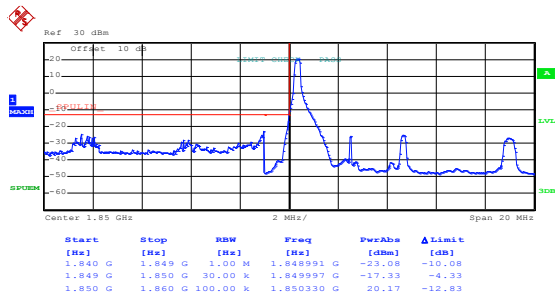
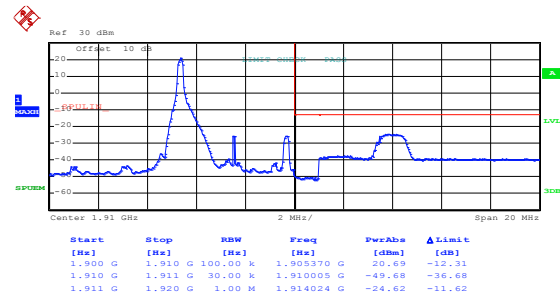


QPSK & RB Size 1



Date: 19.OCT.2017 08:45:19

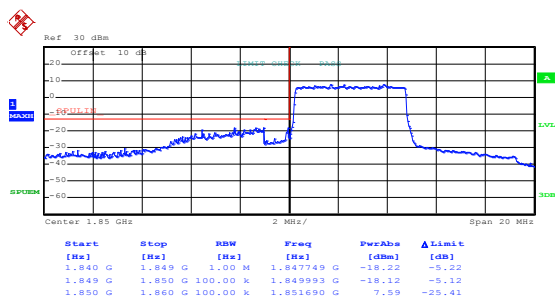
Lowest channel



Date: 19.OCT.2017 08:48:01

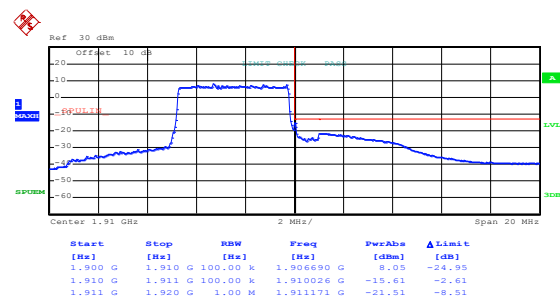
Highest channel

QPSK & RB Size 25



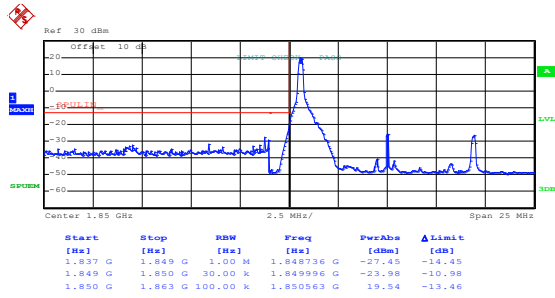
Date: 19.OCT.2017 08:47:14

Lowest channel



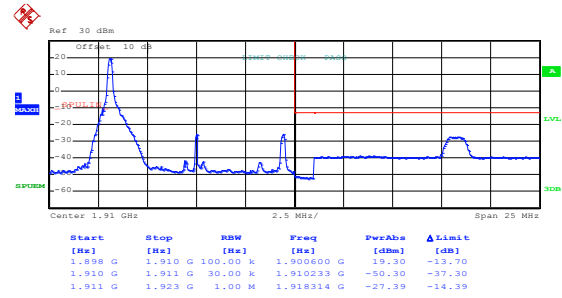
Date: 19.OCT.2017 08:49:48

Highest channel

10 MHz:**16QAM & RB Size 1**

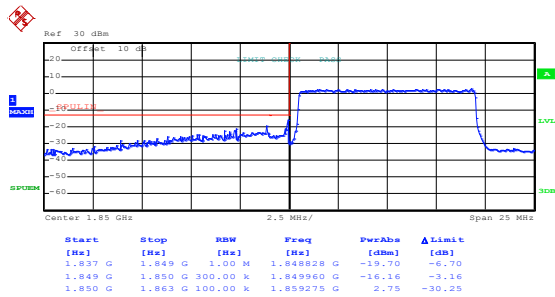
Date: 19.OCT.2017 08:51:39

Lowest channel



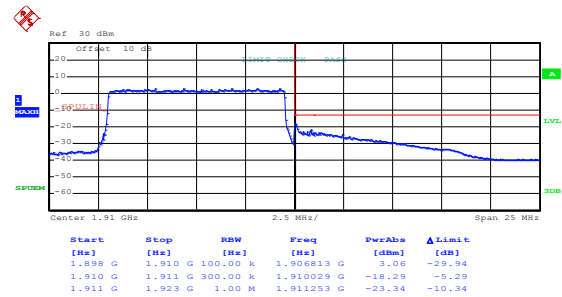
Date: 19.OCT.2017 08:54:06

Highest channel

16QAM & RB Size 50

Date: 19.OCT.2017 08:53:21

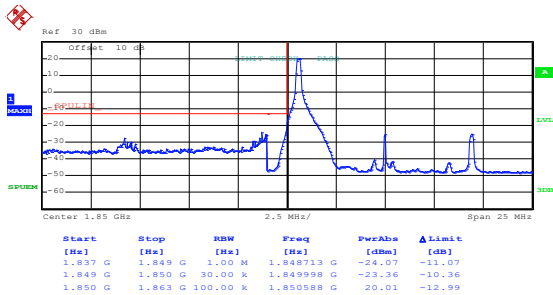
Lowest channel



Date: 19.OCT.2017 08:56:04

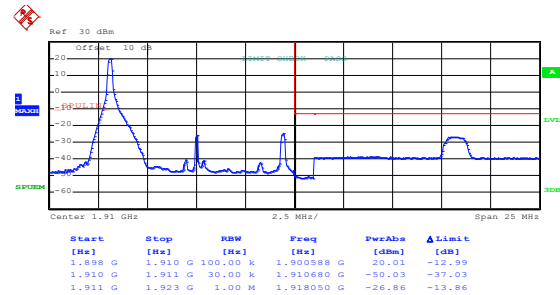
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 08:51:31

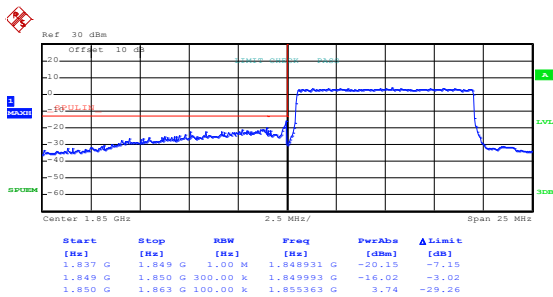
Lowest channel



Date: 19.OCT.2017 08:53:58

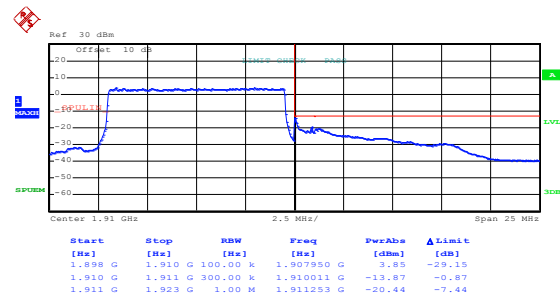
Highest channel

QPSK & RB Size 50



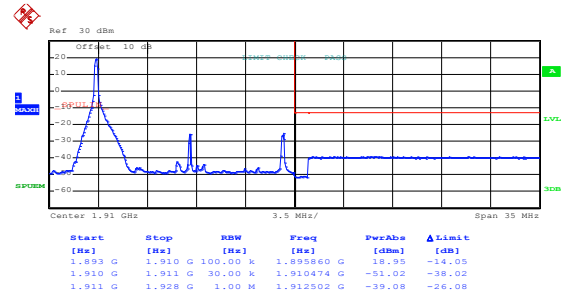
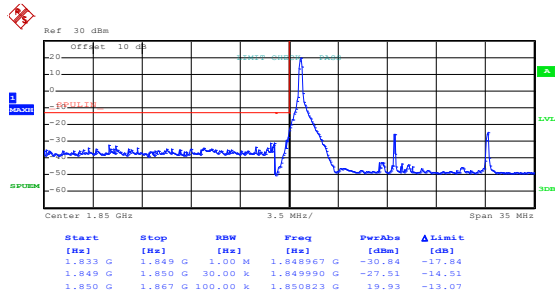
Date: 19.OCT.2017 08:53:13

Lowest channel



Date: 19.OCT.2017 08:55:57

Highest channel

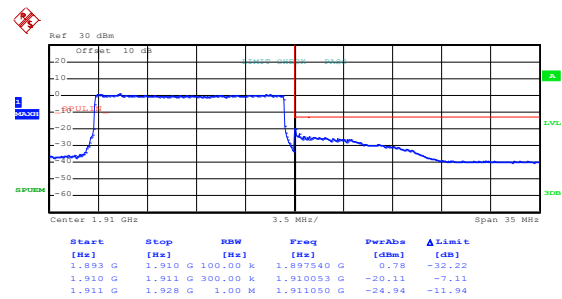
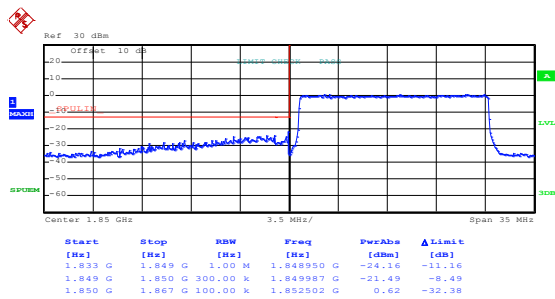
15 MHz:**16QAM & RB Size 1**

Date: 19.OCT.2017 08:57:18

Date: 19.OCT.2017 08:59:43

Lowest channel

Highest channel

16QAM & RB Size 75

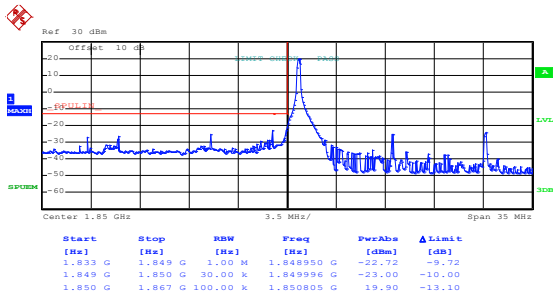
Date: 19.OCT.2017 08:58:58

Date: 19.OCT.2017 09:01:20

Lowest channel

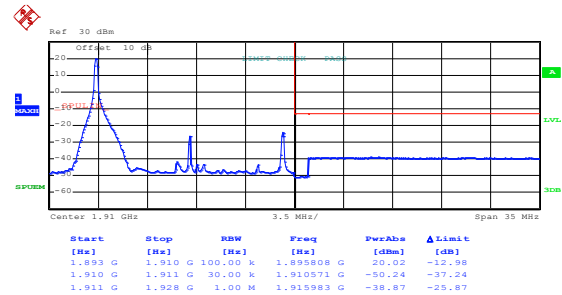
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 08:57:09

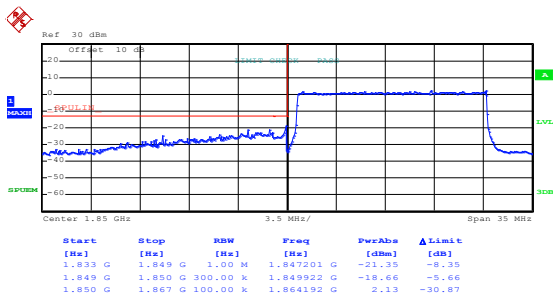
Lowest channel



Date: 19.OCT.2017 08:59:35

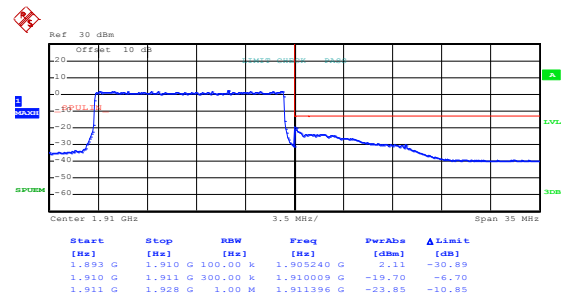
Highest channel

QPSK & RB Size 75



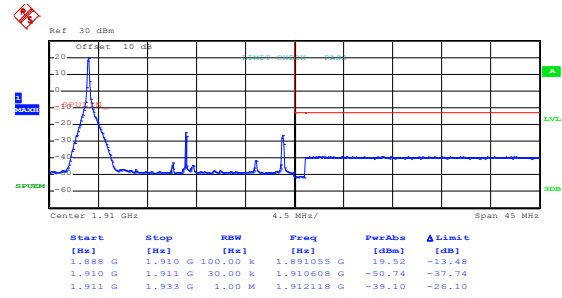
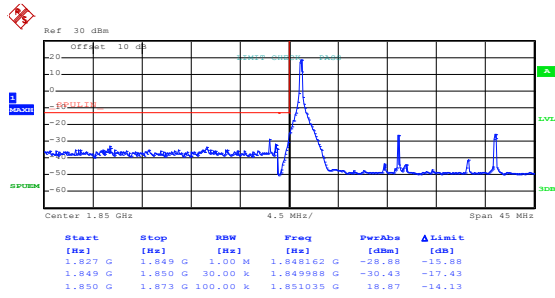
Date: 19.OCT.2017 08:58:50

Lowest channel



Date: 19.OCT.2017 09:01:13

Highest channel

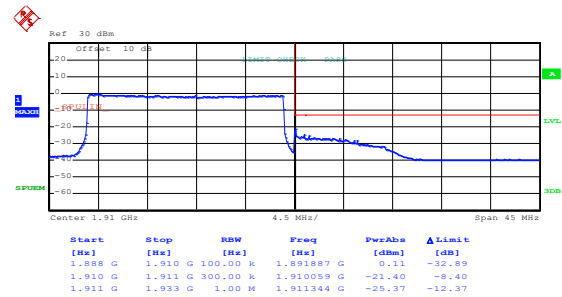
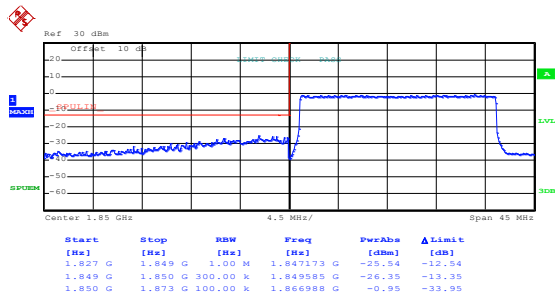
20 MHz:**16QAM & RB Size 1**

Date: 19.OCT.2017 09:02:23

Date: 19.OCT.2017 09:04:54

Lowest channel

Highest channel

16QAM & RB Size 100

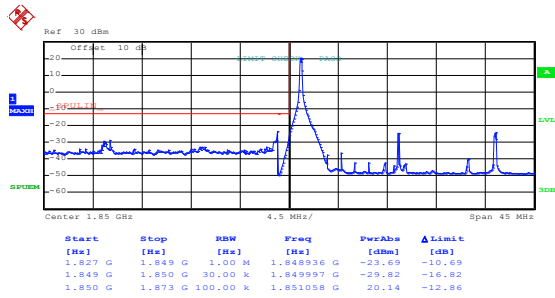
Date: 19.OCT.2017 09:04:15

Date: 19.OCT.2017 09:06:30

Lowest channel

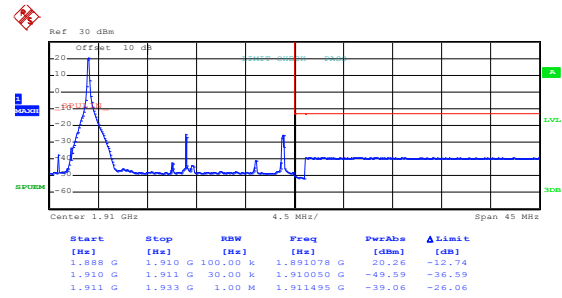
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:02:14

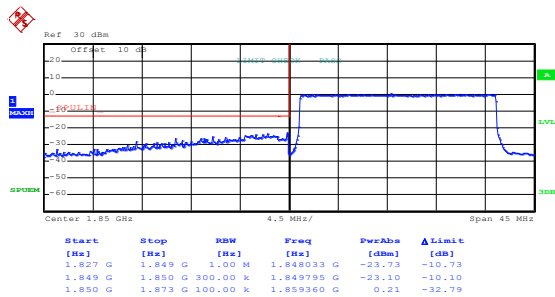
Lowest channel



Date: 19.OCT.2017 09:04:44

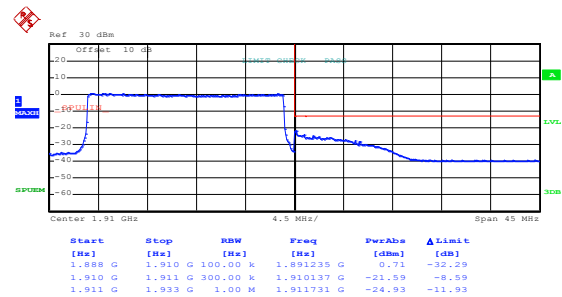
Highest channel

QPSK & RB Size 100



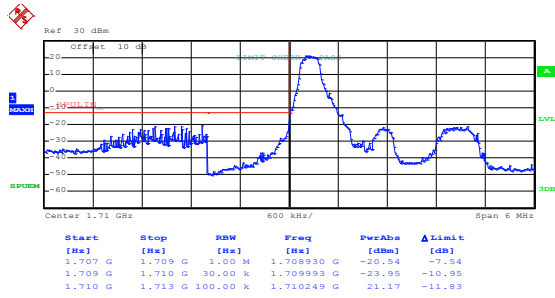
Date: 19.OCT.2017 09:04:08

Lowest channel



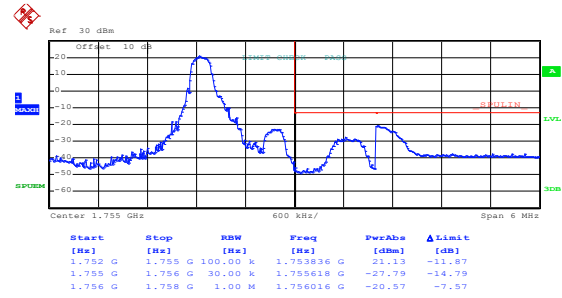
Date: 19.OCT.2017 09:06:22

Highest channel

LTE band 4, 1.4MHz:**16QAM & RB Size 1**

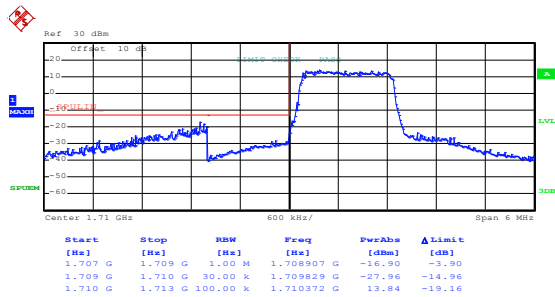
Date: 19.OCT.2017 09:13:44

Lowest channel



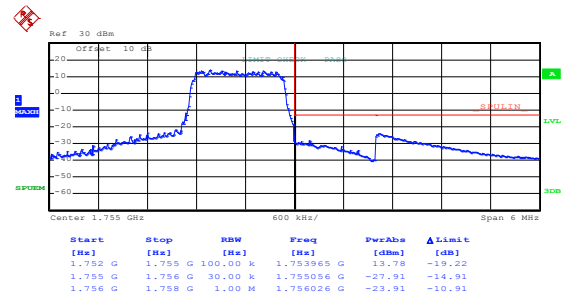
Date: 19.OCT.2017 09:15:47

Highest channel

16QAM & RB Size 6

Date: 19.OCT.2017 09:15:17

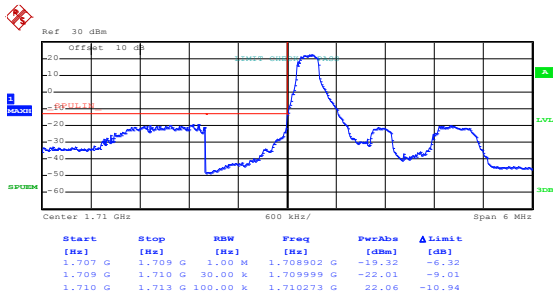
Lowest channel



Date: 19.OCT.2017 09:17:08

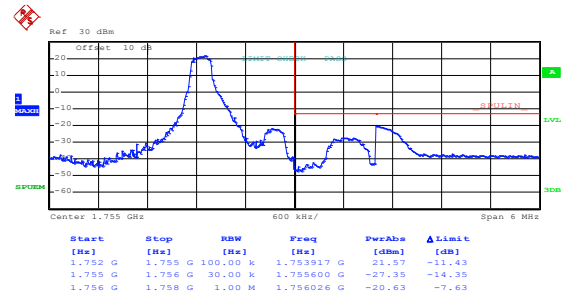
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:13:35

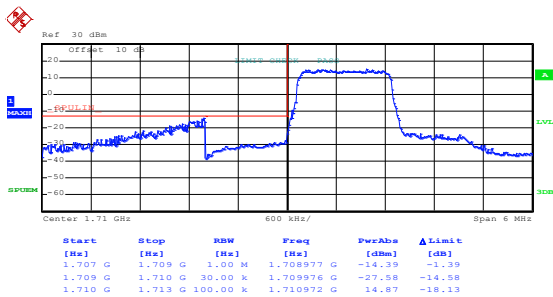
Lowest channel



Date: 19.OCT.2017 09:15:40

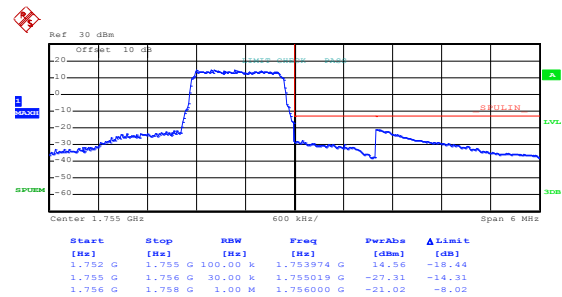
Highest channel

QPSK & RB Size 6



Date: 19.OCT.2017 09:15:10

Lowest channel

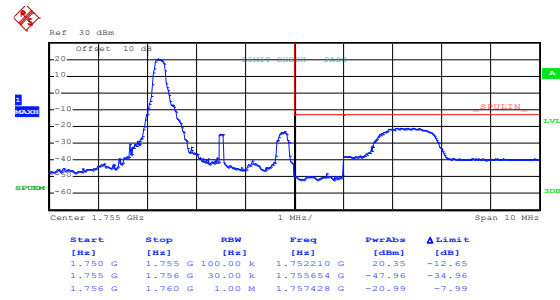
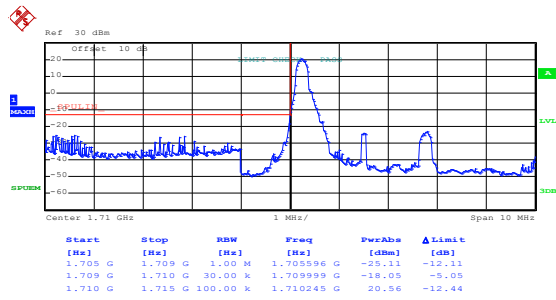


Date: 19.OCT.2017 09:17:00

Highest channel

3 MHz:

16QAM & RB Size 1



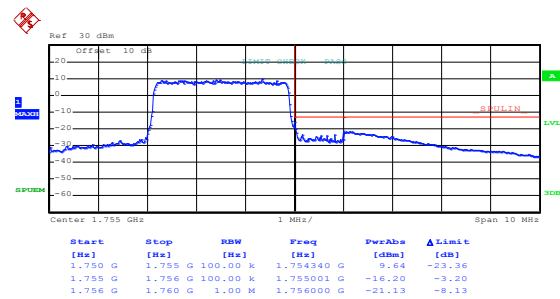
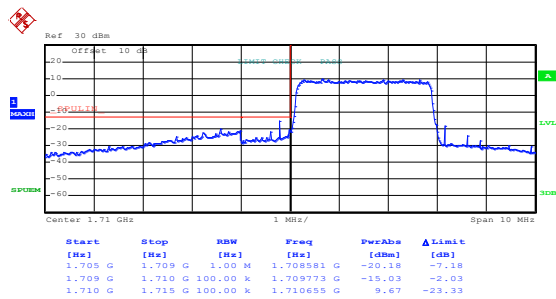
Date: 19.OCT.2017 09:18:19

Date: 19.OCT.2017 09:21:43

Lowest channel

Highest channel

16QAM & RB Size 15



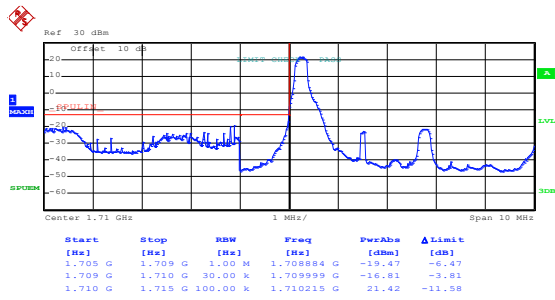
Date: 19.OCT.2017 09:20:51

Date: 19.OCT.2017 09:23:09

Lowest channel

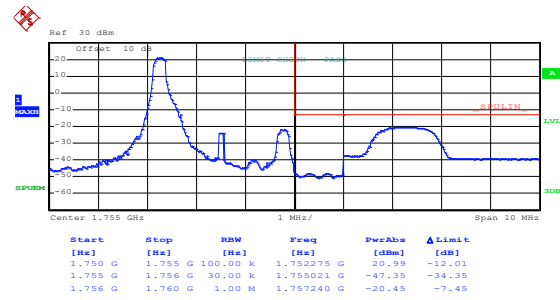
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:18:05

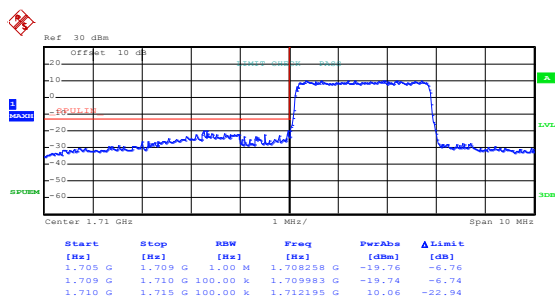
Lowest channel



Date: 19.OCT.2017 09:21:35

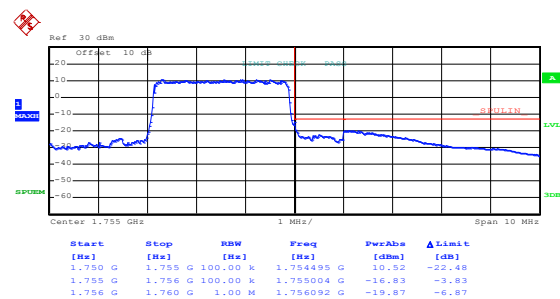
Highest channel

QPSK & RB Size 15



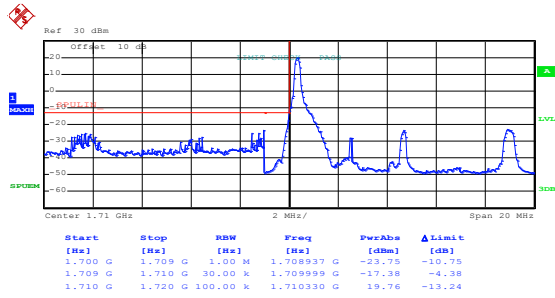
Date: 19.OCT.2017 09:20:43

Lowest channel



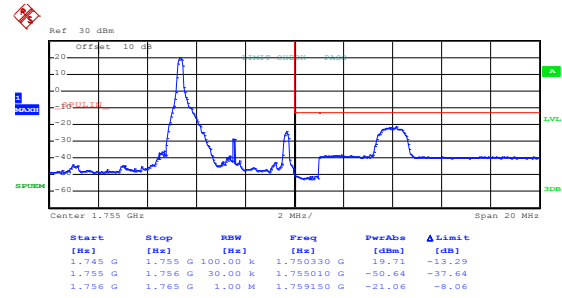
Date: 19.OCT.2017 09:23:02

Highest channel

5 MHz:**16QAM & RB Size 1**

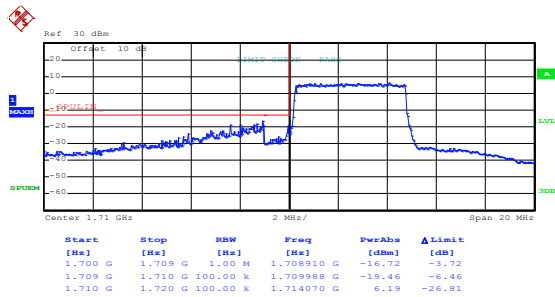
Date: 19.OCT.2017 09:25:04

Lowest channel



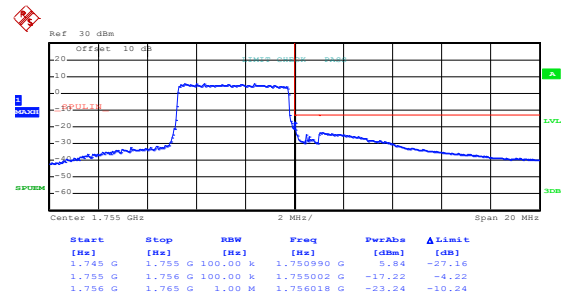
Date: 19.OCT.2017 09:28:16

Highest channel

16QAM & RB Size 25

Date: 19.OCT.2017 09:27:20

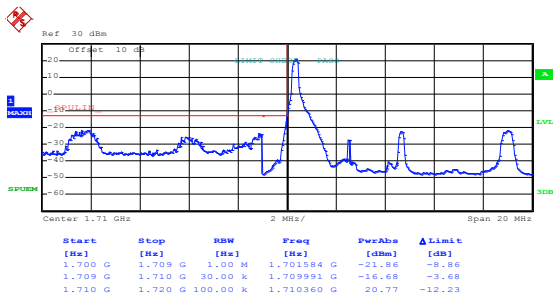
Lowest channel



Date: 19.OCT.2017 09:29:38

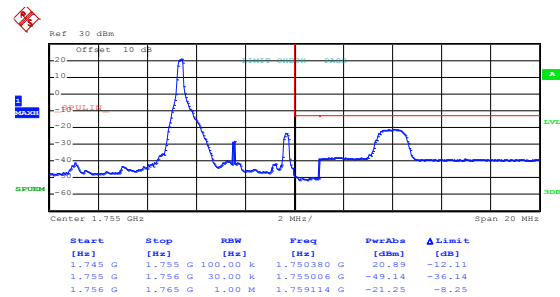
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:24:56

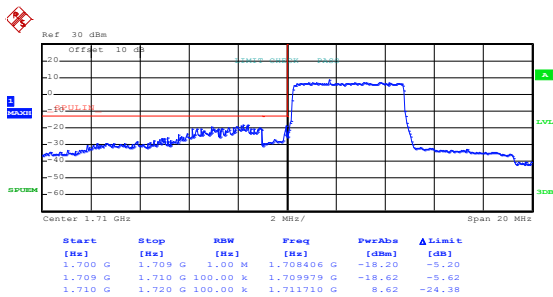
Lowest channel



Date: 19.OCT.2017 09:28:09

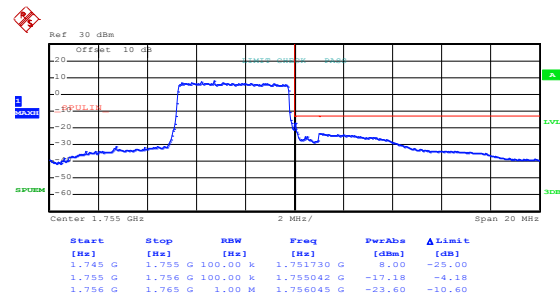
Highest channel

QPSK & RB Size 25



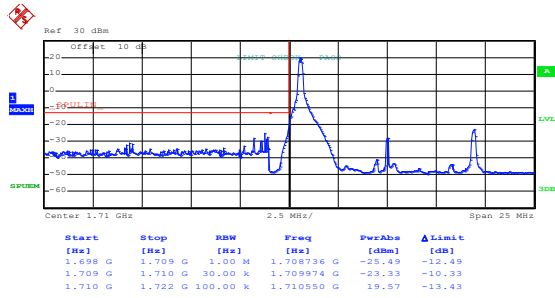
Date: 19.OCT.2017 09:27:14

Lowest channel



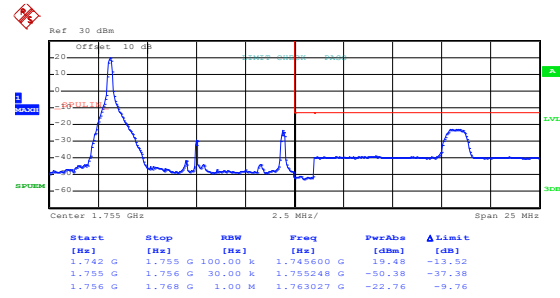
Date: 19.OCT.2017 09:29:32

Highest channel

10 MHz:**16QAM & RB Size 1**

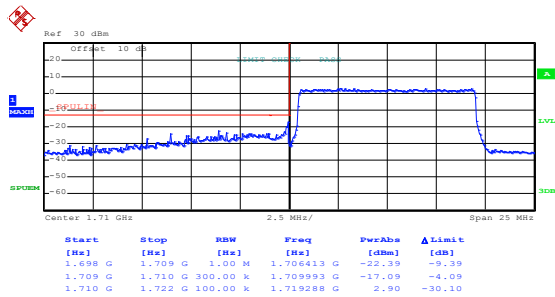
Date: 19.OCT.2017 09:31:01

Lowest channel



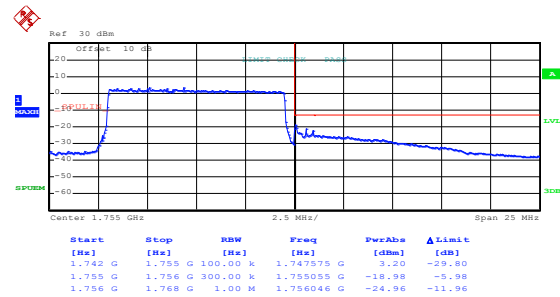
Date: 19.OCT.2017 09:33:05

Highest channel

16QAM & RB Size 50

Date: 19.OCT.2017 09:32:33

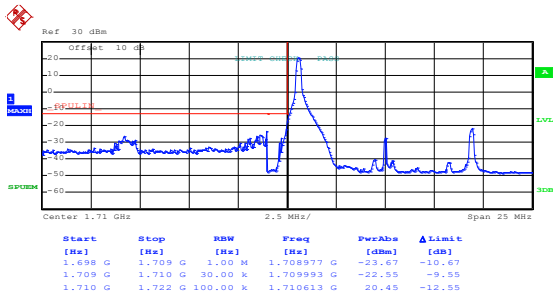
Lowest channel



Date: 19.OCT.2017 09:34:36

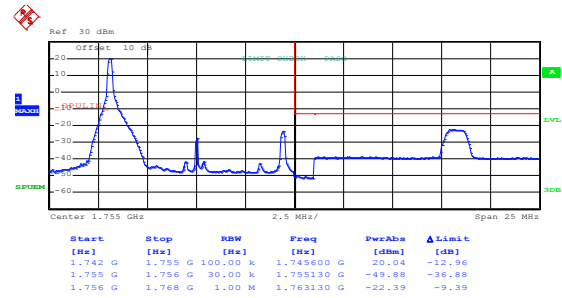
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:30:54

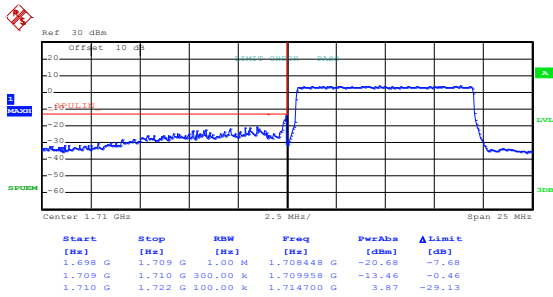
Lowest channel



Date: 19.OCT.2017 09:32:58

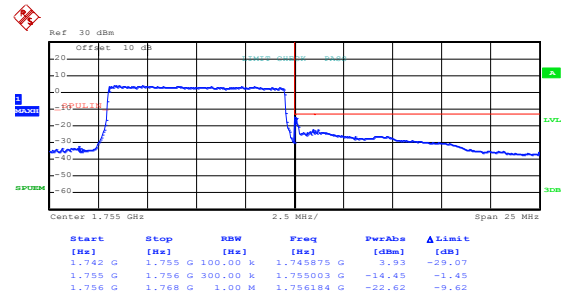
Highest channel

QPSK & RB Size 50



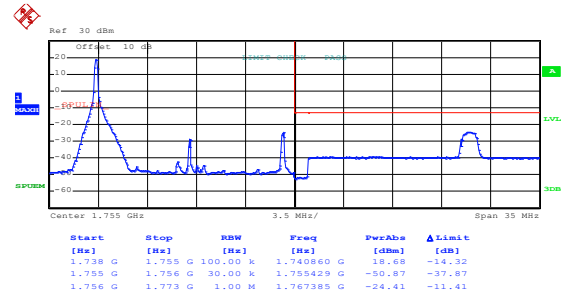
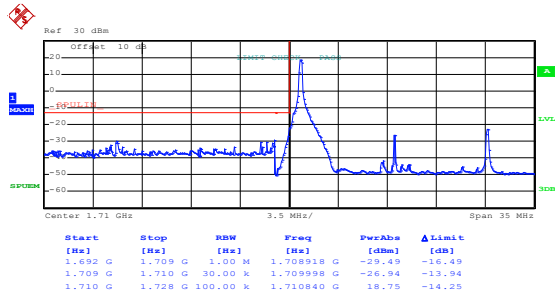
Date: 19.OCT.2017 09:32:26

Lowest channel



Date: 19.OCT.2017 09:34:31

Highest channel

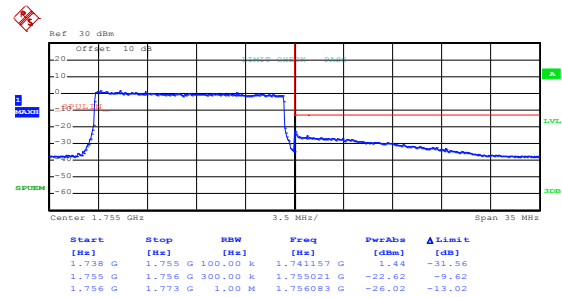
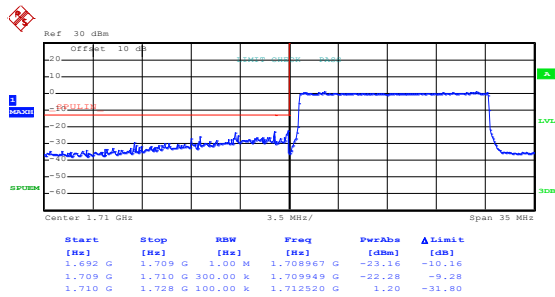
15 MHz:**16QAM & RB Size 1**

Date: 19.OCT.2017 09:35:42

Date: 19.OCT.2017 09:37:53

Lowest channel

Highest channel

16QAM & RB Size 75

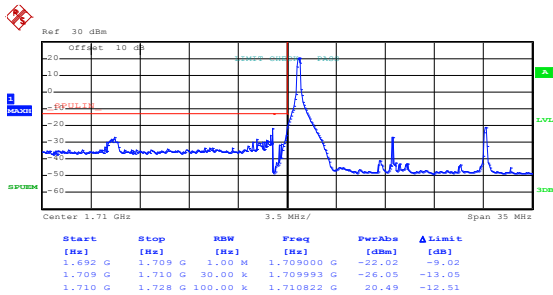
Date: 19.OCT.2017 09:37:14

Date: 19.OCT.2017 09:39:17

Lowest channel

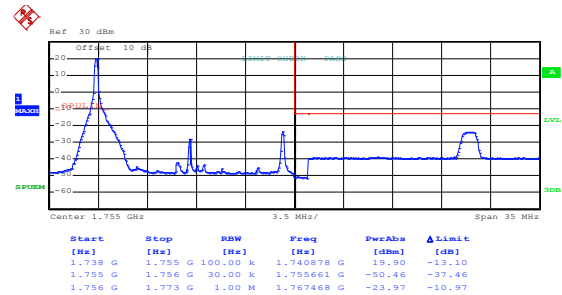
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:35:35

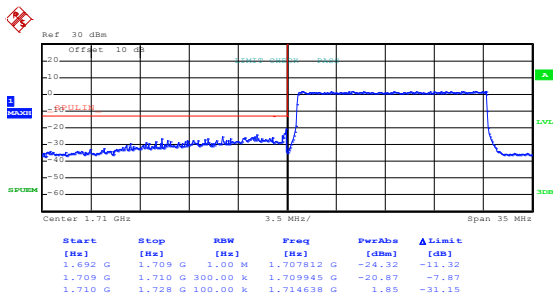
Lowest channel



Date: 19.OCT.2017 09:37:46

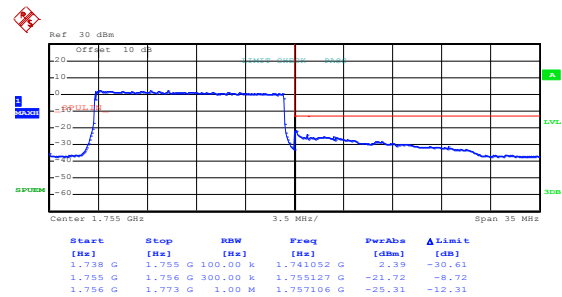
Highest channel

QPSK & RB Size 75



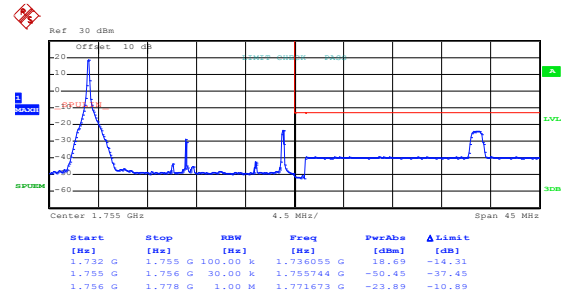
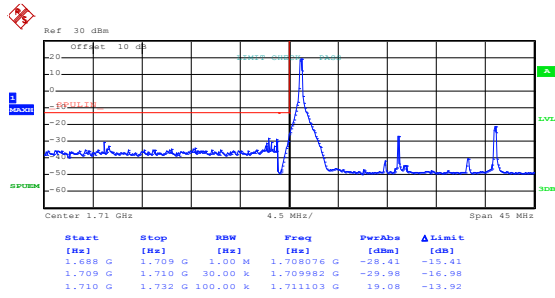
Date: 19.OCT.2017 09:37:07

Lowest channel



Date: 19.OCT.2017 09:39:11

Highest channel

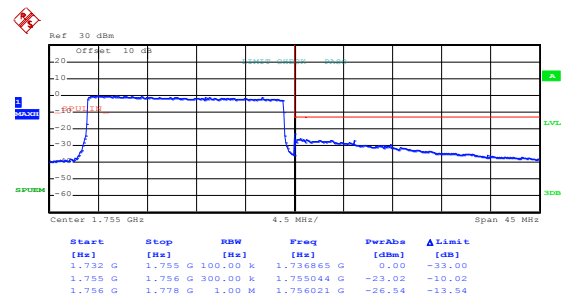
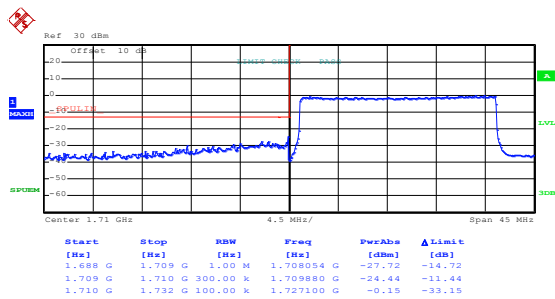
20 MHz:**16QAM & RB Size 1**

Date: 19.OCT.2017 09:40:21

Date: 19.OCT.2017 09:42:29

Lowest channel

Highest channel

16QAM & RB Size 100

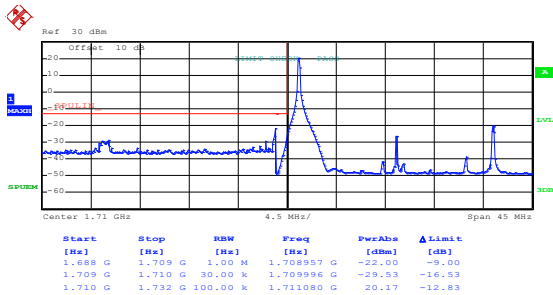
Date: 19.OCT.2017 09:41:53

Date: 19.OCT.2017 09:43:53

Lowest channel

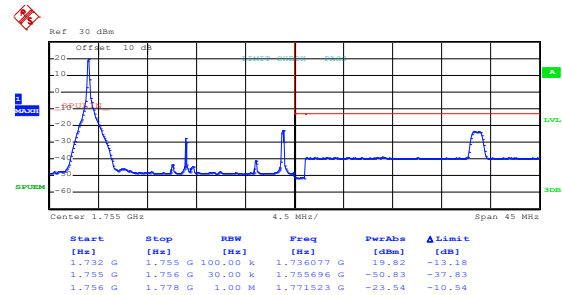
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:40:12

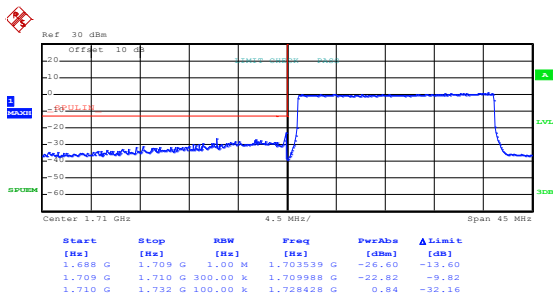
Lowest channel



Date: 19.OCT.2017 09:42:20

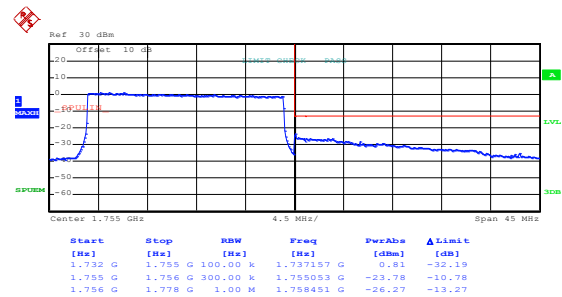
Highest channel

QPSK & RB Size 100



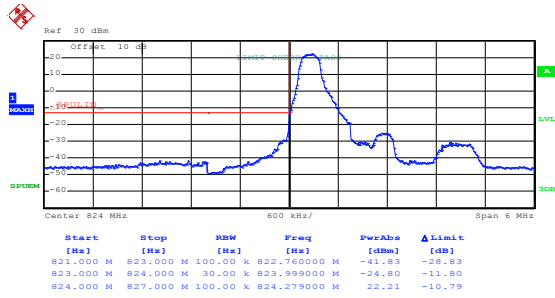
Date: 19.OCT.2017 09:41:46

Lowest channel



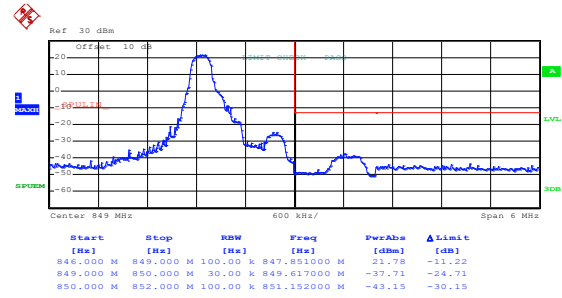
Date: 19.OCT.2017 09:43:46

Highest channel

LTE band 5, 1.4MHz:**16QAM & RB Size 1**

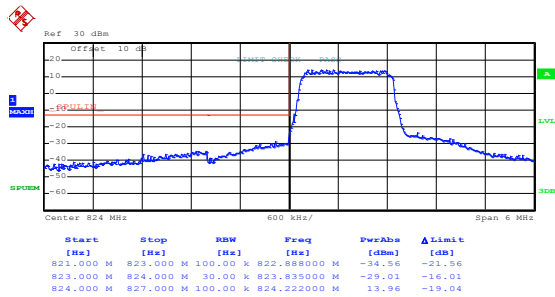
Date: 19.OCT.2017 10:17:06

Lowest channel



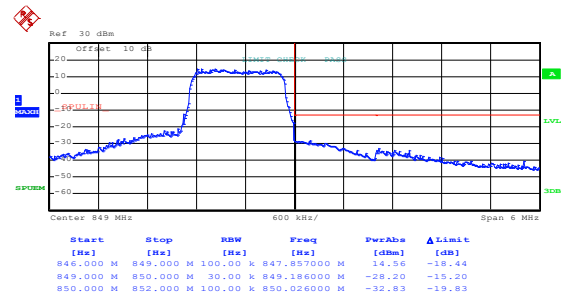
Date: 19.OCT.2017 10:18:54

Highest channel

16QAM & RB Size 6

Date: 19.OCT.2017 10:18:24

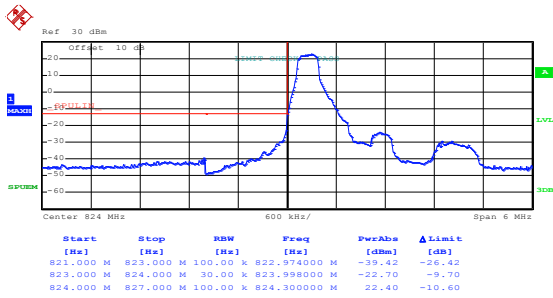
Lowest channel



Date: 19.OCT.2017 10:20:13

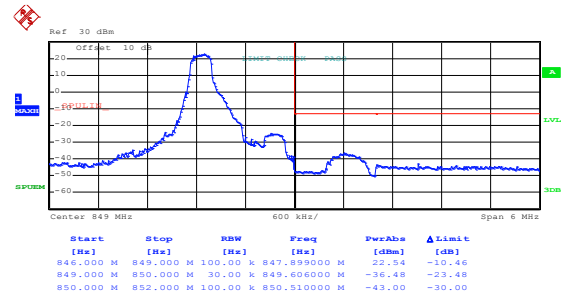
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:16:46

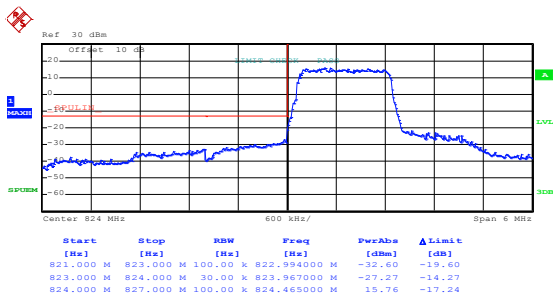
Lowest channel



Date: 19.OCT.2017 10:18:46

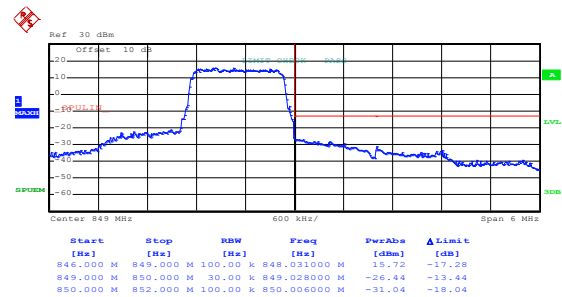
Highest channel

QPSK & RB Size 6



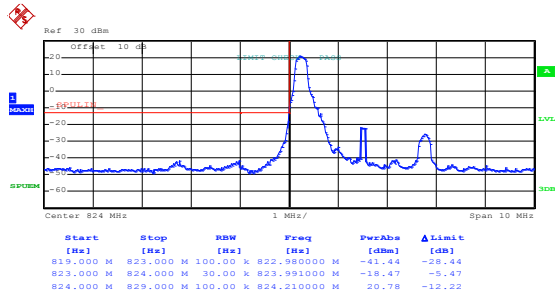
Date: 19.OCT.2017 10:18:17

Lowest channel



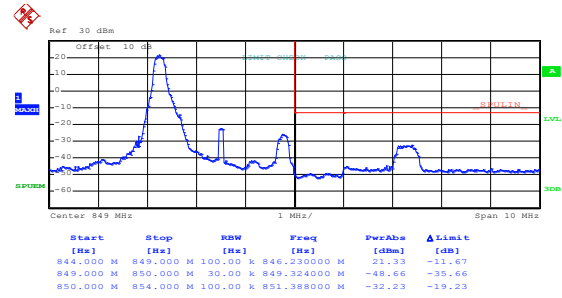
Date: 19.OCT.2017 10:20:07

Highest channel

3 MHz:**16QAM & RB Size 1**

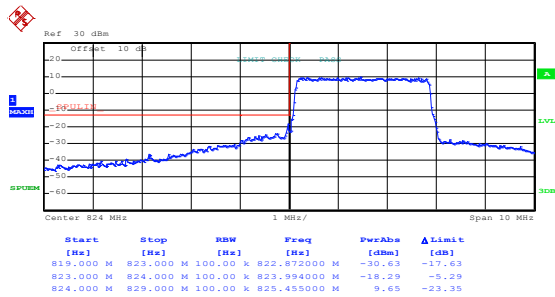
Date: 19.OCT.2017 10:21:20

Lowest channel



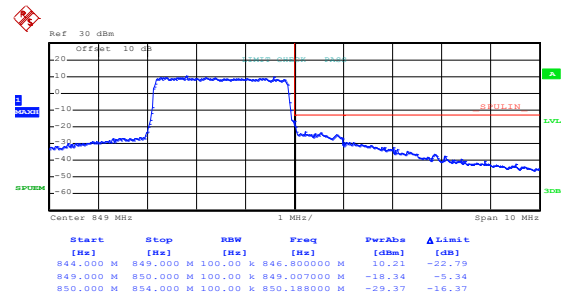
Date: 19.OCT.2017 10:23:56

Highest channel

16QAM & RB Size 15

Date: 19.OCT.2017 10:23:19

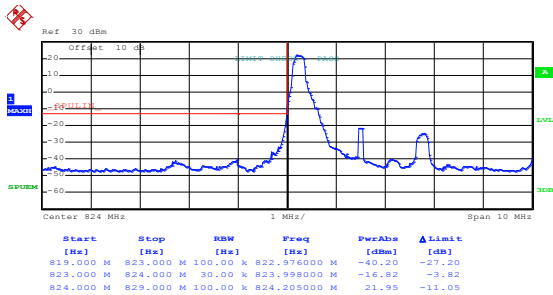
Lowest channel



Date: 19.OCT.2017 10:25:25

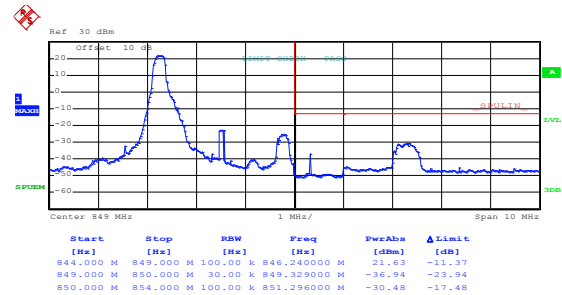
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:21:12

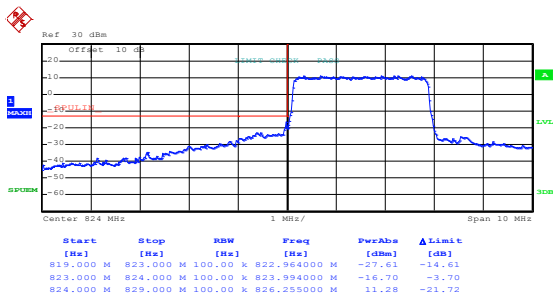
Lowest channel



Date: 19.OCT.2017 10:23:48

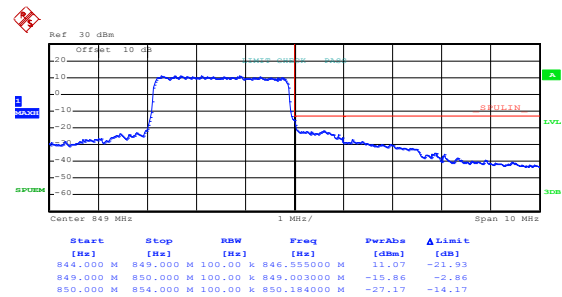
Highest channel

QPSK & RB Size 15



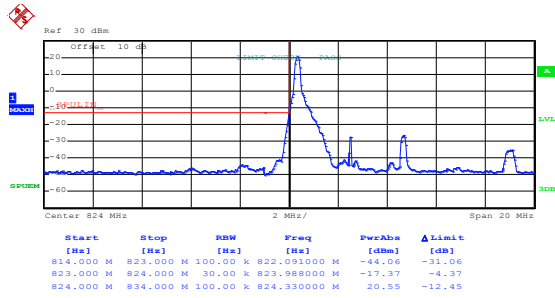
Date: 19.OCT.2017 10:23:13

Lowest channel



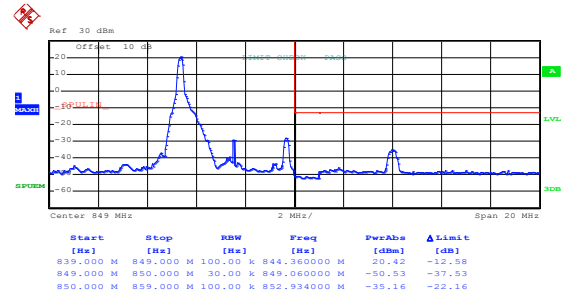
Date: 19.OCT.2017 10:25:19

Highest channel

5 MHz:**16QAM & RB Size 1**

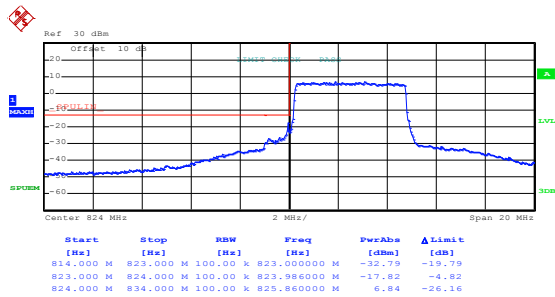
Date: 19.OCT.2017 10:26:58

Lowest channel



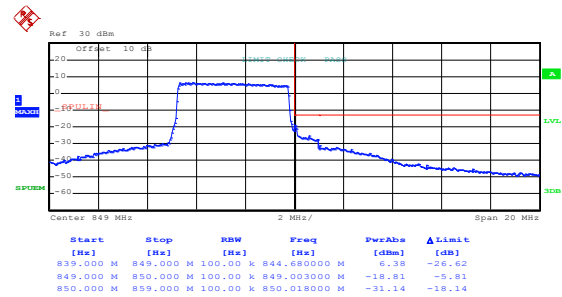
Date: 19.OCT.2017 10:30:16

Highest channel

16QAM & RB Size 25

Date: 19.OCT.2017 10:29:26

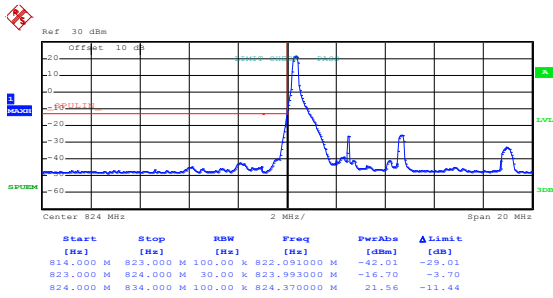
Lowest channel



Date: 19.OCT.2017 10:31:47

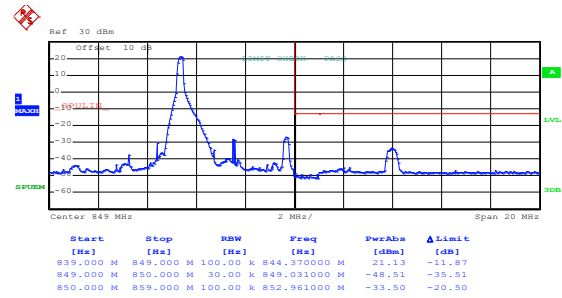
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:26:50

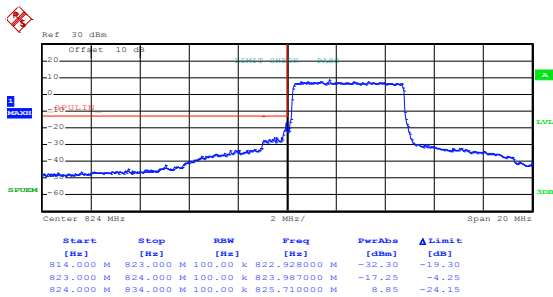
Lowest channel



Date: 19.OCT.2017 10:30:09

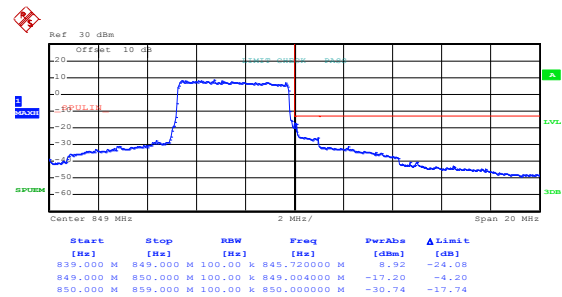
Highest channel

QPSK & RB Size 25



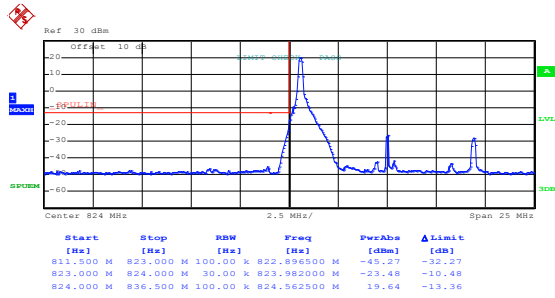
Date: 19.OCT.2017 10:29:17

Lowest channel



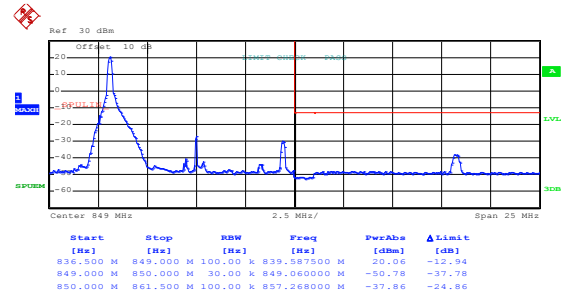
Date: 19.OCT.2017 10:31:40

Highest channel

10 MHz:**16QAM & RB Size 1**

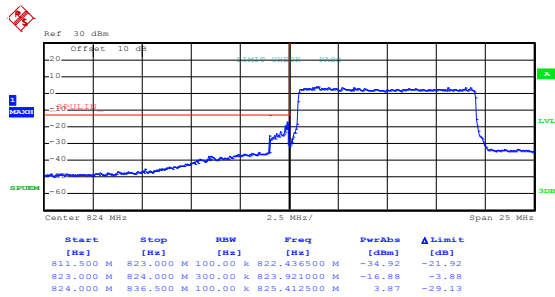
Date: 19.OCT.2017 10:32:59

Lowest channel



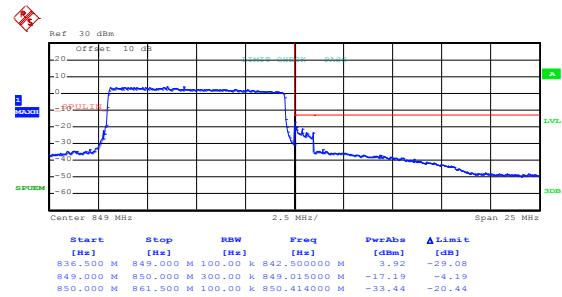
Date: 19.OCT.2017 10:35:14

Highest channel

16QAM & RB Size 50

Date: 19.OCT.2017 10:34:29

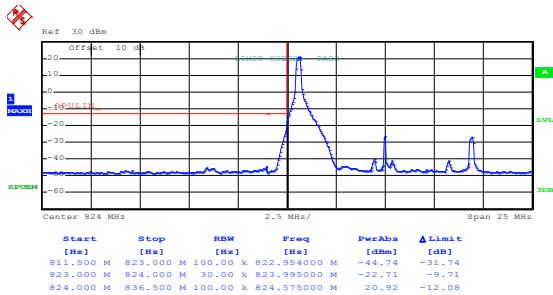
Lowest channel



Date: 19.OCT.2017 10:36:49

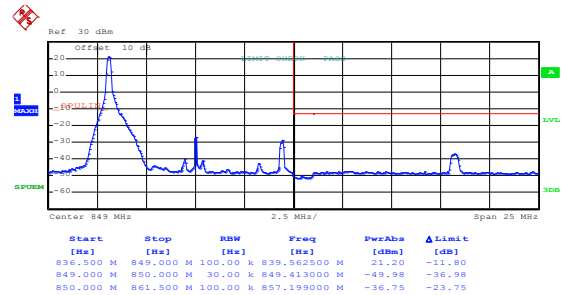
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:32:52

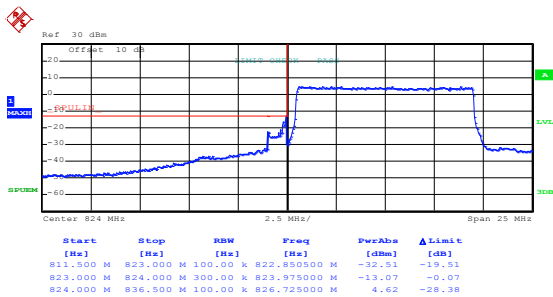
Lowest channel



Date: 19.OCT.2017 10:35:07

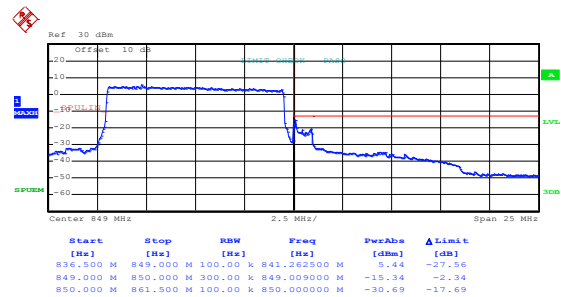
Highest channel

QPSK & RB Size 50



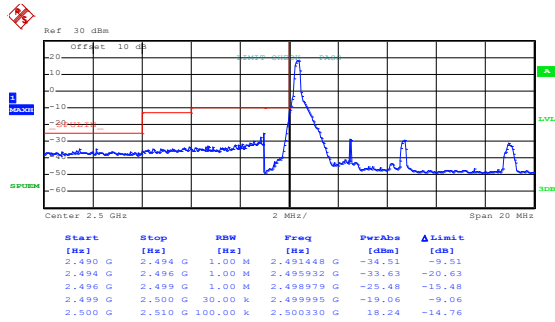
Date: 19.OCT.2017 10:34:22

Lowest channel



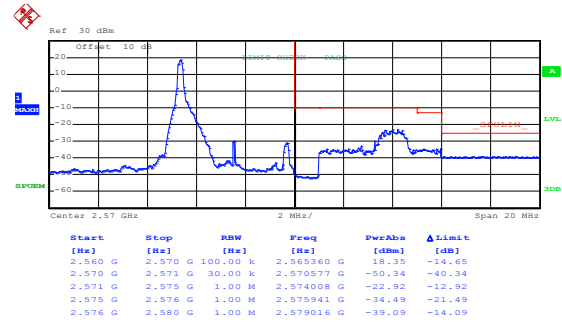
Date: 19.OCT.2017 10:36:43

Highest channel

LTE band 7, 5 MHz:**16QAM & RB Size 1**

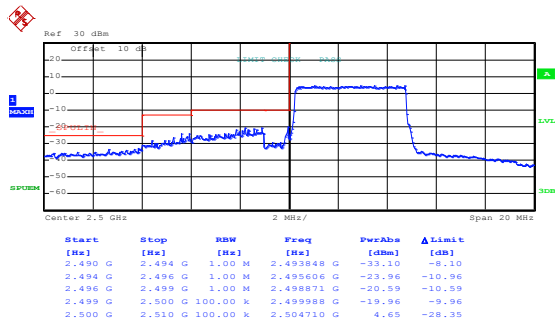
Date: 19.OCT.2017 09:48:38

Lowest channel



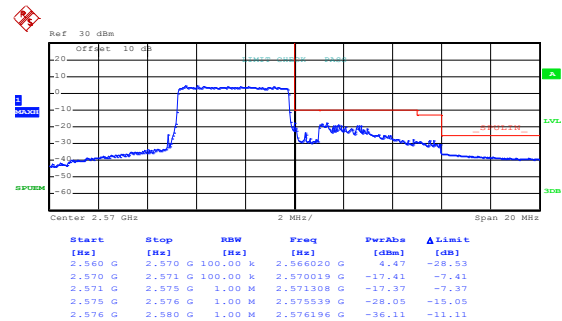
Date: 19.OCT.2017 09:51:03

Highest channel

16QAM & RB Size 25

Date: 19.OCT.2017 09:50:15

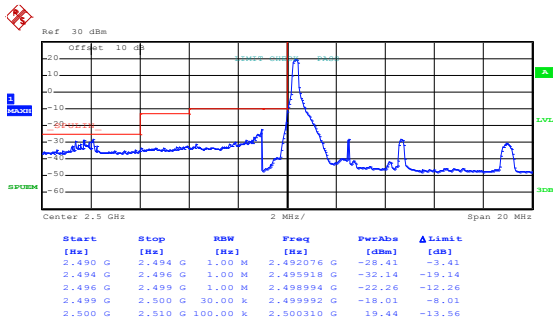
Lowest channel



Date: 19.OCT.2017 09:57:12

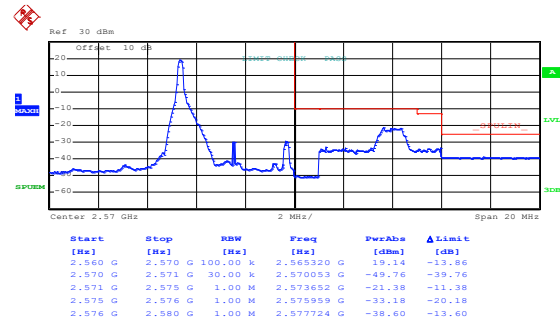
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:48:27

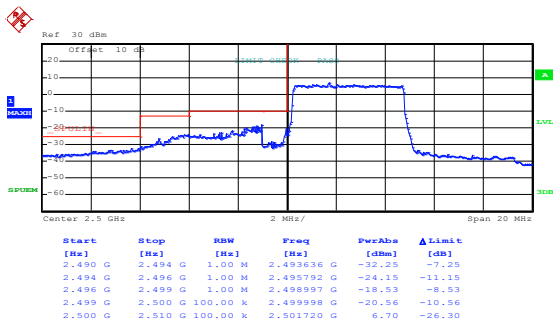
Lowest channel



Date: 19.OCT.2017 09:50:55

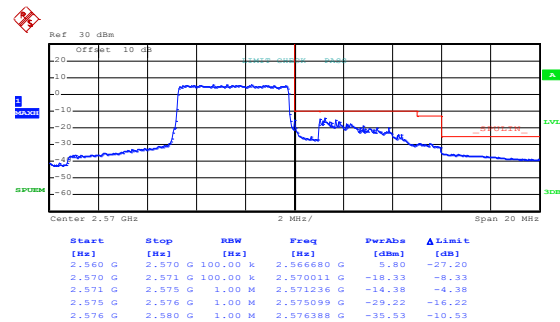
Highest channel

QPSK & RB Size 25



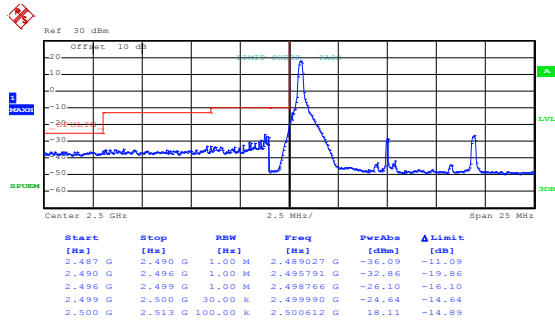
Date: 19.OCT.2017 09:50:08

Lowest channel



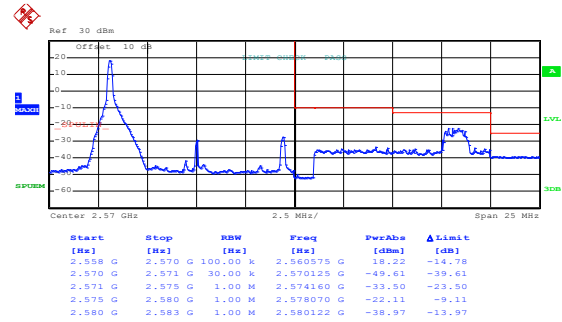
Date: 19.OCT.2017 09:57:06

Highest channel

10 MHz:**16QAM & RB Size 1**

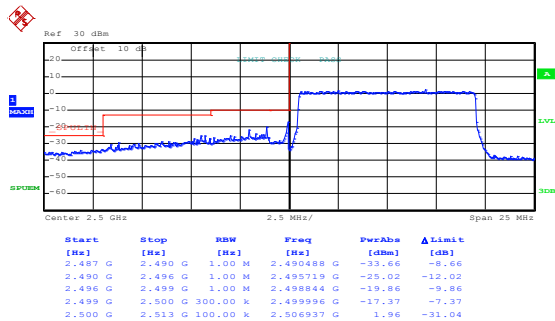
Date: 19.OCT.2017 09:58:42

Lowest channel



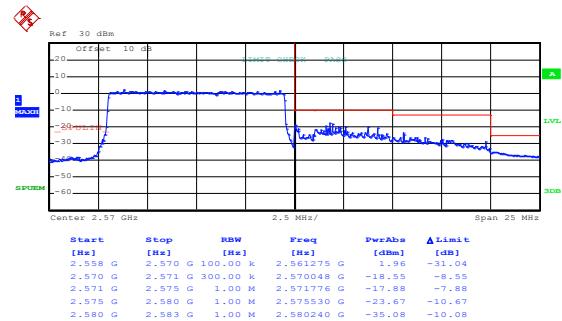
Date: 19.OCT.2017 10:00:56

Highest channel

16QAM & RB Size 50

Date: 19.OCT.2017 10:00:17

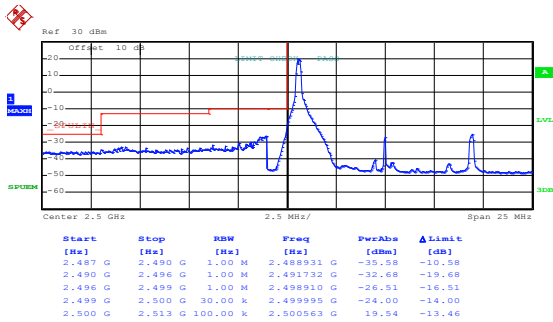
Lowest channel



Date: 19.OCT.2017 10:02:37

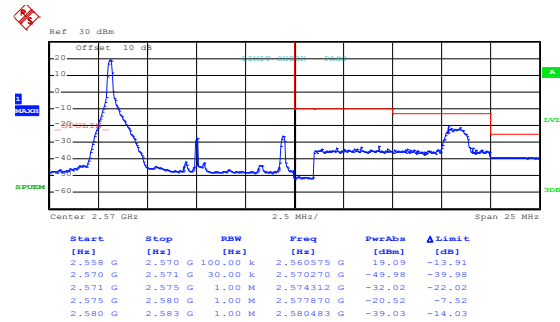
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 09:58:31

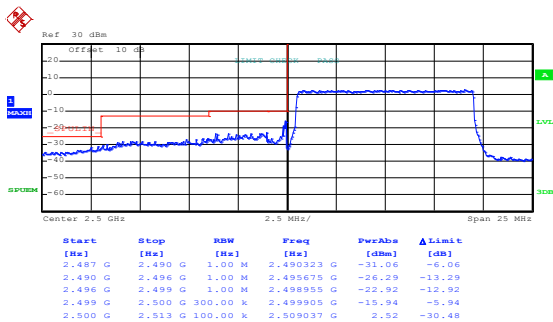
Lowest channel



Date: 19.OCT.2017 10:00:49

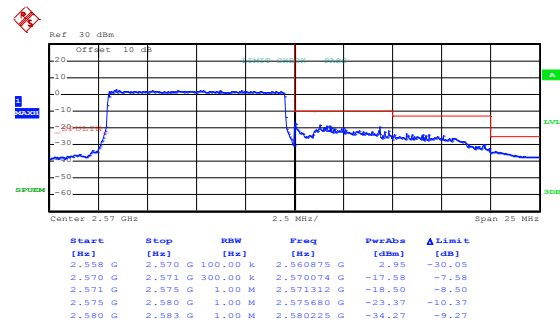
Highest channel

QPSK & RB Size 50



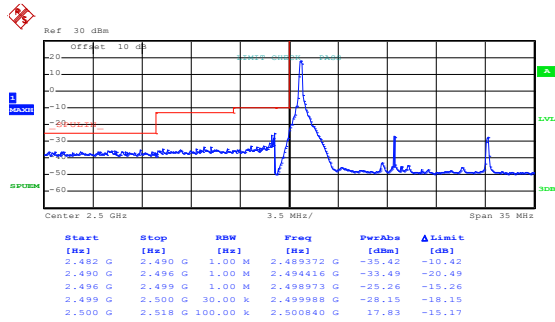
Date: 19.OCT.2017 10:00:11

Lowest channel



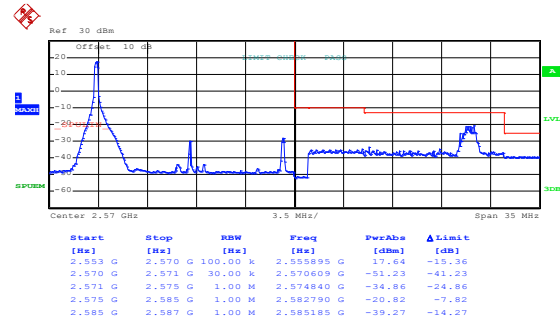
Date: 19.OCT.2017 10:02:28

Highest channel

15 MHz:**16QAM & RB Size 1**

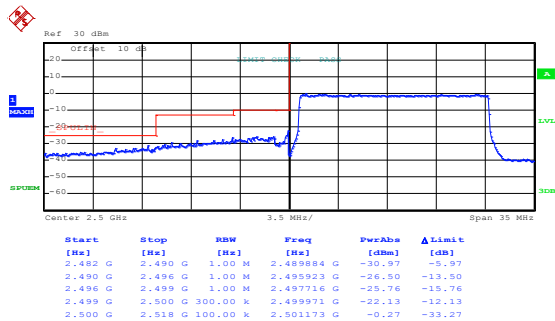
Date: 19.OCT.2017 10:03:49

Lowest channel



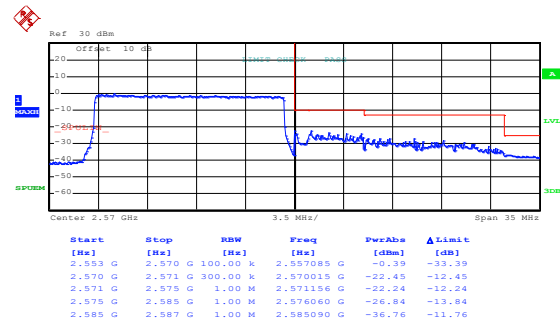
Date: 19.OCT.2017 10:06:19

Highest channel

16QAM & RB Size 75

Date: 19.OCT.2017 10:05:31

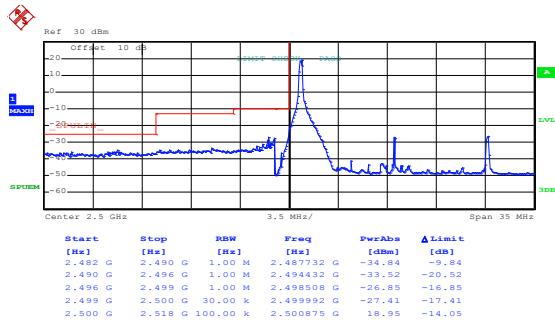
Lowest channel



Date: 19.OCT.2017 10:08:02

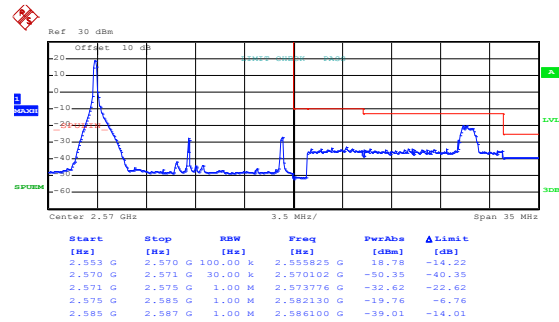
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:03:41

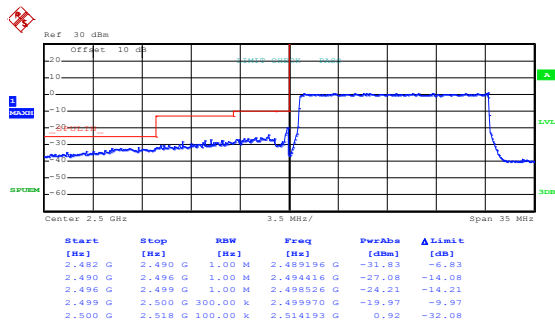
Lowest channel



Date: 19.OCT.2017 10:06:11

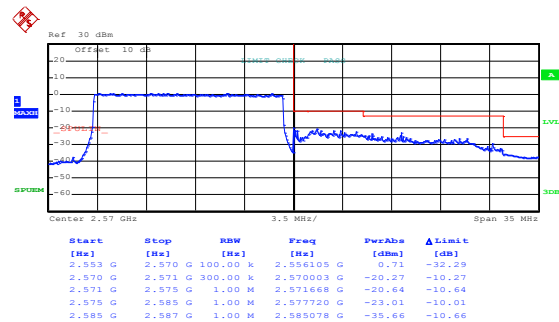
Highest channel

QPSK & RB Size 75



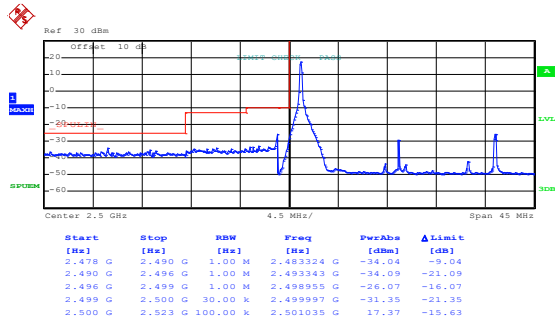
Date: 19.OCT.2017 10:05:21

Lowest channel



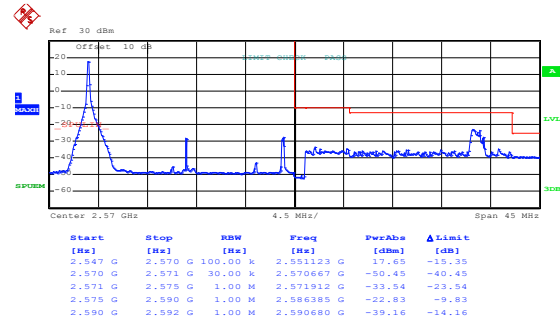
Date: 19.OCT.2017 10:07:55

Highest channel

20 MHz:**16QAM & RB Size 1**

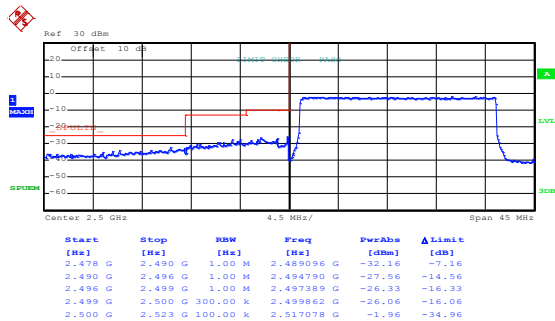
Date: 19.OCT.2017 10:08:58

Lowest channel



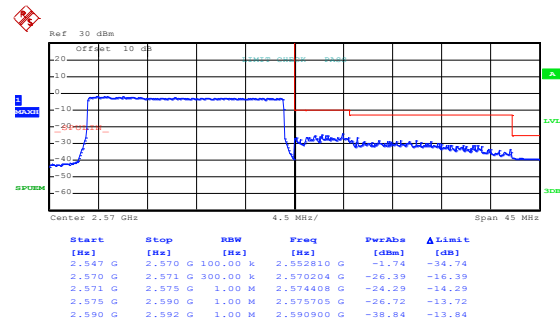
Date: 19.OCT.2017 10:11:08

Highest channel

16QAM & RB Size 100

Date: 19.OCT.2017 10:10:27

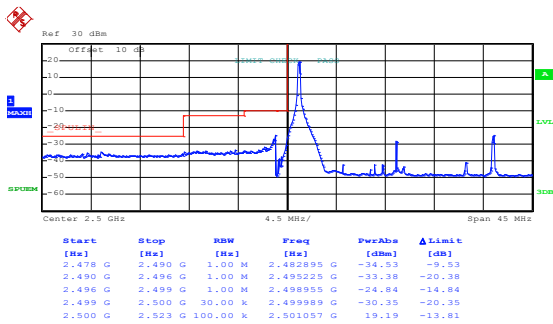
Lowest channel



Date: 19.OCT.2017 10:12:40

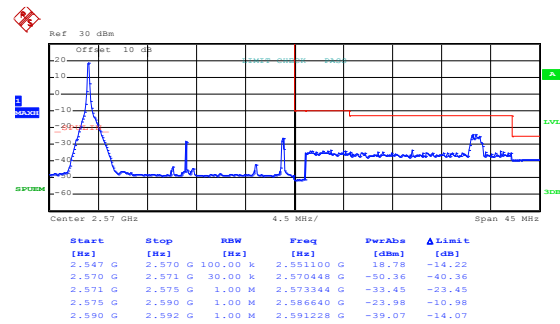
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:08:51

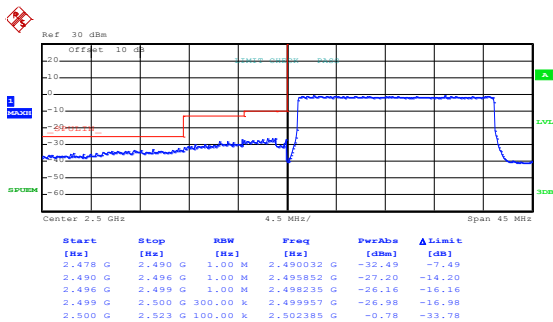
Lowest channel



Date: 19.OCT.2017 10:11:01

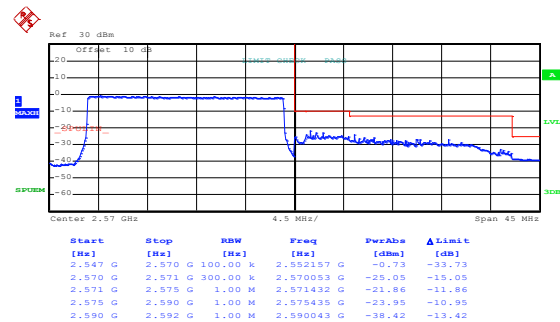
Highest channel

QPSK & RB Size 100



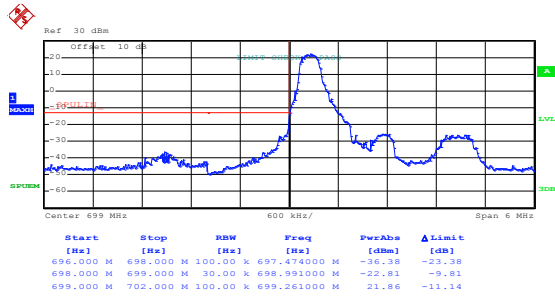
Date: 19.OCT.2017 10:10:20

Lowest channel



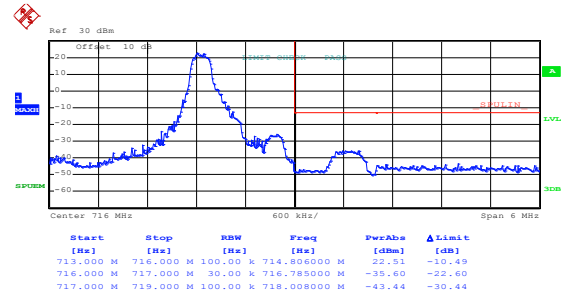
Date: 19.OCT.2017 10:12:33

Highest channel

LTE band 12, 1.4MHz:**16QAM & RB Size 1**

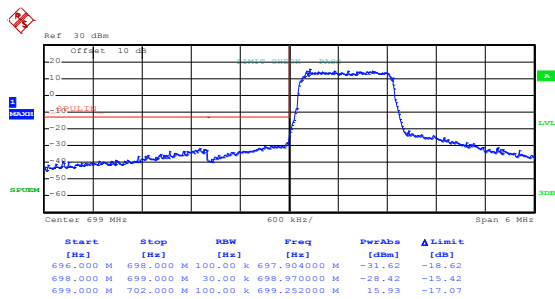
Date: 19.OCT.2017 10:39:01

Lowest channel



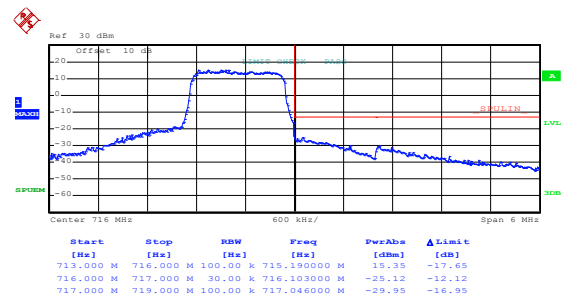
Date: 19.OCT.2017 10:41:01

Highest channel

16QAM & RB Size 6

Date: 19.OCT.2017 10:40:28

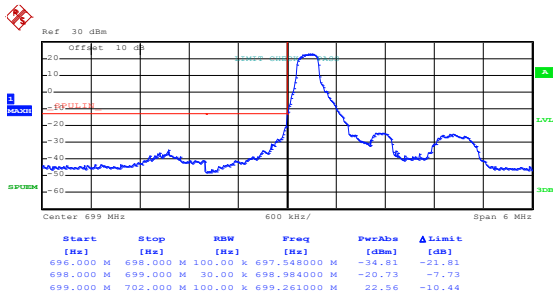
Lowest channel



Date: 19.OCT.2017 10:42:24

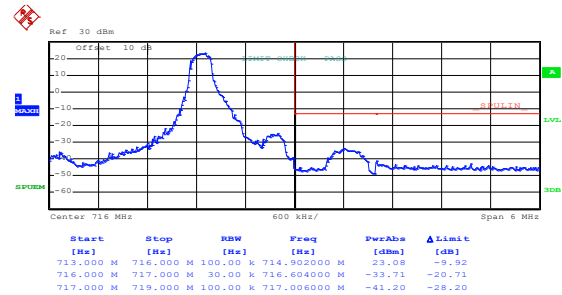
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:38:52

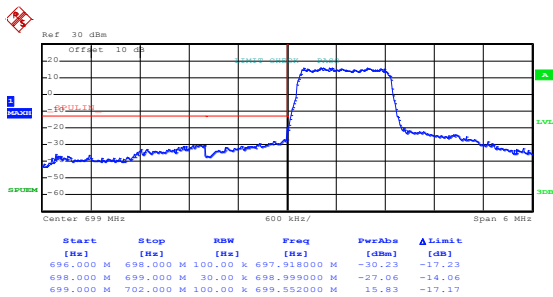
Lowest channel



Date: 19.OCT.2017 10:40:53

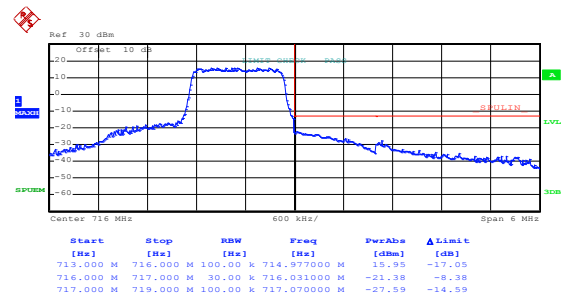
Highest channel

QPSK & RB Size 6



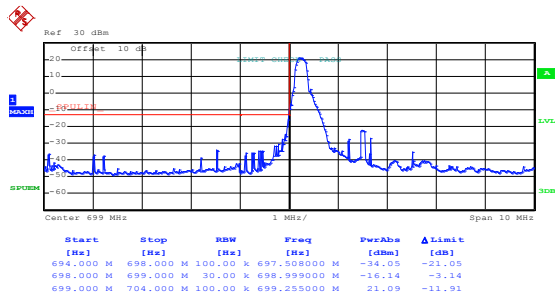
Date: 19.OCT.2017 10:40:19

Lowest channel



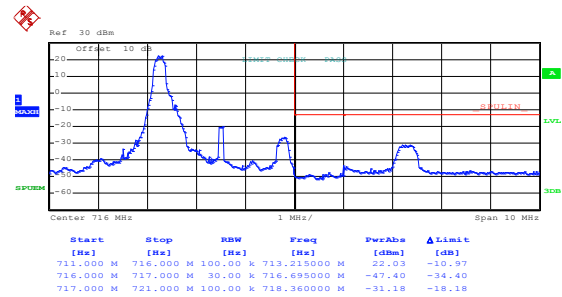
Date: 19.OCT.2017 10:42:13

Highest channel

3 MHz:**16QAM & RB Size 1**

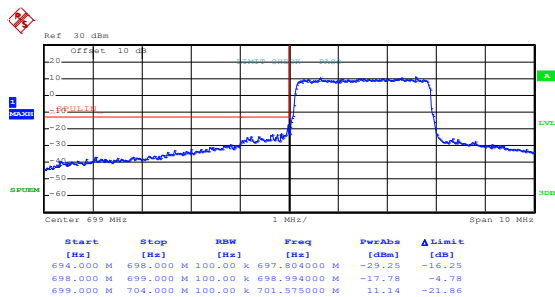
Date: 19.OCT.2017 10:45:32

Lowest channel



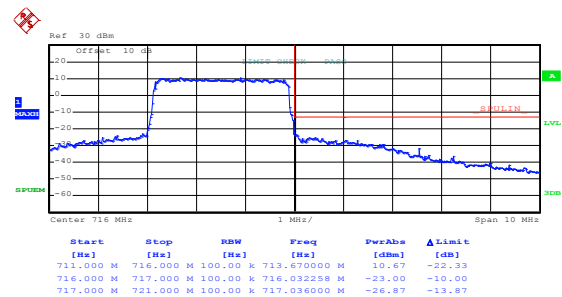
Date: 19.OCT.2017 10:48:04

Highest channel

16QAM & RB Size 15

Date: 19.OCT.2017 10:47:27

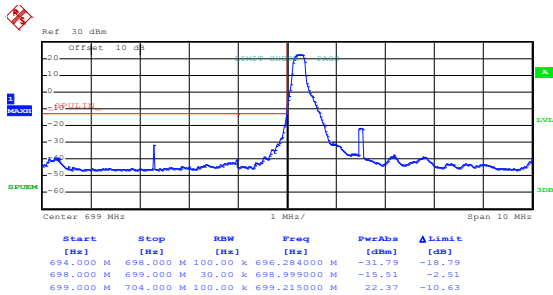
Lowest channel



Date: 19.OCT.2017 10:49:59

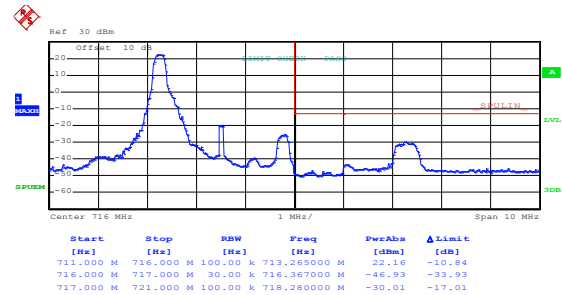
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:45:24

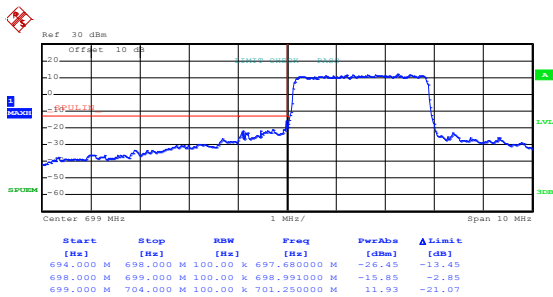
Lowest channel



Date: 19.OCT.2017 10:47:53

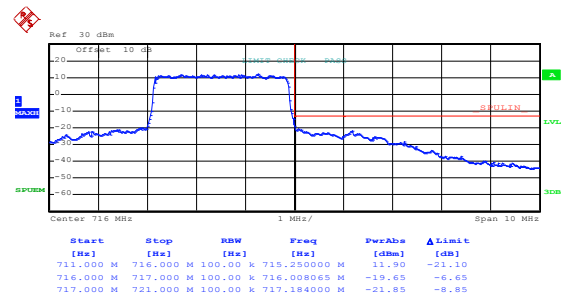
Highest channel

QPSK & RB Size 15



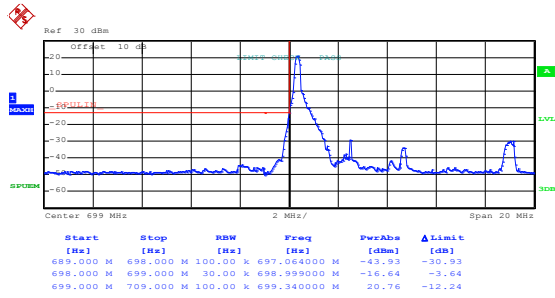
Date: 19.OCT.2017 10:47:19

Lowest channel



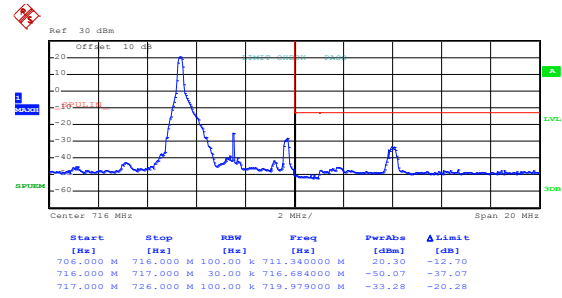
Date: 19.OCT.2017 10:49:52

Highest channel

5 MHz:**16QAM & RB Size 1**

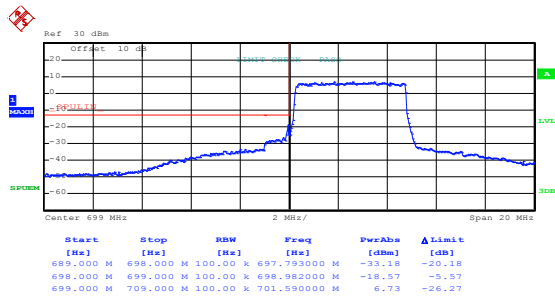
Date: 19.OCT.2017 10:51:14

Lowest channel



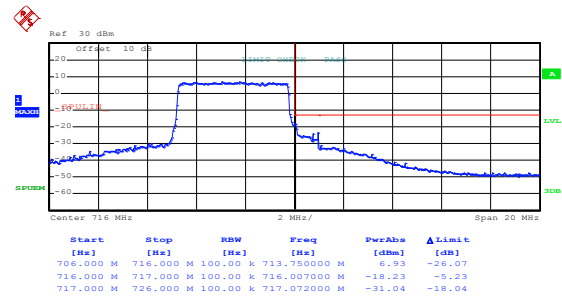
Date: 19.OCT.2017 10:53:45

Highest channel

16QAM & RB Size 25

Date: 19.OCT.2017 10:53:08

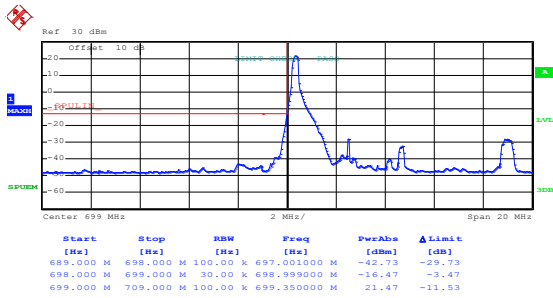
Lowest channel



Date: 19.OCT.2017 10:56:17

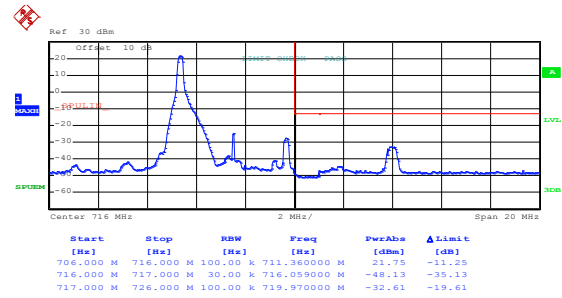
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 10:51:07

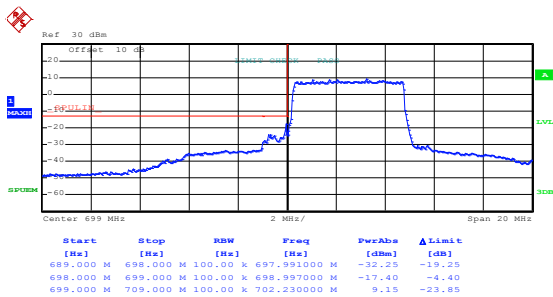
Lowest channel



Date: 19.OCT.2017 10:53:38

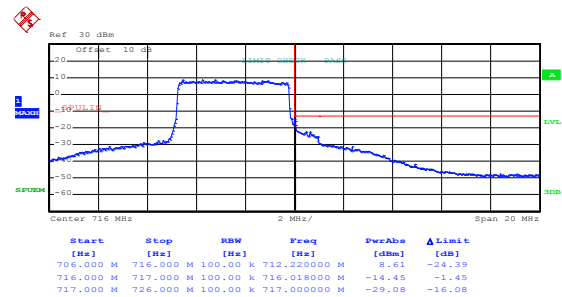
Highest channel

QPSK & RB Size 25



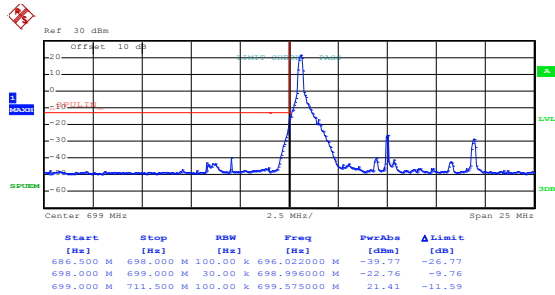
Date: 19.OCT.2017 10:53:22

Lowest channel



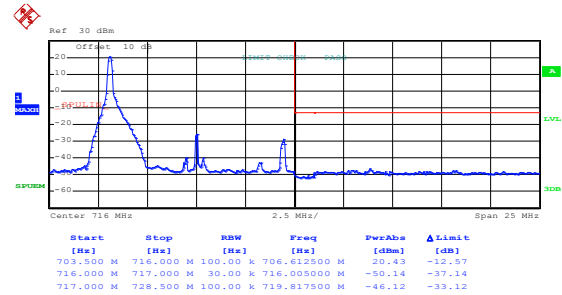
Date: 19.OCT.2017 10:56:10

Highest channel

10 MHz:**16QAM & RB Size 1**

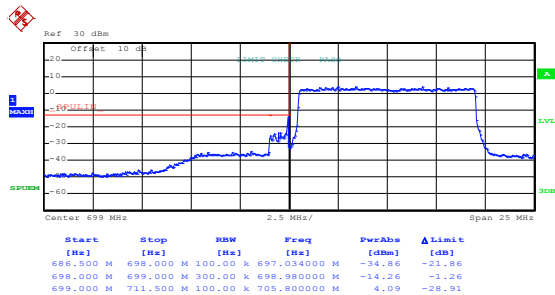
Date: 19.OCT.2017 11:03:59

Lowest channel



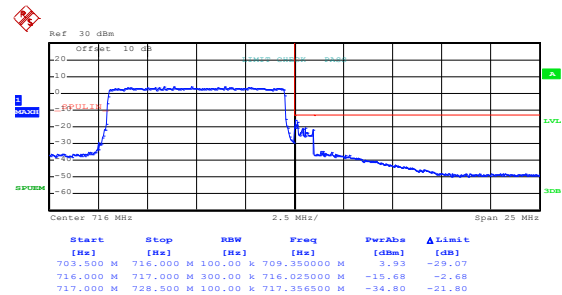
Date: 19.OCT.2017 11:09:43

Highest channel

16QAM & RB Size 50

Date: 19.OCT.2017 11:05:59

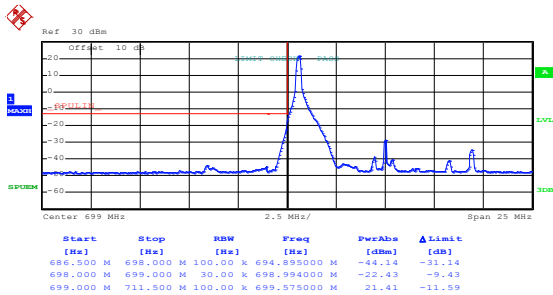
Lowest channel



Date: 19.OCT.2017 11:15:26

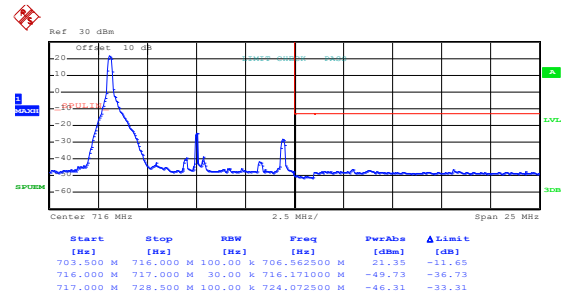
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 11:01:27

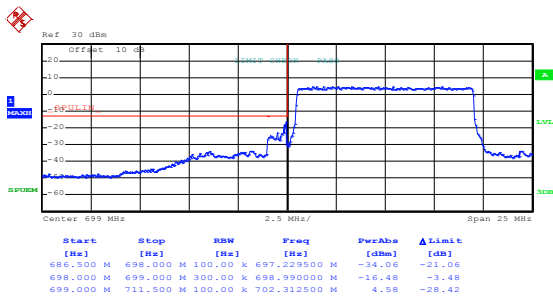
Lowest channel



Date: 19.OCT.2017 11:09:35

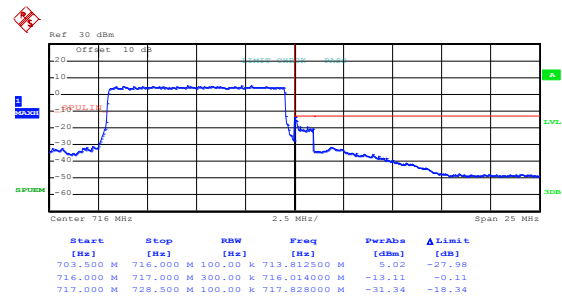
Highest channel

QPSK & RB Size 50



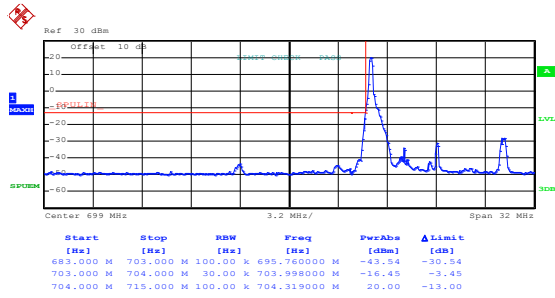
Date: 19.OCT.2017 11:05:51

Lowest channel



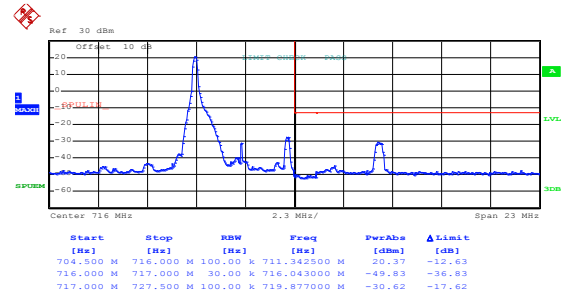
Date: 19.OCT.2017 11:15:18

Highest channel

LTE band 17, 5 MHz:**16QAM & RB Size 1**

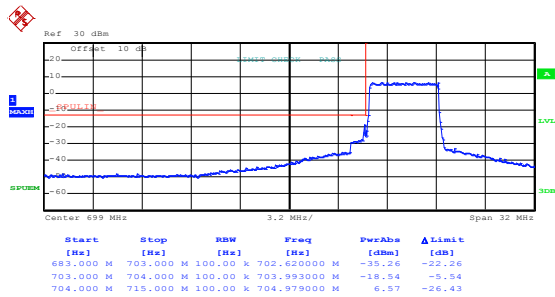
Date: 19.OCT.2017 11:28:22

Lowest channel



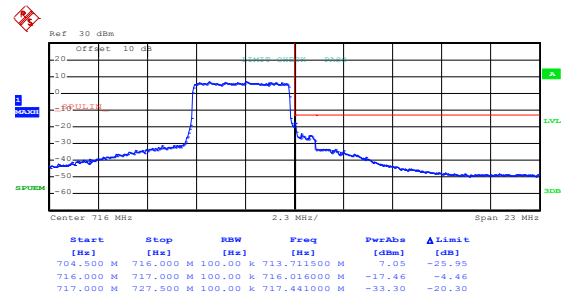
Date: 19.OCT.2017 11:30:55

Highest channel

16QAM & RB Size 25

Date: 19.OCT.2017 11:30:15

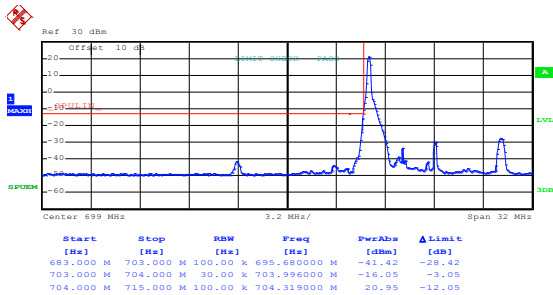
Lowest channel



Date: 19.OCT.2017 11:32:26

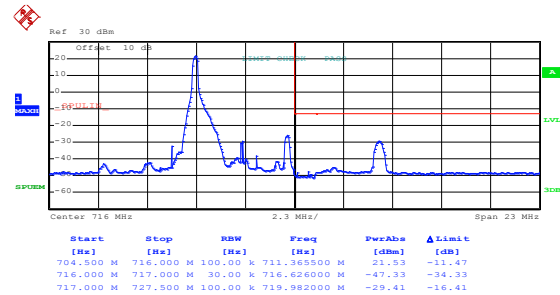
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 11:28:10

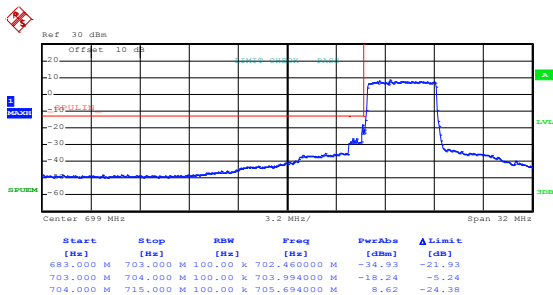
Lowest channel



Date: 19.OCT.2017 11:30:48

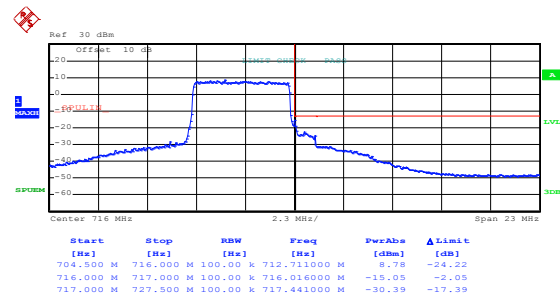
Highest channel

QPSK & RB Size 25



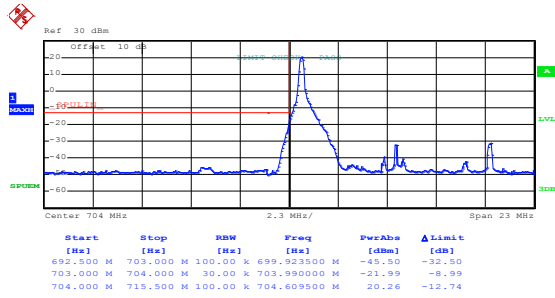
Date: 19.OCT.2017 11:30:08

Lowest channel



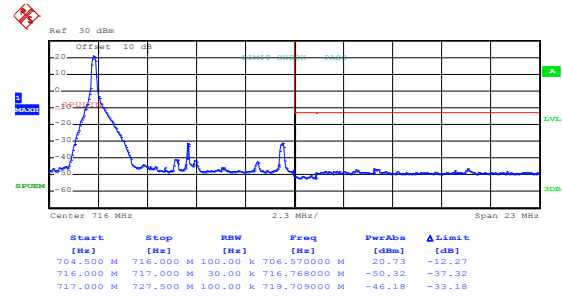
Date: 19.OCT.2017 11:32:21

Highest channel

10 MHz:**16QAM & RB Size 1**

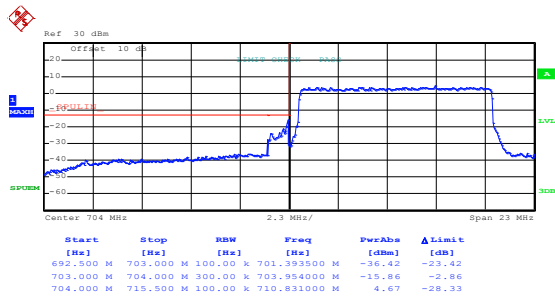
Date: 19.OCT.2017 11:34:05

Lowest channel



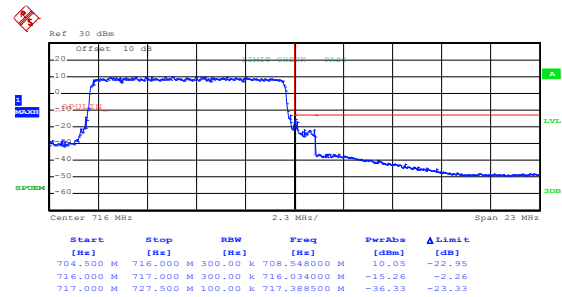
Date: 19.OCT.2017 11:36:20

Highest channel

16QAM & RB Size 50

Date: 19.OCT.2017 11:35:43

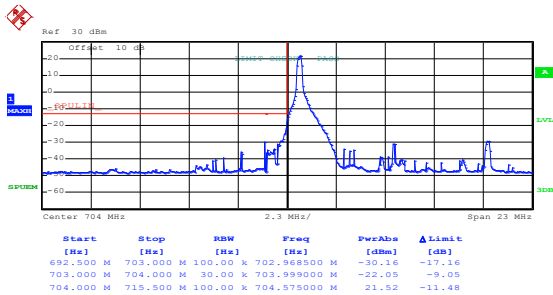
Lowest channel



Date: 19.OCT.2017 11:38:14

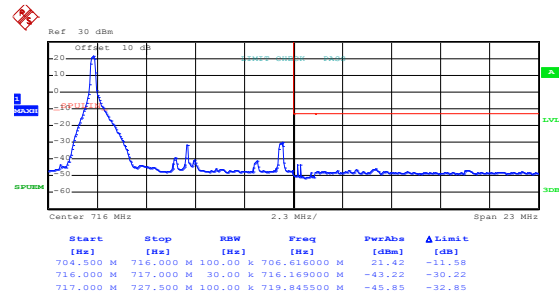
Highest channel

QPSK & RB Size 1



Date: 19.OCT.2017 11:33:58

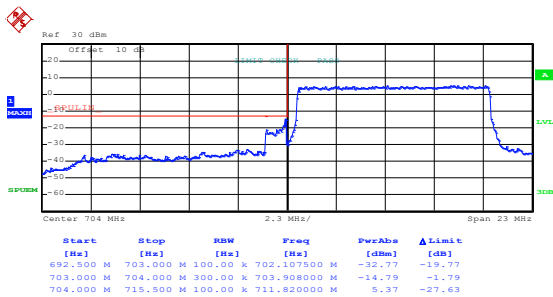
Lowest channel



Date: 19.OCT.2017 11:36:13

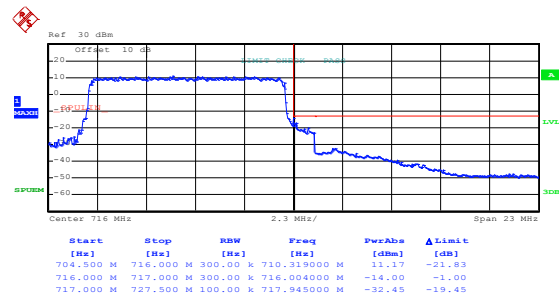
Highest channel

QPSK & RB Size 50



Date: 19.OCT.2017 11:35:37

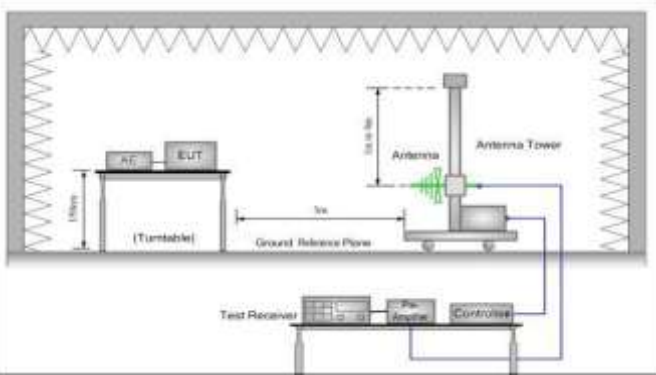
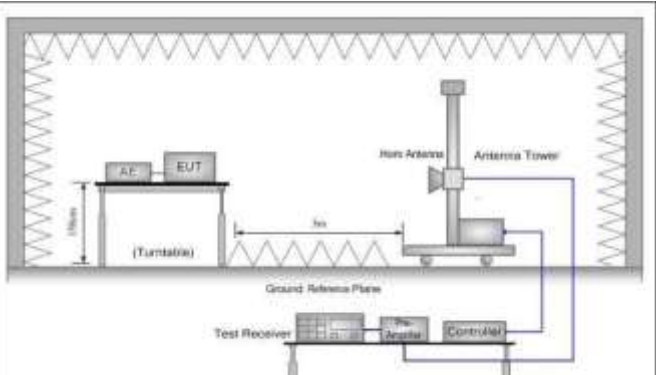
Lowest channel



Date: 19.OCT.2017 11:38:05

Highest channel

6.5 ERP, EIRP Measurement

Test Requirement:	Part 22.913(a), Part 24.232(c), part 27.50(c), part 27.50(d), part 27.50 (h)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2: 2W EIRP, LTE Band 4: 1W EIRP LTE Band 5: 7W EIRP, LTE Band 7: 2W EIRP, LTE Band 12: 3W ERP, LTE Band 17: 3W EIRP
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 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. 3. 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: $ERP = S.G. \text{ output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$ 4. 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: $EIRP = S.G. \text{ output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$ 5. The worse case was relating to the conducted output power.
Test Instruments:	Refer to section 5.8 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	21.92	33.00	Pass
					H	19.23		
1850.70	18607	16QAM	1.4	H	V	22.06		
					H	20.04		
Middle Channel								
1880.00	18900	QPSK	1.4	H	V	22.19	33.00	Pass
					H	20.30		
1880.00	18900	16QAM	1.4	H	V	22.44		
					H	19.68		
Highest Channel								
1909.3	19193	QPSK	1.4	H	V	22.26	33.00	Pass
					H	21.09		
1909.3	19193	16QAM	1.4	H	V	22.47		
					H	19.69		

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	20.55	33.00	Pass
					H	19.01		
1851.50	18615	16QAM	3	H	V	21.62		
					H	19.06		
Middle Channel								
1880.00	18900	QPSK	3	H	V	21.44	33.00	Pass
					H	19.03		
1880.00	18900	16QAM	3	H	V	22.06		
					H	19.39		
Highest Channel								
1908.50	19185	QPSK	3	H	V	21.16	33.00	Pass
					H	20.69		
1908.50	19185	16QAM	3	H	V	22.40		
					H	19.23		

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	20.56	33.00	Pass
					H	19.32		
1852.50	18625	16QAM	5	H	V	21.18		
					H	18.24		
Middle Channel								
1880.00	18900	QPSK	5	H	V	20.39	33.00	Pass
					H	19.55		
1880.00	18900	16QAM	5	H	V	21.62		
					H	20.06		
Highest Channel								
1907.50	19175	QPSK	5	H	V	21.60	33.00	Pass
					H	19.23		
1907.50	19175	16QAM	5	H	V	21.06		
					H	19.65		

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	21.98	33.00	Pass
					H	20.01		
1855.00	18650	16QAM	10	H	V	22.49		
					H	19.40		
Middle Channel								
1880.00	18900	QPSK	10	H	V	21.65	33.00	Pass
					H	20.03		
1880.00	18900	16QAM	10	H	V	22.78		
					H	19.36		
Highest Channel								
1905.00	19150	QPSK	10	H	V	21.23	33.00	Pass
					H	20.46		
1905.00	19150	16QAM	10	H	V	22.25		
					H	19.32		

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	21.52	33.00	Pass
					H	19.65		
1857.50	18675	16QAM	15	H	V	22.04		
					H	19.36		
Middle Channel								
1880.00	18900	QPSK	15	H	V	21.32	33.00	Pass
					H	19.95		
1880.00	18900	16QAM	15	H	V	22.54		
					H	19.32		
Highest Channel								
1902.50	19125	QPSK	15	H	V	21.16	33.00	Pass
					H	20.20		
1902.50	19125	16QAM	15	H	V	22.16		
					H	20.04		

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	21.46	33.00	Pass
					H	19.02		
1860.00	18700	16QAM	20	H	V	22.13		
					H	19.19		
Middle Channel								
1880.00	18900	QPSK	20	H	V	20.95	33.00	Pass
					H	18.56		
1880.00	18900	16QAM	20	H	V	21.36		
					H	19.44		
Highest Channel								
1900.00	19100	QPSK	20	H	V	21.03	33.00	Pass
					H	19.84		
1900.00	19100	16QAM	20	H	V	22.01		
					H	19.44		

LTE Band 4

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	22.23	30.00	Pass
					H	19.55		
1710.70	19957	16QAM	1.4	H	V	21.69		
					H	19.02		
Middle Channel								
1732.50	20175	QPSK	1.4	H	V	23.15	30.00	Pass
					H	20.44		
1732.50	20175	16QAM	1.4	H	V	22.62		
					H	19.26		
Highest Channel								
1754.30	20393	QPSK	1.4	H	V	22.45	30.00	Pass
					H	20.26		
1754.30	20393	16QAM	1.4	H	V	22.10		
					H	19.03		

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	22.47	30.00	Pass
					H	19.36		
1711.50	19965	16QAM	3	H	V	21.24		
					H	19.29		
Middle Channel								
1732.50	20175	QPSK	3	H	V	22.42	30.00	Pass
					H	19.26		
1732.50	20175	16QAM	3	H	V	21.20		
					H	19.58		
Highest Channel								
1753.50	20385	QPSK	3	H	V	22.46	30.00	Pass
					H	19.27		
1753.50	20385	16QAM	3	H	V	21.23		
					H	19.51		

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	21.68	30.00	Pass
					H	19.04		
1712.50	19975	16QAM	5	H	V	21.47		
					H	19.21		
Middle Channel								
1732.50	20175	QPSK	5	H	V	21.46	30.00	Pass
					H	19.05		
1732.50	20175	16QAM	5	H	V	20.85		
					H	19.21		
Highest Channel								
1752.50	20375	QPSK	5	H	V	21.43	30.00	Pass
					H	19.03		
1752.50	20375	16QAM	5	H	V	20.04		
					H	19.29		

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	22.25	30.00	Pass
					H	20.63		
1715.00	20000	16QAM	10	H	V	22.23		
					H	19.52		
Middle Channel								
1732.50	20175	QPSK	10	H	V	22.62	30.00	Pass
					H	19.69		
1732.50	20175	16QAM	10	H	V	22.14		
					H	19.30		
Highest Channel								
1750.00	20350	QPSK	10	H	V	22.26	30.00	Pass
					H	19.34		
1750.00	20350	16QAM	10	H	V	22.18		
					H	19.04		

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	21.54	30.00	Pass
					H	19.62		
1717.50	20025	16QAM	15	H	V	21.46		
					H	19.32		
Middle Channel								
1732.50	20175	QPSK	15	H	V	21.64	30.00	Pass
					H	19.32		
1732.50	20175	16QAM	15	H	V	21.47		
					H	19.22		
Highest Channel								
1747.50	20325	QPSK	15	H	V	21.52	30.00	Pass
					H	19.26		
1747.50	20325	16QAM	15	H	V	21.37		
					H	19.65		

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	21.32	30.00	Pass
					H	19.25		
1720.00	20050	16QAM	20	H	V	21.47		
					H	19.21		
Middle Channel								
1732.50	20175	QPSK	20	H	V	21.54	30.00	Pass
					H	19.32		
1732.50	20175	16QAM	20	H	V	21.15		
					H	19.67		
Highest Channel								
1745.00	20300	QPSK	20	H	V	21.57	30.00	Pass
					H	19.33		
1745.00	20300	16QAM	20	H	V	21.32		
					H	19.27		

LTE band 5 part

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
824.70	20407	QPSK	1.4	H	V	21.25	38.45	Pass
					H	19.36		
824.70	20407	16QAM	1.4	H	V	20.47		
					H	19.02		
Middle Channel								
836.50	20525	QPSK	1.4	H	V	21.54	38.45	Pass
					H	19.25		
836.50	20525	16QAM	1.4	H	V	20.23		
					H	19.14		
Highest Channel								
848.30	20643	QPSK	1.4	H	V	21.25	38.45	Pass
					H	19.36		
848.30	20643	16QAM	1.4	H	V	20.24		
					H	19.15		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
825.50	20415	QPSK	3	H	V	21.14	38.45	Pass
					H	19.23		
825.50	20415	16QAM	3	H	V	20.29		
					H	19.22		
Middle Channel								
836.50	20525	QPSK	3	H	V	21.15	38.45	Pass
					H	19.63		
836.50	20525	16QAM	3	H	V	20.27		
					H	19.20		
Highest Channel								
847.30	20635	QPSK	3	H	V	21.19	38.45	Pass
					H	19.29		
847.30	20635	16QAM	3	H	V	19.34		
					H	18.25		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
826.50	20425	QPSK	5	H	V	20.58	38.45	Pass
					H	19.24		
826.50	20425	16QAM	5	H	V	20.28		
					H	19.24		
Middle Channel								
836.50	20525	QPSK	5	H	V	20.25	38.45	Pass
					H	19.32		
836.50	20525	16QAM	5	H	V	20.66		
					H	19.04		
Highest Channel								
846.50	20625	QPSK	5	H	V	21.10	38.45	Pass
					H	19.62		
846.50	20625	16QAM	5	H	V	20.03		
					H	19.24		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
829.00	20450	QPSK	10	H	V	21.03	38.45	Pass
					H	19.25		
829.00	20450	16QAM	10	H	V	20.04		
					H	19.26		
Middle Channel								
836.50	20525	QPSK	10	H	V	21.24	38.45	Pass
					H	19.30		
836.50	20525	16QAM	10	H	V	20.09		
					H	19.44		
Highest Channel								
844.00	20600	QPSK	10	H	V	21.32	38.45	Pass
					H	20.58		
844.00	20600	16QAM	10	H	V	20.19		
					H	19.47		

LTE band 7

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
2502.50	20775	QPSK	5	H	V	20.12	33.00	Pass
					H	19.02		
2502.50	20775	16QAM	5	H	V	21.26		
					H	19.75		
Middle Channel								
2535.00	21100	QPSK	5	H	V	19.23	33.00	Pass
					H	18.25		
2535.00	21100	16QAM	5	H	V	21.41		
					H	19.02		
Highest Channel								
2567.50	21425	QPSK	5	H	V	19.25	33.00	Pass
					H	18.36		
2567.50	21425	16QAM	5	H	V	21.41		
					H	19.06		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
2505.00	20800	QPSK	10	H	V	21.03	33.00	Pass
					H	19.74		
2505.00	20800	16QAM	10	H	V	21.01		
					H	19.32		
Middle Channel								
2535.00	21100	QPSK	10	H	V	19.20	33.00	Pass
					H	18.36		
2535.00	21100	16QAM	10	H	V	21.05		
					H	19.32		
Highest Channel								
2565.00	21400	QPSK	10	H	V	19.36	33.00	Pass
					H	18.52		
2565.00	21400	16QAM	10	H	V	21.47		
					H	19.26		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
2507.50	20825	QPSK	15	H	V	20.05	33.00	Pass
					H	19.32		
2507.50	20825	16QAM	15	H	V	19.47		
					H	18.95		
Middle Channel								
2535.00	21100	QPSK	15	H	V	20.13	33.00	Pass
					H	19.24		
2535.00	21100	16QAM	15	H	V	19.36		
					H	18.20		
Highest Channel								
2562.50	21375	QPSK	15	H	V	20.43	33.00	Pass
					H	19.02		
2562.50	21375	16QAM	15	H	V	19.32		
					H	18.09		

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel								
2510.00	20850	QPSK	20	H	V	19.58	33.00	Pass
					H	18.25		
2510.00	20850	16QAM	20	H	V	21.32		
					H	19.44		
Middle Channel								
2535.00	21100	QPSK	20	H	V	19.23	33.00	Pass
					H	18.52		
2535.00	21100	16QAM	20	H	V	21.40		
					H	19.32		
Highest Channel								
2565.00	21350	QPSK	20	H	V	21.02	33.00	Pass
					H	19.59		
2565.00	21350	16QAM	20	H	V	20.45		
					H	19.30		

LTE band 12 part

LTE band 12 part

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	21.69	34.77	Pass
					H	19.40		
699.70	23017	16QAM	1.4	H	V	21.05		
					H	19.20		
Middle Channel								
707.50	23095	QPSK	1.4	H	V	21.52	34.77	Pass
					H	19.46		
707.50	23095	16QAM	1.4	H	V	21.07		
					H	19.23		
Highest Channel								
715.30	23173	QPSK	1.4	H	V	21.53	34.77	Pass
					H	19.45		
715.30	23173	16QAM	1.4	H	V	21.02		
					H	19.74		

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	21.42	34.77	Pass
					H	19.32		
700.50	23025	16QAM	3	H	V	21.04		
					H	19.05		
Middle Channel								
707.50	23095	QPSK	3	H	V	21.45	34.77	Pass
					H	19.26		
707.50	23095	16QAM	3	H	V	21.05		
					H	19.37		
Highest Channel								
714.50	23165	QPSK	3	H	V	21.62	34.77	Pass
					H	19.02		
714.50	23165	16QAM	3	H	V	21.47		
					H	19.32		

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	21.54	34.77	Pass
					H	19.36		
701.50	23035	16QAM	5	H	V	21.05		
					H	19.06		
Middle Channel								
707.50	23095	QPSK	5	H	V	21.52	34.77	Pass
					H	19.30		
707.50	23095	16QAM	5	H	V	21.52		
					H	19.09		
Highest Channel								
713.50	23155	QPSK	5	H	V	21.20	34.77	Pass
					H	19.32		
713.50	23155	16QAM	5	H	V	21.02		
					H	19.06		

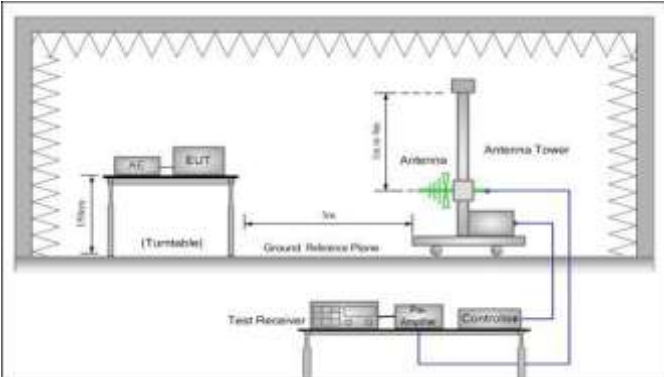
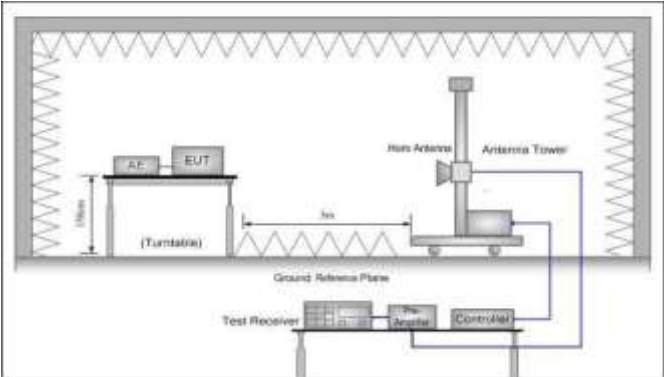
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
704.00	23060	QPSK	10	H	V	21.54	34.77	Pass
					H	19.23		
704.00	23060	16QAM	10	H	V	21.05		
					H	19.39		
Middle Channel								
707.50	23095	QPSK	10	H	V	21.52	34.77	Pass
					H	19.02		
707.50	23095	16QAM	10	H	V	21.03		
					H	19.41		
Highest Channel								
711.00	23130	QPSK	10	H	V	21.36	34.77	Pass
					H	19.02		
711.00	23130	16QAM	10	H	V	21.26		
					H	19.37		

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	21.03	34.77	Pass
					H	19.25		
706.50	23755	16QAM	5	H	V	21.32		
					H	18.69		
Middle Channel								
710.00	23790	QPSK	5	H	V	21.26	34.77	Pass
					H	19.67		
710.00	23790	16QAM	5	H	V	21.25		
					H	18.46		
Highest Channel								
713.50	23825	QPSK	5	H	V	23.25	34.77	Pass
					H	19.58		
713.50	23825	16QAM	5	H	V	21.46		
					H	18.27		

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	22.26	34.77	Pass
					H	19.20		
709.00	23780	16QAM	10	H	V	21.03		
					H	19.32		
Middle Channel								
710.00	23790	QPSK	10	H	V	22.24	34.77	Pass
					H	19.32		
710.00	23790	16QAM	10	H	V	21.07		
					H	19.65		
Highest Channel								
711.00	23800	QPSK	10	H	V	22.02	34.77	Pass
					H	19.03		
711.00	23800	16QAM	10	H	V	21.26		
					H	19.67		

6.6 Field strength of spurious radiation measurement

Test Requirement:	Part 22.917(a), FCC Part 24.238 (a), Part 27.53(g), Part 27.53(m), Part 27.53(h)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2 & 4 & 5 & 12 & 17: < -13dBm, LTE Band 7: < -25dBm
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. $ERP / EIRP = S.G. \text{ output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details.
Test results:	Passed

Measurement Data:

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	-49.01	-13.00	Pass
5552.10	V	-46.55		
7402.00	V	-42.10		
3701.40	Horizontal	-46.96		
5552.10	H	-46.70		
7402.00	H	-41.49		
Middle				
3760.00	Vertical	-51.86	-13.00	Pass
5640.00	V	-44.55		
7520.00	V	-42.83		
3760.00	Horizontal	-53.64		
5640.00	H	-45.20		
7520.00	H	-42.62		
Highest				
3816.60	Vertical	-53.38	-13.00	Pass
5724.90	V	-47.46		
7633.20	V	-43.59		
3816.60	Horizontal	-53.17		
5724.90	H	-47.27		
7633.20	H	-42.42		

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 / 3 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3703.00	Vertical	-52.48	-13.00	Pass
5554.50	V	-41.60		
7406.00	V	-42.25		
3703.00	Horizontal	-46.39		
5554.50	H	-41.58		
7406.00	H	-41.70		
Middle				
3760.00	Vertical	-51.62	-13.00	Pass
5640.00	V	-46.23		
7520.00	V	-42.52		
3760.00	Horizontal	-51.70		
5640.00	H	-45.19		
7520.00	H	-42.52		
Highest				
3817.00	Vertical	-51.24	-13.00	Pass
5725.50	V	-45.37		
7634.00	V	-42.26		
3817.00	Horizontal	-52.08		
5725.50	H	-42.19		
7634.00	H	-41.78		

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	-50.23	-13.00	Pass
5557.50	V	-47.62		
7410.00	V	-41.56		
3705.00	Horizontal	-45.23		
5557.50	H	-45.19		
7410.00	H	-42.25		
Middle				
3760.00	Vertical	-52.23	-13.00	Pass
5640.00	V	-43.61		
7520.00	V	-42.25		
3760.00	Horizontal	-52.47		
5640.00	H	-46.23		
7520.00	H	-41.95		
Highest				
3815.00	Vertical	-52.23	-13.00	Pass
5722.50	V	-48.62		
7630.00	V	-42.56		
3815.00	Horizontal	-52.16		
5722.50	H	-46.52		
7630.00	H	-41.79		

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	-51.26	-13.00	Pass
5565.00	V	-42.52		
7420.00	V	-41.79		
3710.00	Horizontal	-47.65		
5565.00	H	-42.25		
7420.00	H	-42.19		
Middle				
3760.00	Vertical	-52.56	-13.00	Pass
5640.00	V	-45.39		
7520.00	V	-41.27		
3760.00	Horizontal	-52.25		
5640.00	H	-46.19		
7520.00	H	-41.78		
Highest				
3810.00	Vertical	-51.26	-13.00	Pass
5715.00	V	-46.29		
7620.00	V	-41.78		
3810.00	Horizontal	-51.28		
5715.00	H	-42.17		
7620.00	H	-42.16		

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	-51.23	-13.00	Pass
5572.50	V	-47.66		
7430.00	V	-42.52		
3715.00	Horizontal	-44.77		
5572.50	H	-44.26		
7430.00	H	-43.19		
Middle				
3760.00	Vertical	-51.26	-13.00	Pass
5640.00	V	-43.56		
7520.00	V	-42.74		
3760.00	Horizontal	-51.95		
5640.00	H	-45.26		
7520.00	H	-42.57		
Highest				
3805.00	Vertical	-52.16	-13.00	Pass
5707.50	V	-48.62		
7610.00	V	-42.17		
3805.00	Horizontal	-52.49		
5707.50	H	-46.65		
7610.00	H	-42.59		

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 2 / 20 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3720.00	Vertical	-50.88	-13.00	Pass
5580.00	V	-43.95		
7440.00	V	-42.60		
3720.00	Horizontal	-48.46		
5580.00	H	-42.87		
7440.00	H	-42.26		
Middle				
3760.00	Vertical	-52.86	-13.00	Pass
5640.00	V	-46.35		
7520.00	V	-42.93		
3760.00	Horizontal	-52.45		
5640.00	H	-45.01		
7520.00	H	-42.68		
Highest				
3800.00	Vertical	-52.27	-13.00	Pass
5700.00	V	-46.45		
7600.00	V	-41.59		
3800.00	Horizontal	-52.25		
5700.00	H	-43.88		
7600.00	H	-41.91		

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	-52.52	-13.00	Pass
5132.10	V	-47.65		
6842.80	V	-42.94		
3421.40	Horizontal	-50.20		
5132.10	H	-47.61		
6842.80	H	-42.38		
Middle				
3465.00	Vertical	-53.26	-13.00	Pass
5197.50	V	-46.39		
6930.00	V	-42.35		
3465.00	Horizontal	-52.24		
5197.50	H	-48.02		
6930.00	H	-43.16		
Highest				
3508.60	Vertical	-51.89	-13.00	Pass
5262.90	V	-46.50		
7017.20	V	-43.07		
3508.60	Horizontal	-49.66		
5262.90	H	-47.50		
7017.20	H	-42.40		

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	-50.26	-13.00	Pass
5134.50	V	-48.69		
6846.00	V	-45.26		
3423.00	Horizontal	-46.17		
5134.50	H	-45.98		
6846.00	H	-46.22		
Middle				
3465.00	Vertical	-52.15	-13.00	Pass
5197.50	V	-46.23		
6930.00	V	-41.78		
3465.00	Horizontal	-49.95		
5197.50	H	-48.22		
6930.00	H	-41.39		
Highest				
3507.00	Vertical	-52.20	-13.00	Pass
5260.50	V	-46.29		
7014.00	V	-45.39		
3507.00	Horizontal	-46.62		
5260.50	H	-46.59		
7014.00	H	-47.51		

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	-51.26	-13.00	Pass
5137.50	V	-46.32		
6850.00	V	-41.55		
3425.00	Horizontal	-49.23		
5137.50	H	-46.17		
6850.00	H	-41.52		
Middle				
3465.00	Vertical	-52.24	-13.00	Pass
5197.50	V	-46.21		
6930.00	V	-41.57		
3465.00	Horizontal	-51.49		
5197.50	H	-48.52		
6930.00	H	-42.19		
Highest				
3505.00	Vertical	-52.23	-13.00	Pass
5257.50	V	-45.26		
7010.00	V	-42.58		
3505.00	Horizontal	-50.49		
5257.50	H	-46.51		
7010.00	H	-42.17		

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	-49.32	-13.00	Pass
5145.00	V	-48.26		
6860.00	V	-46.18		
3430.00	Horizontal	-45.25		
5145.00	H	-46.71		
6860.00	H	-46.29		
Middle				
3465.00	Vertical	-52.25	-13.00	Pass
5197.50	V	-46.23		
6930.00	V	-42.17		
3465.00	Horizontal	-49.52		
5197.50	H	-48.26		
6930.00	H	-41.78		
Highest				
3500.00	Vertical	-51.26	-13.00	Pass
5250.00	V	-46.25		
7000.00	V	-45.29		
3500.00	Horizontal	-46.78		
5250.00	H	-46.59		
7000.00	H	-46.19		

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	-52.26	-13.00	Pass
5152.50	V	-47.62		
6870.00	V	-42.25		
3435.00	Horizontal	-47.62		
5152.50	H	-45.29		
6870.00	H	-42.18		
Middle				
3465.00	Vertical	-52.23	-13.00	Pass
5197.50	V	-46.89		
6930.00	V	-42.15		
3465.00	Horizontal	-51.47		
5197.50	H	-47.62		
6930.00	H	-41.22		
Highest				
3495.00	Vertical	-52.29	-13.00	Pass
5242.50	V	-45.62		
6990.00	V	-42.17		
3495.00	Horizontal	-49.62		
5242.50	H	-45.17		
6990.00	H	-42.19		

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	-51.26	-13.00	Pass
5160.00	V	-47.62		
6880.00	V	-45.29		
3440.00	Horizontal	-46.32		
5160.00	H	-47.52		
6880.00	H	-47.19		
Middle				
3465.00	Vertical	-51.23	-13.00	Pass
5197.50	V	-46.25		
6930.00	V	-41.57		
3465.00	Horizontal	-50.12		
5197.50	H	-49.23		
6930.00	H	-42.29		
Highest				
3490.00	Vertical	-52.16	-13.00	Pass
5235.00	V	-47.85		
6980.00	V	-46.29		
3490.00	Horizontal	-47.11		
5235.00	H	-45.20		
6980.00	H	-46.03		

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 / 1.4 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1649.40	Vertical	-59.87	-13.00	Pass
2474.10	V	-49.02		
3298.80	V	-54.45		
1649.40	Horizontal	-60.88		
2474.10	H	-50.99		
3298.80	H	-54.22		
Middle				
1673.00	Vertical	-60.29	-13.00	Pass
2509.50	V	-58.36		
3346.00	V	-51.69		
1673.00	Horizontal	-57.66		
2509.50	H	-51.20		
3346.00	H	-51.63		
Highest				
1696.60	Vertical	-58.56	-13.00	Pass
2544.90	V	-46.26		
3393.20	V	-51.48		
1696.60	Horizontal	-58.98		
2544.90	H	-42.56		
3393.20	H	-41.33		

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 / 3 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1651.00	Vertical	-59.22	-13.00	Pass
2476.50	V	-46.32		
3302.00	V	-51.44		
1651.00	Horizontal	-59.95		
2476.50	H	-41.58		
3302.00	H	-42.26		
Middle				
1673.00	Vertical	-60.29	-13.00	Pass
2509.50	V	-47.30		
3346.00	V	-51.26		
1673.00	Horizontal	-60.69		
2509.50	H	-52.20		
3346.00	H	-41.76		
Highest				
1695.00	Vertical	-59.23	-13.00	Pass
2542.50	V	-46.13		
3390.00	V	-52.06		
1695.00	Horizontal	-59.20		
2542.50	H	-51.44		
3390.00	H	-52.06		

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 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1653.00	Vertical	-60.25	-13.00	Pass
2479.50	V	-48.21		
3306.00	V	-53.20		
1653.00	Horizontal	-59.23		
2479.50	H	-51.43		
3306.00	H	-53.19		
Middle				
1673.00	Vertical	-59.23	-13.00	Pass
2509.50	V	-47.23		
3346.00	V	-52.26		
1673.00	Horizontal	-58.90		
2509.50	H	-52.19		
3346.00	H	-52.75		
Highest				
1693.00	Vertical	-58.23	-13.00	Pass
2539.50	V	-47.26		
3386.00	V	-51.62		
1693.00	Horizontal	-58.95		
2539.50	H	-42.56		
3386.00	H	-41.76		

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 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1658.00	Vertical	-60.20	-13.00	Pass
2487.00	V	-46.29		
3316.00	V	-51.32		
1658.00	Horizontal	-60.48		
2487.00	H	-42.17		
3316.00	H	-42.26		
Middle				
1673.00	Vertical	-59.23	-13.00	Pass
2509.50	V	-46.25		
3346.00	V	-52.25		
1673.00	Horizontal	-59.24		
2509.50	H	-51.27		
3346.00	H	-51.46		
Highest				
1688.00	Vertical	-60.23	-13.00	Pass
2532.00	V	-47.19		
3376.00	V	-52.05		
1688.00	Horizontal	-60.25		
2532.00	H	-52.23		
3376.00	H	-53.90		

Note:

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

LTE Band 7 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5005.00	Vertical	-48.80	-25.00	Pass
7507.50	V	-43.38		
10010.00	V	-40.94		
5005.00	Horizontal	-49.49		
7507.50	H	-42.85		
10010.00	H	-41.40		
Middle				
5070.00	Vertical	-48.88	-25.00	Pass
7605.00	V	-43.31		
10140.00	V	-40.21		
5070.00	Horizontal	-48.05		
7605.00	H	-42.13		
10140.00	H	-40.02		
Highest				
5135.00	Vertical	-49.10	-25.00	Pass
7702.50	V	-41.34		
10270.00	V	-40.75		
5135.00	Horizontal	-48.58		
7702.50	H	-42.86		
10270.00	H	-40.81		

Note:

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

LTE Band 7 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5010.00	Vertical	-47.20	-25.00	Pass
7515.00	V	-42.10		
10020.00	V	-45.39		
5010.00	Horizontal	-41.25		
7515.00	H	-39.20		
10020.00	H	-40.11		
Middle				
5070.00	Vertical	-49.23	-25.00	Pass
7605.00	V	-41.66		
10140.00	V	-42.58		
5070.00	Horizontal	-46.31		
7605.00	H	-42.77		
10140.00	H	-39.26		
Highest				
5130.00	Vertical	-45.29	-25.00	Pass
7695.00	V	-42.26		
10260.00	V	-46.32		
5130.00	Horizontal	-42.10		
7695.00	H	-39.26		
10260.00	H	-40.99		

Note:

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

LTE Band 7 / 15 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5015.00	Vertical	-47.32	-25.00	Pass
7522.50	V	-42.56		
10030.00	V	-41.26		
5015.00	Horizontal	-49.62		
7522.50	H	-42.22		
10030.00	H	-41.30		
Middle				
5070.00	Vertical	-47.69	-25.00	Pass
7605.00	V	-42.56		
10140.00	V	-40.19		
5070.00	Horizontal	-47.62		
7605.00	H	-42.25		
10140.00	H	-39.69		
Highest				
5125.00	Vertical	-49.26	-25.00	Pass
7687.50	V	-42.58		
10250.00	V	-40.19		
5125.00	Horizontal	-47.95		
7687.50	H	-41.66		
10250.00	H	-40.25		

Note:

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

LTE Band 7 / 20 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5020.00	Vertical	-46.29	-25.00	Pass
7530.00	V	-42.26		
10040.00	V	-46.87		
5020.00	Horizontal	-42.25		
7530.00	H	-40.19		
10040.00	H	-39.30		
Middle				
5070.00	Vertical	-50.23	-25.00	Pass
7605.00	V	-41.63		
10140.00	V	-42.86		
5070.00	Horizontal	-47.21		
7605.00	H	-41.79		
10140.00	H	-40.98		
Highest				
5120.00	Vertical	-46.03	-25.00	Pass
7680.00	V	-41.57		
10240.00	V	-45.95		
5120.00	Horizontal	-41.67		
7680.00	H	-39.62		
10240.00	H	-40.19		

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	-61.75	-13.00	Pass
2099.10	V	-56.81		
2798.80	V	-56.87		
1399.40	Horizontal	-49.21		
2099.10	H	-57.19		
2798.80	H	-56.55		
Middle				
1415.00	Vertical	-60.81	-13.00	Pass
2122.50	V	-55.17		
2830.00	V	-54.80		
1415.00	Horizontal	-61.06		
2122.50	H	-54.49		
2830.00	H	-56.14		
Highest				
1430.60	Vertical	-54.89	-13.00	Pass
2145.90	V	-59.63		
2861.20	V	-55.85		
1430.60	Horizontal	-56.68		
2145.90	H	-59.16		
2861.20	H	-55.97		

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	-61.23	-13.00	Pass
2101.50	V	-54.25		
2802.00	V	-52.26		
1401.00	Horizontal	-51.34		
2101.50	H	-52.97		
2802.00	H	-53.98		
Middle				
1415.00	Vertical	-52.19	-13.00	Pass
2122.50	V	-59.32		
2830.00	V	-52.26		
1415.00	Horizontal	-54.69		
2122.50	H	-58.23		
2830.00	H	-54.17		
Highest				
1429.00	Vertical	-51.33	-13.00	Pass
2143.50	V	-59.62		
2858.00	V	-52.24		
1429.00	Horizontal	-54.16		
2143.50	H	-57.64		
2858.00	H	-52.19		

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	-62.25	-13.00	Pass
2104.50	V	-57.34		
2806.00	V	-56.19		
1403.00	Horizontal	-49.55		
2104.50	H	-56.23		
2806.00	H	-54.77		
Middle				
1415.00	Vertical	-59.20	-13.00	Pass
2122.50	V	-54.95		
2830.00	V	-53.62		
1415.00	Horizontal	-62.27		
2122.50	H	-52.25		
2830.00	H	-54.17		
Highest				
1427.00	Vertical	-53.26	-13.00	Pass
2410.50	V	-60.17		
2854.00	V	-54.21		
1427.00	Horizontal	-55.29		
2410.50	H	-58.66		
2854.00	H	-55.65		

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 12 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1408.00	Vertical	-60.25	-13.00	Pass
2112.00	V	-54.23		
2816.00	V	-53.69		
1408.00	Horizontal	-62.25		
2112.00	H	-51.46		
2816.00	H	-54.79		
Middle				
1415.00	Vertical	-52.23	-13.00	Pass
2122.50	V	-60.40		
2830.00	V	-54.90		
1415.00	Horizontal	-55.26		
2122.50	H	-58.21		
2830.00	H	-54.31		
Highest				
1422.00	Vertical	-52.26	-13.00	Pass
2133.00	V	-59.34		
2844.00	V	-53.19		
1422.00	Horizontal	-54.96		
2133.00	H	-58.25		
2844.00	H	-53.49		

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	-57.17	-13.00	Pass
2119.50	V	-56.15		
2826.00	V	-56.62		
1413.00	Horizontal	-59.79		
2119.50	H	-54.92		
2826.00	H	-56.29		
Middle				
1420.00	Vertical	-62.18	-13.00	Pass
2130.00	V	-56.88		
2840.00	V	-56.35		
1420.00	Horizontal	-61.79		
2130.00	H	-57.65		
2840.00	H	-56.13		
Highest				
1427.00	Vertical	-61.53	-13.00	Pass
2140.50	V	-54.48		
2854.00	V	-55.30		
1427.00	Horizontal	-57.94		
2140.50	H	-56.78		
2854.00	H	-56.13		

Note:

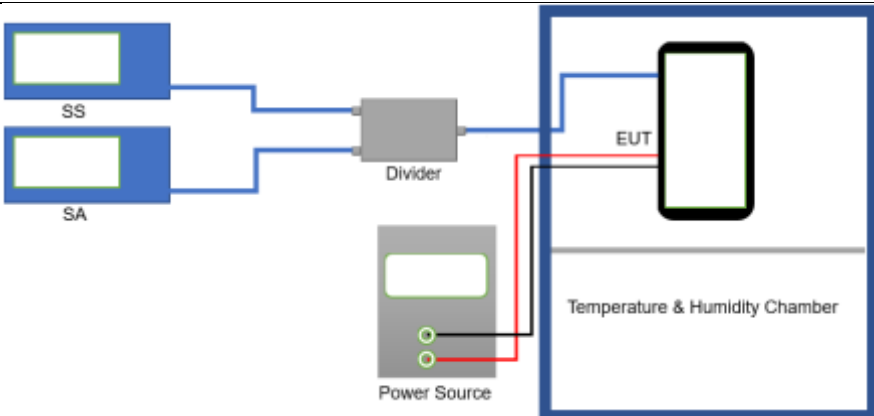
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.

LTE Band 17 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1418.00	Vertical	-56.26	-13.00	Pass
2127.00	V	-55.29		
2836.00	V	-56.95		
1418.00	Horizontal	-60.23		
2127.00	H	-54.17		
2836.00	H	-56.22		
Middle				
1420.00	Vertical	-62.21	-13.00	Pass
2130.00	V	-56.38		
2840.00	V	-56.24		
1420.00	Horizontal	-62.17		
2130.00	H	-56.98		
2840.00	H	-56.42		
Highest				
1422.00	Vertical	-60.29	-13.00	Pass
2133.00	V	-53.62		
2844.00	V	-54.17		
1422.00	Horizontal	-56.68		
2133.00	H	-55.23		
2844.00	H	-54.79		

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 22.355, Part 24.235, Part 27.54, Part 2.1055(a)(1)(b)
Test Method:	ANSI/TIA-603-D 2010
Limit:	$\pm 2.5\text{ppm}$
Test setup:	 The diagram illustrates the test setup. On the left, there are two blue boxes labeled 'SS' (Signal Source) and 'SA' (Spectrum Analyzer). They are connected to a central grey box labeled 'Divider'. The 'Divider' is connected to a black box labeled 'EUT' (Equipment Under Test) which is located inside a larger blue box labeled 'Temperature & Humidity Chamber'. A 'Power Source' (grey box) is also connected to the 'EUT' via red and black wires.
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 5.8 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					
3.80	-30	198	0.105319	±2.5	Pass
	-20	171	0.090957		
	-10	180	0.095745		
	0	132	0.070213		
	10	165	0.087766		
	20	145	0.077128		
	30	102	0.054255		
	40	114	0.060638		
	50	150	0.079787		
16QAM					
3.80	-30	193	0.102660	±2.5	Pass
	-20	126	0.067021		
	-10	133	0.070745		
	0	141	0.075000		
	10	171	0.090957		
	20	180	0.095745		
	30	166	0.088298		
	40	158	0.084043		
	50	177	0.094149		

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					
3.80	-30	199	0.114863	±2.5	Pass
	-20	123	0.070996		
	-10	165	0.095238		
	0	180	0.103896		
	10	174	0.100433		
	20	141	0.081385		
	30	102	0.058874		
	40	133	0.076768		
	50	108	0.062338		
16QAM					
3.80	-30	197	0.113709	±2.5	Pass
	-20	123	0.070996		
	-10	132	0.076190		
	0	151	0.087157		
	10	161	0.092929		
	20	148	0.085426		
	30	104	0.060029		
	40	179	0.103319		
	50	109	0.062915		

Note: Only the worst case shown in the report.

Reference Frequency: LTE Band 5 (10MHz) Middle channel=20525 channel=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	193	0.230723	±2.5	Pass
	-20	132	0.157800		
	-10	160	0.191273		
	0	141	0.168559		
	10	180	0.215182		
	20	129	0.154214		
	30	177	0.211596		
	40	100	0.119546		
	50	126	0.150628		
16QAM					
3.80	-30	190	0.227137	±2.5	Pass
	-20	123	0.147041		
	-10	133	0.158996		
	0	148	0.176928		
	10	170	0.203228		
	20	126	0.150628		
	30	158	0.188882		
	40	113	0.135087		
	50	100	0.119546		

Note: Only the worst case shown in the report.

Reference Frequency: LTE Band 7 (10MHz) Middle channel=21100Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	197	0.077712	±2.5	Pass
	-20	151	0.059566		
	-10	168	0.066272		
	0	133	0.052465		
	10	148	0.058383		
	20	101	0.039842		
	30	126	0.049704		
	40	138	0.054438		
	50	100	0.039448		
16QAM					
3.80	-30	193	0.076134	±2.5	Pass
	-20	165	0.065089		
	-10	123	0.048521		
	0	134	0.052860		
	10	107	0.042209		
	20	180	0.071006		
	30	177	0.069822		
	40	144	0.056805		
	50	109	0.042998		

Note: Only the worst case shown in the report.

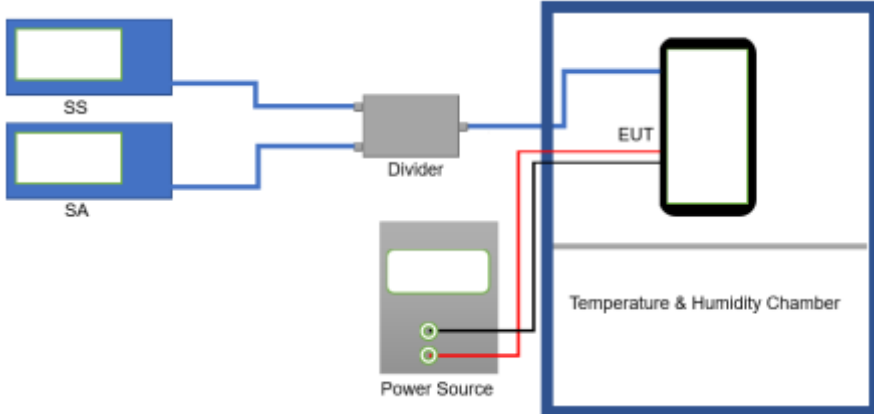
Reference Frequency: LTE Band 12 (10MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	195	0.275618	±2.5	Pass
	-20	122	0.172438		
	-10	188	0.265724		
	0	174	0.245936		
	10	165	0.233216		
	20	144	0.203534		
	30	102	0.144170		
	40	136	0.192226		
	50	151	0.213428		
16QAM					
3.80	-30	190	0.268551	±2.5	Pass
	-20	121	0.171025		
	-10	146	0.206360		
	0	171	0.241696		
	10	180	0.254417		
	20	132	0.186572		
	30	102	0.144170		
	40	115	0.162544		
	50	162	0.228975		

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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	193	0.271831	±2.5	Pass
	-20	121	0.170423		
	-10	165	0.232394		
	0	141	0.198592		
	10	108	0.152113		
	20	177	0.249296		
	30	180	0.253521		
	40	168	0.236620		
	50	101	0.142254		
16QAM					
3.80	-30	191	0.269014	±2.5	Pass
	-20	121	0.170423		
	-10	148	0.208451		
	0	177	0.249296		
	10	126	0.177465		
	20	133	0.187324		
	30	158	0.222535		
	40	100	0.140845		
	50	164	0.230986		

Note: Only the worst case shown in the report.

6.8 Frequency stability V.S. Voltage measurement

Test Requirement:	Part 22.355, Part 24.235, Part 27.54, Part 2.1055(d)(2)
Test Method:	ANSI/TIA-603-D 2010
Limit:	$\pm 2.5\text{ppm}$
Test setup:	
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 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

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	4.35	95	0.050532	±2.5	Pass
	3.80	80	0.042553		
	3.50	74	0.039362		
16QAM					
25	4.35	84	0.044681	±2.5	Pass
	3.80	96	0.051064		
	3.50	60	0.031915		

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	4.35	80	0.046176	±2.5	Pass
	3.80	95	0.054834		
	3.50	96	0.055411		
16QAM					
25	4.35	84	0.048485	±2.5	Pass
	3.80	90	0.051948		
	3.50	65	0.037518		

Note: Only the worst case shown in the report.

Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 channel=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	99	0.118350	±2.5	Pass
	3.80	80	0.095637		
	3.50	74	0.088464		
16QAM					
25	4.35	58	0.069337	±2.5	Pass
	3.80	97	0.115959		
	3.50	77	0.092050		

Note: Only the worst case shown in the report.

Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	80	0.031558	±2.5	Pass
	3.80	75	0.029586		
	3.50	96	0.037870		
16QAM					
25	4.35	65	0.025641	±2.5	Pass
	3.80	90	0.035503		
	3.50	74	0.029191		

Note: Only the worst case shown in the report.

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	84	0.118728	±2.5	Pass
	3.80	93	0.131449		
	3.50	57	0.080565		
16QAM					
25	4.35	88	0.124382	±2.5	Pass
	3.80	90	0.127208		
	3.50	64	0.090459		

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	4.35	88	0.123944	±2.5	Pass
	3.80	74	0.104225		
	3.50	69	0.097183		
16QAM					
25	4.35	90	0.126761	±2.5	Pass
	3.80	48	0.067606		
	3.50	68	0.095775		

Note: Only the worst case shown in the report.