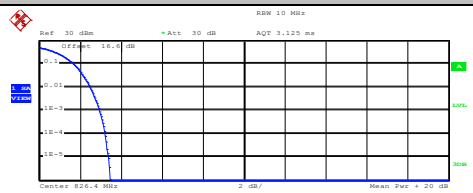
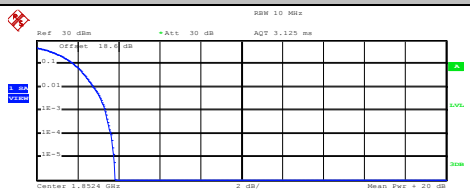
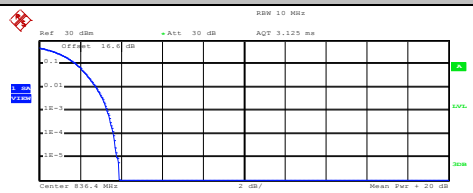
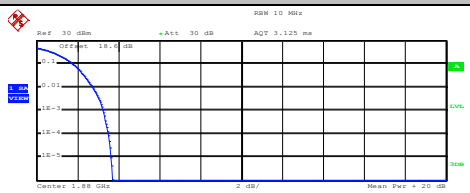
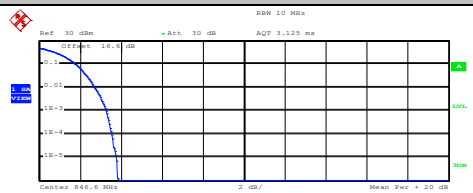
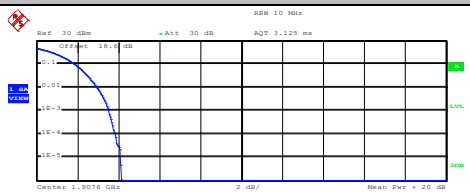
# A2. WCDMA

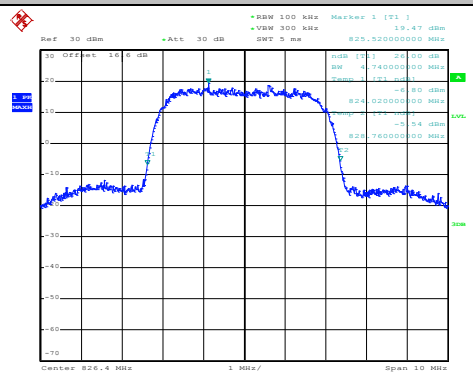
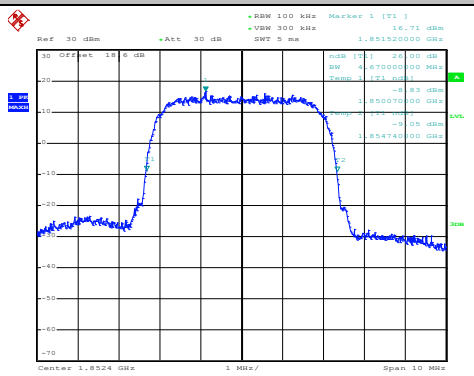
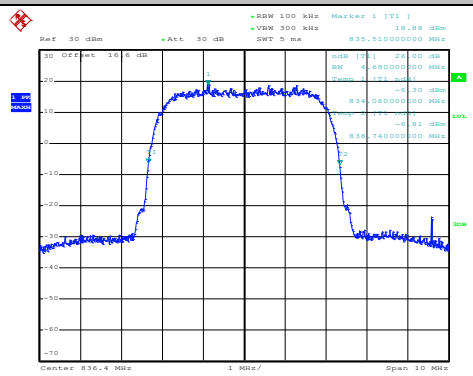
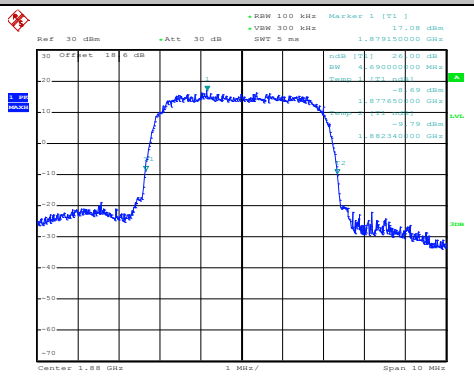
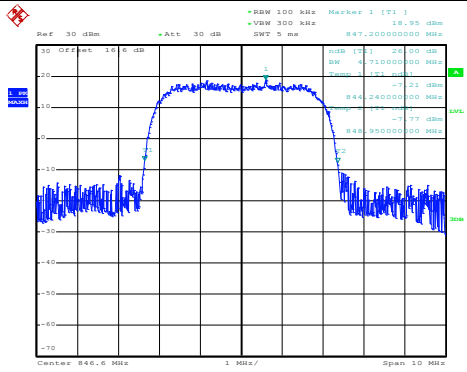
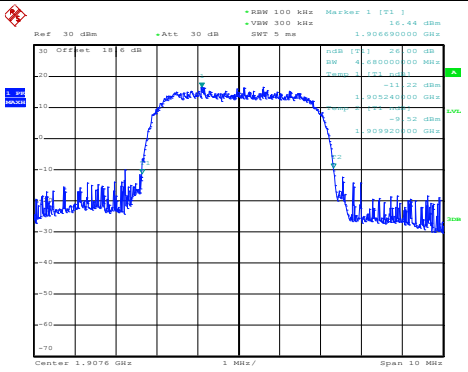
## Peak-to-Average Ratio

| Mode | WCDMA Band V | WCDMA Band II | Limit: 13dB |
|---|---|---|---|
| Mod. | RMC 12.2Kbps | RMC 12.2Kbps | Result |
| Lowest CH | 2.96 | 3.36 | PASS |
| Middle CH | 3.32 | 3.24 | |
| Highest CH | 3.28 | 3.52 | |

| WCDMA Band V (RMC 12.2Kbps) | WCDMA Band II (RMC 12.2Kbps) |
|---|---|
| **Lowest Channel** | **Lowest Channel** |
|  |  |
| Complementary Cumulative Distribution Function (100000 samples)<br>Trace 1<br>Mean 18.75 dBm<br>Peak 22.21 dBm<br>Crest 3.46 dB<br>10 % 1.68 dB<br>1 % 2.48 dB<br>.1 % 2.96 dB<br>.01 % 3.24 dB | Complementary Cumulative Distribution Function (100000 samples)<br>Trace 1<br>Mean 20.49 dBm<br>Peak 24.33 dBm<br>Crest 3.84 dB<br>10 % 1.80 dB<br>1 % 2.80 dB<br>.1 % 3.36 dB<br>.01 % 3.64 dB |
| Date: 4.NOV.2015 10:43:45 | Date: 4.NOV.2015 10:59:41 |
| **Middle Channel** | **Middle Channel** |
|  |  |
| Complementary Cumulative Distribution Function (100000 samples)<br>Trace 1<br>Mean 19.00 dBm<br>Peak 22.92 dBm<br>Crest 3.91 dB<br>10 % 1.80 dB<br>1 % 2.76 dB<br>.1 % 3.32 dB<br>.01 % 3.64 dB | Complementary Cumulative Distribution Function (100000 samples)<br>Trace 1<br>Mean 21.33 dBm<br>Peak 25.03 dBm<br>Crest 3.70 dB<br>10 % 1.76 dB<br>1 % 2.72 dB<br>.1 % 3.24 dB<br>.01 % 3.52 dB |
| Date: 4.NOV.2015 10:43:59 | Date: 4.NOV.2015 10:59:51 |
| **Highest Channel** | **Highest Channel** |
|  |  |
| Complementary Cumulative Distribution Function (100000 samples)<br>Trace 1<br>Mean 19.14 dBm<br>Peak 22.99 dBm<br>Crest 3.84 dB<br>10 % 1.80 dB<br>1 % 2.72 dB<br>.1 % 3.28 dB<br>.01 % 3.56 dB | Complementary Cumulative Distribution Function (100000 samples)<br>Trace 1<br>Mean 20.06 dBm<br>Peak 24.19 dBm<br>Crest 4.12 dB<br>10 % 1.88 dB<br>1 % 2.96 dB<br>.1 % 3.52 dB<br>.01 % 3.84 dB |
| Date: 4.NOV.2015 10:44:10 | Date: 4.NOV.2015 11:00:02 |

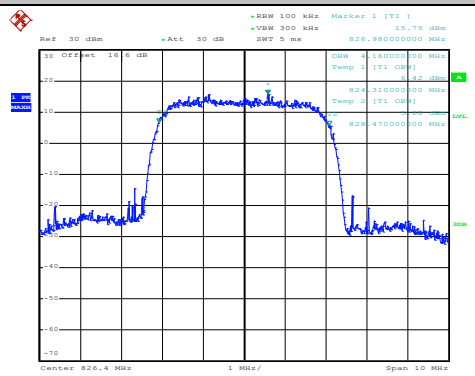
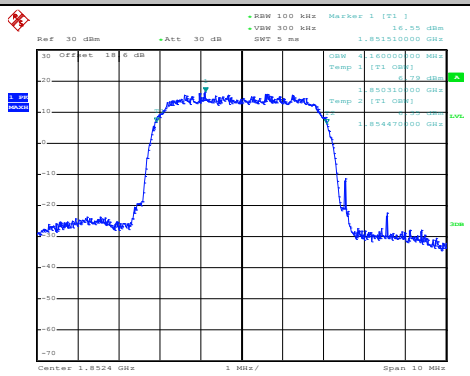
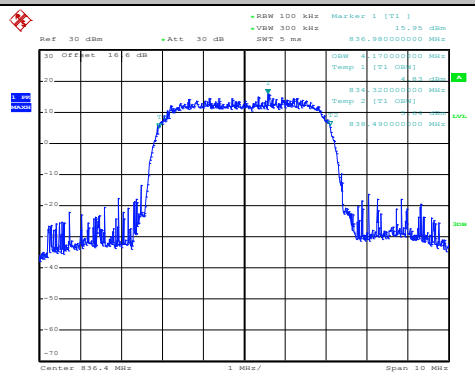
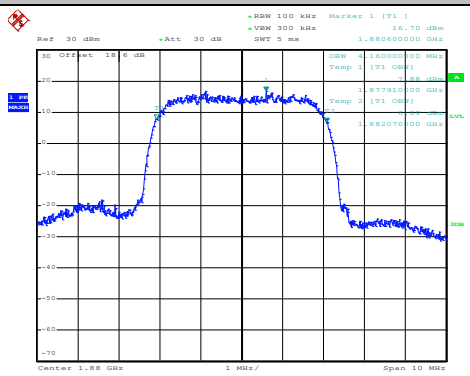
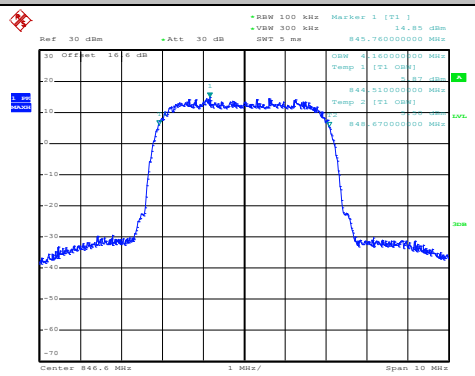
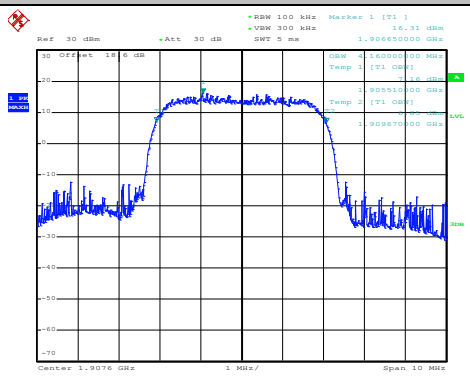
# 26dB Bandwidth

| Mode | WCDMA Band V | WCDMA Band II |
|---|---|---|
| Mod. | RMC 12.2Kbps | RMC 12.2Kbps |
| Lowest CH | 4.74 | 4.67 |
| Middle CH | 4.68 | 4.69 |
| Highest CH | 4.71 | 4.68 |

| WCDMA Band V (RMC 12.2Kbps) | WCDMA Band II (RMC 12.2Kbps) |
|---|---|
| **Lowest Channel** | **Lowest Channel** |
|  |  |
| Date: 4.NOV.2015 10:31:21 | Date: 4.NOV.2015 10:46:01 |
| **Middle Channel** | **Middle Channel** |
|  |  |
| Date: 4.NOV.2015 10:31:55 | Date: 4.NOV.2015 10:46:29 |
| **Highest Channel** | **Highest Channel** |
|  |  |
| Date: 4.NOV.2015 10:32:27 | Date: 4.NOV.2015 10:46:57 |

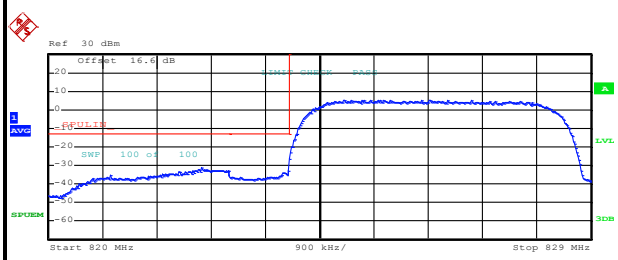
# Occupied Bandwidth

| Mode | WCDMA Band V | WCDMA Band II |
|---|---|---|
| Mod. | RMC 12.2Kbps | RMC 12.2Kbps |
| Lowest CH | 4.16 | 4.16 |
| Middle CH | 4.17 | 4.16 |
| Highest CH | 4.16 | 4.16 |

| WCDMA Band V (RMC 12.2Kbps) | WCDMA Band II (RMC 12.2Kbps) |
|---|---|
| **Lowest Channel** | **Lowest Channel** |
|  |  |
| Date: 4.NOV.2015 10:35:02 | Date: 4.NOV.2015 10:49:26 |
| **Middle Channel** | **Middle Channel** |
|  |  |
| Date: 4.NOV.2015 10:35:31 | Date: 4.NOV.2015 10:49:54 |
| **Highest Channel** | **Highest Channel** |
|  |  |
| Date: 4.NOV.2015 10:35:59 | Date: 4.NOV.2015 10:50:22 |

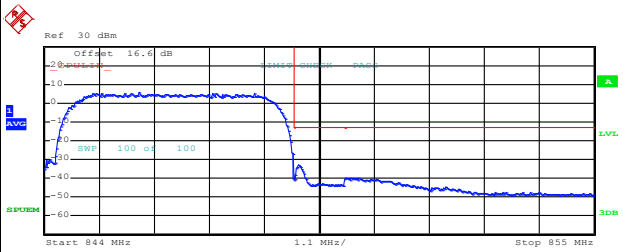
# Conducted Band Edge

| WCDMA Band V (RMC 12.2Kbps) | |
|---|---|
| **Lowest Band Edge** | **Highest Band Edge** |




| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 820.000 M | 823.000 M | 100.00 k | 822.529000 M | -31.28 | -18.28 |
| 823.000 M | 824.000 M | 50.00 k | 823.996000 M | -33.52 | -20.52 |
| 824.000 M | 829.000 M | 100.00 k | 825.475000 M | 5.35 | -29.65 |

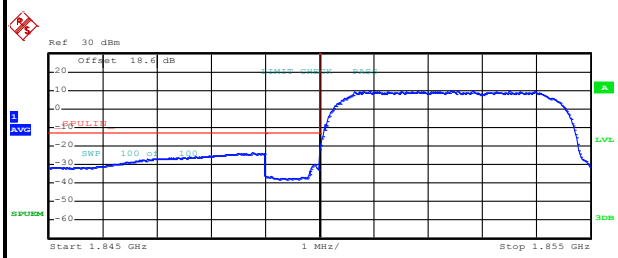
Date: 4.NOV.2015 10:38:55




| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 844.000 M | 849.000 M | 100.00 k | 845.895000 M | 5.53 | -29.47 |
| 849.000 M | 850.000 M | 50.00 k | 849.076000 M | -32.62 | -19.62 |
| 850.000 M | 855.000 M | 100.00 k | 850.090000 M | -39.62 | -26.62 |

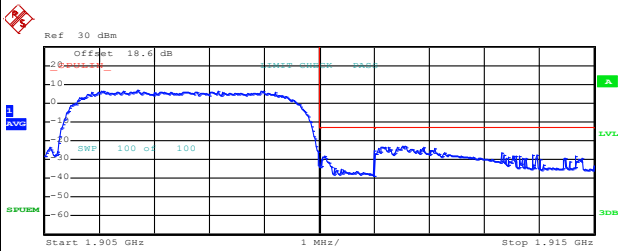
Date: 4.NOV.2015 10:41:38

| WCDMA Band II (RMC 12.2Kbps) | |
|---|---|
| **Lowest Band Edge** | **Highest Band Edge** |




| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 1.845 G | 1.849 G | 1.00 M | 1.848756 G | -23.67 | -10.67 |
| 1.849 G | 1.850 G | 50.00 k | 1.849916 G | -29.68 | -16.68 |
| 1.850 G | 1.855 G | 100.00 k | 1.850910 G | 9.93 | -25.07 |

Date: 2.DEC.2015 16:50:27



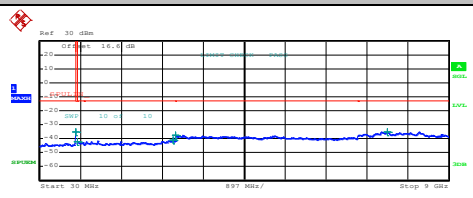

| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 1.905 G | 1.910 G | 100.00 k | 1.906690 G | 6.68 | -28.32 |
| 1.910 G | 1.911 G | 50.00 k | 1.910104 G | -28.18 | -15.18 |
| 1.911 G | 1.915 G | 1.00 M | 1.911560 G | -22.93 | -9.93 |

Date: 4.NOV.2015 10:56:15

# Conducted Spurious Emission

## WCDMA Band V (RMC 12.2Kbps)

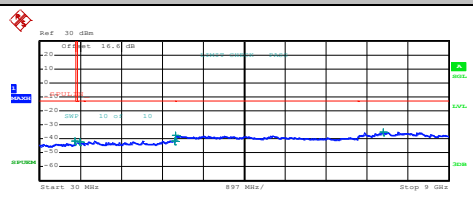
### Lowest Channel



| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 30.000 M | 820.000 M | 1.00 M | 819.802500 M | -35.09 | -22.09 |
| 855.000 M | 1.000 G | 1.00 M | 860.147500 M | -42.23 | -29.23 |
| 1.000 G | 3.000 G | 1.00 M | 2.959000 G | -41.28 | -28.28 |
| 3.000 G | 7.000 G | 1.00 M | 3.002000 G | -37.73 | -24.73 |
| 7.000 G | 9.000 G | 1.00 M | 7.649500 G | -35.23 | -22.23 |

Date: 4.NOV.2015 10:42:25

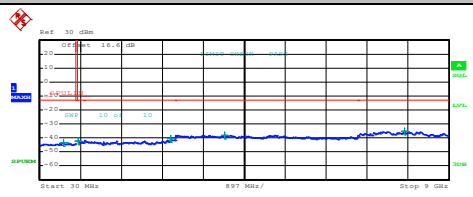
### Middle Channel



| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 30.000 M | 820.000 M | 1.00 M | 808.742500 M | -41.73 | -28.73 |
| 855.000 M | 1.000 G | 1.00 M | 901.001253 M | -41.93 | -28.93 |
| 1.000 G | 3.000 G | 1.00 M | 2.996500 G | -41.45 | -28.45 |
| 3.000 G | 7.000 G | 1.00 M | 3.004000 G | -37.75 | -24.75 |
| 7.000 G | 9.000 G | 1.00 M | 7.557500 G | -35.32 | -22.32 |

Date: 4.NOV.2015 10:42:55

### Highest Channel

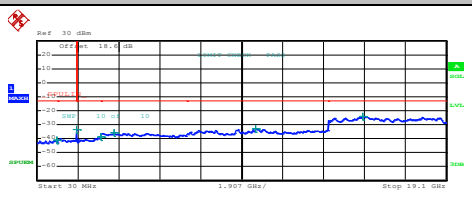


| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 30.000 M | 820.000 M | 1.00 M | 556.930000 M | -43.38 | -30.38 |
| 855.000 M | 1.000 G | 1.00 M | 877.148752 M | -42.16 | -29.16 |
| 1.000 G | 3.000 G | 1.00 M | 2.892500 G | -40.62 | -27.62 |
| 3.000 G | 7.000 G | 1.00 M | 4.090000 G | -37.84 | -24.84 |
| 7.000 G | 9.000 G | 1.00 M | 8.024000 G | -35.48 | -22.48 |

Date: 4.NOV.2015 10:43:25

## WCDMA Band II (RMC 12.2Kbps)

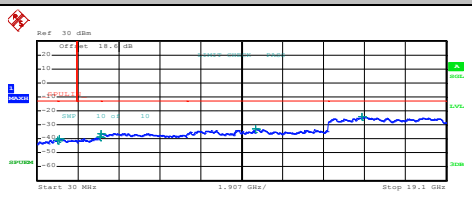
### Lowest Channel



| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 30.000 M | 1.000 G | 1.00 M | 929.675000 M | -41.20 | -28.20 |
| 1.000 G | 1.845 G | 1.00 M | 1.844578 G | -33.44 | -20.44 |
| 1.915 G | 3.000 G | 1.00 M | 2.990506 G | -38.96 | -25.96 |
| 3.000 G | 7.000 G | 1.00 M | 3.607000 G | -36.03 | -23.03 |
| 7.000 G | 13.600 G | 1.00 M | 10.219150 G | -33.08 | -20.08 |
| 13.600 G | 19.100 G | 1.00 M | 15.211500 G | -24.34 | -11.34 |

Date: 4.NOV.2015 10:57:04

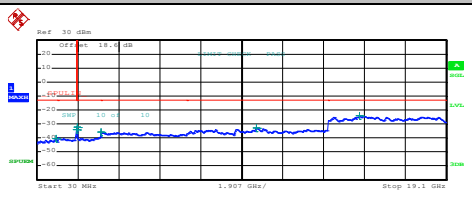
### Middle Channel



| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 30.000 M | 1.000 G | 1.00 M | 984.722500 M | -40.79 | -27.79 |
| 1.000 G | 1.845 G | 1.00 M | 1.064642 G | -40.11 | -27.11 |
| 1.915 G | 3.000 G | 1.00 M | 2.963110 G | -38.78 | -25.78 |
| 3.000 G | 7.000 G | 1.00 M | 3.002000 G | -36.13 | -23.13 |
| 7.000 G | 13.600 G | 1.00 M | 10.215850 G | -33.15 | -20.15 |
| 13.600 G | 19.100 G | 1.00 M | 15.177813 G | -24.19 | -11.19 |

Date: 4.NOV.2015 10:57:34

### Highest Channel



| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz] | PwrAbs [dBm] | ΔLimit [dB] |
|---|---|---|---|---|---|
| 30.000 M | 1.000 G | 1.00 M | 891.117500 M | -40.68 | -27.68 |
| 1.000 G | 1.845 G | 1.00 M | 1.844155 G | -34.23 | -21.23 |
| 1.915 G | 3.000 G | 1.00 M | 1.915542 G | -32.52 | -19.52 |
| 3.000 G | 7.000 G | 1.00 M | 3.016000 G | -35.90 | -22.90 |
| 7.000 G | 13.600 G | 1.00 M | 10.248025 G | -32.84 | -19.84 |
| 13.600 G | 19.100 G | 1.00 M | 15.047875 G | -24.19 | -11.19 |

Date: 4.NOV.2015 10:58:04

# Frequency Stability

| Test Conditions | Middle Channel | WCDMA Band V (RMC 12.2Kbps) | Limit 2.5ppm |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0155 | PASS |
| 40 | Normal Voltage | 0.0167 | |
| 30 | Normal Voltage | 0.0024 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0024 | |
| 0 | Normal Voltage | 0.0108 | |
| -10 | Normal Voltage | 0.0012 | |
| -20 | Normal Voltage | 0.0012 | |
| -30 | Normal Voltage | 0.0143 | |
| 20 | Maximum Voltage | 0.0120 | |
| 20 | Normal Voltage | 0.0036 | |
| 20 | Battery End Point | 0.0132 | |

**Note:**

1. Normal Voltage = 3.8V. ；Battery End Point (BEP) = 3.4 V.；Maximum Voltage =4.35 V
2. The frequency fundamental emissions stay within the authorized frequency block.

| Test Conditions | Middle Channel | WCDMA Band II (RMC 12.2Kbps) | Limit Note 2. |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0005 | PASS |
| 40 | Normal Voltage | 0.0011 | |
| 30 | Normal Voltage | 0.0016 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0005 | |
| 0 | Normal Voltage | 0.0005 | |
| -10 | Normal Voltage | 0.0021 | |
| -20 | Normal Voltage | 0.0016 | |
| -30 | Normal Voltage | 0.0011 | |
| 20 | Maximum Voltage | 0.0005 | |
| 20 | Normal Voltage | 0.0096 | |
| 20 | Battery End Point | 0.0122 | |

**Note:**

**1.** Normal Voltage = 3.8V. ；Battery End Point (BEP) = 3.4 V.；Maximum Voltage =4.35 V

**2.** The frequency fundamental emissions stay within the authorized frequency block.