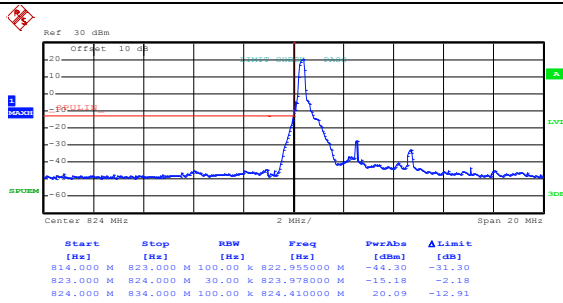
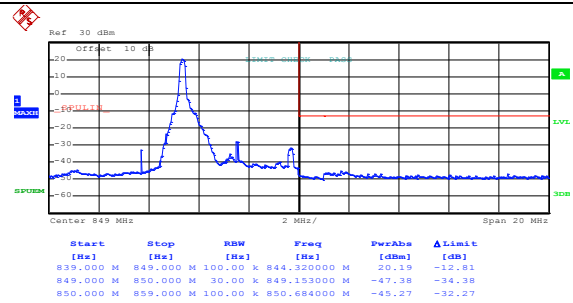


LTE Band 5, BW: 5MHz
16QAM & RB Size 1

Date: 18.JUL.2018 08:49:56

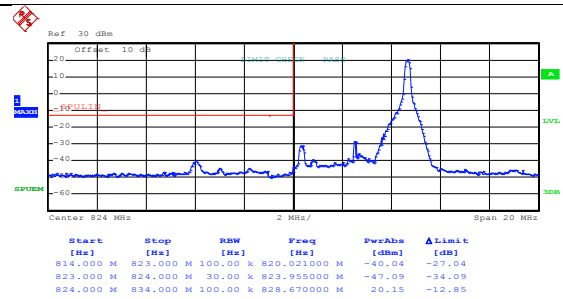
Lowest channel



Date: 18.JUL.2018 08:51:21

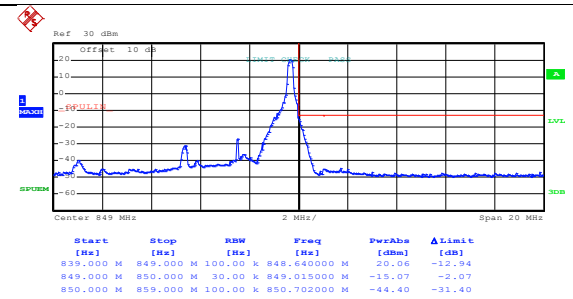
Highest channel

16QAM & RB Size 24



Date: 18.JUL.2018 08:50:13

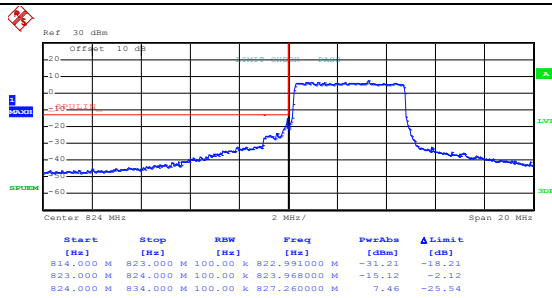
Lowest channel



Date: 18.JUL.2018 08:51:38

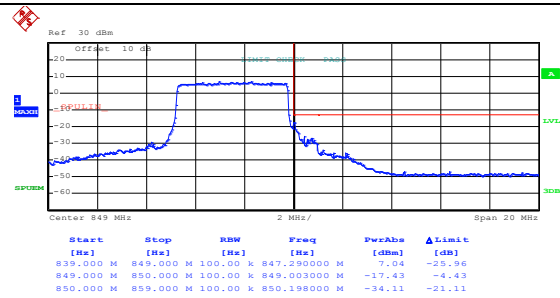
Highest channel

16QAM & RB Size 25



Date: 18.JUL.2018 08:50:42

Lowest channel

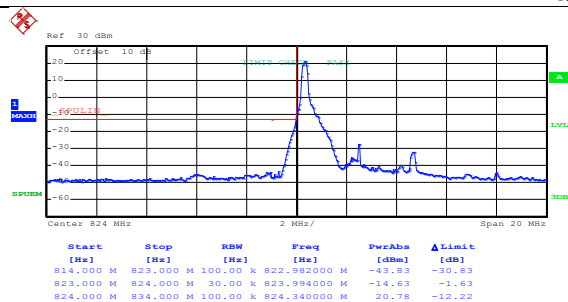


Date: 18.JUL.2018 08:52:03

Highest channel

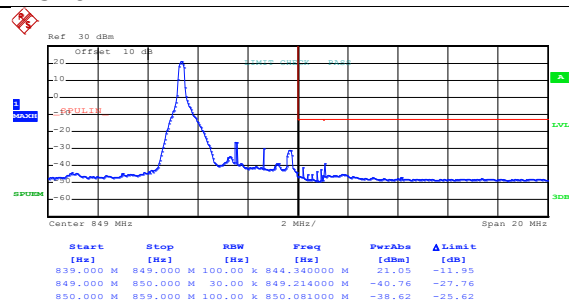
LTE Band 5, BW: 5MHz

QPSK & RB Size 1



Date: 18.JUL.2018 08:49:50

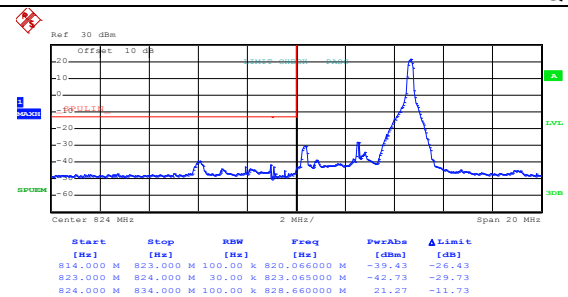
Lowest channel



Date: 18.JUL.2018 08:51:15

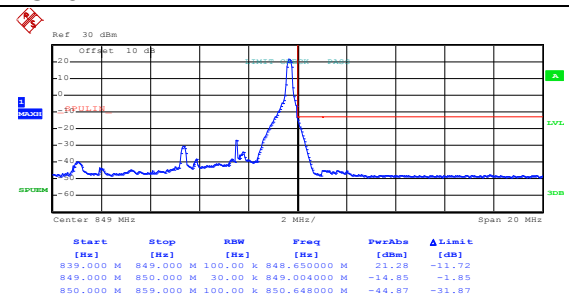
Highest channel

QPSK & RB Size 24



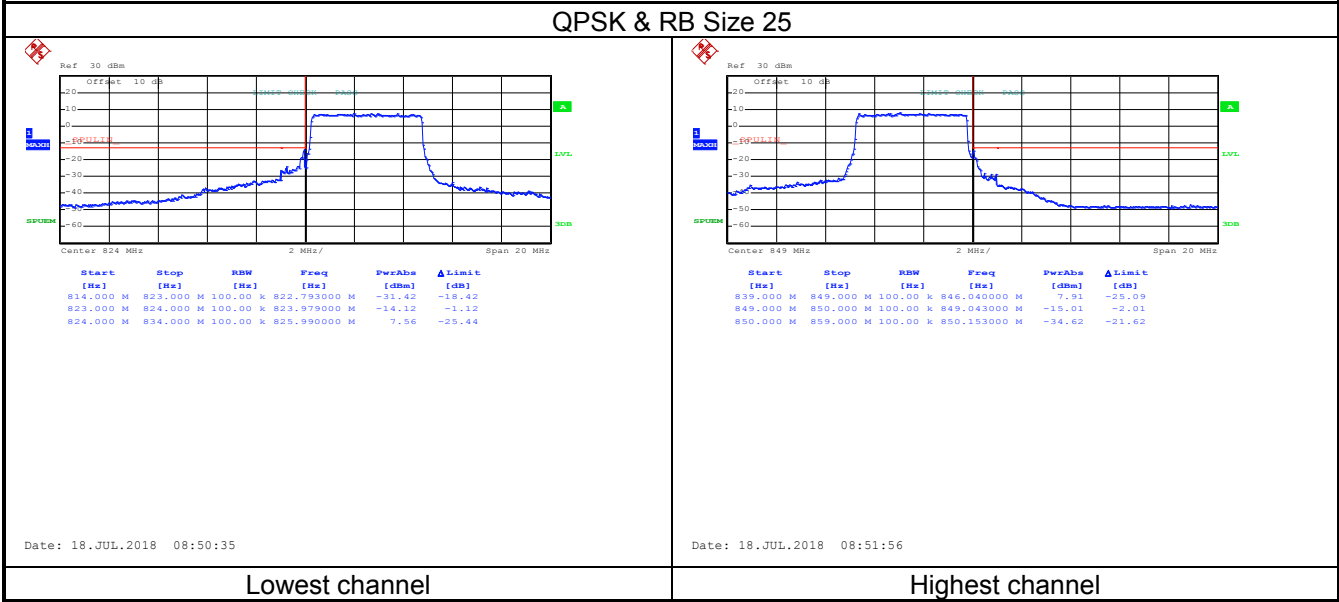
Date: 18.JUL.2018 08:50:06

Lowest channel



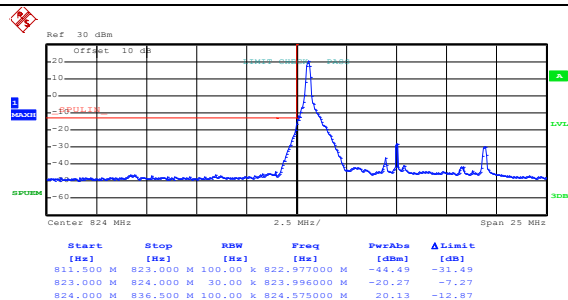
Date: 18.JUL.2018 08:51:31

Highest channel



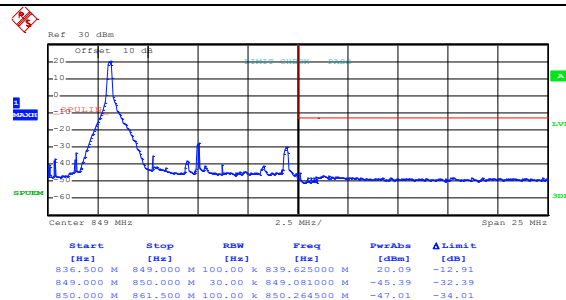
LTE Band 5, BW: 10MHz

16QAM & RB Size 1



Date: 18.JUL.2018 08:53:01

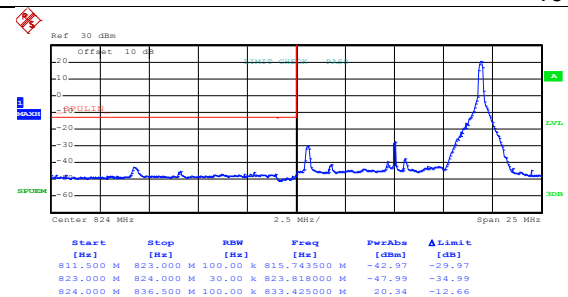
Lowest channel



Date: 18.JUL.2018 08:54:17

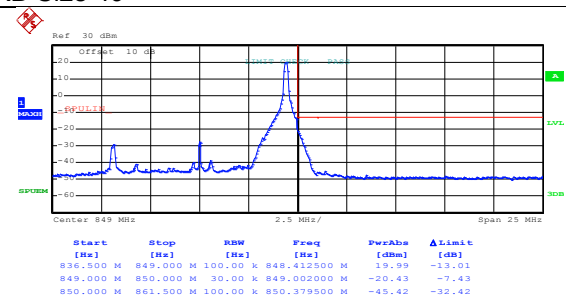
Highest channel

16QAM & RB Size 49



Date: 18.JUL.2018 08:53:18

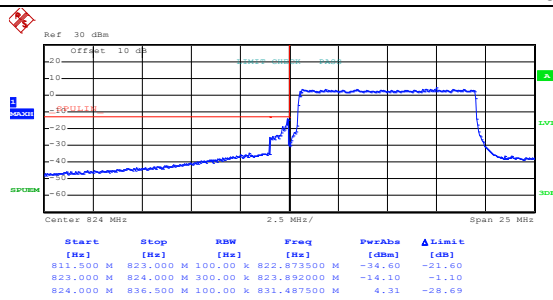
Lowest channel



Date: 18.JUL.2018 08:54:34

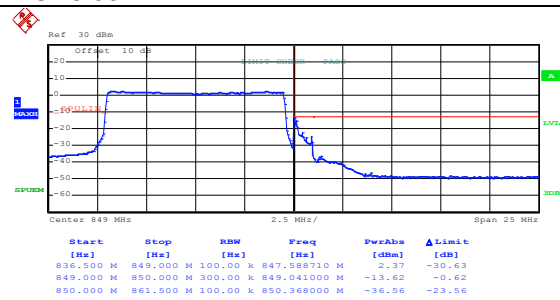
Highest channel

16QAM & RB Size 50



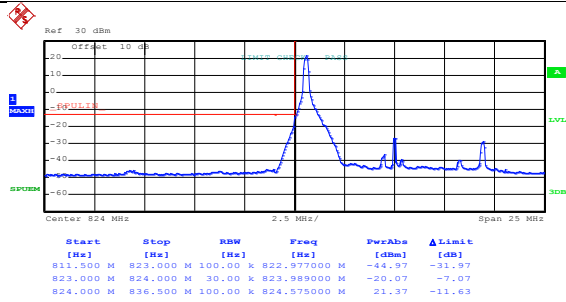
Date: 18.JUL.2018 08:53:42

Lowest channel



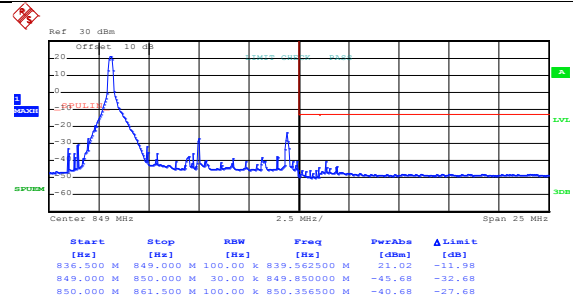
Date: 18.JUL.2018 08:55:34

Highest channel

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

Date: 18.JUL.2018 08:52:52

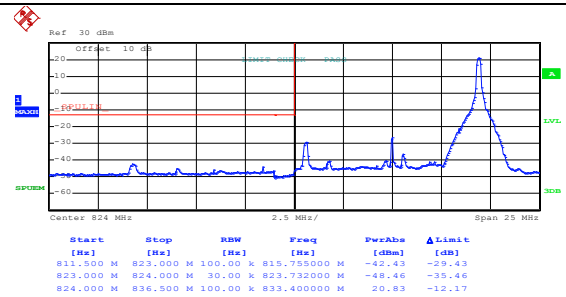
Lowest channel



Date: 18.JUL.2018 08:54:11

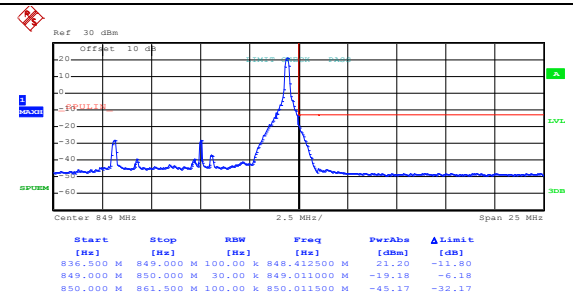
Highest channel

QPSK & RB Size 49



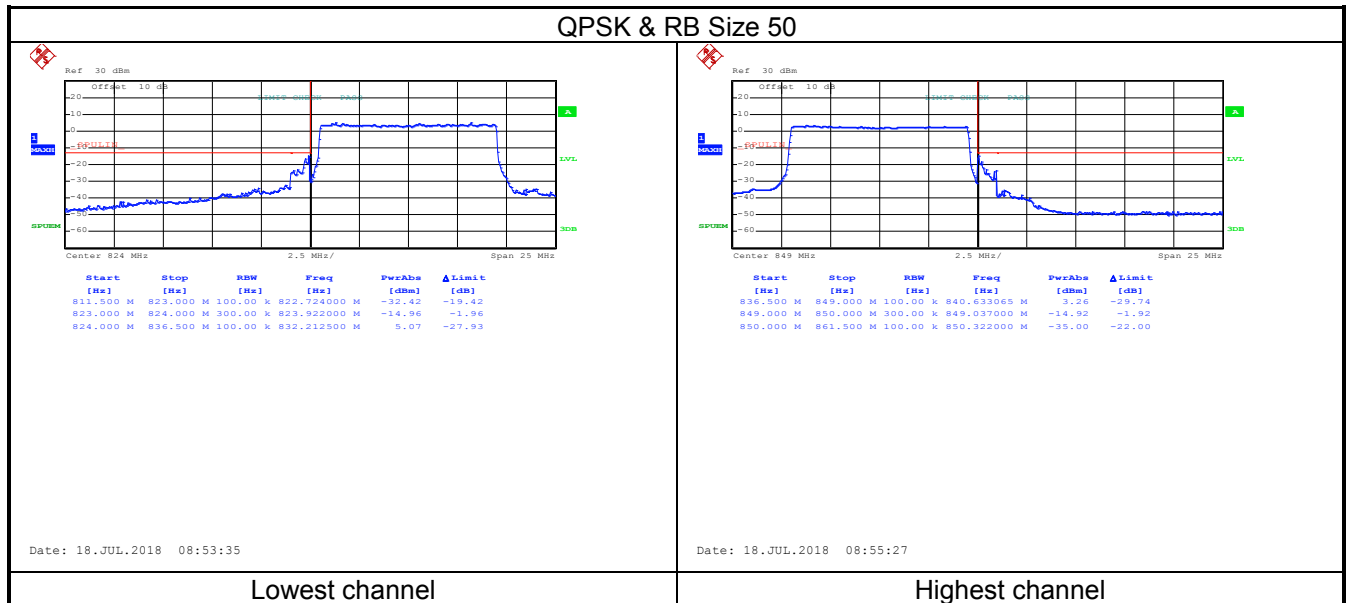
Date: 18.JUL.2018 08:53:11

Lowest channel

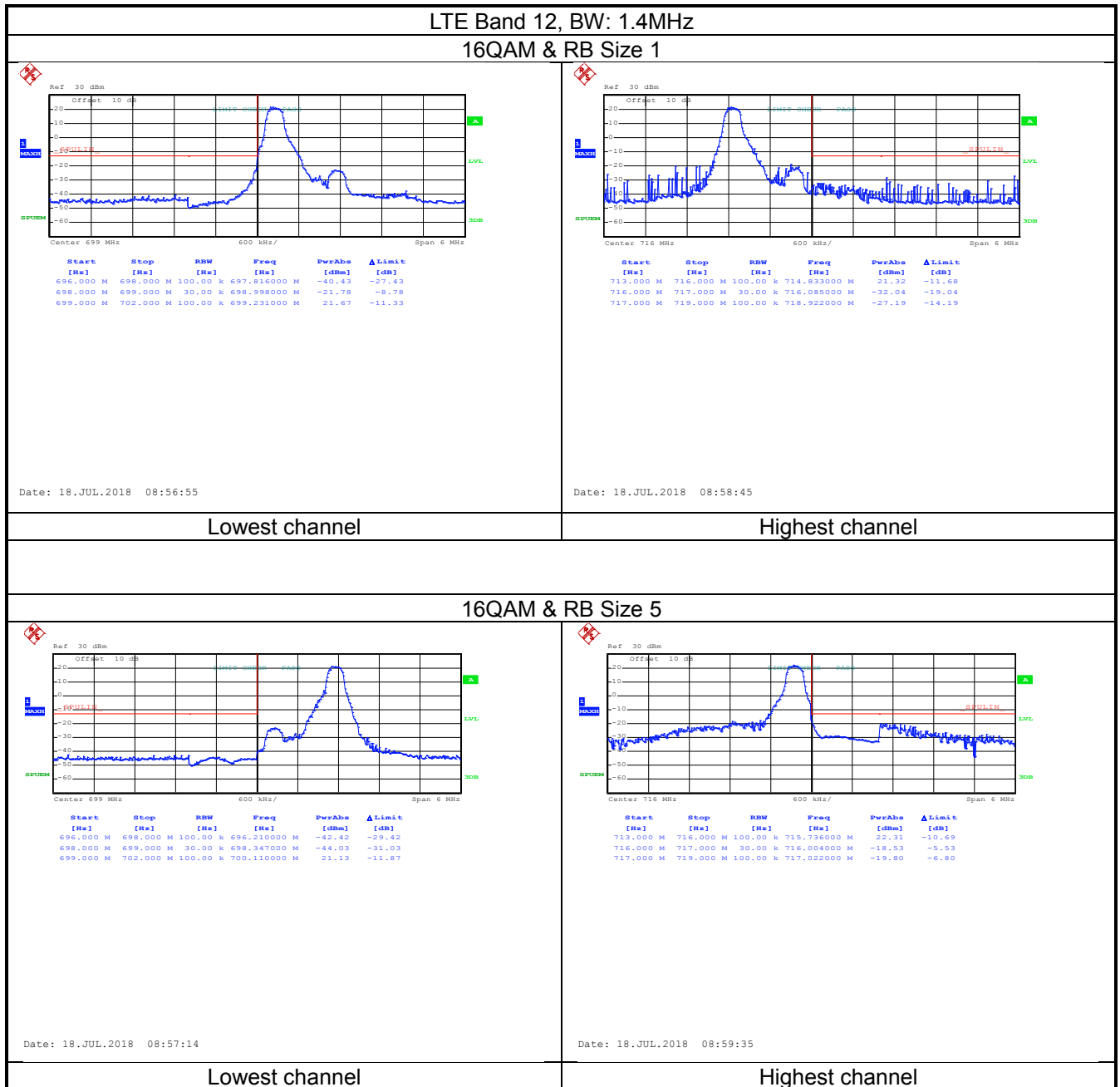


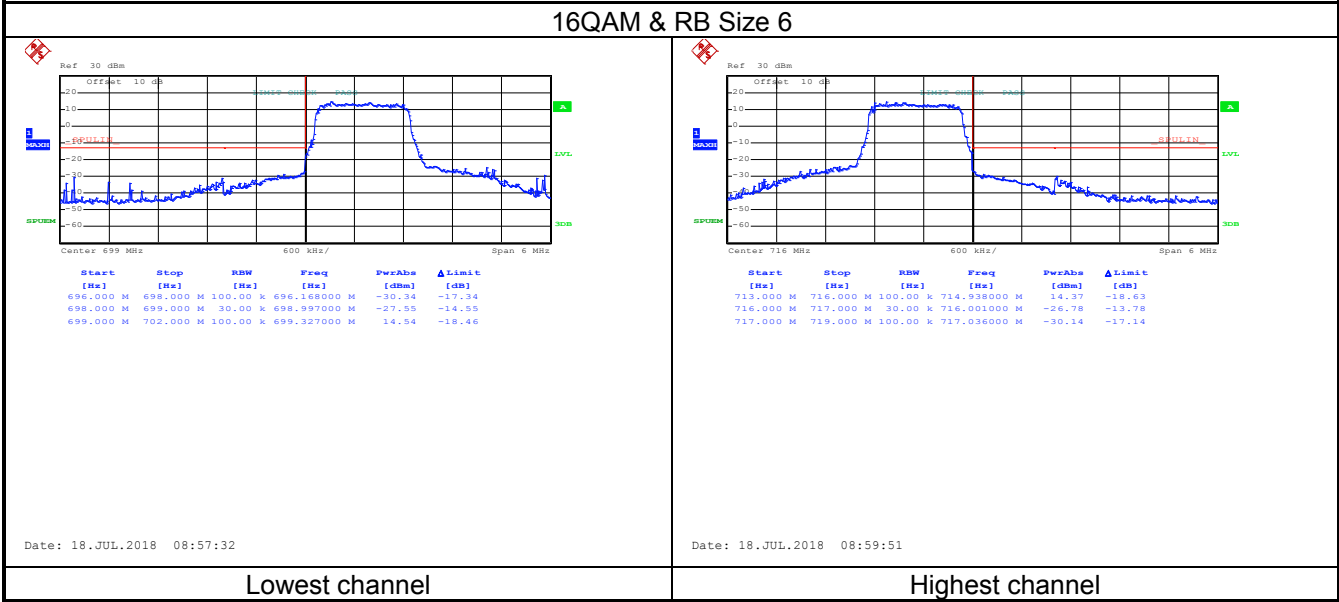
Date: 18.JUL.2018 08:54:27

Highest channel



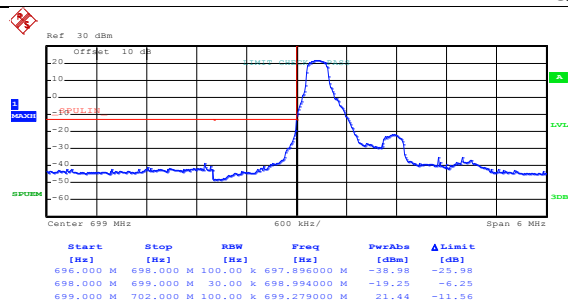
LTE band 12 part:





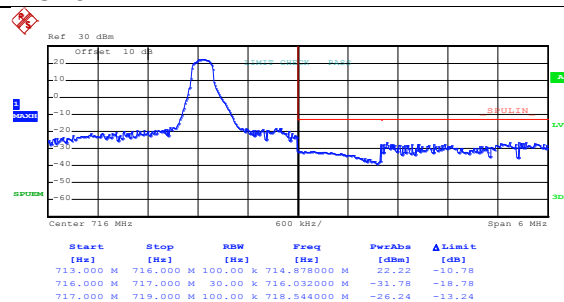
LTE Band 12, BW: 1.4MHz

QPSK & RB Size 1



Date: 18.JUL.2018 08:56:47

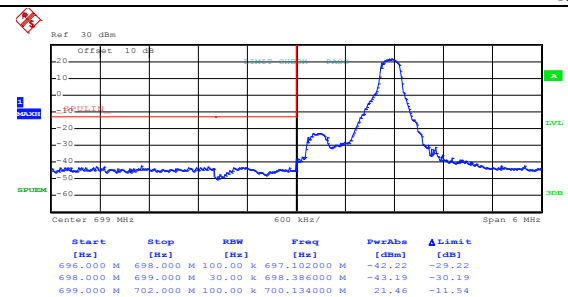
Lowest channel



Date: 18.JUL.2018 08:58:38

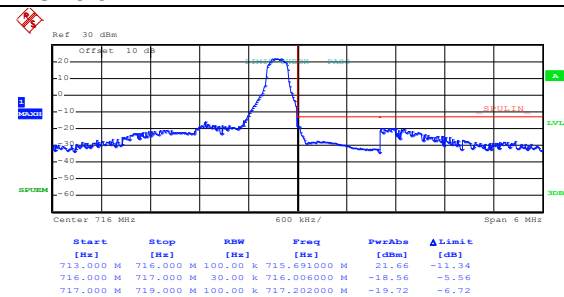
Highest channel

QPSK & RB Size 5



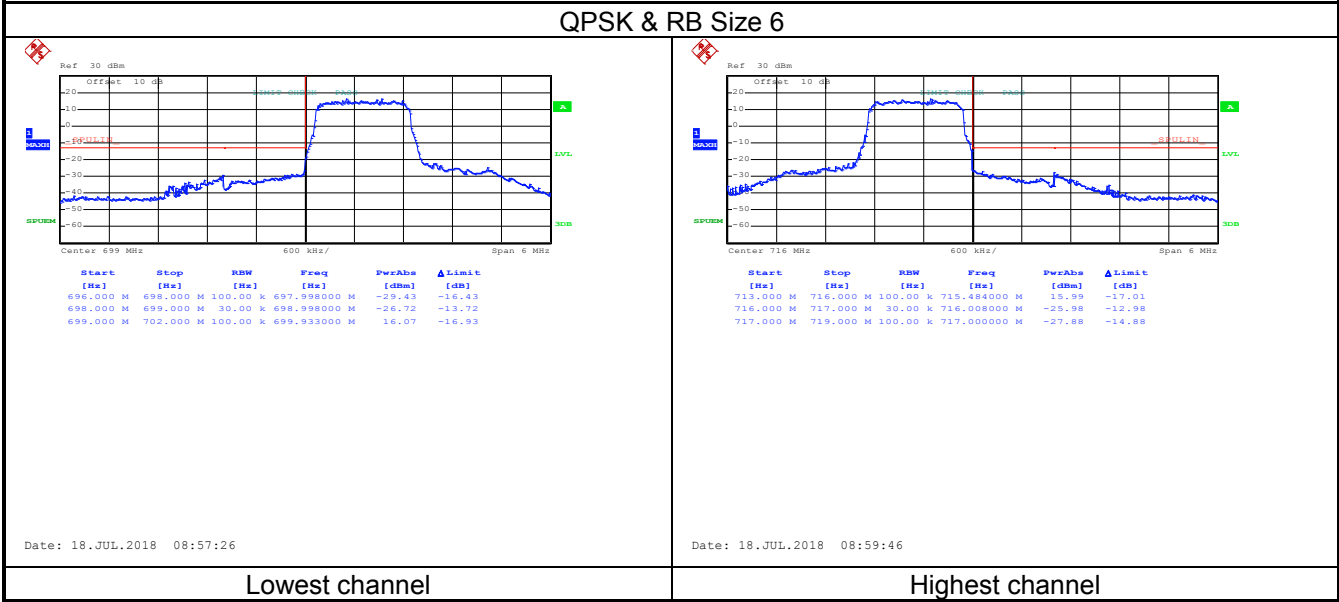
Date: 18.JUL.2018 08:57:05

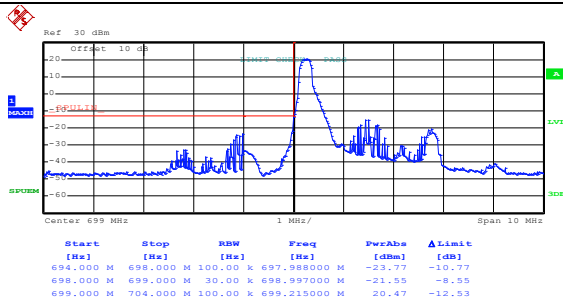
Lowest channel



Date: 18.JUL.2018 08:59:13

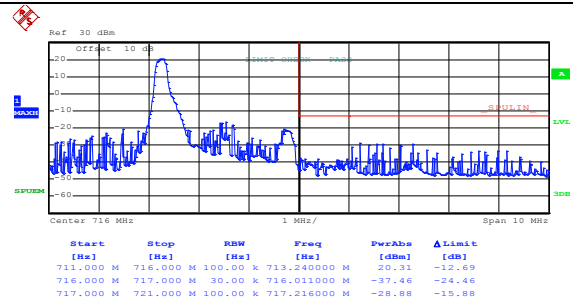
Highest channel



LTE Band 12, BW: 3MHz
16QAM & RB Size 1

Date: 18.JUL.2018 09:00:46

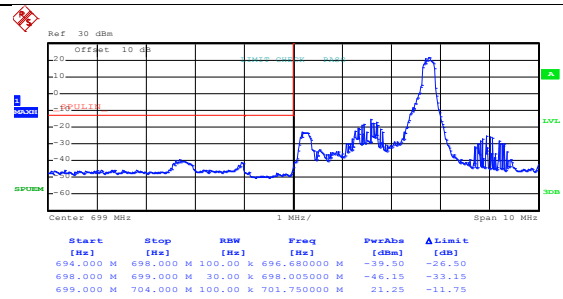
Lowest channel



Date: 18.JUL.2018 09:02:21

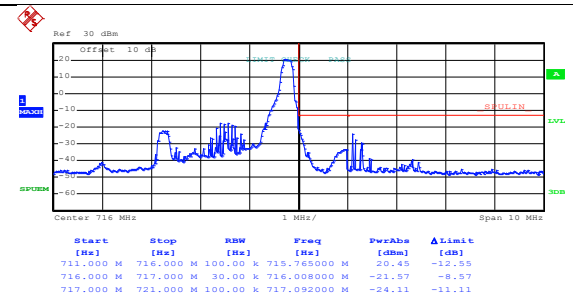
Highest channel

16QAM & RB Size 14



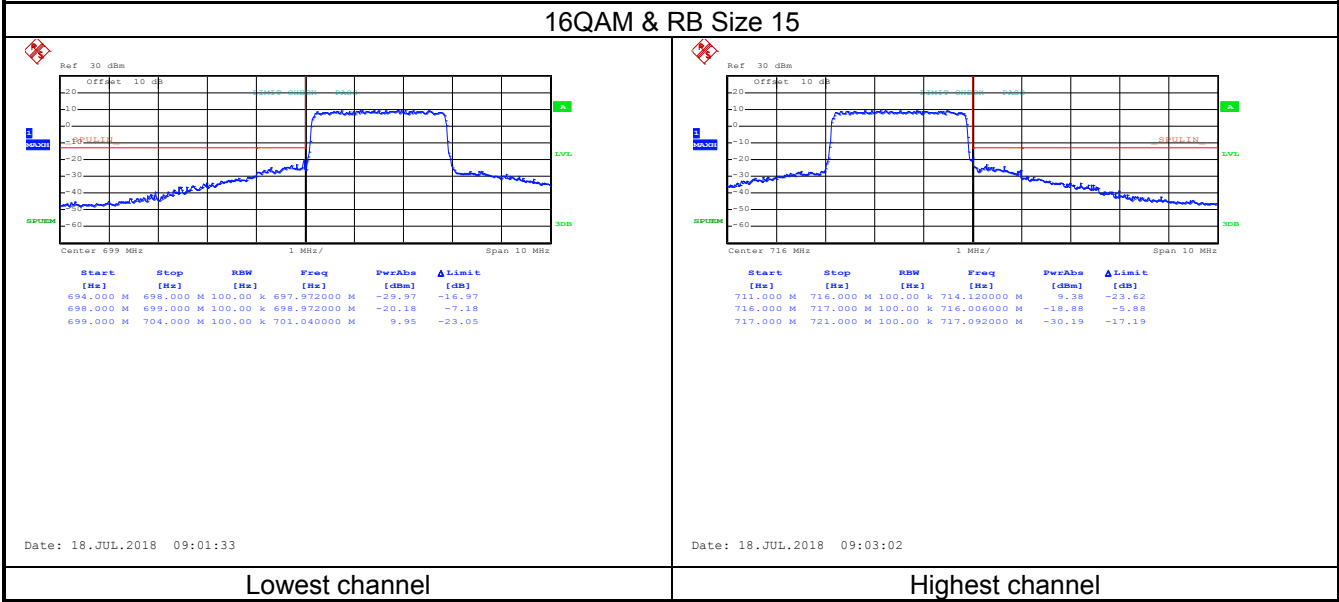
Date: 18.JUL.2018 09:01:09

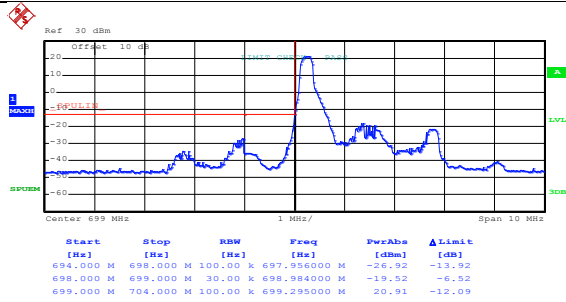
Lowest channel



Date: 18.JUL.2018 09:02:36

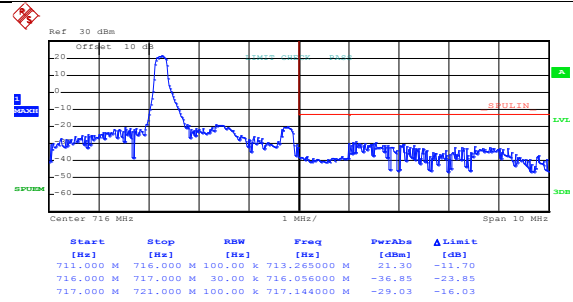
Highest channel



LTE Band 12, BW: 3MHz
QPSK & RB Size 1

Date: 18.JUL.2018 09:00:36

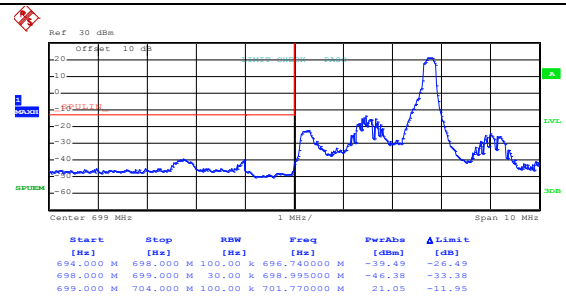
Lowest channel



Date: 18.JUL.2018 09:02:13

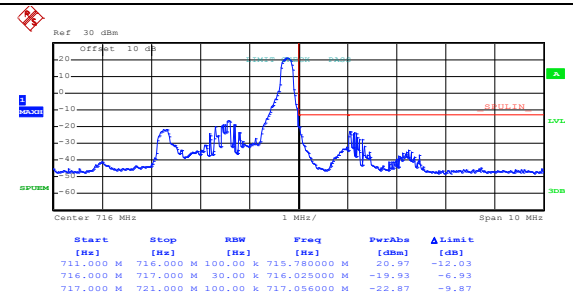
Highest channel

QPSK & RB Size 14



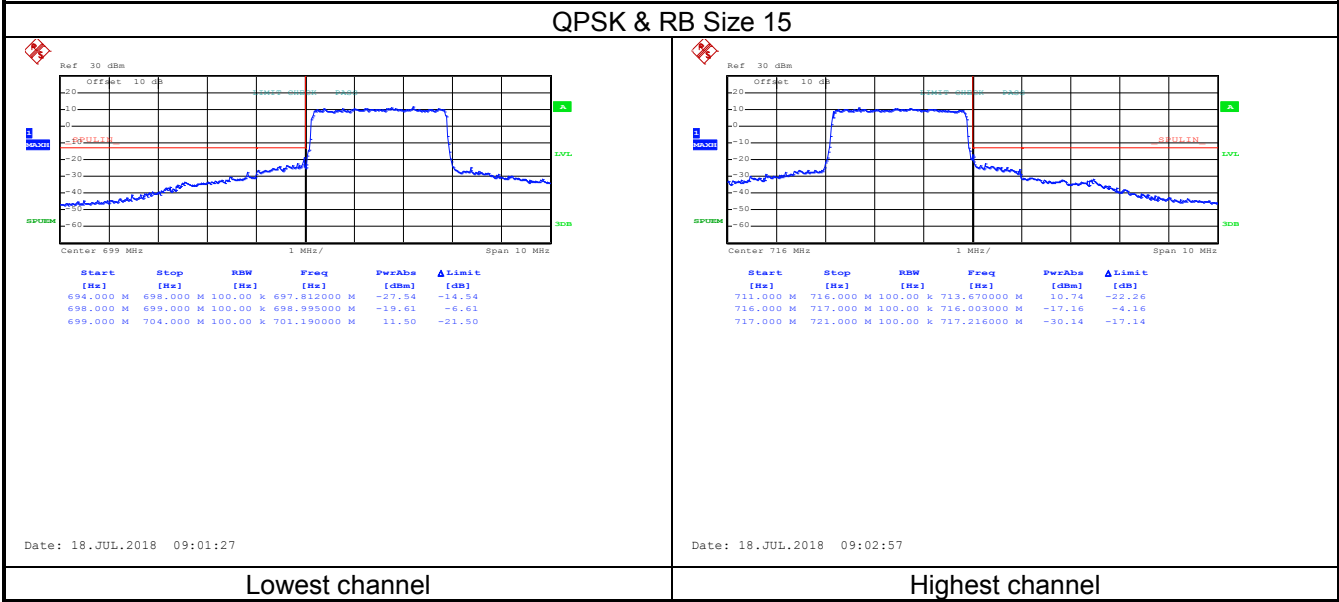
Date: 18.JUL.2018 09:00:59

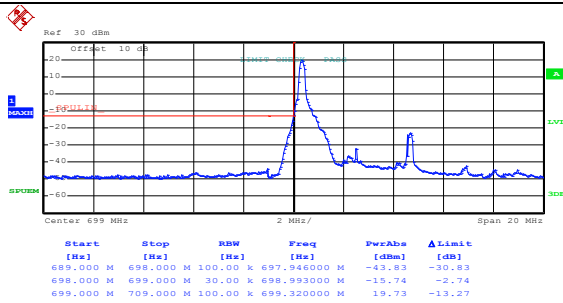
Lowest channel



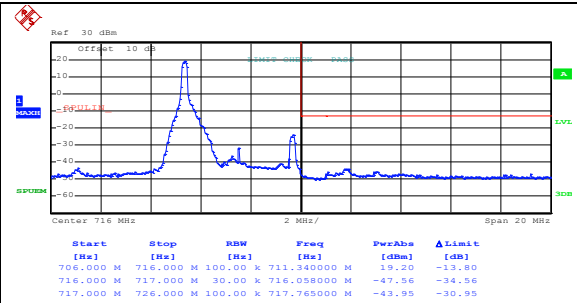
Date: 18.JUL.2018 09:02:29

Highest channel



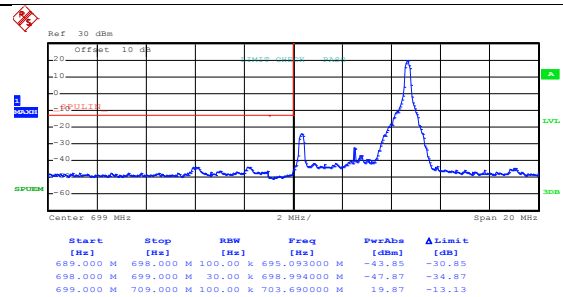
LTE Band 12, BW: 5MHz
16QAM & RB Size 1

Lowest channel

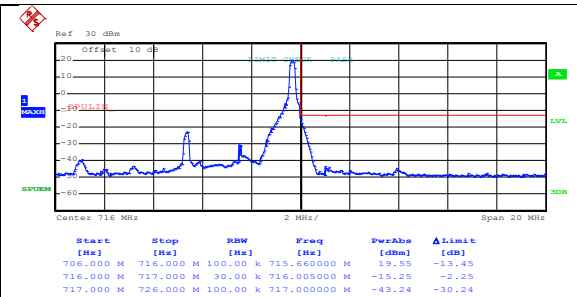


Highest channel

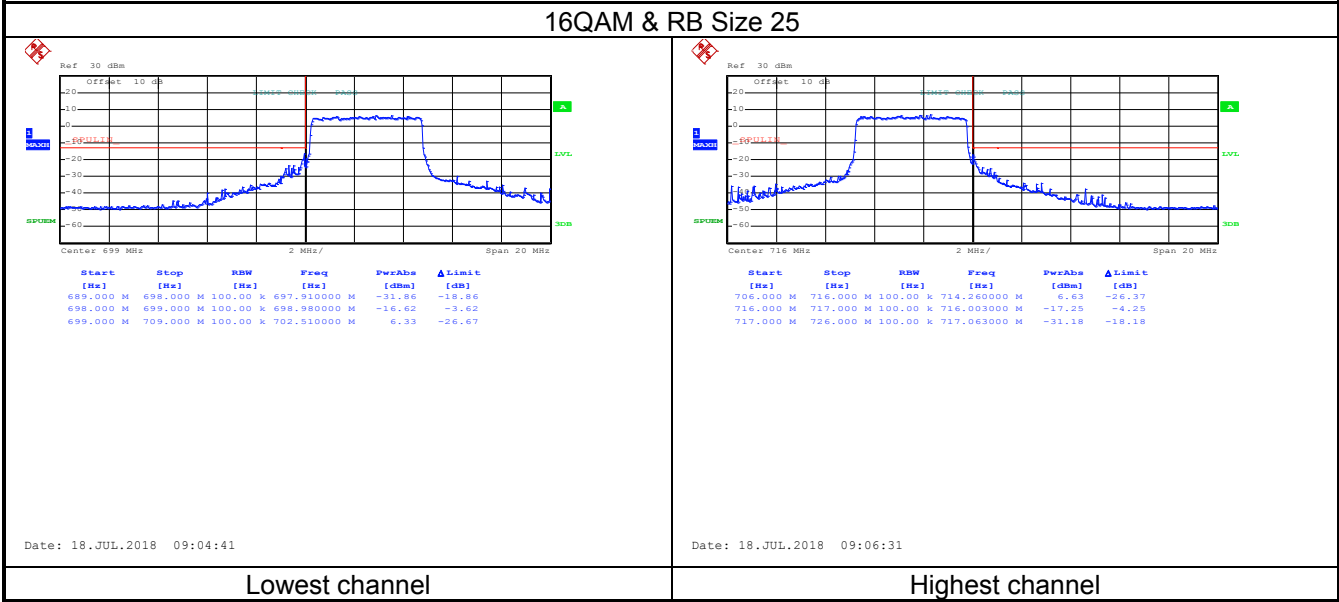
16QAM & RB Size 24



Lowest channel

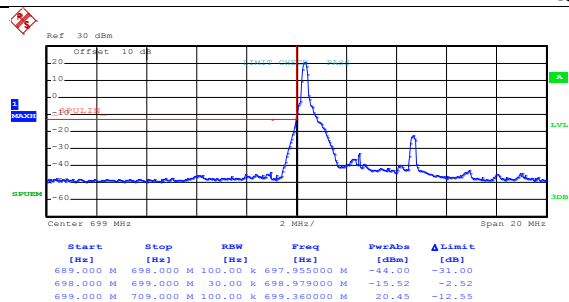


Highest channel



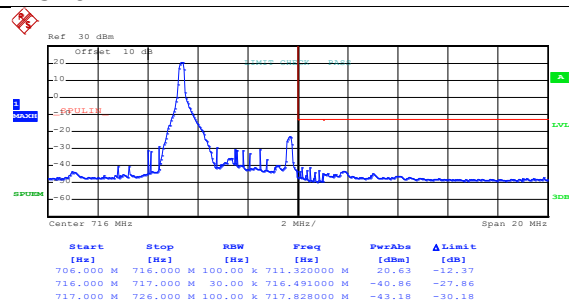
LTE Band 12, BW: 5MHz

QPSK & RB Size 1



Date: 18.JUL.2018 09:03:50

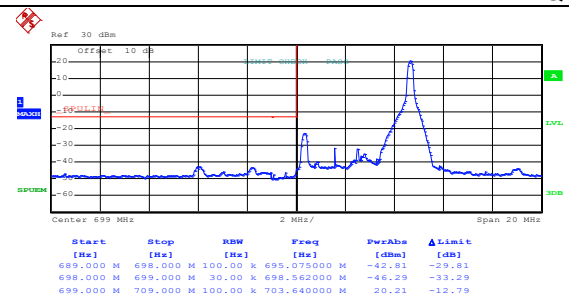
Lowest channel



Date: 18.JUL.2018 09:05:43

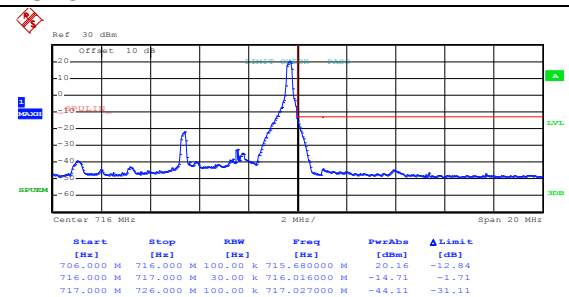
Highest channel

QPSK & RB Size 24



Date: 18.JUL.2018 09:04:06

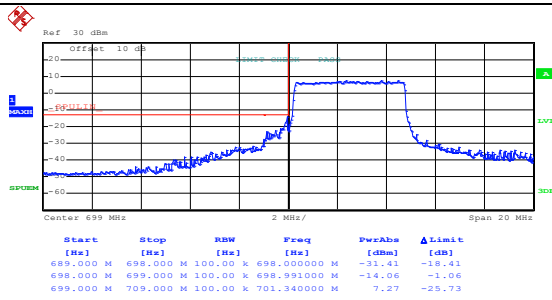
Lowest channel



Date: 18.JUL.2018 09:05:59

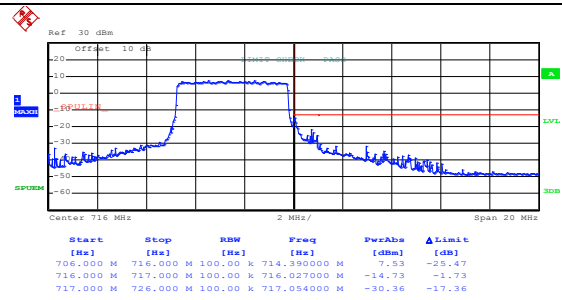
Highest channel

QPSK & RB Size 25



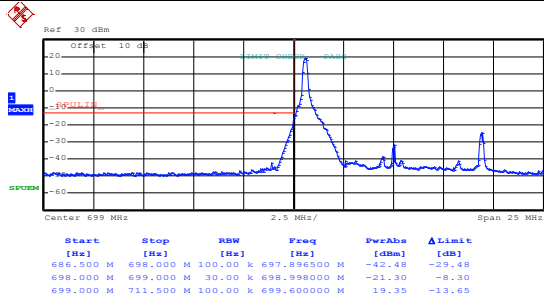
Date: 18.JUL.2018 09:04:35

Lowest channel



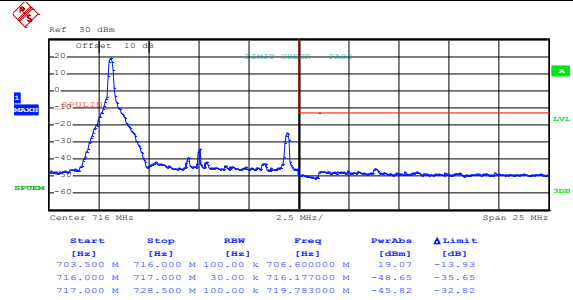
Date: 18.JUL.2018 09:06:26

Highest channel

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

Date: 18.JUL.2018 09:07:20

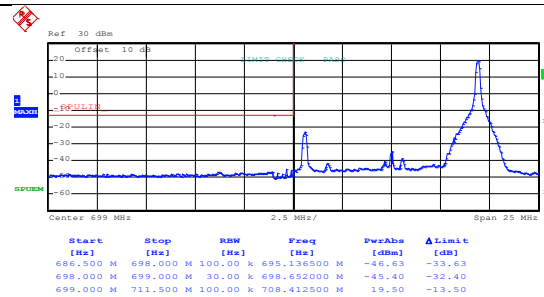
Lowest channel



Date: 18.JUL.2018 09:08:41

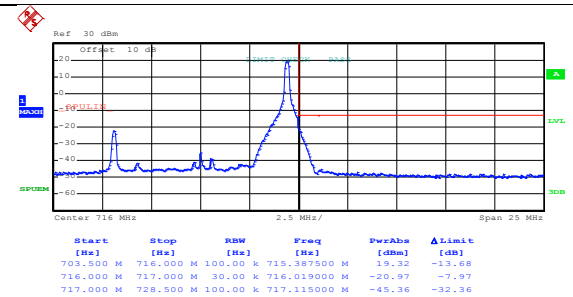
Highest channel

16QAM & RB Size 49



Date: 18.JUL.2018 09:07:36

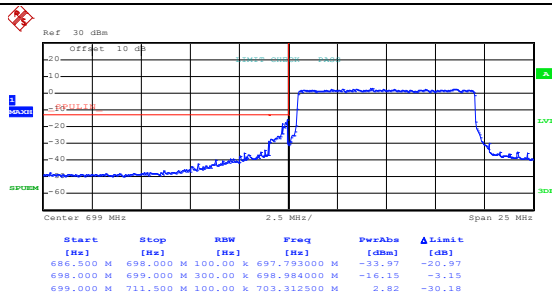
Lowest channel



Date: 18.JUL.2018 09:09:01

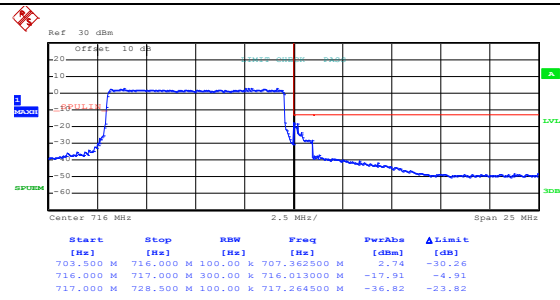
Highest channel

16QAM & RB Size 50



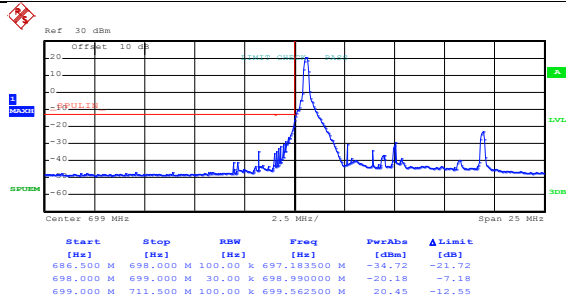
Date: 18.JUL.2018 09:08:13

Lowest channel



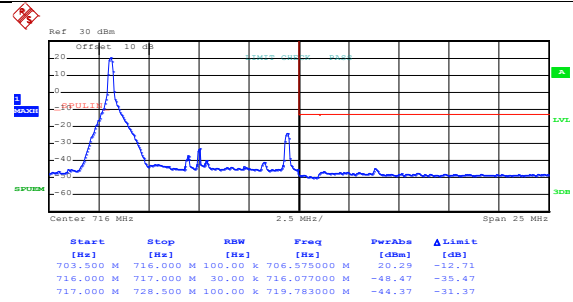
Date: 18.JUL.2018 09:09:37

Highest channel

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

Date: 18.JUL.2018 09:07:14

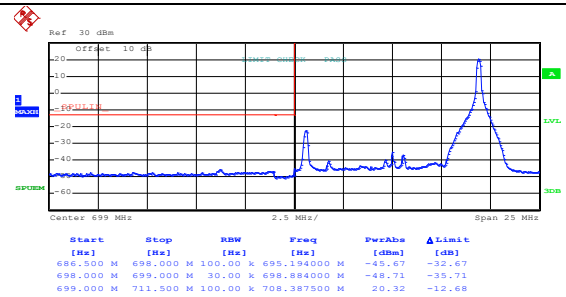
Lowest channel



Date: 18.JUL.2018 09:08:35

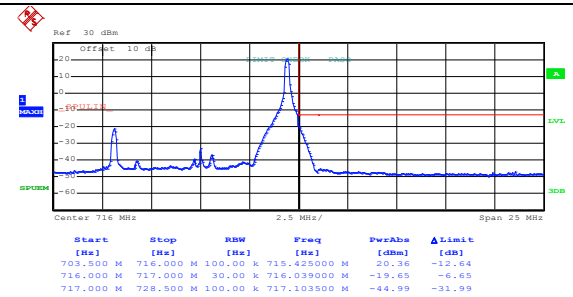
Highest channel

QPSK & RB Size 49



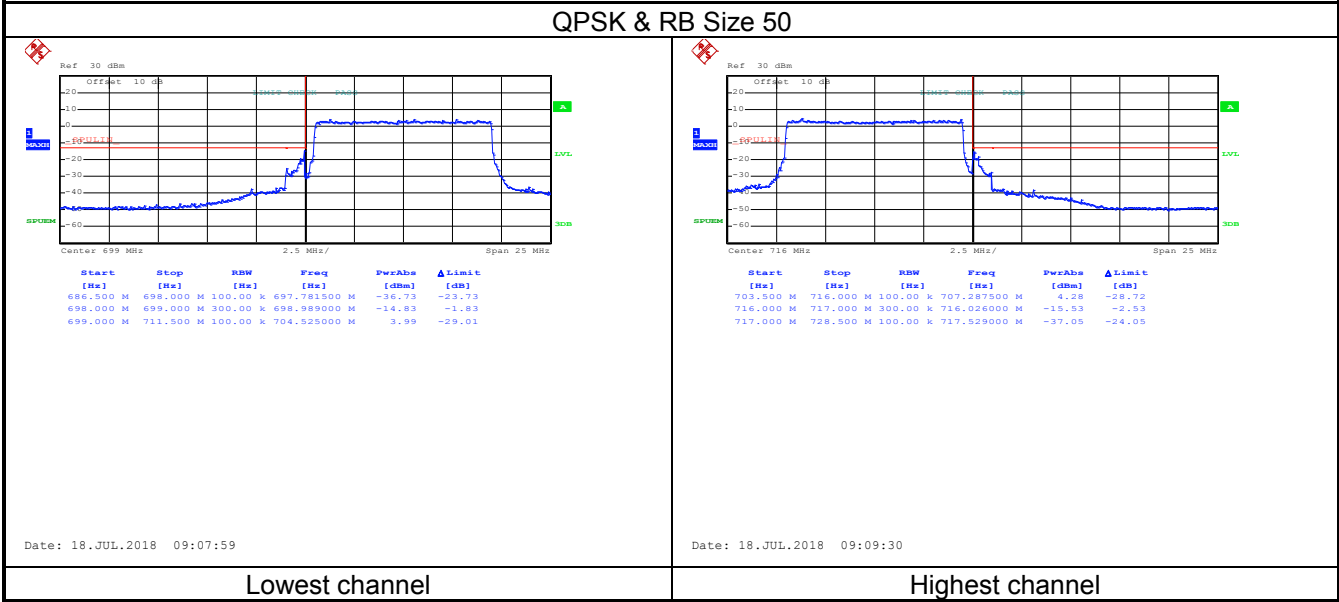
Date: 18.JUL.2018 09:07:29

Lowest channel

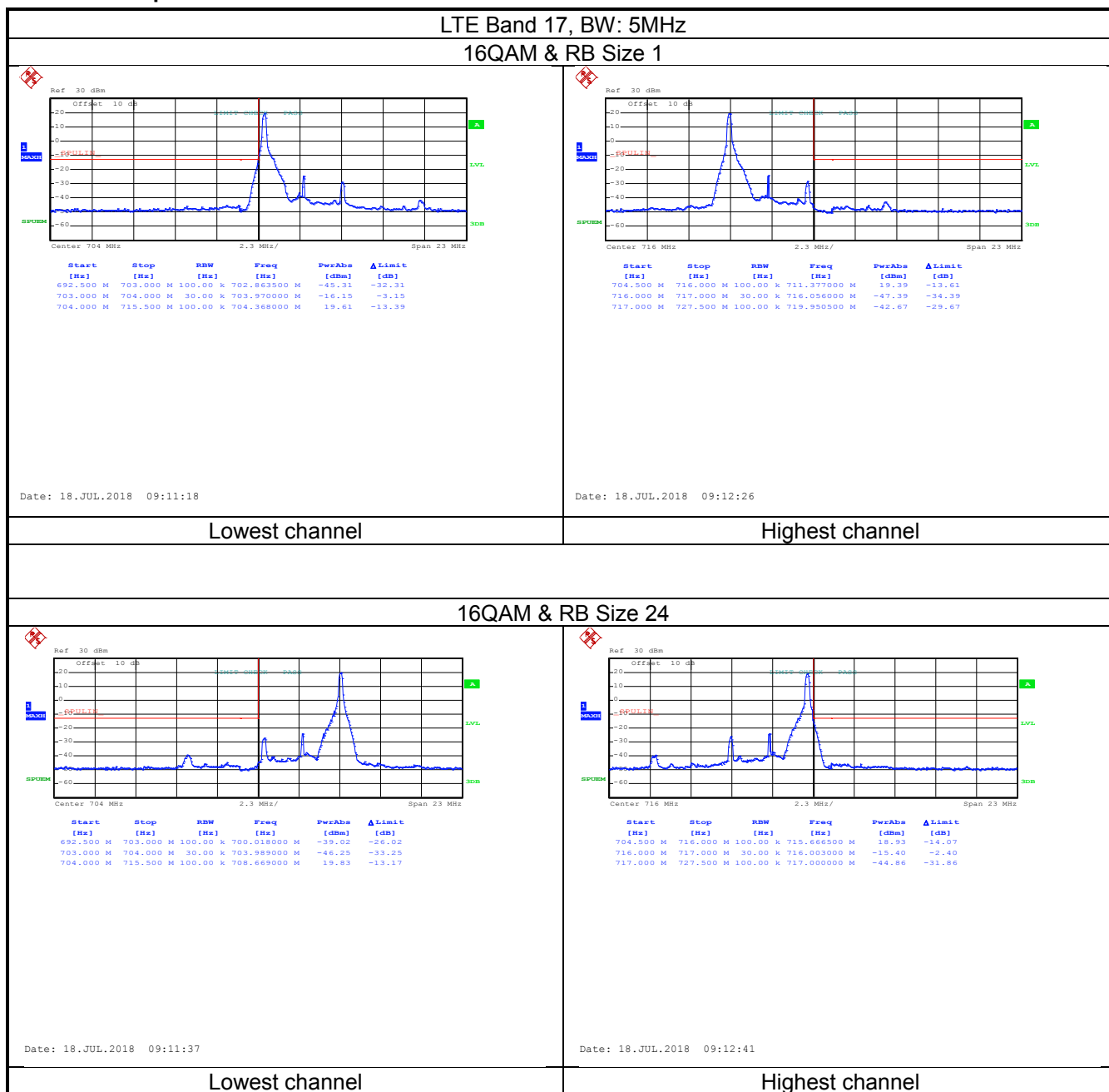


Date: 18.JUL.2018 09:08:54

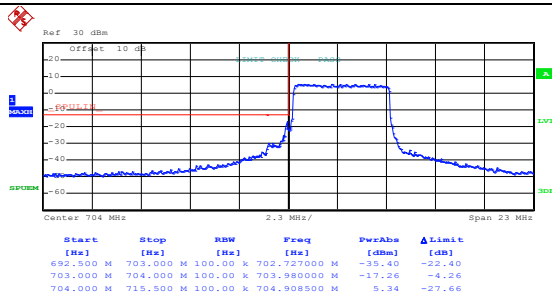
Highest channel



LTE Band 17 part:

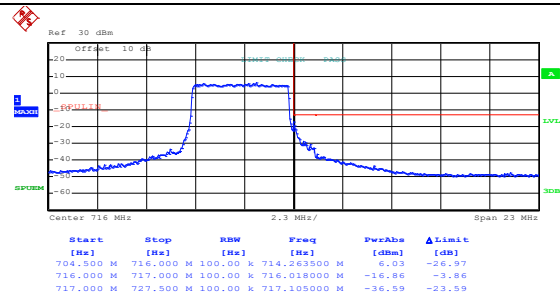


16QAM & RB Size 25



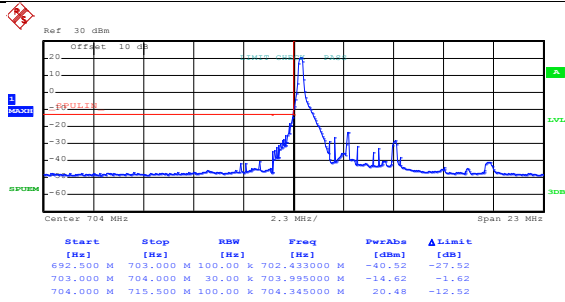
Date: 18.JUL.2018 09:12:00

Lowest channel



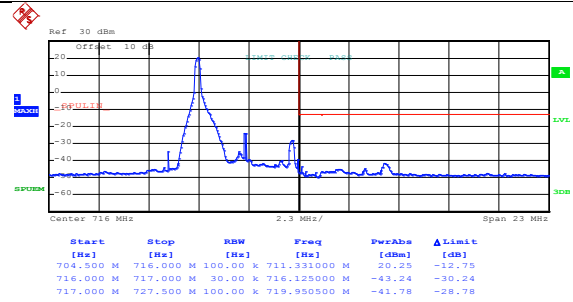
Date: 18.JUL.2018 09:13:07

Highest channel

LTE Band 17, BW: 5MHz
QPSK & RB Size 1

Date: 18.JUL.2018 09:11:12

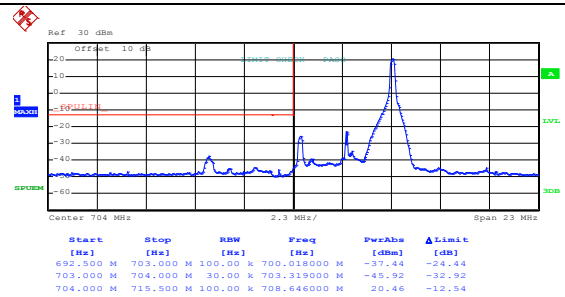
Lowest channel



Date: 18.JUL.2018 09:12:20

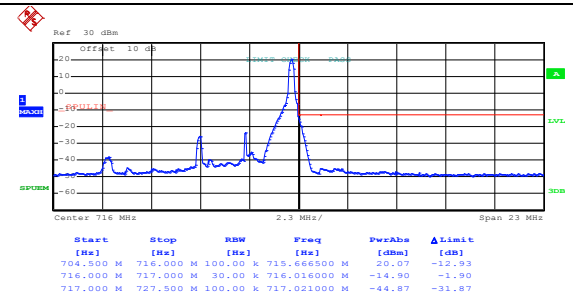
Highest channel

QPSK & RB Size 24



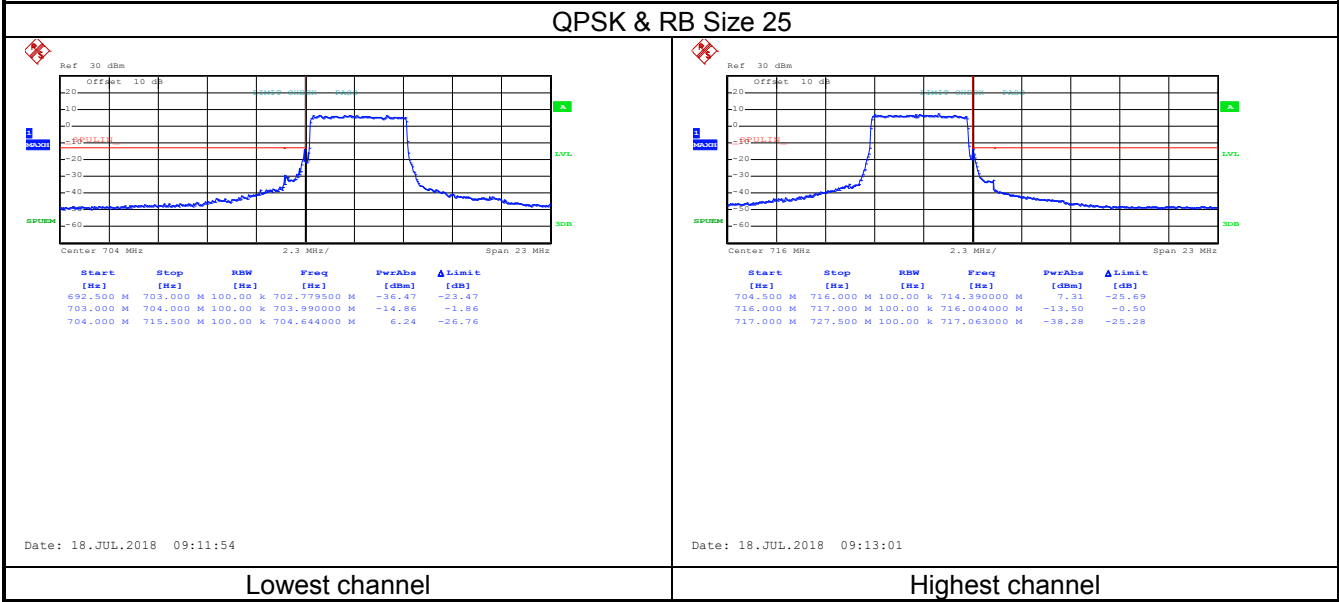
Date: 18.JUL.2018 09:11:28

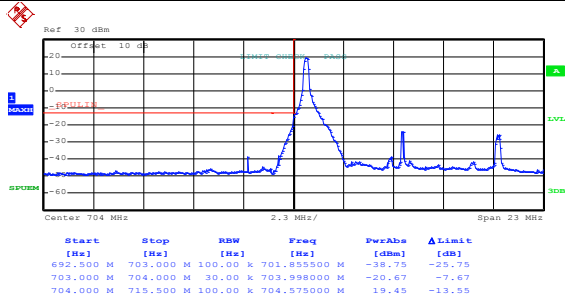
Lowest channel



Date: 18.JUL.2018 09:12:35

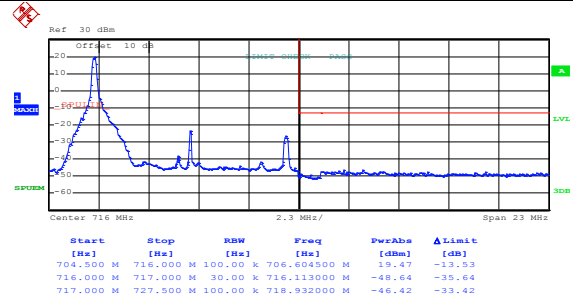
Highest channel



LTE Band 17, BW: 10MHz
16QAM & RB Size 1

Date: 18.JUL.2018 09:15:02

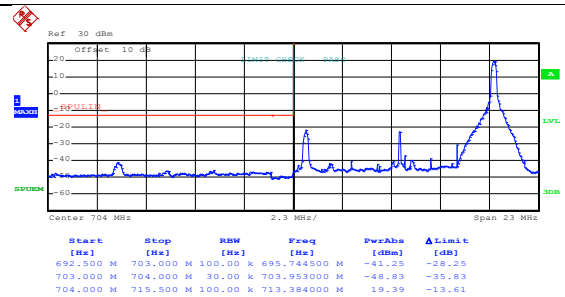
Lowest channel



Date: 18.JUL.2018 09:16:12

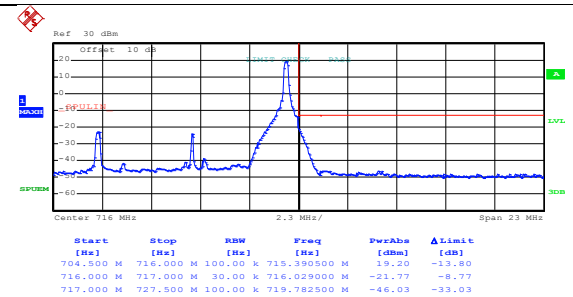
Highest channel

16QAM & RB Size 49



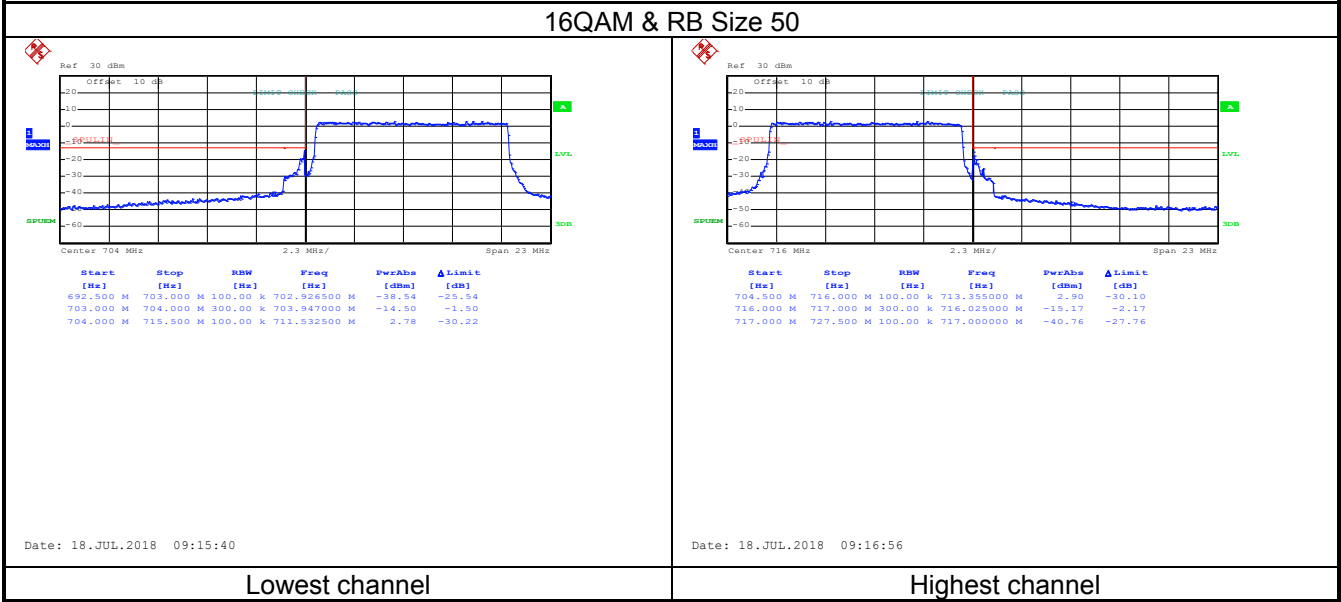
Date: 18.JUL.2018 09:15:18

Lowest channel



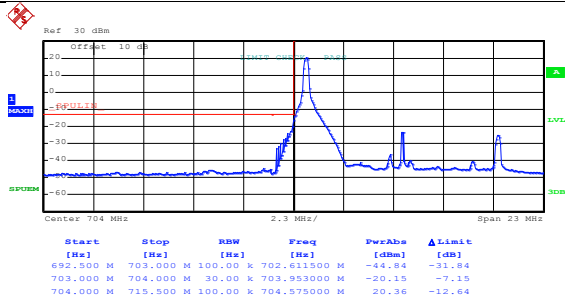
Date: 18.JUL.2018 09:16:28

Highest channel



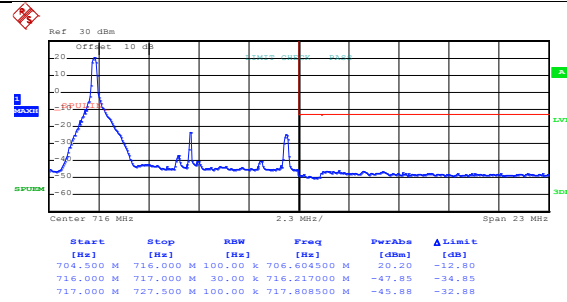
LTE Band 17, BW: 10MHz

QPSK & RB Size 1



Date: 18.JUL.2018 09:14:54

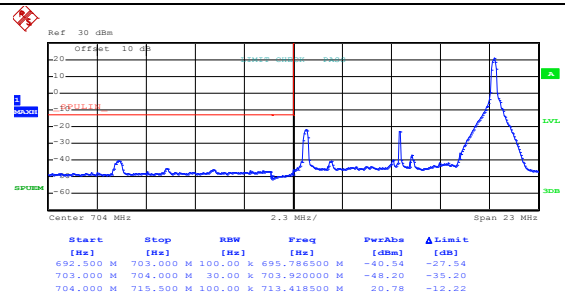
Lowest channel



Date: 18.JUL.2018 09:16:06

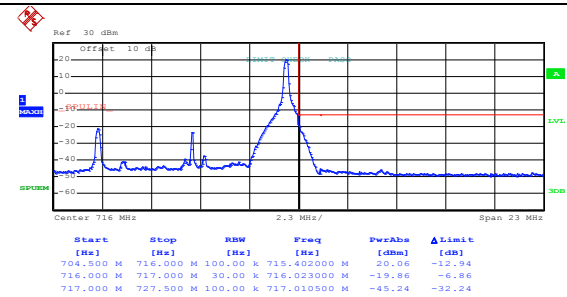
Highest channel

QPSK & RB Size 49



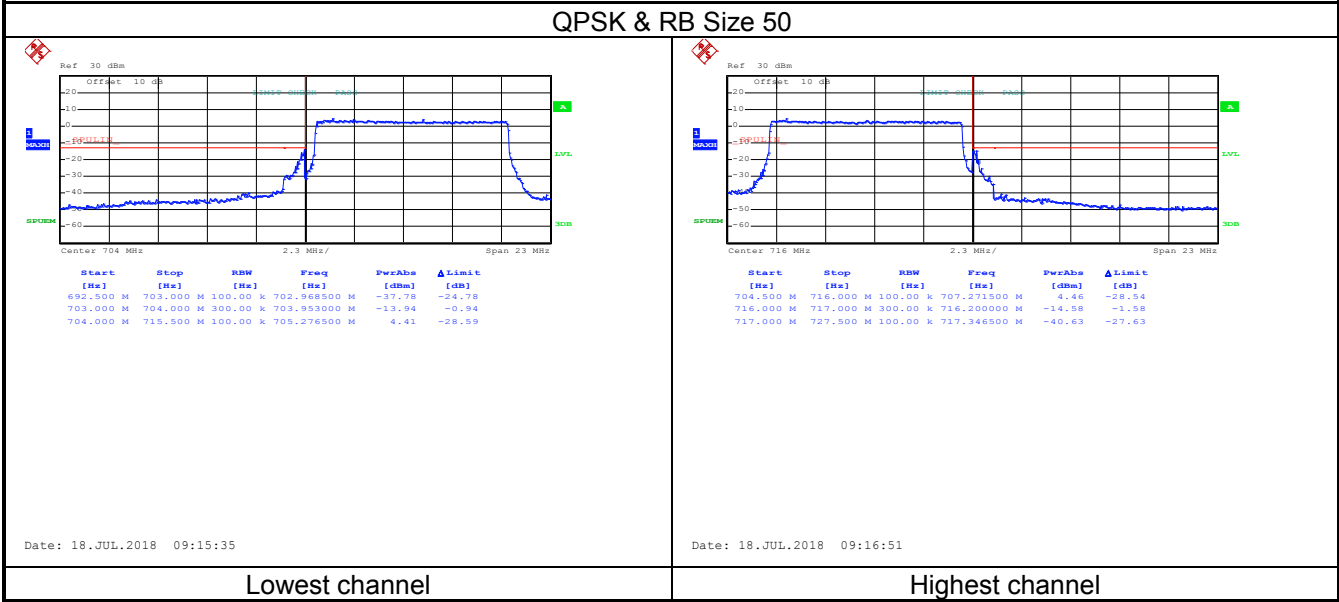
Date: 18.JUL.2018 09:15:11

Lowest channel

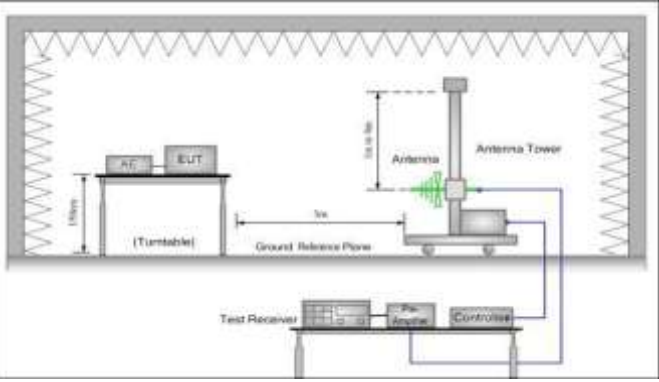
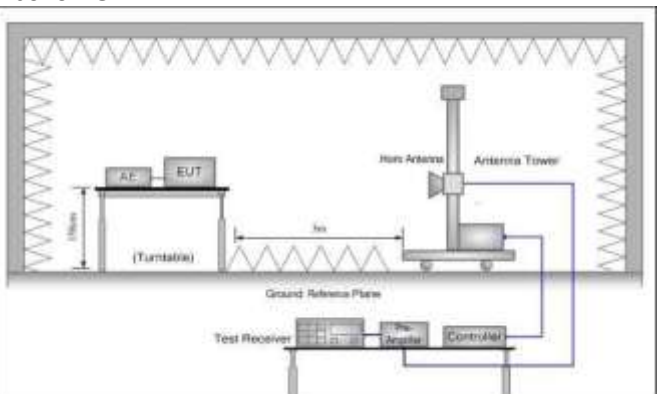


Date: 18.JUL.2018 09:16:21

Highest channel



6.5 ERP, EIRP Measurement

Test Requirement:	Part 22.913(a)(2), Part 24.232(c), Part 27.50(c)(10), Part 27.50(d)(4)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2: 2W EIRP, LTE Band 5: 7W EIRP, LTE Band 4: 1W EIRP, LTE Band 12: 3W EIRP, 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: $\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$ 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: $\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$ 5. The worse case was relating to the conducted output power.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

LTE Band 2 part:

LTE Band 2							
BW: 1.4MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1850.70	18607	QPSK	H	V	18.83	33.00	Pass
				H	18.02		
1850.70	18607	16QAM	H	V	17.84		
				H	18.29		
Middle Channel							
1880.00	18900	QPSK	H	V	18.47	33.00	Pass
				H	16.02		
1880.00	18900	16QAM	H	V	17.26		
				H	17.44		
Highest Channel							
1909.3	19193	QPSK	H	V	18.85	33.00	Pass
				H	15.79		
1909.3	19193	16QAM	H	V	17.68		
				H	16.14		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1851.50	18615	QPSK	H	V	17.63	33.00	Pass
				H	18.26		
1851.50	18615	16QAM	H	V	17.32		
				H	17.84		
Middle Channel							
1880.00	18900	QPSK	H	V	18.20	33.00	Pass
				H	17.30		
1880.00	18900	16QAM	H	V	16.38		
				H	17.46		
Highest Channel							
1908.50	19185	QPSK	H	V	18.26	33.00	Pass
				H	17.32		
1908.50	19185	16QAM	H	V	18.52		
				H	17.44		

LTE Band 2							
BW: 5MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1852.50	18625	QPSK	H	V	18.26	33.00	Pass
				H	17.64		
1852.50	18625	16QAM	H	V	18.62		
				H	18.77		
Middle Channel							
1880.00	18900	QPSK	H	V	17.68	33.00	Pass
				H	18.92		
1880.00	18900	16QAM	H	V	15.42		
				H	16.73		
Highest Channel							
1907.50	19175	QPSK	H	V	17.63	33.00	Pass
				H	16.85		
1907.50	19175	16QAM	H	V	18.42		
				H	17.98		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1855.00	18650	QPSK	H	V	18.76	33.00	Pass
				H	17.64		
1855.00	18650	16QAM	H	V	16.38		
				H	18.44		
Middle Channel							
1880.00	18900	QPSK	H	V	17.60	33.00	Pass
				H	18.46		
1880.00	18900	16QAM	H	V	17.87		
				H	18.23		
Highest Channel							
1905.00	19150	QPSK	H	V	18.26	33.00	Pass
				H	18.72		
1905.00	19150	16QAM	H	V	17.34		
				H	16.44		

LTE Band 2							
BW: 15MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1857.50	18675	QPSK	H	V	18.78	33.00	Pass
				H	17.68		
1857.50	18675	16QAM	H	V	18.23		
				H	17.14		
Middle Channel							
1880.00	18900	QPSK	H	V	18.64	33.00	Pass
				H	17.34		
1880.00	18900	16QAM	H	V	16.43		
				H	17.48		
Highest Channel							
1902.5	19125	QPSK	H	V	17.64	33.00	Pass
				H	18.89		
1902.5	19125	16QAM	H	V	17.68		
				H	18.55		
BW: 20MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1860.00	18700	QPSK	H	V	18.47	33.00	Pass
				H	17.85		
1860.00	18700	16QAM	H	V	18.39		
				H	17.44		
Middle Channel							
1880.00	18900	QPSK	H	V	18.63	33.00	Pass
				H	16.43		
1880.00	18900	16QAM	H	V	17.83		
				H	18.55		
Highest Channel							
1900.00	19100	QPSK	H	V	18.47	33.00	Pass
				H	18.54		
1900.00	19100	16QAM	H	V	17.89		
				H	18.55		

LTE Band 4 part:

LTE Band 4							
BW: 1.4MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1710.70	19957	QPSK	H	V	18.72	30.00	Pass
				H	17.85		
1710.70	19957	16QAM	H	V	18.26		
				H	17.22		
Middle Channel							
1732.50	20175	QPSK	H	V	13.53	30.00	Pass
				H	18.10		
1732.50	20175	16QAM	H	V	14.85		
				H	17.89		
Highest Channel							
1754.30	20393	QPSK	H	V	14.62	30.00	Pass
				H	17.79		
1754.30	20393	16QAM	H	V	15.68		
				H	18.79		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1711.50	19965	QPSK	H	V	18.22	30.00	Pass
				H	17.30		
1711.50	19965	16QAM	H	V	18.62		
				H	17.84		
Middle Channel							
1732.50	20175	QPSK	H	V	14.62	30.00	Pass
				H	18.20		
1732.50	20175	16QAM	H	V	14.87		
				H	17.44		
Highest Channel							
1753.50	20385	QPSK	H	V	15.62	30.00	Pass
				H	16.36		
1753.50	20385	16QAM	H	V	16.89		
				H	18.77		

LTE Band 4							
BW: 5MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1712.50	19975	QPSK	H	V	17.62	30.00	Pass
				H	18.33		
1712.50	19975	16QAM	H	V	17.89		
				H	19.10		
Middle Channel							
1732.50	20175	QPSK	H	V	15.36	30.00	Pass
				H	17.69		
1732.50	20175	16QAM	H	V	15.84		
				H	18.10		
Highest Channel							
1752.50	20375	QPSK	H	V	15.62	30.00	Pass
				H	17.34		
1752.50	20375	16QAM	H	V	15.84		
				H	17.16		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1715.00	20000	QPSK	H	V	18.26	30.00	Pass
				H	17.60		
1715.00	20000	16QAM	H	V	16.25		
				H	18.59		
Middle Channel							
1732.50	20175	QPSK	H	V	16.39	30.00	Pass
				H	19.64		
1732.50	20175	16QAM	H	V	14.78		
				H	18.55		
Highest Channel							
1750.00	20350	QPSK	H	V	19.34	30.00	Pass
				H	18.24		
1750.00	20350	16QAM	H	V	18.62		
				H	17.49		

LTE Band 4							
BW: 15MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1717.50	20025	QPSK	H	V	17.46	30.00	Pass
				H	16.25		
1717.50	20025	16QAM	H	V	18.04		
				H	17.44		
Middle Channel							
1732.50	20175	QPSK	H	V	18.62	30.00	Pass
				H	17.44		
1732.50	20175	16QAM	H	V	16.38		
				H	15.89		
Highest Channel							
1747.50	20325	QPSK	H	V	18.62	30.00	Pass
				H	18.44		
1747.50	20325	16QAM	H	V	17.98		
				H	17.29		
BW: 20MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1720.00	20050	QPSK	H	V	18.26	30.00	Pass
				H	17.69		
1720.00	20050	16QAM	H	V	16.88		
				H	16.44		
Middle Channel							
1732.50	20175	QPSK	H	V	19.25	30.00	Pass
				H	18.67		
1732.50	20175	16QAM	H	V	18.34		
				H	17.95		
Highest Channel							
1745.00	20300	QPSK	H	V	18.42	30.00	Pass
				H	17.89		
1745.00	20300	16QAM	H	V	16.35		
				H	17.44		

LTE Band 5 part:

LTE Band 5							
BW: 1.4MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
824.70	20407	QPSK	H	V	21.02	38.45	Pass
				H	14.87		
824.70	20407	16QAM	H	V	20.25		
				H	15.33		
Middle Channel							
836.50	20525	QPSK	H	V	21.50	38.45	Pass
				H	15.22		
836.50	20525	16QAM	H	V	20.11		
				H	14.11		
Highest Channel							
848.30	20643	QPSK	H	V	21.45	38.45	Pass
				H	14.78		
848.30	20643	16QAM	H	V	20.76		
				H	13.46		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
825.5	20415	QPSK	H	V	21.45	38.45	Pass
				H	13.32		
825.5	20415	16QAM	H	V	20.57		
				H	15.69		
Middle Channel							
836.50	20525	QPSK	H	V	21.63	38.45	Pass
				H	15.43		
836.50	20525	16QAM	H	V	21.47		
				H	13.36		
Highest Channel							
847.50	20635	QPSK	H	V	20.36	38.45	Pass
				H	14.70		
847.50	20635	16QAM	H	V	21.49		
				H	13.69		

LTE Band 5							
BW: 5MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
826.50	20425	QPSK	H	V	21.23	38.45	Pass
				H	15.26		
826.50	20425	16QAM	H	V	20.69		
				H	14.57		
Middle Channel							
836.50	20525	QPSK	H	V	21.62	38.45	Pass
				H	15.93		
836.50	20525	16QAM	H	V	20.33		
				H	14.44		
Highest Channel							
846.50	20625	QPSK	H	V	21.25	38.45	Pass
				H	15.47		
846.50	20625	16QAM	H	V	20.89		
				H	14.44		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
829.00	20450	QPSK	H	V	21.47	38.45	Pass
				H	15.29		
829.00	20450	16QAM	H	V	20.39		
				H	14.77		
Middle Channel							
836.50	20525	QPSK	H	V	21.03	38.45	Pass
				H	14.79		
836.50	20525	16QAM	H	V	21.23		
				H	15.03		
Highest Channel							
844.00	20600	QPSK	H	V	21.58	38.45	Pass
				H	15.23		
844.00	20600	16QAM	H	V	21.47		
				H	14.89		

LTE band 12

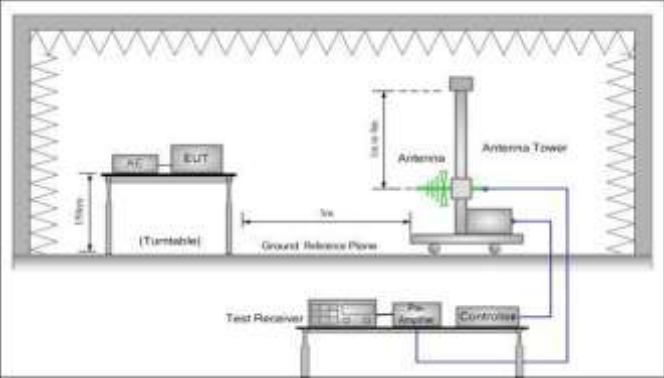
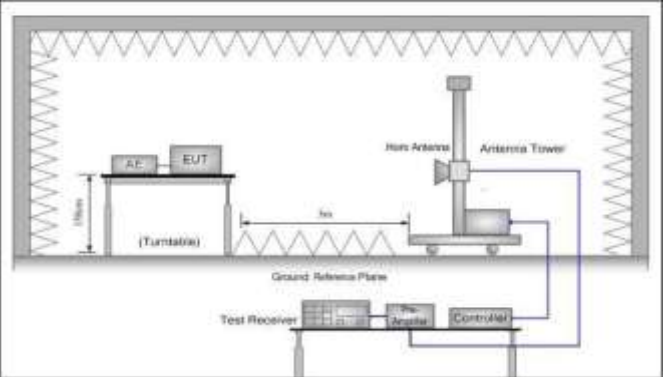
LTE Band 12							
BW: 1.4MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
699.70	23017	QPSK	H	V	24.25	34.77	Pass
				H	15.24		
699.70	23017	16QAM	H	V	24.15		
				H	13.69		
Middle Channel							
707.50	23095	QPSK	H	V	24.38	34.77	Pass
				H	16.39		
707.50	23095	16QAM	H	V	24.58		
				H	15.77		
Highest Channel							
715.30	23173	QPSK	H	V	25.04	34.77	Pass
				H	15.79		
715.30	23173	16QAM	H	V	24.45		
				H	16.69		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
700.50	23025	QPSK	H	V	24.23	34.77	Pass
				H	15.78		
700.50	23025	16QAM	H	V	24.10		
				H	16.40		
Middle Channel							
707.50	23095	QPSK	H	V	24.63	34.77	Pass
				H	15.44		
707.50	23095	16QAM	H	V	23.74		
				H	14.44		
Highest Channel							
714.50	23165	QPSK	H	V	21.98	34.77	Pass
				H	15.57		
714.50	23165	16QAM	H	V	21.39		
				H	14.46		

LTE Band 12							
BW: 5MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
701.50	23035	QPSK	H	V	24.32	34.77	Pass
				H	16.30		
701.50	23035	16QAM	H	V	23.54		
				H	17.34		
Middle Channel							
707.50	23095	QPSK	H	V	24.52	34.77	Pass
				H	16.30		
707.50	23095	16QAM	H	V	23.14		
				H	13.78		
Highest Channel							
713.50	23155	QPSK	H	V	21.23	34.77	Pass
				H	15.47		
713.50	23155	16QAM	H	V	21.58		
				H	16.46		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
704.00	23060	QPSK	H	V	21.47	34.77	Pass
				H	16.39		
704.00	23060	16QAM	H	V	21.58		
				H	16.33		
Middle Channel							
707.50	23095	QPSK	H	V	21.45	34.77	Pass
				H	15.85		
707.50	23095	16QAM	H	V	21.44		
				H	16.87		
Highest Channel							
711.00	23130	QPSK	H	V	21.54	34.77	Pass
				H	14.26		
711.00	23130	16QAM	H	V	20.46		
				H	13.49		

LTE band 17

LTE Band 17							
BW: 5MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
706.50	23755	QPSK	H	V	24.80	34.77	Pass
				H	14.20		
706.50	23755	16QAM	H	V	23.62		
				H	15.22		
Middle Channel							
710.00	23790	QPSK	H	V	24.69	34.77	Pass
				H	14.81		
710.00	23790	16QAM	H	V	23.60		
				H	15.47		
Highest Channel							
713.50	23825	QPSK	H	V	24.05	34.77	Pass
				H	14.17		
713.50	23825	16QAM	H	V	23.06		
				H	14.55		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
709.00	23780	QPSK	H	V	24.63	34.77	Pass
				H	15.23		
709.00	23780	16QAM	H	V	23.44		
				H	15.73		
Middle Channel							
710.00	23790	QPSK	H	V	24.23	34.77	Pass
				H	15.62		
710.00	23790	16QAM	H	V	24.37		
				H	15.88		
Highest Channel							
711.00	23800	QPSK	H	V	24.63	34.77	Pass
				H	15.30		
711.00	23800	16QAM	H	V	23.47		
				H	15.49		

6.6 Field strength of spurious radiation measurement

Test Requirement:	Part 22.917(b), Part 24.238 (a), Part 27.53(g), Part 27.53(m)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2 & 4 & 5 & 12 & 17: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm).
Test setup:	Below 1GHz  Above 1GHz 
Test Procedure:	1. The EUT was placed on 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. $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details.
Test results:	Passed

Measurement Data:
LTE Band 2 part:

LTE Band 2, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3701.40	Vertical	-45.93	-13.00	Pass
5552.10	V	-42.17		
7402.00	V	-37.82		
3701.40	Horizontal	-41.32		
5552.10	H	-42.42		
7402.00	H	-37.61		
Middle Channel				
3760.00	Vertical	-47.05	-13.00	Pass
5640.00	V	-43.46		
7520.00	V	-39.36		
3760.00	Horizontal	-45.85		
5640.00	H	-44.29		
7520.00	H	-39.88		
Highest Channel				
3816.60	Vertical	-48.69	-13.00	Pass
5724.90	V	-43.70		
7633.20	V	-38.53		
3816.60	Horizontal	-45.69		
5724.90	H	-44.33		
7633.20	H	-37.66		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 2, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3703.00	Vertical	-45.25	-13.00	Pass
5554.50	V	-41.37		
7406.00	V	-38.62		
3703.00	Horizontal	-42.56		
5554.50	H	-41.35		
7406.00	H	-40.22		
Middle Channel				
3760.00	Vertical	-45.26	-13.00	Pass
5640.00	V	-47.34		
7520.00	V	-39.62		
3760.00	Horizontal	-45.16		
5640.00	H	-41.34		
7520.00	H	-39.79		
Highest Channel				
3817.00	Vertical	-45.25	-13.00	Pass
5725.50	V	-42.32		
7634.00	V	-43.10		
3817.00	Horizontal	-45.79		
5725.50	H	-44.61		
7634.00	H	-37.49		
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 2, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3705.00	Vertical	-44.25	-13.00	Pass
5557.50	V	-43.61		
7410.00	V	-38.65		
3705.00	Horizontal	-42.52		
5557.50	H	-41.34		
7410.00	H	-38.56		
Middle Channel				
3760.00	Vertical	-46.25	-13.00	Pass
5640.00	V	-45.13		
7520.00	V	-40.77		
3760.00	Horizontal	-46.35		
5640.00	H	-43.58		
7520.00	H	-39.87		
Highest Channel				
3815.00	Vertical	-48.63	-13.00	Pass
5722.50	V	-42.68		
7630.00	V	-37.85		
3815.00	Horizontal	-46.16		
5722.50	H	-45.82		
7630.00	H	-36.73		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 2, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3710.00	Vertical	-46.25	-13.00	Pass
5565.00	V	-42.12		
7420.00	V	-37.68		
3710.00	Horizontal	-41.52		
5565.00	H	-42.25		
7420.00	H	-39.73		
Middle Channel				
3760.00	Vertical	-46.31	-13.00	Pass
5640.00	V	-47.68		
7520.00	V	-40.25		
3760.00	Horizontal	-46.31		
5640.00	H	-42.12		
7520.00	H	-39.88		
Highest Channel				
3810.00	Vertical	-44.31	-13.00	Pass
5715.00	V	-41.37		
7620.00	V	-43.69		
3810.00	Horizontal	-45.25		
5715.00	H	-45.11		
7620.00	H	-38.75		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 2, WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3715.00	Vertical	-45.23	-13.00	Pass
5572.50	V	-42.16		
7430.00	V	-37.68		
3715.00	Horizontal	-42.69		
5572.50	H	-42.15		
7430.00	H	-39.32		
Middle Channel				
3760.00	Vertical	-46.31	-13.00	Pass
5640.00	V	-45.85		
7520.00	V	-39.34		
3760.00	Horizontal	-46.78		
5640.00	H	-42.51		
7520.00	H	-39.37		
Highest Channel				
3805.00	Vertical	-46.31	-13.00	Pass
5707.50	V	-41.37		
7610.00	V	-38.60		
3805.00	Horizontal	-45.19		
5707.50	H	-46.37		
7610.00	H	-38.13		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 2, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3720.00	Vertical	-45.21	-13.00	Pass
5580.00	V	-41.34		
7440.00	V	-36.37		
3720.00	Horizontal	-42.21		
5580.00	H	-41.67		
7440.00	H	-40.79		
Middle Channel				
3760.00	Vertical	-47.64	-13.00	Pass
5640.00	V	-46.38		
7520.00	V	-39.21		
3760.00	Horizontal	-45.27		
5640.00	H	-41.30		
7520.00	H	-39.37		
Highest Channel				
3800.00	Vertical	-45.24	-13.00	Pass
5700.00	V	-42.36		
7600.00	V	-39.68		
3800.00	Horizontal	-46.25		
5700.00	H	-45.21		
7600.00	H	-37.49		
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 4 part:

LTE Band 4, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3421.40	Vertical	-41.06	-13.00	Pass
5132.10	V	-45.52		
6842.80	V	-40.45		
3421.40	Horizontal	-40.33		
5132.10	H	-46.11		
6842.80	H	-40.70		
Middle Channel				
3465.00	Vertical	-45.18	-13.00	Pass
5197.50	V	-44.43		
6930.00	V	-39.74		
3465.00	Horizontal	-43.81		
5197.50	H	-45.39		
6930.00	H	-38.87		
Highest Channel				
3508.60	Vertical	-50.68	-13.00	Pass
5262.90	V	-45.04		
7017.20	V	-39.77		
3508.60	Horizontal	-49.93		
5262.90	H	-44.30		
7017.20	H	-39.75		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 4, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3423.00	Vertical	-45.25	-13.00	Pass
5134.50	V	-44.31		
6846.00	V	-39.67		
3423.00	Horizontal	-39.56		
5134.50	H	-44.25		
6846.00	H	-36.72		
Middle Channel				
3465.00	Vertical	-44.31	-13.00	Pass
5197.50	V	-42.25		
6930.00	V	-39.34		
3465.00	Horizontal	-41.25		
5197.50	H	-44.31		
6930.00	H	-39.76		
Highest Channel				
3507.00	Vertical	-41.34	-13.00	Pass
5260.50	V	-46.32		
7014.00	V	-39.63		
3507.00	Horizontal	-42.56		
5260.50	H	-37.63		
7014.00	H	-46.11		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 4, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3425.00	Vertical	-42.02	-13.00	Pass
5137.50	V	-44.14		
6850.00	V	-39.64		
3425.00	Horizontal	-39.31		
5137.50	H	-45.27		
6850.00	H	-39.96		
Middle Channel				
3465.00	Vertical	-44.31	-13.00	Pass
5197.50	V	-43.25		
6930.00	V	-40.13		
3465.00	Horizontal	-42.76		
5197.50	H	-45.86		
6930.00	H	-39.76		
Highest Channel				
3505.00	Vertical	-49.61	-13.00	Pass
5257.50	V	-44.50		
7010.00	V	-39.25		
3505.00	Horizontal	-48.67		
5257.50	H	-45.12		
7010.00	H	-39.46		
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 4, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3430.00	Vertical	-46.32	-13.00	Pass
5145.00	V	-45.21		
6860.00	V	-38.60		
3430.00	Horizontal	-39.32		
5145.00	H	-45.21		
6860.00	H	-37.34		
Middle Channel				
3465.00	Vertical	-45.21	-13.00	Pass
5197.50	V	-41.36		
6930.00	V	-39.61		
3465.00	Horizontal	-42.58		
5197.50	H	-45.21		
6930.00	H	-39.36		
Highest Channel				
3500.00	Vertical	-42.52	-13.00	Pass
5250.00	V	-46.30		
7000.00	V	-39.68		
3500.00	Horizontal	-41.25		
5250.00	H	-38.60		
7000.00	H	-45.15		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 4, WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3435.00	Vertical	-43.25	-13.00	Pass
5152.50	V	-45.62		
6870.00	V	-39.67		
3435.00	Horizontal	-39.21		
5152.50	H	-45.22		
6870.00	H	-39.68		
Middle Channel				
3465.00	Vertical	-45.26	-13.00	Pass
5197.50	V	-43.26		
6930.00	V	-39.21		
3465.00	Horizontal	-41.57		
5197.50	H	-45.88		
6930.00	H	-39.75		
Highest Channel				
3495.00	Vertical	-48.21	-13.00	Pass
5242.50	V	-45.25		
6990.00	V	-38.46		
3495.00	Horizontal	-47.61		
5242.50	H	-46.31		
6990.00	H	-37.89		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 4, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3440.00	Vertical	-42.25	-13.00	Pass
5160.00	V	-46.31		
6880.00	V	-37.64		
3440.00	Horizontal	-39.62		
5160.00	H	-44.60		
6880.00	H	-38.61		
Middle Channel				
3465.00	Vertical	-44.34	-13.00	Pass
5197.50	V	-42.52		
6930.00	V	-40.31		
3465.00	Horizontal	-42.36		
5197.50	H	-44.97		
6930.00	H	-40.58		
Highest Channel				
3490.00	Vertical	-41.24	-13.00	Pass
5235.00	V	-45.21		
6980.00	V	-38.67		
3490.00	Horizontal	-40.44		
5235.00	H	-38.62		
6980.00	H	-45.25		
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 5 part:

LTE Band 5, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1649.40	Vertical	-53.23	-13.00	Pass
2474.10	V	-54.31		
3298.80	V	-48.16		
1649.40	Horizontal	-54.64		
2474.10	H	-55.42		
3298.80	H	-49.99		
Middle Channel				
1673.00	Vertical	-59.20	-13.00	Pass
2509.50	V	-54.31		
3346.00	V	-49.76		
1673.00	Horizontal	-51.23		
2509.50	H	-52.31		
3346.00	H	-49.76		
Highest Channel				
1696.60	Vertical	-50.87	-13.00	Pass
2544.90	V	-55.20		
3393.20	V	-51.50		
1696.60	Horizontal	-47.89		
2544.90	H	-54.12		
3393.20	H	-51.68		
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 5, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1651.00	Vertical	-51.45	-13.00	Pass
2476.50	V	-53.85		
3302.00	V	-45.69		
1651.00	Horizontal	-51.37		
2476.50	H	-53.45		
3302.00	H	-47.89		
Middle Channel				
1673.00	Vertical	-56.25	-13.00	Pass
2509.50	V	-54.76		
3346.00	V	-49.86		
1673.00	Horizontal	-51.34		
2509.50	H	-49.61		
3346.00	H	-48.87		
Highest Channel				
1695.00	Vertical	-48.25	-13.00	Pass
2542.50	V	-53.44		
3390.00	V	-51.47		
1695.00	Horizontal	-49.54		
2542.50	H	-51.44		
3390.00	H	-52.02		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 5, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1653.00	Vertical	-52.20	-13.00	Pass
2479.50	V	-53.61		
3306.00	V	-47.64		
1653.00	Horizontal	-53.21		
2479.50	H	-54.27		
3306.00	H	-48.95		
Middle Channel				
1673.00	Vertical	-58.68	-13.00	Pass
2509.50	V	-54.87		
3346.00	V	-49.86		
1673.00	Horizontal	-51.45		
2509.50	H	-52.36		
3346.00	H	-48.75		
Highest Channel				
1693.00	Vertical	-49.37	-13.00	Pass
2539.50	V	-54.57		
3386.00	V	-51.45		
1693.00	Horizontal	-48.61		
2539.50	H	-53.32		
3386.00	H	-52.10		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 5, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1658.00	Vertical	-52.12	-13.00	Pass
2487.00	V	-54.34		
3316.00	V	-46.61		
1658.00	Horizontal	-53.20		
2487.00	H	-53.64		
3316.00	H	-47.64		
Middle Channel				
1673.00	Vertical	-57.64	-13.00	Pass
2509.50	V	-55.62		
3346.00	V	-49.31		
1673.00	Horizontal	-52.24		
2509.50	H	-51.78		
3346.00	H	-51.78		
Highest Channel				
1688.00	Vertical	-49.61	-13.00	Pass
2532.00	V	-53.26		
3376.00	V	-52.24		
1688.00	Horizontal	-49.87		
2532.00	H	-52.13		
3376.00	H	-51.47		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 12 part:

LTE Band 12, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1399.40	Vertical	-53.60	-13.00	Pass
2099.10	V	-55.64		
2798.80	V	-53.47		
1399.40	Horizontal	-52.70		
2099.10	H	-57.61		
2798.80	H	-54.08		
Middle Channel				
1415.00	Vertical	-51.77	-13.00	Pass
2122.50	V	-54.25		
2830.00	V	-53.28		
1415.00	Horizontal	-52.52		
2122.50	H	-58.33		
2830.00	H	-53.41		
Highest Channel				
1430.60	Vertical	-53.18	-13.00	Pass
2145.90	V	-56.04		
2861.20	V	-53.40		
1430.60	Horizontal	-49.12		
2145.90	H	-56.32		
2861.20	H	-52.94		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 12, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1401.00	Vertical	-55.26	-13.00	Pass
2101.50	V	-54.31		
2802.00	V	-52.69		
1401.00	Horizontal	-52.46		
2101.50	H	-54.61		
2802.00	H	-53.77		
Middle Channel				
1415.00	Vertical	-52.63	-13.00	Pass
2122.50	V	-52.78		
2830.00	V	-51.46		
1415.00	Horizontal	-52.13		
2122.50	H	-56.68		
2830.00	H	-51.44		
Highest Channel				
1429.00	Vertical	-53.23	-13.00	Pass
2143.50	V	-49.68		
2858.00	V	-48.51		
1429.00	Horizontal	-49.37		
2143.50	H	-55.24		
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, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1403.00	Vertical	-54.32	-13.00	Pass
2104.50	V	-55.26		
2806.00	V	54.27		
1403.00	Horizontal	-51.64		
2104.50	H	-56.34		
2806.00	H	-52.79		
Middle Channel				
1415.00	Vertical	-52.26	-13.00	Pass
2122.50	V	-53.64		
2830.00	V	-52.54		
1415.00	Horizontal	-53.61		
2122.50	H	-57.64		
2830.00	H	-52.49		
Highest Channel				
1427.00	Vertical	-52.58	-13.00	Pass
2410.50	V	-54.68		
2854.00	V	-53.25		
1427.00	Horizontal	-49.87		
2410.50	H	-55.48		
2854.00	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.				

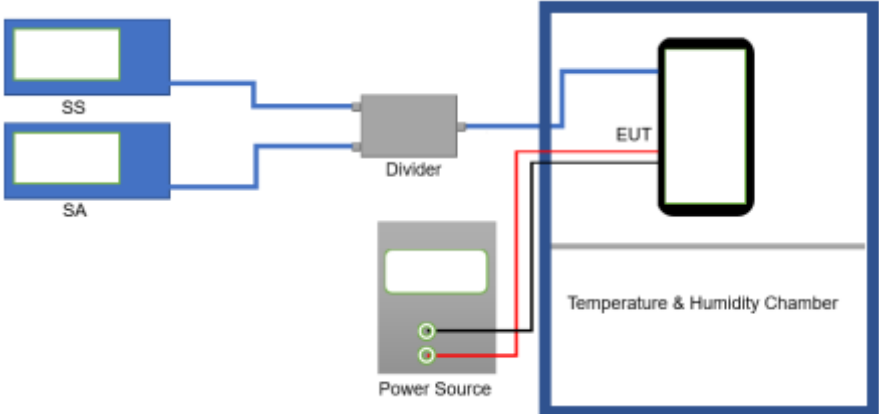
LTE Band 12, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1408.00	Vertical	-54.25	-13.00	Pass
2112.00	V	-55.64		
2816.00	V	-53.25		
1408.00	Horizontal	-51.34		
2112.00	H	-55.67		
2816.00	H	-52.64		
Middle Channel				
1415.00	Vertical	-51.34	-13.00	Pass
2122.50	V	-52.67		
2830.00	V	-51.64		
1415.00	Horizontal	-52.26		
2122.50	H	-57.64		
2830.00	H	-52.19		
Highest Channel				
1422.00	Vertical	-52.98	-13.00	Pass
2133.00	V	-49.61		
2844.00	V	-48.52		
1422.00	Horizontal	-51.34		
2133.00	H	-56.76		
2844.00	H	-51.43		
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 part:

LTE Band 17, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1413.00	Vertical	-58.66	-13.00	Pass
2119.50	V	-56.34		
2826.00	V	-53.44		
1413.00	Horizontal	-55.06		
2119.50	H	-58.61		
2826.00	H	-53.28		
Middle Channel				
1420.00	Vertical	-48.62	-13.00	Pass
2130.00	V	-47.64		
2840.00	V	-52.21		
1420.00	Horizontal	-51.36		
2130.00	H	-48.60		
2840.00	H	-47.31		
Highest Channel				
1427.00	Vertical	-47.68	-13.00	Pass
2140.50	V	-48.62		
2854.00	V	-50.23		
1427.00	Horizontal	-49.61		
2140.50	H	-48.25		
2854.00	H	-51.43		
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, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1418.00	Vertical	-54.62	-13.00	Pass
2127.00	V	-52.21		
2836.00	V	-51.49		
1418.00	Horizontal	-49.38		
2127.00	H	-48.57		
2836.00	H	-51.02		
Middle Channel				
1420.00	Vertical	-49.32	-13.00	Pass
2130.00	V	-48.51		
2840.00	V	-51.26		
1420.00	Horizontal	-52.46		
2130.00	H	-49.80		
2840.00	H	-48.58		
Highest Channel				
1422.00	Vertical	-49.21	-13.00	Pass
2133.00	V	-48.17		
2844.00	V	-49.36		
1422.00	Horizontal	-50.25		
2133.00	H	-51.34		
2844.00	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.				

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:	±2.5ppm
Test setup:	
Test procedure:	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to –30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):

LTE Band 2 part:

Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	200	0.106383	±2.5	Pass
	-20	157	0.083511		
	-10	165	0.087766		
	0	125	0.066489		
	10	190	0.101064		
	20	176	0.093617		
	30	116	0.061702		
	40	107	0.056915		
	50	152	0.080851		
16QAM					
3.80	-30	125	0.066489	±2.5	Pass
	-20	152	0.080851		
	-10	168	0.089362		
	0	124	0.065957		
	10	146	0.077660		
	20	142	0.075532		
	30	158	0.084043		
	40	135	0.071809		
	50	140	0.074468		
Note: Only the worst case shown in the report.					

LTE Band 4 part:

Reference Frequency: LTE Band 4 (10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	200	0.115433	±2.5	Pass
	-20	157	0.090615		
	-10	165	0.095233		
	0	125	0.072146		
	10	190	0.109662		
	20	176	0.101581		
	30	116	0.066951		
	40	107	0.061757		
	50	152	0.087729		
16QAM					
3.80	-30	125	0.072146	±2.5	Pass
	-20	152	0.087729		
	-10	168	0.096964		
	0	124	0.071569		
	10	146	0.084266		
	20	142	0.081958		
	30	158	0.091192		
	40	135	0.077918		
	50	140	0.080803		
Note: Only the worst case shown in the report.					

LTE Band 5 part:

Reference Frequency: LTE Band 5 (10MHz) Middle channel=20525 channel=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	197	0.235505	±2.5	Pass
	-20	154	0.184100		
	-10	162	0.193664		
	0	122	0.145846		
	10	187	0.223551		
	20	173	0.206814		
	30	113	0.135087		
	40	104	0.124328		
	50	149	0.178123		
16QAM					
3.80	-30	122	0.145846	±2.5	Pass
	-20	149	0.178123		
	-10	165	0.197250		
	0	121	0.144650		
	10	143	0.170950		
	20	139	0.166169		
	30	155	0.185296		
	40	132	0.157800		
	50	137	0.163778		
Note: Only the worst case shown in the report.					

LTE Band 12 part:

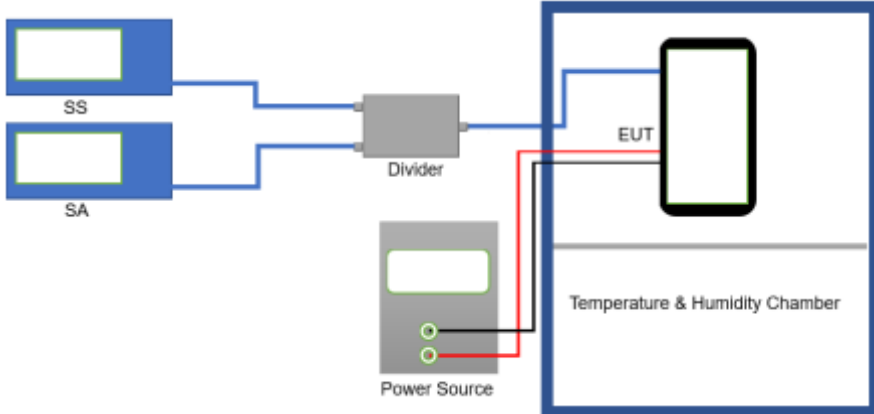
LTE Band 12 part:

Reference Frequency: LTE Band 12 (10MHz) Middle channel=23095 channel=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	195	0.275618	±2.5	Pass
	-20	152	0.214841		
	-10	160	0.226148		
	0	120	0.169611		
	10	185	0.261484		
	20	171	0.241696		
	30	111	0.156890		
	40	102	0.144170		
	50	147	0.207774		
16QAM					
3.80	-30	120	0.169611	±2.5	Pass
	-20	147	0.207774		
	-10	163	0.230389		
	0	119	0.168198		
	10	141	0.199293		
	20	137	0.193640		
	30	153	0.216254		
	40	130	0.183746		
	50	135	0.190813		
Note: Only the worst case shown in the report.					

LTE Band 17 part:

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	199	0.280282	±2.5	Pass
	-20	156	0.219718		
	-10	164	0.230986		
	0	124	0.174648		
	10	189	0.266197		
	20	175	0.246479		
	30	115	0.161972		
	40	106	0.149296		
	50	151	0.212676		
16QAM					
3.80	-30	124	0.174648	±2.5	Pass
	-20	151	0.212676		
	-10	167	0.235211		
	0	123	0.173239		
	10	145	0.204225		
	20	141	0.198592		
	30	157	0.221127		
	40	134	0.188732		
	50	139	0.195775		
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 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):
LTE Band 2 part:

Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	100	0.053191	±2.5	Pass
	3.80	67	0.035638		
	3.50	76	0.040426		
16QAM					
25	4.35	82	0.043617	±2.5	Pass
	3.80	98	0.052128		
	3.50	50	0.026596		
Note: Only the worst case shown in the report.					

LTE Band 4 part:

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	96	0.055411	±2.5	Pass
	3.80	63	0.036364		
	3.50	72	0.041558		
16QAM					
25	4.35	78	0.045022	±2.5	Pass
	3.80	94	0.054257		
	3.50	46	0.026551		
Note: Only the worst case shown in the report.					

LTE Band 5 part:

Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 channel=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	97	0.115959	±2.5	Pass
	3.80	64	0.076509		
	3.50	73	0.087268		
16QAM					
25	4.35	79	0.094441	±2.5	Pass
	3.80	95	0.113568		
	3.50	47	0.056186		
Note: Only the worst case shown in the report.					

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 channel=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	95	0.134276	±2.5	Pass
	3.80	62	0.087633		
	3.50	71	0.100353		
16QAM					
25	4.35	77	0.108834	±2.5	Pass
	3.80	93	0.131449		
	3.50	45	0.063604		
Note: Only the worst case shown in the report.					

LTE Band 17 part:

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	99	0.139437	±2.5	Pass
	3.80	66	0.092958		
	3.50	75	0.105634		
16QAM					
25	4.35	81	0.114085	±2.5	Pass
	3.80	97	0.136620		
	3.50	49	0.069014		
Note: Only the worst case shown in the report.					