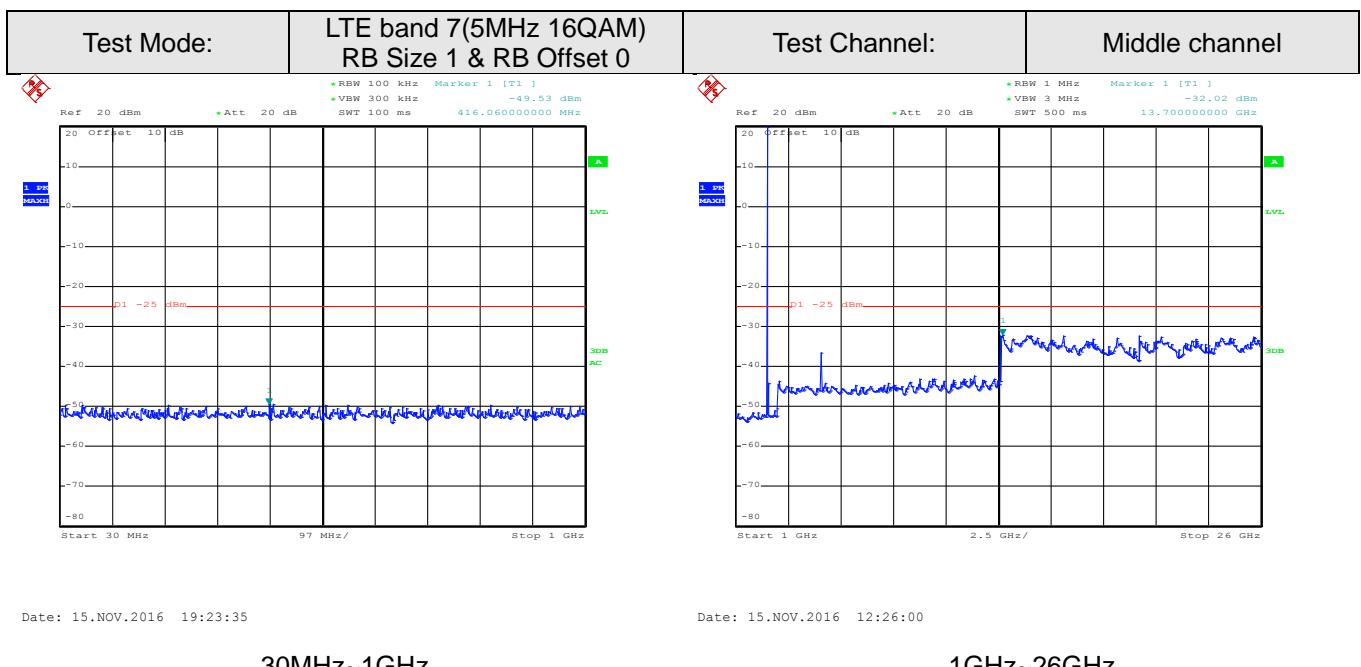
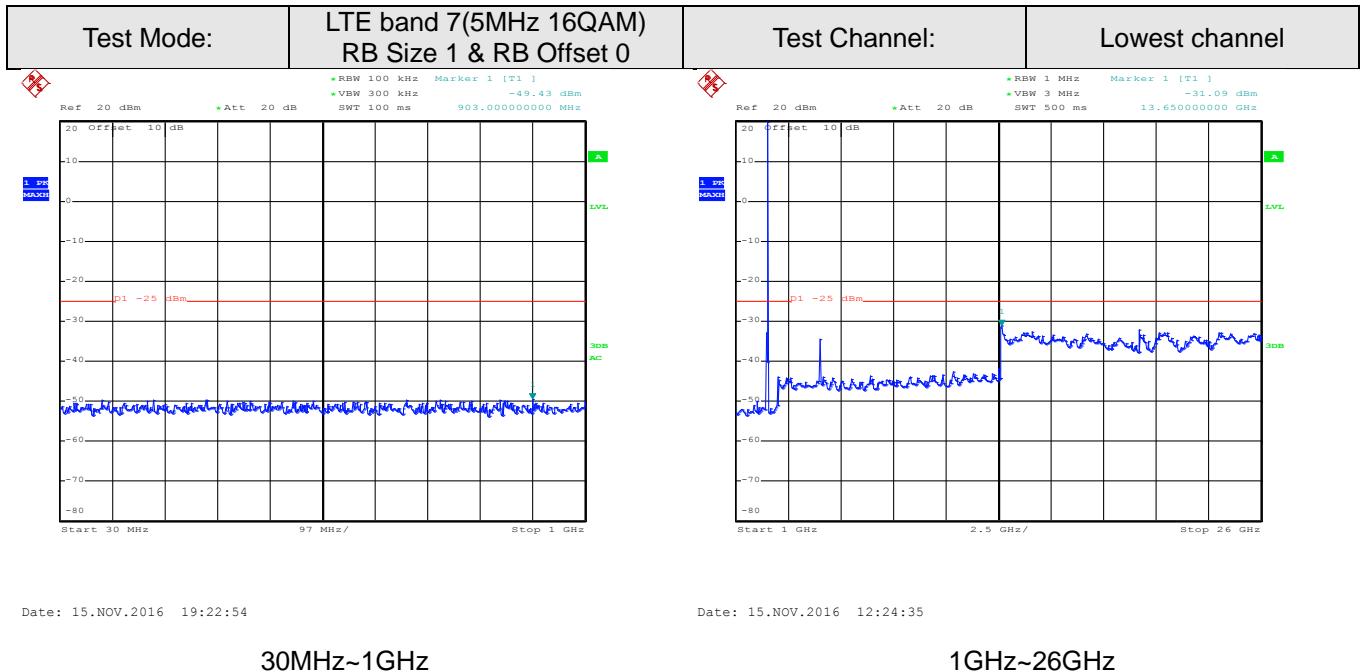
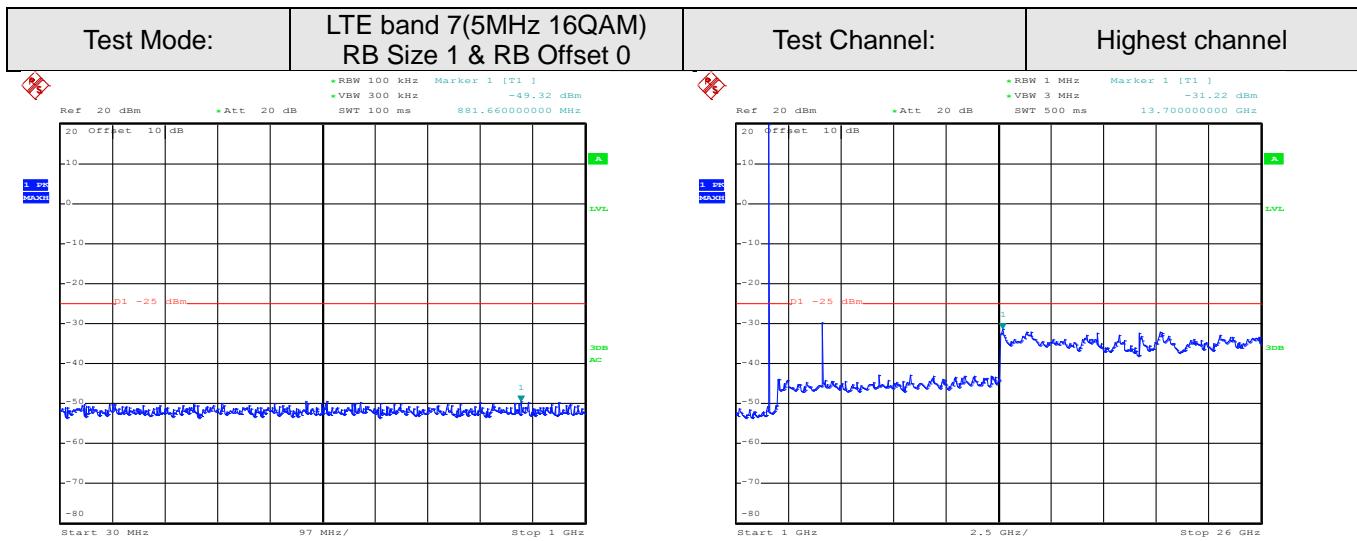


LTE band 7 part:

5MHz



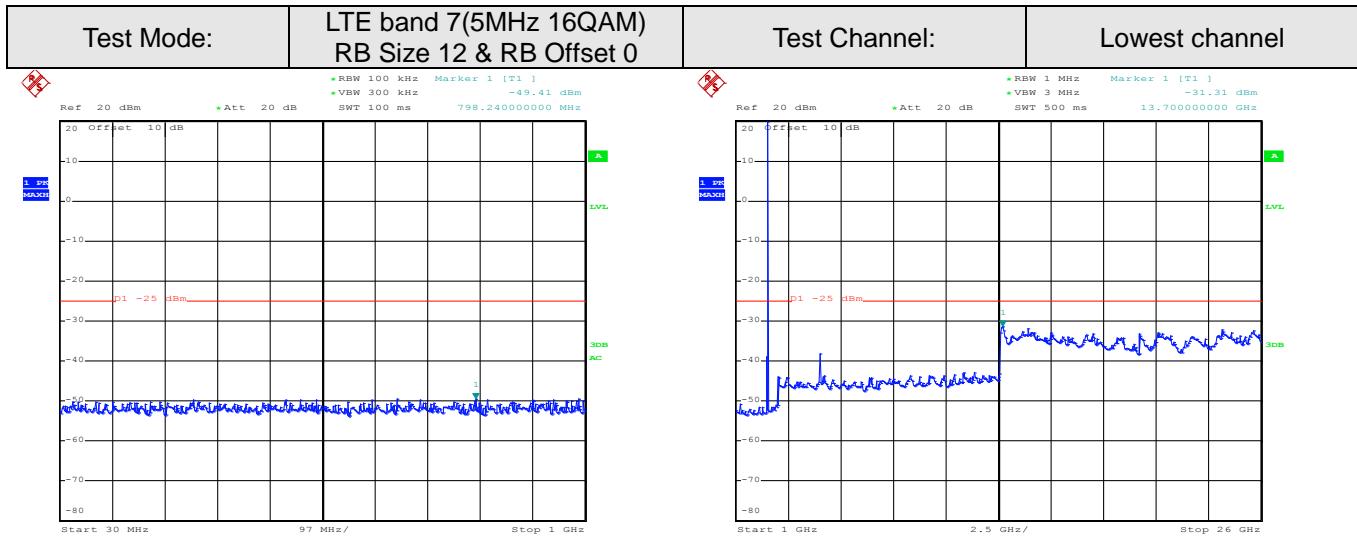


Date: 15.NOV.2016 19:24:24

30MHz~1GHz

Date: 15.NOV.2016 12:27:25

1GHz~26GHz

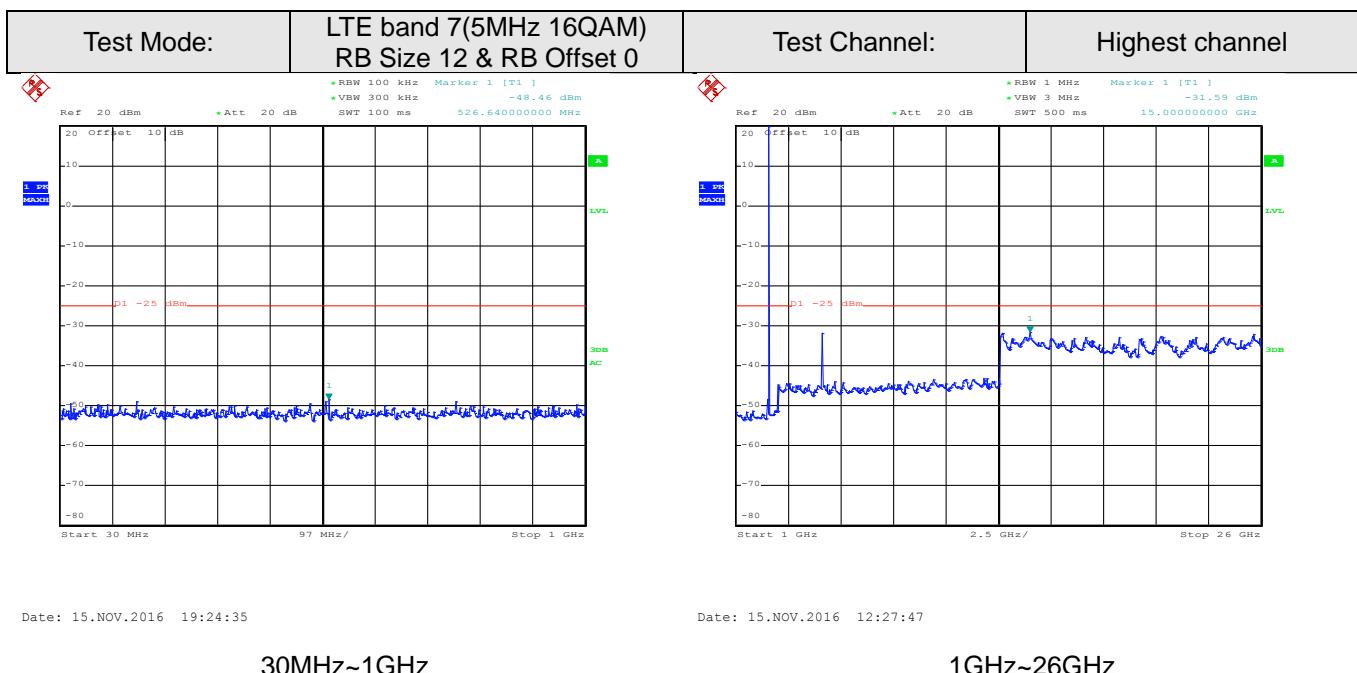
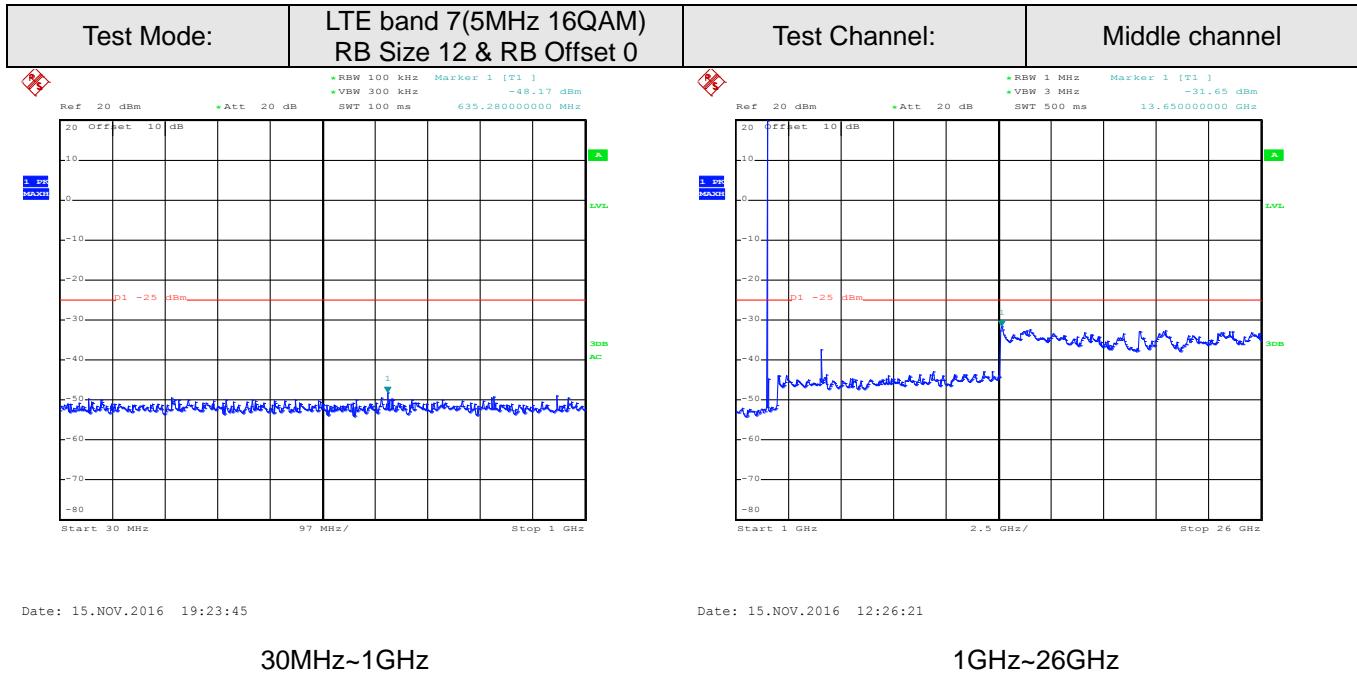


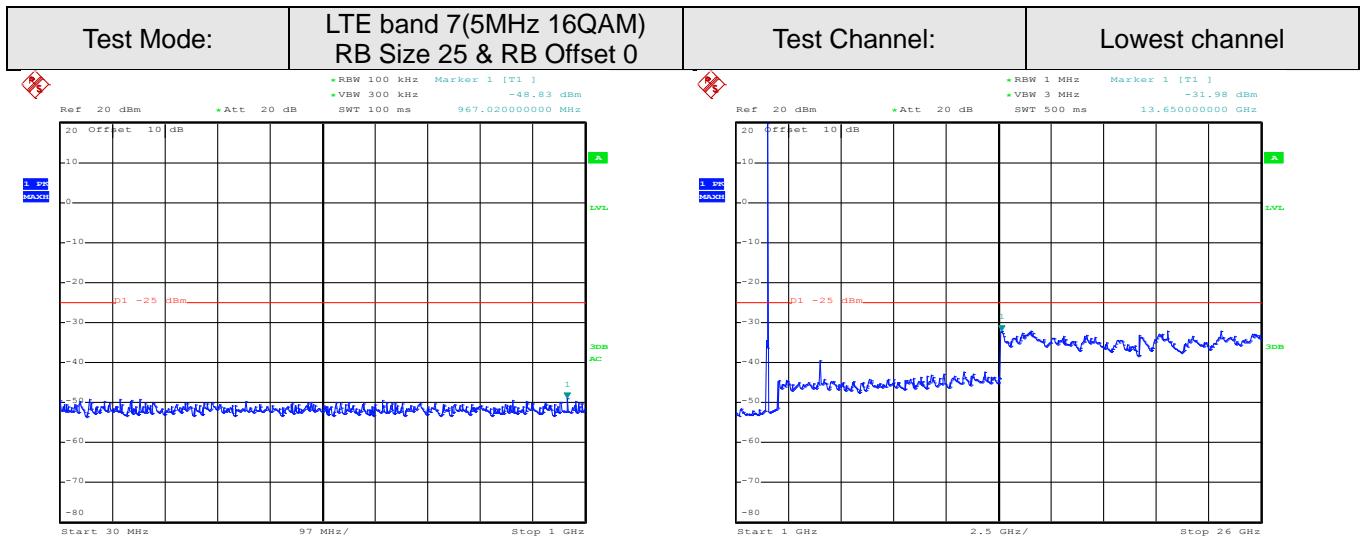
Date: 15.NOV.2016 19:23:09

30MHz~1GHz

Date: 15.NOV.2016 12:25:06

1GHz~26GHz



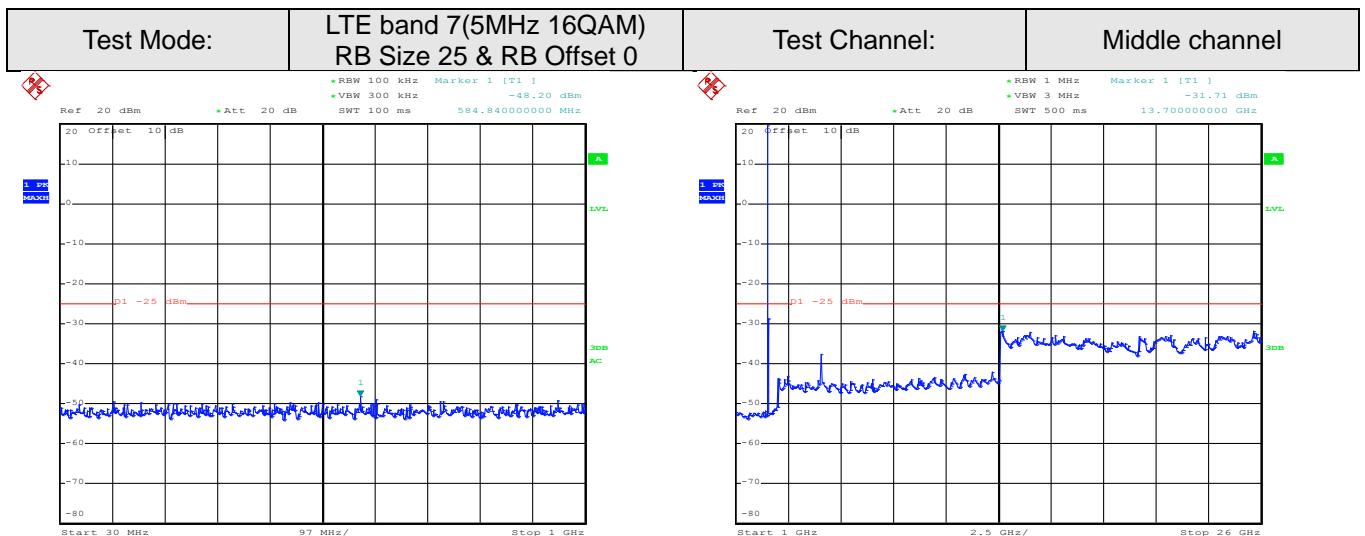


Date: 15.NOV.2016 19:23:20

30MHz~1GHz

Date: 15.NOV.2016 12:25:28

1GHz~26GHz

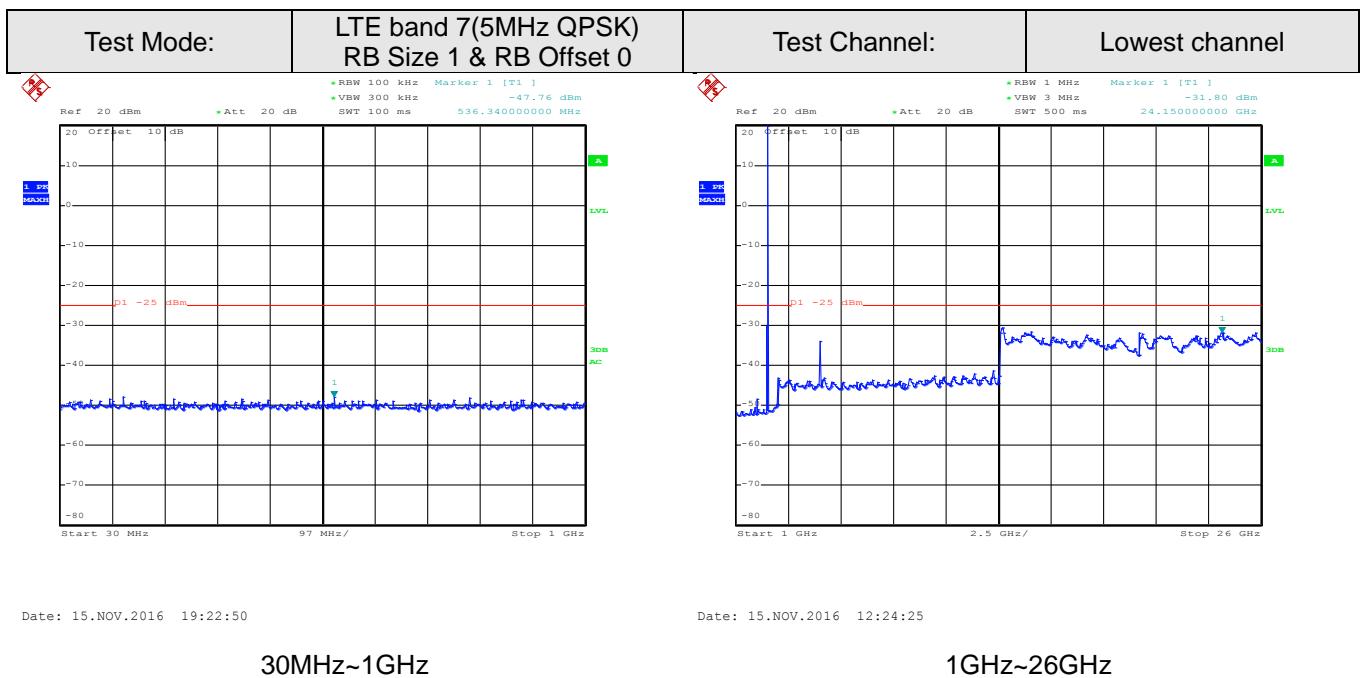
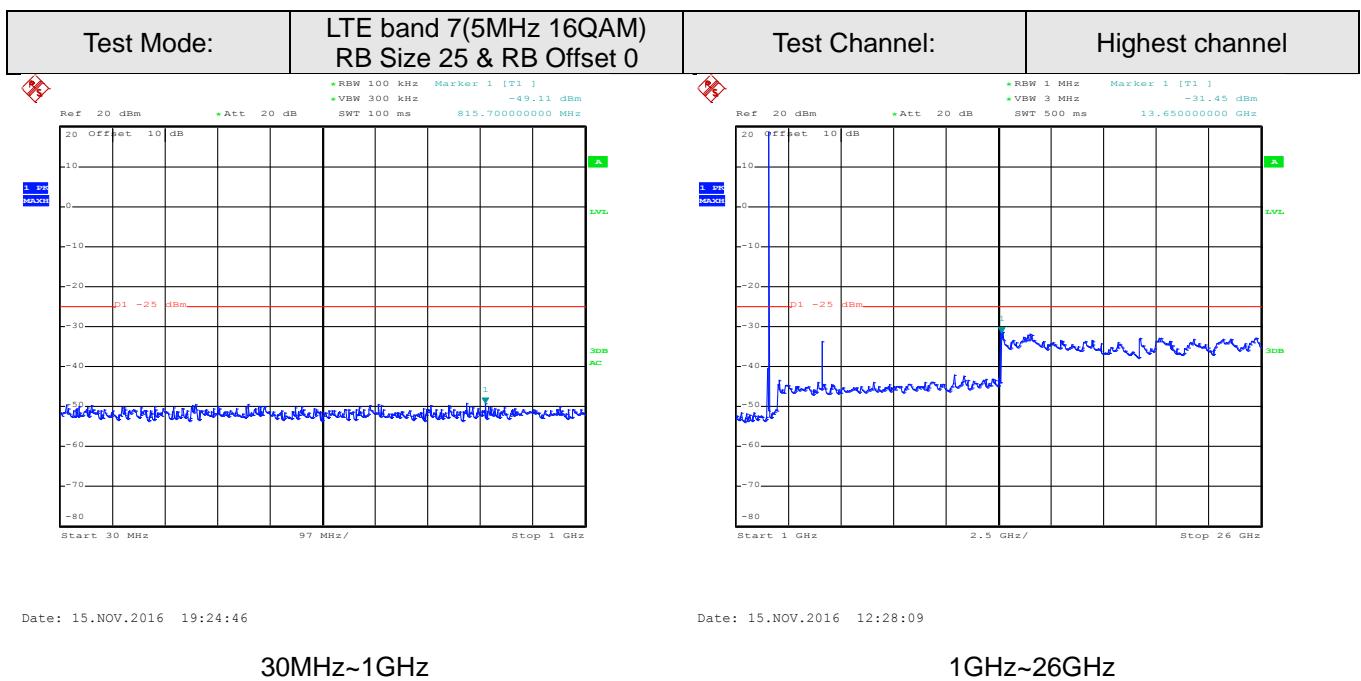


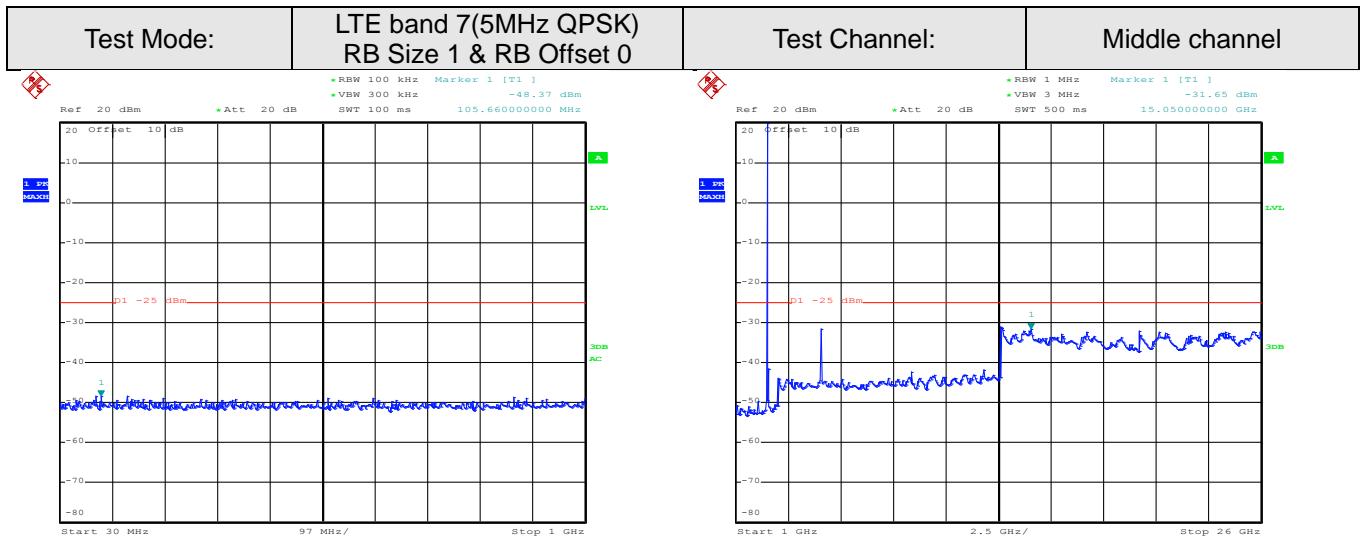
Date: 15.NOV.2016 19:24:07

30MHz~1GHz

Date: 15.NOV.2016 12:26:41

1GHz~26GHz



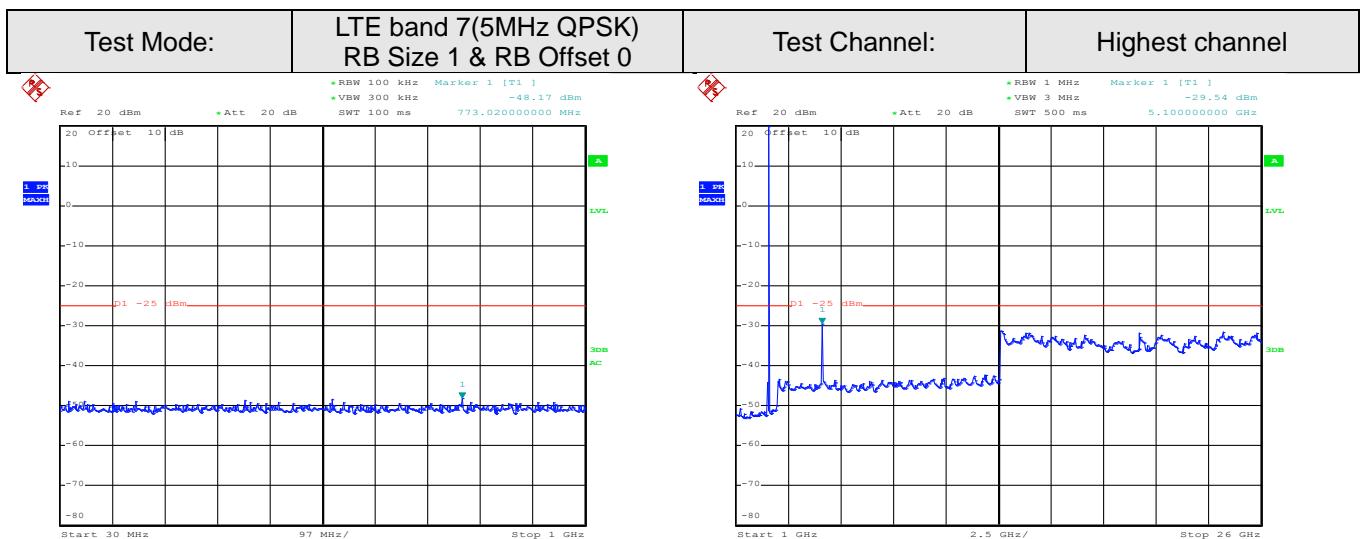


Date: 15.NOV.2016 19:23:31

30MHz~1GHz

Date: 15.NOV.2016 12:25:51

1GHz~26GHz

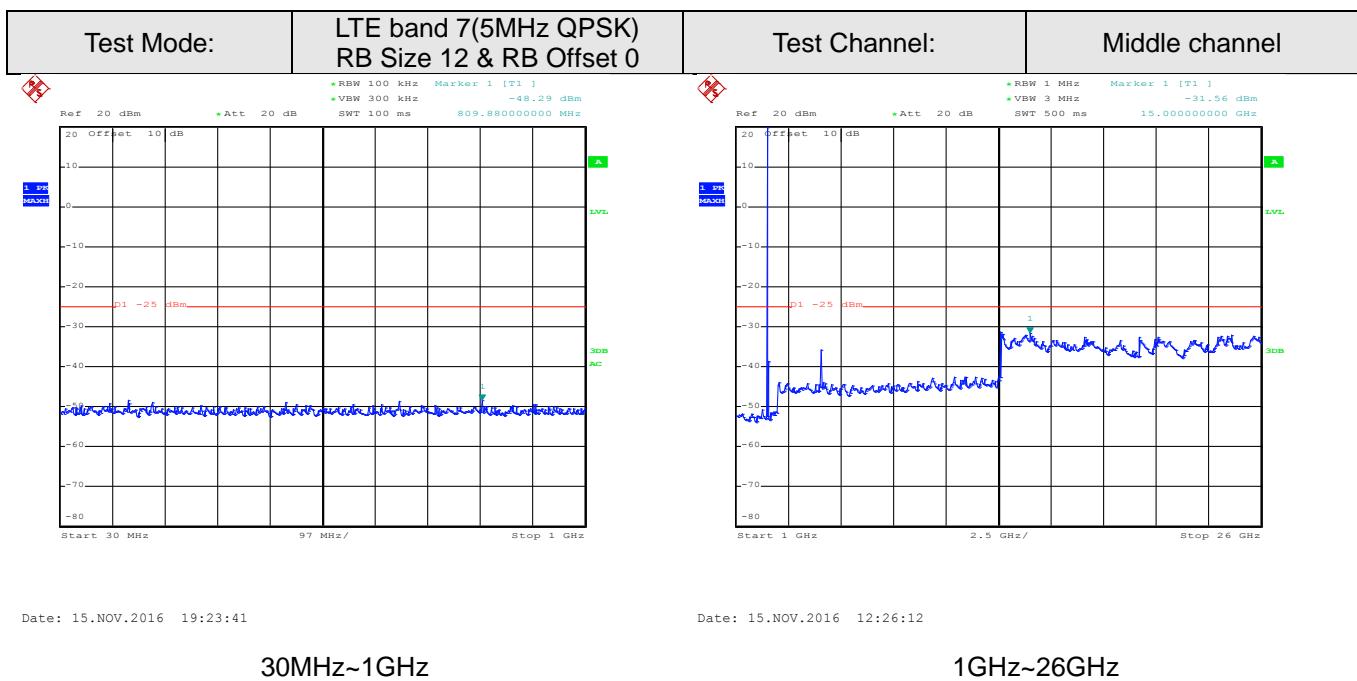
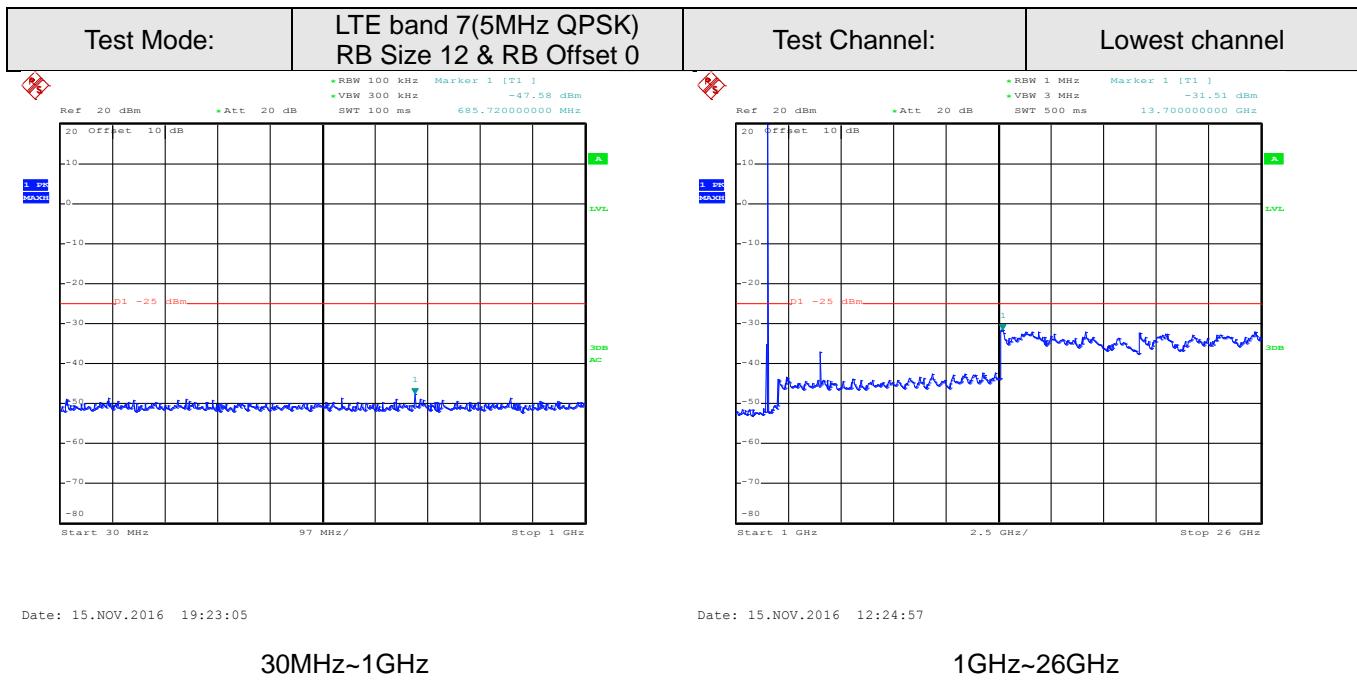


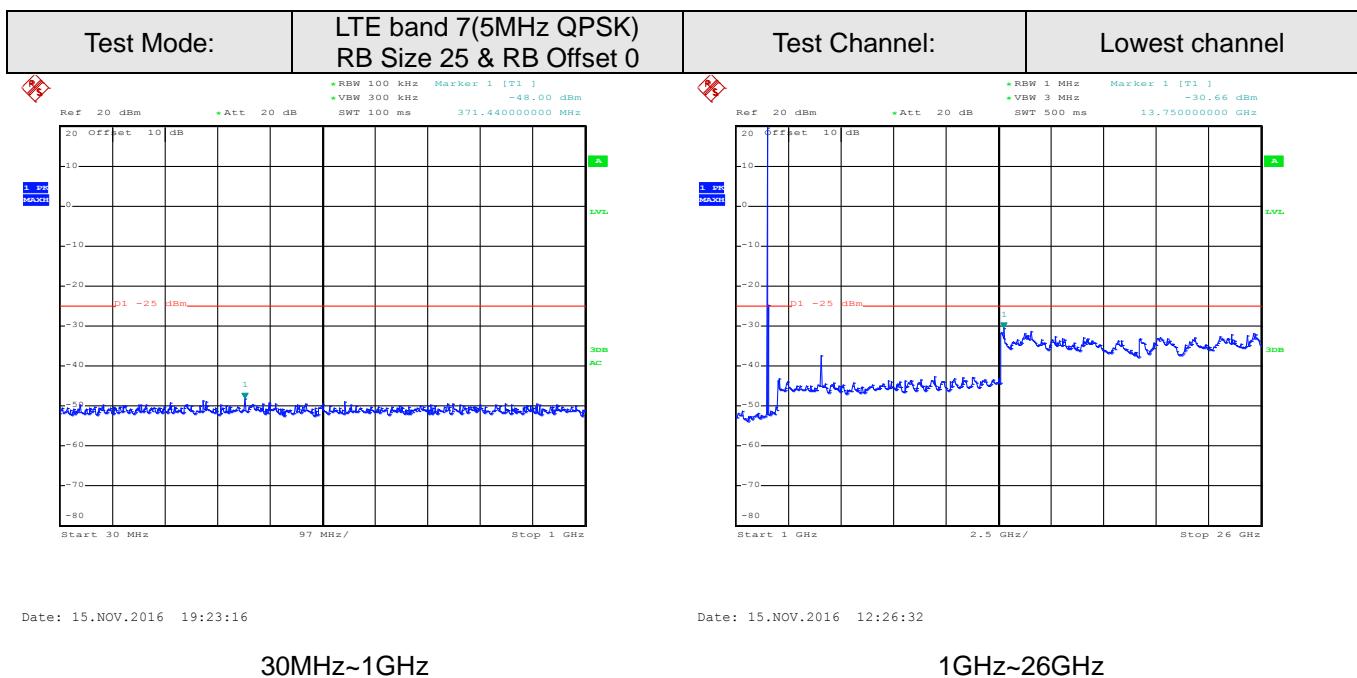
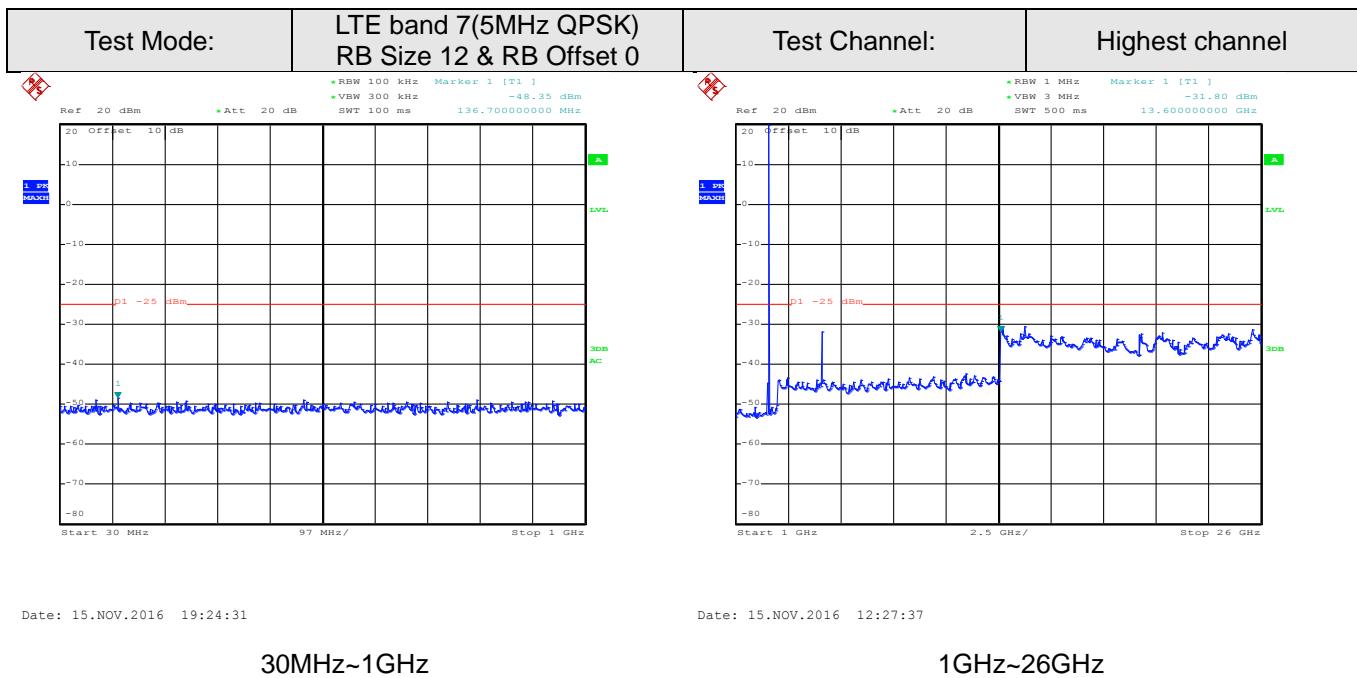
Date: 15.NOV.2016 19:24:21

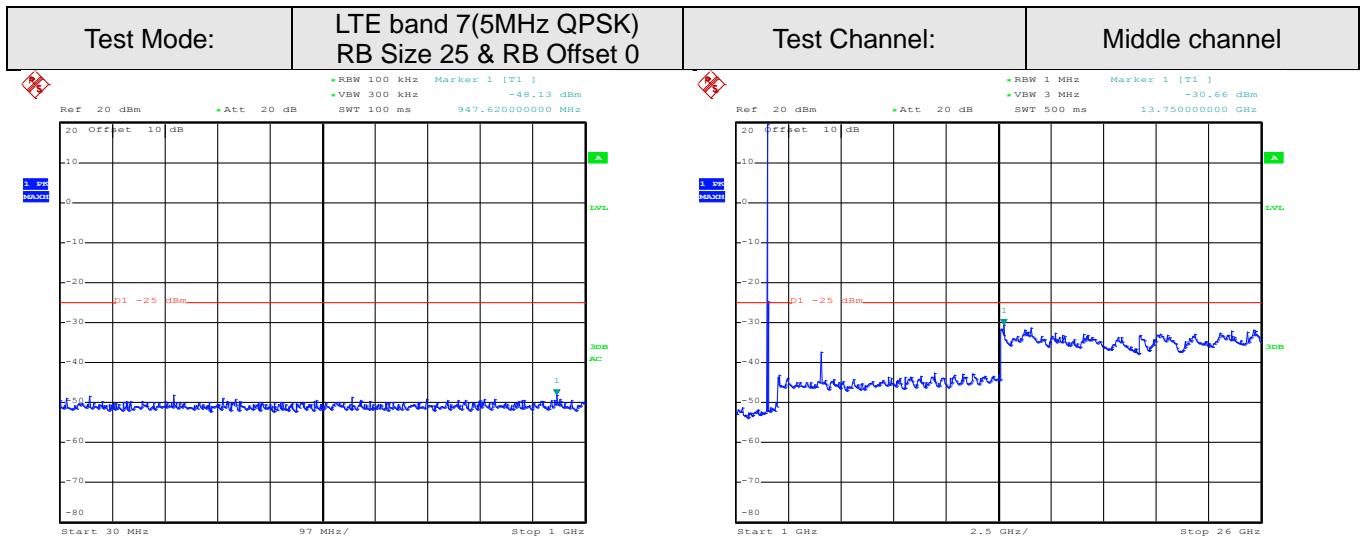
30MHz~1GHz

Date: 15.NOV.2016 12:27:14

1GHz~26GHz





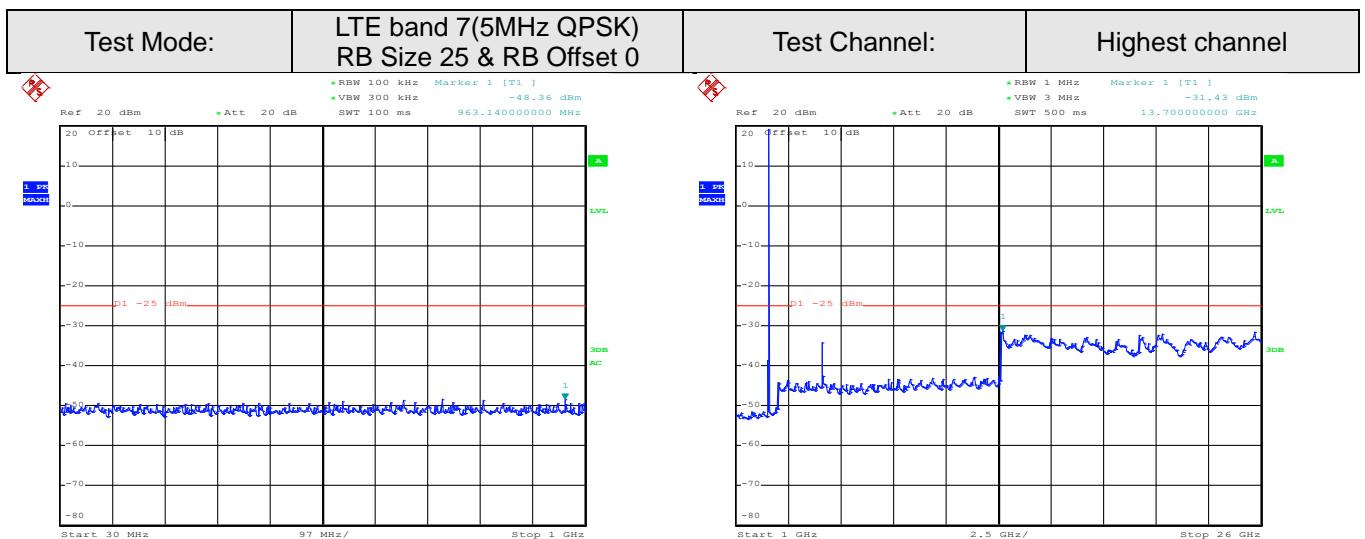


Date: 15.NOV.2016 19:23:54

30MHz~1GHz

Date: 15.NOV.2016 12:26:32

1GHz~26GHz



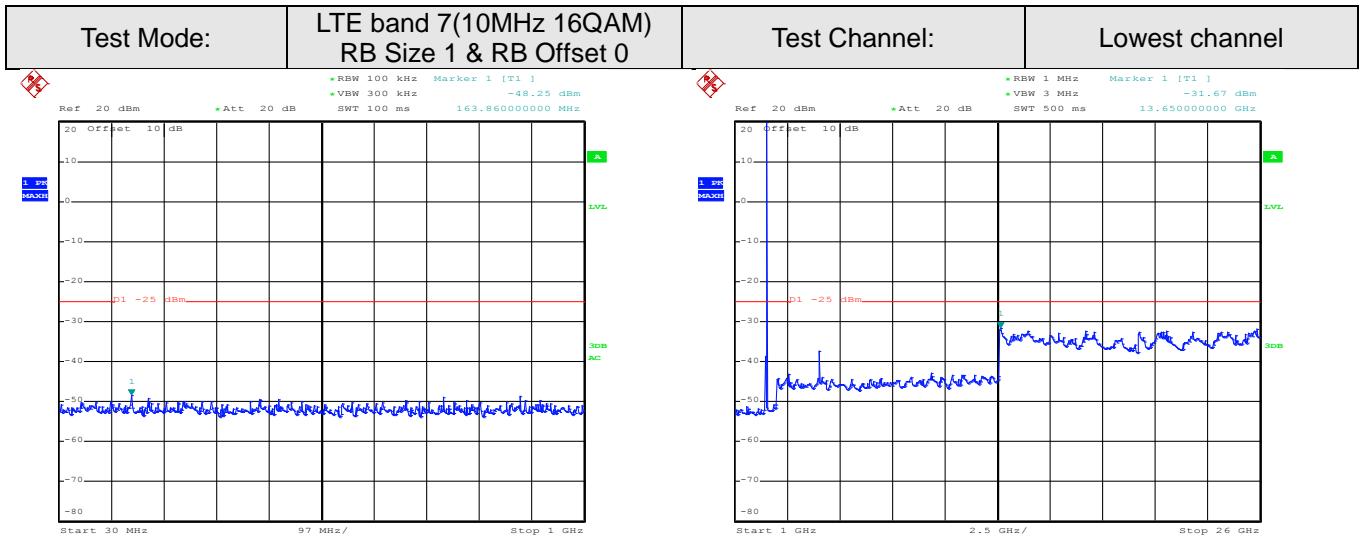
Date: 15.NOV.2016 19:24:42

30MHz~1GHz

Date: 15.NOV.2016 12:28:00

1GHz~26GHz

## 10MHz

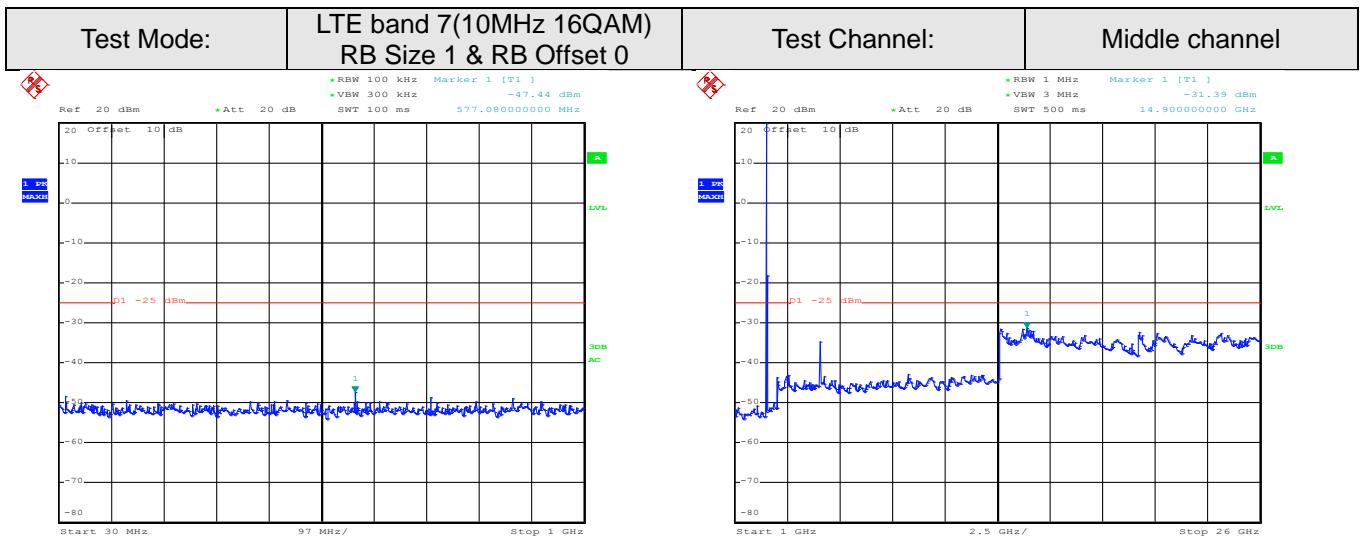


Date: 15.NOV.2016 19:25:06

Date: 15.NOV.2016 12:29:12

30MHz~1GHz

1GHz~26GHz

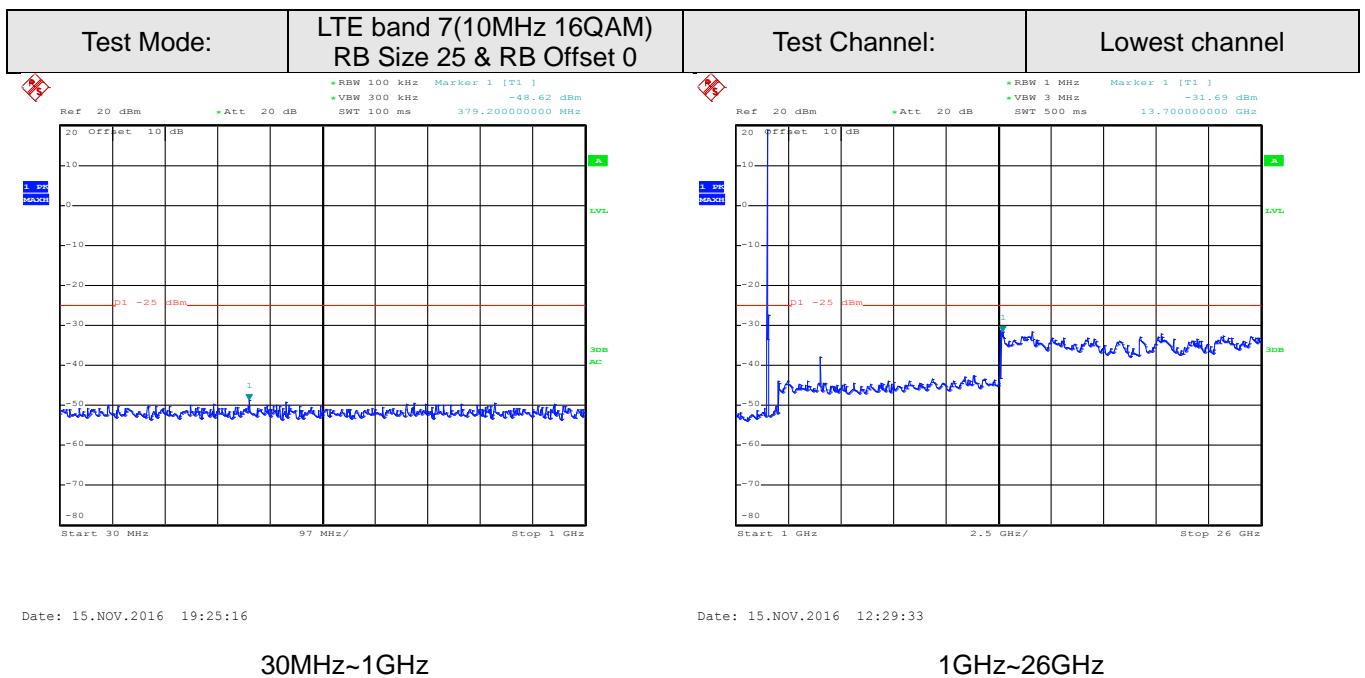
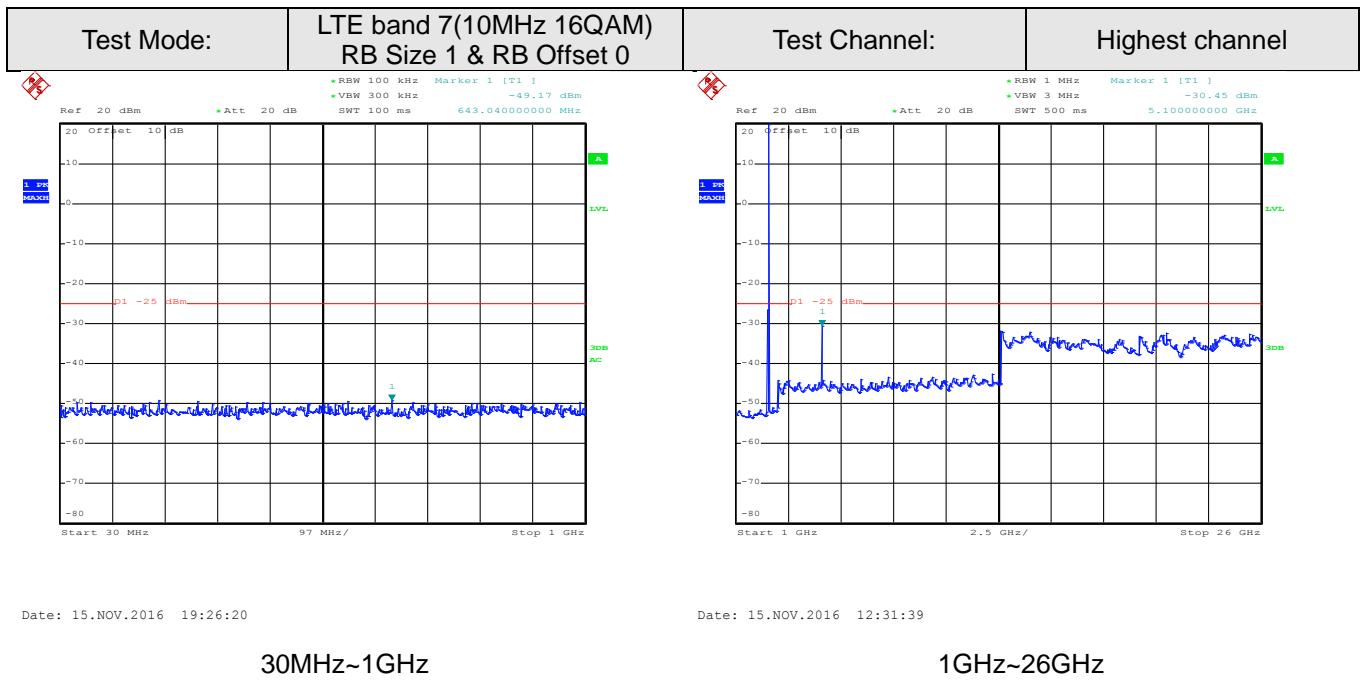


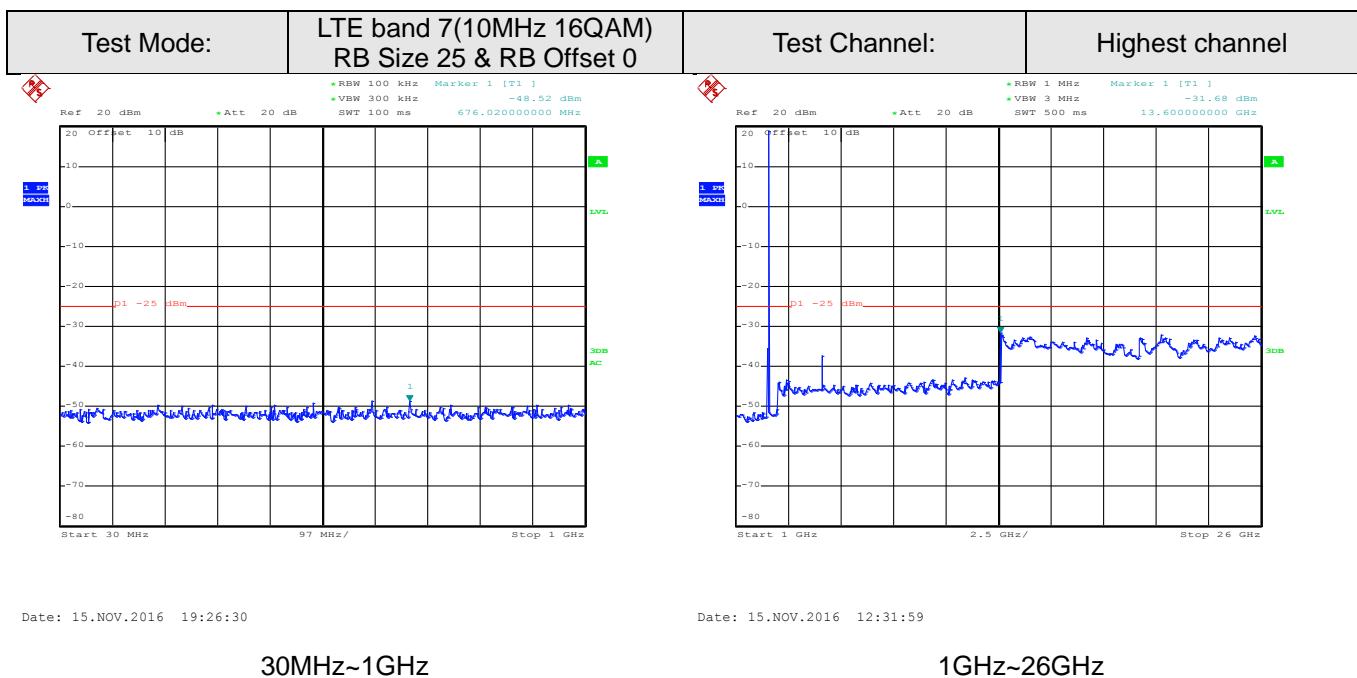
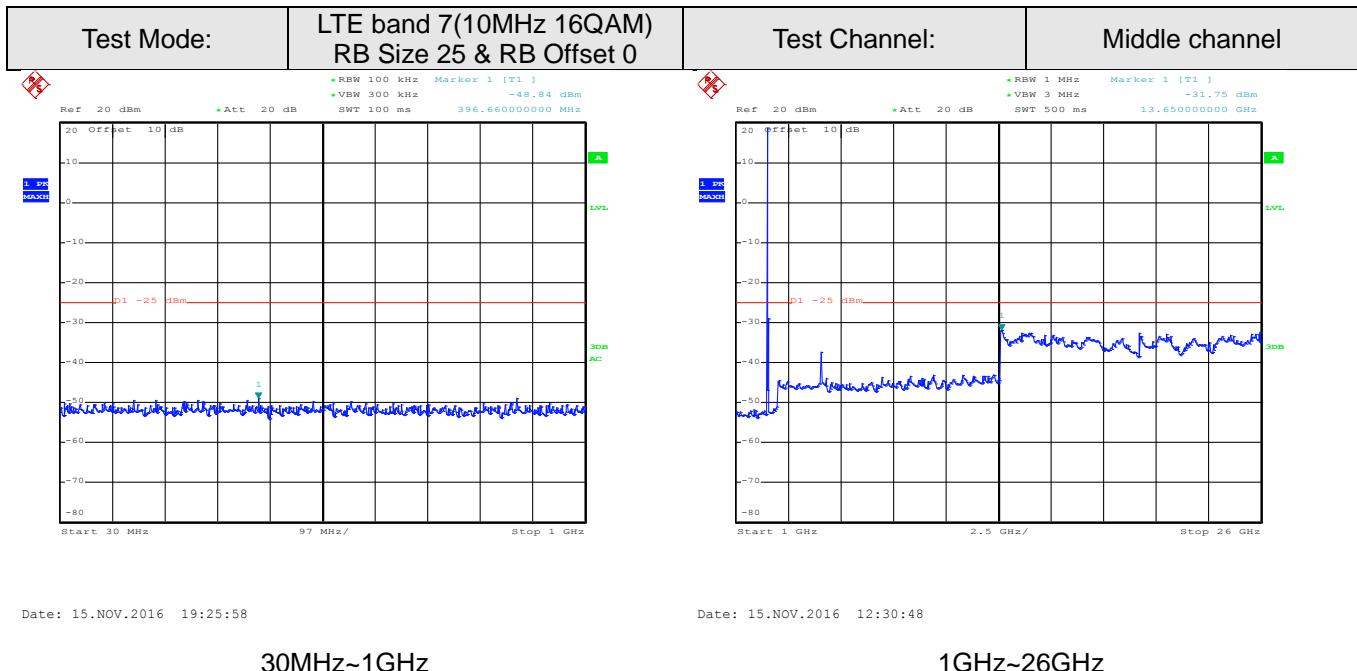
Date: 15.NOV.2016 19:25:45

Date: 15.NOV.2016 12:30:24

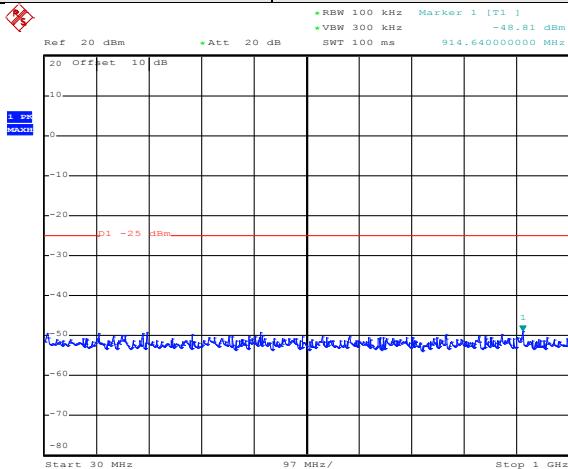
30MHz~1GHz

1GHz~26GHz



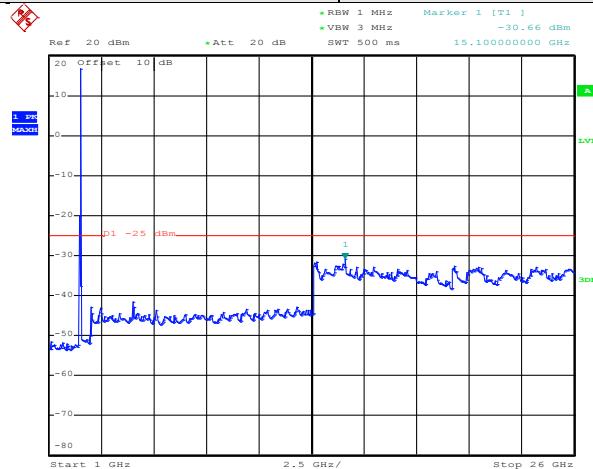


Test Mode:	LTE band 7(10MHz 16QAM) RB Size 50 & RB Offset 0	Test Channel:	Lowest channel
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Date: 15.NOV.2016 19:25:29

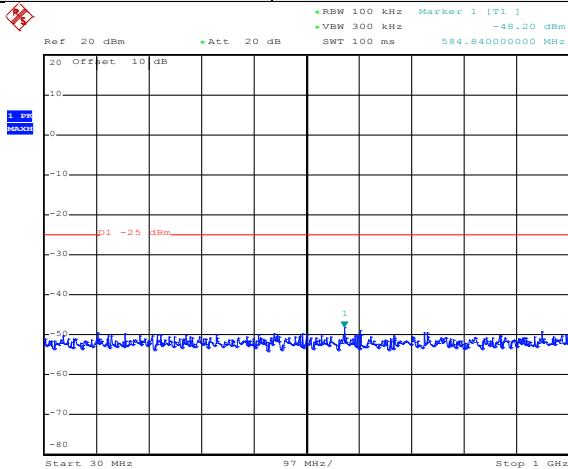
30MHz~1GHz



Date: 15.NOV.2016 12:29:53

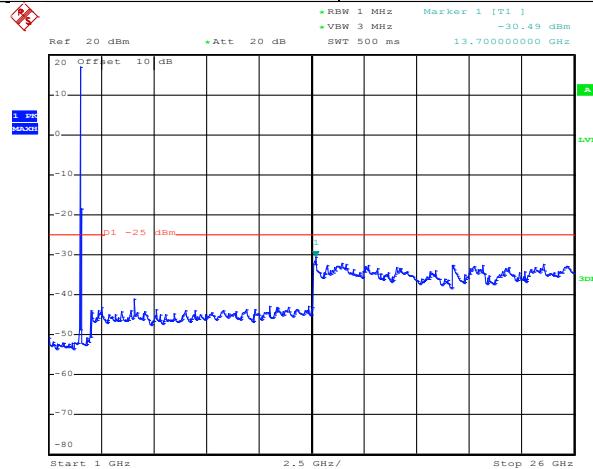
1GHz~26GHz

Test Mode:	LTE band 7(10MHz 16QAM) RB Size 50 & RB Offset 0	Test Channel:	Middle channel
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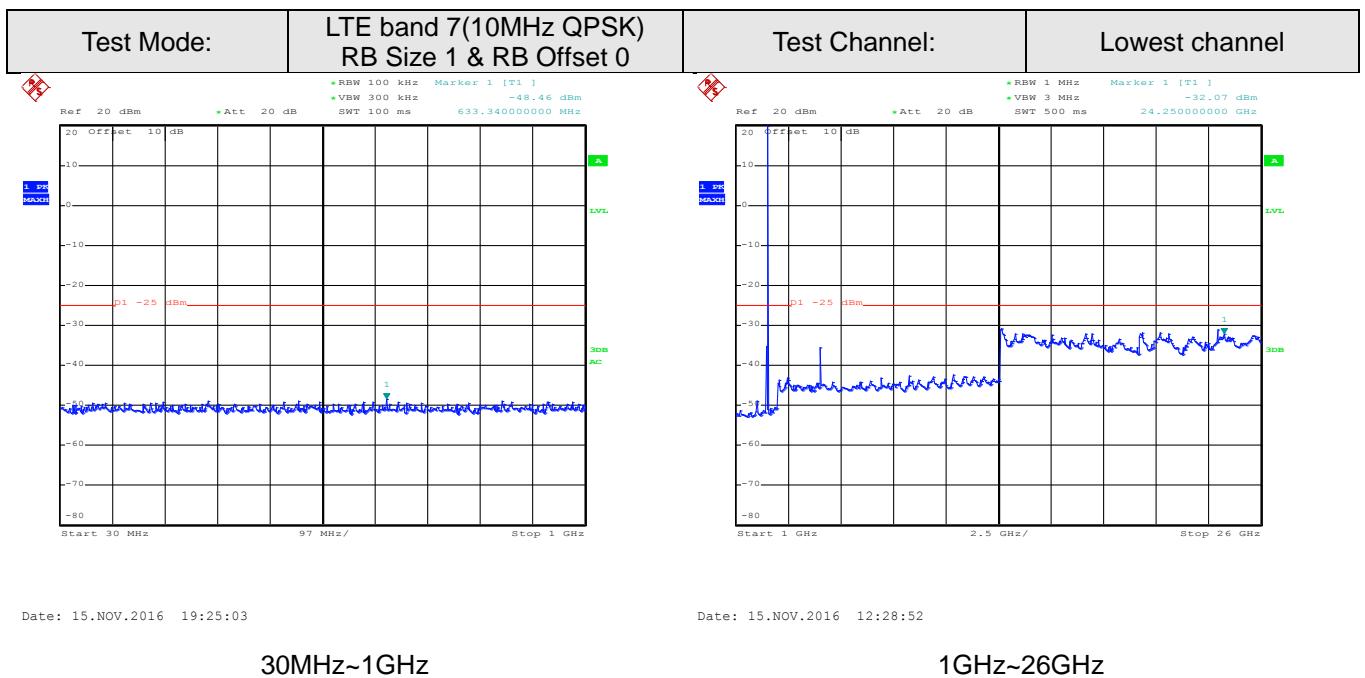
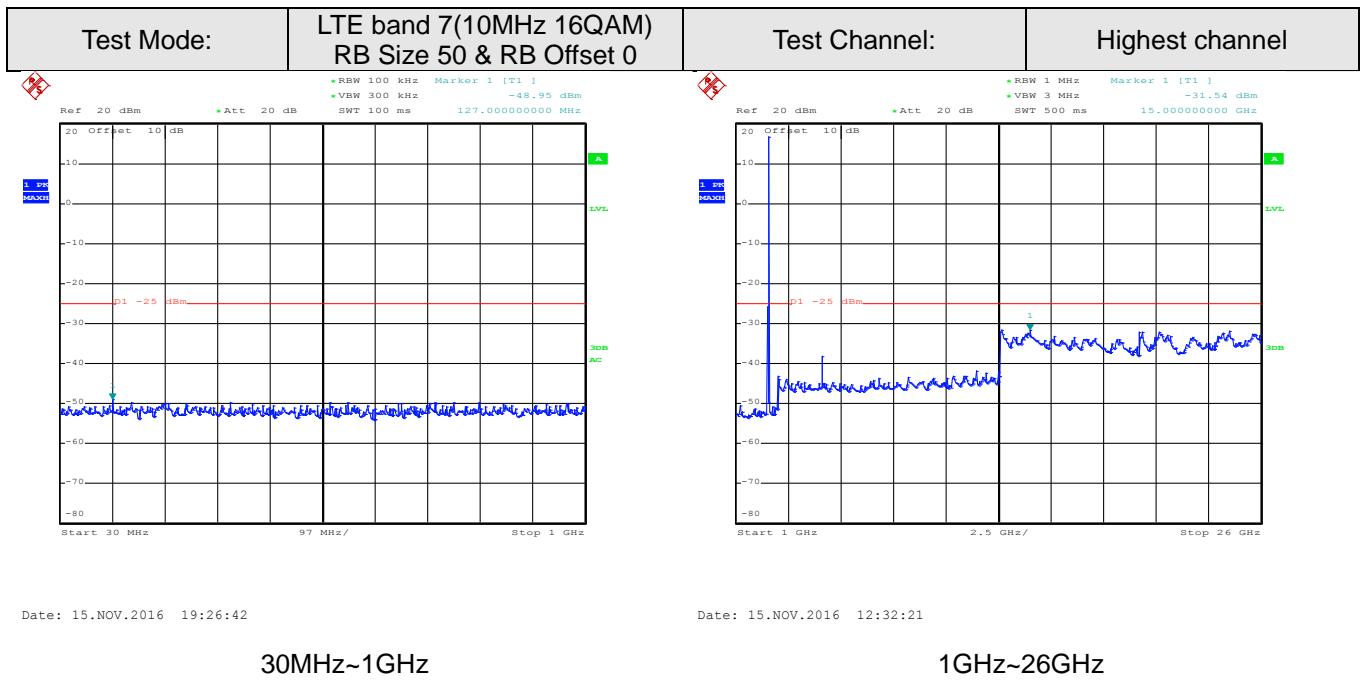
Date: 15.NOV.2016 19:24:07

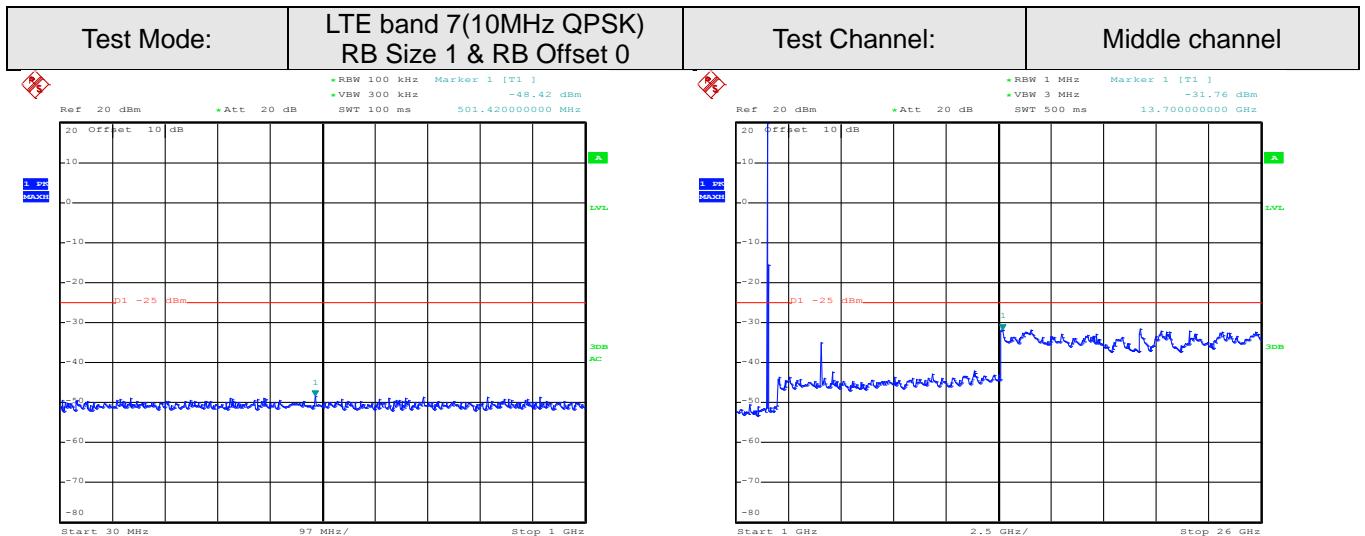
30MHz~1GHz



Date: 15.NOV.2016 12:31:09

1GHz~26GHz



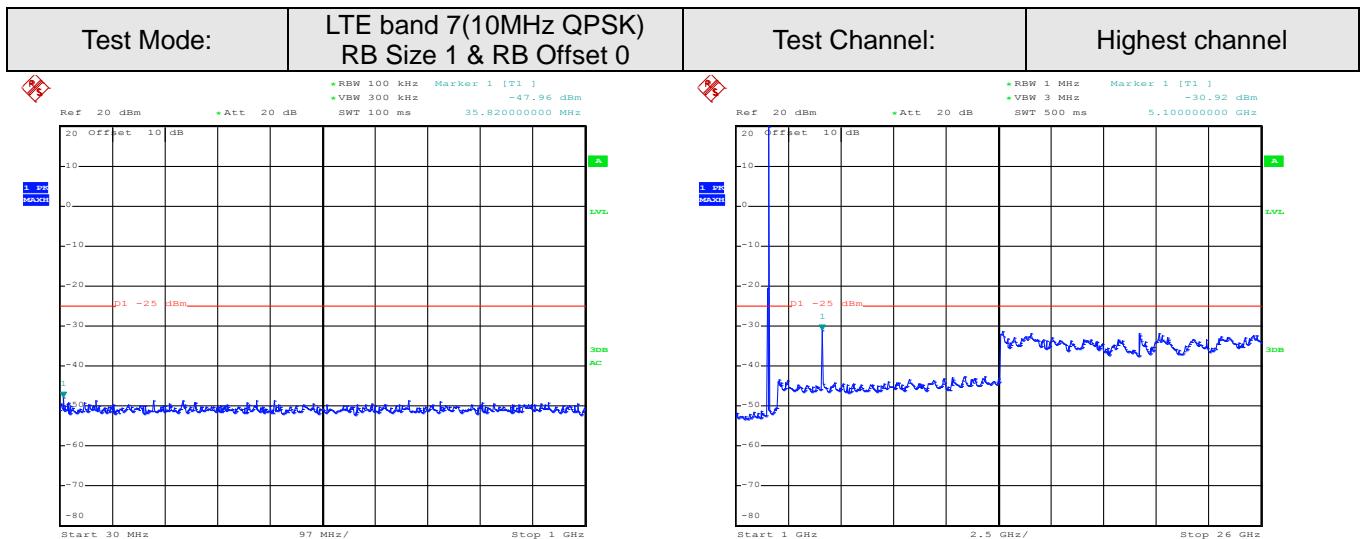


Date: 15.NOV.2016 19:25:41

30MHz~1GHz

Date: 15.NOV.2016 12:30:14

1GHz~26GHz



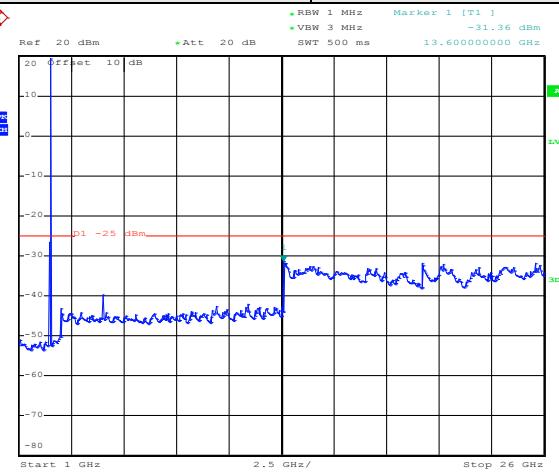
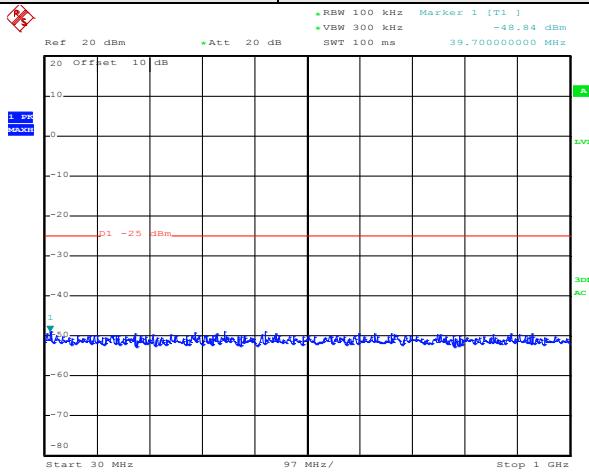
Date: 15.NOV.2016 19:26:16

30MHz~1GHz

Date: 15.NOV.2016 12:31:31

1GHz~26GHz

Test Mode:	LTE band 7(10MHz QPSK) RB Size 25 & RB Offset 0	Test Channel:	Lowest channel
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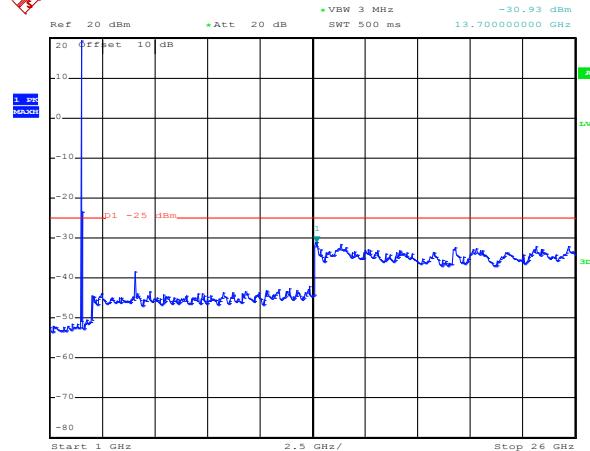
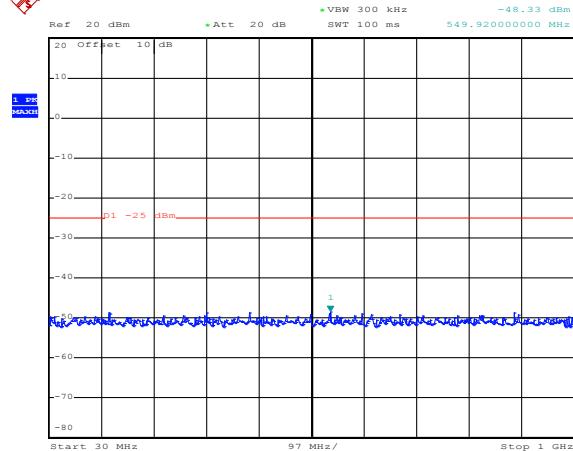
Date: 15.NOV.2016 19:25:13

30MHz~1GHz

Date: 15.NOV.2016 12:29:24

1GHz~26GHz

Test Mode:	LTE band 7(10MHz QPSK) RB Size 25 & RB Offset 0	Test Channel:	Middle channel
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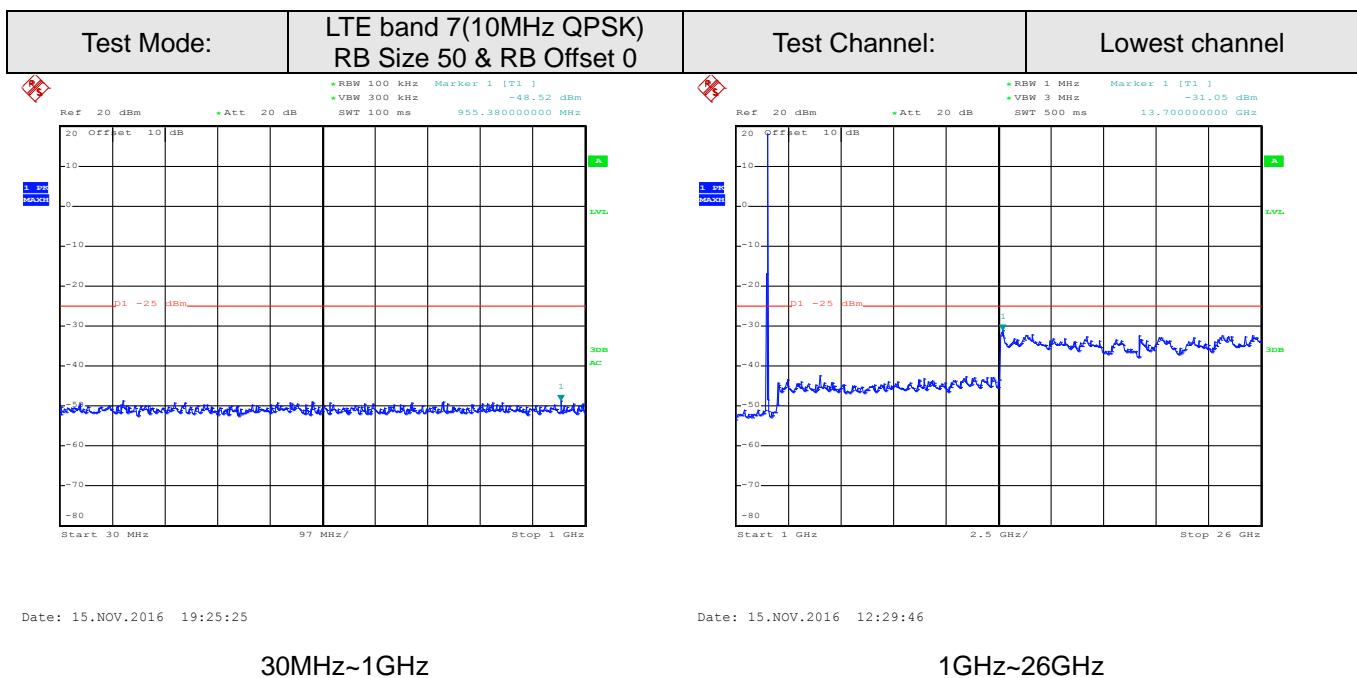
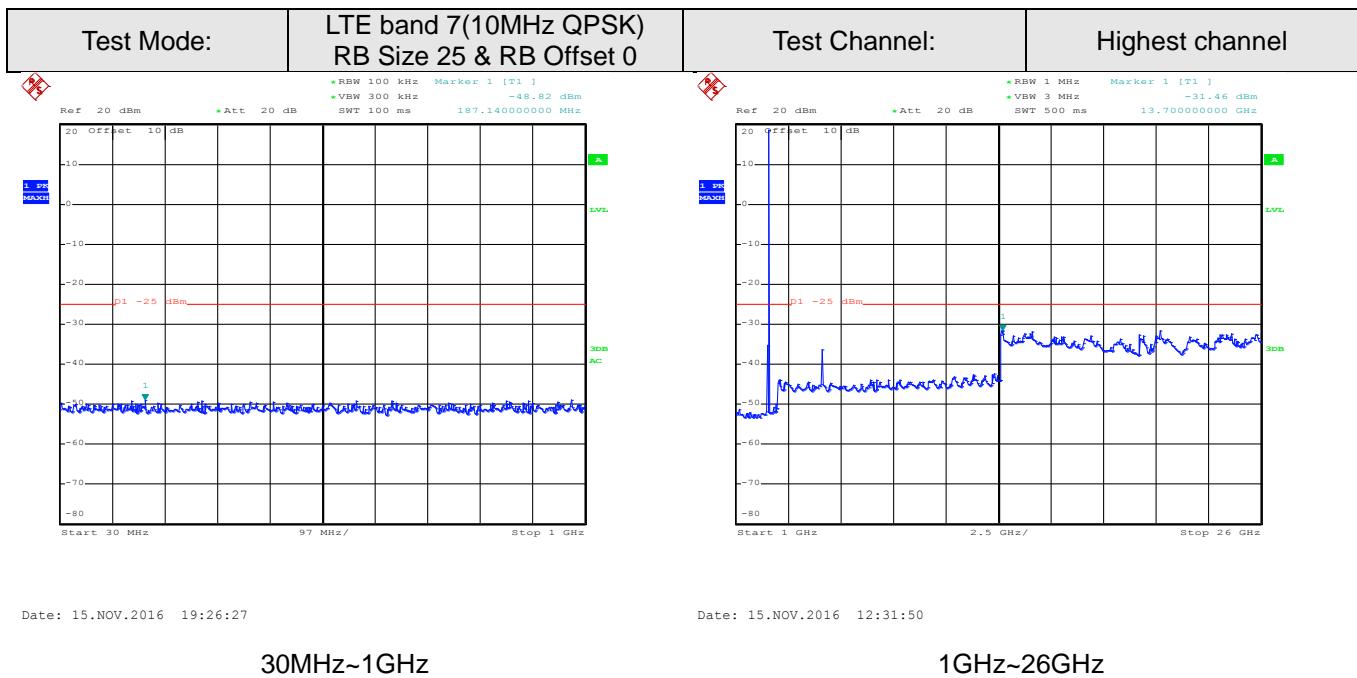


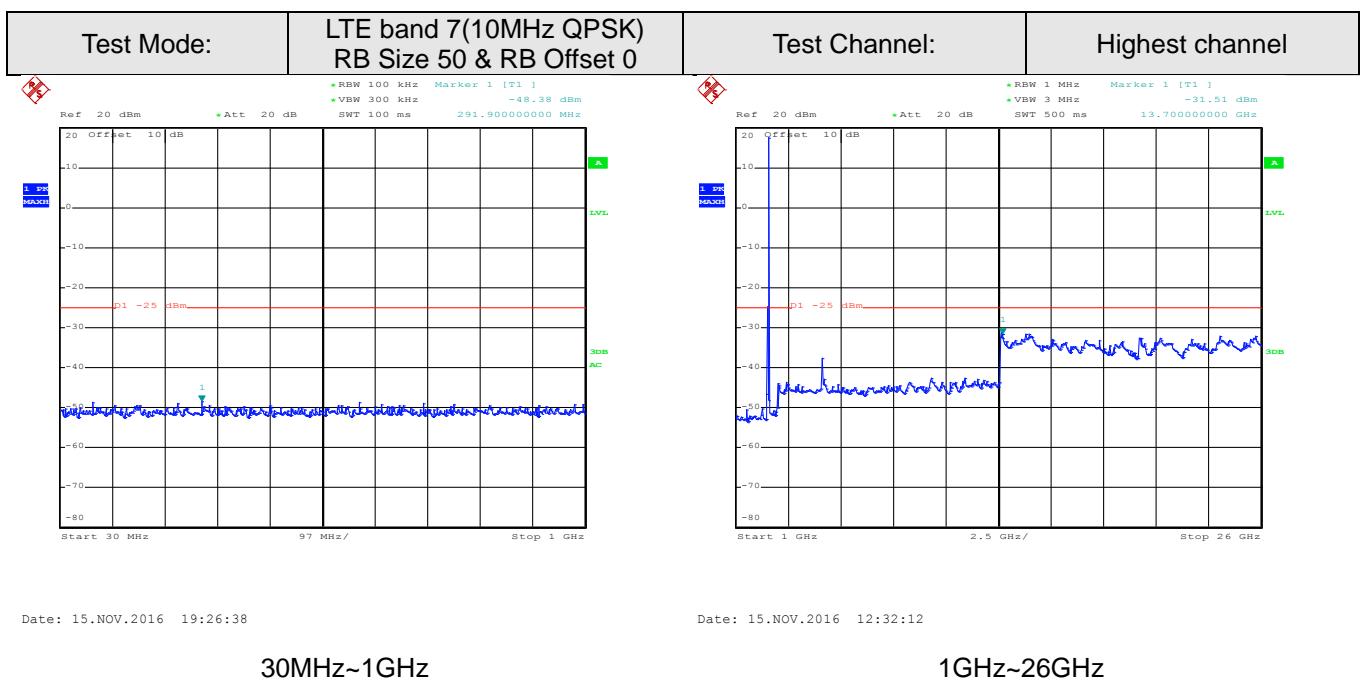
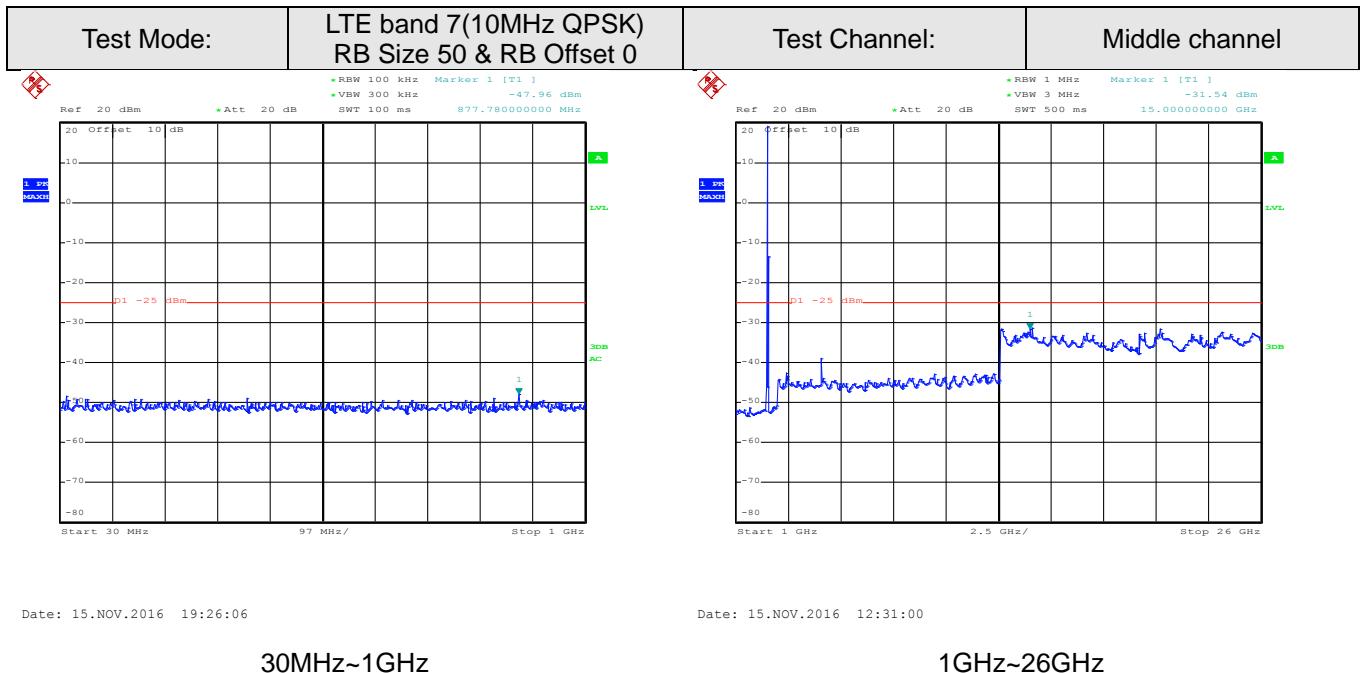
Date: 15.NOV.2016 19:25:54

30MHz~1GHz

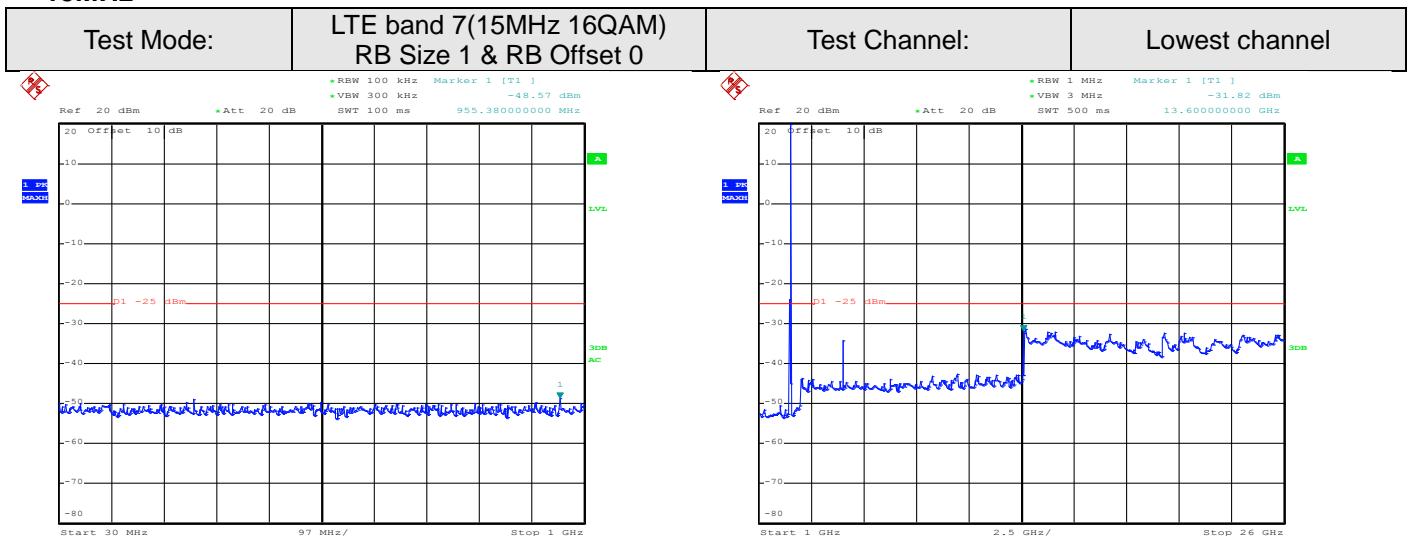
Date: 15.NOV.2016 12:30:37

1GHz~26GHz





## 15MHz

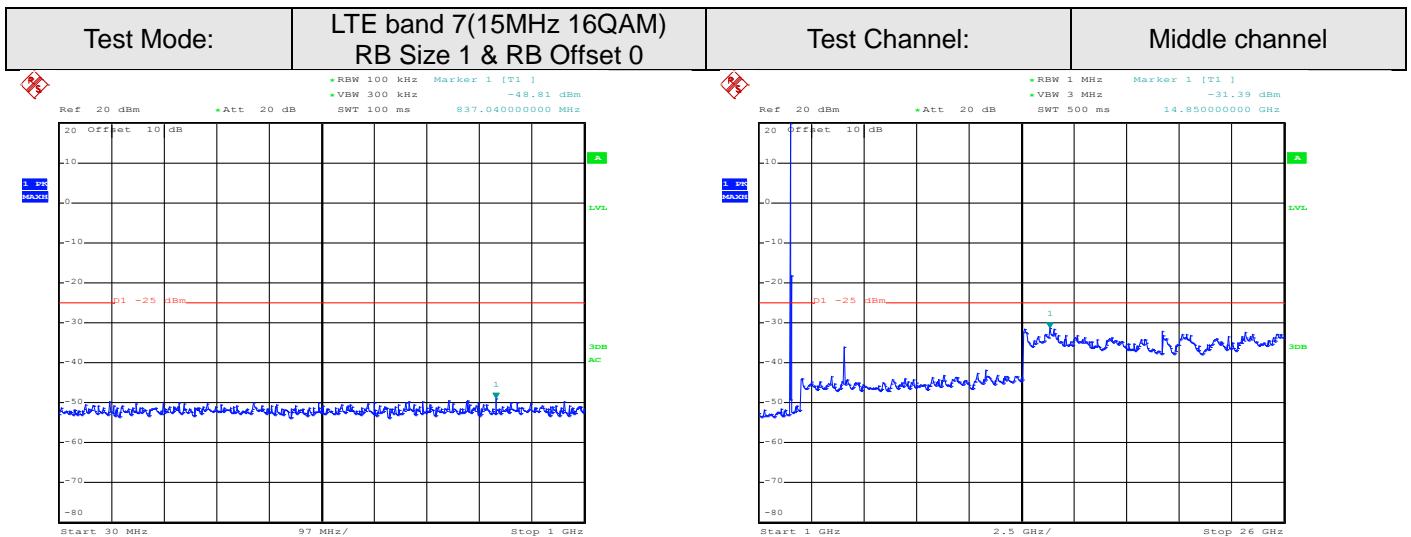


Date: 15.NOV.2016 19:26:59

Date: 15.NOV.2016 12:33:06

30MHz~1GHz

1GHz~26GHz

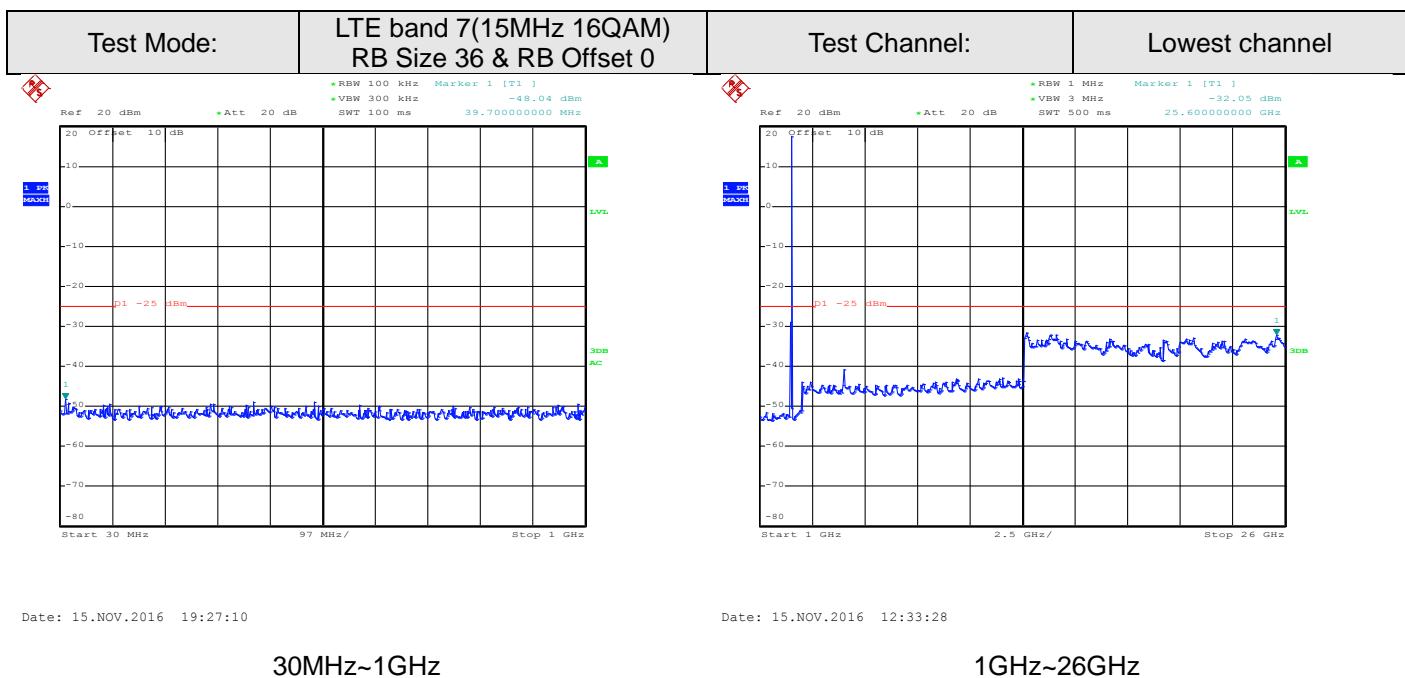
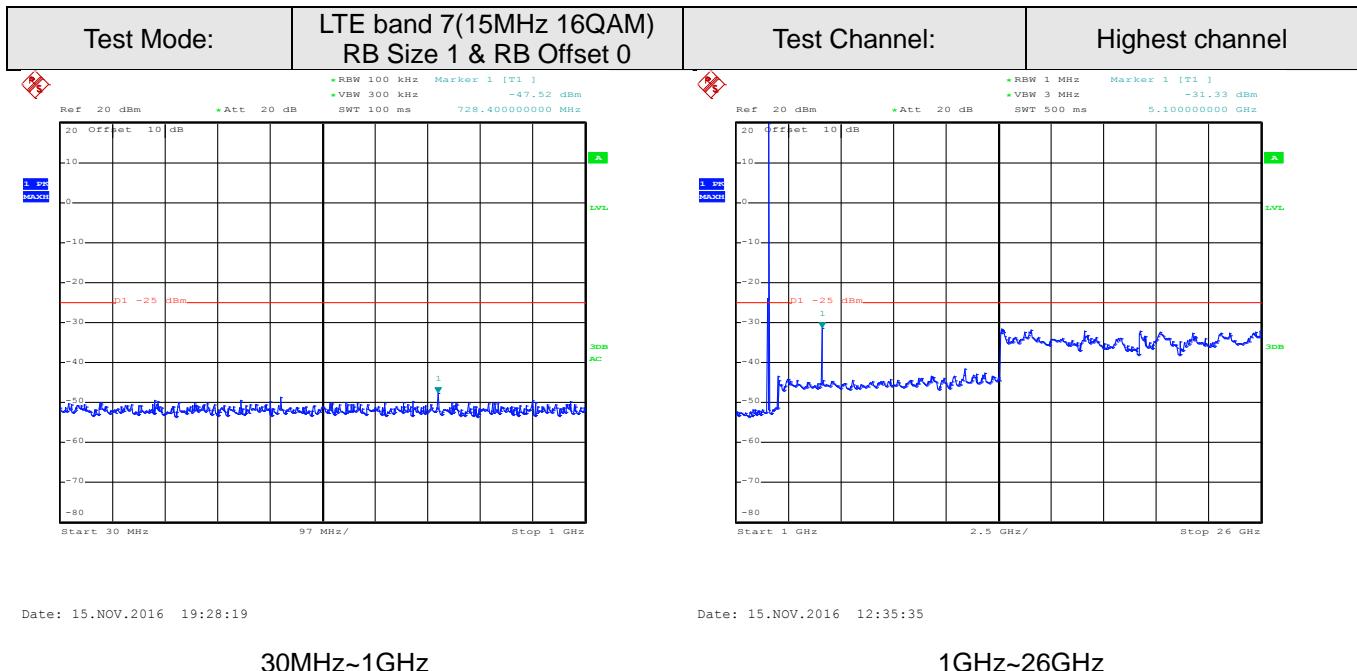


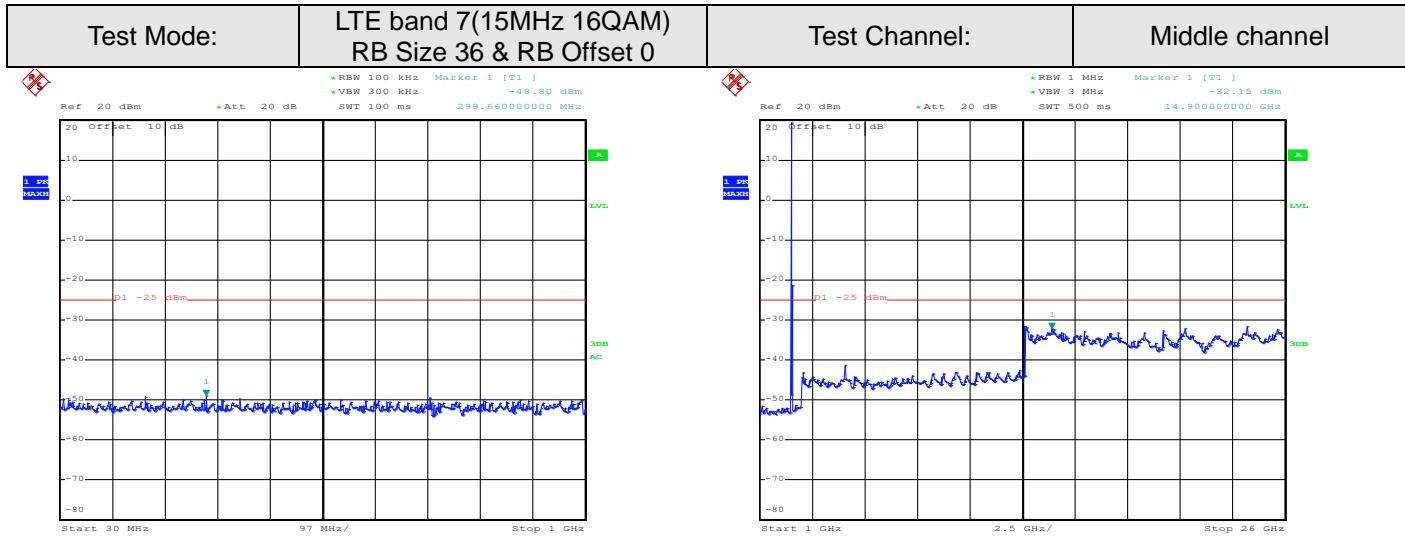
Date: 15.NOV.2016 19:27:41

Date: 15.NOV.2016 12:34:17

30MHz~1GHz

1GHz~26GHz



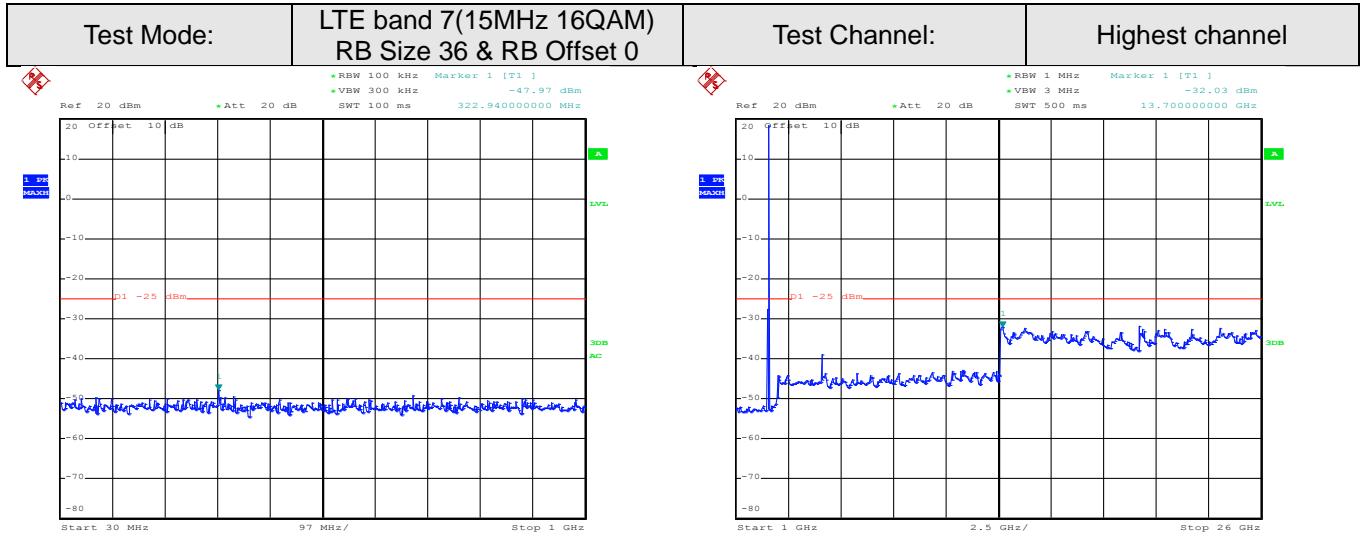


Date: 15.NOV.2016 19:27:53

30MHz~1GHz

Date: 15.NOV.2016 12:34:41

1GHz~26GHz



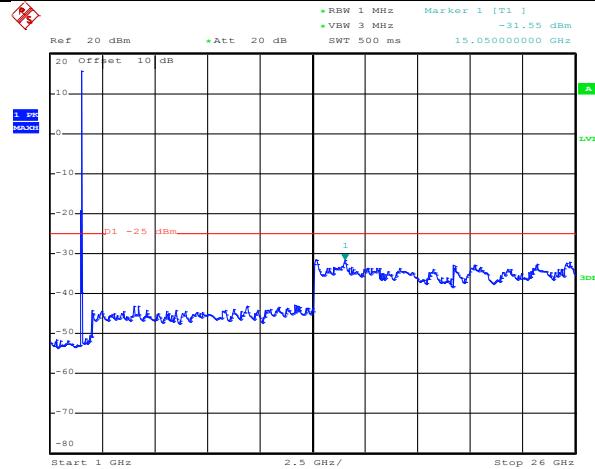
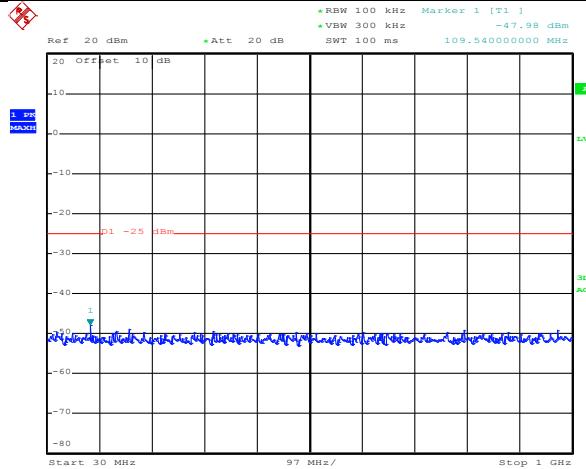
Date: 15.NOV.2016 19:28:30

30MHz~1GHz

Date: 15.NOV.2016 12:35:55

1GHz~26GHz

Test Mode:	LTE band 7(15MHz 16QAM) RB Size 75 & RB Offset 0	Test Channel:	Lowest channel
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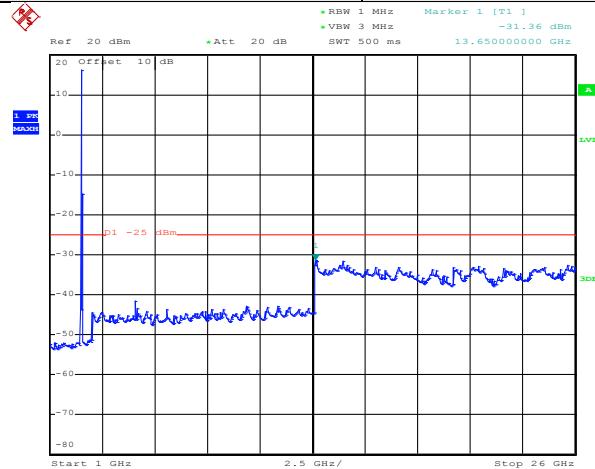
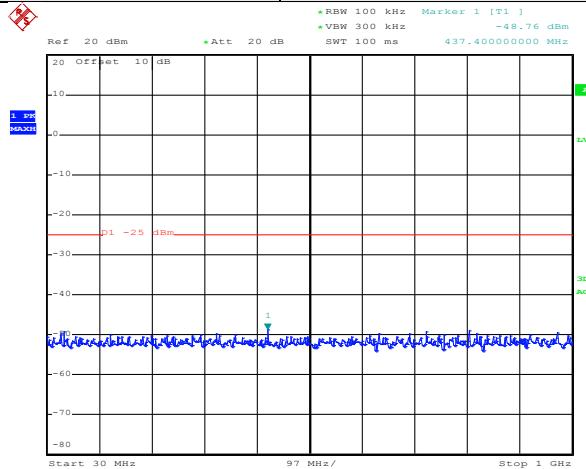
Date: 15.NOV.2016 19:27:26

30MHz~1GHz

Date: 15.NOV.2016 12:33:49

1GHz~26GHz

Test Mode:	LTE band 7(15MHz 16QAM) RB Size 75 & RB Offset 0	Test Channel:	Middle channel
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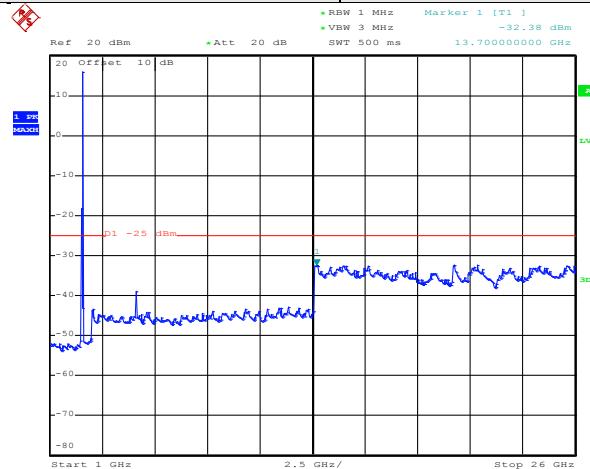
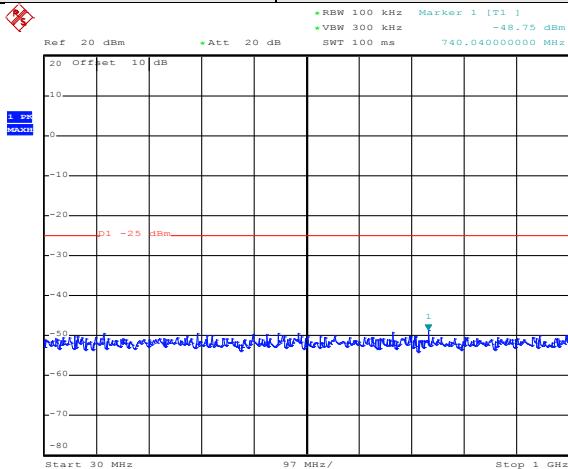
Date: 15.NOV.2016 19:28:04

30MHz~1GHz

Date: 15.NOV.2016 12:35:02

1GHz~26GHz

Test Mode:	LTE band 7(15MHz 16QAM) RB Size 75 & RB Offset 0	Test Channel:	Highest channel
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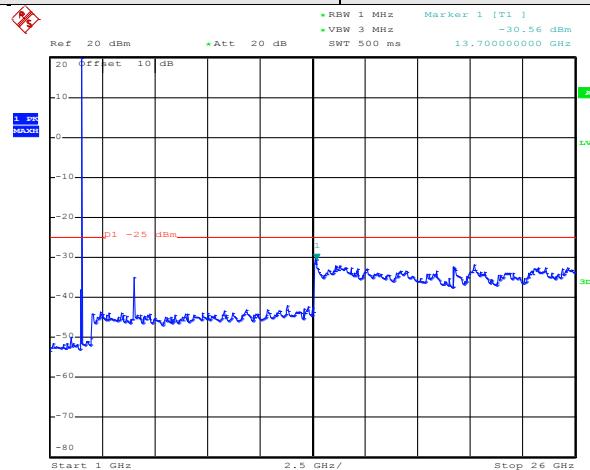
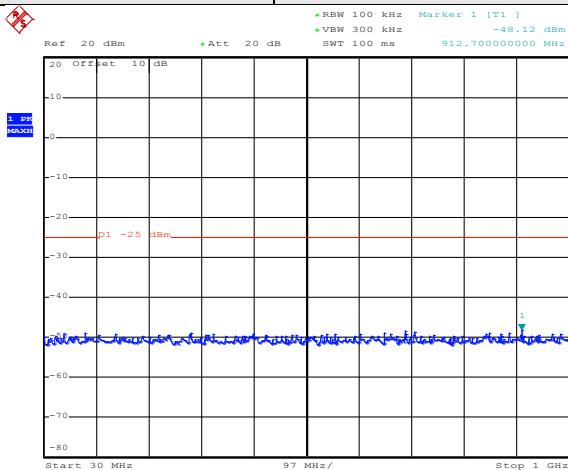
Date: 15.NOV.2016 19:28:42

30MHz~1GHz

Date: 15.NOV.2016 12:36:16

1GHz~26GHz

Test Mode:	LTE band 7(15MHz QPSK) RB Size 1 & RB Offset 0	Test Channel:	Lowest channel
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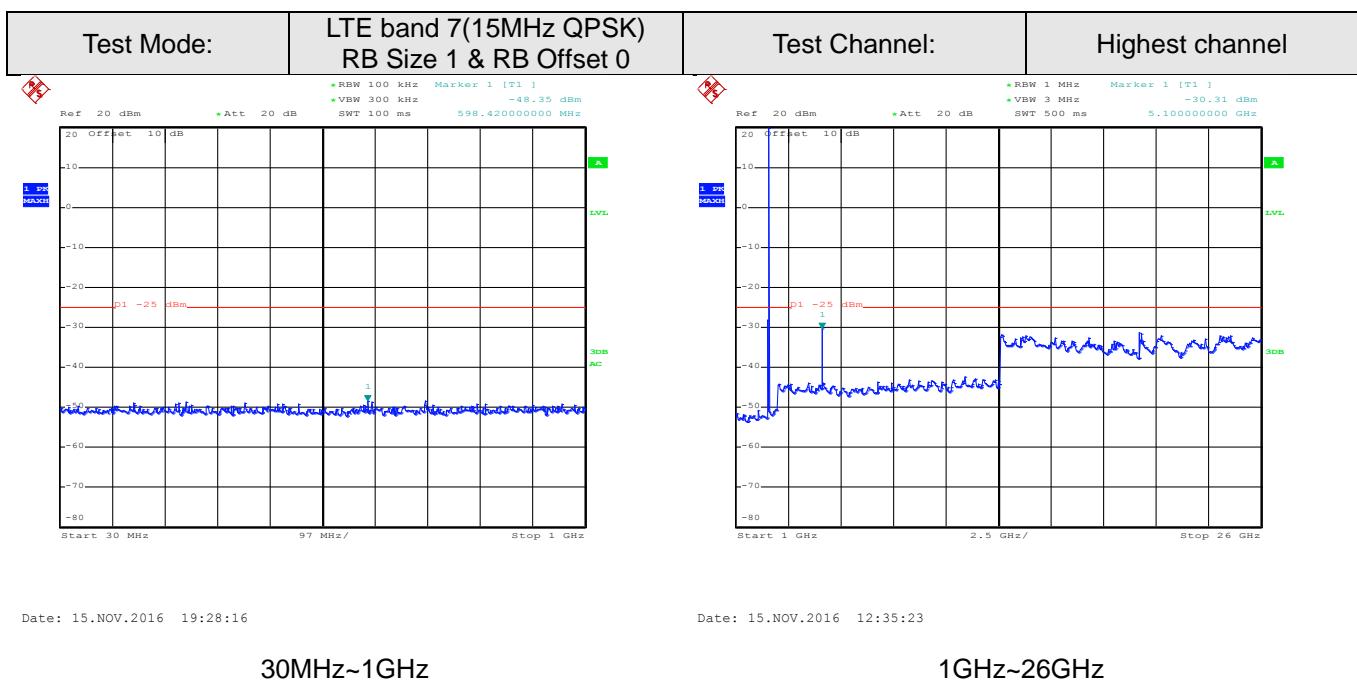
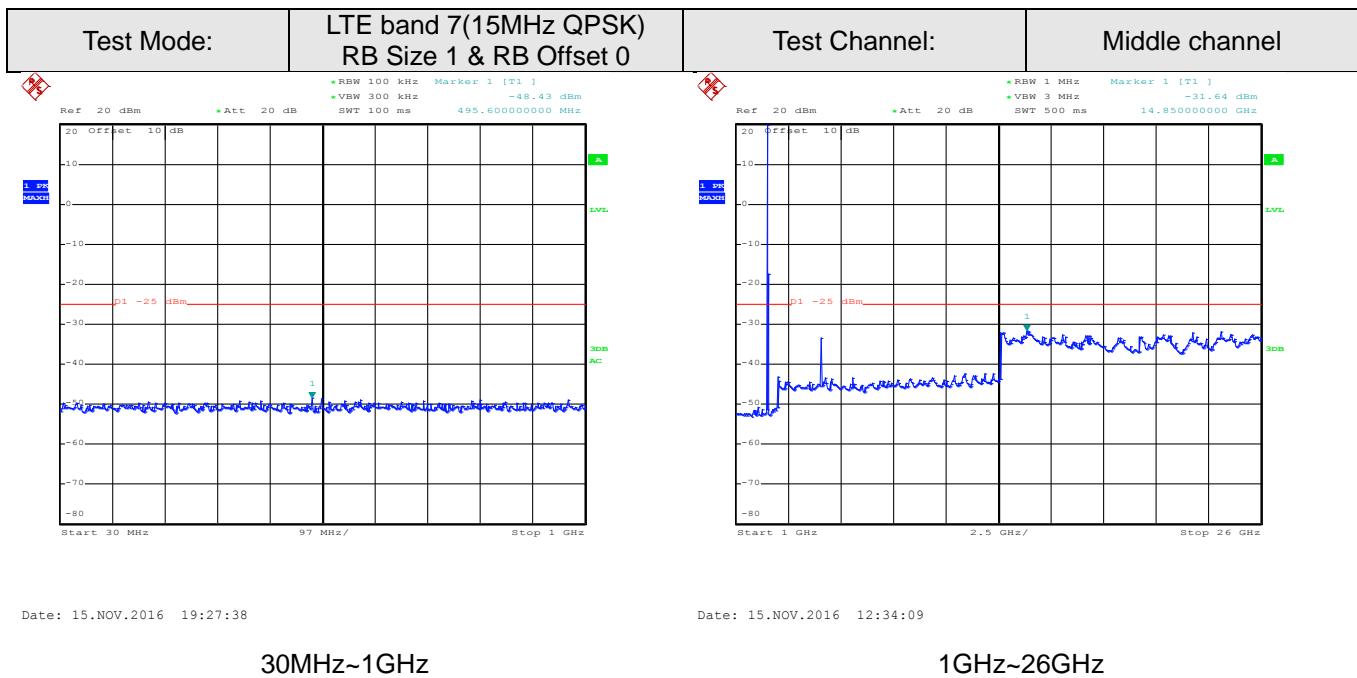


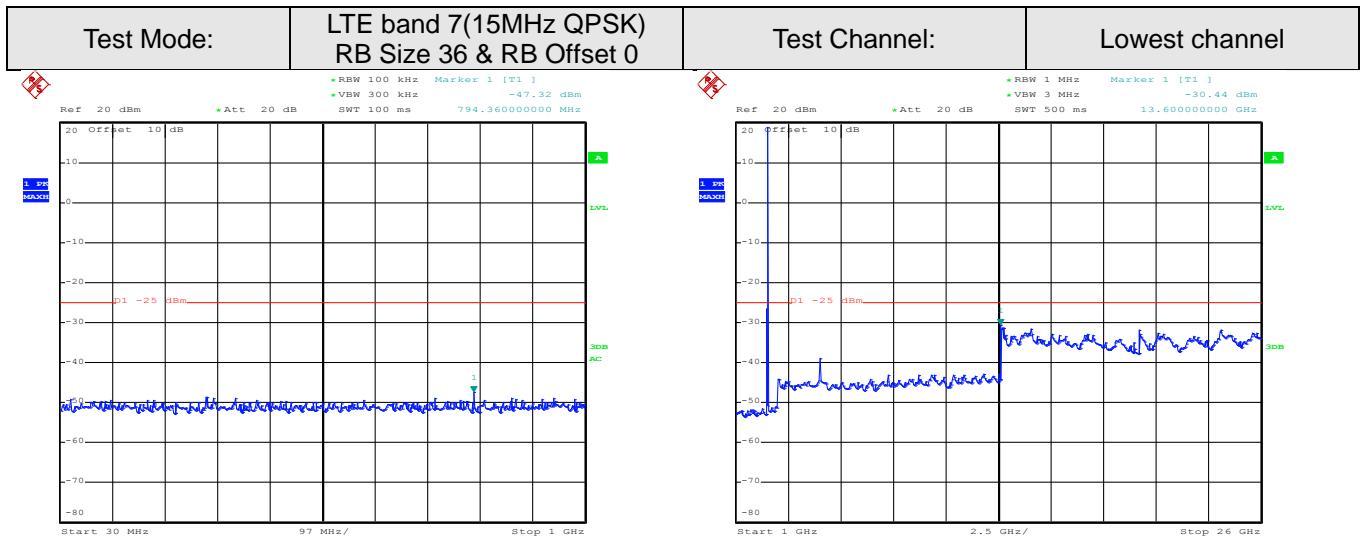
Date: 15.NOV.2016 19:26:54

30MHz~1GHz

Date: 15.NOV.2016 12:32:57

1GHz~26GHz



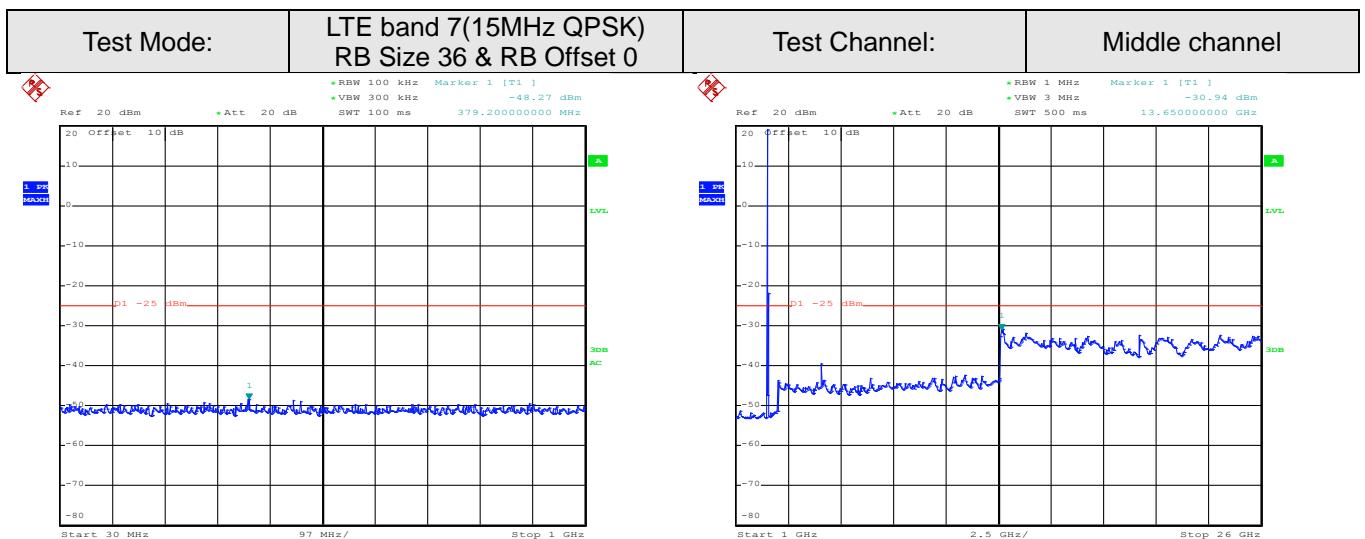


Date: 15.NOV.2016 19:27:06

30MHz~1GHz

Date: 15.NOV.2016 12:33:19

1GHz~26GHz

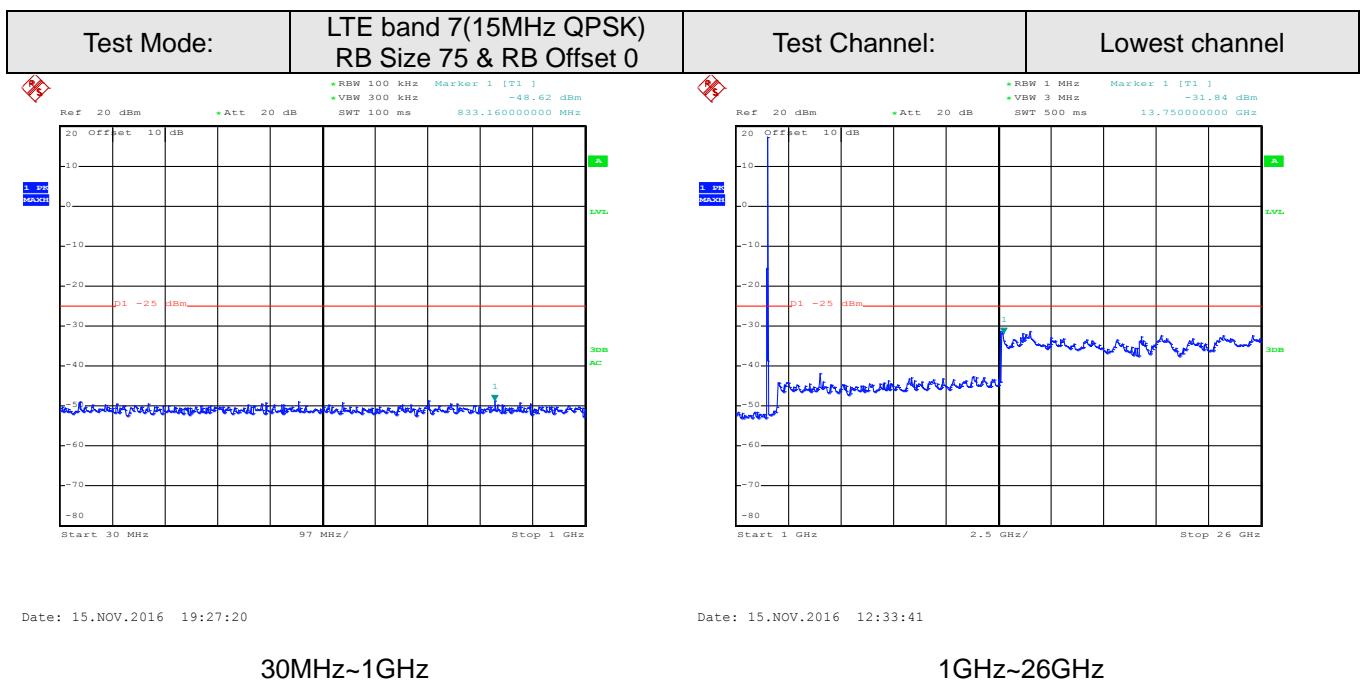
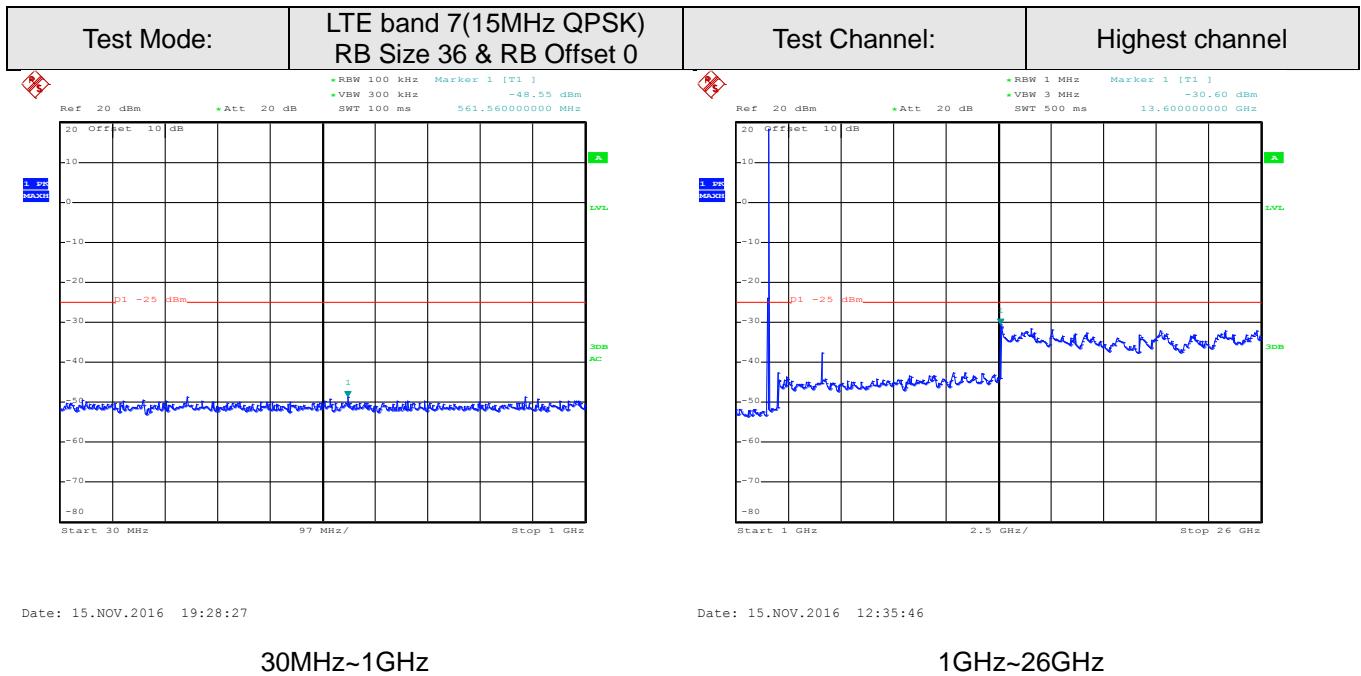


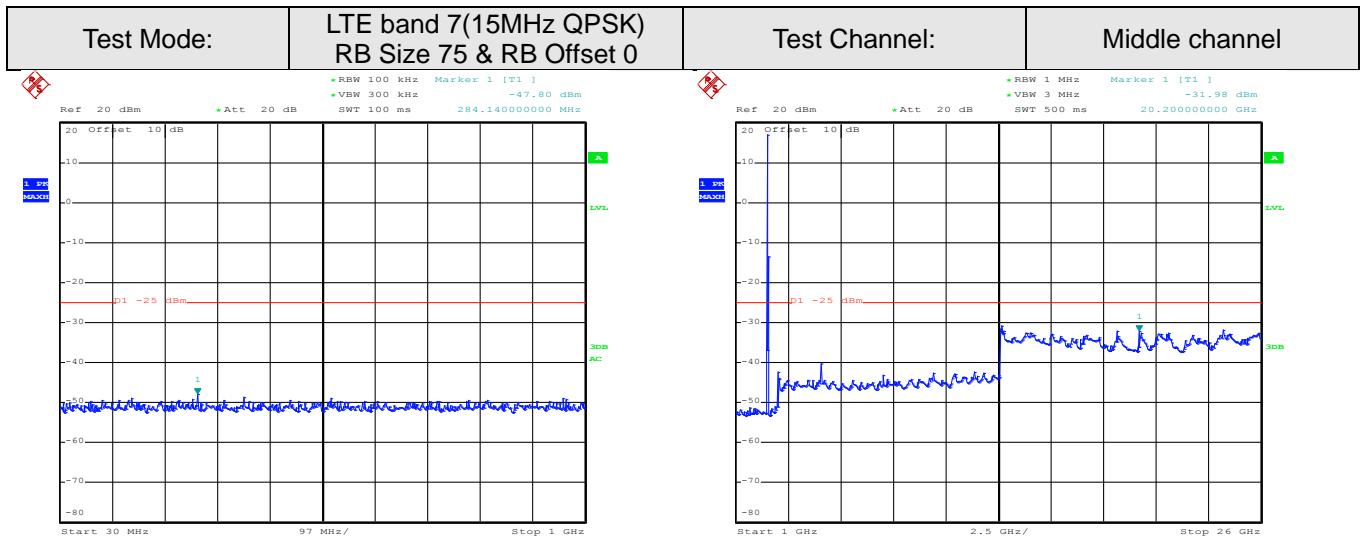
Date: 15.NOV.2016 19:27:49

30MHz~1GHz

Date: 15.NOV.2016 12:34:30

1GHz~26GHz



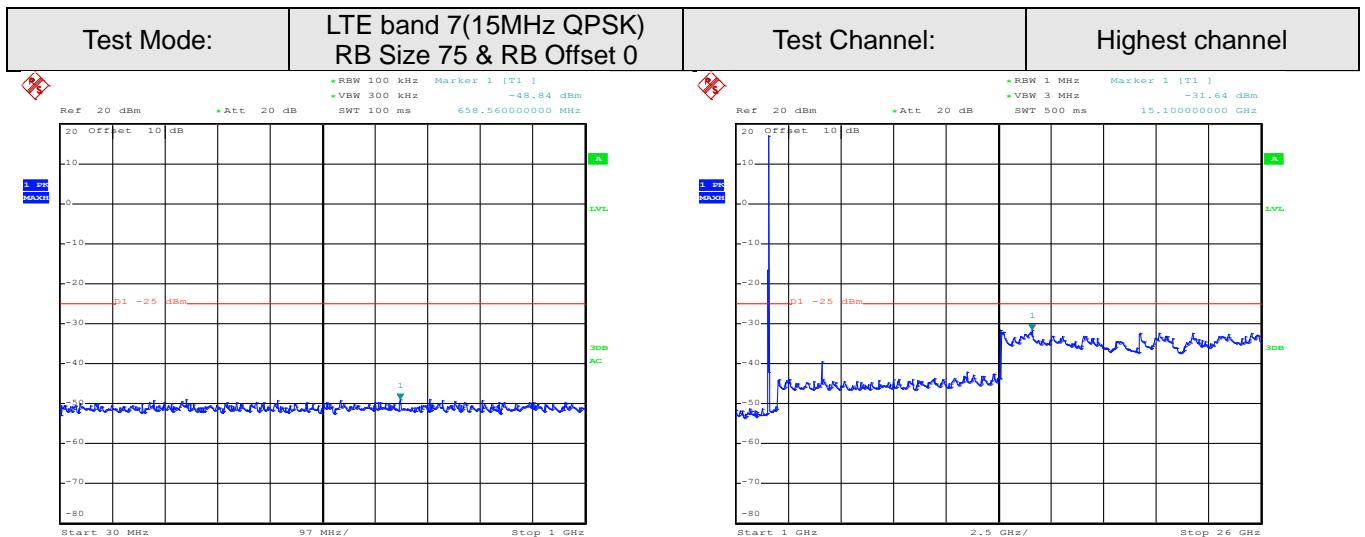


Date: 15.NOV.2016 19:28:00

30MHz~1GHz

Date: 15.NOV.2016 12:34:52

1GHz~26GHz



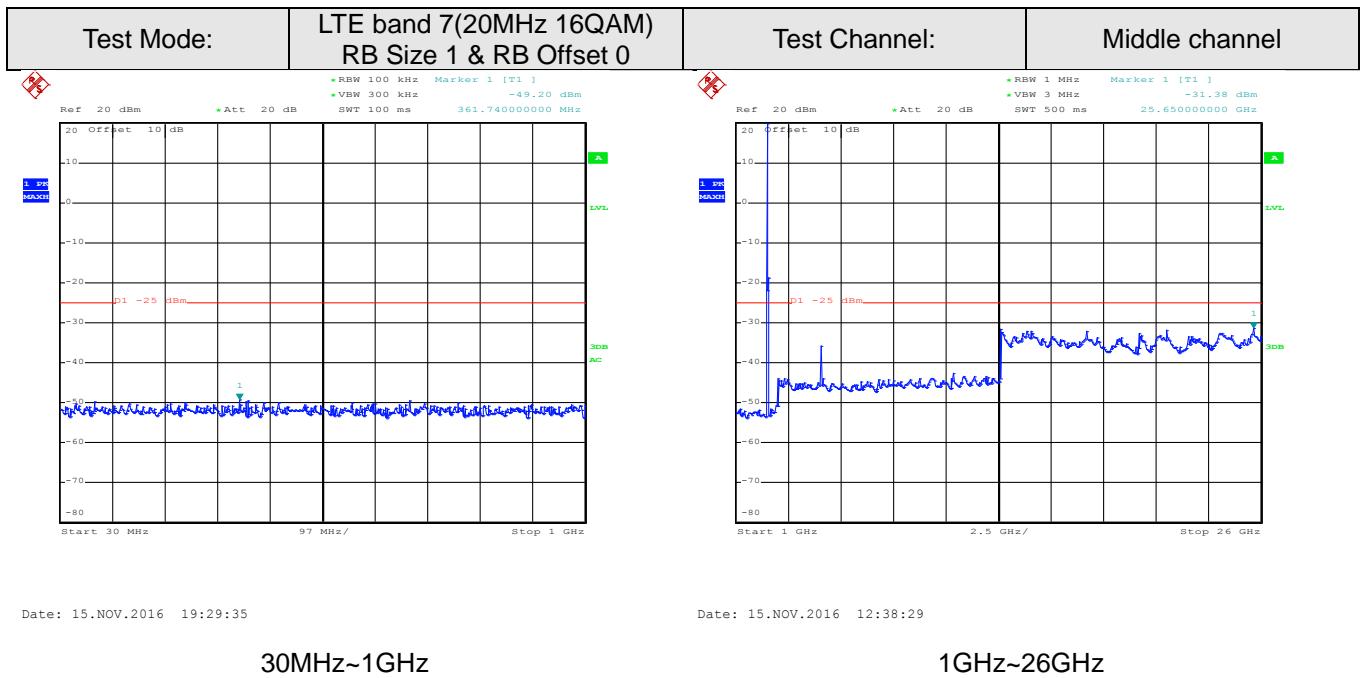
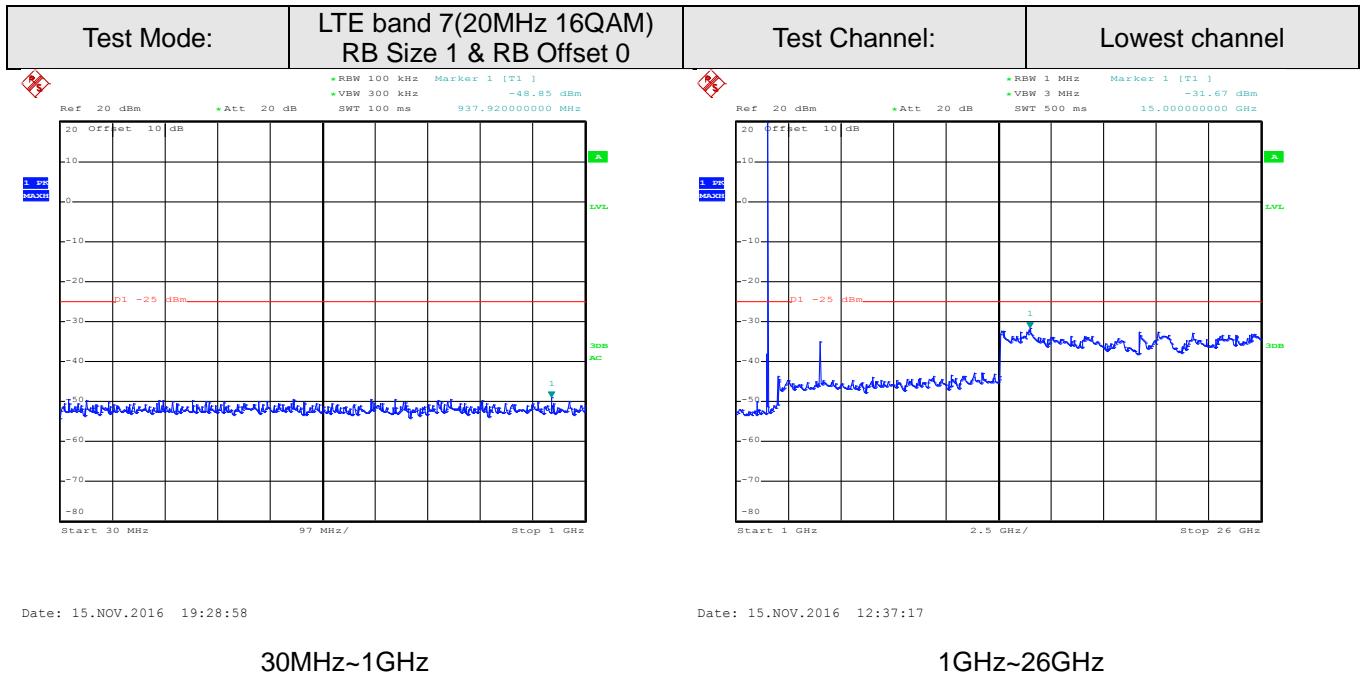
Date: 15.NOV.2016 19:28:38

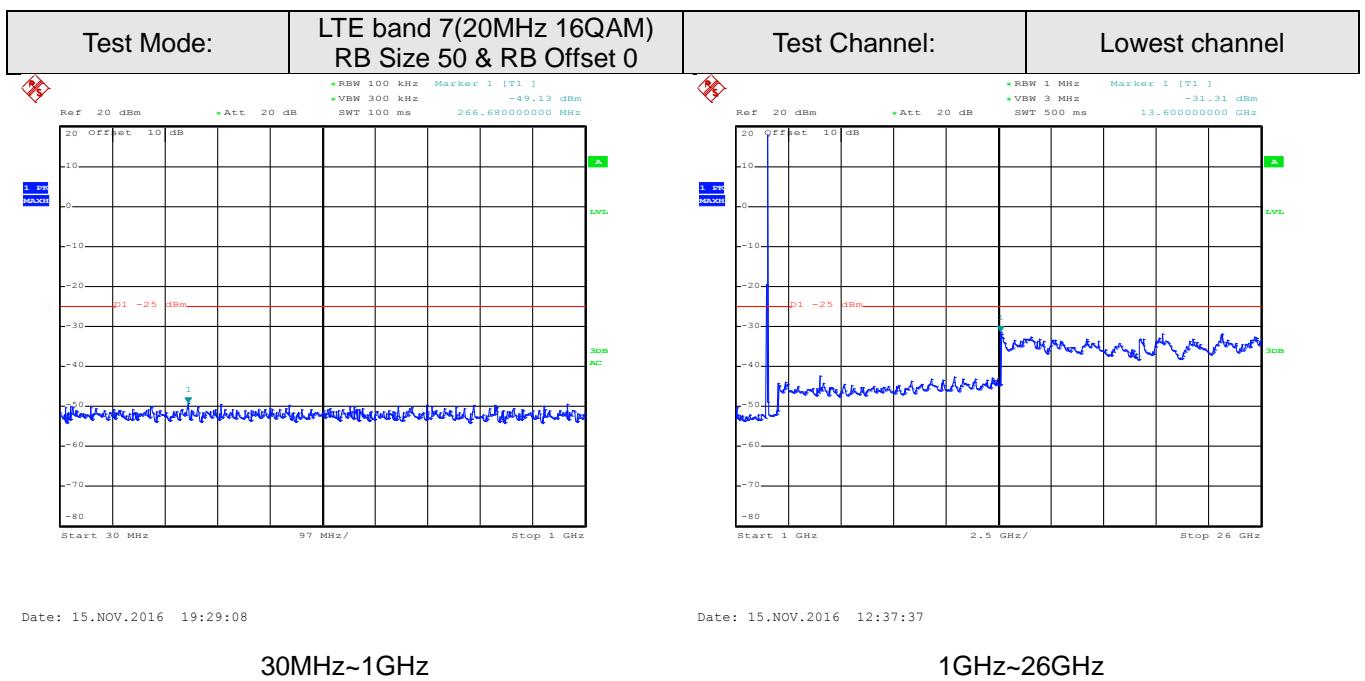
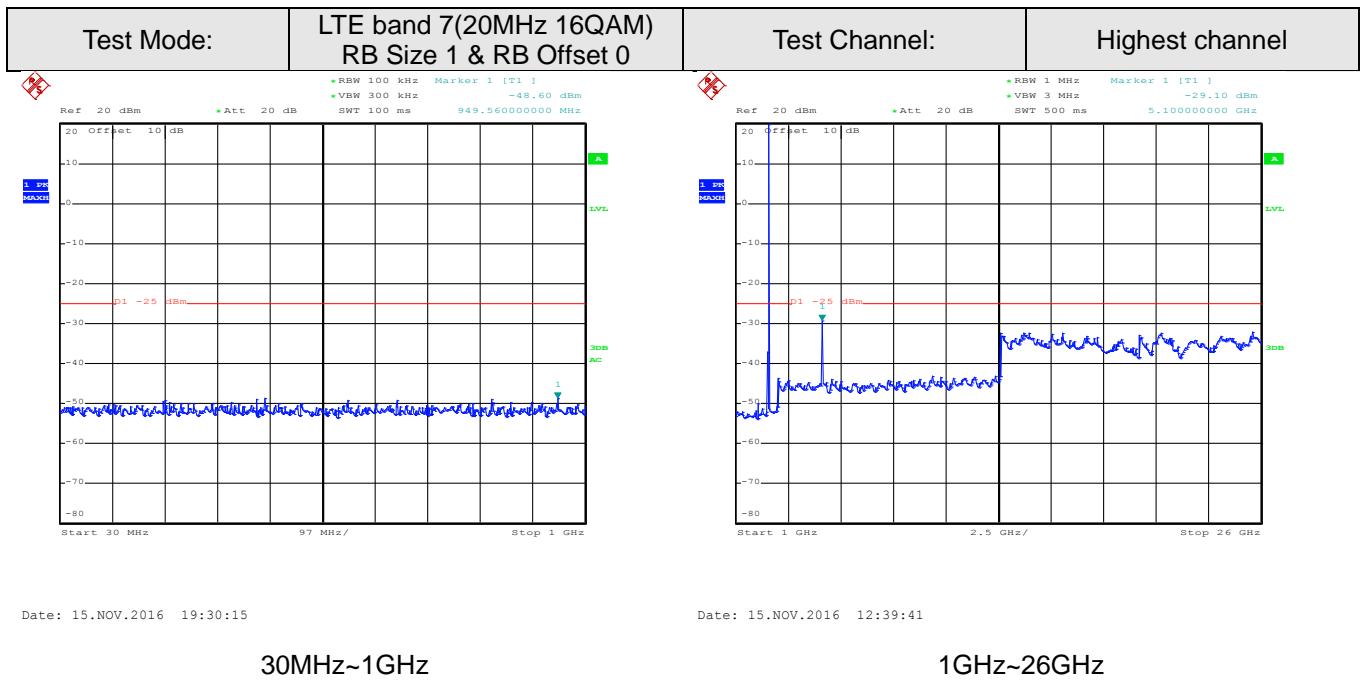
30MHz~1GHz

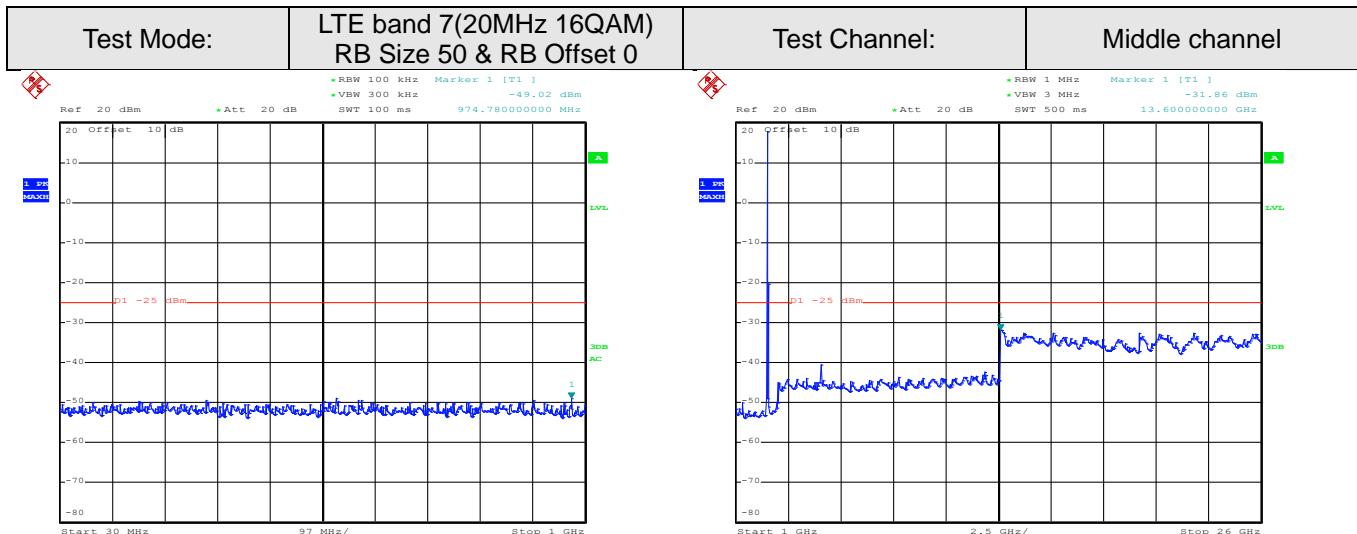
Date: 15.NOV.2016 12:36:07

1GHz~26GHz

## 20MHz





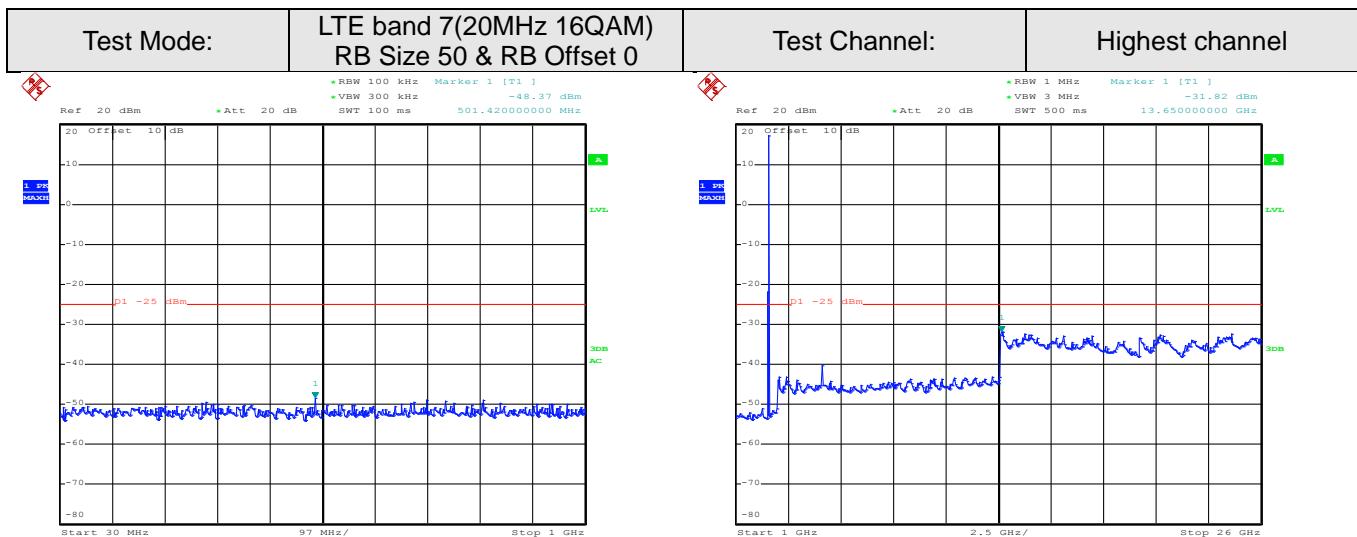


Date: 15.NOV.2016 19:29:47

30MHz~1GHz

Date: 15.NOV.2016 12:38:52

1GHz~26GHz

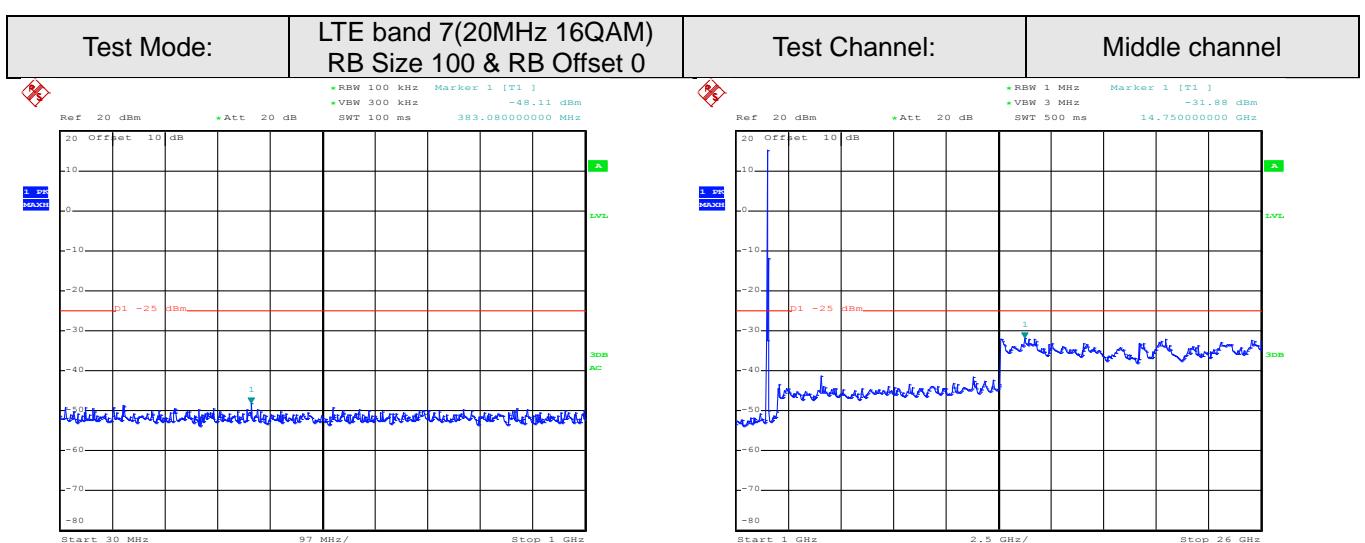
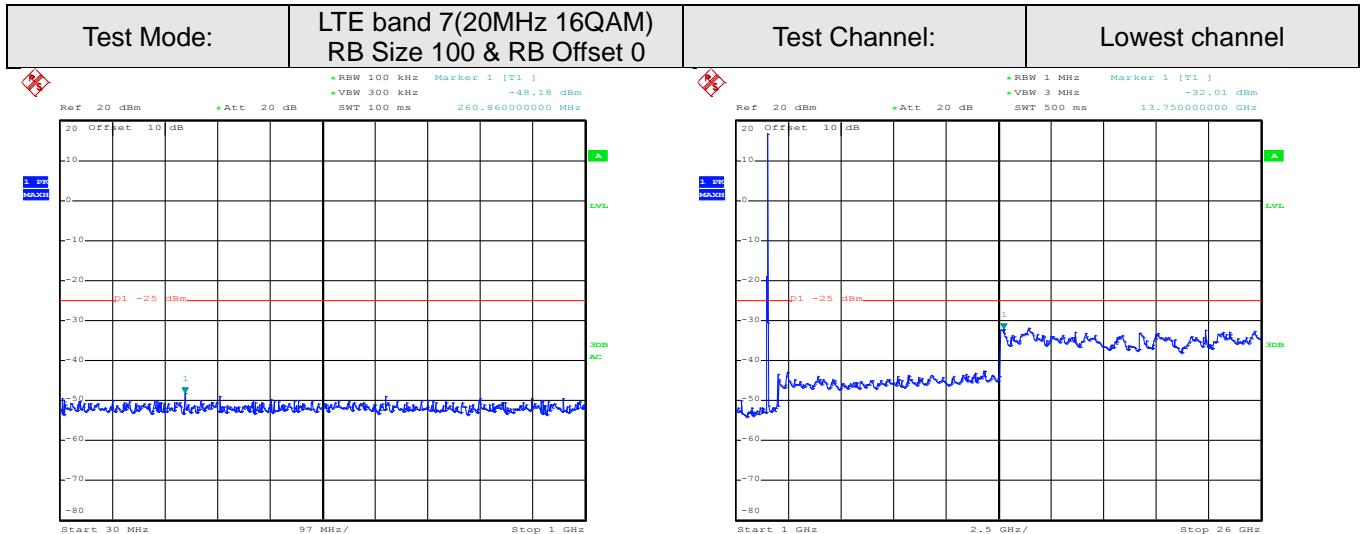


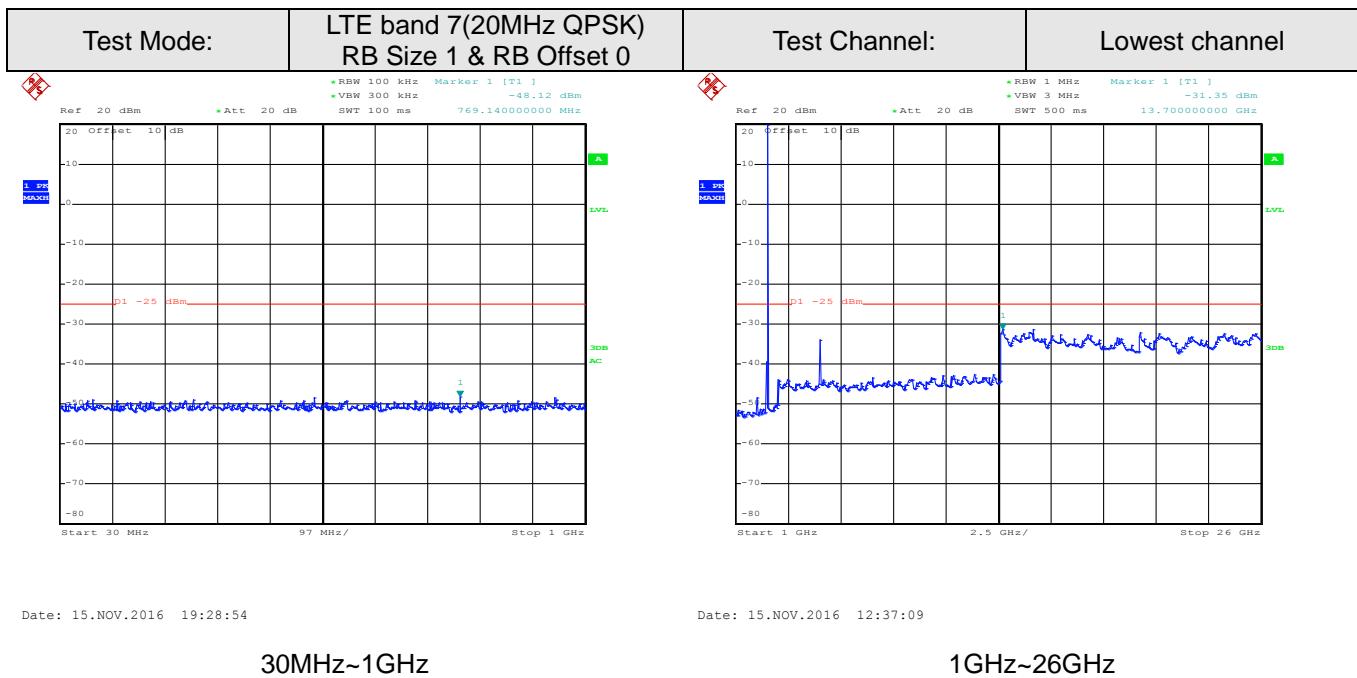
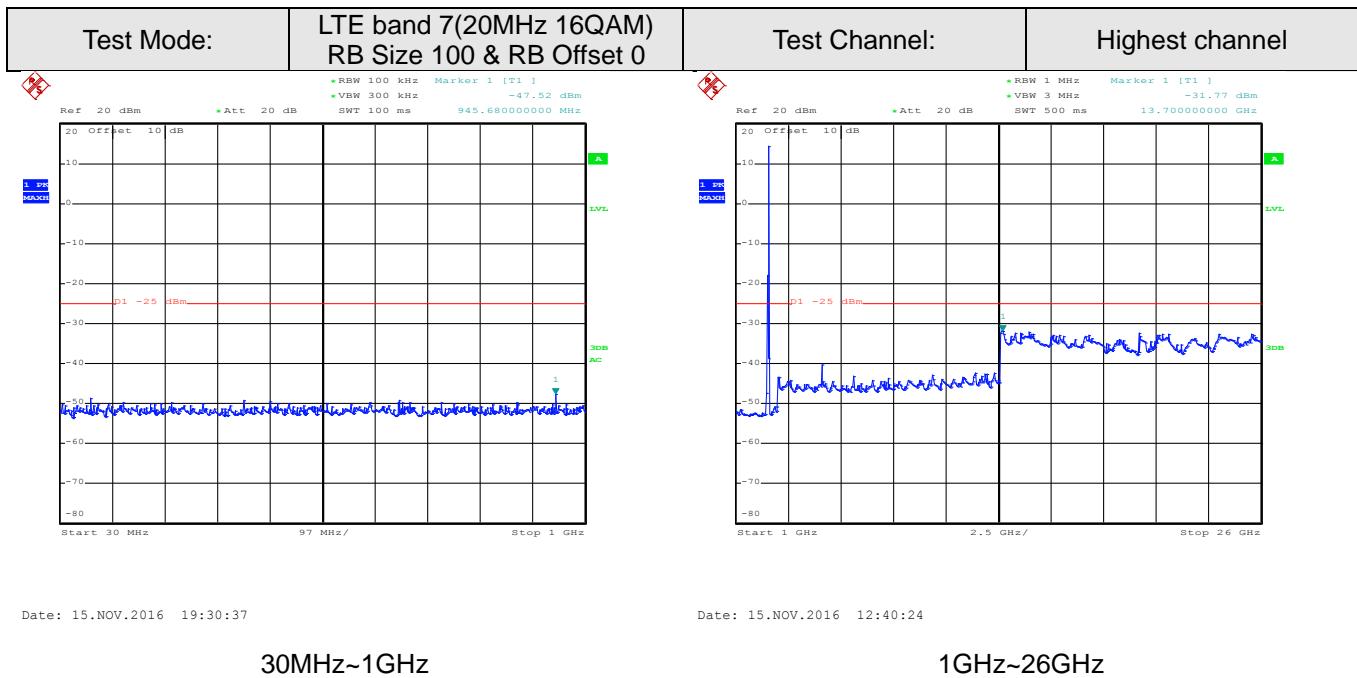
Date: 15.NOV.2016 19:30:25

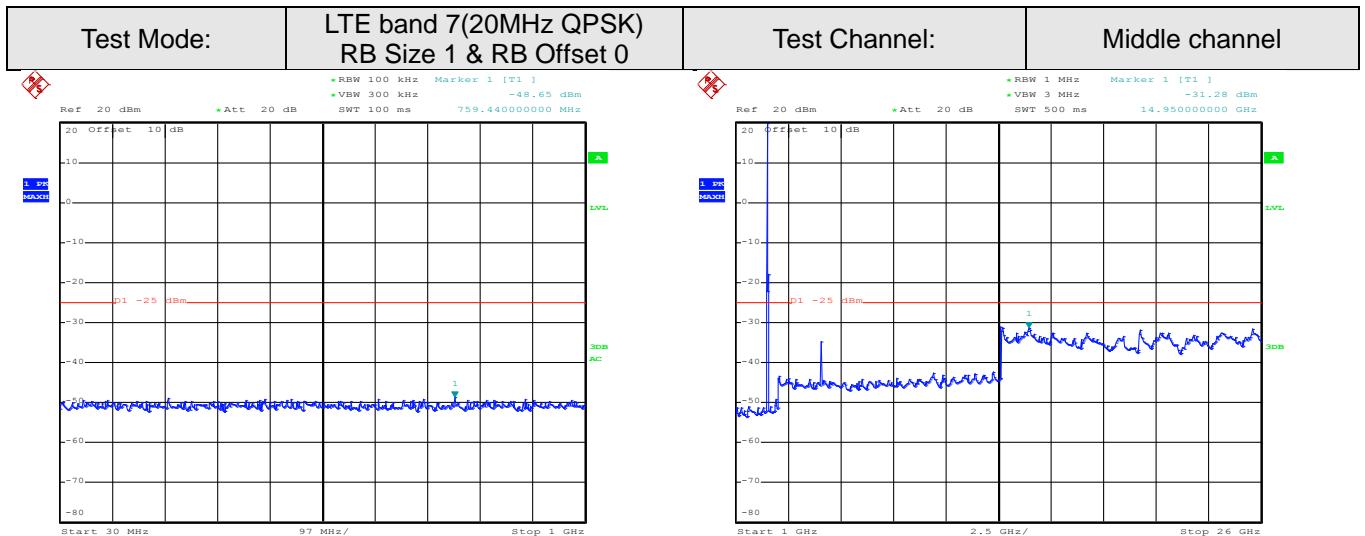
30MHz~1GHz

Date: 15.NOV.2016 12:40:03

1GHz~26GHz





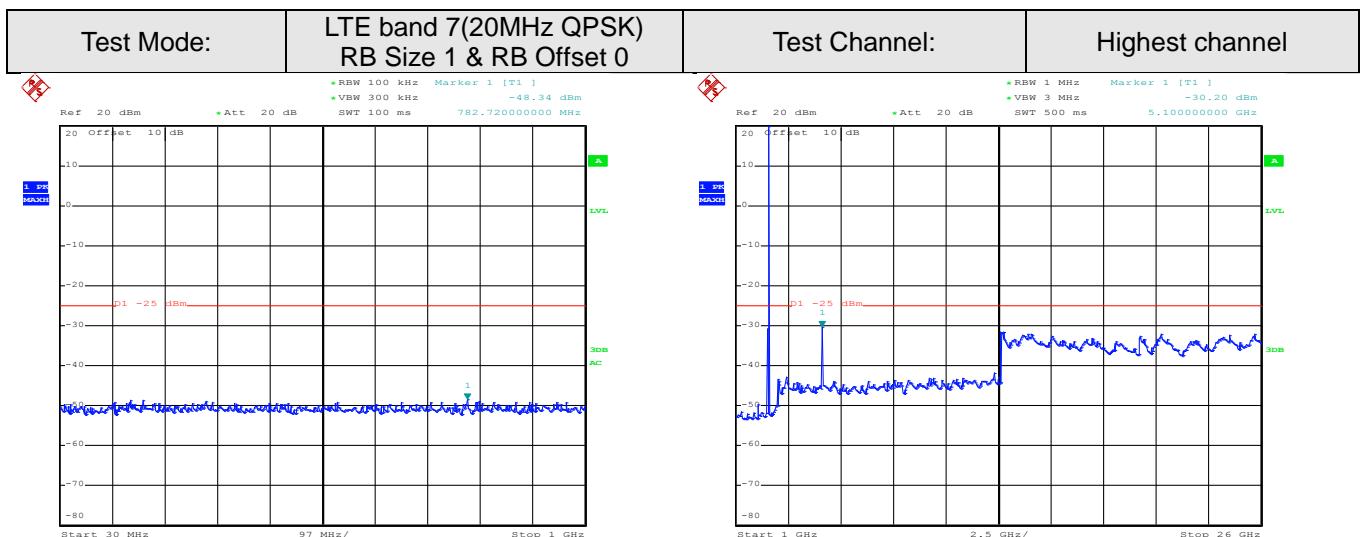


Date: 15.NOV.2016 19:29:32

30MHz~1GHz

Date: 15.NOV.2016 12:38:16

1GHz~26GHz

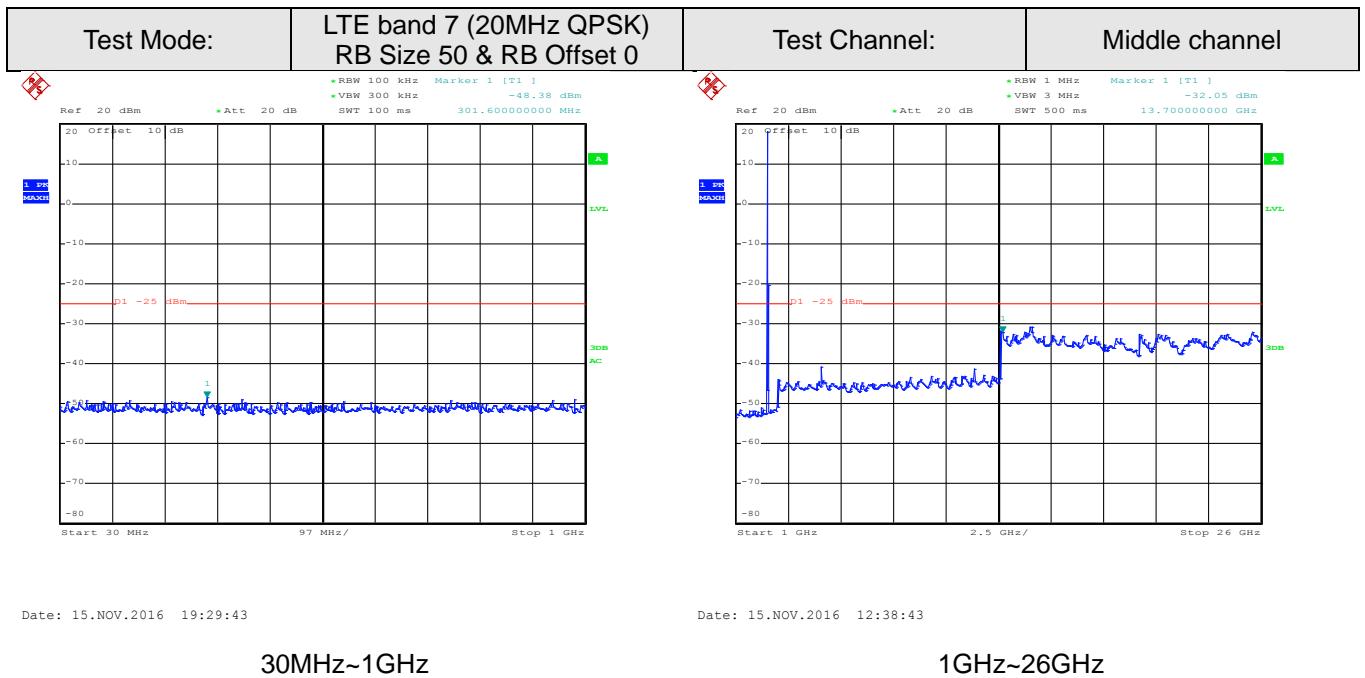
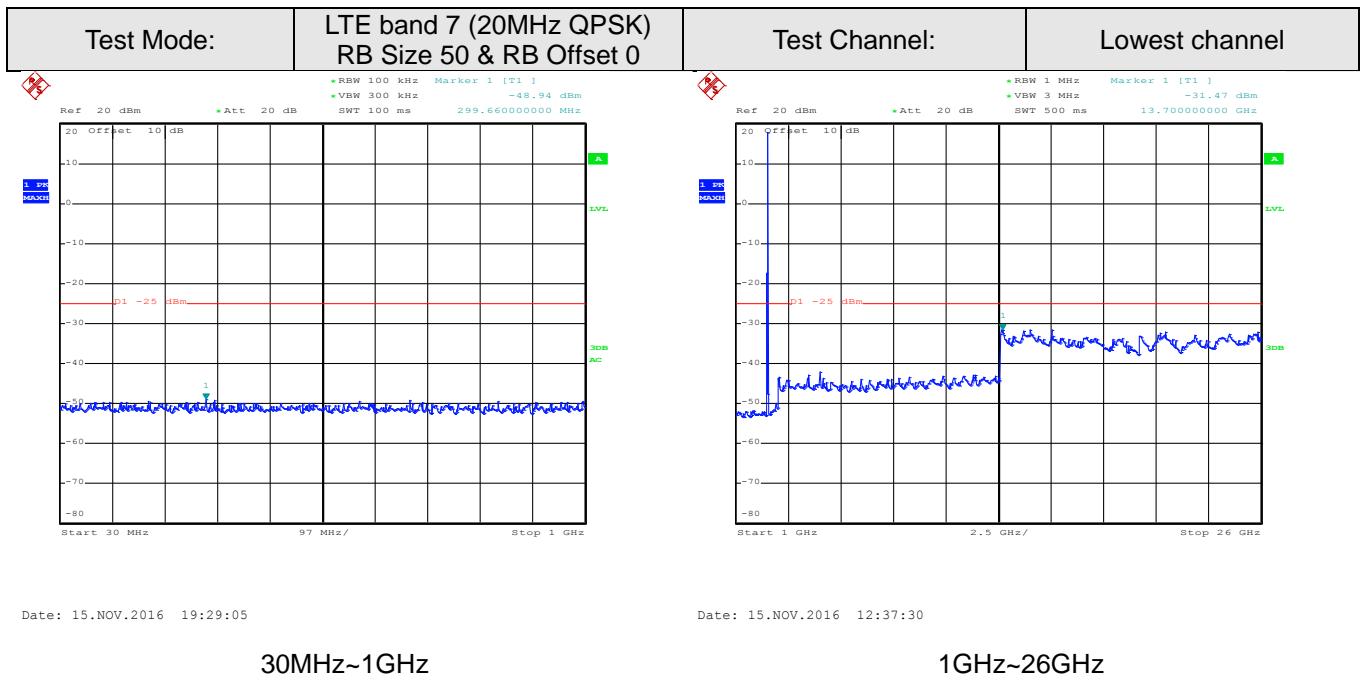


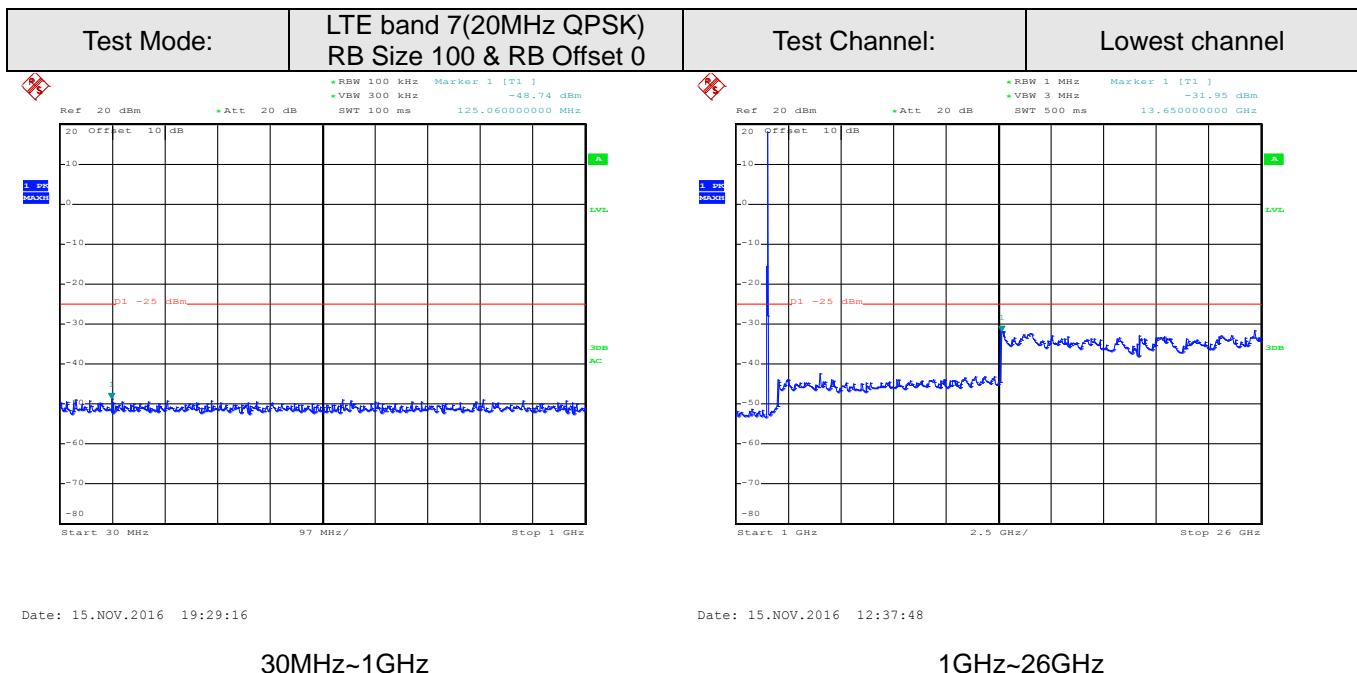
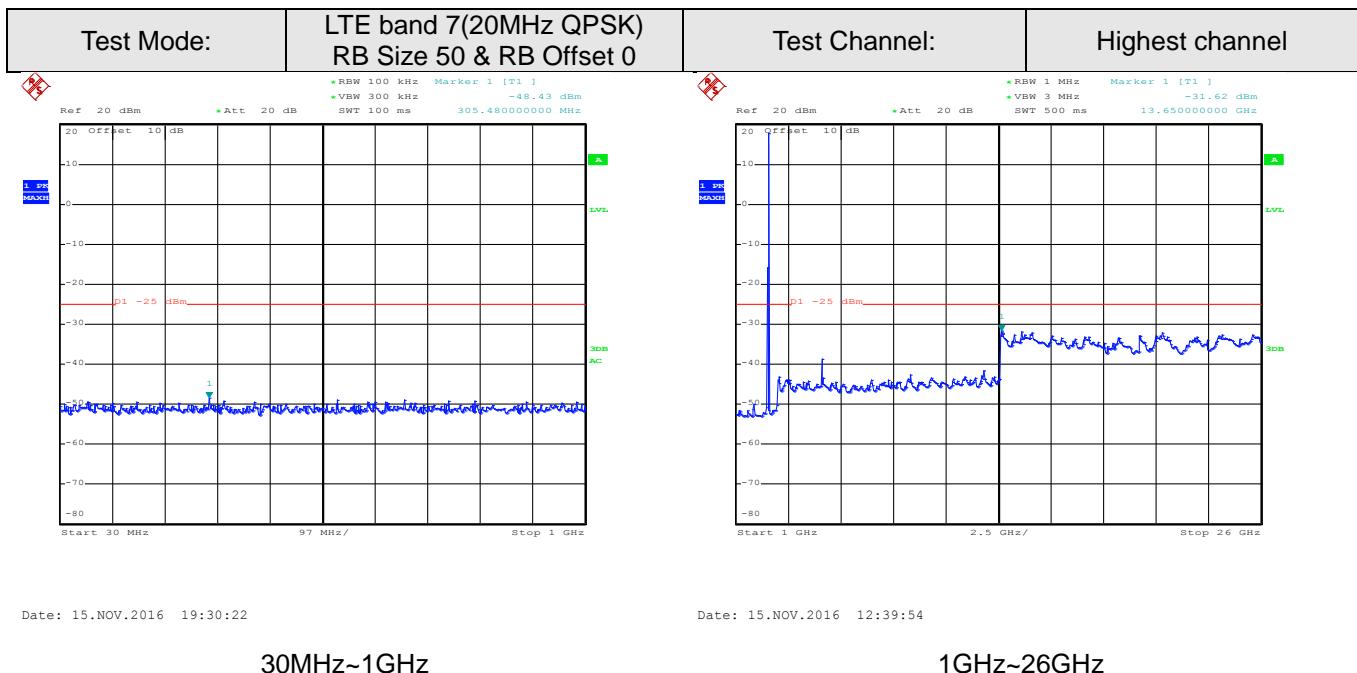
Date: 15.NOV.2016 19:30:11

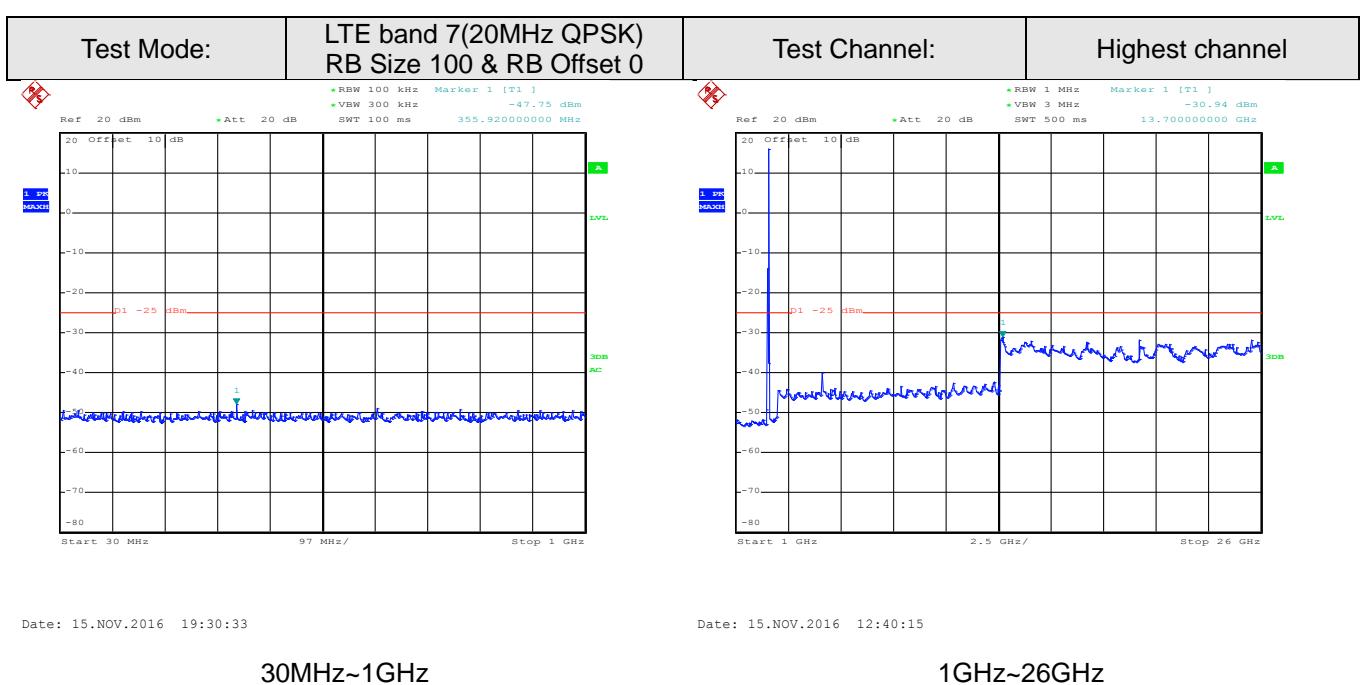
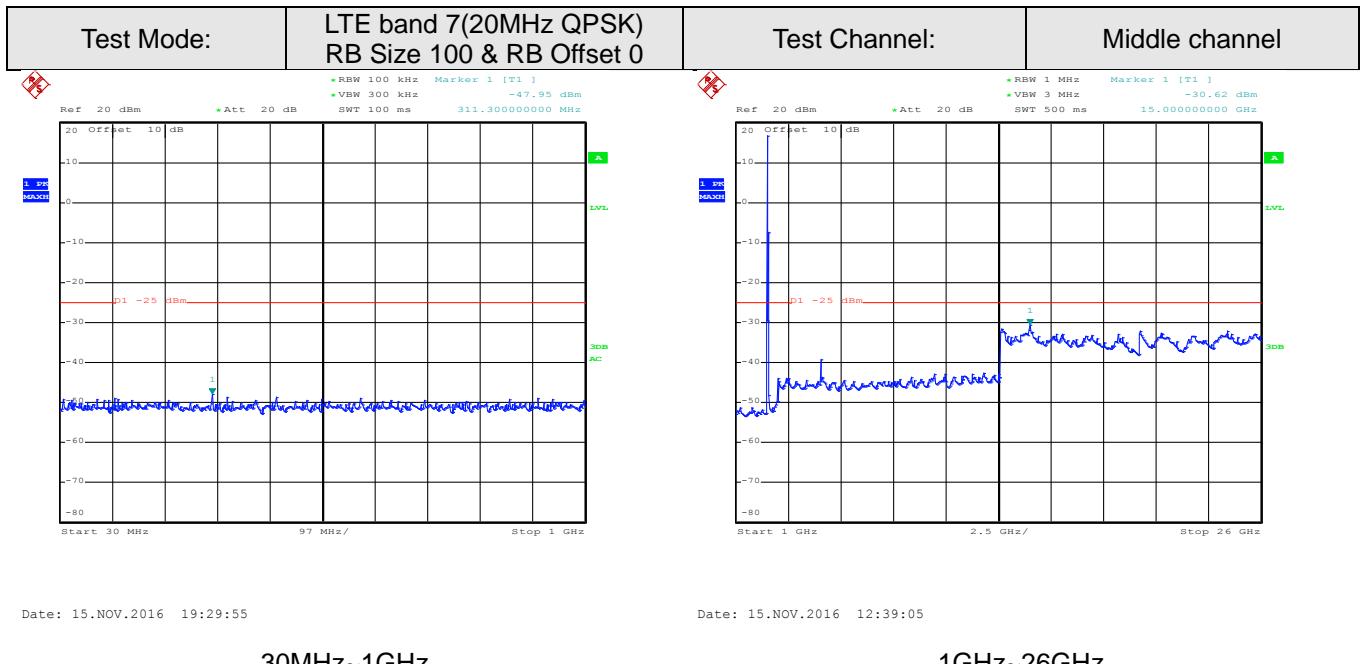
30MHz~1GHz

Date: 15.NOV.2016 12:39:31

1GHz~26GHz

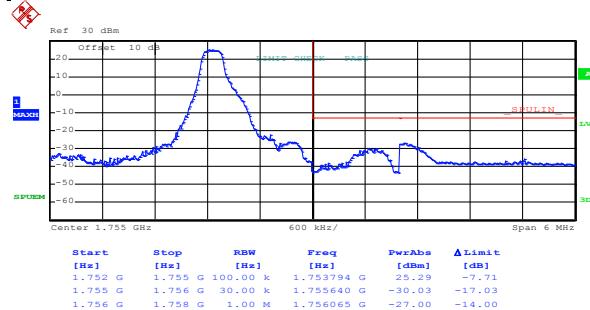
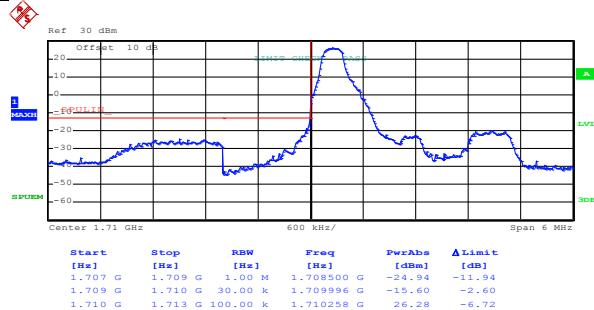






**Band edge emission:****LTE band 4 part:1.4MHz:**

Test Mode:	LTE band 4(QPSK RB Size 1 & RB Offset 0)
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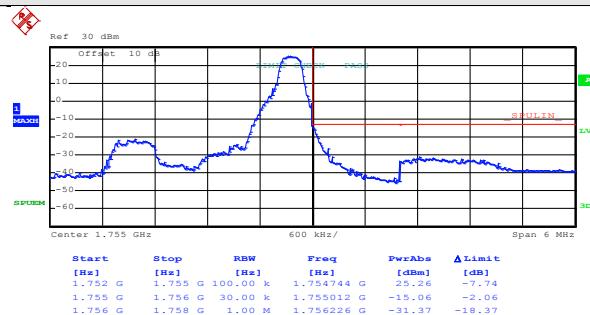
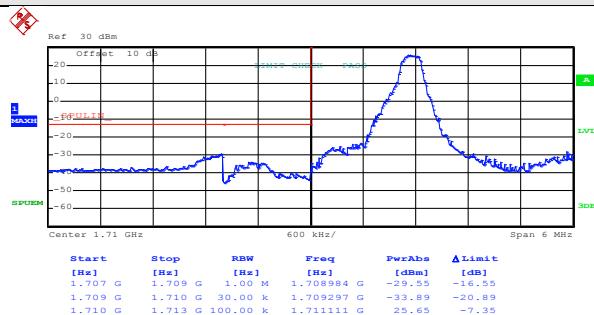
Date: 15.NOV.2016 13:16:09

Date: 15.NOV.2016 13:18:22

Lowest channel

Highest channel

Test Mode:	LTE band 4(QPSK RB Size 1 & RB Offset 5)
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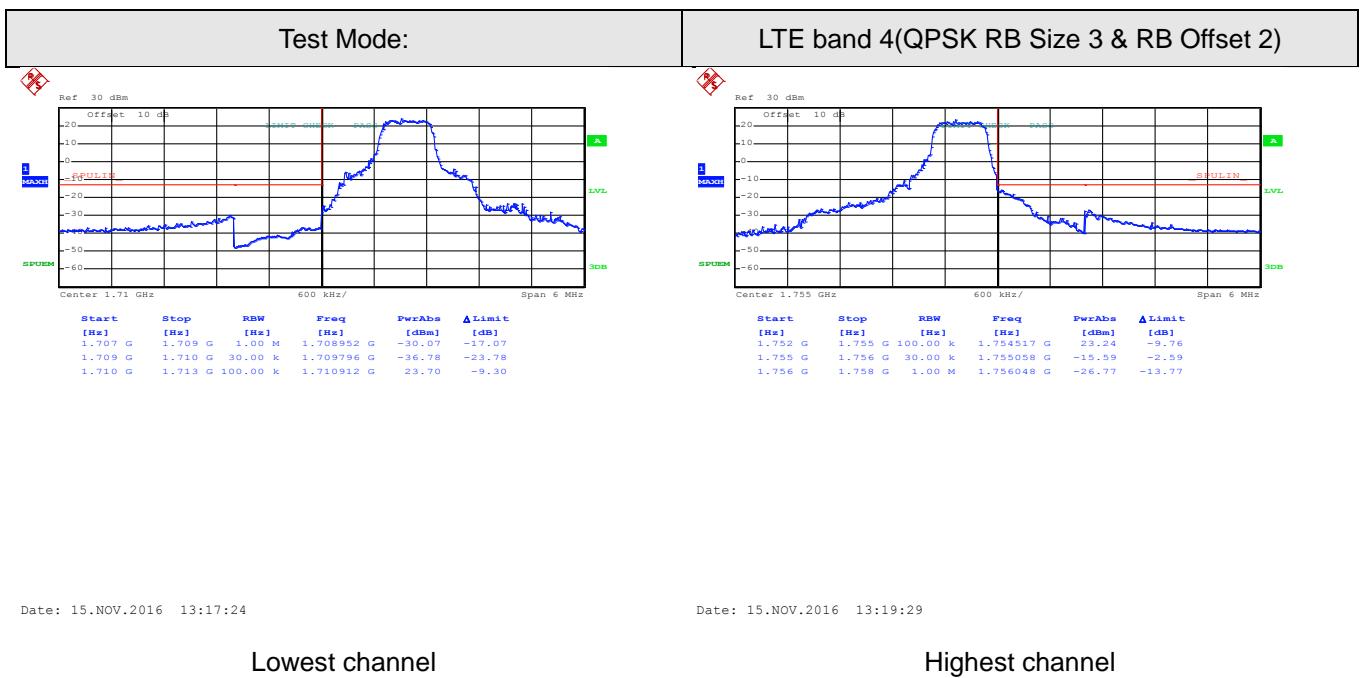
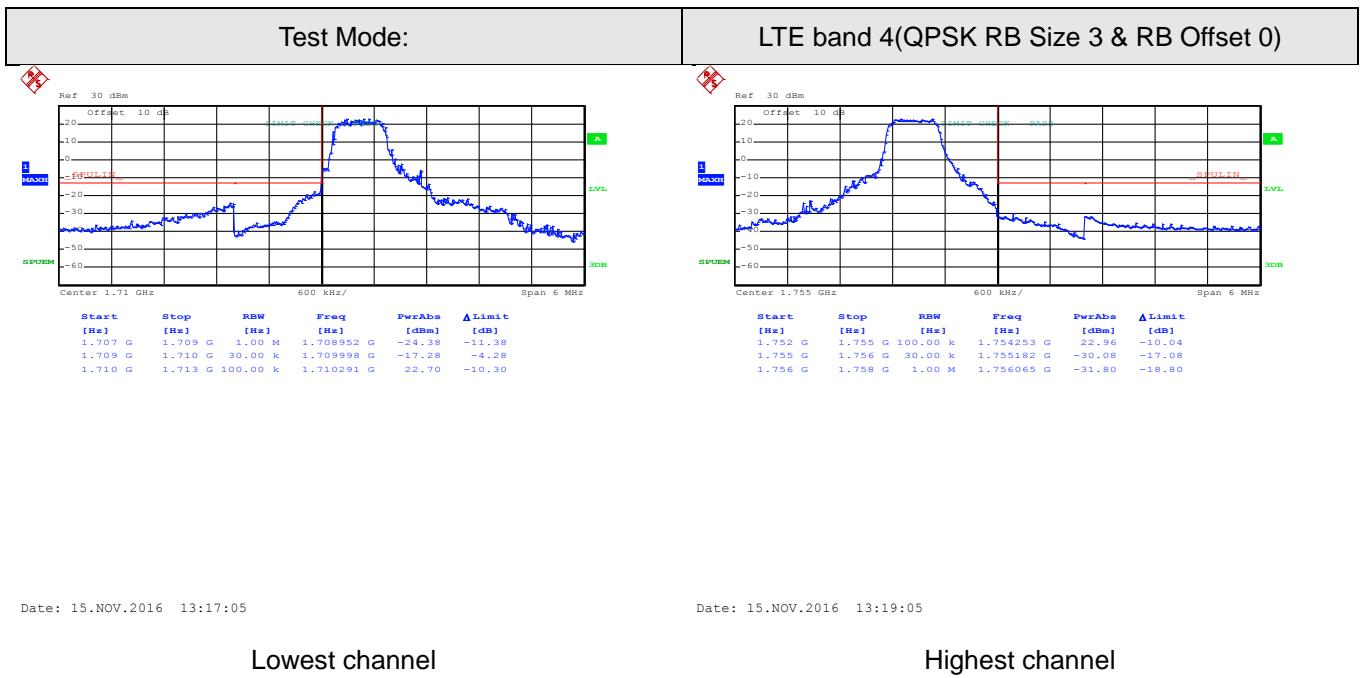


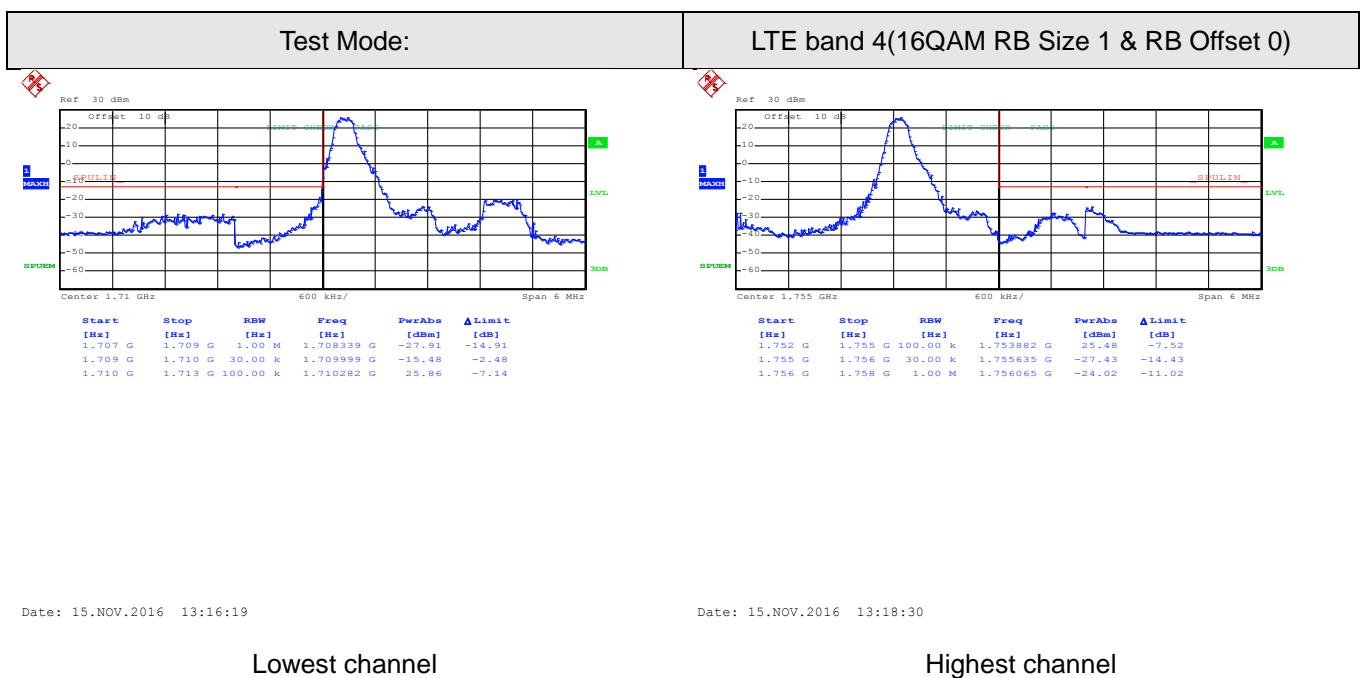
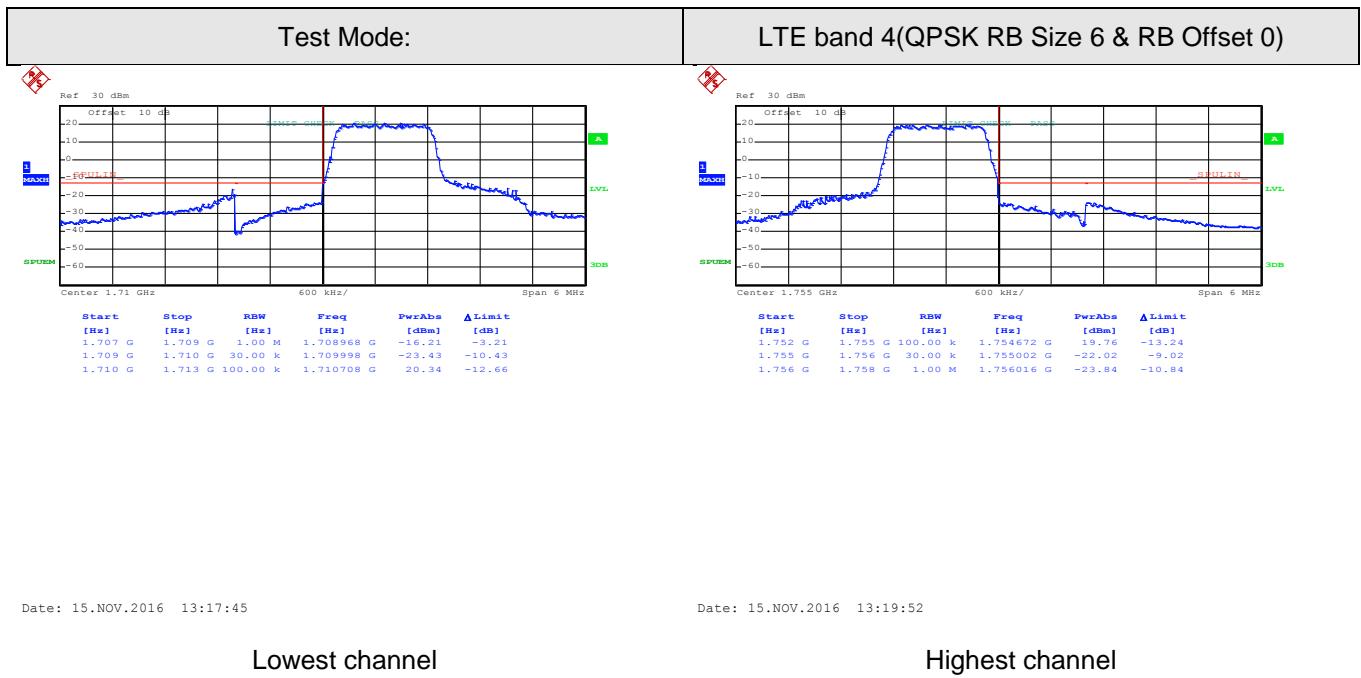
Date: 15.NOV.2016 13:16:31

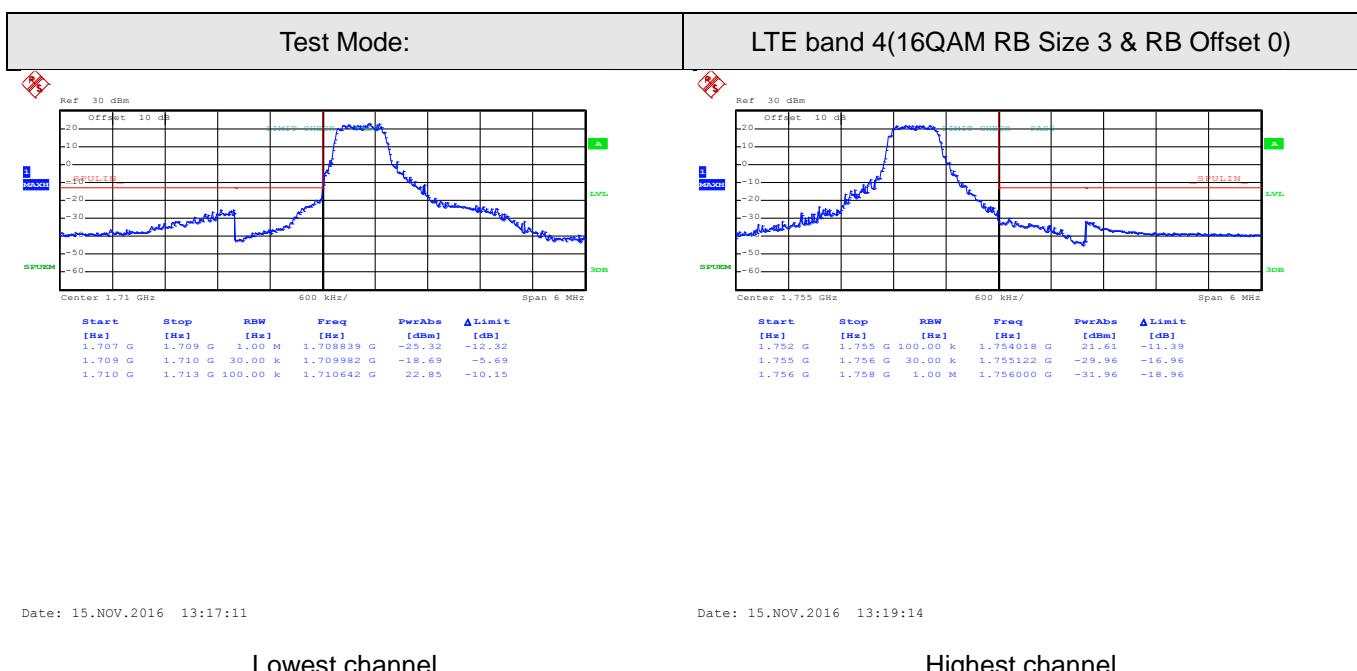
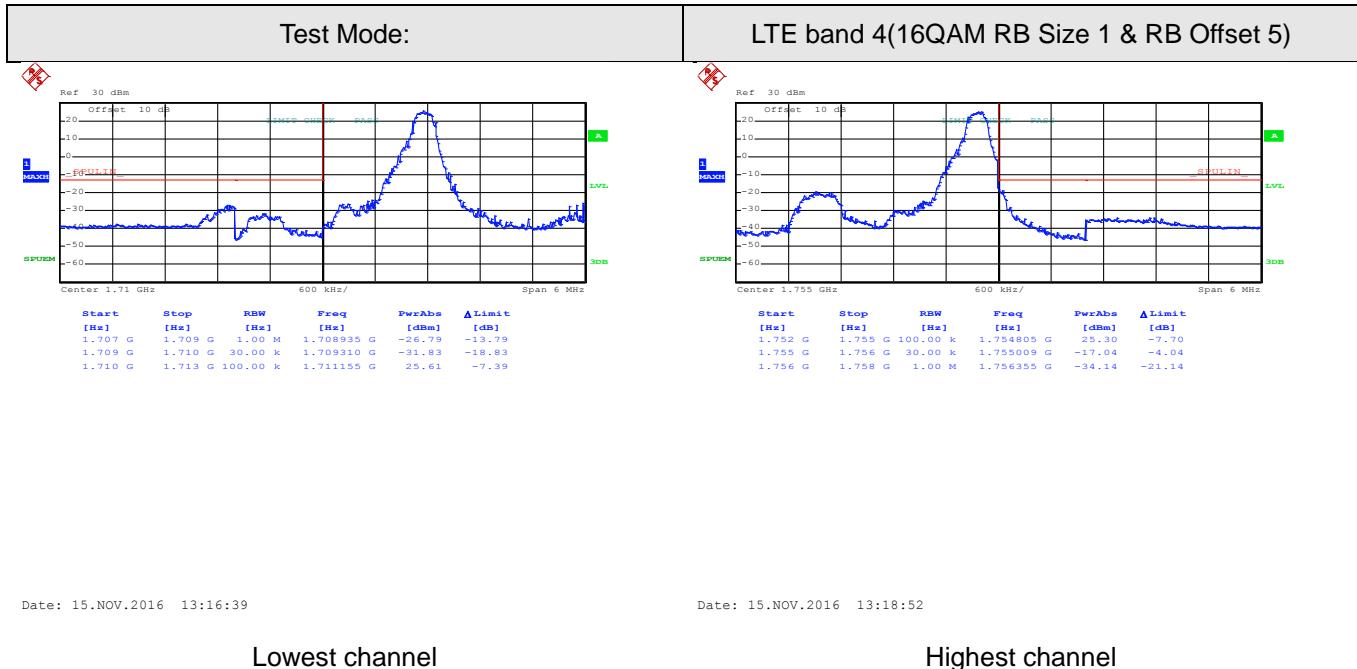
Date: 15.NOV.2016 13:18:42

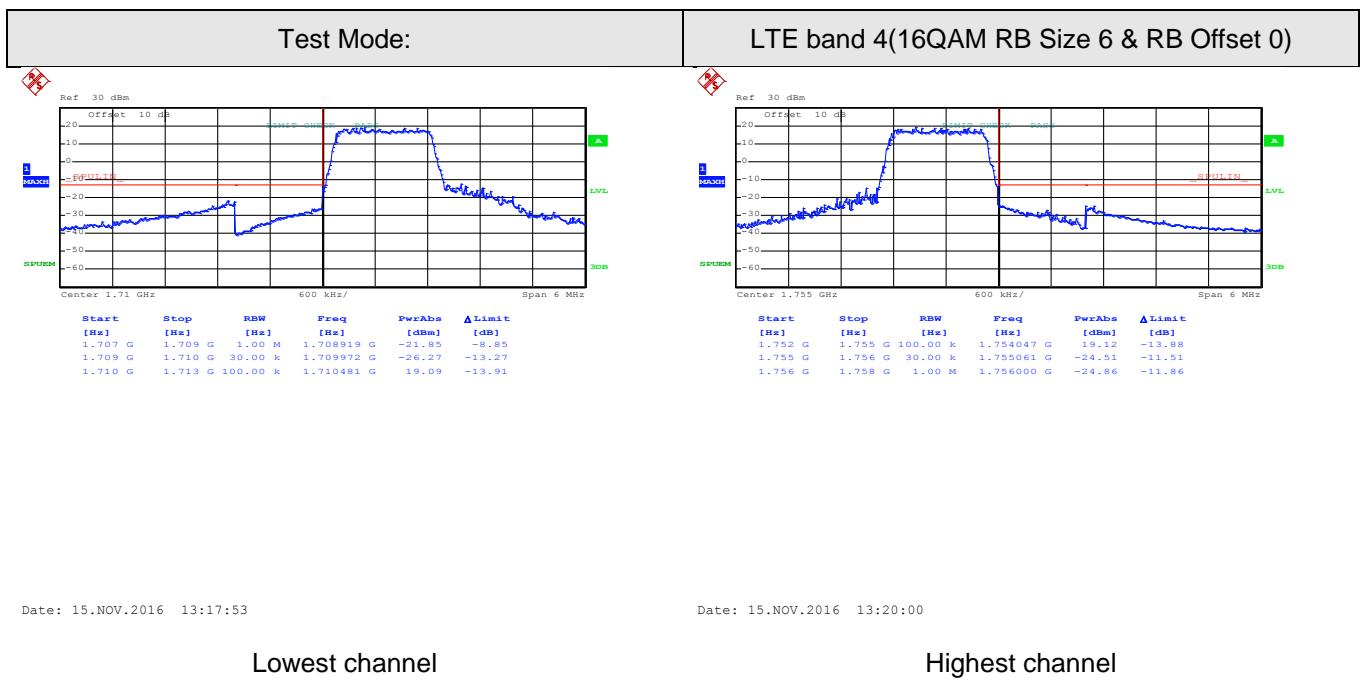
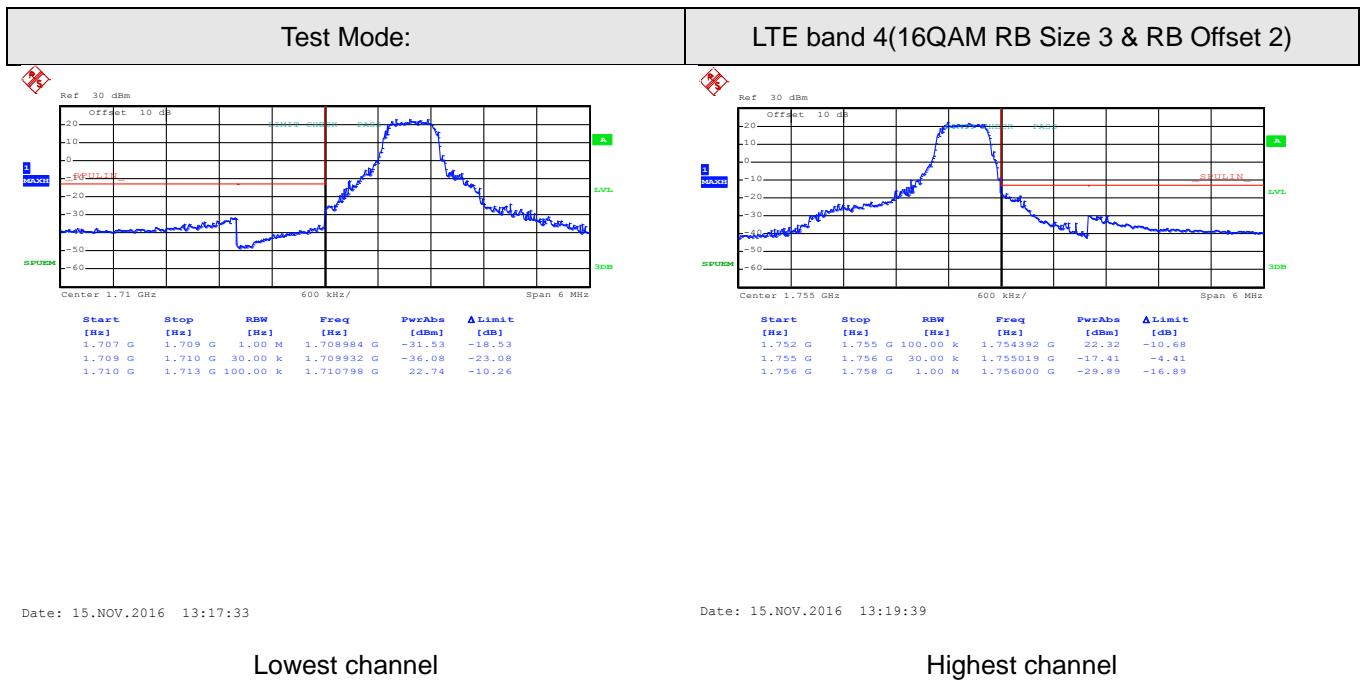
Lowest channel

Highest channel

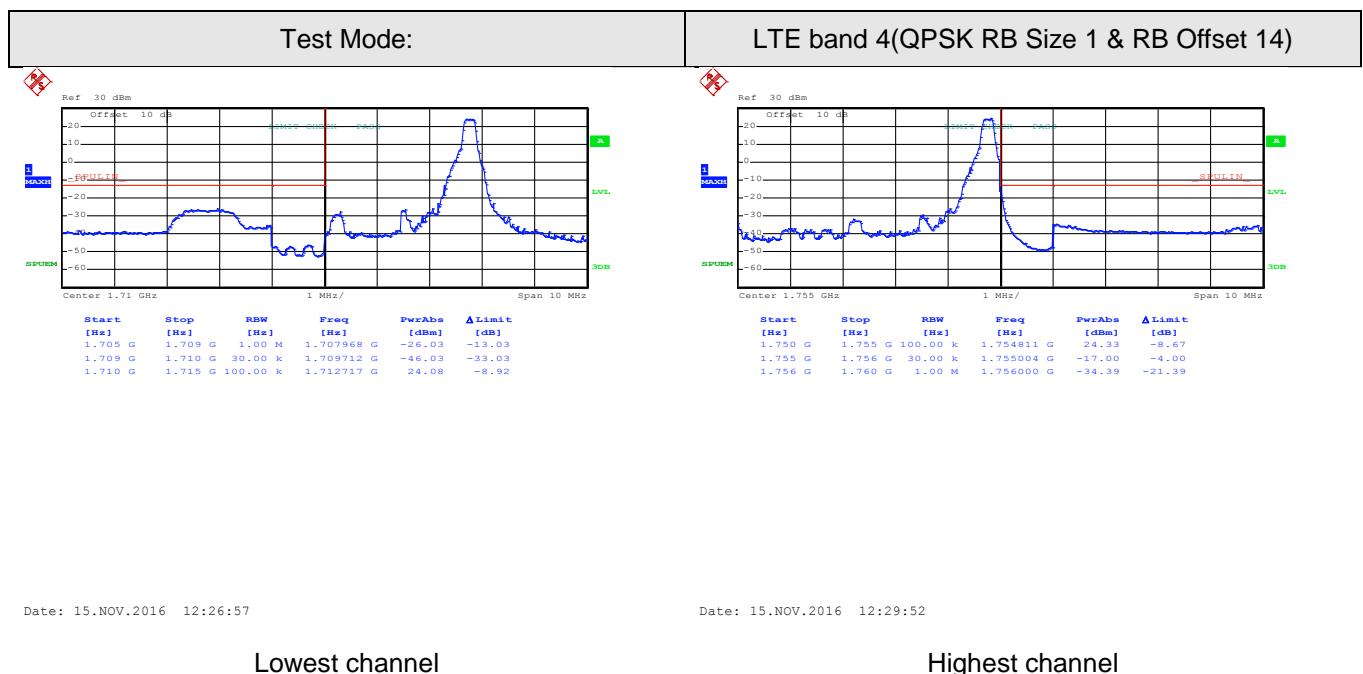
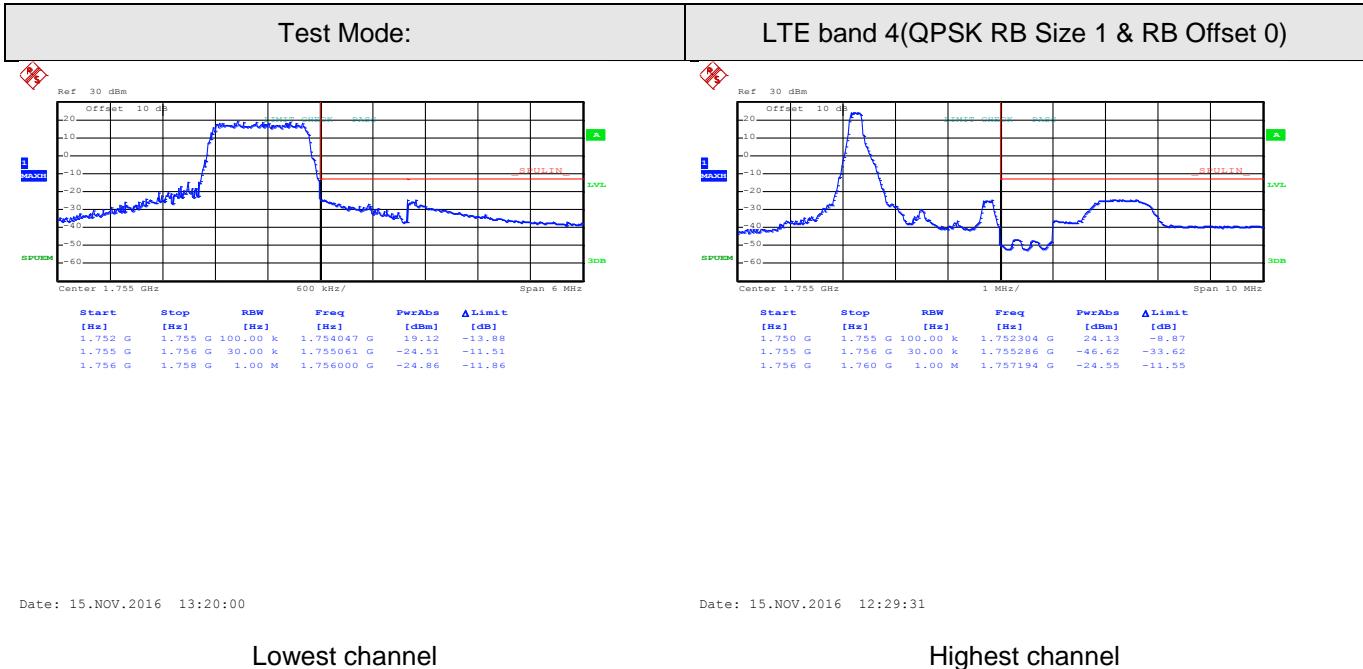


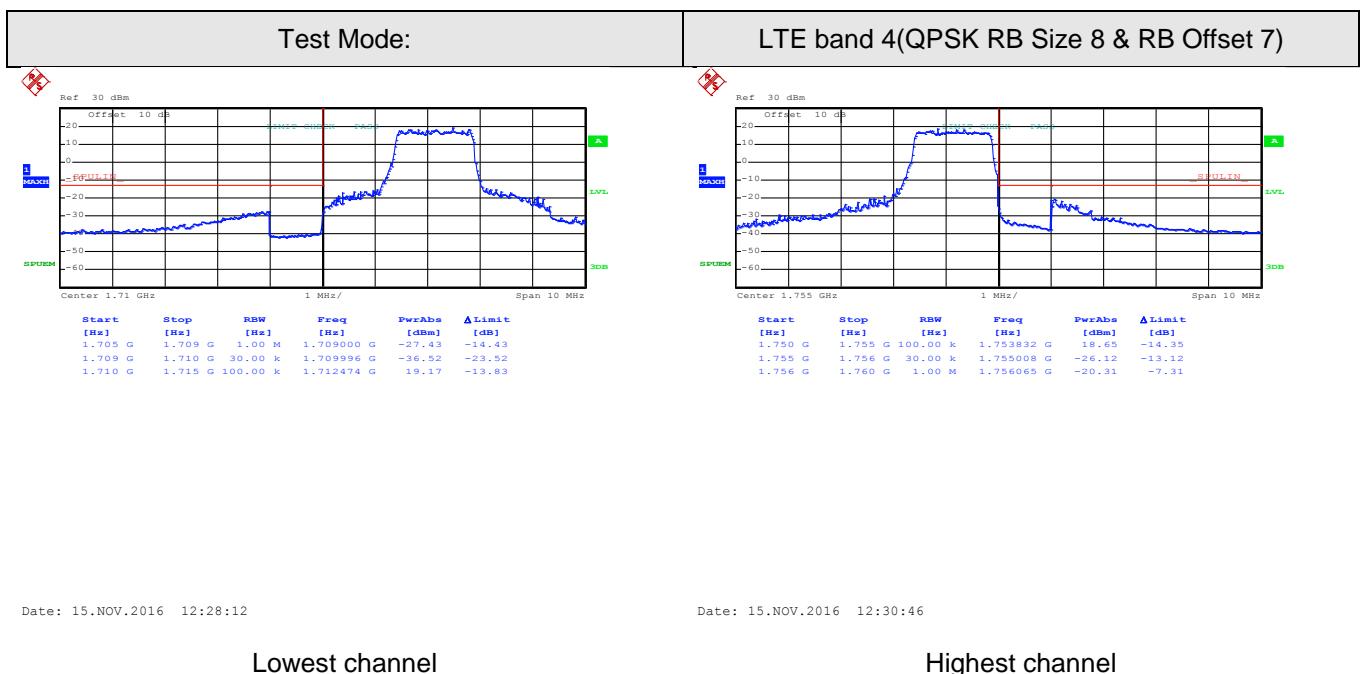
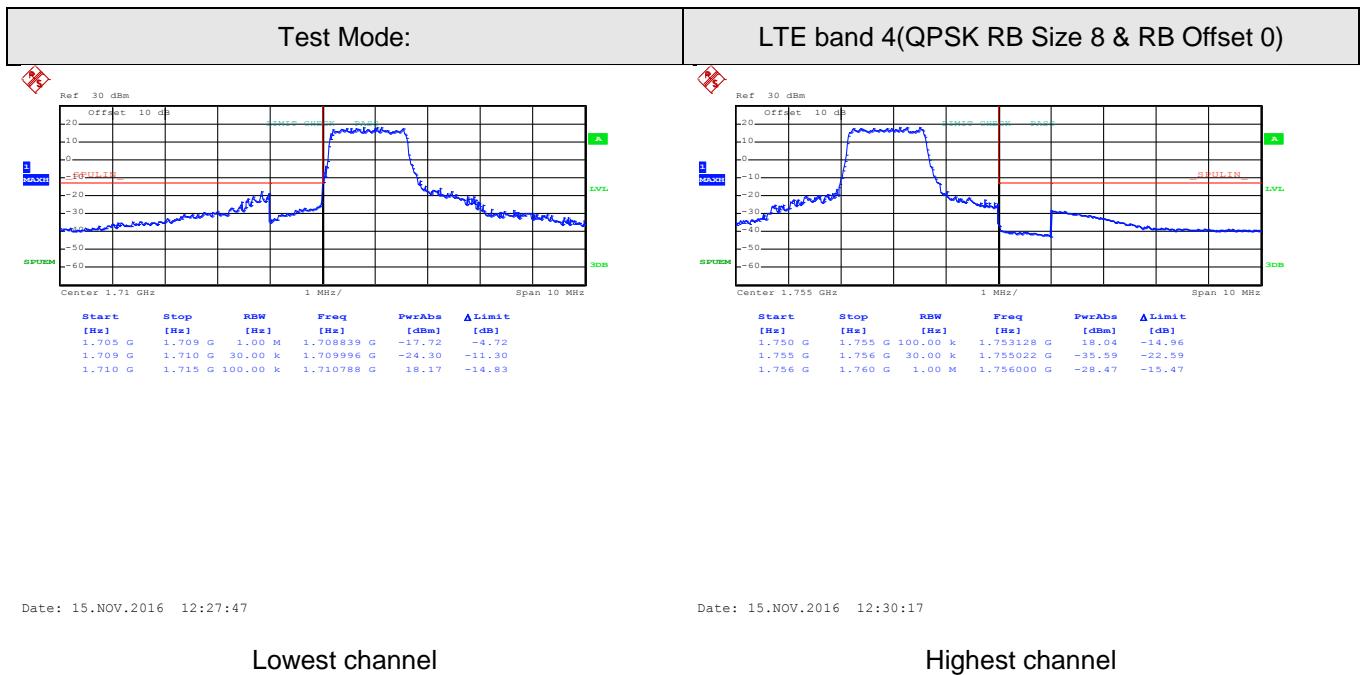


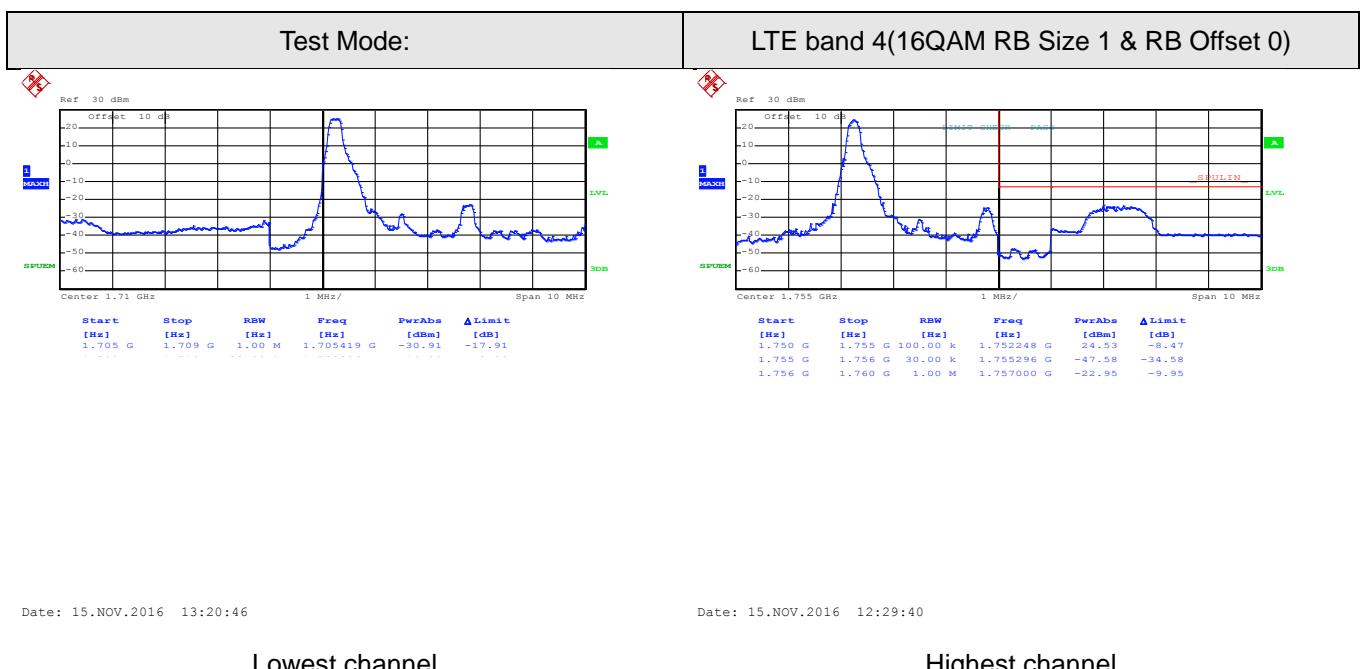
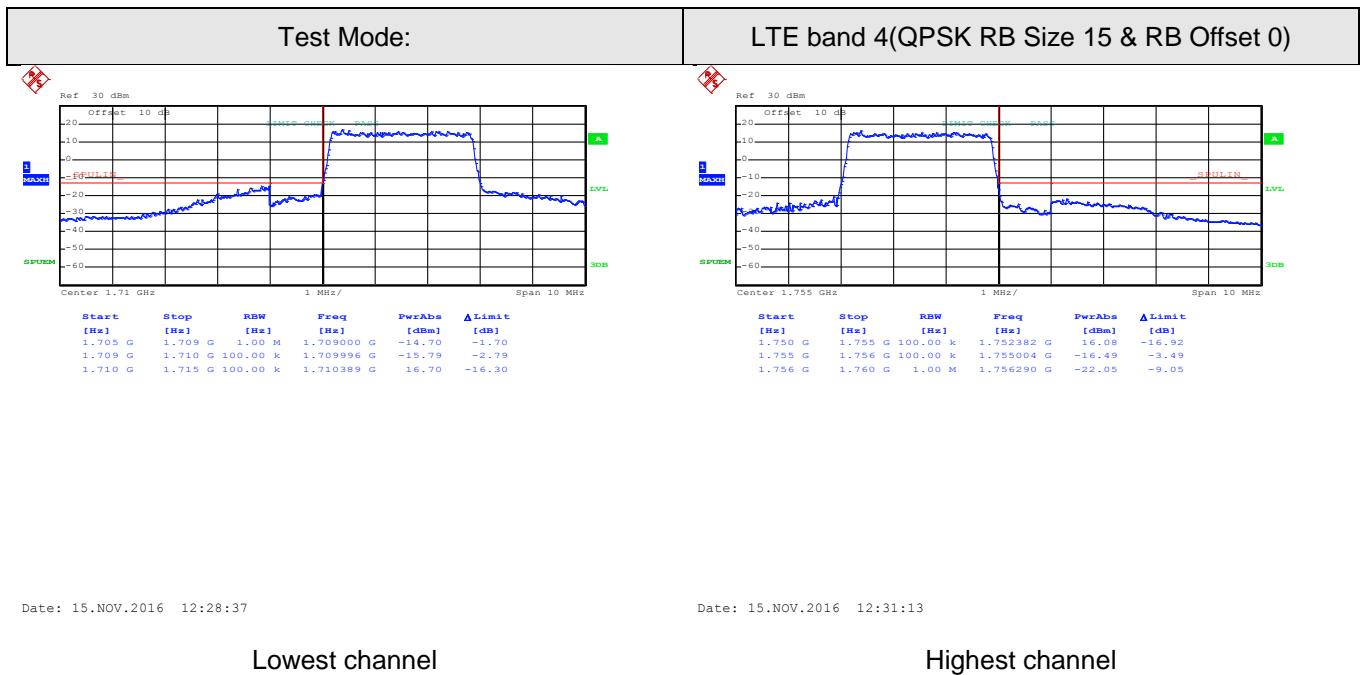


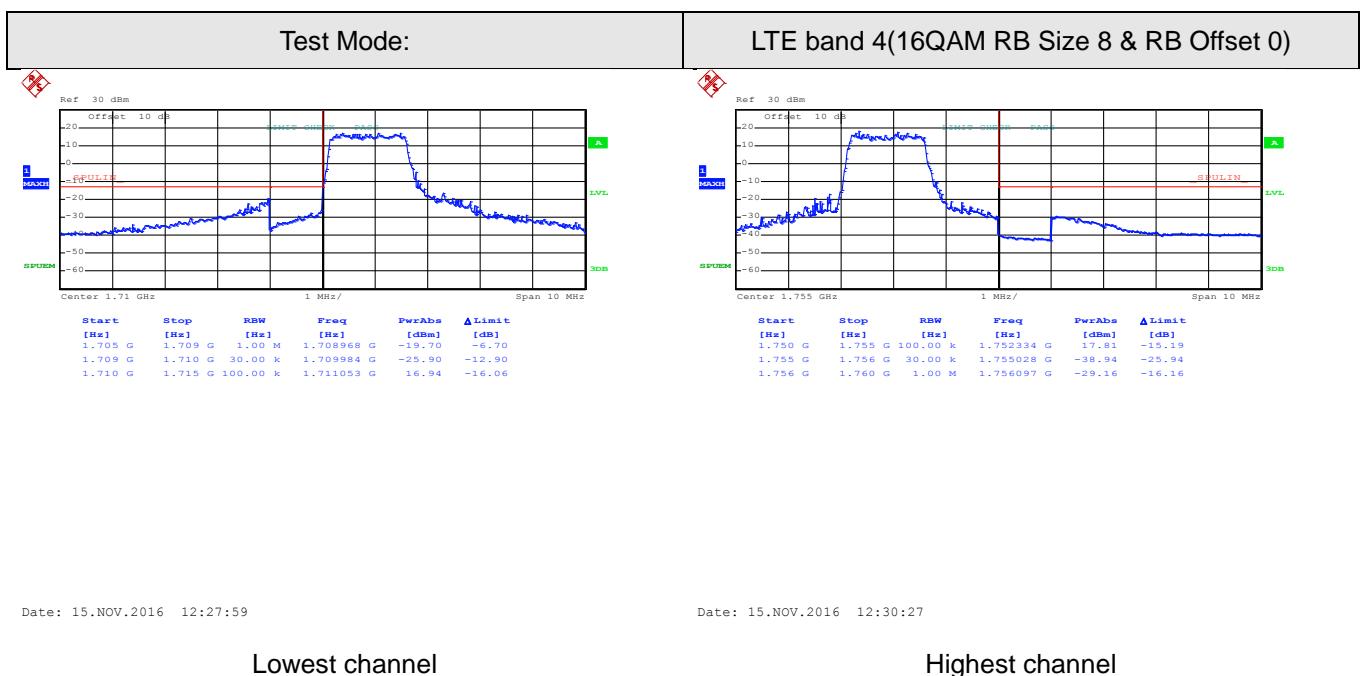
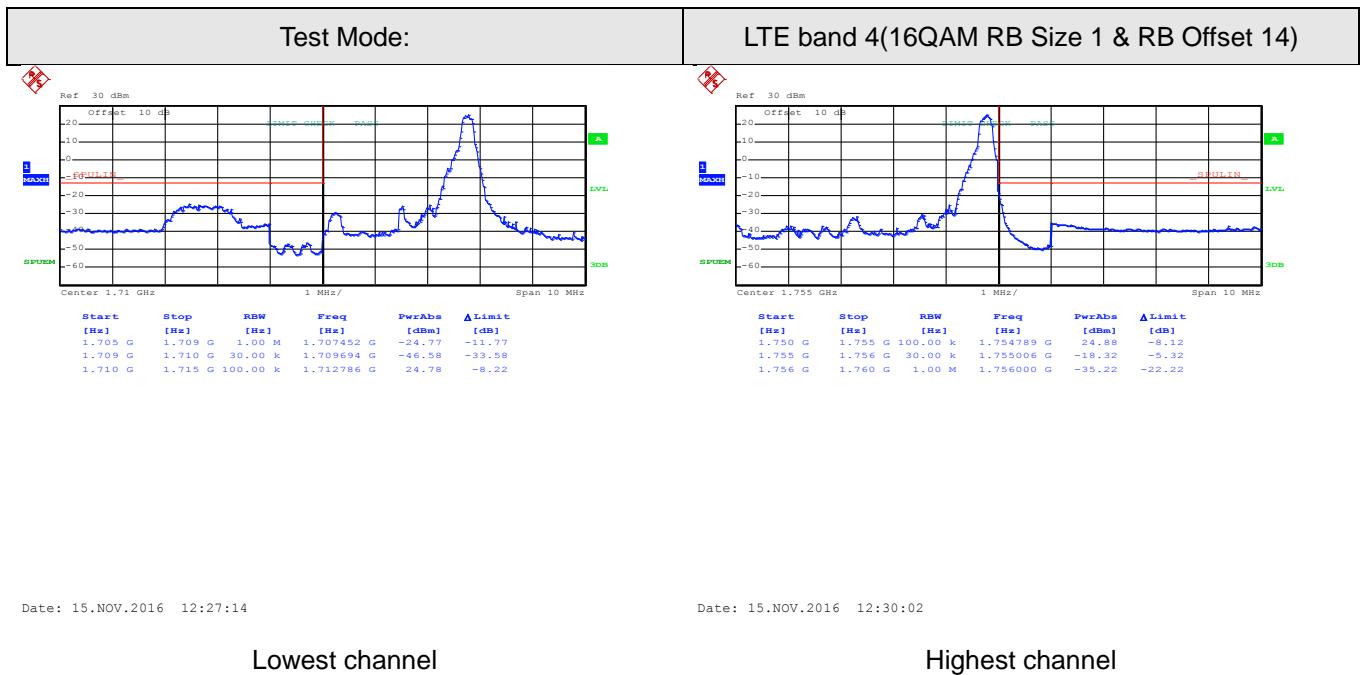


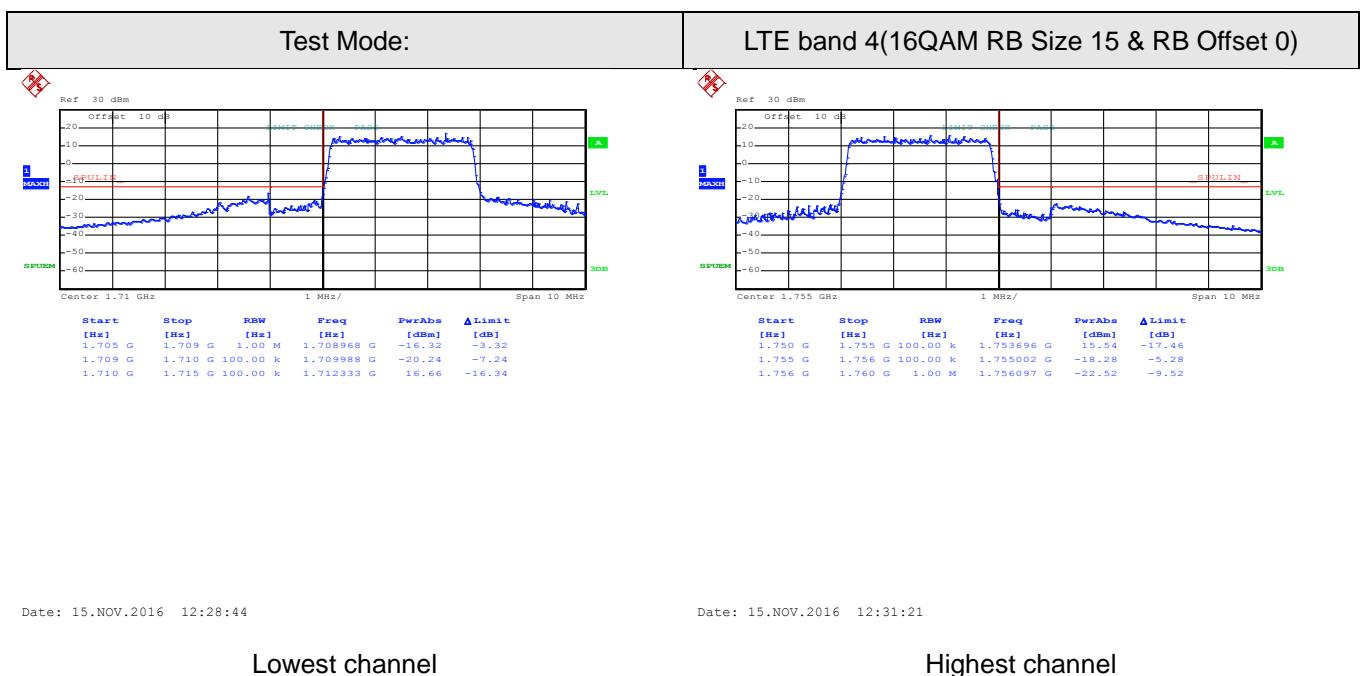
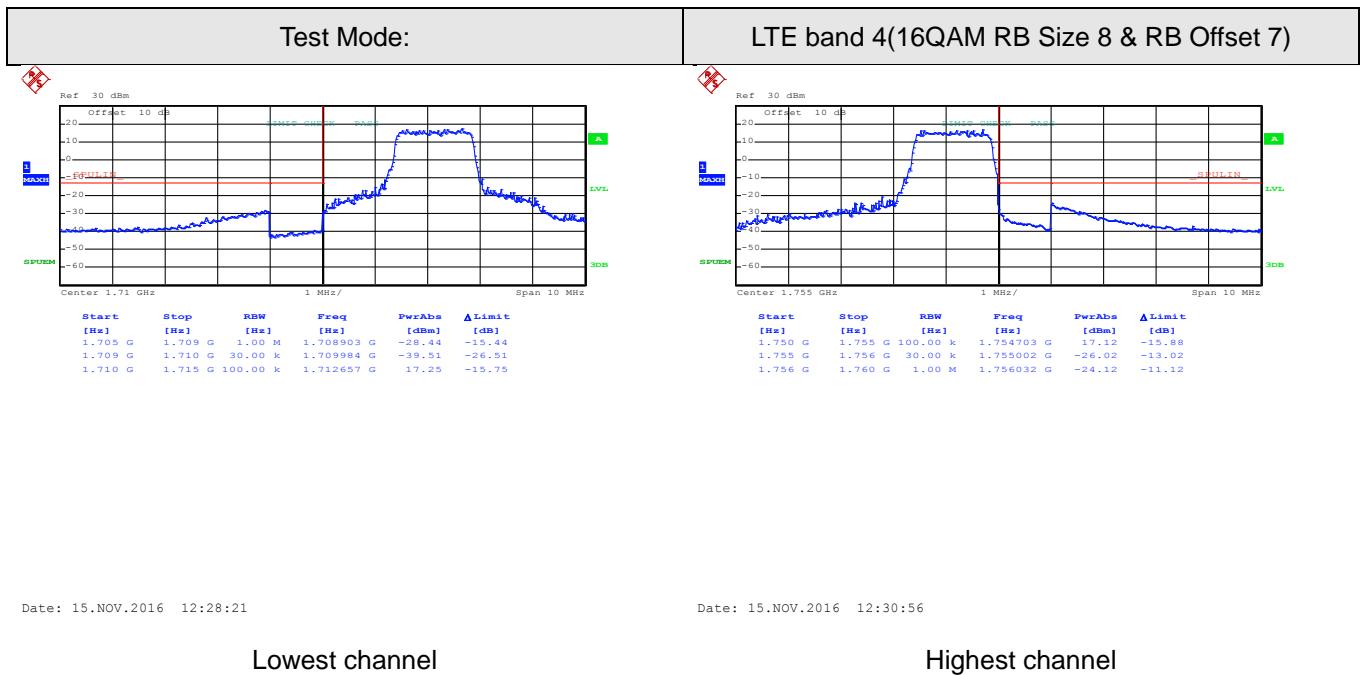
3MHz:



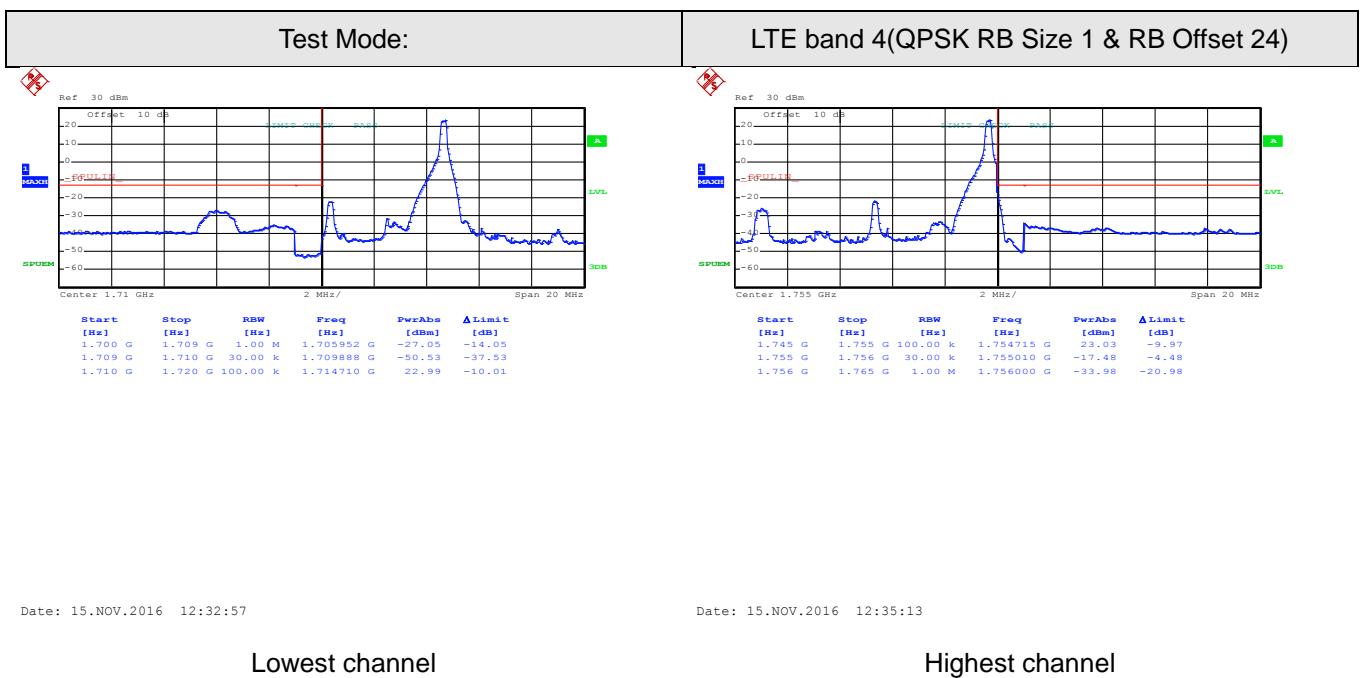
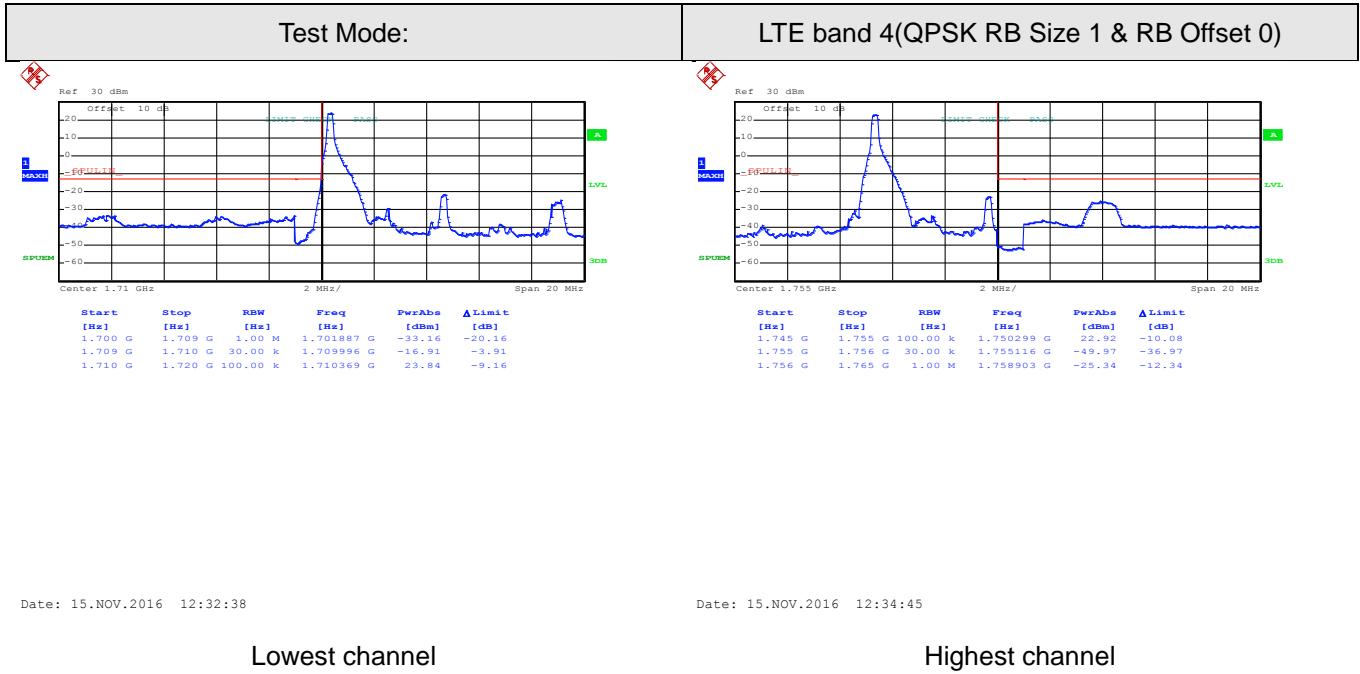


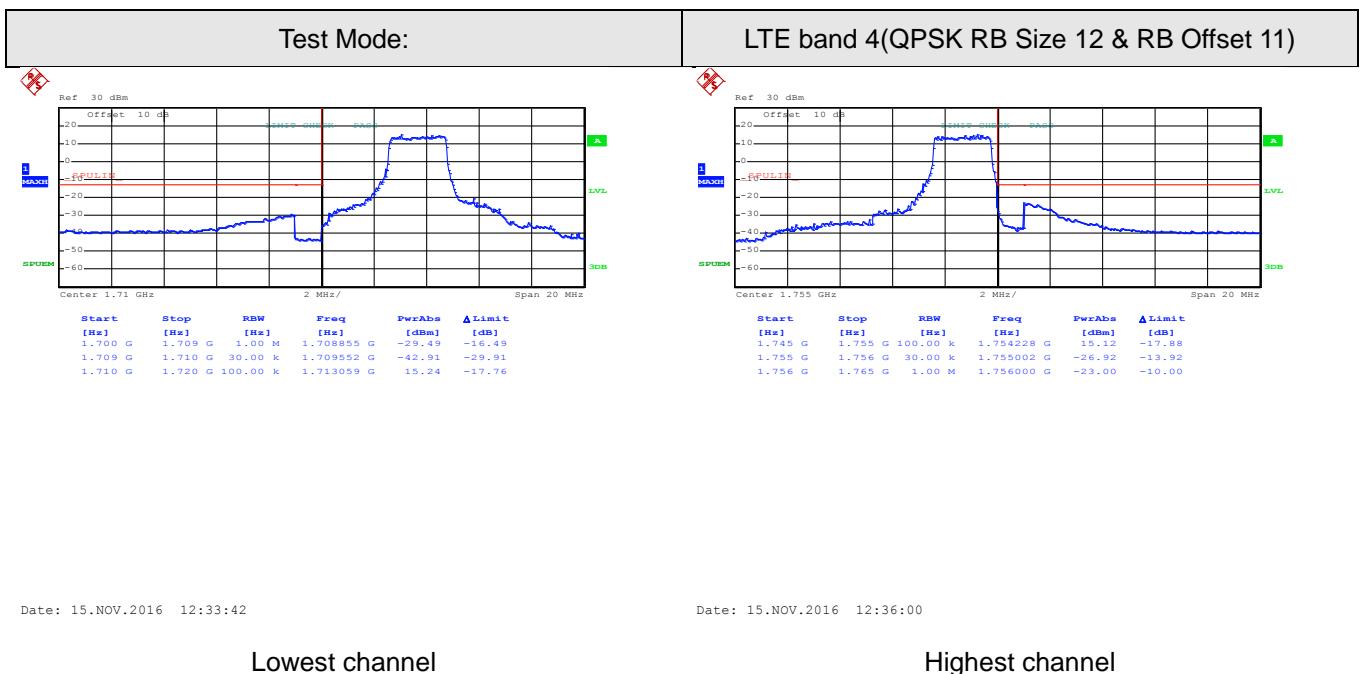
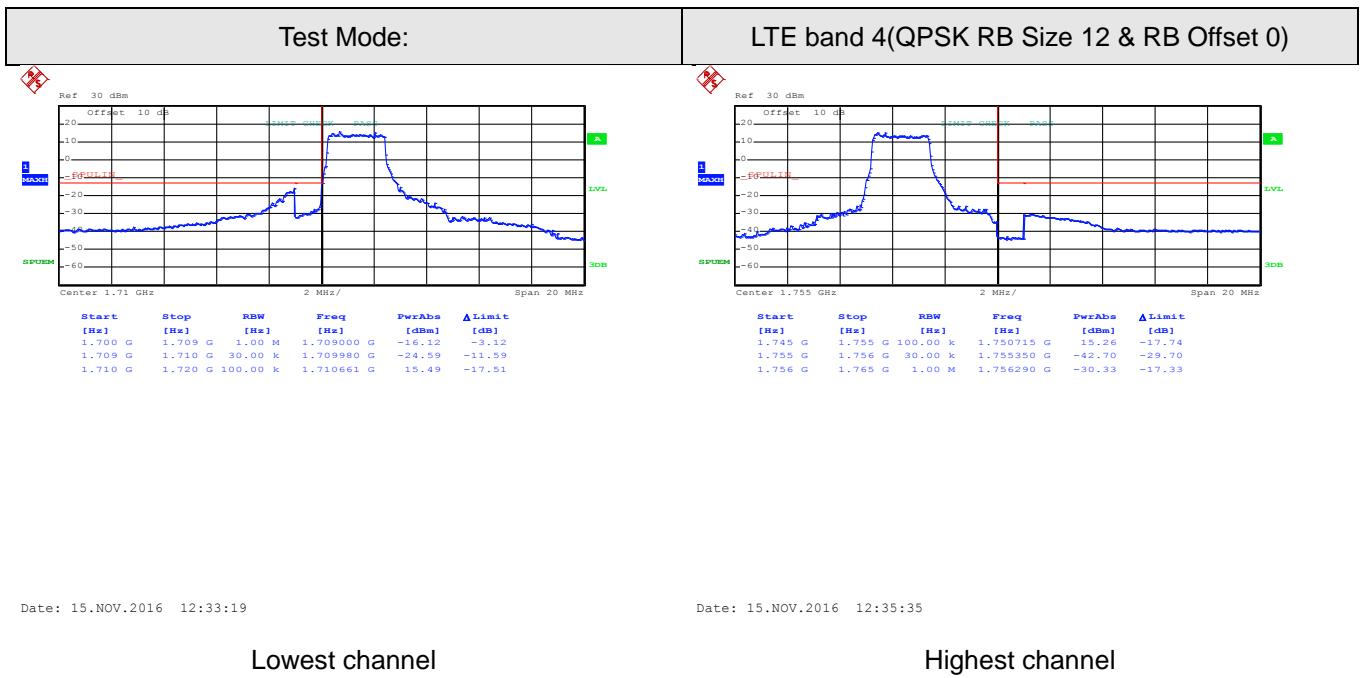


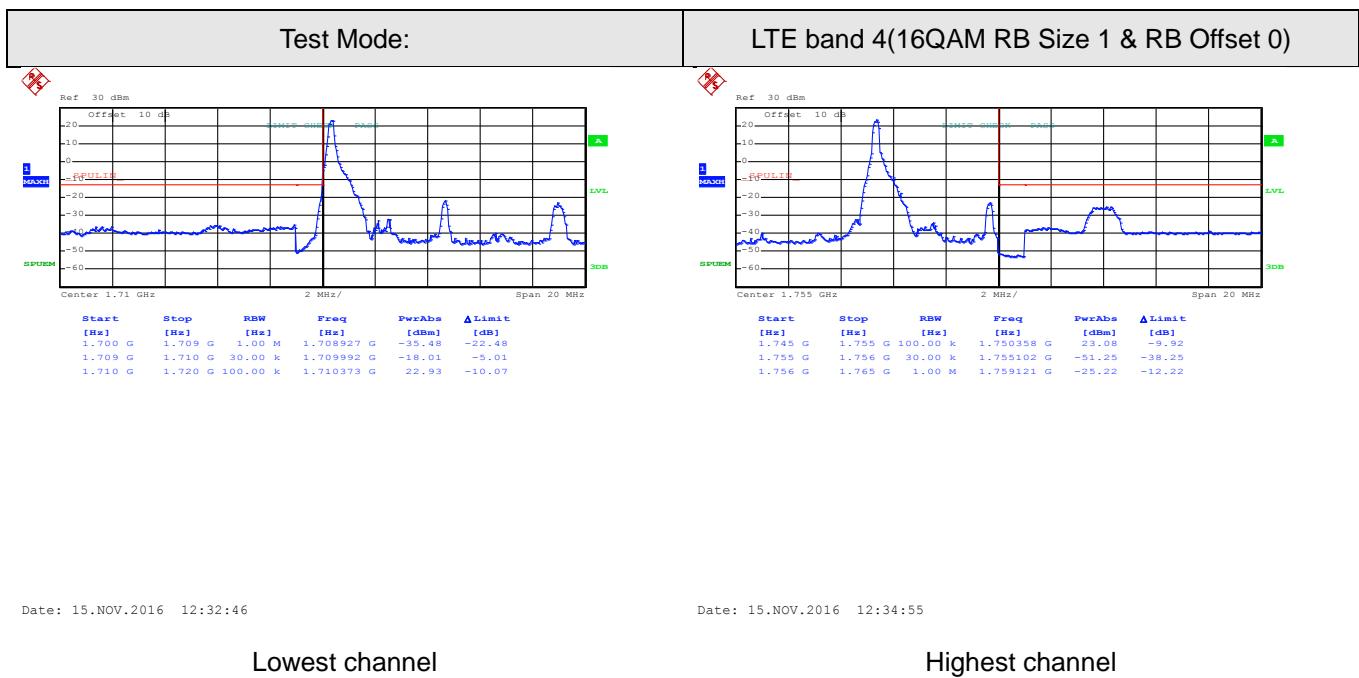
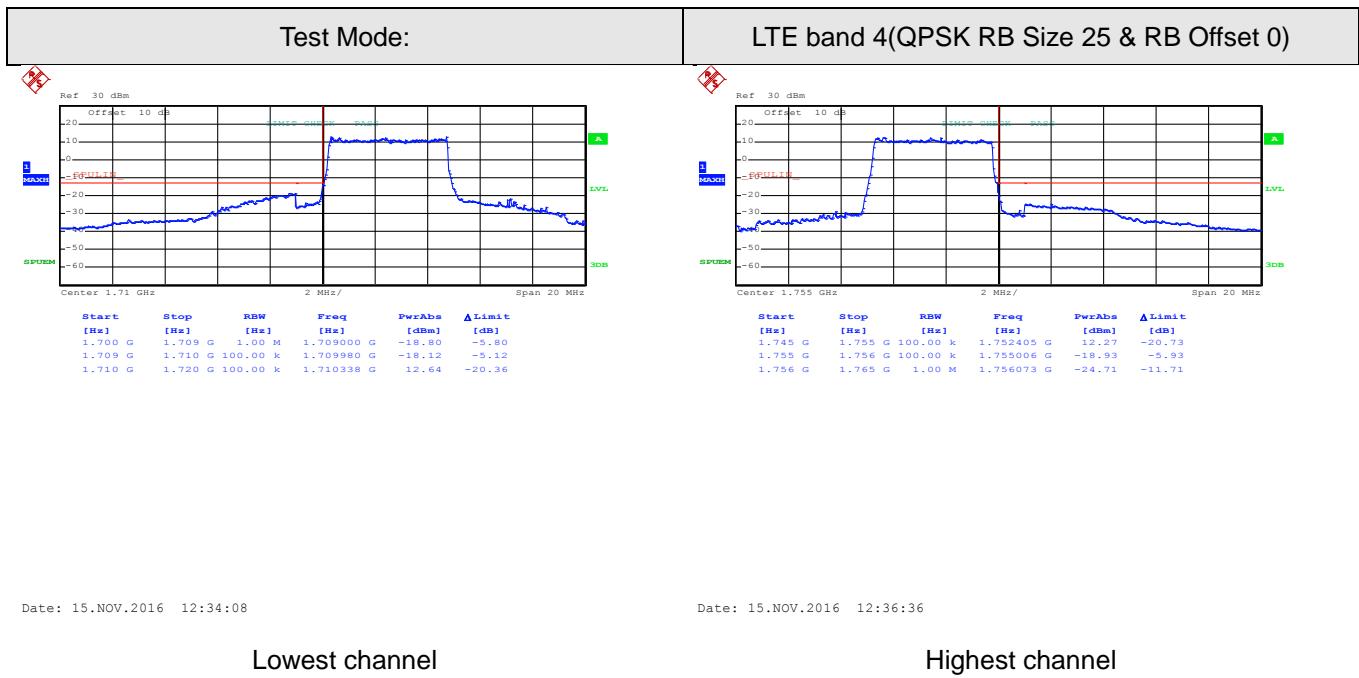




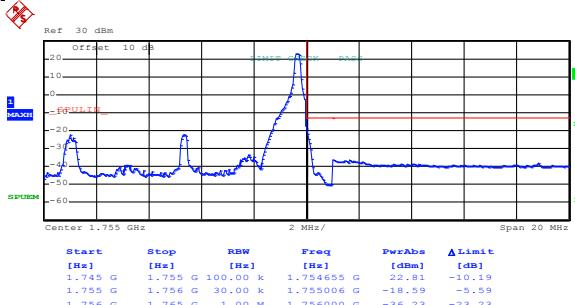
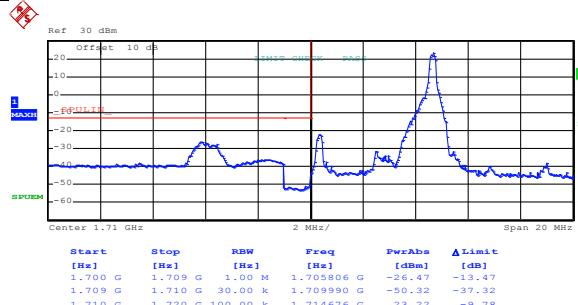
5MHz:







Test Mode:	LTE band 4(16QAM RB Size 1 & RB Offset 24)
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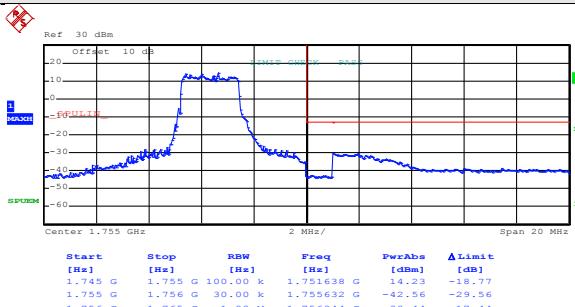
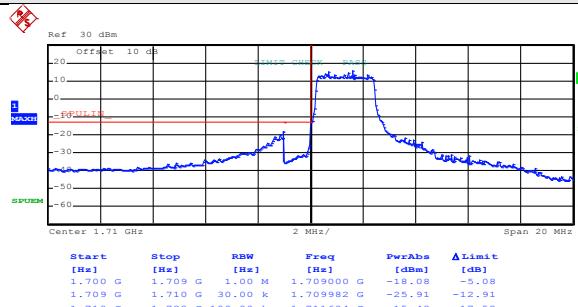
Date: 15.NOV.2016 12:33:06

Date: 15.NOV.2016 12:35:21

Lowest channel

Highest channel

Test Mode:	LTE band 4(16QAM RB Size 12 & RB Offset 0)
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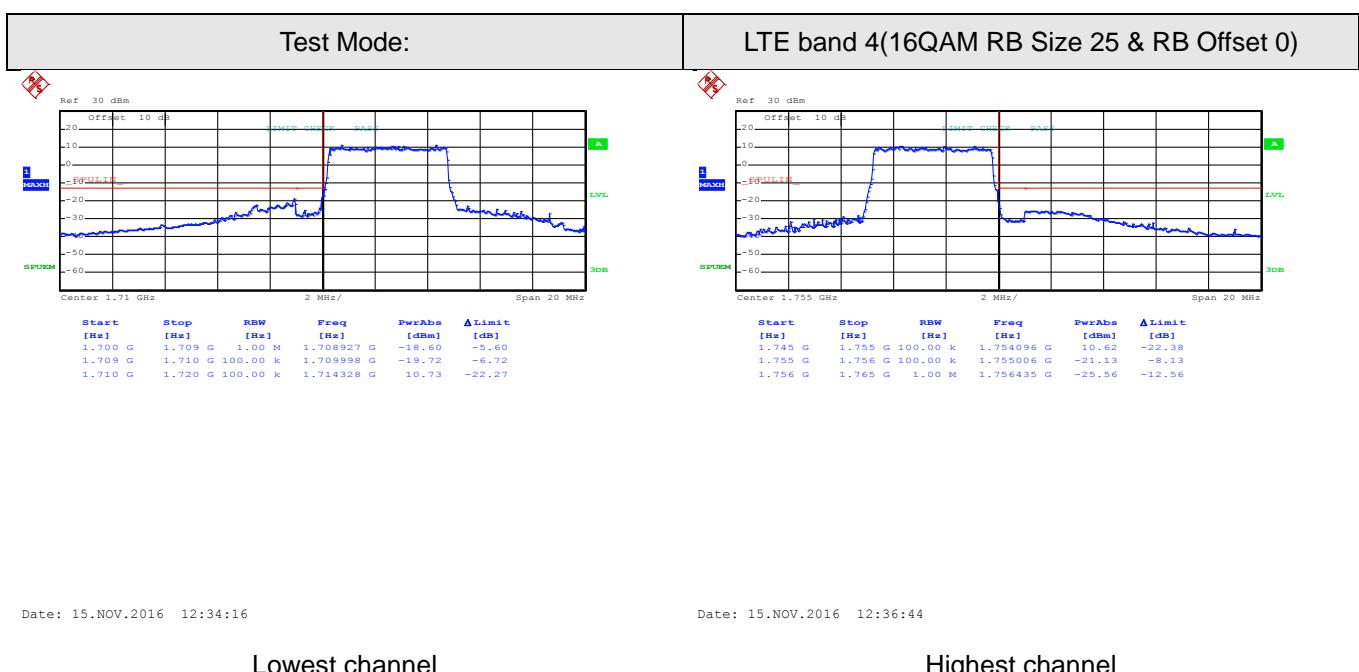
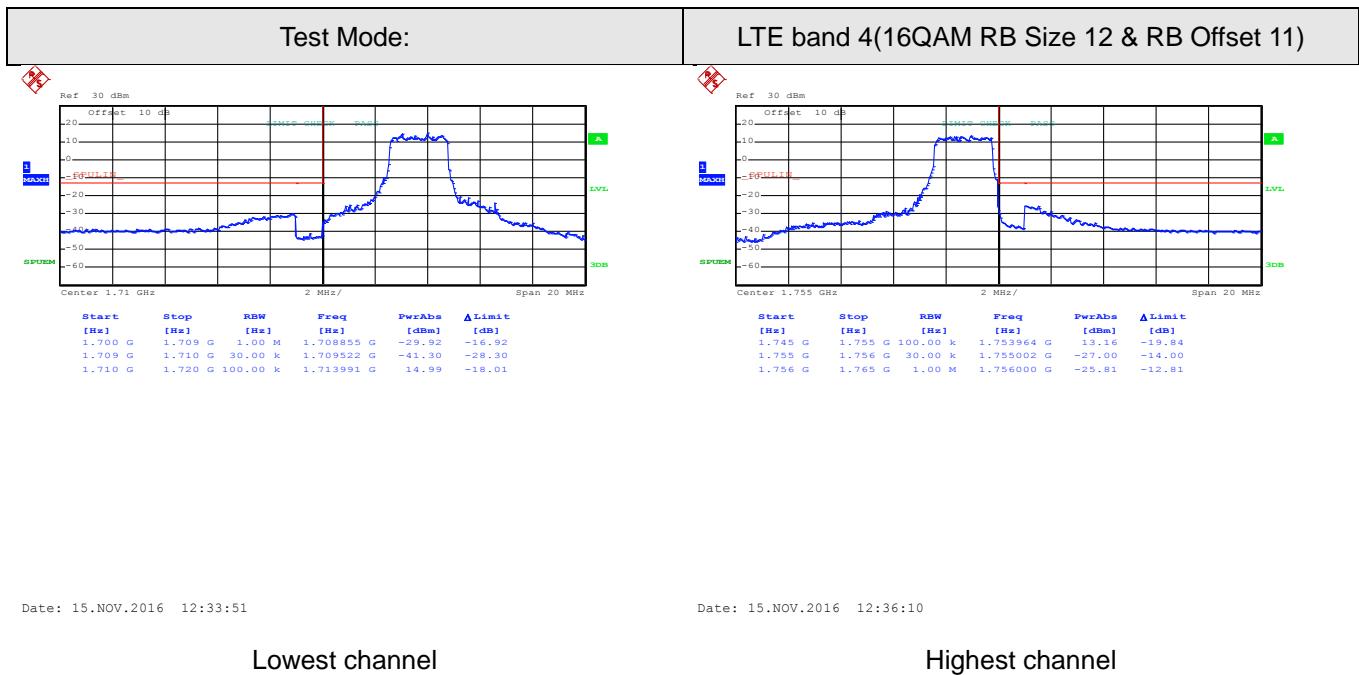


Date: 15.NOV.2016 12:33:28

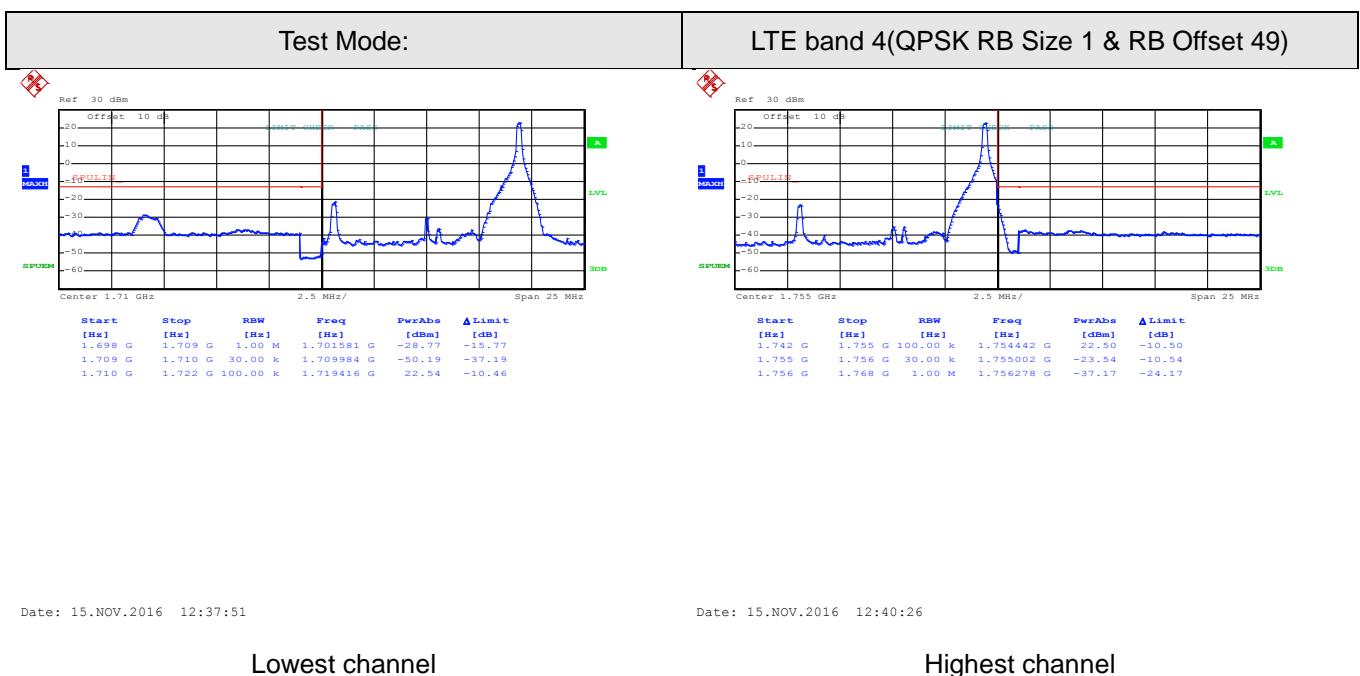
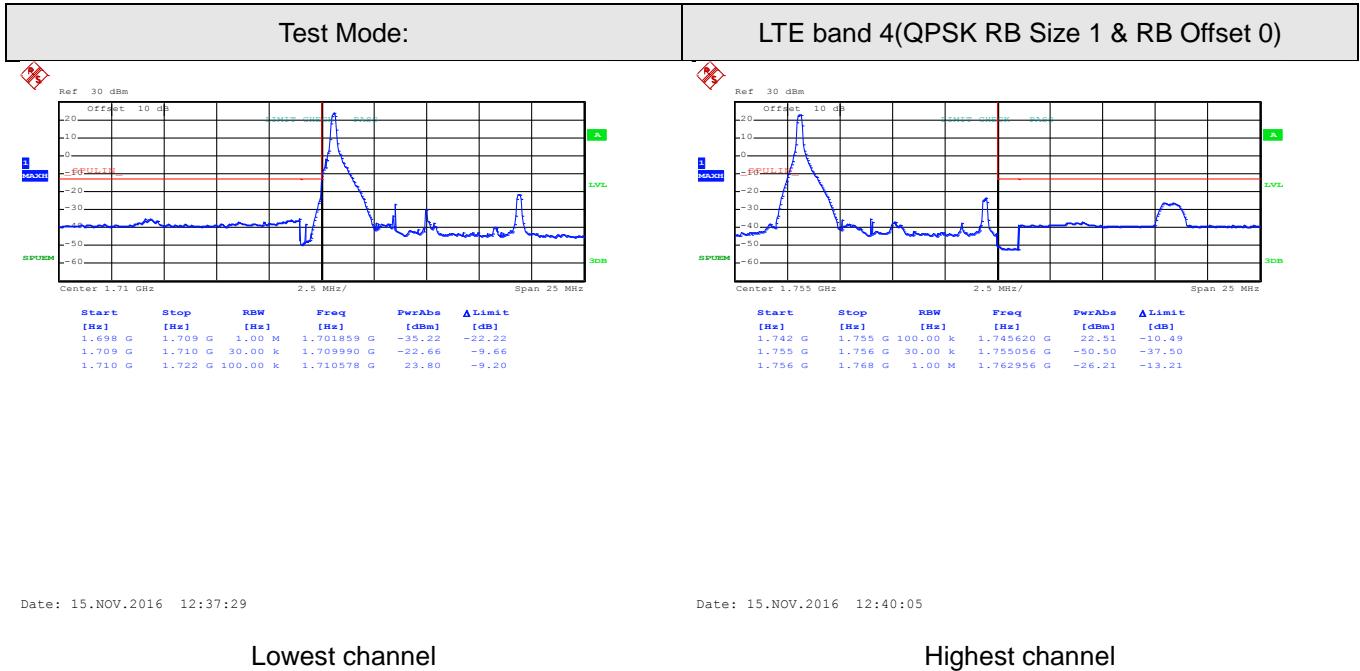
Date: 15.NOV.2016 12:35:43

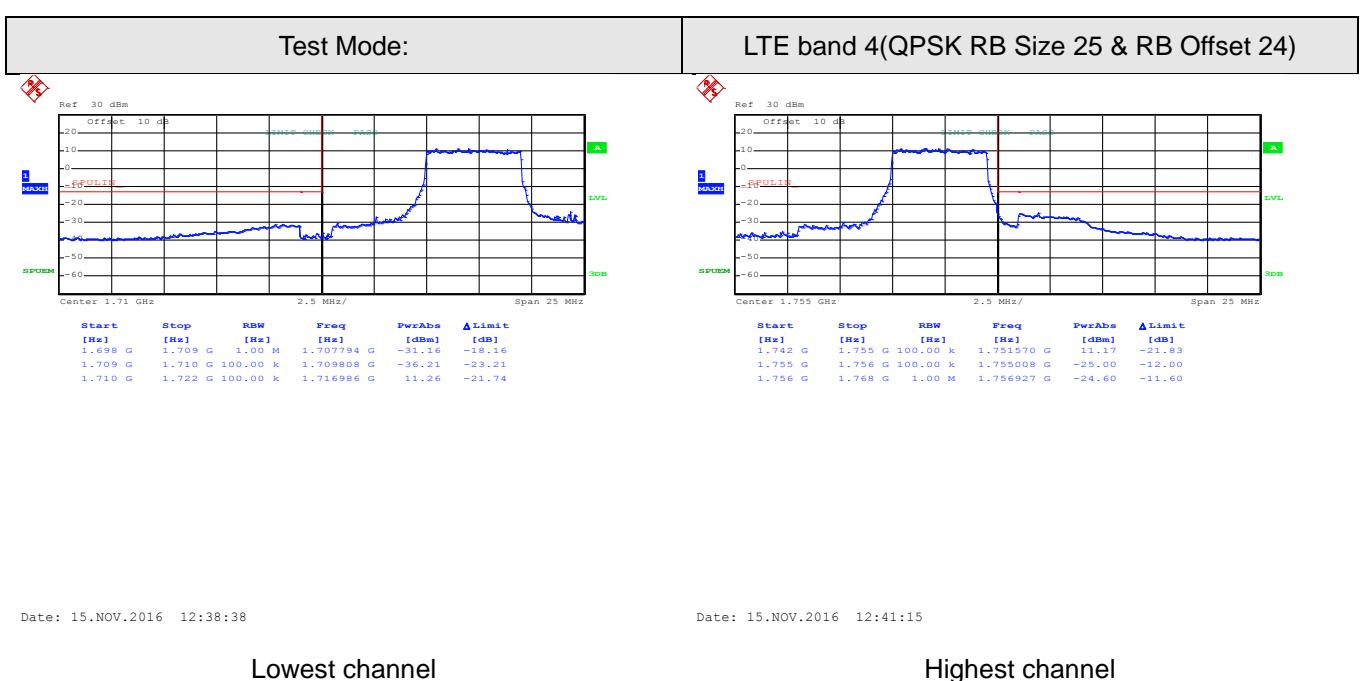
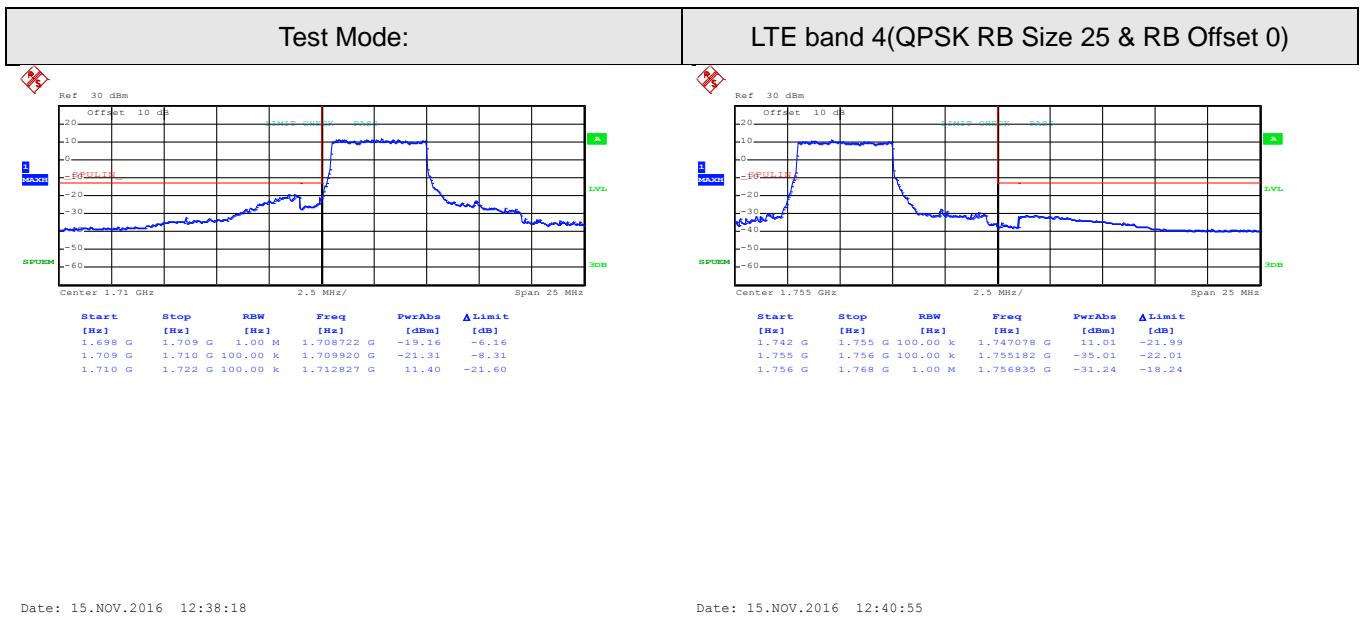
Lowest channel

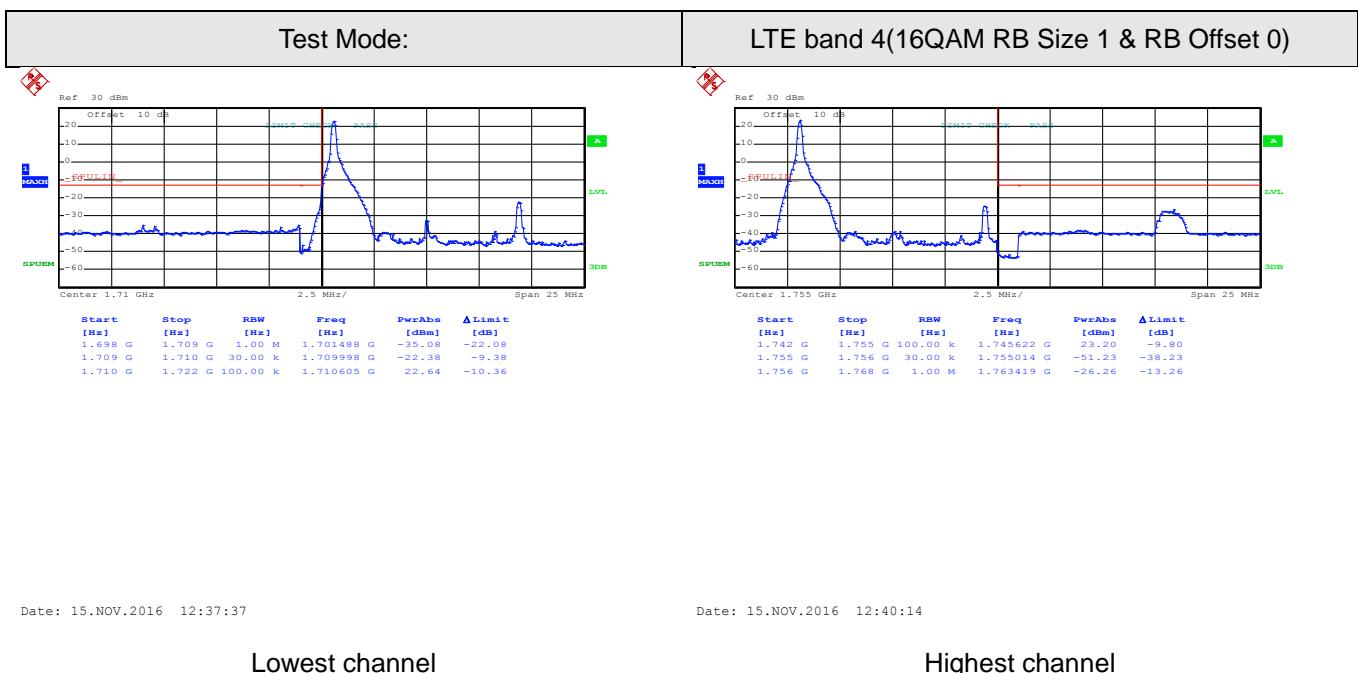
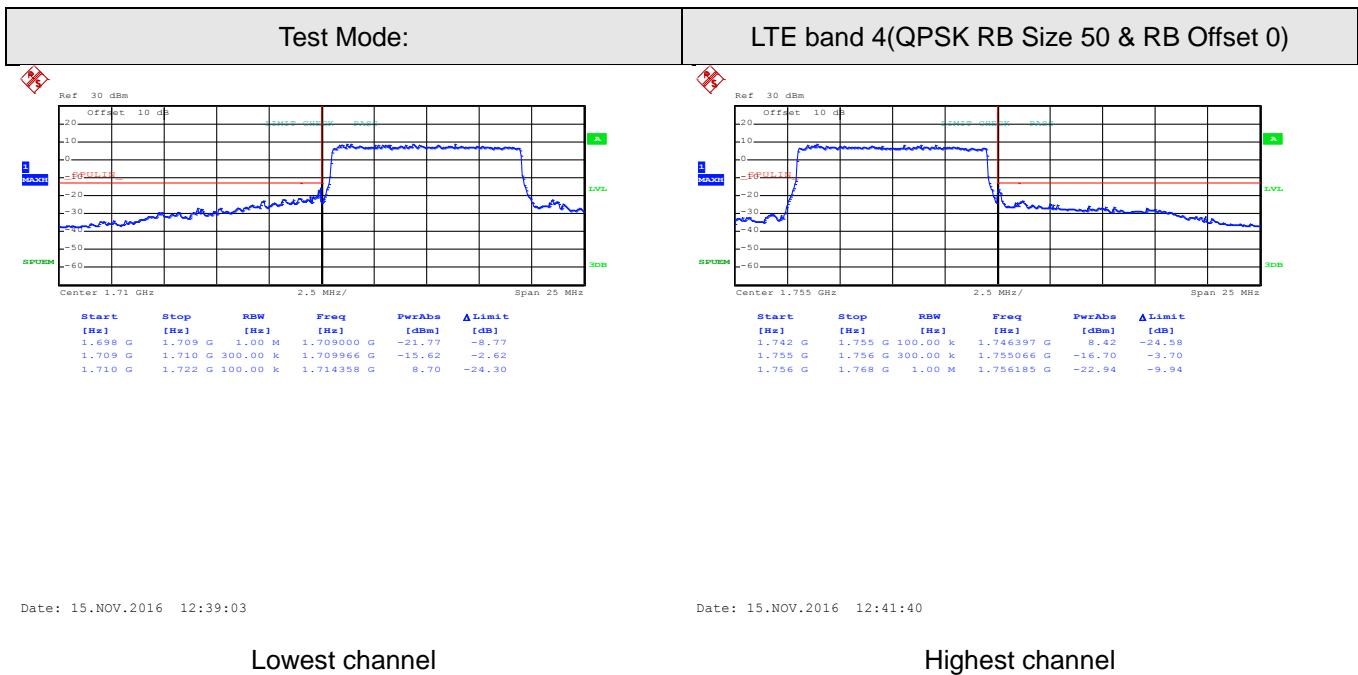
Highest channel



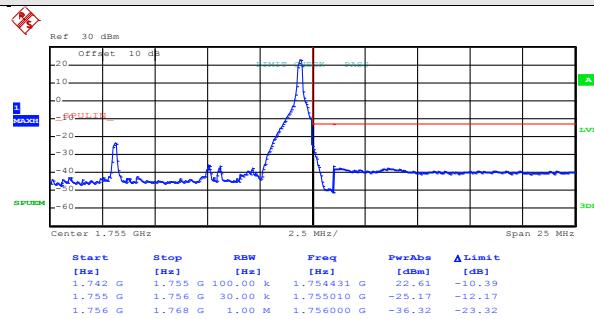
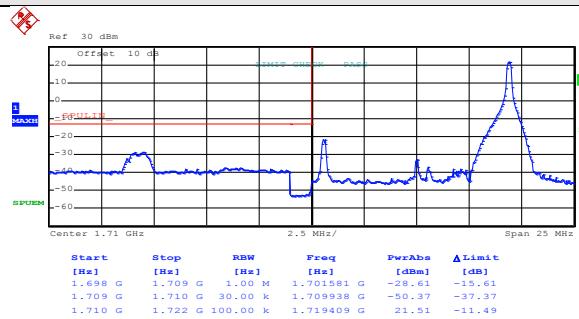
10MHz:







Test Mode:	LTE band 4(16QAM RB Size 1 & RB Offset 49)
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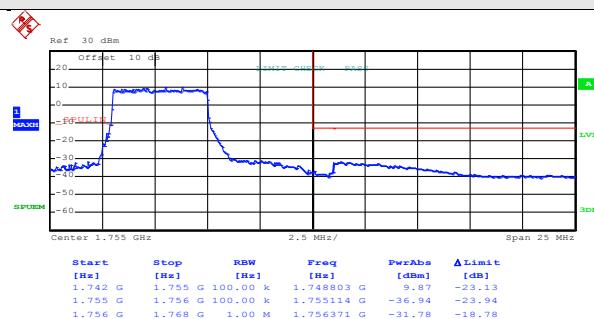
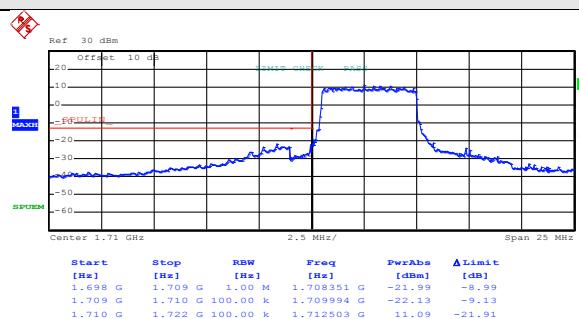
Date: 15.NOV.2016 12:38:01

Lowest channel

Date: 15.NOV.2016 12:40:37

Highest channel

Test Mode:	LTE band 4(16QAM RB Size 25 & RB Offset 0)
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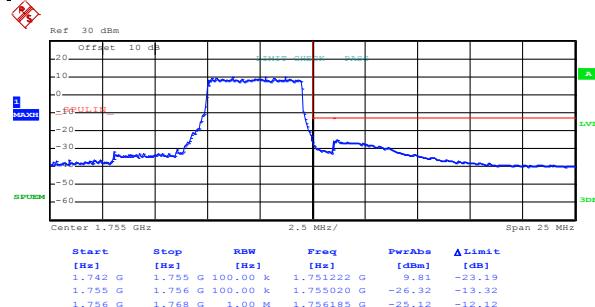
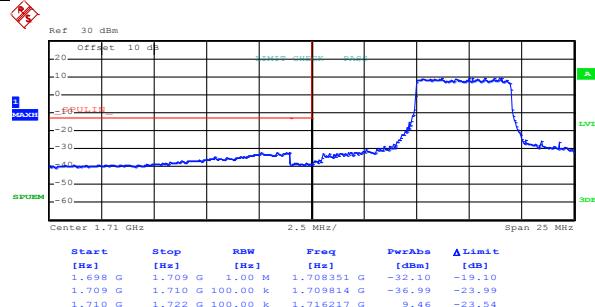
Date: 15.NOV.2016 12:38:26

Lowest channel

Date: 15.NOV.2016 12:41:03

Highest channel

Test Mode:	LTE band 4(16QAM RB Size 25 & RB Offset 24)
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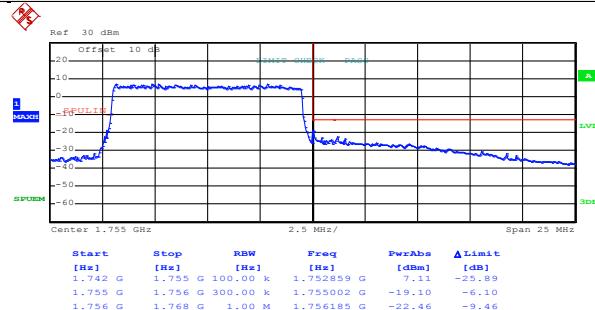
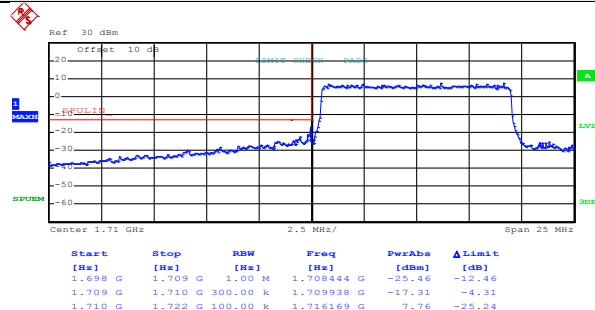
Date: 15.NOV.2016 12:38:48

Date: 15.NOV.2016 12:41:25

Lowest channel

Highest channel

Test Mode:	LTE band 4(16QAM RB Size 50 & RB Offset 0)
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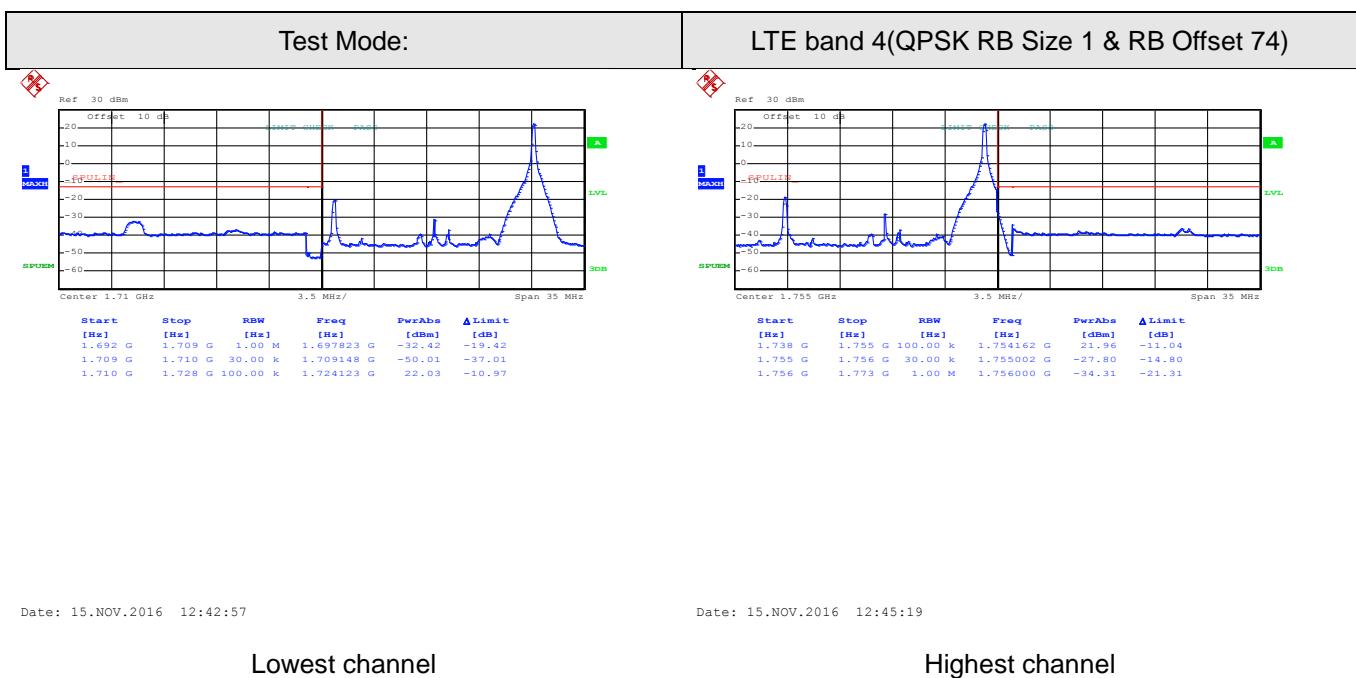
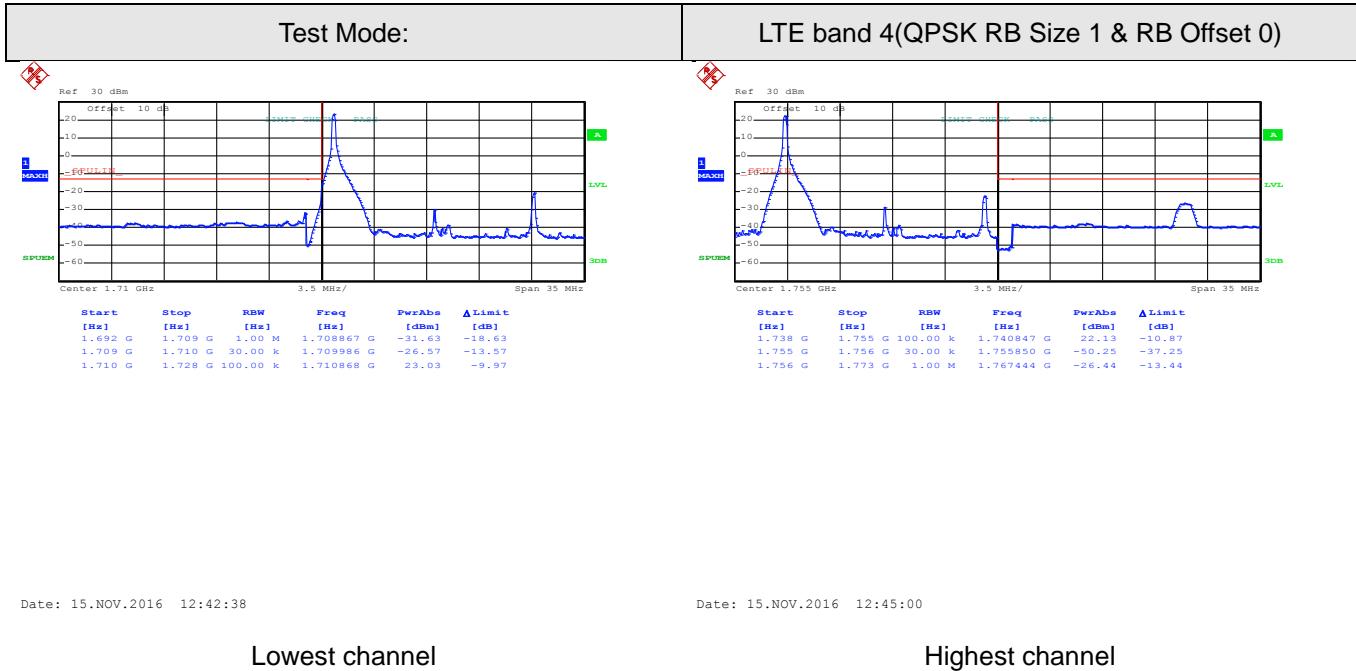
Date: 15.NOV.2016 12:39:10

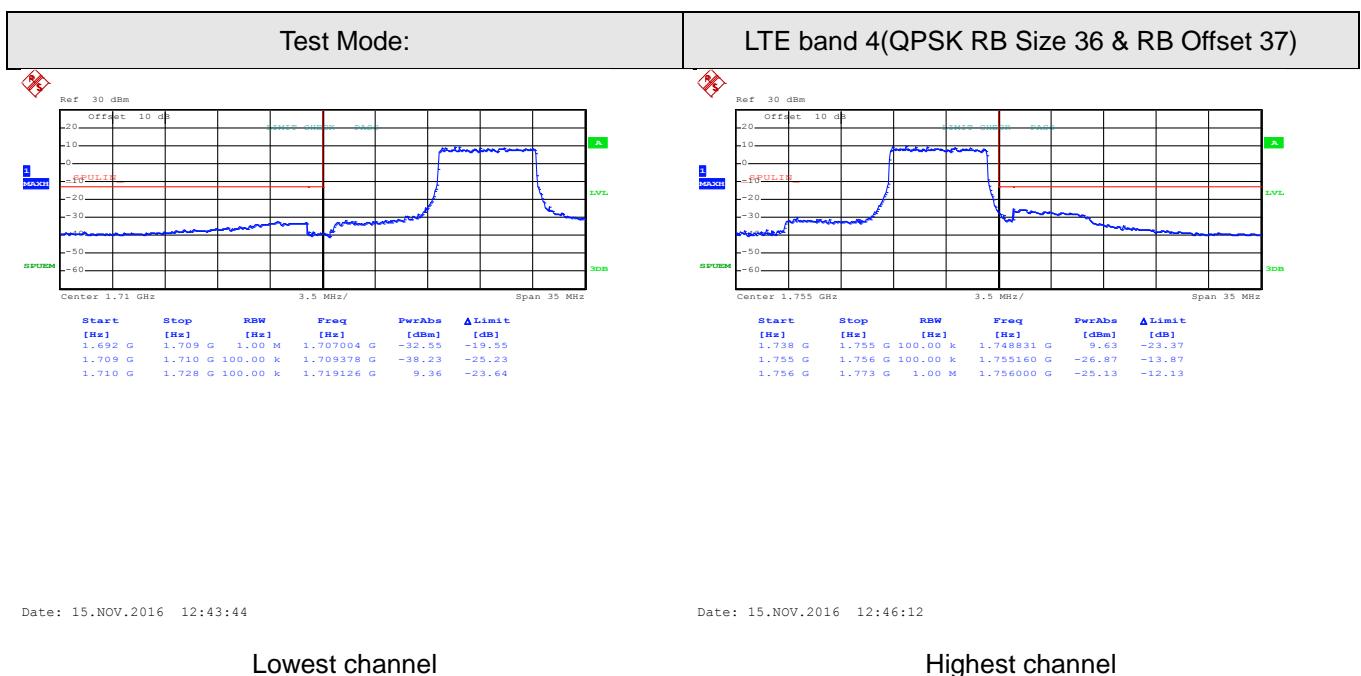
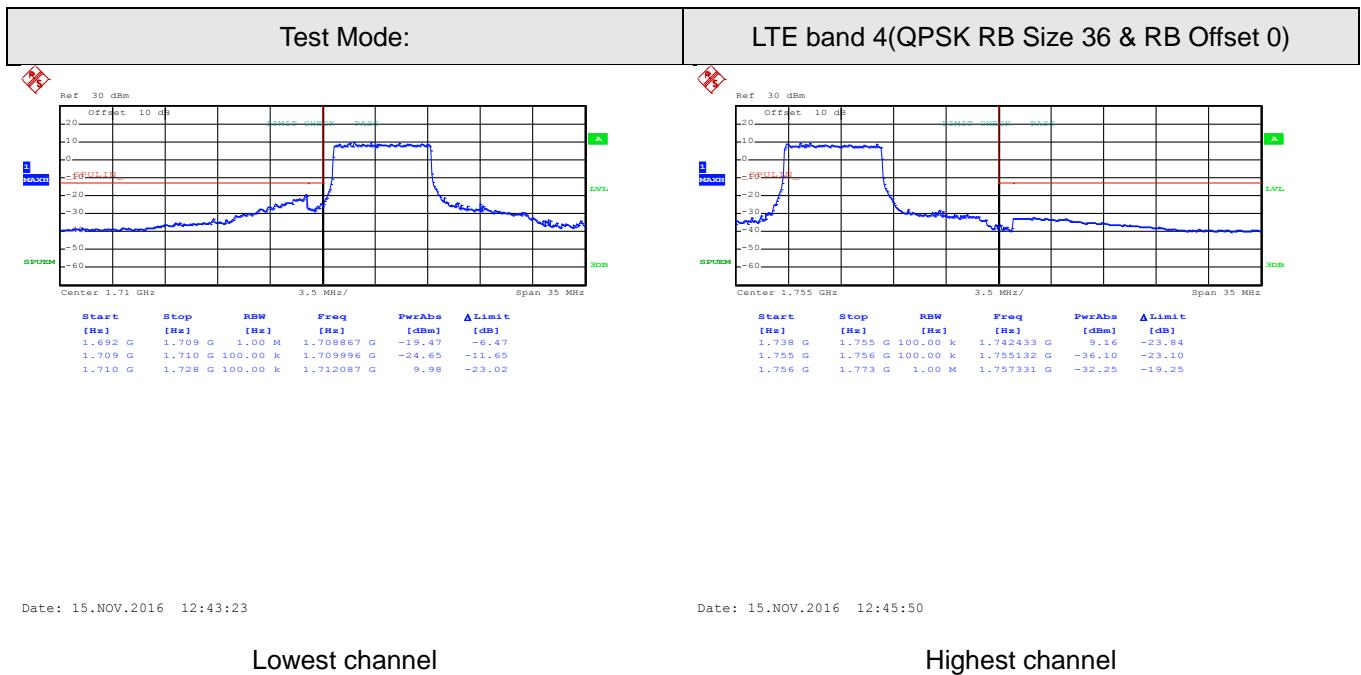
Date: 15.NOV.2016 12:41:48

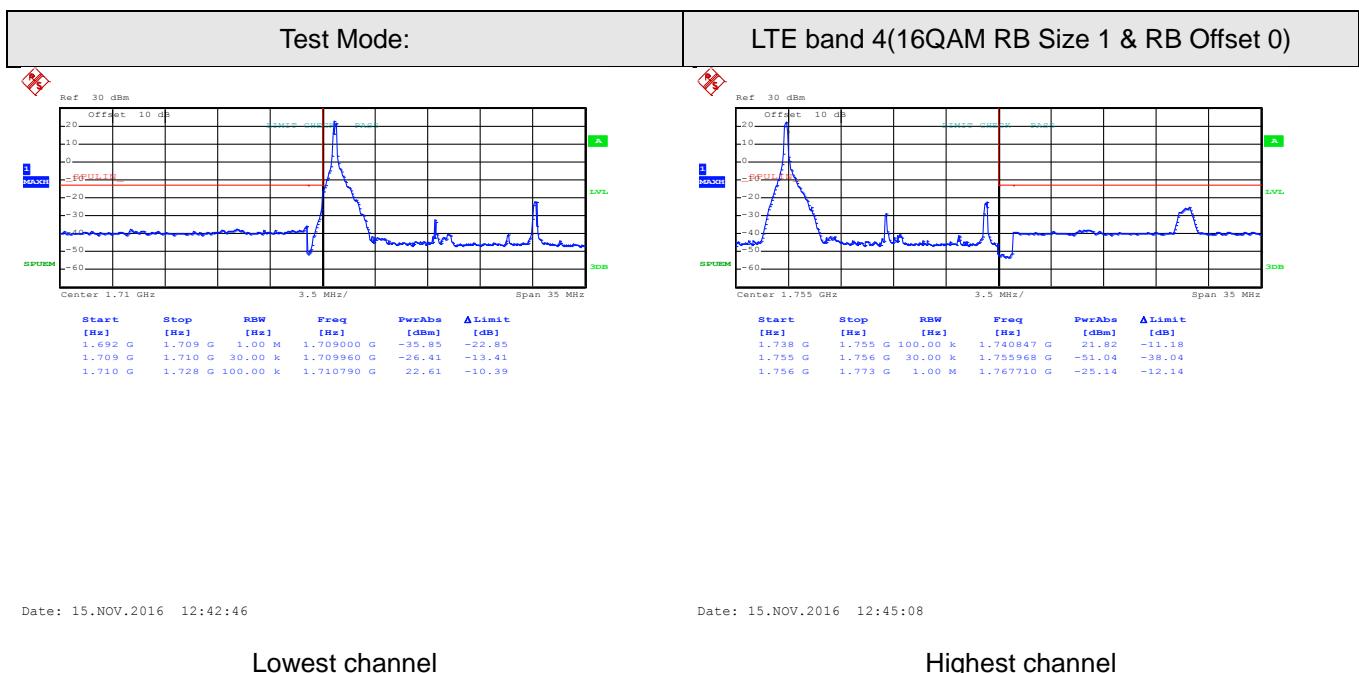
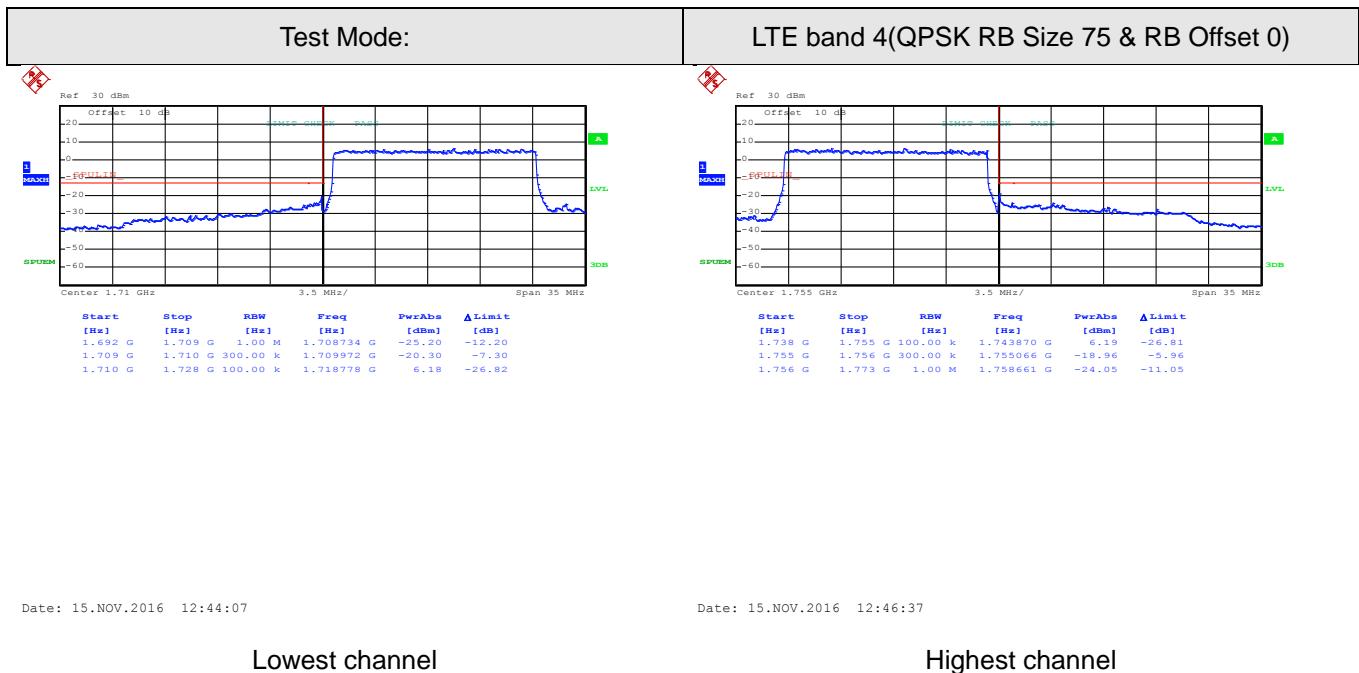
Lowest channel

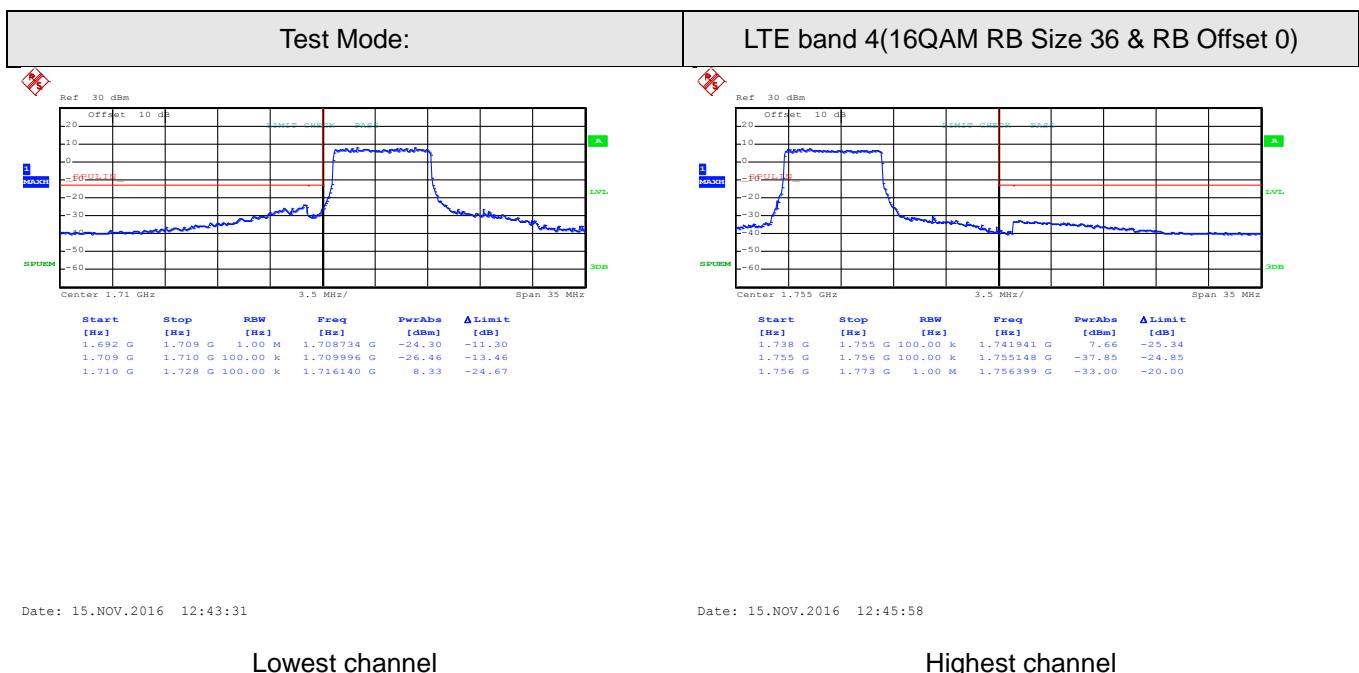
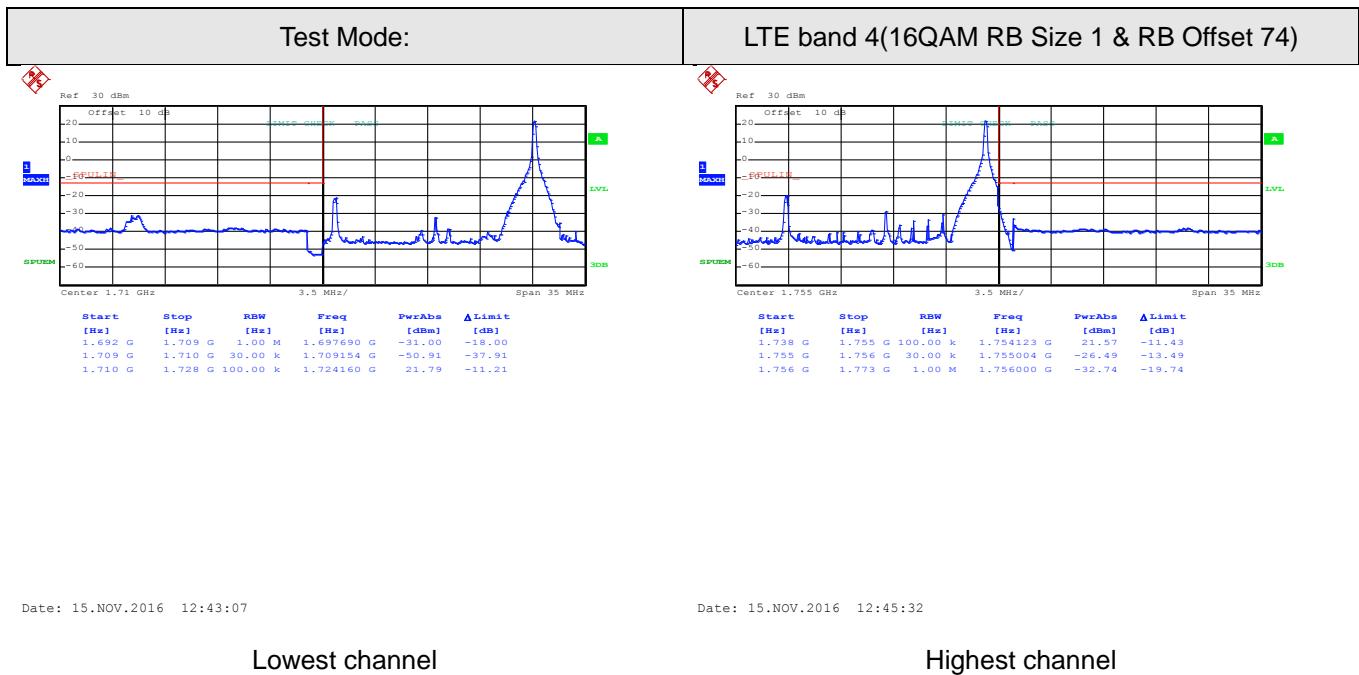
Highest channel

## 15MHz:

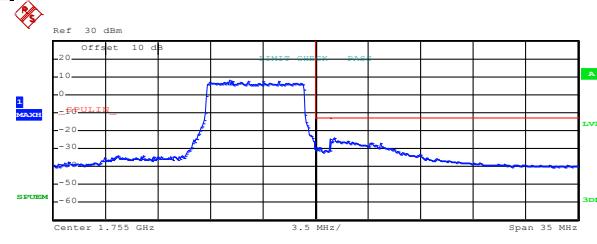
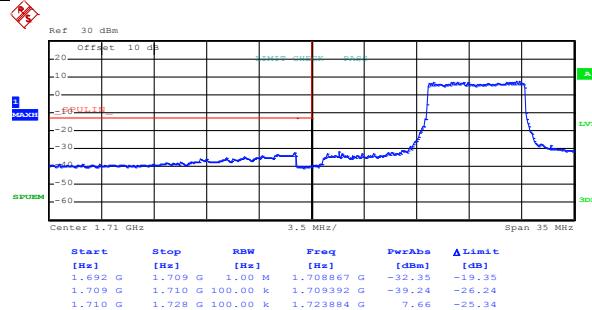








Test Mode:	LTE band 4(16QAM RB Size 36 & RB Offset 37)
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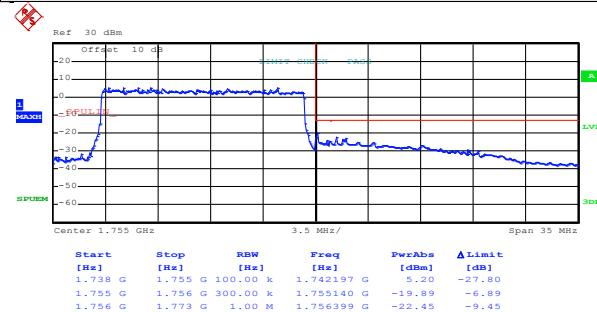
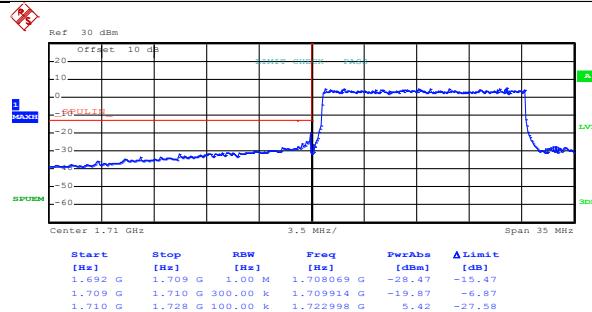
Date: 15.NOV.2016 12:43:52

Date: 15.NOV.2016 12:46:21

Lowest channel

Highest channel

Test Mode:	LTE band 4(16QAM RB Size 75 & RB Offset 0)
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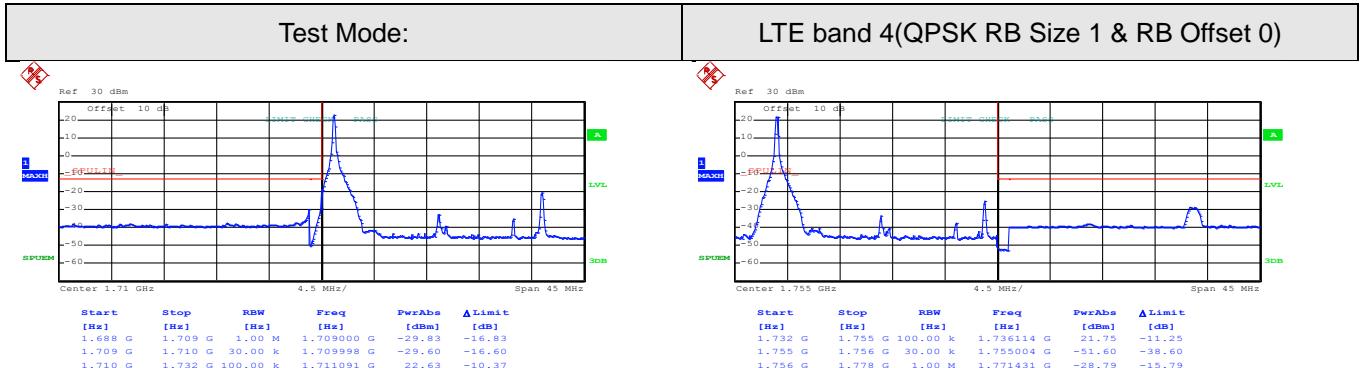
Date: 15.NOV.2016 12:44:14

Date: 15.NOV.2016 12:46:45

Lowest channel

Highest channel

## 20MHz:

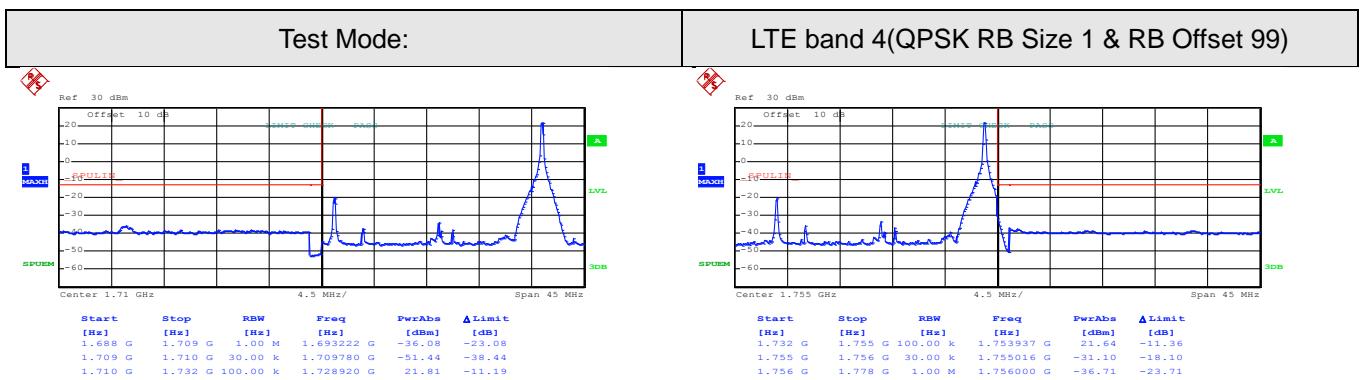


Date: 15.NOV.2016 12:48:37

Date: 15.NOV.2016 12:50:52

Lowest channel

Highest channel

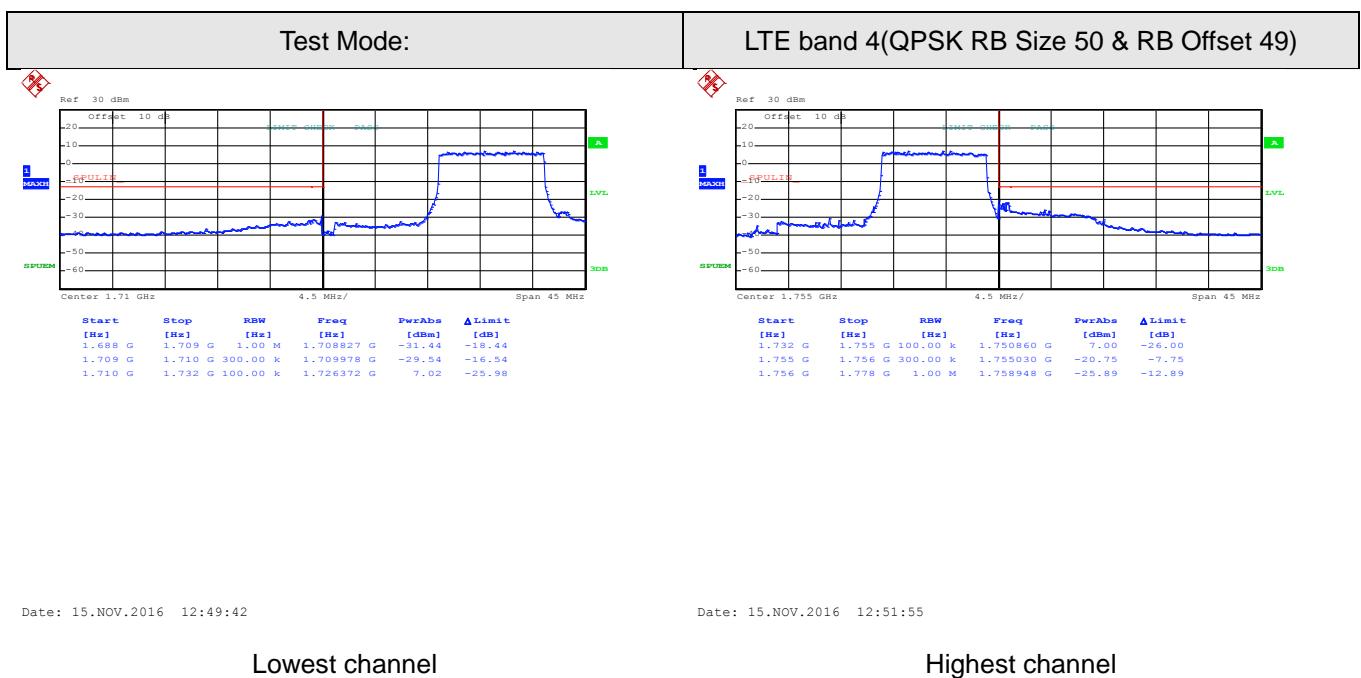
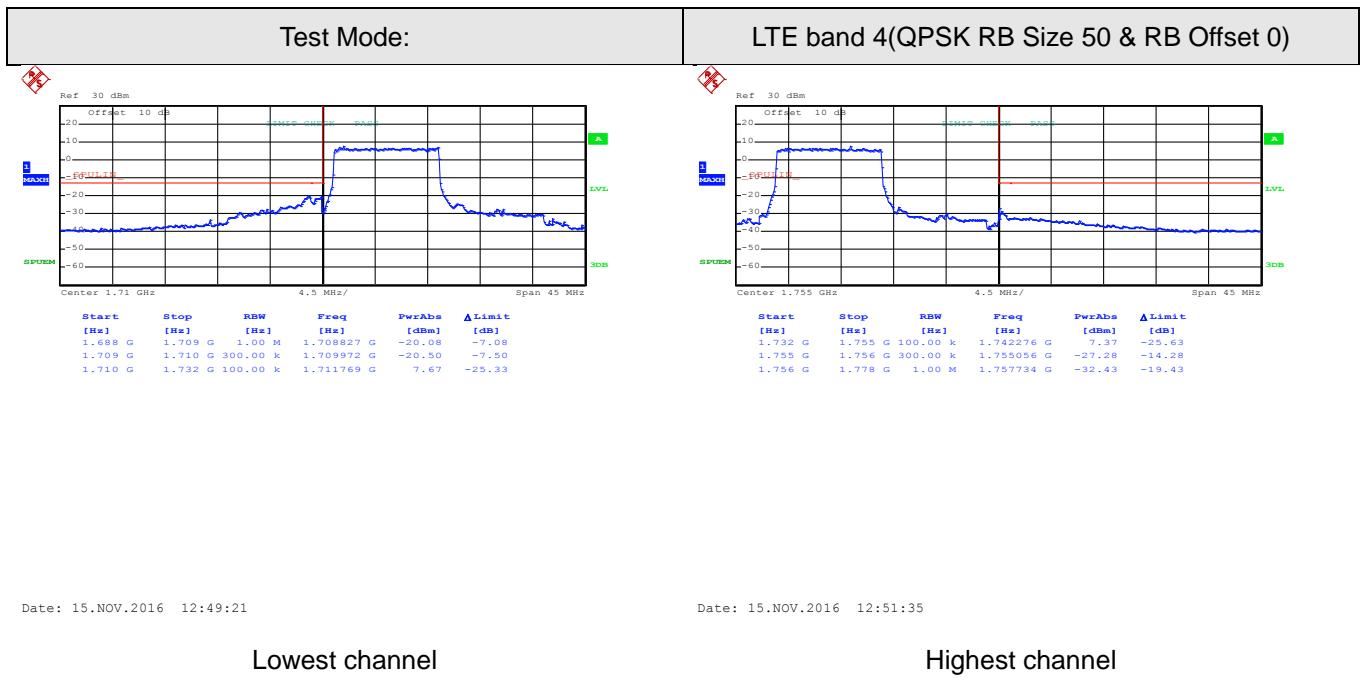


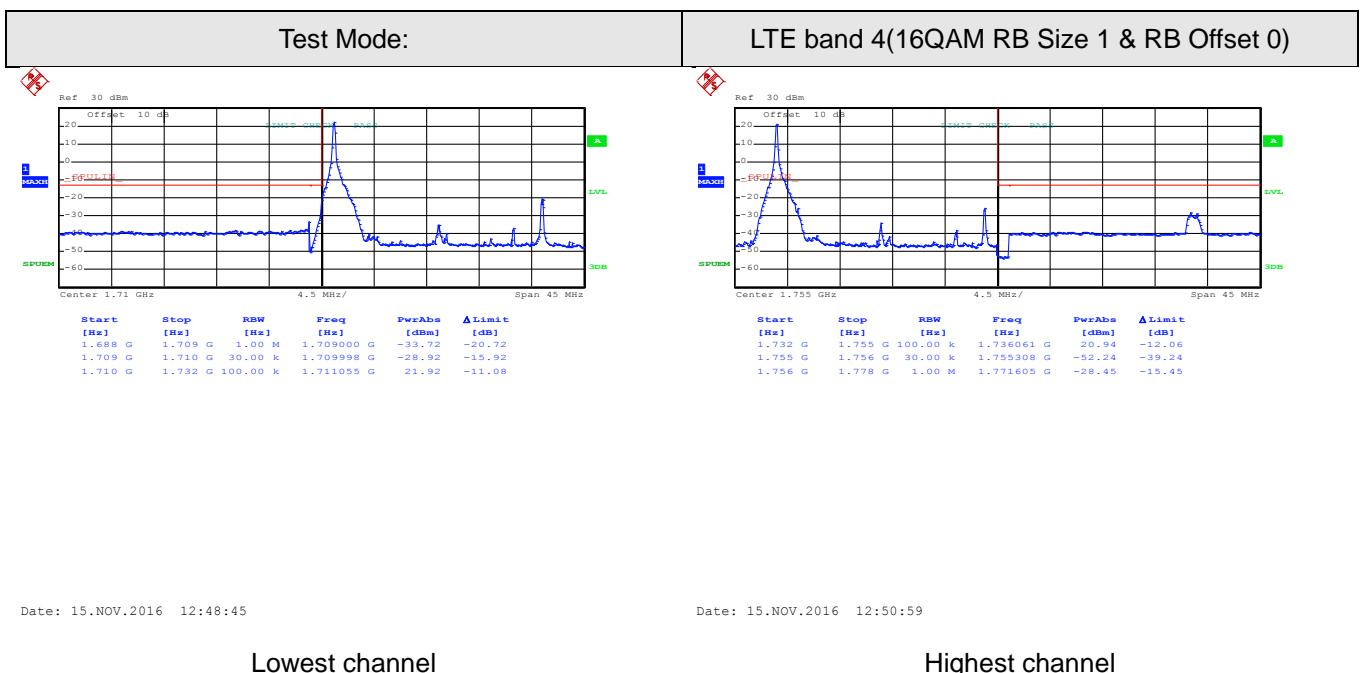
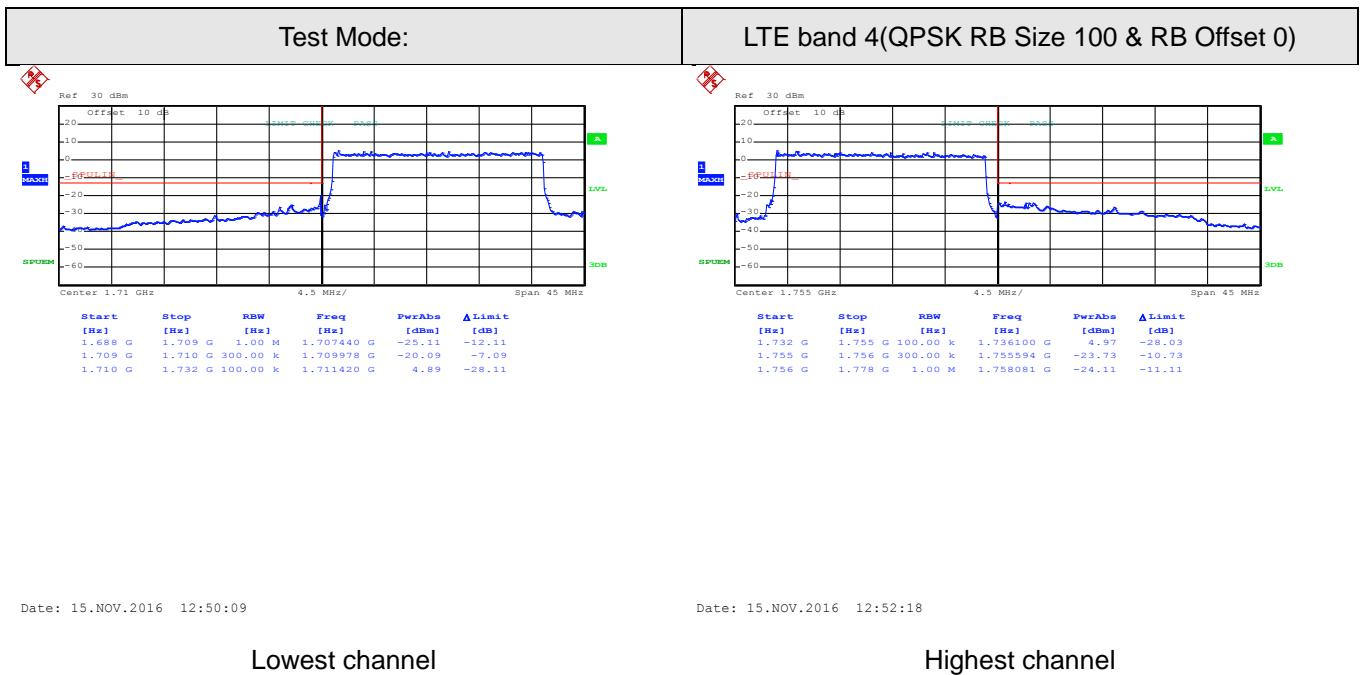
Date: 15.NOV.2016 12:48:55

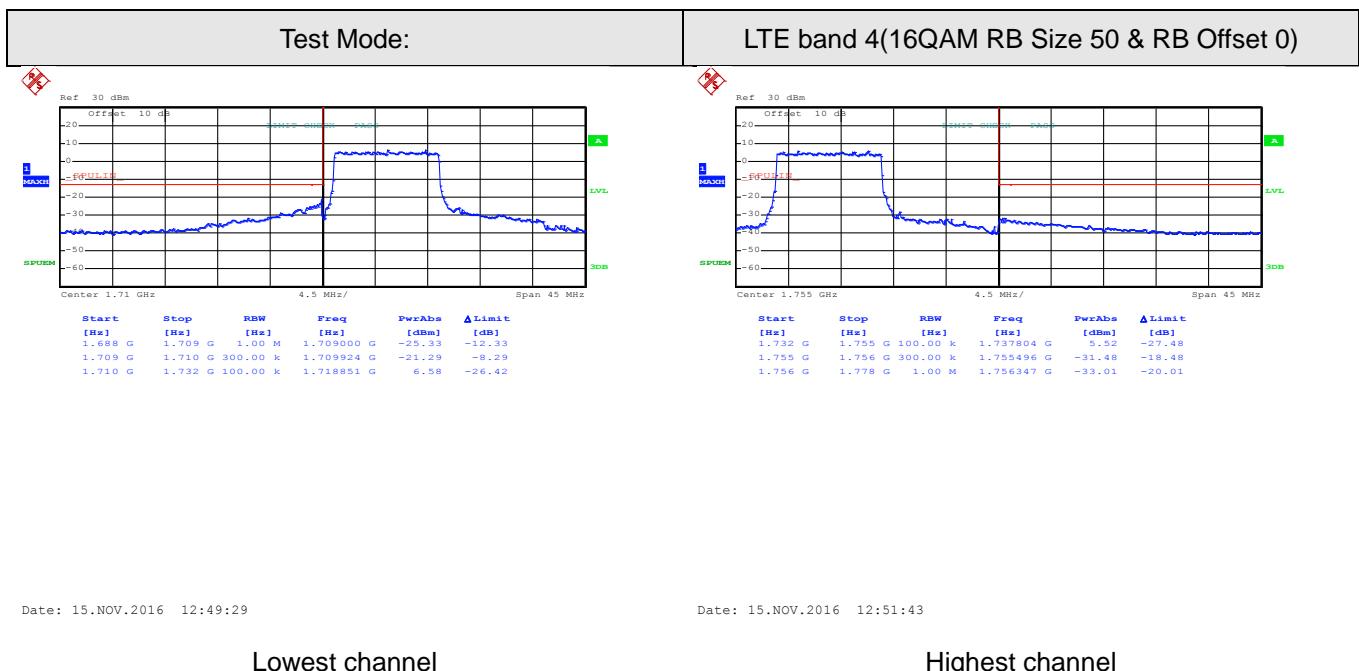
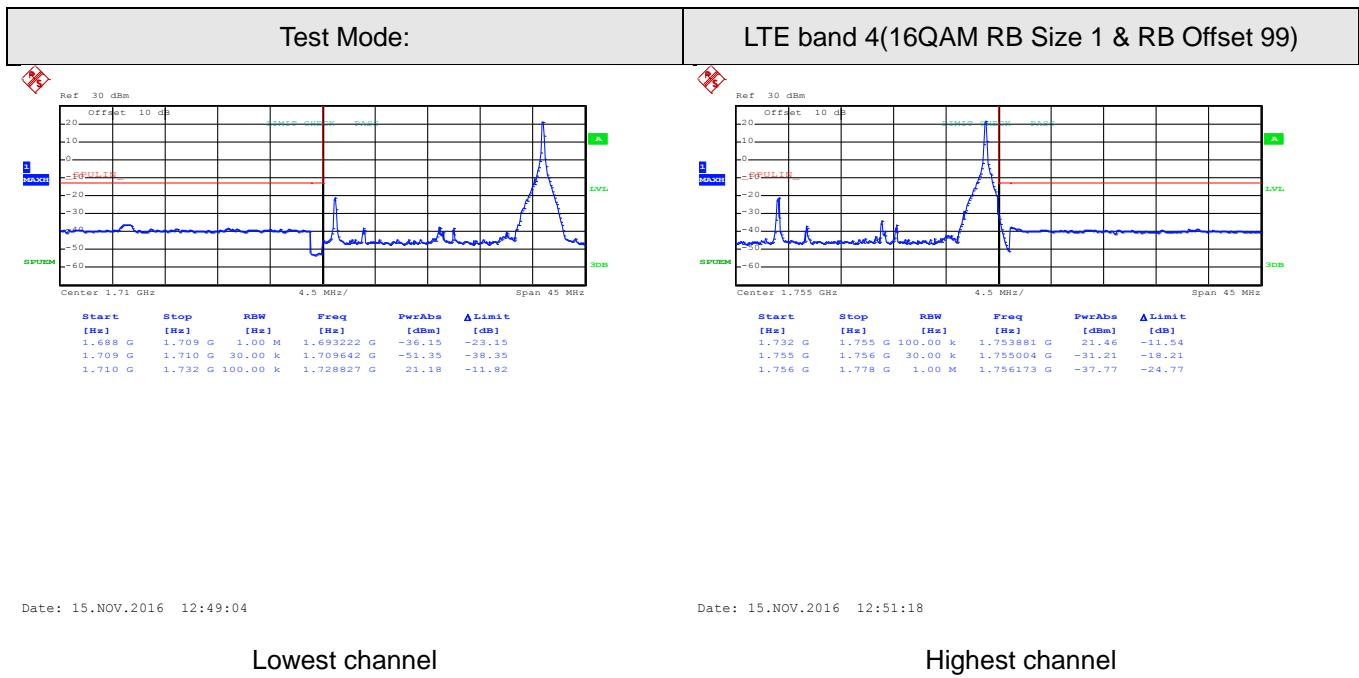
Date: 15.NOV.2016 12:51:10

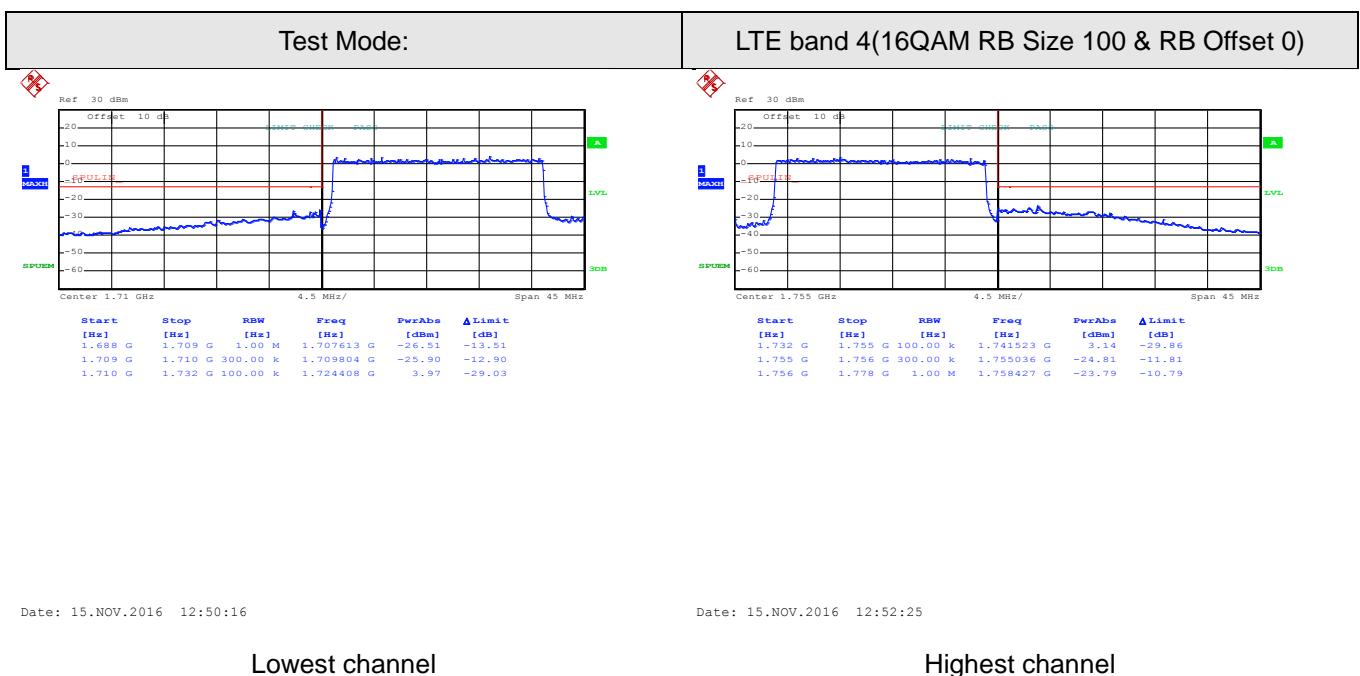
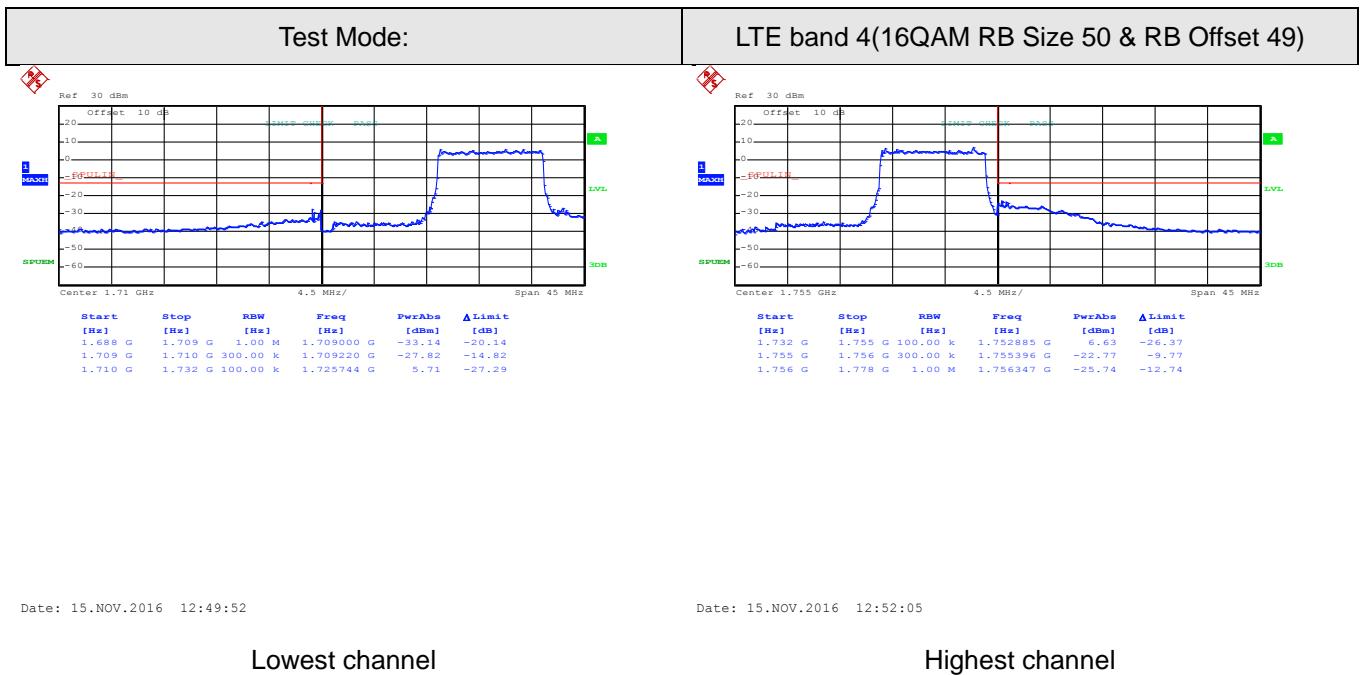
Lowest channel

Highest channel





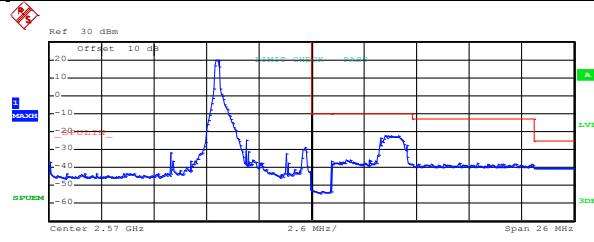
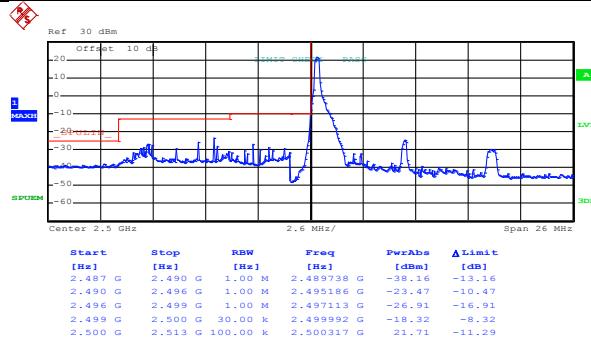




## LTE band 7 part:

5MHz:

Test Mode:	LTE band 7(QPSK RB Size 1 & RB Offset 0)
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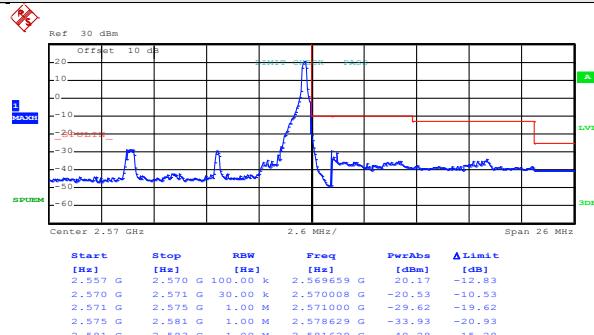
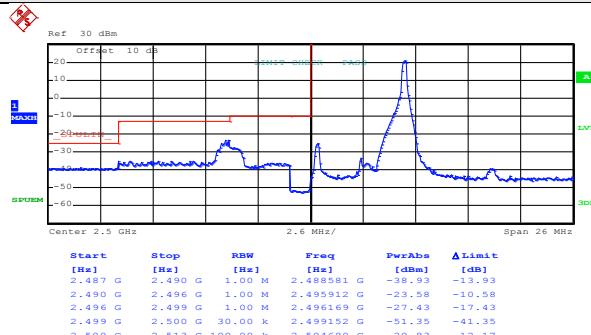
Date: 15.NOV.2016 13:00:47

Date: 15.NOV.2016 13:03:48

Lowest channel

Highest channel

Test Mode:	LTE band 7(QPSK RB Size 1 & RB Offset 24)
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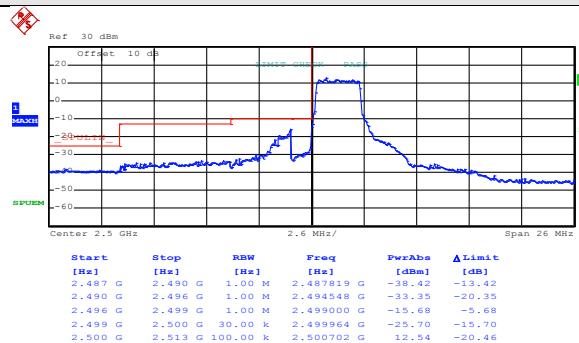
Date: 15.NOV.2016 13:01:20

Date: 15.NOV.2016 13:04:36

Lowest channel

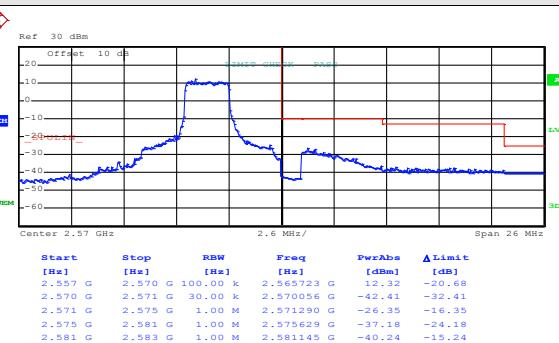
Highest channel

Test Mode:	LTE band 7(QPSK RB Size 12 & RB Offset 0)
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Date: 15.NOV.2016 13:01:53

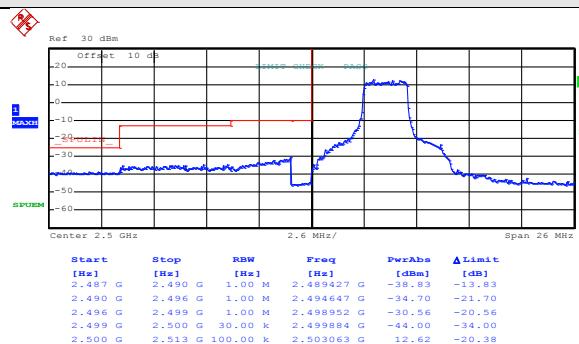
Lowest channel



Date: 15.NOV.2016 13:05:00

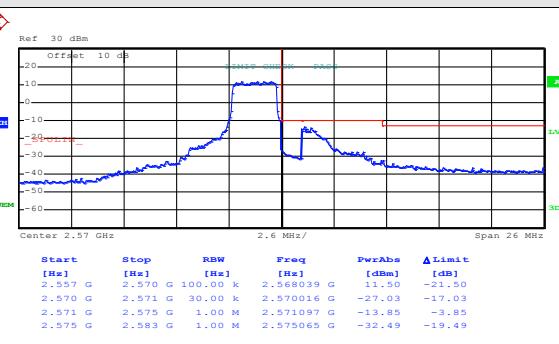
Highest channel

Test Mode:	LTE band 7(QPSK RB Size 12 & RB Offset 11)
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Date: 15.NOV.2016 13:02:25

Lowest channel



Date: 15.NOV.2016 13:30:22

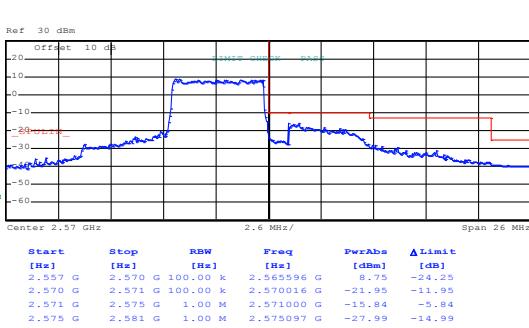
Highest channel

Test Mode:	LTE band 7(QPSK RB Size 25 & RB Offset 0)
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Date: 15.NOV.2016 13:03:01

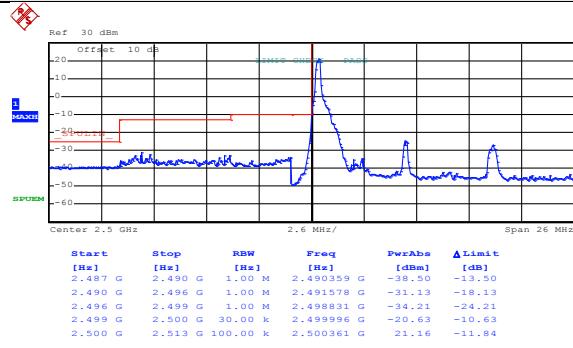
Lowest channel



Date: 15.NOV.2016 13:05:35

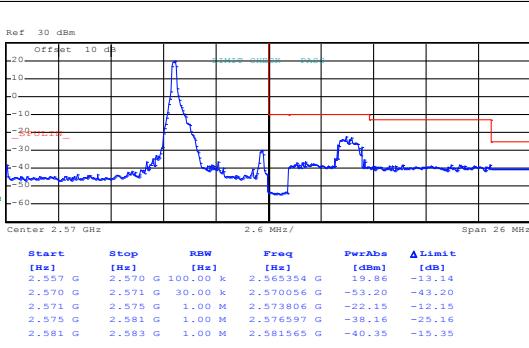
Highest channel

Test Mode:	LTE band 7(16QAM RB Size 1 & RB Offset 0)
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Date: 15.NOV.2016 13:01:06

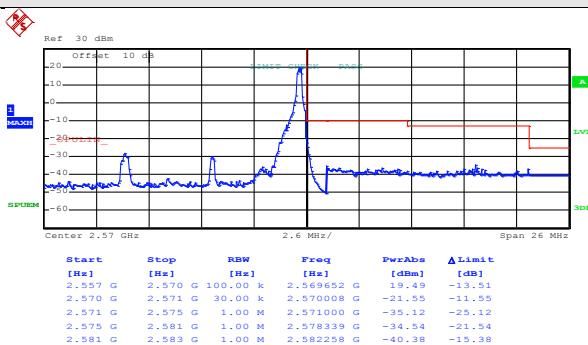
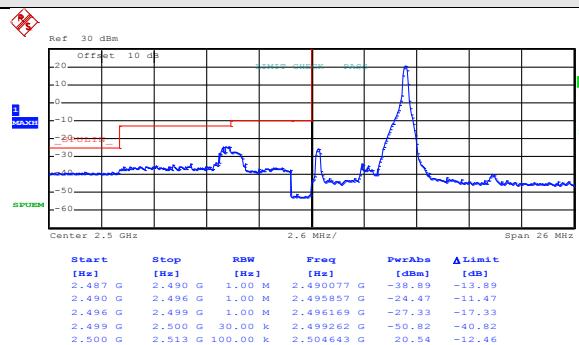
Lowest channel



Date: 15.NOV.2016 13:04:21

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 1 & RB Offset 24)
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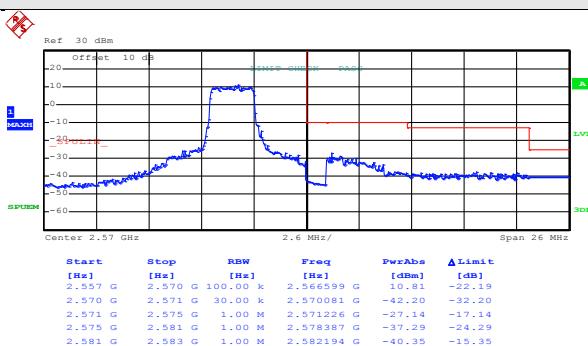
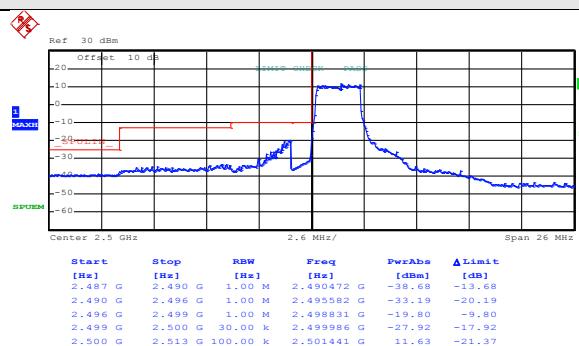
Date: 15.NOV.2016 13:01:35

Date: 15.NOV.2016 13:04:45

Lowest channel

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 12 & RB Offset 0)
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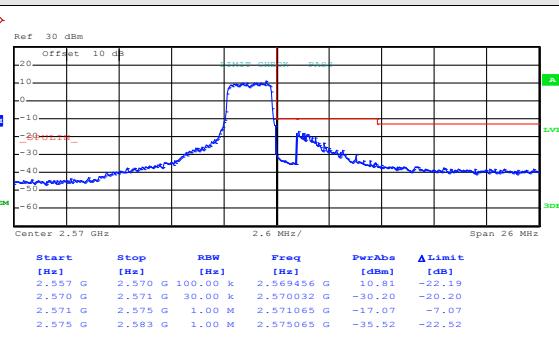
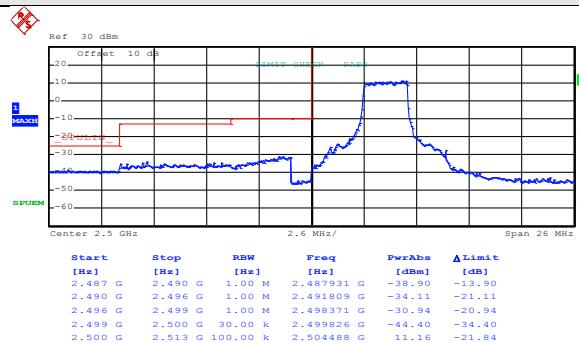
Date: 15.NOV.2016 13:02:06

Date: 15.NOV.2016 13:05:09

Lowest channel

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 12 & RB Offset 11)
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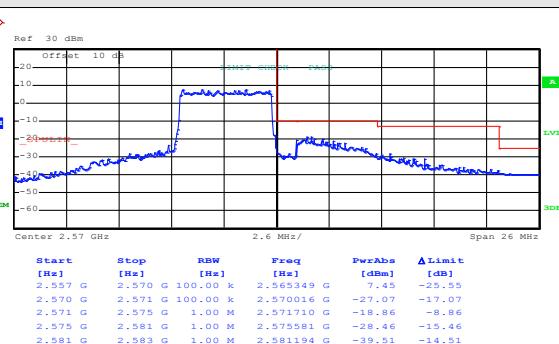
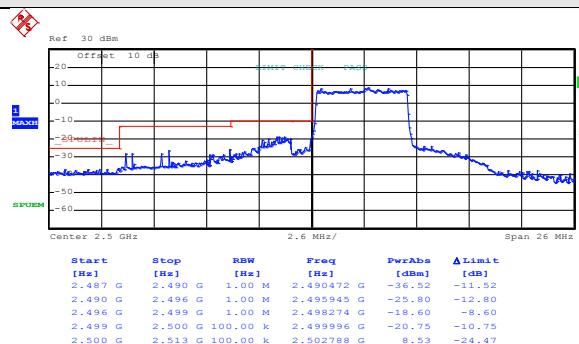
Date: 15.NOV.2016 13:02:40

Lowest channel

Date: 15.NOV.2016 13:30:34

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 25 & RB Offset 0)
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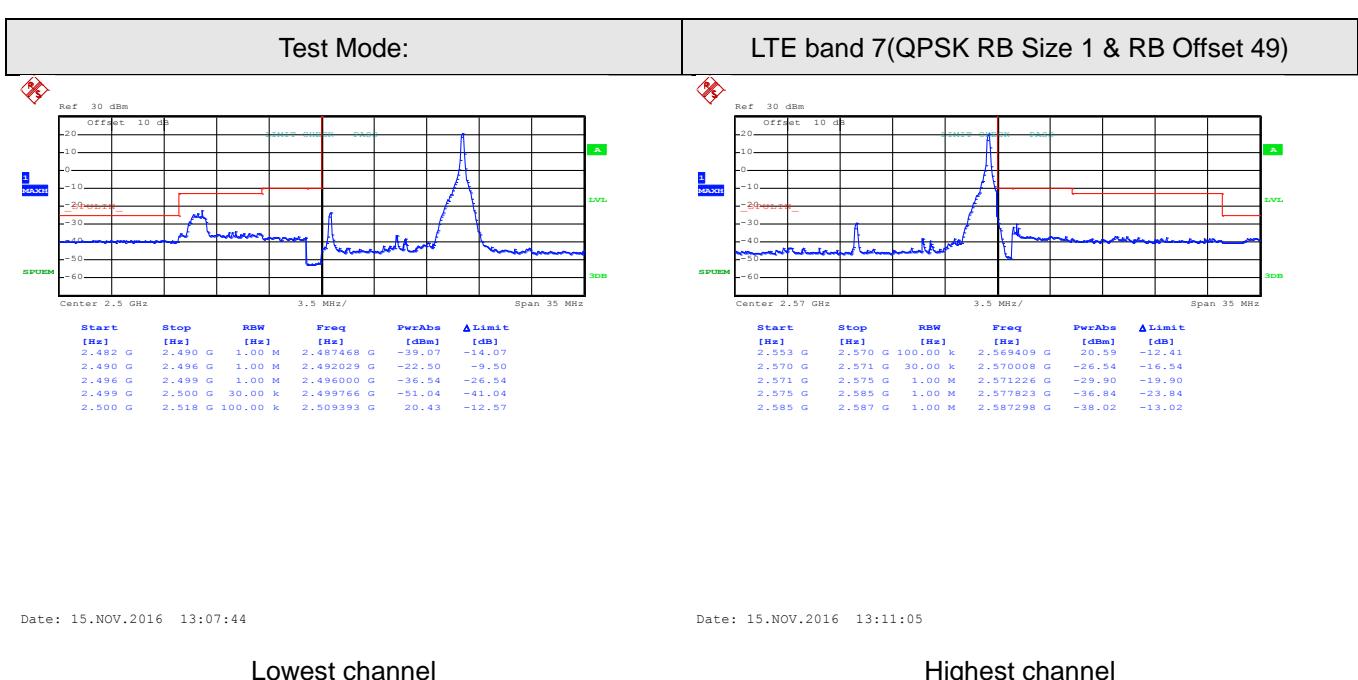
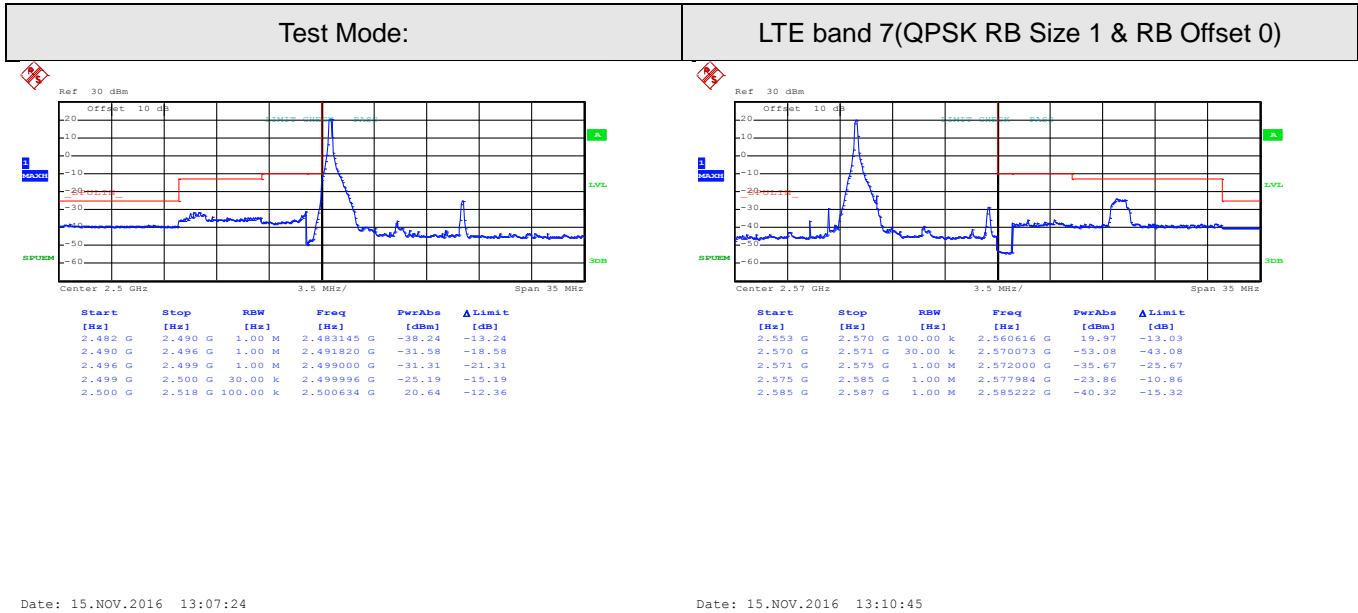
Date: 15.NOV.2016 13:03:12

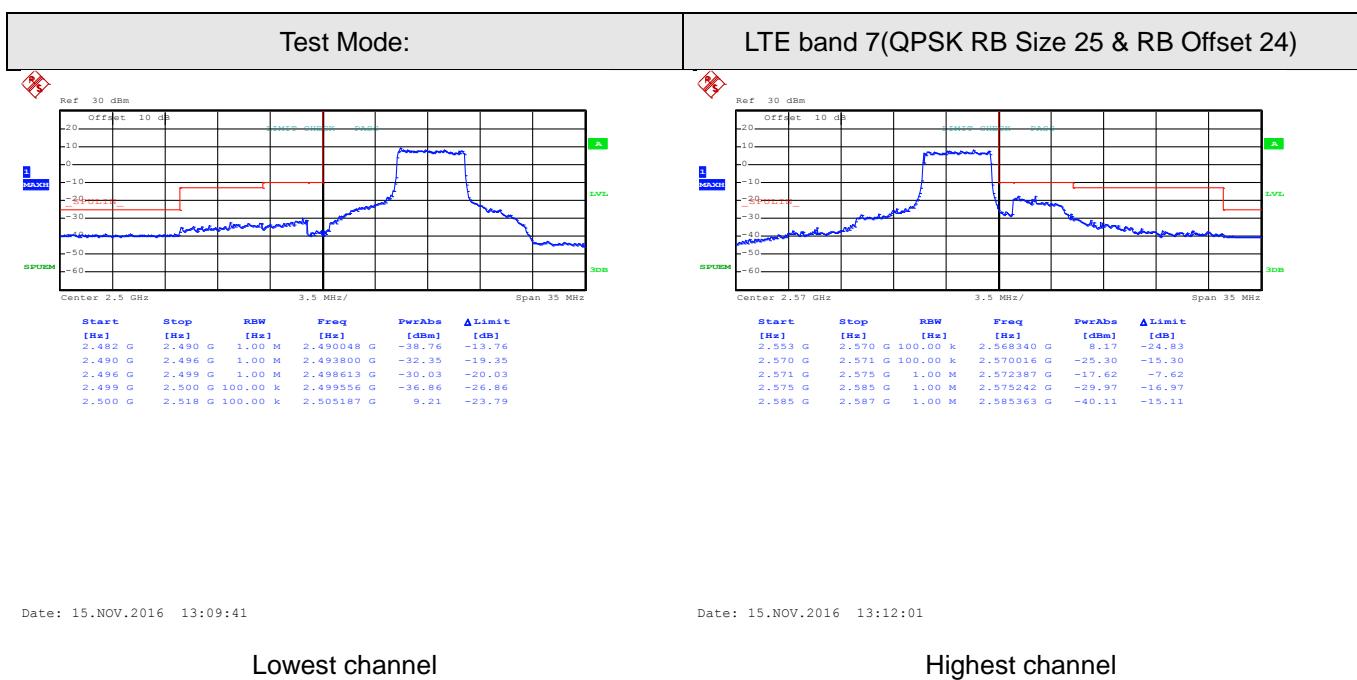
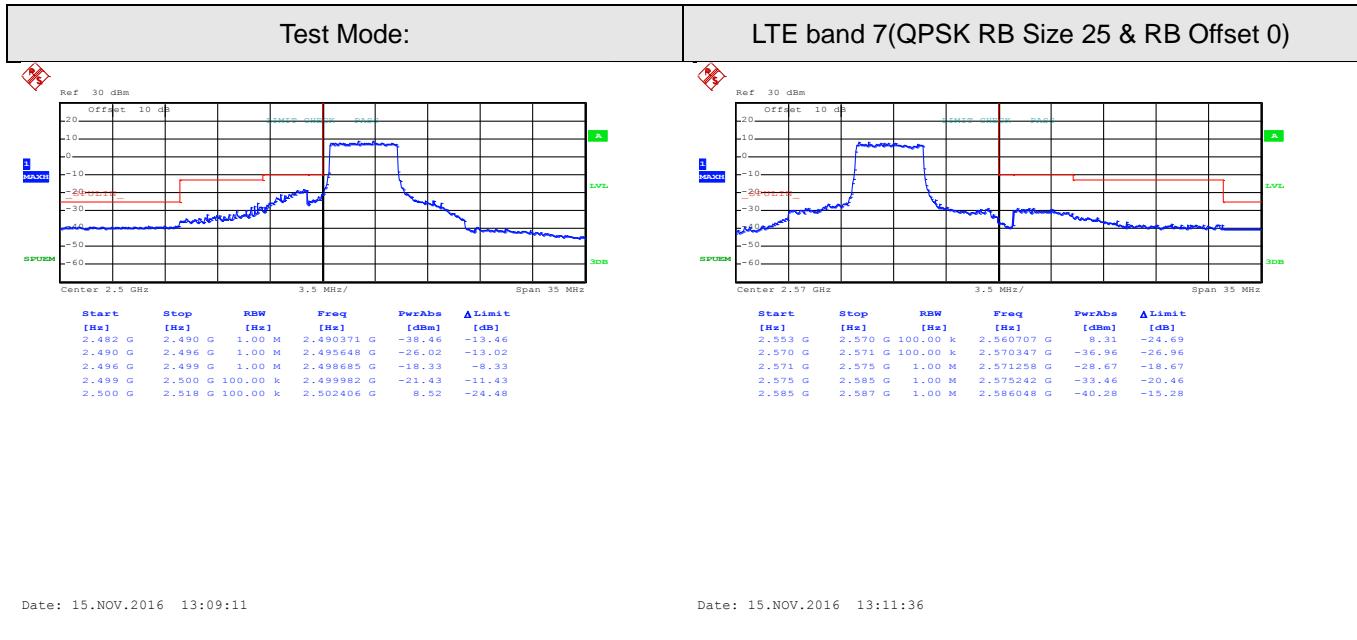
Date: 15.NOV.2016 13:05:45

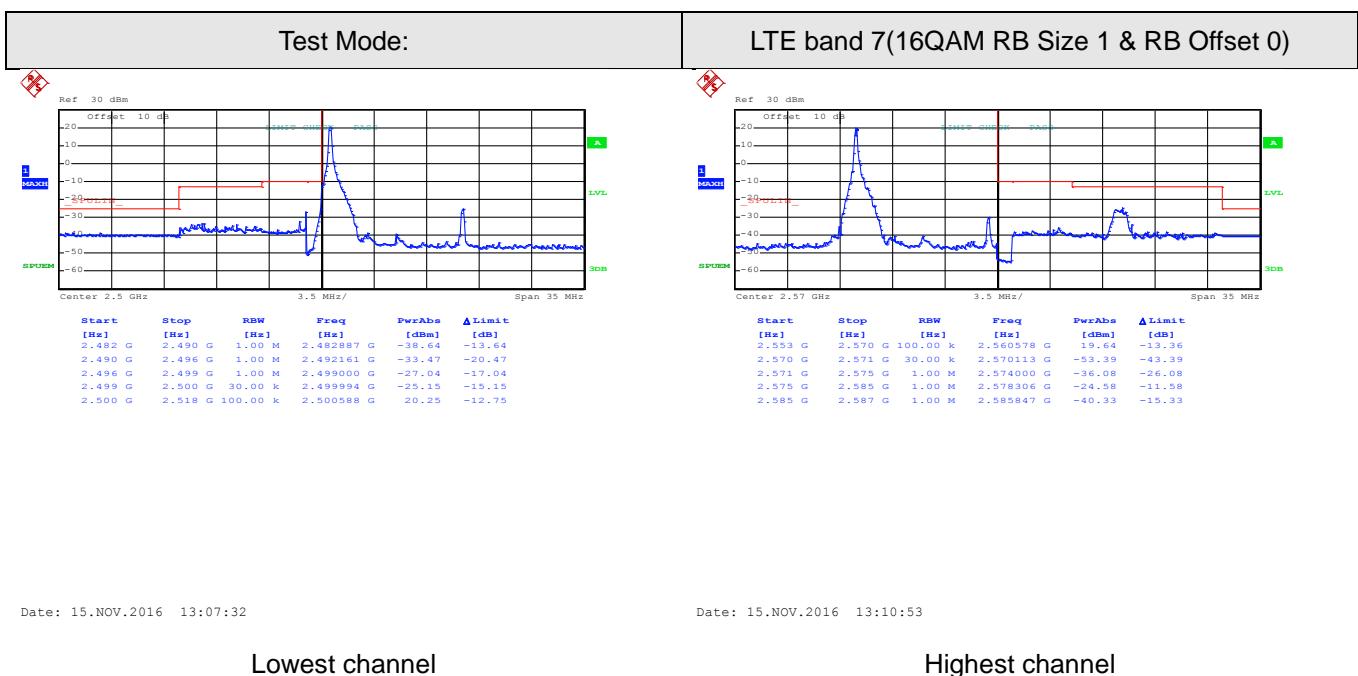
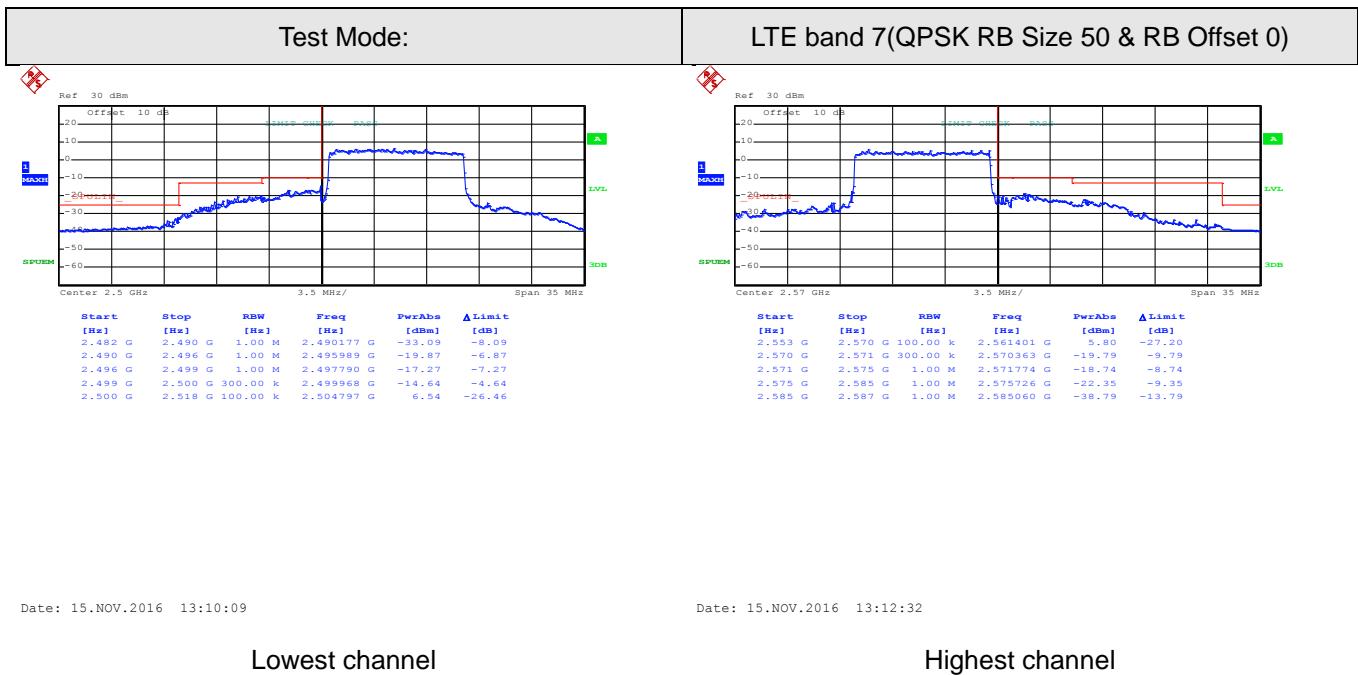
Lowest channel

Highest channel

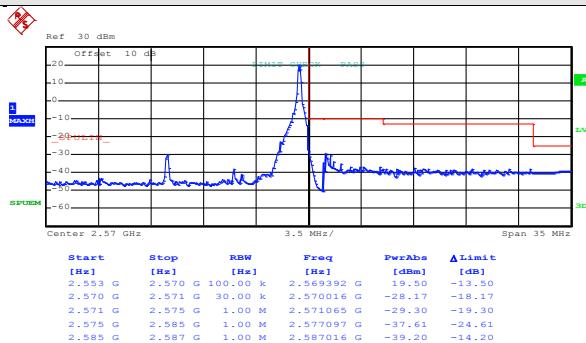
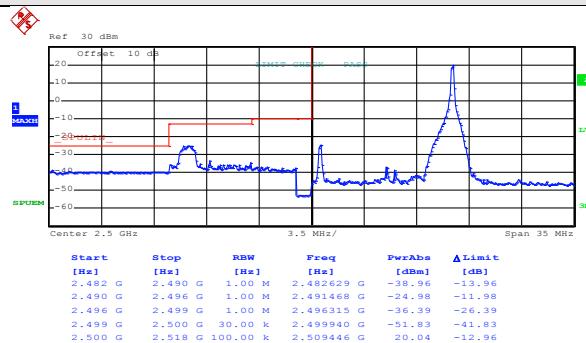
10MHz:







Test Mode:	LTE band 7(16QAM RB Size 1 & RB Offset 49)
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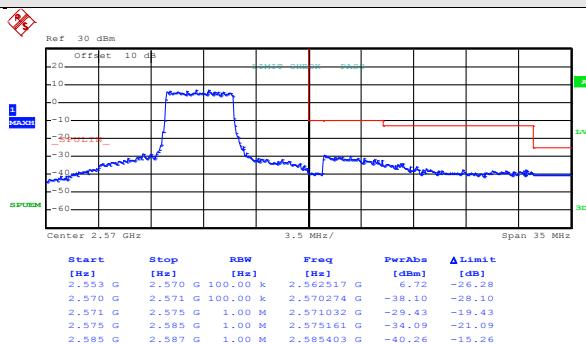
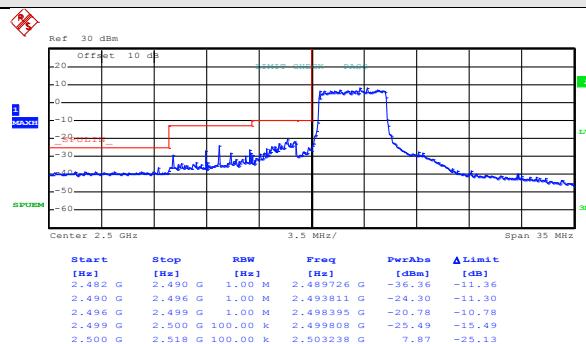
Date: 15.NOV.2016 13:07:55

Lowest channel

Date: 15.NOV.2016 13:11:14

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 25 & RB Offset 0)
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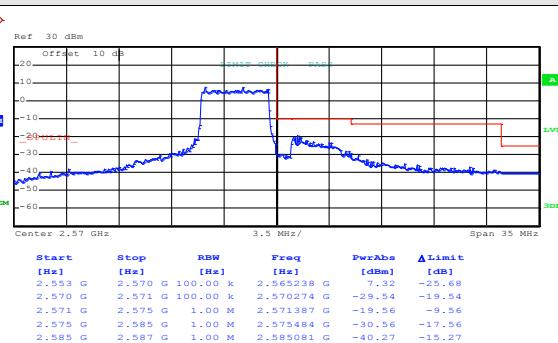
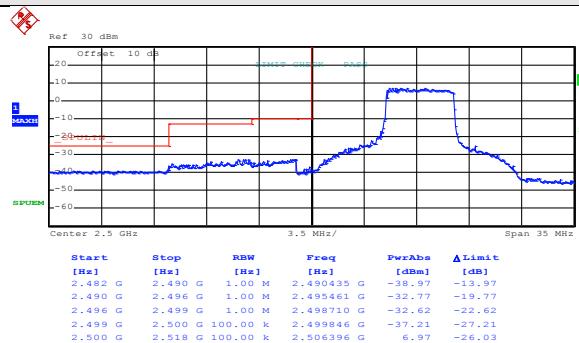
Date: 15.NOV.2016 13:09:28

Date: 15.NOV.2016 13:11:44

Lowest channel

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 25 & RB Offset 24)
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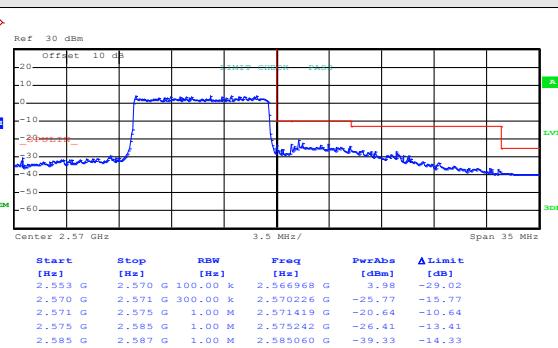
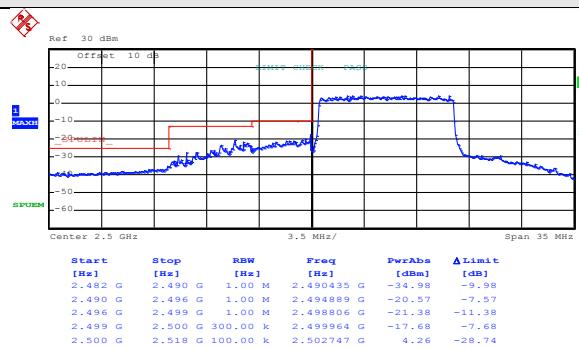
Date: 15.NOV.2016 13:09:50

Date: 15.NOV.2016 13:12:11

Lowest channel

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 50 & RB Offset 0)
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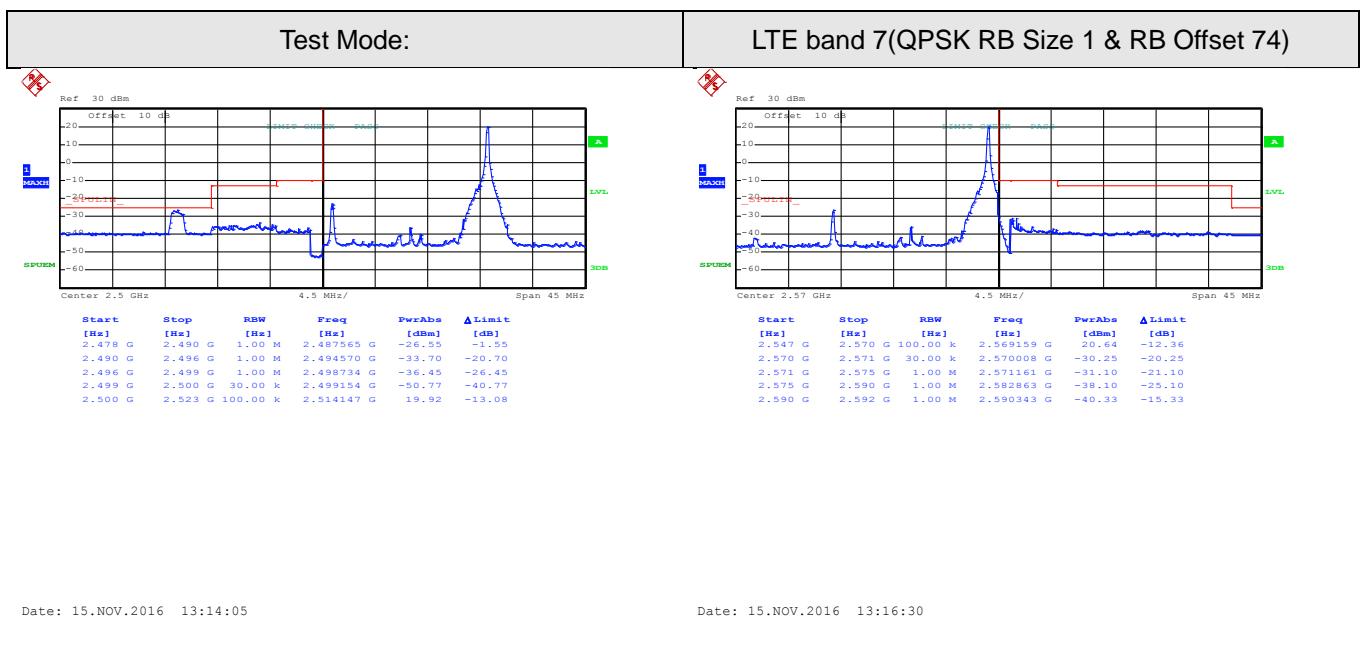
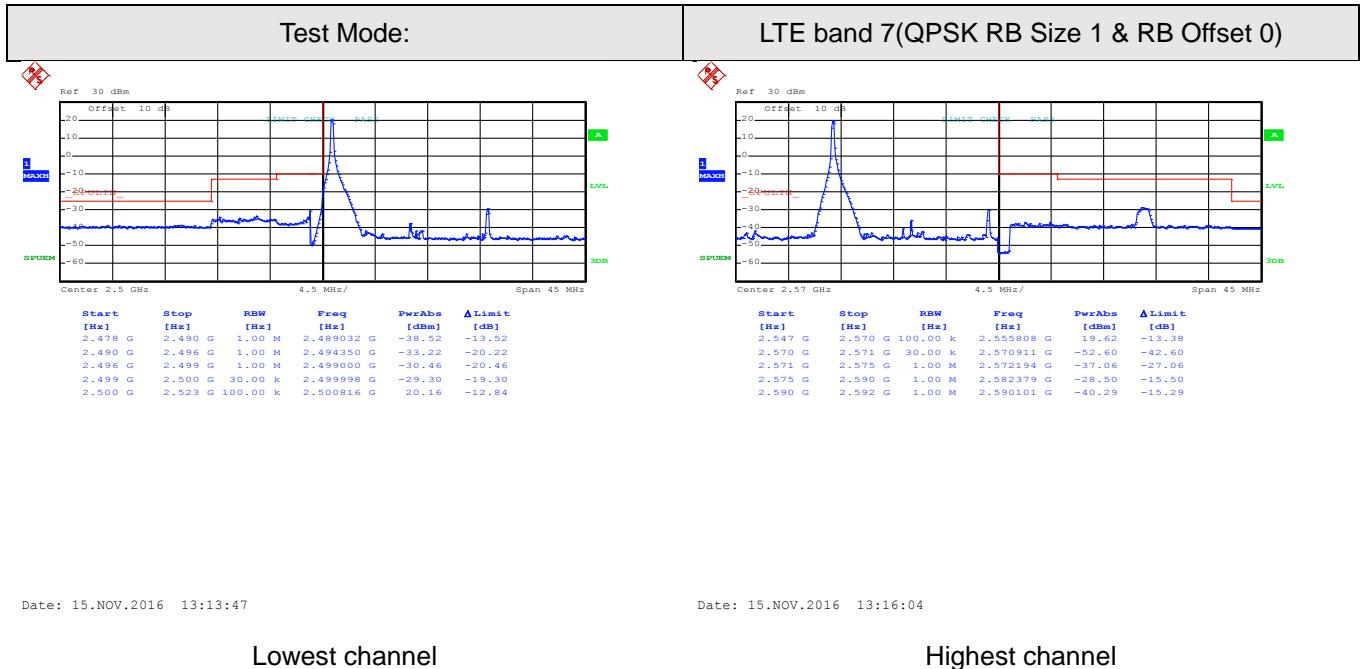
Date: 15.NOV.2016 13:10:17

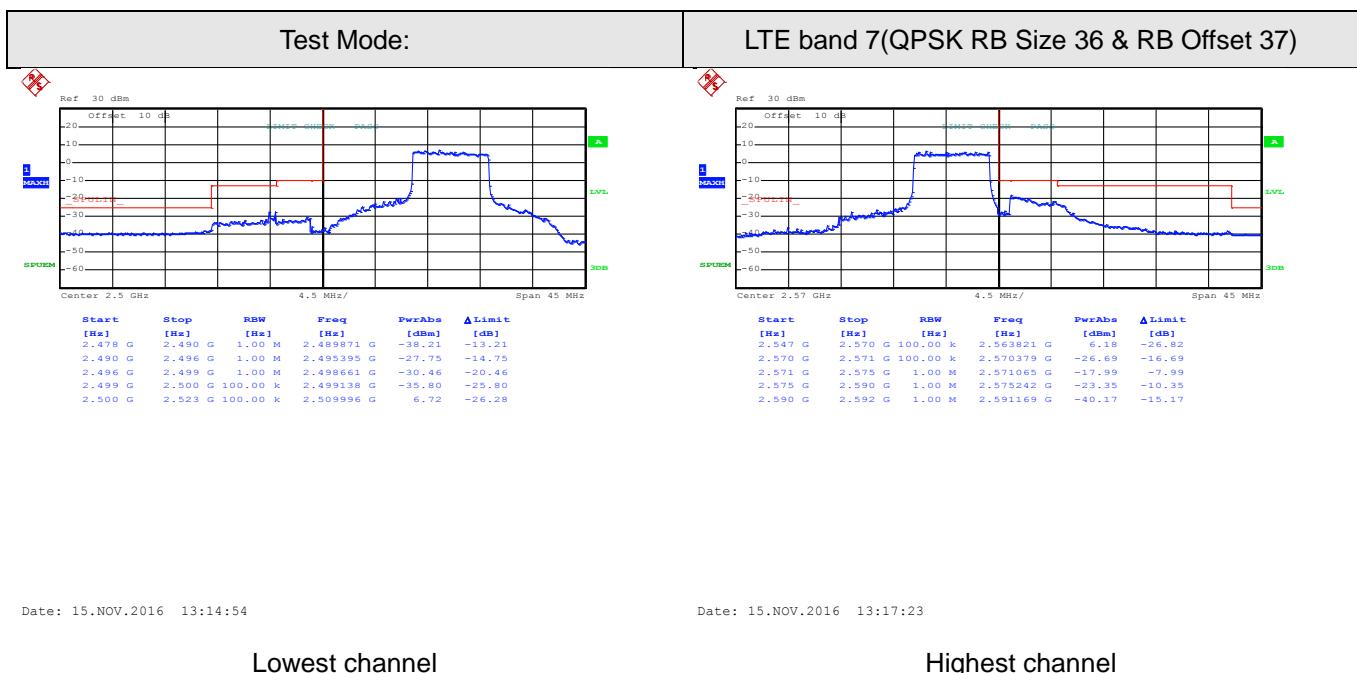
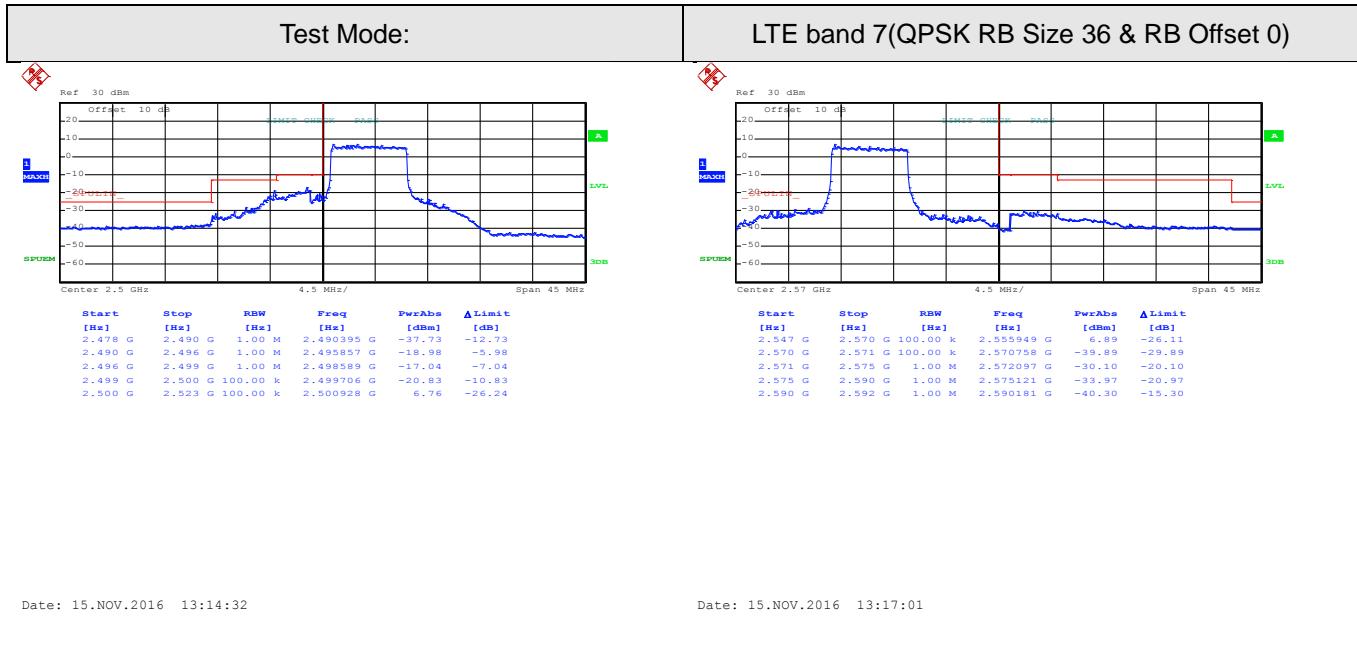
Date: 15.NOV.2016 13:12:40

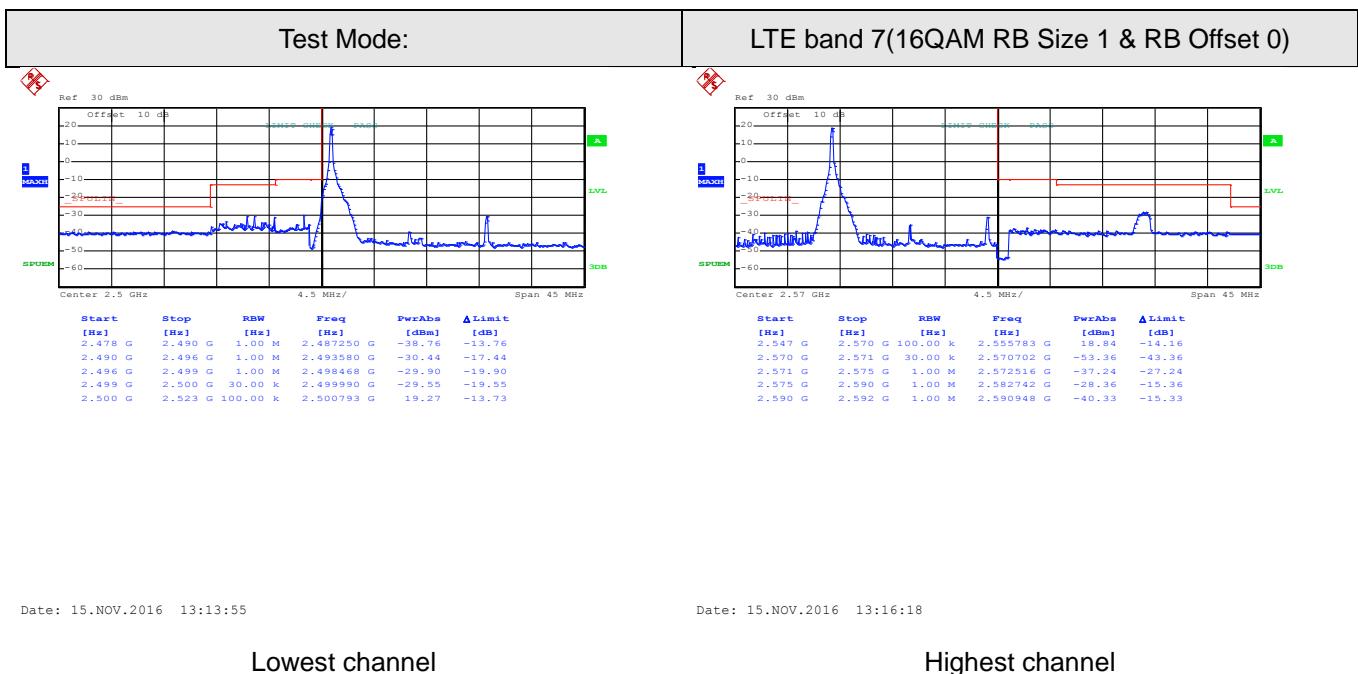
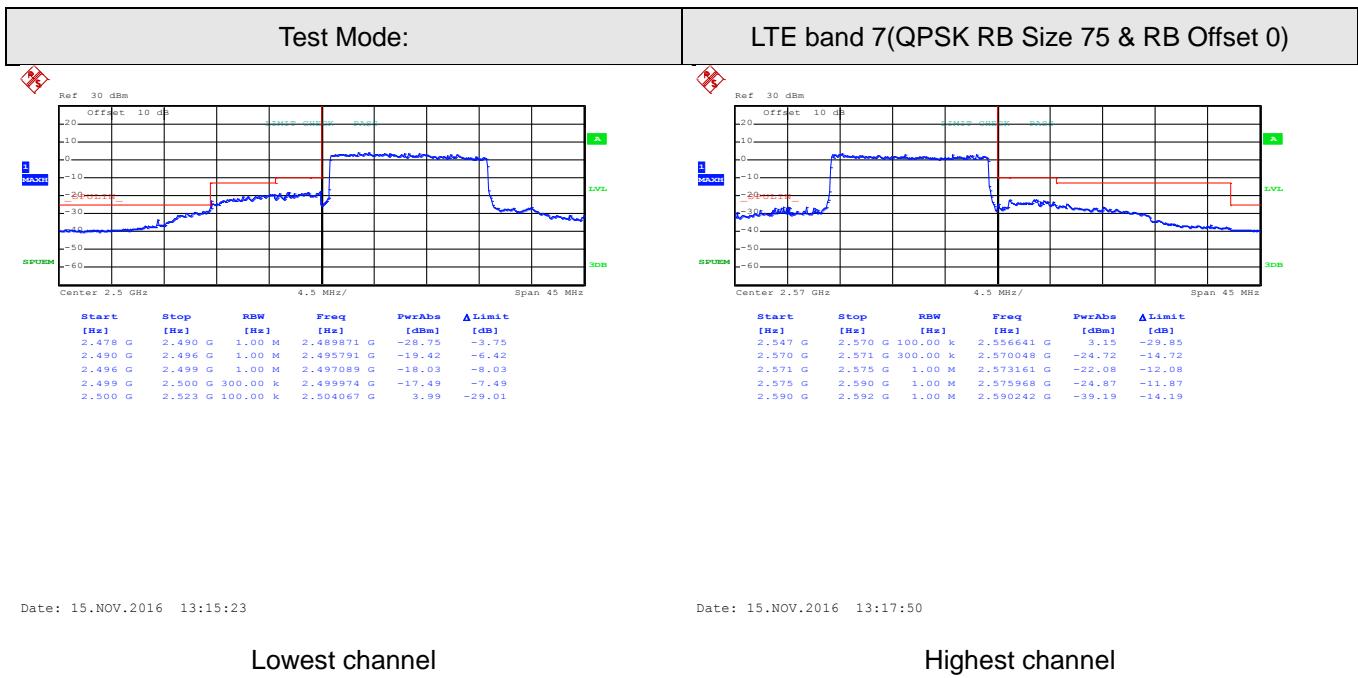
Lowest channel

Highest channel

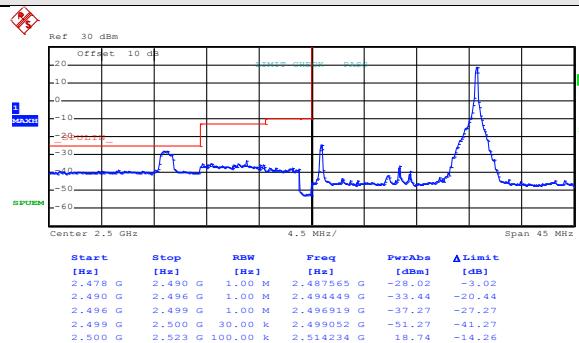
15MHz:





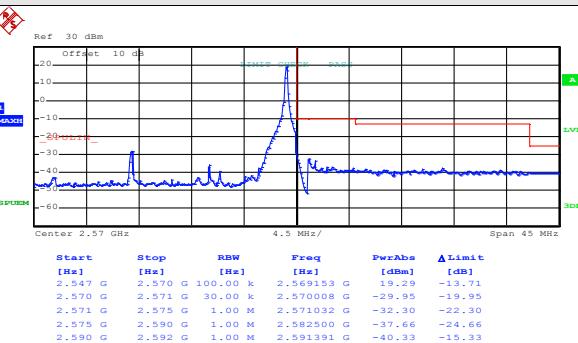


Test Mode:	LTE band 7(16QAM RB Size 1 & RB Offset 74)
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Date: 15.NOV.2016 13:14:14

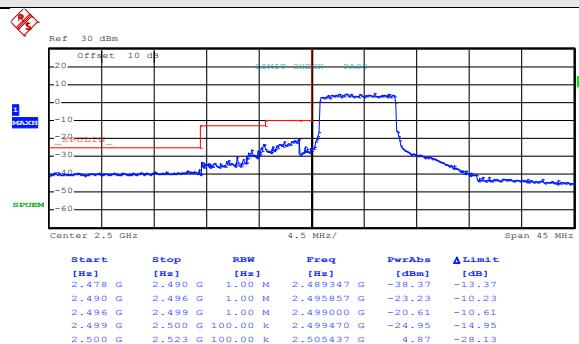
Lowest channel



Date: 15.NOV.2016 13:16:41

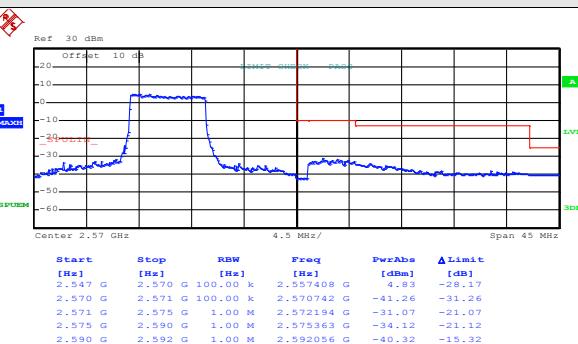
Highest channel

Test Mode:	LTE band 7(16QAM RB Size 36 & RB Offset 0)
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Date: 15.NOV.2016 13:14:40

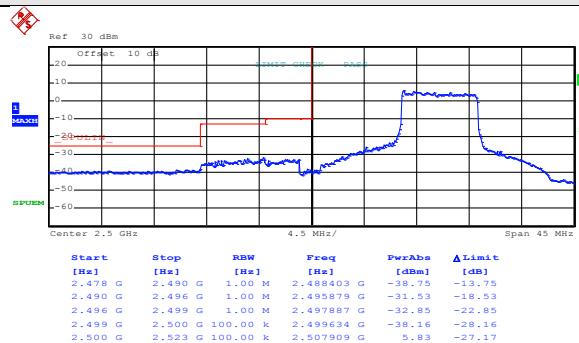
Lowest channel



Date: 15.NOV.2016 13:17:10

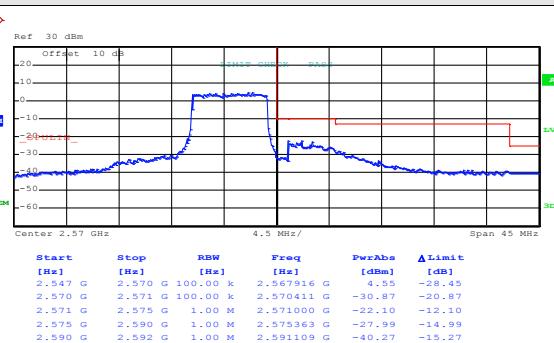
Highest channel

Test Mode:	LTE band 7(16QAM RB Size 36 & RB Offset 37)
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Date: 15.NOV.2016 13:15:04

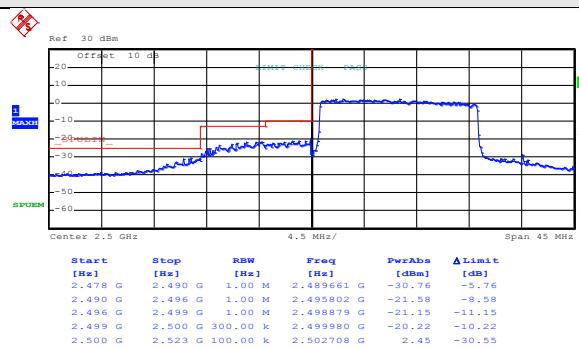
Lowest channel



Date: 15.NOV.2016 13:17:32

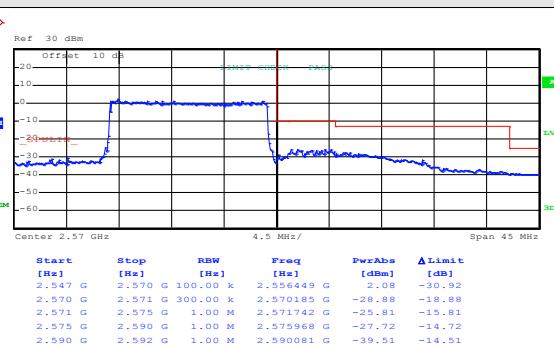
Highest channel

Test Mode:	LTE band 7(16QAM RB Size 75 & RB Offset 0)
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Date: 15.NOV.2016 13:15:34

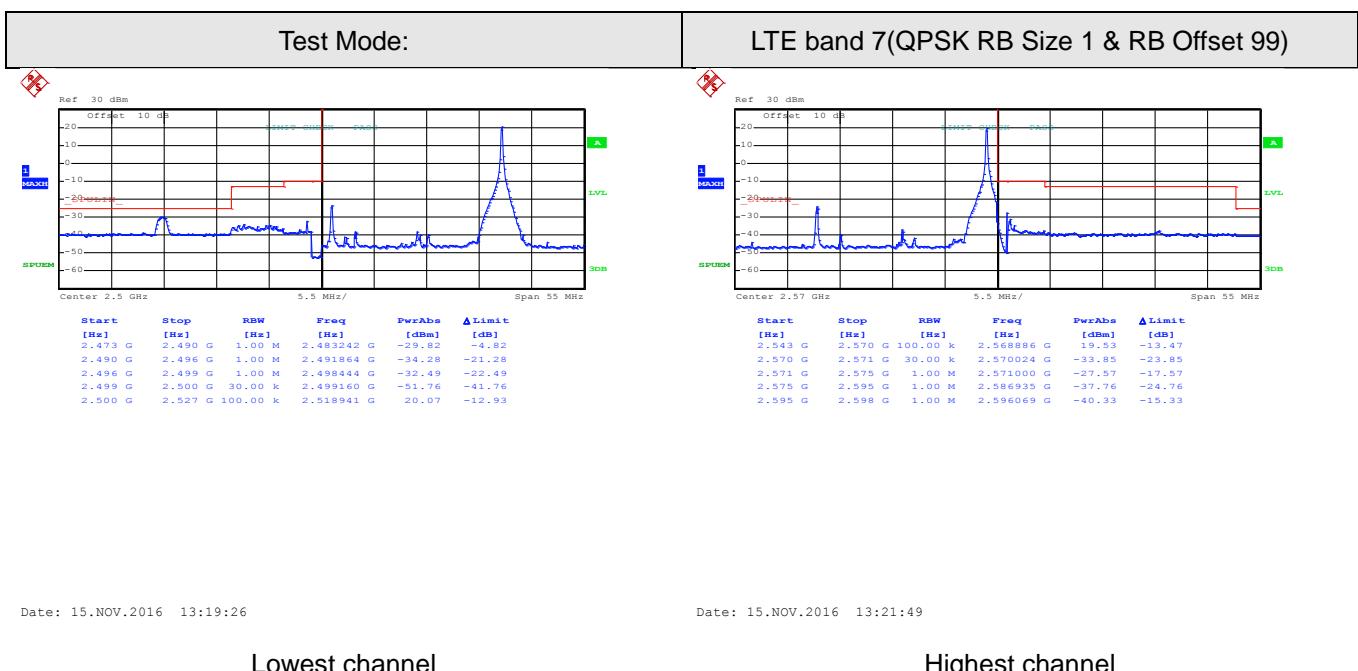
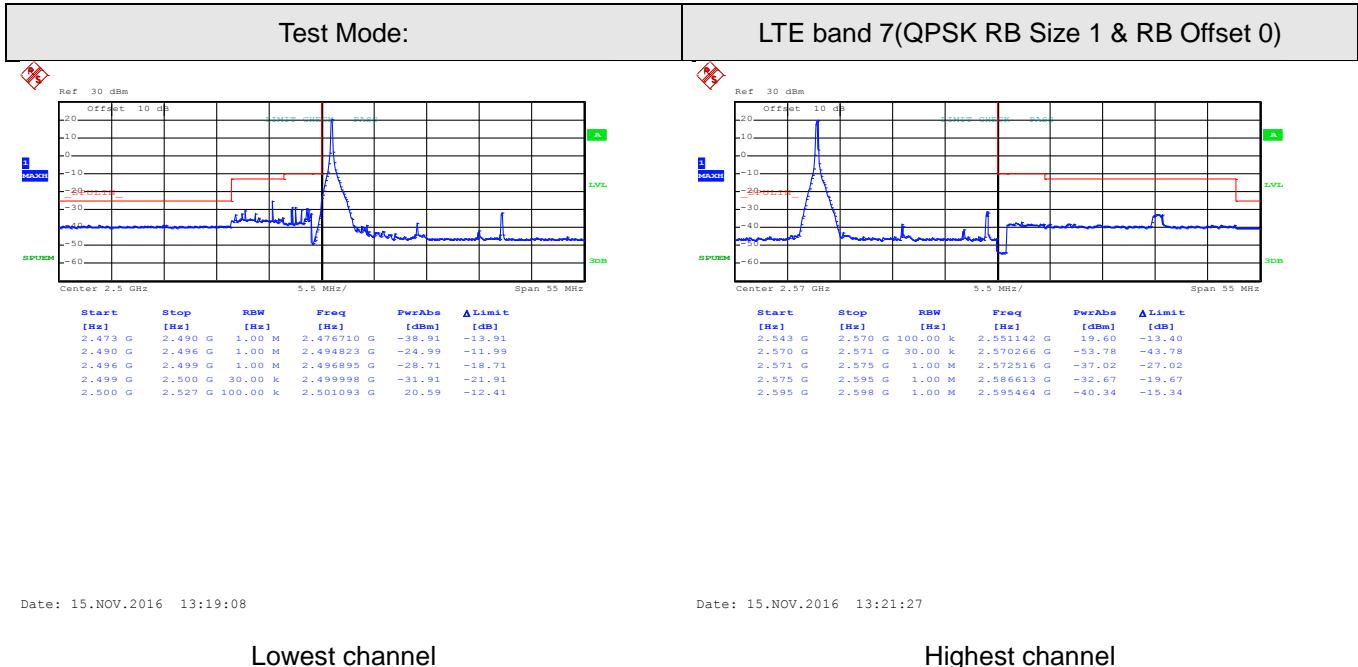
Lowest channel

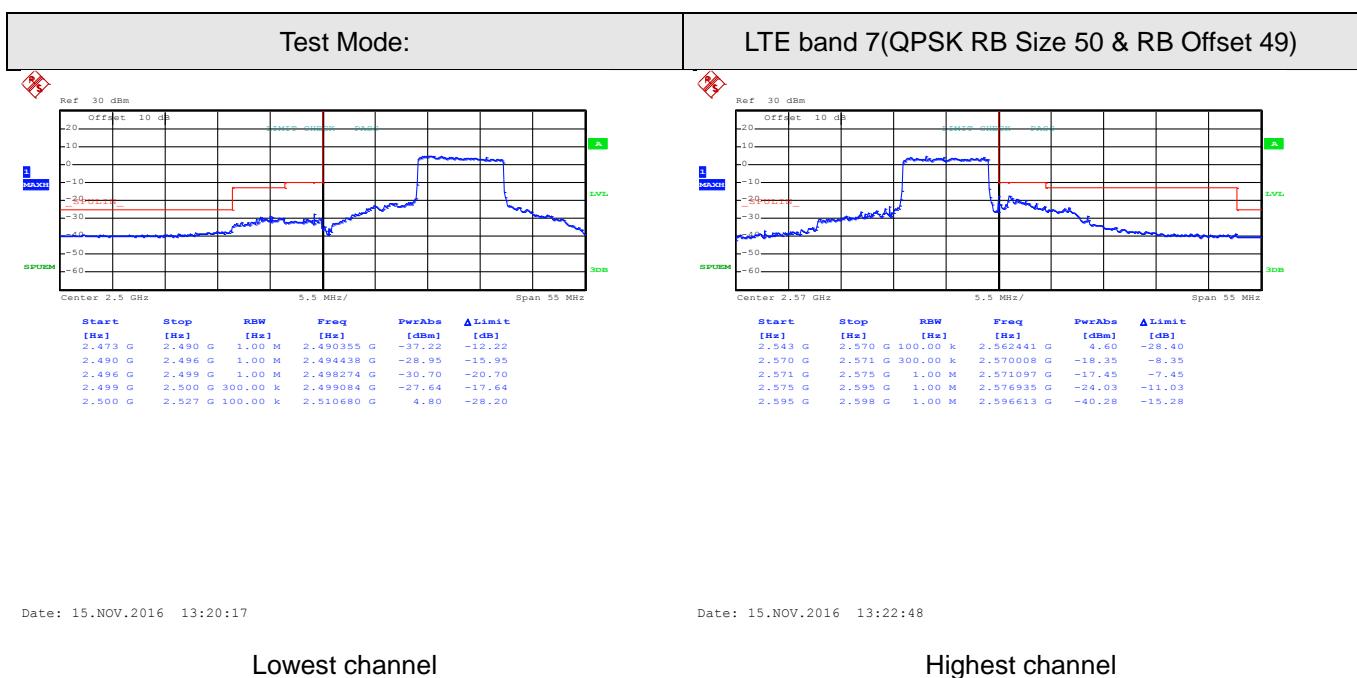
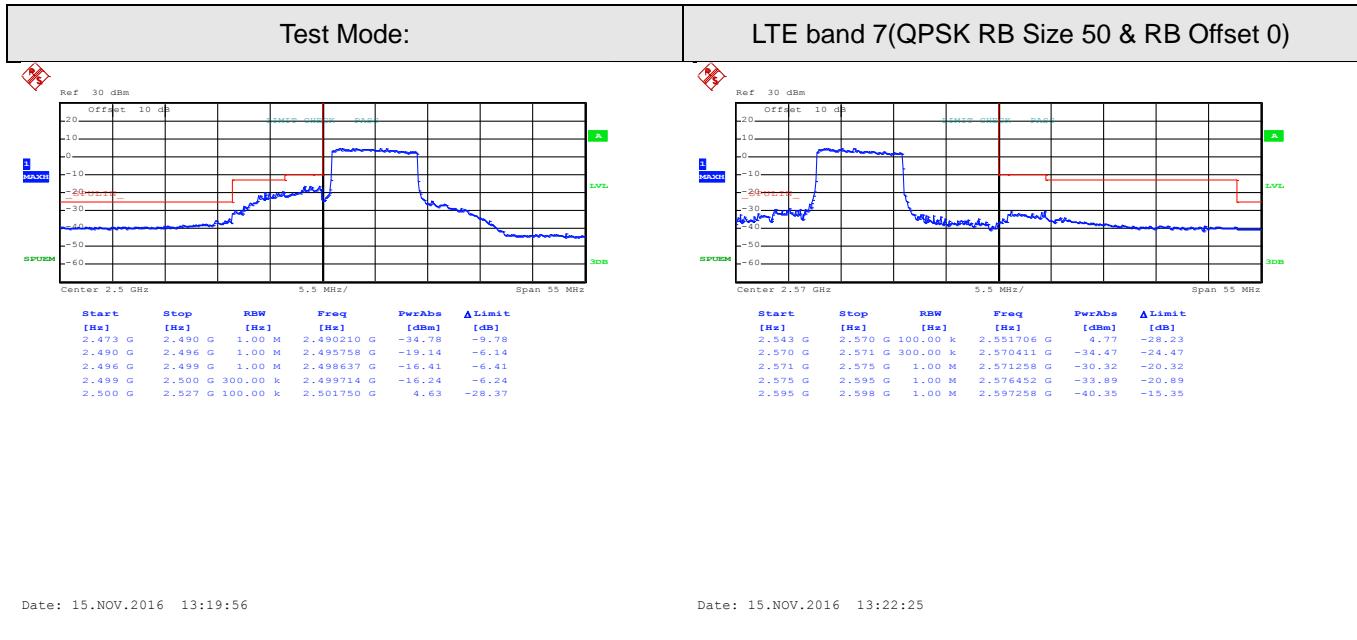


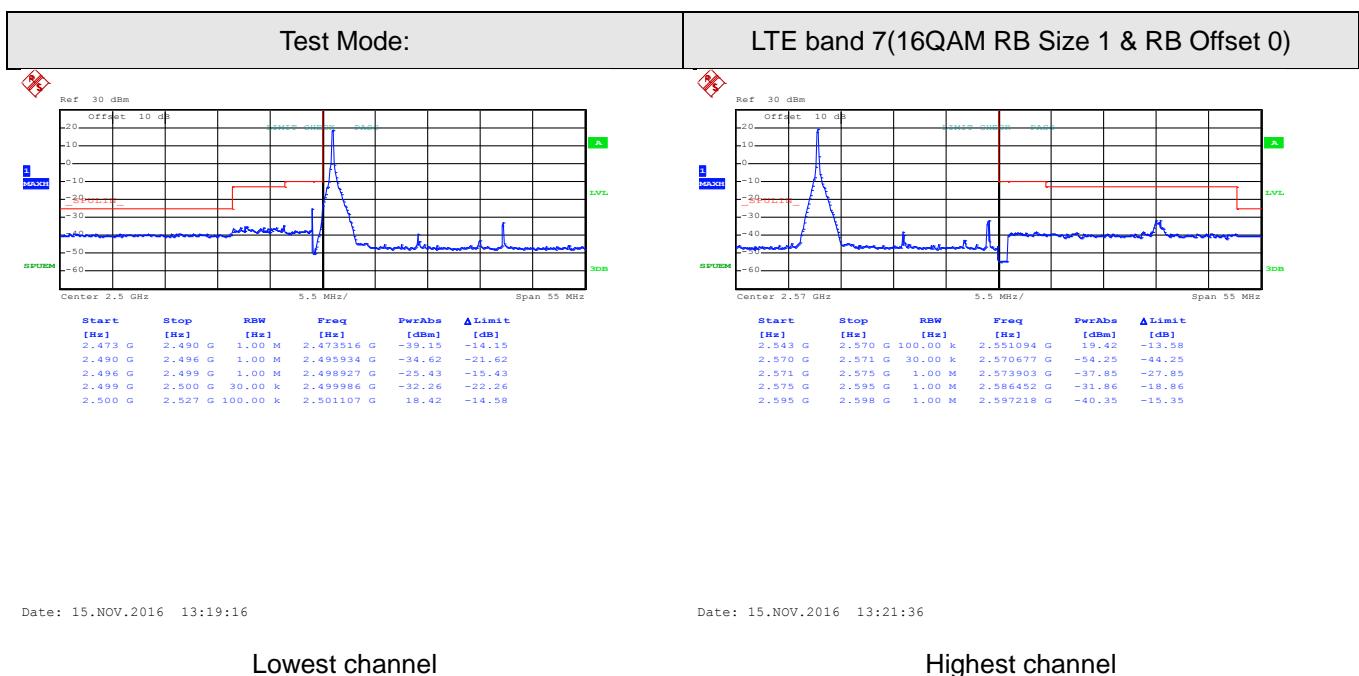
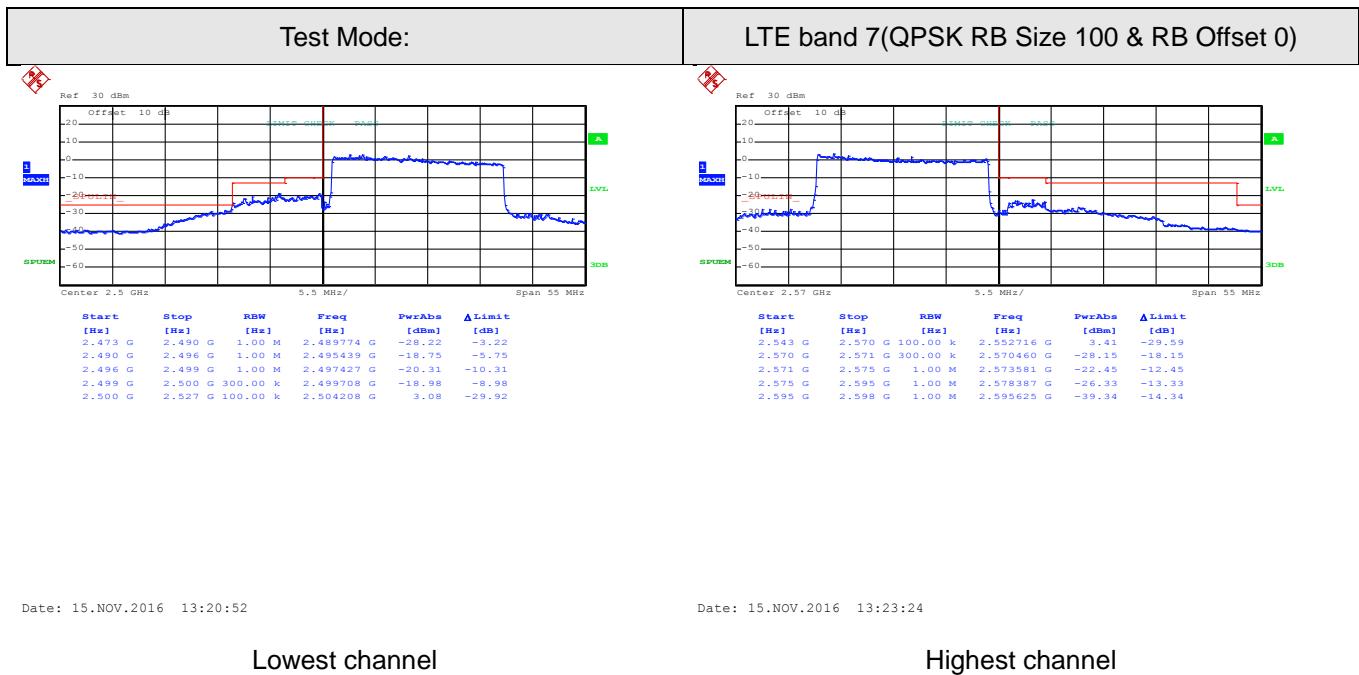
Date: 15.NOV.2016 13:17:57

Highest channel

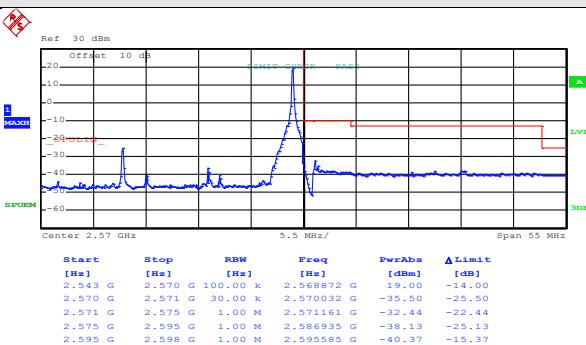
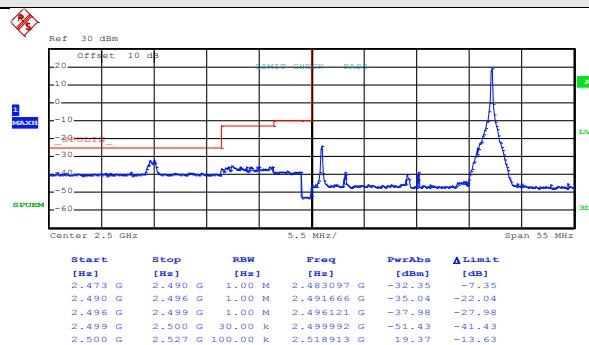
20MHz:







Test Mode:	LTE band 7(16QAM RB Size 1 & RB Offset 99)
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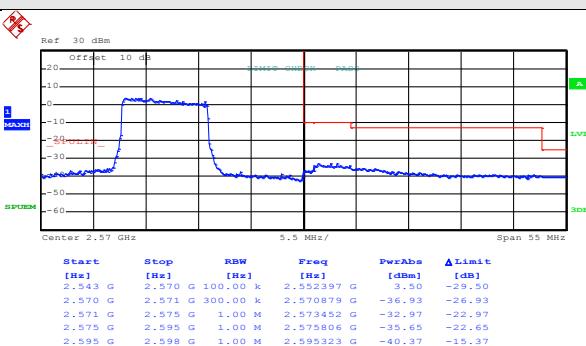
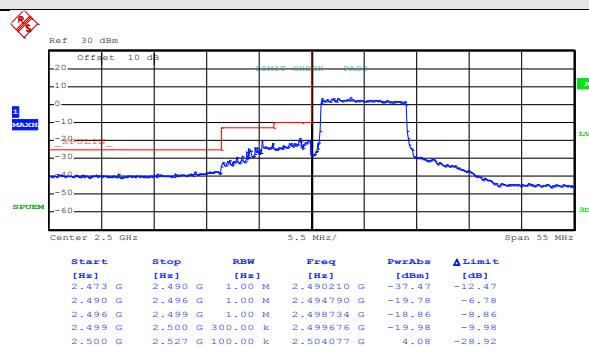
Date: 15.NOV.2016 13:19:37

Lowest channel

Date: 15.NOV.2016 13:22:00

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 50 & RB Offset 0)
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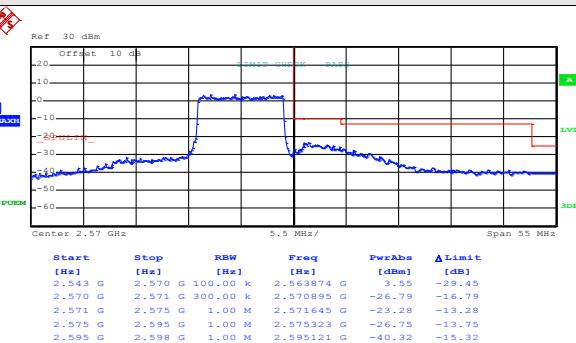
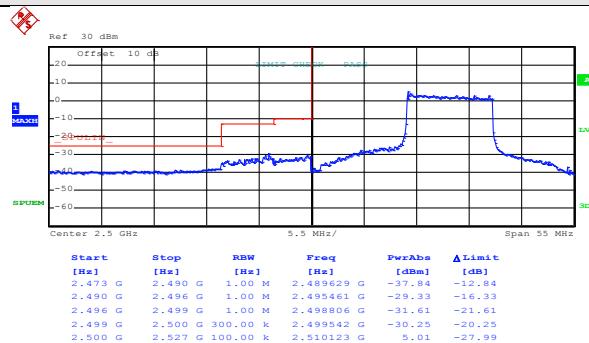
Date: 15.NOV.2016 13:20:04

Date: 15.NOV.2016 13:22:36

Lowest channel

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 50 & RB Offset 49)
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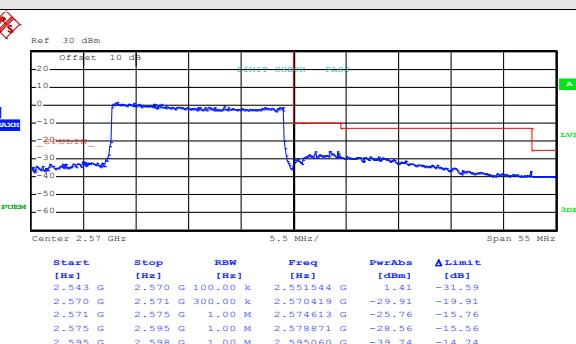
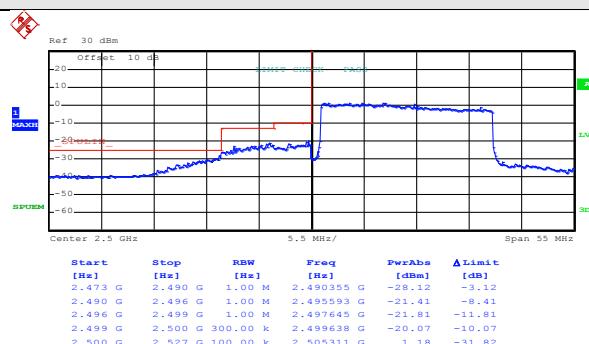
Date: 15.NOV.2016 13:20:26

Lowest channel

Date: 15.NOV.2016 13:23:13

Highest channel

Test Mode:	LTE band 7(16QAM RB Size 100 & RB Offset 0)
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Date: 15.NOV.2016 13:20:59

Date: 15.NOV.2016 13:23:33

Lowest channel

Highest channel

## 6.10 ERP, EIRP Measurement

Test Requirement:	part 27.50(d), part 27.50 (h)
Test Method:	FCC part2.1046
Limit:	LTE Band 4: 1W EIRP LTE Band 7: 2W EIRP
Test setup:	<p>Below 1GHz</p> <p>Above 1GHz</p> <p>Substituted method:</p>

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

**Measurement Data (worst case):****LTE band 4 part****Lowest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
1710.70	19957	QPSK	1.4	H	V	23.26	30.00	Pass
					H	22.91		
1710.70	19957	16QAM	1.4	H	V	23.61	30.00	Pass
					H	18.28		
1.4MHz(RB size 3 & RB offset 0)								
1710.70	19957	QPSK	1.4	H	V	23.69	30.00	Pass
					H	19.38		
1710.70	19957	16QAM	1.4	H	V	22.70	30.00	Pass
					H	18.40		
1.4MHz(RB size 6 & RB offset 0)								
1710.70	19957	QPSK	1.4	H	V	22.19	30.00	Pass
					H	19.79		
1710.70	19957	16QAM	1.4	H	V	22.40	30.00	Pass
					H	18.15		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
1732.50	20175	QPSK	1.4	H	V	23.64	30.00	Pass
					H	22.02		
1732.50	20175	16QAM	1.4	H	V	22.64	30.00	Pass
					H	19.37		
1.4MHz(RB size 3 & RB offset 0)								
1732.50	20175	QPSK	1.4	H	V	23.64	30.00	Pass
					H	20.15		
1732.50	20175	16QAM	1.4	H	V	23.49	30.00	Pass
					H	19.78		
1.4MHz(RB size 6 & RB offset 0)								
1732.50	20175	QPSK	1.4	H	V	22.46	30.00	Pass
					H	20.16		
1732.50	20175	16QAM	1.4	H	V	22.78	30.00	Pass
					H	19.64		

**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
1754.30	20393	QPSK	1.4	H	V	23.15	30.00	Pass
					H	22.04		
1754.30	20393	16QAM	1.4	H	V	22.70	30.00	Pass
					H	19.45		
1.4MHz(RB size 3 & RB offset 0)								
1754.30	20393	QPSK	1.4	H	V	23.46	30.00	Pass
					H	21.25		
1754.30	20393	16QAM	1.4	H	V	23.40	30.00	Pass
					H	20.15		
1.4MHz(RB size 6 & RB offset 0)								
1754.30	20393	QPSK	1.4	H	V	22.46	30.00	Pass
					H	21.97		
1754.30	20393	16QAM	1.4	H	V	22.45	30.00	Pass
					H	20.39		

**Lowest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
1720.00	20050	QPSK	20	H	V	22.59	30.00	Pass
					H	17.35		
1720.00	20050	16QAM	20	H	V	22.63	30.00	Pass
					H	18.34		
20MHz(RB size 50 & RB offset 0)								
1720.00	20050	QPSK	20	H	V	19.25	30.00	Pass
					H	18.48		
1720.00	20050	16QAM	20	H	V	20.35	30.00	Pass
					H	18.58		
20MHz(RB size 100 & RB offset 0)								
1720.00	20050	QPSK	20	H	V	19.54	30.00	Pass
					H	19.75		
1720.00	20050	16QAM	20	H	V	18.46	30.00	Pass
					H	18.40		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
1732.50	20175	QPSK	20	H	V	22.15	30.00	Pass
					H	18.34		
1732.50	20175	16QAM	20	H	V	22.64	30.00	Pass
					H	19.56		
20MHz(RB size 50 & RB offset 0)								
1732.50	20175	QPSK	20	H	V	19.85	30.00	Pass
					H	19.64		
1732.50	20175	16QAM	20	H	V	20.41	30.00	Pass
					H	19.78		
20MHz(RB size 100 & RB offset 0)								
1732.50	20175	QPSK	20	H	V	20.45	30.00	Pass
					H	19.67		
1732.50	20175	16QAM	20	H	V	19.54	30.00	Pass
					H	19.36		

**High channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
1745.00	20300	QPSK	20	H	V	21.42	30.00	Pass
					H	19.68		
1745.00	20300	16QAM	20	H	V	22.45	30.00	Pass
					H	19.43		
20MHz(RB size 50 & RB offset 0)								
1745.00	20300	QPSK	20	H	V	20.04	30.00	Pass
					H	20.34		
1745.00	20300	16QAM	20	H	V	21.64	30.00	Pass
					H	20.98		
20MHz(RB size 100 & RB offset 0)								
1745.00	20300	QPSK	20	H	V	20.65	30.00	Pass
					H	20.39		
1745.00	20300	16QAM	20	H	V	20.47	30.00	Pass
					H	20.42		

**LTE band 7 part****Lowest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
5MHz(RB size 1 & RB offset 0)								
2502.50	20775	QPSK	5	H	V	18.06	33.00	Pass
					H	19.22		
2502.50	20775	16QAM	5	H	V	18.64	33.00	Pass
					H	19.97		
5MHz(RB size 12& RB offset 0)								
2502.50	20775	QPSK	5	H	V	20.43	33.00	Pass
					H	18.54		
2502.50	20775	16QAM	5	H	V	20.56	33.00	Pass
					H	19.64		
5MHz(RB size 25& RB offset 0)								
2502.50	20775	QPSK	5	H	V	19.64	33.00	Pass
					H	18.73		
2502.50	20775	16QAM	5	H	V	18.59	33.00	Pass
					H	17.58		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
5MHz(RB size 1 & RB offset 0)								
2535.00	21100	QPSK	5	H	V	19.25	33.00	Pass
					H	20.34		
2535.00	21100	16QAM	5	H	V	19.64	33.00	Pass
					H	18.76		
5MHz(RB size 12& RB offset 0)								
2535.00	21100	QPSK	5	H	V	20.01	33.00	Pass
					H	19.64		
2535.00	21100	16QAM	5	H	V	20.32	33.00	Pass
					H	19.75		
5MHz(RB size 25& RB offset 0)								
2535.00	21100	QPSK	5	H	V	20.04	33.00	Pass
					H	19.36		
2535.00	21100	16QAM	5	H	V	19.25	33.00	Pass
					H	17.45		

**Highest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
5MHz(RB size 1 & RB offset 0)								
2567.50	21425	QPSK	5	H	V	19.36	33.00	Pass
					H	20.15		
2567.50	21425	16QAM	5	H	V	20.43	33.00	Pass
					H	19.42		
5MHz(RB size 12& RB offset 0)								
2567.50	21425	QPSK	5	H	V	20.16	33.00	Pass
					H	20.74		
2567.50	21425	16QAM	5	H	V	20.16	33.00	Pass
					H	19.65		
5MHz(RB size 25& RB offset 0)								
2567.50	21425	QPSK	5	H	V	20.46	33.00	Pass
					H	19.62		
2567.50	21425	16QAM	5	H	V	19.34	33.00	Pass
					H	18.49		

**Lowest channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
2510.00	20850	QPSK	20	H	V	20.22	33.00	Pass
					H	17.43		
2510.00	20850	16QAM	20	H	V	18.38	33.00	Pass
					H	16.28		
20MHz(RB size 50 & RB offset 0)								
2510.00	20850	QPSK	20	H	V	19.87	33.00	Pass
					H	16.89		
2510.00	20850	16QAM	20	H	V	18.06	33.00	Pass
					H	17.24		
20MHz(RB size 100 & RB offset 0)								
2510.00	20850	QPSK	20	H	V	19.11	33.00	Pass
					H	17.59		
2510.00	20850	16QAM	20	H	V	18.24	33.00	Pass
					H	19.44		

**Middle channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
2535.00	21100	QPSK	20	H	V	20.13	33.00	Pass
					H	20.46		
2535.00	21100	16QAM	20	H	V	19.67	33.00	Pass
					H	17.45		
20MHz(RB size 50 & RB offset 0)								
2535.00	21100	QPSK	20	H	V	19.34	33.00	Pass
					H	18.72		
2535.00	21100	16QAM	20	H	V	19.43	33.00	Pass
					H	18.52		
20MHz(RB size 100 & RB offset 0)								
2535.00	21100	QPSK	20	H	V	19.36	33.00	Pass
					H	18.45		
2535.00	21100	16QAM	20	H	V	17.64	33.00	Pass
					H	19.58		

**High channel**

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
2560.00	21350	QPSK	20	H	V	20.15	33.00	Pass
					H	20.45		
2560.00	21350	16QAM	20	H	V	19.34	33.00	Pass
					H	18.75		
20MHz(RB size 50 & RB offset 0)								
2560.00	21350	QPSK	20	H	V	19.34	33.00	Pass
					H	18.42		
2560.00	21350	16QAM	20	H	V	19.36	33.00	Pass
					H	18.48		
20MHz(RB size 100 & RB offset 0)								
2560.00	21350	QPSK	20	H	V	19.64	33.00	Pass
					H	19.25		
2560.00	21350	16QAM	20	H	V	17.42	33.00	Pass
					H	19.36		

## 6.11 Field strength of spurious radiation measurement

Test Requirement:	Part 27.53(m), Part 27.53(h)
Test Method:	FCC part2.1053
Limit:	LTE Band 2, LTE Band 4, LTE Band 5 and LTE Band 17: -13dBm, LTE Band 7: -25dBm
Test setup:	<p>Below 1GHz</p> <p>Above 1GHz</p> <p>Substituted method:</p>
Test Procedure:	<ol style="list-style-type: none"> <li>The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission</li> </ol>

	<p>was determined using the substitution method.</p> <p>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.</p> $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details.
Test results:	Passed

**Measurement Data (worst case):****Below 1GHz:**

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

**Above 1GHz**

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

## LTE Band 4 Part:

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

Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
3421.40	Vertical	-40.44	-13.00	Pass
5132.10	V	-25.88		
6842.80	V	-37.87		
3421.40	Horizontal	-45.87		
5132.10	H	-31.08		
6842.80	H	-34.41		
<b>Middle</b>				
3465.00	Vertical	-46.69	-13.00	Pass
5197.50	V	-29.97		
6930.00	V	-36.39		
3465.00	Horizontal	-50.17		
5197.50	H	-32.68		
6930.00	H	-36.75		
<b>Highest</b>				
3508.60	Vertical	-47.64	-13.00	Pass
5262.90	V	-32.54		
7017.20	V	-41.49		
3508.60	Horizontal	-48.99		
5262.90	H	-31.88		
7017.20	H	-40.00		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
3423.00	Vertical	-43.47	-13.00	Pass
5134.50	V	30.25		
6846.00	V	-37.61		
3423.00	Horizontal	-45.79		
5134.50	H	-32.01		
6846.00	H	-35.94		
<b>Middle</b>				
3465.00	Vertical	-46.87	-13.00	Pass
5197.50	V	-34.61		
6930.00	V	-42.15		
3465.00	Horizontal	-48.79		
5197.50	H	-35.69		
6930.00	H	-36.45		
<b>Highest</b>				
3507.00	Vertical	-45.78	-13.00	Pass
5260.50	V	-32.64		
7014.00	V	-36.51		
3507.00	Horizontal	-48.79		
5260.50	H	-40.41		
7014.00	H	-37.94		

<b>5MHz(RB size 1 &amp; RB offset 0) for QPSK</b>				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
3425.00	Vertical	-41.34	-13.00	Pass
5137.50	V	-26.54		
6850.00	V	-37.61		
3425.00	Horizontal	-45.78		
5137.50	H	-32.36		
6850.00	H	-34.25		
<b>Middle</b>				
3465.00	Vertical	-46.58	-13.00	Pass
5197.50	V	-30.15		
6930.00	V	-37.64		
3465.00	Horizontal	-49.68		
5197.50	H	-32.54		
6930.00	H	-36.16		
<b>Highest</b>				
3505.00	Vertical	-47.61	-13.00	Pass
5257.50	V	-32.65		
7010.00	V	-41.58		
3505.00	Horizontal	-49.67		
5257.50	H	-32.25		
7010.00	H	-41.46		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
3430.00	Vertical	-42.16	-13.00	Pass
5145.00	V	-29.64		
6860.00	V	-37.51		
3430.00	Horizontal	-45.34		
5145.00	H	-32.58		
6860.00	H	-36.47		
<b>Middle</b>				
3465.00	Vertical	-45.18	-13.00	Pass
5197.50	V	-33.36		
6930.00	V	-42.78		
3465.00	Horizontal	-48.16		
5197.50	H	-35.49		
6930.00	H	-36.31		
<b>Highest</b>				
3500.00	Vertical	-45.87	-13.00	Pass
5250.00	V	-32.15		
7000.00	V	-35.48		
3500.00	Horizontal	-47.51		
5250.00	H	-39.65		
7000.00	H	-36.45		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
3435.00	Vertical	-42.67	-13.00	Pass
5152.50	V	-26.58		
6870.00	V	-37.64		
3435.00	Horizontal	-45.15		
5152.50	H	-32.32		
6870.00	H	-34.21		
<b>Middle</b>				
3465.00	Vertical	-46.58	-13.00	Pass
5197.50	V	-31.45		
6930.00	V	-37.94		
3465.00	Horizontal	-49.87		
5197.50	H	-32.51		
6930.00	H	-36.79		
<b>Highest</b>				
3495.00	Vertical	-46.37	-13.00	Pass
5242.50	V	-32.15		
6990.00	V	-42.78		
3495.00	Horizontal	-50.04		
5242.50	H	-32.16		
6990.00	H	-42.15		

20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
3440.00	Vertical	-41.44	-13.00	Pass
5160.00	V	-28.01		
6880.00	V	-38.30		
3440.00	Horizontal	-46.68		
5160.00	H	-33.04		
6880.00	H	-36.41		
<b>Middle</b>				
3465.00	Vertical	-45.89	-13.00	Pass
5197.50	V	-32.62		
6930.00	V	-42.38		
3465.00	Horizontal	-48.55		
5197.50	H	-36.04		
6930.00	H	-35.86		
<b>Highest</b>				
3490.00	Vertical	-46.63	-13.00	Pass
5235.00	V	-30.17		
6980.00	V	-36.25		
3490.00	Horizontal	-47.84		
5235.00	H	-39.09		
6980.00	H	-36.01		

## LTE Band 7 Part:

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

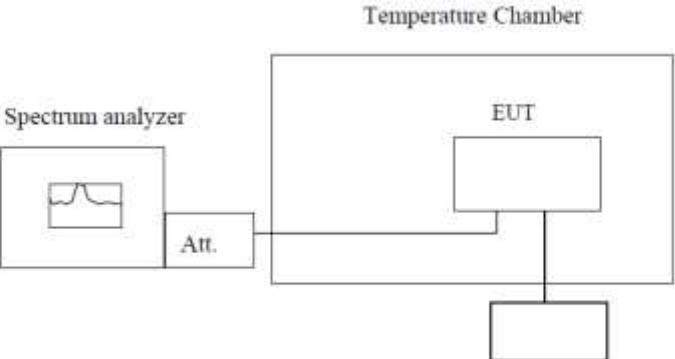
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
5005.00	Vertical	-35.63	-25.00	Pass
7507.50	V	-32.40		
10010.00	V	-40.47		
5005.00	Horizontal	-36.58		
7507.50	H	-34.68		
10010.00	H	-39.83		
<b>Middle</b>				
5070.00	Vertical	-30.71	-25.00	Pass
7605.00	V	-33.34		
10140.00	V	-39.97		
5070.00	Horizontal	-32.35		
7605.00	H	-35.89		
10140.00	H	-39.85		
<b>Highest</b>				
5135.00	Vertical	-32.45	-25.00	Pass
7702.50	V	-33.44		
10270.00	V	-39.51		
5135.00	Horizontal	-32.44		
7702.50	H	-35.68		
10270.00	H	-39.70		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
5010.00	Vertical	-33.64	-25.00	Pass
7515.00	V	-35.61		
10020.00	V	-37.54		
5010.00	Horizontal	-40.15		
7515.00	H	-34.69		
10020.00	H	-40.78		
<b>Middle</b>				
5070.00	Vertical	-32.54	-25.00	Pass
7605.00	V	-32.02		
10140.00	V	-39.64		
5070.00	Horizontal	-34.15		
7605.00	H	-32.64		
10140.00	H	-40.07		
<b>Highest</b>				
5130.00	Vertical	-34.61	-25.00	Pass
7695.00	V	-34.58		
10260.00	V	-40.49		
5130.00	Horizontal	-39.67		
7695.00	H	-38.16		
10260.00	H	-40.15		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
5015.00	Vertical	-35.61	-25.00	Pass
7522.50	V	-33.67		
10030.00	V	-40.15		
5015.00	Horizontal	-35.97		
7522.50	H	-36.24		
10030.00	H	-40.15		
<b>Middle</b>				
5070.00	Vertical	-30.72	-25.00	Pass
7605.00	V	-33.15		
10140.00	V	-40.76		
5070.00	Horizontal	-32.61		
7605.00	H	-35.49		
10140.00	H	-40.15		
<b>Highest</b>				
5125.00	Vertical	-32.67	-25.00	Pass
7687.50	V	-33.64		
10250.00	V	-40.15		
5125.00	Horizontal	-32.49		
7687.50	H	-36.54		
10250.00	H	-40.19		

20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest</b>				
5020.00	Vertical	-34.73	-25.00	Pass
7530.00	V	-34.26		
10040.00	V	-38.49		
5020.00	Horizontal	-39.05		
7530.00	H	-34.33		
10040.00	H	-40.53		
<b>Middle</b>				
5070.00	Vertical	-32.47	-25.00	Pass
7605.00	V	-31.86		
10140.00	V	-39.84		
5070.00	Horizontal	-32.25		
7605.00	H	-34.22		
10140.00	H	-39.66		
<b>Highest</b>				
5120.00	Vertical	-34.34	-25.00	Pass
7680.00	V	-34.70		
10240.00	V	-39.11		
5120.00	Horizontal	-38.68		
7680.00	H	-37.00		
10240.00	H	-39.47		

## 6.12 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC Part2.1055(a)(1)(b)
Test Method:	FCC Part2.1055(a)(1)(b)
Limit:	±2.5ppm
Test setup:	 <p><b>Note :</b> Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	All three channels of all modulations have been tested, but only the worst channel and the worst modulation show in this test item.

Measurement Data (the worst channel):

**LTE Band 4(QPSK):**

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	188	0.108514	±2.5	Pass
	-20	163	0.094084		
	-10	152	0.087734		
	0	141	0.081385		
	10	174	0.100433		
	20	133	0.076768		
	30	139	0.080231		
	40	146	0.084271		
	50	128	0.073882		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	159	0.091775	±2.5	Pass
	-20	147	0.084848		
	-10	133	0.076768		
	0	126	0.072727		
	10	158	0.091198		
	20	152	0.087734		
	30	147	0.084848		
	40	139	0.080231		
	50	125	0.072150		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	177	0.102165	±2.5	Pass
	-20	152	0.087734		
	-10	169	0.097547		
	0	128	0.073882		
	10	167	0.096392		
	20	141	0.081385		
	30	136	0.078499		
	40	170	0.098124		
	50	169	0.097547		

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	156	0.090043	±2.5	Pass
	-20	155	0.089466		
	-10	142	0.081962		
	0	136	0.078499		
	10	108	0.062338		
	20	127	0.073304		
	30	160	0.092352		
	40	149	0.086003		
	50	137	0.079076		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	180	0.103896	±2.5	Pass
	-20	174	0.100433		
	-10	169	0.097547		
	0	152	0.087734		
	10	137	0.079076		
	20	157	0.090620		
	30	149	0.086003		
	40	163	0.094084		
	50	108	0.062338		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	165	0.095238	±2.5	Pass
	-20	124	0.071573		
	-10	114	0.065801		
	0	106	0.061183		
	10	127	0.073304		
	20	140	0.080808		
	30	136	0.078499		
	40	124	0.071573		
	50	136	0.078499		

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

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	136	0.078499	±2.5	Pass
	-20	144	0.083117		
	-10	152	0.087734		
	0	107	0.061760		
	10	116	0.066955		
	20	128	0.073882		
	30	136	0.078499		
	40	155	0.089466		
	50	127	0.073304		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	174	0.100433	±2.5	Pass
	-20	136	0.078499		
	-10	185	0.106782		
	0	174	0.100433		
	10	166	0.095815		
	20	159	0.091775		
	30	148	0.085426		
	40	135	0.077922		
	50	157	0.090620		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	163	0.094084	±2.5	Pass
	-20	152	0.087734		
	-10	170	0.098124		
	0	145	0.083694		
	10	152	0.087734		
	20	108	0.062338		
	30	136	0.078499		
	40	145	0.083694		
	50	180	0.103896		

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	147	0.084848	±2.5	Pass
	-20	144	0.083117		
	-10	130	0.075036		
	0	125	0.072150		
	10	126	0.072727		
	20	159	0.091775		
	30	155	0.089466		
	40	143	0.082540		
	50	138	0.079654		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	150	0.086580	±2.5	Pass
	-20	126	0.072727		
	-10	137	0.079076		
	0	156	0.090043		
	10	180	0.103896		
	20	184	0.106205		
	30	125	0.072150		
	40	160	0.092352		
	50	127	0.073304		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	133	0.076768	±2.5	Pass
	-20	114	0.065801		
	-10	107	0.061760		
	0	130	0.075036		
	10	125	0.072150		
	20	115	0.066378		
	30	129	0.074459		
	40	132	0.076190		
	50	122	0.070418		

## LTE Band 7(QPSK):

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	144	0.056805	±2.5	Pass
	-20	133	0.052465		
	-10	126	0.049704		
	0	105	0.041420		
	10	117	0.046154		
	20	126	0.049704		
	30	123	0.048521		
	40	130	0.051282		
	50	138	0.054438		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	174	0.068639	±2.5	Pass
	-20	169	0.066667		
	-10	182	0.071795		
	0	166	0.065483		
	10	175	0.069034		
	20	170	0.067061		
	30	126	0.049704		
	40	138	0.054438		
	50	156	0.061538		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	166	0.065483	±2.5	Pass
	-20	178	0.070217		
	-10	190	0.074951		
	0	163	0.064300		
	10	155	0.061144		
	20	142	0.056016		
	30	135	0.053254		
	40	160	0.063116		
	50	174	0.068639		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	168	0.066272	±2.5	Pass
	-20	145	0.057199		
	-10	136	0.053649		
	0	152	0.059961		
	10	147	0.057988		
	20	160	0.063116		
	30	152	0.059961		
	40	134	0.052860		
	50	130	0.051282		

## LTE Band 7(16QAM):

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	187	0.073767	±2.5	Pass
	-20	156	0.061538		
	-10	168	0.066272		
	0	163	0.064300		
	10	147	0.057988		
	20	149	0.058777		
	30	155	0.061144		
	40	159	0.062722		
	50	152	0.059961		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	163	0.064300	±2.5	Pass
	-20	140	0.055227		
	-10	155	0.061144		
	0	138	0.054438		
	10	174	0.068639		
	20	163	0.064300		
	30	155	0.061144		
	40	128	0.050493		
	50	179	0.070611		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	174	0.068639	2.5	Pass
	-20	163	0.064300		
	-10	190	0.074951		
	0	158	0.062327		
	10	147	0.057988		
	20	160	0.063116		
	30	180	0.071006		
	40	184	0.072584		
	50	155	0.061144		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	170	0.067061	2.5	Pass
	-20	136	0.053649		
	-10	145	0.057199		
	0	162	0.063905		
	10	165	0.065089		
	20	144	0.056805		
	30	150	0.059172		
	40	123	0.048521		
	50	139	0.054832		

## 6.13 Frequency stability V.S. Voltage measurement

Test Requirement:	FCC Part2.1055(d)(1)(2)
Test Method:	FCC Part2.1055(d)(1)(2)
Limit:	2.5ppm
Test setup:	<p style="text-align: center;">Temperature Chamber</p> <p>Note : Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"> <li>Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details, and all channels have been tested, only shows the worst channel data in this report.
Test results:	Passed

**Measurement Data (the worst channel):****LTE Band 4(QPSK):**

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	74	0.042713	±2.5	Pass
	3.70	80	0.046176		
	3.23	69	0.039827		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.049062	±2.5	Pass
	3.70	49	0.028283		
	3.23	74	0.042713		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	69	0.039827	±2.5	Pass
	3.70	85	0.049062		
	3.23	63	0.036364		
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	74	0.042713	±2.5	Pass
	3.70	58	0.033478		
	3.23	69	0.039827		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	88	0.050794	±2.5	Pass
	3.70	79	0.045599		
	3.23	63	0.036364		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	87	0.050216	±2.5	Pass
	3.70	85	0.049062		
	3.23	63	0.036364		

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

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	80	0.046176	±2.5	Pass
	3.70	74	0.042713		
	3.23	90	0.051948		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.049062	±2.5	Pass
	3.70	86	0.049639		
	3.23	74	0.042713		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	76	0.043867	±2.5	Pass
	3.70	57	0.032900		
	3.23	90	0.051948		
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	74	0.042713	±2.5	Pass
	3.70	85	0.049062		
	3.23	86	0.049639		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	67	0.038672	±2.5	Pass
	3.70	74	0.042713		
	3.23	75	0.043290		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	88	0.050794	±2.5	Pass
	3.70	90	0.051948		
	3.23	63	0.036364		

**LTE Band 7(QPSK):**

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	78	0.030769	±2.5	Pass
	3.70	56	0.022091		
	3.23	92	0.036292		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	78	0.030769	±2.5	Pass
	3.70	68	0.026824		
	3.23	45	0.017751		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	76	0.029980	±2.5	Pass
	3.70	63	0.024852		
	3.23	80	0.031558		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	75	0.029586	±2.5	Pass
	3.70	86	0.033925		
	3.23	93	0.036686		

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

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	74	0.029191	±2.5	Pass
	3.70	63	0.024852		
	3.23	88	0.034714		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	75	0.029586	±2.5	Pass
	3.70	95	0.037475		
	3.23	47	0.018540		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	66	0.026036	±2.5	Pass
	3.70	67	0.026430		
	3.23	85	0.033531		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	87	0.034320	±2.5	Pass
	3.70	83	0.032742		
	3.23	65	0.025641		