

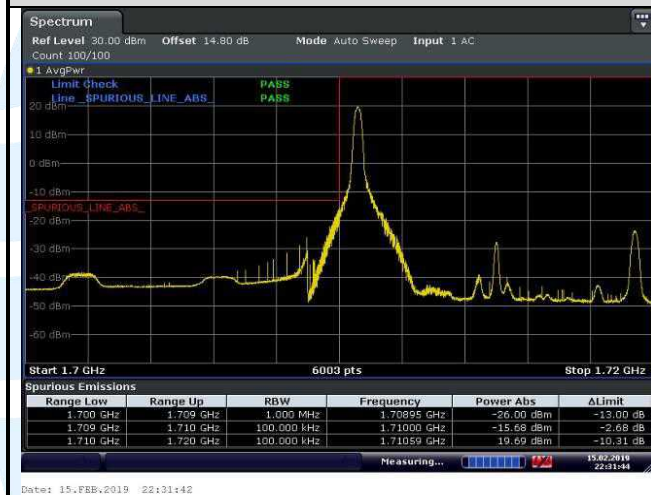


LTE Band 4 / 10 MHz / QPSK

1 RB

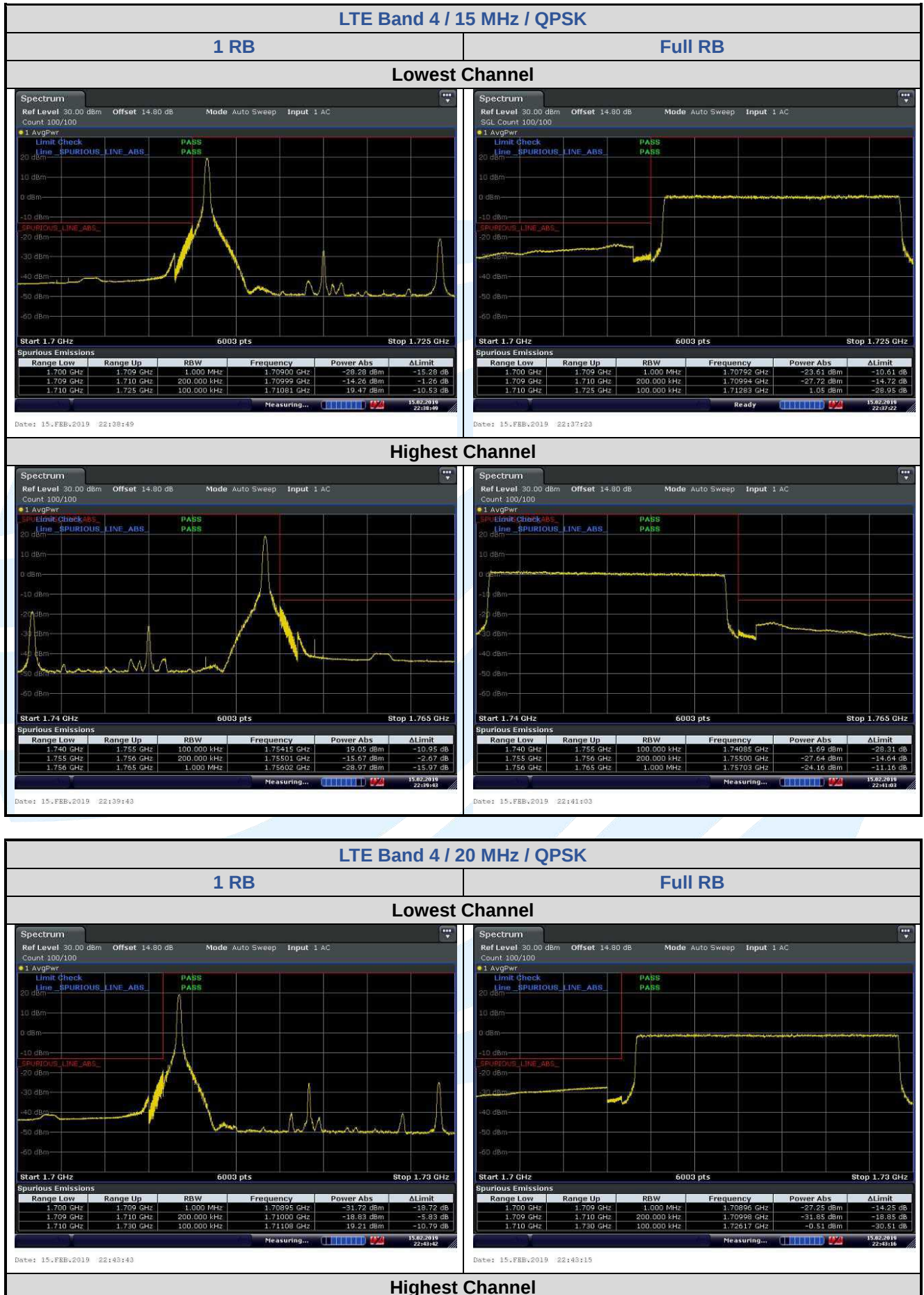
Full RB

Lowest Channel



Highest Channel



**LTE Band 4 / 20 MHz / QPSK**
1 RB
Full RB
Lowest Channel



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70895 GHz	-31.72 dBm	-18.72 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.71000 GHz	-18.83 dBm	-5.83 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.71109 GHz	19.21 dBm	-10.79 dB

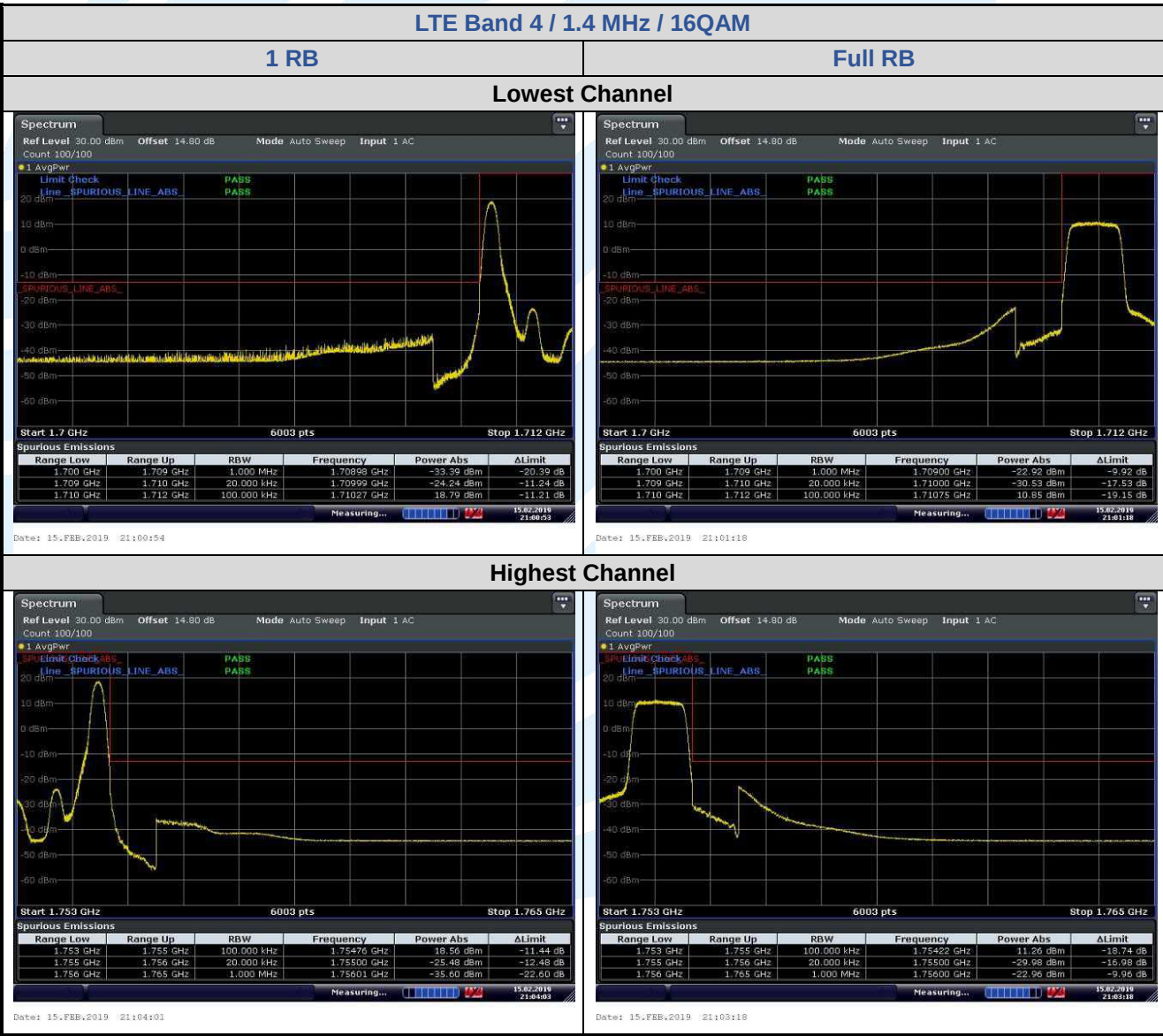
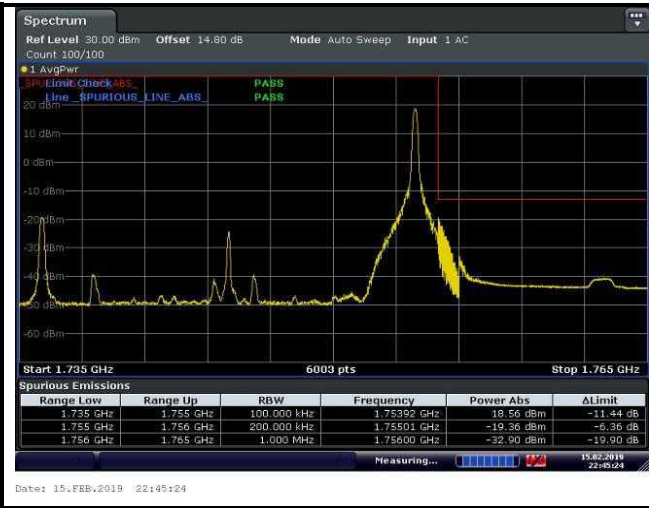
Date: 15.FEB.2019 22:43:43

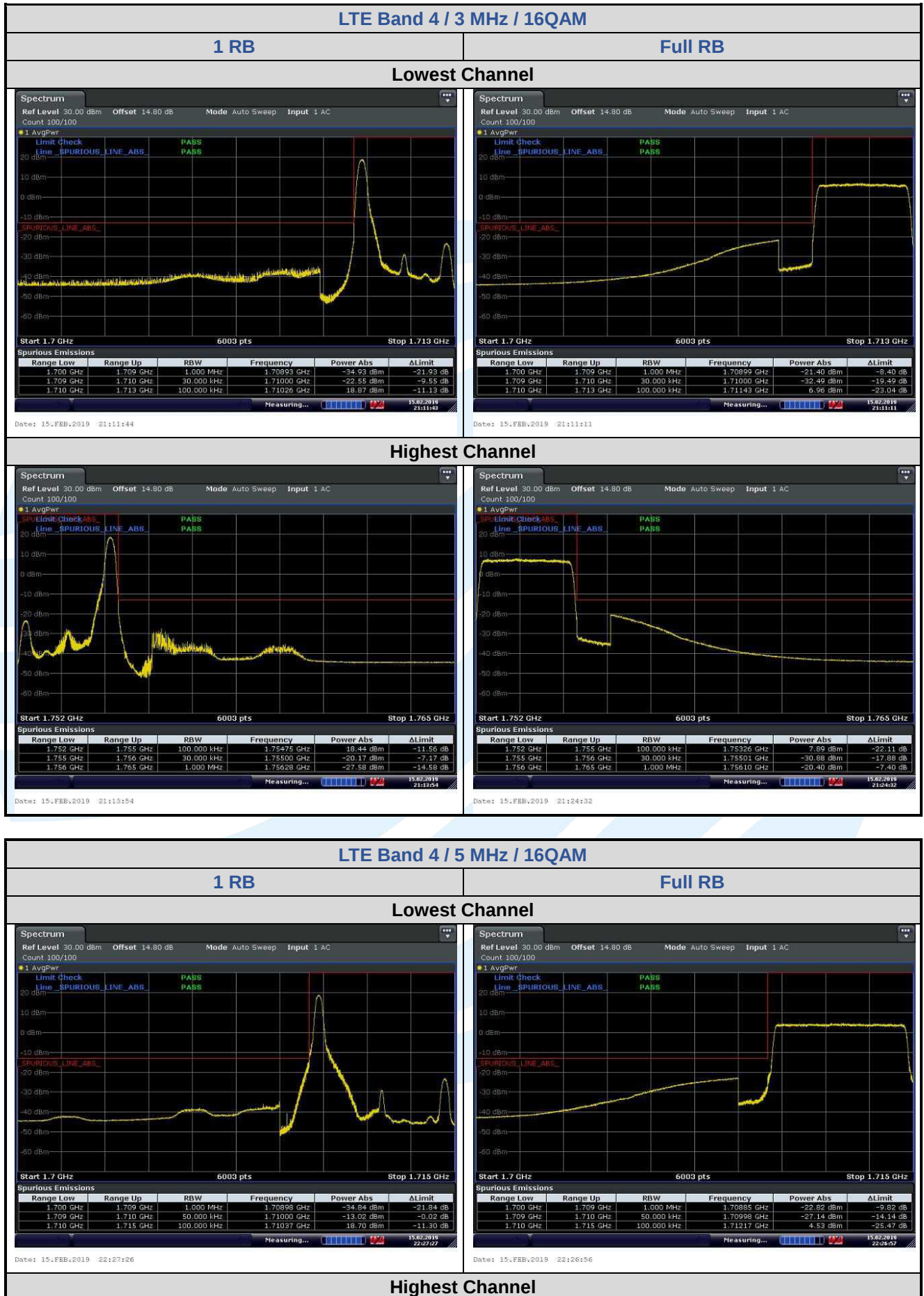


Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70896 GHz	-27.25 dBm	-14.25 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.70998 GHz	-31.85 dBm	-18.85 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.72617 GHz	-0.51 dBm	-30.51 dB

Date: 15.FEB.2019 22:43:15

Highest Channel





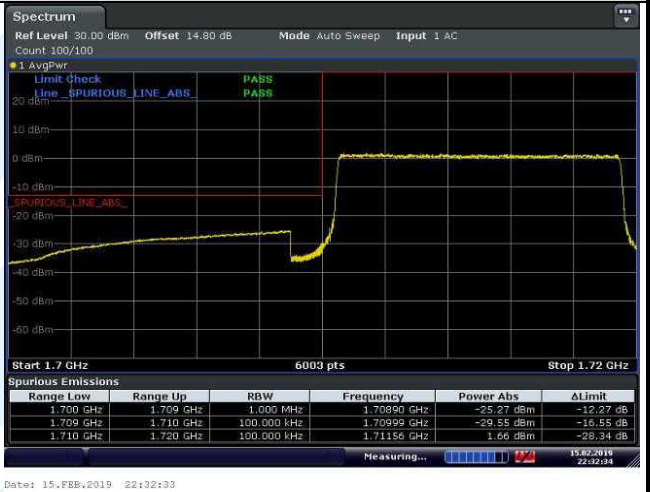
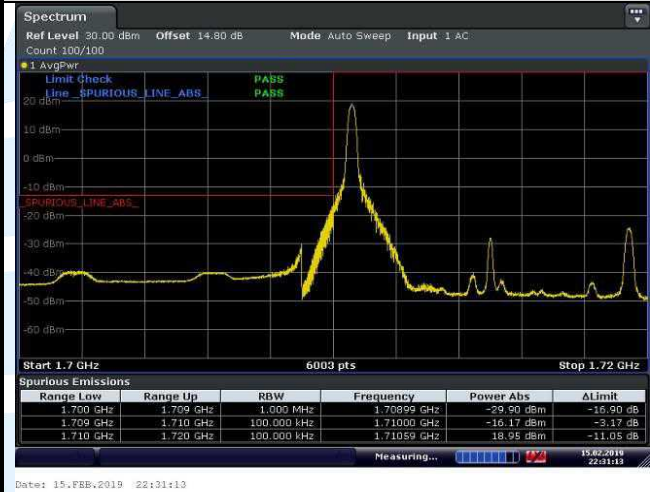


LTE Band 4 / 10 MHz / 16QAM

1 RB

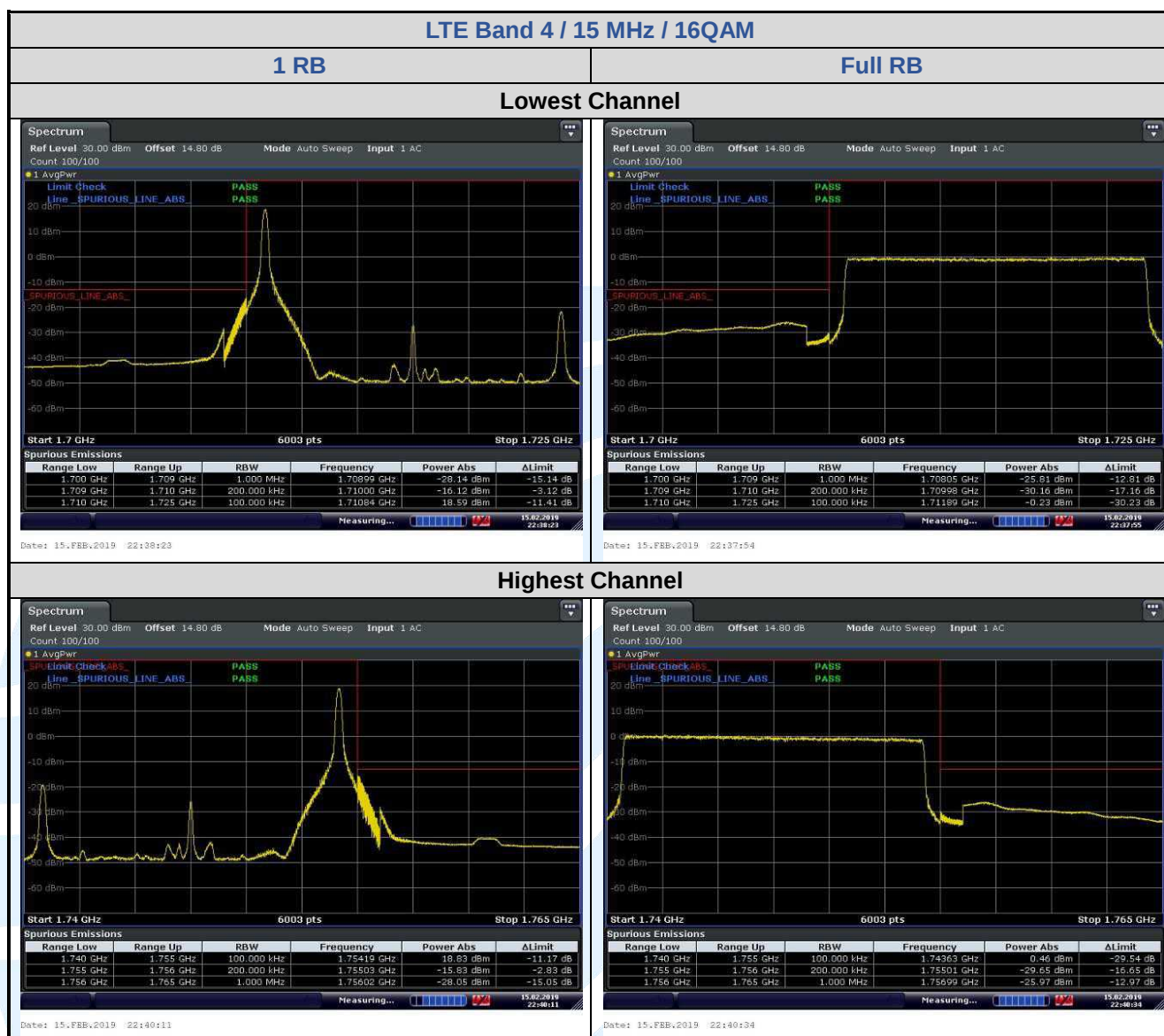
Full RB

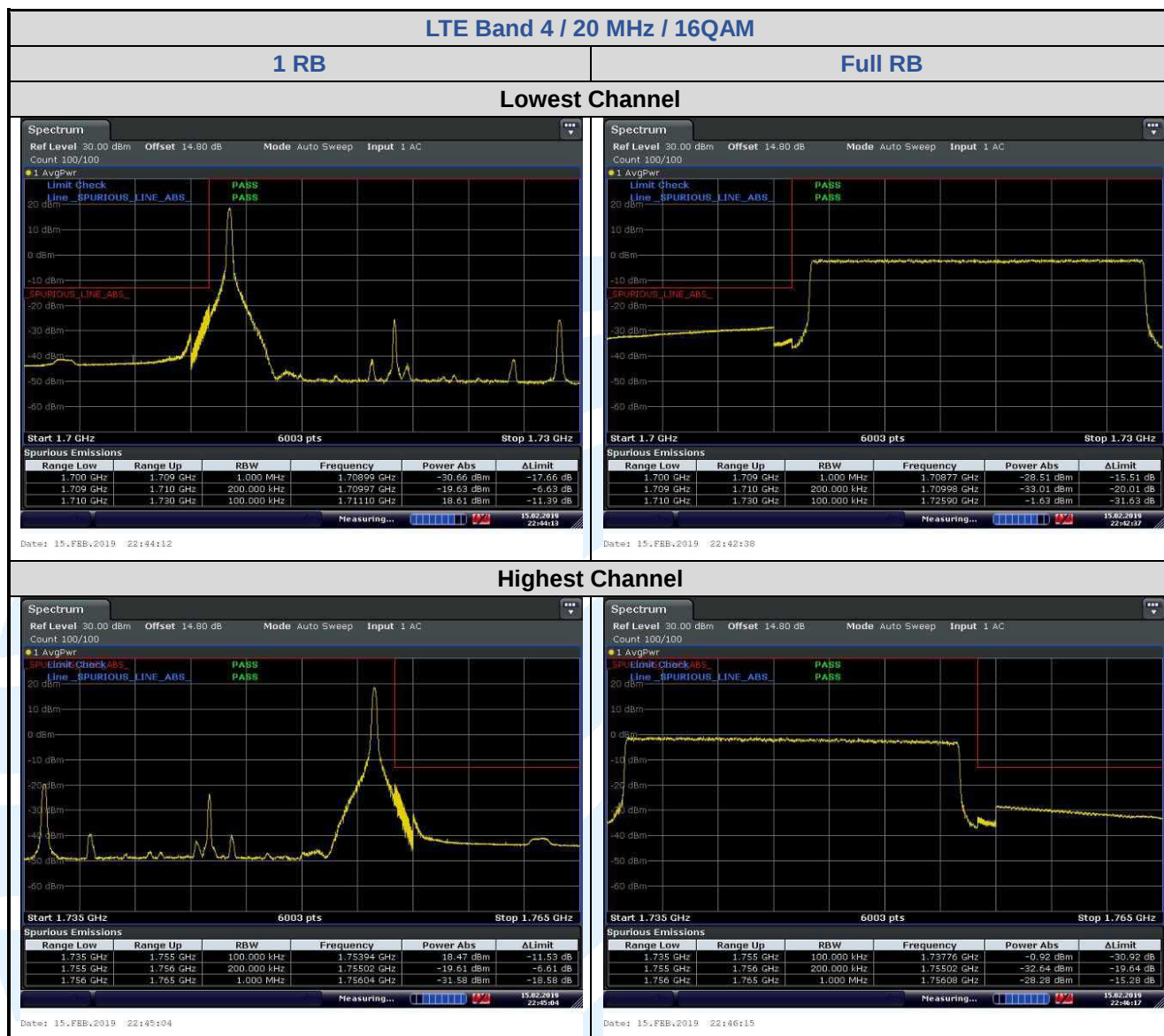
Lowest Channel



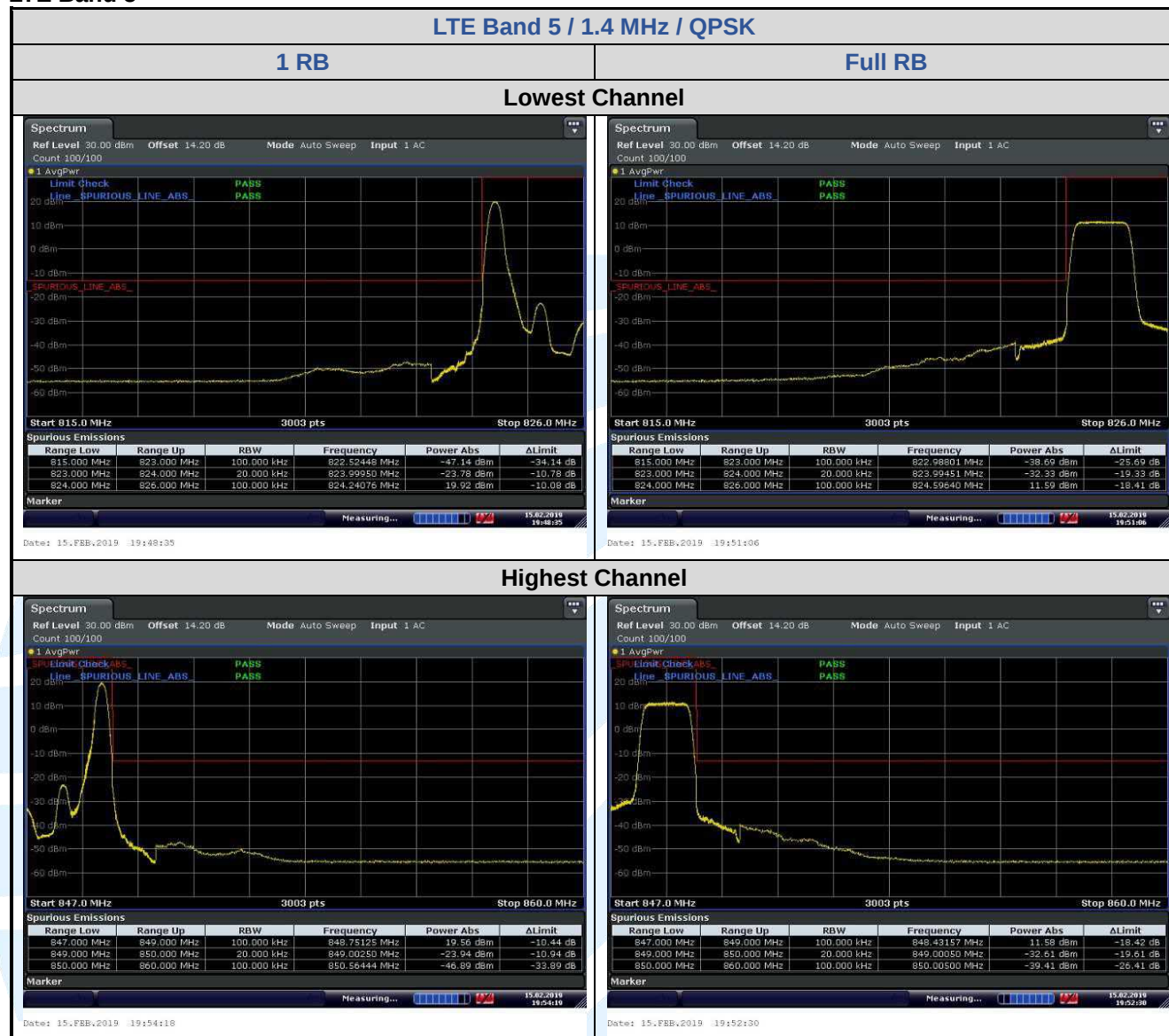
Highest Channel

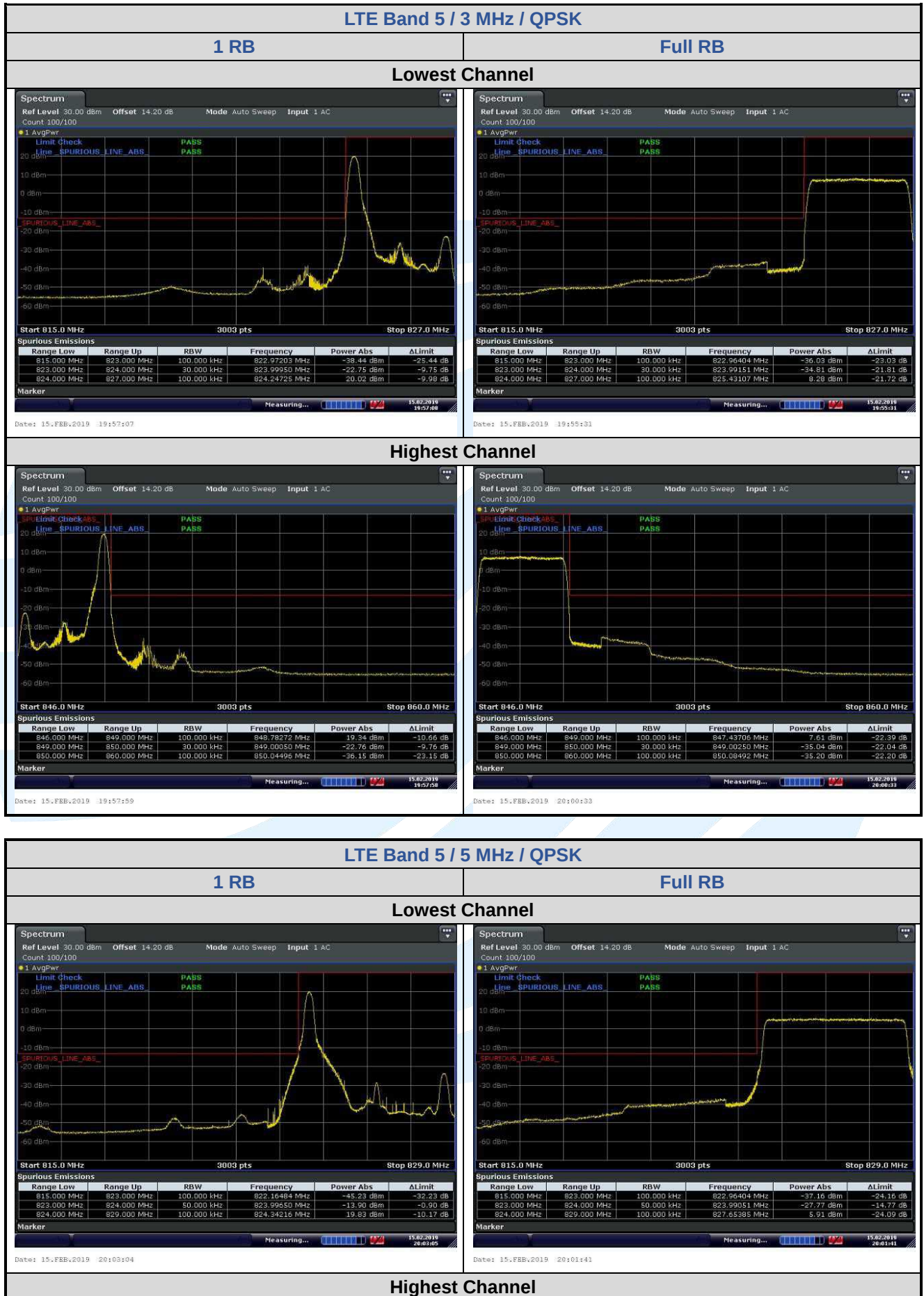






LTE Band 5



**LTE Band 5 / 5 MHz / QPSK**
1 RB
Full RB
Lowest Channel



Start 815.0 MHz Stop 829.0 MHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.16484 MHz	-45.23 dBm	-32.23 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99650 MHz	-13.90 dBm	-0.90 dB
824.000 MHz	829.000 MHz	100.000 kHz	824.34216 MHz	19.83 dBm	-10.17 dB

Date: 15.FEB.2019 20:03:04

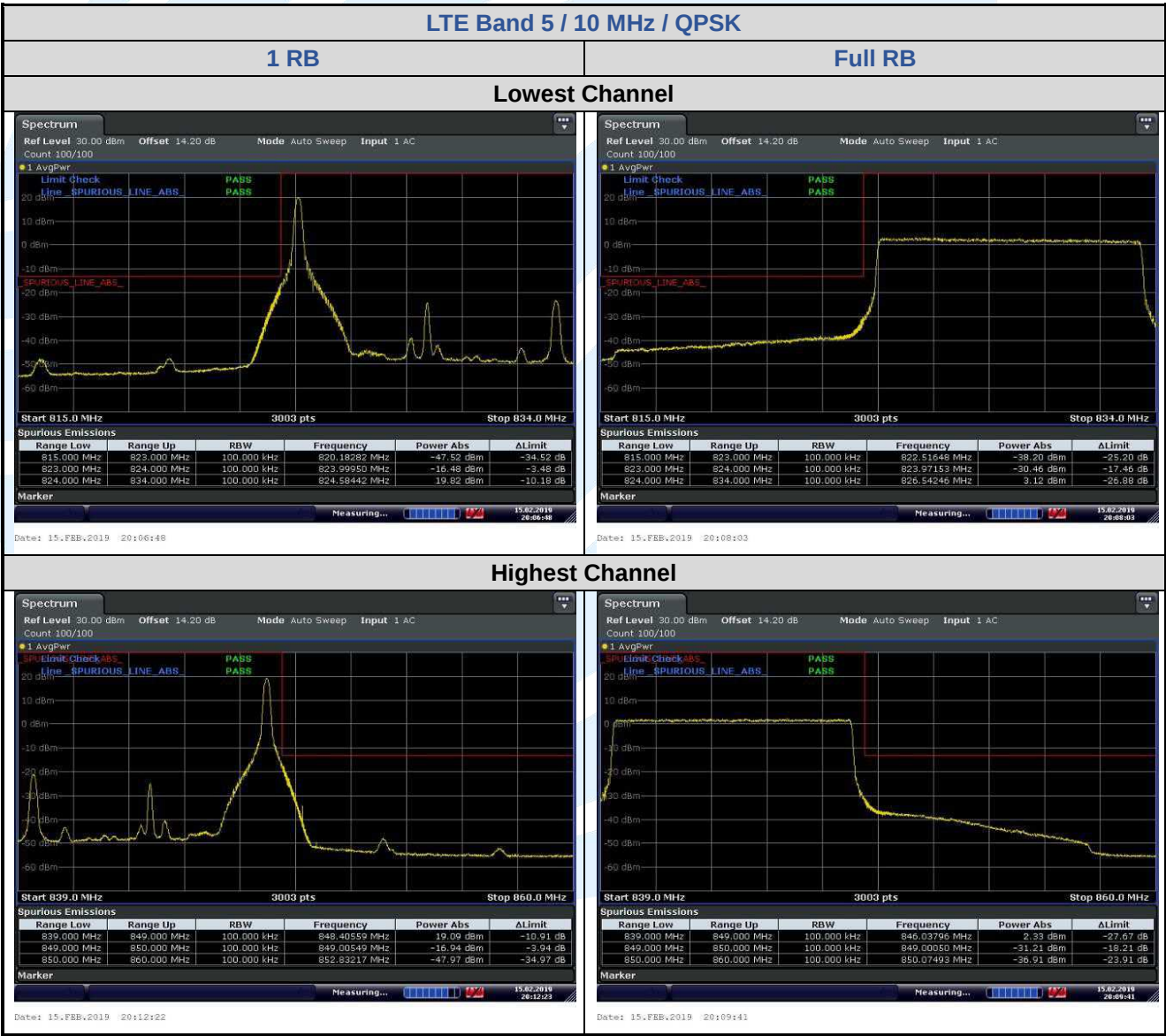
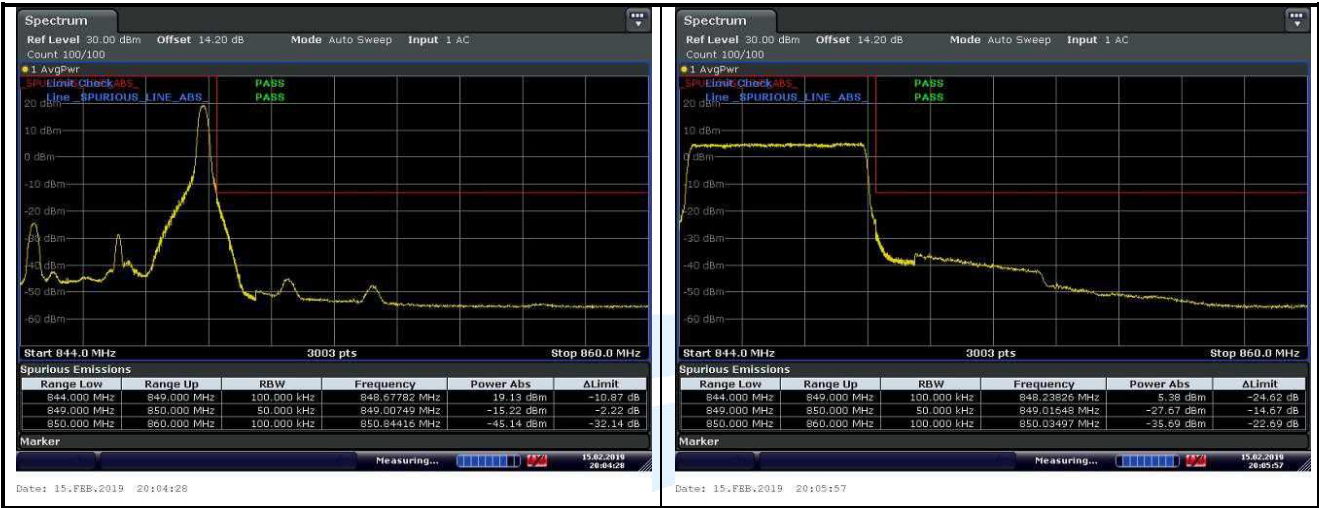


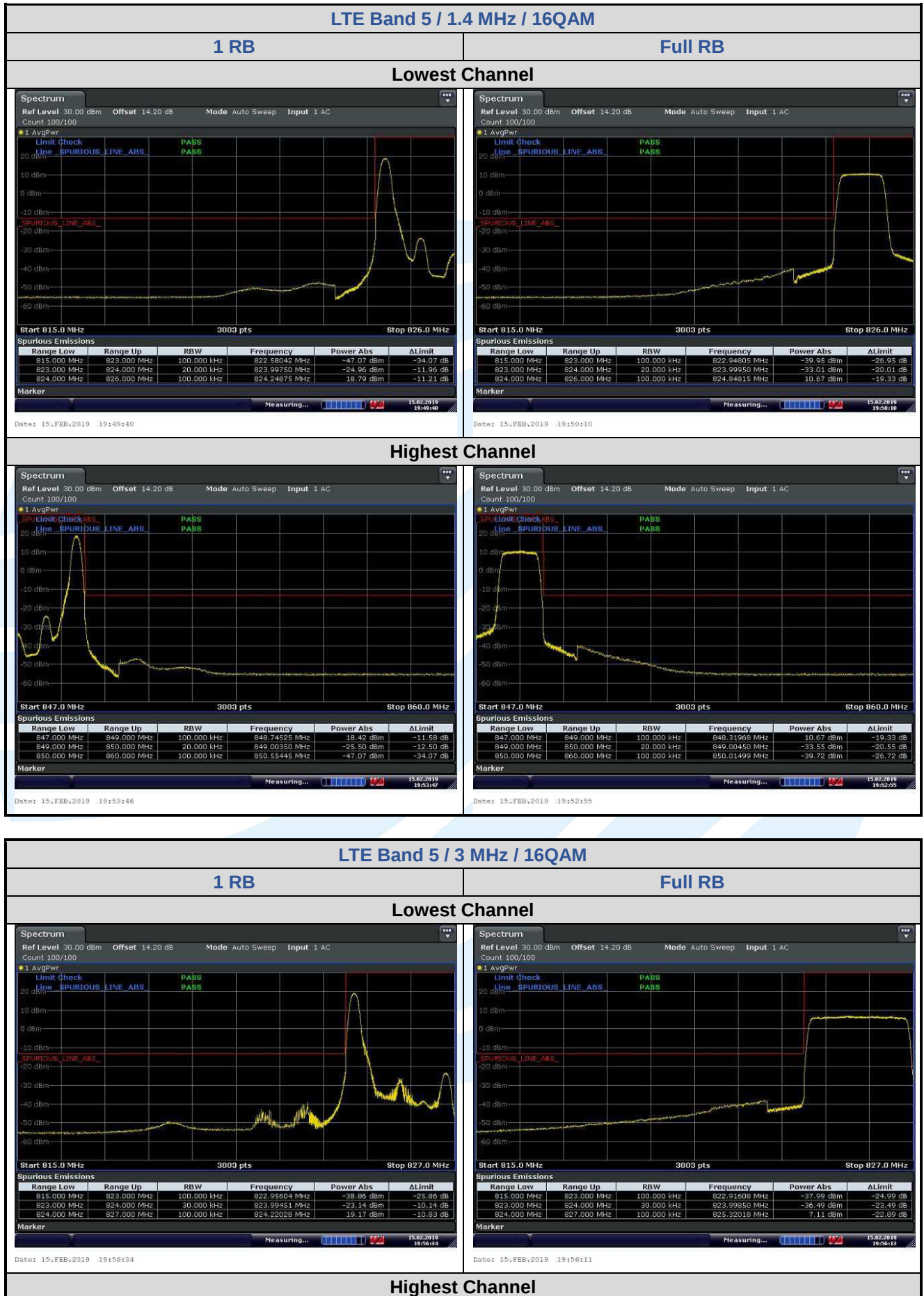
Start 815.0 MHz Stop 829.0 MHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.96404 MHz	-37.16 dBm	-24.16 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99051 MHz	-27.77 dBm	-14.77 dB
824.000 MHz	829.000 MHz	100.000 kHz	827.65385 MHz	5.91 dBm	-24.09 dB

Date: 15.FEB.2019 20:01:41

Highest Channel

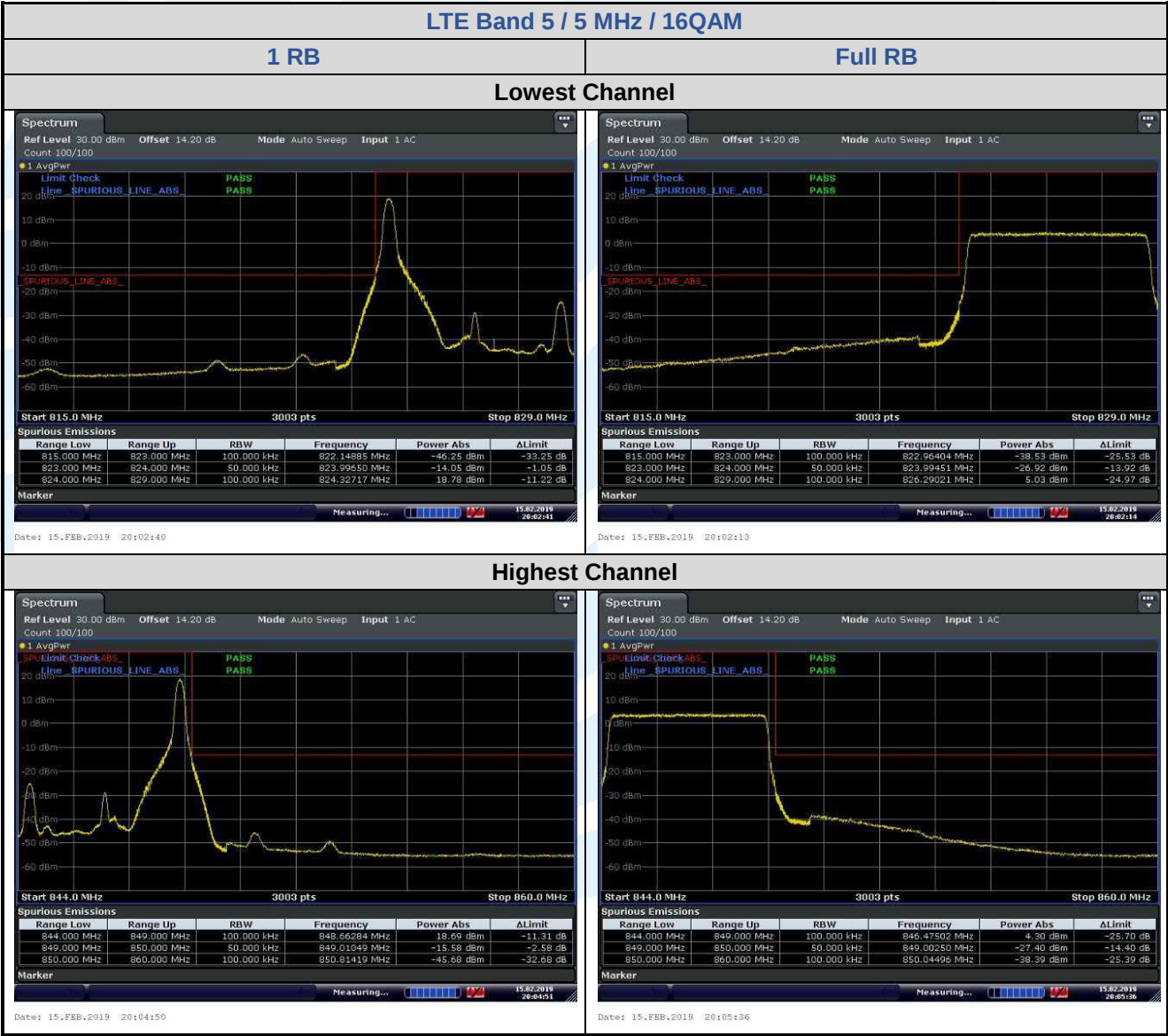


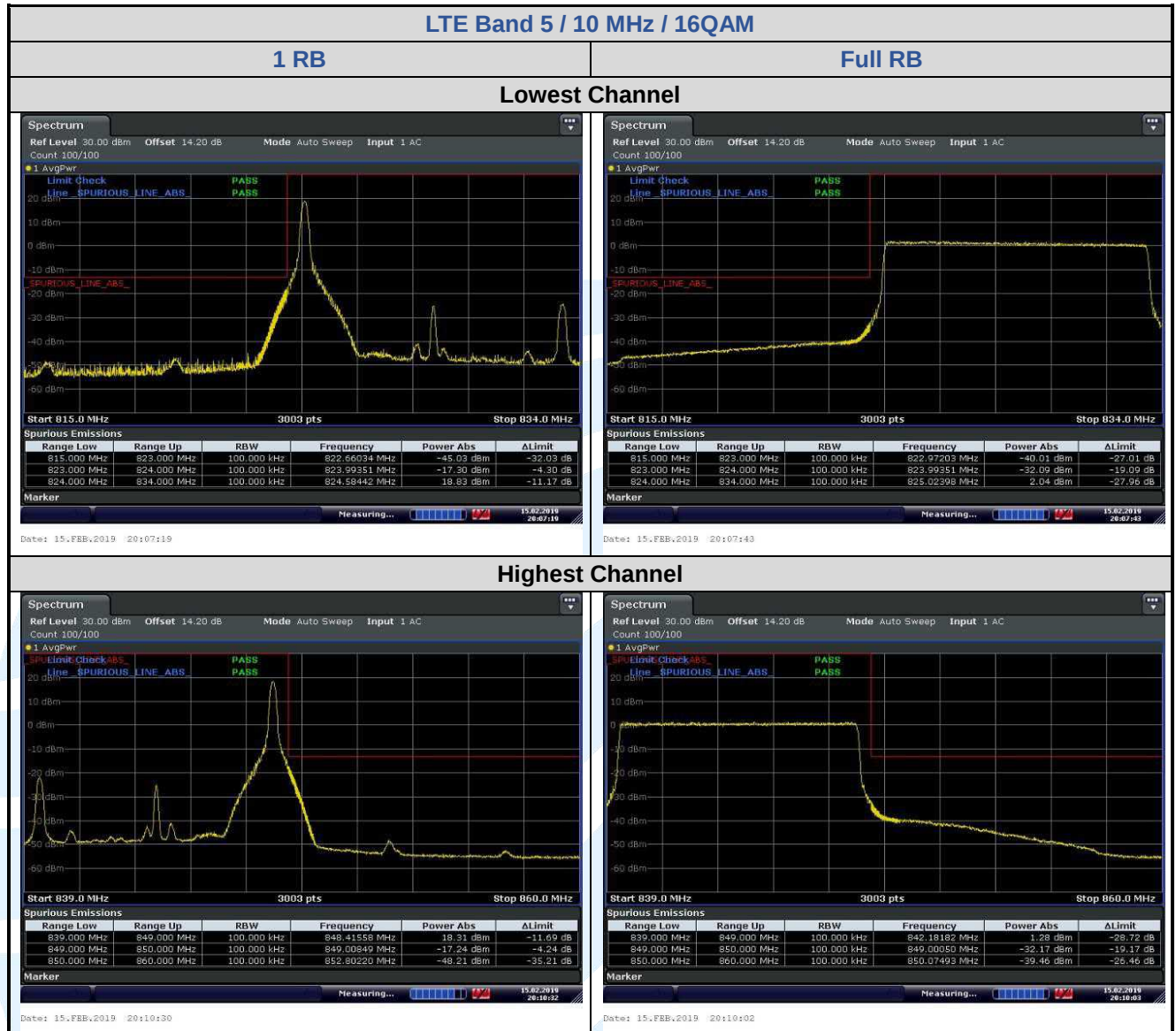

LTE Band 5 / 3 MHz / 16QAM
1 RB
Full RB
Lowest Channel

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.95604 MHz	-38.86 dBm	-25.86 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99451 MHz	-23.14 dBm	-10.14 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.22028 MHz	19.17 dBm	-10.83 dB

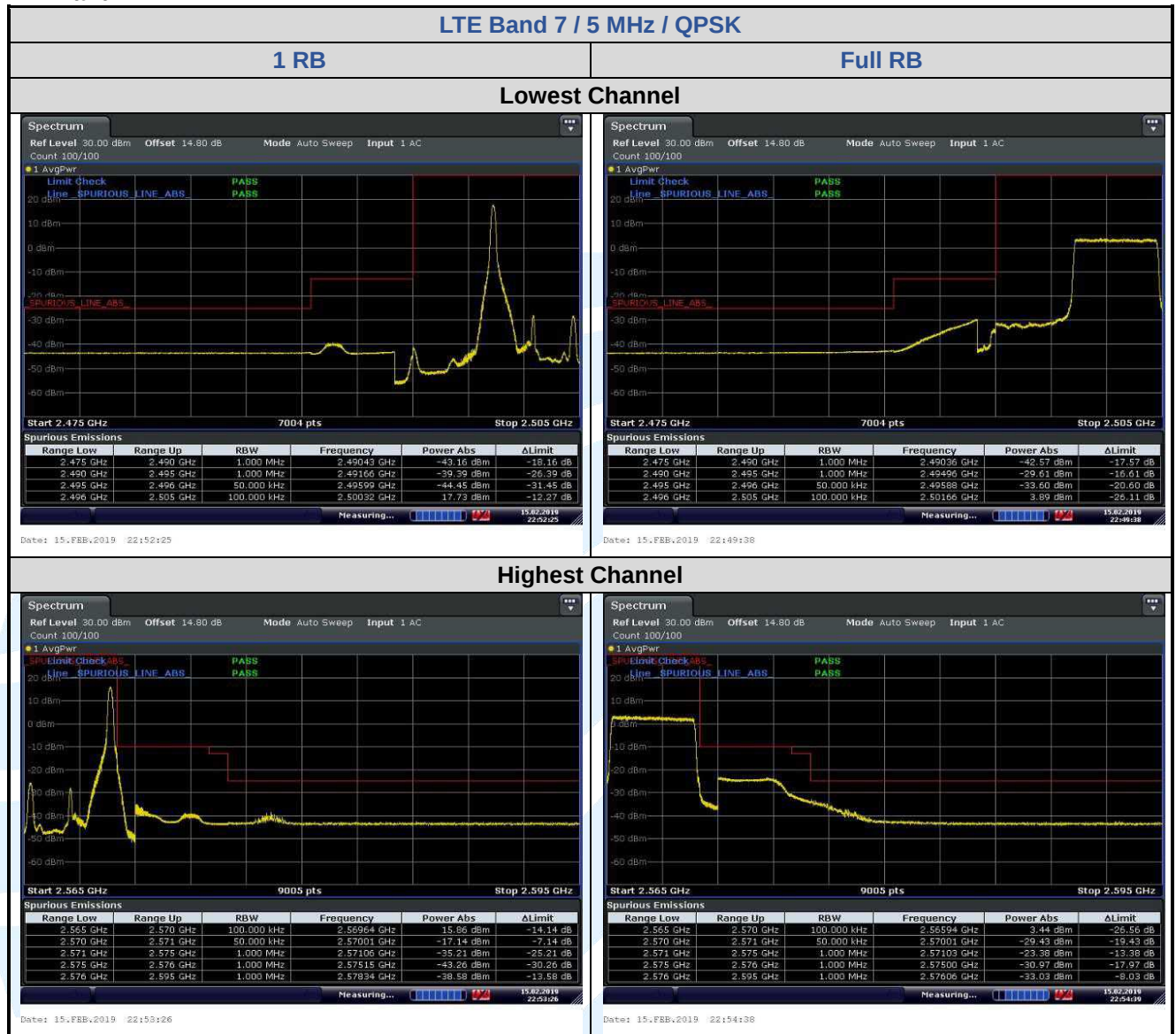
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.91608 MHz	-37.99 dBm	-24.99 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99850 MHz	-36.49 dBm	-23.49 dB
824.000 MHz	827.000 MHz	100.000 kHz	825.32018 MHz	7.11 dBm	-22.89 dB

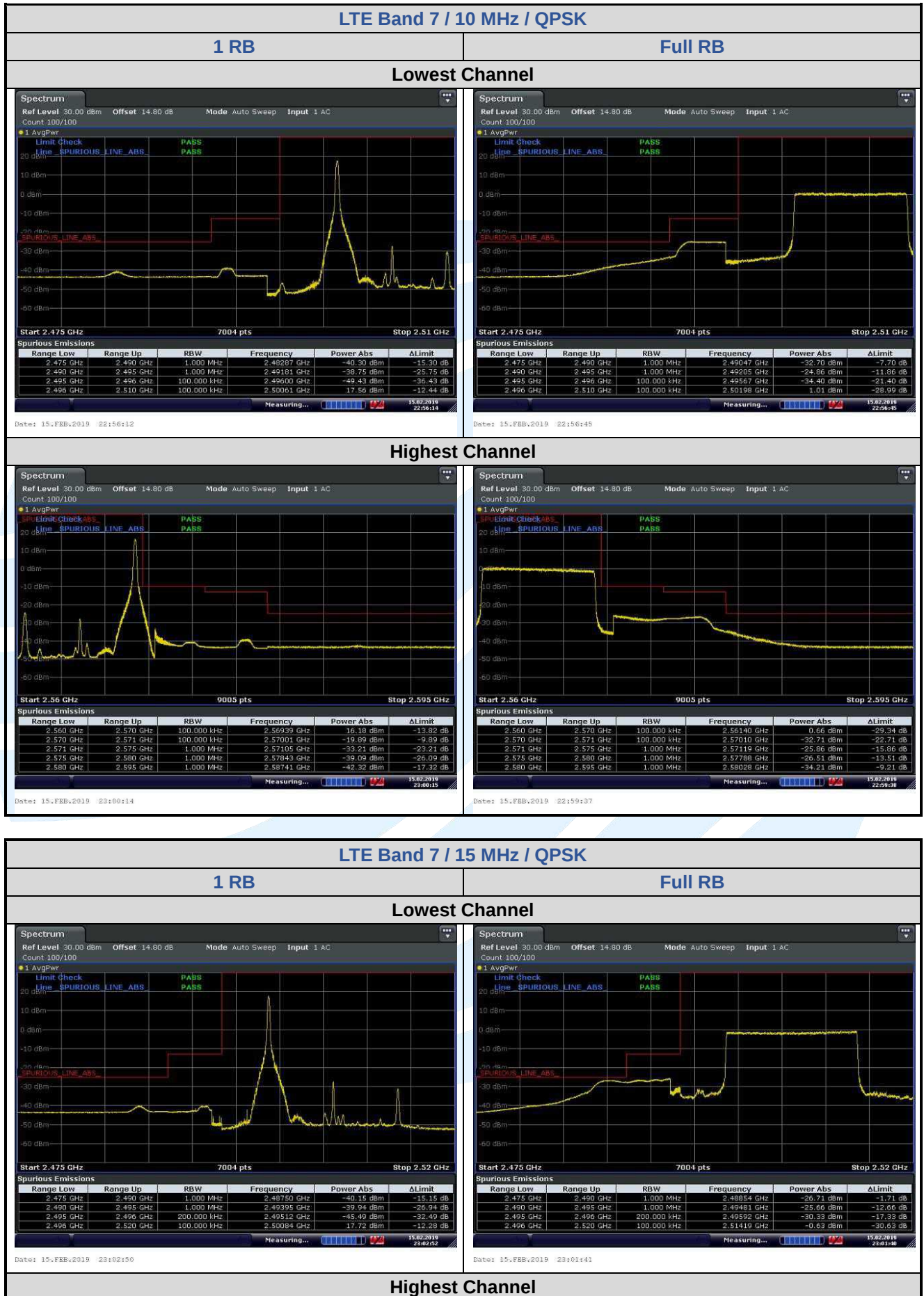
Highest Channel





LTE Band 7




LTE Band 7 / 15 MHz / QPSK
1 RB
Full RB
Lowest Channel

Spectrum

Ref Level 30.00 dBm Offset 14.80 dB Mode Auto Sweep Input 1 AC

Count 100/100

1 AvgPwr

Limit Check PASS

Line SPURIOUS LINE ABS PASS

Start 2.475 GHz 7004 pts Stop 2.52 GHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48750 GHz	-40.15 dBm	-15.15 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49395 GHz	-39.94 dBm	-26.94 dB
2.495 GHz	2.496 GHz	200.000 kHz	2.49512 GHz	-45.49 dBm	-32.49 dB
2.496 GHz	2.520 GHz	100.000 kHz	2.50084 GHz	17.72 dBm	-12.28 dB

Date: 15.FEB.2019 23:02:50

Spectrum

Ref Level 30.00 dBm Offset 14.80 dB Mode Auto Sweep Input 1 AC

Count 100/100

1 AvgPwr

Limit Check PASS

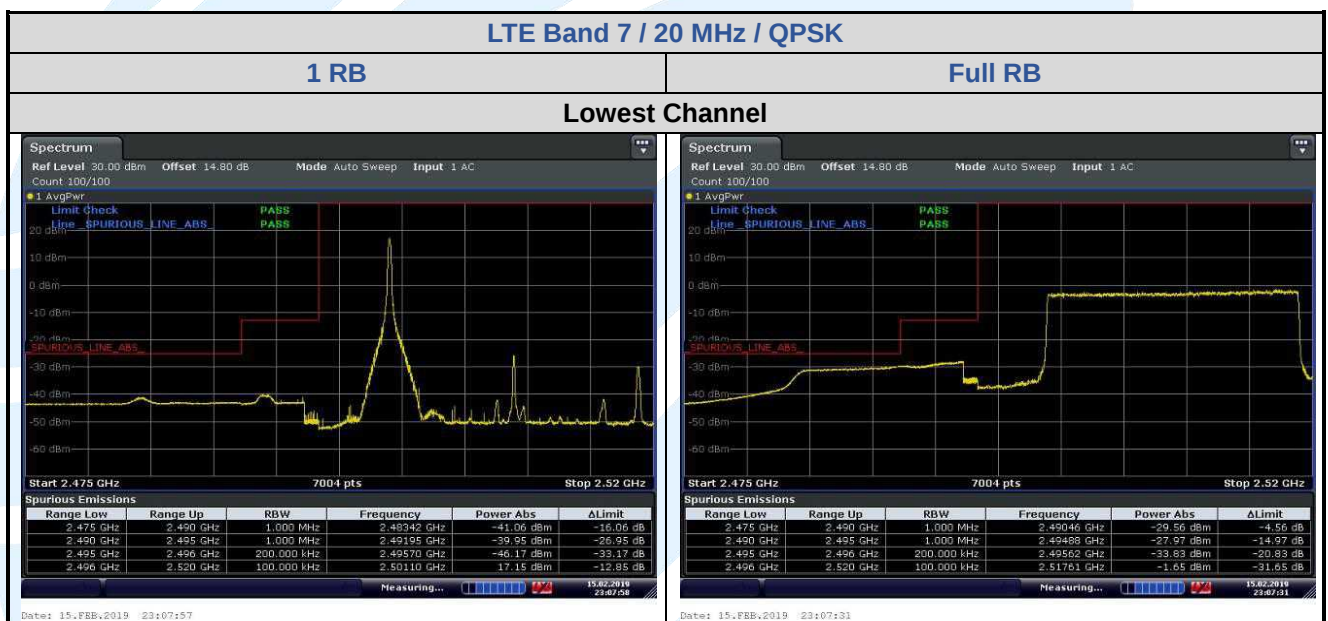
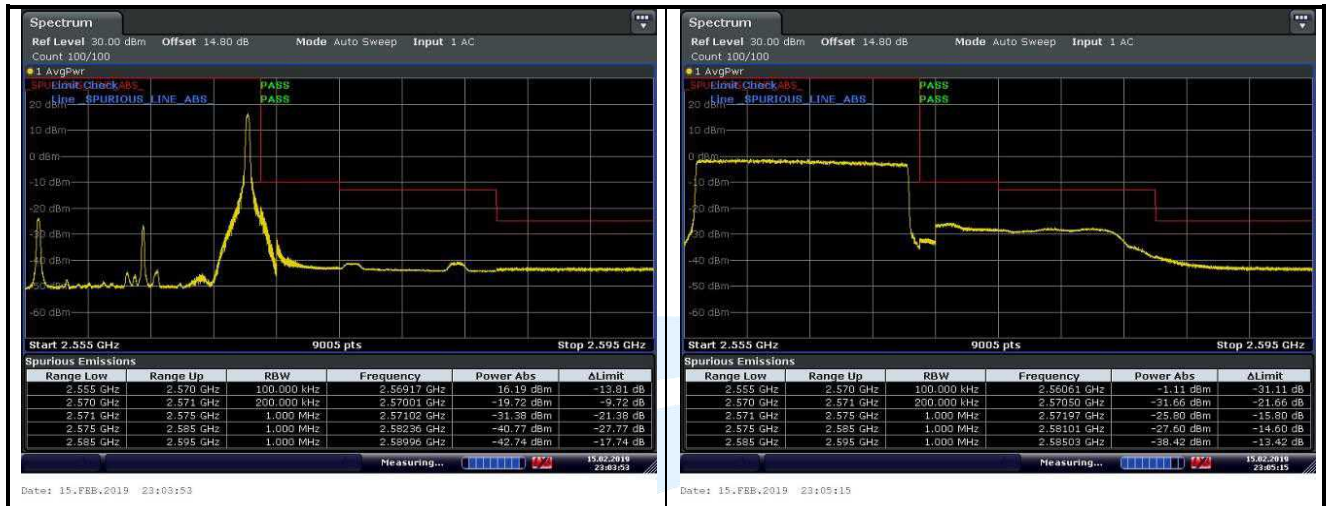
Line SPURIOUS LINE ABS PASS

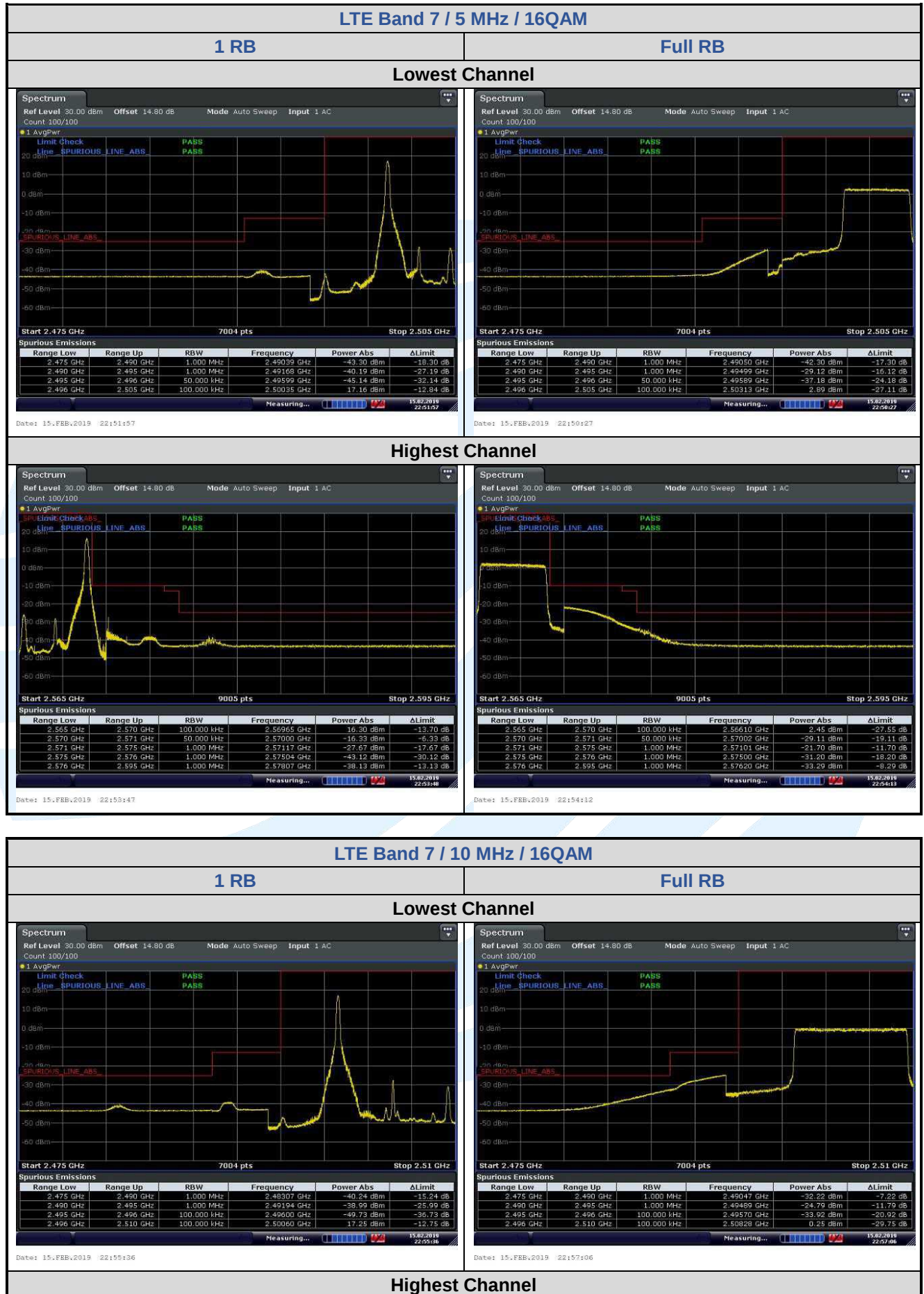
Start 2.475 GHz 7004 pts Stop 2.52 GHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48854 GHz	-26.71 dBm	-1.71 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49481 GHz	-25.66 dBm	-12.66 dB
2.495 GHz	2.496 GHz	200.000 kHz	2.49592 GHz	-30.33 dBm	-17.33 dB
2.496 GHz	2.520 GHz	100.000 kHz	2.51419 GHz	-0.63 dBm	-30.63 dB

Date: 15.FEB.2019 23:01:41

Highest Channel




LTE Band 7 / 10 MHz / 16QAM
1 RB
Full RB
Lowest Channel

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48307 GHz	-40.24 dBm	-15.24 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49194 GHz	-38.99 dBm	-25.99 dB
2.495 GHz	2.496 GHz	100.000 kHz	2.49600 GHz	-49.73 dBm	-36.73 dB
2.496 GHz	2.510 GHz	100.000 kHz	2.50060 GHz	17.25 dBm	-12.75 dB

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49047 GHz	-32.22 dBm	-7.22 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49489 GHz	-24.79 dBm	-11.79 dB
2.495 GHz	2.496 GHz	100.000 kHz	2.49570 GHz	-33.92 dBm	-20.92 dB
2.496 GHz	2.510 GHz	100.000 kHz	2.50828 GHz	0.25 dBm	-29.75 dB

Highest Channel

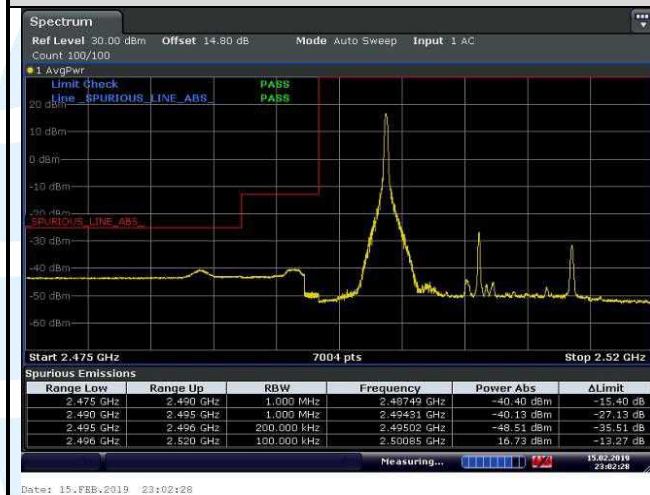


LTE Band 7 / 15 MHz / 16QAM

1 RB

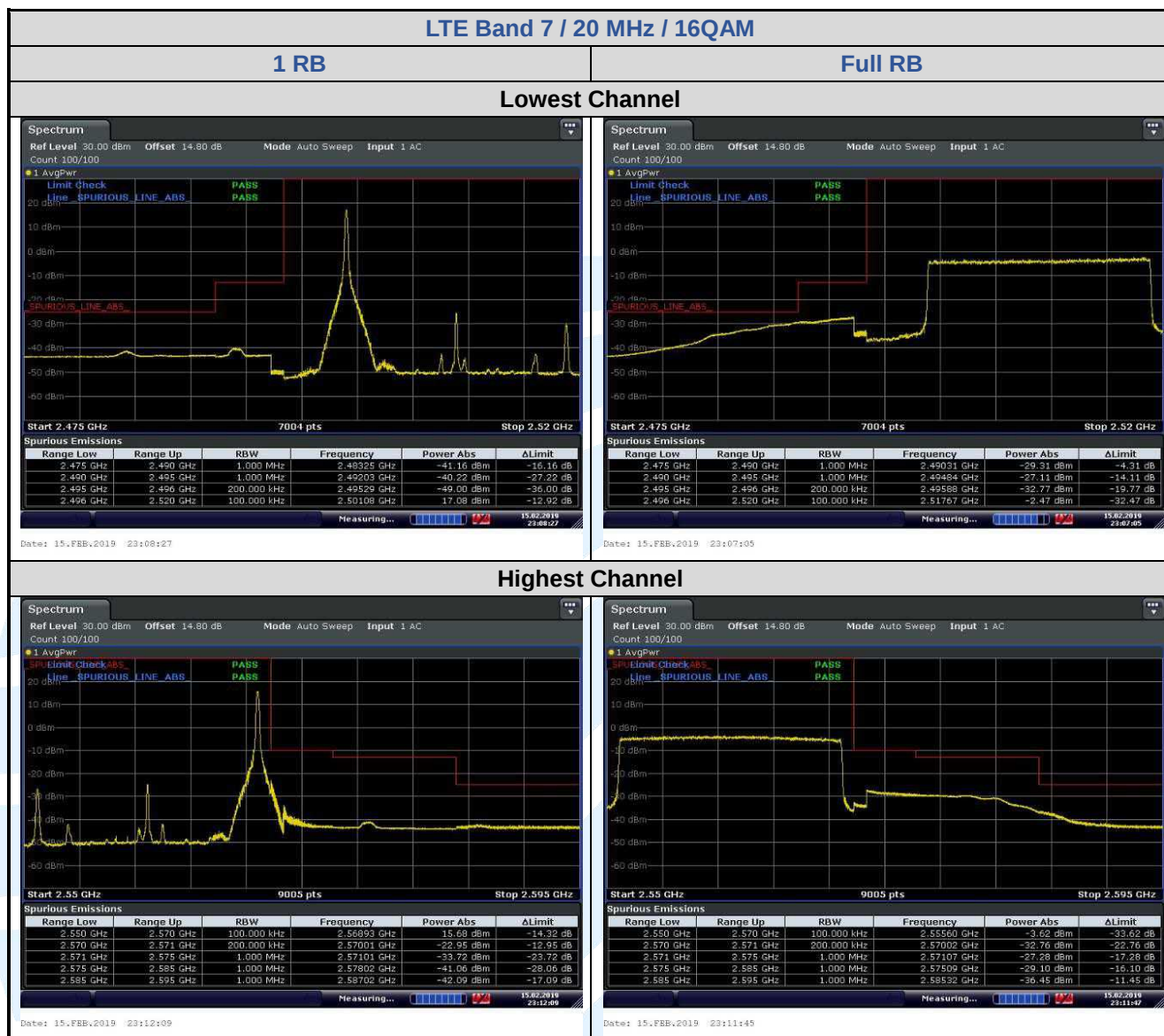
Full RB

Lowest Channel



Highest Channel





5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Test Requirement: FCC 47 CFR Part 2.1051,
GSM 850 & WCDMA Band V & LTE Band 5: FCC 47 CFR Part 22.917(a)(b),
GSM 1900 & WCDMA Band II & LTE Band 2: FCC 47 CFR Part 24.238(a)(b),
LTE Band 4: FCC 47 CFR Part 27.53(h)(1),
LTE Band 7: FCC 47 CFR Part 27.53(m)(4)

Test Method: ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01

Limit:

FCC 47 CFR Part 22 & FCC 47 CFR Part 24: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(h)(1): Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, 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. The emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(m)(4): 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. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Test Procedure:

The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range. b. Measuring frequency range is from 30 MHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

The test plots as follows:

