

|                                |                                                                                                                                                                                                     |                   |                  |                   |                     |              |              |               |              |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| LTE<br>Band 5<br>5MHz<br>QPSK  | <b>High Frequency Substitution Measurement</b><br><b>UL Korea, Ltd. Suwon Laboratory Chamber 2</b>                                                                                                  |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Company:</b> Samsung<br><b>Project #:</b> 4787656438<br><b>Date:</b> 10-31-16<br><b>Test Engineer:</b> YH Lim<br><b>Configuration:</b> EUT ONLY, X Position<br><b>Mode:</b> LTE5 5MHz FUND QPSK  |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Test Equipment:</b><br><b>Receiving:</b> VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)<br><b>Substitution:</b> Dipole S/N: 00164753, 3m SMA Cable Warehouse.        |                   |                  |                   |                     |              |              |               |              |
|                                | <b>f</b>                                                                                                                                                                                            | <b>SG reading</b> | <b>Ant. Pol.</b> | <b>Cable Loss</b> | <b>Antenna Gain</b> | <b>ERP</b>   | <b>Limit</b> | <b>Margin</b> | <b>Notes</b> |
|                                | <b>MHz</b>                                                                                                                                                                                          | <b>(dBm)</b>      | <b>(H/V)</b>     | <b>(dB)</b>       | <b>(dBd)</b>        | <b>(dBm)</b> | <b>(dBm)</b> | <b>(dB)</b>   |              |
|                                | Low Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 826.50                                                                                                                                                                                              | 6.43              | V                | 1.1               | -1.5                | 3.83         | 38.5         | -34.6         |              |
|                                | 826.50                                                                                                                                                                                              | -4.76             | H                | 1.1               | -1.5                | -7.36        | 38.5         | -45.8         |              |
|                                | Mid Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 836.50                                                                                                                                                                                              | 6.31              | V                | 1.1               | -1.4                | 3.82         | 38.5         | -34.6         |              |
|                                | 836.50                                                                                                                                                                                              | -6.50             | H                | 1.1               | -1.4                | -9.00        | 38.5         | -47.4         |              |
|                                | High Ch                                                                                                                                                                                             |                   |                  |                   |                     |              |              |               |              |
|                                | 846.50                                                                                                                                                                                              | 3.61              | V                | 1.6               | -1.3                | 0.73         | 38.5         | -37.7         |              |
|                                | 846.50                                                                                                                                                                                              | -6.38             | H                | 1.6               | -1.3                | -9.26        | 38.5         | -47.7         |              |
|                                | Rev. 3.17.11<br>Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm                                                                                                              |                   |                  |                   |                     |              |              |               |              |
| LTE<br>Band 5<br>5MHz<br>16QAM | <b>High Frequency Substitution Measurement</b><br><b>UL Korea, Ltd. Suwon Laboratory Chamber 2</b>                                                                                                  |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Company:</b> Samsung<br><b>Project #:</b> 4787656438<br><b>Date:</b> 10-31-16<br><b>Test Engineer:</b> YH Lim<br><b>Configuration:</b> EUT ONLY, X Position<br><b>Mode:</b> LTE5 5MHz FUND 16QAM |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Test Equipment:</b><br><b>Receiving:</b> VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)<br><b>Substitution:</b> Dipole S/N: 00164753, 3m SMA Cable Warehouse.        |                   |                  |                   |                     |              |              |               |              |
|                                | <b>f</b>                                                                                                                                                                                            | <b>SG reading</b> | <b>Ant. Pol.</b> | <b>Cable Loss</b> | <b>Antenna Gain</b> | <b>ERP</b>   | <b>Limit</b> | <b>Margin</b> | <b>Notes</b> |
|                                | <b>MHz</b>                                                                                                                                                                                          | <b>(dBm)</b>      | <b>(H/V)</b>     | <b>(dB)</b>       | <b>(dBd)</b>        | <b>(dBm)</b> | <b>(dBm)</b> | <b>(dB)</b>   |              |
|                                | Low Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 826.50                                                                                                                                                                                              | 5.33              | V                | 1.1               | -1.5                | 2.73         | 38.5         | -35.7         |              |
|                                | 826.50                                                                                                                                                                                              | -5.84             | H                | 1.1               | -1.5                | -8.44        | 38.5         | -46.9         |              |
|                                | Mid Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 836.50                                                                                                                                                                                              | 5.31              | V                | 1.1               | -1.4                | 2.82         | 38.5         | -35.6         |              |
|                                | 836.50                                                                                                                                                                                              | -7.12             | H                | 1.1               | -1.4                | -9.62        | 38.5         | -48.1         |              |
|                                | High Ch                                                                                                                                                                                             |                   |                  |                   |                     |              |              |               |              |
|                                | 846.50                                                                                                                                                                                              | 2.64              | V                | 1.1               | -1.3                | 0.26         | 38.5         | -38.2         |              |
|                                | 846.50                                                                                                                                                                                              | -7.35             | H                | 1.1               | -1.3                | -9.74        | 38.5         | -48.2         |              |
|                                | Rev. 3.17.11<br>Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm                                                                                                              |                   |                  |                   |                     |              |              |               |              |

|                                |                                                                                                                                                                                                     |                   |                  |                   |                     |              |              |               |              |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| LTE<br>Band 5<br>3MHz<br>QPSK  | <b>High Frequency Substitution Measurement</b><br><b>UL Korea, Ltd. Suwon Laboratory Chamber 2</b>                                                                                                  |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Company:</b> Samsung<br><b>Project #:</b> 4787656438<br><b>Date:</b> 10-31-16<br><b>Test Engineer:</b> YH Lim<br><b>Configuration:</b> EUT ONLY, X Position<br><b>Mode:</b> LTE5 3MHz FUND QPSK  |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Test Equipment:</b><br>Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)<br>Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse.                      |                   |                  |                   |                     |              |              |               |              |
|                                | <b>f</b>                                                                                                                                                                                            | <b>SG reading</b> | <b>Ant. Pol.</b> | <b>Cable Loss</b> | <b>Antenna Gain</b> | <b>ERP</b>   | <b>Limit</b> | <b>Margin</b> | <b>Notes</b> |
|                                | <b>MHz</b>                                                                                                                                                                                          | <b>(dBm)</b>      | <b>(H/V)</b>     | <b>(dB)</b>       | <b>(dBd)</b>        | <b>(dBm)</b> | <b>(dBm)</b> | <b>(dB)</b>   |              |
|                                | Low Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 825.50                                                                                                                                                                                              | 6.50              | V                | 1.1               | -1.5                | 3.90         | 38.5         | -34.6         |              |
|                                | 825.50                                                                                                                                                                                              | -5.33             | H                | 1.1               | -1.5                | -7.93        | 38.5         | -46.4         |              |
|                                | Mid Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 836.50                                                                                                                                                                                              | 6.30              | V                | 1.1               | -1.4                | 3.81         | 38.5         | -34.6         |              |
| LTE<br>Band 5<br>3MHz<br>16QAM | 836.50                                                                                                                                                                                              | -4.61             | H                | 1.1               | -1.4                | -7.11        | 38.5         | -45.6         |              |
|                                | High Ch                                                                                                                                                                                             |                   |                  |                   |                     |              |              |               |              |
|                                | 847.50                                                                                                                                                                                              | 5.84              | V                | 1.6               | -1.3                | 2.96         | 38.5         | -35.5         |              |
|                                | 847.50                                                                                                                                                                                              | -7.23             | H                | 1.6               | -1.3                | -10.11       | 38.5         | -48.6         |              |
|                                | Rev. 3.17.11<br>Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | <b>High Frequency Substitution Measurement</b><br><b>UL Korea, Ltd. Suwon Laboratory Chamber 2</b>                                                                                                  |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Company:</b> Samsung<br><b>Project #:</b> 4787656438<br><b>Date:</b> 10-31-16<br><b>Test Engineer:</b> YH Lim<br><b>Configuration:</b> EUT ONLY, X Position<br><b>Mode:</b> LTE5 3MHz FUND 16QAM |                   |                  |                   |                     |              |              |               |              |
|                                | <b>Test Equipment:</b><br>Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)<br>Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse.                      |                   |                  |                   |                     |              |              |               |              |
|                                | <b>f</b>                                                                                                                                                                                            | <b>SG reading</b> | <b>Ant. Pol.</b> | <b>Cable Loss</b> | <b>Antenna Gain</b> | <b>ERP</b>   | <b>Limit</b> | <b>Margin</b> | <b>Notes</b> |
|                                | <b>MHz</b>                                                                                                                                                                                          | <b>(dBm)</b>      | <b>(H/V)</b>     | <b>(dB)</b>       | <b>(dBd)</b>        | <b>(dBm)</b> | <b>(dBm)</b> | <b>(dB)</b>   |              |
|                                | Low Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 825.50                                                                                                                                                                                              | 5.38              | V                | 1.1               | -1.5                | 2.78         | 38.5         | -35.7         |              |
|                                | 825.50                                                                                                                                                                                              | -6.34             | H                | 1.1               | -1.5                | -8.94        | 38.5         | -47.4         |              |
|                                | Mid Ch                                                                                                                                                                                              |                   |                  |                   |                     |              |              |               |              |
|                                | 836.50                                                                                                                                                                                              | 5.27              | V                | 1.1               | -1.4                | 2.78         | 38.5         | -35.7         |              |
|                                | 836.50                                                                                                                                                                                              | -5.59             | H                | 1.1               | -1.4                | -8.09        | 38.5         | -46.5         |              |
|                                | High Ch                                                                                                                                                                                             |                   |                  |                   |                     |              |              |               |              |
|                                | 847.50                                                                                                                                                                                              | 4.82              | V                | 1.1               | -1.3                | 2.44         | 38.5         | -36.0         |              |
|                                | 847.50                                                                                                                                                                                              | -8.30             | H                | 1.1               | -1.3                | -10.69       | 38.5         | -49.1         |              |
|                                | Rev. 3.17.11<br>Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm                                                                                                              |                   |                  |                   |                     |              |              |               |              |

|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                  |                   |                     |              |              |               |              |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| LTE<br>Band 5<br>1.4MHz<br>QPSK                                                        | <b>UL Korea, Ltd. Suwon Laboratory Chamber 2</b><br><br><b>Company:</b> Samsung<br><b>Project #:</b> 4787656438<br><b>Date:</b> 10-31-16<br><b>Test Engineer:</b> YH Lim<br><b>Configuration:</b> EUT ONLY, X Position<br><b>Mode:</b> LTE5 1.4MHz FUND QPSK<br><br><b>Test Equipment:</b><br>Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)<br>Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse.                                                    |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | <b>f</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>SG reading</b> | <b>Ant. Pol.</b> | <b>Cable Loss</b> | <b>Antenna Gain</b> | <b>ERP</b>   | <b>Limit</b> | <b>Margin</b> | <b>Notes</b> |
|                                                                                        | <b>MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>(dBm)</b>      | <b>(H/V)</b>     | <b>(dB)</b>       | <b>(dBd)</b>        | <b>(dBm)</b> | <b>(dBm)</b> | <b>(dB)</b>   |              |
|                                                                                        | Low Ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | 824.70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.56              | V                | 1.1               | -1.5                | 0.96         | 38.5         | -37.5         |              |
|                                                                                        | 824.70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -1.05             | H                | 1.1               | -1.5                | -3.65        | 38.5         | -42.1         |              |
|                                                                                        | Mid Ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | 836.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.21              | V                | 1.1               | -1.4                | 1.72         | 38.5         | -36.7         |              |
|                                                                                        | 836.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -8.68             | H                | 1.1               | -1.4                | -11.18       | 38.5         | -49.6         |              |
|                                                                                        | High Ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | 848.30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.06              | V                | 1.6               | -1.3                | 1.18         | 38.5         | -37.3         |              |
|                                                                                        | 848.30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -8.22             | H                | 1.6               | -1.3                | -11.10       | 38.5         | -49.5         |              |
| Rev. 3.17.11<br>Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                  |                   |                     |              |              |               |              |
| LTE<br>Band 5<br>1.4MHz<br>16QAM                                                       | <b>High Frequency Substitution Measurement</b><br><b>UL Korea, Ltd. Suwon Laboratory Chamber 2</b><br><br><b>Company:</b> Samsung<br><b>Project #:</b> 4787656438<br><b>Date:</b> 10-31-16<br><b>Test Engineer:</b> YH Lim<br><b>Configuration:</b> EUT ONLY, X Position<br><b>Mode:</b> LTE5 1.4MHz FUND 16QAM<br><br><b>Test Equipment:</b><br>Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)<br>Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse. |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | <b>f</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>SG reading</b> | <b>Ant. Pol.</b> | <b>Cable Loss</b> | <b>Antenna Gain</b> | <b>ERP</b>   | <b>Limit</b> | <b>Margin</b> | <b>Notes</b> |
|                                                                                        | <b>MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>(dBm)</b>      | <b>(H/V)</b>     | <b>(dB)</b>       | <b>(dBd)</b>        | <b>(dBm)</b> | <b>(dBm)</b> | <b>(dB)</b>   |              |
|                                                                                        | Low Ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | 824.70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2.63              | V                | 1.1               | -1.5                | 0.03         | 38.5         | -38.4         |              |
|                                                                                        | 824.70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -2.12             | H                | 1.1               | -1.5                | -4.72        | 38.5         | -43.2         |              |
|                                                                                        | Mid Ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | 836.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.21              | V                | 1.1               | -1.4                | 0.72         | 38.5         | -37.7         |              |
|                                                                                        | 836.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -9.60             | H                | 1.1               | -1.4                | -12.10       | 38.5         | -50.5         |              |
|                                                                                        | High Ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                  |                   |                     |              |              |               |              |
|                                                                                        | 848.30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.03              | V                | 1.1               | -1.3                | 0.65         | 38.5         | -37.8         |              |
|                                                                                        | 848.30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -9.22             | H                | 1.1               | -1.3                | -11.61       | 38.5         | -50.1         |              |
| Rev. 3.17.11<br>Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                  |                   |                     |              |              |               |              |

## **11.2. FIELD STRENGTH OF SPURIOUS RADIATION**

### **RULE PART(S)**

FCC: §2.1053, §22.917

### **LIMIT**

Part 22.917(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

### LTE Band 5

LTE  
Band 5  
10MHz  
QPSK

UL Korea, Ltd Suwon Laboratory

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4787656438

Date: 11-01-16

Test Engineer: YH Lim

Configuration: EUT / Cradle / AC Adapter, X Position

Mode: TX, LTE BAND 5, 10MHz BW,QPSK

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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 Channel (829MHz)   |                  |                 |              |             |             |            |             |            |       |
| 1.6580                 | -5.3             | V               | 3.0          | 38.2        | 1.0         | -42.6      | -13.0       | -29.6      |       |
| 2.4870                 | -11.0            | V               | 3.0          | 38.8        | 1.0         | -48.8      | -13.0       | -35.8      |       |
| 3.3160                 | -20.1            | V               | 3.0          | 39.4        | 1.0         | -58.5      | -13.0       | -45.5      |       |
| 1.6580                 | -8.3             | H               | 3.0          | 38.2        | 1.0         | -45.5      | -13.0       | -32.5      |       |
| 2.4870                 | -11.4            | H               | 3.0          | 38.8        | 1.0         | -49.2      | -13.0       | -36.2      |       |
| 3.3160                 | -20.0            | H               | 3.0          | 39.4        | 1.0         | -58.4      | -13.0       | -45.4      |       |
| Mid Channel (836.5MHz) |                  |                 |              |             |             |            |             |            |       |
| 1.6730                 | -10.2            | V               | 3.0          | 38.2        | 1.0         | -47.4      | -13.0       | -34.4      |       |
| 2.5090                 | -13.0            | V               | 3.0          | 38.8        | 1.0         | -50.8      | -13.0       | -37.8      |       |
| 3.3460                 | -20.3            | V               | 3.0          | 39.5        | 1.0         | -58.7      | -13.0       | -45.7      |       |
| 1.6730                 | -8.2             | H               | 3.0          | 38.2        | 1.0         | -45.4      | -13.0       | -32.4      |       |
| 2.5090                 | -15.3            | H               | 3.0          | 38.8        | 1.0         | -53.1      | -13.0       | -40.1      |       |
| 3.3460                 | -20.1            | H               | 3.0          | 39.5        | 1.0         | -58.6      | -13.0       | -45.6      |       |
| High Channel (844MHz)  |                  |                 |              |             |             |            |             |            |       |
| 1.6880                 | -7.1             | V               | 3.0          | 38.2        | 1.0         | -44.4      | -13.0       | -31.4      |       |
| 2.5320                 | -13.8            | V               | 3.0          | 38.9        | 1.0         | -51.6      | -13.0       | -38.6      |       |
| 3.3760                 | -19.6            | V               | 3.0          | 39.5        | 1.0         | -58.0      | -13.0       | -45.0      |       |
| 1.6880                 | -12.7            | H               | 3.0          | 38.2        | 1.0         | -49.9      | -13.0       | -36.9      |       |
| 2.5320                 | -16.0            | H               | 3.0          | 38.9        | 1.0         | -53.8      | -13.0       | -40.8      |       |
| 3.3760                 | -20.5            | H               | 3.0          | 39.5        | 1.0         | -59.0      | -13.0       | -46.0      |       |

Rev. 03.03.09

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

LTE  
Band 5  
10MHz  
16QAM

UL Korea, Ltd Suwon Laboratory

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4787656438

Date: 11-01-16

Test Engineer: YH Lim

Configuration: EUT / Cradle / AC Adapter, X Position

Mode: TX, LTE BAND 5, 10MHz BW,16QAM

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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 Channel (829MHz)   |                  |                 |              |             |             |            |             |            |       |
| 1.6580                 | -7.0             | V               | 3.0          | 38.2        | 1.0         | -44.2      | -13.0       | -31.2      |       |
| 2.4870                 | -9.6             | V               | 3.0          | 38.8        | 1.0         | -47.4      | -13.0       | -34.4      |       |
| 3.3160                 | -19.7            | V               | 3.0          | 39.4        | 1.0         | -58.1      | -13.0       | -45.1      |       |
| 1.6580                 | -8.7             | H               | 3.0          | 38.2        | 1.0         | -45.9      | -13.0       | -32.9      |       |
| 2.4870                 | -12.8            | H               | 3.0          | 38.8        | 1.0         | -50.6      | -13.0       | -37.6      |       |
| 3.3160                 | -20.0            | H               | 3.0          | 39.4        | 1.0         | -58.4      | -13.0       | -45.4      |       |
| Mid Channel (836.5MHz) |                  |                 |              |             |             |            |             |            |       |
| 1.6730                 | -10.2            | V               | 3.0          | 38.2        | 1.0         | -47.5      | -13.0       | -34.5      |       |
| 2.5090                 | -14.8            | V               | 3.0          | 38.8        | 1.0         | -52.7      | -13.0       | -39.7      |       |
| 3.3460                 | -20.4            | V               | 3.0          | 39.5        | 1.0         | -58.9      | -13.0       | -45.9      |       |
| 1.6730                 | -9.6             | H               | 3.0          | 38.2        | 1.0         | -46.8      | -13.0       | -33.8      |       |
| 2.5090                 | -16.7            | H               | 3.0          | 38.8        | 1.0         | -54.5      | -13.0       | -41.5      |       |
| 3.3460                 | -20.7            | H               | 3.0          | 39.5        | 1.0         | -59.1      | -13.0       | -46.1      |       |
| High Channel (844MHz)  |                  |                 |              |             |             |            |             |            |       |
| 1.6880                 | -7.2             | V               | 3.0          | 38.2        | 1.0         | -44.5      | -13.0       | -31.5      |       |
| 2.5320                 | -14.4            | V               | 3.0          | 38.9        | 1.0         | -52.2      | -13.0       | -39.2      |       |
| 3.3760                 | -19.5            | V               | 3.0          | 39.5        | 1.0         | -57.9      | -13.0       | -44.9      |       |
| 1.6880                 | -13.5            | H               | 3.0          | 38.2        | 1.0         | -50.8      | -13.0       | -37.8      |       |
| 2.5320                 | -16.2            | H               | 3.0          | 38.9        | 1.0         | -54.1      | -13.0       | -41.1      |       |
| 3.3760                 | -20.8            | H               | 3.0          | 39.5        | 1.0         | -59.3      | -13.0       | -46.3      |       |

Rev. 03.03.09

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

LTE  
Band 5  
  
5MHz  
  
QPSK

UL Korea, Ltd Suwon Laboratory  
Above 1GHz High Frequency Substitution Measurement

Company: Samsung  
Project #: 4787656438  
Date: 11-01-16  
Test Engineer: JH Park  
Configuration: EUT / Cradle / AC Adapter, X Position  
Mode: TX, LTE BAND 5, 5MHz BW, QPSK

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

Part 22

| f<br>GHz                | SG reading<br>(dBm) | Ant. Pol.<br>(H/V) | Distance<br>(m) | Preamp<br>(dB) | Filter<br>(dB) | EIRP<br>(dBm) | Limit<br>(dBm) | Delta<br>(dB) | Notes |
|-------------------------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|
| Low Channel (826.5MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6530                  | -14.3               | V                  | 3.0             | 38.2           | 1.0            | -51.6         | -13.0          | -38.6         |       |
| 2.4790                  | -10.1               | V                  | 3.0             | 38.8           | 1.0            | -47.9         | -13.0          | -34.9         |       |
| 3.3060                  | -21.2               | V                  | 3.0             | 39.4           | 1.0            | -59.6         | -13.0          | -46.6         |       |
| 1.6530                  | -11.9               | H                  | 3.0             | 38.2           | 1.0            | -49.1         | -13.0          | -36.1         |       |
| 2.4790                  | -10.8               | H                  | 3.0             | 38.8           | 1.0            | -48.6         | -13.0          | -35.6         |       |
| 3.3060                  | -20.5               | H                  | 3.0             | 39.4           | 1.0            | -58.9         | -13.0          | -45.9         |       |
| Mid Channel (836.5MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6730                  | -12.1               | V                  | 3.0             | 38.2           | 1.0            | -49.3         | -13.0          | -36.3         |       |
| 2.5090                  | -15.0               | V                  | 3.0             | 38.8           | 1.0            | -52.9         | -13.0          | -39.9         |       |
| 3.3460                  | -19.8               | V                  | 3.0             | 39.5           | 1.0            | -58.3         | -13.0          | -45.3         |       |
| 1.6730                  | -9.3                | H                  | 3.0             | 38.2           | 1.0            | -46.6         | -13.0          | -33.6         |       |
| 2.5090                  | -12.9               | H                  | 3.0             | 38.8           | 1.0            | -50.8         | -13.0          | -37.8         |       |
| 3.3460                  | -20.7               | H                  | 3.0             | 39.5           | 1.0            | -59.2         | -13.0          | -46.2         |       |
| High Channel (846.5MHz) |                     |                    |                 |                |                |               |                |               |       |
| 1.6930                  | -1.9                | V                  | 3.0             | 38.2           | 1.0            | -39.2         | -13.0          | -26.2         |       |
| 2.5390                  | -14.9               | V                  | 3.0             | 38.9           | 1.0            | -52.8         | -13.0          | -39.8         |       |
| 3.3860                  | -20.3               | V                  | 3.0             | 39.5           | 1.0            | -58.8         | -13.0          | -45.8         |       |
| 1.6930                  | -12.8               | H                  | 3.0             | 38.2           | 1.0            | -50.1         | -13.0          | -37.1         |       |
| 2.5390                  | -12.9               | H                  | 3.0             | 38.9           | 1.0            | -50.7         | -13.0          | -37.7         |       |
| 3.3860                  | -20.1               | H                  | 3.0             | 39.5           | 1.0            | -58.6         | -13.0          | -45.6         |       |

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

LTE  
Band 5  
  
5MHz  
  
16QAM

UL Korea, Ltd Suwon Laboratory  
Above 1GHz High Frequency Substitution Measurement

Company: Samsung  
Project #: 4787656438  
Date: 11-01-16  
Test Engineer: JH Park  
Configuration: EUT / Cradle / AC Adapter, X Position  
Mode: TX, LTE BAND 5, 5MHz BW, 16QAM

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

Part 22

| f<br>GHz                | SG reading<br>(dBm) | Ant. Pol.<br>(H/V) | Distance<br>(m) | Preamp<br>(dB) | Filter<br>(dB) | EIRP<br>(dBm) | Limit<br>(dBm) | Delta<br>(dB) | Notes |
|-------------------------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|
| Low Channel (826.5MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6530                  | -13.8               | V                  | 3.0             | 38.2           | 1.0            | -51.0         | -13.0          | -38.0         |       |
| 2.4790                  | -9.8                | V                  | 3.0             | 38.8           | 1.0            | -47.6         | -13.0          | -34.6         |       |
| 3.3060                  | -19.8               | V                  | 3.0             | 39.4           | 1.0            | -58.2         | -13.0          | -45.2         |       |
| 1.6530                  | -11.7               | H                  | 3.0             | 38.2           | 1.0            | -48.9         | -13.0          | -35.9         |       |
| 2.4790                  | -10.1               | H                  | 3.0             | 38.8           | 1.0            | -47.9         | -13.0          | -34.9         |       |
| 3.3060                  | -20.8               | H                  | 3.0             | 39.4           | 1.0            | -59.3         | -13.0          | -46.3         |       |
| Mid Channel (836.5MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6730                  | -12.1               | V                  | 3.0             | 38.2           | 1.0            | -49.3         | -13.0          | -36.3         |       |
| 2.5090                  | -13.2               | V                  | 3.0             | 38.8           | 1.0            | -51.0         | -13.0          | -38.0         |       |
| 3.3460                  | -21.1               | V                  | 3.0             | 39.5           | 1.0            | -59.5         | -13.0          | -46.5         |       |
| 1.6730                  | -12.5               | H                  | 3.0             | 38.2           | 1.0            | -49.7         | -13.0          | -36.7         |       |
| 2.5090                  | -12.4               | H                  | 3.0             | 38.8           | 1.0            | -50.3         | -13.0          | -37.3         |       |
| 3.3460                  | -20.5               | H                  | 3.0             | 39.5           | 1.0            | -59.0         | -13.0          | -46.0         |       |
| High Channel (846.5MHz) |                     |                    |                 |                |                |               |                |               |       |
| 1.6930                  | -3.0                | V                  | 3.0             | 38.2           | 1.0            | -40.3         | -13.0          | -27.3         |       |
| 2.5390                  | -15.3               | V                  | 3.0             | 38.9           | 1.0            | -53.2         | -13.0          | -40.2         |       |
| 3.3860                  | -20.4               | V                  | 3.0             | 39.5           | 1.0            | -58.9         | -13.0          | -45.9         |       |
| 1.6930                  | -14.2               | H                  | 3.0             | 38.2           | 1.0            | -51.5         | -13.0          | -38.5         |       |
| 2.5390                  | -13.5               | H                  | 3.0             | 38.9           | 1.0            | -51.4         | -13.0          | -38.4         |       |
| 3.3860                  | -20.6               | H                  | 3.0             | 39.5           | 1.0            | -59.1         | -13.0          | -46.1         |       |

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



LTE  
Band 5  
3MHz  
QPSK

UL Korea, Ltd Suwon Laboratory

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4787656438

Date: 11-01-16

Test Engineer: JH Park

Configuration: EUT / Cradle / AC Adapter, X Position

Mode: TX, LTE BAND 5, 3MHz BW, QPSK

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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 Channel (825.5MHz)  |                  |                 |              |             |             |            |             |            |       |
| 1.6510                  | -5.9             | V               | 3.0          | 38.2        | 1.0         | -43.2      | -13.0       | -30.2      |       |
| 2.4765                  | -12.1            | V               | 3.0          | 38.8        | 1.0         | -49.9      | -13.0       | -36.9      |       |
| 3.3020                  | -21.1            | V               | 3.0          | 39.4        | 1.0         | -59.5      | -13.0       | -46.5      |       |
| 1.6510                  | -13.6            | H               | 3.0          | 38.2        | 1.0         | -50.8      | -13.0       | -37.8      |       |
| 2.4765                  | -7.2             | H               | 3.0          | 38.8        | 1.0         | -45.0      | -13.0       | -32.0      |       |
| 3.3020                  | -20.4            | H               | 3.0          | 39.4        | 1.0         | -58.8      | -13.0       | -45.8      |       |
| Mid Channel (836.5MHz)  |                  |                 |              |             |             |            |             |            |       |
| 1.6730                  | -7.1             | V               | 3.0          | 38.2        | 1.0         | -44.3      | -13.0       | -31.3      |       |
| 2.5090                  | -15.8            | V               | 3.0          | 38.8        | 1.0         | -53.6      | -13.0       | -40.6      |       |
| 3.3460                  | -18.3            | V               | 3.0          | 39.5        | 1.0         | -56.7      | -13.0       | -43.7      |       |
| 1.6730                  | -6.7             | H               | 3.0          | 38.2        | 1.0         | -43.9      | -13.0       | -30.9      |       |
| 2.5090                  | -13.9            | H               | 3.0          | 38.8        | 1.0         | -51.7      | -13.0       | -38.7      |       |
| 3.3460                  | -20.4            | H               | 3.0          | 39.5        | 1.0         | -58.9      | -13.0       | -45.9      |       |
| High Channel (847.5MHz) |                  |                 |              |             |             |            |             |            |       |
| 1.6950                  | -6.2             | V               | 3.0          | 38.2        | 1.0         | -43.4      | -13.0       | -30.4      |       |
| 2.5425                  | -14.4            | V               | 3.0          | 38.9        | 1.0         | -52.3      | -13.0       | -39.3      |       |
| 3.3900                  | -20.0            | V               | 3.0          | 39.5        | 1.0         | -58.5      | -13.0       | -45.5      |       |
| 1.6950                  | -10.4            | H               | 3.0          | 38.2        | 1.0         | -47.7      | -13.0       | -34.7      |       |
| 2.5425                  | -12.9            | H               | 3.0          | 38.9        | 1.0         | -50.8      | -13.0       | -37.8      |       |
| 3.3900                  | -20.2            | H               | 3.0          | 39.5        | 1.0         | -58.7      | -13.0       | -45.7      |       |

Rev. 03.03.09

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

LTE  
Band 5  
3MHz  
16QAM

UL Korea, Ltd Suwon Laboratory

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4787656438

Date: 11-01-16

Test Engineer: JH Park

Configuration: EUT / Cradle / AC Adapter, X Position

Mode: TX, LTE BAND 5, 3MHz BW, 16QAM

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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 Channel (825.5MHz)  |                  |                 |              |             |             |            |             |            |       |
| 1.6510                  | -5.7             | V               | 3.0          | 38.2        | 1.0         | -43.0      | -13.0       | -30.0      |       |
| 2.4765                  | -11.4            | V               | 3.0          | 38.8        | 1.0         | -49.2      | -13.0       | -36.2      |       |
| 3.3020                  | -20.0            | V               | 3.0          | 39.4        | 1.0         | -58.5      | -13.0       | -45.5      |       |
| 1.6510                  | -15.3            | H               | 3.0          | 38.2        | 1.0         | -52.6      | -13.0       | -39.6      |       |
| 2.4765                  | -8.4             | H               | 3.0          | 38.8        | 1.0         | -46.2      | -13.0       | -33.2      |       |
| 3.3020                  | -19.8            | H               | 3.0          | 39.4        | 1.0         | -58.3      | -13.0       | -45.3      |       |
| Mid Channel (836.5MHz)  |                  |                 |              |             |             |            |             |            |       |
| 1.6730                  | -9.0             | V               | 3.0          | 38.2        | 1.0         | -46.2      | -13.0       | -33.2      |       |
| 2.5090                  | -16.8            | V               | 3.0          | 38.8        | 1.0         | -54.6      | -13.0       | -41.6      |       |
| 3.3460                  | -20.6            | V               | 3.0          | 39.5        | 1.0         | -59.1      | -13.0       | -46.1      |       |
| 1.6730                  | -7.4             | H               | 3.0          | 38.2        | 1.0         | -44.7      | -13.0       | -31.7      |       |
| 2.5090                  | -13.7            | H               | 3.0          | 38.8        | 1.0         | -51.6      | -13.0       | -38.6      |       |
| 3.3460                  | -19.6            | H               | 3.0          | 39.5        | 1.0         | -58.0      | -13.0       | -45.0      |       |
| High Channel (847.5MHz) |                  |                 |              |             |             |            |             |            |       |
| 1.6950                  | -6.6             | V               | 3.0          | 38.2        | 1.0         | -43.9      | -13.0       | -30.9      |       |
| 2.5425                  | -14.4            | V               | 3.0          | 38.9        | 1.0         | -52.2      | -13.0       | -39.2      |       |
| 3.3900                  | -20.5            | V               | 3.0          | 39.5        | 1.0         | -58.9      | -13.0       | -45.9      |       |
| 1.6950                  | -11.0            | H               | 3.0          | 38.2        | 1.0         | -48.3      | -13.0       | -35.3      |       |
| 2.5425                  | -12.7            | H               | 3.0          | 38.9        | 1.0         | -50.6      | -13.0       | -37.6      |       |
| 3.3900                  | -19.9            | H               | 3.0          | 39.5        | 1.0         | -58.4      | -13.0       | -45.4      |       |

Rev. 03.03.09

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

LTE  
Band 5  
1.4MHz  
QPSK

UL Korea, Ltd Suwon Laboratory  
Above 1GHz High Frequency Substitution Measurement

Company: Samsung  
Project #: 4787656438  
Date: 10-31-16  
Test Engineer: YH Lim  
Configuration: EUT / Cradle / AC Adapter, X Position  
Mode: TX, LTE BAND 5, 1.4MHz BW,QPSK

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

Part 22

| f<br>GHz                | SG reading<br>(dBm) | Ant. Pol.<br>(H/V) | Distance<br>(m) | Preamp<br>(dB) | Filter<br>(dB) | EIRP<br>(dBm) | Limit<br>(dBm) | Delta<br>(dB) | Notes |
|-------------------------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|
| Low Channel (824.7MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6494                  | -13.6               | V                  | 3.0             | 38.2           | 1.0            | -50.8         | -13.0          | -37.8         |       |
| 2.4741                  | -9.3                | V                  | 3.0             | 38.8           | 1.0            | -47.1         | -13.0          | -34.1         |       |
| 3.2988                  | -19.1               | V                  | 3.0             | 39.4           | 1.0            | -57.5         | -13.0          | -44.5         |       |
| 1.6494                  | -12.1               | H                  | 3.0             | 38.2           | 1.0            | -49.4         | -13.0          | -36.4         |       |
| 2.4741                  | -12.6               | H                  | 3.0             | 38.8           | 1.0            | -50.4         | -13.0          | -37.4         |       |
| 3.2988                  | -19.6               | H                  | 3.0             | 39.4           | 1.0            | -58.0         | -13.0          | -45.0         |       |
| Mid Channel (836.5MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6730                  | -12.2               | V                  | 3.0             | 38.2           | 1.0            | -49.5         | -13.0          | -36.5         |       |
| 2.5090                  | -11.8               | V                  | 3.0             | 38.8           | 1.0            | -49.7         | -13.0          | -36.7         |       |
| 3.3460                  | -20.0               | V                  | 3.0             | 39.5           | 1.0            | -58.5         | -13.0          | -45.5         |       |
| 1.6730                  | -11.6               | H                  | 3.0             | 38.2           | 1.0            | -48.9         | -13.0          | -35.9         |       |
| 2.5090                  | -12.8               | H                  | 3.0             | 38.8           | 1.0            | -50.7         | -13.0          | -37.7         |       |
| 3.3460                  | -19.8               | H                  | 3.0             | 39.5           | 1.0            | -58.3         | -13.0          | -45.3         |       |
| High Channel (848.3MHz) |                     |                    |                 |                |                |               |                |               |       |
| 1.6966                  | -9.2                | V                  | 3.0             | 38.2           | 1.0            | -46.5         | -13.0          | -33.5         |       |
| 2.5449                  | -14.4               | V                  | 3.0             | 38.9           | 1.0            | -52.3         | -13.0          | -39.3         |       |
| 3.3932                  | -19.7               | V                  | 3.0             | 39.5           | 1.0            | -58.2         | -13.0          | -45.2         |       |
| 1.6966                  | -4.7                | H                  | 3.0             | 38.2           | 1.0            | -41.9         | -13.0          | -28.9         |       |
| 2.5449                  | -13.4               | H                  | 3.0             | 38.9           | 1.0            | -51.2         | -13.0          | -38.2         |       |
| 3.3932                  | -20.2               | H                  | 3.0             | 39.5           | 1.0            | -58.7         | -13.0          | -45.7         |       |

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

LTE  
Band 5  
1.4MHz  
16QAM

UL Korea, Ltd Suwon Laboratory  
Above 1GHz High Frequency Substitution Measurement

Company: Samsung  
Project #: 4787656438  
Date: 10-31-16  
Test Engineer: YH Lim  
Configuration: EUT / Cradle / AC Adapter, X Position  
Mode: TX, LTE BAND 5, 1.4MHz BW,16QAM

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

Part 22

| f<br>GHz                | SG reading<br>(dBm) | Ant. Pol.<br>(H/V) | Distance<br>(m) | Preamp<br>(dB) | Filter<br>(dB) | EIRP<br>(dBm) | Limit<br>(dBm) | Delta<br>(dB) | Notes |
|-------------------------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|
| Low Channel (824.7MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6494                  | -14.3               | V                  | 3.0             | 38.2           | 1.0            | -51.6         | -13.0          | -38.6         |       |
| 2.4741                  | -9.5                | V                  | 3.0             | 38.8           | 1.0            | -47.3         | -13.0          | -34.3         |       |
| 3.2988                  | -20.3               | V                  | 3.0             | 39.4           | 1.0            | -58.7         | -13.0          | -45.7         |       |
| 1.6494                  | -13.0               | H                  | 3.0             | 38.2           | 1.0            | -50.2         | -13.0          | -37.2         |       |
| 2.4741                  | -12.9               | H                  | 3.0             | 38.8           | 1.0            | -50.7         | -13.0          | -37.7         |       |
| 3.2988                  | -19.6               | H                  | 3.0             | 39.4           | 1.0            | -58.0         | -13.0          | -45.0         |       |
| Mid Channel (836.5MHz)  |                     |                    |                 |                |                |               |                |               |       |
| 1.6730                  | -12.8               | V                  | 3.0             | 38.2           | 1.0            | -50.0         | -13.0          | -37.0         |       |
| 2.5090                  | -11.9               | V                  | 3.0             | 38.8           | 1.0            | -49.7         | -13.0          | -36.7         |       |
| 3.3460                  | -20.2               | V                  | 3.0             | 39.5           | 1.0            | -58.6         | -13.0          | -45.6         |       |
| 1.6730                  | -11.7               | H                  | 3.0             | 38.2           | 1.0            | -48.9         | -13.0          | -35.9         |       |
| 2.5090                  | -13.1               | H                  | 3.0             | 38.8           | 1.0            | -51.0         | -13.0          | -38.0         |       |
| 3.3460                  | -19.7               | H                  | 3.0             | 39.5           | 1.0            | -58.1         | -13.0          | -45.1         |       |
| High Channel (848.3MHz) |                     |                    |                 |                |                |               |                |               |       |
| 1.6966                  | -9.8                | V                  | 3.0             | 38.2           | 1.0            | -47.1         | -13.0          | -34.1         |       |
| 2.5449                  | -15.6               | V                  | 3.0             | 38.9           | 1.0            | -53.4         | -13.0          | -40.4         |       |
| 3.3932                  | -20.0               | V                  | 3.0             | 39.5           | 1.0            | -58.5         | -13.0          | -45.5         |       |
| 1.6966                  | -7.2                | H                  | 3.0             | 38.2           | 1.0            | -44.5         | -13.0          | -31.5         |       |
| 2.5449                  | -14.1               | H                  | 3.0             | 38.9           | 1.0            | -51.9         | -13.0          | -38.9         |       |
| 3.3932                  | -19.9               | H                  | 3.0             | 39.5           | 1.0            | -58.4         | -13.0          | -45.4         |       |

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