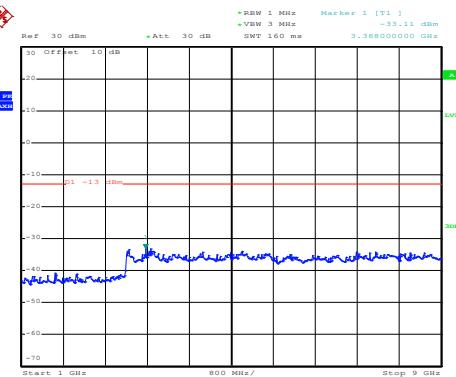
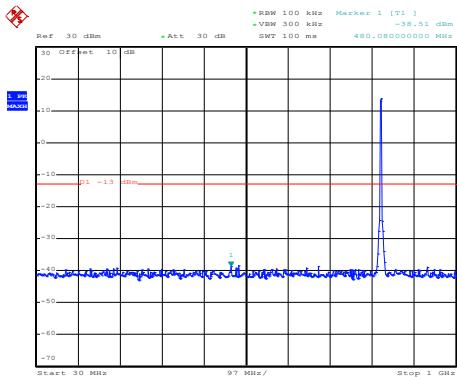


LTE Band 5: 16 QAM & RB Size 25

BW: 5MHz

Lowest channel



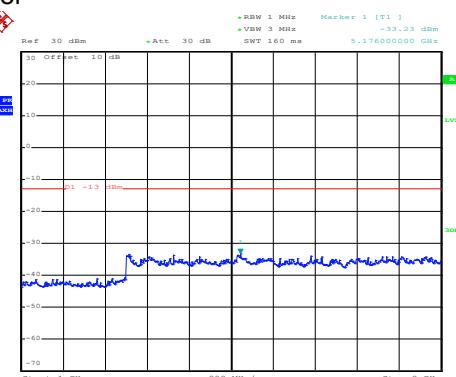
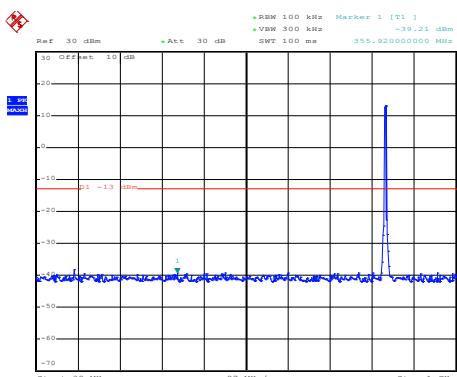
Date: 19.AUG.2019 15:25:31

30MHz~1GHz

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

1GHz~9GHz

Middle channel



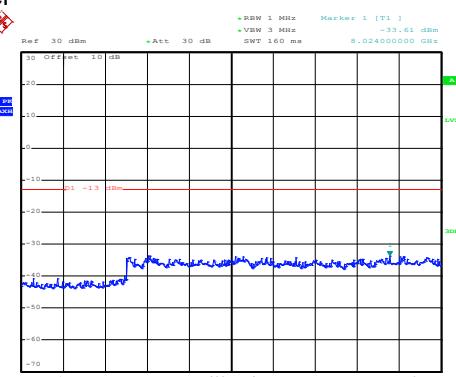
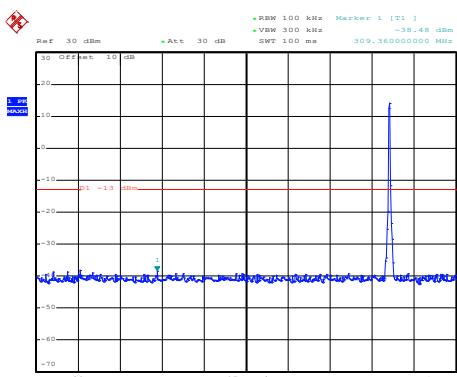
Date: 19.AUG.2019 15:26:11

30MHz~1GHz

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

1GHz~9GHz

High channel

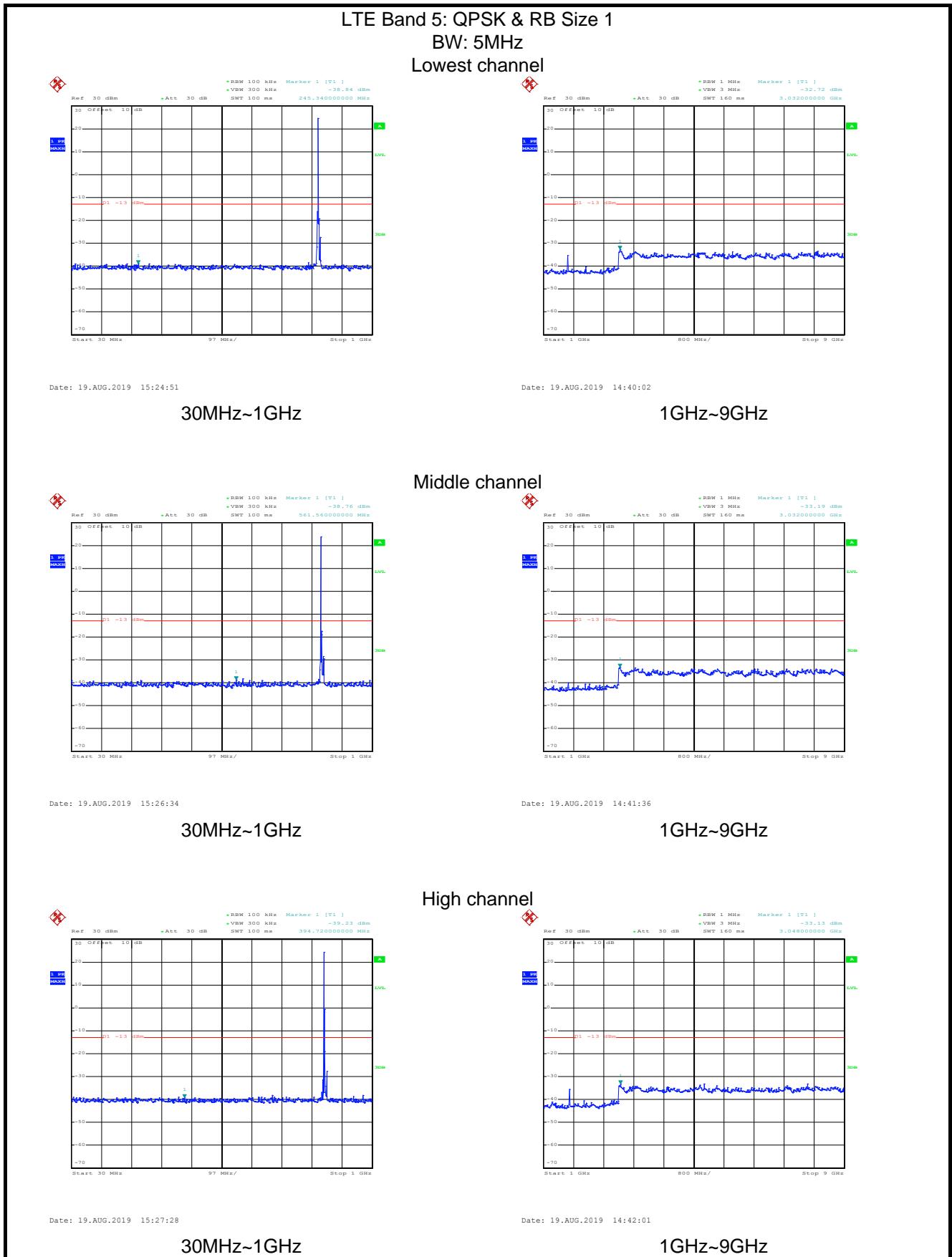


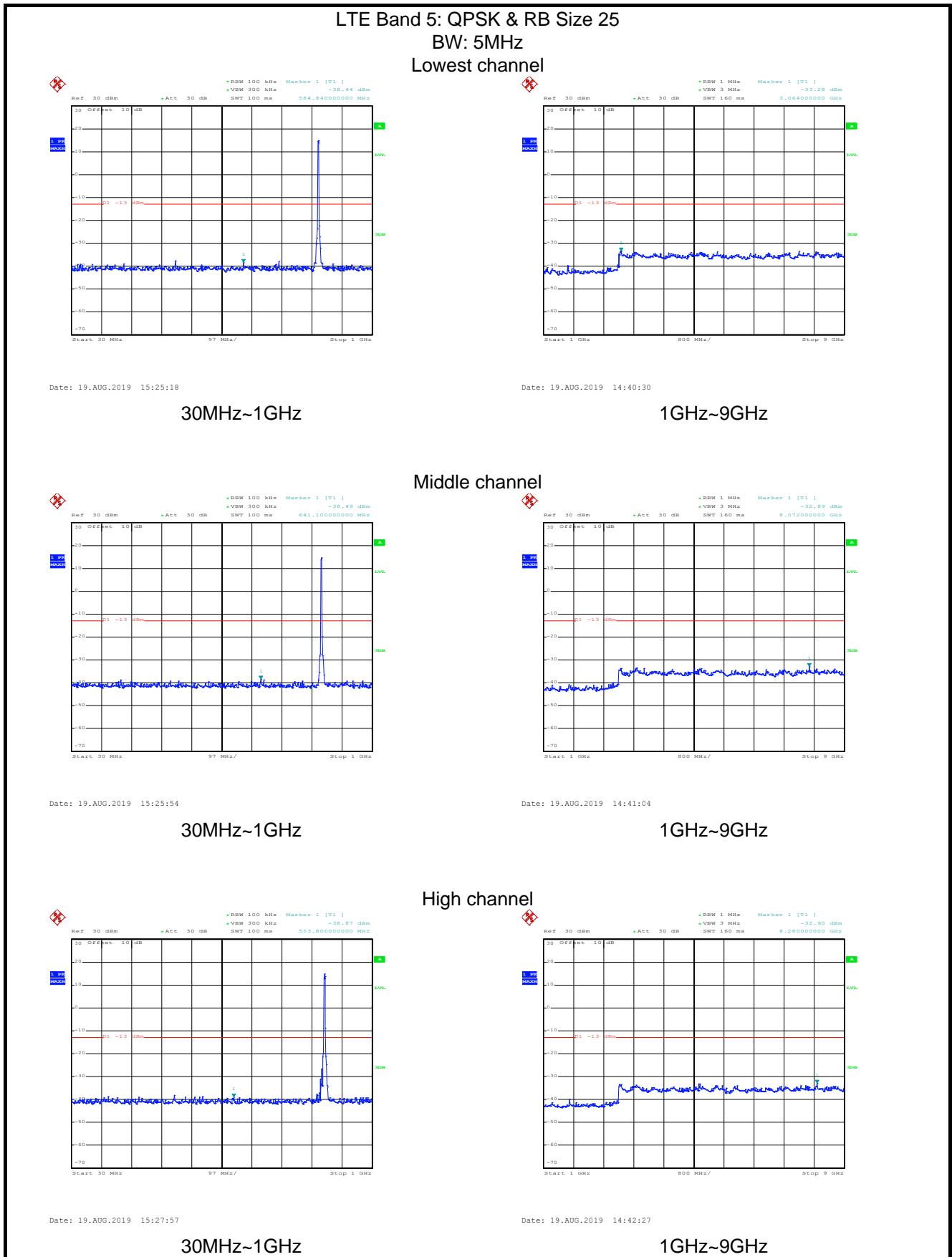
Date: 19.AUG.2019 15:28:15

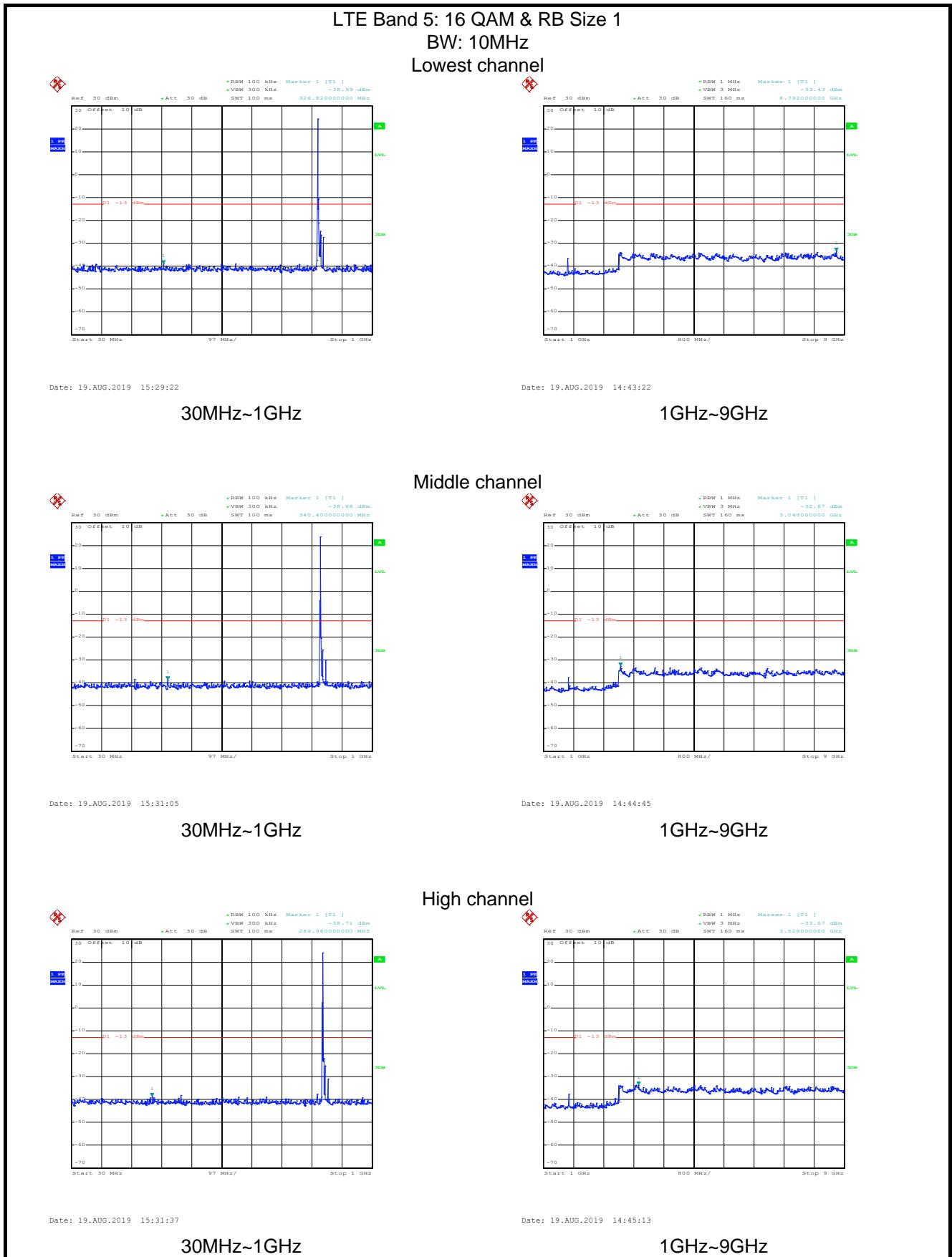
30MHz~1GHz

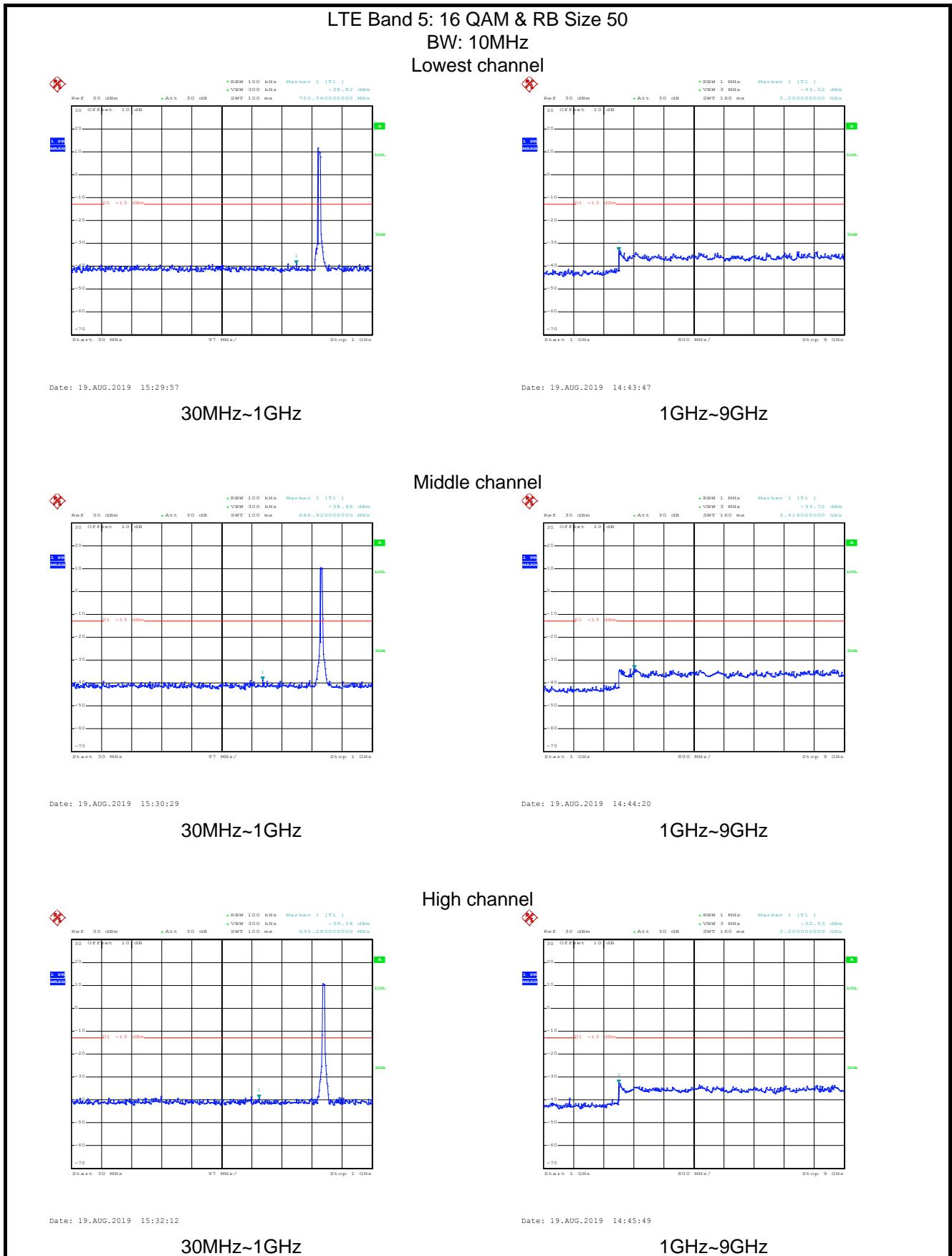
Date: 19.AUG.2019 14:42:38

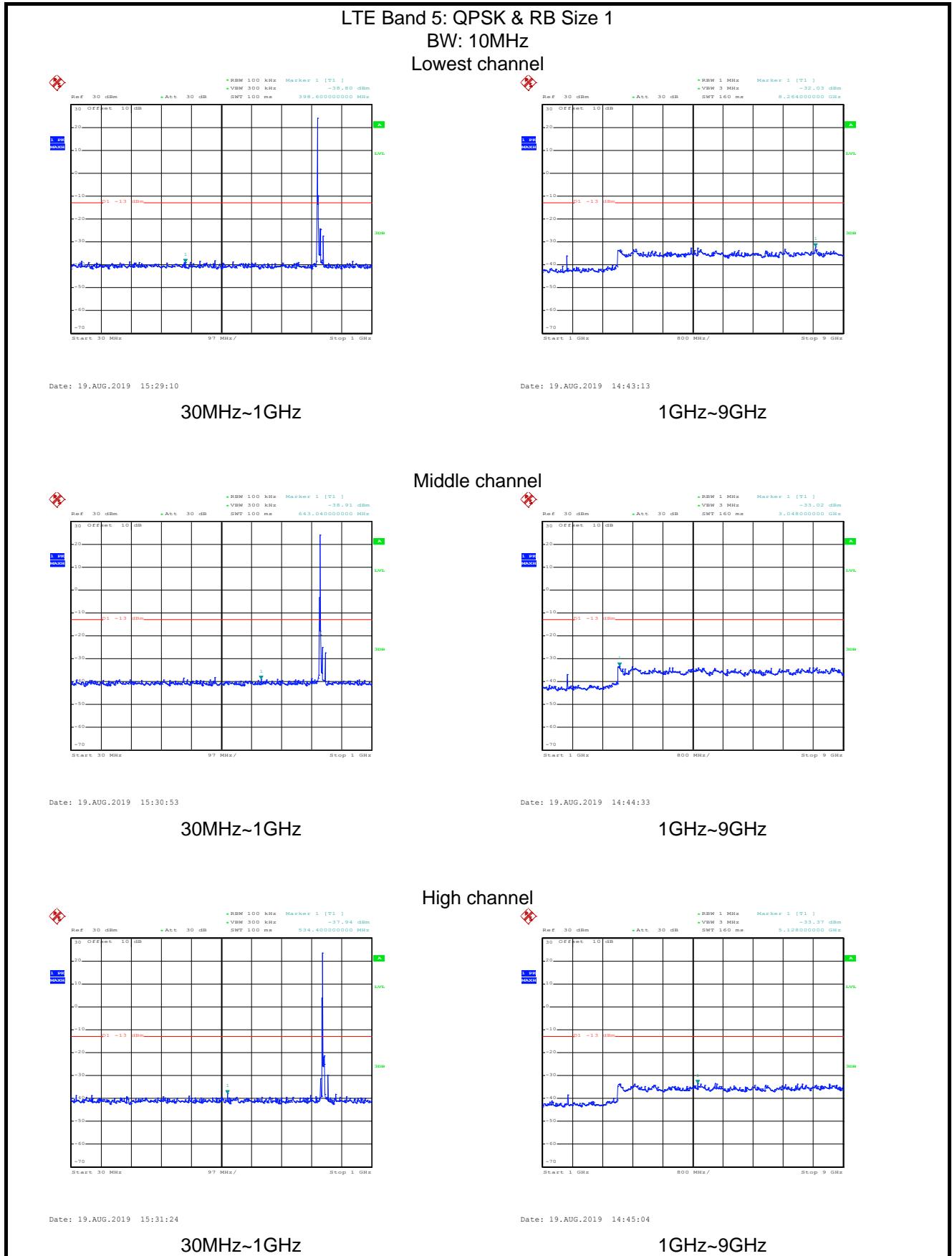
1GHz~9GHz

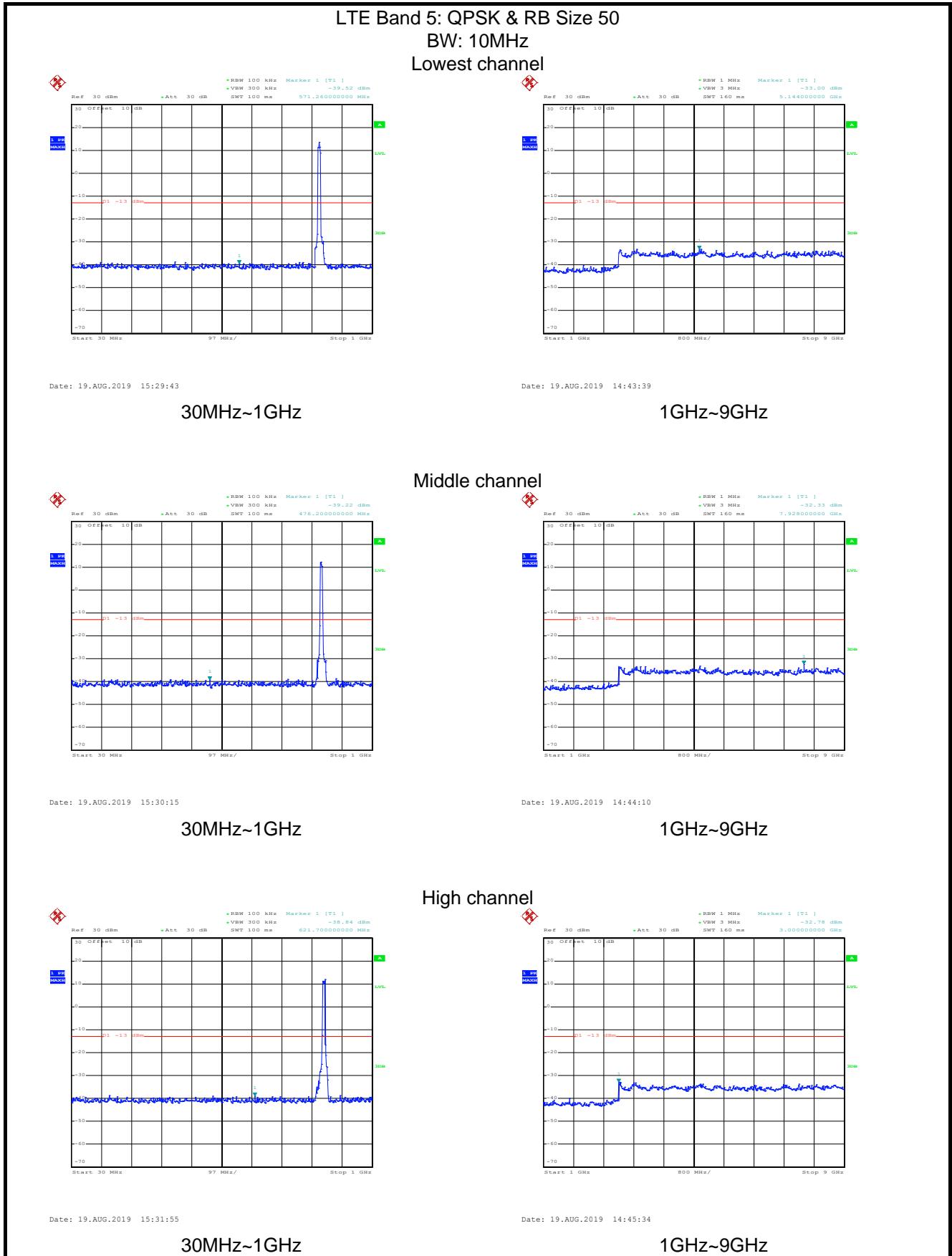




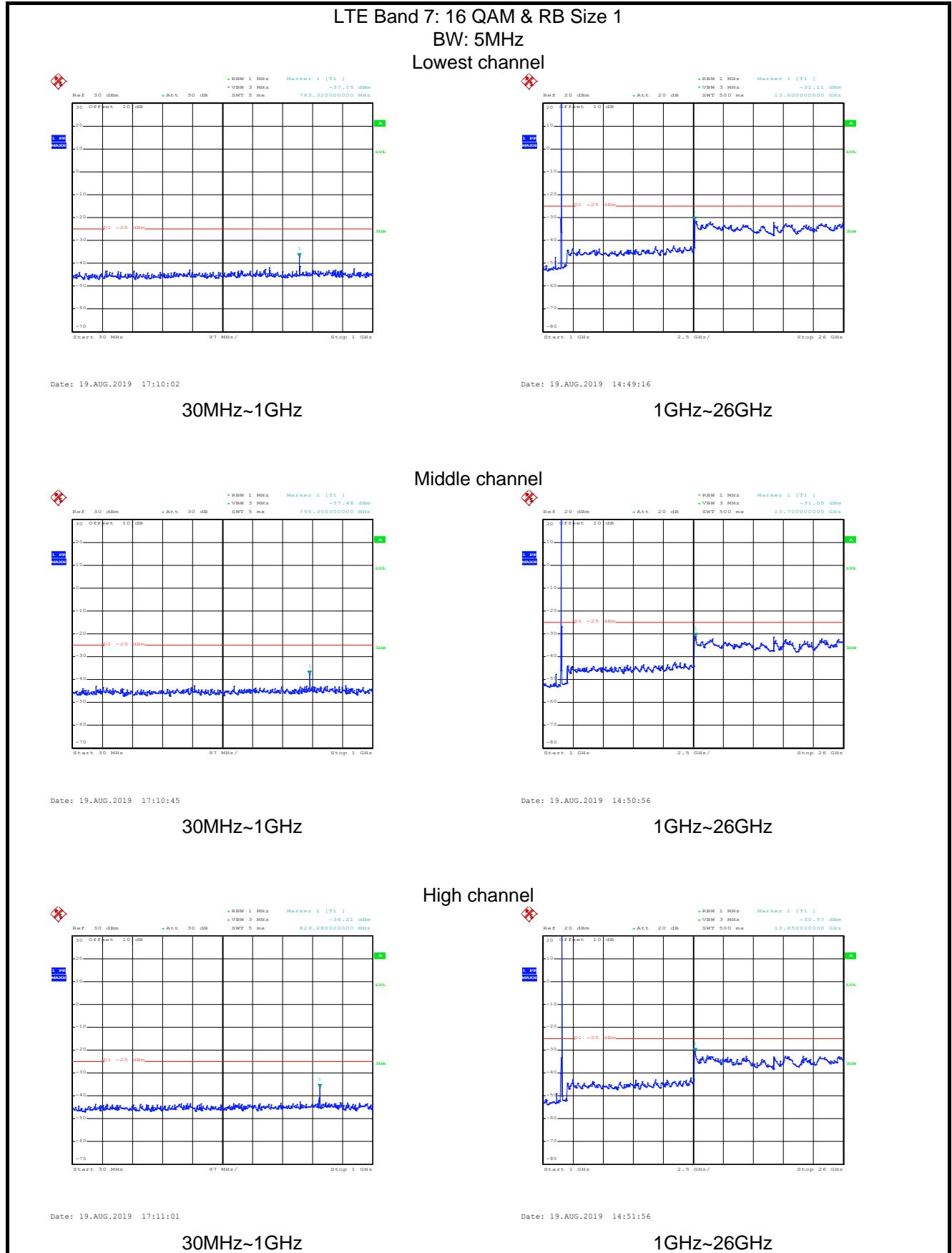


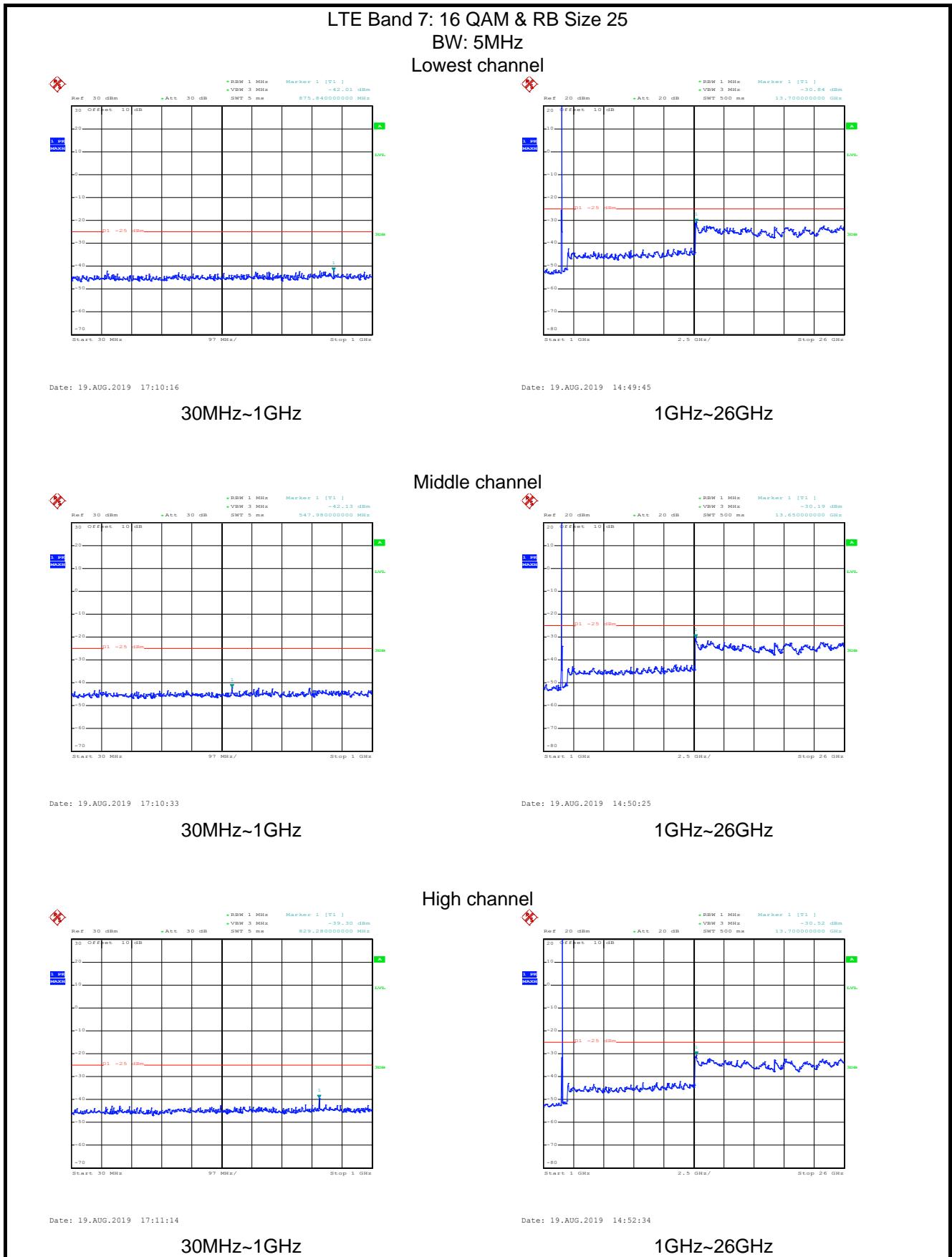


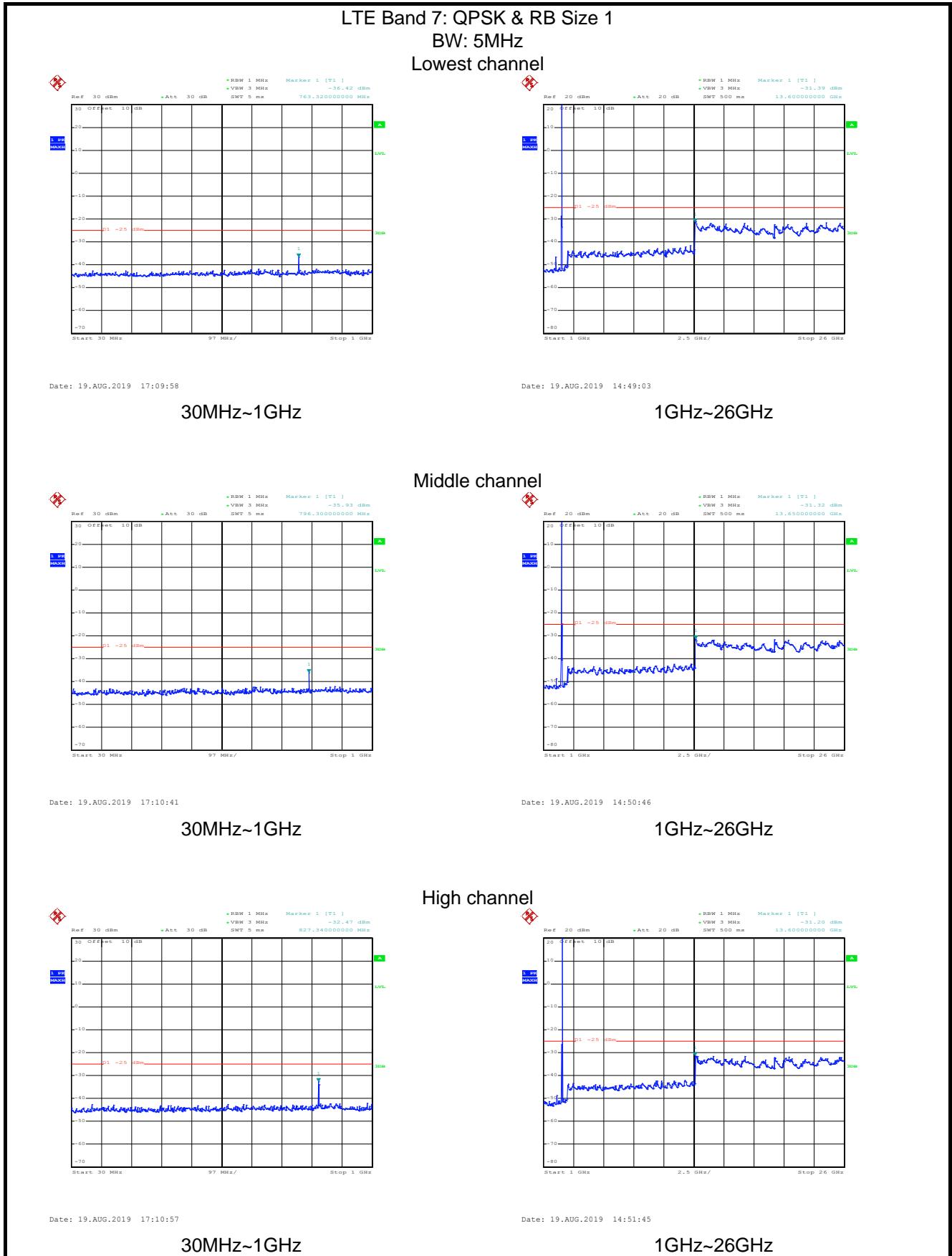


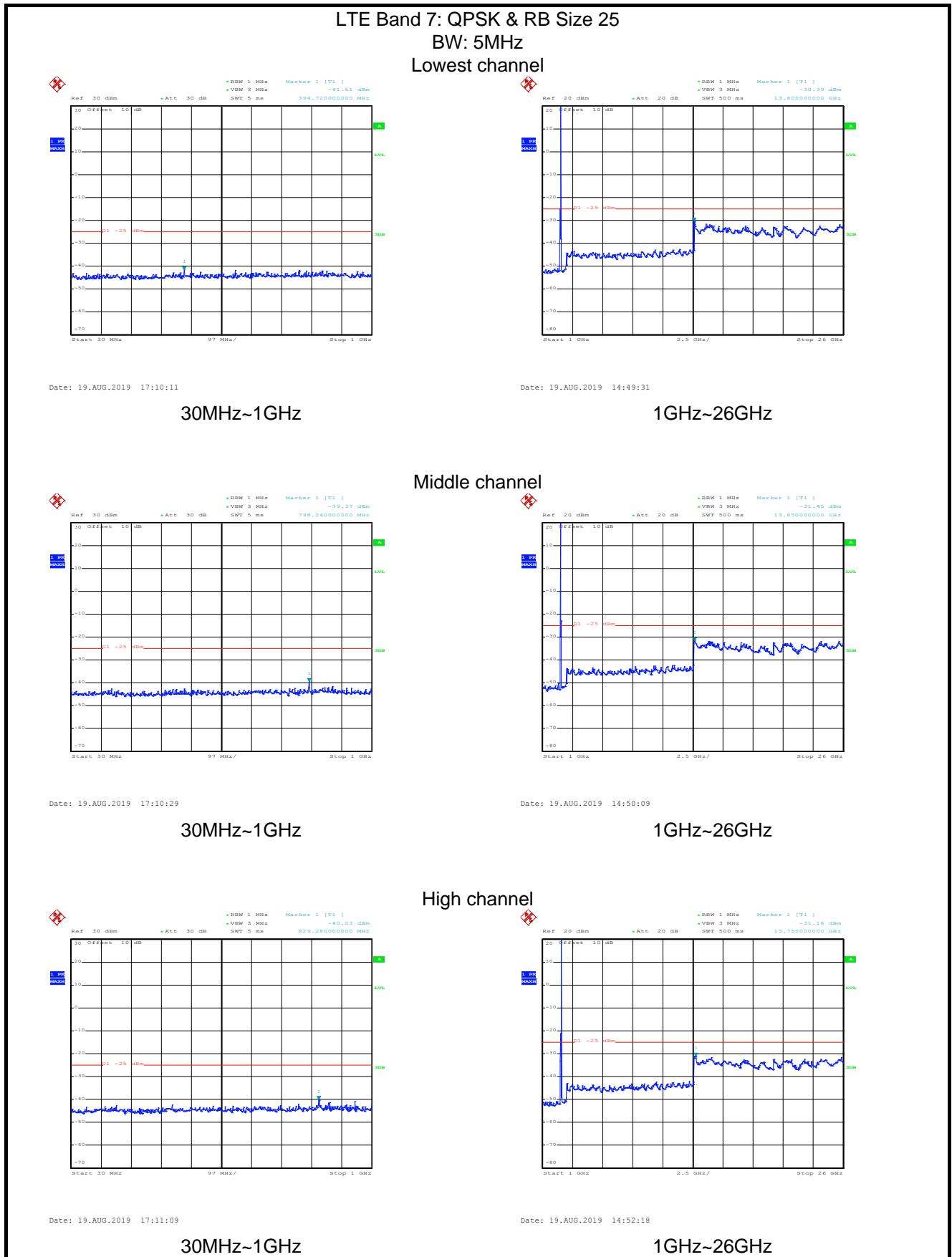


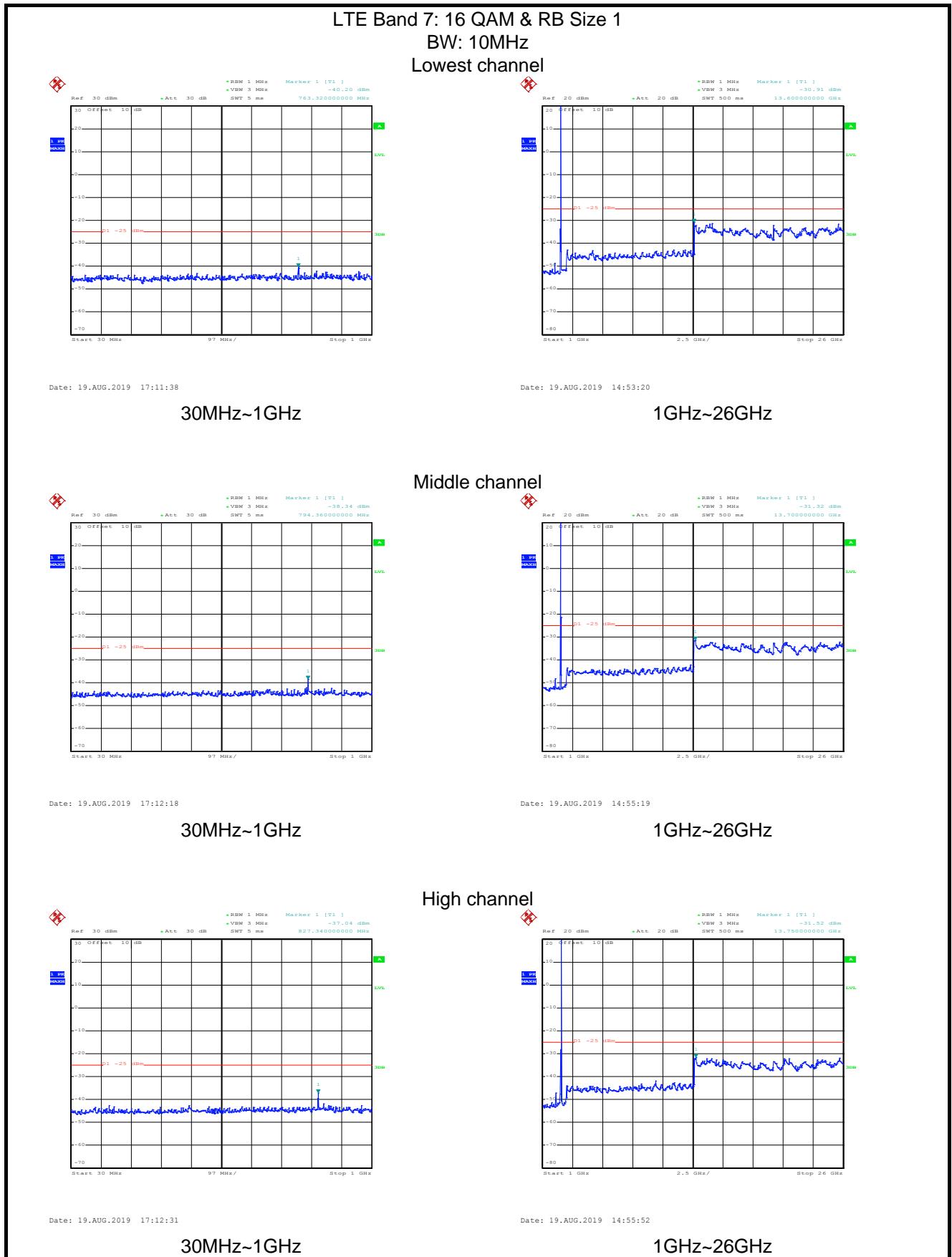
LTE Band 7 part:

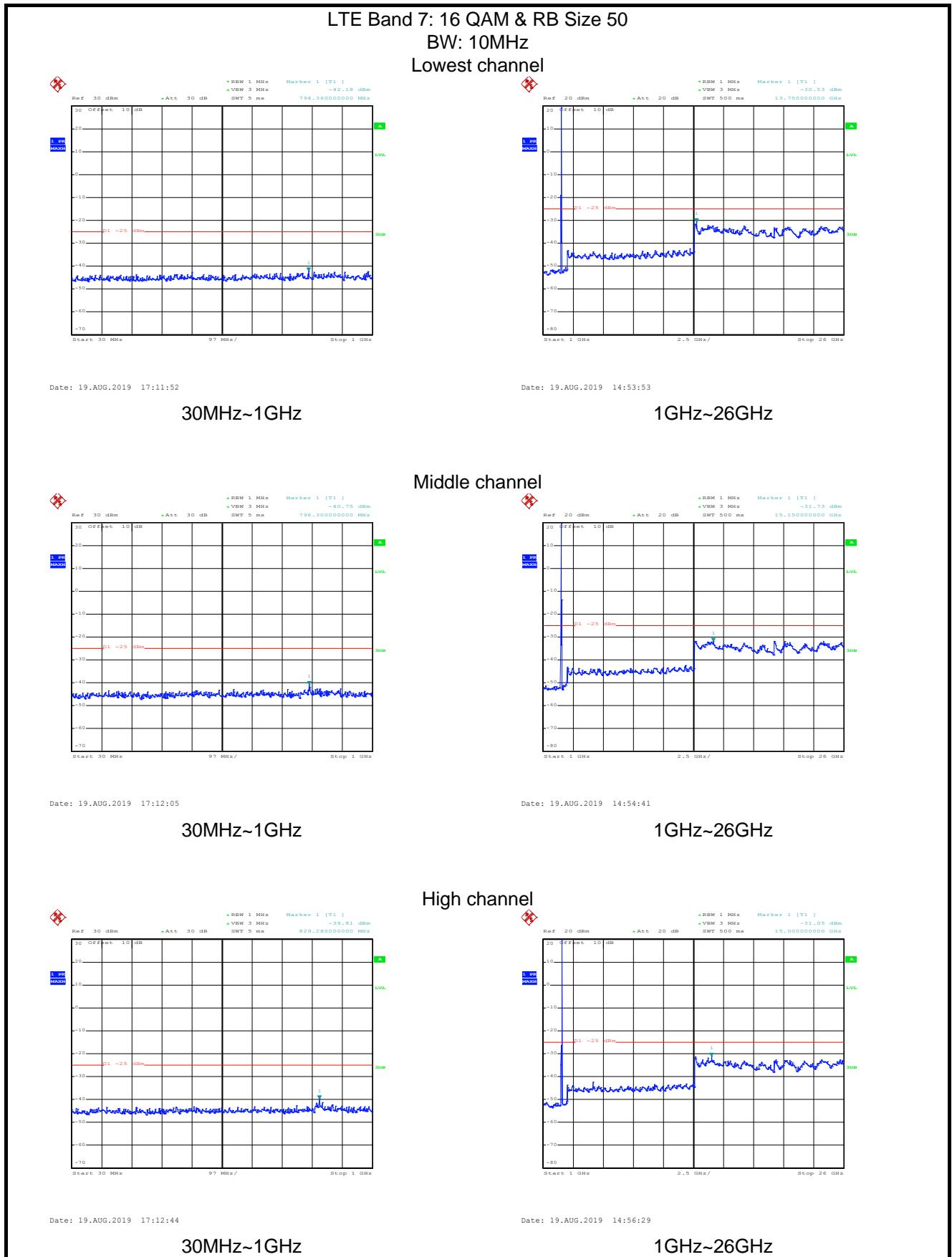


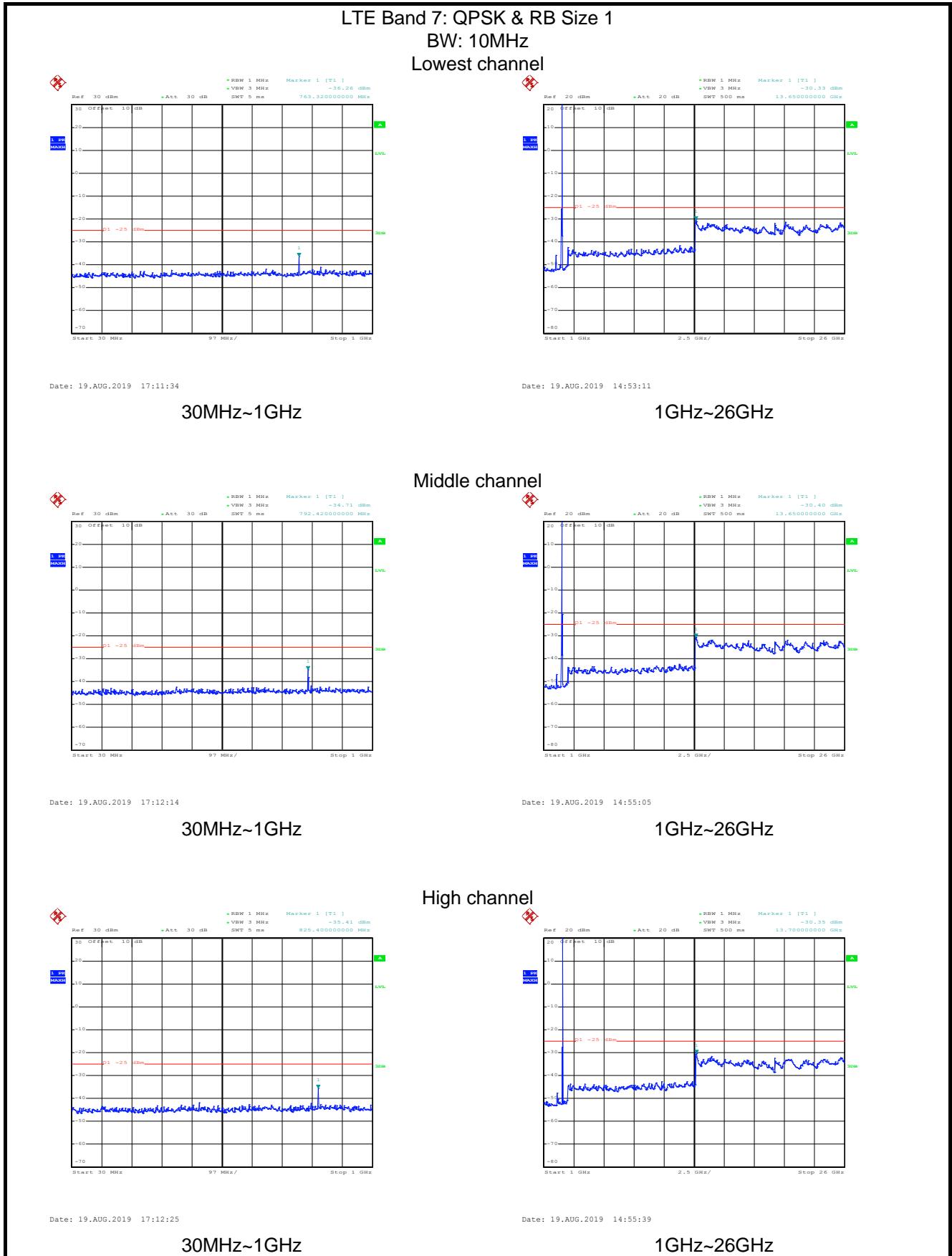


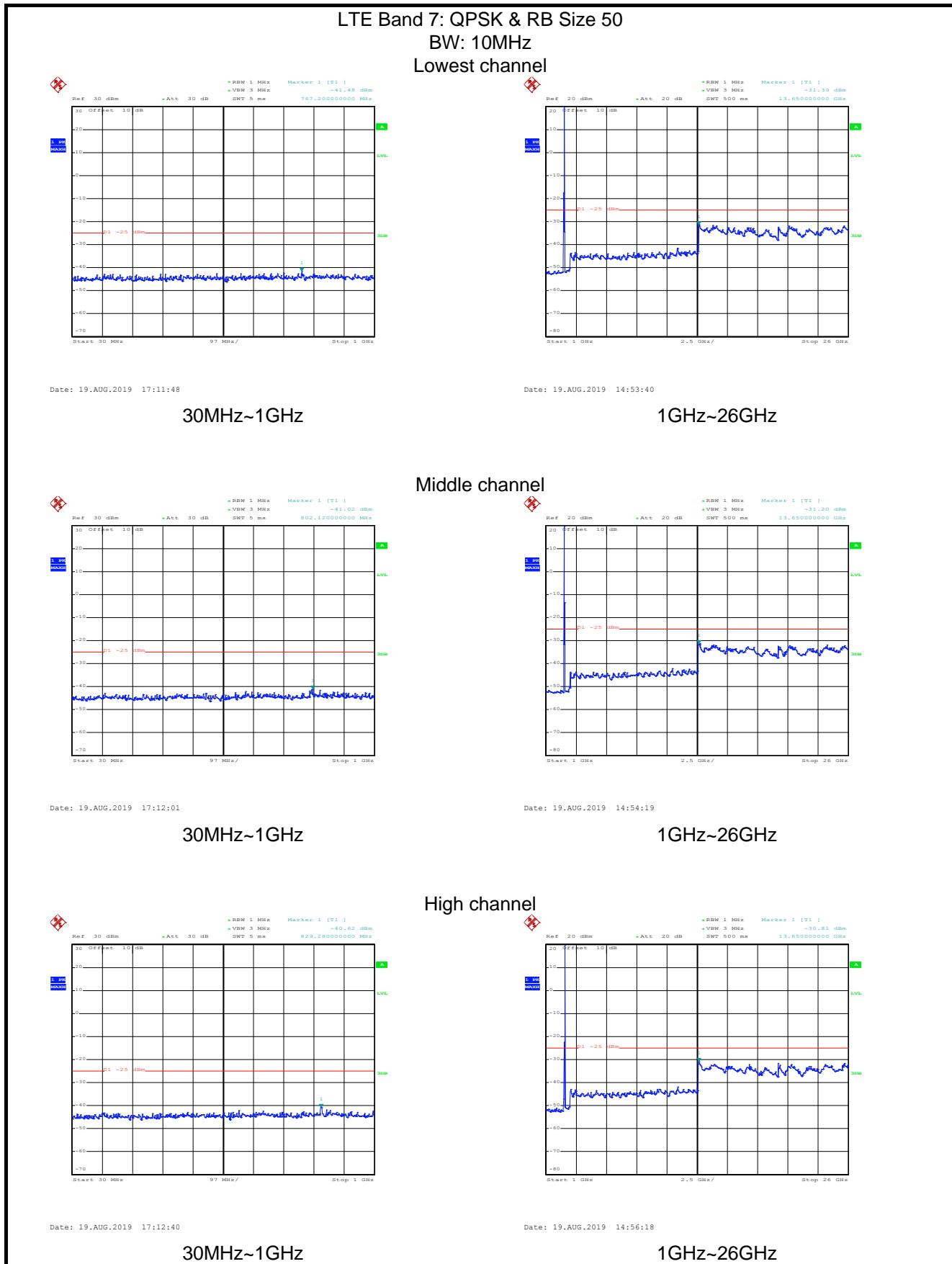


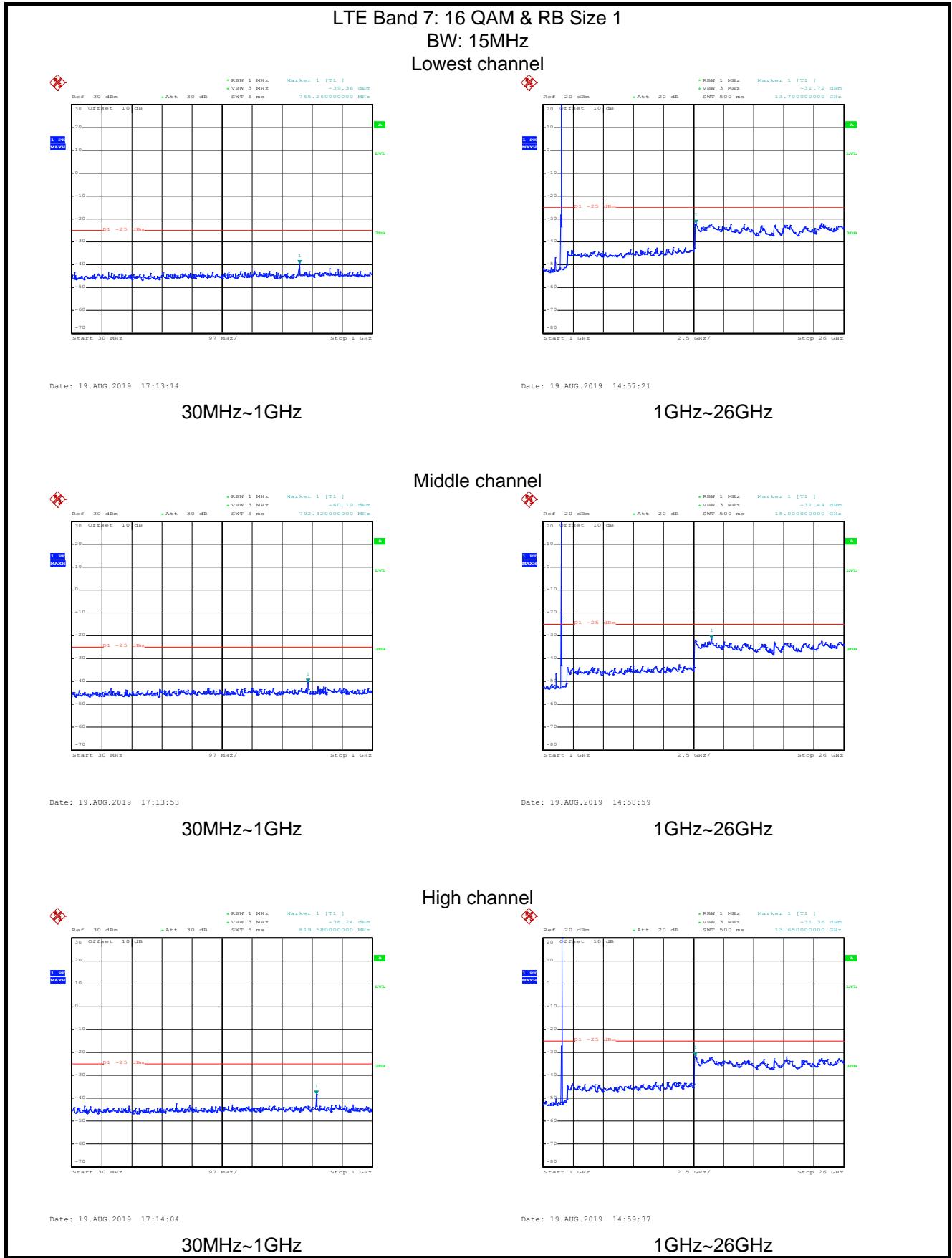


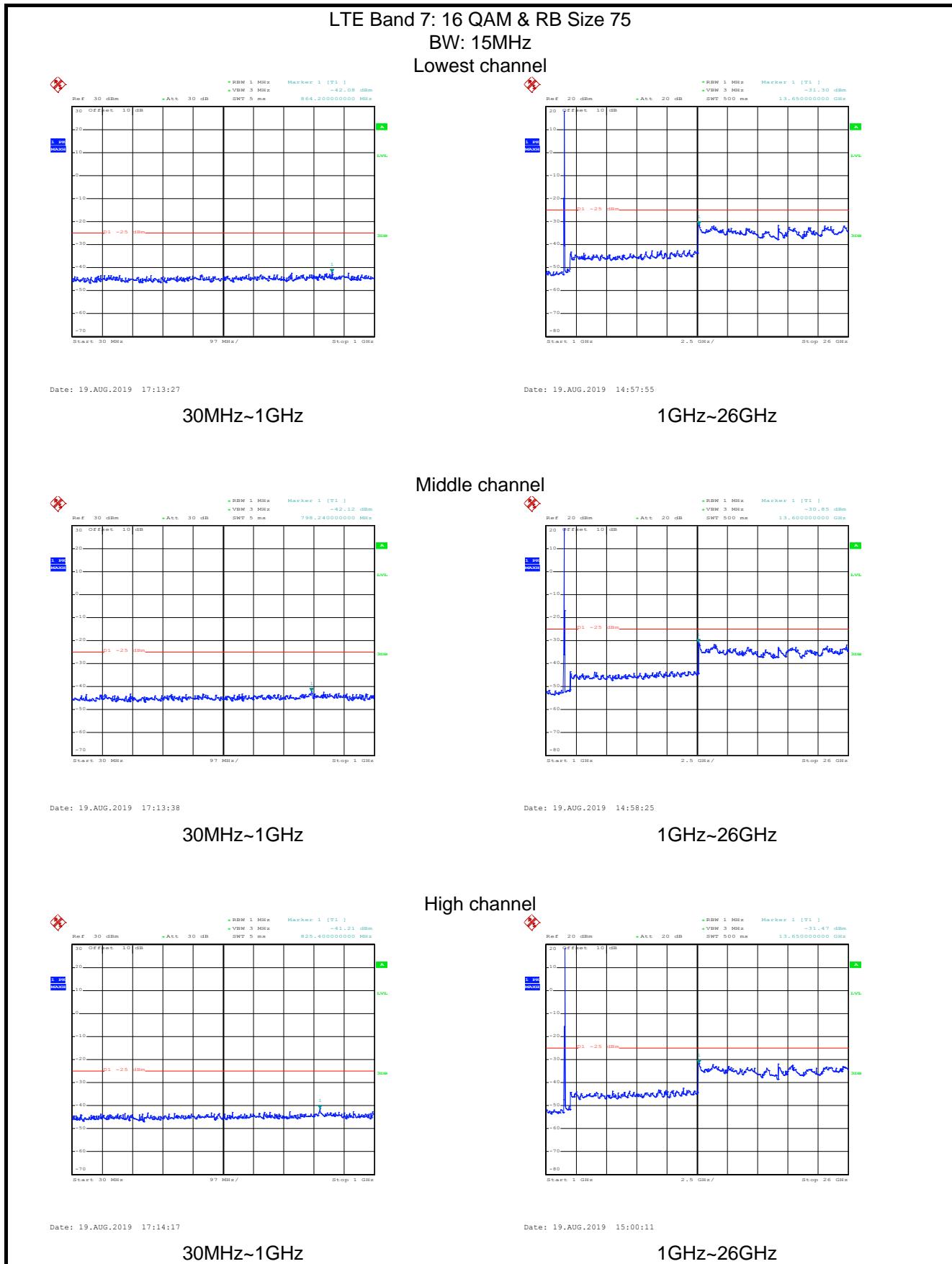


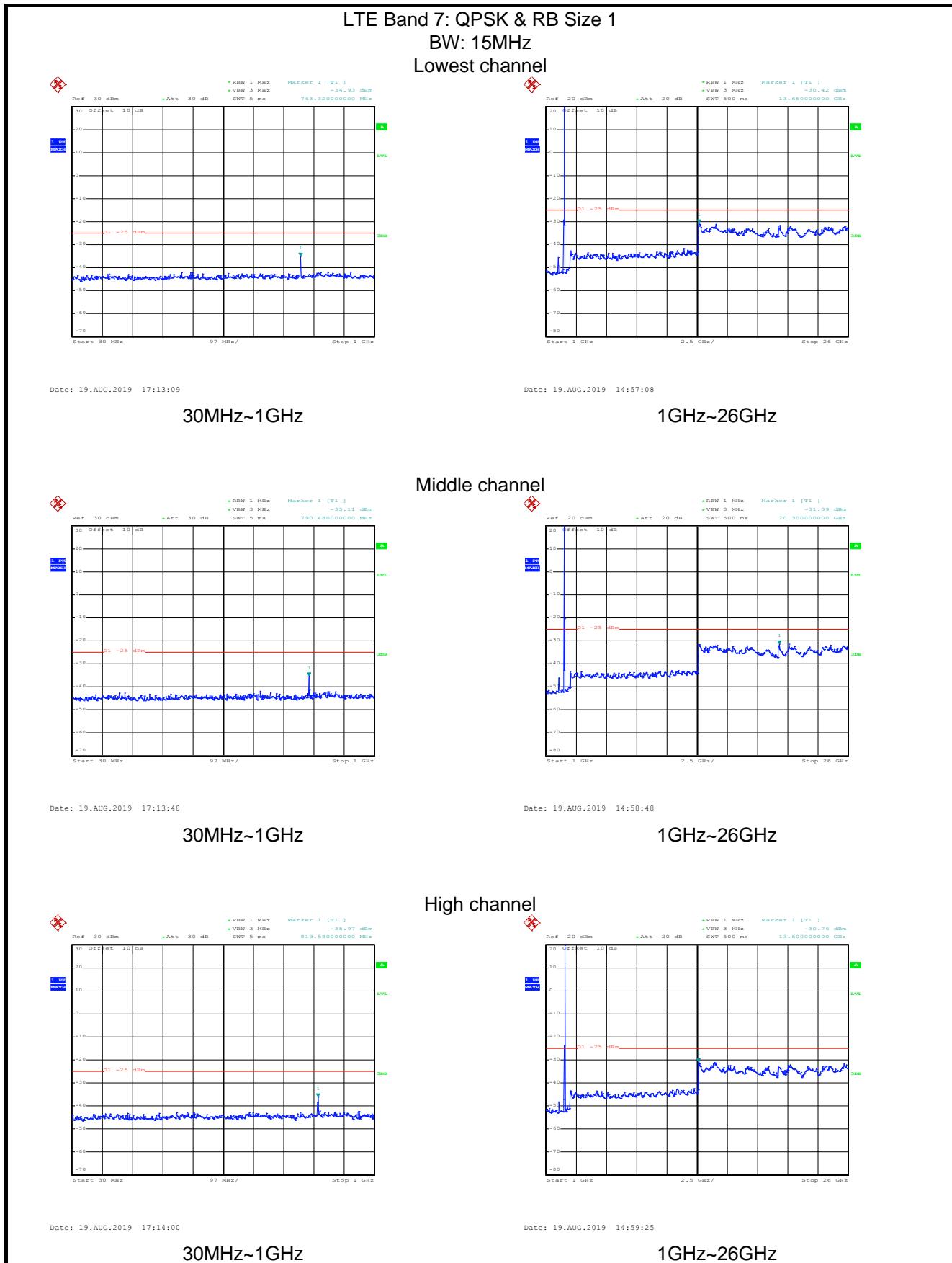


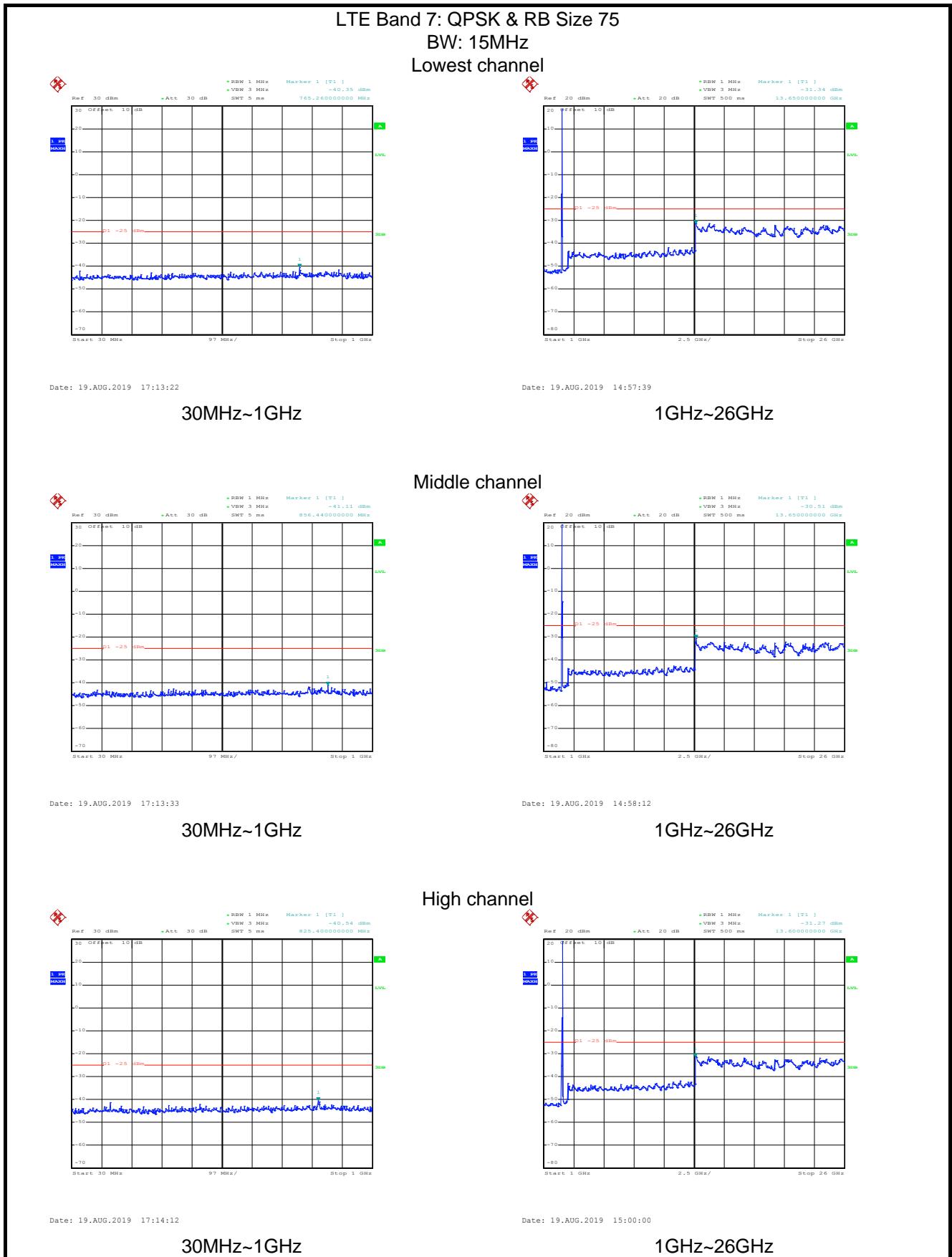


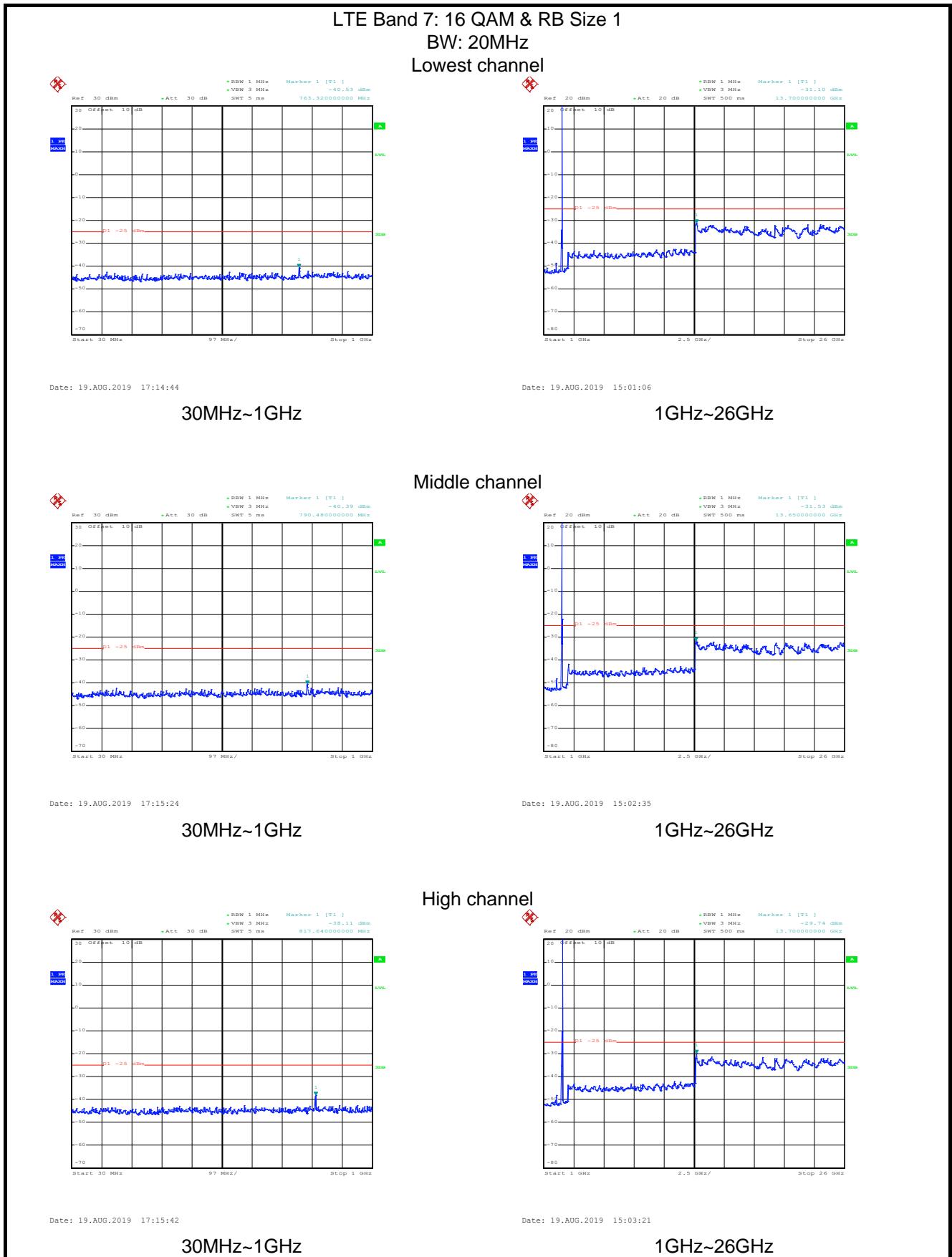


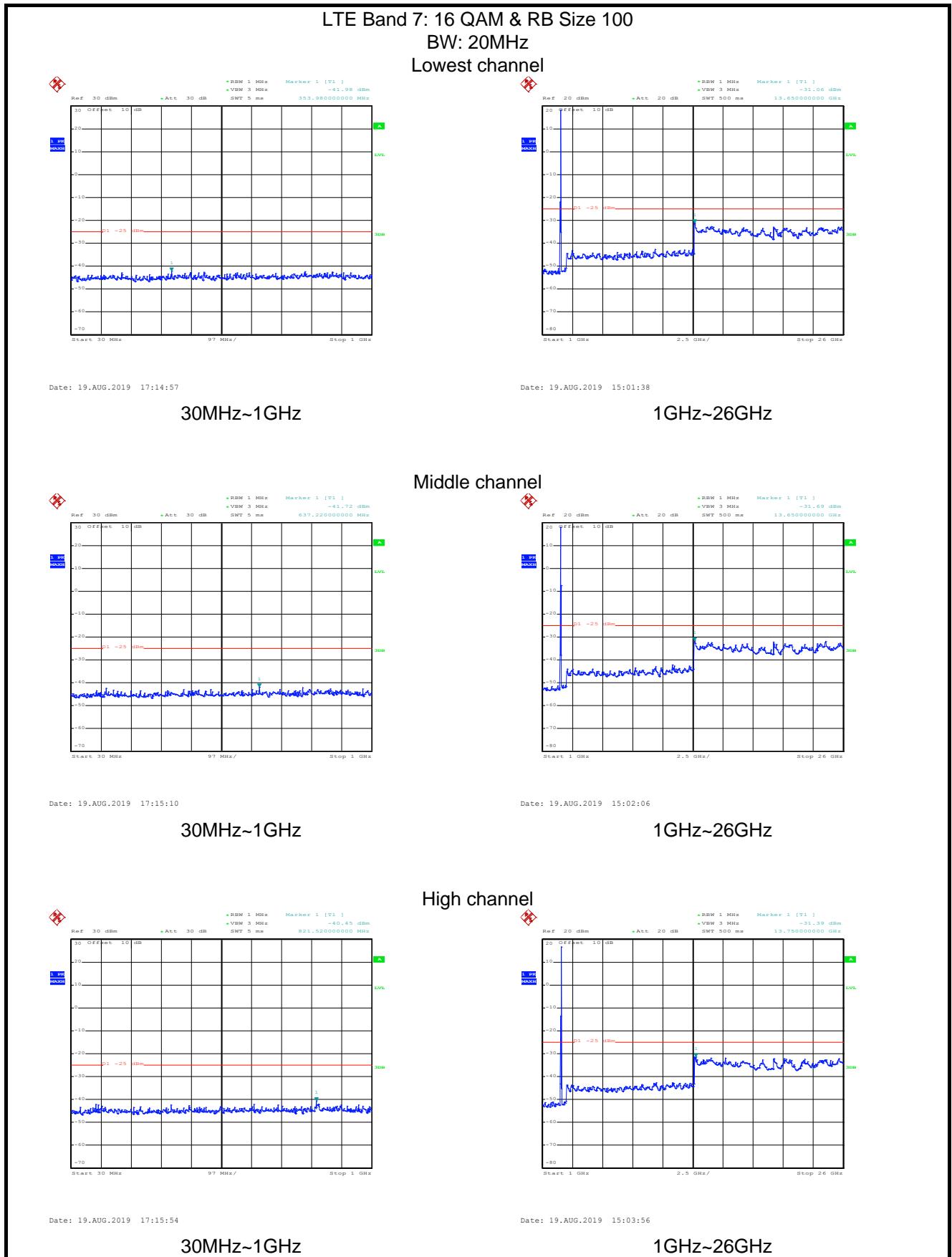


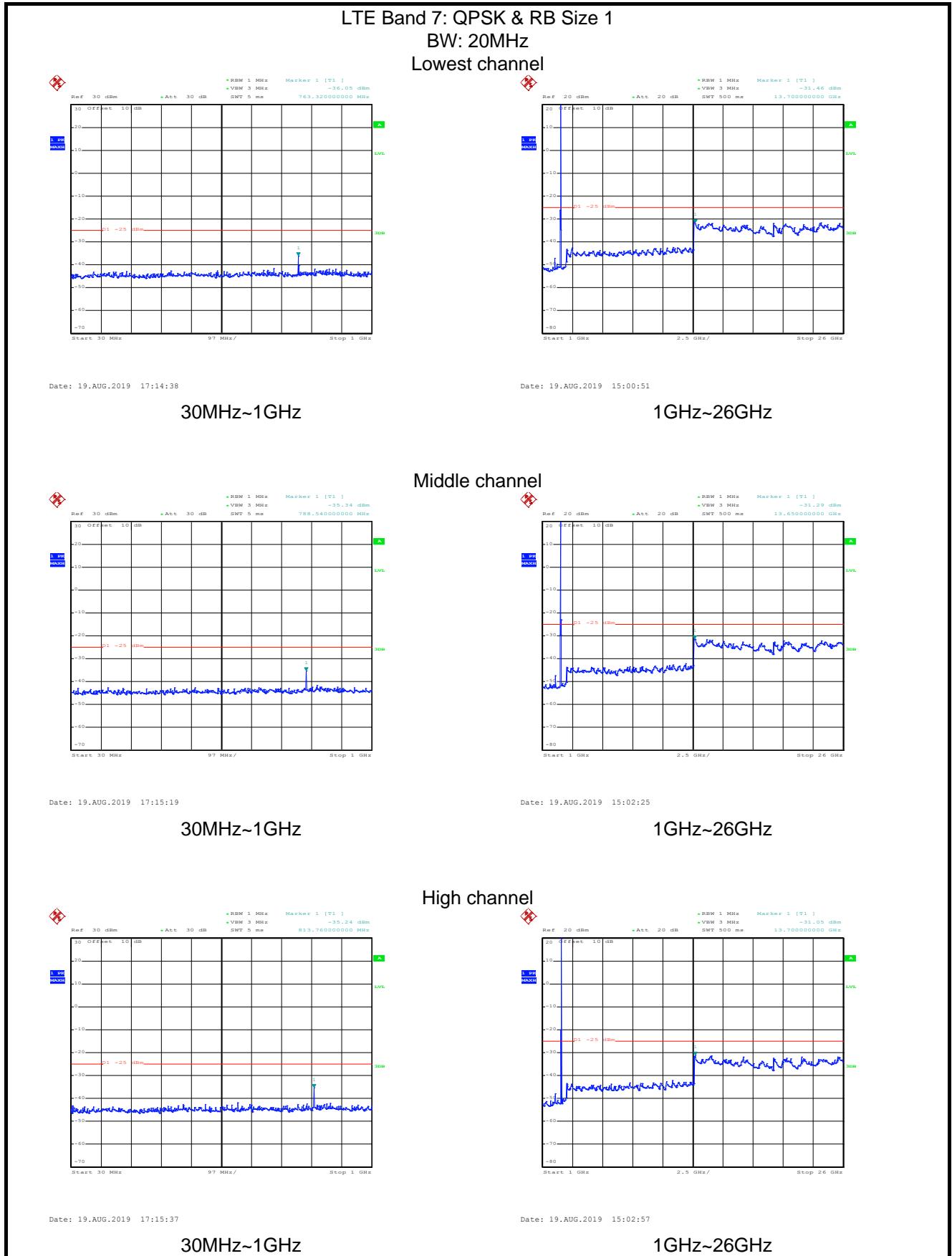








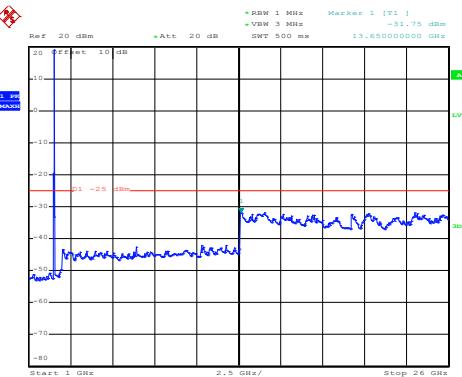
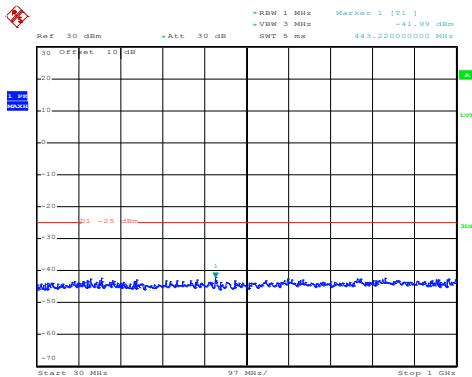




LTE Band 7: QPSK & RB Size 100

BW: 20MHz

Lowest channel



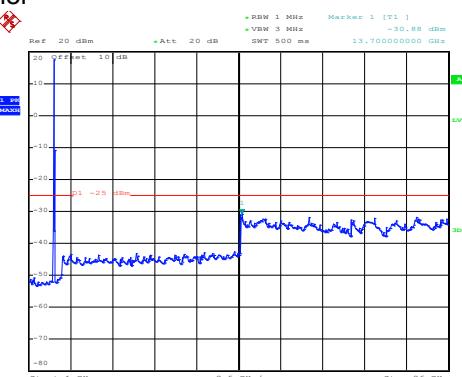
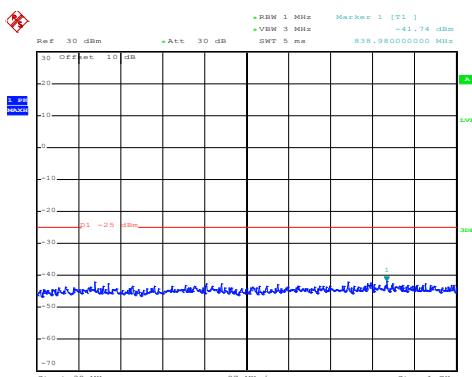
Date: 19.AUG.2019 17:14:52

30MHz~1GHz

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

1GHz~26GHz

Middle channel



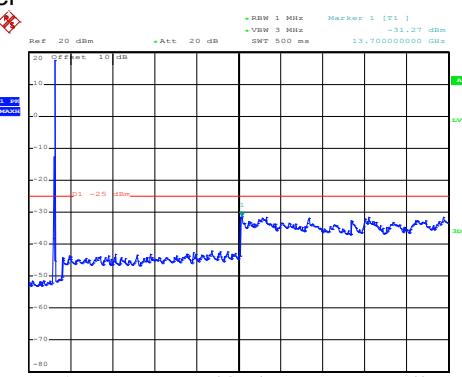
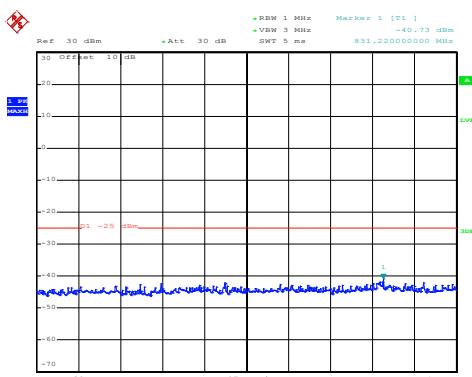
Date: 19.AUG.2019 17:15:05

30MHz~1GHz

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

1GHz~26GHz

High channel



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

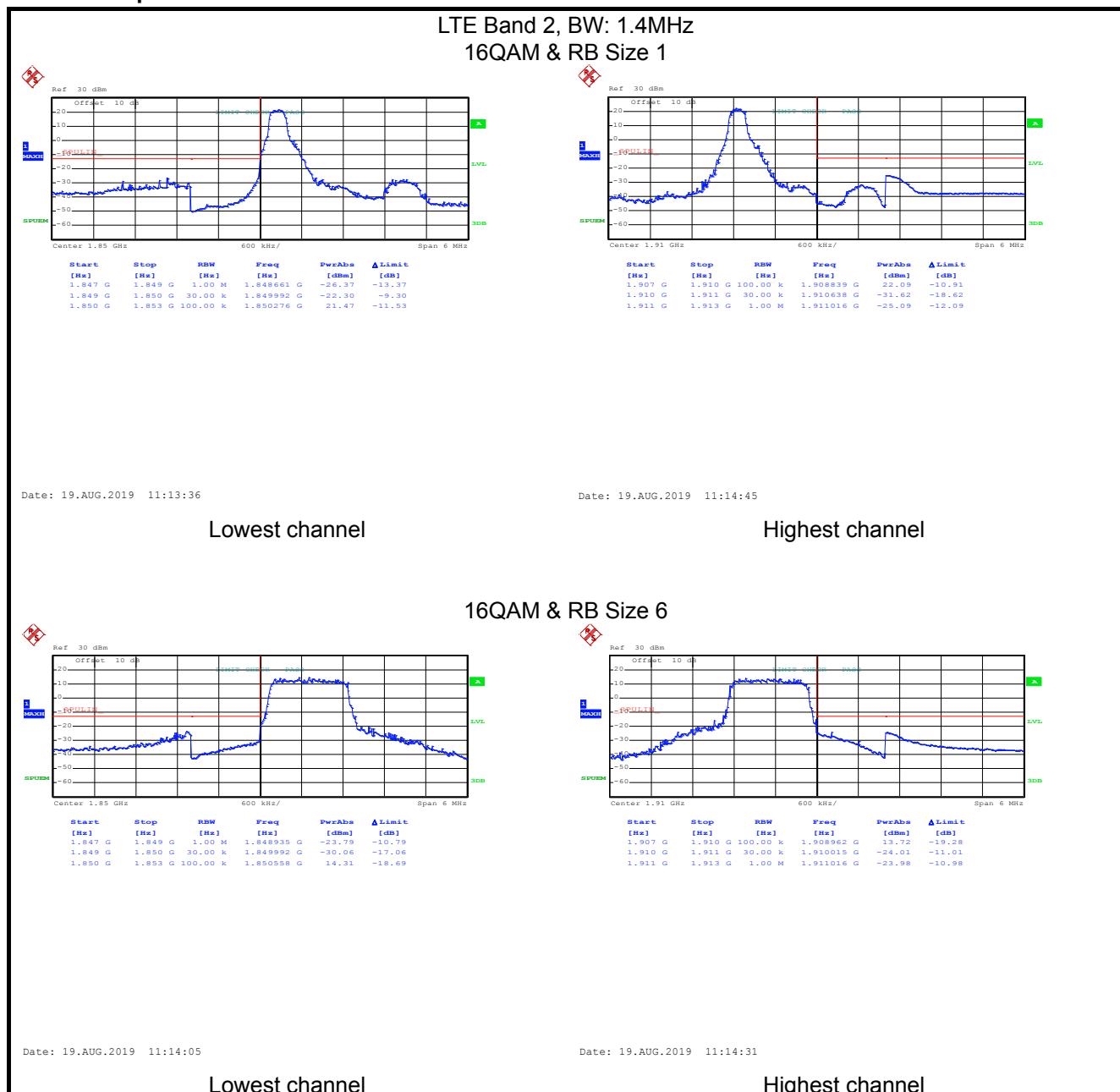
30MHz~1GHz

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

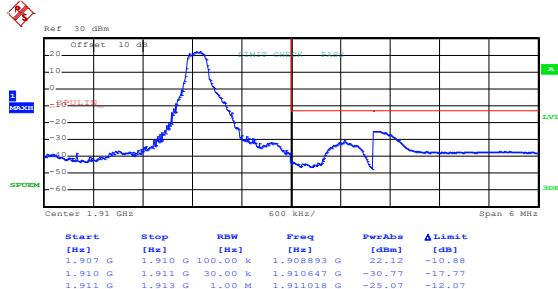
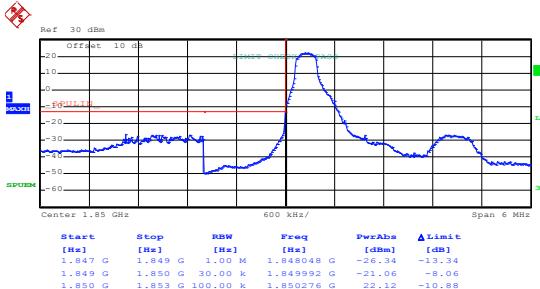
1GHz~26GHz

Band edge emission:

LTE Band 2 part:



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



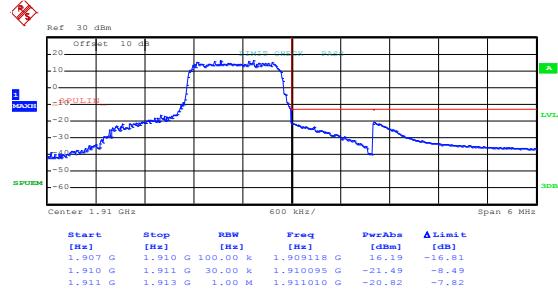
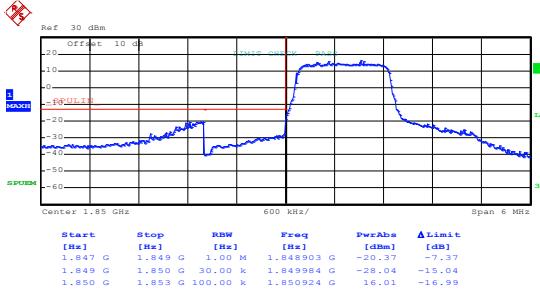
Date: 19.AUG.2019 11:13:29

Lowest channel

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

Highest channel

QPSK & RB Size 6



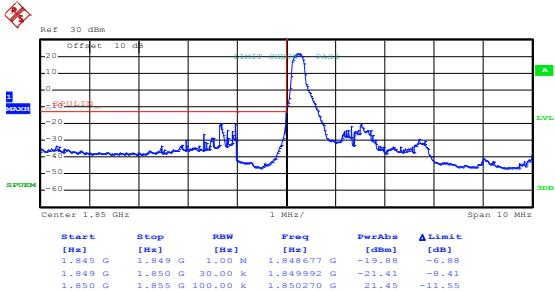
Date: 19.AUG.2019 11:13:59

Lowest channel

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

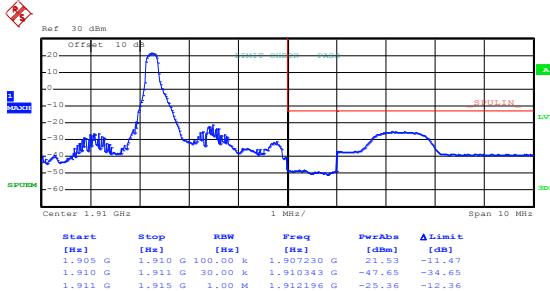
Highest channel

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



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

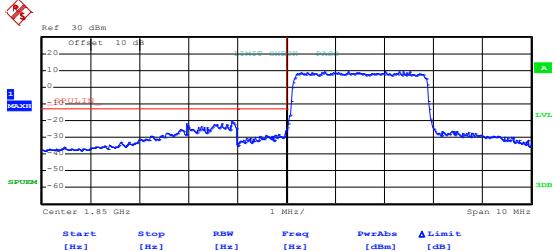
Lowest channel



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

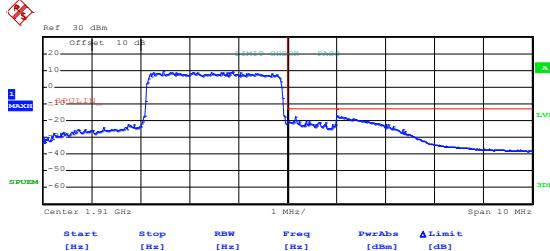
Highest channel

16QAM & RB Size 15



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

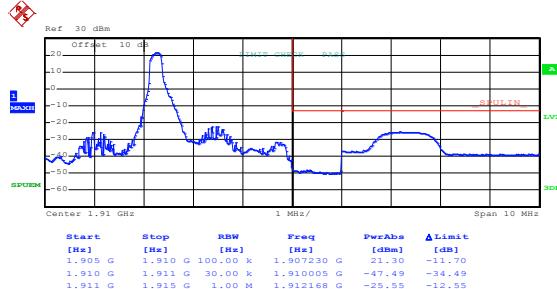
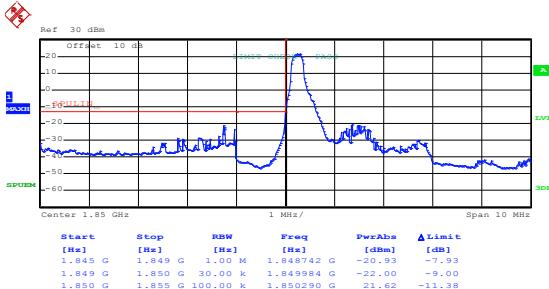
Lowest channel



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

Highest channel

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



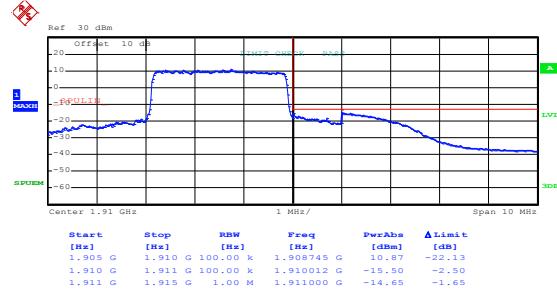
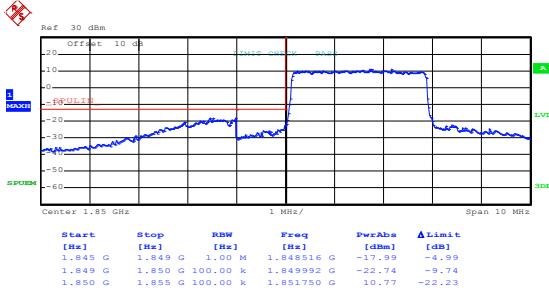
Date: 19.AUG.2019 11:16:58

Lowest channel

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

Highest channel

QPSK & RB Size 15



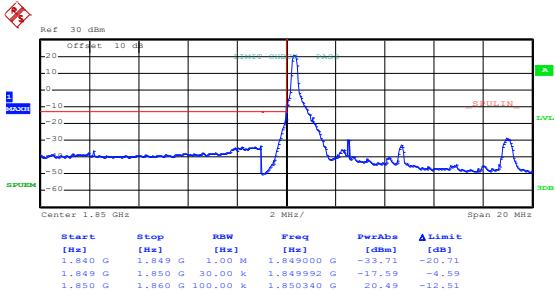
Date: 19.AUG.2019 11:16:36

Lowest channel

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

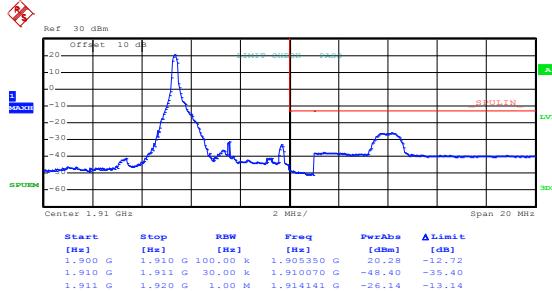
Highest channel

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



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

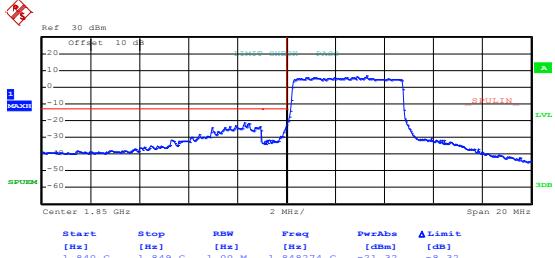
Lowest channel



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

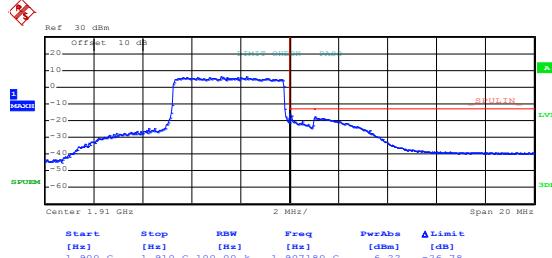
Highest channel

16QAM & RB Size 25



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

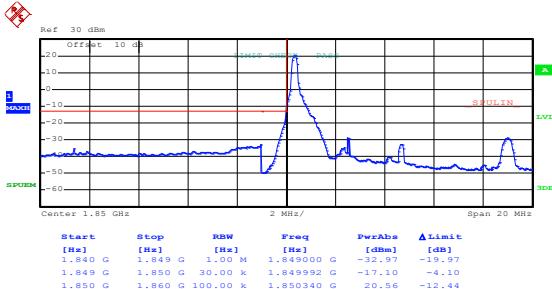
Lowest channel



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

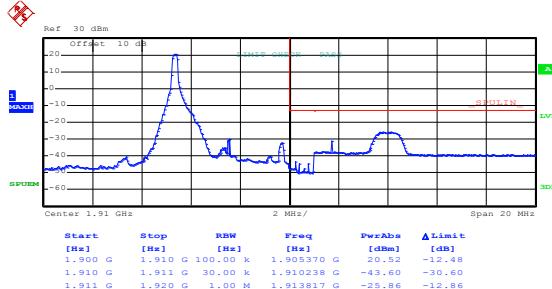
Highest channel

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



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

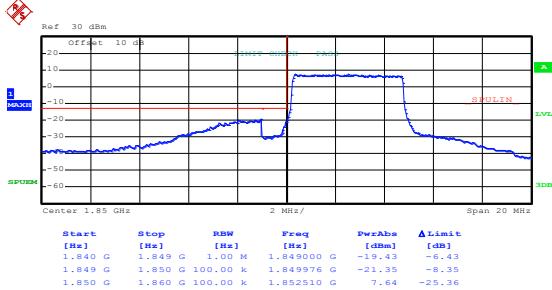
Lowest channel



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

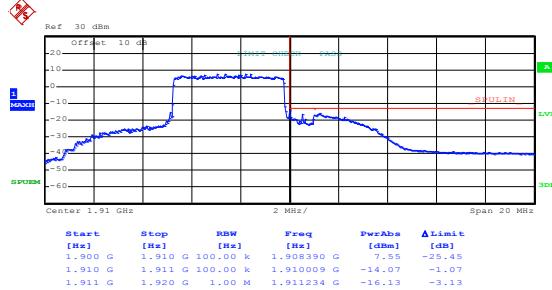
Highest channel

QPSK & RB Size 25



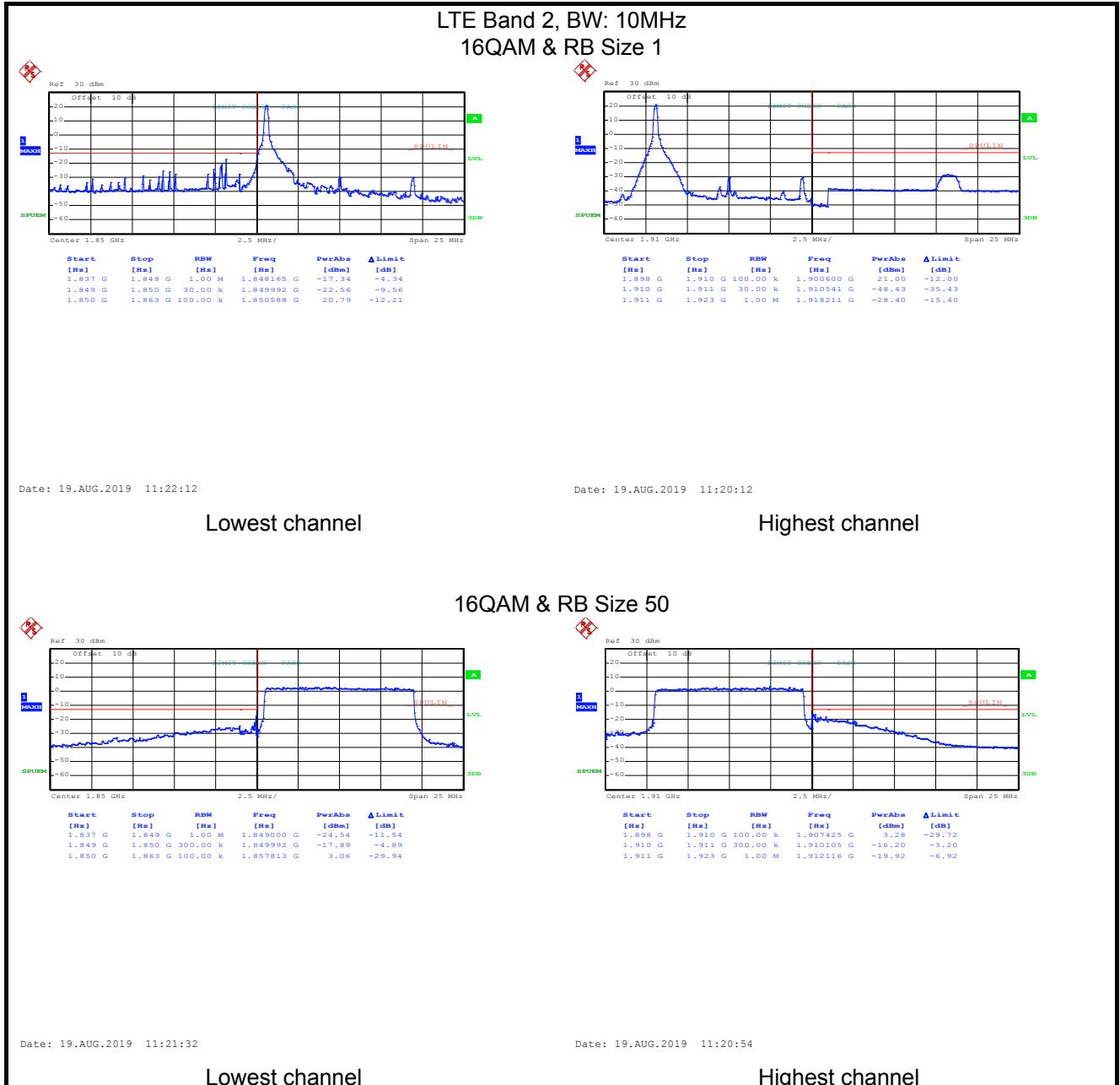
Date: 19.AUG.2019 11:18:20

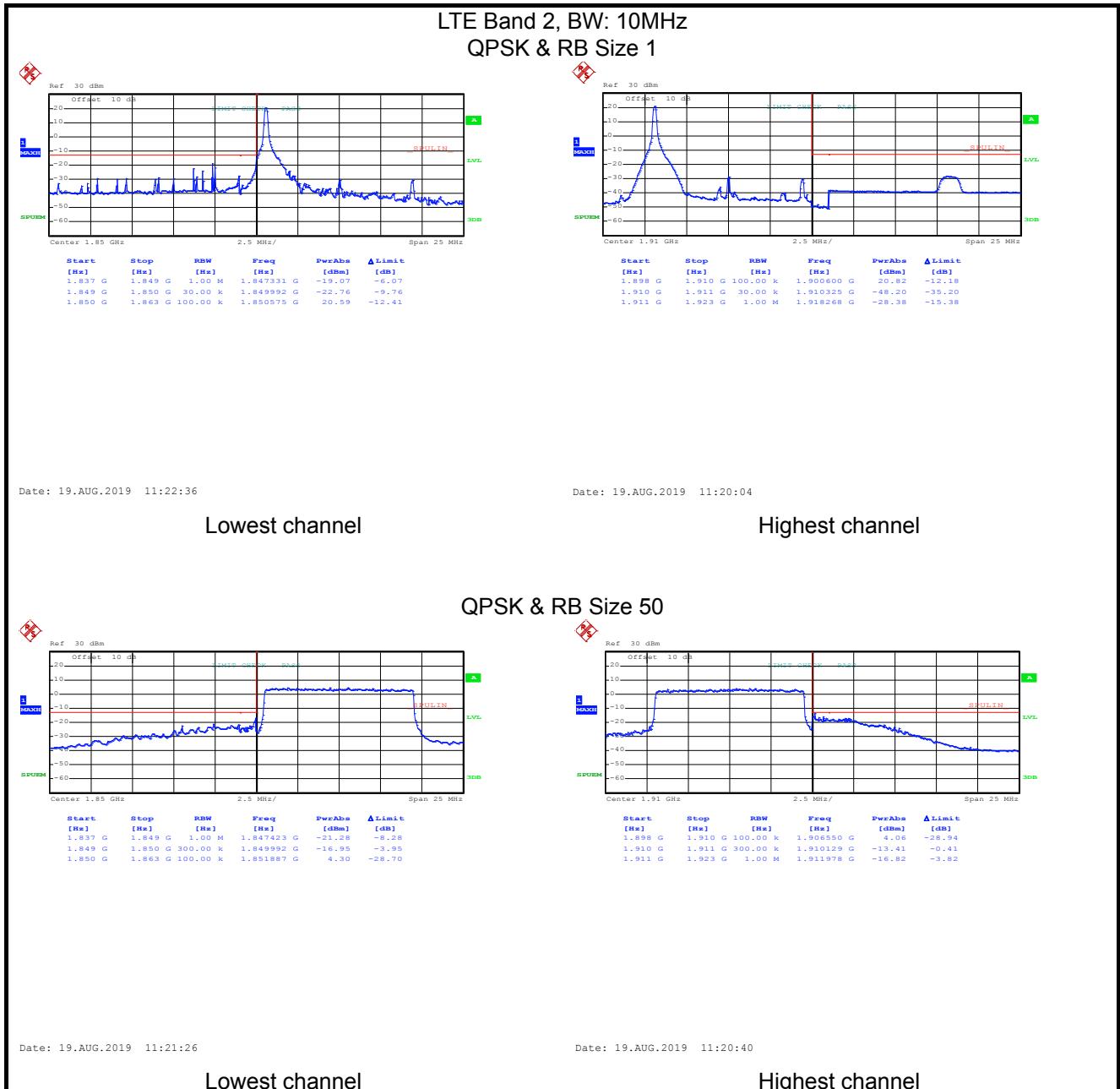
Lowest channel



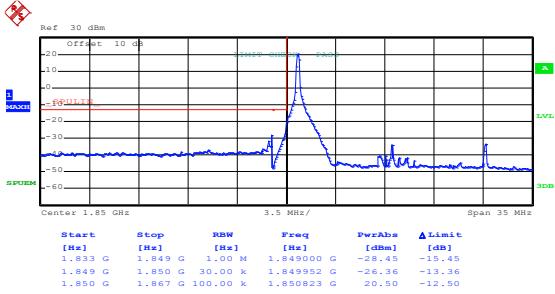
Date: 19.AUG.2019 11:18:56

Highest channel



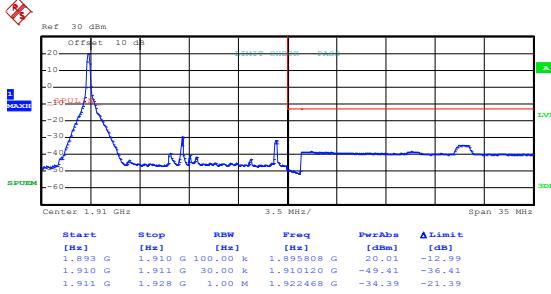


LTE Band 2, BW: 15MHz
16QAM & RB Size 1



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

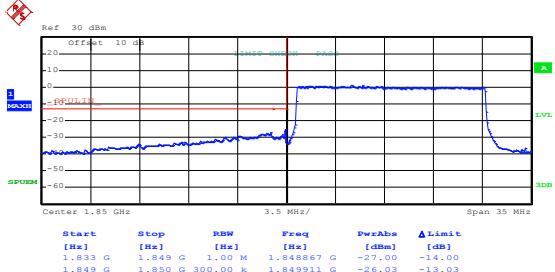
Lowest channel



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

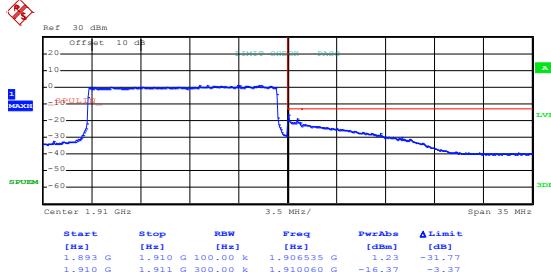
Highest channel

16QAM & RB Size 75



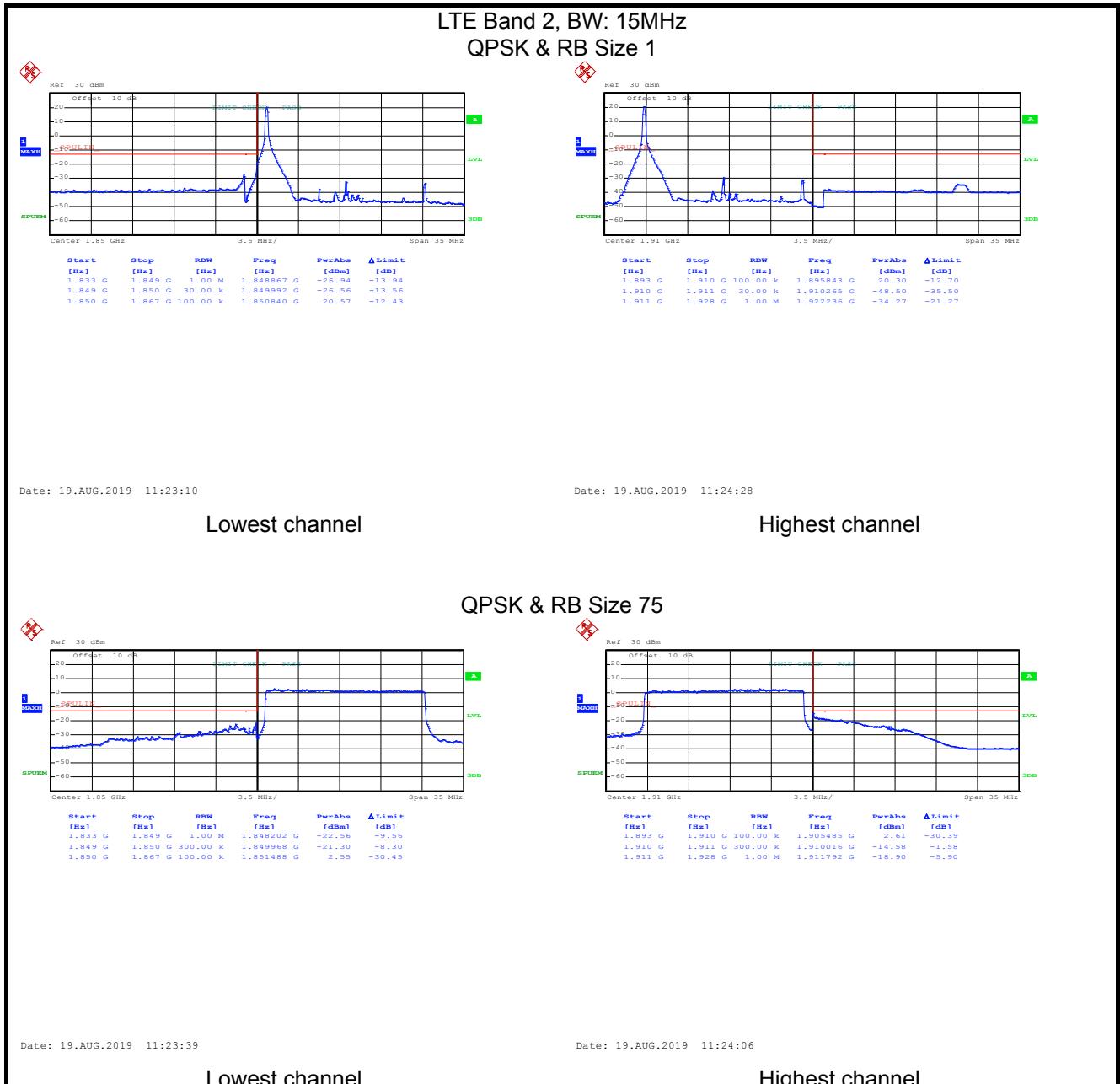
Date: 19.AUG.2019 11:23:45

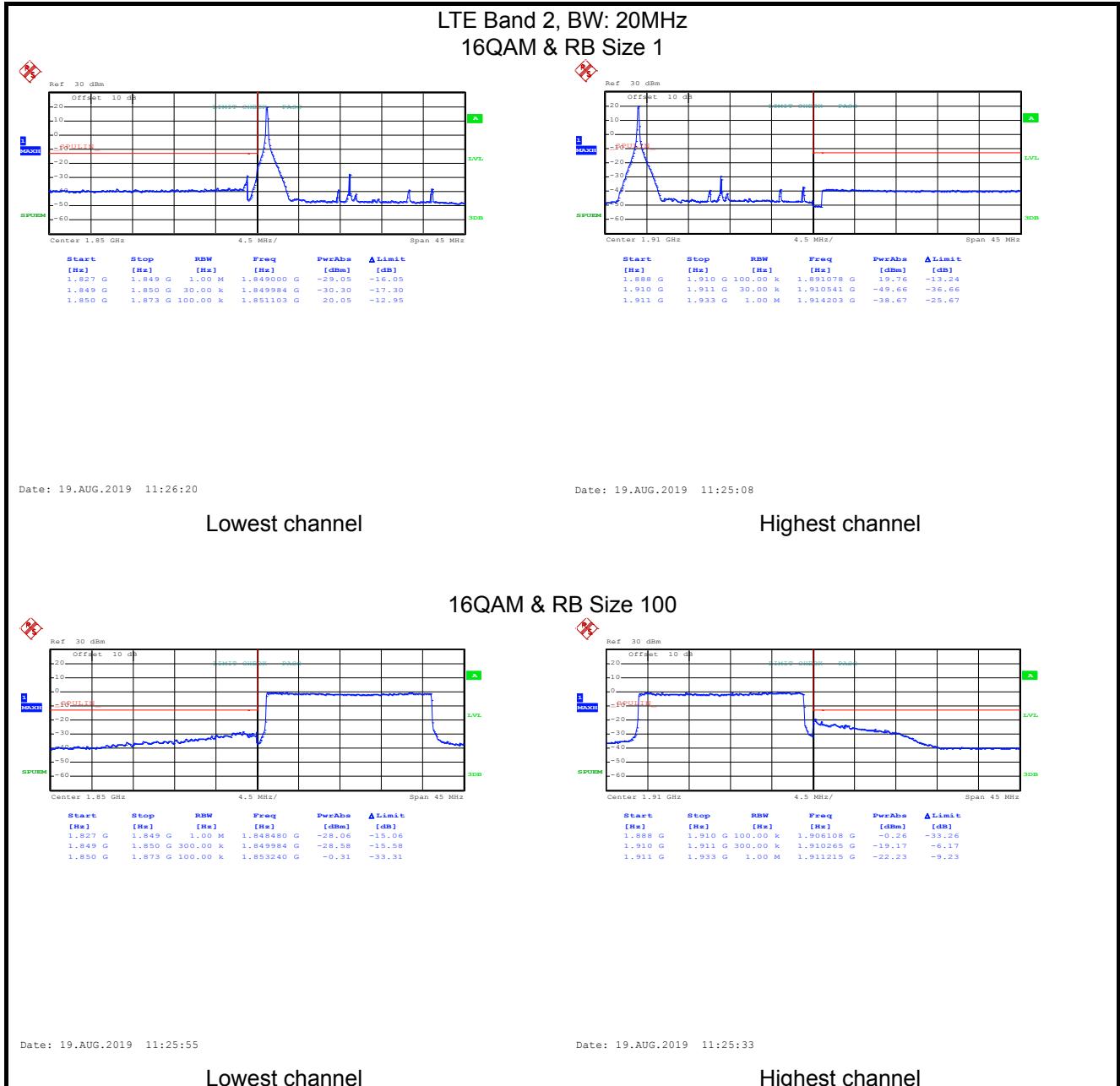
Lowest channel



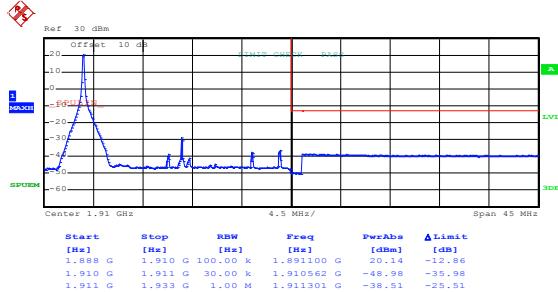
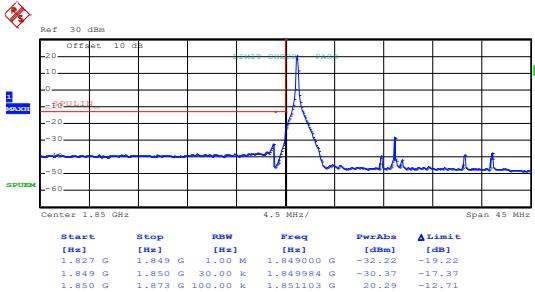
Date: 19.AUG.2019 11:24:12

Highest channel





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

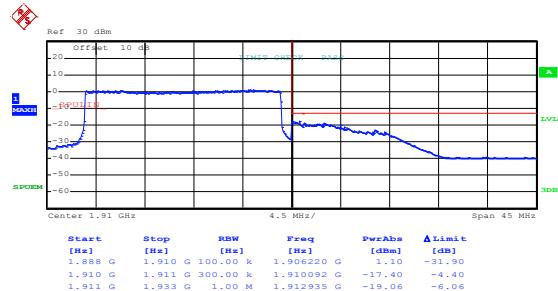
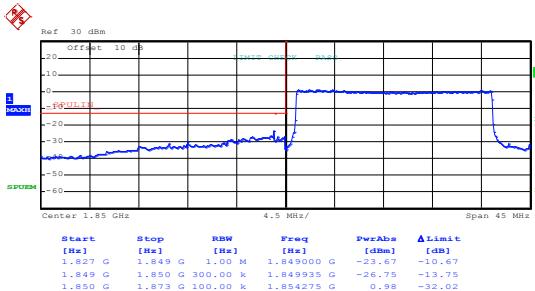


Date: 19.AUG.2019 11:26:13

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

Lowest channel**Highest channel**

QPSK & RB Size 100

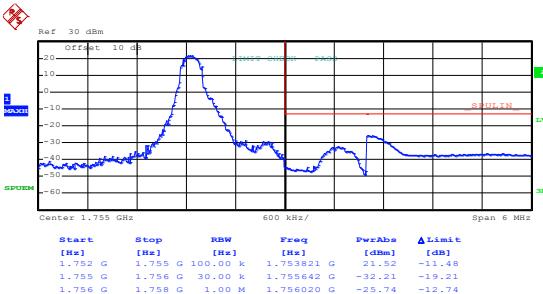
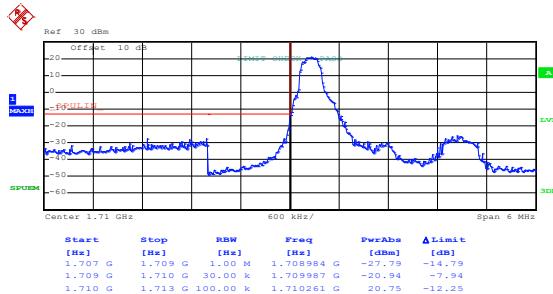


Date: 19.AUG.2019 11:25:49

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

Lowest channel**Highest channel**

LTE Band 4 part:

LTE Band 4, BW: 1.4MHz
16QAM & RB Size 1

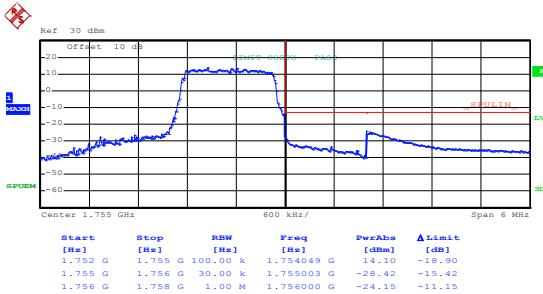
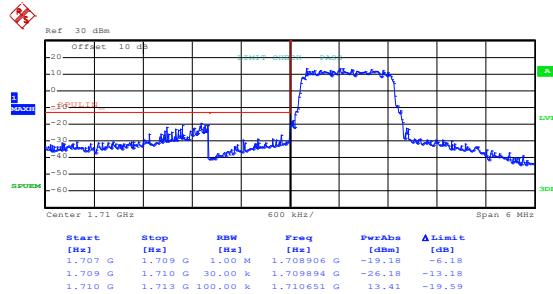
Date: 19.AUG.2019 10:42:10

Date: 19.AUG.2019 10:55:08

Lowest channel

Highest channel

16QAM & RB Size 6

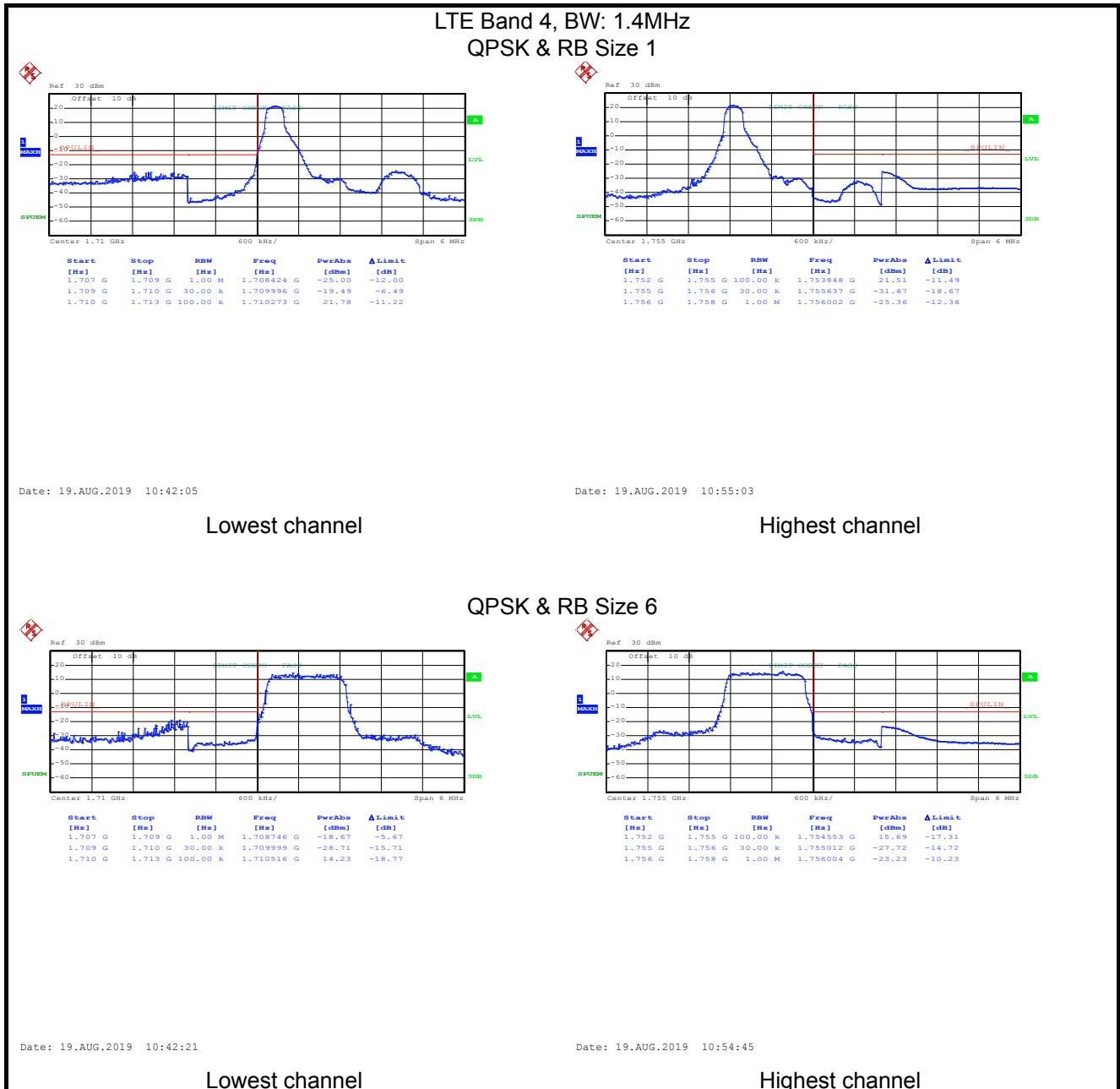


Date: 19.AUG.2019 10:54:16

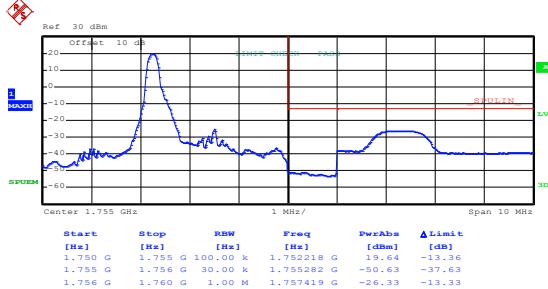
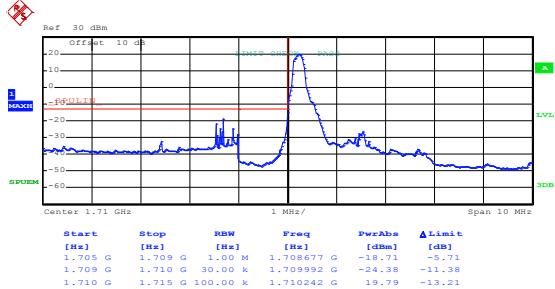
Date: 19.AUG.2019 10:54:52

Lowest channel

Highest channel



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



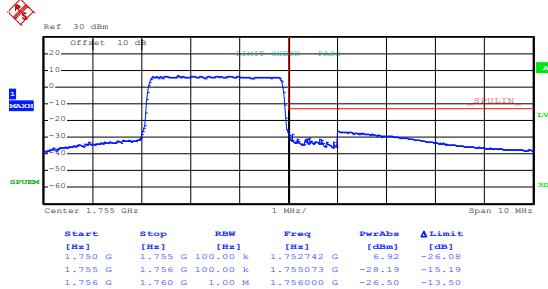
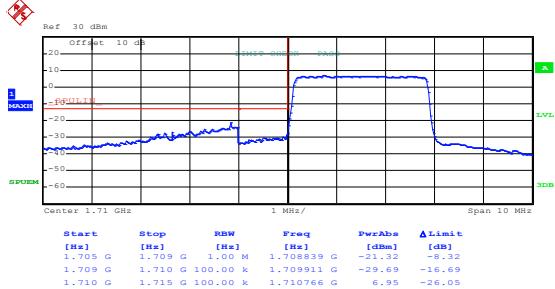
Date: 19.AUG.2019 10:58:53

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

Lowest channel

Highest channel

16QAM & RB Size 15



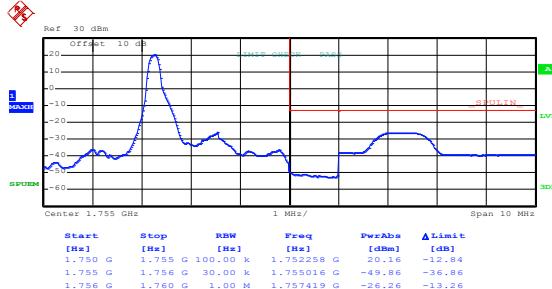
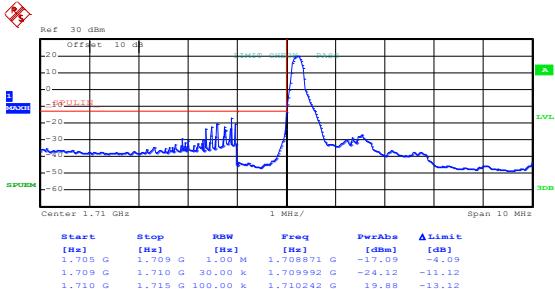
Date: 19.AUG.2019 10:58:30

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

Lowest channel

Highest channel

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



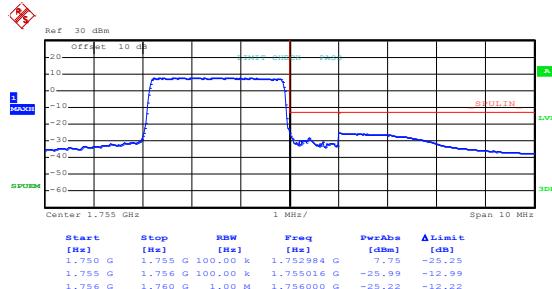
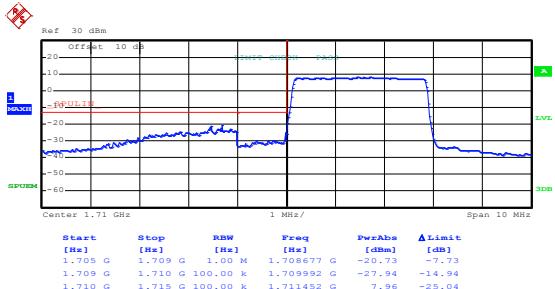
Date: 19.AUG.2019 10:58:47

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

Lowest channel

Highest channel

QPSK & RB Size 15



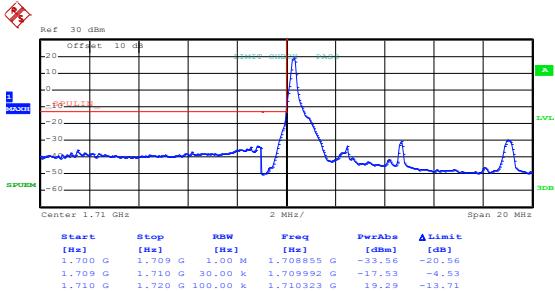
Date: 19.AUG.2019 10:58:21

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

Lowest channel

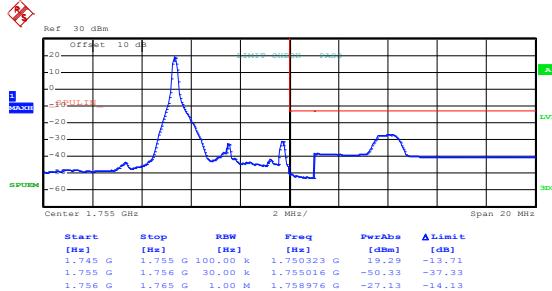
Highest channel

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



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

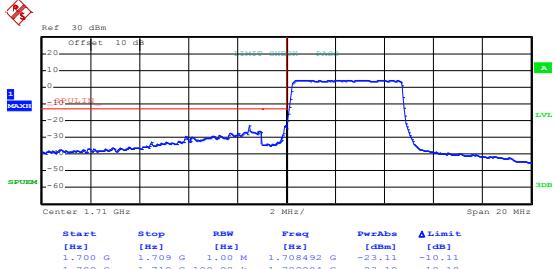
Lowest channel



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

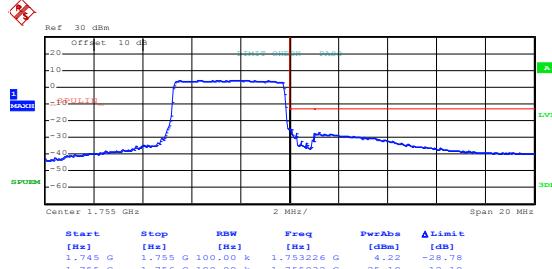
Highest channel

16QAM & RB Size 25



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

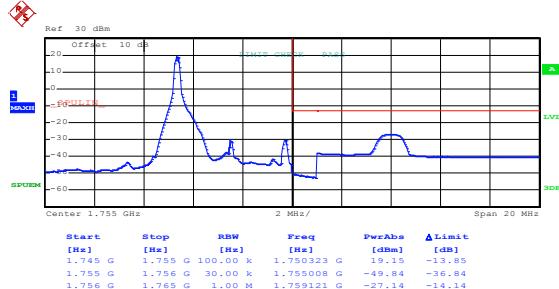
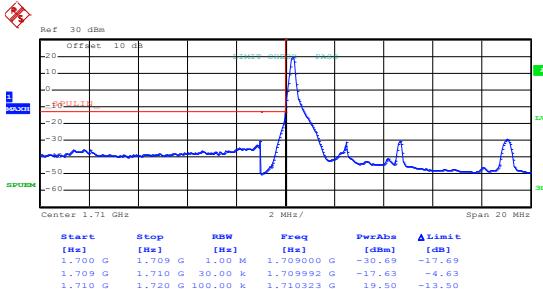
Lowest channel



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

Highest channel

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



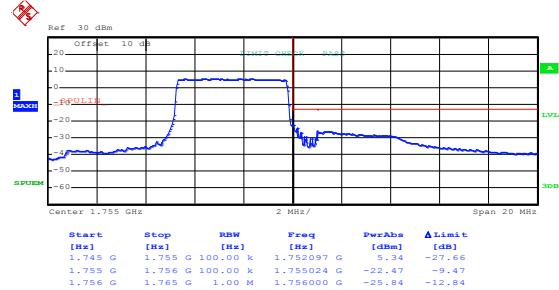
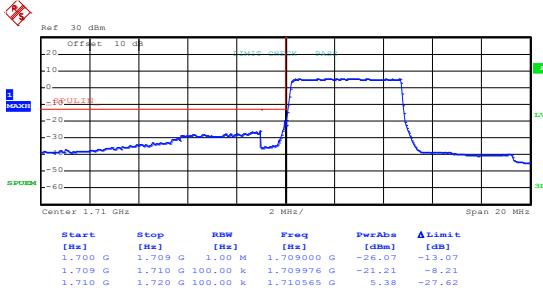
Date: 19.AUG.2019 10:59:33

Lowest channel

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

Highest channel

QPSK & RB Size 25



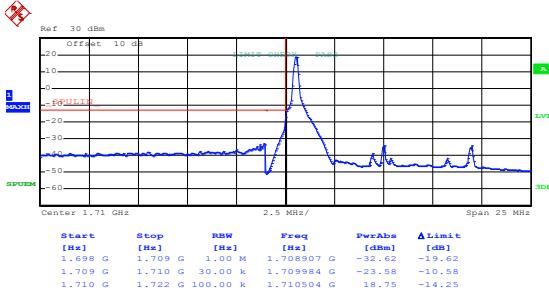
Date: 19.AUG.2019 10:59:59

Lowest channel

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

Highest channel

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



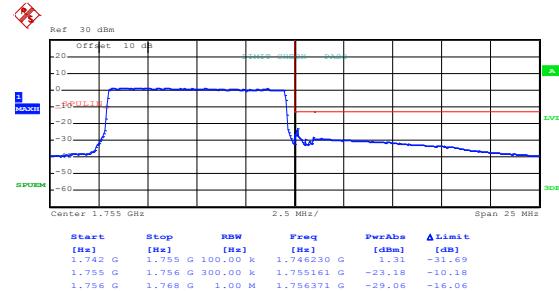
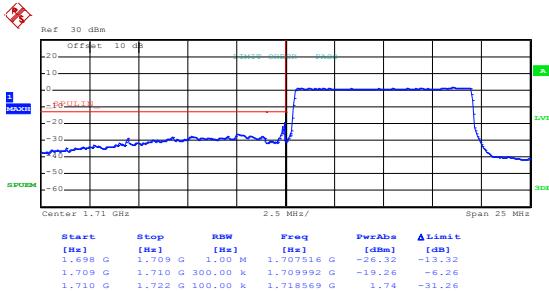
Date: 19.AUG.2019 11:03:16

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

Lowest channel

Highest channel

16QAM & RB Size 50

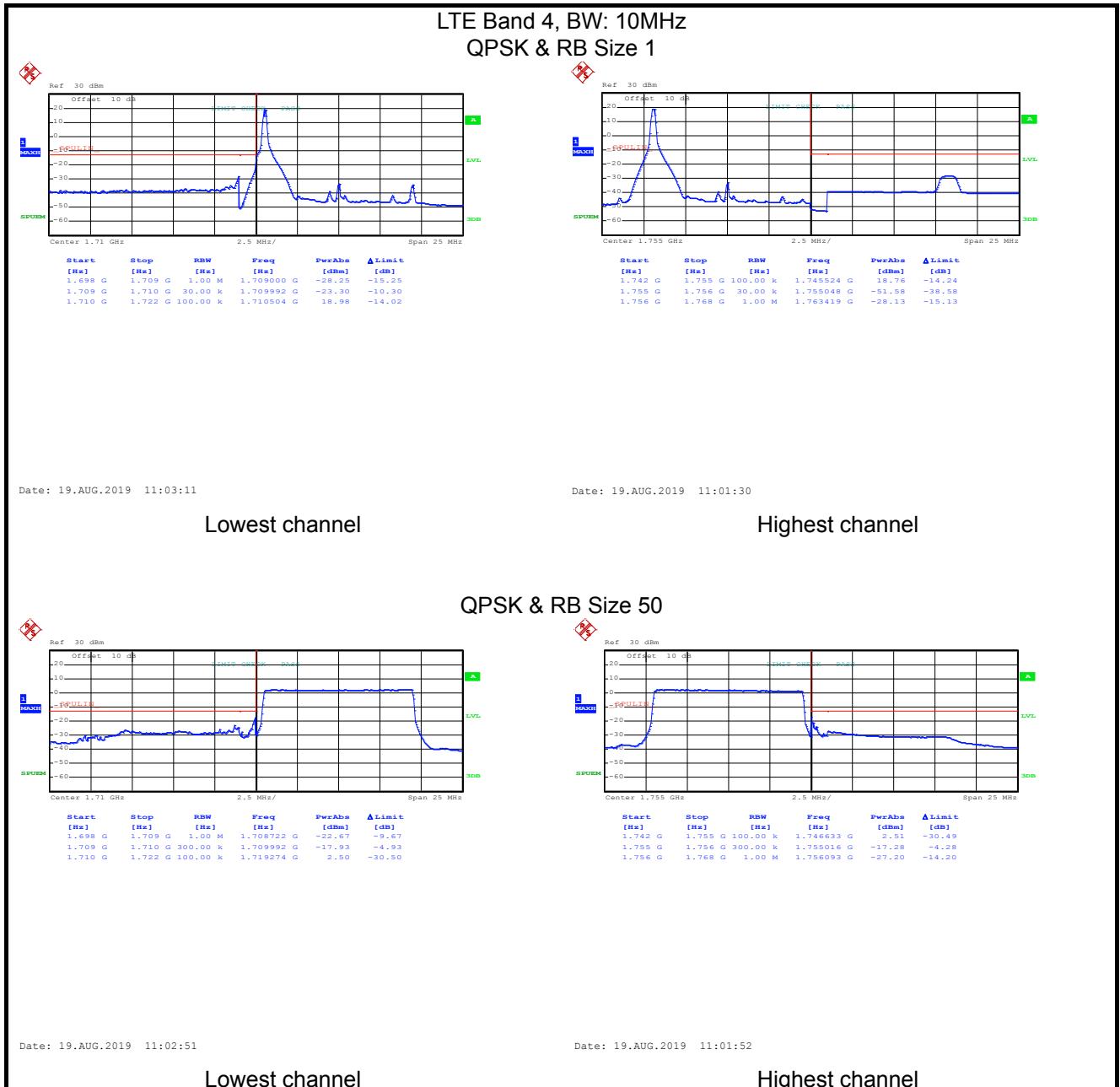


Date: 19.AUG.2019 11:02:57

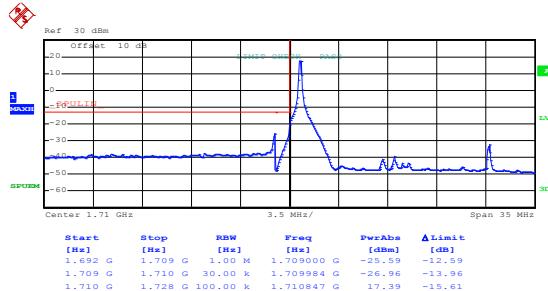
Date: 19.AUG.2019 11:01:58

Lowest channel

Highest channel

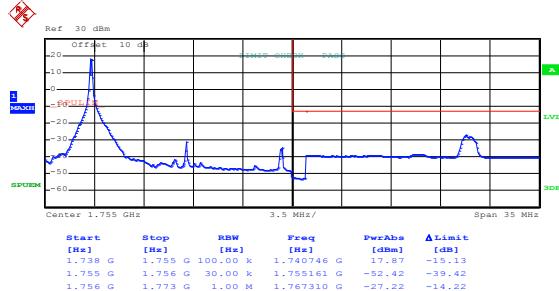


LTE Band 4, BW: 15MHz
16QAM & RB Size 1



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

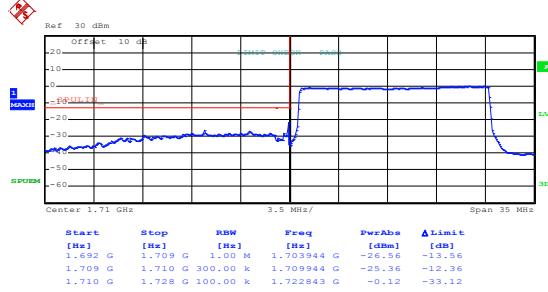
Lowest channel



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

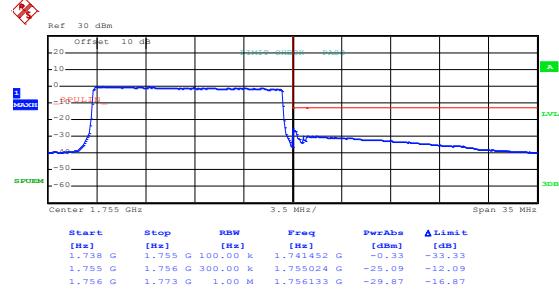
Highest channel

16QAM & RB Size 75



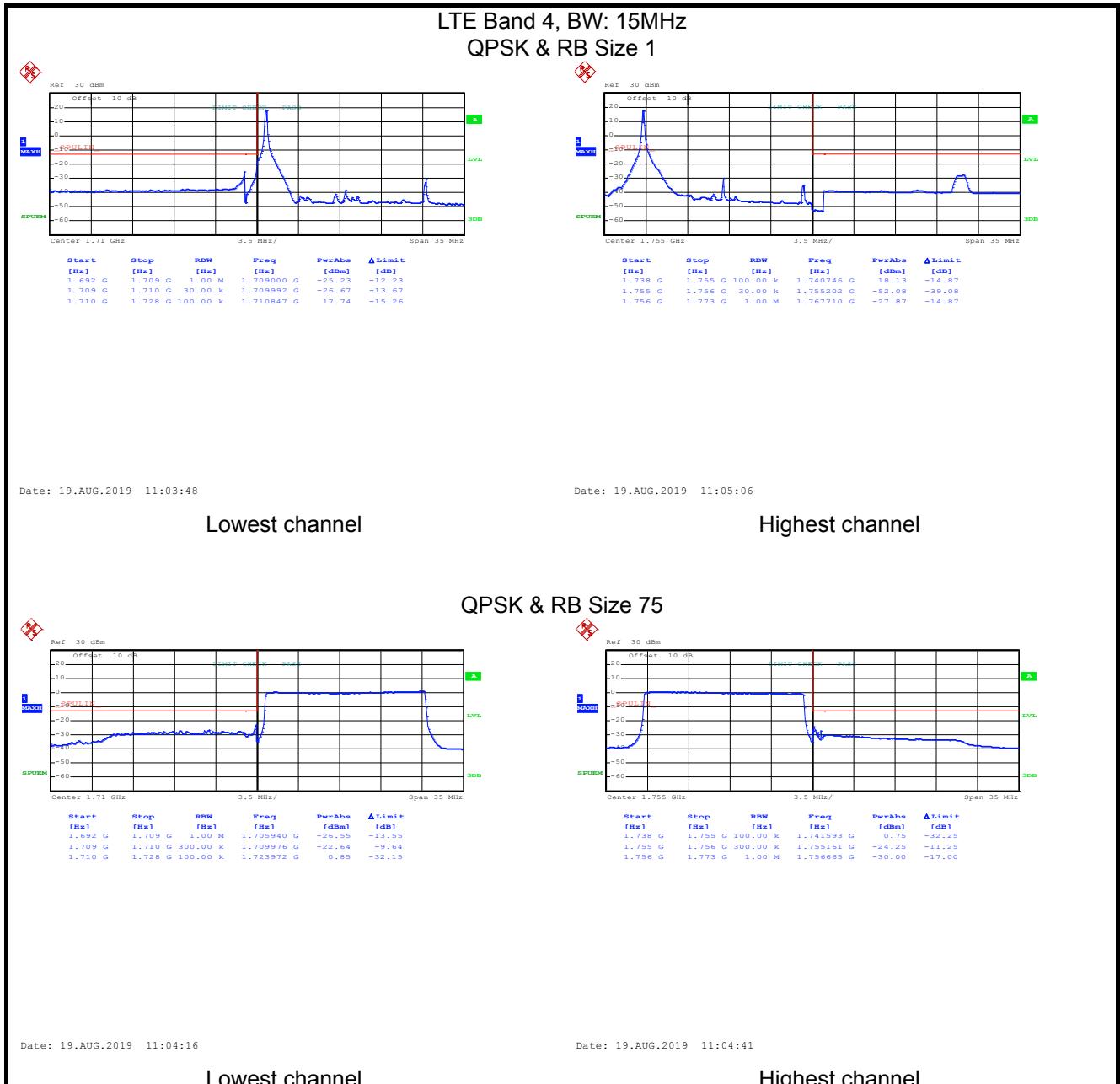
Date: 19.AUG.2019 11:04:22

Lowest channel

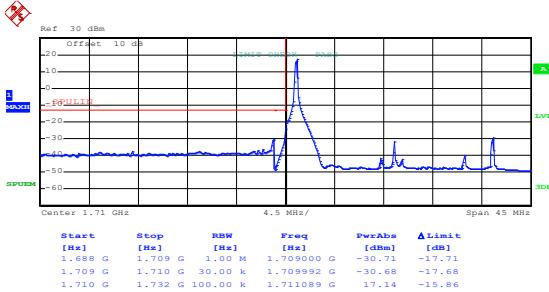


Date: 19.AUG.2019 11:04:49

Highest channel

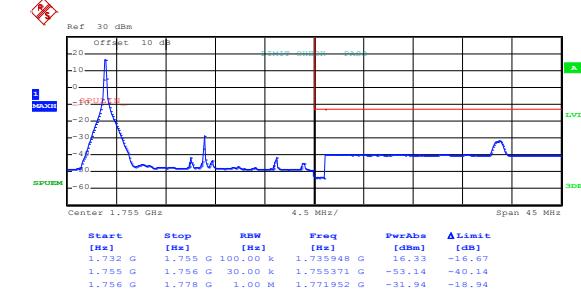


LTE Band 4, BW: 20MHz
16QAM & RB Size 1



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

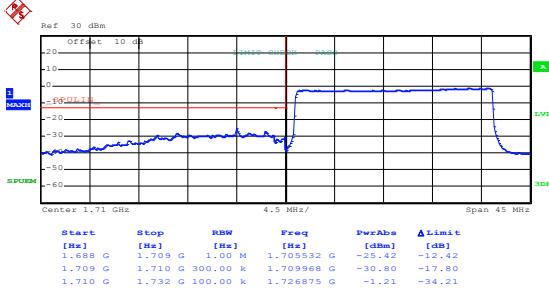
Lowest channel



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

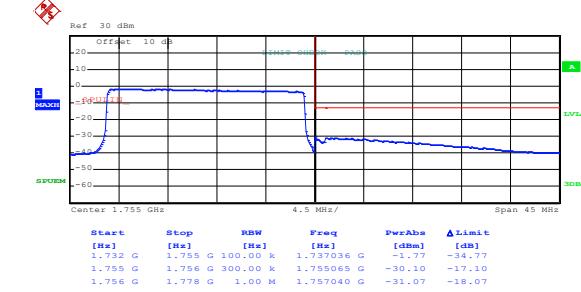
Highest channel

16QAM & RB Size 100



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

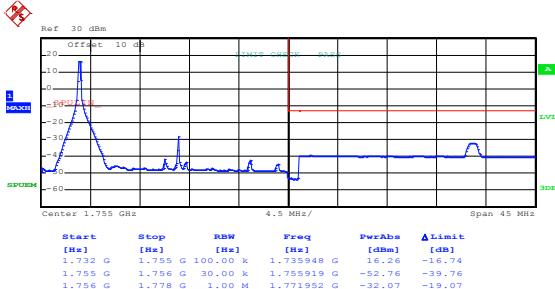
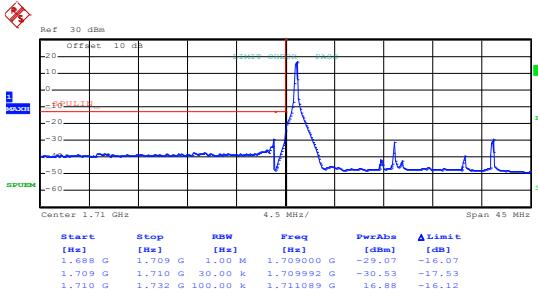
Lowest channel



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

Highest channel

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



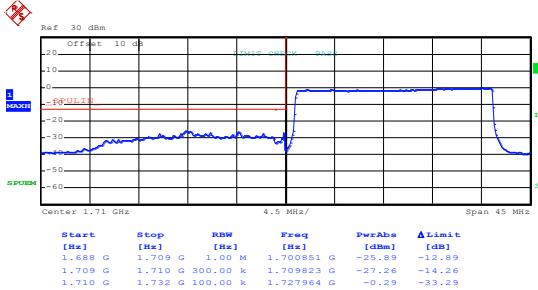
Date: 19.AUG.2019 11:07:27

Lowest channel

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

Highest channel

QPSK & RB Size 100



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

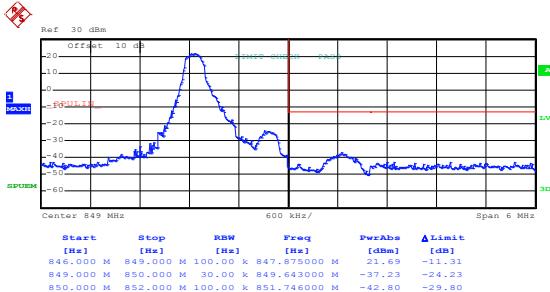
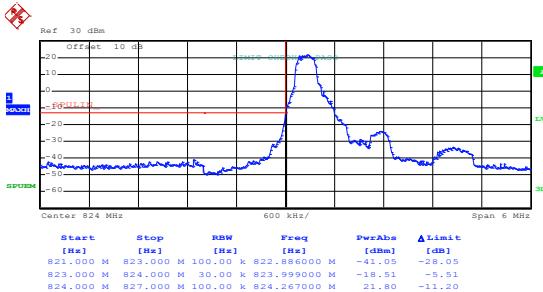
Lowest channel

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

Highest channel

LTE Band 5 part:

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



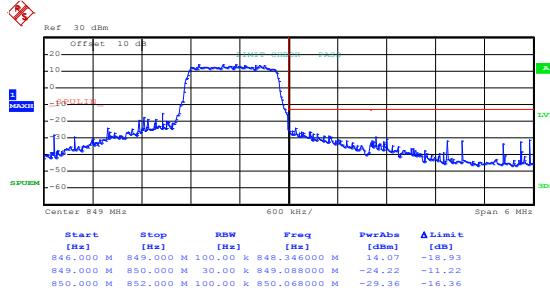
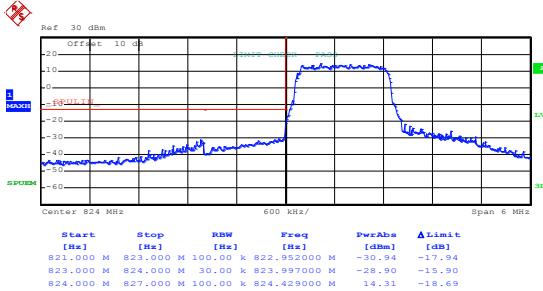
Date: 19.AUG.2019 10:30:34

Lowest channel

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

Highest channel

16QAM & RB Size 6



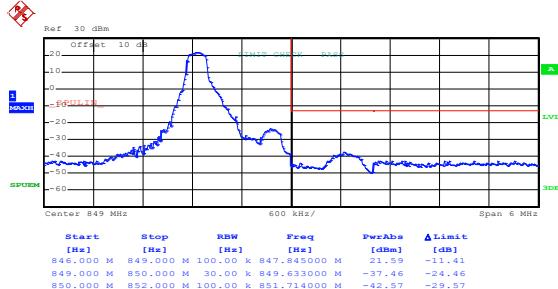
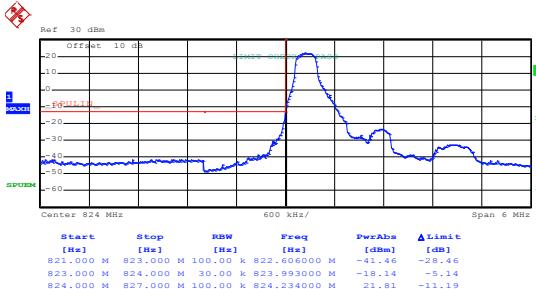
Date: 19.AUG.2019 10:30:55

Lowest channel

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

Highest channel

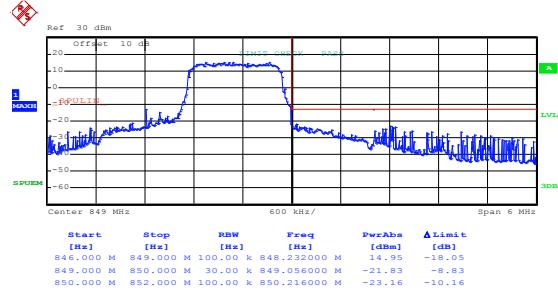
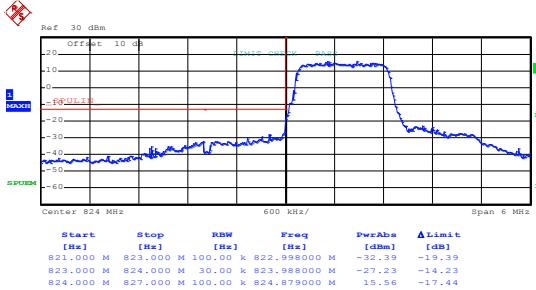
LTE Band 5, BW: 1.4MHz
QPSK & RB Size 1



Lowest channel

Highest channel

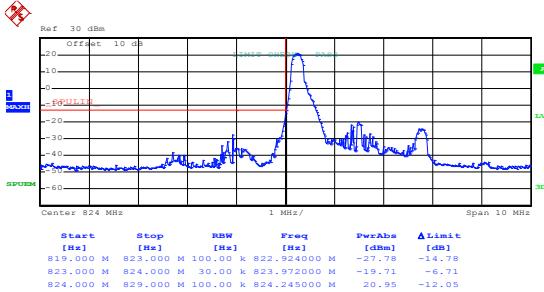
QPSK & RB Size 6



Lowest channel

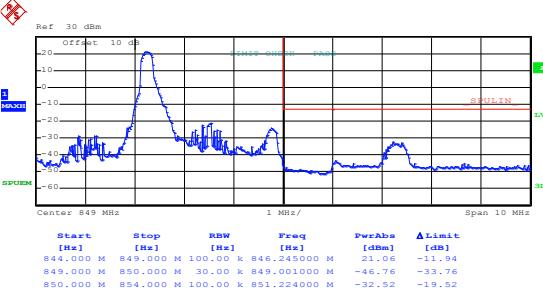
Highest channel

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



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

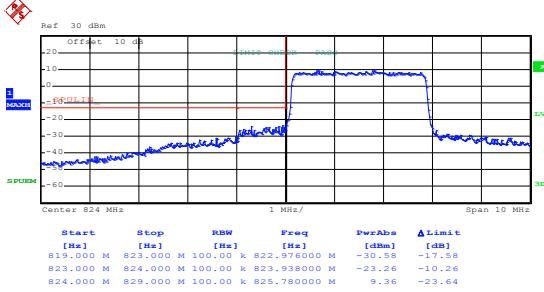
Lowest channel



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

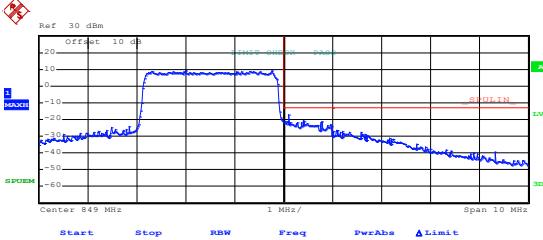
Highest channel

16QAM & RB Size 15



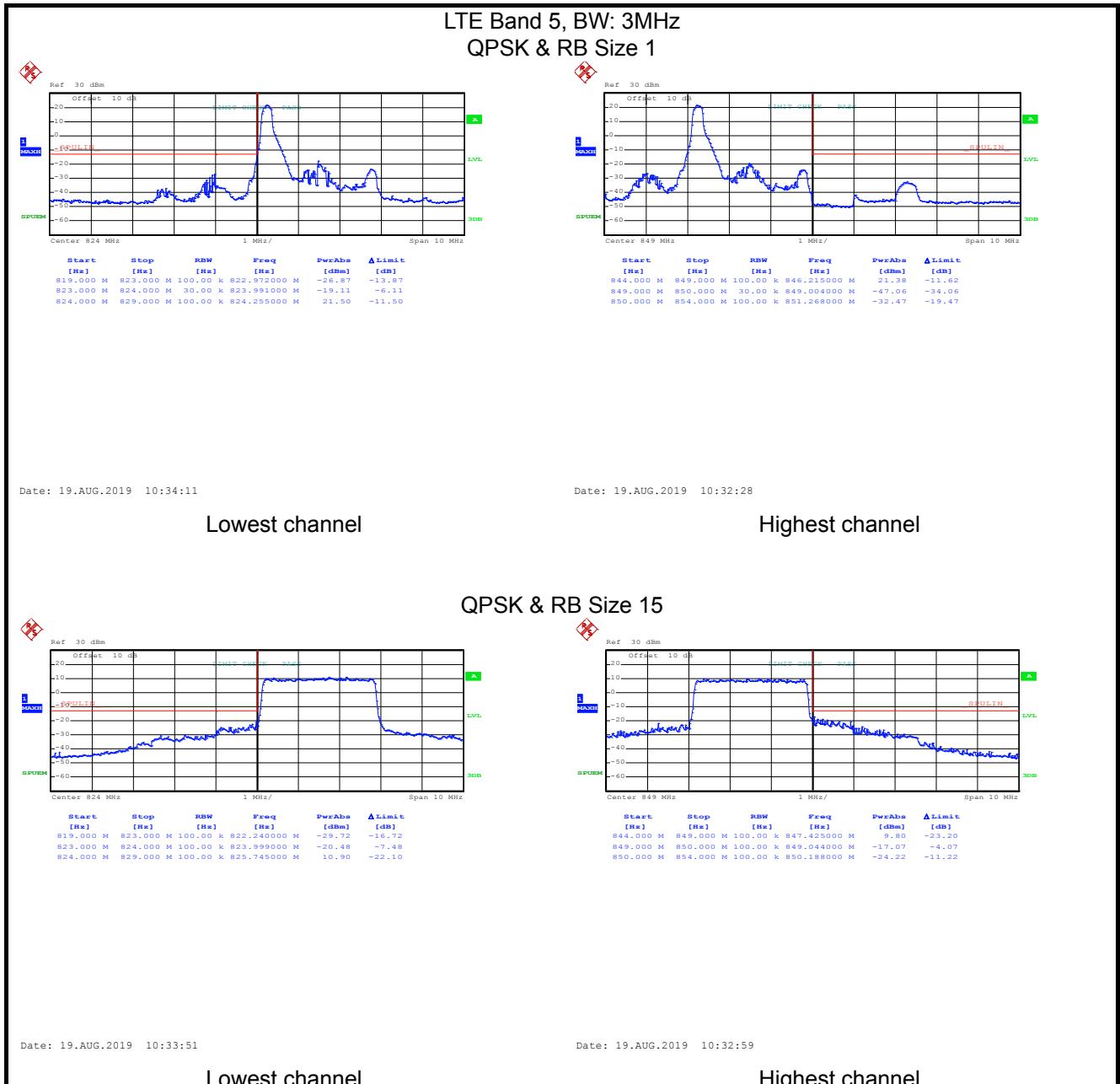
Date: 19.AUG.2019 10:33:56

Lowest channel

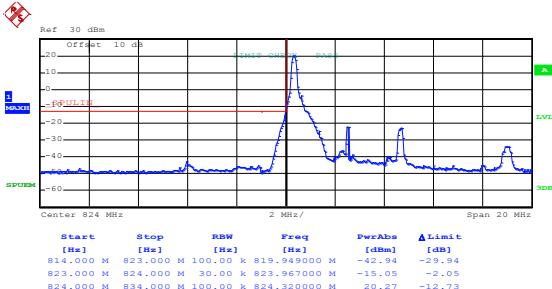


Date: 19.AUG.2019 10:33:06

Highest channel

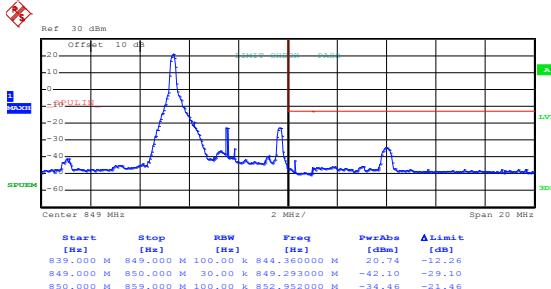


LTE Band 5, BW: 5MHz
16QAM & RB Size 1



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

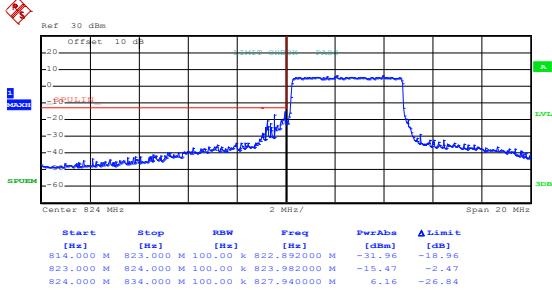
Lowest channel



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

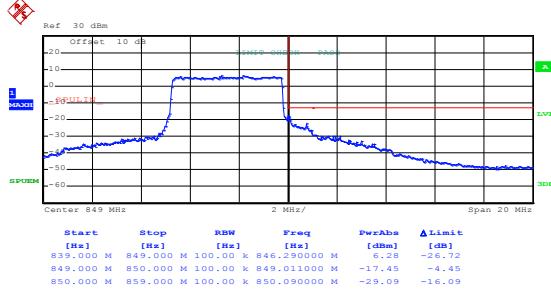
Highest channel

16QAM & RB Size 25



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

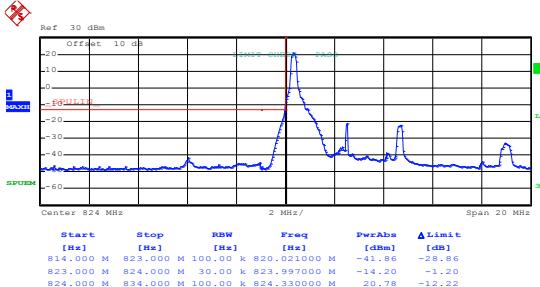
Lowest channel



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

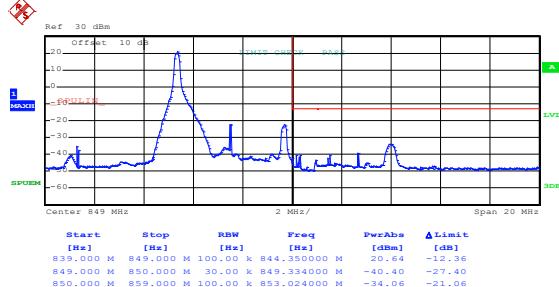
Highest channel

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



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

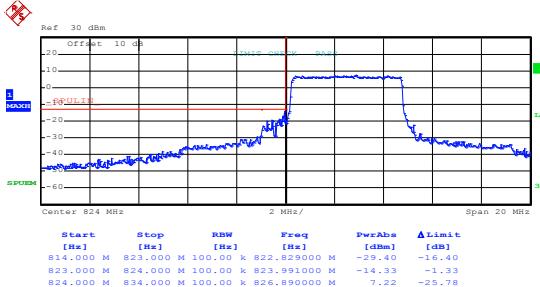
Lowest channel



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

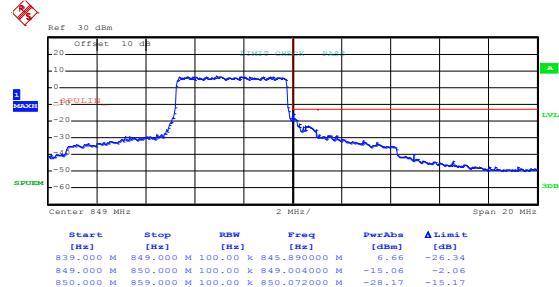
Highest channel

QPSK & RB Size 25



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

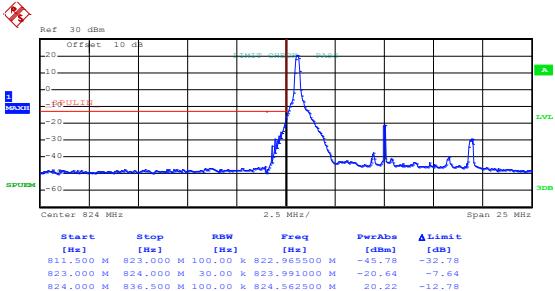
Lowest channel



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

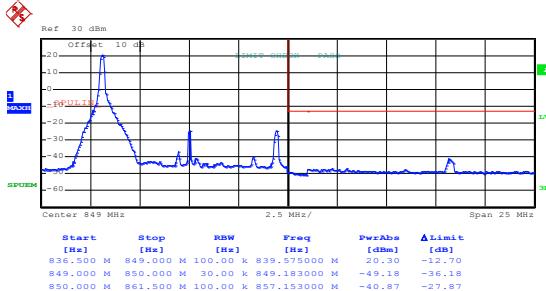
Highest channel

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



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

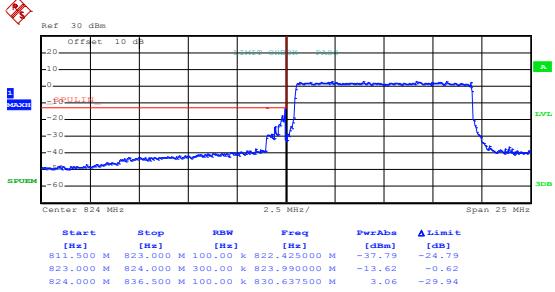
Lowest channel



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

Highest channel

16QAM & RB Size 50



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

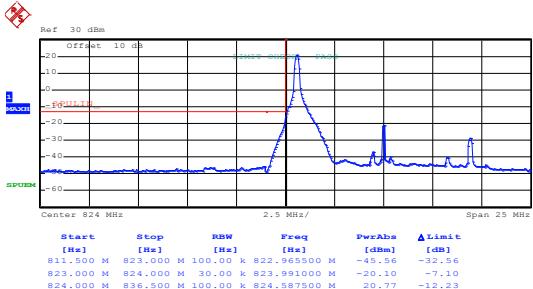
Lowest channel



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

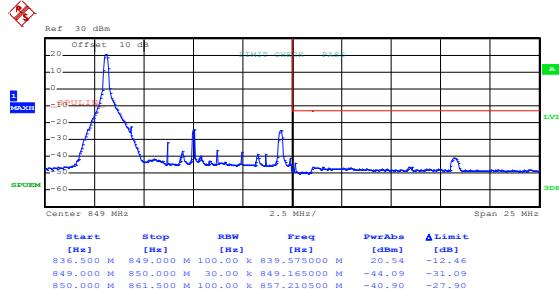
Highest channel

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



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

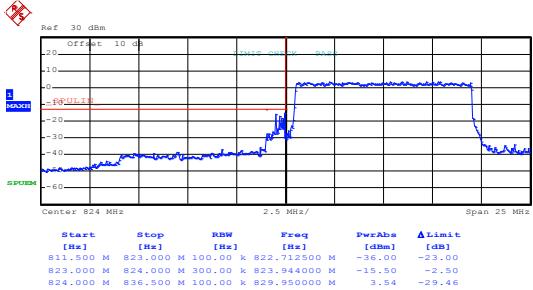
Lowest channel



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

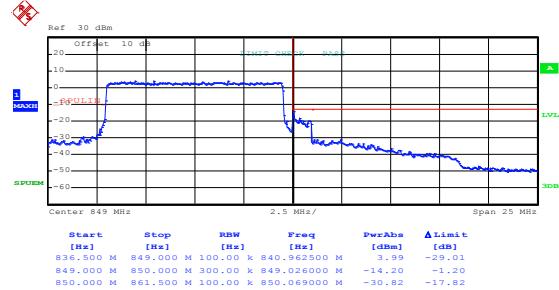
Highest channel

QPSK & RB Size 50



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

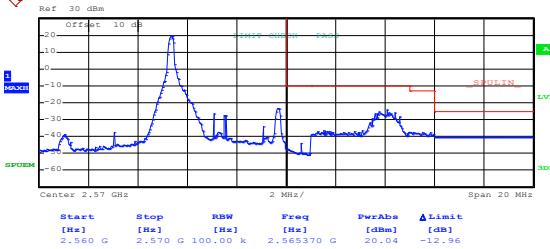
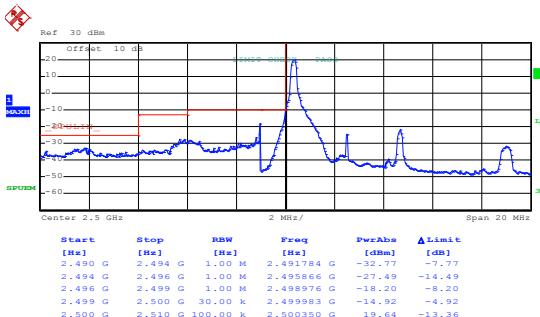
Lowest channel



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

Highest channel

LTE Band 7 part:

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

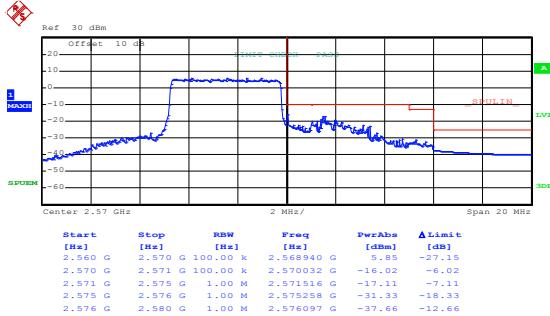
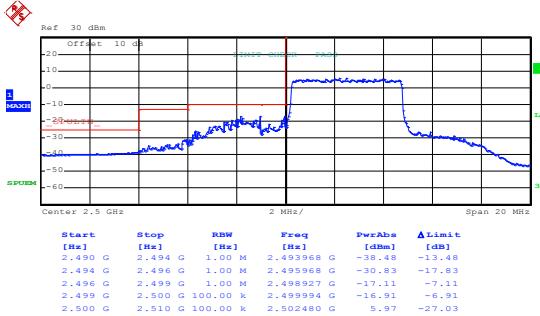
Date: 19.AUG.2019 10:14:23

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

Lowest channel

Highest channel

16QAM & RB Size 25

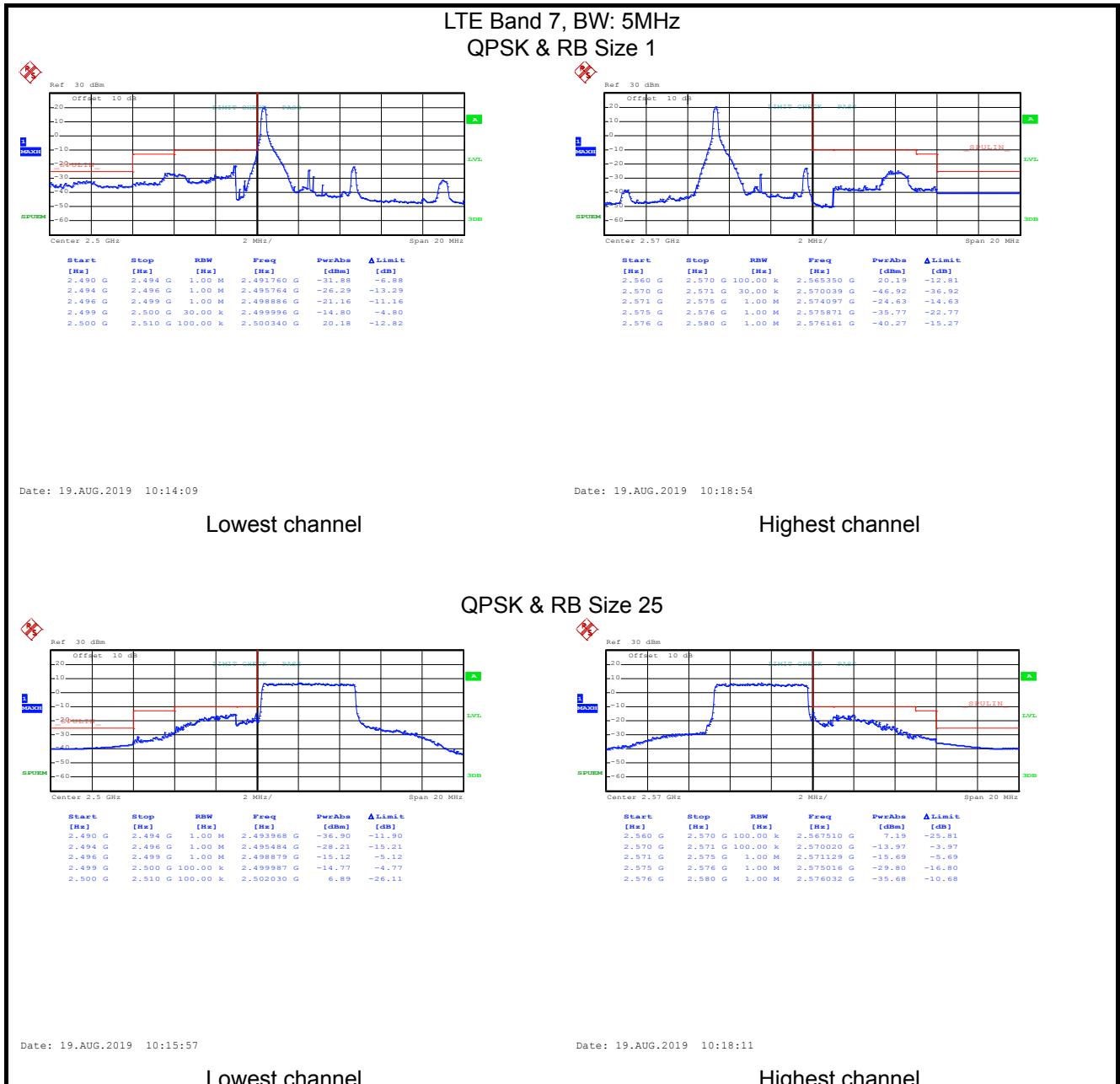


Date: 19.AUG.2019 10:16:04

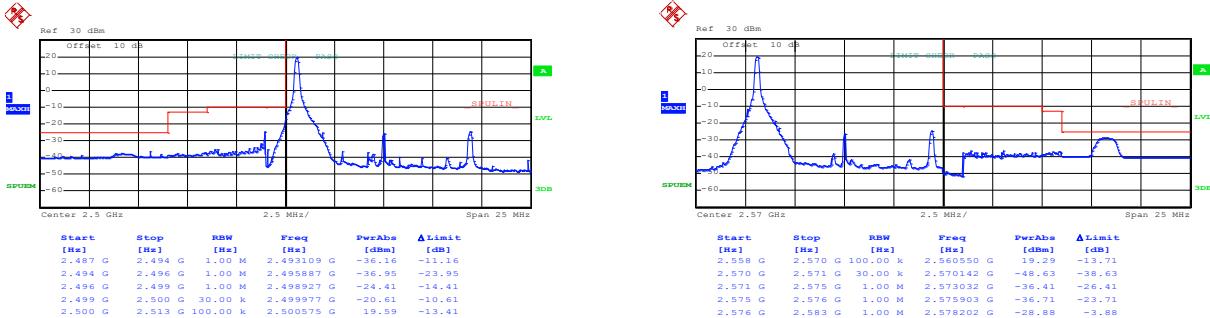
Date: 19.AUG.2019 10:18:23

Lowest channel

Highest channel



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



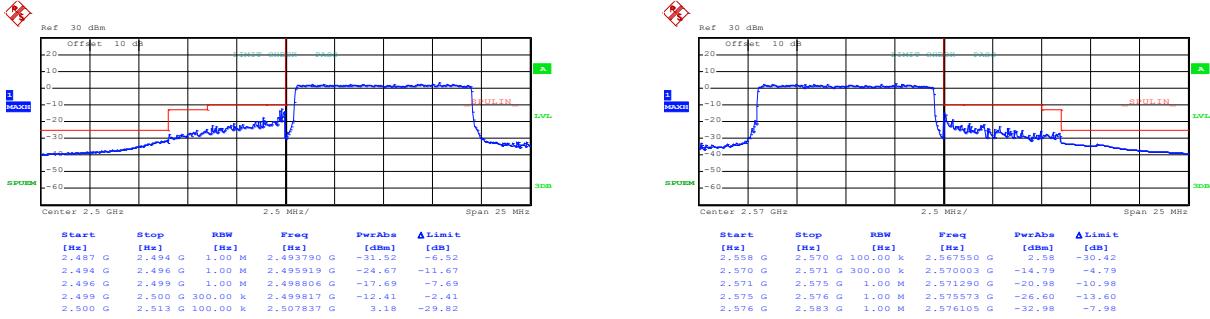
Date: 19.AUG.2019 10:23:08

Lowest channel

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

Highest channel

16QAM & RB Size 50



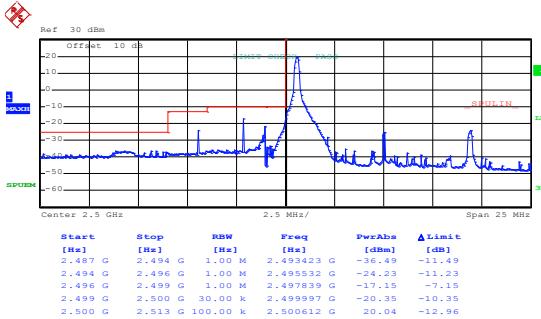
Date: 19.AUG.2019 10:22:33

Lowest channel

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

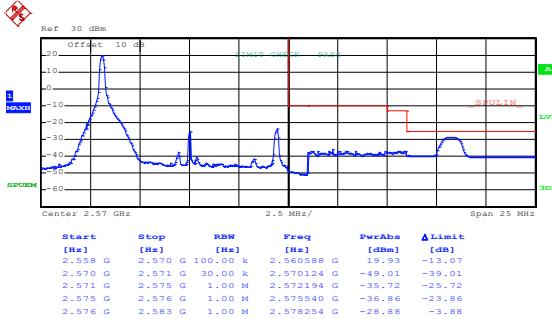
Highest channel

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



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

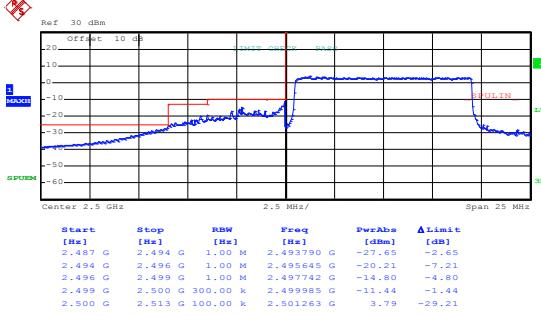
Lowest channel



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

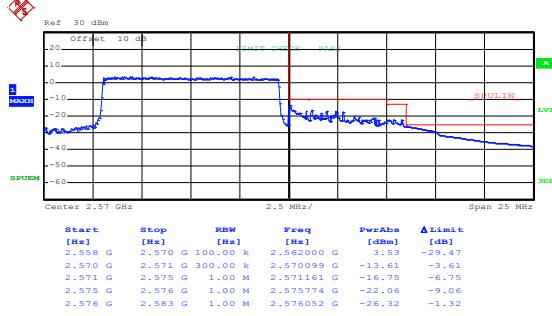
Highest channel

QPSK & RB Size 50



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

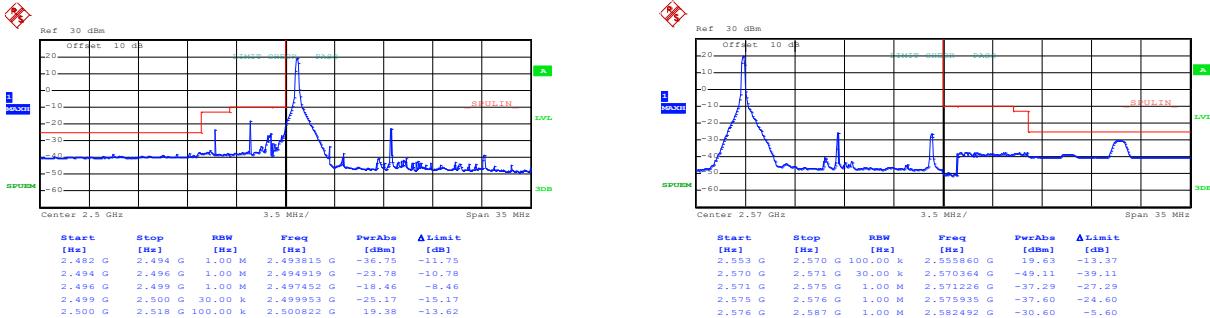
Lowest channel



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

Highest channel

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



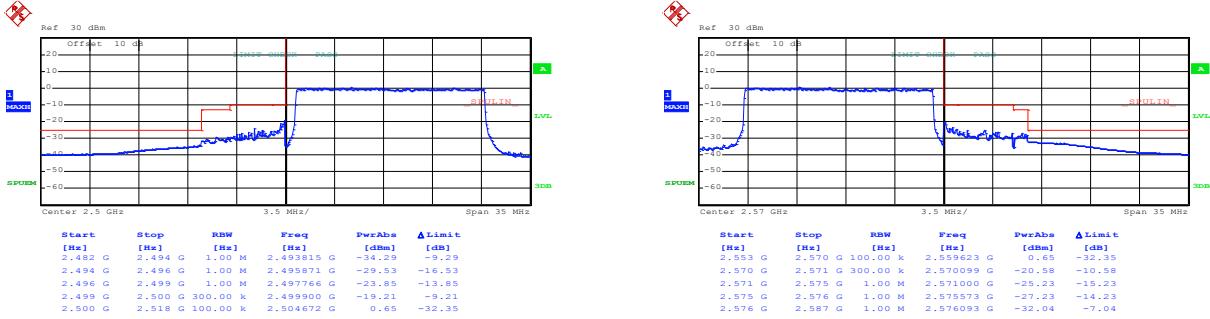
Date: 19.AUG.2019 10:24:21

Lowest channel

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

Highest channel

16QAM & RB Size 75

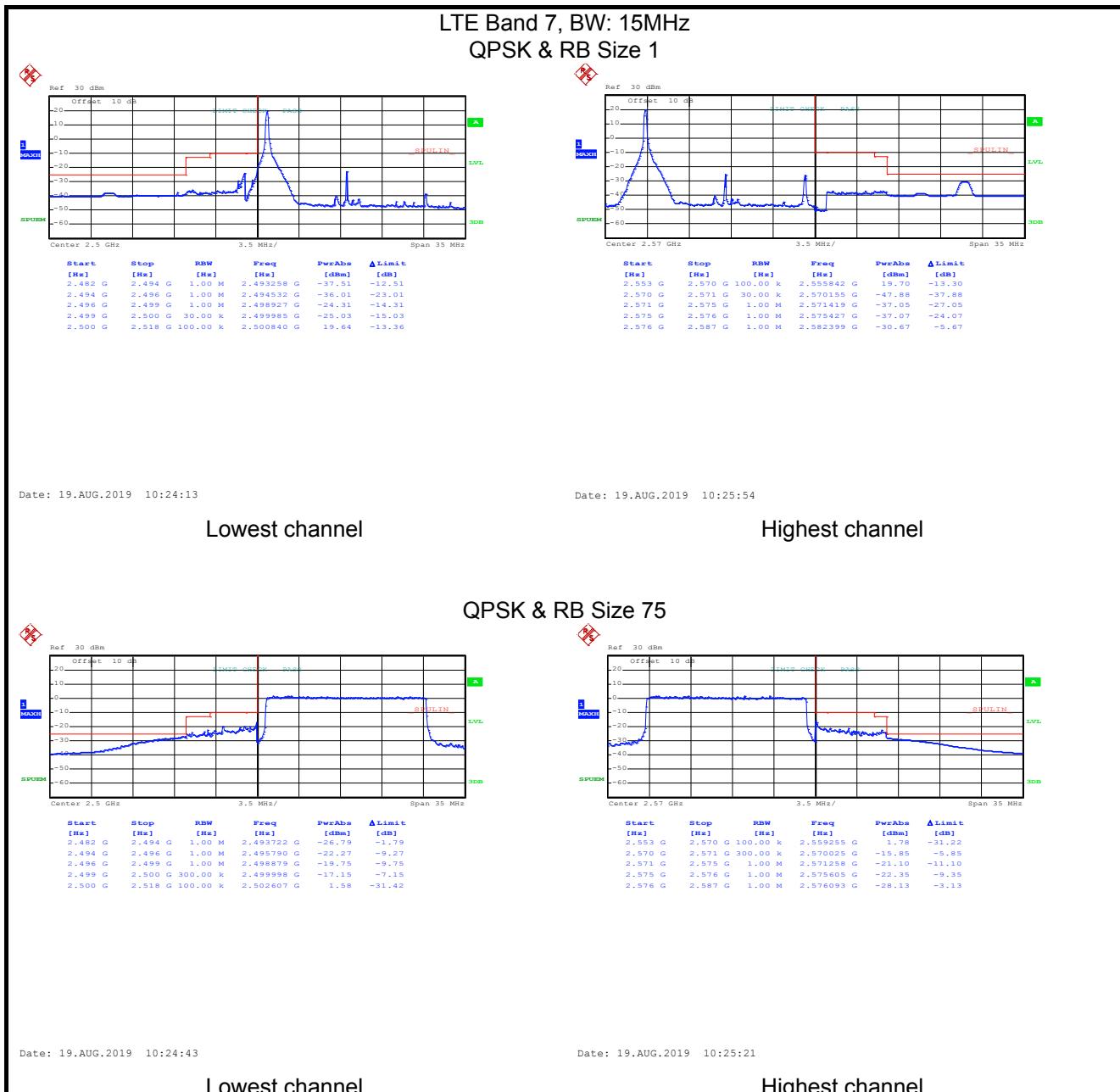


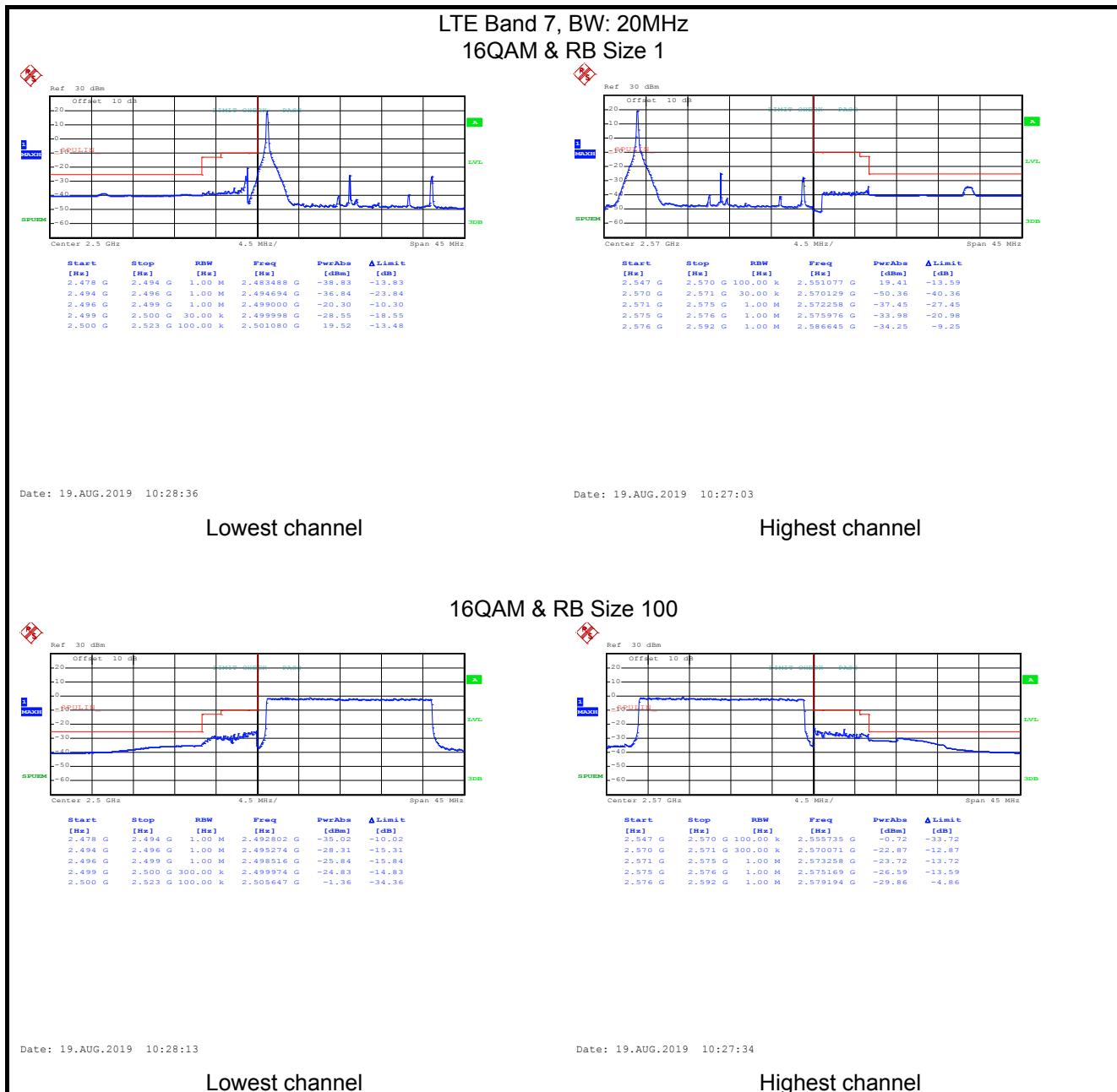
Date: 19.AUG.2019 10:24:51

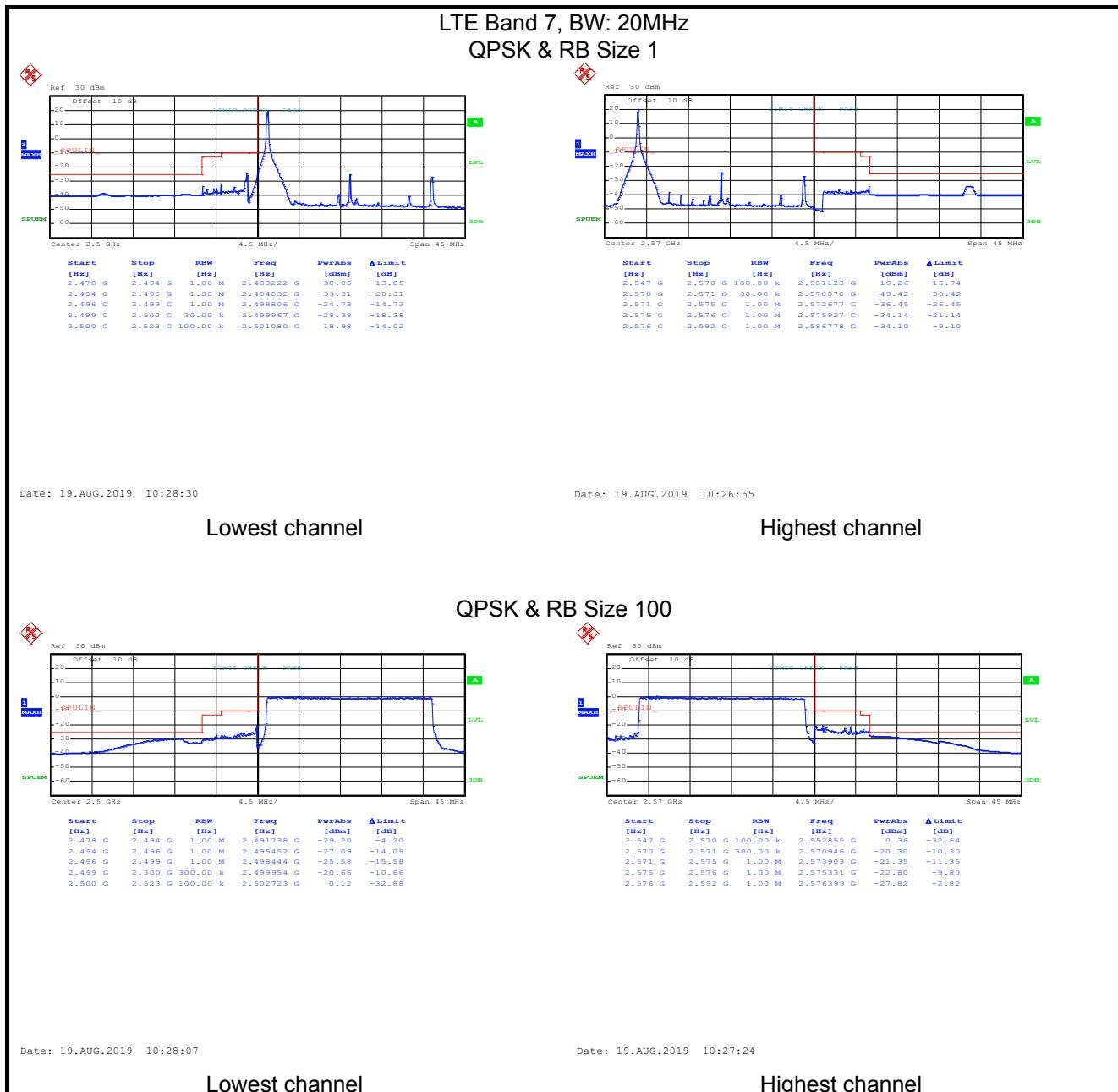
Lowest channel

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

Highest channel







6.5 Field strength of spurious radiation measurement

Test Requirement:	Part 22.917(b), Part 24.238 (a), Part 27.53(m), Part 27.53(h)
Limit:	<p>LTE Band 2 & 4 & 5: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm).</p> <p>LTE Band 7: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ 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 than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz.</p>
Test setup:	<p>Below 1GHz</p> <p>Above 1GHz</p>
Test Procedure:	<ol style="list-style-type: none"> 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. 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. 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

	was determined using the substitution method.
4.	The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – 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)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

LTE Band 2, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

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)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

LTE Band 4, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

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)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

LTE Band 5, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

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)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

LTE Band 7, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
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		
Middle Channel				
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		
Highest Channel				
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		

Note:

1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

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:	$\pm 2.5\text{ppm}$
Test setup:	<p>The diagram illustrates the test setup. A Power Source at the bottom left provides power to a central Divider. One output from the Divider goes to a Spectrum Analyzer (SA) labeled 'SA' at the bottom center. The other output from the Divider goes to a block labeled 'EUT' (Equipment Under Test) which is situated inside a rectangular box labeled 'Temperature & Humidity Chamber'. A Signal Source (SS) is connected to the SA. The connections are represented by blue lines.</p>
Test procedure:	<ol style="list-style-type: none"> 1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached
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		
QPSK					
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		
16QAM					
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		
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					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
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		
	16QAM				
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		
QPSK					
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		
	16QAM				
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		
	<i>Note: Only the worst case shown in the report.</i>				

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		
QPSK					
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		
	16QAM				
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:	$\pm 2.5\text{ppm}$
Test setup:	<p>The diagram illustrates the test setup. A Power Source provides power to a Divider. The output of the Divider connects to an External Under Test (EUT), which is placed inside a Temperature & Humidity Chamber. The chamber also receives signals from a Signal Source (SS) and a Spectrum Analyzer (SA). The SA is connected to the EUT via a divider. A red line indicates a feedback path from the EUT back to the Power Source.</p>
Test procedure:	<ol style="list-style-type: none"> Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
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		

Note: Only the worst case shown in the report.