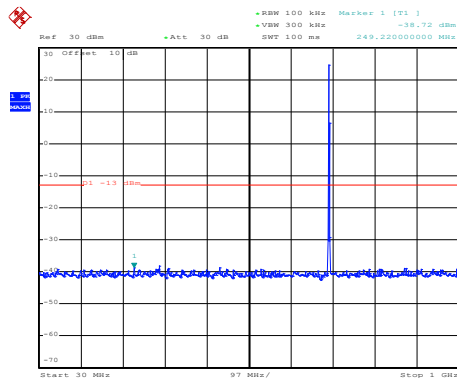
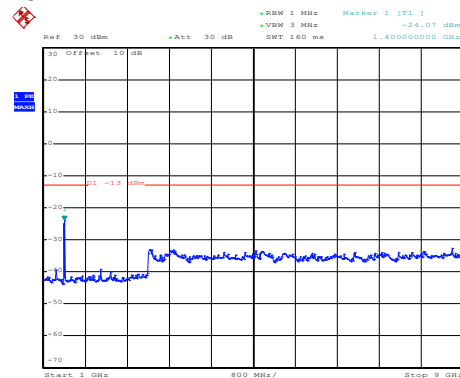


LTE Band 12: QPSK & RB Size 1 BW: 1.4MHz Lowest channel



Date: 17.SEP.2019 17:50:57

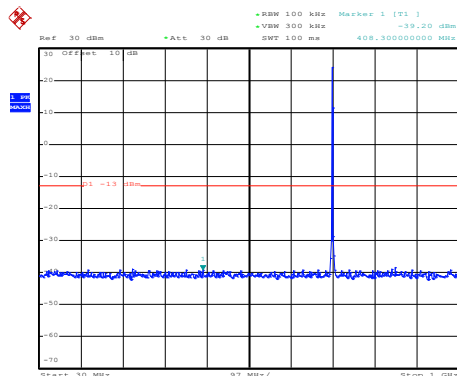
30MHz~1GHz



Date: 17.SEP.2019 18:58:57

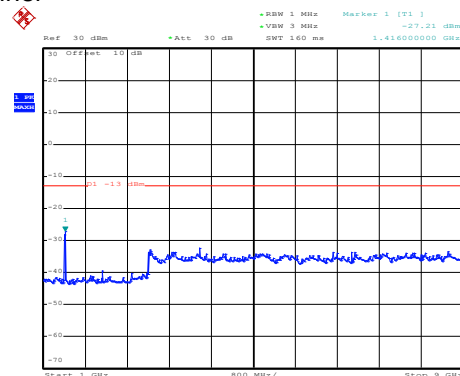
1GHz~25GHz

Middle channel



Date: 17.SEP.2019 17:52:05

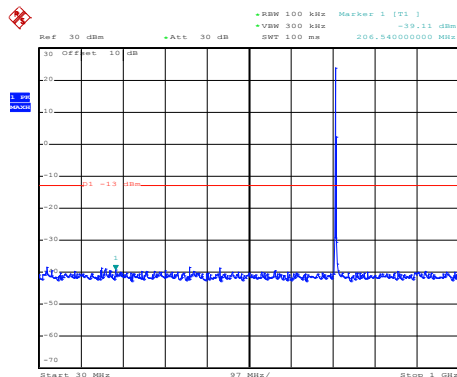
30MHz~1GHz



Date: 17.SEP.2019 18:59:49

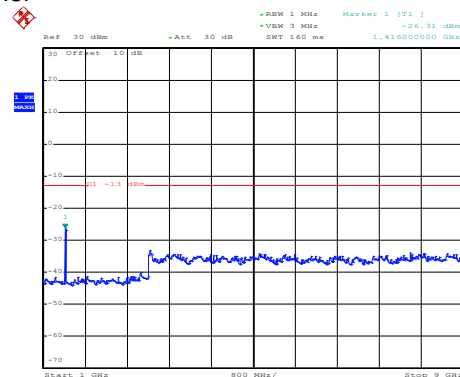
1GHz~25GHz

High channel



Date: 17.SEP.2019 17:52:28

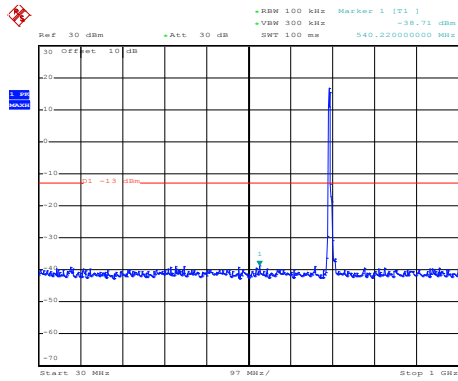
30MHz~1GHz



Date: 17.SEP.2019 19:00:08

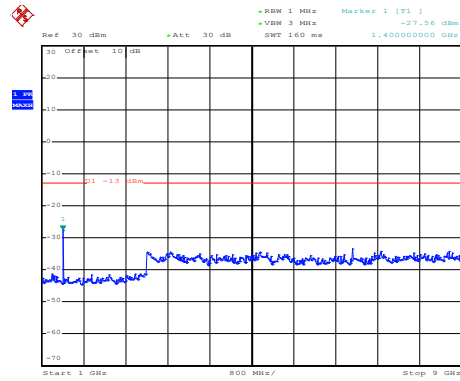
1GHz~25GHz

LTE Band 12: 16 QAM & RB Size 1 BW: 10MHz Lowest channel



Date: 17.SEP.2019 17:42:12

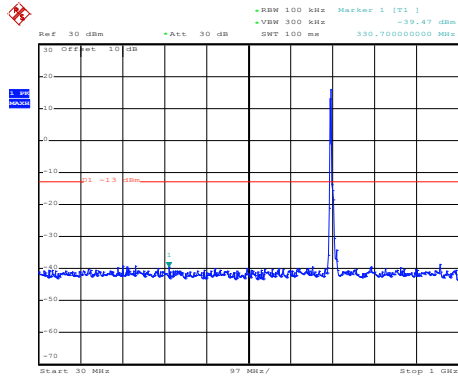
30MHz~1GHz



Date: 17.SEP.2019 19:05:26

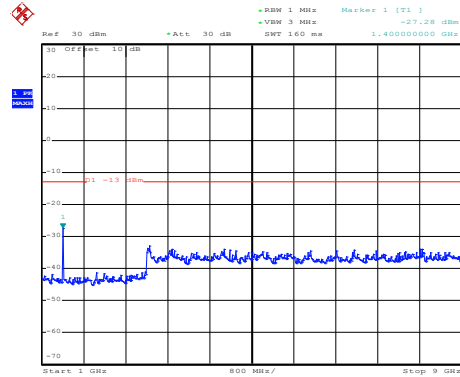
1GHz~25GHz

Middle channel



Date: 17.SEP.2019 17:43:22

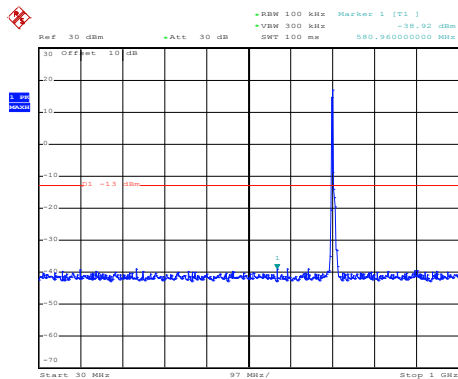
30MHz~1GHz



Date: 17.SEP.2019 19:06:17

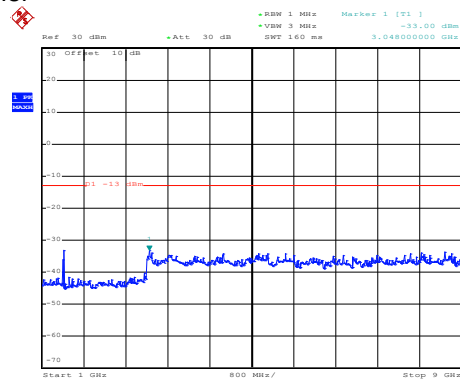
1GHz~25GHz

High channel



Date: 17.SEP.2019 17:43:48

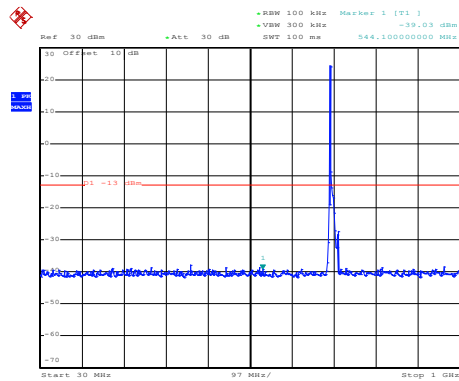
30MHz~1GHz



Date: 17.SEP.2019 19:06:35

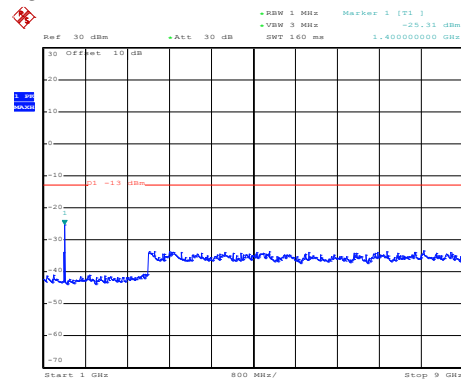
1GHz~25GHz

LTE Band 12: QPSK & RB Size 1 BW: 10MHz Lowest channel



Date: 17.SEP.2019 17:42:00

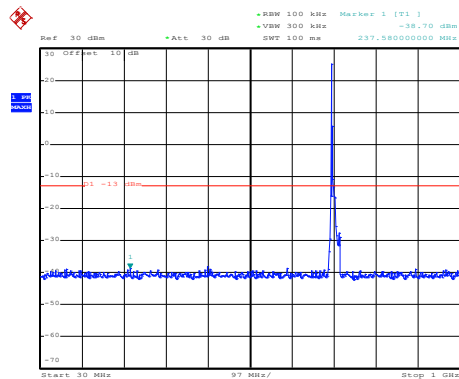
30MHz~1GHz



Date: 17.SEP.2019 19:05:20

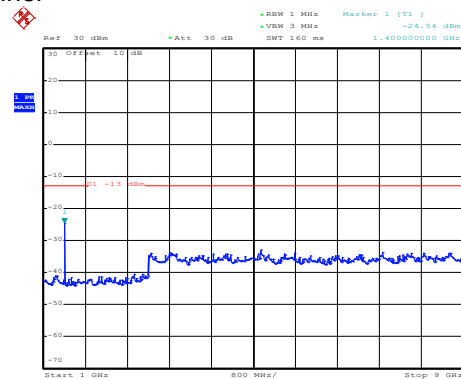
1GHz~25GHz

Middle channel



Date: 17.SEP.2019 17:43:14

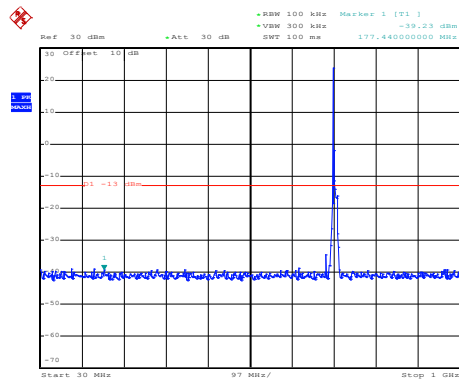
30MHz~1GHz



Date: 17.SEP.2019 19:06:11

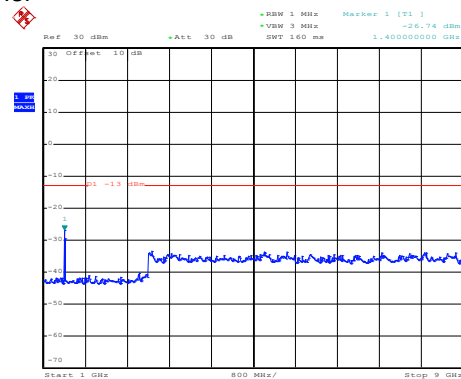
1GHz~25GHz

High channel



Date: 17.SEP.2019 17:43:40

30MHz~1GHz

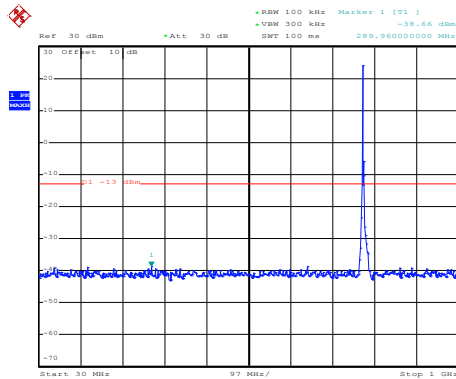


Date: 17.SEP.2019 19:06:30

1GHz~25GHz

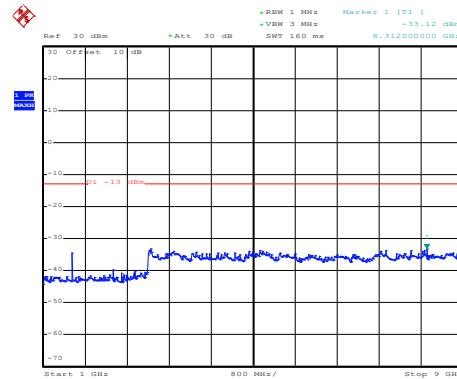
LTE Band 13 part:

LTE Band 13: 16 QAM & RB Size 1 BW: 5MHz Lowest channel



Date: 17.SEP.2019 17:40:05

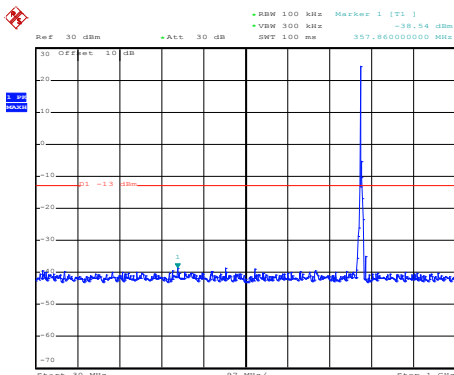
30MHz~1GHz



Date: 17.SEP.2019 19:10:13

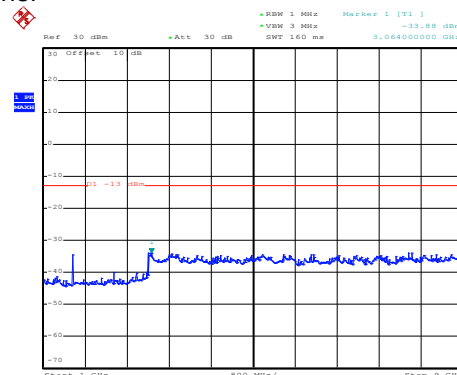
1GHz~9GHz

Middle channel



Date: 17.SEP.2019 17:39:34

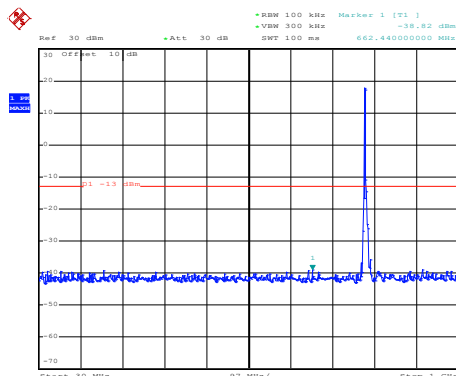
30MHz~1GHz



Date: 17.SEP.2019 19:08:43

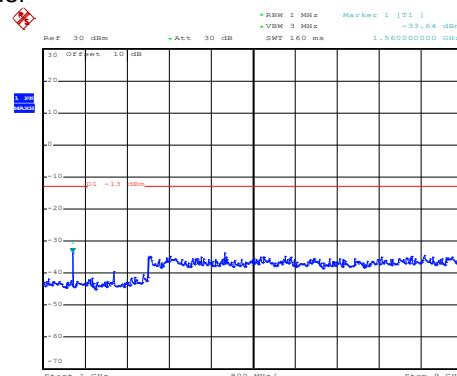
1GHz~9GHz

High channel



Date: 17.SEP.2019 17:28:52

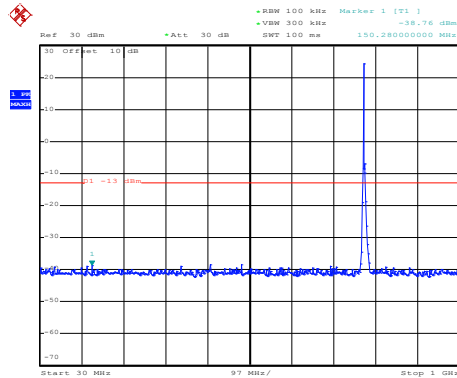
30MHz~1GHz



Date: 17.SEP.2019 19:10:31

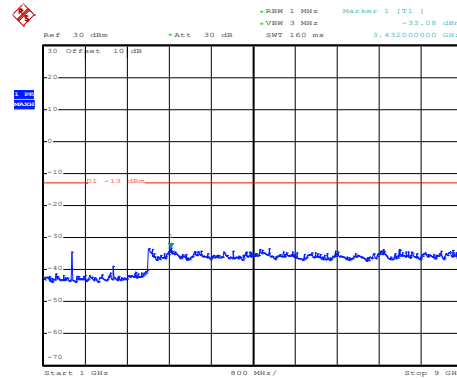
1GHz~9GHz

LTE Band 13: QPSK & RB Size 1 BW: 5MHz Lowest channel



Date: 17.SEP.2019 17:39:55

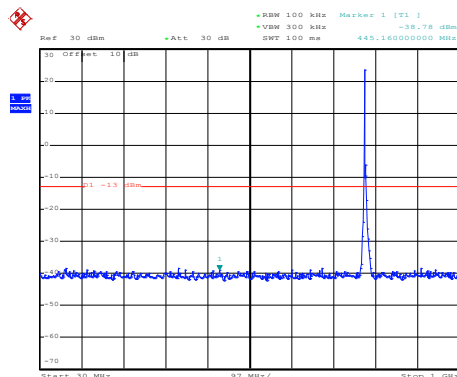
30MHz~1GHz



Date: 17.SEP.2019 19:10:03

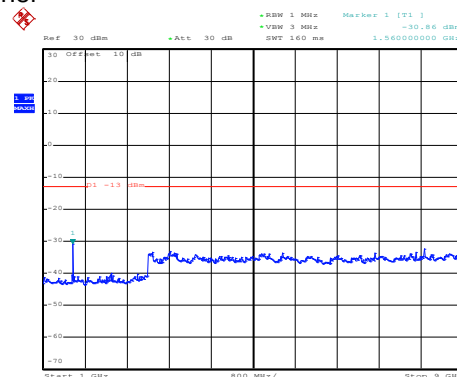
1GHz~9GHz

Middle channel



Date: 17.SEP.2019 17:39:27

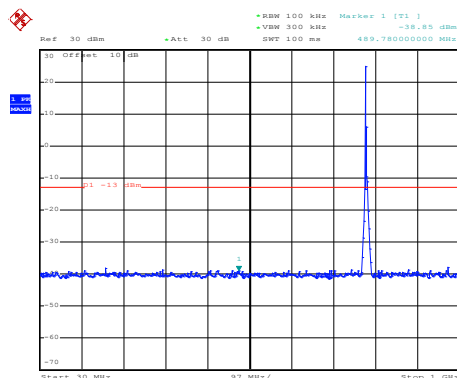
30MHz~1GHz



Date: 17.SEP.2019 19:08:33

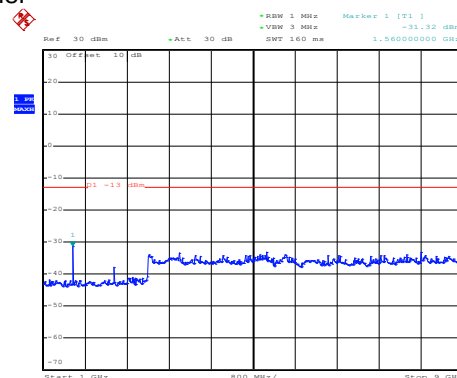
1GHz~9GHz

High channel



Date: 17.SEP.2019 17:28:42

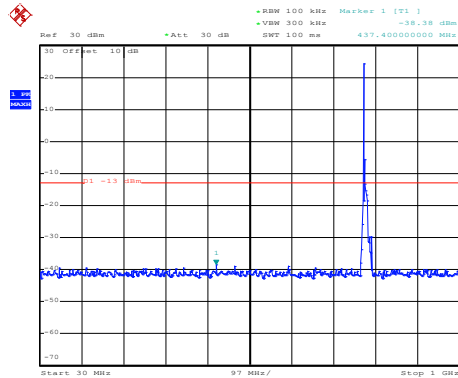
30MHz~1GHz



Date: 17.SEP.2019 19:10:25

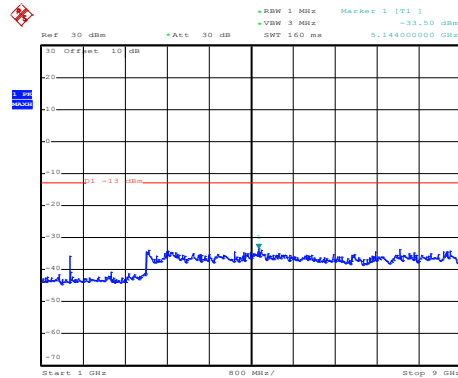
1GHz~9GHz

LTE Band 13: 16 QAM & RB Size 1 BW: 10MHz Middle channel



Date: 17.SEP.2019 17:41:09

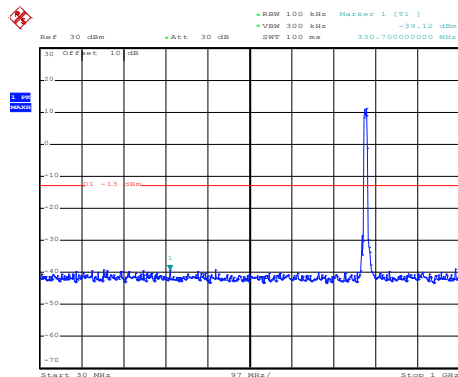
30MHz~1GHz



Date: 17.SEP.2019 19:07:55

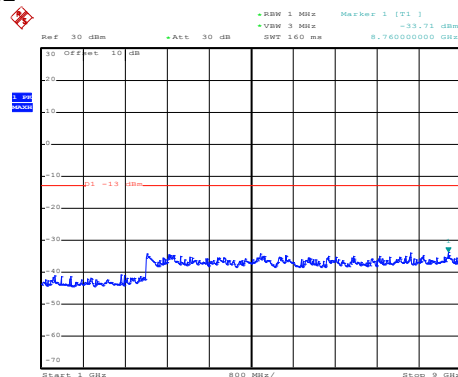
1GHz~9GHz

LTE Band 13: 16 QAM & RB Size 50 BW: 10MHz



Date: 17.SEP.2019 17:41:26

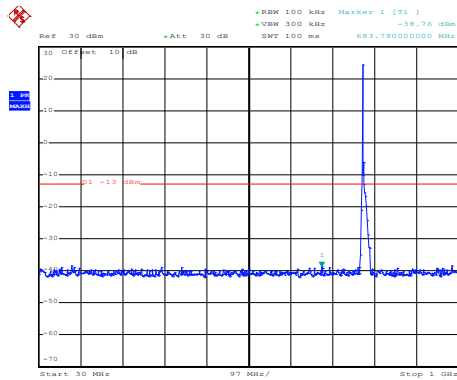
30MHz~1GHz



Date: 17.SEP.2019 19:08:12

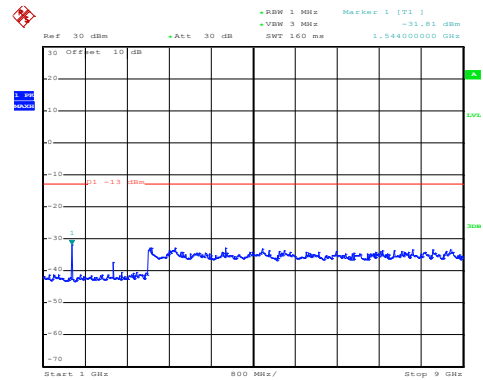
1GHz~9GHz

LTE Band 13: 16 QAM & RB Size 1
BW: 10MHz
Middle channel



Date: 17.SEP.2019 17:40:56

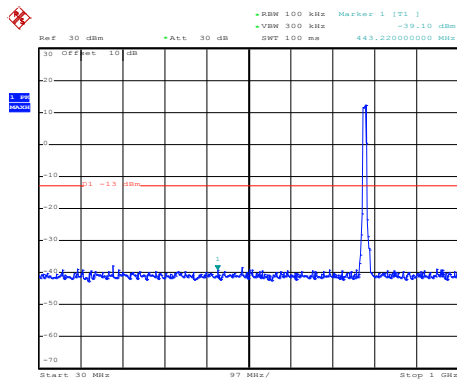
30MHz~1GHz



Date: 17.SEP.2019 19:07:48

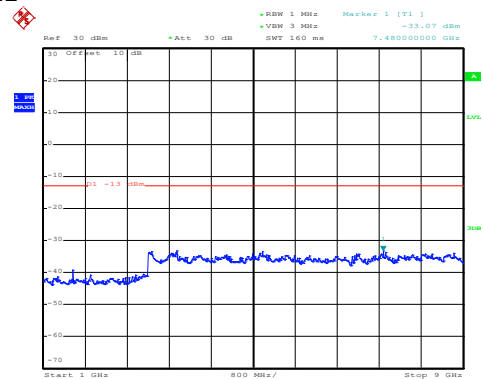
1GHz~9GHz

LTE Band 13: 16 QAM & RB Size 50
BW: 10MHz



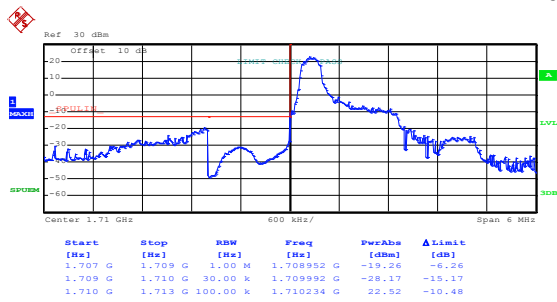
Date: 17.SEP.2019 17:41:19

30MHz~1GHz



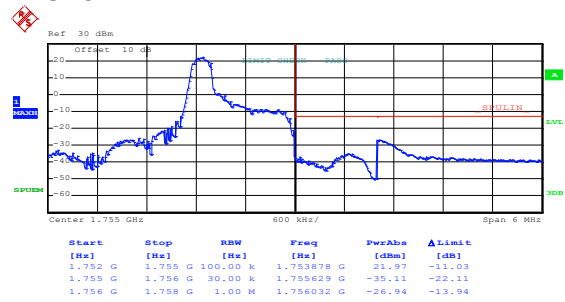
Date: 17.SEP.2019 19:08:06

1GHz~9GHz

Band edge emission:**LTE Band 4 part:****LTE Band 4, BW: 1.4MHz
16QAM & RB Size 1**

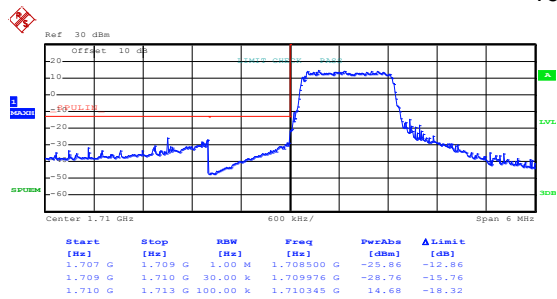
Date: 17.SEP.2019 20:19:28

Lowest channel



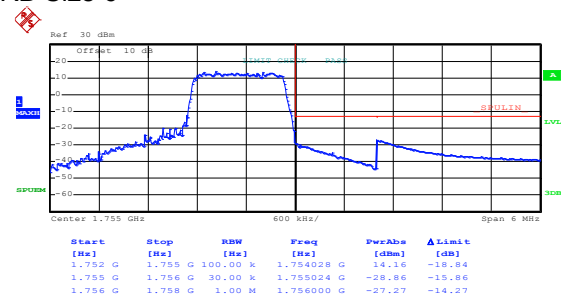
Date: 17.SEP.2019 20:20:31

Highest channel

16QAM & RB Size 6

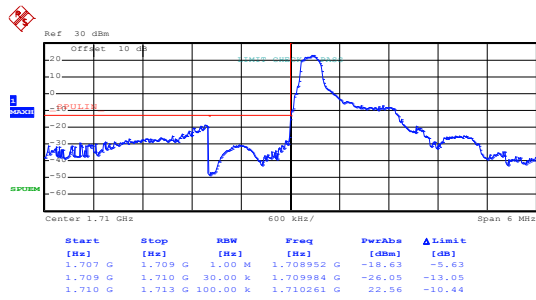
Date: 17.SEP.2019 20:19:47

Lowest channel



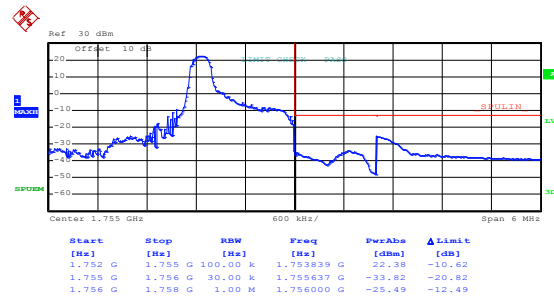
Date: 17.SEP.2019 20:20:12

Highest channel

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

Date: 17.SEP.2019 20:19:13

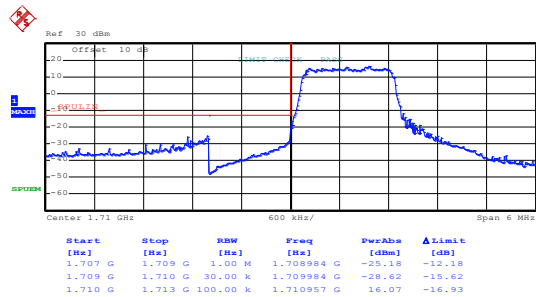
Lowest channel



Date: 17.SEP.2019 20:20:22

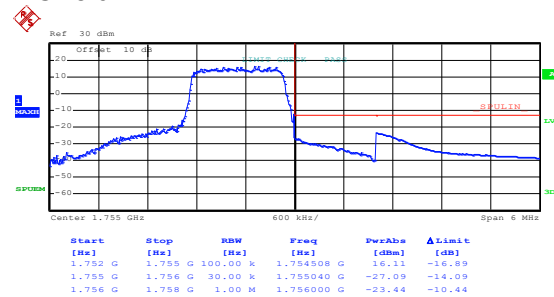
Highest channel

QPSK & RB Size 6



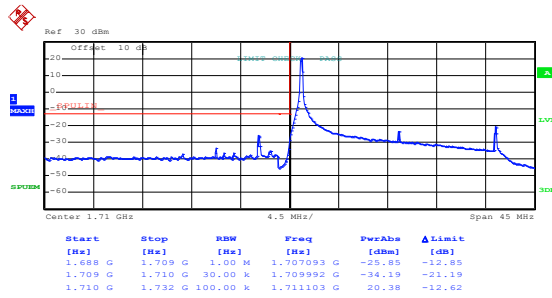
Date: 17.SEP.2019 20:19:38

Lowest channel



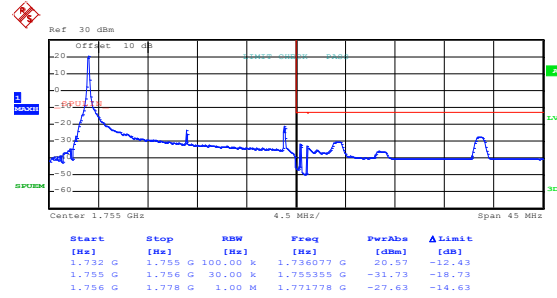
Date: 17.SEP.2019 20:20:05

Highest channel

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

Date: 17.SEP.2019 20:31:15

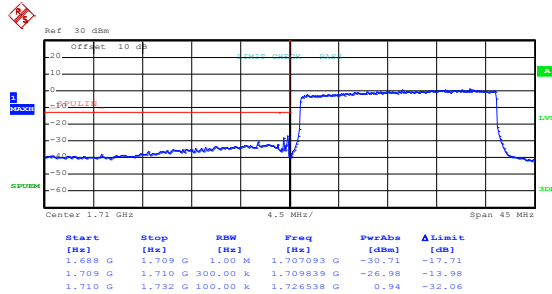
Lowest channel



Date: 17.SEP.2019 20:30:02

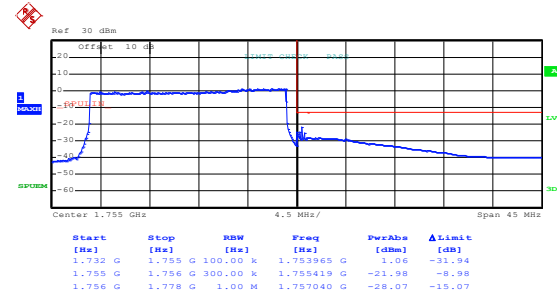
Highest channel

16QAM & RB Size 100



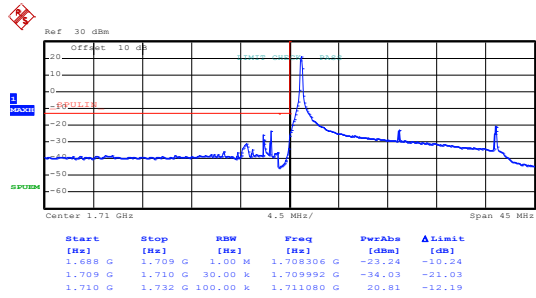
Date: 17.SEP.2019 20:30:52

Lowest channel



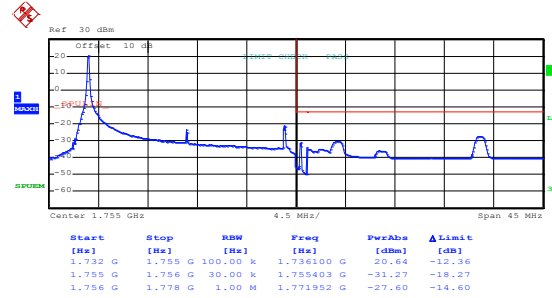
Date: 17.SEP.2019 20:30:31

Highest channel

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

Date: 17.SEP.2019 20:31:07

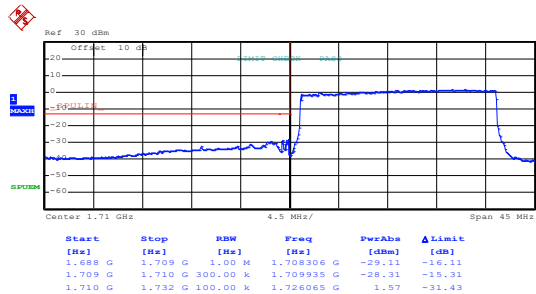
Lowest channel



Date: 17.SEP.2019 20:29:52

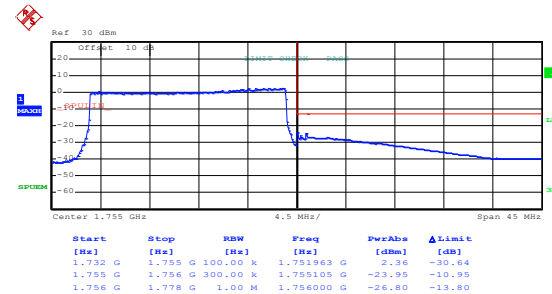
Highest channel

QPSK & RB Size 100



Date: 17.SEP.2019 20:30:45

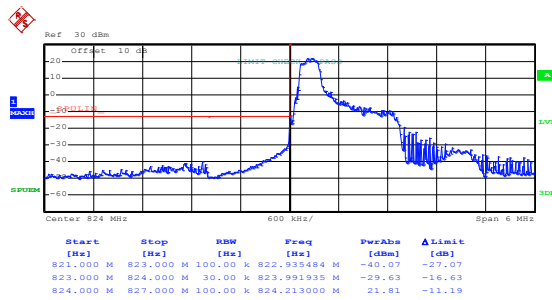
Lowest channel



Date: 17.SEP.2019 20:30:19

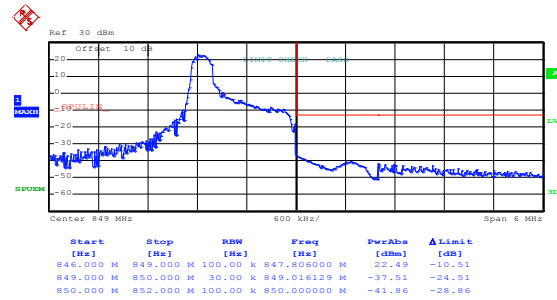
Highest channel

LTE Band 5 part:

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

Date: 17.SEP.2019 20:05:12

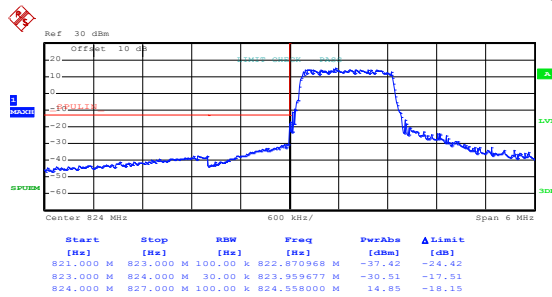
Lowest channel



Date: 17.SEP.2019 20:06:12

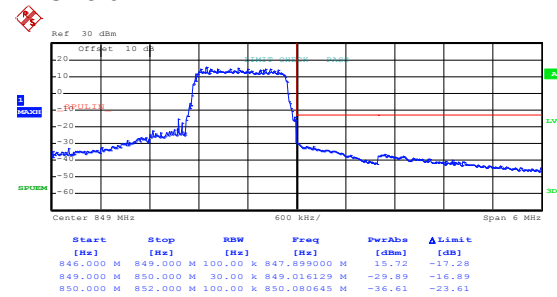
Highest channel

16QAM & RB Size 6



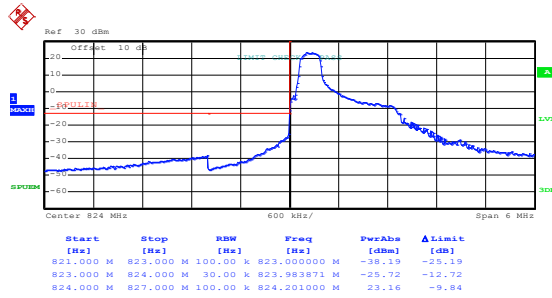
Date: 17.SEP.2019 20:05:29

Lowest channel



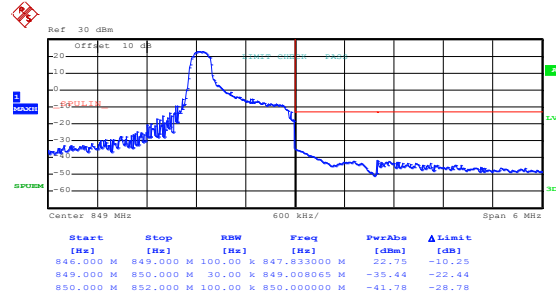
Date: 17.SEP.2019 20:05:51

Highest channel

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

Date: 17.SEP.2019 20:04:54

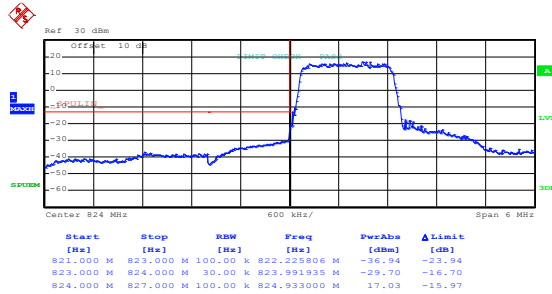
Lowest channel



Date: 17.SEP.2019 20:06:01

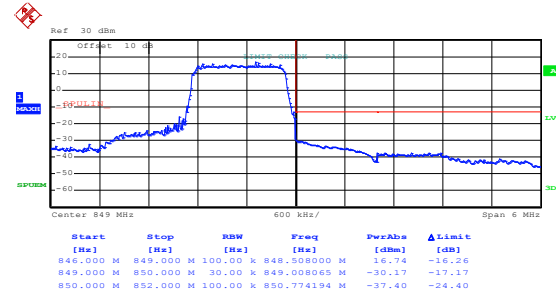
Highest channel

QPSK & RB Size 6



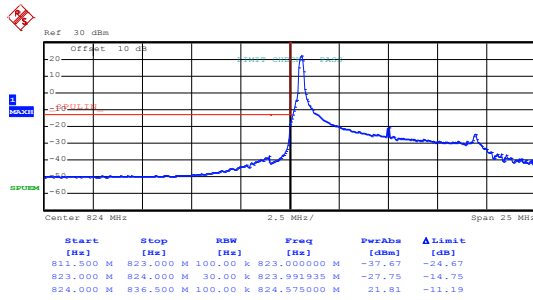
Date: 17.SEP.2019 20:05:23

Lowest channel



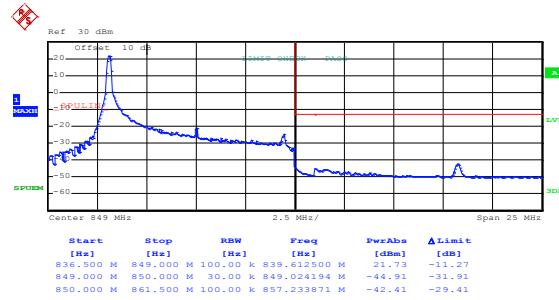
Date: 17.SEP.2019 20:05:44

Highest channel

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

Date: 17.SEP.2019 20:17:11

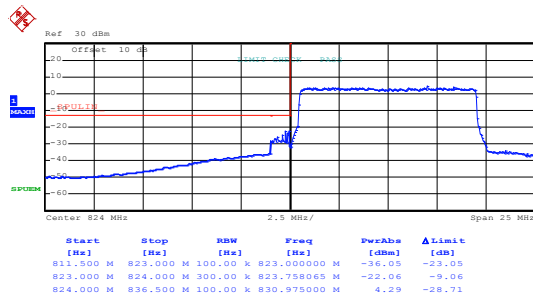
Lowest channel



Date: 17.SEP.2019 20:15:46

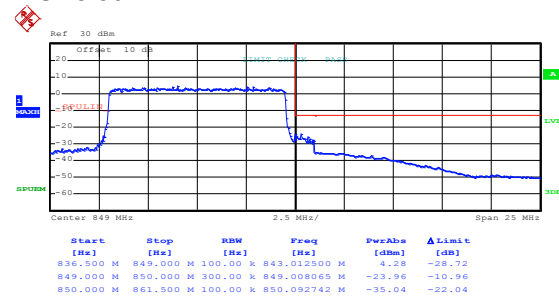
Highest channel

16QAM & RB Size 50



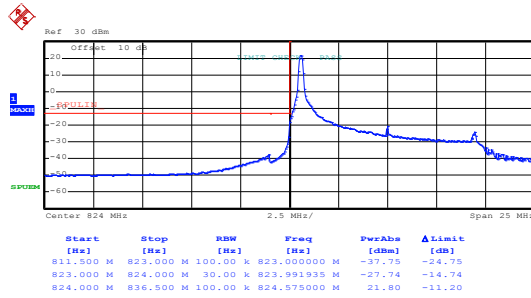
Date: 17.SEP.2019 20:16:45

Lowest channel



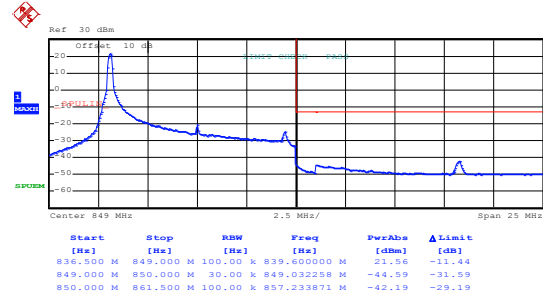
Date: 17.SEP.2019 20:16:12

Highest channel

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

Date: 17.SEP.2019 20:17:00

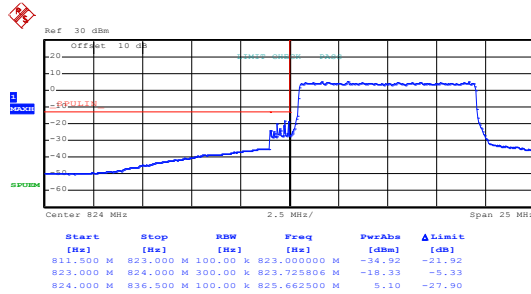
Lowest channel



Date: 17.SEP.2019 20:15:38

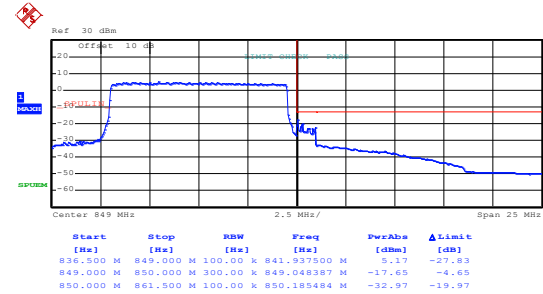
Highest channel

QPSK & RB Size 50



Date: 17.SEP.2019 20:16:38

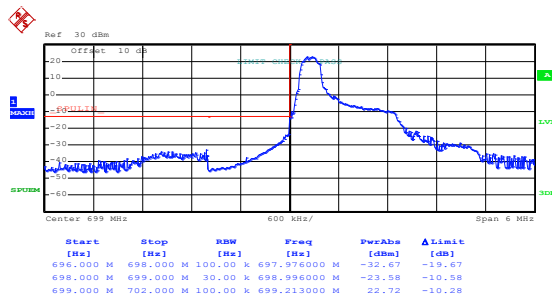
Lowest channel



Date: 17.SEP.2019 20:16:06

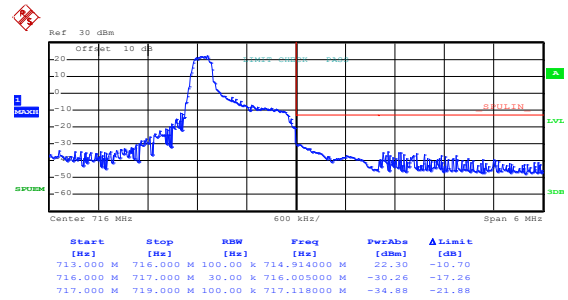
Highest channel

LTE band 12 part:

LTE Band 12, BW: 1.4MHz
16QAM & RB Size 1

Date: 17.SEP.2019 19:55:19

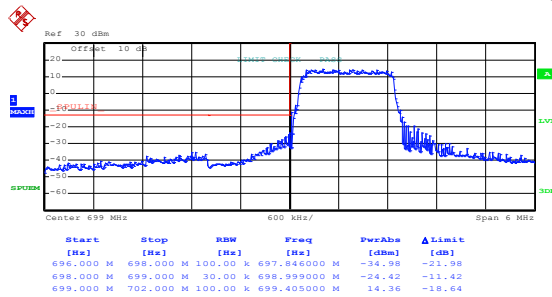
Lowest channel



Date: 17.SEP.2019 19:56:26

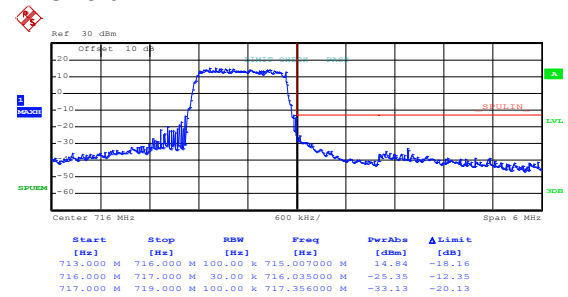
Highest channel

16QAM & RB Size 6



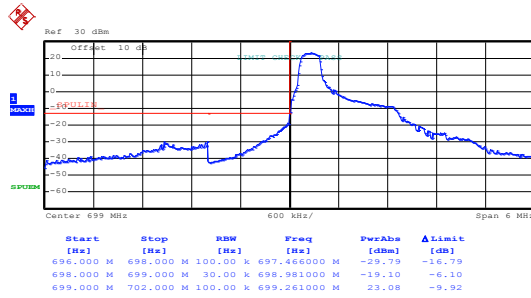
Date: 17.SEP.2019 19:55:37

Lowest channel



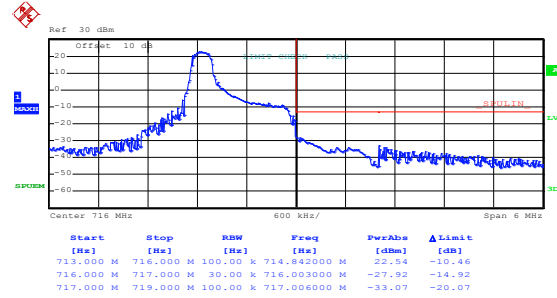
Date: 17.SEP.2019 19:56:04

Highest channel

LTE Band 12, BW: 1.4MHz
QPSK & RB Size 1

Date: 17.SEP.2019 19:55:00

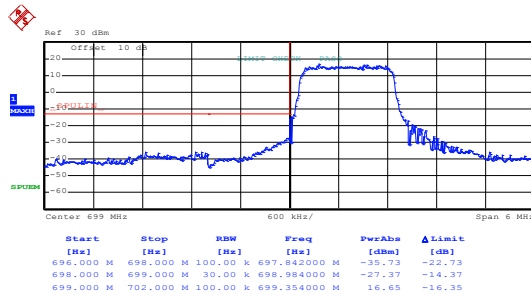
Lowest channel



Date: 17.SEP.2019 19:56:16

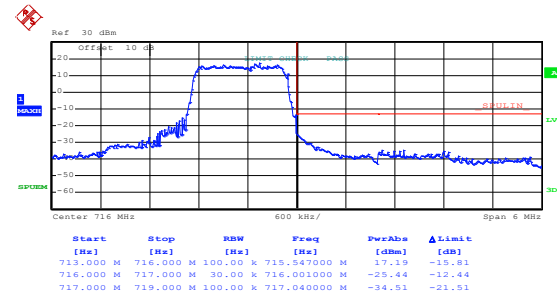
Highest channel

QPSK & RB Size 6



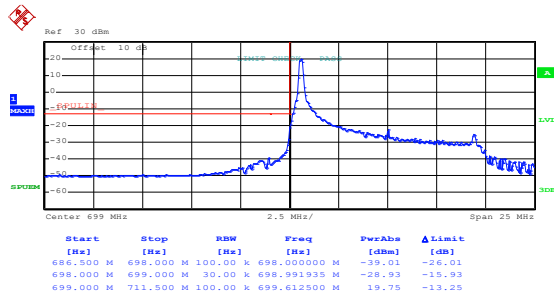
Date: 17.SEP.2019 19:55:29

Lowest channel



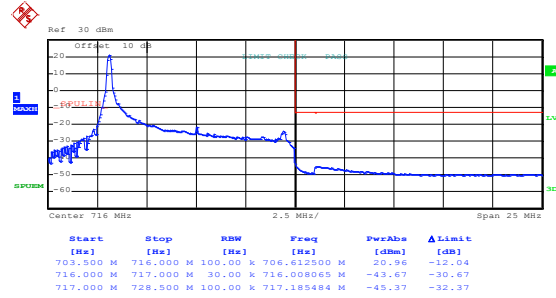
Date: 17.SEP.2019 19:55:57

Highest channel

LTE Band 12, BW: 10MHz
16QAM & RB Size 1

Date: 17.SEP.2019 20:03:33

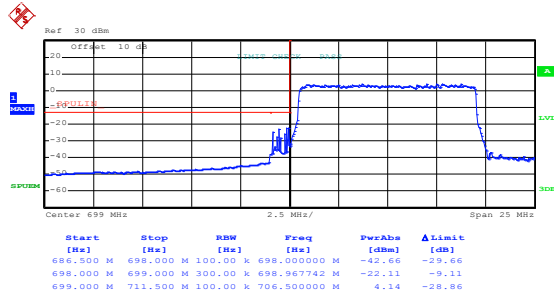
Lowest channel



Date: 17.SEP.2019 20:02:13

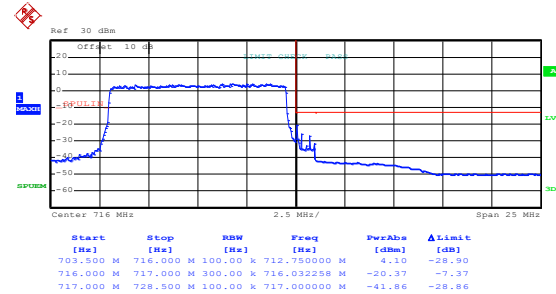
Highest channel

16QAM & RB Size 50



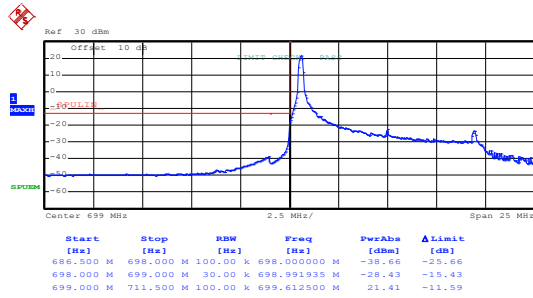
Date: 17.SEP.2019 20:03:07

Lowest channel



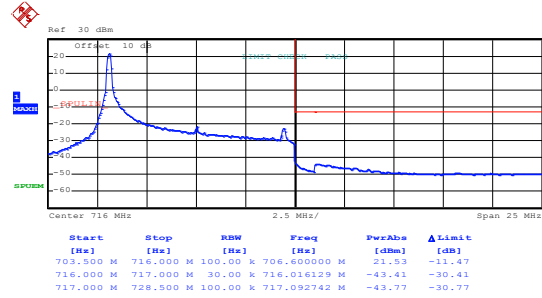
Date: 17.SEP.2019 20:02:37

Highest channel

LTE Band 12, BW: 10MHz
QPSK & RB Size 1

Date: 17.SEP.2019 20:03:25

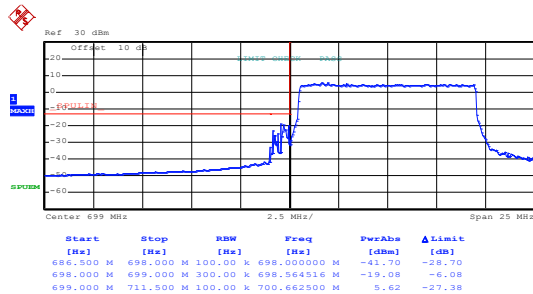
Lowest channel



Date: 17.SEP.2019 20:02:04

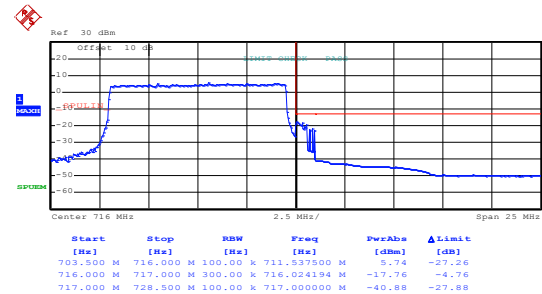
Highest channel

QPSK & RB Size 50



Date: 17.SEP.2019 20:03:00

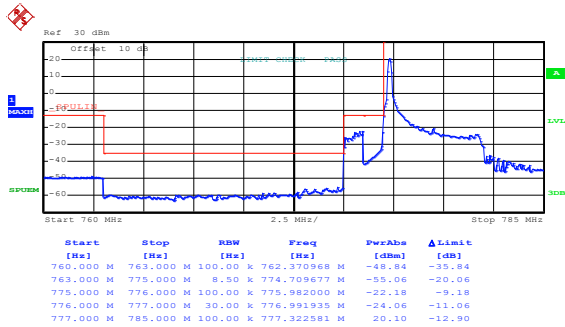
Lowest channel



Date: 17.SEP.2019 20:02:30

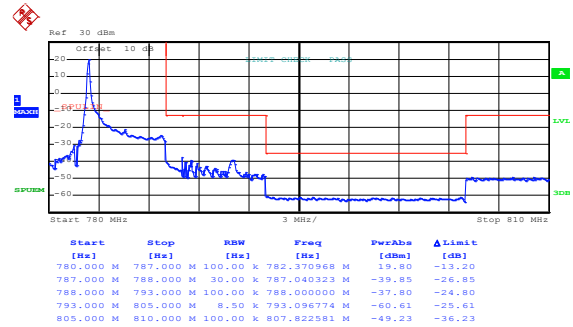
Highest channel

LTE Band 13 part:

LTE Band 13, BW: 5MHz
16QAM & RB Size 1

Date: 17.SEP.2019 19:39:10

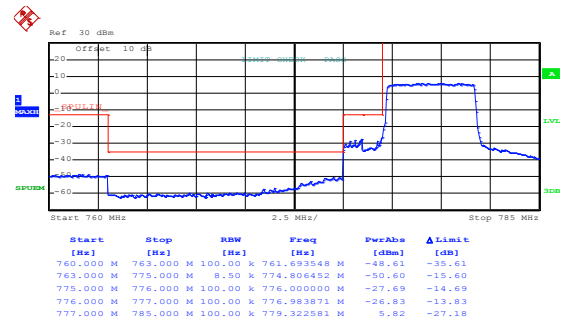
Lowest channel



Date: 17.SEP.2019 19:46:50

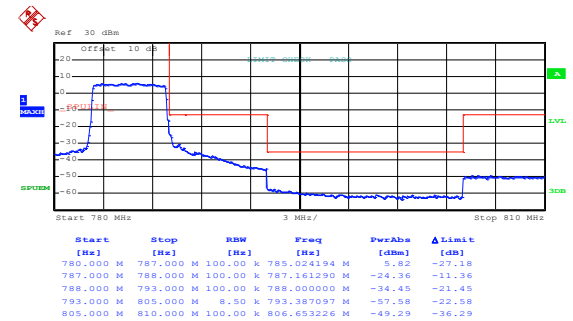
Highest channel

16QAM & RB Size 25



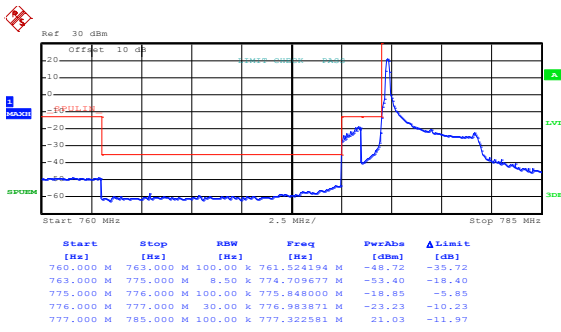
Date: 17.SEP.2019 19:44:02

Lowest channel



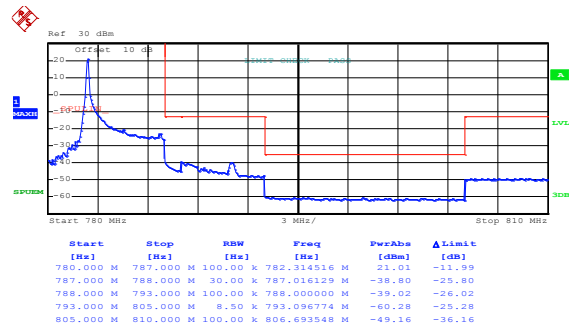
Date: 17.SEP.2019 19:46:07

Highest channel

LTE Band 13, BW: 5MHz
QPSK & RB Size 1

Date: 17.SEP.2019 19:38:56

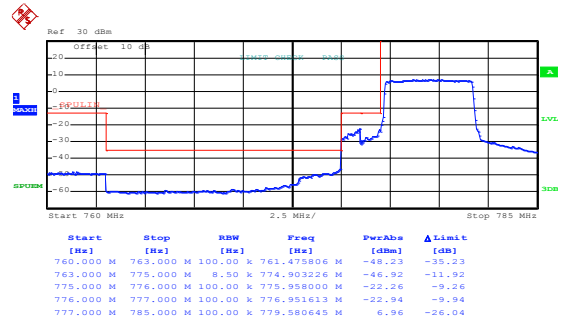
Lowest channel



Date: 17.SEP.2019 19:46:37

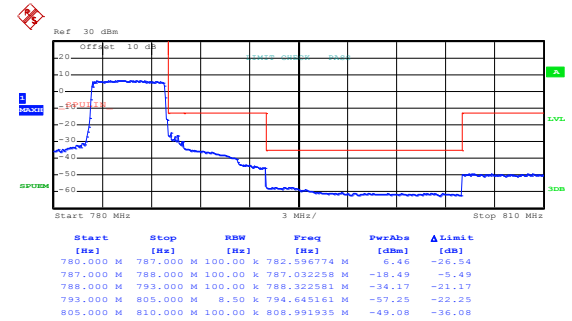
Highest channel

QPSK & RB Size 25



Date: 17.SEP.2019 19:43:54

Lowest channel

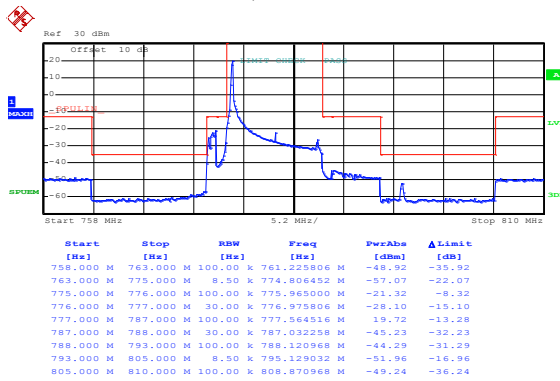


Date: 17.SEP.2019 19:46:00

Highest channel

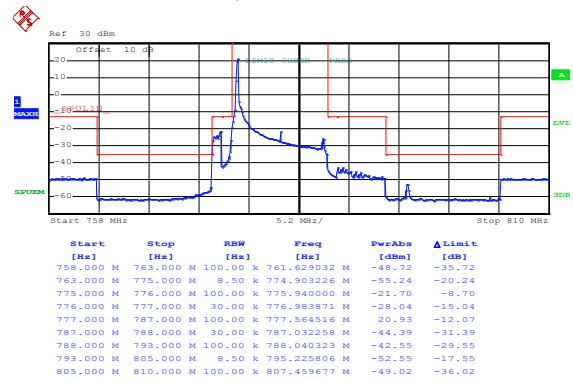
LTE Band 13, BW: 10MHz

16QAM & RB Size 1



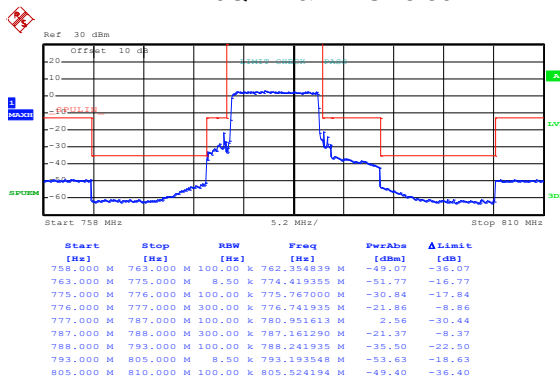
Date: 17.SEP.2019 19:52:23

QPSK & RB Size 1



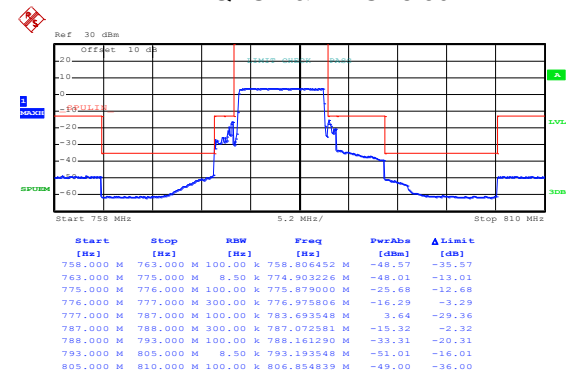
Date: 17.SEP.2019 19:52:04

16QAM & RB Size 50



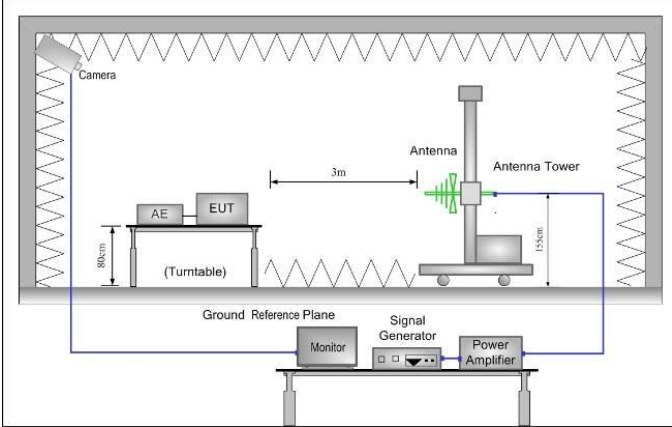
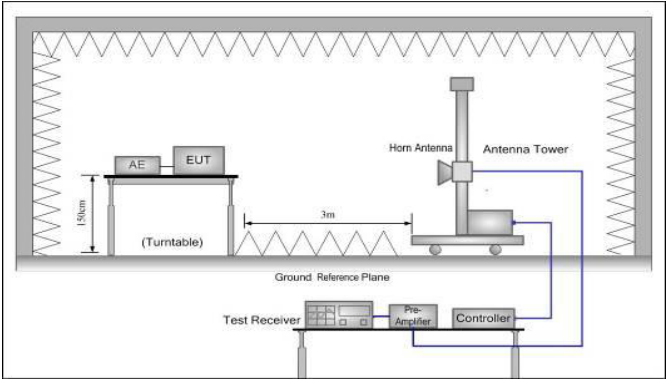
Date: 17.SEP.2019 19:51:21

QPSK & RB Size 50



Date: 17.SEP.2019 19:51:09

6.5 Field strength of spurious radiation measurement

Test Requirement:	Part 22.917(b), Part 27.53(g), Part 27.53(c),Part 27.53(h)
Limit:	LTE Band 4 & 5 & 12: 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). LTE Band 13: The power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB(-13 dBm). On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.
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. 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 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	-49.85	-13.00	Pass
5132.10	V	-44.74		
6842.80	V	-38.17		
3421.40	Horizontal	-49.91		
5132.10	H	-44.91		
6842.80	H	-38.32		
Middle Channel				
3465.00	Vertical	-49.36	-13.00	Pass
5197.50	V	-44.51		
6930.00	V	-38.69		
3465.00	Horizontal	-49.46		
5197.50	H	-44.19		
6930.00	H	-38.93		
Highest Channel				
3508.60	Vertical	-49.57	-13.00	Pass
5262.90	V	-44.74		
7017.20	V	-38.36		
3508.60	Horizontal	-49.95		
5262.90	H	-44.91		
7017.20	H	-38.57		
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	-49.77	-13.00	Pass
5160.00	V	-44.16		
6880.00	V	-38.57		
3440.00	Horizontal	-49.57		
5160.00	H	-44.70		
6880.00	H	-38.84		
Middle Channel				
3465.00	Vertical	-49.29	-13.00	Pass
5197.50	V	-44.16		
6930.00	V	-38.94		
3465.00	Horizontal	-49.91		
5197.50	H	-44.68		
6930.00	H	-38.42		
Highest Channel				
3490.00	Vertical	-49.63	-13.00	Pass
5235.00	V	-44.91		
6980.00	V	-38.38		
3490.00	Horizontal	-49.41		
5235.00	H	-44.08		
6980.00	H	-38.59		
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	-51.53	-13.00	Pass
2474.10	V	-54.66		
3298.80	V	-49.28		
1649.40	Horizontal	-56.32		
2474.10	H	-49.63		
3298.80	H	-50.87		
Middle Channel				
1673.00	Vertical	-51.16	-13.00	Pass
2509.50	V	-54.25		
3346.00	V	-49.33		
1673.00	Horizontal	-56.37		
2509.50	H	-49.54		
3346.00	H	-50.46		
Highest Channel				
1696.60	Vertical	-51.42	-13.00	Pass
2544.90	V	-54.39		
3393.20	V	-49.37		
1696.60	Horizontal	-56.16		
2544.90	H	-49.86		
3393.20	H	-50.30		
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	-51.36	-13.00	Pass
2487.00	V	-54.06		
3316.00	V	-49.26		
1658.00	Horizontal	-56.83		
2487.00	H	-49.42		
3316.00	H	-50.44		
Middle Channel				
1673.00	Vertical	-51.16	-13.00	Pass
2509.50	V	-54.24		
3346.00	V	-49.86		
1673.00	Horizontal	-56.41		
2509.50	H	-49.36		
3346.00	H	-50.98		
Highest Channel				
1688.00	Vertical	-51.42	-13.00	Pass
2532.00	V	-54.96		
3376.00	V	-49.62		
1688.00	Horizontal	-56.37		
2532.00	H	-49.89		
3376.00	H	-50.23		
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 12 part:

LTE Band 12, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1399.40	Vertical	-56.15	-13.00	Pass
2099.10	V	-53.90		
2798.80	V	-53.40		
1399.40	Horizontal	-53.91		
2099.10	H	-46.23		
2798.80	H	-52.97		
Middle Channel				
1415.00	Vertical	-56.14	-13.00	Pass
2122.50	V	-53.21		
2830.00	V	-53.28		
1415.00	Horizontal	-53.67		
2122.50	H	-46.26		
2830.00	H	-52.36		
Highest Channel				
1430.60	Vertical	-56.63	-13.00	Pass
2145.90	V	-53.17		
2861.20	V	-53.94		
1430.60	Horizontal	-53.97		
2145.90	H	-46.32		
2861.20	H	-52.13		
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.				

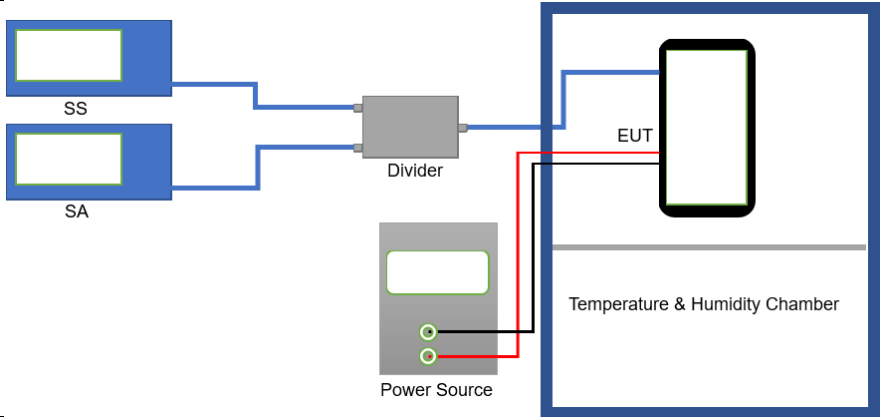
LTE Band 12, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1408.00	Vertical	-56.23	-13.00	Pass
2112.00	V	-53.17		
2816.00	V	-53.36		
1408.00	Horizontal	-53.03		
2112.00	H	-46.43		
2816.00	H	-52.16		
Middle Channel				
1415.00	Vertical	-56.88	-13.00	Pass
2122.50	V	-53.15		
2830.00	V	-53.01		
1415.00	Horizontal	-53.74		
2122.50	H	-46.41		
2830.00	H	-52.94		
Highest Channel				
1422.00	Vertical	-56.41	-13.00	Pass
2133.00	V	-53.63		
2844.00	V	-53.15		
1422.00	Horizontal	-53.73		
2133.00	H	-46.15		
2844.00	H	-52.01		
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 13 part:

LTE Band 13, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1559.00	Vertical	-58.58	-13.00	Pass
2338.50	V	-56.53		
3118.00	V	-51.58		
1559.00	Horizontal	-58.92		
2338.50	H	-53.95		
3118.00	H	-50.11		
Middle Channel				
1564.00	Vertical	-58.16	-13.00	Pass
2346.00	V	-56.05		
3128.00	V	-51.32		
1564.00	Horizontal	-58.42		
2346.00	H	-53.60		
3128.00	H	-50.57		
Highest Channel				
1569.00	Vertical	-58.12	-13.00	Pass
2353.50	V	-56.93		
3138.00	V	-51.12		
1569.00	Horizontal	-58.03		
2353.50	H	-53.05		
3138.00	H	-50.39		
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 13, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1564.00	Vertical	-58.41	-13.00	Pass
2346.00	V	-56.07		
3128.00	V	-51.32		
1564.00	Horizontal	-58.40		
2346.00	H	-53.05		
3128.00	H	-50.42		
Middle Channel				
1564.00	Vertical	-58.36	-13.00	Pass
2346.00	V	-56.03		
3128.00	V	-51.39		
1564.00	Horizontal	-58.39		
2346.00	H	-53.12		
3128.00	H	-50.34		
Highest Channel				
1564.00	Vertical	-58.03	-13.00	Pass
2346.00	V	-56.58		
3128.00	V	-51.06		
1564.00	Horizontal	-58.31		
2346.00	H	-53.23		
3128.00	H	-50.40		
Note:				
3. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
4. 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 27.54, Part 2.1055(a)(1)(b)
Limit:	$\pm 2.5\text{ppm}$
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 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):

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	198	0.114286	±2.5	Pass
	-20	152	0.087734		
	-10	136	0.078499		
	0	145	0.083694		
	10	120	0.069264		
	20	175	0.101010		
	30	144	0.083117		
	40	120	0.069264		
	50	133	0.076768		
16QAM					
3.70	-30	178	0.102742	±2.5	Pass
	-20	159	0.091775		
	-10	168	0.096970		
	0	147	0.084848		
	10	123	0.070996		
	20	156	0.090043		
	30	140	0.080808		
	40	111	0.064069		
	50	122	0.070418		
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	178	0.212766	±2.5	Pass
	-20	156	0.186469		
	-10	123	0.147024		
	0	136	0.162563		
	10	145	0.173321		
	20	168	0.200813		
	30	155	0.185274		
	40	144	0.172125		
	50	163	0.194836		
16QAM					
3.70	-30	188	0.224719	±2.5	Pass
	-20	147	0.175711		
	-10	175	0.209180		
	0	167	0.199617		
	10	173	0.206789		
	20	122	0.145828		
	30	152	0.181688		
	40	162	0.193641		
	50	136	0.162563		
Note: Only the worst case shown in the report.					

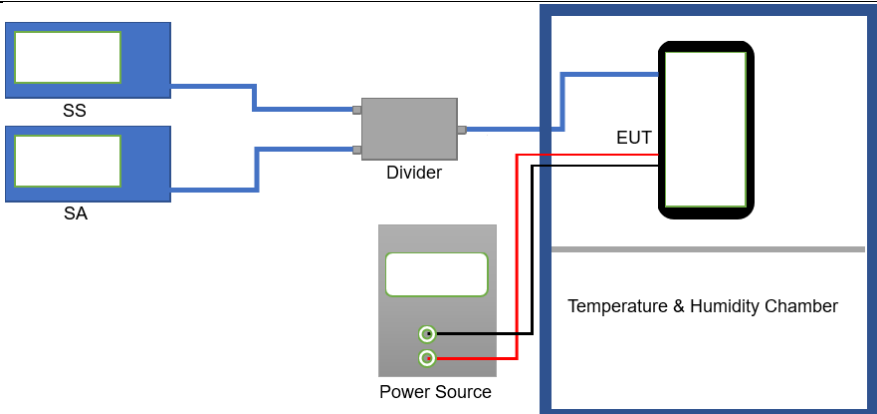
LTE Band 12 part:

Reference Frequency: LTE Band 12 (10MHz) Middle channel=23095 channel=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	188	0.265724	±2.5	Pass
	-20	145	0.204947		
	-10	162	0.228975		
	0	152	0.214841		
	10	132	0.186572		
	20	147	0.207774		
	30	180	0.254417		
	40	185	0.261484		
	50	177	0.250177		
16QAM					
3.70	-30	190	0.268551	±2.5	Pass
	-20	147	0.207774		
	-10	158	0.223322		
	0	169	0.238869		
	10	135	0.190813		
	20	120	0.169611		
	30	145	0.204947		
	40	162	0.228975		
	50	174	0.245936		
Note: Only the worst case shown in the report.					

LTE Band 13 part:

Reference Frequency: LTE Band 13 (10MHz) Middle channel=23230 channel=782.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	187	0.256868	±2.5	Pass
	-20	156	0.214286		
	-10	145	0.199176		
	0	123	0.168956		
	10	155	0.212912		
	20	120	0.164835		
	30	130	0.178571		
	40	158	0.217033		
	50	166	0.228022		
16QAM					
3.70	-30	177	0.243132	±2.5	Pass
	-20	158	0.217033		
	-10	169	0.232143		
	0	139	0.190934		
	10	124	0.170330		
	20	138	0.189560		
	30	164	0.225275		
	40	170	0.233516		
	50	160	0.219780		
Note: Only the worst case shown in the report.					

6.7 Frequency stability V.S. Voltage measurement

Test Requirement:	Part 22.355, Part 27.54, Part 2.1055(d)(2)
Limit:	±2.5ppm
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer (SA) and a Signal Source (SS) are connected to a Divider. 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 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):

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	99	0.057143	±2.5	Pass
	3.70	56	0.032323		
	3.50	63	0.036364		
16QAM					
25	4.20	88	0.050794	±2.5	Pass
	3.70	47	0.027128		
	3.50	75	0.043290		
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	88	0.105188	±2.5	Pass
	3.70	57	0.068133		
	3.50	65	0.077695		
16QAM					
25	4.20	86	0.102797	±2.5	Pass
	3.70	23	0.027492		
	3.50	36	0.043031		
Note: Only the worst case shown in the report.					

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 channel=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.20	96	0.135689	±2.5	Pass
	3.70	56	0.079152		
	3.50	84	0.118728		
16QAM					
25	4.20	78	0.110247	±2.5	Pass
	3.70	69	0.097527		
	3.50	66	0.093286		
Note: Only the worst case shown in the report.					

Note: Only the worst case shown in the report.

LTE Band 13 part:

Reference Frequency: LTE Band 13(10MHz) Middle channel=23230 channel=728.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.20	69	0.094780	±2.5	Pass
	3.70	32	0.043956		
	3.50	42	0.057692		
16QAM					
25	4.20	99	0.135989	±2.5	Pass
	3.70	56	0.076923		
	3.50	87	0.119505		
Note: Only the worst case shown in the report.					

Note: Only the worst case shown in the report.