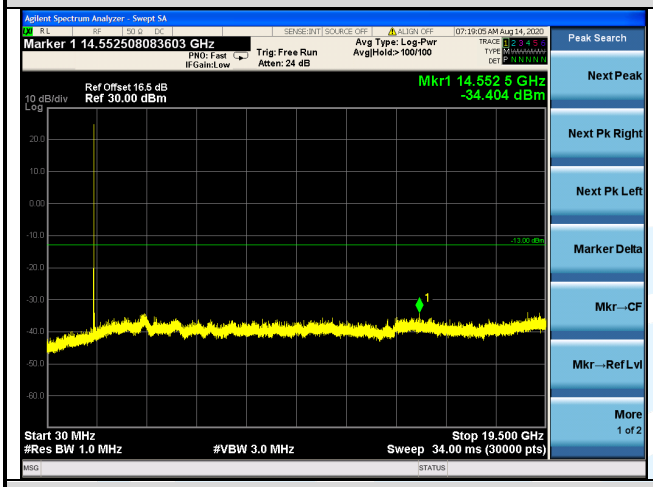
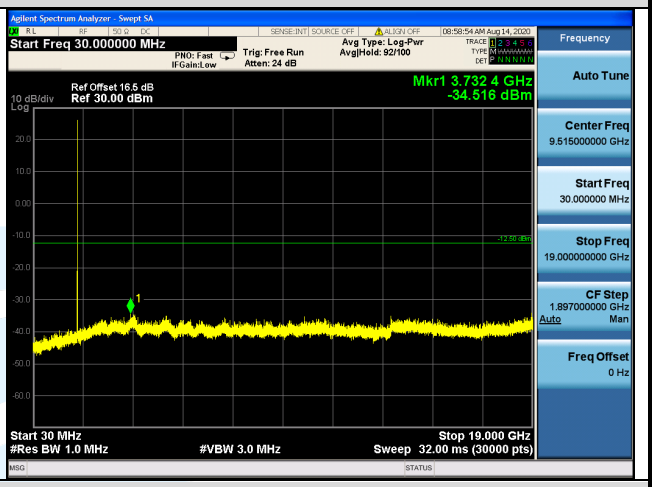
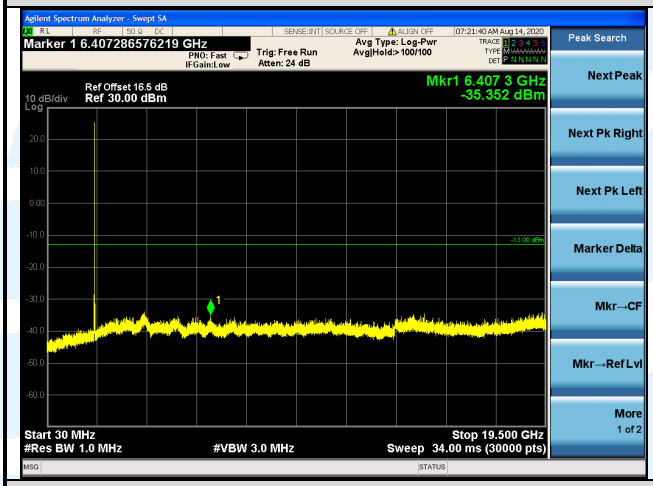
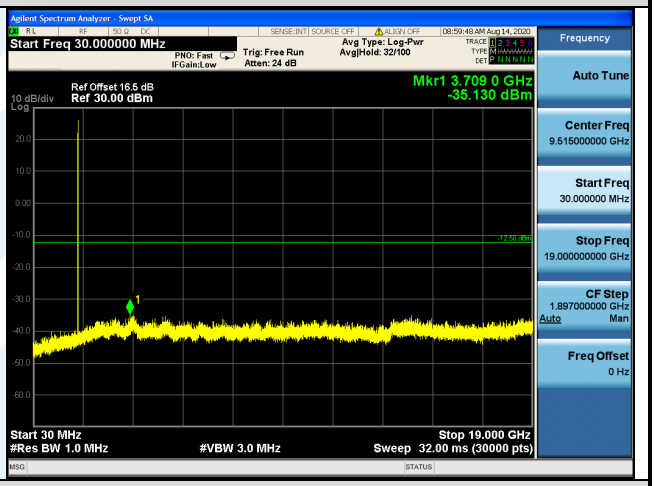
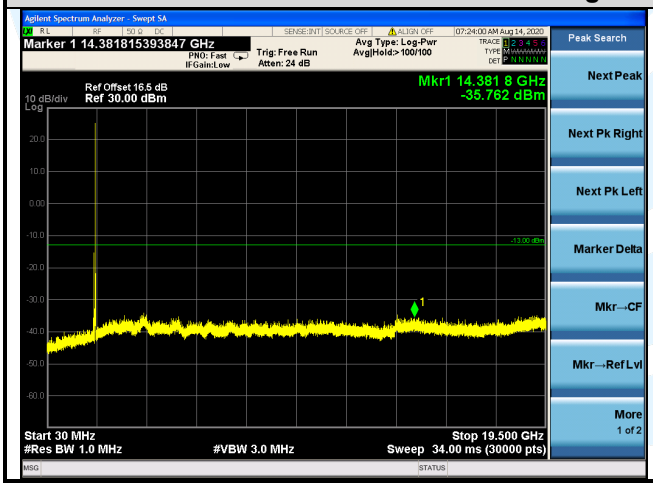
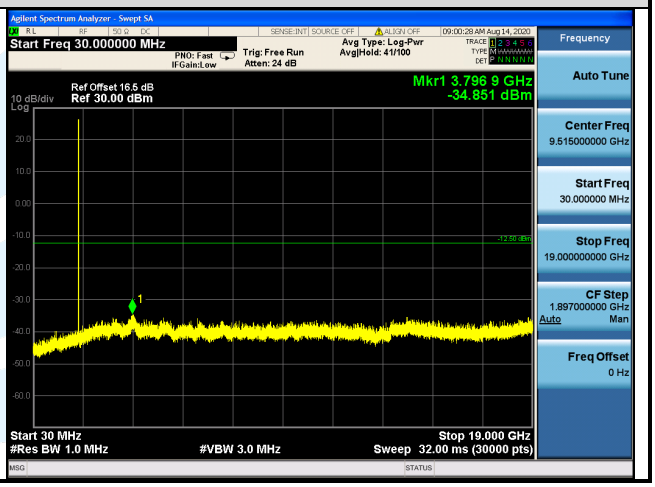
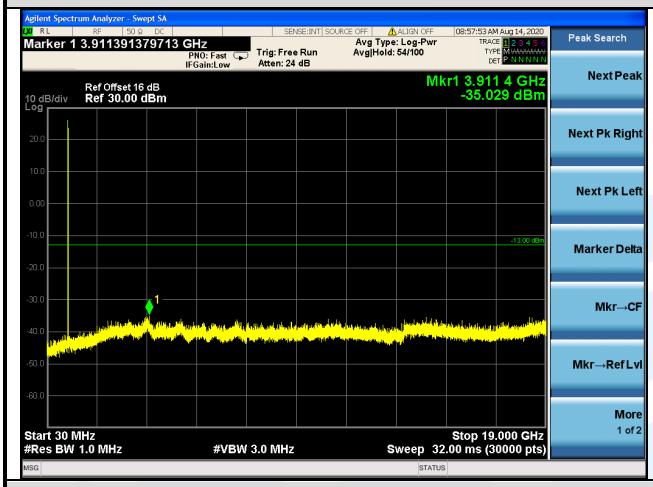
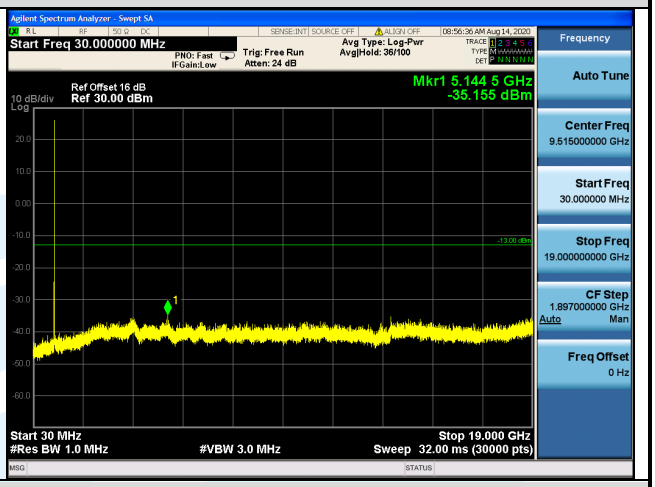
| WCDMA Band II_RMC 12.2kbps | WCDMA Band IV_RMC 12.2kbps |
|---|---|
| **Lowest Channel** | |
|  |  |
| **Middle Channel** | |
|  |  |
| **Highest Channel** | |
|  |  |

## WCDMA Band V_RMC 12.2kbps

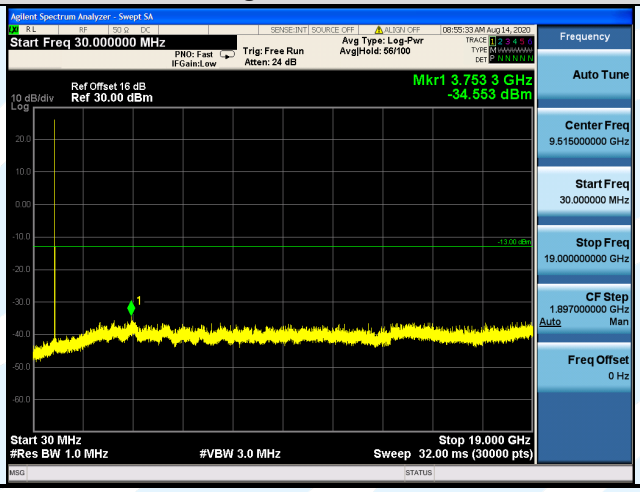
### Lowest Channel




### Middle Channel




### Highest Channel



## 5.8 FIELD STRENGTH OF SPURIOUS RADIATION

**Test Requirement:** FCC 47 CFR Part 2.1053,
FCC 47 CFR Part 22.917(a)(b),
FCC 47 CFR Part 24.238(a)(b),
FCC 47 CFR Part 27.53(h)(1),
RSS-132 Issue 3, Section 5.5,
RSS-133 Issue 6, Section 6.5,
RSS-139 Issue 3, Section 6.6

**Test Method:** ANSI C63.26-2015 & KDB 971168 D01v03r01 Section 7

**Limits:**

**FCC 47 CFR Part 22.917(a), FCC 47 CFR Part 24.238(a), FCC 47 CFR Part 27.53(h)(1),**
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. The emission limit equal to -13 dBm.

**RSS-132 Issue 3, Section 5.5, RSS-133 Issue 6, Section 6.6, RSS-139 Issue 3, Section 6.5,**
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. The emission limit equal to -13 dBm.

**Test Setup:** Refer to section 4.2.1 for details.

**Test Procedures:** KDB 971168 D01v03r01 Section 7

**Equipment Used:** Refer to section 3 for details.

**Test Result:** Pass

**The measurement data as follows:**

| GSM 850 (Below 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| GPRS_ Lowest Channel | | | | | | | |
| 1 | 31.513 | -92.58 | 32.41 | -60.17 | -13.00 | -47.17 | Horizontal |
| 2 | 684.226 | -88.52 | 41.88 | -46.64 | -13.00 | -33.64 | Horizontal |
| 3 | 958.714 | -88.32 | 45.25 | -43.07 | -13.00 | -30.07 | Horizontal |
| 4 | 31.735 | -92.37 | 32.37 | -60.00 | -13.00 | -47.00 | Vertical |
| 5 | 562.014 | -88.95 | 39.40 | -49.55 | -13.00 | -36.55 | Vertical |
| 6 | 986.044 | -87.73 | 44.05 | -43.68 | -13.00 | -30.68 | Vertical |
| GPRS_ Middle Channel | | | | | | | |
| 1 | 30.425 | -91.79 | 32.94 | -58.85 | -13.00 | -45.85 | Horizontal |
| 2 | 406.782 | -88.85 | 36.14 | -52.71 | -13.00 | -39.71 | Horizontal |
| 3 | 972.283 | -87.28 | 44.96 | -42.32 | -13.00 | -29.32 | Horizontal |
| 4 | 30.855 | -92.52 | 32.92 | -59.60 | -13.00 | -46.60 | Vertical |
| 5 | 403.934 | -87.78 | 35.57 | -52.21 | -13.00 | -39.21 | Vertical |
| 6 | 972.283 | -87.72 | 43.99 | -43.73 | -13.00 | -30.73 | Vertical |
| GPRS_ Highest Channel | | | | | | | |
| 1 | 31.735 | -91.06 | 32.29 | -58.77 | -13.00 | -45.77 | Horizontal |
| 2 | 693.910 | -88.58 | 42.11 | -46.47 | -13.00 | -33.47 | Horizontal |
| 3 | 958.714 | -86.91 | 45.25 | -41.66 | -13.00 | -28.66 | Horizontal |
| 4 | 32.184 | -92.12 | 32.09 | -60.03 | -13.00 | -47.03 | Vertical |
| 5 | 531.291 | -89.24 | 38.74 | -50.50 | -13.00 | -37.50 | Vertical |
| 6 | 906.304 | -87.54 | 43.83 | -43.71 | -13.00 | -30.71 | Vertical |

| PCS 1900 (Below 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| GPRS_ Lowest Channel | | | | | | | |
| 1 | 47.703 | -71.04 | -3.75 | -74.79 | -13.00 | -61.79 | Horizontal |
| 2 | 97.686 | -68.61 | -2.89 | -71.50 | -13.00 | -58.50 | Horizontal |
| 3 | 141.769 | -72.49 | -2.43 | -74.92 | -13.00 | -61.92 | Horizontal |
| 4 | 53.006 | -59.01 | -5.00 | -64.01 | -13.00 | -51.01 | Vertical |
| 5 | 125.806 | -65.11 | -2.95 | -68.06 | -13.00 | -55.06 | Vertical |
| 6 | 932.141 | -81.32 | 14.92 | -66.40 | -13.00 | -53.40 | Vertical |
| GPRS_ Middle Channel | | | | | | | |
| 1 | 47.703 | -72.43 | -3.75 | -76.18 | -13.00 | -63.18 | Horizontal |
| 2 | 103.335 | -76.16 | -2.74 | -78.90 | -13.00 | -65.90 | Horizontal |
| 3 | 172.598 | -73.26 | -1.12 | -74.38 | -13.00 | -61.38 | Horizontal |
| 4 | 53.756 | -59.25 | -4.98 | -64.23 | -13.00 | -51.23 | Vertical |
| 5 | 124.925 | -63.32 | -2.96 | -66.28 | -13.00 | -53.28 | Vertical |
| 6 | 887.398 | -81.20 | 14.23 | -66.97 | -13.00 | -53.97 | Vertical |
| GPRS_ Highest Channel | | | | | | | |
| 1 | 54.517 | -71.56 | -4.98 | -76.54 | -13.00 | -63.54 | Horizontal |
| 2 | 95.649 | -75.94 | -3.05 | -78.99 | -13.00 | -65.99 | Horizontal |
| 3 | 180.030 | -74.25 | -0.52 | -74.77 | -13.00 | -61.77 | Horizontal |
| 4 | 53.756 | -58.92 | -4.98 | -63.90 | -13.00 | -50.90 | Vertical |
| 5 | 122.319 | -63.37 | -2.98 | -66.35 | -13.00 | -53.35 | Vertical |
| 6 | 952.000 | -81.46 | 14.93 | -66.53 | -13.00 | -53.53 | Vertical |

| GSM 850 (Above 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| GPRS_ Lowest Channel | | | | | | | |
| 1 | 1648.400 | -65.79 | -0.68 | -66.47 | -13.00 | -53.47 | Horizontal |
| 2 | 2472.600 | -65.23 | 1.97 | -63.26 | -13.00 | -50.26 | Horizontal |
| 3 | 1648.400 | -66.96 | -1.46 | -68.42 | -13.00 | -55.42 | Vertical |
| 4 | 2472.600 | -65.43 | 1.57 | -63.86 | -13.00 | -50.86 | Vertical |
| GPRS_ Middle Channel | | | | | | | |
| 1 | 1673.200 | -65.32 | -0.53 | -65.85 | -13.00 | -52.85 | Horizontal |
| 2 | 2509.800 | -64.95 | 2.06 | -62.89 | -13.00 | -49.89 | Horizontal |
| 3 | 1673.200 | -65.49 | -1.29 | -66.78 | -13.00 | -53.78 | Vertical |
| 4 | 2509.800 | -64.71 | 1.65 | -63.06 | -13.00 | -50.06 | Vertical |
| GPRS_ Highest Channel | | | | | | | |
| 1 | 1697.600 | -65.29 | -0.39 | -65.68 | -13.00 | -52.68 | Horizontal |
| 2 | 2546.400 | -65.76 | 2.18 | -63.58 | -13.00 | -50.58 | Horizontal |
| 3 | 1697.600 | -65.51 | -1.13 | -66.64 | -13.00 | -53.64 | Vertical |
| 4 | 2546.400 | -65.75 | 1.75 | -64.00 | -13.00 | -51.00 | Vertical |

| PCS 1900 (Above 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| GPRS_ Lowest Channel | | | | | | | |
| 1 | 3700.400 | -61.67 | 5.83 | -55.84 | -13.00 | -42.84 | Horizontal |
| 2 | 5550.600 | -63.09 | 9.58 | -53.51 | -13.00 | -40.51 | Horizontal |
| 3 | 3700.400 | -63.02 | 5.81 | -57.21 | -13.00 | -44.21 | Vertical |
| 4 | 5550.600 | -63.57 | 10.07 | -53.50 | -13.00 | -40.50 | Vertical |
| GPRS_ Middle Channel | | | | | | | |
| 1 | 3760.000 | -64.27 | 5.97 | -58.30 | -13.00 | -45.30 | Horizontal |
| 2 | 5640.000 | -64.27 | 9.53 | -54.74 | -13.00 | -41.74 | Horizontal |
| 3 | 3767.619 | -62.90 | 5.99 | -56.91 | -13.00 | -43.91 | Vertical |
| 4 | 5640.000 | -63.43 | 10.01 | -53.42 | -13.00 | -40.42 | Vertical |
| GPRS_ Highest Channel | | | | | | | |
| 1 | 3819.600 | -64.85 | 6.10 | -58.75 | -13.00 | -45.75 | Horizontal |
| 2 | 5729.400 | -63.80 | 9.49 | -54.31 | -13.00 | -41.31 | Horizontal |
| 3 | 3819.600 | -62.66 | 6.13 | -56.53 | -13.00 | -43.53 | Vertical |
| 4 | 5729.400 | -63.50 | 9.94 | -53.56 | -13.00 | -40.56 | Vertical |

| WCDMA Band II (Below 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| RMC 12.2kbps_ Lowest Channel | | | | | | | |
| 1 | 50.461 | -71.11 | -4.69 | -75.80 | -13.00 | -62.80 | Horizontal |
| 2 | 176.275 | -73.26 | -0.82 | -74.08 | -13.00 | -61.08 | Horizontal |
| 3 | 958.714 | -81.57 | 16.25 | -65.32 | -13.00 | -52.32 | Horizontal |
| 4 | 53.756 | -59.13 | -4.98 | -64.11 | -13.00 | -51.11 | Vertical |
| 5 | 123.181 | -62.77 | -2.98 | -65.75 | -13.00 | -52.75 | Vertical |
| 6 | 945.334 | -81.75 | 14.92 | -66.83 | -13.00 | -53.83 | Vertical |
| RMC 12.2kbps_ Middle Channel | | | | | | | |
| 1 | 54.135 | -70.08 | -4.95 | -75.03 | -13.00 | -62.03 | Horizontal |
| 2 | 173.815 | -73.08 | -1.01 | -74.09 | -13.00 | -61.09 | Horizontal |
| 3 | 952.000 | -81.95 | 16.38 | -65.57 | -13.00 | -52.57 | Horizontal |
| 4 | 32.184 | -68.90 | 3.06 | -65.84 | -13.00 | -52.84 | Vertical |
| 5 | 54.135 | -59.15 | -4.98 | -64.13 | -13.00 | -51.13 | Vertical |
| 6 | 124.925 | -64.26 | -2.96 | -67.22 | -13.00 | -54.22 | Vertical |
| RMC 12.2kbps_ Highest Channel | | | | | | | |
| 1 | 47.703 | -72.11 | -3.75 | -75.86 | -13.00 | -62.86 | Horizontal |
| 2 | 176.275 | -73.64 | -0.82 | -74.46 | -13.00 | -61.46 | Horizontal |
| 3 | 952.000 | -82.60 | 16.38 | -66.22 | -13.00 | -53.22 | Horizontal |
| 4 | 53.756 | -59.33 | -4.98 | -64.31 | -13.00 | -51.31 | Vertical |
| 5 | 122.319 | -63.56 | -2.98 | -66.54 | -13.00 | -53.54 | Vertical |
| 6 | 925.613 | -81.25 | 14.92 | -66.33 | -13.00 | -53.33 | Vertical |

| WCDMA Band IV (Below 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| RMC 12.2kbps_ Lowest Channel | | | | | | | |
| 1 | 50.461 | -72.30 | -4.69 | -76.99 | -13.00 | -63.99 | Horizontal |
| 2 | 182.578 | -74.35 | -0.58 | -74.93 | -13.00 | -61.93 | Horizontal |
| 3 | 945.334 | -82.43 | 16.25 | -66.18 | -13.00 | -53.18 | Horizontal |
| 4 | 53.379 | -58.92 | -5.00 | -63.92 | -13.00 | -50.92 | Vertical |
| 5 | 124.925 | -63.88 | -2.96 | -66.84 | -13.00 | -53.84 | Vertical |
| 6 | 958.714 | -80.87 | 14.96 | -65.91 | -13.00 | -52.91 | Vertical |
| RMC 12.2kbps_ Middle Channel | | | | | | | |
| 1 | 50.108 | -71.37 | -4.66 | -76.03 | -13.00 | -63.03 | Horizontal |
| 2 | 97.002 | -74.74 | -2.94 | -77.68 | -13.00 | -64.68 | Horizontal |
| 3 | 176.275 | -73.41 | -0.82 | -74.23 | -13.00 | -61.23 | Horizontal |
| 4 | 53.379 | -59.34 | -5.00 | -64.34 | -13.00 | -51.34 | Vertical |
| 5 | 124.050 | -62.93 | -2.97 | -65.90 | -13.00 | -52.90 | Vertical |
| 6 | 925.613 | -81.99 | 14.92 | -67.07 | -13.00 | -54.07 | Vertical |
| RMC 12.2kbps_ Highest Channel | | | | | | | |
| 1 | 54.135 | -70.47 | -4.95 | -75.42 | -13.00 | -62.42 | Horizontal |
| 2 | 180.030 | -74.39 | -0.52 | -74.91 | -13.00 | -61.91 | Horizontal |
| 3 | 965.474 | -82.35 | 16.11 | -66.24 | -13.00 | -53.24 | Horizontal |
| 4 | 54.135 | -59.10 | -4.98 | -64.08 | -13.00 | -51.08 | Vertical |
| 5 | 127.586 | -64.43 | -2.93 | -67.36 | -13.00 | -54.36 | Vertical |
| 6 | 919.132 | -80.81 | 14.86 | -65.95 | -13.00 | -52.95 | Vertical |

| WCDMA Band V (Below 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| RMC 12.2kbps_ Lowest Channel | | | | | | | |
| 1 | 30.639 | -91.07 | 32.83 | -58.24 | -13.00 | -45.24 | Horizontal |
| 2 | 527.571 | -87.11 | 38.71 | -48.40 | -13.00 | -35.40 | Horizontal |
| 3 | 952.000 | -87.10 | 45.40 | -41.70 | -13.00 | -28.70 | Horizontal |
| 4 | 30.425 | -92.09 | 33.19 | -58.90 | -13.00 | -45.90 | Vertical |
| 5 | 669.952 | -86.83 | 39.65 | -47.18 | -13.00 | -34.18 | Vertical |
| 6 | 952.000 | -87.17 | 43.95 | -43.22 | -13.00 | -30.22 | Vertical |
| RMC 12.2kbps_ Middle Channel | | | | | | | |
| 1 | 31.073 | -92.57 | 32.62 | -59.95 | -13.00 | -46.95 | Horizontal |
| 2 | 398.296 | -89.78 | 36.03 | -53.75 | -13.00 | -40.75 | Horizontal |
| 3 | 986.044 | -87.36 | 44.91 | -42.45 | -13.00 | -29.45 | Horizontal |
| 4 | 31.292 | -92.94 | 32.65 | -60.29 | -13.00 | -47.29 | Vertical |
| 5 | 550.290 | -88.74 | 39.12 | -49.62 | -13.00 | -36.62 | Vertical |
| 6 | 938.714 | -87.80 | 43.97 | -43.83 | -13.00 | -30.83 | Vertical |
| RMC 12.2kbps_ Highest Channel | | | | | | | |
| 1 | 31.292 | -91.91 | 32.52 | -59.39 | -13.00 | -46.39 | Horizontal |
| 2 | 264.971 | -88.36 | 31.08 | -57.28 | -13.00 | -44.28 | Horizontal |
| 3 | 952.000 | -87.43 | 45.40 | -42.03 | -13.00 | -29.03 | Horizontal |
| 4 | 31.073 | -91.62 | 32.78 | -58.84 | -13.00 | -45.84 | Vertical |
| 5 | 642.292 | -89.30 | 39.16 | -50.14 | -13.00 | -37.14 | Vertical |
| 6 | 958.714 | -87.94 | 43.96 | -43.98 | -13.00 | -30.98 | Vertical |

| WCDMA Band II (Above 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| RMC 12.2kbps_ Lowest Channel | | | | | | | |
| 1 | 3704.800 | -62.26 | 5.84 | -56.42 | -13.00 | -43.42 | Horizontal |
| 2 | 5557.200 | -63.47 | 9.58 | -53.89 | -13.00 | -40.89 | Horizontal |
| 3 | 3704.800 | -62.30 | 5.82 | -56.48 | -13.00 | -43.48 | Vertical |
| 4 | 5557.200 | -63.44 | 10.07 | -53.37 | -13.00 | -40.37 | Vertical |
| RMC 12.2kbps_ Middle Channel | | | | | | | |
| 1 | 3760.000 | -63.12 | 5.97 | -57.15 | -13.00 | -44.15 | Horizontal |
| 2 | 5640.000 | -64.69 | 9.53 | -55.16 | -13.00 | -42.16 | Horizontal |
| 3 | 3760.000 | -64.14 | 5.97 | -58.17 | -13.00 | -45.17 | Vertical |
| 4 | 5640.000 | -64.73 | 10.01 | -54.72 | -13.00 | -41.72 | Vertical |
| RMC 12.2kbps_ Highest Channel | | | | | | | |
| 1 | 3815.200 | -64.58 | 6.10 | -58.48 | -13.00 | -45.48 | Horizontal |
| 2 | 5722.800 | -63.82 | 9.50 | -54.32 | -13.00 | -41.32 | Horizontal |
| 3 | 3815.200 | -64.33 | 6.13 | -58.20 | -13.00 | -45.20 | Vertical |
| 4 | 5722.800 | -64.61 | 9.95 | -54.66 | -13.00 | -41.66 | Vertical |

| WCDMA Band IV (Above 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| RMC 12.2kbps_ Lowest Channel | | | | | | | |
| 1 | 3424.800 | -63.12 | 4.97 | -58.15 | -13.00 | -45.15 | Horizontal |
| 2 | 5137.200 | -61.51 | 8.02 | -53.49 | -13.00 | -40.49 | Horizontal |
| 3 | 3424.800 | -63.26 | 4.76 | -58.50 | -13.00 | -45.50 | Vertical |
| 4 | 5137.200 | -63.77 | 8.37 | -55.40 | -13.00 | -42.40 | Vertical |
| RMC 12.2kbps_ Middle Channel | | | | | | | |
| 1 | 3464.800 | -62.99 | 5.10 | -57.89 | -13.00 | -44.89 | Horizontal |
| 2 | 5197.200 | -63.63 | 8.24 | -55.39 | -13.00 | -42.39 | Horizontal |
| 3 | 3464.800 | -63.10 | 4.95 | -58.15 | -13.00 | -45.15 | Vertical |
| 4 | 5197.200 | -64.43 | 8.62 | -55.81 | -13.00 | -42.81 | Vertical |
| RMC 12.2kbps_ Highest Channel | | | | | | | |
| 1 | 3505.200 | -64.29 | 5.23 | -59.06 | -13.00 | -46.06 | Horizontal |
| 2 | 5257.800 | -64.44 | 8.52 | -55.92 | -13.00 | -42.92 | Horizontal |
| 3 | 3505.200 | -62.24 | 5.14 | -57.10 | -13.00 | -44.10 | Vertical |
| 4 | 5257.800 | -62.15 | 8.92 | -53.23 | -13.00 | -40.23 | Vertical |

| WCDMA Band V (Above 1 G) | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Frequency (MHz) | SA Reading (dBm) | Correction factor (dB/m) | EIRP Result (dBm) | Limit (dBm) | Margin (dB) | Ant. Pol. |
| RMC 12.2kbps_ Lowest Channel | | | | | | | |
| 1 | 1652.800 | -60.76 | -0.64 | -61.40 | -13.00 | -48.40 | Horizontal |
| 2 | 2479.200 | -62.56 | 1.99 | -60.57 | -13.00 | -47.57 | Horizontal |
| 3 | 1652.800 | -59.13 | -1.42 | -60.55 | -13.00 | -47.55 | Vertical |
| 4 | 2479.200 | -61.02 | 1.59 | -59.43 | -13.00 | -46.43 | Vertical |
| RMC 12.2kbps_ Middle Channel | | | | | | | |
| 1 | 1672.800 | -58.84 | -0.53 | -59.37 | -13.00 | -46.37 | Horizontal |
| 2 | 2509.200 | -62.56 | 2.06 | -60.50 | -13.00 | -47.50 | Horizontal |
| 3 | 1672.800 | -59.01 | -1.29 | -60.30 | -13.00 | -47.30 | Vertical |
| 4 | 2509.200 | -62.80 | 1.65 | -61.15 | -13.00 | -48.15 | Vertical |
| RMC 12.2kbps_ Highest Channel | | | | | | | |
| 1 | 1693.200 | -59.35 | -0.41 | -59.76 | -13.00 | -46.76 | Horizontal |
| 2 | 2539.800 | -63.22 | 2.16 | -61.06 | -13.00 | -48.06 | Horizontal |
| 3 | 1693.200 | -60.08 | -1.16 | -61.24 | -13.00 | -48.24 | Vertical |
| 4 | 2539.800 | -63.49 | 1.73 | -61.76 | -13.00 | -48.76 | Vertical |

Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

## 5.9 FREQUENCY STABILITY

**Test Requirement:** FCC 47 CFR Part 2.1055 &
FCC 47 CFR Part 22.355 &
FCC 47 CFR Part 24.235 &
FCC 47 CFR Part 27.54,
RSS-132 Issue 3, Section 5.3,
RSS-133 Issue 6, Section 6.3,
RSS-139 Issue 3, Section 6.4

**Test Method:** ANSI C63.26-2015 & KDB 971168 D01v03r01

**Limits:**

**FCC 47 CFR Part 22.355,**
The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

**FCC 47 CFR Part 24.235, FCC 47 CFR Part 27.54**
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

**RSS-132 Issue 3, Section 5.3,**
The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations and ±1.5 ppm for base stations

**RSS-133 Issue 6, Section 6.3,**
The carrier frequency shall not depart from the reference frequency, in excess of ±2.5 ppm for mobile stations and ±1.0 ppm for base stations.

**RSS-139 Issue 3, Section 6.4,**
The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

**Test Setup:** Refer to section 4.2.2 for details.

**Test Procedures:**

1) Use CMW 500 with Frequency Error measurement capability.
   a) Temp. = −30° to + 50°C
   b) Voltage =low voltage, 3.2 Vdc, Normal, 3.8 Vdc and High voltage, 4.5 Vdc.
2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

3) Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

**Equipment Used:** Refer to section 3 for details.

**Test Result:** Pass

| Modulation | Channel/ Frequency (MHz) | Voltage (Vdc) | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Result |
|---|---|---|---|---|---|---|---|
| GSM 850 | | | | | | | |
| GPRS | 190 / 836.6 | VL | TN | -12 | -0.0143 | ± 2.5 | Pass |
| | | VN | | -19 | -0.0227 | ± 2.5 | Pass |
| | | VH | | -16 | -0.0191 | ± 2.5 | Pass |
| | | VN | 50 | -19 | -0.0227 | ± 2.5 | Pass |
| | | | 40 | -14 | -0.0167 | ± 2.5 | Pass |
| | | | 30 | -21 | -0.0251 | ± 2.5 | Pass |
| | | | 20 | -15 | -0.0179 | ± 2.5 | Pass |
| | | | 10 | -16 | -0.0191 | ± 2.5 | Pass |
| | | | 0 | -13 | -0.0155 | ± 2.5 | Pass |
| | | | -10 | -16 | -0.0191 | ± 2.5 | Pass |
| | | | -20 | -21 | -0.0251 | ± 2.5 | Pass |
| | | | -30 | -16 | -0.0191 | ± 2.5 | Pass |

| Modulation | Channel/ Frequency (MHz) | Voltage (Vdc) | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Result |
|---|---|---|---|---|---|---|---|
| PCS 1900 | | | | | | | |
| GPRS | 661 / 1880.0 | VL | TN | -13 | -0.0069 | N/A | Pass |
| | | VN | | -19 | -0.0101 | | Pass |
| | | VH | | -19 | -0.0101 | | Pass |
| | | VN | 50 | -17 | -0.0090 | | Pass |
| | | | 40 | -16 | -0.0085 | | Pass |
| | | | 30 | -17 | -0.0090 | | Pass |
| | | | 20 | -15 | -0.0080 | | Pass |
| | | | 10 | -18 | -0.0096 | | Pass |
| | | | 0 | -10 | -0.0053 | | Pass |
| | | | -10 | -16 | -0.0085 | | Pass |
| | | | -20 | -15 | -0.0080 | | Pass |
| | | | -30 | -18 | -0.0096 | | Pass |

| Modulation | Channel/ Frequency (MHz) | Voltage (Vdc) | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Result |
|---|---|---|---|---|---|---|---|
| WCDMA Band II | | | | | | | |
| RMC 12.2kbps | 9400 / 1880.0 | VL | TN | -12 | -0.0064 | N/A | Pass |
| | | VN | | -13 | -0.0069 | | Pass |
| | | VH | | -16 | -0.0085 | | Pass |
| | | VN | 50 | -13 | -0.0069 | | Pass |
| | | | 40 | -18 | -0.0096 | | Pass |
| | | | 30 | -13 | -0.0069 | | Pass |
| | | | 20 | -15 | -0.0080 | | Pass |
| | | | 10 | -10 | -0.0053 | | Pass |
| | | | 0 | -16 | -0.0085 | | Pass |
| | | | -10 | -16 | -0.0085 | | Pass |
| | | | -20 | -14 | -0.0074 | | Pass |
| | | | -30 | -19 | -0.0101 | | Pass |

| Modulation | Channel/ Frequency (MHz) | Voltage (Vdc) | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Result |
|---|---|---|---|---|---|---|---|
| WCDMA Band IV | | | | | | | |
| RMC 12.2kbps | 1412 / 1732.4 | VL | TN | 12 | 0.0069 | N/A | Pass |
| | | VN | | 15 | 0.0087 | | Pass |
| | | VH | | 15 | 0.0087 | | Pass |
| | | VN | 50 | 14 | 0.0081 | | Pass |
| | | | 40 | 17 | 0.0098 | | Pass |
| | | | 30 | 13 | 0.0075 | | Pass |
| | | | 20 | 14 | 0.0081 | | Pass |
| | | | 10 | 15 | 0.0087 | | Pass |
| | | | 0 | 16 | 0.0092 | | Pass |
| | | | -10 | 13 | 0.0075 | | Pass |
| | | | -20 | 18 | 0.0104 | | Pass |
| | | | -30 | 14 | 0.0081 | | Pass |

| Modulation | Channel/ Frequency (MHz) | Voltage (Vdc) | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Result |
|---|---|---|---|---|---|---|---|
| WCDMA Band V | | | | | | | |
| RMC 12.2kbps | 4182 / 836.4 | VL | TN | 8 | 0.0096 | ± 2.5 | Pass |
| | | VN | | 4 | 0.0048 | ± 2.5 | Pass |
| | | VH | | 6 | 0.0072 | ± 2.5 | Pass |
| | | VN | 50 | 9 | 0.0108 | ± 2.5 | Pass |
| | | | 40 | 3 | 0.0036 | ± 2.5 | Pass |
| | | | 30 | 7 | 0.0084 | ± 2.5 | Pass |
| | | | 20 | 4 | 0.0048 | ± 2.5 | Pass |
| | | | 10 | 7 | 0.0084 | ± 2.5 | Pass |
| | | | 0 | 6 | 0.0072 | ± 2.5 | Pass |
| | | | -10 | 8 | 0.0096 | ± 2.5 | Pass |
| | | | -20 | 3 | 0.0036 | ± 2.5 | Pass |
| | | | -30 | 8 | 0.0096 | ± 2.5 | Pass |

## APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

## APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

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