



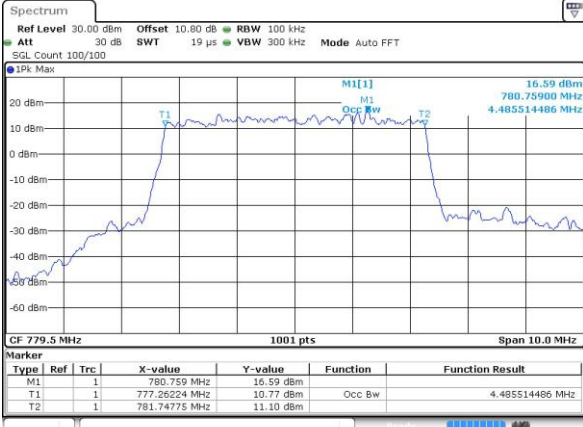
**Occupied Bandwidth**

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.49	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	4.52	9.01	8.99	-	-	-	-
Highest CH	-	-	-	-	4.49	4.48	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.50	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.51	-	-	-	-	-	-	-



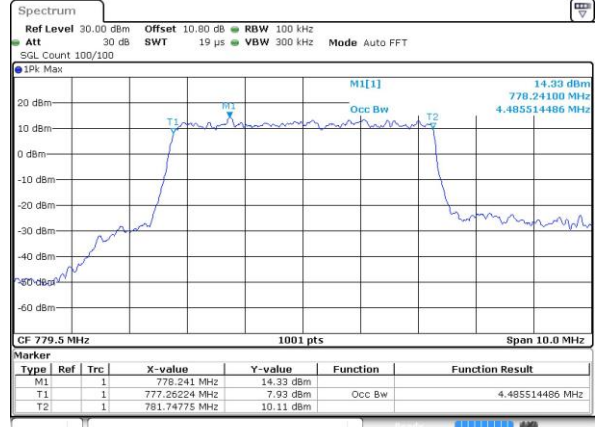
LTE Band 13

Lowest Channel / 5MHz / QPSK



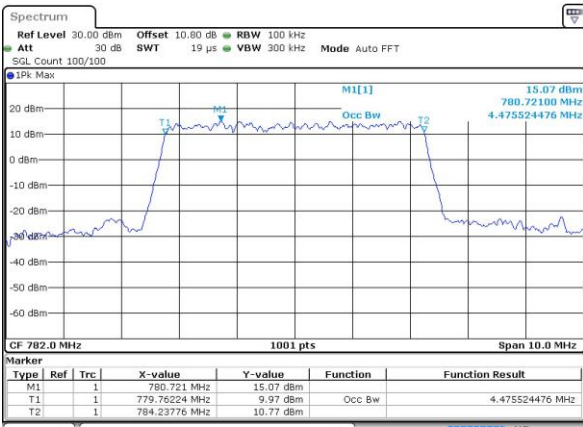
Date: 19 APR 2019 22:38:43

Lowest Channel / 5MHz / 16QAM



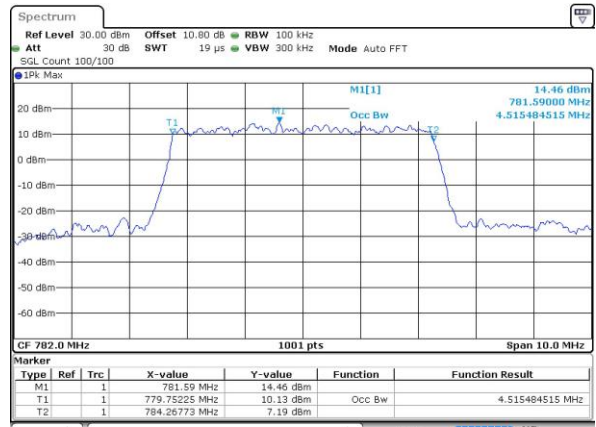
Date: 19 APR 2019 22:38:55

Middle Channel / 5MHz / QPSK



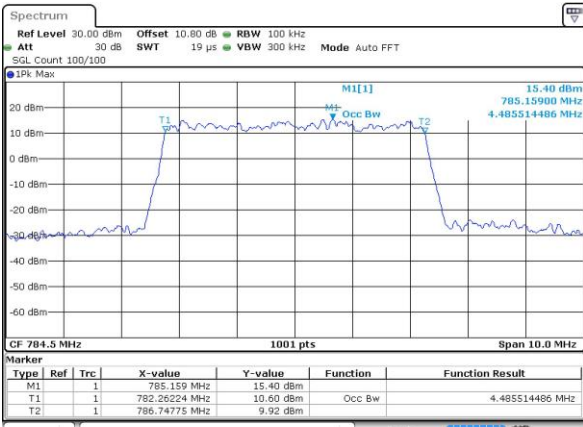
Date: 19 APR 2019 22:49:34

Middle Channel / 5MHz / 16QAM



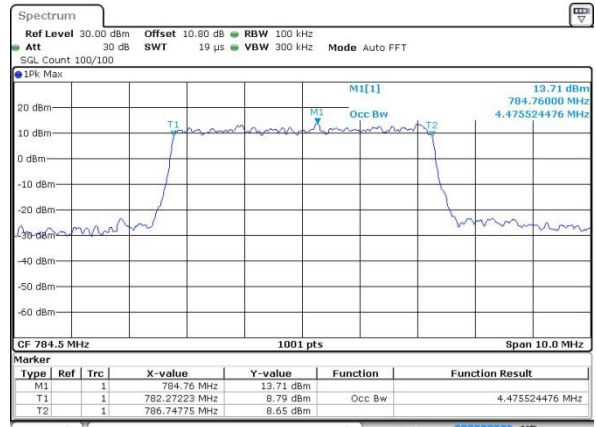
Date: 19 APR 2019 22:49:22

Highest Channel / 5MHz / QPSK



Date: 19 APR 2019 22:49:46

Highest Channel / 5MHz / 16QAM

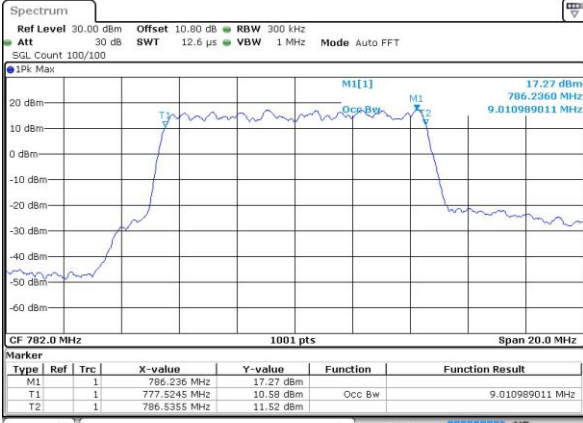


Date: 8 MAY 2019 19:44:01



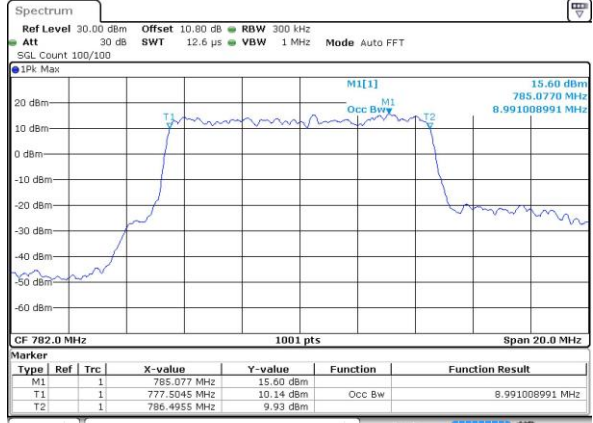
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 19 APR 2019 23:08:41

Middle Channel / 10MHz / 16QAM

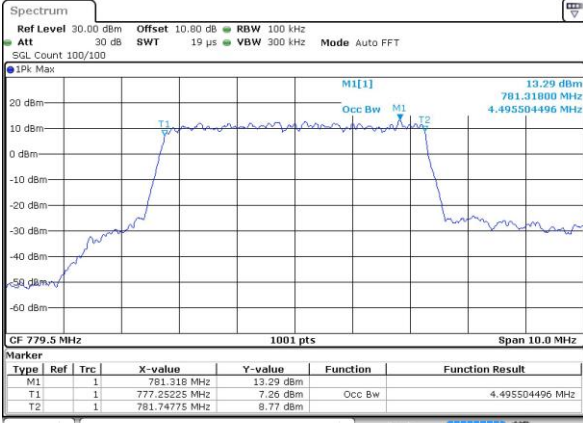


Date: 19 APR 2019 23:08:53



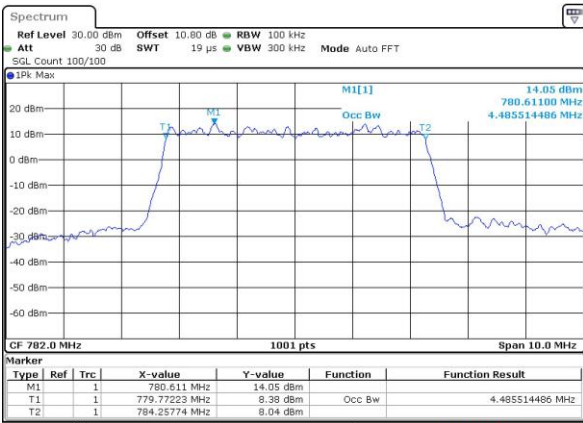
LTE Band 13

Lowest Channel / 5MHz / 64QAM



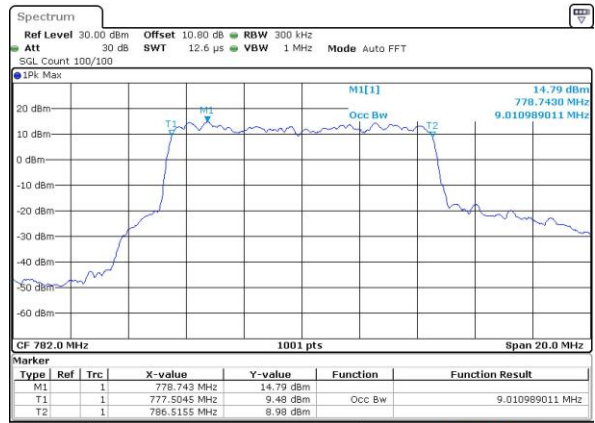
Date: 19 APR 2019 22:58:41

Middle Channel / 5MHz / 64QAM



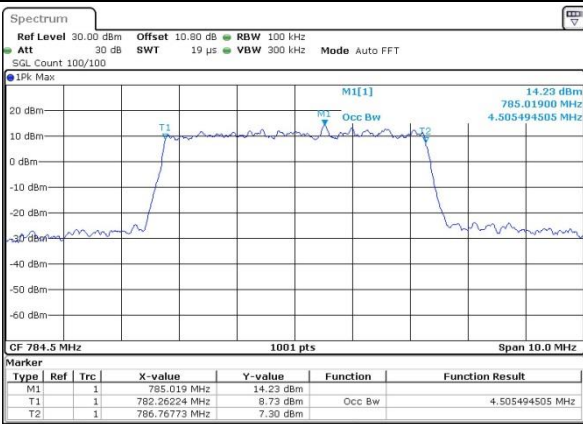
Date: 19 APR 2019 23:04:01

Middle Channel / 10MHz / 64QAM



Date: 19 APR 2019 23:20:52

Highest Channel / 5MHz / 64QAM



Date: 8 MAY 2019 19:44:17

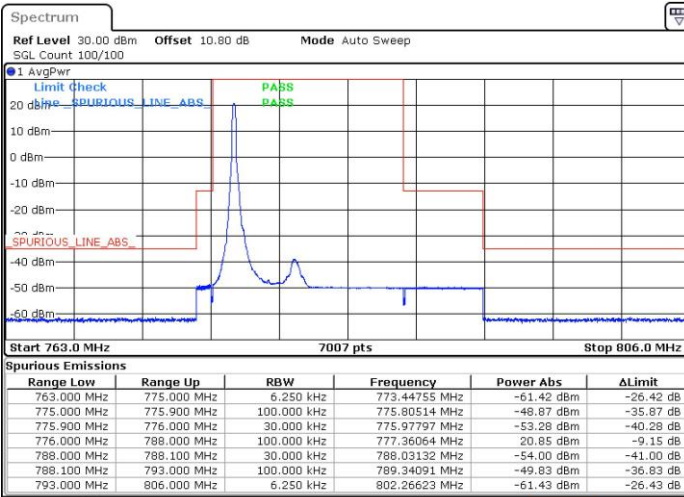


Conducted Band Edge

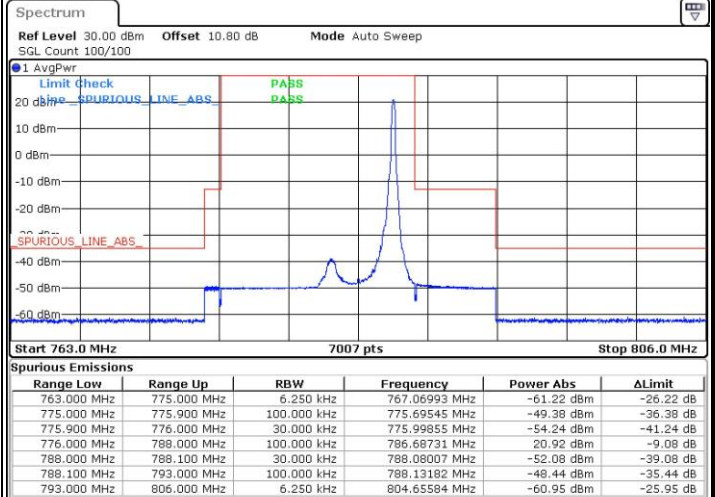
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



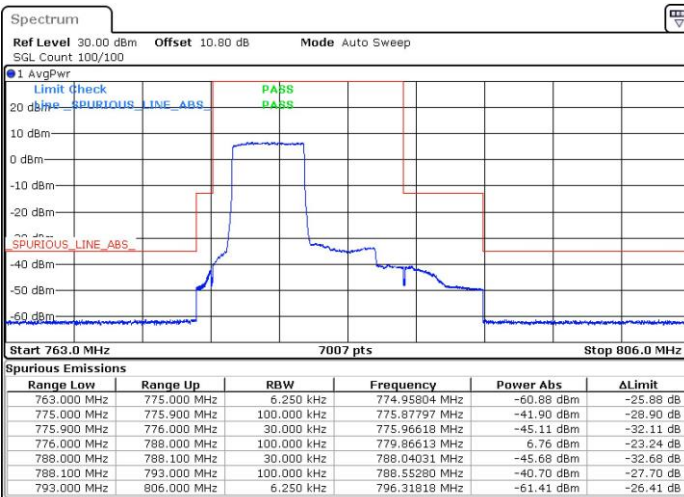
Date: 19 APR 2019 22:46:04



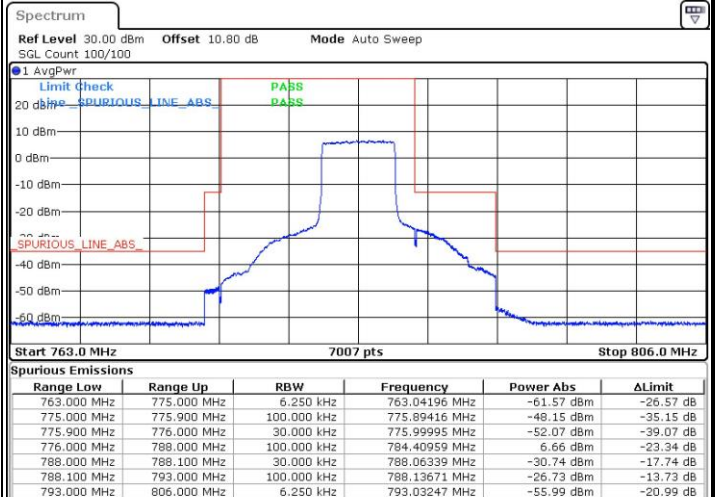
Date: 19 APR 2019 22:57:07

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 19 APR 2019 22:41:00

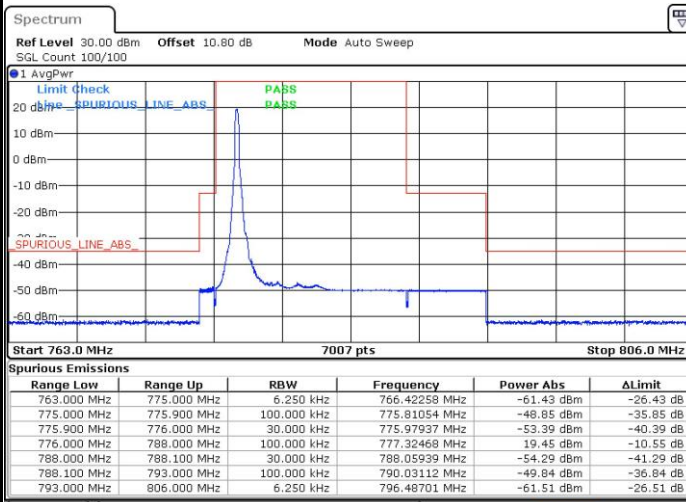


Date: 19 APR 2019 22:52:03



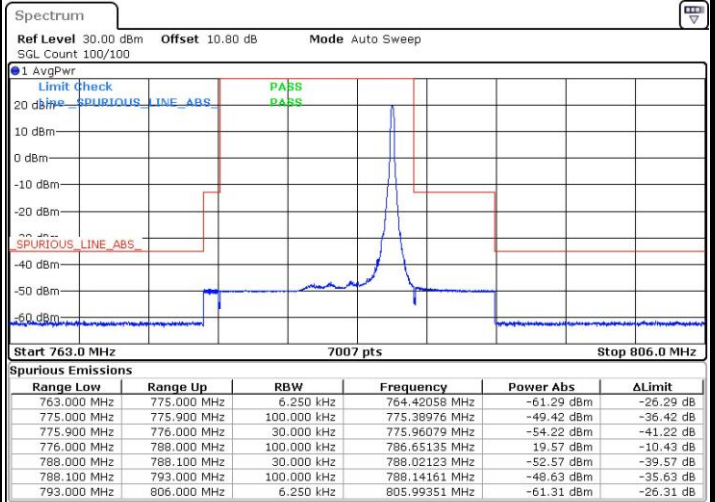
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 19 APR 2019 22:44:23

Highest Band Edge / 1 RB



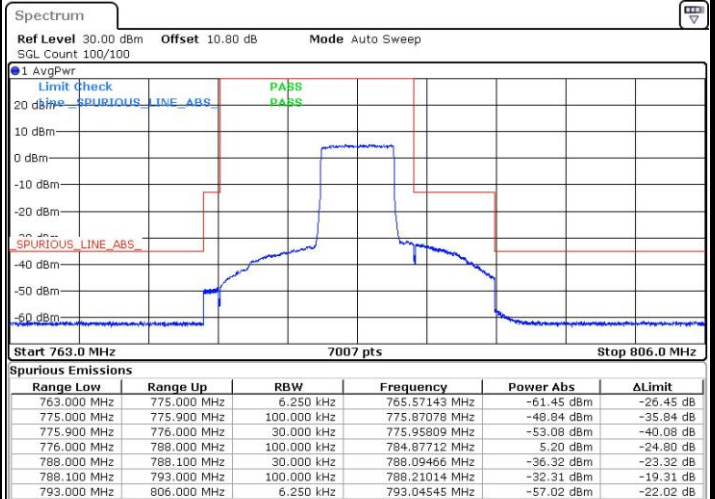
Date: 19 APR 2019 22:55:25

Lowest Band Edge / Full RB



Date: 19 APR 2019 22:42:41

Highest Band Edge / Full RB



Date: 19 APR 2019 22:53:44

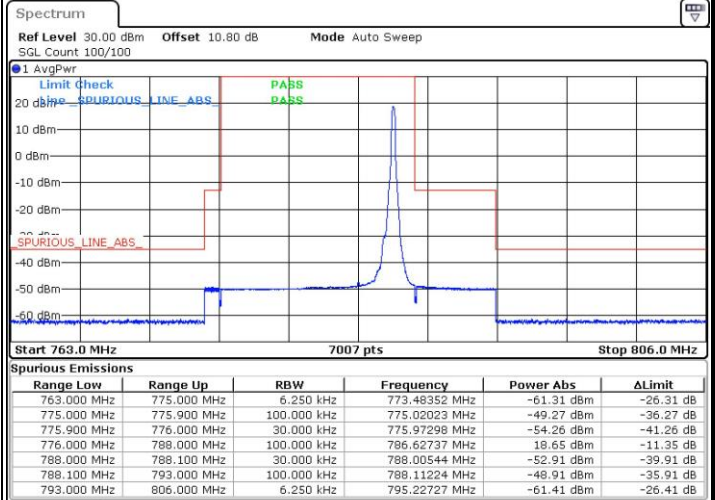
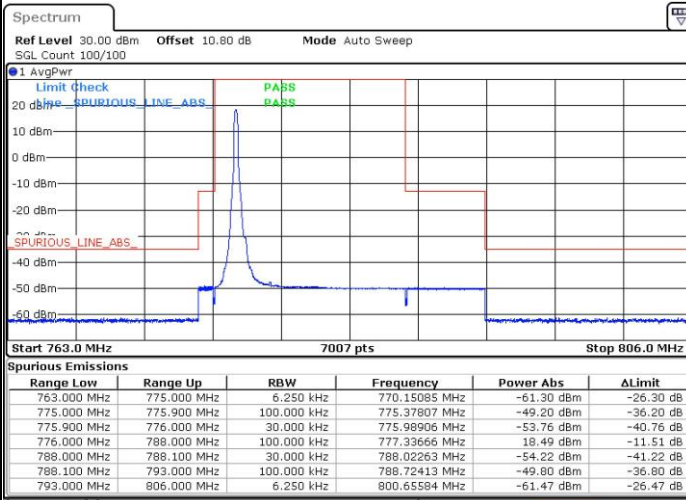




LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

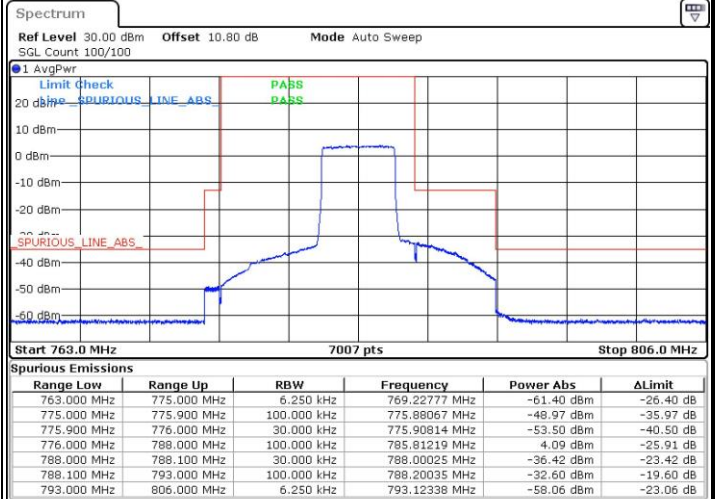
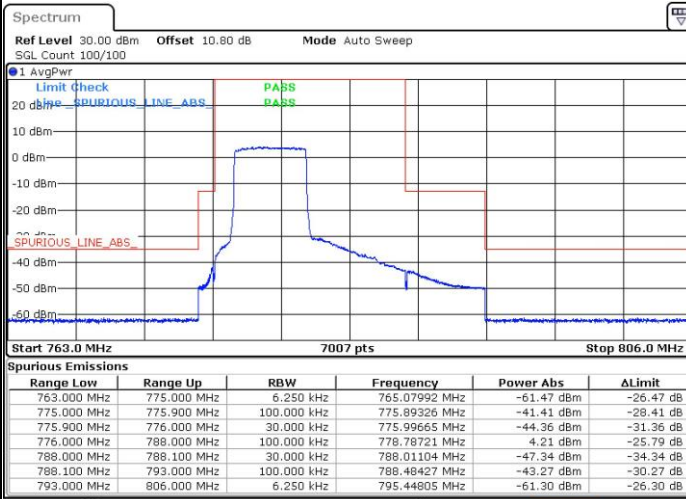


Date: 19 APR 2019 23:02:15

Date: 19 APR 2019 23:07:47

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



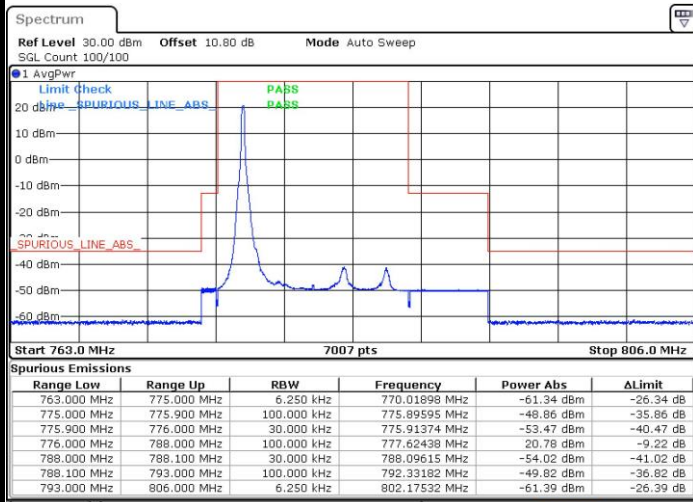
Date: 19 APR 2019 23:00:34

Date: 19 APR 2019 23:06:05



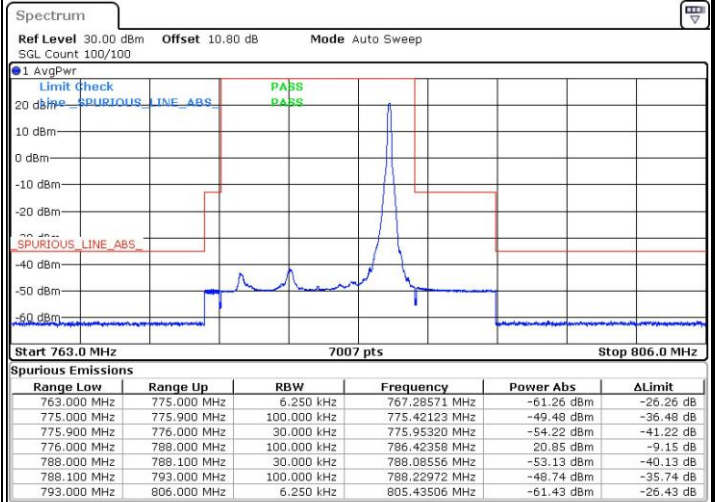
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



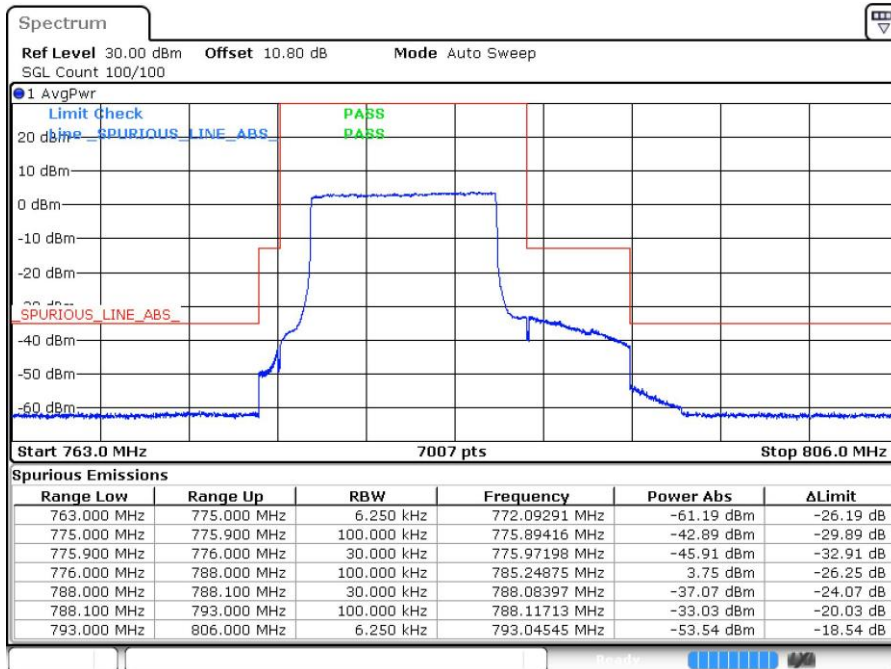
Date: 19 APR 2019 23:15:58

Highest Band Edge / 1 RB



Date: 19 APR 2019 23:17:39

Band Edge / Full RB



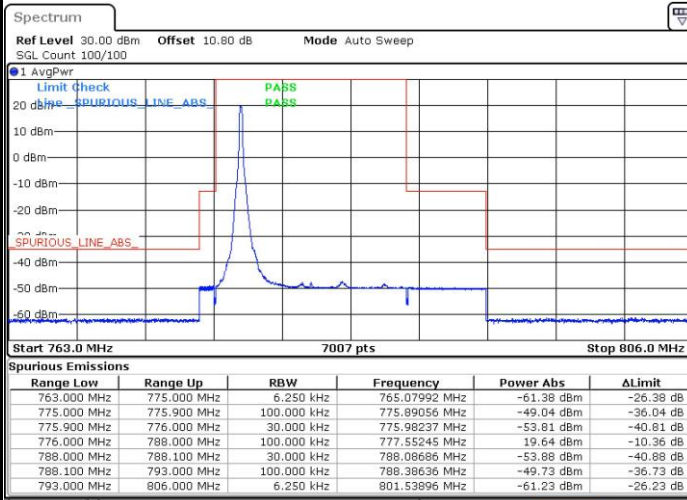
Date: 19 APR 2019 23:10:56





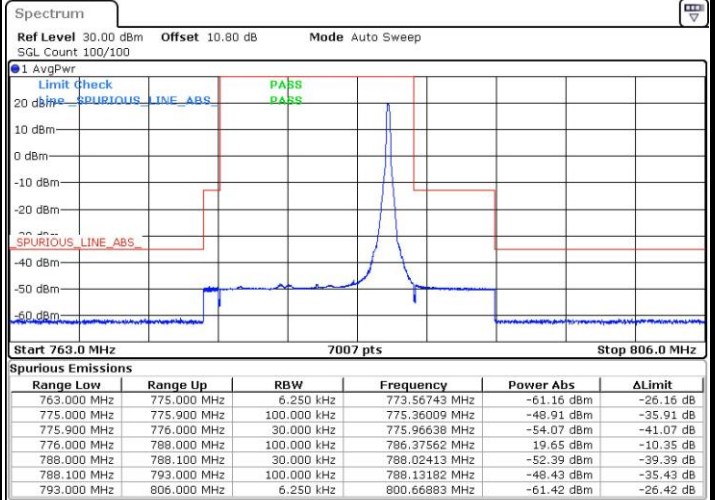
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



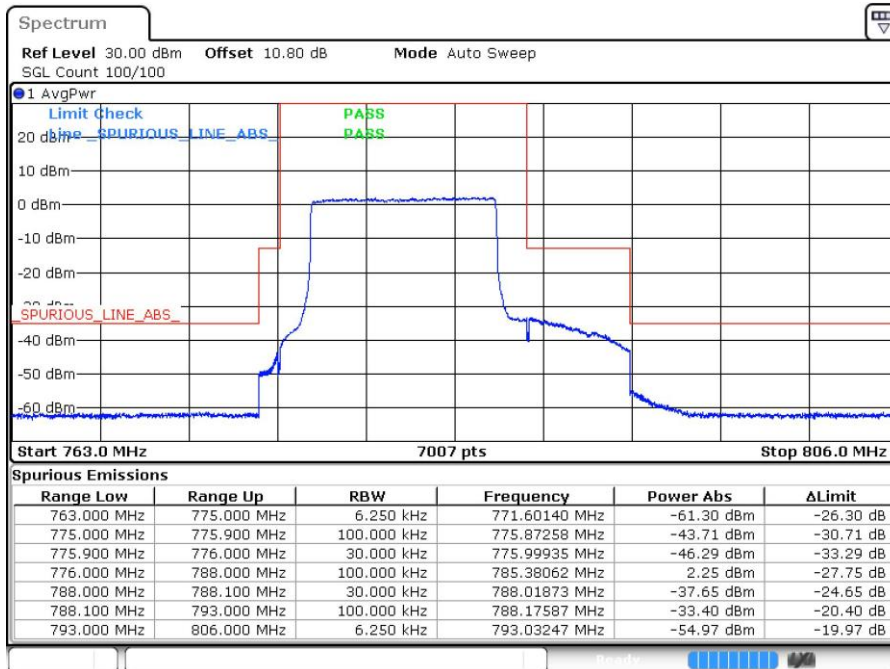
Date: 19 APR 2019 23:14:18

Highest Band Edge / 1 RB



Date: 19 APR 2019 23:19:19

Band Edge / Full RB

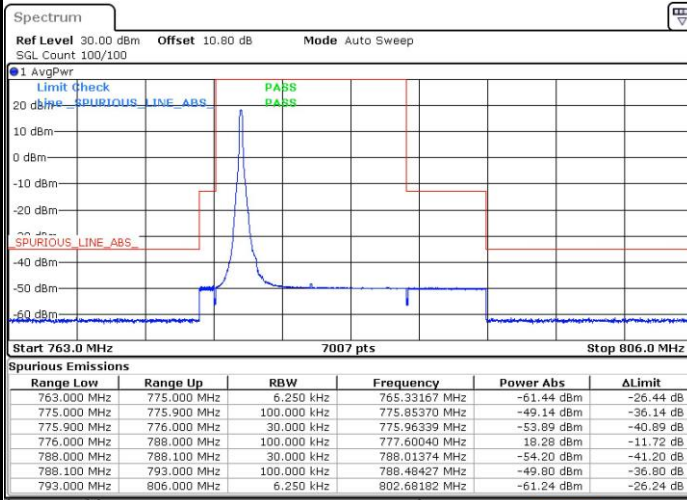


Date: 19 APR 2019 23:12:37



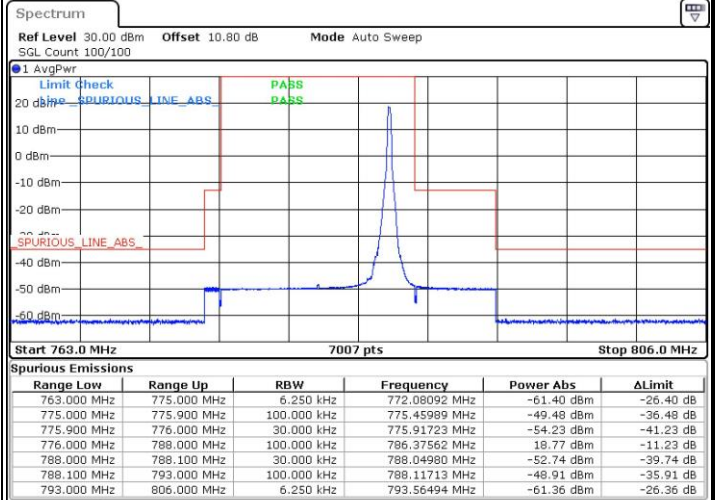
LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



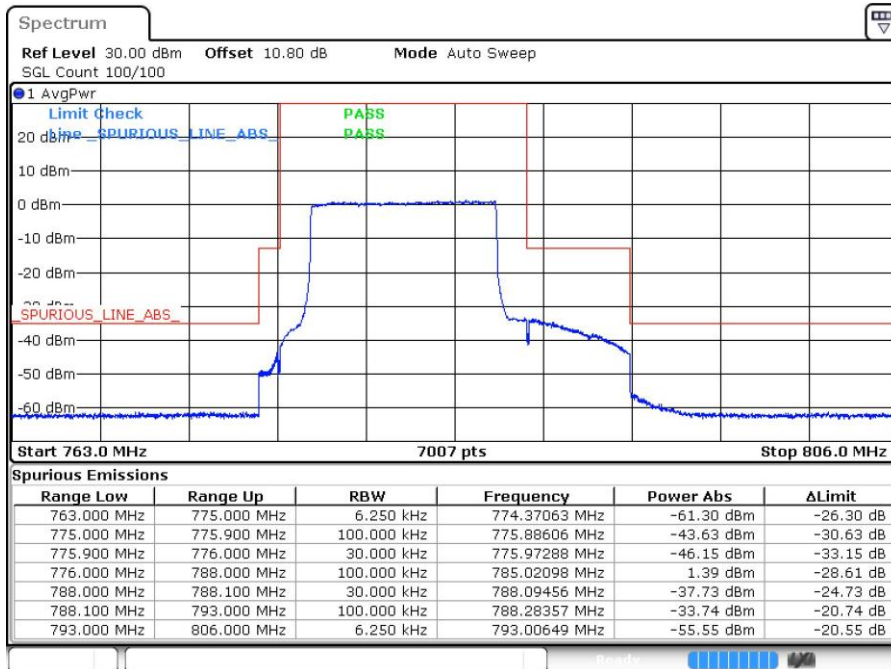
Date: 19 APR 2019 23:24:25

Highest Band Edge / 1 RB



Date: 19 APR 2019 23:26:05

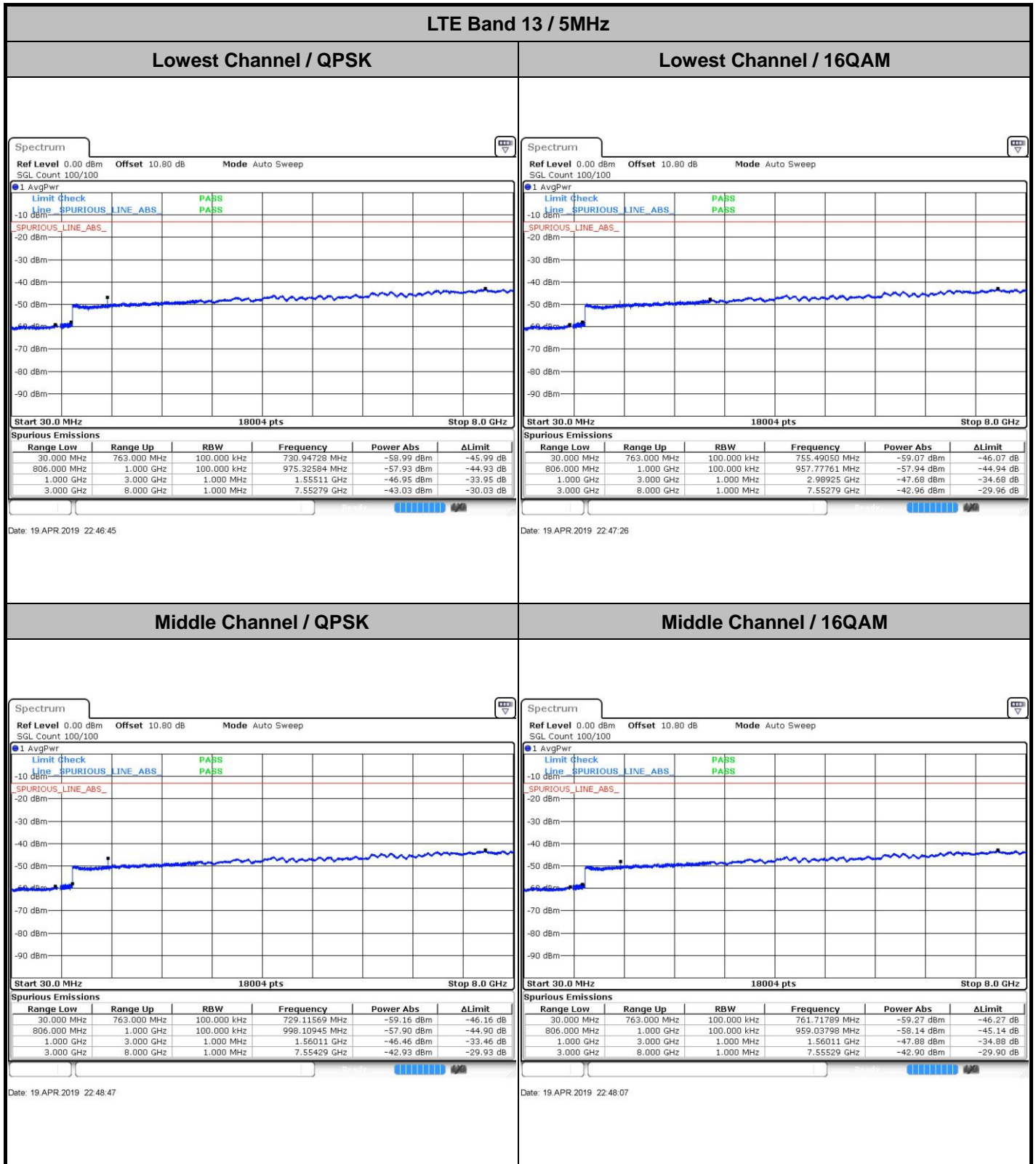
Band Edge / Full RB



Date: 19 APR 2019 23:22:44



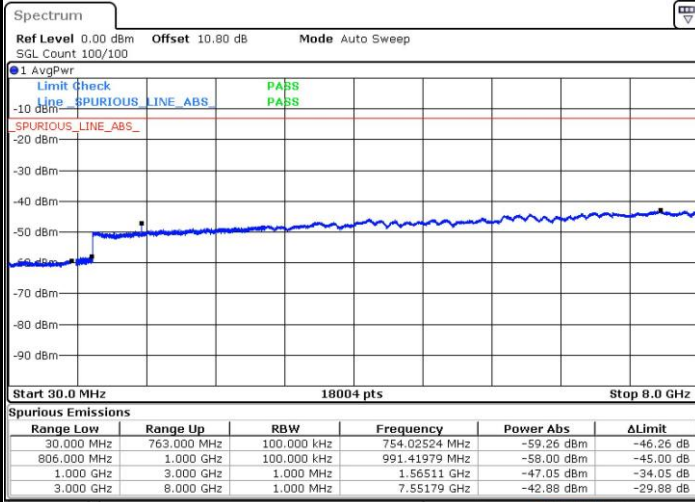
# Conducted Spurious Emission





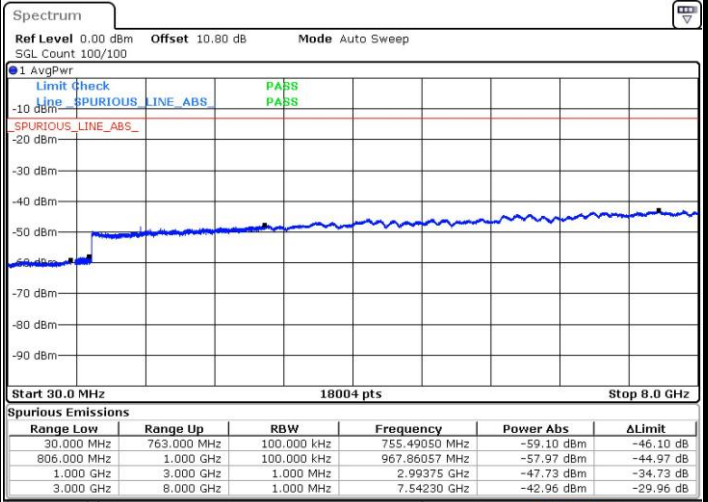
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 19 APR 2019 22:57:48

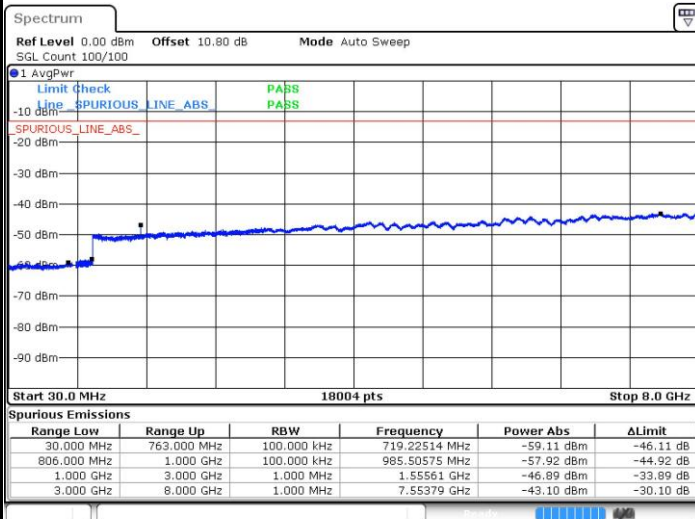
Highest Channel / 16QAM



Date: 19 APR 2019 22:58:29

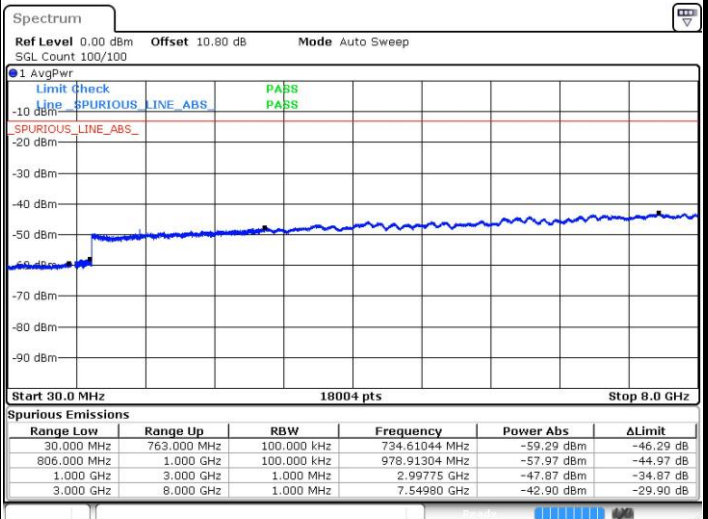
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 19 APR 2019 23:20:41

Middle Channel / 16QAM



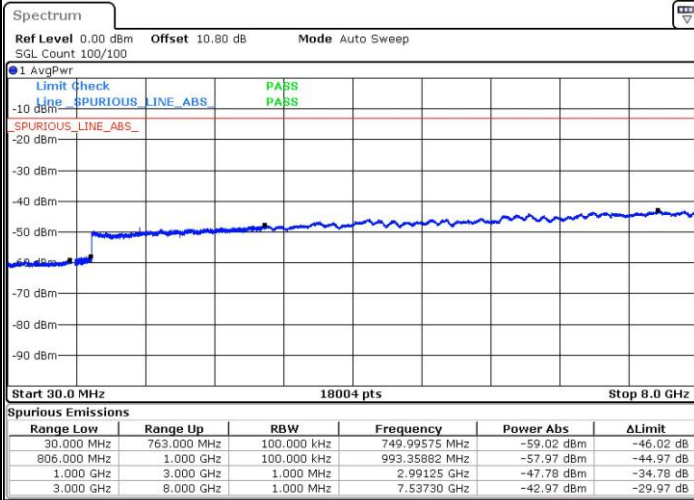
Date: 19 APR 2019 23:20:00



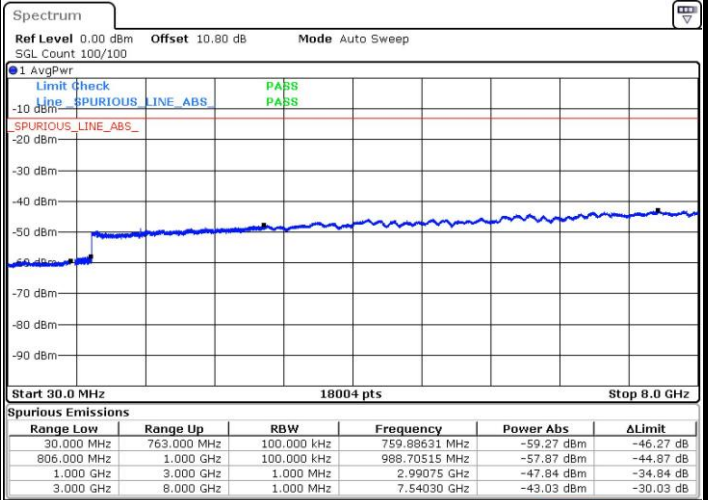
LTE Band 13 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

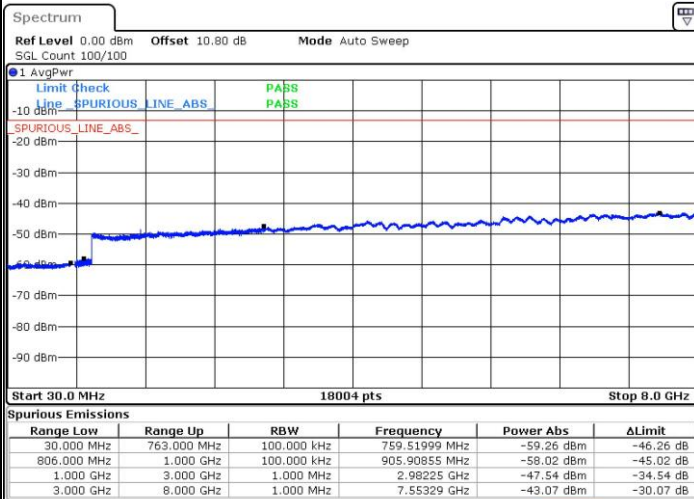


Date: 19 APR 2019 23:02:57



Date: 19 APR 2019 23:03:38

Highest Channel / 64QAM



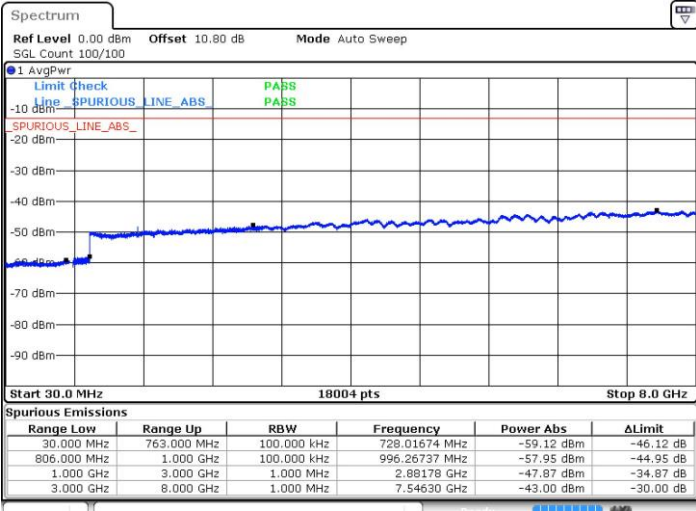
Date: 19 APR 2019 23:08:28





LTE Band 13 / 10MHz

Middle Channel / 64QAM



Date: 19 APR 2019 23:26:46



### 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	0.0070	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0014	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0035	
-20	Normal Voltage	0.0008	
-30	Normal Voltage	0.0024	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0058	

**Note:**

- 1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.65 V. ; Maximum Voltage =4.25 V.
- 2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 25

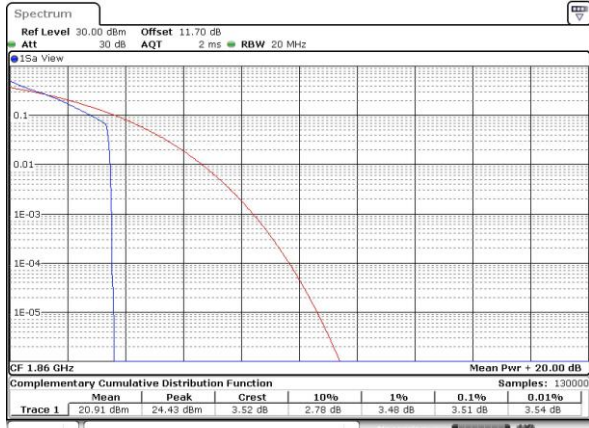
## Peak-to-Average Ratio

Mode	LTE Band 25 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.51	4.87	4.12	5.94	PASS
Middle CH	3.57	4.70	4.26	5.86	
Highest CH	3.57	4.75	4.23	5.91	
Mode	LTE Band 25 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	4.93	6.43	-	-	PASS
Middle CH	5.39	6.43	-	-	
Highest CH	5.25	6.43	-	-	



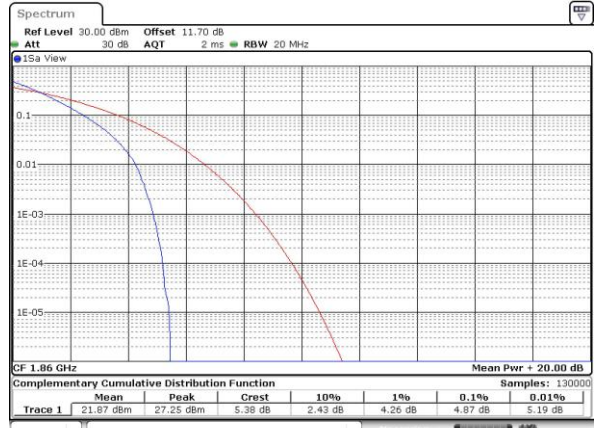
LTE Band 25 / 20MHz / QPSK

Lowest Channel / 1RB



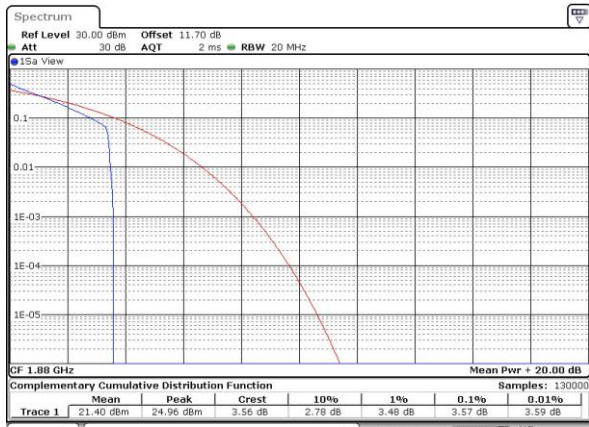
Date: 20 APR 2019 02:11:13

Lowest Channel / Full RB



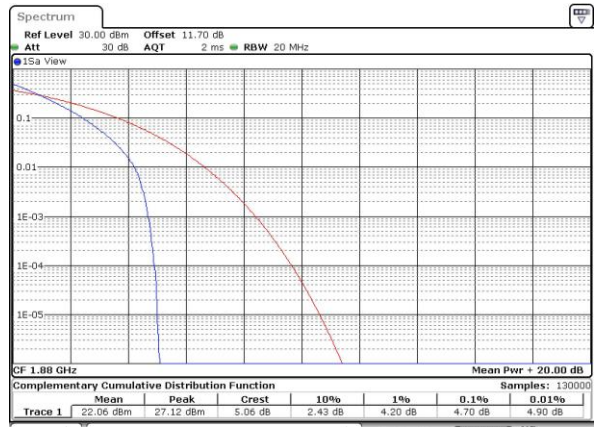
Date: 20 APR 2019 02:11:26

Middle Channel / 1RB



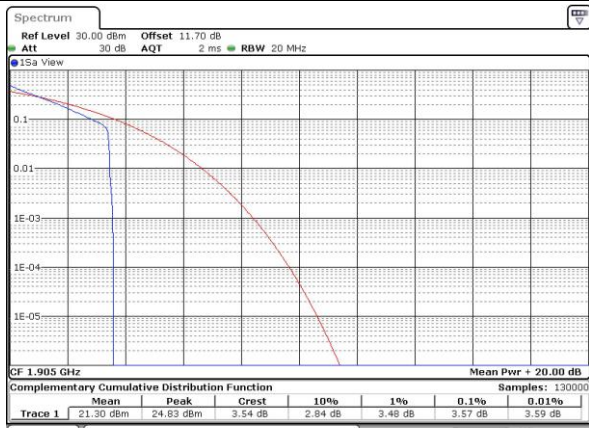
Date: 20 APR 2019 02:12:07

Middle Channel / Full RB



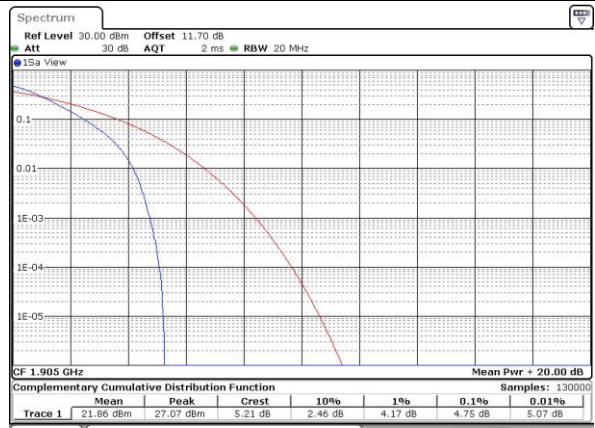
Date: 20 APR 2019 02:12:25

Highest Channel / 1RB



Date: 20 APR 2019 02:13:05

Highest Channel / Full RB



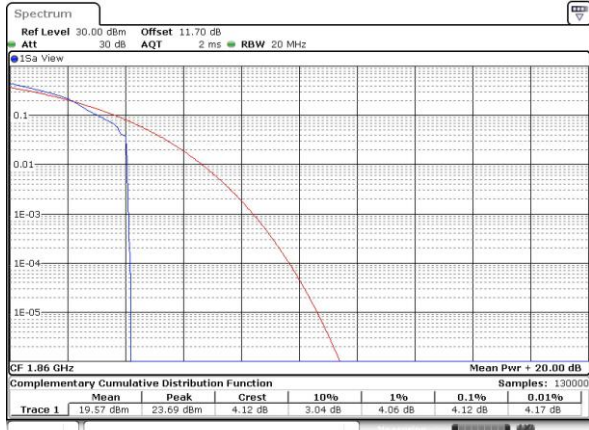
Date: 20 APR 2019 02:13:28





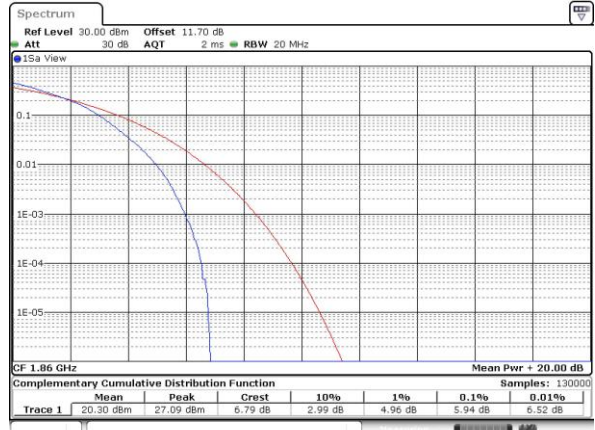
LTE Band 25 / 20MHz / 16QAM

Lowest Channel / 1RB



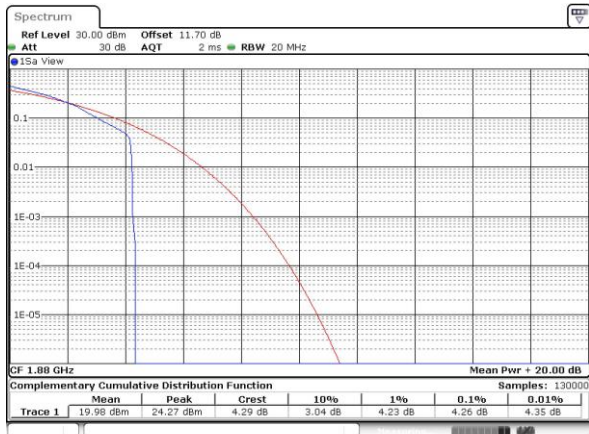
Date: 20 APR 2019 02:10:32

Lowest Channel / Full RB



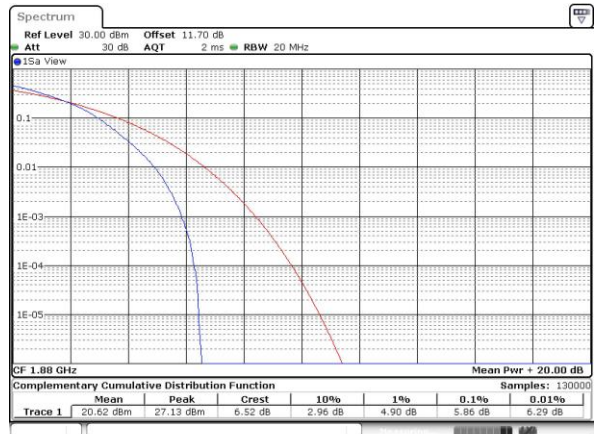
Date: 20 APR 2019 02:10:44

Middle Channel / 1RB



Date: 20 APR 2019 02:11:44

Middle Channel / Full RB



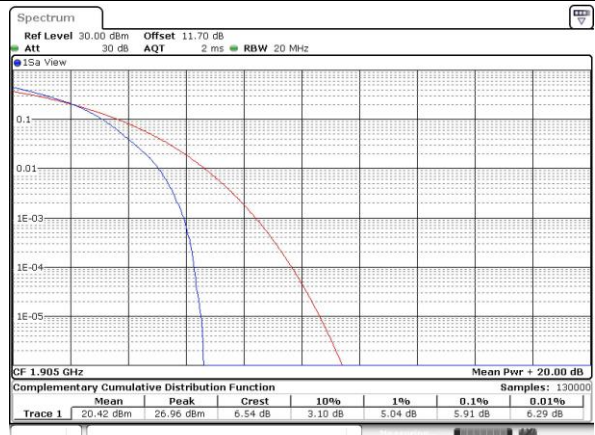
Date: 20 APR 2019 02:11:56

Highest Channel / 1RB



Date: 20 APR 2019 02:12:37

Highest Channel / Full RB



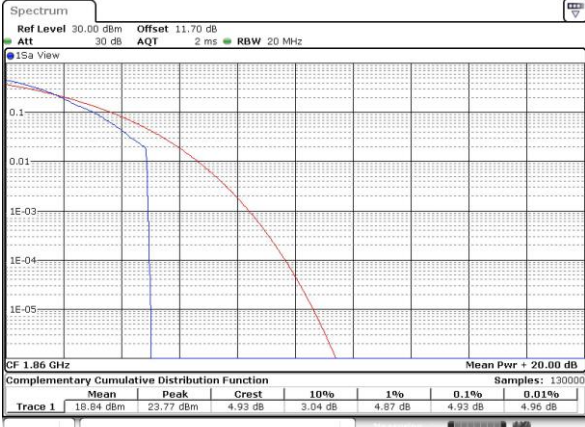
Date: 20 APR 2019 02:12:49





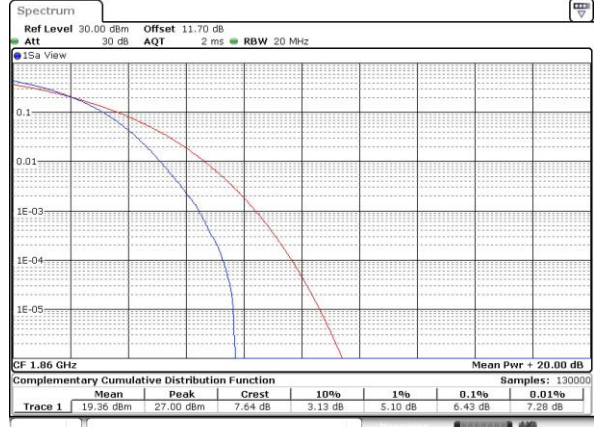
LTE Band 25 / 20MHz / 64QAM

Lowest Channel / 1RB



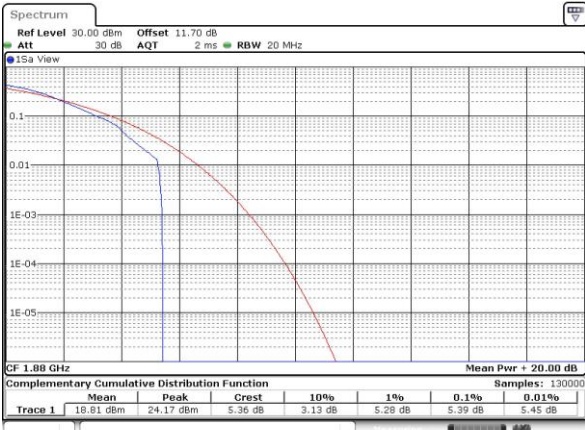
Date: 20 APR 2019 02:09:12

Lowest Channel / Full RB



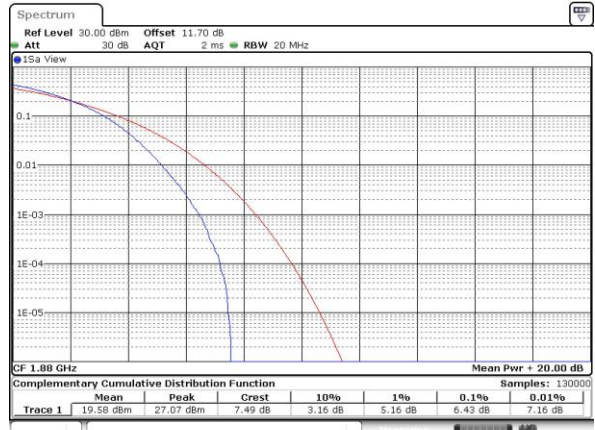
Date: 20 APR 2019 02:09:27

Middle Channel / 1RB



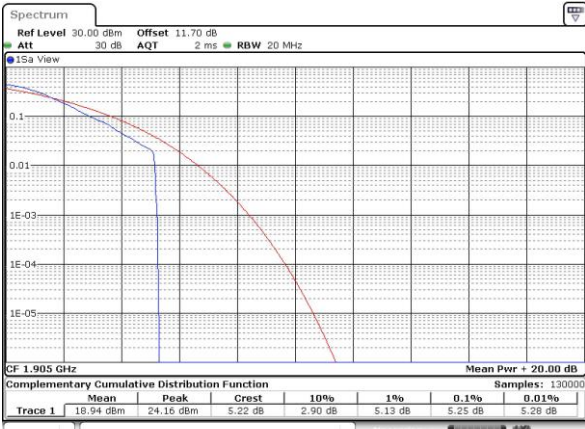
Date: 20 APR 2019 02:09:39

Middle Channel / Full RB



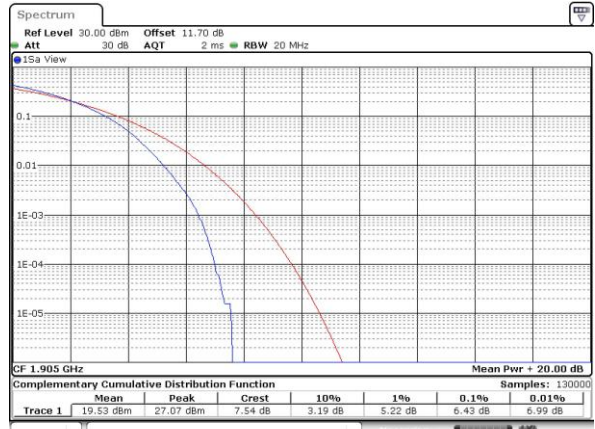
Date: 20 APR 2019 02:09:54

Highest Channel / 1RB



Date: 20 APR 2019 02:10:07

Highest Channel / Full RB



Date: 20 APR 2019 02:10:19



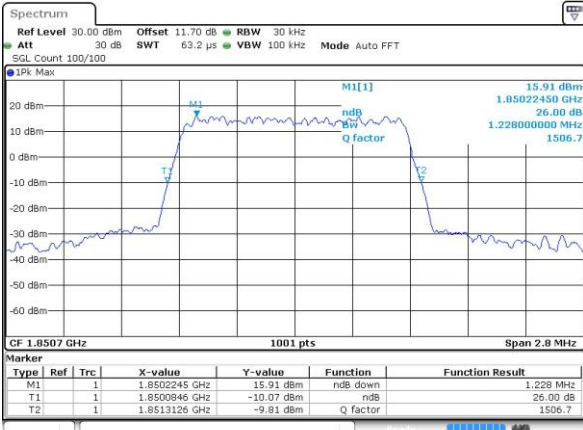
**26dB Bandwidth**

Mode	LTE Band 25 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.23	1.22	3.05	3.00	4.97	4.87	9.75	9.79	14.48	14.39	19.22	18.82
Middle CH	1.21	1.22	3.02	3.06	4.89	4.85	9.67	9.71	14.42	14.30	18.82	18.78
Highest CH	1.22	1.23	3.06	3.03	4.85	4.90	9.75	9.87	14.48	14.30	19.10	19.38
Mode	LTE Band 25 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.23	-	3.02	-	4.87	-	9.69	-	14.45	-	18.86	-
Middle CH	1.21	-	3.02	-	4.92	-	9.95	-	14.33	-	19.06	-
Highest CH	1.23	-	3.05	-	4.88	-	9.81	-	14.39	-	19.18	-



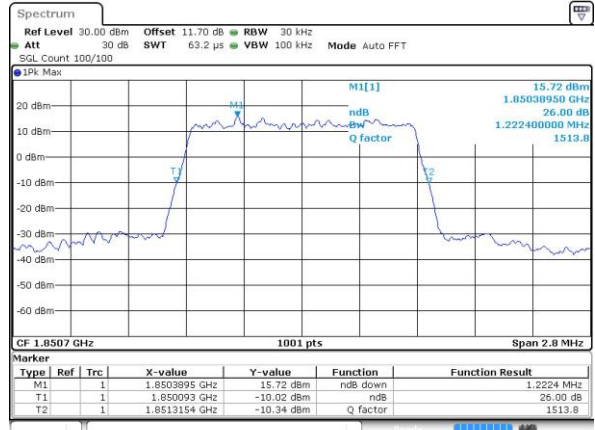
LTE Band 25

Lowest Channel / 1.4MHz / QPSK



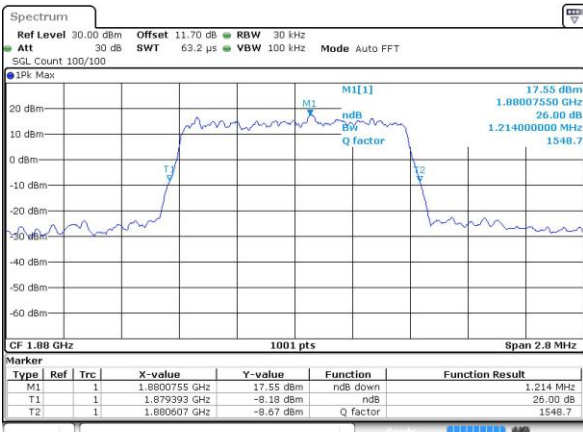
Date: 19 APR 2019 23:48:41

Lowest Channel / 1.4MHz / 16QAM



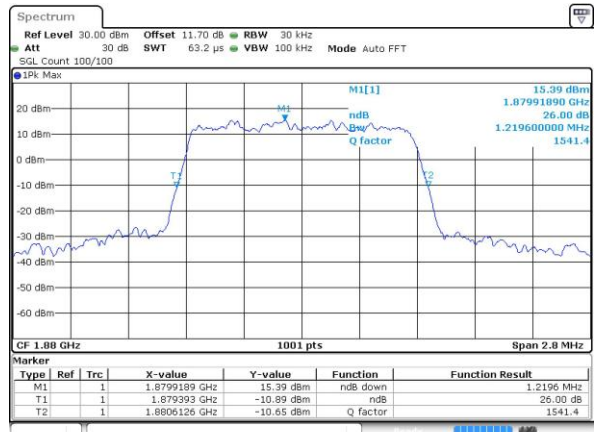
Date: 19 APR 2019 23:48:53

Middle Channel / 1.4MHz / QPSK



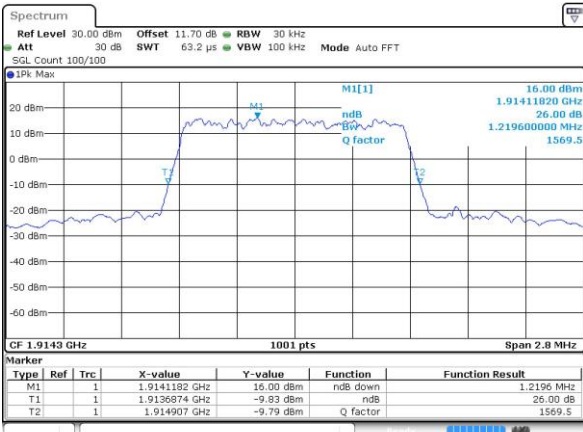
Date: 19 APR 2019 23:55:11

Middle Channel / 1.4MHz / 16QAM



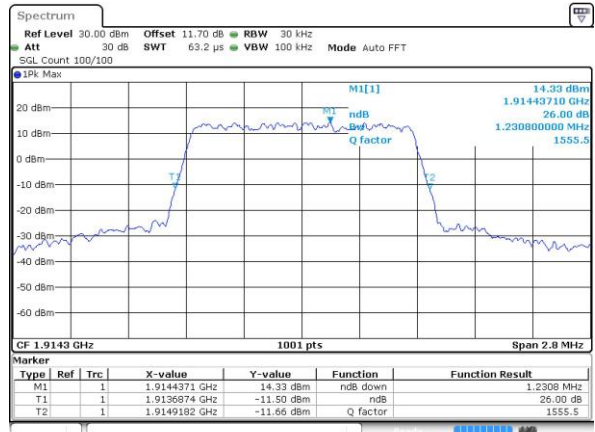
Date: 19 APR 2019 23:55:23

Highest Channel / 1.4MHz / QPSK



Date: 19 APR 2019 23:57:36

Highest Channel / 1.4MHz / 16QAM



Date: 19 APR 2019 23:57:24