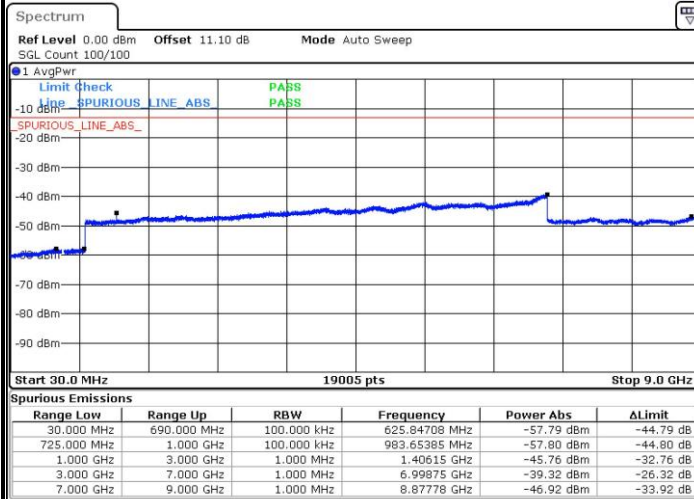




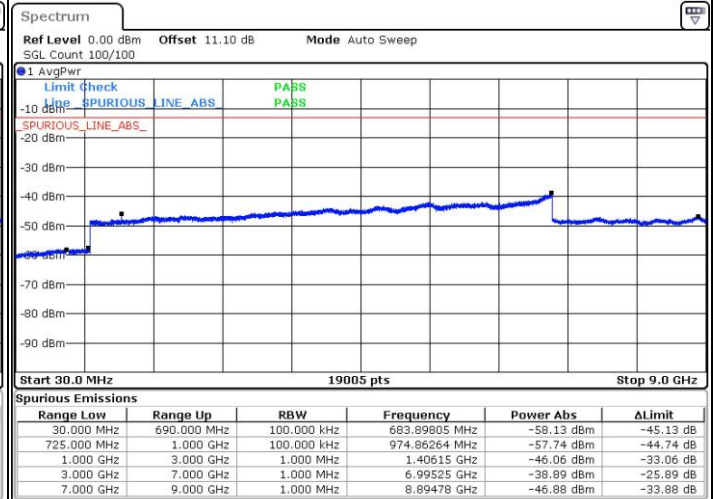
LTE Band 12 / 10MHz

Middle Channel / QPSK



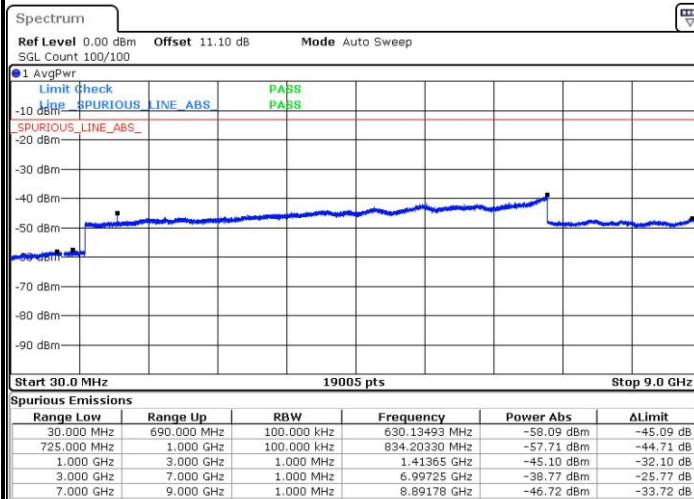
Date: 23.JUN.2019 22:55:18

Middle Channel / 16QAM



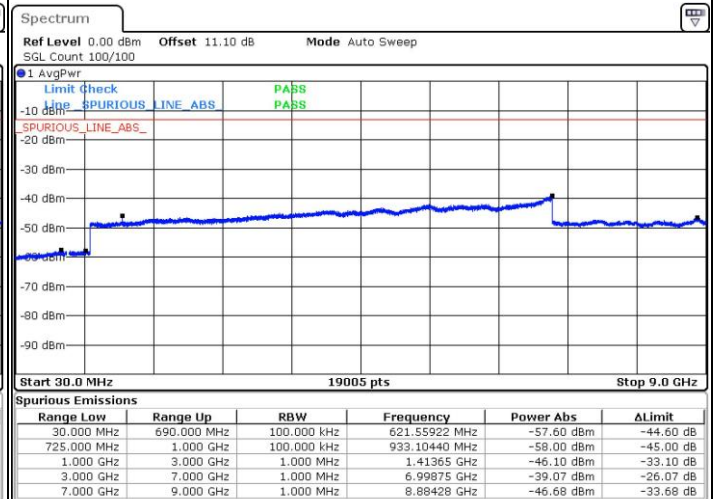
Date: 23.JUN.2019 22:54:16

Highest Channel / QPSK



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

Highest Channel / 16QAM



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	-	-	-	-	PASS
Middle CH	2.67	4.75	3.57	5.57	
Highest CH	-	-	-	-	

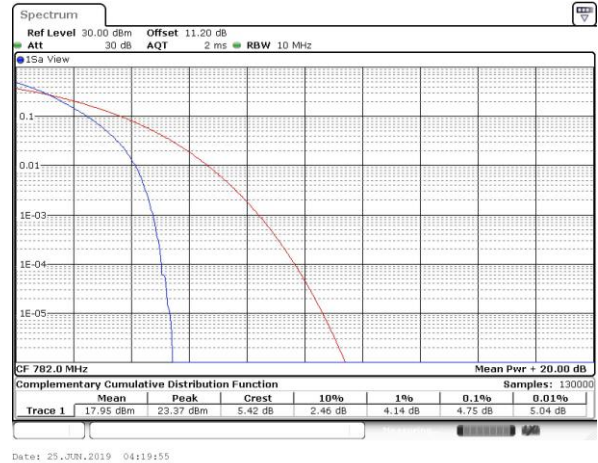


LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB

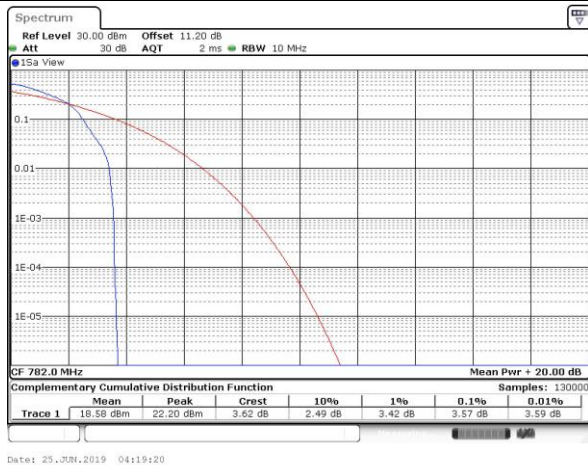


Middle Channel / Full RB

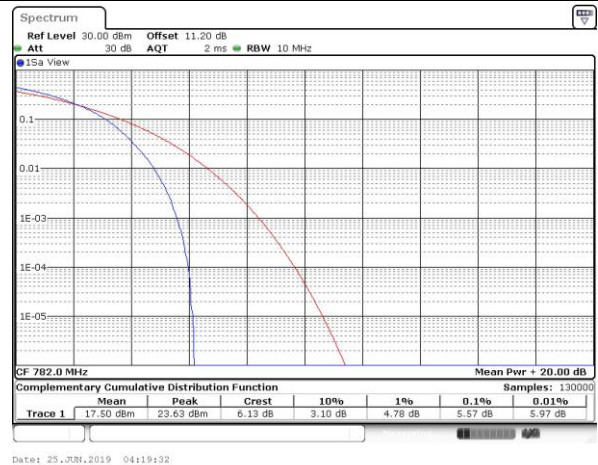


LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Middle Channel / Full RB



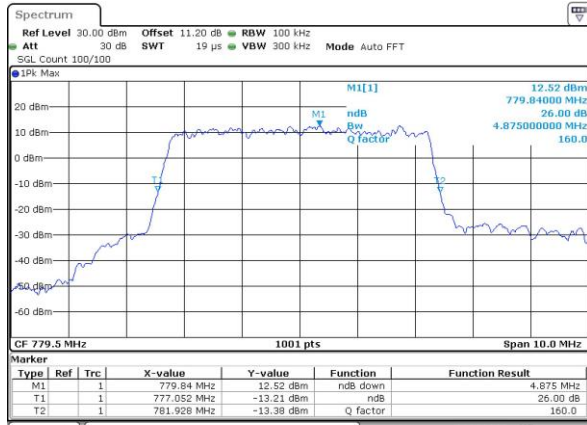
**26dB Bandwidth**

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	-	-	-	-	-	-

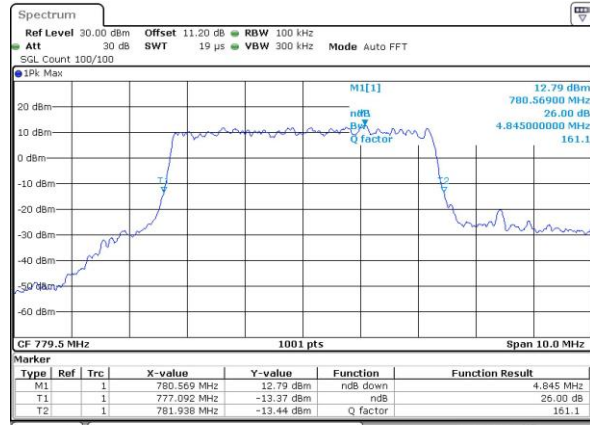


LTE Band 13

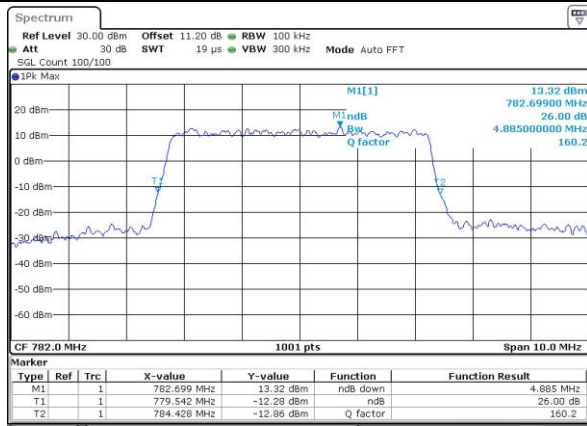
Lowest Channel / 5MHz / QPSK



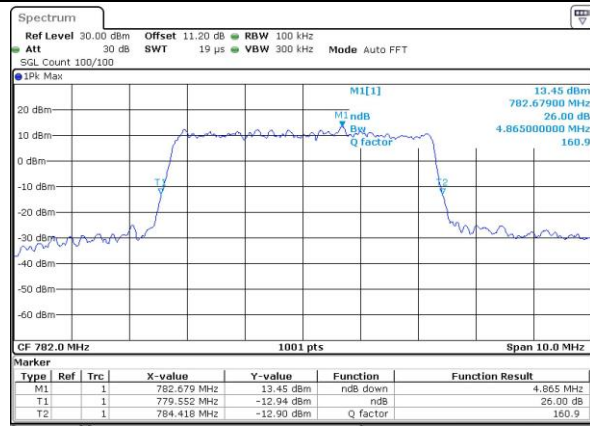
Lowest Channel / 5MHz / 16QAM



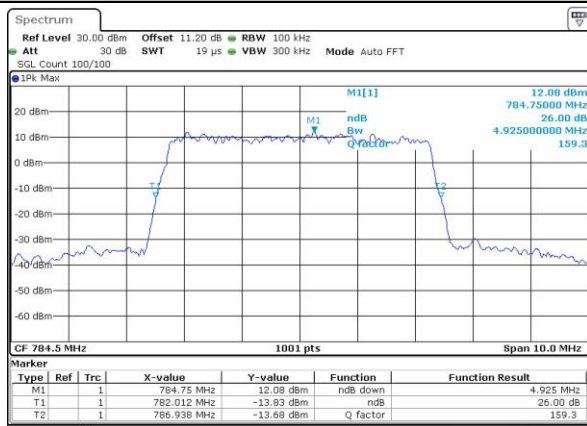
Middle Channel / 5MHz / QPSK



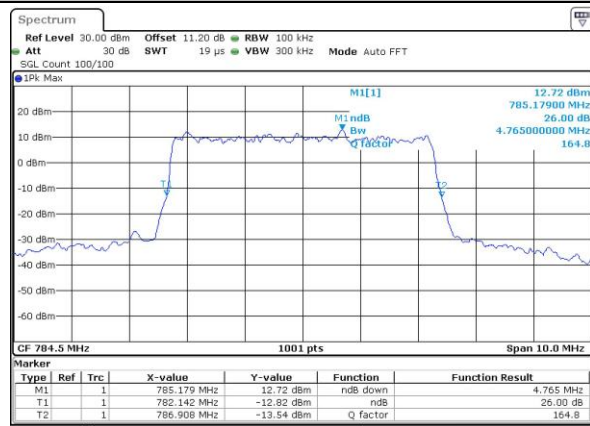
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



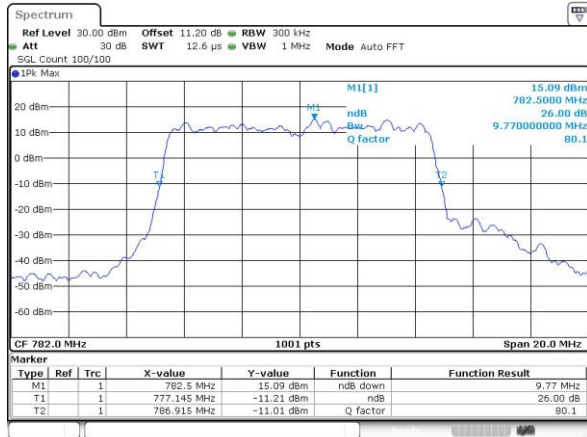
Highest Channel / 5MHz / 16QAM



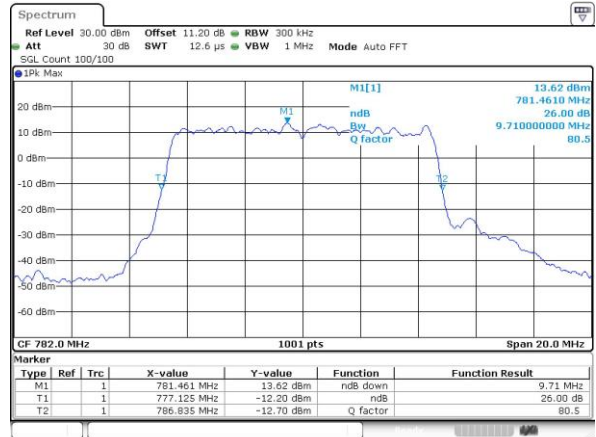


LTE Band 13

Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM





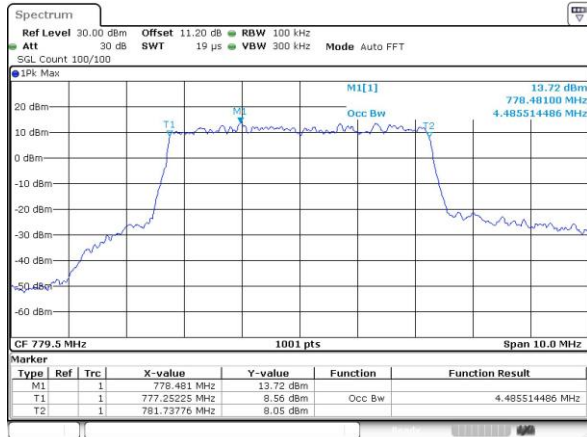
Occupied Bandwidth

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	-	-	-	-	-	-

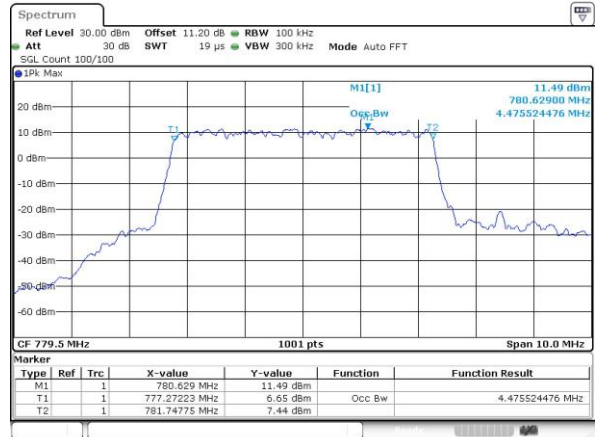


LTE Band 13

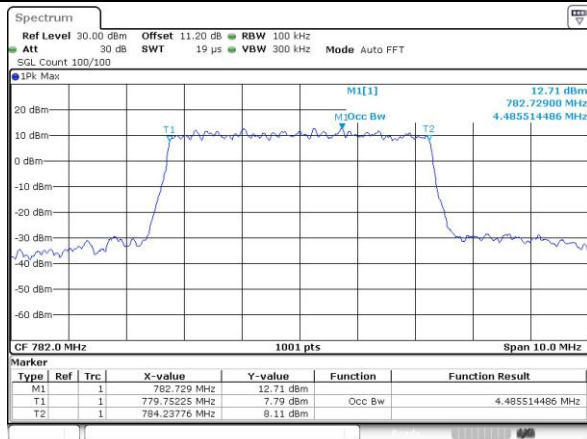
Lowest Channel / 5MHz / QPSK



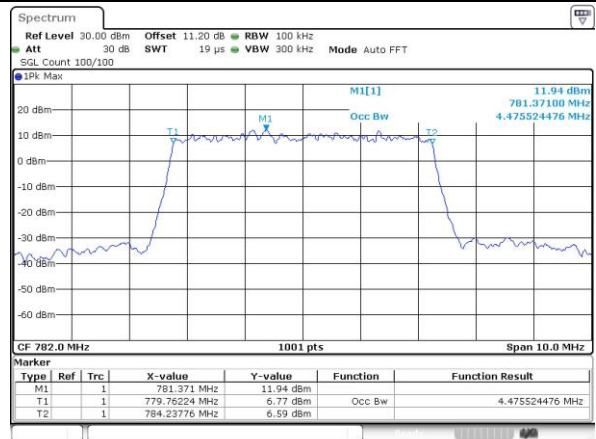
Lowest Channel / 5MHz / 16QAM



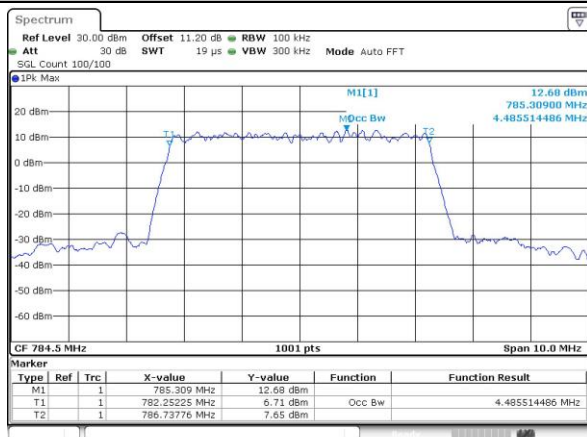
Middle Channel / 5MHz / QPSK



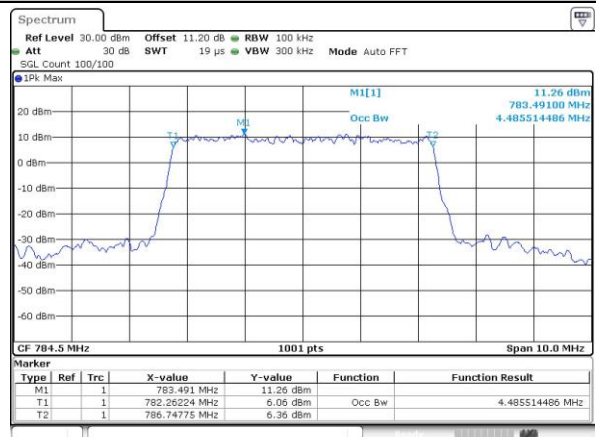
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



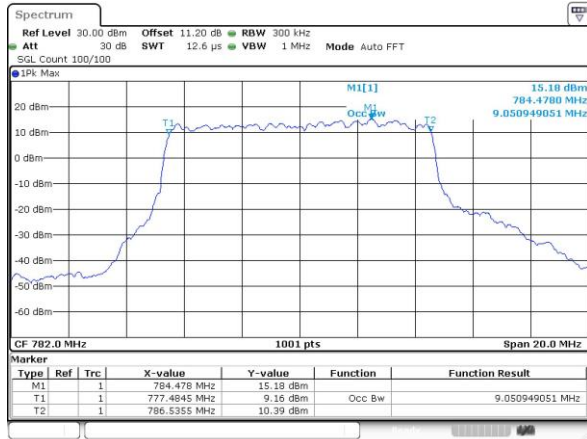
Highest Channel / 5MHz / 16QAM



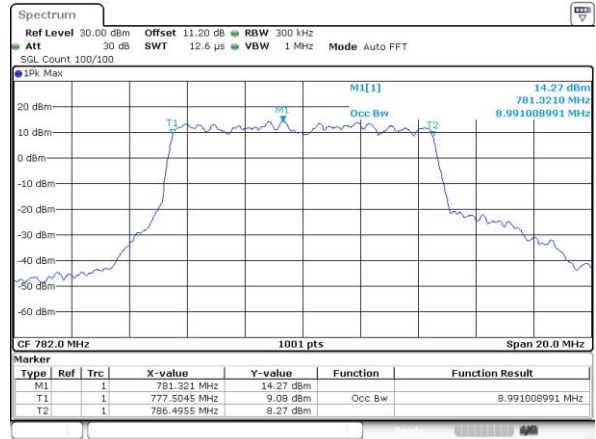


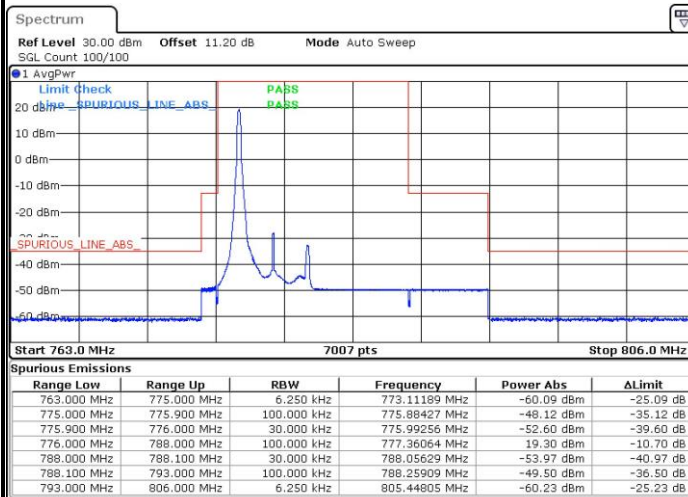
LTE Band 13

Middle Channel / 10MHz / QPSK

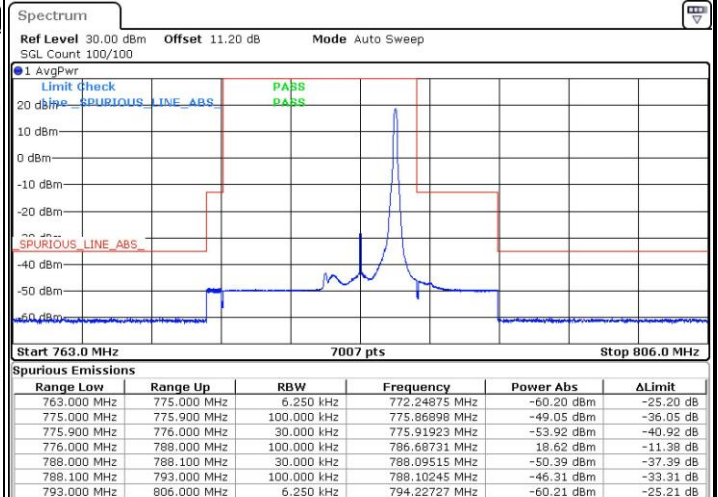


Middle Channel / 10MHz / 16QAM

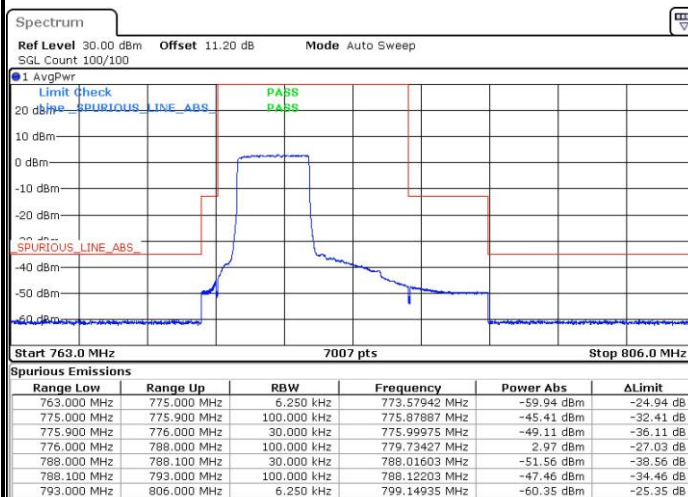


**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB**

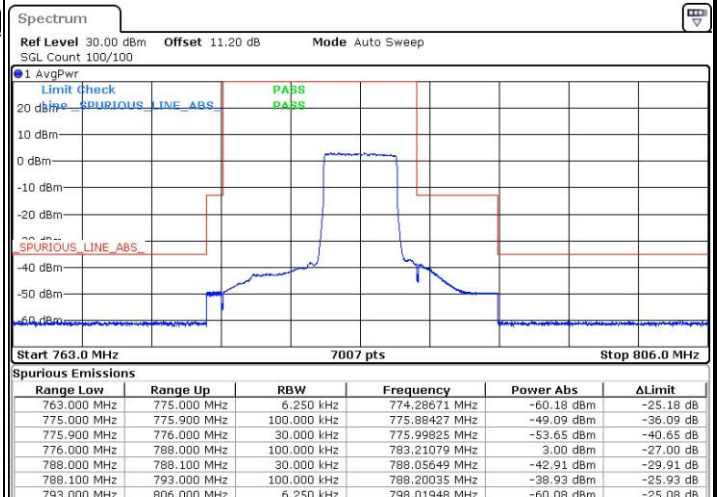
Date: 25 JUN 2019 03:51:53

Highest Band Edge / 1 RB

Date: 25 JUN 2019 04:04:14

Lowest Band Edge / Full RB

Date: 25 JUN 2019 03:46:54

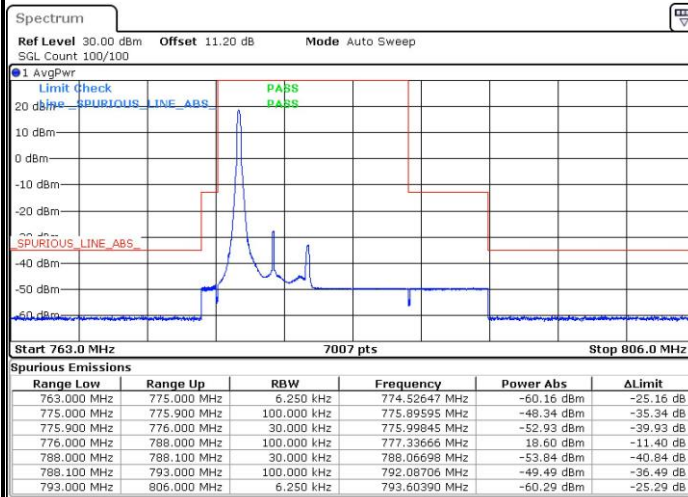
Highest Band Edge / Full RB

Date: 25 JUN 2019 03:59:14



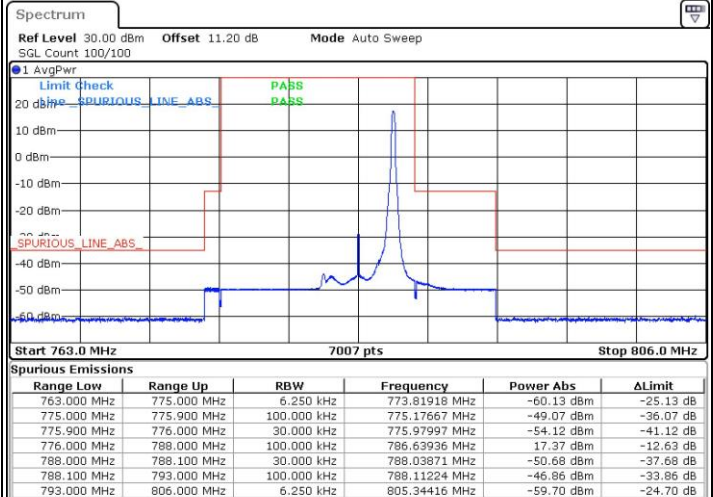
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



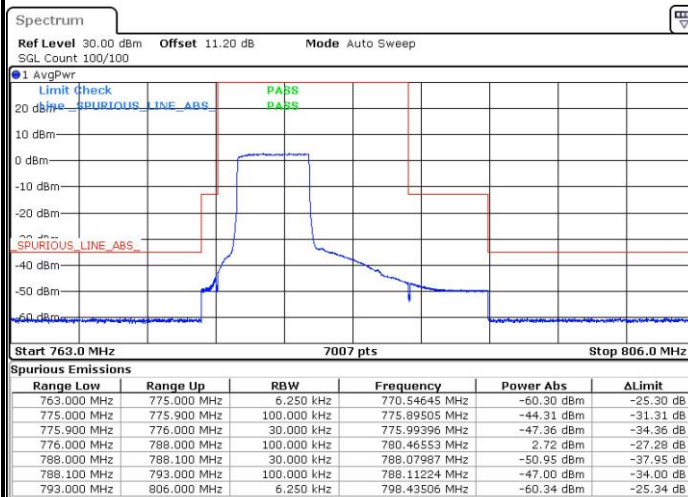
Date: 25 JUN 2019 03:50:13

Highest Band Edge / 1 RB



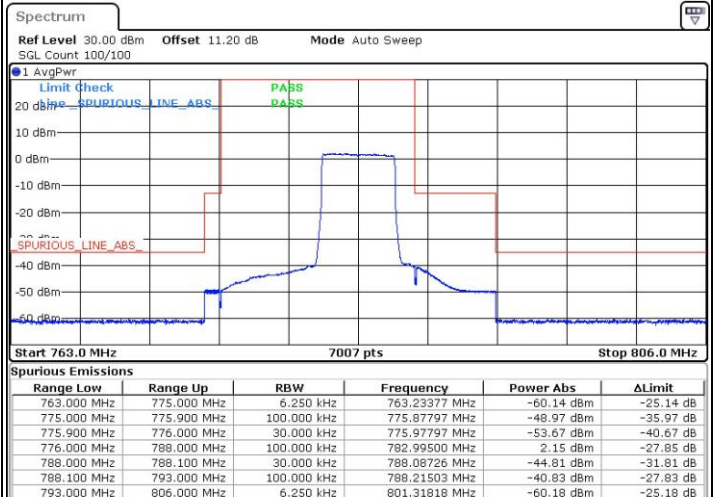
Date: 25 JUN 2019 04:02:34

Lowest Band Edge / Full RB



Date: 25 JUN 2019 03:48:34

Highest Band Edge / Full RB

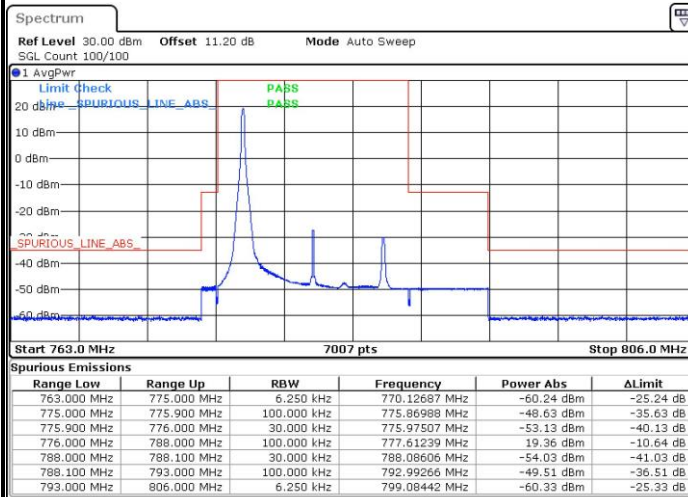


Date: 25 JUN 2019 04:00:55

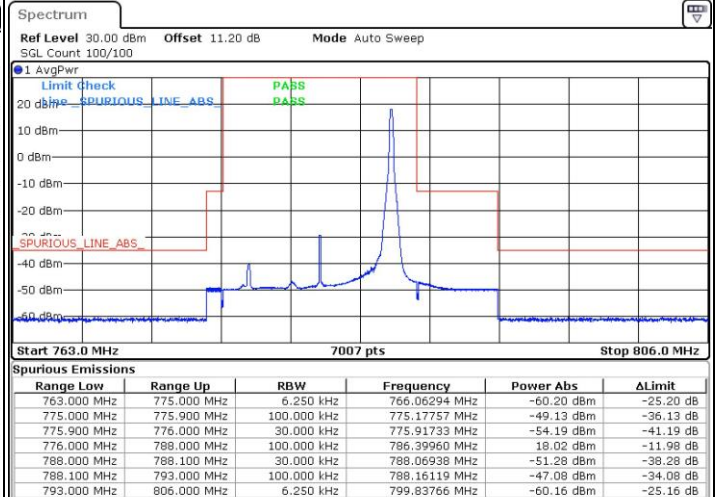


LTE Band 13 / 10MHz / QPSK

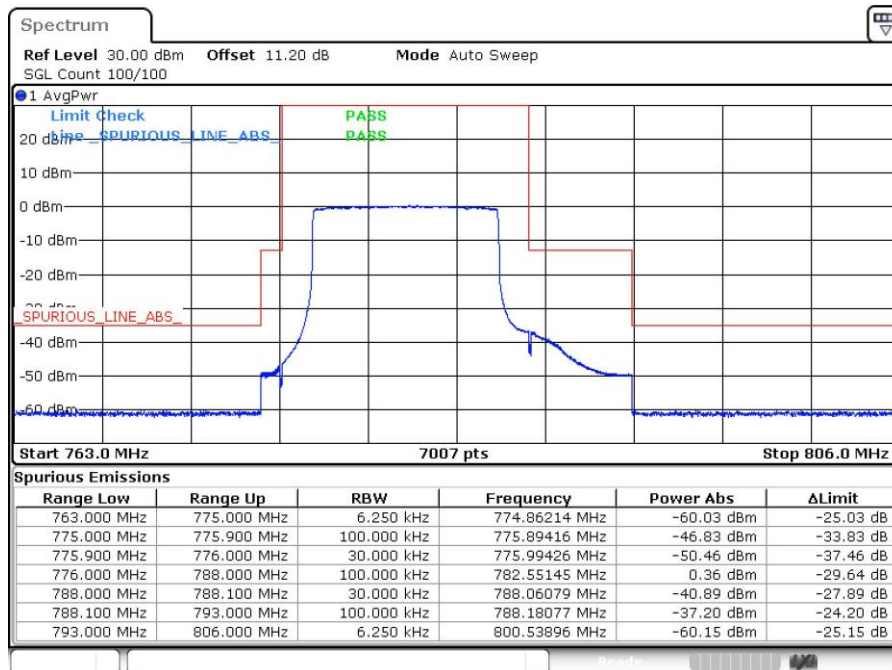
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



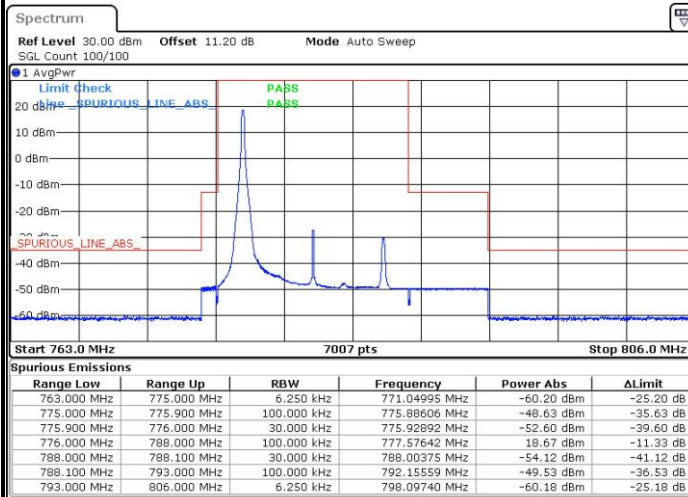
Band Edge / Full RB



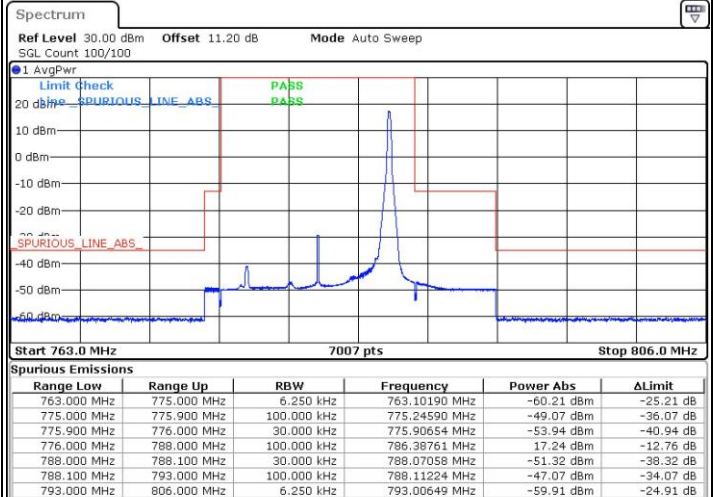


LTE Band 13 / 10MHz / 16QAM

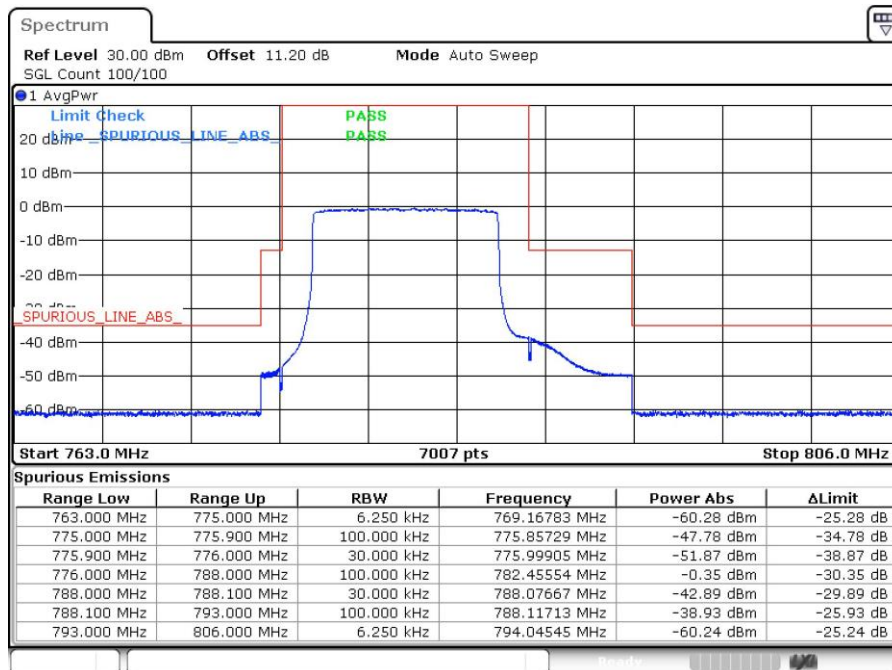
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Band Edge / Full RB

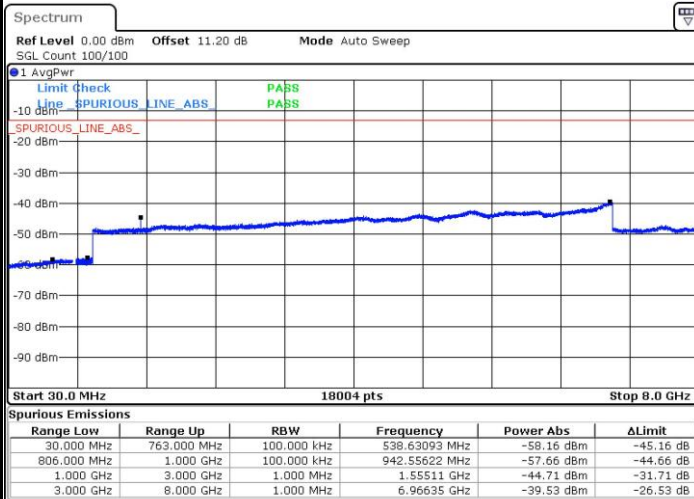




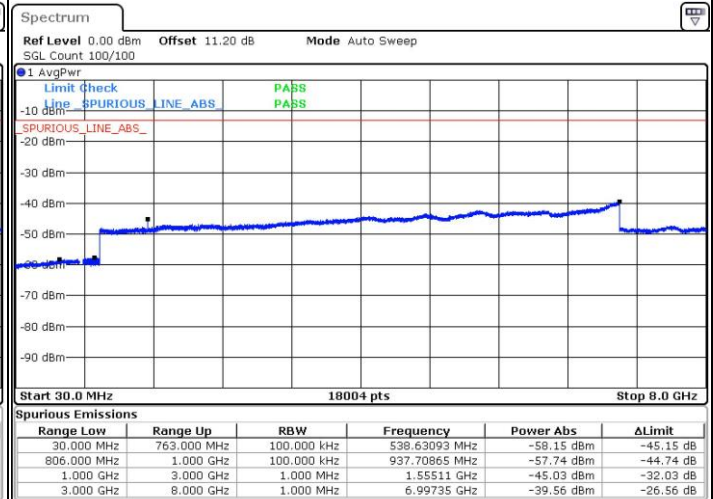
Conducted Spurious Emission

LTE Band 13 / 5MHz

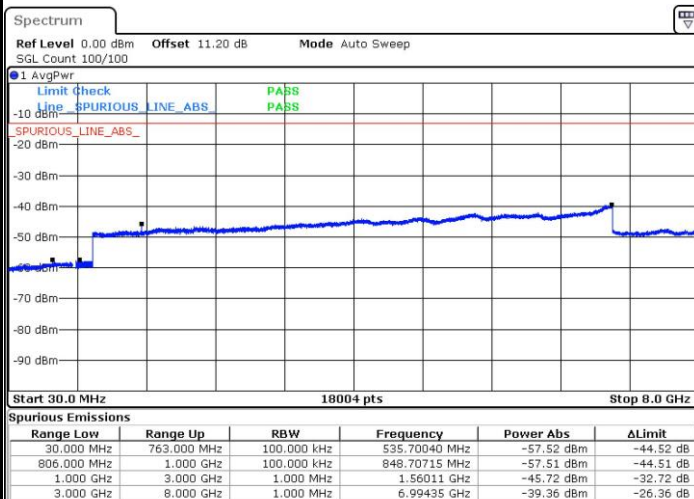
Lowest Channel / QPSK



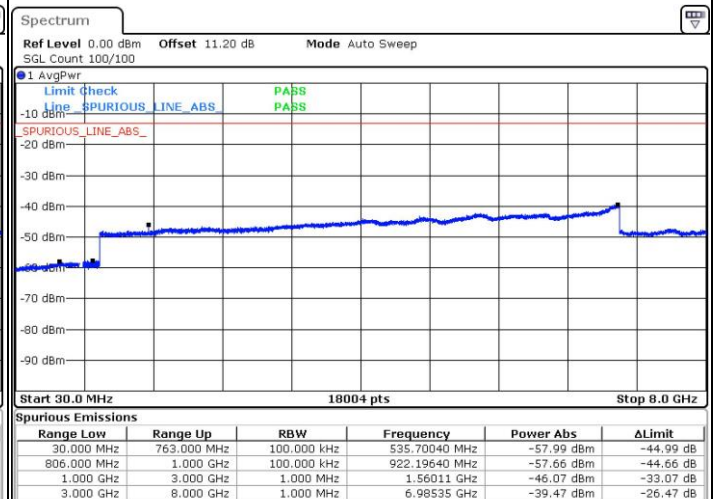
Lowest Channel / 16QAM



Middle Channel / QPSK



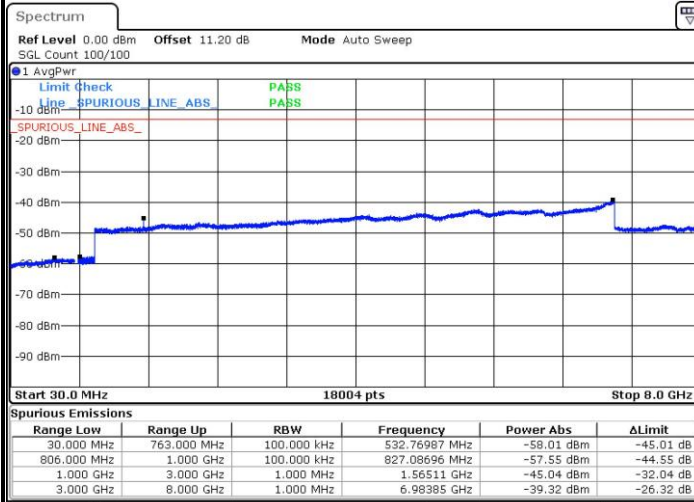
Middle Channel / 16QAM





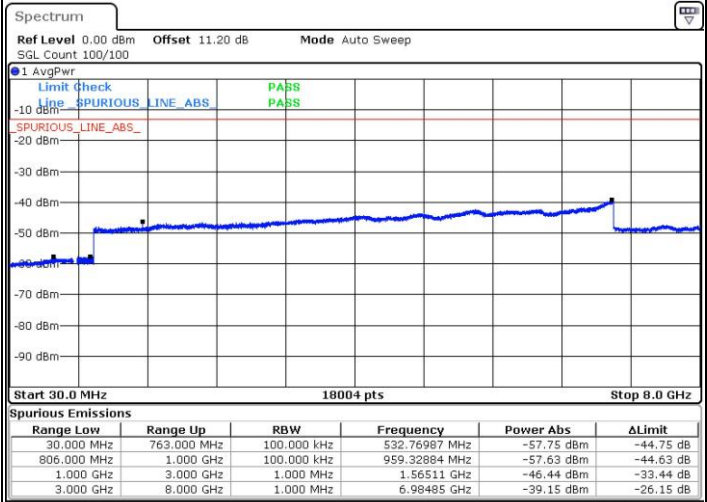
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 25.JUN.2019 04:05:16

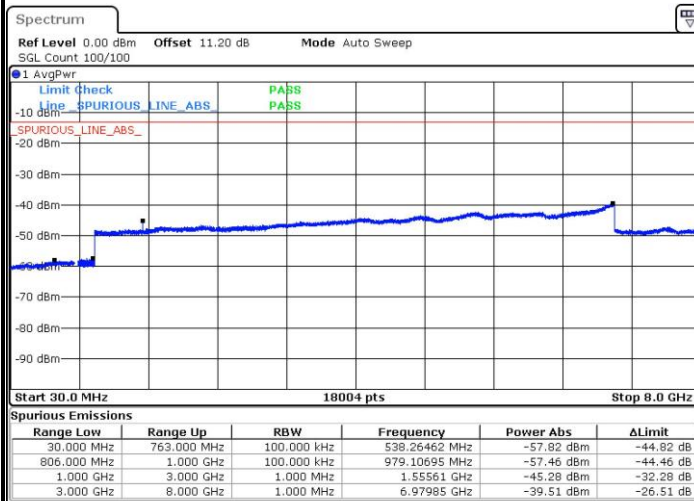
Highest Channel / 16QAM



Date: 25.JUN.2019 04:06:19

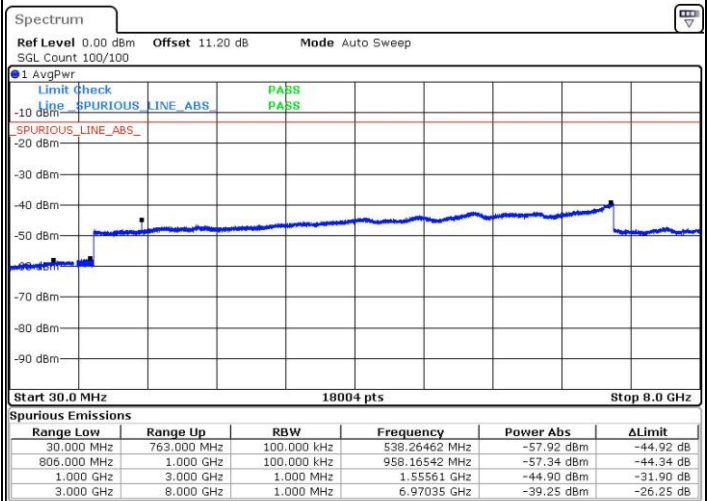
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 25.JUN.2019 04:19:07

Middle Channel / 16QAM



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	PASS
Middle CH	3.45	4.84	4.43	5.88	
Highest CH	3.59	4.67	3.88	5.74	

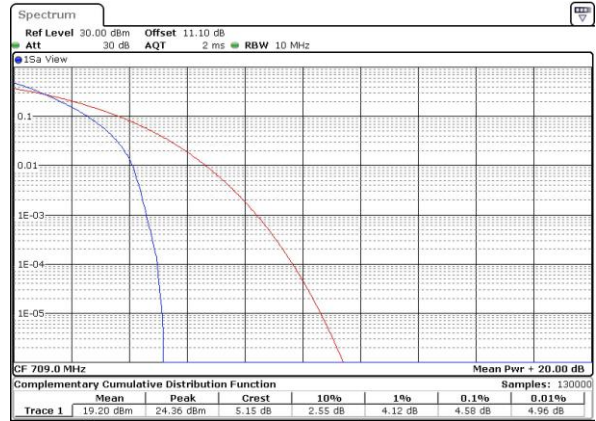


LTE Band 17 / 10MHz / QPSK

Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel/ 1RB



Middle Channel / Full RB



Highest Channel/ 1RB



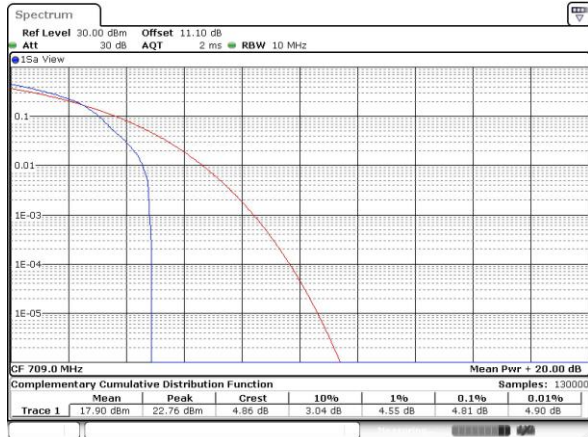
Highest Channel / Full RB



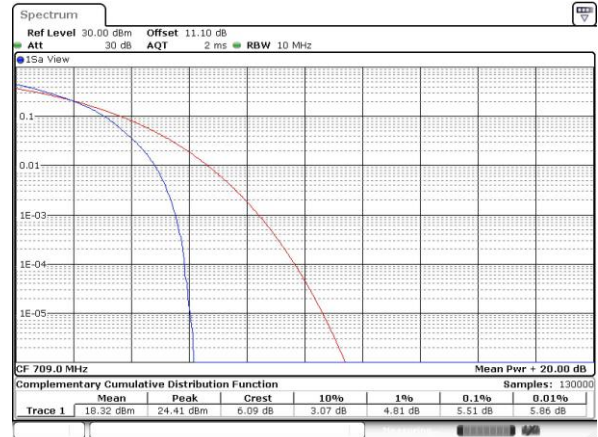


LTE Band 17 / 10MHz / 16QAM

Lowest Channel / 1RB



Lowest Channel / Full RB



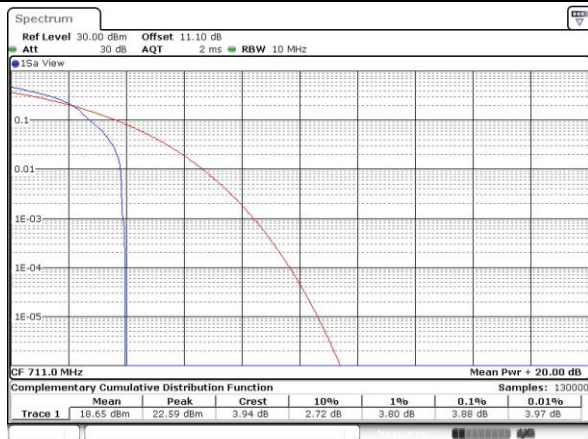
Middle Channel/ 1RB



Middle Channel / Full RB



Highest Channel/ 1RB



Highest Channel / Full RB



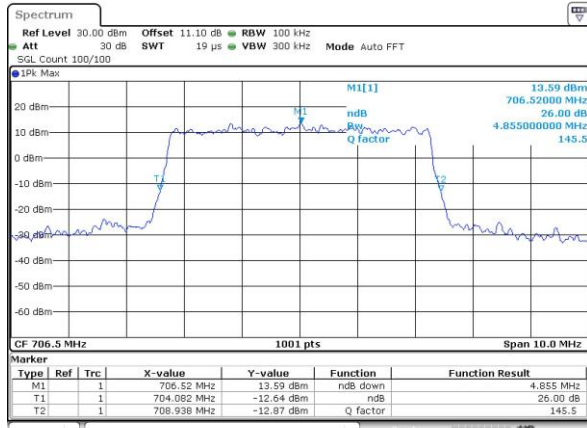
**26dB Bandwidth**

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	-	-	-	-



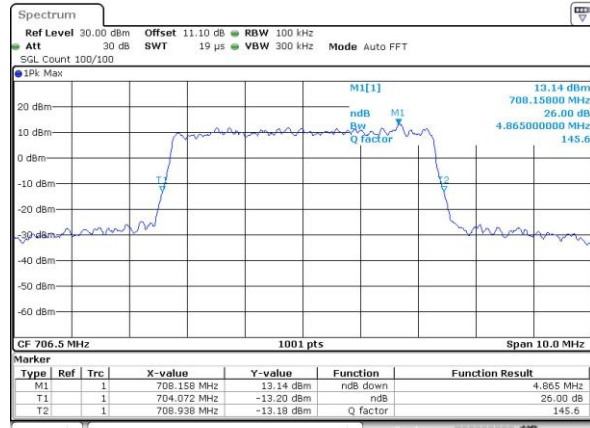
LTE Band 17

Lowest Channel / 5MHz / QPSK



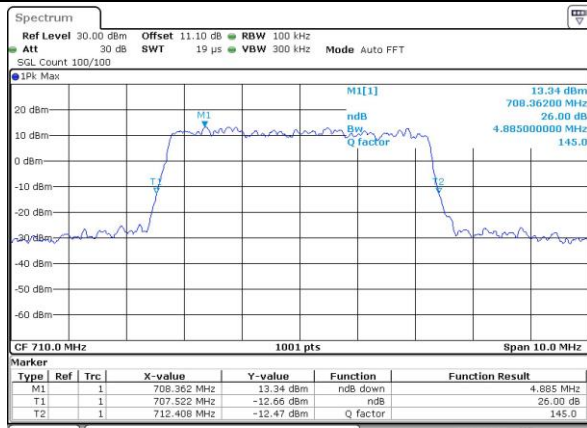
Date: 28 JUN 2019 06:04:05

Lowest Channel / 5MHz / 16QAM



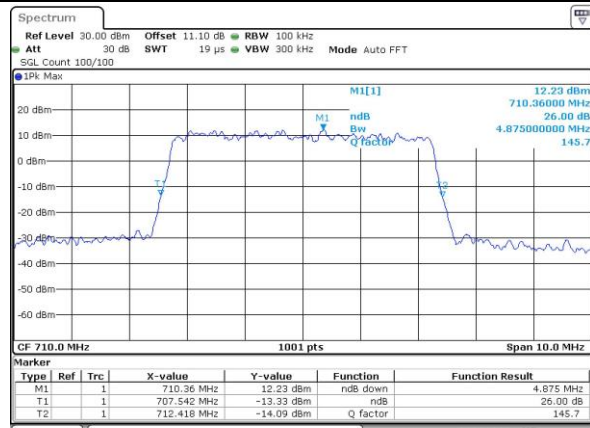
Date: 28 JUN 2019 06:04:17

Middle Channel / 5MHz / QPSK



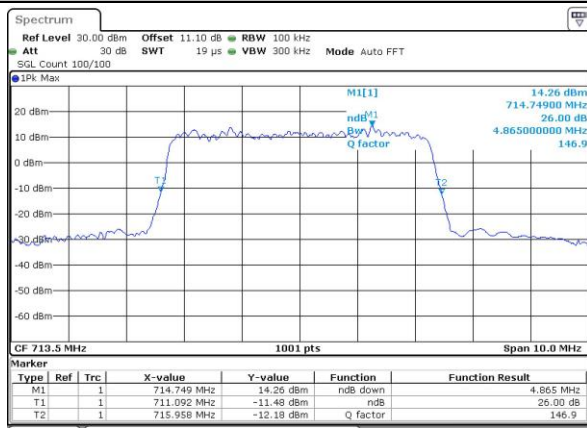
Date: 28 JUN 2019 06:04:28

Middle Channel / 5MHz / 16QAM



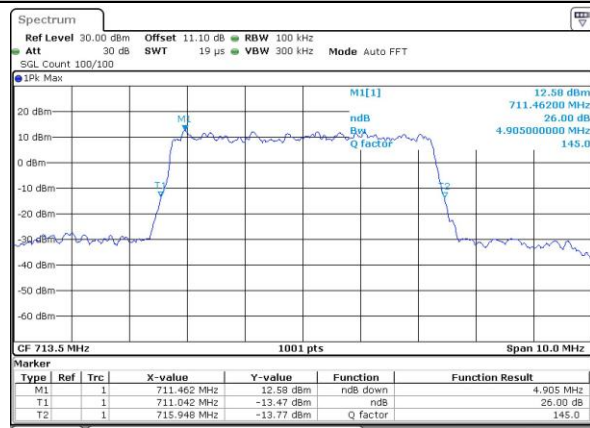
Date: 28 JUN 2019 06:04:40

Highest Channel / 5MHz / QPSK



Date: 28 JUN 2019 06:04:51

Highest Channel / 5MHz / 16QAM

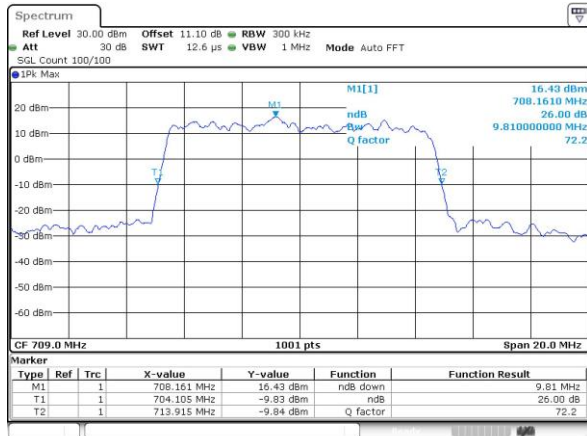


Date: 28 JUN 2019 06:05:03



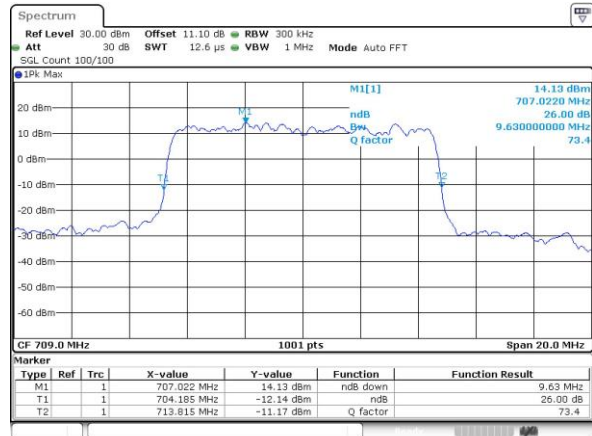
LTE Band 17

Lowest Channel / 10MHz / QPSK



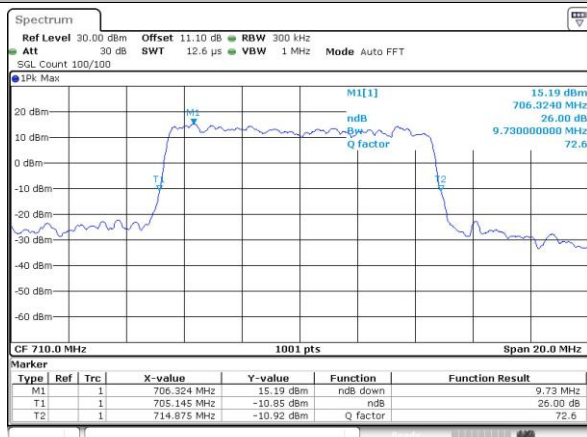
Date: 28.JUN.2019 06:05:14

Lowest Channel / 10MHz / 16QAM



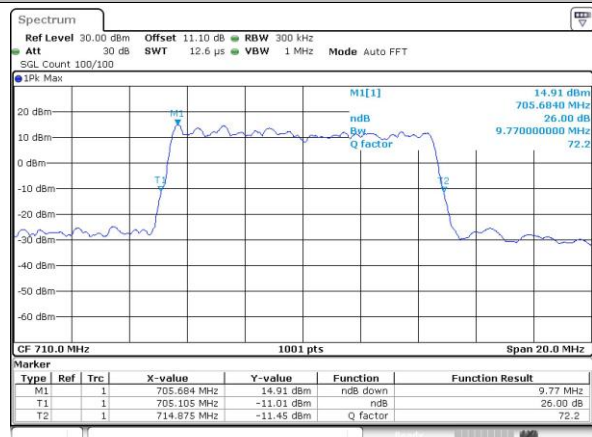
Date: 28.JUN.2019 06:05:26

Middle Channel / 10MHz / QPSK



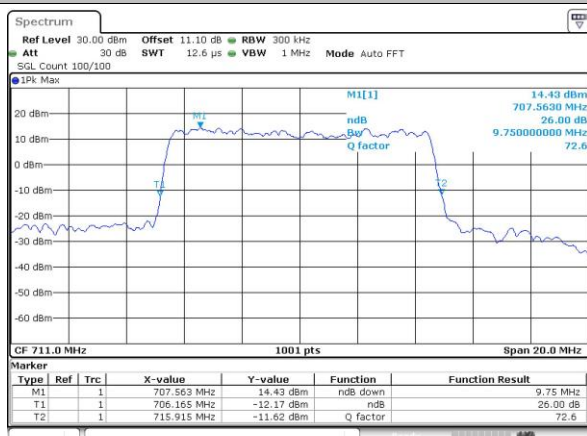
Date: 28.JUN.2019 06:05:37

Middle Channel / 10MHz / 16QAM



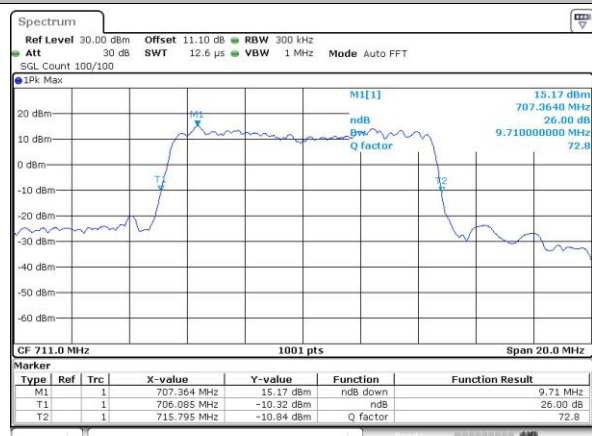
Date: 28.JUN.2019 06:05:48

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	-	-	-	-