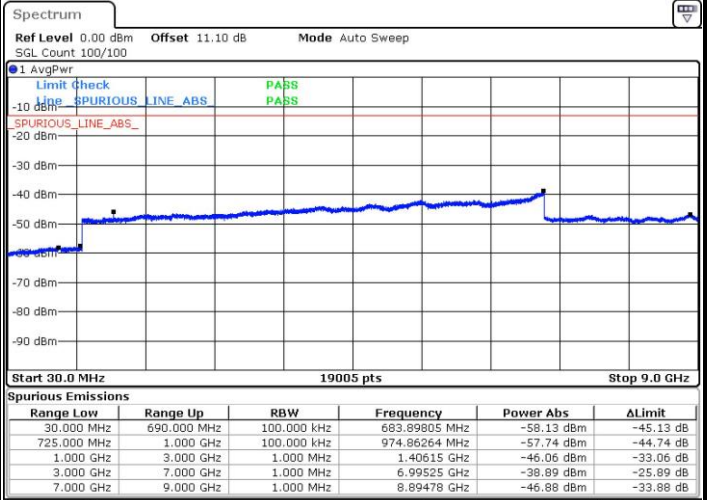
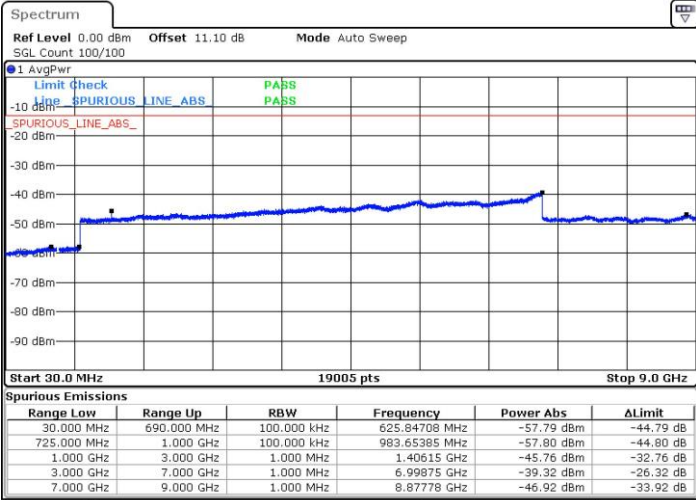




LTE Band 12 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

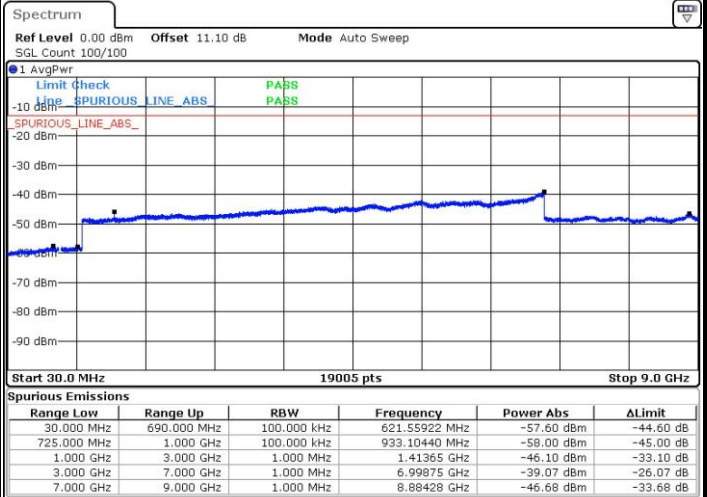


Date: 23.JUN.2019 22:55:18

Date: 23.JUN.2019 22:54:16

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 23.JUN.2019 23:00:42

Date: 23.JUN.2019 23:01:45



**Frequency Stability**

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0023	PASS
40	Normal Voltage	0.0102	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0037	
-10	Normal Voltage	0.0024	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0041	
20	Maximum Voltage	0.0058	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

**Note:**

1. Normal Voltage =7.7 V. ; Battery End Point (BEP) =6.8 V. ; Maximum Voltage =8.8 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

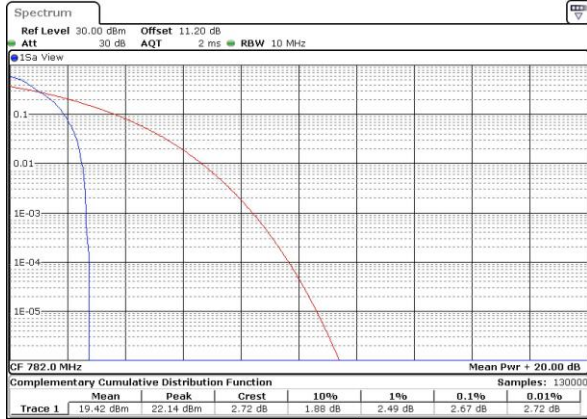
### Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	<b>PASS</b>
Middle CH	2.67	4.75	3.57	5.57	
Highest CH	-	-	-	-	



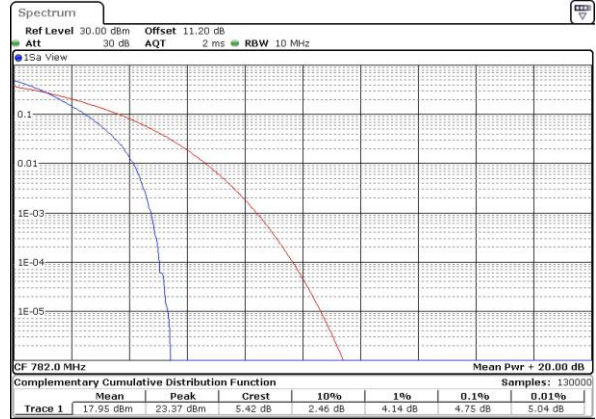
LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB



Date: 25 JUN 2019 04:19:44

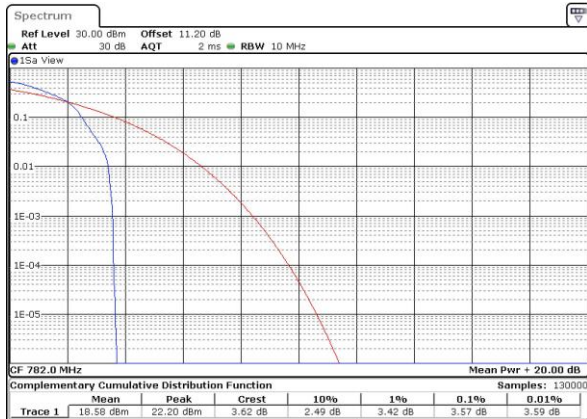
Middle Channel / Full RB



Date: 25 JUN 2019 04:19:55

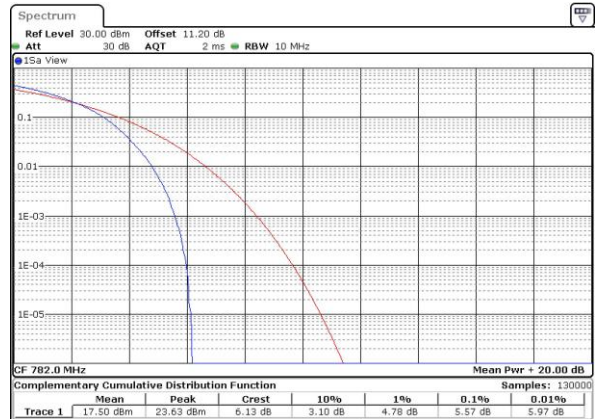
LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Date: 25 JUN 2019 04:19:20

Middle Channel / Full RB



Date: 25 JUN 2019 04:19:32



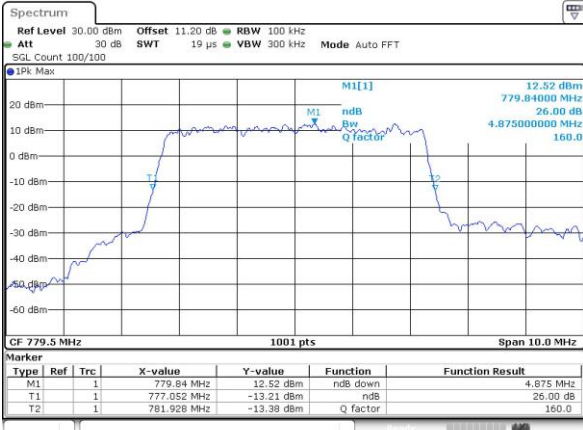
**26dB Bandwidth**

Mode BW Mod.	LTE Band 13 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.87	4.84	-	-	-	-	-	-
Middle CH	-	-	-	-	4.88	4.86	9.77	9.71	-	-	-	-
Highest CH	-	-	-	-	4.92	4.76	-	-	-	-	-	-



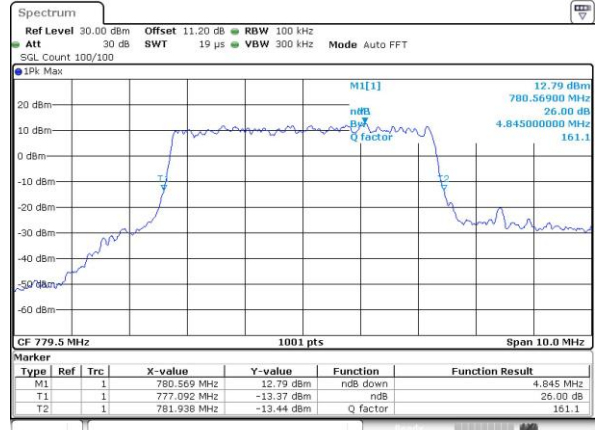
LTE Band 13

Lowest Channel / 5MHz / QPSK



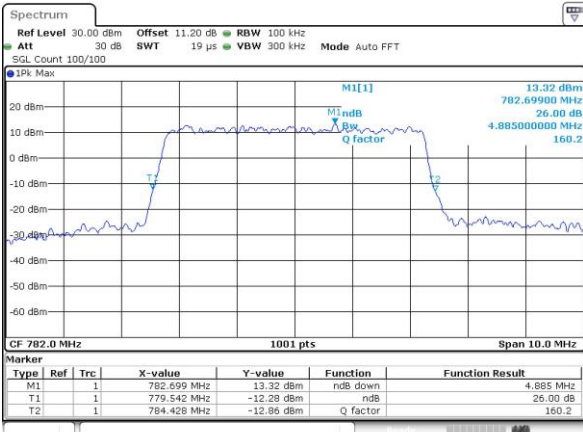
Date: 28 JUN 2019 05:56:09

Lowest Channel / 5MHz / 16QAM



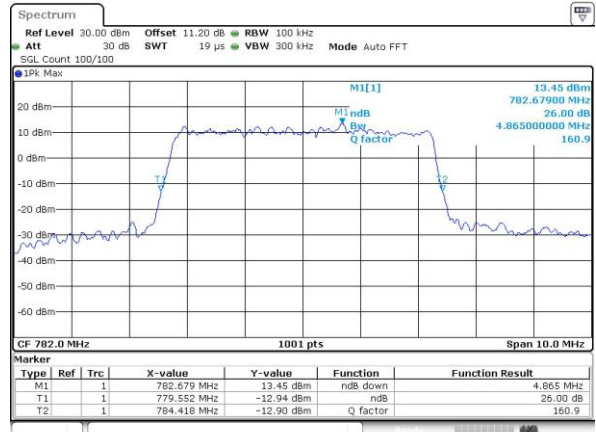
Date: 28 JUN 2019 05:56:21

Middle Channel / 5MHz / QPSK



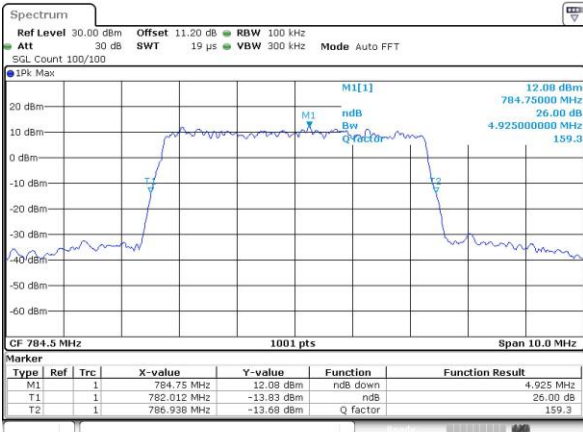
Date: 28 JUN 2019 05:56:44

Middle Channel / 5MHz / 16QAM



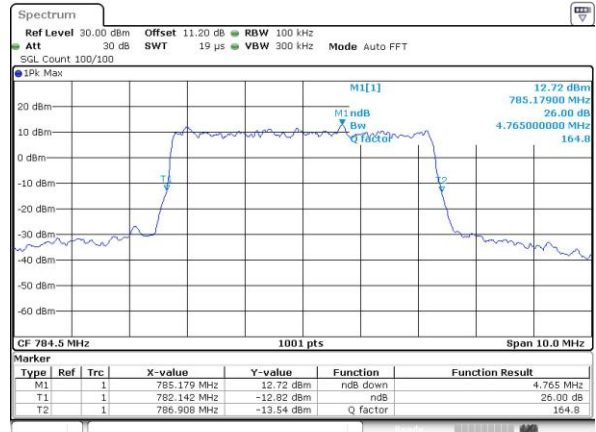
Date: 28 JUN 2019 05:56:32

Highest Channel / 5MHz / QPSK



Date: 28 JUN 2019 05:56:55

Highest Channel / 5MHz / 16QAM

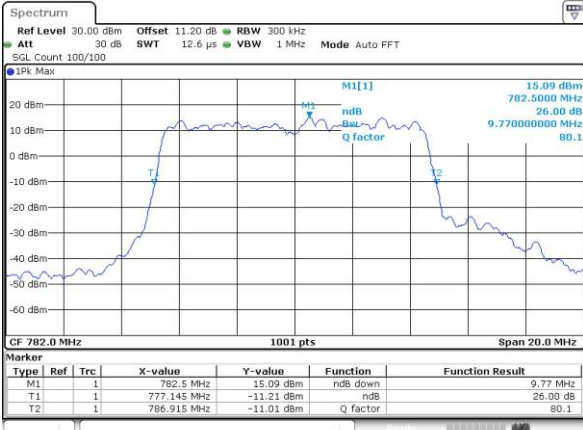


Date: 28 JUN 2019 05:57:07



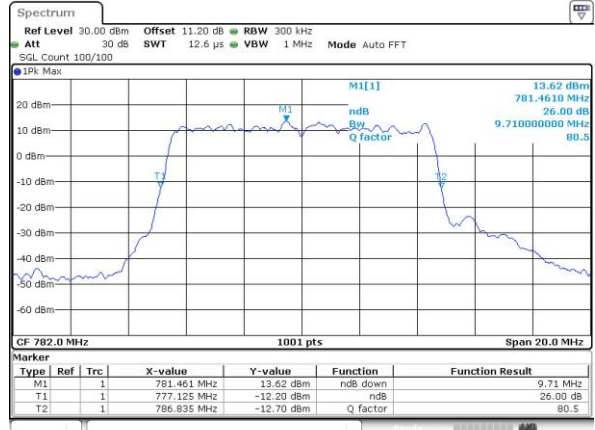
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 28 JUN 2019 05:57:18

Middle Channel / 10MHz / 16QAM



Date: 28 JUN 2019 05:57:30



**Occupied Bandwidth**

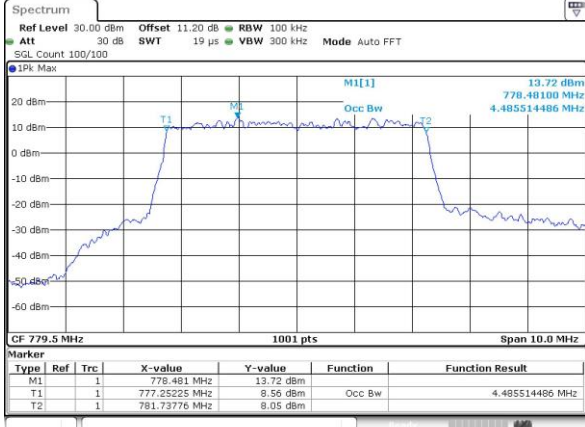
Mode BW Mod.	LTE Band 13 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.47	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	4.47	9.05	8.99	-	-	-	-
Highest CH	-	-	-	-	4.48	4.48	-	-	-	-	-	-





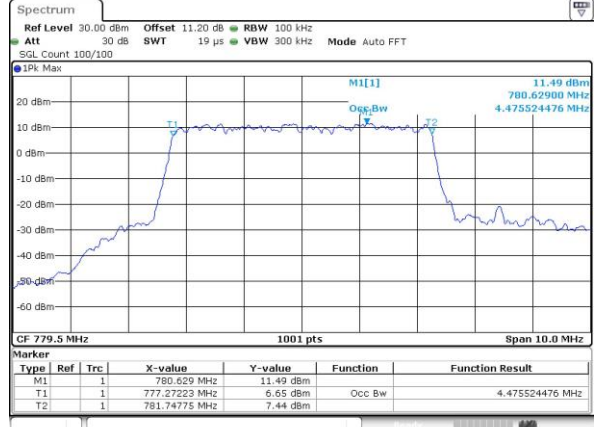
LTE Band 13

Lowest Channel / 5MHz / QPSK



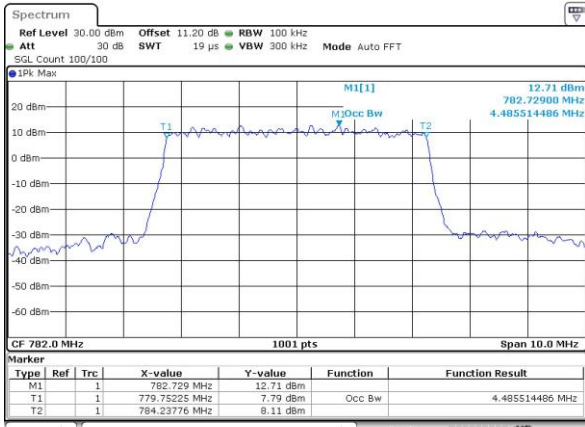
Date: 28 JUN 2019 05:57:41

Lowest Channel / 5MHz / 16QAM



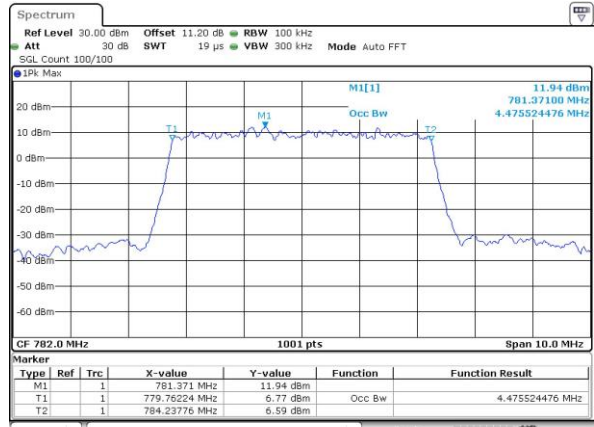
Date: 28 JUN 2019 05:57:53

Middle Channel / 5MHz / QPSK



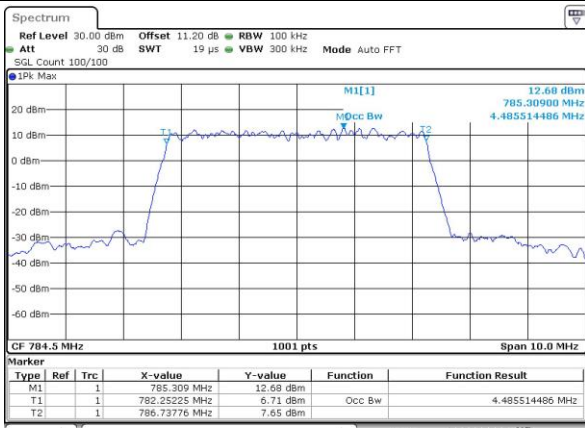
Date: 28 JUN 2019 05:58:16

Middle Channel / 5MHz / 16QAM



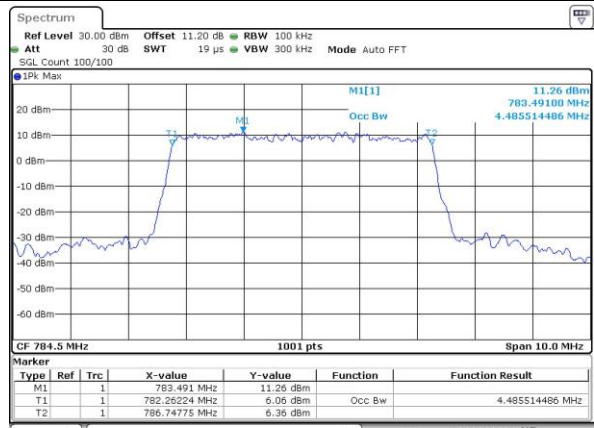
Date: 28 JUN 2019 05:58:05

Highest Channel / 5MHz / QPSK



Date: 28 JUN 2019 05:58:28

Highest Channel / 5MHz / 16QAM

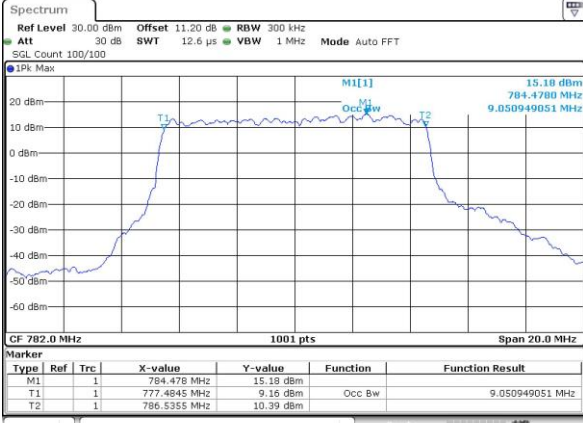


Date: 28 JUN 2019 05:58:39



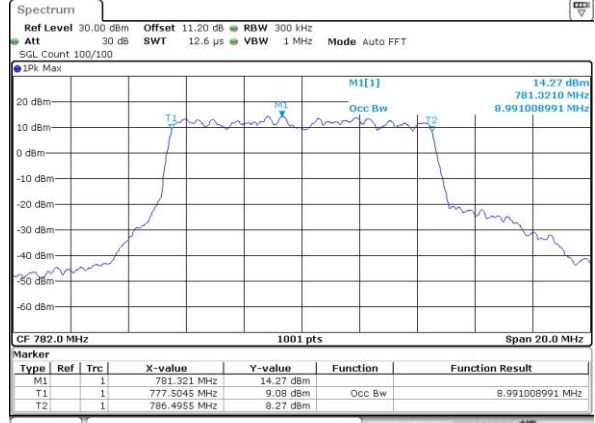
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 28 JUN 2019 05:58:51

Middle Channel / 10MHz / 16QAM



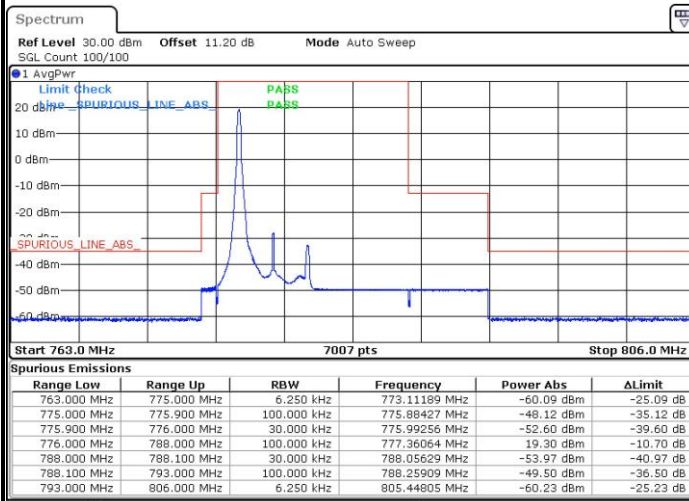
Date: 28 JUN 2019 05:59:03



# Conducted Band Edge

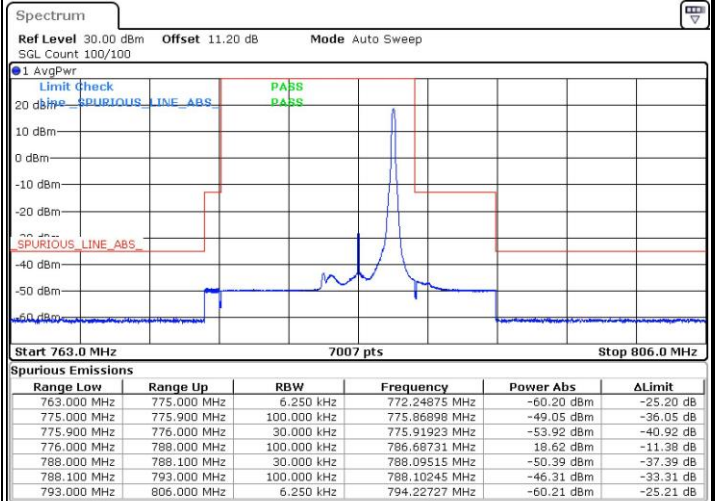
## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



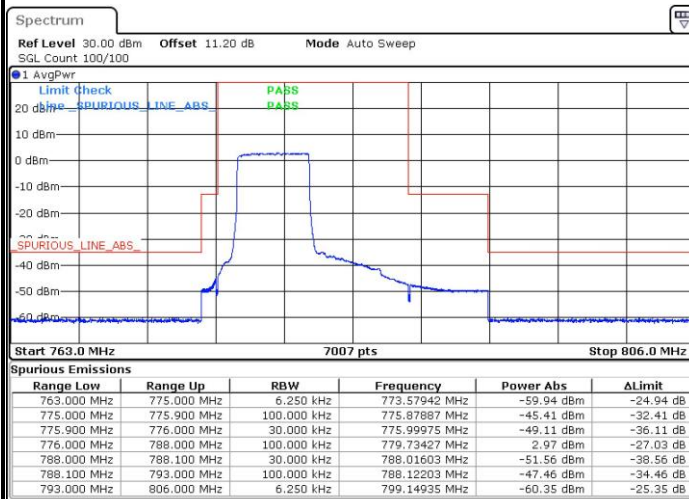
Date: 25 JUN 2019 03:51:53

### Highest Band Edge / 1 RB



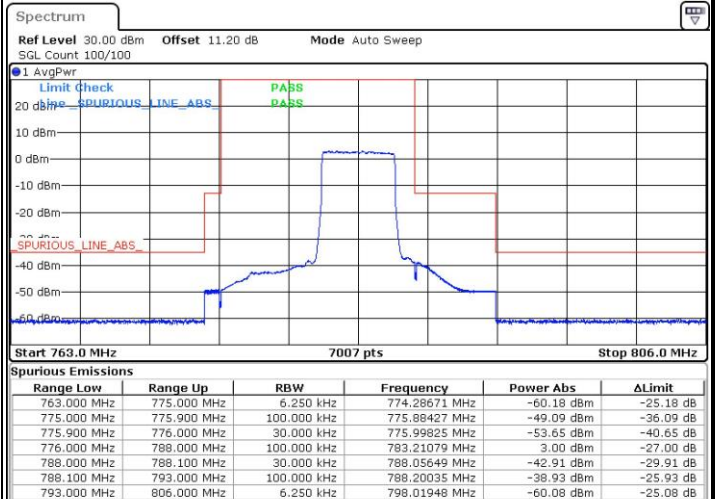
Date: 25 JUN 2019 04:04:14

### Lowest Band Edge / Full RB



Date: 25 JUN 2019 03:46:54

### Highest Band Edge / Full RB



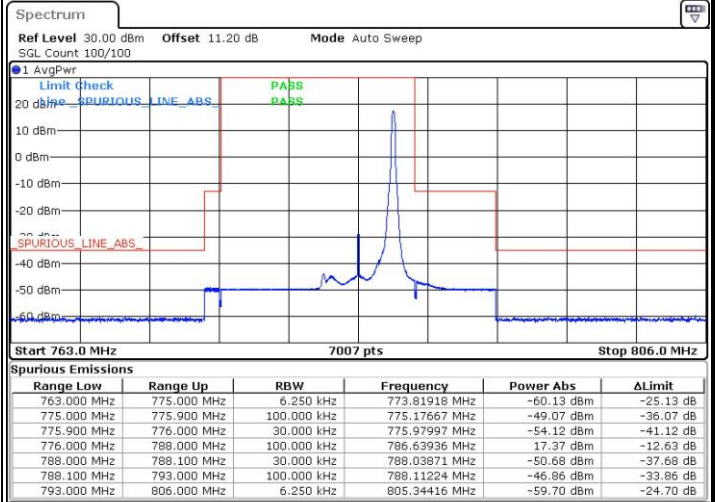
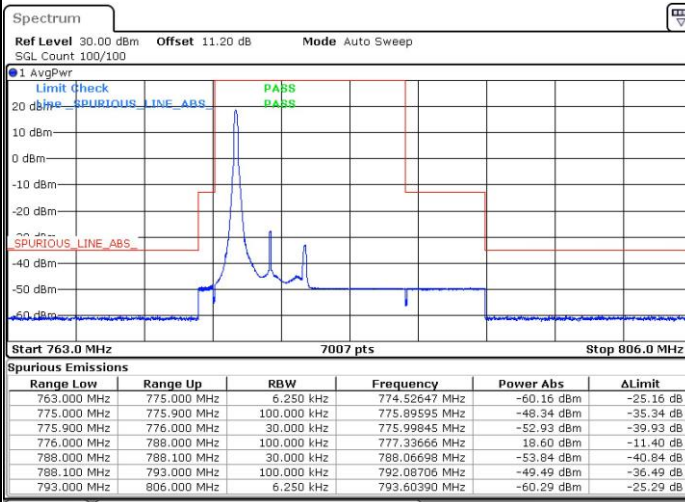
Date: 25 JUN 2019 03:59:14



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

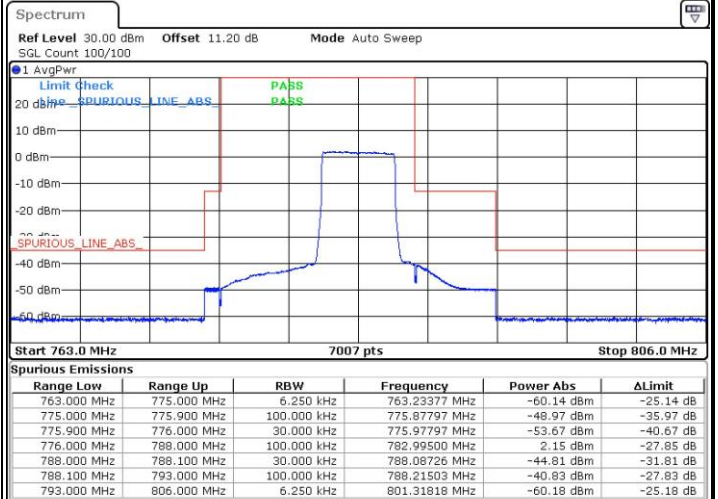
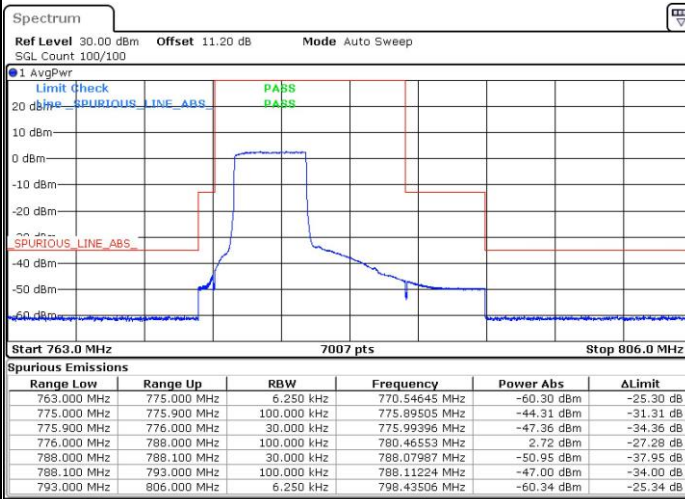


Date: 25 JUN.2019 03:50:13

Date: 25 JUN.2019 04:02:34

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 25 JUN.2019 03:48:34

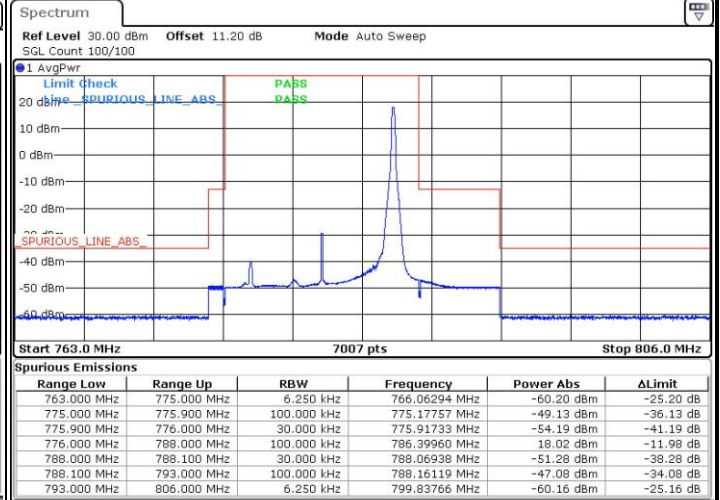
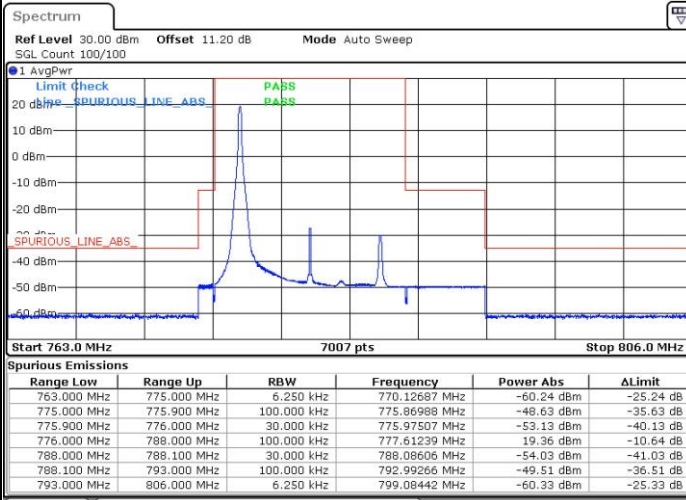
Date: 25 JUN.2019 04:00:55



LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB

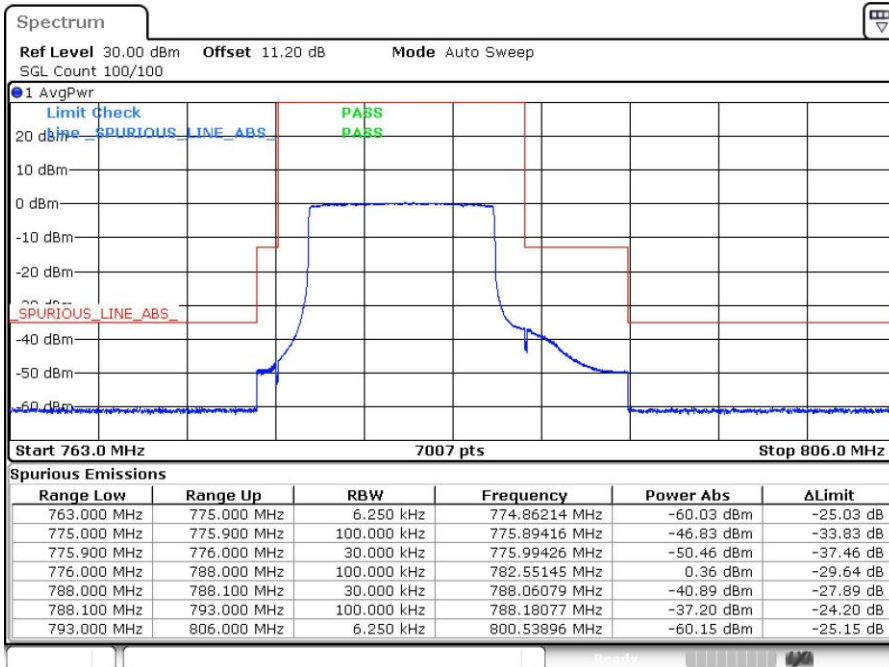
Highest Band Edge / 1 RB



Date: 25 JUN 2019 04:13:44

Date: 25 JUN 2019 04:15:24

Band Edge / Full RB



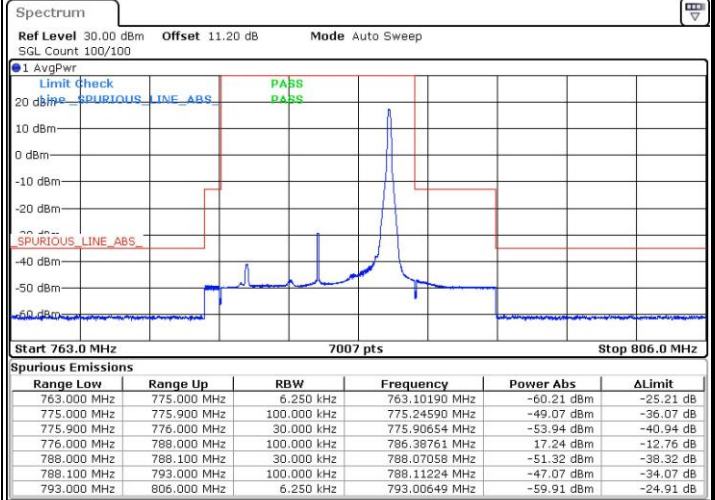
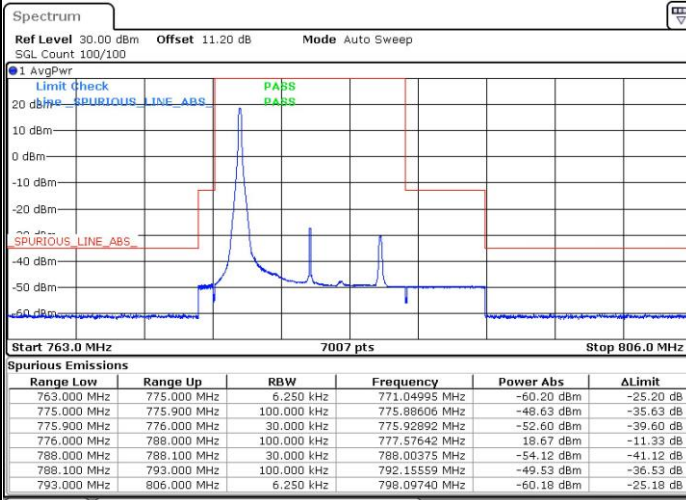
Date: 25 JUN 2019 04:08:45



LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

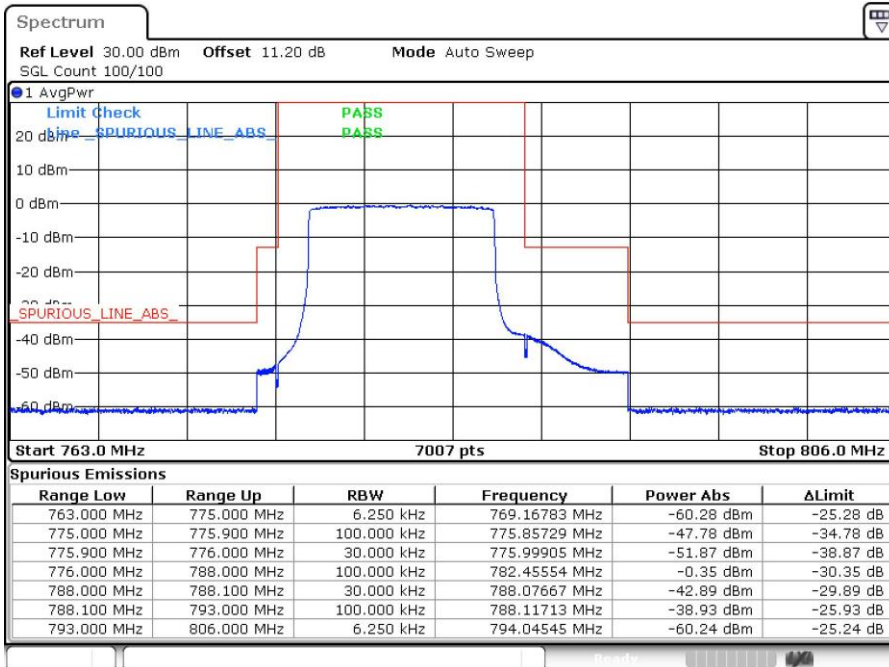
Highest Band Edge / 1 RB



Date: 25 JUN 2019 04:12:05

Date: 25 JUN 2019 04:17:03

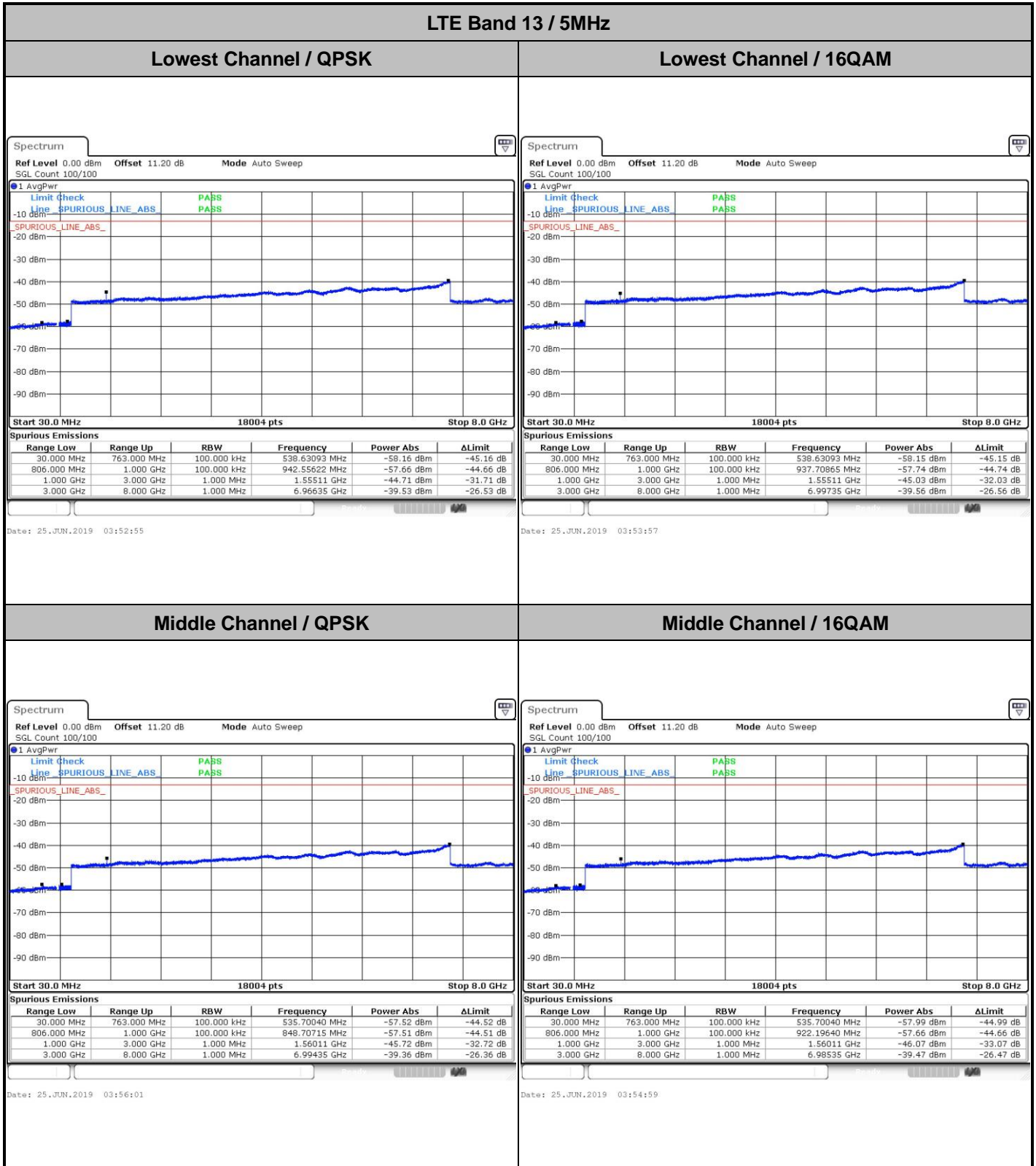
Band Edge / Full RB



Date: 25 JUN 2019 04:10:25



# Conducted Spurious Emission





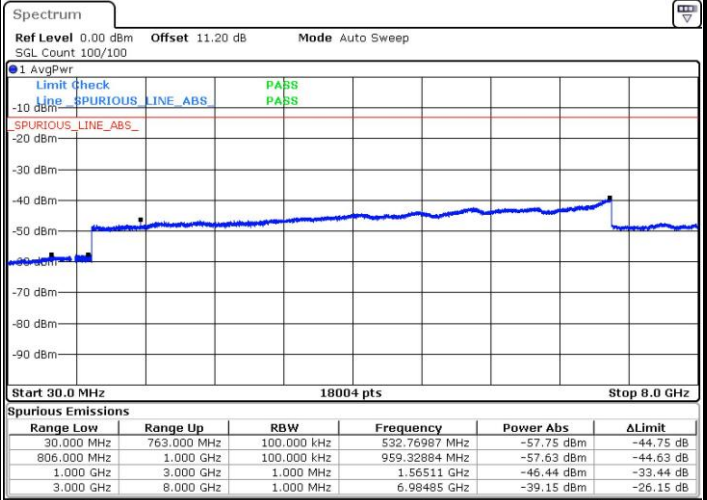
LTE Band 13 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 25 JUN.2019 04:05:16

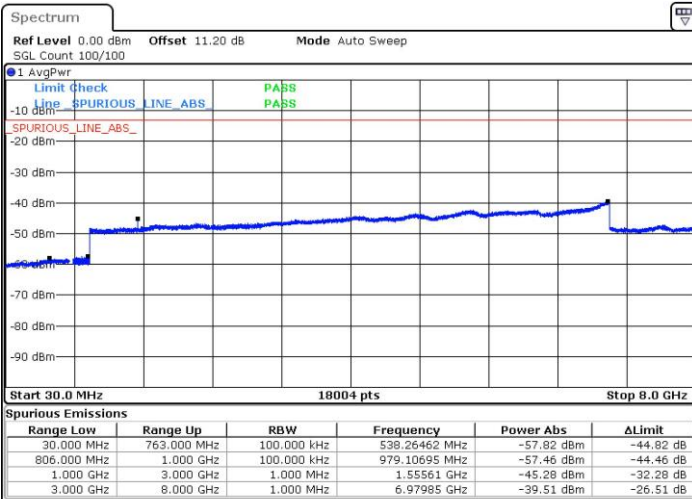


Date: 25 JUN.2019 04:06:19

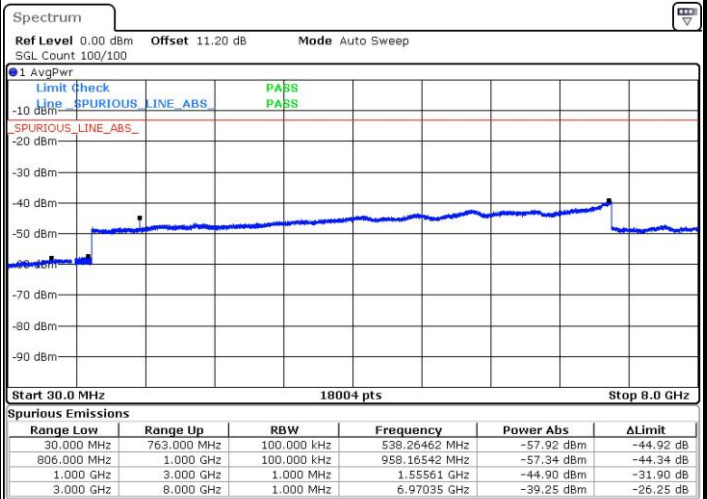
LTE Band 13 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 25 JUN.2019 04:19:07



Date: 25 JUN.2019 04:18:05





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	0.0036	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0033	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0046	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0036	
-30	Normal Voltage	0.0037	
20	Maximum Voltage	0.0087	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0090	

Note:

1. Normal Voltage =7.7 V. ; Battery End Point (BEP) =6.8 V. ; Maximum Voltage =8.8 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 17

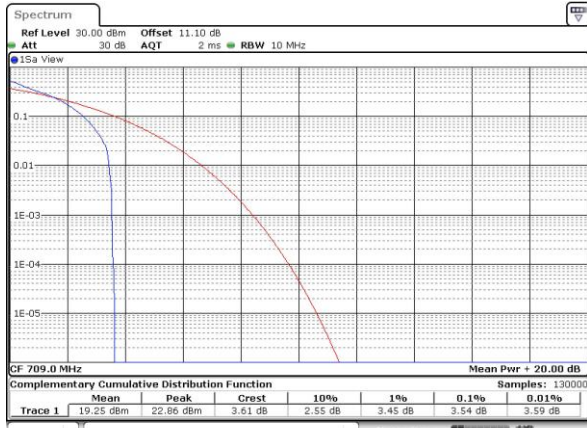
### Peak-to-Average Ratio

Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.54	4.58	4.81	5.51	<b>PASS</b>
Middle CH	3.45	4.84	4.43	5.88	
Highest CH	3.59	4.67	3.88	5.74	



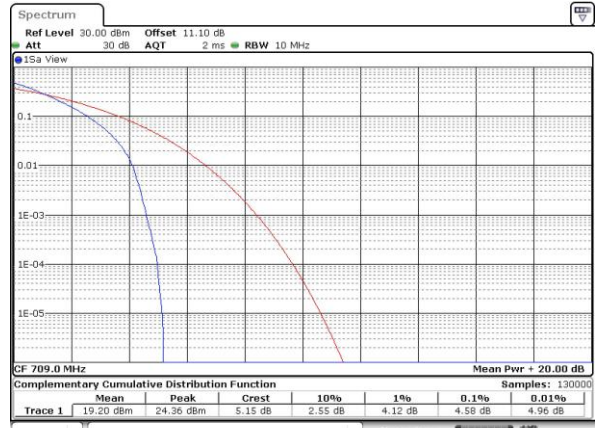
LTE Band 17 / 10MHz / QPSK

Lowest Channel / 1RB



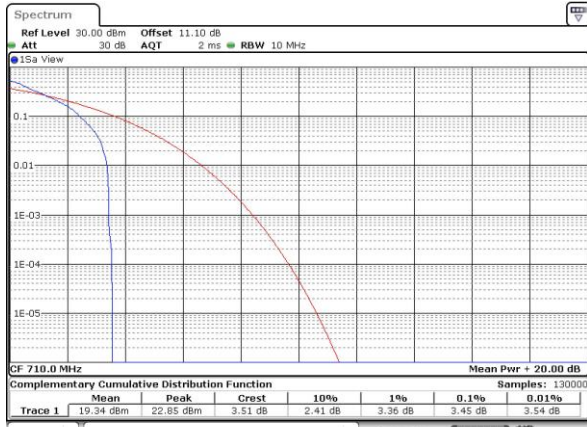
Date: 25 JUN 2019 01:10:56

Lowest Channel / Full RB



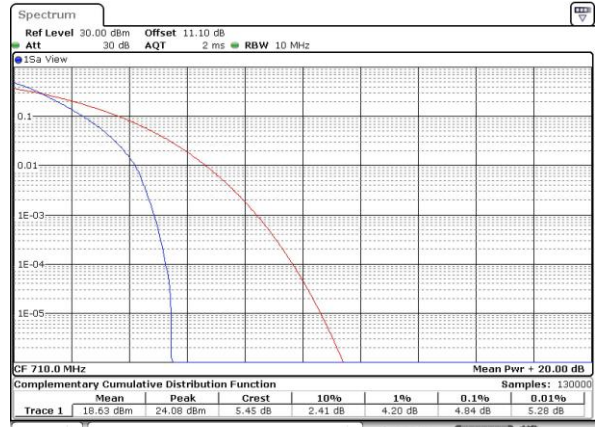
Date: 25 JUN 2019 01:11:07

Middle Channel / 1RB



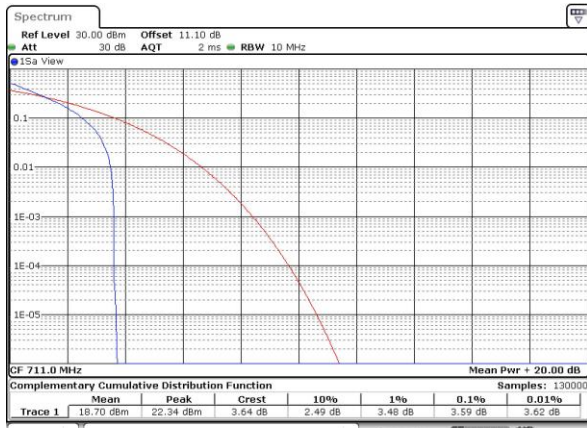
Date: 25 JUN 2019 01:11:24

Middle Channel / Full RB



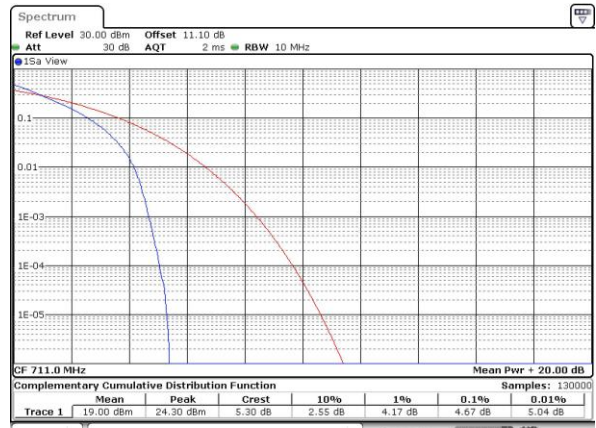
Date: 25 JUN 2019 01:11:38

Highest Channel / 1RB



Date: 25 JUN 2019 01:11:49

Highest Channel / Full RB

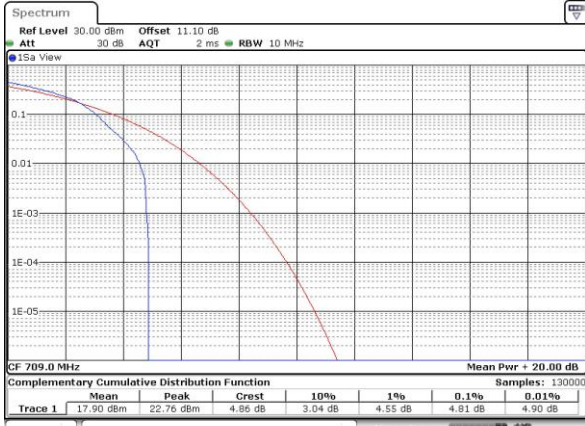


Date: 25 JUN 2019 01:12:24



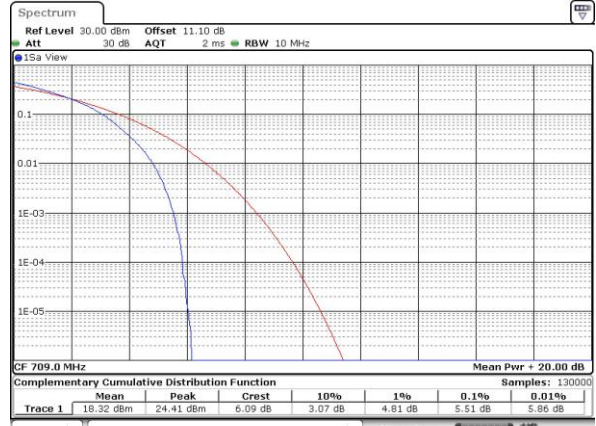
LTE Band 17 / 10MHz / 16QAM

Lowest Channel / 1RB



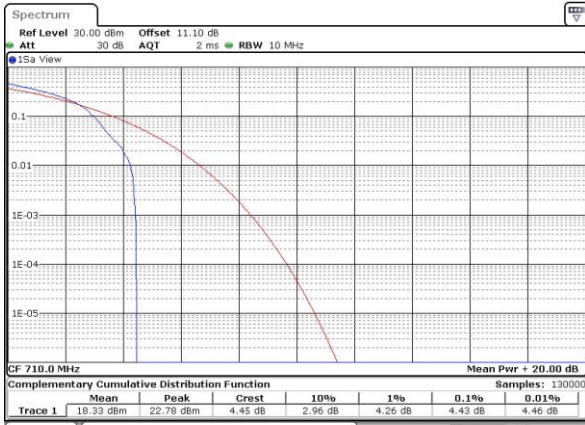
Date: 25 JUN 2019 01:09:35

Lowest Channel / Full RB



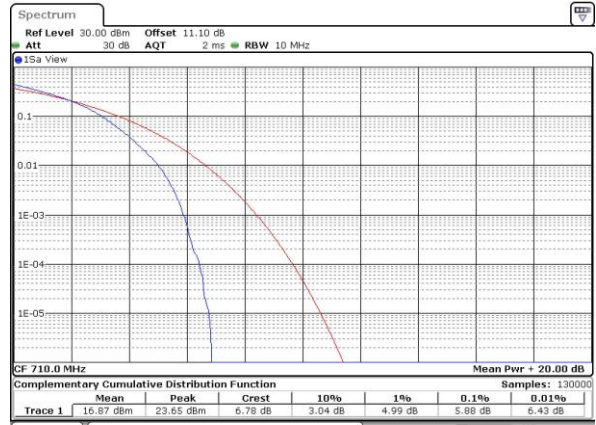
Date: 25 JUN 2019 01:09:50

Middle Channel / 1RB



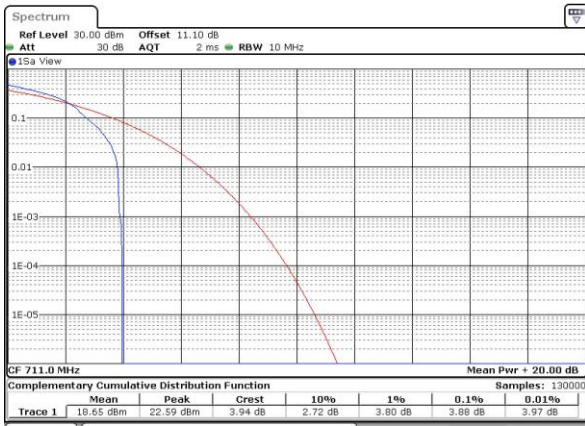
Date: 25 JUN 2019 01:10:02

Middle Channel / Full RB



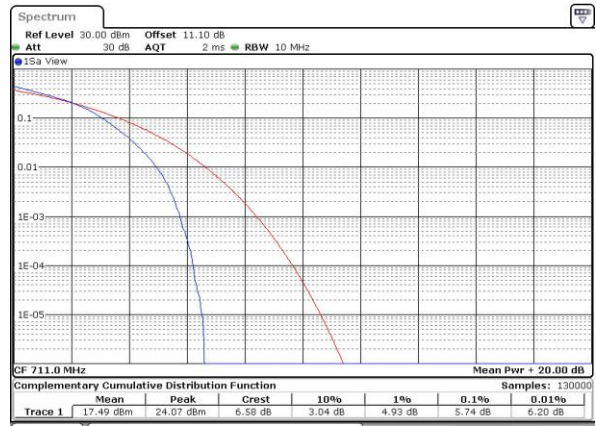
Date: 25 JUN 2019 01:10:13

Highest Channel / 1RB



Date: 25 JUN 2019 01:10:24

Highest Channel / Full RB



Date: 25 JUN 2019 01:10:36



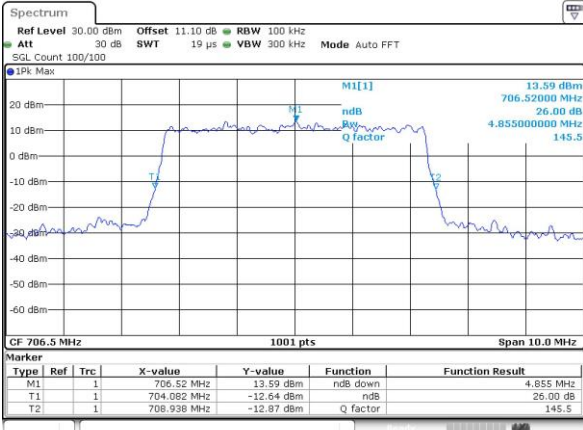
**26dB Bandwidth**

Mode BW Mod.	LTE Band 17 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.85	4.86	9.81	9.63	-	-	-	-
Middle CH	-	-	-	-	4.88	4.87	9.73	9.77	-	-	-	-
Highest CH	-	-	-	-	4.86	4.9	9.75	9.71	-	-	-	-



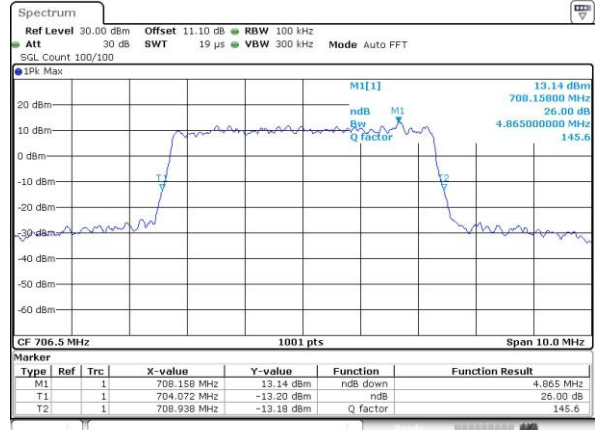
LTE Band 17

Lowest Channel / 5MHz / QPSK



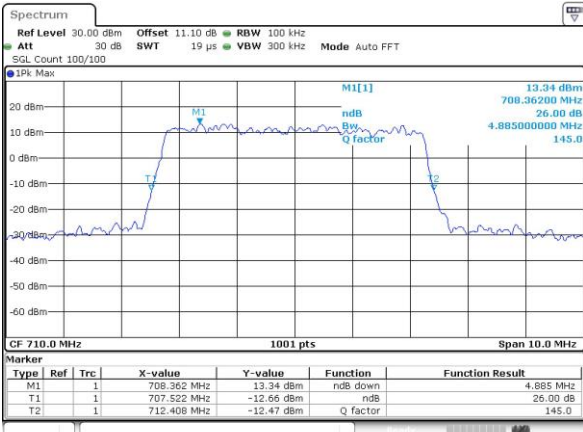
Date: 28 JUN 2019 06:04:05

Lowest Channel / 5MHz / 16QAM



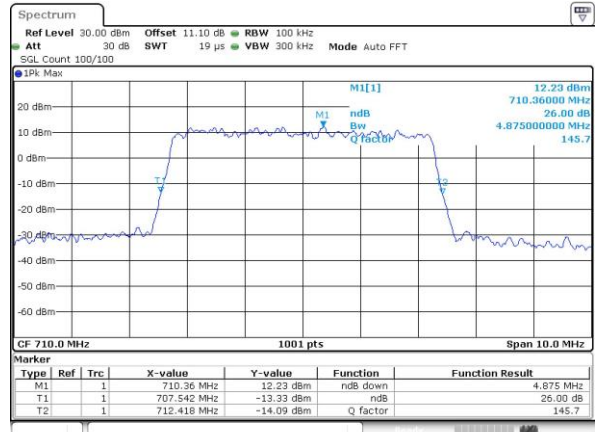
Date: 28 JUN 2019 06:04:17

Middle Channel / 5MHz / QPSK



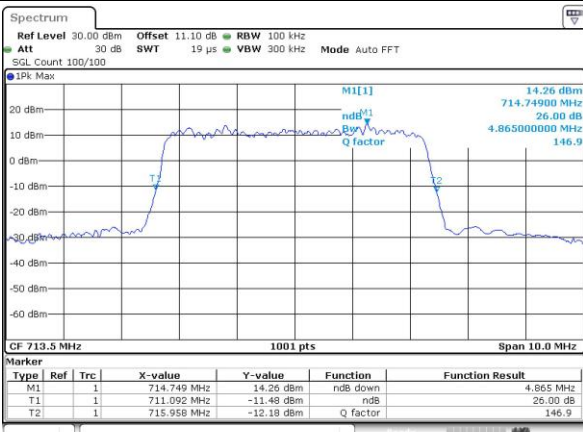
Date: 28 JUN 2019 06:04:28

Middle Channel / 5MHz / 16QAM



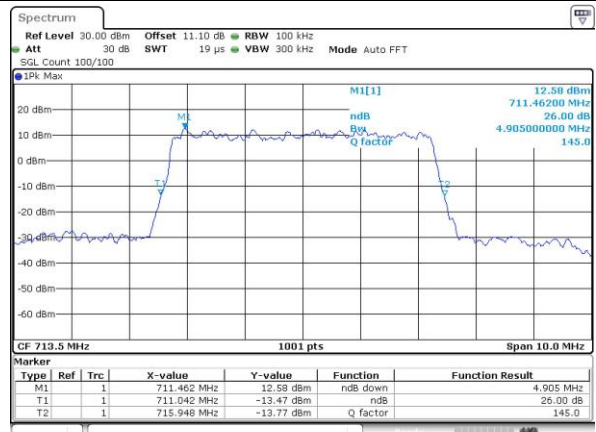
Date: 28 JUN 2019 06:04:40

Highest Channel / 5MHz / QPSK



Date: 28 JUN 2019 06:04:51

Highest Channel / 5MHz / 16QAM

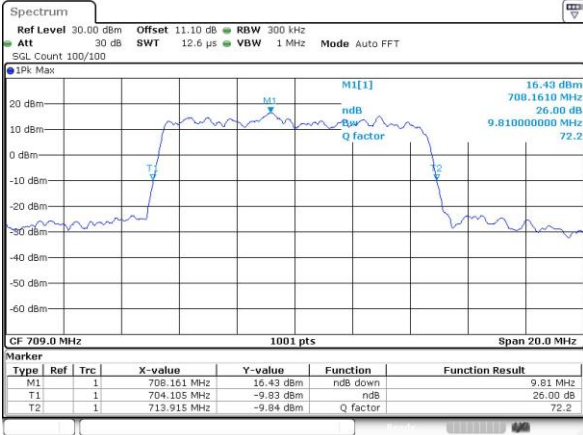


Date: 28 JUN 2019 06:05:03



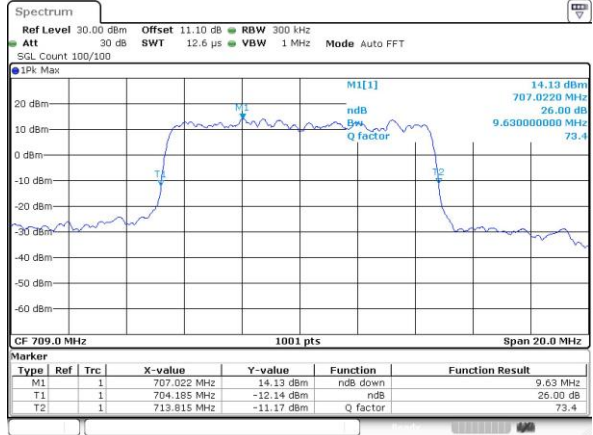
LTE Band 17

Lowest Channel / 10MHz / QPSK



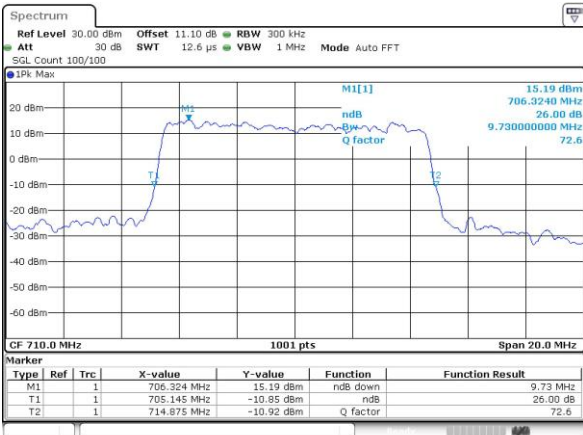
Date: 28 JUN 2019 06:05:14

Lowest Channel / 10MHz / 16QAM



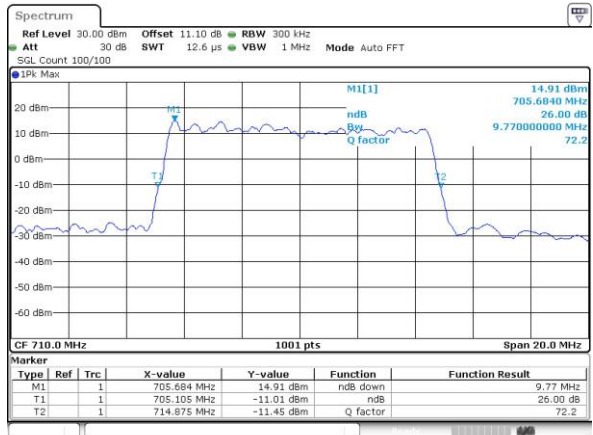
Date: 28 JUN 2019 06:05:26

Middle Channel / 10MHz / QPSK



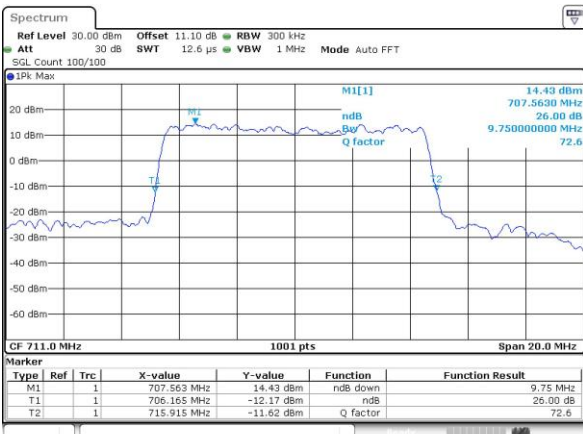
Date: 28 JUN 2019 06:05:17

Middle Channel / 10MHz / 16QAM



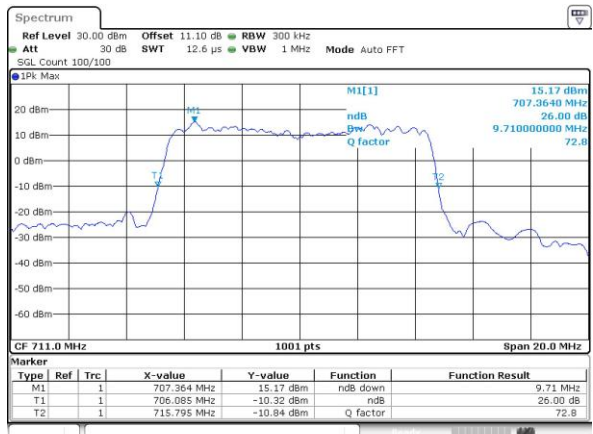
Date: 28 JUN 2019 06:05:48

Highest Channel / 10MHz / QPSK



Date: 28 JUN 2019 06:06:00

Highest Channel / 10MHz / 16QAM



Date: 28 JUN 2019 06:06:12



**Occupied Bandwidth**

Mode BW Mod.	LTE Band 17 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.48	8.95	9.03	-	-	-	-
Middle CH	-	-	-	-	4.46	4.48	8.95	9.05	-	-	-	-
Highest CH	-	-	-	-	4.48	4.49	9.07	9.05	-	-	-	-