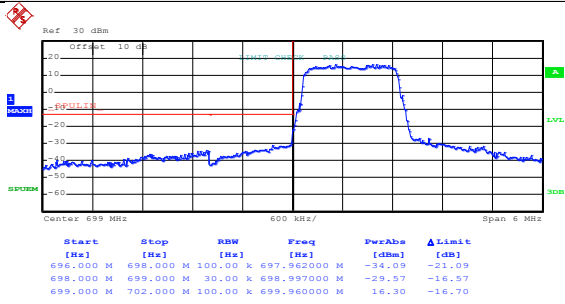
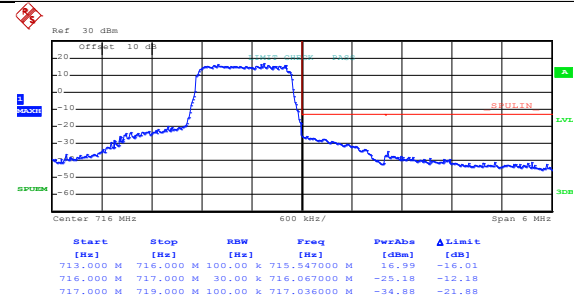


Test Mode: LTE band 12 (QPSK RB Size 6 &RB Offset 0)



Date: 26.JUN.2017 22:53:05

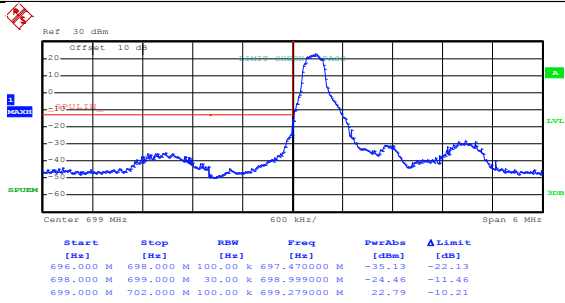
Lowest channel



Date: 26.JUN.2017 23:04:42

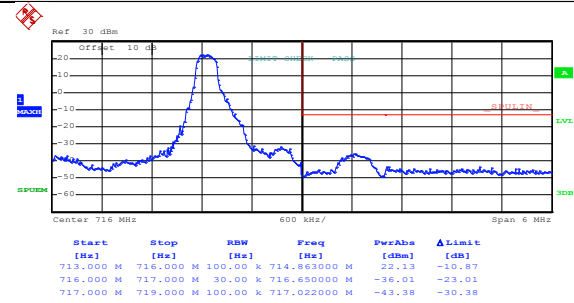
Highest channel

Test Mode: LTE band 12 (16QAM RB Size 1 &RB Offset 0)



Date: 26.JUN.2017 22:51:47

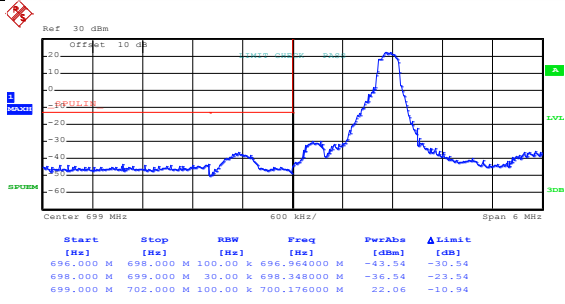
Lowest channel



Date: 26.JUN.2017 23:03:54

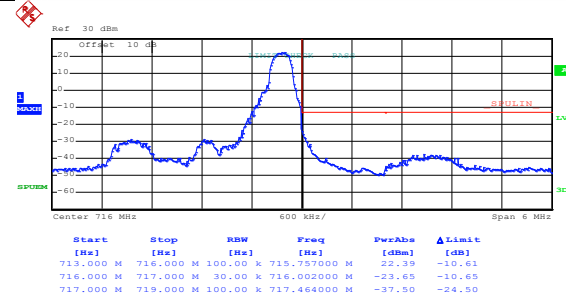
Highest channel

Test Mode: LTE band 12 (16QAM RB Size 1 &RB Offset 5)



Date: 26.JUN.2017 22:52:11

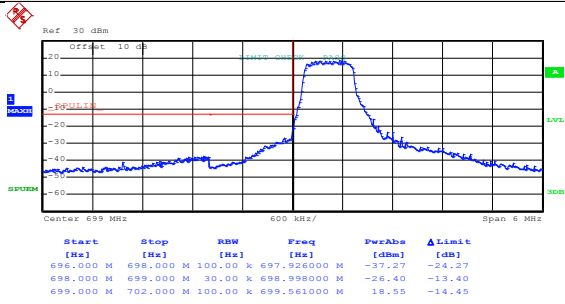
Lowest channel



Date: 26.JUN.2017 23:04:12

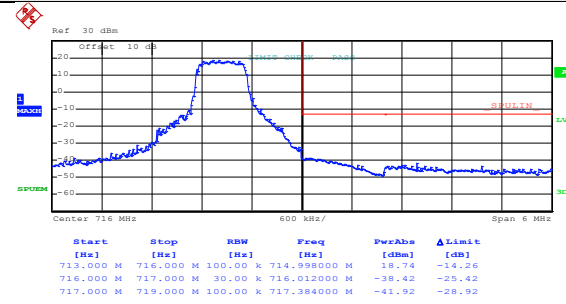
Highest channel

Test Mode: LTE band 12 (16QAM RB Size 3 &RB Offset 0)



Date: 26.JUN.2017 22:52:32

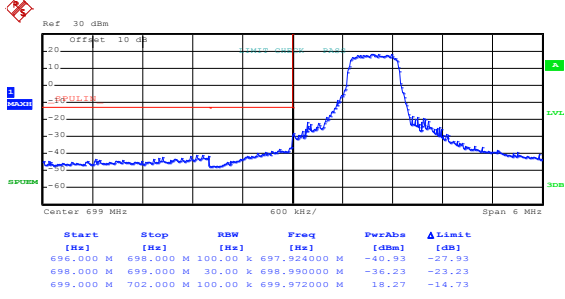
Lowest channel



Date: 26.JUN.2017 23:04:32

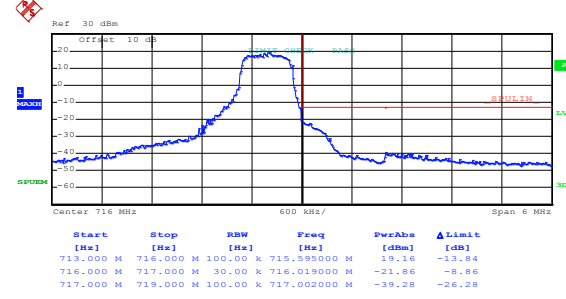
Highest channel

Test Mode: LTE band 12 (16QAM RB Size 3 &RB Offset 2)



Date: 26.JUN.2017 22:52:52

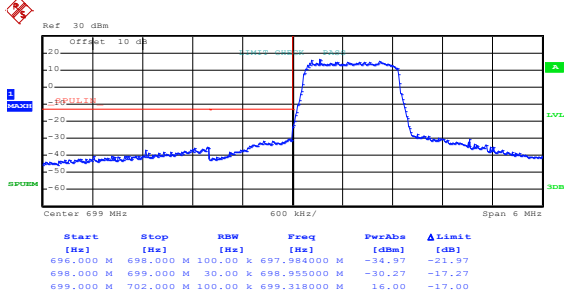
Lowest channel



Date: 26.JUN.2017 23:25:35

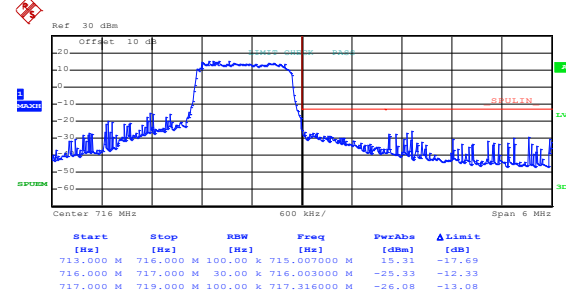
Highest channel

Test Mode: LTE band 12 (16QAM RB Size 6 &RB Offset 0)



Date: 26.JUN.2017 22:53:14

Lowest channel

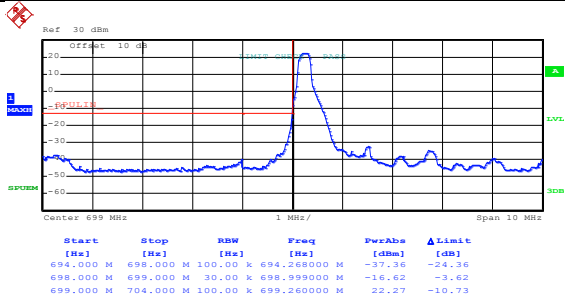


Date: 26.JUN.2017 23:04:50

Highest channel

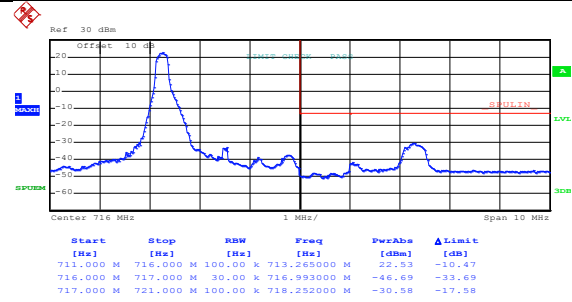
3MHz:

Test Mode: LTE band 12 (QPSK RB Size 1 &RB Offset 0)



Date: 26.JUN.2017 23:06:20

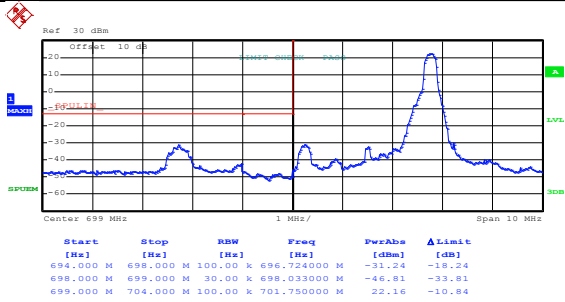
Lowest channel



Date: 26.JUN.2017 23:08:24

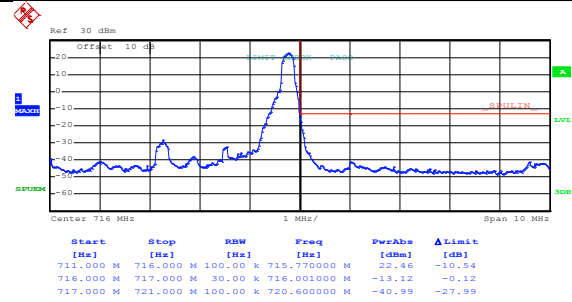
Highest channel

Test Mode: LTE band 12 (QPSK RB Size 1 &RB Offset 14)



Date: 26.JUN.2017 23:06:38

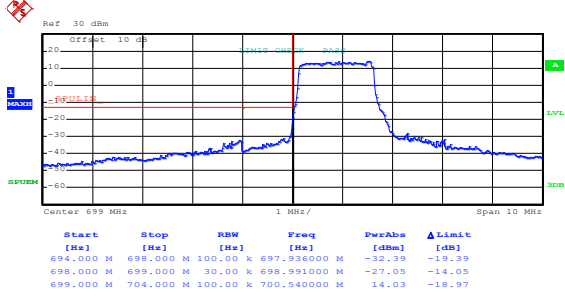
Lowest channel



Date: 26.JUN.2017 23:08:43

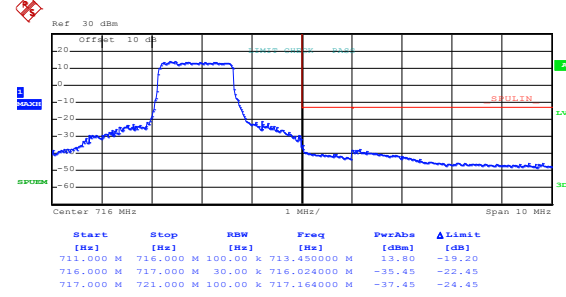
Highest channel

Test Mode: LTE band 12 (QPSK RB Size 8 &RB Offset 0)



Date: 26.JUN.2017 23:06:58

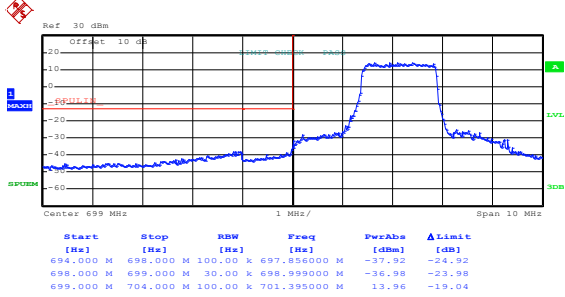
Lowest channel



Date: 26.JUN.2017 23:09:04

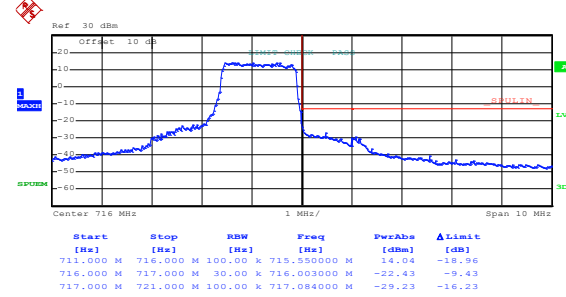
Highest channel

Test Mode: LTE band 12 (QPSK RB Size 8 &RB Offset 7)



Date: 26.JUN.2017 23:07:19

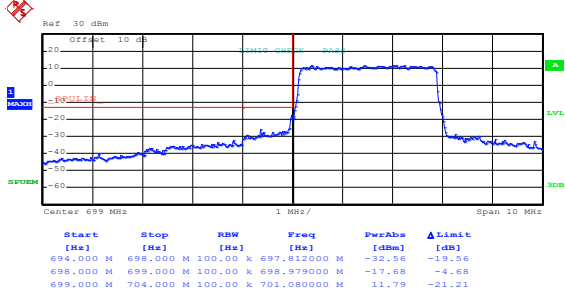
Lowest channel



Date: 26.JUN.2017 23:09:28

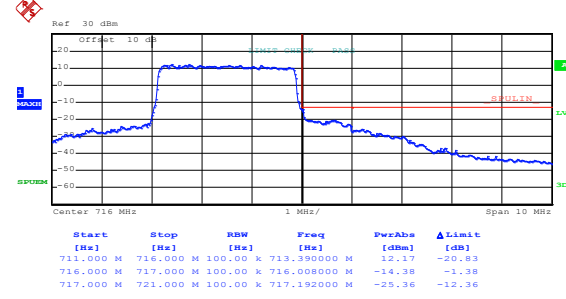
Highest channel

Test Mode: LTE band 12 (QPSK RB Size 15 &RB Offset 0)



Date: 26.JUN.2017 23:07:45

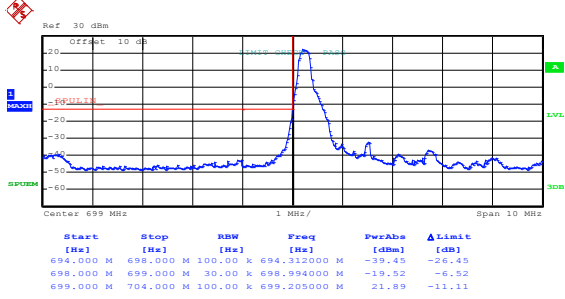
Lowest channel



Date: 26.JUN.2017 23:09:59

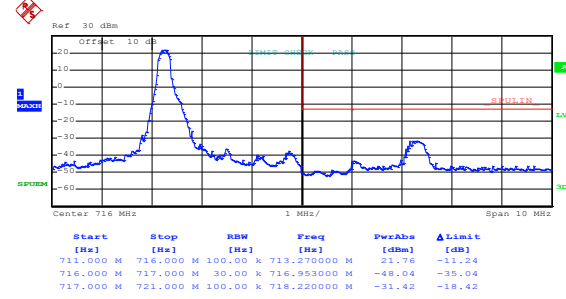
Highest channel

Test Mode: LTE band 12(16QAM RB Size 1 &RB Offset 0)



Date: 26.JUN.2017 23:06:27

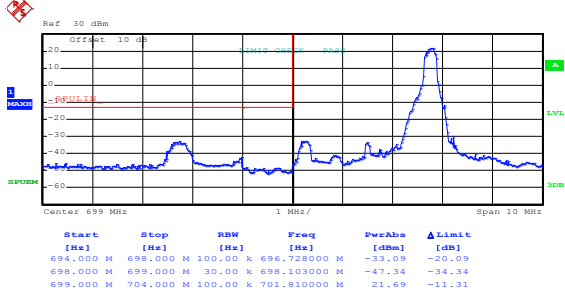
Lowest channel



Date: 26.JUN.2017 23:08:32

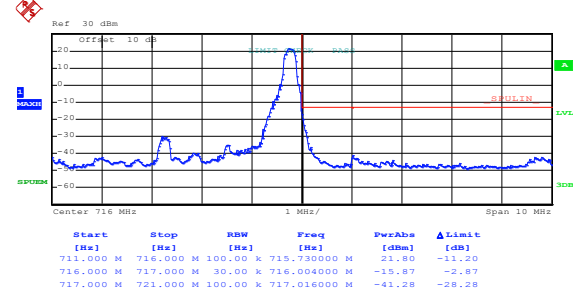
Highest channel

Test Mode: LTE band 12(16QAM RB Size 1 &RB Offset 14)



Date: 26.JUN.2017 23:06:46

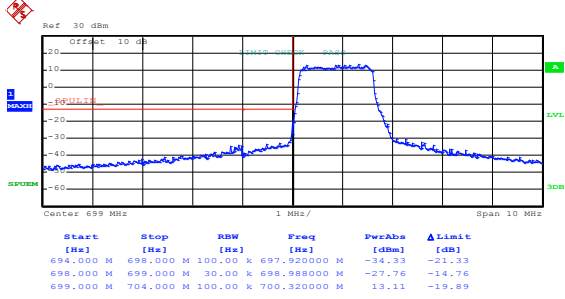
Lowest channel



Date: 26.JUN.2017 23:08:52

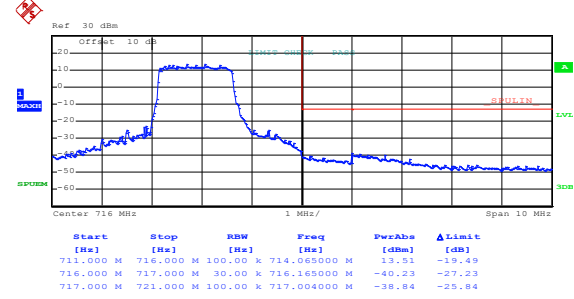
Highest channel

Test Mode: LTE band 12(16QAM RB Size 8 &RB Offset 0)



Date: 26.JUN.2017 23:07:08

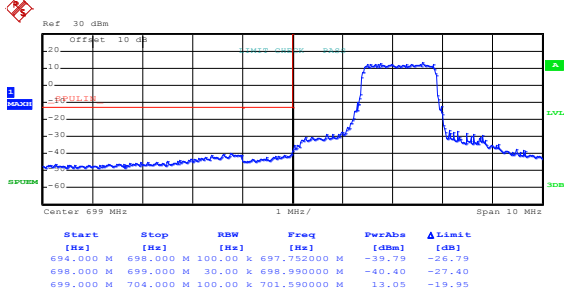
Lowest channel



Date: 26.JUN.2017 23:09:11

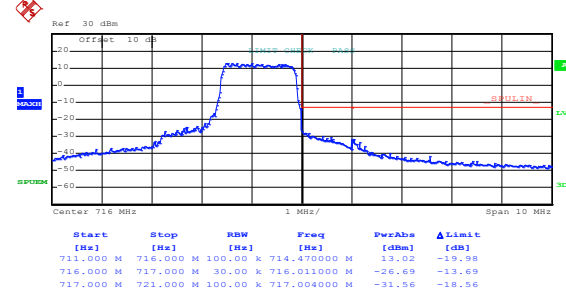
Highest channel

Test Mode: LTE band 12(16QAM RB Size 8 &RB Offset 7)



Date: 26.JUN.2017 23:07:27

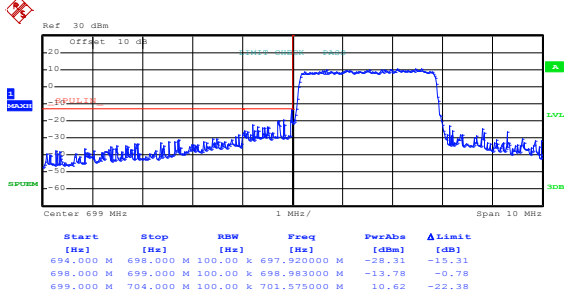
Lowest channel



Date: 26.JUN.2017 23:09:37

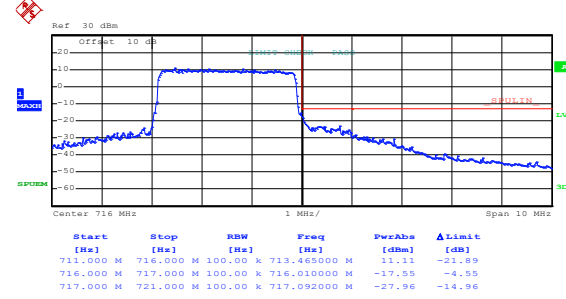
Highest channel

Test Mode: LTE band 12(16QAM RB Size 15 &RB Offset 0)



Date: 26.JUN.2017 23:07:55

Lowest channel



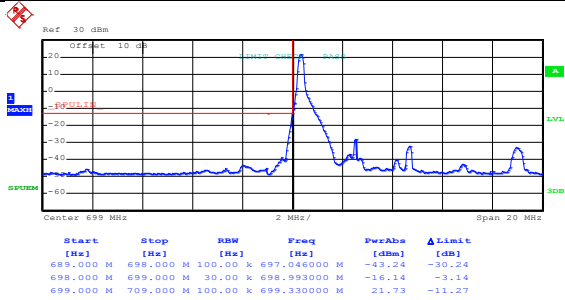
Date: 26.JUN.2017 23:10:08

Highest channel



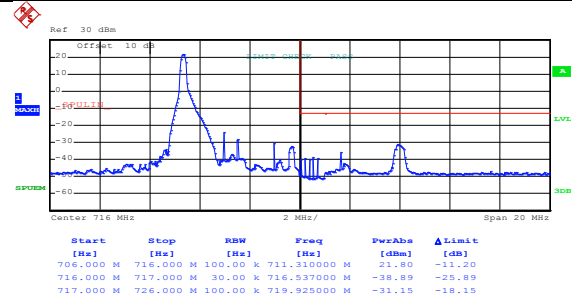
5MHz:

Test Mode: LTE band 12(QPSK RB Size 1 &RB Offset 0)



Date: 26.JUN.2017 23:11:21

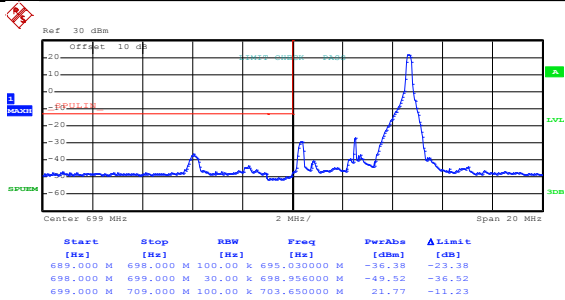
Lowest channel



Date: 26.JUN.2017 23:13:30

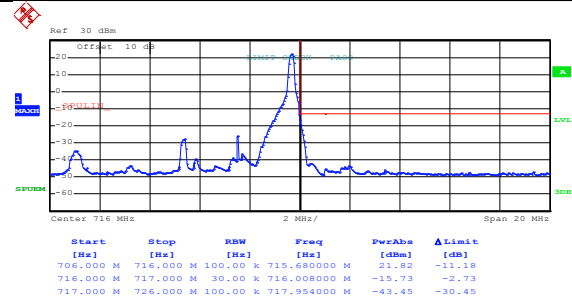
Highest channel

Test Mode: LTE band 12(QPSK RB Size 1 &RB Offset 24)



Date: 26.JUN.2017 23:11:41

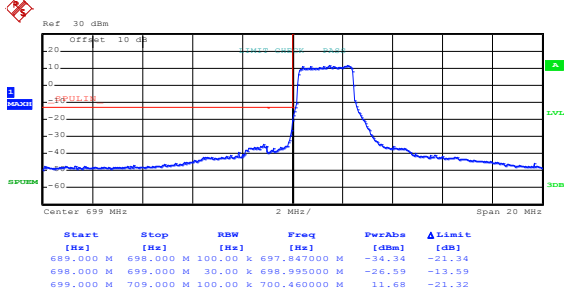
Lowest channel



Date: 26.JUN.2017 23:13:53

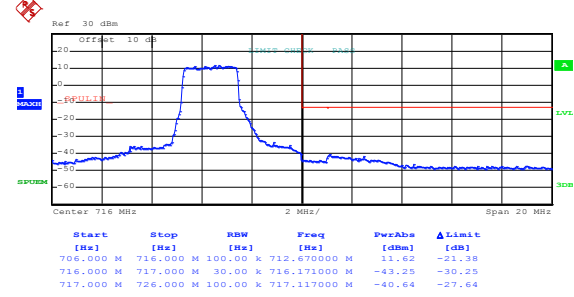
Highest channel

Test Mode: LTE band 12(QPSK RB Size 12 &RB Offset 0)



Date: 26.JUN.2017 23:12:03

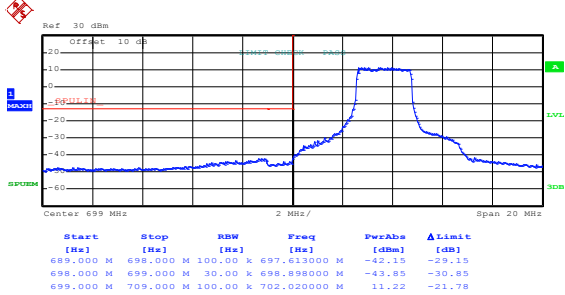
Lowest channel



Date: 26.JUN.2017 23:14:15

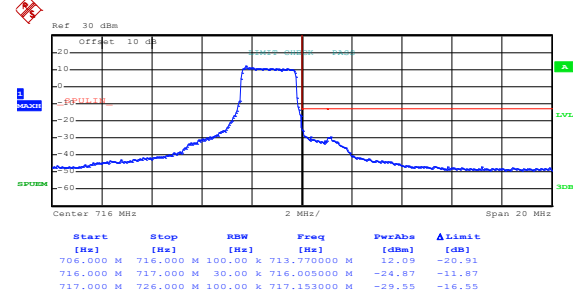
Highest channel

Test Mode: LTE band 12(QPSK RB Size 12 &RB Offset 11)



Date: 26.JUN.2017 23:12:23

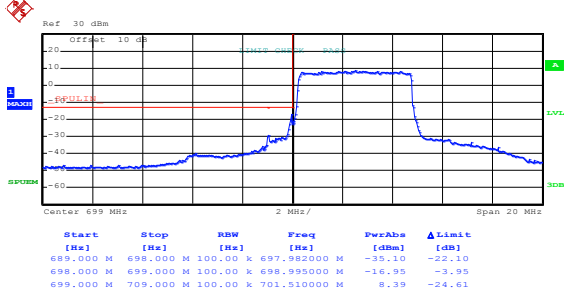
Lowest channel



Date: 26.JUN.2017 23:14:38

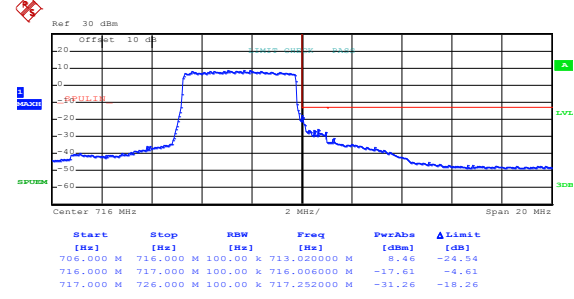
Highest channel

Test Mode: LTE band 12(QPSK RB Size 25 &RB Offset 0)



Date: 26.JUN.2017 23:12:57

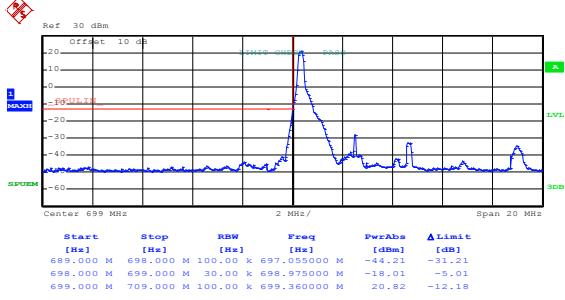
Lowest channel



Date: 26.JUN.2017 23:15:06

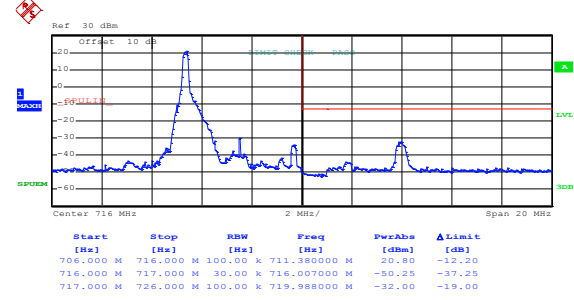
Highest channel

Test Mode: LTE band 12(16QAM RB Size 1 &RB Offset 0)



Date: 26.JUN.2017 23:11:30

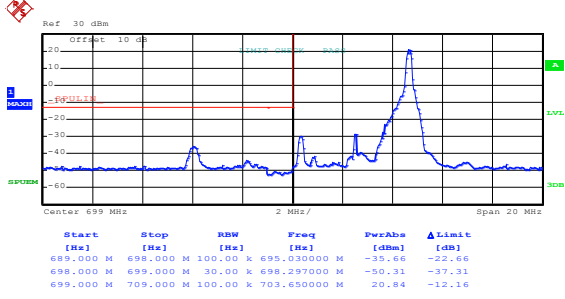
Lowest channel



Date: 26.JUN.2017 23:13:38

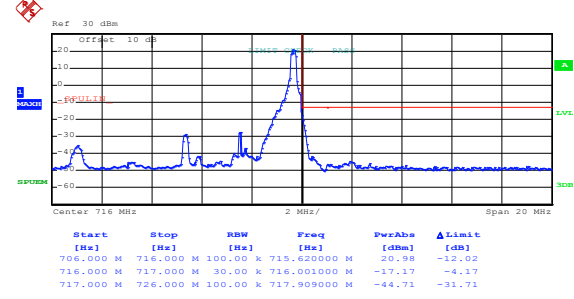
Highest channel

Test Mode: LTE band 12(16QAM RB Size 1 &RB Offset 24)



Date: 26.JUN.2017 23:11:51

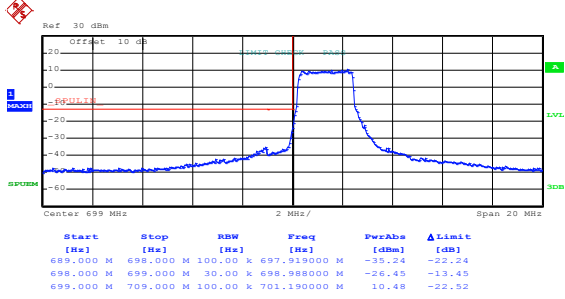
Lowest channel



Date: 26.JUN.2017 23:14:03

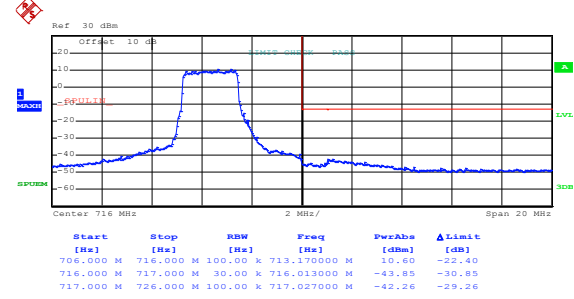
Highest channel

Test Mode: LTE band 12(16QAM RB Size 12 &RB Offset 0)



Date: 26.JUN.2017 23:12:11

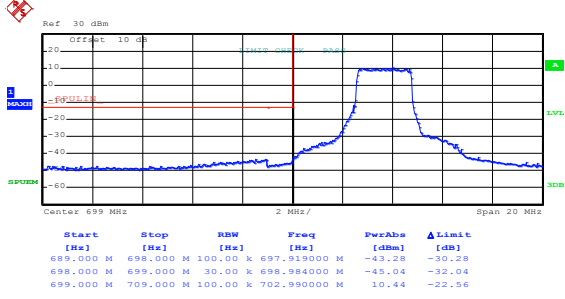
Lowest channel



Date: 26.JUN.2017 23:14:24

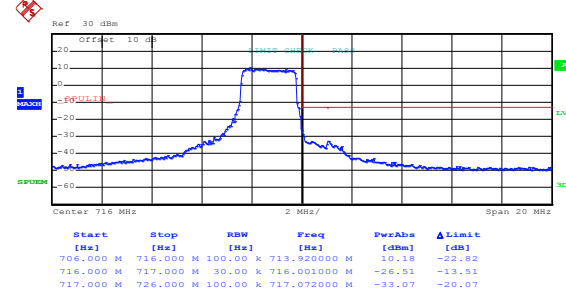
Highest channel

Test Mode: LTE band 12(16QAM RB Size 12 &RB Offset 11)



Date: 26.JUN.2017 23:12:34

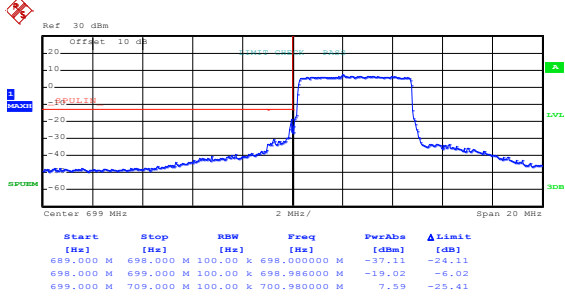
Lowest channel



Date: 26.JUN.2017 23:14:47

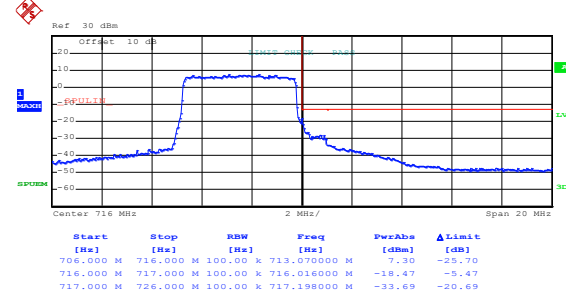
Highest channel

Test Mode: LTE band 12(16QAM RB Size 25 &RB Offset 0)



Date: 26.JUN.2017 23:13:05

Lowest channel

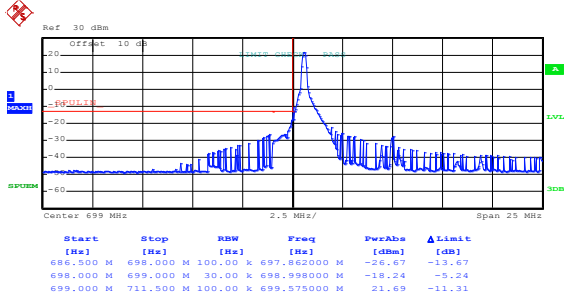


Date: 26.JUN.2017 23:15:16

Highest channel

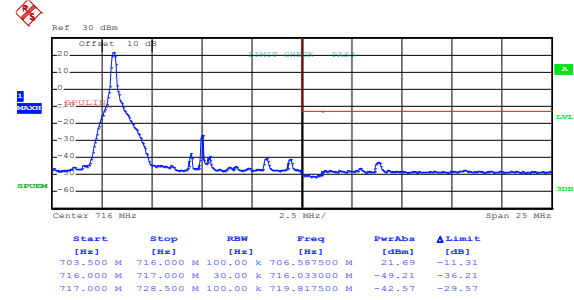
10MHz:

Test Mode: LTE band 12(QPSK RB Size 1 &RB Offset 0)



Date: 26.JUN.2017 23:16:18

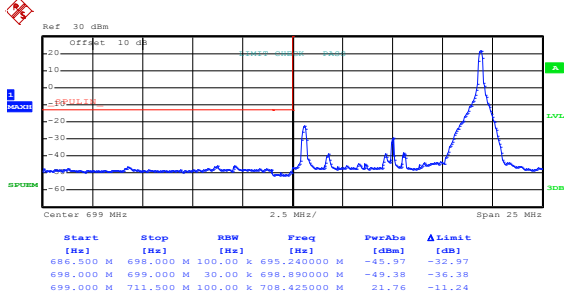
Lowest channel



Date: 26.JUN.2017 23:18:43

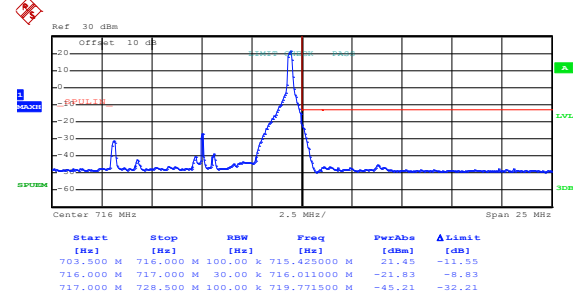
Highest channel

Test Mode: LTE band 12(QPSK RB Size 1 &RB Offset 49)



Date: 26.JUN.2017 23:16:39

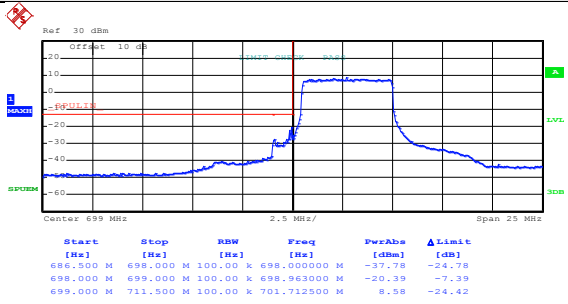
Lowest channel



Date: 26.JUN.2017 23:19:05

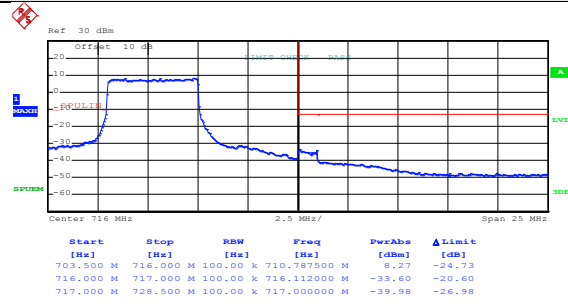
Highest channel

Test Mode: LTE band 12(QPSK RB Size 25 &RB Offset 0)



Date: 26.JUN.2017 23:17:06

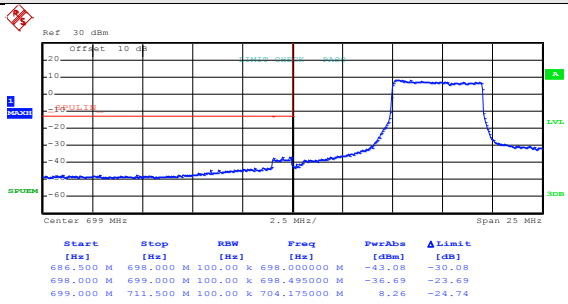
Lowest channel



Date: 26.JUN.2017 23:19:33

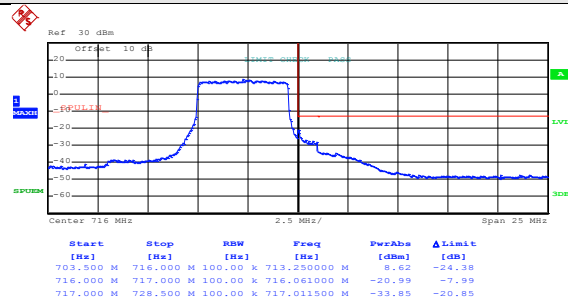
Highest channel

Test Mode: LTE band 12(QPSK RB Size 25 &RB Offset 24)



Date: 26.JUN.2017 23:17:28

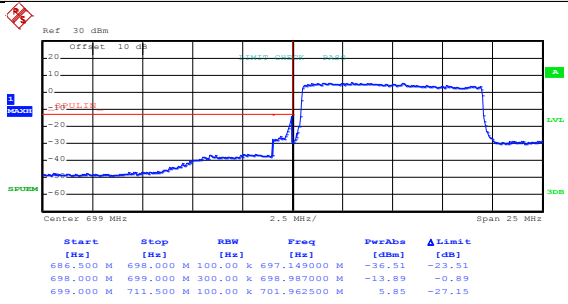
Lowest channel



Date: 26.JUN.2017 23:19:54

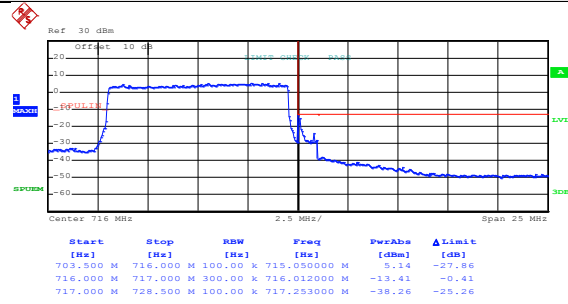
Highest channel

Test Mode: LTE band 12(QPSK RB Size 50 &RB Offset 0)



Date: 26.JUN.2017 23:17:56

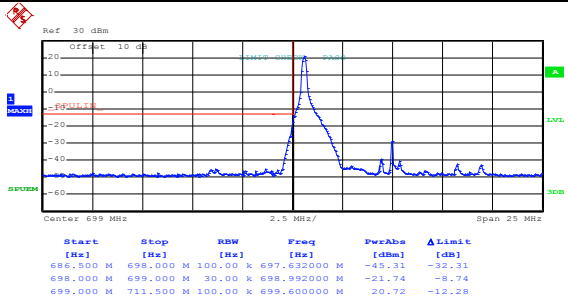
Lowest channel



Date: 26.JUN.2017 23:20:33

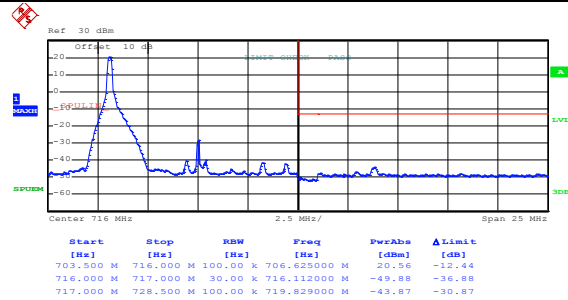
Highest channel

Test Mode: LTE band 12(16QAM RB Size 1 &RB Offset 0)



Date: 26.JUN.2017 23:16:28

Lowest channel

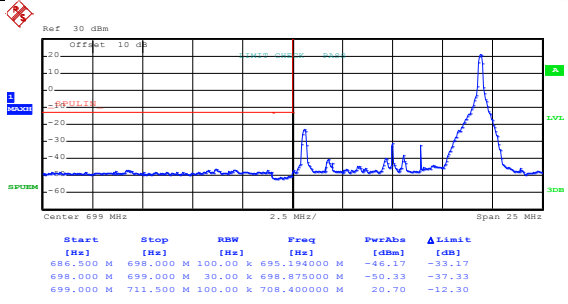


Date: 26.JUN.2017 23:18:52

Highest channel

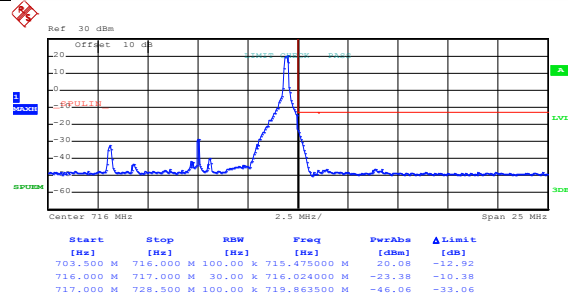


Test Mode: LTE band 12(16QAM RB Size 1 &RB Offset 49)



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

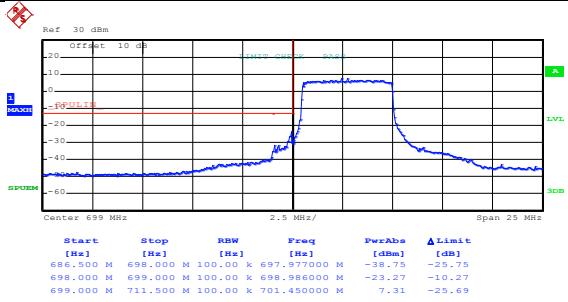
Lowest channel



Date: 26.JUN.2017 23:19:14

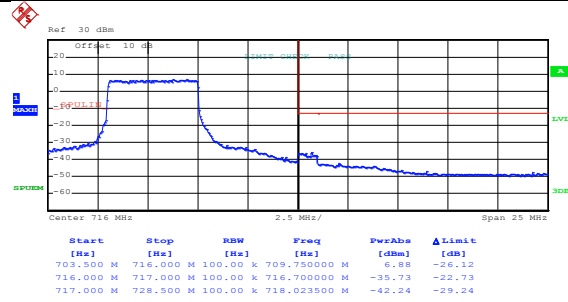
Highest channel

Test Mode: LTE band 12(16QAM RB Size 25 &RB Offset 0)



Date: 26.JUN.2017 23:17:16

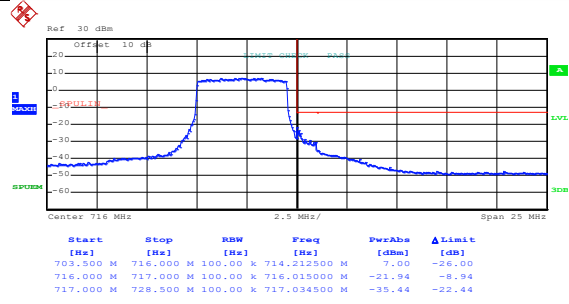
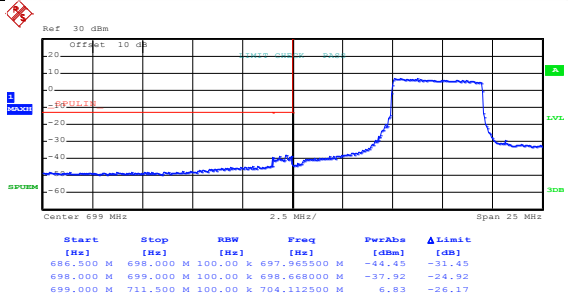
Lowest channel



Date: 26.JUN.2017 23:19:42

Highest channel

Test Mode: LTE band 12(16QAM RB Size 25 &RB Offset 24)



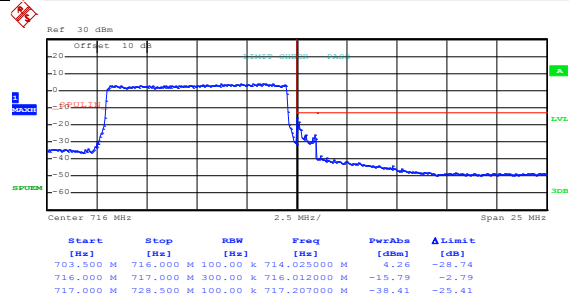
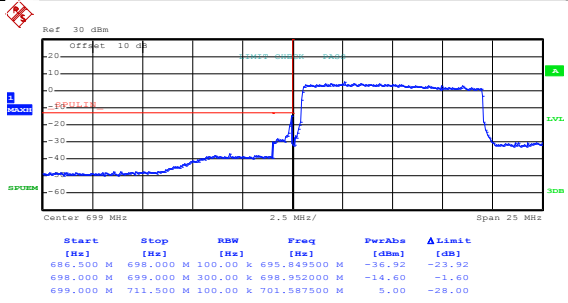
Date: 26.JUN.2017 23:17:37

Date: 26.JUN.2017 23:20:07

Lowest channel

Highest channel

Test Mode: LTE band 12 (16QAM RB Size 50 &RB Offset 0)



Date: 26.JUN.2017 23:18:03

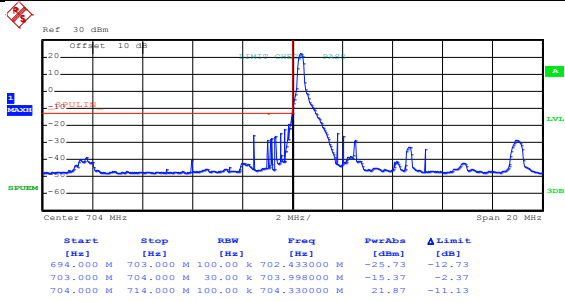
Date: 26.JUN.2017 23:20:41

Lowest channel

Highest channel

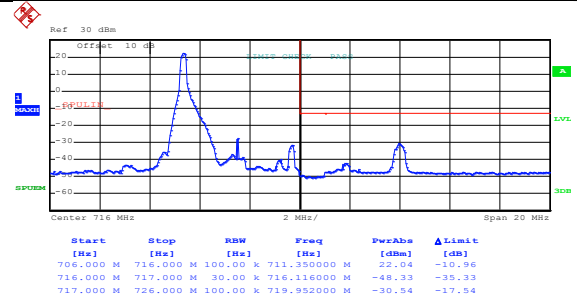
## LTE band 17 part:5MHz:

Test Mode: LTE band 17(QPSK RB Size 1 & RB Offset 0)



Date: 26.JUN.2017 23:37:25

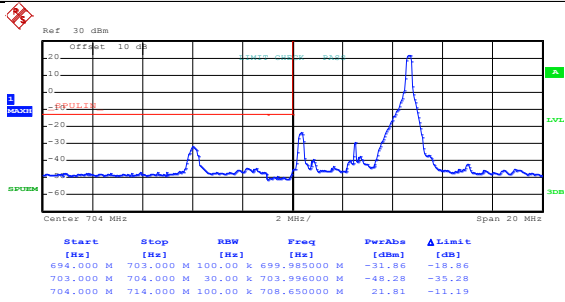
Lowest channel



Date: 26.JUN.2017 23:40:29

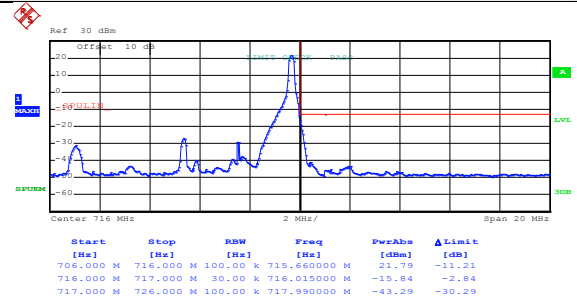
Highest channel

Test Mode: LTE band 17(QPSK RB Size 1 & RB Offset 24)



Date: 26.JUN.2017 23:37:47

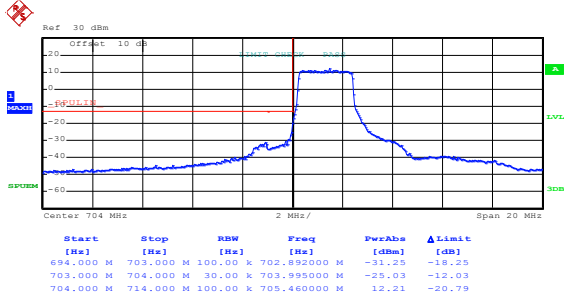
Lowest channel



Date: 26.JUN.2017 23:40:47

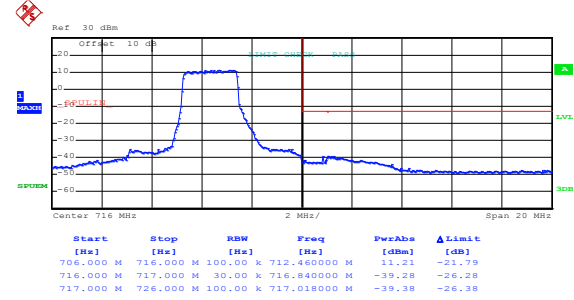
Highest channel

Test Mode: LTE band 17(QPSK RB Size 12& RB Offset 0)



Date: 26.JUN.2017 23:38:07

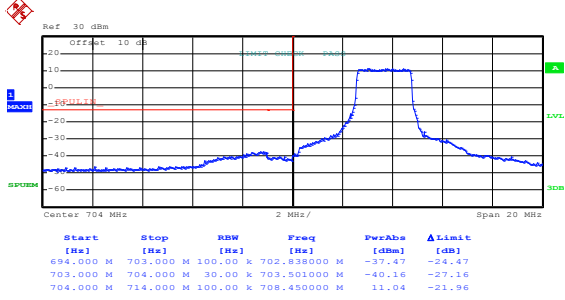
Lowest channel



Date: 26.JUN.2017 23:41:07

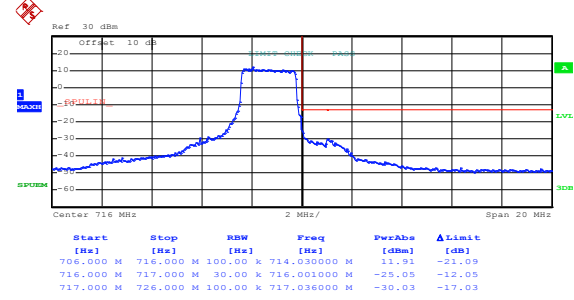
Highest channel

Test Mode: LTE band 17(QPSK RB Size 12& RB Offset 11)



Date: 26.JUN.2017 23:38:28

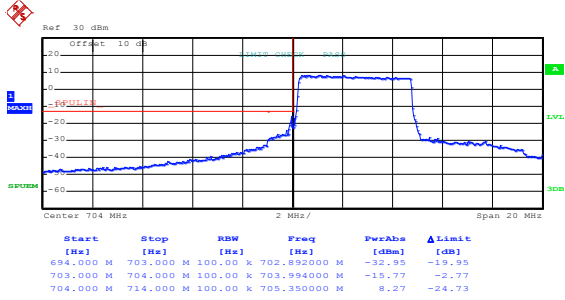
Lowest channel



Date: 26.JUN.2017 23:42:50

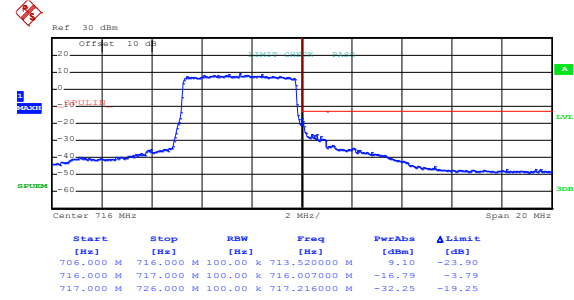
Highest channel

Test Mode: LTE band 17(QPSK RB Size 25& RB Offset 0)



Date: 26.JUN.2017 23:38:56

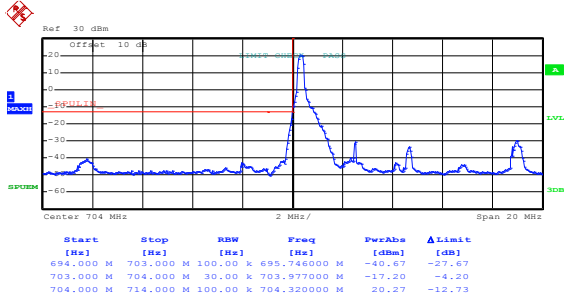
Lowest channel



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

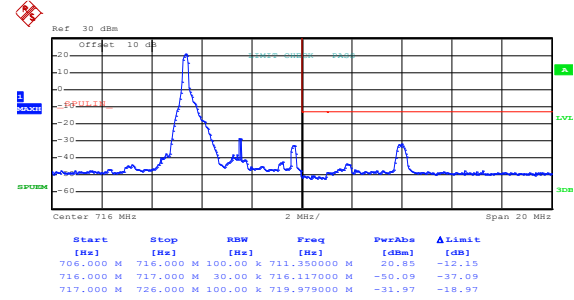
Highest channel

Test Mode: LTE band 17(16QAM RB Size 1& RB Offset 0)



Date: 26.JUN.2017 23:37:33

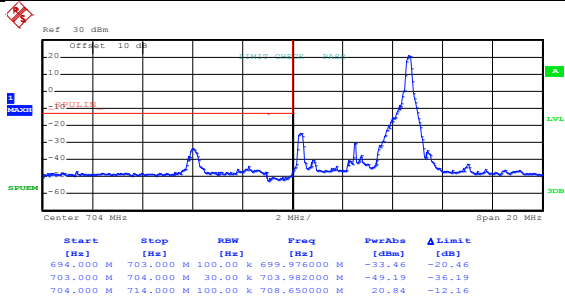
Lowest channel



Date: 26.JUN.2017 23:40:36

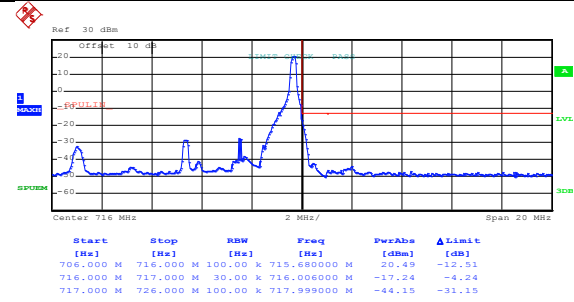
Highest channel

Test Mode: LTE band 17(16QAM RB Size 1 & RB Offset 24)



Date: 26.JUN.2017 23:37:56

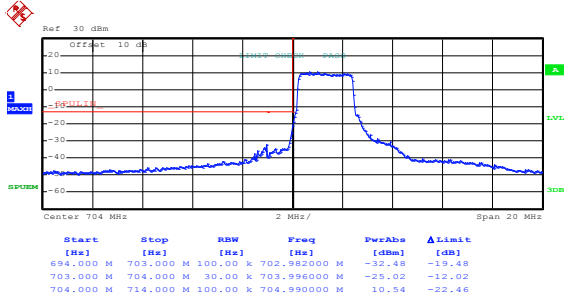
Lowest channel



Date: 26.JUN.2017 23:40:56

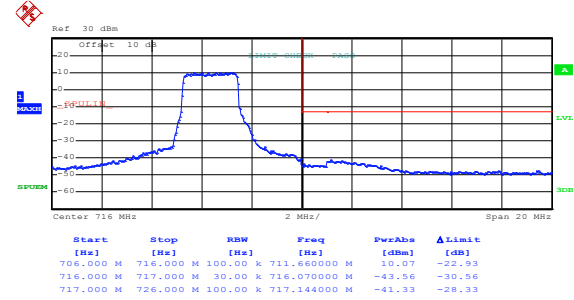
Highest channel

Test Mode: LTE band 17(16QAM RB Size 12 & RB Offset 0)



Date: 26.JUN.2017 23:38:15

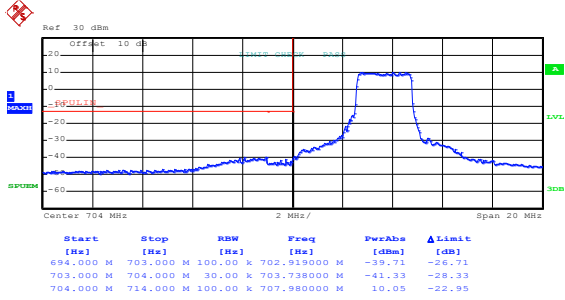
Lowest channel



Date: 26.JUN.2017 23:41:16

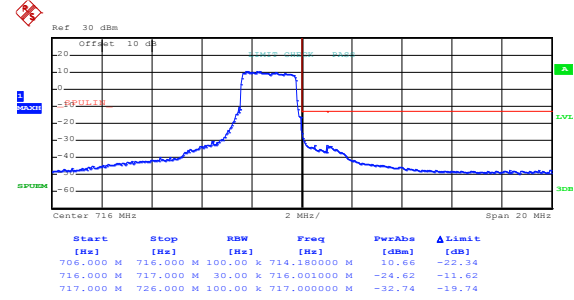
Highest channel

Test Mode: LTE band 17(16QAM RB Size 12& RB Offset 11)



Date: 26.JUN.2017 23:38:37

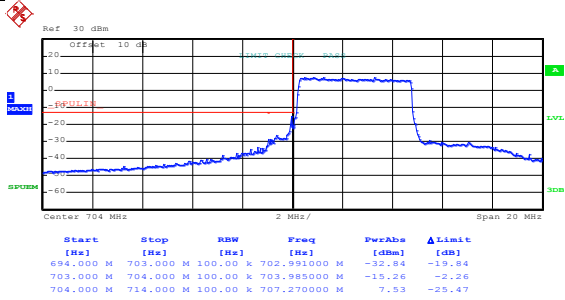
Lowest channel



Date: 26.JUN.2017 23:43:01

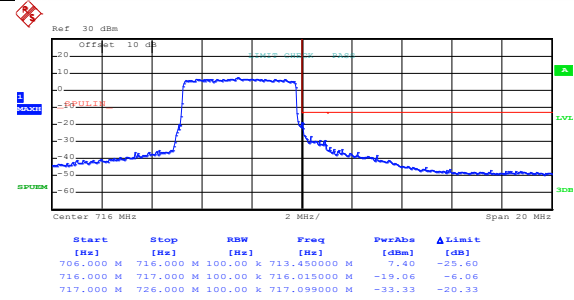
Highest channel

Test Mode: LTE band 17(16QAM RB Size 25& RB Offset 0)



Date: 26.JUN.2017 23:39:08

Lowest channel

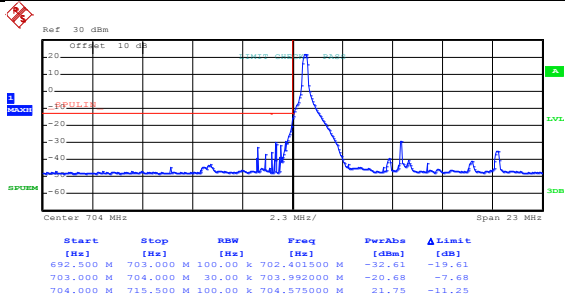


Date: 26.JUN.2017 23:43:28

Highest channel

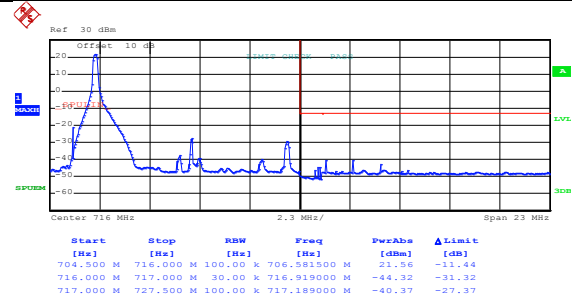
10MHz:

Test Mode: LTE band 17(QPSK RB Size 1& RB Offset 0)



Date: 26.JUN.2017 23:44:37

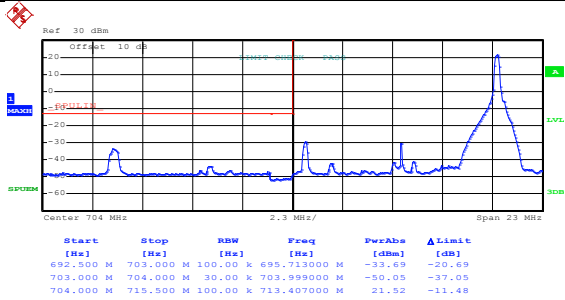
Lowest channel



Date: 26.JUN.2017 23:50:07

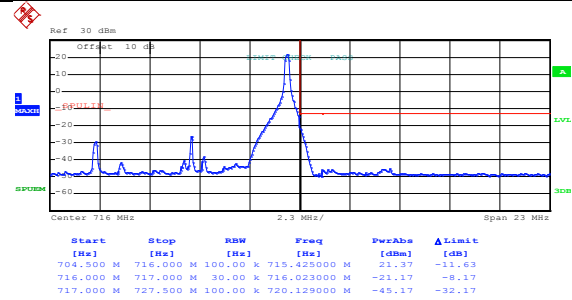
Highest channel

Test Mode: LTE band 17(QPSK RB Size 1& RB Offset 49)



Date: 26.JUN.2017 23:44:57

Lowest channel

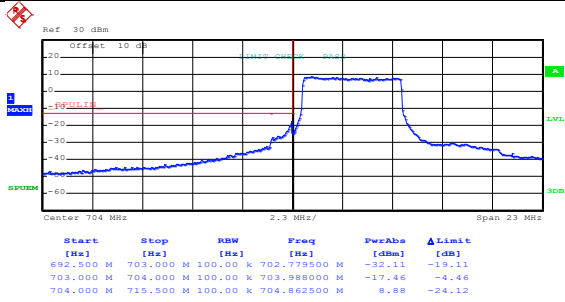


Date: 26.JUN.2017 23:50:26

Highest channel

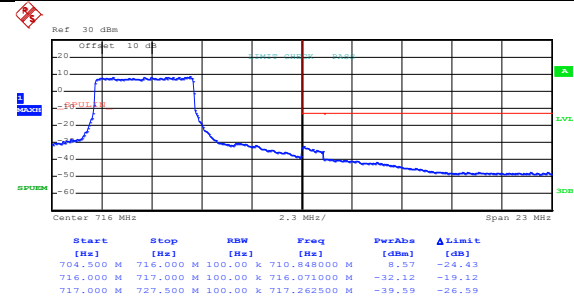


Test Mode: LTE band 17(QPSK RB Size 25& RB Offset 0)



Date: 26.JUN.2017 23:46:13

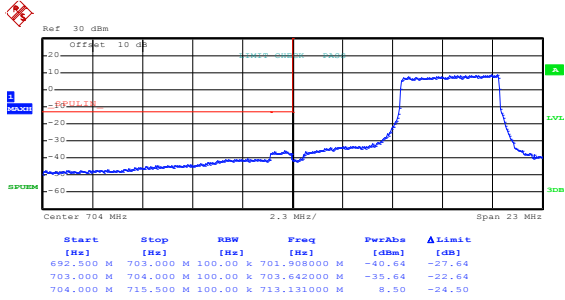
Lowest channel



Date: 26.JUN.2017 23:51:04

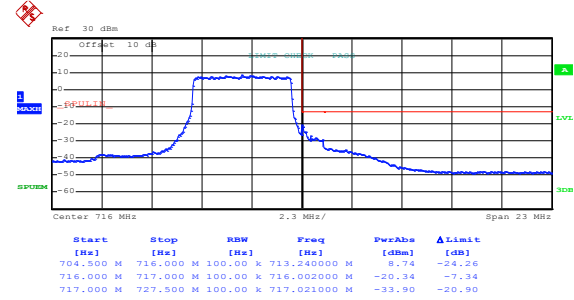
Highest channel

Test Mode: LTE band 17(QPSK RB Size 25& RB Offset 24)



Date: 26.JUN.2017 23:46:37

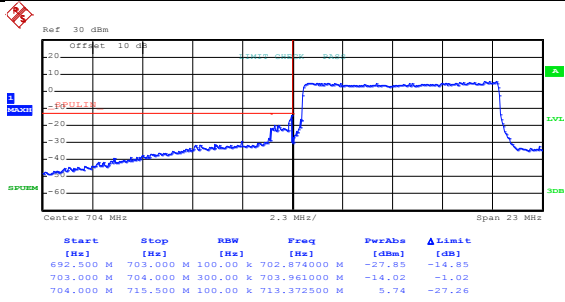
Lowest channel



Date: 26.JUN.2017 23:51:24

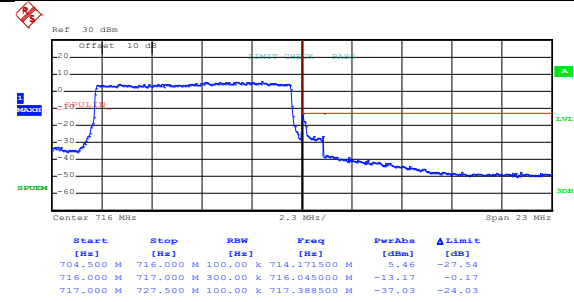
Highest channel

Test Mode: LTE band 17(QPSK RB Size 50& RB Offset 0)



Date: 26.JUN.2017 23:48:44

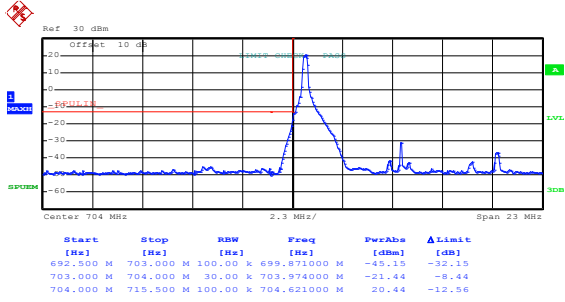
Lowest channel



Date: 26.JUN.2017 23:52:05

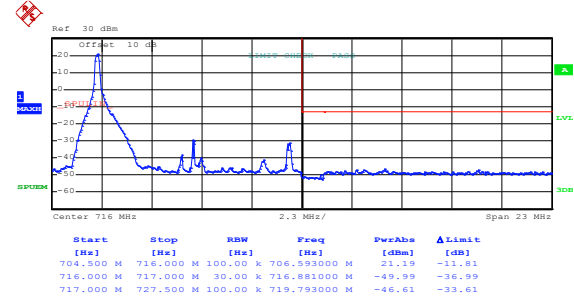
Highest channel

Test Mode: LTE band 17(16QAM RB Size 1& RB Offset 0)



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

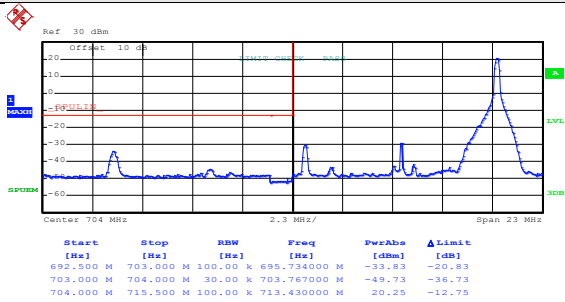
Lowest channel



Date: 26.JUN.2017 23:50:16

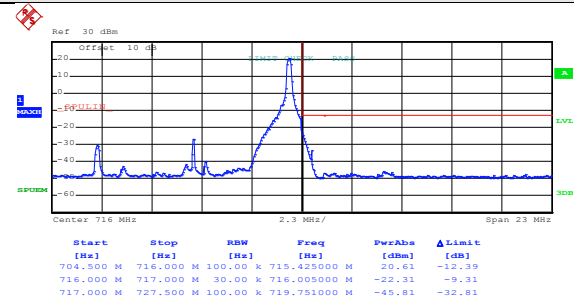
Highest channel

Test Mode: LTE band 17(16QAM RB Size 1& RB Offset 49)



Date: 26.JUN.2017 23:45:06

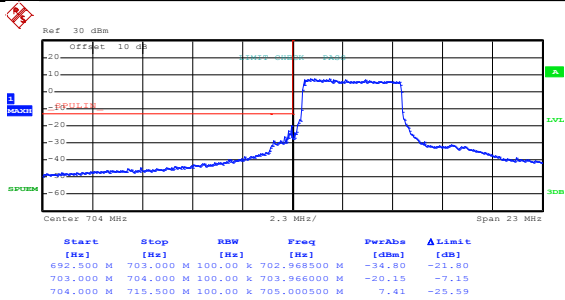
Lowest channel



Date: 26.JUN.2017 23:50:35

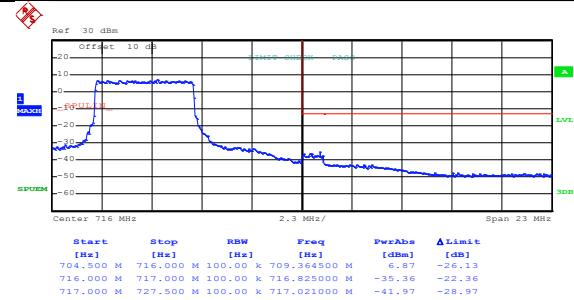
Highest channel

Test Mode: LTE band 17(16QAM RB Size 25& RB Offset 0)



Date: 26.JUN.2017 23:46:22

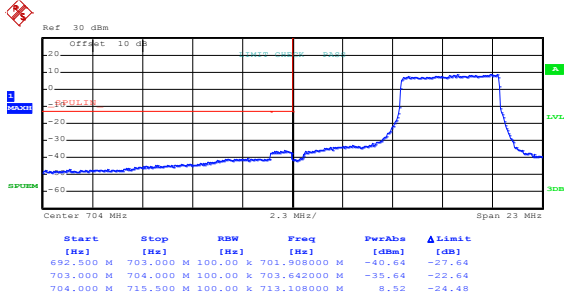
Lowest channel



Date: 26.JUN.2017 23:51:11

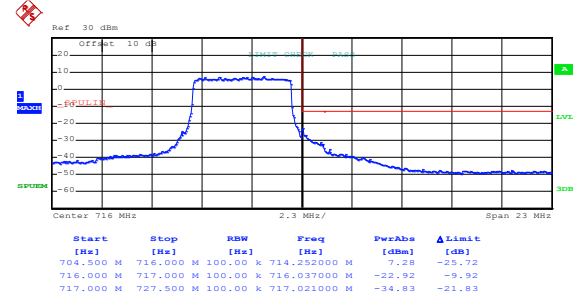
Highest channel

**Test Mode:** LTE band 17(16QAM RB Size 25& RB Offset 24)



Date: 26.JUN.2017 23:47:09

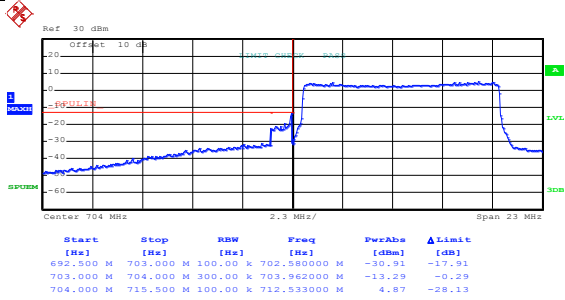
Lowest channel



Date: 26.JUN.2017 23:51:37

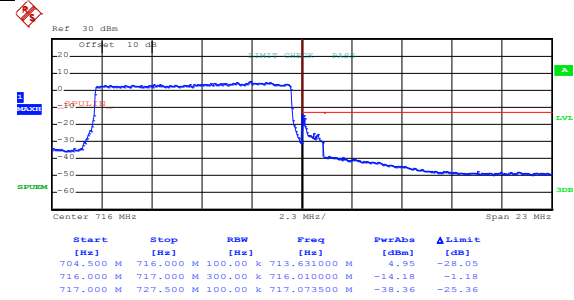
Highest channel

**Test Mode:** LTE band 17(16QAMRB Size 50& RB Offset 0)



Date: 26.JUN.2017 23:49:00

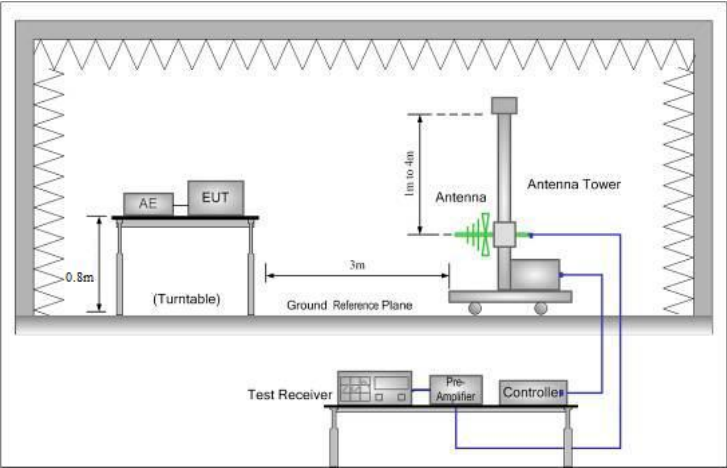
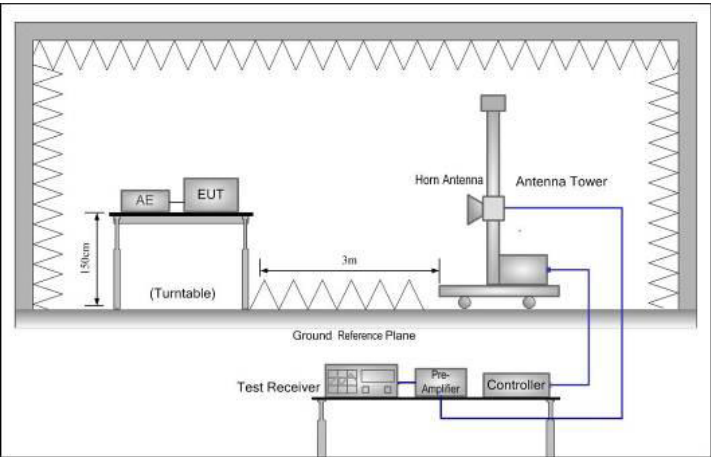
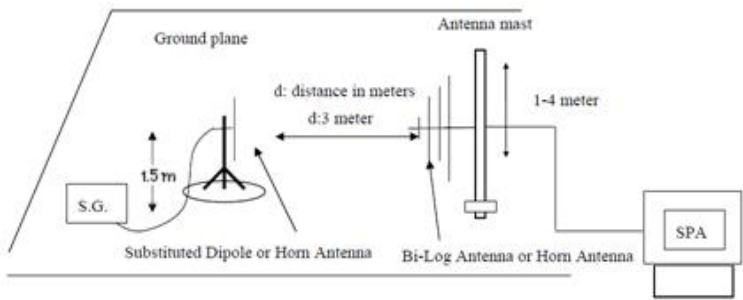
Lowest channel



Date: 26.JUN.2017 23:52:17

Highest channel

## 6.10 ERP, EIRP Measurement

Test Requirement:	FCC part 24.232 (c), part 27.50(c), part 27.50(d), part 27.50 (h), part 22.913 (a)
Test Method:	FCC part 2.1046
Limit:	LTE Band 2: 2W EIRP LTE Band 4: 1W EIRP LTE Band 5: 7W EIRP LTE Band 7: 2W EIRP LTE Band 12: 3W ERP LTE Band 17: 3W EIRP
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>  <p>Substituted method:</p> 

Test Procedure:

1. The EUT was placed on an non-conductive turntable using a non-

	<p>conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</p> <ol style="list-style-type: none"> <li>2. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.</li> <li>3. ERP in frequency band below 1GHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:  <math display="block">\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}</math> </li> <li>4. EIRP in frequency band above 1GHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:  <math display="block">\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}</math> </li> <li>5. The worse case was relating to the conducted output power.</li> </ol>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):

LTE band 2 part

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
1850.70	18607	QPSK	1.4	H	V	22.95	33.00	Pass
					H	14.79		
		16QAM			V	22.85		
					H	14.45		
3MHz								
1851.5	18615	QPSK	3	H	V	22.78	33.00	Pass
					H	15.76		
		16QAM			V	21.86		
					H	13.23		
5MHz								
1852.5	18625	QPSK	5	H	V	22.67	33.00	Pass
					H	14.43		
		16QAM			V	22.54		
					H	13.22		
10MHz								
1855	18615	QPSK	10	H	V	22.32	33.00	Pass
					H	14.79		
		16QAM			V	22.85		
					H	14.45		
15MHz								
1857.5	18675	QPSK	15	H	V	21.25	33.00	Pass
					H	14.79		
		16QAM			V	21.68		
					H	14.45		
20MHz								
1860	18700	QPSK	20	H	V	21.77	33.00	Pass
					H	13.90		
		16QAM			V	22.38		
					H	13.29		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
1880	18607	QPSK	1.4	H	V	22.54	33.00	Pass
					H	14.12		
		16QAM			V	22.74		
					H	14.32		
3MHz								
1880	18607	QPSK	3	H	V	22.21	33.00	Pass
					H	13.89		
		16QAM			V	22.35		
					H	14.12		
5MHz								
1880	18607	QPSK	5	H	V	21.98	33.00	Pass
					H	13.76		
		16QAM			V	21.76		
					H	13.21		
10MHz								
1880	18607	QPSK	10	H	V	21.65	33.00	Pass
					H	13.79		
		16QAM			V	21.25		
					H	13.60		
15MHz								
1880	18607	QPSK	15	H	V	21.53	33.00	Pass
					H	13.22		
		16QAM			V	21.80		
					H	13.27		
20MHz								
1880	18607	QPSK	20	H	V	21.65	33.00	Pass
					H	13.98		
		16QAM			V	21.46		
					H	13.21		



**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
1909.3	19193	QPSK	1.4	H	V	21.26	33.00	Pass
					H	16.34		
		16QAM			V	22.27		
					H	15.24		
3MHz								
1908.50	19185	QPSK	3	H	V	21.26	33.00	Pass
					H	17.34		
		16QAM			V	21.32		
					H	15.24		
5MHz								
1907.5	19175	QPSK	5	H	V	21.12	33.00	Pass
					H	15.67		
		16QAM			V	21.23		
					H	15.79		
10MHz								
1905	19150	QPSK	10	H	V	21.41	33.00	Pass
					H	14.32		
		16QAM			V	21.01		
					H	13.98		
15MHz								
1902.5	19125	QPSK	15	H	V	21.32	33.00	Pass
					H	13.78		
		16QAM			V	21.09		
					H	13.21		
20MHz								
1900	19100	QPSK	20	H	V	21.20	33.00	Pass
					H	13.27		
		16QAM			V	21.24		
					H	13.23		

LTE band 4 part

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
1710.7	19957	QPSK	1.4	H	V	20.45	30.00	Pass
					H	16.89		
		16QAM			V	21.22		
					H	16.80		
3MHz								
1711.5	19965	QPSK	3	H	V	20.12	30.00	Pass
					H	15.67		
		16QAM			V	20.11		
					H	16.23		
5MHz								
1712.5	19975	QPSK	5	H	V	19.78	30.00	Pass
					H	14.65		
		16QAM			V	19.56		
					H	14.32		
10MHz								
1715	20000	QPSK	10	H	V	19.54	30.00	Pass
					H	14.32		
		16QAM			V	19.78		
					H	14.32		
15MHz								
1717.5	20025	QPSK	15	H	V	19.56	30.00	Pass
					H	13.23		
		16QAM			V	19.34		
					H	14.45		
20MHz								
1720	20050	QPSK	20	H	V	19.21	30.00	Pass
					H	13.28		
		16QAM			V	19.43		
					H	12.65		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
1732.5	20175	QPSK	1.4	H	V	21.83	30.00	Pass
					H	16.78		
		16QAM			V	21.77		
					H	16.46		
3MHz								
1732.5	20175	QPSK	3	H	V	20.88	30.00	Pass
					H	16.70		
		16QAM			V	20.34		
					H	16.46		
5MHz								
1732.5	20175	QPSK	5	H	V	21.34	30.00	Pass
					H	15.78		
		16QAM			V	21.47		
					H	15.98		
10MHz								
1732.5	20175	QPSK	10	H	V	21.32	30.00	Pass
					H	15.21		
		16QAM			V	21.23		
					H	15.32		
15MHz								
1732.5	20175	QPSK	15	H	V	20.98	30.00	Pass
					H	14.54		
		16QAM			V	20.56		
					H	15.65		
20MHz								
1732.5	20175	QPSK	20	H	V	21.35	30.00	Pass
					H	14.79		
		16QAM			V	21.67		
					H	14.45		

**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
1754.3	20393	QPSK	1.4	H	V	21.32	30.00	Pass
					H	16.21		
		16QAM			V	21.47		
					H	16.98		
3MHz								
1753.5	20385	QPSK	3	H	V	21.02	30.00	Pass
					H	15.98		
		16QAM			V	21.52		
					H	15.62		
5MHz								
1752.5	20375	QPSK	5	H	V	21.55	30.00	Pass
					H	15.68		
		16QAM			V	21.69		
					H	15.32		
10MHz								
1750	20350	QPSK	10	H	V	21.47	30.00	Pass
					H	15.23		
		16QAM			V	21.14		
					H	15.36		
15MHz								
1747.5	20325	QPSK	15	H	V	21.02	30.00	Pass
					H	15.12		
		16QAM			V	21.32		
					H	15.56		
20MHz								
1745	20300	QPSK	20	H	V	20.26	30.00	Pass
					H	14.47		
		16QAM			V	20.69		
					H	15.39		

LTE band 5 part

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
824.7	20407	QPSK	1.4	H	V	24.22	38.45	Pass
					H	16.32		
		16QAM			V	24.18		
					H	16.29		
3MHz								
825.5	20415	QPSK	3	H	V	24.20	38.45	Pass
					H	16.98		
		16QAM			V	24.12		
					H	16.11		
5MHz								
826.5	20425	QPSK	5	H	V	23.36	38.45	Pass
					H	15.63		
		16QAM			V	23.21		
					H	15.14		
10MHz								
829	20450	QPSK	10	H	V	23.14	38.45	Pass
					H	15.25		
		16QAM			V	23.18		
					H	15.96		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
836.5	20525	QPSK	1.4	H	V	24.21	38.45	Pass
					H	16.32		
		16QAM			V	23.98		
					H	16.25		
3MHz								
836.5	20525	QPSK	3	H	V	24.12	38.45	Pass
					H	16.32		
		16QAM			V	23.57		
					H	15.69		
5MHz								
836.5	20525	QPSK	5	H	V	23.26	38.45	Pass
					H	16.21		
		16QAM			V	23.25		
					H	15.20		
10MHz								
836.5	20525	QPSK	10	H	V	23.33	38.45	Pass
					H	16.15		
		16QAM			V	23.18		
					H	15.02		

**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
848.3	20643	QPSK	1.4	H	V	23.21	38.45	Pass
					H	14.79		
		16QAM			V	23.65		
					H	14.58		
3MHz								
847.5	20635	QPSK	3	H	V	22.95	38.45	Pass
					H	14.12		
		16QAM			V	23.22		
					H	14.45		
5MHz								
846.5	20625	QPSK	5	H	V	22.36	38.45	Pass
					H	14.22		
		16QAM			V	22.63		
					H	14.02		
10MHz								
844	20600250	QPSK	10	H	V	22.25	38.45	Pass
					H	14.47		
		16QAM			V	22.15		
					H	13.95		

LTE band 7 part

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
5MHz								
2502.5	20775	QPSK	5	H	V	19.26	33.00	Pass
					H	14.79		
		16QAM			V	19.58		
					H	14.45		
10MHz								
2505	20800	QPSK	10	H	V	19.03	33.00	Pass
					H	13.65		
		16QAM			V	19.14		
					H	13.26		
15MHz								
2507.5	20825	QPSK	15	H	V	19.12	33.00	Pass
					H	13.20		
		16QAM			V	18.98		
					H	13.12		
20MHz								
2510	20850	QPSK	20	H	V	19.26	33.00	Pass
					H	13.01		
		16QAM			V	19.02		
					H	12.99		



**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
5MHz								
2535	21100	QPSK	5	H	V	19.68	33.00	Pass
					H	13.21		
		16QAM			V	19.63		
					H	14.25		
10MHz								
2535	21100	QPSK	10	H	V	19.66	33.00	Pass
					H	13.29		
		16QAM			V	19.22		
					H	13.28		
15MHz								
2535	21100	QPSK	15	H	V	18.85	33.00	Pass
					H	13.02		
		16QAM			V	18.96		
					H	13.02		
20MHz								
2535	21100	QPSK	20	H	V	18.51	33.00	Pass
					H	13.36		
		16QAM			V	18.04		
					H	13.23		

**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
5MHz								
2567.5	21425	QPSK	5	H	V	19.82	33.00	Pass
					H	14.69		
		16QAM			V	19.58		
					H	14.22		
10MHz								
2565	21400	QPSK	10	H	V	19.26	33.00	Pass
					H	13.20		
		16QAM			V	19.87		
					H	14.15		
15MHz								
2562.5	21375	QPSK	15	H	V	19.63	33.00	Pass
					H	13.54		
		16QAM			V	19.03		
					H	13.22		
20MHz								
2565	21350	QPSK	20	H	V	19.21	33.00	Pass
					H	13.22		
		16QAM			V	18.89		
					H	13.01		

LTE band 12 part

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
699.7	23017	QPSK	1.4	H	V	21.65	34.77	Pass
					H	17.25		
		16QAM			V	21.47		
					H	17.69		
3MHz								
700.5	23025	QPSK	3	H	V	21.63	34.77	Pass
					H	17.01		
		16QAM			V	21.32		
					H	17.04		
5MHz								
701.5	23035	QPSK	5	H	V	21.55	34.77	Pass
					H	17.10		
		16QAM			V	21.23		
					H	16.99		
10MHz								
704	23060	QPSK	10	H	V	21.48	34.77	Pass
					H	16.56		
		16QAM			V	21.36		
					H	16.41		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
707.5	23095	QPSK	1.4	H	V	21.26	34.77	Pass
					H	16.95		
		16QAM			V	21.20		
					H	16.14		
3MHz								
707.5	23095	QPSK	3	H	V	21.01	34.77	Pass
					H	15.62		
		16QAM			V	21.03		
					H	15.23		
5MHz								
707.5	23095	QPSK	5	H	V	21.22	34.77	Pass
					H	15.33		
		16QAM			V	20.93		
					H	15.58		
10MHz								
707.5	23095	QPSK	10	H	V	21.63	34.77	Pass
					H	15.47		
		16QAM			V	20.58		
					H	15.33		

**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz								
715.3	23173	QPSK	1.4	H	V	21.41	34.77	Pass
					H	16.95		
		16QAM			V	21.28		
					H	16.36		
3MHz								
714.5	23165	QPSK	3	H	V	21.47	34.77	Pass
					H	16.55		
		16QAM			V	21.02		
					H	16.35		
5MHz								
713.5	23155	QPSK	5	H	V	21.58	34.77	Pass
					H	16.23		
		16QAM			V	21.16		
					H	16.39		
10MHz								
711	23130	QPSK	10	H	V	21.21	34.77	Pass
					H	15.95		
		16QAM			V	21.03		
					H	15.99		

**LTE band 17 part  
Lowest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
5MHz								
706.50	23755	QPSK	5	H	V	19.36	34.77	Pass
					H	16.54		
		16QAM			V	19.67		
					H	17.95		
10MHz								
709.00	23780	QPSK	10	H	V	19.25	34.77	Pass
					H	16.21		
		16QAM			V	19.25		
					H	16.54		

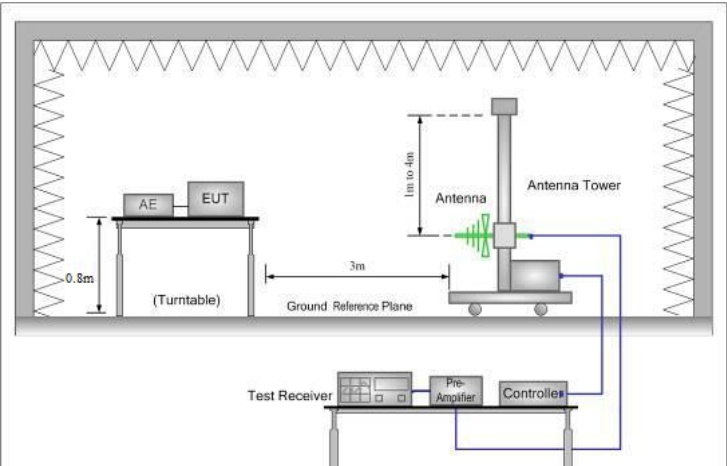
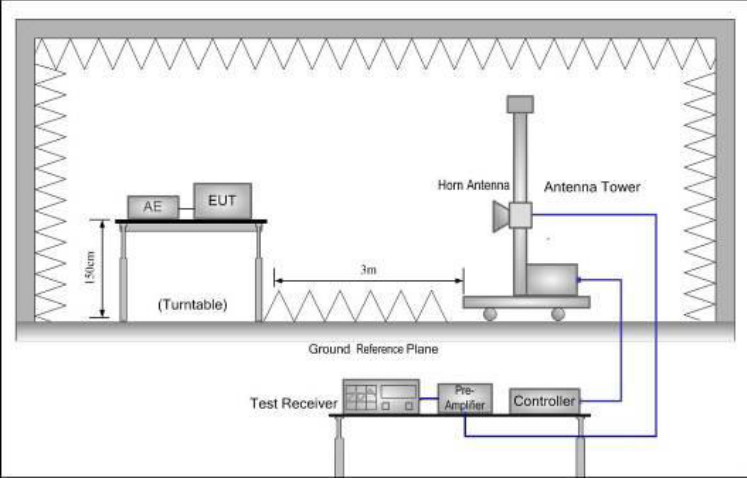
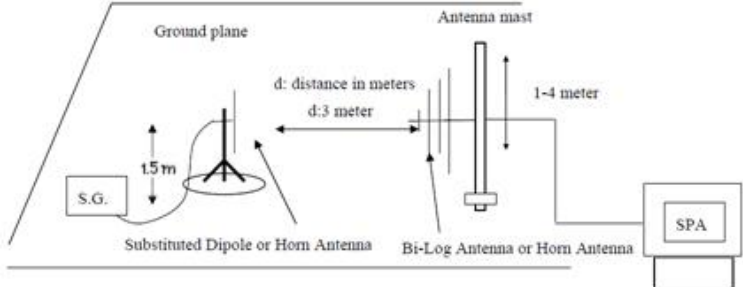
**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
5MHz								
710.00	23790	QPSK	5	H	V	19.65	34.77	Pass
					H	15.17		
		16QAM			V	19.39		
					H	16.21		
10MHz								
710.00	23790	QPSK	10	H	V	19.36	34.77	Pass
					H	15.14		
		16QAM			V	19.87		
					H	16.32		

**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
5MHz								
713.50	23825	QPSK	5	H	V	19.62	34.77	Pass
					H	15.12		
		16QAM			V	19.36		
					H	15.14		
10MHz								
711.00	23800	QPSK	10	H	V	19.26	34.77	Pass
					H	15.02		
		16QAM			V	19.37		
					H	15.01		

## 6.11 Field strength of spurious radiation measurement

Test Requirement:	FCC Part 24.238 (a), Part 27.53(g), Part 27.53(m), Part 27.53(h), Part 22.917(a)
Test Method:	FCC part 2.1053
Limit:	LTE Band 2, LTE Band 4, LTE Band 5, LTE Band 12 and LTE Band 17:-13dBm, LTE Band 7: -25dBm
Test setup:	<p><b>Below 1GHz</b></p>  <p><b>Above 1GHz</b></p>  <p><b>Substituted method:</b></p> 
Test Procedure:	<ol style="list-style-type: none"> <li>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.</li> <li>2. During the tests, the antenna height and the EUT azimuth were</li> </ol>

	<p>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.</p> <p>3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.</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 5.8 for details
Test mode:	Refer to section 5.3 for details.
Test results:	Passed

**Measurement Data (worst case):**

**Below 1GHz:**

The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.

**Above 1GHz**

For above 1 GHz, all test modes were performed, and just the worst case shown in the report.



LTE band 2 part:

1.4MHz(RB size 1 & RB offset 0) for QPSK

Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3701.40	Vertical	-39.38	-13.00	Pass
5552.10	V	-43.60		
7402.00	V	-37.99		
3701.40	Horizontal	-41.73		
5552.10	H	-40.89		
7402.00	H	-38.31		
Middle				
3760.00	Vertical	-39.08	-13.00	Pass
5640.00	V	-39.22		
7520.00	V	-34.30		
3760.00	Horizontal	-42.07		
5640.00	H	-43.45		
7520.00	H	-39.36		
Highest				
3816.60	Vertical	-40.95	-13.00	Pass
5724.90	V	-38.34		
7633.20	V	-35.95		
3816.60	Horizontal	-40.58		
5724.90	H	-40.00		
7633.20	H	-37.48		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3703.00	Vertical	-36.21	-13.00	Pass
5554.50	V	-36.27		
7406.00	V	-37.46		
3703.00	Horizontal	-42.51		
5554.50	H	-41.24		
7406.00	H	-36.26		
Middle				
3760.00	Vertical	-42.21	-13.00	Pass
5640.00	V	-33.22		
7520.00	V	-33.79		
3760.00	Horizontal	-42.51		
5640.00	H	-41.24		
7520.00	H	-36.23		
Highest				
3817.00	Vertical	-36.75	-13.00	Pass
5725.50	V	-37.91		
7634.00	V	-36.55		
3817.00	Horizontal	-42.25		
5725.50	H	-39.61		
7634.00	H	-36.25		

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3705.00	Vertical	-40.26	-13.00	Pass
5557.50	V	-43.26		
7410.00	V	-36.21		
3705.00	Horizontal	-42.21		
5557.50	H	-40.53		
7410.00	H	-38.62		
Middle				
3760.00	Vertical	-39.26	-13.00	Pass
5640.00	V	-39.56		
7520.00	V	-34.51		
3760.00	Horizontal	-42.10		
5640.00	H	-43.27		
7520.00	H	-39.64		
Highest				
3815.00	Vertical	-40.26	-13.00	Pass
5722.50	V	-38.64		
7630.00	V	-36.23		
3815.00	Horizontal	-41.27		
5722.50	H	-40.26		
7630.00	H	-37.58		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3710.00	Vertical	-36.23	-13.00	Pass
5565.00	V	-37.64		
7420.00	V	-36.21		
3710.00	Horizontal	-42.21		
5565.00	H	-42.77		
7420.00	H	-35.91		
Middle				
3760.00	Vertical	-41.24	-13.00	Pass
5640.00	V	-33.26		
7520.00	V	-33.25		
3760.00	Horizontal	-42.16		
5640.00	H	-40.25		
7520.00	H	-36.73		
Highest				
3810.00	Vertical	-38.64	-13.00	Pass
5715.00	V	-37.61		
7620.00	V	-36.54		
3810.00	Horizontal	-42.10		
5715.00	H	-39.77		
7620.00	H	-35.42		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3715.00	Vertical	-41.20	-13.00	Pass
5572.50	V	-42.62		
7430.00	V	-37.60		
3715.00	Horizontal	-42.59		
5572.50	H	-40.31		
7430.00	H	-38.67		
Middle				
3760.00	Vertical	-39.62	-13.00	Pass
5640.00	V	-40.25		
7520.00	V	-36.25		
3760.00	Horizontal	-42.25		
5640.00	H	-43.78		
7520.00	H	-40.21		
Highest				
3805.00	Vertical	-41.25	-13.00	Pass
5707.50	V	-39.64		
7610.00	V	-36.25		
3805.00	Horizontal	-42.21		
5707.50	H	-40.72		
7610.00	H	-36.25		

20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3720.00	Vertical	-36.15	-13.00	Pass
5580.00	V	-37.45		
7440.00	V	-36.72		
3720.00	Horizontal	-42.20		
5580.00	H	-42.72		
7440.00	H	-35.36		
Middle				
3760.00	Vertical	-40.18	-13.00	Pass
5640.00	V	-32.20		
7520.00	V	-34.43		
3760.00	Horizontal	-42.41		
5640.00	H	-40.39		
7520.00	H	-36.99		
Highest				
3800.00	Vertical	-38.46	-13.00	Pass
5700.00	V	-37.31		
7600.00	V	-36.22		
3800.00	Horizontal	-42.36		
5700.00	H	-39.51		
7600.00	H	-35.87		

LTE Band 4 Part:

1.4MHz(RB size 1 & RB offset 0) for QPSK

Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3421.40	Vertical	-35.61	-13.00	Pass
5132.10	V	-38.42		
6842.80	V	-28.53		
3421.40	Horizontal	-37.56		
5132.10	H	-40.20		
6842.80	H	-27.77		
Middle				
3465.00	Vertical	-41.34	-13.00	Pass
5197.50	V	-41.22		
6930.00	V	-35.94		
3465.00	Horizontal	-42.27		
5197.50	H	-40.58		
6930.00	H	-33.56		
Highest				
3508.60	Vertical	-42.91	-13.00	Pass
5262.90	V	-38.42		
7017.20	V	-35.96		
3508.60	Horizontal	-41.26		
5262.90	H	-39.64		
7017.20	H	-36.52		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3423.00	Vertical	-35.26	-13.00	Pass
5134.50	V	-42.26		
6846.00	V	-30.26		
3423.00	Horizontal	-36.67		
5134.50	H	-42.60		
6846.00	H	-39.66		
Middle				
3465.00	Vertical	-41.67	-13.00	Pass
5197.50	V	-42.59		
6930.00	V	-34.69		
3465.00	Horizontal	-42.25		
5197.50	H	-43.61		
6930.00	H	-37.59		
Highest				
3507.00	Vertical	-41.64	-13.00	Pass
5260.50	V	-40.28		
7014.00	V	-35.97		
3507.00	Horizontal	-39.69		
5260.50	H	-42.11		
7014.00	H	-36.78		



5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3425.00	Vertical	-36.23	-13.00	Pass
5137.50	V	-37.24		
6850.00	V	-28.52		
3425.00	Horizontal	-36.24		
5137.50	H	-39.12		
6850.00	H	-28.59		
Middle				
3465.00	Vertical	-42.21	-13.00	Pass
5197.50	V	-43.21		
6930.00	V	-36.59		
3465.00	Horizontal	-42.78		
5197.50	H	-40.59		
6930.00	H	-36.32		
Highest				
3505.00	Vertical	-42.15	-13.00	Pass
5257.50	V	-38.69		
7010.00	V	-36.26		
3505.00	Horizontal	-42.22		
5257.50	H	-39.62		
7010.00	H	-36.29		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3430.00	Vertical	-36.24	-13.00	Pass
5145.00	V	-42.21		
6860.00	V	-30.26		
3430.00	Horizontal	-36.72		
5145.00	H	-42.61		
6860.00	H	-39.65		
Middle				
3465.00	Vertical	-40.21	-13.00	Pass
5197.50	V	-42.25		
6930.00	V	-34.69		
3465.00	Horizontal	-42.72		
5197.50	H	-43.21		
6930.00	H	-36.24		
Highest				
3500.00	Vertical	-42.21	-13.00	Pass
5250.00	V	-40.26		
7000.00	V	-36.24		
3500.00	Horizontal	-40.21		
5250.00	H	-42.79		
7000.00	H	-36.45		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3435.00	Vertical	-37.50	-13.00	Pass
5152.50	V	-36.26		
6870.00	V	-29.21		
3435.00	Horizontal	-36.25		
5152.50	H	-40.21		
6870.00	H	-27.58		
Middle				
3465.00	Vertical	-42.69	-13.00	Pass
5197.50	V	-43.32		
6930.00	V	-36.21		
3465.00	Horizontal	-42.22		
5197.50	H	-40.21		
6930.00	H	-36.79		
Highest				
3495.00	Vertical	-42.59	-13.00	Pass
5242.50	V	-38.61		
6990.00	V	-36.23		
3495.00	Horizontal	-42.21		
5242.50	H	-39.77		
6990.00	H	-36.49		

20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3440.00	Vertical	-35.26	-13.00	Pass
5160.00	V	-41.15		
6880.00	V	-29.40		
3440.00	Horizontal	-37.71		
5160.00	H	-43.44		
6880.00	H	-29.82		
Middle				
3465.00	Vertical	-39.05	-13.00	Pass
5197.50	V	-42.23		
6930.00	V	-34.35		
3465.00	Horizontal	-43.67		
5197.50	H	-43.71		
6930.00	H	-34.60		
Highest				
3490.00	Vertical	-41.02	-13.00	Pass
5235.00	V	-41.39		
6980.00	V	-37.97		
3490.00	Horizontal	-39.10		
5235.00	H	-42.08		
6980.00	H	-35.92		

LTE Band 5 Part:

1.4MHz(RB size 1 & RB offset 0) for QPSK

Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1649.40	Vertical	-56.23	-13	Pass
2474.10	V	-44.28		
3298.80	V	-46.60		
1649.40	Horizontal	-52.75		
2474.10	H	-45.36		
3298.80	H	-42.48		
Middle				
1673.00	Vertical	-51.60	-13	Pass
2509.50	V	-40.43		
3346.00	V	-49.13		
1673.00	Horizontal	-52.68		
2509.50	H	-48.24		
3346.00	H	-43.01		
Highest				
1696.60	Vertical	-53.07	-13	Pass
2544.90	V	-46.26		
3393.20	V	-35.14		
1696.60	Horizontal	-50.03		
2544.90	H	-48.42		
3393.20	H	-44.44		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1651.00	Vertical	-52.16	-13	Pass
2476.50	V	-51.34		
3302.00	V	-42.67		
1651.00	Horizontal	-52.64		
2476.50	H	-47.61		
3302.00	H	-43.25		
Middle				
1673.00	Vertical	-52.21	-13	Pass
2509.50	V	-48.67		
3346.00	V	-36.25		
1673.00	Horizontal	-50.19		
2509.50	H	-48.61		
3346.00	H	-50.26		
Highest				
1695.00	Vertical	-51.64	-13	Pass
2542.50	V	-49.67		
3390.00	V	-42.25		
1695.00	Horizontal	-51.34		
2542.50	H	-46.67		
3390.00	H	-42.18		

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1653.00	Vertical	-55.26	-13	Pass
2479.50	V	-45.27		
3306.00	V	-46.32		
1653.00	Horizontal	-52.25		
2479.50	H	-45.98		
3306.00	H	-42.21		
Middle				
1673.00	Vertical	-52.23	-13	Pass
2509.50	V	-41.76		
3346.00	V	-50.19		
1673.00	Horizontal	-52.64		
2509.50	H	-47.91		
3346.00	H	-43.26		
Highest				
1693.00	Vertical	-52.21	-13	Pass
2539.50	V	-46.37		
3386.00	V	-36.59		
1693.00	Horizontal	-49.58		
2539.50	H	-49.78		
3386.00	H	-45.32		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1658.00	Vertical	-53.64	-13	Pass
2487.00	V	-52.13		
3316.00	V	-41.27		
1658.00	Horizontal	-53.62		
2487.00	H	-46.27		
3316.00	H	-42.25		
Middle				
1673.00	Vertical	-51.34	-13	Pass
2509.50	V	-47.61		
3346.00	V	-35.24		
1673.00	Horizontal	-50.61		
2509.50	H	-49.81		
3346.00	H	-48.27		
Highest				
1688.00	Vertical	-52.90	-13	Pass
2532.00	V	-51.24		
3376.00	V	-42.67		
1688.00	Horizontal	-52.98		
2532.00	H	-45.19		
3376.00	H	-41.72		



LTE Band 7 Part:

5MHz(RB size 1 & RB offset 0) for QPSK

Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5005.00	Vertical	-44.81	-25.00	Pass
7507.50	V	-36.51		
10010.00	V	-37.69		
5005.00	Horizontal	-44.84		
7507.50	H	-38.19		
10010.00	H	-36.89		
Middle				
5070.00	Vertical	-42.81	-25.00	Pass
7605.00	V	-38.65		
10140.00	V	-36.91		
5070.00	Horizontal	-44.66		
7605.00	H	-37.96		
10140.00	H	-35.59		
Highest				
5135.00	Vertical	-42.17	-25.00	Pass
7702.50	V	-37.82		
10270.00	V	-35.39		
5135.00	Horizontal	-41.26		
7702.50	H	-38.64		
10270.00	H	-36.42		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5010.00	Vertical	-42.56	-25.00	Pass
7515.00	V	-40.21		
10020.00	V	-36.26		
5010.00	Horizontal	-45.95		
7515.00	H	-35.23		
10020.00	H	-36.27		
Middle				
5070.00	Vertical	-43.11	-25.00	Pass
7605.00	V	-36.52		
10140.00	V	-37.58		
5070.00	Horizontal	-42.69		
7605.00	H	-36.25		
10140.00	H	-35.21		
Highest				
5130.00	Vertical	-43.12	-25.00	Pass
7695.00	V	-37.80		
10260.00	V	-40.25		
5130.00	Horizontal	-41.25		
7695.00	H	-38.91		
10260.00	H	-39.63		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5015.00	Vertical	-45.26	-25.00	Pass
7522.50	V	-35.21		
10030.00	V	-36.24		
5015.00	Horizontal	-45.97		
7522.50	H	-37.66		
10030.00	H	-36.23		
Middle				
5070.00	Vertical	-41.27	-25.00	Pass
7605.00	V	-38.59		
10140.00	V	-36.36		
5070.00	Horizontal	-45.21		
7605.00	H	-36.00		
10140.00	H	-35.21		
Highest				
5125.00	Vertical	-42.15	-25.00	Pass
7687.50	V	-37.89		
10250.00	V	-36.26		
5125.00	Horizontal	-42.25		
7687.50	H	-38.22		
10250.00	H	-36.23		

20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5020.00	Vertical	-42.25	-25.00	Pass
7530.00	V	-39.64		
10040.00	V	-35.21		
5020.00	Horizontal	-45.27		
7530.00	H	-36.21		
10040.00	H	-35.72		
Middle				
5070.00	Vertical	-43.21	-25.00	Pass
7605.00	V	-36.72		
10140.00	V	-37.95		
5070.00	Horizontal	-42.21		
7605.00	H	-37.58		
10140.00	H	-37.51		
Highest				
5120.00	Vertical	-42.89	-25.00	Pass
7680.00	V	-38.67		
10240.00	V	-40.21		
5120.00	Horizontal	-42.21		
7680.00	H	-38.97		
10240.00	H	-39.25		

LTE Band 12 Part:

1.4MHz(RB size 1 & RB offset 0) for QPSK

Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1399.40	Vertical	-46.26	-13	Pass
2099.10	V	-46.31		
2798.80	V	-45.27		
1399.40	Horizontal	-45.93		
2099.10	H	-45.69		
2798.80	H	-47.47		
Middle				
1415.00	Vertical	-50.36	-13	Pass
2122.50	V	-50.13		
2830.00	V	-47.54		
1415.00	Horizontal	-48.51		
2122.50	H	-49.05		
2830.00	H	-44.74		
Highest				
1430.60	Vertical	-49.05	-13	Pass
2145.90	V	-49.29		
2861.20	V	-48.88		
1430.60	Horizontal	-49.06		
2145.90	H	-49.53		
2861.20	H	-46.74		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1401.00	Vertical	-47.61	-13	Pass
2101.50	V	-47.69		
2802.00	V	-50.12		
1401.00	Horizontal	-49.58		
2101.50	H	-50.19		
2802.00	H	-44.57		
Middle				
1415.00	Vertical	-50.20	-13	Pass
2122.50	V	-49.61		
2830.00	V	-47.21		
1415.00	Horizontal	-50.28		
2122.50	H	-47.61		
2830.00	H	-42.18		
Highest				
1429.00	Vertical	-49.67	-13	Pass
2143.50	V	-50.24		
2858.00	V	-48.25		
1429.00	Horizontal	-50.19		
2143.50	H	-45.27		
2858.00	H	-47.58		

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1403.00	Vertical	-47.25	-13	Pass
2104.50	V	-47.66		
2806.00	V	-45.29		
1403.00	Horizontal	-46.21		
2104.50	H	-45.58		
2806.00	H	-47.15		
Middle				
1415.00	Vertical	-50.21	-13	Pass
2122.50	V	-49.61		
2830.00	V	-45.59		
1415.00	Horizontal	-47.59		
2122.50	H	-50.24		
2830.00	H	-45.79		
Highest				
1427.00	Vertical	-49.26	-13	Pass
2410.50	V	-50.60		
2854.00	V	-47.51		
1427.00	Horizontal	-50.49		
2410.50	H	-47.25		
2854.00	H	-44.78		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1408.00	Vertical	-48.64	-13	Pass
2112.00	V	-47.34		
2816.00	V	-50.39		
1408.00	Horizontal	-49.61		
2112.00	H	-50.47		
2816.00	H	-44.78		
Middle				
1415.00	Vertical	-49.62	-13	Pass
2122.50	V	-50.21		
2830.00	V	-48.67		
1415.00	Horizontal	-50.26		
2122.50	H	-47.89		
2830.00	H	-43.21		
Highest				
1422.00	Vertical	-50.26	-13	Pass
2133.00	V	-49.63		
2844.00	V	-47.61		
1422.00	Horizontal	-49.25		
2133.00	H	-46.27		
2844.00	H	-47.81		



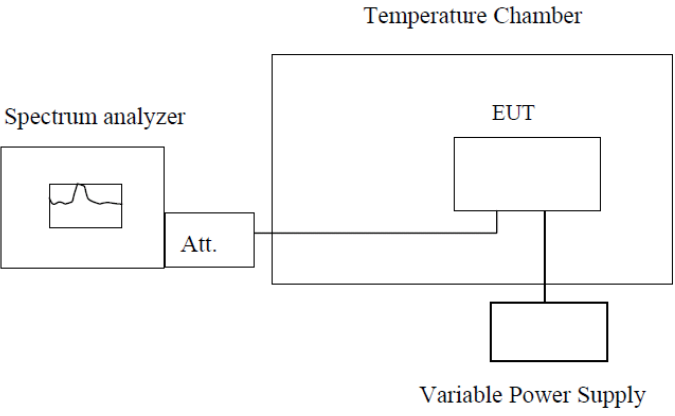
LTE Band 17 Part:

5MHz(RB size 1 & RB offset 0) for QPSK

Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1413.00	Vertical	-54.06	-13.00	Pass
2119.50	V	-48.58		
2826.00	V	-51.07		
1413.00	Horizontal	-55.06		
2119.50	H	-48.47		
2826.00	H	-48.67		
Middle				
1420.00	Vertical	-50.18	-13.00	Pass
2130.00	V	-50.92		
2840.00	V	-49.13		
1420.00	Horizontal	-53.57		
2130.00	H	-50.11		
2840.00	H	-47.89		
Highest				
1427.00	Vertical	-47.74	-13.00	Pass
2140.50	V	-50.95		
2854.00	V	-49.47		
1427.00	Horizontal	-47.78		
2140.50	H	-52.04		
2854.00	H	-51.86		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1418.00	Vertical	-55.26	-13.00	Pass
2127.00	V	-47.61		
2836.00	V	-52.24		
1418.00	Horizontal	-54.94		
2127.00	H	-47.68		
2836.00	H	-48.21		
Middle				
1420.00	Vertical	-49.61	-13.00	Pass
2130.00	V	-51.26		
2840.00	V	-50.37		
1420.00	Horizontal	-52.98		
2130.00	H	-49.31		
2840.00	H	-48.27		
Highest				
1422.00	Vertical	-47.65	-13.00	Pass
2133.00	V	-49.31		
2844.00	V	-48.25		
1422.00	Horizontal	-46.27		
2133.00	H	-51.42		
2844.00	H	-52.79		

## 6.12 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC Part 2.1055(a)(1)(b)
Test Method:	FCC Part 2.1055(a)(1)(b)
Limit:	±2.5ppm
Test setup:	 <p style="text-align: center;"><b>Note :</b> Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	All three channels of all modulations have been tested, but only the worst channel and the worst modulation show in this test item.

Measurement Data (the worst channel):

### LTE Band 2(QPSK):

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	198	0.105459	±2.5	Pass
	-20	123	0.065346		
	-10	165	0.087766		
	0	144	0.076586		
	10	122	0.061794		
	20	139	0.064936		
	30	101	0.053723		
	40	184	0.075872		
	50	171	0.090957		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	152	0.045351	±2.5	Pass
	-20	123	0.064526		
	-10	136	0.078540		
	0	120	0.065830		
	10	144	0.076986		
	20	107	0.078515		
	30	165	0.068766		
	40	108	0.053577		
	50	174	0.092343		
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	156	0.044279	±2.5	Pass
	-20	123	0.032426		
	-10	177	0.094349		
	0	144	0.074596		
	10	160	0.096310		
	20	155	0.085471		
	30	150	0.067787		
	40	104	0.055819		
	50	132	0.073213		

Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	181	0.089277	±2.5	Pass
	-20	123	0.065826		
	-10	165	0.078766		
	0	104	0.055319		
	10	171	0.096957		
	20	146	0.079860		
	30	100	0.057891		
	40	118	0.066566		
	50	148	0.075723		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	155	0.085747	±2.5	Pass
	-20	165	0.083666		
	-10	171	0.090957		
	0	144	0.076796		
	10	120	0.064830		
	20	133	0.070745		
	30	138	0.078504		
	40	104	0.054819		
	50	118	0.069666		
Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	195	0.108623	±2.5	Pass
	-20	123	0.065426		
	-10	132	0.075313		
	0	166	0.085998		
	10	181	0.089277		
	20	175	0.095085		
	30	143	0.076764		
	40	123	0.064526		
	50	107	0.057815		

**LTE Band 2(16QAM):**

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	151	0.083519	±2.5	Pass
	-20	181	0.096477		
	-10	144	0.076596		
	0	171	0.092857		
	10	141	0.075120		
	20	133	0.085745		
	30	136	0.072340		
	40	108	0.057567		
	50	102	0.058555		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	166	0.089698	±2.5	Pass
	-20	160	0.085506		
	-10	155	0.082447		
	0	123	0.063426		
	10	133	0.070745		
	20	126	0.067021		
	30	138	0.074404		
	40	144	0.076896		
	50	140	0.074988		
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	177	0.094149	±2.5	Pass
	-20	123	0.067526		
	-10	132	0.073613		
	0	133	0.070745		
	10	126	0.085021		
	20	144	0.077596		
	30	148	0.076623		
	40	166	0.089598		
	50	160	0.084106		

Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	181	0.096237	±2.5	Pass
	-20	121	0.064362		
	-10	144	0.045596		
	0	155	0.062447		
	10	160	0.035106		
	20	140	0.074468		
	30	108	0.087447		
	40	117	0.069234		
	50	103	0.036787		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	166	0.085898	±2.5	Pass
	-20	160	0.063106		
	-10	112	0.08574		
	0	110	0.075511		
	10	123	0.086426		
	20	125	0.066489		
	30	133	0.079645		
	40	136	0.074540		
	50	107	0.057815		
Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	155	0.025647	±2.5	Pass
	-20	161	0.036938		
	-10	123	0.065426		
	0	133	0.070345		
	10	125	0.066489		
	20	136	0.024340		
	30	166	0.084298		
	40	171	0.068957		
	50	104	0.055219		

**LTE Band 4(QPSK):**

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	193	0.135400	±2.5	Pass
	-20	123	0.070996		
	-10	131	0.074113		
	0	166	0.095815		
	10	181	0.1075473		
	20	171	0.068015		
	30	182	0.102051		
	40	175	0.107510		
	50	144	0.083517		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	188	0.107514	±2.5	Pass
	-20	123	0.025996		
	-10	132	0.076190		
	0	166	0.095875		
	10	171	0.038701		
	20	141	0.081585		
	30	105	0.057606		
	40	108	0.062338		
	50	155	0.089466		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	164	0.094661	±2.5	Pass
	-20	132	0.076190		
	-10	136	0.078499		
	0	168	0.096970		
	10	144	0.083117		
	20	148	0.085426		
	30	101	0.08297		
	40	108	0.082338		
	50	128	0.073882		



Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	166	0.092715	±2.5	Pass
	-20	123	0.070996		
	-10	133	0.0717768		
	0	128	0.072782		
	10	161	0.092929		
	20	144	0.083117		
	30	140	0.080808		
	40	171	0.098250		
	50	170	0.098124		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	155	0.089466	±2.5	Pass
	-20	123	0.073596		
	-10	150	0.086580		
	0	126	0.072727		
	10	144	0.083117		
	20	148	0.084526		
	30	133	0.012768		
	40	130	0.0757536		
	50	114	0.067701		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	196	0.135131	±2.5	Pass
	-20	171	0.095701		
	-10	175	0.108510		
	0	161	0.092929		
	10	133	0.074368		
	20	148	0.085346		
	30	138	0.077554		
	40	140	0.085608		
	50	108	0.062838		

**LTE Band 4(16QAM):**

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	166	0.095515	±2.5	Pass
	-20	152	0.056734		
	-10	121	0.069841		
	0	153	0.0825312		
	10	162	0.095306		
	20	144	0.083117		
	30	148	0.08526		
	40	107	0.0652760		
	50	109	0.045915		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	165	0.094538	±2.5	Pass
	-20	142	0.081452		
	-10	148	0.085426		
	0	160	0.092352		
	10	132	0.074590		
	20	136	0.073399		
	30	126	0.072727		
	40	128	0.073882		
	50	107	0.061760		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	154	0.085589	±2.5	Pass
	-20	164	0.094561		
	-10	158	0.0911098		
	0	160	0.092352		
	10	123	0.074596		
	20	131	0.074513		
	30	126	0.072727		
	40	130	0.075126		
	50	144	0.081117		

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	165	0.0954538	±2.5	Pass
	-20	123	0.056996		
	-10	131	0.075613		
	0	144	0.083117		
	10	128	0.0734582		
	20	136	0.078499		
	30	148	0.08536		
	40	107	0.063460		
	50	109	0.062415		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	177	0.102455	±2.5	Pass
	-20	141	0.081755		
	-10	162	0.091206		
	0	123	0.070996		
	10	132	0.076190		
	20	146	0.05871		
	30	160	0.0928652		
	40	151	0.087457		
	50	158	0.091198		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	166	0.097815	±2.5	Pass
	-20	162	0.0945506		
	-10	132	0.072490		
	0	131	0.04513		
	10	144	0.083117		
	20	140	0.045408		
	30	155	0.0854566		
	40	150	0.086580		
	50	121	0.069451		

**LTE Band 5(QPSK):**

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	199	0.2345396	±2.5	Pass
	-20	123	0.1474441		
	-10	144	0.172146		
	0	155	0.18596		
	10	160	0.191273		
	20	150	0.17519		
	30	143	0.14550		
	40	171	0.2054723		
50	180	0.215182			
Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	166	0.198446	±2.5	Pass
	-20	123	0.148041		
	-10	130	0.1557509		
	0	125	0.1494532		
	10	136	0.162582		
	20	161	0.192459		
	30	144	0.172526		
	40	148	0.176928		
50	150	0.178919			
Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	123	0.147541	±2.5	Pass
	-20	132	0.153500		
	-10	133	0.155396		
	0	162	0.193654		
	10	128	0.155319		
	20	144	0.1735346		
	30	148	0.176222		
	40	171	0.207523		
50	160	0.191273			
Reference Frequency: LTE Band 5(10MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	155	0.185796	±2.5	Pass
	-20	123	0.147641		
	-10	130	0.153609		
	0	151	0.180514		
	10	141	0.1632759		
	20	161	0.192469		
	30	107	0.127554		
	40	144	0.172146		
50	109	0.130455			

**LTE Band 5(16QAM):**

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	165	0.198550	±2.5	Pass
	-20	123	0.142541		
	-10	131	0.156605		
	0	126	0.154568		
	10	160	0.191273		
	20	144	0.1285146		
	30	148	0.17328		
	40	171	0.204423		
50	101	0.120741			
Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	168	0.206837	±2.5	Pass
	-20	162	0.192664		
	-10	132	0.157820		
	0	136	0.162582		
	10	144	0.172246		
	20	145	0.178541		
	30	123	0.147081		
	40	126	0.154528		
50	107	0.127914			
Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	171	0.2048523	2.5	Pass
	-20	141	0.164559		
	-10	146	0.174537		
	0	178	0.212791		
	10	161	0.1945469		
	20	133	0.145996		
	30	131	0.156455		
	40	123	0.144541		
50	114	0.136262			
Reference Frequency: LTE Band 5(10MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	156	0.185891	2.5	Pass
	-20	123	0.147041		
	-10	132	0.157560		
	0	126	0.150628		
	10	131	0.156655		
	20	144	0.172146		
	30	147	0.1754532		
	40	160	0.194573		
50	169	0.202232			

**LTE Band 7(QPSK):**

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	198	0.078107	±2.5	Pass
	-20	123	0.0445621		
	-10	161	0.063511		
	0	193	0.074534		
	10	144	0.0564505		
	20	171	0.064563		
	30	180	0.075063		
	40	116	0.045459		
	50	131	0.051577		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	155	0.065544	±2.5	Pass
	-20	161	0.063511		
	-10	123	0.048751		
	0	136	0.053649		
	10	166	0.068683		
	20	171	0.061556		
	30	180	0.071806		
	40	153	0.060695		
	50	177	0.069852		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	123	0.048521	±2.5	Pass
	-20	166	0.057383		
	-10	168	0.066272		
	0	122	0.048566		
	10	144	0.056805		
	20	147	0.057658		
	30	101	0.039842		
	40	155	0.061464		
	50	150	0.058572		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	192	0.075740	±2.5	Pass
	-20	123	0.043621		
	-10	171	0.062756		
	0	182	0.071795		
	10	161	0.063511		
	20	144	0.056625		
	30	152	0.059961		
	40	155	0.062244		
	50	108	0.042604		

**LTE Band 7(16QAM):**

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	123	0.048521	±2.5	Pass
	-20	155	0.061274		
	-10	166	0.062283		
	0	161	0.063511		
	10	150	0.059172		
	20	134	0.015760		
	30	145	0.057199		
	40	114	0.04780		
	50	107	0.042689		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	181	0.072563	±2.5	Pass
	-20	123	0.048521		
	-10	136	0.053759		
	0	124	0.048915		
	10	138	0.058638		
	20	104	0.041826		
	30	177	0.069352		
	40	160	0.0633316		
	50	166	0.065353		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	158	0.062327	2.5	Pass
	-20	121	0.048932		
	-10	169	0.063566		
	0	171	0.067456		
	10	178	0.07352		
	20	151	0.0536		
	30	145	0.057199		
	40	146	0.05294		
	50	108	0.042604		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	144	0.056805	2.5	Pass
	-20	151	0.059566		
	-10	146	0.057594		
	0	158	0.06246		
	10	123	0.04635		
	20	136	0.053247		
	30	104	0.041026		
	40	171	0.06857		
	50	141	0.055358		

**LTE Band 12(QPSK):**

Reference Frequency: LTE Band 12(1.4MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	199	0.281272	±2.5	Pass
	-20	141	0.199293		
	-10	151	0.213258		
	0	164	0.2385		
	10	158	0.223322		
	20	148	0.207898		
	30	169	0.27552		
	40	171	0.24895		
	50	189	0.26354		
Reference Frequency: LTE Band 12(3MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	155	0.2128	±2.5	Pass
	-20	184	0.26865		
	-10	174	0.24574		
	0	176	0.248763		
	10	180	0.2536		
	20	161	0.227562		
	30	169	0.2331		
	40	104	0.146996		
	50	125	0.176678		
Reference Frequency: LTE Band 12(5MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	169	0.238869	±2.5	Pass
	-20	123	0.142335		
	-10	138	0.195856		
	0	129	0.18258		
	10	144	0.203534		
	20	150	0.21314		
	30	156	0.22089		
	40	101	0.14262		
	50	108	0.15220		
Reference Frequency: LTE Band 12(10MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	197	0.278445	±2.5	Pass
	-20	123	0.17122		
	-10	135	0.19323		
	0	126	0.174527		
	10	138	0.195053		
	20	144	0.20335		
	30	180	0.25222		
	40	171	0.241223		
	50	168	0.237416		



**LTE Band 12(16QAM):**

Reference Frequency: LTE Band 12(1.4MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	151	0.213428	±2.5	Pass
	-20	123	0.173362		
	-10	136	0.192526		
	0	144	0.203534		
	10	171	0.275696		
	20	101	0.142756		
	30	160	0.227548		
	40	168	0.237436		
	50	148	0.206287		
Reference Frequency: LTE Band 12(3MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	148	0.209187	±2.5	Pass
	-20	151	0.217628		
	-10	123	0.173852		
	0	136	0.198626		
	10	155	0.215281		
	20	141	0.193593		
	30	101	0.142356		
	40	105	0.144410		
	50	118	0.166284		
Reference Frequency: LTE Band 12(5MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	123	0.173852	2.5	Pass
	-20	131	0.185629		
	-10	147	0.203774		
	0	150	0.212014		
	10	155	0.213481		
	20	160	0.226148		
	30	141	0.199363		
	40	107	0.151237		
	50	118	0.166784		
Reference Frequency: LTE Band 12(10MHz) Middle channel=23095Frequency=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	163	0.230389	2.5	Pass
	-20	169	0.238769		
	-10	144	0.208234		
	0	151	0.213428		
	10	158	0.232522		
	20	171	0.241696		
	30	176	0.24763		
	40	101	0.143125		
	50	108	0.1526574		

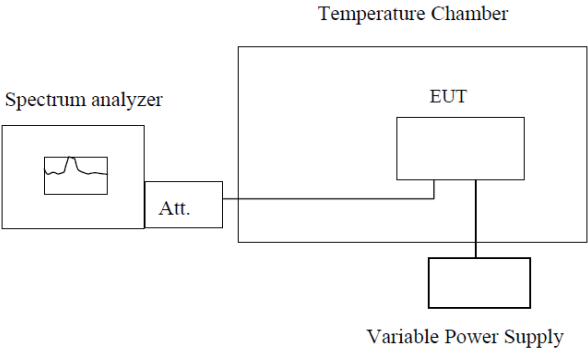
**LTE Band 17(QPSK):**

Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	195	0.274648	±2.5	Pass
	-20	171	0.240345		
	-10	180	0.2555221		
	0	186	0.261972		
	10	175	0.246349		
	20	123	0.173229		
	30	136	0.191549		
	40	121	0.170245		
	50	140	0.197153		
Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	199	0.280285	±2.5	Pass
	-20	141	0.193692		
	-10	151	0.212626		
	0	168	0.236620		
	10	158	0.286435		
	20	149	0.206259		
	30	171	0.240845		
	40	189	0.264797		
	50	180	0.253521		

**LTE Band 17(16QAM):**

Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	161	0.226761	±2.5	Pass
	-20	141	0.198592		
	-10	181	0.254930		
	0	123	0.173159		
	10	138	0.1943656		
	20	171	0.240845		
	30	186	0.263692		
	40	169	0.238378		
	50	107	0.155704		
Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.85	-30	107	0.150704	±2.5	Pass
	-20	181	0.253290		
	-10	141	0.198592		
	0	156	0.213598		
	10	153	0.215493		
	20	123	0.14899		
	30	168	0.236160		
	40	118	0.165297		
	50	172	0.242434		

## 6.13 Frequency stability V.S. Voltage measurement

Test Requirement:	FCC Part 2.1055(d)(1)(2)
Test Method:	FCC Part 2.1055(d)(1)(2)
Limit:	±2.5ppm
Test setup:	 <p style="text-align: center;">Temperature Chamber</p> <p style="text-align: center;">Spectrum analyzer      Att.      EUT</p> <p style="text-align: center;">Variable Power Supply</p> <p><b>Note :</b> Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"> <li>1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details, and all channels have been tested, only shows the worst channel data in this report.
Test results:	Passed

**Measurement Data (the worst channel):**

**LTE Band 2(QPSK):**

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	99	0.053560	±2.5	Pass
	3.85	87	0.044547		
	3.60	68	0.036150		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	75	0.033454	±2.5	Pass
	3.85	84	0.044781		
	3.60	64	0.034543		
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	82	0.043517	±2.5	Pass
	3.85	90	0.046572		
	3.60	74	0.039522		
Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	77	0.040257	±2.5	Pass
	3.85	84	0.044881		
	3.60	96	0.057564		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	92	0.045636	±2.5	Pass
	3.85	96	0.056264		
	3.60	76	0.040426		
Reference Frequency: LTE Band 2(20MHz) Middle channel=20175 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	88	0.043409	±2.5	Pass
	3.85	64	0.056243		
	3.60	71	0.037866		

**LTE Band 2(16QAM):**

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	90	0.045872	±2.5	Pass
	3.85	81	0.043685		
	3.60	76	0.045326		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	99	0.055360	±2.5	Pass
	3.85	84	0.047581		
	3.60	75	0.039594		
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	93	0.046268	±2.5	Pass
	3.85	75	0.033594		
	3.60	81	0.046285		
Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	78	0.041489	±2.5	Pass
	3.85	81	0.043485		
	3.60	74	0.034362		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	99	0.052850	±2.5	Pass
	3.85	82	0.062617		
	3.60	76	0.070426		
Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	93	0.043468	±2.5	Pass
	3.85	82	0.0441617		
	3.60	64	0.035443		

**LTE Band 4(QPSK):**

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	98	0.054536	±2.5	Pass
	3.85	75	0.085290		
	3.60	64	0.0365241		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	90	0.057548	±2.5	Pass
	3.85	99	0.052143		
	3.60	85	0.049462		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	86	0.043239	±2.5	Pass
	3.85	74	0.047413		
	3.60	92	0.052602		
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	95	0.054844	±2.5	Pass
	3.85	91	0.062525		
	3.60	81	0.043253		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	77	0.044444	±2.5	Pass
	3.85	84	0.048485		
	3.60	68	0.039250		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	90	0.057448	±2.5	Pass
	3.85	87	0.053516		
	3.60	64	0.039641		

**LTE Band 4(16QAM):**

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	88	0.058594	±2.5	Pass
	3.85	75	0.062190		
	3.60	71	0.045981		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	66	0.038385	±2.5	Pass
	3.85	84	0.048485		
	3.60	52	0.035614		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	55	0.036346	±2.5	Pass
	3.85	87	0.058616		
	3.60	48	0.027906		
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	99	0.056243	±2.5	Pass
	3.85	65	0.037438		
	3.60	87	0.050216		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	68	0.039650	±2.5	Pass
	3.85	75	0.0436230		
	3.60	81	0.046853		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	86	0.068739	±2.5	Pass
	3.85	94	0.052257		
	3.60	71	0.043281		

**LTE Band 5(QPSK):**

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	99	0.142650	±2.5	Pass
	3.85	85	0.135614		
	3.60	64	0.076609		
Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	88	0.105523	±2.5	Pass
	3.85	74	0.096564		
	3.60	90	0.107351		
Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	84	0.106218	±2.5	Pass
	3.85	74	0.088464		
	3.60	90	0.124591		
Reference Frequency: LTE Band5(10MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	96	0.114364	±2.5	Pass
	3.85	45	0.056296		
	3.60	80	0.094537		



**LTE Band 5(16QAM):**

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	84	0.105418	±2.5	Pass
	3.85	64	0.074209		
	3.60	70	0.083682		
Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	99	0.114250	±2.5	Pass
	3.85	78	0.075246		
	3.60	80	0.093637		
Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	93	0.201178	±2.5	Pass
	3.85	64	0.076309		
	3.60	82	0.098027		
Reference Frequency: LTE Band 5(10MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	84	0.103418	±2.5	Pass
	3.85	75	0.089459		
	3.60	90	0.112591		

**LTE Band 7(QPSK):**

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	90	0.035303	±2.5	Pass
	3.85	81	0.031343		
	3.60	65	0.025441		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	74	0.029291	±2.5	Pass
	3.85	81	0.036253		
	3.60	96	0.037570		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	88	0.033114	±2.5	Pass
	3.85	75	0.025586		
	3.60	64	0.026347		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	84	0.036536	±2.5	Pass
	3.85	97	0.034264		
	3.60	40	0.019679		

**LTE Band 7(16QAM):**

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	74	0.042691	±2.5	Pass
	3.85	84	0.033151		
	3.60	96	0.037830		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	99	0.039053	±2.5	Pass
	3.85	85	0.032521		
	3.60	64	0.023247		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	58	0.029580	±2.5	Pass
	3.85	74	0.022691		
	3.60	90	0.035603		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	65	0.027641	±2.5	Pass
	3.85	81	0.033953		
	3.60	74	0.029691		

**LTE Band 12(QPSK):**

Reference Frequency: LTE Band 12(1.4MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	78	0.113247	±2.5	Pass
	3.85	94	0.132762		
	3.60	80	0.113274		
Reference Frequency: LTE Band 12(3MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	88	0.132582	±2.5	Pass
	3.85	86	0.121565		
	3.60	91	0.128628		
Reference Frequency: LTE Band 12(5MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	95	0.134356	±2.5	Pass
	3.85	64	0.094269		
	3.60	72	0.105667		
Reference Frequency: LTE Band 12(10MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	84	0.118628	±2.5	Pass
	3.85	67	0.0947620		
	3.60	47	0.068231		

**LTE Band 12(16QAM):**

Reference Frequency: LTE Band 12(1.4MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	90	0.122308	±2.5	Pass
	3.85	81	0.11438		
	3.60	74	0.104204		
Reference Frequency: LTE Band 12(3MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	88	0.124852	±2.5	Pass
	3.85	64	0.090449		
	3.60	71	0.100343		
Reference Frequency: LTE Band 12(5MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	56	0.079152	±2.5	Pass
	3.85	64	0.090459		
	3.60	71	0.105353		
Reference Frequency: LTE Band 12(10MHz) Middle channel=23095Frequency=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	81	0.114438	±2.5	Pass
	3.85	93	0.134549		
	3.60	37	0.052497		

**LTE Band 17(QPSK):**

Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	66	0.092558	±2.5	Pass
	3.85	87	0.125535		
	3.60	90	0.126761		
Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	84	0.118310	±2.5	Pass
	3.85	71	0.104250		
	3.60	90	0.123761		

**LTE Band 17(16QAM):**

Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	66	0.035658	±2.5	Pass
	3.85	85	0.117528		
	3.60	74	0.104225		
Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.40	63	0.087562	±2.5	Pass
	3.85	52	0.073309		
	3.60	48	0.085206		