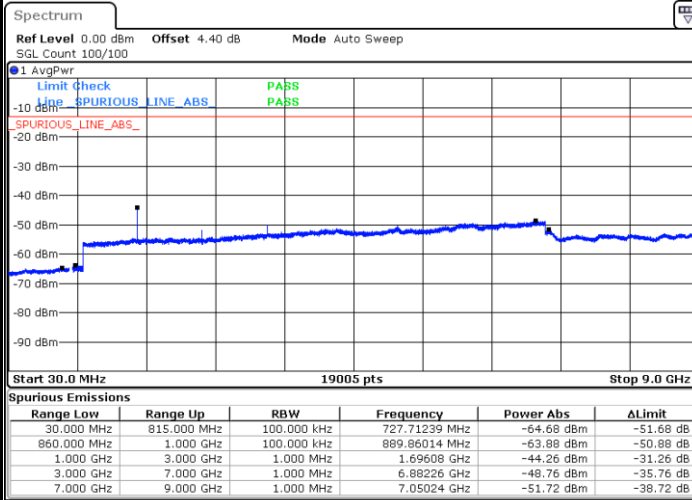




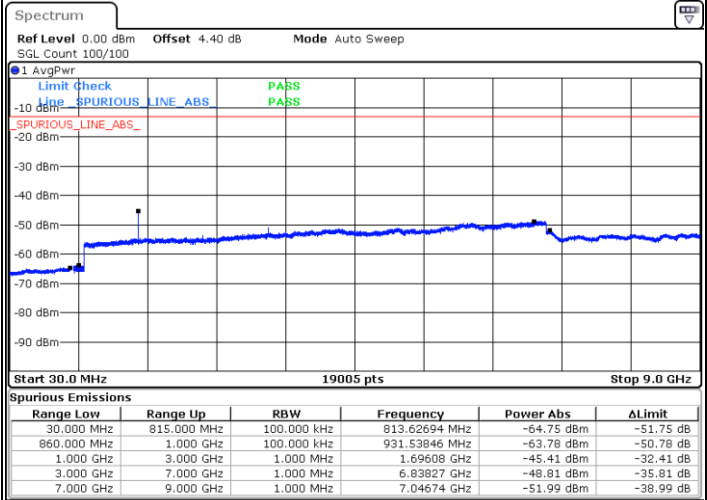
## LTE Band 26 / 1.4MHz

## Highest Channel / QPSK



Date: 26 DEC 2017 10:31:11

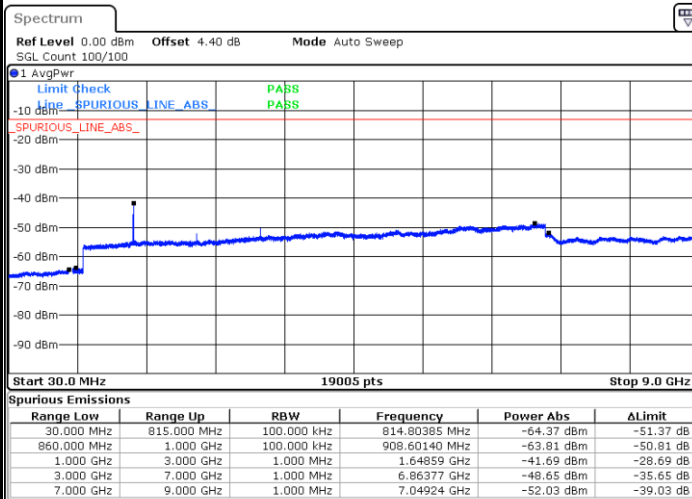
## Highest Channel / 16QAM



Date: 26 DEC 2017 10:31:36

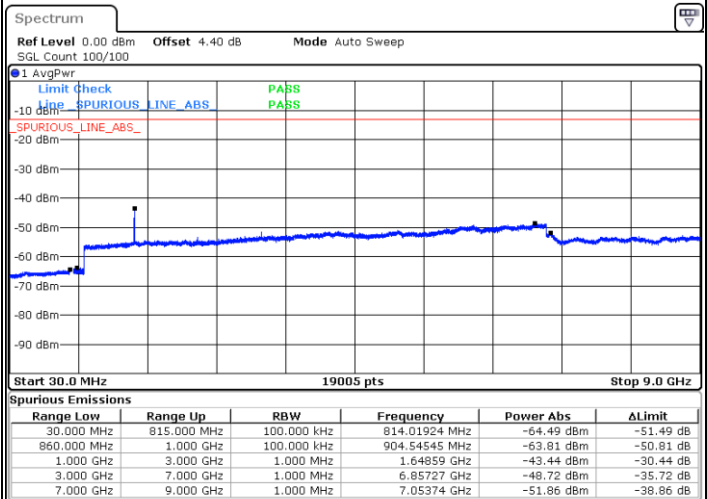
## LTE Band 26 / 3MHz

## Lowest Channel / QPSK



Date: 26 DEC 2017 10:32:13

## Lowest Channel / 16QAM

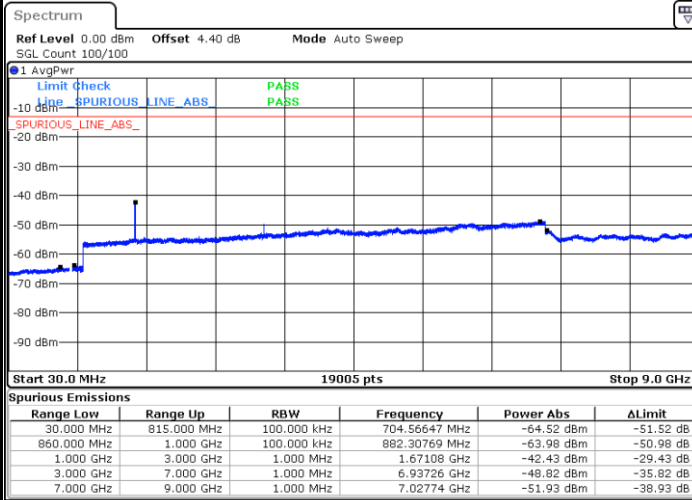


Date: 26 DEC 2017 10:32:40



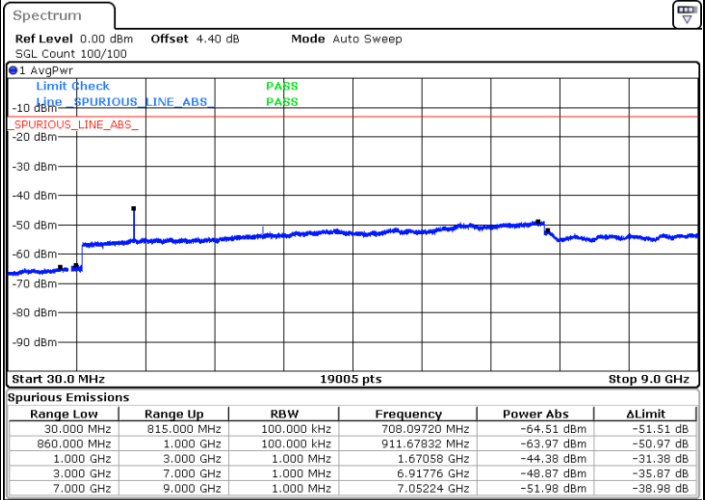
## LTE Band 26 / 3MHz

## Middle Channel / QPSK



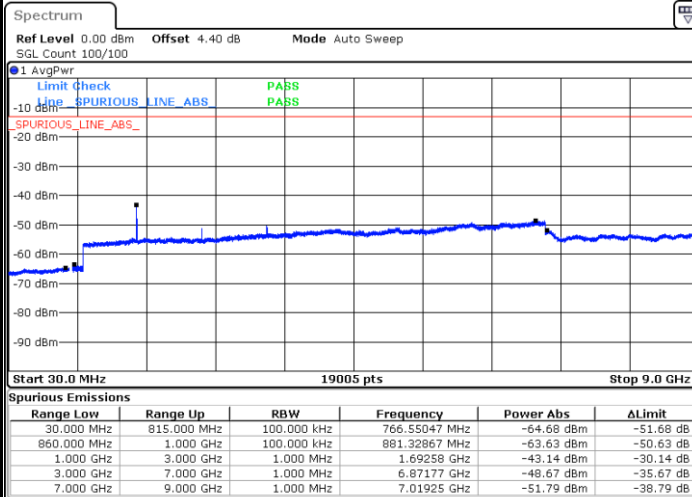
Date: 26 DEC 2017 10:33:34

## Middle Channel / 16QAM



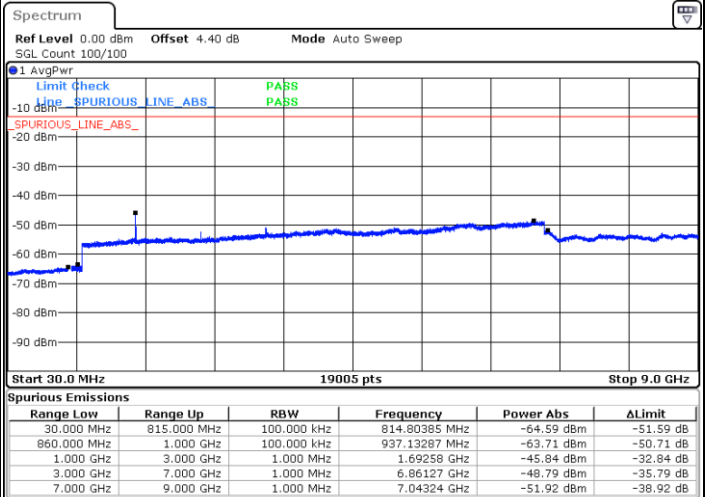
Date: 26 DEC 2017 10:33:09

## Highest Channel / QPSK



Date: 26 DEC 2017 10:35:38

## Highest Channel / 16QAM

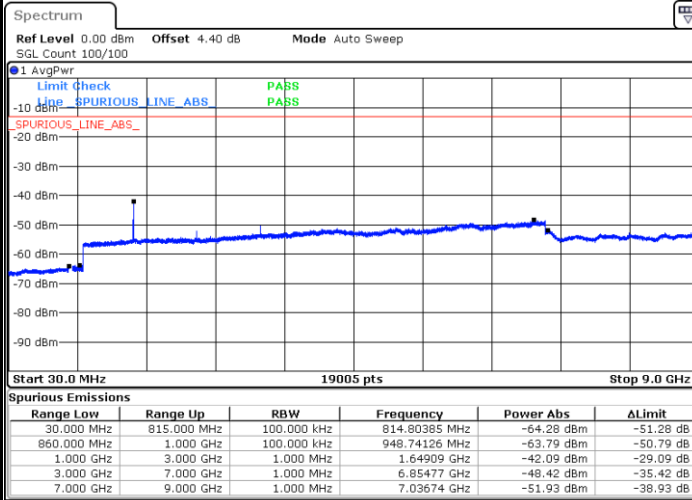


Date: 26 DEC 2017 10:36:03



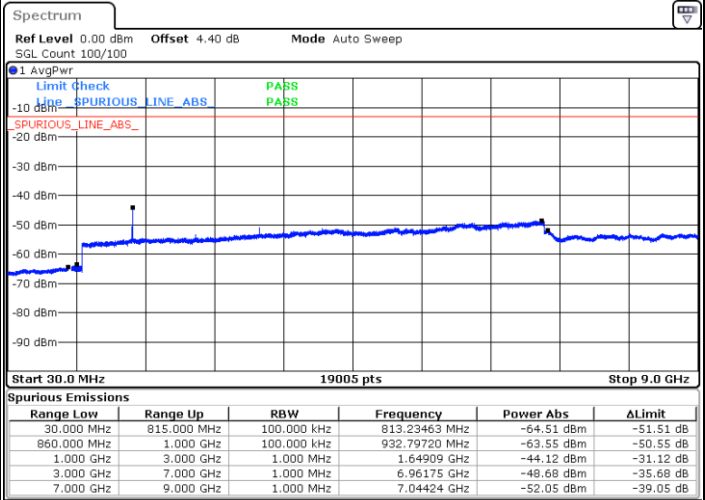
## LTE Band 26 / 5MHz

## Lowest Channel / QPSK



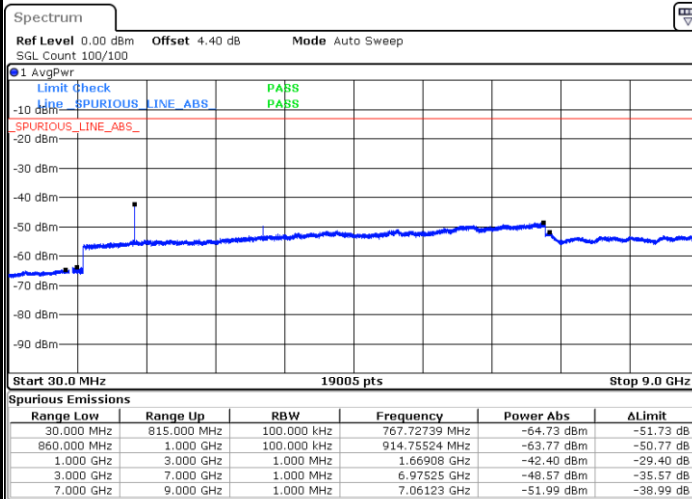
Date: 26 DEC 2017 10:41:46

## Lowest Channel / 16QAM



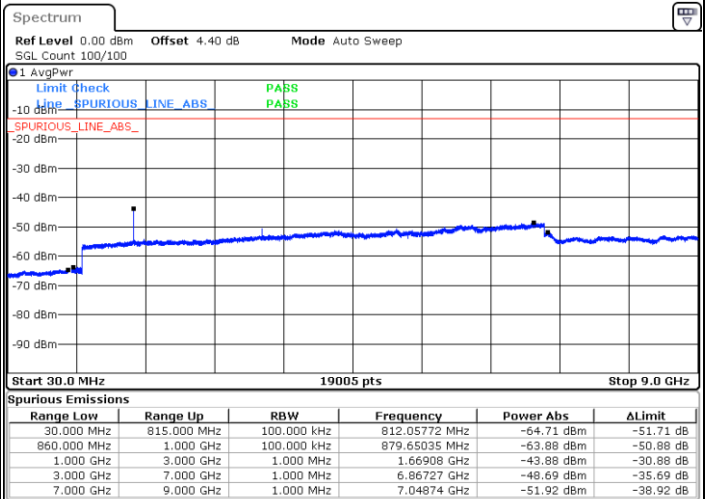
Date: 26 DEC 2017 10:42:20

## Middle Channel / QPSK



Date: 26 DEC 2017 10:43:08

## Middle Channel / 16QAM

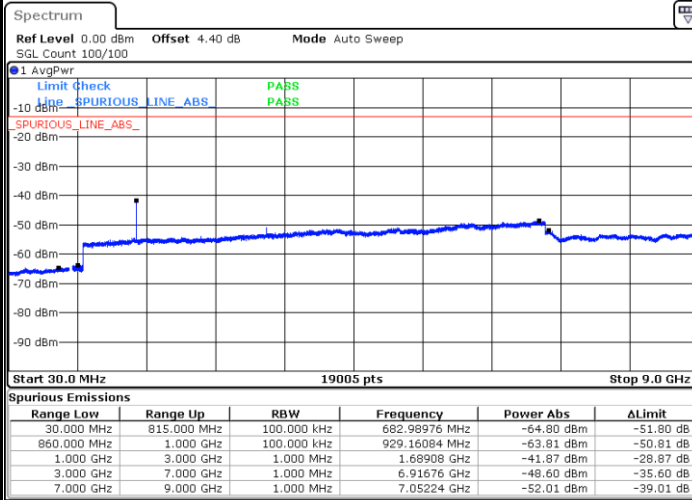


Date: 26 DEC 2017 10:42:43



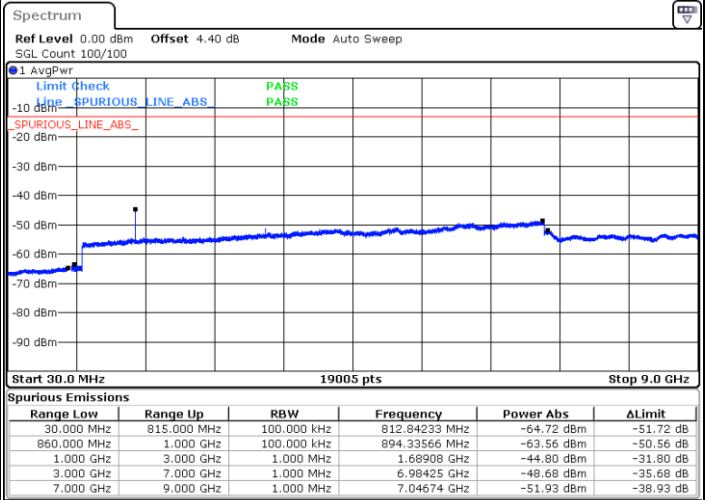
## LTE Band 26 / 5MHz

## Highest Channel / QPSK



Date: 26 DEC 2017 10:45:59

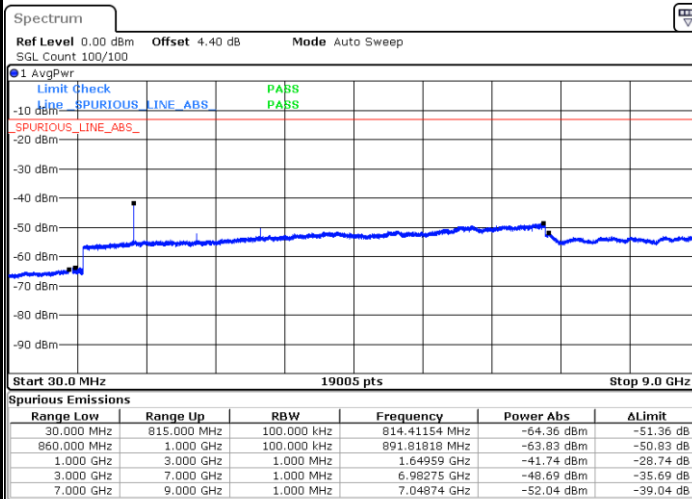
## Highest Channel / 16QAM



Date: 26 DEC 2017 10:46:25

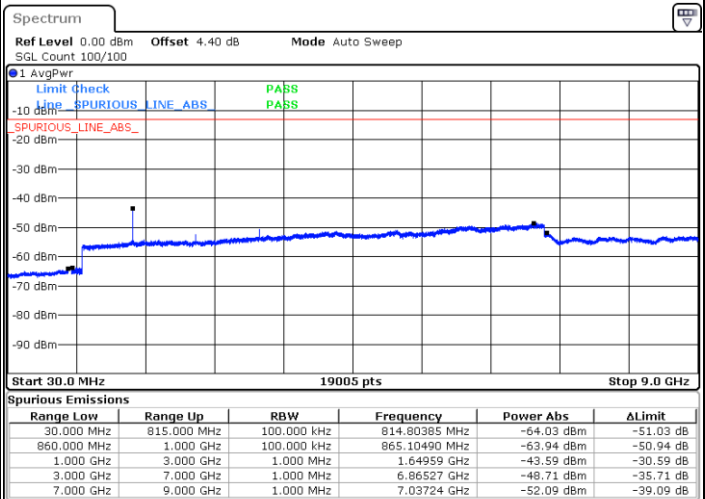
## LTE Band 26 / 10MHz

## Lowest Channel / QPSK



Date: 26 DEC 2017 10:46:58

## Lowest Channel / 16QAM

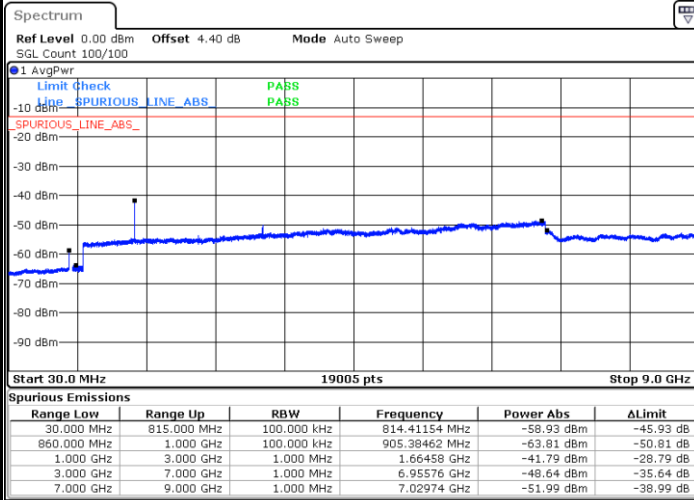


Date: 26 DEC 2017 10:47:23



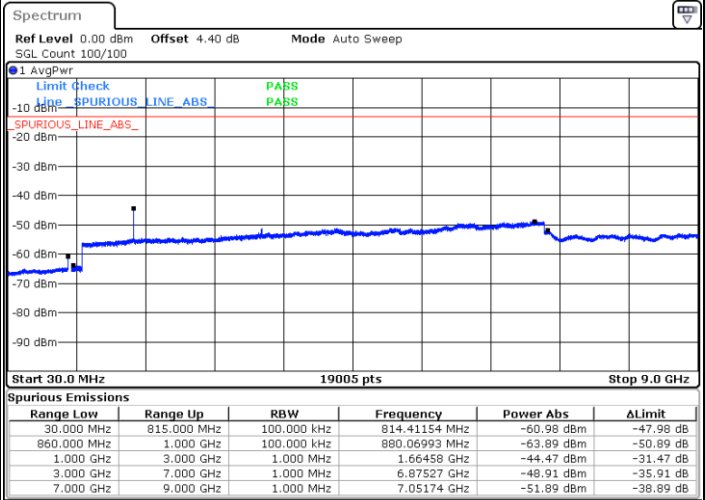
## LTE Band 26 / 10MHz

## Middle Channel / QPSK



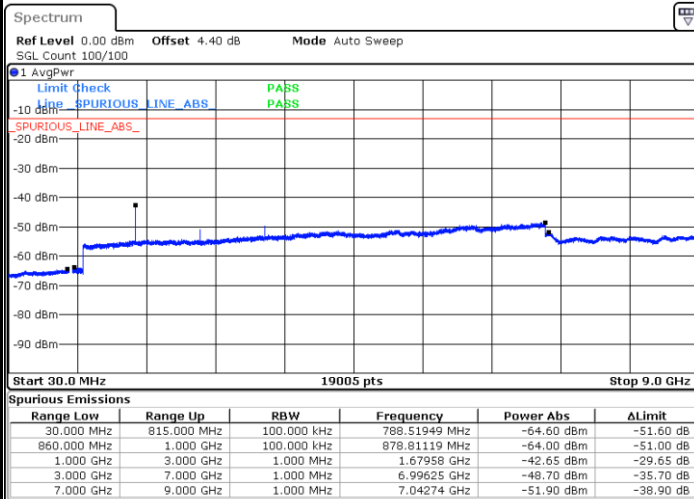
Date: 26 DEC 2017 10:48:12

## Middle Channel / 16QAM



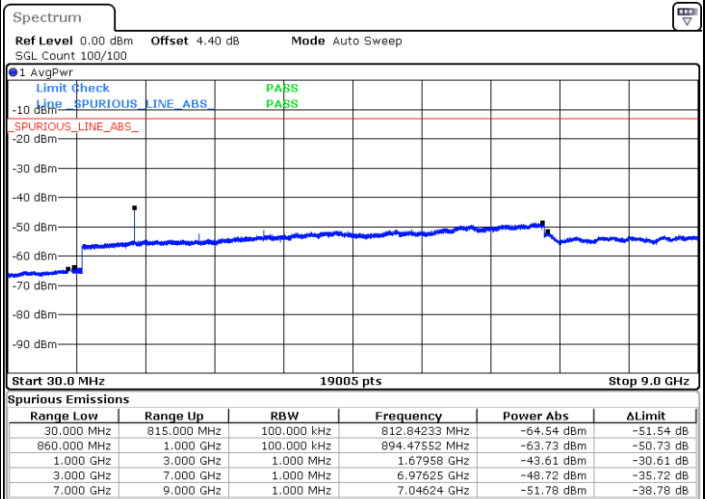
Date: 26 DEC 2017 10:47:48

## Highest Channel / QPSK



Date: 26 DEC 2017 10:48:41

## Highest Channel / 16QAM

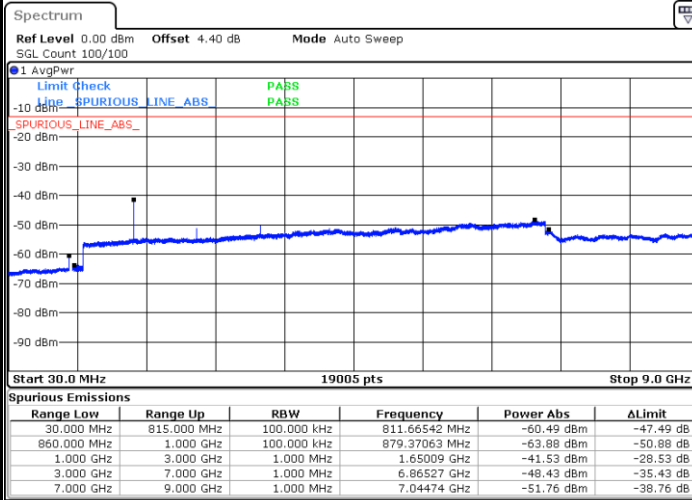


Date: 26 DEC 2017 10:49:06



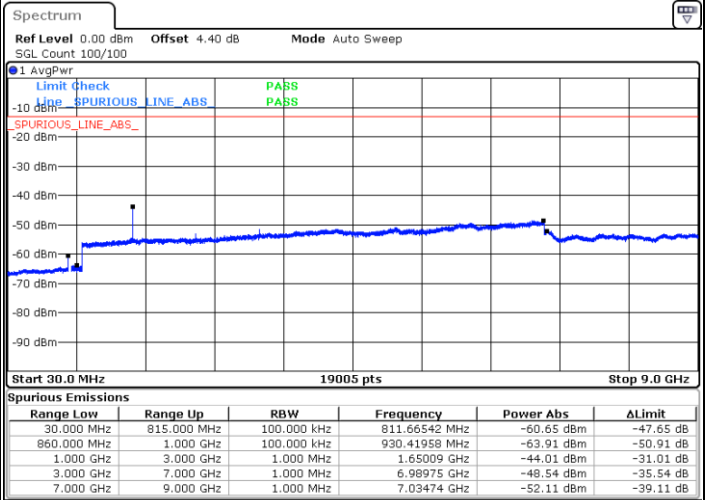
## LTE Band 26 / 15MHz

## Lowest Channel / QPSK



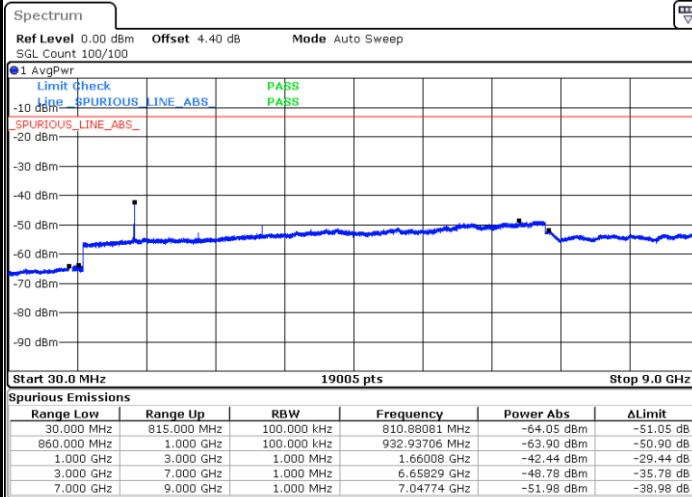
Date: 26 DEC 2017 10:13:41

## Lowest Channel / 16QAM



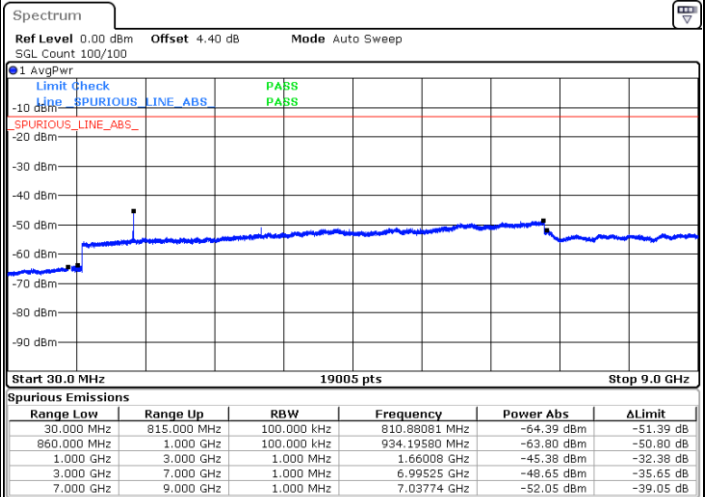
Date: 26 DEC 2017 10:14:05

## Middle Channel / QPSK



Date: 26 DEC 2017 10:15:00

## Middle Channel / 16QAM

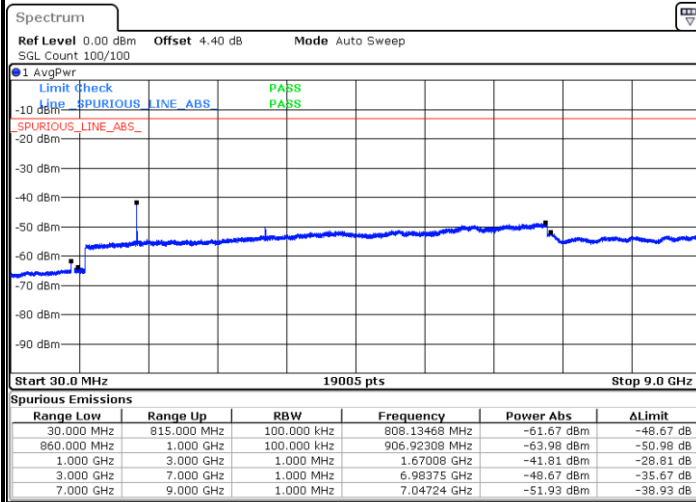


Date: 26 DEC 2017 10:14:33



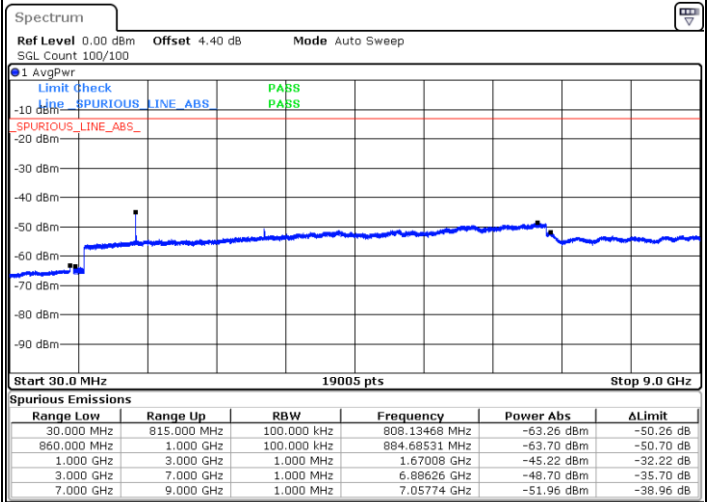
## LTE Band 26 / 15MHz

## Highest Channel / QPSK



Date: 26 DEC. 2017 10:15:34

## Highest Channel / 16QAM

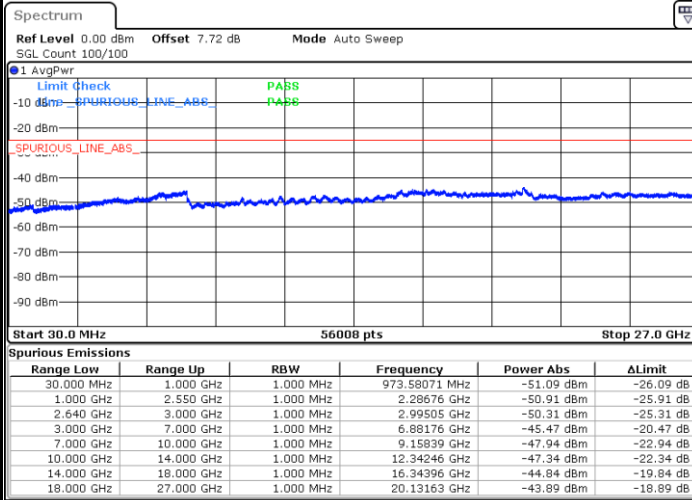


Date: 26 DEC. 2017 10:15:59



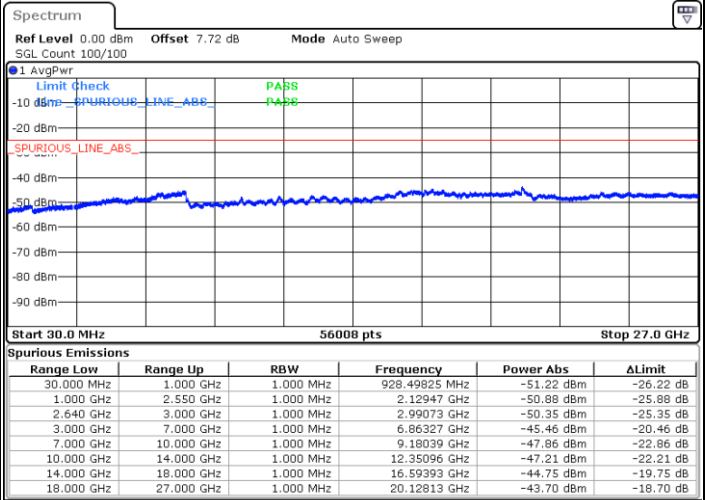
## LTE Band 38 / 5MHz

## Lowest Channel / QPSK



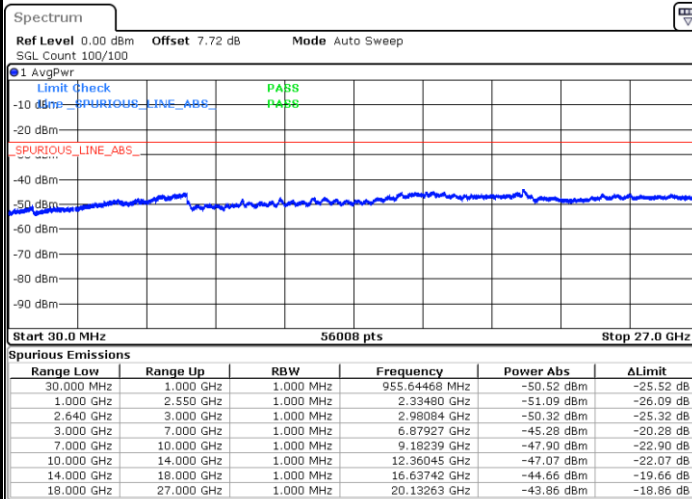
Date: 26 DEC 2017 07:55:42

## Lowest Channel / 16QAM



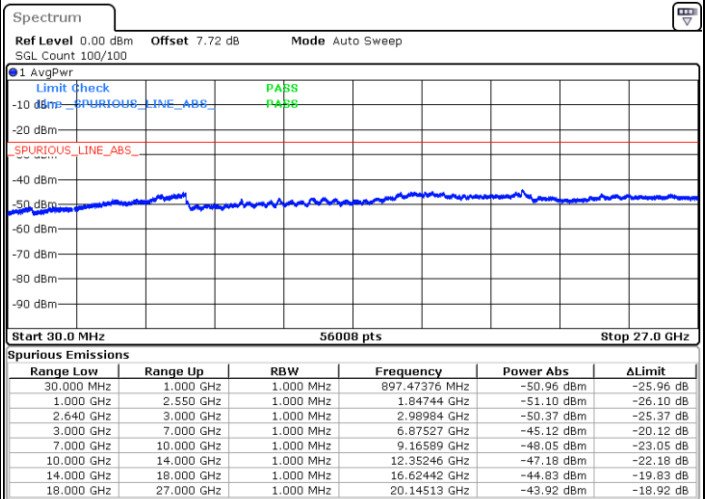
Date: 26 DEC 2017 07:57:58

## Middle Channel / QPSK



Date: 26 DEC 2017 07:59:42

## Middle Channel / 16QAM

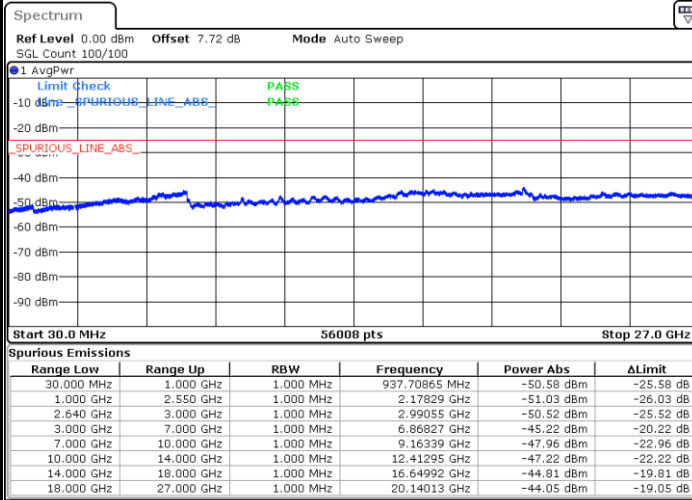


Date: 26 DEC 2017 07:58:53



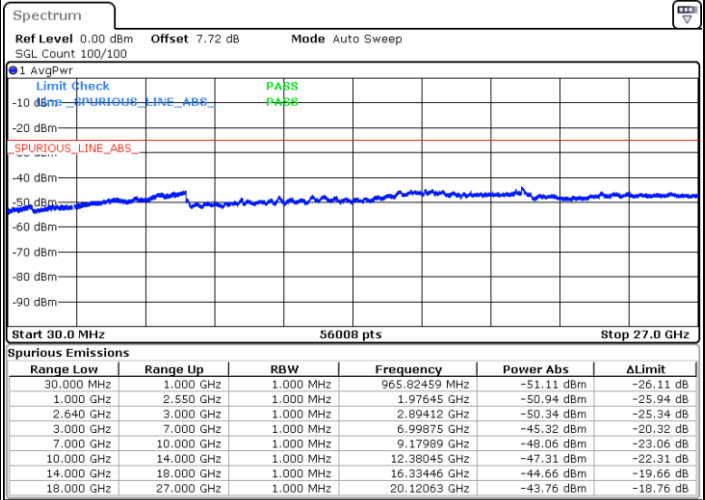
## LTE Band 38 / 5MHz

## Highest Channel / QPSK



Date: 26 DEC 2017 08:01:36

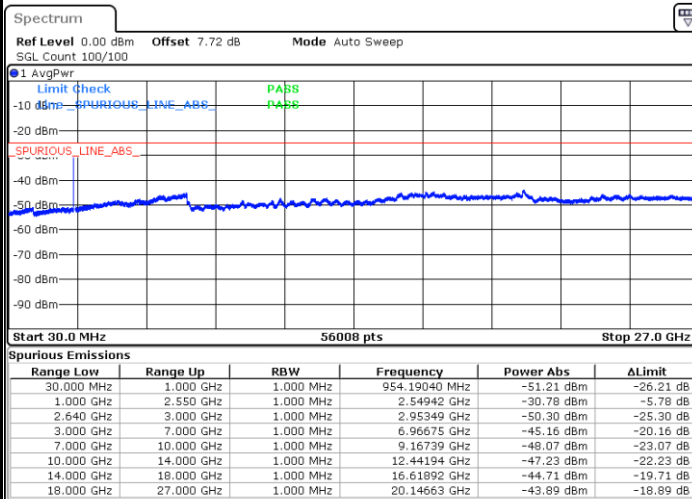
## Highest Channel / 16QAM



Date: 26 DEC 2017 08:02:33

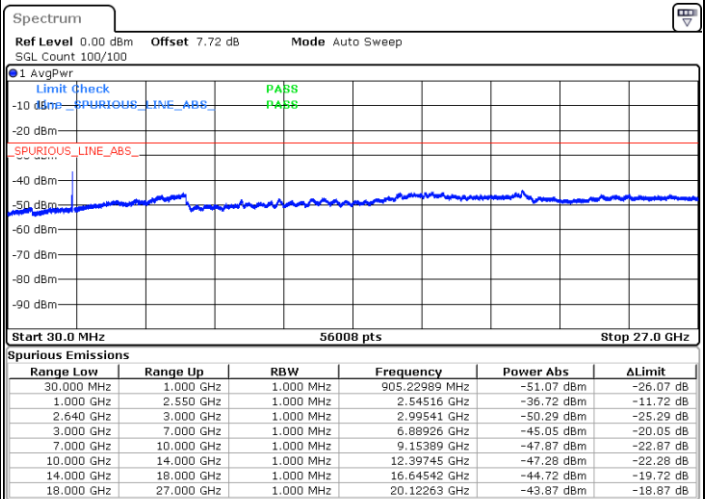
## LTE Band 38 / 10MHz

## Lowest Channel / QPSK



Date: 26 DEC 2017 08:04:03

## Lowest Channel / 16QAM

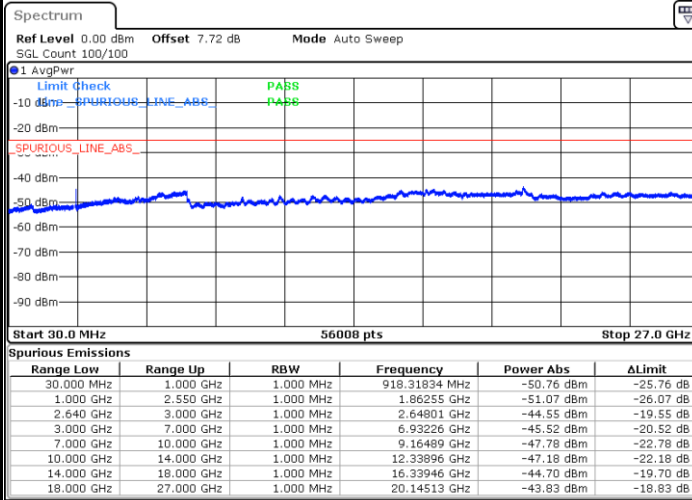


Date: 26 DEC 2017 08:06:00



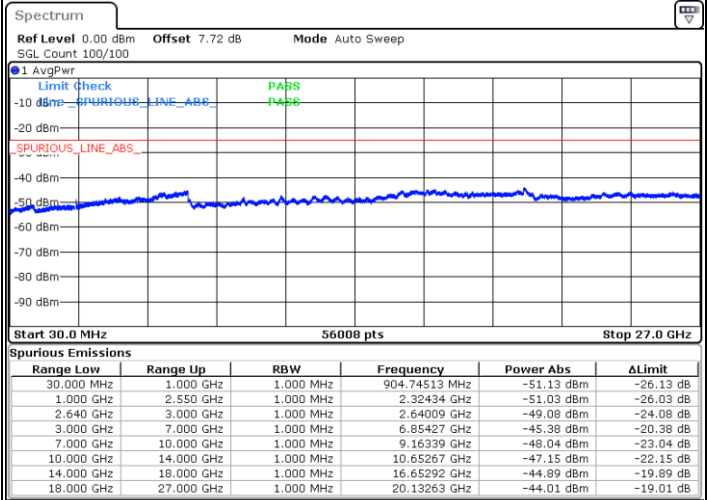
## LTE Band 38 / 10MHz

## Middle Channel / QPSK



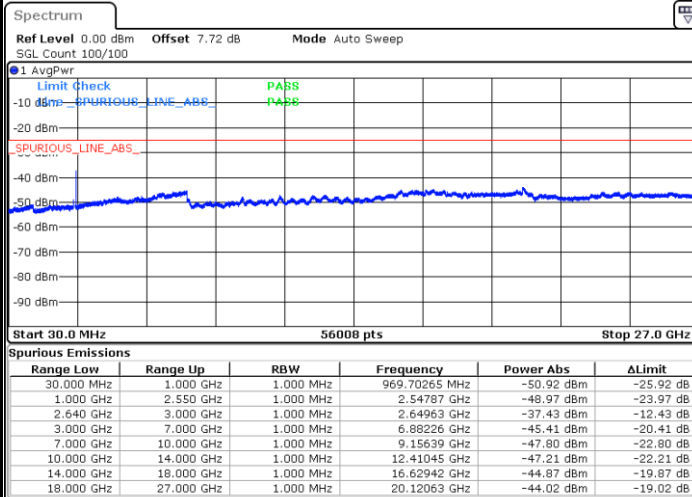
Date: 26 DEC 2017 08:07:59

## Middle Channel / 16QAM



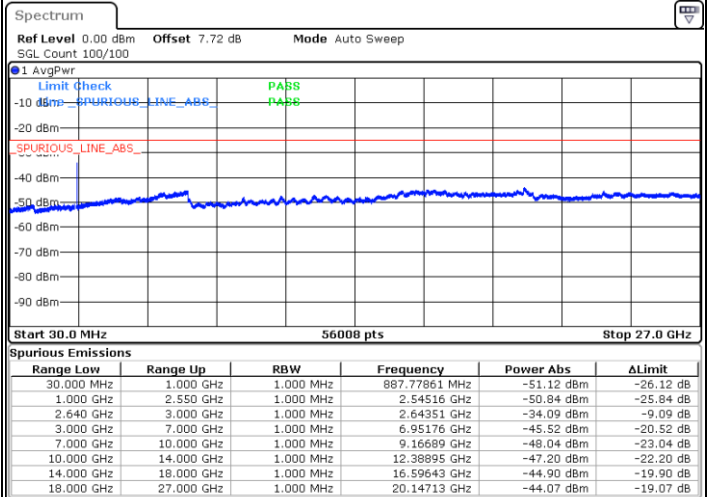
Date: 26 DEC 2017 08:08:53

## Highest Channel / QPSK



Date: 26 DEC 2017 08:10:58

## Highest Channel / 16QAM

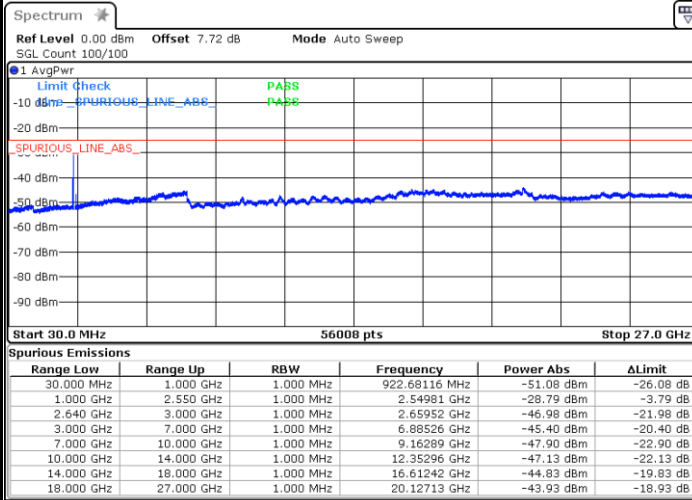


Date: 26 DEC 2017 08:09:46



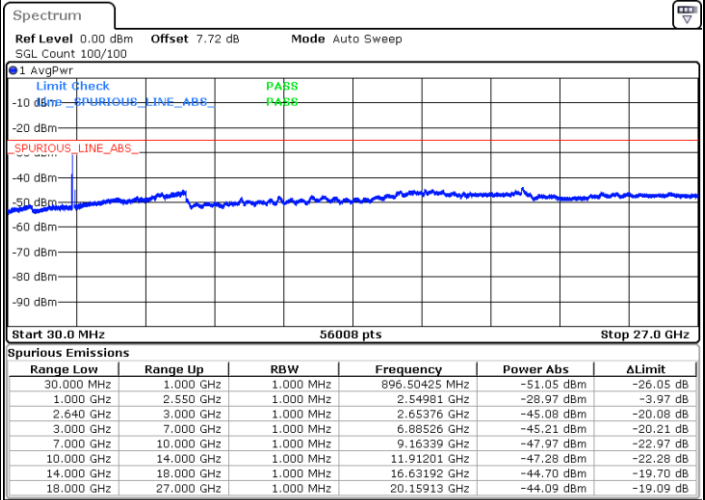
## LTE Band 38 / 15MHz

## Lowest Channel / QPSK



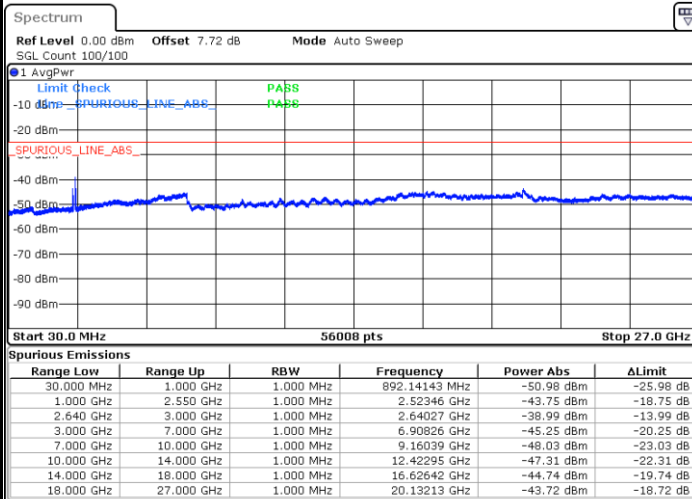
Date: 26 DEC 2017 08:13:12

## Lowest Channel / 16QAM



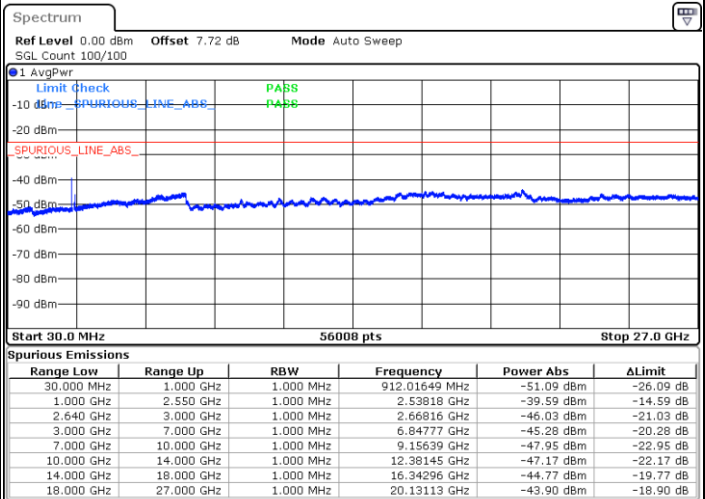
Date: 26 DEC 2017 08:14:06

## Middle Channel / QPSK



Date: 26 DEC 2017 08:16:20

## Middle Channel / 16QAM

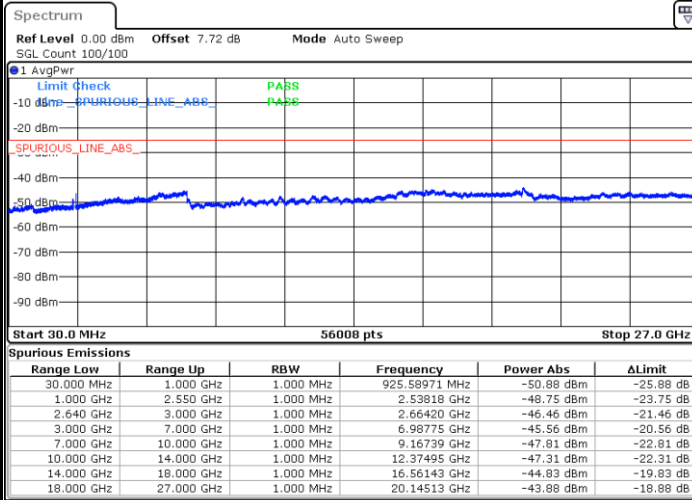


Date: 26 DEC 2017 08:15:03



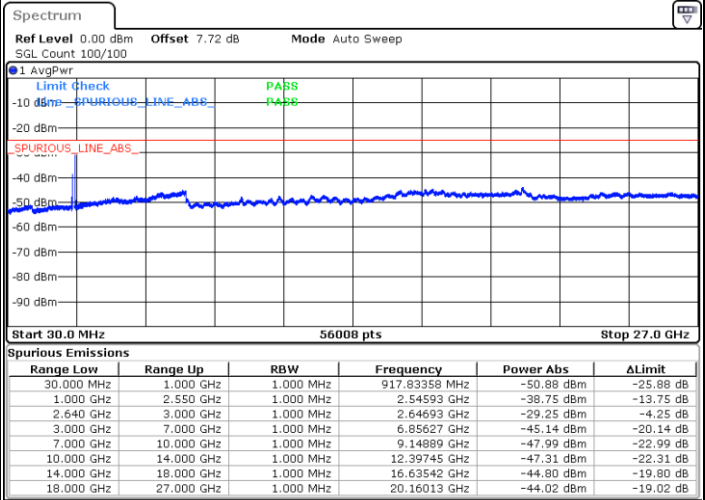
## LTE Band 38 / 15MHz

## Highest Channel / QPSK



Date: 26 DEC 2017 08:18:51

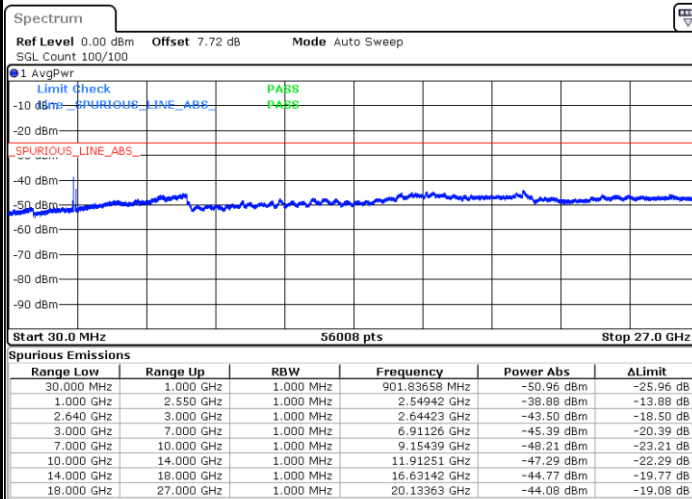
## Highest Channel / 16QAM



Date: 26 DEC 2017 08:20:46

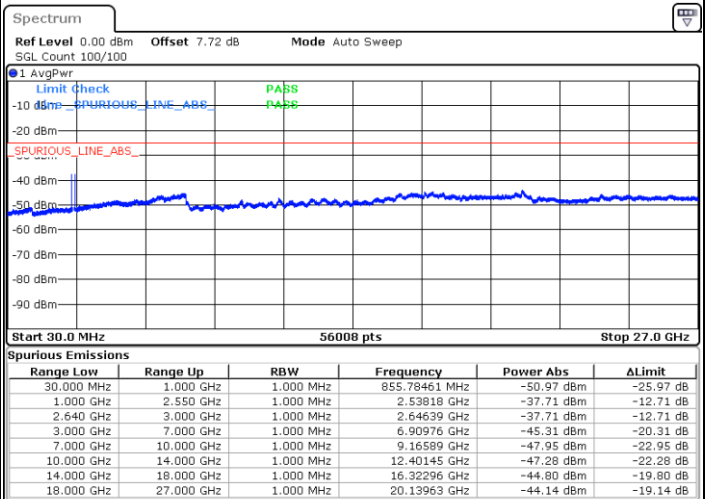
## LTE Band 38 / 20MHz

## Lowest Channel / QPSK



Date: 26 DEC 2017 08:21:56

## Lowest Channel / 16QAM

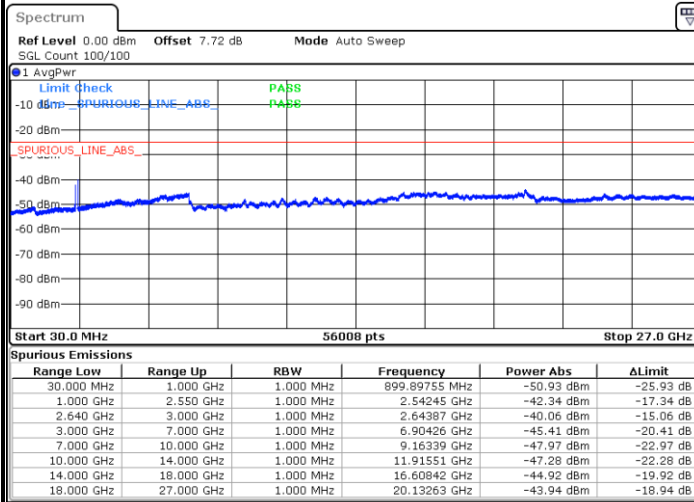


Date: 26 DEC 2017 08:22:55



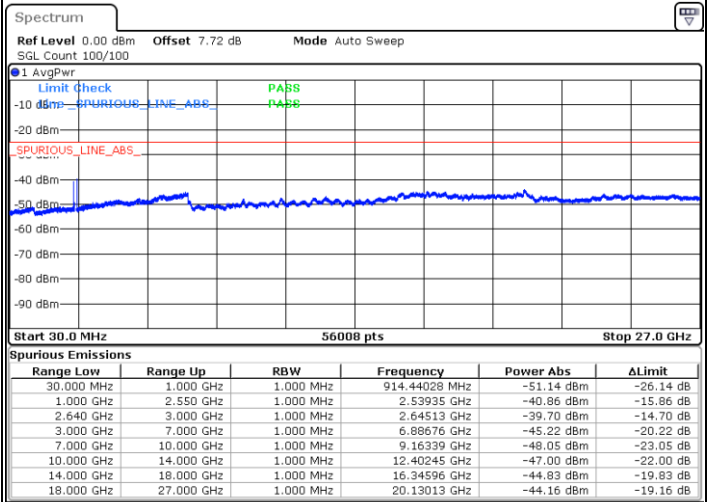
## LTE Band 38 / 20MHz

## Middle Channel / QPSK



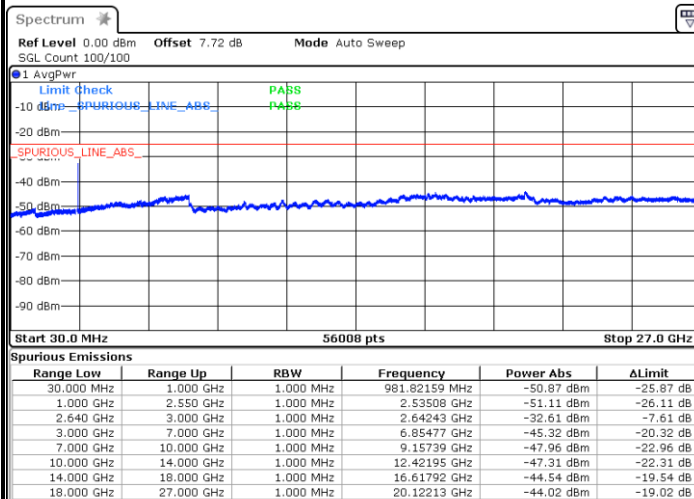
Date: 26 DEC 2017 08:25:05

## Middle Channel / 16QAM



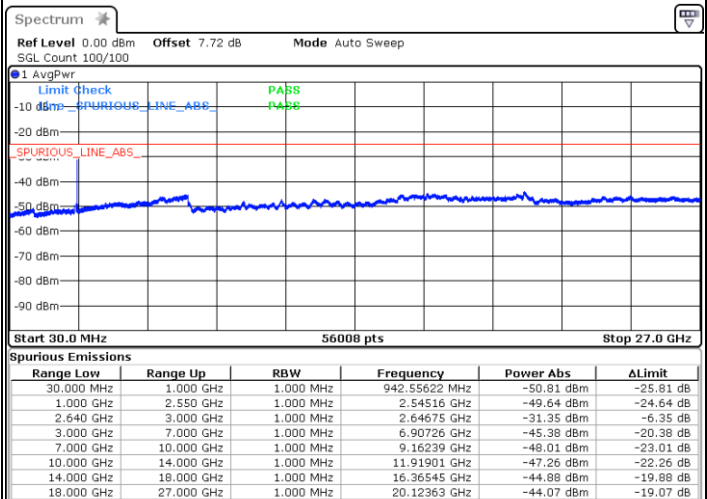
Date: 26 DEC 2017 08:24:01

## Highest Channel / QPSK



Date: 26 DEC 2017 08:26:20

## Highest Channel / 16QAM

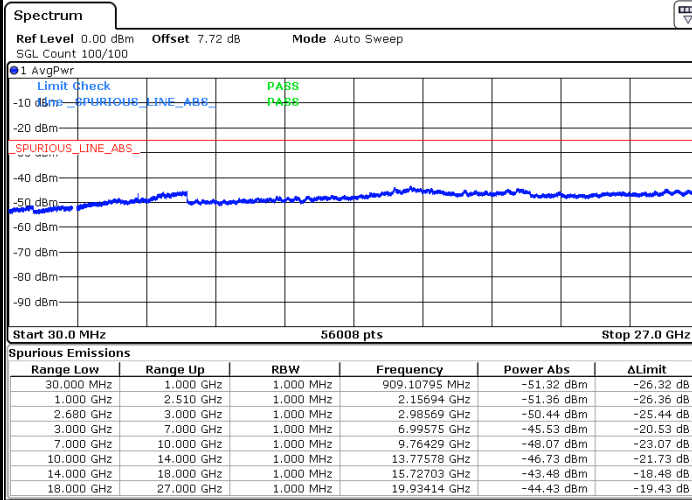


Date: 26 DEC 2017 08:27:46



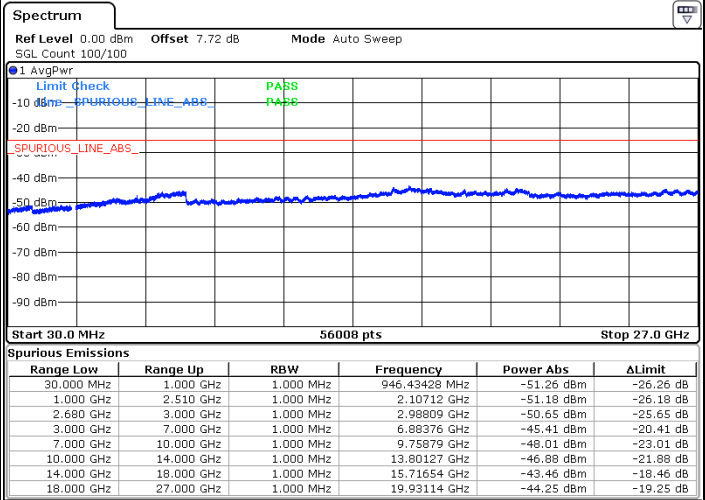
## LTE Band 41 / 5MHz

## Lowest Channel / QPSK



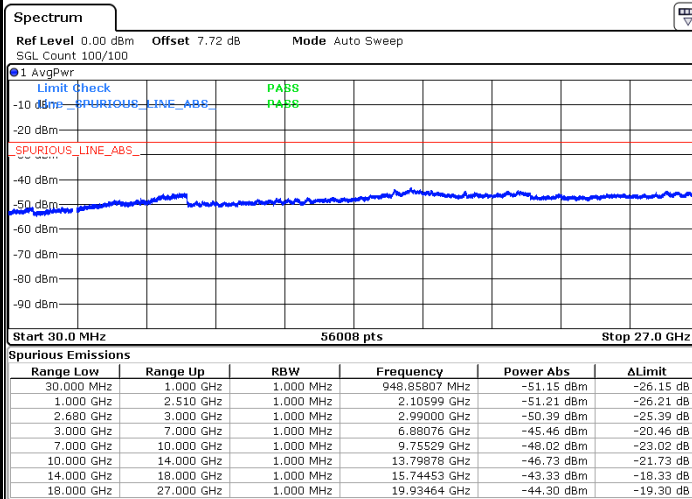
Date: 26 JAN 2018 10:03:34

## Lowest Channel / 16QAM



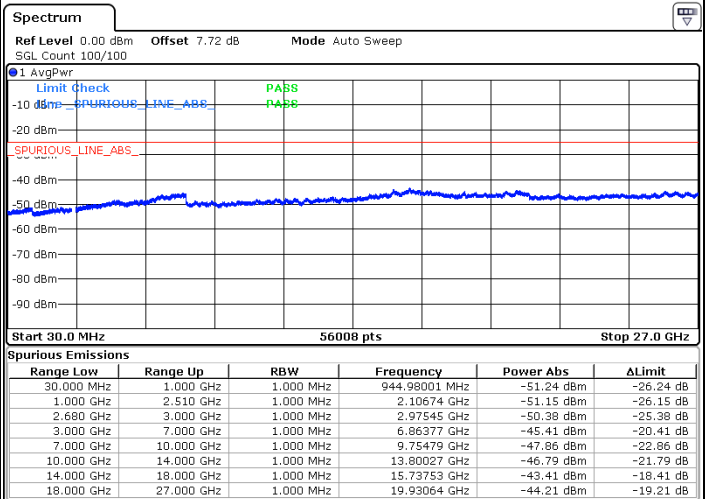
Date: 26 JAN 2018 10:04:05

## Middle Channel / QPSK



Date: 26 JAN 2018 10:06:25

## Middle Channel / 16QAM

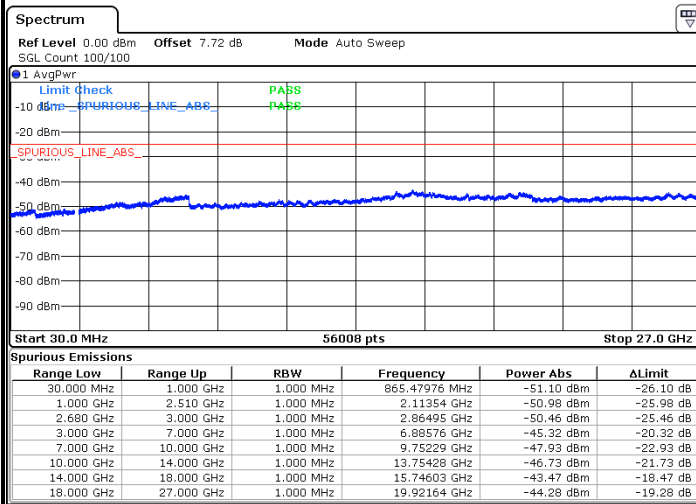


Date: 26 JAN 2018 10:05:32



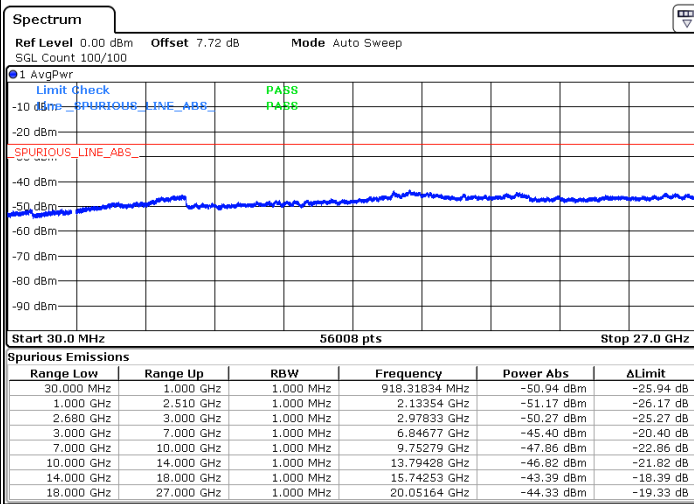
## LTE Band 41 / 5MHz

## Highest Channel / QPSK



Date: 26 JAN 2018 10:07:13

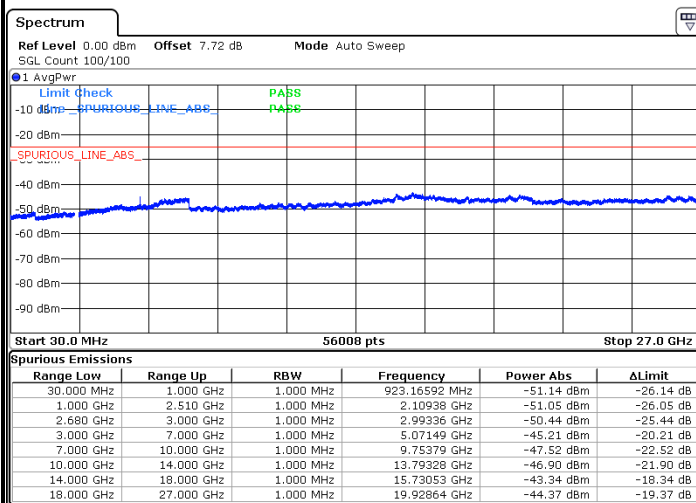
## Highest Channel / 16QAM



Date: 26 JAN 2018 10:08:03

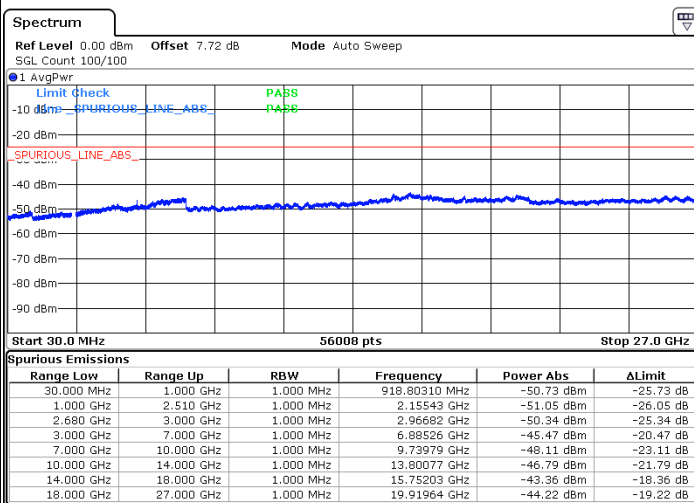
## LTE Band 41 / 10MHz

## Lowest Channel / QPSK



Date: 26 JAN 2018 10:09:06

## Lowest Channel / 16QAM

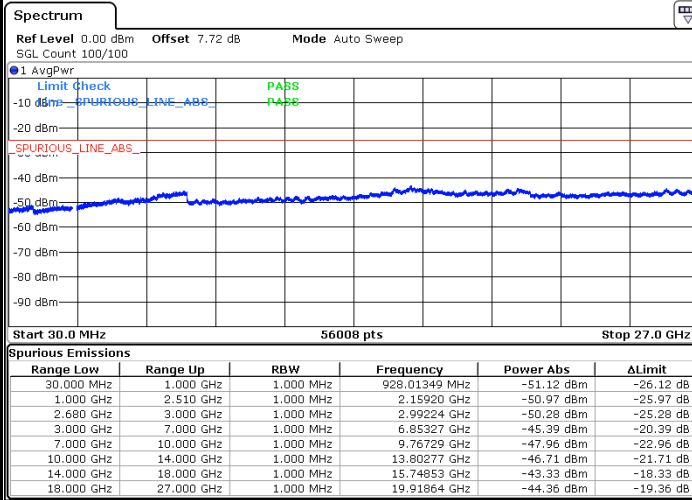


Date: 26 JAN 2018 10:10:10



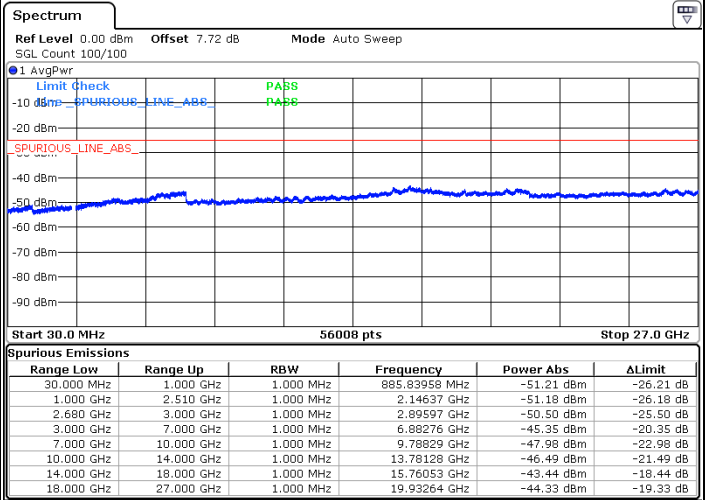
## LTE Band 41 / 10MHz

## Middle Channel / QPSK



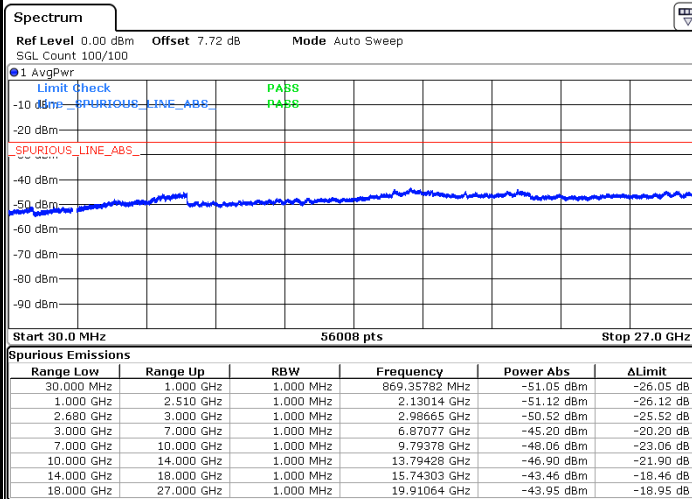
Date: 26 JAN 2018 10:11:56

## Middle Channel / 16QAM



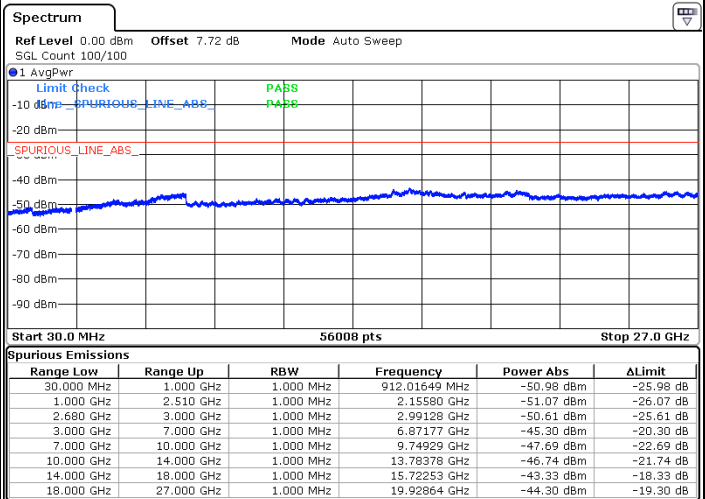
Date: 26 JAN 2018 10:11:50

## Highest Channel / QPSK



Date: 26 JAN 2018 10:14:26

## Highest Channel / 16QAM

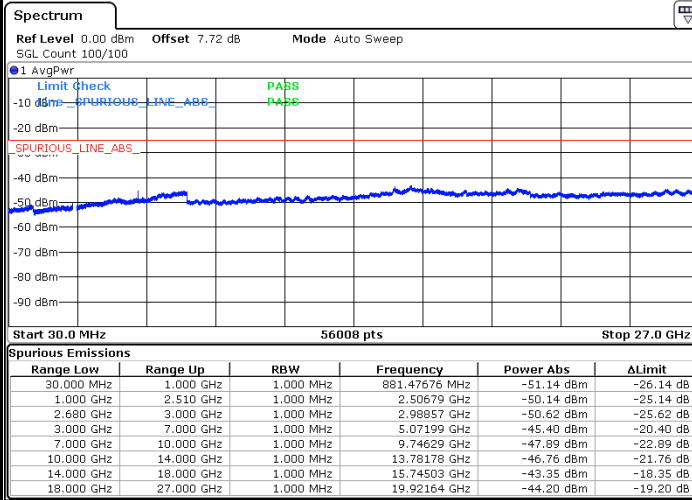


Date: 26 JAN 2018 10:13:37



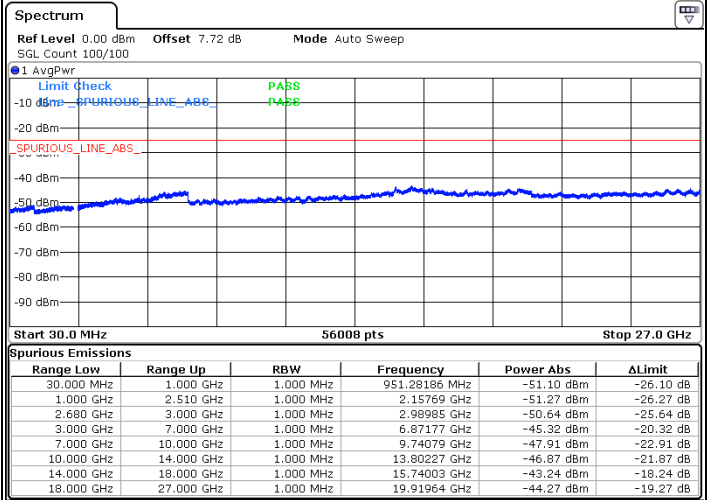
## LTE Band 41 / 15MHz

## Lowest Channel / QPSK



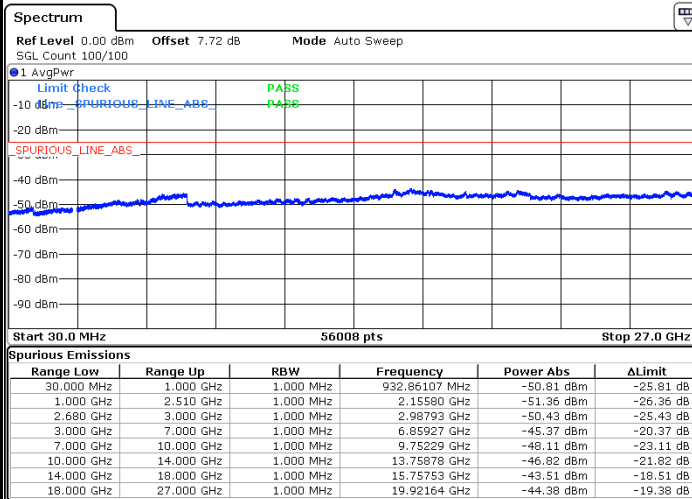
Date: 26 JAN 2018 10:15:22

## Lowest Channel / 16QAM



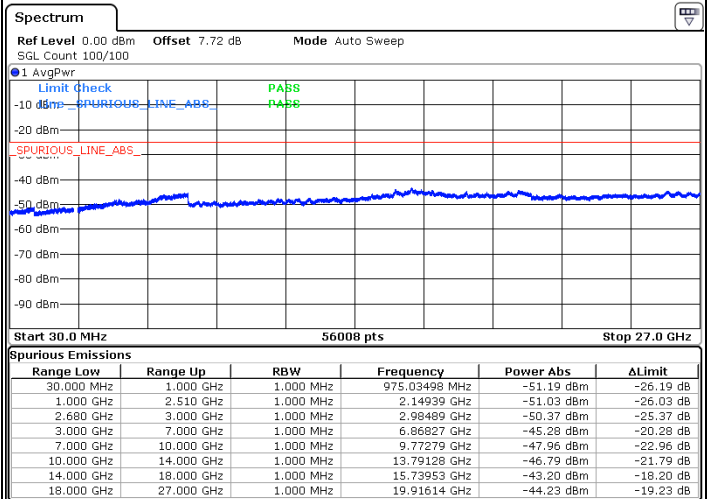
Date: 26 JAN 2018 10:16:16

## Middle Channel / QPSK



Date: 26 JAN 2018 10:17:59

## Middle Channel / 16QAM

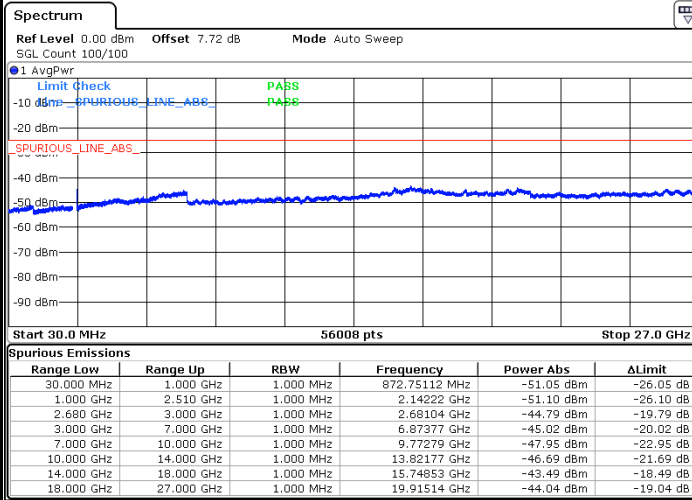


Date: 26 JAN 2018 10:17:10



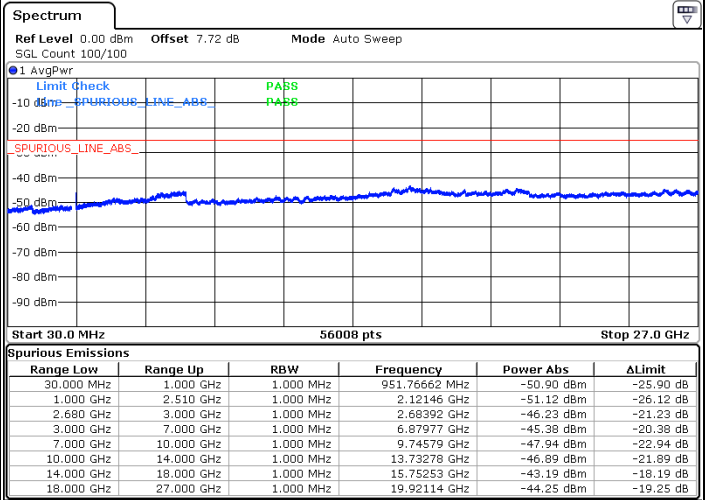
## LTE Band 41 / 15MHz

## Highest Channel / QPSK



Date: 26 JAN 2018 10:21:45

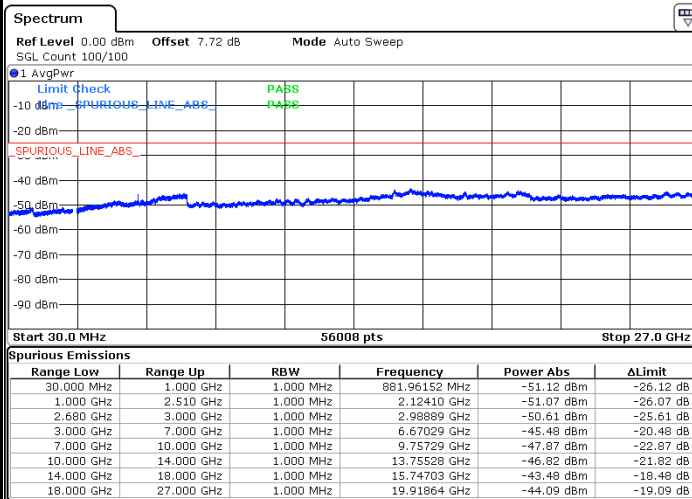
## Highest Channel / 16QAM



Date: 26 JAN 2018 10:20:56

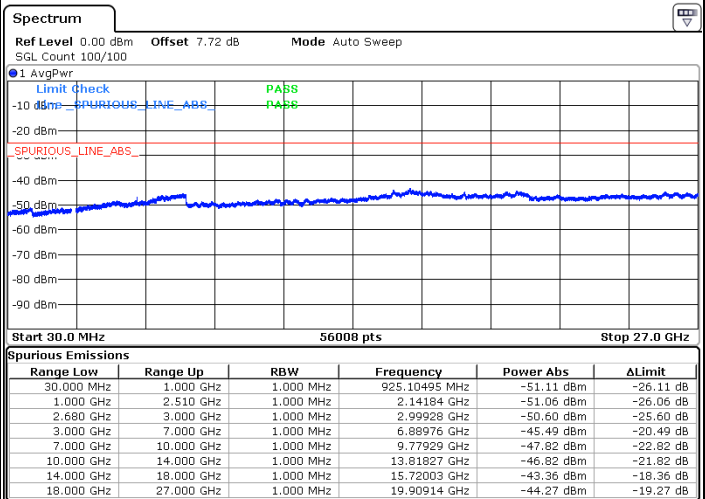
## LTE Band 41 / 20MHz

## Lowest Channel / QPSK



Date: 26 JAN 2018 10:22:59

## Lowest Channel / 16QAM

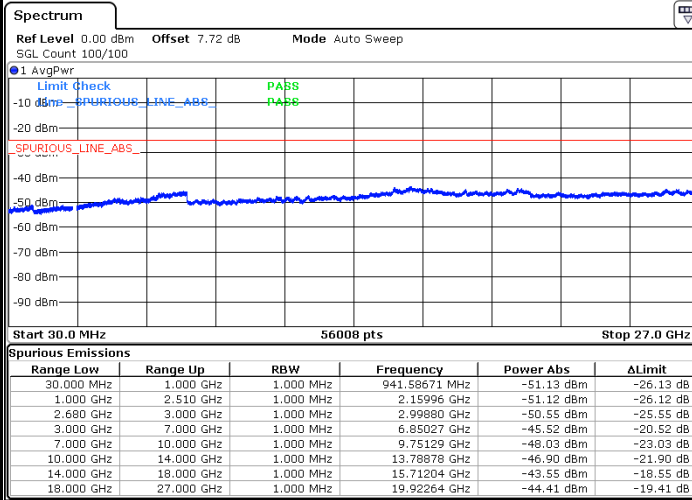


Date: 26 JAN 2018 10:23:52

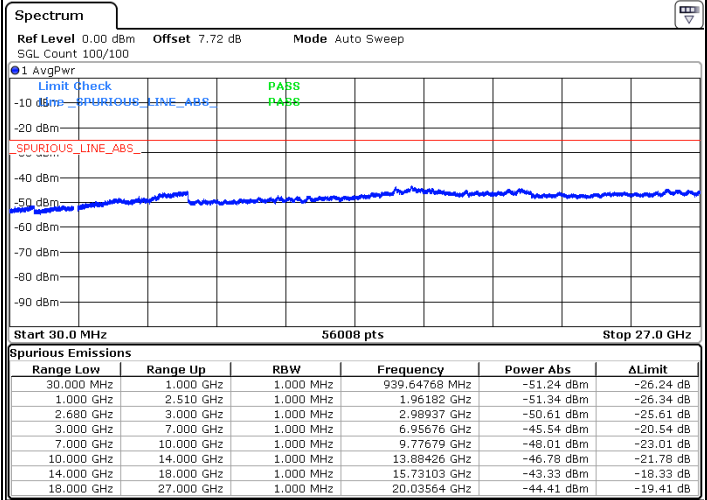


## LTE Band 41 / 20MHz

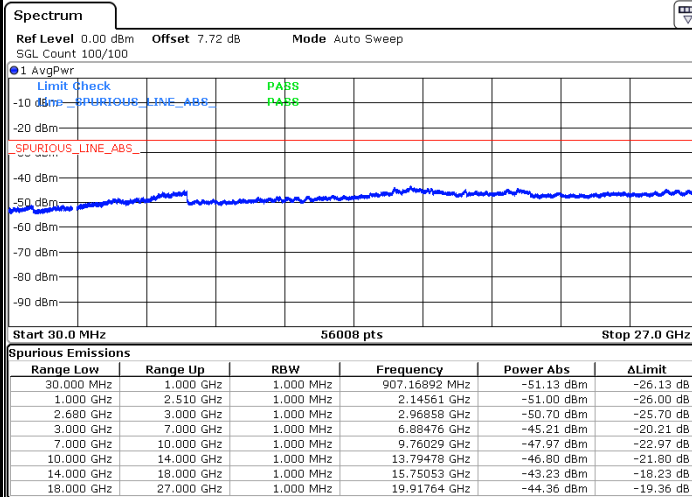
## Middle Channel / QPSK



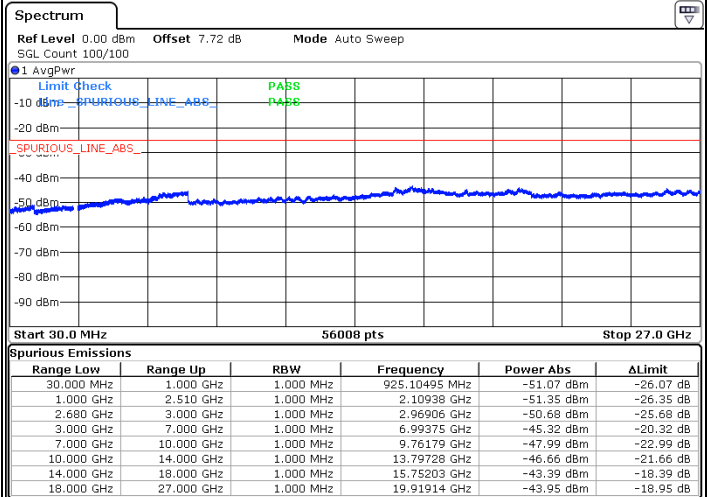
## Middle Channel / 16QAM



## Highest Channel / QPSK



## Highest Channel / 16QAM



**Frequency Stability**

| Test Conditions  |                   | LTE Band 5 (QPSK) / Middle Channel | Limit  |
|------------------|-------------------|------------------------------------|--------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | 2.5ppm |
|                  |                   | Deviation (ppm)                    | Result |
| 50               | Normal Voltage    | 0.0006                             | PASS   |
| 40               | Normal Voltage    | 0.0033                             |        |
| 30               | Normal Voltage    | 0.0044                             |        |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |        |
| 10               | Normal Voltage    | 0.0033                             |        |
| 0                | Normal Voltage    | 0.0045                             |        |
| -10              | Normal Voltage    | 0.0037                             |        |
| -20              | Normal Voltage    | 0.0004                             |        |
| -30              | Normal Voltage    | 0.0026                             |        |
| 20               | Maximum Voltage   | 0.0000                             |        |
| 20               | Normal Voltage    | 0.0032                             |        |
| 20               | Battery End Point | 0.0010                             |        |

**Note:** Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.



| Test Conditions     |                   | LTE Band 26 (QPSK) / Middle Channel | Limit  |
|---------------------|-------------------|-------------------------------------|--------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 10MHz                            | 2.5ppm |
|                     |                   | Deviation<br>(ppm)                  | Result |
| 50                  | Normal Voltage    | 0.0077                              | PASS   |
| 40                  | Normal Voltage    | 0.0117                              |        |
| 30                  | Normal Voltage    | 0.0088                              |        |
| 20(Ref.)            | Normal Voltage    | 0.0000                              |        |
| 10                  | Normal Voltage    | 0.0105                              |        |
| 0                   | Normal Voltage    | 0.0027                              |        |
| -10                 | Normal Voltage    | 0.0044                              |        |
| -20                 | Normal Voltage    | 0.0111                              |        |
| -30                 | Normal Voltage    | 0.0092                              |        |
| 20                  | Maximum Voltage   | 0.0041                              |        |
| 20                  | Normal Voltage    | 0.0023                              |        |
| 20                  | Battery End Point | 0.0096                              |        |

**Note:** Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.



| Test Conditions     |                   | LTE Band 38 (QPSK) / Middle Channel | Limit   |
|---------------------|-------------------|-------------------------------------|---------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 10MHz                            | Note 2. |
|                     |                   | Deviation<br>(ppm)                  | Result  |
| 50                  | Normal Voltage    | 0.0024                              | PASS    |
| 40                  | Normal Voltage    | 0.0009                              |         |
| 30                  | Normal Voltage    | 0.0027                              |         |
| 20(Ref.)            | Normal Voltage    | 0.0000                              |         |
| 10                  | Normal Voltage    | 0.0004                              |         |
| 0                   | Normal Voltage    | 0.0020                              |         |
| -10                 | Normal Voltage    | 0.0018                              |         |
| -20                 | Normal Voltage    | 0.0002                              |         |
| -30                 | Normal Voltage    | 0.0001                              |         |
| 20                  | Maximum Voltage   | 0.0010                              |         |
| 20                  | Normal Voltage    | 0.0007                              |         |
| 20                  | Battery End Point | 0.0022                              |         |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



| Test Conditions     |                   | LTE Band 41 (QPSK) / Middle Channel | Limit   |
|---------------------|-------------------|-------------------------------------|---------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 10MHz                            | Note 2. |
|                     |                   | Deviation<br>(ppm)                  | Result  |
| 50                  | Normal Voltage    | 0.0001                              | PASS    |
| 40                  | Normal Voltage    | 0.0009                              |         |
| 30                  | Normal Voltage    | 0.0002                              |         |
| 20(Ref.)            | Normal Voltage    | 0.0000                              |         |
| 10                  | Normal Voltage    | 0.0006                              |         |
| 0                   | Normal Voltage    | 0.0022                              |         |
| -10                 | Normal Voltage    | 0.0015                              |         |
| -20                 | Normal Voltage    | 0.0007                              |         |
| -30                 | Normal Voltage    | 0.0000                              |         |
| 20                  | Maximum Voltage   | 0.0002                              |         |
| 20                  | Normal Voltage    | 0.0019                              |         |
| 20                  | Battery End Point | 0.0021                              |         |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6V. ; Maximum Voltage =4.4V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## Appendix B. Test Results of Radiated Test

### Radiated Spurious Emission

| LTE Band 5 / 10MHz / 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                                         | 1664              | -60.10      | -13           | -47.10            | -60.42            | -62.01             | 1.14                 | 5.20                  | H                  |
|                                                | 2496              | -55.06      | -13           | -42.06            | -59.36            | -57.69             | 1.12                 | 5.90                  | H                  |
|                                                | 3327              | -56.36      | -13           | -43.36            | -60.48            | -59.57             | 1.34                 | 6.70                  | H                  |
|                                                | 1664              | -62.40      | -13           | -49.40            | -61.5             | -64.31             | 1.14                 | 5.20                  | V                  |
|                                                | 2496              | -55.77      | -13           | -42.77            | -58.84            | -58.40             | 1.12                 | 5.90                  | V                  |
|                                                | 3327              | -57.57      | -13           | -44.57            | -62.71            | -60.78             | 1.34                 | 6.70                  | V                  |

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

| LTE Band 26 / 10MHz / 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                                          | 1664              | -61.91      | -13           | -48.91            | -62.23            | -63.82             | 1.14                 | 5.20                  | H                  |
|                                                 | 2496              | -50.15      | -13           | -37.15            | -54.71            | -52.78             | 1.12                 | 5.90                  | H                  |
|                                                 | 3327              | -61.66      | -13           | -48.66            | -65.78            | -64.87             | 1.34                 | 6.70                  | H                  |
|                                                 | 1664              | -54.80      | -13           | -41.80            | -53.99            | -56.71             | 1.14                 | 5.20                  | V                  |
|                                                 | 2496              | -33.32      | -13           | -20.32            | -41.6             | -35.95             | 1.12                 | 5.90                  | V                  |
|                                                 | 3327              | -61.48      | -13           | -48.48            | -66.62            | -64.69             | 1.34                 | 6.70                  | V                  |

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



| LTE Band 38 / 20MHz / 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                                          | 5172              | -58.93       | -25           | -33.93            | -45.52            | -65.76             | 2.46                 | 9.29                  | H                  |
|                                                 | 7760              | -50.08       | -25           | -25.08            | -46.56            | -59.27             | 3.01                 | 12.20                 | H                  |
|                                                 | 10341             | -60.50       | -25           | -35.50            | -57.37            | -69.23             | 3.52                 | 12.25                 | H                  |
|                                                 | 5172              | -62.14       | -25           | -37.14            | -46.91            | -68.97             | 2.46                 | 9.29                  | V                  |
|                                                 | 7760              | -56.88       | -25           | -31.88            | -44.8             | -66.07             | 3.01                 | 12.20                 | V                  |
|                                                 | 10341             | -62.03       | -25           | -37.03            | -58.38            | -70.76             | 3.52                 | 12.25                 | V                  |

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

| LTE Band 41 / 20MHz / 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                                          | 5172              | -59.77       | -25           | -34.77            | -46.36            | -66.60             | 2.46                 | 9.29                  | H                  |
|                                                 | 7760              | -50.02       | -25           | -25.02            | -46.50            | -59.21             | 3.01                 | 12.20                 | H                  |
|                                                 | 10344             | -61.18       | -25           | -36.18            | -58.05            | -69.91             | 3.52                 | 12.25                 | H                  |
|                                                 | 5172              | -63.22       | -25           | -38.22            | -47.99            | -70.05             | 2.46                 | 9.29                  | V                  |
|                                                 | 7760              | -59.07       | -25           | -34.07            | -46.99            | -68.26             | 3.01                 | 12.20                 | V                  |
|                                                 | 10344             | -62.28       | -25           | -37.28            | -58.63            | -71.01             | 3.52                 | 12.25                 | V                  |

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



## **Appendix D. Reference Report**

Please refer to Sporton report number FG7D0507B which is issued separately.