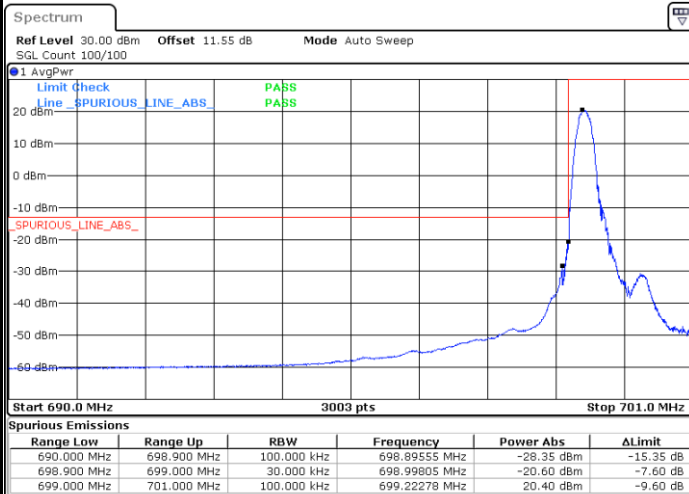




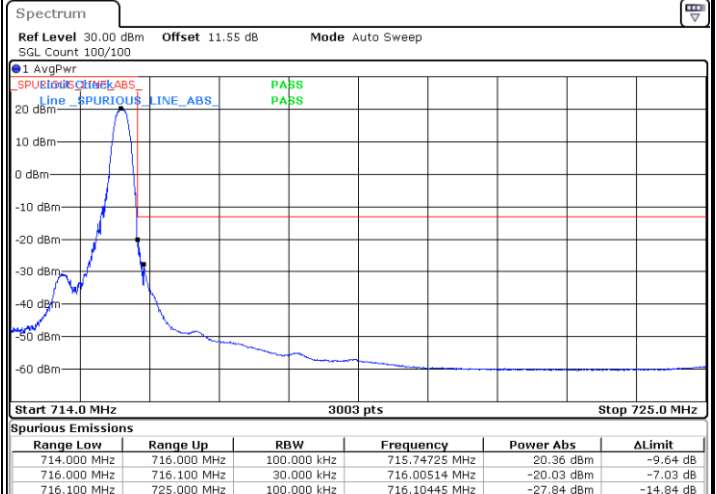
# Conducted Band Edge

## LTE Band 12 / 1.4MHz / QPSK

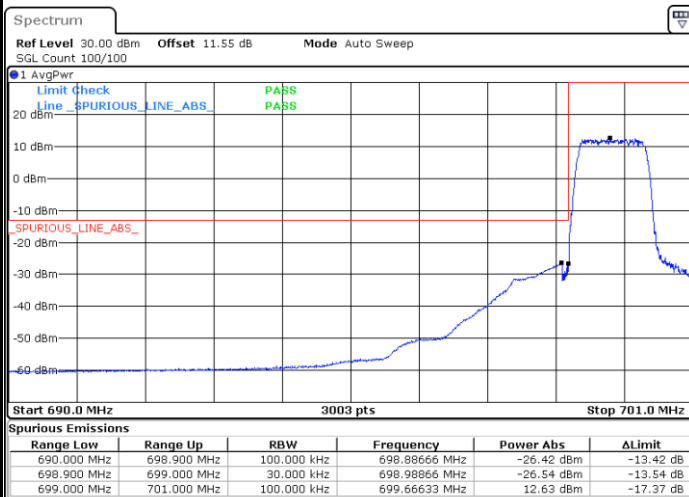
### Lowest Band Edge / 1RB



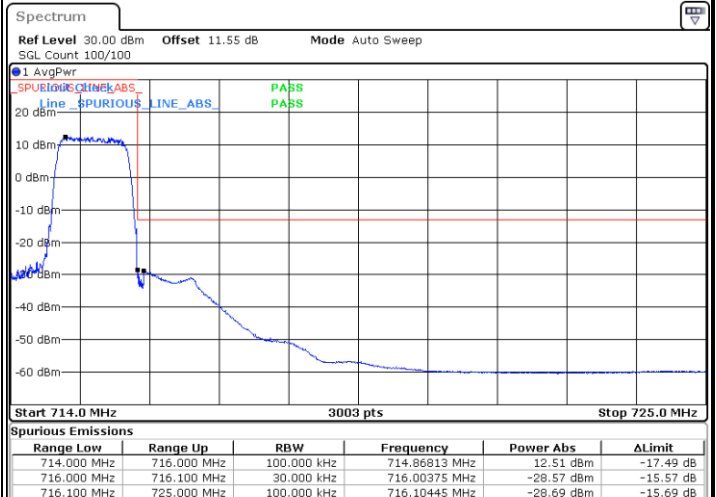
### Highest Band Edge / 1RB



### Lowest Band Edge / Full RB



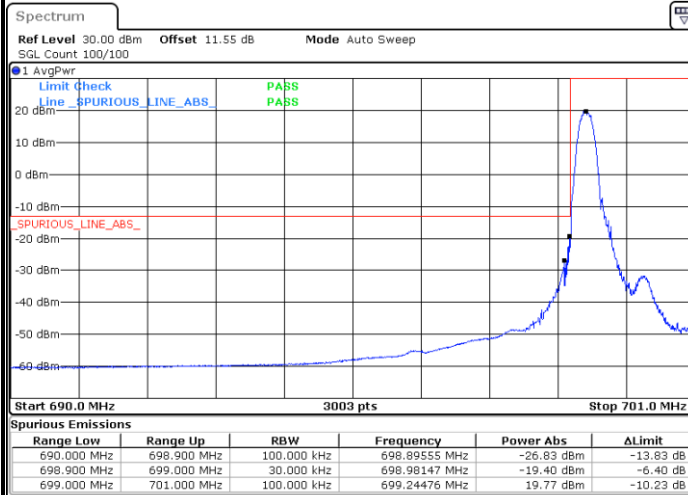
### Highest Band Edge / Full RB



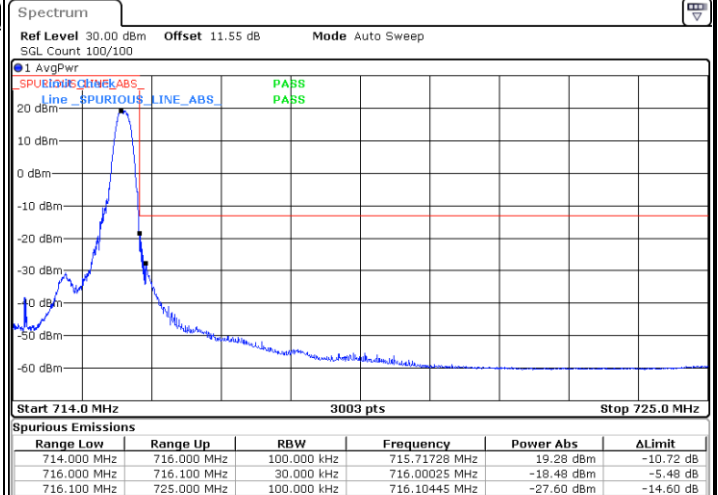


## LTE Band 12 / 1.4MHz / 16QAM

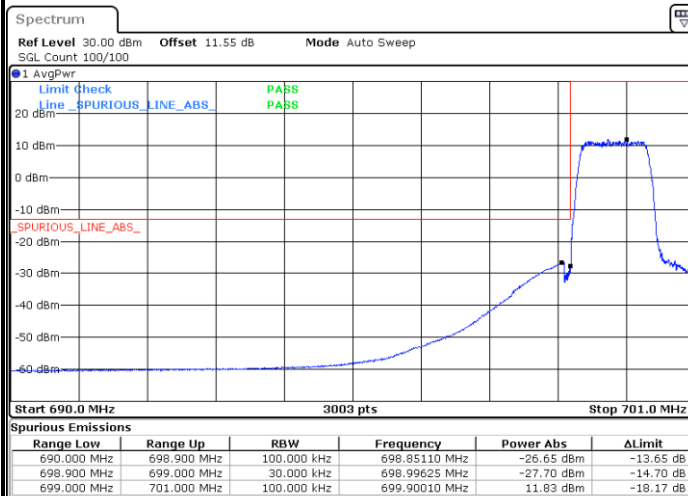
## Lowest Band Edge / 1 RB



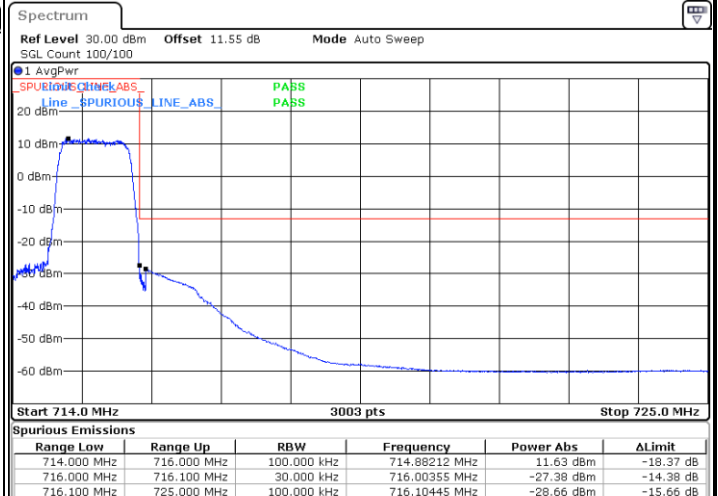
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



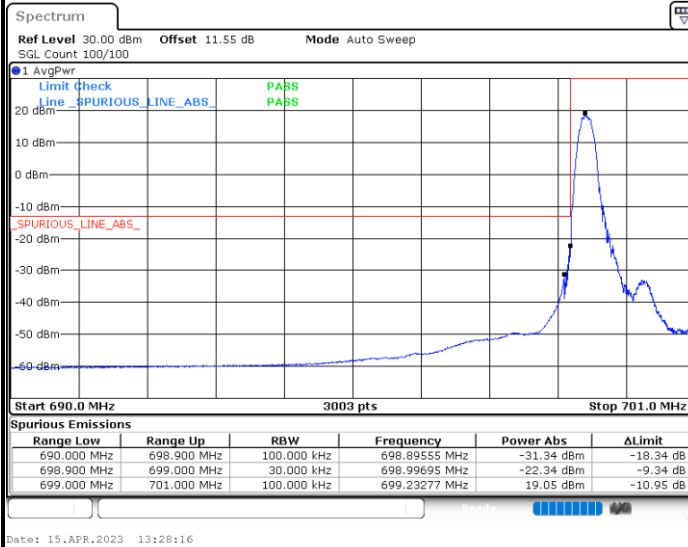
## Highest Band Edge / Full RB



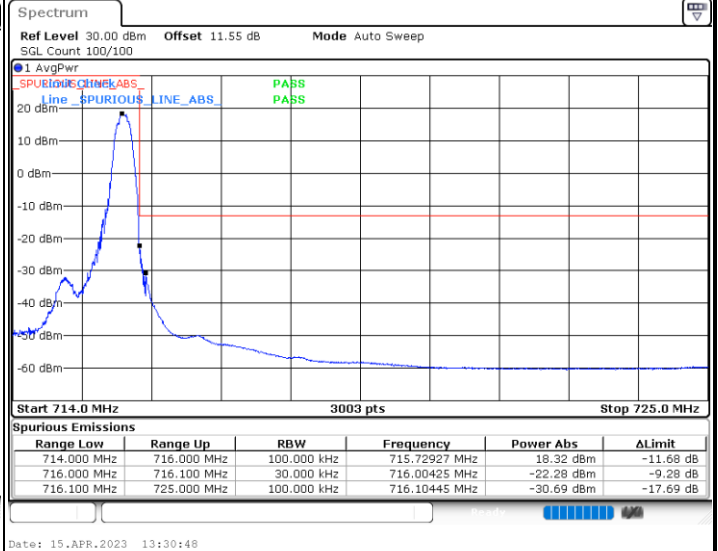


## LTE Band 12 / 1.4MHz / 64QAM

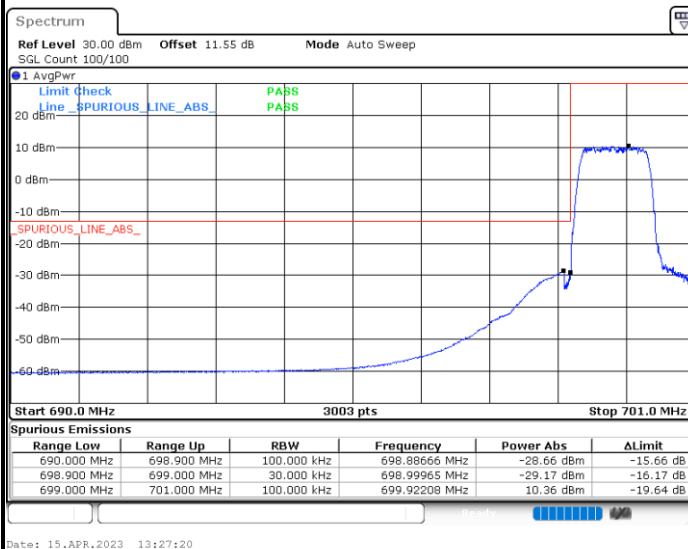
## Lowest Band Edge / 1 RB



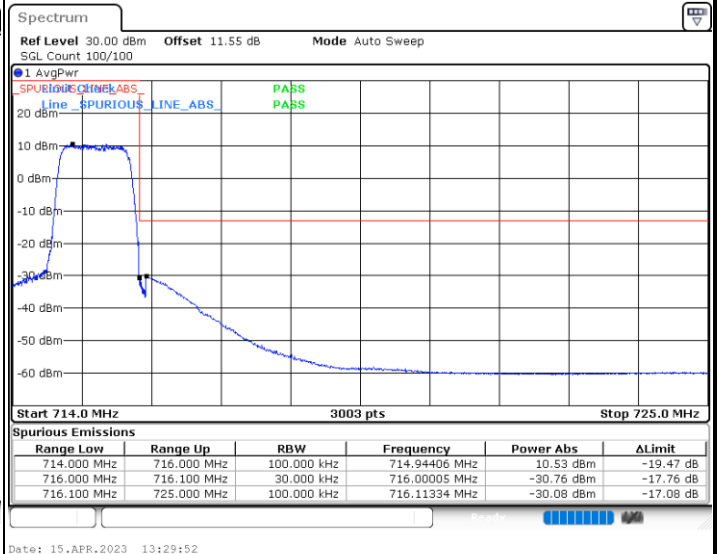
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



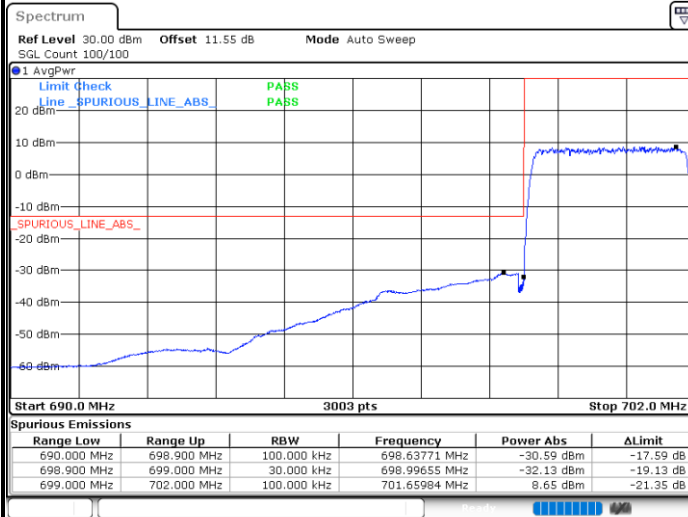
## Highest Band Edge / Full RB





## LTE Band 12 / 3MHz / QPSK

## Lowest Band Edge / Full RB

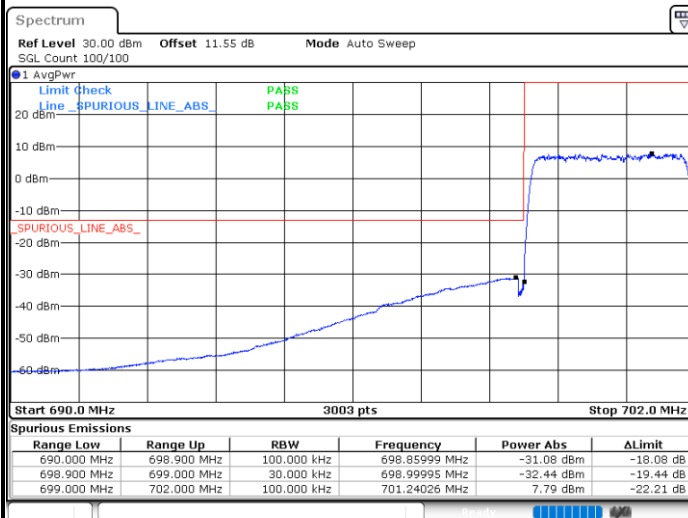


## Highest Band Edge / Full RB

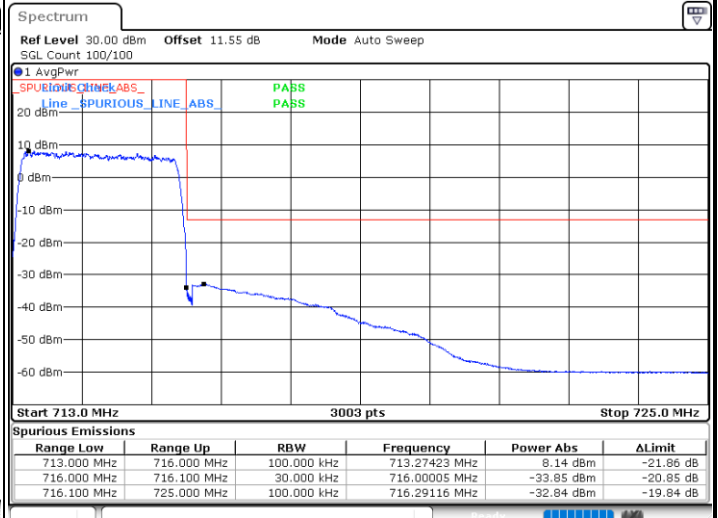


## LTE Band 12 / 3MHz / 16QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

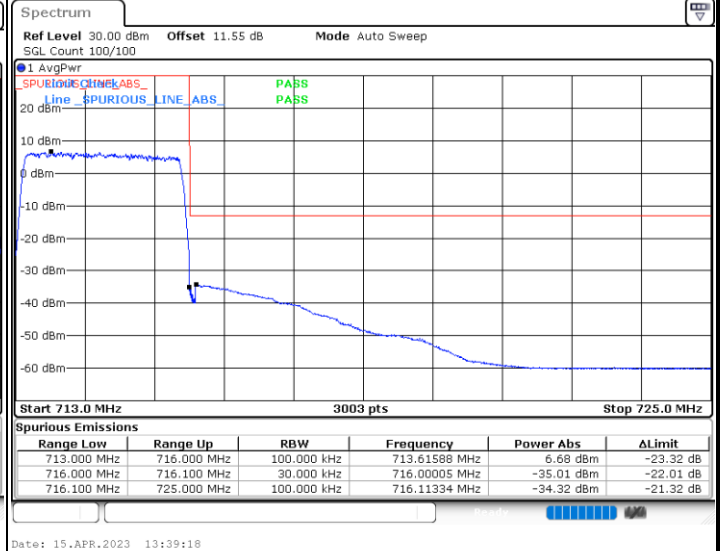
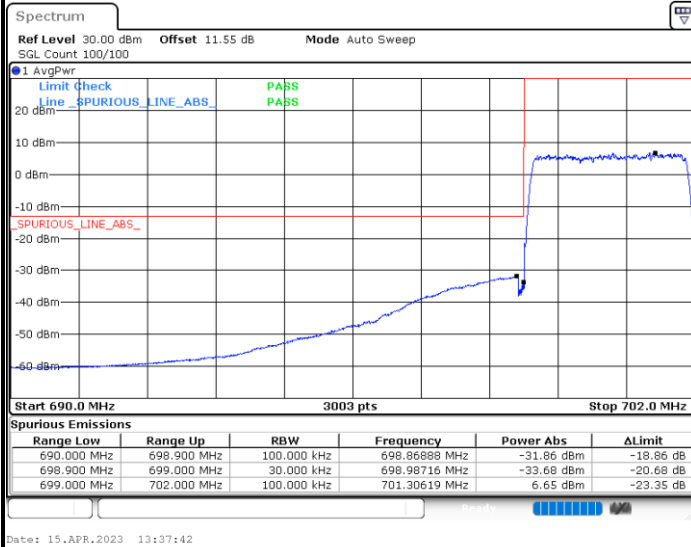




## LTE Band 12 / 3MHz / 64QAM

## Lowest Band Edge / Full RB

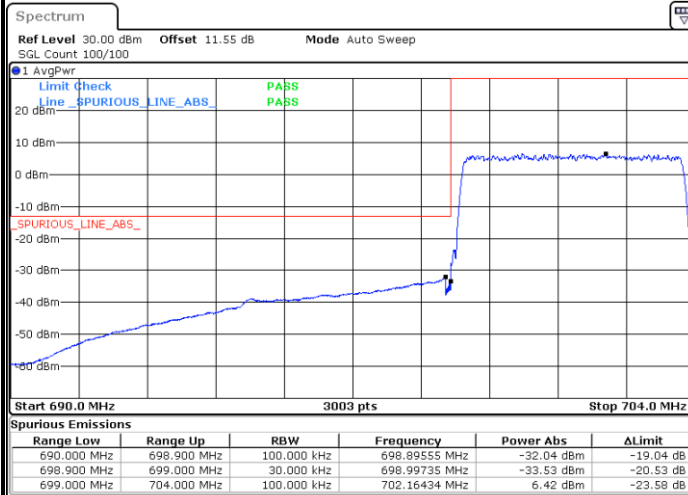
## Highest Band Edge / Full RB



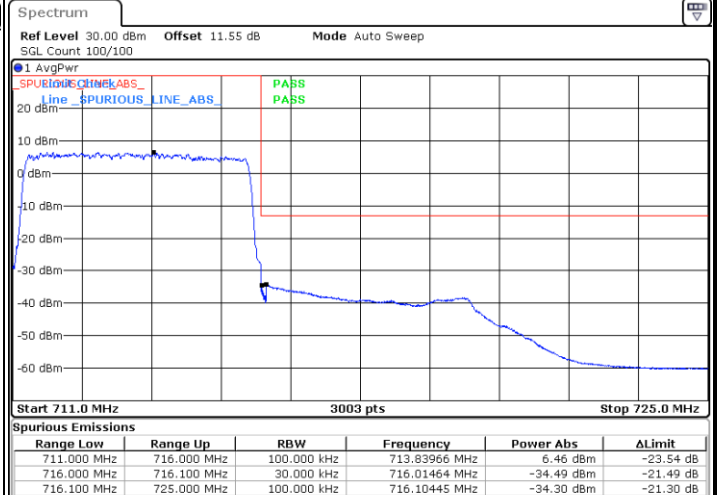


## LTE Band 12 / 5MHz / QPSK

## Lowest Band Edge / Full RB

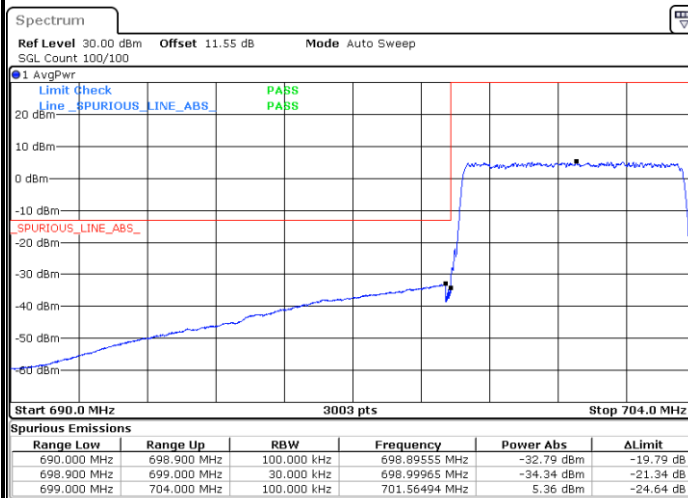


## Highest Band Edge / Full RB

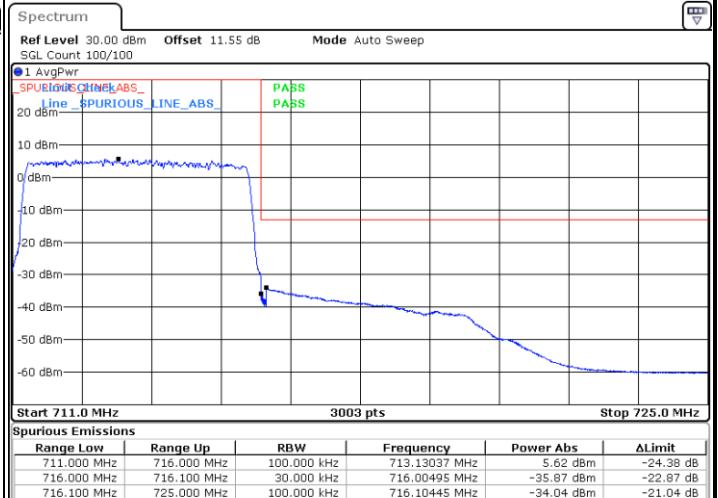


## LTE Band 12 / 5MHz / 16QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

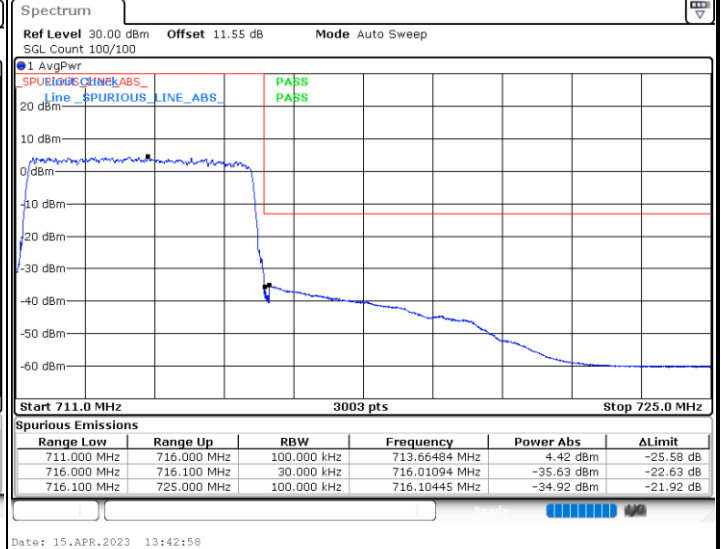
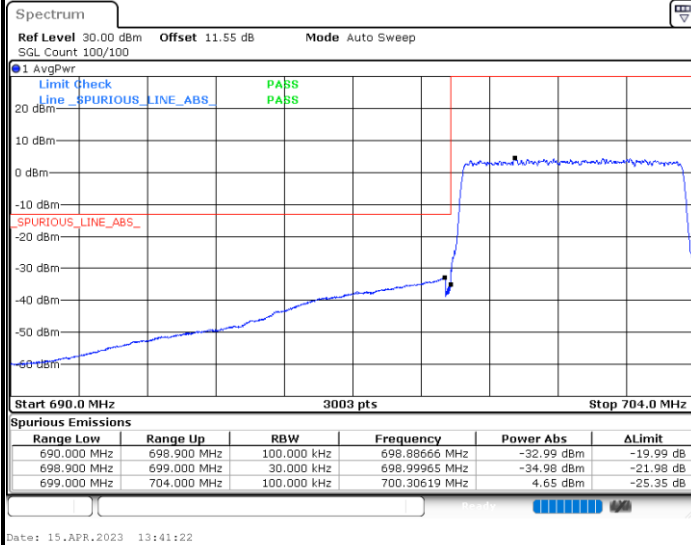




## LTE Band 12 / 5MHz / 64QAM

## Lowest Band Edge / Full RB

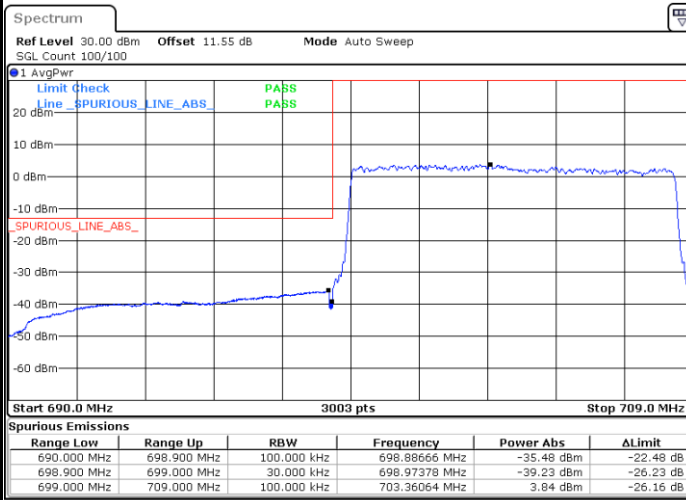
## Highest Band Edge / Full RB



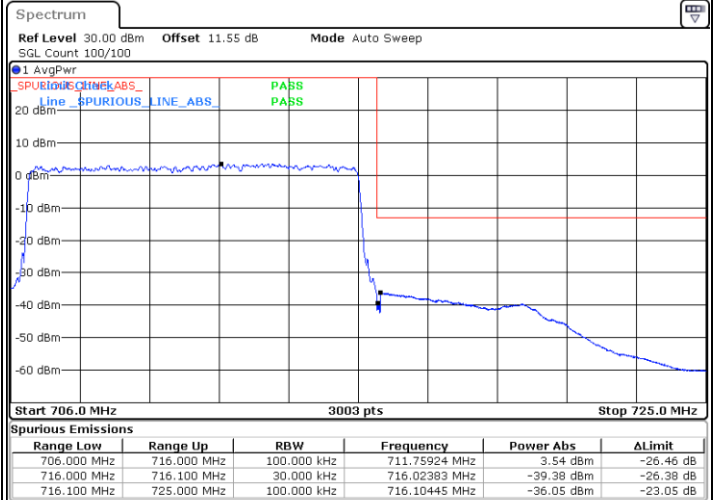


## LTE Band 12 / 10MHz / QPSK

## Lowest Band Edge / Full RB

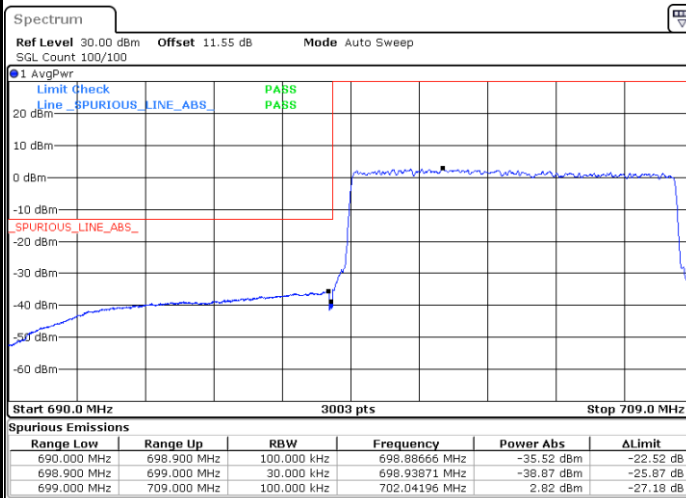


## Highest Band Edge / Full RB

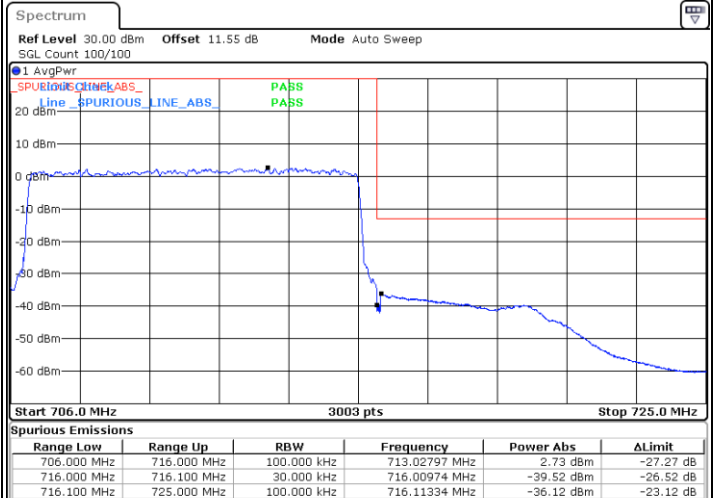


## LTE Band 12 / 10MHz / 16QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

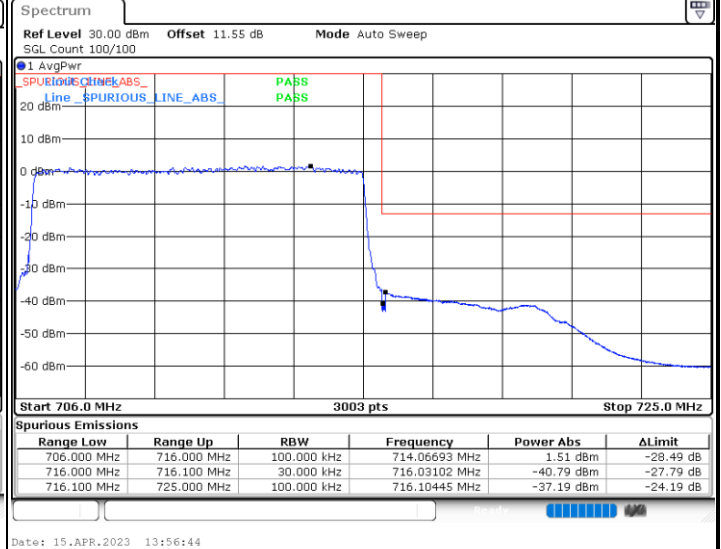
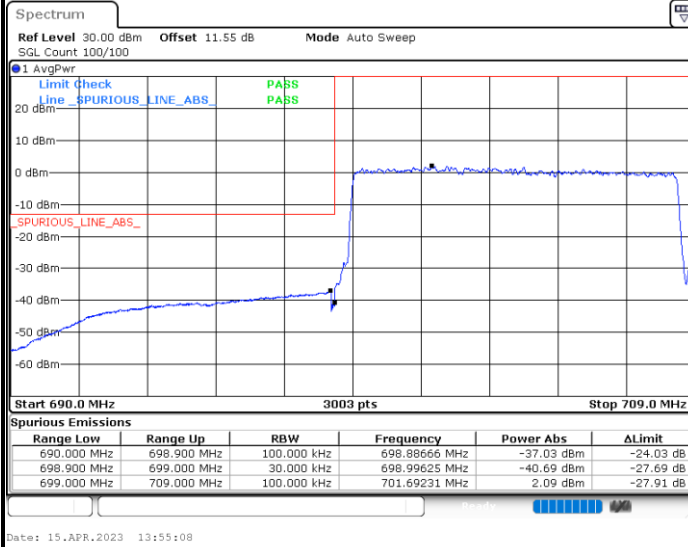




## LTE Band 12 / 10MHz / 64QAM

## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB

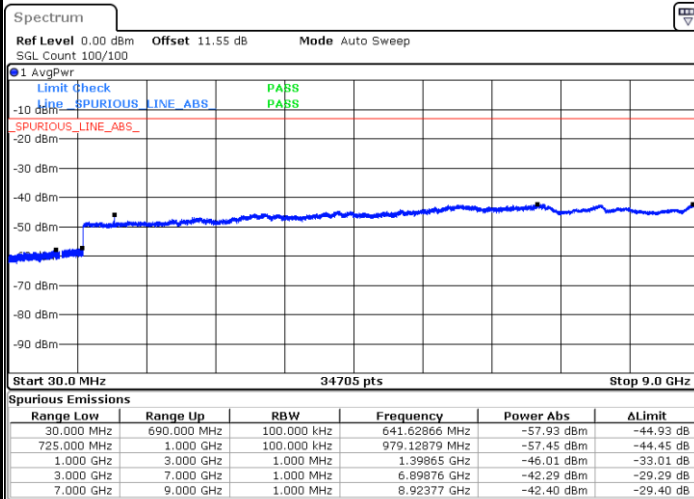




## Conducted Spurious Emission

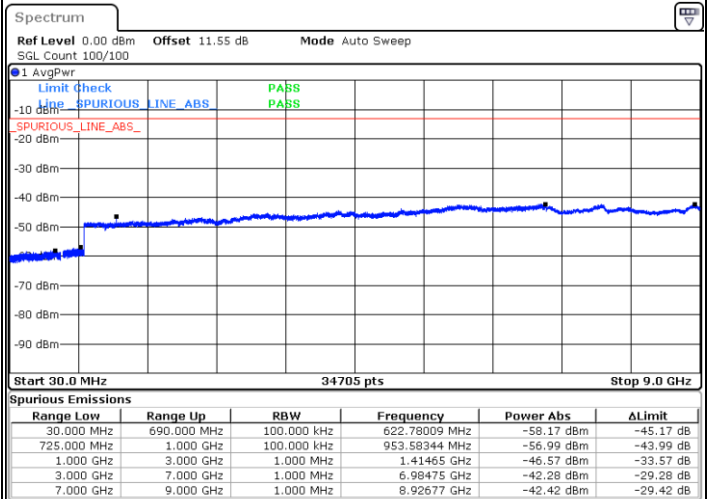
### LTE Band 12 / 1.4MHz

#### Lowest Channel / QPSK



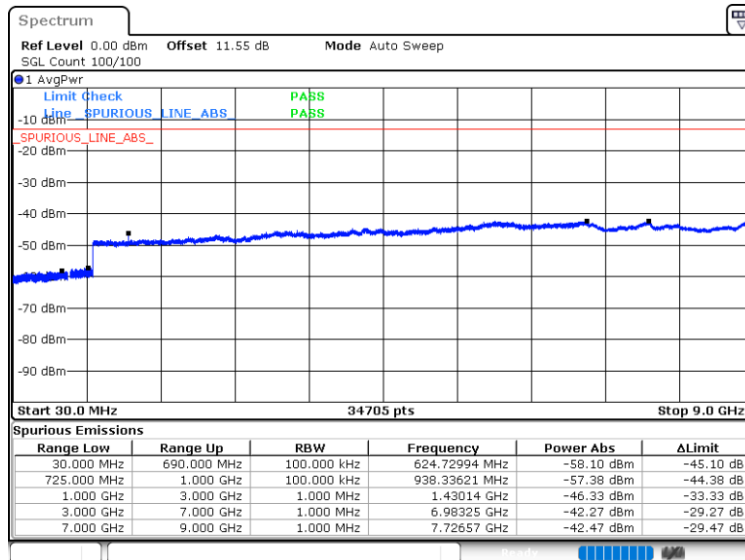
Date: 15.APR.2023 13:18:39

#### Middle Channel / QPSK



Date: 15.APR.2023 13:21:25

#### Highest Channel / QPSK

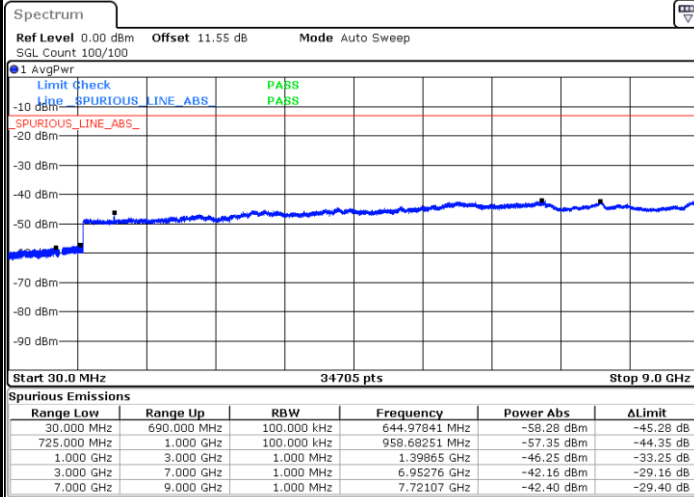


Date: 15.APR.2023 13:26:24



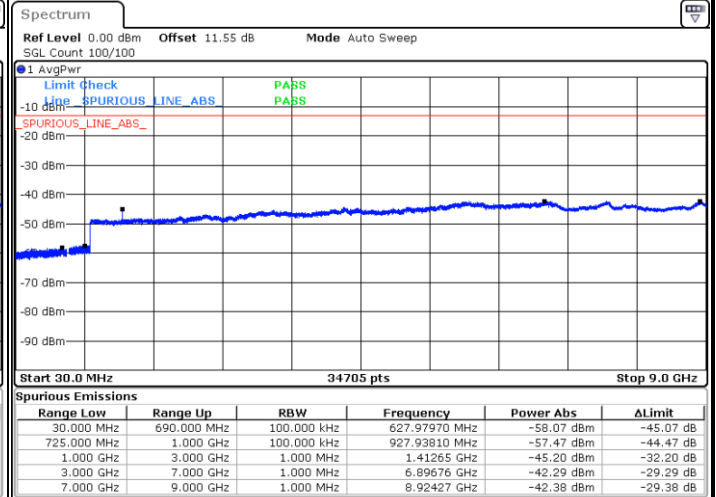
## LTE Band 12 / 3MHz

## Lowest Channel / QPSK



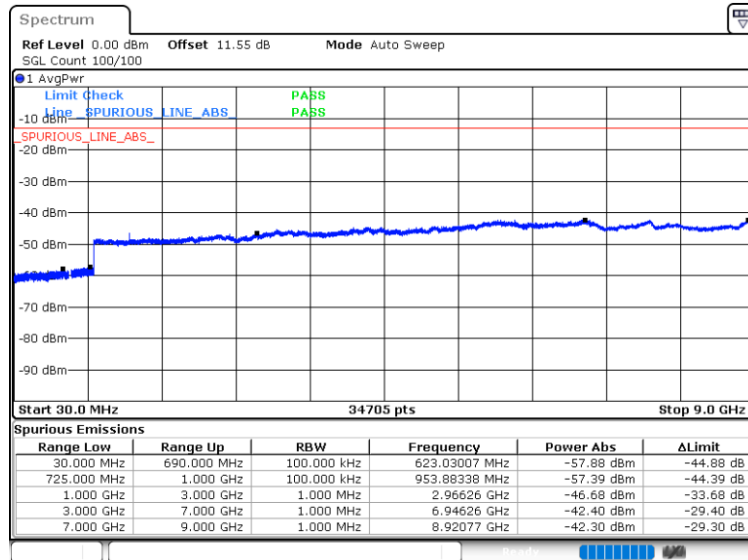
Date: 15.APR.2023 14:00:03

## Middle Channel / QPSK



Date: 15.APR.2023 14:01:18

## Highest Channel / QPSK

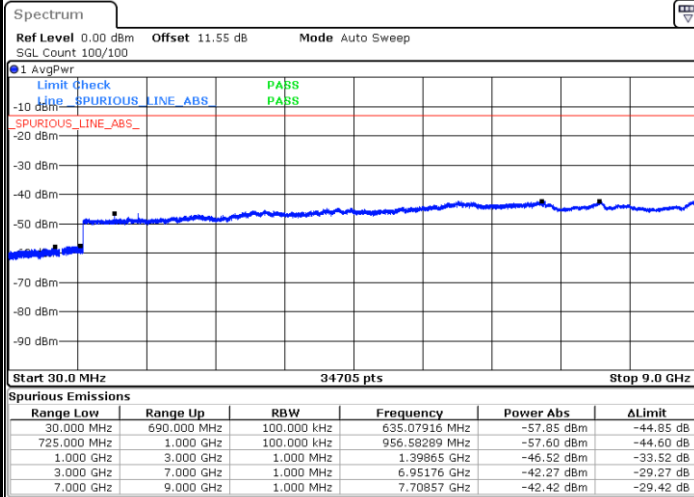


Date: 15.APR.2023 14:02:33



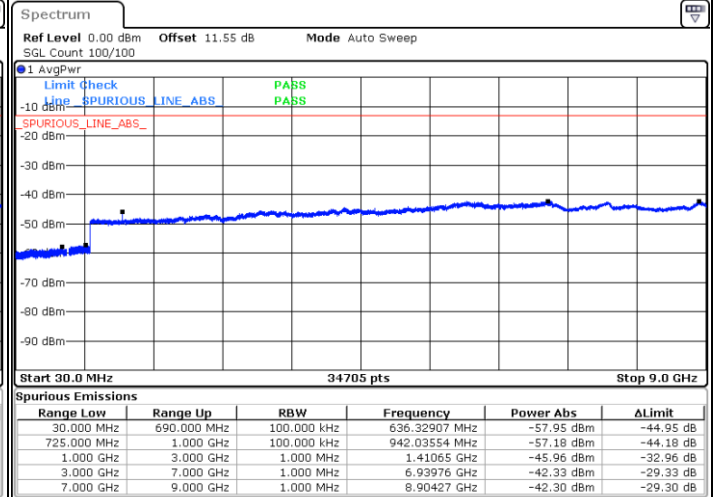
## LTE Band 12 / 5MHz

## Lowest Channel / QPSK



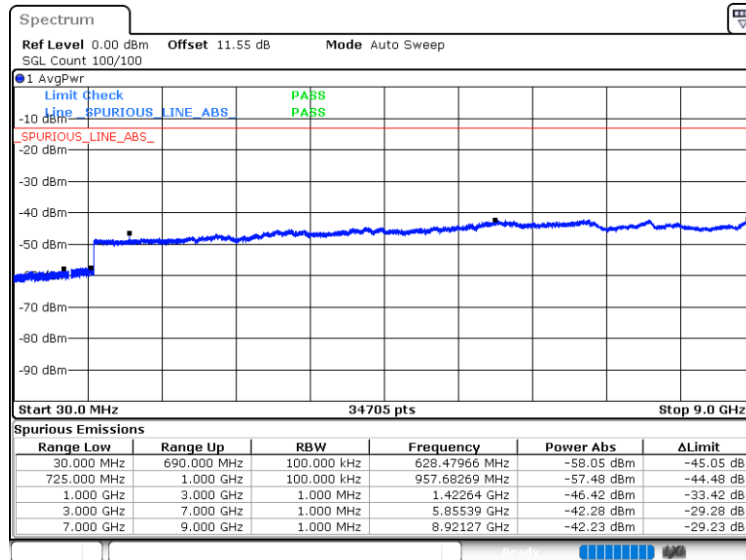
Date: 15.APR.2023 14:04:31

## Middle Channel / QPSK



Date: 15.APR.2023 14:05:45

## Highest Channel / QPSK

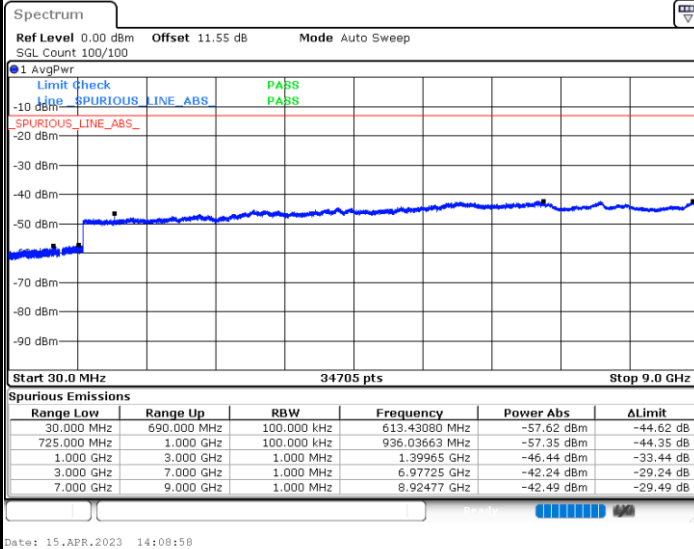


Date: 15.APR.2023 14:07:00

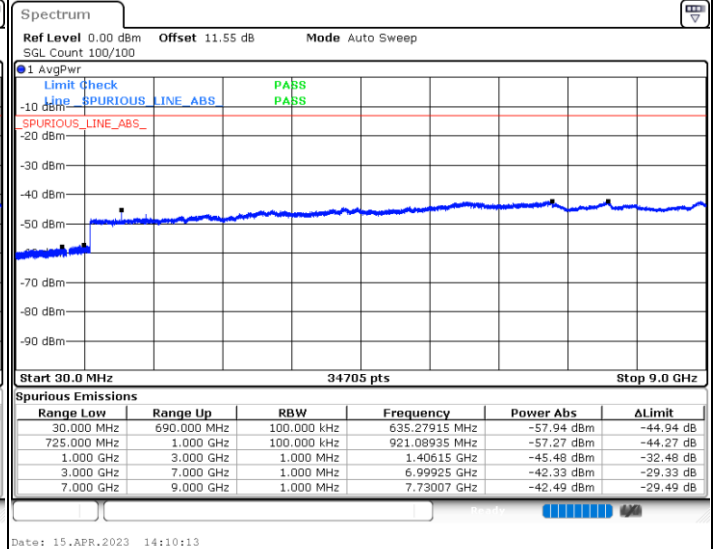


## LTE Band 12 / 10MHz

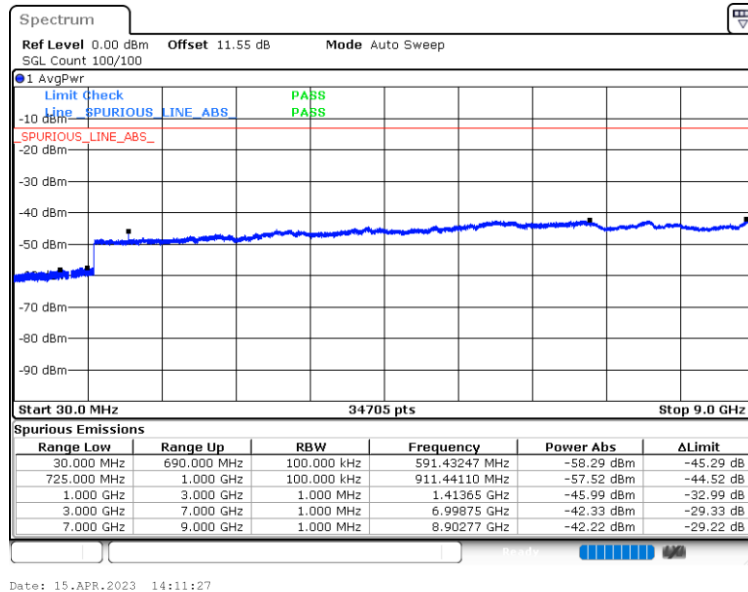
## Lowest Channel / QPSK



## Middle Channel / QPSK



## Highest Channel / QPSK



## Frequency Stability

| Test Conditions  |                   | LTE Band 12 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                            | Note 2. |
|                  |                   | Deviation (ppm)                     | Result  |
| 50               | Normal Voltage    | 0.0014                              | PASS    |
| 40               | Normal Voltage    | 0.0228                              |         |
| 30               | Normal Voltage    | 0.0198                              |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                              |         |
| 10               | Normal Voltage    | 0.0014                              |         |
| 0                | Normal Voltage    | 0.0003                              |         |
| -10              | Normal Voltage    | 0.0065                              |         |
| -20              | Normal Voltage    | 0.0122                              |         |
| -30              | Normal Voltage    | 0.0123                              |         |
| 20               | Maximum Voltage   | 0.0106                              |         |
| 20               | Normal Voltage    | 0.0014                              |         |
| 20               | Battery End Point | 0.0066                              |         |

**Note:**

1. Normal Voltage = 3.87 V. ; Battery End Point (BEP) = 3.60 V. ; Maximum Voltage = 4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 38

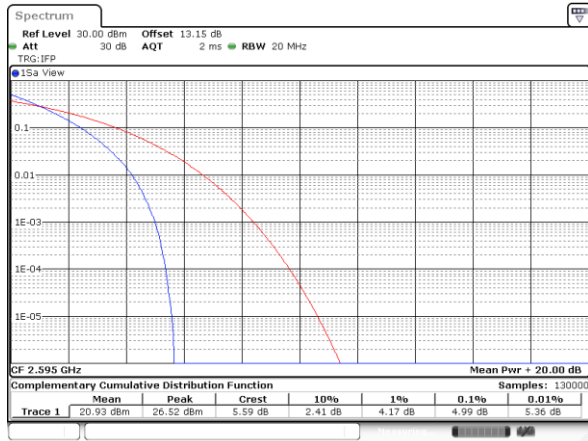
### Peak-to-Average Ratio

| Mode      | LTE Band 38 / 20MHz |         |         |             |
|-----------|---------------------|---------|---------|-------------|
| Mod.      | QPSK                | 16QAM   | 64QAM   | Limit: 13dB |
| RB Size   | Full RB             | Full RB | Full RB | Result      |
| Middle CH | 4.99                | 5.88    | 6.23    | <b>PASS</b> |



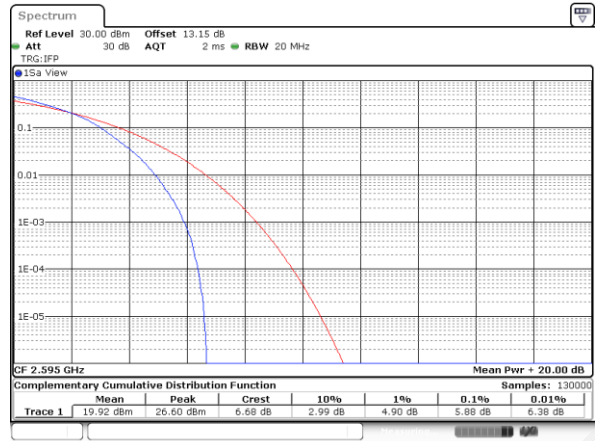
## LTE Band 38 / 20MHz / QPSK

## Middle Channel / Full RB



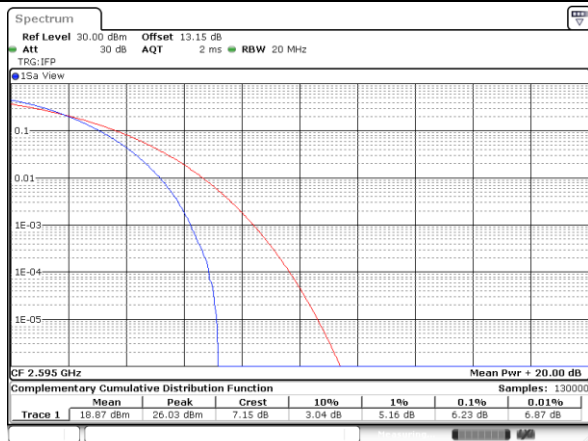
## LTE Band 38 / 20MHz / 16QAM

## Middle Channel / Full RB



## LTE Band 38 / 20MHz / 64QAM

## Middle Channel / Full RB



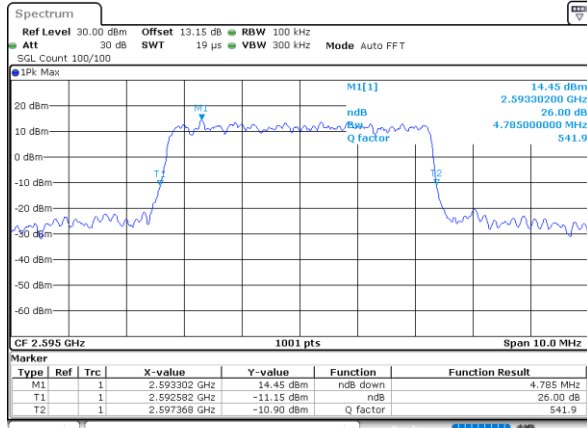
**26dB Bandwidth**

| Mode      | LTE Band 38 : 26dB BW(MHz) |       |       |       |       |       |       |       |
|-----------|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| BW        | 5MHz                       |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.      | QPSK                       | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Middle CH | 4.79                       | 4.83  | 9.73  | 9.63  | 14.42 | 14.45 | 19.06 | 18.94 |
| Mode      | LTE Band 38 : 26dB BW(MHz) |       |       |       |       |       |       |       |
| BW        | 5MHz                       |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.      | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Middle CH | 4.82                       |       | 9.69  |       | 14.15 |       | 18.70 |       |



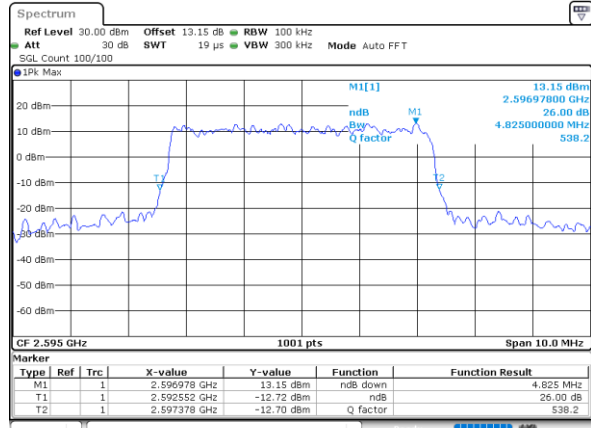
## LTE Band 38

## Middle Channel / 5MHz / QPSK



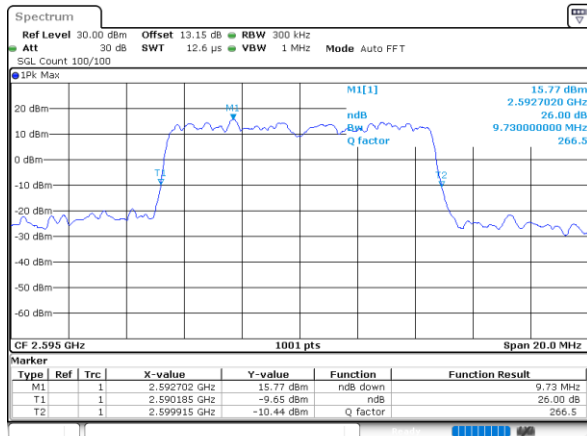
Date: 15.APR.2023 16:23:26

## Middle Channel / 5MHz / 16QAM



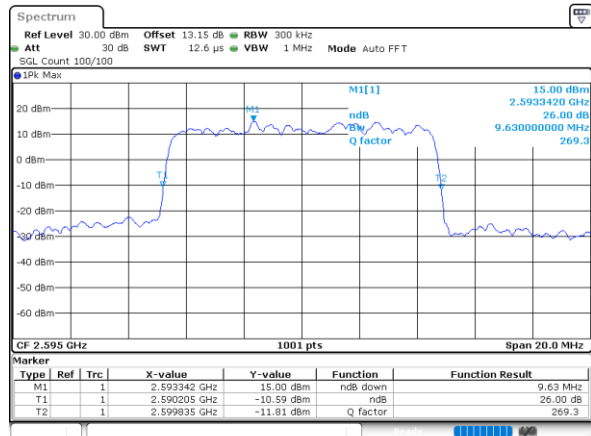
Date: 15.APR.2023 16:23:50

## Middle Channel / 10MHz / QPSK



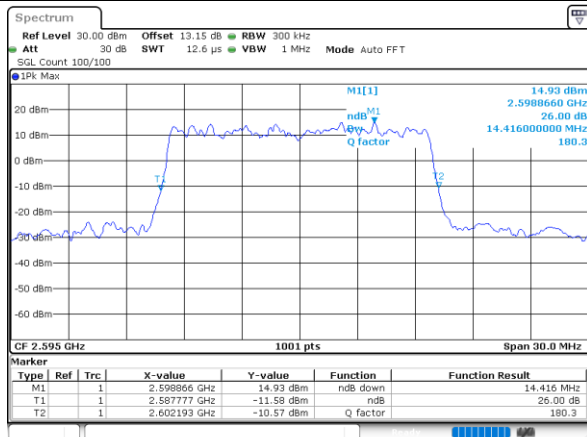
Date: 15.APR.2023 16:25:01

## Middle Channel / 10MHz / 16QAM



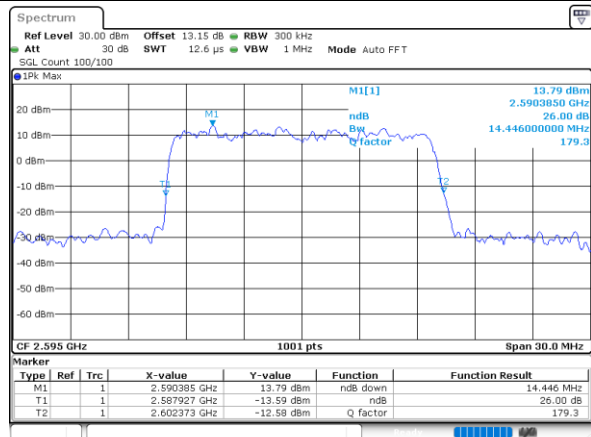
Date: 15.APR.2023 16:25:24

## Middle Channel / 15MHz / QPSK



Date: 15.APR.2023 16:26:35

## Middle Channel / 15MHz / 16QAM

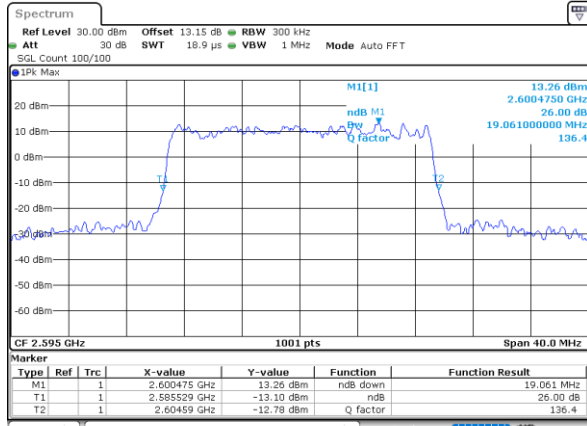


Date: 15.APR.2023 16:26:59



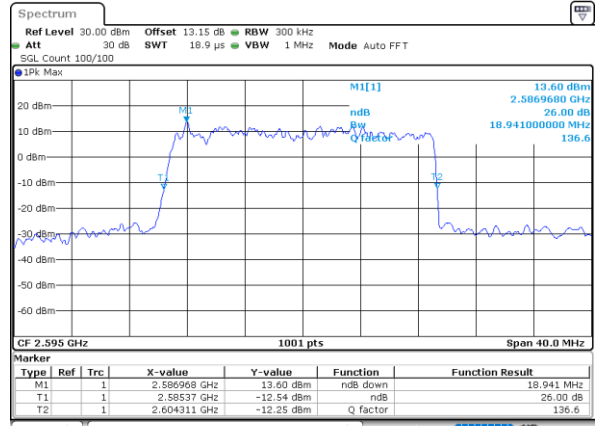
## LTE Band 38

## Middle Channel / 20MHz / QPSK



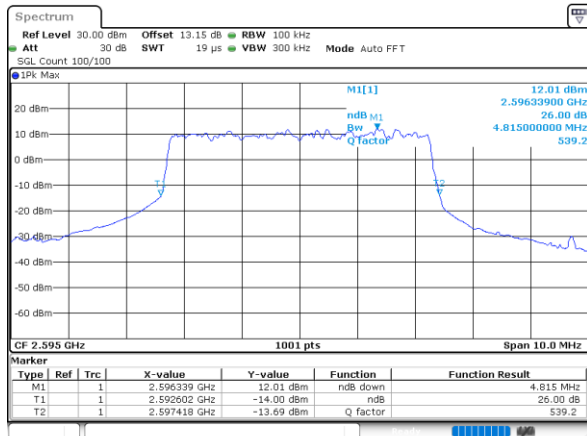
Date: 15.APR.2023 16:28:10

## Middle Channel / 20MHz / 16QAM



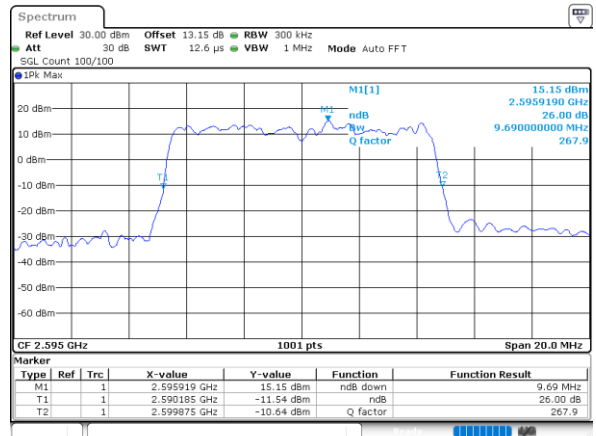
Date: 15.APR.2023 16:28:33

## Middle Channel / 5MHz / 64QAM



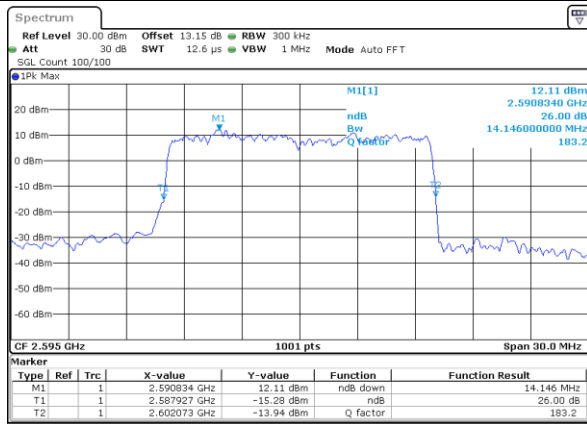
Date: 15.APR.2023 16:29:21

## Middle Channel / 10MHz / 64QAM



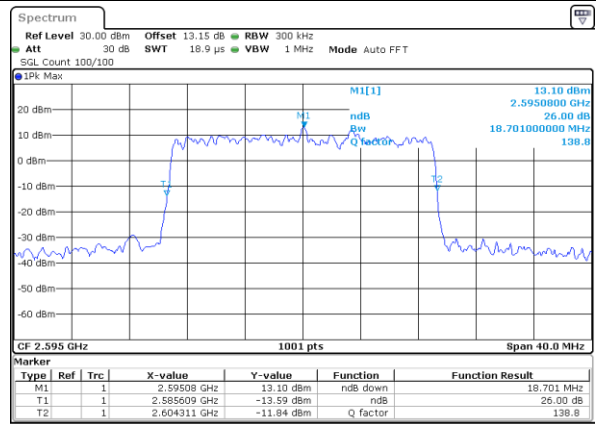
Date: 27.APR.2023 12:42:02

## Middle Channel / 15MHz / 64QAM



Date: 15.APR.2023 16:30:56

## Middle Channel / 20MHz / 64QAM



Date: 15.APR.2023 16:31:43

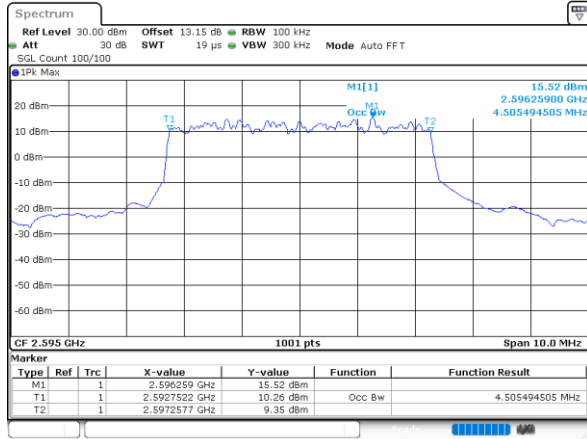
**Occupied Bandwidth**

| Mode      | LTE Band 38 : 99%OBW(MHz) |       |       |       |       |       |       |       |
|-----------|---------------------------|-------|-------|-------|-------|-------|-------|-------|
| BW        | 5MHz                      |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.      | QPSK                      | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Middle CH | 4.51                      | 4.48  | 9.01  | 9.03  | 13.46 | 13.43 | 17.90 | 17.78 |
| Mode      | LTE Band 38 : 99%OBW(MHz) |       |       |       |       |       |       |       |
| BW        | 5MHz                      |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.      | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Middle CH | 4.52                      |       | 9.01  |       | 13.40 |       | 17.82 |       |

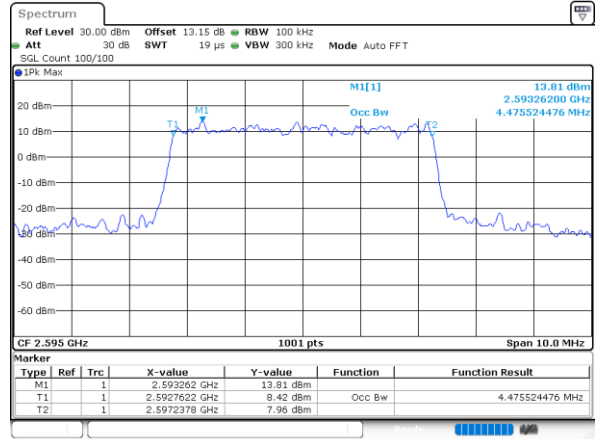


## LTE Band 38

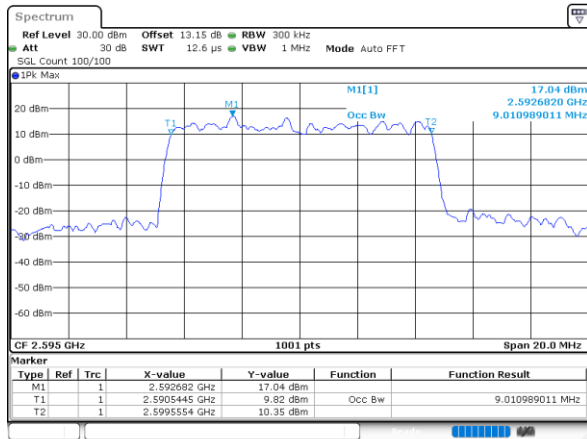
## Middle Channel / 5MHz / QPSK



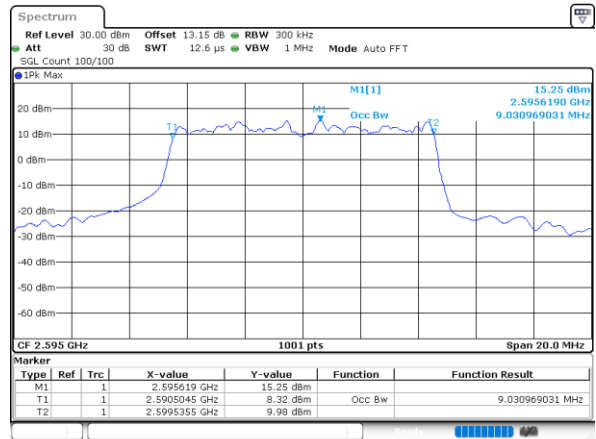
## Middle Channel / 5MHz / 16QAM



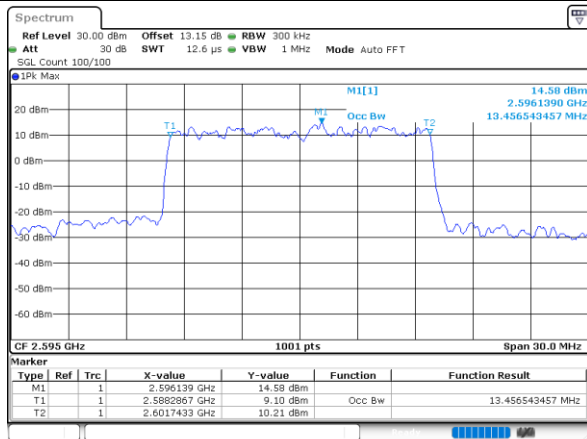
## Middle Channel / 10MHz / QPSK



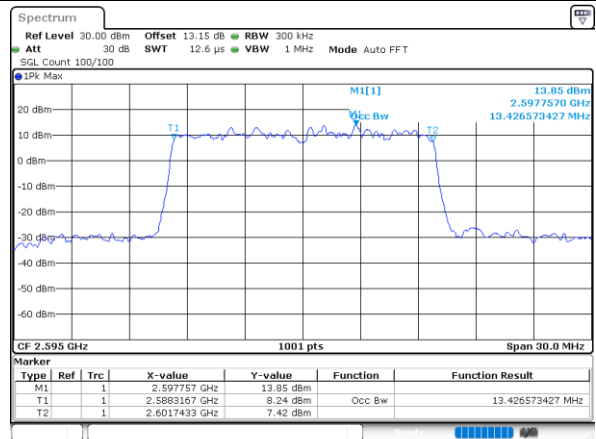
## Middle Channel / 10MHz / 16QAM



## Middle Channel / 15MHz / QPSK



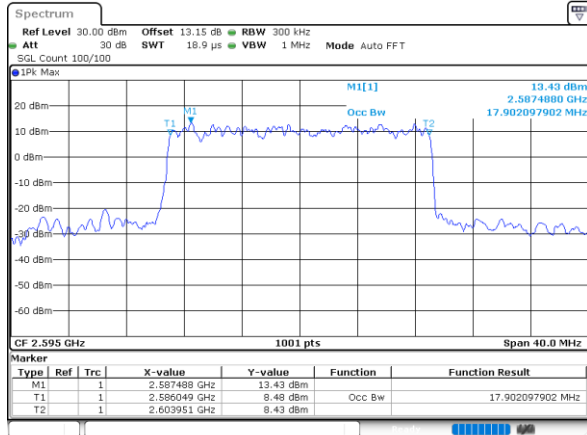
## Middle Channel / 15MHz / 16QAM





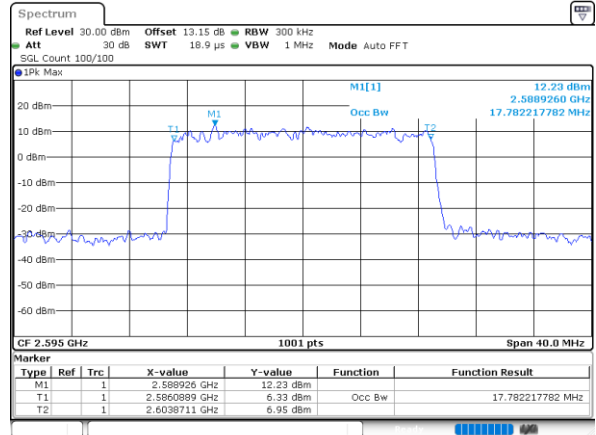
## LTE Band 38

## Middle Channel / 20MHz / QPSK



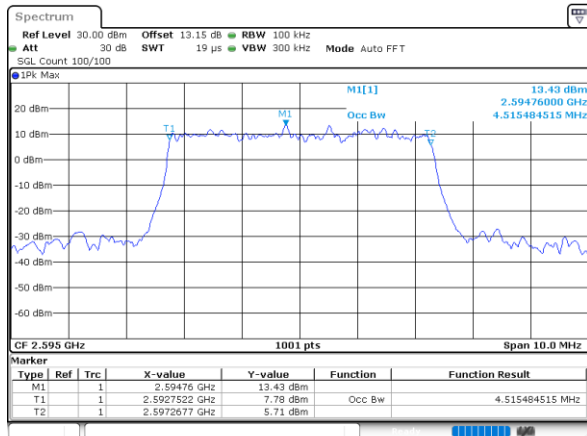
Date: 15.APR.2023 16:27:23

## Middle Channel / 20MHz / 16QAM



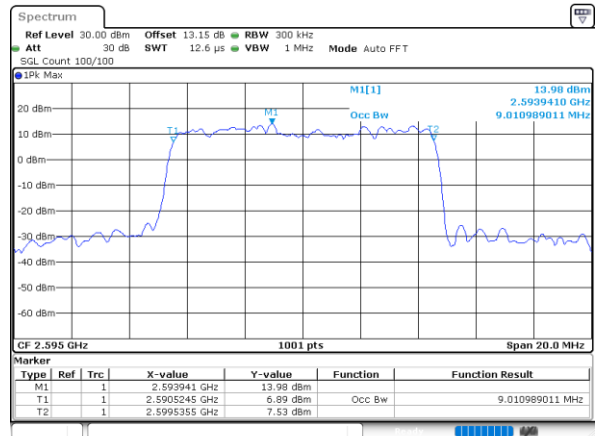
Date: 15.APR.2023 16:27:46

## Middle Channel / 5MHz / 64QAM



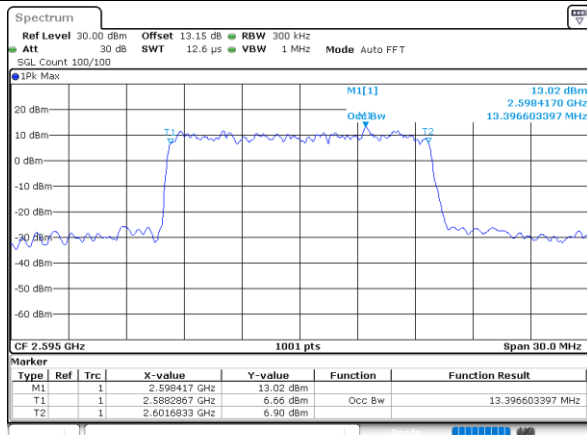
Date: 15.APR.2023 16:28:57

## Middle Channel / 10MHz / 64QAM



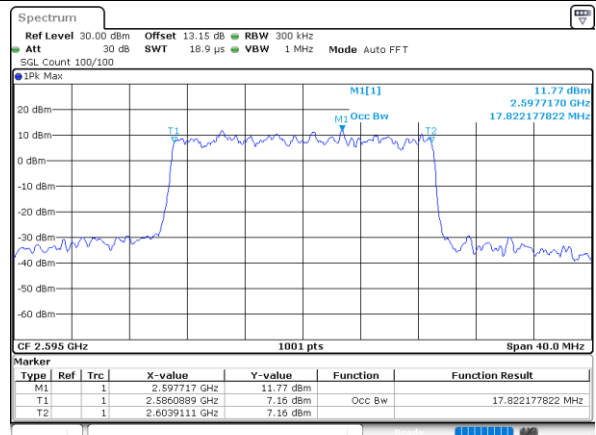
Date: 15.APR.2023 16:29:45

## Middle Channel / 15MHz / 64QAM

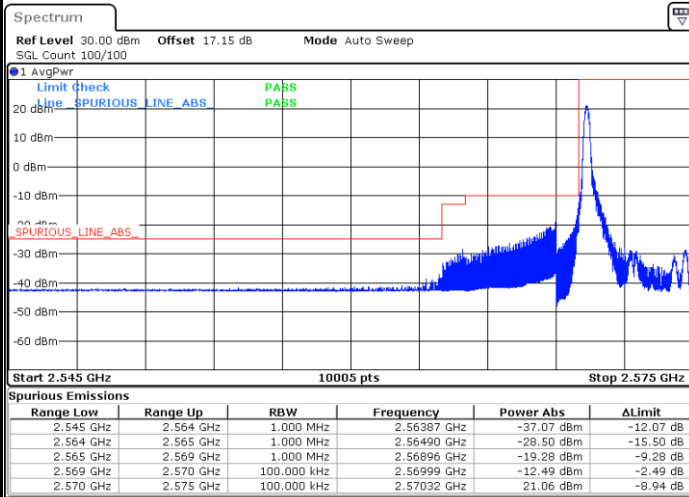
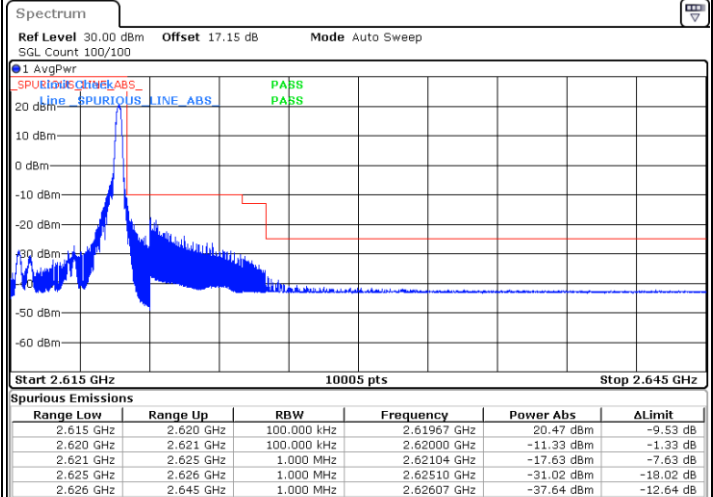
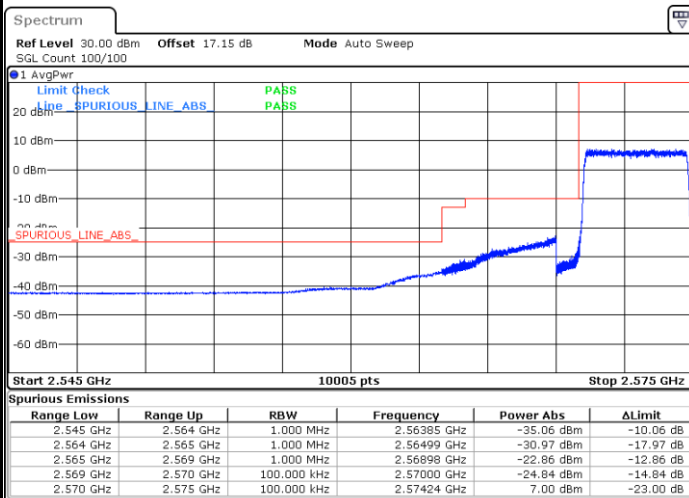
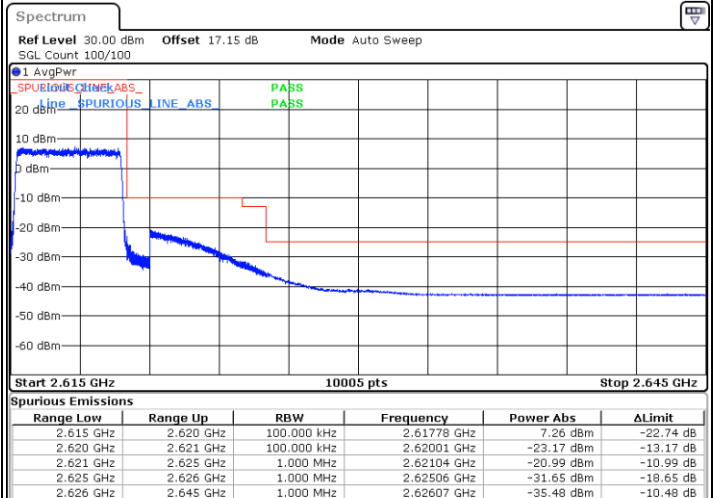


Date: 15.APR.2023 16:30:32

## Middle Channel / 20MHz / 64QAM



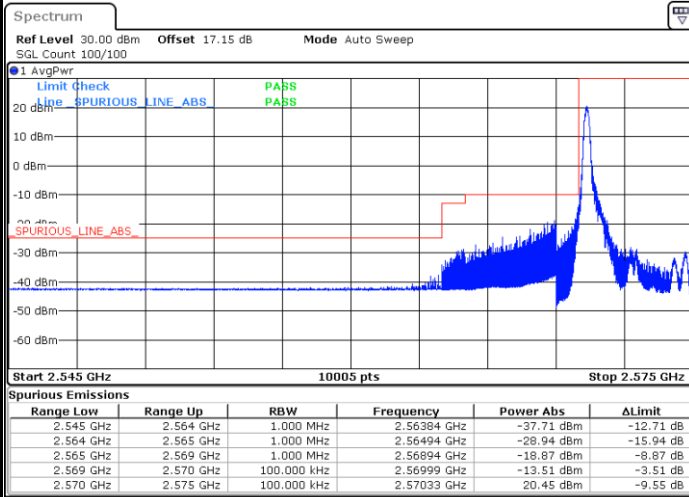
Date: 15.APR.2023 16:31:20

**Conducted Band Edge****LTE Band 38 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**

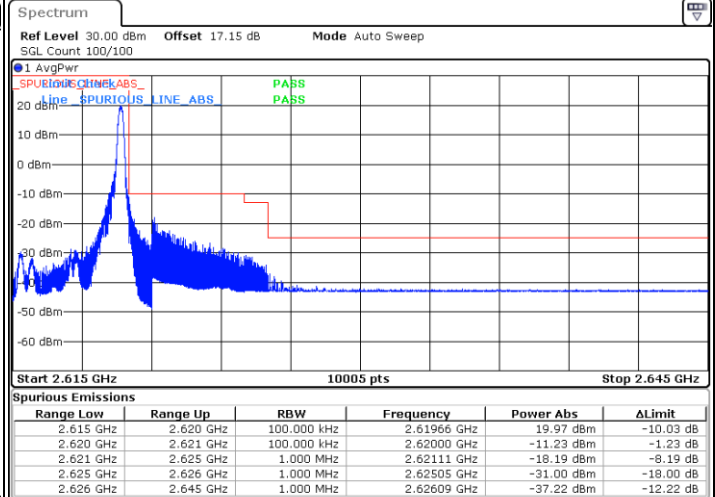


## LTE Band 38 / 5MHz / 16QAM

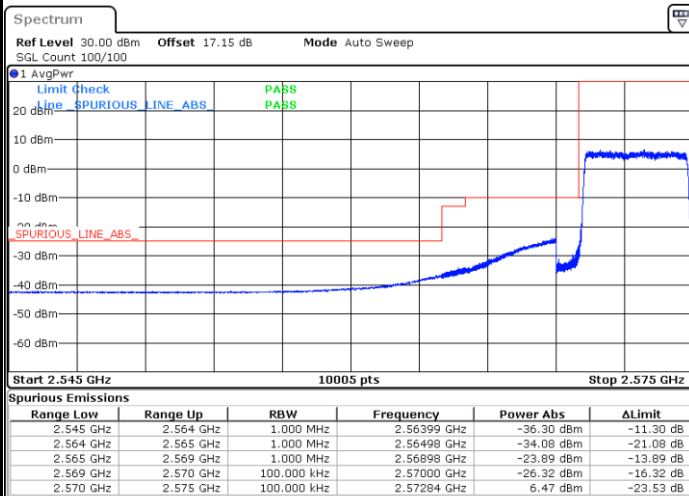
## Lowest Band Edge / 1RB



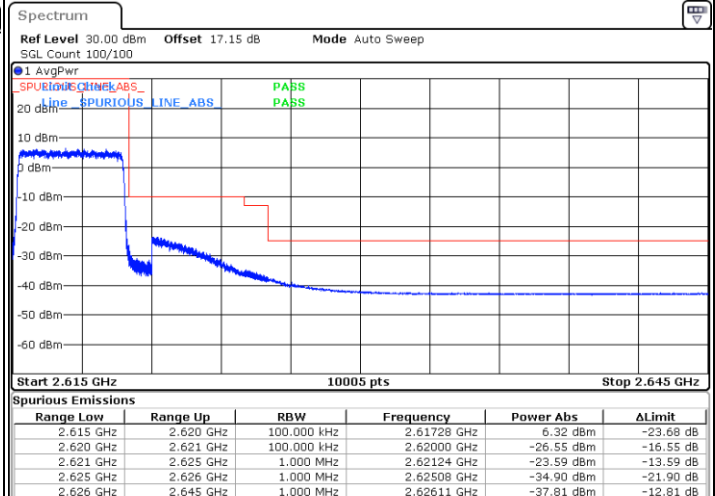
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



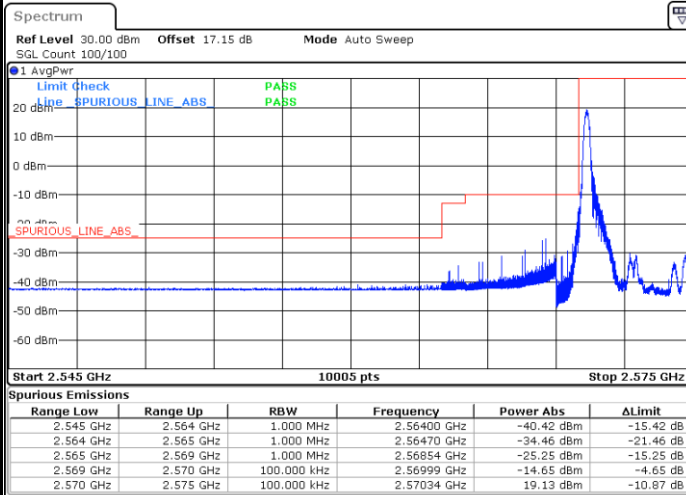
## Highest Band Edge / Full RB





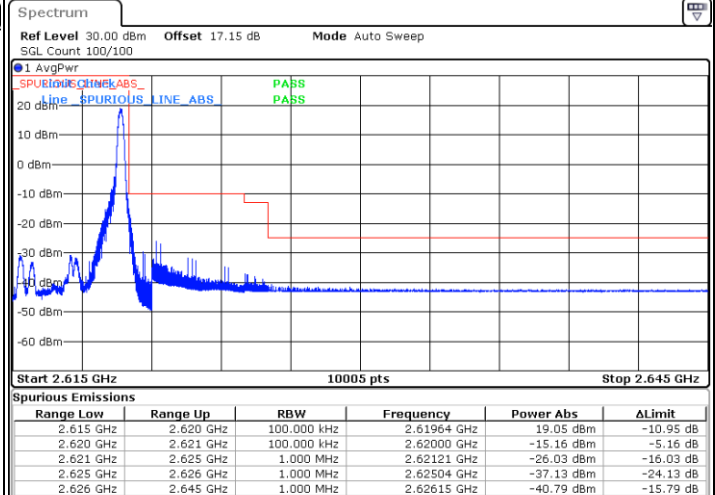
## LTE Band 38 / 5MHz / 64QAM

## Lowest Band Edge / 1RB



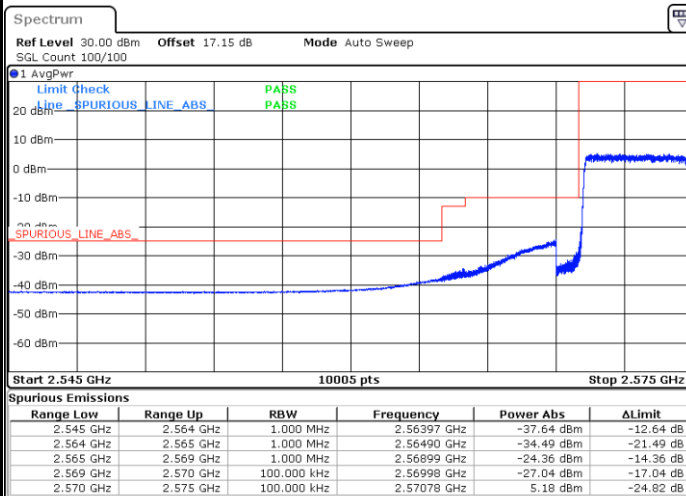
Date: 15.APR.2023 16:43:47

## Highest Band Edge / 1 RB



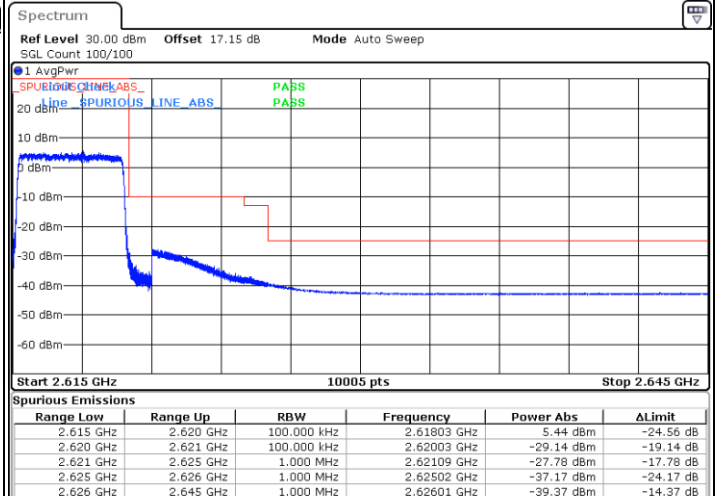
Date: 15.APR.2023 16:46:29

## Lowest Band Edge / Full RB



Date: 15.APR.2023 16:44:41

## Highest Band Edge / Full RB

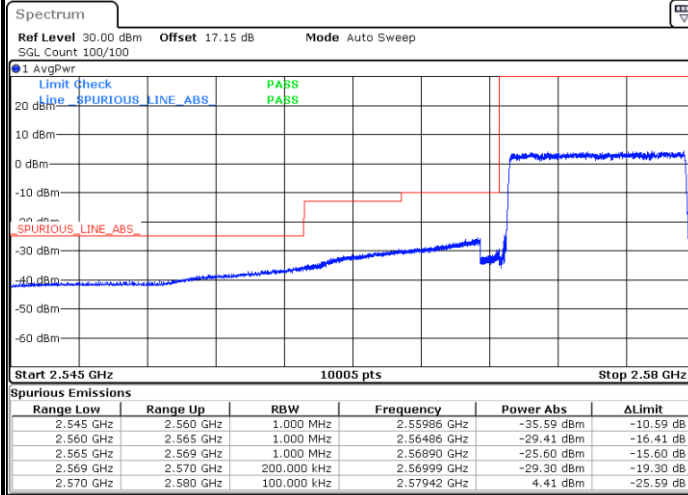


Date: 15.APR.2023 16:45:35

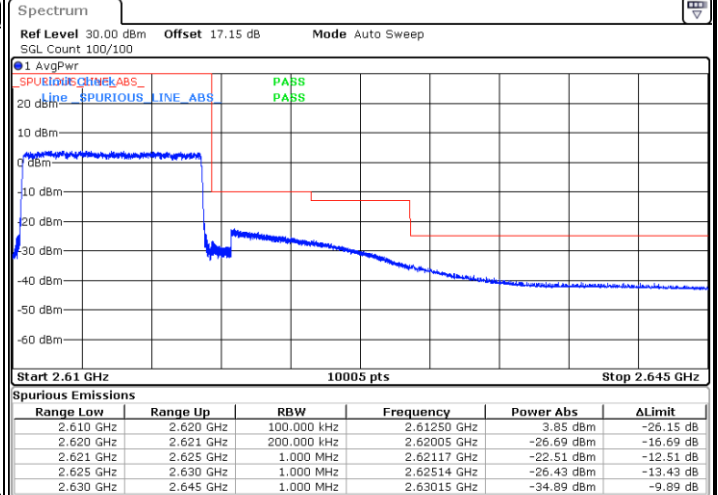


## LTE Band 38 / 10MHz / QPSK

## Lowest Band Edge / Full RB

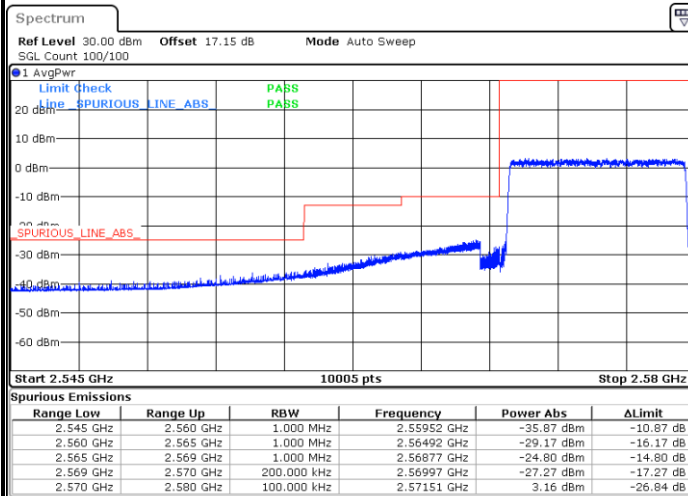


## Highest Band Edge / Full RB

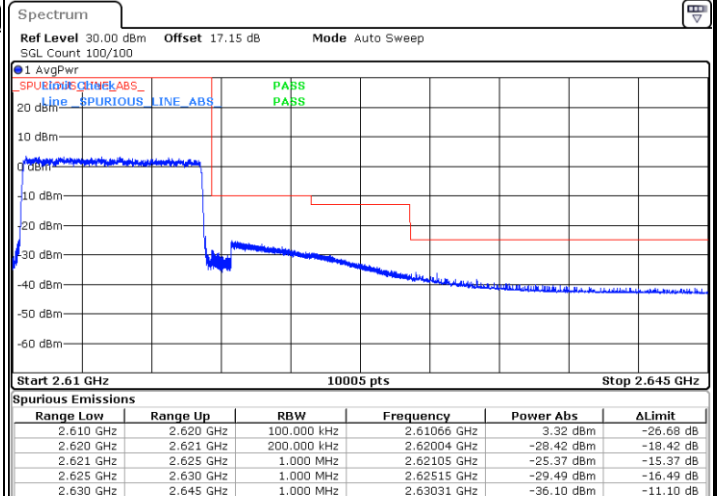


## LTE Band 38 / 10MHz / 16QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

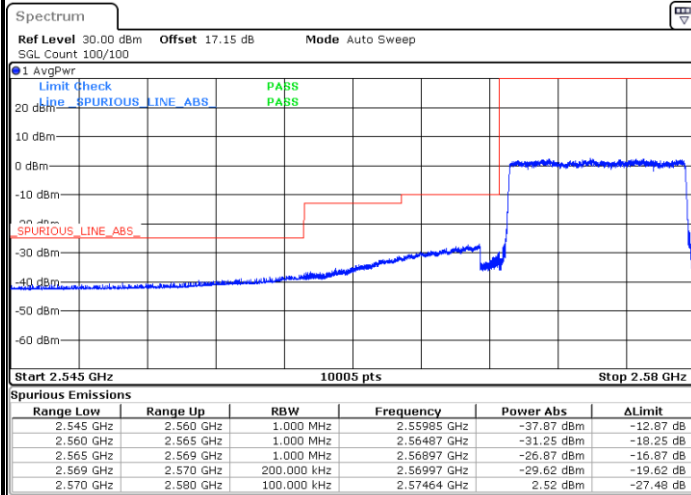




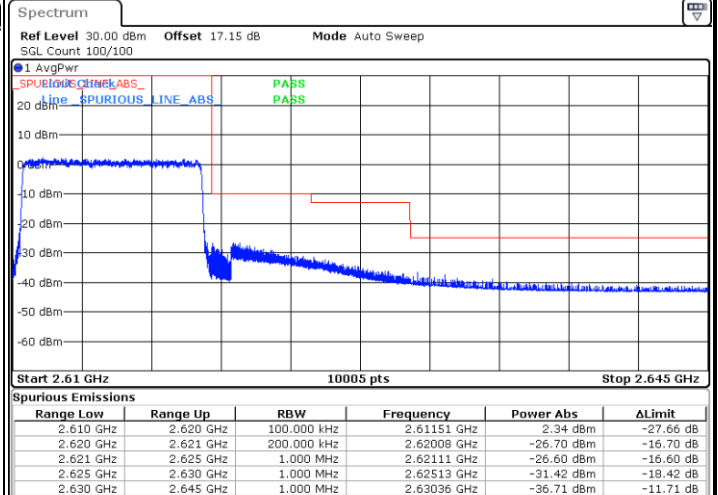
## LTE Band 38 / 10MHz / 64QAM

## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB



Date: 15.APR.2023 16:47:23

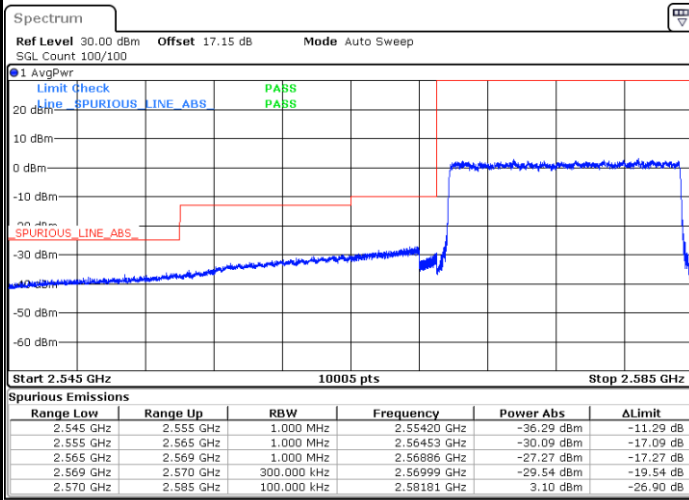


Date: 15.APR.2023 16:48:16

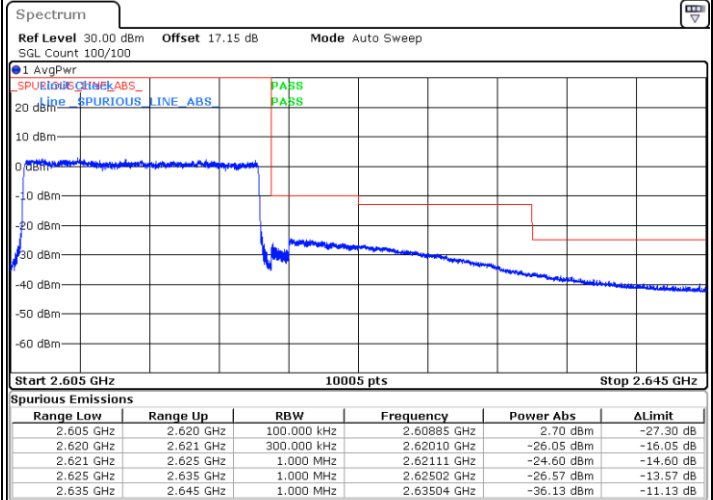


## LTE Band 38 / 15MHz / QPSK

## Lowest Band Edge / Full RB

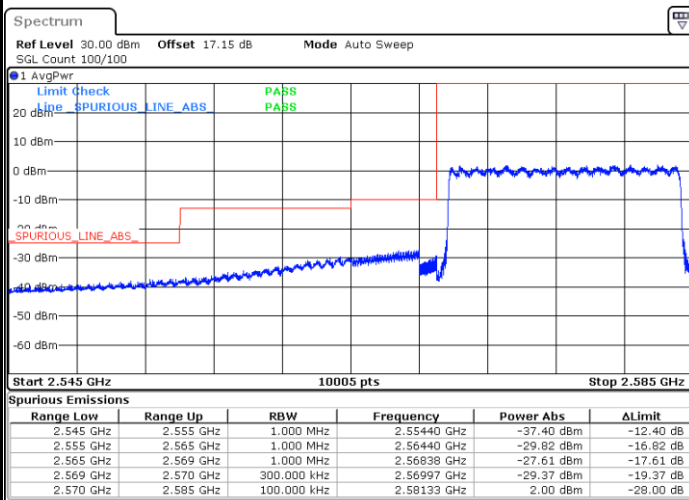


## Highest Band Edge / Full RB

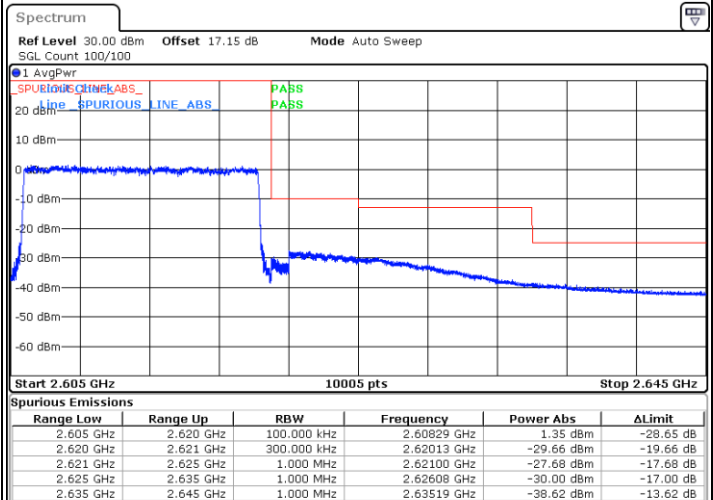


## LTE Band 38 / 15MHz / 16QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

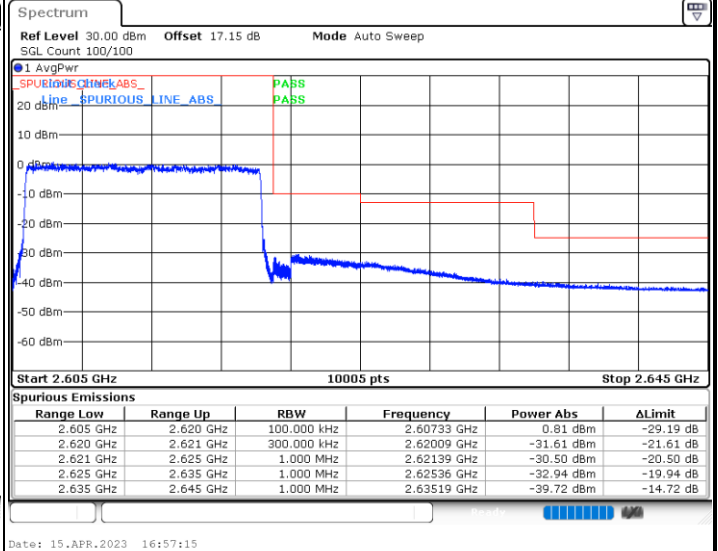
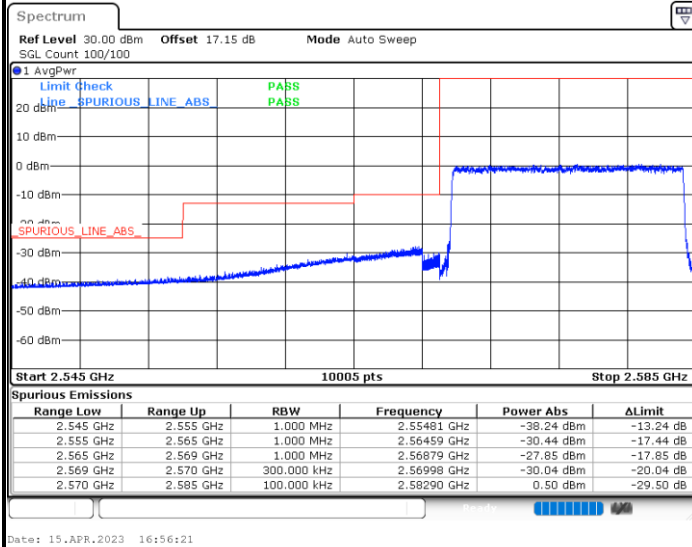




## LTE Band 38 / 15MHz / 64QAM

## Lowest Band Edge / Full RB

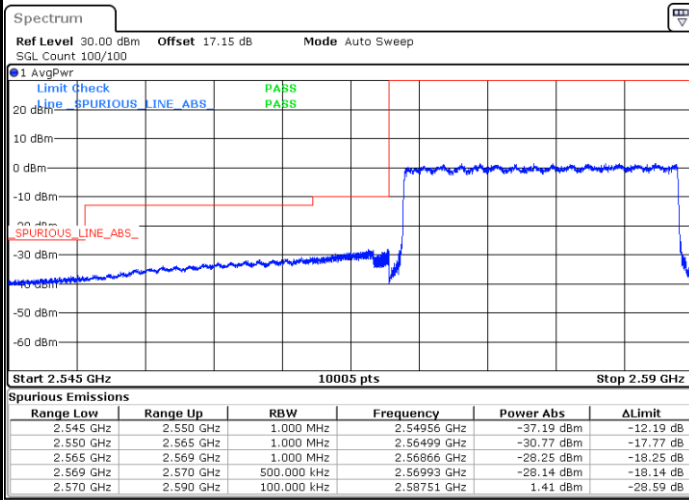
## Highest Band Edge / Full RB



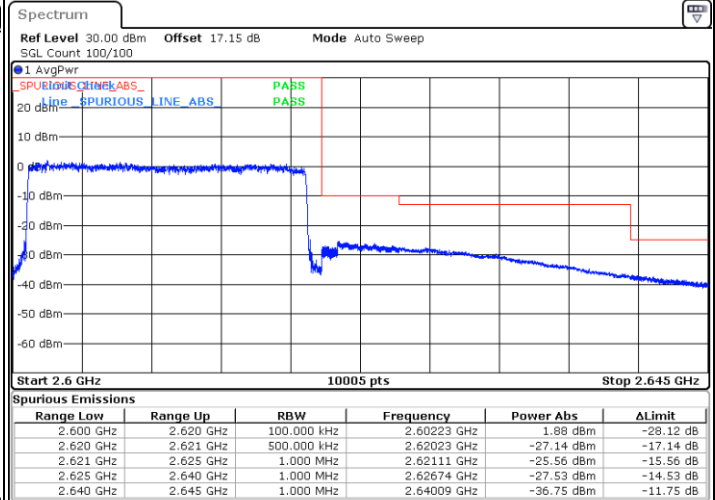


## LTE Band 38 / 20MHz / QPSK

## Lowest Band Edge / Full RB

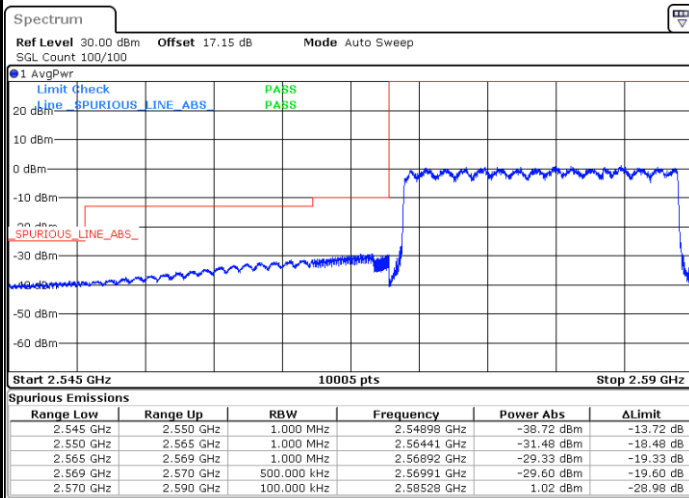


## Highest Band Edge / Full RB

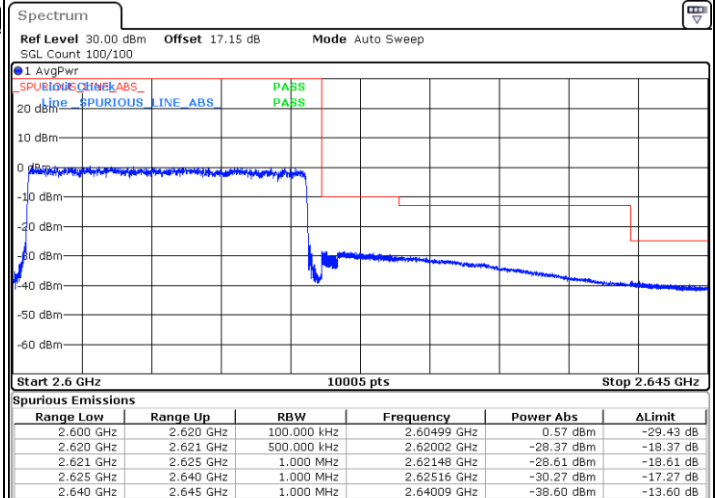


## LTE Band 38 / 20MHz / 16QAM

## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

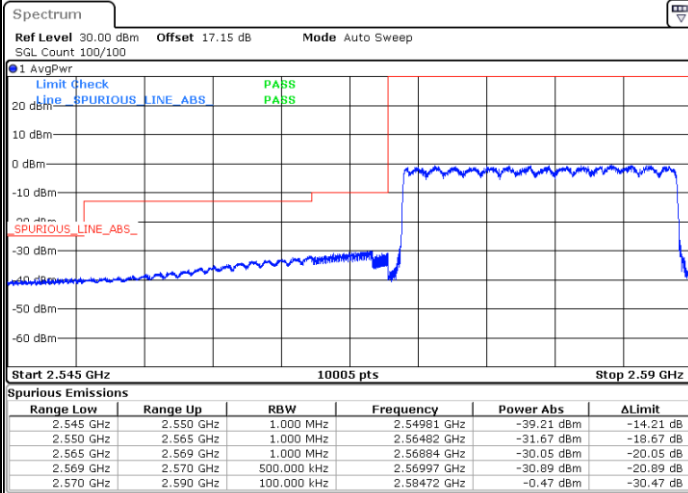




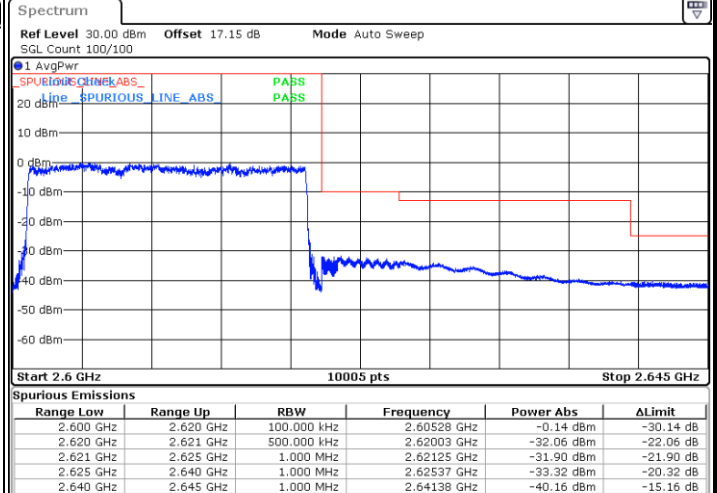
## LTE Band 38 / 20MHz / 64QAM

## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB



Date: 15.APR.2023 17:01:44



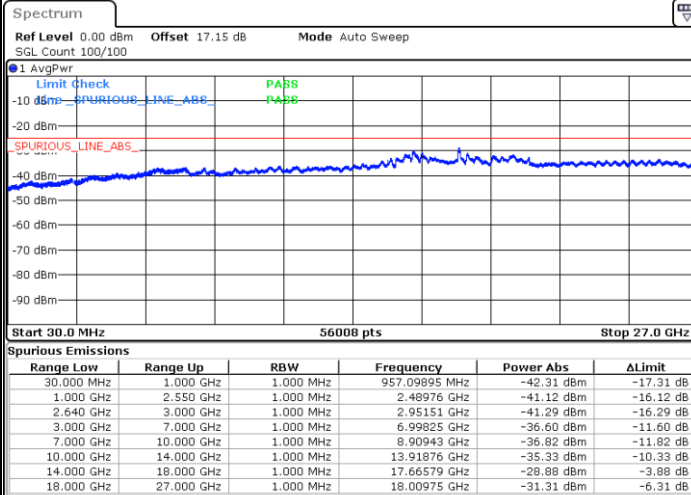
Date: 15.APR.2023 17:02:38



# Conducted Spurious Emission

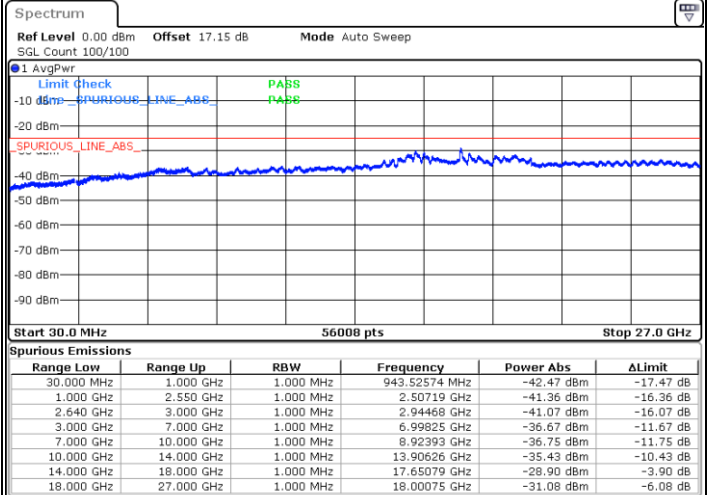
## LTE Band 38 / 5MHz

### Lowest Channel / QPSK



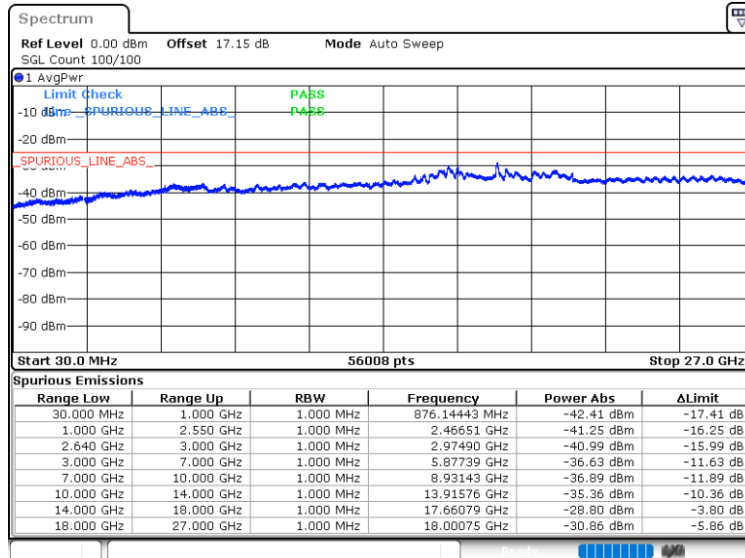
Date: 15.APR.2023 17:04:12

### Middle Channel / QPSK



Date: 15.APR.2023 17:05:45

### Highest Channel / QPSK



Date: 15.APR.2023 17:07:18