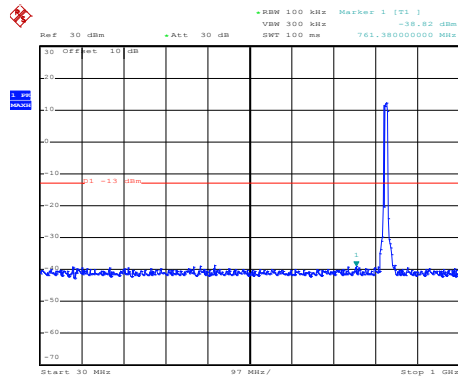
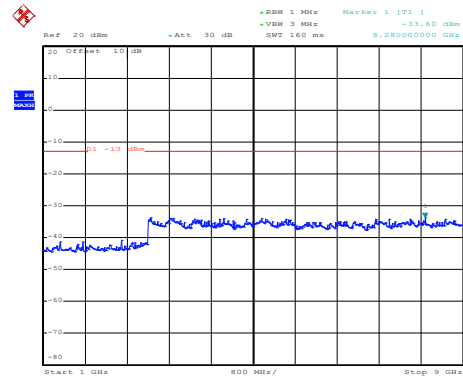


LTE Band 5: 16 QAM & RB Size 50 BW: 10MHz Lowest channel



Date: 19.DEC.2018 04:16:22

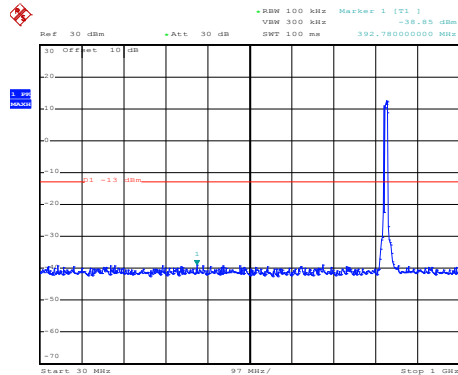
30MHz~1GHz



Date: 19.DEC.2018 05:13:54

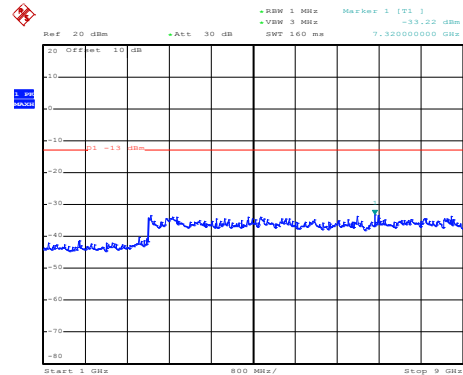
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:11:16

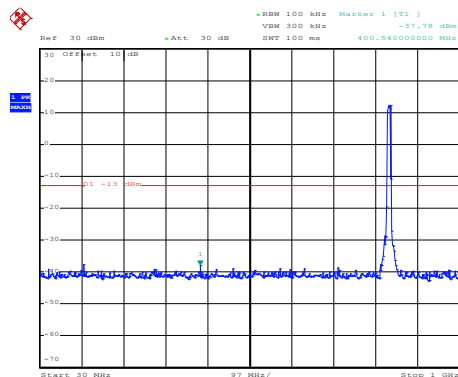
30MHz~1GHz



Date: 19.DEC.2018 05:15:14

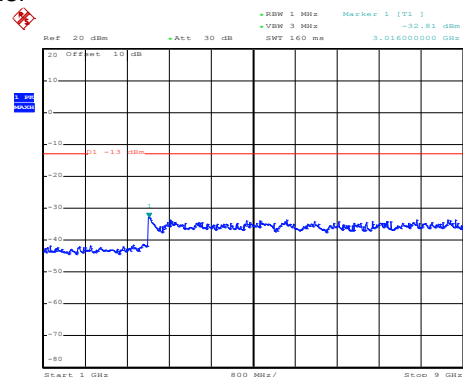
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:12:52

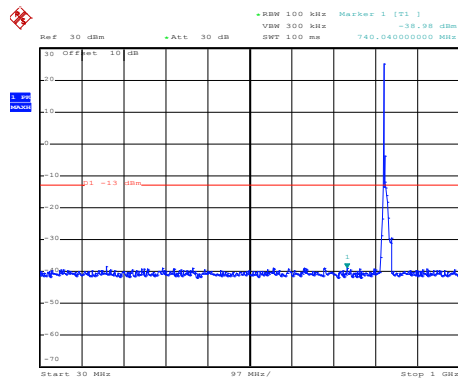
30MHz~1GHz



Date: 19.DEC.2018 05:16:12

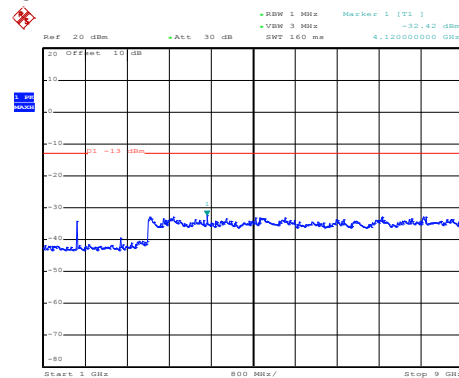
1GHz~9GHz

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



Date: 19.DEC.2018 04:10:26

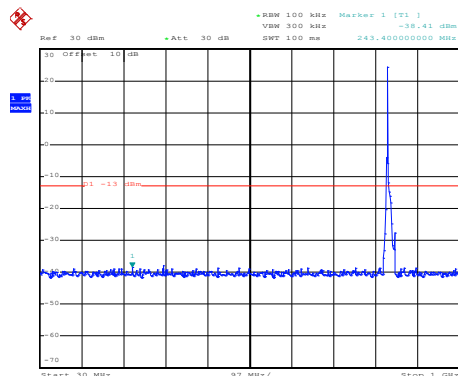
30MHz~1GHz



Date: 19.DEC.2018 05:13:21

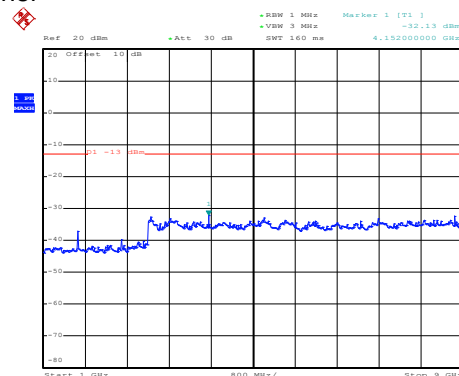
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:16:57

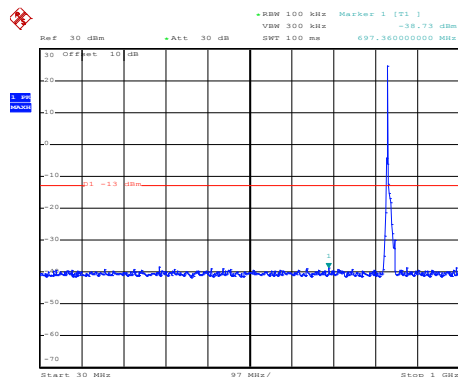
30MHz~1GHz



Date: 19.DEC.2018 05:14:37

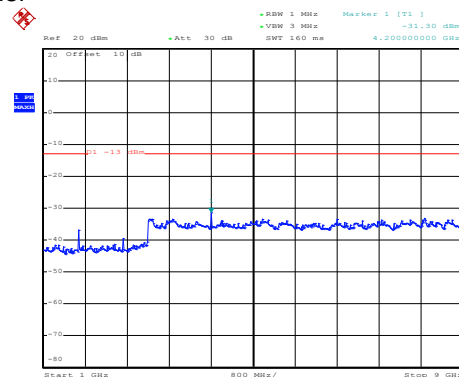
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:12:00

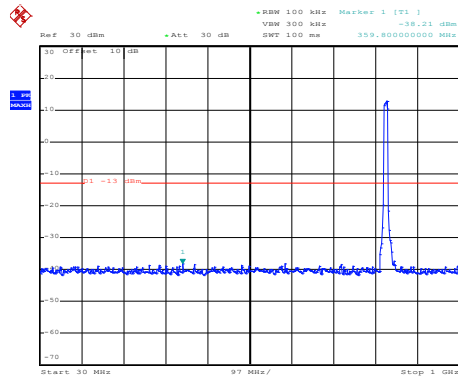
30MHz~1GHz



Date: 19.DEC.2018 05:15:36

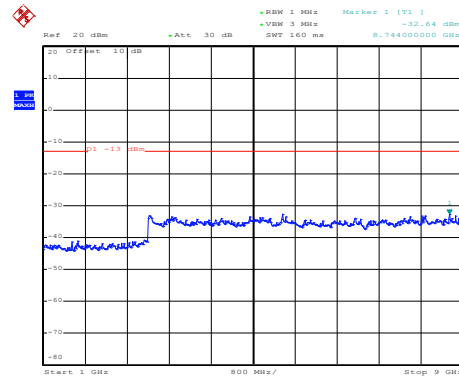
1GHz~9GHz

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



Date: 19.DEC.2018 04:16:10

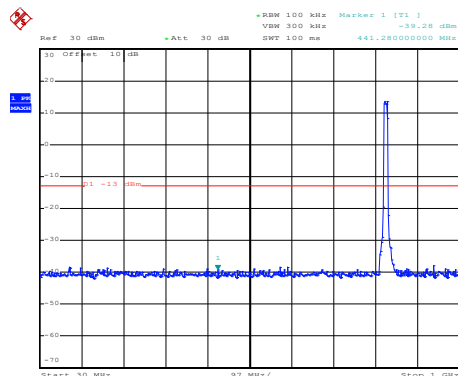
30MHz~1GHz



Date: 19.DEC.2018 05:13:46

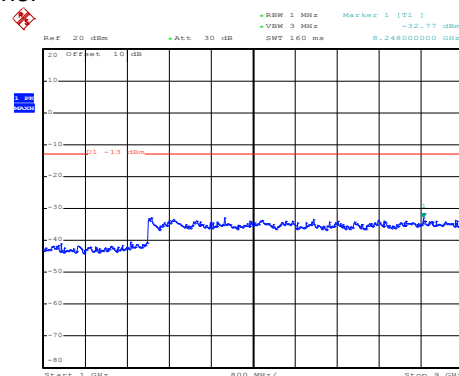
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:11:04

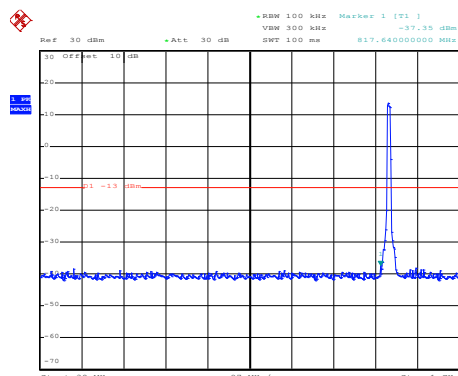
30MHz~1GHz



Date: 19.DEC.2018 05:15:07

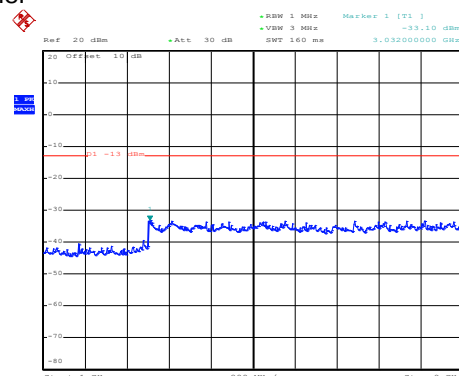
1GHz~9GHz

High channel



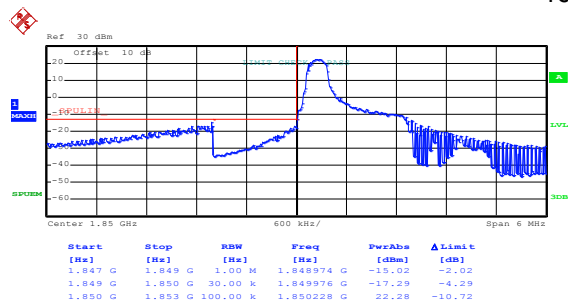
Date: 19.DEC.2018 04:12:38

30MHz~1GHz



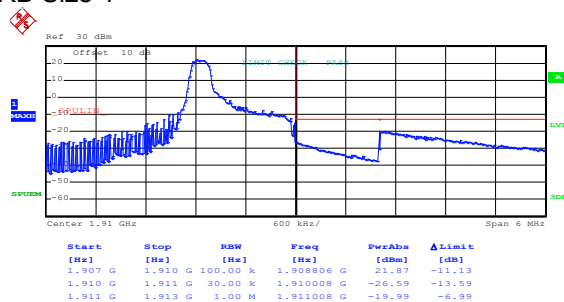
Date: 19.DEC.2018 05:16:00

1GHz~9GHz

Band edge emission:**LTE Band 2 part:****LTE Band 2, BW: 1.4MHz
16QAM & RB Size 1**

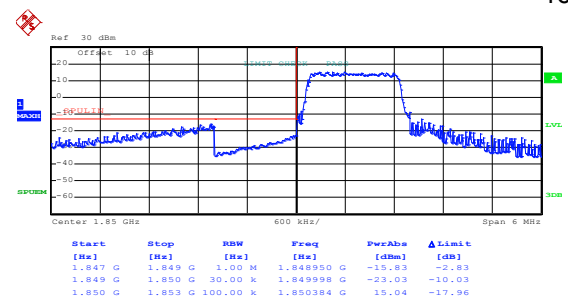
Date: 19.DEC.2018 03:10:25

Lowest channel



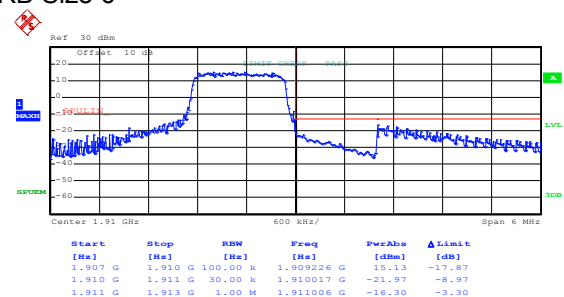
Date: 19.DEC.2018 03:11:45

Highest channel

16QAM & RB Size 6

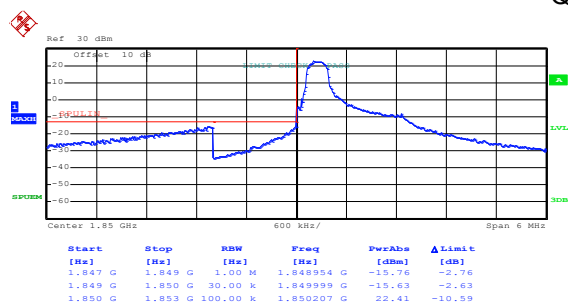
Date: 19.DEC.2018 03:10:48

Lowest channel



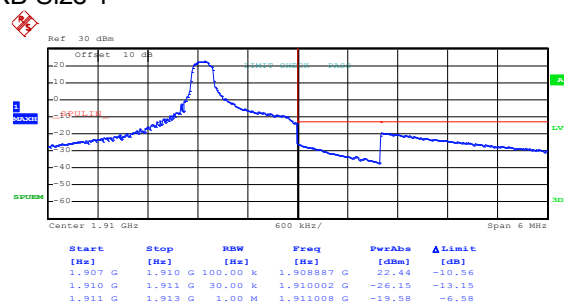
Date: 19.DEC.2018 03:12:06

Highest channel

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

Date: 19.DEC.2018 03:10:19

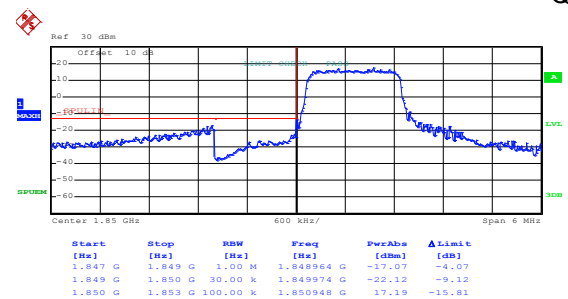
Lowest channel



Date: 19.DEC.2018 03:11:38

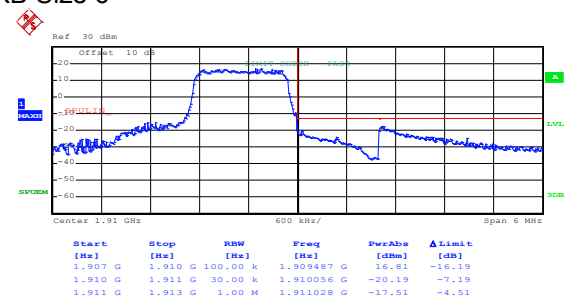
Highest channel

QPSK & RB Size 6



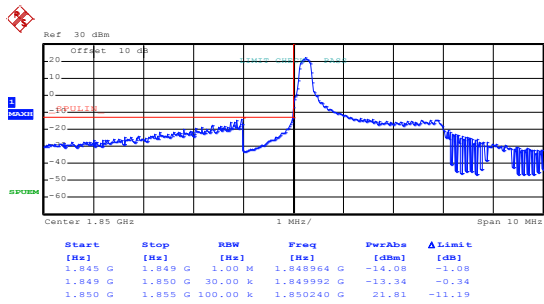
Date: 19.DEC.2018 03:10:40

Lowest channel



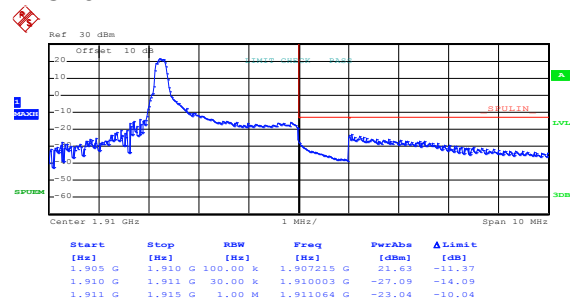
Date: 19.DEC.2018 03:12:00

Highest channel

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

Date: 19.DEC.2018 03:14:31

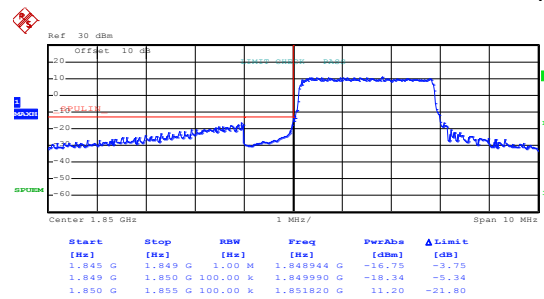
Lowest channel



Date: 19.DEC.2018 03:13:00

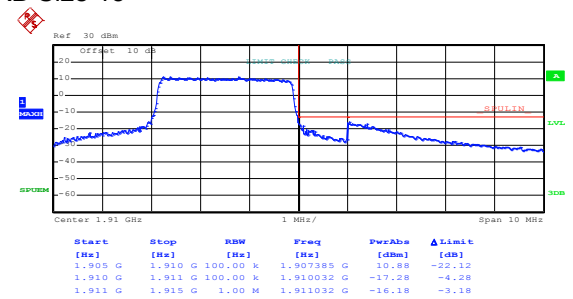
Highest channel

16QAM & RB Size 15



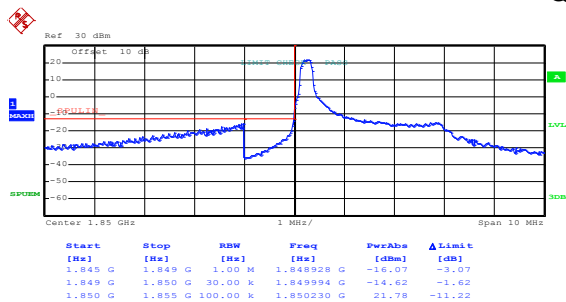
Date: 19.DEC.2018 03:15:53

Lowest channel



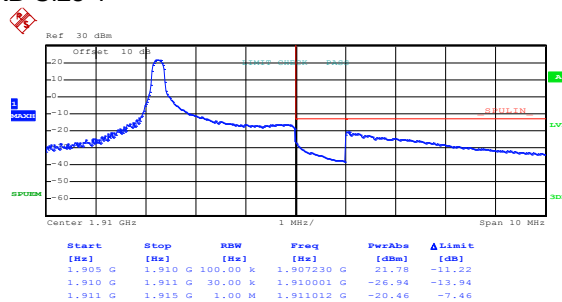
Date: 19.DEC.2018 03:13:58

Highest channel

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

Date: 19.DEC.2018 03:15:16

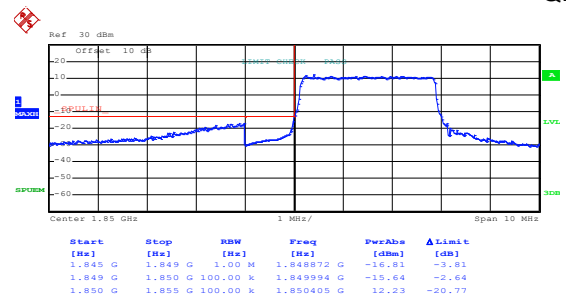
Lowest channel



Date: 19.DEC.2018 03:12:55

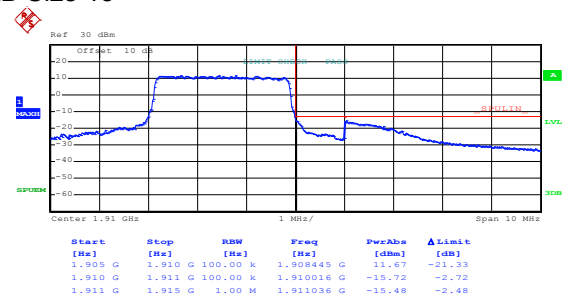
Highest channel

QPSK & RB Size 15



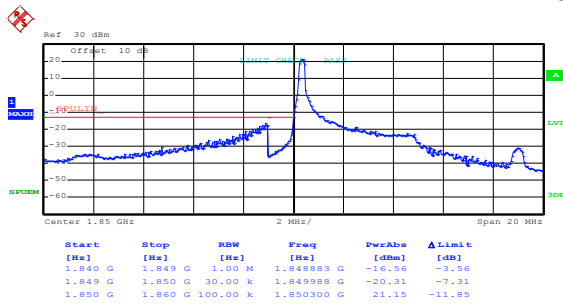
Date: 19.DEC.2018 03:15:46

Lowest channel



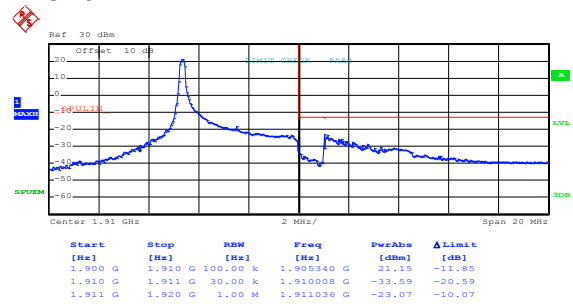
Date: 19.DEC.2018 03:13:49

Highest channel

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

Date: 19.DEC.2018 03:24:01

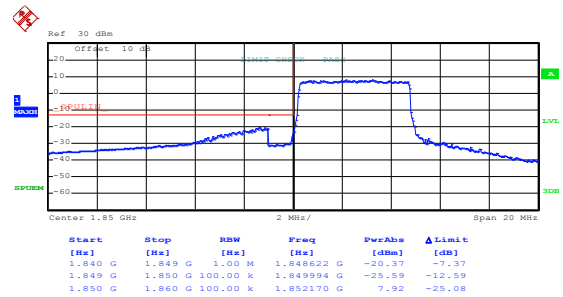
Lowest channel



Date: 19.DEC.2018 03:25:30

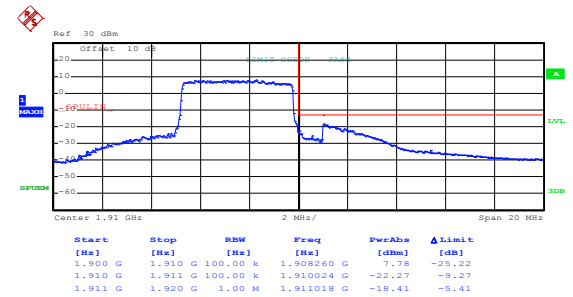
Highest channel

16QAM & RB Size 25



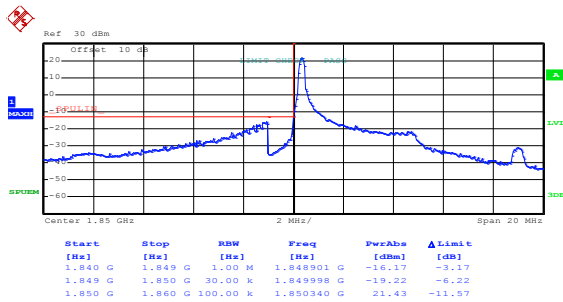
Date: 19.DEC.2018 03:24:51

Lowest channel



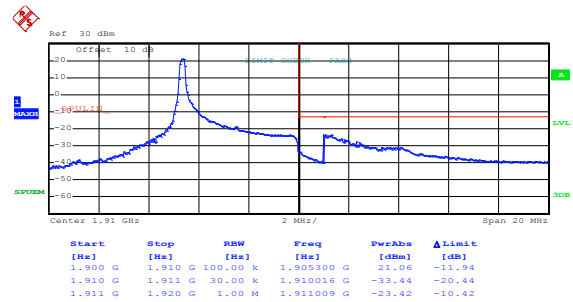
Date: 19.DEC.2018 03:26:04

Highest channel

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

Date: 19.DEC.2018 03:23:54

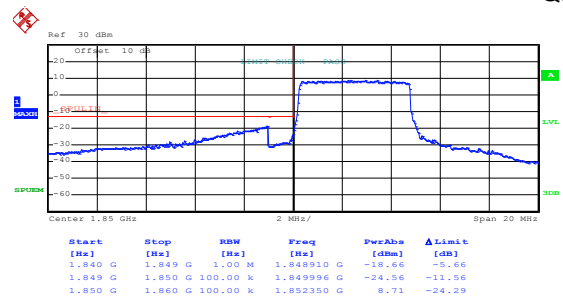
Lowest channel



Date: 19.DEC.2018 03:25:20

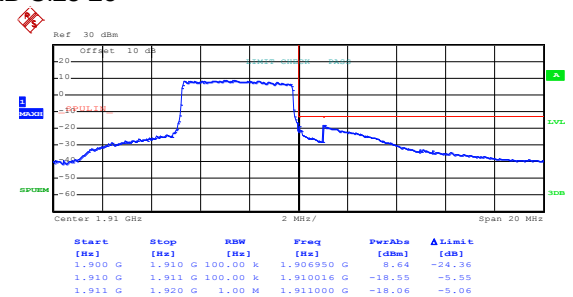
Highest channel

QPSK & RB Size 25



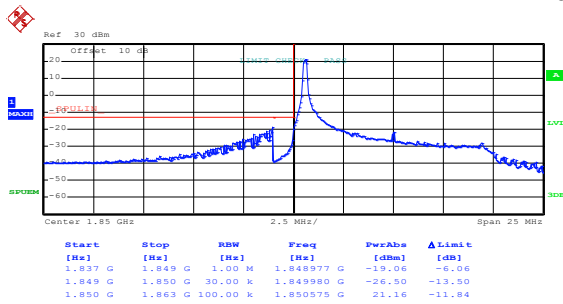
Date: 19.DEC.2018 03:24:37

Lowest channel



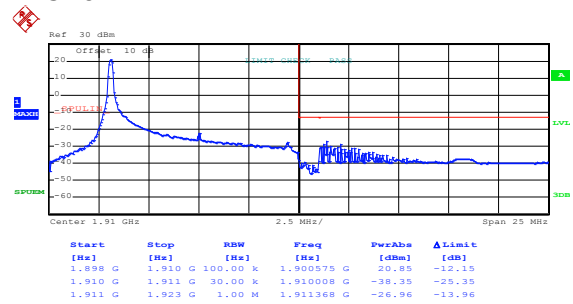
Date: 19.DEC.2018 03:25:53

Highest channel

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

Date: 19.DEC.2018 03:22:22

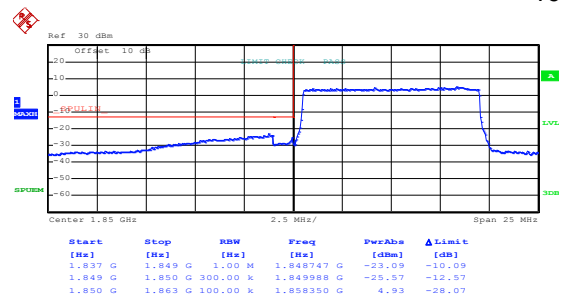
Lowest channel



Date: 19.DEC.2018 03:20:57

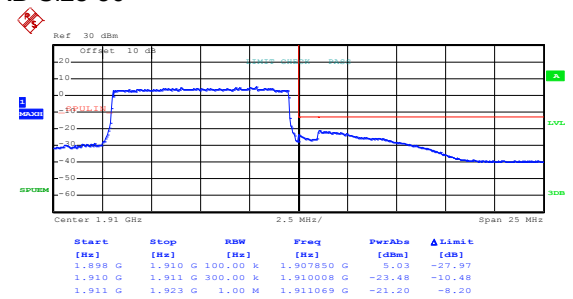
Highest channel

16QAM & RB Size 50



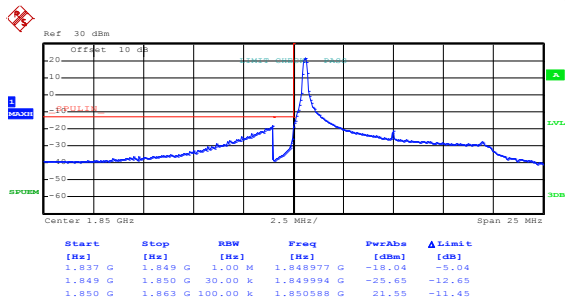
Date: 19.DEC.2018 03:22:57

Lowest channel



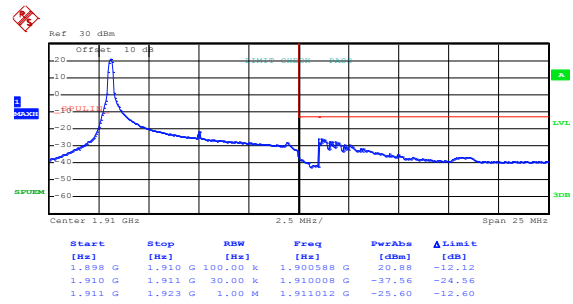
Date: 19.DEC.2018 03:21:33

Highest channel

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

Date: 19.DEC.2018 03:22:16

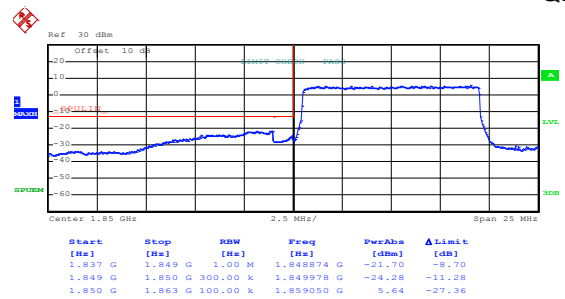
Lowest channel



Date: 19.DEC.2018 03:20:51

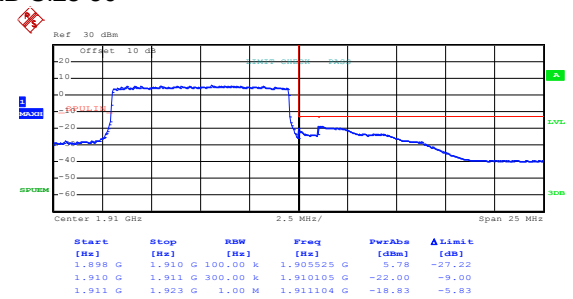
Highest channel

QPSK & RB Size 50



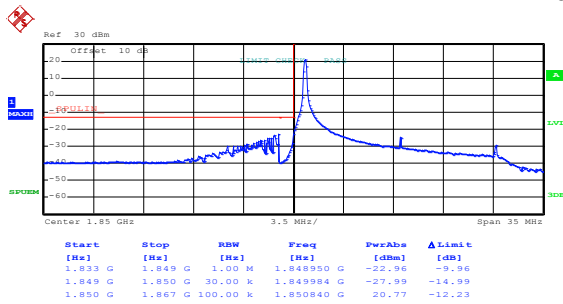
Date: 19.DEC.2018 03:22:46

Lowest channel



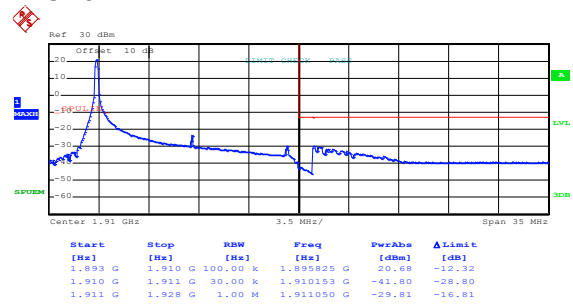
Date: 19.DEC.2018 03:21:24

Highest channel

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

Date: 19.DEC.2018 03:27:22

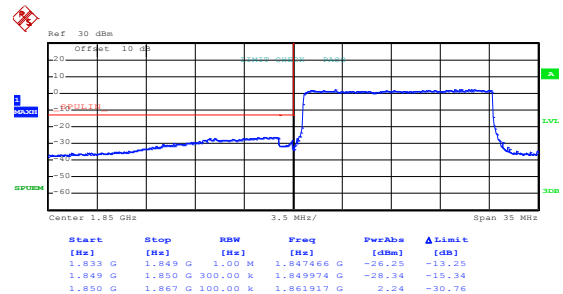
Lowest channel



Date: 19.DEC.2018 03:28:52

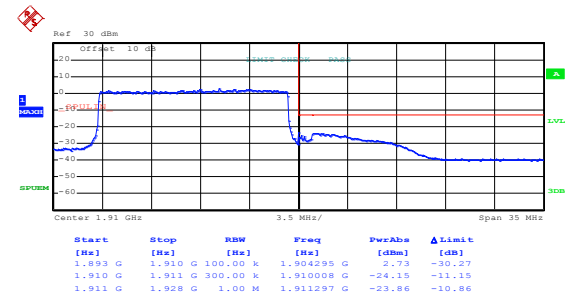
Highest channel

16QAM & RB Size 75



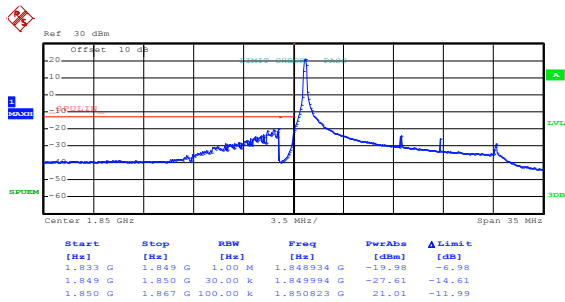
Date: 19.DEC.2018 03:28:04

Lowest channel



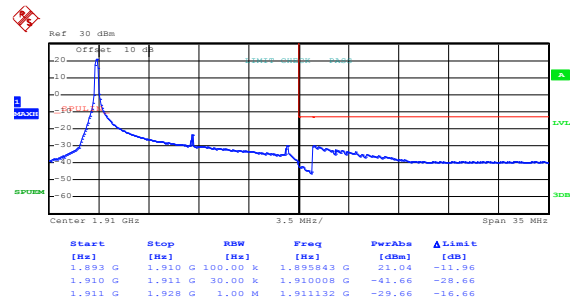
Date: 19.DEC.2018 03:29:23

Highest channel

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

Date: 19.DEC.2018 03:27:07

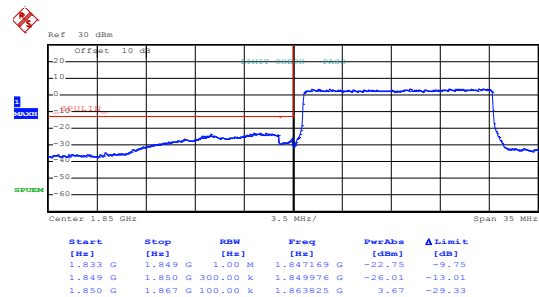
Lowest channel



Date: 19.DEC.2018 03:28:39

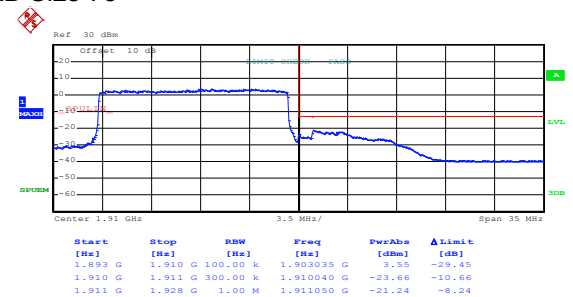
Highest channel

QPSK & RB Size 75



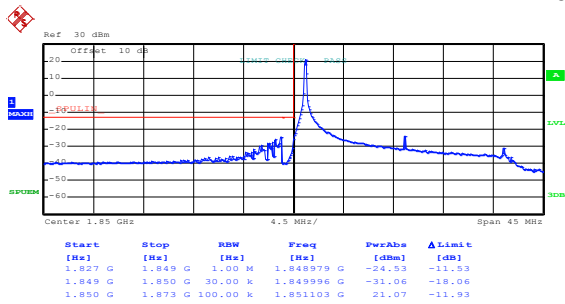
Date: 19.DEC.2018 03:27:58

Lowest channel



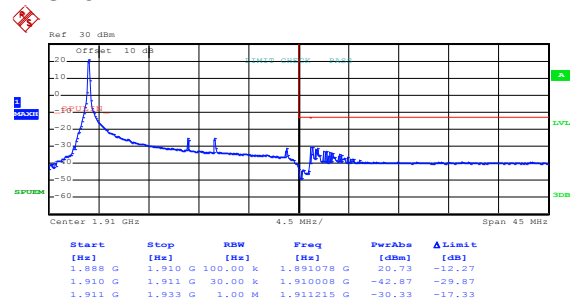
Date: 19.DEC.2018 03:29:17

Highest channel

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

Date: 19.DEC.2018 03:33:03

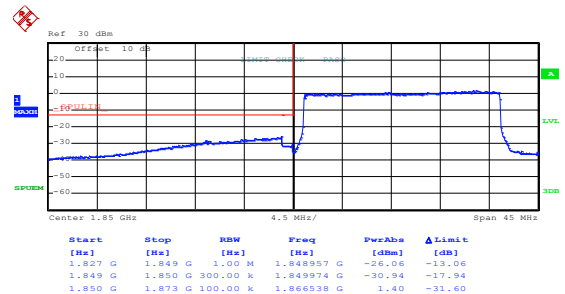
Lowest channel



Date: 19.DEC.2018 03:31:58

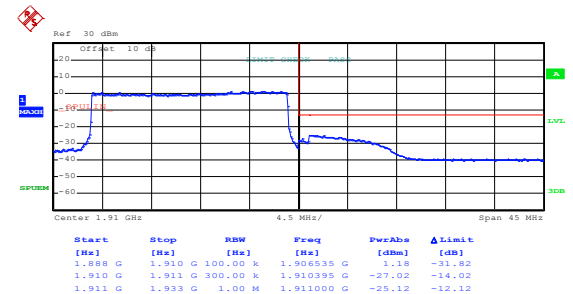
Highest channel

16QAM & RB Size 100



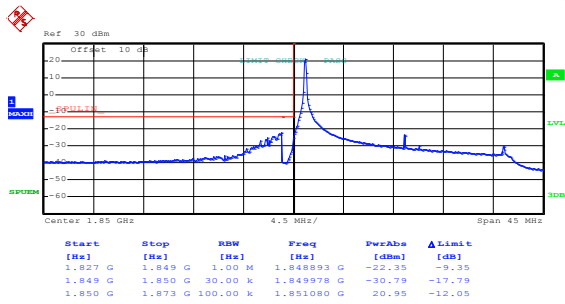
Date: 19.DEC.2018 03:32:38

Lowest channel



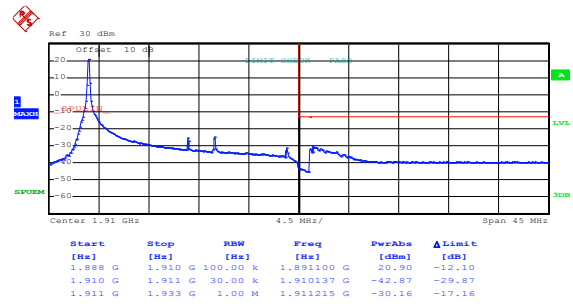
Date: 19.DEC.2018 03:31:29

Highest channel

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

Date: 19.DEC.2018 03:32:57

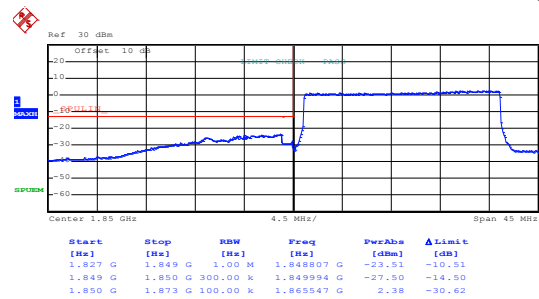
Lowest channel



Date: 19.DEC.2018 03:31:52

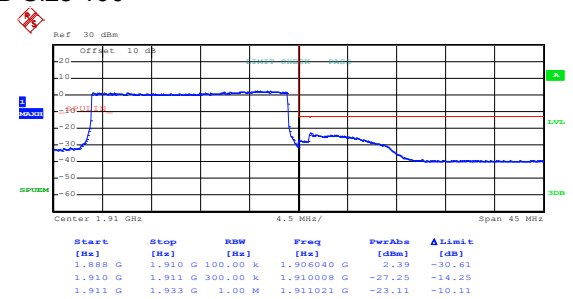
Highest channel

QPSK & RB Size 100



Date: 19.DEC.2018 03:32:31

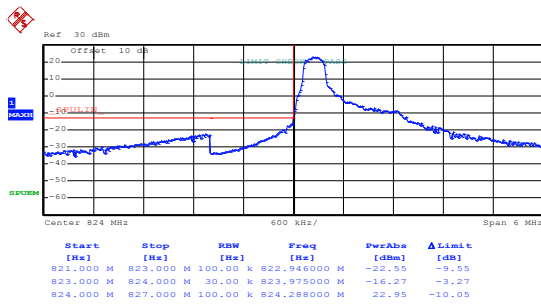
Lowest channel



Date: 19.DEC.2018 03:30:07

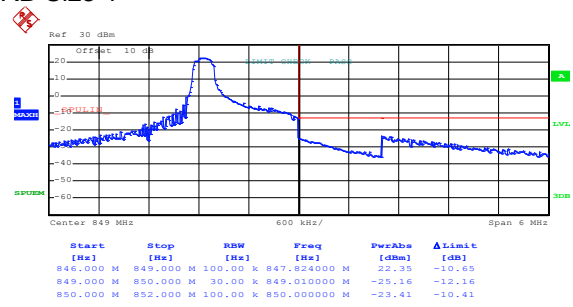
Highest channel

LTE Band 5 part:

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

Date: 19.DEC.2018 02:53:10

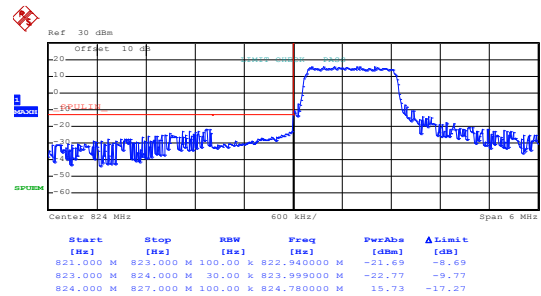
Lowest channel



Date: 19.DEC.2018 02:55:09

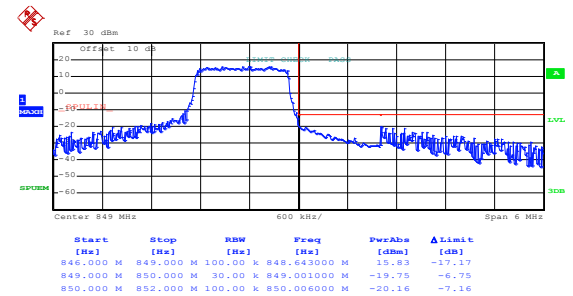
Highest channel

16QAM & RB Size 6



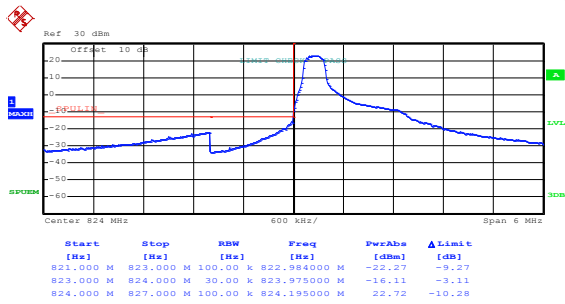
Date: 19.DEC.2018 02:53:33

Lowest channel



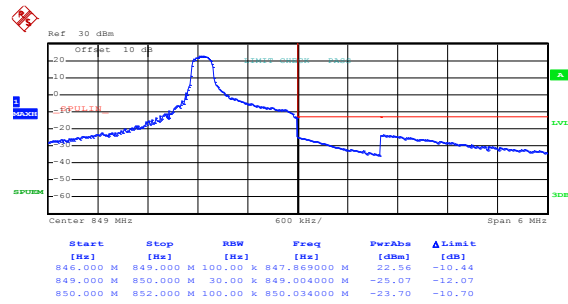
Date: 19.DEC.2018 02:54:18

Highest channel

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

Date: 19.DEC.2018 02:52:56

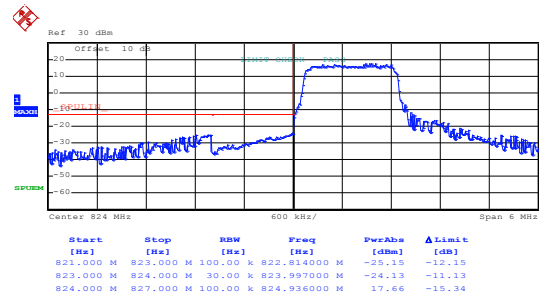
Lowest channel



Date: 19.DEC.2018 02:55:00

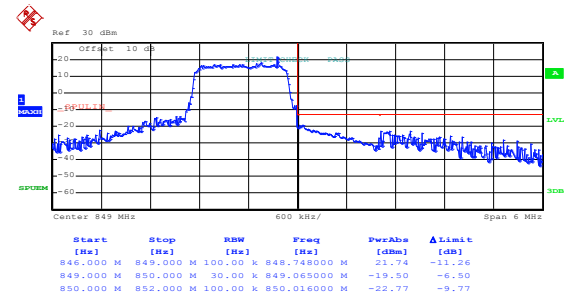
Highest channel

QPSK & RB Size 6



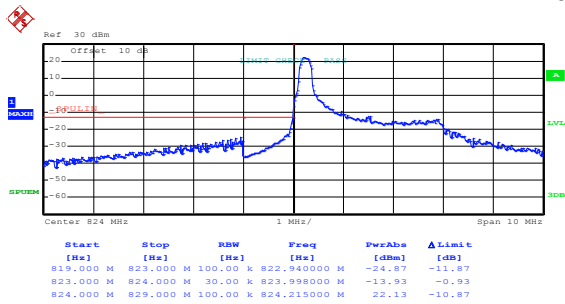
Date: 19.DEC.2018 02:53:24

Lowest channel



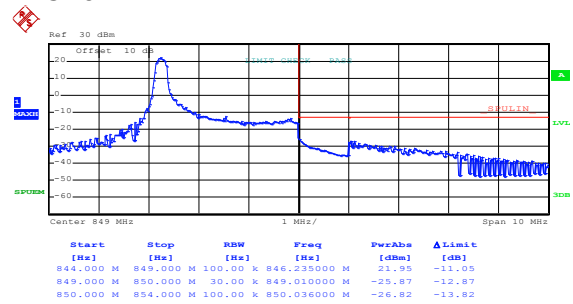
Date: 19.DEC.2018 02:54:10

Highest channel

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

Date: 19.DEC.2018 02:56:34

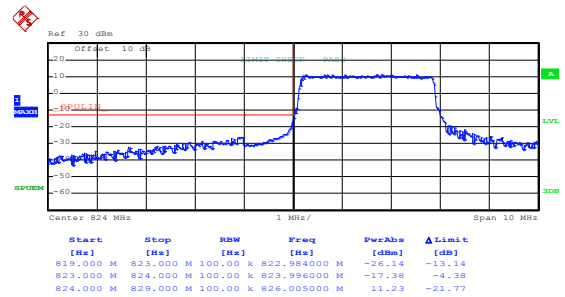
Lowest channel



Date: 19.DEC.2018 02:59:06

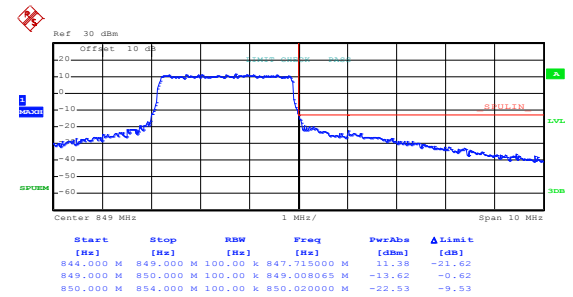
Highest channel

16QAM & RB Size 15



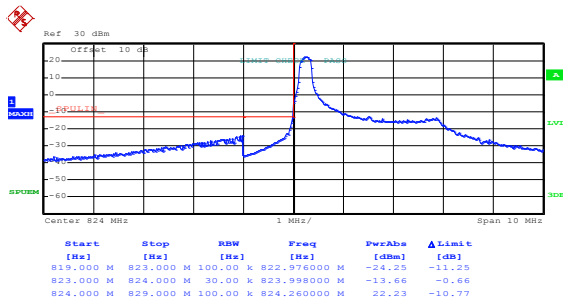
Date: 19.DEC.2018 02:57:47

Lowest channel



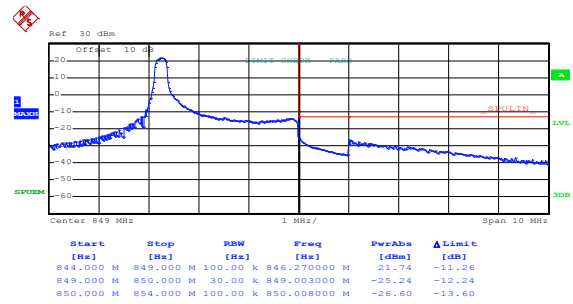
Date: 19.DEC.2018 03:01:12

Highest channel

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

Date: 19.DEC.2018 02:56:26

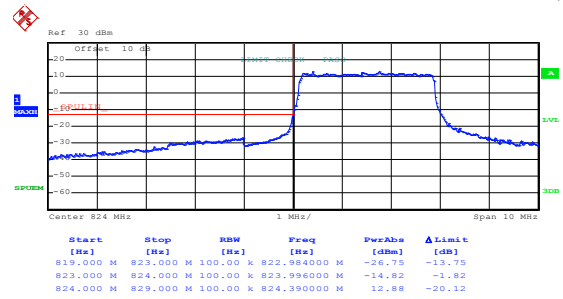
Lowest channel



Date: 19.DEC.2018 02:58:59

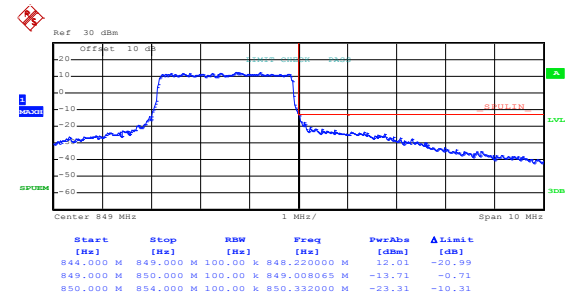
Highest channel

QPSK & RB Size 15



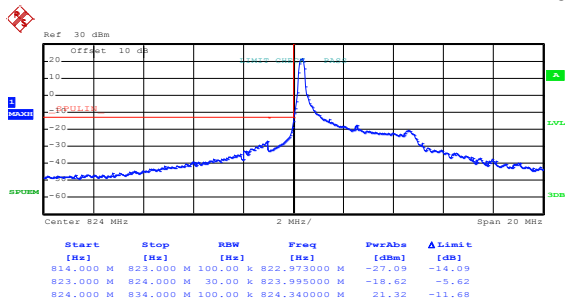
Date: 19.DEC.2018 02:57:41

Lowest channel



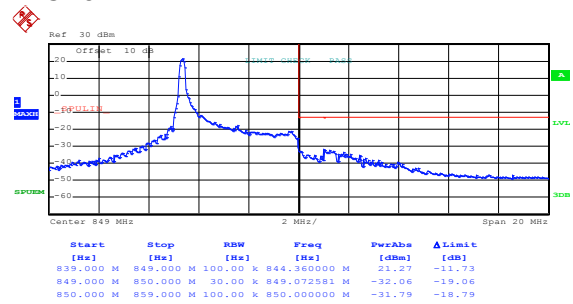
Date: 19.DEC.2018 03:01:04

Highest channel

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

Date: 19.DEC.2018 03:03:58

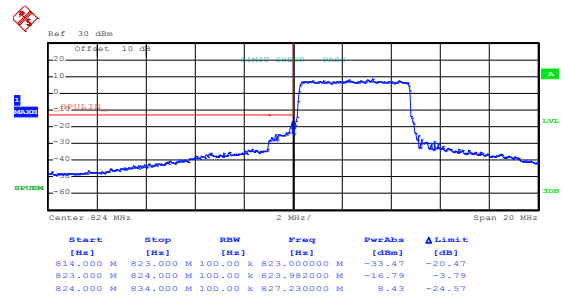
Lowest channel



Date: 19.DEC.2018 03:02:48

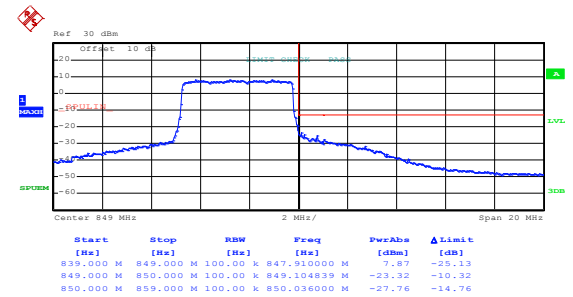
Highest channel

16QAM & RB Size 25



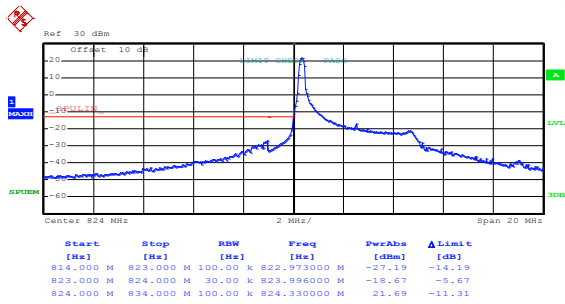
Date: 19.DEC.2018 03:04:28

Lowest channel



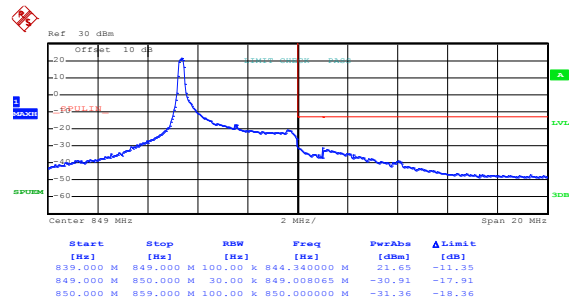
Date: 19.DEC.2018 03:02:18

Highest channel

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

Date: 19.DEC.2018 03:03:47

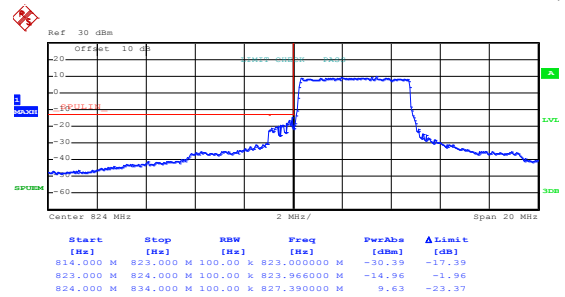
Lowest channel



Date: 19.DEC.2018 03:02:41

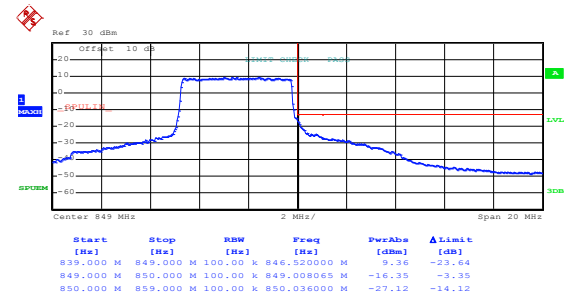
Highest channel

QPSK & RB Size 25



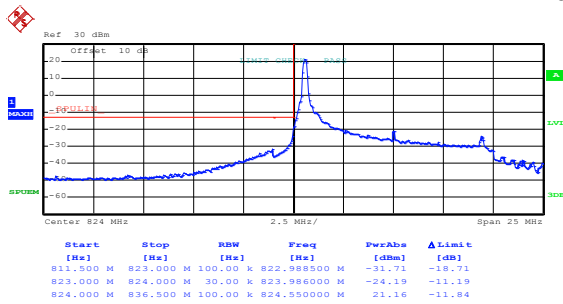
Date: 19.DEC.2018 03:04:22

Lowest channel



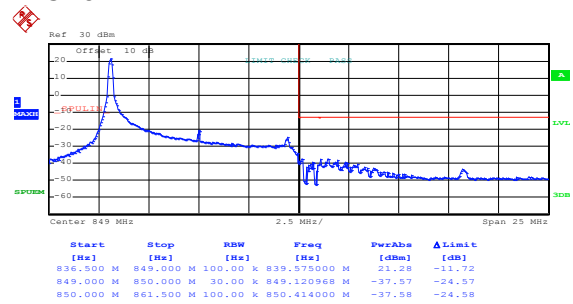
Date: 19.DEC.2018 03:02:12

Highest channel

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

Date: 19.DEC.2018 03:05:28

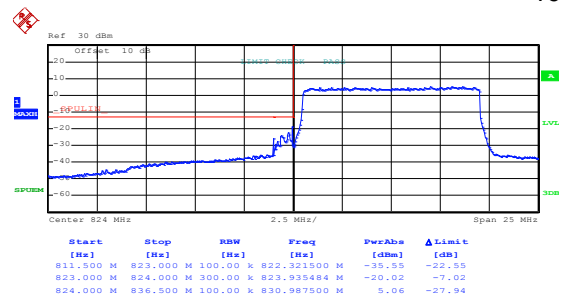
Lowest channel



Date: 19.DEC.2018 03:08:52

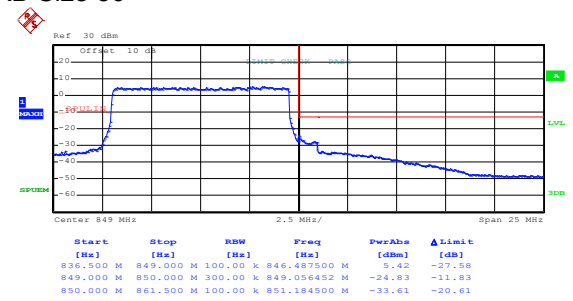
Highest channel

16QAM & RB Size 50



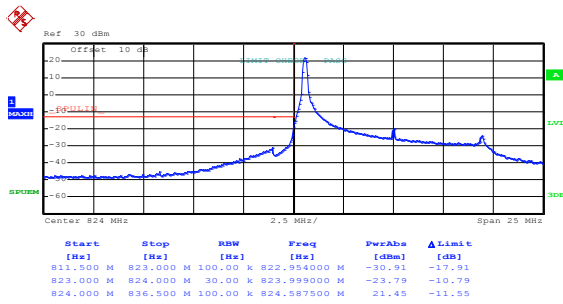
Date: 19.DEC.2018 03:06:34

Lowest channel



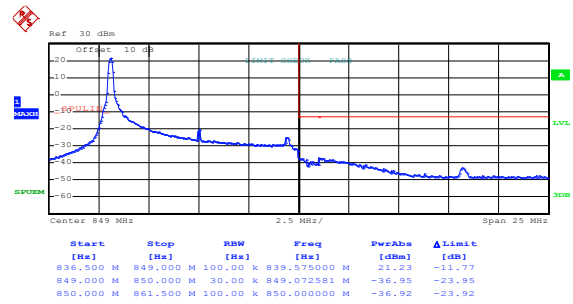
Date: 19.DEC.2018 03:08:26

Highest channel

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

Date: 19.DEC.2018 03:05:21

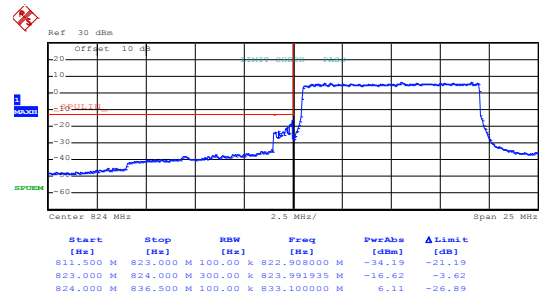
Lowest channel



Date: 19.DEC.2018 03:08:47

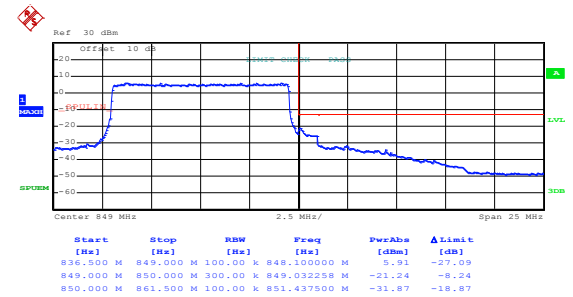
Highest channel

QPSK & RB Size 50



Date: 19.DEC.2018 03:06:26

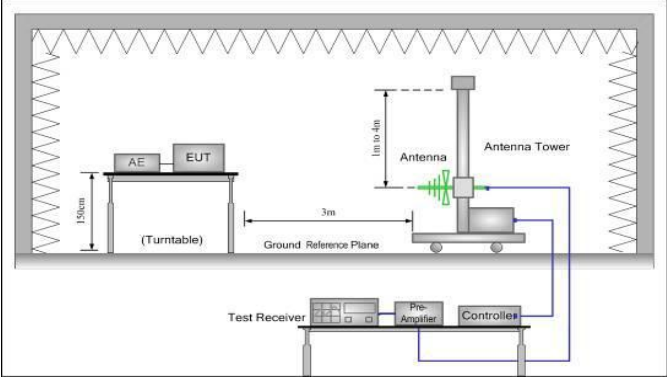
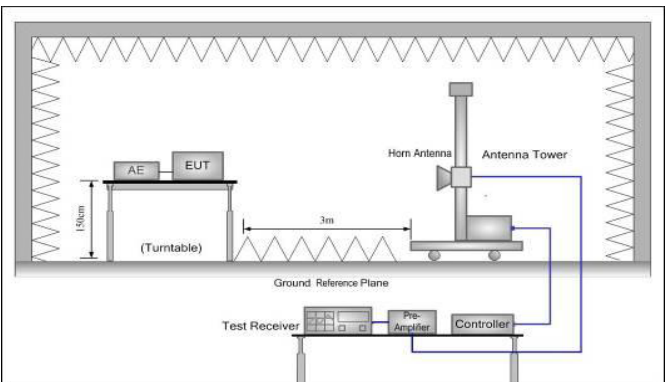
Lowest channel



Date: 19.DEC.2018 03:08:15

Highest channel

6.5 Field strength of spurious radiation measurement

Test Requirement:	Part 22.917(b), Part 24.238 (a)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2 & 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).
Test setup:	Below 1GHz  Above 1GHz 
Test Procedure:	1. The EUT was placed on an 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. 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. 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 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. $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
Test Instruments:	Refer to section 5.9 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	-38.13	-13.00	Pass
5552.10	V	-33.74		
7402.00	V	-33.56		
3701.40	Horizontal	-43.84		
5552.10	H	-35.76		
7402.00	H	-33.42		
Middle Channel				
3760.00	Vertical	-38.32	-13.00	Pass
5640.00	V	-33.69		
7520.00	V	-32.36		
3760.00	Horizontal	-43.32		
5640.00	H	-35.65		
7520.00	H	-31.36		
Highest Channel				
3816.60	Vertical	-38.81	-13.00	Pass
5724.90	V	-33.69		
7633.20	V	-33.62		
3816.60	Horizontal	-43.78		
5724.90	H	-35.81		
7633.20	H	-33.36		
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: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3703.00	Vertical	-38.47	-13.00	Pass
5554.50	V	-33.86		
7406.00	V	-32.58		
3703.00	Horizontal	-42.61		
5554.50	H	-35.96		
7406.00	H	-33.49		
Middle Channel				
3760.00	Vertical	-37.92	-13.00	Pass
5640.00	V	-33.70		
7520.00	V	-32.61		
3760.00	Horizontal	-41.79		
5640.00	H	-35.86		
7520.00	H	-33.64		
Highest Channel				
3817.00	Vertical	-37.84	-13.00	Pass
5725.50	V	-33.89		
7634.00	V	-32.47		
3817.00	Horizontal	-41.62		
5725.50	H	-35.86		
7634.00	H	-33.67		
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: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3705.00	Vertical	-38.17	-13.00	Pass
5557.50	V	-33.76		
7410.00	V	-33.47		
3705.00	Horizontal	-43.71		
5557.50	H	-35.86		
7410.00	H	-33.52		
Middle Channel				
3760.00	Vertical	-38.32	-13.00	Pass
5640.00	V	-33.46		
7520.00	V	-32.36		
3760.00	Horizontal	-43.32		
5640.00	H	-35.64		
7520.00	H	-31.42		
Highest Channel				
3815.00	Vertical	-38.49	-13.00	Pass
5722.50	V	-33.72		
7630.00	V	-33.65		
3815.00	Horizontal	-42.48		
5722.50	H	-35.82		
7630.00	H	-33.47		
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: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3710.00	Vertical	-38.47	-13.00	Pass
5565.00	V	-33.83		
7420.00	V	-32.61		
3710.00	Horizontal	-42.58		
5565.00	H	-35.92		
7420.00	H	-33.47		
Middle Channel				
3760.00	Vertical	-37.89	-13.00	Pass
5640.00	V	-33.64		
7520.00	V	-32.53		
3760.00	Horizontal	-41.86		
5640.00	H	-35.94		
7520.00	H	-33.57		
Highest Channel				
3810.00	Vertical	-37.86	-13.00	Pass
5715.00	V	-33.94		
7620.00	V	-32.56		
3810.00	Horizontal	-41.57		
5715.00	H	-35.86		
7620.00	H	-33.64		
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: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3715.00	Vertical	-38.26	-13.00	Pass
5572.50	V	-33.64		
7430.00	V	-32.49		
3715.00	Horizontal	-42.16		
5572.50	H	-35.38		
7430.00	H	-33.42		
Middle Channel				
3760.00	Vertical	-37.86	-13.00	Pass
5640.00	V	-33.61		
7520.00	V	-32.52		
3760.00	Horizontal	-43.29		
5640.00	H	-35.62		
7520.00	H	-31.43		
Highest Channel				
3805.00	Vertical	-38.53	-13.00	Pass
5707.50	V	-33.84		
7610.00	V	-32.42		
3805.00	Horizontal	-42.39		
5707.50	H	-35.87		
7610.00	H	-33.53		
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	-38.67	-13.00	Pass
5580.00	V	-33.86		
7440.00	V	-32.57		
3720.00	Horizontal	-42.47		
5580.00	H	-35.91		
7440.00	H	-33.56		
Middle Channel				
3760.00	Vertical	-37.84	-13.00	Pass
5640.00	V	-33.79		
7520.00	V	-32.47		
3760.00	Horizontal	-41.89		
5640.00	H	-35.91		
7520.00	H	-33.59		
Highest Channel				
3800.00	Vertical	-37.89	-13.00	Pass
5700.00	V	-33.86		
7600.00	V	-32.61		
3800.00	Horizontal	-41.35		
5700.00	H	-35.91		
7600.00	H	-33.58		
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	-43.76	-13.00	Pass
2474.10	V	-39.35		
3298.80	V	-39.26		
1649.40	Horizontal	-47.34		
2474.10	H	-34.26		
3298.80	H	-42.57		
Middle Channel				
1673.00	Vertical	-43.79	-13.00	Pass
2509.50	V	-39.37		
3346.00	V	-39.19		
1673.00	Horizontal	-47.13		
2509.50	H	-34.19		
3346.00	H	-42.43		
Highest Channel				
1696.60	Vertical	-43.87	-13.00	Pass
2544.90	V	-39.46		
3393.20	V	-39.16		
1696.60	Horizontal	-47.18		
2544.90	H	-34.29		
3393.20	H	-42.58		
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, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1651.00	Vertical	-43.29	-13.00	Pass
2476.50	V	-39.34		
3302.00	V	-39.27		
1651.00	Horizontal	-47.23		
2476.50	H	-37.35		
3302.00	H	-42.49		
Middle Channel				
1673.00	Vertical	-43.38	-13.00	Pass
2509.50	V	-39.27		
3346.00	V	-39.56		
1673.00	Horizontal	-47.43		
2509.50	H	-37.39		
3346.00	H	-42.58		
Highest Channel				
1695.00	Vertical	-47.39	-13.00	Pass
2542.50	V	-39.38		
3390.00	V	-39.24		
1695.00	Horizontal	-47.38		
2542.50	H	-37.26		
3390.00	H	-42.52		
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: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1653.00	Vertical	-43.87	-13.00	Pass
2479.50	V	-39.58		
3306.00	V	-39.26		
1653.00	Horizontal	-47.38		
2479.50	H	-34.29		
3306.00	H	-42.59		
Middle Channel				
1673.00	Vertical	-43.84	-13.00	Pass
2509.50	V	-39.82		
3346.00	V	-39.24		
1673.00	Horizontal	-47.19		
2509.50	H	-34.26		
3346.00	H	-42.58		
Highest Channel				
1693.00	Vertical	-43.85	-13.00	Pass
2539.50	V	-39.37		
3386.00	V	-39.23		
1693.00	Horizontal	-47.19		
2539.50	H	-34.32		
3386.00	H	-42.56		
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	-43.87	-13.00	Pass
2487.00	V	-39.58		
3316.00	V	-39.26		
1658.00	Horizontal	-47.56		
2487.00	H	-37.39		
3316.00	H	-42.58		
Middle Channel				
1673.00	Vertical	-43.87	-13.00	Pass
2509.50	V	-38.39		
3346.00	V	-39.48		
1673.00	Horizontal	-47.51		
2509.50	H	-37.53		
3346.00	H	-42.67		
Highest Channel				
1688.00	Vertical	-47.42	-13.00	Pass
2532.00	V	-39.37		
3376.00	V	-39.13		
1688.00	Horizontal	-47.51		
2532.00	H	-37.43		
3376.00	H	-42.67		
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 2.1055(a)(1)(b)
Test Method:	ANSI/TIA-603-D 2010
Limit:	±2.5ppm
Test setup:	
Test procedure:	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 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):

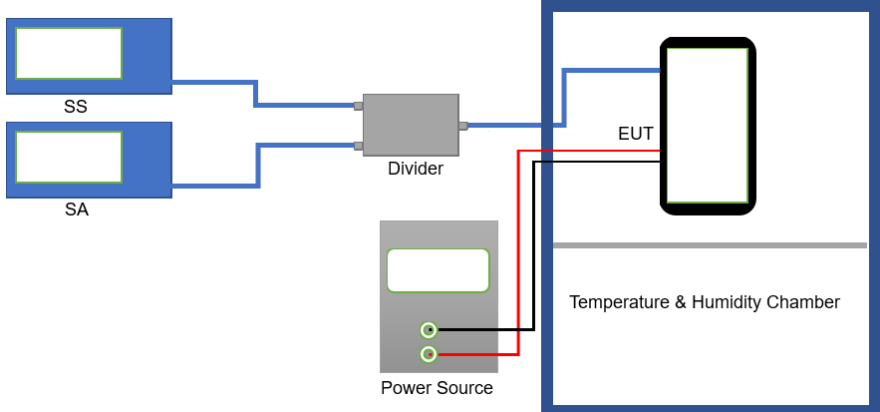
LTE Band 2 part:

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					
3.80	-30	193	0.102660	±2.5	Pass
	-20	150	0.079787		
	-10	161	0.085638		
	0	128	0.068085		
	10	183	0.097340		
	20	171	0.090957		
	30	118	0.062766		
	40	100	0.053191		
	50	156	0.082979		
16QAM					
3.80	-30	126	0.067021	±2.5	Pass
	-20	152	0.080851		
	-10	167	0.088830		
	0	120	0.063830		
	10	145	0.077128		
	20	149	0.079255		
	30	150	0.079787		
	40	139	0.073936		
	50	137	0.072872		
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					
3.80	-30	199	0.237896	±2.5	Pass
	-20	158	0.188882		
	-10	166	0.198446		
	0	124	0.148237		
	10	187	0.223551		
	20	170	0.203228		
	30	115	0.137478		
	40	106	0.126718		
	50	153	0.182905		
16QAM					
3.80	-30	122	0.145846	±2.5	Pass
	-20	155	0.185296		
	-10	169	0.202032		
	0	125	0.149432		
	10	143	0.170950		
	20	148	0.176928		
	30	159	0.190078		
	40	134	0.160191		
	50	131	0.156605		
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 2.1055(d)(2)
Test Method:	ANSI/TIA-603-D 2010
Limit:	$\pm 2.5\text{ppm}$
Test setup:	 The diagram illustrates the test setup. A Signal Source (SS) and a Spectrum Analyzer (SA) are connected to a Divider. The output of the Divider is connected to the EUT (Equipment Under Test) inside a Temperature & Humidity Chamber. A Power Source is also connected to the EUT.
Test procedure:	1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
Test Instruments:	Refer to section 5.9 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	4.35	96	0.051064	±2.5	Pass
	3.80	64	0.034043		
	3.50	71	0.037766		
16QAM					
25	4.35	85	0.045213	±2.5	Pass
	3.80	97	0.051596		
	3.50	43	0.022872		
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	4.35	95	0.113568	±2.5	Pass
	3.80	62	0.074118		
	3.50	71	0.084877		
16QAM					
25	4.35	81	0.096832	±2.5	Pass
	3.80	95	0.113568		
	3.50	40	0.047818		
Note: Only the worst case shown in the report.					