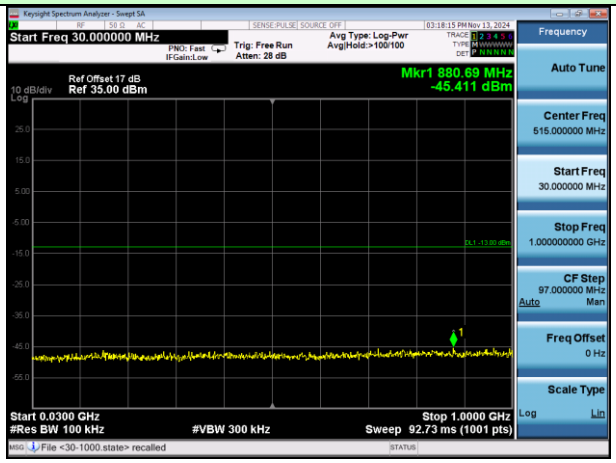
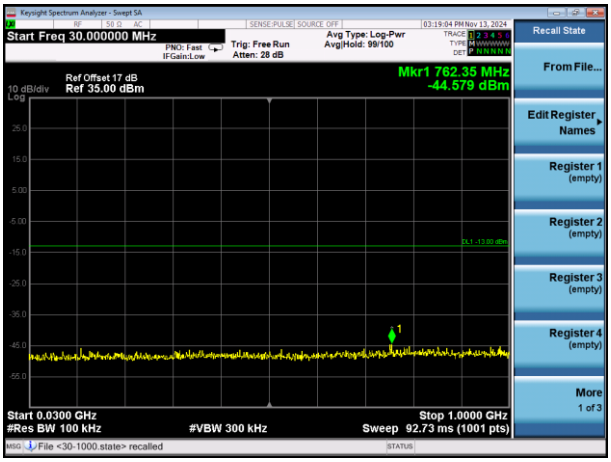
| Test Mode: Traffic mode | PCS1900 (GPRS 1 link) |
|---|---|



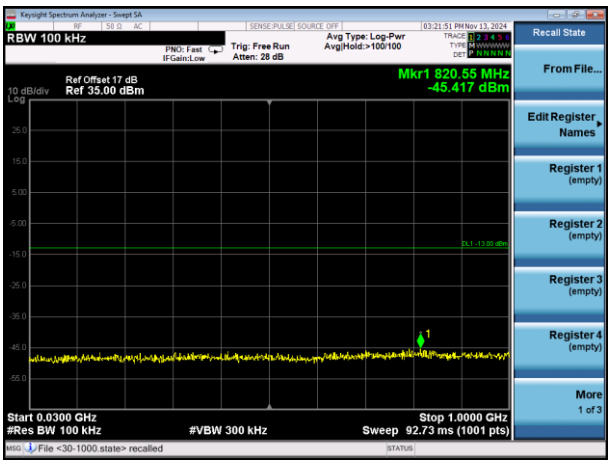


Lowest channel





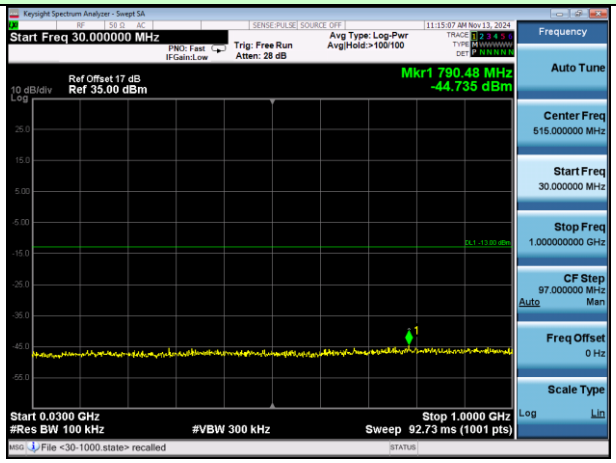
Middle channel





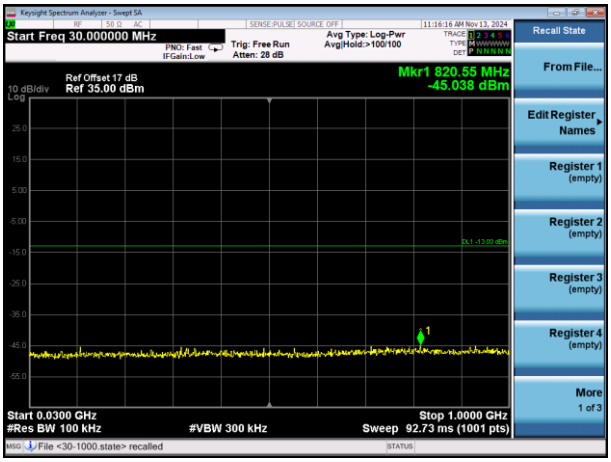
Highest channel

| Test Mode: Traffic mode | PCS1900 (EGPRS 1 link) |
|---|---|



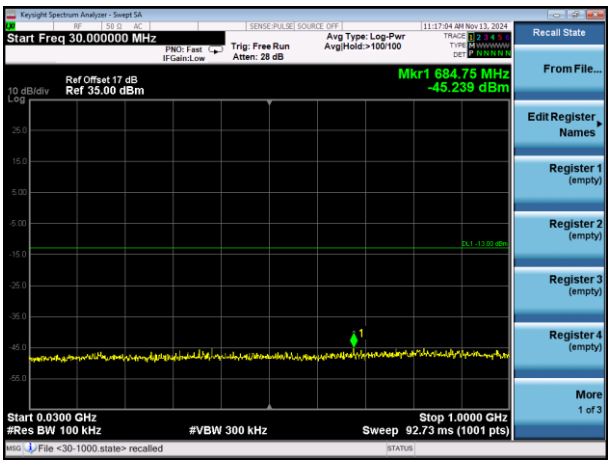


Lowest channel





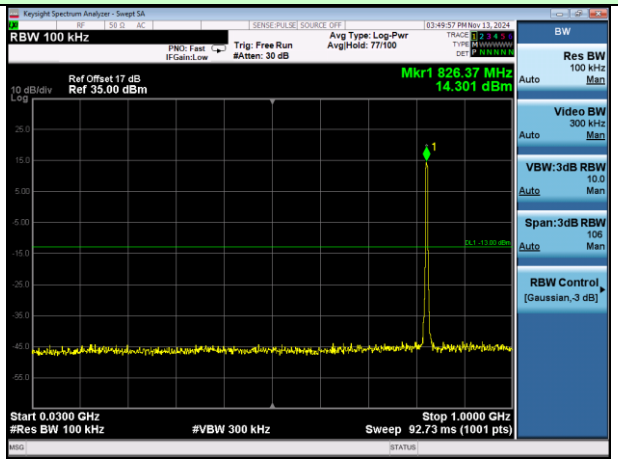
Middle channel





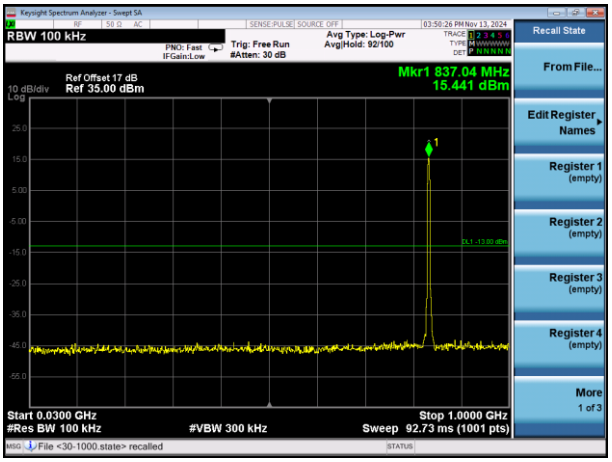
Highest channel

| Test Mode: Traffic mode | WCDMA Band V (RMC 12.2Kbps link) |
|---|---|



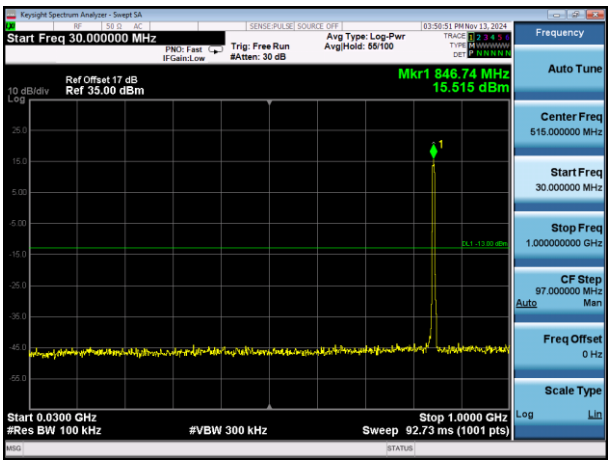


Lowest channel





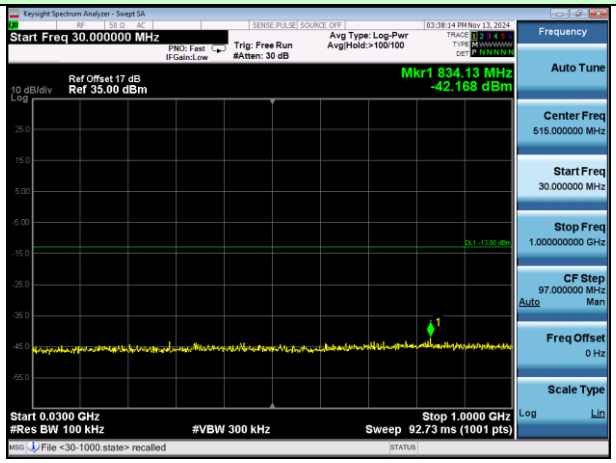
Middle channel





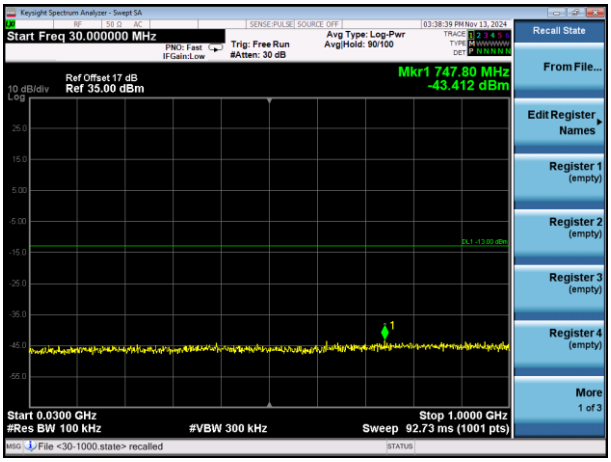
Highest channel

| Test Mode: Traffic mode | WCDMA Band II (RMC 12.2Kbps link) |
|---|---|



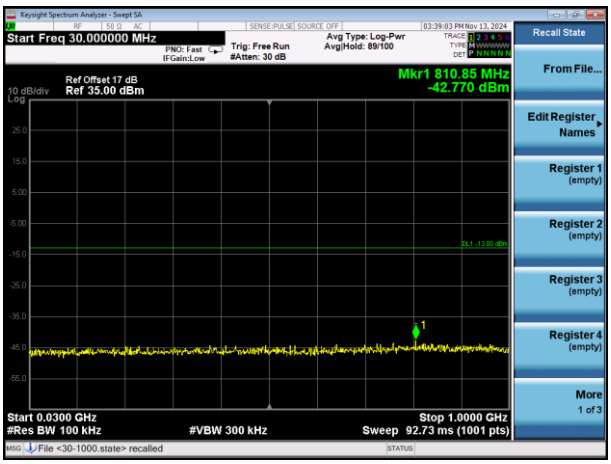


Lowest channel





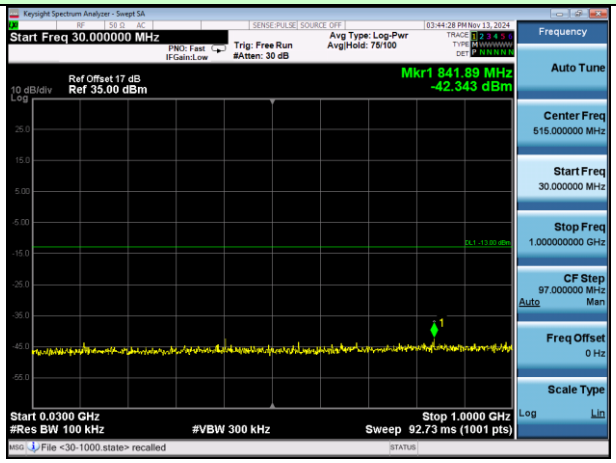
Middle channel





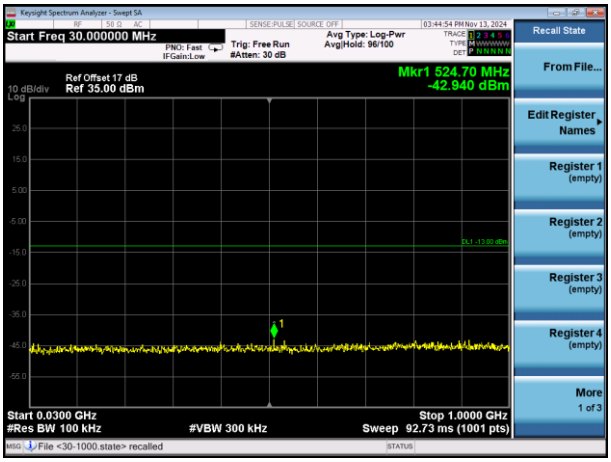
Highest channel

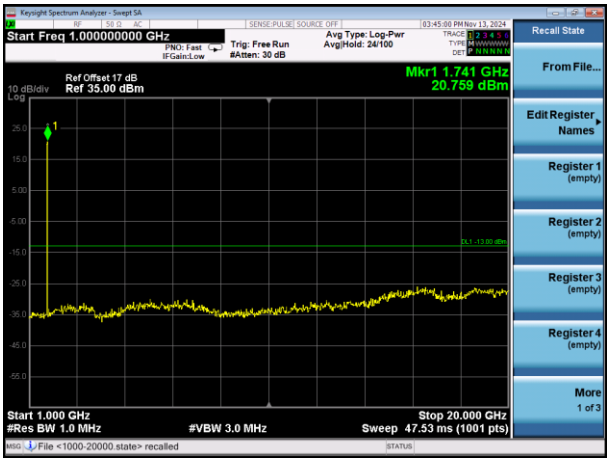
| Test Mode: Traffic mode | WCDMA Band IV (RMC 12.2Kbps link) |
|---|---|



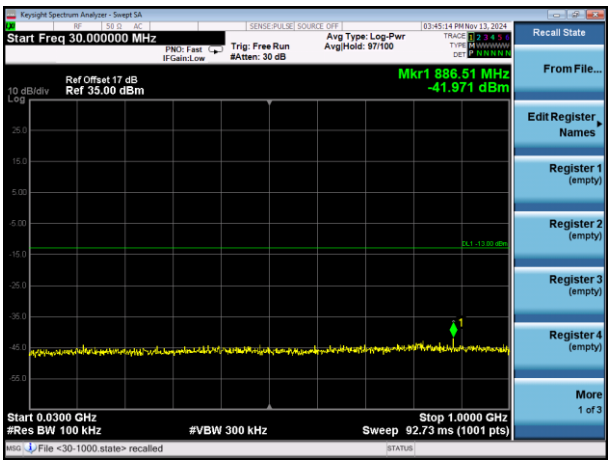


Lowest channel




Middle channel

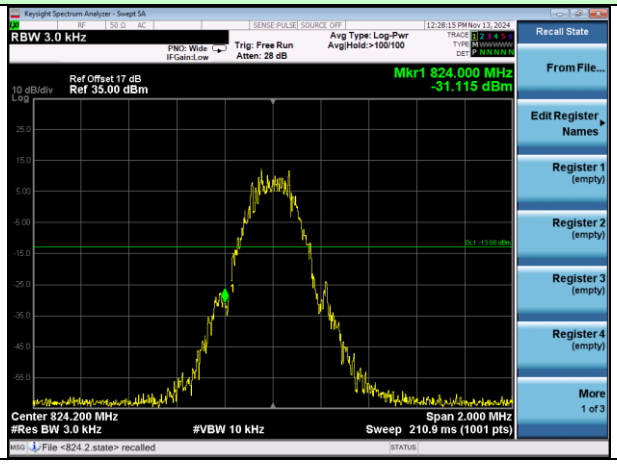




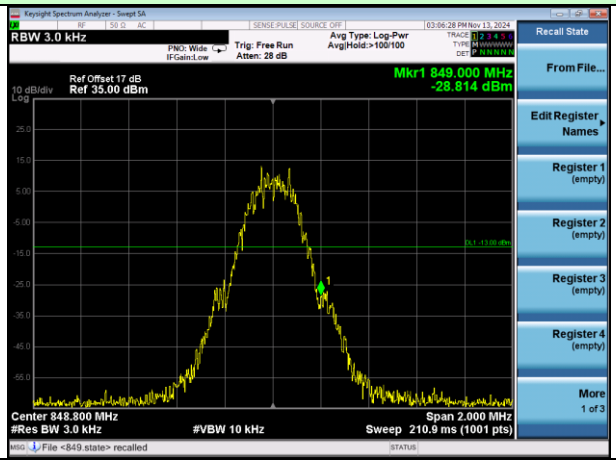
Highest channel

Band Edge:

| Test Mode: Traffic mode | GSM850 (GPRS 1 link) |
|---|---|

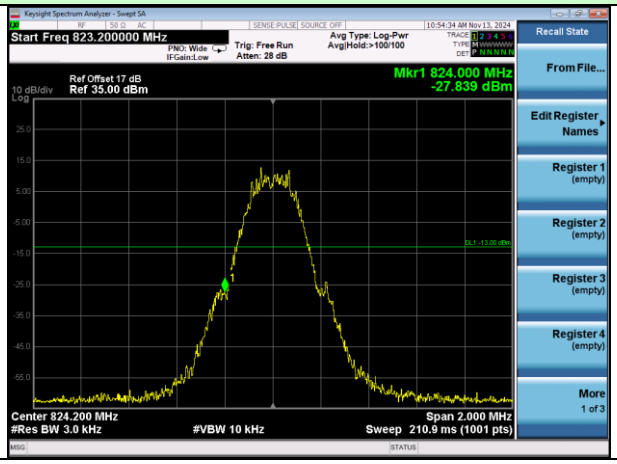



Lowest channel

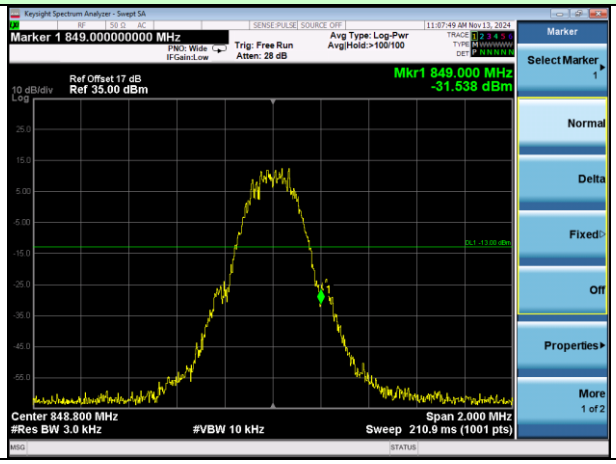



Highest channel

| Test Mode: Traffic mode | GSM850 (EGPRS 1 link) |
|---|---|

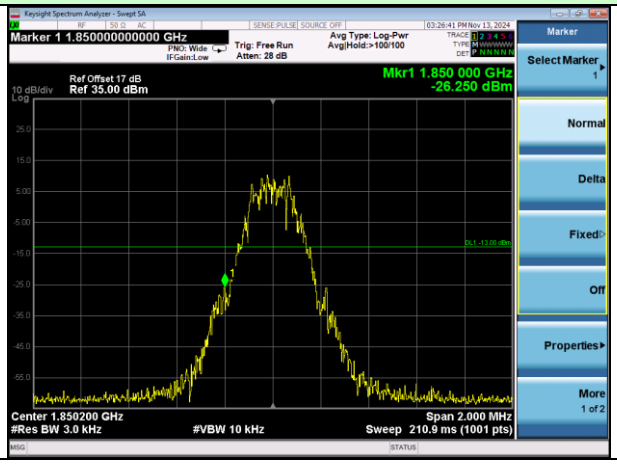



Lowest channel

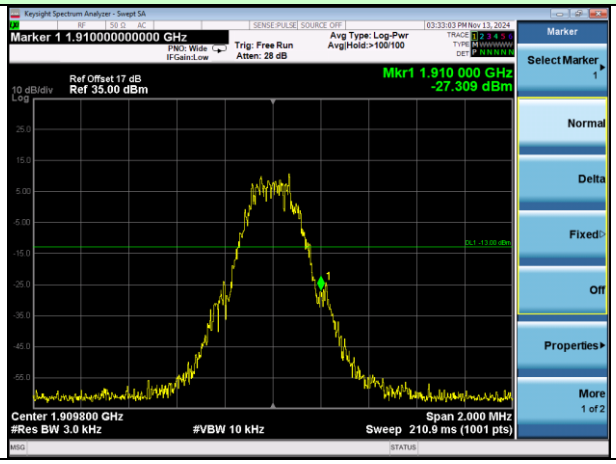



Highest channel

| Test Mode: Traffic mode | PCS1900 (GPRS 1 link) |
|---|---|

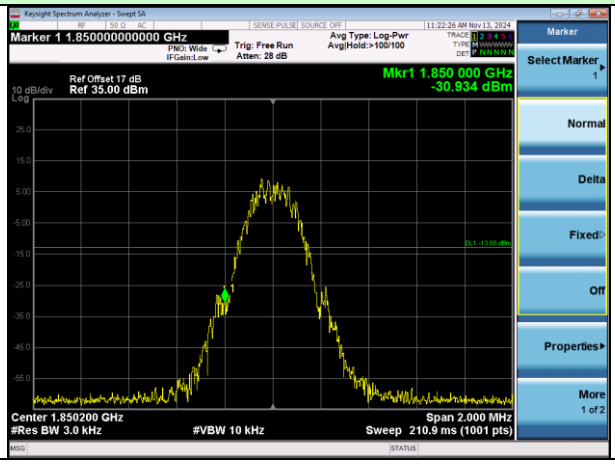



Lowest channel

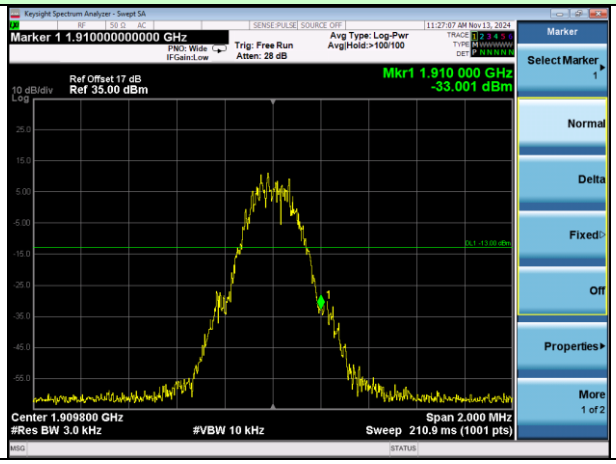



Highest channel

| Test Mode: Traffic mode | PCS1900 (EGPRS 1 link) |
|---|---|




Lowest channel




Highest channel

| Test Mode: Traffic mode | WCDMA Band V (RMC 12.2Kbps link) |
|---|---|


Lowest channel

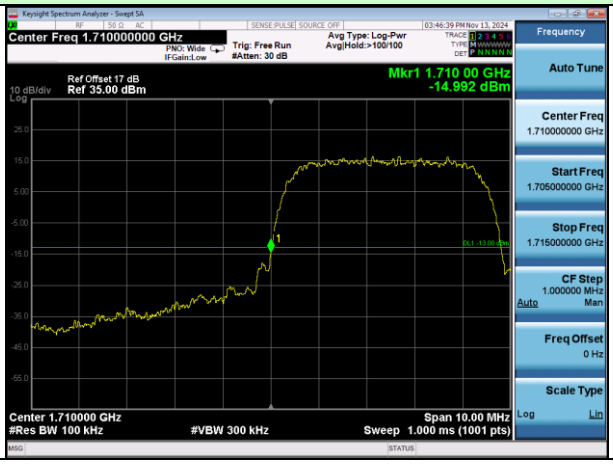

Highest channel

| Test Mode: Traffic mode | WCDMA Band II (RMC 12.2Kbps link) |
|---|---|


Lowest channel


Highest channel

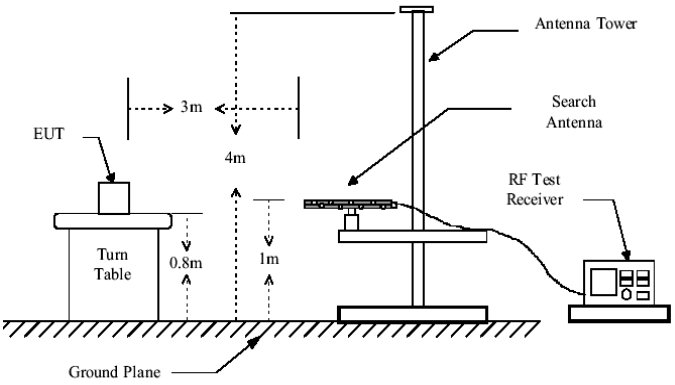
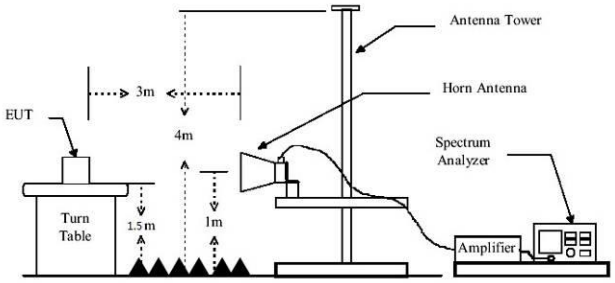
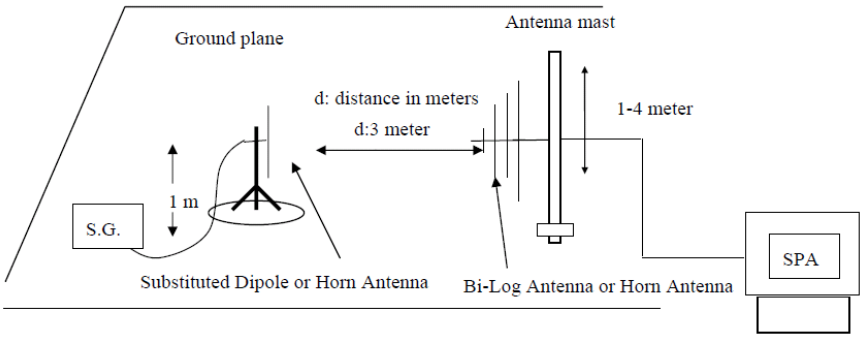
| Test Mode: Traffic mode | WCDMA Band IV (RMC 12.2Kbps link) |
|---|---|




Lowest channel


Highest channel

## 4.8 ERP, EIRP Measurement

| | |
|---|---|
| Test Requirement: | FCC part22.913(a) and FCC part24.232(b) , Part 27.54(h) |
| Test Method: | FCC part2.1046 |
| Limit: | GSM850, WCDMA Band V: 7W<br>PCS1900, WCDMA Band II: 2W<br>WCDMA Band IV: 1W |
| Test setup: | Below 1GHz<br>  <br>Above 1GHz<br>  <br>Substituted method:<br>  |

| | |
|---|---|
| Test Procedure: | 1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.<br>2. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.<br>3. ERP in frequency band 824.2 –848.80.8MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated asfollows:<br>ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)<br>4. EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:<br>EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB) |
| Test Instruments: | Refer to section 3 for details |
| Test mode: | Refer to section 4.1 for details |
| Test results: | Pass |

Measurement Data

| EUT mode | Channel | EUT Pol. | Antenna Pol. | ERP(dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| GSM850 (GPRS 1 link) | Lowest | H | V | 29.48 | 38.45 | Pass |
| | | | H | 28.93 | | |
| | | E1 | V | 29.89 | | |
| | | | H | 29.84 | | |
| | | E2 | V | 29.67 | | |
| | | | H | 30.62 | | |
| | Middle | H | V | 29.13 | 38.45 | Pass |
| | | | H | 30.04 | | |
| | | E1 | V | 30.84 | | |
| | | | H | 29.36 | | |
| | | E2 | V | 28.89 | | |
| | | | H | 31.01 | | |
| | Highest | H | V | 31.09 | 38.45 | Pass |
| | | | H | 29.91 | | |
| | | E1 | V | 30.19 | | |
| | | | H | 31.51 | | |
| | | E2 | V | 30.40 | | |
| | | | H | 29.61 | | |

| EUT mode | Channel | EUT Pol. | Antenna Pol. | ERP(dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| GSM850 (EGPRS 1 link) | Lowest | H | V | 27.02 | 38.45 | Pass |
| | | | H | 27.51 | | |
| | | E1 | V | 27.97 | | |
| | | | H | 27.88 | | |
| | | E2 | V | 27.07 | | |
| | | | H | 28.06 | | |
| | Middle | H | V | 26.65 | 38.45 | Pass |
| | | | H | 27.42 | | |
| | | E1 | V | 28.17 | | |
| | | | H | 29.40 | | |
| | | E2 | V | 28.04 | | |
| | | | H | 27.63 | | |
| | Highest | H | V | 29.61 | 38.45 | Pass |
| | | | H | 28.75 | | |
| | | E1 | V | 26.91 | | |
| | | | H | 27.74 | | |
| | | E2 | V | 27.71 | | |
| | | | H | 28.79 | | |

| EUT mode | Channel | EUT Pol. | Antenna Pol. | EIRP (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| PCS1900 (GPRS 1 link) | Lowest | H | V | 30.88 | 33.01 | Pass |
| | | | H | 30.87 | | |
| | | E1 | V | 30.22 | | |
| | | | H | 30.33 | | |
| | | E2 | V | 31.45 | | |
| | | | H | 30.27 | | |
| | Middle | H | V | 31.28 | 33.01 | Pass |
| | | | H | 29.03 | | |
| | | E1 | V | 28.92 | | |
| | | | H | 29.29 | | |
| | | E2 | V | 29.32 | | |
| | | | H | 30.13 | | |
| | Highest | H | V | 30.93 | 33.01 | Pass |
| | | | H | 30.84 | | |
| | | E1 | V | 30.67 | | |
| | | | H | 29.47 | | |
| | | E2 | V | 31.25 | | |
| | | | H | 30.13 | | |

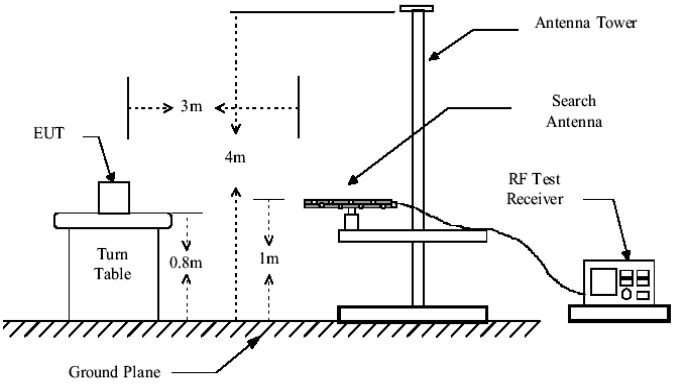
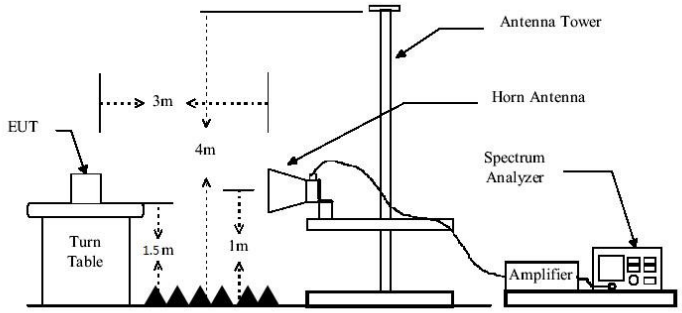
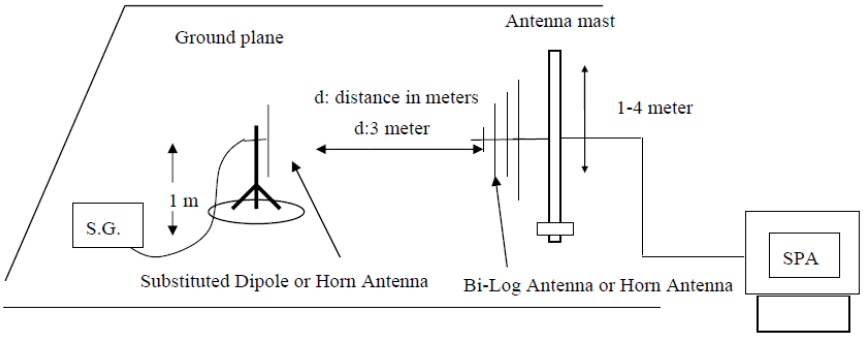
| EUT mode | Channel | EUT Pol. | Antenna Pol. | EIRP (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| PCS1900 (EGPRS 1 link) | Lowest | H | V | 27.94 | 33.01 | Pass |
| | | | H | 28.28 | | |
| | | E1 | V | 27.39 | | |
| | | | H | 26.98 | | |
| | | E2 | V | 27.73 | | |
| | | | H | 27.43 | | |
| | Middle | H | V | 28.80 | 33.01 | Pass |
| | | | H | 27.19 | | |
| | | E1 | V | 27.72 | | |
| | | | H | 27.54 | | |
| | | E2 | V | 29.20 | | |
| | | | H | 28.27 | | |
| | Highest | H | V | 27.09 | 33.01 | Pass |
| | | | H | 29.33 | | |
| | | E1 | V | 27.20 | | |
| | | | H | 28.93 | | |
| | | E2 | V | 29.32 | | |
| | | | H | 27.75 | | |

| EUT mode | Channel | EUT Pol. | Antenna Pol. | ERP(dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| WCDMA Band V | Lowest | H | V | 21.62 | 38.45 | Pass |
| | | | H | 22.69 | | |
| | | E1 | V | 22.68 | | |
| | | | H | 22.25 | | |
| | | E2 | V | 22.72 | | |
| | | | H | 23.52 | | |
| | Middle | H | V | 21.99 | 38.45 | Pass |
| | | | H | 23.55 | | |
| | | E1 | V | 22.12 | | |
| | | | H | 21.94 | | |
| | | E2 | V | 23.60 | | |
| | | | H | 21.32 | | |
| | Highest | H | V | 21.17 | 38.45 | Pass |
| | | | H | 21.80 | | |
| | | E1 | V | 22.25 | | |
| | | | H | 22.71 | | |
| | | E2 | V | 23.18 | | |
| | | | H | 21.97 | | |

| EUT mode | Channel | EUT Pol. | Antenna Pol. | EIRP(dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| WCDMA Band II | Lowest | H | V | 23.27 | 33.01 | Pass |
| | | | H | 23.27 | | |
| | | E1 | V | 22.67 | | |
| | | | H | 22.59 | | |
| | | E2 | V | 22.40 | | |
| | | | H | 22.94 | | |
| | Middle | H | V | 22.27 | 33.01 | Pass |
| | | | H | 22.59 | | |
| | | E1 | V | 23.54 | | |
| | | | H | 22.72 | | |
| | | E2 | V | 21.96 | | |
| | | | H | 23.22 | | |
| | Highest | H | V | 23.70 | 33.01 | Pass |
| | | | H | 22.59 | | |
| | | E1 | V | 23.19 | | |
| | | | H | 21.90 | | |
| | | E2 | V | 22.85 | | |
| | | | H | 23.19 | | |

| EUT mode | Channel | EUT Pol. | Antenna Pol. | EIRP(dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| WCDMA Band IV | Lowest | H | V | 21.53 | 33.01 | Pass |
| | | | H | 21.84 | | |
| | | E1 | V | 23.26 | | |
| | | | H | 23.29 | | |
| | | E2 | V | 23.38 | | |
| | | | H | 23.46 | | |
| | Middle | H | V | 23.44 | 33.01 | Pass |
| | | | H | 22.54 | | |
| | | E1 | V | 21.86 | | |
| | | | H | 23.36 | | |
| | | E2 | V | 23.17 | | |
| | | | H | 22.01 | | |
| | Highest | H | V | 22.19 | 33.01 | Pass |
| | | | H | 22.70 | | |
| | | E1 | V | 22.95 | | |
| | | | H | 21.72 | | |
| | | E2 | V | 22.29 | | |
| | | | H | 23.91 | | |

## 4.9 Field strength of spurious radiation measurement

| | |
|---|---|
| Test Requirement: | FCC part22.917(a) and FCC part24.238(a), Part 27.54(h) |
| Test Method: | FCC part2.1053 |
| Limit: | -13dBm |
| Test setup: | Below 1GHz<br>  <br><br>Above 1GHz<br>  <br><br>Substituted method:<br>  <br> |

| | |
|---|---|
| Test Procedure: | 1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.<br>2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.<br>3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.<br>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.<br>ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB) |
| Test Instruments: | Refer to section 3 for details |
| Test mode: | Refer to section 4.1 for details |
| Test results: | Pass |

Measurement Data

| Test mode: | GPRS850 | | Test channel: | Highest |
|---|---|---|---|---|
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 1697.82 | V | -37.54 | -13.00 | Pass |
| 2546.75 | V | -39.66 | | |
| 3395.40 | V | -36.22 | | |
| 4242.30 | V | -34.95 | | |
| 5092.26 | V | -31.49 | | |
| 1696.19 | H | -41.14 | -13.00 | Pass |
| 2545.41 | H | -35.89 | | |
| 3393.97 | H | -35.83 | | |
| 4243.34 | H | -31.44 | | |
| 5092.72 | H | -30.87 | | |
| **Test mode:** | **EGPRS850** | | **Test channel:** | **Highest** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 1697.43 | V | -39.24 | -13.00 | Pass |
| 2545.43 | V | -37.56 | | |
| 3394.58 | V | -33.50 | | |
| 4243.72 | V | -33.01 | | |
| 5093.71 | V | -31.29 | | |
| 1697.24 | H | -39.18 | -13.00 | Pass |
| 2545.91 | H | -37.48 | | |
| 3394.80 | H | -35.45 | | |
| 4242.74 | H | -32.53 | | |
| 5093.72 | H | -29.94 | | |

Remark：

1. The emission behaviour belongs to narrowband spurious emission.
2. The above table only shows the worst case channel of each mode.
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

| Test mode: | GPRS1900 | | Test channel: | Highest |
|---|---|---|---|---|
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3818.92 | V | -38.50 | -13.00 | Pass |
| 5728.17 | V | -38.29 | | |
| 7639.51 | V | -35.79 | | |
| 9547.69 | V | -33.85 | | |
| 11460.58 | V | -28.94 | | |
| 3818.73 | H | -39.34 | -13.00 | Pass |
| 5729.21 | H | -36.43 | | |
| 7641.57 | H | -33.74 | | |
| 9547.98 | H | -33.54 | | |
| 11458.85 | H | -29.37 | | |
| **Test mode:** | **EGPRS1900** | | **Test channel:** | **Highest** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3819.66 | V | -37.39 | -13.00 | Pass |
| 5729.90 | V | -38.19 | | |
| 7639.11 | V | -35.87 | | |
| 9548.27 | V | -33.82 | | |
| 11459.05 | V | -33.01 | | |
| 3819.89 | H | -38.20 | -13.00 | Pass |
| 5729.10 | H | -37.49 | | |
| 7638.77 | H | -38.07 | | |
| 9549.04 | H | -33.12 | | |
| 11458.08 | H | -27.76 | | |

Remark：

1. The emission behaviour belongs to narrowband spurious emission.
2. The above table only shows the worst case channel of each mode.
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

| Test mode: | WCDMA Band V | | Test channel: | Lowest |
|---|---|---|---|---|
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 1652.70 | V | -38.89 | -13.00 | Pass |
| 2479.54 | V | -37.08 | | |
| 3304.72 | V | -33.37 | | |
| 4132.85 | V | -32.70 | | |
| 4957.86 | V | -30.44 | | |
| 1653.10 | H | -38.68 | -13.00 | Pass |
| 2478.09 | H | -39.44 | | |
| 3305.43 | H | -34.80 | | |
| 4129.84 | H | -34.63 | | |
| 4959.27 | H | -29.88 | | |
| **Test mode:** | **WCDMA Band V** | | **Test channel:** | **Middle** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 1672.73 | V | -37.07 | -13.00 | Pass |
| 2509.14 | V | -36.42 | | |
| 3345.68 | V | -35.86 | | |
| 4183.04 | V | -35.13 | | |
| 5016.94 | V | -31.42 | | |
| 1672.58 | H | -37.82 | -13.00 | Pass |
| 2508.05 | H | -36.52 | | |
| 3345.88 | H | -34.54 | | |
| 4182.18 | H | -33.34 | | |
| 5018.31 | H | -28.69 | | |
| **Test mode:** | **WCDMA Band V** | | **Test channel:** | **Highest** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 1692.84 | V | -39.06 | -13.00 | Pass |
| 2538.94 | V | -37.95 | | |
| 3385.92 | V | -36.06 | | |
| 4231.56 | V | -32.89 | | |
| 5078.46 | V | -31.54 | | |
| 1695.12 | H | -38.36 | -13.00 | Pass |
| 2539.08 | H | -35.83 | | |
| 3386.41 | H | -36.17 | | |
| 4234.25 | H | -33.93 | | |
| 5079.66 | H | -30.03 | | |

Remark：

1. The emission behaviour belongs to narrowband spurious emission.
2. Remark”---“ means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

| Test mode: | WCDMA Band II | | Test channel: | Lowest |
|---|---|---|---|---|
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3704.92 | V | -39.12 | -13.00 | Pass |
| 5557.30 | V | -36.07 | | |
| 7409.39 | V | -35.71 | | |
| 9260.31 | V | -32.93 | | |
| 11113.65 | V | -31.51 | | |
| 3703.24 | H | -37.79 | -13.00 | Pass |
| 5558.07 | H | -37.57 | | |
| 7410.03 | H | -35.15 | | |
| 9261.80 | H | -32.24 | | |
| 11114.96 | H | -30.41 | | |
| **Test mode:** | **WCDMA Band II** | | **Test channel:** | **Middle** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3760.13 | V | -40.79 | -13.00 | Pass |
| 5640.43 | V | -36.96 | | |
| 7519.82 | V | -33.96 | | |
| 9400.19 | V | -31.97 | | |
| 11281.97 | V | -29.67 | | |
| 3760.58 | H | -39.06 | -13.00 | Pass |
| 5640.59 | H | -37.44 | | |
| 7520.93 | H | -36.15 | | |
| 9399.49 | H | -31.19 | | |
| 11277.94 | H | -29.94 | | |
| **Test mode:** | **WCDMA Band II** | | **Test channel:** | **Highest** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3814.74 | V | -39.13 | -13.00 | Pass |
| 5722.24 | V | -36.40 | | |
| 7629.28 | V | -36.63 | | |
| 9536.57 | V | -32.60 | | |
| 11445.11 | V | -31.33 | | |
| 3813.77 | H | -37.69 | -13.00 | Pass |
| 5723.84 | H | -36.92 | | |
| 7631.52 | H | -35.55 | | |
| 9536.89 | H | -34.32 | | |
| 11446.94 | H | -31.55 | | |

Remark：

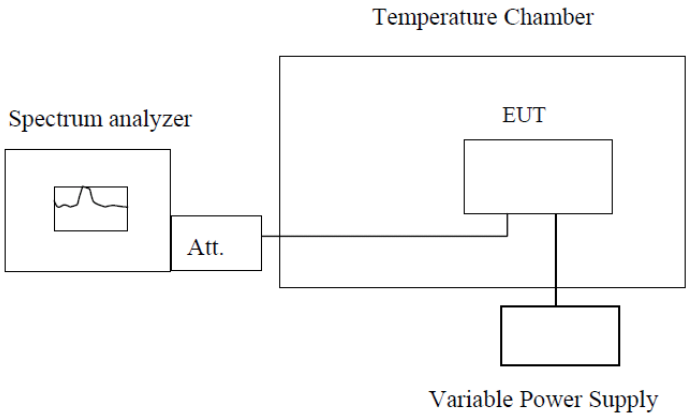
1. The emission behaviour belongs to narrowband spurious emission.
2. Remark”---“ means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

| Test mode: | WCDMA Band IV | | Test channel: | Lowest |
|---|---|---|---|---|
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3423.64 | V | -39.31 | -13.00 | Pass |
| 5136.76 | V | -37.74 | | |
| 6847.69 | V | -36.78 | | |
| 8560.94 | V | -34.35 | | |
| 10276.05 | V | -32.51 | | |
| 3424.35 | H | -38.90 | -13.00 | Pass |
| 5137.56 | H | -36.11 | | |
| 6848.89 | H | -35.32 | | |
| 8562.29 | H | -34.14 | | |
| 10273.06 | H | -30.58 | | |
| **Test mode:** | **WCDMA Band IV** | | **Test channel:** | **Middle** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3480.07 | V | -38.17 | -13.00 | Pass |
| 5219.78 | V | -38.48 | | |
| 6960.32 | V | -34.33 | | |
| 8700.12 | V | -33.84 | | |
| 10440.96 | V | -31.46 | | |
| 3481.46 | H | -39.46 | -13.00 | Pass |
| 5221.73 | H | -38.43 | | |
| 6961.36 | H | -36.10 | | |
| 8699.70 | H | -32.29 | | |
| 10440.03 | H | -30.56 | | |
| **Test mode:** | **WCDMA Band IV** | | **Test channel:** | **Highest** |
| Frequency (MHz) | Spurious Emission | | Limit (dBm) | Result |
| | Polarization | Level (dBm) | | |
| 3503.72 | V | -39.54 | -13.00 | Pass |
| 5258.46 | V | -38.51 | | |
| 7009.34 | V | -36.14 | | |
| 8761.80 | V | -34.71 | | |
| 10514.15 | V | -29.70 | | |
| 3505.71 | H | -40.33 | -13.00 | Pass |
| 5258.46 | H | -36.70 | | |
| 7010.06 | H | -34.71 | | |
| 8763.94 | H | -32.88 | | |
| 10515.20 | H | -31.02 | | |

Remark：

1. The emission behaviour belongs to narrowband spurious emission.
2. Remark”---“ means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

## 4.10 Frequency stability V.S. Temperature measurement

| | |
|---|---|
| Test Requirement: | FCC Part2.1055(a)(1)(b) |
| Test Method: | FCC Part2.1055(a)(1)(b) |
| Limit: | 2.5ppm |
| Test setup: |  <br>**Note :** Measurement setup for testing on Antenna connector |
| Test procedure: | 1. The equipment under test was connected to an external DC power supply and input rated voltage.<br>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.<br>3. The EUT was placed inside the temperature chamber.<br>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.<br>5. Turn EUT off and set the chamber temperature to –20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.<br>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached. |
| Test Instruments: | Refer to section 3 for details |
| Test mode: | Refer to section 4.1 for details |
| Test results: | Pass |

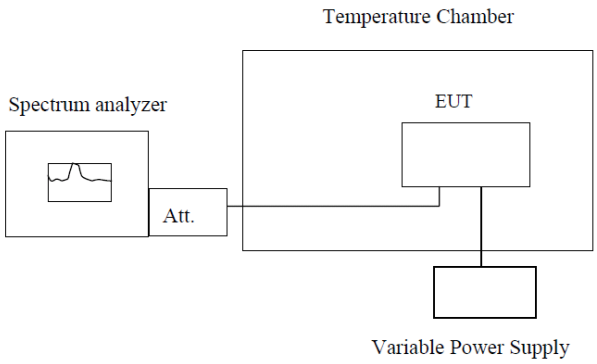
Measurement Data

| Reference Frequency: GSM850 (GPRS 1 link) Middle channel=190 channel=836.6MHz | | | | | |
|---|---|---|---|---|---|
| Power supplied (Vdc) | Temperature (°C) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 12 | -20 | 28 | 0.0337 | 2.5 | Pass |
| | -10 | -7 | -0.0085 | | |
| | 0 | 20 | 0.0242 | | |
| | 10 | -8 | -0.0092 | | |
| | 20 | 20 | 0.0241 | | |
| | 30 | 17 | 0.0209 | | |
| | 40 | 17 | 0.0208 | | |
| | 50 | 6 | 0.0070 | | |
| | 60 | 19 | 0.0222 | | |
| **Reference Frequency: GSM850 (EGPRS 1 link) Middle channel=190 channel=836.6MHz** | | | | | |
| Power supplied (Vdc) | Temperature (°C) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 12 | -20 | 19 | 0.0233 | 2.5 | Pass |
| | -10 | -19 | -0.0222 | | |
| | 0 | 16 | 0.0191 | | |
| | 10 | -4 | -0.0051 | | |
| | 20 | 16 | 0.0188 | | |
| | 30 | 8 | 0.0098 | | |
| | 40 | 8 | 0.0094 | | |
| | 50 | 10 | 0.0122 | | |
| | 60 | 16 | 0.0188 | | |

| Reference Frequency: PCS1900 (GPRS 1 link) Middle channel=661 channel=1880MHz | | | | | |
|---|---|---|---|---|---|
| Power supplied (Vdc) | Temperature (°C) | Frequency error | | | Result |
| | | Hz | ppm | | |
| 12 | -20 | 30 | 0.0161 | 2.5 | Pass |
| | -10 | -5 | -0.0026 | | |
| | 0 | 26 | 0.0140 | | |
| | 10 | -4 | -0.0024 | | |
| | 20 | 28 | 0.0149 | | |
| | 30 | 9 | 0.0047 | | |
| | 40 | 14 | 0.0074 | | |
| | 50 | 7 | 0.0037 | | |
| | 60 | 18 | 0.0096 | | |
| **Reference Frequency: PCS1900 (EGPRS 1 link) Middle channel=661 channel=1880MHz** | | | | | |
| Power supplied (Vdc) | Temperature (°C) | Frequency error | | | Result |
| | | Hz | ppm | | |
| 12 | -20 | 19 | 0.0100 | 2.5 | Pass |
| | -10 | -13 | -0.0067 | | |
| | 0 | 19 | 0.0099 | | |
| | 10 | -10 | -0.0054 | | |
| | 20 | 19 | 0.0099 | | |
| | 30 | 19 | 0.0101 | | |
| | 40 | 8 | 0.0045 | | |
| | 50 | 13 | 0.0072 | | |
| | 60 | 12 | 0.0063 | | |

| Reference Frequency: WCDMA Band V Middle channel=4183 channel=836.6MHz | | | | | |
|---|---|---|---|---|---|
| Power supplied (Vdc) | Temperature (℃) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 12 | -20 | 17 | 0.0198 | 2.5 | Pass |
| | -10 | -9 | -0.0113 | | |
| | 0 | 22 | 0.0269 | | |
| | 10 | -7 | -0.0082 | | |
| | 20 | 14 | 0.0169 | | |
| | 30 | 18 | 0.0212 | | |
| | 40 | 8 | 0.0097 | | |
| | 50 | 15 | 0.0176 | | |
| | 60 | 20 | 0.0237 | | |
| **Reference Frequency: WCDMA Band II Middle channel=9400 channel=1880.0MHz** | | | | | |
| Power supplied (Vdc) | Temperature (℃) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 12 | -20 | 18 | 0.0095 | 2.5 | Pass |
| | -10 | -11 | -0.0058 | | |
| | 0 | 27 | 0.0146 | | |
| | 10 | -11 | -0.0059 | | |
| | 20 | 18 | 0.0097 | | |
| | 30 | 10 | 0.0052 | | |
| | 40 | 10 | 0.0055 | | |
| | 50 | 11 | 0.0058 | | |
| | 60 | 13 | 0.0071 | | |
| **Reference Frequency: WCDMA Band IV Middle channel=1450 channel=1732.5MHz** | | | | | |
| Power supplied (Vdc) | Temperature (℃) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 3.8 | -20 | 30 | 0.0175 | 2.5 | Pass |
| | -10 | -4 | -0.0025 | | |
| | 0 | 28 | 0.0160 | | |
| | 10 | -2 | -0.0013 | | |
| | 20 | 18 | 0.0102 | | |
| | 30 | 17 | 0.0099 | | |
| | 40 | 9 | 0.0053 | | |
| | 50 | 6 | 0.0034 | | |
| | 60 | 12 | 0.0071 | | |

## 4.11 Frequency stability V.S. Voltage measurement

| | |
|---|---|
| Test Requirement: | FCC Part2.1055(d)(1)(2) |
| Test Method: | FCC Part2.1055(d)(1)(2) |
| Limit: | 2.5ppm |
| Test setup: |  <br>**Note :** Measurement setup for testing on Antenna connector |
| Test procedure: | 1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.<br>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.<br>3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change. |
| Test Instruments: | Refer to section 3 for details |
| Test mode: | Refer to section 4.1 for details |
| Test results: | Pass |

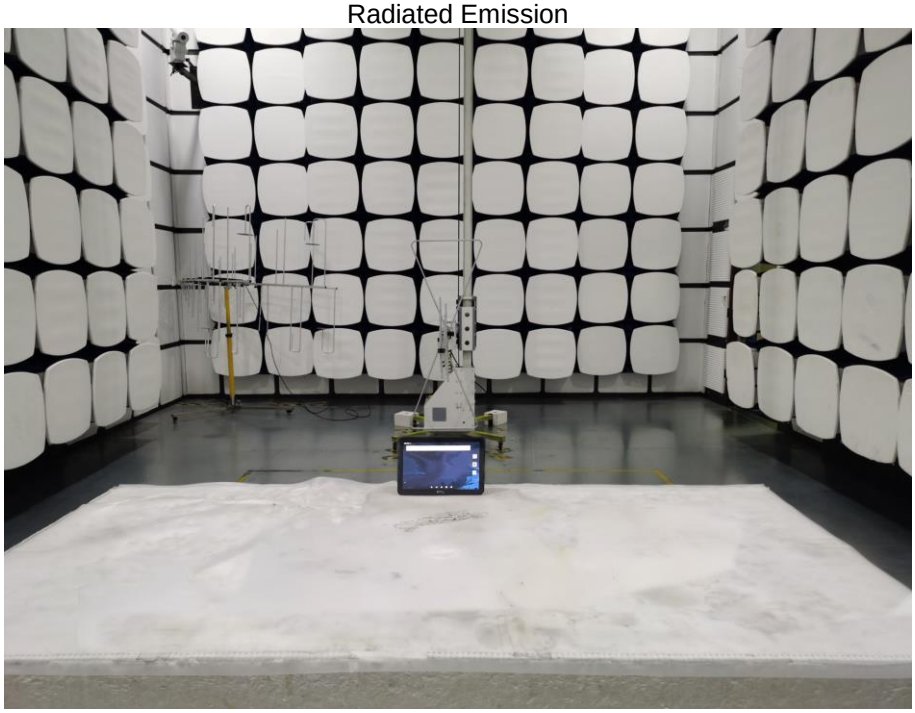
Measurement Data

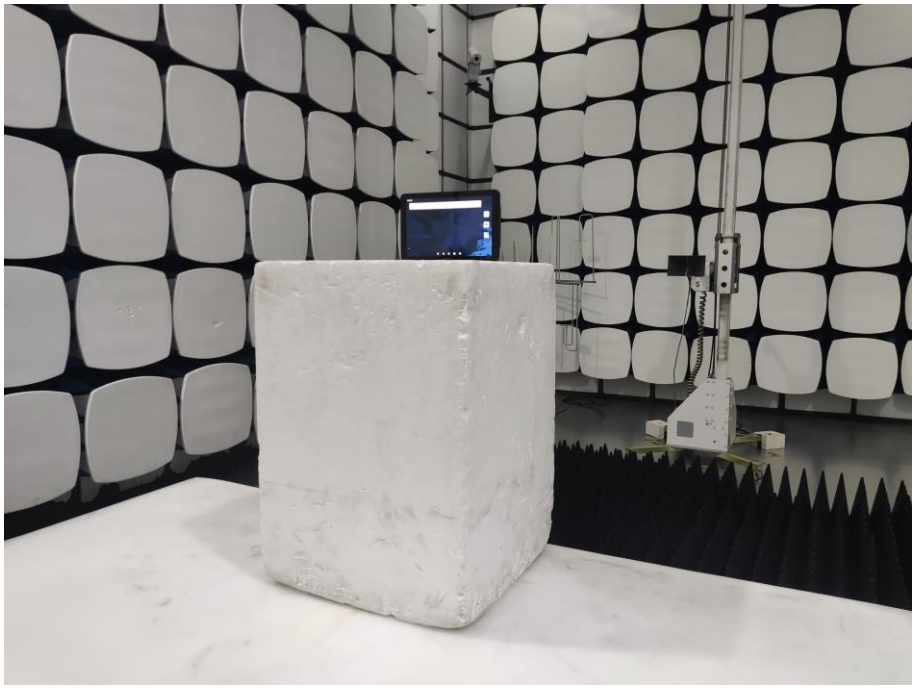
| Reference Frequency: GSM850 (GPRS 1 link) Middle channel=190 channel=836.6MHz | | | | | |
|---|---|---|---|---|---|
| Temperature (°C) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 36 | 24 | 0.0289 | 2.5 | Pass |
| | 24 | -16 | -0.0192 | | |
| | 9 | 15 | 0.0182 | | |
| Reference Frequency: GSM850 (EGPRS 1 link) Middle channel=190 channel=836.6MHz | | | | | |
| Temperature (°C) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 36 | 12 | 0.0146 | 2.5 | Pass |
| | 24 | -10 | -0.0123 | | |
| | 9 | 26 | 0.0311 | | |
| Reference Frequency: PCS1900 (GPRS 1 link) Middle channel=661 channel=1880MHz | | | | | |
| Temperature (°C) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 36 | 10 | 0.0052 | 2.5 | Pass |
| | 24 | -17 | -0.0088 | | |
| | 9 | 30 | 0.0160 | | |
| Reference Frequency: PCS1900 (EGPRS 1 link) Middle channel=661 channel=1880MHz | | | | | |
| Temperature (°C) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 36 | 25 | 0.0131 | 2.5 | Pass |
| | 24 | -19 | -0.0101 | | |
| | 9 | 26 | 0.0140 | | |

| Reference Frequency: WCDMA Band V Middle channel=4183 channel=836.6MHz | | | | | |
|---|---|---|---|---|---|
| Temperature (℃) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 36 | 20 | 0.0243 | 2.5 | Pass |
| | 24 | -3 | -0.0030 | | |
| | 9 | 28 | 0.0331 | | |
| Reference Frequency: WCDMA Band II Middle channel=940 channel=1880.0MHz | | | | | |
| Temperature (℃) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 36 | 20 | 0.0107 | 2.5 | Pass |
| | 24 | -15 | -0.0080 | | |
| | 9 | 27 | 0.0143 | | |
| Reference Frequency: WCDMA Band IV Middle channel=1450 channel=1732.5MHz | | | | | |
| Temperature (℃) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| 25 | 36 | 9 | 0.0054 | 2.5 | Pass |
| | 24 | -6 | -0.0033 | | |
| | 9 | 22 | 0.0125 | | |

# 5 Test Setup Photo

Radiated Emission





**-------END OF REPORT-------**