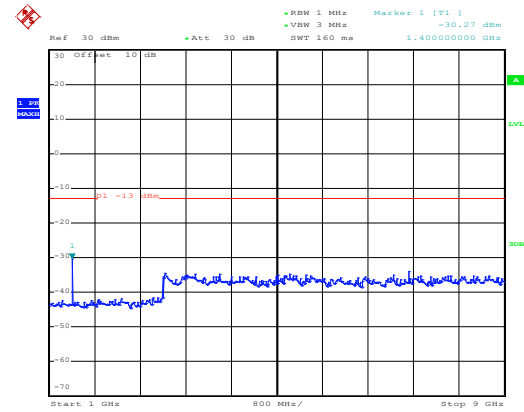
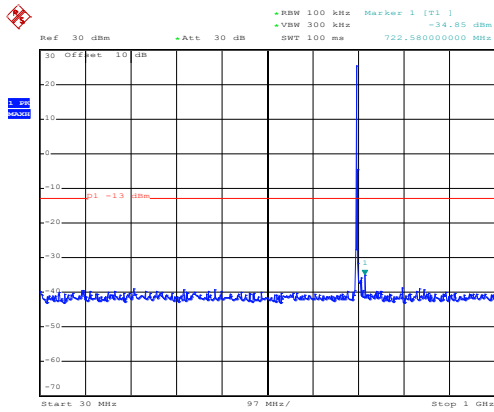


10MHz

16 QAM & RB Size 1 Lowest channel



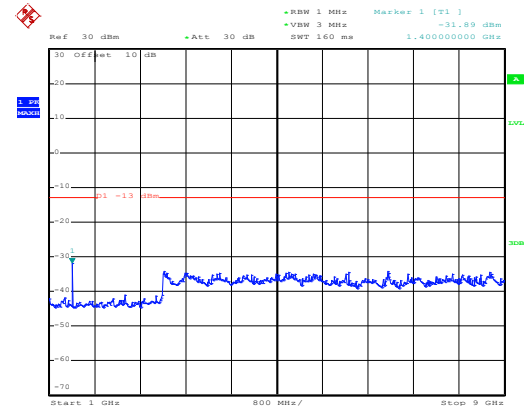
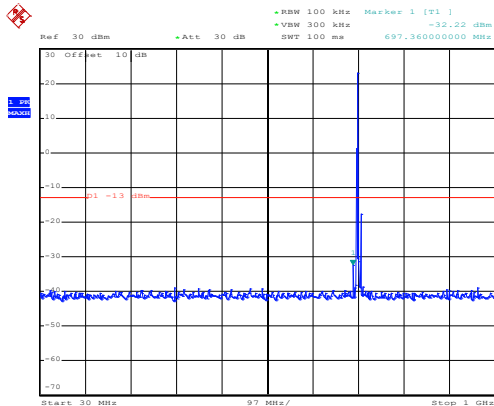
Date: 4.DEC.2017 14:27:40

Date: 1.DEC.2017 17:13:28

30MHz~1GHz

1GHz~8GHz

Middle channel



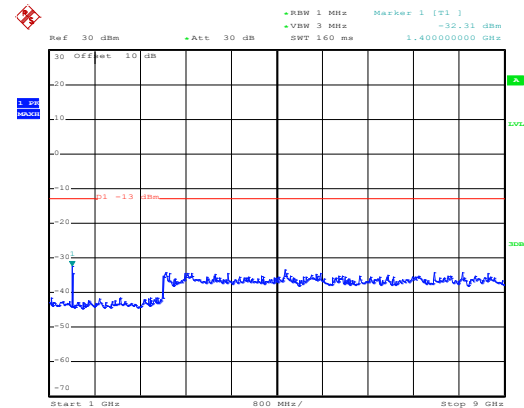
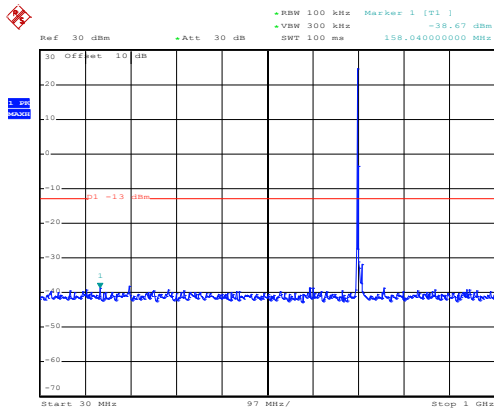
Date: 4.DEC.2017 14:28:57

Date: 1.DEC.2017 17:14:08

30MHz~1GHz

1GHz~8GHz

High channel



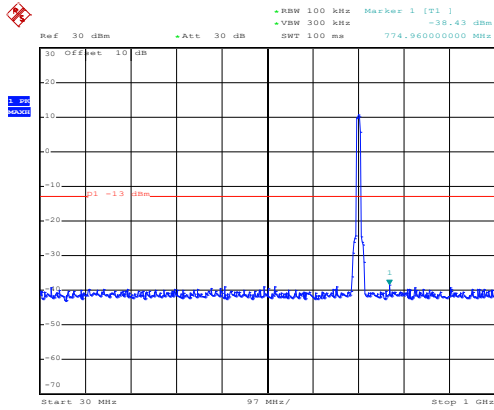
Date: 4.DEC.2017 14:30:15

Date: 1.DEC.2017 17:14:54

30MHz~1GHz

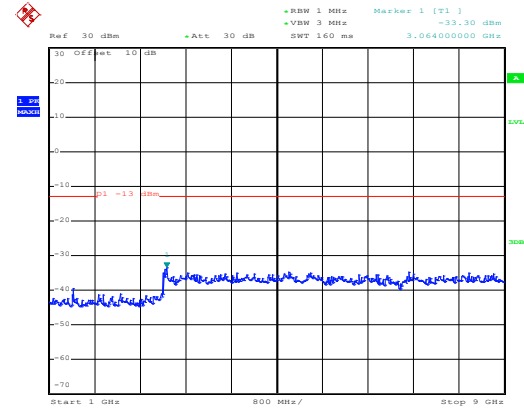
1GHz~8GHz

16 QAM & RB Size 50 Lowest channel



Date: 4.DEC.2017 14:28:05

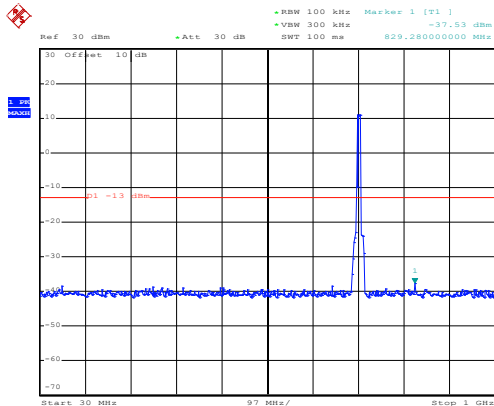
30MHz~1GHz



Date: 1.DEC.2017 17:13:46

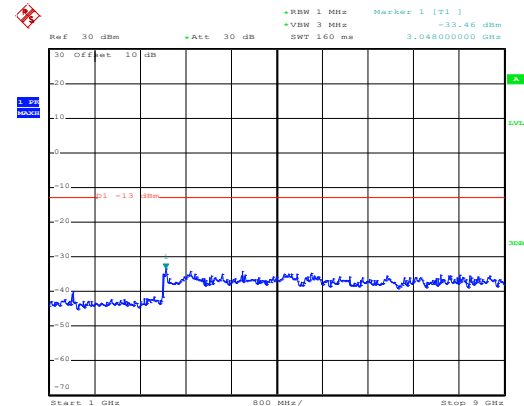
1GHz~8GHz

Middle channel



Date: 4.DEC.2017 14:29:36

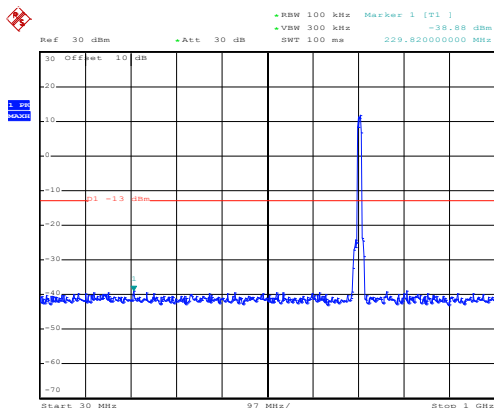
30MHz~1GHz



Date: 1.DEC.2017 17:14:34

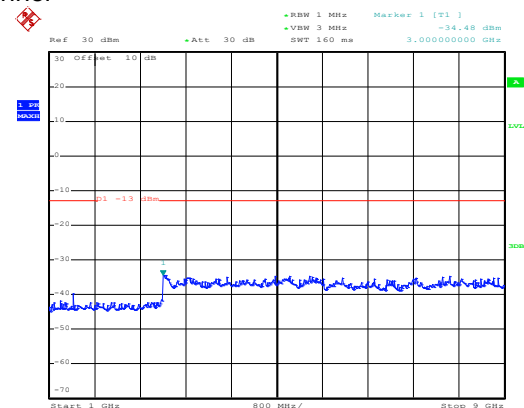
1GHz~8GHz

High channel



Date: 4.DEC.2017 14:30:39

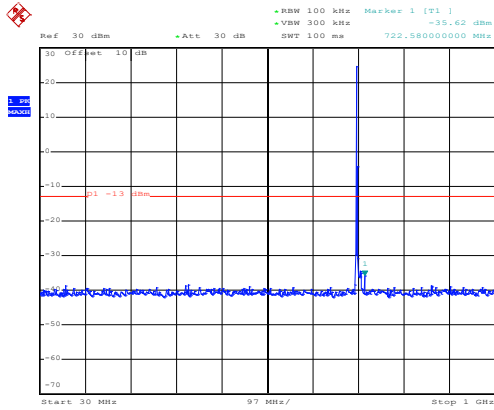
30MHz~1GHz



Date: 1.DEC.2017 17:15:05

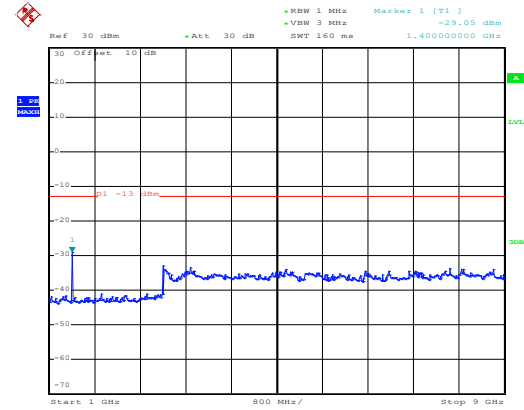
1GHz~8GHz

QPSK & RB Size 1 Lowest channel



Date: 4.DEC.2017 14:27:33

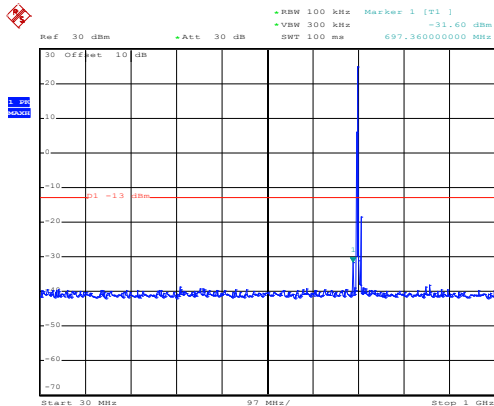
30MHz~1GHz



Date: 1.DEC.2017 17:13:21

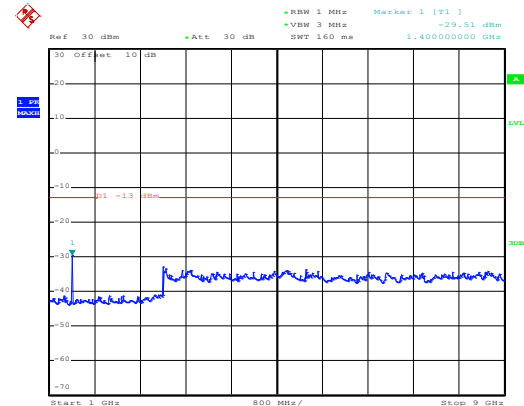
1GHz~8GHz

Middle channel



Date: 4.DEC.2017 14:28:47

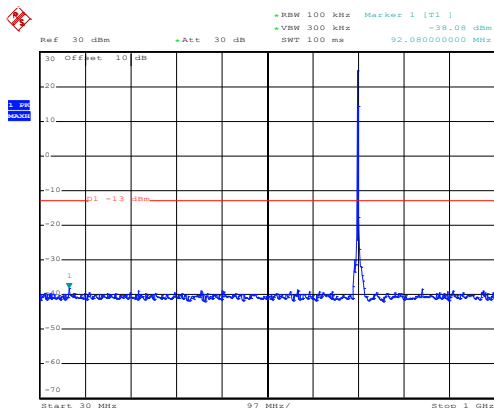
30MHz~1GHz



Date: 1.DEC.2017 17:14:03

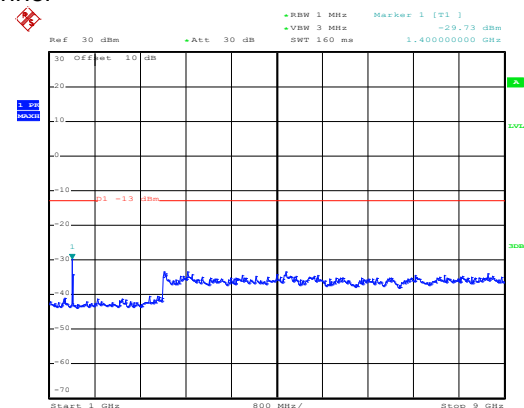
1GHz~8GHz

High channel



Date: 4.DEC.2017 14:30:04

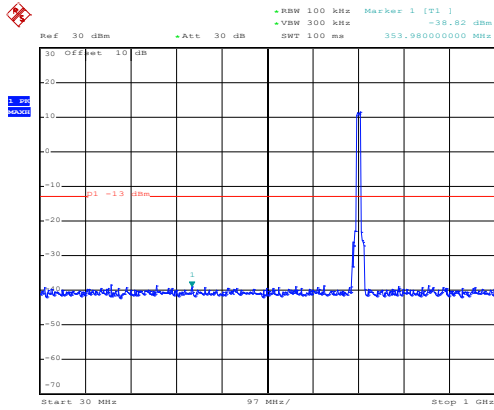
30MHz~1GHz



Date: 1.DEC.2017 17:14:48

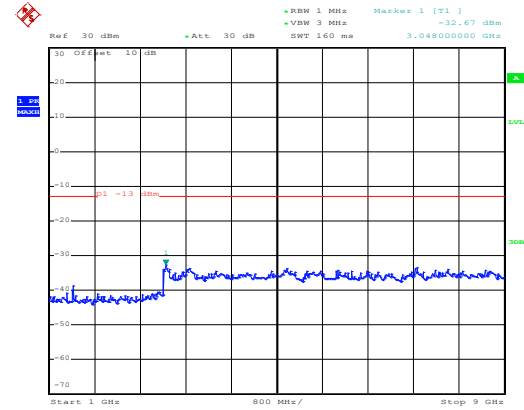
1GHz~8GHz

QPSK & RB Size 50 Lowest channel



Date: 4.DEC.2017 14:27:56

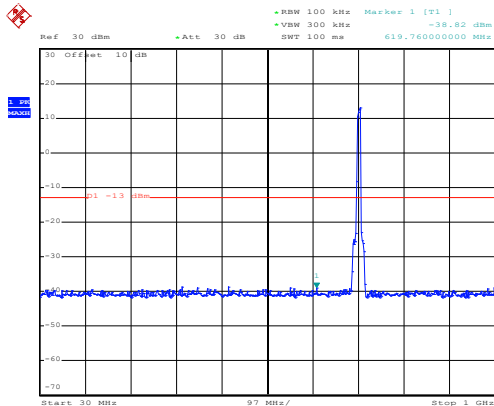
30MHz~1GHz



Date: 1.DEC.2017 17:13:42

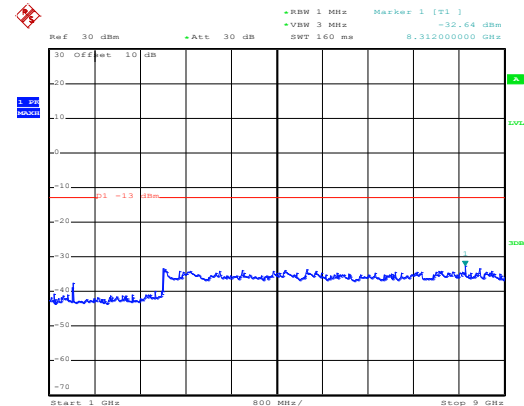
1GHz~8GHz

Middle channel



Date: 4.DEC.2017 14:29:16

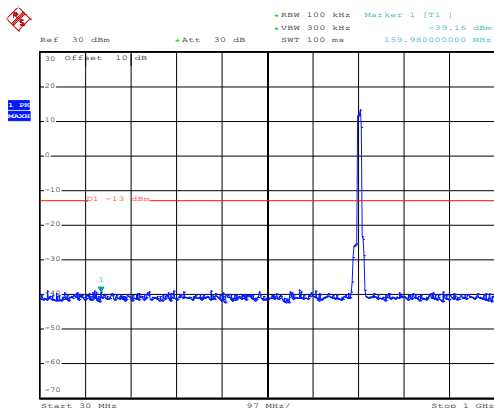
30MHz~1GHz



Date: 1.DEC.2017 17:14:30

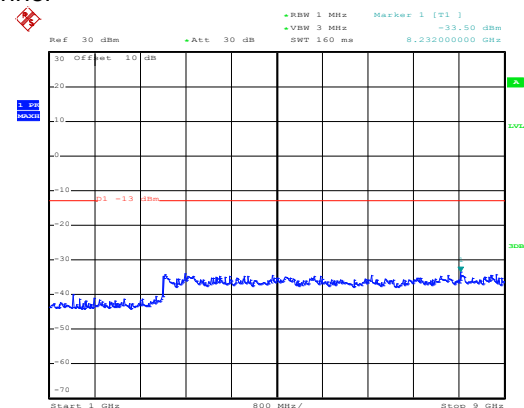
1GHz~8GHz

High channel



Date: 4.DEC.2017 14:30:31

30MHz~1GHz

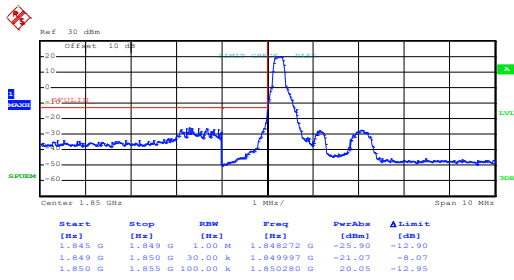


Date: 1.DEC.2017 17:15:01

1GHz~8GHz

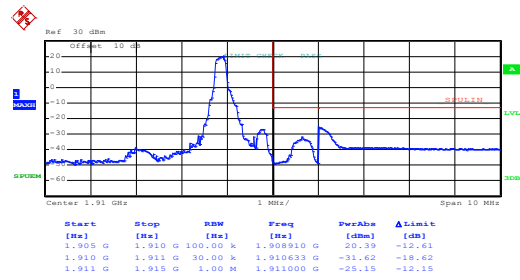
**Band edge emission:
LTE band 2, 1.4MHz:**

16QAM & RB Size 1



Date: 4.DEC.2017 15:27:39

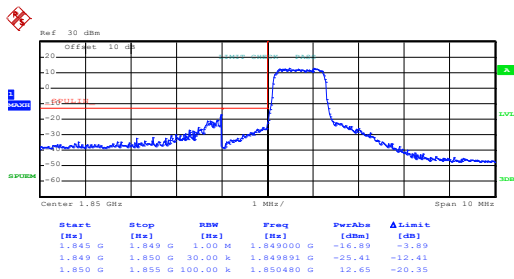
Lowest channel



Date: 4.DEC.2017 15:29:55

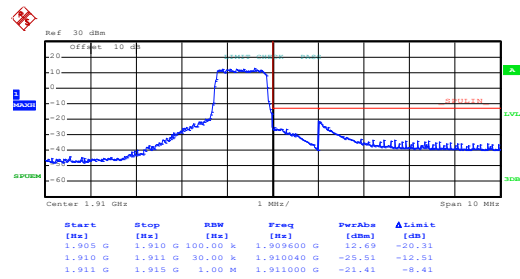
Highest channel

16QAM & RB Size 6



Date: 4.DEC.2017 15:28:11

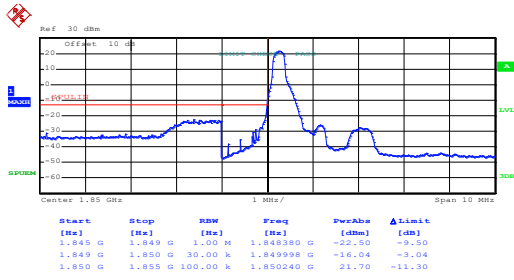
Lowest channel



Date: 4.DEC.2017 15:30:08

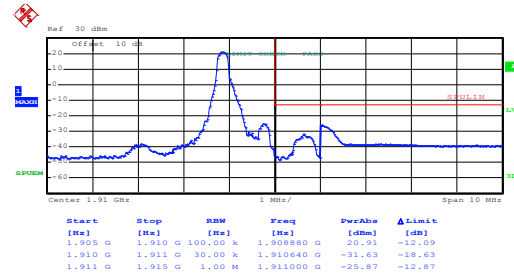
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:27:30

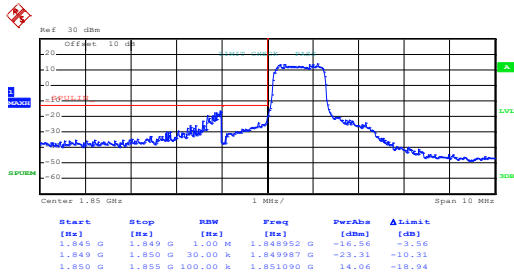
Lowest channel



Date: 4.DEC.2017 15:29:49

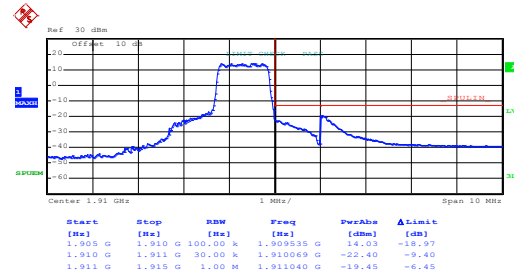
Highest channel

QPSK & RB Size 6



Date: 4.DEC.2017 15:28:04

Lowest channel

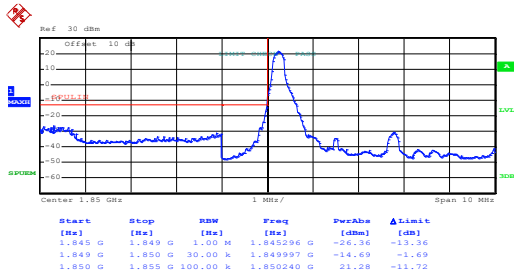


Date: 4.DEC.2017 15:30:03

Highest channel

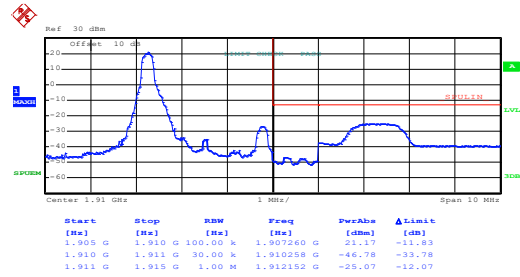
3 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 15:32:13

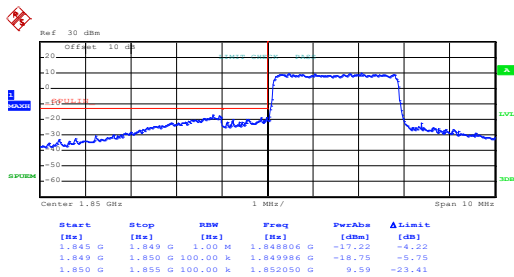
Lowest channel



Date: 4.DEC.2017 15:34:59

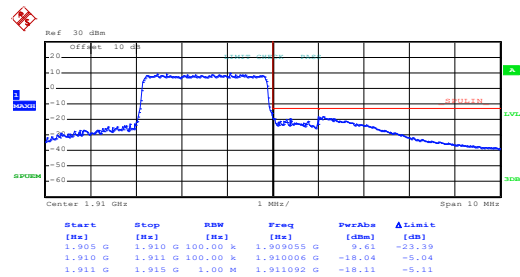
Highest channel

16QAM & RB Size 15



Date: 4.DEC.2017 15:34:29

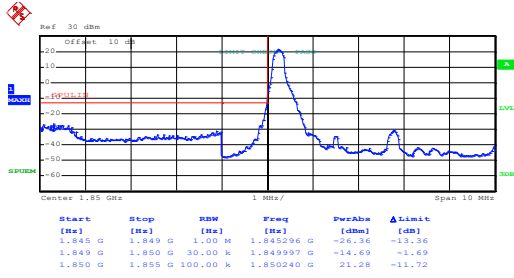
Lowest channel



Date: 4.DEC.2017 15:35:40

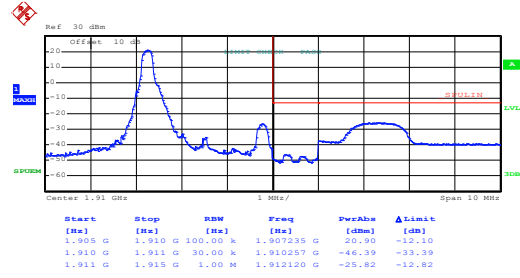
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:30:50

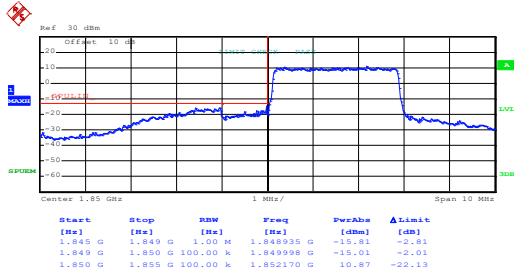
Lowest channel



Date: 4.DEC.2017 15:34:46

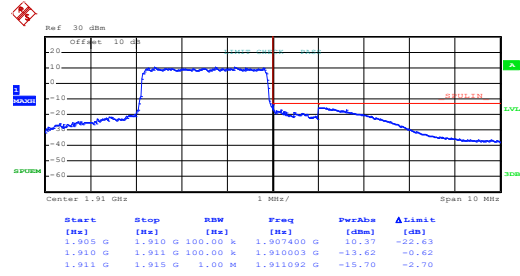
Highest channel

QPSK & RB Size 15



Date: 4.DEC.2017 15:34:22

Lowest channel

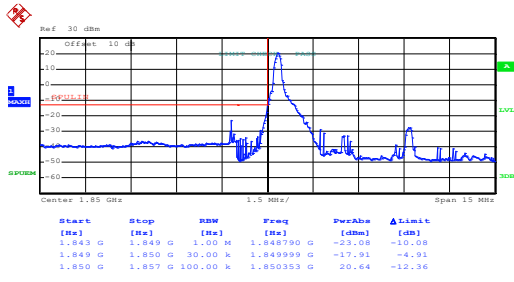


Date: 4.DEC.2017 15:35:35

Highest channel

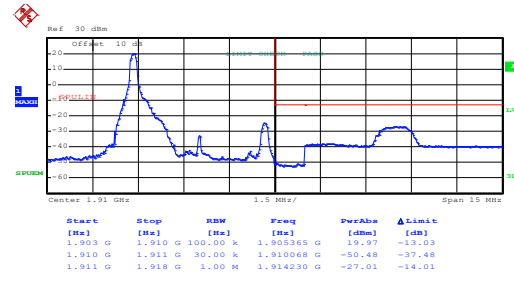
5 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 15:36:18

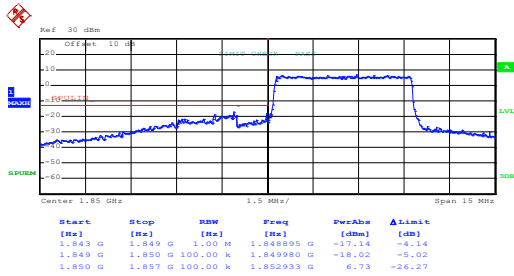
Lowest channel



Date: 4.DEC.2017 15:37:02

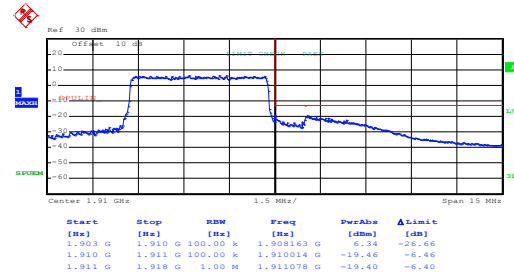
Highest channel

16QAM & RB Size 25



Date: 4.DEC.2017 15:36:37

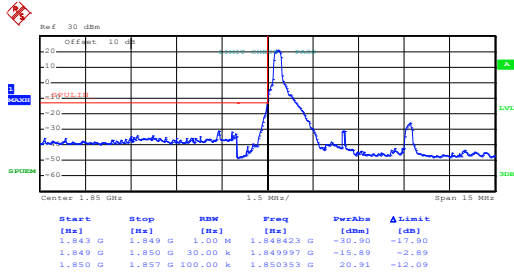
Lowest channel



Date: 4.DEC.2017 15:37:37

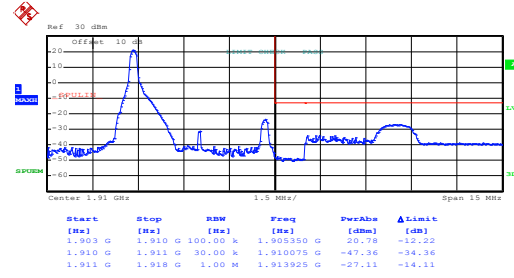
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:36:13

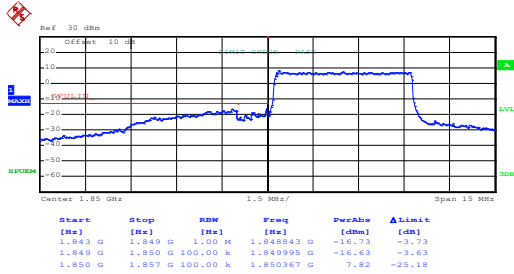
Lowest channel



Date: 4.DEC.2017 15:36:56

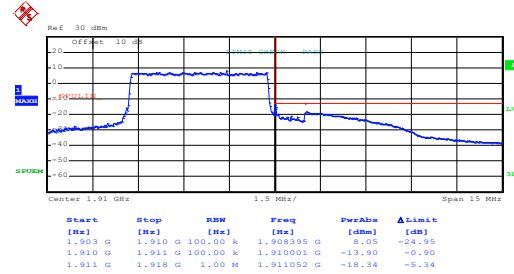
Highest channel

QPSK & RB Size 25



Date: 4.DEC.2017 15:36:33

Lowest channel

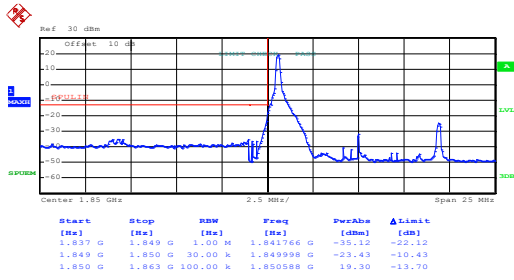


Date: 4.DEC.2017 15:37:18

Highest channel

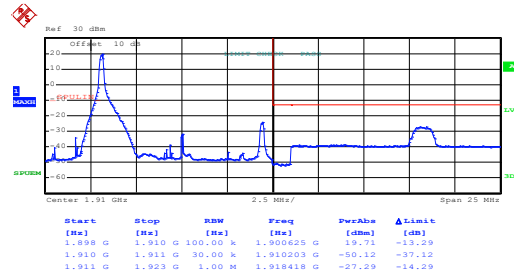
10 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 15:40:12

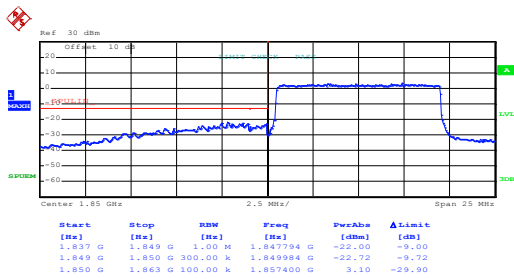
Lowest channel



Date: 4.DEC.2017 15:41:23

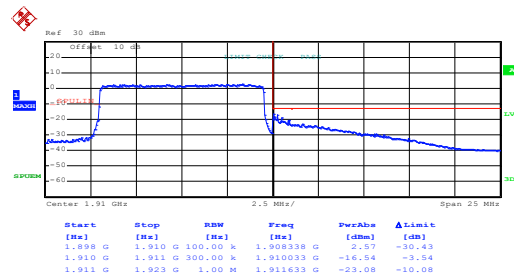
Highest channel

16QAM & RB Size 50



Date: 4.DEC.2017 15:40:43

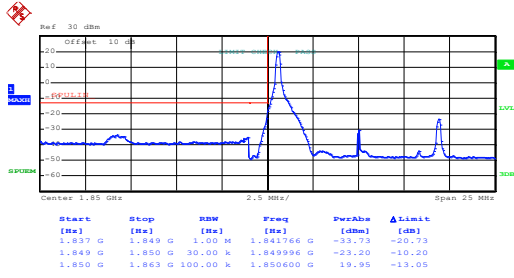
Lowest channel



Date: 4.DEC.2017 15:41:53

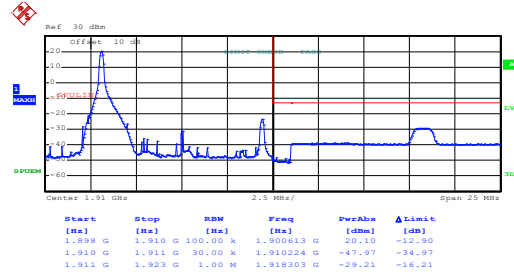
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:38:14

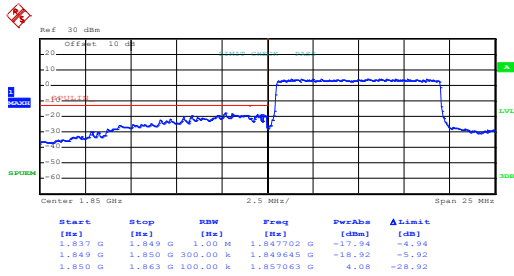
Lowest channel



Date: 4.DEC.2017 15:41:09

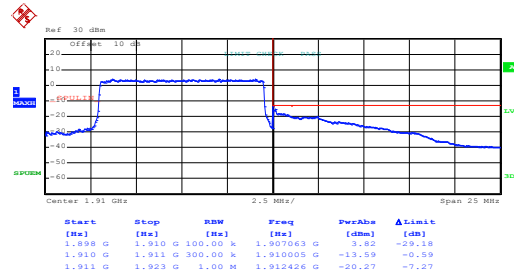
Highest channel

QPSK & RB Size 50



Date: 4.DEC.2017 15:40:37

Lowest channel

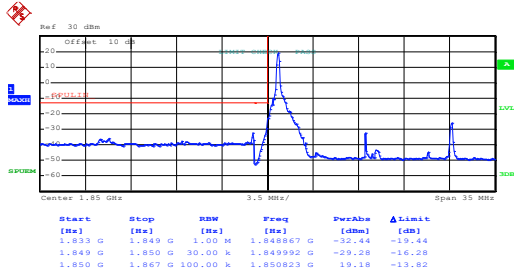


Date: 4.DEC.2017 15:41:47

Highest channel

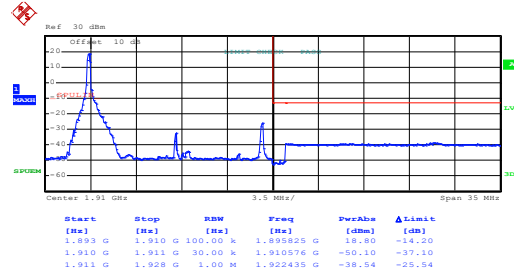
15 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 15:42:47

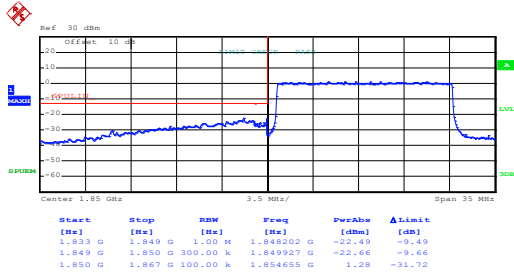
Lowest channel



Date: 4.DEC.2017 15:43:34

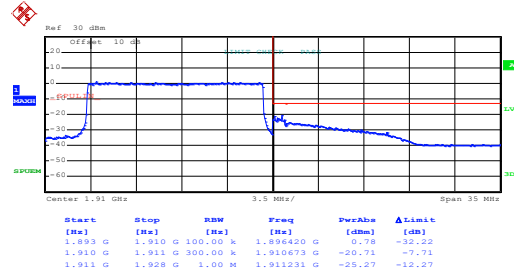
Highest channel

16QAM & RB Size 75



Date: 4.DEC.2017 15:43:12

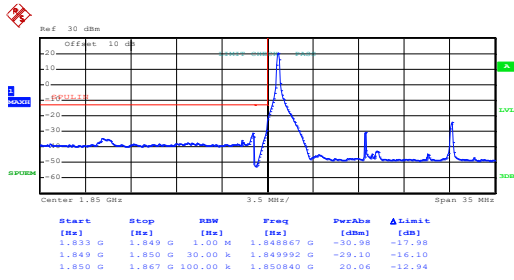
Lowest channel



Date: 4.DEC.2017 15:44:01

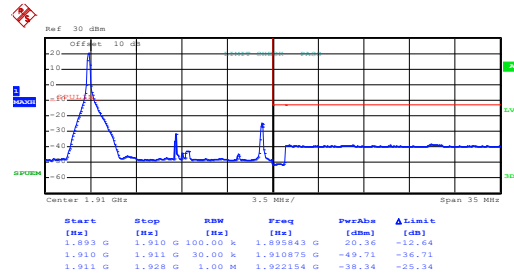
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:42:40

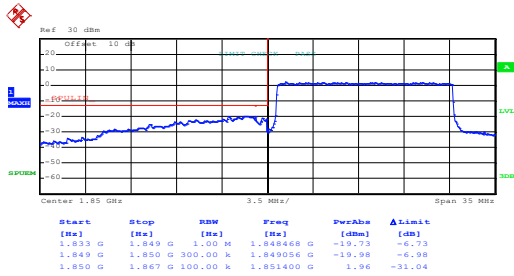
Lowest channel



Date: 4.DEC.2017 15:43:29

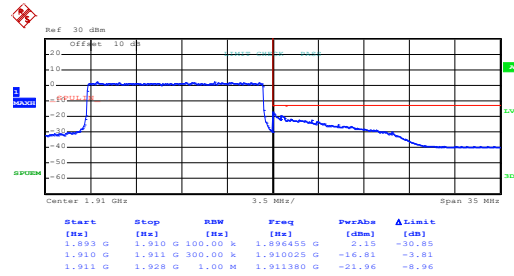
Highest channel

QPSK & RB Size 75



Date: 4.DEC.2017 15:43:05

Lowest channel

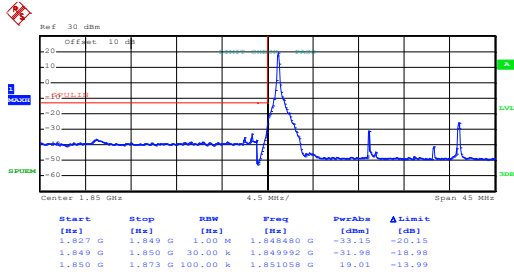


Date: 4.DEC.2017 15:43:56

Highest channel

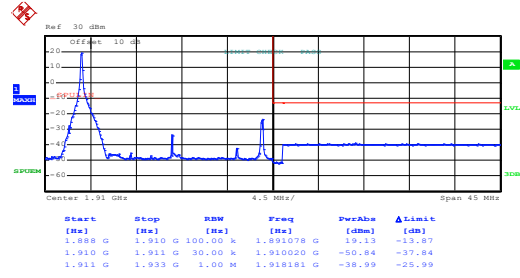
20 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 15:45:10

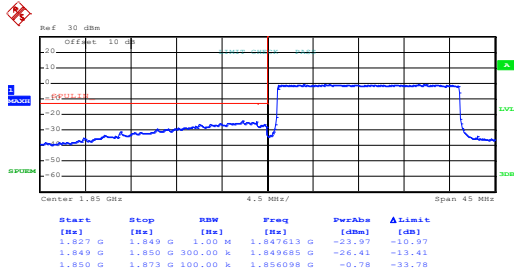
Lowest channel



Date: 4.DEC.2017 15:46:02

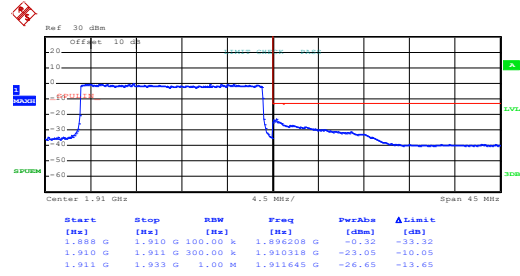
Highest channel

16QAM & RB Size 100



Date: 4.DEC.2017 15:45:35

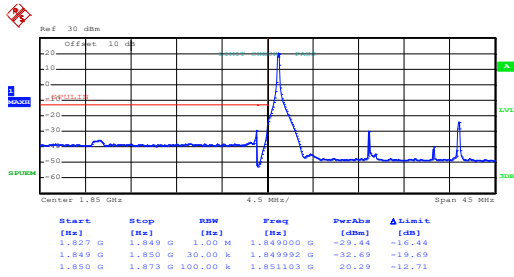
Lowest channel



Date: 4.DEC.2017 15:46:21

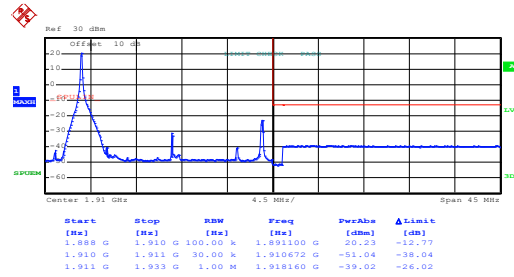
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:45:00

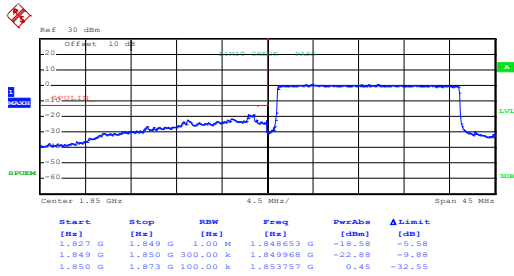
Lowest channel



Date: 4.DEC.2017 15:45:54

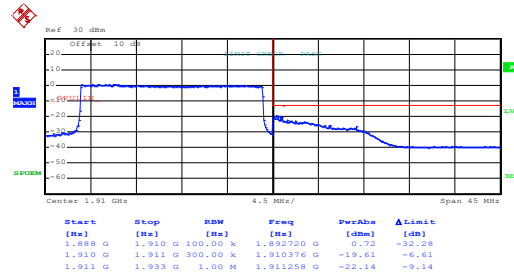
Highest channel

QPSK & RB Size 100



Date: 4.DEC.2017 15:45:28

Lowest channel

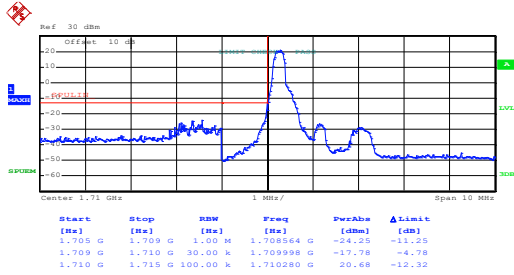


Date: 4.DEC.2017 15:46:16

Highest channel

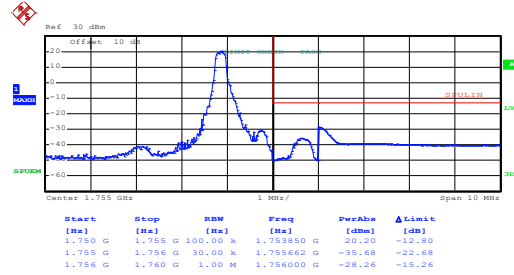
LTE band 4, 1.4MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 15:54:49

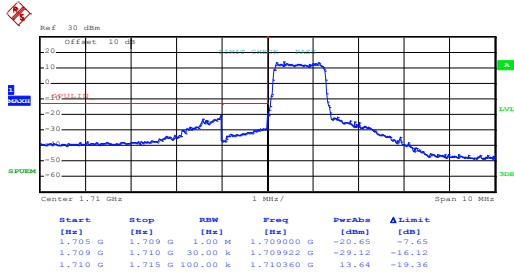
Lowest channel



Date: 4.DEC.2017 15:55:36

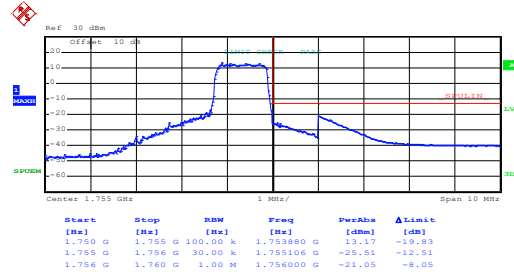
Highest channel

16QAM & RB Size 6



Date: 4.DEC.2017 15:55:13

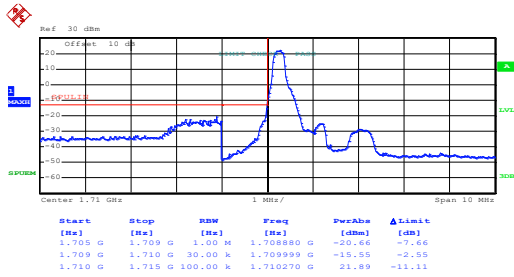
Lowest channel



Date: 4.DEC.2017 15:55:47

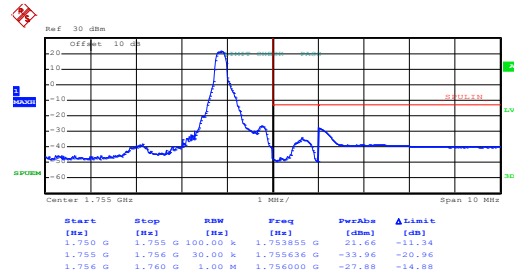
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:54:38

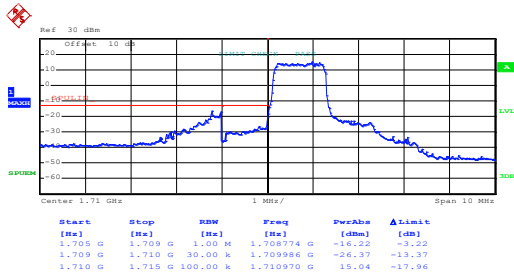
Lowest channel



Date: 4.DEC.2017 15:55:31

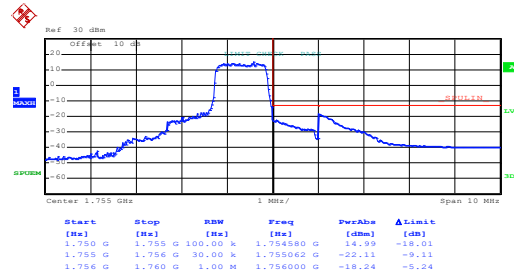
Highest channel

QPSK & RB Size 6



Date: 4.DEC.2017 15:55:07

Lowest channel

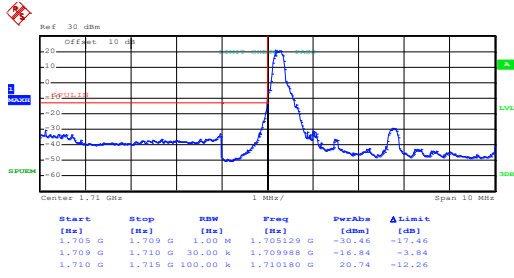


Date: 4.DEC.2017 15:55:43

Highest channel

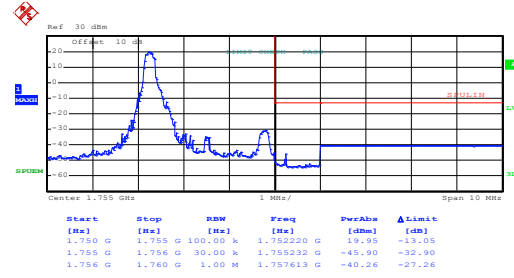
3 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 15:56:21

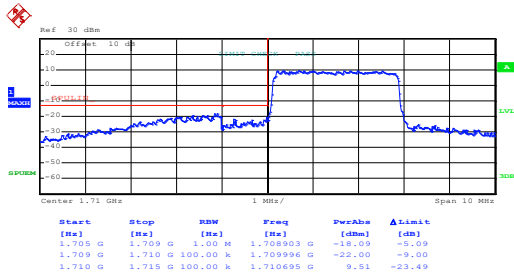
Lowest channel



Date: 4.DEC.2017 15:57:00

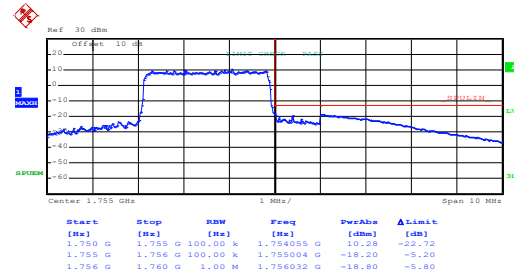
Highest channel

16QAM & RB Size 15



Date: 4.DEC.2017 15:56:37

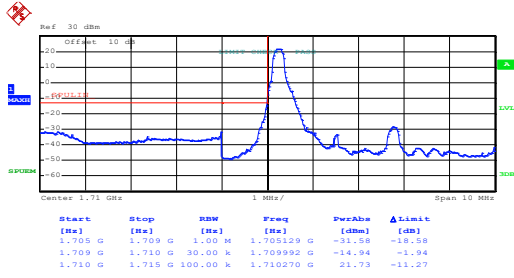
Lowest channel



Date: 4.DEC.2017 15:59:08

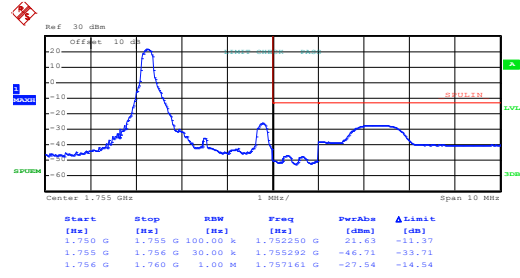
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 15:56:16

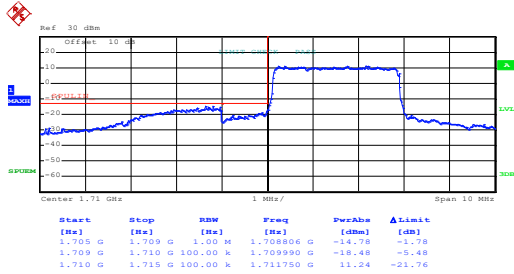
Lowest channel



Date: 4.DEC.2017 15:56:55

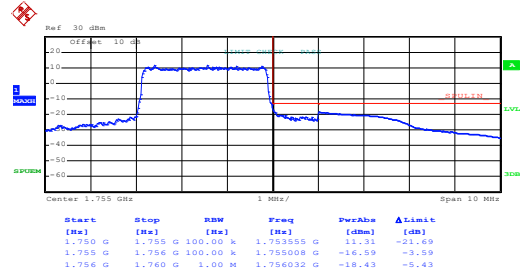
Highest channel

QPSK & RB Size 15



Date: 4.DEC.2017 15:56:33

Lowest channel

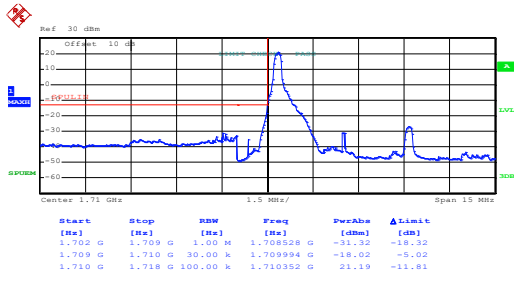


Date: 4.DEC.2017 15:59:02

Highest channel

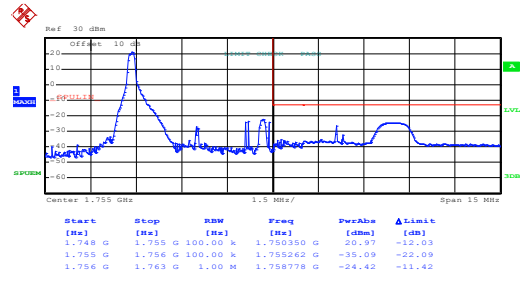
5 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:02:50

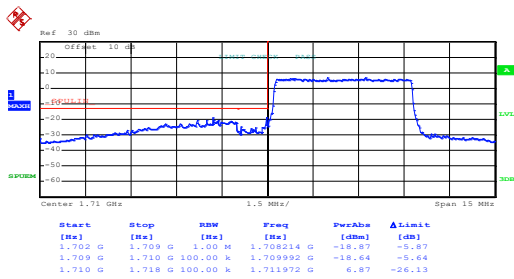
Lowest channel



Date: 4.DEC.2017 16:17:59

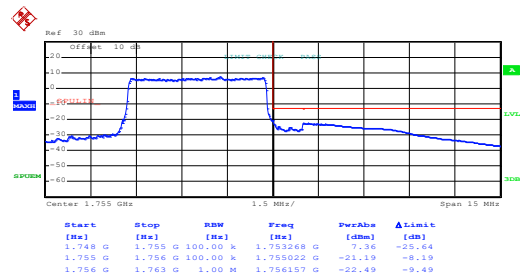
Highest channel

16QAM & RB Size 25



Date: 4.DEC.2017 16:03:19

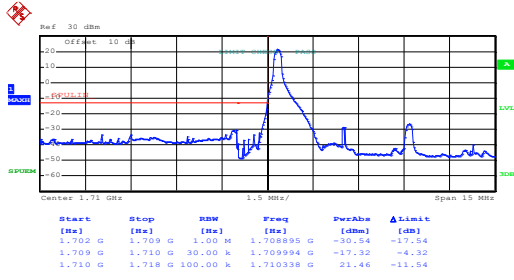
Lowest channel



Date: 4.DEC.2017 16:18:29

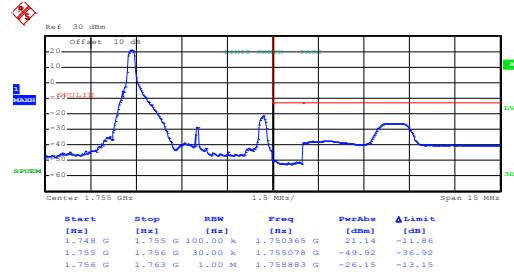
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:02:33

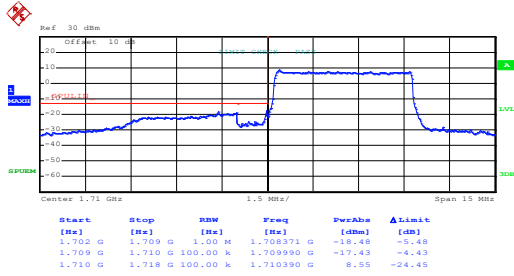
Lowest channel



Date: 4.DEC.2017 16:05:04

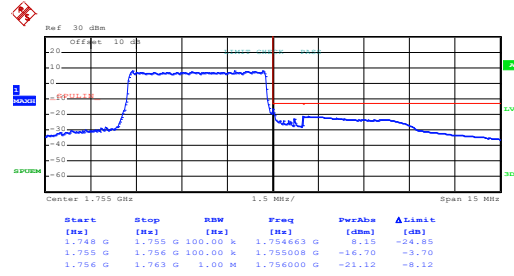
Highest channel

QPSK & RB Size 25



Date: 4.DEC.2017 16:03:14

Lowest channel

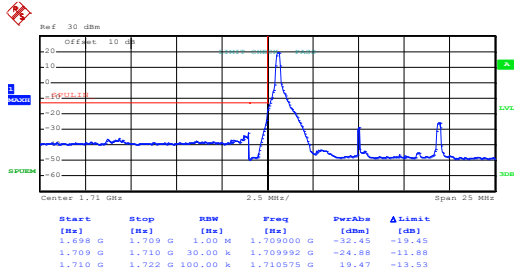


Date: 4.DEC.2017 16:18:18

Highest channel

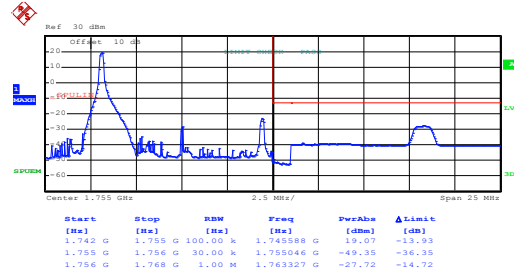
10 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:19:24

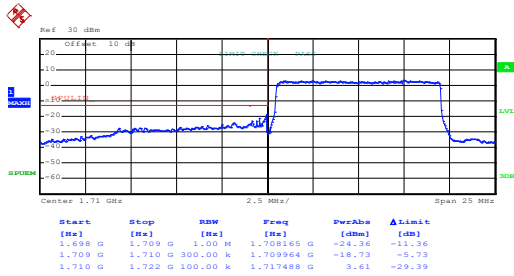
Lowest channel



Date: 4.DEC.2017 16:21:40

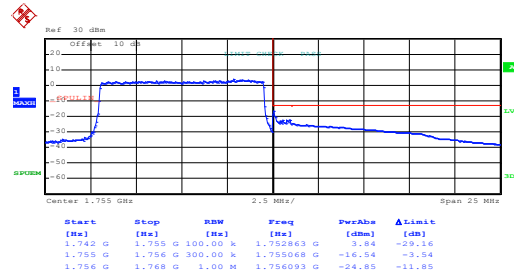
Highest channel

16QAM & RB Size 50



Date: 4.DEC.2017 16:21:00

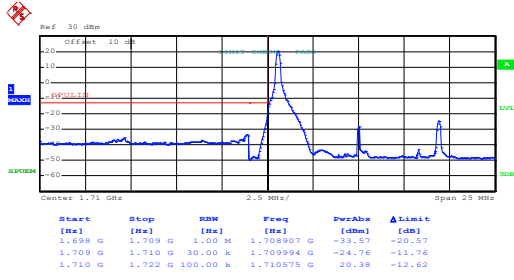
Lowest channel



Date: 4.DEC.2017 16:22:01

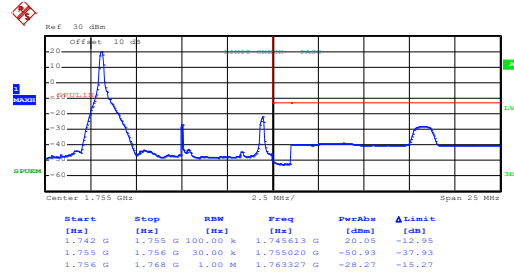
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:19:11

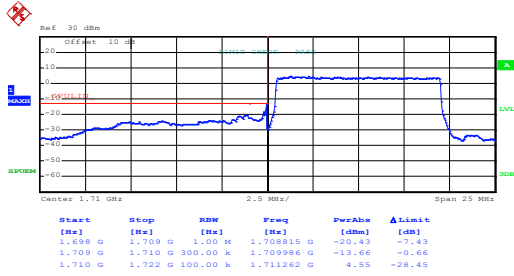
Lowest channel



Date: 4.DEC.2017 16:21:21

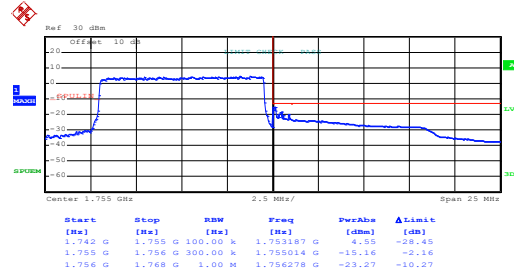
Highest channel

QPSK & RB Size 50



Date: 4.DEC.2017 16:20:52

Lowest channel

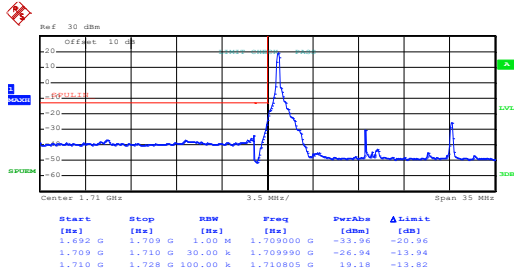


Date: 4.DEC.2017 16:21:55

Highest channel

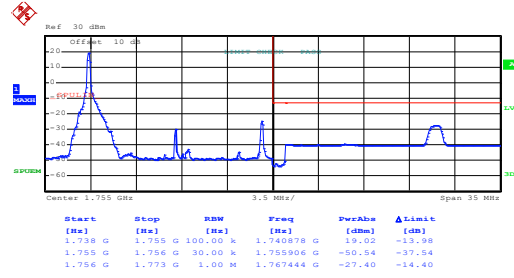
15 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:23:05

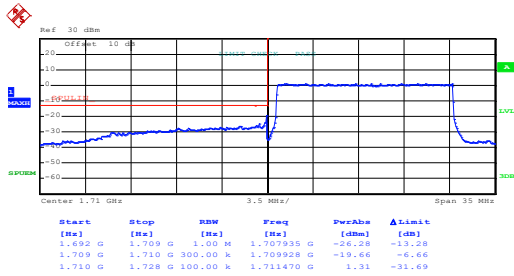
Lowest channel



Date: 4.DEC.2017 16:24:28

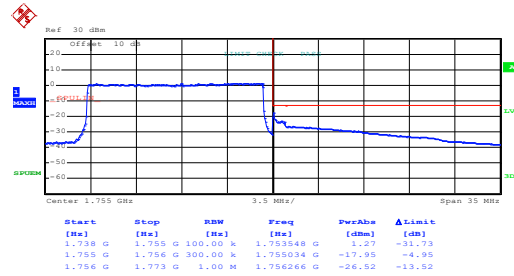
Highest channel

16QAM & RB Size 75



Date: 4.DEC.2017 16:23:32

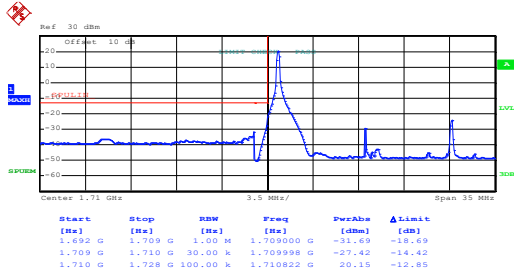
Lowest channel



Date: 4.DEC.2017 16:24:59

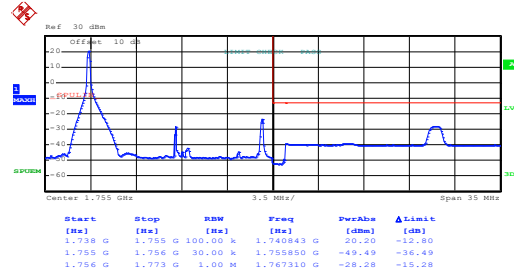
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:22:58

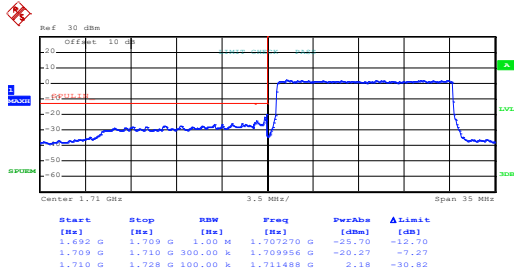
Lowest channel



Date: 4.DEC.2017 16:24:20

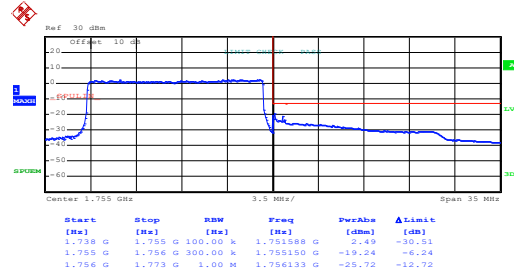
Highest channel

QPSK & RB Size 75



Date: 4.DEC.2017 16:23:19

Lowest channel

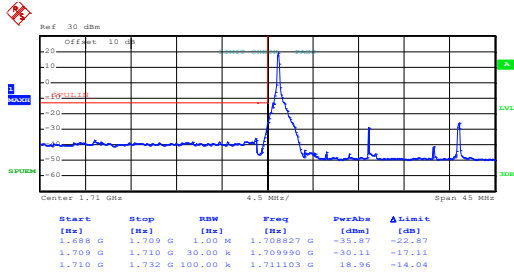


Date: 4.DEC.2017 16:24:45

Highest channel

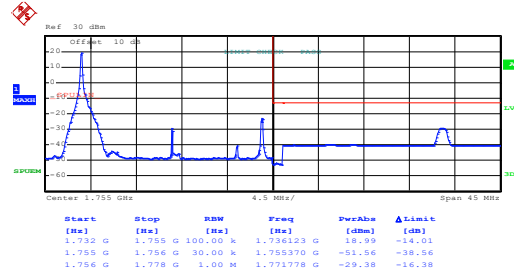
20 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:25:44

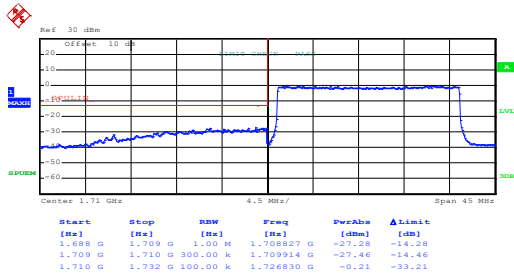
Lowest channel



Date: 4.DEC.2017 16:26:30

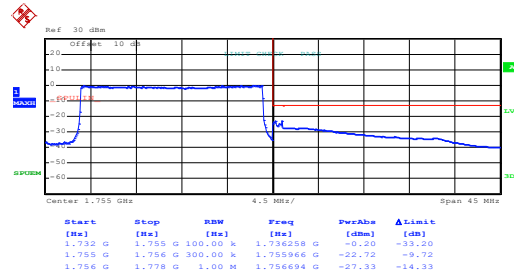
Highest channel

16QAM & RB Size 100



Date: 4.DEC.2017 16:26:03

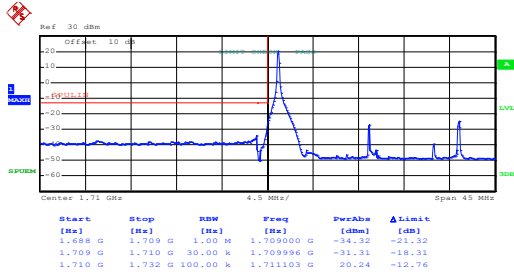
Lowest channel



Date: 4.DEC.2017 16:26:53

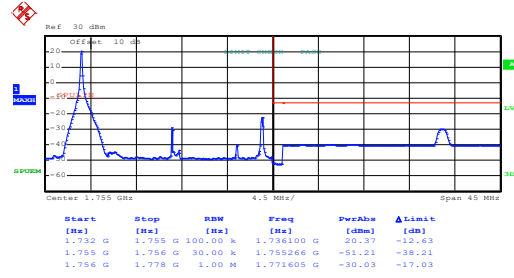
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:25:37

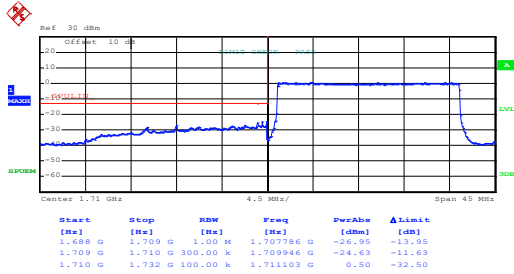
Lowest channel



Date: 4.DEC.2017 16:26:21

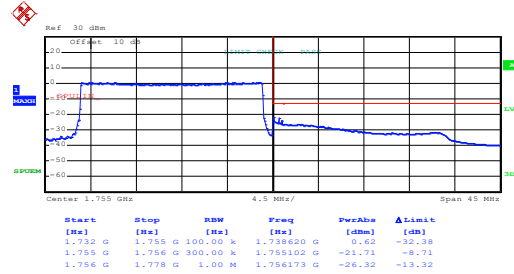
Highest channel

QPSK & RB Size 100



Date: 4.DEC.2017 16:25:58

Lowest channel

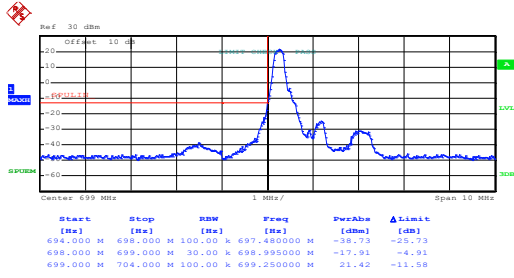


Date: 4.DEC.2017 16:26:43

Highest channel

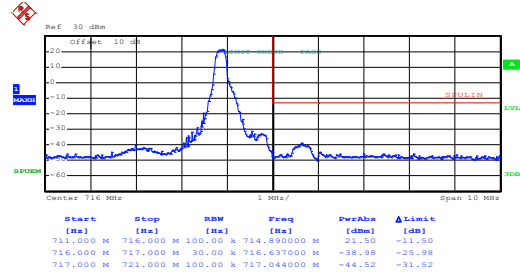
LTE band 12, 1.4 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:36:56

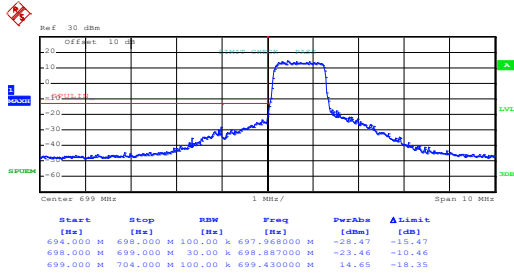
Lowest channel



Date: 4.DEC.2017 16:37:44

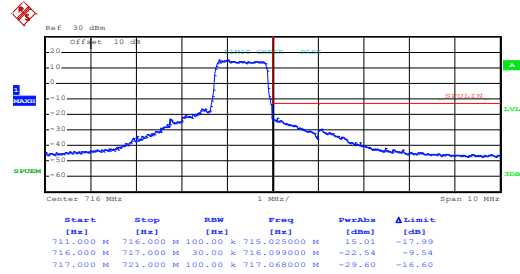
Highest channel

16QAM & RB Size 6



Date: 4.DEC.2017 16:37:16

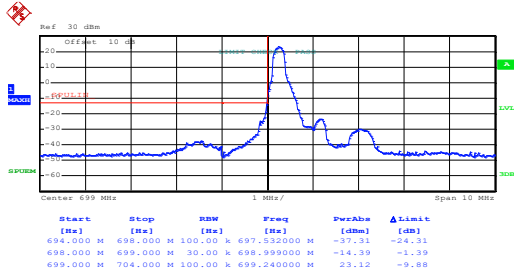
Lowest channel



Date: 4.DEC.2017 16:38:21

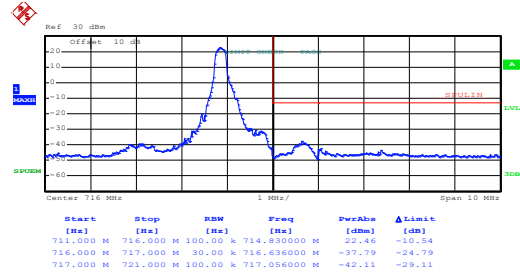
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:36:50

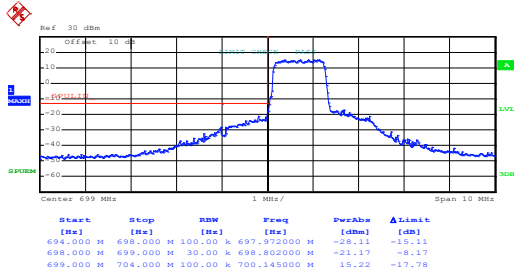
Lowest channel



Date: 4.DEC.2017 16:37:38

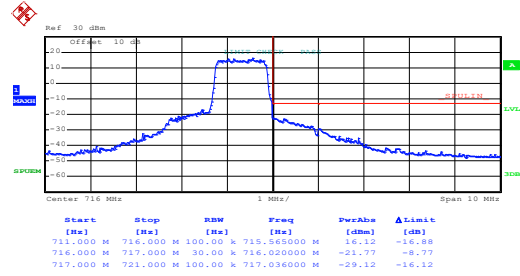
Highest channel

QPSK & RB Size 6



Date: 4.DEC.2017 16:37:09

Lowest channel

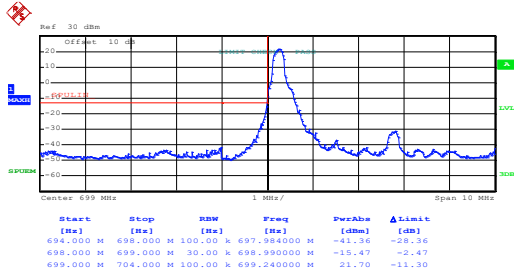


Date: 4.DEC.2017 16:37:53

Highest channel

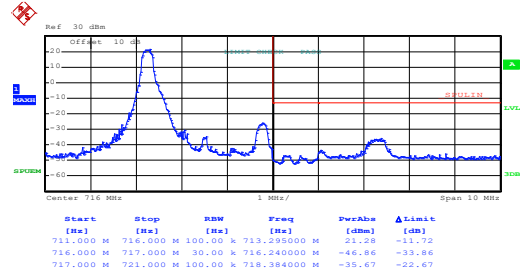
3 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:39:23

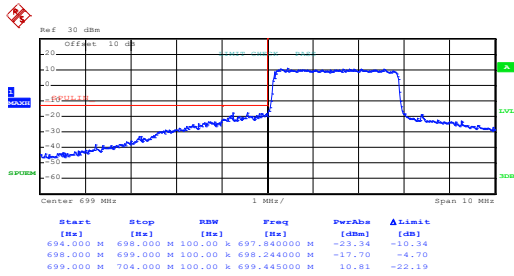
Lowest channel



Date: 4.DEC.2017 16:40:05

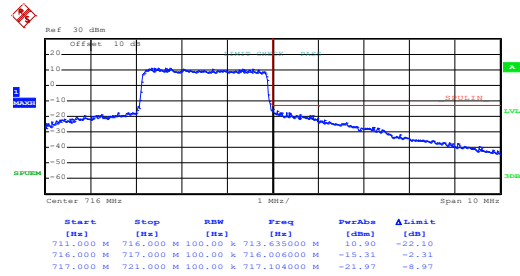
Highest channel

16QAM & RB Size 15



Date: 4.DEC.2017 16:39:41

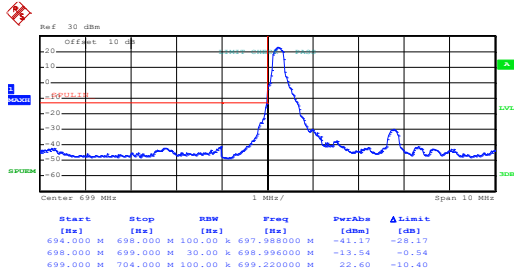
Lowest channel



Date: 4.DEC.2017 16:40:42

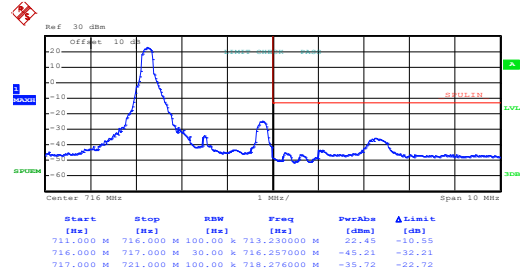
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:39:16

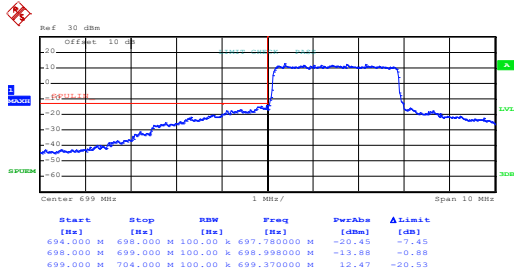
Lowest channel



Date: 4.DEC.2017 16:40:00

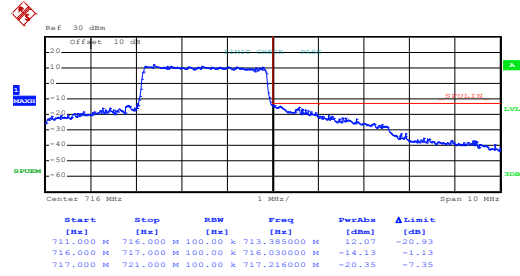
Highest channel

QPSK & RB Size 15



Date: 4.DEC.2017 16:39:35

Lowest channel

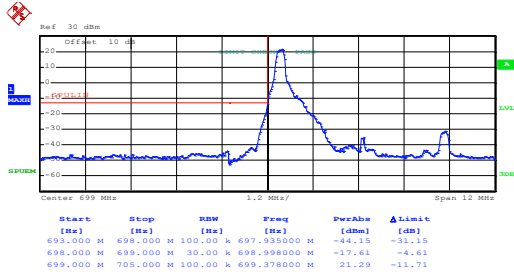


Date: 4.DEC.2017 16:40:37

Highest channel

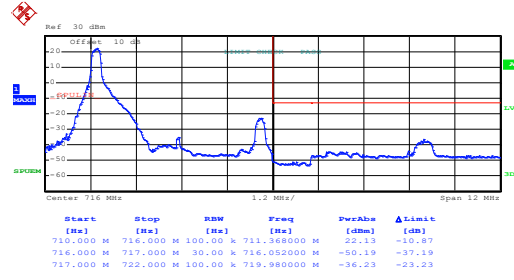
5 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:44:48

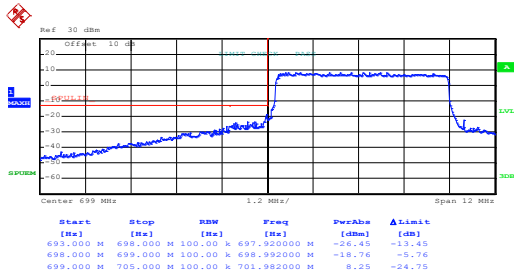
Lowest channel



Date: 4.DEC.2017 16:46:28

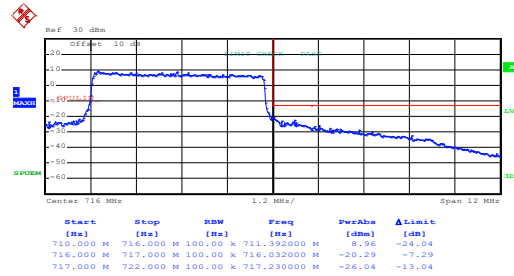
Highest channel

16QAM & RB Size 25



Date: 4.DEC.2017 16:45:07

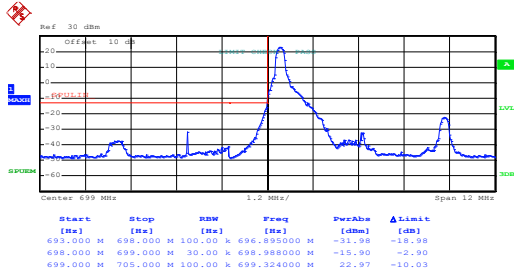
Lowest channel



Date: 4.DEC.2017 16:45:58

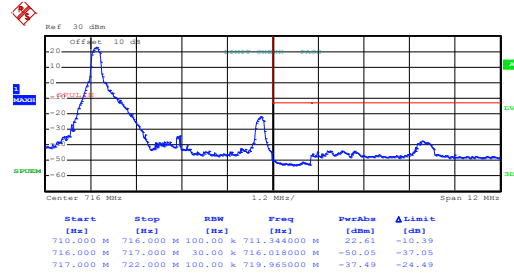
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:41:13

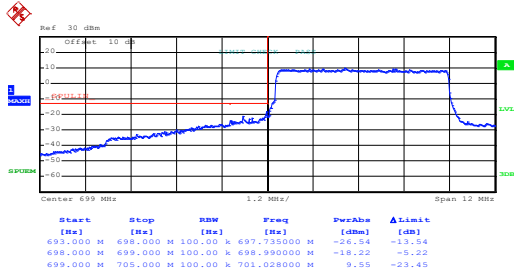
Lowest channel



Date: 4.DEC.2017 16:46:17

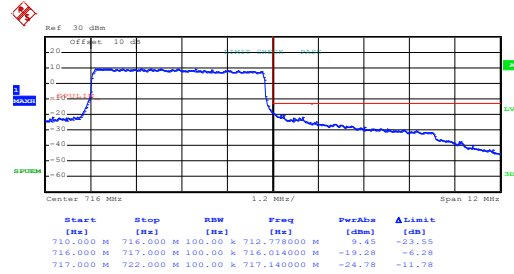
Highest channel

QPSK & RB Size 25



Date: 4.DEC.2017 16:45:03

Lowest channel

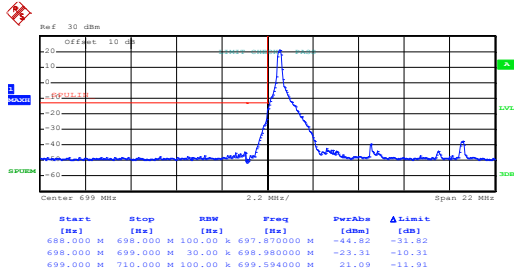


Date: 4.DEC.2017 16:45:54

Highest channel

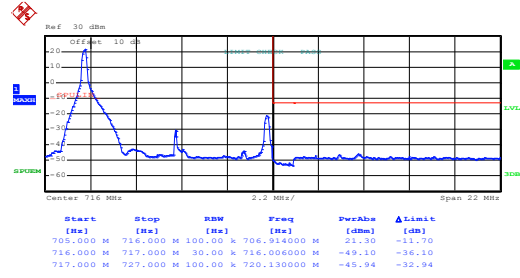
10 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:47:16

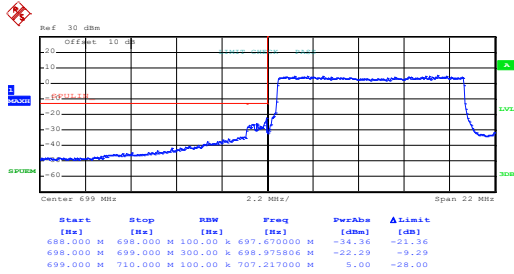
Lowest channel



Date: 4.DEC.2017 16:52:42

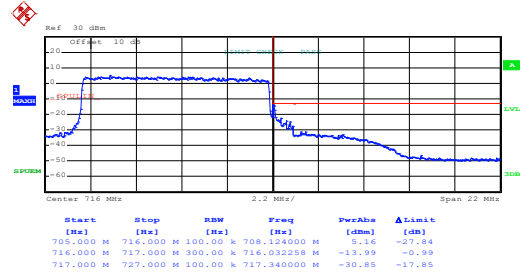
Highest channel

16QAM & RB Size 50



Date: 4.DEC.2017 16:52:09

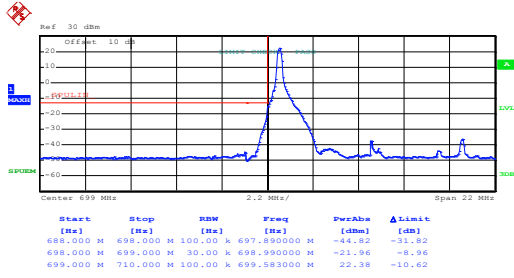
Lowest channel



Date: 4.DEC.2017 16:53:42

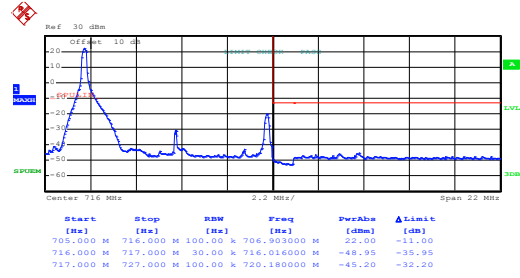
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:47:10

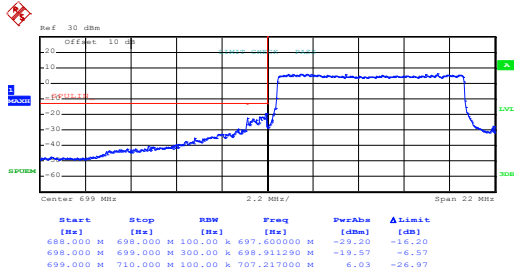
Lowest channel



Date: 4.DEC.2017 16:52:31

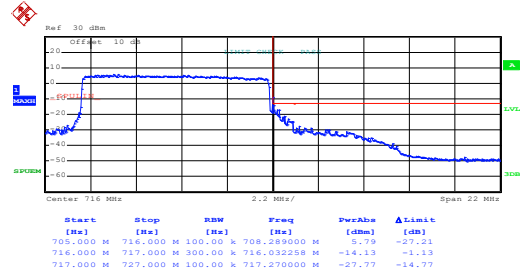
Highest channel

QPSK & RB Size 50



Date: 4.DEC.2017 16:52:02

Lowest channel

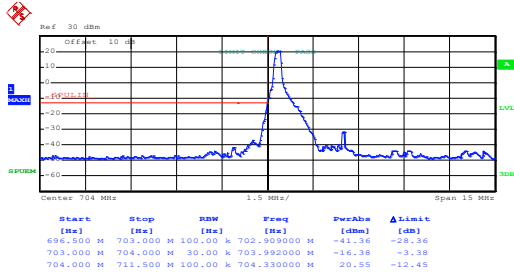


Date: 4.DEC.2017 16:53:27

Highest channel

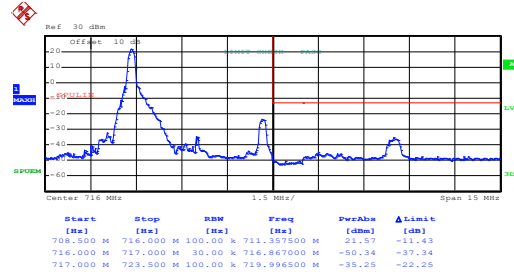
LTE band 17, 5 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:56:57

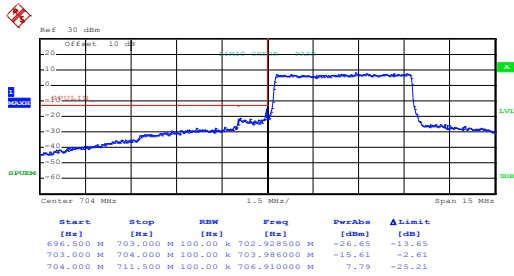
Lowest channel



Date: 4.DEC.2017 16:56:11

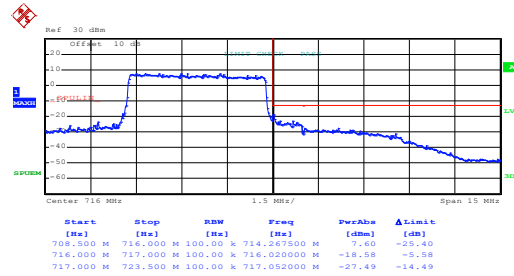
Highest channel

16QAM & RB Size 25



Date: 4.DEC.2017 16:57:17

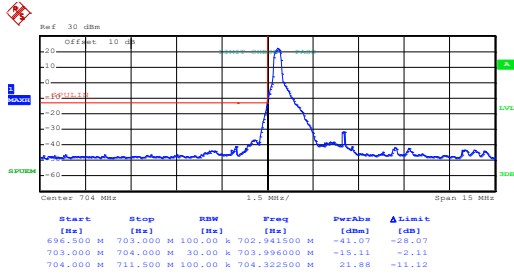
Lowest channel



Date: 4.DEC.2017 16:56:33

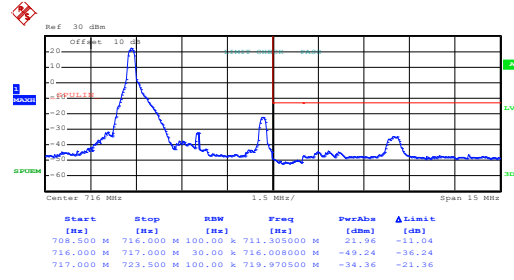
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:56:51

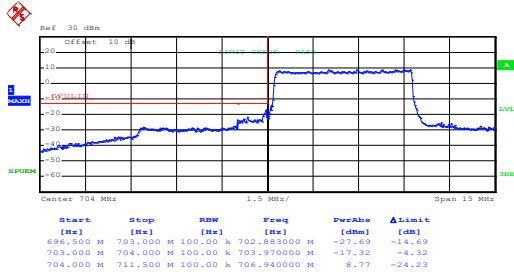
Lowest channel



Date: 4.DEC.2017 16:56:05

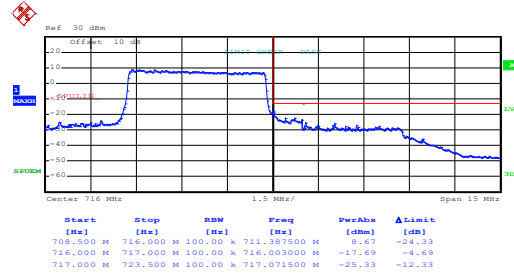
Highest channel

QPSK & RB Size 25



Date: 4.DEC.2017 16:57:12

Lowest channel

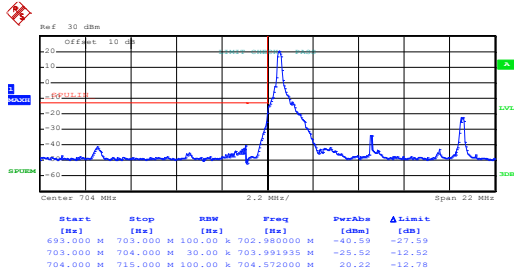


Date: 4.DEC.2017 16:56:29

Highest channel

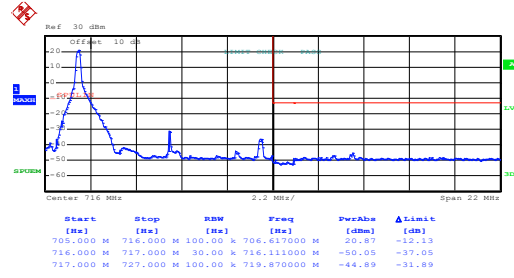
10 MHz:

16QAM & RB Size 1



Date: 4.DEC.2017 16:58:09

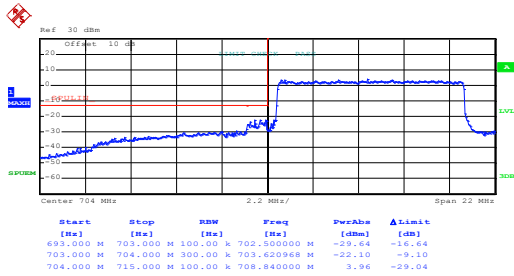
Lowest channel



Date: 4.DEC.2017 17:02:31

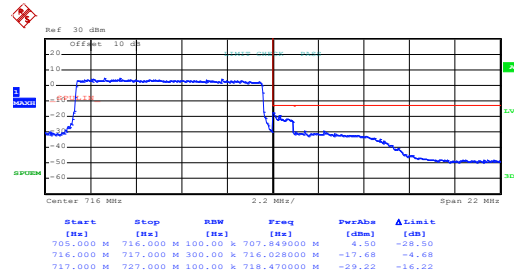
Highest channel

16QAM & RB Size 50



Date: 4.DEC.2017 16:58:35

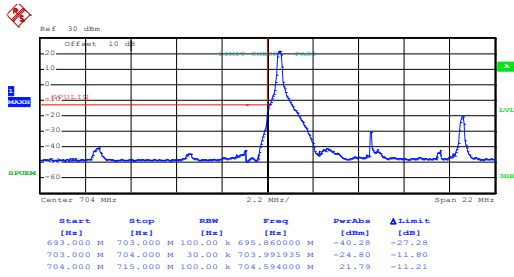
Lowest channel



Date: 4.DEC.2017 17:02:47

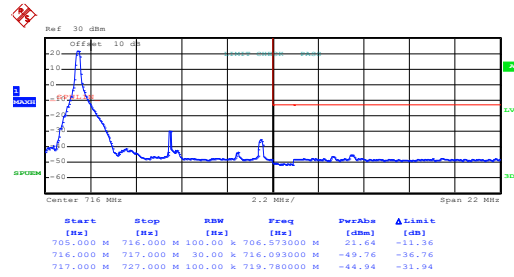
Highest channel

QPSK & RB Size 1



Date: 4.DEC.2017 16:58:04

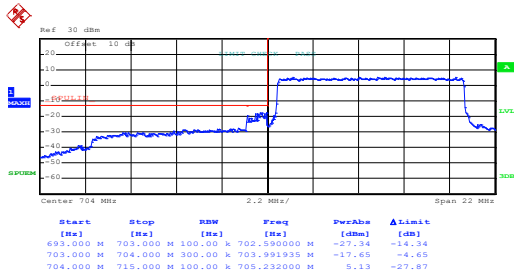
Lowest channel



Date: 4.DEC.2017 17:02:25

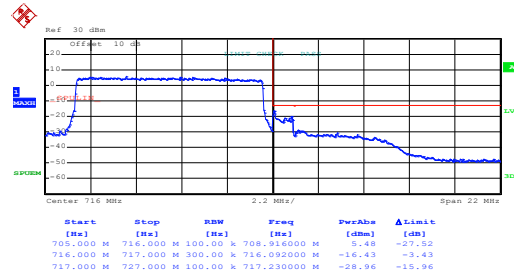
Highest channel

QPSK & RB Size 50



Date: 4.DEC.2017 16:58:31

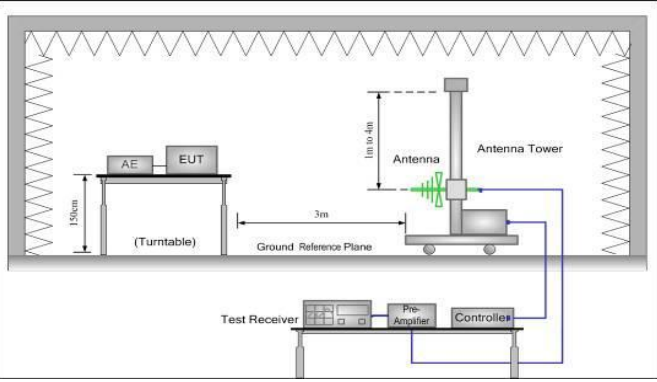
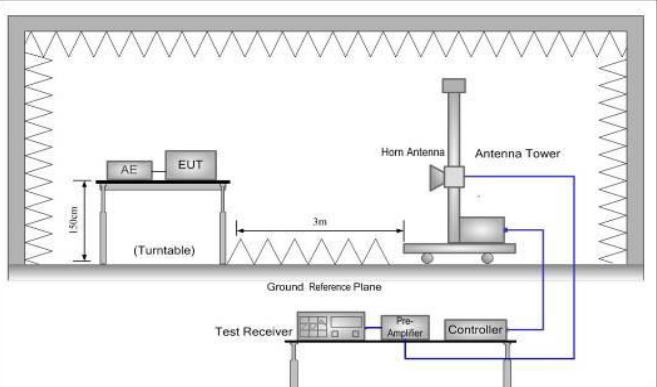
Lowest channel



Date: 4.DEC.2017 17:02:42

Highest channel

6.5 ERP, EIRP Measurement

Test Requirement:	Part 24.232(c), Part 27.50(c)(10), Part 27.50(d)(4)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2: 2W EIRP, LTE Band 4: 1W EIRP, LTE Band 12: 3W EIRP, LTE Band 17: 3W EIRP
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 measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated. ERP in frequency band below 1GHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows: $ERP = S.G. \text{ output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$ EIRP in frequency band above 1GHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows: $EIRP = S.G. \text{ output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$ The worse case was relating to the conducted output power.
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

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1850.70	18607	QPSK	1.4	H	V	21.60	33.00	Pass
					H	21.74		
1850.70	18607	16QAM	1.4	H	V	21.86		
					H	21.95		
Middle Channel								
1880.00	18900	QPSK	1.4	H	V	23.10	33.00	Pass
					H	22.46		
1880.00	18900	16QAM	1.4	H	V	23.11		
					H	22.43		
Highest Channel								
1909.3	19193	QPSK	1.4	H	V	24.32	33.00	Pass
					H	19.09		
1909.3	19193	16QAM	1.4	H	V	23.74		
					H	19.92		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1851.50	18615	QPSK	3	H	V	21.19	33.00	Pass
					H	21.24		
1851.50	18615	16QAM	3	H	V	21.93		
					H	21.69		
Middle Channel								
1880.00	18900	QPSK	3	H	V	23.24	33.00	Pass
					H	22.23		
1880.00	18900	16QAM	3	H	V	23.74		
					H	22.34		
Highest Channel								
1908.50	19185	QPSK	3	H	V	24.17	33.00	Pass
					H	19.98		
1908.50	19185	16QAM	3	H	V	23.24		
					H	19.74		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1852.50	18625	QPSK	5	H	V	21.34	33.00	Pass
					H	21.23		
1852.50	18625	16QAM	5	H	V	21.56		
					H	21.42		
Middle Channel								
1880.00	18900	QPSK	5	H	V	23.93	33.00	Pass
					H	22.74		
1880.00	18900	16QAM	5	H	V	23.36		
					H	22.27		
Highest Channel								
1907.50	19175	QPSK	5	H	V	24.56	33.00	Pass
					H	19.83		
1907.50	19175	16QAM	5	H	V	23.71		
					H	19.54		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1855.00	18650	QPSK	10	H	V	21.95	33.00	Pass
					H	21.23		
1855.00	18650	16QAM	10	H	V	21.01		
					H	21.74		
Middle Channel								
1880.00	18900	QPSK	10	H	V	23.37	33.00	Pass
					H	22.34		
1880.00	18900	16QAM	10	H	V	23.74		
					H	22.95		
Highest Channel								
1905.00	19150	QPSK	10	H	V	24.71	33.00	Pass
					H	19.33		
1905.00	19150	16QAM	10	H	V	23.27		
					H	19.23		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1857.50	18675	QPSK	15	H	V	21.26	33.00	Pass
					H	21.57		
1857.50	18675	16QAM	15	H	V	21.36		
					H	21.86		
Middle Channel								
1880.00	18900	QPSK	15	H	V	23.89	33.00	Pass
					H	22.87		
1880.00	18900	16QAM	15	H	V	23.69		
					H	22.15		
Highest Channel								
1902.50	19125	QPSK	15	H	V	24.23	33.00	Pass
					H	19.45		
1902.50	19125	16QAM	15	H	V	23.26		
					H	19.81		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1860.00	18700	QPSK	20	H	V	21.44	33.00	Pass
					H	21.86		
1860.00	18700	16QAM	20	H	V	21.37		
					H	21.86		
Middle Channel								
1880.00	18900	QPSK	20	H	V	23.34	33.00	Pass
					H	22.17		
1880.00	18900	16QAM	20	H	V	23.45		
					H	22.39		
Highest Channel								
1900.00	19100	QPSK	20	H	V	24.95	33.00	Pass
					H	19.33		
1900.00	19100	16QAM	20	H	V	23.13		
					H	19.45		

LTE Band 4

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1710.70	19957	QPSK	1.4	H	V	17.63	30.00	Pass
					H	26.79		
1710.70	19957	16QAM	1.4	H	V	17.51		
					H	26.68		
Middle Channel								
1732.50	20175	QPSK	1.4	H	V	17.44	30.00	Pass
					H	26.02		
1732.50	20175	16QAM	1.4	H	V	17.58		
					H	26.10		
Highest Channel								
1754.30	20393	QPSK	1.4	H	V	18.02	30.00	Pass
					H	25.16		
1754.30	20393	16QAM	1.4	H	V	18.13		
					H	25.13		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1711.50	19965	QPSK	3	H	V	17.18	30.00	Pass
					H	26.32		
1711.50	19965	16QAM	3	H	V	17.53		
					H	26.45		
Middle Channel								
1732.50	20175	QPSK	3	H	V	17.39	30.00	Pass
					H	26.88		
1732.50	20175	16QAM	3	H	V	17.74		
					H	26.45		
Highest Channel								
1753.50	20385	QPSK	3	H	V	18.38	30.00	Pass
					H	25.13		
1753.50	20385	16QAM	3	H	V	18.73		
					H	25.32		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1712.50	19975	QPSK	5	H	V	17.53	30.00	Pass
					H	26.45		
1712.50	19975	16QAM	5	H	V	17.23		
					H	26.93		
Middle Channel								
1732.50	20175	QPSK	5	H	V	17.31	30.00	Pass
					H	26.38		
1732.50	20175	16QAM	5	H	V	17.88		
					H	26.37		
Highest Channel								
1752.50	20375	QPSK	5	H	V	18.83	30.00	Pass
					H	25.23		
1752.50	20375	16QAM	5	H	V	18.37		
					H	25.14		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1715.00	20000	QPSK	10	H	V	17.23	30.00	Pass
					H	26.61		
1715.00	20000	16QAM	10	H	V	17.26		
					H	26.53		
Middle Channel								
1732.50	20175	QPSK	10	H	V	17.58	30.00	Pass
					H	26.25		
1732.50	20175	16QAM	10	H	V	17.83		
					H	26.82		
Highest Channel								
1750.00	20350	QPSK	10	H	V	18.32	30.00	Pass
					H	25.31		
1750.00	20350	16QAM	10	H	V	18.75		
					H	25.71		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1717.50	20025	QPSK	15	H	V	17.31	30.00	Pass
					H	26.17		
1717.50	20025	16QAM	15	H	V	17.50		
					H	26.31		
Middle Channel								
1732.50	20175	QPSK	15	H	V	17.75	30.00	Pass
					H	26.31		
1732.50	20175	16QAM	15	H	V	26.11		
					H	26.10		
Highest Channel								
1747.50	20325	QPSK	15	H	V	18.55	30.00	Pass
					H	25.51		
1747.50	20325	16QAM	15	H	V	18.71		
					H	25.41		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
1720.00	20050	QPSK	20	H	V	17.53	30.00	Pass
					H	26.23		
1720.00	20050	16QAM	20	H	V	17.12		
					H	26.52		
Middle Channel								
1732.50	20175	QPSK	20	H	V	17.36	30.00	Pass
					H	26.23		
1732.50	20175	16QAM	20	H	V	17.14		
					H	26.33		
Highest Channel								
1745.00	20300	QPSK	20	H	V	18.62	30.00	Pass
					H	25.33		
1745.00	20300	16QAM	20	H	V	18.93		
					H	25.59		

LTE band 12

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
699.70	23017	QPSK	1.4	H	V	15.68	34.77	Pass
					H	18.45		
699.70	23017	16QAM	1.4	H	V	16.07		
					H	18.34		
Middle Channel								
707.50	23095	QPSK	1.4	H	V	17.43	34.77	Pass
					H	20.48		
707.50	23095	16QAM	1.4	H	V	15.96		
					H	20.40		
Highest Channel								
715.30	23173	QPSK	1.4	H	V	16.47	34.77	Pass
					H	19.52		
715.30	23173	16QAM	1.4	H	V	16.21		
					H	19.47		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
700.50	23025	QPSK	3	H	V	15.71	34.77	Pass
					H	18.14		
700.50	23025	16QAM	3	H	V	16.48		
					H	18.53		
Middle Channel								
707.50	23095	QPSK	3	H	V	17.30	34.77	Pass
					H	20.85		
707.50	23095	16QAM	3	H	V	15.53		
					H	20.31		
Highest Channel								
714.50	23165	QPSK	3	H	V	16.23	34.77	Pass
					H	19.14		
714.50	23165	16QAM	3	H	V	16.47		
					H	19.37		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
701.50	23035	QPSK	5	H	V	15.14	34.77	Pass
					H	18.42		
701.50	23035	16QAM	5	H	V	16.23		
					H	18.47		
Middle Channel								
707.50	23095	QPSK	5	H	V	17.48	34.77	Pass
					H	20.19		
707.50	23095	16QAM	5	H	V	15.47		
					H	20.33		
Highest Channel								
713.50	23155	QPSK	5	H	V	16.37	34.77	Pass
					H	19.31		
713.50	23155	16QAM	5	H	V	16.14		
					H	19.85		

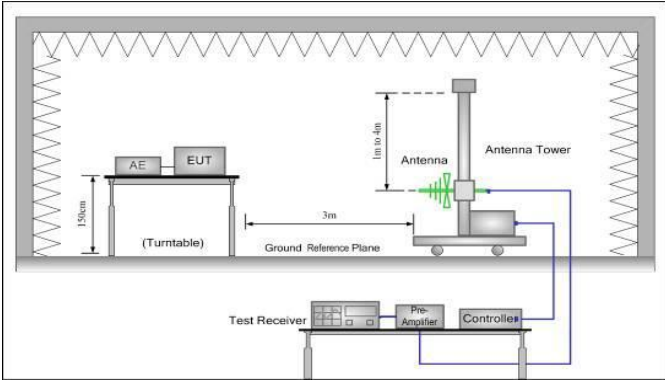
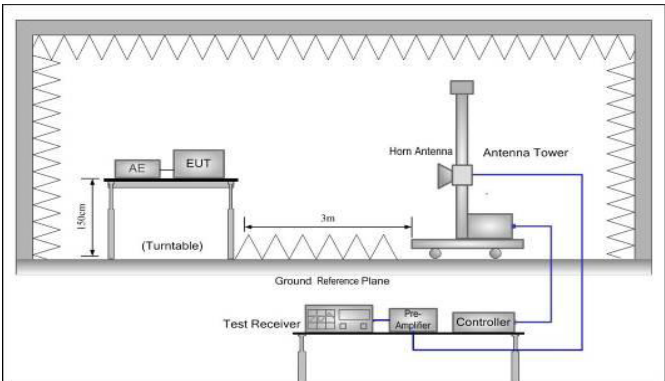
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
704.00	23060	QPSK	10	H	V	15.88	34.77	Pass
					H	18.42		
704.00	23060	16QAM	10	H	V	16.14		
					H	18.23		
Middle Channel								
707.50	23095	QPSK	10	H	V	17.85	34.77	Pass
					H	20.23		
707.50	23095	16QAM	10	H	V	15.12		
					H	20.41		
Highest Channel								
711.00	23130	QPSK	10	H	V	16.31	34.77	Pass
					H	19.23		
711.00	23130	16QAM	10	H	V	16.85		
					H	19.14		

LTE band 17

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
706.50	23755	QPSK	5	H	V	16.25	34.77	Pass
					H	19.50		
706.50	23755	16QAM	5	H	V	16.43		
					H	19.69		
Middle Channel								
710.00	23790	QPSK	5	H	V	16.41	34.77	Pass
					H	19.33		
710.00	23790	16QAM	5	H	V	16.74		
					H	19.19		
Highest Channel								
713.50	23825	QPSK	5	H	V	16.32	34.77	Pass
					H	19.19		
713.50	23825	16QAM	5	H	V	16.39		
					H	19.41		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
709.00	23780	QPSK	10	H	V	16.32	34.77	Pass
					H	19.41		
709.00	23780	16QAM	10	H	V	16.37		
					H	19.32		
Middle Channel								
710.00	23790	QPSK	10	H	V	16.19	34.77	Pass
					H	19.01		
710.00	23790	16QAM	10	H	V	16.32		
					H	19.29		
Highest Channel								
711.00	23800	QPSK	10	H	V	16.34	34.77	Pass
					H	19.23		
711.00	23800	16QAM	10	H	V	16.14		
					H	19.43		

6.6 Field strength of spurious radiation measurement

Test Requirement:	Part 24.238 (a), Part 27.53(g), Part 27.53(h)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2, LTE Band 4 and LTE Band 17: < -13dBm
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
Test Procedure:	<ol style="list-style-type: none"> 1. The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. 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. $ERP / EIRP = S.G. \text{ output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
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 / 1.4 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3701.40	Vertical	-31.87	-13.00	Pass
5552.10	V	-40.77		
7402.00	V	-35.96		
3701.40	Horizontal	-34.36		
5552.10	H	-40.44		
7402.00	H	-36.03		
Middle				
3760.00	Vertical	-31.37	-13.00	Pass
5640.00	V	-40.41		
7520.00	V	-35.87		
3760.00	Horizontal	-34.18		
5640.00	H	-40.99		
7520.00	H	-36.97		
Highest				
3816.60	Vertical	-31.56	-13.00	Pass
5724.90	V	-40.31		
7633.20	V	-35.41		
3816.60	Horizontal	-34.82		
5724.90	H	-40.74		
7633.20	H	-36.87		

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 / 3 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3703.00	Vertical	-31.56	-13.00	Pass
5554.50	V	-40.36		
7406.00	V	-35.12		
3703.00	Horizontal	-34.37		
5554.50	H	-40.26		
7406.00	H	-36.04		
Middle				
3760.00	Vertical	-31.59	-13.00	Pass
5640.00	V	-40.42		
7520.00	V	-35.72		
3760.00	Horizontal	-34.21		
5640.00	H	-40.55		
7520.00	H	-36.26		
Highest				
3817.00	Vertical	-31.44	-13.00	Pass
5725.50	V	-40.41		
7634.00	V	-35.42		
3817.00	Horizontal	-34.34		
5725.50	H	-40.56		
7634.00	H	-36.13		

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 2 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3705.00	Vertical	-31.31	-13.00	Pass
5557.50	V	-40.19		
7410.00	V	-35.59		
3705.00	Horizontal	-34.31		
5557.50	H	-40.26		
7410.00	H	-36.13		
Middle				
3760.00	Vertical	-31.19	-13.00	Pass
5640.00	V	-40.99		
7520.00	V	-35.31		
3760.00	Horizontal	-34.29		
5640.00	H	-40.42		
7520.00	H	-36.97		
Highest				
3815.00	Vertical	-31.56	-13.00	Pass
5722.50	V	-40.41		
7630.00	V	-35.42		
3815.00	Horizontal	-34.35		
5722.50	H	-40.47		
7630.00	H	-36.42		

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 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3710.00	Vertical	-31.70	-13.00	Pass
5565.00	V	-40.27		
7420.00	V	-35.41		
3710.00	Horizontal	-34.36		
5565.00	H	-40.03		
7420.00	H	-36.36		
Middle				
3760.00	Vertical	-31.84	-13.00	Pass
5640.00	V	-40.41		
7520.00	V	-35.15		
3760.00	Horizontal	-34.13		
5640.00	H	-40.16		
7520.00	H	-36.85		
Highest				
3810.00	Vertical	-31.26	-13.00	Pass
5715.00	V	-40.31		
7620.00	V	-35.47		
3810.00	Horizontal	-34.32		
5715.00	H	-40.22		
7620.00	H	-36.55		

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 / 15 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3715.00	Vertical	-31.37	-13.00	Pass
5572.50	V	-40.41		
7430.00	V	-35.55		
3715.00	Horizontal	-34.27		
5572.50	H	-40.26		
7430.00	H	-36.74		
Middle				
3760.00	Vertical	-31.26	-13.00	Pass
5640.00	V	-40.44		
7520.00	V	-35.85		
3760.00	Horizontal	-34.34		
5640.00	H	-40.36		
7520.00	H	-36.37		
Highest				
3805.00	Vertical	-31.56	-13.00	Pass
5707.50	V	-40.42		
7610.00	V	-35.36		
3805.00	Horizontal	-34.36		
5707.50	H	-40.28		
7610.00	H	-36.41		

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 / 20 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3720.00	Vertical	-31.36	-13.00	Pass
5580.00	V	-40.23		
7440.00	V	-35.56		
3720.00	Horizontal	-34.13		
5580.00	H	-40.06		
7440.00	H	-36.84		
Middle				
3760.00	Vertical	-31.86	-13.00	Pass
5640.00	V	-40.36		
7520.00	V	-35.16		
3760.00	Horizontal	-34.82		
5640.00	H	-40.36		
7520.00	H	-36.85		
Highest				
3800.00	Vertical	-31.21	-13.00	Pass
5700.00	V	-40.93		
7600.00	V	-35.53		
3800.00	Horizontal	-34.48		
5700.00	H	-40.84		
7600.00	H	-36.86		

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 / 1.4 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3421.40	Vertical	-48.49	-13.00	Pass
5132.10	V	-42.79		
6842.80	V	-36.66		
3421.40	Horizontal	-45.23		
5132.10	H	-41.78		
6842.80	H	-36.96		
Middle				
3465.00	Vertical	-48.34	-13.00	Pass
5197.50	V	-42.51		
6930.00	V	-36.68		
3465.00	Horizontal	-45.63		
5197.50	H	-41.38		
6930.00	H	-36.51		
Highest				
3508.60	Vertical	-48.42	-13.00	Pass
5262.90	V	-42.57		
7017.20	V	-36.42		
3508.60	Horizontal	-45.23		
5262.90	H	-41.33		
7017.20	H	-36.29		

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 / 3 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3423.00	Vertical	-48.68	-13.00	Pass
5134.50	V	-42.56		
6846.00	V	-36.57		
3423.00	Horizontal	-45.39		
5134.50	H	-41.56		
6846.00	H	-36.42		
Middle				
3465.00	Vertical	-48.42	-13.00	Pass
5197.50	V	-42.38		
6930.00	V	-36.23		
3465.00	Horizontal	-45.24		
5197.50	H	-41.93		
6930.00	H	-36.79		
Highest				
3507.00	Vertical	-48.41	-13.00	Pass
5260.50	V	-42.84		
7014.00	V	-36.24		
3507.00	Horizontal	-45.74		
5260.50	H	-41.61		
7014.00	H	-36.55		

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 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3425.00	Vertical	-48.41	-13.00	Pass
5137.50	V	-42.84		
6850.00	V	-36.23		
3425.00	Horizontal	-45.24		
5137.50	H	-41.99		
6850.00	H	-36.35		
Middle				
3465.00	Vertical	-48.22	-13.00	Pass
5197.50	V	-42.57		
6930.00	V	-36.45		
3465.00	Horizontal	-45.41		
5197.50	H	-41.23		
6930.00	H	-36.12		
Highest				
3505.00	Vertical	-48.22	-13.00	Pass
5257.50	V	-42.57		
7010.00	V	-36.57		
3505.00	Horizontal	-45.12		
5257.50	H	-41.61		
7010.00	H	-36.22		

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 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3430.00	Vertical	-48.18	-13.00	Pass
5145.00	V	-42.42		
6860.00	V	-36.57		
3430.00	Horizontal	-45.22		
5145.00	H	-41.42		
6860.00	H	-36.79		
Middle				
3465.00	Vertical	-48.35	-13.00	Pass
5197.50	V	-42.14		
6930.00	V	-36.24		
3465.00	Horizontal	-45.35		
5197.50	H	-41.93		
6930.00	H	-36.84		
Highest				
3500.00	Vertical	-48.91	-13.00	Pass
5250.00	V	-42.85		
7000.00	V	-36.33		
3500.00	Horizontal	-45.11		
5250.00	H	-41.61		
7000.00	H	-36.42		

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 / 15 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3435.00	Vertical	-48.85	-13.00	Pass
5152.50	V	-42.18		
6870.00	V	-36.41		
3435.00	Horizontal	-45.57		
5152.50	H	-41.45		
6870.00	H	-36.23		
Middle				
3465.00	Vertical	-48.22	-13.00	Pass
5197.50	V	-42.41		
6930.00	V	-36.42		
3465.00	Horizontal	-45.52		
5197.50	H	-41.39		
6930.00	H	-36.48		
Highest				
3495.00	Vertical	-48.91	-13.00	Pass
5242.50	V	-42.79		
6990.00	V	-36.85		
3495.00	Horizontal	-45.32		
5242.50	H	-41.85		
6990.00	H	-36.11		

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 / 20 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3440.00	Vertical	-48.63	-13.00	Pass
5160.00	V	-42.55		
6880.00	V	-36.33		
3440.00	Horizontal	-45.49		
5160.00	H	-41.51		
6880.00	H	-36.14		
Middle				
3465.00	Vertical	-48.02	-13.00	Pass
5197.50	V	-42.19		
6930.00	V	-36.38		
3465.00	Horizontal	-45.14		
5197.50	H	-41.24		
6930.00	H	-36.24		
Highest				
3490.00	Vertical	-48.92	-13.00	Pass
5235.00	V	-42.55		
6980.00	V	-36.15		
3490.00	Horizontal	-45.85		
5235.00	H	-41.31		
6980.00	H	-36.44		

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 / 1.4 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1399.40	Vertical	-56.71	-13.00	Pass
2099.10	V	-47.00		
2798.80	V	-50.69		
1399.40	Horizontal	-56.03		
2099.10	H	-56.30		
2798.80	H	-51.07		
Middle				
1415.00	Vertical	-57.61	-13.00	Pass
2122.50	V	-47.96		
2830.00	V	-51.29		
1415.00	Horizontal	-56.17		
2122.50	H	-57.96		
2830.00	H	-53.41		
Highest				
1430.60	Vertical	-55.97	-13.00	Pass
2145.90	V	-48.94		
2861.20	V	-51.64		
1430.60	Horizontal	-58.16		
2145.90	H	-56.96		
2861.20	H	-52.58		

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 12 / 3 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1401.00	Vertical	-56.75	-13.00	Pass
2101.50	V	-47.34		
2802.00	V	-50.45		
1401.00	Horizontal	-56.58		
2101.50	H	-56.49		
2802.00	H	-51.58		
Middle				
1415.00	Vertical	-57.86	-13.00	Pass
2122.50	V	-47.93		
2830.00	V	-51.81		
1415.00	Horizontal	-56.61		
2122.50	H	-57.38		
2830.00	H	-53.16		
Highest				
1429.00	Vertical	-55.13	-13.00	Pass
2143.50	V	-48.83		
2858.00	V	-51.64		
1429.00	Horizontal	-58.36		
2143.50	H	-56.36		
2858.00	H	-52.41		

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 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1403.00	Vertical	-56.14	-13.00	Pass
2104.50	V	-47.21		
2806.00	V	-50.28		
1403.00	Horizontal	-56.41		
2104.50	H	-56.11		
2806.00	H	-51.83		
Middle				
1415.00	Vertical	-57.17	-13.00	Pass
2122.50	V	-47.18		
2830.00	V	-51.32		
1415.00	Horizontal	-56.72		
2122.50	H	-57.89		
2830.00	H	-53.23		
Highest				
1427.00	Vertical	-55.27	-13.00	Pass
2410.50	V	-48.97		
2854.00	V	-51.39		
1427.00	Horizontal	-58.77		
2410.50	H	-56.73		
2854.00	H	-52.94		

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 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1408.00	Vertical	-56.69	-13.00	Pass
2112.00	V	-47.69		
2816.00	V	-50.10		
1408.00	Horizontal	-56.96		
2112.00	H	-56.97		
2816.00	H	-51.04		
Middle				
1415.00	Vertical	-57.63	-13.00	Pass
2122.50	V	-47.74		
2830.00	V	-51.45		
1415.00	Horizontal	-56.36		
2122.50	H	-57.44		
2830.00	H	-53.17		
Highest				
1422.00	Vertical	-55.41	-13.00	Pass
2133.00	V	-48.56		
2844.00	V	-51.71		
1422.00	Horizontal	-58.12		
2133.00	H	-56.63		
2844.00	H	-52.67		

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 17 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1413.00	Vertical	-54.60	-13.00	Pass
2119.50	V	-41.64		
2826.00	V	-52.02		
1413.00	Horizontal	-54.86		
2119.50	H	-44.61		
2826.00	H	-50.16		
Middle				
1420.00	Vertical	-55.62	-13.00	Pass
2130.00	V	-41.54		
2840.00	V	-53.12		
1420.00	Horizontal	-56.92		
2130.00	H	-45.87		
2840.00	H	-52.04		
Highest				
1427.00	Vertical	-55.14	-13.00	Pass
2140.50	V	-42.71		
2854.00	V	-52.92		
1427.00	Horizontal	-56.54		
2140.50	H	-44.71		
2854.00	H	-51.65		

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 17 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1418.00	Vertical	-54.14	-13.00	Pass
2127.00	V	-41.41		
2836.00	V	-52.21		
1418.00	Horizontal	-54.28		
2127.00	H	-44.42		
2836.00	H	-50.11		
Middle				
1420.00	Vertical	-55.19	-13.00	Pass
2130.00	V	-41.29		
2840.00	V	-53.71		
1420.00	Horizontal	-56.73		
2130.00	H	-45.46		
2840.00	H	-52.97		
Highest				
1422.00	Vertical	-55.92	-13.00	Pass
2133.00	V	-42.86		
2844.00	V	-52.12		
1422.00	Horizontal	-56.62		
2133.00	H	-44.41		
2844.00	H	-51.46		

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.

6.7 Frequency stability V.S. Temperature measurement

Test Requirement:	Part 24.235, Part 27.54, Part 2.1055(a)(1)(b)
Test Method:	ANSI/TIA-603-D 2010
Limit:	±2.5ppm
Test setup:	
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 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

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	198	0.105319	±2.5	Pass
	-20	155	0.082447		
	-10	163	0.086702		
	0	123	0.065426		
	10	188	0.100000		
	20	174	0.092553		
	30	114	0.060638		
	40	105	0.055851		
	50	150	0.079787		
16QAM					
3.70	-30	123	0.065426	±2.5	Pass
	-20	150	0.079787		
	-10	166	0.088298		
	0	122	0.064894		
	10	144	0.076596		
	20	140	0.074468		
	30	156	0.082979		
	40	133	0.070745		
	50	138	0.073404		

Note: Only the worst case shown in the report.

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	155	0.089466		
	-10	163	0.094084		
	0	123	0.070996		
	10	188	0.108514		
	20	174	0.100433		
	30	114	0.065801		
	40	105	0.060606		
	50	150	0.086580		
16QAM					
3.70	-30	123	0.070996	±2.5	Pass
	-20	150	0.086580		
	-10	166	0.095815		
	0	122	0.070418		
	10	144	0.083117		
	20	140	0.080808		
	30	156	0.090043		
	40	133	0.076768		
	50	138	0.079654		

Note: Only the worst case shown in the report.

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	198	0.279859	±2.5	Pass
	-20	155	0.219081		
	-10	163	0.230389		
	0	123	0.173852		
	10	188	0.265724		
	20	174	0.245936		
	30	114	0.161131		
	40	105	0.148410		
	50	150	0.212014		
16QAM					
3.70	-30	123	0.173852	±2.5	Pass
	-20	150	0.212014		
	-10	166	0.234629		
	0	122	0.172438		
	10	144	0.203534		
	20	140	0.197880		
	30	156	0.220495		
	40	133	0.187986		
	50	138	0.195053		

Note: Only the worst case shown in the report.

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	198	0.278873	±2.5	Pass
	-20	155	0.218310		
	-10	163	0.229577		
	0	123	0.173239		
	10	188	0.264789		
	20	174	0.245070		
	30	114	0.160563		
	40	105	0.147887		
	50	150	0.211268		
16QAM					
3.70	-30	123	0.173239	±2.5	Pass
	-20	150	0.211268		
	-10	166	0.233803		
	0	122	0.171831		
	10	144	0.202817		
	20	140	0.197183		
	30	156	0.219718		
	40	133	0.187324		
	50	138	0.194366		

Note: Only the worst case shown in the report.

6.8 Frequency stability V.S. Voltage measurement

Test Requirement:	Part 24.235, Part 27.54, Part 2.1055(d)(2)
Test Method:	ANSI/TIA-603-D 2010
Limit:	±2.5ppm
Test setup:	
Test procedure:	<ol style="list-style-type: none"> 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:

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	96	0.051064	±2.5	Pass
	3.70	63	0.033511		
	3.50	72	0.038298		
16QAM					
25	4.20	82	0.043617	±2.5	Pass
	3.70	94	0.050000		
	3.50	46	0.024468		

Note: Only the worst case shown in the report.

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	98	0.056566	±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	96	0.055411		
	3.50	48	0.027706		

Note: Only the worst case shown in the report.

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	98	0.138516	±2.5	Pass
	3.70	60	0.084806		
	3.50	74	0.104594		
16QAM					
25	4.20	80	0.113074	±2.5	Pass
	3.70	96	0.135689		
	3.50	48	0.104594		

Note: Only the worst case shown in the report.

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.20	98	0.138028	±2.5	Pass
	3.70	65	0.091549		
	3.50	74	0.104225		
16QAM					
25	4.20	80	0.112676	±2.5	Pass
	3.70	96	0.135211		
	3.50	48	0.067606		

Note: Only the worst case shown in the report.