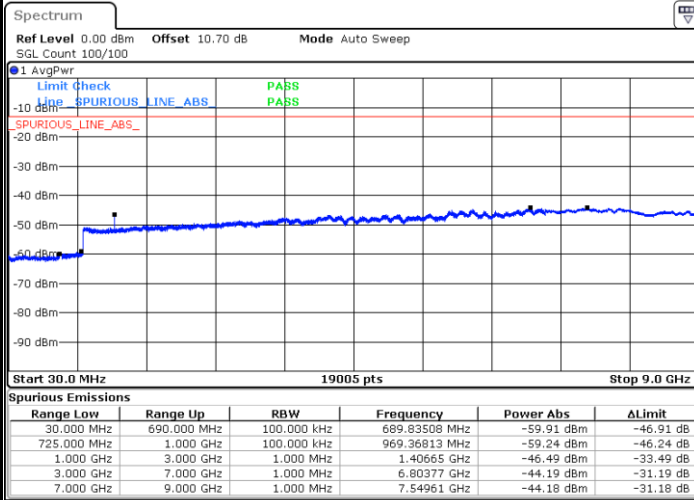




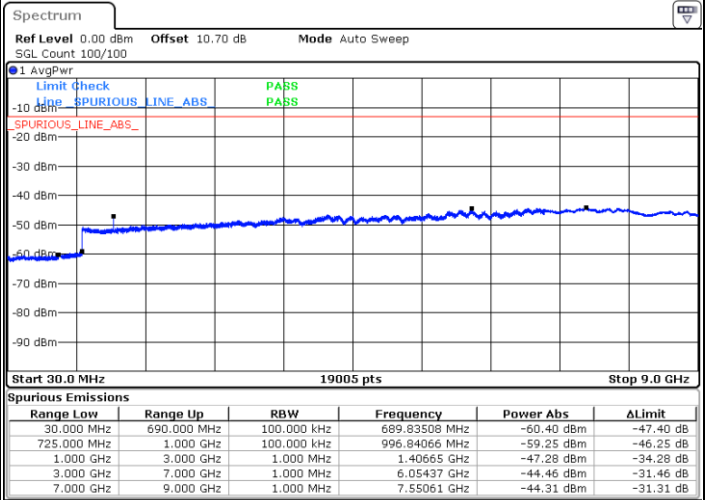
LTE Band 12 / 10MHz

Middle Channel / QPSK



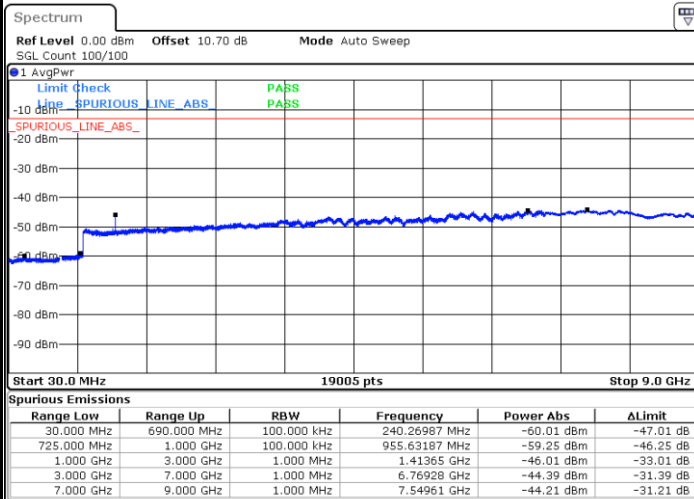
Date: 4 JAN 2020 23:02:03

Middle Channel / 16QAM



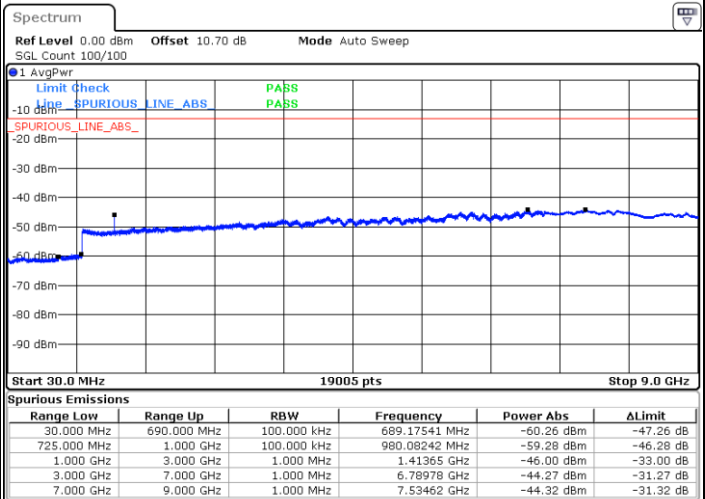
Date: 4 JAN 2020 23:01:23

Highest Channel / QPSK



Date: 4 JAN 2020 23:07:35

Highest Channel / 16QAM

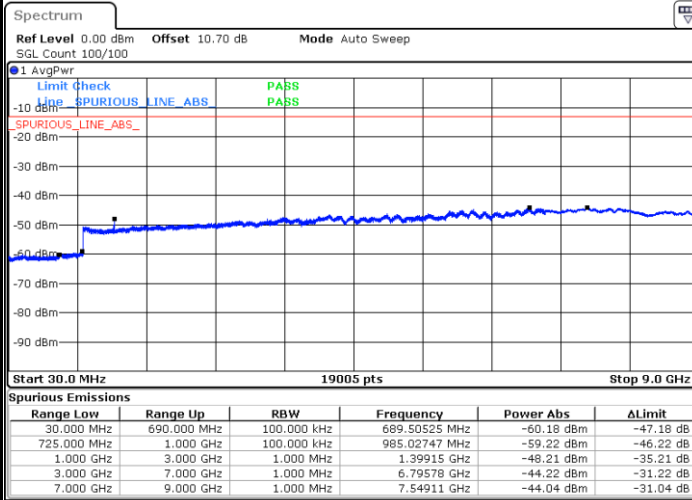


Date: 4 JAN 2020 23:08:15



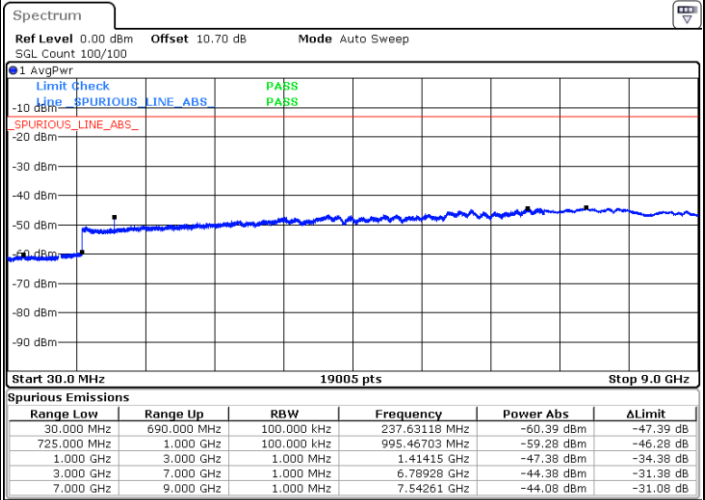
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



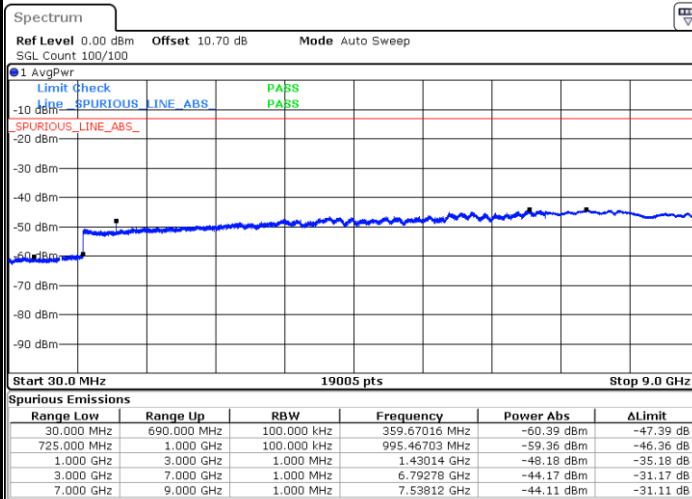
Date: 4 JAN 2020 22:05:49

Middle Channel / 64QAM



Date: 4 JAN 2020 22:06:53

Highest Channel / 64QAM

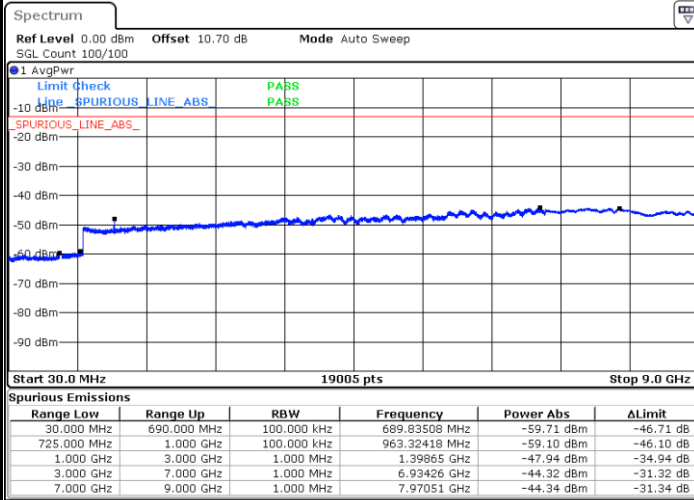


Date: 4 JAN 2020 22:09:59



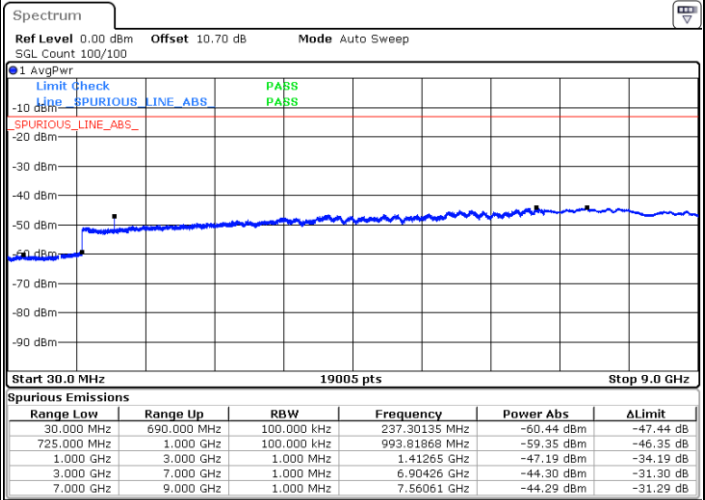
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



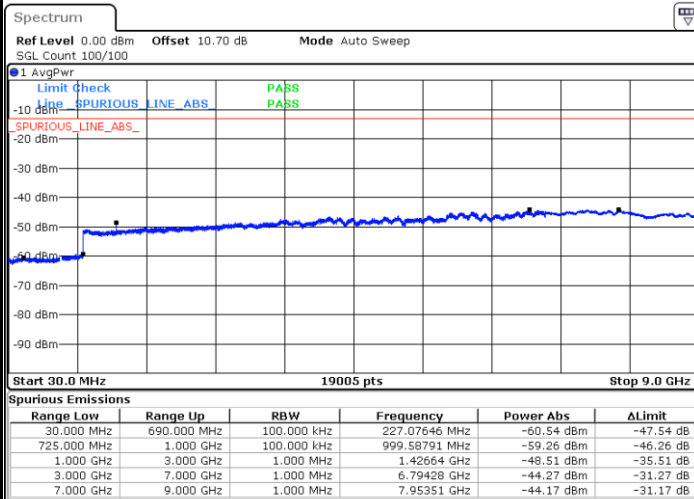
Date: 4 JAN 2020 22:27:41

Middle Channel / 64QAM



Date: 4 JAN 2020 22:28:44

Highest Channel / 64QAM

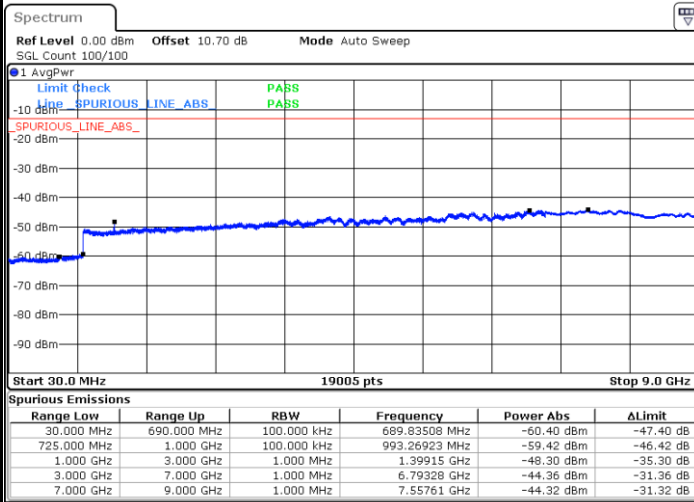


Date: 4 JAN 2020 22:31:50



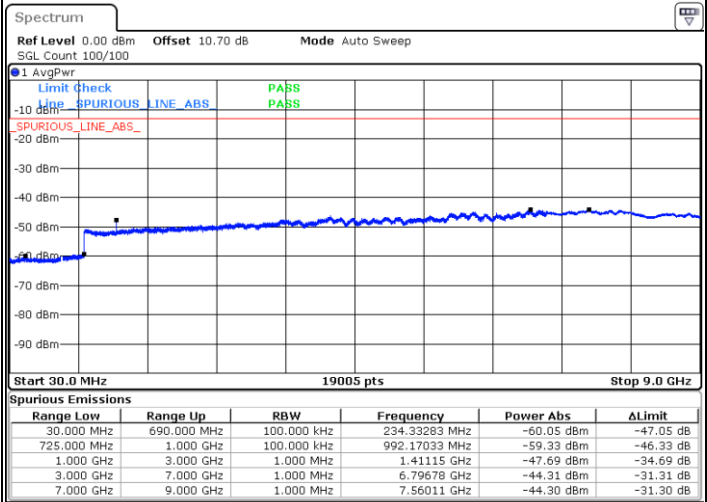
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



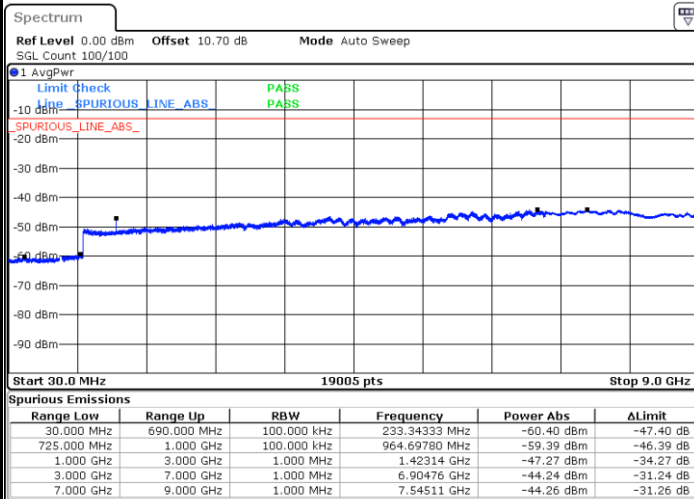
Date: 4 JAN 2020 22:34:58

Middle Channel / 64QAM



Date: 4 JAN 2020 22:36:01

Highest Channel / 64QAM

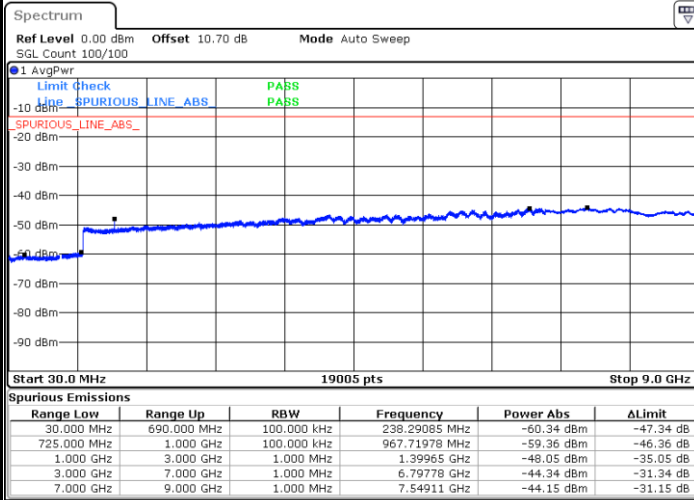


Date: 4 JAN 2020 22:39:08



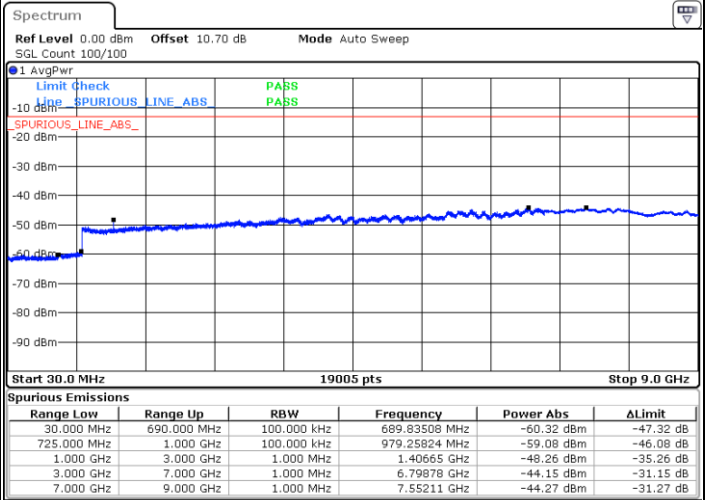
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



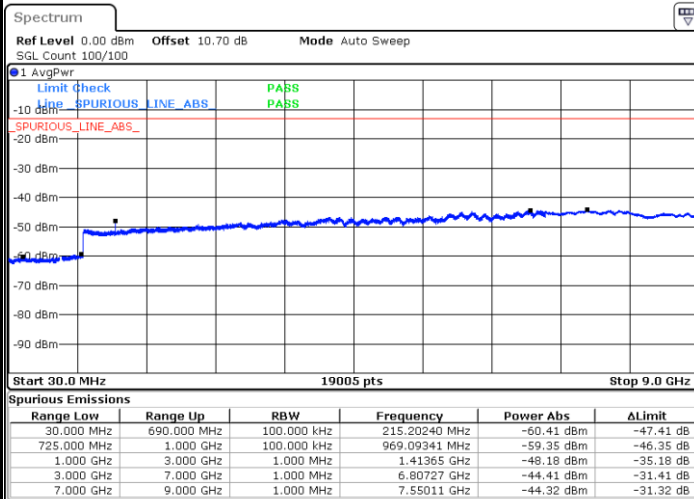
Date: 4 JAN 2020 23:11:22

Middle Channel / 64QAM



Date: 4 JAN 2020 23:12:25

Highest Channel / 64QAM



Date: 4 JAN 2020 23:15:32

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	0.0099	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0098	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0069	
0	Normal Voltage	0.0082	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0175	
-30	Normal Voltage	0.0171	
20	Maximum Voltage	0.0020	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

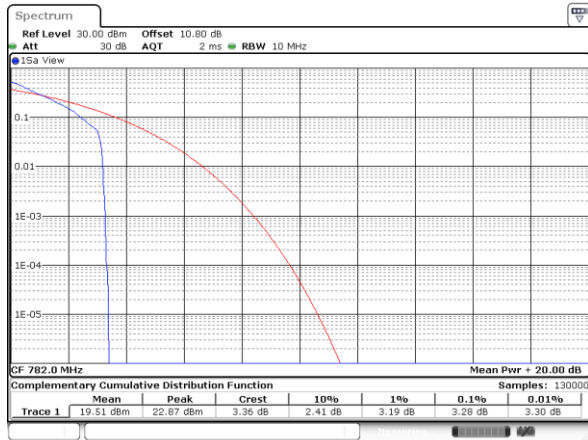
Note:

1. Normal Voltage =7.7 V. ; Battery End Point (BEP) =6.9 V. ; Maximum Voltage =8.5 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

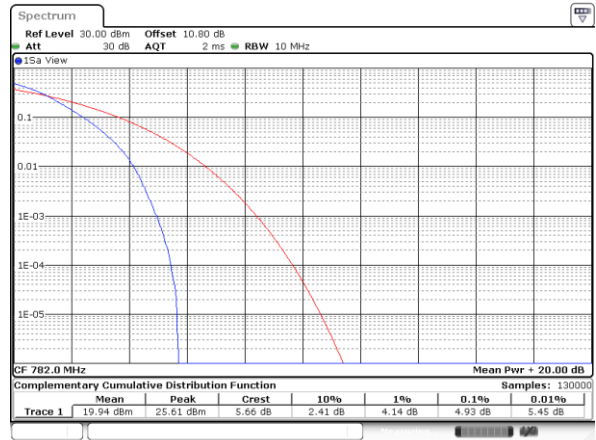
LTE Band 13

Peak-to-Average Ratio

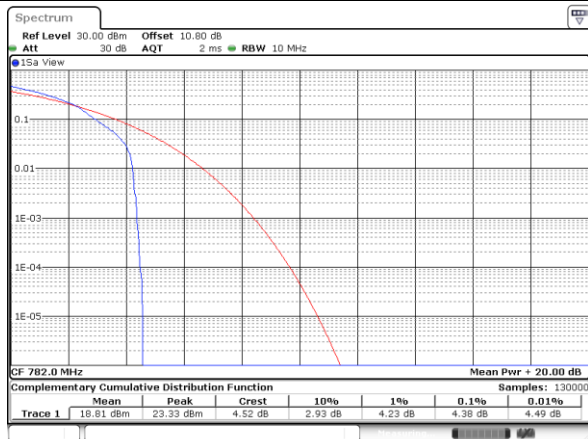
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.28	4.93	4.38	5.57	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.16	6.12	-	-	
Highest CH	-	-	-	-	

LTE Band 13 / 10MHz / QPSK
Middle Channel / 1RB


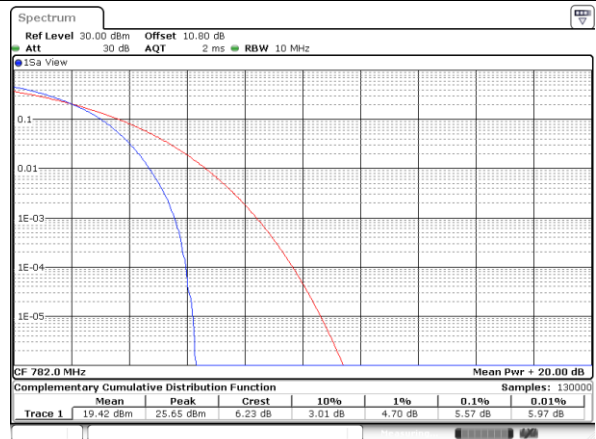
Date: 4 JAN 2020 07:24:27

Middle Channel / Full RB


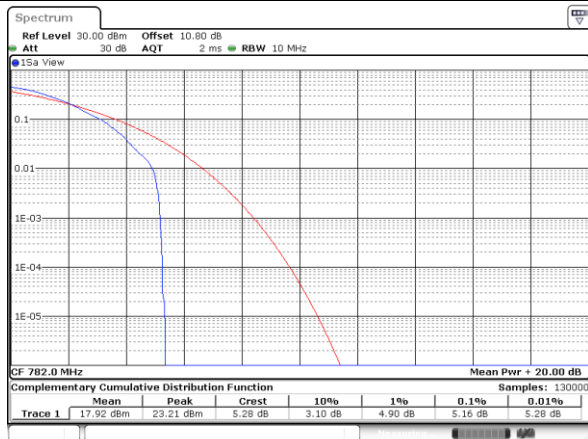
Date: 4 JAN 2020 07:24:40

LTE Band 13 / 10MHz / 16QAM
Middle Channel / 1RB


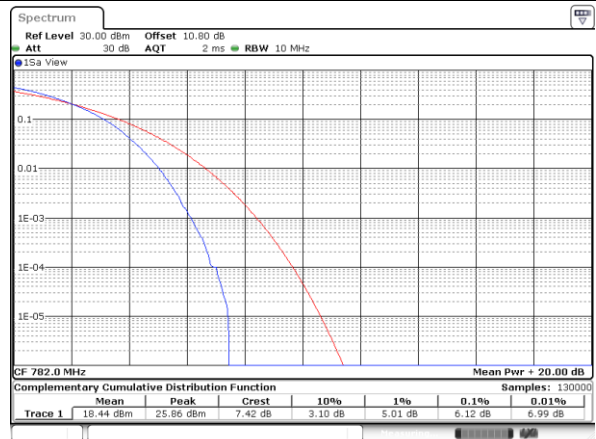
Date: 4 JAN 2020 07:24:05

Middle Channel / Full RB


Date: 4 JAN 2020 07:25:26

LTE Band 13 / 10MHz / 64QAM
Middle Channel / 1RB


Date: 4 JAN 2020 07:23:44

Middle Channel / Full RB


Date: 4 JAN 2020 07:25:03

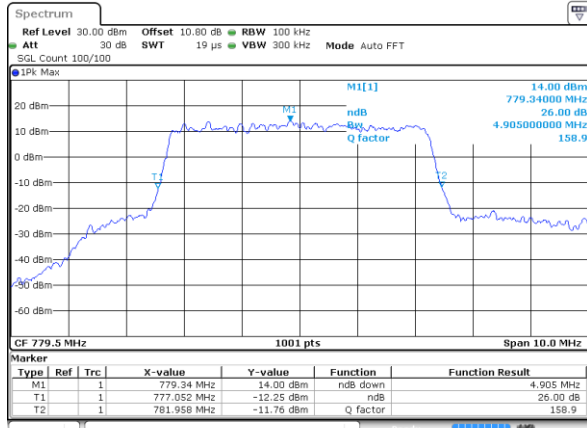
**26dB Bandwidth**

Mode	LTE Band 13 : 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	-	-	-	-	4.91	4.88	-	-	-	-	-	-
Middle CH	-	-	-	-	4.96	4.96	9.83	9.81	-	-	-	-
Highest CH	-	-	-	-	4.97	4.91	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.85	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.90	-	9.83	-	-	-	-	-
Highest CH	-	-	-	-	4.86	-	-	-	-	-	-	-



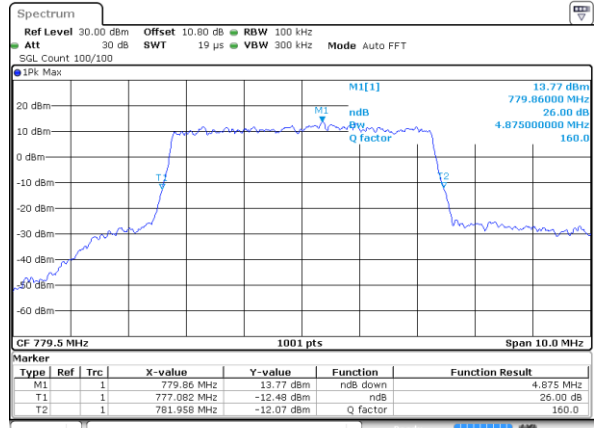
LTE Band 13

Lowest Channel / 5MHz / QPSK



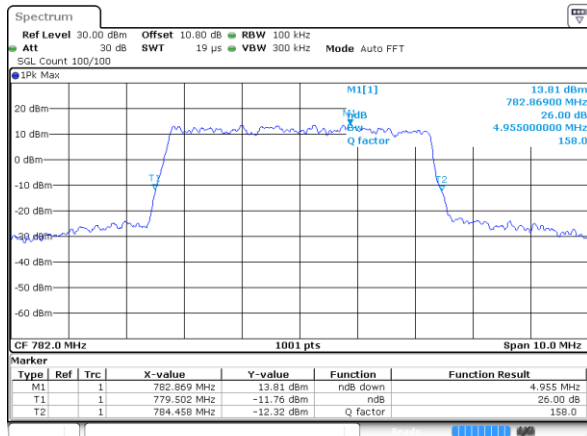
Date: 4 JAN 2020 06:34:45

Lowest Channel / 5MHz / 16QAM



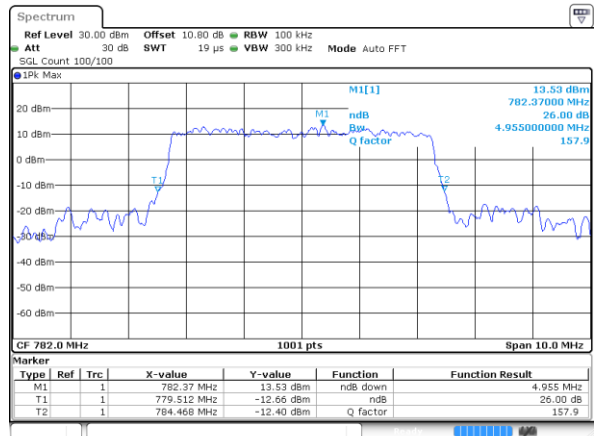
Date: 4 JAN 2020 06:34:32

Middle Channel / 5MHz / QPSK



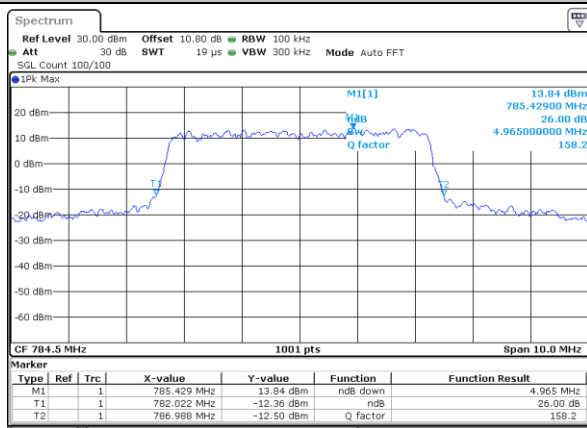
Date: 4 JAN 2020 06:44:21

Middle Channel / 5MHz / 16QAM



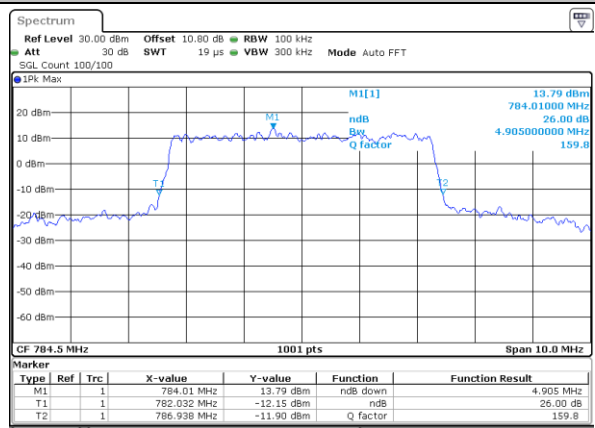
Date: 4 JAN 2020 06:44:33

Highest Channel / 5MHz / QPSK



Date: 4 JAN 2020 06:45:45

Highest Channel / 5MHz / 16QAM

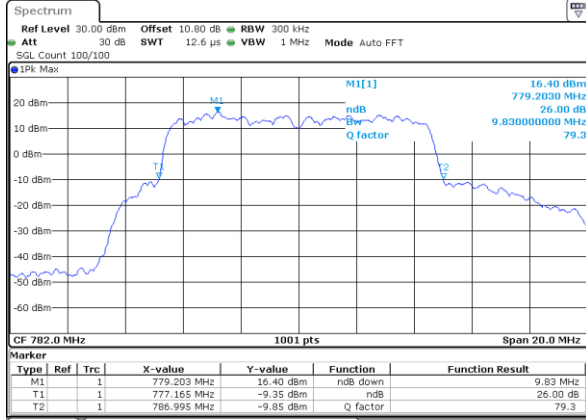


Date: 4 JAN 2020 06:45:33



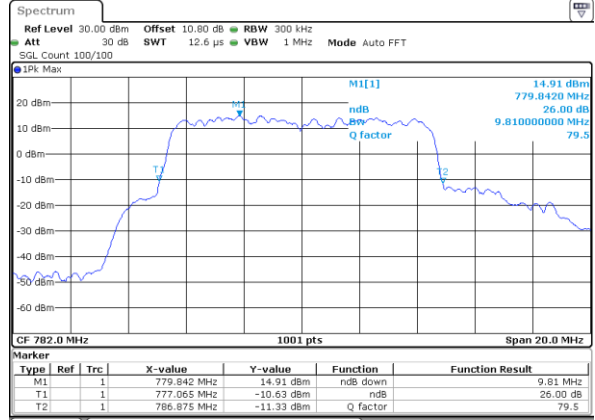
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 4 JAN 2020 07:04:34

Middle Channel / 10MHz / 16QAM

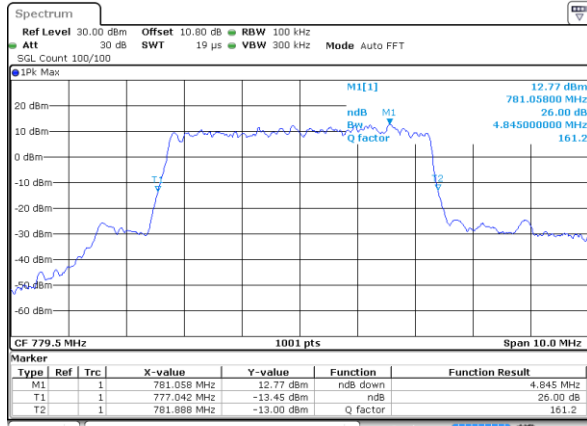


Date: 4 JAN 2020 07:04:22

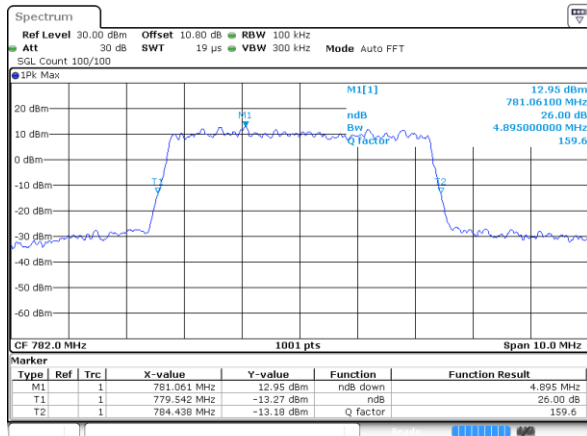


LTE Band 13

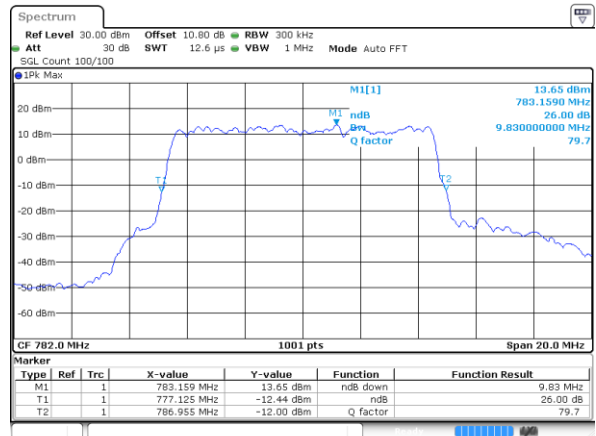
Lowest Channel / 5MHz / 64QAM



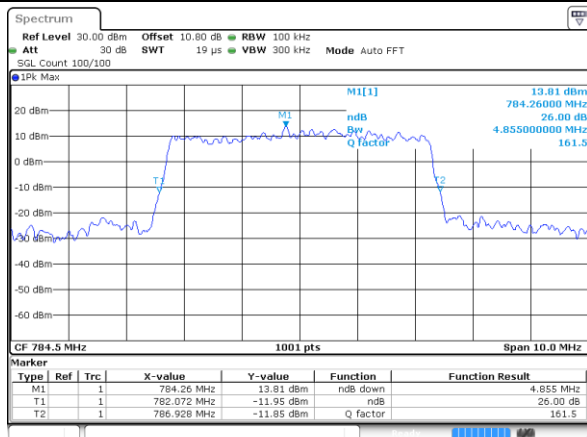
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



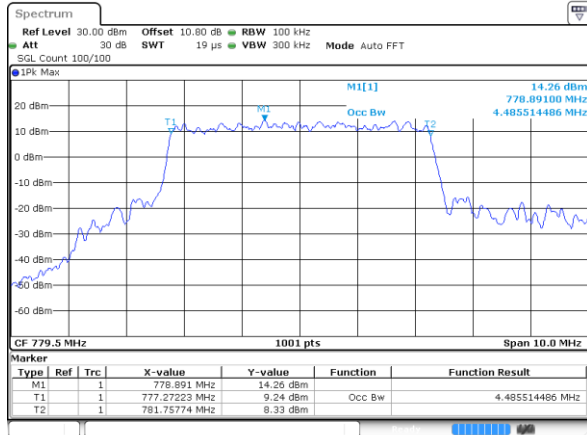
**Occupied Bandwidth**

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	4.47	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	4.52	9.01	9.01	-	-	-	-
Highest CH	-	-	-	-	4.49	4.50	-	-	-	-	-	-
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	-	8.99	-	-	-	-	-
Highest CH	-	-	-	-	4.49	-	-	-	-	-	-	-



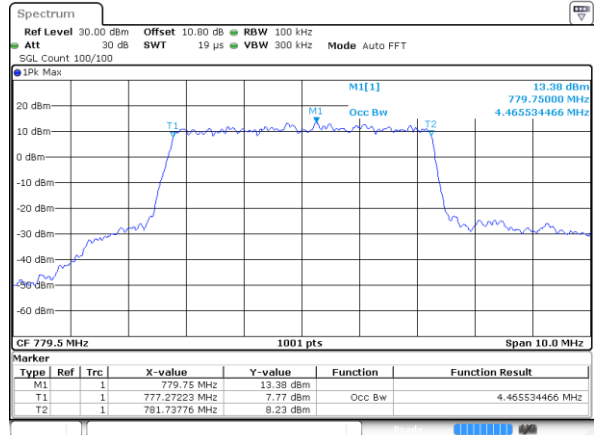
LTE Band 13

Lowest Channel / 5MHz / QPSK



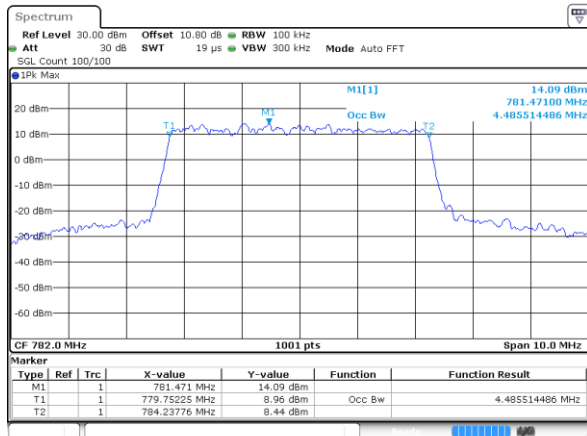
Date: 4 JAN 2020 06:34:08

Lowest Channel / 5MHz / 16QAM



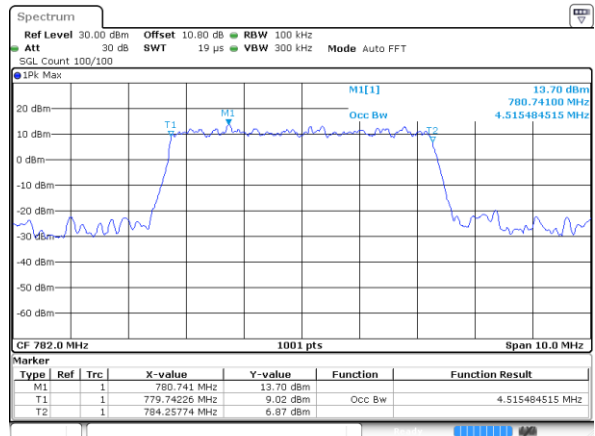
Date: 4 JAN 2020 06:34:20

Middle Channel / 5MHz / QPSK



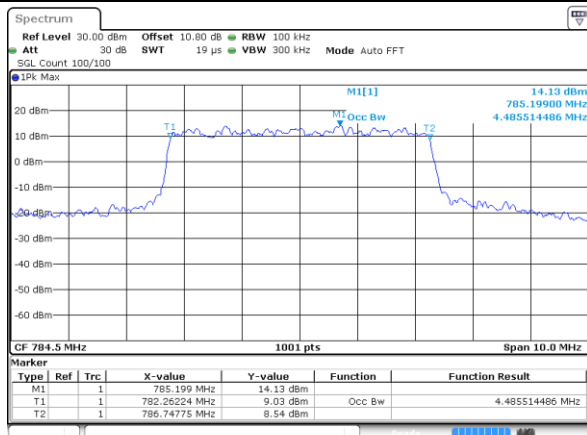
Date: 4 JAN 2020 06:44:56

Middle Channel / 5MHz / 16QAM



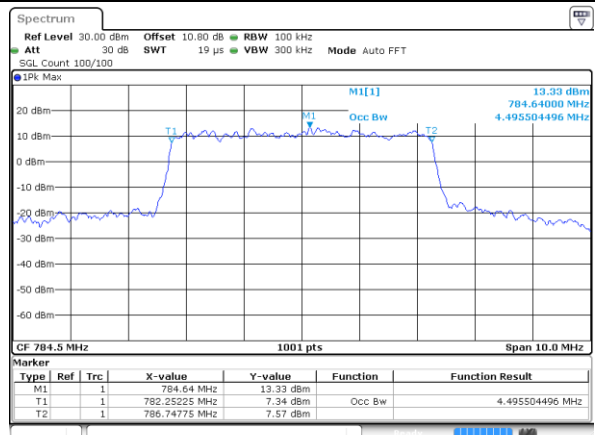
Date: 4 JAN 2020 06:44:44

Highest Channel / 5MHz / QPSK



Date: 4 JAN 2020 06:45:08

Highest Channel / 5MHz / 16QAM

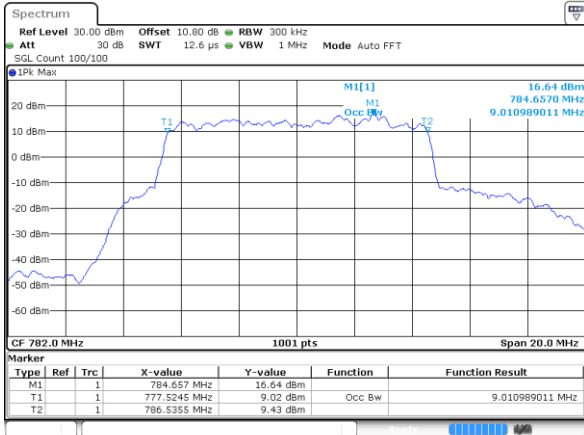


Date: 4 JAN 2020 06:45:20



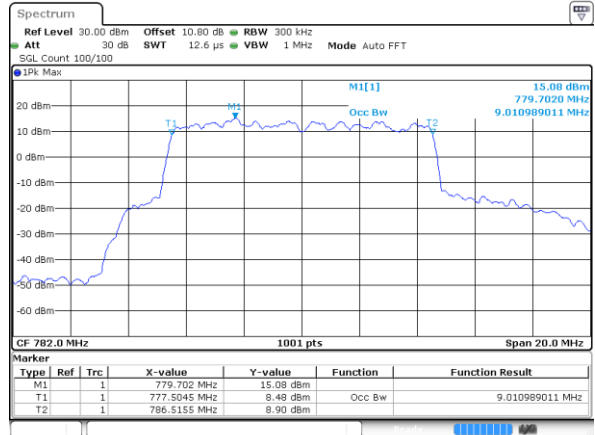
LTE Band 13

Middle Channel / 10MHz / QPSK

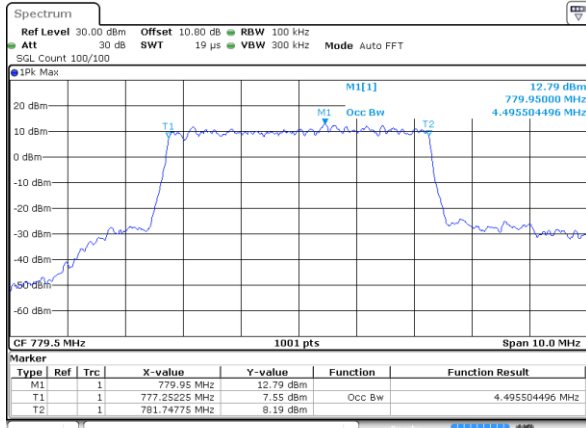


Date: 4 JAN 2020 07:03:59

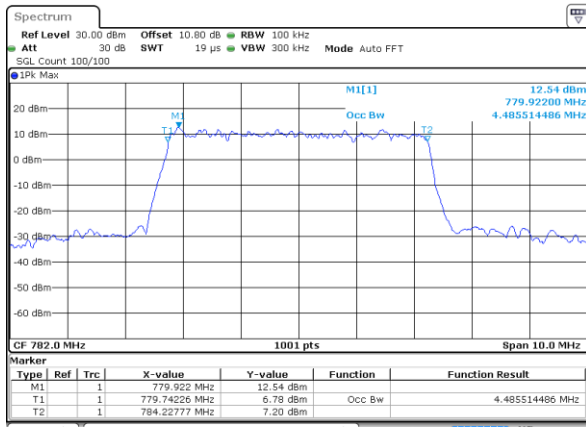
Middle Channel / 10MHz / 16QAM



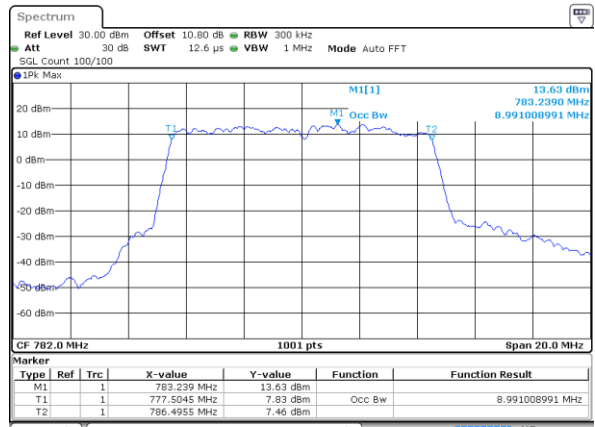
Date: 4 JAN 2020 07:04:11

LTE Band 13
Lowest Channel / 5MHz / 64QAM


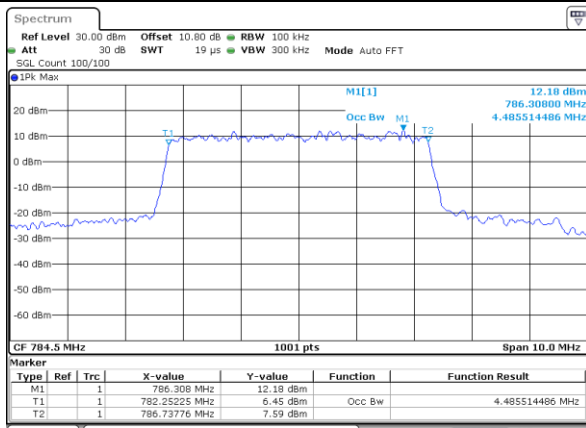
Date: 4 JAN 2020 06:54:02

Middle Channel / 5MHz / 64QAM


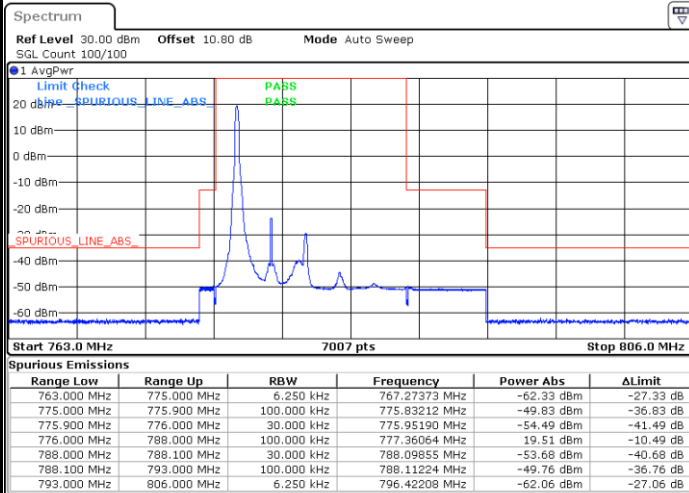
Date: 4 JAN 2020 06:59:20

Middle Channel / 10MHz / 64QAM


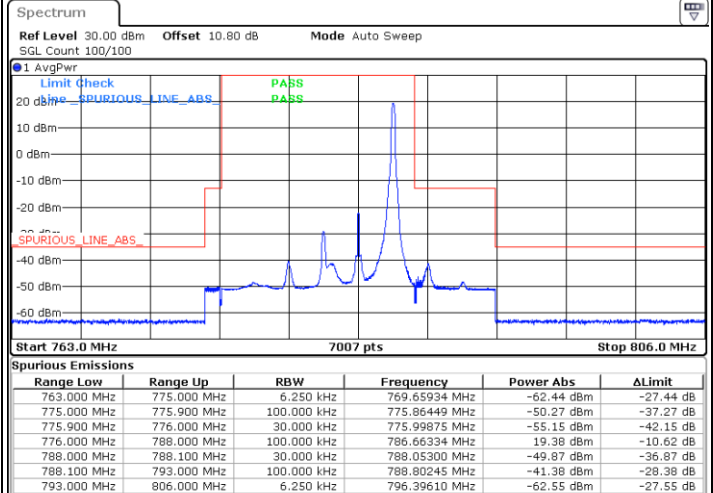
Date: 4 JAN 2020 07:16:07

Highest Channel / 5MHz / 64QAM


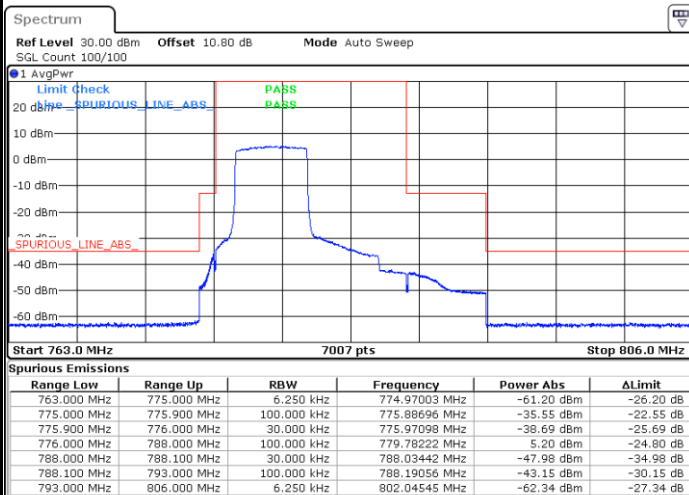
Date: 4 JAN 2020 06:59:32

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

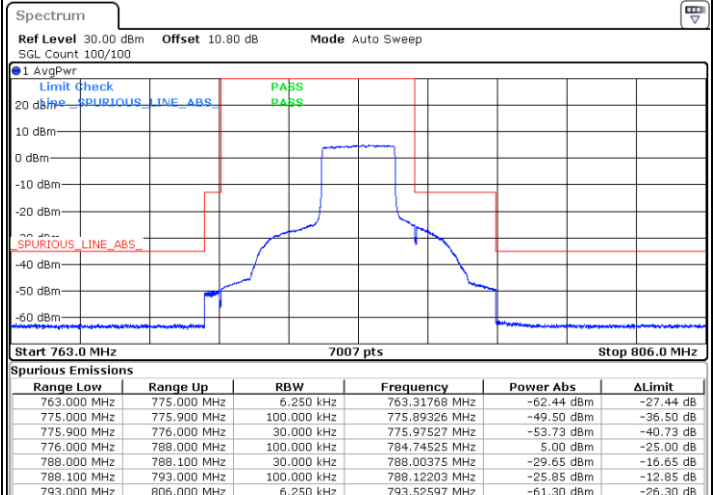
Date: 4 JAN 2020 06:41:28

Highest Band Edge / 1 RB

Date: 4 JAN 2020 06:52:29

Lowest Band Edge / Full RB

Date: 4 JAN 2020 06:36:25

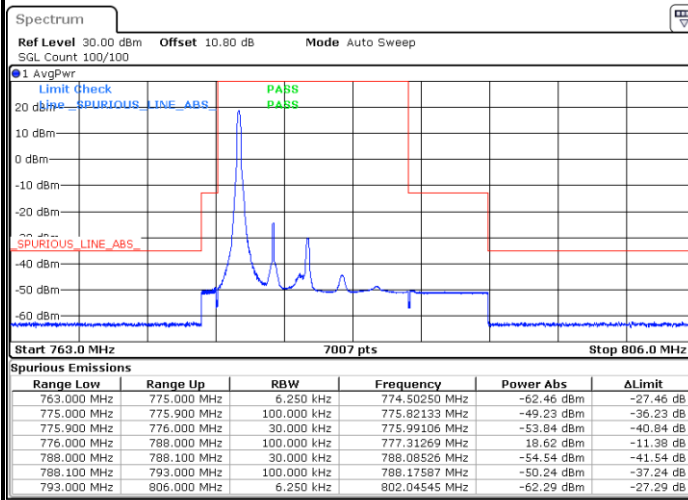
Highest Band Edge / Full RB

Date: 4 JAN 2020 06:47:25



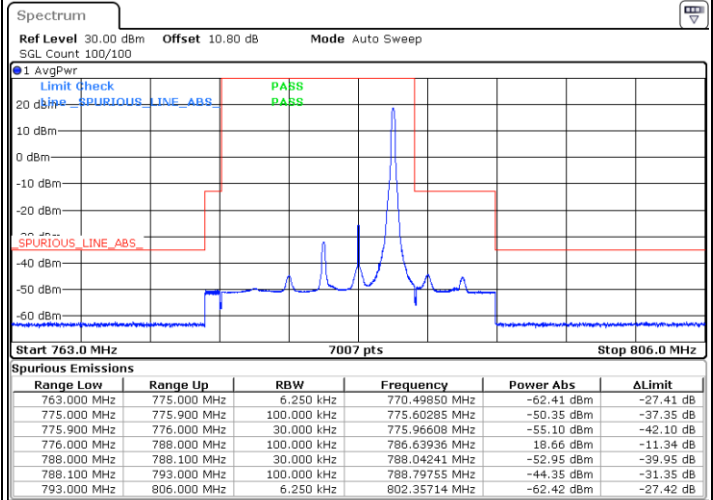
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



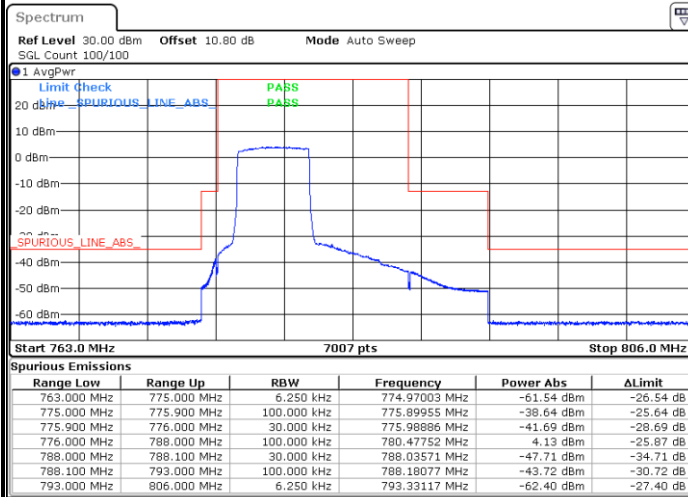
Date: 4 JAN 2020 06:39:47

Highest Band Edge / 1 RB



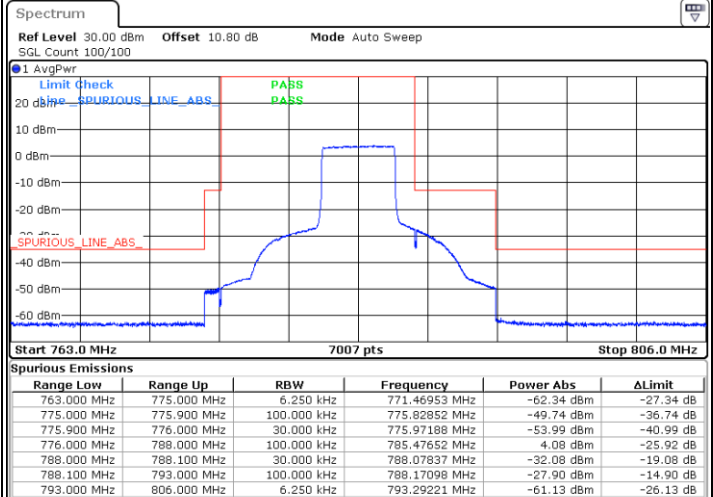
Date: 4 JAN 2020 06:50:48

Lowest Band Edge / Full RB



Date: 4 JAN 2020 06:38:06

Highest Band Edge / Full RB

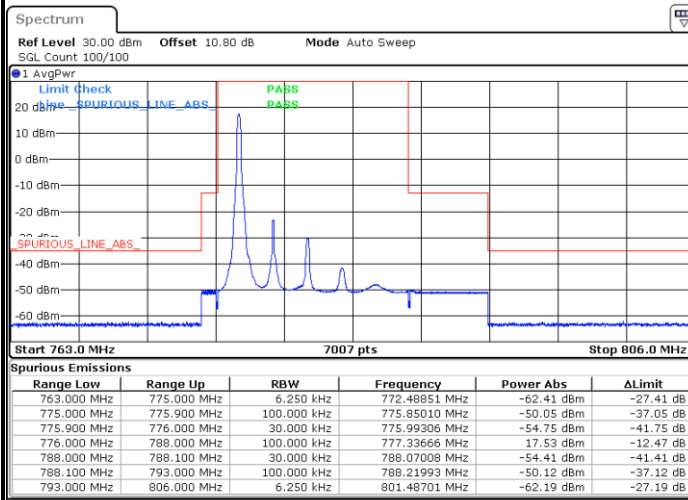


Date: 4 JAN 2020 06:49:07

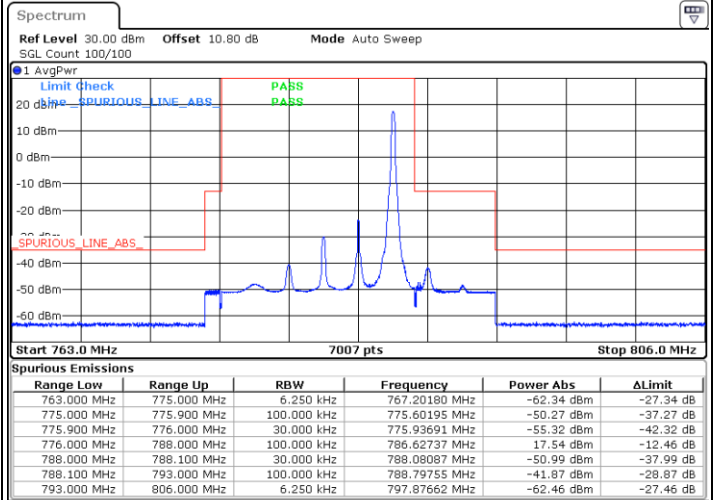


LTE Band 13 / 5MHz / 64QAM

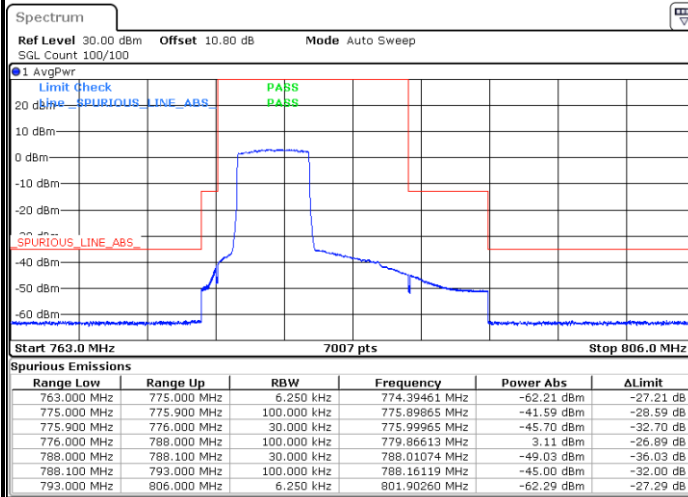
Lowest Band Edge / 1 RB



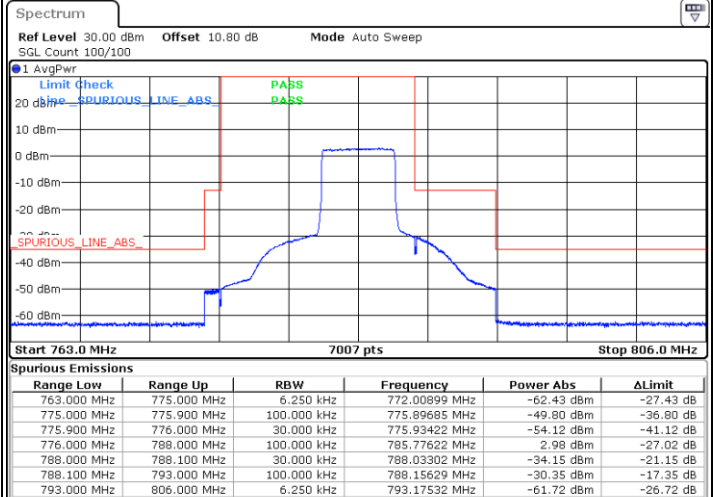
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



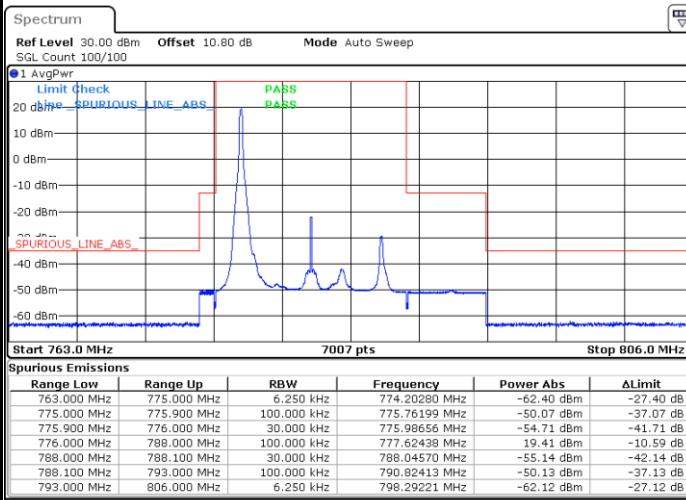
Highest Band Edge / Full RB





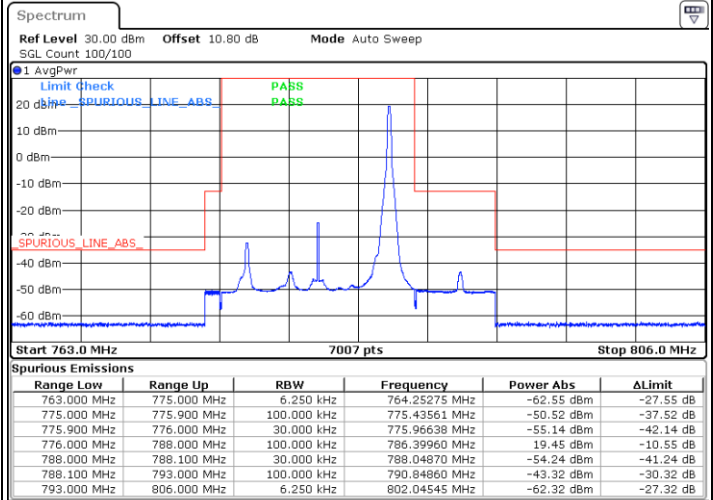
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



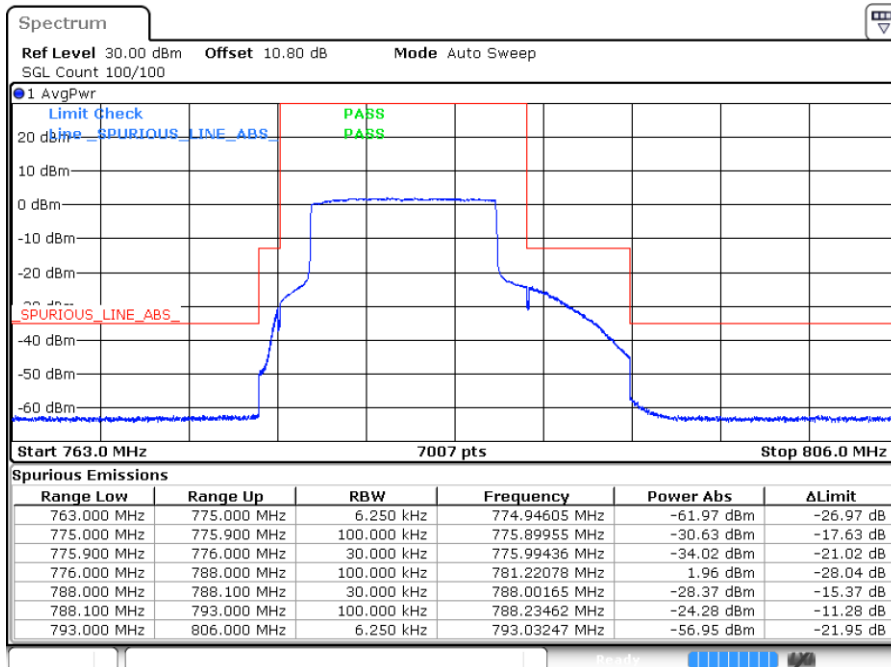
Date: 4 JAN 2020 07:11:15

Highest Band Edge / 1 RB



Date: 4 JAN 2020 07:12:55

Band Edge / Full RB

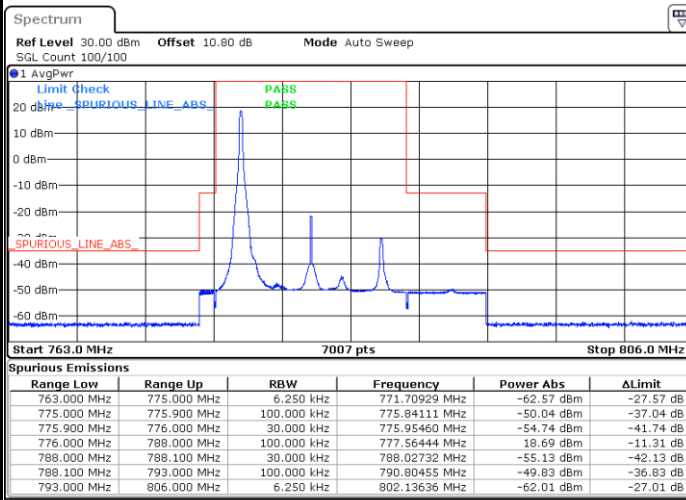


Date: 4 JAN 2020 07:06:13



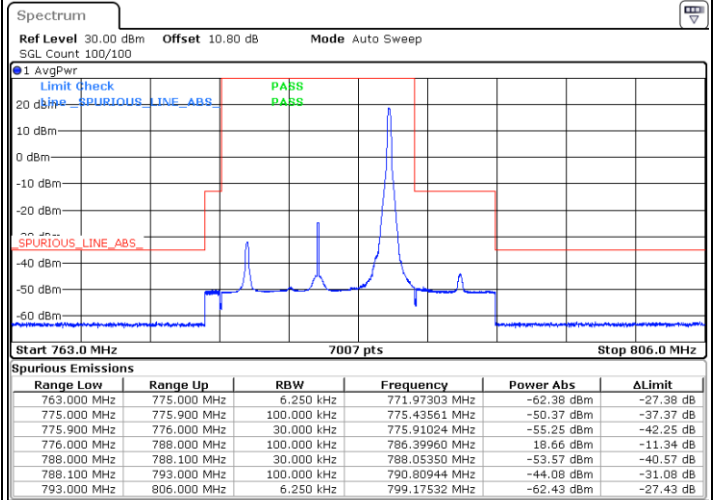
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



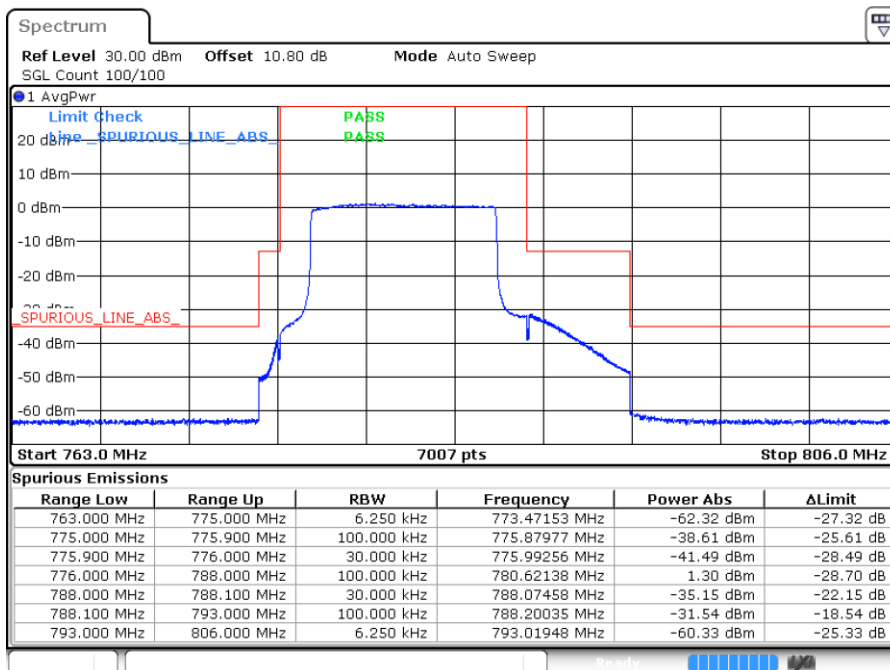
Date: 4 JAN 2020 07:09:34

Highest Band Edge / 1 RB



Date: 4 JAN 2020 07:14:35

Band Edge / Full RB

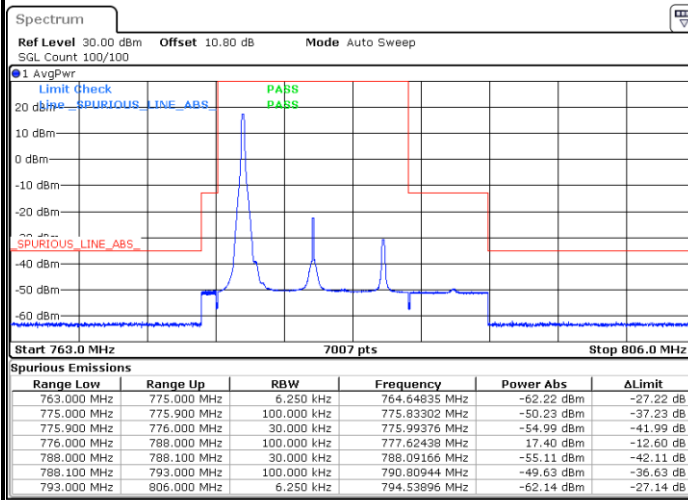


Date: 4 JAN 2020 07:07:54



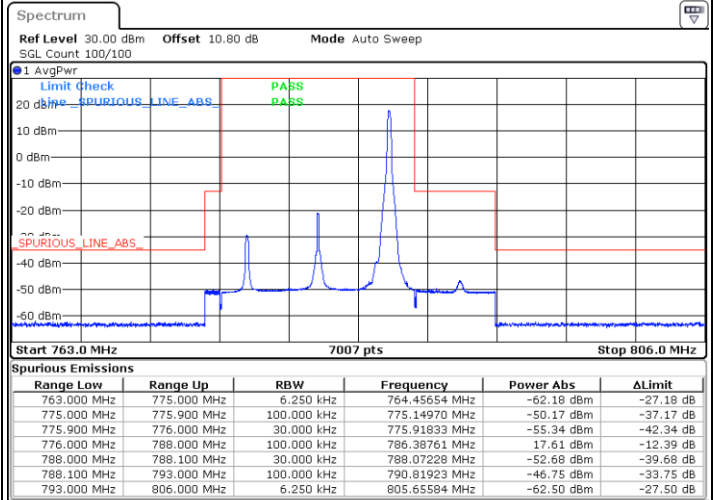
LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



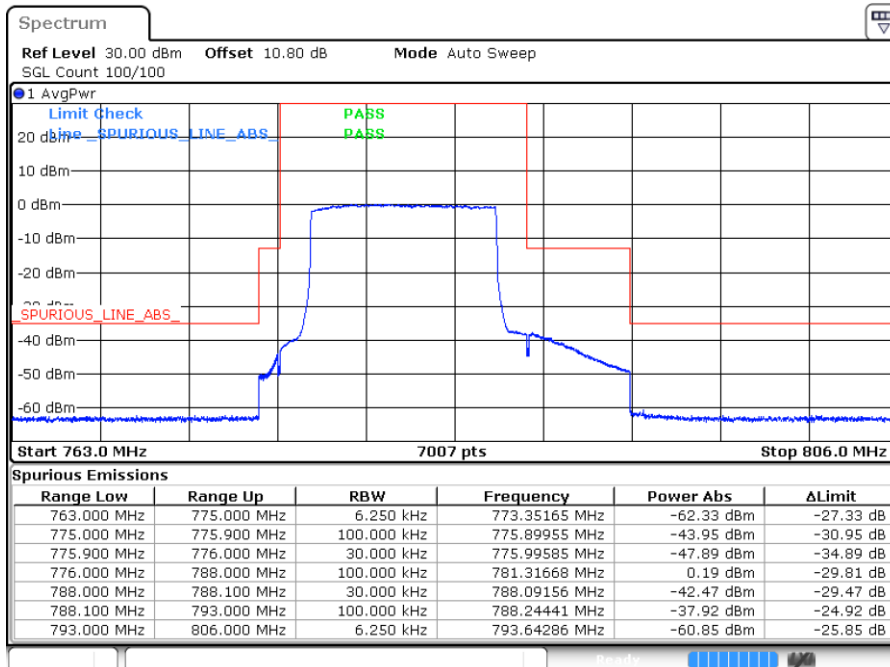
Date: 4 JAN 2020 07:19:39

Highest Band Edge / 1 RB



Date: 4 JAN 2020 07:21:20

Band Edge / Full RB



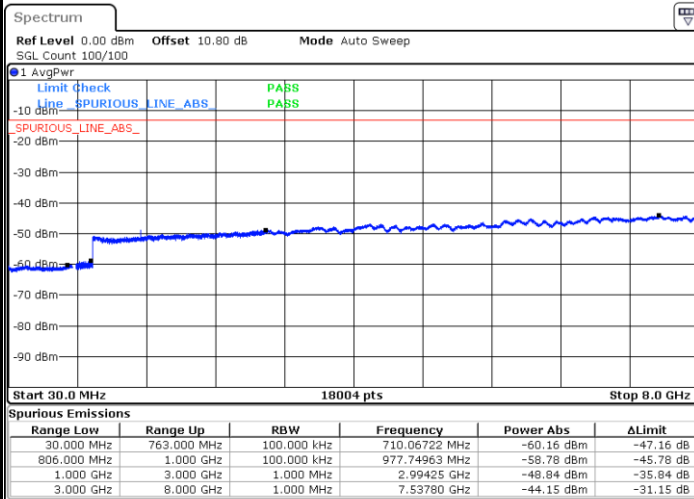
Date: 4 JAN 2020 07:17:59



Conducted Spurious Emission

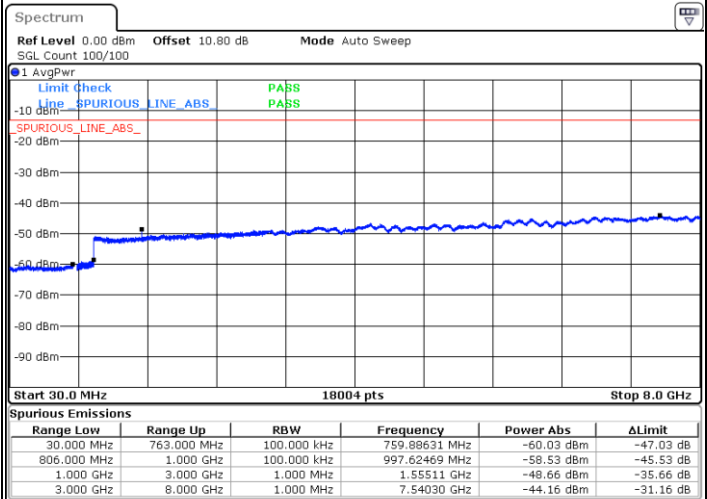
LTE Band 13 / 5MHz

Lowest Channel / QPSK



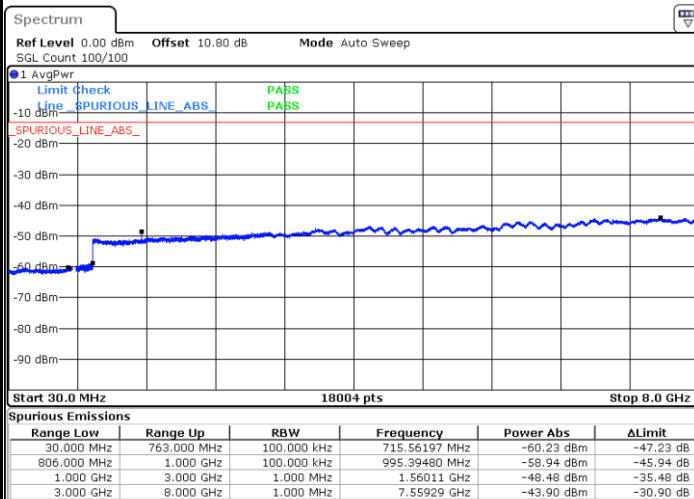
Date: 4 JAN 2020 06:42:09

Lowest Channel / 16QAM



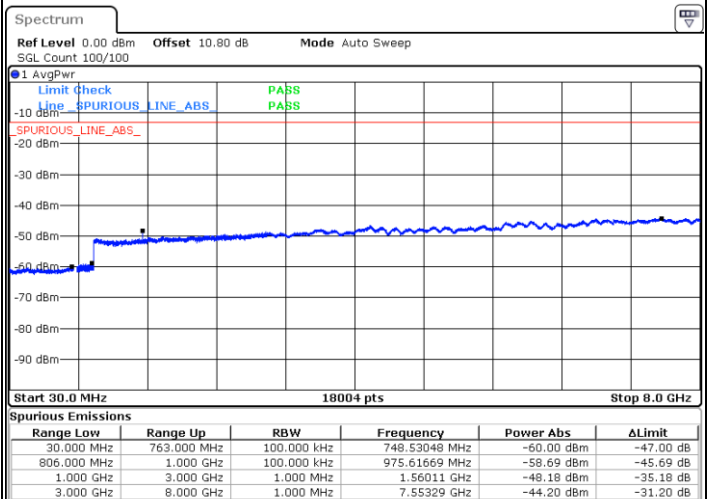
Date: 4 JAN 2020 06:42:50

Middle Channel / QPSK



Date: 4 JAN 2020 06:44:10

Middle Channel / 16QAM

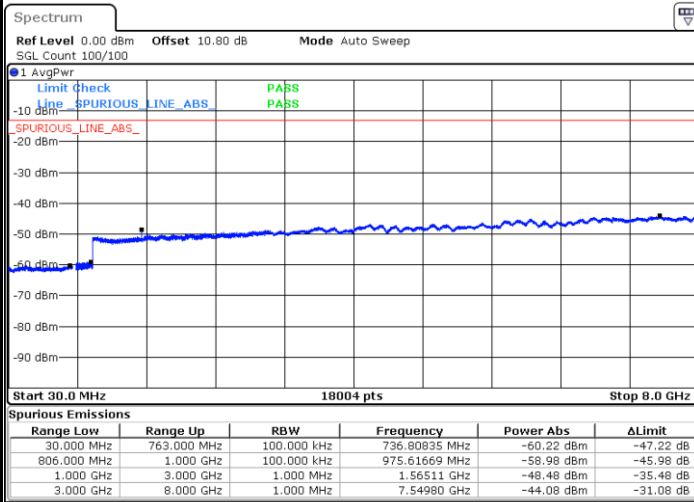


Date: 4 JAN 2020 06:43:30



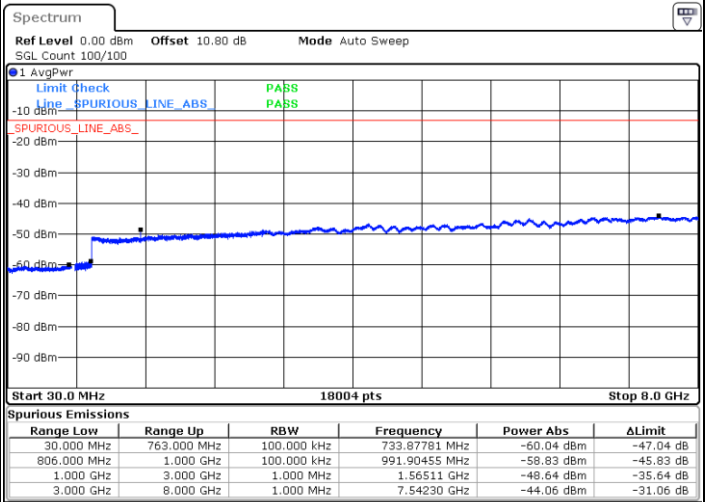
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 4 JAN 2020 06:53:10

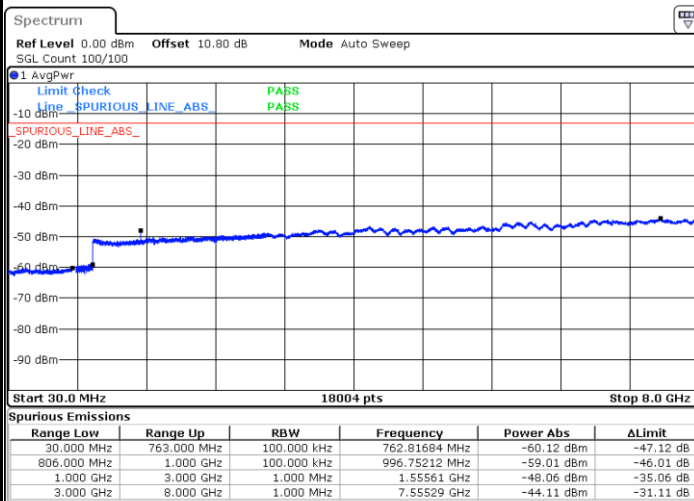
Highest Channel / 16QAM



Date: 4 JAN 2020 06:53:50

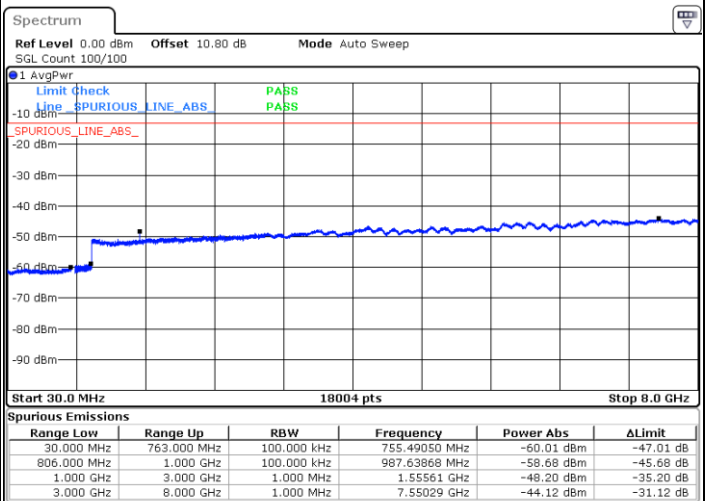
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 4 JAN 2020 07:15:56

Middle Channel / 16QAM

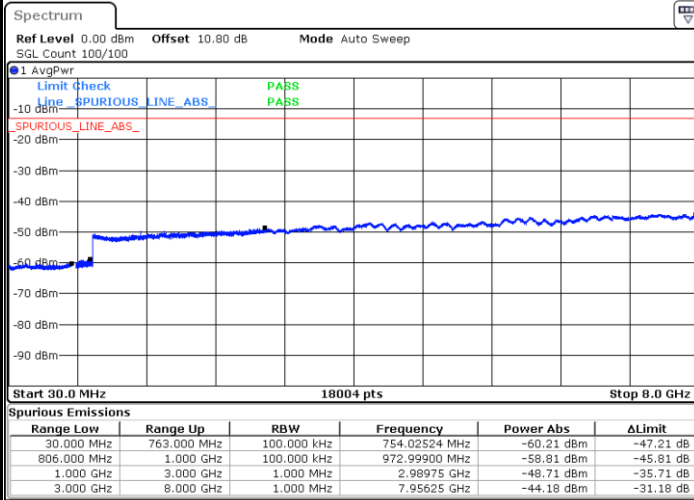


Date: 4 JAN 2020 07:15:16



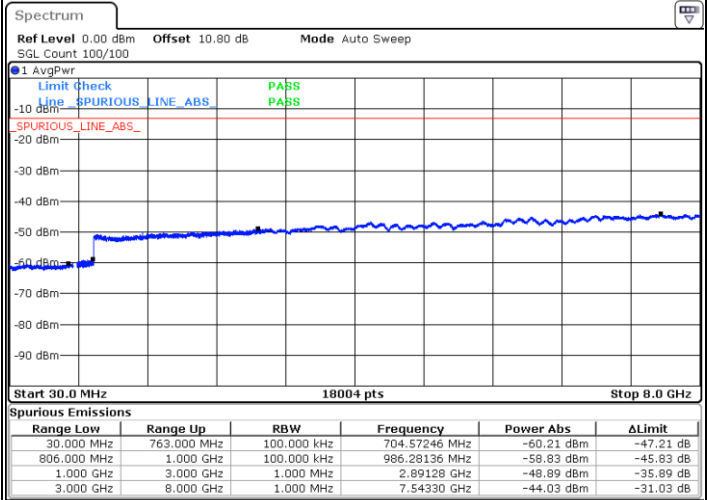
LTE Band 13 / 5MHz

Lowest Channel / 64QAM



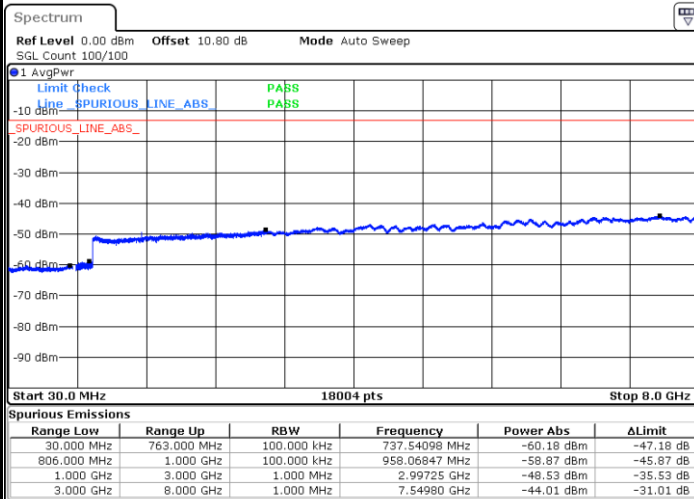
Date: 4 JAN 2020 06:58:17

Middle Channel / 64QAM



Date: 4 JAN 2020 06:58:57

Highest Channel / 64QAM

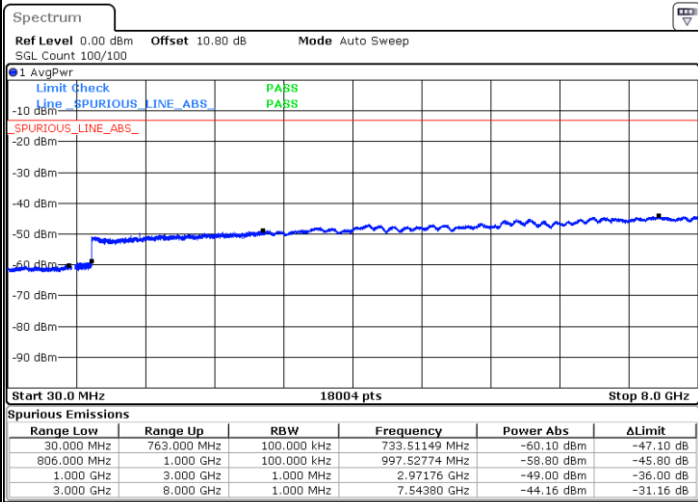


Date: 4 JAN 2020 07:03:47



LTE Band 13 / 10MHz

Middle Channel / 64QAM



Date: 4 JAN 2020 07:22:00

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	0.0019	PASS
40	Normal Voltage	0.0160	
30	Normal Voltage	0.0138	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0086	
0	Normal Voltage	0.0026	
-10	Normal Voltage	0.0097	
-20	Normal Voltage	0.0047	
-30	Normal Voltage	0.0009	
20	Maximum Voltage	0.0059	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0029	

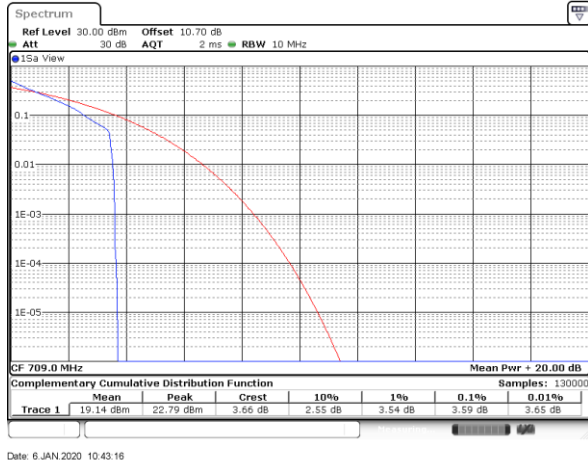
Note:

1. Normal Voltage =7.7 V. ; Battery End Point (BEP) =6.9 V. ; Maximum Voltage =8.5 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

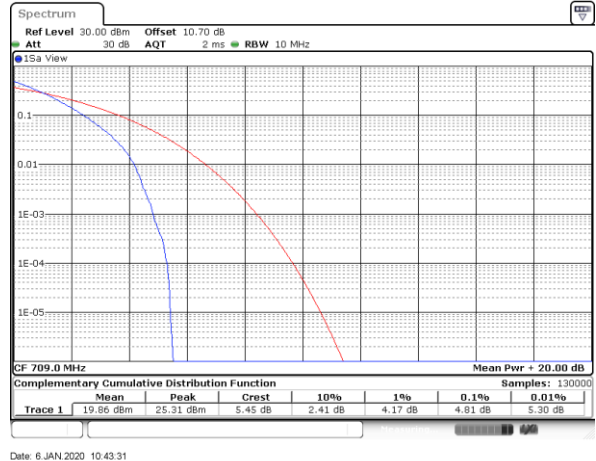
LTE Band 17

Peak-to-Average Ratio

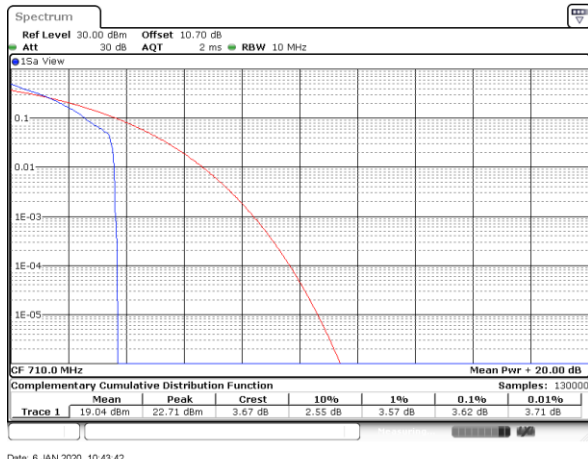
Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.59	4.81	4.99	5.83	PASS
Middle CH	3.62	4.87	5.28	5.80	
Highest CH	3.91	4.96	5.22	5.86	
Mode	LTE Band 17 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.12	6.26	-	-	PASS
Middle CH	6.70	6.29	-	-	
Highest CH	6.58	6.35	-	-	

LTE Band 17 / 10MHz / QPSK
Lowest Channel / 1RB


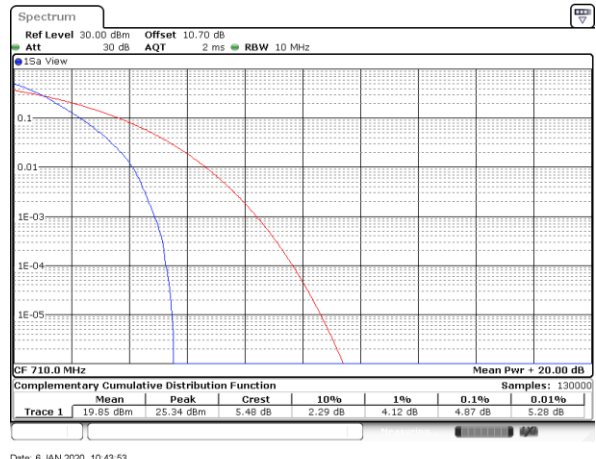
Date: 6 JAN 2020 10:43:16

Lowest Channel / Full RB


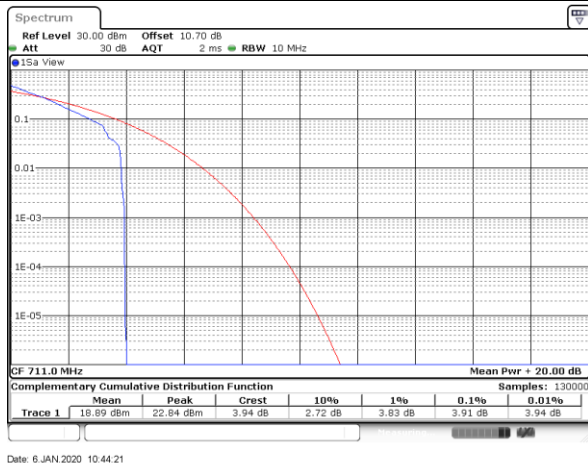
Date: 6 JAN 2020 10:43:31

Middle Channel / 1RB


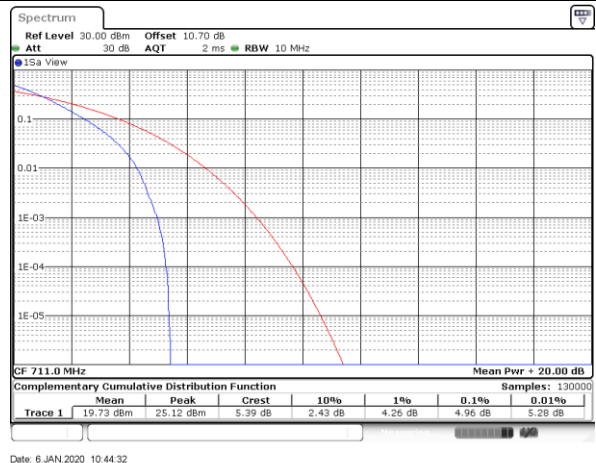
Date: 6 JAN 2020 10:43:42

Middle Channel / Full RB


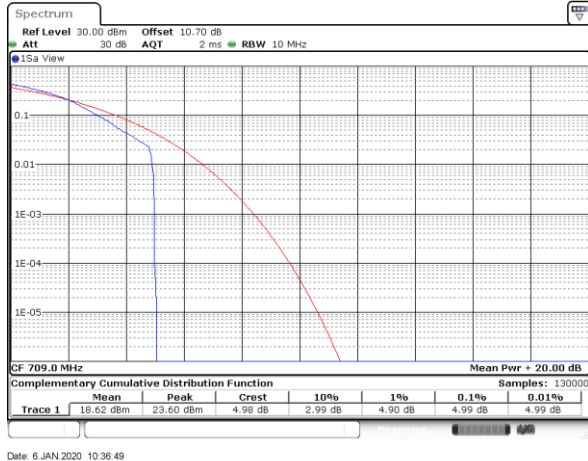
Date: 6 JAN 2020 10:43:53

Highest Channel / 1RB


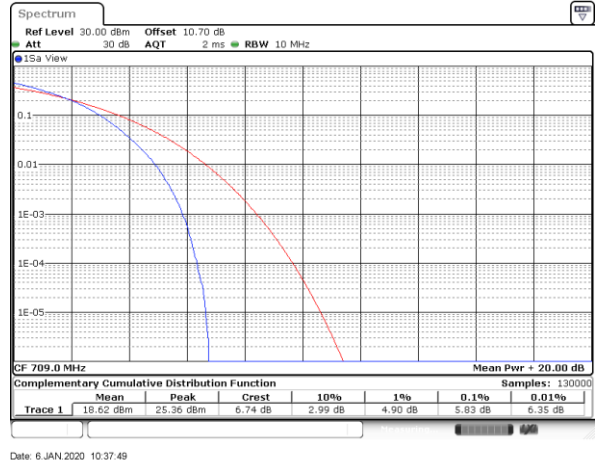
Date: 6 JAN 2020 10:44:21

Highest Channel / Full RB


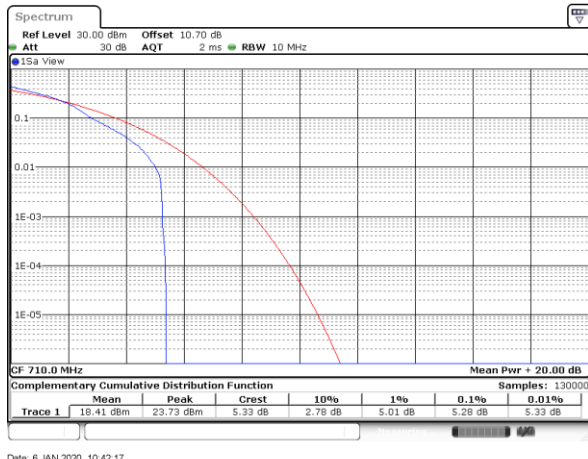
Date: 6 JAN 2020 10:44:32

LTE Band 17 / 10MHz / 16QAM
Lowest Channel / 1RB


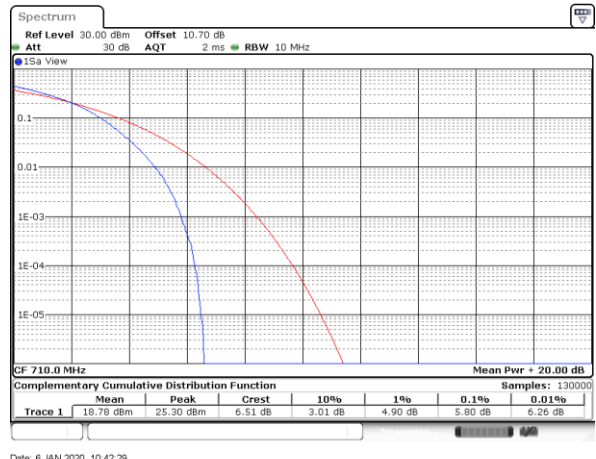
Date: 6 JAN 2020 10:36:49

Lowest Channel / Full RB


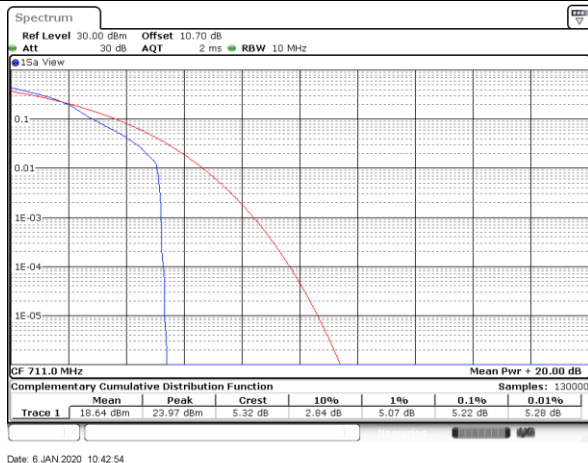
Date: 6 JAN 2020 10:37:49

Middle Channel / 1RB


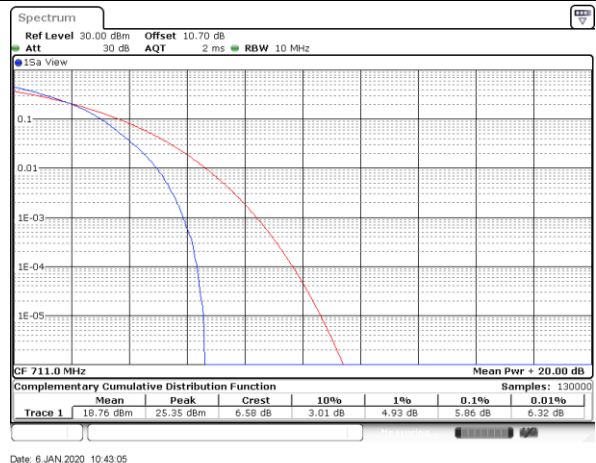
Date: 6 JAN 2020 10:42:17

Middle Channel / Full RB


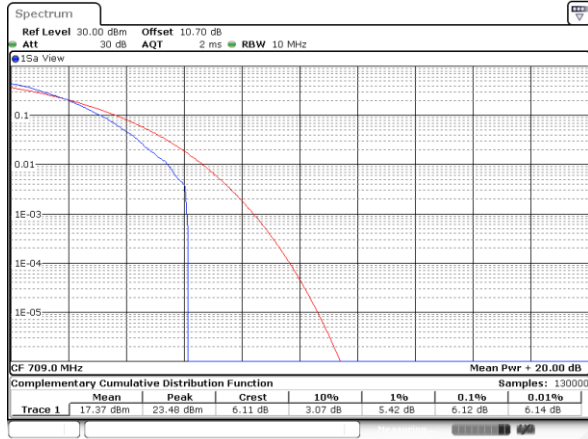
Date: 6 JAN 2020 10:42:29

Highest Channel / 1RB


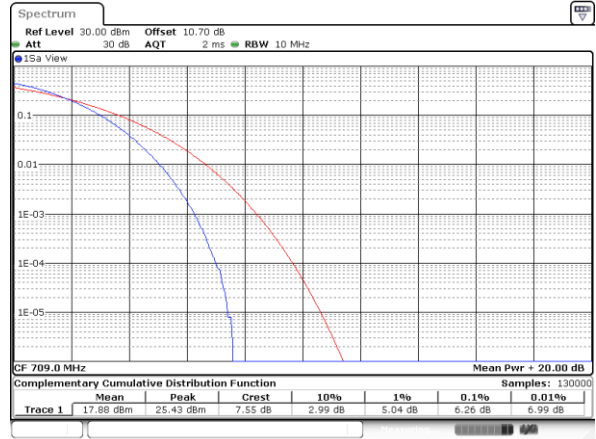
Date: 6 JAN 2020 10:42:54

Highest Channel / Full RB


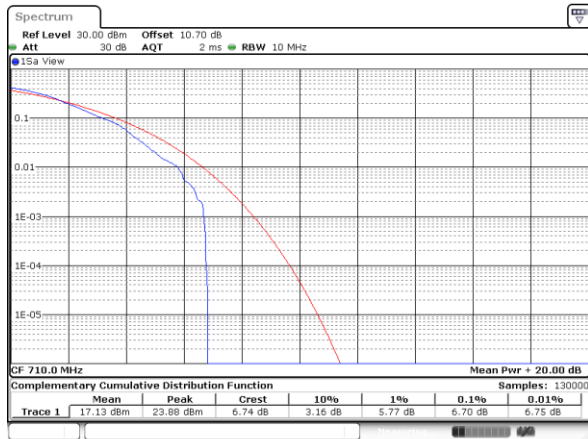
Date: 6 JAN 2020 10:43:05

LTE Band 17 / 10MHz / 64QAM
Lowest Channel / 1RB


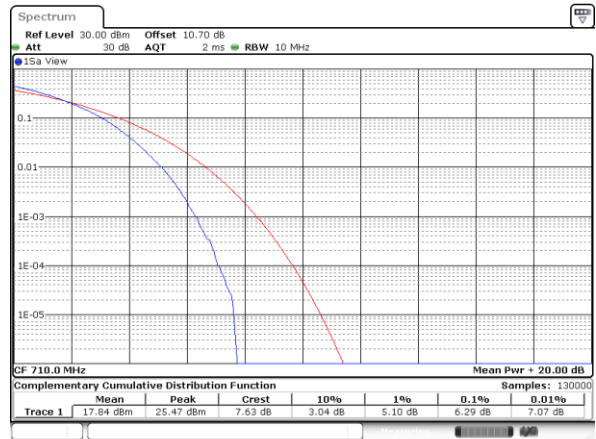
Date: 6 JAN 2020 10:44:43

Lowest Channel / Full RB


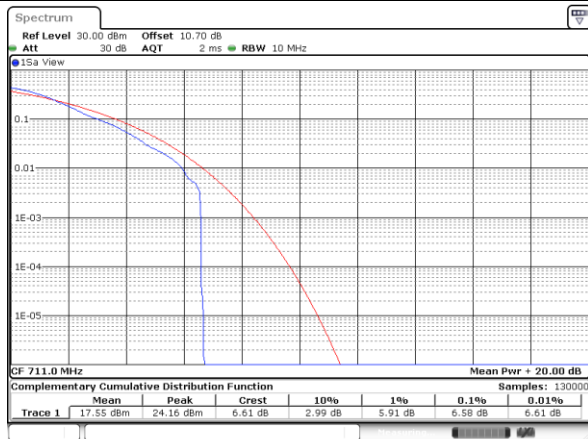
Date: 6 JAN 2020 10:44:54

Middle Channel / 1RB


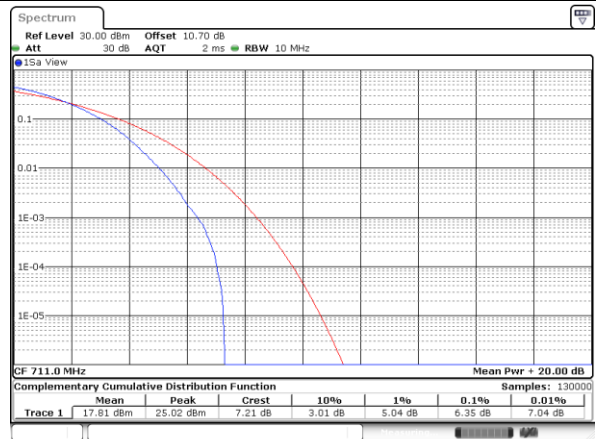
Date: 6 JAN 2020 10:45:04

Middle Channel / Full RB


Date: 6 JAN 2020 10:45:15

Highest Channel / 1RB


Date: 6 JAN 2020 10:45:26

Highest Channel / Full RB


Date: 6 JAN 2020 10:45:37

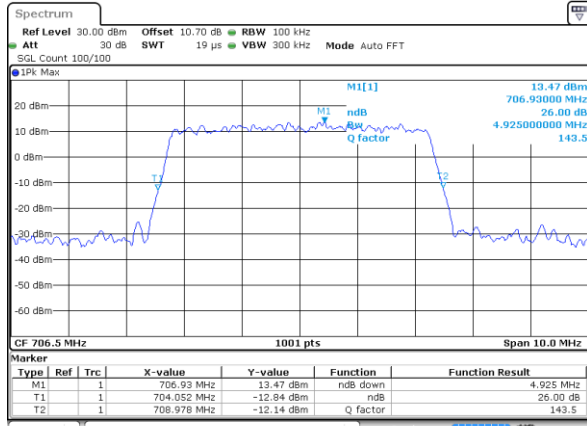
**26dB Bandwidth**

Mode	LTE Band 17 : 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	-	-	-	-	4.93	4.94	9.67	9.71	-	-	-	-
Middle CH	-	-	-	-	4.88	4.84	9.81	9.69	-	-	-	-
Highest CH	-	-	-	-	4.87	4.82	9.83	9.67	-	-	-	-
Mode	LTE Band 17 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.85	-	9.89	-	-	-	-	-
Middle CH	-	-	-	-	4.94	-	9.79	-	-	-	-	-
Highest CH	-	-	-	-	4.82	-	9.79	-	-	-	-	-

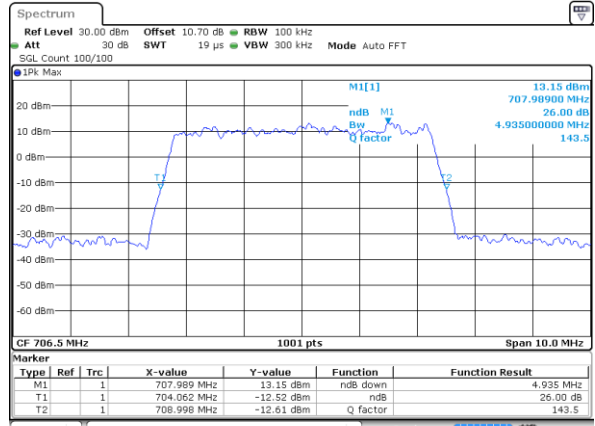


LTE Band 17

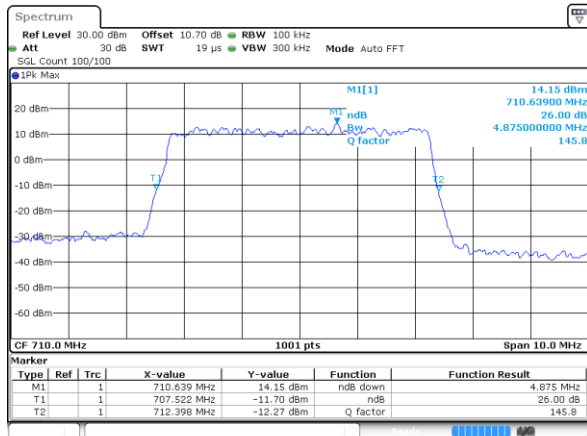
Lowest Channel / 5MHz / QPSK



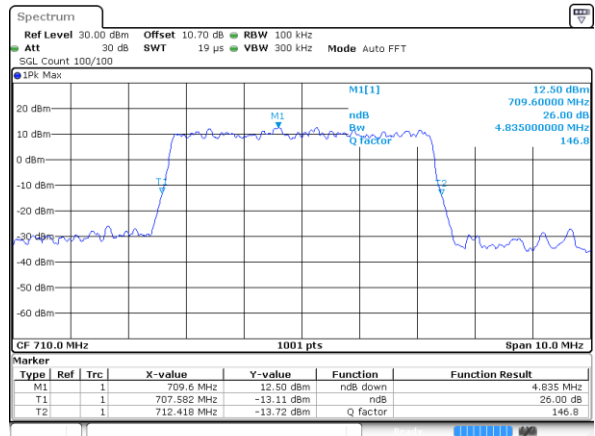
Lowest Channel / 5MHz / 16QAM



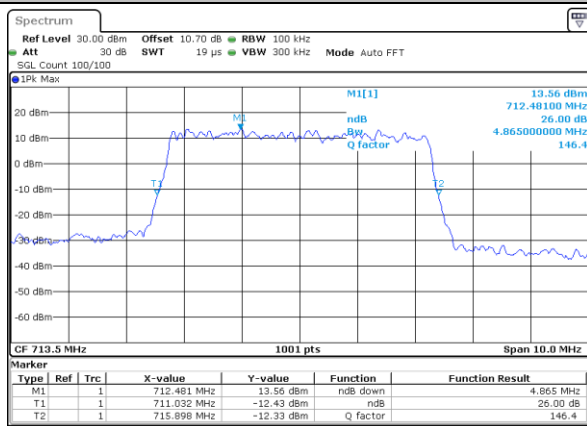
Middle Channel / 5MHz / QPSK



Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



Highest Channel / 5MHz / 16QAM

