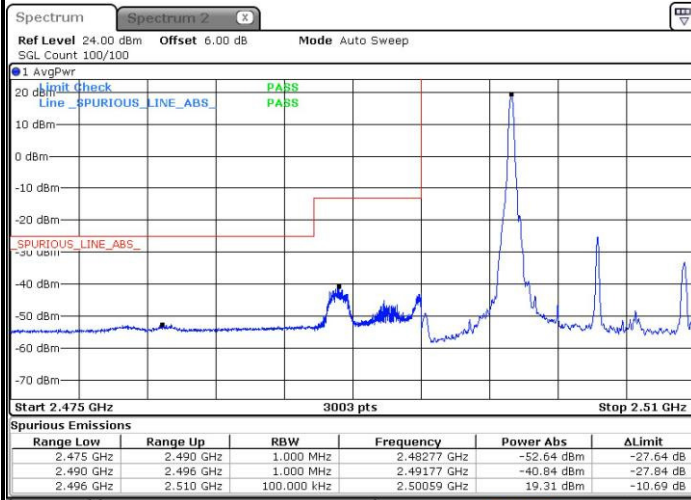


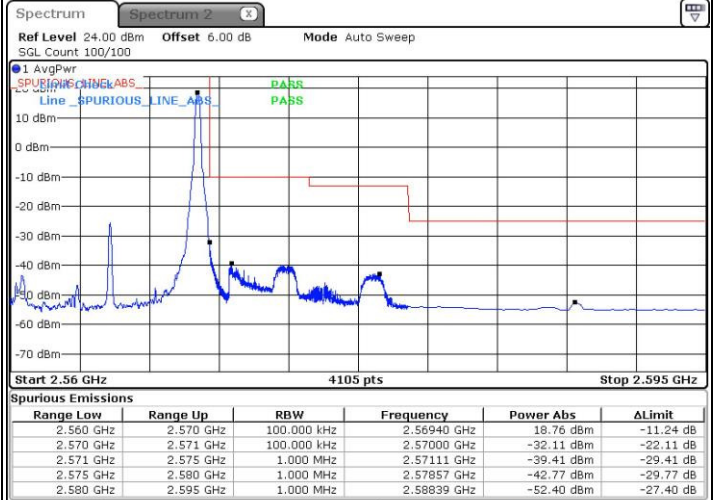


## LTE Band 7 / 10MHz / 16QAM

## Lowest Band Edge / 1 RB



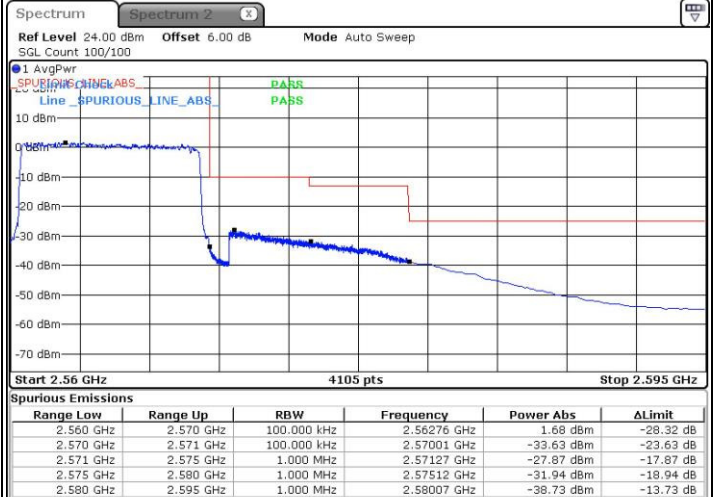
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



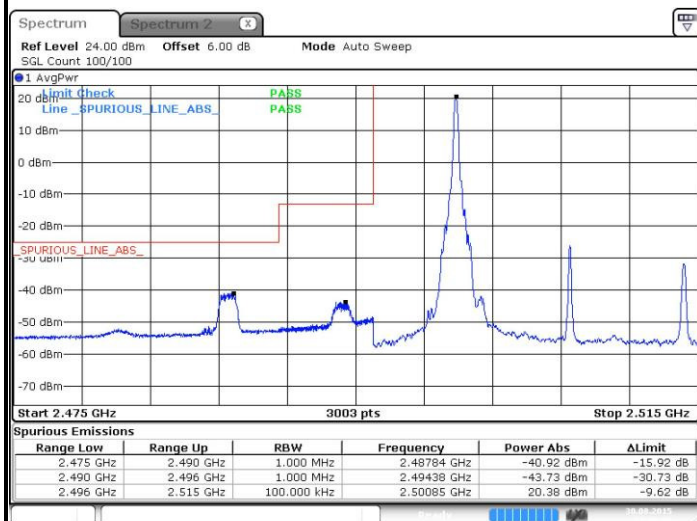
## Highest Band Edge / Full RB



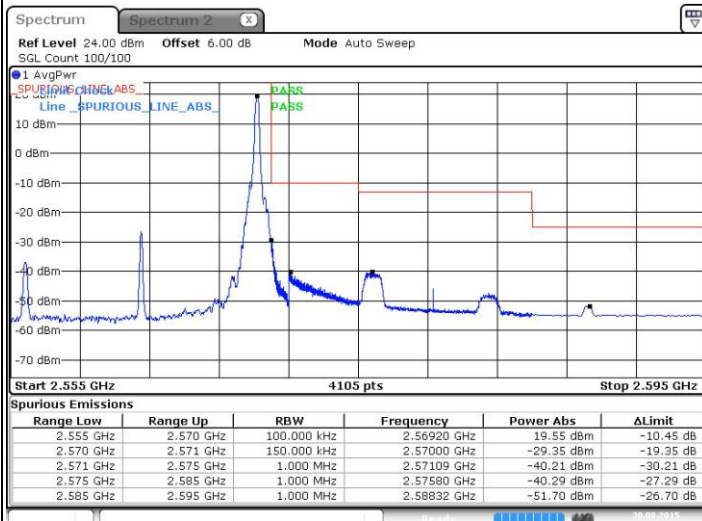


## LTE Band 7 / 15MHz / QPSK

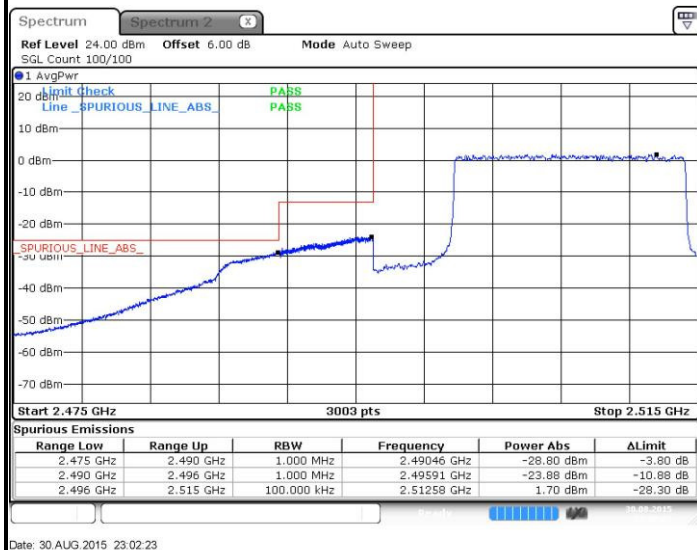
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



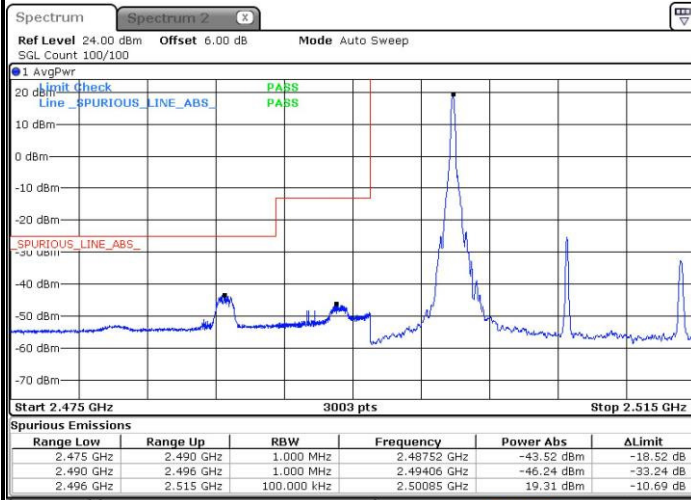
## Highest Band Edge / Full RB



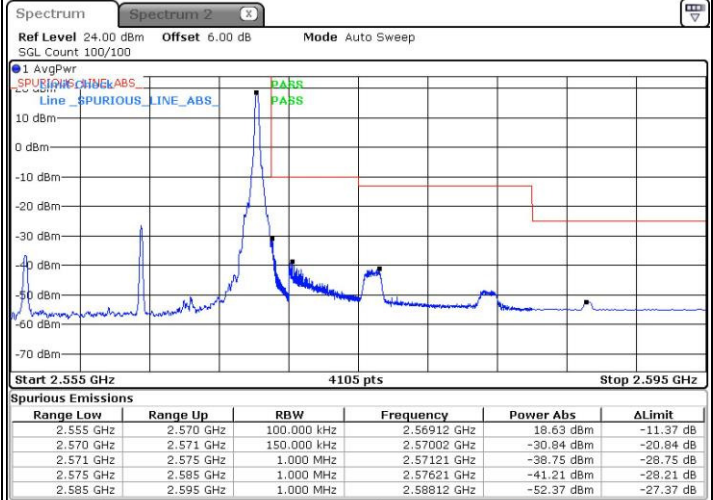


## LTE Band 7 / 15MHz / 16QAM

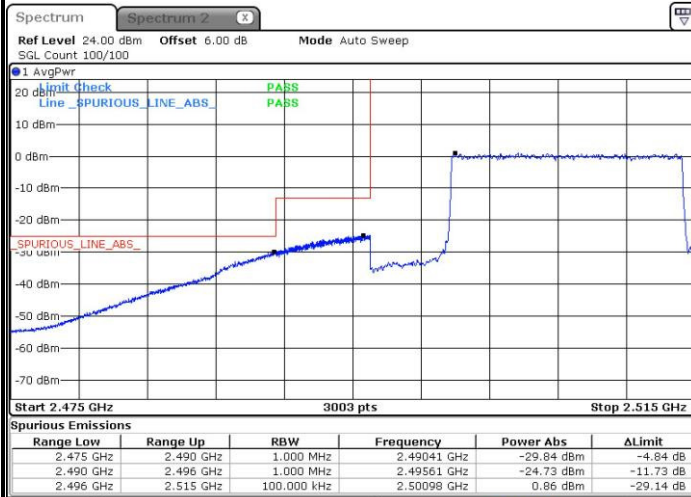
## Lowest Band Edge / 1 RB



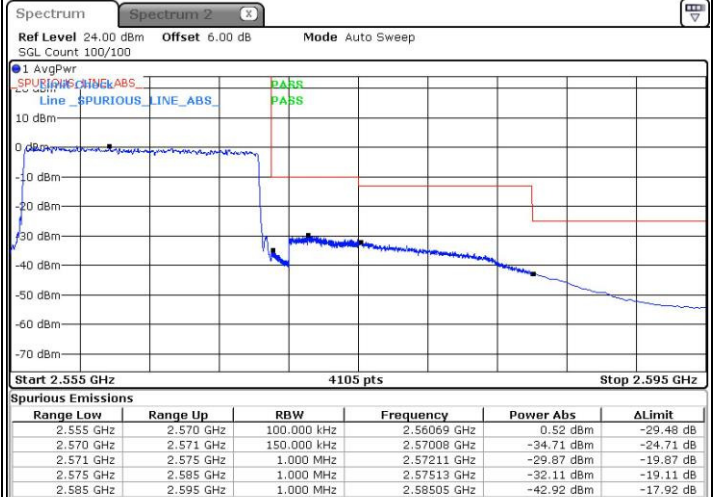
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



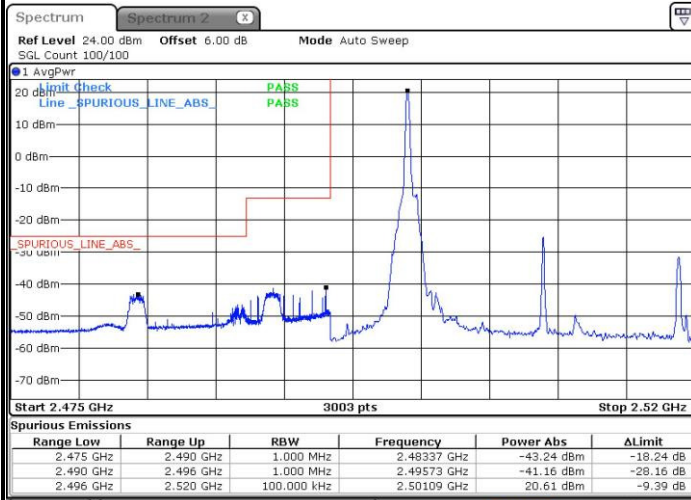
## Highest Band Edge / Full RB



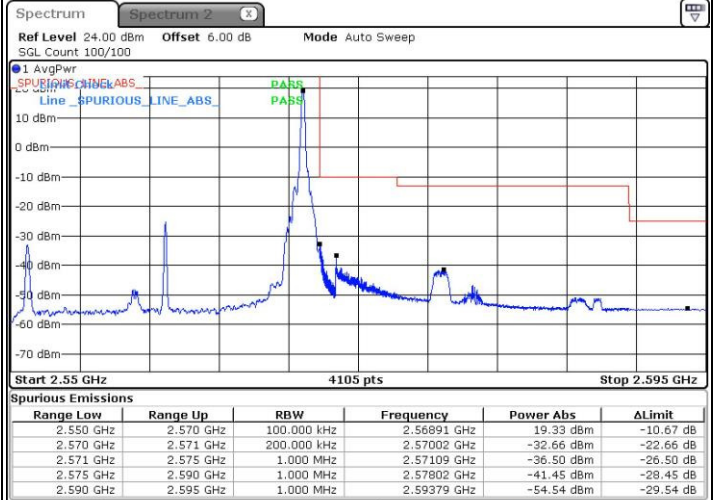


## LTE Band 7 / 20MHz / QPSK

## Lowest Band Edge / 1 RB



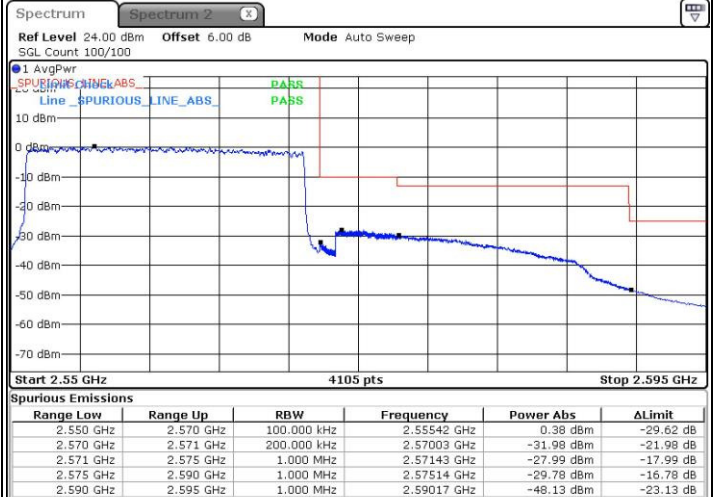
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



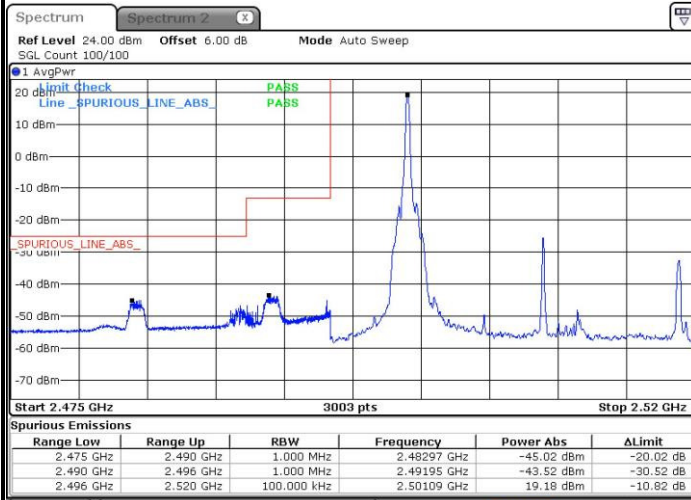
## Highest Band Edge / Full RB



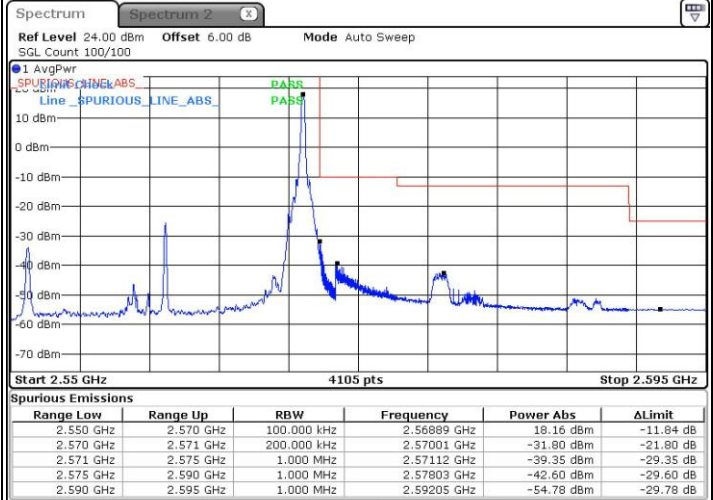


## LTE Band 7 / 20MHz / 16QAM

## Lowest Band Edge / 1 RB



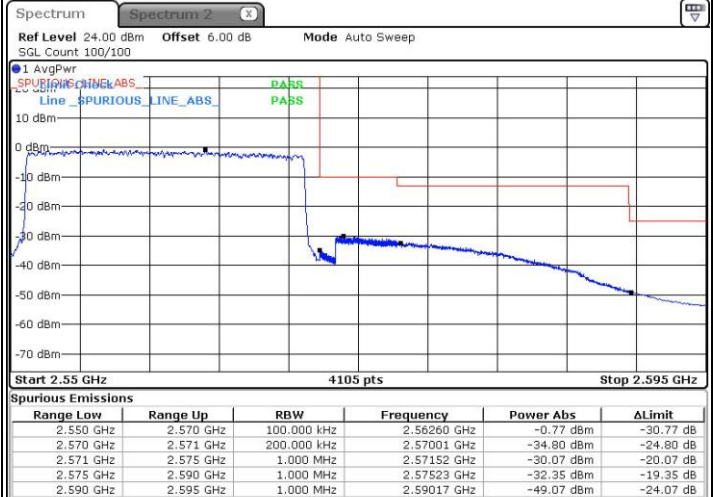
## Highest Band Edge / 1RB



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

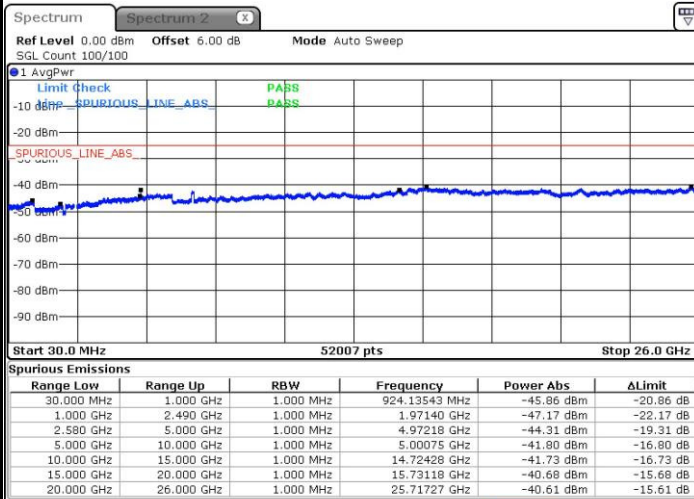




# Conducted Spurious Emission

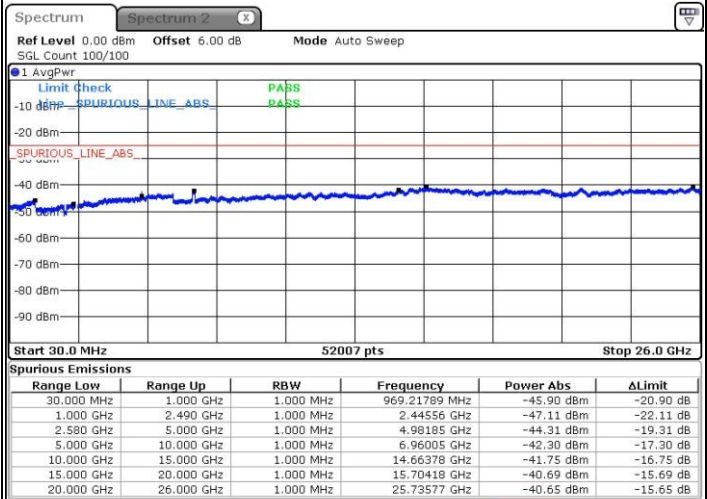
## LTE Band 7 / 5MHz

### Lowest Channel / QPSK



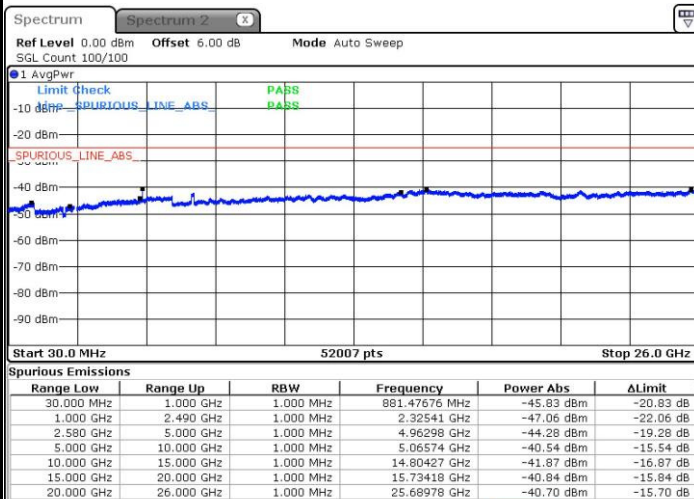
Date: 30 AUG.2015 22:27:49

### Lowest Channel / 16QAM



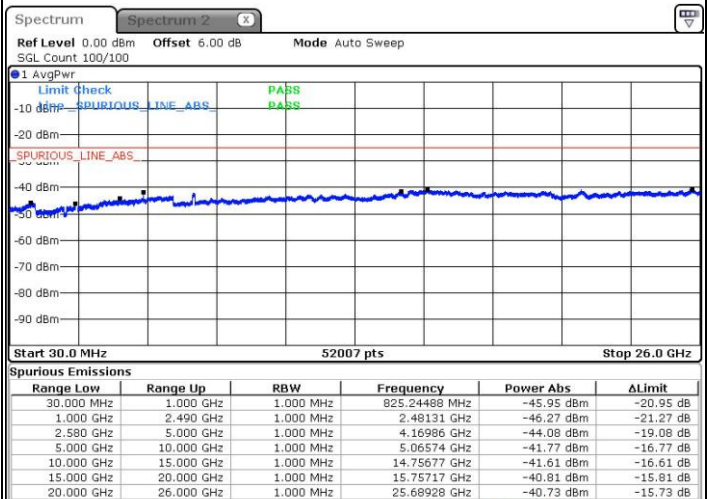
Date: 30 AUG.2015 22:28:59

### Middle Channel / QPSK



Date: 30 AUG.2015 22:30:55

### Middle Channel / 16QAM

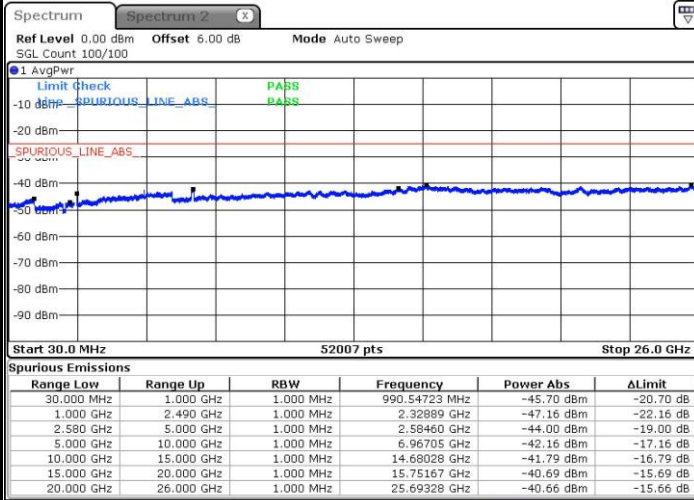


Date: 30 AUG.2015 22:32:04



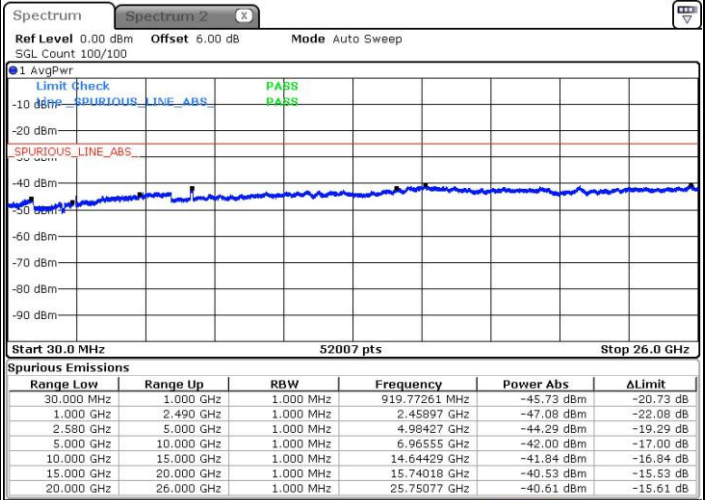
## LTE Band 7 / 5MHz

## Highest Channel / QPSK



Date: 30 AUG 2015 22:38:35

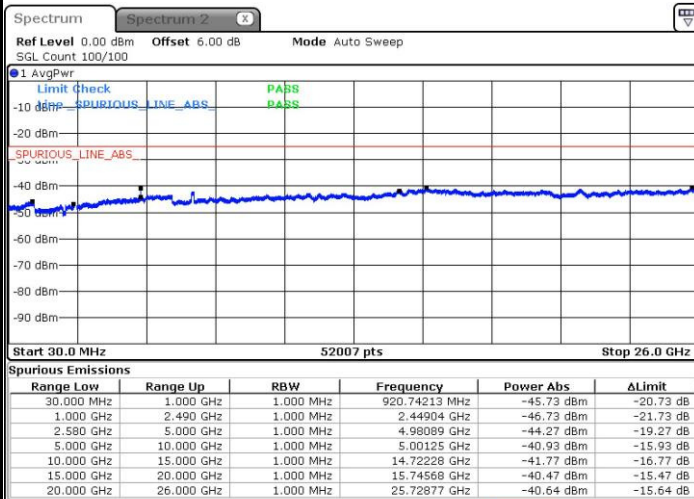
## Highest Channel / 16QAM



Date: 30 AUG 2015 22:39:44

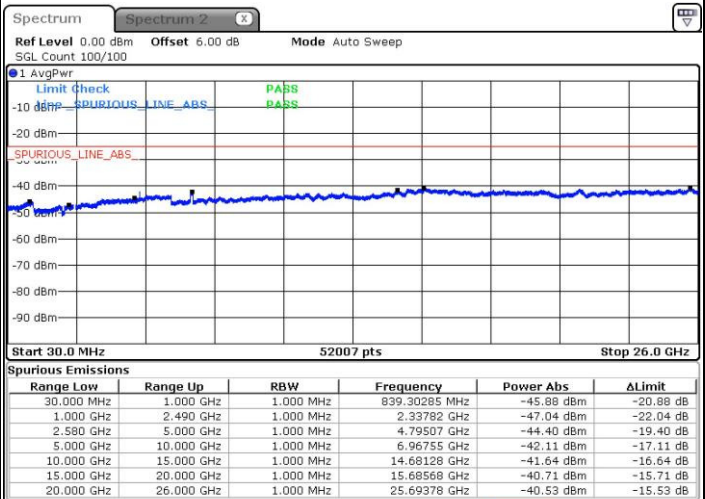
## LTE Band 7 / 10MHz

## Lowest Channel / QPSK



Date: 30 AUG 2015 22:46:15

## Lowest Channel / 16QAM

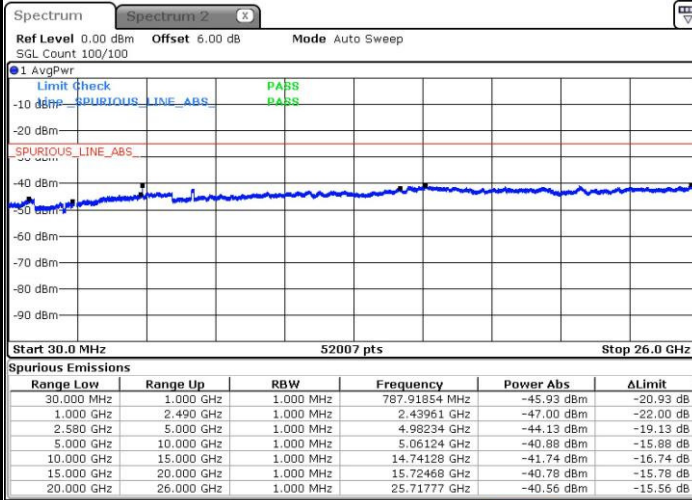


Date: 30 AUG 2015 22:47:24



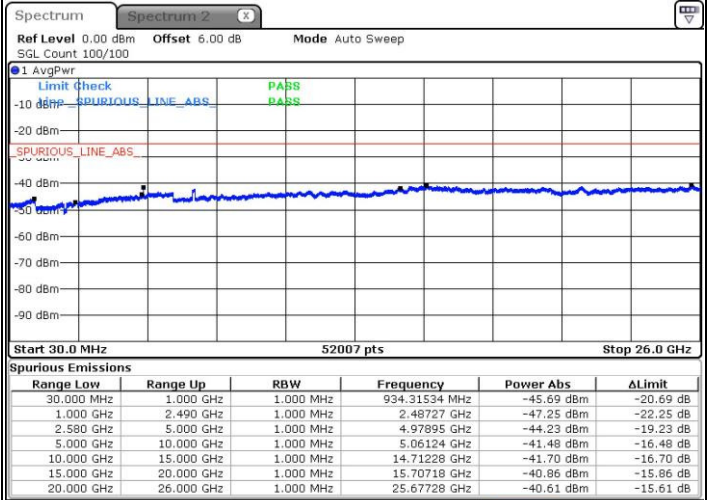
## LTE Band 7 / 10MHz

## Middle Channel / QPSK



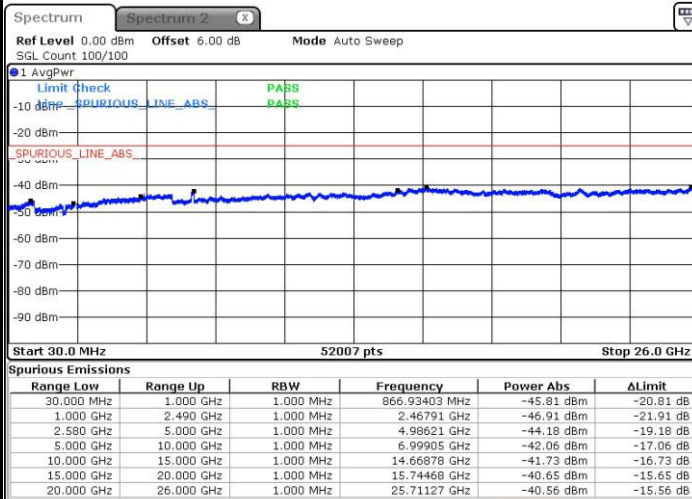
Date: 30 AUG 2015 22:49:20

## Middle Channel / 16QAM



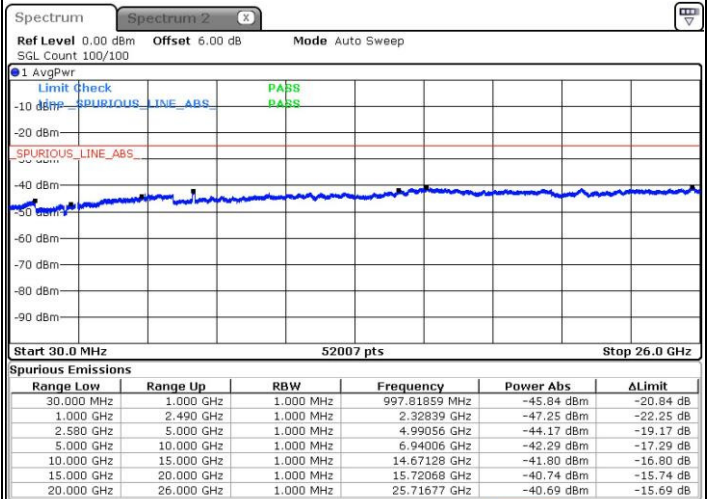
Date: 30 AUG 2015 22:50:30

## Highest Channel / QPSK



Date: 30 AUG 2015 22:57:00

## Highest Channel / 16QAM

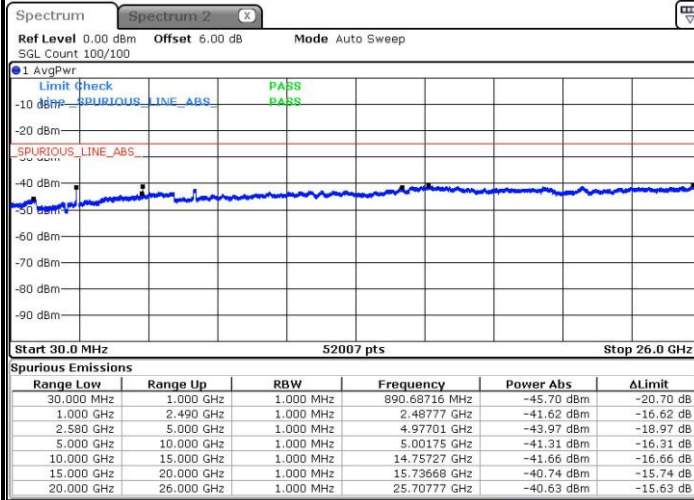


Date: 30 AUG 2015 22:58:10



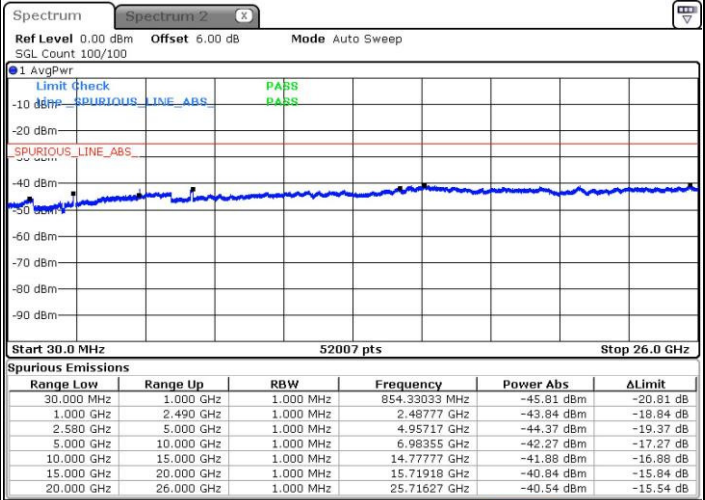
## LTE Band 7 / 15MHz

## Lowest Channel / QPSK



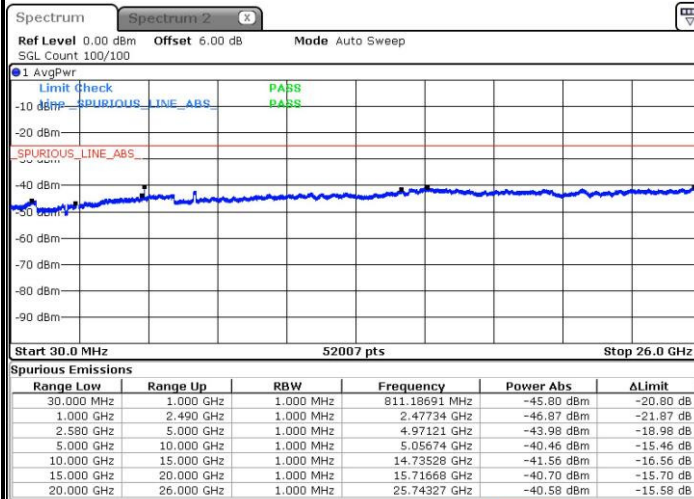
Date: 30 AUG. 2015 23:04:40

## Lowest Channel / 16QAM



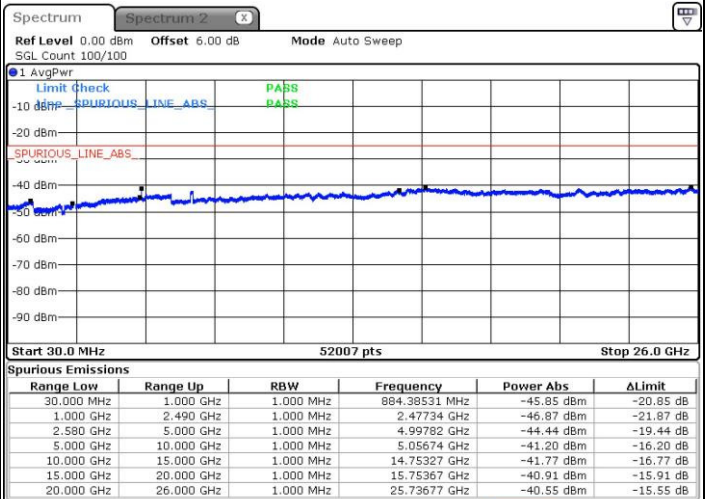
Date: 30 AUG. 2015 23:05:50

## Middle Channel / QPSK



Date: 30 AUG. 2015 23:07:46

## Middle Channel / 16QAM

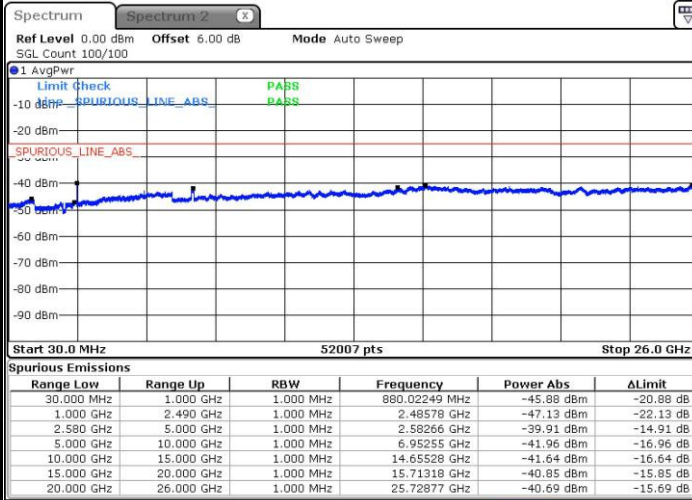


Date: 30 AUG. 2015 23:08:56



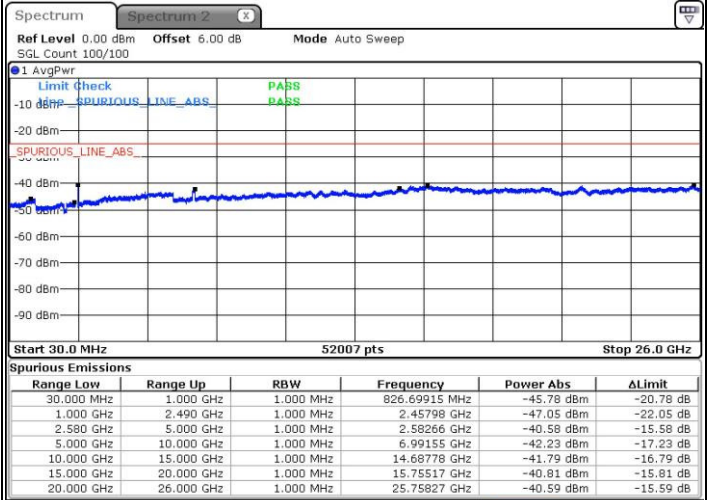
## LTE Band 7 / 15MHz

## Highest Channel / QPSK



Date: 30 AUG 2015 23:15:26

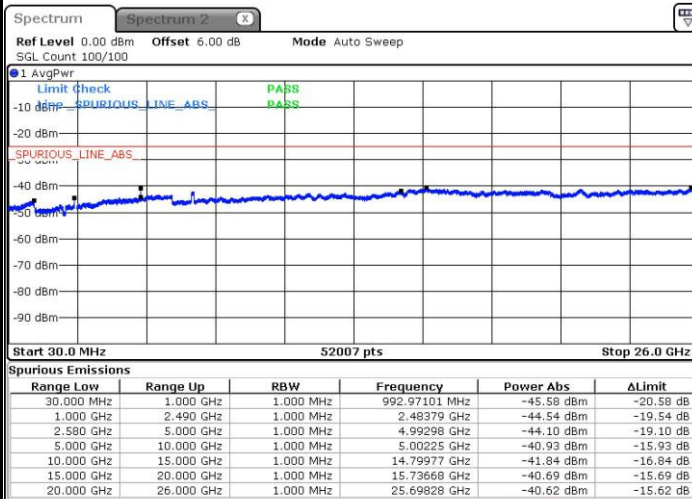
## Highest Channel / 16QAM



Date: 30 AUG 2015 23:16:36

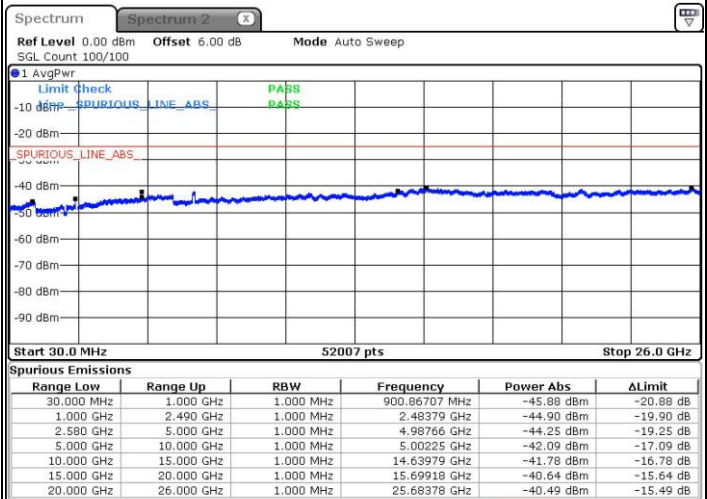
## LTE Band 7 / 20MHz

## Lowest Channel / QPSK



Date: 30 AUG 2015 23:23:06

## Lowest Channel / 16QAM

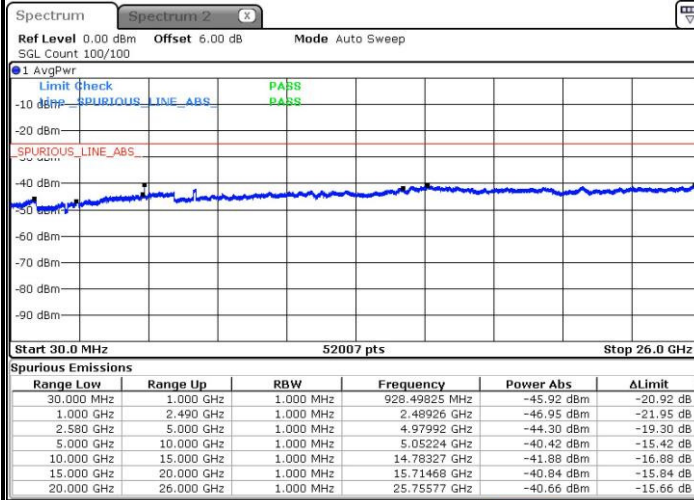


Date: 30 AUG 2015 23:24:16



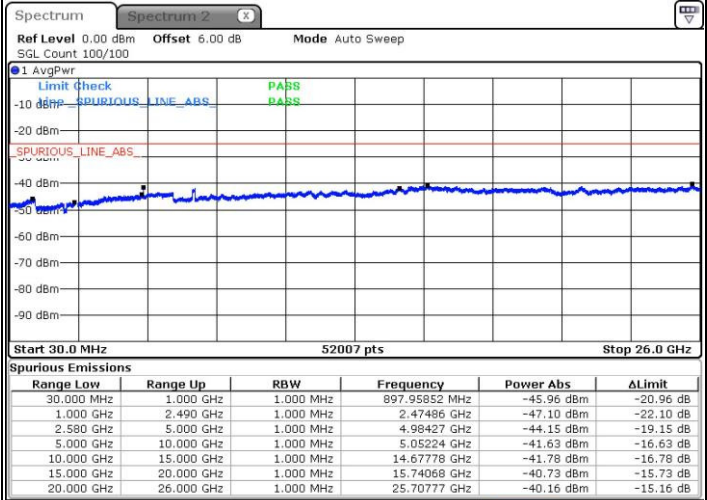
## LTE Band 7 / 20MHz

## Middle Channel / QPSK



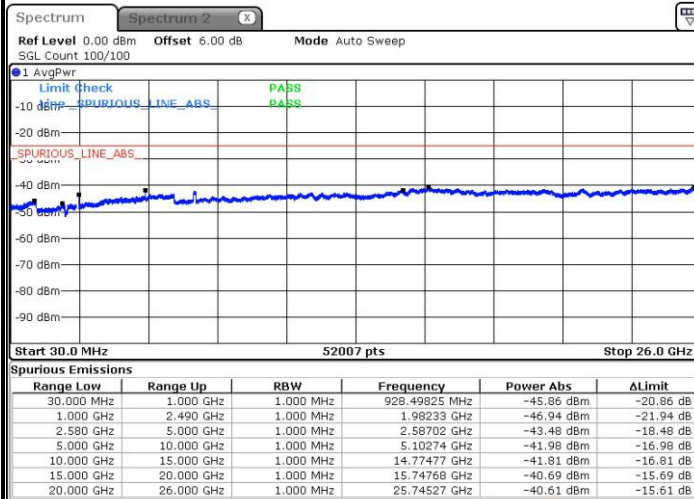
Date: 30 AUG 2015 23:26:12

## Middle Channel / 16QAM



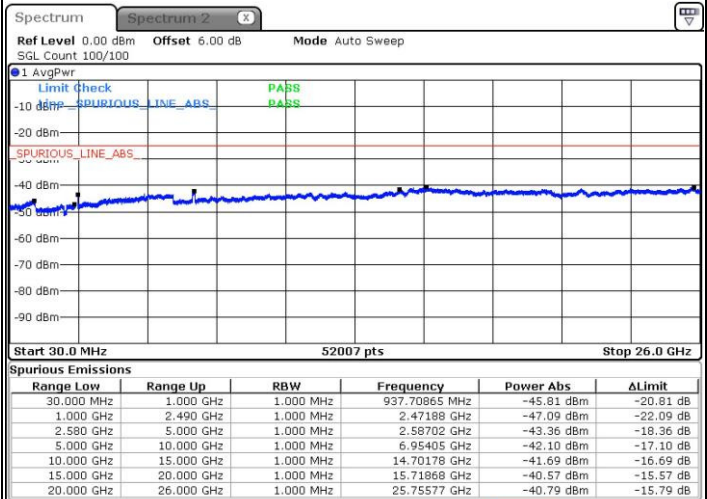
Date: 30 AUG 2015 23:27:22

## Highest Channel / QPSK



Date: 30 AUG 2015 23:33:52

## Highest Channel / 16QAM



Date: 30 AUG 2015 23:35:02

## Frequency Stability

| Test Conditions  |                   | LTE Band 7 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0013                             | PASS    |
| 40               | Normal Voltage    | 0.0000                             |         |
| 30               | Normal Voltage    | 0.0022                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0004                             |         |
| 0                | Normal Voltage    | 0.0007                             |         |
| -10              | Normal Voltage    | 0.0009                             |         |
| -20              | Normal Voltage    | 0.0002                             |         |
| -30              | Normal Voltage    | 0.0014                             |         |
| 20               | Maximum Voltage   | 0.0021                             |         |
| 20               | Normal Voltage    | 0.0017                             |         |
| 20               | Battery End Point | 0.0013                             |         |

**Note:**

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 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

### EIRP

| LTE Band 7 / 5MHz (Average) |            |      |        |            |         |           |         |
|-----------------------------|------------|------|--------|------------|---------|-----------|---------|
| Channel                     | Modulation | RB   |        | Horizontal |         | Vertical  |         |
|                             |            | Size | Offset | EIRP(dBm)  | EIRP(W) | EIRP(dBm) | EIRP(W) |
| Lowest                      | QPSK       | 1    | 12     | 25.59      | 0.3622  | 25.42     | 0.3483  |
| Middle                      |            | 1    | 12     | 24.67      | 0.2931  | 24.37     | 0.2735  |
| Highest                     |            | 1    | 12     | 26.12      | 0.4093  | 25.56     | 0.3597  |
| Lowest                      | 16QAM      | 1    | 0      | 24.86      | 0.3062  | 24.68     | 0.2938  |
| Middle                      |            | 1    | 0      | 25.65      | 0.3673  | 24.96     | 0.3133  |
| Highest                     |            | 1    | 0      | 24.55      | 0.2851  | 24.15     | 0.2600  |
| Limit                       | EIRP < 2W  |      |        | Result     |         | PASS      |         |

| LTE Band 7 / 10MHz (Average) |            |      |        |            |         |           |         |
|------------------------------|------------|------|--------|------------|---------|-----------|---------|
| Channel                      | Modulation | RB   |        | Horizontal |         | Vertical  |         |
|                              |            | Size | Offset | EIRP(dBm)  | EIRP(W) | EIRP(dBm) | EIRP(W) |
| Lowest                       | QPSK       | 1    | 0      | 25.58      | 0.3614  | 25.38     | 0.3451  |
| Middle                       |            | 1    | 25     | 24.72      | 0.2965  | 24.36     | 0.2729  |
| Highest                      |            | 1    | 25     | 26.41      | 0.4375  | 25.81     | 0.3811  |
| Lowest                       | 16QAM      | 1    | 0      | 25.00      | 0.3162  | 24.69     | 0.2944  |
| Middle                       |            | 1    | 25     | 26.26      | 0.4227  | 25.67     | 0.3690  |
| Highest                      |            | 1    | 25     | 25.26      | 0.3357  | 24.62     | 0.2897  |
| Limit                        | EIRP < 2W  |      |        | Result     |         | PASS      |         |

| LTE Band 7 / 15MHz (Average) |            |      |        |            |         |           |         |
|------------------------------|------------|------|--------|------------|---------|-----------|---------|
| Channel                      | Modulation | RB   |        | Horizontal |         | Vertical  |         |
|                              |            | Size | Offset | EIRP(dBm)  | EIRP(W) | EIRP(dBm) | EIRP(W) |
| Lowest                       | QPSK       | 1    | 0      | 25.66      | 0.3681  | 25.35     | 0.3428  |
| Middle                       |            | 1    | 37     | 24.92      | 0.3105  | 24.60     | 0.2884  |
| Highest                      |            | 1    | 0      | 25.99      | 0.3972  | 25.67     | 0.3690  |
| Lowest                       | 16QAM      | 1    | 0      | 25.51      | 0.3556  | 25.30     | 0.3388  |
| Middle                       |            | 1    | 0      | 26.23      | 0.4198  | 25.55     | 0.3589  |
| Highest                      |            | 1    | 0      | 25.54      | 0.3581  | 24.87     | 0.3069  |
| Limit                        | EIRP < 2W  |      |        | Result     |         | PASS      |         |

| LTE Band 7 / 20MHz (Average) |            |      |        |            |         |           |         |
|------------------------------|------------|------|--------|------------|---------|-----------|---------|
| Channel                      | Modulation | RB   |        | Horizontal |         | Vertical  |         |
|                              |            | Size | Offset | EIRP(dBm)  | EIRP(W) | EIRP(dBm) | EIRP(W) |
| Lowest                       | QPSK       | 1    | 0      | 25.56      | 0.3597  | 25.35     | 0.3428  |
| Middle                       |            | 1    | 0      | 24.91      | 0.3097  | 24.65     | 0.2917  |
| Highest                      |            | 1    | 0      | 25.92      | 0.3908  | 25.70     | 0.3715  |
| Lowest                       | 16QAM      | 1    | 0      | 24.93      | 0.3112  | 25.20     | 0.3311  |
| Middle                       |            | 1    | 0      | 26.34      | 0.4305  | 25.47     | 0.3524  |
| Highest                      |            | 1    | 49     | 25.02      | 0.3177  | 24.40     | 0.2754  |
| Limit                        | EIRP < 2W  |      |        | Result     |         | PASS      |         |

**Radiated Spurious Emission**

| LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0 |                   |             |               |                   |                   |                    |                      |                       |                    |
|-----------------------------------------------|-------------------|-------------|---------------|-------------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| 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                                        | 5066              | -48.50      | -25           | -23.50            | -35.12            | -55.06             | 2.41                 | 8.97                  | H                  |
|                                               | 7598              | -42.54      | -25           | -17.54            | -37.86            | -51.54             | 2.86                 | 11.86                 | H                  |
|                                               | 10130             | -56.61      | -25           | -31.61            | -52.00            | -65.51             | 3.21                 | 12.11                 | H                  |
|                                               | 5066              | -52.83      | -25           | -27.83            | -39.43            | -59.39             | 2.41                 | 8.97                  | V                  |
|                                               | 7598              | -50.61      | -25           | -25.61            | -43.45            | -59.61             | 2.86                 | 11.86                 | V                  |
|                                               | 10130             | -57.72      | -25           | -32.72            | -53.24            | -66.62             | 3.21                 | 12.11                 | V                  |

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

| LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0 |                   |              |               |                   |                   |                    |                      |                       |                    |
|------------------------------------------------|-------------------|--------------|---------------|-------------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| 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                                         | 5060              | -46.30       | -25           | -21.30            | -33.55            | -52.86             | 2.41                 | 8.97                  | H                  |
|                                                | 7592              | -40.76       | -25           | -15.76            | -36.46            | -49.76             | 2.86                 | 11.86                 | H                  |
|                                                | 10124             | -57.84       | -25           | -32.84            | -53.23            | -66.74             | 3.21                 | 12.11                 | H                  |
|                                                | 5060              | -50.31       | -25           | -25.31            | -37.81            | -56.87             | 2.41                 | 8.97                  | V                  |
|                                                | 7592              | -47.80       | -25           | -22.80            | -41.99            | -56.80             | 2.86                 | 11.86                 | V                  |
|                                                | 10124             | -56.02       | -25           | -31.02            | -51.54            | -64.92             | 3.21                 | 12.11                 | V                  |

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

| LTE Band 7 / 15MHz / QPSK / RB Size 1 Offset 0 |                   |              |               |                   |                   |                    |                      |                       |                    |
|------------------------------------------------|-------------------|--------------|---------------|-------------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| 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                                         | 5054              | -46.89       | -25           | -21.89            | -33.98            | -53.45             | 2.41                 | 8.97                  | H                  |
|                                                | 7586              | -41.03       | -25           | -16.03            | -36.69            | -50.03             | 2.86                 | 11.86                 | H                  |
|                                                | 10112             | -57.96       | -25           | -32.96            | -53.35            | -66.86             | 3.21                 | 12.11                 | H                  |
|                                                | 5054              | -49.11       | -25           | -24.11            | -36.83            | -55.67             | 2.41                 | 8.97                  | V                  |
|                                                | 7586              | -47.33       | -25           | -22.33            | -41.57            | -56.33             | 2.86                 | 11.86                 | V                  |
|                                                | 10112             | -56.37       | -25           | -31.37            | -51.89            | -65.27             | 3.21                 | 12.11                 | V                  |

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



| LTE Band 7 / 20MHz / QPSK / RB Size 1 Offset 0 |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|------------------------------------------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel                                        | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Middle                                         | 5054                 | -44.29          | -25              | -19.29                  | -32.00                  | -50.85                   | 2.41                       | 8.97                        | H                     |
|                                                | 7580                 | -39.35          | -25              | -14.35                  | -35.19                  | -48.35                   | 2.86                       | 11.86                       | H                     |
|                                                | 10106                | -58.54          | -25              | -33.54                  | -53.93                  | -67.44                   | 3.21                       | 12.11                       | H                     |
|                                                | 5054                 | -48.92          | -25              | -23.92                  | -36.66                  | -55.48                   | 2.41                       | 8.97                        | V                     |
|                                                | 7580                 | -47.18          | -25              | -22.18                  | -41.44                  | -56.18                   | 2.86                       | 11.86                       | V                     |
|                                                | 10106                | -57.09          | -25              | -32.09                  | -52.61                  | -65.99                   | 3.21                       | 12.11                       | V                     |

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



## **Appendix D. Photographs of EUT**

Please refer to Sporton report number EP570906-04 which is issued separately.