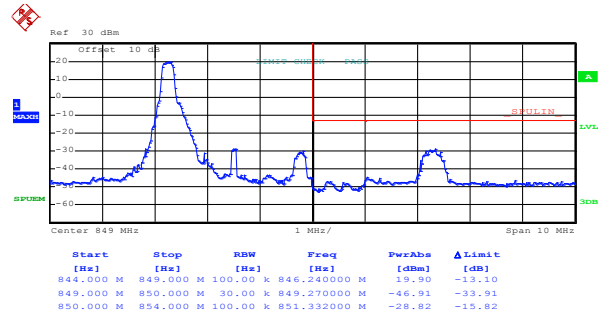
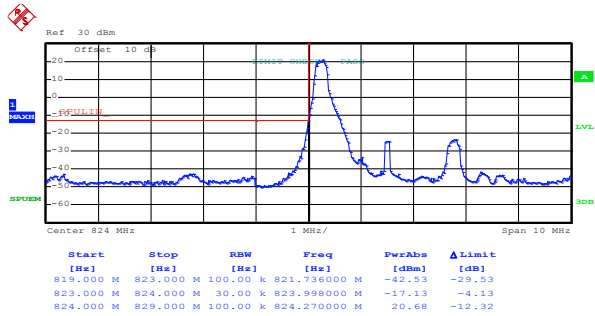


3 MHz:

16QAM & RB Size 1



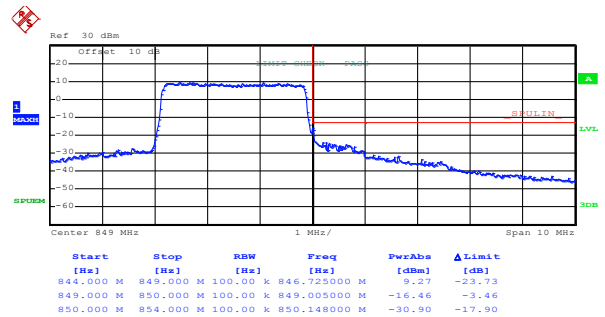
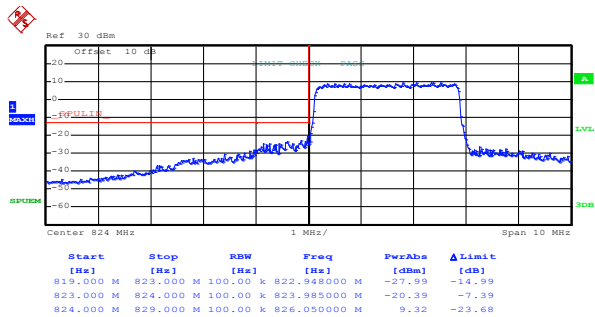
Date: 27.OCT.2017 00:00:40

Date: 27.OCT.2017 00:02:34

Lowest channel

Highest channel

16QAM & RB Size 15



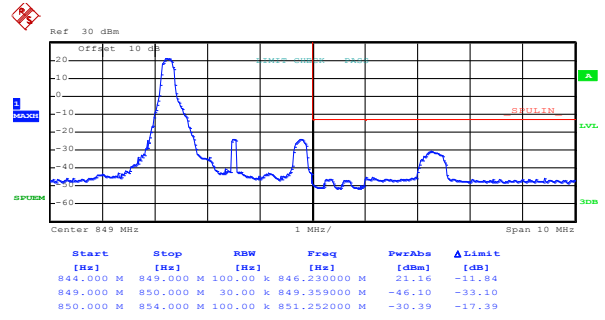
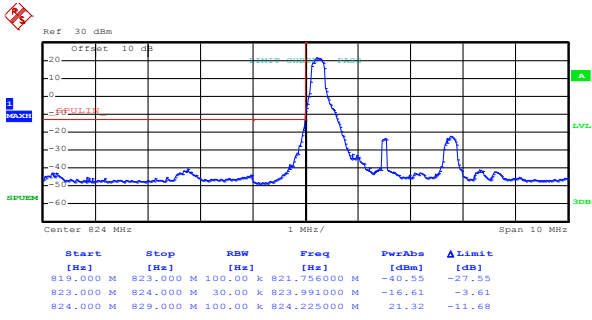
Date: 27.OCT.2017 00:02:11

Date: 27.OCT.2017 00:04:00

Lowest channel

Highest channel

QPSK & RB Size 1



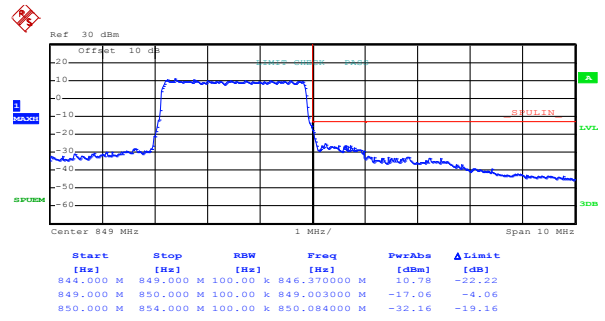
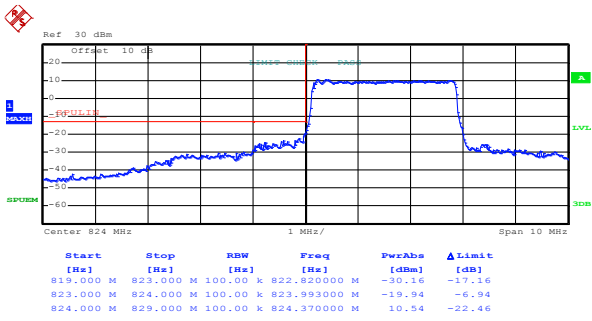
Date: 27.OCT.2017 00:00:30

Date: 27.OCT.2017 00:02:29

Lowest channel

Highest channel

QPSK & RB Size 15



Date: 27.OCT.2017 00:02:08

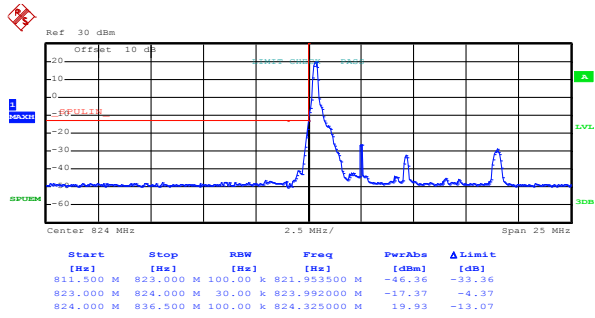
Date: 27.OCT.2017 00:03:52

Lowest channel

Highest channel

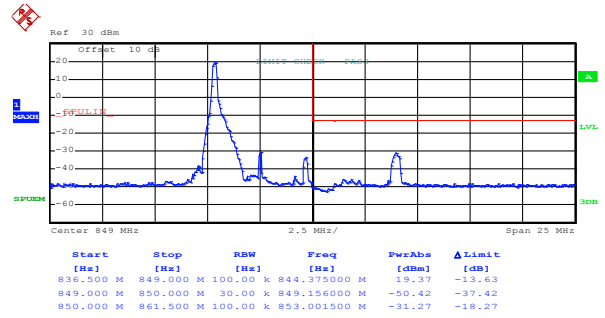
5 MHz:

16QAM & RB Size 1



Date: 27.OCT.2017 00:04:56

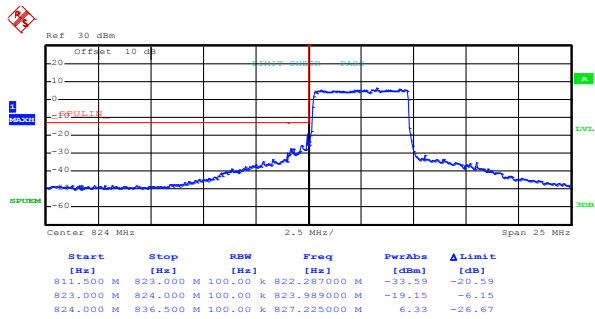
Lowest channel



Date: 27.OCT.2017 00:06:43

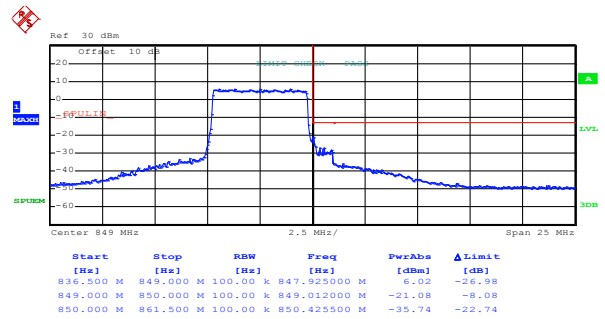
Highest channel

16QAM & RB Size 25



Date: 27.OCT.2017 00:06:24

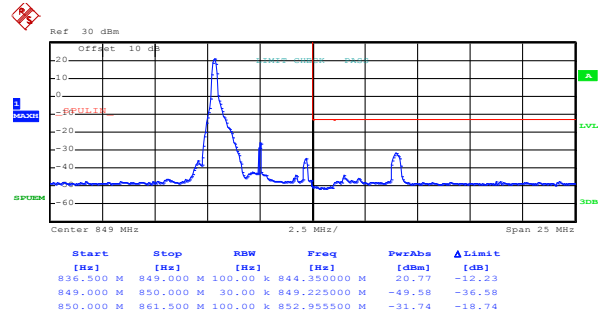
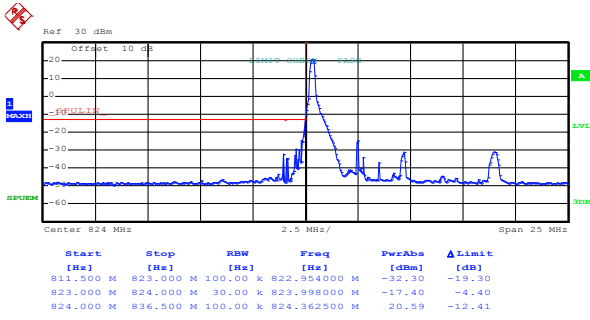
Lowest channel



Date: 27.OCT.2017 00:07:45

Highest channel

QPSK & RB Size 1



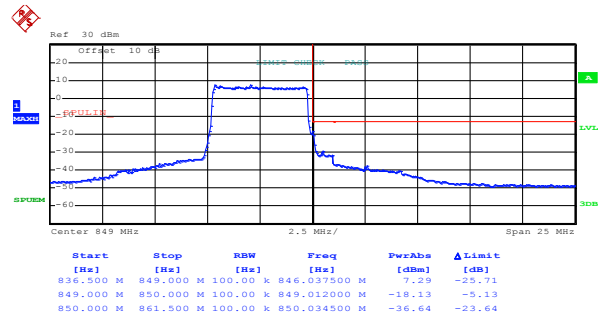
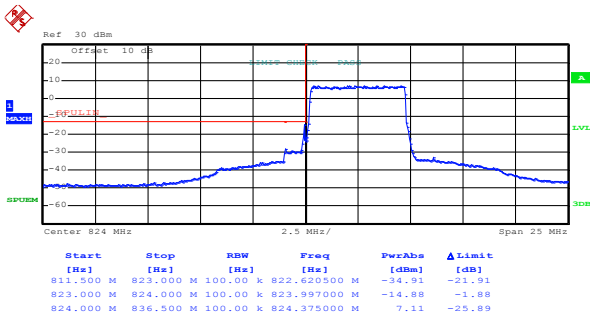
Date: 27.OCT.2017 00:04:42

Date: 27.OCT.2017 00:06:38

Lowest channel

Highest channel

QPSK & RB Size 25



Date: 27.OCT.2017 00:06:19

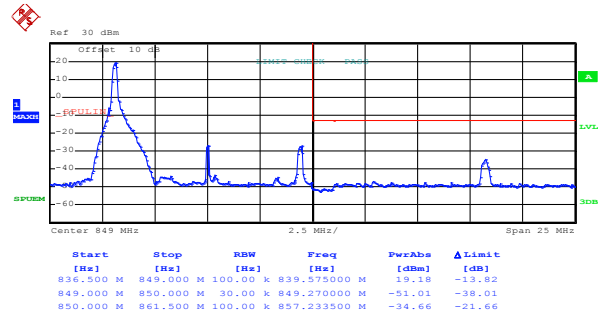
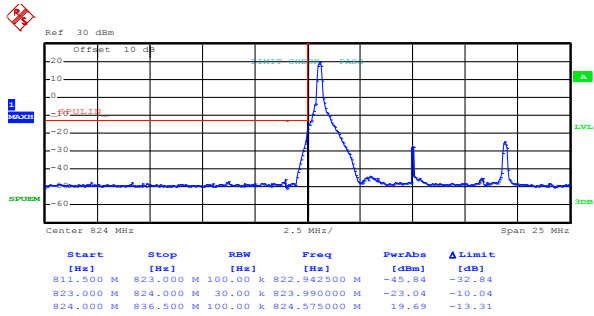
Date: 27.OCT.2017 00:07:40

Lowest channel

Highest channel

10 MHz:

16QAM & RB Size 1



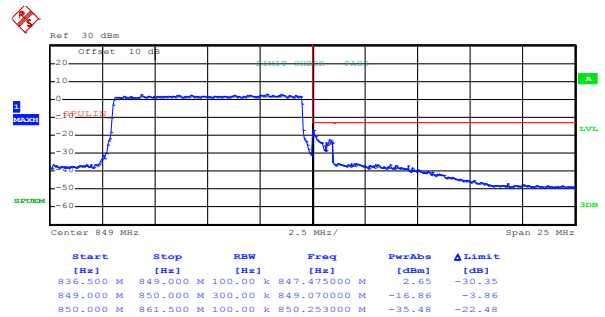
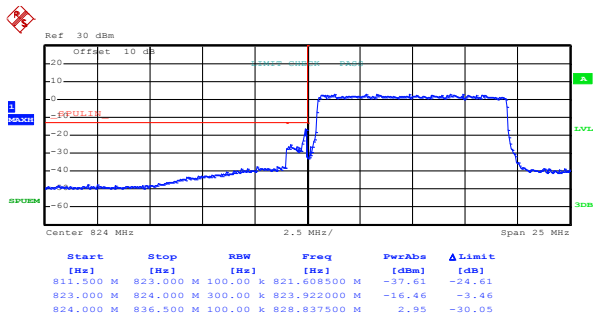
Date: 27.OCT.2017 00:08:22

Date: 27.OCT.2017 00:10:02

Lowest channel

Highest channel

16QAM & RB Size 50



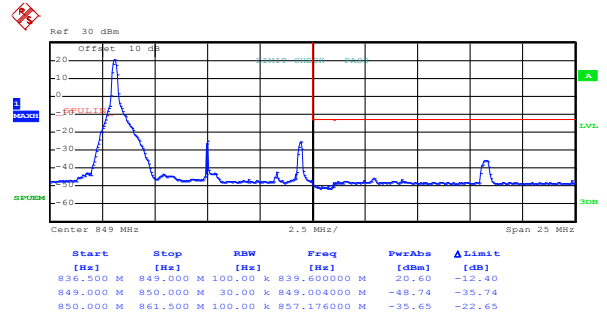
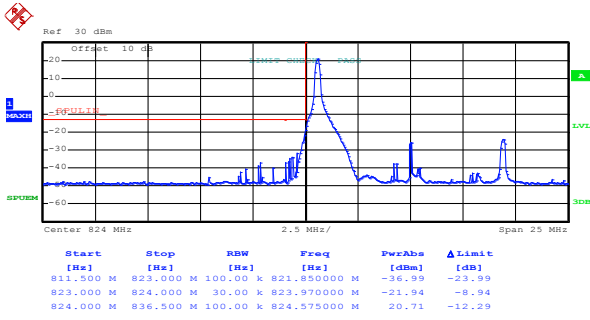
Date: 27.OCT.2017 00:09:28

Date: 27.OCT.2017 00:11:35

Lowest channel

Highest channel

QPSK & RB Size 1



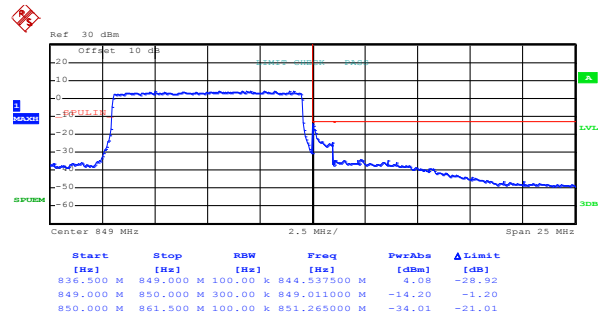
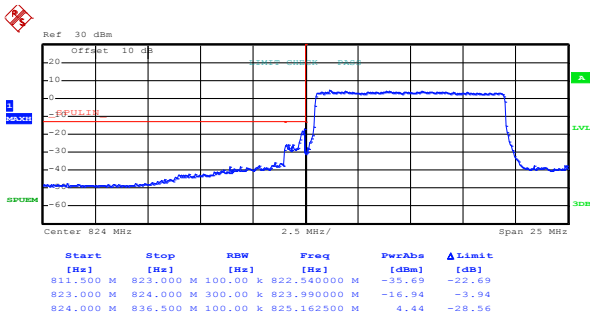
Date: 27.OCT.2017 00:08:17

Date: 27.OCT.2017 00:09:56

Lowest channel

Highest channel

QPSK & RB Size 50



Date: 27.OCT.2017 00:09:22

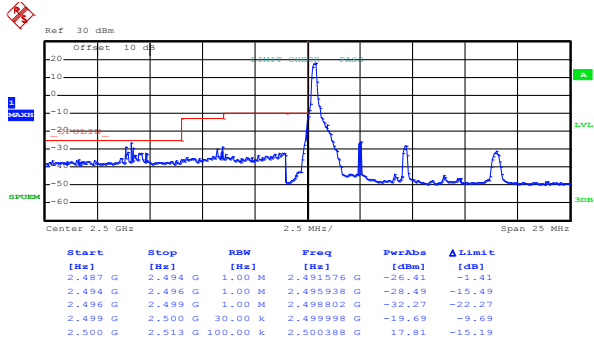
Date: 27.OCT.2017 00:11:28

Lowest channel

Highest channel

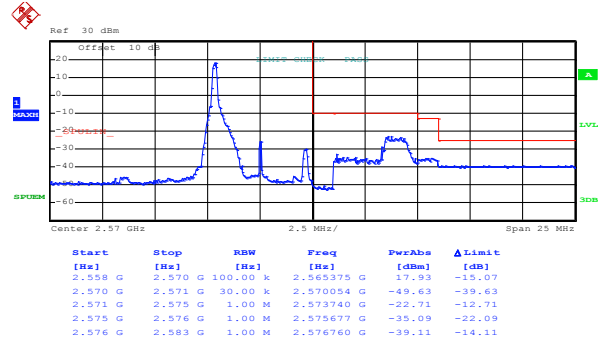
LTE band 7, 5 MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:15:11

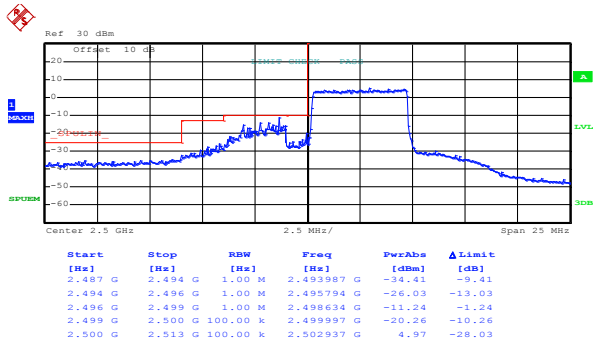
Lowest channel



Date: 26.OCT.2017 23:16:58

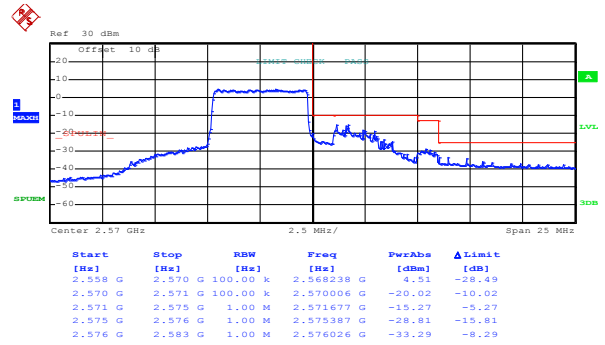
Highest channel

16QAM & RB Size 25



Date: 26.OCT.2017 23:16:31

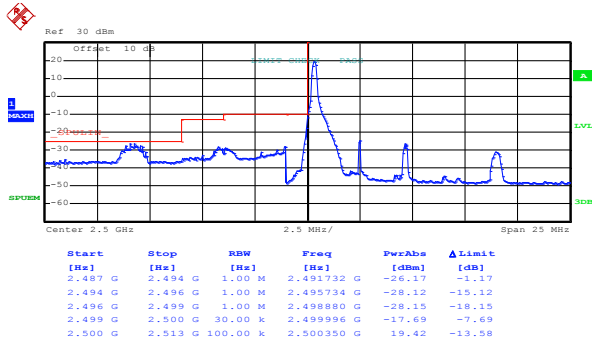
Lowest channel



Date: 26.OCT.2017 23:18:36

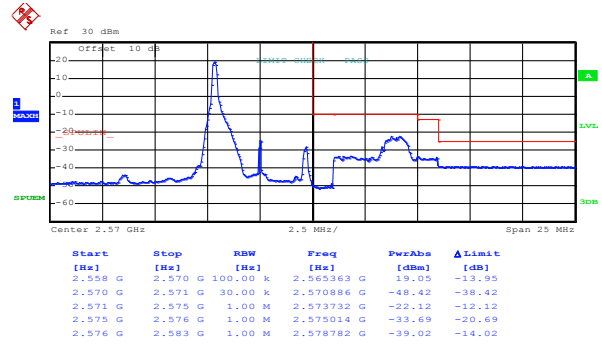
Highest channel

QPSK & RB Size 1



Date: 26.OCT.2017 23:15:05

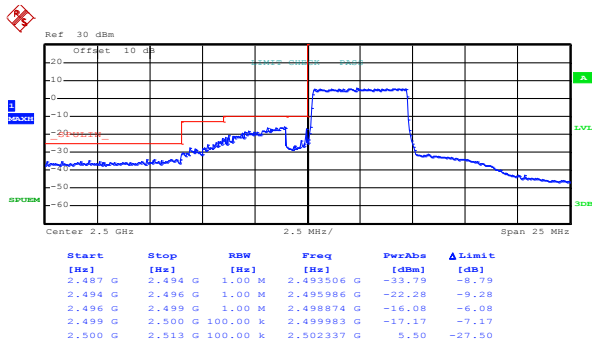
Lowest channel



Date: 26.OCT.2017 23:16:53

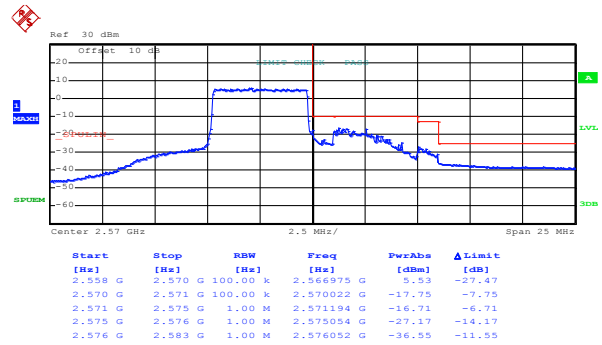
Highest channel

QPSK & RB Size 25



Date: 26.OCT.2017 23:16:25

Lowest channel

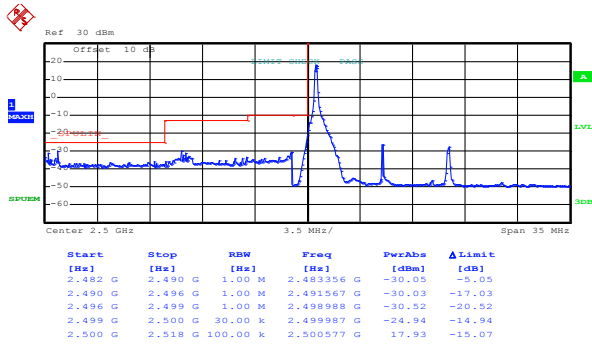


Date: 26.OCT.2017 23:18:29

Highest channel

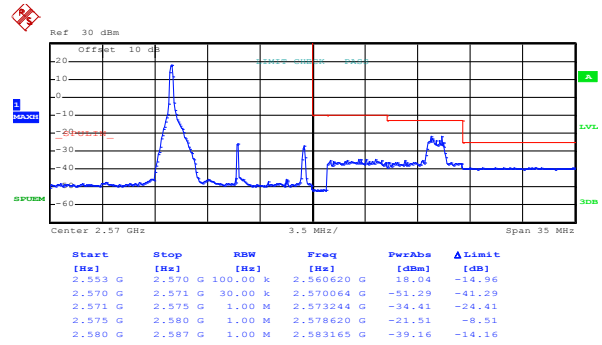
10 MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:19:49

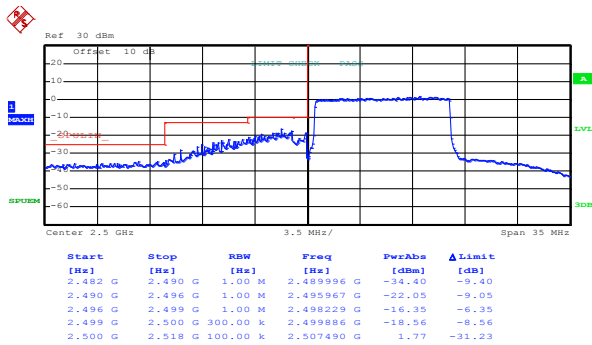
Lowest channel



Date: 26.OCT.2017 23:21:19

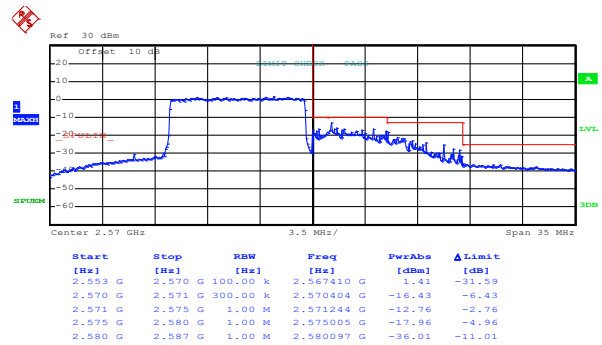
Highest channel

16QAM & RB Size 50



Date: 26.OCT.2017 23:20:56

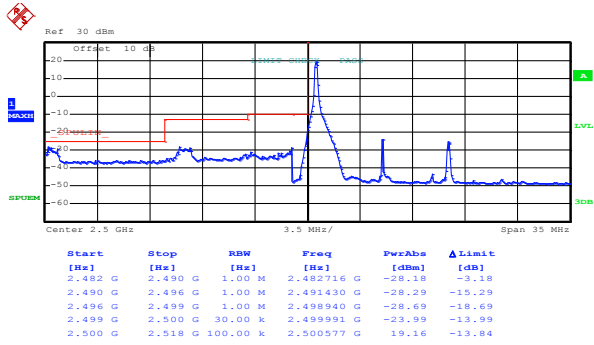
Lowest channel



Date: 26.OCT.2017 23:22:26

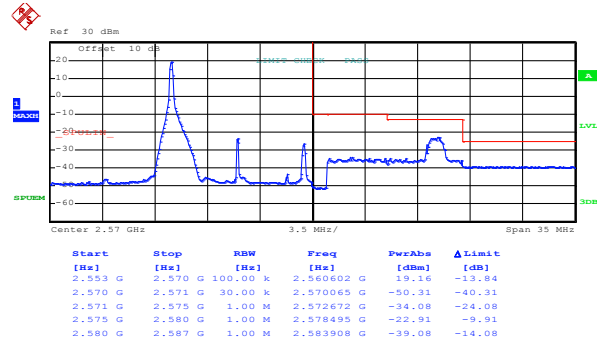
Highest channel

QPSK & RB Size 1



Date: 26.OCT.2017 23:19:43

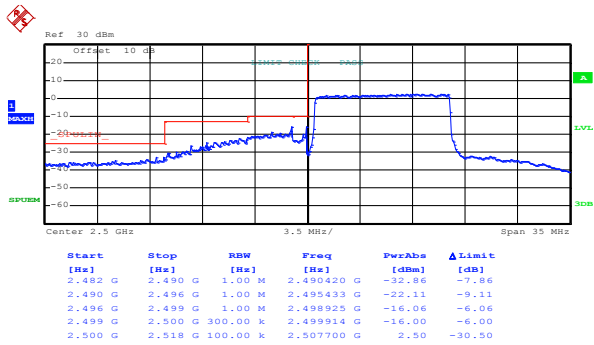
Lowest channel



Date: 26.OCT.2017 23:21:14

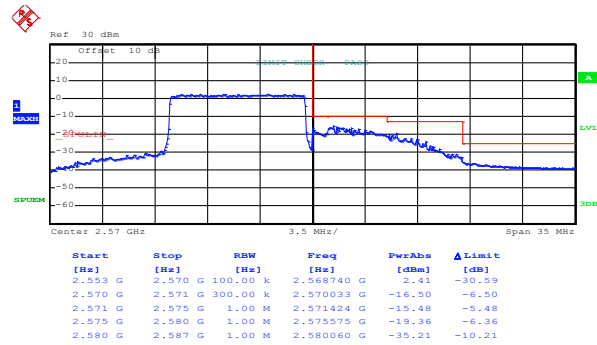
Highest channel

QPSK & RB Size 50



Date: 26.OCT.2017 23:20:50

Lowest channel

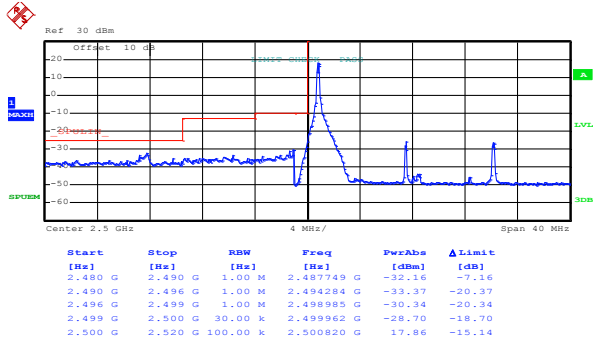


Date: 26.OCT.2017 23:22:21

Highest channel

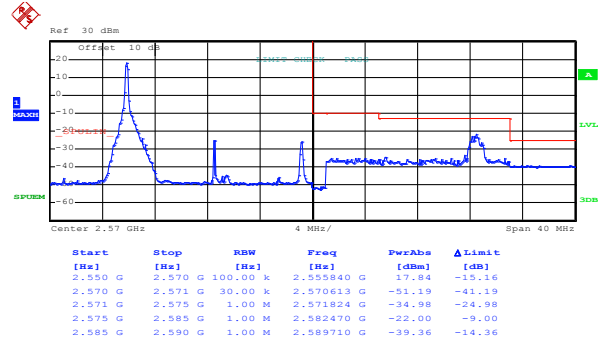
15 MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:23:29

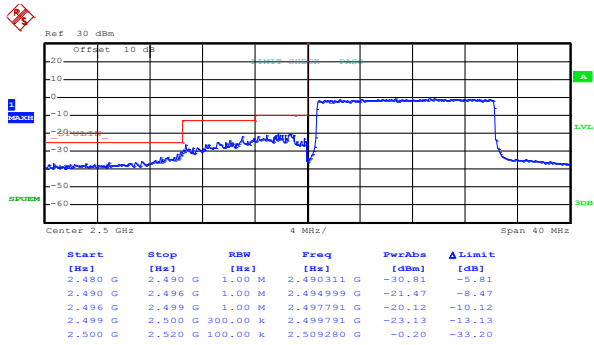
Lowest channel



Date: 26.OCT.2017 23:25:21

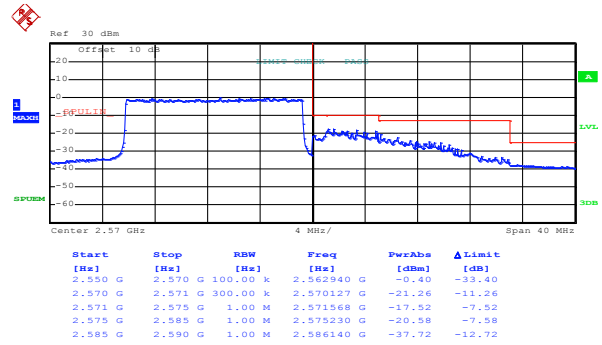
Highest channel

16QAM & RB Size 75



Date: 26.OCT.2017 23:24:58

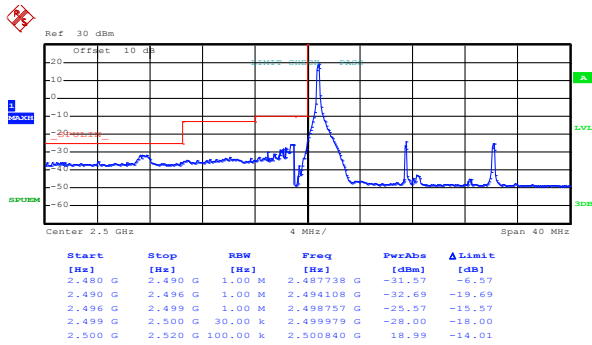
Lowest channel



Date: 26.OCT.2017 23:26:41

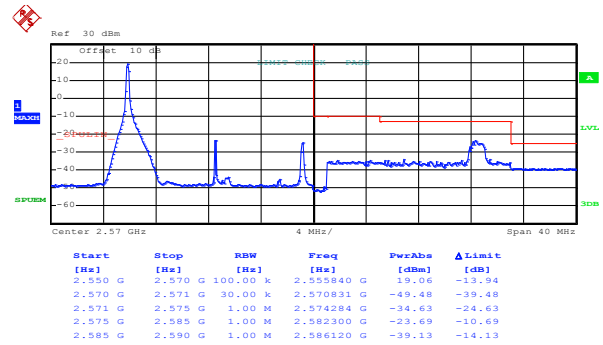
Highest channel

QPSK & RB Size 1



Date: 26.OCT.2017 23:23:24

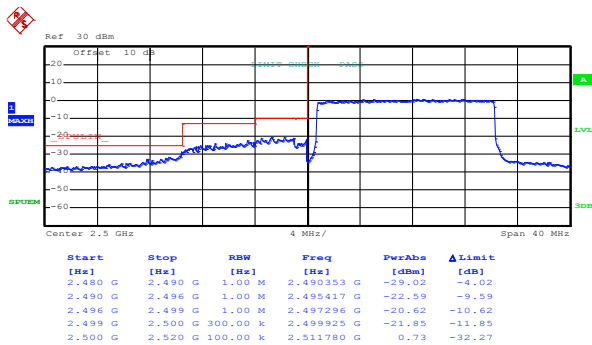
Lowest channel



Date: 26.OCT.2017 23:25:16

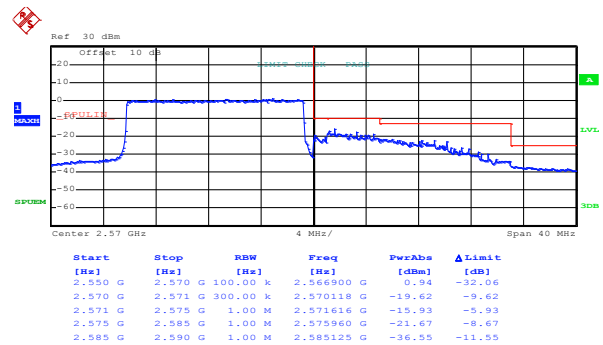
Highest channel

QPSK & RB Size 75



Date: 26.OCT.2017 23:24:53

Lowest channel

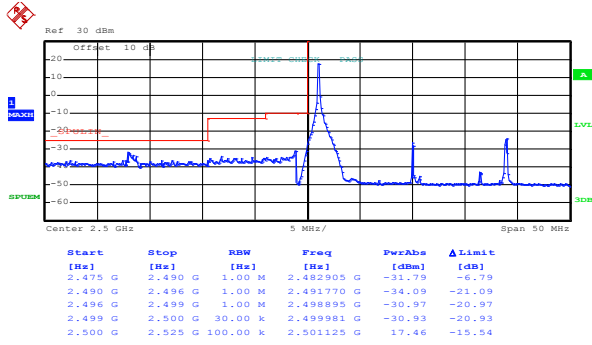


Date: 26.OCT.2017 23:26:37

Highest channel

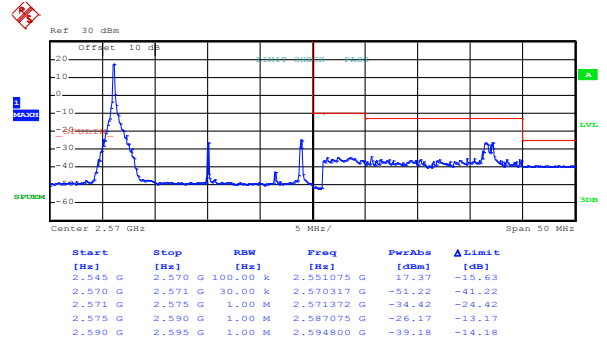
20 MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:27:54

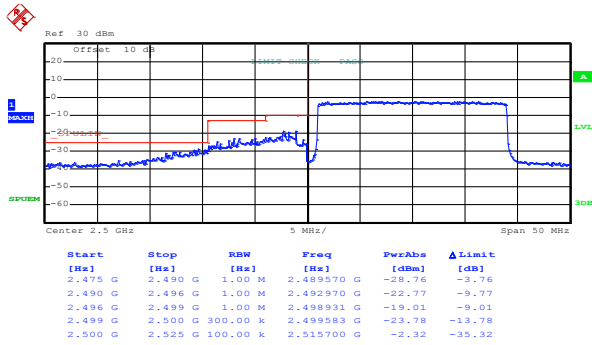
Lowest channel



Date: 26.OCT.2017 23:29:34

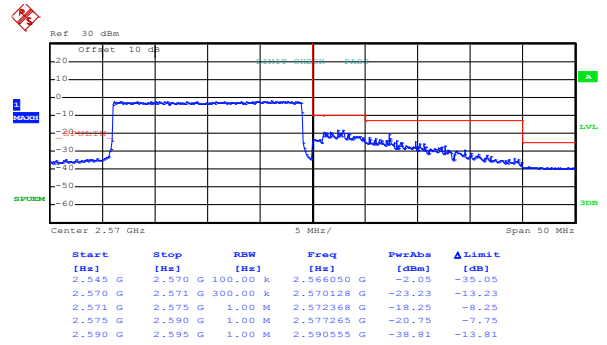
Highest channel

16QAM & RB Size 100



Date: 26.OCT.2017 23:29:09

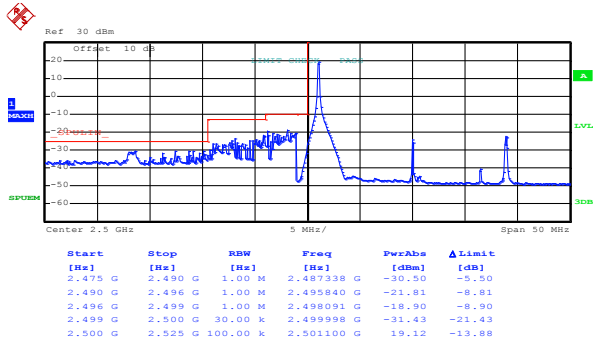
Lowest channel



Date: 26.OCT.2017 23:30:38

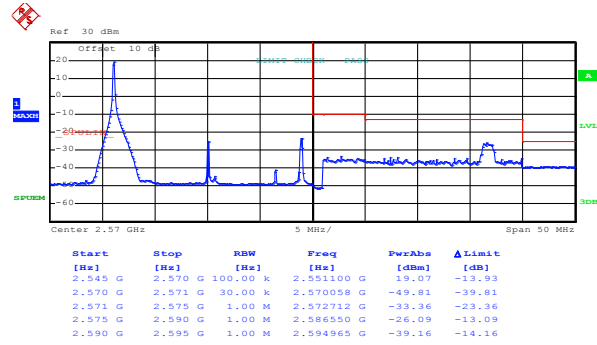
Highest channel

QPSK & RB Size 1



Date: 26.OCT.2017 23:27:49

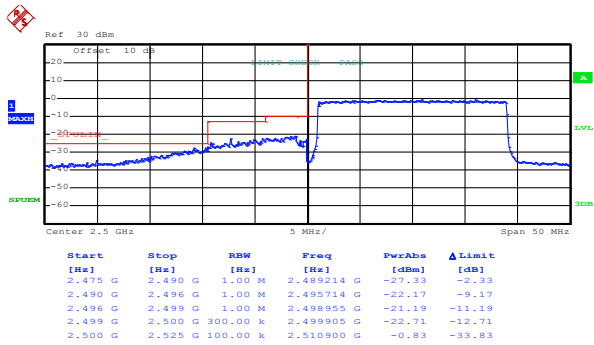
Lowest channel



Date: 26.OCT.2017 23:29:27

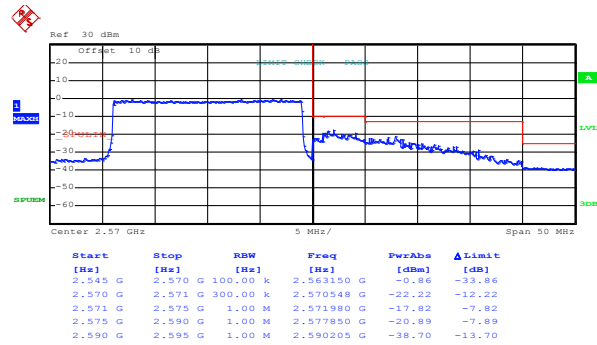
Highest channel

QPSK & RB Size 100



Date: 26.OCT.2017 23:29:03

Lowest channel

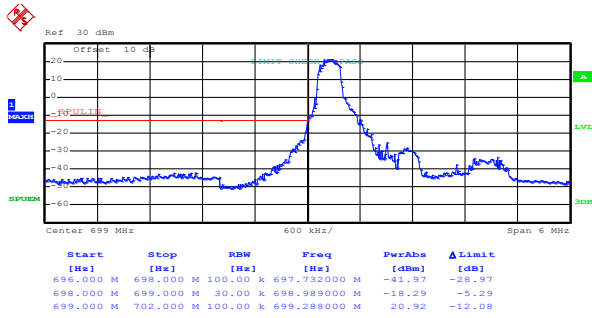


Date: 26.OCT.2017 23:30:32

Highest channel

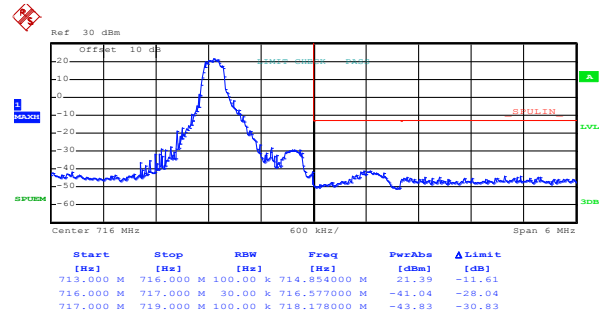
LTE band 12, 1.4MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:41:59

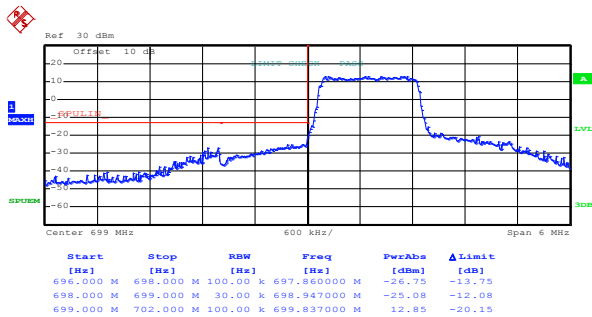
Lowest channel



Date: 26.OCT.2017 23:43:07

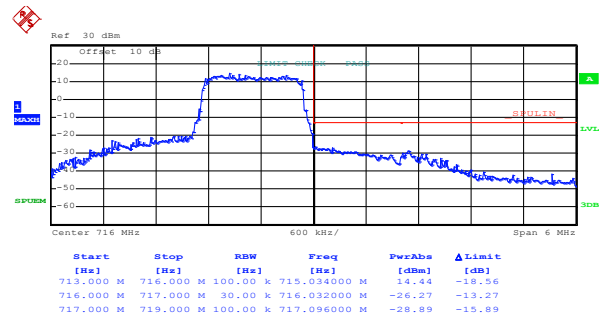
Highest channel

16QAM & RB Size 6



Date: 26.OCT.2017 23:42:46

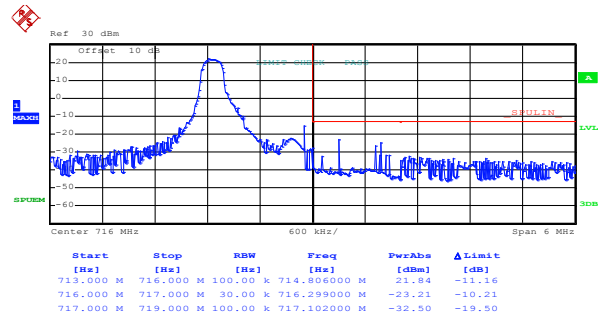
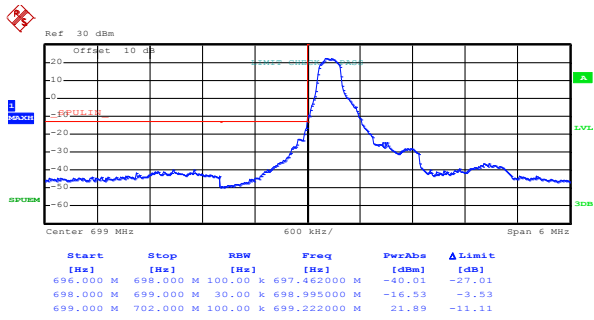
Lowest channel



Date: 26.OCT.2017 23:43:59

Highest channel

QPSK & RB Size 1



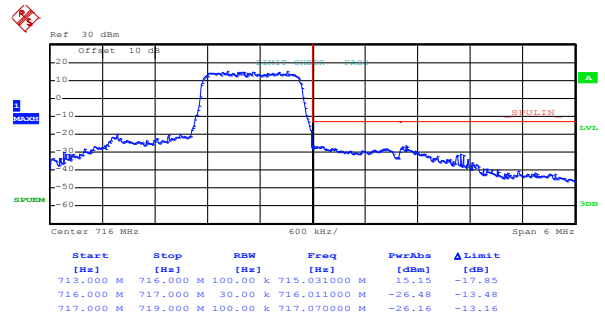
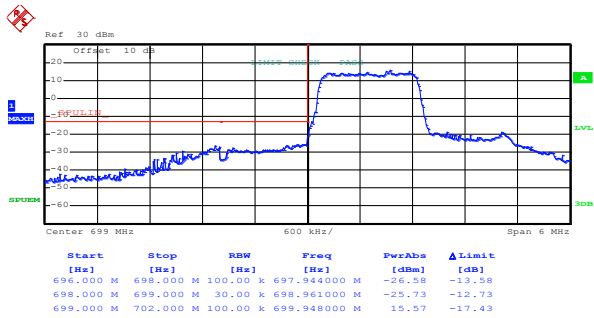
Date: 26.OCT.2017 23:41:54

Date: 26.OCT.2017 23:43:02

Lowest channel

Highest channel

QPSK & RB Size 6



Date: 26.OCT.2017 23:42:42

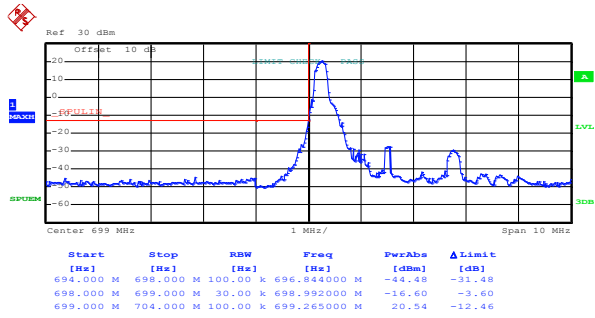
Date: 26.OCT.2017 23:43:55

Lowest channel

Highest channel

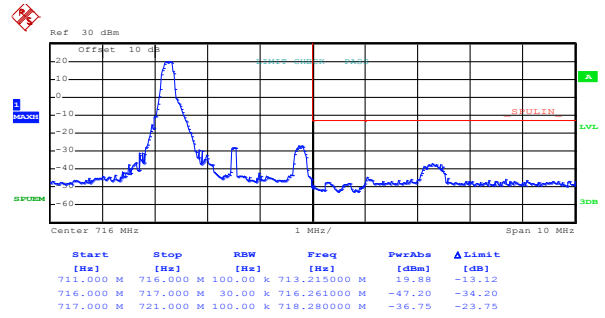
3 MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:44:45

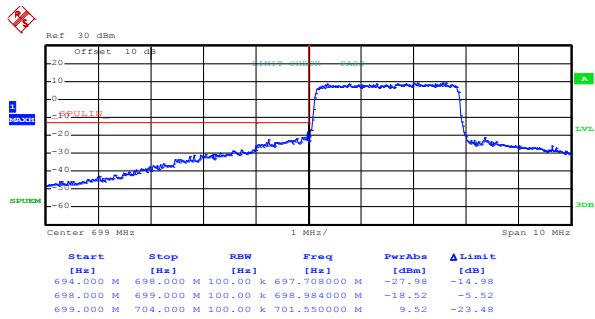
Lowest channel



Date: 26.OCT.2017 23:46:05

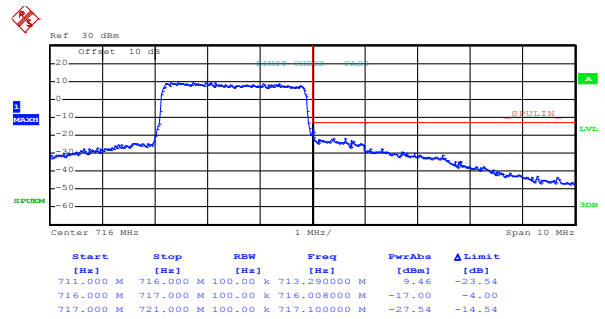
Highest channel

16QAM & RB Size 15



Date: 26.OCT.2017 23:45:44

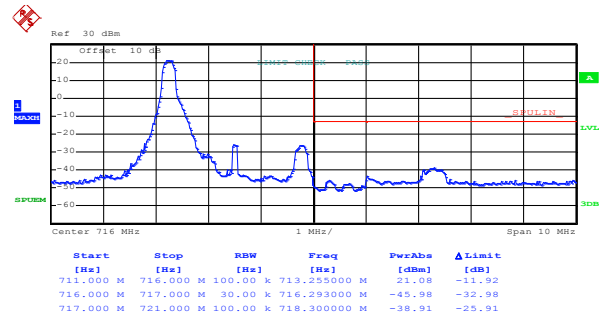
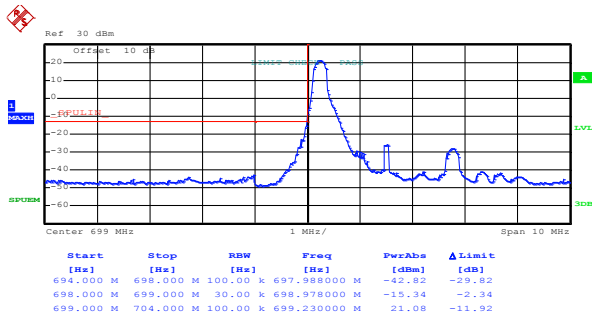
Lowest channel



Date: 26.OCT.2017 23:47:22

Highest channel

QPSK & RB Size 1



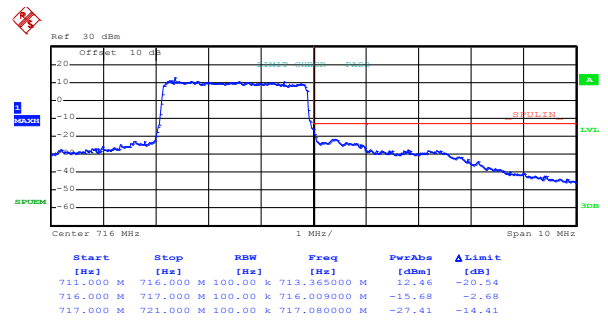
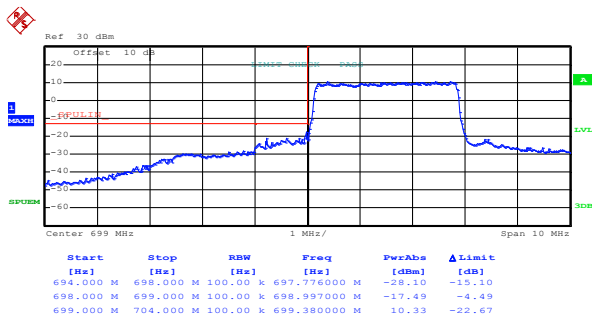
Date: 26.OCT.2017 23:44:41

Date: 26.OCT.2017 23:45:58

Lowest channel

Highest channel

QPSK & RB Size 15



Date: 26.OCT.2017 23:45:39

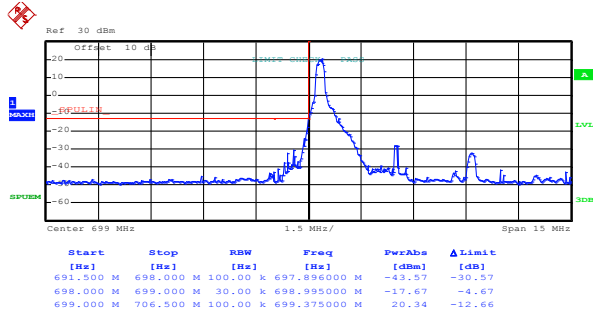
Date: 26.OCT.2017 23:47:16

Lowest channel

Highest channel

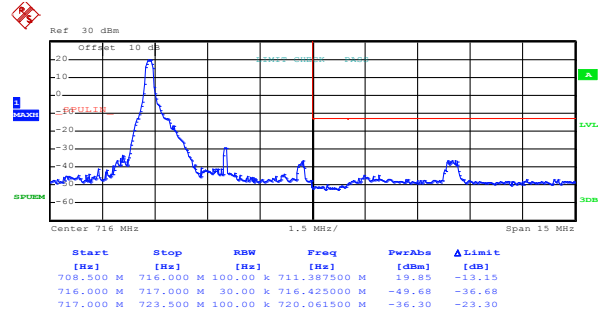
5 MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:48:16

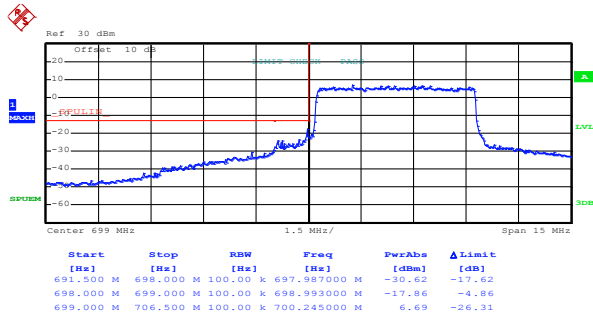
Lowest channel



Date: 26.OCT.2017 23:49:57

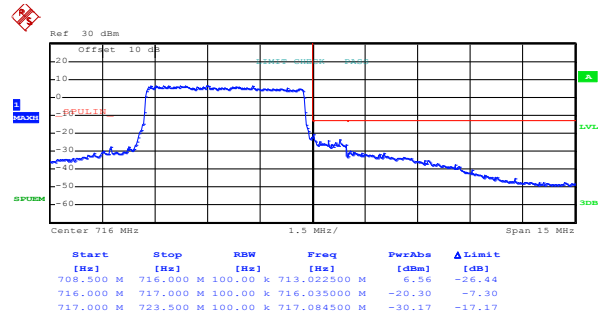
Highest channel

16QAM & RB Size 25



Date: 26.OCT.2017 23:49:34

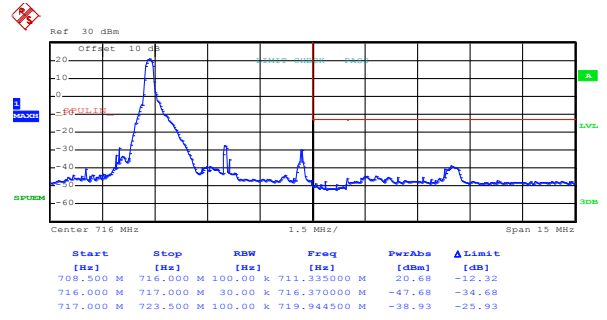
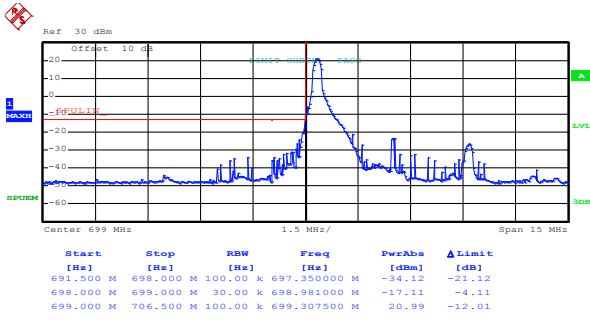
Lowest channel



Date: 26.OCT.2017 23:51:13

Highest channel

QPSK & RB Size 1



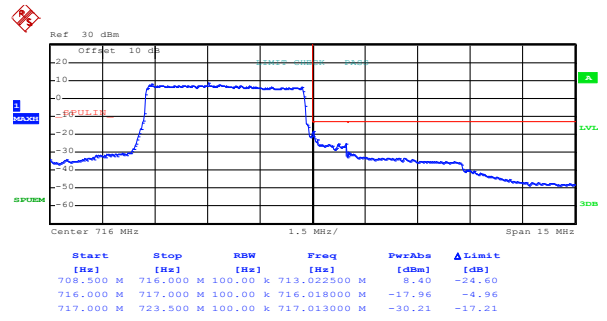
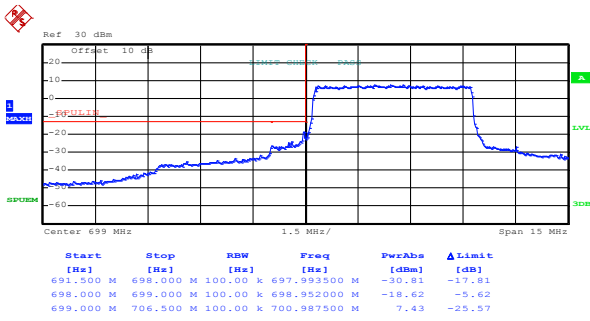
Date: 26.OCT.2017 23:48:10

Date: 26.OCT.2017 23:49:48

Lowest channel

Highest channel

QPSK & RB Size 25



Date: 26.OCT.2017 23:49:28

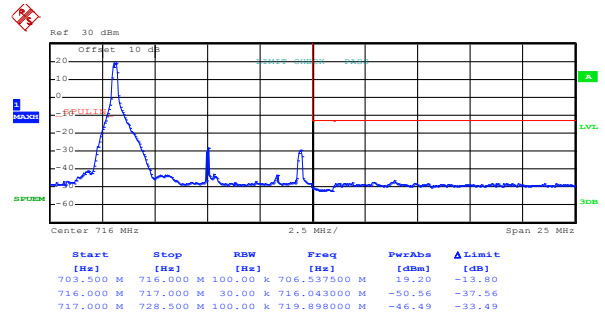
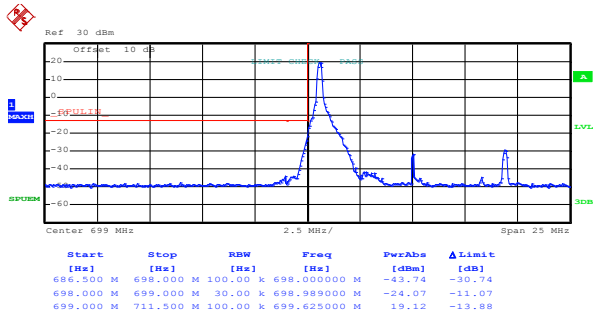
Date: 26.OCT.2017 23:51:06

Lowest channel

Highest channel

10 MHz:

16QAM & RB Size 1



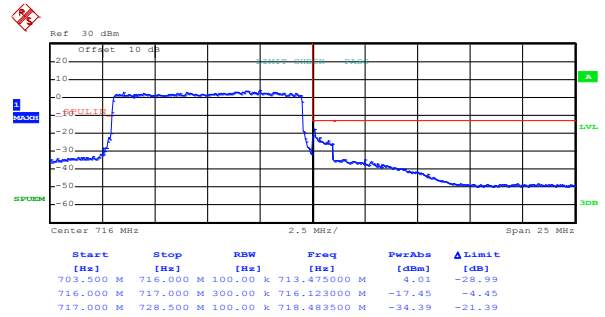
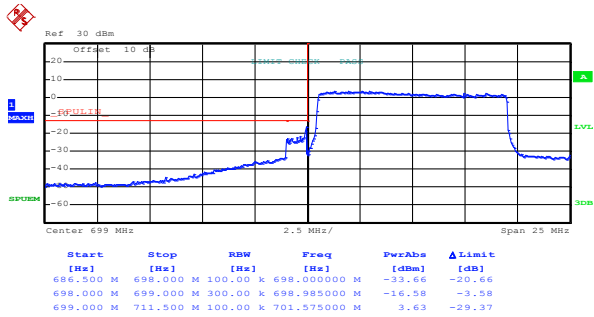
Date: 26.OCT.2017 23:51:52

Date: 26.OCT.2017 23:54:21

Lowest channel

Highest channel

16QAM & RB Size 50



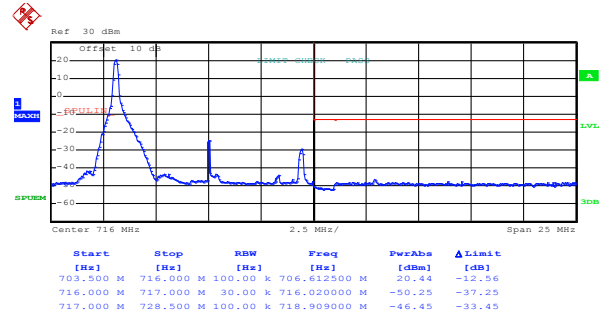
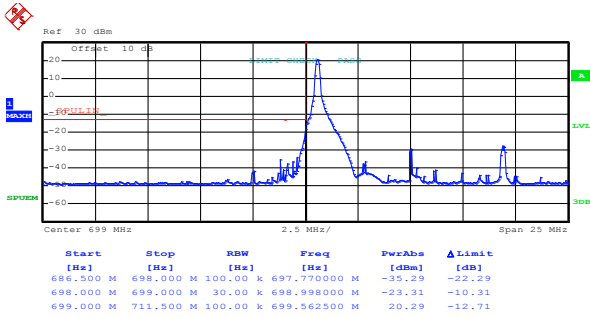
Date: 26.OCT.2017 23:53:08

Date: 26.OCT.2017 23:55:33

Lowest channel

Highest channel

QPSK & RB Size 1



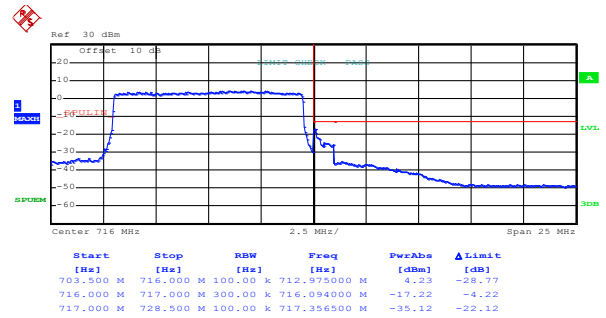
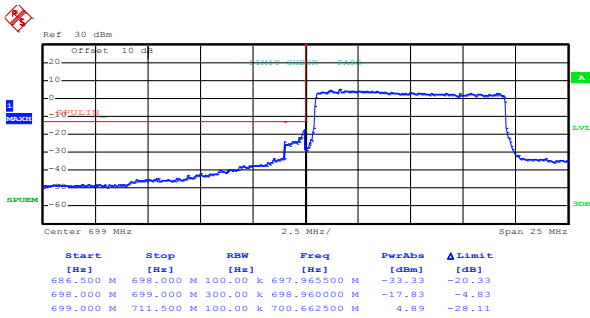
Date: 26.OCT.2017 23:51:47

Date: 26.OCT.2017 23:54:13

Lowest channel

Highest channel

QPSK & RB Size 50



Date: 26.OCT.2017 23:53:00

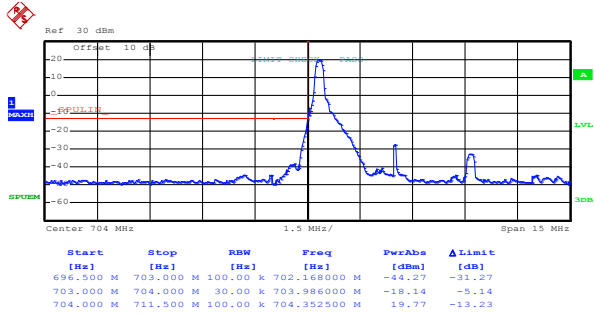
Date: 26.OCT.2017 23:55:28

Lowest channel

Highest channel

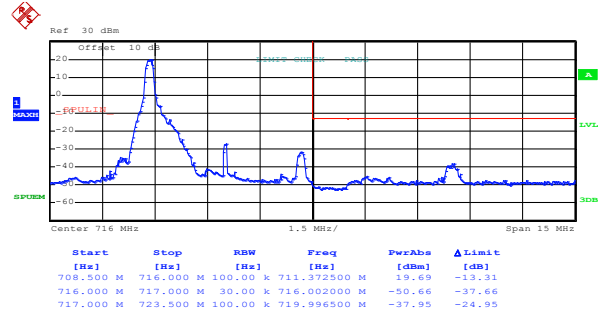
LTE band 17, 5 MHz:

16QAM & RB Size 1



Date: 26.OCT.2017 23:33:54

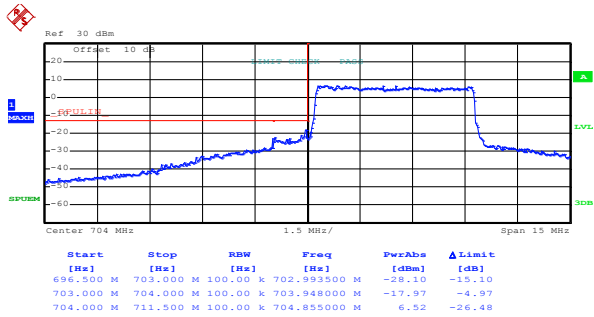
Lowest channel



Date: 26.OCT.2017 23:35:46

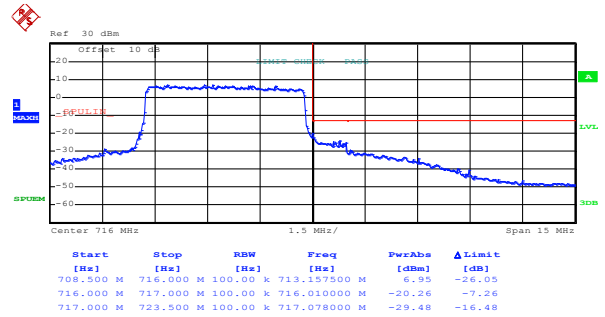
Highest channel

16QAM & RB Size 25



Date: 26.OCT.2017 23:34:57

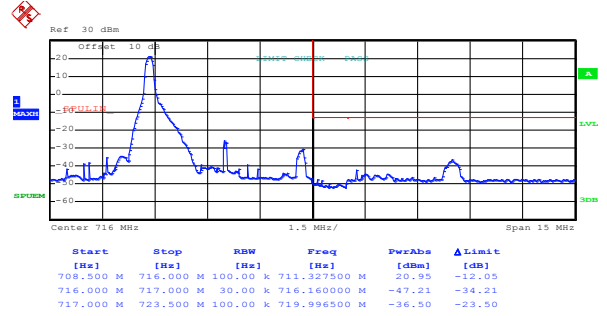
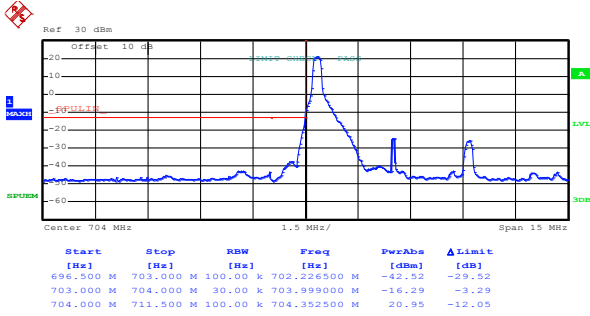
Lowest channel



Date: 26.OCT.2017 23:36:46

Highest channel

QPSK & RB Size 1



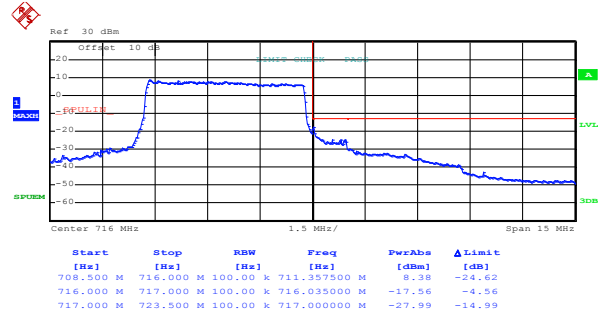
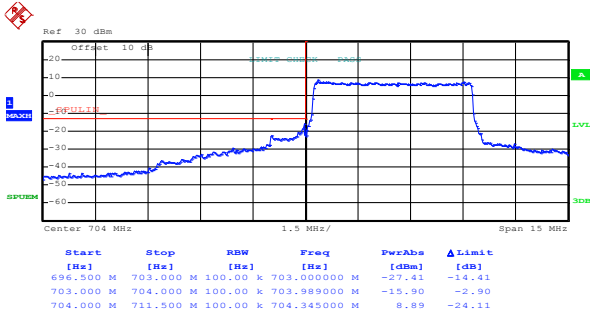
Date: 26.OCT.2017 23:33:46

Date: 26.OCT.2017 23:35:42

Lowest channel

Highest channel

QPSK & RB Size 25



Date: 26.OCT.2017 23:34:53

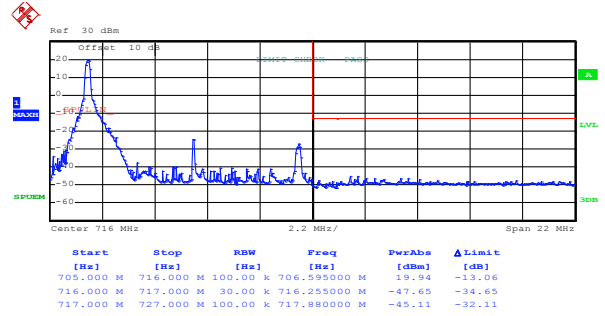
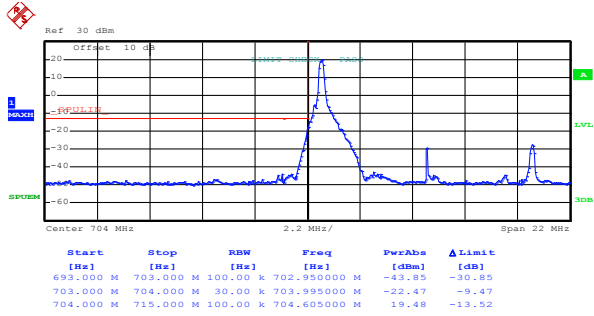
Date: 26.OCT.2017 23:36:42

Lowest channel

Highest channel

10 MHz:

16QAM & RB Size 1



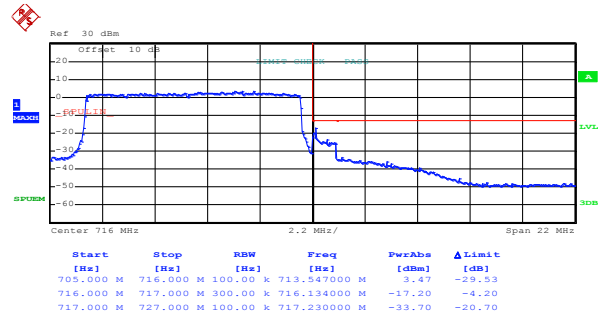
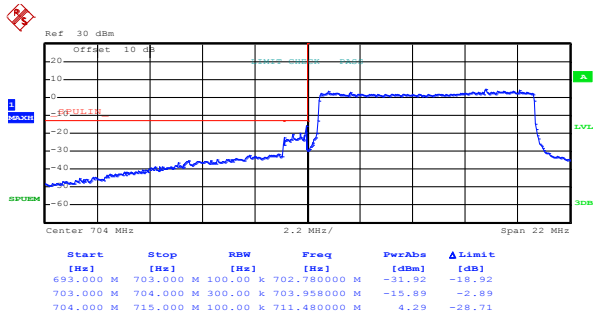
Date: 26.OCT.2017 23:37:32

Date: 26.OCT.2017 23:39:29

Lowest channel

Highest channel

16QAM & RB Size 50



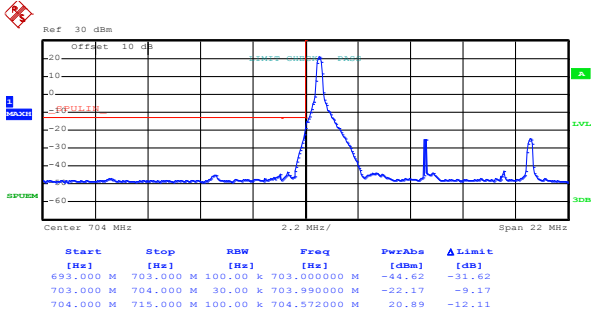
Date: 26.OCT.2017 23:39:06

Date: 26.OCT.2017 23:40:39

Lowest channel

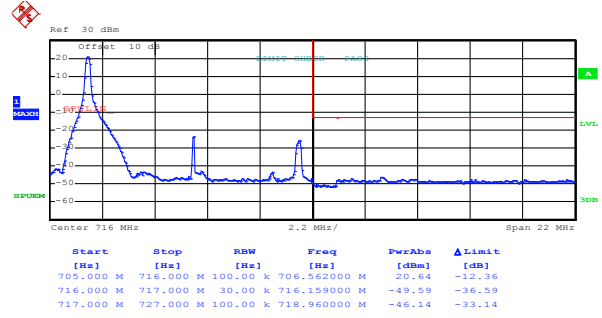
Highest channel

QPSK & RB Size 1



Date: 26.OCT.2017 23:37:27

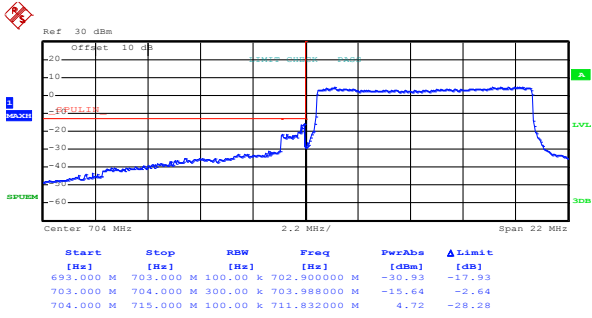
Lowest channel



Date: 26.OCT.2017 23:39:24

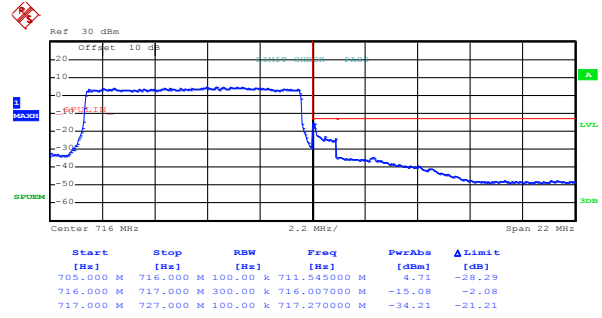
Highest channel

QPSK & RB Size 50



Date: 26.OCT.2017 23:39:00

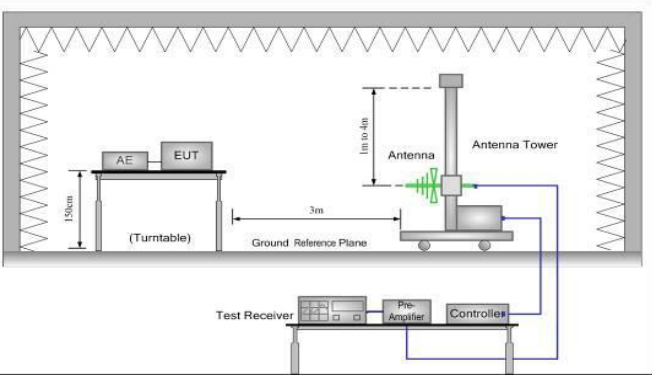
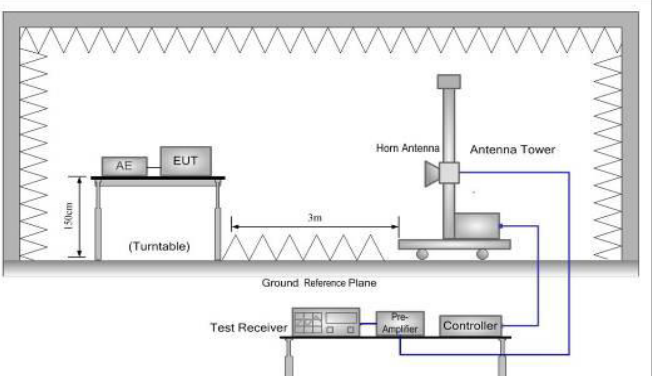
Lowest channel



Date: 26.OCT.2017 23:40:35

Highest channel

6.5 ERP, EIRP Measurement

Test Requirement:	Part 24.232(c), part 27.50(c), part 27.50(d), part 27.50 (h),Part22.913(a)
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:	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
Test Procedure:	<ol style="list-style-type: none"> 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. 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 5.8 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	22.18	33.00	Pass
					H	22.32		
1850.70	18607	16QAM	1.4	H	V	22.31		
					H	22.65		
Middle Channel								
1880.00	18900	QPSK	1.4	H	V	22.78	33.00	Pass
					H	22.80		
1880.00	18900	16QAM	1.4	H	V	22.62		
					H	22.77		
Highest Channel								
1909.30	19193	QPSK	1.4	H	V	21.34	33.00	Pass
					H	21.52		
1909.30	19193	16QAM	1.4	H	V	21.35		
					H	21.47		

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	22.12	33.00	Pass
					H	22.85		
1851.50	18615	16QAM	3	H	V	22.71		
					H	22.35		
Middle Channel								
1880.00	18900	QPSK	3	H	V	22.41	33.00	Pass
					H	22.31		
1880.00	18900	16QAM	3	H	V	22.66		
					H	22.21		
Highest Channel								
1908.50	19185	QPSK	3	H	V	21.55	33.00	Pass
					H	21.46		
1908.50	19185	16QAM	3	H	V	21.93		
					H	21.66		

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	22.16	33.00	Pass
					H	22.37		
1852.50	18625	16QAM	5	H	V	22.71		
					H	22.36		
Middle Channel								
1880.00	18900	QPSK	5	H	V	22.18	33.00	Pass
					H	22.85		
1880.00	18900	16QAM	5	H	V	22.45		
					H	22.47		
Highest Channel								
1907.50	19175	QPSK	5	H	V	21.39	33.00	Pass
					H	21.66		
1907.50	19175	16QAM	5	H	V	21.59		
					H	21.41		

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	22.56	33.00	Pass
					H	22.27		
1855.00	18650	16QAM	10	H	V	22.66		
					H	22.45		
Middle Channel								
1880.00	18900	QPSK	10	H	V	22.85	33.00	Pass
					H	22.27		
1880.00	18900	16QAM	10	H	V	22.74		
					H	22.45		
Highest Channel								
1905.00	19150	QPSK	10	H	V	21.71	33.00	Pass
					H	21.02		
1905.00	19150	16QAM	10	H	V	21.66		
					H	21.16		

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	22.62	33.00	Pass
					H	22.27		
1857.50	18675	16QAM	15	H	V	22.41		
					H	22.21		
Middle Channel								
1880.00	18900	QPSK	15	H	V	22.47	33.00	Pass
					H	22.39		
1880.00	18900	16QAM	15	H	V	22.54		
					H	22.37		
Highest Channel								
1902.50	19125	QPSK	15	H	V	21.39	33.00	Pass
					H	21.15		
1902.50	19125	16QAM	15	H	V	21.52		
					H	21.18		

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	22.46	33.00	Pass
					H	22.53		
1860.00	18700	16QAM	20	H	V	22.21		
					H	22.69		
Middle Channel								
1880.00	18900	QPSK	20	H	V	22.47	33.00	Pass
					H	22.69		
1880.00	18900	16QAM	20	H	V	22.54		
					H	22.46		
Highest Channel								
1900.00	19100	QPSK	20	H	V	21.48	33.00	Pass
					H	21.39		
1900.00	19100	16QAM	20	H	V	21.15		
					H	21.27		

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	23.53	33.00	Pass
					H	25.34		
1710.70	19957	16QAM	1.4	H	V	23.19		
					H	24.44		
Middle Channel								
1732.50	20175	QPSK	1.4	H	V	23.44	33.00	Pass
					H	25.18		
1732.50	20175	16QAM	1.4	H	V	23.35		
					H	25.15		
Highest Channel								
1754.30	20393	QPSK	1.4	H	V	21.78	33.00	Pass
					H	23.53		
1754.30	20393	16QAM	1.4	H	V	21.83		
					H	23.58		

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	23.21	33.00	Pass
					H	25.17		
1711.50	19965	16QAM	3	H	V	23.83		
					H	24.18		
Middle Channel								
1732.50	20175	QPSK	3	H	V	23.41	33.00	Pass
					H	25.19		
1732.50	20175	16QAM	3	H	V	23.51		
					H	25.21		
Highest Channel								
1753.50	20385	QPSK	3	H	V	21.34	33.00	Pass
					H	23.83		
1753.50	20385	16QAM	3	H	V	21.71		
					H	23.81		

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	23.71	33.00	Pass
					H	25.37		
1712.50	19975	16QAM	5	H	V	23.19		
					H	24.18		
Middle Channel								
1732.50	20175	QPSK	5	H	V	23.31	33.00	Pass
					H	25.81		
1732.50	20175	16QAM	5	H	V	23.39		
					H	25.34		
Highest Channel								
1752.50	20375	QPSK	5	H	V	21.51	33.00	Pass
					H	23.39		
1752.50	20375	16QAM	5	H	V	21.81		
					H	23.83		

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	23.55	33.00	Pass
					H	25.66		
1715.00	20000	16QAM	10	H	V	23.63		
					H	24.34		
Middle Channel								
1732.50	20175	QPSK	10	H	V	23.45	33.00	Pass
					H	25.93		
1732.50	20175	16QAM	10	H	V	23.64		
					H	25.64		
Highest Channel								
1750.00	20350	QPSK	10	H	V	21.18	33.00	Pass
					H	23.36		
1750.00	20350	16QAM	10	H	V	21.15		
					H	23.91		

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	23.11	33.00	Pass
					H	25.38		
1717.50	20025	16QAM	15	H	V	23.83		
					H	24.51		
Middle Channel								
1732.50	20175	QPSK	15	H	V	23.66	33.00	Pass
					H	25.43		
1732.50	20175	16QAM	15	H	V	23.39		
					H	25.43		
Highest Channel								
1747.50	20325	QPSK	15	H	V	21.43	33.00	Pass
					H	23.54		
1747.50	20325	16QAM	15	H	V	21.51		
					H	23.64		

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	23.64	33.00	Pass
					H	25.82		
1720.00	20050	16QAM	20	H	V	23.46		
					H	24.83		
Middle Channel								
1732.50	20175	QPSK	20	H	V	23.34	33.00	Pass
					H	25.81		
1732.50	20175	16QAM	20	H	V	23.63		
					H	25.43		
Highest Channel								
1745.00	20300	QPSK	20	H	V	21.54	33.00	Pass
					H	23.66		
1745.00	20300	16QAM	20	H	V	21.35		
					H	23.34		

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	14.56	33.00	Pass
					H	14.70		
824.70	20407	16QAM	1.4	H	V	14.56		
					H	14.77		
Middle Channel								
836.50	20525	QPSK	1.4	H	V	14.76	33.00	Pass
					H	14.74		
836.50	20525	16QAM	1.4	H	V	14.77		
					H	13.73		
Highest Channel								
848.30	20643	QPSK	1.4	H	V	13.74	33.00	Pass
					H	13.76		
848.30	20643	16QAM	1.4	H	V	13.72		
					H	13.71		

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	14.82	33.00	Pass
					H	14.84		
825.50	20415	16QAM	3	H	V	14.73		
					H	14.42		
Middle Channel								
836.50	20525	QPSK	3	H	V	14.13	33.00	Pass
					H	14.37		
836.50	20525	16QAM	3	H	V	14.39		
					H	14.29		
Highest Channel								
847.30	20635	QPSK	3	H	V	13.33	33.00	Pass
					H	13.79		
847.30	20635	16QAM	3	H	V	13.83		
					H	13.38		

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	14.27	33.00	Pass
					H	14.38		
826.50	20425	16QAM	5	H	V	14.42		
					H	14.47		
Middle Channel								
836.50	20525	QPSK	5	H	V	14.13	33.00	Pass
					H	14.93		
836.50	20525	16QAM	5	H	V	14.42		
					H	14.32		
Highest Channel								
846.50	20625	QPSK	5	H	V	13.38	33.00	Pass
					H	13.42		
846.50	20625	16QAM	5	H	V	13.24		
					H	13.18		

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	14.13	33.00	Pass
					H	14.38		
829.00	20450	16QAM	10	H	V	14.17		
					H	14.37		
Middle Channel								
836.50	20525	QPSK	10	H	V	14.33	33.00	Pass
					H	14.83		
836.50	20525	16QAM	10	H	V	14.29		
					H	14.71		
Highest Channel								
844.00	20600	QPSK	10	H	V	13.38	33.00	Pass
					H	13.42		
844.00	20600	16QAM	10	H	V	13.33		
					H	13.44		

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	17.12	33.00	Pass
					H	22.25		
2502.50	20775	16QAM	5	H	V	16.84		
					H	21.85		
Middle Channel								
2535.00	21100	QPSK	5	H	V	16.94	33.00	Pass
					H	22.47		
2535.00	21100	16QAM	5	H	V	16.76		
					H	22.22		
Highest Channel								
2567.50	21425	QPSK	5	H	V	15.12	33.00	Pass
					H	20.95		
2567.50	21425	16QAM	5	H	V	15.15		
					H	20.98		

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	17.25	33.00	Pass
					H	22.53		
2505.00	20800	16QAM	10	H	V	16.39		
					H	21.51		
Middle Channel								
2535.00	21100	QPSK	10	H	V	16.36	33.00	Pass
					H	22.02		
2535.00	21100	16QAM	10	H	V	16.29		
					H	22.15		
Highest Channel								
2565.00	21400	QPSK	10	H	V	15.83	33.00	Pass
					H	20.48		
2565.00	21400	16QAM	10	H	V	15.30		
					H	20.39		

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	17.48	33.00	Pass
					H	22.17		
2507.50	20825	16QAM	15	H	V	16.86		
					H	21.77		
Middle Channel								
2535.00	21100	QPSK	15	H	V	16.15	33.00	Pass
					H	22.29		
2535.00	21100	16QAM	15	H	V	16.83		
					H	22.15		
Highest Channel								
2562.50	21375	QPSK	15	H	V	15.29	33.00	Pass
					H	20.39		
2562.50	21375	16QAM	15	H	V	15.31		
					H	20.86		

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	17.36	33.00	Pass
					H	22.55		
2510.00	20850	16QAM	20	H	V	16.29		
					H	21.95		
Middle Channel								
2535.00	21100	QPSK	20	H	V	16.43	33.00	Pass
					H	22.23		
2535.00	21100	16QAM	20	H	V	16.52		
					H	22.19		
Highest Channel								
2565.00	21350	QPSK	20	H	V	15.43	33.00	Pass
					H	20.84		
2565.00	21350	16QAM	20	H	V	15.33		
					H	20.15		

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	15.19	33.00	Pass
					H	9.80		
699.70	23017	16QAM	1.4	H	V	14.84		
					H	9.71		
Middle Channel								
707.50	23095	QPSK	1.4	H	V	15.11	33.00	Pass
					H	9.88		
707.50	23095	16QAM	1.4	H	V	15.36		
					H	9.89		
Highest Channel								
715.30	23173	QPSK	1.4	H	V	14.36	33.00	Pass
					H	9.04		
715.30	23173	16QAM	1.4	H	V	14.35		
					H	8.96		

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	15.69	33.00	Pass
					H	9.99		
700.50	23025	16QAM	3	H	V	14.62		
					H	9.51		
Middle Channel								
707.50	23095	QPSK	3	H	V	15.41	33.00	Pass
					H	9.35		
707.50	23095	16QAM	3	H	V	15.78		
					H	9.66		
Highest Channel								
714.50	23165	QPSK	3	H	V	14.17	33.00	Pass
					H	9.69		
714.50	23165	16QAM	3	H	V	14.95		
					H	8.98		

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	15.99	33.00	Pass
					H	9.95		
701.50	23035	16QAM	5	H	V	14.15		
					H	9.93		
Middle Channel								
707.50	23095	QPSK	5	H	V	15.78	33.00	Pass
					H	9.66		
707.50	23095	16QAM	5	H	V	15.35		
					H	9.53		
Highest Channel								
713.50	23155	QPSK	5	H	V	14.51	33.00	Pass
					H	9.17		
713.50	23155	16QAM	5	H	V	14.26		
					H	9.03		

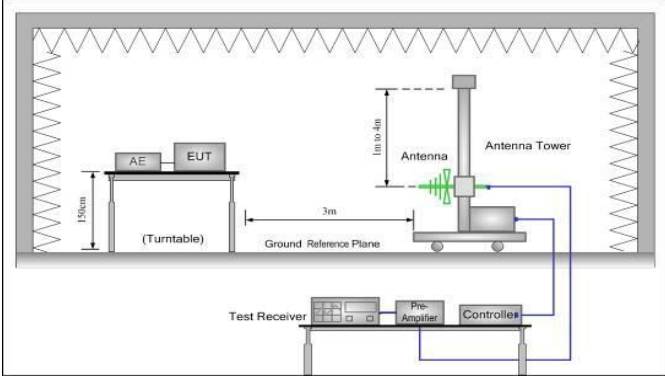
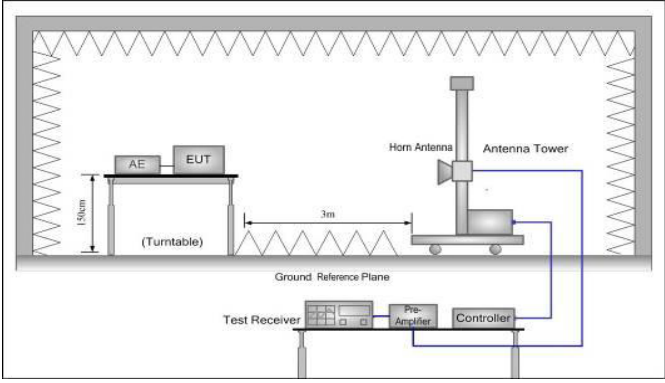
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel								
704.00	23060	QPSK	10	H	V	15.95	33.00	Pass
					H	9.71		
704.00	23060	16QAM	10	H	V	14.35		
					H	9.93		
Middle Channel								
707.50	23095	QPSK	10	H	V	15.71	33.00	Pass
					H	9.69		
707.50	23095	16QAM	10	H	V	15.52		
					H	9.65		
Highest Channel								
711.00	23130	QPSK	10	H	V	14.17	33.00	Pass
					H	9.14		
711.00	23130	16QAM	10	H	V	14.36		
					H	9.01		

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	17.63	33.00	Pass
					H	11.89		
706.50	23755	16QAM	5	H	V	17.56		
					H	11.79		
Middle Channel								
710.00	23790	QPSK	5	H	V	17.31	33.00	Pass
					H	11.61		
710.00	23790	16QAM	5	H	V	17.44		
					H	11.67		
Highest Channel								
713.50	23825	QPSK	5	H	V	15.86	33.00	Pass
					H	10.06		
713.50	23825	16QAM	5	H	V	15.89		
					H	9.93		

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	17.71	33.00	Pass
					H	11.07		
709.00	23780	16QAM	10	H	V	17.91		
					H	11.29		
Middle Channel								
710.00	23790	QPSK	10	H	V	17.85	33.00	Pass
					H	11.91		
710.00	23790	16QAM	10	H	V	17.29		
					H	11.15		
Highest Channel								
711.00	23800	QPSK	10	H	V	15.15	33.00	Pass
					H	10.89		
711.00	23800	16QAM	10	H	V	15.39		
					H	9.21		

6.6 Field strength of spurious radiation measurement

Test Requirement:	FCC Part 24.238 (a), Part 27.53(g), Part 27.53(m), Part 27.53(h), Part 22.917(a)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2, LTE Band 4, LTE Band 5 and LTE Band 17: < -13dBm, LTE Band 7: < -25dBm
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 5.8 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	-31.60	-13.00	Pass
5552.10	V	-40.76		
7402.00	V	-35.81		
3701.40	Horizontal	-32.06		
5552.10	H	-37.56		
7402.00	H	-35.41		
Middle				
3760.00	Vertical	-34.35	-13.00	Pass
5640.00	V	-40.99		
7520.00	V	-36.74		
3760.00	Horizontal	-32.87		
5640.00	H	-41.13		
7520.00	H	-36.80		
Highest				
3816.60	Vertical	-32.10	-13.00	Pass
5724.90	V	-40.38		
7633.20	V	-35.15		
3816.60	Horizontal	-36.71		
5724.90	H	-40.50		
7633.20	H	-35.68		

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	-31.33	-13.00	Pass
5554.50	V	-40.32		
7406.00	V	-35.43		
3703.00	Horizontal	-32.33		
5554.50	H	-37.74		
7406.00	H	-35.83		
Middle				
3760.00	Vertical	-34.42	-13.00	Pass
5640.00	V	-40.47		
7520.00	V	-36.50		
3760.00	Horizontal	-32.08		
5640.00	H	-41.21		
7520.00	H	-36.14		
Highest				
3817.00	Vertical	-32.42	-13.00	Pass
5725.50	V	-40.56		
7634.00	V	-35.46		
3817.00	Horizontal	-36.57		
5725.50	H	-40.08		
7634.00	H	-35.79		

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 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3705.00	Vertical	-31.38	-13.00	Pass
5557.50	V	-40.57		
7410.00	V	-35.76		
3705.00	Horizontal	-32.33		
5557.50	H	-37.74		
7410.00	H	-35.68		
Middle				
3760.00	Vertical	-34.21	-13.00	Pass
5640.00	V	-40.46		
7520.00	V	-36.14		
3760.00	Horizontal	-32.32		
5640.00	H	-41.38		
7520.00	H	-36.12		
Highest				
3815.00	Vertical	-32.27	-13.00	Pass
5722.50	V	-40.39		
7630.00	V	-35.11		
3815.00	Horizontal	-36.11		
5722.50	H	-40.12		
7630.00	H	-35.57		

Note:

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

LTE Band 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	-40.19		
7420.00	V	-35.22		
3710.00	Horizontal	-32.19		
5565.00	H	-37.12		
7420.00	H	-35.39		
Middle				
3760.00	Vertical	-34.94	-13.00	Pass
5640.00	V	-40.12		
7520.00	V	-36.16		
3760.00	Horizontal	-32.57		
5640.00	H	-41.42		
7520.00	H	-36.47		
Highest				
3810.00	Vertical	-32.57	-13.00	Pass
5715.00	V	-40.21		
7620.00	V	-35.19		
3810.00	Horizontal	-36.22		
5715.00	H	-40.13		
7620.00	H	-35.46		

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.

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	-31.74	-13.00	Pass
5572.50	V	-40.94		
7430.00	V	-35.12		
3715.00	Horizontal	-32.27		
5572.50	H	-37.39		
7430.00	H	-35.41		
Middle				
3760.00	Vertical	-34.56	-13.00	Pass
5640.00	V	-40.42		
7520.00	V	-36.21		
3760.00	Horizontal	-32.56		
5640.00	H	-41.42		
7520.00	H	-36.41		
Highest				
3805.00	Vertical	-32.74	-13.00	Pass
5707.50	V	-40.64		
7610.00	V	-35.46		
3805.00	Horizontal	-36.12		
5707.50	H	-40.15		
7610.00	H	-35.12		

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	-31.08	-13.00	Pass
5580.00	V	-40.38		
7440.00	V	-35.42		
3720.00	Horizontal	-32.69		
5580.00	H	-37.69		
7440.00	H	-35.39		
Middle				
3760.00	Vertical	-34.57	-13.00	Pass
5640.00	V	-40.56		
7520.00	V	-36.41		
3760.00	Horizontal	-32.38		
5640.00	H	-41.12		
7520.00	H	-36.19		
Highest				
3800.00	Vertical	-32.12	-13.00	Pass
5700.00	V	-40.38		
7600.00	V	-35.94		
3800.00	Horizontal	-36.19		
5700.00	H	-40.11		
7600.00	H	-35.64		

Note:

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

LTE Band 4 / 1.4 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3421.40	Vertical	-34.25	-13.00	Pass
5132.10	V	-42.54		
6842.80	V	-36.51		
3421.40	Horizontal	-32.32		
5132.10	H	-39.99		
6842.80	H	-37.15		
Middle				
3465.00	Vertical	-33.75	-13.00	Pass
5197.50	V	-42.37		
6930.00	V	-34.31		
3465.00	Horizontal	-32.08		
5197.50	H	-40.85		
6930.00	H	-36.53		
Highest				
3508.60	Vertical	-35.63	-13.00	Pass
5262.90	V	-41.96		
7017.20	V	-36.37		
3508.60	Horizontal	-27.81		
5262.90	H	-40.80		
7017.20	H	-35.54		

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	-34.42	-13.00	Pass
5134.50	V	-42.52		
6846.00	V	-36.77		
3423.00	Horizontal	-32.43		
5134.50	H	-39.27		
6846.00	H	-37.12		
Middle				
3465.00	Vertical	-33.56	-13.00	Pass
5197.50	V	-42.63		
6930.00	V	-34.46		
3465.00	Horizontal	-32.37		
5197.50	H	-40.99		
6930.00	H	-36.43		
Highest				
3507.00	Vertical	-35.16	-13.00	Pass
5260.50	V	-41.46		
7014.00	V	-36.77		
3507.00	Horizontal	-27.16		
5260.50	H	-40.56		
7014.00	H	-35.16		

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 4 / 5 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3425.00	Vertical	-34.35	-13.00	Pass
5137.50	V	-42.52		
6850.00	V	-36.79		
3425.00	Horizontal	-32.42		
5137.50	H	-39.71		
6850.00	H	-37.27		
Middle				
3465.00	Vertical	-33.49	-13.00	Pass
5197.50	V	-42.41		
6930.00	V	-34.81		
3465.00	Horizontal	-32.12		
5197.50	H	-40.99		
6930.00	H	-36.27		
Highest				
3505.00	Vertical	-35.45	-13.00	Pass
5257.50	V	-41.99		
7010.00	V	-36.14		
3505.00	Horizontal	-27.27		
5257.50	H	-40.26		
7010.00	H	-35.27		

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	-34.43	-13.00	Pass
5145.00	V	-42.27		
6860.00	V	-36.41		
3430.00	Horizontal	-32.81		
5145.00	H	-39.94		
6860.00	H	-37.12		
Middle				
3465.00	Vertical	-33.77	-13.00	Pass
5197.50	V	-42.41		
6930.00	V	-34.43		
3465.00	Horizontal	-32.49		
5197.50	H	-40.41		
6930.00	H	-36.49		
Highest				
3500.00	Vertical	-35.71	-13.00	Pass
5250.00	V	-41.63		
7000.00	V	-36.45		
3500.00	Horizontal	-27.81		
5250.00	H	-40.92		
7000.00	H	-35.12		

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	-34.27	-13.00	Pass
5152.50	V	-42.41		
6870.00	V	-36.54		
3435.00	Horizontal	-32.94		
5152.50	H	-39.92		
6870.00	H	-37.15		
Middle				
3465.00	Vertical	-33.77	-13.00	Pass
5197.50	V	-42.27		
6930.00	V	-34.27		
3465.00	Horizontal	-32.81		
5197.50	H	-40.54		
6930.00	H	-36.99		
Highest				
3495.00	Vertical	-35.37	-13.00	Pass
5242.50	V	-41.43		
6990.00	V	-36.92		
3495.00	Horizontal	-27.27		
5242.50	H	-40.43		
6990.00	H	-35.22		

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 / 20 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3440.00	Vertical	-34.46	-13.00	Pass
5160.00	V	-42.15		
6880.00	V	-36.16		
3440.00	Horizontal	-32.37		
5160.00	H	-39.54		
6880.00	H	-37.49		
Middle				
3465.00	Vertical	-33.56	-13.00	Pass
5197.50	V	-42.42		
6930.00	V	-34.27		
3465.00	Horizontal	-32.84		
5197.50	H	-40.19		
6930.00	H	-36.45		
Highest				
3490.00	Vertical	-35.16	-13.00	Pass
5235.00	V	-41.77		
6980.00	V	-36.96		
3490.00	Horizontal	-27.12		
5235.00	H	-40.35		
6980.00	H	-35.37		

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	-25.72	-13.00	Pass
2474.10	V	-52.59		
3298.80	V	-39.44		
1649.40	Horizontal	-29.98		
2474.10	H	-51.39		
3298.80	H	-40.09		
Middle				
1673.00	Vertical	-29.18	-13.00	Pass
2509.50	V	-46.99		
3346.00	V	-36.75		
1673.00	Horizontal	-30.09		
2509.50	H	-42.91		
3346.00	H	-36.62		
Highest				
1696.60	Vertical	-31.59	-13.00	Pass
2544.90	V	-47.32		
3393.20	V	-38.16		
1696.60	Horizontal	-28.97		
2544.90	H	-40.55		
3393.20	H	-37.42		

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 5 / 3 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1651.00	Vertical	-25.25	-13.00	Pass
2476.50	V	-52.76		
3302.00	V	-39.97		
1651.00	Horizontal	-29.41		
2476.50	H	-51.47		
3302.00	H	-40.16		
Middle				
1673.00	Vertical	-29.34	-13.00	Pass
2509.50	V	-46.33		
3346.00	V	-36.37		
1673.00	Horizontal	-30.71		
2509.50	H	-42.76		
3346.00	H	-36.95		
Highest				
1695.00	Vertical	-31.97	-13.00	Pass
2542.50	V	-47.34		
3390.00	V	-38.61		
1695.00	Horizontal	-28.94		
2542.50	H	-40.44		
3390.00	H	-37.37		

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	-25.08	-13.00	Pass
2479.50	V	-52.11		
3306.00	V	-39.32		
1653.00	Horizontal	-29.99		
2479.50	H	-51.18		
3306.00	H	-40.35		
Middle				
1673.00	Vertical	-29.17	-13.00	Pass
2509.50	V	-46.88		
3346.00	V	-36.95		
1673.00	Horizontal	-30.44		
2509.50	H	-42.85		
3346.00	H	-36.89		
Highest				
1693.00	Vertical	-31.62	-13.00	Pass
2539.50	V	-47.89		
3386.00	V	-38.99		
1693.00	Horizontal	-28.97		
2539.50	H	-40.33		
3386.00	H	-37.56		

Note:

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

LTE Band 5 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1658.00	Vertical	-25.11	-13.00	Pass
2487.00	V	-52.41		
3316.00	V	-39.12		
1658.00	Horizontal	-29.88		
2487.00	H	-51.89		
3316.00	H	-40.16		
Middle				
1673.00	Vertical	-29.59	-13.00	Pass
2509.50	V	-46.34		
3346.00	V	-36.99		
1673.00	Horizontal	-30.64		
2509.50	H	-42.32		
3346.00	H	-36.85		
Highest				
1688.00	Vertical	-31.89	-13.00	Pass
2532.00	V	-47.88		
3376.00	V	-38.62		
1688.00	Horizontal	-28.85		
2532.00	H	-40.17		
3376.00	H	-37.34		

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	-41.84	-25.00	Pass
7507.50	V	-35.82		
10010.00	V	-34.18		
5005.00	Horizontal	-42.75		
7507.50	H	-36.25		
10010.00	H	-33.38		
Middle				
5070.00	Vertical	-42.62	-25.00	Pass
7605.00	V	-36.70		
10140.00	V	-32.04		
5070.00	Horizontal	-41.93		
7605.00	H	-36.64		
10140.00	H	-32.06		
Highest				
5135.00	Vertical	-40.50	-25.00	Pass
7702.50	V	-34.58		
10270.00	V	-32.29		
5135.00	Horizontal	-41.16		
7702.50	H	-36.35		
10270.00	H	-32.41		

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 7 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5010.00	Vertical	-41.04	-25.00	Pass
7515.00	V	-35.26		
10020.00	V	-34.73		
5010.00	Horizontal	-42.26		
7515.00	H	-36.58		
10020.00	H	-33.99		
Middle				
5070.00	Vertical	-42.24	-25.00	Pass
7605.00	V	-36.95		
10140.00	V	-32.16		
5070.00	Horizontal	-41.24		
7605.00	H	-36.93		
10140.00	H	-36.55		
Highest				
5130.00	Vertical	-40.58	-25.00	Pass
7695.00	V	-34.24		
10260.00	V	-32.99		
5130.00	Horizontal	-41.15		
7695.00	H	-36.42		
10260.00	H	-32.93		

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	-41.51	-25.00	Pass
7522.50	V	-35.77		
10030.00	V	-34.24		
5015.00	Horizontal	-42.38		
7522.50	H	-36.02		
10030.00	H	-33.74		
Middle				
5070.00	Vertical	-42.36	-25.00	Pass
7605.00	V	-36.41		
10140.00	V	-32.35		
5070.00	Horizontal	-41.83		
7605.00	H	-36.76		
10140.00	H	-32.58		
Highest				
5125.00	Vertical	-40.16	-25.00	Pass
7687.50	V	-34.24		
10250.00	V	-32.71		
5125.00	Horizontal	-41.71		
7687.50	H	-36.31		
10250.00	H	-32.42		

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 7 / 20 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5020.00	Vertical	-41.35	-25.00	Pass
7530.00	V	-35.78		
10040.00	V	-34.76		
5020.00	Horizontal	-42.35		
7530.00	H	-36.76		
10040.00	H	-33.61		
Middle				
5070.00	Vertical	-42.73	-25.00	Pass
7605.00	V	-36.93		
10140.00	V	-32.71		
5070.00	Horizontal	-41.26		
7605.00	H	-36.83		
10140.00	H	-36.78		
Highest				
5120.00	Vertical	-40.26	-25.00	Pass
7680.00	V	-34.26		
10240.00	V	-32.58		
5120.00	Horizontal	-41.24		
7680.00	H	-36.15		
10240.00	H	-32.99		

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 12 / 1.4 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1399.40	Vertical	-26.17	-13.00	Pass
2099.10	V	-56.89		
2798.80	V	-50.75		
1399.40	Horizontal	-27.06		
2099.10	H	-56.73		
2798.80	H	-51.63		
Middle				
1415.00	Vertical	-27.58	-13.00	Pass
2122.50	V	-50.21		
2830.00	V	-47.11		
1415.00	Horizontal	-27.59		
2122.50	H	-48.82		
2830.00	H	-45.27		
Highest				
1430.60	Vertical	-26.83	-13.00	Pass
2145.90	V	-49.84		
2861.20	V	-43.18		
1430.60	Horizontal	-26.54		
2145.90	H	-47.16		
2861.20	H	-41.22		

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 12 / 3 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1401.00	Vertical	-26.45	-13.00	Pass
2101.50	V	-56.52		
2802.00	V	-50.65		
1401.00	Horizontal	-27.65		
2101.50	H	-56.91		
2802.00	H	-51.32		
Middle				
1415.00	Vertical	-27.03	-13.00	Pass
2122.50	V	-50.47		
2830.00	V	-47.16		
1415.00	Horizontal	-27.34		
2122.50	H	-48.28		
2830.00	H	-45.13		
Highest				
1429.00	Vertical	-26.03	-13.00	Pass
2143.50	V	-49.54		
2858.00	V	-43.13		
1429.00	Horizontal	-26.99		
2143.50	H	-47.67		
2858.00	H	-41.34		

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	-26.03	-13.00	Pass
2104.50	V	-56.54		
2806.00	V	-50.22		
1403.00	Horizontal	-27.89		
2104.50	H	-56.35		
2806.00	H	-51.91		
Middle				
1415.00	Vertical	-27.91	-13.00	Pass
2122.50	V	-50.67		
2830.00	V	-47.61		
1415.00	Horizontal	-27.16		
2122.50	H	-48.52		
2830.00	H	-45.65		
Highest				
1427.00	Vertical	-26.45	-13.00	Pass
2410.50	V	-49.13		
2854.00	V	-43.66		
1427.00	Horizontal	-26.91		
2410.50	H	-47.65		
2854.00	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 12 / 10 MHz / RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1408.00	Vertical	-26.97	-13.00	Pass
2112.00	V	-56.03		
2816.00	V	-50.67		
1408.00	Horizontal	-27.03		
2112.00	H	-56.36		
2816.00	H	-51.46		
Middle				
1415.00	Vertical	-27.49	-13.00	Pass
2122.50	V	-50.65		
2830.00	V	-47.32		
1415.00	Horizontal	-27.52		
2122.50	H	-48.97		
2830.00	H	-45.32		
Highest				
1422.00	Vertical	-26.28	-13.00	Pass
2133.00	V	-49.52		
2844.00	V	-43.97		
1422.00	Horizontal	-26.65		
2133.00	H	-47.03		
2844.00	H	-41.54		

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	-23.18	-13.00	Pass
2119.50	V	-48.35		
2826.00	V	-42.62		
1413.00	Horizontal	-22.98		
2119.50	H	-43.01		
2826.00	H	-42.61		
Middle				
1420.00	Vertical	-25.82	-13.00	Pass
2130.00	V	-44.45		
2840.00	V	-44.27		
1420.00	Horizontal	-26.39		
2130.00	H	-43.18		
2840.00	H	-44.36		
Highest				
1427.00	Vertical	-29.09	-13.00	Pass
2140.50	V	-45.76		
2854.00	V	-47.94		
1427.00	Horizontal	-26.23		
2140.50	H	-42.60		
2854.00	H	-45.46		

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.

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	-23.52	-13.00	Pass
2127.00	V	-48.41		
2836.00	V	-42.76		
1418.00	Horizontal	-52.14		
2127.00	H	-43.21		
2836.00	H	-42.67		
Middle				
1420.00	Vertical	-25.18	-13.00	Pass
2130.00	V	-44.67		
2840.00	V	-44.16		
1420.00	Horizontal	-26.34		
2130.00	H	-43.77		
2840.00	H	-44.45		
Highest				
1422.00	Vertical	-29.12	-13.00	Pass
2133.00	V	-45.45		
2844.00	V	-47.19		
1422.00	Horizontal	-26.99		
2133.00	H	-42.51		
2844.00	H	-45.94		

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.

1.1 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 5.8 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	174	0.092553	±2.5	Pass
	-20	144	0.076596		
	-10	123	0.065426		
	0	105	0.055851		
	10	146	0.077660		
	20	155	0.082447		
	30	169	0.089894		
	40	114	0.060638		
	50	136	0.072340		
16QAM					
3.80	-30	174	0.092553	±2.5	Pass
	-20	188	0.100000		
	-10	190	0.101064		
	0	163	0.086702		
	10	154	0.081915		
	20	135	0.071809		
	30	162	0.086170		
	40	180	0.095745		
	50	174	0.092553		

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	176	0.101587	±2.5	Pass
	-20	152	0.087734		
	-10	146	0.084271		
	0	138	0.079654		
	10	159	0.091775		
	20	147	0.084848		
	30	191	0.110245		
	40	123	0.070996		
	50	158	0.091198		
16QAM					
3.80	-30	163	0.094084	±2.5	Pass
	-20	157	0.090620		
	-10	181	0.104473		
	0	136	0.078499		
	10	146	0.084271		
	20	149	0.086003		
	30	179	0.103319		
	40	168	0.096970		
	50	148	0.085426		

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	186	0.222355	±2.5	Pass
	-20	144	0.172146		
	-10	136	0.162582		
	0	128	0.153019		
	10	170	0.203228		
	20	163	0.194860		
	30	125	0.149432		
	40	146	0.174537		
	50	138	0.164973		
16QAM					
3.80	-30	176	0.210400	±2.5	Pass
	-20	125	0.149432		
	-10	160	0.191273		
	0	143	0.170950		
	10	126	0.150628		
	20	159	0.190078		
	30	147	0.175732		
	40	102	0.121937		
	50	126	0.150628		

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	163	0.064300	±2.5	Pass
	-20	125	0.049310		
	-10	104	0.041026		
	0	125	0.049310		
	10	162	0.063905		
	20	179	0.070611		
	30	115	0.045365		
	40	136	0.053649		
	50	189	0.074556		
16QAM					
3.80	-30	174	0.068639	±2.5	Pass
	-20	156	0.061538		
	-10	135	0.053254		
	0	128	0.050493		
	10	136	0.053649		
	20	159	0.062722		
	30	178	0.070217		
	40	190	0.074951		
	50	156	0.061538		

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	176	0.248763	±2.5	Pass
	-20	122	0.172438		
	-10	149	0.210601		
	0	138	0.195053		
	10	157	0.221908		
	20	108	0.152650		
	30	125	0.176678		
	40	136	0.192226		
	50	178	0.251590		
16QAM					
3.80	-30	159	0.224735	±2.5	Pass
	-20	136	0.192226		
	-10	146	0.206360		
	0	125	0.176678		
	10	116	0.163958		
	20	133	0.187986		
	30	149	0.210601		
	40	158	0.223322		
	50	107	0.151237		

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					
3.80	-30	176	0.247887	±2.5	Pass
	-20	152	0.214085		
	-10	163	0.229577		
	0	192	0.270423		
	10	147	0.207042		
	20	163	0.229577		
	30	158	0.222535		
	40	126	0.177465		
	50	136	0.191549		
16QAM					
3.80	-30	147	0.207042	±2.5	Pass
	-20	123	0.173239		
	-10	105	0.147887		
	0	156	0.219718		
	10	179	0.252113		
	20	156	0.219718		
	30	136	0.191549		
	40	128	0.180282		
	50	174	0.245070		

Note: Only the worst case shown in the report.

1.2 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 5.8 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					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	69	0.036702	±2.5	Pass
	3.80	85	0.045213		
	3.50	63	0.033511		
16QAM					
25	4.35	74	0.039362	±2.5	Pass
	3.80	90	0.047872		
	3.50	88	0.046809		

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	75	0.043290	±2.5	Pass
	3.80	69	0.039827		
	3.50	77	0.044444		
16QAM					
25	4.35	89	0.051371	±2.5	Pass
	3.80	75	0.043290		
	3.50	63	0.036364		

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	75	0.089659	±2.5	Pass
	3.80	85	0.101614		
	3.50	90	0.107591		
16QAM					
25	4.35	77	0.092050	±2.5	Pass
	3.80	86	0.102809		
	3.50	78	0.093246		

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	63	0.024852	±2.5	Pass
	3.80	78	0.030769		
	3.50	95	0.037475		
16QAM					
25	4.35	74	0.029191	±2.5	Pass
	3.80	63	0.024852		
	3.50	89	0.035108		

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	75	0.106007	±2.5	Pass
	3.80	87	0.122968		
	3.50	89	0.125795		
16QAM					
25	4.35	78	0.110247	±2.5	Pass
	3.80	88	0.124382		
	3.50	63	0.089046		

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	78	0.109859	±2.5	Pass
	3.80	96	0.135211		
	3.50	85	0.119718		
16QAM					
25	4.35	76	0.107042	±2.5	Pass
	3.80	89	0.125352		
	3.50	95	0.133803		

Note: Only the worst case shown in the report.