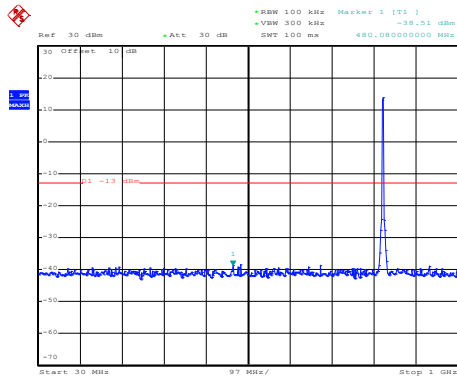
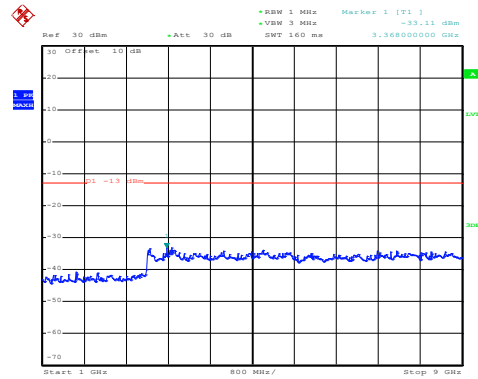


## LTE Band 5: 16 QAM & RB Size 25 BW: 5MHz Lowest channel



Date: 19.AUG.2019 15:25:31

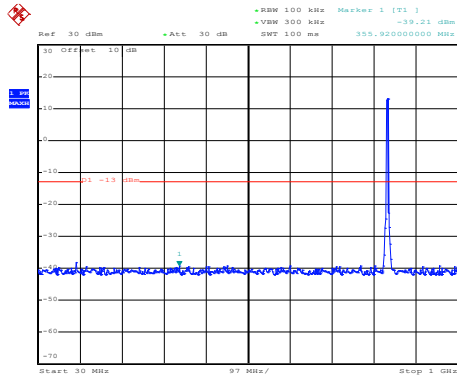
30MHz~1GHz



Date: 19.AUG.2019 14:40:41

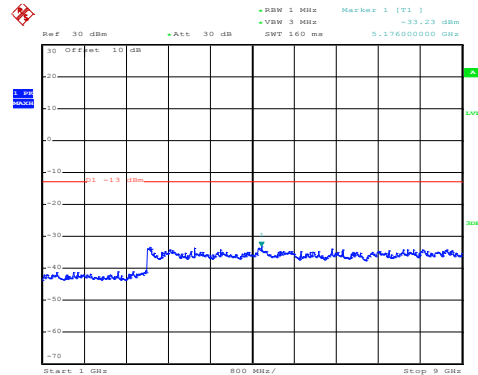
1GHz~9GHz

## Middle channel



Date: 19.AUG.2019 15:26:11

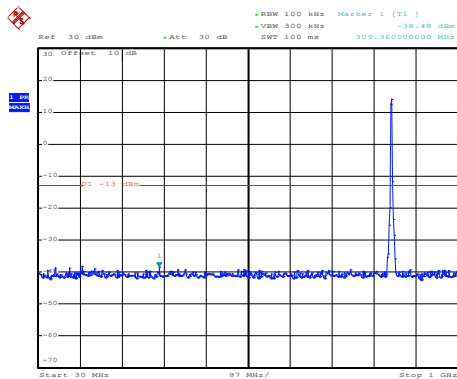
30MHz~1GHz



Date: 19.AUG.2019 14:41:18

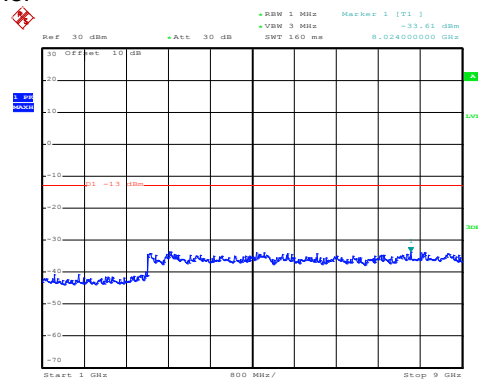
1GHz~9GHz

## High channel



Date: 19.AUG.2019 15:28:15

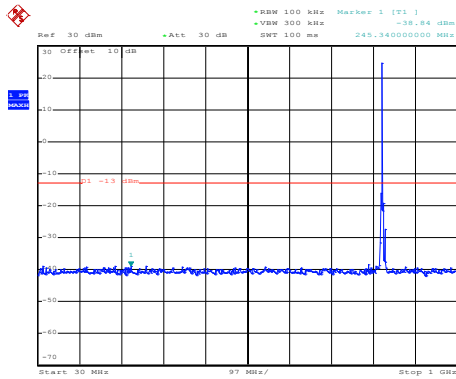
30MHz~1GHz



Date: 19.AUG.2019 14:42:38

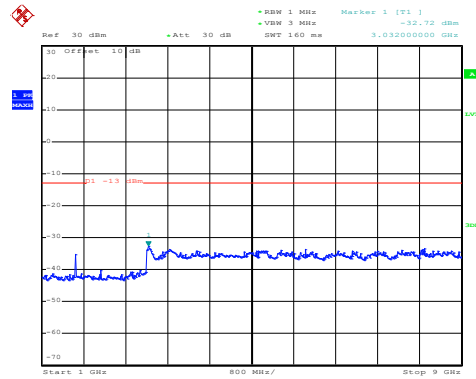
1GHz~9GHz

## LTE Band 5: QPSK & RB Size 1 BW: 5MHz Lowest channel



Date: 19.AUG.2019 15:24:51

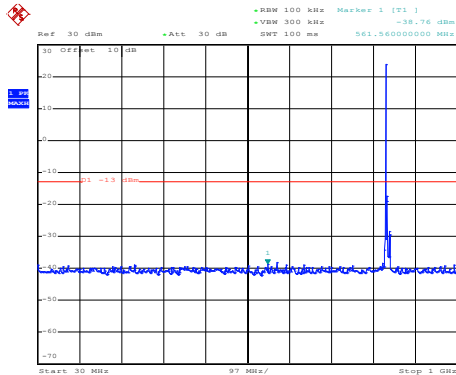
30MHz~1GHz



Date: 19.AUG.2019 14:40:02

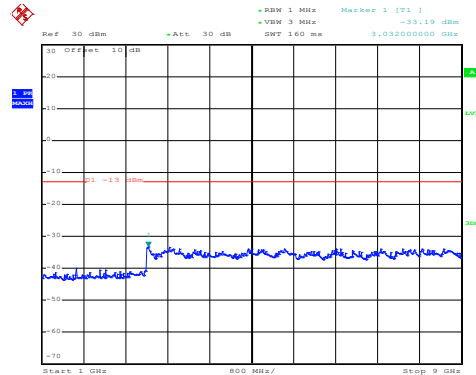
1GHz~9GHz

## Middle channel



Date: 19.AUG.2019 15:26:34

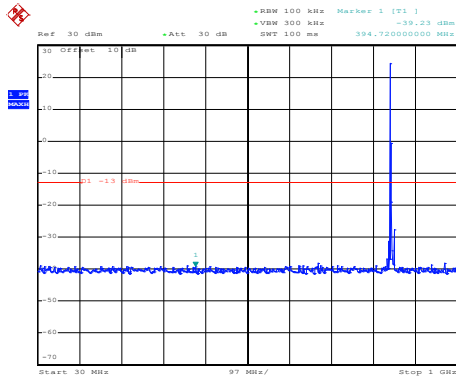
30MHz~1GHz



Date: 19.AUG.2019 14:41:36

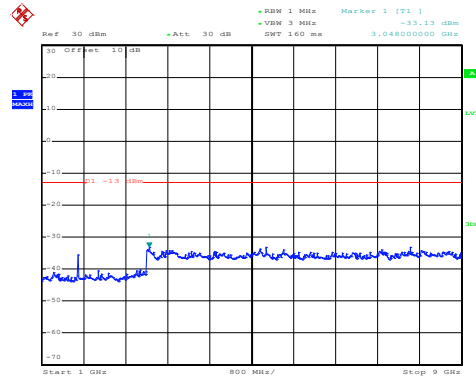
1GHz~9GHz

## High channel



Date: 19.AUG.2019 15:27:28

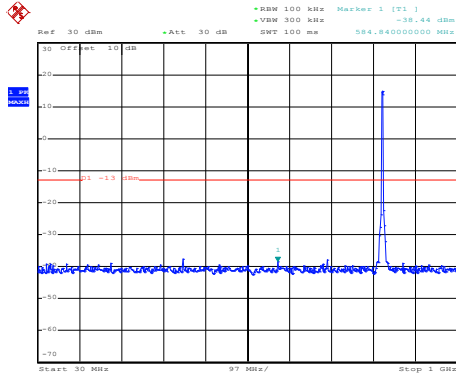
30MHz~1GHz



Date: 19.AUG.2019 14:42:01

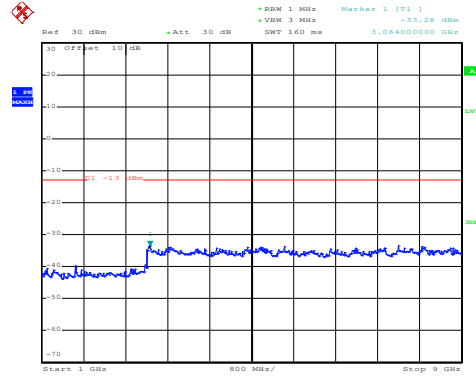
1GHz~9GHz

## LTE Band 5: QPSK & RB Size 25 BW: 5MHz Lowest channel



Date: 19.AUG.2019 15:25:18

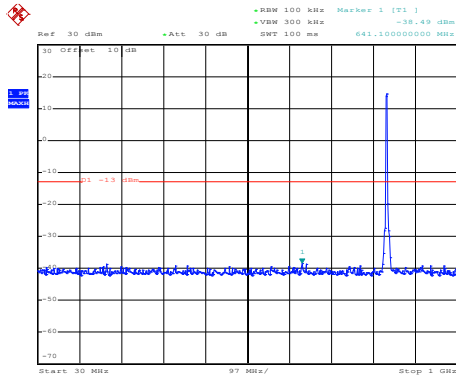
30MHz~1GHz



Date: 19.AUG.2019 14:40:30

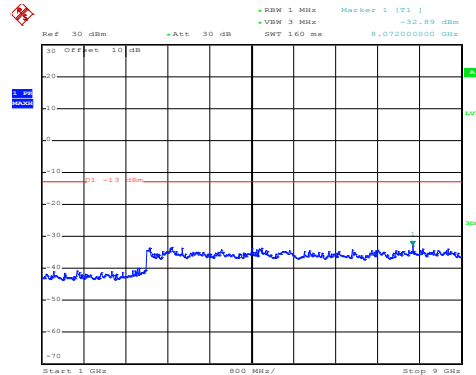
1GHz~9GHz

## Middle channel



Date: 19.AUG.2019 15:25:54

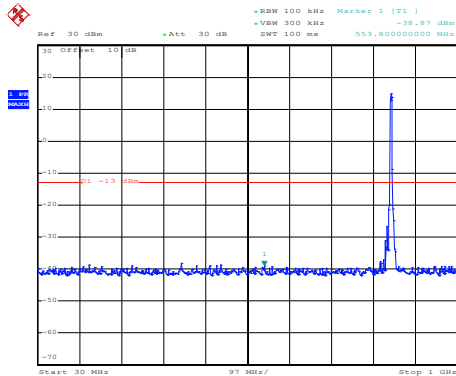
30MHz~1GHz



Date: 19.AUG.2019 14:41:04

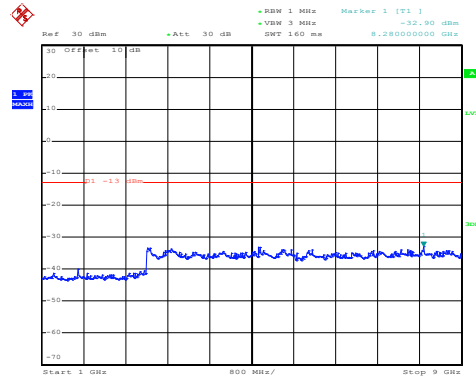
1GHz~9GHz

## High channel



Date: 19.AUG.2019 15:27:57

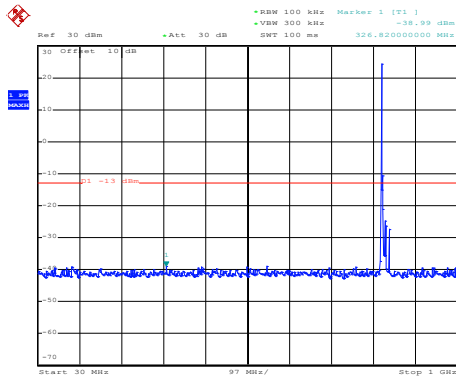
30MHz~1GHz



Date: 19.AUG.2019 14:42:27

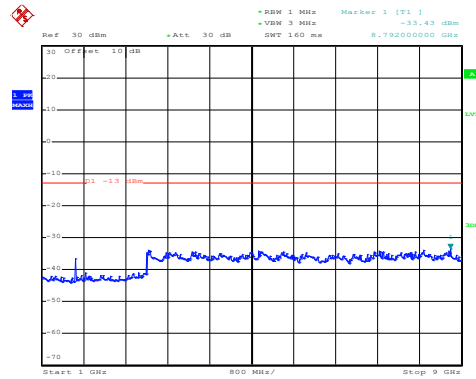
1GHz~9GHz

## LTE Band 5: 16 QAM & RB Size 1 BW: 10MHz Lowest channel



Date: 19.AUG.2019 15:29:22

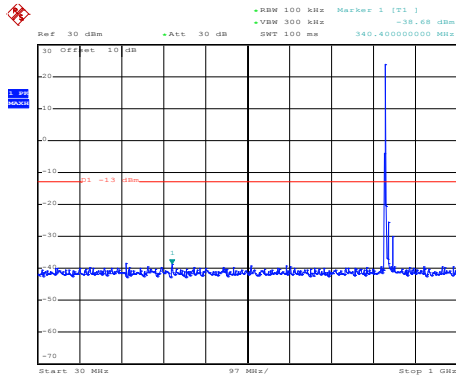
30MHz~1GHz



Date: 19.AUG.2019 14:43:22

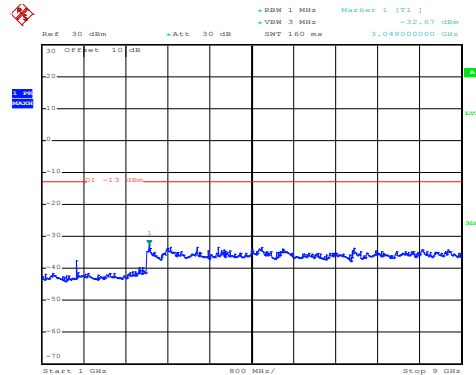
1GHz~9GHz

## Middle channel



Date: 19.AUG.2019 15:31:05

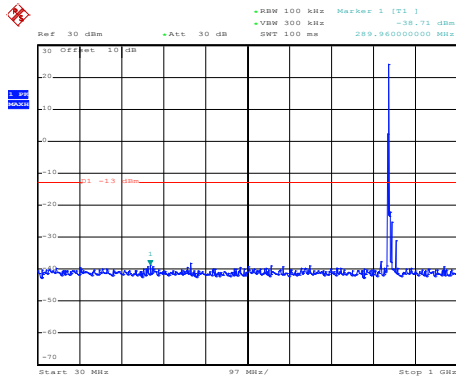
30MHz~1GHz



Date: 19.AUG.2019 14:44:45

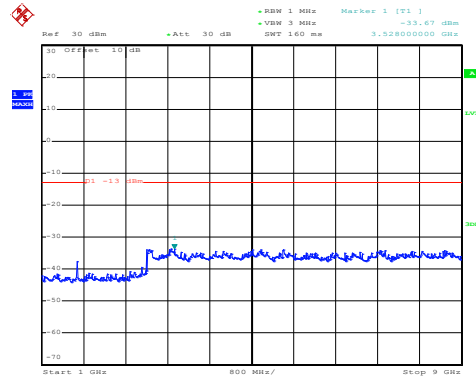
1GHz~9GHz

## High channel



Date: 19.AUG.2019 15:31:37

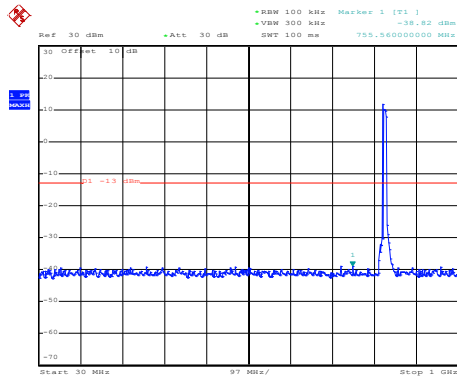
30MHz~1GHz



Date: 19.AUG.2019 14:45:13

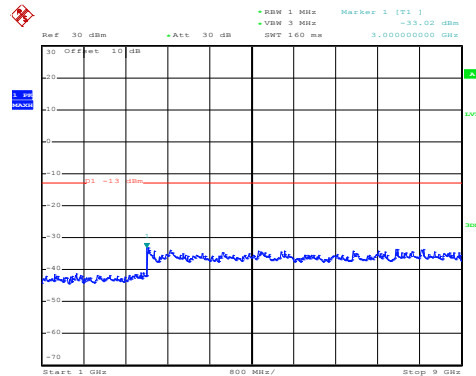
1GHz~9GHz

## LTE Band 5: 16 QAM & RB Size 50 BW: 10MHz Lowest channel



Date: 19.AUG.2019 15:29:57

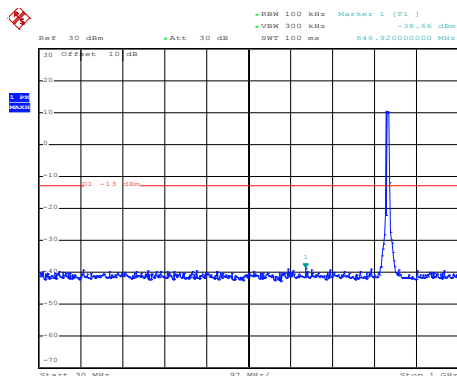
30MHz~1GHz



Date: 19.AUG.2019 14:43:47

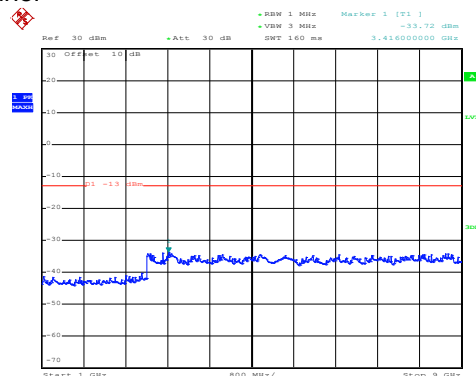
1GHz~9GHz

## Middle channel



Date: 19.AUG.2019 15:30:29

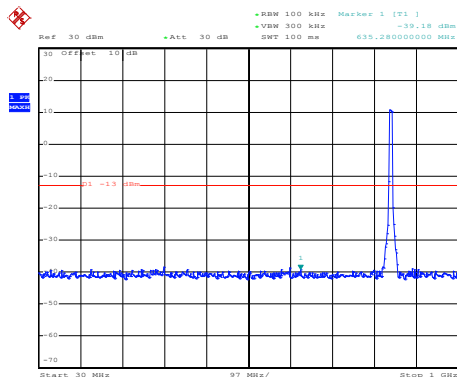
30MHz~1GHz



Date: 19.AUG.2019 14:44:20

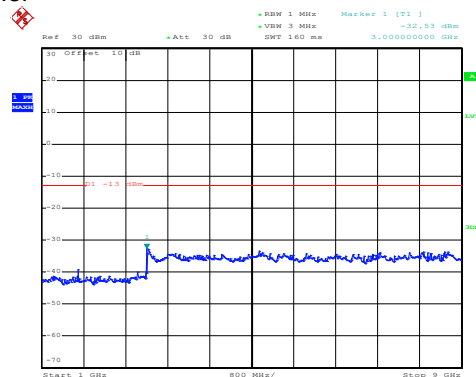
1GHz~9GHz

## High channel



Date: 19.AUG.2019 15:32:12

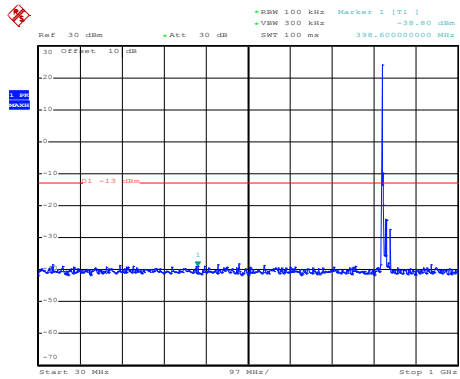
30MHz~1GHz



Date: 19.AUG.2019 14:45:49

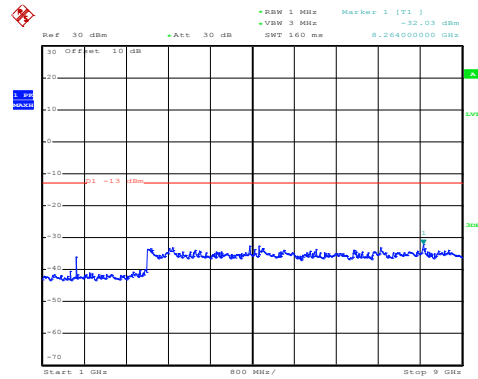
1GHz~9GHz

## LTE Band 5: QPSK & RB Size 1 BW: 10MHz Lowest channel



Date: 19.AUG.2019 15:29:10

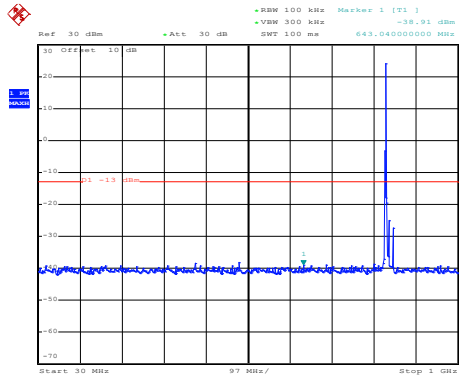
30MHz~1GHz



Date: 19.AUG.2019 14:43:13

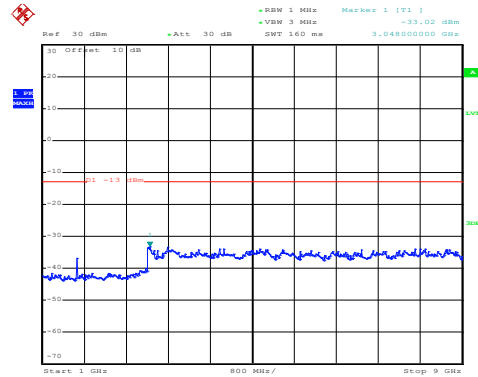
1GHz~9GHz

## Middle channel



Date: 19.AUG.2019 15:30:53

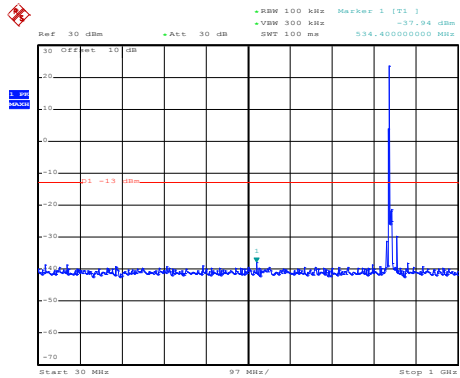
30MHz~1GHz



Date: 19.AUG.2019 14:44:33

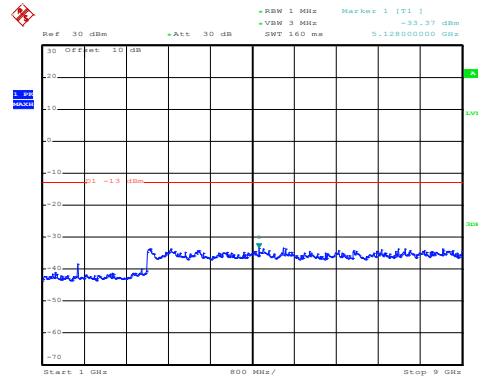
1GHz~9GHz

## High channel



Date: 19.AUG.2019 15:31:24

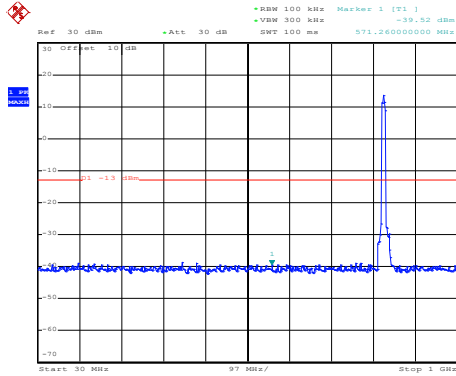
30MHz~1GHz



Date: 19.AUG.2019 14:45:04

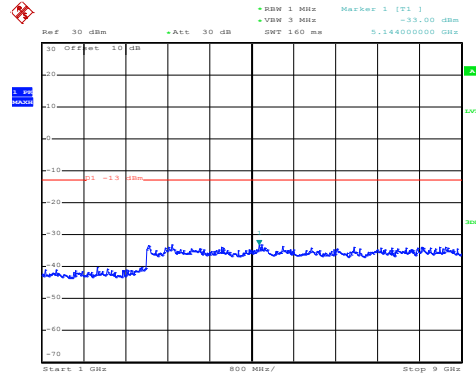
1GHz~9GHz

## LTE Band 5: QPSK & RB Size 50 BW: 10MHz Lowest channel



Date: 19.AUG.2019 15:29:43

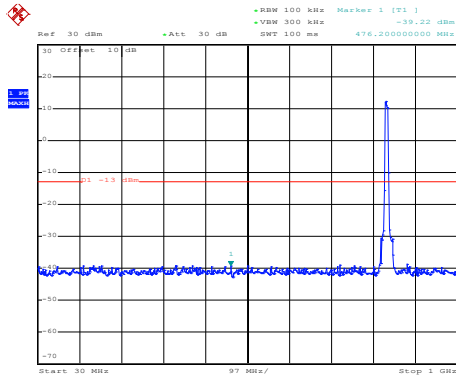
30MHz~1GHz



Date: 19.AUG.2019 14:43:39

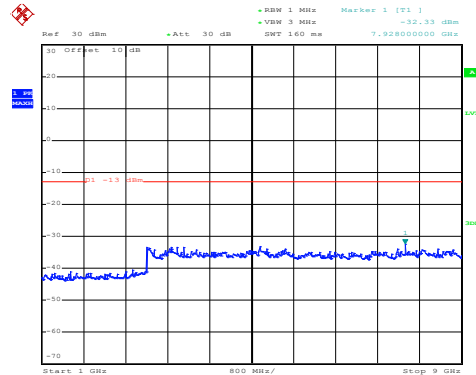
1GHz~9GHz

## Middle channel



Date: 19.AUG.2019 15:30:15

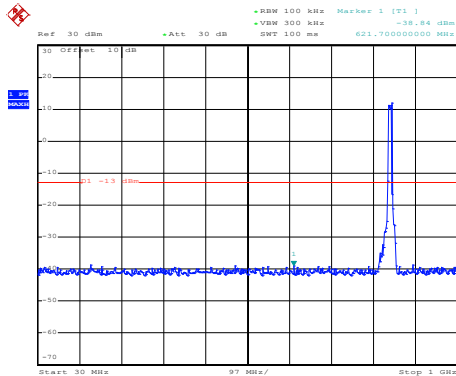
30MHz~1GHz



Date: 19.AUG.2019 14:44:10

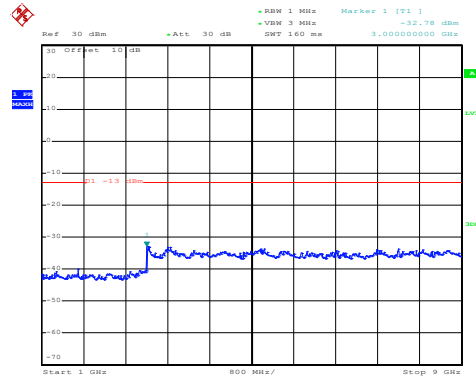
1GHz~9GHz

## High channel



Date: 19.AUG.2019 15:31:55

30MHz~1GHz

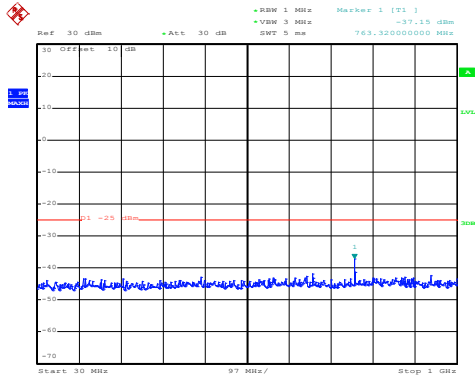


Date: 19.AUG.2019 14:45:34

1GHz~9GHz

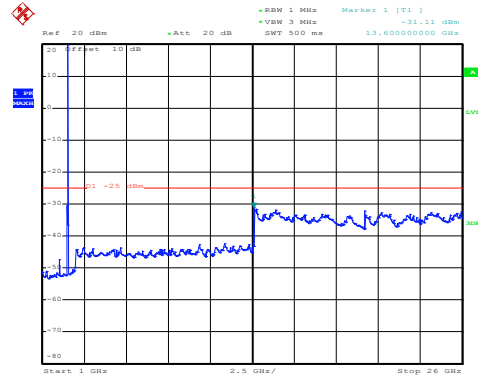
LTE Band 7 part:

LTE Band 7: 16 QAM & RB Size 1  
 BW: 5MHz  
 Lowest channel



Date: 19.AUG.2019 17:10:02

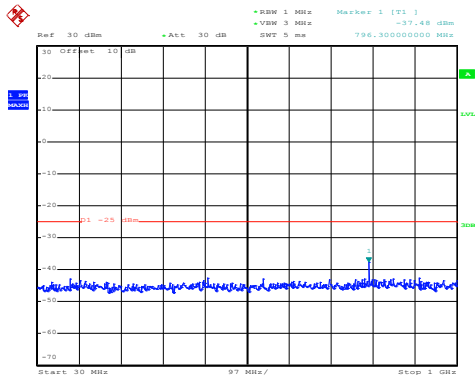
30MHz~1GHz



Date: 19.AUG.2019 14:49:16

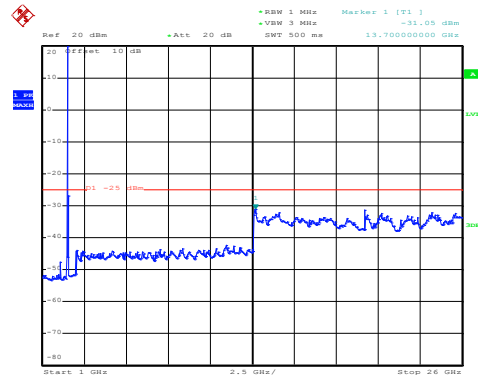
1GHz~26GHz

Middle channel



Date: 19.AUG.2019 17:10:45

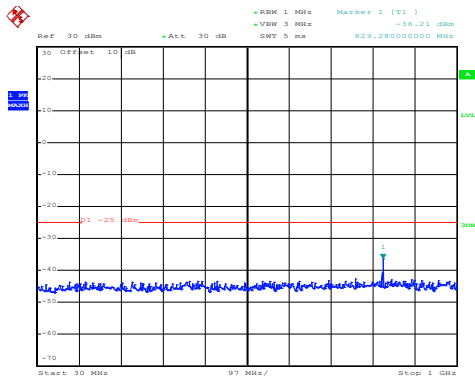
30MHz~1GHz



Date: 19.AUG.2019 14:50:56

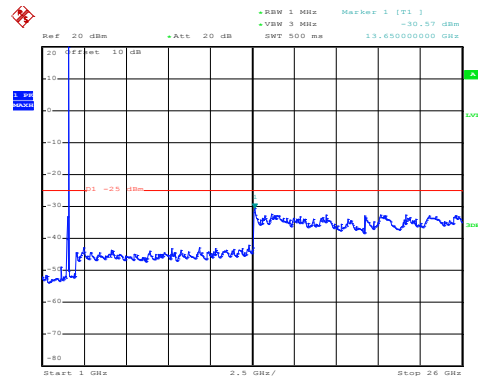
1GHz~26GHz

High channel



Date: 19.AUG.2019 17:11:01

30MHz~1GHz

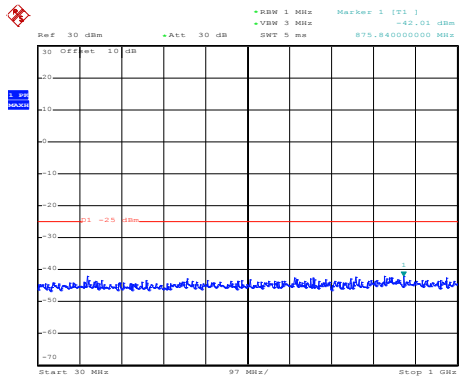


Date: 19.AUG.2019 14:51:56

1GHz~26GHz

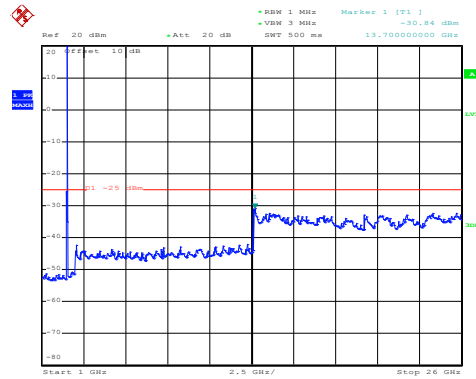


## LTE Band 7: 16 QAM & RB Size 25 BW: 5MHz Lowest channel



Date: 19.AUG.2019 17:10:16

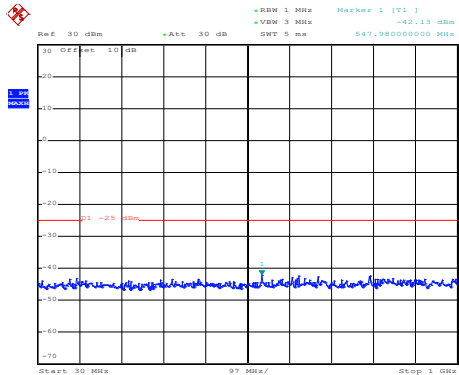
30MHz~1GHz



Date: 19.AUG.2019 14:49:45

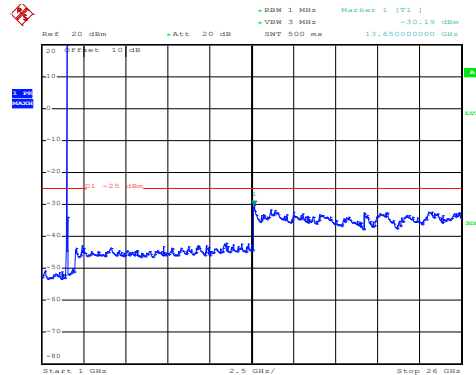
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:10:33

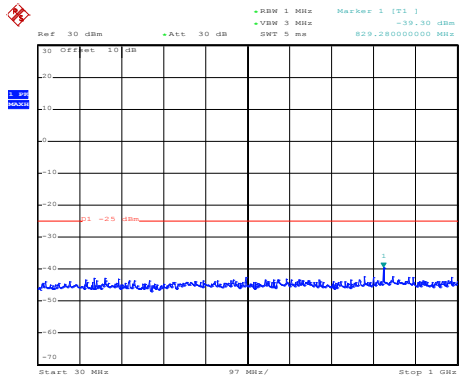
30MHz~1GHz



Date: 19.AUG.2019 14:50:25

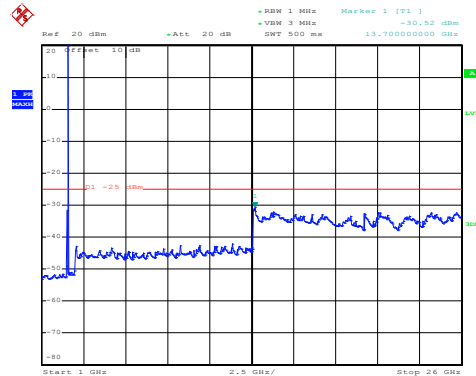
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:11:14

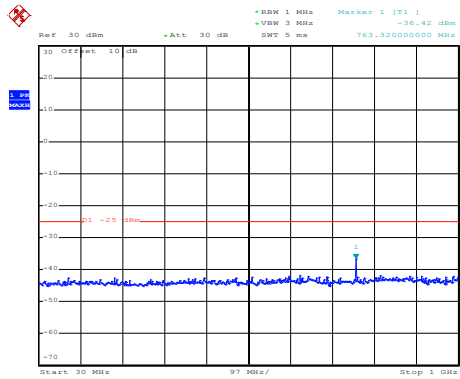
30MHz~1GHz



Date: 19.AUG.2019 14:52:34

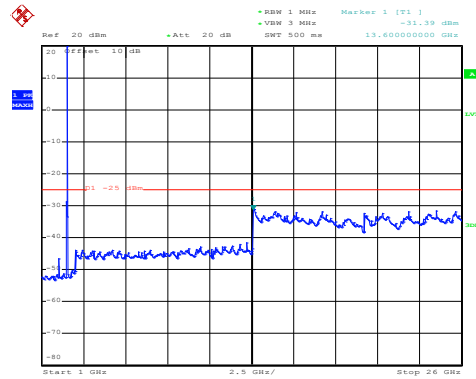
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 1 BW: 5MHz Lowest channel



Date: 19.AUG.2019 17:09:58

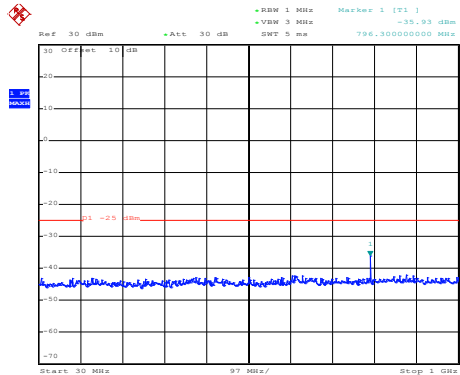
30MHz~1GHz



Date: 19.AUG.2019 14:49:03

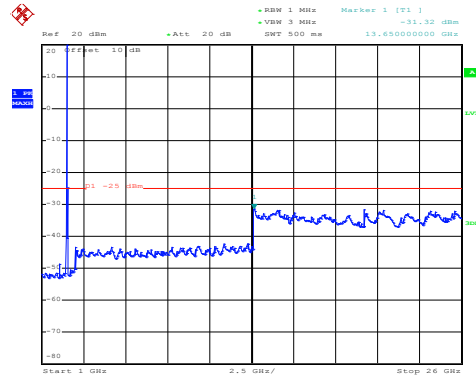
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:10:41

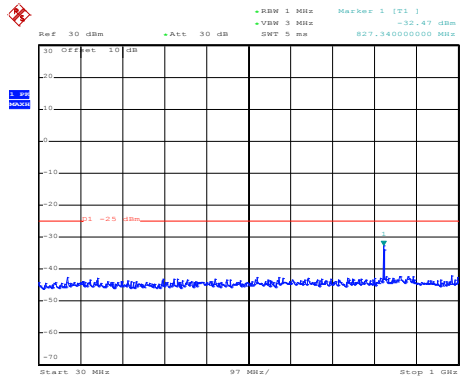
30MHz~1GHz



Date: 19.AUG.2019 14:50:46

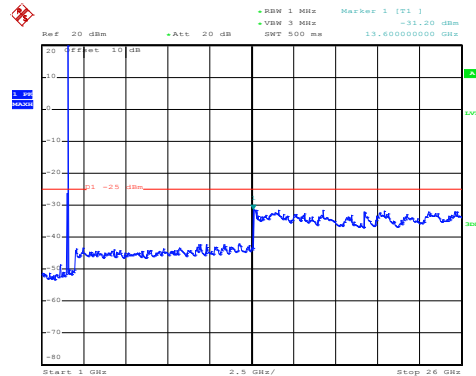
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:10:57

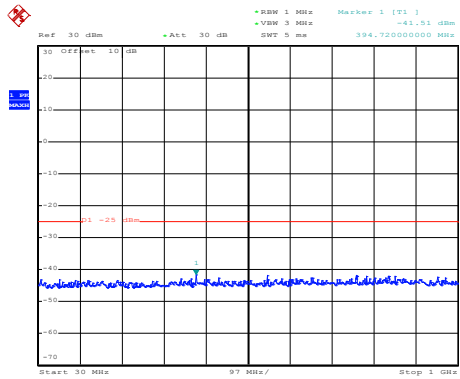
30MHz~1GHz



Date: 19.AUG.2019 14:51:45

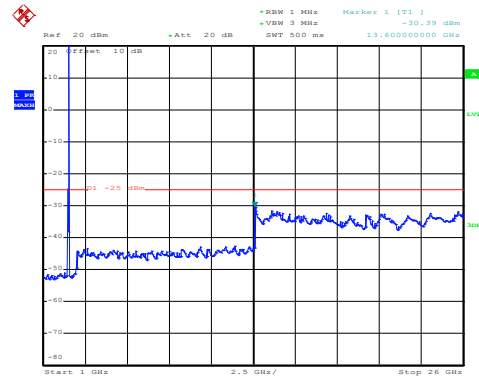
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 25 BW: 5MHz Lowest channel



Date: 19.AUG.2019 17:10:11

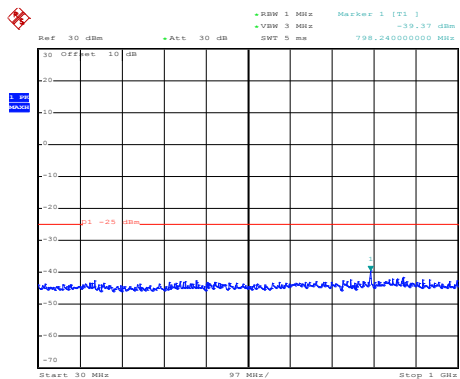
30MHz~1GHz



Date: 19.AUG.2019 14:49:31

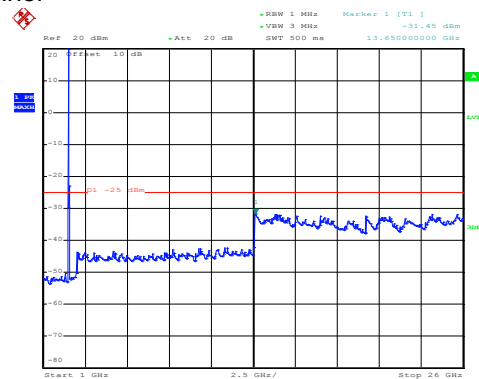
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:10:29

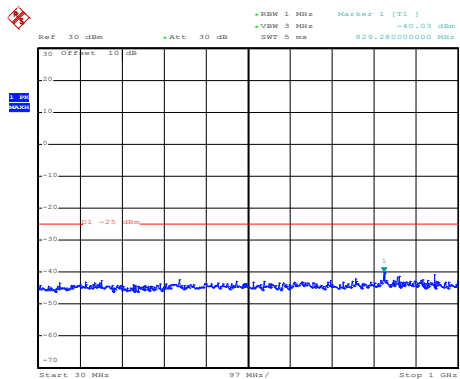
30MHz~1GHz



Date: 19.AUG.2019 14:50:09

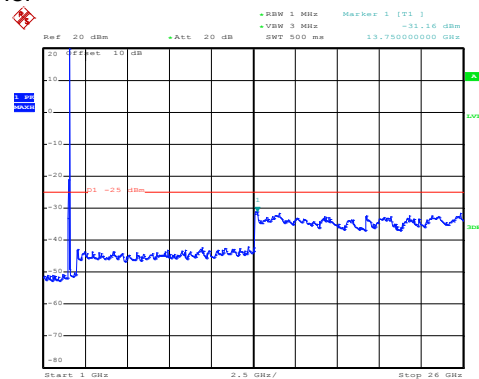
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:11:09

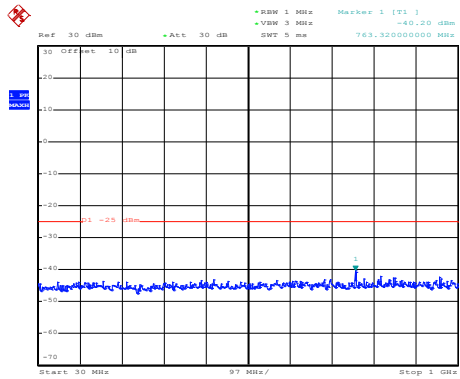
30MHz~1GHz



Date: 19.AUG.2019 14:52:18

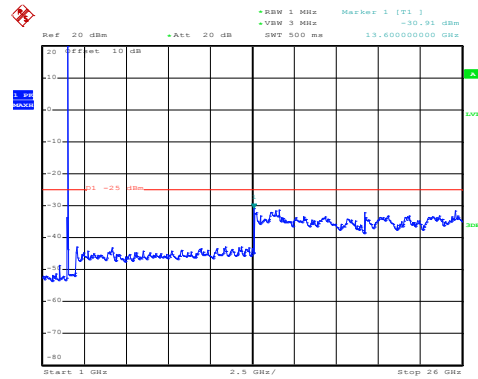
1GHz~26GHz

## LTE Band 7: 16 QAM & RB Size 1 BW: 10MHz Lowest channel



Date: 19.AUG.2019 17:11:38

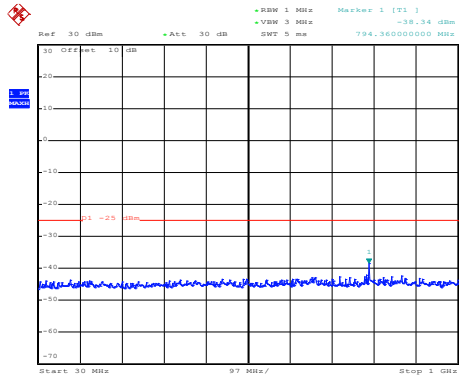
30MHz~1GHz



Date: 19.AUG.2019 14:53:20

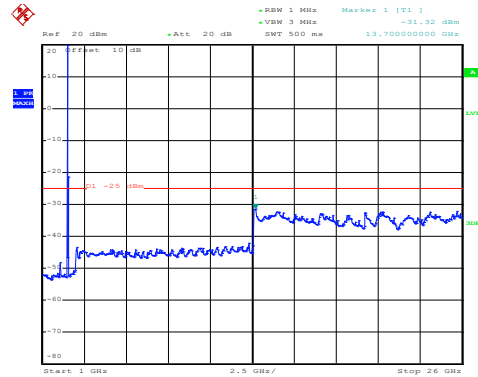
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:12:18

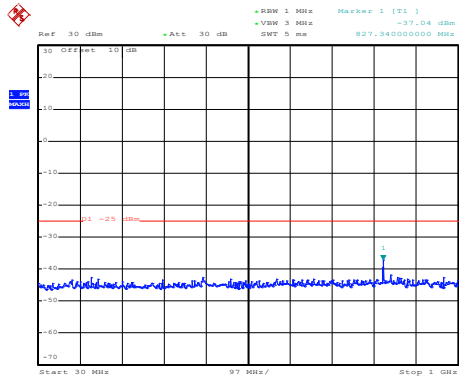
30MHz~1GHz



Date: 19.AUG.2019 14:55:19

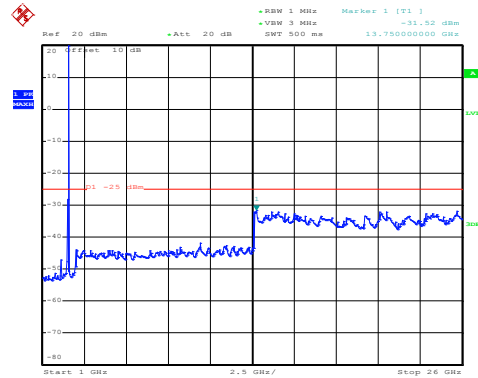
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:12:31

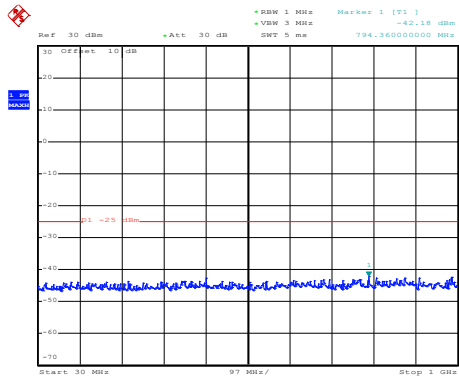
30MHz~1GHz



Date: 19.AUG.2019 14:55:52

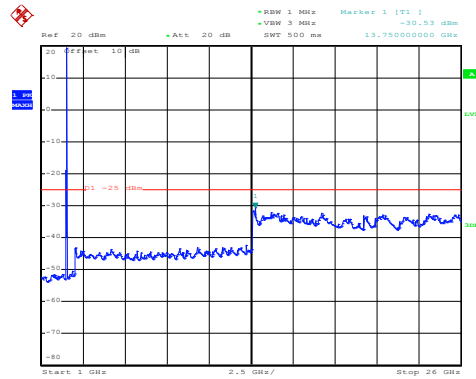
1GHz~26GHz

## LTE Band 7: 16 QAM & RB Size 50 BW: 10MHz Lowest channel



Date: 19.AUG.2019 17:11:52

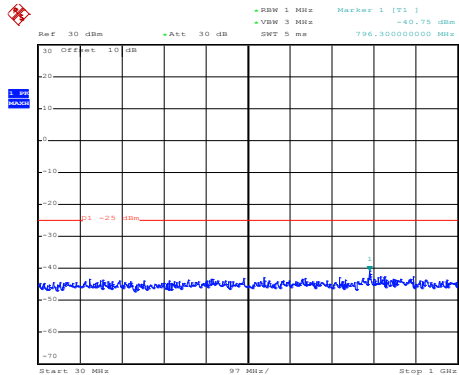
30MHz~1GHz



Date: 19.AUG.2019 14:53:53

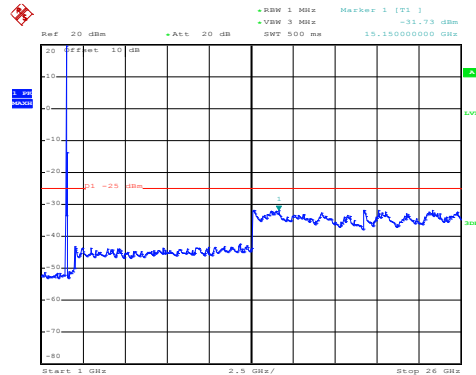
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:12:05

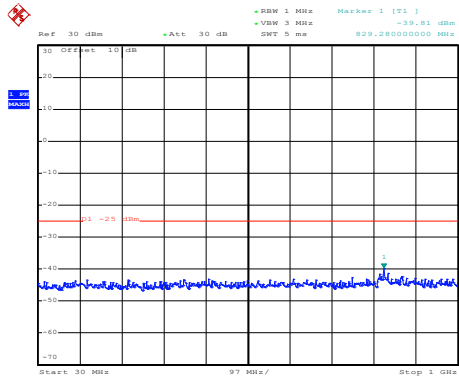
30MHz~1GHz



Date: 19.AUG.2019 14:54:41

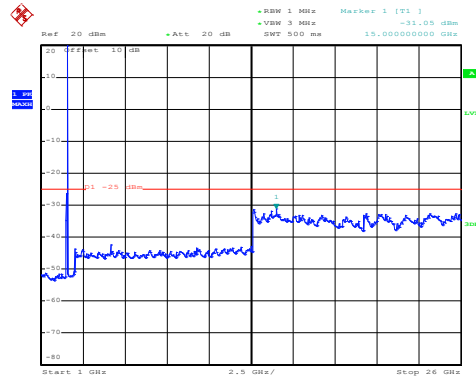
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:12:44

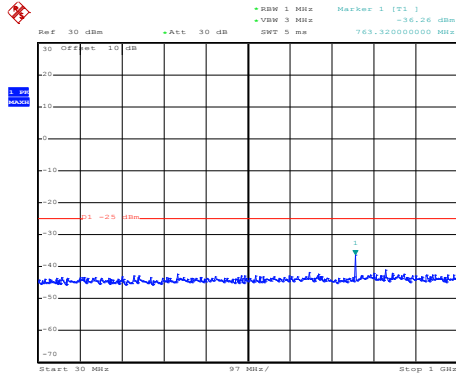
30MHz~1GHz



Date: 19.AUG.2019 14:56:29

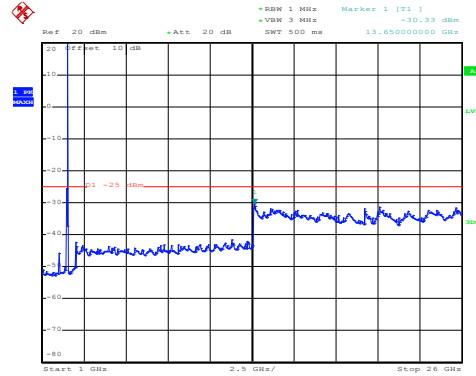
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 1 BW: 10MHz Lowest channel



Date: 19.AUG.2019 17:11:34

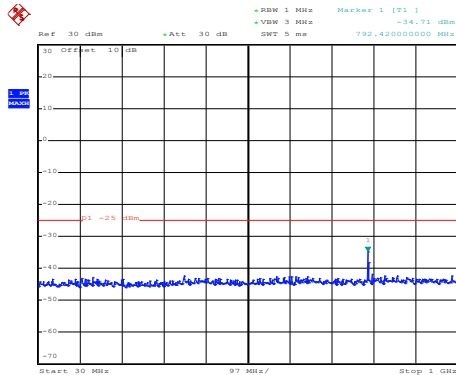
30MHz~1GHz



Date: 19.AUG.2019 14:53:11

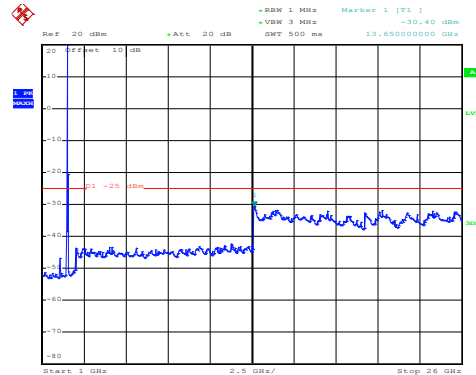
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:12:14

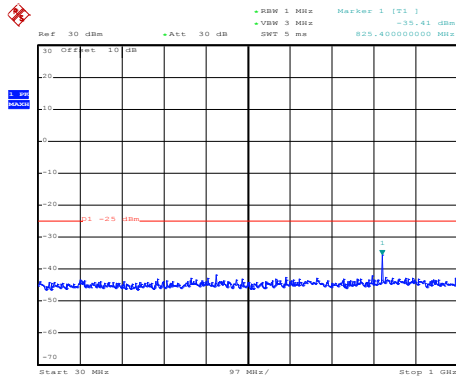
30MHz~1GHz



Date: 19.AUG.2019 14:55:05

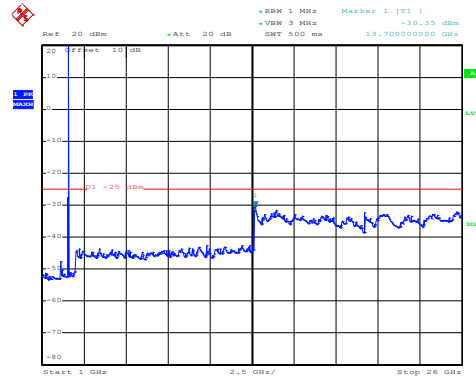
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:12:25

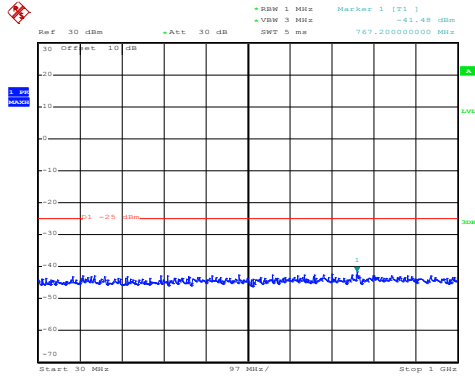
30MHz~1GHz



Date: 19.AUG.2019 14:55:39

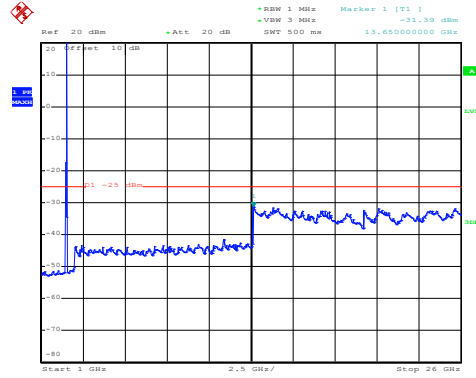
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 50 BW: 10MHz Lowest channel



Date: 19.AUG.2019 17:11:48

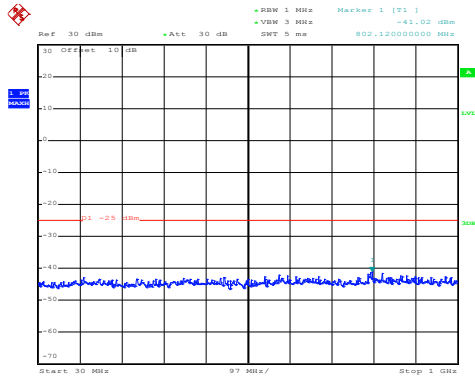
30MHz~1GHz



Date: 19.AUG.2019 14:53:40

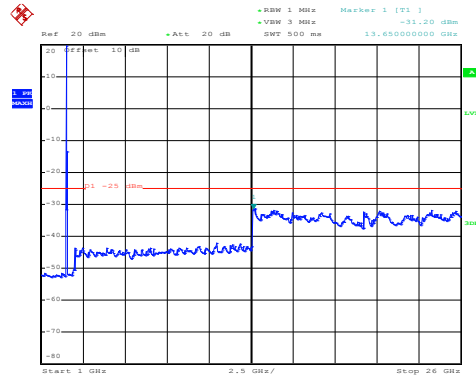
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:12:01

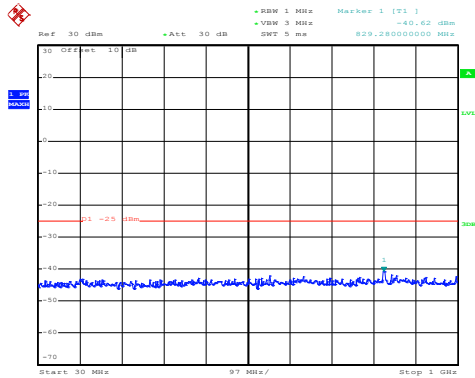
30MHz~1GHz



Date: 19.AUG.2019 14:54:19

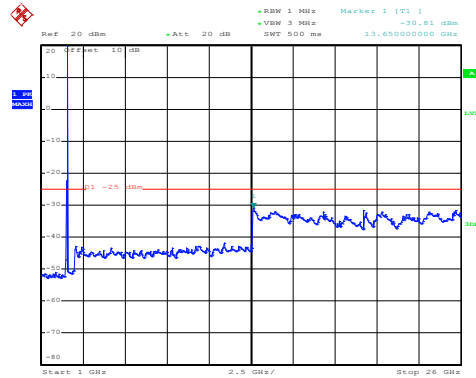
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:12:40

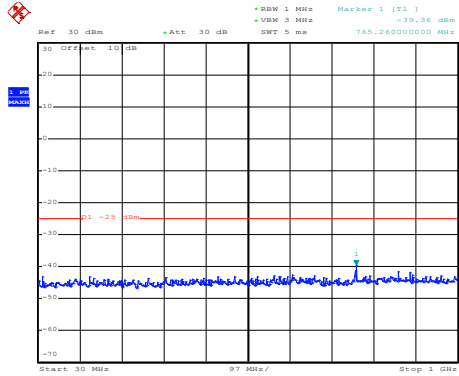
30MHz~1GHz



Date: 19.AUG.2019 14:56:18

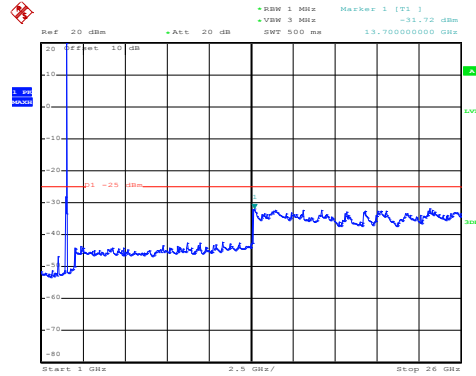
1GHz~26GHz

## LTE Band 7: 16 QAM & RB Size 1 BW: 15MHz Lowest channel



Date: 19.AUG.2019 17:13:14

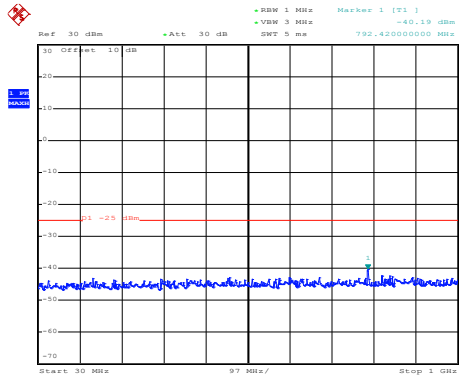
30MHz~1GHz



Date: 19.AUG.2019 14:57:21

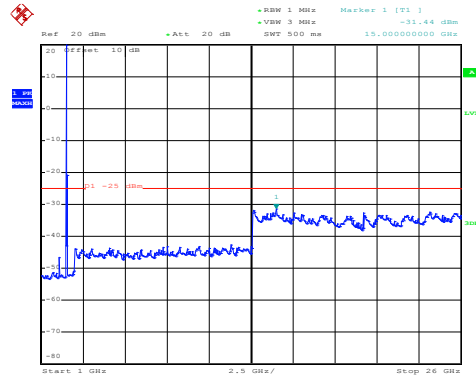
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:13:53

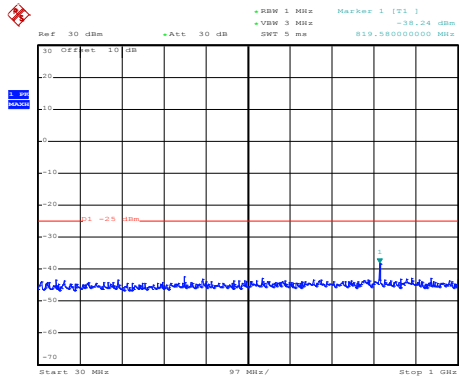
30MHz~1GHz



Date: 19.AUG.2019 14:58:59

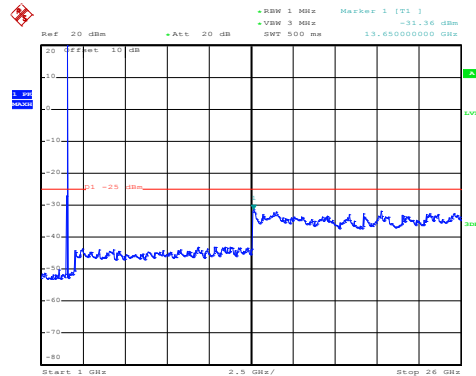
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:14:04

30MHz~1GHz

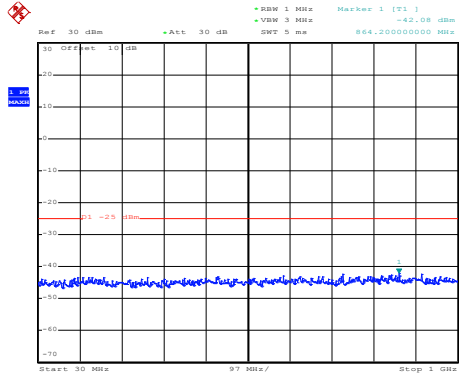


Date: 19.AUG.2019 14:59:37

1GHz~26GHz

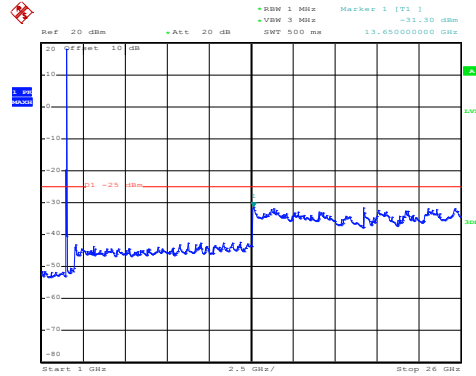


LTE Band 7: 16 QAM & RB Size 75  
 BW: 15MHz  
 Lowest channel



Date: 19.AUG.2019 17:13:27

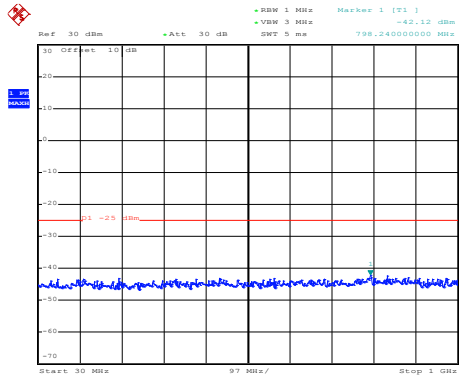
30MHz~1GHz



Date: 19.AUG.2019 14:57:55

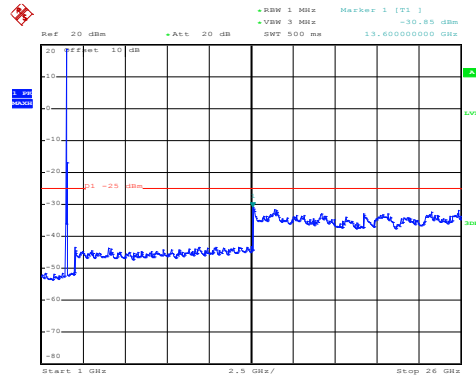
1GHz~26GHz

Middle channel



Date: 19.AUG.2019 17:13:38

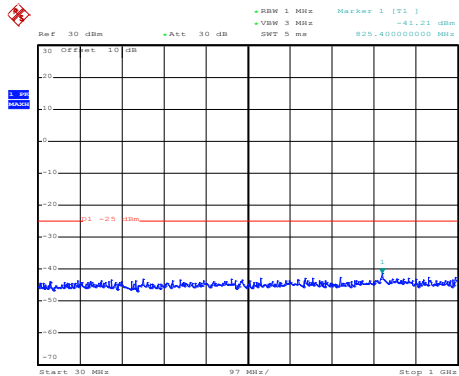
30MHz~1GHz



Date: 19.AUG.2019 14:58:25

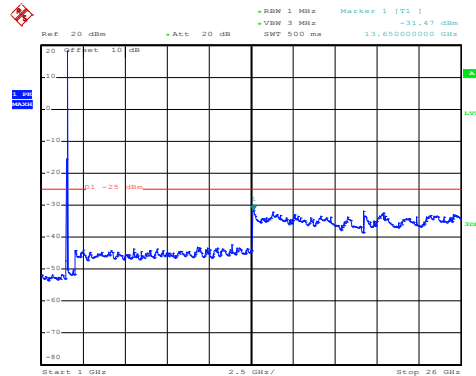
1GHz~26GHz

High channel



Date: 19.AUG.2019 17:14:17

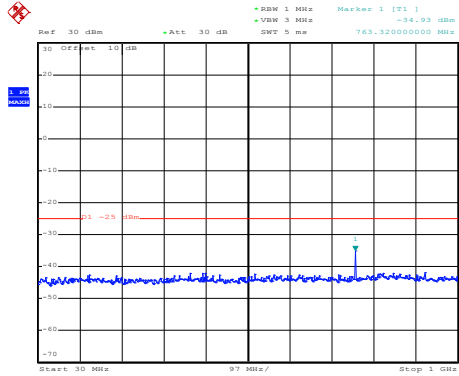
30MHz~1GHz



Date: 19.AUG.2019 15:00:11

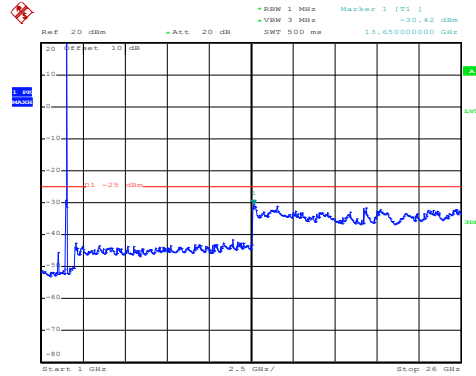
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 1 BW: 15MHz Lowest channel



Date: 19.AUG.2019 17:13:09

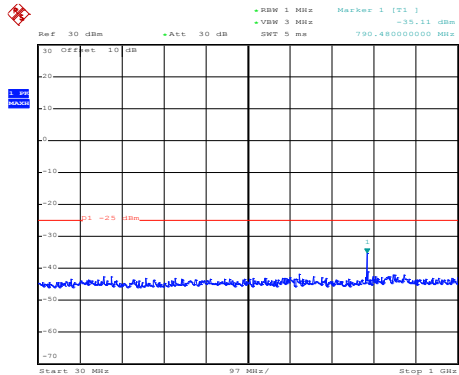
30MHz~1GHz



Date: 19.AUG.2019 14:57:08

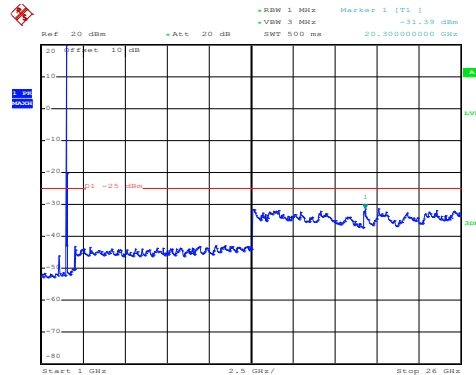
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:13:48

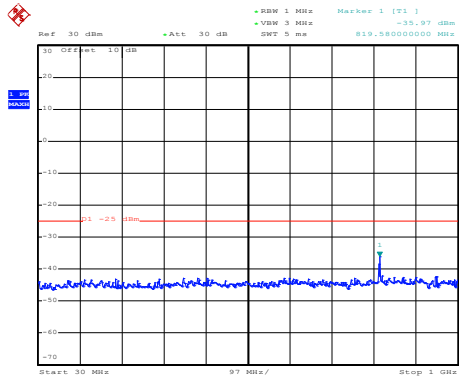
30MHz~1GHz



Date: 19.AUG.2019 14:58:48

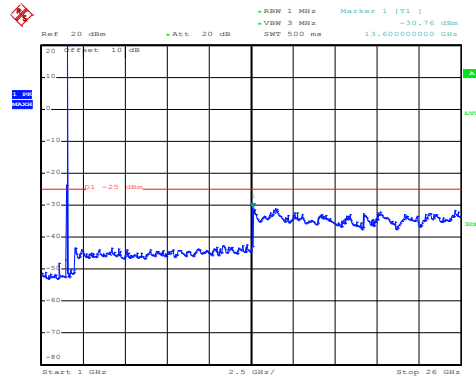
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:14:00

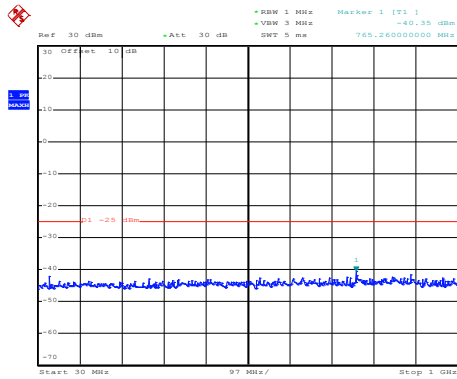
30MHz~1GHz



Date: 19.AUG.2019 14:59:25

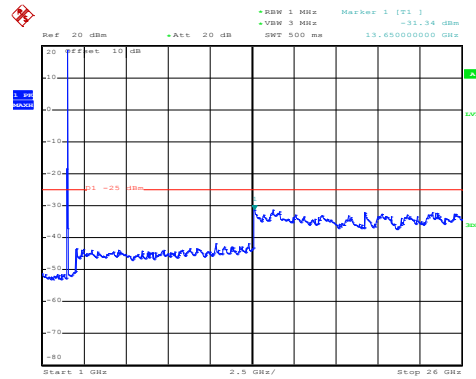
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 75 BW: 15MHz Lowest channel



Date: 19.AUG.2019 17:13:22

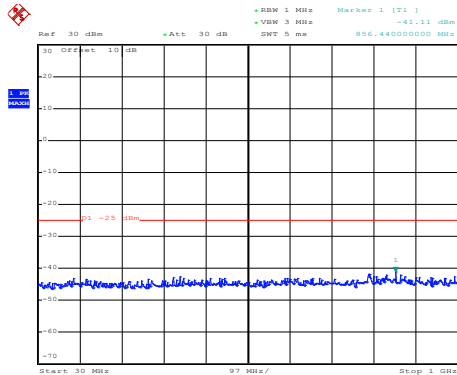
30MHz~1GHz



Date: 19.AUG.2019 14:57:39

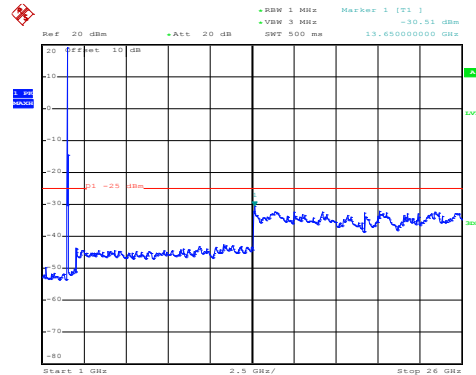
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:13:33

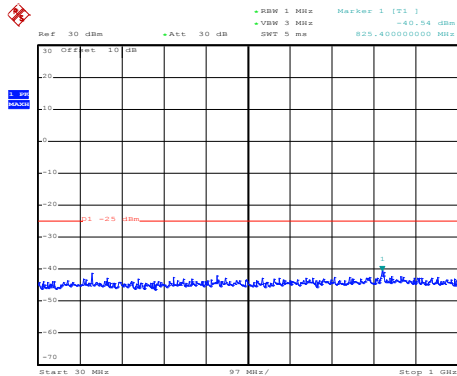
30MHz~1GHz



Date: 19.AUG.2019 14:58:12

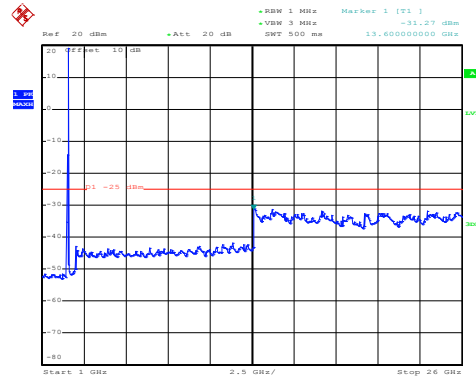
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:14:12

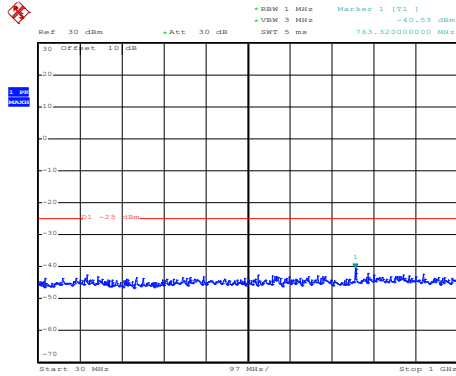
30MHz~1GHz



Date: 19.AUG.2019 15:00:00

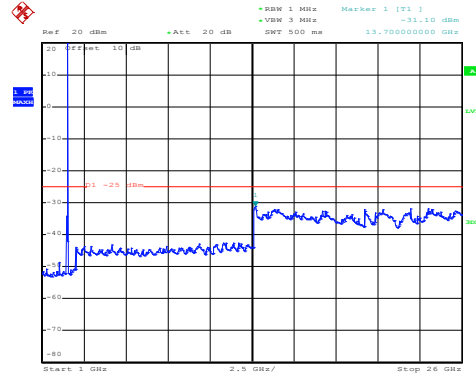
1GHz~26GHz

## LTE Band 7: 16 QAM & RB Size 1 BW: 20MHz Lowest channel



Date: 19.AUG.2019 17:14:44

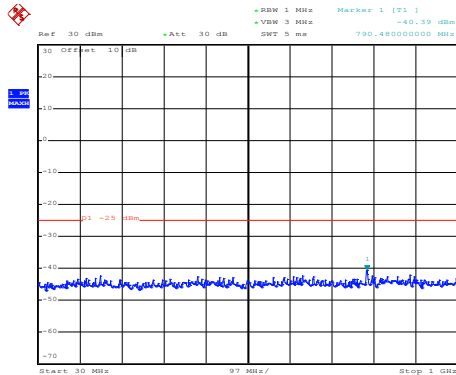
30MHz~1GHz



Date: 19.AUG.2019 15:01:06

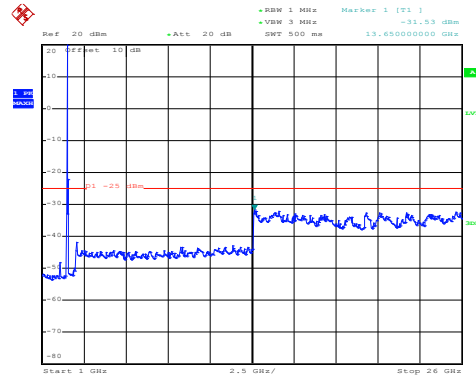
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:15:24

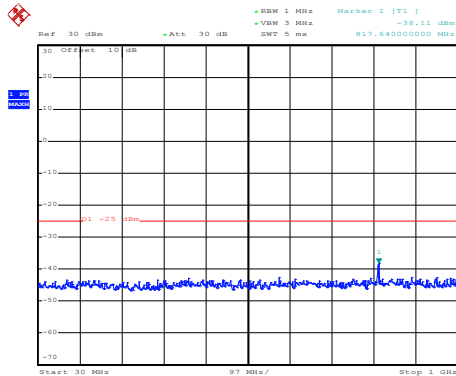
30MHz~1GHz



Date: 19.AUG.2019 15:02:35

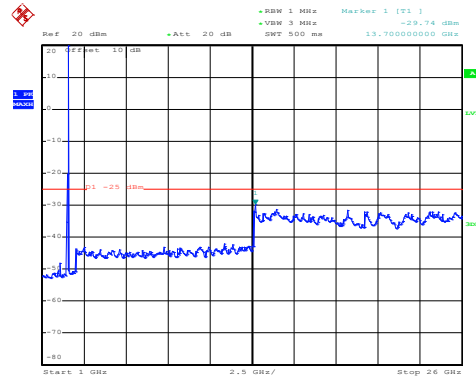
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:15:42

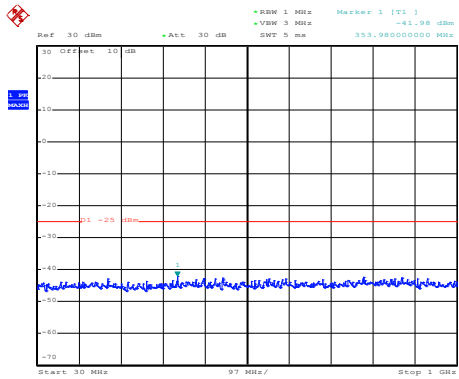
30MHz~1GHz



Date: 19.AUG.2019 15:03:21

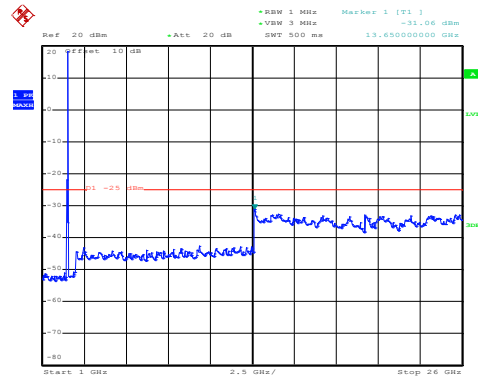
1GHz~26GHz

LTE Band 7: 16 QAM & RB Size 100  
 BW: 20MHz  
 Lowest channel



Date: 19.AUG.2019 17:14:57

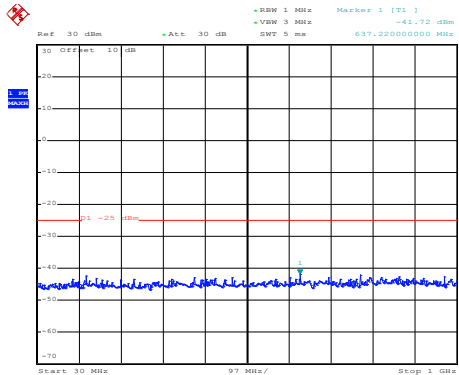
30MHz~1GHz



Date: 19.AUG.2019 15:01:38

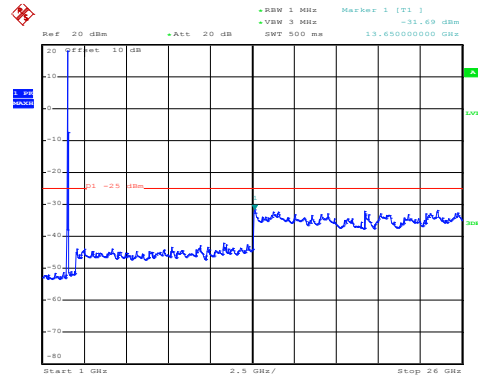
1GHz~26GHz

Middle channel



Date: 19.AUG.2019 17:15:10

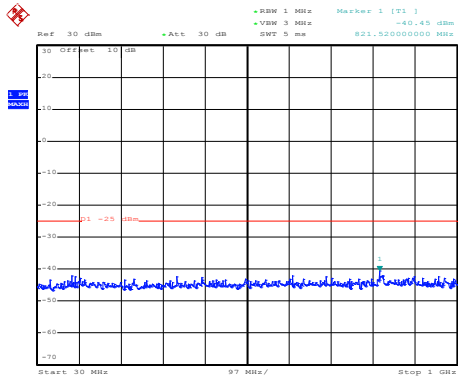
30MHz~1GHz



Date: 19.AUG.2019 15:02:06

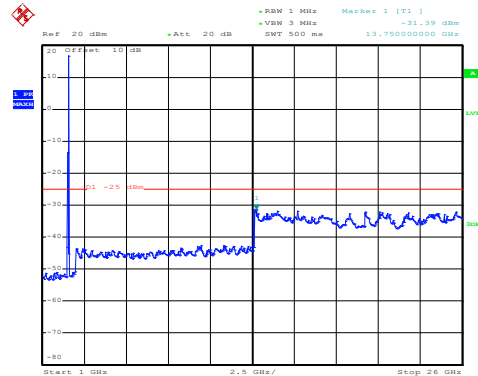
1GHz~26GHz

High channel



Date: 19.AUG.2019 17:15:54

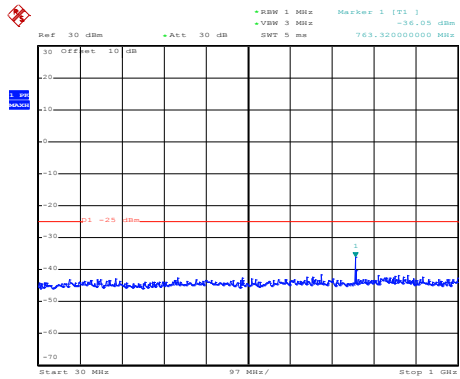
30MHz~1GHz



Date: 19.AUG.2019 15:03:56

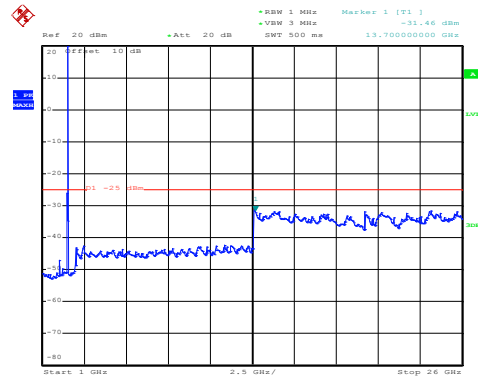
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 1 BW: 20MHz Lowest channel



Date: 19.AUG.2019 17:14:38

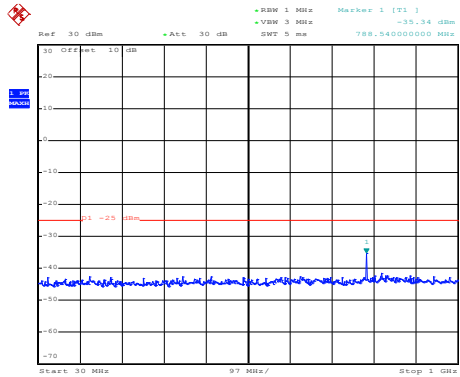
30MHz~1GHz



Date: 19.AUG.2019 15:00:51

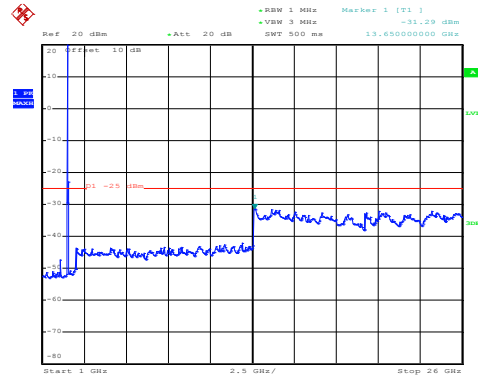
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:15:19

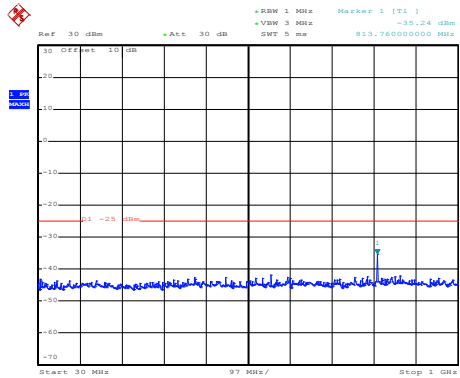
30MHz~1GHz



Date: 19.AUG.2019 15:02:25

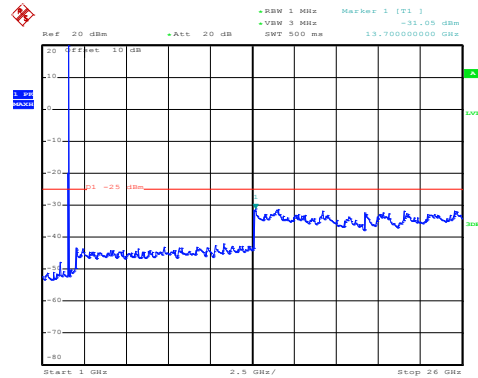
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:15:37

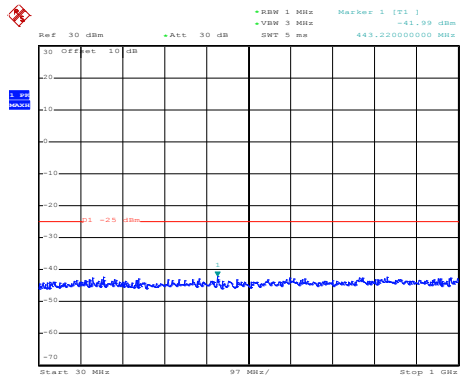
30MHz~1GHz



Date: 19.AUG.2019 15:02:57

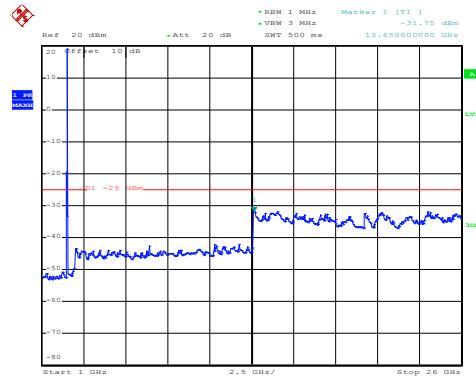
1GHz~26GHz

## LTE Band 7: QPSK & RB Size 100 BW: 20MHz Lowest channel



Date: 19.AUG.2019 17:14:52

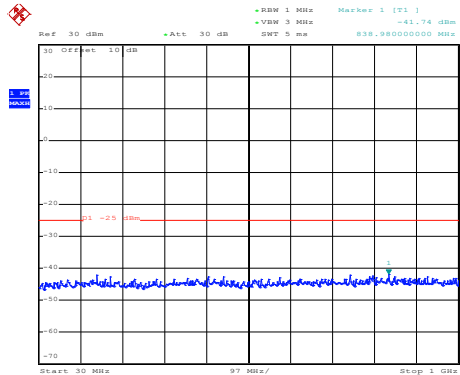
30MHz~1GHz



Date: 19.AUG.2019 15:01:27

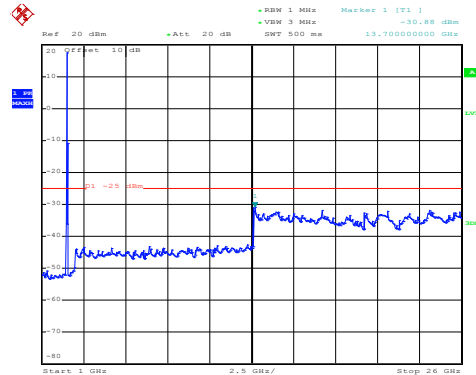
1GHz~26GHz

## Middle channel



Date: 19.AUG.2019 17:15:05

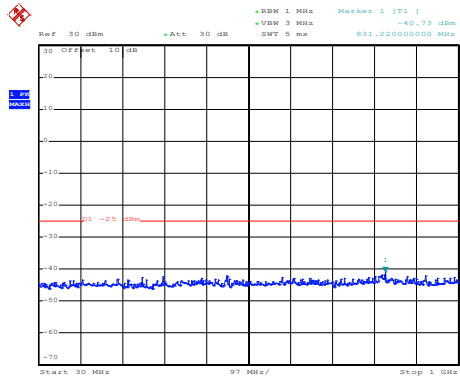
30MHz~1GHz



Date: 19.AUG.2019 15:01:56

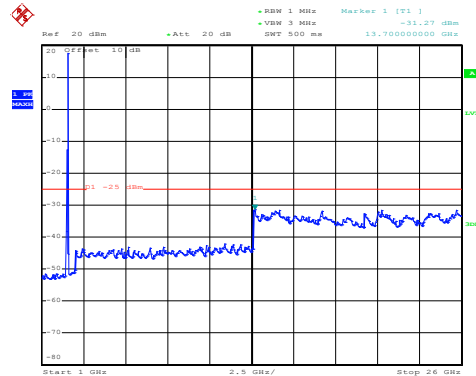
1GHz~26GHz

## High channel



Date: 19.AUG.2019 17:15:49

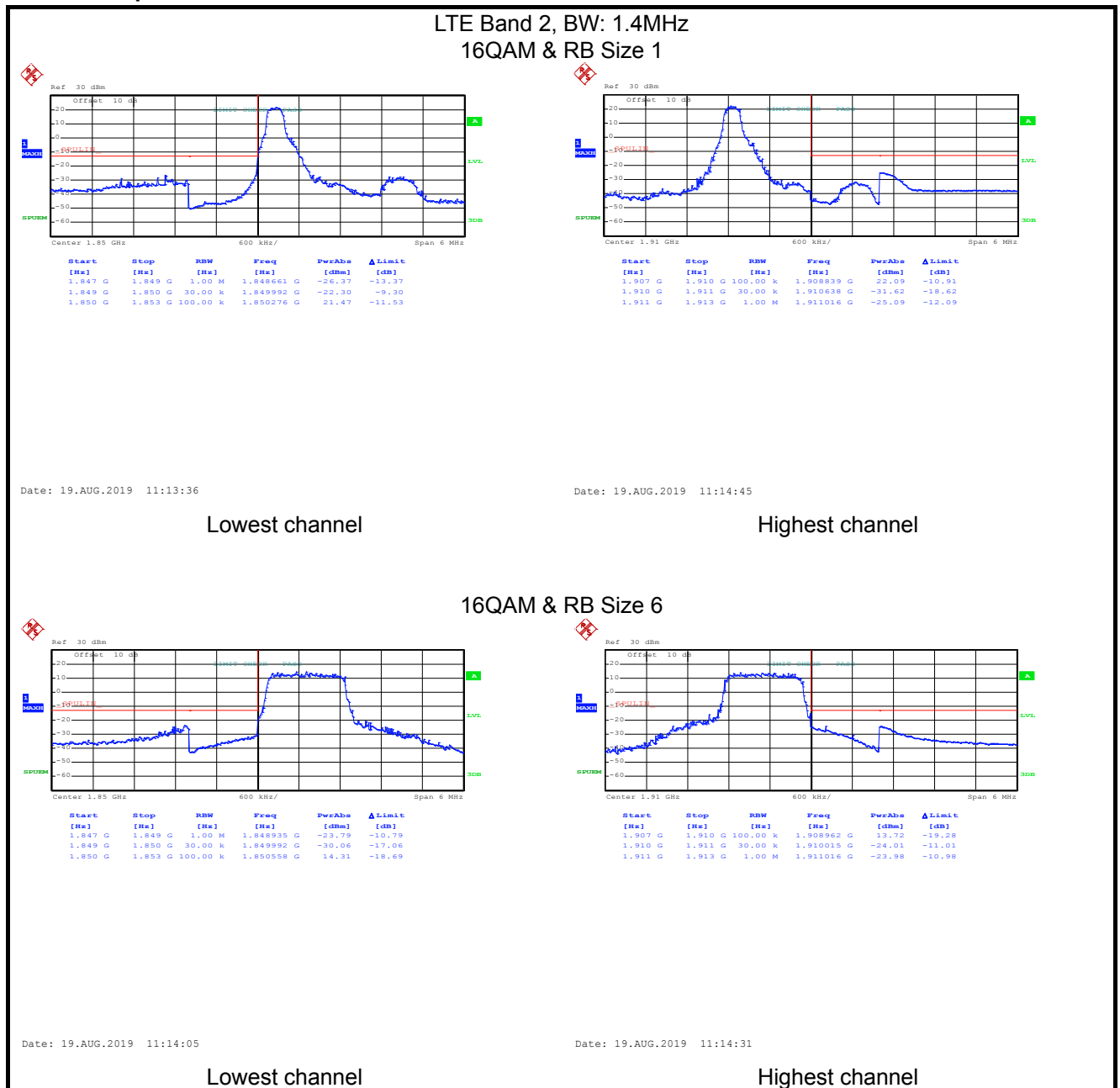
30MHz~1GHz



Date: 19.AUG.2019 15:03:40

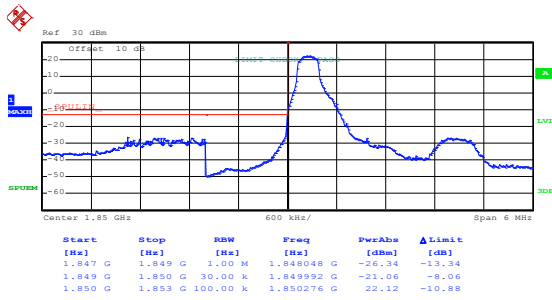
1GHz~26GHz

**Band edge emission:**  
**LTE Band 2 part:**



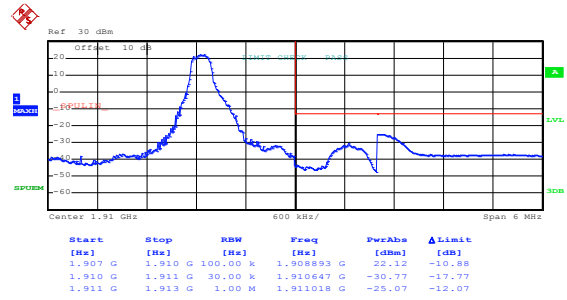


## LTE Band 2, BW: 1.4MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:13:29

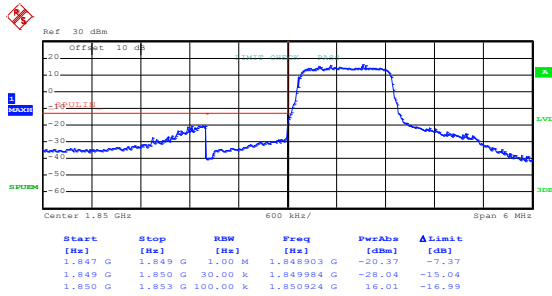
Lowest channel



Date: 19.AUG.2019 11:14:40

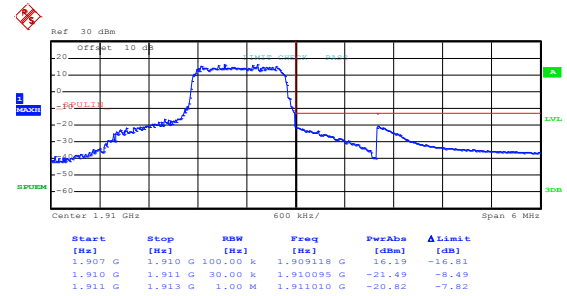
Highest channel

## QPSK & RB Size 6



Date: 19.AUG.2019 11:13:59

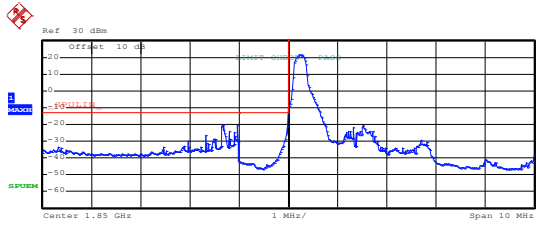
Lowest channel



Date: 19.AUG.2019 11:14:25

Highest channel

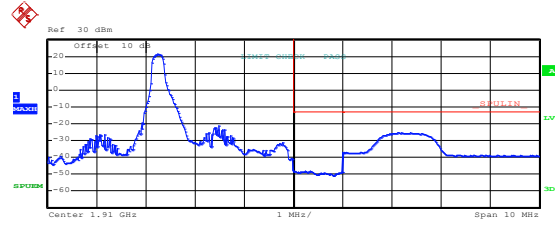
## LTE Band 2, BW: 3MHz 16QAM & RB Size 1



| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz]  | PwrAbs [dBm] | ΔLimit [dB] |
|------------|-----------|----------|------------|--------------|-------------|
| 1.845 G    | 1.849 G   | 1.00 M   | 1.848877 G | -19.88       | -6.88       |
| 1.849 G    | 1.850 G   | 30.00 K  | 1.849992 G | -23.41       | -8.41       |
| 1.850 G    | 1.855 G   | 100.00 K | 1.850270 G | 23.45        | -11.55      |

Date: 19.AUG.2019 11:17:09

Lowest channel

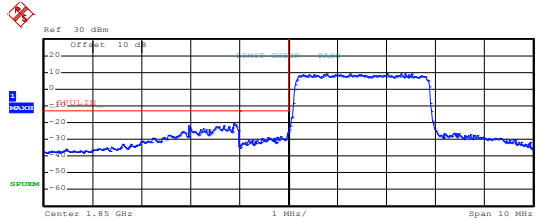


| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz]  | PwrAbs [dBm] | ΔLimit [dB] |
|------------|-----------|----------|------------|--------------|-------------|
| 1.905 G    | 1.910 G   | 100.00 K | 1.907330 G | 21.53        | -11.47      |
| 1.910 G    | 1.911 G   | 30.00 K  | 1.910343 G | -47.65       | -34.65      |
| 1.911 G    | 1.915 G   | 1.00 M   | 1.912196 G | -25.36       | -12.36      |

Date: 19.AUG.2019 11:15:35

Highest channel

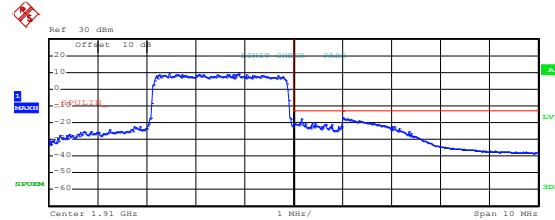
## 16QAM & RB Size 15



| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz]  | PwrAbs [dBm] | ΔLimit [dB] |
|------------|-----------|----------|------------|--------------|-------------|
| 1.845 G    | 1.849 G   | 1.00 M   | 1.848871 G | -20.11       | -7.11       |
| 1.849 G    | 1.850 G   | 100.00 K | 1.849839 G | -27.93       | -14.93      |
| 1.850 G    | 1.855 G   | 100.00 K | 1.852300 G | 9.30         | -23.70      |

Date: 19.AUG.2019 11:16:42

Lowest channel

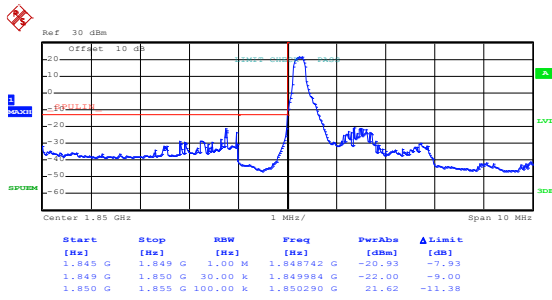


| Start [Hz] | Stop [Hz] | RBW [Hz] | Freq [Hz]  | PwrAbs [dBm] | ΔLimit [dB] |
|------------|-----------|----------|------------|--------------|-------------|
| 1.905 G    | 1.910 G   | 100.00 K | 1.907450 G | 9.72         | -23.28      |
| 1.910 G    | 1.911 G   | 100.00 K | 1.910152 G | -17.70       | -4.70       |
| 1.911 G    | 1.915 G   | 1.00 M   | 1.911012 G | -17.16       | -4.16       |

Date: 19.AUG.2019 11:16:10

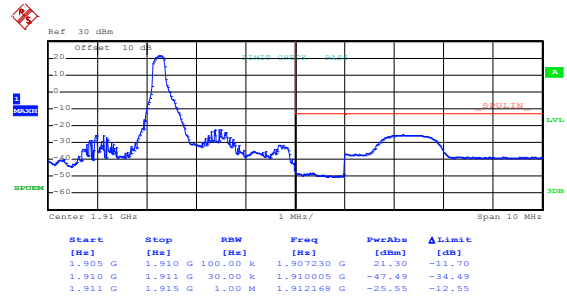
Highest channel

## LTE Band 2, BW: 3MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:16:58

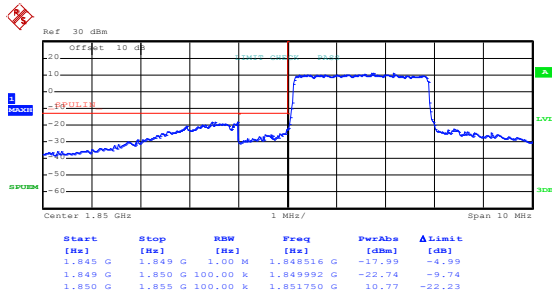
Lowest channel



Date: 19.AUG.2019 11:15:22

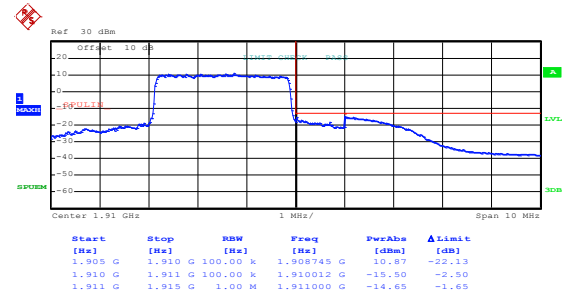
Highest channel

## QPSK & RB Size 15



Date: 19.AUG.2019 11:16:36

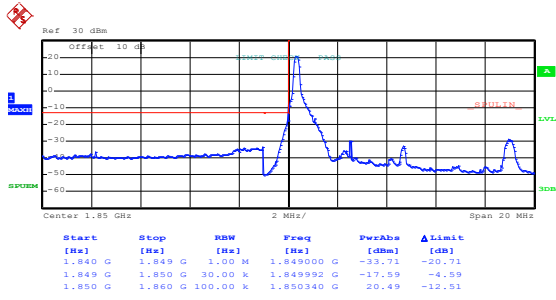
Lowest channel



Date: 19.AUG.2019 11:16:04

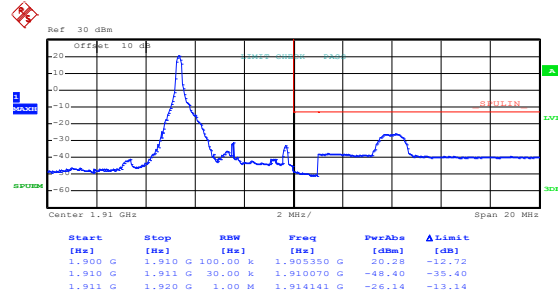
Highest channel

## LTE Band 2, BW: 5MHz 16QAM & RB Size 1



Date: 19.AUG.2019 11:17:49

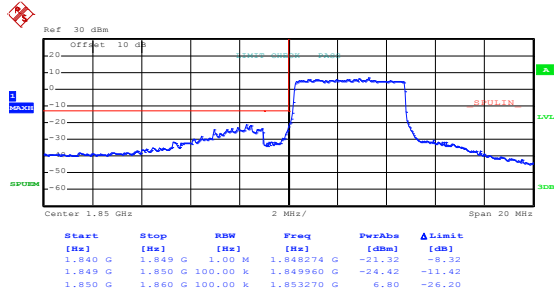
Lowest channel



Date: 19.AUG.2019 11:19:30

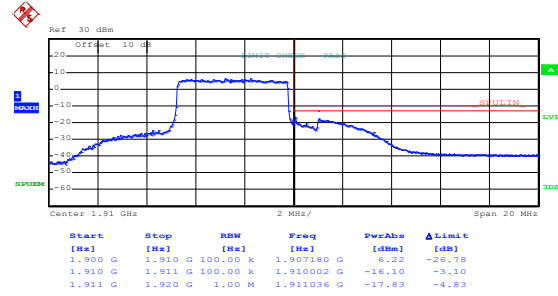
Highest channel

## 16QAM & RB Size 25



Date: 19.AUG.2019 11:18:26

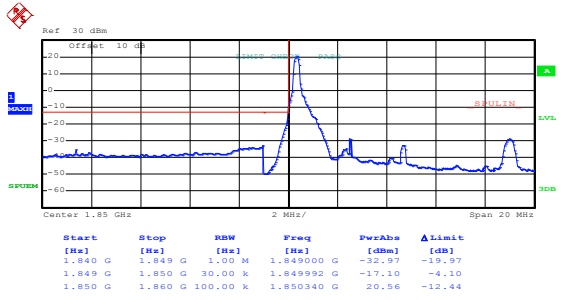
Lowest channel



Date: 19.AUG.2019 11:19:02

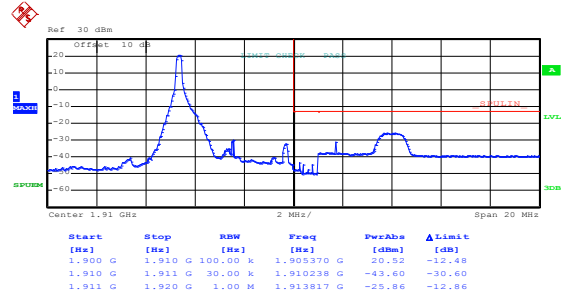
Highest channel

## LTE Band 2, BW: 5MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:17:42

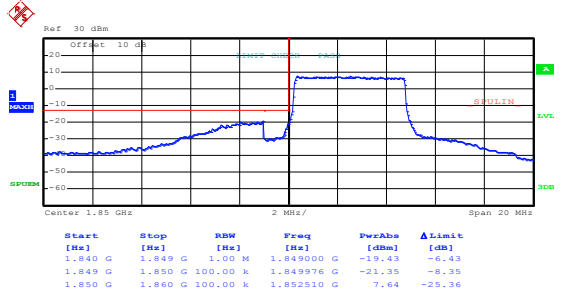
Lowest channel



Date: 19.AUG.2019 11:19:24

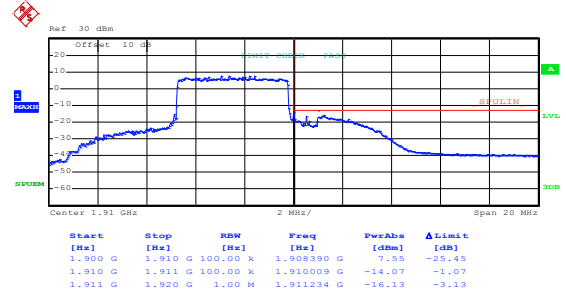
Highest channel

## QPSK & RB Size 25



Date: 19.AUG.2019 11:18:20

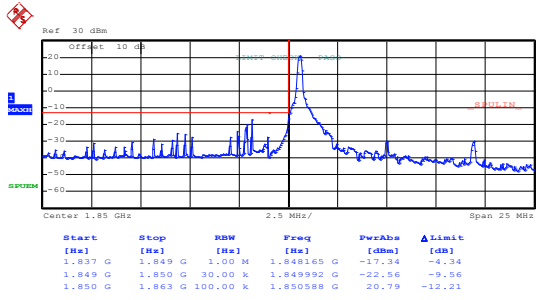
Lowest channel



Date: 19.AUG.2019 11:18:56

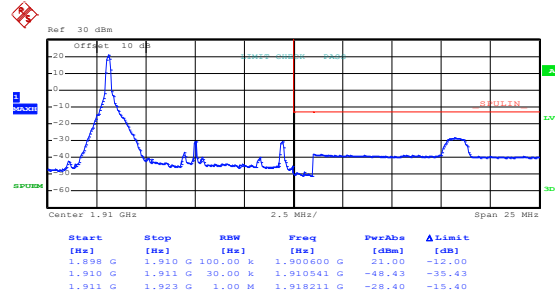
Highest channel

## LTE Band 2, BW: 10MHz 16QAM & RB Size 1



Date: 19.AUG.2019 11:22:12

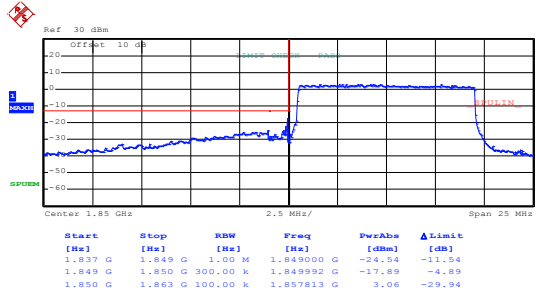
Lowest channel



Date: 19.AUG.2019 11:20:12

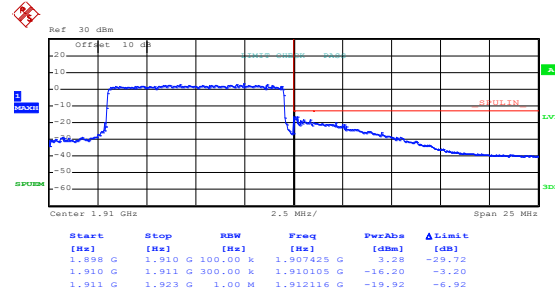
Highest channel

## 16QAM & RB Size 50



Date: 19.AUG.2019 11:21:32

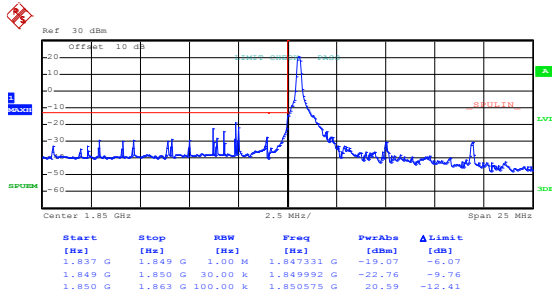
Lowest channel



Date: 19.AUG.2019 11:20:54

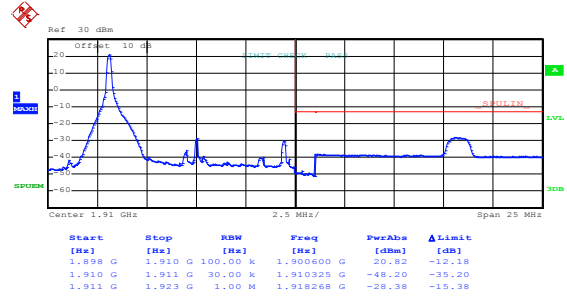
Highest channel

## LTE Band 2, BW: 10MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:22:36

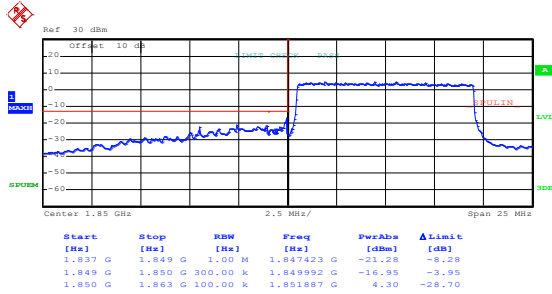
Lowest channel



Date: 19.AUG.2019 11:20:04

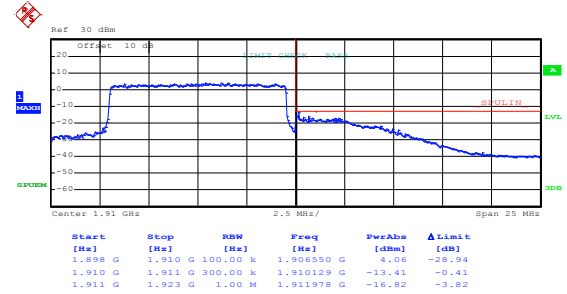
Highest channel

## QPSK & RB Size 50



Date: 19.AUG.2019 11:21:26

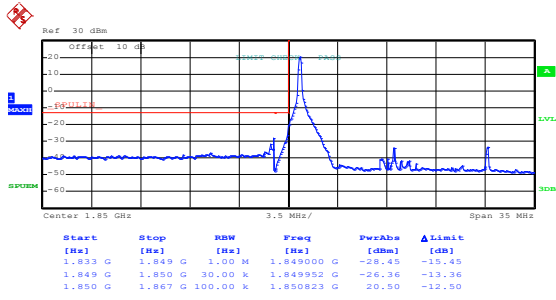
Lowest channel



Date: 19.AUG.2019 11:20:40

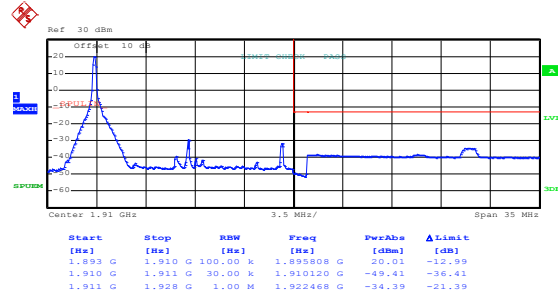
Highest channel

## LTE Band 2, BW: 15MHz 16QAM & RB Size 1



Date: 19.AUG.2019 11:23:18

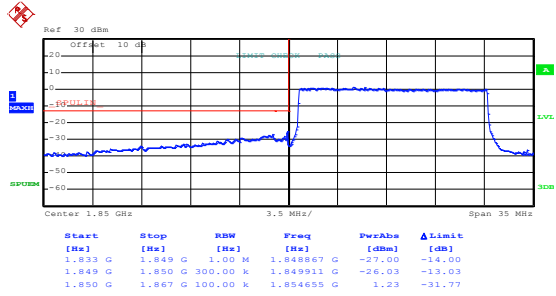
Lowest channel



Date: 19.AUG.2019 11:24:35

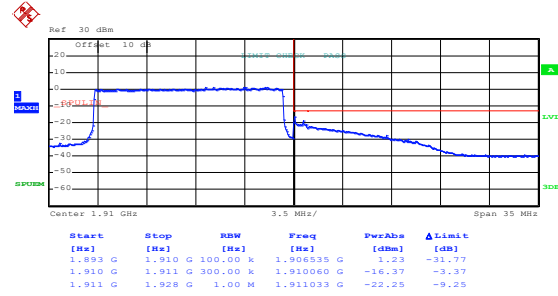
Highest channel

## 16QAM & RB Size 75



Date: 19.AUG.2019 11:23:45

Lowest channel

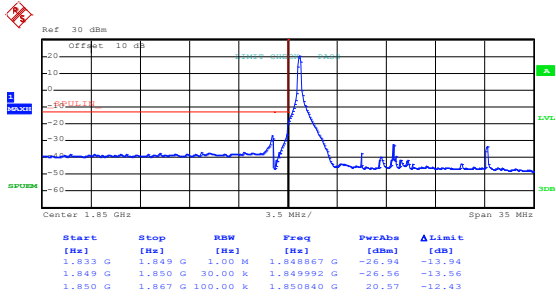


Date: 19.AUG.2019 11:24:12

Highest channel

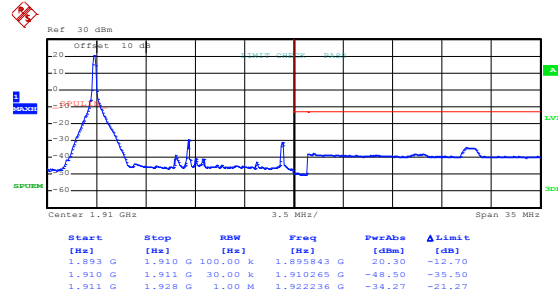


## LTE Band 2, BW: 15MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:23:10

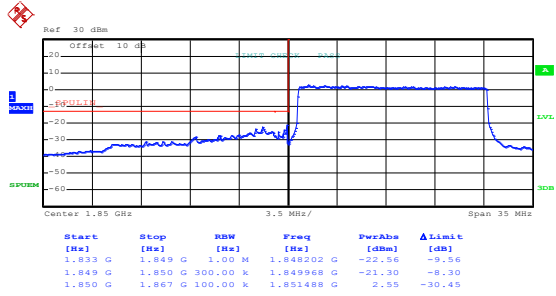
Lowest channel



Date: 19.AUG.2019 11:24:28

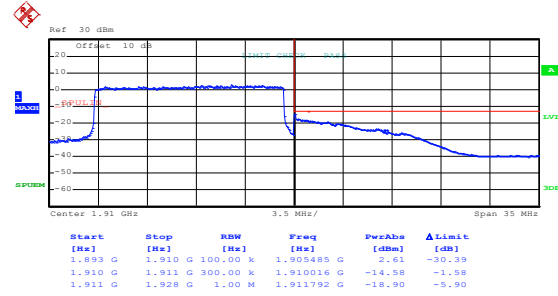
Highest channel

## QPSK & RB Size 75



Date: 19.AUG.2019 11:23:39

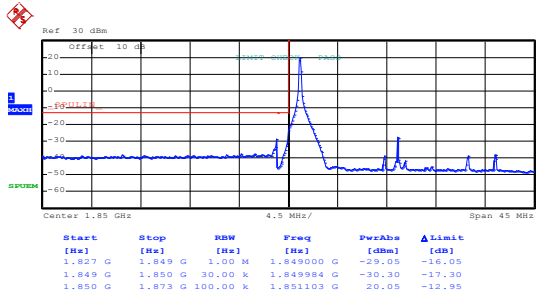
Lowest channel



Date: 19.AUG.2019 11:24:06

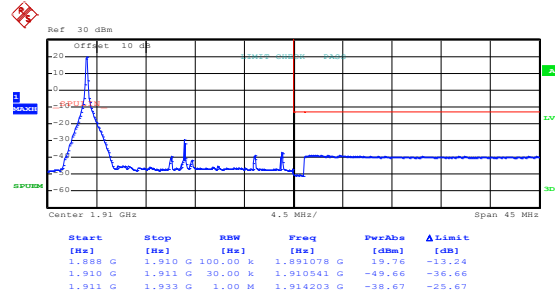
Highest channel

## LTE Band 2, BW: 20MHz 16QAM & RB Size 1



Date: 19.AUG.2019 11:26:20

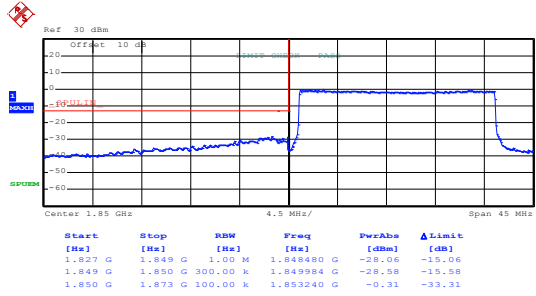
Lowest channel



Date: 19.AUG.2019 11:25:08

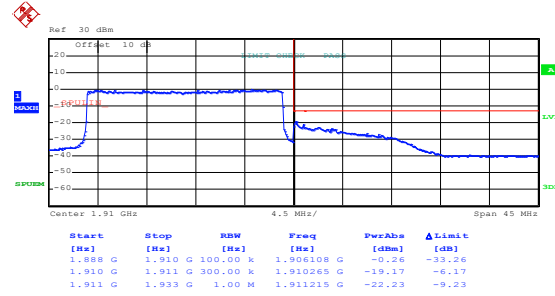
Highest channel

## 16QAM & RB Size 100



Date: 19.AUG.2019 11:25:55

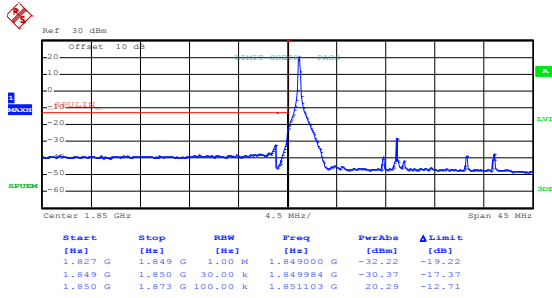
Lowest channel



Date: 19.AUG.2019 11:25:33

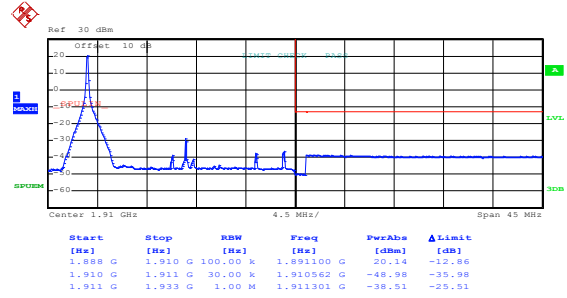
Highest channel

## LTE Band 2, BW: 20MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:26:13

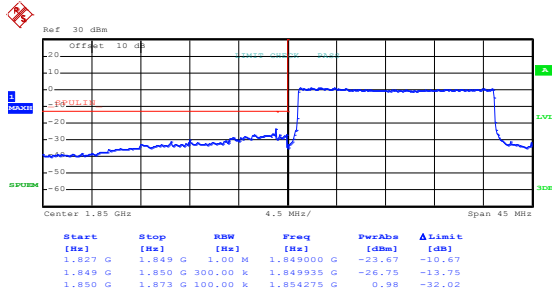
Lowest channel



Date: 19.AUG.2019 11:25:03

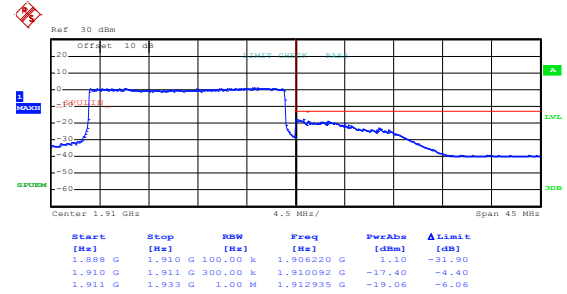
Highest channel

## QPSK & RB Size 100



Date: 19.AUG.2019 11:25:49

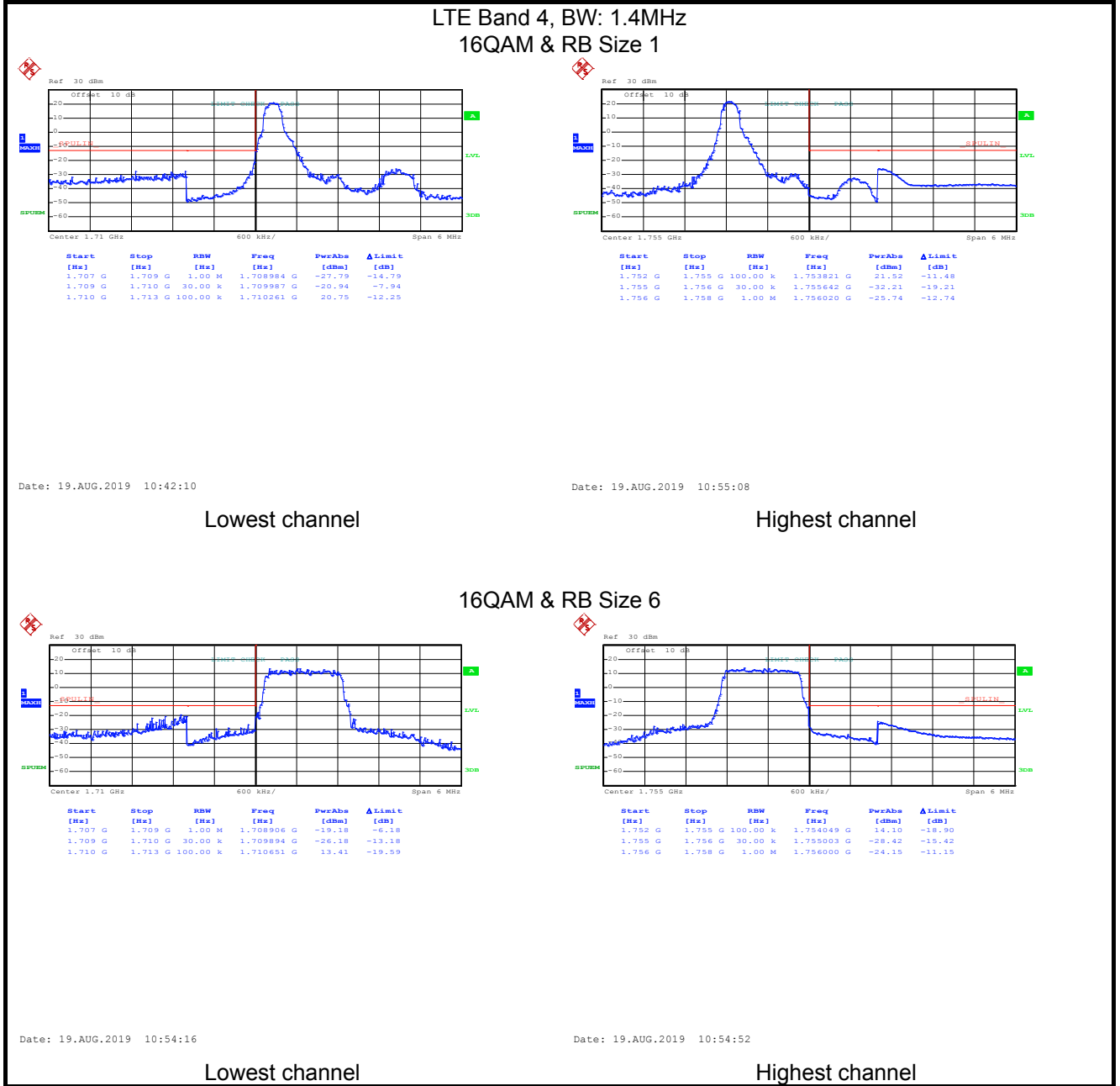
Lowest channel



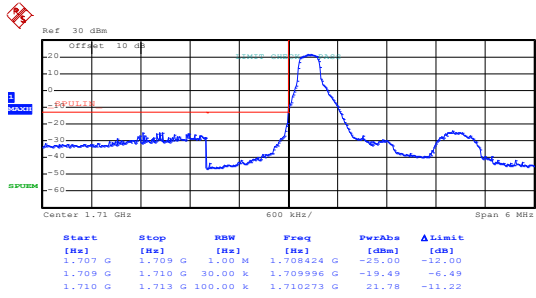
Date: 19.AUG.2019 11:25:26

Highest channel

LTE Band 4 part:

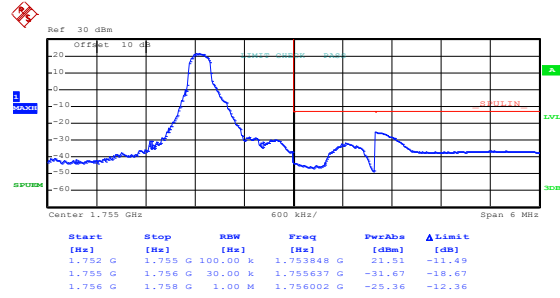


## LTE Band 4, BW: 1.4MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:42:05

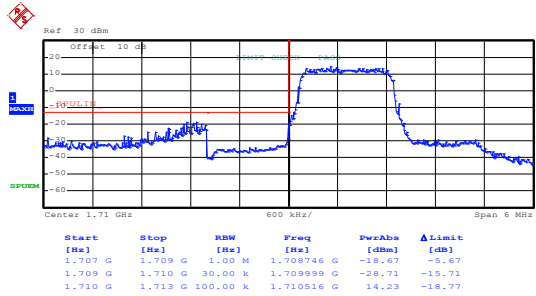
Lowest channel



Date: 19.AUG.2019 10:55:03

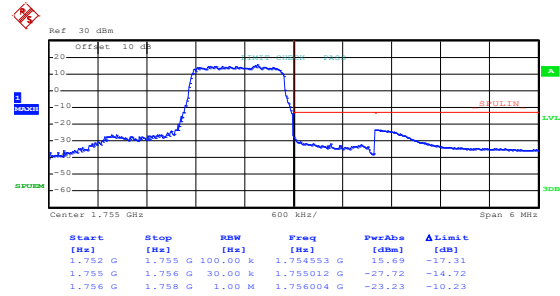
Highest channel

## QPSK & RB Size 6



Date: 19.AUG.2019 10:42:21

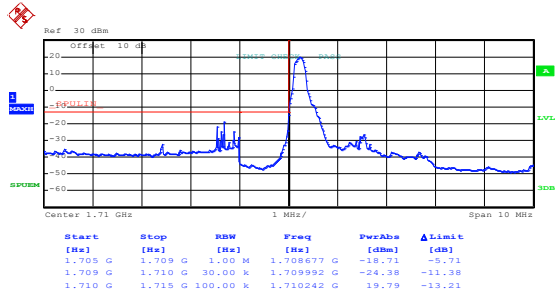
Lowest channel



Date: 19.AUG.2019 10:54:45

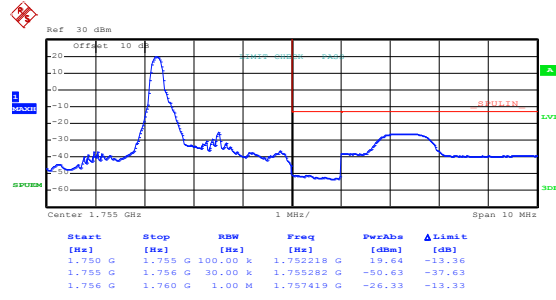
Highest channel

## LTE Band 4, BW: 3MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:58:53

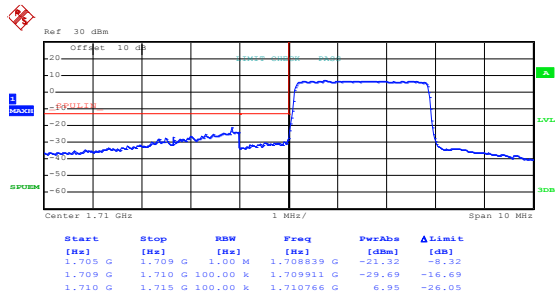
Lowest channel



Date: 19.AUG.2019 10:57:15

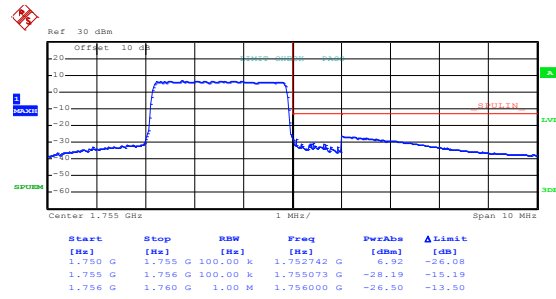
Highest channel

## 16QAM & RB Size 15



Date: 19.AUG.2019 10:58:30

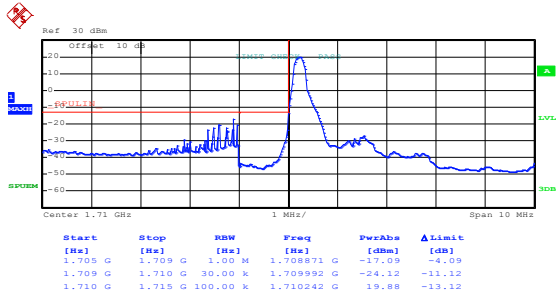
Lowest channel



Date: 19.AUG.2019 10:57:39

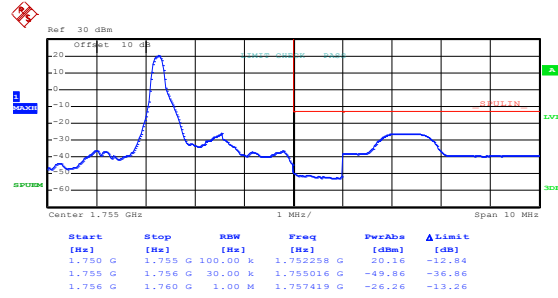
Highest channel

## LTE Band 4, BW: 3MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:58:47

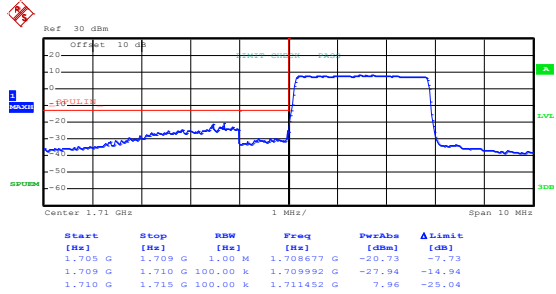
Lowest channel



Date: 19.AUG.2019 10:57:09

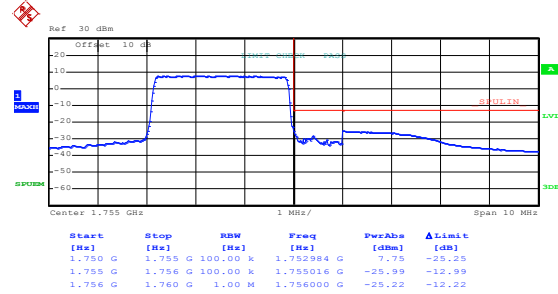
Highest channel

## QPSK & RB Size 15



Date: 19.AUG.2019 10:58:21

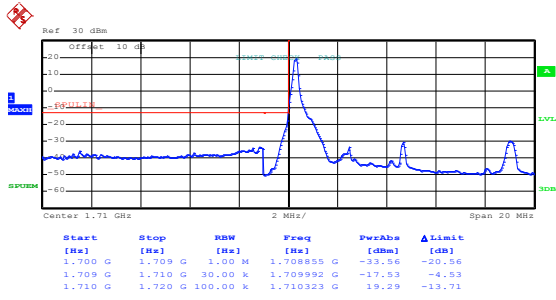
Lowest channel



Date: 19.AUG.2019 10:57:34

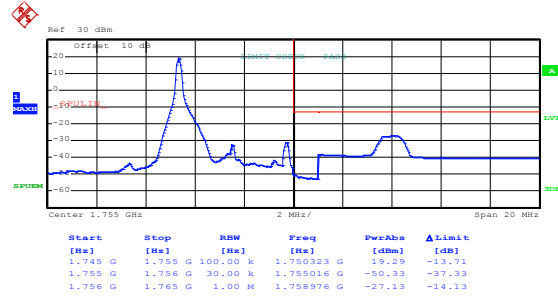
Highest channel

## LTE Band 4, BW: 5MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:59:38

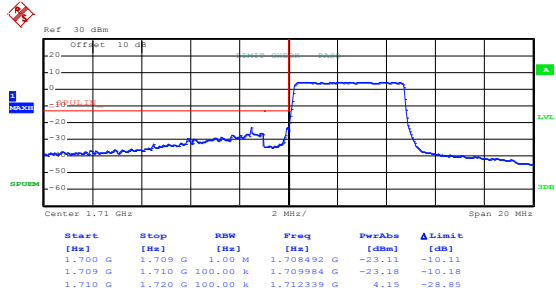
Lowest channel



Date: 19.AUG.2019 11:00:51

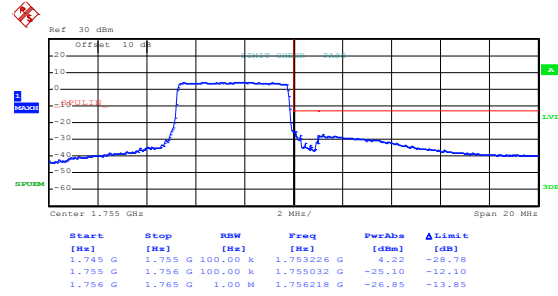
Highest channel

## 16QAM & RB Size 25



Date: 19.AUG.2019 11:00:04

Lowest channel

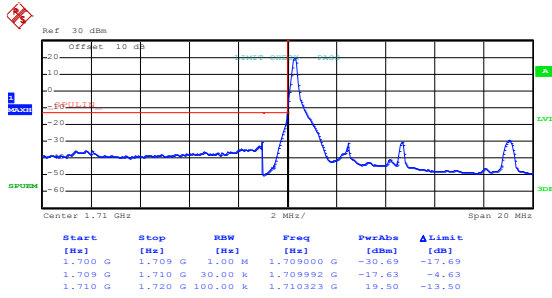


Date: 19.AUG.2019 11:00:29

Highest channel

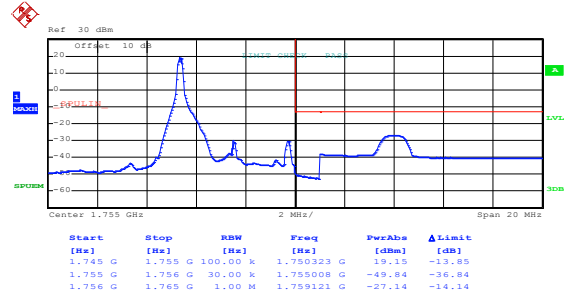


## LTE Band 4, BW: 5MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:59:33

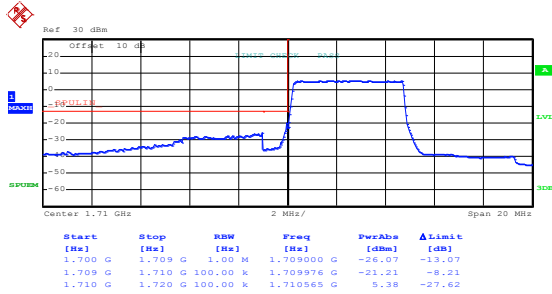
Lowest channel



Date: 19.AUG.2019 11:00:46

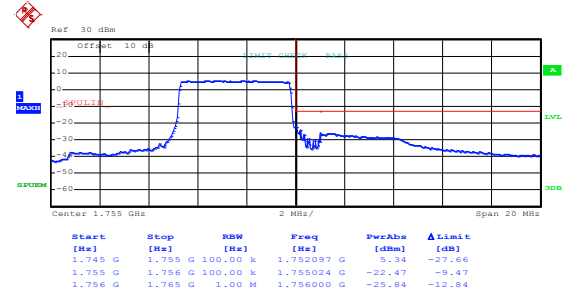
Highest channel

## QPSK & RB Size 25



Date: 19.AUG.2019 10:59:59

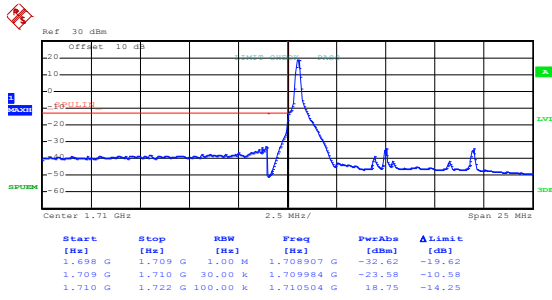
Lowest channel



Date: 19.AUG.2019 11:00:24

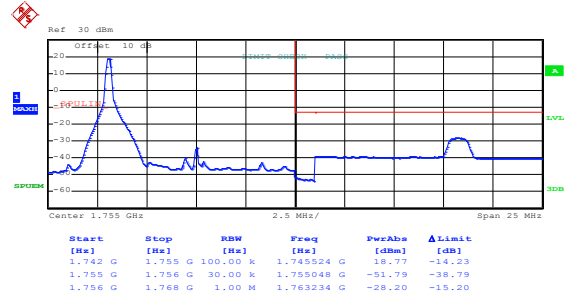
Highest channel

## LTE Band 4, BW: 10MHz 16QAM & RB Size 1



Date: 19.AUG.2019 11:03:16

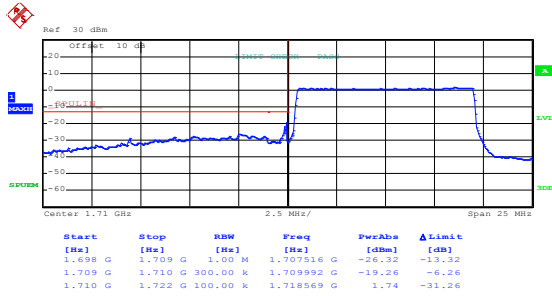
Lowest channel



Date: 19.AUG.2019 11:01:36

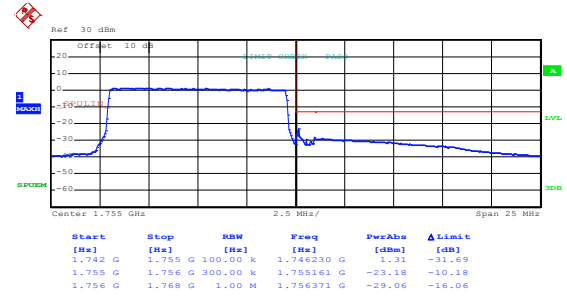
Highest channel

## 16QAM & RB Size 50



Date: 19.AUG.2019 11:02:57

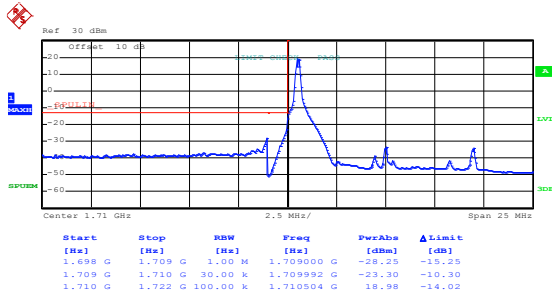
Lowest channel



Date: 19.AUG.2019 11:01:58

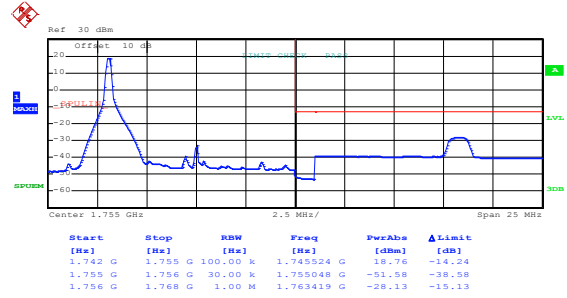
Highest channel

## LTE Band 4, BW: 10MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:03:11

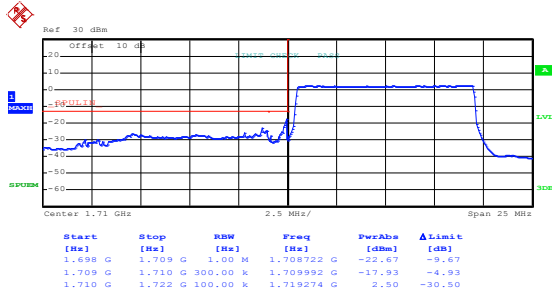
Lowest channel



Date: 19.AUG.2019 11:01:30

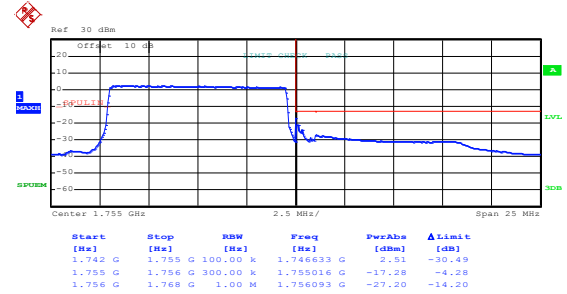
Highest channel

## QPSK & RB Size 50



Date: 19.AUG.2019 11:02:51

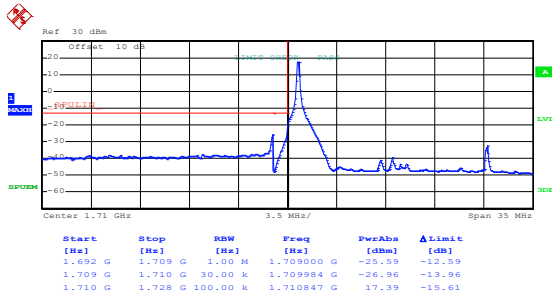
Lowest channel



Date: 19.AUG.2019 11:01:52

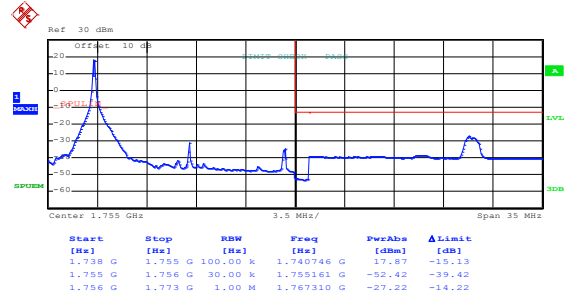
Highest channel

## LTE Band 4, BW: 15MHz 16QAM & RB Size 1



Date: 19.AUG.2019 11:03:54

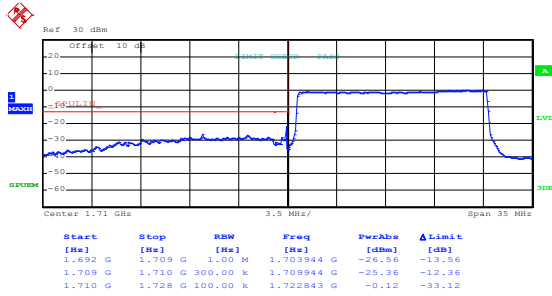
Lowest channel



Date: 19.AUG.2019 11:05:12

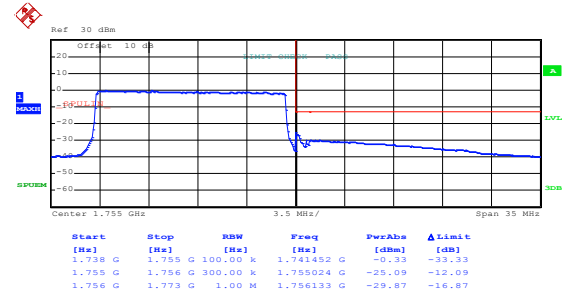
Highest channel

## 16QAM & RB Size 75



Date: 19.AUG.2019 11:04:22

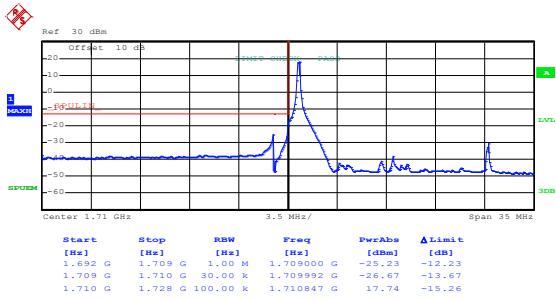
Lowest channel



Date: 19.AUG.2019 11:04:49

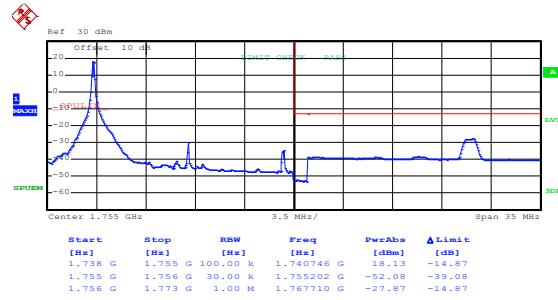
Highest channel

## LTE Band 4, BW: 15MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:03:48

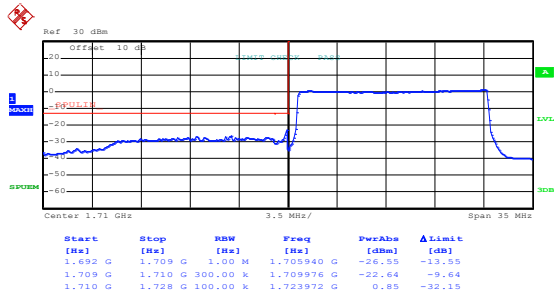
Lowest channel



Date: 19.AUG.2019 11:05:06

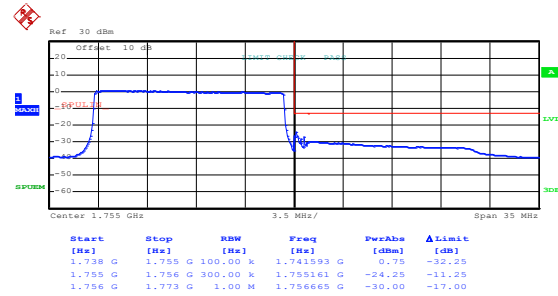
Highest channel

## QPSK & RB Size 75



Date: 19.AUG.2019 11:04:16

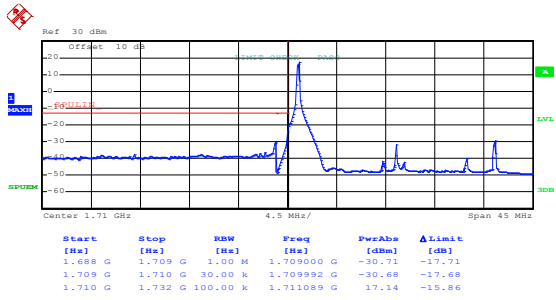
Lowest channel



Date: 19.AUG.2019 11:04:41

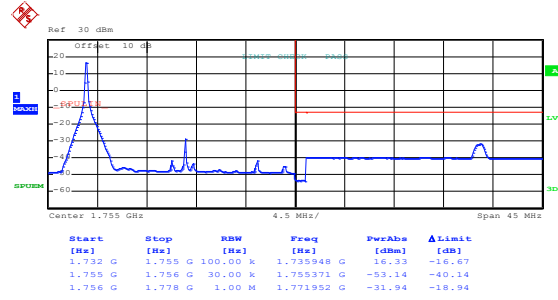
Highest channel

## LTE Band 4, BW: 20MHz 16QAM & RB Size 1



Date: 19.AUG.2019 11:07:34

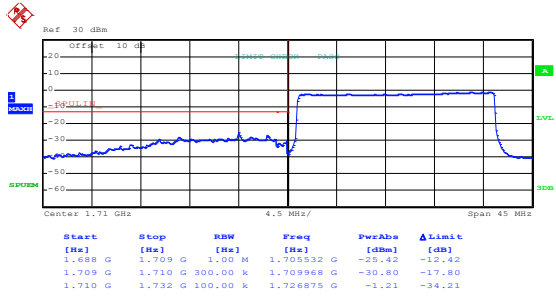
Lowest channel



Date: 19.AUG.2019 11:06:00

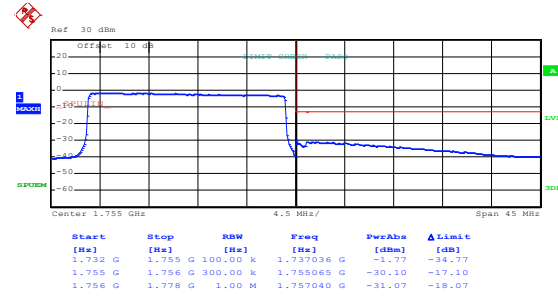
Highest channel

## 16QAM & RB Size 100



Date: 19.AUG.2019 11:07:01

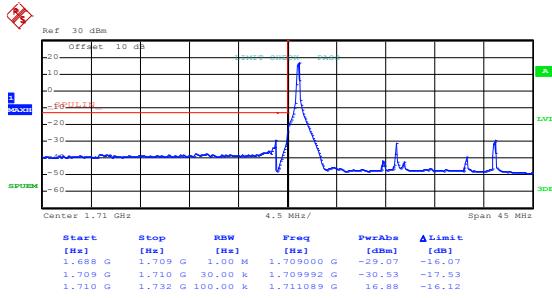
Lowest channel



Date: 19.AUG.2019 11:06:34

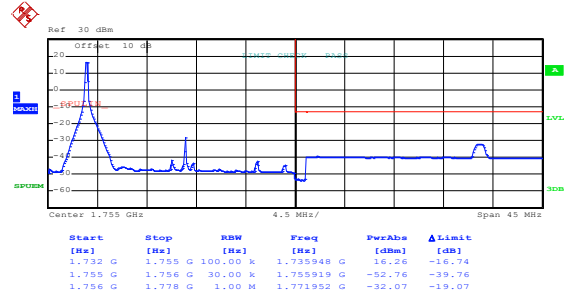
Highest channel

## LTE Band 4, BW: 20MHz QPSK & RB Size 1



Date: 19.AUG.2019 11:07:27

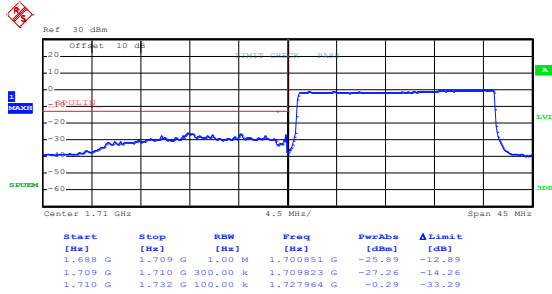
Lowest channel



Date: 19.AUG.2019 11:06:11

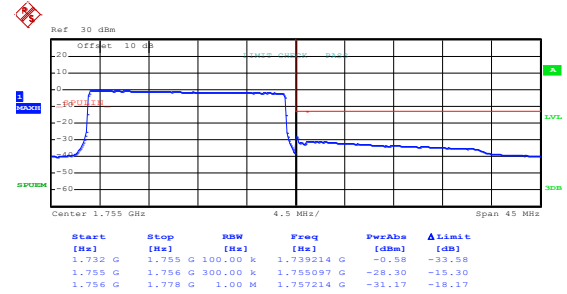
Highest channel

## QPSK & RB Size 100



Date: 19.AUG.2019 11:06:55

Lowest channel

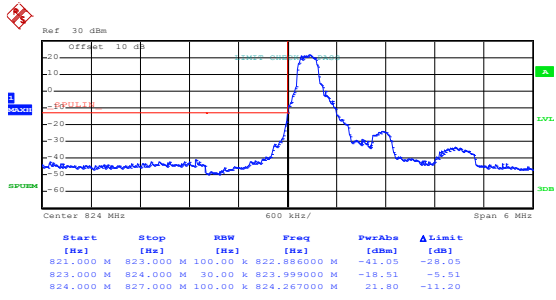


Date: 19.AUG.2019 11:06:27

Highest channel

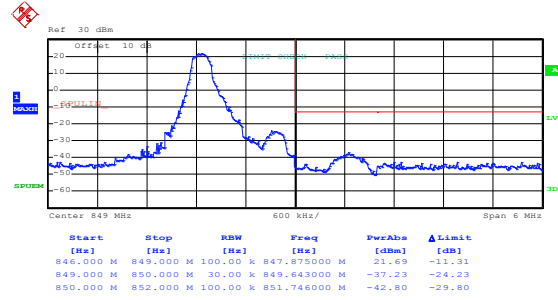
LTE Band 5 part:

LTE Band 5, BW: 1.4MHz  
16QAM & RB Size 1



Date: 19.AUG.2019 10:30:34

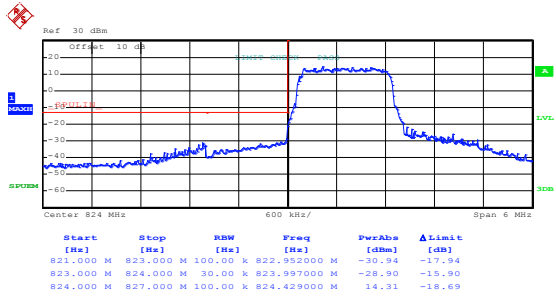
Lowest channel



Date: 19.AUG.2019 10:31:43

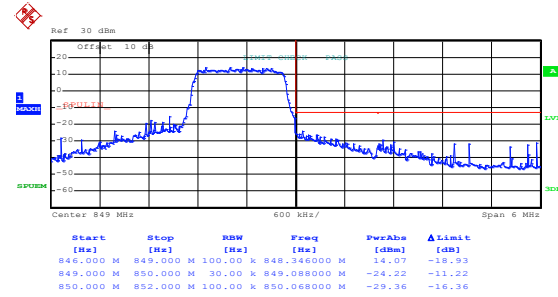
Highest channel

16QAM & RB Size 6



Date: 19.AUG.2019 10:30:55

Lowest channel

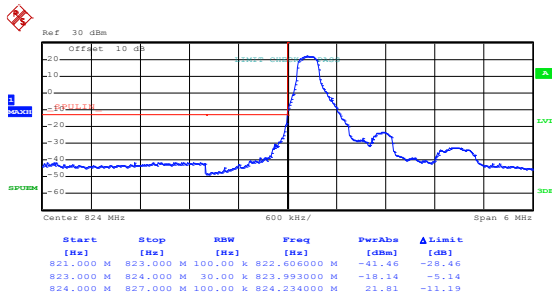


Date: 19.AUG.2019 10:31:27

Highest channel

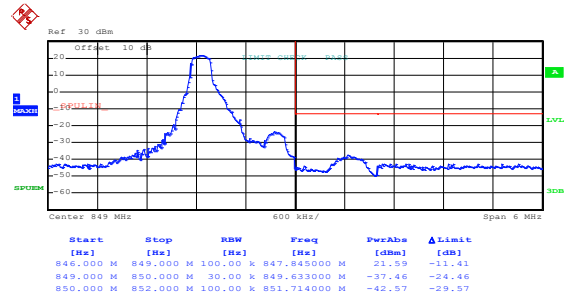


## LTE Band 5, BW: 1.4MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:30:28

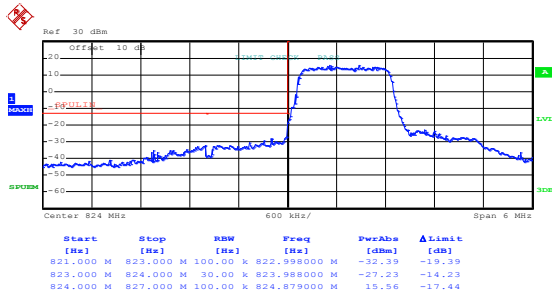
Lowest channel



Date: 19.AUG.2019 10:31:37

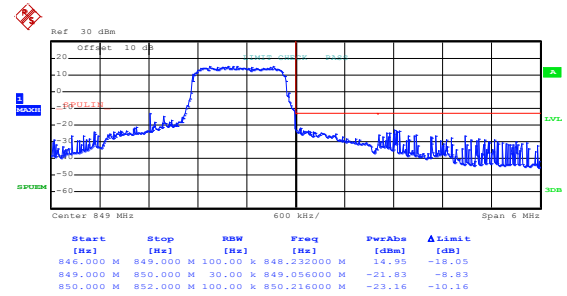
Highest channel

## QPSK & RB Size 6



Date: 19.AUG.2019 10:30:47

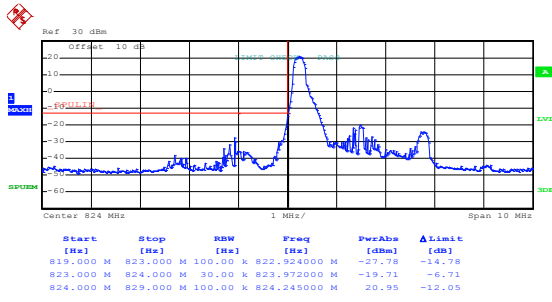
Lowest channel



Date: 19.AUG.2019 10:31:20

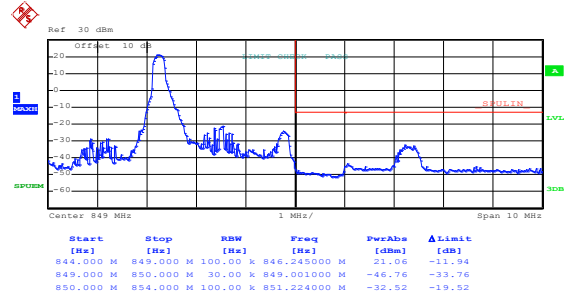
Highest channel

## LTE Band 5, BW: 3MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:34:16

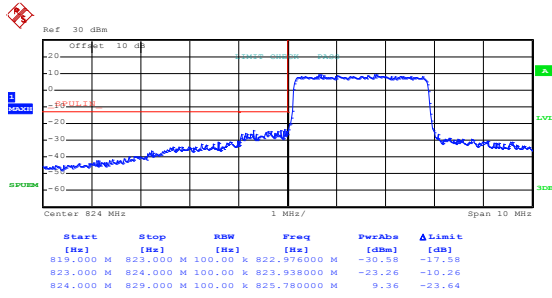
Lowest channel



Date: 19.AUG.2019 10:32:34

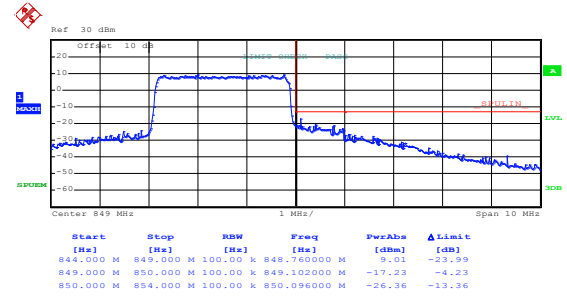
Highest channel

## 16QAM & RB Size 15



Date: 19.AUG.2019 10:33:56

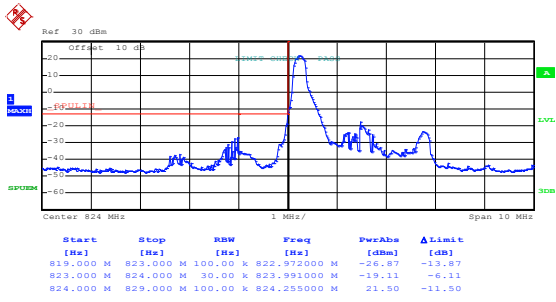
Lowest channel



Date: 19.AUG.2019 10:33:06

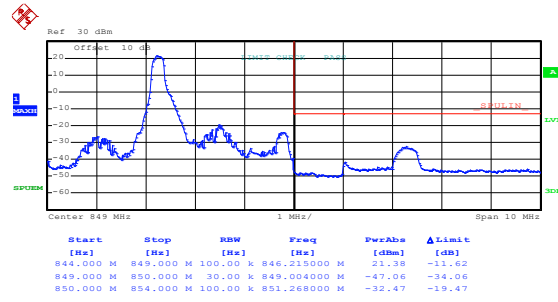
Highest channel

## LTE Band 5, BW: 3MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:34:11

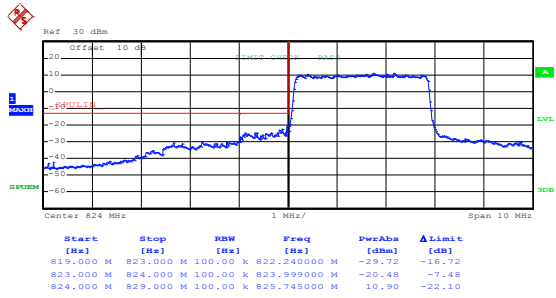
Lowest channel



Date: 19.AUG.2019 10:32:28

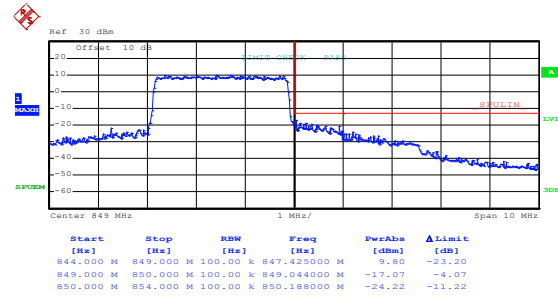
Highest channel

## QPSK & RB Size 15



Date: 19.AUG.2019 10:33:51

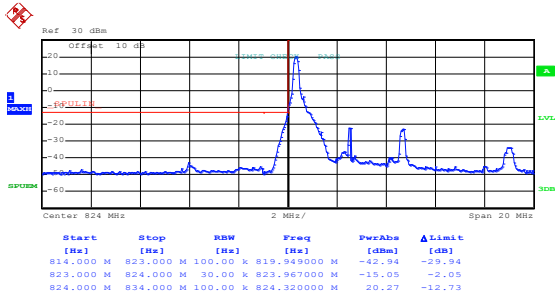
Lowest channel



Date: 19.AUG.2019 10:32:59

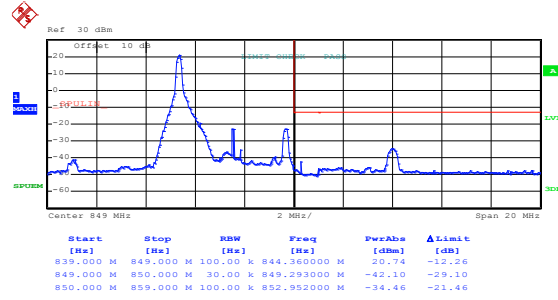
Highest channel

## LTE Band 5, BW: 5MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:34:59

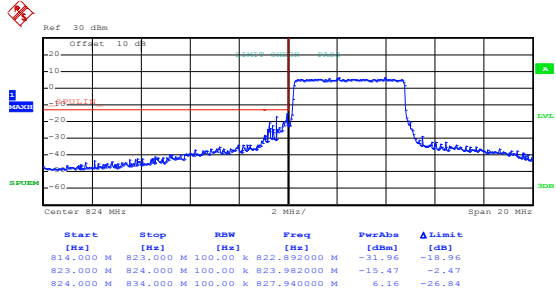
Lowest channel



Date: 19.AUG.2019 10:36:18

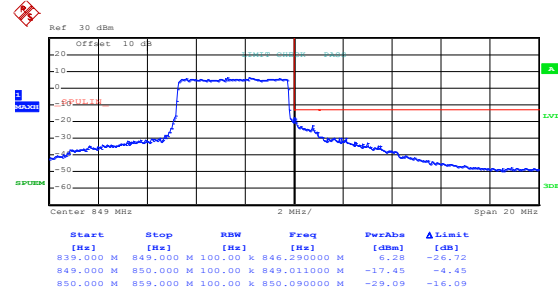
Highest channel

## 16QAM & RB Size 25



Date: 19.AUG.2019 10:35:24

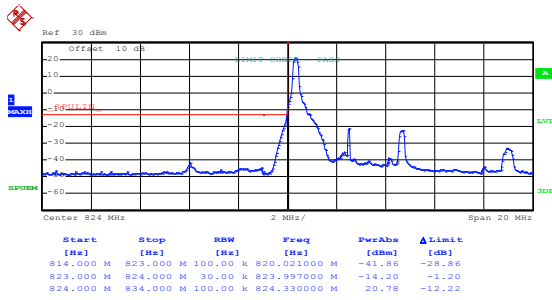
Lowest channel



Date: 19.AUG.2019 10:35:55

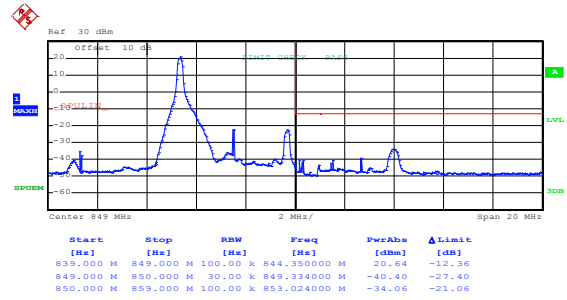
Highest channel

## LTE Band 5, BW: 5MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:34:54

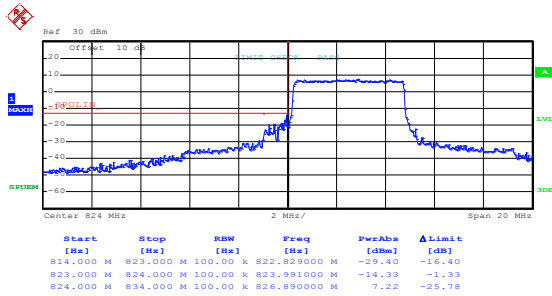
Lowest channel



Date: 19.AUG.2019 10:36:13

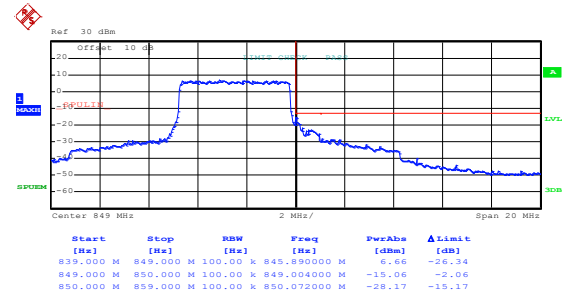
Highest channel

## QPSK & RB Size 25



Date: 19.AUG.2019 10:35:18

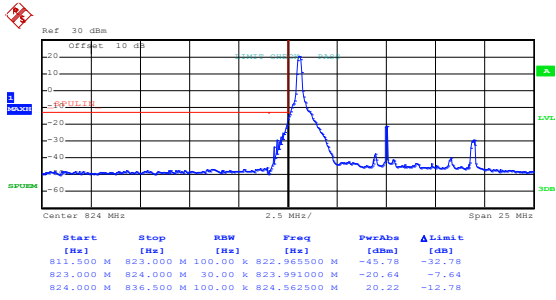
Lowest channel



Date: 19.AUG.2019 10:35:49

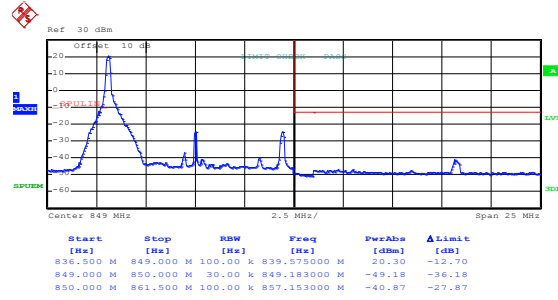
Highest channel

## LTE Band 5, BW: 10MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:40:04

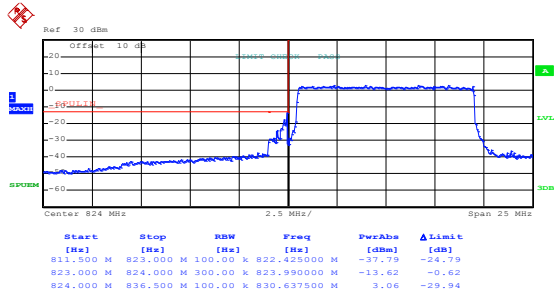
Lowest channel



Date: 19.AUG.2019 10:37:19

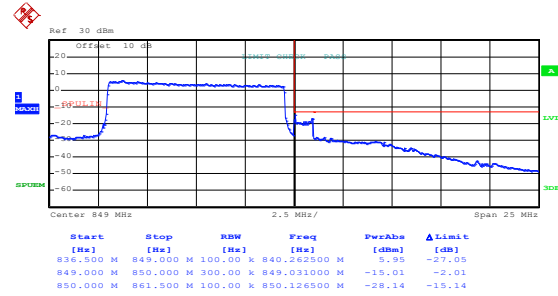
Highest channel

## 16QAM & RB Size 50



Date: 19.AUG.2019 10:39:33

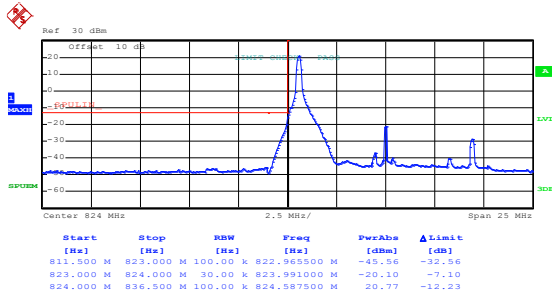
Lowest channel



Date: 14.OCT.2019 09:51:28

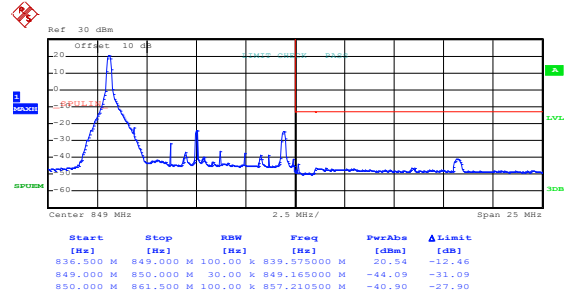
Highest channel

## LTE Band 5, BW: 10MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:39:58

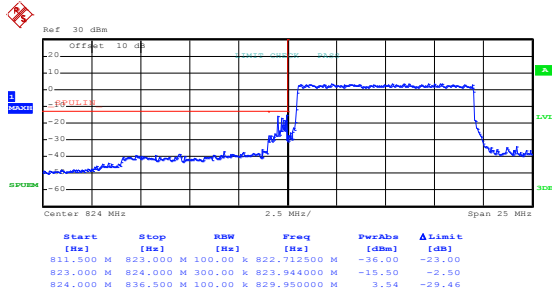
Lowest channel



Date: 19.AUG.2019 10:37:15

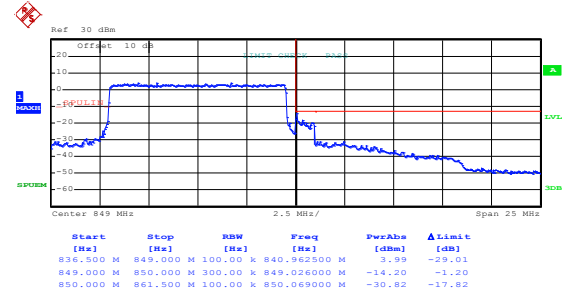
Highest channel

## QPSK & RB Size 50



Date: 19.AUG.2019 10:39:11

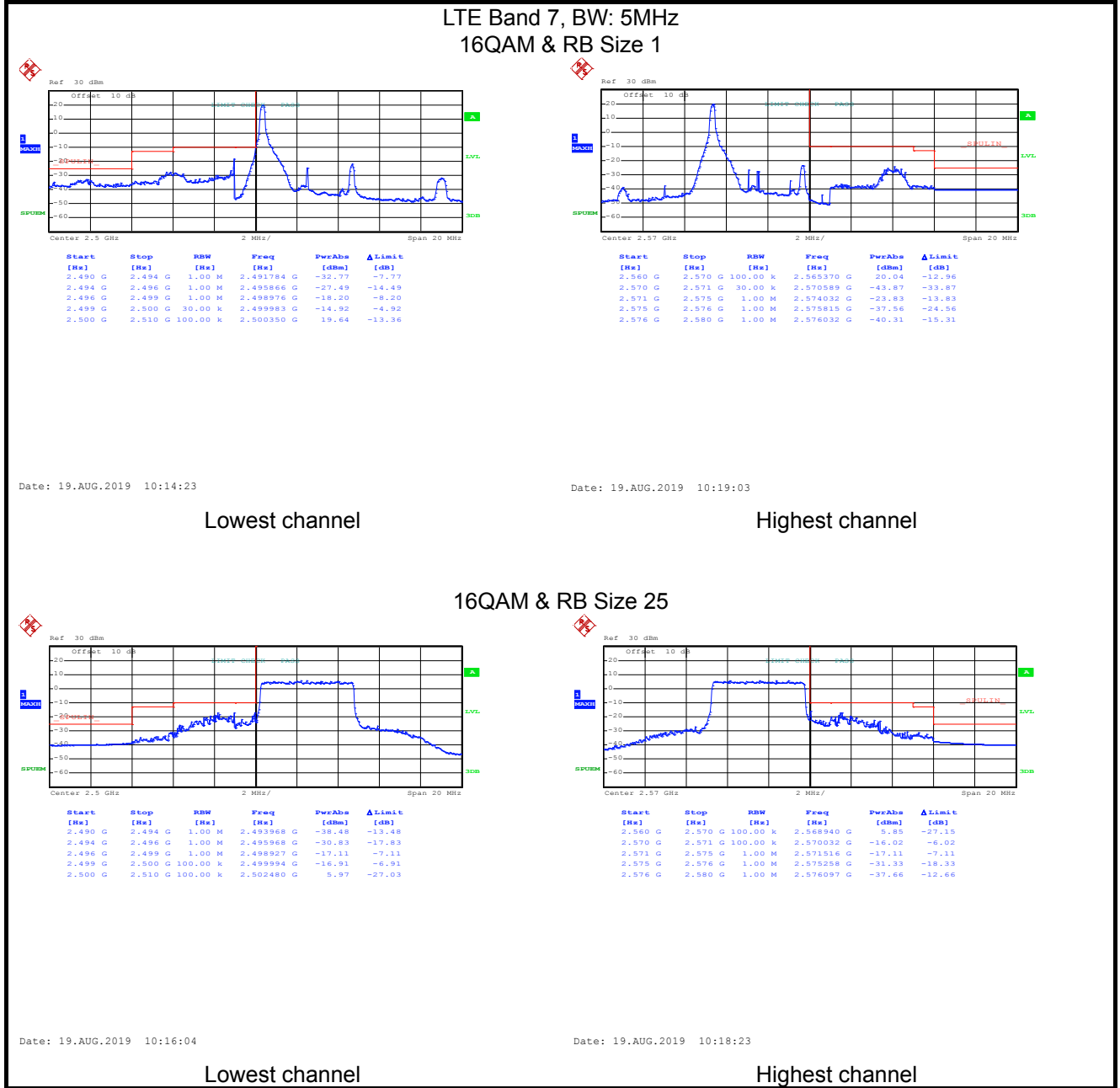
Lowest channel



Date: 19.AUG.2019 10:38:01

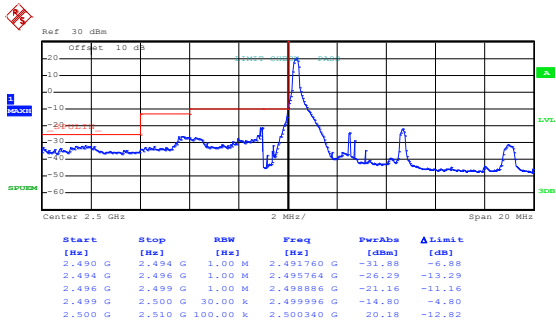
Highest channel

LTE Band 7 part:



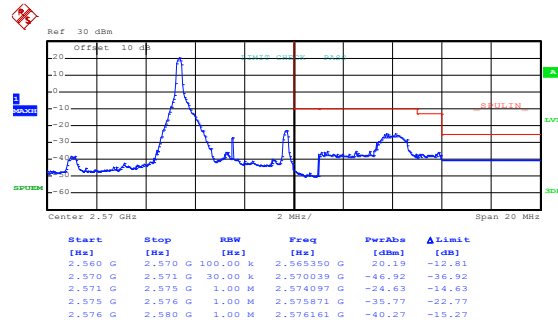


## LTE Band 7, BW: 5MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:14:09

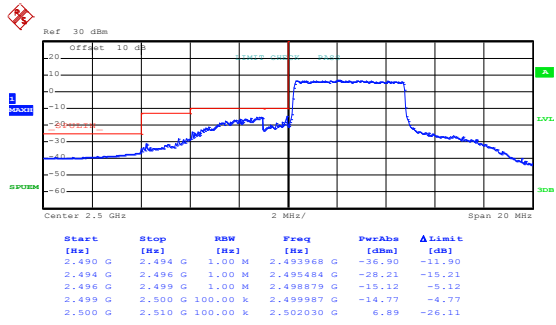
Lowest channel



Date: 19.AUG.2019 10:18:54

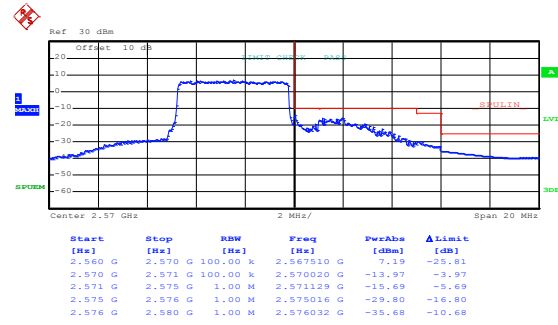
Highest channel

## QPSK & RB Size 25



Date: 19.AUG.2019 10:15:57

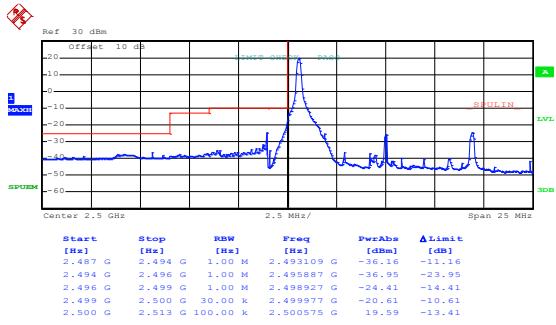
Lowest channel



Date: 19.AUG.2019 10:18:11

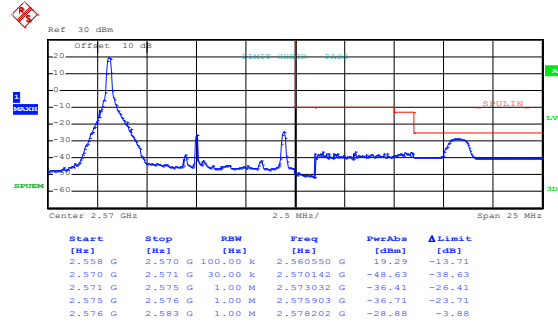
Highest channel

## LTE Band 7, BW: 10MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:23:08

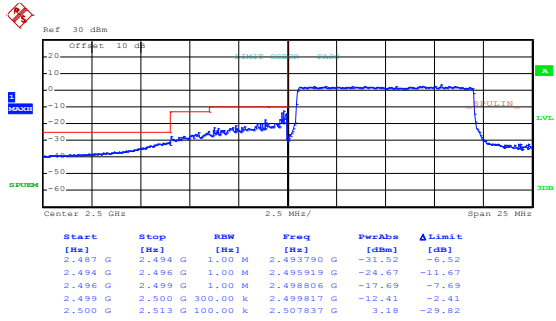
Lowest channel



Date: 19.AUG.2019 10:20:10

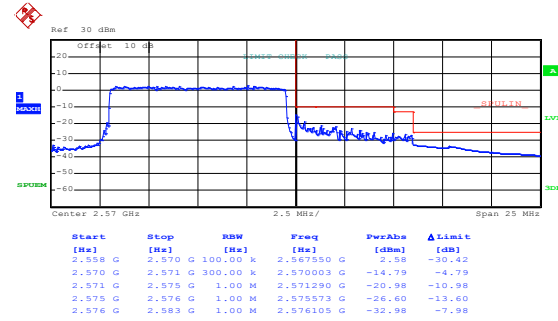
Highest channel

## 16QAM & RB Size 50



Date: 19.AUG.2019 10:22:33

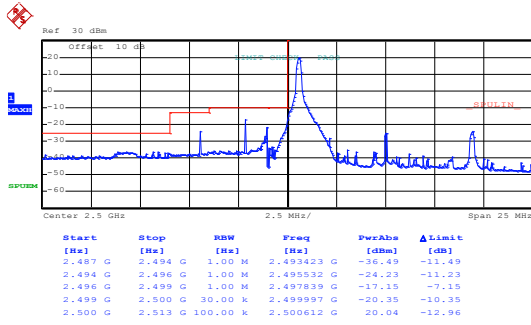
Lowest channel



Date: 19.AUG.2019 10:21:03

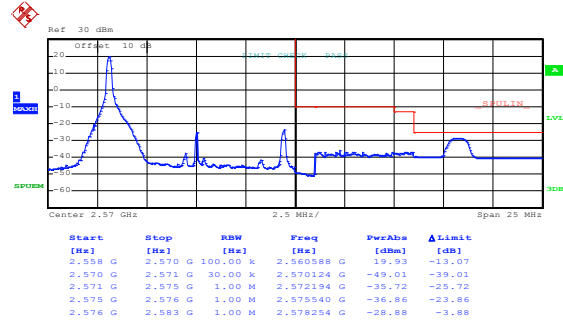
Highest channel

## LTE Band 7, BW: 10MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:23:00

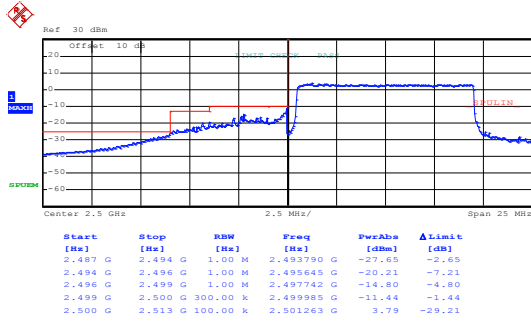
Lowest channel



Date: 19.AUG.2019 10:20:02

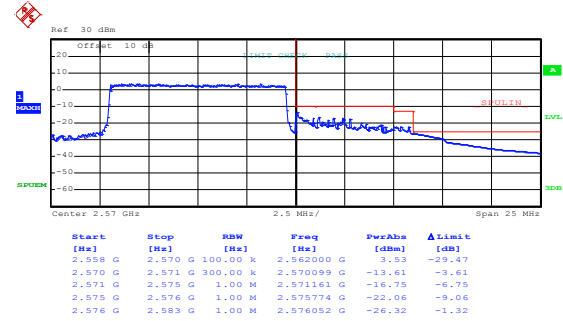
Highest channel

## QPSK & RB Size 50



Date: 19.AUG.2019 10:22:23

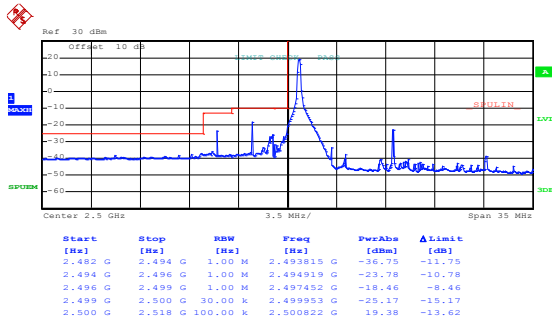
Lowest channel



Date: 19.AUG.2019 10:20:53

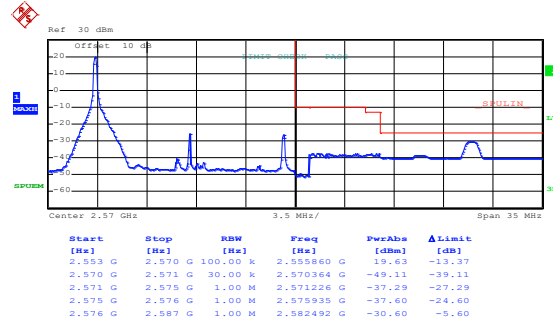
Highest channel

## LTE Band 7, BW: 15MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:24:21

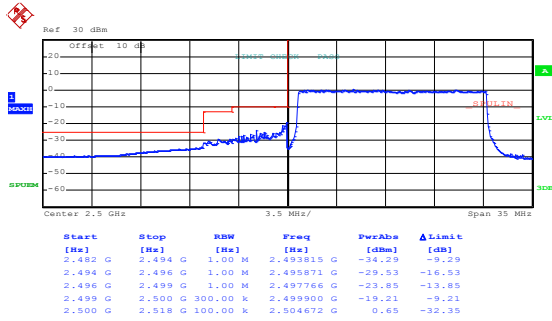
Lowest channel



Date: 19.AUG.2019 10:26:02

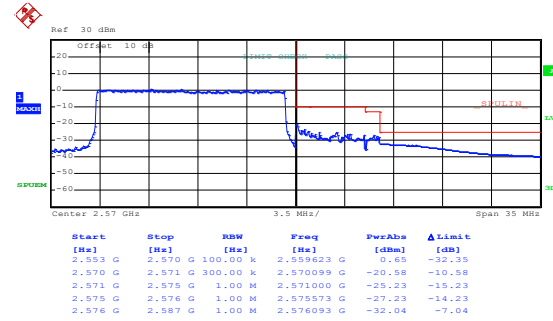
Highest channel

## 16QAM & RB Size 75



Date: 19.AUG.2019 10:24:51

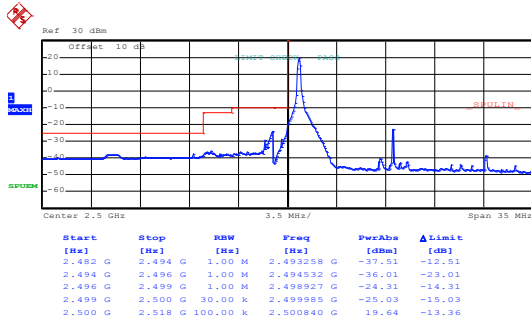
Lowest channel



Date: 19.AUG.2019 10:25:29

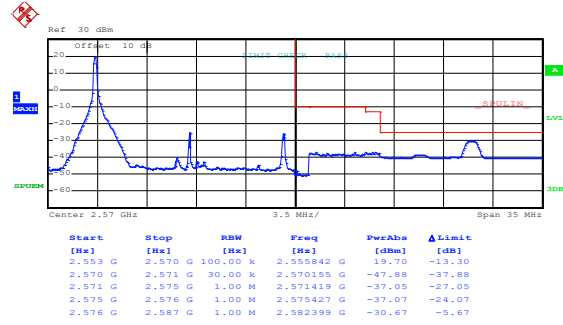
Highest channel

## LTE Band 7, BW: 15MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:24:13

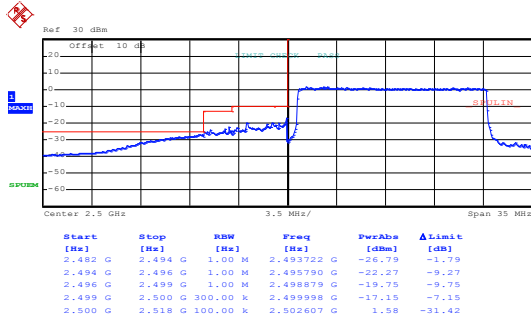
Lowest channel



Date: 19.AUG.2019 10:25:54

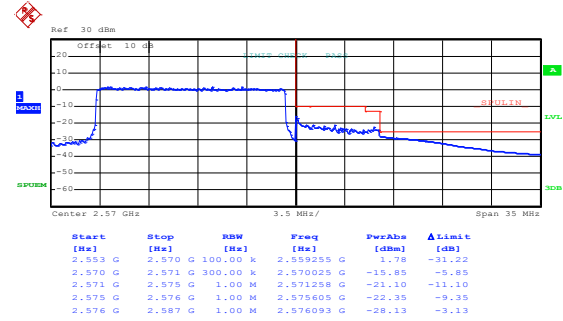
Highest channel

## QPSK & RB Size 75



Date: 19.AUG.2019 10:24:43

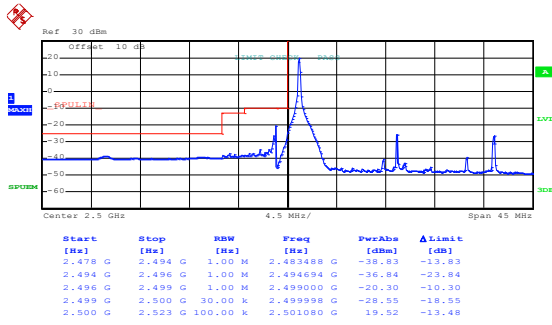
Lowest channel



Date: 19.AUG.2019 10:25:21

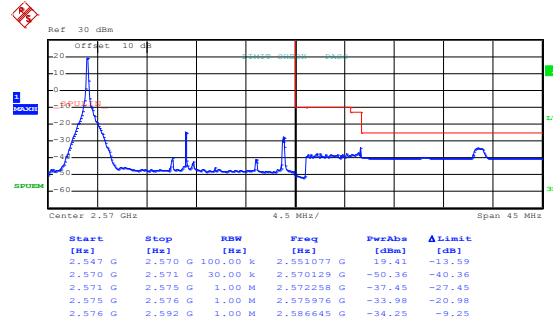
Highest channel

## LTE Band 7, BW: 20MHz 16QAM & RB Size 1



Date: 19.AUG.2019 10:28:36

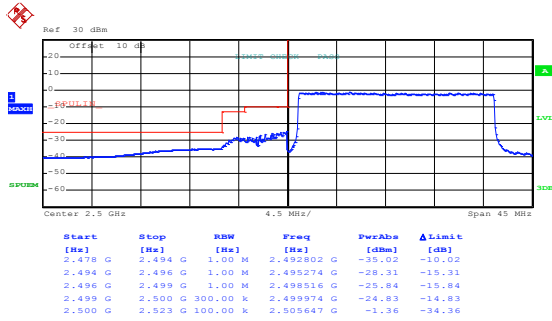
Lowest channel



Date: 19.AUG.2019 10:27:03

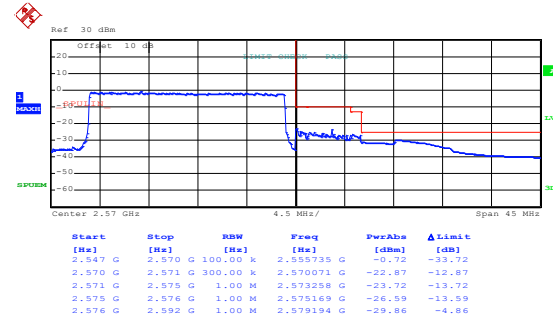
Highest channel

## 16QAM & RB Size 100



Date: 19.AUG.2019 10:28:13

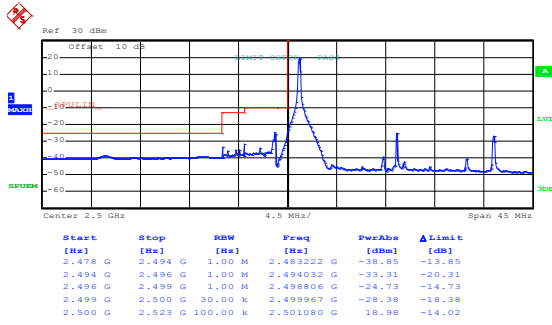
Lowest channel



Date: 19.AUG.2019 10:27:34

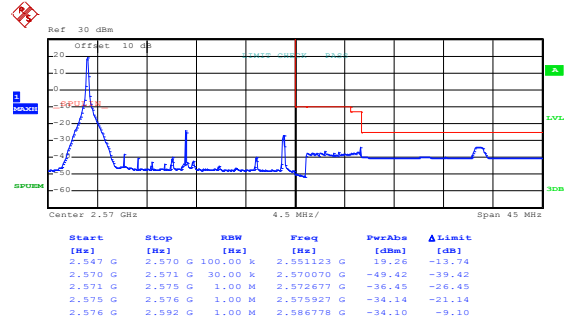
Highest channel

## LTE Band 7, BW: 20MHz QPSK & RB Size 1



Date: 19.AUG.2019 10:28:30

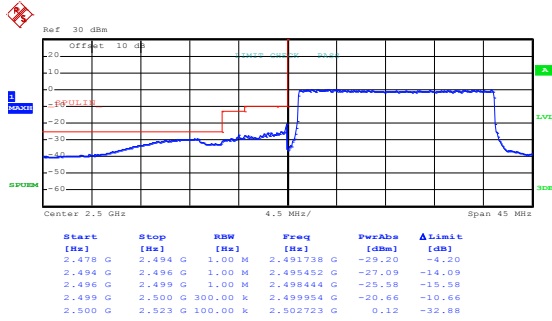
Lowest channel



Date: 19.AUG.2019 10:26:55

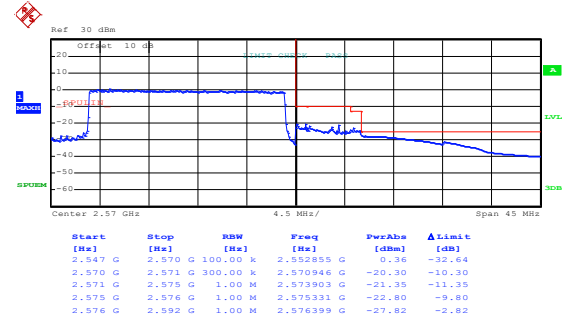
Highest channel

## QPSK & RB Size 100



Date: 19.AUG.2019 10:28:07

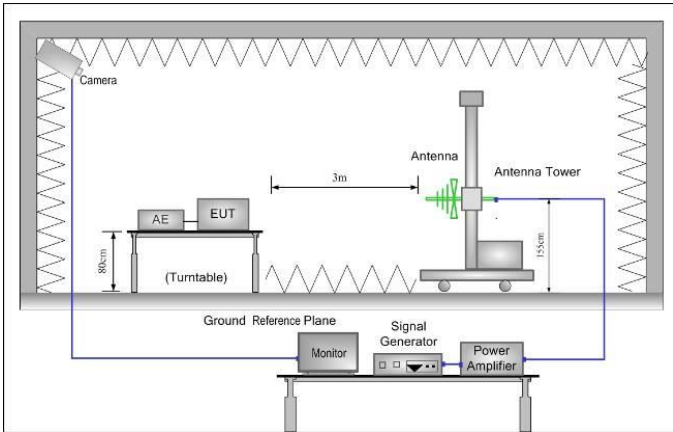
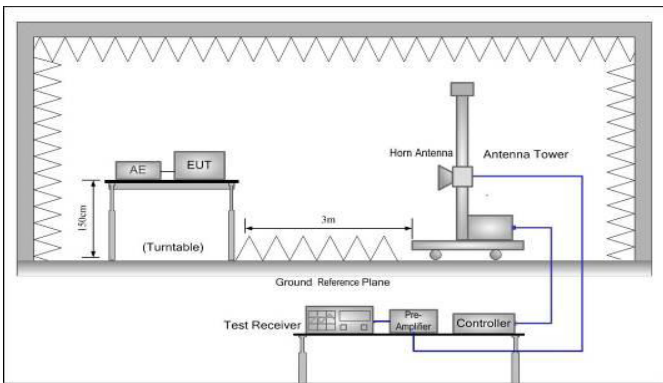
Lowest channel



Date: 19.AUG.2019 10:27:24

Highest channel

## 6.5 Field strength of spurious radiation measurement

|                          |   |
|--------------------------|---|
| <p>Test Requirement:</p> | <p>Part 22.917(b), Part 24.238 (a), Part 27.53(m), Part 27.53(h)</p>  |
| <p>Limit:</p>            | <p>LTE Band 2 &amp; 4 &amp; 5:<br/>         The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least <math>43 + 10 \log_{10}(P)</math> dB (-13 dBm).<br/>         LTE Band 7:<br/>         For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log (P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log (P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log (P)</math> dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that <math>43 + 10 \log (P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log (P)</math> dB at or below 2490.5 MHz.</p> |
| <p>Test setup:</p>       | <p>Below 1GHz</p>  <p>Above 1GHz</p>   |
| <p>Test Procedure:</p>   | <ol style="list-style-type: none"> <li>1. The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission</li> </ol>   |



|                   |  |
|-------------------|--|
|                   | <p>was determined using the substitution method.</p> <p>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.</p> $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$ |
| Test Instruments: | Refer to section 5.10 for details  |
| Test mode:        | Refer to section 5.3 for details.  |
| Test results:     | Passed   |

**Measurement Data:**

**LTE Band 2 part:**

| LTE Band 2, WB: 1.4MHz  |                   |             |             |        |
|---|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0   |                   |             |             |        |
| Frequency (MHz)   | Spurious Emission |             | Limit (dBm) | Result |
|   | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>   |                   |             |             |        |
| 3701.40   | Vertical          | -43.17      | -13.00      | Pass   |
| 5552.10   | V                 | -35.19      |             |        |
| 7402.00   | V                 | -38.56      |             |        |
| 3701.40   | Horizontal        | -45.10      |             |        |
| 5552.10   | H                 | -42.66      |             |        |
| 7402.00   | H                 | -38.46      |             |        |
| <b>Middle Channel</b>   |                   |             |             |        |
| 3760.00   | Vertical          | -43.37      | -13.00      | Pass   |
| 5640.00   | V                 | -35.56      |             |        |
| 7520.00   | V                 | -38.76      |             |        |
| 3760.00   | Horizontal        | -45.75      |             |        |
| 5640.00   | H                 | -42.64      |             |        |
| 7520.00   | H                 | -38.64      |             |        |
| <b>Highest Channel</b>  |                   |             |             |        |
| 3816.60   | Vertical          | -43.28      | -13.00      | Pass   |
| 5724.90   | V                 | -35.42      |             |        |
| 7633.20   | V                 | -38.04      |             |        |
| 3816.60   | Horizontal        | -45.38      |             |        |
| 5724.90   | H                 | -42.12      |             |        |
| 7633.20   | H                 | -38.74      |             |        |
| <p>Note:</p> <p>1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</p> <p>2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</p> |                   |             |             |        |

| LTE Band 2, WB: 20MHz   |                   |             |             |        |
|---|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0   |                   |             |             |        |
| Frequency (MHz)   | Spurious Emission |             | Limit (dBm) | Result |
|   | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>   |                   |             |             |        |
| 3720.00   | Vertical          | -43.11      | -13.00      | Pass   |
| 5580.00   | V                 | -35.17      |             |        |
| 7440.00   | V                 | -38.18      |             |        |
| 3720.00   | Horizontal        | -45.57      |             |        |
| 5580.00   | H                 | -42.56      |             |        |
| 7440.00   | H                 | -38.04      |             |        |
| <b>Middle Channel</b>   |                   |             |             |        |
| 3760.00   | Vertical          | -43.12      | -13.00      | Pass   |
| 5640.00   | V                 | -35.45      |             |        |
| 7520.00   | V                 | -38.59      |             |        |
| 3760.00   | Horizontal        | -45.52      |             |        |
| 5640.00   | H                 | -42.79      |             |        |
| 7520.00   | H                 | -38.46      |             |        |
| <b>Highest Channel</b>  |                   |             |             |        |
| 3800.00   | Vertical          | -43.45      | -13.00      | Pass   |
| 5700.00   | V                 | -35.19      |             |        |
| 7600.00   | V                 | -38.99      |             |        |
| 3800.00   | Horizontal        | -45.74      |             |        |
| 5700.00   | H                 | -42.25      |             |        |
| 7600.00   | H                 | -38.83      |             |        |
| <p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol> |                   |             |             |        |

**LTE Band 4 part:**

| LTE Band 4, WB: 1.4MHz  |                   |             |             |        |
|---|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0   |                   |             |             |        |
| Frequency (MHz)   | Spurious Emission |             | Limit (dBm) | Result |
|   | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>   |                   |             |             |        |
| 3421.40   | Vertical          | -47.24      | -13.00      | Pass   |
| 5132.10   | V                 | -44.17      |             |        |
| 6842.80   | V                 | -37.09      |             |        |
| 3421.40   | Horizontal        | -47.25      |             |        |
| 5132.10   | H                 | -45.39      |             |        |
| 6842.80   | H                 | -39.68      |             |        |
| <b>Middle Channel</b>   |                   |             |             |        |
| 3465.00   | Vertical          | -47.45      | -13.00      | Pass   |
| 5197.50   | V                 | -44.26      |             |        |
| 6930.00   | V                 | -37.91      |             |        |
| 3465.00   | Horizontal        | -47.94      |             |        |
| 5197.50   | H                 | -45.12      |             |        |
| 6930.00   | H                 | -39.94      |             |        |
| <b>Highest Channel</b>  |                   |             |             |        |
| 3508.60   | Vertical          | -47.05      | -13.00      | Pass   |
| 5262.90   | V                 | -44.39      |             |        |
| 7017.20   | V                 | -37.26      |             |        |
| 3508.60   | Horizontal        | -47.74      |             |        |
| 5262.90   | H                 | -45.41      |             |        |
| 7017.20   | H                 | -39.26      |             |        |
| <p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol> |                   |             |             |        |

| LTE Band 4, WB: 20MHz   |                   |             |             |        |
|---|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0   |                   |             |             |        |
| Frequency (MHz)   | Spurious Emission |             | Limit (dBm) | Result |
|   | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>   |                   |             |             |        |
| 3440.00   | Vertical          | -47.29      | -13.00      | Pass   |
| 5160.00   | V                 | -44.69      |             |        |
| 6880.00   | V                 | -37.05      |             |        |
| 3440.00   | Horizontal        | -47.71      |             |        |
| 5160.00   | H                 | -45.74      |             |        |
| 6880.00   | H                 | -39.68      |             |        |
| <b>Middle Channel</b>   |                   |             |             |        |
| 3465.00   | Vertical          | -47.26      | -13.00      | Pass   |
| 5197.50   | V                 | -44.69      |             |        |
| 6930.00   | V                 | -37.05      |             |        |
| 3465.00   | Horizontal        | -47.11      |             |        |
| 5197.50   | H                 | -45.91      |             |        |
| 6930.00   | H                 | -39.77      |             |        |
| <b>Highest Channel</b>  |                   |             |             |        |
| 3490.00   | Vertical          | -47.04      | -13.00      | Pass   |
| 5235.00   | V                 | -44.43      |             |        |
| 6980.00   | V                 | -47.99      |             |        |
| 3490.00   | Horizontal        | -47.11      |             |        |
| 5235.00   | H                 | -45.05      |             |        |
| 6980.00   | H                 | -39.58      |             |        |
| <p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol> |                   |             |             |        |

**LTE Band 5 part:**

| LTE Band 5, WB: 1.4MHz  |                   |             |             |        |
|---|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0   |                   |             |             |        |
| Frequency (MHz)   | Spurious Emission |             | Limit (dBm) | Result |
|   | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>   |                   |             |             |        |
| 1649.40   | Vertical          | -56.51      | -13.00      | Pass   |
| 2474.10   | V                 | -54.10      |             |        |
| 3298.80   | V                 | -47.78      |             |        |
| 1649.40   | Horizontal        | -57.12      |             |        |
| 2474.10   | H                 | -53.78      |             |        |
| 3298.80   | H                 | -49.51      |             |        |
| <b>Middle Channel</b>   |                   |             |             |        |
| 1673.00   | Vertical          | -56.16      | -13.00      | Pass   |
| 2509.50   | V                 | -54.25      |             |        |
| 3346.00   | V                 | -47.33      |             |        |
| 1673.00   | Horizontal        | -57.72      |             |        |
| 2509.50   | H                 | -53.43      |             |        |
| 3346.00   | H                 | -49.95      |             |        |
| <b>Highest Channel</b>  |                   |             |             |        |
| 1696.60   | Vertical          | -56.46      | -13.00      | Pass   |
| 2544.90   | V                 | -54.45      |             |        |
| 3393.20   | V                 | -47.81      |             |        |
| 1696.60   | Horizontal        | -57.41      |             |        |
| 2544.90   | H                 | -53.27      |             |        |
| 3393.20   | H                 | -49.69      |             |        |
| <p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol> |                   |             |             |        |

| LTE Band 5, WB: 10MHz   |                   |             |             |        |
|---|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0   |                   |             |             |        |
| Frequency (MHz)   | Spurious Emission |             | Limit (dBm) | Result |
|   | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>   |                   |             |             |        |
| 1658.00   | Vertical          | -56.57      | -13.00      | Pass   |
| 2487.00   | V                 | -54.13      |             |        |
| 3316.00   | V                 | -47.52      |             |        |
| 1658.00   | Horizontal        | -57.56      |             |        |
| 2487.00   | H                 | -53.58      |             |        |
| 3316.00   | H                 | -49.15      |             |        |
| <b>Middle Channel</b>   |                   |             |             |        |
| 1673.00   | Vertical          | -56.55      | -13.00      | Pass   |
| 2509.50   | V                 | -54.24      |             |        |
| 3346.00   | V                 | -47.15      |             |        |
| 1673.00   | Horizontal        | -57.16      |             |        |
| 2509.50   | H                 | -53.37      |             |        |
| 3346.00   | H                 | -49.04      |             |        |
| <b>Highest Channel</b>  |                   |             |             |        |
| 1688.00   | Vertical          | -56.37      | -13.00      | Pass   |
| 2532.00   | V                 | -54.27      |             |        |
| 3376.00   | V                 | -47.55      |             |        |
| 1688.00   | Horizontal        | -57.81      |             |        |
| 2532.00   | H                 | -53.15      |             |        |
| 3376.00   | H                 | -49.82      |             |        |
| <p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol> |                   |             |             |        |

**LTE Band 7 part:**

| LTE Band 7, WB: 5MHz   |                   |             |             |        |
|--|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0  |                   |             |             |        |
| Frequency (MHz)  | Spurious Emission |             | Limit (dBm) | Result |
|  | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>  |                   |             |             |        |
| 5005.00  | Vertical          | -34.67      | -25.00      | Pass   |
| 7507.50  | V                 | -32.62      |             |        |
| 10010.00   | V                 | -33.25      |             |        |
| 5005.00  | Horizontal        | -34.81      |             |        |
| 7507.50  | H                 | -33.17      |             |        |
| 10010.00   | H                 | -34.15      |             |        |
| <b>Middle Channel</b>  |                   |             |             |        |
| 5070.00  | Vertical          | -34.56      | -25.00      | Pass   |
| 7605.00  | V                 | -32.59      |             |        |
| 10140.00   | V                 | -33.86      |             |        |
| 5070.00  | Horizontal        | -34.45      |             |        |
| 7605.00  | H                 | -33.59      |             |        |
| 10140.00   | H                 | -34.76      |             |        |
| <b>Highest Channel</b>   |                   |             |             |        |
| 5135.00  | Vertical          | -34.41      | -25.00      | Pass   |
| 7702.50  | V                 | -32.68      |             |        |
| 10270.00   | V                 | -33.62      |             |        |
| 5135.00  | Horizontal        | -34.93      |             |        |
| 7702.50  | H                 | -33.67      |             |        |
| 10270.00   | H                 | -34.25      |             |        |
| <p>Note:</p> <ol style="list-style-type: none"> <li>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</li> <li>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</li> </ol> |                   |             |             |        |

| LTE Band 7, WB: 20MHz   |                   |             |             |        |
|---|-------------------|-------------|-------------|--------|
| RB size 1 & RB offset 0   |                   |             |             |        |
| Frequency (MHz)   | Spurious Emission |             | Limit (dBm) | Result |
|   | Polarization      | Level (dBm) |             |        |
| <b>Lowest Channel</b>   |                   |             |             |        |
| 5020.00   | Vertical          | -34.53      | -25.00      | Pass   |
| 7530.00   | V                 | -32.93      |             |        |
| 10040.00  | V                 | -33.68      |             |        |
| 5020.00   | Horizontal        | -34.60      |             |        |
| 7530.00   | H                 | -33.91      |             |        |
| 10040.00  | H                 | -34.68      |             |        |
| <b>Middle Channel</b>   |                   |             |             |        |
| 5070.00   | Vertical          | -34.65      | -25.00      | Pass   |
| 7605.00   | V                 | -32.24      |             |        |
| 10140.00  | V                 | -33.63      |             |        |
| 5070.00   | Horizontal        | -34.91      |             |        |
| 7605.00   | H                 | -33.68      |             |        |
| 10140.00  | H                 | -34.59      |             |        |
| <b>Highest Channel</b>  |                   |             |             |        |
| 5120.00   | Vertical          | -34.32      | -25.00      | Pass   |
| 7680.00   | V                 | -32.98      |             |        |
| 10240.00  | V                 | -33.24      |             |        |
| 5120.00   | Horizontal        | -34.64      |             |        |
| 7680.00   | H                 | -33.04      |             |        |
| 10240.00  | H                 | -34.68      |             |        |
| <p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol> |                   |             |             |        |



## 6.6 Frequency stability V.S. Temperature measurement

|                   |   |
|-------------------|---|
| Test Requirement: | Part 22.355, Part 24.235, Part 27.54, Part 2.1055(a)(1)(b)  |
| Limit:            | ±2.5ppm   |
| Test setup:       |   |
| Test procedure:   | <ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol> |
| Test Instruments: | Refer to section 5.10 for details   |
| Test mode:        | Refer to section 5.3 for details  |
| Test results:     | Passed  |

**Measurement Data (worst case):**

**LTE Band 2 part:**

| Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 channel=1880.00MHz |                  |                 |          |             |        |
|---|------------------|-----------------|----------|-------------|--------|
| Power supplied (Vdc)  | Temperature (°C) | Frequency error |          | Limit (ppm) | Result |
|   |                  | Hz              | ppm      |             |        |
| <b>QPSK</b>   |                  |                 |          |             |        |
| 3.70  | -30              | 196             | 0.104255 | ±2.5        | Pass   |
|   | -20              | 155             | 0.082447 |             |        |
|   | -10              | 167             | 0.088830 |             |        |
|   | 0                | 123             | 0.065426 |             |        |
|   | 10               | 188             | 0.100000 |             |        |
|   | 20               | 174             | 0.092553 |             |        |
|   | 30               | 114             | 0.060638 |             |        |
|   | 40               | 137             | 0.072872 |             |        |
|   | 50               | 160             | 0.085106 |             |        |
| <b>16QAM</b>  |                  |                 |          |             |        |
| 3.70  | -30              | 166             | 0.088298 | ±2.5        | Pass   |
|   | -20              | 158             | 0.084043 |             |        |
|   | -10              | 150             | 0.079787 |             |        |
|   | 0                | 146             | 0.077660 |             |        |
|   | 10               | 135             | 0.071809 |             |        |
|   | 20               | 129             | 0.068617 |             |        |
|   | 30               | 120             | 0.063830 |             |        |
|   | 40               | 111             | 0.059043 |             |        |
|   | 50               | 140             | 0.074468 |             |        |
| <i>Note: Only the worst case shown in the report.</i>                           |                  |                 |          |             |        |

**LTE Band 4 part:**

| Reference Frequency: LTE Band 4 (10MHz) Middle channel=20175 channel=1732.50MHz |                  |                 |          |             |        |
|---|------------------|-----------------|----------|-------------|--------|
| Power supplied (Vdc)  | Temperature (°C) | Frequency error |          | Limit (ppm) | Result |
|   |                  | Hz              | ppm      |             |        |
| <b>QPSK</b>   |                  |                 |          |             |        |
| 3.70  | -30              | 197             | 0.113709 | ±2.5        | Pass   |
|   | -20              | 180             | 0.103896 |             |        |
|   | -10              | 172             | 0.099278 |             |        |
|   | 0                | 168             | 0.096970 |             |        |
|   | 10               | 157             | 0.090620 |             |        |
|   | 20               | 151             | 0.087157 |             |        |
|   | 30               | 142             | 0.081962 |             |        |
|   | 40               | 127             | 0.073304 |             |        |
|   | 50               | 160             | 0.092352 |             |        |
| <b>16QAM</b>  |                  |                 |          |             |        |
| 3.70  | -30              | 168             | 0.096970 | ±2.5        | Pass   |
|   | -20              | 150             | 0.086580 |             |        |
|   | -10              | 146             | 0.084271 |             |        |
|   | 0                | 132             | 0.076190 |             |        |
|   | 10               | 128             | 0.073882 |             |        |
|   | 20               | 121             | 0.069841 |             |        |
|   | 30               | 114             | 0.065801 |             |        |
|   | 40               | 108             | 0.062338 |             |        |
|   | 50               | 140             | 0.080808 |             |        |

*Note: Only the worst case shown in the report.*

**LTE Band 5 part:**

| Reference Frequency: LTE Band 5 (10MHz) Middle channel=20525 channel=836.50MHz |                  |                 |          |             |        |
|--|------------------|-----------------|----------|-------------|--------|
| Power supplied (Vdc)   | Temperature (°C) | Frequency error |          | Limit (ppm) | Result |
|  |                  | Hz              | ppm      |             |        |
| <b>QPSK</b>  |                  |                 |          |             |        |
| 3.70   | -30              | 187             | 0.223551 | ±2.5        | Pass   |
|  | -20              | 155             | 0.185296 |             |        |
|  | -10              | 163             | 0.194860 |             |        |
|  | 0                | 123             | 0.147041 |             |        |
|  | 10               | 143             | 0.170950 |             |        |
|  | 20               | 174             | 0.208010 |             |        |
|  | 30               | 114             | 0.136282 |             |        |
|  | 40               | 105             | 0.125523 |             |        |
|  | 50               | 150             | 0.179319 |             |        |
| <b>16QAM</b>   |                  |                 |          |             |        |
| 3.70   | -30              | 166             | 0.198446 | ±2.5        | Pass   |
|  | -20              | 150             | 0.179319 |             |        |
|  | -10              | 157             | 0.187687 |             |        |
|  | 0                | 149             | 0.178123 |             |        |
|  | 10               | 136             | 0.162582 |             |        |
|  | 20               | 128             | 0.153019 |             |        |
|  | 30               | 121             | 0.144650 |             |        |
|  | 40               | 117             | 0.139868 |             |        |
|  | 50               | 140             | 0.167364 |             |        |

*Note: Only the worst case shown in the report.*

**LTE Band 7 part:**

| Reference Frequency: LTE Band 7 (10MHz) Middle channel=21100 Frequency=2535.00MHz |                  |                 |          |             |        |
|---|------------------|-----------------|----------|-------------|--------|
| Power supplied (Vdc)  | Temperature (°C) | Frequency error |          | Limit (ppm) | Result |
|   |                  | Hz              | ppm      |             |        |
| <b>QPSK</b>   |                  |                 |          |             |        |
| 3.70  | -30              | 193             | 0.076134 | ±2.5        | Pass   |
|   | -20              | 155             | 0.061144 |             |        |
|   | -10              | 163             | 0.064300 |             |        |
|   | 0                | 123             | 0.048521 |             |        |
|   | 10               | 186             | 0.073373 |             |        |
|   | 20               | 174             | 0.068639 |             |        |
|   | 30               | 114             | 0.044970 |             |        |
|   | 40               | 105             | 0.041420 |             |        |
|   | 50               | 150             | 0.059172 |             |        |
| <b>16QAM</b>  |                  |                 |          |             |        |
| 3.70  | -30              | 167             | 0.065878 | ±2.5        | Pass   |
|   | -20              | 159             | 0.062722 |             |        |
|   | -10              | 143             | 0.056410 |             |        |
|   | 0                | 137             | 0.054043 |             |        |
|   | 10               | 126             | 0.049704 |             |        |
|   | 20               | 114             | 0.044970 |             |        |
|   | 30               | 106             | 0.041815 |             |        |
|   | 40               | 120             | 0.047337 |             |        |
|   | 50               | 150             | 0.059172 |             |        |

*Note: Only the worst case shown in the report.*

## 6.7 Frequency stability V.S. Voltage measurement

|                   |  |
|-------------------|--|
| Test Requirement: | Part 22.355, Part 24.235, Part 27.54, Part 2.1055(d)(2)  |
| Limit:            | ±2.5ppm  |
| Test setup:       | <p>The diagram illustrates the test setup. A Power Source is connected to a Divider. The Divider is connected to a Spectrum Analyzer (SA) and an Environmental Under Test (EUT) inside a Temperature &amp; Humidity Chamber. A Signal Source (SS) is also connected to the Divider.</p>  |
| Test procedure:   | <ol style="list-style-type: none"> <li>1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol> |
| Test Instruments: | Refer to section 5.10 for details  |
| Test mode:        | Refer to section 5.3 for details   |
| Test results:     | Passed   |

**Measurement Data (worst case):**

**LTE Band 2 part:**

| Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz |                      |                 |          |             |        |
|--|----------------------|-----------------|----------|-------------|--------|
| Temperature (°C)   | Power supplied (Vdc) | Frequency error |          | Limit (ppm) | Result |
|  |                      | Hz              | ppm      |             |        |
| QPSK   |                      |                 |          |             |        |
| 25   | 4.20                 | 88              | 0.046809 | ±2.5        | Pass   |
|  | 3.70                 | 65              | 0.034574 |             |        |
|  | 3.50                 | 74              | 0.039362 |             |        |
| 16QAM  |                      |                 |          |             |        |
| 25   | 4.20                 | 80              | 0.042553 | ±2.5        | Pass   |
|  | 3.70                 | 62              | 0.032979 |             |        |
|  | 3.50                 | 48              | 0.025532 |             |        |

*Note: Only the worst case shown in the report.*

**LTE Band 4 part:**

| Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz |                      |                 |          |             |        |
|--|----------------------|-----------------|----------|-------------|--------|
| Temperature (°C)   | Power supplied (Vdc) | Frequency error |          | Limit (ppm) | Result |
|  |                      | Hz              | ppm      |             |        |
| QPSK   |                      |                 |          |             |        |
| 25   | 4.20                 | 95              | 0.054834 | ±2.5        | Pass   |
|  | 3.70                 | 65              | 0.037518 |             |        |
|  | 3.50                 | 74              | 0.042713 |             |        |
| 16QAM  |                      |                 |          |             |        |
| 25   | 4.20                 | 80              | 0.046176 | ±2.5        | Pass   |
|  | 3.70                 | 53              | 0.030592 |             |        |
|  | 3.50                 | 48              | 0.027706 |             |        |

*Note: Only the worst case shown in the report.*

**LTE Band 5 part:**

| Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 channel=836.50MHz |                      |                 |          |             |        |
|---|----------------------|-----------------|----------|-------------|--------|
| Temperature (°C)  | Power supplied (Vdc) | Frequency error |          | Limit (ppm) | Result |
|   |                      | Hz              | ppm      |             |        |
| QPSK  |                      |                 |          |             |        |
| 25  | 4.20                 | 90              | 0.107591 | ±2.5        | Pass   |
|   | 3.70                 | 86              | 0.102809 |             |        |
|   | 3.50                 | 74              | 0.088464 |             |        |
| 16QAM   |                      |                 |          |             |        |
| 25  | 4.20                 | 89              | 0.106396 | ±2.5        | Pass   |
|   | 3.70                 | 66              | 0.078900 |             |        |
|   | 3.50                 | 48              | 0.057382 |             |        |

*Note: Only the worst case shown in the report.*

**LTE Band 7 part:**

| Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 channel=2535.0MHz |                      |                 |          |             |        |
|---|----------------------|-----------------|----------|-------------|--------|
| Temperature (°C)  | Power supplied (Vdc) | Frequency error |          | Limit (ppm) | Result |
|   |                      | Hz              | ppm      |             |        |
| QPSK  |                      |                 |          |             |        |
| 25  | 4.20                 | 92              | 0.036292 | ±2.5        | Pass   |
|   | 3.70                 | 81              | 0.031953 |             |        |
|   | 3.50                 | 76              | 0.029980 |             |        |
| 16QAM   |                      |                 |          |             |        |
| 25  | 4.20                 | 87              | 0.034320 | ±2.5        | Pass   |
|   | 3.70                 | 61              | 0.024063 |             |        |
|   | 3.50                 | 52              | 0.020513 |             |        |
| <i>Note: Only the worst case shown in the report.</i>                         |                      |                 |          |             |        |