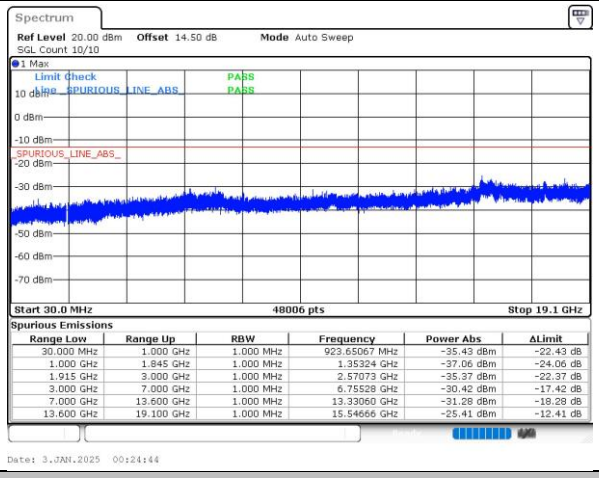
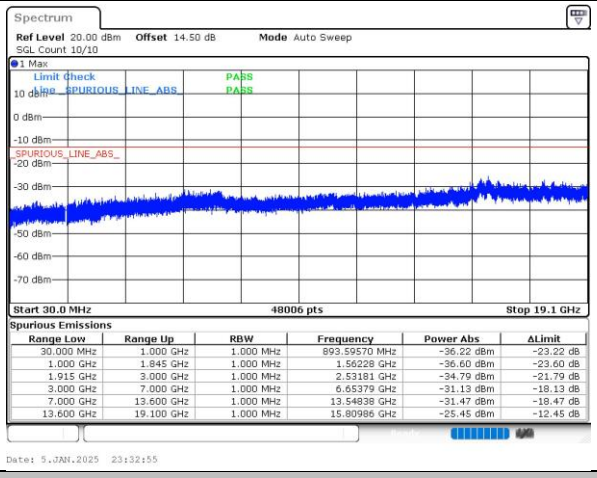
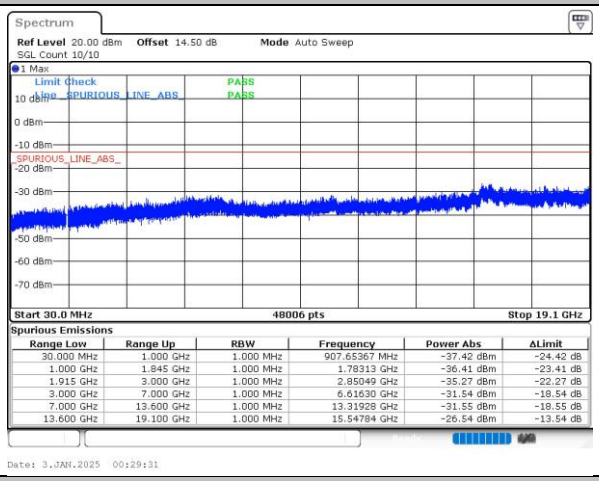
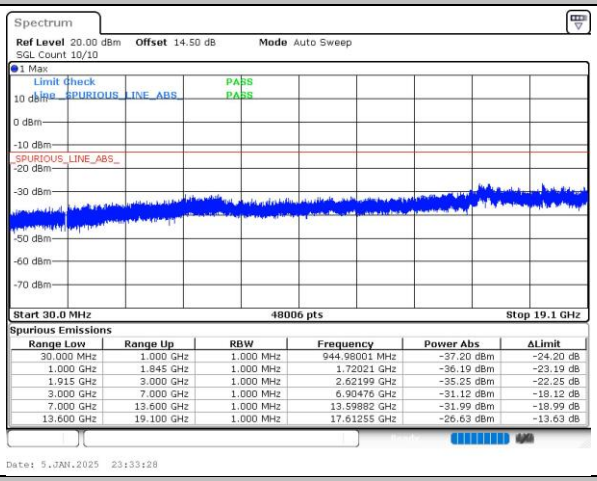
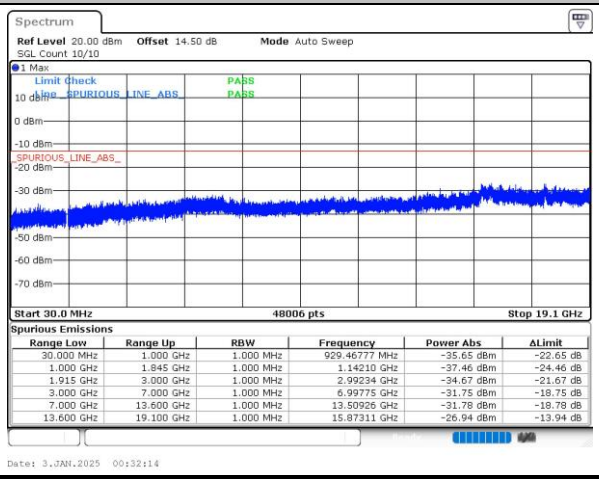
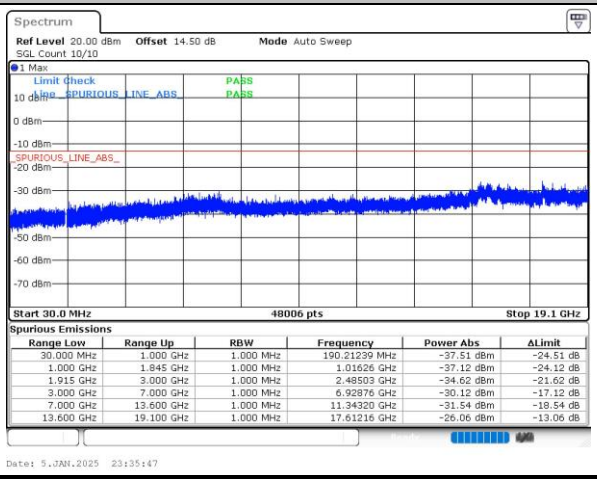
| GSM1900 (GSM) | GSM1900 (EDGE class 8) |
|---|---|
| **Lowest Channel** | **Lowest Channel** |
|  |  |
| **Middle Channel** | **Middle Channel** |
|  |  |
| **Highest Channel** | **Highest Channel** |
|  |  |

# Frequency Stability

| Test Conditions | Middle Channel | GSM850 (GSM) | GSM850 (EDGE class 8) | Limit 2.5ppm |
|---|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | | Result |
| 50 | Normal Voltage | 0.0007 | 0.0001 | PASS |
| 40 | Normal Voltage | 0.0012 | 0.0004 | |
| 30 | Normal Voltage | 0.0023 | 0.0009 | |
| 20(Ref.) | Normal Voltage | 0.0000 | 0.0000 | |
| 10 | Normal Voltage | 0.0008 | 0.0007 | |
| 0 | Normal Voltage | 0.0020 | 0.0000 | |
| -10 | Normal Voltage | 0.0016 | 0.0005 | |
| -20 | Normal Voltage | 0.0018 | 0.0004 | |
| -30 | Normal Voltage | 0.0004 | 0.0006 | |
| 20 | Maximum Voltage | 0.0008 | 0.0005 | |
| 20 | Normal Voltage | 0.0000 | 0.0000 | |
| 20 | Battery End Point | 0.0010 | 0.0002 | |

| Test Conditions | Middle Channel | GSM1900 (GSM) | GSM1900 (EDGE class 8) | Limit Note 2. |
|---|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | | Result |
| 50 | Normal Voltage | 0.0001 | 0.0007 | PASS |
| 40 | Normal Voltage | 0.0004 | 0.0004 | |
| 30 | Normal Voltage | 0.0009 | 0.0003 | |
| 20(Ref.) | Normal Voltage | 0.0000 | 0.0000 | |
| 10 | Normal Voltage | 0.0007 | 0.0009 | |
| 0 | Normal Voltage | 0.0000 | 0.0006 | |
| -10 | Normal Voltage | 0.0005 | 0.0013 | |
| -20 | Normal Voltage | 0.0004 | 0.0003 | |
| -30 | Normal Voltage | 0.0006 | 0.0010 | |
| 20 | Maximum Voltage | 0.0005 | 0.0005 | |
| 20 | Normal Voltage | 0.0000 | 0.0000 | |
| 20 | Battery End Point | 0.0002 | 0.0002 | |

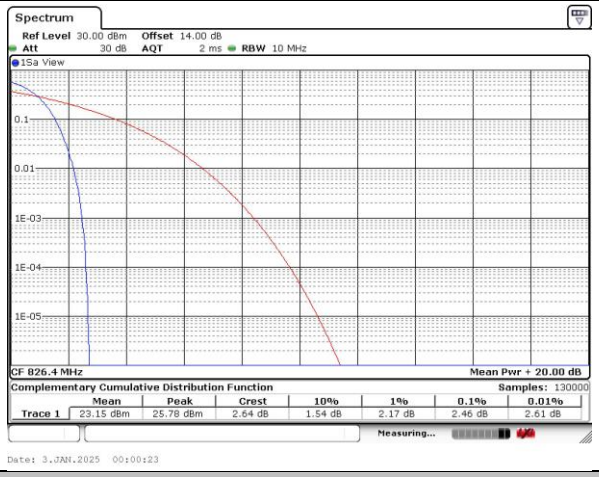
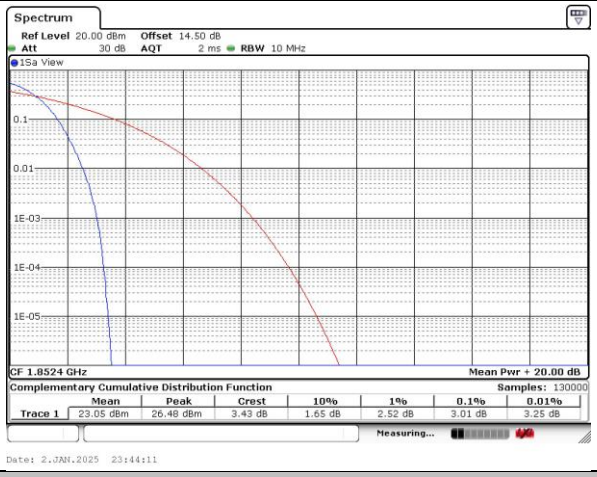
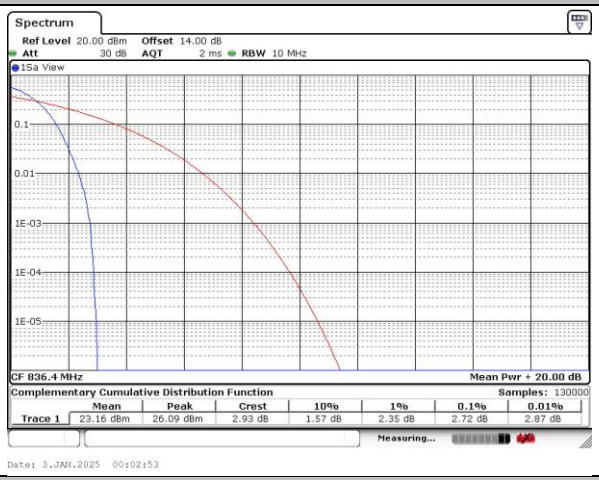
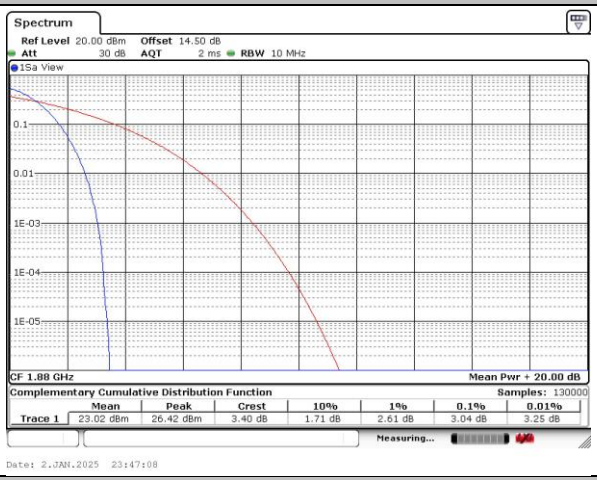
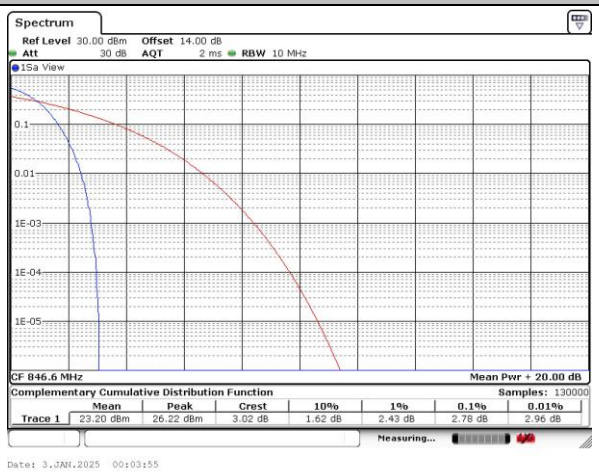
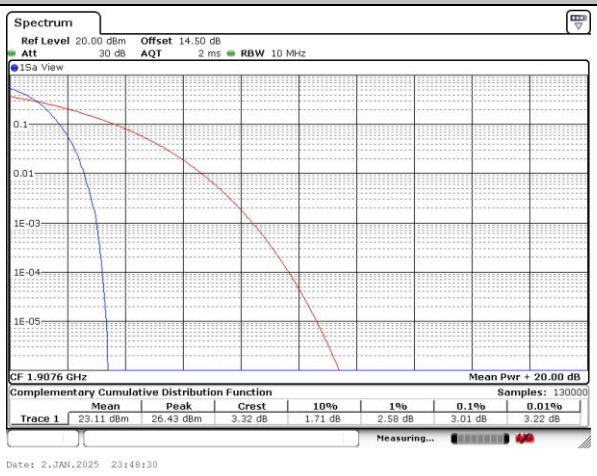
**Note:**

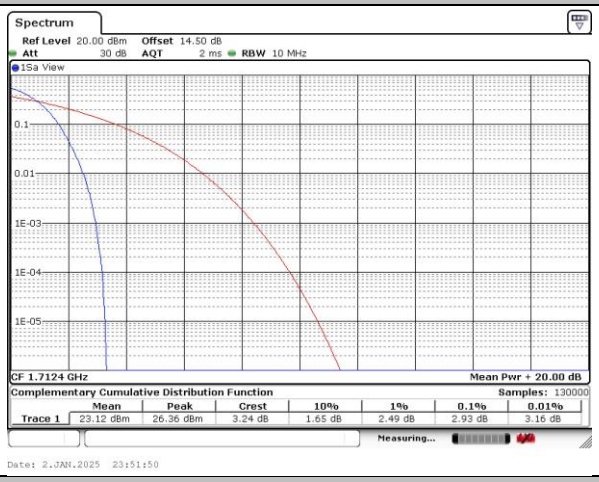
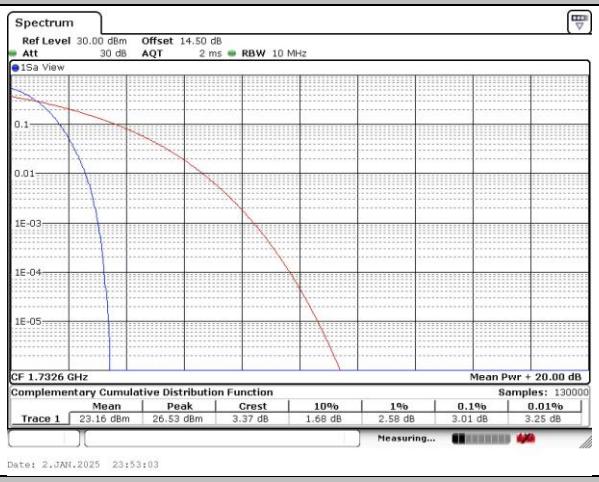
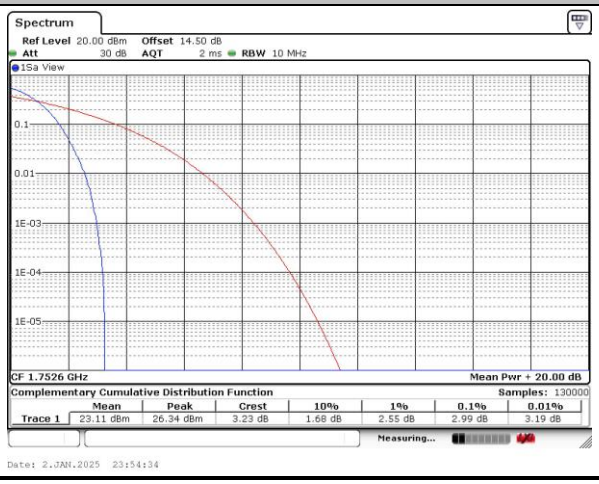
1. Normal Voltage = 3.91V ; Minimum Voltage = 3.6 V ; Maximum Voltage =4.5 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

# A2. WCDMA

## Peak-to-Average Ratio

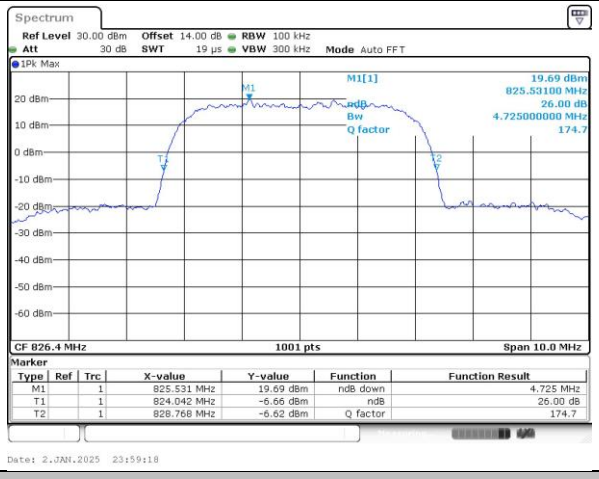
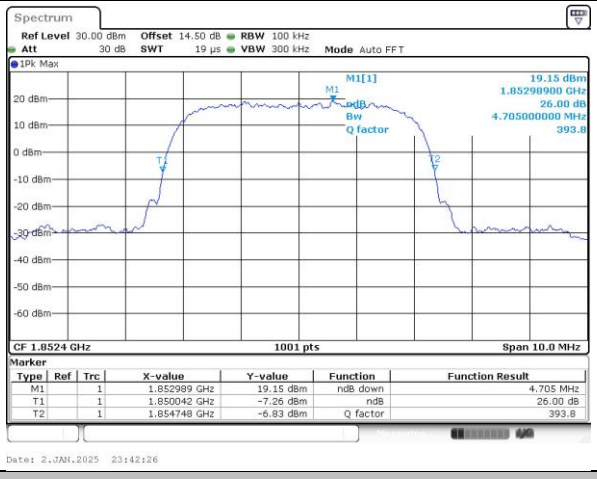
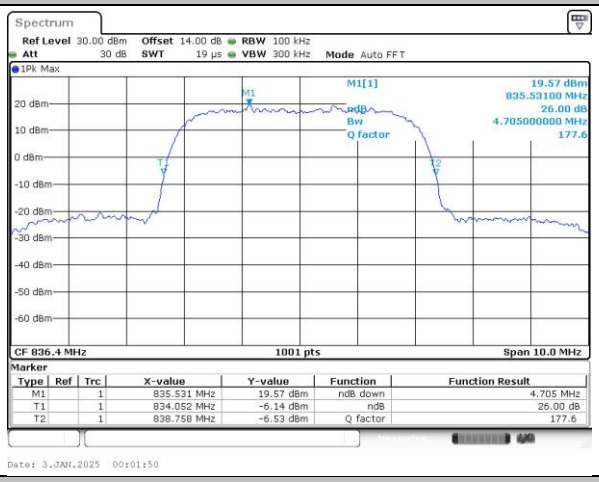
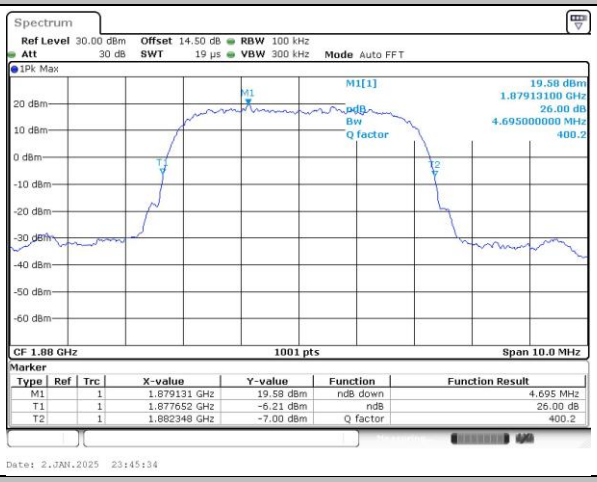
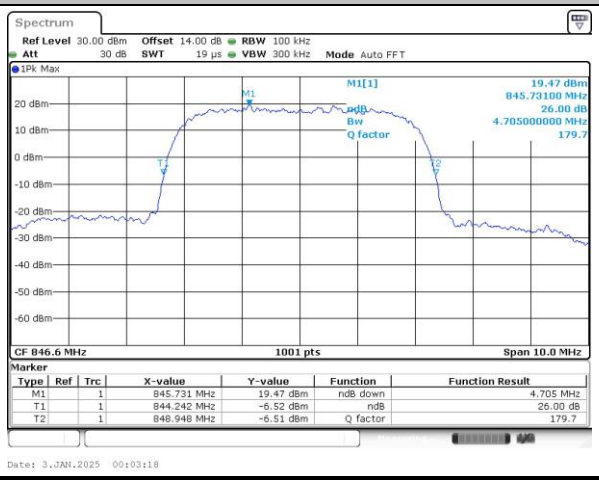
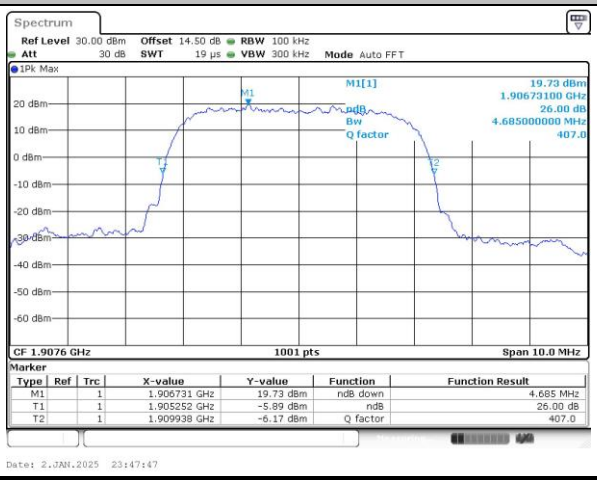
| Mode | WCDMA Band V(dB) | WCDMA Band II(dB) | WCDMA Band IV(dB) | Limit: 13dB |
|---|---|---|---|---|
| Mod. | RMC 12.2Kbps | RMC 12.2Kbps | RMC 12.2Kbps | Result |
| Lowest CH | 2.46 | 3.01 | 2.93 | PASS |
| Middle CH | 2.72 | 3.04 | 3.01 | |
| Highest CH | 2.78 | 3.01 | 2.99 | |

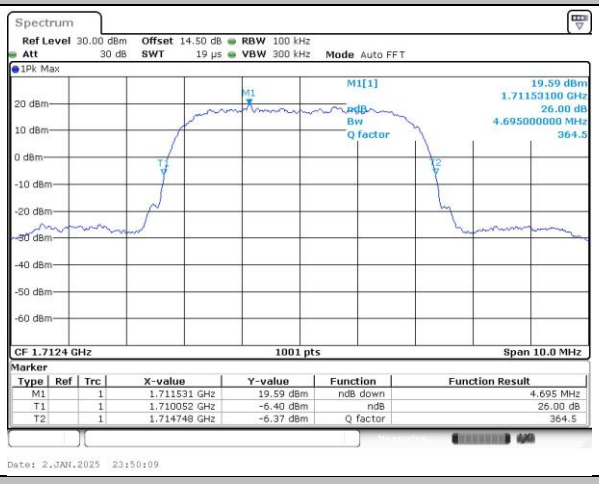
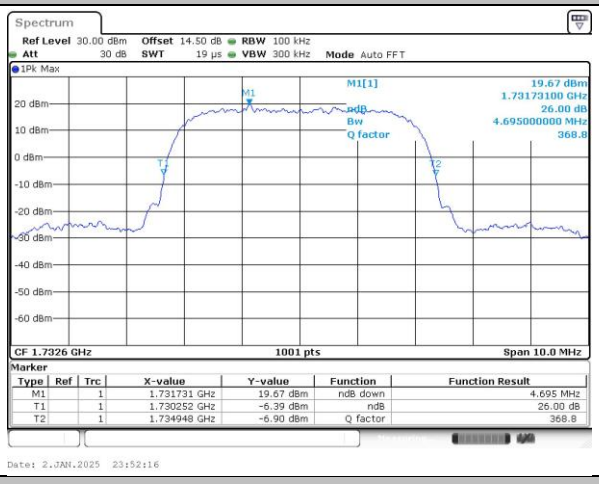
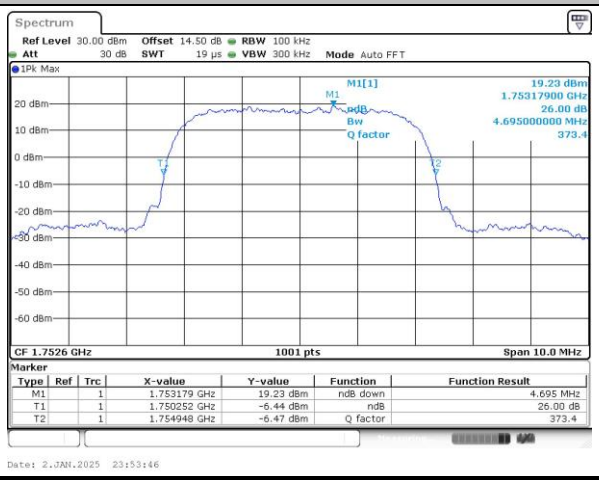
| WCDMA Band V (RMC 12.2Kbps) | WCDMA Band II (RMC 12.2Kbps) |
|---|---|
| **Lowest Channel** | **Lowest Channel** |
|  |  |
| **Middle Channel** | **Middle Channel** |
|  |  |
| **Highest Channel** | **Highest Channel** |
|  |  |

| WCDMA Band IV (RMC 12.2Kbps) | |
|---|---|
| **Lowest Channel** | |
|  | |
| **Middle Channel** | |
|  | |
| **Highest Channel** | |
|  | |

# 26dB Bandwidth

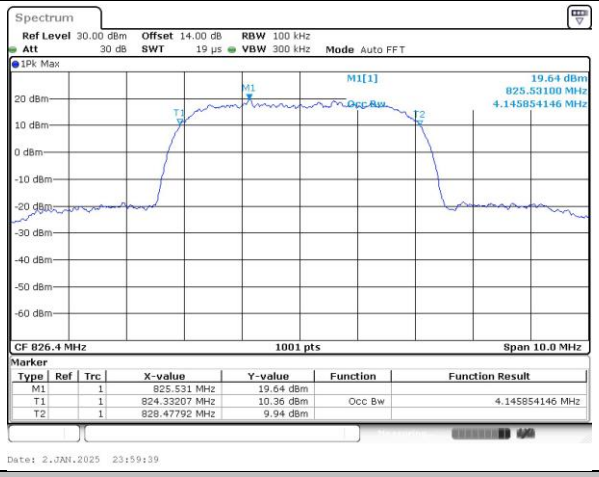
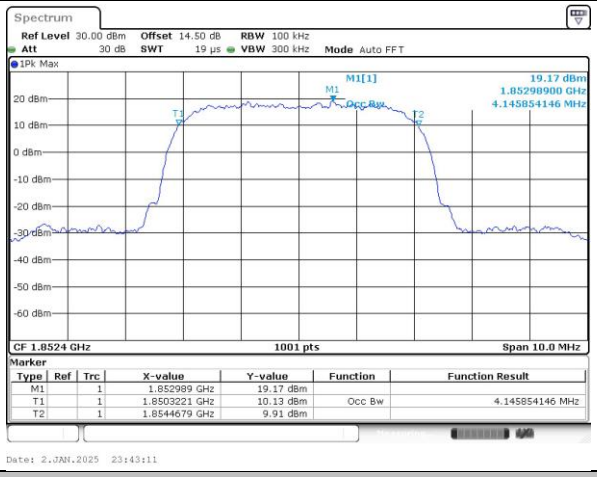
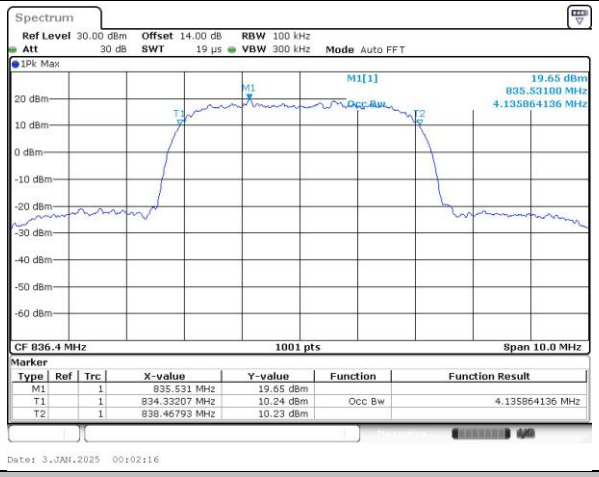
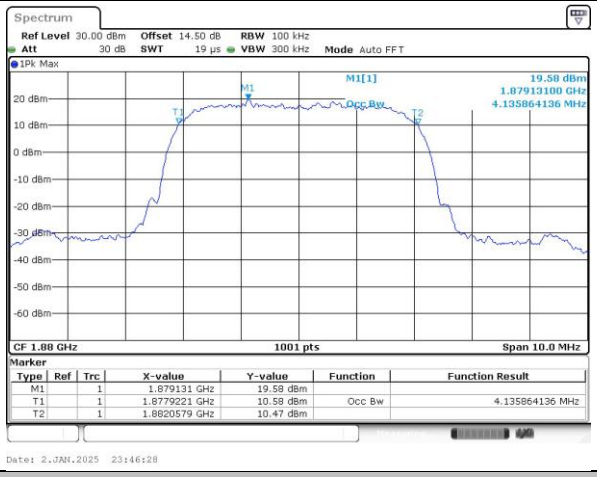
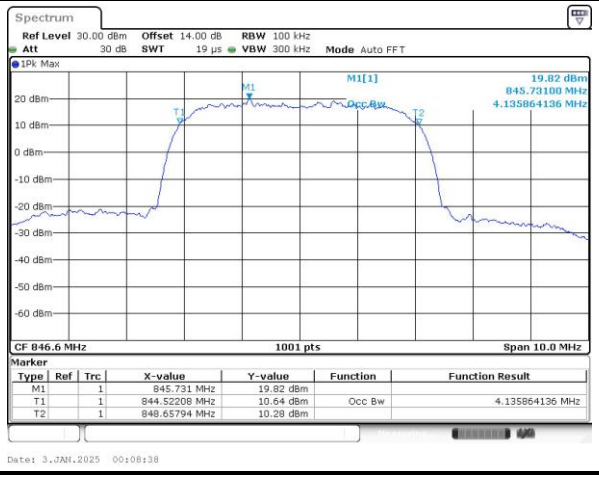
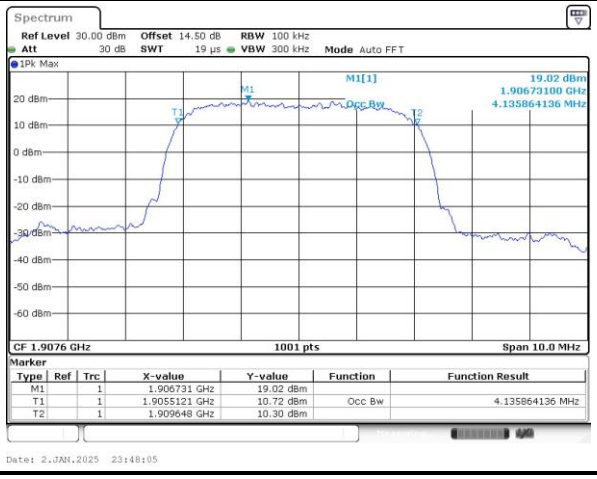
| Mode | WCDMA Band V(MHz) | WCDMA Band II(MHz) | WCDMA Band IV(MHz) |
|---|---|---|---|
| Mod. | RMC 12.2Kbps | RMC 12.2Kbps | RMC 12.2Kbps |
| Lowest CH | 4.73 | 4.71 | 4.70 |
| Middle CH | 4.71 | 4.70 | 4.70 |
| Highest CH | 4.71 | 4.69 | 4.70 |

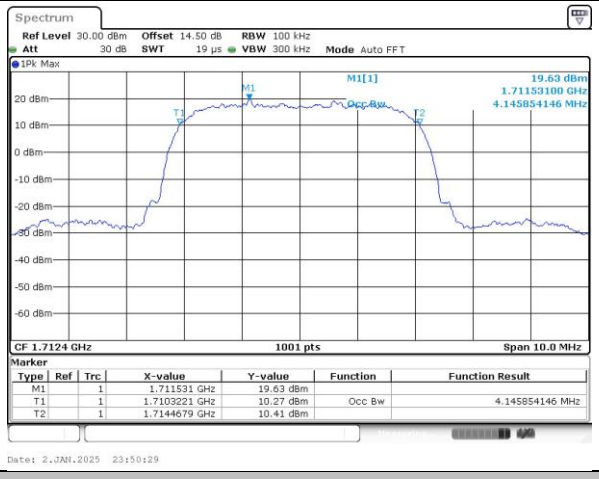
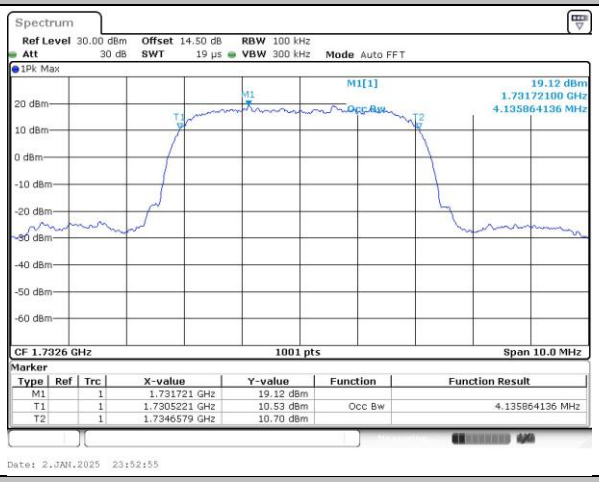
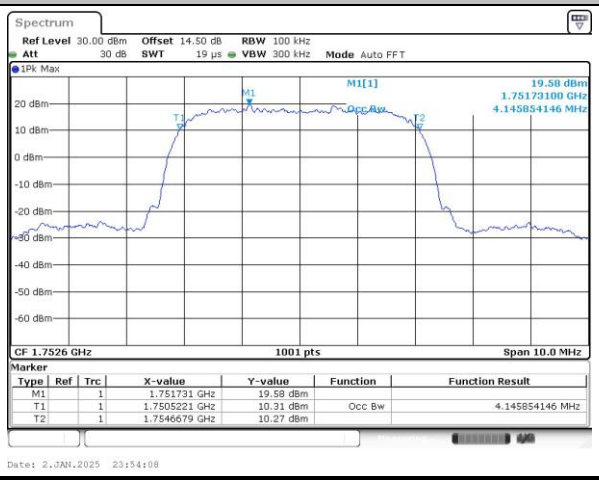
| WCDMA Band V (RMC 12.2Kbps) | WCDMA Band II (RMC 12.2Kbps) |
|---|---|
| **Lowest Channel** | **Lowest Channel** |
|  |  |
| **Middle Channel** | **Middle Channel** |
|  |  |
| **Highest Channel** | **Highest Channel** |
|  |  |

| WCDMA Band IV (RMC 12.2Kbps) | |
|---|---|
| **Lowest Channel** | |
|  | |
| **Middle Channel** | |
|  | |
| **Highest Channel** | |
|  | |

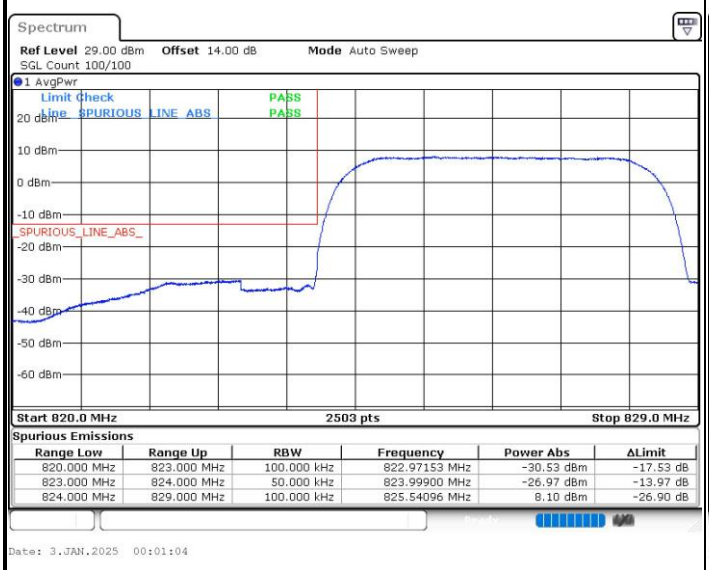
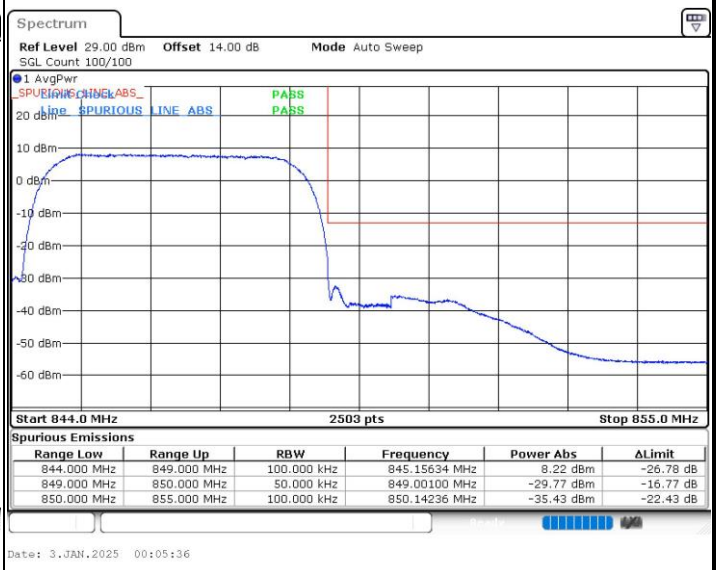
# Occupied Bandwidth

| Mode | WCDMA Band V(MHz) | WCDMA Band II(MHz) | WCDMA Band IV(MHz) |
|---|---|---|---|
| Mod. | RMC 12.2Kbps | RMC 12.2Kbps | RMC 12.2Kbps |
| Lowest CH | 4.15 | 4.15 | 4.15 |
| Middle CH | 4.14 | 4.14 | 4.14 |
| Highest CH | 4.14 | 4.14 | 4.15 |

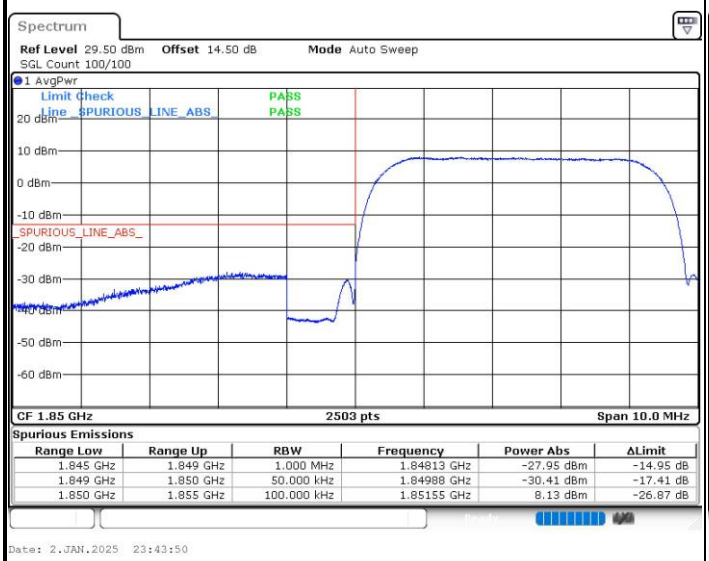
| WCDMA Band V (RMC 12.2Kbps) | WCDMA Band II (RMC 12.2Kbps) |
|---|---|
| **Lowest Channel** | **Lowest Channel** |
|  |  |
| **Middle Channel** | **Middle Channel** |
|  |  |
| **Highest Channel** | **Highest Channel** |
|  |  |

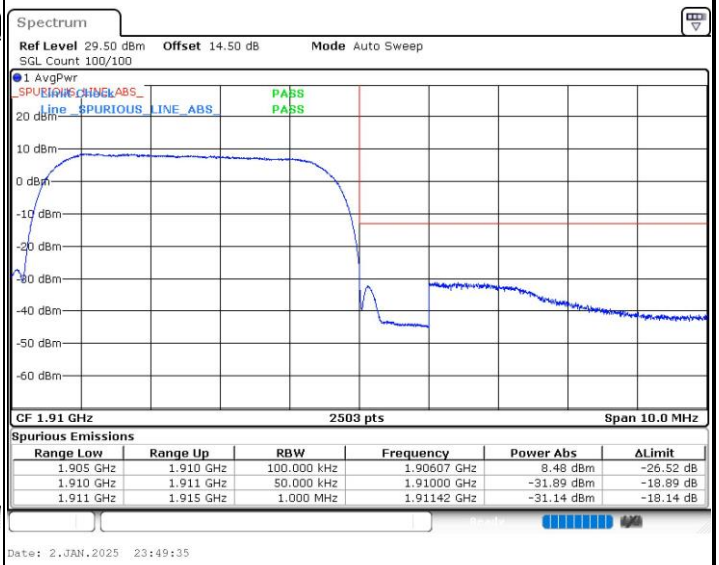
| WCDMA Band IV (RMC 12.2Kbps) | |
|---|---|
| **Lowest Channel** | |
|  | |
| **Middle Channel** | |
|  | |
| **Highest Channel** | |
|  | |

# Conducted Band Edge

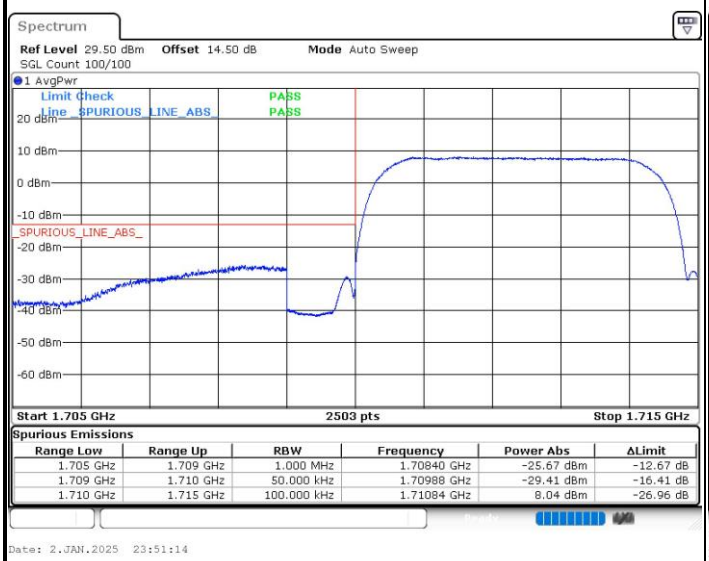
| WCDMA Band V (RMC 12.2Kbps) | |
|---|---|
| **Lowest Band Edge** | **Highest Band Edge** |
|  |  |

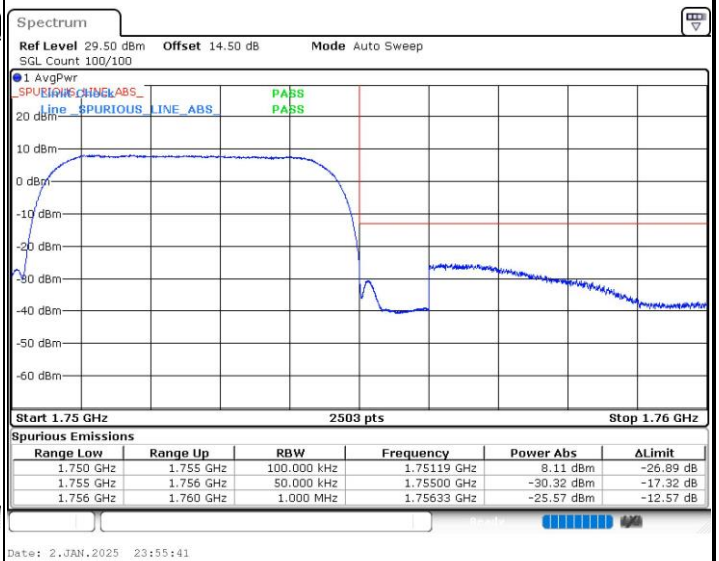
| WCDMA Band II (RMC 12.2Kbps) | |
|---|---|
| **Lowest Band Edge** | **Highest Band Edge** |



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

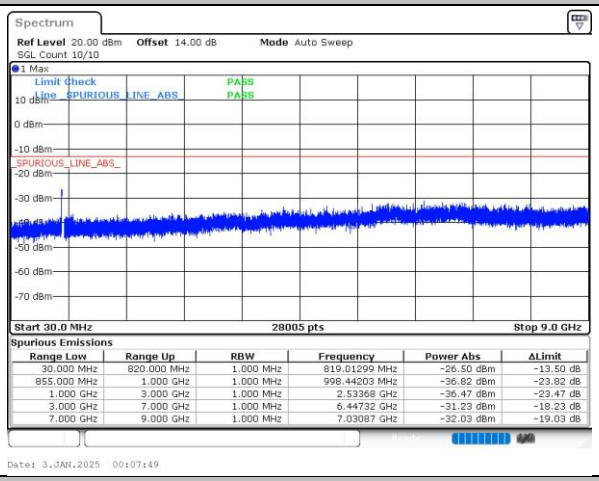


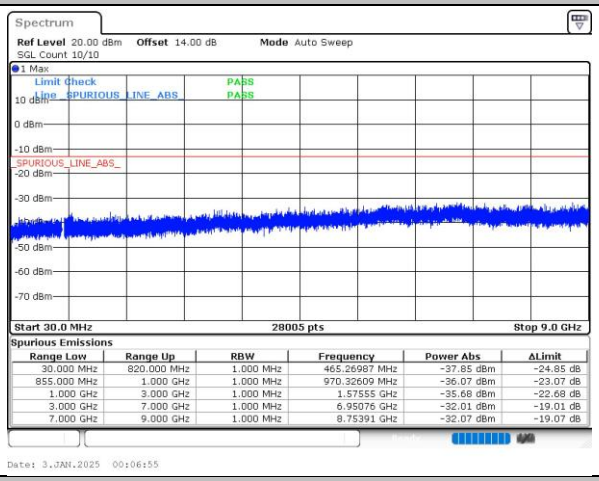
# Conducted Spurious Emission

## WCDMA Band V (RMC 12.2Kbps)

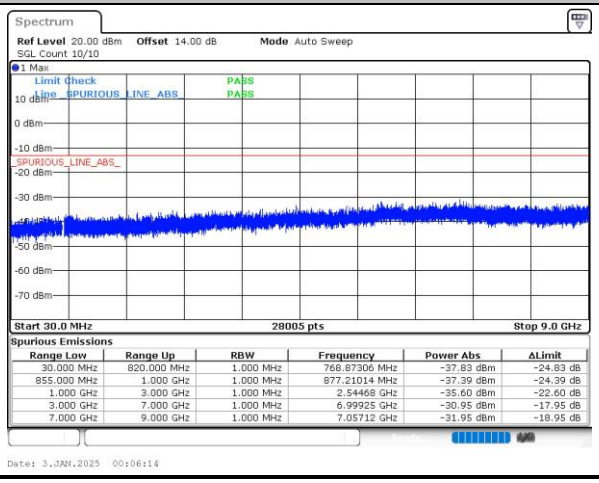
### Lowest Channel




### Middle Channel

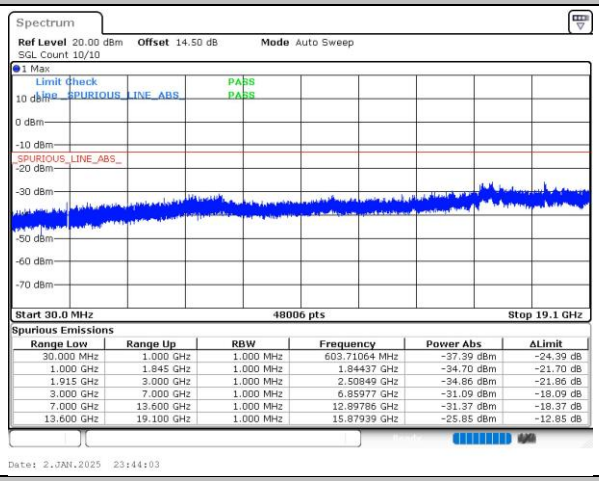



### Highest Channel

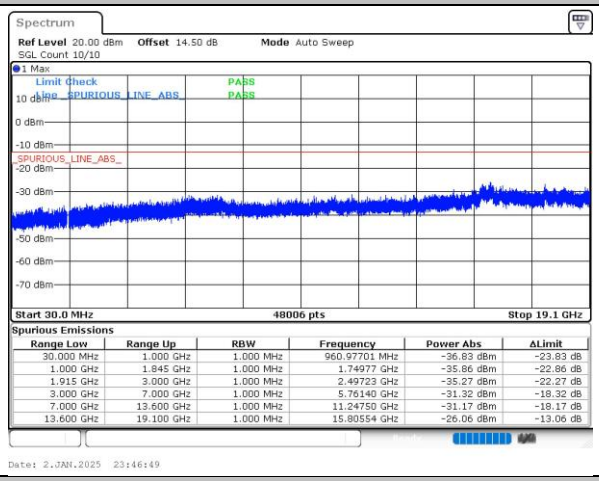



## WCDMA Band II (RMC 12.2Kbps)

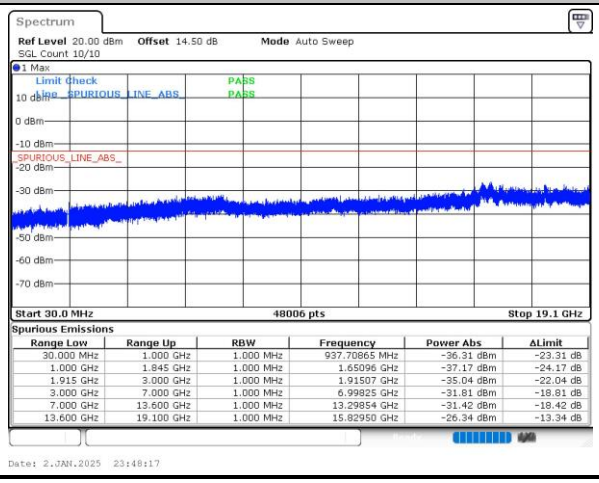
### Lowest Channel

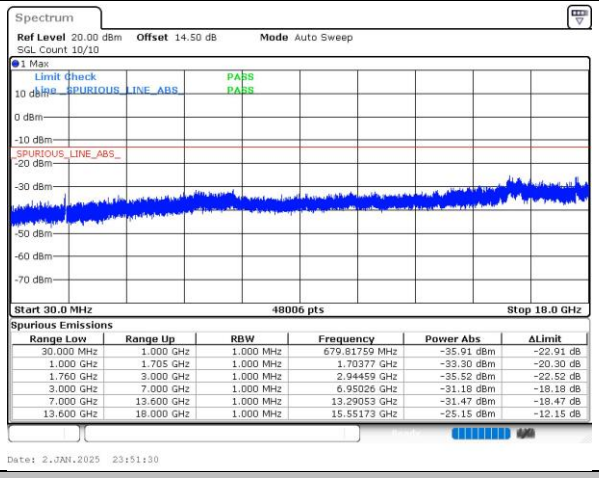
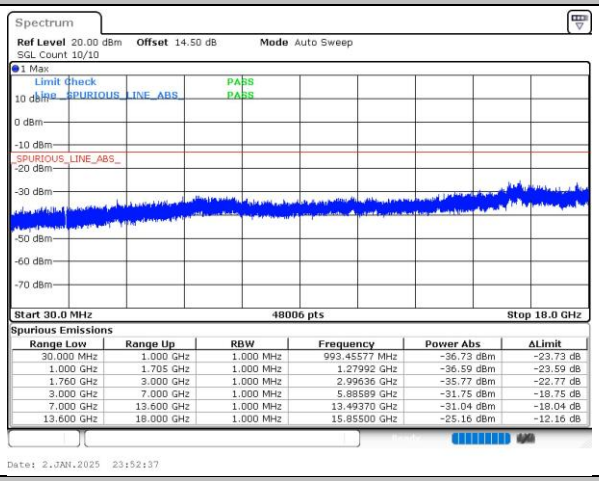
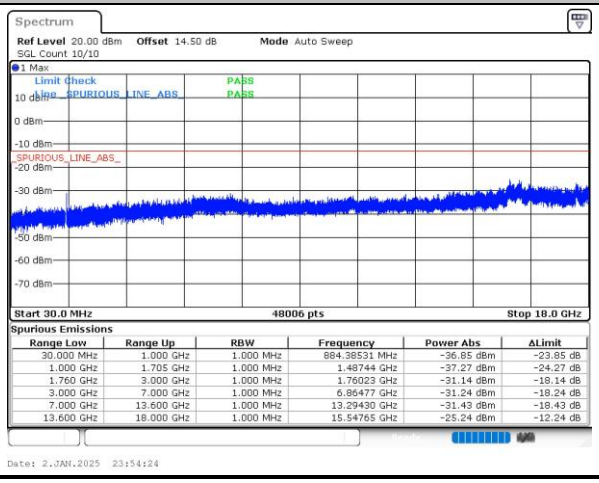



### Middle Channel




### Highest Channel



| WCDMA Band IV (RMC 12.2Kbps) | |
|---|---|
| **Lowest Channel** | |
|  | |
| **Middle Channel** | |
|  | |
| **Highest Channel** | |
|  | |

# 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 | 0.0013 | PASS |
| 40 | Normal Voltage | 0.0006 | |
| 30 | Normal Voltage | 0.0023 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0005 | |
| 0 | Normal Voltage | 0.0009 | |
| -10 | Normal Voltage | 0.0017 | |
| -20 | Normal Voltage | 0.0019 | |
| -30 | Normal Voltage | 0.0021 | |
| 20 | Maximum Voltage | 0.0011 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0004 | |

| Test Conditions | Middle Channel | WCDMA Band II (RMC 12.2Kbps) | Limit Note 2. |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0008 | PASS |
| 40 | Normal Voltage | 0.0004 | |
| 30 | Normal Voltage | 0.0013 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0004 | |
| 0 | Normal Voltage | 0.0006 | |
| -10 | Normal Voltage | 0.0010 | |
| -20 | Normal Voltage | 0.0011 | |
| -30 | Normal Voltage | 0.0012 | |
| 20 | Maximum Voltage | 0.0007 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0003 | |

| Test Conditions | Middle Channel | WCDMA Band IV (RMC 12.2Kbps) | Limit Note 2. |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0007 | PASS |
| 40 | Normal Voltage | 0.0004 | |
| 30 | Normal Voltage | 0.0012 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0004 | |
| 0 | Normal Voltage | 0.0005 | |
| -10 | Normal Voltage | 0.0009 | |
| -20 | Normal Voltage | 0.0010 | |
| -30 | Normal Voltage | 0.0011 | |
| 20 | Maximum Voltage | 0.0006 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0003 | |

**Note:**

**1.** Normal Voltage = 3.91V；Minimum Voltage = 3.6 V；Maximum Voltage =4.5 V

**2.** The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

# Appendix B. Test Results of Radiated Test

## Radiated Spurious Emission

| Test Engineer : | Kuang Jia | Temperature : | 22~25℃ |
|---|---|---|---|
| | | Relative Humidity : | 48~52% |

Note: Pre-scanned harmonic for the different antennas, we choose the worst antenna mode to perform final test and record in the report.

| GSM850 (GSM)_ANT0 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 1672.8 | -61.87 | -13 | -48.87 | -73.55 | -65.12 | 4.00 | 9.40 | H |
| | 2509.2 | -57.17 | -13 | -44.17 | -76.17 | -60.74 | 4.88 | 10.60 | H |
| | 3345.6 | -56.30 | -13 | -43.30 | -77.27 | -61.23 | 5.52 | 12.60 | H |
| | 1672.8 | -55.96 | -13 | -42.96 | -68.35 | -59.21 | 4.00 | 9.40 | V |
| | 2509.2 | -57.38 | -13 | -44.38 | -76.59 | -60.95 | 4.88 | 10.60 | V |
| | 3345.6 | -56.24 | -13 | -43.24 | -77.51 | -61.17 | 5.52 | 12.60 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

| GSM850 (EDGE 1 Tx slots) _ANT0 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 1672.8 | -62.92 | -13 | -49.92 | -74.60 | -66.17 | 4.00 | 9.40 | H |
| | 2509.2 | -58.36 | -13 | -45.36 | -77.36 | -61.93 | 4.88 | 10.60 | H |
| | 3345.6 | -58.01 | -13 | -45.01 | -78.98 | -62.94 | 5.52 | 12.60 | H |
| | 1672.8 | -57.59 | -13 | -44.59 | -69.98 | -60.84 | 4.00 | 9.40 | V |
| | 2509.2 | -57.07 | -13 | -44.07 | -76.28 | -60.64 | 4.88 | 10.60 | V |
| | 3345.6 | -57.48 | -13 | -44.48 | -78.75 | -62.41 | 5.52 | 12.60 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

| GSM1900 (GSM) _ANT2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 3760 | -57.79 | -13 | -44.79 | -80.08 | -64.54 | 5.85 | 12.60 | H |
| | 5640 | -57.64 | -13 | -44.64 | -81.60 | -63.44 | 7.30 | 13.10 | H |
| | 7520 | -55.64 | -13 | -42.64 | -82.13 | -58.79 | 8.35 | 11.50 | H |
| | 3760 | -55.57 | -13 | -42.57 | -81.02 | -62.32 | 5.85 | 12.60 | V |
| | 5640 | -57.27 | -13 | -44.27 | -81.38 | -63.07 | 7.30 | 13.10 | V |
| | 7520 | -55.59 | -13 | -42.59 | -82.06 | -58.74 | 8.35 | 11.50 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

| GSM1900 (EDGE 1 Tx slots) _ANT2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 3760 | -57.87 | -13 | -44.87 | -80.16 | -64.62 | 5.85 | 12.60 | H |
| | 5640 | -57.59 | -13 | -44.59 | -81.55 | -63.39 | 7.30 | 13.10 | H |
| | 7520 | -54.95 | -13 | -41.95 | -81.44 | -58.10 | 8.35 | 11.50 | H |
| | 3760 | -55.62 | -13 | -42.62 | -81.07 | -62.37 | 5.85 | 12.60 | V |
| | 5640 | -57.38 | -13 | -44.38 | -81.49 | -63.18 | 7.30 | 13.10 | V |
| | 7520 | -55.40 | -13 | -42.40 | -81.87 | -58.55 | 8.35 | 11.50 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

| WCDMA Band V(RMC 12.2Kbps) _ANT0 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 1672.8 | -67.14 | -13 | -54.14 | -78.82 | -70.39 | 4.00 | 9.40 | H |
| | 2509.2 | -61.19 | -13 | -48.19 | -80.19 | -64.76 | 4.88 | 10.60 | H |
| | 3345.6 | -60.76 | -13 | -47.76 | -81.73 | -65.69 | 5.52 | 12.60 | H |
| | 1672.8 | -65.88 | -13 | -52.88 | -78.27 | -69.13 | 4.00 | 9.40 | V |
| | 2509.2 | -61.21 | -13 | -48.21 | -80.42 | -64.78 | 4.88 | 10.60 | V |
| | 3345.6 | -60.17 | -13 | -47.17 | -81.44 | -65.10 | 5.52 | 12.60 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

| WCDMA Band II(RMC 12.2Kbps) _ANT2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 3760 | -57.86 | -13 | -44.86 | -80.15 | -64.61 | 5.85 | 12.60 | H |
| | 5640 | -57.59 | -13 | -44.59 | -81.55 | -63.39 | 7.30 | 13.10 | H |
| | 7520 | -54.91 | -13 | -41.91 | -81.40 | -58.06 | 8.35 | 11.50 | H |
| | 3760 | -55.47 | -13 | -42.47 | -80.92 | -62.22 | 5.85 | 12.60 | V |
| | 5640 | -57.42 | -13 | -44.42 | -81.53 | -63.22 | 7.30 | 13.10 | V |
| | 7520 | -55.49 | -13 | -42.49 | -81.96 | -58.64 | 8.35 | 11.50 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

| WCDMA Band IV(RMC 12.2Kbps) _ANT2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 3465.2 | -59.82 | -13 | -46.82 | -81.67 | -66.67 | 5.65 | 12.50 | H |
| | 5197.8 | -57.70 | -13 | -44.70 | -81.76 | -63.37 | 7.13 | 12.80 | H |
| | 6930.4 | -56.68 | -13 | -43.68 | -82.30 | -60.08 | 8.40 | 11.80 | H |
| | 3465.2 | -59.51 | -13 | -46.51 | -81.16 | -66.36 | 5.65 | 12.50 | V |
| | 5197.8 | -57.55 | -13 | -44.55 | -81.88 | -63.22 | 7.13 | 12.80 | V |
| | 6930.4 | -55.61 | -13 | -42.61 | -82.15 | -59.01 | 8.40 | 11.80 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.