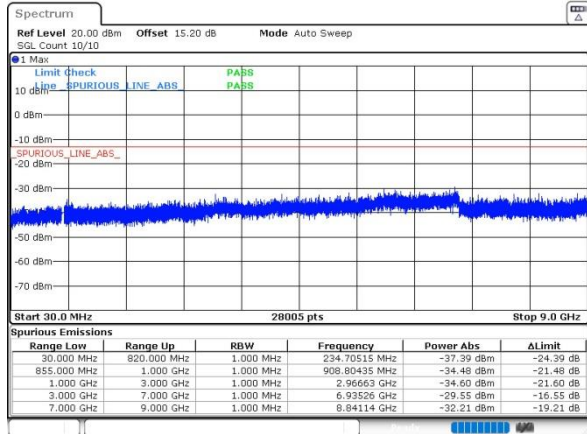




## Conducted Spurious Emission

### GSM850 (GSM)

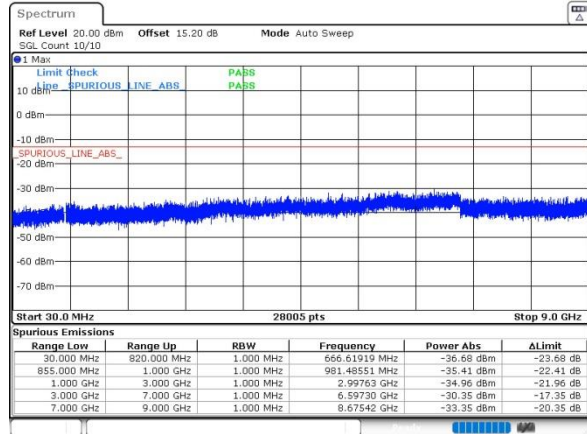
#### Lowest Channel



Date: 26.JUL.2024 07:17:35

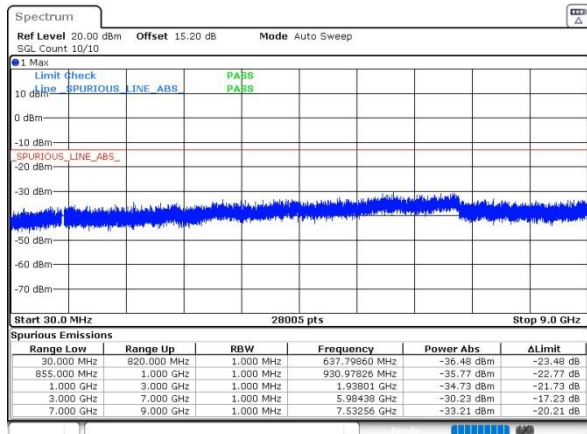
### GSM850 (EDGE class 8)

#### Lowest Channel



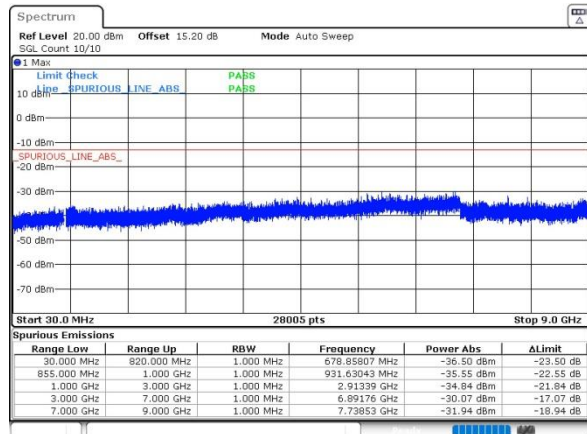
Date: 26.JUL.2024 07:27:57

### Middle Channel



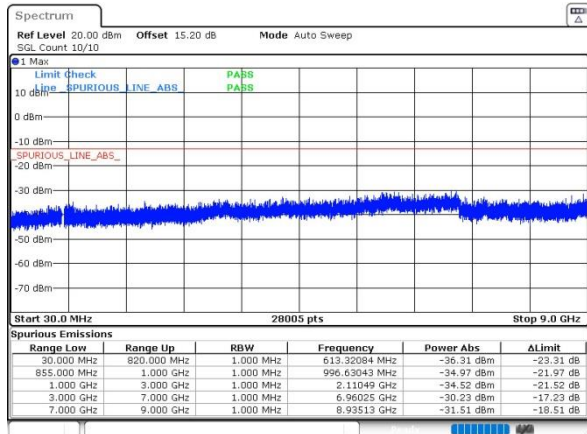
Date: 26.JUL.2024 07:17:44

### Middle Channel



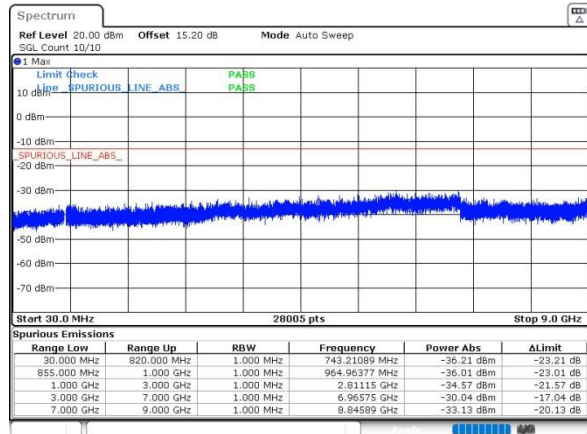
Date: 26.JUL.2024 07:28:06

### Highest Channel



Date: 26.JUL.2024 07:17:53

### Highest Channel

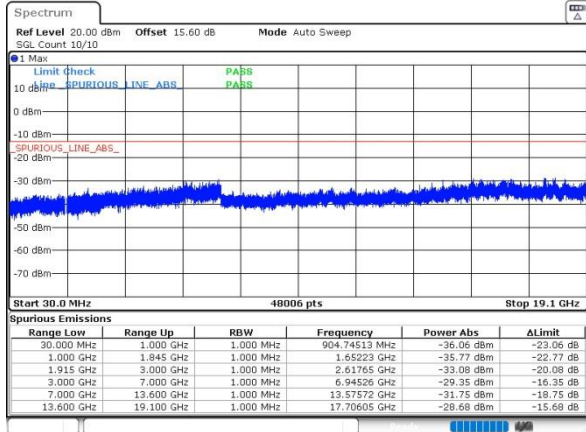


Date: 26.JUL.2024 07:28:19



## GSM1900 (GSM)

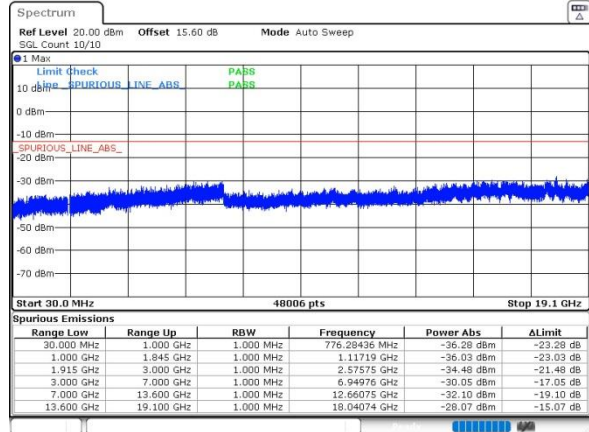
## Lowest Channel



Date: 28.JUL.2024 06:48:21

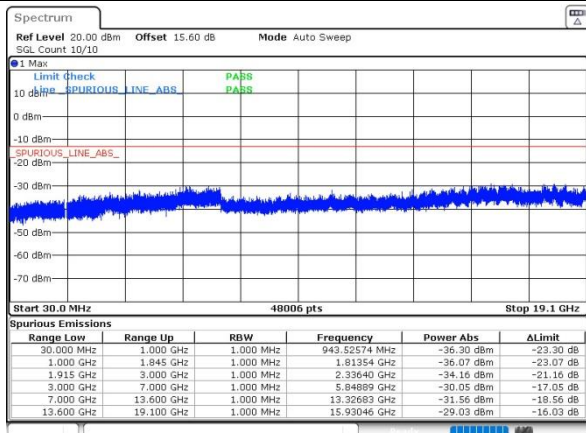
## GSM1900 (EDGE class 8)

## Lowest Channel



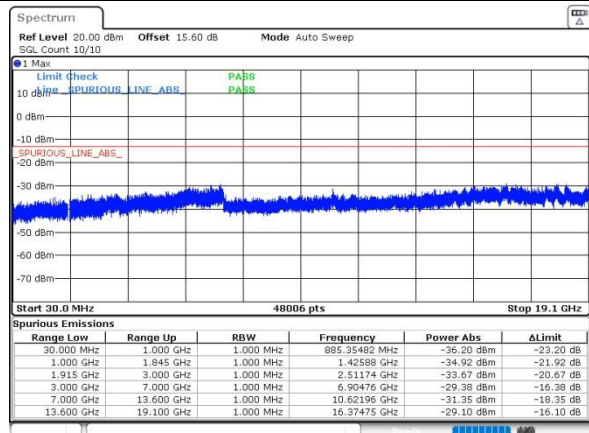
Date: 28.JUL.2024 06:58:51

## Middle Channel



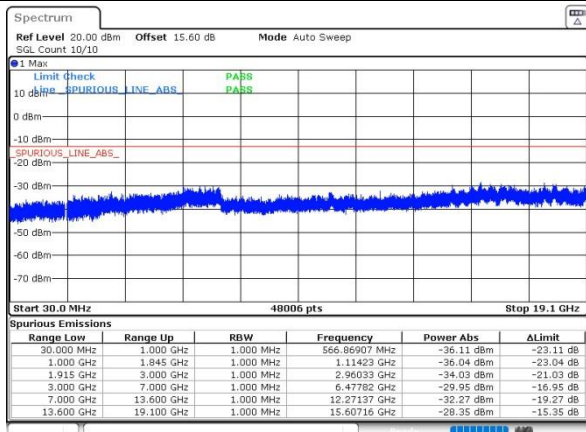
Date: 28.JUL.2024 06:48:31

## Middle Channel



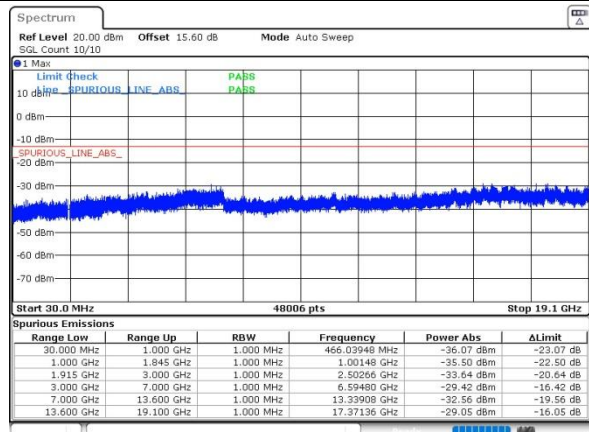
Date: 28.JUL.2024 06:59:01

## Highest Channel



Date: 28.JUL.2024 06:48:40

## Highest Channel



Date: 28.JUL.2024 06:59:10

**Frequency Stability**

| Test Conditions  | Middle Channel    | GSM850<br>(GSM) | GSM850<br>(EDGE class 8) | Limit<br>2.5ppm |
|------------------|-------------------|-----------------|--------------------------|-----------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm) |                          | Result          |
| 50               | Normal Voltage    | 0.0042          | 0.0058                   | PASS            |
| 40               | Normal Voltage    | 0.0517          | 0.0147                   |                 |
| 30               | Normal Voltage    | 0.0099          | 0.0562                   |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000          | 0.0000                   |                 |
| 10               | Normal Voltage    | 0.0563          | 0.0428                   |                 |
| 0                | Normal Voltage    | 0.0182          | 0.0536                   |                 |
| -10              | Normal Voltage    | 0.0059          | 0.0447                   |                 |
| -20              | Normal Voltage    | 0.0139          | 0.0144                   |                 |
| -30              | Normal Voltage    | 0.0174          | 0.0458                   |                 |
| 20               | Maximum Voltage   | 0.0455          | 0.0556                   |                 |
| 20               | Normal Voltage    | 0.0169          | 0.0139                   |                 |
| 20               | Battery End Point | 0.0328          | 0.0238                   |                 |



| Test Conditions  | Middle Channel    | GSM1900<br>(GSM) | GSM1900<br>(EDGE class 8) | Limit<br>Note 2. |
|------------------|-------------------|------------------|---------------------------|------------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)  |                           | Result           |
| 50               | Normal Voltage    | 0.0044           | 0.0002                    | PASS             |
| 40               | Normal Voltage    | 0.0058           | 0.0044                    |                  |
| 30               | Normal Voltage    | 0.0069           | 0.0076                    |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000           | 0.0000                    |                  |
| 10               | Normal Voltage    | 0.0164           | 0.0269                    |                  |
| 0                | Normal Voltage    | 0.0047           | 0.0162                    |                  |
| -10              | Normal Voltage    | 0.0128           | 0.0033                    |                  |
| -20              | Normal Voltage    | 0.0218           | 0.0039                    |                  |
| -30              | Normal Voltage    | 0.0003           | 0.0274                    |                  |
| 20               | Maximum Voltage   | 0.0047           | 0.0182                    |                  |
| 20               | Normal Voltage    | 0.0044           | 0.0091                    |                  |
| 20               | Battery End Point | 0.0169           | 0.0014                    |                  |

**Note:**

1. Normal Voltage = 3.91V ; Battery End Point (BEP) =3.4V. ; Maximum Voltage =4.5V
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 | WCDMA Band II | WCDMA Band IV | Limit: 13dB |
|------------|--------------|---------------|---------------|-------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  | Result      |
| Lowest CH  | 3.25         | 3.19          | 3.30          | PASS        |
| Middle CH  | 3.30         | 3.16          | 3.30          |             |
| Highest CH | 3.30         | 3.25          | 3.39          |             |



WCDMA Band V (RMC 12.2Kbps)

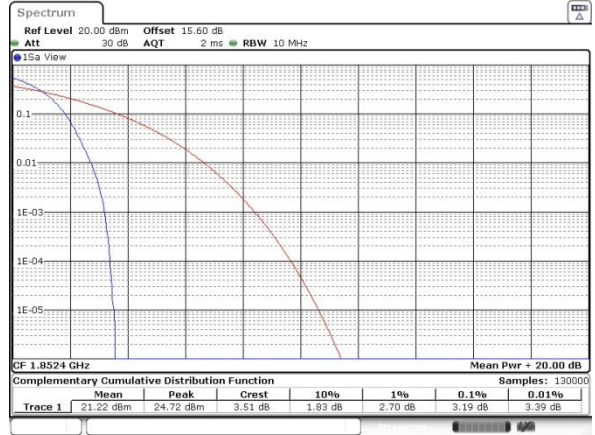
Lowest Channel



Date: 28.JUL.2024 06:31:32

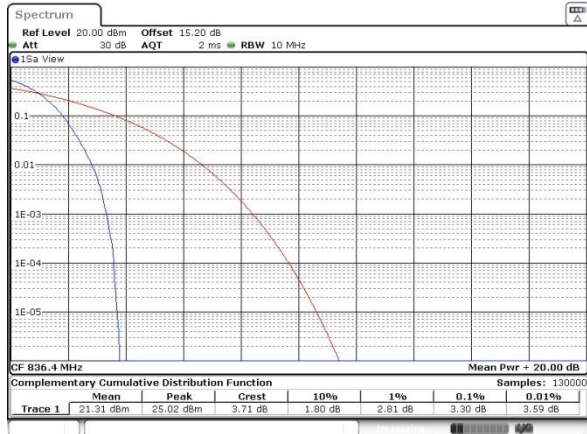
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



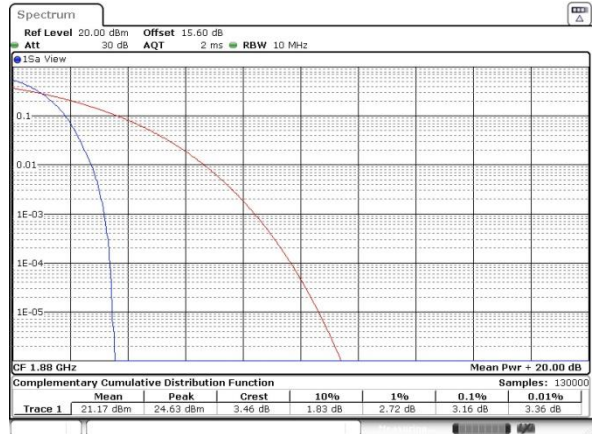
Date: 28.JUL.2024 05:54:43

Middle Channel



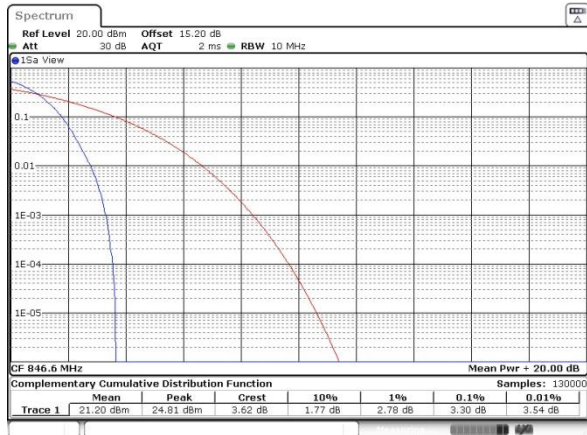
Date: 28.JUL.2024 06:31:38

Middle Channel



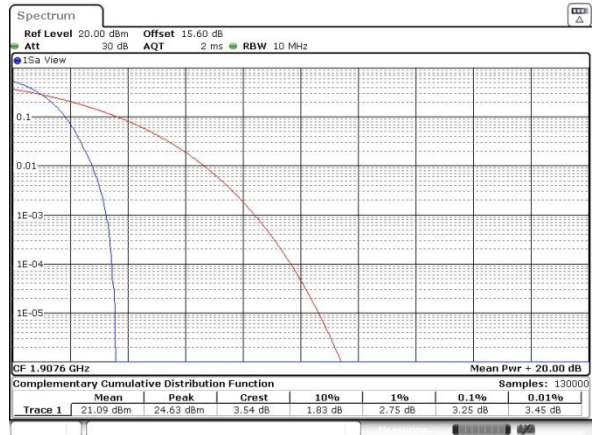
Date: 28.JUL.2024 05:54:50

Highest Channel



Date: 28.JUL.2024 06:31:44

Highest Channel

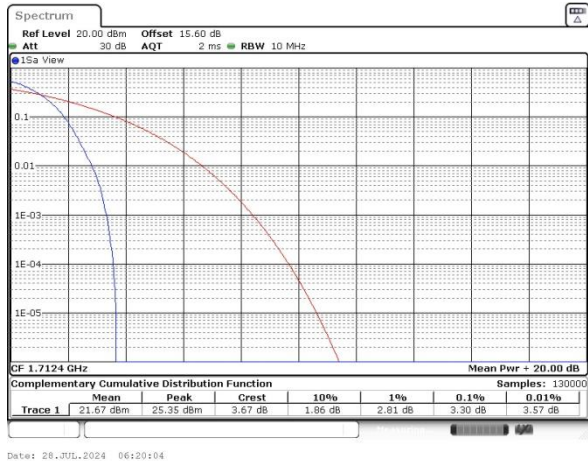


Date: 28.JUL.2024 05:54:56

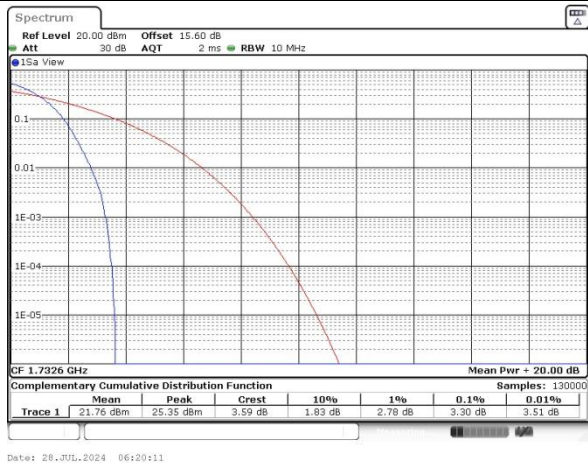


WCDMA Band IV (RMC 12.2Kbps)

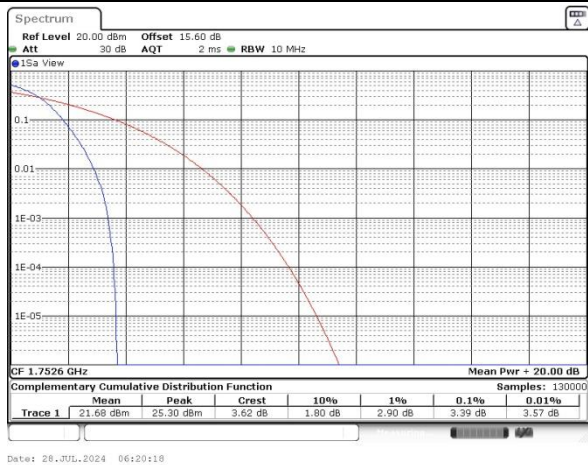
Lowest Channel



Middle Channel



Highest Channel





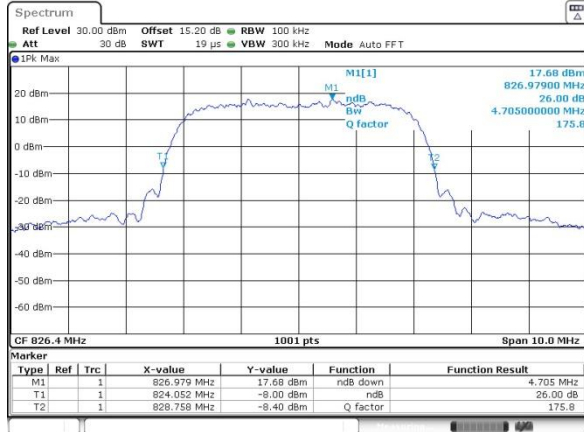
**26dB Bandwidth**

| Mode       | WCDMA Band V | WCDMA Band II | WCDMA Band IV |
|------------|--------------|---------------|---------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  |
| Lowest CH  | 4.71         | 4.72          | 4.71          |
| Middle CH  | 4.72         | 4.72          | 4.72          |
| Highest CH | 4.71         | 4.72          | 4.72          |



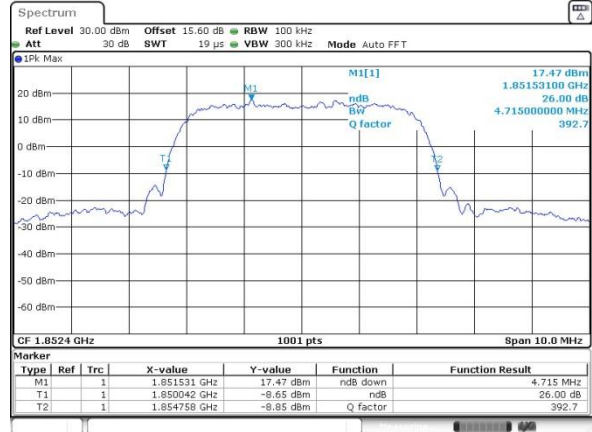
## WCDMA Band V (RMC 12.2Kbps)

## Lowest Channel

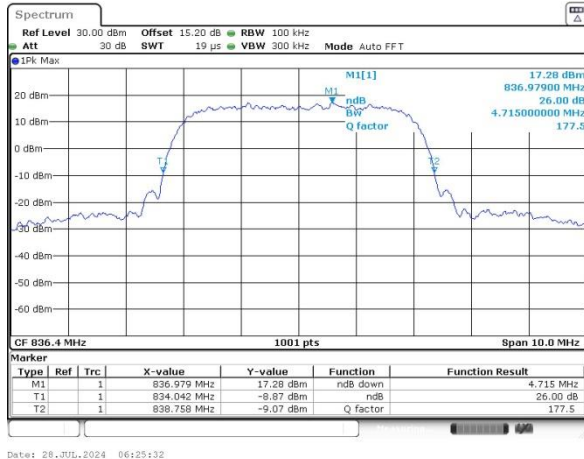


## WCDMA Band II (RMC 12.2Kbps)

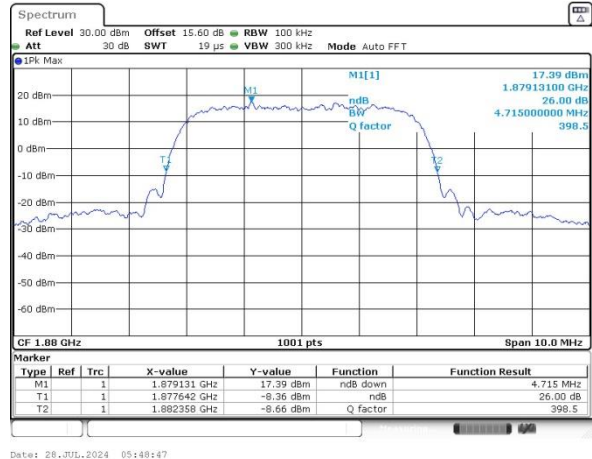
## Lowest Channel



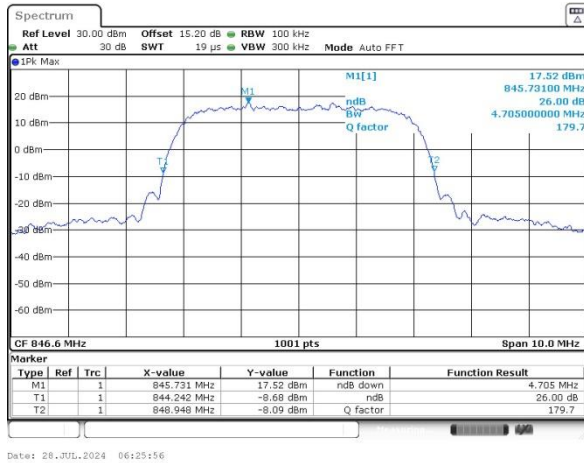
## Middle Channel



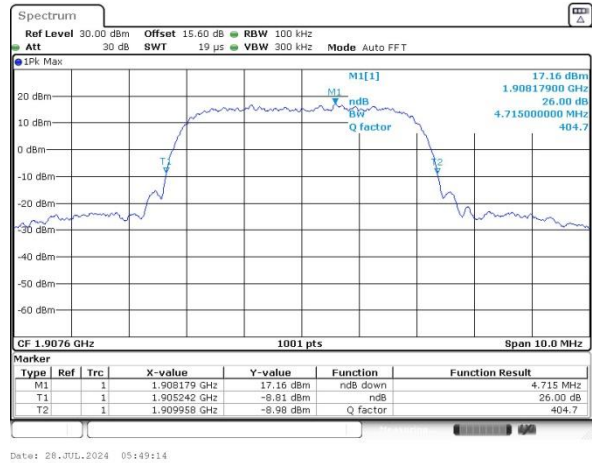
## Middle Channel



## Highest Channel



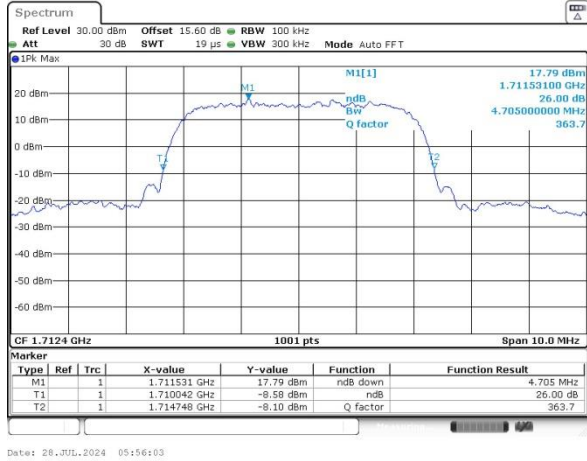
## Highest Channel



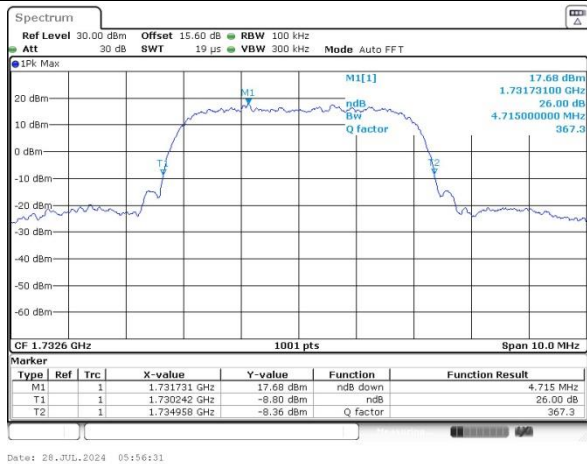


WCDMA Band IV (RMC 12.2Kbps)

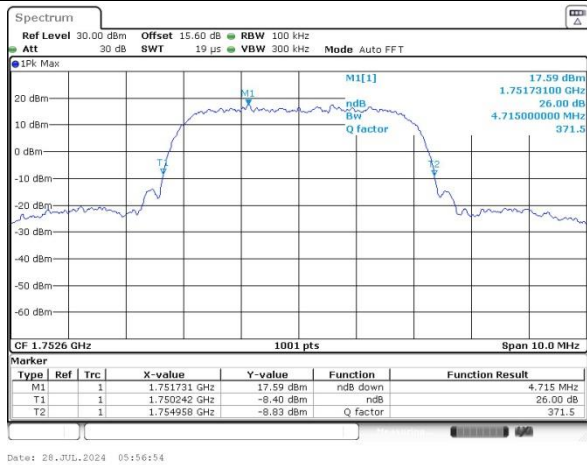
Lowest Channel



Middle Channel



Highest Channel





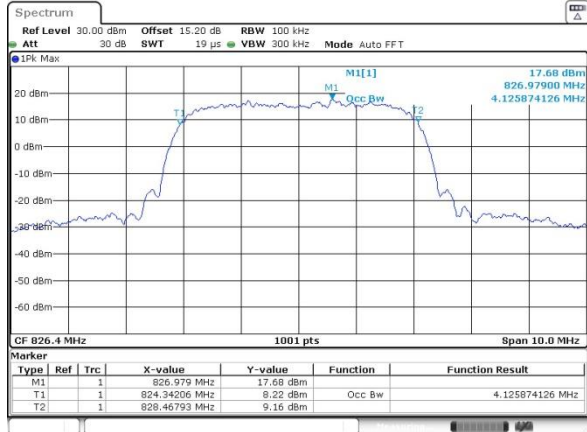
## Occupied Bandwidth

| Mode       | WCDMA Band V | WCDMA Band II | WCDMA Band IV |
|------------|--------------|---------------|---------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  |
| Lowest CH  | 4.13         | 4.14          | 4.14          |
| Middle CH  | 4.13         | 4.14          | 4.15          |
| Highest CH | 4.12         | 4.14          | 4.14          |



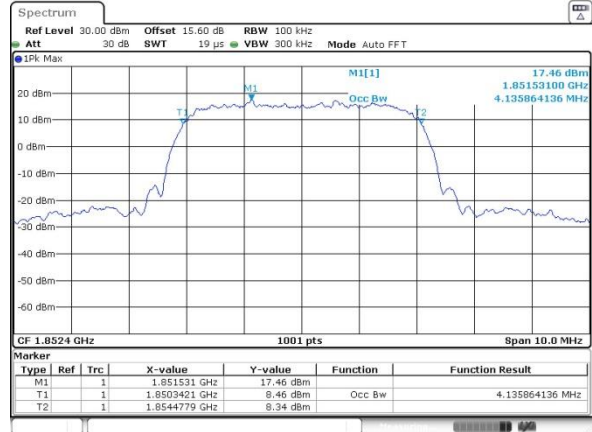
## WCDMA Band V (RMC 12.2Kbps)

## Lowest Channel

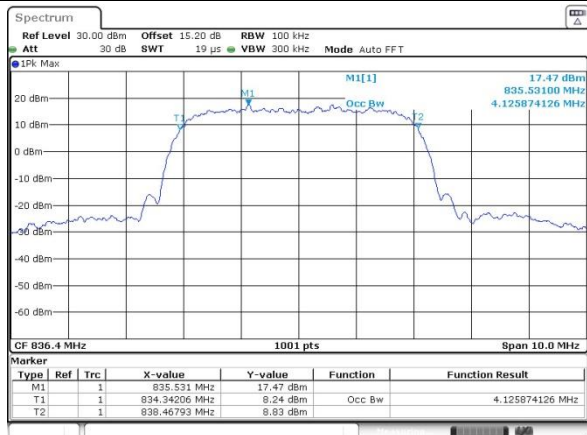


## WCDMA Band II (RMC 12.2Kbps)

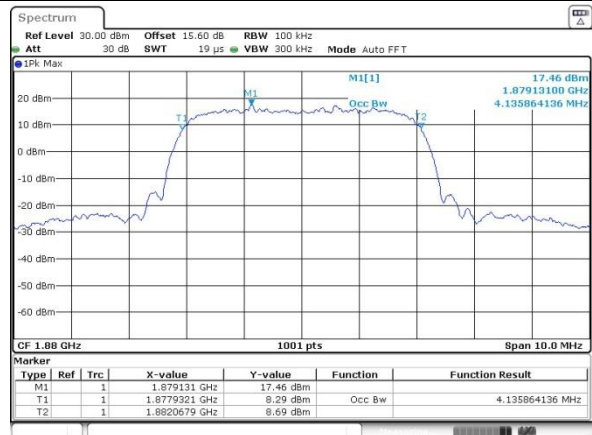
## Lowest Channel



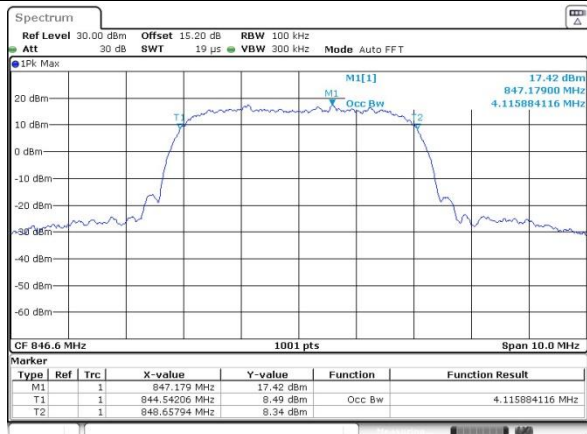
## Middle Channel



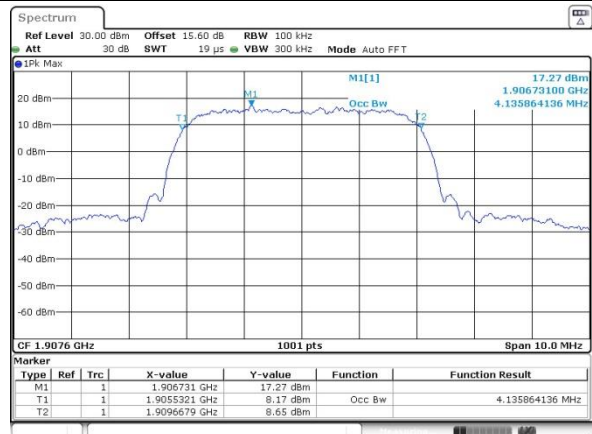
## Middle Channel



## Highest Channel



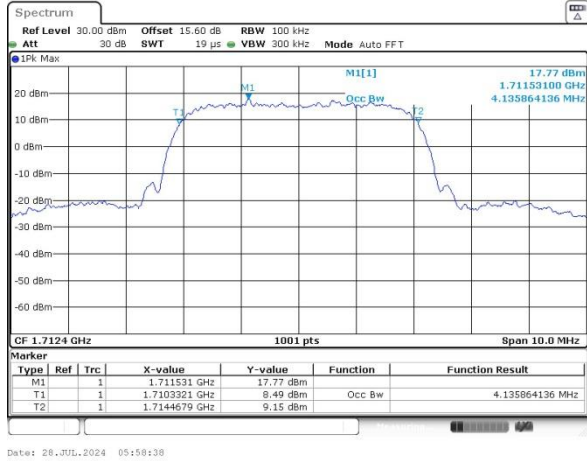
## Highest Channel



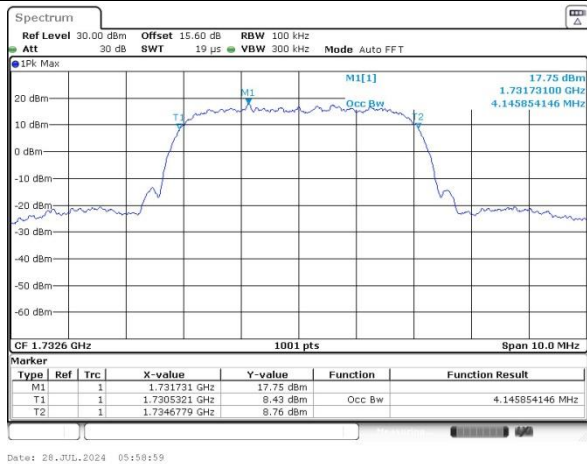


WCDMA Band IV (RMC 12.2Kbps)

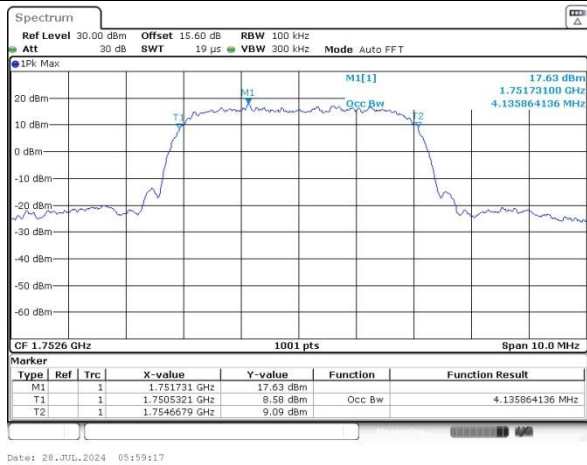
Lowest Channel

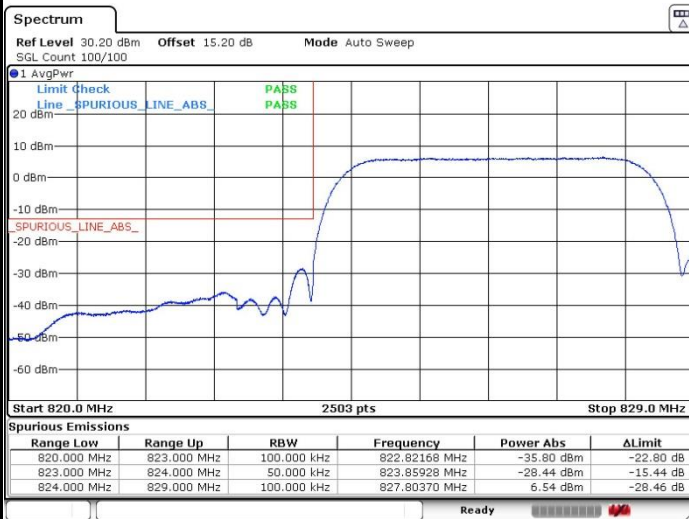
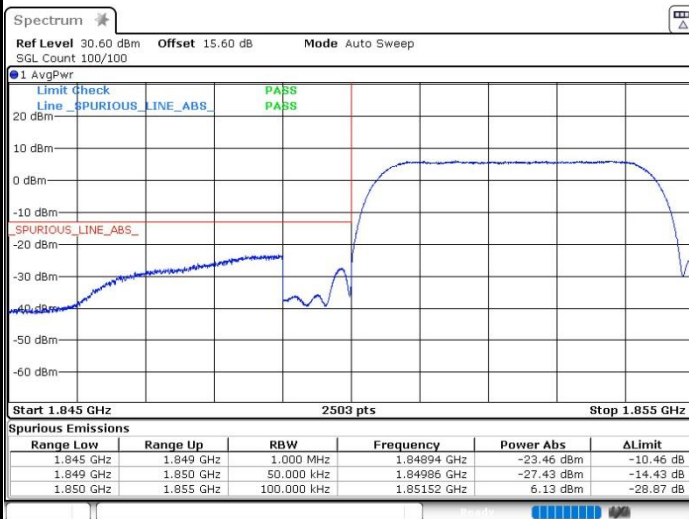
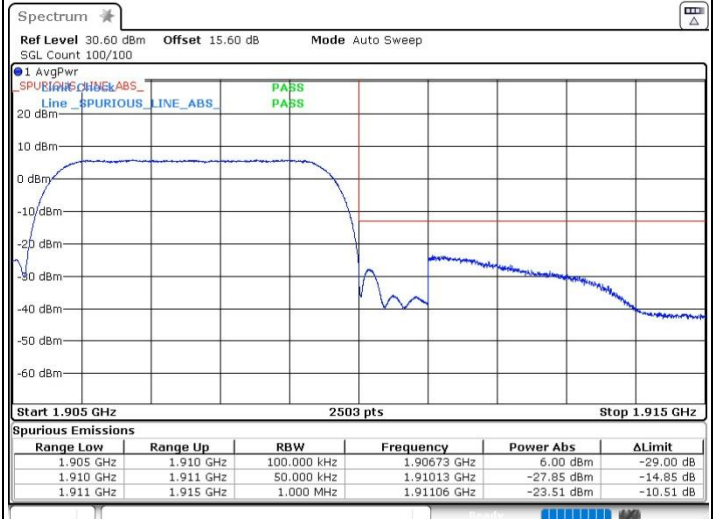


Middle Channel



Highest Channel



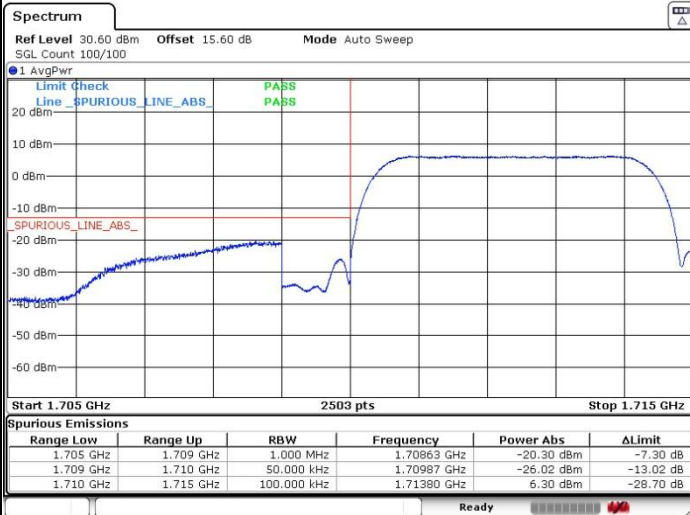
**Conducted Band Edge****WCDMA Band V (RMC 12.2Kbps)****Lowest Band Edge****Highest Band Edge****WCDMA Band II (RMC 12.2Kbps)****Lowest Band Edge****Highest Band Edge**



WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge

Highest Band Edge



Date: 28.JUL.2024 06:04:03



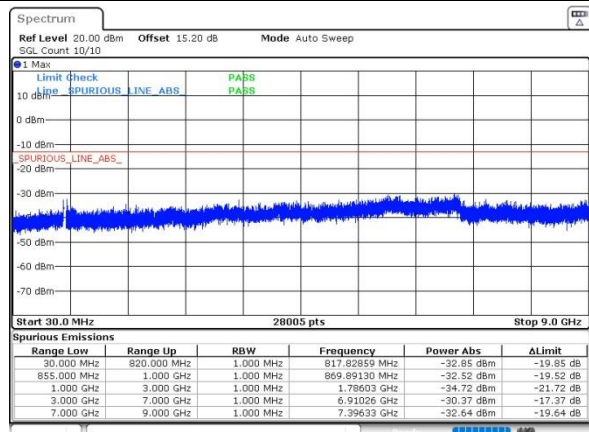
Date: 28.JUL.2024 06:05:14



# Conducted Spurious Emission

## WCDMA Band V (RMC 12.2Kbps)

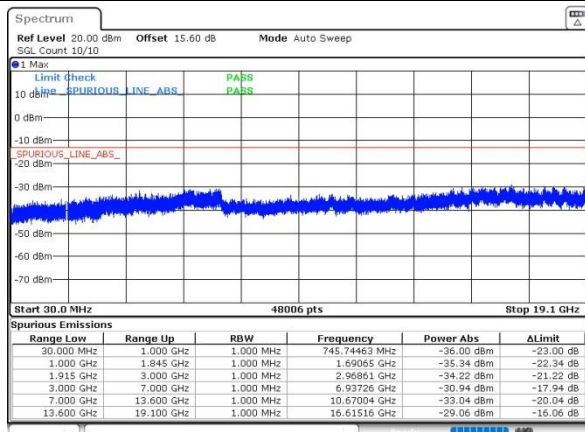
### Lowest Channel



Date: 28.JUL.2024 06:31:02

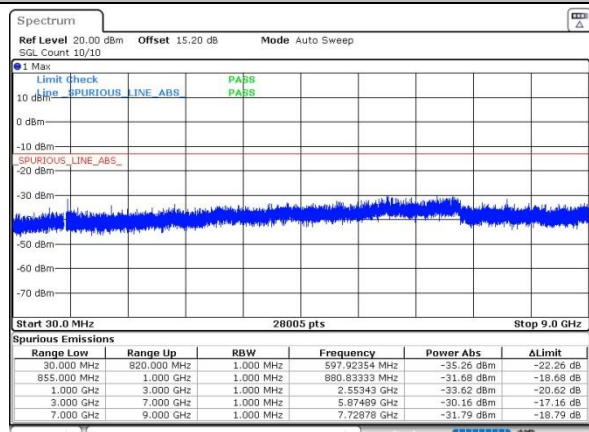
## WCDMA Band II (RMC 12.2Kbps)

### Lowest Channel



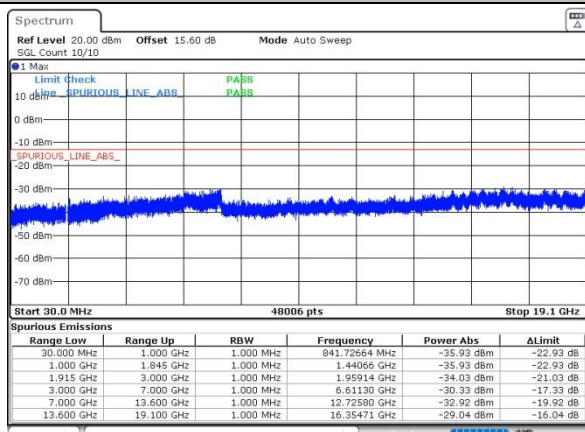
Date: 28.JUL.2024 05:54:15

### Middle Channel



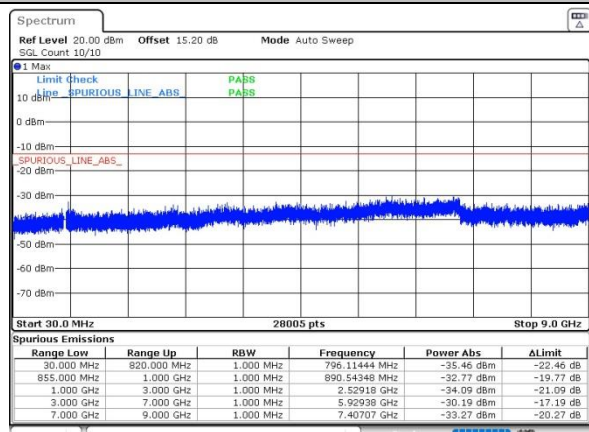
Date: 28.JUL.2024 06:31:11

### Middle Channel



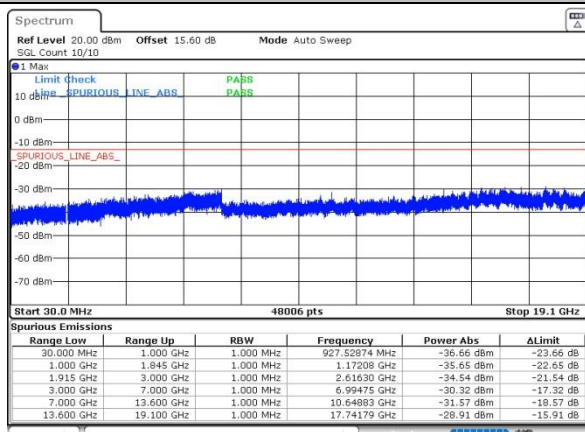
Date: 28.JUL.2024 05:54:25

### Highest Channel



Date: 28.JUL.2024 06:31:20

### Highest Channel

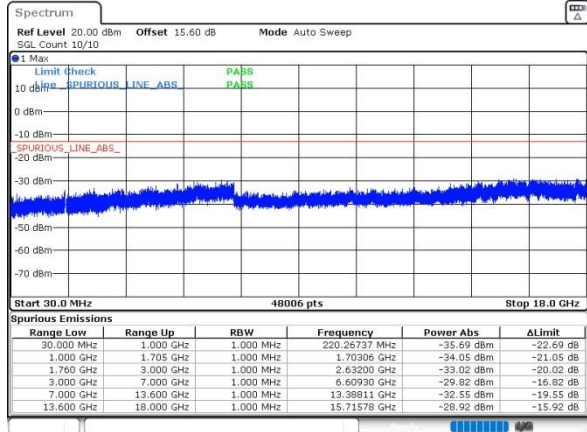


Date: 28.JUL.2024 05:54:35

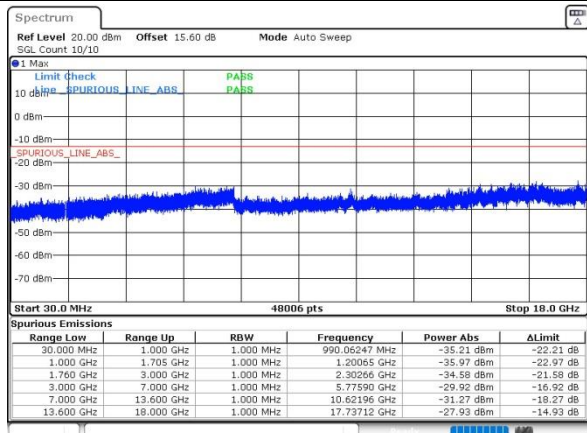


## WCDMA Band IV (RMC 12.2Kbps)

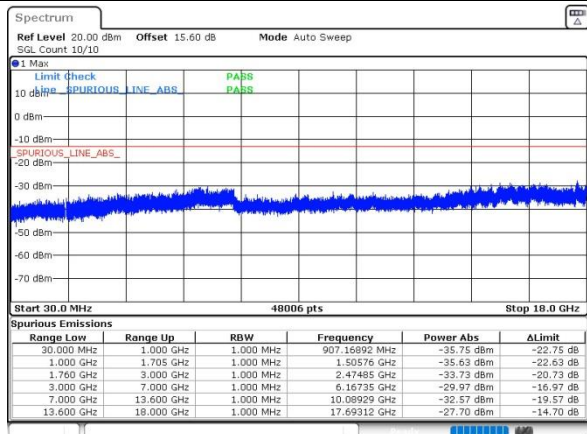
## Lowest Channel



## Middle Channel



## Highest Channel



**Frequency Stability**

| Test Conditions  | Middle Channel    | WCDMA Band V<br>(RMC 12.2KbpsRMC 12.2Kbps) | Limit<br>2.5ppm |
|------------------|-------------------|--------------------------------------------|-----------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)                            | Result          |
| 50               | Normal Voltage    | 0.0058                                     | PASS            |
| 40               | Normal Voltage    | 0.0377                                     |                 |
| 30               | Normal Voltage    | 0.0485                                     |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000                                     |                 |
| 10               | Normal Voltage    | 0.0069                                     |                 |
| 0                | Normal Voltage    | 0.0344                                     |                 |
| -10              | Normal Voltage    | 0.0063                                     |                 |
| -20              | Normal Voltage    | 0.0141                                     |                 |
| -30              | Normal Voltage    | 0.0325                                     |                 |
| 20               | Maximum Voltage   | 0.0418                                     |                 |
| 20               | Normal Voltage    | 0.0176                                     |                 |
| 20               | Battery End Point | 0.0063                                     |                 |

| Test Conditions  | Middle Channel    | WCDMA Band II<br>(RMC 12.2Kbps) | Limit<br>Note 2. |
|------------------|-------------------|---------------------------------|------------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)                 | Result           |
| 50               | Normal Voltage    | 0.0169                          | PASS             |
| 40               | Normal Voltage    | 0.0136                          |                  |
| 30               | Normal Voltage    | 0.0144                          |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |                  |
| 10               | Normal Voltage    | 0.0155                          |                  |
| 0                | Normal Voltage    | 0.0136                          |                  |
| -10              | Normal Voltage    | 0.0247                          |                  |
| -20              | Normal Voltage    | 0.0072                          |                  |
| -30              | Normal Voltage    | 0.0169                          |                  |
| 20               | Maximum Voltage   | 0.0162                          |                  |
| 20               | Normal Voltage    | 0.0128                          |                  |
| 20               | Battery End Point | 0.0019                          |                  |



| Test Conditions  | Middle Channel    | WCDMA Band IV<br>(RMC 12.2Kbps) | Limit<br>Note 2. |
|------------------|-------------------|---------------------------------|------------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)                 | Result           |
| 50               | Normal Voltage    | 0.0048                          | PASS             |
| 40               | Normal Voltage    | 0.0146                          |                  |
| 30               | Normal Voltage    | 0.0003                          |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |                  |
| 10               | Normal Voltage    | 0.0017                          |                  |
| 0                | Normal Voltage    | 0.0044                          |                  |
| -10              | Normal Voltage    | 0.0172                          |                  |
| -20              | Normal Voltage    | 0.0163                          |                  |
| -30              | Normal Voltage    | 0.0061                          |                  |
| 20               | Maximum Voltage   | 0.0028                          |                  |
| 20               | Normal Voltage    | 0.0029                          |                  |
| 20               | Battery End Point | 0.0118                          |                  |

**Note:**

1. Normal Voltage = 3.91V ; Battery End Point (BEP) =3.4V. ; Maximum Voltage =4.5V
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 : | Bruce | Temperature :       | 23~25°C |
|                 |       | Relative Humidity : | 41~42%  |

| GSM850 (GSM) / Ant.0 |                   |             |               |                   |                    |                      |                       |                    |
|----------------------|-------------------|-------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel              | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle               | 1672              | -57.51      | -13           | -44.51            | -64.48             | 1.58                 | 10.70                 | H                  |
|                      | 2512              | -50.04      | -13           | -37.04            | -58.29             | 2.102                | 12.50                 | H                  |
|                      | 3344              | -68.34      | -13           | -55.34            | -77.23             | 2.856                | 13.90                 | H                  |
|                      | 1672              | -61.94      | -13           | -48.94            | -68.91             | 1.58                 | 10.70                 | V                  |
|                      | 2512              | -46.08      | -13           | -33.08            | -54.33             | 2.10                 | 12.50                 | V                  |
|                      | 3344              | -68.07      | -13           | -55.07            | -76.96             | 2.86                 | 13.90                 | V                  |

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

| GSM850 (EDGE 1 Tx slots) / Ant.0 |                   |             |               |                   |                    |                      |                       |                    |
|----------------------------------|-------------------|-------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel                          | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle                           | 1672              | -70.83      | -13           | -57.83            | -77.80             | 1.58                 | 10.70                 | H                  |
|                                  | 2512              | -59.89      | -13           | -46.89            | -68.14             | 2.102                | 12.50                 | H                  |
|                                  | 3344              | -68.39      | -13           | -55.39            | -77.28             | 2.856                | 13.90                 | H                  |
|                                  | 1672              | -70.33      | -13           | -57.33            | -77.30             | 1.58                 | 10.70                 | V                  |
|                                  | 2512              | -51.09      | -13           | -38.09            | -59.34             | 2.10                 | 12.50                 | V                  |
|                                  | 3344              | -68.22      | -13           | -55.22            | -77.11             | 2.86                 | 13.90                 | V                  |

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

| GSM1900 (GSM) / Ant.1 |                   |              |               |                   |                    |                      |                       |                    |
|-----------------------|-------------------|--------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel               | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle                | 3765              | -57.04       | -13           | -44.04            | -69.30             | 2.64                 | 14.90                 | H                  |
|                       | 5640              | -37.17       | -13           | -24.17            | -49.03             | 2.94                 | 14.80                 | H                  |
|                       | 7515              | -51.90       | -13           | -38.90            | -61.67             | 3.39                 | 13.16                 | H                  |
|                       | 3765              | -56.84       | -13           | -43.84            | -69.10             | 2.64                 | 14.90                 | V                  |
|                       | 5640              | -42.41       | -13           | -29.41            | -54.27             | 2.94                 | 14.80                 | V                  |
|                       | 7515              | -52.51       | -13           | -39.51            | -62.28             | 3.39                 | 13.16                 | V                  |
|                       | 9405              | -50.56       | -13           | -37.56            | -61.04             | 4.00                 | 14.48                 | V                  |

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



| GSM1900 (EDGE 1 Tx slots) / Ant.1 |                   |              |               |                   |                    |                      |                       |                    |
|-----------------------------------|-------------------|--------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel                           | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle                            | 3765              | -58.11       | -13           | -45.11            | -70.37             | 2.64                 | 14.90                 | H                  |
|                                   | 5640              | -40.37       | -13           | -27.37            | -52.23             | 2.94                 | 14.80                 | H                  |
|                                   | 7515              | -52.03       | -13           | -39.03            | -61.80             | 3.39                 | 13.16                 | H                  |
|                                   | 9405              | -50.31       | -13           | -37.31            | -60.79             | 4.00                 | 14.48                 | H                  |
|                                   | 3765              | -56.23       | -13           | -43.23            | -68.49             | 2.64                 | 14.90                 | V                  |
|                                   | 5640              | -36.63       | -13           | -23.63            | -48.49             | 2.94                 | 14.80                 | V                  |
|                                   | 7515              | -53.30       | -13           | -40.30            | -63.07             | 3.39                 | 13.16                 | V                  |

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

| WCDMA Band V(RMC 12.2Kbps) / Ant.0 |                   |             |               |                   |                    |                      |                       |                    |
|------------------------------------|-------------------|-------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel                            | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle                             | 1672              | -72.12      | -13           | -59.12            | -79.09             | 1.58                 | 10.70                 | H                  |
|                                    | 2512              | -65.11      | -13           | -52.11            | -73.36             | 2.102                | 12.50                 | H                  |
|                                    | 3344              | -68.26      | -13           | -55.26            | -77.15             | 2.856                | 13.90                 | H                  |
|                                    | 1672              | -71.66      | -13           | -58.66            | -78.63             | 1.58                 | 10.70                 | V                  |
|                                    | 2512              | -64.57      | -13           | -51.57            | -72.82             | 2.10                 | 12.50                 | V                  |
|                                    | 3344              | -68.37      | -13           | -55.37            | -77.26             | 2.86                 | 13.90                 | V                  |

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

| WCDMA Band II(RMC 12.2Kbps) / Ant.1 |                   |              |               |                   |                    |                      |                       |                    |
|-------------------------------------|-------------------|--------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel                             | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle                              | 3765              | -68.14       | -13           | -55.14            | -80.40             | 2.64                 | 14.90                 | H                  |
|                                     | 5640              | -53.44       | -13           | -40.44            | -65.30             | 2.94                 | 14.80                 | H                  |
|                                     | 7515              | -56.12       | -13           | -43.12            | -65.89             | 3.39                 | 13.16                 | H                  |
|                                     | 3765              | -67.59       | -13           | -54.59            | -79.85             | 2.64                 | 14.90                 | V                  |
|                                     | 5640              | -56.55       | -13           | -43.55            | -68.41             | 2.94                 | 14.80                 | V                  |
|                                     | 7515              | -56.83       | -13           | -43.83            | -66.60             | 3.39                 | 13.16                 | V                  |

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



| WCDMA Band IV(RMC 12.2Kbps) / Ant.1 |                      |                 |                  |                         |                          |                            |                             |                       |
|-------------------------------------|----------------------|-----------------|------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel                             | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Middle                              | 3465                 | -66.70          | -13              | -53.70                  | -77.44                   | 2.604                      | 13.34                       | H                     |
|                                     | 5205                 | -53.22          | -13              | -40.22                  | -63.73                   | 3.011                      | 13.52                       | H                     |
|                                     | 6930                 | -58.91          | -13              | -45.91                  | -69.11                   | 3.271                      | 13.47                       | H                     |
|                                     | 3465                 | -67.30          | -13              | -54.30                  | -78.04                   | 2.604                      | 13.34                       | V                     |
|                                     | 5205                 | -52.12          | -13              | -39.12                  | -62.63                   | 3.011                      | 13.52                       | V                     |
|                                     | 6930                 | -58.71          | -13              | -45.71                  | -68.91                   | 3.271                      | 13.47                       | V                     |

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