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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------|----------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| LTE Band 5 5MHz QPSK | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: | | Samsung | | | | | | |
| | Project #: | | 16K23304 | | | | | | |
| | Date: | | 05-25-16 | | | | | | |
| | Test Engineer: | | Chan Park | | | | | | |
| | Configuration: | | EUT ONLY, X Position | | | | | | |
| | Mode: | | LTE5 5MHz 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 | | | | | | | | |
| | 826.50 | 8.42 | V | 1.1 | -1.5 | 5.82 | 38.5 | -32.6 | |
| | 826.50 | 14.04 | H | 1.1 | -1.5 | 11.44 | 38.5 | -27.0 | |
| Mid Ch | | | | | | | | | |
| 836.50 | 7.93 | V | 1.1 | -1.4 | 5.44 | 38.5 | -33.0 | | |
| 836.50 | 13.99 | H | 1.1 | -1.4 | 11.50 | 38.5 | -27.0 | | |
| High Ch | | | | | | | | | |
| 846.50 | 7.81 | V | 1.6 | -1.3 | 4.93 | 38.5 | -33.5 | | |
| 846.50 | 15.41 | H | 1.6 | -1.3 | 12.53 | 38.5 | -25.9 | | |
| Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm | | | | | | | | | |
| LTE Band 5 5MHz 16QAM | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: | | Samsung | | | | | | |
| | Project #: | | 16K23304 | | | | | | |
| | Date: | | 05-25-16 | | | | | | |
| | Test Engineer: | | Chan Park | | | | | | |
| | Configuration: | | EUT ONLY, X Position | | | | | | |
| | Mode: | | LTE5 5MHz 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 | | | | | | | | |
| | 826.50 | 8.52 | V | 1.1 | -1.5 | 5.92 | 38.5 | -32.5 | |
| | 826.50 | 14.06 | H | 1.1 | -1.5 | 11.46 | 38.5 | -27.0 | |
| Mid Ch | | | | | | | | | |
| 836.50 | 8.15 | V | 1.1 | -1.4 | 5.65 | 38.5 | -32.8 | | |
| 836.50 | 14.15 | H | 1.1 | -1.4 | 11.66 | 38.5 | -26.8 | | |
| High Ch | | | | | | | | | |
| 846.50 | 7.89 | V | 1.1 | -1.3 | 5.51 | 38.5 | -32.9 | | |
| 846.50 | 15.62 | H | 1.1 | -1.3 | 13.24 | 38.5 | -25.2 | | |
| Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm | | | | | | | | | |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------|----------------------|-------------------|---------------------|--------------|--------------|---------------|--------------|
| LTE Band 5 3MHz QPSK | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: | | Samsung | | | | | | |
| | Project #: | | 16K23304 | | | | | | |
| | Date: | | 05-25-16 | | | | | | |
| | Test Engineer: | | Chan Park | | | | | | |
| | Configuration: | | EUT ONLY, X 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. | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | ERP | Limit | Margin | Notes |
| | MHz | (dBm) | (H/V) | (dB) | (dBd) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 825.50 | 9.25 | V | 1.1 | -1.5 | 6.65 | 38.5 | -31.8 | |
| 825.50 | 14.34 | H | 1.1 | -1.5 | 11.74 | 38.5 | -26.7 | | |
| Mid Ch | | | | | | | | | |
| 836.50 | 8.50 | V | 1.1 | -1.4 | 6.01 | 38.5 | -32.4 | | |
| 836.50 | 14.12 | H | 1.1 | -1.4 | 11.63 | 38.5 | -26.8 | | |
| High Ch | | | | | | | | | |
| 847.50 | 8.31 | V | 1.6 | -1.3 | 5.43 | 38.5 | -33.0 | | |
| 847.50 | 15.82 | H | 1.6 | -1.3 | 12.94 | 38.5 | -25.5 | | |
| Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm | | | | | | | | | |
| LTE Band 5 3MHz 16QAM | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | | |
| | Company: | | Samsung | | | | | | |
| | Project #: | | 16K23304 | | | | | | |
| | Date: | | 05-25-16 | | | | | | |
| | Test Engineer: | | Chan Park | | | | | | |
| | Configuration: | | EUT ONLY, X 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. | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | ERP | Limit | Margin | Notes |
| | MHz | (dBm) | (H/V) | (dB) | (dBd) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 825.50 | 9.30 | V | 1.1 | -1.5 | 6.70 | 38.5 | -31.8 | |
| 825.50 | 14.50 | H | 1.1 | -1.5 | 11.90 | 38.5 | -26.6 | | |
| Mid Ch | | | | | | | | | |
| 836.50 | 8.63 | V | 1.1 | -1.4 | 6.14 | 38.5 | -32.3 | | |
| 836.50 | 14.31 | H | 1.1 | -1.4 | 11.82 | 38.5 | -26.6 | | |
| High Ch | | | | | | | | | |
| 847.50 | 8.58 | V | 1.1 | -1.3 | 6.20 | 38.5 | -32.3 | | |
| 847.50 | 15.62 | H | 1.1 | -1.3 | 13.24 | 38.5 | -25.2 | | |
| Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm | | | | | | | | | |

| | | High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2 | | | | | | | |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|
| LTE Band 5 1.4MHz QPSK | Company: Samsung Project #: 16K23304 Date: 05-25-16 Test Engineer: Chan Park Configuration: EUT ONLY, X 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 MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes |
| | Low Ch | | | | | | | | |
| | 824.70 | 6.98 | V | 1.1 | -1.5 | 4.38 | 38.5 | -34.1 | |
| | 824.70 | 12.36 | H | 1.1 | -1.5 | 9.76 | 38.5 | -28.7 | |
| | Mid Ch | | | | | | | | |
| | 836.50 | 6.68 | V | 1.1 | -1.4 | 4.19 | 38.5 | -34.3 | |
| | 836.50 | 12.61 | H | 1.1 | -1.4 | 10.12 | 38.5 | -28.3 | |
| | High Ch | | | | | | | | |
| | 848.30 | 5.90 | V | 1.6 | -1.3 | 3.02 | 38.5 | -35.4 | |
| | 848.30 | 13.72 | H | 1.6 | -1.3 | 10.84 | 38.5 | -27.6 | |
| Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm | | | | | | | | | |
| LTE Band 5 1.4MHz 16QAM | Company: Samsung Project #: 16K23304 Date: 05-25-16 Test Engineer: Chan Park Configuration: EUT ONLY, X 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 MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes |
| | Low Ch | | | | | | | | |
| | 824.70 | 6.93 | V | 1.1 | -1.5 | 4.33 | 38.5 | -34.1 | |
| | 824.70 | 12.41 | H | 1.1 | -1.5 | 9.81 | 38.5 | -28.6 | |
| | Mid Ch | | | | | | | | |
| | 836.50 | 6.81 | V | 1.1 | -1.4 | 4.32 | 38.5 | -34.1 | |
| | 836.50 | 12.46 | H | 1.1 | -1.4 | 9.97 | 38.5 | -28.5 | |
| | High Ch | | | | | | | | |
| | 848.30 | 6.02 | V | 1.1 | -1.3 | 3.64 | 38.5 | -34.8 | |
| | 848.30 | 13.60 | H | 1.1 | -1.3 | 11.22 | 38.5 | -27.2 | |
| Rev. 3.17.11 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, §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 | | | | | | | | | | |
|------------------------|----------------|---------------------------------------------------------------------------------------|------------------|------------------|-----------------|--------------|-------------|-------------|------------|-------------|------------|-------|
| GSM GSM850 GPRS | Company: | Samsung | | | | | | | | | | |
| | Project #: | 16K23304 | | | | | | | | | | |
| | Date: | 04-27-16 | | | | | | | | | | |
| | Test Engineer: | YH Lim | | | | | | | | | | |
| | Configuration: | EUT / AC Adapter / Earphone, X 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 | -5.8 | V | 3.0 | 39.1 | 1.0 | -43.9 | -13.0 | -30.9 | | |
| | | 2.4726 | 0.7 | V | 3.0 | 39.5 | 1.0 | -37.8 | -13.0 | -24.8 | | |
| | | 3.2968 | -18.0 | V | 3.0 | 40.1 | 1.0 | -57.1 | -13.0 | -44.1 | | |
| | | 1.6484 | -4.9 | H | 3.0 | 39.1 | 1.0 | -43.0 | -13.0 | -30.0 | | |
| | | 2.4726 | 7.5 | H | 3.0 | 39.5 | 1.0 | -31.0 | -13.0 | -18.0 | | |
| | | 3.2968 | -18.3 | H | 3.0 | 40.1 | 1.0 | -57.4 | -13.0 | -44.4 | | |
| | | Mid Ch, 836.6MHz | | | | | | | | | | |
| | | 1.6730 | -1.6 | V | 3.0 | 39.1 | 1.0 | -39.7 | -13.0 | -26.7 | | |
| | | 2.5098 | -0.9 | V | 3.0 | 39.5 | 1.0 | -39.4 | -13.0 | -26.4 | | |
| | | 3.3464 | -16.4 | V | 3.0 | 40.1 | 1.0 | -55.6 | -13.0 | -42.6 | | |
| | | 1.6730 | -2.7 | H | 3.0 | 39.1 | 1.0 | -40.8 | -13.0 | -27.8 | | |
| | | 2.5098 | 5.1 | H | 3.0 | 39.5 | 1.0 | -33.5 | -13.0 | -20.5 | | |
| | | 3.3464 | -16.6 | H | 3.0 | 40.1 | 1.0 | -55.8 | -13.0 | -42.8 | | |
| | | High Ch, 848.8MHz | | | | | | | | | | |
| | | 1.6976 | -4.8 | V | 3.0 | 39.1 | 1.0 | -42.9 | -13.0 | -29.9 | | |
| | | 2.5466 | -4.3 | V | 3.0 | 39.6 | 1.0 | -42.9 | -13.0 | -29.9 | | |
| | | 3.3952 | -17.3 | V | 3.0 | 40.2 | 1.0 | -56.5 | -13.0 | -43.5 | | |
| | | 1.6976 | -5.1 | H | 3.0 | 39.1 | 1.0 | -43.2 | -13.0 | -30.2 | | |
| | | 2.5466 | 0.2 | H | 3.0 | 39.6 | 1.0 | -38.4 | -13.0 | -25.4 | | |
| | | 3.3952 | -17.7 | H | 3.0 | 40.2 | 1.0 | -56.8 | -13.0 | -43.8 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |
| GSM GSM850 EGPRS | Company: | Samsung | | | | | | | | | | |
| | Project #: | 16K23304 | | | | | | | | | | |
| | Date: | 04-26-16 | | | | | | | | | | |
| | Test Engineer: | YH Lim | | | | | | | | | | |
| | Configuration: | EUT / AC Adapter / Earphone, X Position | | | | | | | | | | |
| | Mode: | EGPRS 850 MHz | | | | | | | | | | |
| | | | Chamber | Pre-amplifier | Filter | Limit | | | | | | |
| | | | Chamber 1 | 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 | -14.8 | V | 3.0 | 39.1 | 1.0 | -52.9 | -13.0 | -39.9 | | |
| | | 2.4726 | -11.5 | V | 3.0 | 39.5 | 1.0 | -50.0 | -13.0 | -37.0 | | |
| | | 3.2968 | -18.0 | V | 3.0 | 40.1 | 1.0 | -57.1 | -13.0 | -44.1 | | |
| | | 1.6484 | -15.3 | H | 3.0 | 39.1 | 1.0 | -53.4 | -13.0 | -40.4 | | |
| | | 2.4726 | -4.6 | H | 3.0 | 39.5 | 1.0 | -43.1 | -13.0 | -30.1 | | |
| | | 3.2968 | -18.2 | H | 3.0 | 40.1 | 1.0 | -57.3 | -13.0 | -44.3 | | |
| | | Mid Ch, 836.6MHz | | | | | | | | | | |
| | | 1.6730 | -10.3 | V | 3.0 | 39.1 | 1.0 | -48.4 | -13.0 | -35.4 | | |
| | | 2.5098 | -12.5 | V | 3.0 | 39.5 | 1.0 | -51.1 | -13.0 | -38.1 | | |
| | | 3.3464 | -16.4 | V | 3.0 | 40.1 | 1.0 | -55.5 | -13.0 | -42.5 | | |
| | | 1.6730 | -13.2 | H | 3.0 | 39.1 | 1.0 | -51.3 | -13.0 | -38.3 | | |
| | | 2.5098 | -6.9 | H | 3.0 | 39.5 | 1.0 | -45.4 | -13.0 | -32.4 | | |
| | | 3.3464 | -16.7 | H | 3.0 | 40.1 | 1.0 | -55.9 | -13.0 | -42.9 | | |
| | | High Ch, 848.8MHz | | | | | | | | | | |
| | | 1.6976 | -15.7 | V | 3.0 | 39.1 | 1.0 | -53.9 | -13.0 | -40.9 | | |
| | | 2.5466 | -16.7 | V | 3.0 | 39.6 | 1.0 | -55.2 | -13.0 | -42.2 | | |
| | | 3.3952 | -17.5 | V | 3.0 | 40.2 | 1.0 | -56.7 | -13.0 | -43.7 | | |
| | | 1.6976 | -17.0 | H | 3.0 | 39.1 | 1.0 | -55.1 | -13.0 | -42.1 | | |
| | | 2.5466 | -14.8 | H | 3.0 | 39.6 | 1.0 | -53.4 | -13.0 | -40.4 | | |
| | | 3.3952 | -17.7 | H | 3.0 | 40.2 | 1.0 | -56.9 | -13.0 | -43.9 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |

GSM 1900

| GSM GSM1900 GPRS | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|------------------------|--------------------|------------------|----------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|
| | Company: Samsung Project #: 16K23304 Date: 04-26-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, X Position Mode: GPRS 1900 | | Chamber Chamber 2 | Pre-amplifier AFS42 | Filter Filter 1 | Limit Part 24 | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) |
| Low Ch, 1850.2MHz | | | | | | | | | | | | | | | |
| | 3.7004 | -6.0 | V | 3.0 | 40.5 | 1.0 | -45.4 | -13.0 | -32.4 | | | | | | |
| | 5.5506 | -7.9 | V | 3.0 | 40.8 | 1.0 | -47.7 | -13.0 | -34.7 | | | | | | |
| | 7.4008 | -11.6 | V | 3.0 | 40.8 | 1.0 | -51.4 | -13.0 | -38.4 | | | | | | |
| | 3.7000 | -2.3 | H | 3.0 | 40.5 | 1.0 | -41.8 | -13.0 | -28.8 | | | | | | |
| | 5.5506 | -5.6 | H | 3.0 | 40.8 | 1.0 | -45.4 | -13.0 | -32.4 | | | | | | |
| | 7.4008 | -12.0 | H | 3.0 | 40.8 | 1.0 | -51.8 | -13.0 | -38.8 | | | | | | |
| Mid Ch, 1880.0MHz | | | | | | | | | | | | | | | |
| | 3.7600 | -7.1 | V | 3.0 | 40.5 | 1.0 | -46.6 | -13.0 | -33.6 | | | | | | |
| | 5.6400 | -6.9 | V | 3.0 | 40.8 | 1.0 | -46.7 | -13.0 | -33.7 | | | | | | |
| | 7.5200 | -10.9 | V | 3.0 | 40.7 | 1.0 | -50.6 | -13.0 | -37.6 | | | | | | |
| | 3.7600 | -3.7 | H | 3.0 | 40.5 | 1.0 | -43.2 | -13.0 | -30.2 | | | | | | |
| | 5.6400 | -4.6 | H | 3.0 | 40.8 | 1.0 | -44.4 | -13.0 | -31.4 | | | | | | |
| | 7.5200 | -11.3 | H | 3.0 | 40.7 | 1.0 | -51.0 | -13.0 | -38.0 | | | | | | |
| High Ch, 1909.8 MHz | | | | | | | | | | | | | | | |
| | 3.8196 | -5.5 | V | 3.0 | 40.6 | 1.0 | -45.1 | -13.0 | -32.1 | | | | | | |
| | 5.7294 | -4.2 | V | 3.0 | 40.8 | 1.0 | -44.0 | -13.0 | -31.0 | | | | | | |
| | 7.6392 | -9.9 | V | 3.0 | 40.7 | 1.0 | -49.5 | -13.0 | -36.5 | | | | | | |
| | 3.8196 | -5.2 | H | 3.0 | 40.6 | 1.0 | -44.8 | -13.0 | -31.8 | | | | | | |
| | 5.7294 | -1.6 | H | 3.0 | 40.8 | 1.0 | -41.4 | -13.0 | -28.4 | | | | | | |
| | 7.6392 | -10.4 | H | 3.0 | 40.7 | 1.0 | -50.1 | -13.0 | -37.1 | | | | | | |
| Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | | | | | |

| GSM GSM1900 EGPRS | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|------------------------|--------------------|------------------|----------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|
| | Company: Samsung Project #: 16K23304 Date: 04-26-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, X Position Mode: EGPRS 1900 MHz | | Chamber Chamber 2 | Pre-amplifier AFS42 | Filter Filter 1 | Limit Part 24 | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) |
| Low Ch, 1850.2MHz | | | | | | | | | | | | | | | |
| | 3.7004 | -15.1 | V | 3.0 | 40.5 | 1.0 | -54.6 | -13.0 | -41.6 | | | | | | |
| | 5.5506 | -13.5 | V | 3.0 | 40.8 | 1.0 | -53.3 | -13.0 | -40.3 | | | | | | |
| | 7.4008 | -11.9 | V | 3.0 | 40.8 | 1.0 | -51.7 | -13.0 | -38.7 | | | | | | |
| | 3.7000 | -13.9 | H | 3.0 | 40.5 | 1.0 | -53.4 | -13.0 | -40.4 | | | | | | |
| | 5.5500 | -11.5 | H | 3.0 | 40.8 | 1.0 | -51.3 | -13.0 | -38.3 | | | | | | |
| | 7.4000 | -11.8 | H | 3.0 | 40.8 | 1.0 | -51.6 | -13.0 | -38.6 | | | | | | |
| Mid Ch, 1880.0MHz | | | | | | | | | | | | | | | |
| | 3.7600 | -15.6 | V | 3.0 | 40.5 | 1.0 | -55.2 | -13.0 | -42.2 | | | | | | |
| | 5.6400 | -13.8 | V | 3.0 | 40.8 | 1.0 | -53.6 | -13.0 | -40.6 | | | | | | |
| | 7.5200 | -11.6 | V | 3.0 | 40.7 | 1.0 | -51.3 | -13.0 | -38.3 | | | | | | |
| | 3.7600 | -15.6 | H | 3.0 | 40.5 | 1.0 | -55.1 | -13.0 | -42.1 | | | | | | |
| | 5.6400 | -11.8 | H | 3.0 | 40.8 | 1.0 | -51.6 | -13.0 | -38.6 | | | | | | |
| | 7.5200 | -11.4 | H | 3.0 | 40.7 | 1.0 | -51.1 | -13.0 | -38.1 | | | | | | |
| High Ch, 1909.8 MHz | | | | | | | | | | | | | | | |
| | 3.8196 | -14.0 | V | 3.0 | 40.6 | 1.0 | -53.6 | -13.0 | -40.6 | | | | | | |
| | 5.7294 | -13.2 | V | 3.0 | 40.8 | 1.0 | -53.0 | -13.0 | -40.0 | | | | | | |
| | 7.6392 | -11.3 | V | 3.0 | 40.7 | 1.0 | -50.9 | -13.0 | -37.9 | | | | | | |
| | 3.8196 | -13.1 | H | 3.0 | 40.6 | 1.0 | -52.7 | -13.0 | -39.7 | | | | | | |
| | 5.7294 | -11.1 | H | 3.0 | 40.8 | 1.0 | -50.9 | -13.0 | -37.9 | | | | | | |
| | 7.6392 | -10.8 | H | 3.0 | 40.7 | 1.0 | -50.4 | -13.0 | -37.4 | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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---|-------|-------|-------|--|--------|-------|---|-----|------|-----|-------|-------|-------|--|--|
| WCDMA Band 5 REL99 | Company: Samsung Project #: 16K23304 Date: 04-27-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone / X Position Mode: Tx, REL99,850MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <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 Ch, 826.40MHz</td></tr> <tr><td>1.6520</td><td>-14.8</td><td>V</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-52.9</td><td>-13.0</td><td>-39.9</td><td></td></tr> <tr><td>2.4790</td><td>-18.0</td><td>V</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-56.5</td><td>-13.0</td><td>-43.5</td><td></td></tr> <tr><td>3.3056</td><td>-16.0</td><td>V</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.1</td><td>-13.0</td><td>-42.1</td><td></td></tr> <tr><td>1.6520</td><td>-16.7</td><td>H</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-54.8</td><td>-13.0</td><td>-41.8</td><td></td></tr> <tr><td>2.4790</td><td>-18.5</td><td>H</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-57.0</td><td>-13.0</td><td>-44.0</td><td></td></tr> <tr><td>3.3056</td><td>-16.2</td><td>H</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.3</td><td>-13.0</td><td>-42.3</td><td></td></tr> <tr><td colspan="10">Mid Ch, 836.6MHz</td></tr> <tr><td>1.6732</td><td>-14.7</td><td>V</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-52.8</td><td>-13.0</td><td>-39.8</td><td></td></tr> <tr><td>2.5098</td><td>-17.8</td><td>V</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-56.4</td><td>-13.0</td><td>-43.4</td><td></td></tr> <tr><td>3.3464</td><td>-16.0</td><td>V</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.1</td><td>-13.0</td><td>-42.1</td><td></td></tr> <tr><td>1.6732</td><td>-16.5</td><td>H</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-54.6</td><td>-13.0</td><td>-41.6</td><td></td></tr> <tr><td>2.5098</td><td>-18.3</td><td>H</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-56.9</td><td>-13.0</td><td>-43.9</td><td></td></tr> <tr><td>3.3464</td><td>-16.3</td><td>H</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.4</td><td>-13.0</td><td>-42.4</td><td></td></tr> <tr><td colspan="10">High Ch, 846.6MHz</td></tr> <tr><td>1.6932</td><td>-13.9</td><td>V</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-52.0</td><td>-13.0</td><td>-39.0</td><td></td></tr> <tr><td>2.5390</td><td>-17.9</td><td>V</td><td>3.0</td><td>39.6</td><td>1.0</td><td>-56.4</td><td>-13.0</td><td>-43.4</td><td></td></tr> <tr><td>3.3860</td><td>-15.9</td><td>V</td><td>3.0</td><td>40.2</td><td>1.0</td><td>-55.0</td><td>-13.0</td><td>-42.0</td><td></td></tr> <tr><td>1.6932</td><td>-17.2</td><td>H</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-55.3</td><td>-13.0</td><td>-42.3</td><td></td></tr> <tr><td>2.5390</td><td>-18.2</td><td>H</td><td>3.0</td><td>39.6</td><td>1.0</td><td>-56.8</td><td>-13.0</td><td>-43.8</td><td></td></tr> <tr><td>3.3860</td><td>-16.1</td><td>H</td><td>3.0</td><td>40.2</td><td>1.0</td><td>-55.3</td><td>-13.0</td><td>-42.3</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 Ch, 826.40MHz | | | | | | | | | | 1.6520 | -14.8 | V | 3.0 | 39.1 | 1.0 | -52.9 | -13.0 | -39.9 | | 2.4790 | -18.0 | V | 3.0 | 39.5 | 1.0 | -56.5 | -13.0 | -43.5 | | 3.3056 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.1 | -13.0 | -42.1 | | 1.6520 | -16.7 | H | 3.0 | 39.1 | 1.0 | -54.8 | -13.0 | -41.8 | | 2.4790 | -18.5 | H | 3.0 | 39.5 | 1.0 | -57.0 | -13.0 | -44.0 | | 3.3056 | -16.2 | H | 3.0 | 40.1 | 1.0 | -55.3 | -13.0 | -42.3 | | Mid Ch, 836.6MHz | | | | | | | | | | 1.6732 | -14.7 | V | 3.0 | 39.1 | 1.0 | -52.8 | -13.0 | -39.8 | | 2.5098 | -17.8 | V | 3.0 | 39.5 | 1.0 | -56.4 | -13.0 | -43.4 | | 3.3464 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.1 | -13.0 | -42.1 | | 1.6732 | -16.5 | H | 3.0 | 39.1 | 1.0 | -54.6 | -13.0 | -41.6 | | 2.5098 | -18.3 | H | 3.0 | 39.5 | 1.0 | -56.9 | -13.0 | -43.9 | | 3.3464 | -16.3 | H | 3.0 | 40.1 | 1.0 | -55.4 | -13.0 | -42.4 | | High Ch, 846.6MHz | | | | | | | | | | 1.6932 | -13.9 | V | 3.0 | 39.1 | 1.0 | -52.0 | -13.0 | -39.0 | | 2.5390 | -17.9 | V | 3.0 | 39.6 | 1.0 | -56.4 | -13.0 | -43.4 | | 3.3860 | -15.9 | V | 3.0 | 40.2 | 1.0 | -55.0 | -13.0 | -42.0 | | 1.6932 | -17.2 | H | 3.0 | 39.1 | 1.0 | -55.3 | -13.0 | -42.3 | | 2.5390 | -18.2 | H | 3.0 | 39.6 | 1.0 | -56.8 | -13.0 | -43.8 | | 3.3860 | -16.1 | H | 3.0 | 40.2 | 1.0 | -55.3 | -13.0 | -42.3 | | |
| | 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 | -14.8 | V | 3.0 | 39.1 | 1.0 | -52.9 | -13.0 | -39.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4790 | -18.0 | V | 3.0 | 39.5 | 1.0 | -56.5 | -13.0 | -43.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3056 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.1 | -13.0 | -42.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6520 | -16.7 | H | 3.0 | 39.1 | 1.0 | -54.8 | -13.0 | -41.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4790 | -18.5 | H | 3.0 | 39.5 | 1.0 | -57.0 | -13.0 | -44.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3056 | -16.2 | H | 3.0 | 40.1 | 1.0 | -55.3 | -13.0 | -42.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch, 836.6MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6732 | -14.7 | V | 3.0 | 39.1 | 1.0 | -52.8 | -13.0 | -39.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5098 | -17.8 | V | 3.0 | 39.5 | 1.0 | -56.4 | -13.0 | -43.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3464 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.1 | -13.0 | -42.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6732 | -16.5 | H | 3.0 | 39.1 | 1.0 | -54.6 | -13.0 | -41.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5098 | -18.3 | H | 3.0 | 39.5 | 1.0 | -56.9 | -13.0 | -43.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3464 | -16.3 | H | 3.0 | 40.1 | 1.0 | -55.4 | -13.0 | -42.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch, 846.6MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6932 | -13.9 | V | 3.0 | 39.1 | 1.0 | -52.0 | -13.0 | -39.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5390 | -17.9 | V | 3.0 | 39.6 | 1.0 | -56.4 | -13.0 | -43.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3860 | -15.9 | V | 3.0 | 40.2 | 1.0 | -55.0 | -13.0 | -42.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6932 | -17.2 | H | 3.0 | 39.1 | 1.0 | -55.3 | -13.0 | -42.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5390 | -18.2 | H | 3.0 | 39.6 | 1.0 | -56.8 | -13.0 | -43.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3860 | -16.1 | H | 3.0 | 40.2 | 1.0 | -55.3 | -13.0 | -42.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rev. 03.03.09 | Note: No other emissions were detected above the system noise floor. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WCDMA Band 5 HSDPA | Company: Samsung Project #: 16K23304 Date: 04-27-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone / X Position Mode: Tx, HSDPA,850MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <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 Ch, 826.40MHz</td></tr> <tr><td>1.6520</td><td>-13.6</td><td>V</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-51.7</td><td>-13.0</td><td>-38.7</td><td></td></tr> <tr><td>2.4790</td><td>-18.0</td><td>V</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-56.5</td><td>-13.0</td><td>-43.5</td><td></td></tr> <tr><td>3.3056</td><td>-16.0</td><td>V</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.1</td><td>-13.0</td><td>-42.1</td><td></td></tr> <tr><td>1.6520</td><td>-16.5</td><td>H</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-54.6</td><td>-13.0</td><td>-41.6</td><td></td></tr> <tr><td>2.4790</td><td>-18.3</td><td>H</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-56.9</td><td>-13.0</td><td>-43.9</td><td></td></tr> <tr><td>3.3056</td><td>-16.2</td><td>H</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.3</td><td>-13.0</td><td>-42.3</td><td></td></tr> <tr><td colspan="10">Mid Ch, 836.6MHz</td></tr> <tr><td>1.6732</td><td>-14.4</td><td>V</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-52.5</td><td>-13.0</td><td>-39.5</td><td></td></tr> <tr><td>2.5098</td><td>-17.7</td><td>V</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-56.3</td><td>-13.0</td><td>-43.3</td><td></td></tr> <tr><td>3.3464</td><td>-16.0</td><td>V</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.2</td><td>-13.0</td><td>-42.2</td><td></td></tr> <tr><td>1.6732</td><td>-15.6</td><td>H</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-53.7</td><td>-13.0</td><td>-40.7</td><td></td></tr> <tr><td>2.5098</td><td>-18.2</td><td>H</td><td>3.0</td><td>39.5</td><td>1.0</td><td>-56.8</td><td>-13.0</td><td>-43.8</td><td></td></tr> <tr><td>3.3464</td><td>-16.3</td><td>H</td><td>3.0</td><td>40.1</td><td>1.0</td><td>-55.4</td><td>-13.0</td><td>-42.4</td><td></td></tr> <tr><td colspan="10">High Ch, 846.6MHz</td></tr> <tr><td>1.6932</td><td>-16.2</td><td>V</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-54.3</td><td>-13.0</td><td>-41.3</td><td></td></tr> <tr><td>2.5390</td><td>-17.9</td><td>V</td><td>3.0</td><td>39.6</td><td>1.0</td><td>-56.5</td><td>-13.0</td><td>-43.5</td><td></td></tr> <tr><td>3.3860</td><td>-15.8</td><td>V</td><td>3.0</td><td>40.2</td><td>1.0</td><td>-55.0</td><td>-13.0</td><td>-42.0</td><td></td></tr> <tr><td>1.6932</td><td>-18.6</td><td>H</td><td>3.0</td><td>39.1</td><td>1.0</td><td>-56.7</td><td>-13.0</td><td>-43.7</td><td></td></tr> <tr><td>2.5390</td><td>-18.3</td><td>H</td><td>3.0</td><td>39.6</td><td>1.0</td><td>-56.9</td><td>-13.0</td><td>-43.9</td><td></td></tr> <tr><td>3.3860</td><td>-16.2</td><td>H</td><td>3.0</td><td>40.2</td><td>1.0</td><td>-55.4</td><td>-13.0</td><td>-42.4</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 Ch, 826.40MHz | | | | | | | | | | 1.6520 | -13.6 | V | 3.0 | 39.1 | 1.0 | -51.7 | -13.0 | -38.7 | | 2.4790 | -18.0 | V | 3.0 | 39.5 | 1.0 | -56.5 | -13.0 | -43.5 | | 3.3056 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.1 | -13.0 | -42.1 | | 1.6520 | -16.5 | H | 3.0 | 39.1 | 1.0 | -54.6 | -13.0 | -41.6 | | 2.4790 | -18.3 | H | 3.0 | 39.5 | 1.0 | -56.9 | -13.0 | -43.9 | | 3.3056 | -16.2 | H | 3.0 | 40.1 | 1.0 | -55.3 | -13.0 | -42.3 | | Mid Ch, 836.6MHz | | | | | | | | | | 1.6732 | -14.4 | V | 3.0 | 39.1 | 1.0 | -52.5 | -13.0 | -39.5 | | 2.5098 | -17.7 | V | 3.0 | 39.5 | 1.0 | -56.3 | -13.0 | -43.3 | | 3.3464 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.2 | -13.0 | -42.2 | | 1.6732 | -15.6 | H | 3.0 | 39.1 | 1.0 | -53.7 | -13.0 | -40.7 | | 2.5098 | -18.2 | H | 3.0 | 39.5 | 1.0 | -56.8 | -13.0 | -43.8 | | 3.3464 | -16.3 | H | 3.0 | 40.1 | 1.0 | -55.4 | -13.0 | -42.4 | | High Ch, 846.6MHz | | | | | | | | | | 1.6932 | -16.2 | V | 3.0 | 39.1 | 1.0 | -54.3 | -13.0 | -41.3 | | 2.5390 | -17.9 | V | 3.0 | 39.6 | 1.0 | -56.5 | -13.0 | -43.5 | | 3.3860 | -15.8 | V | 3.0 | 40.2 | 1.0 | -55.0 | -13.0 | -42.0 | | 1.6932 | -18.6 | H | 3.0 | 39.1 | 1.0 | -56.7 | -13.0 | -43.7 | | 2.5390 | -18.3 | H | 3.0 | 39.6 | 1.0 | -56.9 | -13.0 | -43.9 | | 3.3860 | -16.2 | H | 3.0 | 40.2 | 1.0 | -55.4 | -13.0 | -42.4 | | |
| | 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 | -13.6 | V | 3.0 | 39.1 | 1.0 | -51.7 | -13.0 | -38.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4790 | -18.0 | V | 3.0 | 39.5 | 1.0 | -56.5 | -13.0 | -43.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3.3056 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.1 | -13.0 | -42.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.6520 | -16.5 | H | 3.0 | 39.1 | 1.0 | -54.6 | -13.0 | -41.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2.4790 | -18.3 | H | 3.0 | 39.5 | 1.0 | -56.9 | -13.0 | -43.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3056 | -16.2 | H | 3.0 | 40.1 | 1.0 | -55.3 | -13.0 | -42.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch, 836.6MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6732 | -14.4 | V | 3.0 | 39.1 | 1.0 | -52.5 | -13.0 | -39.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5098 | -17.7 | V | 3.0 | 39.5 | 1.0 | -56.3 | -13.0 | -43.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3464 | -16.0 | V | 3.0 | 40.1 | 1.0 | -55.2 | -13.0 | -42.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6732 | -15.6 | H | 3.0 | 39.1 | 1.0 | -53.7 | -13.0 | -40.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5098 | -18.2 | H | 3.0 | 39.5 | 1.0 | -56.8 | -13.0 | -43.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3464 | -16.3 | H | 3.0 | 40.1 | 1.0 | -55.4 | -13.0 | -42.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch, 846.6MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6932 | -16.2 | V | 3.0 | 39.1 | 1.0 | -54.3 | -13.0 | -41.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5390 | -17.9 | V | 3.0 | 39.6 | 1.0 | -56.5 | -13.0 | -43.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3860 | -15.8 | V | 3.0 | 40.2 | 1.0 | -55.0 | -13.0 | -42.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6932 | -18.6 | H | 3.0 | 39.1 | 1.0 | -56.7 | -13.0 | -43.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.5390 | -18.3 | H | 3.0 | 39.6 | 1.0 | -56.9 | -13.0 | -43.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.3860 | -16.2 | H | 3.0 | 40.2 | 1.0 | -55.4 | -13.0 | -42.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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 #: 16K23304 | | Date: 04-27-16 | | Test Engineer: Chan Park | | Configuration: EUT / AC Adapter / Earphone / X Position | |
| WCDMA Band 2 REL99 | | 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, 1852.4MHz | | | | | | | | | |
| | | 3.7048 | -11.5 | V | 3.0 | 40.5 | 1.0 | -51.0 | -13.0 | -38.0 | |
| | | 5.5572 | -10.5 | V | 3.0 | 40.8 | 1.0 | -50.3 | -13.0 | -37.3 | |
| | | 7.4096 | -9.1 | V | 3.0 | 40.8 | 1.0 | -48.9 | -13.0 | -35.9 | |
| | | 3.7048 | -12.4 | H | 3.0 | 40.5 | 1.0 | -51.9 | -13.0 | -38.9 | |
| | | 5.5572 | -9.9 | H | 3.0 | 40.8 | 1.0 | -49.7 | -13.0 | -36.7 | |
| | | 7.4096 | -9.0 | H | 3.0 | 40.8 | 1.0 | -48.8 | -13.0 | -35.8 | |
| | | Mid Ch, 1880MHz | | | | | | | | | |
| | | 3.7600 | -13.2 | V | 3.0 | 40.5 | 1.0 | -52.8 | -13.0 | -39.8 | |
| | | 5.6400 | -10.3 | V | 3.0 | 40.8 | 1.0 | -50.1 | -13.0 | -37.1 | |
| | | 7.5200 | -8.2 | V | 3.0 | 40.7 | 1.0 | -47.9 | -13.0 | -34.9 | |
| | | 3.7600 | -13.5 | H | 3.0 | 40.5 | 1.0 | -53.1 | -13.0 | -40.1 | |
| | | 5.6400 | -10.4 | H | 3.0 | 40.8 | 1.0 | -50.2 | -13.0 | -37.2 | |
| | | 7.5200 | -8.3 | H | 3.0 | 40.7 | 1.0 | -48.0 | -13.0 | -35.0 | |
| | | High Ch, 1907.6MHz | | | | | | | | | |
| | | 3.8152 | -12.4 | V | 3.0 | 40.6 | 1.0 | -52.0 | -13.0 | -39.0 | |
| | | 5.7228 | -9.8 | V | 3.0 | 40.8 | 1.0 | -49.6 | -13.0 | -36.6 | |
| | | 7.6304 | -8.4 | V | 3.0 | 40.7 | 1.0 | -48.1 | -13.0 | -35.1 | |
| | | 3.8152 | -13.6 | H | 3.0 | 40.6 | 1.0 | -53.2 | -13.0 | -40.2 | |
| | | 5.7228 | -9.9 | H | 3.0 | 40.8 | 1.0 | -49.7 | -13.0 | -36.7 | |
| | | 7.6304 | -8.3 | H | 3.0 | 40.7 | 1.0 | -48.0 | -13.0 | -35.0 | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | |
| WCDMA Band 2 HSDPA | | UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement | | | | | | | | | |
| | | Company: Samsung | | Project #: 16K23304 | | Date: 04-27-16 | | Test Engineer: Chan Park | | Configuration: EUT / AC Adapter / Earphone / X Position | |
| | | 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, 1852.4MHz | | | | | | | | | |
| | | 3.7048 | -12.0 | V | 3.0 | 40.5 | 1.0 | -51.5 | -13.0 | -38.5 | |
| | | 5.5572 | -10.4 | V | 3.0 | 40.8 | 1.0 | -50.3 | -13.0 | -37.3 | |
| | | 7.4096 | -9.2 | V | 3.0 | 40.8 | 1.0 | -49.0 | -13.0 | -36.0 | |
| | | 3.7048 | -12.9 | H | 3.0 | 40.5 | 1.0 | -52.4 | -13.0 | -39.4 | |
| | | 5.5572 | -9.9 | H | 3.0 | 40.8 | 1.0 | -49.7 | -13.0 | -36.7 | |
| | | 7.4096 | -9.0 | H | 3.0 | 40.8 | 1.0 | -48.8 | -13.0 | -35.8 | |
| | | Mid Ch, 1880MHz | | | | | | | | | |
| | | 3.7600 | -13.5 | V | 3.0 | 40.5 | 1.0 | -53.0 | -13.0 | -40.0 | |
| | | 5.6400 | -10.6 | V | 3.0 | 40.8 | 1.0 | -50.4 | -13.0 | -37.4 | |
| | | 7.5200 | -8.4 | V | 3.0 | 40.7 | 1.0 | -48.2 | -13.0 | -35.2 | |
| | | 3.7600 | -13.8 | H | 3.0 | 40.5 | 1.0 | -53.4 | -13.0 | -40.4 | |
| | | 5.6400 | -10.5 | H | 3.0 | 40.8 | 1.0 | -50.3 | -13.0 | -37.3 | |
| | | 7.5200 | -8.3 | H | 3.0 | 40.7 | 1.0 | -48.0 | -13.0 | -35.0 | |
| | | High Ch, 1907.6MHz | | | | | | | | | |
| | | 3.8152 | -12.7 | V | 3.0 | 40.6 | 1.0 | -52.2 | -13.0 | -39.2 | |
| | | 5.7228 | -10.1 | V | 3.0 | 40.8 | 1.0 | -49.9 | -13.0 | -36.9 | |
| | | 7.6304 | -8.4 | V | 3.0 | 40.7 | 1.0 | -48.1 | -13.0 | -35.1 | |
| | | 3.8152 | -13.7 | H | 3.0 | 40.6 | 1.0 | -53.3 | -13.0 | -40.3 | |
| | | 5.7228 | -9.9 | H | 3.0 | 40.8 | 1.0 | -49.7 | -13.0 | -36.7 | |
| | | 7.6304 | -8.3 | H | 3.0 | 40.7 | 1.0 | -47.9 | -13.0 | -34.9 | |
| | | 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 | | | | | | | | | | |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------|------------------|------------------------|--------------|--------------------|-------------|------------------|-------------|------------|-------|
| LTE Band 5 10MHz QPSK | Company: Samsung Project #: 16K23304 Date: 05-25-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, 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 | -18.7 | V | 3.0 | 39.1 | 1.0 | -56.8 | -13.0 | -43.8 | |
| | | | 2.4870 | -22.8 | V | 3.0 | 39.5 | 1.0 | -61.4 | -13.0 | -48.4 | |
| | | | 3.3160 | -22.4 | V | 3.0 | 40.1 | 1.0 | -61.5 | -13.0 | -48.5 | |
| | | | 1.6580 | -16.8 | H | 3.0 | 39.1 | 1.0 | -54.9 | -13.0 | -41.9 | |
| | | | 2.4870 | -22.6 | H | 3.0 | 39.5 | 1.0 | -61.1 | -13.0 | -48.1 | |
| | | | 3.3160 | -22.2 | H | 3.0 | 40.1 | 1.0 | -61.3 | -13.0 | -48.3 | |
| | | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -14.2 | V | 3.0 | 39.1 | 1.0 | -52.3 | -13.0 | -39.3 | | |
| | | 2.5090 | -19.8 | V | 3.0 | 39.5 | 1.0 | -58.4 | -13.0 | -45.4 | | |
| | | 3.3460 | -22.7 | V | 3.0 | 40.1 | 1.0 | -61.8 | -13.0 | -48.8 | | |
| | | 1.6730 | -7.7 | H | 3.0 | 39.1 | 1.0 | -45.8 | -13.0 | -32.8 | | |
| | | 2.5090 | -17.2 | H | 3.0 | 39.5 | 1.0 | -55.8 | -13.0 | -42.8 | | |
| | | 3.3460 | -22.1 | H | 3.0 | 40.1 | 1.0 | -61.2 | -13.0 | -48.2 | | |
| | | High Channel (844MHz) | | | | | | | | | | |
| | | 1.6880 | -17.2 | V | 3.0 | 39.1 | 1.0 | -55.3 | -13.0 | -42.3 | | |
| | | 2.5320 | -21.4 | V | 3.0 | 39.5 | 1.0 | -59.9 | -13.0 | -46.9 | | |
| | | 3.3760 | -23.1 | V | 3.0 | 40.2 | 1.0 | -62.3 | -13.0 | -49.3 | | |
| | | 1.6880 | -14.6 | H | 3.0 | 39.1 | 1.0 | -52.7 | -13.0 | -39.7 | | |
| | | 2.5320 | -18.0 | H | 3.0 | 39.5 | 1.0 | -56.6 | -13.0 | -43.6 | | |
| | | 3.3760 | -22.5 | H | 3.0 | 40.2 | 1.0 | -61.6 | -13.0 | -48.6 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |
| LTE Band 5 10MHz 16QAM | Company: Samsung Project #: 16K23304 Date: 05-25-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, 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 | -18.5 | V | 3.0 | 39.1 | 1.0 | -56.6 | -13.0 | -43.6 | |
| | | | 2.4870 | -23.9 | V | 3.0 | 39.5 | 1.0 | -62.4 | -13.0 | -49.4 | |
| | | | 3.3160 | -22.4 | V | 3.0 | 40.1 | 1.0 | -61.5 | -13.0 | -48.5 | |
| | | | 1.6580 | -16.8 | H | 3.0 | 39.1 | 1.0 | -54.9 | -13.0 | -41.9 | |
| | | | 2.4870 | -22.7 | H | 3.0 | 39.5 | 1.0 | -61.2 | -13.0 | -48.2 | |
| | | | 3.3160 | -22.3 | H | 3.0 | 40.1 | 1.0 | -61.5 | -13.0 | -48.5 | |
| | | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -15.7 | V | 3.0 | 39.1 | 1.0 | -53.8 | -13.0 | -40.8 | | |
| | | 2.5090 | -20.6 | V | 3.0 | 39.5 | 1.0 | -59.1 | -13.0 | -46.1 | | |
| | | 3.3460 | -22.7 | V | 3.0 | 40.1 | 1.0 | -61.9 | -13.0 | -48.9 | | |
| | | 1.6730 | -10.2 | H | 3.0 | 39.1 | 1.0 | -48.3 | -13.0 | -35.3 | | |
| | | 2.5090 | -18.3 | H | 3.0 | 39.5 | 1.0 | -56.8 | -13.0 | -43.8 | | |
| | | 3.3460 | -22.4 | H | 3.0 | 40.1 | 1.0 | -61.5 | -13.0 | -48.5 | | |
| | | High Channel (844MHz) | | | | | | | | | | |
| | | 1.6880 | -17.2 | V | 3.0 | 39.1 | 1.0 | -55.3 | -13.0 | -42.3 | | |
| | | 2.5320 | -21.4 | V | 3.0 | 39.5 | 1.0 | -59.9 | -13.0 | -46.9 | | |
| | | 3.3760 | -23.1 | V | 3.0 | 40.2 | 1.0 | -62.3 | -13.0 | -49.3 | | |
| | | 1.6880 | -14.9 | H | 3.0 | 39.1 | 1.0 | -53.0 | -13.0 | -40.0 | | |
| | | 2.5320 | -18.1 | H | 3.0 | 39.5 | 1.0 | -56.6 | -13.0 | -43.6 | | |
| | | 3.3760 | -22.5 | H | 3.0 | 40.2 | 1.0 | -61.7 | -13.0 | -48.7 | | |
| | | 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 | | | | | | | | | | |
|--------------------------------|----------------|---------------------------------------------------------------------------------------|-----------------------------------------|------------|---------------|----------|----------|--------|---------|-------|-------|-------|
| LTE Band 5 5MHz QPSK | Company: | | Samsung | | | | | | | | | |
| | Project #: | | 16K23304 | | | | | | | | | |
| | Date: | | 05-25-16 | | | | | | | | | |
| | Test Engineer: | | YH Lim | | | | | | | | | |
| | Configuration: | | EUT / AC Adapter / Earphone, X Position | | | | | | | | | |
| | Mode: | | TX, LTE BAND 5, 5MHz BW, QPSK | | | | | | | | | |
| | | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| | | | f | SG reading | Ant. Pol. | Distance | Preamp | Filter | EIRP | Limit | Delta | Notes |
| | | | GHz | (dBm) | (H/V) | (m) | (dB) | (dB) | (dBm) | (dBm) | (dB) | |
| | | | Low Channel (826.5MHz) | | | | | | | | | |
| | | | 1.6530 | -15.5 | V | 3.0 | 39.1 | 1.0 | -53.6 | -13.0 | -40.6 | |
| | | | 2.4790 | -22.7 | V | 3.0 | 39.5 | 1.0 | -61.3 | -13.0 | -48.3 | |
| | | | 3.3060 | -22.7 | V | 3.0 | 40.1 | 1.0 | -61.8 | -13.0 | -48.8 | |
| | | | 1.6530 | -18.5 | H | 3.0 | 39.1 | 1.0 | -56.6 | -13.0 | -43.6 | |
| | | | 2.4790 | -21.5 | H | 3.0 | 39.5 | 1.0 | -60.0 | -13.0 | -47.0 | |
| | | | 3.3060 | -23.4 | H | 3.0 | 40.1 | 1.0 | -62.5 | -13.0 | -49.5 | |
| | | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | | 1.6730 | -13.0 | V | 3.0 | 39.1 | 1.0 | -51.1 | -13.0 | -38.1 | |
| | | | 2.5090 | -21.2 | V | 3.0 | 39.5 | 1.0 | -59.8 | -13.0 | -46.8 | |
| | | 3.3460 | -23.0 | V | 3.0 | 40.1 | 1.0 | -62.1 | -13.0 | -49.1 | | |
| | | 1.6730 | -9.6 | H | 3.0 | 39.1 | 1.0 | -47.7 | -13.0 | -34.7 | | |
| | | 2.5090 | -17.9 | H | 3.0 | 39.5 | 1.0 | -56.4 | -13.0 | -43.4 | | |
| | | 3.3460 | -23.5 | H | 3.0 | 40.1 | 1.0 | -62.7 | -13.0 | -49.7 | | |
| | | High Channel (846.5MHz) | | | | | | | | | | |
| | | 1.6930 | -20.5 | V | 3.0 | 39.1 | 1.0 | -58.7 | -13.0 | -45.7 | | |
| | | 2.5390 | -23.5 | V | 3.0 | 39.6 | 1.0 | -62.0 | -13.0 | -49.0 | | |
| | | 3.3860 | -23.0 | V | 3.0 | 40.2 | 1.0 | -62.2 | -13.0 | -49.2 | | |
| | | 1.6930 | -21.6 | H | 3.0 | 39.1 | 1.0 | -59.8 | -13.0 | -46.8 | | |
| | | 2.5390 | -23.0 | H | 3.0 | 39.6 | 1.0 | -61.6 | -13.0 | -48.6 | | |
| | | 3.3860 | -23.6 | H | 3.0 | 40.2 | 1.0 | -62.8 | -13.0 | -49.8 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |
| LTE Band 5 5MHz 16QAM | Company: | | Samsung | | | | | | | | | |
| | Project #: | | 16K23304 | | | | | | | | | |
| | Date: | | 05-25-16 | | | | | | | | | |
| | Test Engineer: | | YH Lim | | | | | | | | | |
| | Configuration: | | EUT / AC Adapter / Earphone, X Position | | | | | | | | | |
| | Mode: | | TX, LTE BAND 5, 5MHz BW, 16QAM | | | | | | | | | |
| | | | Chamber | | Pre-amplifier | | Filter | | Limit | | | |
| | | | Chamber 2 | | AFS42 | | Filter 1 | | Part 22 | | | |
| | | | f | SG reading | Ant. Pol. | Distance | Preamp | Filter | EIRP | Limit | Delta | Notes |
| | | | GHz | (dBm) | (H/V) | (m) | (dB) | (dB) | (dBm) | (dBm) | (dB) | |
| | | | Low Channel (826.5MHz) | | | | | | | | | |
| | | | 1.6530 | -17.5 | V | 3.0 | 39.1 | 1.0 | -55.6 | -13.0 | -42.6 | |
| | | | 2.4790 | -23.0 | V | 3.0 | 39.5 | 1.0 | -61.5 | -13.0 | -48.5 | |
| | | | 3.3060 | -22.9 | V | 3.0 | 40.1 | 1.0 | -62.0 | -13.0 | -49.0 | |
| | | | 1.6530 | -14.5 | H | 3.0 | 39.1 | 1.0 | -52.6 | -13.0 | -39.6 | |
| | | | 2.4790 | -22.3 | H | 3.0 | 39.5 | 1.0 | -60.8 | -13.0 | -47.8 | |
| | | | 3.3060 | -23.5 | H | 3.0 | 40.1 | 1.0 | -62.6 | -13.0 | -49.6 | |
| | | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | | 1.6730 | -16.1 | V | 3.0 | 39.1 | 1.0 | -54.3 | -13.0 | -41.3 | |
| | | | 2.5090 | -22.9 | V | 3.0 | 39.5 | 1.0 | -61.4 | -13.0 | -48.4 | |
| | | 3.3460 | -23.0 | V | 3.0 | 40.1 | 1.0 | -62.1 | -13.0 | -49.1 | | |
| | | 1.6730 | -11.4 | H | 3.0 | 39.1 | 1.0 | -49.5 | -13.0 | -36.5 | | |
| | | 2.5090 | -19.7 | H | 3.0 | 39.5 | 1.0 | -58.3 | -13.0 | -45.3 | | |
| | | 3.3460 | -23.6 | H | 3.0 | 40.1 | 1.0 | -62.8 | -13.0 | -49.8 | | |
| | | High Channel (846.5MHz) | | | | | | | | | | |
| | | 1.6930 | -20.9 | V | 3.0 | 39.1 | 1.0 | -59.0 | -13.0 | -46.0 | | |
| | | 2.5390 | -23.6 | V | 3.0 | 39.6 | 1.0 | -62.2 | -13.0 | -49.2 | | |
| | | 3.3860 | -23.2 | V | 3.0 | 40.2 | 1.0 | -62.3 | -13.0 | -49.3 | | |
| | | 1.6930 | -20.7 | H | 3.0 | 39.1 | 1.0 | -58.8 | -13.0 | -45.8 | | |
| | | 2.5390 | -23.1 | H | 3.0 | 39.6 | 1.0 | -61.6 | -13.0 | -48.6 | | |
| | | 3.3860 | -23.6 | H | 3.0 | 40.2 | 1.0 | -62.8 | -13.0 | -49.8 | | |
| | | 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 #: 16K23304 Date: 05-25-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, XPosition Mode: TX LTE BAND 5, 3MHz BW, QPSK | <input type="text" value="Chamber"/> | | <input type="text" value="Pre-amplifier"/> | | <input type="text" value="Filter"/> | | <input type="text" value="Limit"/> | | | |
| | <input type="text" value="Chamber 2"/> | | <input type="text" value="AFS42"/> | | <input type="text" value="Filter 1"/> | | <input type="text" value="Part 22"/> | | | | |
| | | f | SG reading | Ant. Pol. | Distance | Preamp | Filter | EIRP | Limit | Delta | Notes |
| | | GHz | (dBm) | (H/V) | (m) | (dB) | (dB) | (dBm) | (dBm) | (dB) | |
| | | Low Channel (825.5MHz) | | | | | | | | | |
| | | 1.6510 | -14.2 | V | 3.0 | 39.1 | 1.0 | -52.3 | -13.0 | -39.3 | |
| | | 2.4675 | -25.0 | V | 3.0 | 39.5 | 1.0 | -63.5 | -13.0 | -50.5 | |
| | | 3.3020 | -23.3 | V | 3.0 | 40.1 | 1.0 | -62.4 | -13.0 | -49.4 | |
| | | 1.6510 | -12.7 | H | 3.0 | 39.1 | 1.0 | -50.8 | -13.0 | -37.8 | |
| | | 2.4675 | -25.4 | H | 3.0 | 39.5 | 1.0 | -63.9 | -13.0 | -50.9 | |
| | | 3.3020 | -23.5 | H | 3.0 | 40.1 | 1.0 | -62.6 | -13.0 | -49.6 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -16.1 | V | 3.0 | 39.1 | 1.0 | -54.2 | -13.0 | -41.2 | |
| | | 2.5090 | -21.6 | V | 3.0 | 39.5 | 1.0 | -60.2 | -13.0 | -47.2 | |
| | | 3.3460 | -23.3 | V | 3.0 | 40.1 | 1.0 | -62.4 | -13.0 | -49.4 | |
| | | 1.6730 | -8.4 | H | 3.0 | 39.1 | 1.0 | -46.5 | -13.0 | -33.5 | |
| | | 2.5090 | -18.3 | H | 3.0 | 39.5 | 1.0 | -56.9 | -13.0 | -43.9 | |
| | | 3.3460 | -23.5 | H | 3.0 | 40.1 | 1.0 | -62.7 | -13.0 | -49.7 | |
| | | High Channel (847.5MHz) | | | | | | | | | |
| | | 1.6950 | -20.7 | V | 3.0 | 39.1 | 1.0 | -58.9 | -13.0 | -45.9 | |
| | 2.5425 | -23.8 | V | 3.0 | 39.6 | 1.0 | -62.3 | -13.0 | -49.3 | | |
| | 3.3900 | -23.0 | V | 3.0 | 40.2 | 1.0 | -62.2 | -13.0 | -49.2 | | |
| | 1.6950 | -20.3 | H | 3.0 | 39.1 | 1.0 | -58.4 | -13.0 | -45.4 | | |
| | 2.5425 | -22.7 | H | 3.0 | 39.6 | 1.0 | -61.2 | -13.0 | -48.2 | | |
| | 3.3900 | -23.3 | H | 3.0 | 40.2 | 1.0 | -62.5 | -13.0 | -49.5 | | |
| | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |
| LTE Band 5 3MHz 16QAM | Company: Samsung Project #: 16K23304 Date: 05-25-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, XPosition Mode: TX LTE BAND 5, 3MHz BW, 16QAM | <input type="text" value="Chamber"/> | | <input type="text" value="Pre-amplifier"/> | | <input type="text" value="Filter"/> | | <input type="text" value="Limit"/> | | | |
| | <input type="text" value="Chamber 2"/> | | <input type="text" value="AFS42"/> | | <input type="text" value="Filter 1"/> | | <input type="text" value="Part 22"/> | | | | |
| | | f | SG reading | Ant. Pol. | Distance | Preamp | Filter | EIRP | Limit | Delta | Notes |
| | | GHz | (dBm) | (H/V) | (m) | (dB) | (dB) | (dBm) | (dBm) | (dB) | |
| | | Low Channel (825.5MHz) | | | | | | | | | |
| | | 1.6510 | -15.7 | V | 3.0 | 39.1 | 1.0 | -53.8 | -13.0 | -40.8 | |
| | | 2.4675 | -25.2 | V | 3.0 | 39.5 | 1.0 | -63.7 | -13.0 | -50.7 | |
| | | 3.3020 | -23.5 | V | 3.0 | 40.1 | 1.0 | -62.6 | -13.0 | -49.6 | |
| | | 1.6510 | -16.7 | H | 3.0 | 39.1 | 1.0 | -54.8 | -13.0 | -41.8 | |
| | | 2.4675 | -25.7 | H | 3.0 | 39.5 | 1.0 | -64.2 | -13.0 | -51.2 | |
| | | 3.3020 | -23.7 | H | 3.0 | 40.1 | 1.0 | -62.8 | -13.0 | -49.8 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | |
| | | 1.6730 | -13.1 | V | 3.0 | 39.1 | 1.0 | -51.2 | -13.0 | -38.2 | |
| | | 2.5090 | -23.2 | V | 3.0 | 39.5 | 1.0 | -61.7 | -13.0 | -48.7 | |
| | | 3.3460 | -23.3 | V | 3.0 | 40.1 | 1.0 | -62.5 | -13.0 | -49.5 | |
| | | 1.6730 | -10.2 | H | 3.0 | 39.1 | 1.0 | -48.3 | -13.0 | -35.3 | |
| | | 2.5090 | -20.0 | H | 3.0 | 39.5 | 1.0 | -58.5 | -13.0 | -45.5 | |
| | | 3.3460 | -23.6 | H | 3.0 | 40.1 | 1.0 | -62.7 | -13.0 | -49.7 | |
| | | High Channel (847.5MHz) | | | | | | | | | |
| | | 1.6950 | -20.9 | V | 3.0 | 39.1 | 1.0 | -59.0 | -13.0 | -46.0 | |
| | 2.5425 | -24.0 | V | 3.0 | 39.6 | 1.0 | -62.6 | -13.0 | -49.6 | | |
| | 3.3900 | -23.1 | V | 3.0 | 40.2 | 1.0 | -62.3 | -13.0 | -49.3 | | |
| | 1.6950 | -20.4 | H | 3.0 | 39.1 | 1.0 | -58.5 | -13.0 | -45.5 | | |
| | 2.5425 | -23.2 | H | 3.0 | 39.6 | 1.0 | -61.7 | -13.0 | -48.7 | | |
| | 3.3900 | -23.4 | H | 3.0 | 40.2 | 1.0 | -62.6 | -13.0 | -49.6 | | |
| | 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 | | | | | | | | | | |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------|------------------|-----------------|--------------|-------------|-------------|------------|-------------|------------|-------|
| LTE Band 5 1.4MHz QPSK | Company: Samsung | | | | | | | | | | | |
| | Project #: 16K23304 | | | | | | | | | | | |
| | Date: 05-25-16 | | | | | | | | | | | |
| | Test Engineer: YH Lim | | | | | | | | | | | |
| | Configuration: EUT / AC Adapter / Earphone, X Position | | | | | | | | | | | |
| | Mode: TX, LTE BAND 5, 1.4MHz BW, QPSK | | | | | | | | | | | |
| | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Chamber Chamber 2</div> <div style="border: 1px solid black; padding: 2px;">Pre-amplifier AFS42</div> <div style="border: 1px solid black; padding: 2px;">Filter Filter 1</div> <div style="border: 1px solid black; padding: 2px;">Limit Part 22</div> </div> | | | | | | | | | | | |
| | | | 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 | -13.1 | V | 3.0 | 39.1 | 1.0 | -51.2 | -13.0 | -38.2 | |
| | | | 2.4741 | -23.4 | V | 3.0 | 39.5 | 1.0 | -61.9 | -13.0 | -48.9 | |
| | | | 3.2988 | -23.5 | V | 3.0 | 40.1 | 1.0 | -62.6 | -13.0 | -49.6 | |
| | | | 1.6494 | -10.5 | H | 3.0 | 39.1 | 1.0 | -48.6 | -13.0 | -35.6 | |
| | | | 2.4741 | -18.2 | H | 3.0 | 39.5 | 1.0 | -56.7 | -13.0 | -43.7 | |
| | | | 3.2988 | -23.7 | H | 3.0 | 40.1 | 1.0 | -62.8 | -13.0 | -49.8 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | | |
| | | 1.6730 | -12.5 | V | 3.0 | 39.1 | 1.0 | -50.7 | -13.0 | -37.7 | | |
| | | 2.5090 | -10.8 | V | 3.0 | 39.5 | 1.0 | -49.3 | -13.0 | -36.3 | | |
| | | 3.3460 | -23.1 | V | 3.0 | 40.1 | 1.0 | -62.2 | -13.0 | -49.2 | | |
| | | 1.6730 | -8.6 | H | 3.0 | 39.1 | 1.0 | -46.7 | -13.0 | -33.7 | | |
| | | 2.5090 | -17.8 | H | 3.0 | 39.5 | 1.0 | -56.4 | -13.0 | -43.4 | | |
| | | 3.3460 | -23.6 | H | 3.0 | 40.1 | 1.0 | -62.7 | -13.0 | -49.7 | | |
| | | High Channel (848.3MHz) | | | | | | | | | | |
| | | 1.6966 | -20.0 | V | 3.0 | 39.1 | 1.0 | -58.1 | -13.0 | -45.1 | | |
| | | 2.5449 | -24.2 | V | 3.0 | 39.6 | 1.0 | -62.8 | -13.0 | -49.8 | | |
| | | 3.3932 | -22.7 | V | 3.0 | 40.2 | 1.0 | -61.9 | -13.0 | -48.9 | | |
| | | 1.6966 | -19.1 | H | 3.0 | 39.1 | 1.0 | -57.2 | -13.0 | -44.2 | | |
| | | 2.5449 | -23.0 | H | 3.0 | 39.6 | 1.0 | -61.5 | -13.0 | -48.5 | | |
| | | 3.3932 | -23.1 | H | 3.0 | 40.2 | 1.0 | -62.3 | -13.0 | -49.3 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |
| LTE Band 5 1.4MHz 16QAM | Company: Samsung | | | | | | | | | | | |
| | Project #: 16K23304 | | | | | | | | | | | |
| | Date: 05-25-16 | | | | | | | | | | | |
| | Test Engineer: YH Lim | | | | | | | | | | | |
| | Configuration: EUT / AC Adapter / Earphone, X Position | | | | | | | | | | | |
| | Mode: TX, LTE BAND 5, 1.4MHz BW, 16QAM | | | | | | | | | | | |
| | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Chamber Chamber 2</div> <div style="border: 1px solid black; padding: 2px;">Pre-amplifier AFS42</div> <div style="border: 1px solid black; padding: 2px;">Filter Filter 1</div> <div style="border: 1px solid black; padding: 2px;">Limit Part 22</div> </div> | | | | | | | | | | | |
| | | | 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 | -14.5 | V | 3.0 | 39.1 | 1.0 | -52.6 | -13.0 | -39.6 | |
| | | | 2.4741 | -23.9 | V | 3.0 | 39.5 | 1.0 | -62.4 | -13.0 | -49.4 | |
| | | | 3.2988 | -23.6 | V | 3.0 | 40.1 | 1.0 | -62.7 | -13.0 | -49.7 | |
| | | | 1.6494 | -9.2 | H | 3.0 | 39.1 | 1.0 | -47.3 | -13.0 | -34.3 | |
| | | | 2.4741 | -19.7 | H | 3.0 | 39.5 | 1.0 | -58.2 | -13.0 | -45.2 | |
| | | | 3.2988 | -23.7 | H | 3.0 | 40.1 | 1.0 | -62.8 | -13.0 | -49.8 | |
| | | Mid Channel (836.5MHz) | | | | | | | | | | |
| | | 1.6730 | -14.8 | V | 3.0 | 39.1 | 1.0 | -52.9 | -13.0 | -39.9 | | |
| | | 2.5090 | -13.2 | V | 3.0 | 39.5 | 1.0 | -51.7 | -13.0 | -38.7 | | |
| | | 3.3460 | -23.3 | V | 3.0 | 40.1 | 1.0 | -62.4 | -13.0 | -49.4 | | |
| | | 1.6730 | -10.3 | H | 3.0 | 39.1 | 1.0 | -48.4 | -13.0 | -35.4 | | |
| | | 2.5090 | -19.1 | H | 3.0 | 39.5 | 1.0 | -57.6 | -13.0 | -44.6 | | |
| | | 3.3460 | -23.7 | H | 3.0 | 40.1 | 1.0 | -62.8 | -13.0 | -49.8 | | |
| | | High Channel (848.3MHz) | | | | | | | | | | |
| | | 1.6966 | -20.3 | V | 3.0 | 39.1 | 1.0 | -58.5 | -13.0 | -45.5 | | |
| | | 2.5449 | -23.9 | V | 3.0 | 39.6 | 1.0 | -62.5 | -13.0 | -49.5 | | |
| | | 3.3932 | -22.8 | V | 3.0 | 40.2 | 1.0 | -61.9 | -13.0 | -48.9 | | |
| | | 1.6966 | -19.4 | H | 3.0 | 39.1 | 1.0 | -57.5 | -13.0 | -44.5 | | |
| | | 2.5449 | -23.5 | H | 3.0 | 39.6 | 1.0 | -62.1 | -13.0 | -49.1 | | |
| | | 3.3932 | -23.3 | H | 3.0 | 40.2 | 1.0 | -62.5 | -13.0 | -49.5 | | |
| | | Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. | | | | | | | | | | |