.5 | 1.0 | -63.8 | -13.0 | -50.8 | | | | |
| 3.3056 | -26.1 | H | 3.0 | 40.1 | 1.0 | -65.2 | -13.0 | -52.2 | | | | |
| Mid Ch, 836.6MHz | | | | | | | | | | | | |
| 1.6732 | -25.5 | V | 3.0 | 39.1 | 1.0 | -63.6 | -13.0 | -50.6 | | | | |
| 2.5098 | -25.7 | V | 3.0 | 39.5 | 1.0 | -64.3 | -13.0 | -51.3 | | | | |
| 3.3464 | -25.6 | V | 3.0 | 40.1 | 1.0 | -64.7 | -13.0 | -51.7 | | | | |
| 1.6732 | -27.4 | H | 3.0 | 39.1 | 1.0 | -65.5 | -13.0 | -52.5 | | | | |
| 2.5098 | -26.5 | H | 3.0 | 39.5 | 1.0 | -65.0 | -13.0 | -52.0 | | | | |
| 3.3464 | -25.8 | H | 3.0 | 40.1 | 1.0 | -64.9 | -13.0 | -51.9 | | | | |
| High Ch, 846.6MHz | | | | | | | | | | | | |
| 1.6932 | -24.7 | V | 3.0 | 39.1 | 1.0 | -62.9 | -13.0 | -49.9 | | | | |
| 2.5390 | -23.2 | V | 3.0 | 39.6 | 1.0 | -61.8 | -13.0 | -48.8 | | | | |
| 3.3860 | -25.6 | V | 3.0 | 40.2 | 1.0 | -64.8 | -13.0 | -51.8 | | | | |
| 1.6932 | -27.1 | H | 3.0 | 39.1 | 1.0 | -65.3 | -13.0 | -52.3 | | | | |
| 2.5390 | -22.6 | H | 3.0 | 39.6 | 1.0 | -61.1 | -13.0 | -48.1 | | | | |
| 3.3860 | -25.8 | H | 3.0 | 40.2 | 1.0 | -64.9 | -13.0 | -51.9 | | | | |
| Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | | |
| WCDMA | Band 5 HSDPA | Company: Samsung | | | | | | | | | | |
| | | Project #: 15K21054 | | | | | | | | | | |
| | | Date: 06-18-15 | | | | | | | | | | |
| | | Test Engineer: Steven Kim | | | | | | | | | | |
| | | Configuration: EUT / AC Adapter / Earphone / Y Position | | | | | | | | | | |
| | | Mode: Tx, HSDPA,850MHz | | | | | | | | | | |
| | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Chamber</div> Chamber 2 | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Pre-amplifier</div> AFS42 | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Filter</div> Filter 1 | | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Limit</div> Part 22 | | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | |
| Low Ch, 826.40MHz | | | | | | | | | | | | |
| 1.6520 | -24.4 | V | 3.0 | 39.1 | 1.0 | -62.5 | -13.0 | -49.5 | | | | |
| 2.4790 | -24.5 | V | 3.0 | 39.5 | 1.0 | -63.0 | -13.0 | -50.0 | | | | |
| 3.3056 | -25.6 | V | 3.0 | 40.1 | 1.0 | -64.7 | -13.0 | -51.7 | | | | |
| 1.6520 | -25.8 | H | 3.0 | 39.1 | 1.0 | -63.9 | -13.0 | -50.9 | | | | |
| 2.4790 | -25.2 | H | 3.0 | 39.5 | 1.0 | -63.8 | -13.0 | -50.8 | | | | |
| 3.3056 | -26.0 | H | 3.0 | 40.1 | 1.0 | -65.1 | -13.0 | -52.1 | | | | |
| Mid Ch, 836.6MHz | | | | | | | | | | | | |
| 1.6732 | -25.6 | V | 3.0 | 39.1 | 1.0 | -63.7 | -13.0 | -50.7 | | | | |
| 2.5098 | -25.5 | V | 3.0 | 39.5 | 1.0 | -64.0 | -13.0 | -51.0 | | | | |
| 3.3464 | -25.5 | V | 3.0 | 40.1 | 1.0 | -64.6 | -13.0 | -51.6 | | | | |
| 1.6732 | -27.4 | H | 3.0 | 39.1 | 1.0 | -65.5 | -13.0 | -52.5 | | | | |
| 2.5098 | -26.6 | H | 3.0 | 39.5 | 1.0 | -65.1 | -13.0 | -52.1 | | | | |
| 3.3464 | -25.9 | H | 3.0 | 40.1 | 1.0 | -65.1 | -13.0 | -52.1 | | | | |
| High Ch, 846.6MHz | | | | | | | | | | | | |
| 1.6932 | -26.0 | V | 3.0 | 39.1 | 1.0 | -64.1 | -13.0 | -51.1 | | | | |
| 2.5390 | -23.4 | V | 3.0 | 39.6 | 1.0 | -61.9 | -13.0 | -48.9 | | | | |
| 3.3860 | -25.6 | V | 3.0 | 40.2 | 1.0 | -64.8 | -13.0 | -51.8 | | | | |
| 1.6932 | -27.4 | H | 3.0 | 39.1 | 1.0 | -65.5 | -13.0 | -52.5 | | | | |
| 2.5390 | -23.7 | H | 3.0 | 39.6 | 1.0 | -62.2 | -13.0 | -49.2 | | | | |
| 3.3860 | -25.9 | H | 3.0 | 40.2 | 1.0 | -65.1 | -13.0 | -52.1 | | | | |
| Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | | |

WCDMA Band 2

| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
|---|------------------|--|--------------|---------------|-------------|------------|-------------|------------|-------|--|--|
| | | Company: Samsung | | | | | | | | | |
| | | Project #: 15K21054 | | | | | | | | | |
| | | Date: 06-20-15 | | | | | | | | | |
| | | Test Engineer: Steven Kim | | | | | | | | | |
| | | Configuration: EUT / AC Adapter / Earphone / X Position | | | | | | | | | |
| | | Mode: Tx, REL99,1900MHz | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 24 | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | |
| WCDMA Band 2 REL99 | | | | | | | | | | | |
| Low Ch, 1852.4MHz | | | | | | | | | | | |
| 3.7048 | -15.7 | V | 3.0 | 40.5 | 1.0 | -55.2 | -13.0 | -42.2 | | | |
| 5.5572 | -20.5 | V | 3.0 | 40.8 | 1.0 | -60.3 | -13.0 | -47.3 | | | |
| 7.4096 | -21.2 | V | 3.0 | 40.8 | 1.0 | -61.0 | -13.0 | -48.0 | | | |
| 3.7048 | -9.6 | H | 3.0 | 40.5 | 1.0 | -49.1 | -13.0 | -36.1 | | | |
| 5.5572 | -14.8 | H | 3.0 | 40.8 | 1.0 | -54.6 | -13.0 | -41.6 | | | |
| 7.4096 | -21.1 | H | 3.0 | 40.8 | 1.0 | -60.9 | -13.0 | -47.9 | | | |
| Mid Ch, 1880MHz | | | | | | | | | | | |
| 3.7600 | -13.1 | V | 3.0 | 40.5 | 1.0 | -52.6 | -13.0 | -39.6 | | | |
| 5.6400 | -20.5 | V | 3.0 | 40.8 | 1.0 | -60.3 | -13.0 | -47.3 | | | |
| 7.5200 | -20.7 | V | 3.0 | 40.7 | 1.0 | -60.4 | -13.0 | -47.4 | | | |
| 3.7600 | -6.8 | H | 3.0 | 40.5 | 1.0 | -46.3 | -13.0 | -33.3 | | | |
| 5.6400 | -15.3 | H | 3.0 | 40.8 | 1.0 | -55.1 | -13.0 | -42.1 | | | |
| 7.5200 | -20.8 | H | 3.0 | 40.7 | 1.0 | -60.6 | -13.0 | -47.6 | | | |
| High Ch, 1907.6MHz | | | | | | | | | | | |
| 3.8152 | -11.3 | V | 3.0 | 40.6 | 1.0 | -50.9 | -13.0 | -37.9 | | | |
| 5.7228 | -22.2 | V | 3.0 | 40.8 | 1.0 | -62.0 | -13.0 | -49.0 | | | |
| 7.6304 | -21.0 | V | 3.0 | 40.7 | 1.0 | -60.7 | -13.0 | -47.7 | | | |
| 3.8152 | -5.2 | H | 3.0 | 40.6 | 1.0 | -44.8 | -13.0 | -31.8 | | | |
| 5.7228 | -14.7 | H | 3.0 | 40.8 | 1.0 | -54.5 | -13.0 | -41.5 | | | |
| 7.6304 | -21.0 | H | 3.0 | 40.7 | 1.0 | -60.7 | -13.0 | -47.7 | | | |
| Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | |
| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
| | | Company: Samsung | | | | | | | | | |
| | | Project #: 15K21054 | | | | | | | | | |
| | | Date: 06-20-15 | | | | | | | | | |
| | | Test Engineer: Steven Kim | | | | | | | | | |
| | | Configuration: EUT / AC Adapter / Earphone / X Position | | | | | | | | | |
| | | Mode: Tx, HSDPA,1900MHz | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 24 | | | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | |
| WCDMA Band 2 HSDPA | | | | | | | | | | | |
| Low Ch, 1852.4MHz | | | | | | | | | | | |
| 3.7048 | -15.8 | V | 3.0 | 40.5 | 1.0 | -55.3 | -13.0 | -42.3 | | | |
| 5.5572 | -20.6 | V | 3.0 | 40.8 | 1.0 | -60.4 | -13.0 | -47.4 | | | |
| 7.4096 | -21.2 | V | 3.0 | 40.8 | 1.0 | -61.0 | -13.0 | -48.0 | | | |
| 3.7048 | -9.8 | H | 3.0 | 40.5 | 1.0 | -49.2 | -13.0 | -36.2 | | | |
| 5.5572 | -18.3 | H | 3.0 | 40.8 | 1.0 | -58.2 | -13.0 | -45.2 | | | |
| 7.4096 | -21.2 | H | 3.0 | 40.8 | 1.0 | -61.0 | -13.0 | -48.0 | | | |
| Mid Ch, 1880MHz | | | | | | | | | | | |
| 3.7600 | -13.7 | V | 3.0 | 40.5 | 1.0 | -53.2 | -13.0 | -40.2 | | | |
| 5.6400 | -22.5 | V | 3.0 | 40.8 | 1.0 | -62.3 | -13.0 | -49.3 | | | |
| 7.5200 | -20.8 | V | 3.0 | 40.7 | 1.0 | -60.5 | -13.0 | -47.5 | | | |
| 3.7600 | -7.4 | H | 3.0 | 40.5 | 1.0 | -47.0 | -13.0 | -34.0 | | | |
| 5.6400 | -20.5 | H | 3.0 | 40.8 | 1.0 | -60.3 | -13.0 | -47.3 | | | |
| 7.5200 | -20.7 | H | 3.0 | 40.7 | 1.0 | -60.4 | -13.0 | -47.4 | | | |
| High Ch, 1907.6MHz | | | | | | | | | | | |
| 3.8152 | -16.7 | V | 3.0 | 40.6 | 1.0 | -56.2 | -13.0 | -43.2 | | | |
| 5.7228 | -12.5 | V | 3.0 | 40.8 | 1.0 | -52.3 | -13.0 | -39.3 | | | |
| 7.6304 | -19.6 | V | 3.0 | 40.7 | 1.0 | -59.3 | -13.0 | -46.3 | | | |
| 3.8152 | -11.3 | H | 3.0 | 40.6 | 1.0 | -50.9 | -13.0 | -37.9 | | | |
| 5.7228 | -10.2 | H | 3.0 | 40.8 | 1.0 | -50.0 | -13.0 | -37.0 | | | |
| 7.6304 | -20.5 | H | 3.0 | 40.7 | 1.0 | -60.2 | -13.0 | -47.2 | | | |
| Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | |

LTE Band 5

| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
|--------|--|---|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|
| | | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 10MHz BW, QPSK | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| LTE | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| Band 5 | | Low Channel (829MHz) | | | | | | | | | |
| | | 1.6580 | -24.8 | V | 3.0 | 39.1 | 1.0 | -62.9 | -13.0 | -49.9 | |
| | | 2.4870 | -28.8 | V | 3.0 | 39.5 | 1.0 | -67.3 | -13.0 | -54.3 | |
| 10MHz | | 3.3160 | -32.1 | V | 3.0 | 40.1 | 1.0 | -71.2 | -13.0 | -58.2 | |
| | | 1.6580 | -26.0 | H | 3.0 | 39.1 | 1.0 | -64.1 | -13.0 | -51.1 | |
| | | 2.4870 | -28.8 | H | 3.0 | 39.5 | 1.0 | -67.3 | -13.0 | -54.3 | |
| QPSK | | 3.3160 | -35.3 | H | 3.0 | 40.1 | 1.0 | -74.4 | -13.0 | -61.4 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -26.8 | V | 3.0 | 39.1 | 1.0 | -64.9 | -13.0 | -51.9 | |
| | | 2.5090 | -31.0 | V | 3.0 | 39.5 | 1.0 | -69.6 | -13.0 | -56.6 | |
| | | 3.3460 | -32.7 | V | 3.0 | 40.1 | 1.0 | -71.9 | -13.0 | -58.9 | |
| | | 1.6730 | -24.5 | H | 3.0 | 39.1 | 1.0 | -62.6 | -13.0 | -49.6 | |
| | | 2.5090 | -33.2 | H | 3.0 | 39.5 | 1.0 | -71.7 | -13.0 | -58.7 | |
| | | 3.3460 | -35.4 | H | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | |
| | | High Channel (844MHz) | | | | | | | | | |
| | | 1.6880 | -26.6 | V | 3.0 | 39.1 | 1.0 | -64.8 | -13.0 | -51.8 | |
| | | 2.5320 | -25.6 | V | 3.0 | 39.5 | 1.0 | -64.2 | -13.0 | -51.2 | |
| | | 3.3760 | -31.7 | V | 3.0 | 40.2 | 1.0 | -70.9 | -13.0 | -57.9 | |
| | | 1.6880 | -27.6 | H | 3.0 | 39.1 | 1.0 | -65.8 | -13.0 | -52.8 | |
| | | 2.5320 | -23.4 | H | 3.0 | 39.5 | 1.0 | -61.9 | -13.0 | -48.9 | |
| | | 3.3760 | -35.5 | H | 3.0 | 40.2 | 1.0 | -74.7 | -13.0 | -61.7 | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | |
| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
| | | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 10MHz BW, 16QAM | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| LTE | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| Band 5 | | Low Channel (829MHz) | | | | | | | | | |
| | | 1.6580 | -25.7 | V | 3.0 | 39.1 | 1.0 | -63.8 | -13.0 | -50.8 | |
| | | 2.4870 | -29.7 | V | 3.0 | 39.5 | 1.0 | -68.2 | -13.0 | -55.2 | |
| 10MHz | | 3.3160 | -33.2 | V | 3.0 | 40.1 | 1.0 | -72.3 | -13.0 | -59.3 | |
| | | 1.6580 | -27.0 | H | 3.0 | 39.1 | 1.0 | -65.1 | -13.0 | -52.1 | |
| | | 2.4870 | -29.9 | H | 3.0 | 39.5 | 1.0 | -68.4 | -13.0 | -55.4 | |
| 16QAM | | 3.3160 | -35.7 | H | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -27.8 | V | 3.0 | 39.1 | 1.0 | -65.9 | -13.0 | -52.9 | |
| | | 2.5090 | -31.8 | V | 3.0 | 39.5 | 1.0 | -70.4 | -13.0 | -57.4 | |
| | | 3.3460 | -33.7 | V | 3.0 | 40.1 | 1.0 | -72.8 | -13.0 | -59.8 | |
| | | 1.6730 | -25.5 | H | 3.0 | 39.1 | 1.0 | -63.6 | -13.0 | -50.6 | |
| | | 2.5090 | -34.2 | H | 3.0 | 39.5 | 1.0 | -72.7 | -13.0 | -59.7 | |
| | | 3.3460 | -35.5 | H | 3.0 | 40.1 | 1.0 | -74.7 | -13.0 | -61.7 | |
| | | High Channel (844MHz) | | | | | | | | | |
| | | 1.6880 | -27.3 | V | 3.0 | 39.1 | 1.0 | -65.4 | -13.0 | -52.4 | |
| | | 2.5320 | -26.7 | V | 3.0 | 39.5 | 1.0 | -65.2 | -13.0 | -52.2 | |
| | | 3.3760 | -32.6 | V | 3.0 | 40.2 | 1.0 | -71.8 | -13.0 | -58.8 | |
| | | 1.6880 | -28.6 | H | 3.0 | 39.1 | 1.0 | -66.7 | -13.0 | -53.7 | |
| | | 2.5320 | -24.4 | H | 3.0 | 39.5 | 1.0 | -63.0 | -13.0 | -50.0 | |
| | | 3.3760 | -35.6 | H | 3.0 | 40.2 | 1.0 | -74.7 | -13.0 | -61.7 | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | |

| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
|--------|--|---|------------------|-----------------|--------------|-------------|-------------|------------|-------------|------------|-------|
| | | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 5MHz BW,QPSK | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| LTE | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| Band 5 | | Low Channel (826.5MHz) | | | | | | | | | |
| | | 1.6530 | -23.2 | V | 3.0 | 39.1 | 1.0 | -61.3 | -13.0 | -48.3 | |
| | | 2.4790 | -27.3 | V | 3.0 | 39.5 | 1.0 | -65.8 | -13.0 | -52.8 | |
| | | 3.3060 | -35.5 | V | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | |
| 5MHz | | 1.6530 | -24.7 | H | 3.0 | 39.1 | 1.0 | -62.9 | -13.0 | -49.9 | |
| | | 2.4790 | -28.8 | H | 3.0 | 39.5 | 1.0 | -67.4 | -13.0 | -54.4 | |
| QPSK | | 3.3060 | -35.5 | H | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -28.1 | V | 3.0 | 39.1 | 1.0 | -66.2 | -13.0 | -53.2 | |
| | | 2.5090 | -30.4 | V | 3.0 | 39.5 | 1.0 | -68.9 | -13.0 | -55.9 | |
| | | 3.3460 | -35.5 | V | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | |
| | | 1.6730 | -25.5 | H | 3.0 | 39.1 | 1.0 | -63.7 | -13.0 | -50.7 | |
| | | 2.5090 | -34.1 | H | 3.0 | 39.5 | 1.0 | -72.6 | -13.0 | -59.6 | |
| | | 3.3460 | -35.6 | H | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | |
| | | High Channel (846.5MHz) | | | | | | | | | |
| | | 1.6930 | -26.7 | V | 3.0 | 39.1 | 1.0 | -64.8 | -13.0 | -51.8 | |
| | | 2.5390 | -24.5 | V | 3.0 | 39.6 | 1.0 | -63.0 | -13.0 | -50.0 | |
| | | 3.3860 | -35.3 | V | 3.0 | 40.2 | 1.0 | -74.5 | -13.0 | -61.5 | |
| | | 1.6930 | -26.6 | H | 3.0 | 39.1 | 1.0 | -64.7 | -13.0 | -51.7 | |
| | | 2.5390 | -27.1 | H | 3.0 | 39.6 | 1.0 | -65.6 | -13.0 | -52.6 | |
| | | 3.3860 | -35.4 | H | 3.0 | 40.2 | 1.0 | -74.5 | -13.0 | -61.5 | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | |
| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
| | | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 5MHz BW,16QAM | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| LTE | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| Band 5 | | Low Channel (826.5MHz) | | | | | | | | | |
| | | 1.6530 | -24.6 | V | 3.0 | 39.1 | 1.0 | -62.7 | -13.0 | -49.7 | |
| | | 2.4790 | -29.0 | V | 3.0 | 39.5 | 1.0 | -67.5 | -13.0 | -54.5 | |
| | | 3.3060 | -35.6 | V | 3.0 | 40.1 | 1.0 | -74.7 | -13.0 | -61.7 | |
| 5MHz | | 1.6530 | -25.9 | H | 3.0 | 39.1 | 1.0 | -64.0 | -13.0 | -51.0 | |
| | | 2.4790 | -29.9 | H | 3.0 | 39.5 | 1.0 | -68.5 | -13.0 | -55.5 | |
| 16QAM | | 3.3060 | -35.4 | H | 3.0 | 40.1 | 1.0 | -74.5 | -13.0 | -61.5 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -29.1 | V | 3.0 | 39.1 | 1.0 | -67.2 | -13.0 | -54.2 | |
| | | 2.5090 | -31.6 | V | 3.0 | 39.5 | 1.0 | -70.2 | -13.0 | -57.2 | |
| | | 3.3460 | -35.3 | V | 3.0 | 40.1 | 1.0 | -74.5 | -13.0 | -61.5 | |
| | | 1.6730 | -26.5 | H | 3.0 | 39.1 | 1.0 | -64.6 | -13.0 | -51.6 | |
| | | 2.5090 | -34.8 | H | 3.0 | 39.5 | 1.0 | -73.3 | -13.0 | -60.3 | |
| | | 3.3460 | -35.6 | H | 3.0 | 40.1 | 1.0 | -74.7 | -13.0 | -61.7 | |
| | | High Channel (846.5MHz) | | | | | | | | | |
| | | 1.6930 | -27.7 | V | 3.0 | 39.1 | 1.0 | -65.8 | -13.0 | -52.8 | |
| | | 2.5390 | -25.4 | V | 3.0 | 39.6 | 1.0 | -64.0 | -13.0 | -51.0 | |
| | | 3.3860 | -35.0 | V | 3.0 | 40.2 | 1.0 | -74.2 | -13.0 | -61.2 | |
| | | 1.6930 | -27.6 | H | 3.0 | 39.1 | 1.0 | -65.8 | -13.0 | -52.8 | |
| | | 2.5390 | -28.0 | H | 3.0 | 39.6 | 1.0 | -66.6 | -13.0 | -53.6 | |
| | | 3.3860 | -35.6 | H | 3.0 | 40.2 | 1.0 | -74.8 | -13.0 | -61.8 | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | |

| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|--|-----------------|------------------|-----------------|--------------|-------------|-------------|------------|-------------|------------|-------|-------------------------------|--|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|-------------------------------|--|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------------------------------|--|--|--|--|--|--|--|--|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|
| LTE Band 5 3MHz QPSK | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 3MHz BW,QPSK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Chamber</div> <div style="border: 1px solid black; padding: 2px;">Pre-amplifier</div> <div style="border: 1px solid black; padding: 2px;">Filter</div> <div style="border: 1px solid black; padding: 2px;">Limit</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">Chamber 2</div> <div style="border: 1px solid black; padding: 2px;">AFS42</div> <div style="border: 1px solid black; padding: 2px;">Filter 1</div> <div style="border: 1px solid black; padding: 2px;">Part 22</div> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Distance (m)</th> <th>Preamp (dB)</th> <th>Filter (dB)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="10">Low Channel (825.5MHz)</td> </tr> <tr> <td>1.6510</td> <td>-23.8</td> <td>V</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-61.9</td> <td>-13.0</td> <td>-48.9</td> <td></td> </tr> <tr> <td>2.4675</td> <td>-26.9</td> <td>V</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-65.4</td> <td>-13.0</td> <td>-52.4</td> <td></td> </tr> <tr> <td>3.3020</td> <td>-35.8</td> <td>V</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.9</td> <td>-13.0</td> <td>-61.9</td> <td></td> </tr> <tr> <td>1.6510</td> <td>-23.4</td> <td>H</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-61.5</td> <td>-13.0</td> <td>-48.5</td> <td></td> </tr> <tr> <td>2.4675</td> <td>-28.8</td> <td>H</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-67.4</td> <td>-13.0</td> <td>-54.4</td> <td></td> </tr> <tr> <td>3.3020</td> <td>-35.0</td> <td>H</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.1</td> <td>-13.0</td> <td>-61.1</td> <td></td> </tr> <tr> <td colspan="10">Mid Channel (836.5MHz)</td> </tr> <tr> <td>1.6730</td> <td>-25.5</td> <td>V</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-63.6</td> <td>-13.0</td> <td>-50.6</td> <td></td> </tr> <tr> <td>2.5090</td> <td>-30.0</td> <td>V</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-68.6</td> <td>-13.0</td> <td>-55.6</td> <td></td> </tr> <tr> <td>3.3460</td> <td>-35.5</td> <td>V</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.6</td> <td>-13.0</td> <td>-61.6</td> <td></td> </tr> <tr> <td>1.6730</td> <td>-24.9</td> <td>H</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-63.0</td> <td>-13.0</td> <td>-50.0</td> <td></td> </tr> <tr> <td>2.5090</td> <td>-32.0</td> <td>H</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-70.6</td> <td>-13.0</td> <td>-57.6</td> <td></td> </tr> <tr> <td>3.3460</td> <td>-35.3</td> <td>H</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.5</td> <td>-13.0</td> <td>-61.5</td> <td></td> </tr> <tr> <td colspan="10">High Channel (847.5MHz)</td> </tr> <tr> <td>1.6950</td> <td>-26.4</td> <td>V</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-64.5</td> <td>-13.0</td> <td>-51.5</td> <td></td> </tr> <tr> <td>2.5425</td> <td>-24.2</td> <td>V</td> <td>3.0</td> <td>39.6</td> <td>1.0</td> <td>-62.7</td> <td>-13.0</td> <td>-49.7</td> <td></td> </tr> <tr> <td>3.3900</td> <td>-35.4</td> <td>V</td> <td>3.0</td> <td>40.2</td> <td>1.0</td> <td>-74.6</td> <td>-13.0</td> <td>-61.6</td> <td></td> </tr> <tr> <td>1.6950</td> <td>-26.3</td> <td>H</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-64.4</td> <td>-13.0</td> <td>-51.4</td> <td></td> </tr> <tr> <td>2.5425</td> <td>-27.2</td> <td>H</td> <td>3.0</td> <td>39.6</td> <td>1.0</td> <td>-65.8</td> <td>-13.0</td> <td>-52.8</td> <td></td> </tr> <tr> <td>3.3900</td> <td>-35.0</td> <td>H</td> <td>3.0</td> <td>40.2</td> <td>1.0</td> <td>-74.2</td> <td>-13.0</td> <td>-61.2</td> <td></td> </tr> </tbody> </table> | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Channel (825.5MHz) | | | | | | | | | | 1.6510 | -23.8 | V | 3.0 | 39.1 | 1.0 | -61.9 | -13.0 | -48.9 | | 2.4675 | -26.9 | V | 3.0 | 39.5 | 1.0 | -65.4 | -13.0 | -52.4 | | 3.3020 | -35.8 | V | 3.0 | 40.1 | 1.0 | -74.9 | -13.0 | -61.9 | | 1.6510 | -23.4 | H | 3.0 | 39.1 | 1.0 | -61.5 | -13.0 | -48.5 | | 2.4675 | -28.8 | H | 3.0 | 39.5 | 1.0 | -67.4 | -13.0 | -54.4 | | 3.3020 | -35.0 | H | 3.0 | 40.1 | 1.0 | -74.1 | -13.0 | -61.1 | | Mid Channel (836.5MHz) | | | | | | | | | | 1.6730 | -25.5 | V | 3.0 | 39.1 | 1.0 | -63.6 | -13.0 | -50.6 | | 2.5090 | -30.0 | V | 3.0 | 39.5 | 1.0 | -68.6 | -13.0 | -55.6 | | 3.3460 | -35.5 | V | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | | 1.6730 | -24.9 | H | 3.0 | 39.1 | 1.0 | -63.0 | -13.0 | -50.0 | | 2.5090 | -32.0 | H | 3.0 | 39.5 | 1.0 | -70.6 | -13.0 | -57.6 | | 3.3460 | -35.3 | H | 3.0 | 40.1 | 1.0 | -74.5 | -13.0 | -61.5 | | High Channel (847.5MHz) | | | | | | | | | | 1.6950 | -26.4 | V | 3.0 | 39.1 | 1.0 | -64.5 | -13.0 | -51.5 | | 2.5425 | -24.2 | V | 3.0 | 39.6 | 1.0 | -62.7 | -13.0 | -49.7 | | 3.3900 | -35.4 | V | 3.0 | 40.2 | 1.0 | -74.6 | -13.0 | -61.6 | | 1.6950 | -26.3 | H | 3.0 | 39.1 | 1.0 | -64.4 | -13.0 | -51.4 | | 2.5425 | -27.2 | H | 3.0 | 39.6 | 1.0 | -65.8 | -13.0 | -52.8 | | 3.3900 | -35.0 | H | 3.0 | 40.2 | 1.0 | -74.2 | -13.0 | -61.2 | |
| | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Low Channel (825.5MHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6510 | -23.8 | V | 3.0 | 39.1 | 1.0 | -61.9 | -13.0 | -48.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4675 | -26.9 | V | 3.0 | 39.5 | 1.0 | -65.4 | -13.0 | -52.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3020 | -35.8 | V | 3.0 | 40.1 | 1.0 | -74.9 | -13.0 | -61.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6510 | -23.4 | H | 3.0 | 39.1 | 1.0 | -61.5 | -13.0 | -48.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4675 | -28.8 | H | 3.0 | 39.5 | 1.0 | -67.4 | -13.0 | -54.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3020 | -35.0 | H | 3.0 | 40.1 | 1.0 | -74.1 | -13.0 | -61.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mid Channel (836.5MHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6730 | -25.5 | V | 3.0 | 39.1 | 1.0 | -63.6 | -13.0 | -50.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.5090 | -30.0 | V | 3.0 | 39.5 | 1.0 | -68.6 | -13.0 | -55.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3460 | -35.5 | V | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6730 | -24.9 | H | 3.0 | 39.1 | 1.0 | -63.0 | -13.0 | -50.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5090 | -32.0 | H | 3.0 | 39.5 | 1.0 | -70.6 | -13.0 | -57.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3460 | -35.3 | H | 3.0 | 40.1 | 1.0 | -74.5 | -13.0 | -61.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Channel (847.5MHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6950 | -26.4 | V | 3.0 | 39.1 | 1.0 | -64.5 | -13.0 | -51.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5425 | -24.2 | V | 3.0 | 39.6 | 1.0 | -62.7 | -13.0 | -49.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3900 | -35.4 | V | 3.0 | 40.2 | 1.0 | -74.6 | -13.0 | -61.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6950 | -26.3 | H | 3.0 | 39.1 | 1.0 | -64.4 | -13.0 | -51.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5425 | -27.2 | H | 3.0 | 39.6 | 1.0 | -65.8 | -13.0 | -52.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3900 | -35.0 | H | 3.0 | 40.2 | 1.0 | -74.2 | -13.0 | -61.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LTE Band 5 3MHz 16QAM | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 3MHz BW,16QAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Chamber</div> <div style="border: 1px solid black; padding: 2px;">Pre-amplifier</div> <div style="border: 1px solid black; padding: 2px;">Filter</div> <div style="border: 1px solid black; padding: 2px;">Limit</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">Chamber 2</div> <div style="border: 1px solid black; padding: 2px;">AFS42</div> <div style="border: 1px solid black; padding: 2px;">Filter 1</div> <div style="border: 1px solid black; padding: 2px;">Part 22</div> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Distance (m)</th> <th>Preamp (dB)</th> <th>Filter (dB)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="10">Low Channel (825.5MHz)</td> </tr> <tr> <td>1.6510</td> <td>-24.2</td> <td>V</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-62.3</td> <td>-13.0</td> <td>-49.3</td> <td></td> </tr> <tr> <td>2.4675</td> <td>-26.6</td> <td>V</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-65.1</td> <td>-13.0</td> <td>-52.1</td> <td></td> </tr> <tr> <td>3.3020</td> <td>-35.8</td> <td>V</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.9</td> <td>-13.0</td> <td>-61.9</td> <td></td> </tr> <tr> <td>1.6510</td> <td>-24.9</td> <td>H</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-63.0</td> <td>-13.0</td> <td>-50.0</td> <td></td> </tr> <tr> <td>2.4675</td> <td>-30.1</td> <td>H</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-68.6</td> <td>-13.0</td> <td>-55.6</td> <td></td> </tr> <tr> <td>3.3020</td> <td>-35.7</td> <td>H</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.8</td> <td>-13.0</td> <td>-61.8</td> <td></td> </tr> <tr> <td colspan="10">Mid Channel (836.5MHz)</td> </tr> <tr> <td>1.6730</td> <td>-26.4</td> <td>V</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-64.5</td> <td>-13.0</td> <td>-51.5</td> <td></td> </tr> <tr> <td>2.5090</td> <td>-30.7</td> <td>V</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-69.3</td> <td>-13.0</td> <td>-56.3</td> <td></td> </tr> <tr> <td>3.3460</td> <td>-35.6</td> <td>V</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.8</td> <td>-13.0</td> <td>-61.8</td> <td></td> </tr> <tr> <td>1.6730</td> <td>-26.0</td> <td>H</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-64.1</td> <td>-13.0</td> <td>-51.1</td> <td></td> </tr> <tr> <td>2.5090</td> <td>-33.1</td> <td>H</td> <td>3.0</td> <td>39.5</td> <td>1.0</td> <td>-71.6</td> <td>-13.0</td> <td>-58.6</td> <td></td> </tr> <tr> <td>3.3460</td> <td>-35.5</td> <td>H</td> <td>3.0</td> <td>40.1</td> <td>1.0</td> <td>-74.7</td> <td>-13.0</td> <td>-61.7</td> <td></td> </tr> <tr> <td colspan="10">High Channel (847.5MHz)</td> </tr> <tr> <td>1.6950</td> <td>-27.4</td> <td>V</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-65.5</td> <td>-13.0</td> <td>-52.5</td> <td></td> </tr> <tr> <td>2.5425</td> <td>-25.2</td> <td>V</td> <td>3.0</td> <td>39.6</td> <td>1.0</td> <td>-63.7</td> <td>-13.0</td> <td>-50.7</td> <td></td> </tr> <tr> <td>3.3900</td> <td>-35.1</td> <td>V</td> <td>3.0</td> <td>40.2</td> <td>1.0</td> <td>-74.3</td> <td>-13.0</td> <td>-61.3</td> <td></td> </tr> <tr> <td>1.6950</td> <td>-27.2</td> <td>H</td> <td>3.0</td> <td>39.1</td> <td>1.0</td> <td>-65.4</td> <td>-13.0</td> <td>-52.4</td> <td></td> </tr> <tr> <td>2.5425</td> <td>-27.8</td> <td>H</td> <td>3.0</td> <td>39.6</td> <td>1.0</td> <td>-66.4</td> <td>-13.0</td> <td>-53.4</td> <td></td> </tr> <tr> <td>3.3900</td> <td>-35.2</td> <td>H</td> <td>3.0</td> <td>40.2</td> <td>1.0</td> <td>-74.4</td> <td>-13.0</td> <td>-61.4</td> <td></td> </tr> </tbody> </table> | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Channel (825.5MHz) | | | | | | | | | | 1.6510 | -24.2 | V | 3.0 | 39.1 | 1.0 | -62.3 | -13.0 | -49.3 | | 2.4675 | -26.6 | V | 3.0 | 39.5 | 1.0 | -65.1 | -13.0 | -52.1 | | 3.3020 | -35.8 | V | 3.0 | 40.1 | 1.0 | -74.9 | -13.0 | -61.9 | | 1.6510 | -24.9 | H | 3.0 | 39.1 | 1.0 | -63.0 | -13.0 | -50.0 | | 2.4675 | -30.1 | H | 3.0 | 39.5 | 1.0 | -68.6 | -13.0 | -55.6 | | 3.3020 | -35.7 | H | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | | Mid Channel (836.5MHz) | | | | | | | | | | 1.6730 | -26.4 | V | 3.0 | 39.1 | 1.0 | -64.5 | -13.0 | -51.5 | | 2.5090 | -30.7 | V | 3.0 | 39.5 | 1.0 | -69.3 | -13.0 | -56.3 | | 3.3460 | -35.6 | V | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | | 1.6730 | -26.0 | H | 3.0 | 39.1 | 1.0 | -64.1 | -13.0 | -51.1 | | 2.5090 | -33.1 | H | 3.0 | 39.5 | 1.0 | -71.6 | -13.0 | -58.6 | | 3.3460 | -35.5 | H | 3.0 | 40.1 | 1.0 | -74.7 | -13.0 | -61.7 | | High Channel (847.5MHz) | | | | | | | | | | 1.6950 | -27.4 | V | 3.0 | 39.1 | 1.0 | -65.5 | -13.0 | -52.5 | | 2.5425 | -25.2 | V | 3.0 | 39.6 | 1.0 | -63.7 | -13.0 | -50.7 | | 3.3900 | -35.1 | V | 3.0 | 40.2 | 1.0 | -74.3 | -13.0 | -61.3 | | 1.6950 | -27.2 | H | 3.0 | 39.1 | 1.0 | -65.4 | -13.0 | -52.4 | | 2.5425 | -27.8 | H | 3.0 | 39.6 | 1.0 | -66.4 | -13.0 | -53.4 | | 3.3900 | -35.2 | H | 3.0 | 40.2 | 1.0 | -74.4 | -13.0 | -61.4 | |
| | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Low Channel (825.5MHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6510 | -24.2 | V | 3.0 | 39.1 | 1.0 | -62.3 | -13.0 | -49.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4675 | -26.6 | V | 3.0 | 39.5 | 1.0 | -65.1 | -13.0 | -52.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3020 | -35.8 | V | 3.0 | 40.1 | 1.0 | -74.9 | -13.0 | -61.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6510 | -24.9 | H | 3.0 | 39.1 | 1.0 | -63.0 | -13.0 | -50.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4675 | -30.1 | H | 3.0 | 39.5 | 1.0 | -68.6 | -13.0 | -55.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3020 | -35.7 | H | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mid Channel (836.5MHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6730 | -26.4 | V | 3.0 | 39.1 | 1.0 | -64.5 | -13.0 | -51.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.5090 | -30.7 | V | 3.0 | 39.5 | 1.0 | -69.3 | -13.0 | -56.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3460 | -35.6 | V | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6730 | -26.0 | H | 3.0 | 39.1 | 1.0 | -64.1 | -13.0 | -51.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5090 | -33.1 | H | 3.0 | 39.5 | 1.0 | -71.6 | -13.0 | -58.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3460 | -35.5 | H | 3.0 | 40.1 | 1.0 | -74.7 | -13.0 | -61.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Channel (847.5MHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6950 | -27.4 | V | 3.0 | 39.1 | 1.0 | -65.5 | -13.0 | -52.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5425 | -25.2 | V | 3.0 | 39.6 | 1.0 | -63.7 | -13.0 | -50.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3900 | -35.1 | V | 3.0 | 40.2 | 1.0 | -74.3 | -13.0 | -61.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6950 | -27.2 | H | 3.0 | 39.1 | 1.0 | -65.4 | -13.0 | -52.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5425 | -27.8 | H | 3.0 | 39.6 | 1.0 | -66.4 | -13.0 | -53.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3900 | -35.2 | H | 3.0 | 40.2 | 1.0 | -74.4 | -13.0 | -61.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
|----------------------------------|--|--|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|--|
| | | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 1.4MHz BW, QPSK | | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | | |
| LTE Band 5 1.4MHz QPSK | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | |
| | | Low Channel (824.7MHz) | | | | | | | | | | |
| | | 1.6494 | -23.7 | V | 3.0 | 39.1 | 1.0 | -61.8 | -13.0 | -48.8 | | |
| | | 2.4741 | -27.6 | V | 3.0 | 39.5 | 1.0 | -66.1 | -13.0 | -53.1 | | |
| | | 3.2988 | -35.0 | V | 3.0 | 40.1 | 1.0 | -74.1 | -13.0 | -61.1 | | |
| | | 1.6494 | -15.6 | H | 3.0 | 39.1 | 1.0 | -53.7 | -13.0 | -40.7 | | |
| | | 2.4741 | -29.5 | H | 3.0 | 39.5 | 1.0 | -68.1 | -13.0 | -55.1 | | |
| | | 3.2988 | -35.7 | H | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | | |
| | | Mid Channel (836.5MHz) | | | | | | | | | | |
| | | 1.6730 | -26.4 | V | 3.0 | 39.1 | 1.0 | -64.5 | -13.0 | -51.5 | | |
| | | 2.5090 | -30.4 | V | 3.0 | 39.5 | 1.0 | -68.9 | -13.0 | -55.9 | | |
| | | 3.3460 | -35.4 | V | 3.0 | 40.1 | 1.0 | -74.5 | -13.0 | -61.5 | | |
| | | 1.6730 | -25.2 | H | 3.0 | 39.1 | 1.0 | -63.3 | -13.0 | -50.3 | | |
| | | 2.5090 | -32.0 | H | 3.0 | 39.5 | 1.0 | -70.6 | -13.0 | -57.6 | | |
| | | 3.3460 | -35.5 | H | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | | |
| | | High Channel (844.3MHz) | | | | | | | | | | |
| | | 1.6886 | -27.2 | V | 3.0 | 39.1 | 1.0 | -65.3 | -13.0 | -52.3 | | |
| | | 2.5329 | -24.7 | V | 3.0 | 39.5 | 1.0 | -63.2 | -13.0 | -50.2 | | |
| | | 3.3772 | -35.4 | V | 3.0 | 40.2 | 1.0 | -74.5 | -13.0 | -61.5 | | |
| | | 1.6886 | -28.4 | H | 3.0 | 39.1 | 1.0 | -66.5 | -13.0 | -53.5 | | |
| | | 2.5329 | -23.5 | H | 3.0 | 39.5 | 1.0 | -62.0 | -13.0 | -49.0 | | |
| | | 3.3772 | -35.5 | H | 3.0 | 40.2 | 1.0 | -74.7 | -13.0 | -61.7 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |
| | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
| | | Company: Samsung Project #: 15K21054 Date: 06-20-15 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y Position Mode: TX, LTE BAND 5, 1.4MHz BW, 16QAM | | | | | | | | | | |
| | | Chamber | | Pre-amplifier | | Filter | | Limit | | | | |
| | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | | |
| LTE Band 5 1.4MHz 16QAM | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | |
| | | Low Channel (824.7MHz) | | | | | | | | | | |
| | | 1.6494 | -24.8 | V | 3.0 | 39.1 | 1.0 | -62.9 | -13.0 | -49.9 | | |
| | | 2.4741 | -28.4 | V | 3.0 | 39.5 | 1.0 | -66.9 | -13.0 | -53.9 | | |
| | | 3.2988 | -35.5 | V | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | | |
| | | 1.6494 | -16.5 | H | 3.0 | 39.1 | 1.0 | -54.6 | -13.0 | -41.6 | | |
| | | 2.4741 | -30.1 | H | 3.0 | 39.5 | 1.0 | -68.6 | -13.0 | -55.6 | | |
| | | 3.2988 | -35.7 | H | 3.0 | 40.1 | 1.0 | -74.8 | -13.0 | -61.8 | | |
| | | Mid Channel (836.5MHz) | | | | | | | | | | |
| | | 1.6730 | -27.6 | V | 3.0 | 39.1 | 1.0 | -65.7 | -13.0 | -52.7 | | |
| | | 2.5090 | -31.3 | V | 3.0 | 39.5 | 1.0 | -69.8 | -13.0 | -56.8 | | |
| | | 3.3460 | -35.5 | V | 3.0 | 40.1 | 1.0 | -74.6 | -13.0 | -61.6 | | |
| | | 1.6730 | -26.7 | H | 3.0 | 39.1 | 1.0 | -64.8 | -13.0 | -51.8 | | |
| | | 2.5090 | -33.5 | H | 3.0 | 39.5 | 1.0 | -72.1 | -13.0 | -59.1 | | |
| | | 3.3460 | -35.6 | H | 3.0 | 40.1 | 1.0 | -74.7 | -13.0 | -61.7 | | |
| | | High Channel (844.3MHz) | | | | | | | | | | |
| | | 1.6886 | -28.5 | V | 3.0 | 39.1 | 1.0 | -66.6 | -13.0 | -53.6 | | |
| | | 2.5329 | -25.3 | V | 3.0 | 39.5 | 1.0 | -63.9 | -13.0 | -50.9 | | |
| | | 3.3772 | -35.3 | V | 3.0 | 40.2 | 1.0 | -74.4 | -13.0 | -61.4 | | |
| | | 1.6886 | -29.4 | H | 3.0 | 39.1 | 1.0 | -67.5 | -13.0 | -54.5 | | |
| | | 2.5329 | -24.4 | H | 3.0 | 39.5 | 1.0 | -63.0 | -13.0 | -50.0 | | |
| | | 3.3772 | -35.4 | H | 3.0 | 40.2 | 1.0 | -74.6 | -13.0 | -61.6 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |