



### Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0017	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0075	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0022	
-10	Normal Voltage	0.0059	
-20	Normal Voltage	0.0022	
-30	Normal Voltage	0.0073	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0008	

**Note:**

1. Normal Voltage =4.0 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.0 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 17

### Peak-to-Average Ratio

Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.06	4.7	4.87	5.59	<b>PASS</b>
Middle CH	4.14	4.78	4.93	5.68	
Highest CH	4.14	4.75	4.87	5.62	



LTE Band 17 / 10MHz / QPSK

Lowest Channel / 1RB



Date: 2 MAY 2017 20:42:19

Lowest Channel / Full RB



Date: 2 MAY 2017 20:42:29

Middle Channel / 1RB



Date: 2 MAY 2017 20:42:38

Middle Channel / Full RB



Date: 2 MAY 2017 20:42:48

Highest Channel / 1RB



Date: 2 MAY 2017 20:42:57

Highest Channel / Full RB



Date: 2 MAY 2017 20:43:18



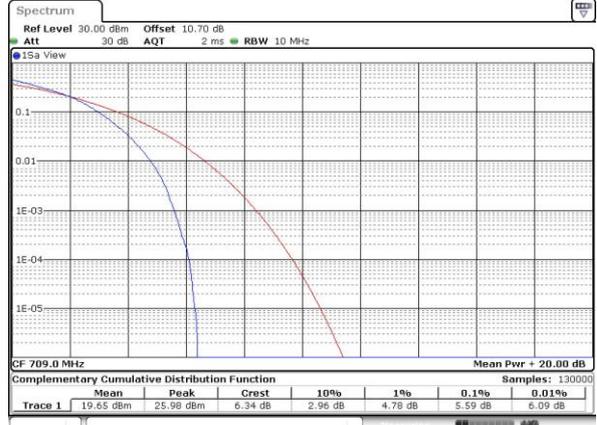
LTE Band 17 / 10MHz / 16QAM

Lowest Channel / 1RB



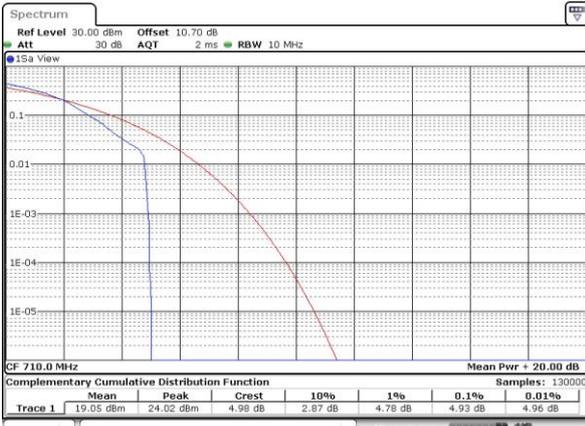
Date: 2 MAY 2017 20:39:39

Lowest Channel / Full RB



Date: 2 MAY 2017 20:39:55

Middle Channel / 1RB



Date: 2 MAY 2017 20:40:05

Middle Channel / Full RB



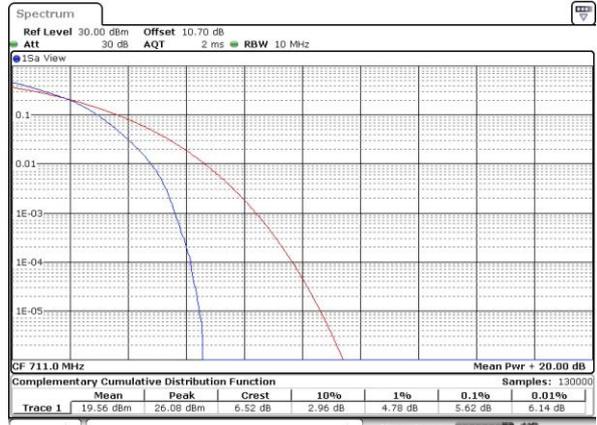
Date: 2 MAY 2017 20:40:15

Highest Channel / 1RB



Date: 2 MAY 2017 20:41:40

Highest Channel / Full RB



Date: 2 MAY 2017 20:42:03



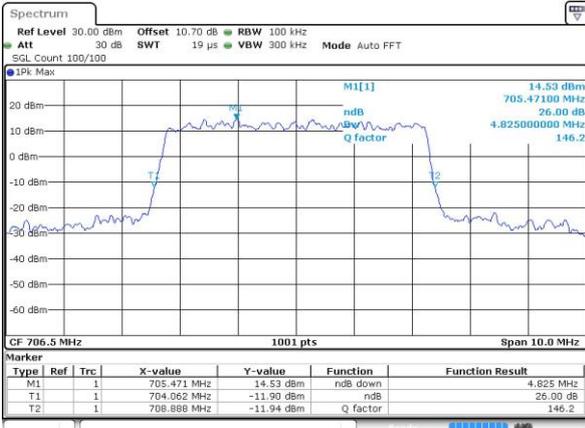
**26dB Bandwidth**

Mode	LTE Band 17 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.825	4.885	9.69	9.73	-	-	-	-
Middle CH	-	-	-	-	4.905	4.975	9.75	9.77	-	-	-	-
Highest CH	-	-	-	-	4.925	4.825	9.77	9.69	-	-	-	-



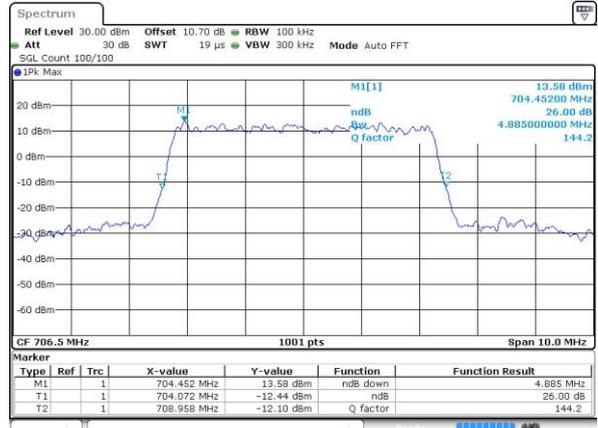
LTE Band 17

Lowest Channel / 5MHz / QPSK



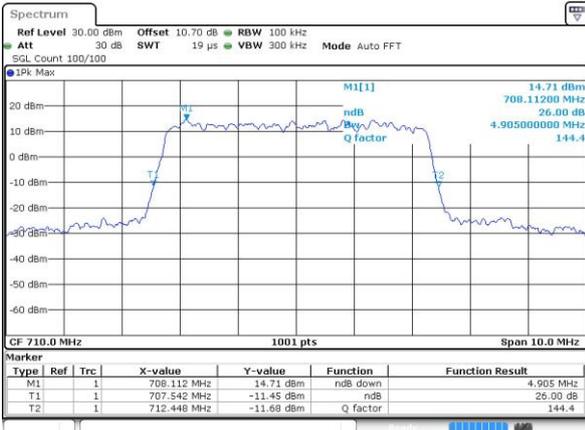
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Lowest Channel / 5MHz / 16QAM



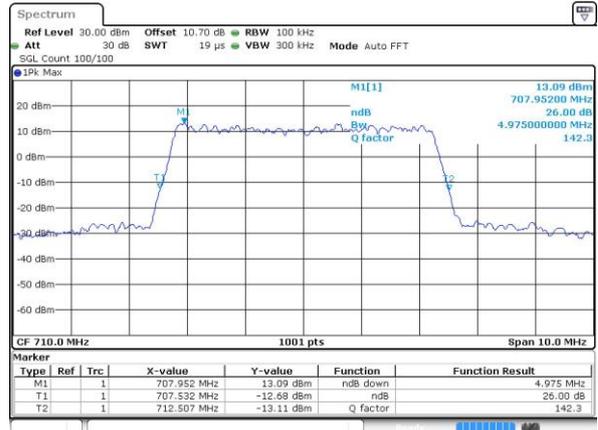
Date: 2 MAY 2017 20:06:12

Middle Channel / 5MHz / QPSK



Date: 2 MAY 2017 20:13:08

Middle Channel / 5MHz / 16QAM



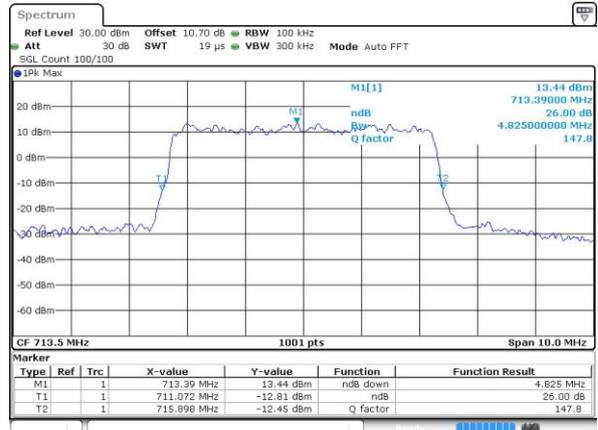
Date: 2 MAY 2017 20:13:19

Highest Channel / 5MHz / QPSK



Date: 2 MAY 2017 20:15:38

Highest Channel / 5MHz / 16QAM

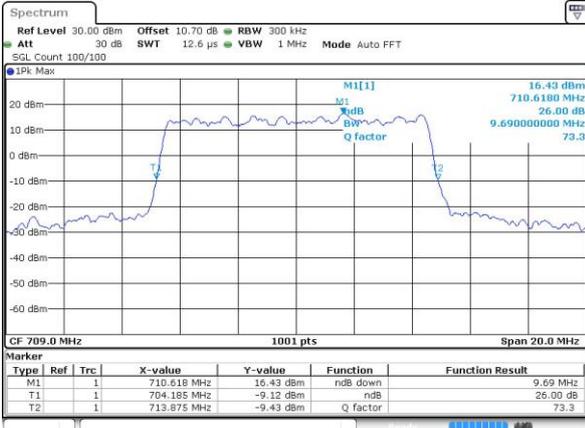


Date: 2 MAY 2017 20:15:49



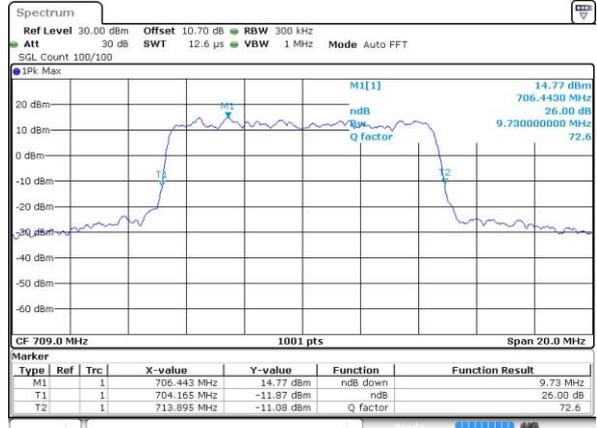
LTE Band 17

Lowest Channel / 10MHz / QPSK



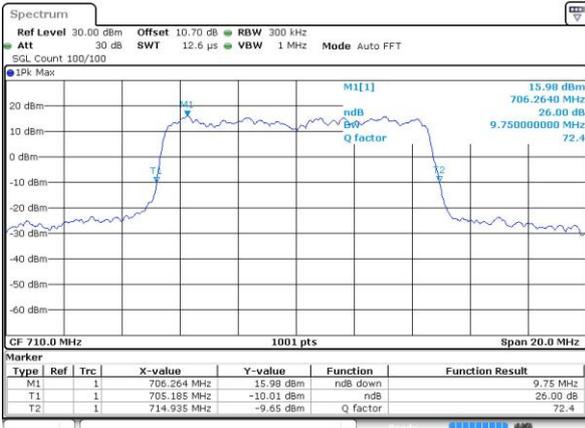
Date: 2 MAY 2017 20:22:45

Lowest Channel / 10MHz / 16QAM



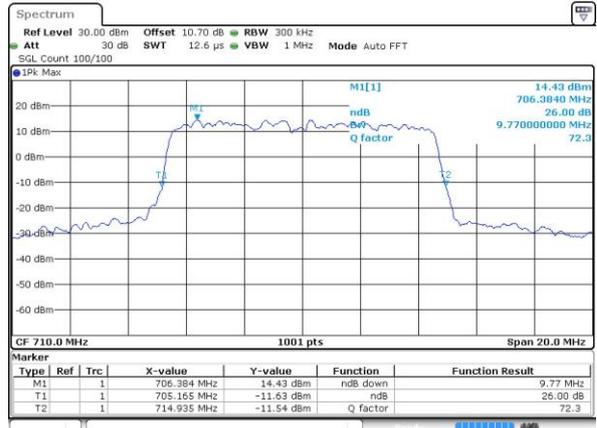
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Middle Channel / 10MHz / QPSK



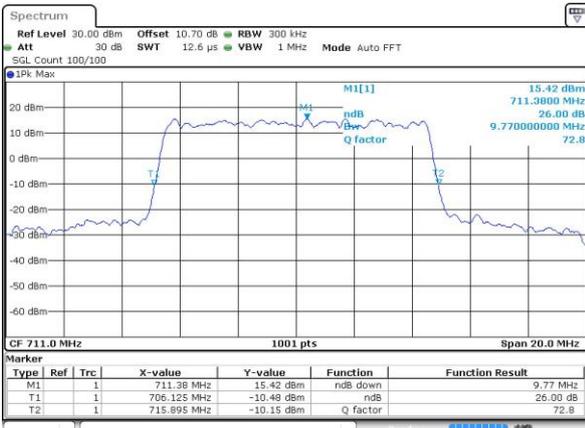
Date: 2 MAY 2017 20:29:51

Middle Channel / 10MHz / 16QAM



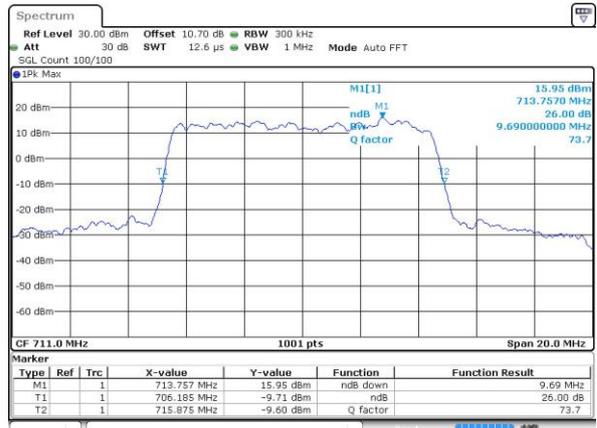
Date: 2 MAY 2017 20:30:02

Highest Channel / 10MHz / QPSK



Date: 2 MAY 2017 20:32:21

Highest Channel / 10MHz / 16QAM



Date: 2 MAY 2017 20:32:32



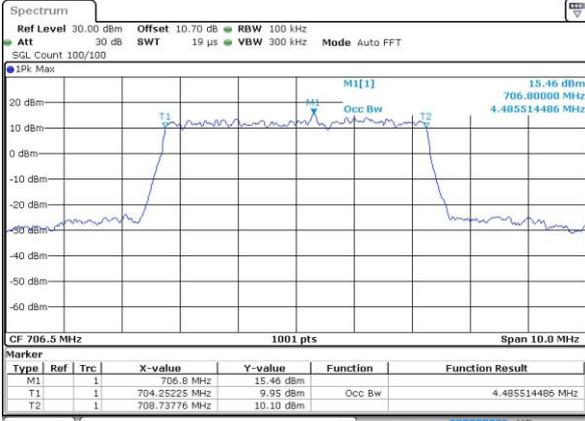
### Occupied Bandwidth

Mode	LTE Band 17 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.49	8.97	8.97	-	-	-	-
Middle CH	-	-	-	-	4.48	4.51	8.97	9.03	-	-	-	-
Highest CH	-	-	-	-	4.49	4.5	9.03	8.97	-	-	-	-



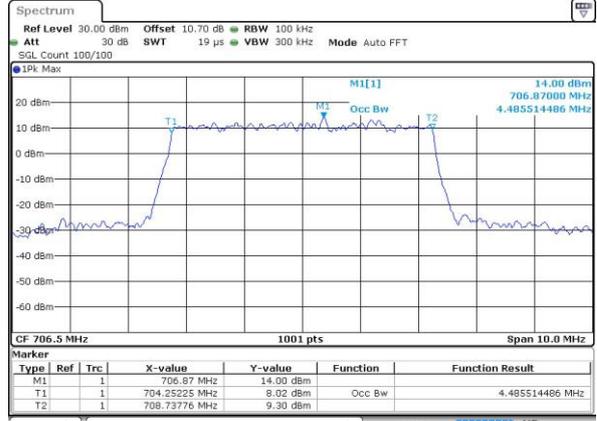
LTE Band 17

Lowest Channel / 5MHz / QPSK



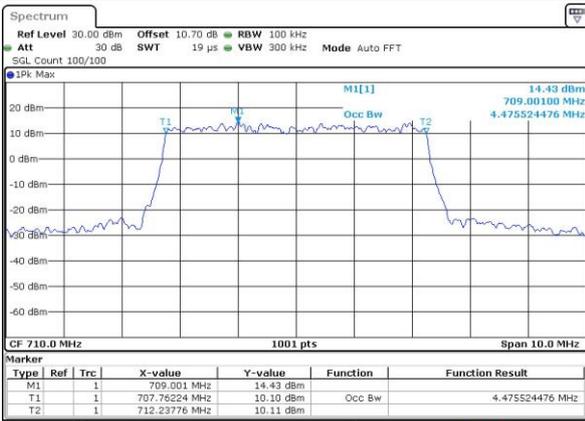
Date: 2 MAY 2017 20:05:41

Lowest Channel / 5MHz / 16QAM



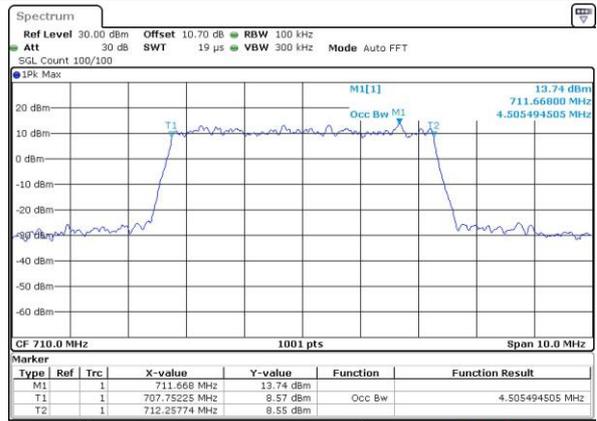
Date: 2 MAY 2017 20:05:51

Middle Channel / 5MHz / QPSK



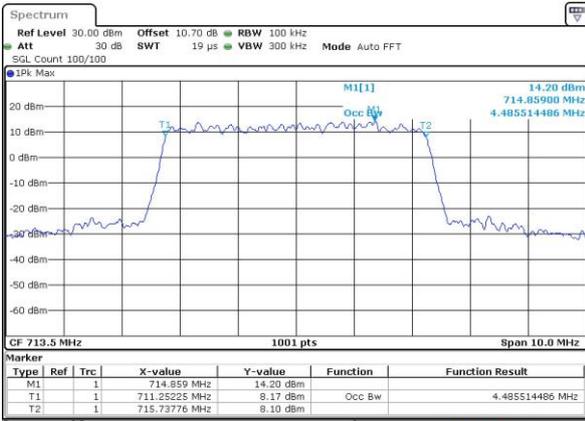
Date: 2 MAY 2017 20:12:48

Middle Channel / 5MHz / 16QAM



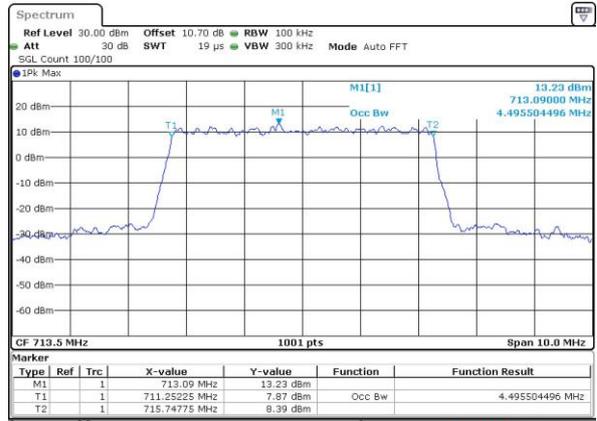
Date: 2 MAY 2017 20:12:58

Highest Channel / 5MHz / QPSK



Date: 2 MAY 2017 20:15:18

Highest Channel / 5MHz / 16QAM

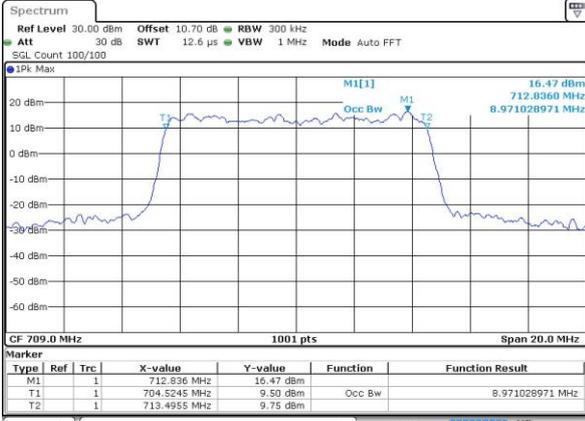


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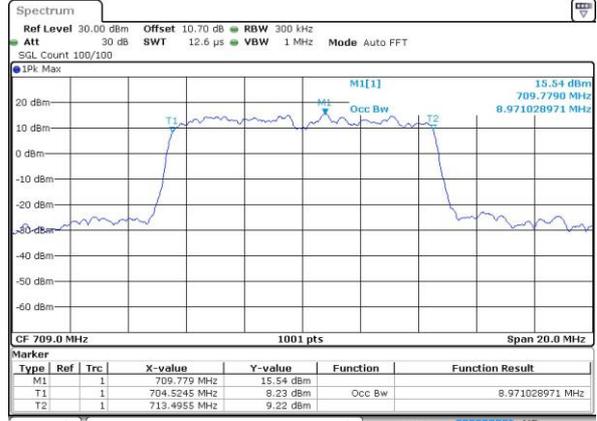
LTE Band 17

Lowest Channel / 10MHz / QPSK



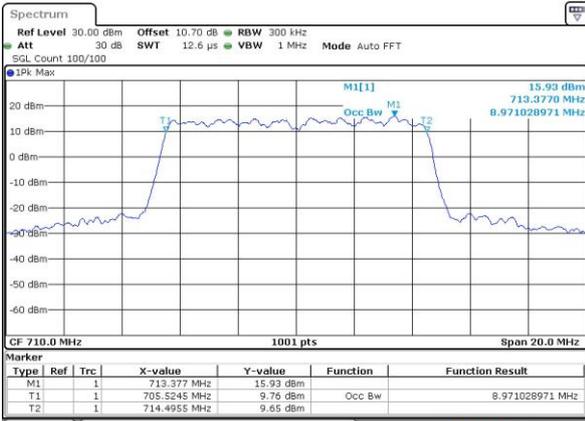
Date: 2 MAY 2017 20:22:24

Lowest Channel / 10MHz / 16QAM



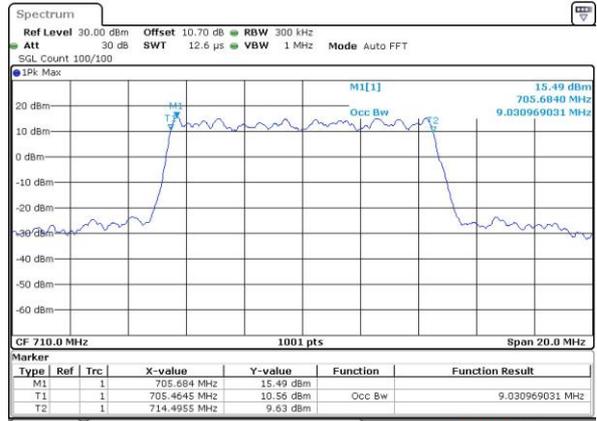
Date: 2 MAY 2017 20:22:34

Middle Channel / 10MHz / QPSK



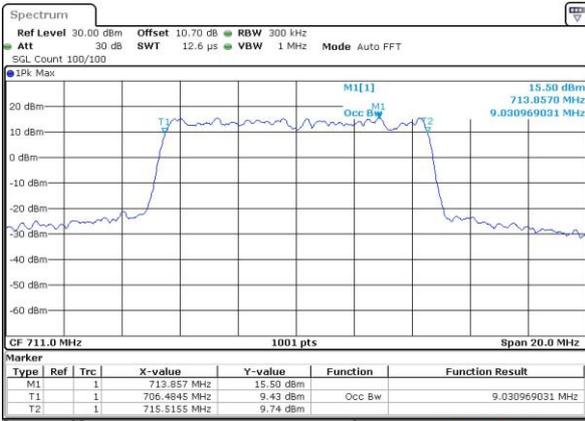
Date: 2 MAY 2017 20:29:31

Middle Channel / 10MHz / 16QAM



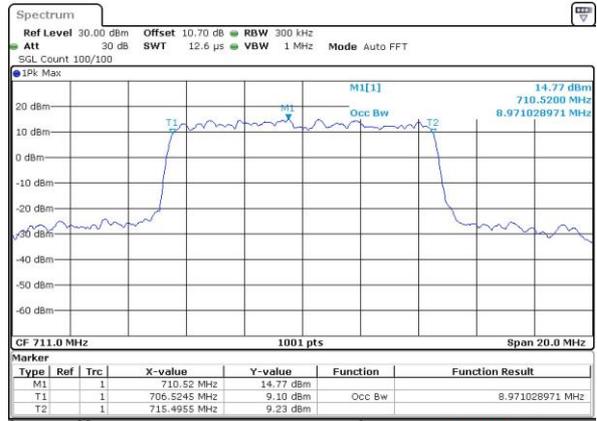
Date: 2 MAY 2017 20:29:41

Highest Channel / 10MHz / QPSK



Date: 2 MAY 2017 20:32:00

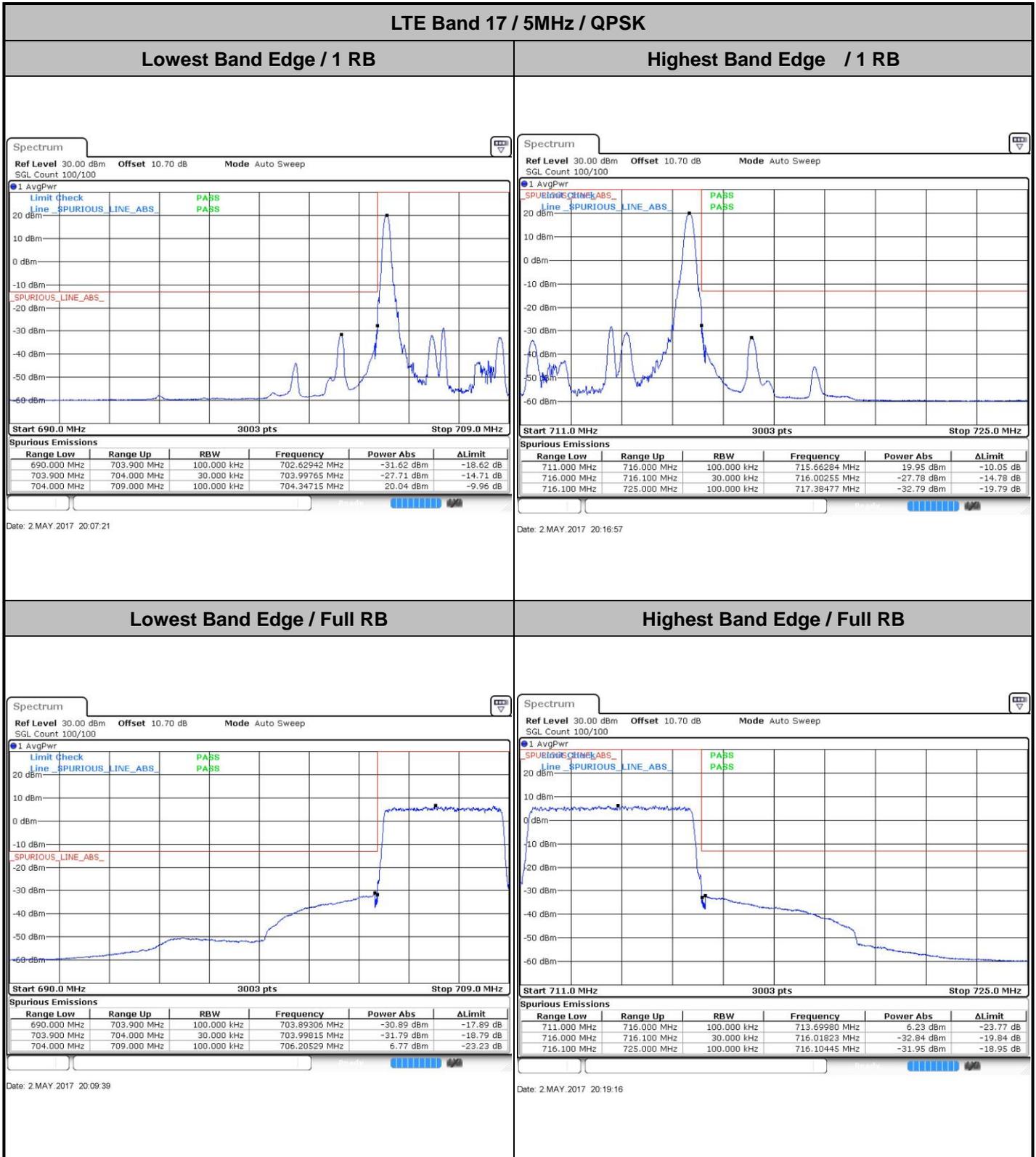
Highest Channel / 10MHz / 16QAM



Date: 2 MAY 2017 20:32:11



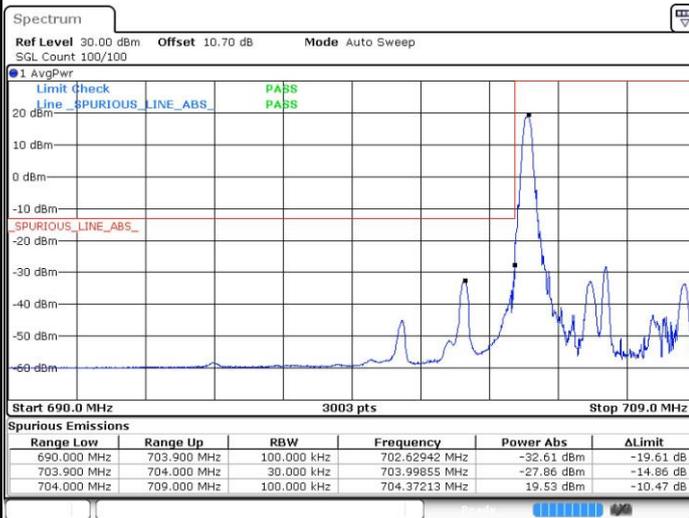
# Conducted Band Edge





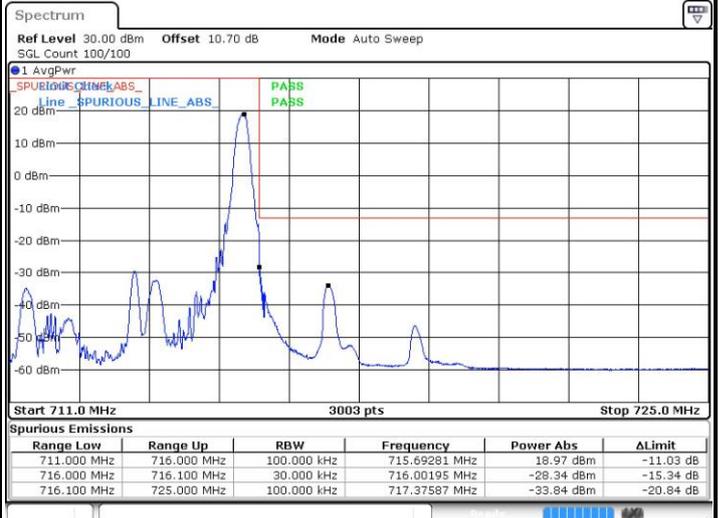
LTE Band 17 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



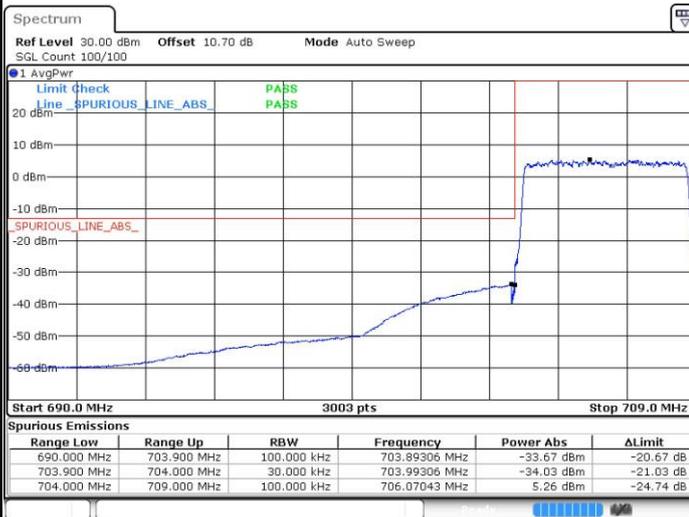
Date: 2 MAY 2017 20:08:30

Highest Band Edge / 1 RB



Date: 2 MAY 2017 20:10:07

Lowest Band Edge / Full RB



Date: 2 MAY 2017 20:10:48

Highest Band Edge / Full RB

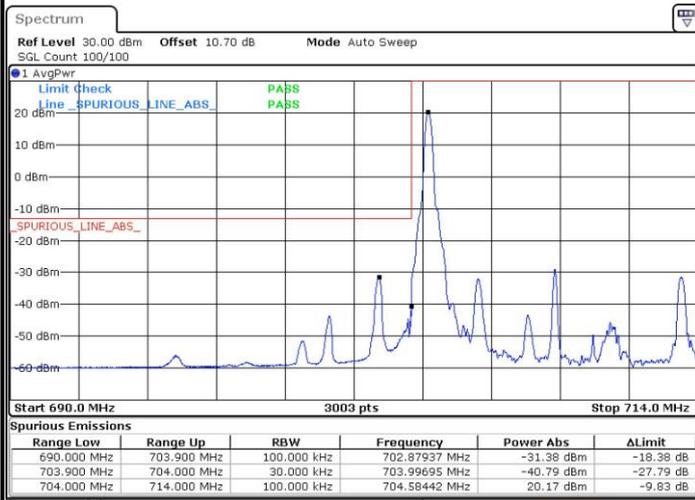


Date: 2 MAY 2017 20:20:25



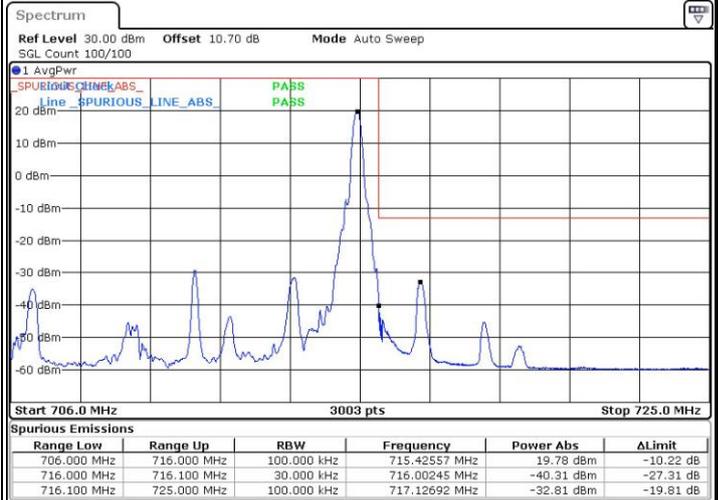
LTE Band 17 / 10MHz / QPSK

Lowest Band Edge / 1 RB



Date: 2 MAY 2017 20:24:04

Highest Band Edge / 1 RB



Date: 2 MAY 2017 20:33:40

Lowest Band Edge / Full RB



Date: 2 MAY 2017 20:26:22

Highest Band Edge / Full RB

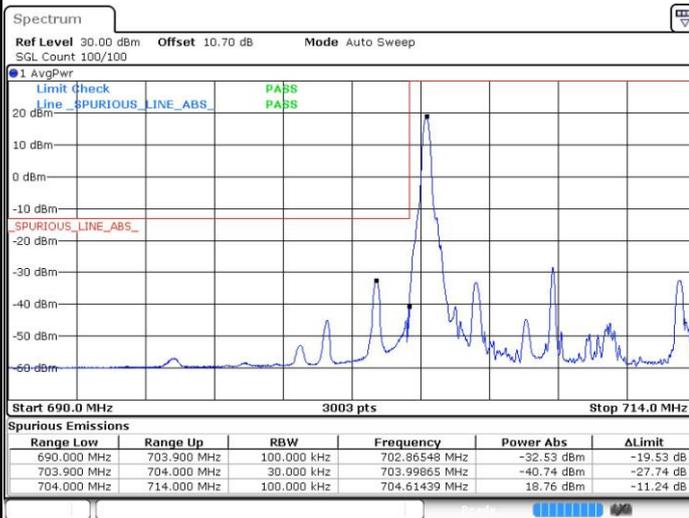


Date: 2 MAY 2017 20:35:59



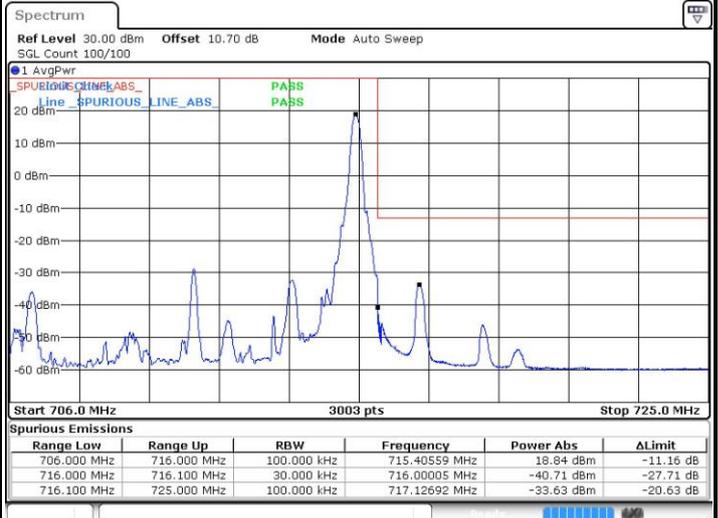
LTE Band 17 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



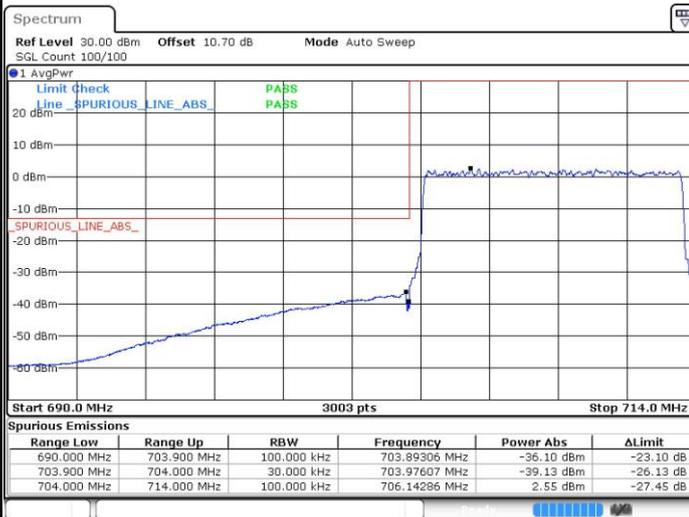
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Highest Band Edge / 1 RB



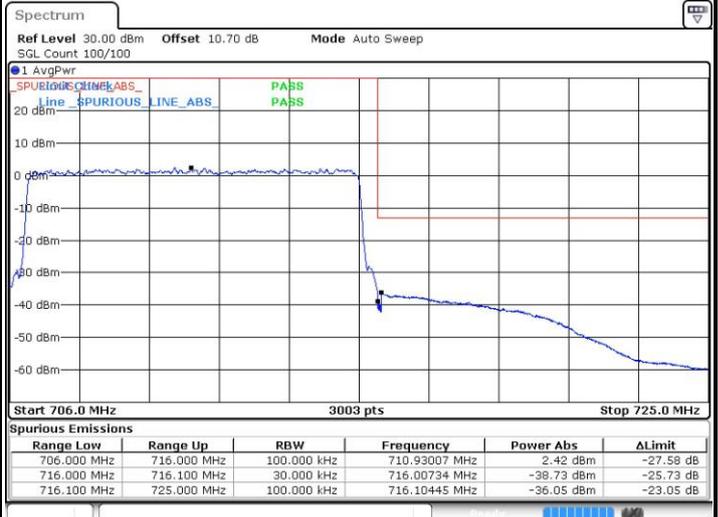
Date: 2 MAY 2017 20:34:49

Lowest Band Edge / Full RB



Date: 2 MAY 2017 20:27:31

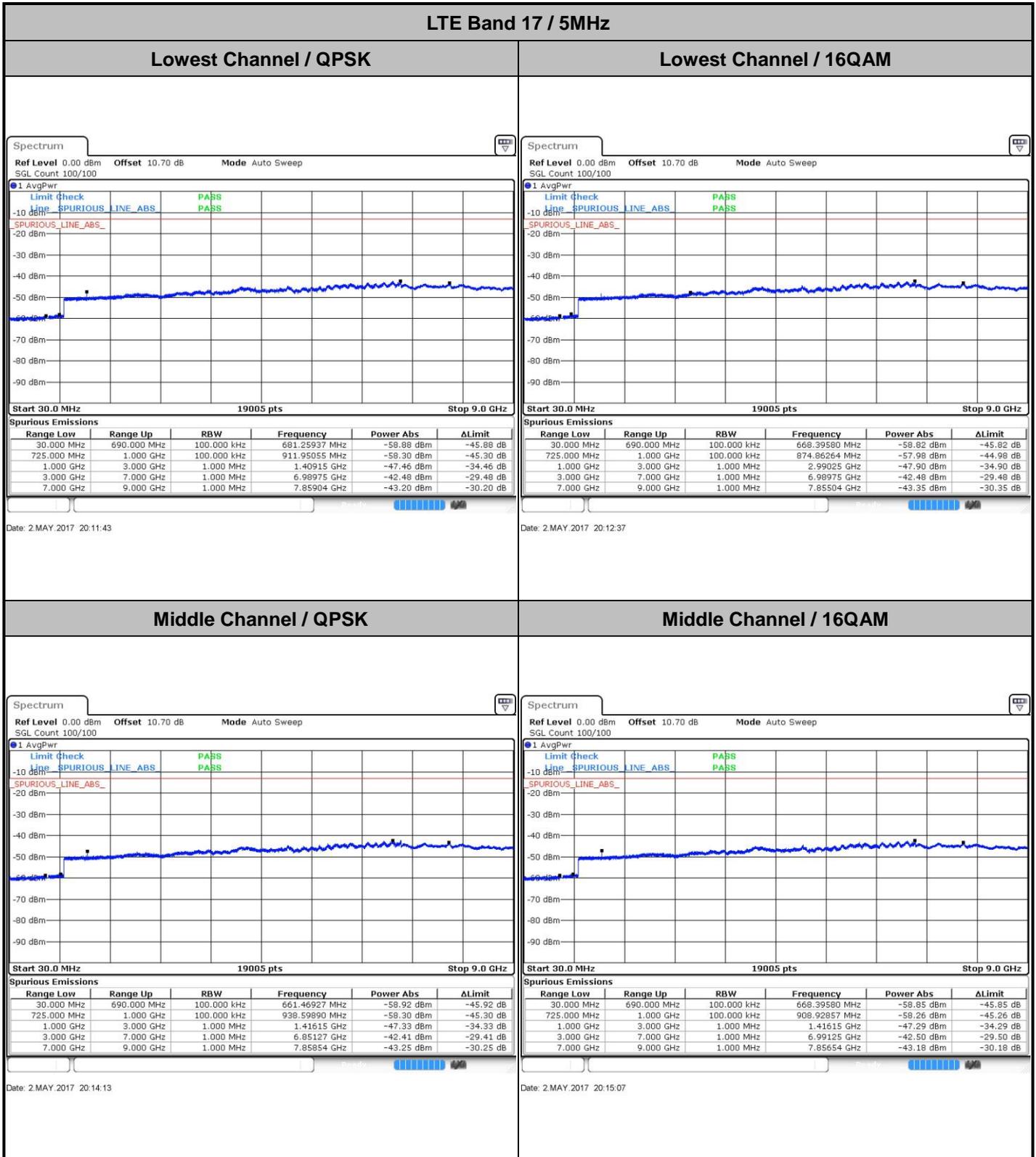
Highest Band Edge / Full RB



Date: 2 MAY 2017 20:37:08



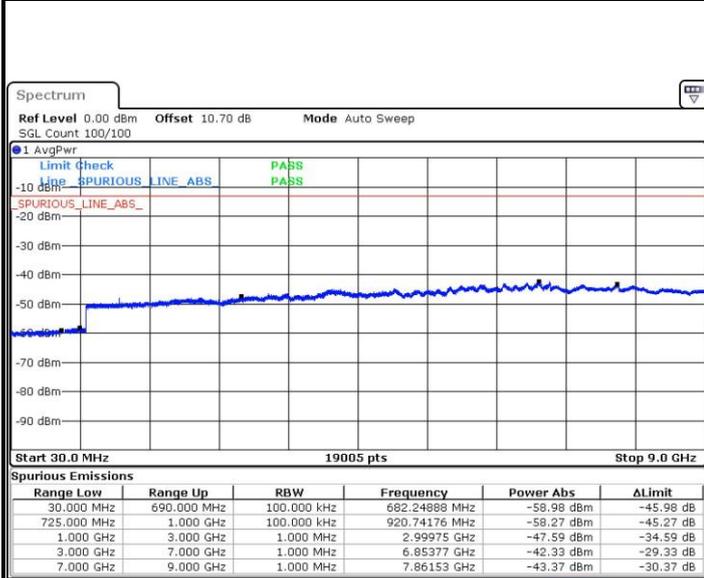
# Conducted Spurious Emission





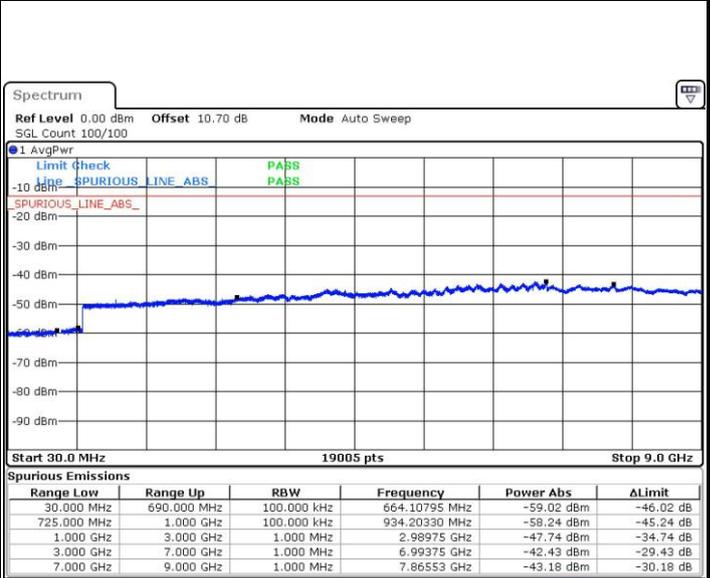
LTE Band 17 / 5MHz

Highest Channel / QPSK



Date: 2 MAY 2017 20:21:20

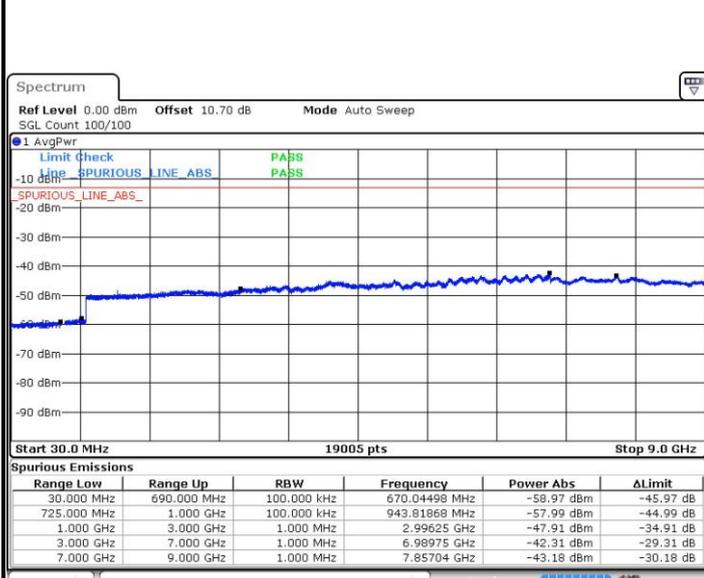
Highest Channel / 16QAM



Date: 2 MAY 2017 20:22:14

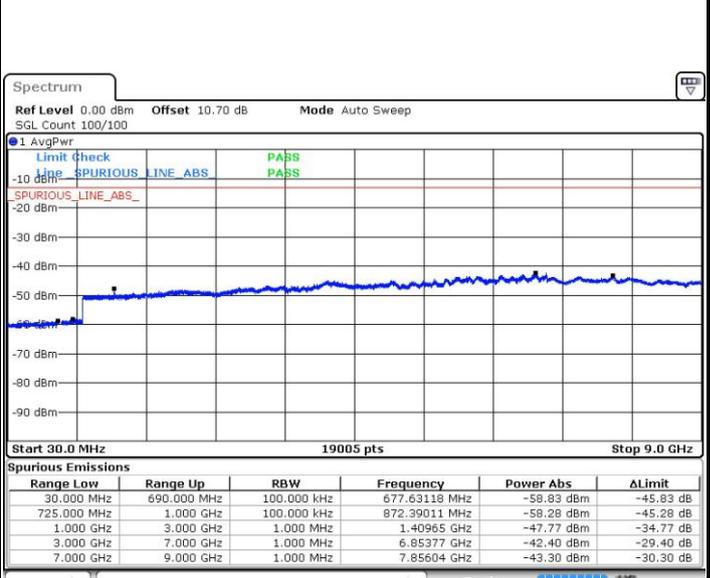
LTE Band 17 / 10MHz

Lowest Channel / QPSK



Date: 2 MAY 2017 20:28:26

Lowest Channel / 16QAM



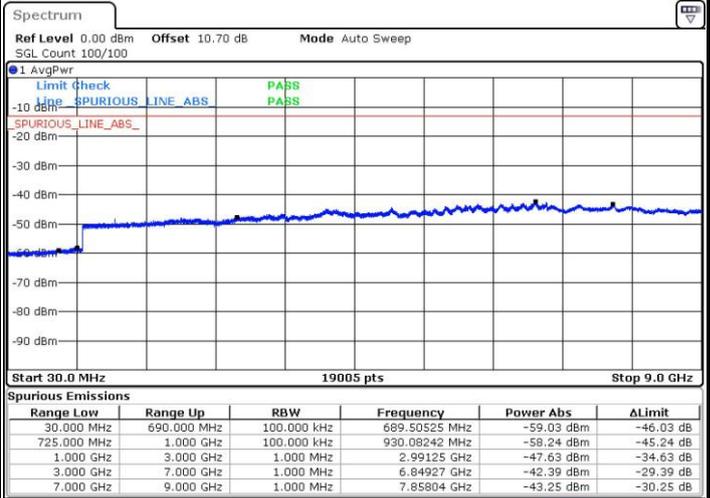
Date: 2 MAY 2017 20:29:20



LTE Band 17 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

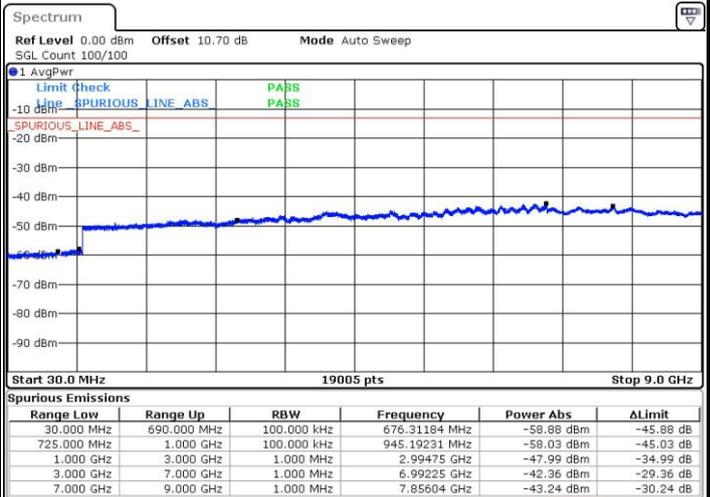
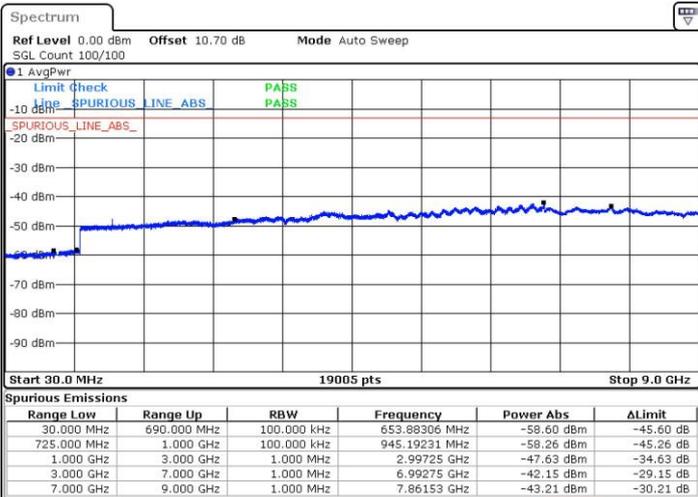


Date: 2 MAY 2017 20:30:56

Date: 2 MAY 2017 20:31:50

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 2 MAY 2017 20:38:03

Date: 2 MAY 2017 20:38:57



Frequency Stability

Test Conditions		LTE Band 17 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0030	
30	Normal Voltage	0.0093	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0097	
-20	Normal Voltage	0.0120	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0079	

Note:

1. Normal Voltage =4.0 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4.0 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 38

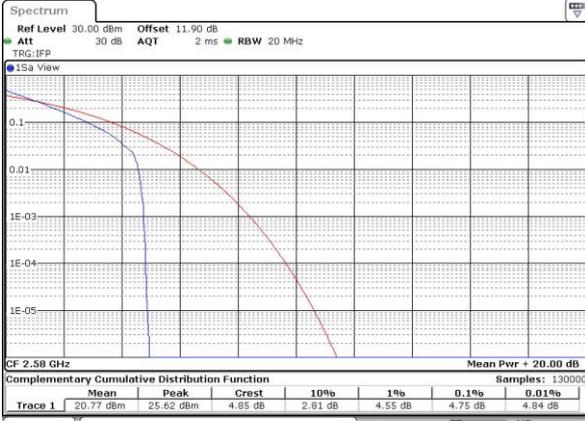
### Peak-to-Average Ratio

Mode	LTE Band 38 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.75	5.13	5.42	6.23	<b>PASS</b>
Middle CH	4.35	5.19	5.16	6.2	
Highest CH	4.67	5.19	5.51	6.23	



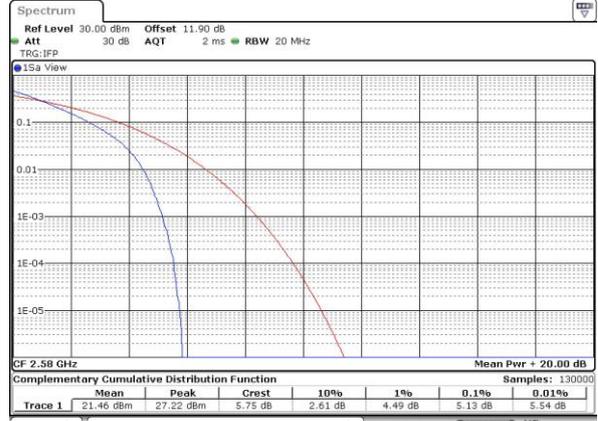
LTE Band 38 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 2 MAY 2017 21:02:34

Lowest Channel / Full RB



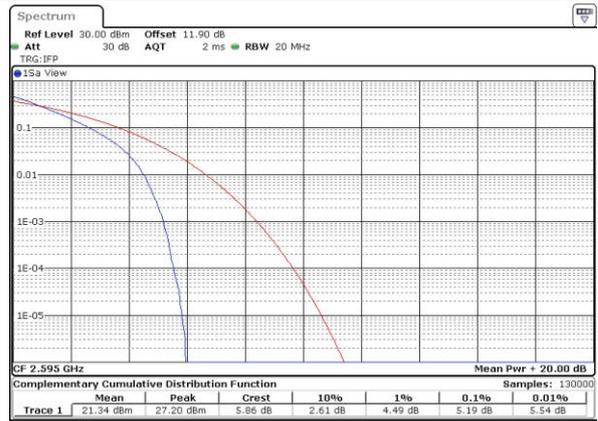
Date: 2 MAY 2017 21:02:50

Middle Channel / 1RB



Date: 2 MAY 2017 21:03:03

Middle Channel / Full RB



Date: 2 MAY 2017 21:03:18

Highest Channel / 1RB



Date: 2 MAY 2017 21:03:33

Highest Channel / Full RB



Date: 2 MAY 2017 21:03:49



LTE Band 38 / 20MHz / 16QAM

Lowest Channel / 1RB



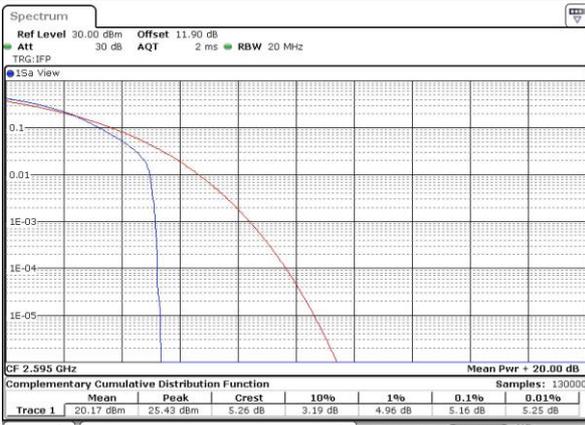
Date: 2 MAY 2017 21:01:00

Lowest Channel / Full RB



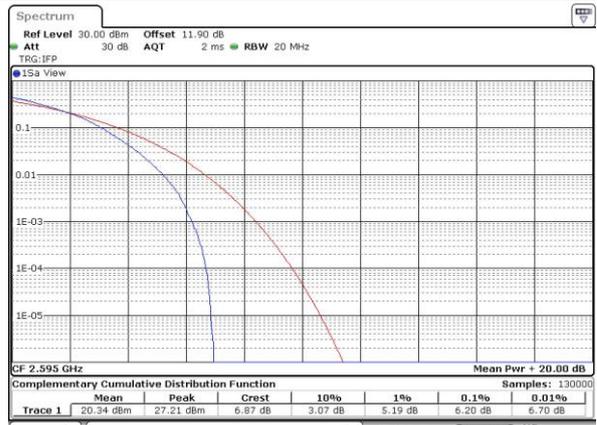
Date: 2 MAY 2017 21:01:18

Middle Channel / 1RB



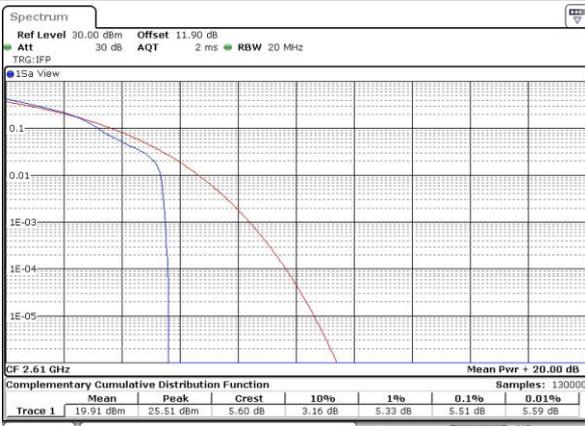
Date: 2 MAY 2017 21:01:35

Middle Channel / Full RB



Date: 2 MAY 2017 21:01:49

Highest Channel / 1RB



Date: 2 MAY 2017 21:02:04

Highest Channel / Full RB



Date: 2 MAY 2017 21:02:21



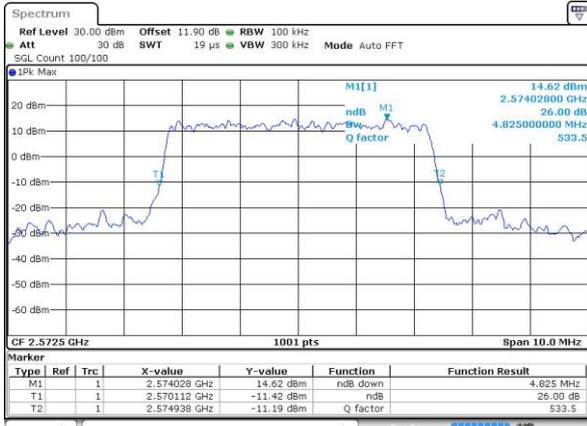
**26dB Bandwidth**

Mode	LTE Band 38 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.825	4.795	9.75	9.61	14.386	14.086	20.02	20.06
Middle CH	-	-	-	-	4.935	4.825	9.65	9.89	14.176	14.416	20.14	20.06
Highest CH	-	-	-	-	4.695	4.715	9.69	9.71	14.116	14.416	20.18	20.1



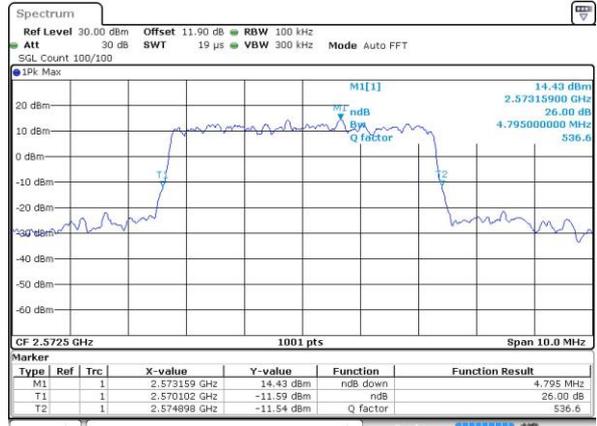
LTE Band 38

Lowest Channel / 5MHz / QPSK



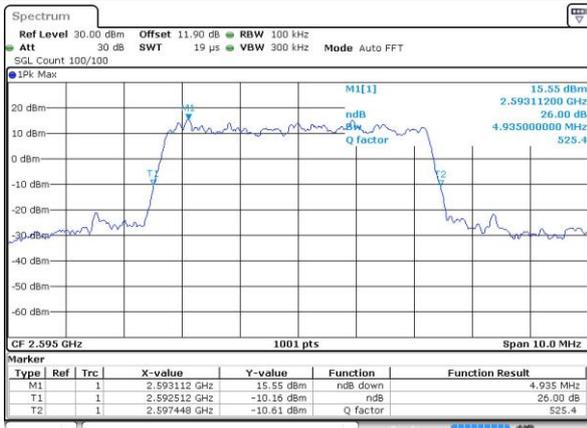
Date: 2 MAY 2017 20:50:09

Lowest Channel / 5MHz / 16QAM



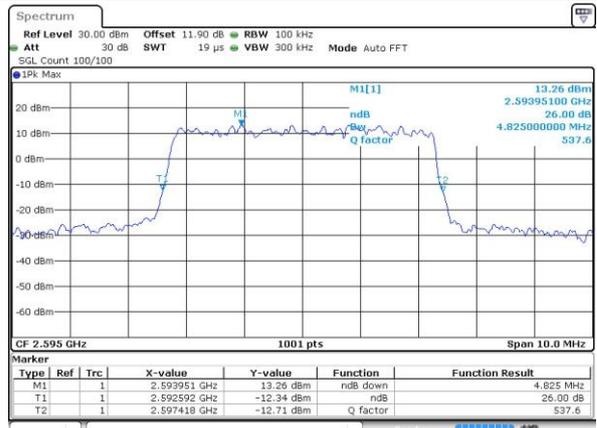
Date: 2 MAY 2017 20:50:20

Middle Channel / 5MHz / QPSK



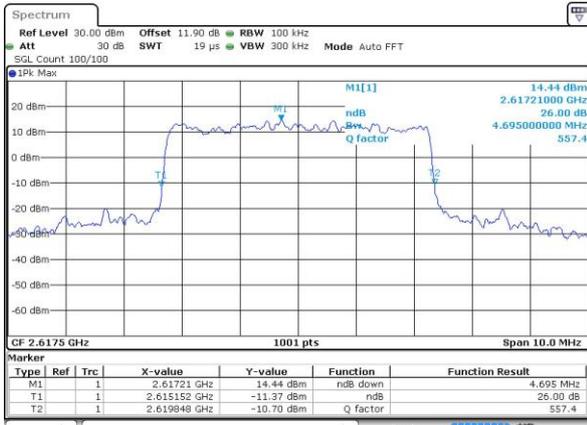
Date: 2 MAY 2017 20:50:51

Middle Channel / 5MHz / 16QAM



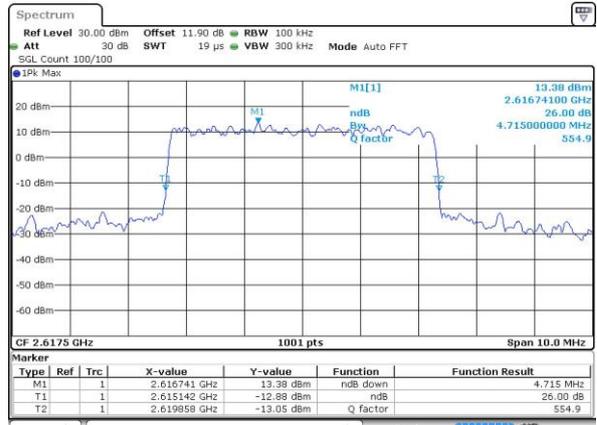
Date: 2 MAY 2017 20:51:01

Highest Channel / 5MHz / QPSK



Date: 2 MAY 2017 20:51:32

Highest Channel / 5MHz / 16QAM

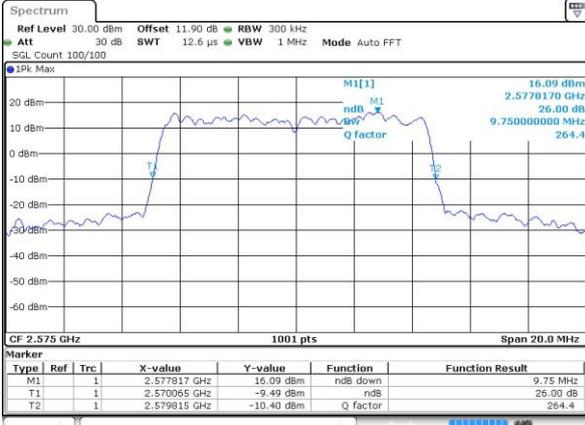


Date: 2 MAY 2017 20:51:43



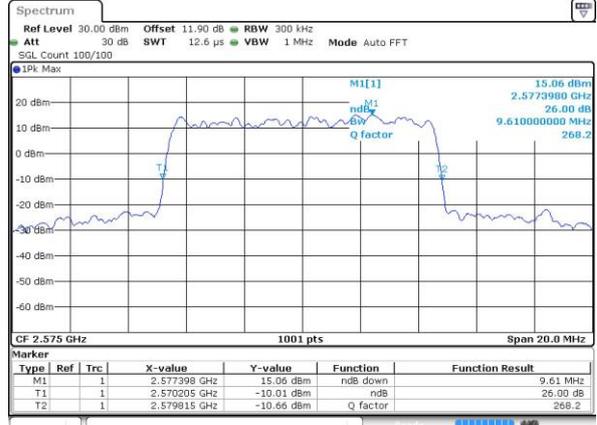
LTE Band 38

Lowest Channel / 10MHz / QPSK



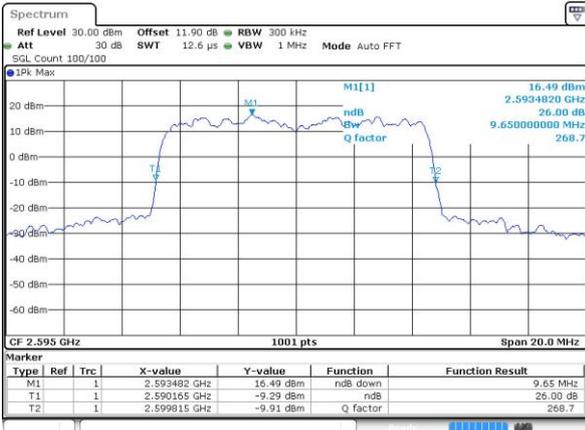
Date: 2 MAY 2017 20:52:14

Lowest Channel / 10MHz / 16QAM



Date: 2 MAY 2017 20:52:24

Middle Channel / 10MHz / QPSK



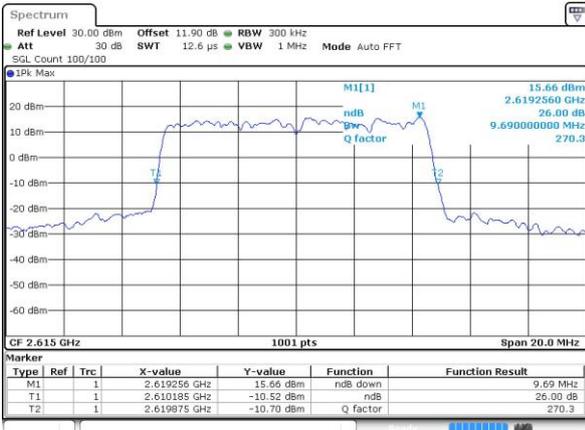
Date: 2 MAY 2017 20:52:55

Middle Channel / 10MHz / 16QAM



Date: 2 MAY 2017 20:53:06

Highest Channel / 10MHz / QPSK



Date: 2 MAY 2017 20:53:37

Highest Channel / 10MHz / 16QAM



Date: 2 MAY 2017 20:53:47