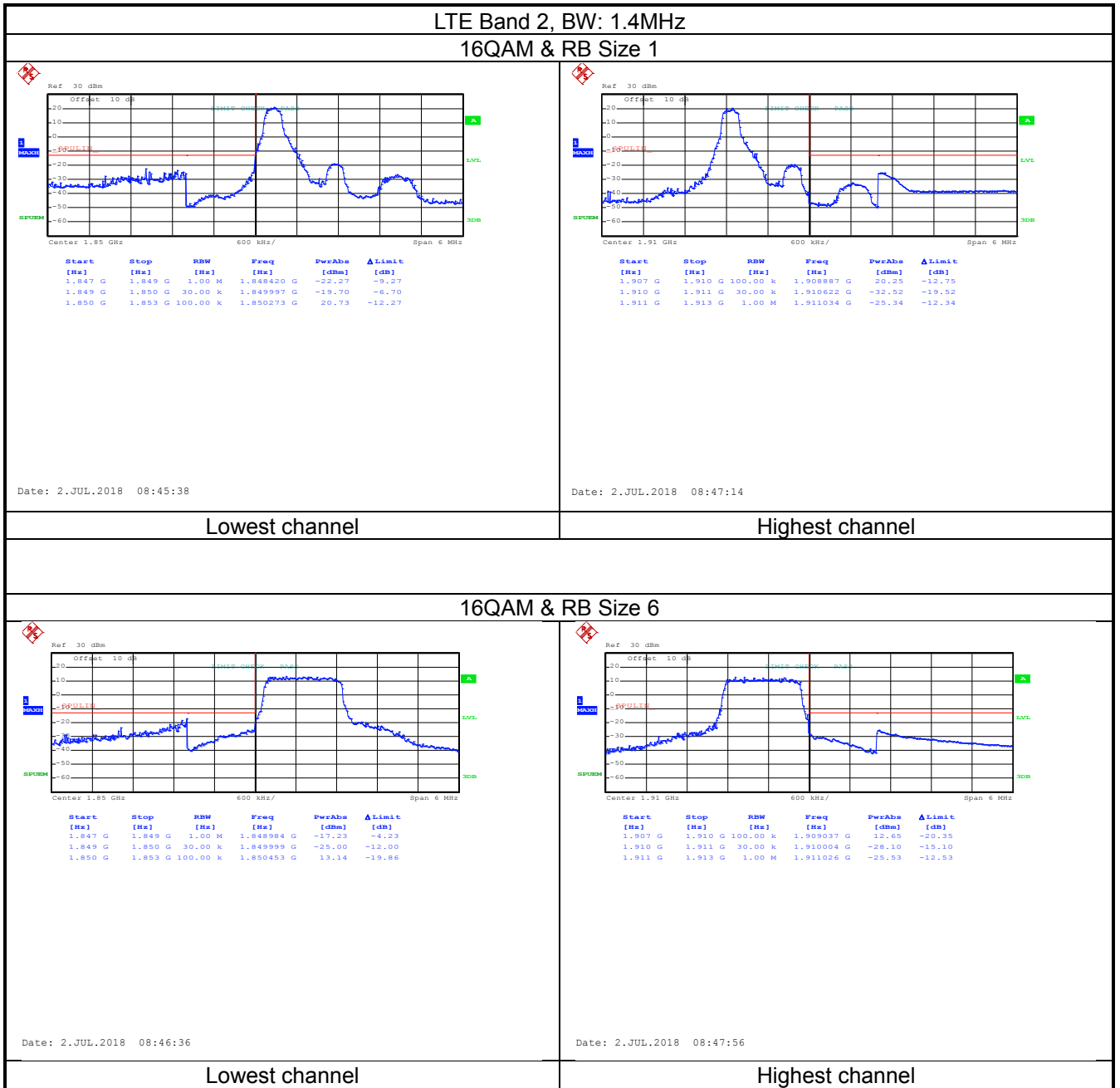
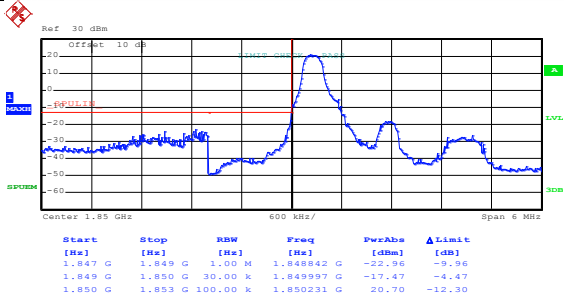


Band edge emission:

LTE Band 2 part:

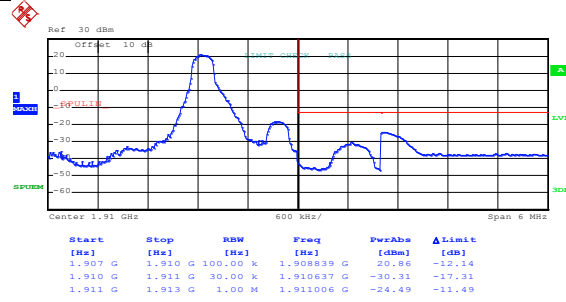


LTE Band 2, BW: 1.4MHz QPSK & RB Size 1



Date: 2.JUL.2018 08:45:29

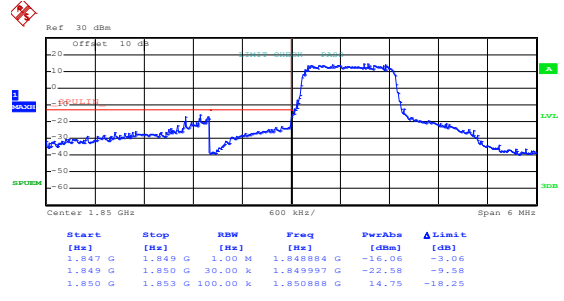
Lowest channel



Date: 2.JUL.2018 08:47:04

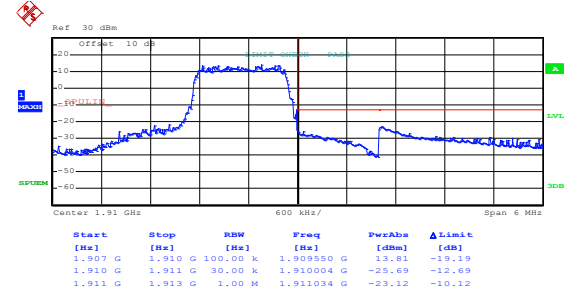
Highest channel

QPSK & RB Size 6



Date: 2.JUL.2018 08:46:29

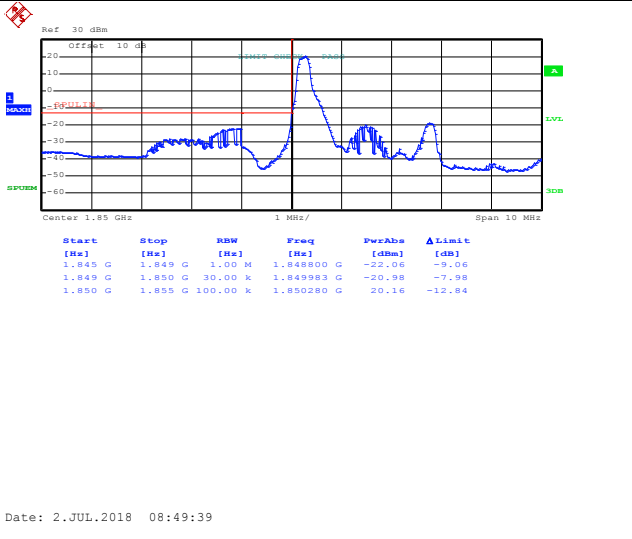
Lowest channel



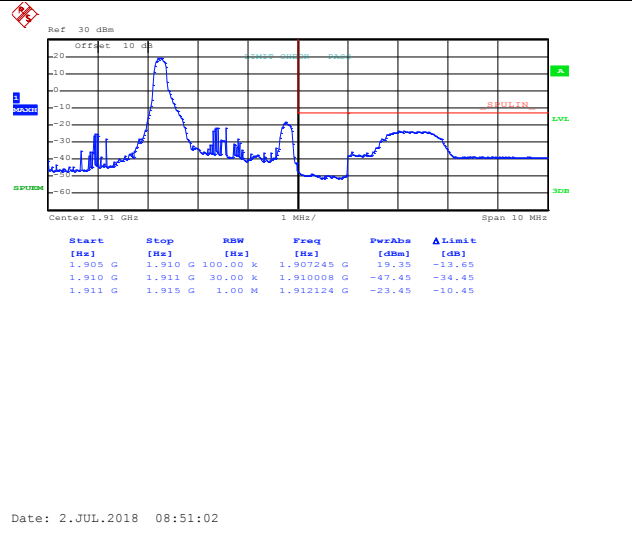
Date: 2.JUL.2018 08:47:49

Highest channel

LTE Band 2, BW: 3MHz 16QAM & RB Size 1

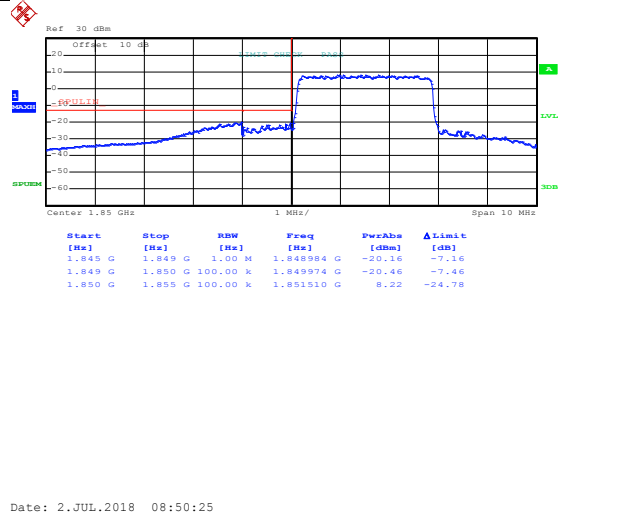


Lowest channel



Highest channel

16QAM & RB Size 15

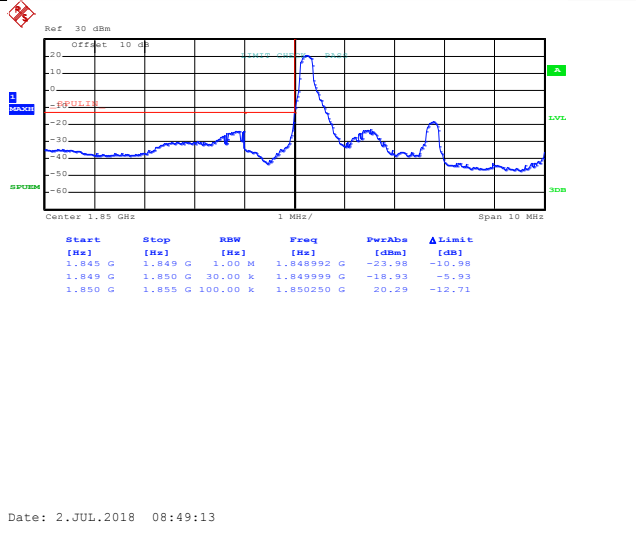


Lowest channel

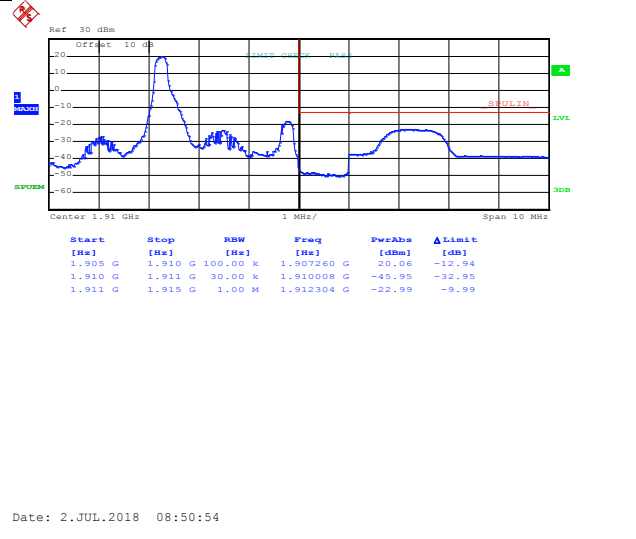


Highest channel

LTE Band 2, BW: 3MHz QPSK & RB Size 1

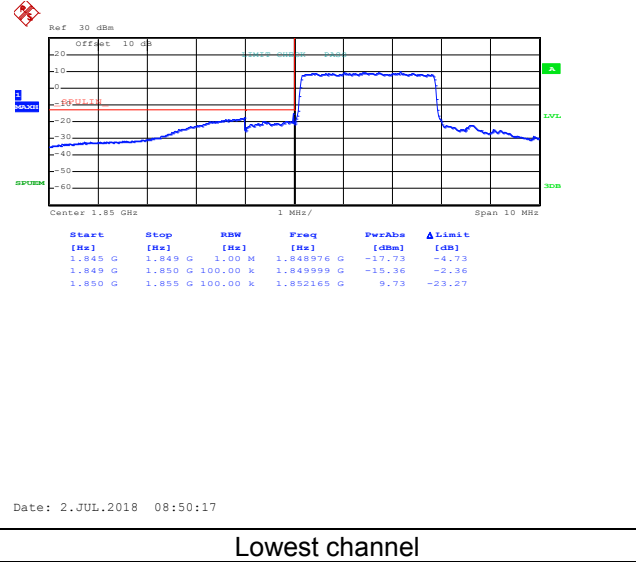


Lowest channel

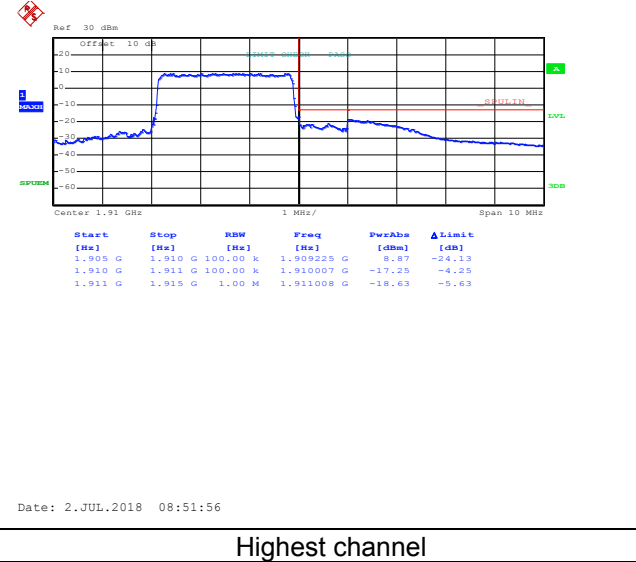


Highest channel

QPSK & RB Size 15

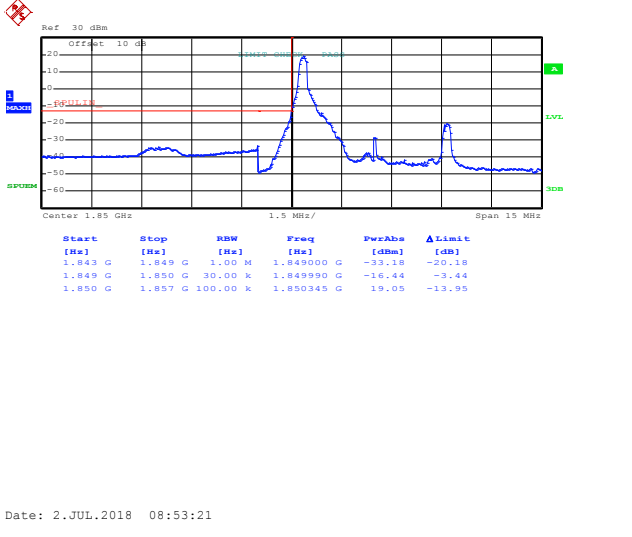


Lowest channel

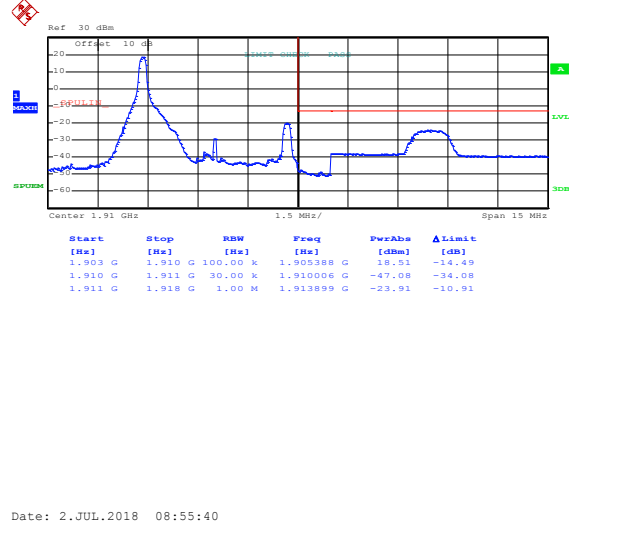


Highest channel

LTE Band 2, BW: 5MHz 16QAM & RB Size 1

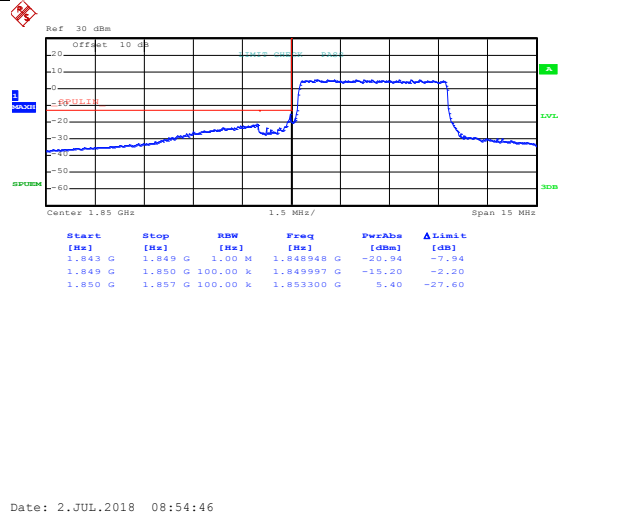


Lowest channel



Highest channel

16QAM & RB Size 25

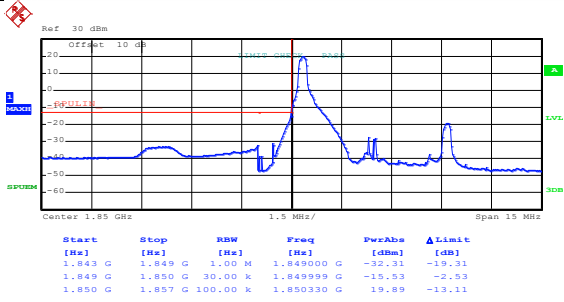


Lowest channel



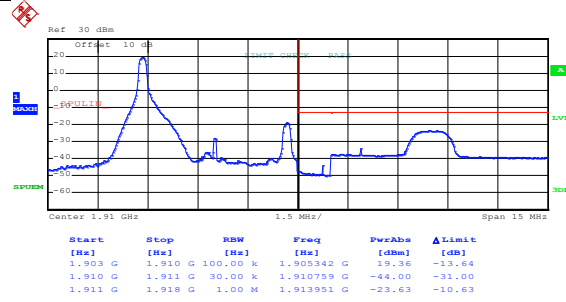
Highest channel

LTE Band 2, BW: 5MHz QPSK & RB Size 1



Date: 2.JUL.2018 08:53:12

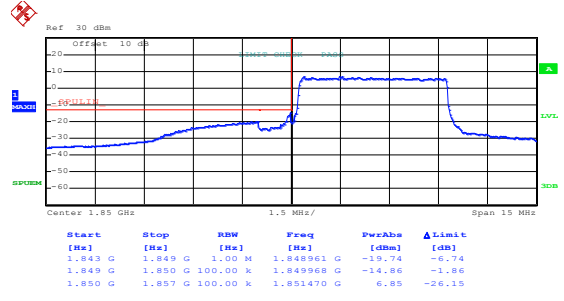
Lowest channel



Date: 2.JUL.2018 08:55:32

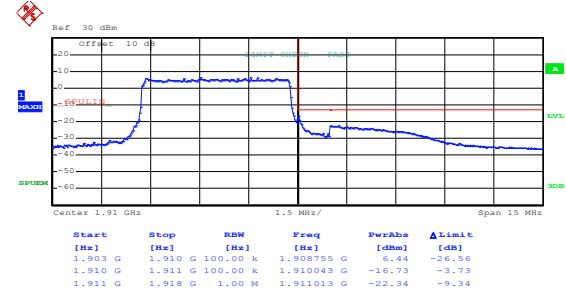
Highest channel

QPSK & RB Size 25



Date: 2.JUL.2018 08:54:38

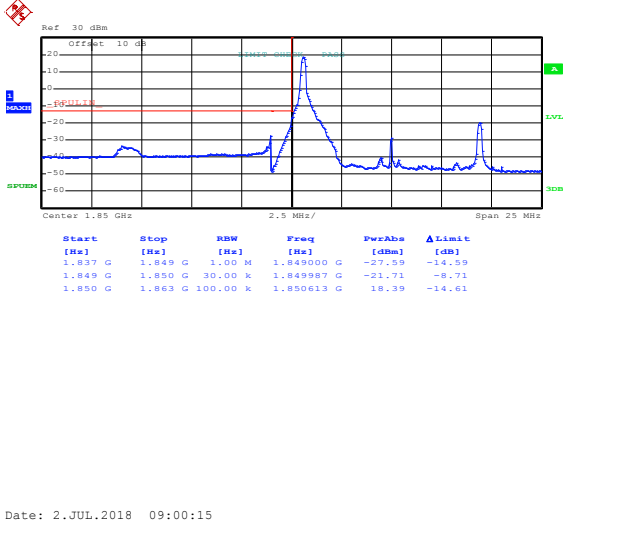
Lowest channel



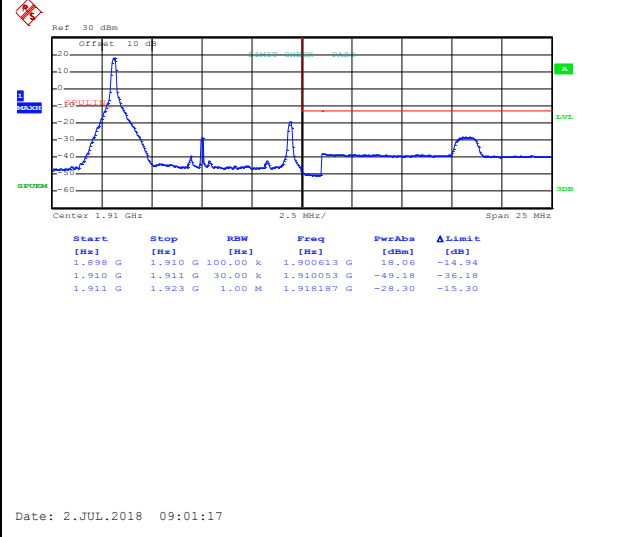
Date: 2.JUL.2018 08:56:34

Highest channel

LTE Band 2, BW: 10MHz 16QAM & RB Size 1

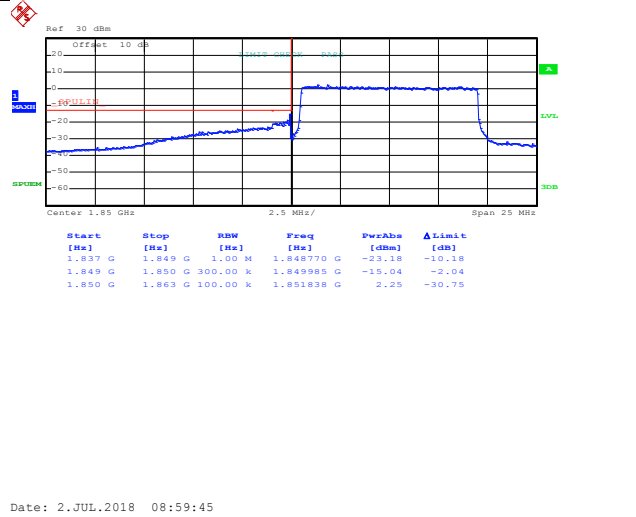


Lowest channel

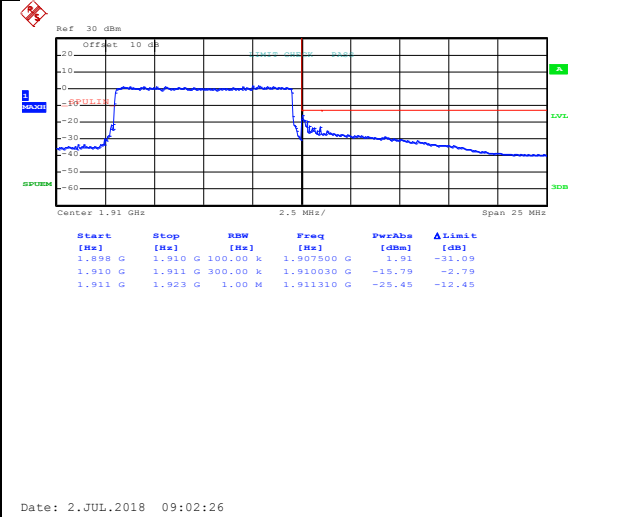


Highest channel

16QAM & RB Size 50

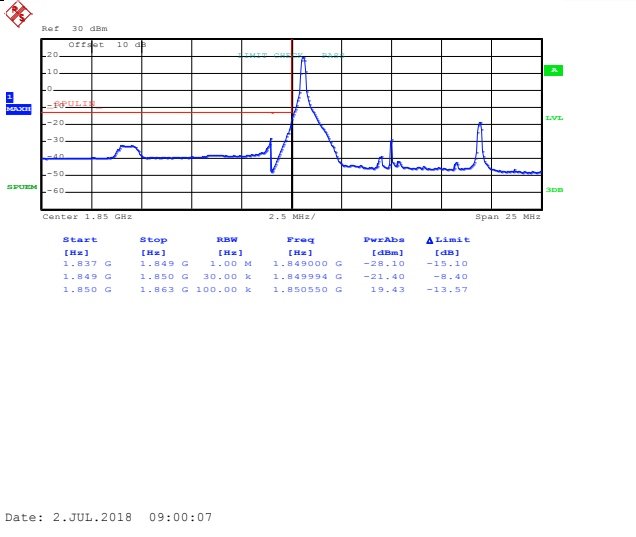


Lowest channel

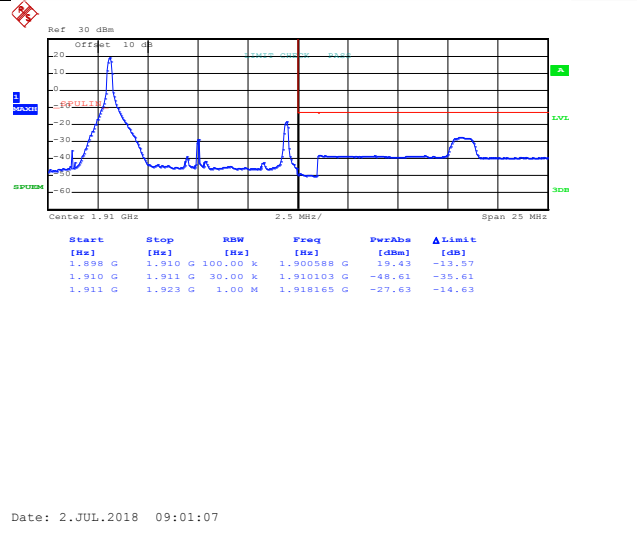


Highest channel

LTE Band 2, BW: 10MHz QPSK & RB Size 1

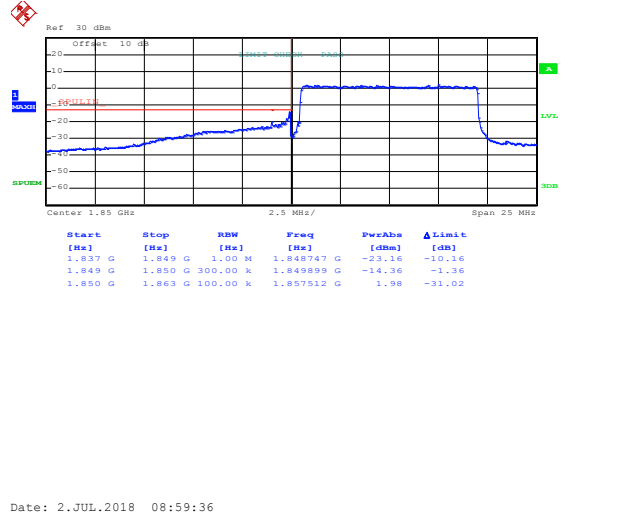


Lowest channel

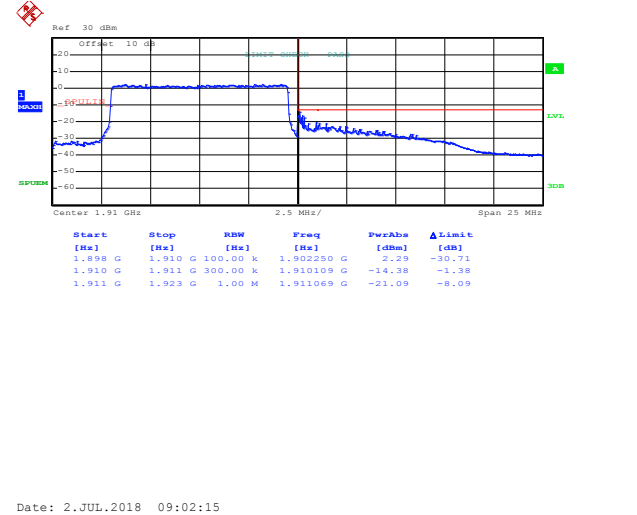


Highest channel

QPSK & RB Size 50

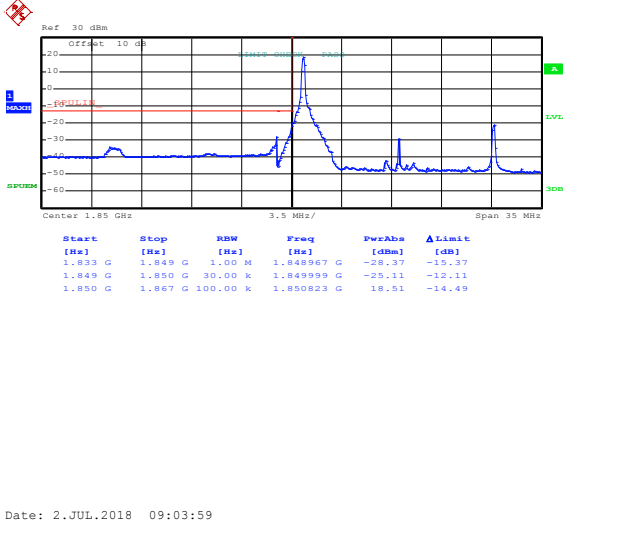


Lowest channel

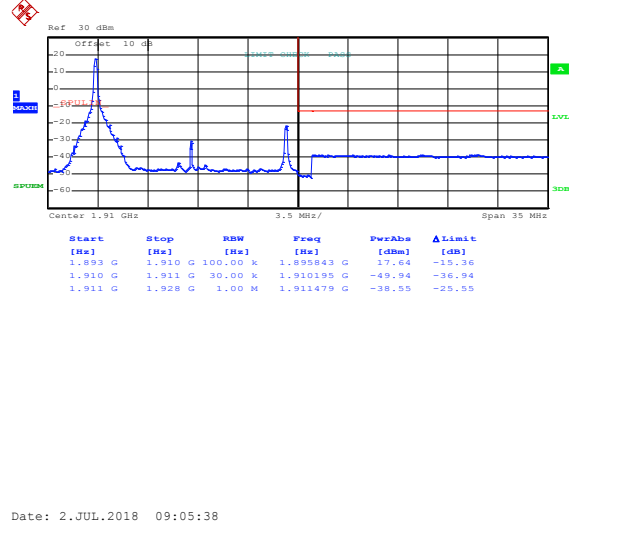


Highest channel

LTE Band 2, BW: 15MHz 16QAM & RB Size 1

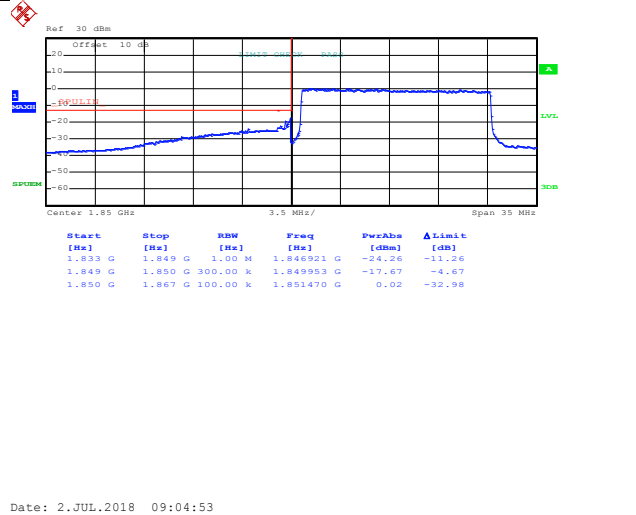


Lowest channel

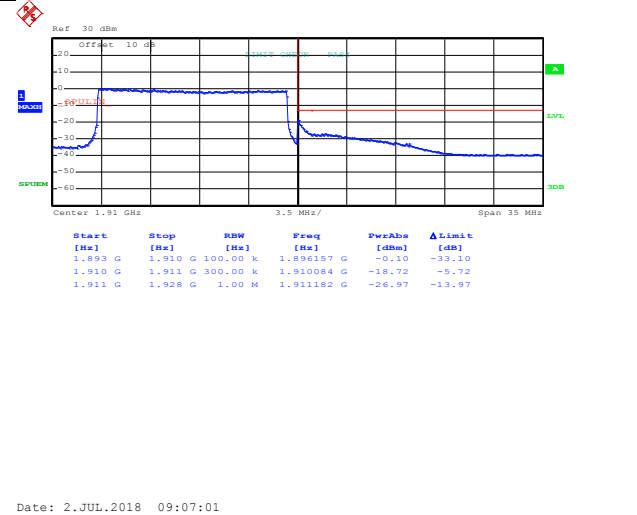


Highest channel

16QAM & RB Size 75

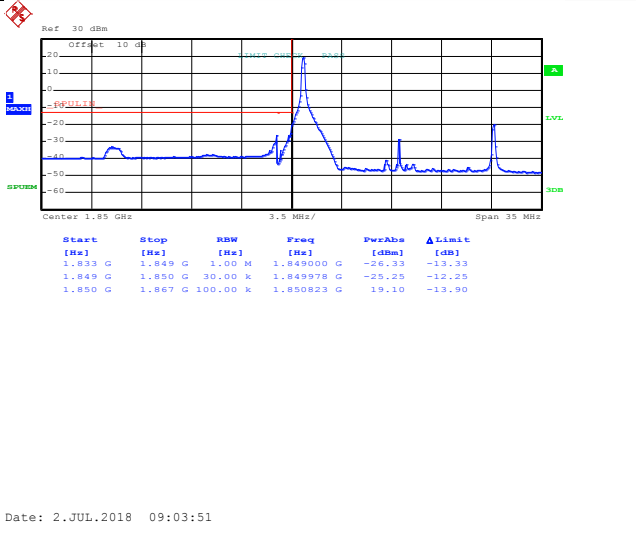


Lowest channel

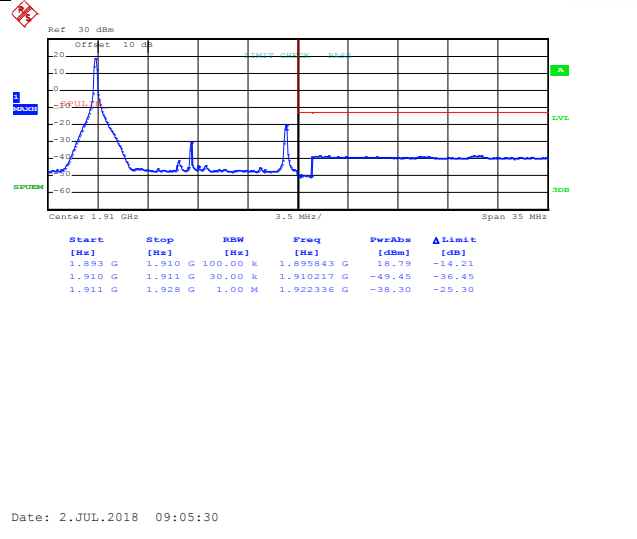


Highest channel

LTE Band 2, BW: 15MHz QPSK & RB Size 1

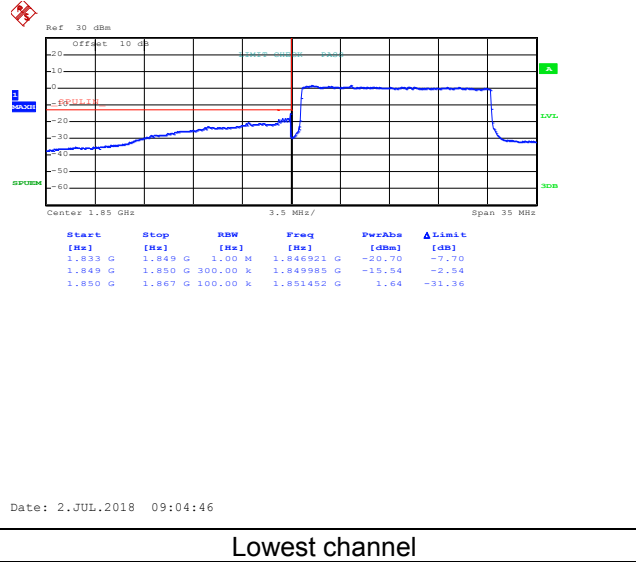


Lowest channel

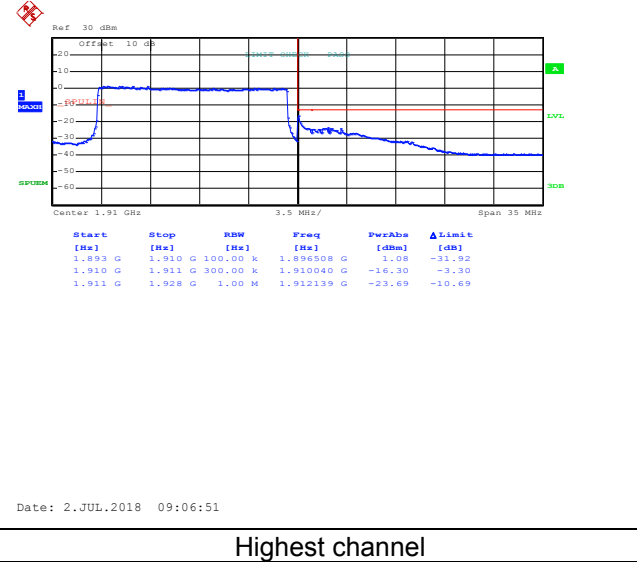


Highest channel

QPSK & RB Size 75

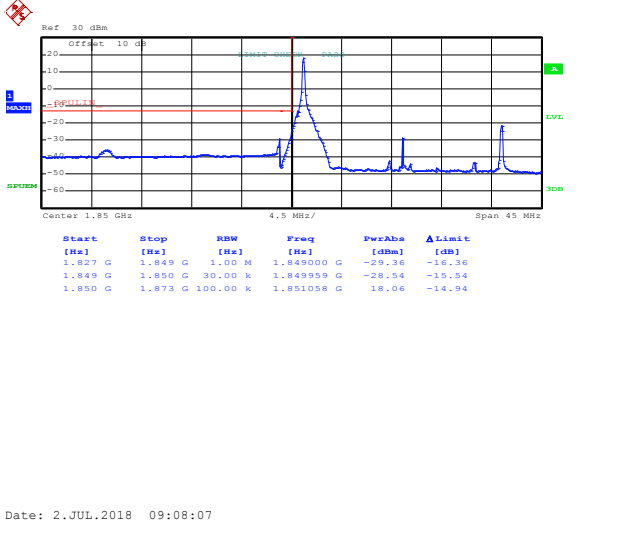


Lowest channel

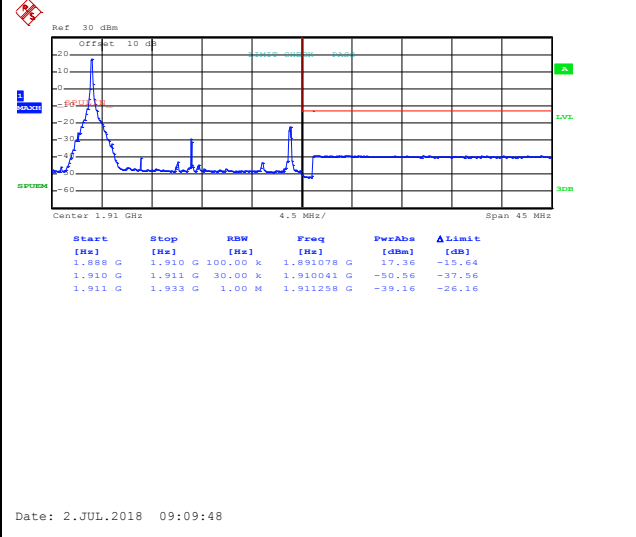


Highest channel

LTE Band 2, BW: 20MHz 16QAM & RB Size 1

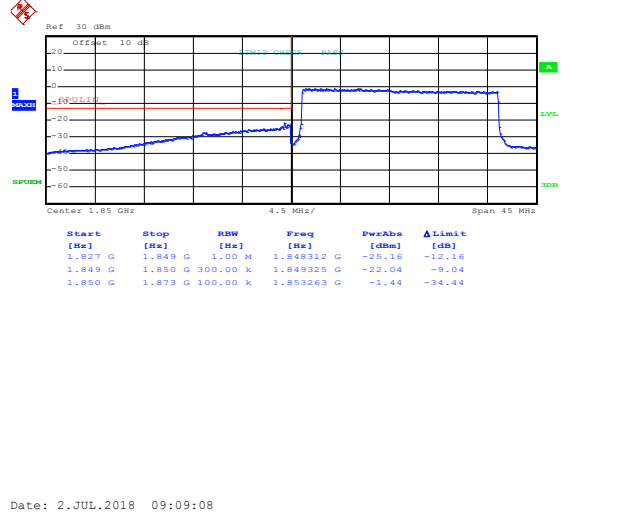


Lowest channel



Highest channel

16QAM & RB Size 100

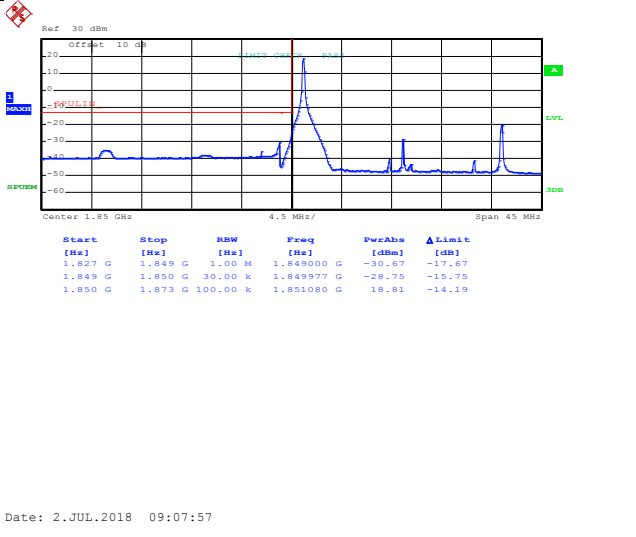


Lowest channel

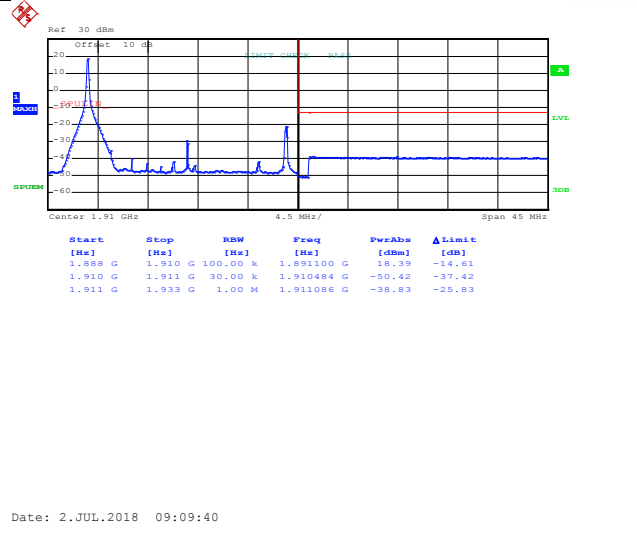


Highest channel

LTE Band 2, BW: 20MHz QPSK & RB Size 1

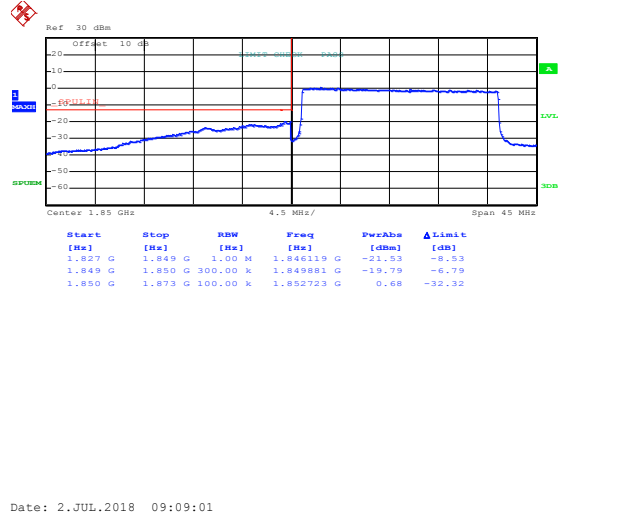


Lowest channel

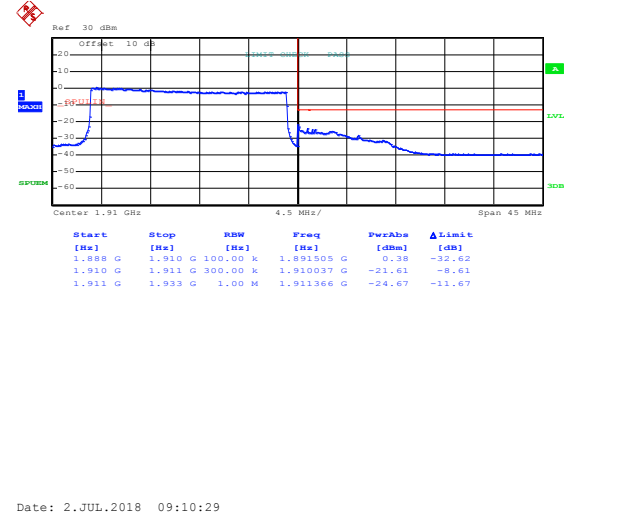


Highest channel

QPSK & RB Size 100



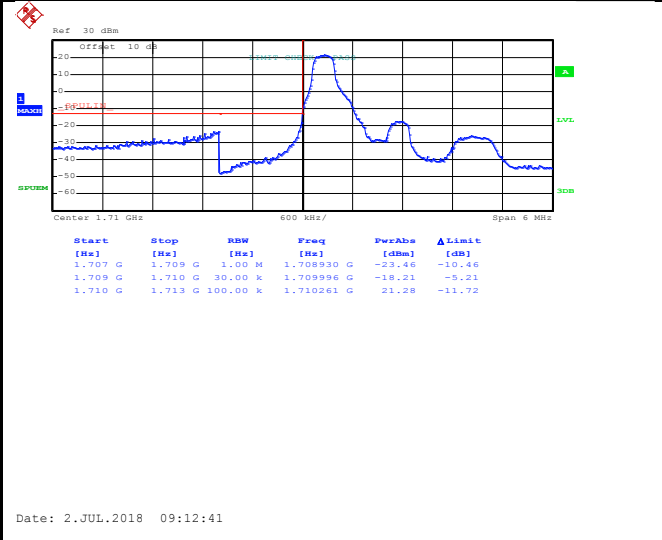
Lowest channel



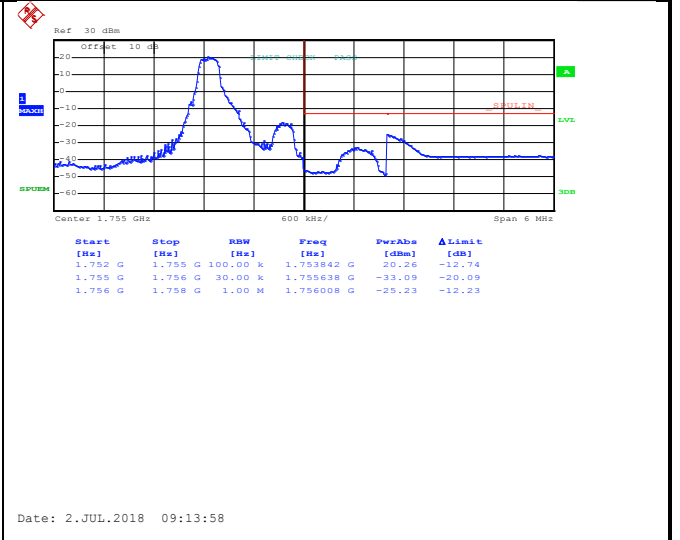
Highest channel

LTE Band 4 part:

LTE Band 4, BW: 1.4MHz
16QAM & RB Size 1

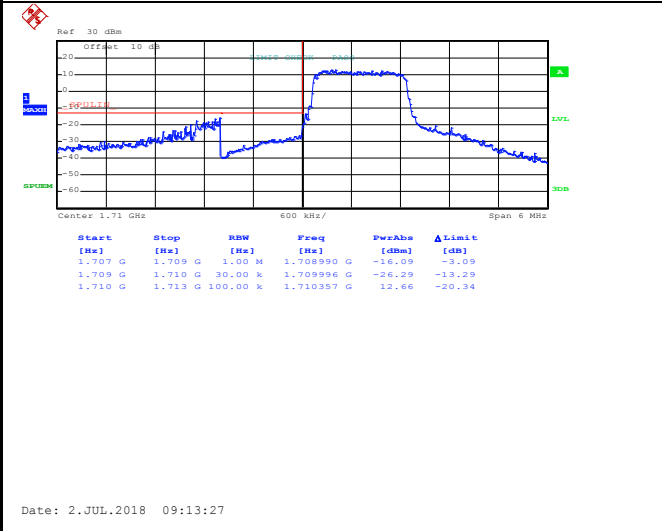


Lowest channel

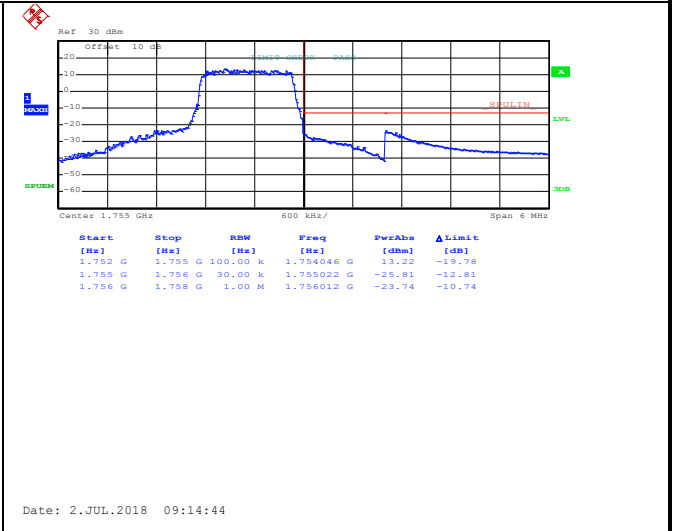


Highest channel

16QAM & RB Size 6

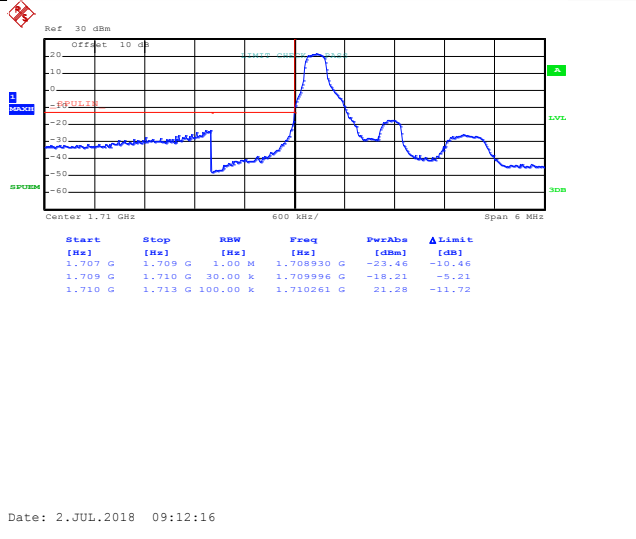


Lowest channel

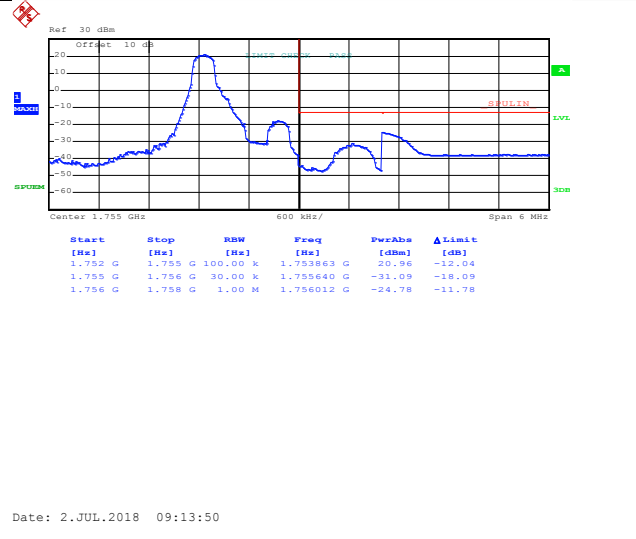


Highest channel

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

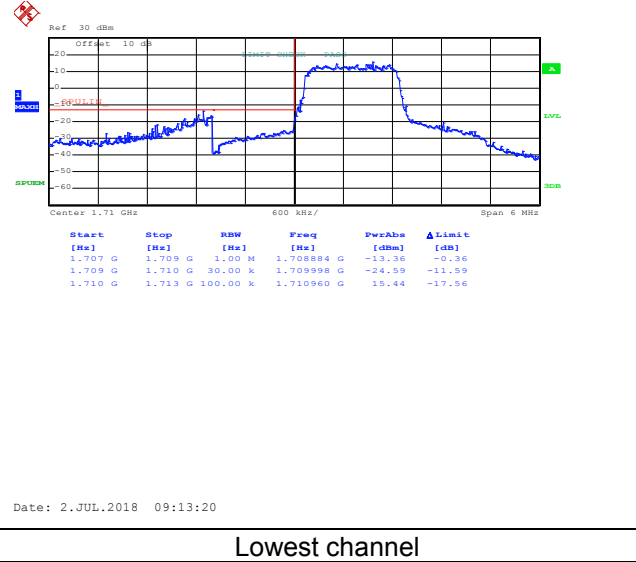


Lowest channel

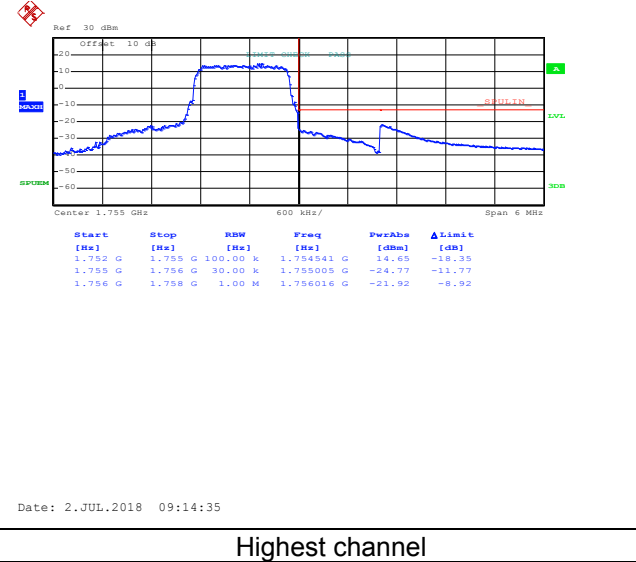


Highest channel

QPSK & RB Size 6

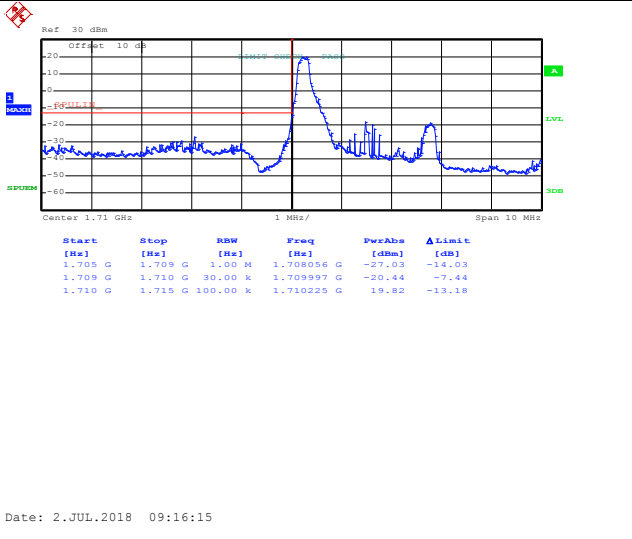


Lowest channel

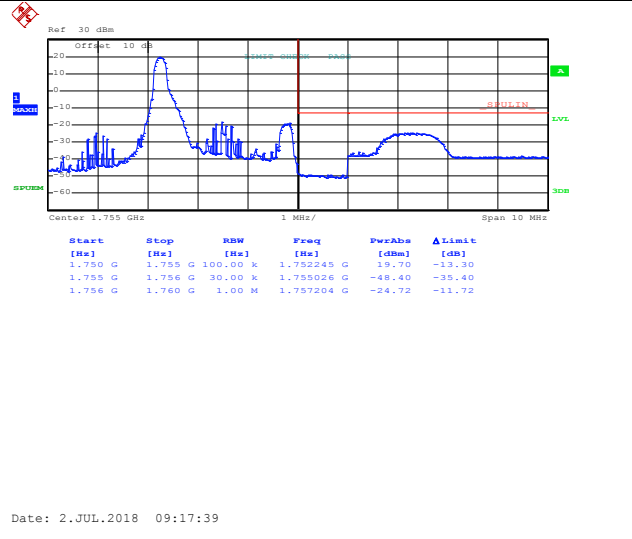


Highest channel

LTE Band 4, BW: 3MHz 16QAM & RB Size 1

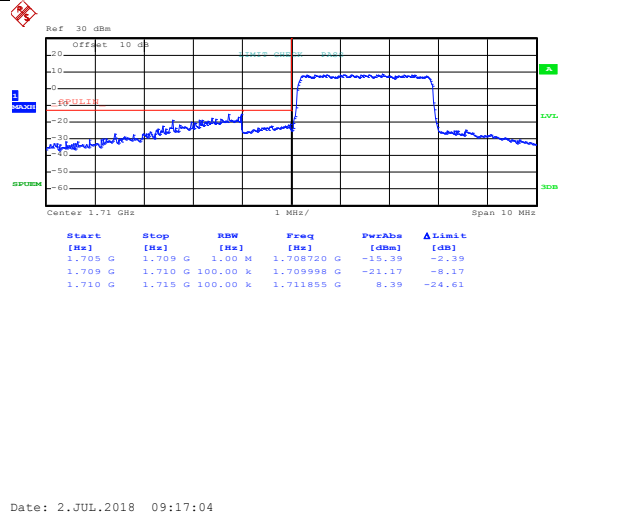


Lowest channel



Highest channel

16QAM & RB Size 15



Lowest channel

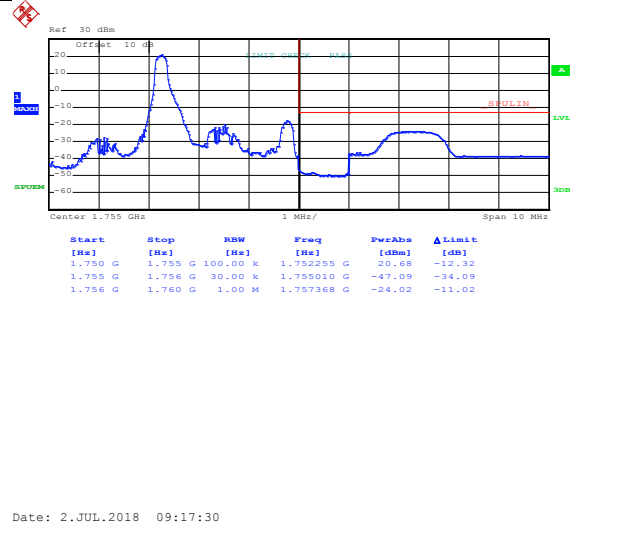


Highest channel

LTE Band 4, BW: 3MHz QPSK & RB Size 1

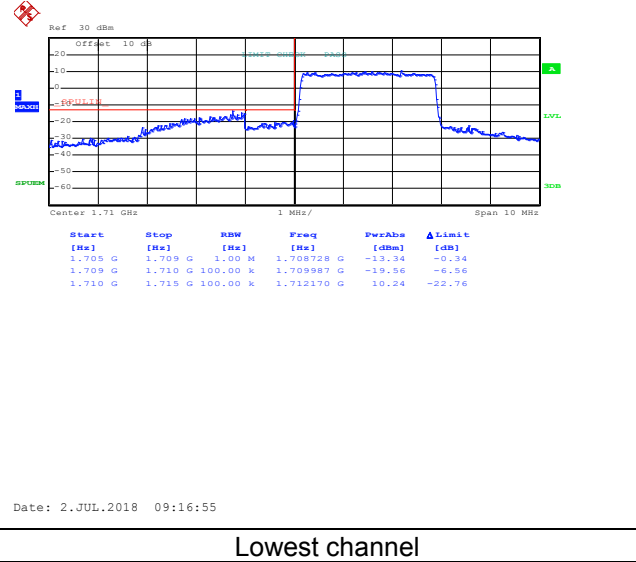


Lowest channel

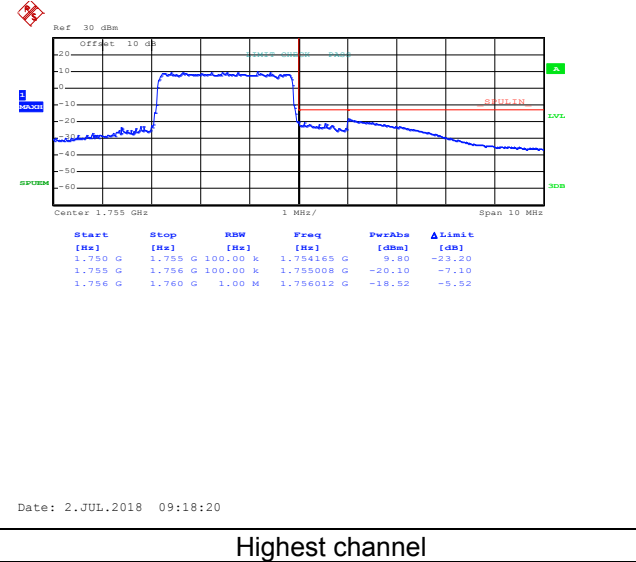


Highest channel

QPSK & RB Size 15

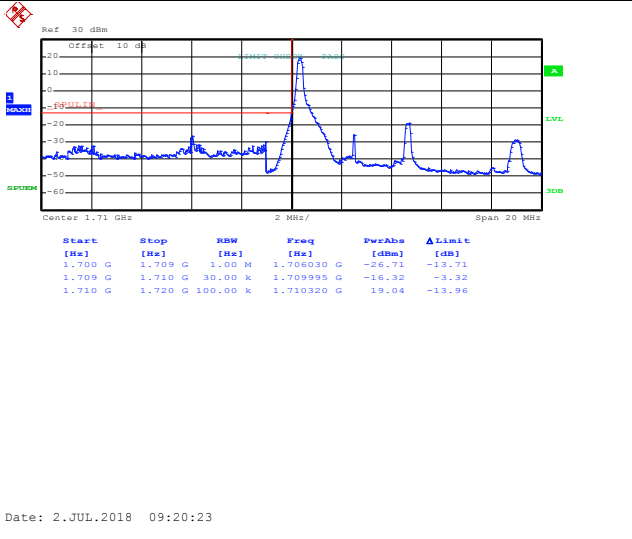


Lowest channel

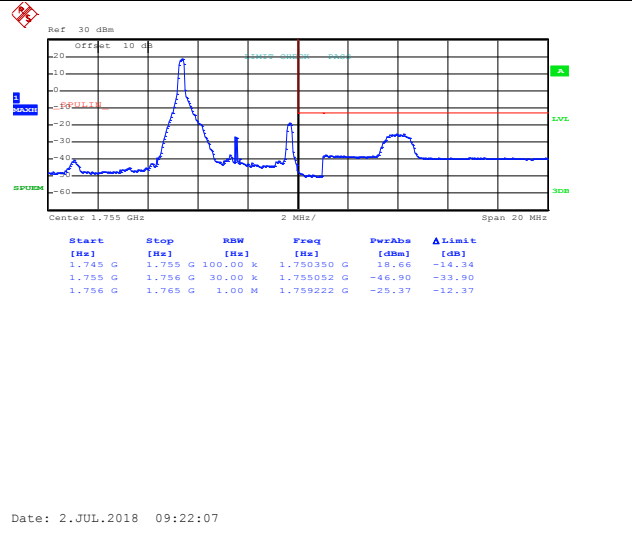


Highest channel

LTE Band 4, BW: 5MHz 16QAM & RB Size 1

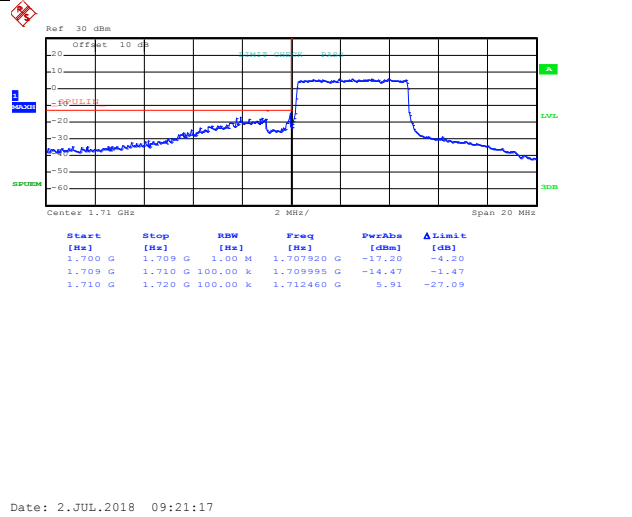


Lowest channel

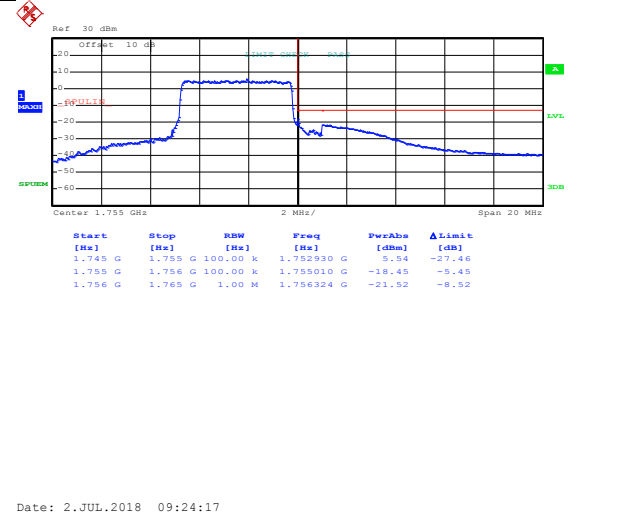


Highest channel

16QAM & RB Size 25

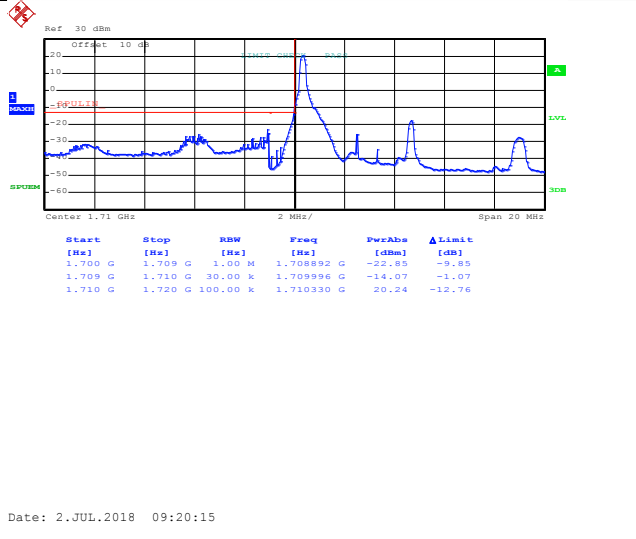


Lowest channel

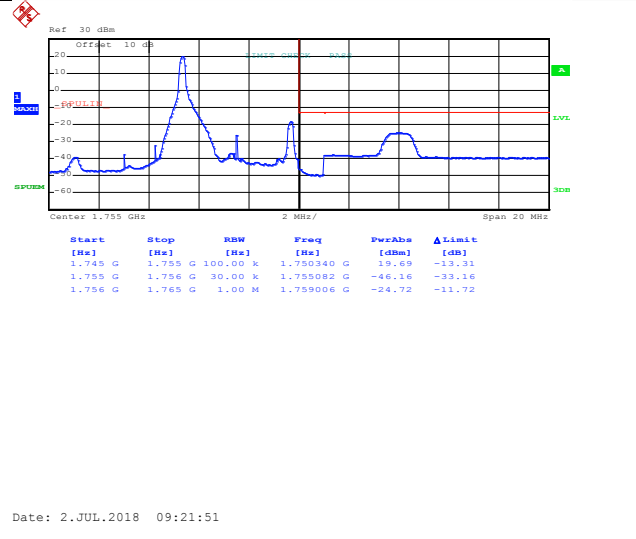


Highest channel

LTE Band 4, BW: 5MHz QPSK & RB Size 1

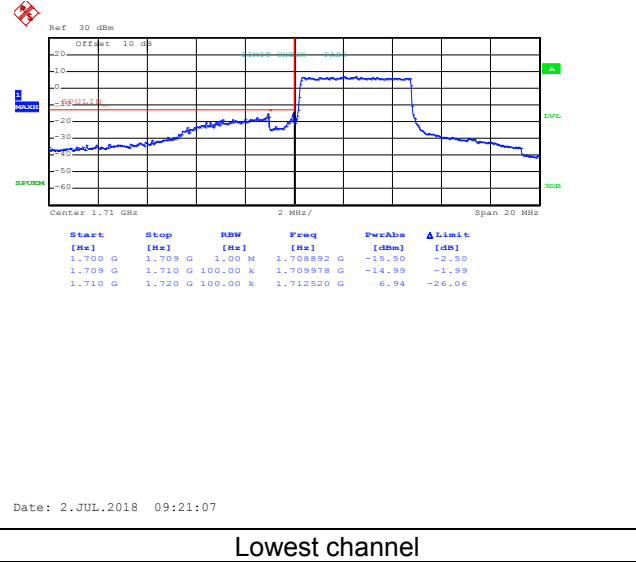


Lowest channel

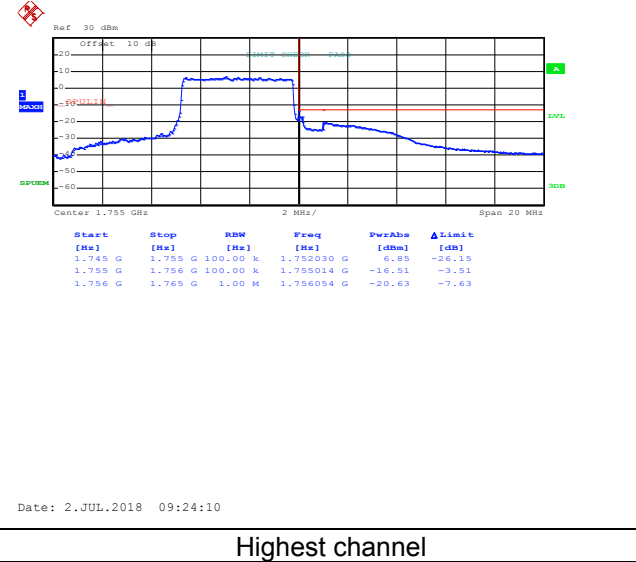


Highest channel

QPSK & RB Size 25

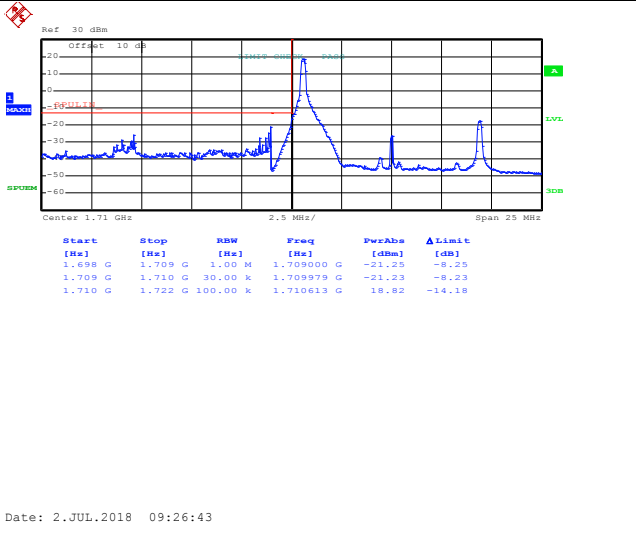


Lowest channel

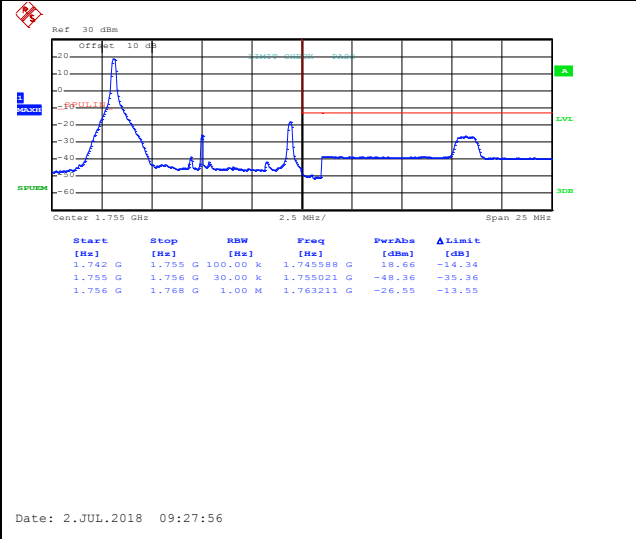


Highest channel

LTE Band 4, BW: 10MHz 16QAM & RB Size 1

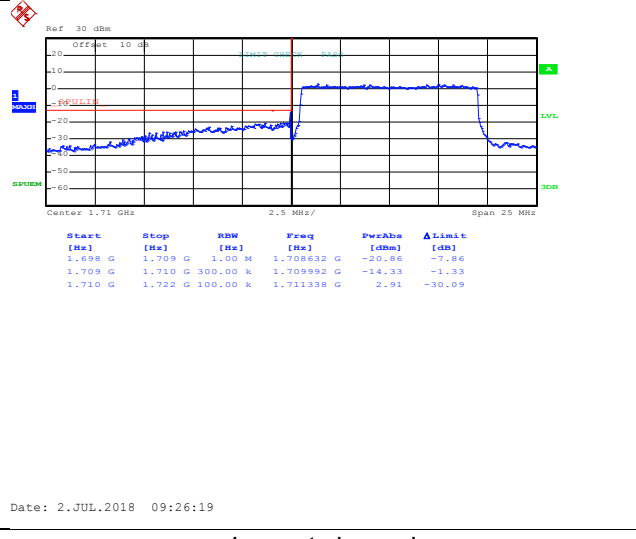


Lowest channel

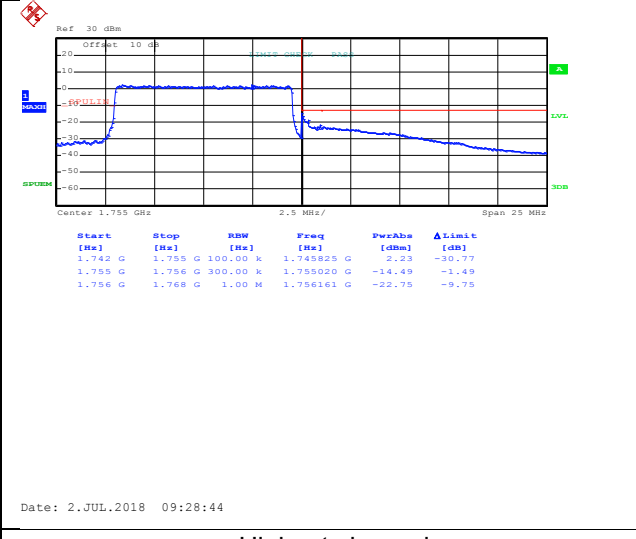


Highest channel

16QAM & RB Size 50

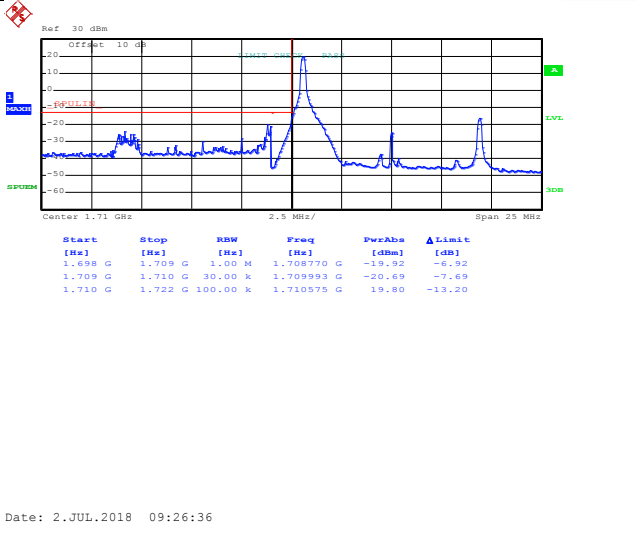


Lowest channel

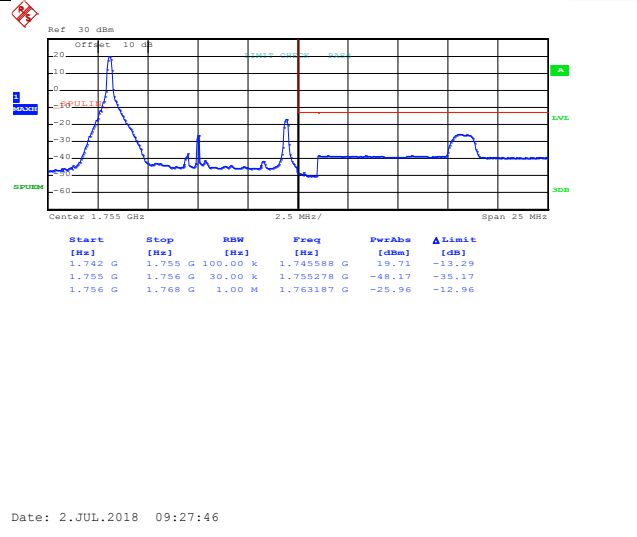


Highest channel

LTE Band 4, BW: 10MHz QPSK & RB Size 1

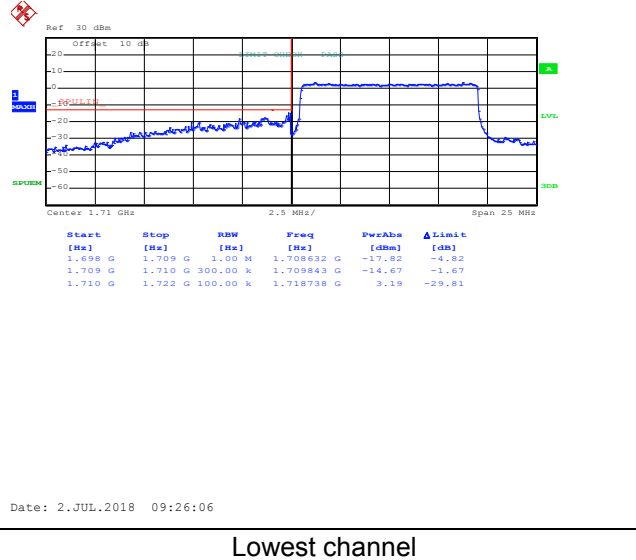


Lowest channel

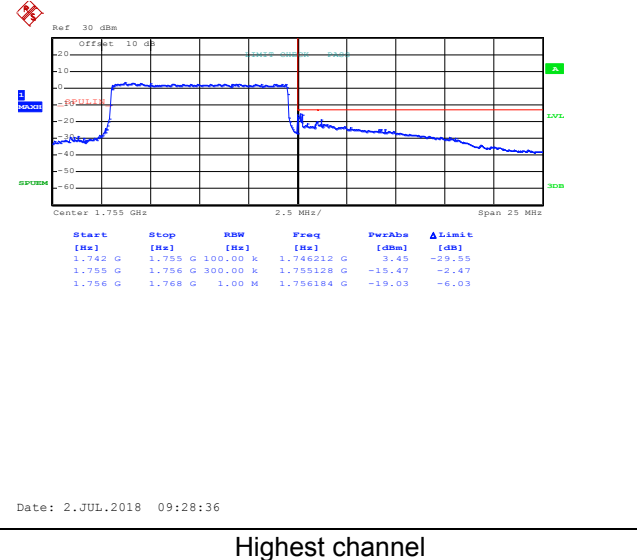


Highest channel

QPSK & RB Size 50

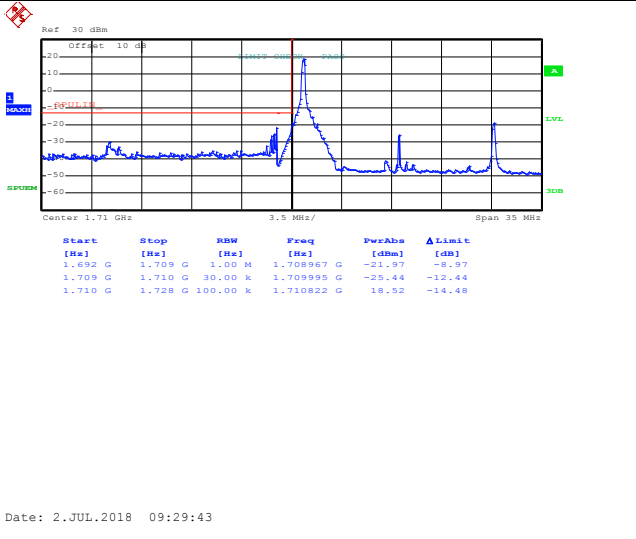


Lowest channel

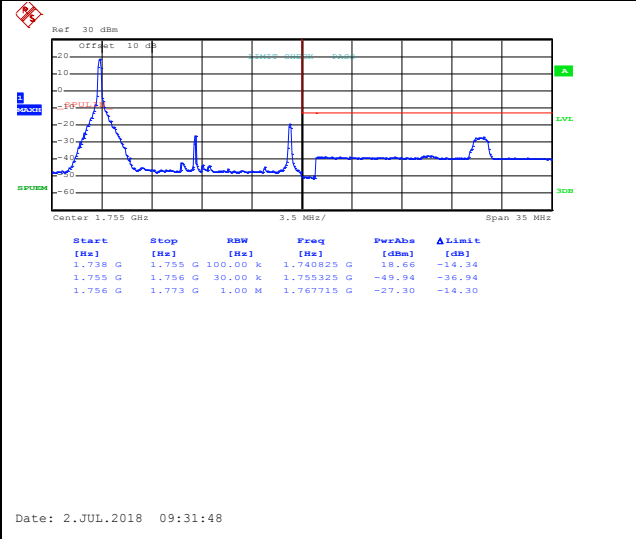


Highest channel

LTE Band 4, BW: 15MHz 16QAM & RB Size 1

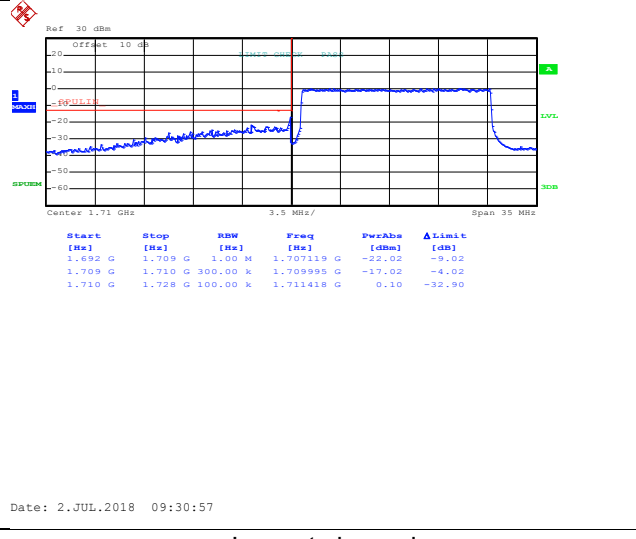


Lowest channel

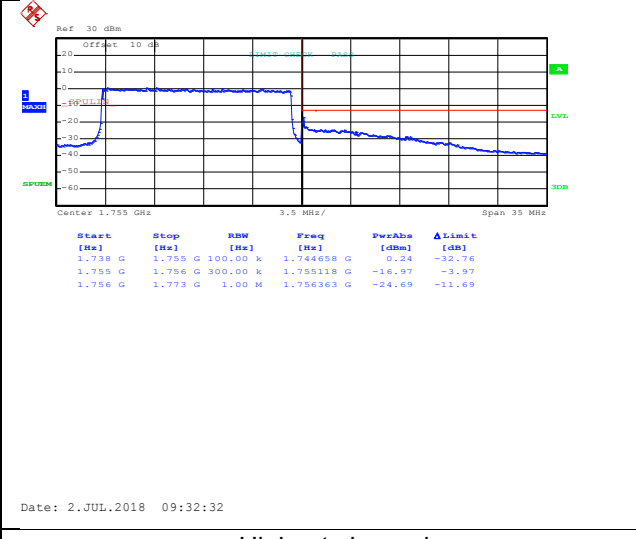


Highest channel

16QAM & RB Size 75

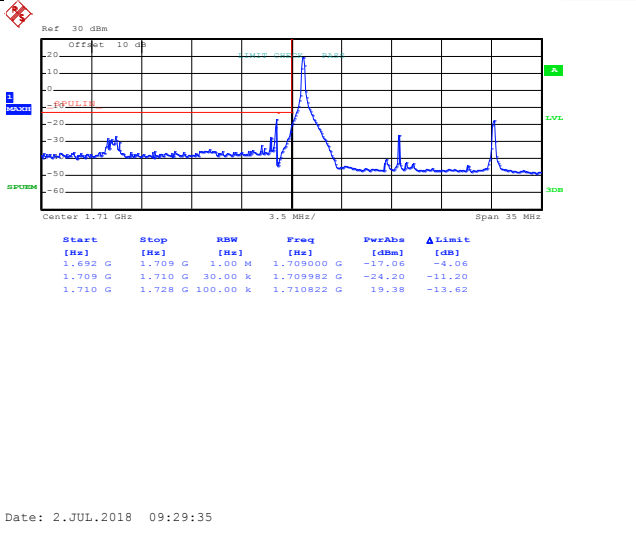


Lowest channel

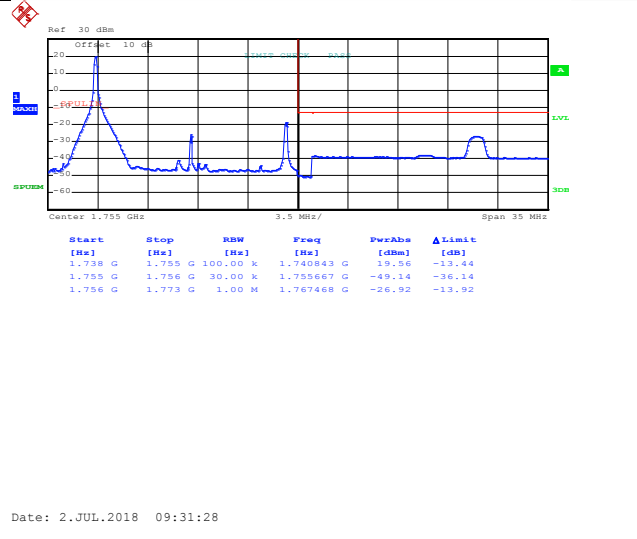


Highest channel

LTE Band 4, BW: 15MHz QPSK & RB Size 1

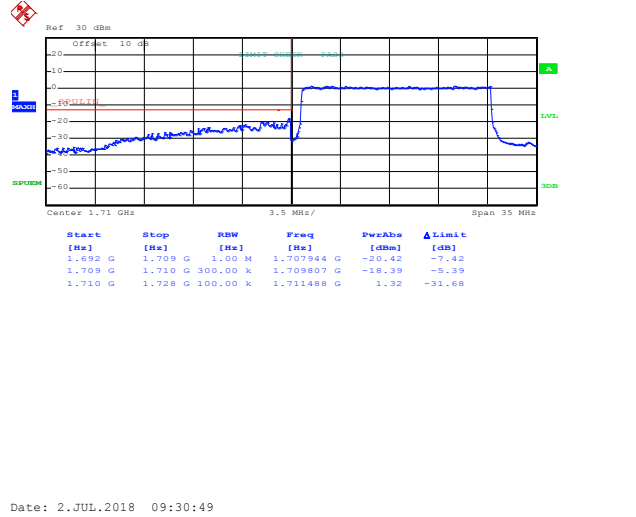


Lowest channel

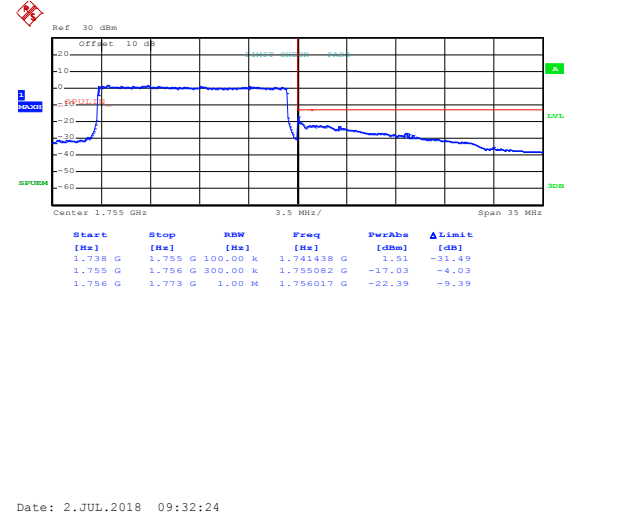


Highest channel

QPSK & RB Size 75

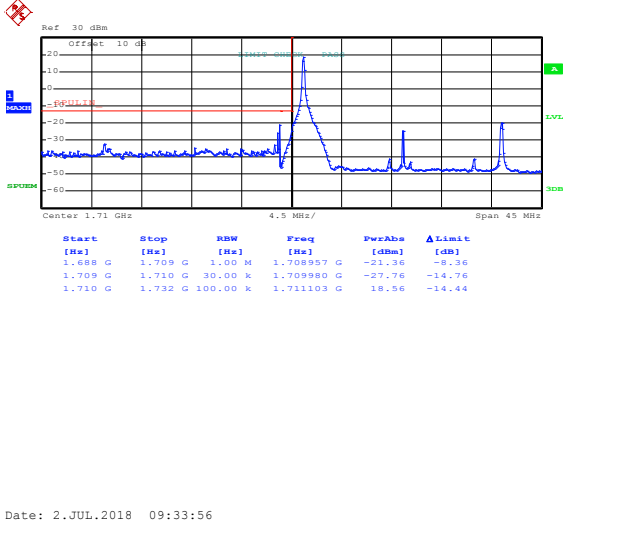


Lowest channel

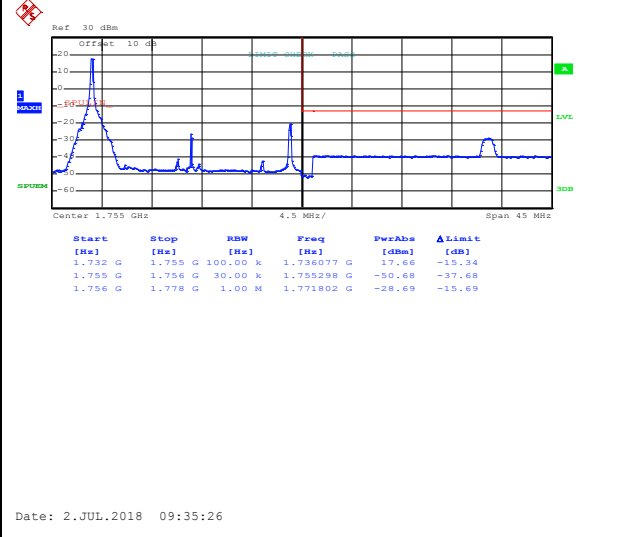


Highest channel

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

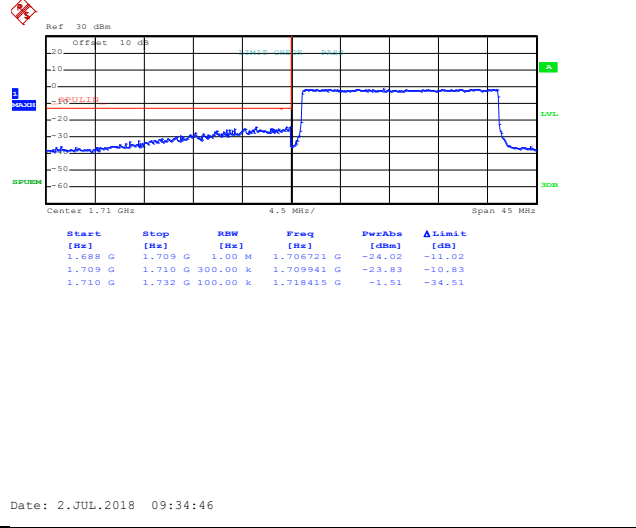


Lowest channel

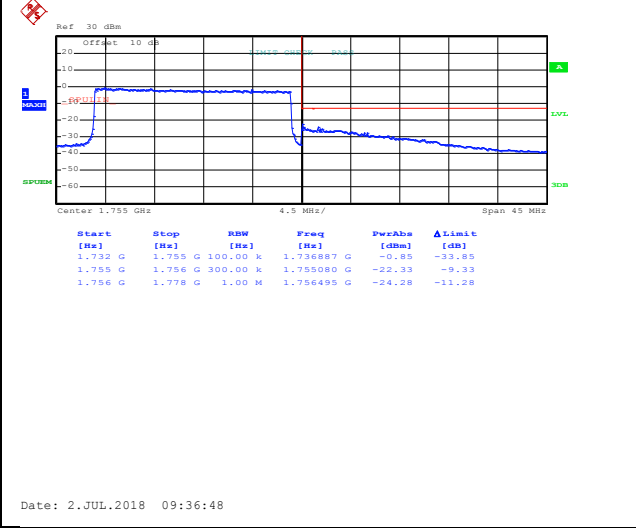


Highest channel

16QAM & RB Size 100

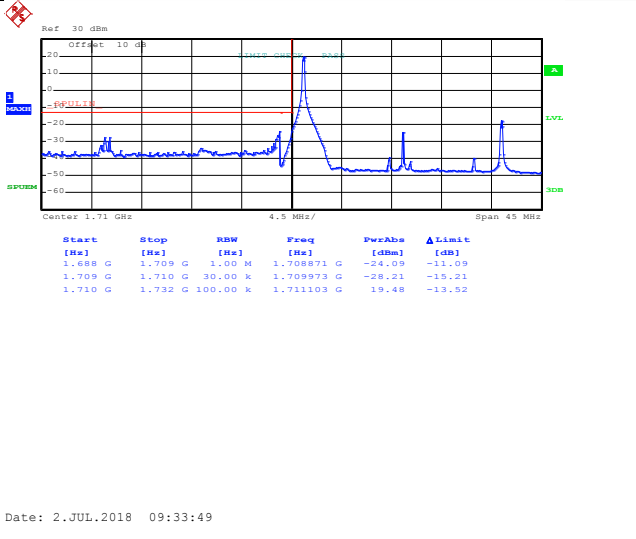


Lowest channel

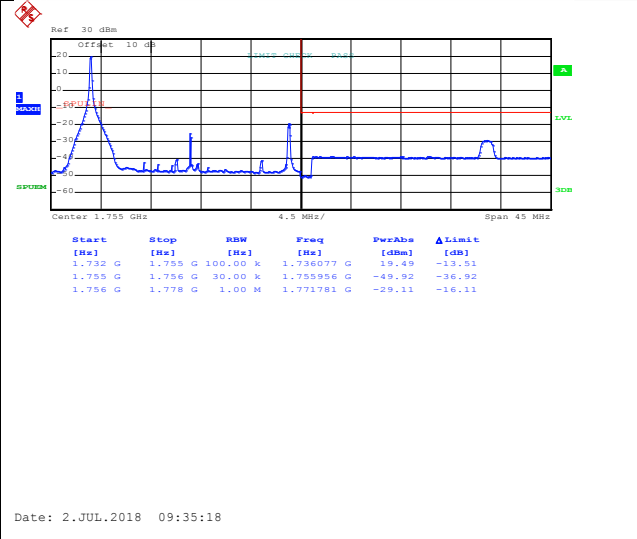


Highest channel

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

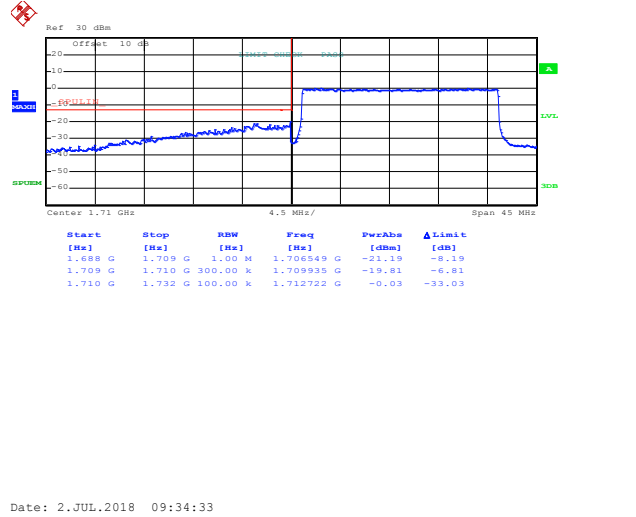


Lowest channel

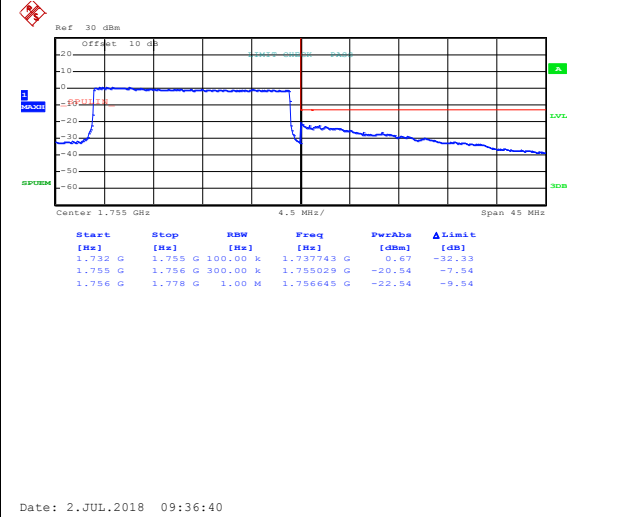


Highest channel

QPSK & RB Size 100



Lowest channel

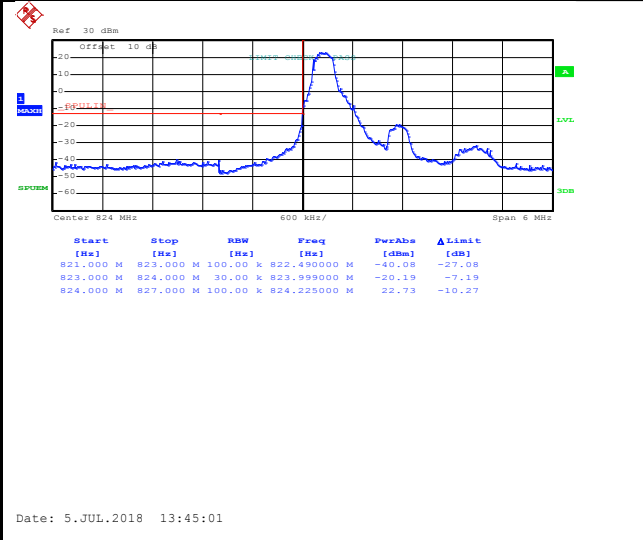


Highest channel

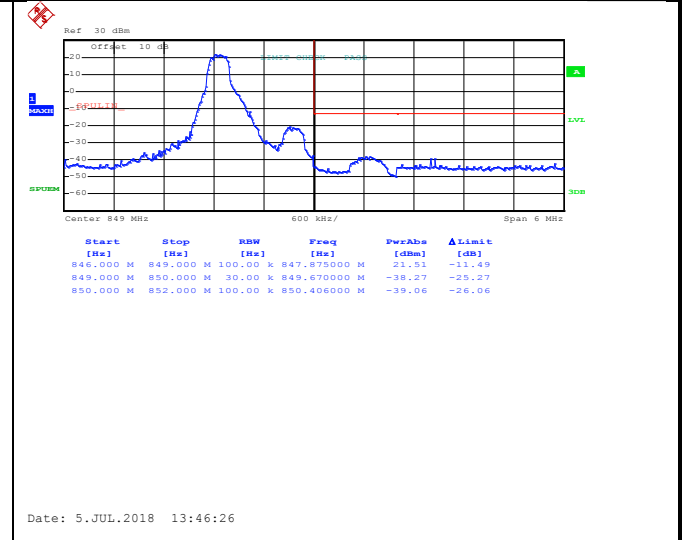
LTE Band 5 part:

LTE Band 5, BW: 1.4MHz

16QAM & RB Size 1

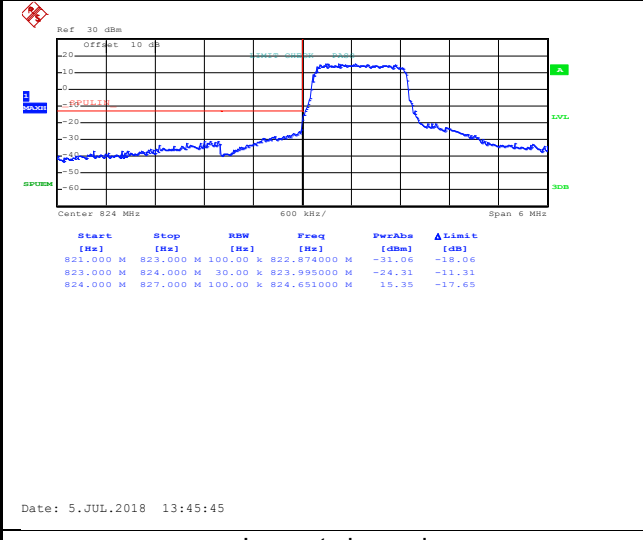


Lowest channel

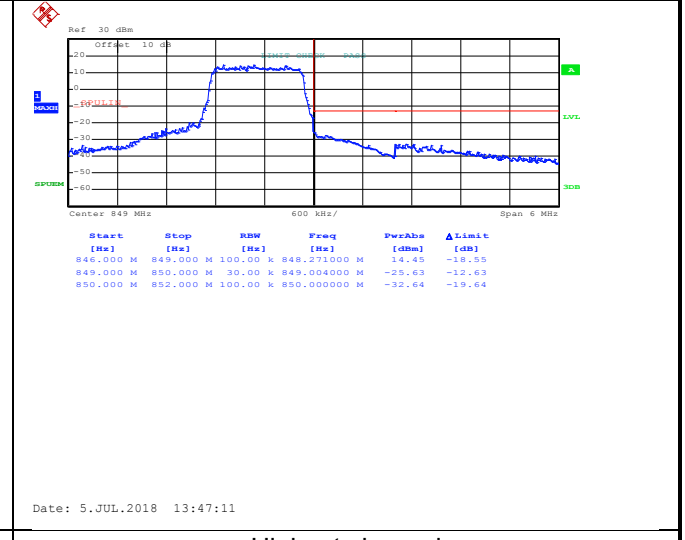


Highest channel

16QAM & RB Size 6

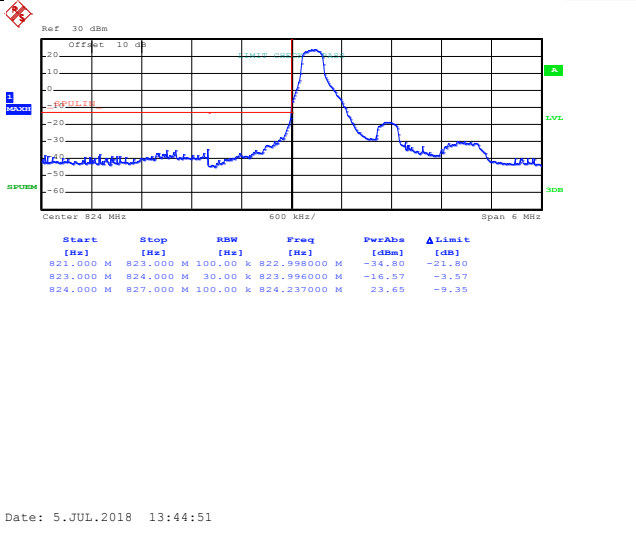


Lowest channel

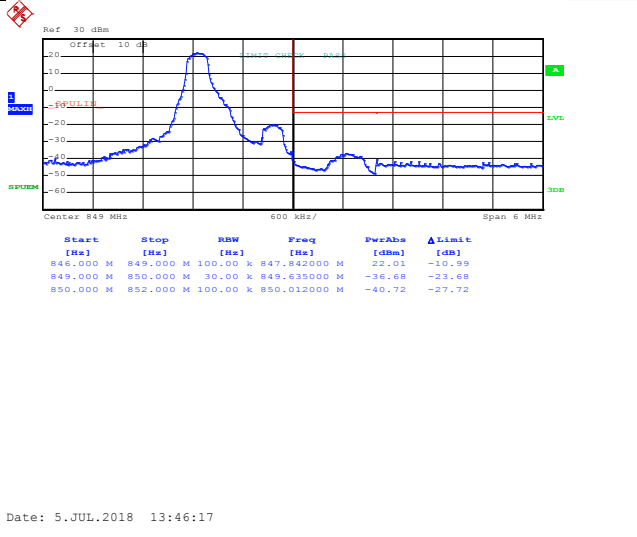


Highest channel

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

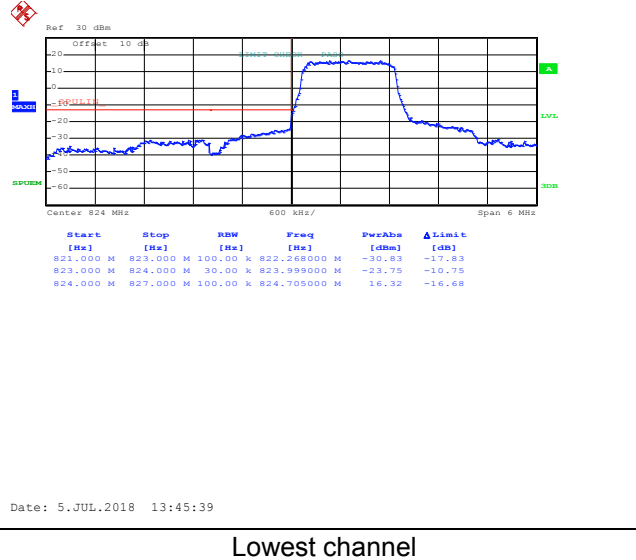


Lowest channel

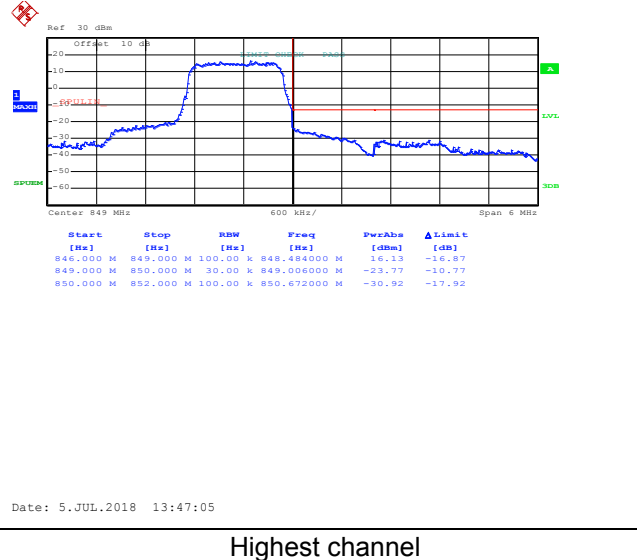


Highest channel

QPSK & RB Size 6



Lowest channel

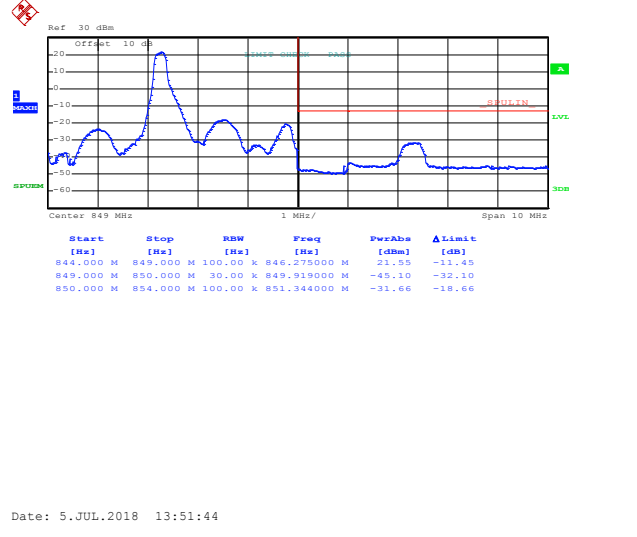


Highest channel

LTE Band 5, BW: 3MHz
16QAM & RB Size 1

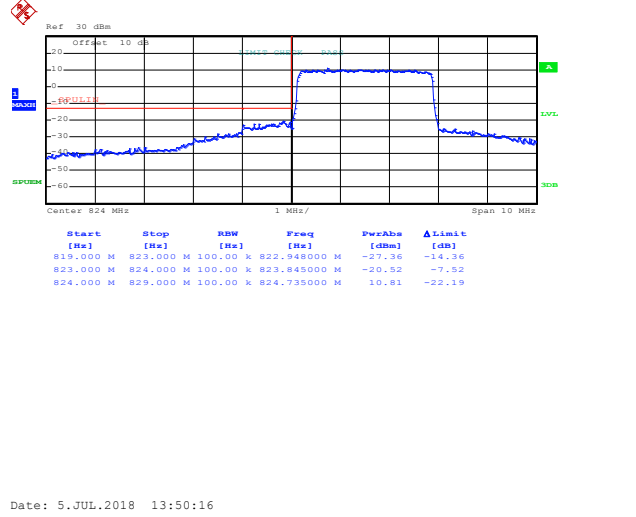


Lowest channel

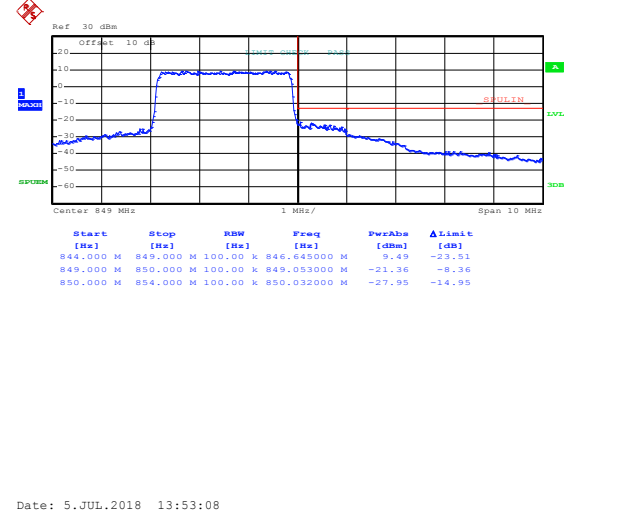


Highest channel

16QAM & RB Size 15



Lowest channel

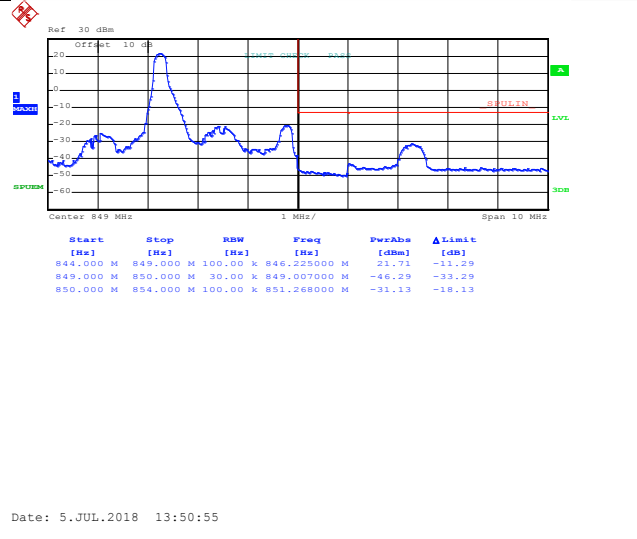


Highest channel

LTE Band 5, BW: 3MHz QPSK & RB Size 1

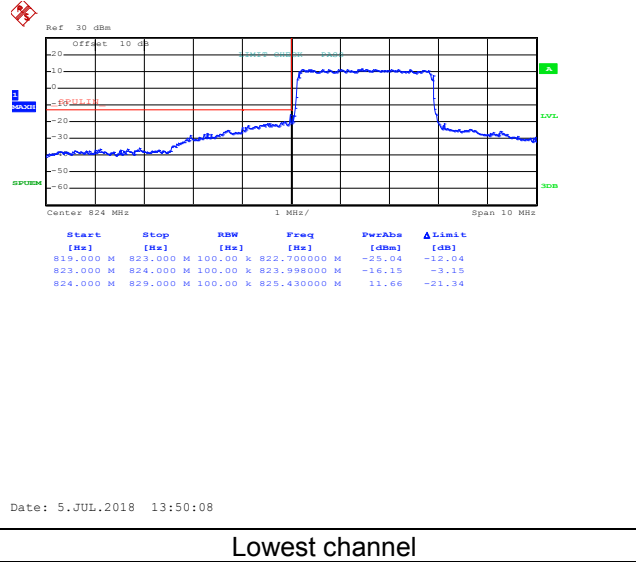


Lowest channel

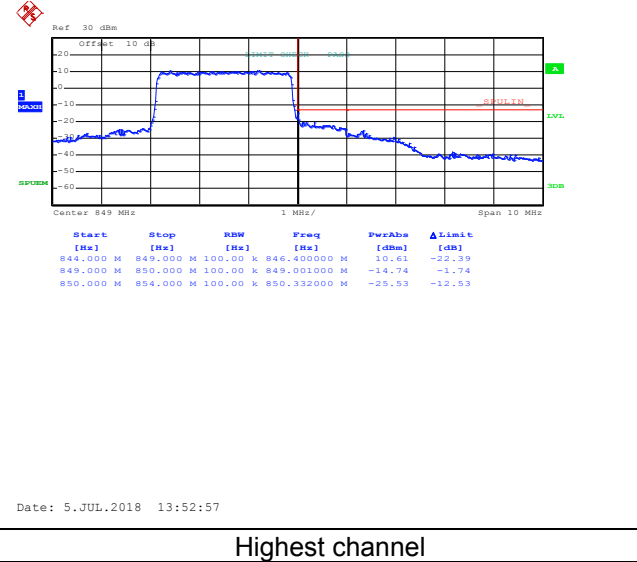


Highest channel

QPSK & RB Size 15

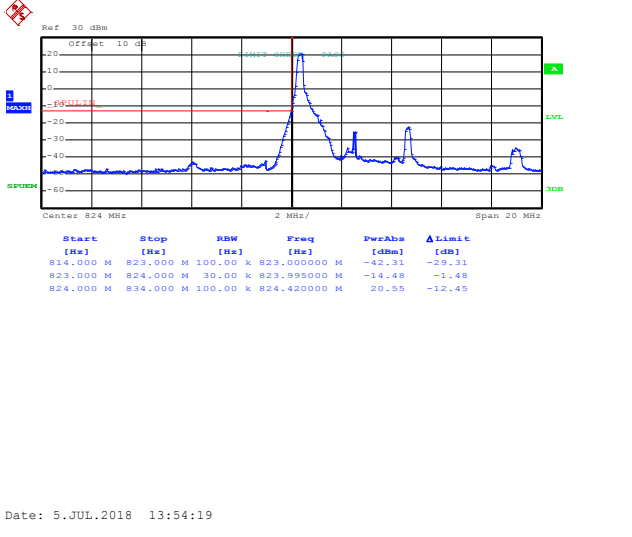


Lowest channel

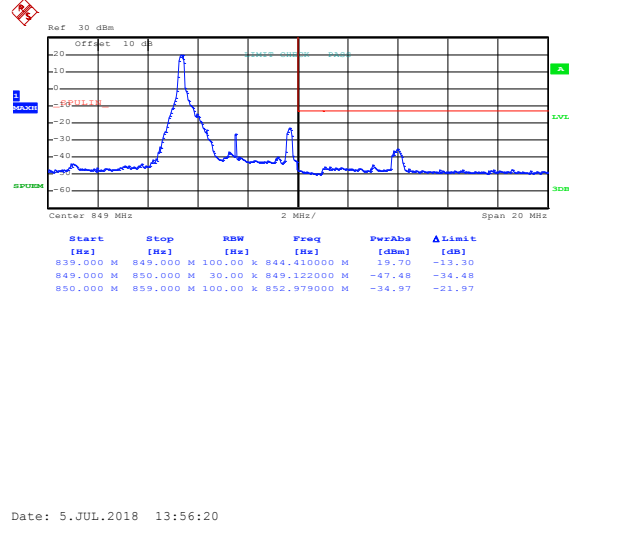


Highest channel

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

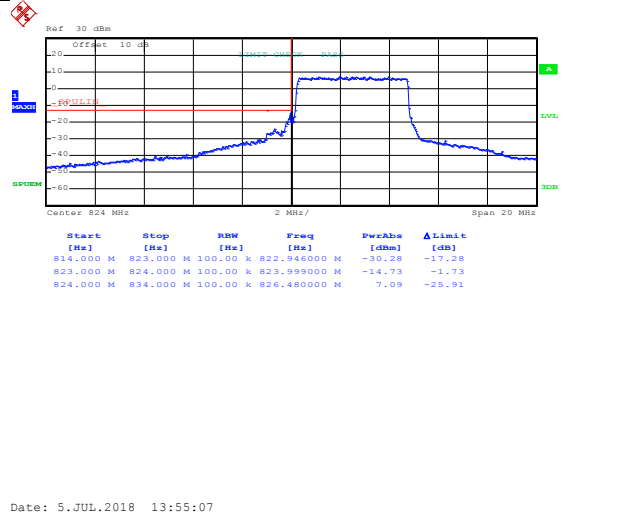


Lowest channel

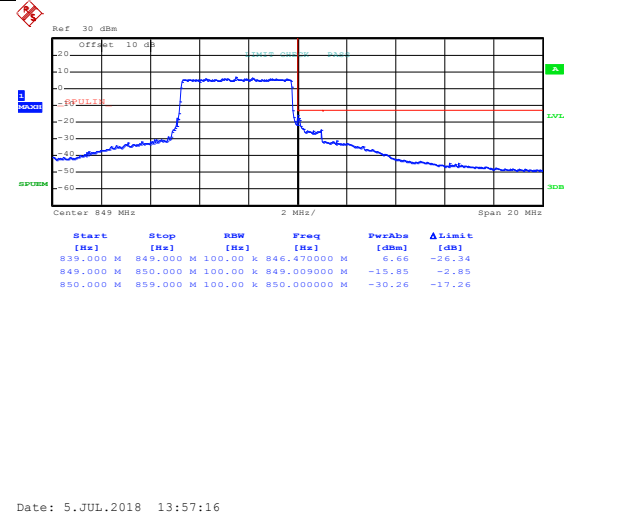


Highest channel

16QAM & RB Size 25

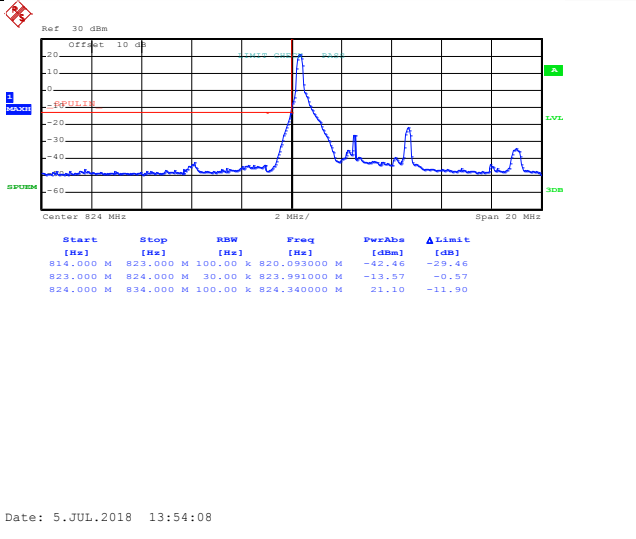


Lowest channel

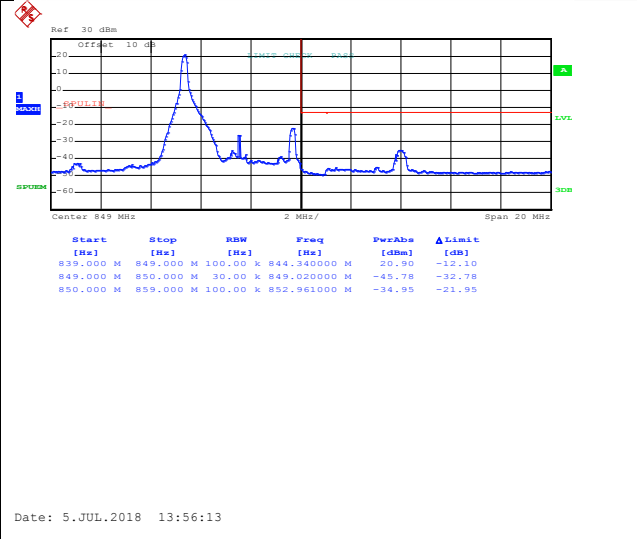


Highest channel

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

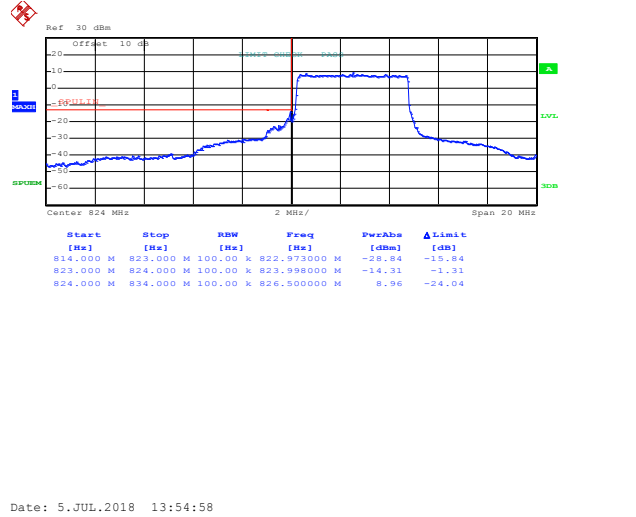


Lowest channel

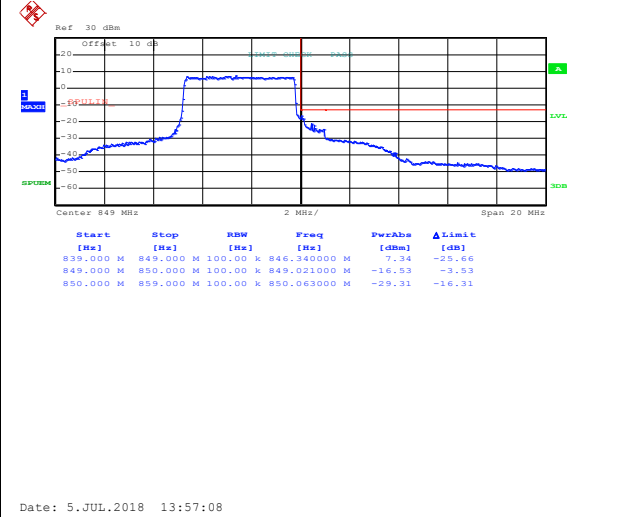


Highest channel

QPSK & RB Size 25

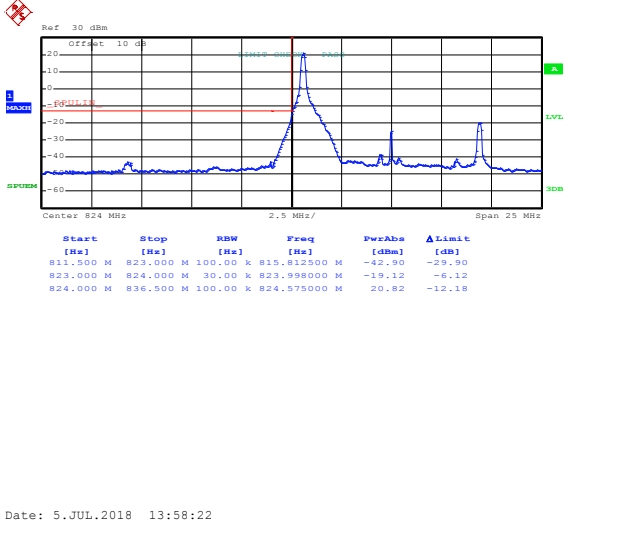


Lowest channel

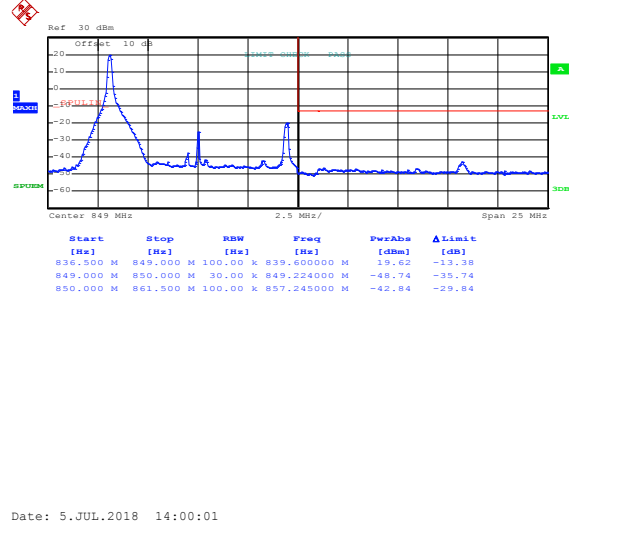


Highest channel

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

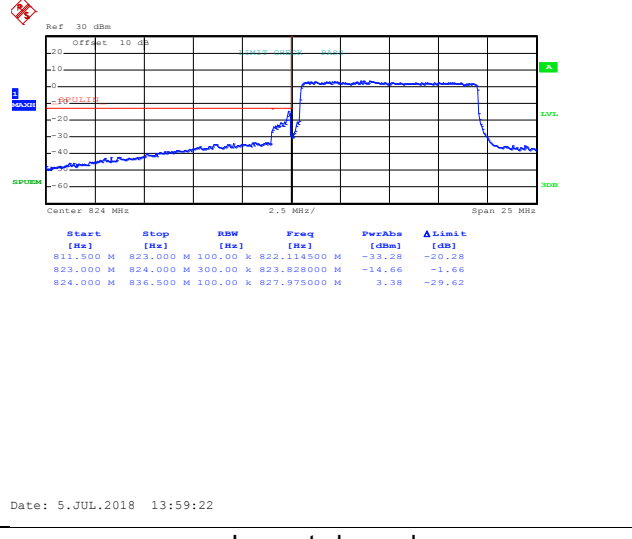


Lowest channel



Highest channel

16QAM & RB Size 50

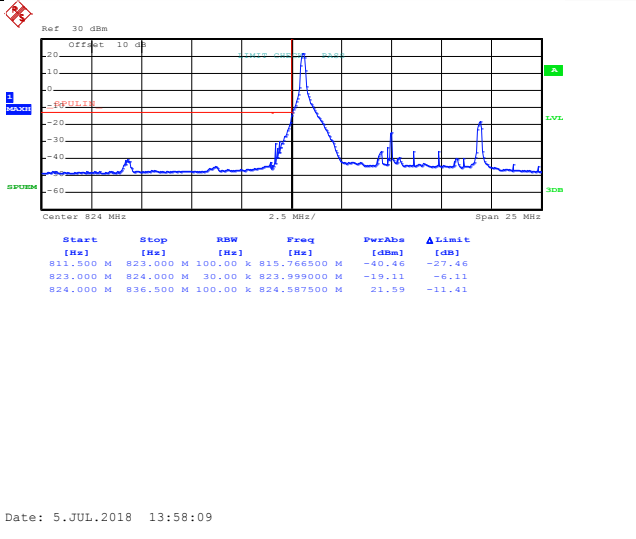


Lowest channel

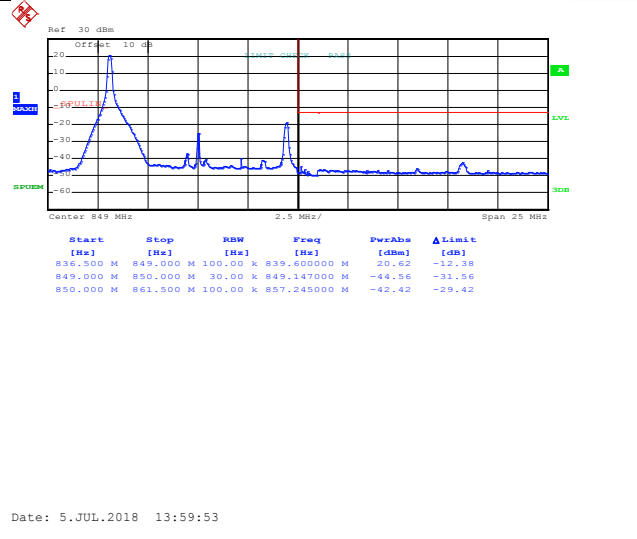


Highest channel

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

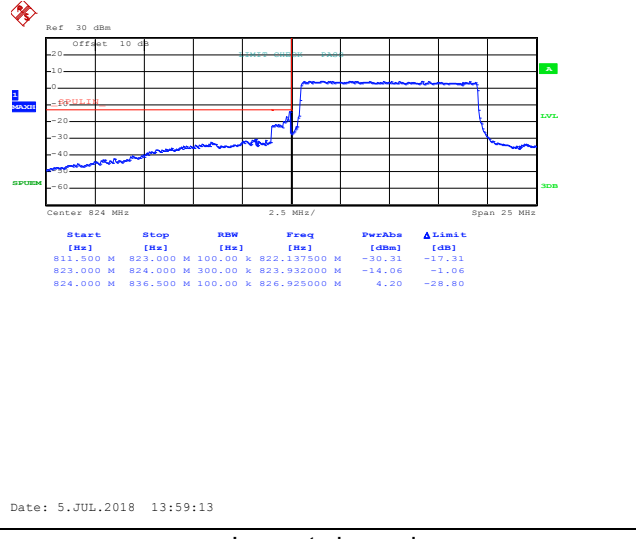


Lowest channel

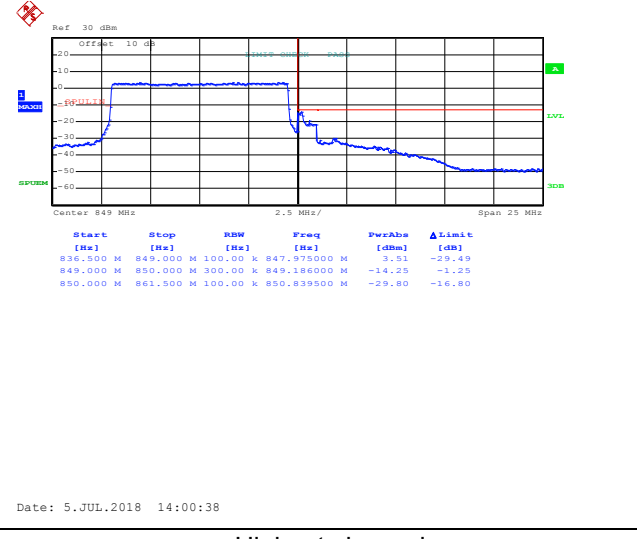


Highest channel

QPSK & RB Size 50



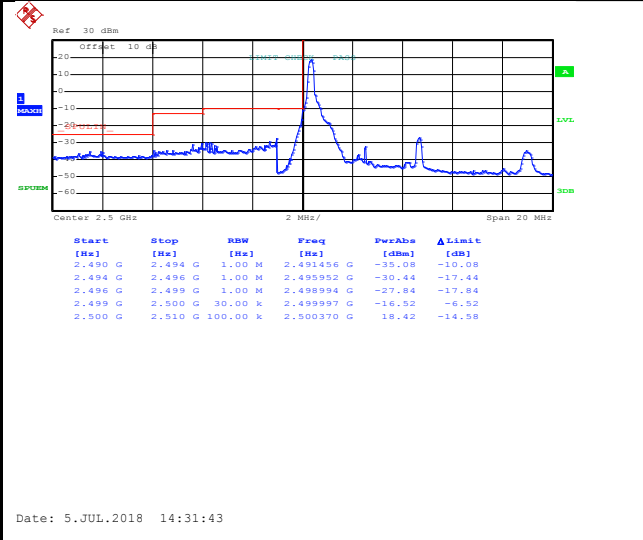
Lowest channel



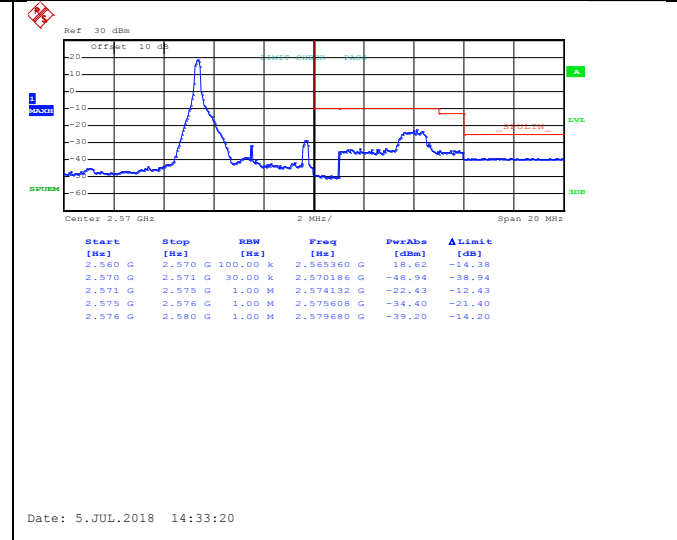
Highest channel

LTE Band 7 part:

LTE Band 7, BW: 5MHz
16QAM & RB Size 1

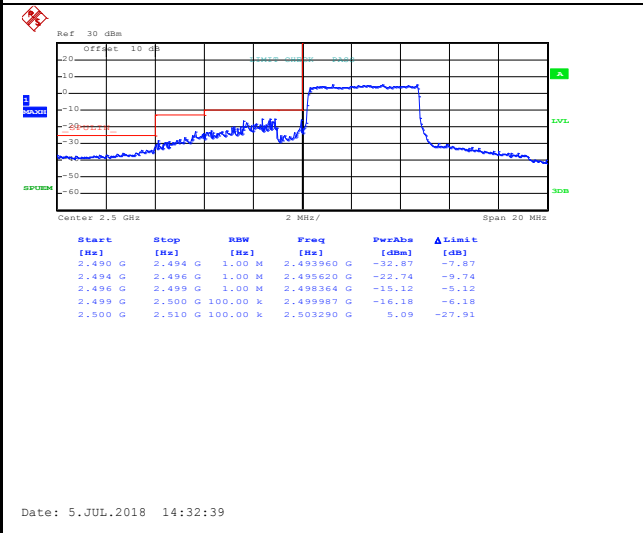


Lowest channel

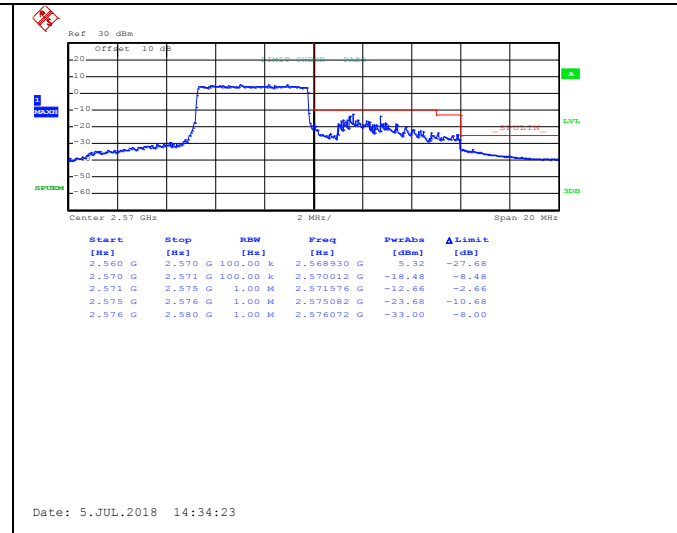


Highest channel

16QAM & RB Size 25

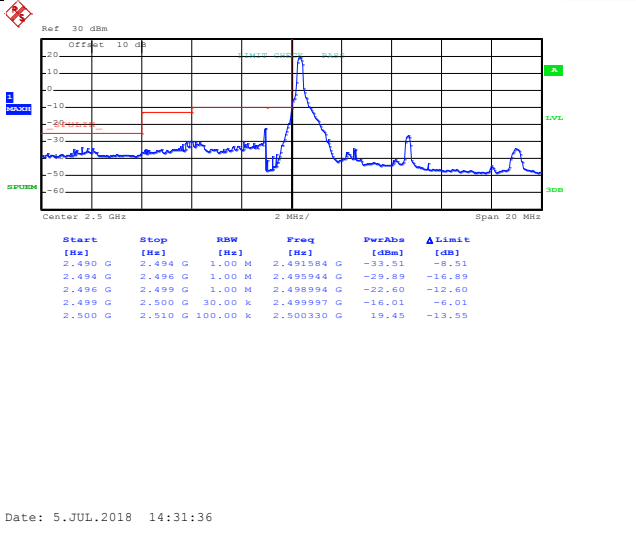


Lowest channel

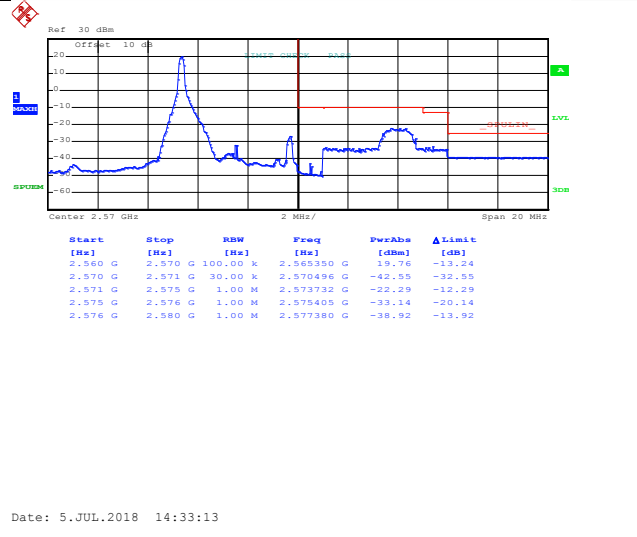


Highest channel

LTE Band 7, BW: 5MHz
QPSK & RB Size 1

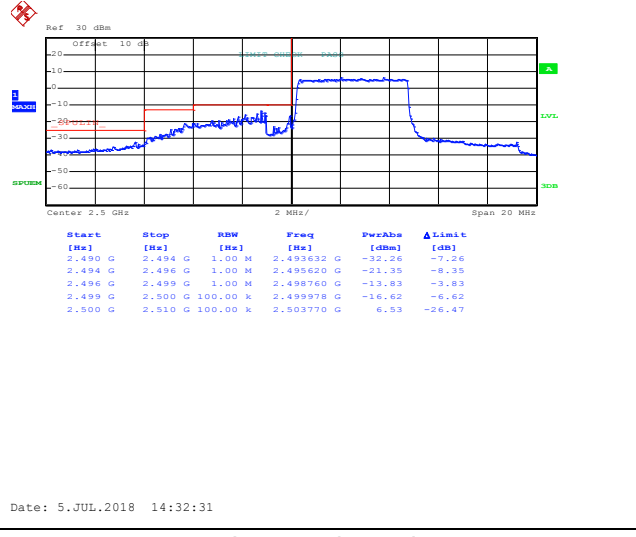


Lowest channel

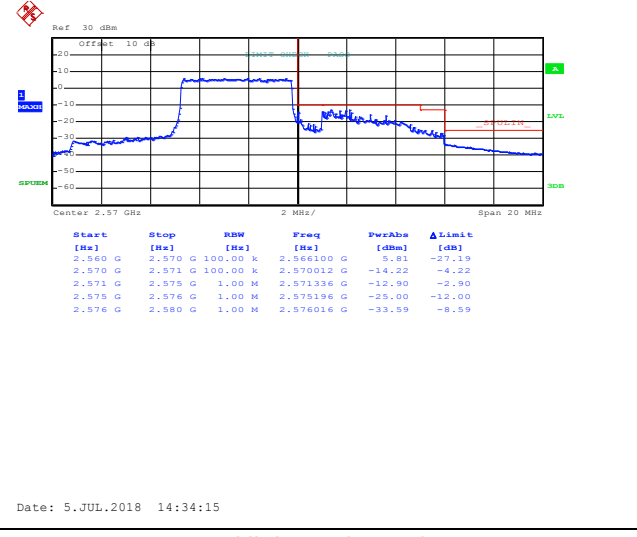


Highest channel

QPSK & RB Size 25

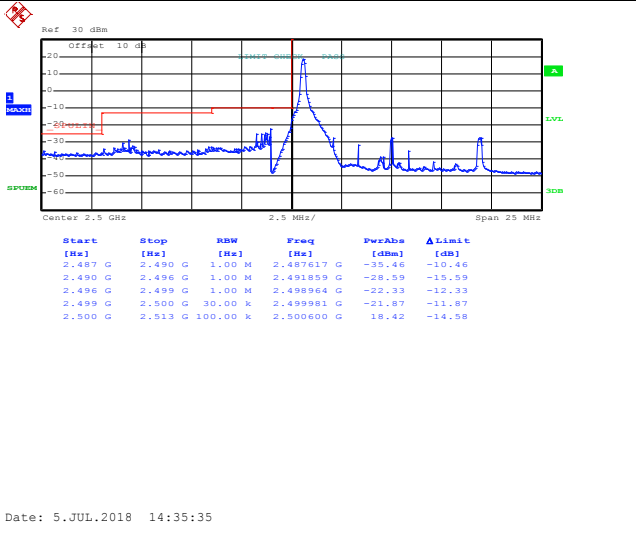


Lowest channel

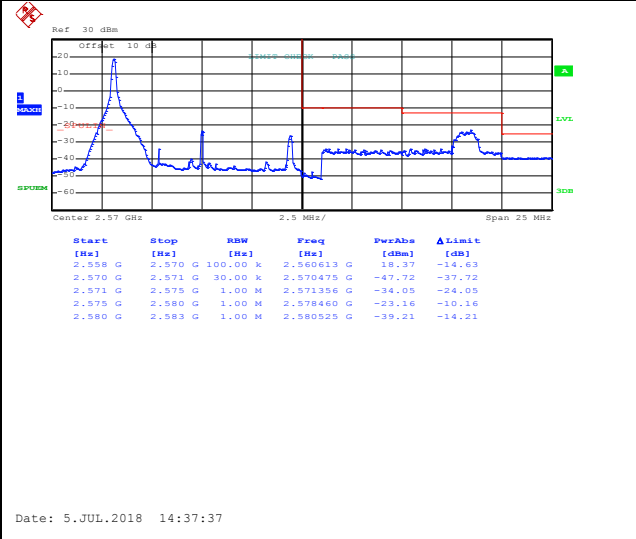


Highest channel

LTE Band 7, BW: 10MHz 16QAM & RB Size 1

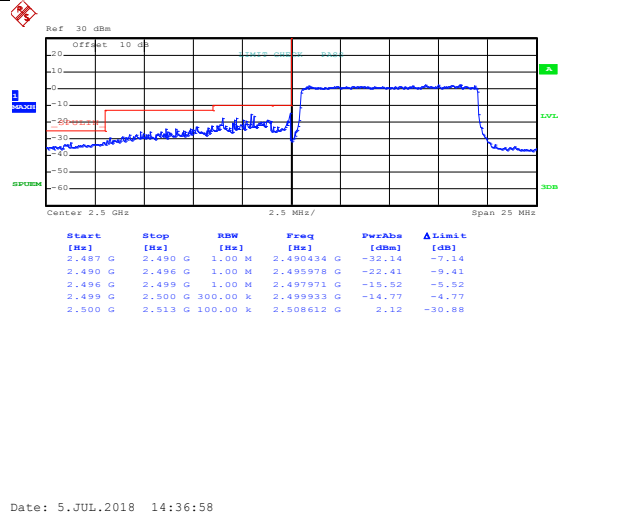


Lowest channel

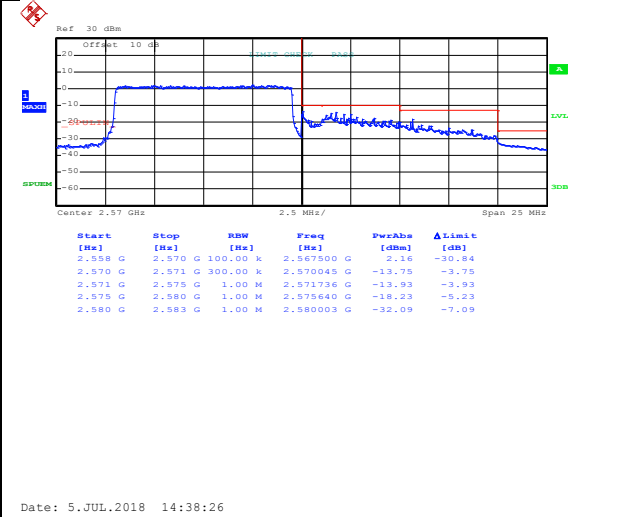


Highest channel

16QAM & RB Size 50

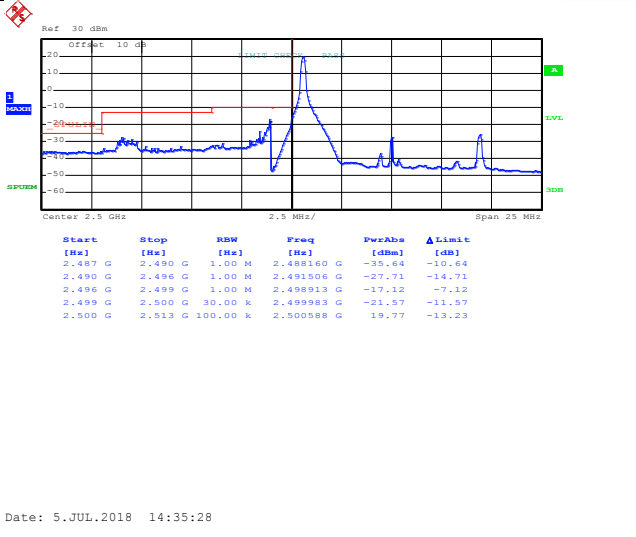


Lowest channel

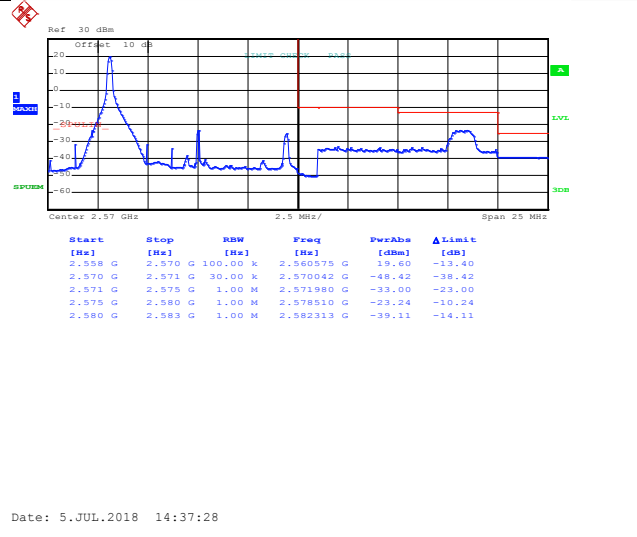


Highest channel

LTE Band 7, BW: 10MHz QPSK & RB Size 1

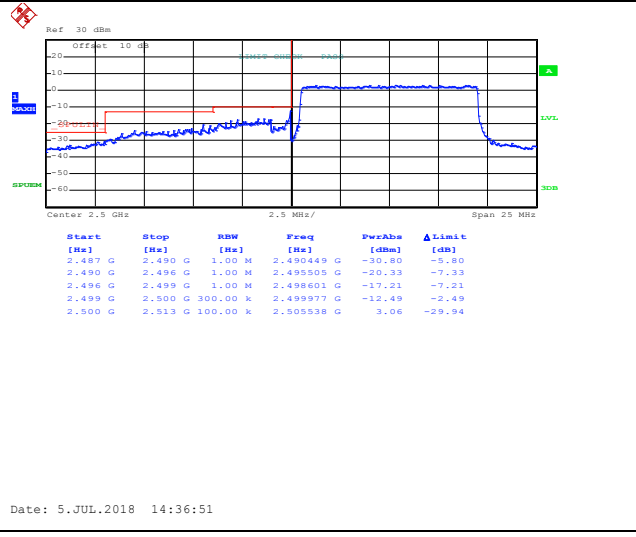


Lowest channel

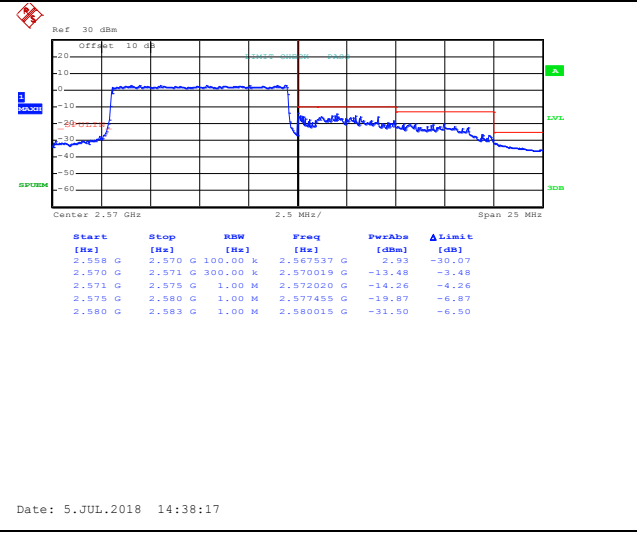


Highest channel

QPSK & RB Size 50

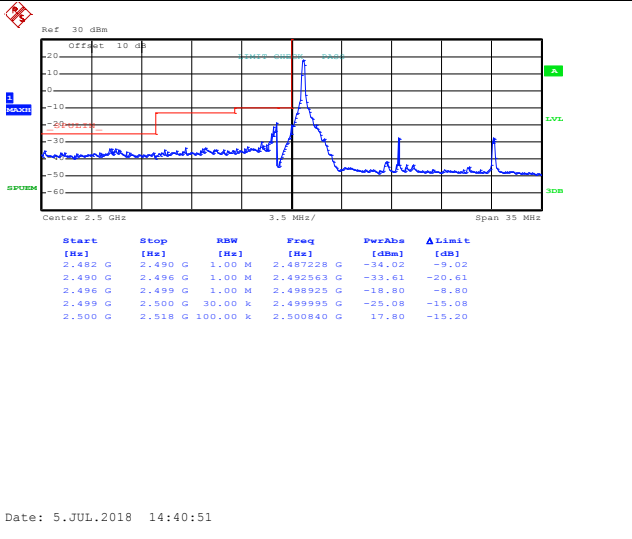


Lowest channel

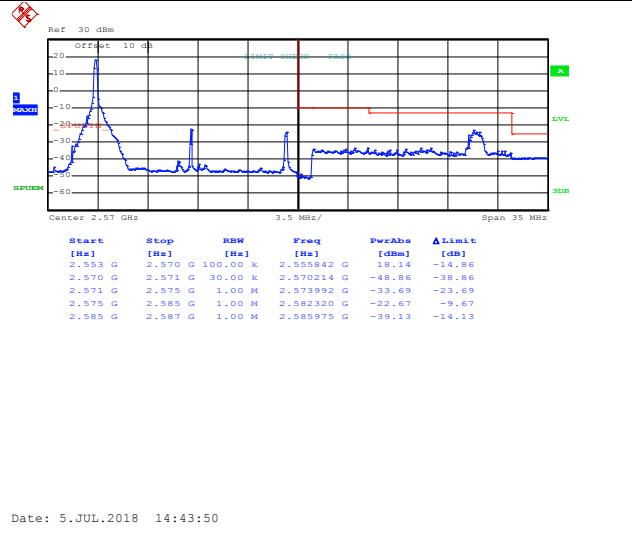


Highest channel

LTE Band 7, BW: 15MHz 16QAM & RB Size 1

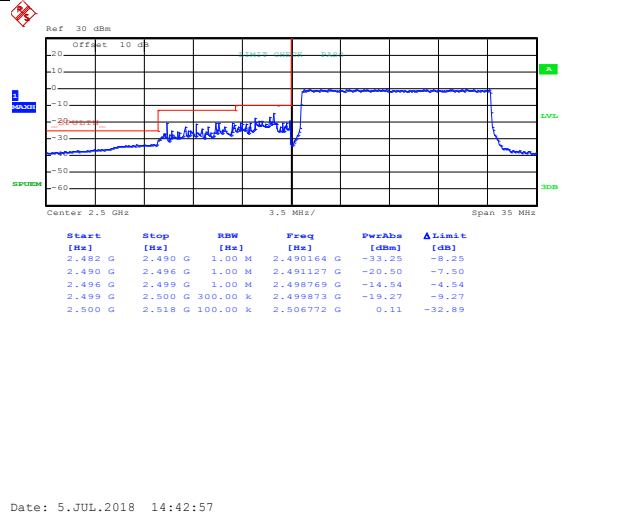


Lowest channel

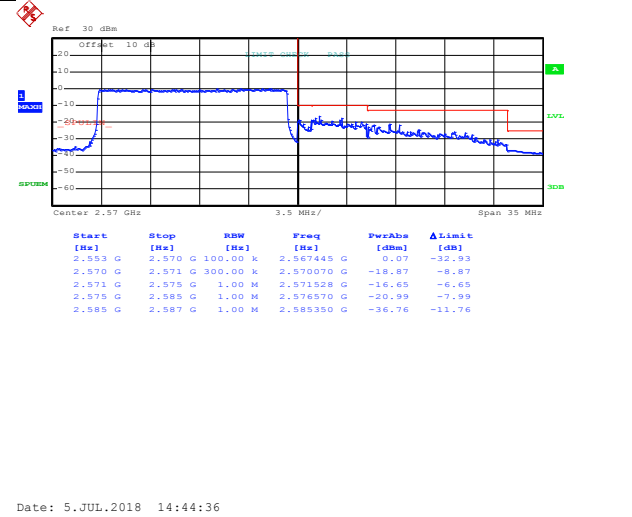


Highest channel

16QAM & RB Size 75

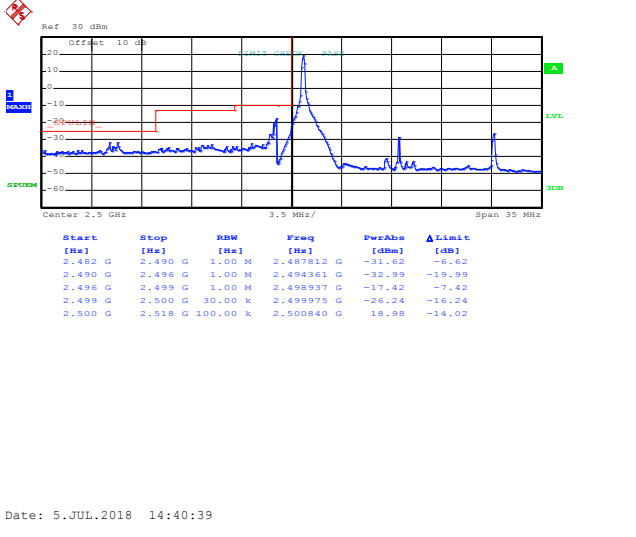


Lowest channel

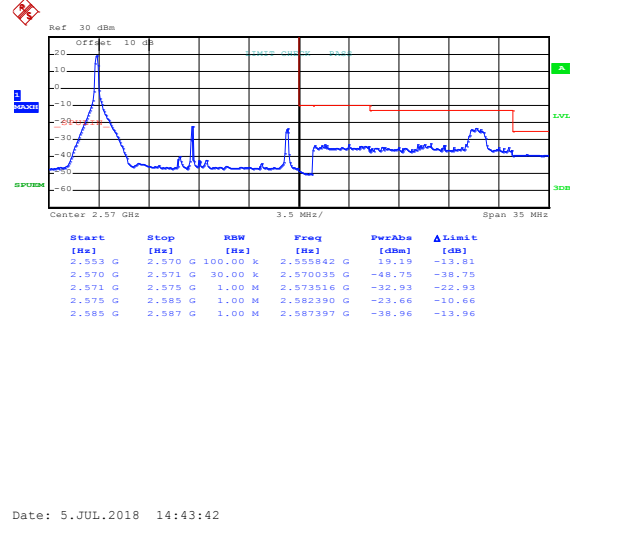


Highest channel

LTE Band 7, BW: 15MHz QPSK & RB Size 1

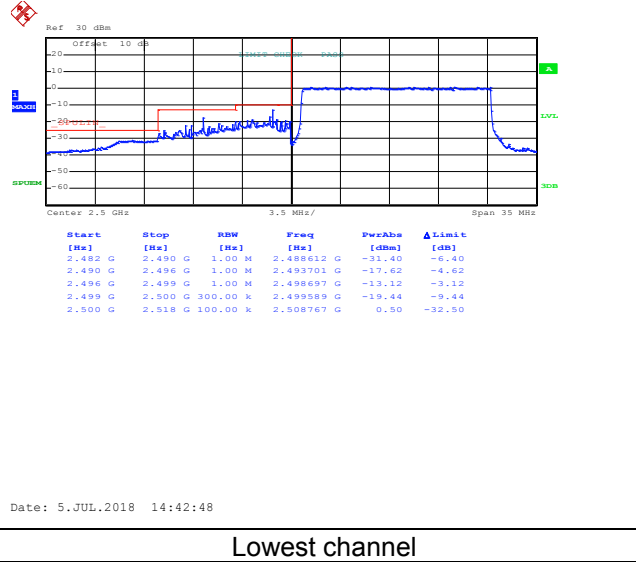


Lowest channel

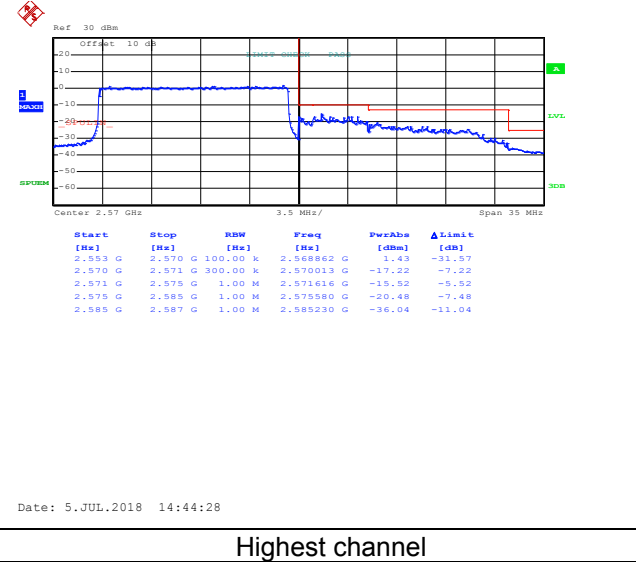


Highest channel

QPSK & RB Size 75

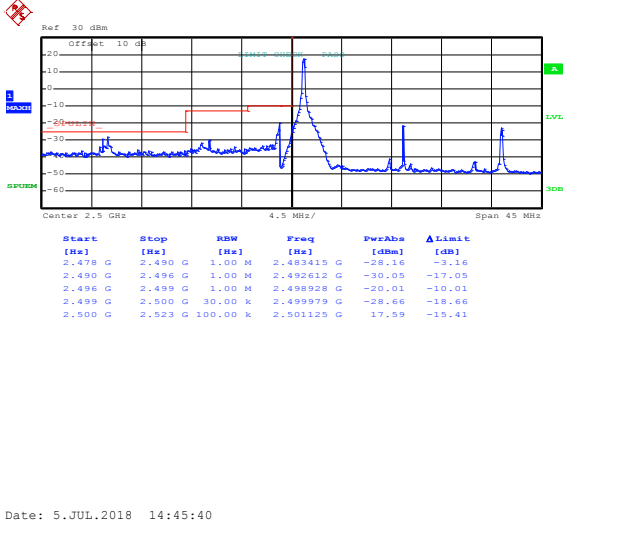


Lowest channel

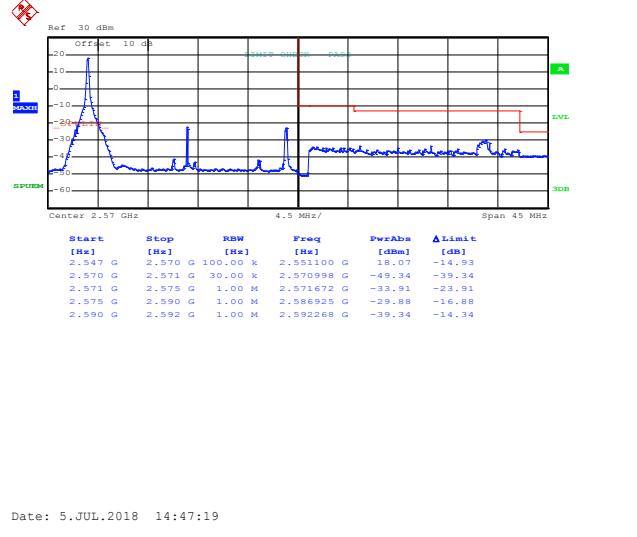


Highest channel

LTE Band 7, BW: 20MHz
16QAM & RB Size 1

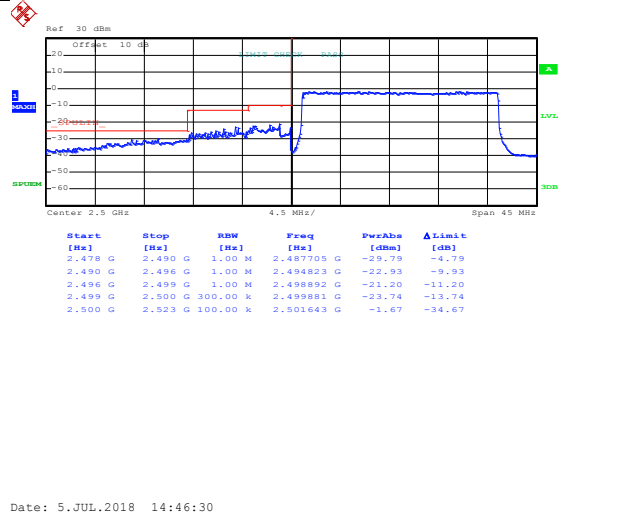


Lowest channel

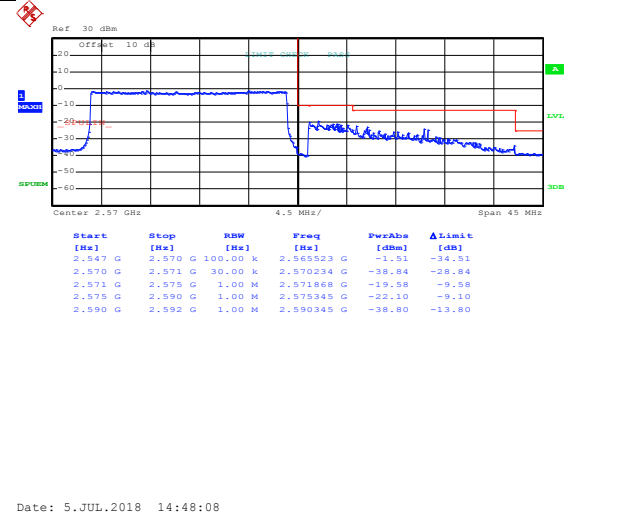


Highest channel

16QAM & RB Size 100

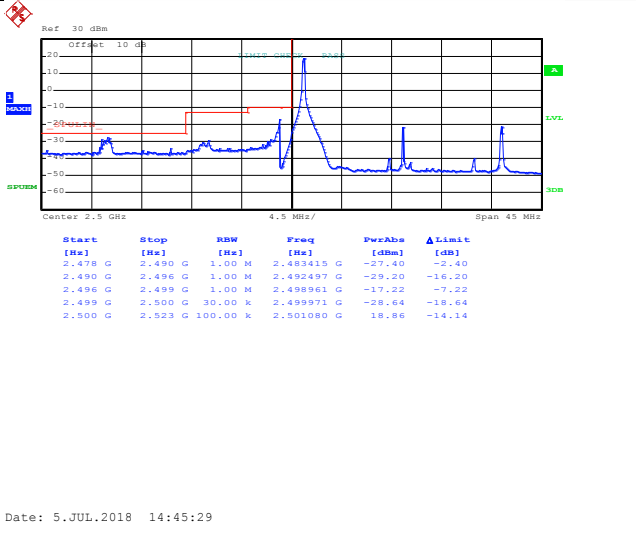


Lowest channel

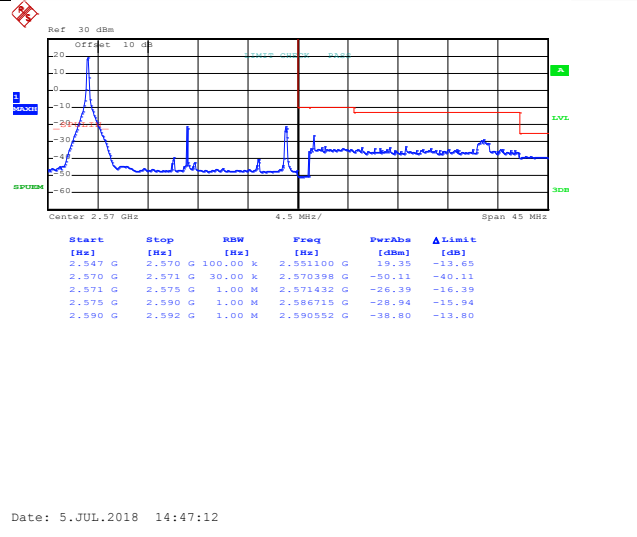


Highest channel

LTE Band 7, BW: 20MHz QPSK & RB Size 1

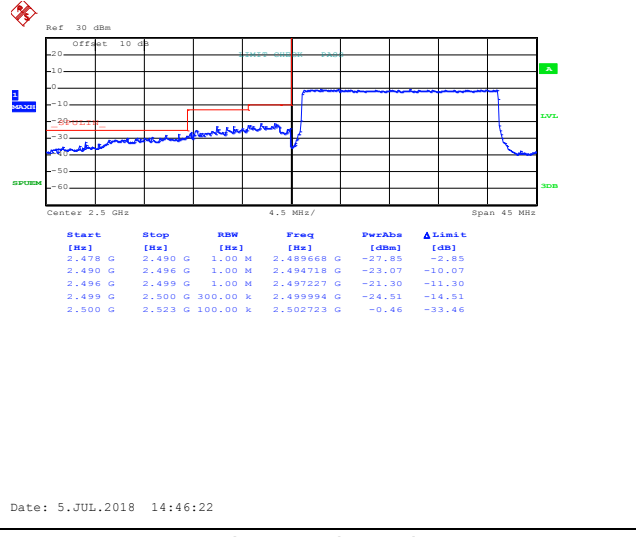


Lowest channel

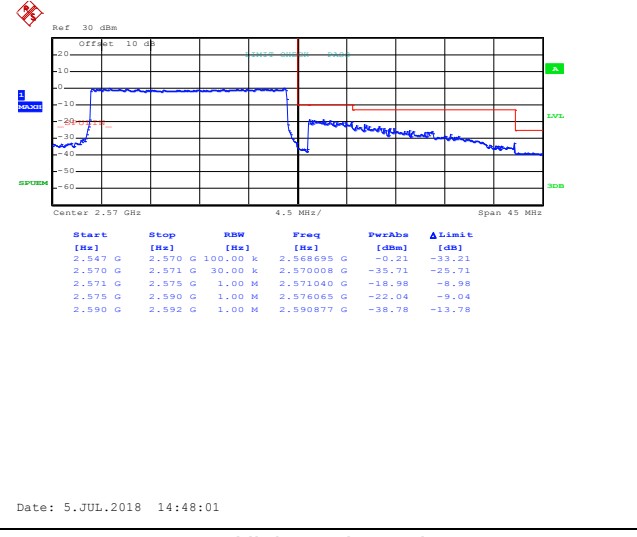


Highest channel

QPSK & RB Size 100



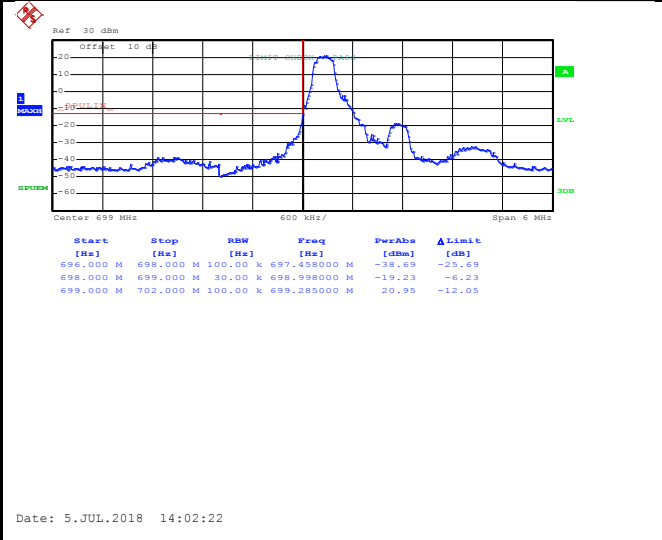
Lowest channel



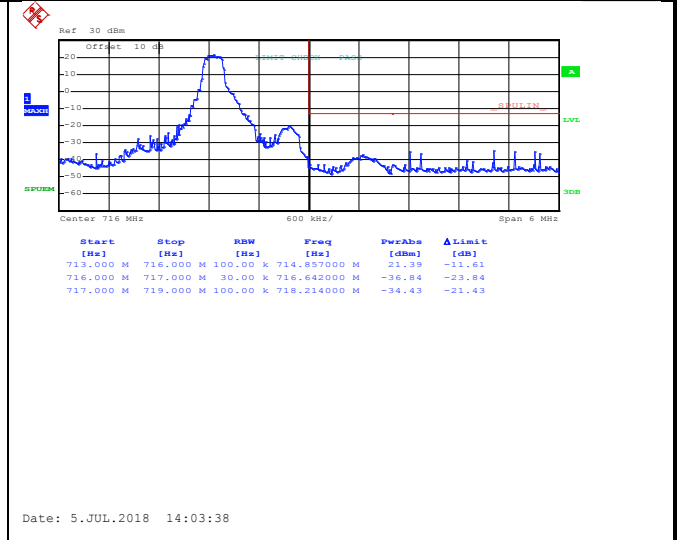
Highest channel

LTE band 12 part:

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

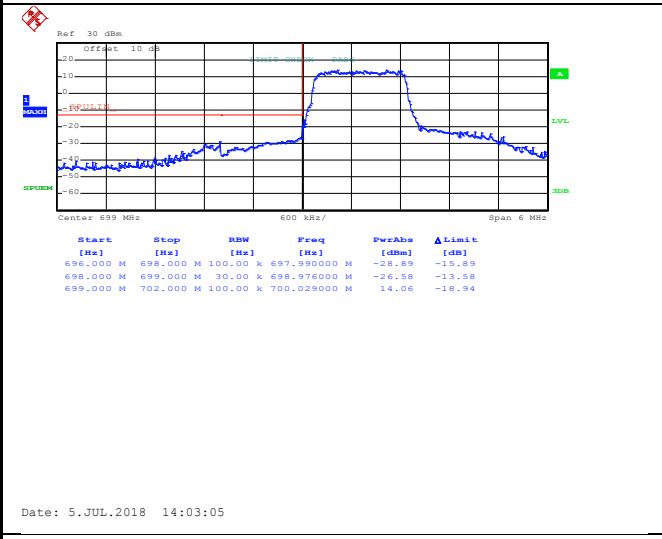


Lowest channel

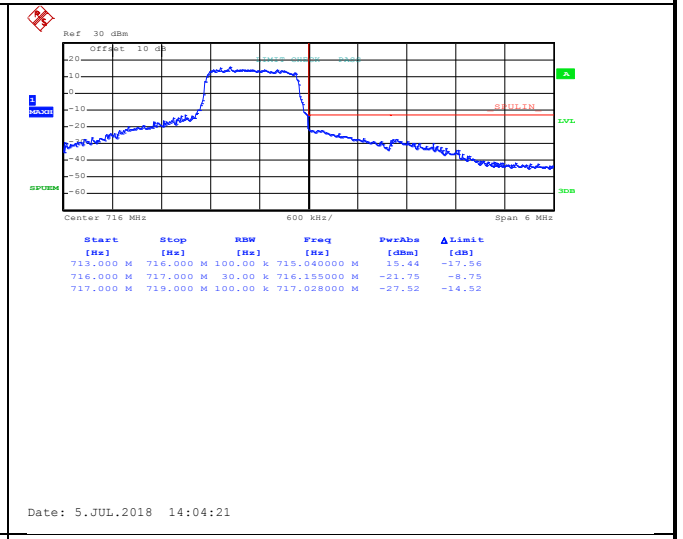


Highest channel

16QAM & RB Size 6

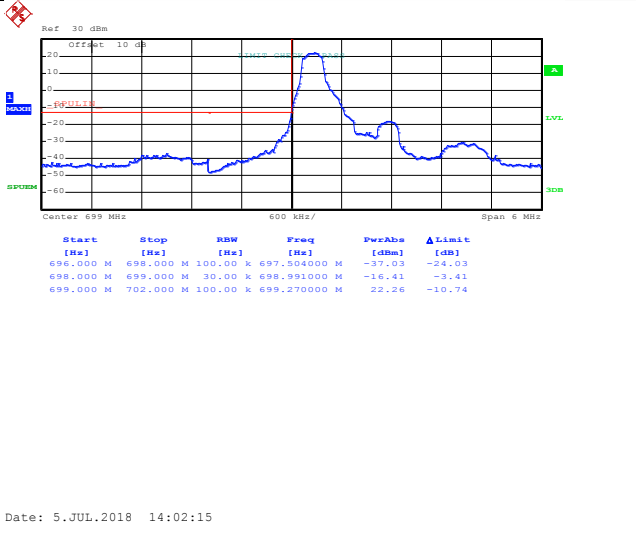


Lowest channel

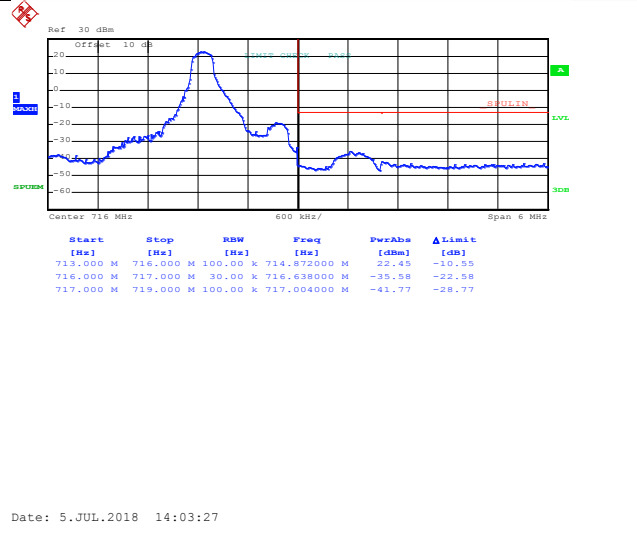


Highest channel

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

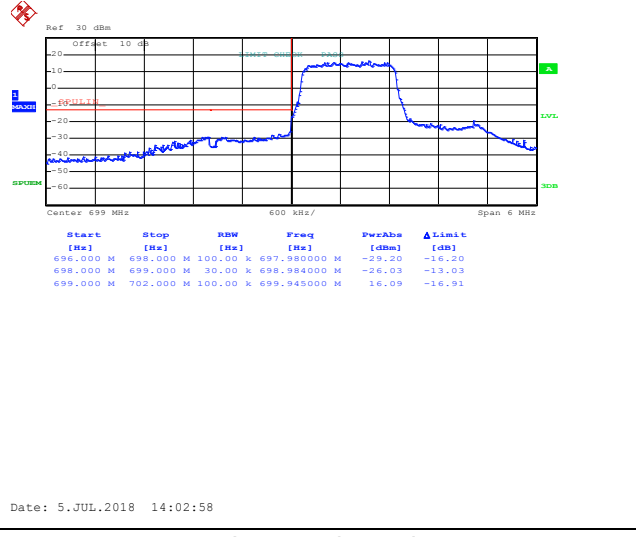


Lowest channel

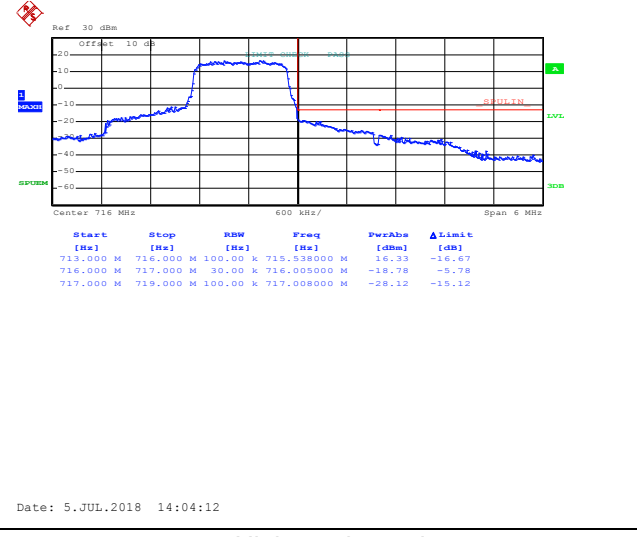


Highest channel

QPSK & RB Size 6

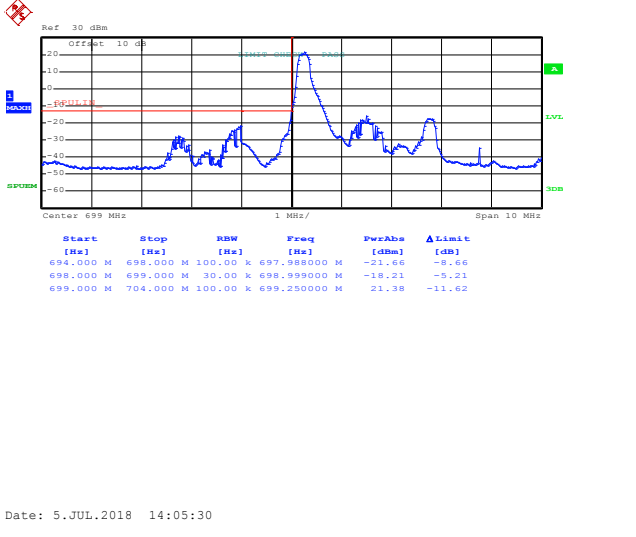


Lowest channel

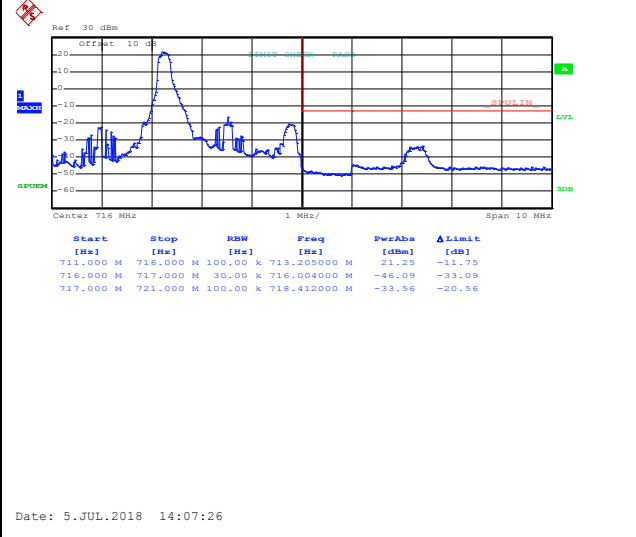


Highest channel

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



Lowest channel

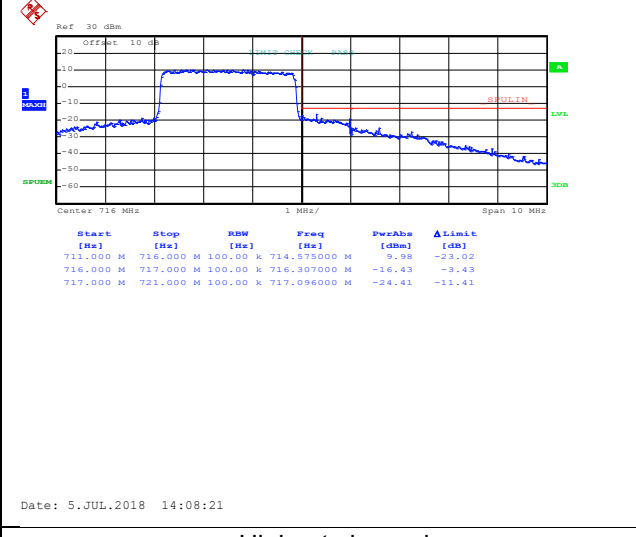


Highest channel

16QAM & RB Size 15

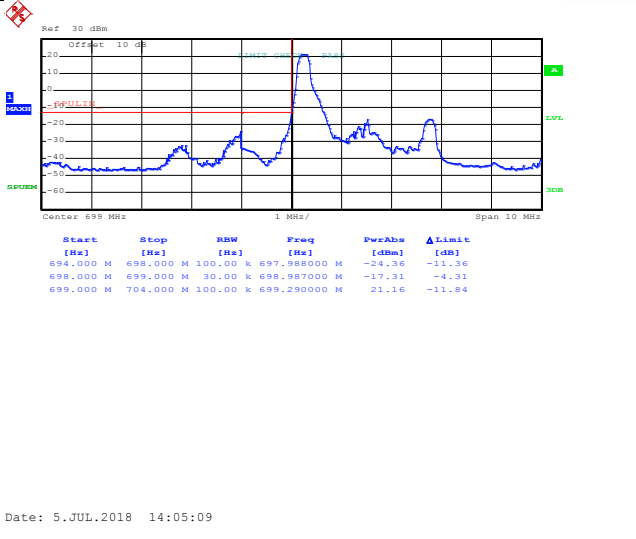


Lowest channel

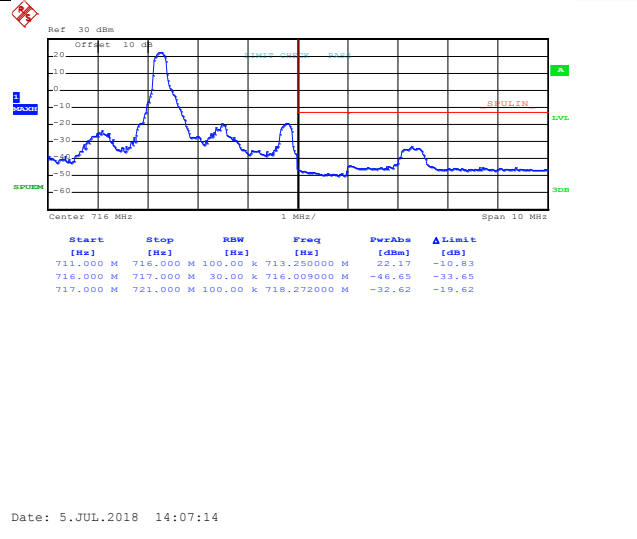


Highest channel

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

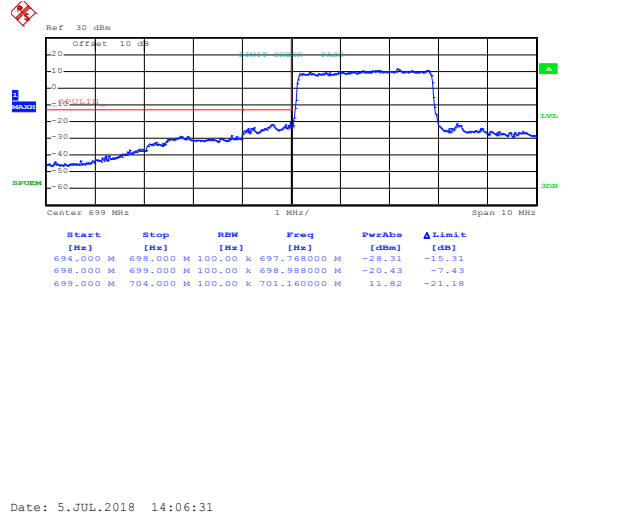


Lowest channel

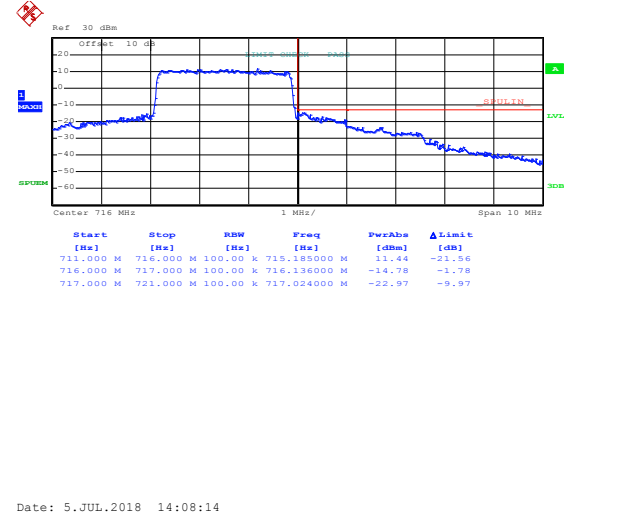


Highest channel

QPSK & RB Size 15

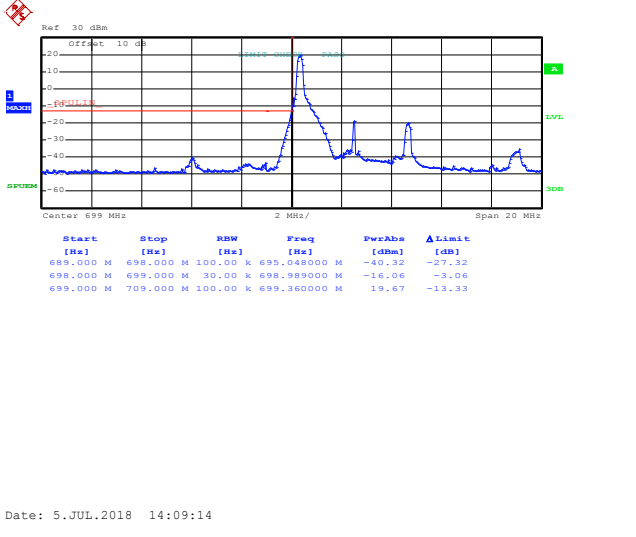


Lowest channel

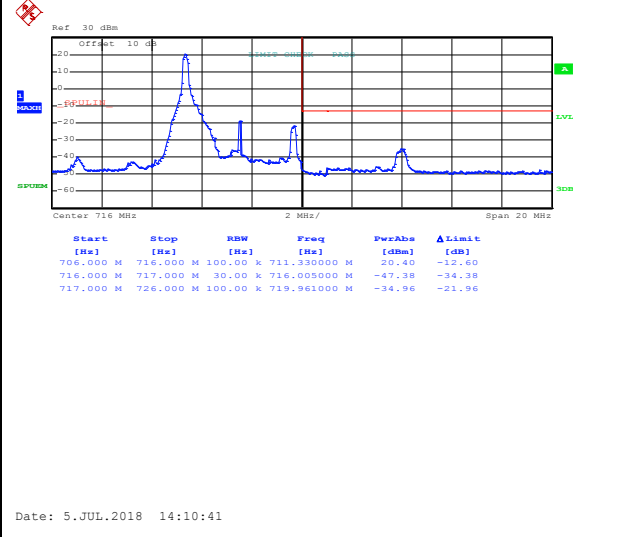


Highest channel

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

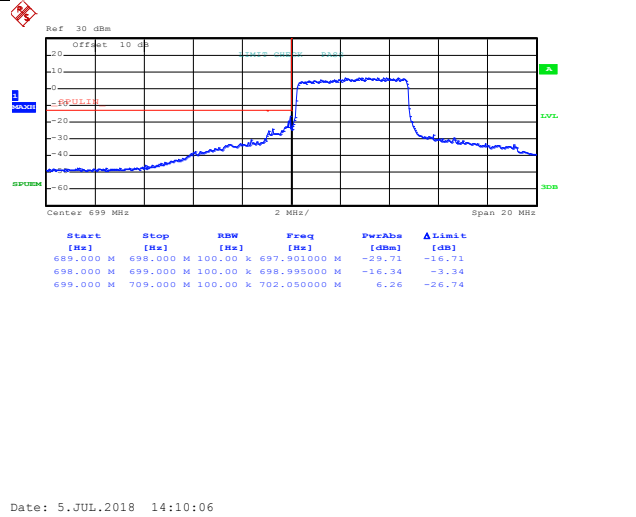


Lowest channel

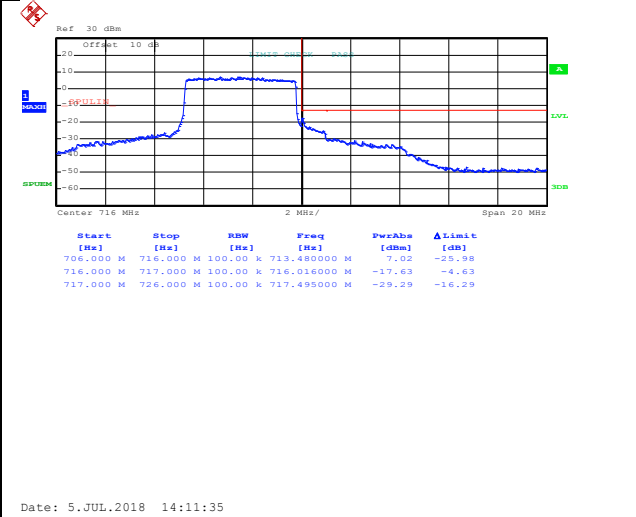


Highest channel

16QAM & RB Size 25

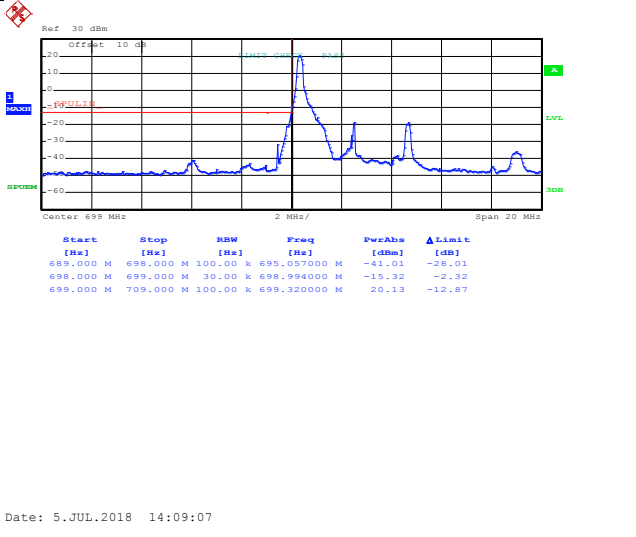


Lowest channel

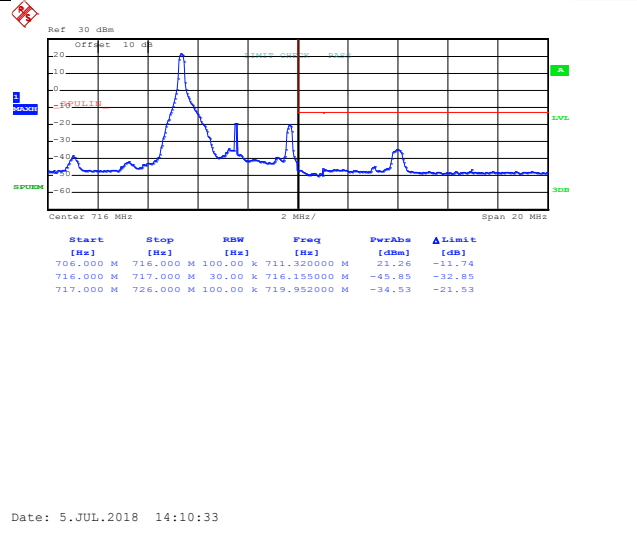


Highest channel

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

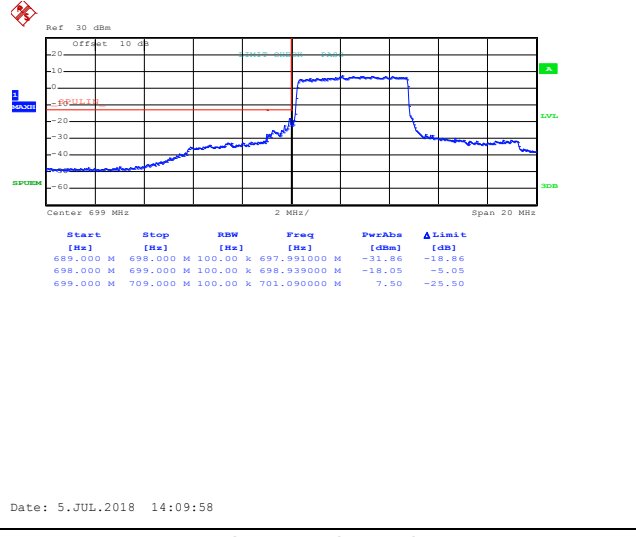


Lowest channel

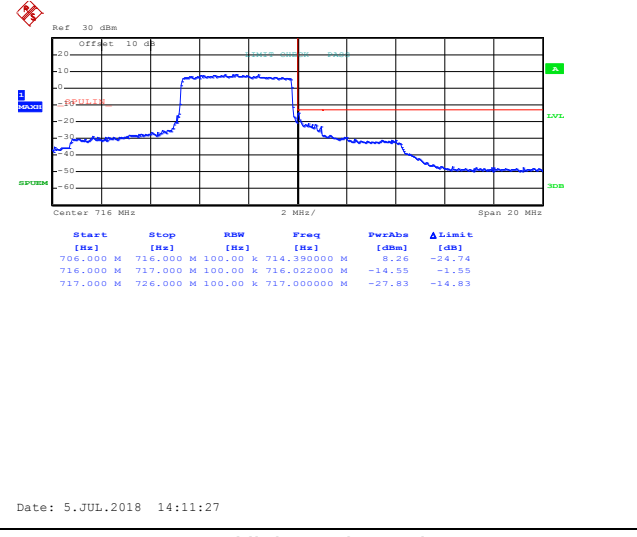


Highest channel

QPSK & RB Size 25

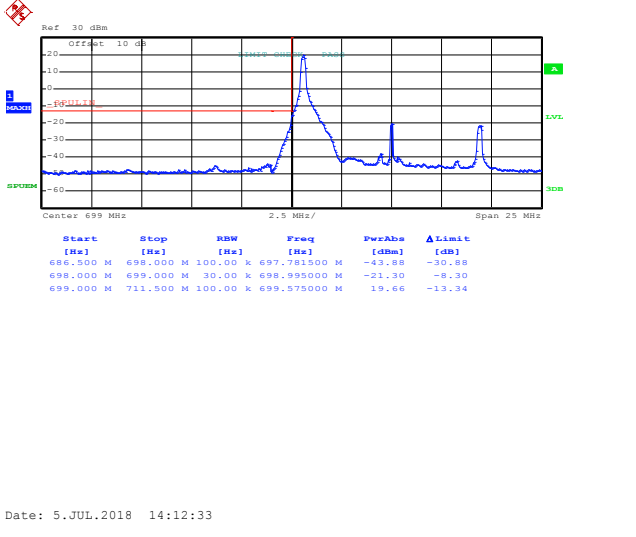


Lowest channel

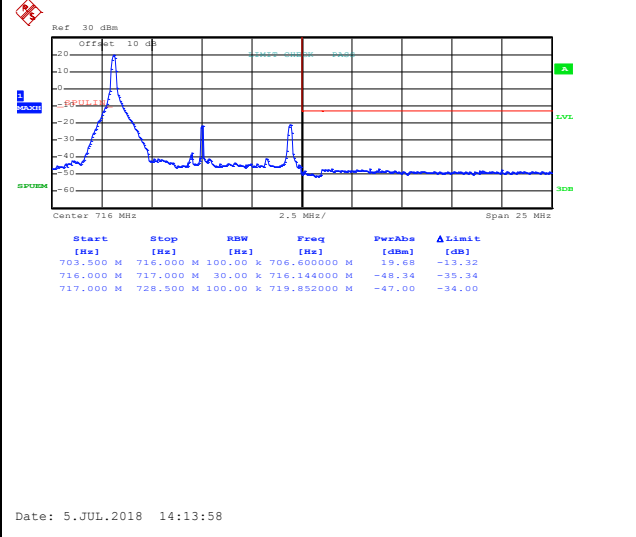


Highest channel

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

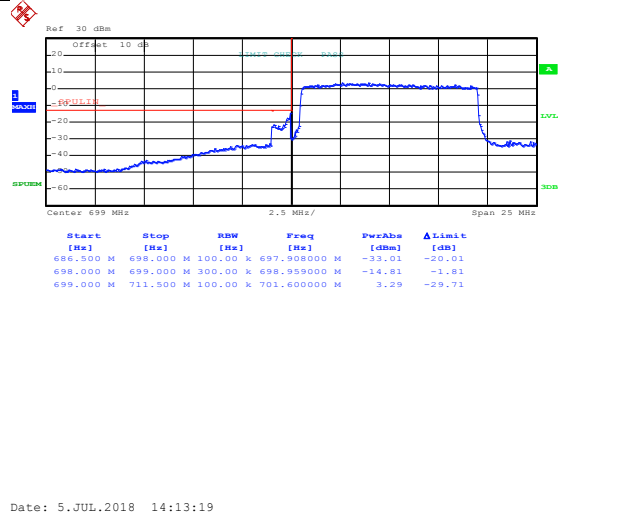


Lowest channel

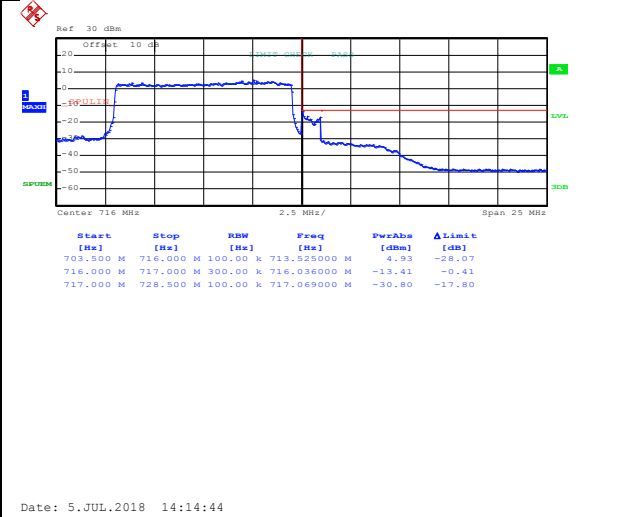


Highest channel

16QAM & RB Size 50

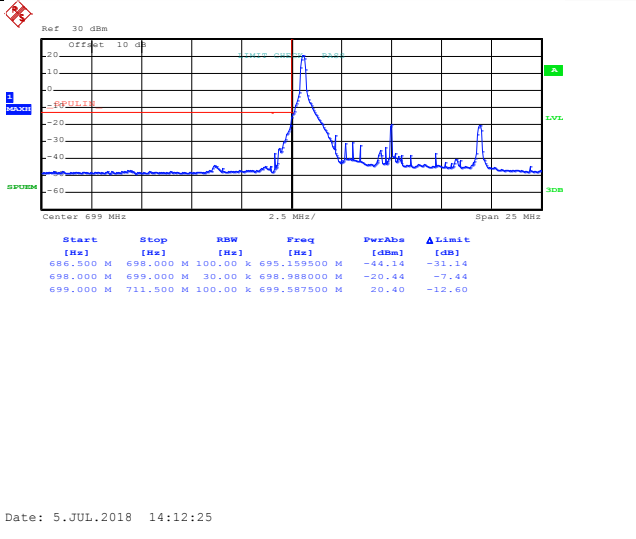


Lowest channel

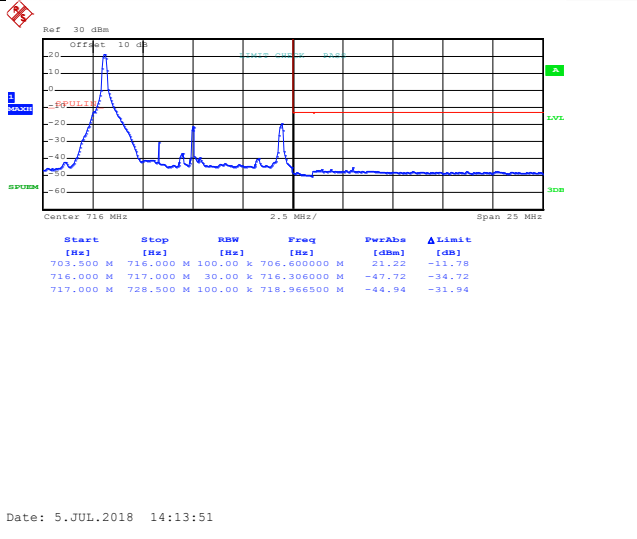


Highest channel

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

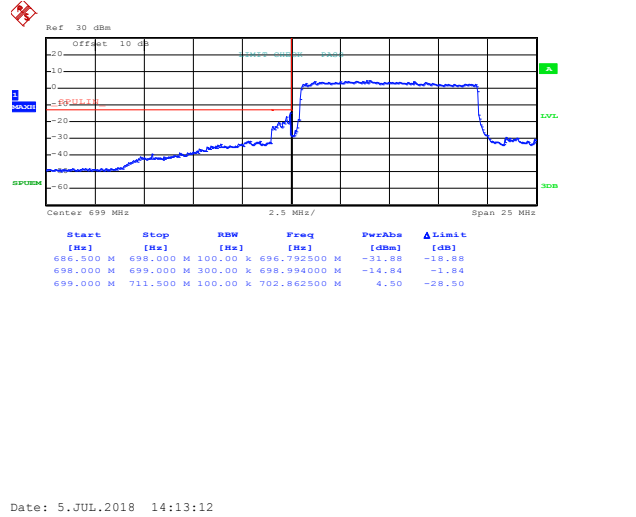


Lowest channel

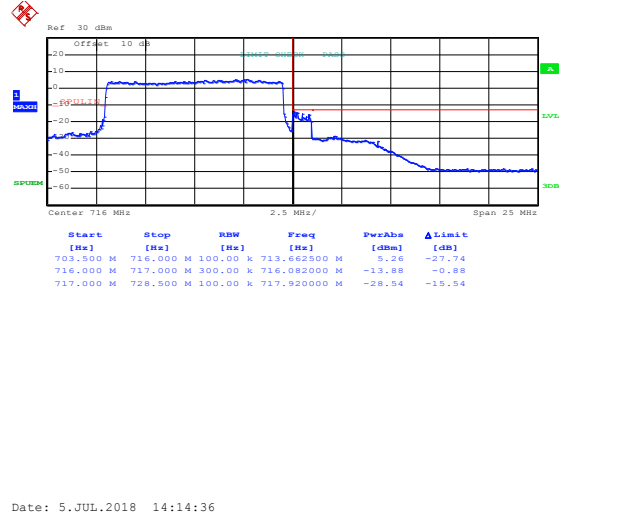


Highest channel

QPSK & RB Size 50



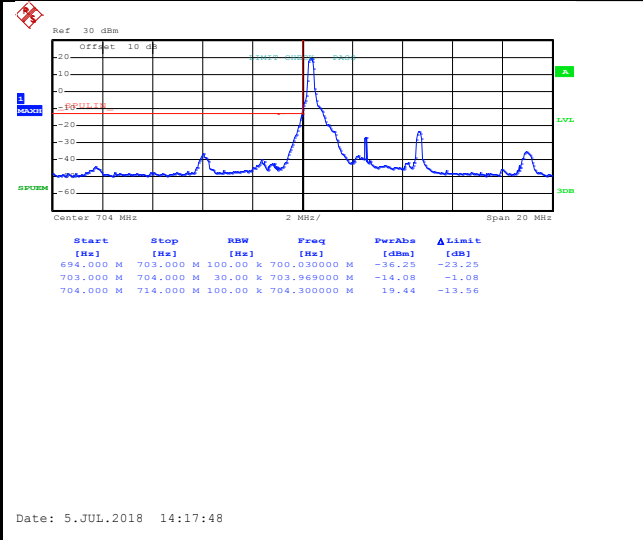
Lowest channel



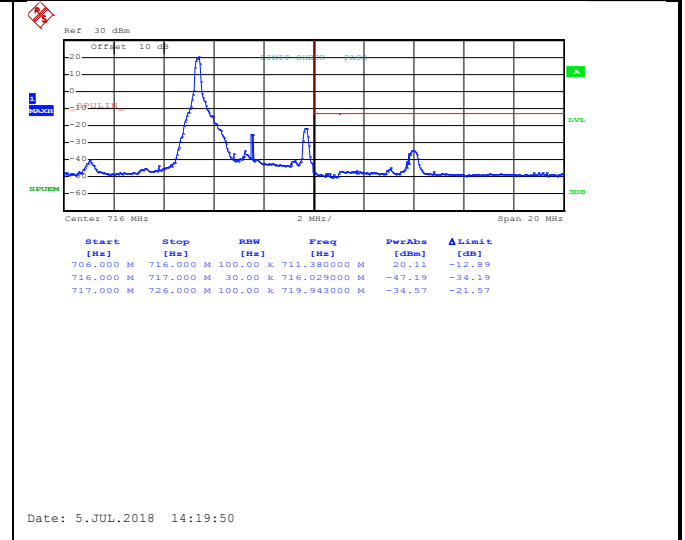
Highest channel

LTE Band 17 part:

LTE Band 17, BW: 5MHz
16QAM & RB Size 1

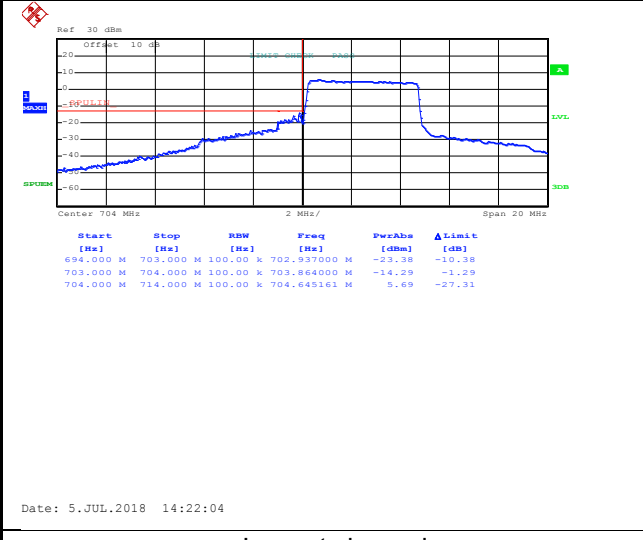


Lowest channel

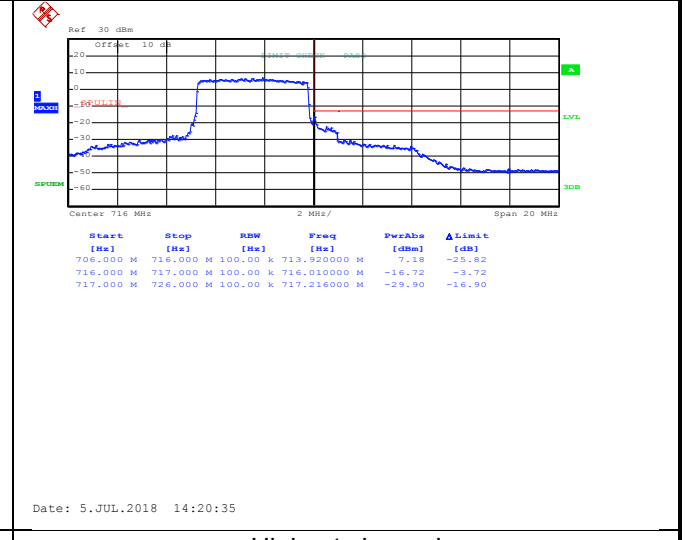


Highest channel

16QAM & RB Size 25

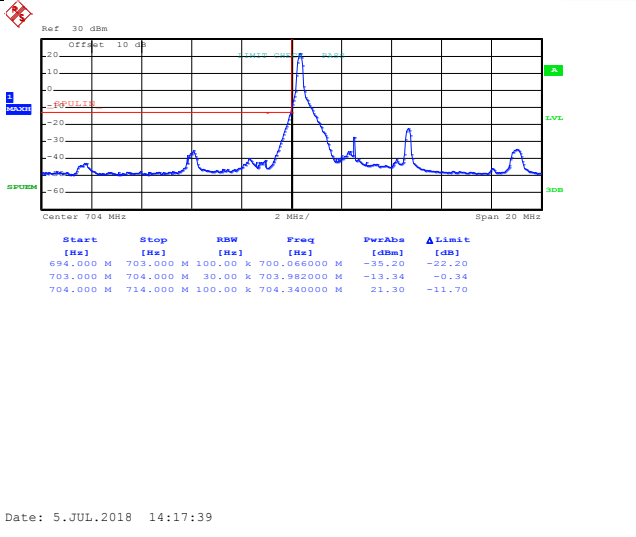


Lowest channel

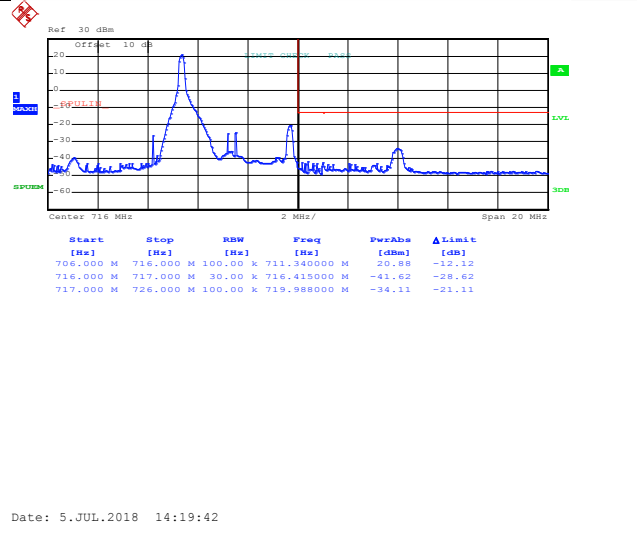


Highest channel

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

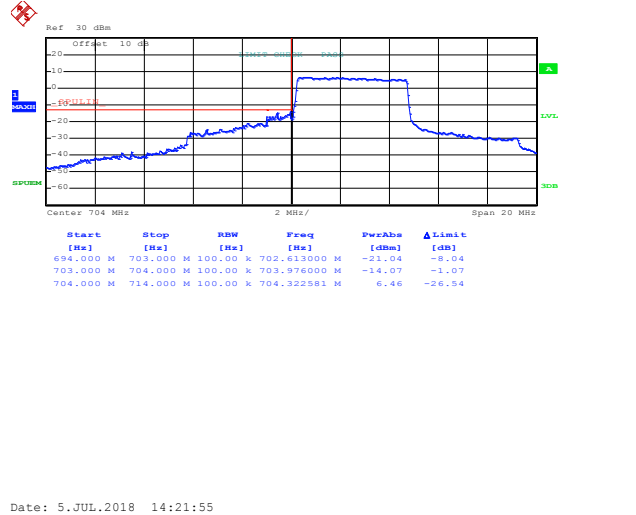


Lowest channel

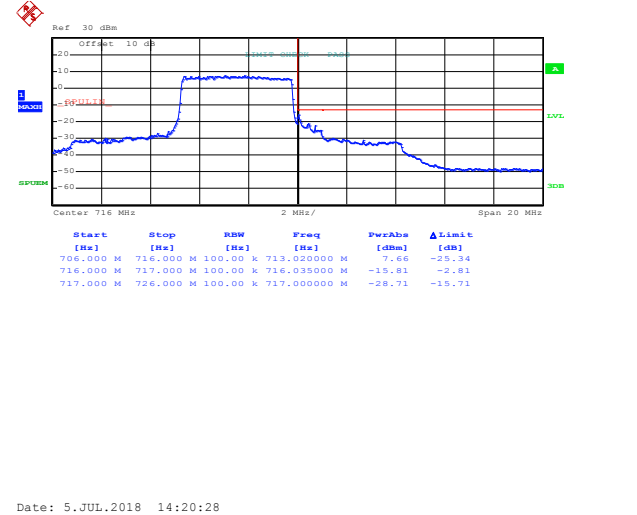


Highest channel

QPSK & RB Size 25

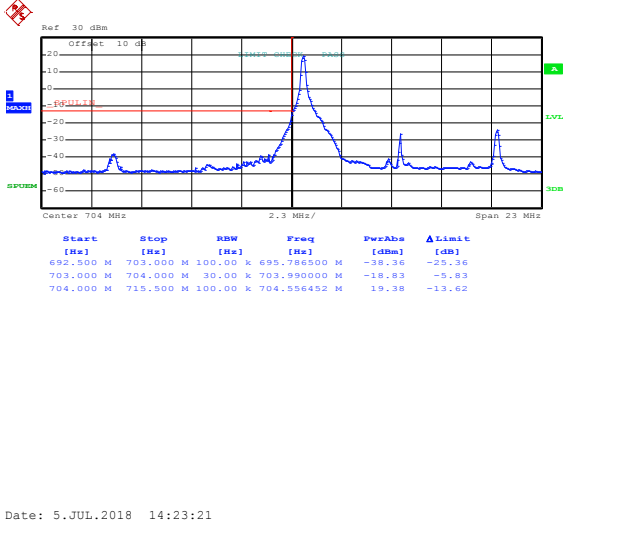


Lowest channel

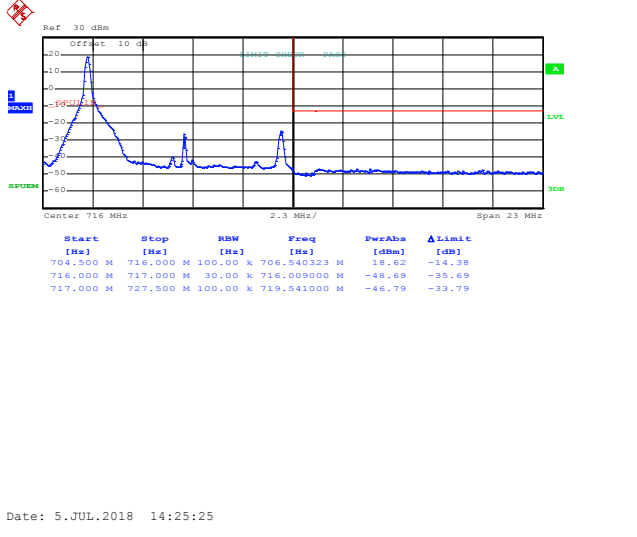


Highest channel

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

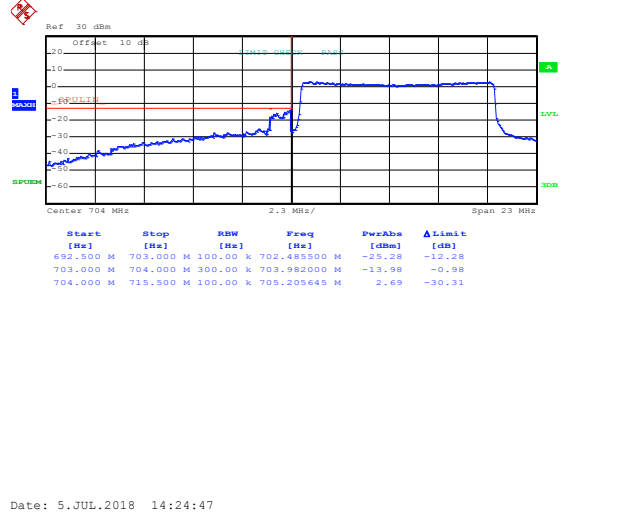


Lowest channel

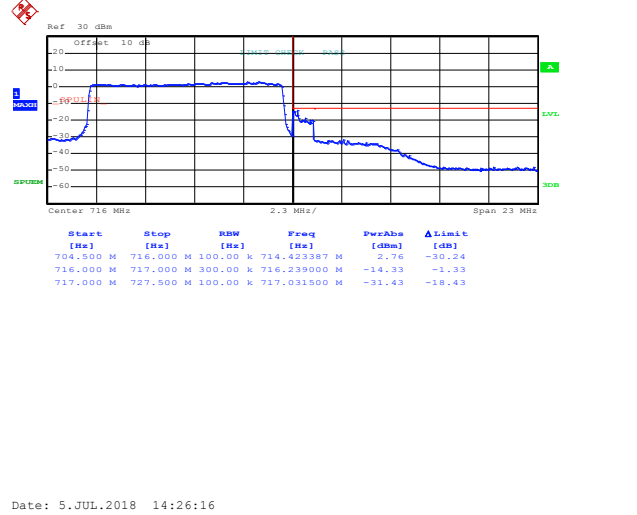


Highest channel

16QAM & RB Size 50

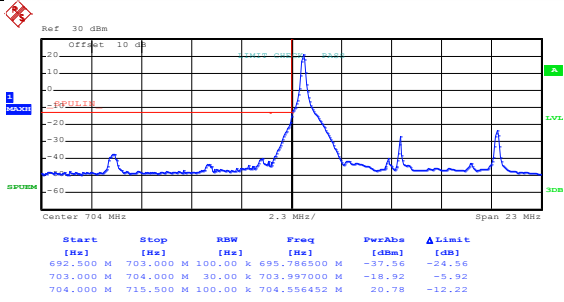


Lowest channel



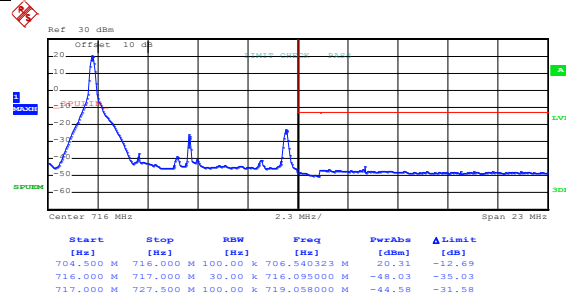
Highest channel

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



Date: 5.JUL.2018 14:23:13

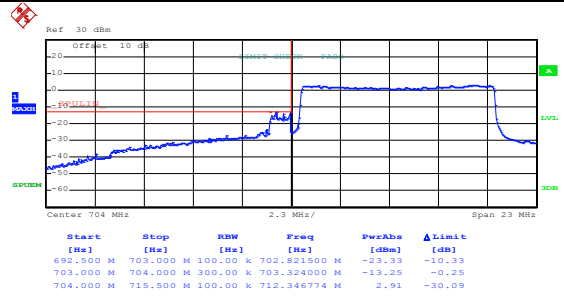
Lowest channel



Date: 5.JUL.2018 14:25:17

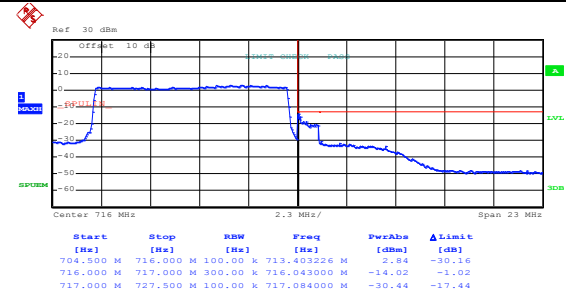
Highest channel

QPSK & RB Size 50



Date: 5.JUL.2018 14:24:40

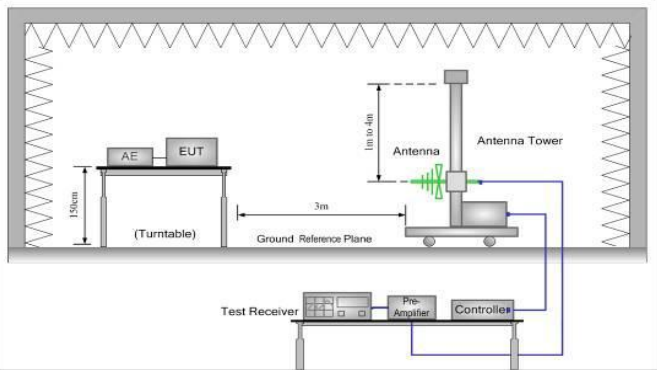
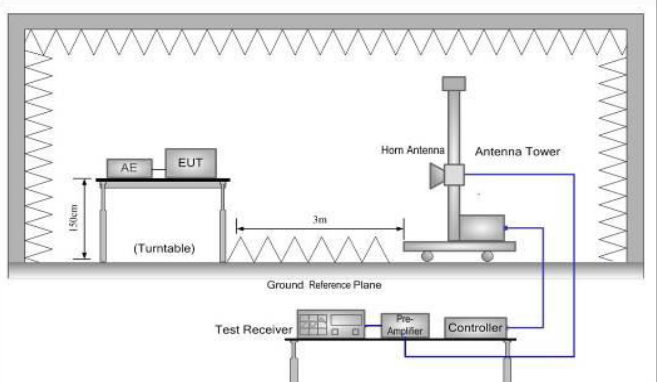
Lowest channel



Date: 5.JUL.2018 14:26:05

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), Part 27.50 (h)
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 7: 2W EIRP, LTE Band 12: 3W EIRP, LTE Band 17: 3W EIRP
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. During the measurement, the EUT was communicating 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 a 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 a 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 worst 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	19.99	33.00	Pass
				H	21.05		
1850.70	18607	16QAM	H	V	21.03		
				H	20.33		
Middle Channel							
1880.00	18900	QPSK	H	V	22.58	33.00	Pass
				H	19.85		
1880.00	18900	16QAM	H	V	21.64		
				H	20.02		
Highest Channel							
1909.3	19193	QPSK	H	V	22.66	33.00	Pass
				H	18.53		
1909.3	19193	16QAM	H	V	21.34		
				H	19.79		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1851.50	18615	QPSK	H	V	20.36	33.00	Pass
				H	20.44		
1851.50	18615	16QAM	H	V	21.32		
				H	20.74		
Middle Channel							
1880.00	18900	QPSK	H	V	21.64	33.00	Pass
				H	20.96		
1880.00	18900	16QAM	H	V	21.40		
				H	20.36		
Highest Channel							
1908.50	19185	QPSK	H	V	21.64	33.00	Pass
				H	19.63		
1908.50	19185	16QAM	H	V	21.54		
				H	19.78		

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	19.64	33.00	Pass
				H	20.12		
1852.50	18625	16QAM	H	V	21.47		
				H	20.23		
Middle Channel							
1880.00	18900	QPSK	H	V	21.52	33.00	Pass
				H	20.34		
1880.00	18900	16QAM	H	V	21.49		
				H	20.58		
Highest Channel							
1907.50	19175	QPSK	H	V	21.39	33.00	Pass
				H	19.45		
1907.50	19175	16QAM	H	V	21.22		
				H	19.29		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1855.00	18650	QPSK	H	V	20.22	33.00	Pass
				H	21.23		
1855.00	18650	16QAM	H	V	21.44		
				H	20.59		
Middle Channel							
1880.00	18900	QPSK	H	V	21.36	33.00	Pass
				H	20.44		
1880.00	18900	16QAM	H	V	21.39		
				H	20.44		
Highest Channel							
1905.00	19150	QPSK	H	V	21.25	33.00	Pass
				H	19.34		
1905.00	19150	16QAM	H	V	21.25		
				H	20.95		

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	21.23	33.00	Pass
				H	22.46		
1857.50	18675	16QAM	H	V	21.36		
				H	20.79		
Middle Channel							
1880.00	18900	QPSK	H	V	22.24	33.00	Pass
				H	20.19		
1880.00	18900	16QAM	H	V	21.43		
				H	19.72		
Highest Channel							
1902.5	19125	QPSK	H	V	22.30	33.00	Pass
				H	19.45		
1902.5	19125	16QAM	H	V	21.01		
				H	19.49		
BW: 20MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1860.00	18700	QPSK	H	V	22.24	33.00	Pass
				H	21.30		
1860.00	18700	16QAM	H	V	20.95		
				H	19.42		
Middle Channel							
1880.00	18900	QPSK	H	V	21.32	33.00	Pass
				H	19.34		
1880.00	18900	16QAM	H	V	20.36		
				H	18.74		
Highest Channel							
1900.00	19100	QPSK	H	V	21.34	33.00	Pass
				H	19.26		
1900.00	19100	16QAM	H	V	20.98		
				H	21.47		

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	24.61	30.00	Pass
				H	23.80		
1710.70	19957	16QAM	H	V	23.34		
				H	22.43		
Middle Channel							
1732.50	20175	QPSK	H	V	23.22	30.00	Pass
				H	23.29		
1732.50	20175	16QAM	H	V	22.24		
				H	21.73		
Highest Channel							
1754.30	20393	QPSK	H	V	22.74	30.00	Pass
				H	24.91		
1754.30	20393	16QAM	H	V	21.34		
				H	23.76		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1711.50	19965	QPSK	H	V	23.24	30.00	Pass
				H	22.64		
1711.50	19965	16QAM	H	V	23.76		
				H	21.49		
Middle Channel							
1732.50	20175	QPSK	H	V	23.51	30.00	Pass
				H	22.63		
1732.50	20175	16QAM	H	V	22.24		
				H	21.46		
Highest Channel							
1753.50	20385	QPSK	H	V	22.67	30.00	Pass
				H	23.52		
1753.50	20385	16QAM	H	V	21.47		
				H	22.44		

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	22.24	30.00	Pass
				H	21.21		
1712.50	19975	16QAM	H	V	23.02		
				H	22.03		
Middle Channel							
1732.50	20175	QPSK	H	V	23.21	30.00	Pass
				H	21.43		
1732.50	20175	16QAM	H	V	21.53		
				H	20.76		
Highest Channel							
1752.50	20375	QPSK	H	V	22.63	30.00	Pass
				H	23.76		
1752.50	20375	16QAM	H	V	21.98		
				H	22.31		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1715.00	20000	QPSK	H	V	22.56	30.00	Pass
				H	23.01		
1715.00	20000	16QAM	H	V	22.20		
				H	21.46		
Middle Channel							
1732.50	20175	QPSK	H	V	23.13	30.00	Pass
				H	21.43		
1732.50	20175	16QAM	H	V	21.69		
				H	20.58		
Highest Channel							
1750.00	20350	QPSK	H	V	22.52	30.00	Pass
				H	23.14		
1750.00	20350	16QAM	H	V	21.44		
				H	22.76		

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	22.23	30.00	Pass
				H	23.14		
1717.50	20025	16QAM	H	V	22.25		
				H	21.44		
Middle Channel							
1732.50	20175	QPSK	H	V	22.56	30.00	Pass
				H	21.43		
1732.50	20175	16QAM	H	V	20.34		
				H	19.72		
Highest Channel							
1747.50	20325	QPSK	H	V	22.54	30.00	Pass
				H	23.63		
1747.50	20325	16QAM	H	V	21.45		
				H	22.36		
BW: 20MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
1720.00	20050	QPSK	H	V	23.02	30.00	Pass
				H	22.45		
1720.00	20050	16QAM	H	V	22.62		
				H	21.47		
Middle Channel							
1732.50	20175	QPSK	H	V	22.23	30.00	Pass
				H	21.02		
1732.50	20175	16QAM	H	V	19.64		
				H	20.34		
Highest Channel							
1745.00	20300	QPSK	H	V	22.20	30.00	Pass
				H	22.13		
1745.00	20300	16QAM	H	V	20.23		
				H	19.76		

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	22.12	38.45	Pass
				H	23.06		
824.70	20407	16QAM	H	V	21.24		
				H	20.39		
Middle Channel							
836.50	20525	QPSK	H	V	25.13	38.45	Pass
				H	23.27		
836.50	20525	16QAM	H	V	24.63		
				H	22.55		
Highest Channel							
848.30	20643	QPSK	H	V	27.32	38.45	Pass
				H	22.98		
848.30	20643	16QAM	H	V	26.32		
				H	21.13		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
825.5	20415	QPSK	H	V	23.12	38.45	Pass
				H	23.62		
825.5	20415	16QAM	H	V	21.47		
				H	19.64		
Middle Channel							
836.50	20525	QPSK	H	V	24.61	38.45	Pass
				H	22.53		
836.50	20525	16QAM	H	V	23.45		
				H	21.43		
Highest Channel							
847.50	20635	QPSK	H	V	26.68	38.45	Pass
				H	24.59		
847.50	20635	16QAM	H	V	26.87		
				H	21.36		

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	22.45	38.45	Pass
				H	23.14		
826.50	20425	16QAM	H	V	22.47		
				H	20.49		
Middle Channel							
836.50	20525	QPSK	H	V	23.64	38.45	Pass
				H	21.34		
836.50	20525	16QAM	H	V	23.58		
				H	22.74		
Highest Channel							
846.50	20625	QPSK	H	V	26.58	38.45	Pass
				H	24.31		
846.50	20625	16QAM	H	V	25.46		
				H	21.47		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
829.00	20450	QPSK	H	V	22.45	38.45	Pass
				H	23.16		
829.00	20450	16QAM	H	V	22.57		
				H	21.46		
Middle Channel							
836.50	20525	QPSK	H	V	23.10	38.45	Pass
				H	21.54		
836.50	20525	16QAM	H	V	23.16		
				H	21.57		
Highest Channel							
844.00	20600	QPSK	H	V	25.64	38.45	Pass
				H	24.15		
844.00	20600	16QAM	H	V	24.87		
				H	22.46		

LTE band 7 part:

LTE Band 7							
BW: 5MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
2502.50	20775	QPSK	H	V	18.17	33.00	Pass
				H	20.98		
2502.50	20775	16QAM	H	V	19.52		
				H	20.47		
Middle Channel							
2535.00	21100	QPSK	H	V	20.66	33.00	Pass
				H	24.99		
2535.00	21100	16QAM	H	V	19.36		
				H	23.55		
Highest Channel							
2567.50	21425	QPSK	H	V	21.12	33.00	Pass
				H	25.89		
2567.50	21425	16QAM	H	V	20.74		
				H	24.19		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
2505.00	20800	QPSK	H	V	19.25	33.00	Pass
				H	21.67		
2505.00	20800	16QAM	H	V	19.45		
				H	20.33		
Middle Channel							
2535.00	21100	QPSK	H	V	21.45	33.00	Pass
				H	23.43		
2535.00	21100	16QAM	H	V	20.13		
				H	22.45		
Highest Channel							
2565.00	21400	QPSK	H	V	21.47	33.00	Pass
				H	24.61		
2565.00	21400	16QAM	H	V	20.30		
				H	23.44		

LTE Band 7							
BW: 15MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
2507.50	20825	QPSK	H	V	20.24	33.00	Pass
				H	21.33		
2507.50	20825	16QAM	H	V	19.20		
				H	20.59		
Middle Channel							
2535.00	21100	QPSK	H	V	21.30	33.00	Pass
				H	22.64		
2535.00	21100	16QAM	H	V	20.11		
				H	21.49		
Highest Channel							
2562.50	21375	QPSK	H	V	21.63	33.00	Pass
				H	23.40		
2562.50	21375	16QAM	H	V	20.34		
				H	22.11		
BW: 20MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
Lowest Channel							
2510.00	20850	QPSK	H	V	21.24	33.00	Pass
				H	19.62		
2510.00	20850	16QAM	H	V	20.36		
				H	19.22		
Middle Channel							
2535.00	21100	QPSK	H	V	21.36	33.00	Pass
				H	22.40		
2535.00	21100	16QAM	H	V	20.47		
				H	21.20		
Highest Channel							
2565.00	21350	QPSK	H	V	21.64	33.00	Pass
				H	23.20		
2565.00	21350	16QAM	H	V	19.64		
				H	18.78		

LTE band 12

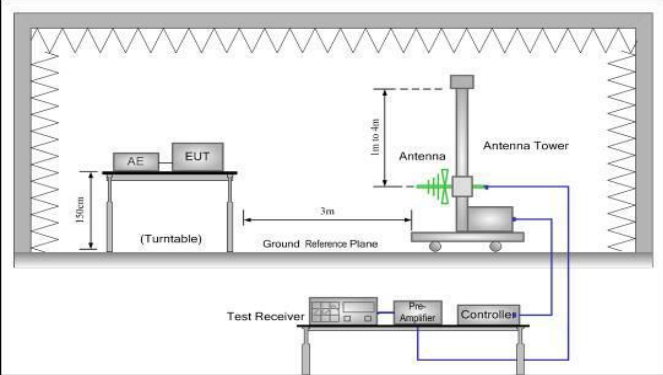
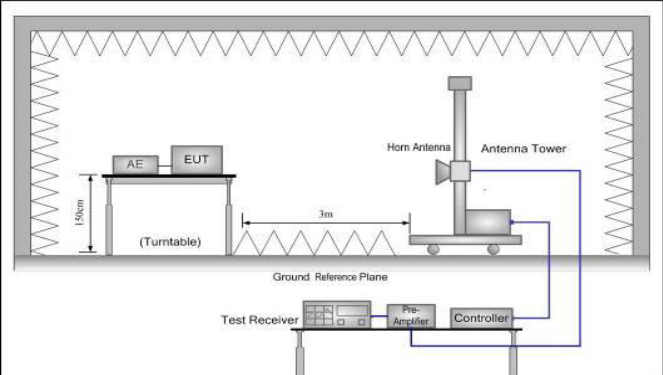
LTE Band 12							
BW: 1.4MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
699.70	23017	QPSK	H	V	23.81	34.77	Pass
				H	15.03		
699.70	23017	16QAM	H	V	22.21		
				H	16.80		
Middle Channel							
707.50	23095	QPSK	H	V	23.51	34.77	Pass
				H	15.40		
707.50	23095	16QAM	H	V	22.45		
				H	17.86		
Highest Channel							
715.30	23173	QPSK	H	V	23.08	34.77	Pass
				H	16.53		
715.30	23173	16QAM	H	V	22.66		
				H	18.74		
BW: 3MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
700.50	23025	QPSK	H	V	22.47	34.77	Pass
				H	16.36		
700.50	23025	16QAM	H	V	23.34		
				H	16.25		
Middle Channel							
707.50	23095	QPSK	H	V	23.61	34.77	Pass
				H	16.43		
707.50	23095	16QAM	H	V	22.74		
				H	16.59		
Highest Channel							
714.50	23165	QPSK	H	V	23.02	34.77	Pass
				H	15.27		
714.50	23165	16QAM	H	V	22.46		
				H	17.49		

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	22.32	34.77	Pass
				H	16.35		
701.50	23035	16QAM	H	V	23.74		
				H	14.21		
Middle Channel							
707.50	23095	QPSK	H	V	22.58	34.77	Pass
				H	15.16		
707.50	23095	16QAM	H	V	22.41		
				H	15.03		
Highest Channel							
713.50	23155	QPSK	H	V	23.16	34.77	Pass
				H	16.43		
713.50	23155	16QAM	H	V	22.14		
				H	15.89		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
704.00	23060	QPSK	H	V	23.34	34.77	Pass
				H	17.65		
704.00	23060	16QAM	H	V	23.32		
				H	16.54		
Middle Channel							
707.50	23095	QPSK	H	V	23.21	34.77	Pass
				H	16.87		
707.50	23095	16QAM	H	V	23.54		
				H	16.73		
Highest Channel							
711.00	23130	QPSK	H	V	23.54	34.77	Pass
				H	16.33		
711.00	23130	16QAM	H	V	22.52		
				H	16.48		

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	22.95	34.77	Pass
				H	14.69		
706.50	23755	16QAM	H	V	21.63		
				H	15.14		
Middle Channel							
710.00	23790	QPSK	H	V	23.94	34.77	Pass
				H	15.86		
710.00	23790	16QAM	H	V	22.03		
				H	16.15		
Highest Channel							
713.50	23825	QPSK	H	V	24.71	34.77	Pass
				H	17.46		
713.50	23825	16QAM	H	V	21.63		
				H	15.47		
BW: 10MHz							
Frequency (MHz)	UL Channel	Modulation	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
Lowest Channel							
709.00	23780	QPSK	H	V	22.15	34.77	Pass
				H	15.39		
709.00	23780	16QAM	H	V	22.02		
				H	16.47		
Middle Channel							
710.00	23790	QPSK	H	V	22.56	34.77	Pass
				H	16.47		
710.00	23790	16QAM	H	V	22.01		
				H	17.89		
Highest Channel							
711.00	23800	QPSK	H	V	23.69	34.77	Pass
				H	18.47		
711.00	23800	16QAM	H	V	22.16		
				H	16.49		

6.6 Field strength of spurious radiation measurement

<p>Test Requirement:</p>	<p>Part 22.917(b), Part 24.238 (a), Part 27.53(g), Part 27.53(m), Part 27.53(h)</p>
<p>Test Method:</p>	<p>ANSI/TIA-603-D 2010</p>
<p>Limit:</p>	<p>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). LTE Band 7: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz.</p>
<p>Test setup:</p>	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
<p>Test Procedure:</p>	<ol style="list-style-type: none"> 1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. 2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations. 3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels).

	<p>Once spurious emission was identified, the power of the emission was determined using the substitution method.</p> <p>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.</p> $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
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	-48.27	-13.00	Pass
5552.10	V	-43.64		
7402.00	V	-39.38		
3701.40	Horizontal	-46.63		
5552.10	H	-44.50		
7402.00	H	-38.88		
Middle Channel				
3760.00	Vertical	-51.30	-13.00	Pass
5640.00	V	-44.22		
7520.00	V	-40.42		
3760.00	Horizontal	-48.26		
5640.00	H	-44.25		
7520.00	H	-38.98		
Highest Channel				
3816.60	Vertical	-50.47	-13.00	Pass
5724.90	V	-43.16		
7633.20	V	-38.93		
3816.60	Horizontal	-48.74		
5724.90	H	-43.77		
7633.20	H	-39.16		
<p>Note:</p> <ol style="list-style-type: none"> The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 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	-45.24	-13.00	Pass
5554.50	V	-46.31		
7406.00	V	-39.64		
3703.00	Horizontal	-45.27		
5554.50	H	-46.31		
7406.00	H	-40.11		
Middle Channel				
3760.00	Vertical	-52.26	-13.00	Pass
5640.00	V	-41.34		
7520.00	V	-39.67		
3760.00	Horizontal	-45.10		
5640.00	H	-46.25		
7520.00	H	-41.78		
Highest Channel				
3817.00	Vertical	-50.24	-13.00	Pass
5725.50	V	-42.16		
7634.00	V	-39.67		
3817.00	Horizontal	-45.21		
5725.50	H	-44.19		
7634.00	H	-42.49		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-47.64	-13.00	Pass
5557.50	V	-42.53		
7410.00	V	-40.13		
3705.00	Horizontal	-45.76		
5557.50	H	-46.77		
7410.00	H	-39.75		
Middle Channel				
3760.00	Vertical	-52.42	-13.00	Pass
5640.00	V	-43.73		
7520.00	V	-39.61		
3760.00	Horizontal	-46.69		
5640.00	H	-44.12		
7520.00	H	-39.72		
Highest Channel				
3815.00	Vertical	-49.21	-13.00	Pass
5722.50	V	-42.53		
7630.00	V	-39.52		
3815.00	Horizontal	-47.41		
5722.50	H	-42.55		
7630.00	H	-39.19		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-46.22	-13.00	Pass
5565.00	V	-45.59		
7420.00	V	-40.23		
3710.00	Horizontal	-46.31		
5565.00	H	-46.58		
7420.00	H	-39.49		
Middle Channel				
3760.00	Vertical	-51.24	-13.00	Pass
5640.00	V	-42.52		
7520.00	V	-39.61		
3760.00	Horizontal	-46.85		
5640.00	H	-45.11		
7520.00	H	-42.25		
Highest Channel				
3810.00	Vertical	-49.52	-13.00	Pass
5715.00	V	-43.16		
7620.00	V	-39.69		
3810.00	Horizontal	-46.54		
5715.00	H	-45.78		
7620.00	H	-41.72		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-46.22	-13.00	Pass
5572.50	V	-41.35		
7430.00	V	-39.67		
3715.00	Horizontal	-46.55		
5572.50	H	-46.28		
7430.00	H	-40.22		
Middle Channel				
3760.00	Vertical	-51.34	-13.00	Pass
5640.00	V	-42.16		
7520.00	V	-39.68		
3760.00	Horizontal	-47.45		
5640.00	H	-45.21		
7520.00	H	-40.33		
Highest Channel				
3805.00	Vertical	-49.25	-13.00	Pass
5707.50	V	-42.76		
7610.00	V	-39.46		
3805.00	Horizontal	-45.72		
5707.50	H	-42.11		
7610.00	H	-38.69		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-45.24	-13.00	Pass
5580.00	V	-42.11		
7440.00	V	-39.68		
3720.00	Horizontal	-45.21		
5580.00	H	-47.34		
7440.00	H	-39.22		
Middle Channel				
3760.00	Vertical	-52.24	-13.00	Pass
5640.00	V	-43.61		
7520.00	V	-40.73		
3760.00	Horizontal	-46.50		
5640.00	H	-45.16		
7520.00	H	-41.79		
Highest Channel				
3800.00	Vertical	-50.34	-13.00	Pass
5700.00	V	-42.19		
7600.00	V	-39.62		
3800.00	Horizontal	-45.24		
5700.00	H	-46.37		
7600.00	H	-42.87		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-46.29	-13.00	Pass
5132.10	V	-44.96		
6842.80	V	-39.55		
3421.40	Horizontal	-46.40		
5132.10	H	-36.23		
6842.80	H	-39.92		
Middle Channel				
3465.00	Vertical	-48.73	-13.00	Pass
5197.50	V	-45.76		
6930.00	V	-38.83		
3465.00	Horizontal	-48.64		
5197.50	H	-43.86		
6930.00	H	-40.03		
Highest Channel				
3508.60	Vertical	-48.09	-13.00	Pass
5262.90	V	-45.27		
7017.20	V	-39.52		
3508.60	Horizontal	-47.99		
5262.90	H	-44.05		
7017.20	H	-40.09		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-45.24	-13.00	Pass
5134.50	V	-43.16		
6846.00	V	-39.67		
3423.00	Horizontal	-45.11		
5134.50	H	-40.53		
6846.00	H	-42.16		
Middle Channel				
3465.00	Vertical	-46.53	-13.00	Pass
5197.50	V	-45.24		
6930.00	V	-39.31		
3465.00	Horizontal	-46.21		
5197.50	H	-45.77		
6930.00	H	-41.49		
Highest Channel				
3507.00	Vertical	-46.34	-13.00	Pass
5260.50	V	-45.19		
7014.00	V	-45.19		
3507.00	Horizontal	-45.73		
5260.50	H	-43.55		
7014.00	H	-39.69		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-45.24	-13.00	Pass
5137.50	V	-43.67		
6850.00	V	-40.25		
3425.00	Horizontal	-45.79		
5137.50	H	-37.64		
6850.00	H	-40.11		
Middle Channel				
3465.00	Vertical	-47.64	-13.00	Pass
5197.50	V	-46.32		
6930.00	V	-39.65		
3465.00	Horizontal	-47.61		
5197.50	H	-43.52		
6930.00	H	-41.70		
Highest Channel				
3505.00	Vertical	-47.86	-13.00	Pass
5257.50	V	-45.16		
7010.00	V	-40.56		
3505.00	Horizontal	-46.97		
5257.50	H	-45.11		
7010.00	H	-39.49		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-46.24	-13.00	Pass
5145.00	V	-42.52		
6860.00	V	-40.37		
3430.00	Horizontal	-45.19		
5145.00	H	-39.56		
6860.00	H	-41.53		
Middle Channel				
3465.00	Vertical	-45.10	-13.00	Pass
5197.50	V	-47.87		
6930.00	V	-40.21		
3465.00	Horizontal	-46.53		
5197.50	H	-45.25		
6930.00	H	-42.79		
Highest Channel				
3500.00	Vertical	-45.21	-13.00	Pass
5250.00	V	-46.35		
7000.00	V	-42.70		
3500.00	Horizontal	-45.85		
5250.00	H	-44.76		
7000.00	H	-39.19		
<i>Note:</i>				
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	-46.32	-13.00	Pass
5152.50	V	-42.25		
6870.00	V	-39.67		
3435.00	Horizontal	-46.52		
5152.50	H	-36.43		
6870.00	H	-39.77		
Middle Channel				
3465.00	Vertical	-45.61	-13.00	Pass
5197.50	V	-46.15		
6930.00	V	-40.25		
3465.00	Horizontal	-46.77		
5197.50	H	-43.16		
6930.00	H	-42.75		
Highest Channel				
3495.00	Vertical	-47.61	-13.00	Pass
5242.50	V	-46.52		
6990.00	V	-41.30		
3495.00	Horizontal	-45.98		
5242.50	H	-44.16		
6990.00	H	-40.17		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-45.23	-13.00	Pass
5160.00	V	-41.34		
6880.00	V	-39.65		
3440.00	Horizontal	-45.20		
5160.00	H	-37.64		
6880.00	H	-40.19		
Middle Channel				
3465.00	Vertical	-46.34	-13.00	Pass
5197.50	V	-47.64		
6930.00	V	-39.31		
3465.00	Horizontal	-45.27		
5197.50	H	-44.67		
6930.00	H	-41.49		
Highest Channel				
3490.00	Vertical	-46.25	-13.00	Pass
5235.00	V	-47.64		
6980.00	V	-42.19		
3490.00	Horizontal	-46.58		
5235.00	H	-45.20		
6980.00	H	-39.75		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-54.17	-13.00	Pass
2474.10	V	-55.34		
3298.80	V	-51.30		
1649.40	Horizontal	-55.89		
2474.10	H	-55.40		
3298.80	H	-51.90		
Middle Channel				
1673.00	Vertical	-55.73	-13.00	Pass
2509.50	V	-54.29		
3346.00	V	-50.95		
1673.00	Horizontal	-56.97		
2509.50	H	-55.88		
3346.00	H	-51.03		
Highest Channel				
1696.60	Vertical	-56.04	-13.00	Pass
2544.90	V	-55.07		
3393.20	V	-50.79		
1696.60	Horizontal	-55.95		
2544.90	H	-55.56		
3393.20	H	-50.24		

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	-56.36	-13.00	Pass
2476.50	V	-55.41		
3302.00	V	-49.78		
1651.00	Horizontal	-55.24		
2476.50	H	-52.61		
3302.00	H	-49.76		
Middle Channel				
1673.00	Vertical	-55.23	-13.00	Pass
2509.50	V	-54.76		
3346.00	V	-48.26		
1673.00	Horizontal	-55.34		
2509.50	H	-52.16		
3346.00	H	-51.49		
Highest Channel				
1695.00	Vertical	-53.67	-13.00	Pass
2542.50	V	-57.46		
3390.00	V	-50.19		
1695.00	Horizontal	-52.98		
2542.50	H	-54.31		
3390.00	H	-48.72		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-55.24	-13.00	Pass
2479.50	V	-54.30		
3306.00	V	-49.61		
1653.00	Horizontal	-55.24		
2479.50	H	-54.37		
3306.00	H	-48.85		
Middle Channel				
1673.00	Vertical	-54.36	-13.00	Pass
2509.50	V	-53.67		
3346.00	V	-49.85		
1673.00	Horizontal	-57.64		
2509.50	H	-54.19		
3346.00	H	-52.80		
Highest Channel				
1693.00	Vertical	-56.36	-13.00	Pass
2539.50	V	-54.83		
3386.00	V	-49.78		
1693.00	Horizontal	-54.32		
2539.50	H	-54.91		
3386.00	H	-49.76		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-54.24	-13.00	Pass
2487.00	V	-55.95		
3316.00	V	-49.30		
1658.00	Horizontal	-54.21		
2487.00	H	-53.67		
3316.00	H	-49.86		
Middle Channel				
1673.00	Vertical	-55.85	-13.00	Pass
2509.50	V	-54.63		
3346.00	V	-49.37		
1673.00	Horizontal	-56.13		
2509.50	H	-53.67		
3346.00	H	-52.11		
Highest Channel				
1688.00	Vertical	-54.60	-13.00	Pass
2532.00	V	-56.39		
3376.00	V	-49.13		
1688.00	Horizontal	-53.27		
2532.00	H	-52.49		
3376.00	H	-49.02		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

LTE Band 7 part:

LTE Band 7, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
5005.00	Vertical	-47.30	-25.00	Pass
7507.50	V	-38.38		
10010.00	V	-36.32		
5005.00	Horizontal	-46.59		
7507.50	H	-39.03		
10010.00	H	-36.83		
Middle Channel				
5070.00	Vertical	-46.03	-25.00	Pass
7605.00	V	-37.39		
10140.00	V	-35.65		
5070.00	Horizontal	-42.98		
7605.00	H	-38.78		
10140.00	H	-34.65		
Highest Channel				
5135.00	Vertical	-46.52	-25.00	Pass
7702.50	V	-39.64		
10270.00	V	-35.31		
5135.00	Horizontal	-47.64		
7702.50	H	-41.34		
10270.00	H	-37.49		
<p>Note:</p> <ol style="list-style-type: none"> The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. For above 1 GHz, all test modes were performed, and just the worst case shown in the report. 				

LTE Band 7, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
5010.00	Vertical	-46.25	-25.00	Pass
7515.00	V	-37.95		
10020.00	V	-40.31		
5010.00	Horizontal	-46.53		
7515.00	H	-40.30		
10020.00	H	-38.65		
Middle Channel				
5070.00	Vertical	-46.53	-25.00	Pass
7605.00	V	-38.94		
10140.00	V	-37.64		
5070.00	Horizontal	-42.12		
7605.00	H	-37.64		
10140.00	H	-35.89		
Highest Channel				
5130.00	Vertical	-45.21	-25.00	Pass
7695.00	V	-40.77		
10260.00	V	-37.89		
5130.00	Horizontal	-46.35		
7695.00	H	-41.45		
10260.00	H	-36.85		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

LTE Band 7, WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
5015.00	Vertical	-46.32	-25.00	Pass
7522.50	V	-39.60		
10030.00	V	-37.64		
5015.00	Horizontal	-45.21		
7522.50	H	-39.26		
10030.00	H	-37.66		
Middle Channel				
5070.00	Vertical	-45.21	-25.00	Pass
7605.00	V	-36.25		
10140.00	V	-37.64		
5070.00	Horizontal	-42.10		
7605.00	H	-37.64		
10140.00	H	-35.98		
Highest Channel				
5125.00	Vertical	-45.26	-25.00	Pass
7687.50	V	-40.36		
10250.00	V	-36.36		
5125.00	Horizontal	-47.64		
7687.50	H	-42.16		
10250.00	H	-36.78		
<i>Note:</i>				
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, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
5020.00	Vertical	-45.24	-25.00	Pass
7530.00	V	-34.72		
10040.00	V	-39.61		
5020.00	Horizontal	-45.35		
7530.00	H	-39.64		
10040.00	H	-37.69		
Middle Channel				
5070.00	Vertical	-46.51	-25.00	Pass
7605.00	V	-37.64		
10140.00	V	-38.62		
5070.00	Horizontal	-42.11		
7605.00	H	-38.97		
10140.00	H	-36.77		
Highest Channel				
5120.00	Vertical	-46.34	-25.00	Pass
7680.00	V	-39.67		
10240.00	V	-37.64		
5120.00	Horizontal	-45.21		
7680.00	H	-41.57		
10240.00	H	-37.49		
<i>Note:</i>				
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	-55.78	-13.00	Pass
2099.10	V	-54.01		
2798.80	V	-53.31		
1399.40	Horizontal	-57.49		
2099.10	H	-50.09		
2798.80	H	-53.44		
Middle Channel				
1415.00	Vertical	-55.79	-13.00	Pass
2122.50	V	-52.36		
2830.00	V	-53.90		
1415.00	Horizontal	-55.51		
2122.50	H	-46.95		
2830.00	H	-53.26		
Highest Channel				
1430.60	Vertical	-56.80	-13.00	Pass
2145.90	V	-51.52		
2861.20	V	-53.53		
1430.60	Horizontal	-57.08		
2145.90	H	-46.25		
2861.20	H	-53.82		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-55.23	-13.00	Pass
2101.50	V	-57.64		
2802.00	V	-55.69		
1401.00	Horizontal	-54.63		
2101.50	H	-50.37		
2802.00	H	-53.61		
Middle Channel				
1415.00	Vertical	-54.37	-13.00	Pass
2122.50	V	-54.61		
2830.00	V	-55.68		
1415.00	Horizontal	-56.45		
2122.50	H	-46.30		
2830.00	H	-53.49		
Highest Channel				
1429.00	Vertical	-57.24	-13.00	Pass
2143.50	V	-52.16		
2858.00	V	-53.49		
1429.00	Horizontal	-56.85		
2143.50	H	-45.87		
2858.00	H	-52.19		
<i>Note:</i>				
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	-54.31	-13.00	Pass
2104.50	V	-55.63		
2806.00	V	-56.24		
1403.00	Horizontal	-56.72		
2104.50	H	-49.52		
2806.00	H	-52.44		
Middle Channel				
1415.00	Vertical	-54.21	-13.00	Pass
2122.50	V	-53.67		
2830.00	V	-54.61		
1415.00	Horizontal	-55.23		
2122.50	H	-46.88		
2830.00	H	-52.79		
Highest Channel				
1427.00	Vertical	-57.64	-13.00	Pass
2410.50	V	-52.19		
2854.00	V	-52.44		
1427.00	Horizontal	-56.37		
2410.50	H	-46.85		
2854.00	H	-53.20		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i> <i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i> 				

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	-53.64	-13.00	Pass
2112.00	V	-56.25		
2816.00	V	-54.37		
1408.00	Horizontal	-53.16		
2112.00	H	-49.87		
2816.00	H	-52.46		
Middle Channel				
1415.00	Vertical	-53.64	-13.00	Pass
2122.50	V	-55.27		
2830.00	V	-54.61		
1415.00	Horizontal	-56.34		
2122.50	H	-47.86		
2830.00	H	-52.20		
Highest Channel				
1422.00	Vertical	-56.34	-13.00	Pass
2133.00	V	-52.16		
2844.00	V	-53.79		
1422.00	Horizontal	-57.64		
2133.00	H	-45.21		
2844.00	H	-52.77		
<i>Note:</i>				
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	-57.47	-13.00	Pass
2119.50	V	-52.33		
2826.00	V	-53.80		
1413.00	Horizontal	-57.58		
2119.50	H	-47.63		
2826.00	H	-54.63		
Middle Channel				
1420.00	Vertical	-55.87	-13.00	Pass
2130.00	V	-49.29		
2840.00	V	-53.99		
1420.00	Horizontal	-56.97		
2130.00	H	-45.13		
2840.00	H	-52.87		
Highest Channel				
1427.00	Vertical	-55.00	-13.00	Pass
2140.50	V	-52.37		
2854.00	V	-53.89		
1427.00	Horizontal	-55.97		
2140.50	H	-49.43		
2854.00	H	-54.44		
<p>Note:</p> <ol style="list-style-type: none"> The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 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	-56.34	-13.00	Pass
2127.00	V	-53.61		
2836.00	V	-54.37		
1418.00	Horizontal	-56.54		
2127.00	H	-48.51		
2836.00	H	-55.44		
Middle Channel				
1420.00	Vertical	-54.27	-13.00	Pass
2130.00	V	-48.61		
2840.00	V	-52.53		
1420.00	Horizontal	-55.19		
2130.00	H	-46.79		
2840.00	H	-53.39		
Highest Channel				
1422.00	Vertical	-54.61	-13.00	Pass
2133.00	V	-53.86		
2844.00	V	-54.19		
1422.00	Horizontal	-55.79		
2133.00	H	-49.10		
2844.00	H	-53.57		
<i>Note:</i>				
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:	<ol style="list-style-type: none"> 1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (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	198	0.105319	±2.5	Pass
	-20	155	0.082447		
	-10	163	0.086702		
	0	123	0.065426		
	10	188	0.100000		
	20	174	0.092553		
	30	114	0.060638		
	40	105	0.055851		
	50	150	0.079787		
16QAM					
3.80	-30	123	0.065426	±2.5	Pass
	-20	150	0.079787		
	-10	166	0.088298		
	0	122	0.064894		
	10	144	0.076596		
	20	140	0.074468		
	30	156	0.082979		
	40	133	0.070745		
	50	138	0.073404		
<i>Note: Only the worst case shown in the report.</i>					

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	196	0.113131	±2.5	Pass
	-20	153	0.088312		
	-10	161	0.092929		
	0	121	0.069841		
	10	186	0.107359		
	20	172	0.099278		
	30	112	0.064646		
	40	103	0.059452		
	50	148	0.085426		
16QAM					
3.80	-30	121	0.069841	±2.5	Pass
	-20	148	0.085426		
	-10	164	0.094661		
	0	120	0.069264		
	10	142	0.081962		
	20	138	0.079654		
	30	154	0.088889		
	40	131	0.075613		
	50	136	0.078499		
<i>Note: Only the worst case shown in the report.</i>					

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	194	0.231919	±2.5	Pass
	-20	151	0.180514		
	-10	159	0.190078		
	0	118	0.141064		
	10	184	0.219964		
	20	170	0.203228		
	30	110	0.131500		
	40	102	0.121937		
	50	146	0.174537		
16QAM					
3.80	-30	121	0.144650	±2.5	Pass
	-20	147	0.175732		
	-10	162	0.193664		
	0	118	0.141064		
	10	140	0.167364		
	20	136	0.162582		
	30	152	0.181710		
	40	129	0.154214		
	50	134	0.160191		
<i>Note: Only the worst case shown in the report.</i>					

LTE Band 7 part:

Reference Frequency: LTE Band 7 (10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	198	0.078107	±2.5	Pass
	-20	155	0.061144		
	-10	163	0.064300		
	0	123	0.048521		
	10	188	0.074162		
	20	174	0.068639		
	30	114	0.044970		
	40	105	0.041420		
	50	150	0.059172		
16QAM					
3.80	-30	123	0.048521	±2.5	Pass
	-20	150	0.059172		
	-10	166	0.065483		
	0	122	0.048126		
	10	144	0.056805		
	20	140	0.055227		
	30	156	0.061538		
	40	133	0.052465		
	50	138	0.054438		
<i>Note: Only the worst case shown in the report.</i>					

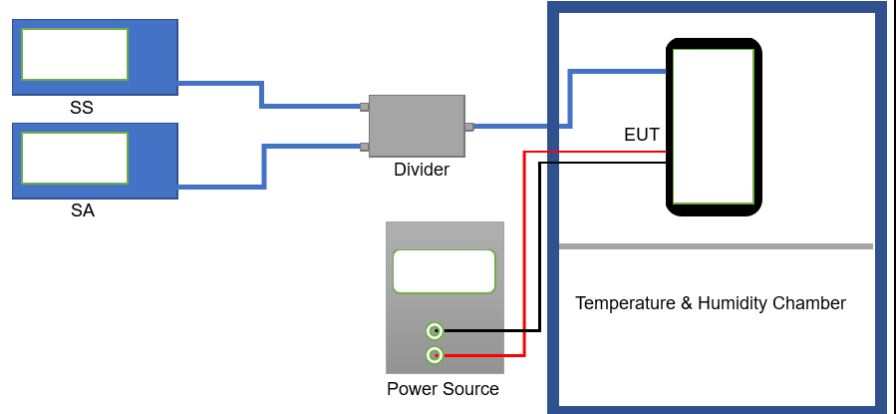
LTE Band 12 part:

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	189	0.267138	±2.5	Pass
	-20	155	0.219081		
	-10	136	0.192226		
	0	132	0.186572		
	10	188	0.265724		
	20	147	0.207774		
	30	141	0.199293		
	40	150	0.212014		
	50	105	0.138516		
16QAM					
3.80	-30	132	0.186572	±2.5	Pass
	-20	105	0.148410		
	-10	166	0.234629		
	0	122	0.172438		
	10	144	0.203534		
	20	104	0.146996		
	30	165	0.233216		
	40	133	0.187986		
	50	183	0.258657		
<i>Note: Only the worst case shown in the report.</i>					

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	152	0.214085	±2.5	Pass
	-20	162	0.228169		
	-10	136	0.191549		
	0	123	0.173239		
	10	188	0.264789		
	20	174	0.245070		
	30	114	0.160563		
	40	105	0.147887		
	50	150	0.211268		
16QAM					
3.80	-30	123	0.173239	±2.5	Pass
	-20	129	0.181690		
	-10	166	0.233803		
	0	122	0.171831		
	10	148	0.208451		
	20	140	0.197183		
	30	156	0.219718		
	40	110	0.154930		
	50	138	0.194366		
<i>Note: Only the worst case shown in the report.</i>					

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:	±2.5ppm
Test setup:	 <p>The diagram illustrates the test setup. On the left, there are two blue boxes labeled 'SS' (Spectrum Scanner) and 'SA' (Spectrum Analyzer). Both are connected to a central grey box labeled 'Divider'. The 'Divider' is connected to a black box labeled 'EUT' (Equipment Under Test) which is located inside a larger blue-bordered box labeled 'Temperature & Humidity Chamber'. Below the chamber, there is a grey box labeled 'Power Source' with two green terminals. Red and black wires connect the 'Power Source' to the 'EUT'.</p>
Test procedure:	<ol style="list-style-type: none"> 1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (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	98	0.052128	±2.5	Pass
	3.80	65	0.034574		
	3.50	74	0.039362		
16QAM					
25	4.35	80	0.042553	±2.5	Pass
	3.80	96	0.051064		
	3.50	48	0.025532		

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	89	0.051371	±2.5	Pass
	3.80	56	0.032323		
	3.50	47	0.027128		
16QAM					
25	4.35	80	0.046176	±2.5	Pass
	3.80	69	0.039827		
	3.50	84	0.048485		

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	96	0.114764	±2.5	Pass
	3.80	63	0.075314		
	3.50	72	0.086073		
16QAM					
25	4.35	78	0.093246	±2.5	Pass
	3.80	94	0.112373		
	3.50	46	0.054991		

Note: Only the worst case shown in the report.

LTE Band 7 part:

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	94	0.037081	±2.5	Pass
	3.80	61	0.024063		
	3.50	70	0.027613		
16QAM					
25	4.35	76	0.029980	±2.5	Pass
	3.80	92	0.036292		
	3.50	44	0.017357		

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	93	0.131449	±2.5	Pass
	3.80	60	0.084806		
	3.50	69	0.097527		
16QAM					
25	4.35	75	0.106007	±2.5	Pass
	3.80	91	0.128622		
	3.50	43	0.060777		

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	98	0.138028	±2.5	Pass
	3.80	65	0.091549		
	3.50	74	0.104225		
16QAM					
25	4.35	80	0.112676	±2.5	Pass
	3.80	96	0.135211		
	3.50	48	0.067606		

Note: Only the worst case shown in the report.