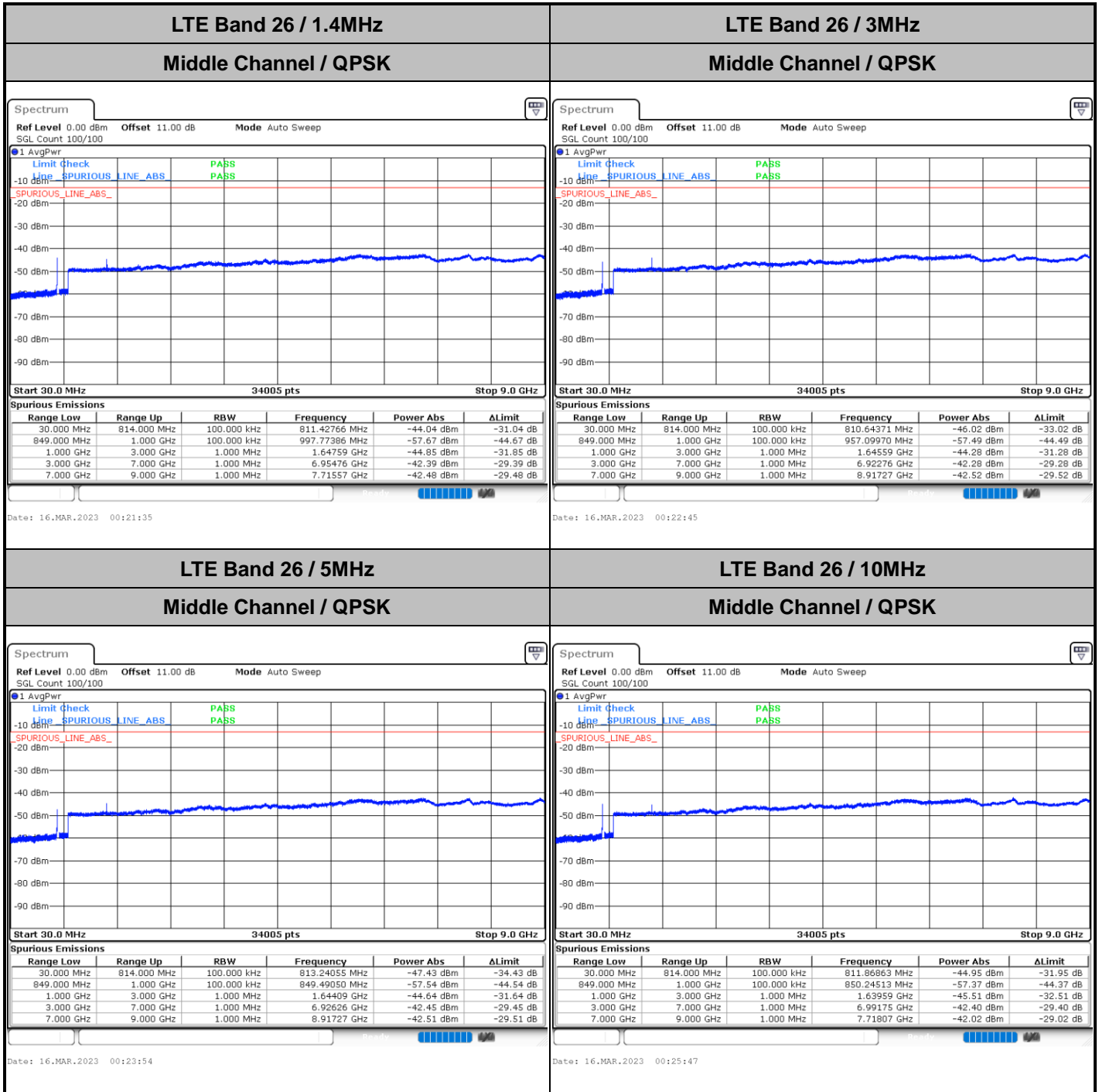
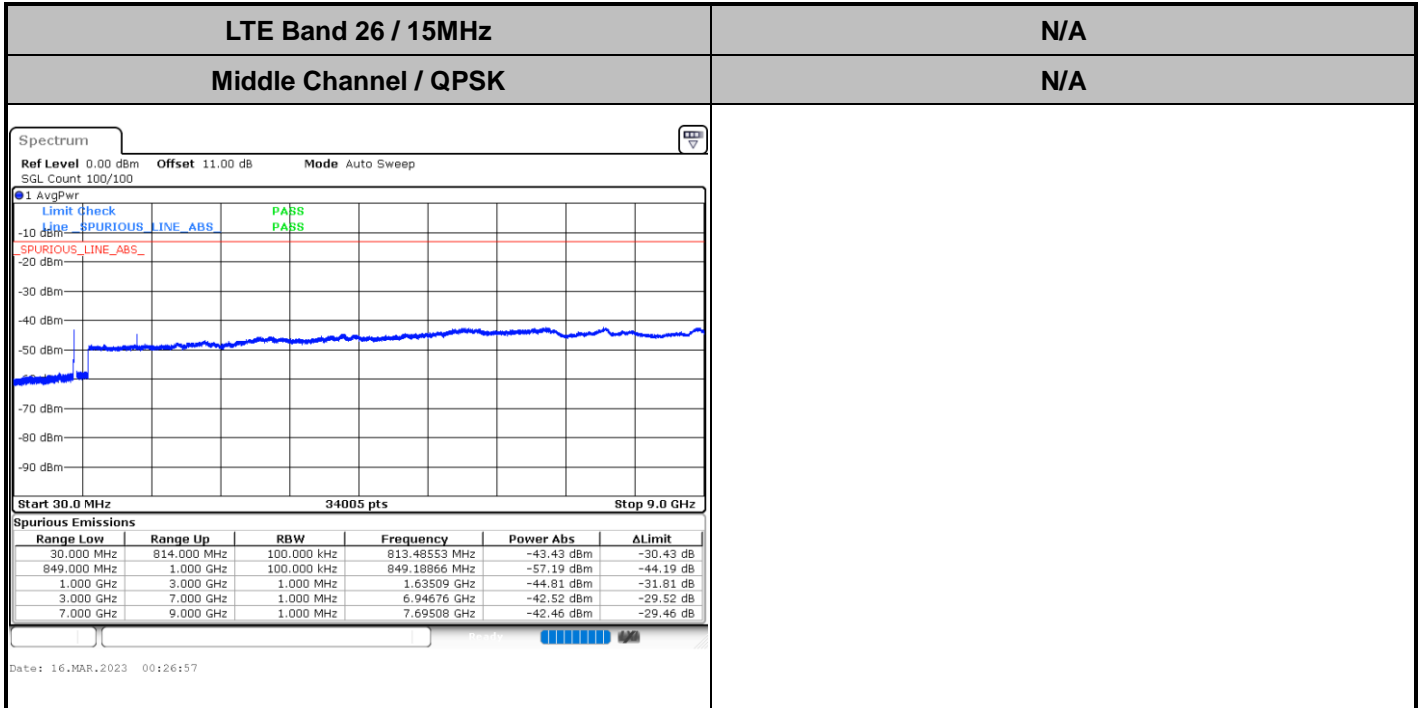




Conducted Spurious Emission







Frequency Stability

| Test Conditions | | LTE Band 26 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0153 | PASS |
| 40 | Normal Voltage | 0.0038 | |
| 30 | Normal Voltage | 0.0002 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0089 | |
| 0 | Normal Voltage | 0.0055 | |
| -10 | Normal Voltage | 0.0121 | |
| -20 | Normal Voltage | 0.0125 | |
| -30 | Normal Voltage | 0.0010 | |
| 20 | Maximum Voltage | 0.0117 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0113 | |

Note:

- 1. Normal Voltage = 3.89 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.4 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



| Test Conditions | | LTE Band 26 (QPSK) / Low Channel | Limit |
|------------------|-------------------|----------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 15MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0167 | PASS |
| 40 | Normal Voltage | 0.0164 | |
| 30 | Normal Voltage | 0.0080 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0011 | |
| 0 | Normal Voltage | 0.0028 | |
| -10 | Normal Voltage | 0.0041 | |
| -20 | Normal Voltage | 0.0050 | |
| -30 | Normal Voltage | 0.0033 | |
| 20 | Maximum Voltage | 0.0108 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0129 | |

Note:

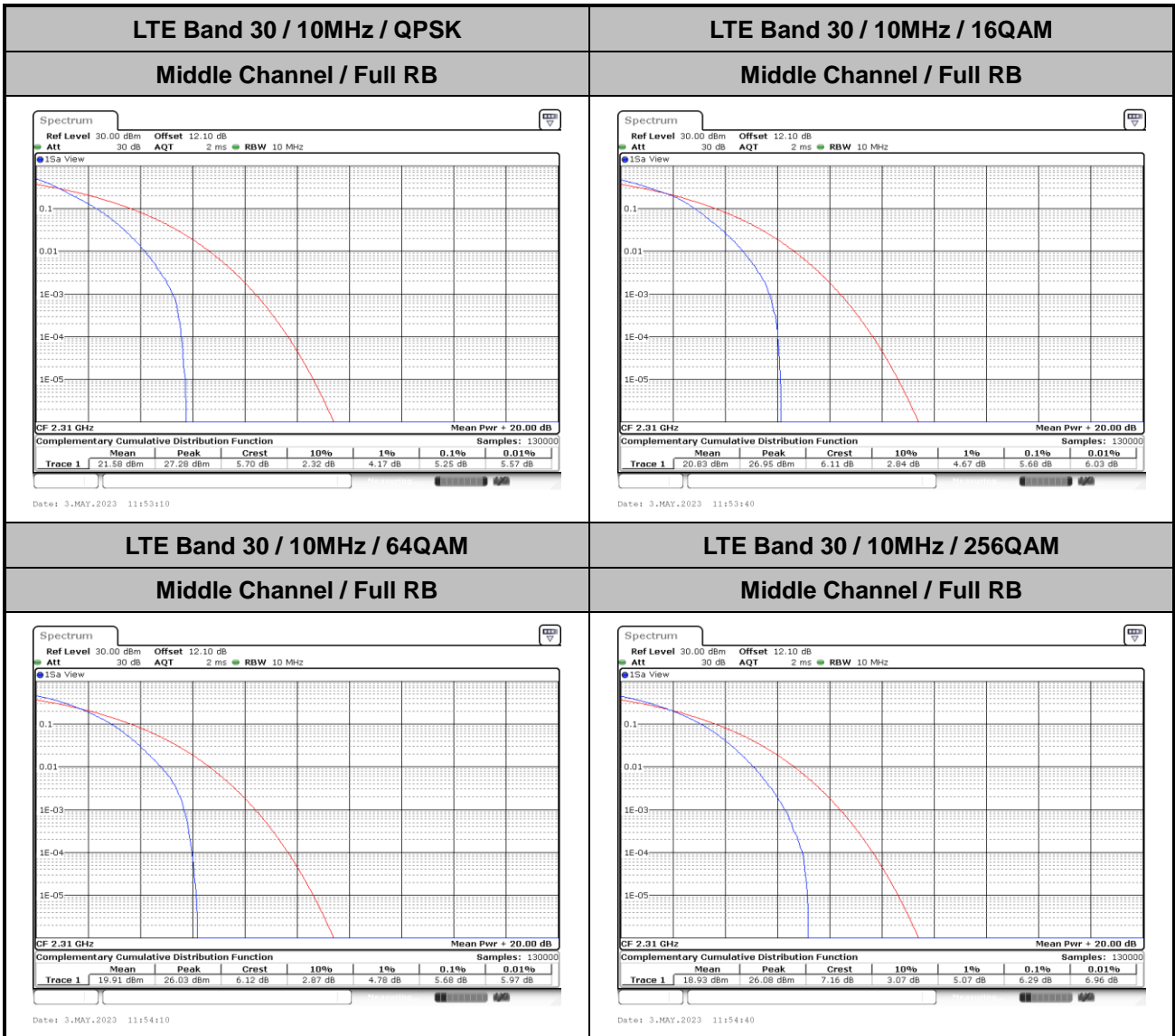
1. Normal Voltage = 3.89 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 30

Peak-to-Average Ratio

| Mode | LTE Band 30 / 10MHz | | | | |
|-----------|---------------------|---------|---------|---------|-------------|
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | Limit: 13dB |
| RB Size | Full RB | Full RB | Full RB | Full RB | Result |
| Middle CH | 5.25 | 5.68 | 5.68 | 6.29 | PASS |





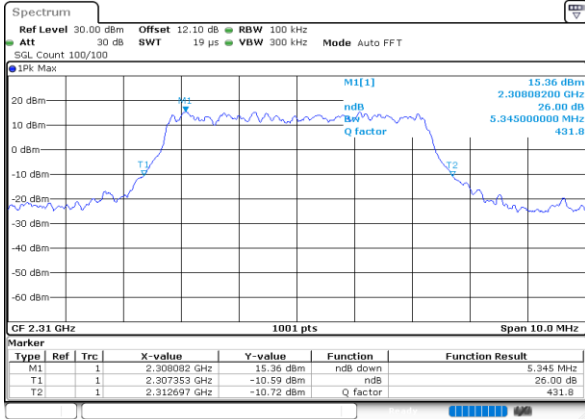
26dB Bandwidth

| Mode | LTE Band 30 : 26dB BW(MHz) | | | | | | | | | | | |
|-----------|----------------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | - | - | - | - | 5.35 | 5.02 | 9.85 | 10.21 | - | - | - | - |
| Mode | LTE Band 30 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | - | - | - | - | 5.36 | 5.32 | 10.09 | 10.21 | - | - | - | - |



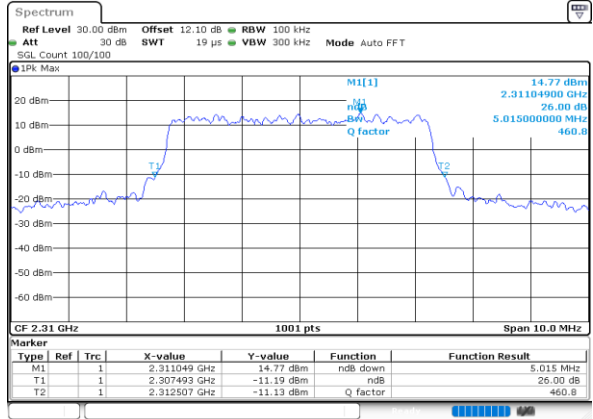
LTE Band 30

Middle Channel / 5MHz / QPSK



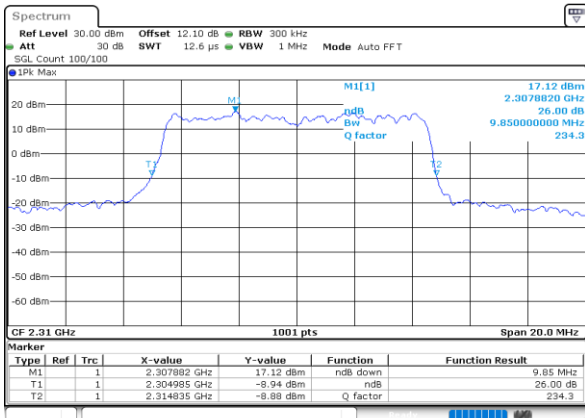
Date: 3.MAY.2023 11:42:45

Middle Channel / 5MHz / 16QAM



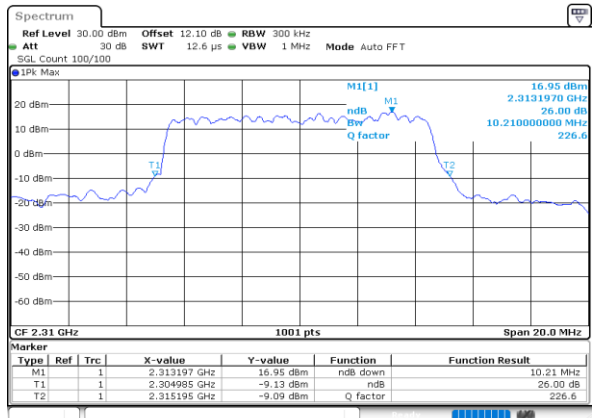
Date: 3.MAY.2023 11:43:14

Middle Channel / 10MHz / QPSK



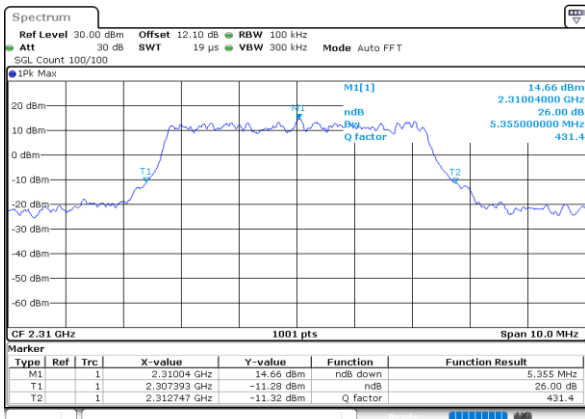
Date: 3.MAY.2023 11:51:13

Middle Channel / 10MHz / 16QAM



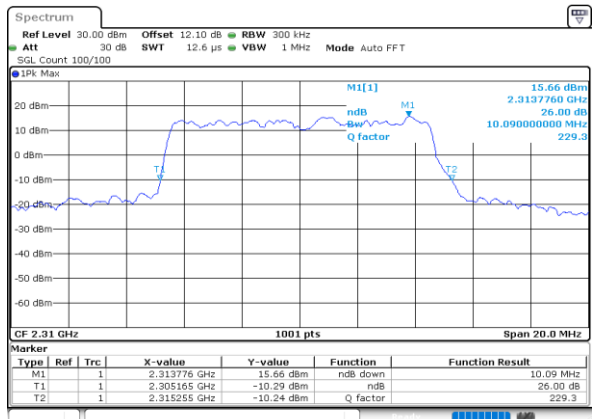
Date: 3.MAY.2023 11:51:42

Middle Channel / 5MHz / 64QAM



Date: 3.MAY.2023 11:49:49

Middle Channel / 10MHz / 64QAM



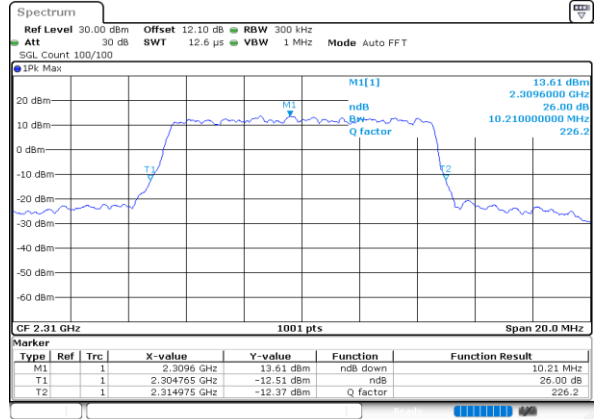
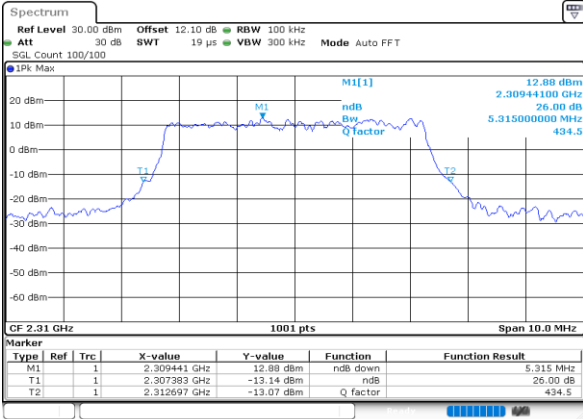
Date: 3.MAY.2023 11:52:11



LTE Band 30

Middle Channel / 5MHz / 256QAM

Middle Channel / 10MHz / 256QAM



Date: 3.MAY.2023 11:44:12

Date: 3.MAY.2023 11:52:40



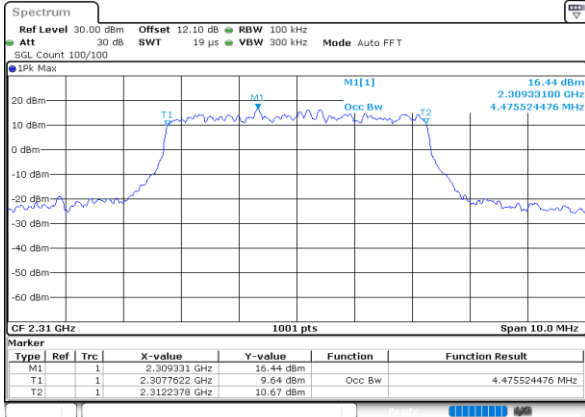
Occupied Bandwidth

| Mode | LTE Band 30 : 99%OBW(MHz) | | | | | | | | | | | |
|-----------|---------------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | - | - | - | - | 4.48 | 4.50 | 8.95 | 9.09 | - | - | - | - |
| Mode | LTE Band 30 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | - | - | - | - | 4.47 | 4.49 | 9.15 | 9.09 | - | - | - | - |



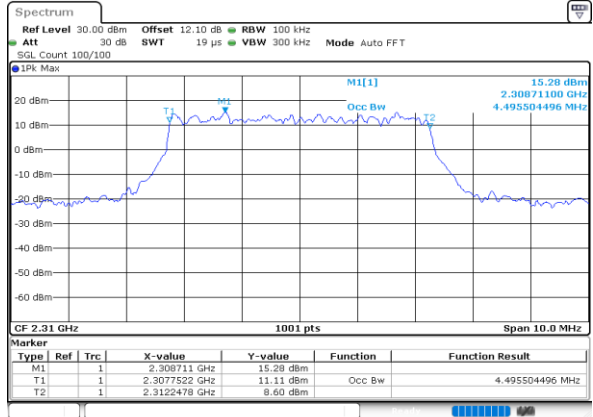
LTE Band 30

Middle Channel / 5MHz / QPSK



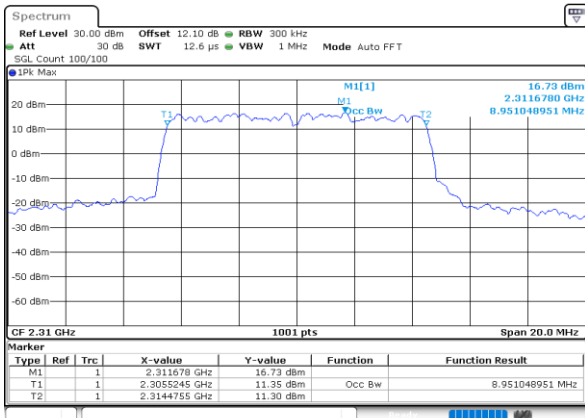
Date: 3.MAY.2023 11:40:50

Middle Channel / 5MHz / 16QAM



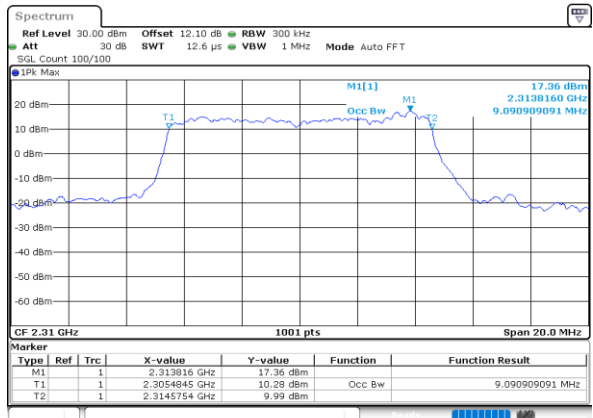
Date: 3.MAY.2023 11:41:19

Middle Channel / 10MHz / QPSK



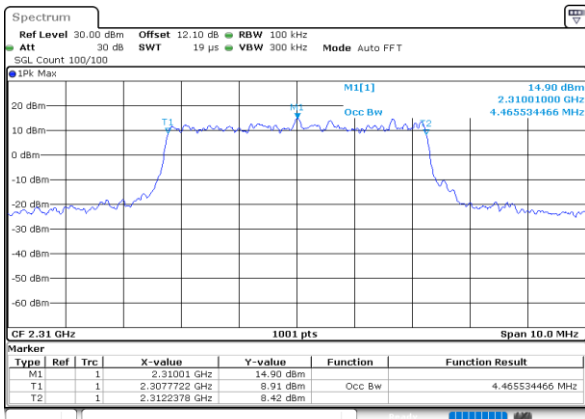
Date: 3.MAY.2023 11:44:46

Middle Channel / 10MHz / 16QAM



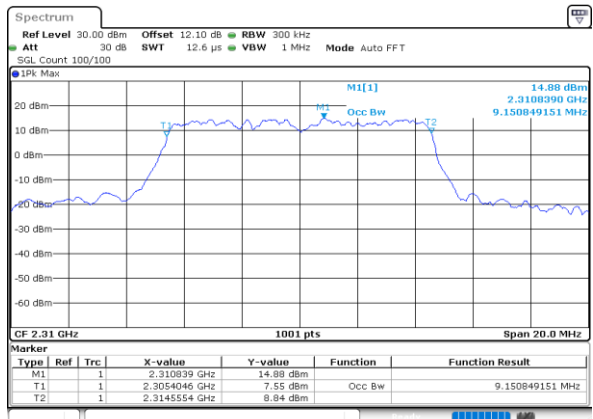
Date: 3.MAY.2023 11:45:15

Middle Channel / 5MHz / 64QAM



Date: 3.MAY.2023 11:41:48

Middle Channel / 10MHz / 64QAM



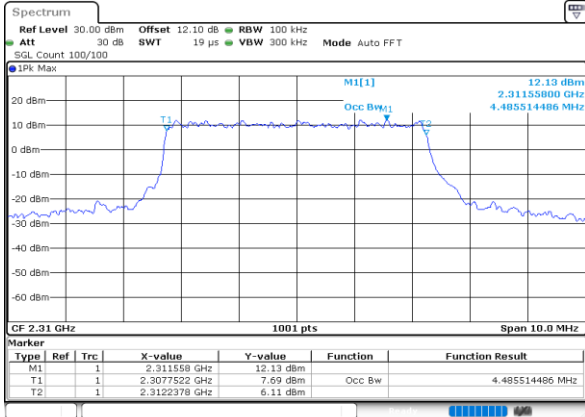
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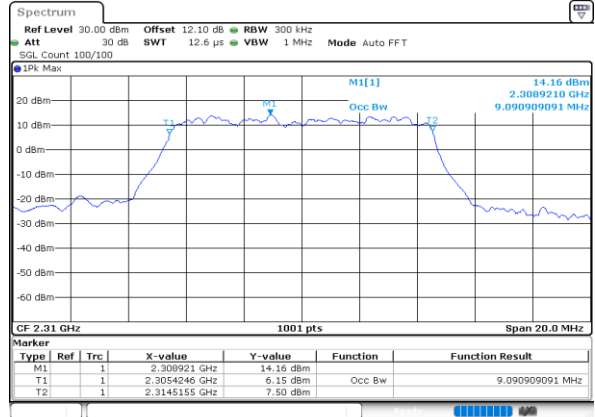
LTE Band 30

Middle Channel / 5MHz / 256QAM

Middle Channel / 10MHz / 256QAM



Date: 3.MAY.2023 11:42:16



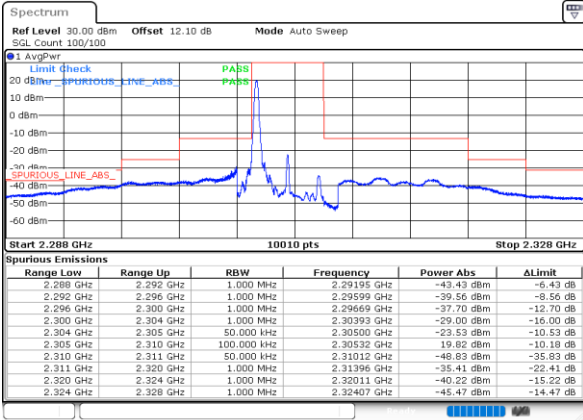
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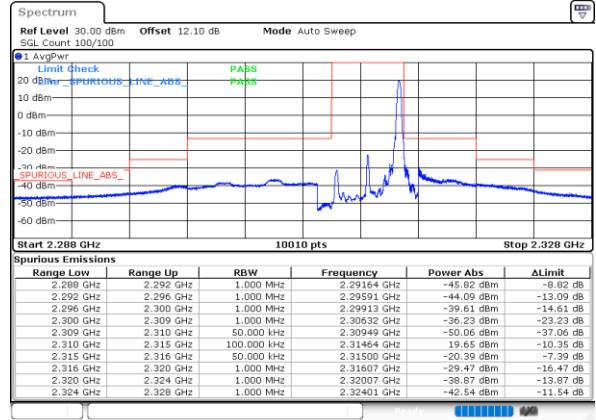
Conducted Band Edge

LTE Band 30 / 5MHz / QPSK

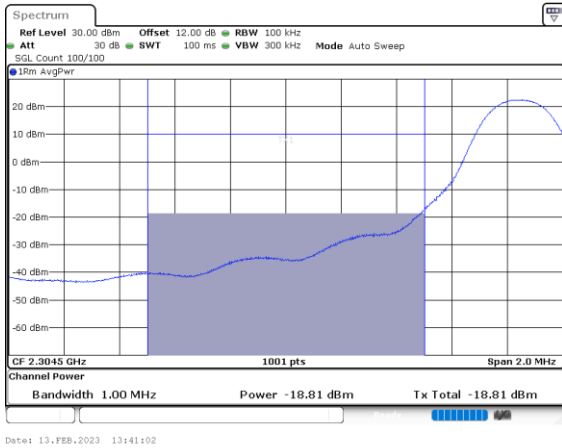
Lowest Band Edge / 1 RB



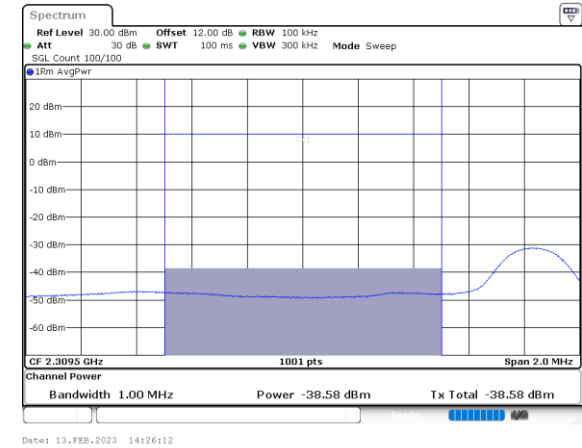
Highest Band Edge / 1 RB



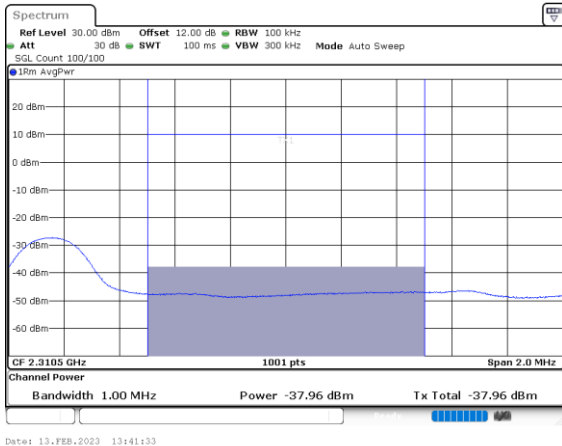
Lowest Band Edge / 1 RB / Lower zoom in



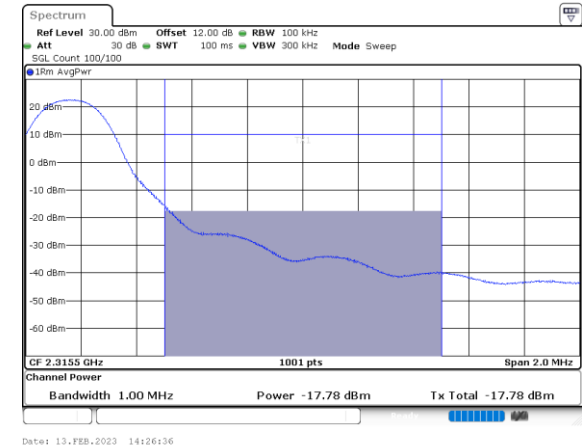
Highest Band Edge / 1 RB / Lower zoom in



Lowest Band Edge / 1 RB / Upper zoom in



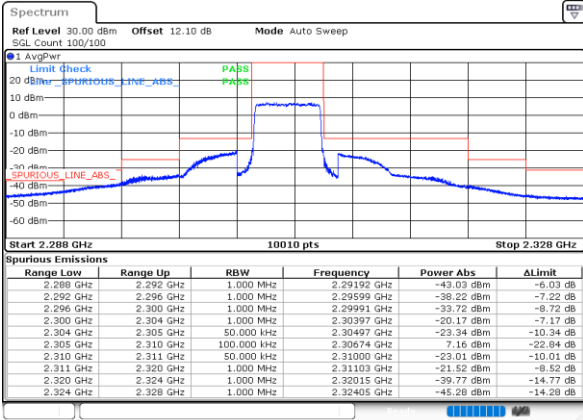
Highest Band Edge / 1 RB / Upper zoom in



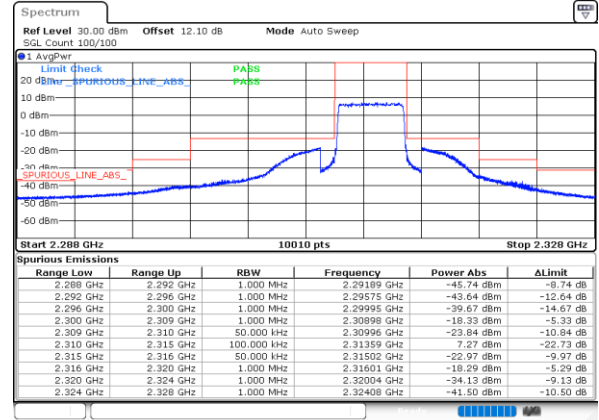


LTE Band 30 / 5MHz / QPSK

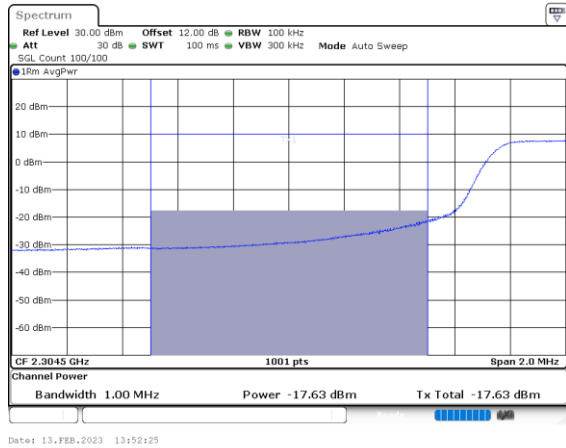
Lowest Band Edge / Full RB



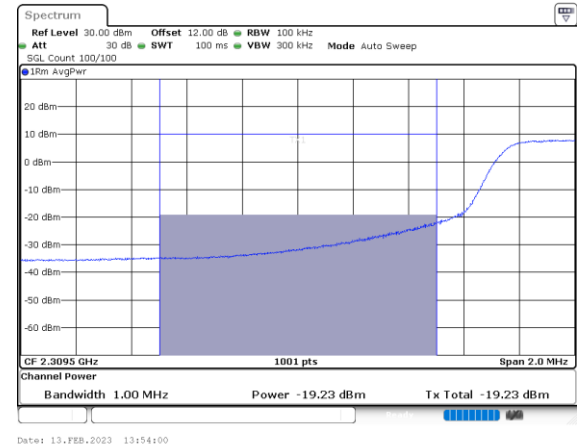
Highest Band Edge / Full RB



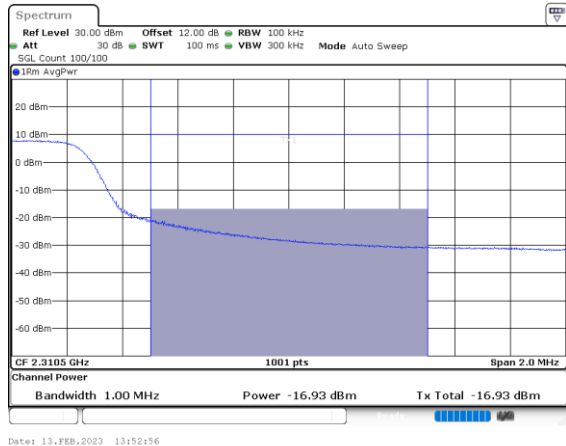
Lowest Band Edge / Full RB / Lower zoom in



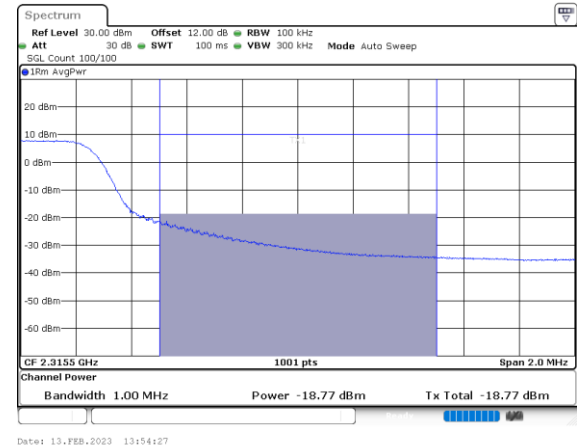
Highest Band Edge / Full RB / Lower zoom in



Lowest Band Edge / Full RB / Upper zoom in



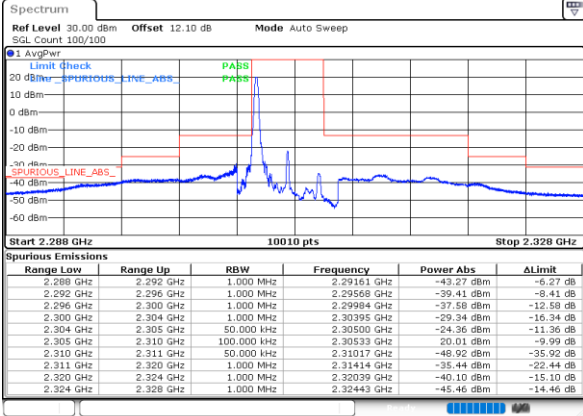
Highest Band Edge / Full RB / Upper zoom in



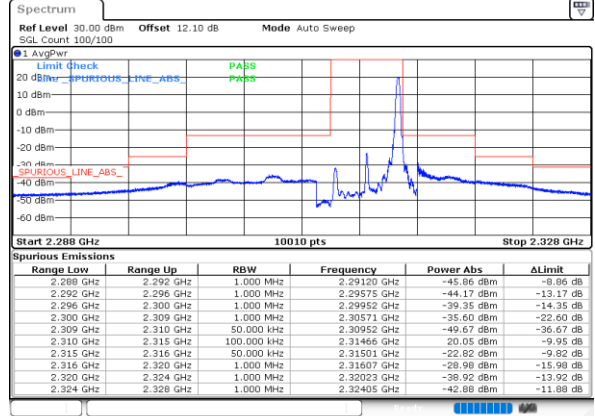


LTE Band 30 / 5MHz / 16QAM

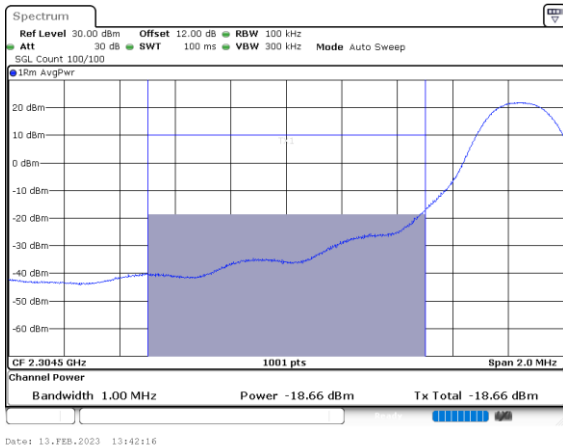
Lowest Band Edge / 1 RB



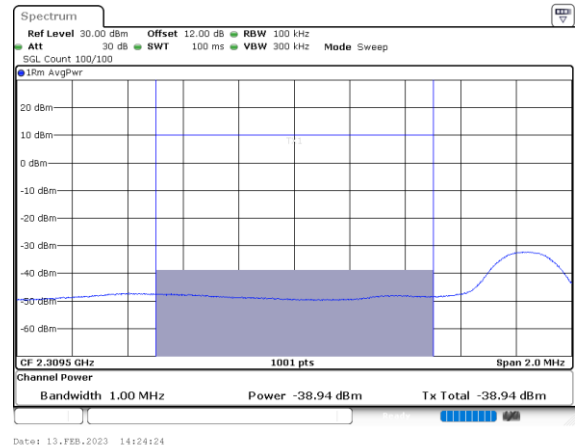
Highest Band Edge / 1 RB



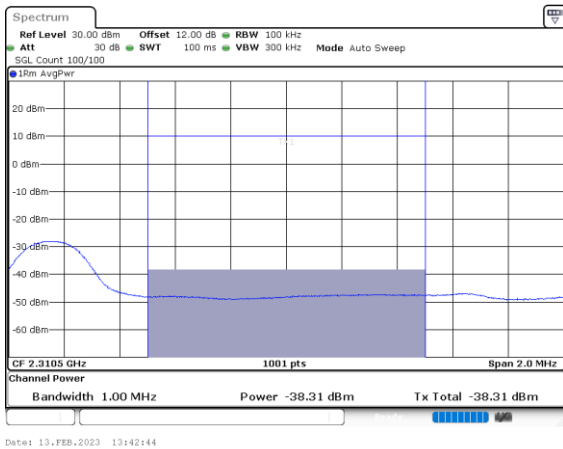
Lowest Band Edge / 1 RB / Lower zoom in



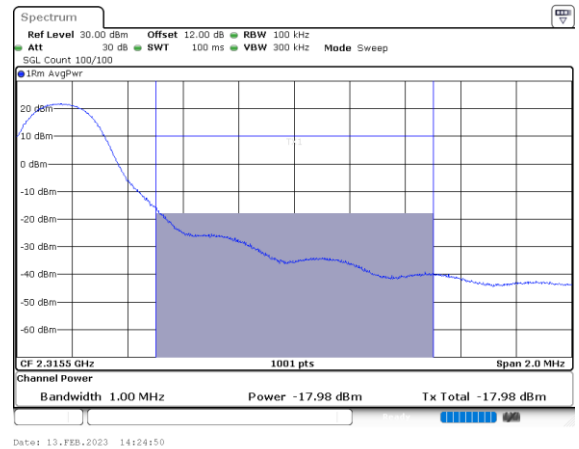
Highest Band Edge / 1 RB / Lower zoom in



Lowest Band Edge / 1 RB / Upper zoom in



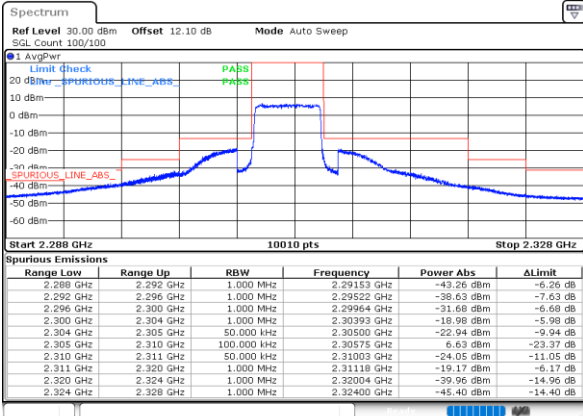
Highest Band Edge / 1 RB / Upper zoom in



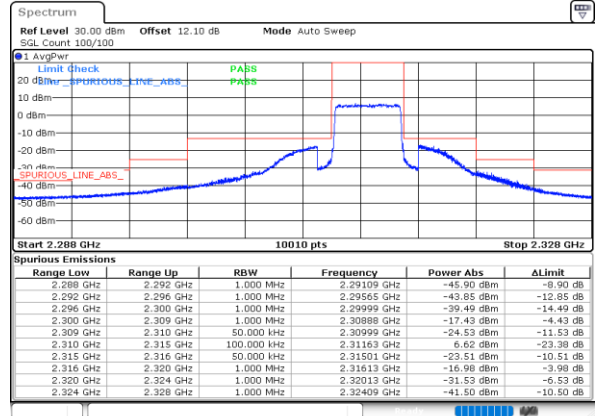


LTE Band 30 / 5MHz / 16QAM

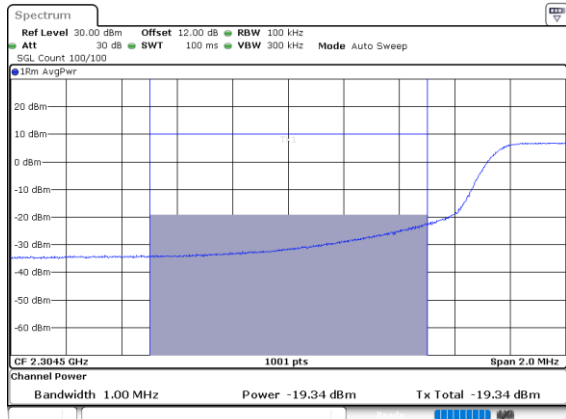
Lowest Band Edge / Full RB



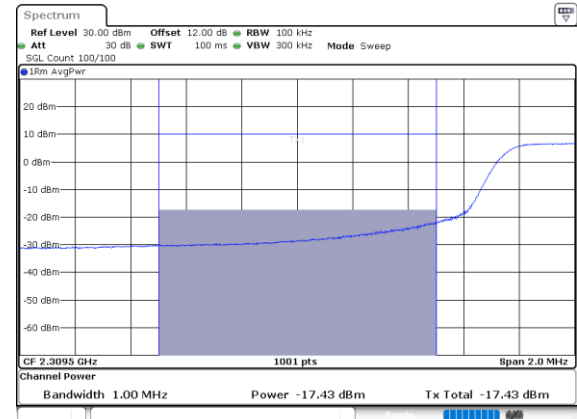
Highest Band Edge / Full RB



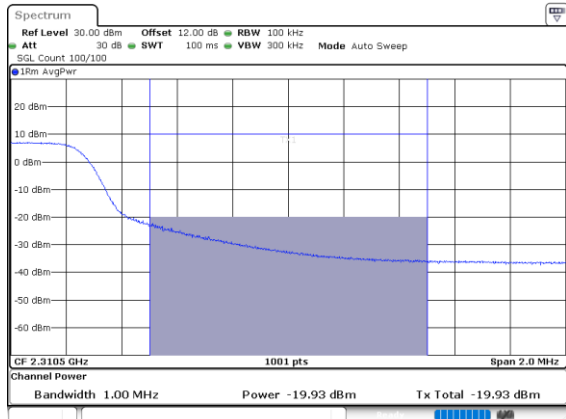
Lowest Band Edge / Full RB / Lower zoom in



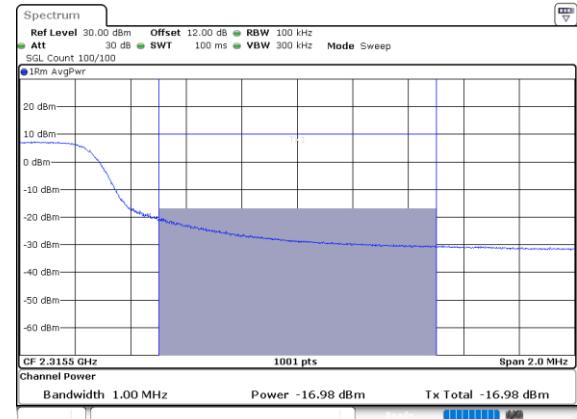
Highest Band Edge / Full RB / Lower zoom in



Lowest Band Edge / Full RB / Upper zoom in



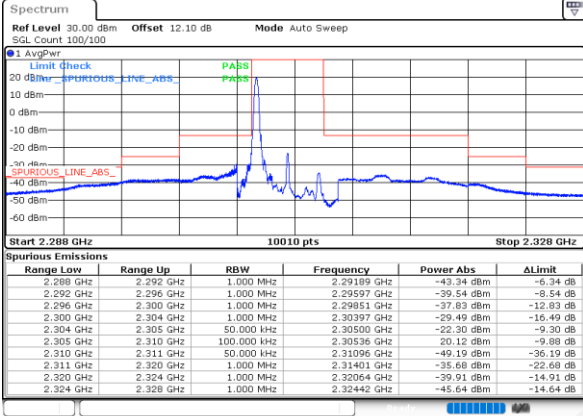
Highest Band Edge / Full RB / Upper zoom in



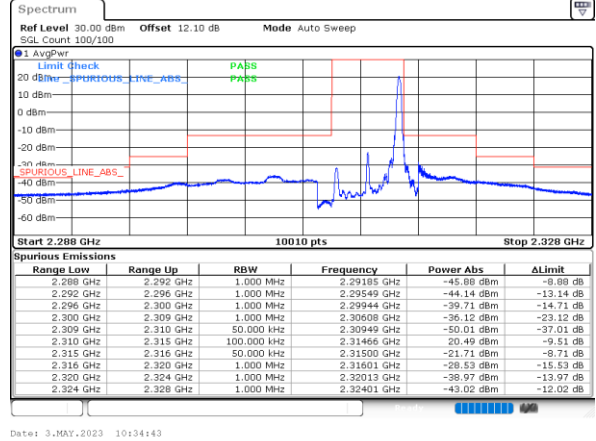


LTE Band 30 / 5MHz / 64QAM

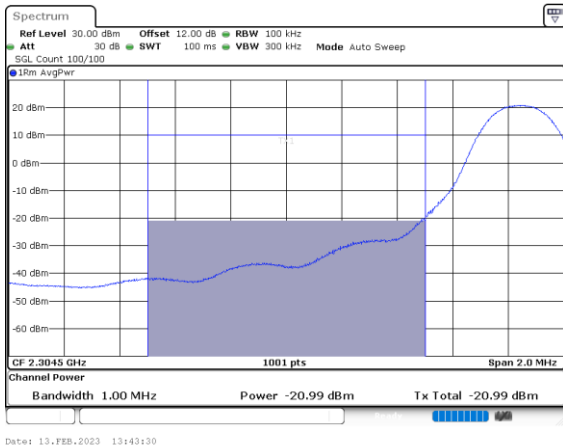
Lowest Band Edge / 1 RB



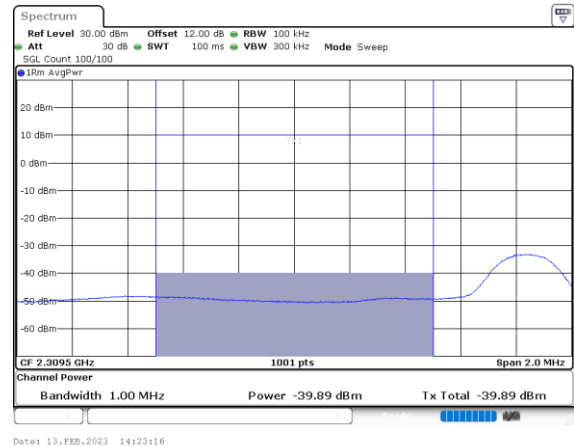
Highest Band Edge / 1 RB



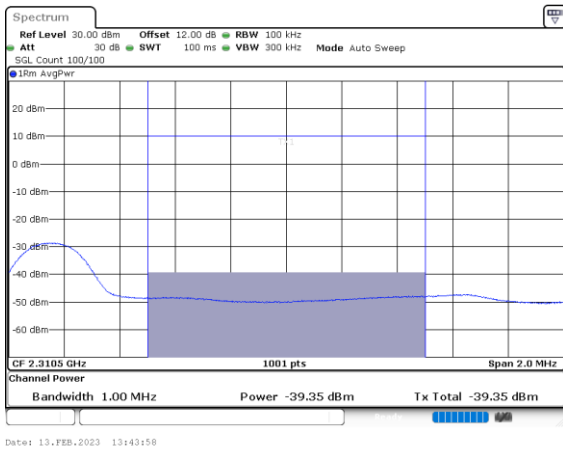
Lowest Band Edge / 1 RB / Lower zoom in



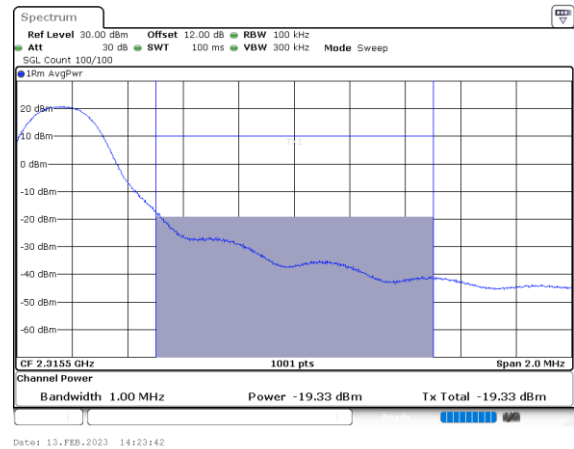
Highest Band Edge / 1 RB / Lower zoom in



Lowest Band Edge / 1 RB / Upper zoom in



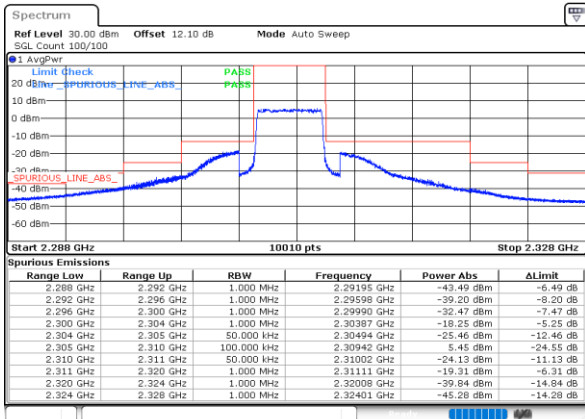
Highest Band Edge / 1 RB / Upper zoom in



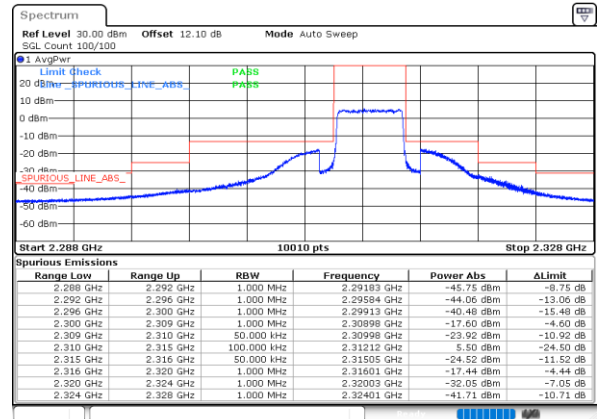


LTE Band 30 / 5MHz / 64QAM

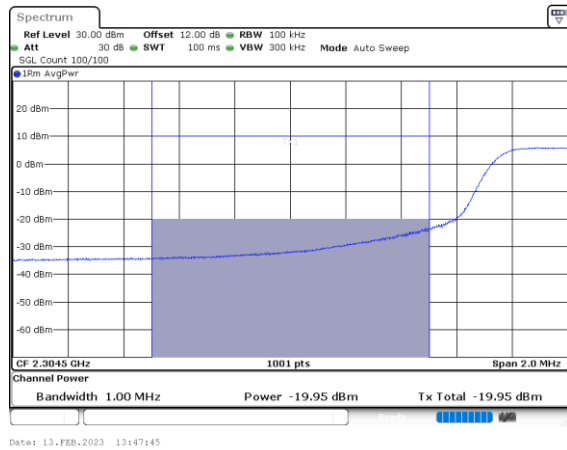
Lowest Band Edge / Full RB



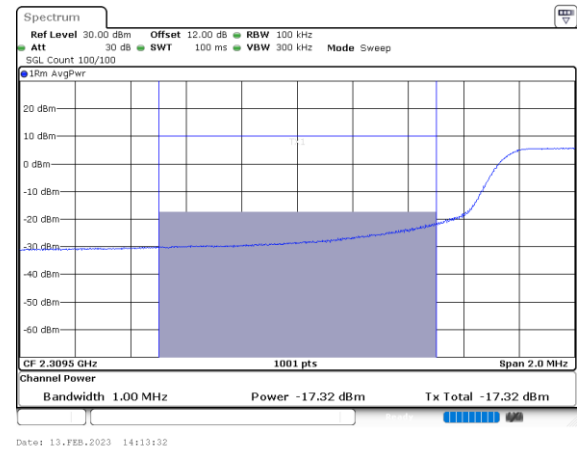
Highest Band Edge / Full RB



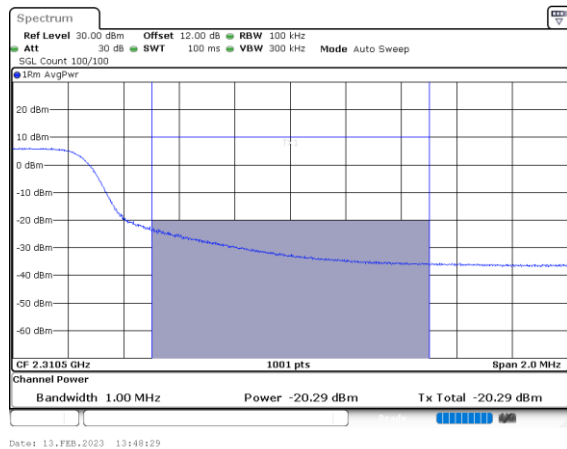
Lowest Band Edge / Full RB / Lower zoom in



Highest Band Edge / Full RB / Lower zoom in



Lowest Band Edge / Full RB / Upper zoom in



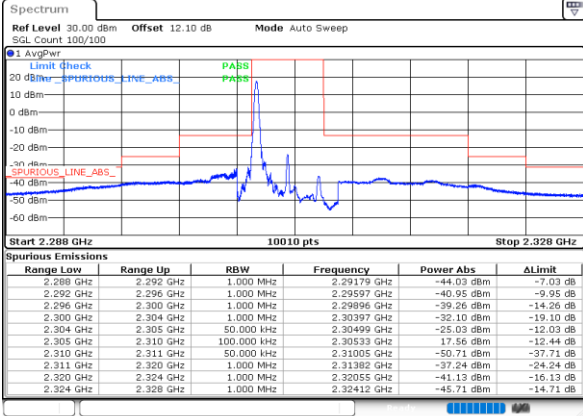
Highest Band Edge / Full RB / Upper zoom in



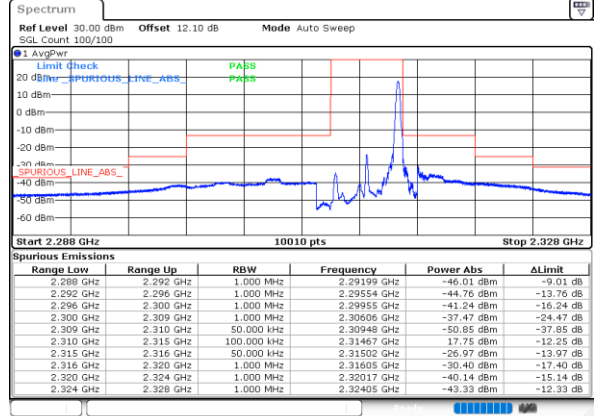


LTE Band 30 / 5MHz / 256QAM

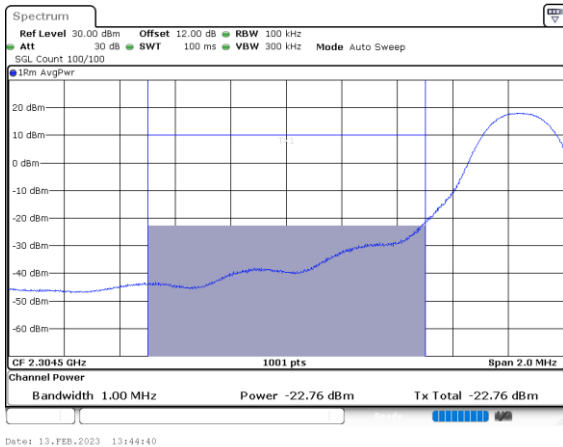
Lowest Band Edge / 1 RB



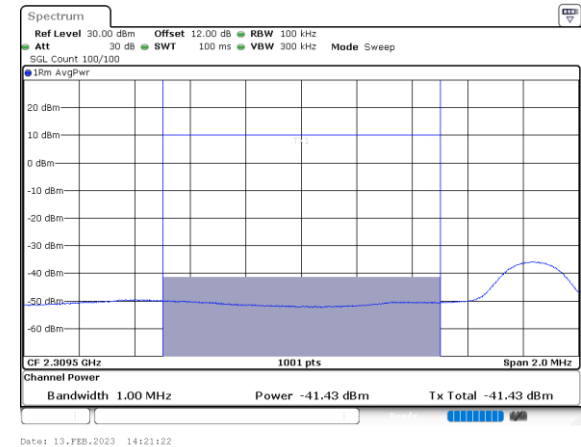
Highest Band Edge / 1 RB



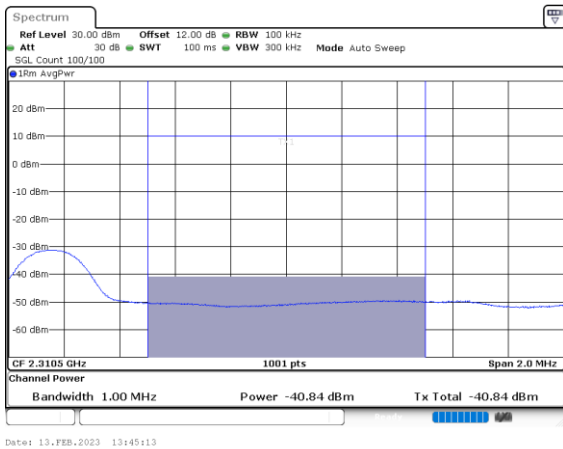
Lowest Band Edge / 1 RB / Lower zoom in



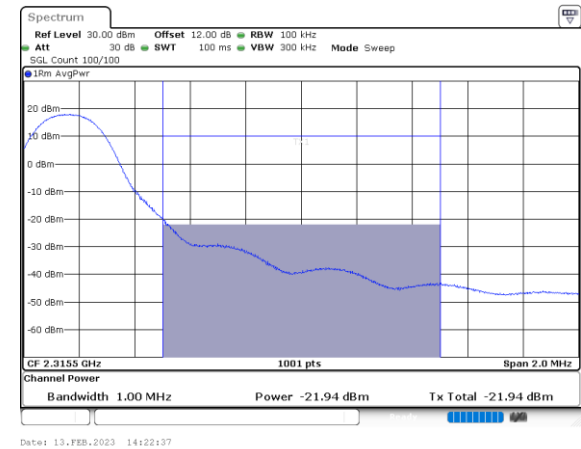
Highest Band Edge / 1 RB / Lower zoom in



Lowest Band Edge / 1 RB / Upper zoom in



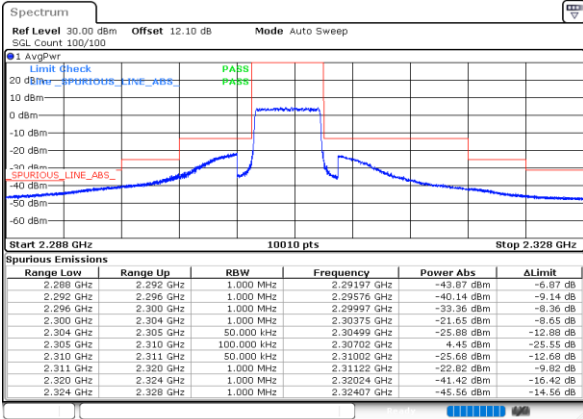
Highest Band Edge / 1 RB / Upper zoom in



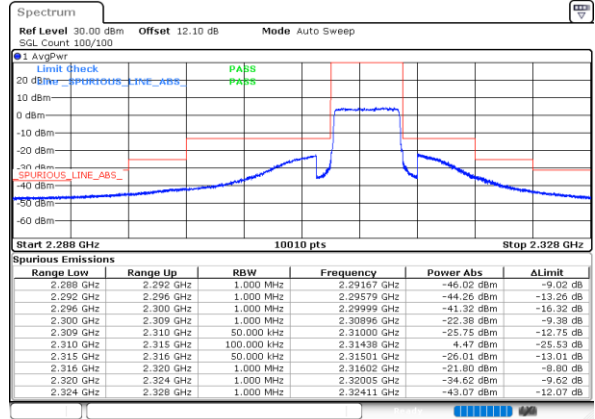


LTE Band 30 / 5MHz / 256QAM

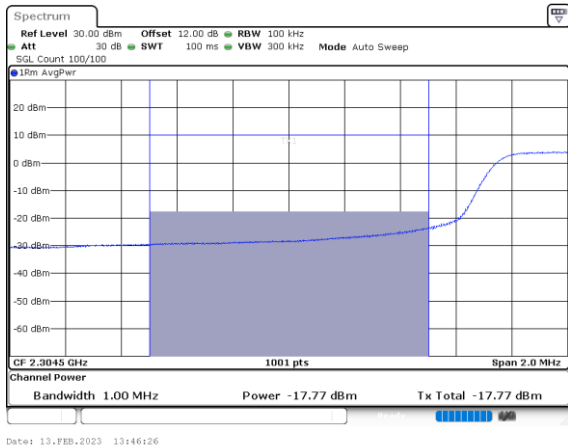
Lowest Band Edge / Full RB



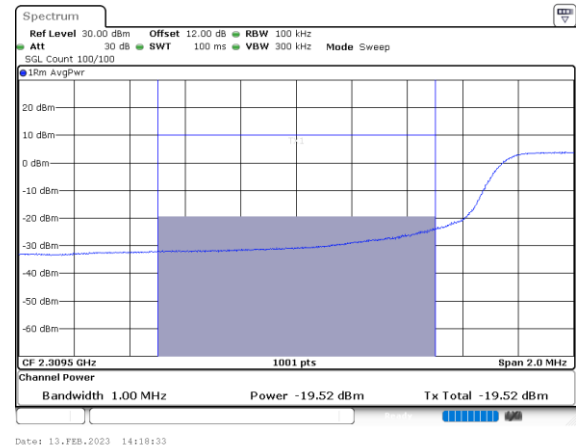
Highest Band Edge / Full RB



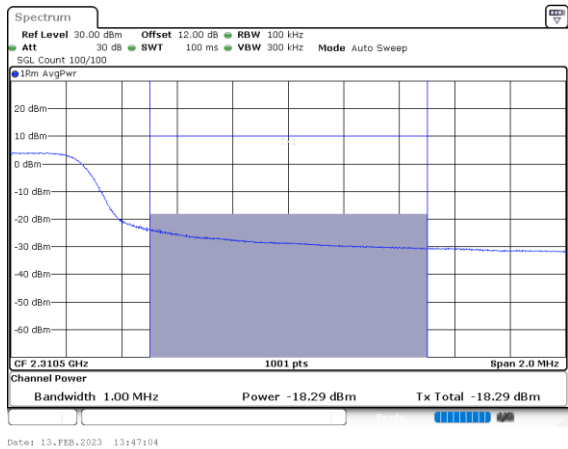
Lowest Band Edge / Full RB / Lower zoom in



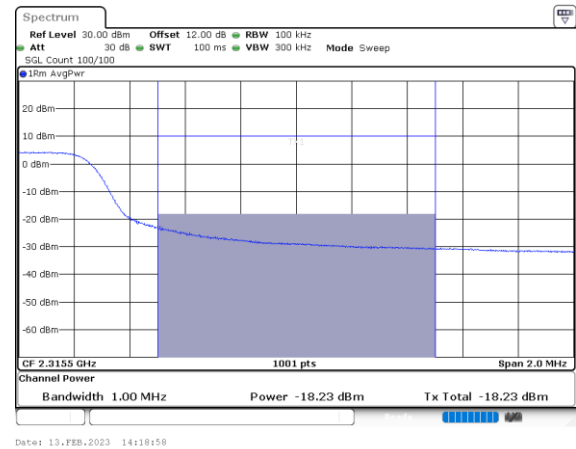
Highest Band Edge / Full RB / Lower zoom in



Lowest Band Edge / Full RB / Upper zoom in



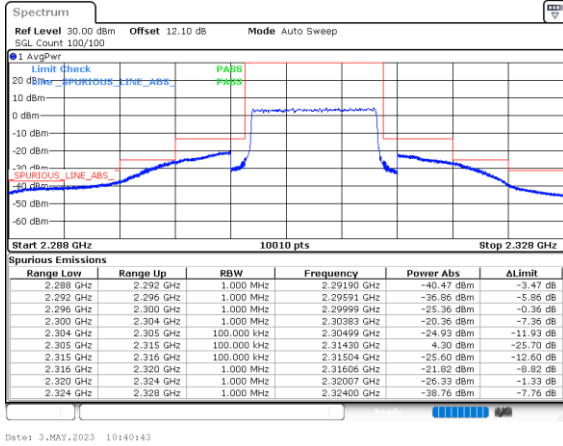
Highest Band Edge / Full RB / Upper zoom in



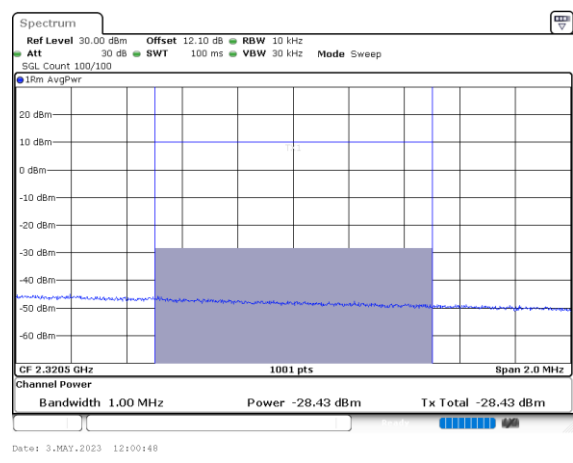
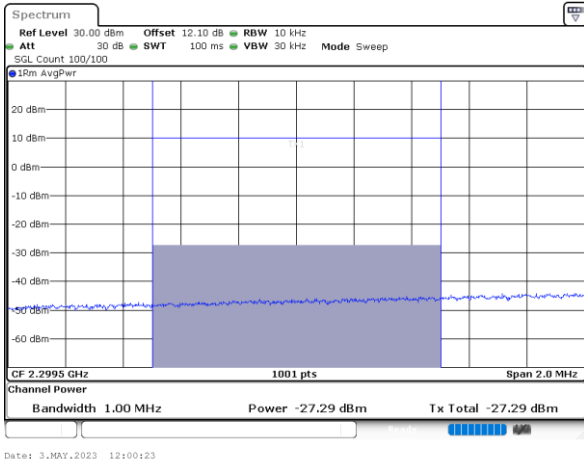


LTE Band 30 / 10MHz / QPSK

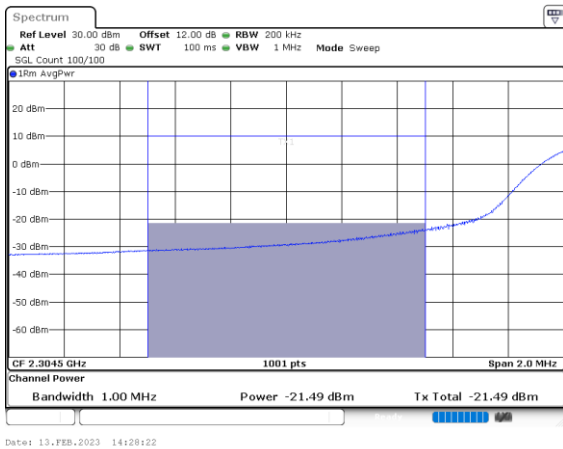
Middle Band Edge / Full RB



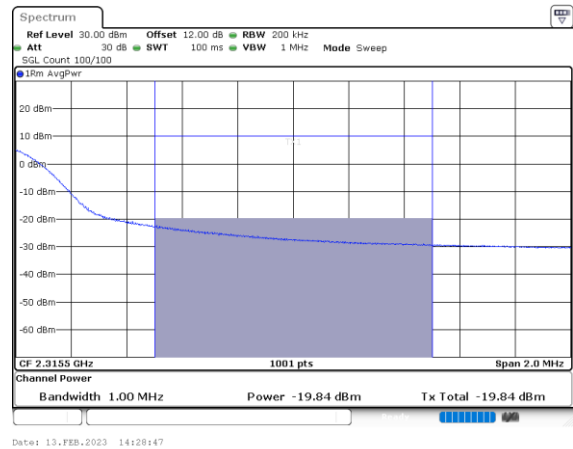
Verify Chnnel Power



Middle / Full RB / Lower zoom in



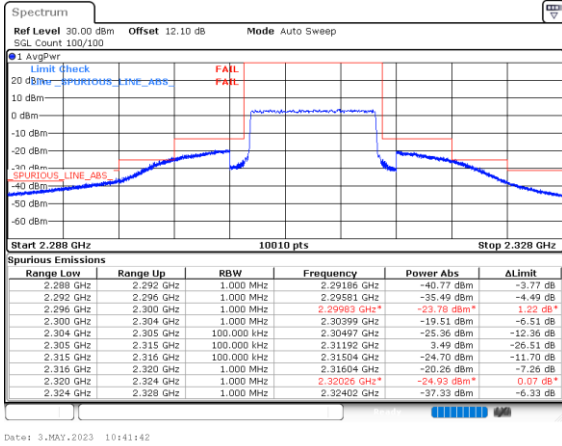
Middle / Full RB / Upper zoom in



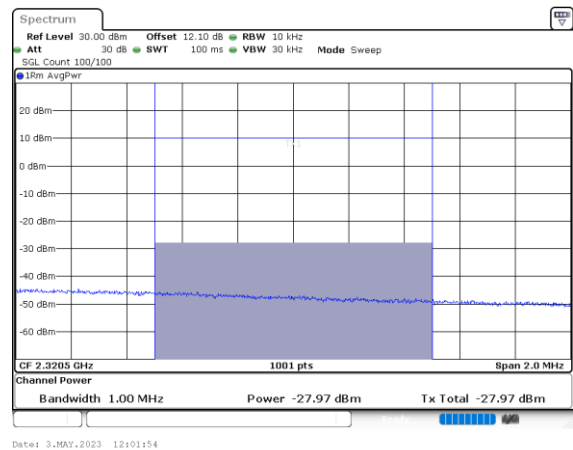
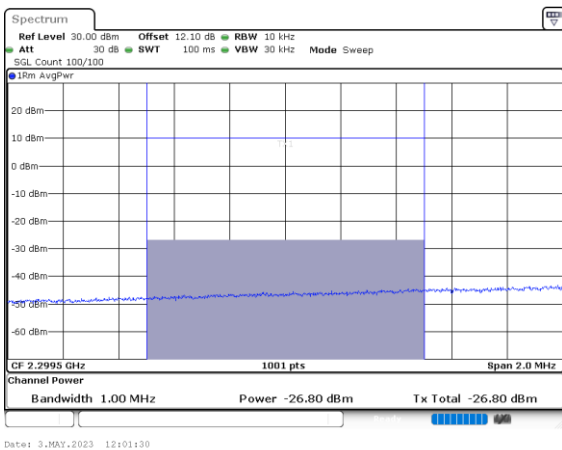


LTE Band 30 / 10MHz / 16QAM

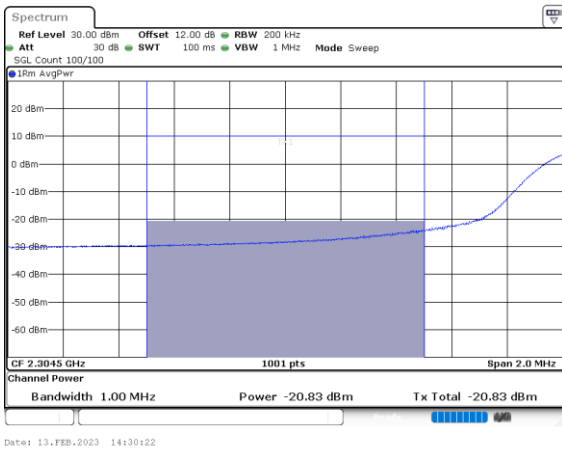
Middle Band Edge / Full RB



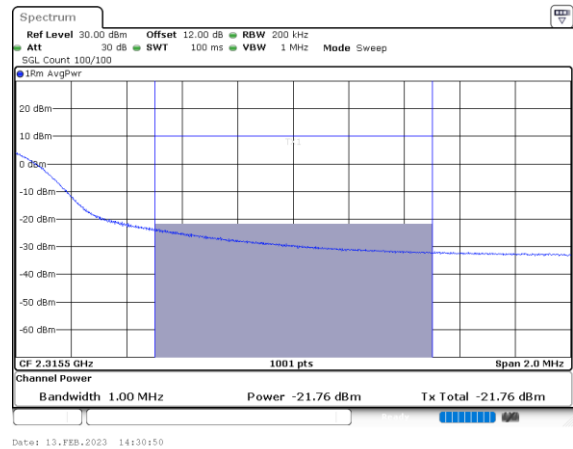
Verify Chnnel Power



Middle / Full RB / Lower zoom in



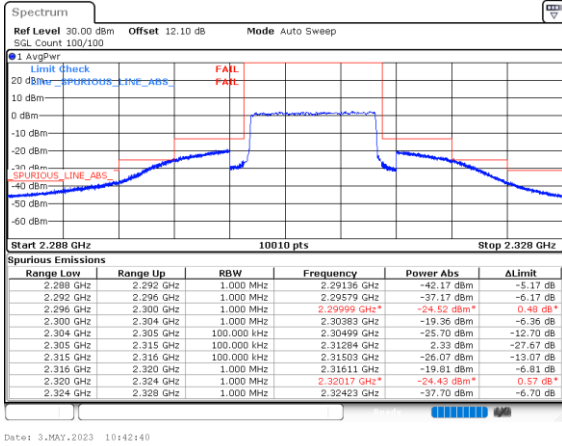
Middle / Full RB / Upper zoom in



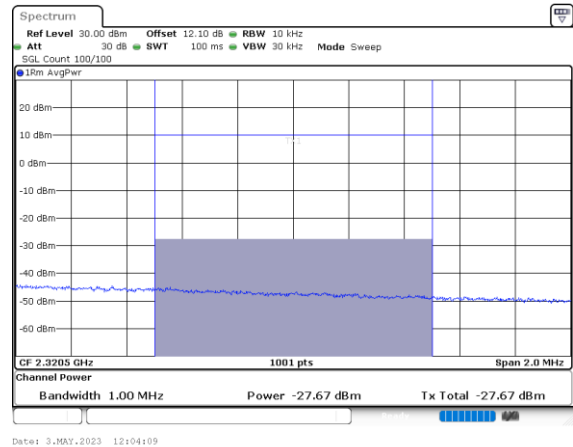
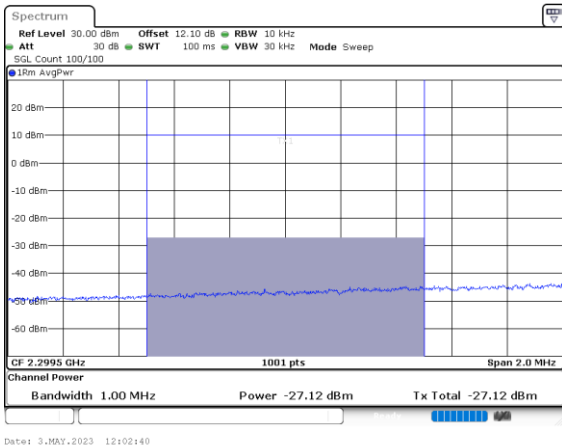


LTE Band 30 / 10MHz / 64QAM

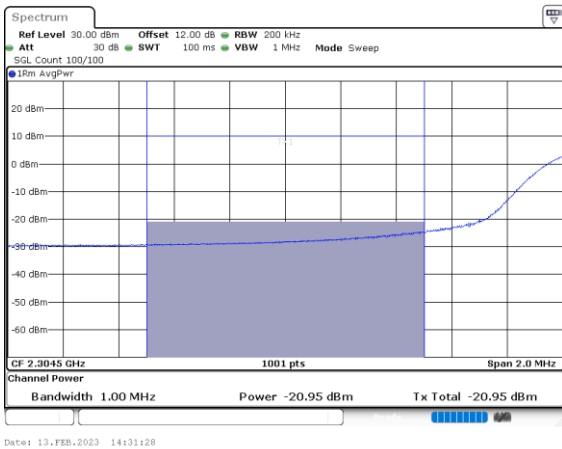
Middle Band Edge / Full RB



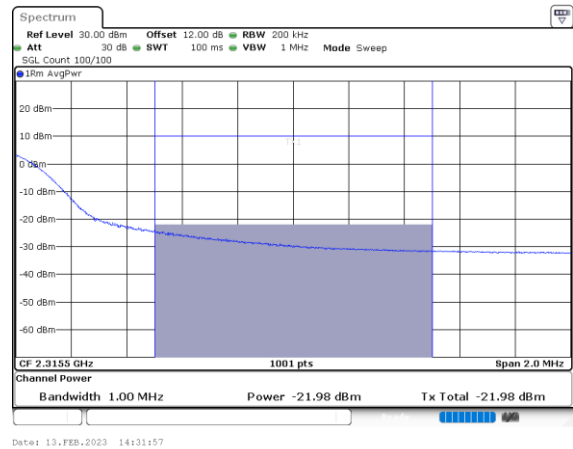
Verify Chnnel Power



Middle / Full RB / Lower zoom in



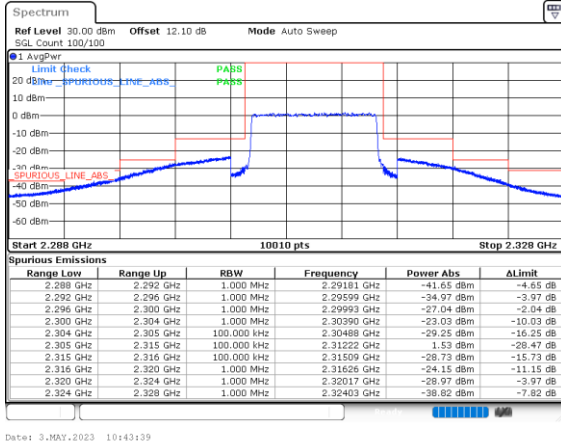
Middle / Full RB / Upper zoom in





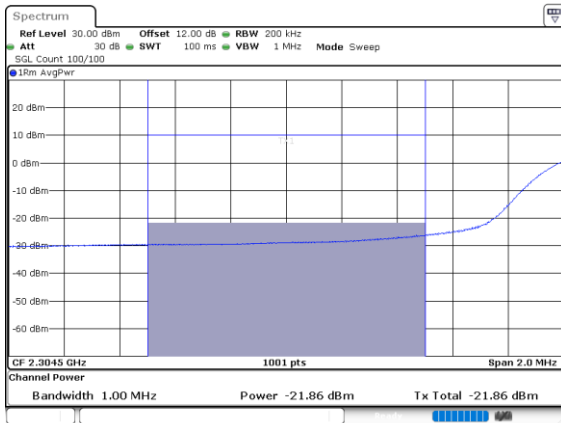
LTE Band 30 / 10MHz / 256QAM

Middle Band Edge / Full RB



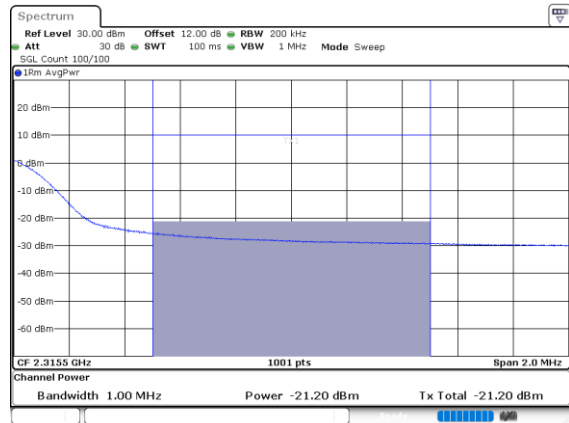
Date: 3.MAY.2023 10:43:39

Middle / Full RB / Lower zoom in



Date: 13.FEB.2023 14:32:42

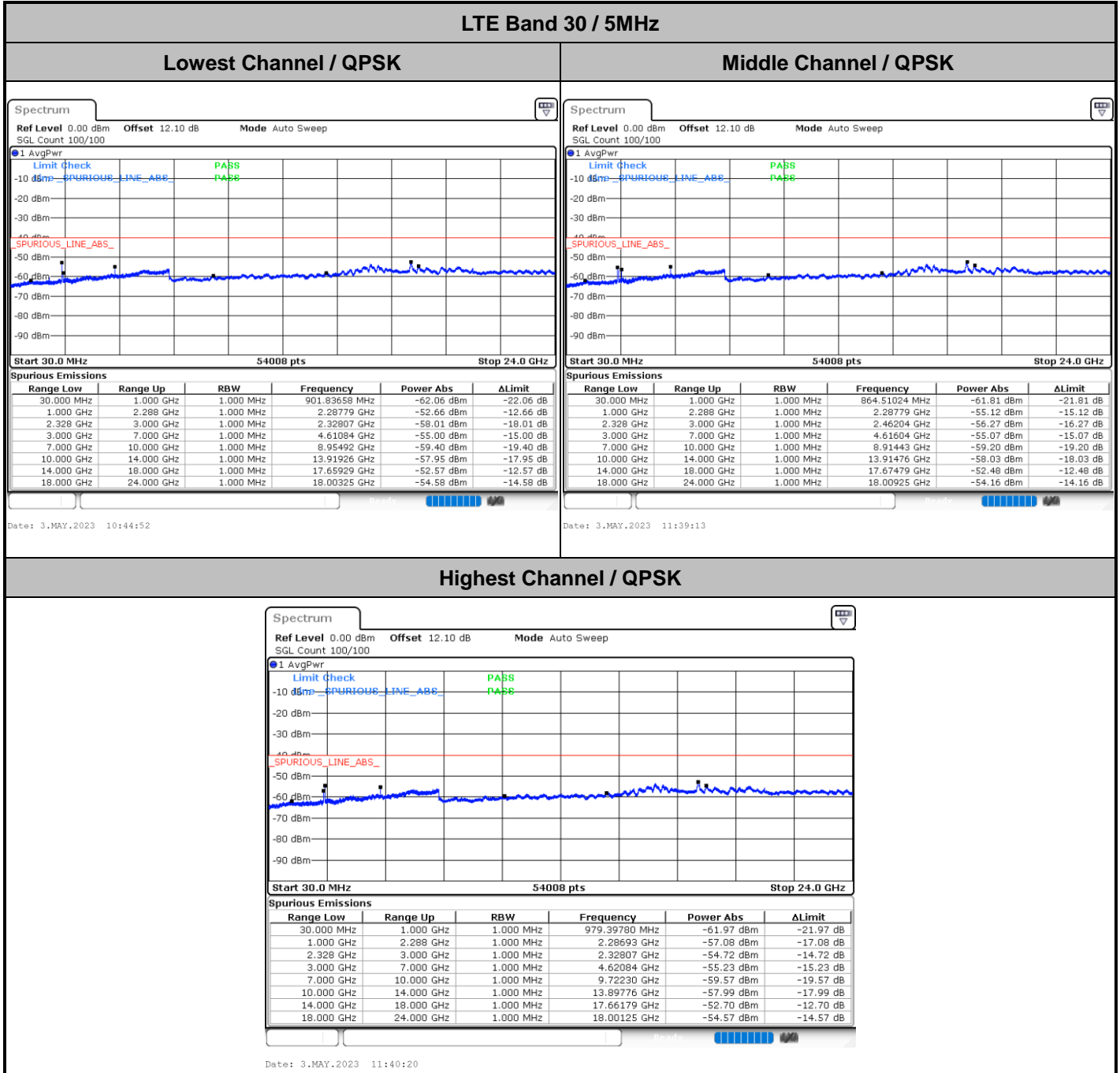
Middle / Full RB / Upper zoom in



Date: 13.FEB.2023 14:34:06



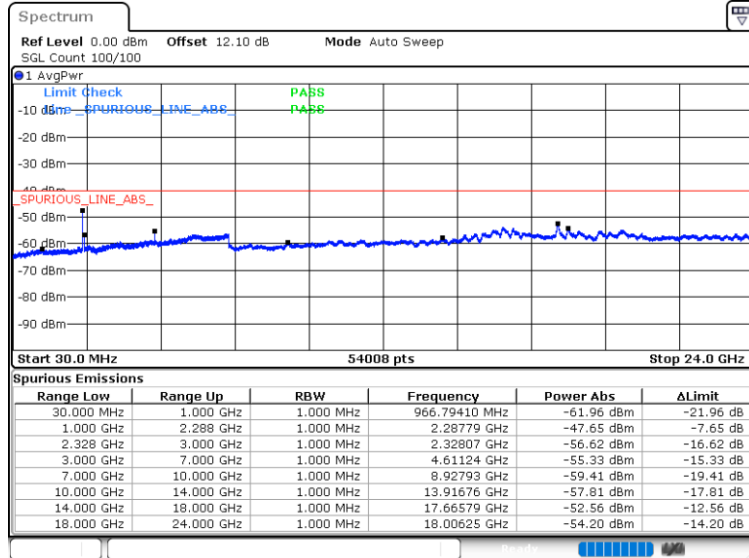
Conducted Spurious Emission





LTE Band 30 / 10MHz

Middle Channel / QPSK



Date: 3.MAY.2023 11:55:48



Frequency Stability

| Test Conditions | | LTE Band 30 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0041 | PASS |
| 40 | Normal Voltage | 0.0028 | |
| 30 | Normal Voltage | 0.0010 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0005 | |
| 0 | Normal Voltage | 0.0057 | |
| -10 | Normal Voltage | 0.0023 | |
| -20 | Normal Voltage | 0.0050 | |
| -30 | Normal Voltage | 0.0025 | |
| 20 | Maximum Voltage | 0.0008 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0016 | |

Note:

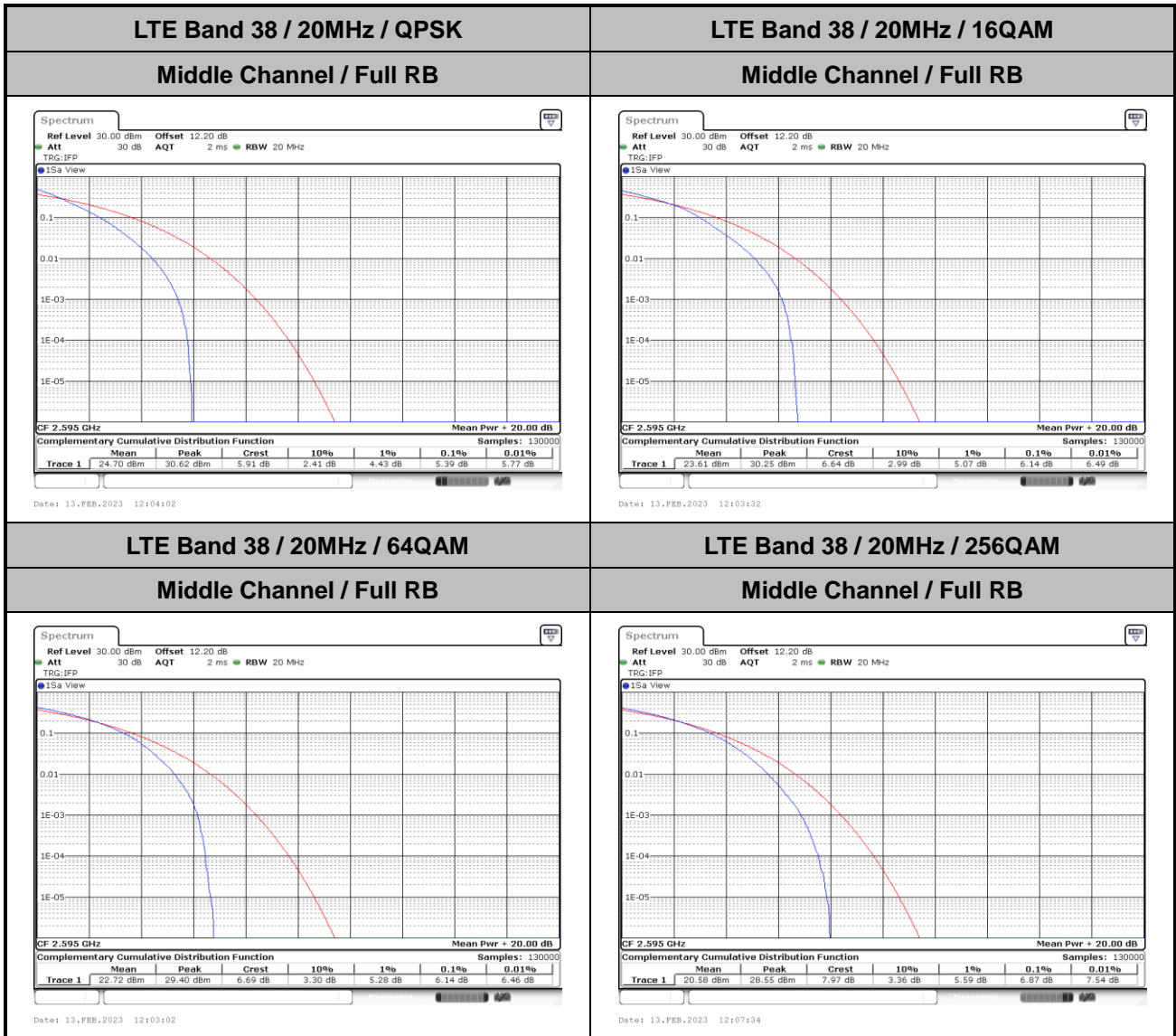
- 1. Normal Voltage = 3.89 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.4 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 38_HPUE

Peak-to-Average Ratio

| Mode | LTE Band 38 / 20MHz | | | | |
|-----------|---------------------|---------|---------|---------|-------------|
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | Limit: 13dB |
| RB Size | Full RB | Full RB | Full RB | Full RB | Result |
| Middle CH | 5.39 | 6.14 | 6.14 | 6.87 | PASS |





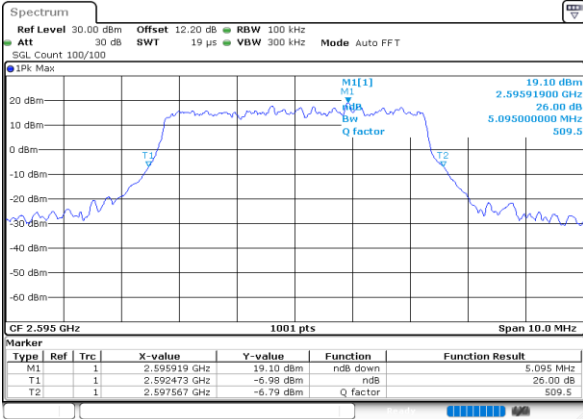
26dB Bandwidth

| Mode | LTE Band 38 : 26dB BW(MHz) | | | | | | | | | | | |
|-----------|----------------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | - | - | - | - | 5.10 | 4.80 | 9.75 | 9.65 | 14.60 | 14.51 | 18.62 | 19.30 |
| Mode | LTE Band 38 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | - | - | - | - | 4.72 | 5.06 | 10.01 | 9.87 | 14.15 | 14.30 | 19.30 | 19.26 |



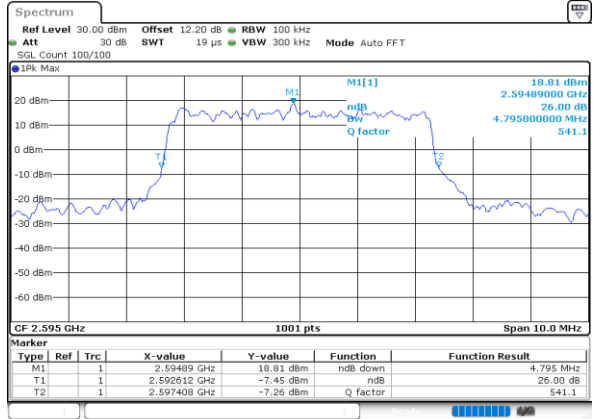
LTE Band 38

Middle Channel / 5MHz / QPSK



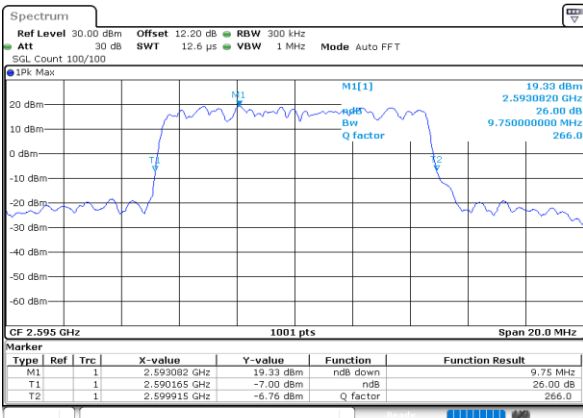
Date: 13.FEB.2023 11:52:59

Middle Channel / 5MHz / 16QAM



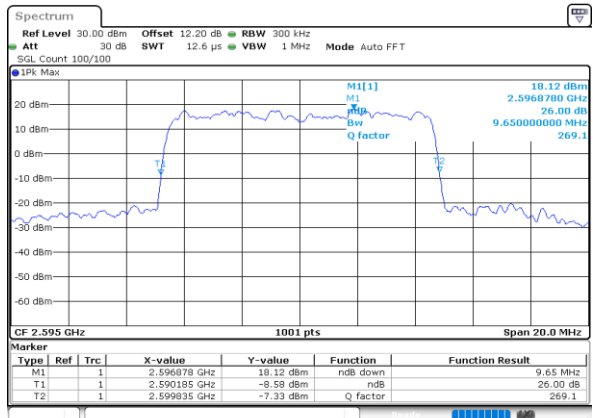
Date: 13.FEB.2023 11:53:28

Middle Channel / 10MHz / QPSK



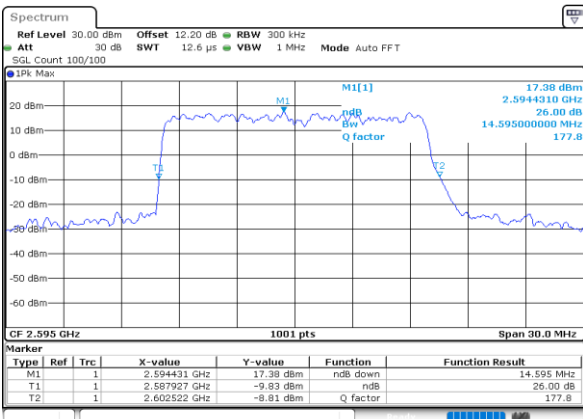
Date: 13.FEB.2023 11:55:00

Middle Channel / 10MHz / 16QAM



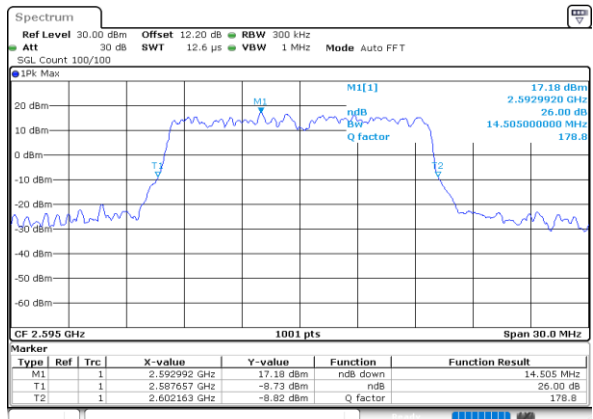
Date: 13.FEB.2023 11:55:29

Middle Channel / 15MHz / QPSK



Date: 13.FEB.2023 11:57:02

Middle Channel / 15MHz / 16QAM

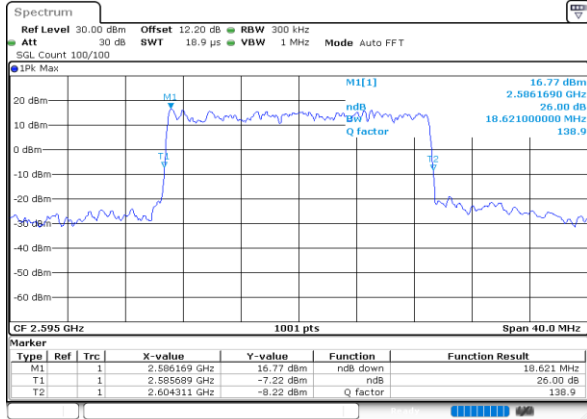


Date: 13.FEB.2023 11:57:31



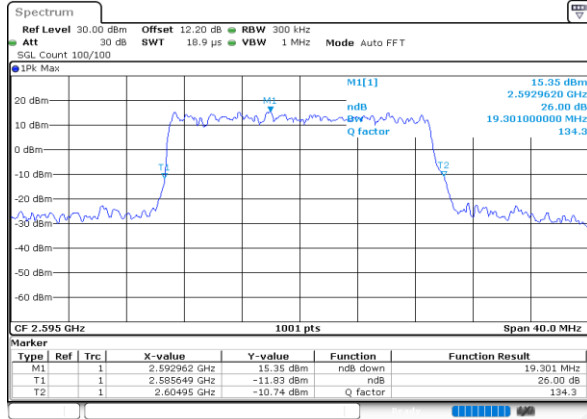
LTE Band 38

Middle Channel / 20MHz / QPSK



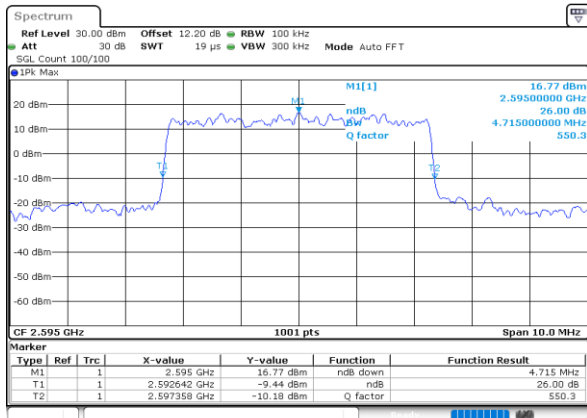
Date: 13.FEB.2023 11:59:03

Middle Channel / 20MHz / 16QAM



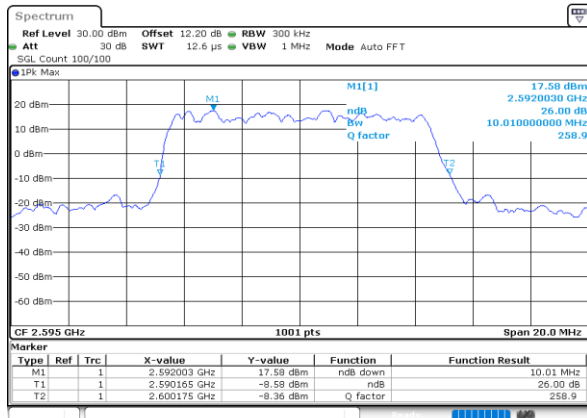
Date: 13.FEB.2023 11:59:31

Middle Channel / 5MHz / 64QAM



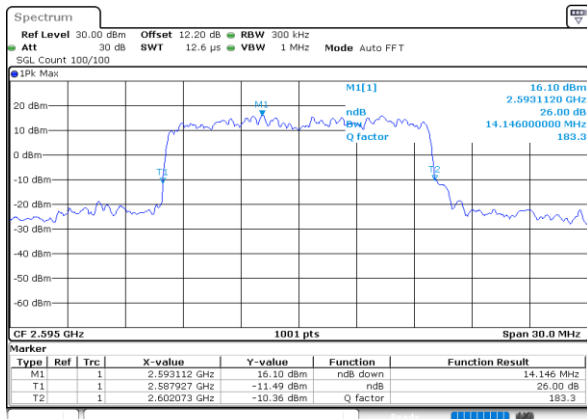
Date: 13.FEB.2023 12:00:20

Middle Channel / 10MHz / 64QAM



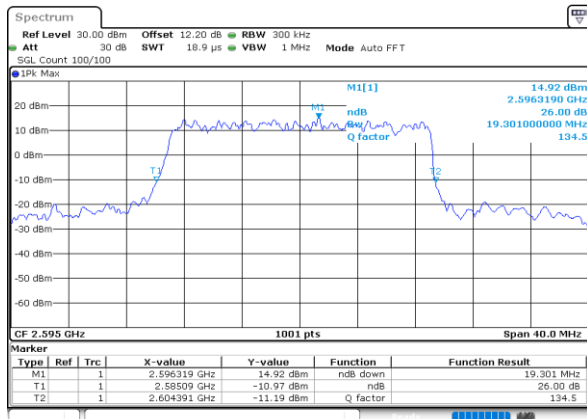
Date: 13.FEB.2023 12:01:08

Middle Channel / 15MHz / 64QAM



Date: 13.FEB.2023 12:01:59

Middle Channel / 20MHz / 64QAM

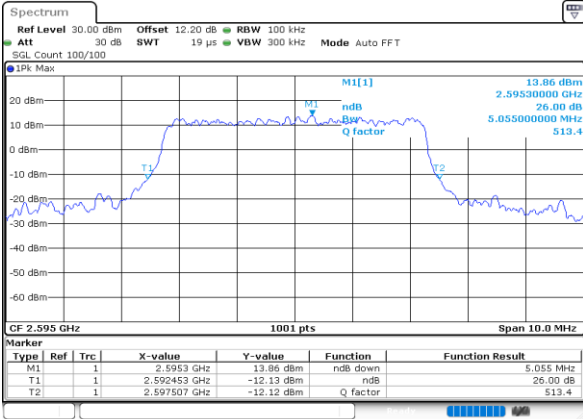


Date: 13.FEB.2023 12:02:47



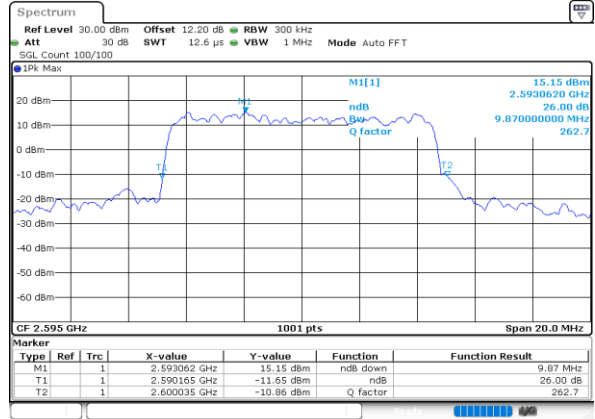
LTE Band 38

Middle Channel / 5MHz / 256QAM



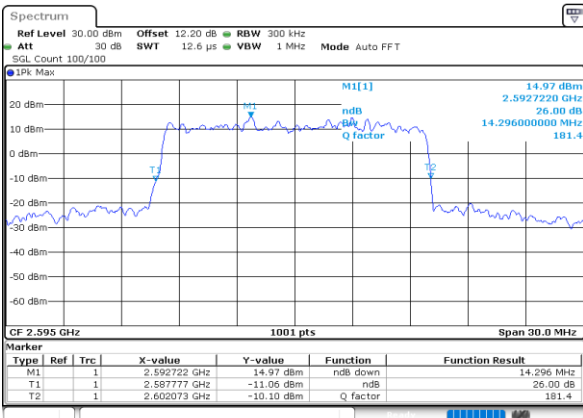
Date: 13.FEB.2023 12:04:51

Middle Channel / 10MHz / 256QAM



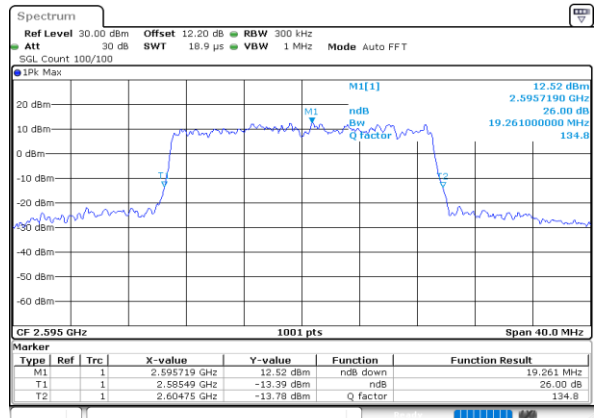
Date: 13.FEB.2023 12:05:39

Middle Channel / 15MHz / 256QAM



Date: 13.FEB.2023 12:06:20

Middle Channel / 20MHz / 256QAM



Date: 13.FEB.2023 12:07:19



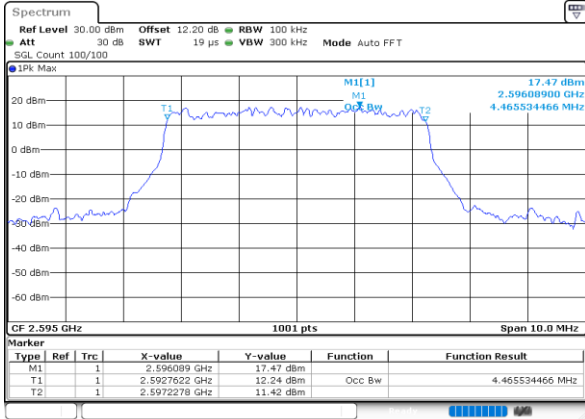
Occupied Bandwidth

| Mode | LTE Band 38 : 99%OBW(MHz) | | | | | | | | | | | |
|-----------|---------------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | - | - | - | - | 4.47 | 4.52 | 9.05 | 8.97 | 13.49 | 13.43 | 17.94 | 17.90 |
| Mode | LTE Band 38 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | - | - | - | - | 4.46 | 4.49 | 9.03 | 9.03 | 13.37 | 13.37 | 17.86 | 17.98 |



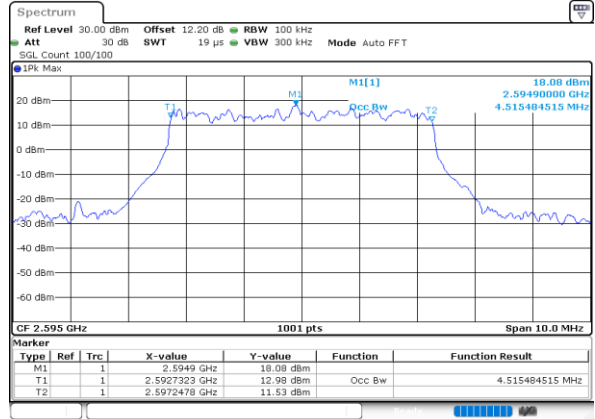
LTE Band 38

Middle Channel / 5MHz / QPSK



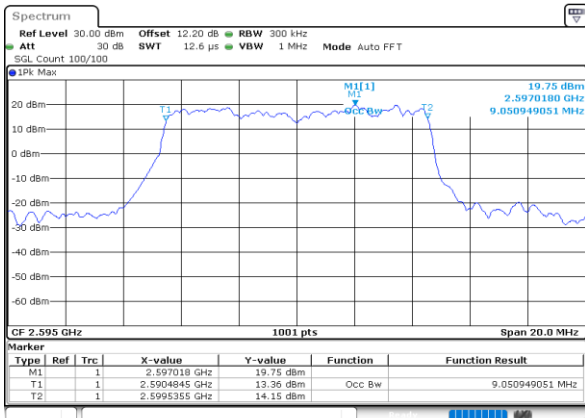
Date: 13.FEB.2023 11:52:01

Middle Channel / 5MHz / 16QAM



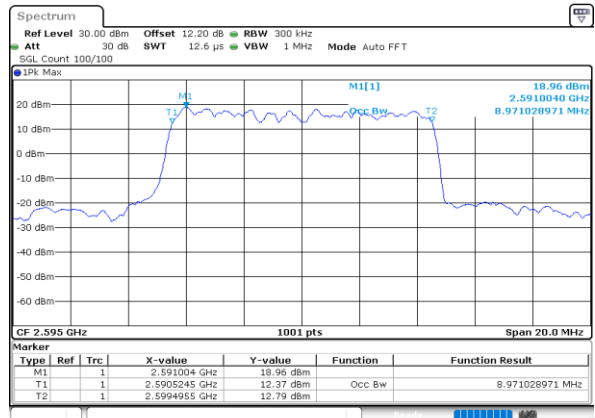
Date: 13.FEB.2023 11:52:130

Middle Channel / 10MHz / QPSK



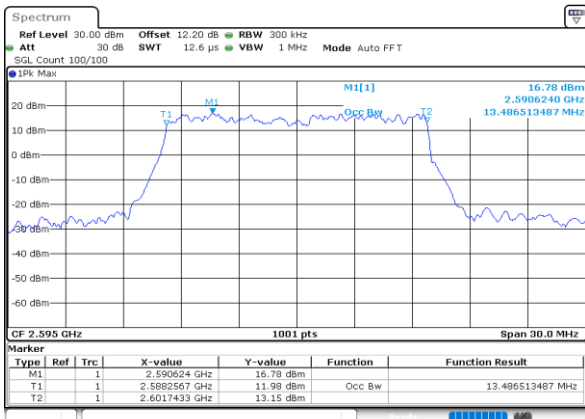
Date: 13.FEB.2023 11:54:02

Middle Channel / 10MHz / 16QAM



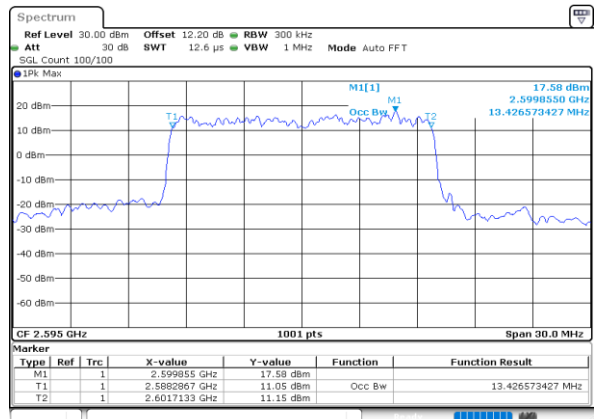
Date: 13.FEB.2023 11:54:131

Middle Channel / 15MHz / QPSK



Date: 13.FEB.2023 11:56:03

Middle Channel / 15MHz / 16QAM

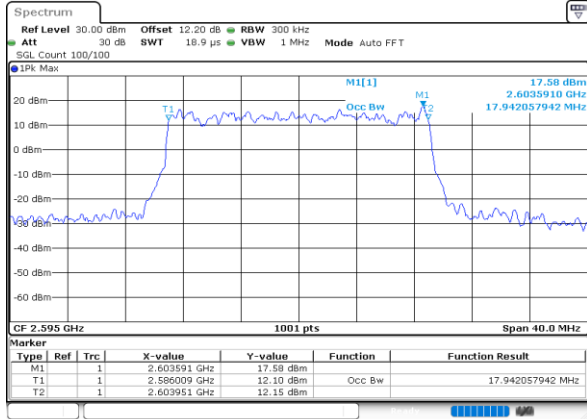


Date: 13.FEB.2023 11:56:132



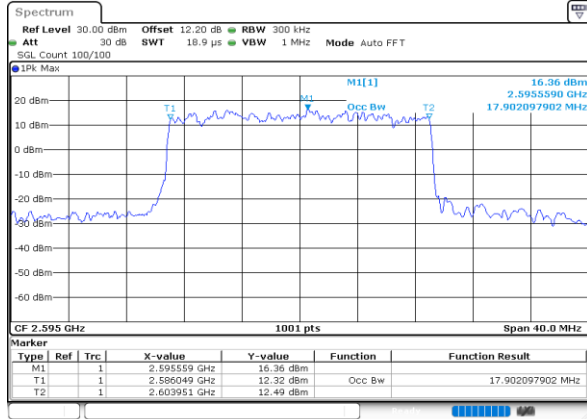
LTE Band 38

Middle Channel / 20MHz / QPSK



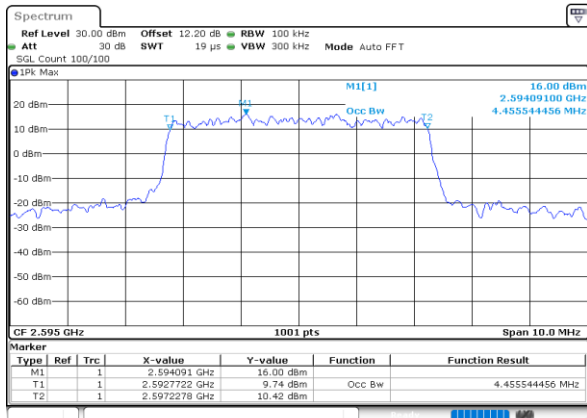
Date: 13.FEB.2023 11:58:05

Middle Channel / 20MHz / 16QAM



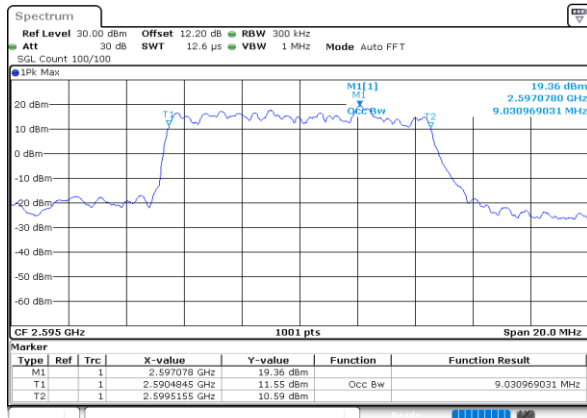
Date: 13.FEB.2023 11:58:134

Middle Channel / 5MHz / 64QAM



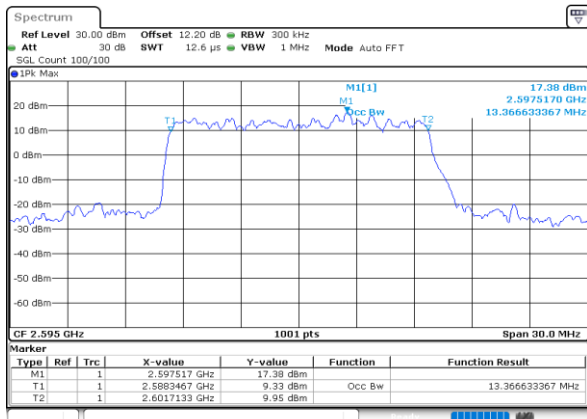
Date: 13.FEB.2023 12:00:06

Middle Channel / 10MHz / 64QAM



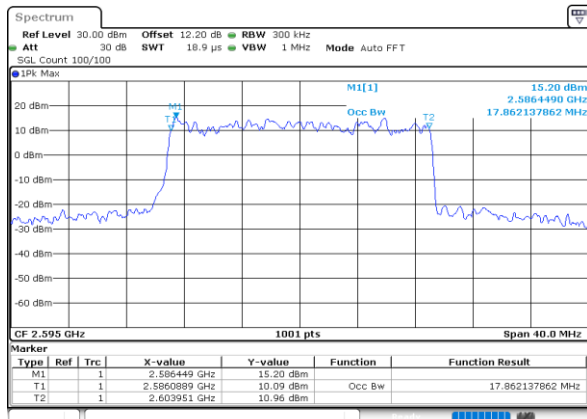
Date: 13.FEB.2023 12:00:154

Middle Channel / 15MHz / 64QAM



Date: 13.FEB.2023 12:01:44

Middle Channel / 20MHz / 64QAM



Date: 13.FEB.2023 12:02:133