

# FCC REPORT

## (LTE)

**Applicant:** Plus One Marketing Ltd.

**Address of Applicant:** Sumitomofudosan Hibiya, Building 2F, 2-8-6 Nishi-Shimbashi, Minatoku, Tokyo, 107-0053, JAPAN

### Equipment Under Test (EUT)

Product Name: mobile phone

Model No.: FTE171A

Trade mark: FREETEL

**FCC ID:** 2AG5L-FTE171A

FCC CFR Title 47 Part 2

FCC CFR Title 47 Part 24 Subpart E

**Applicable standards:** FCC CFR Title 47 Part 27 Subpart L  
FCC CFR Title 47 Part 27 Subpart M  
FCC CFR Title 47 Part 27 Subpart H

**Date of sample receipt:** 22 Mar., 2017

**Date of Test:** 22 Mar., to 19 Apr., 2017

**Date of report issued:** 20 Apr., 2017

**Test Result:** PASS\*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang

Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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**2. Version**

Version No.	Date	Description
00	20 Apr., 2017	Original

**Tested by:****Date:**

20 Apr., 2017

**Test Engineer****Reviewed by:****Date:**

20 Apr., 2017

**Project Engineer**

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## 4. Test Summary

Test Item	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Passed (Please refer to SAR Report)
RF Output Power	Part 2.1046 Part 24.232 (c) Part 27.50 (c)(10) Part 27.50 (d)(4) Part 27.50 (h)(2)	Pass
Peak-to-Average Ratio	Part 24.232 (d) Part 27.50(d)(5)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 24.238 Part 27.53(g) Part 27.53(h) Part 27.53(m)	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53(m)	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53(m)	Pass
Out of band emission, Band Edge	Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53(m)	Pass
Frequency stability vs. temperature	Part 24.235 Part 27.54 Part 2.1055(a)(1)(b)	Pass
Frequency stability vs. voltage	Part 24.235 Part 27.54 Part 2.1055(d)(2)	Pass

*Pass: The EUT complies with the essential requirements in the standard.*

## 5. General Information

### 5.1 Client Information

Applicant:	Plus One Marketing Ltd.
Address of Applicant:	Sumitomofudosan Hibiya, Building 2F, 2-8-6 Nishi-Shimbashi, Minatoku, Tokyo, 107-0053, JAPAN
Manufacturer:	Shenzhen Wellstec Communications Co.,Ltd
Address of Manufacturer:	No. 707, 7th floor, B building., CR city, the park of science and technology, Nanshan district, shenzhen, China

### 5.2 General Description of E.U.T.

Product Name:	mobile phone
Model No.:	FTE171A
Operation Frequency range:	LTE Band 2: TX: 1850MHz-1910MHz, RX: 1930MHz-1990MHz LTE Band 4:TX: 1710MHz-1755MHz, RX: 2110MHz-2155MHz LTE Band 7: TX: 2500MHz -2570MHz, RX: 2620MHz-2690MHz LTE Band 17: TX: 704MHz -716MHz, RX: 734MHz-746MHz
Modulation type:	QPSK, 16QAM
Antenna type:	Internal Antenna
Antenna gain:	LTE Band 2: 2.1dBi LTE Band 4: 1.1dBi LTE Band 7: 2.0dBi LTE Band 17: -0.1dBi
AC adapter:	Model: UT-051A-5065 Input: AC100-240V 50/60Hz 0.2A Output: DC 5.0V, 1000mA
Power supply:	Rechargeable Li-ion Battery DC3.8V-2100mAh

**Operation Frequency List:**

LTE Band 2(1.4MHz)		LTE Band 2(3MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18607	1850.70	18615	1851.50
18608	1850.80	18616	1851.60
....	....	....	....
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
...	...	...	...
19193	1909.20	19185	1908.40
19194	1909.30	19186	1908.50
LTE Band 2(5MHz)		LTE Band 2(10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18625	1852.50	18650	1855.00
18626	1852.60	18651	1855.10
....	....	....	....
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
...	...	...	...
19175	1907.40	19150	1904.90
19176	1907.50	19151	1905.00
LTE Band 2(15MHz)		LTE Band 2(20MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18675	1857.50	18700	1860.00
18676	1857.60	18701	1860.10
....	....	....	....
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
...	...	...	...
19125	1902.40	19100	1899.90
19126	1902.50	19101	1900.00

LTE Band 4(1.4MHz)		LTE Band 4(3MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19957	1710.70	19965	1711.50
19958	1710.80	19966	1711.60
....	....	....	....
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
...	...	...	...
20392	1754.20	20384	1753.40
20393	1754.30	20385	1753.50
LTE Band 4(5MHz)		LTE Band 4(10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19975	1712.50	20000	1715.00
19976	1712.60	20001	1715.10
....	....	....	....
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
...	...	...	...
20374	1752.40	20349	1749.90
20375	1752.50	20350	1750.00
LTE Band 4(15MHz)		LTE Band 4(20MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20025	1717.50	20050	1720.00
20026	1717.60	20051	1720.10
....	....	....	....
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
...	...	...	...
20324	1747.40	20299	1744.90
20325	1747.50	20300	1745.00

LTE Band 7(5MHz)		LTE Band 7(10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20775	2502.50	20800	2505.00
20776	2502.60	20801	2502.10
....	....	....	....
21099	2534.90	21099	2534.90
21100	2535.00	21100	2535.00
21101	2535.20	21101	2535.20
...	...	...	...
21424	2567.40	21399	2564.90
21425	2567.50	21400	2565.00
LTE Band 7(15MHz)		LTE Band 7(20MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20825	2507.50	20850	2510.00
20826	2507.60	20851	2510.10
....	....	....	....
21099	2534.90	21099	2534.90
21100	2535.00	21100	2535.00
21101	2535.20	21101	2535.20
...	...	...	...
21374	2562.40	21349	2559.90
21375	2562.50	21350	2560.00

LTE Band 17(5MHz)		LTE Band 17(10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23755	706.50	23780	709.00
23756	706.60	23781	709.10
....	....	....	....
23789	709.90	23789	709.90
23790	710.00	23790	710.00
23791	710.10	23791	710.10
...	...	...	...
23824	713.40	23799	710.90
23825	713.50	23800	711.00

Regards to the operating frequency range, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channels as below:

LTE Band 2(1.4MHz)			LTE Band 2(3MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	18607	1850.70	Lowest channel	18615	1851.50
Middle channel	18900	1880.00	Middle channel	18900	1880.00
Highest channel	19193	1909.30	Highest channel	19185	1908.50
LTE Band 2(5MHz)			LTE Band 2(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	18625	1852.50	Lowest channel	18650	1855.00
Middle channel	18900	1880.00	Middle channel	18900	1880.00
Highest channel	19175	1907.50	Highest channel	19150	1905.00
LTE Band 2(15MHz)			LTE Band 2(20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	18675	1857.50	Lowest channel	18700	1860.00
Middle channel	18900	1880.00	Middle channel	18900	1880.00
Highest channel	19125	1902.50	Highest channel	19100	1900.00

LTE Band 4(1.4MHz)			LTE Band 4(3MHz)		
Channel:		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	19957	1710.70	Lowest channel	19965	1711.50
Middle channel	20175	1732.50	Middle channel	20175	1732.50
Highest channel	20393	1754.30	Highest channel	20385	1753.50
LTE Band 4(5MHz)			LTE Band 4(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	19975	1712.50	Lowest channel	20000	1715.00
Middle channel	20175	1732.50	Middle channel	20175	1732.50
Highest channel	20375	1752.50	Highest channel	20350	1750.00
LTE Band 4(15MHz)			LTE Band 4(20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	20025	1717.50	Lowest channel	20050	1720.00
Middle channel	20175	1732.50	Middle channel	20175	1732.50
Highest channel	20325	1747.50	Highest channel	20300	1745.00

LTE Band 7(5MHz)			LTE Band 7(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	20775	2502.50	Lowest channel	20800	2505.00
Middle channel	21100	2535.00	Middle channel	21100	2535.00
Highest channel	21425	2567.50	Highest channel	21400	2565.00
LTE Band 7(15MHz)			LTE Band 7(20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	20825	2507.50	Lowest channel	20850	2510.00
Middle channel	21100	2535.00	Middle channel	21100	2535.00
Highest channel	21375	2562.50	Highest channel	21350	2560.00

LTE Band 17(5MHz)			LTE Band 17(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	23755	706.50	Lowest channel	23780	709.00
Middle channel	23790	710.00	Middle channel	23790	710.00
Highest channel	23825	713.50	Highest channel	23800	711.00

### 5.3 Test modes

Data mode (LTE band 2(QPSK))	Keep the EUT in data communicating mode on LTE band 2(QPSK). ( <i>LTE band2(1.4MHz), LTE band2(3MHz), LTE band2(5MHz), LTE band2(10MHz), LTE band2(15MHz), LTE band2(20MHz)</i> )
Data mode (LTE band 2(16QAM))	Keep the EUT in data communicating mode on LTE band 2(16QAM). ( <i>LTE band2(1.4MHz), LTE band2(3MHz), LTE band2(5MHz), LTE band2(10MHz), LTE band2(15MHz), LTE band2(20MHz)</i> )
Data mode (LTE band 4(QPSK))	Keep the EUT in data communicating mode on LTE band 4(QPSK). ( <i>LTE band 4(1.4MHz), LTE band 4(3MHz), LTE band 4(5MHz), LTE band 4(10MHz), LTE band 4(15MHz), LTE band 4(20MHz)</i> )
Data mode (LTE band 4(16QAM))	Keep the EUT in data communicating mode on LTE band 4(16QAM). ( <i>LTE band 4(1.4MHz), LTE band 4(3MHz), LTE band 4(5MHz), LTE band 4(10MHz), LTE band 4(15MHz), LTE band 4(20MHz)</i> )
Data mode (LTE band 7(QPSK))	Keep the EUT in data communicating mode on LTE band 7(QPSK). ( <i>LTE band7(5MHz), LTE band 7(10MHz), LTE band 7(15MHz), LTE band 7(20MHz)</i> )
Data mode (LTE band 7(16QAM))	Keep the EUT in data communicating mode on LTE band 7(16QAM). ( <i>LTE band7(5MHz), LTE band7(10MHz), LTE band 7(15MHz), LTE band 7(20MHz)</i> )
Data mode (LTE band 17(QPSK))	Keep the EUT in data communicating mode on LTE band17(QPSK). ( <i>LTE band17(5MHz), LTE band17(10MHz)</i> )
Data mode (LTE band 17(16QAM))	Keep the EUT in data communicating mode on LTE band 17(16QAM). ( <i>LTE band17(5MHz), LTE band17(10MHz)</i> )
Remark :	Just the worst case data were shown in the report.

### 5.4 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is filing to comply with Section Part 24 subpart E, Part 27 subpart L, Part 27 Subpart M and Part 27 subpart H of the FCC CFR 47 Rules.

### 5.5 Test Methodology

Both conducted and radiated testing were performed according to the procedures document on TIA/EIA 603 and FCC CFR 47 clause 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057

### 5.6 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Registration No.: 817957**

Shenzhen ZhongjianNanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

● **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen ZhongjianNanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L6048**

Shenzhen ZhongjianNanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

### 5.7 Laboratory Location

Shenzhen ZhongjianNanfang Testing Co., Ltd.  
Address: No.B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,  
Bao'an District, Shenzhen, Guangdong, China  
Tel: +86-755-23118282  
Fax: +86-755-23116366

## 5.8 Test Instruments list

Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017
BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	02-25-2017	02-24-2018
Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	02-25-2017	02-24-2018
EMI Test Software	AUDIX	E3	N/A	N/A	N/A
Amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	02-25-2017	02-24-2018
Amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	02-25-2017	02-24-2018
Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	02-25-2017	02-24-2018
Horn Antenna	ETS-LINDGREN	3160	GTS217	02-25-2017	02-24-2018
Printer	HP	HP LaserJet P1007	N/A	N/A	N/A
Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A
Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP 30	CCIS0023	02-25-2017	02-24-2018
EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	02-25-2017	02-24-2018
EMI Test Receiver	Rohde & Schwarz	ESRP7	CCIS0167	02-25-2017	02-24-2018
Loop antenna	Laplace instrument	RF300	EMC0701	02-25-2017	02-24-2018
Universal radio communication tester	Rhode & Schwarz	CMU200	CCIS0069	02-25-2017	02-24-2018
Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	02-25-2017	02-24-2018
DC Power Supply	Shenzhen XinNuoEr Technologies Co., Ltd.	WYK-10020K	CCIS0201	10-31-2016	10-30-2017
Temperature Humidity Chamber	Fo Shan HengPu Electronics Co., Ltd.	HPGDS-500	CCIS0240	11-18-2016	11-27-2017

## 6. System test configuration

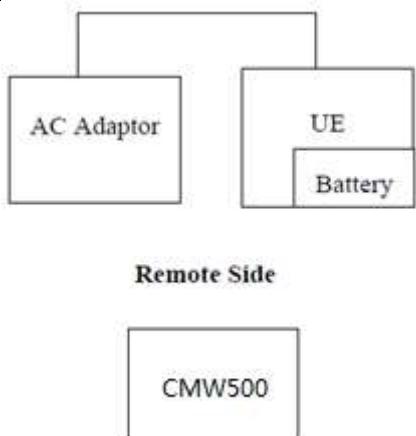
### 6.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 6.2 EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency which was for the purpose of the measurements.

### 6.3 Configuration of Tested System



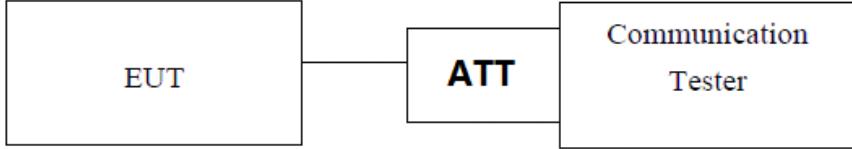
### 6.4 Description of Test Modes

The EUT has been tested under operating condition.

EUT staying in continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing.

The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for three modes (LTE Band 2, LTE Band 4, LTE Band 7 and LTE Band 17) with power adaptor, earphone and Data cable. The worst-case H mode for LTE Band 2, LTE Band 4, LTE Band 7 and LTE Band 17.

## 6.5 Conducted Output Power

Test Requirement:	Part 24.232 (c), part 27.50(c), part 27.50(d), Part 27.50 (h)		
Test Method:	FCC part2.1046		
Limit:	LTE Band2: 2W LTE Band 4: 1W LTE Band 7: 2W LTE Band 17: 3W		
Test setup:	 <i>Note: Measurement setup for testing on Antenna connector</i>		
Test Procedure:	The transmitter output was connected to a calibrated attenuator, the other end of which was connected to the CMW500. Transmitter output power was read off in dBm.		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

**Measurement Data:**  
**LTE Band 2 part**

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18607	18900	19193
					1850.7MHz	1880.0MHz	1909.3MHz
2	1.4	QPSK	1	0	21.28	21.58	21.14
			1	2	21.32	21.64	21.36
			1	5	21.40	21.57	21.40
			3	0	21.34	21.59	21.44
			3	1	21.37	21.60	21.40
			3	2	21.28	21.58	21.42
			6	0	20.83	20.97	20.96
		16QAM	1	0	20.83	20.71	21.44
			1	2	21.04	21.06	21.52
			1	5	20.62	21.33	21.82
			3	0	20.92	21.43	21.07
			3	1	20.98	21.34	20.85
			3	2	21.01	21.51	21.00
			6	0	20.30	20.60	20.73
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
2	3	QPSK	1	0	21.81	21.44	21.42
			1	7	21.65	21.34	21.45
			1	14	21.64	21.52	21.07
			8	0	21.21	21.08	20.98
			8	4	21.20	21.03	20.88
			8	7	21.21	21.04	21.02
			15	0	21.24	21.05	20.85
		16QAM	1	0	21.48	21.30	21.65
			1	7	21.19	21.88	21.21
			1	14	21.41	21.08	21.38
			8	0	20.54	20.44	21.17
			8	4	20.97	20.40	20.98
			8	7	20.31	20.42	20.79
			15	0	20.91	20.49	20.94
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
2	5	QPSK	1	0	21.46	21.43	21.30
			1	12	21.46	21.40	21.26
			1	24	21.48	21.33	21.46
			12	0	21.04	20.95	20.86
			12	6	21.16	20.91	20.86
			12	11	21.00	20.91	20.83
			25	0	21.02	20.91	20.90
		16QAM	1	0	21.21	20.76	20.94
			1	12	21.40	21.18	20.74
			1	24	21.97	20.80	20.76
			12	0	20.87	20.34	21.06
			12	6	20.87	20.42	21.00
			12	11	20.78	21.12	20.69
			25	0	20.87	21.10	20.80

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18650	18900	19150
					1855.0MHz	1880.0MHz	1905.0MHz
2	10	QPSK	1	0	21.62	21.17	20.97
			1	24	21.63	21.14	21.07
			1	49	21.40	20.99	21.12
			25	0	20.71	20.84	20.54
			25	12	20.84	20.68	20.52
			25	24	20.85	20.72	20.63
			50	0	20.84	20.69	20.50
		16QAM	1	0	20.81	21.12	20.83
			1	24	20.88	21.10	20.95
			1	49	20.58	20.95	21.28
			25	0	20.99	21.37	21.35
			25	12	20.96	21.19	21.14
			25	24	20.96	21.14	21.03
			50	0	21.01	21.24	21.09
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18675	18900	19125
					1857.5MHz	1880.0MHz	1902.5MHz
					1860.0MHz	1880.0MHz	1900.0MHz
2	15	QPSK	1	0	21.49	21.53	21.20
			1	37	21.69	21.46	21.00
			1	74	21.47	21.16	21.05
			36	0	21.07	20.98	20.66
			36	16	21.00	20.84	20.58
			36	35	21.08	20.76	20.82
			75	0	21.2	20.80	20.55
		16QAM	1	0	21.15	21.21	21.38
			1	37	20.69	20.57	20.89
			1	74	20.88	20.48	21.76
			36	0	20.76	21.11	20.85
			36	16	20.85	21.15	21.05
			36	35	20.71	21.05	20.87
			75	0	20.70	20.95	20.80
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18700	18900	19100
					1860.0MHz	1880.0MHz	1900.0MHz
					1860.0MHz	1880.0MHz	1900.0MHz
2	20	QPSK	1	0	21.64	21.33	21.38
			1	49	21.61	21.31	21.30
			1	99	21.34	21.10	21.37
			50	0	21.11	21.40	20.77
			50	24	21.08	21.24	20.69
			50	49	20.91	21.24	20.70
			100	0	21.06	20.83	20.76
		16QAM	1	0	20.79	21.02	20.94
			1	49	20.86	21.28	20.70
			1	99	20.45	20.76	20.91
			50	0	20.77	21.12	20.52
			50	24	20.82	20.99	20.95
			50	49	20.81	20.94	20.82
			100	0	20.81	20.96	20.91

## LTE Band 4 part

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19957	20175	20393
					1710.7MHz	1732.5MHz	1754.3MHz
4	1.4	QPSK	1	0	21.56	21.60	21.60
			1	2	21.66	21.82	21.79
			1	5	21.53	21.57	21.78
			3	0	21.61	21.54	21.62
			3	1	21.52	21.58	21.62
			3	2	21.51	21.52	21.59
			6	0	21.02	21.20	21.18
		16QAM	1	0	20.90	21.34	20.89
			1	2	21.68	21.34	21.38
			1	5	21.56	21.37	21.54
			3	0	21.06	21.54	21.37
			3	1	21.31	21.64	21.48
			3	2	21.39	21.46	21.33
			6	0	20.67	20.40	20.90
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
4	3	QPSK	1	0	21.57	21.56	21.40
			1	7	21.79	21.38	21.57
			1	14	21.56	21.37	21.35
			8	0	21.01	21.03	21.10
			8	4	20.87	21.01	21.02
			8	7	20.91	21.05	21.01
			15	0	20.89	21.00	21.02
		16QAM	1	0	21.88	21.24	21.49
			1	7	21.60	20.68	20.76
			1	14	21.93	20.45	20.76
			8	0	20.91	21.37	21.33
			8	4	21.00	20.96	21.37
			8	7	21.19	20.68	21.19
			15	0	20.95	21.18	21.08
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19975	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
4	5	QPSK	1	0	21.20	21.37	21.56
			1	12	21.22	21.46	21.62
			1	24	21.23	21.33	21.38
			12	0	20.76	21.00	21.05
			12	6	20.76	20.87	21.06
			12	11	20.68	20.83	21.06
			25	0	20.71	21.00	21.10
		16QAM	1	0	20.82	21.01	20.72
			1	12	20.80	20.66	20.58
			1	24	20.91	21.06	20.81
			12	0	20.64	21.06	21.09
			12	6	20.84	20.87	21.18
			12	11	20.74	20.87	20.83
			25	0	20.81	21.05	21.07

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
4	10	QPSK	1	0	21.30	21.48	21.53
			1	24	21.27	21.51	21.57
			1	49	21.27	21.49	21.42
			25	0	20.86	20.92	21.10
			25	12	20.77	20.97	20.95
			25	24	20.88	21.00	20.98
			50	0	20.74	20.82	20.97
		16QAM	1	0	21.28	21.65	21.60
			1	24	21.31	21.47	21.19
			1	49	21.72	21.33	21.51
			25	0	21.28	21.43	21.90
			25	12	21.23	21.37	21.62
			25	24	21.19	21.10	21.38
			50	0	21.17	21.37	21.59
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
4	15	QPSK	1	0	21.30	21.46	21.71
			1	37	21.20	21.36	21.35
			1	74	21.23	21.37	21.40
			36	0	20.78	20.93	21.03
			36	16	20.77	20.83	20.99
			36	35	20.85	20.91	20.93
			75	0	20.83	20.86	21.04
		16QAM	1	0	21.03	21.78	21.70
			1	37	20.92	21.22	21.05
			1	74	21.51	21.31	21.44
			36	0	20.77	21.09	21.17
			36	16	21.27	20.89	21.70
			36	35	21.07	20.71	21.16
			75	0	20.65	21.00	20.77
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
4	20	QPSK	1	0	21.38	21.39	21.60
			1	49	21.33	21.49	21.48
			1	99	21.23	21.35	21.25
			50	0	20.91	20.91	21.07
			50	24	20.77	20.98	21.02
			50	49	20.85	20.96	20.93
			100	0	20.80	20.99	20.97
		16QAM	1	0	20.78	21.14	21.26
			1	49	20.43	20.89	20.56
			1	99	21.04	20.59	21.07
			50	0	20.58	21.01	20.70
			50	24	21.13	21.06	21.08
			50	49	20.98	20.65	21.28
			100	0	20.95	20.98	20.91

## LTE Band 7 part

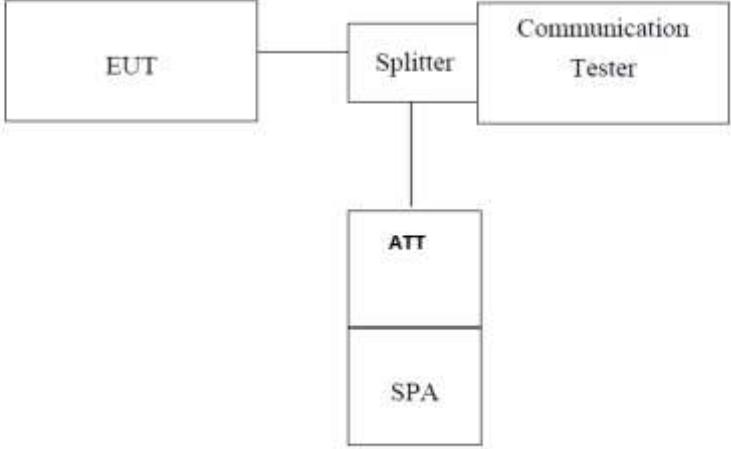
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20775	21100	21425
					2502.5MHz	2535.0MHz	2567.5MHz
7	5	QPSK	1	0	21.75	22.07	21.72
			1	12	21.83	22.12	21.75
			1	24	21.79	22.06	21.76
			12	0	21.19	21.64	21.25
			12	6	21.31	21.56	21.25
			12	11	21.32	21.60	21.26
			25	0	21.43	21.57	21.26
		16QAM	1	0	20.83	21.95	21.84
			1	12	21.09	21.78	21.62
			1	24	21.64	21.84	21.76
			12	0	20.94	20.96	21.07
			12	6	20.67	21.00	21.23
			12	11	20.68	21.07	21.12
			25	0	20.98	21.01	21.09
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20800	21100	21400
					2505.0MHz	2535.0MHz	2565.0MHz
7	10	QPSK	1	0	21.78	22.22	21.30
			1	24	21.86	22.11	21.81
			1	49	21.22	22.05	21.74
			25	0	21.40	21.69	21.20
			25	12	21.33	21.64	21.29
			25	24	21.34	21.63	21.26
			50	0	21.36	21.53	21.30
		16QAM	1	0	21.56	21.72	21.63
			1	24	21.73	22.00	21.78
			1	49	21.77	21.87	21.76
			25	0	20.90	21.28	21.16
			25	12	20.83	21.34	21.23
			25	24	20.78	21.38	21.32
			50	0	20.84	21.29	21.26

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20825	21100	21375
					2507.5MHz	2535.0MHz	2562.5MHz
7	15	QPSK	1	0	21.16	21.42	20.74
			1	37	21.55	22.13	21.64
			1	74	20.63	21.94	21.18
			36	0	21.35	21.75	21.16
			36	16	21.38	21.67	21.19
			36	35	21.45	21.57	21.22
			75	0	21.41	21.63	21.20
		16QAM	1	0	21.32	21.95	21.08
			1	37	21.41	22.58	21.17
			1	74	21.57	22.08	21.72
			36	0	20.63	21.35	20.86
			36	16	20.97	21.24	21.03
			36	35	20.70	20.93	21.11
			75	0	20.51	21.12	20.91
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20850	21100	21350
					2510.0MHz	2535.0MHz	2560.0MHz
7	20	QPSK	1	0	21.85	22.14	21.79
			1	49	21.44	22.15	21.64
			1	99	21.36	21.89	21.71
			50	0	21.43	21.70	21.21
			50	24	21.47	21.56	21.15
			50	49	21.43	21.57	21.36
			100	0	21.53	21.52	21.16
		16QAM	1	0	21.09	22.10	21.26
			1	49	21.25	21.59	21.13
			1	99	21.55	21.72	21.24
			50	0	20.51	21.23	20.68
			50	24	20.79	21.17	20.89
			50	49	20.86	20.80	21.00
			100	0	20.81	21.02	20.93

## LTE Band 17 part

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23755	23790	23825
					706.5MHz	710.0MHz	713.5MHz
17	5	QPSK	1	0	21.79	21.56	21.68
			1	12	21.77	21.65	21.65
			1	24	21.79	21.72	21.56
			12	0	21.09	21.18	21.12
			12	6	21.11	21.10	21.14
			12	11	21.13	21.17	21.09
			25	0	21.18	21.23	21.07
		16QAM	1	0	21.65	20.46	21.02
			1	12	21.28	21.08	20.90
			1	24	21.97	21.12	21.04
			12	0	20.46	20.33	20.37
			12	6	20.35	20.41	20.85
			12	11	20.32	20.43	20.76
			25	0	20.33	20.36	20.53
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23780	23790	23800
					709.0MHz	710.0MHz	711.0MHz
17	10	QPSK	1	0	21.69	21.65	21.74
			1	24	21.71	21.81	21.72
			1	49	21.69	21.63	21.69
			25	0	21.14	21.07	21.19
			25	12	21.29	21.24	21.04
			25	24	21.18	21.19	21.15
			50	0	21.12	21.18	21.10
		16QAM	1	0	21.70	21.40	20.89
			1	24	21.50	21.18	20.83
			1	49	21.78	21.45	20.50
			25	0	20.35	20.38	20.32
			25	12	20.31	20.46	20.59
			25	24	20.74	20.41	20.57
			50	0	20.40	20.50	20.63

## 6.6 Peak-to-Average Ratio

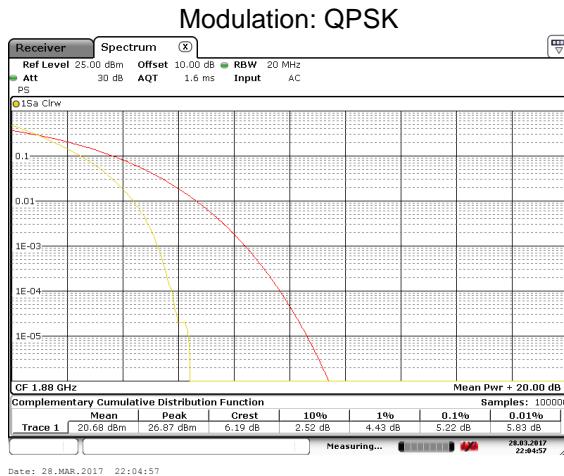
Test Requirement:	Part 24.232 (d), Part 27.50(d)(5)
Limit:	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
Test setup:	 <p><i>Note: Measurement setup for testing on Antenna connector</i></p>
Test Procedure:	
<ol style="list-style-type: none"> <li>1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.</li> <li>2 Set the CCDF option in spectrum analyzer, <math>RBW \geq OBW</math>,</li> <li>3 Set the EUT working in highest power level, measured and recorded the 0.1% as PAPR level.</li> <li>4 Repeat step 1~3 at other frequency and modulations.</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:**

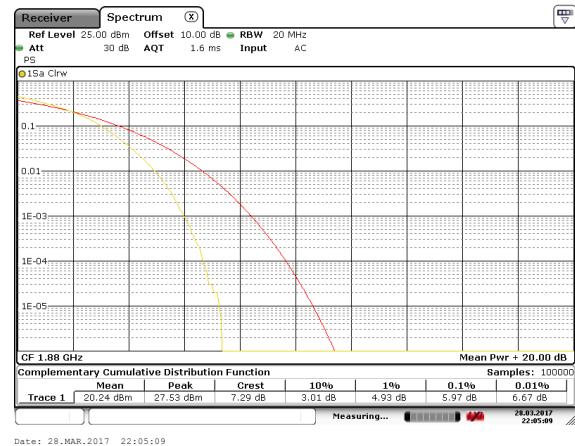
BW(MHz)	Modulation	RB Size	RB Offset	PAPR
LTE Band 2 (Middle Channel)				
20MHz	QPSK	100	0	5.22
	16QAM	100	0	5.97
LTE Band 4 (Middle Channel)				
20MHz	QPSK	100	0	5.16
	16QAM	100	0	6.09
LTE Band 7 (Middle Channel)				
20MHz	QPSK	100	0	4.35
	16QAM	100	0	6.03
LTE Band 17 (Middle Channel)				
10MHz	QPSK	50	0	5.80
	16QAM	50	0	6.43

Test plots as below:

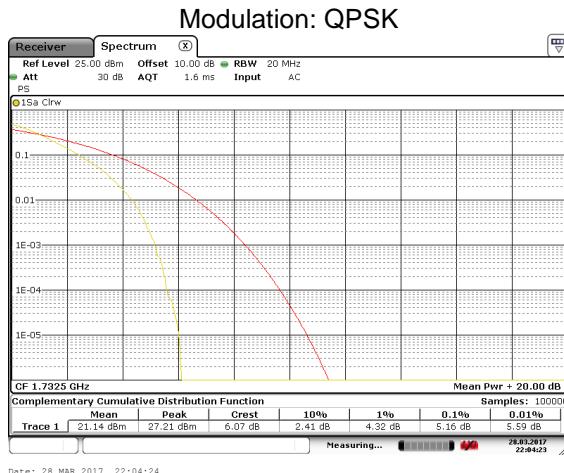
### LTE Band 2 Middle channel



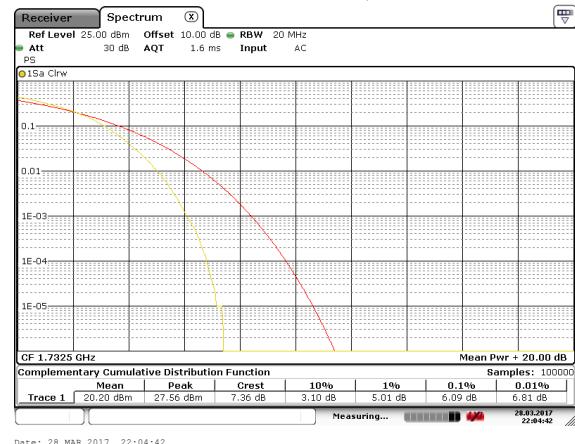
### Modulation:16QAM



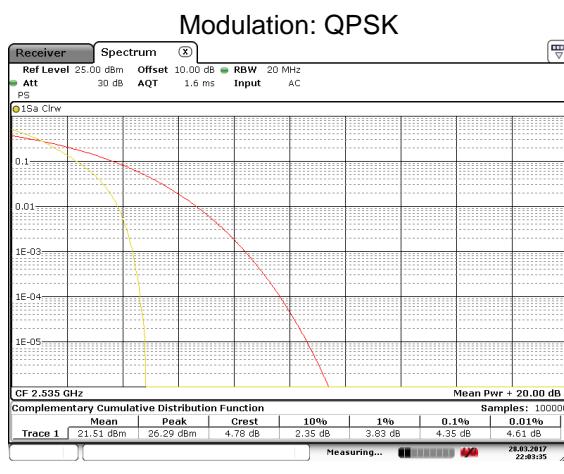
### LTE Band 4 Middle channel



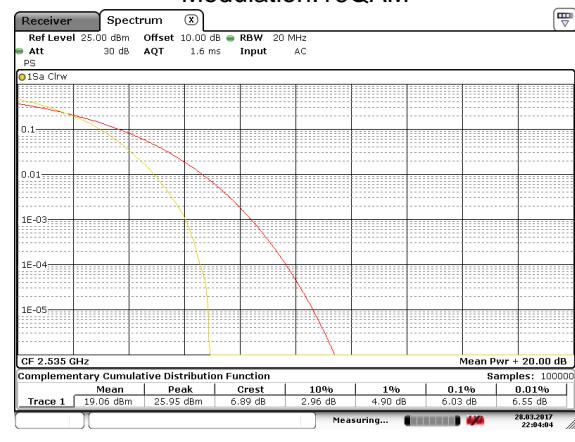
### Modulation:16QAM



### LTE Band 7 Middle channel

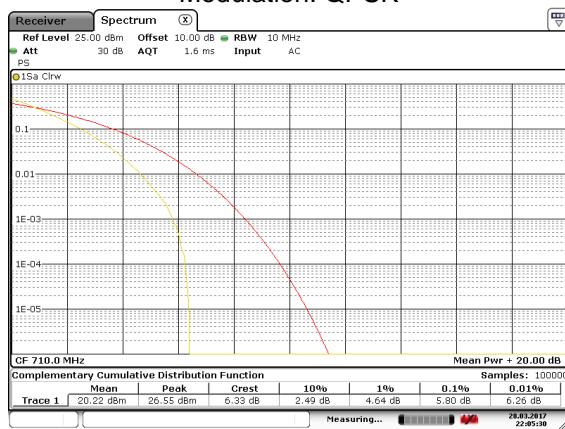


### Modulation:16QAM

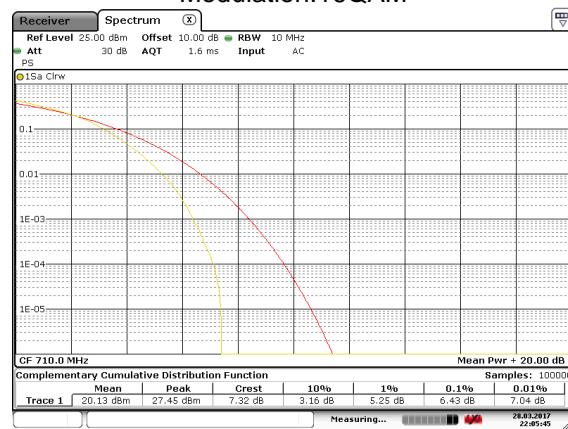


LTE Band 17 Middle channel

Modulation: QPSK



Modulation: 16QAM



Date: 28.MAR.2017 22:05:31

Date: 28.MAR.2017 22:05:46

## 6.7 Occupy Bandwidth

Test Requirement:	Part 24.238, part 27.53(g), part 27.53(h), Part 27.53(m)
Test Method:	FCC part2.1049
Test setup:	<p><i>Note: Measurement setup for testing on Antenna connector</i></p>
<p><b>Test Procedure:</b></p> <ol style="list-style-type: none"> <li>1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer</li> <li>2. RBW was set to about 1% ~ 5% of emission BW, VBW= 3 times RBW.</li> <li>3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.</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:****LTE Band 2 part:**

EUT Mode	Channel	Frequency(MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
1.4MHz	18607	1850.70	16QAM	1116	1422
			QPSK	1104	1404
	18900	1880.00	16QAM	1110	1428
			QPSK	1104	1398
	19193	1909.30	16QAM	1110	1374
			QPSK	1104	1398
3MHz	18615	1851.50	16QAM	2736	3168
			QPSK	2736	3168
	18900	1880.00	16QAM	2724	3132
			QPSK	2760	3144
	19185	1908.50	16QAM	2736	3108
			QPSK	2760	3192
5MHz	18625	1852.50	16QAM	4520	5060
			QPSK	4520	5100
	18900	1880.00	16QAM	4520	5120
			QPSK	4520	5080
	19175	1907.50	16QAM	4500	5020
			QPSK	4520	5160
10MHz	18650	1855.00	16QAM	9120	10040
			QPSK	9120	10240
	18900	1880.00	16QAM	9080	10120
			QPSK	9120	10160
	19150	1905.00	16QAM	9080	10240
			QPSK	9120	10200
15MHz	18675	1857.50	16QAM	13500	14820
			QPSK	13500	14880
	18900	1880.00	16QAM	13500	14700
			QPSK	13500	14940
	19125	1902.50	16QAM	13500	14700
			QPSK	13560	14880
20MHz	18700	1860.00	16QAM	18000	19600
			QPSK	18000	20000
	18900	1880.00	16QAM	18000	19680
			QPSK	18160	19520
	19100	1900.00	16QAM	18000	19520
			QPSK	18000	19840

**LTE Band 4 part:**

EUT Mode	Channel	Frequency(MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
1.4MHz	19957	1710.7	16QAM	1110	1414
			QPSK	1104	1398
	20175	1732.5	16QAM	1098	1416
			QPSK	1110	1398
	20393	1754.3	16QAM	1110	1368
			QPSK	1110	1368
3MHz	19965	1711.5	16QAM	2748	3108
			QPSK	2748	3228
	20175	1732.5	16QAM	2736	3108
			QPSK	2736	3132
	20385	1750.5	16QAM	2736	3096
			QPSK	2748	3132
5MHz	19975	1712.5	16QAM	4520	5080
			QPSK	4520	5060
	20175	1732.5	16QAM	4520	4980
			QPSK	4520	5160
	20375	1752.5	16QAM	4480	4980
			QPSK	4540	5160
10MHz	20000	1715.0	16QAM	9120	10160
			QPSK	9120	10160
	20175	1732.5	16QAM	9080	10200
			QPSK	9160	10320
	20350	1750.0	16QAM	9120	10000
			QPSK	9120	10160
15MHz	20025	1717.5	16QAM	13440	14640
			QPSK	13560	15000
	20175	1732.5	16QAM	13560	14640
			QPSK	13560	14760
	20325	1747.5	16QAM	13500	14700
			QPSK	13500	14820
20MHz	20050	1720.0	16QAM	17920	18960
			QPSK	18080	19760
	20175	1732.5	16QAM	17920	19440
			QPSK	18000	19600
	20300	1745.0	16QAM	17920	19360
			QPSK	17920	19520

**LTE Band 7 part:**

EUT Mode	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dB EBW (kHz)
5MHz	20775	2502.5	16QAM	4480	4940
			QPSK	4520	5300
	21100	2535.0	16QAM	4500	5060
			QPSK	4540	5100
	21425	2567.5	16QAM	4520	5060
			QPSK	4520	5180
	10MHz	20800	16QAM	9120	10000
			QPSK	9120	10360
		21100	16QAM	9120	10240
			QPSK	9160	10120
	15MHz	21400	16QAM	9120	10240
			QPSK	9120	10360
		20825	16QAM	13500	14820
			QPSK	13560	14880
	20MHz	21100	16QAM	13500	14760
			QPSK	13560	14700
		21375	16QAM	13560	14820
			QPSK	13560	14940
	20MHz	20850	16QAM	17920	19600
			QPSK	18000	20000
		21100	16QAM	17920	19520
			QPSK	18000	19680
		21350	16QAM	17920	19680
			QPSK	18080	19840

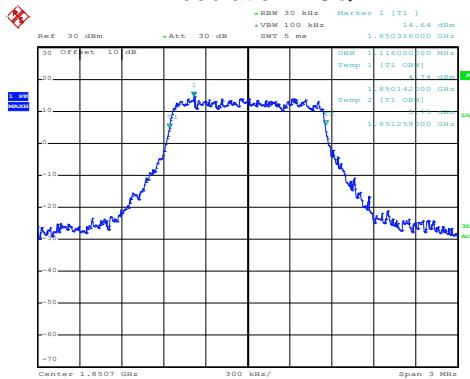
**LTE Band 17 part:**

EUT Mode	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dB EBW (kHz)
5MHz	23755	706.5	16QAM	4480	4980
			QPSK	4520	5140
	23790	710.0	16QAM	4520	5040
			QPSK	4540	5040
	23825	713.5	16QAM	4480	5000
			QPSK	4520	5080
	10MHz	23780	16QAM	9120	10080
			QPSK	9080	10320
		23790	16QAM	9120	10120
			QPSK	9160	10400
	23800	711.0	16QAM	9080	10080
			QPSK	9080	10320

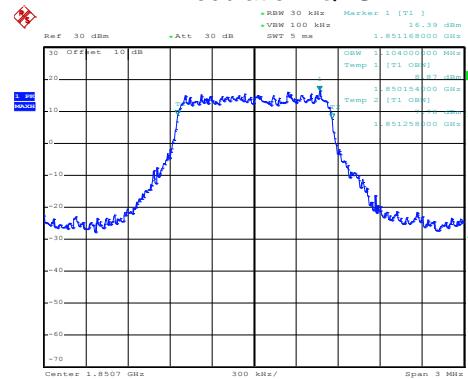
**Test plot as follows:**  
**LTE Band 2 part**

Test Item:99% Occupy bandwidth  
 BW: 1.4MHz

Modulation: 16QAM



Modulation: QPSK

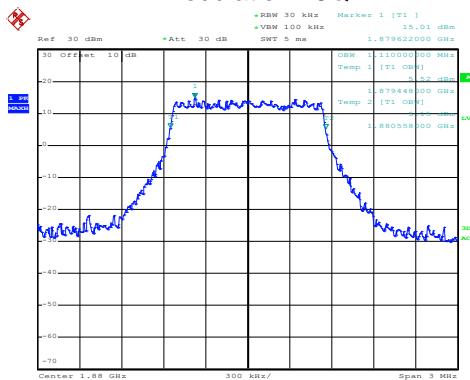


Date: 28.MAR.2017 18:46:22

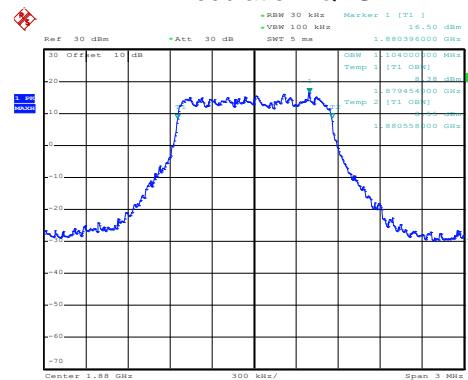
Date: 28.MAR.2017 18:46:16

Lowest channel

Modulation:16QAM



Modulation: QPSK

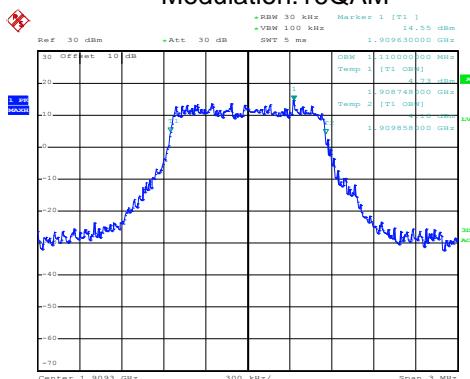


Date: 28.MAR.2017 18:45:33

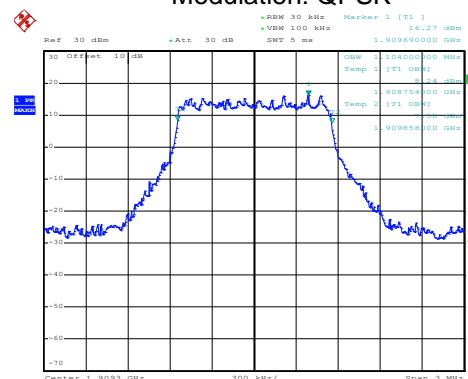
Date: 28.MAR.2017 18:45:26

Middle channel

Modulation:16QAM



Modulation: QPSK



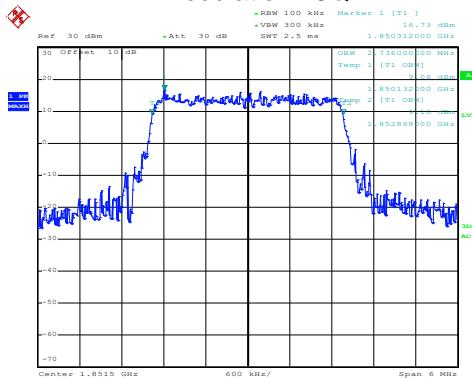
Date: 28.MAR.2017 18:46:40

Date: 28.MAR.2017 18:46:37

Highest channel

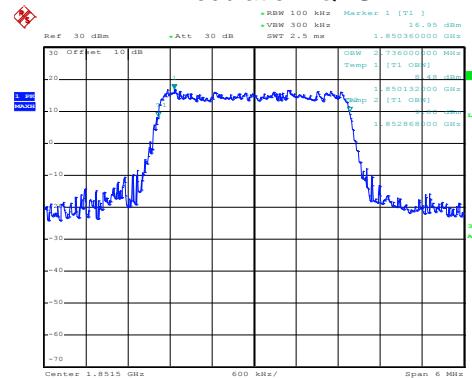
Test Item:99% Occupy bandwidth  
BW: 3MHz

Modulation:16QAM



Date: 28.MAR.2017 18:47:54

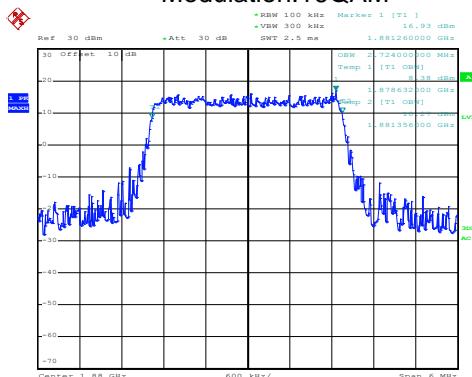
Modulation: QPSK



Date: 28.MAR.2017 18:47:50

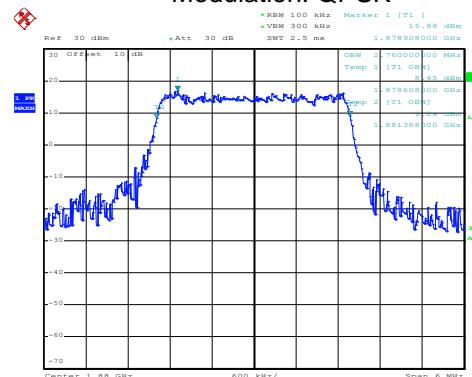
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:48:09

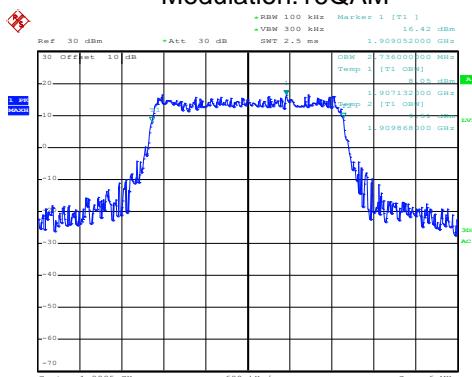
Modulation: QPSK



Date: 28.MAR.2017 18:48:06

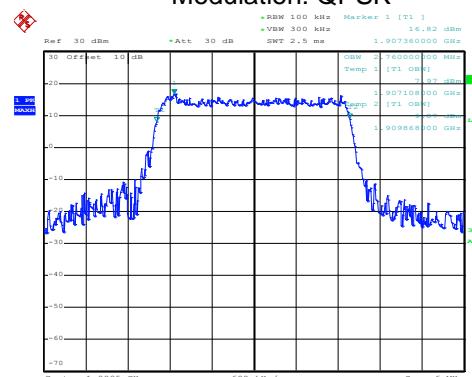
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 18:48:55

Modulation: QPSK

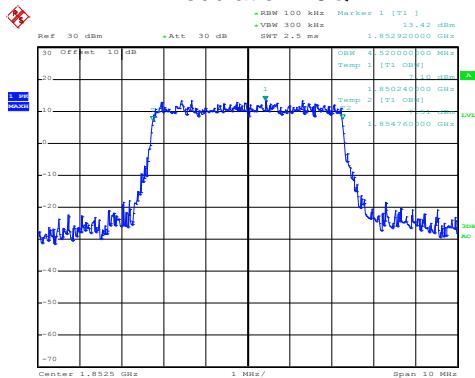


Date: 28.MAR.2017 18:48:49

Highest channel

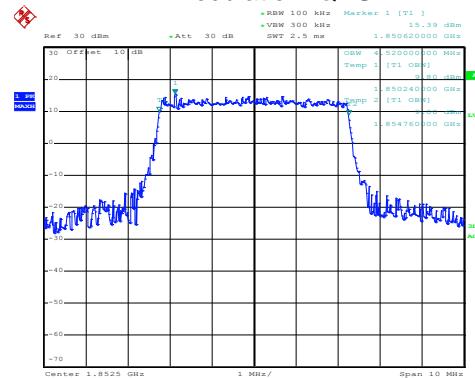
Test Item:99% Occupy bandwidth  
BW: 5MHz

Modulation:16QAM



Date: 28.MAR.2017 18:49:29

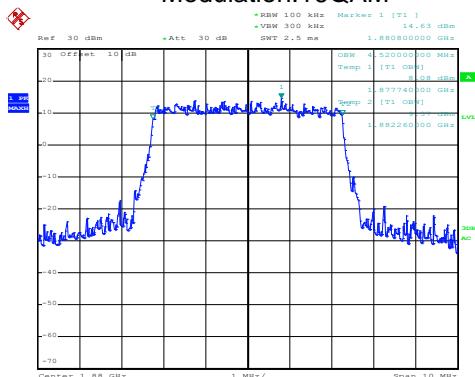
Modulation: QPSK



Date: 28.MAR.2017 18:49:25

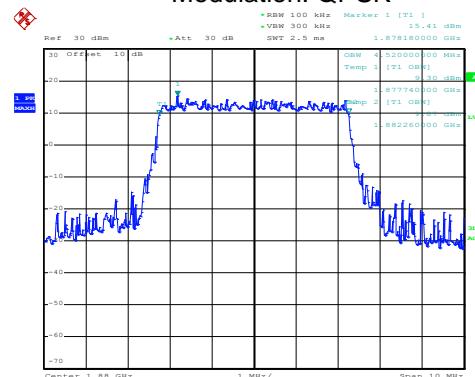
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:50:19

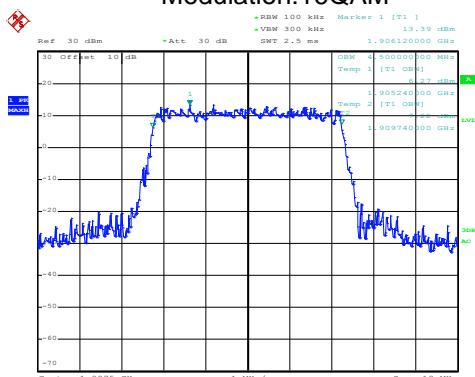
Modulation: QPSK



Date: 28.MAR.2017 18:50:15

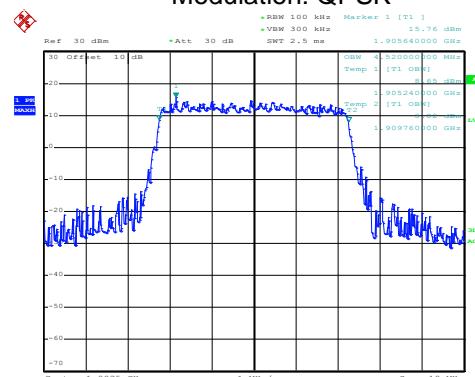
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 18:50:37

Modulation: QPSK

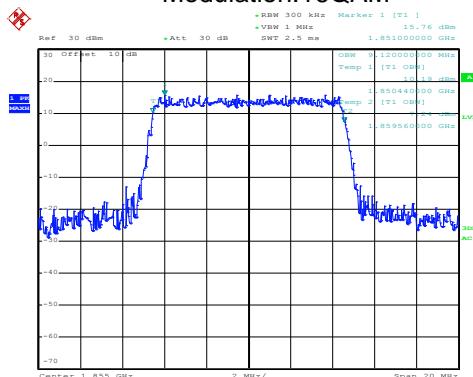


Date: 28.MAR.2017 18:50:34

Highest channel

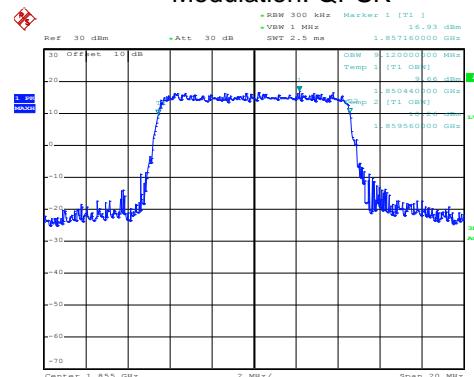
Test Item:99% Occupy bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 28.MAR.2017 18:51:36

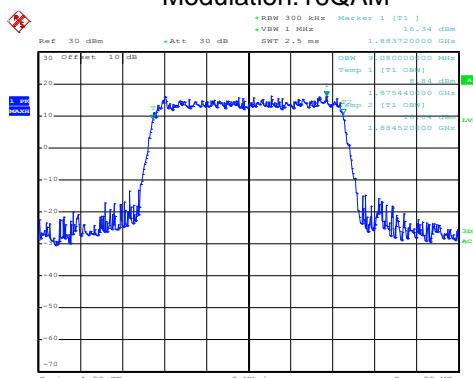
Modulation: QPSK



Date: 28.MAR.2017 18:51:32

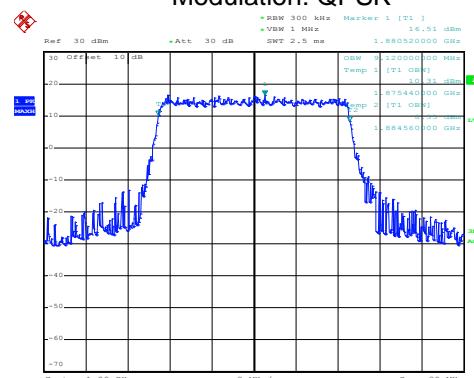
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:51:51

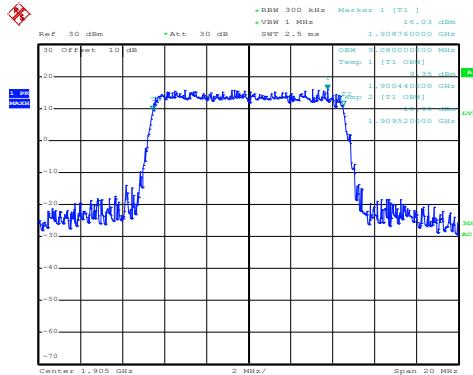
Modulation: QPSK



Date: 28.MAR.2017 18:52:07

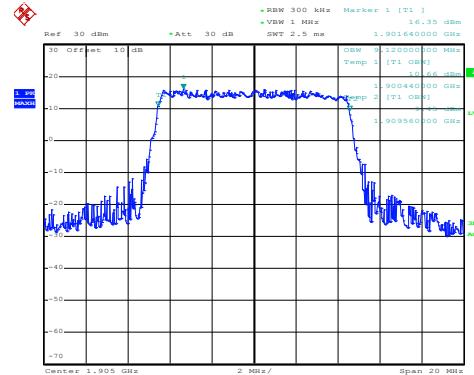
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 18:52:28

Modulation: QPSK

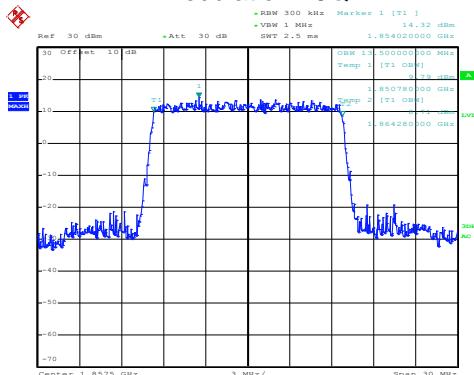


Date: 28.MAR.2017 18:52:25

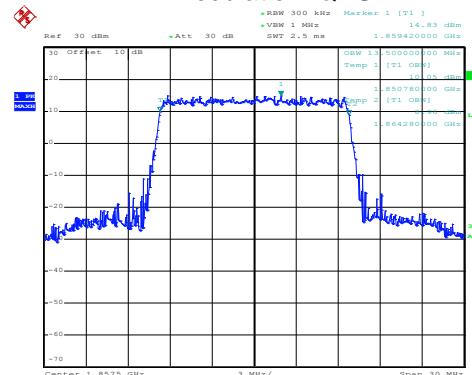
Highest channel

Test Item:99% Occupy bandwidth  
BW: 15MHz

Modulation:16QAM

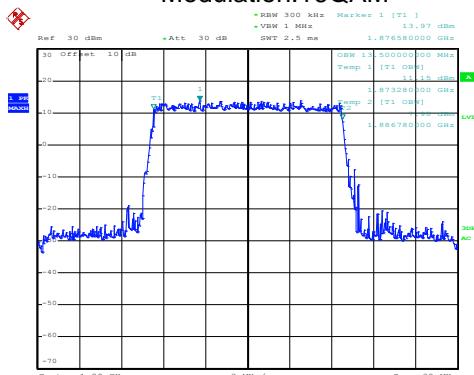


Modulation: QPSK

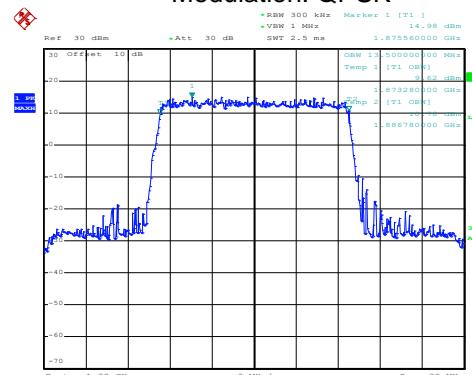


Lowest channel

Modulation:16QAM

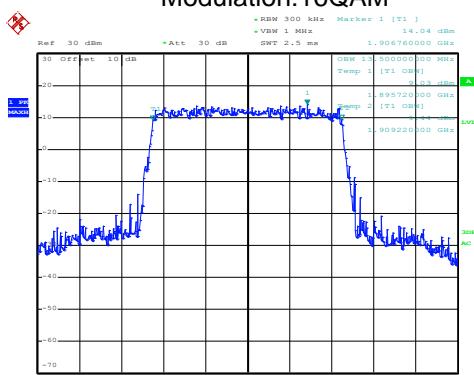


Modulation: QPSK

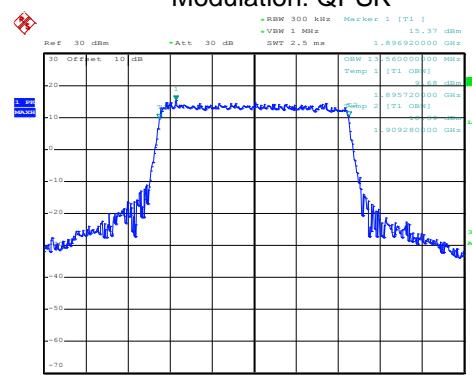


Middle channel

Modulation:16QAM



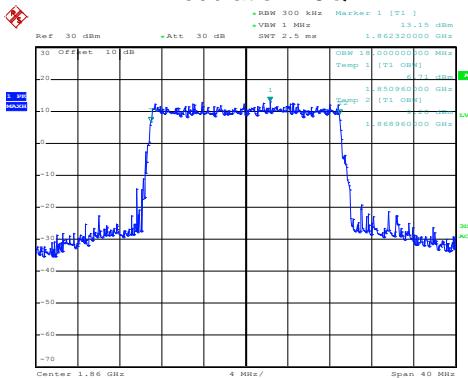
Modulation: QPSK



Highest channel

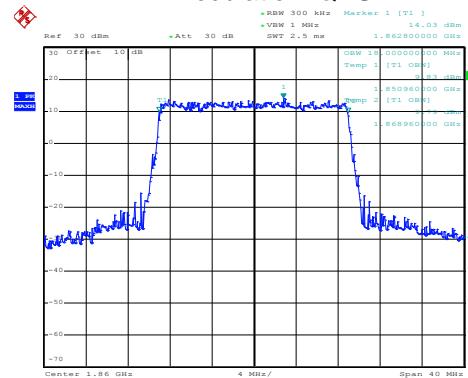
Test Item:99% Occupy bandwidth  
BW: 20MHz

Modulation:16QAM



Date: 28.MAR.2017 18:55:40

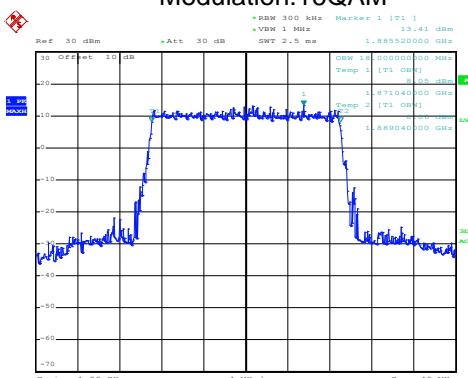
Modulation: QPSK



Date: 28.MAR.2017 18:55:36

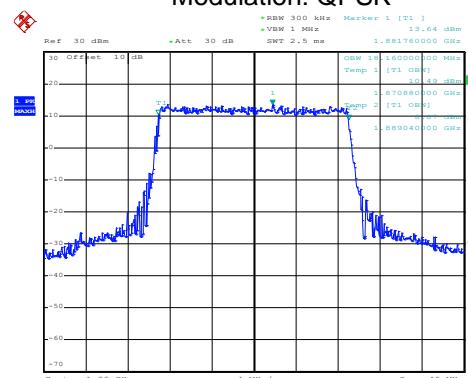
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:55:56

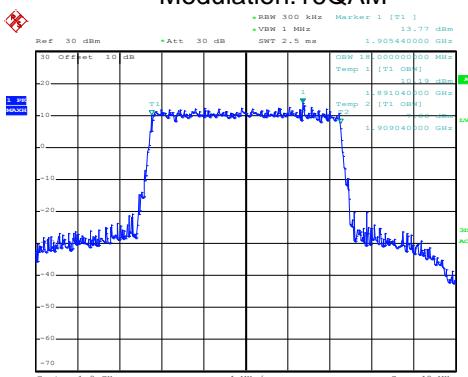
Modulation: QPSK



Date: 28.MAR.2017 18:55:52

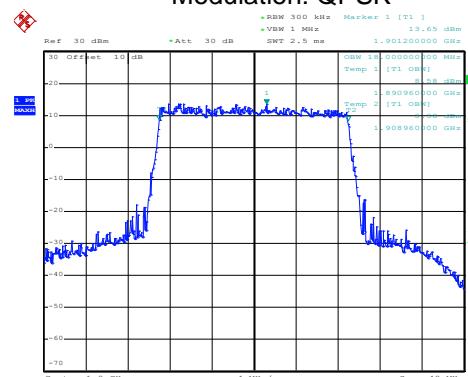
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 18:56:32

Modulation: QPSK

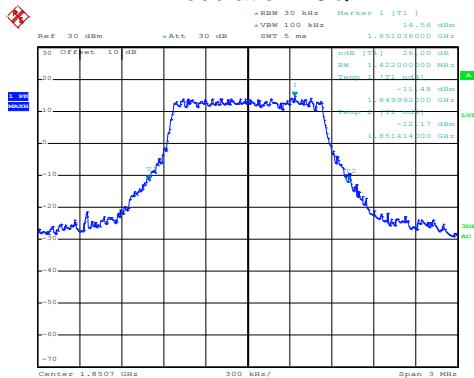


Date: 28.MAR.2017 18:56:26

Highest channel

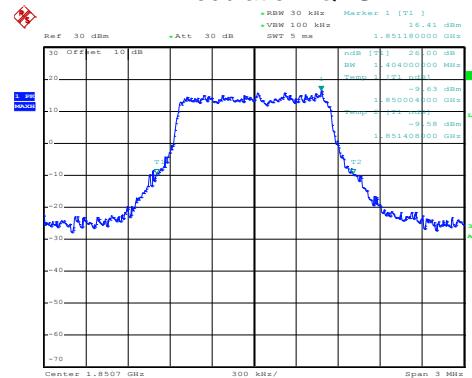
Test Item:-26dBc bandwidth  
BW: 1.4MHz

Modulation:16QAM



Date: 28.MAR.2017 18:46:04

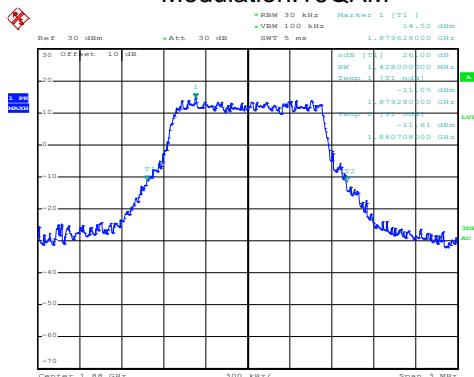
Modulation: QPSK



Date: 28.MAR.2017 18:45:56

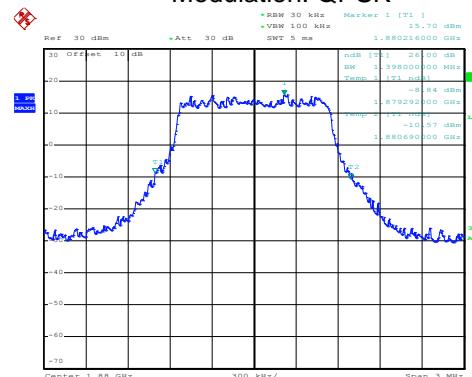
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:45:42

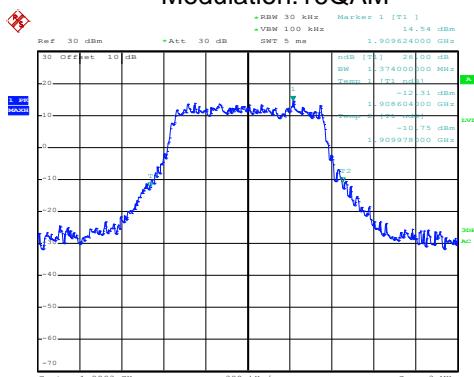
Modulation: QPSK



Date: 28.MAR.2017 18:45:39

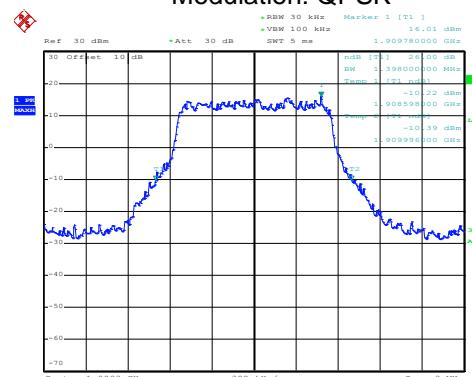
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 18:46:52

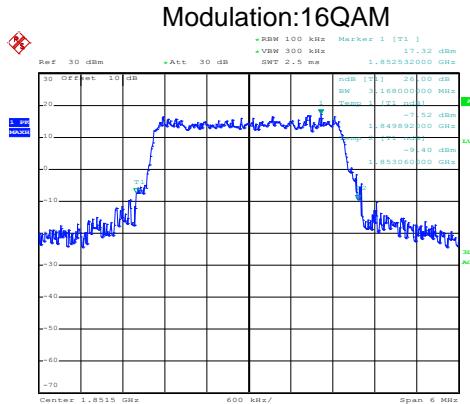
Modulation: QPSK



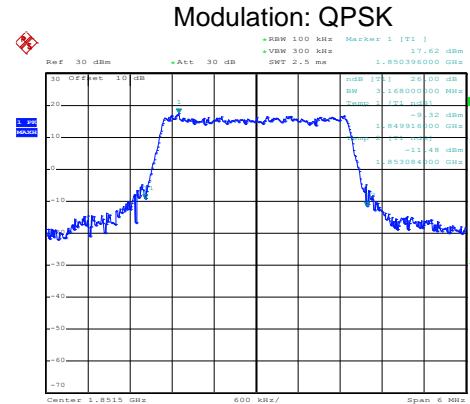
Date: 28.MAR.2017 18:46:48

Highest channel

Test Item:-26dBc bandwidth  
BW: 3MHz

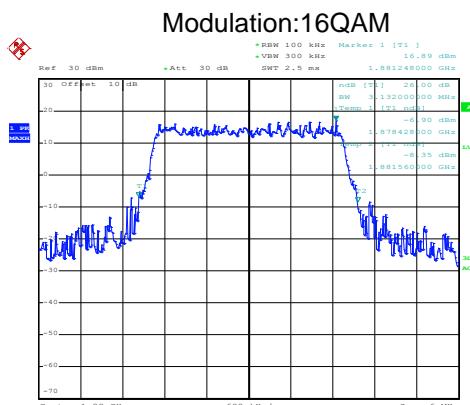


Date: 28.MAR.2017 18:47:43

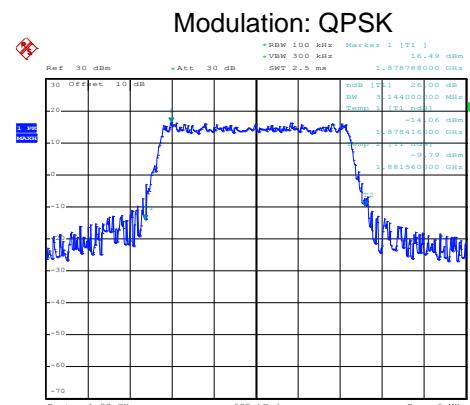


Date: 28.MAR.2017 18:47:37

## Lowest channel

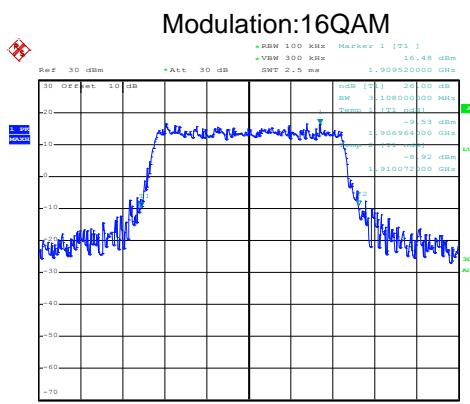


Date: 28.MAR.2017 18:48:21

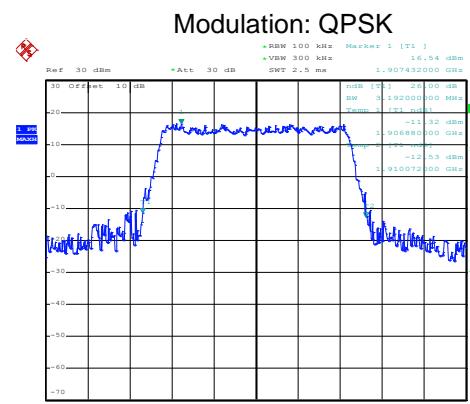


Date: 28.MAR.2017 18:48:15

## Middle channel



Date: 28.MAR.2017 18:48:42

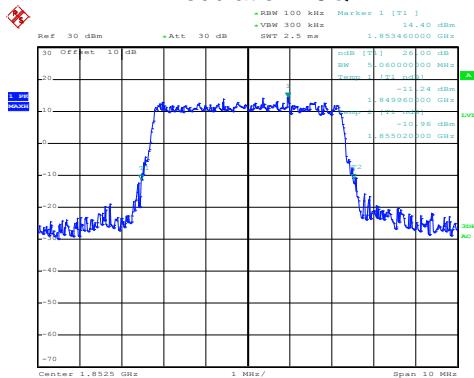


Date: 28.MAR.2017 18:48:36

## Highest channel

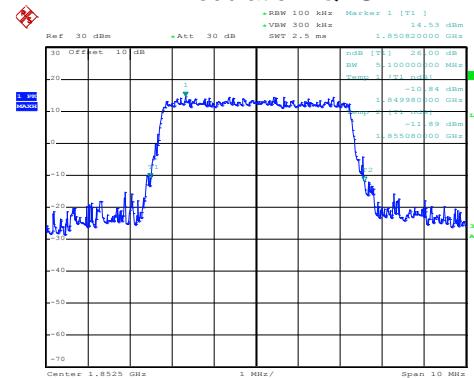
Test Item:-26dBc bandwidth  
BW: 5MHz

Modulation:16QAM



Date: 28.MAR.2017 18:49:40

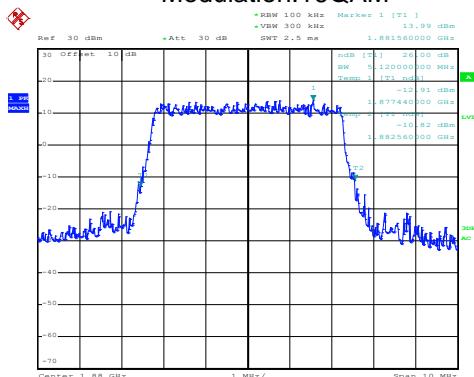
Modulation: QPSK



Date: 28.MAR.2017 18:49:35

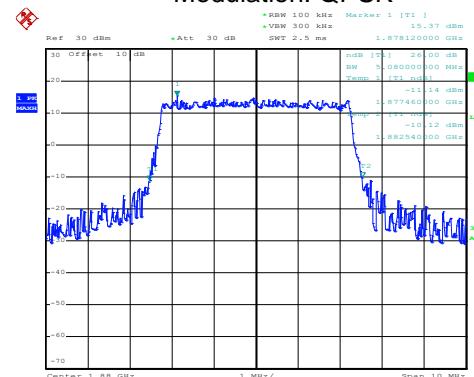
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:50:08

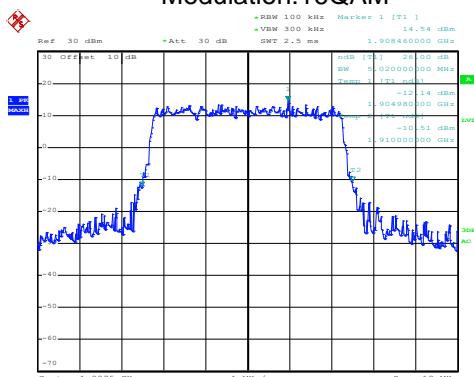
Modulation: QPSK



Date: 28.MAR.2017 18:50:04

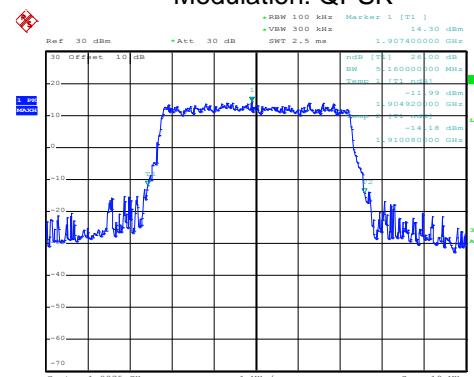
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 18:50:49

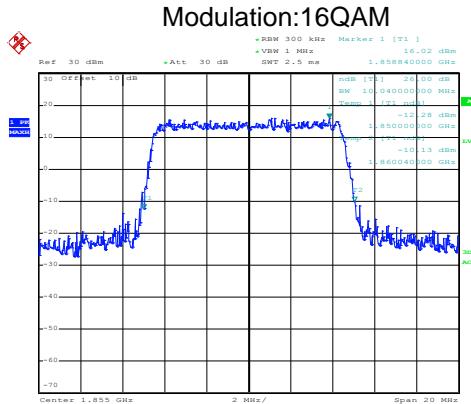
Modulation: QPSK



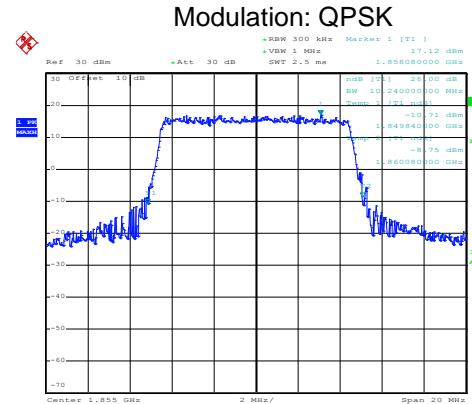
Date: 28.MAR.2017 18:50:44

Highest channel

Test Item:-26dBc bandwidth  
BW: 10MHz

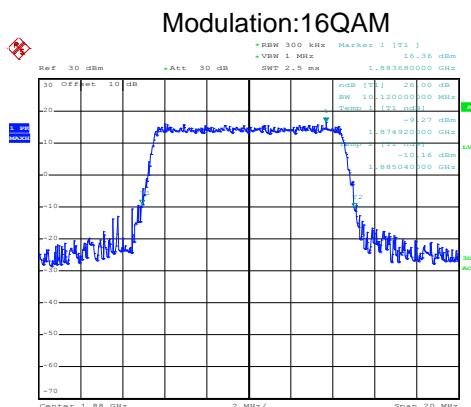


Date: 28.MAR.2017 18:51:27

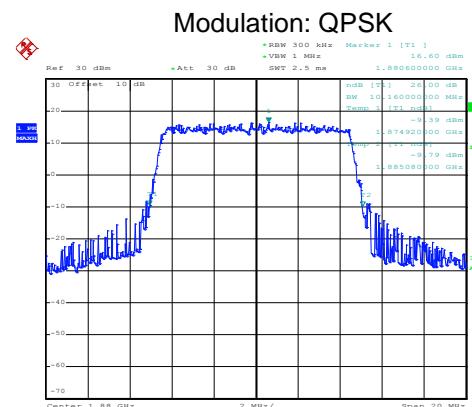


Date: 28.MAR.2017 18:51:23

## Lowest channel

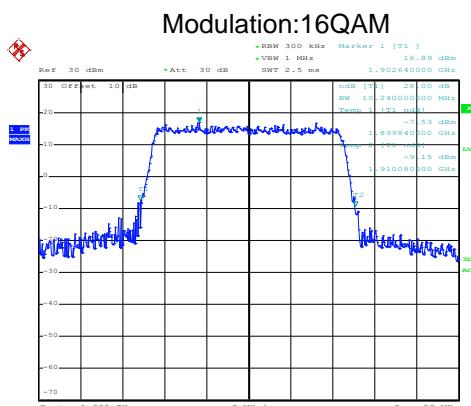


Date: 28.MAR.2017 18:52:02

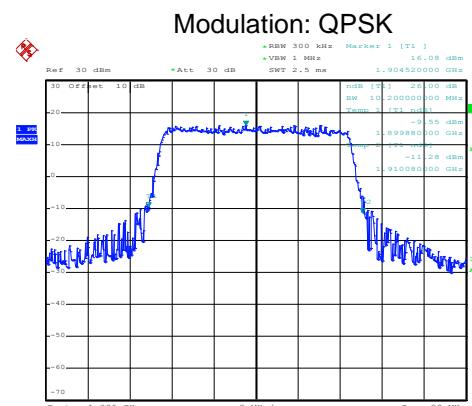


Date: 28.MAR.2017 18:51:57

### Middle channel



Date: 28.MAR.2017 18:52:44

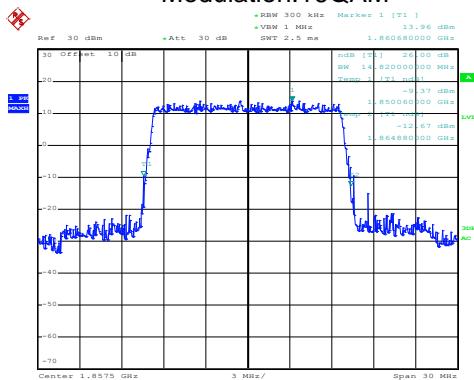


Date: 28.MAR.2017 18:52:36

## Highest channel

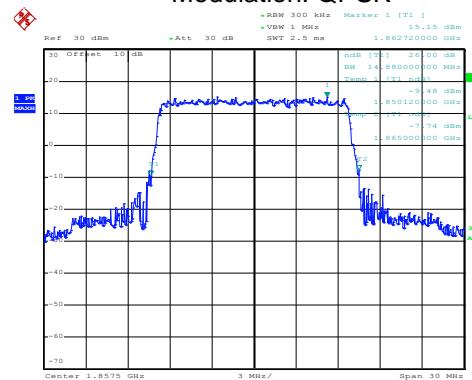
Test Item:-26dBc bandwidth  
BW: 15MHz

Modulation:16QAM



Date: 28.MAR.2017 18:53:13

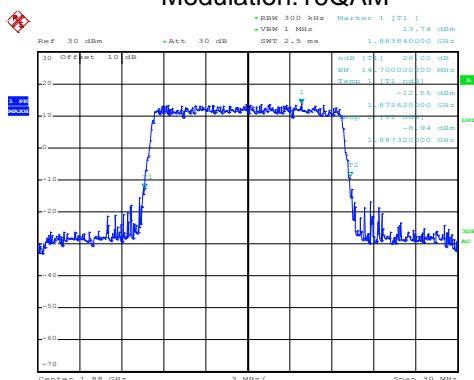
Modulation: QPSK



Date: 28.MAR.2017 18:53:09

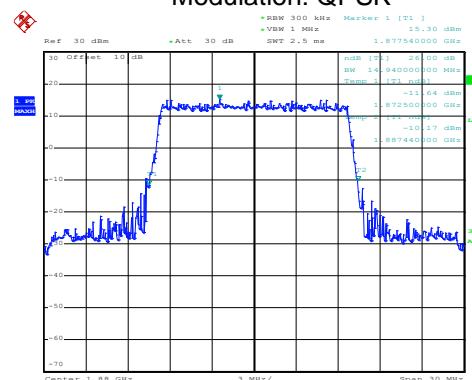
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:53:50

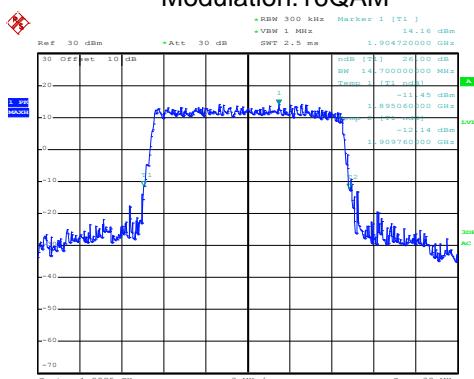
Modulation: QPSK



Date: 28.MAR.2017 18:53:46

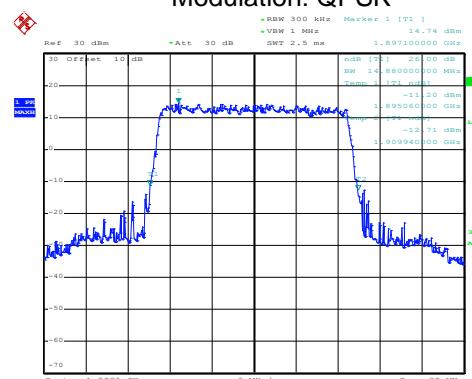
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 18:54:52

Modulation: QPSK

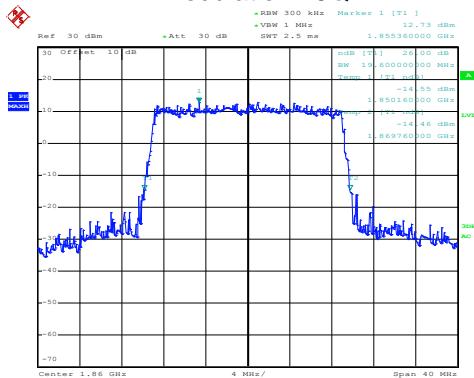


Date: 28.MAR.2017 18:54:48

Highest channel

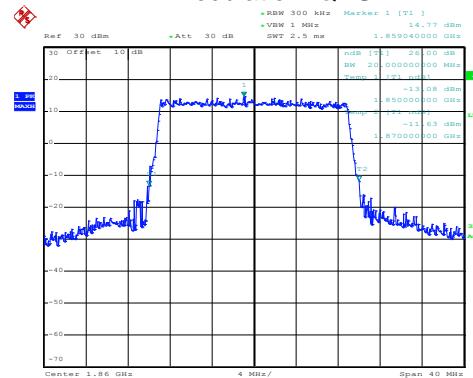
Test Item:-26dBc bandwidth  
BW: 20MHz

Modulation:16QAM



Date: 28.MAR.2017 18:55:30

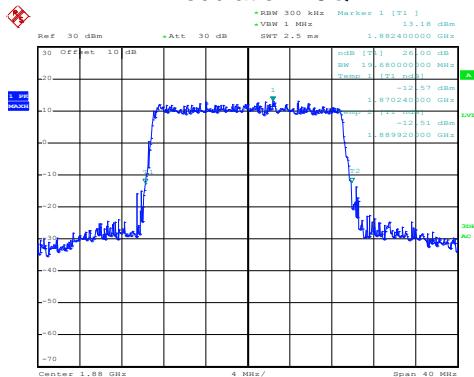
Modulation: QPSK



Date: 28.MAR.2017 18:55:27

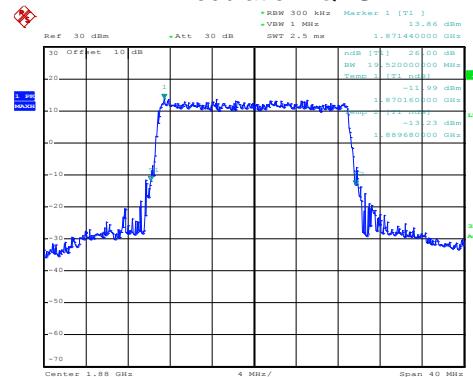
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 18:56:06

Modulation: QPSK

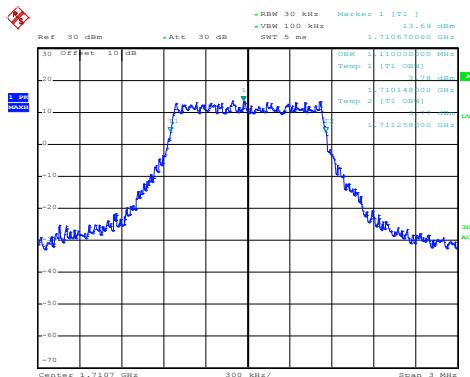


## LTE Band 4 part

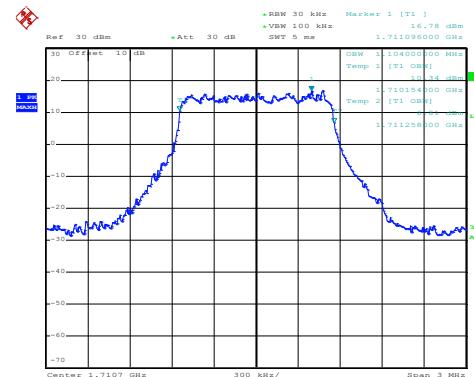
Test Item:99% Occupy bandwidth

BW: 1.4MHz

Modulation:16QAM

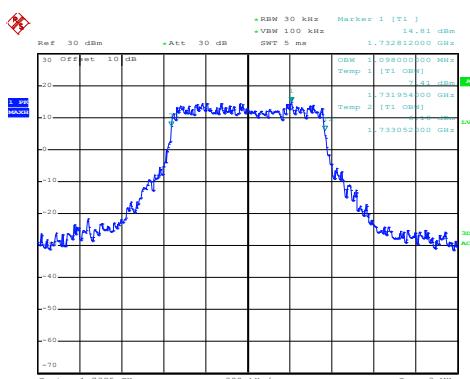


Modulation: QPSK

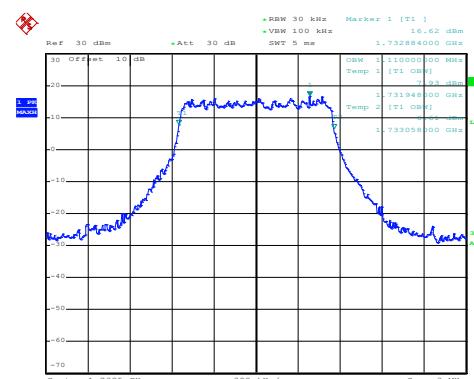


Lowest channel

Modulation:16QAM

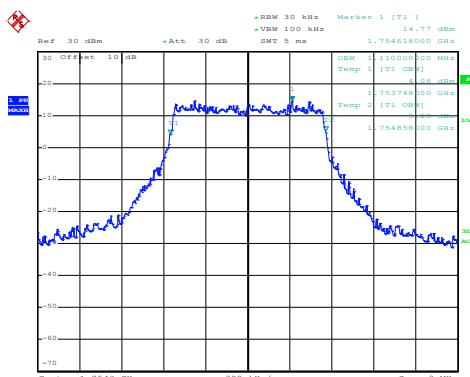


Modulation: QPSK

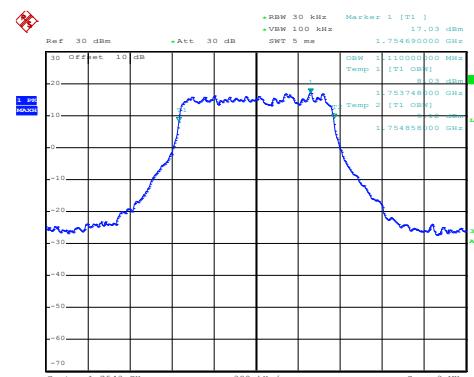


Middle channel

Modulation:16QAM



Modulation: QPSK

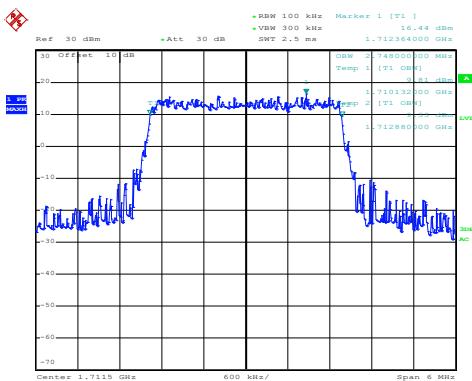


Highest channel

Test Item:99% Occupy bandwidth

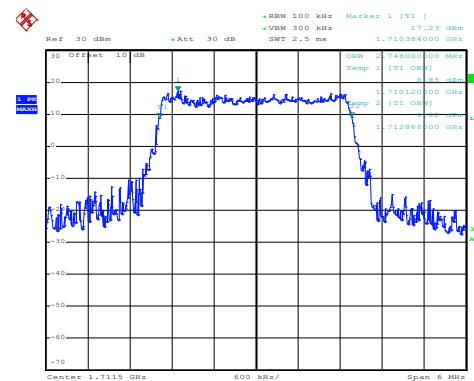
BW: 3MHz

Modulation:16QAM



Date: 28.MAR.2017 19:08:25

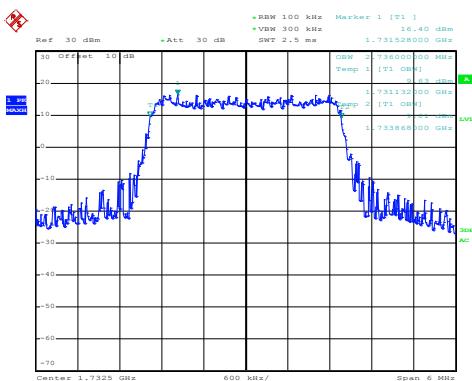
Modulation: QPSK



Date: 28.MAR.2017 19:08:21

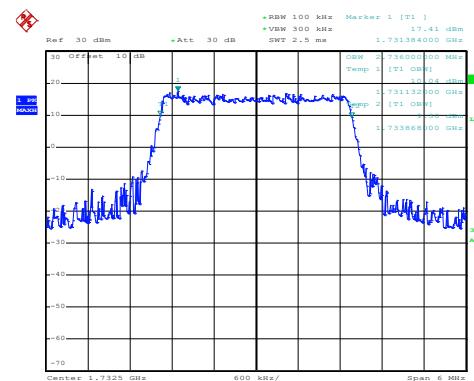
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 19:08:45

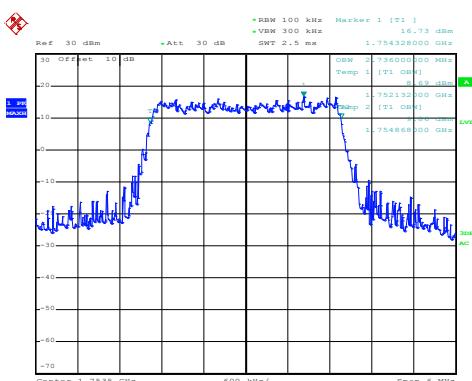
Modulation: QPSK



Date: 28.MAR.2017 19:08:41

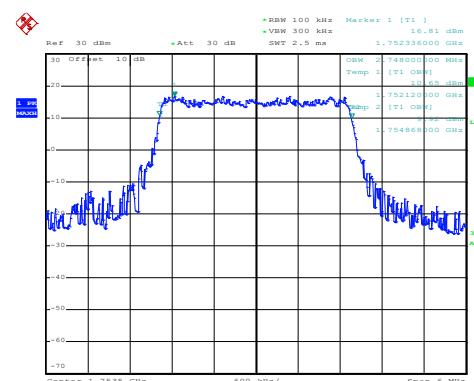
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 19:09:25

Modulation: QPSK



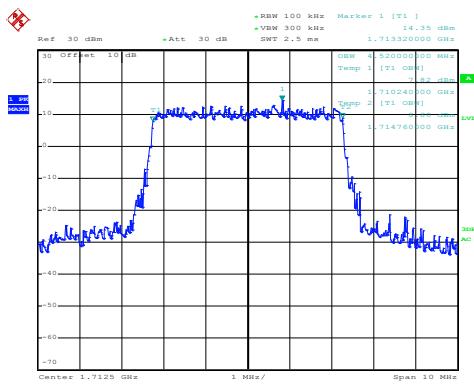
Date: 28.MAR.2017 19:09:21

Highest channel

## Test Item:99% Occupy bandwidth

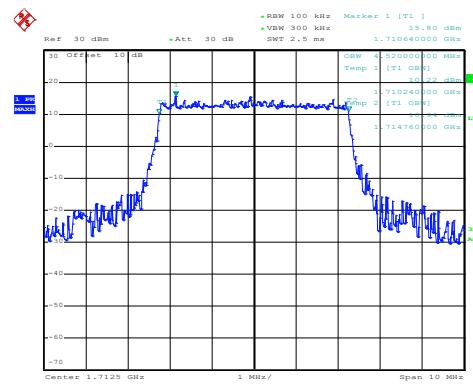
BW: 5MHz

## Modulation:16QAM



Date: 28.MAR.2017 19:09:53

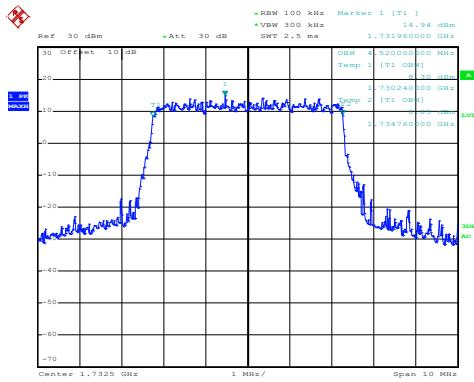
## Modulation: QPSK



Date: 28.MAR.2017 19:09:50

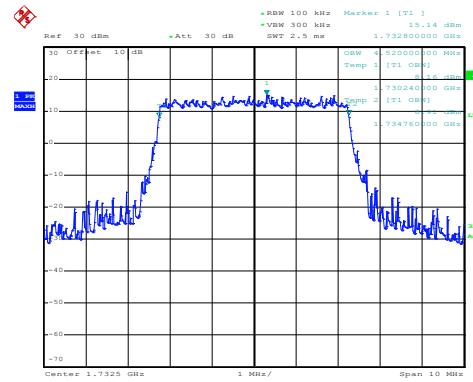
## Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 19:10:32

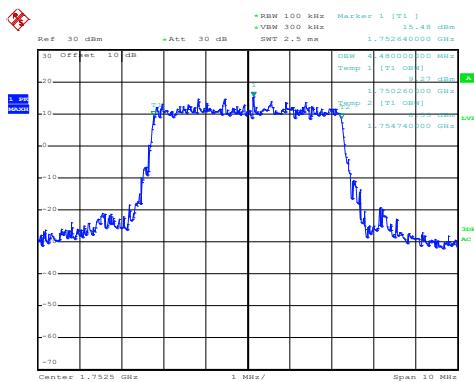
## Modulation: QPSK



Date: 28.MAR.2017 19:10:27

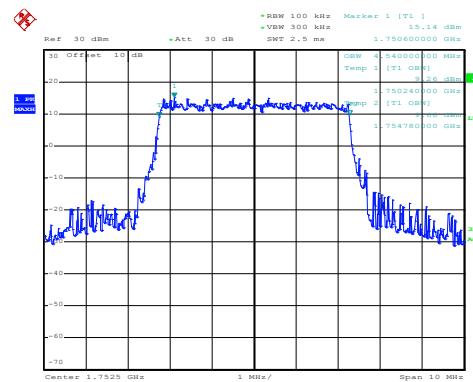
## Middle channel

## Modulation:16QAM



Date: 28.MAR.2017 19:11:25

## Modulation: QPSK



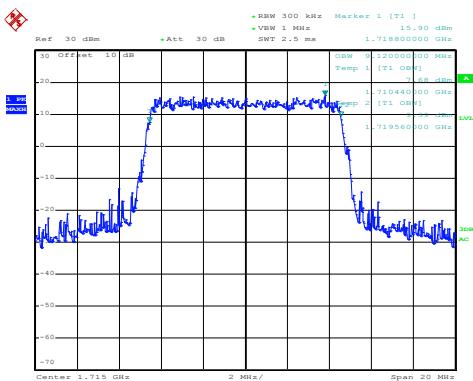
Date: 28.MAR.2017 19:11:22

## Highest channel

Test Item:99% Occupy bandwidth

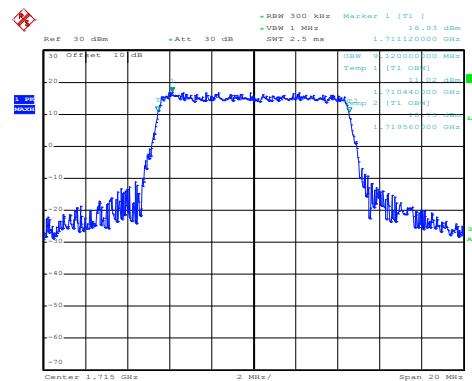
BW: 10MHz

Modulation:16QAM



Date: 28.MAR.2017 19:12:07

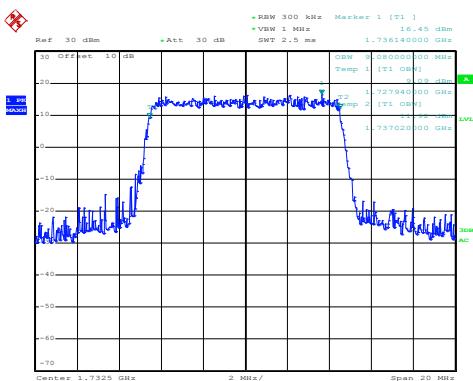
Modulation: QPSK



Date: 28.MAR.2017 19:12:04

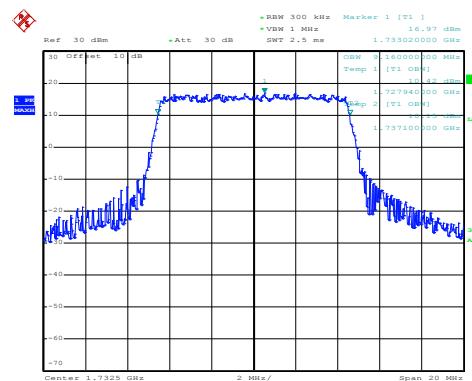
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 19:12:50

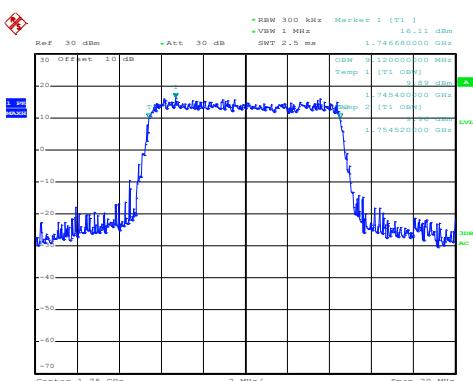
Modulation: QPSK



Date: 28.MAR.2017 19:12:46

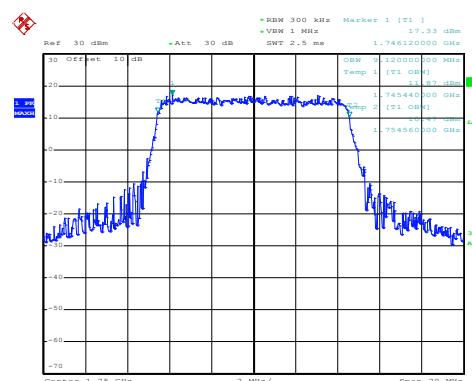
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 19:13:08

Modulation: QPSK



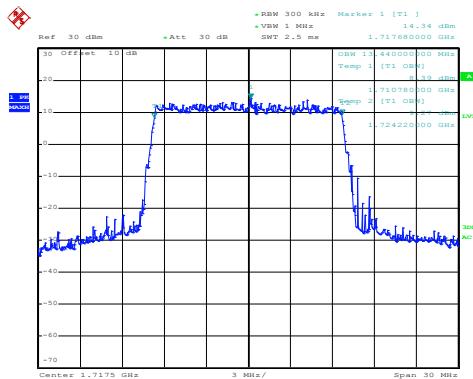
Date: 28.MAR.2017 19:13:05

Highest channel

### Test Item:99% Occupy bandwidth

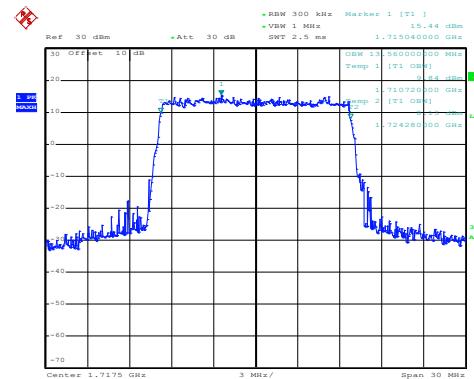
BW: 15MHz

## Modulation:16QAM



Date: 28.MAR.2017 19:13:59

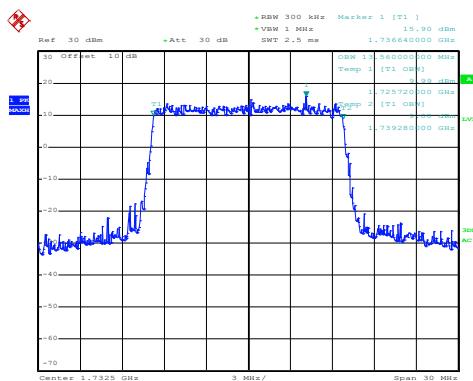
## Modulation: QPSK



Date: 28.MAR.2017 19:13:56

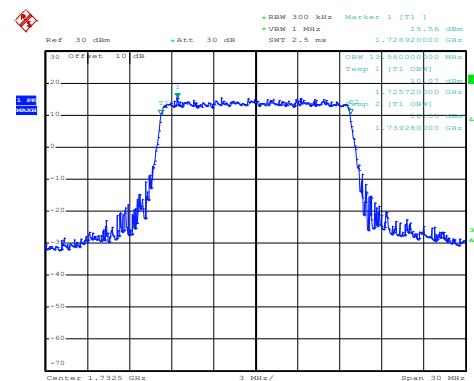
## Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 19:14:27

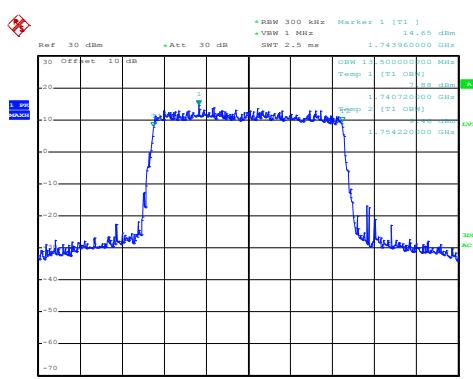
## Modulation: QPSK



Date: 28.MAR.2017 19:14:24

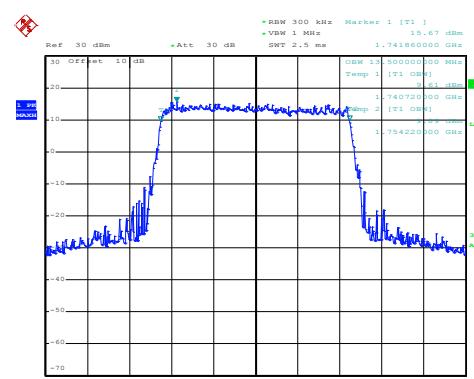
## Middle channel

Modulation:16QAM



Date: 28 MAR 2017 19:15:03

## Modulation: QPSK

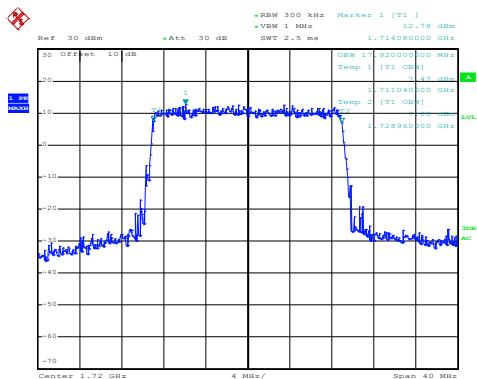


Date: 28 MAR 2017 19:15:00

### Highest channel

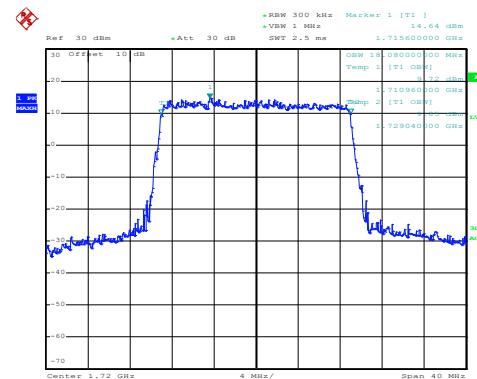
Test Item:99% Occupy bandwidth  
BW: 20MHz

### Modulation:16QAM



Date: 28.MAR.2017 19:15:32

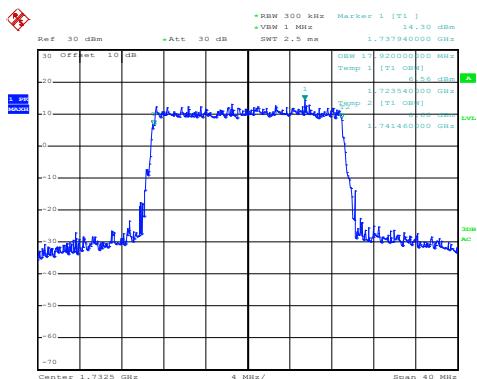
### Modulation: QPSK



Date: 28.MAR.2017 19:15:29

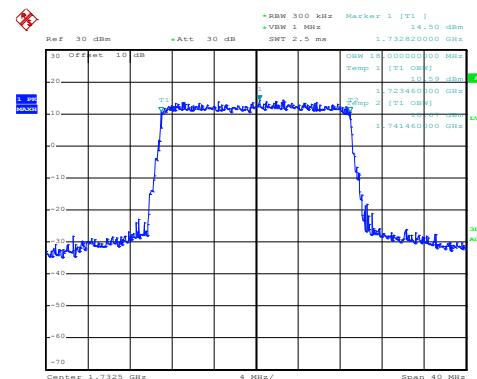
### Lowest channel

### Modulation:16QAM



Date: 28.MAR.2017 19:16:04

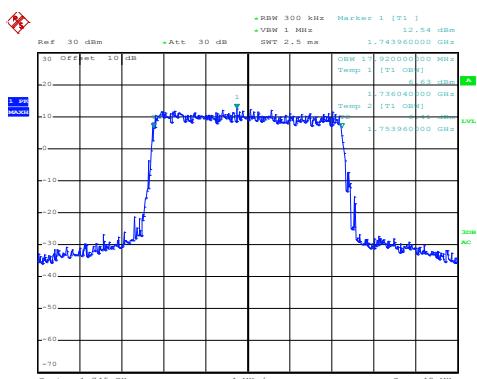
### Modulation: QPSK



Date: 28.MAR.2017 19:16:01

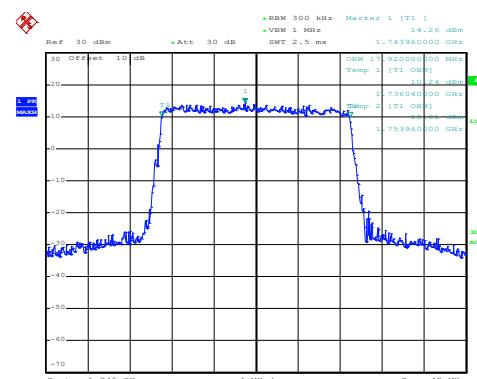
### Middle channel

### Modulation:16QAM



Date: 28.MAR.2017 19:16:18

### Modulation: QPSK



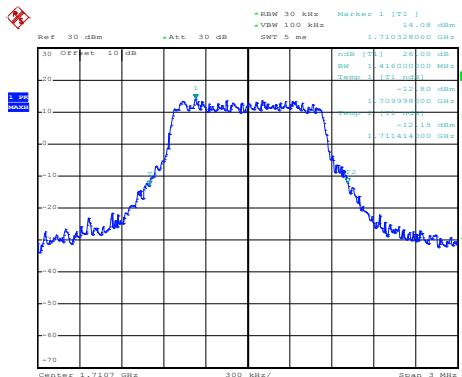
Date: 28.MAR.2017 19:16:15

### Highest channel

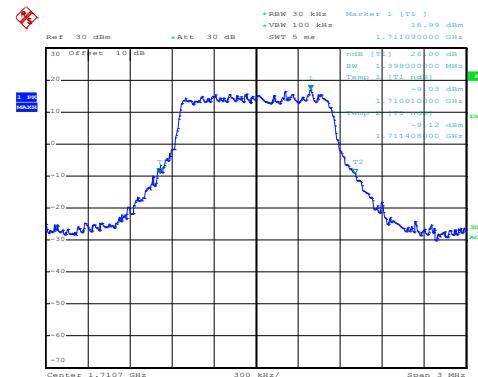
Test Item:-26dBc bandwidth

BW: 1.4MHz

Modulation:16QAM

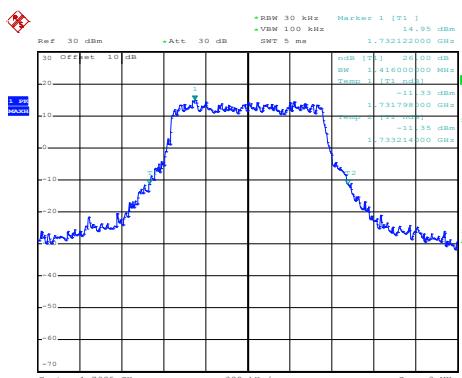


Modulation: QPSK

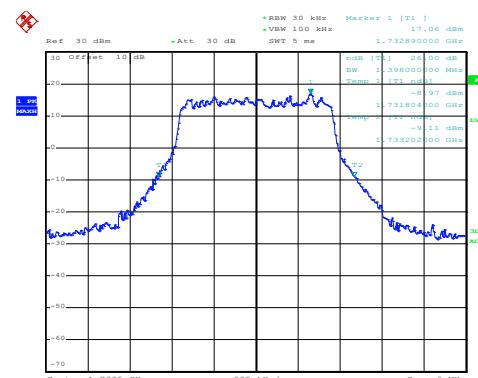


Lowest channel

Modulation:16QAM

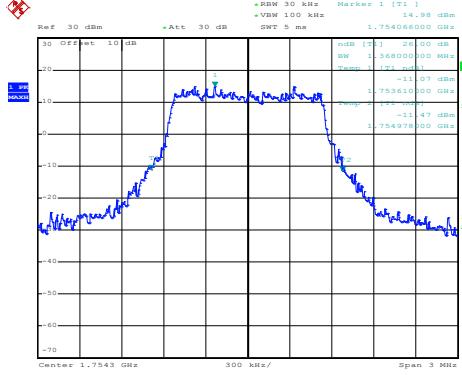


Modulation: QPSK

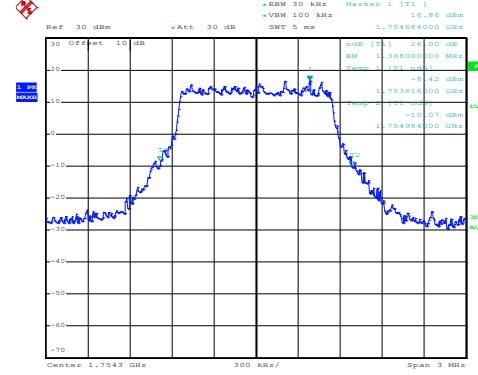


Middle channel

Modulation:16QAM



Modulation: QPSK

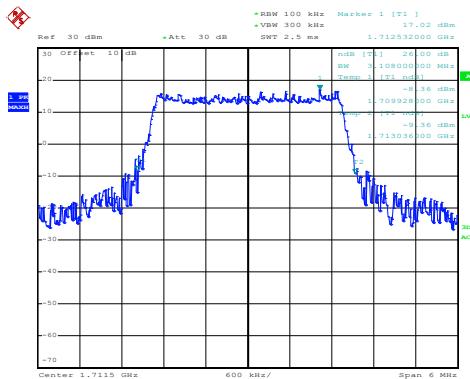


Highest channel

Test Item:-26dBc bandwidth

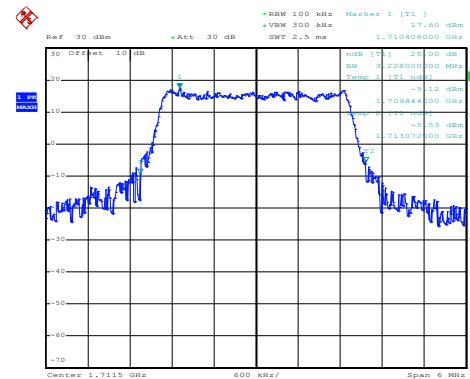
BW: 3MHz

Modulation:16QAM



Date: 28.MAR.2017 19:08:16

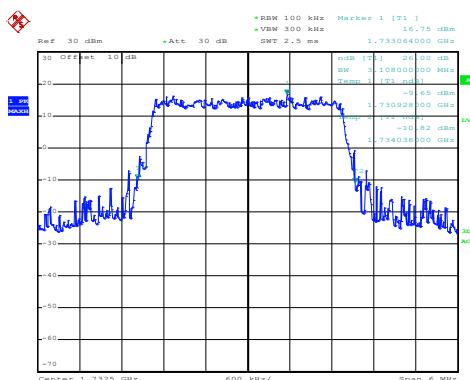
Modulation: QPSK



Date: 28.MAR.2017 19:08:08

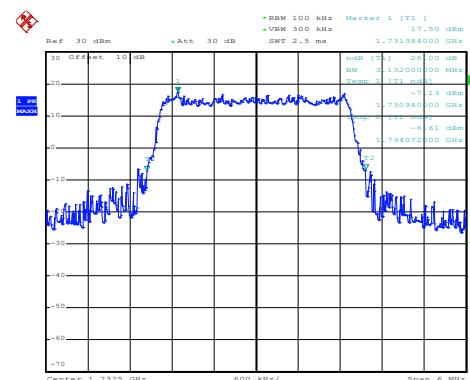
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 19:08:55

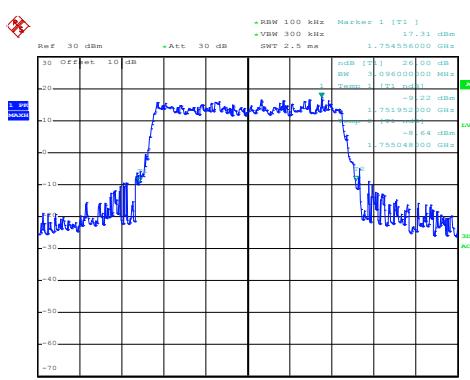
Modulation: QPSK



Date: 28.MAR.2017 19:08:51

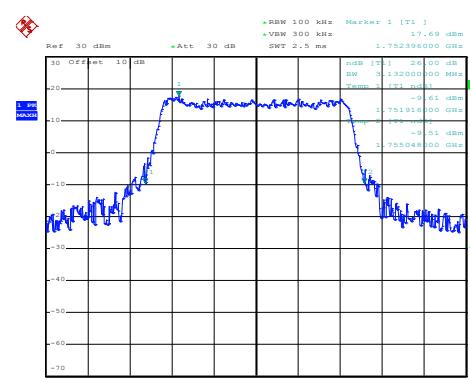
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 19:09:14

Modulation: QPSK



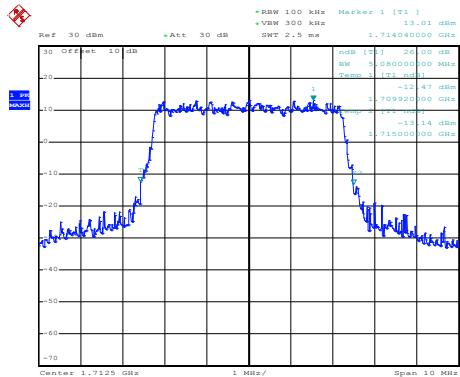
Date: 28.MAR.2017 19:09:10

Highest channel

## Test Item:-26dBc bandwidth

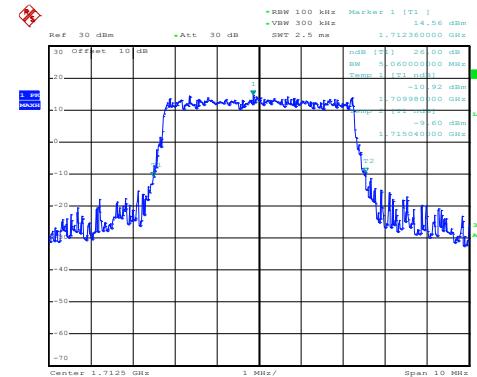
BW: 5MHz

## Modulation:16QAM



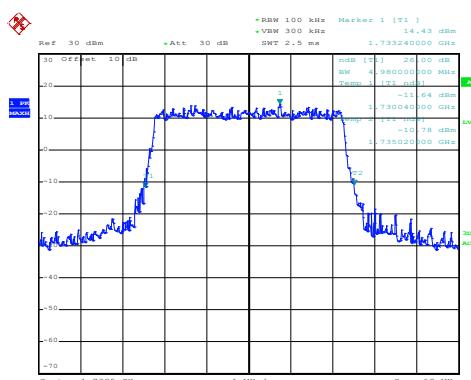
Date: 28.MAR.2017 19:10:03

## Modulation: QPSK



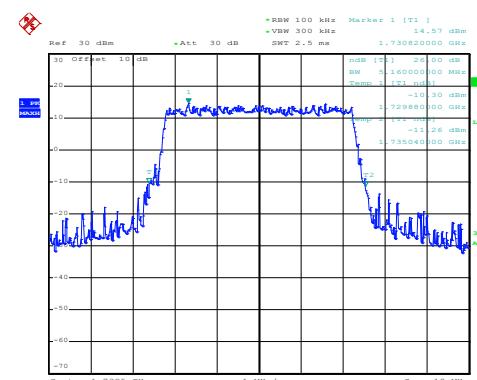
Date: 28.MAR.2017 19:09:59

### Modulation: 16QAM



Date: 28 MAR 2017 19:10:22

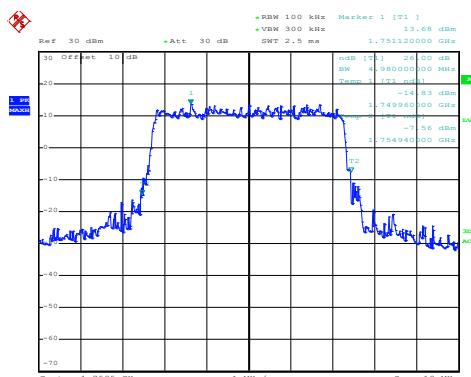
### Modulation: QPSK



Date: 28-MAR-2017 19:10:53

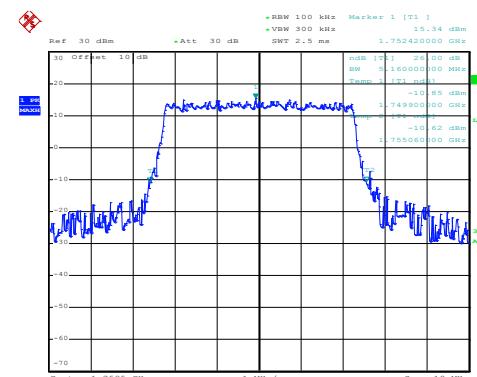
## Middle channel

Modulation:16QAM



Date: 28 MAR 2017 19:11:16

## Modulation: QPSK



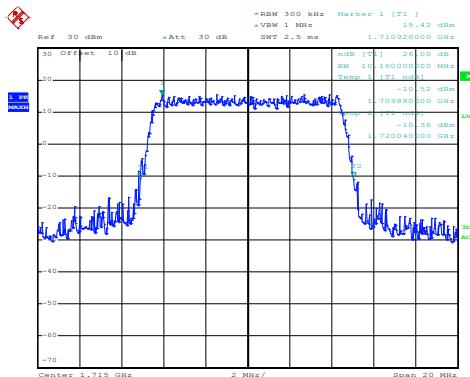
Date: 28-MAR-2017 19:11:12

### Highest channel

Test Item:-26dBc bandwidth

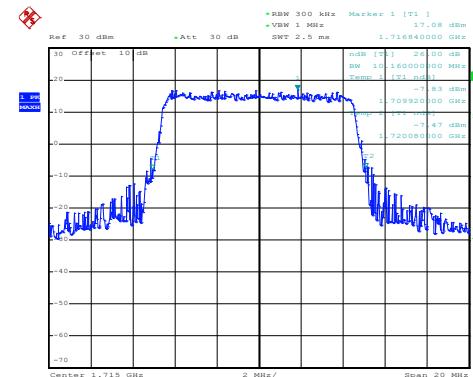
BW: 10MHz

Modulation:16QAM



Date: 28.MAR.2017 19:12:17

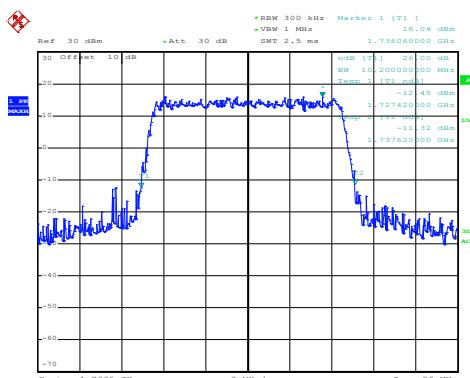
Modulation: QPSK



Date: 28.MAR.2017 19:12:13

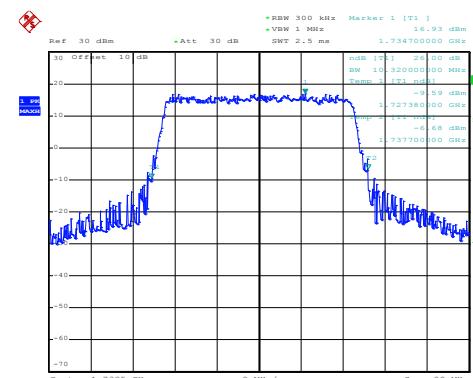
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 19:12:37

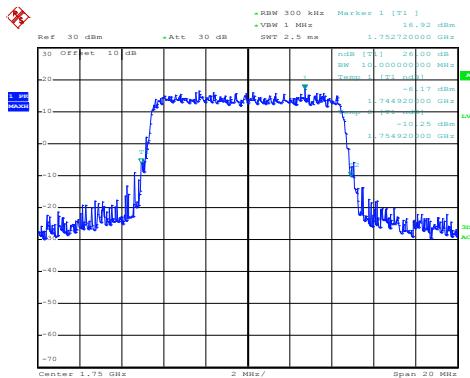
Modulation: QPSK



Date: 28.MAR.2017 19:12:33

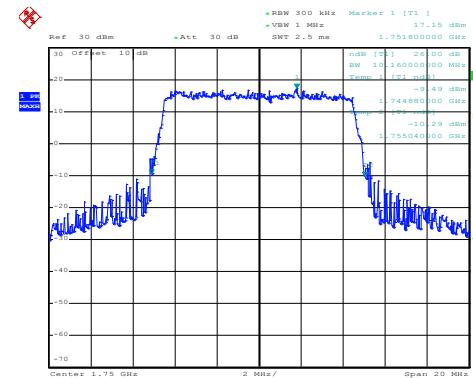
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 19:13:18

Modulation: QPSK



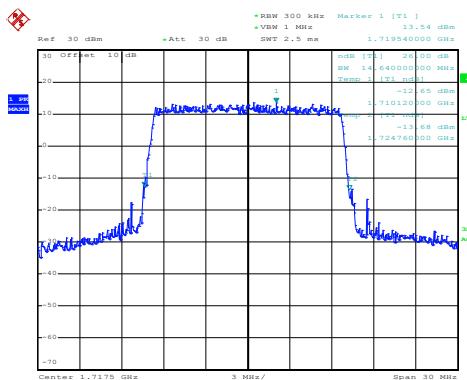
Date: 28.MAR.2017 19:13:15

Highest channel

## Test Item:-26dBc bandwidth

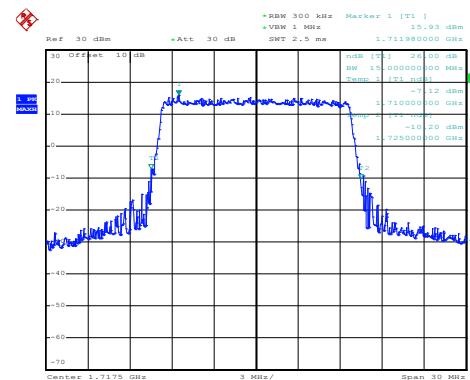
BW: 15MHz

## Modulation:16QAM



Date: 28.MAR.2017 19:13:51

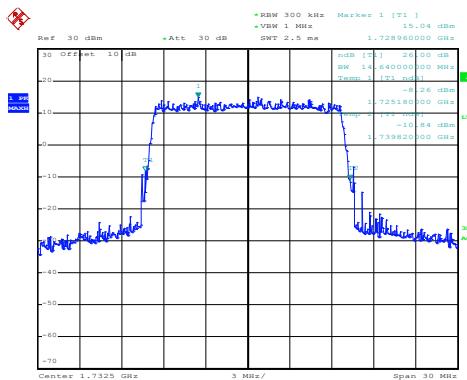
## Modulation: QPSK



Date: 28.MAR.2017 19:13:47

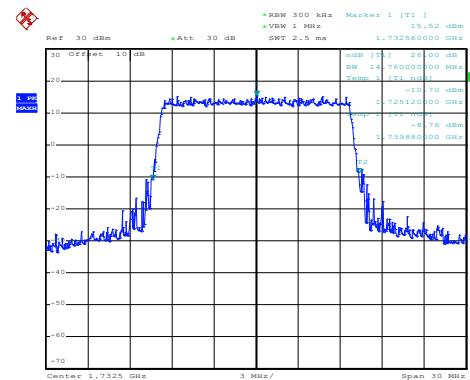
## Lowest channel

## Modulation:16QAM



Date: 28.MAR.2017 19:14:36

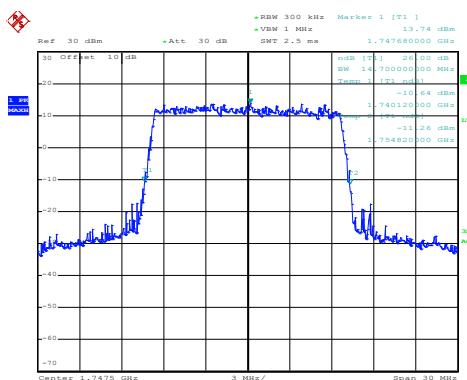
## Modulation: QPSK



Date: 28.MAR.2017 19:14:33

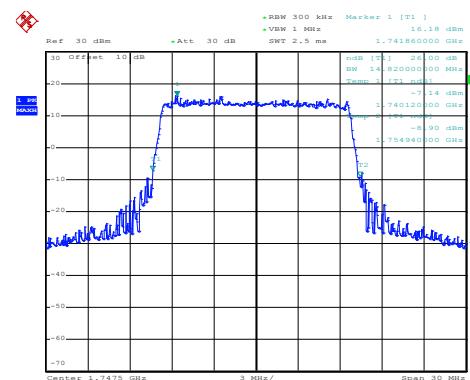
## Middle channel

## Modulation:16QAM



Date: 28.MAR.2017 19:14:54

Modulation: QPSK



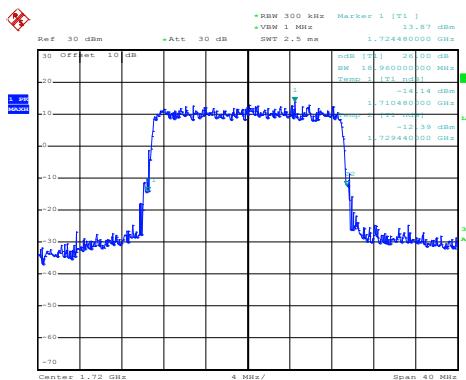
Date: 28.MAR.2017 19:14:50

### Highest channel

Test Item:-26dBc bandwidth

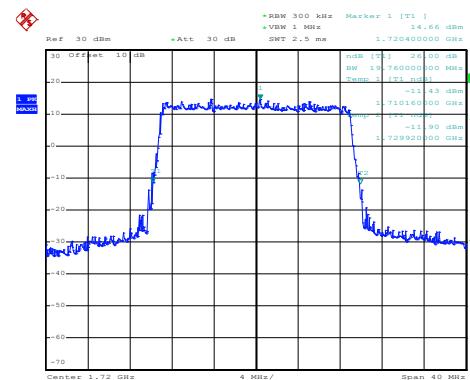
BW: 20MHz

Modulation:16QAM



Date: 28.MAR.2017 19:15:41

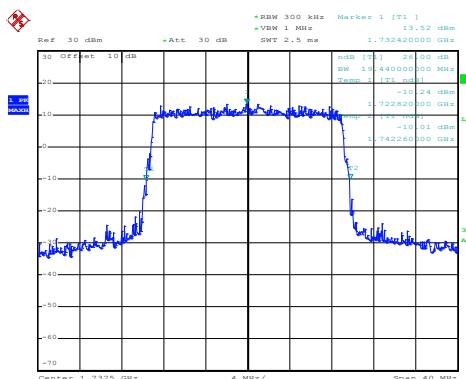
Modulation: QPSK



Date: 28.MAR.2017 19:15:38

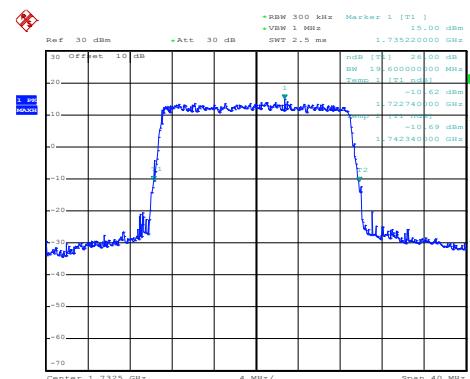
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 19:15:55

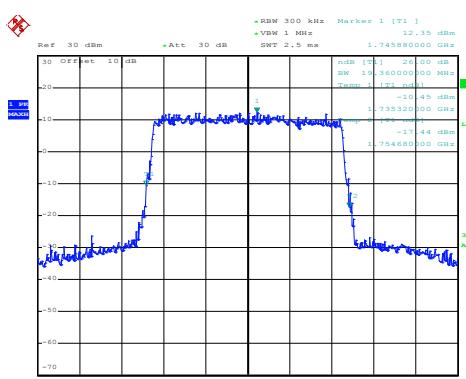
Modulation: QPSK



Date: 28.MAR.2017 19:15:51

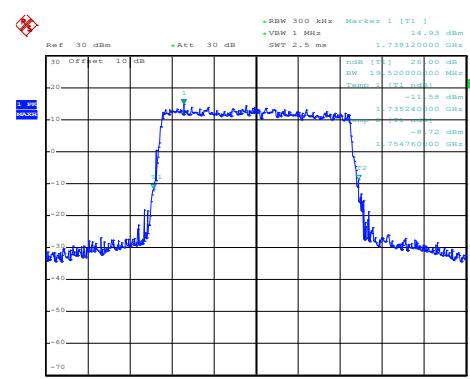
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 19:16:27

Modulation: QPSK



Date: 28.MAR.2017 19:16:24

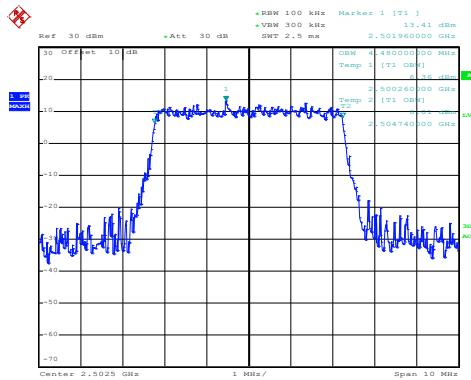
Highest channel

## LTE-Band 7 part

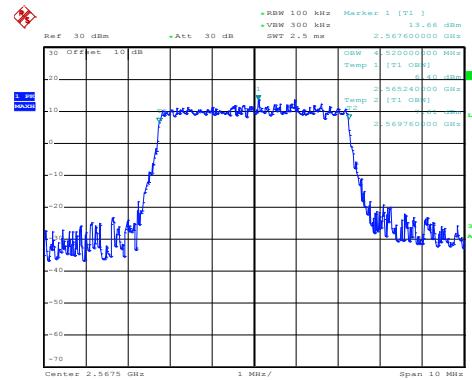
Test Item:99% Occupy bandwidth

BW: 5MHz

Modulation:16QAM



Modulation:QPSK

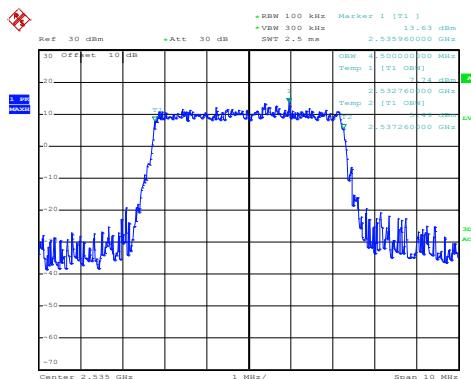


Date: 28.MAR.2017 20:23:36

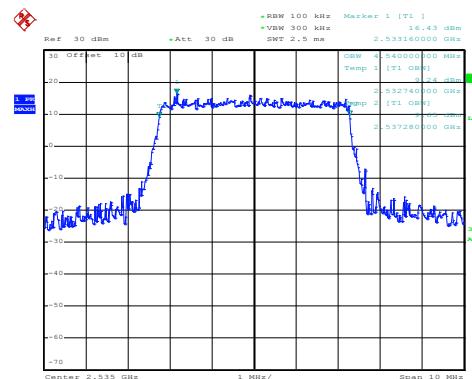
Date: 28.MAR.2017 20:24:41

Lowest channel

Modulation:16QAM



Modulation:QPSK

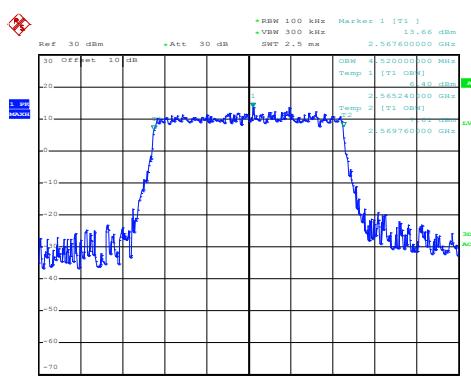


Date: 28.MAR.2017 20:23:54

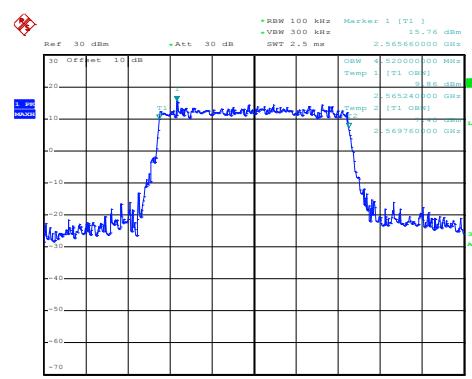
Date: 28.MAR.2017 20:23:50

Middle channel

Modulation:16QAM



Modulation:QPSK



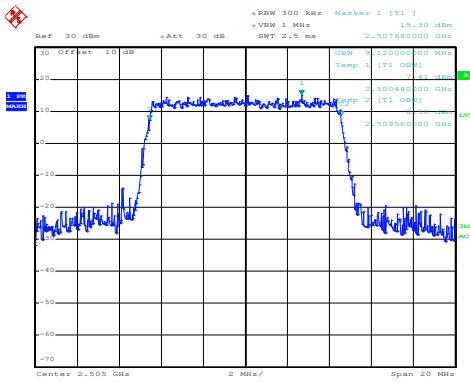
Date: 28.MAR.2017 20:24:41

Date: 28.MAR.2017 20:24:36

Highest channel

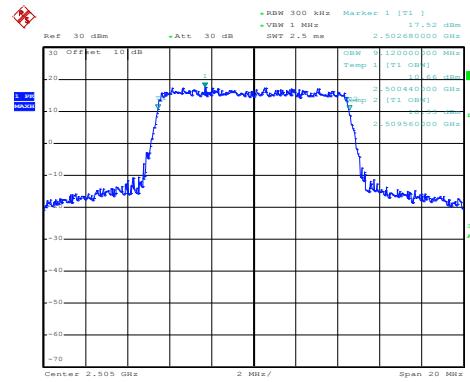
Test Item:99% Occupy bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 28.MAR.2017 20:25:21

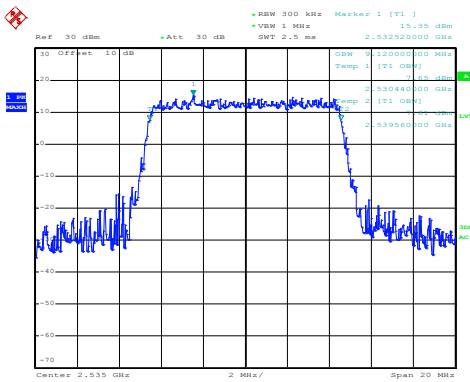
Modulation:QPSK



Date: 28.MAR.2017 20:25:17

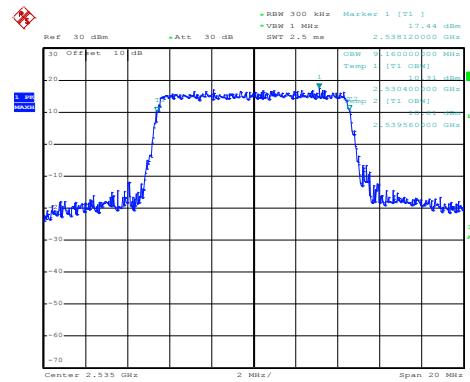
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 20:26:07

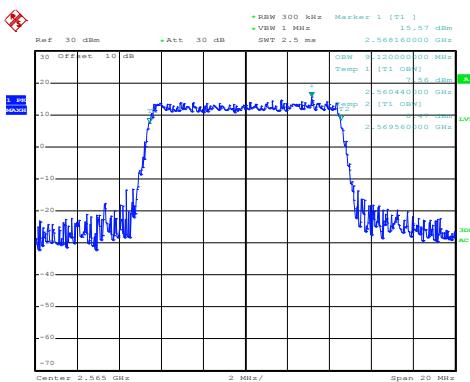
Modulation:QPSK



Date: 28.MAR.2017 20:26:03

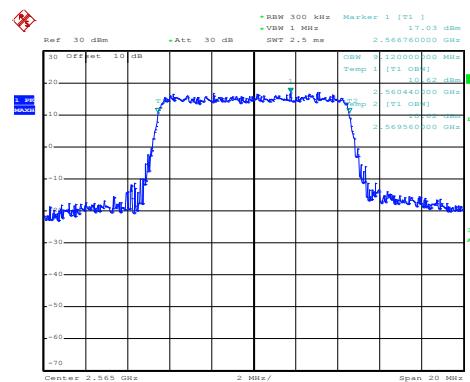
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:26:24

Modulation:QPSK



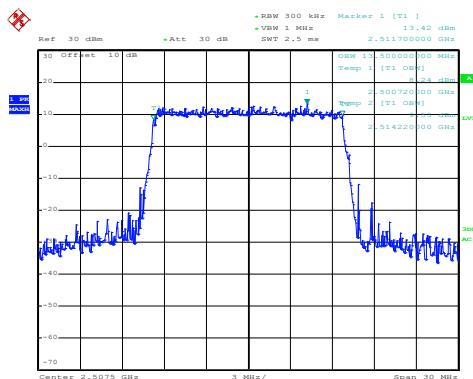
Date: 28.MAR.2017 20:26:20

Highest channel

Test Item:99% Occupy bandwidth

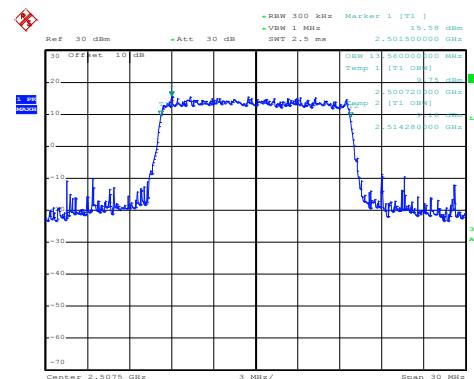
BW: 15MHz

Modulation:16QAM



Date: 28.MAR.2017 20:27:23

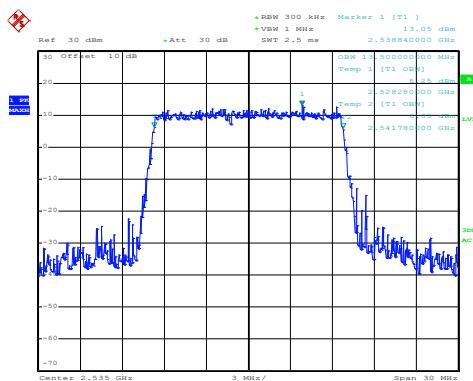
Modulation:QPSK



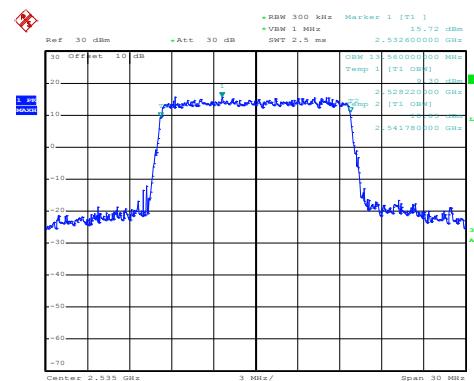
Date: 28.MAR.2017 20:29:26

Lowest channel

Modulation:16QAM



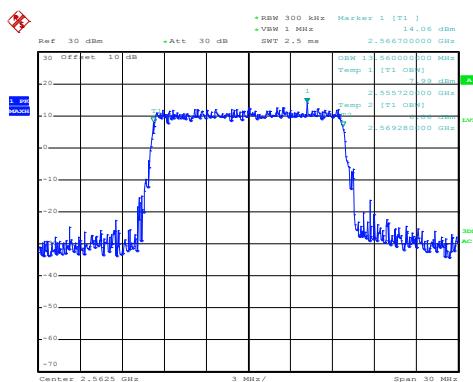
Date: 28.MAR.2017 20:27:38



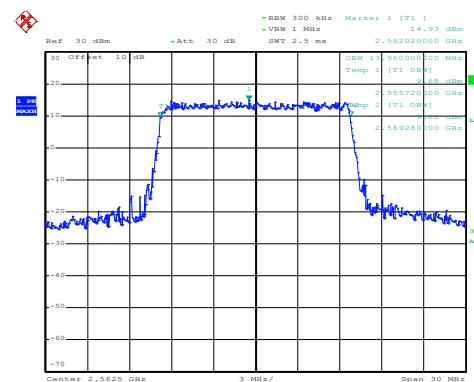
Date: 28.MAR.2017 20:27:35

Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:28:16



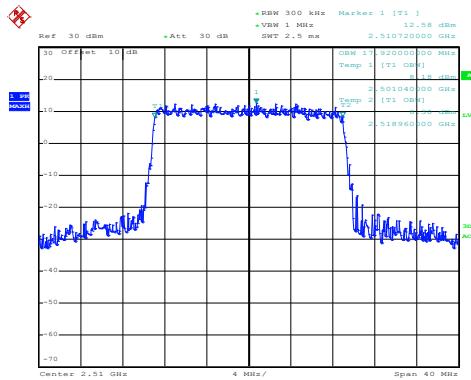
Date: 28.MAR.2017 20:28:13

Highest channel

Test Item:99% Occupy bandwidth

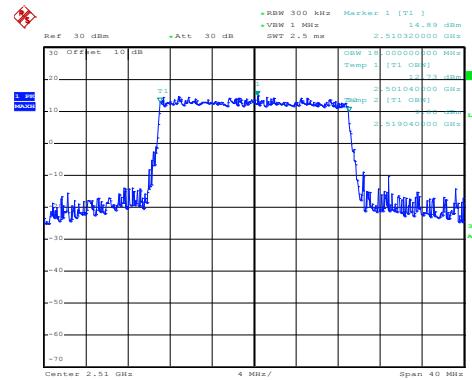
BW: 20MHz

Modulation:16QAM



Date: 28.MAR.2017 20:30:09

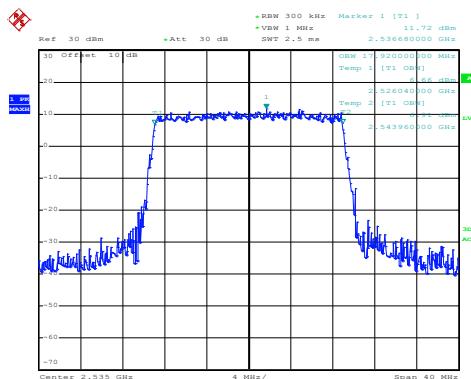
Modulation:QPSK



Date: 28.MAR.2017 20:30:05

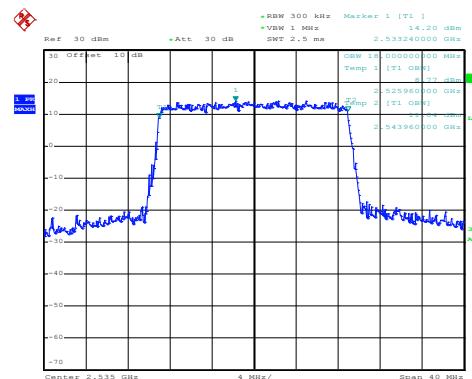
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 20:30:52

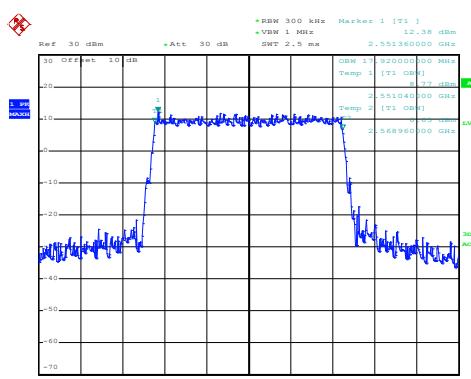
Modulation:QPSK



Date: 28.MAR.2017 20:30:47

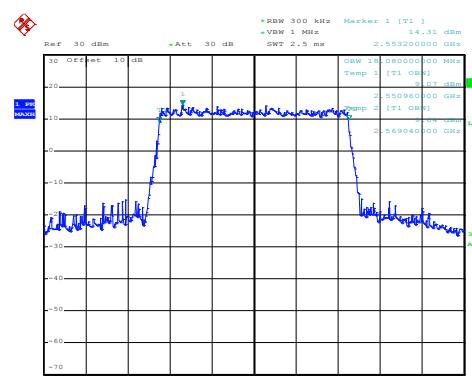
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:31:08

Modulation:QPSK



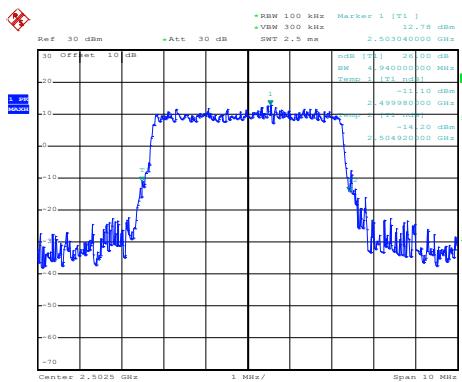
Date: 28.MAR.2017 20:31:05

Highest channel

Test Item:-26dBc bandwidth

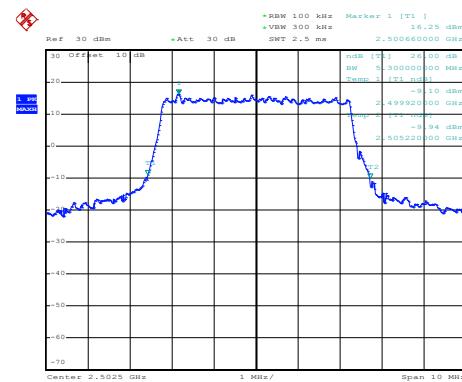
BW: 5MHz

Modulation:16QAM



Date: 28.MAR.2017 20:20:48

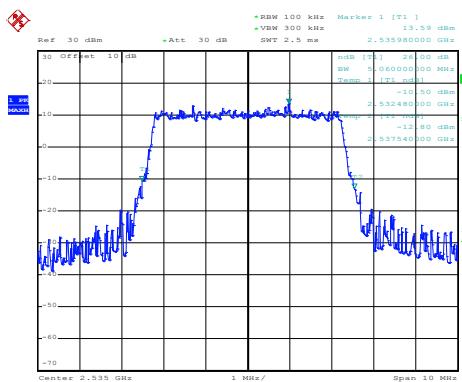
Modulation:QPSK



Date: 28.MAR.2017 20:20:48

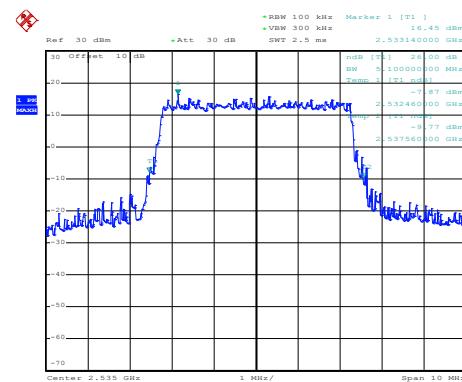
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 20:24:06

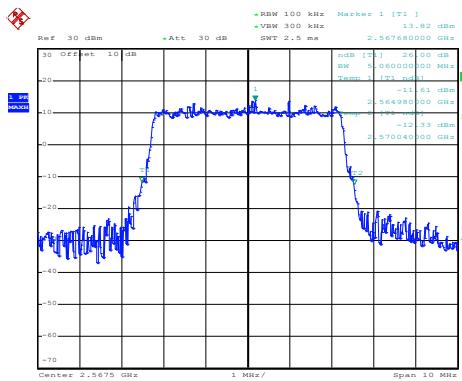
Modulation:QPSK



Date: 28.MAR.2017 20:24:01

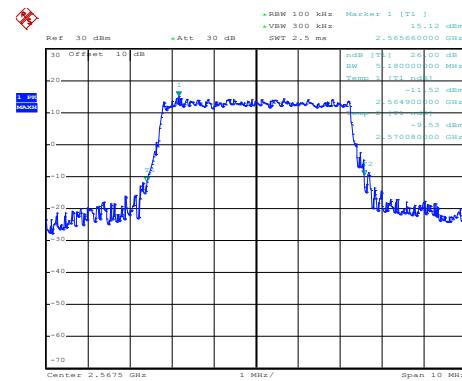
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:24:25

Modulation:QPSK



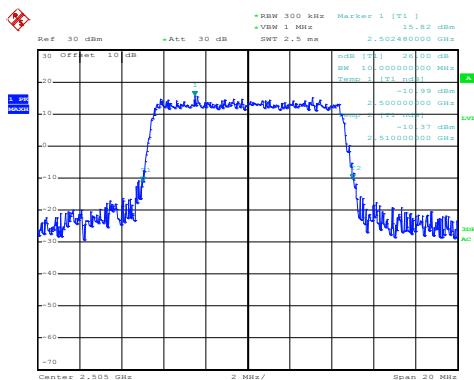
Date: 28.MAR.2017 20:24:20

Highest channel

Test Item:-26dBc bandwidth

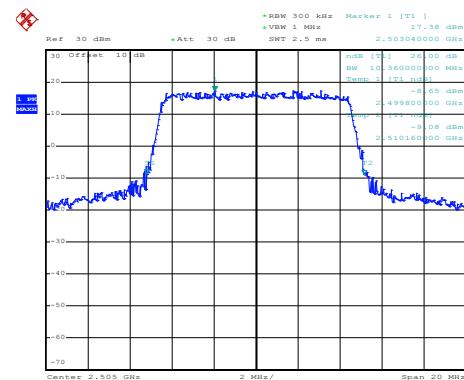
BW: 10MHz

Modulation:16QAM



Date: 28.MAR.2017 20:25:38

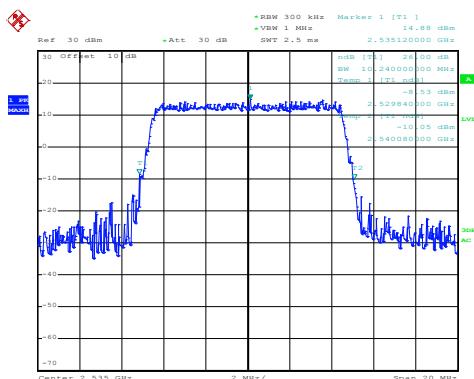
Modulation:QPSK



Date: 28.MAR.2017 20:25:34

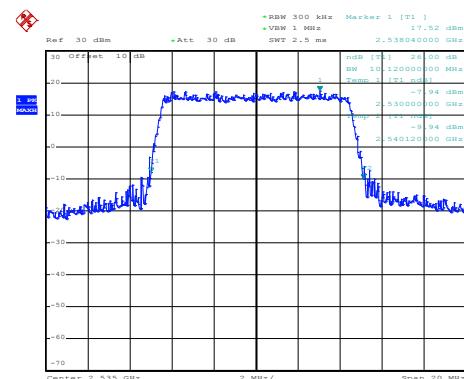
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 20:25:56

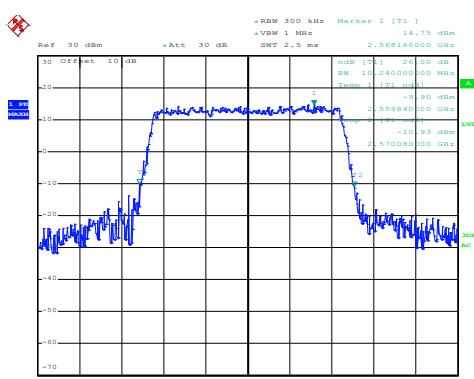
Modulation:QPSK



Date: 28.MAR.2017 20:25:52

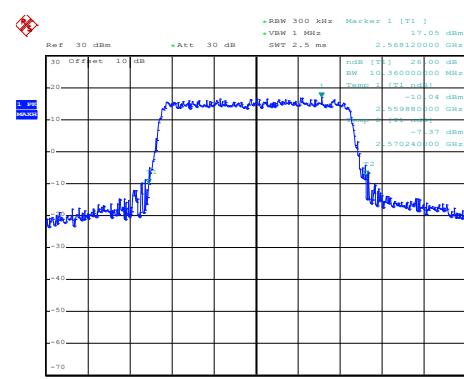
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:26:35

Modulation:QPSK



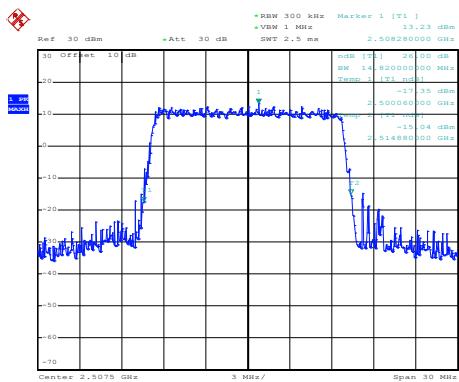
Date: 28.MAR.2017 20:26:30

Highest channel

Test Item:-26dBc bandwidth

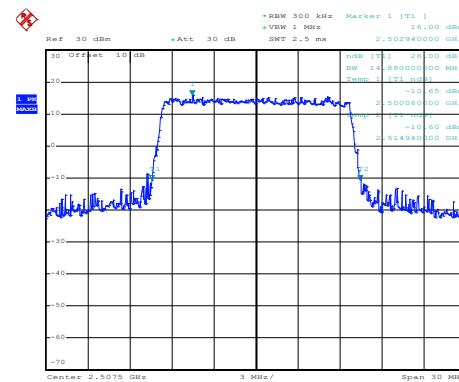
BW: 15MHz

Modulation:16QAM



Date: 28.MAR.2017 20:27:13

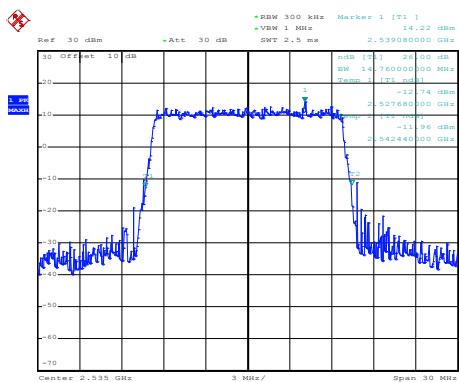
Modulation:QPSK



Date: 28.MAR.2017 20:27:09

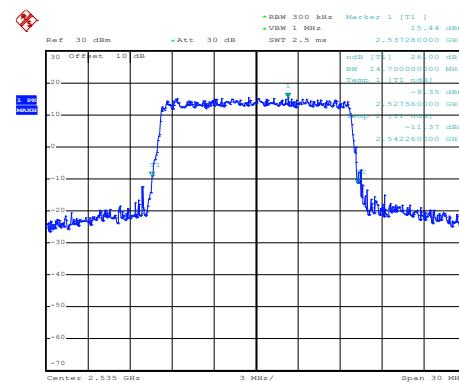
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 20:27:48

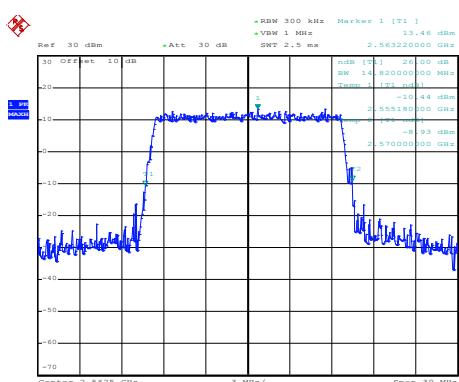
Modulation:QPSK



Date: 28.MAR.2017 20:27:45

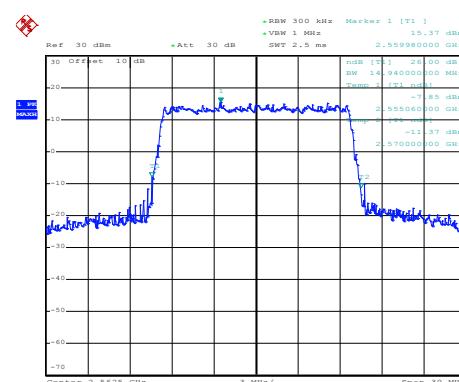
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:28:07

Modulation:QPSK



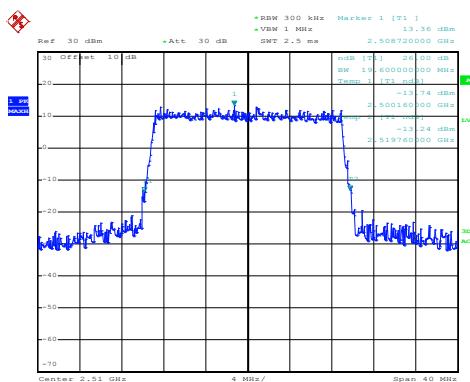
Date: 28.MAR.2017 20:28:03

Highest channel

Test Item:-26dBc bandwidth

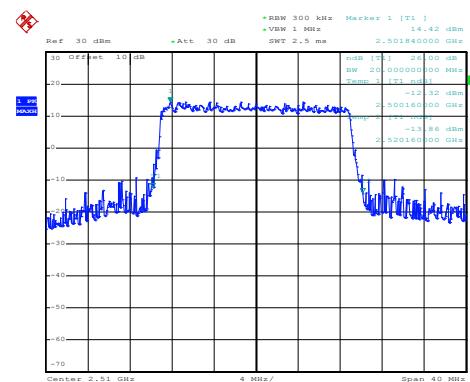
BW: 20MHz

Modulation:16QAM



Date: 28.MAR.2017 20:30:20

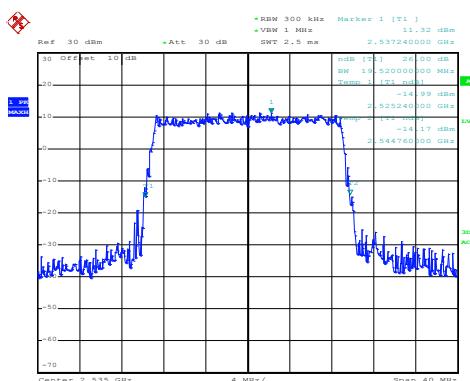
Modulation:QPSK



Date: 28.MAR.2017 20:30:17

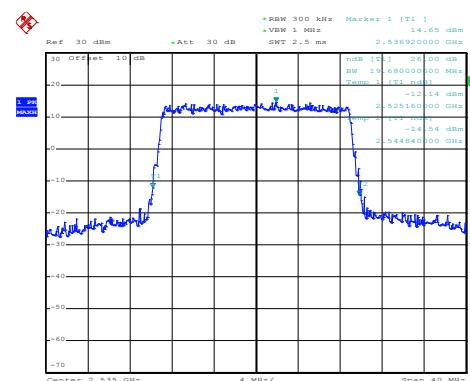
Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 20:30:39

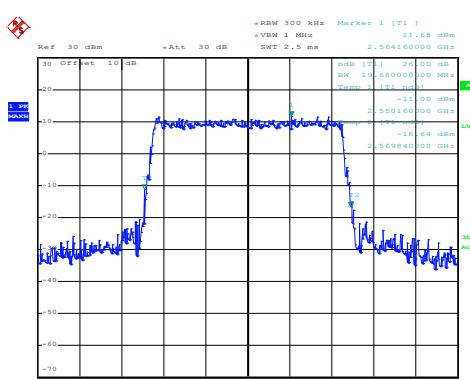
Modulation:QPSK



Date: 28.MAR.2017 20:30:35

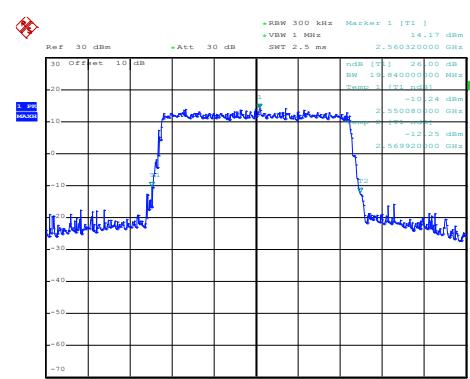
Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:31:18

Modulation:QPSK



Date: 28.MAR.2017 20:31:14

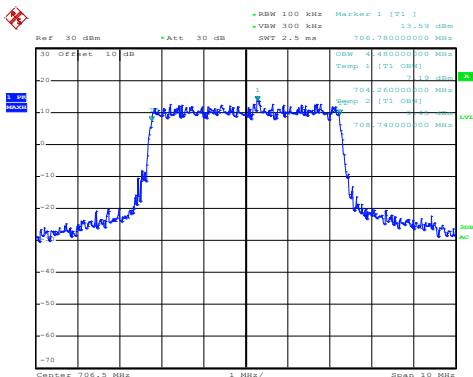
Highest channel

## LTE-Band 17 part

Test Item:99% Occupy bandwidth

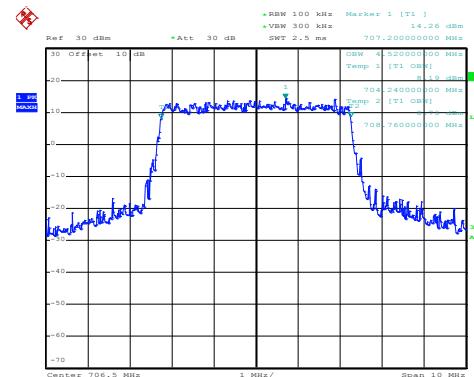
BW: 5MHz

### Modulation:16QAM



Date: 28.MAR.2017 20:33:47

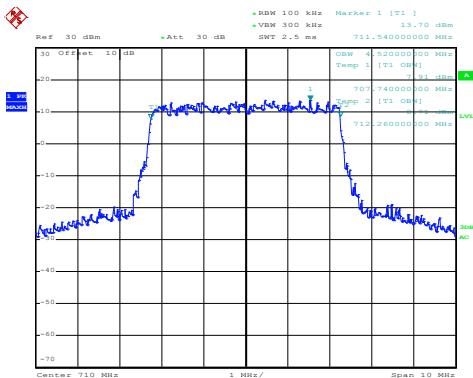
### Modulation: QPSK



Date: 28.MAR.2017 20:33:43

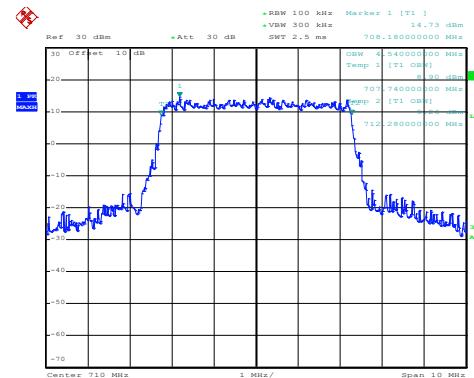
### Lowest channel

### Modulation:16QAM



Date: 28.MAR.2017 20:34:04

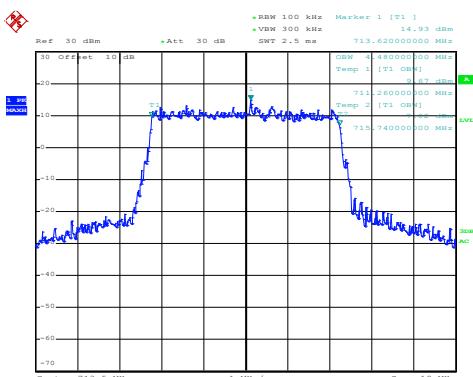
### Modulation: QPSK



Date: 28.MAR.2017 20:33:59

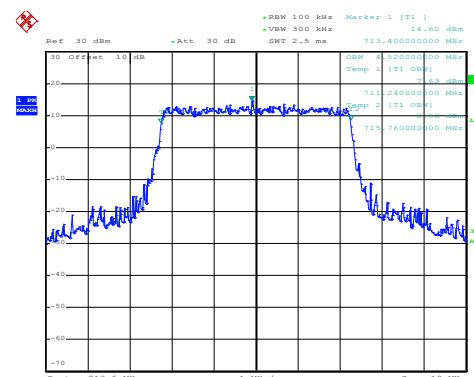
### Middle channel

### Modulation:16QAM



Date: 28.MAR.2017 20:34:42

### Modulation: QPSK



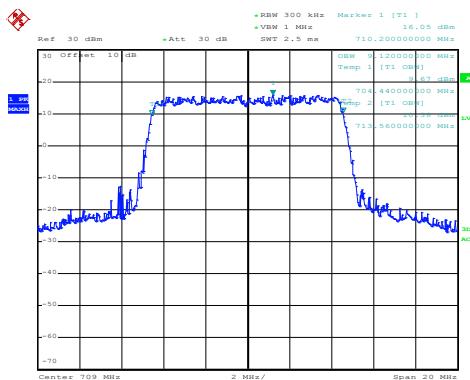
Date: 28.MAR.2017 20:34:38

### Highest channel

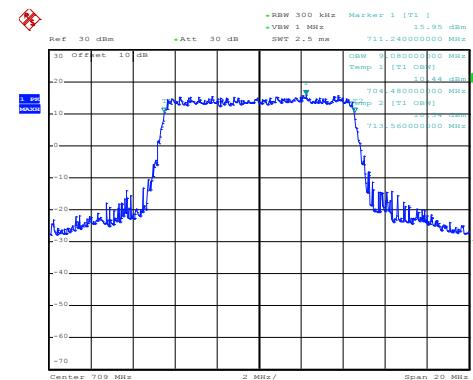
Test Item:99% Occupy bandwidth

BW: 10MHz

### Modulation:16QAM

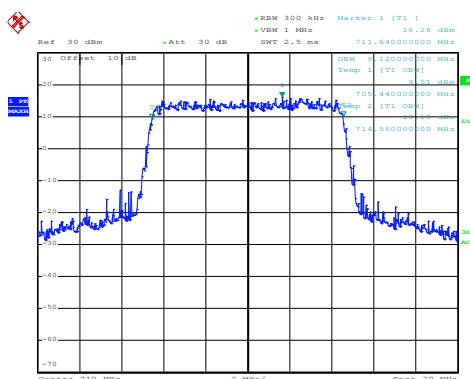


### Modulation: QPSK

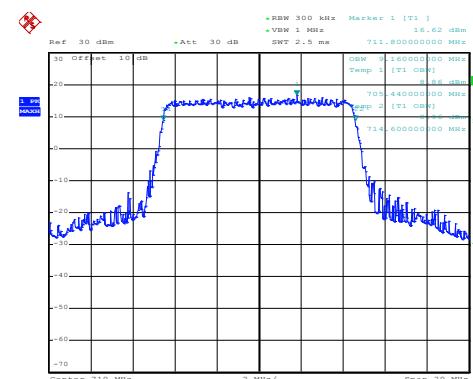


### Lowest channel

### Modulation:16QAM

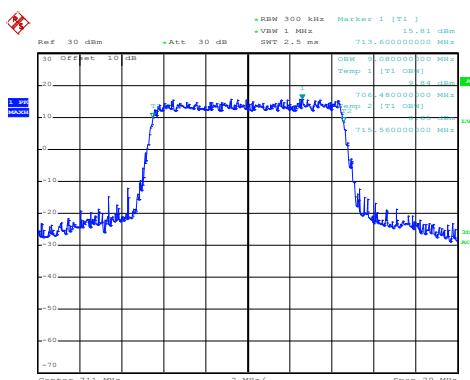


### Modulation: QPSK

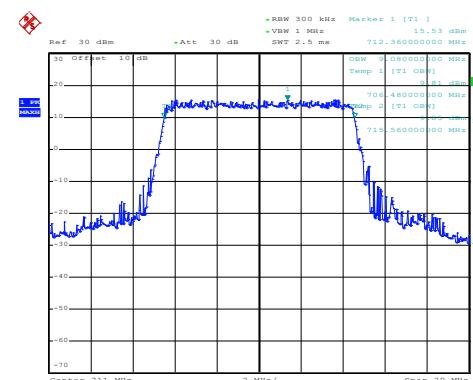


### Middle channel

### Modulation:16QAM



### Modulation: QPSK

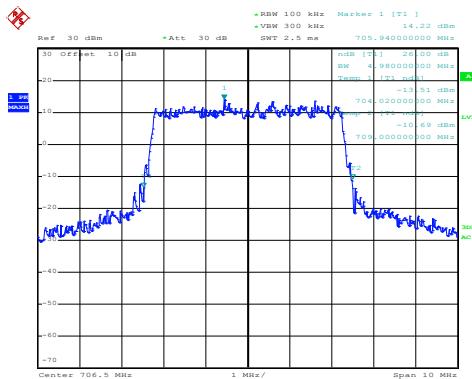


### Highest channel

## Test Item:-26dBc bandwidth

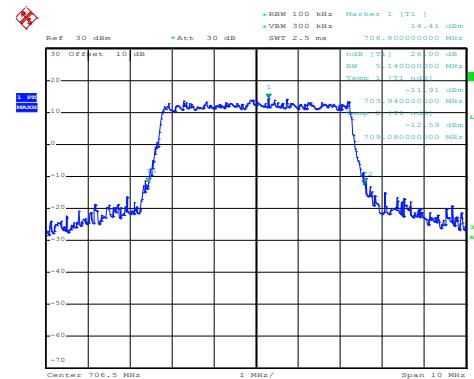
BW: 5MHz

## Modulation:16QAM



Date: 28.MAR.2017 20:33:34

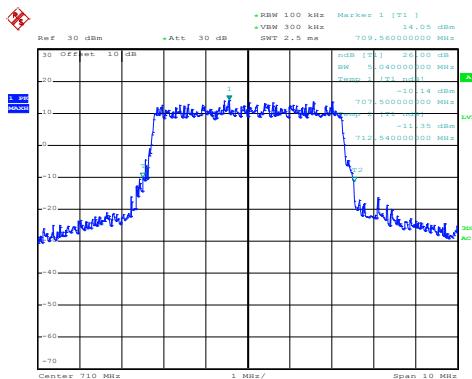
## Modulation: QPSK



Date: 28.MAR.2017 20:33:30

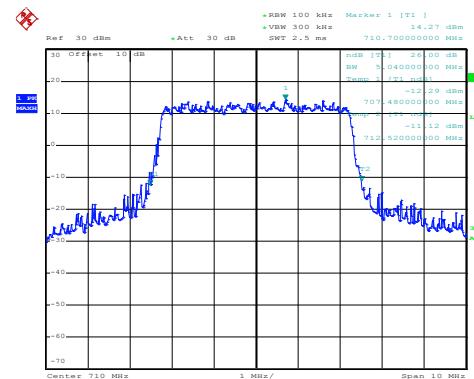
## Lowest channel

## Modulation:16QAM



Date: 28.MAR.2017 20:34:14

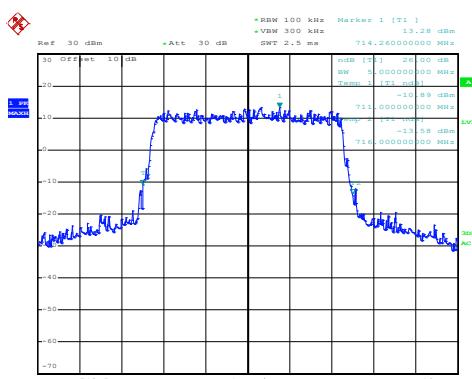
## Modulation: QPSK



Date: 28.MAR.2017 20:34:10

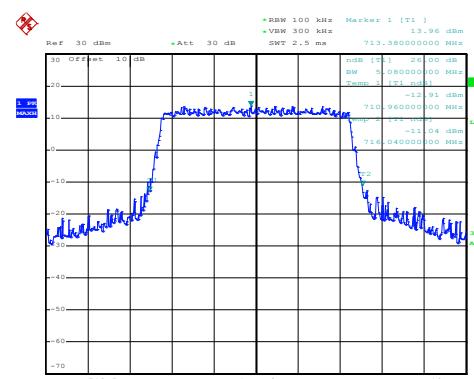
## Middle channel

## Modulation:16QAM



Date: 28.MAR.2017 20:34:31

Modulation: QPSK



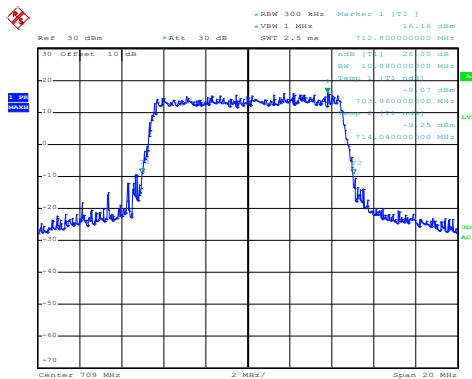
Date: 28.MAR.2017 20:34:27

## Highest channel

## Test Item:-26dBc bandwidth

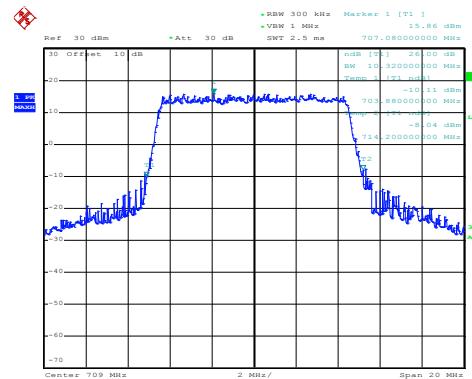
BW: 10MHz

## Modulation:16QAM



Date: 28.MAR.2017 20:35:29

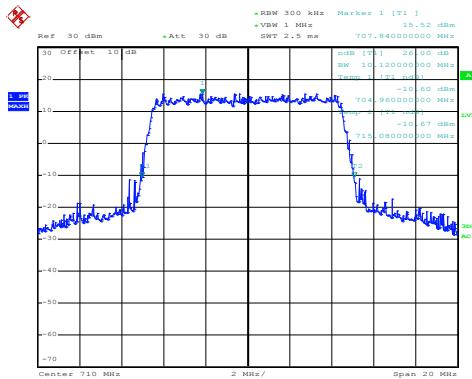
## Modulation: QPSK



Date: 28.MAR.2017 20:35:25

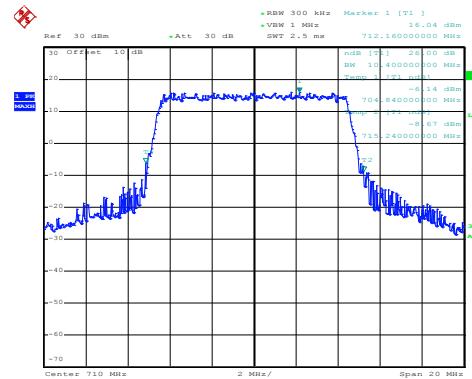
## Lowest channel

Modulation:16QAM



Date: 28.MAR.2017 20:36:18

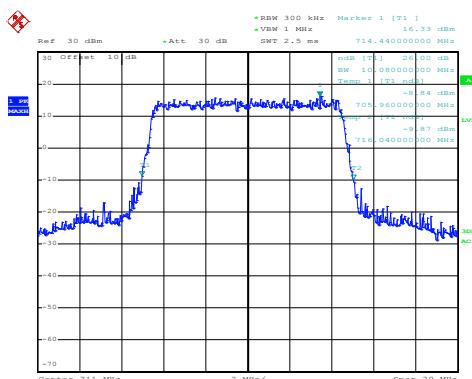
## Modulation: QPSK



Date: 28.MAR.2017 20:36:15

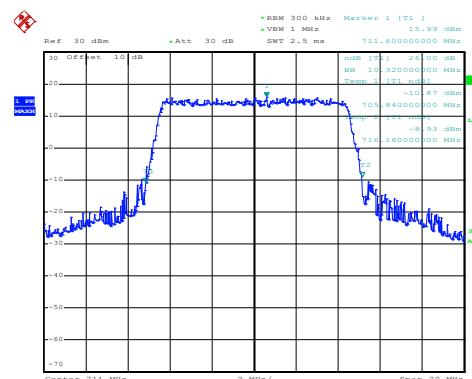
## Middle channel

Modulation:16QAM



Date: 28.MAR.2017 20:36:35

## Modulation: QPSK



Date: 28.MAR.2017 20:36:31

## Highest channel