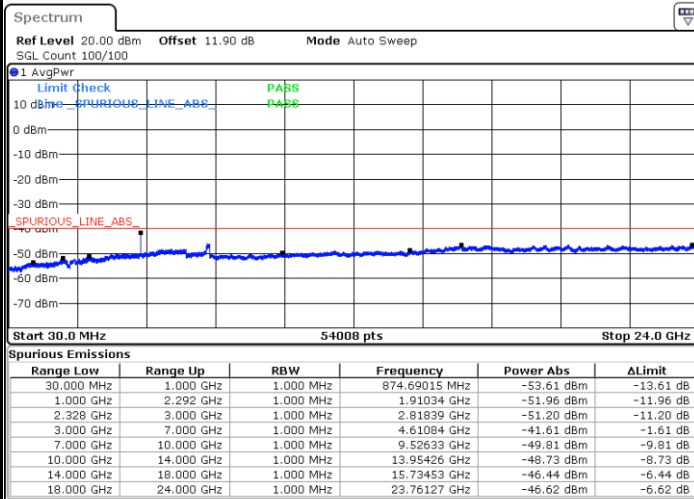




Conducted Spurious Emission

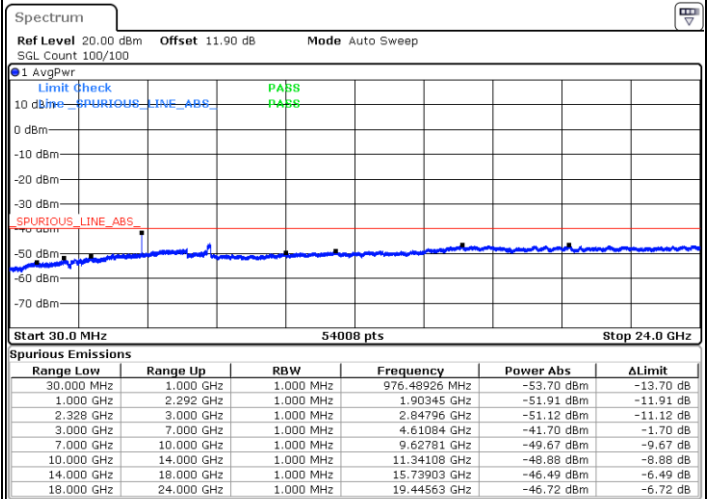
LTE Band 30 / 5MHz

Lowest Channel / QPSK



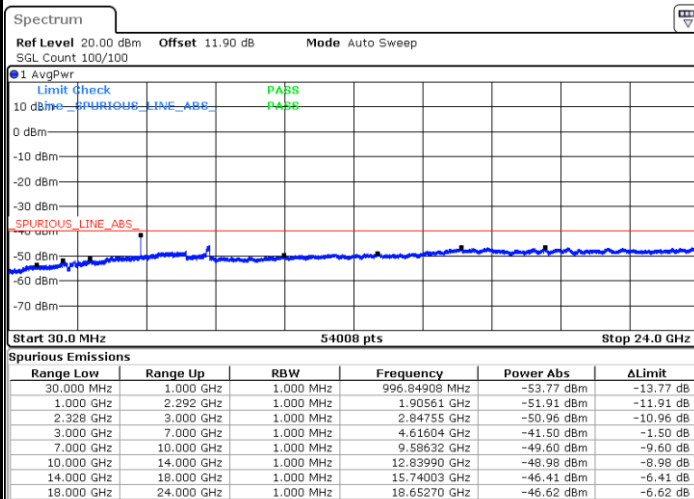
Date: 24.JAN.2020 09:36:05

Lowest Channel / 16QAM



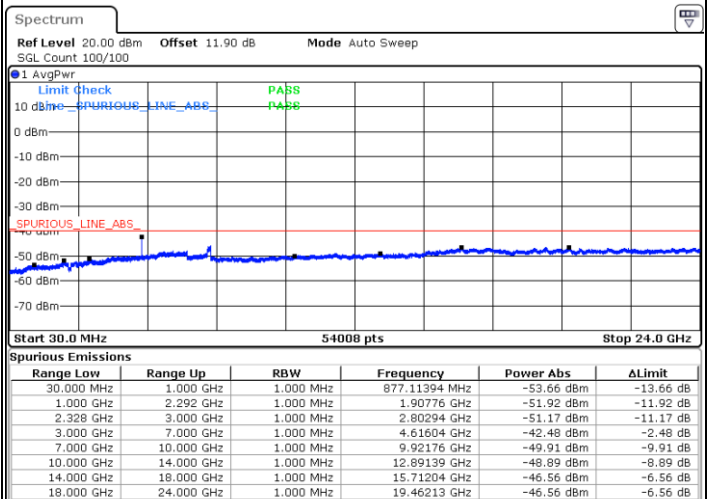
Date: 24.JAN.2020 09:37:07

Middle Channel / QPSK



Date: 24.JAN.2020 09:38:08

Middle Channel / 16QAM

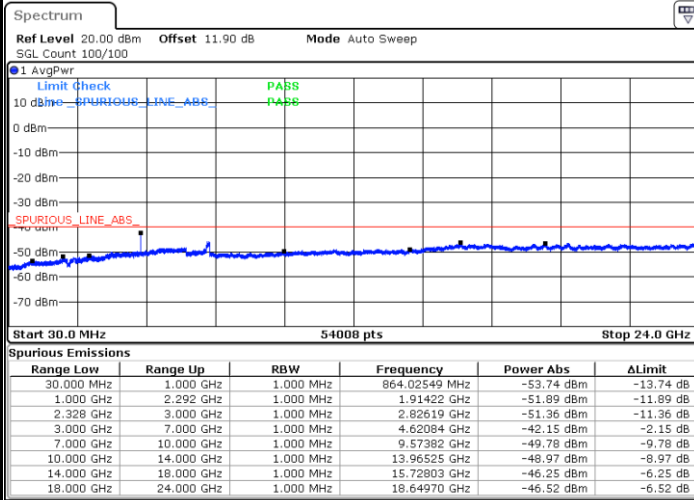


Date: 24.JAN.2020 09:39:09



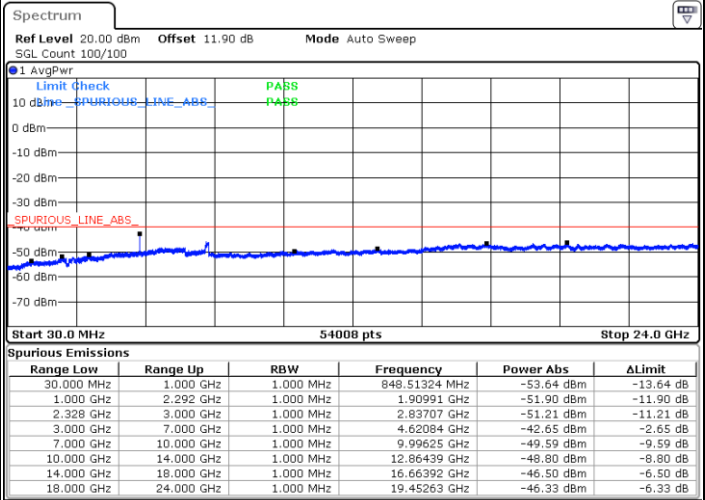
LTE Band 30 / 5MHz

Highest Channel / QPSK



Date: 24.JAN.2020 09:40:11

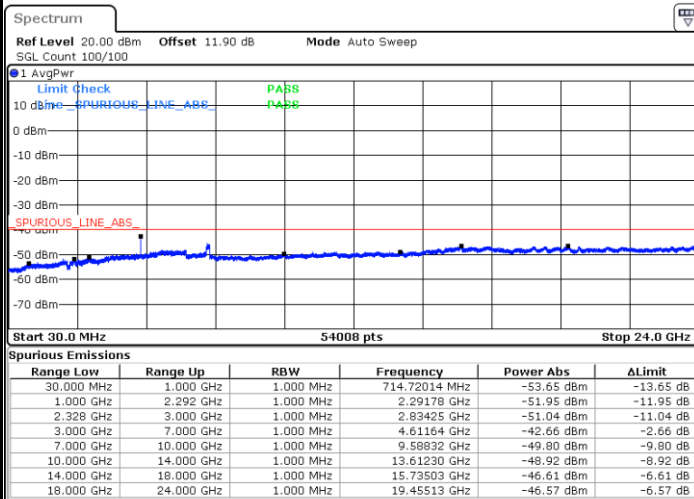
Highest Channel / 16QAM



Date: 24.JAN.2020 09:41:12

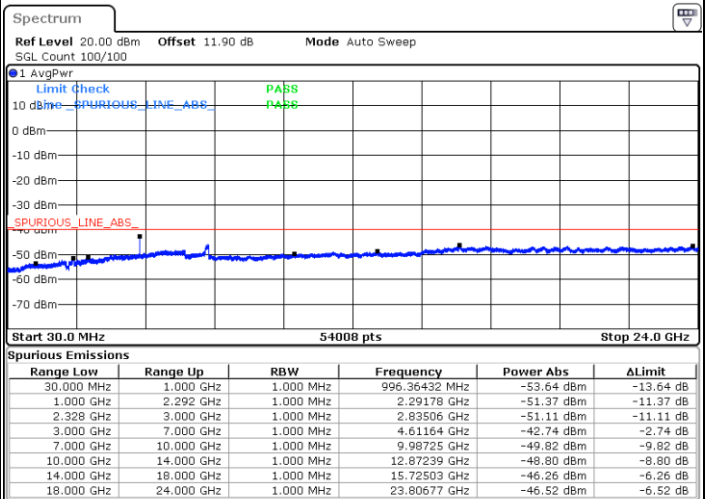
LTE Band 30 / 10MHz

Middle Channel / QPSK



Date: 24.JAN.2020 09:46:25

Middle Channel / 16QAM

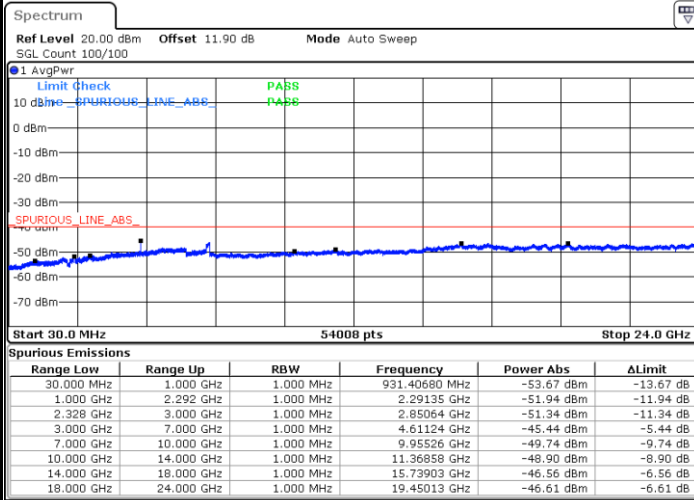


Date: 24.JAN.2020 09:47:27



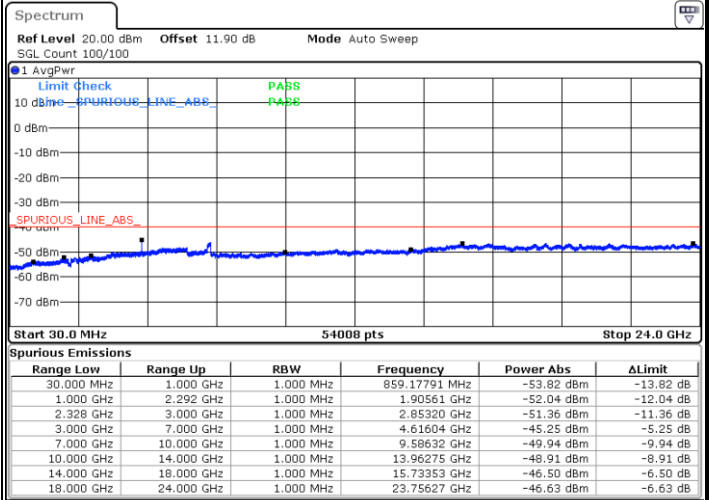
LTE Band 30 / 5MHz

Lowest Channel / 64QAM



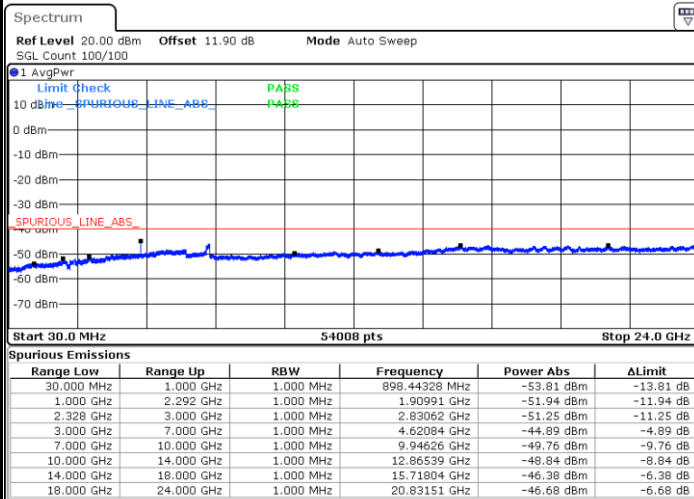
Date: 24.JAN.2020 09:42:14

Middle Channel / 64QAM



Date: 24.JAN.2020 09:43:17

Highest Channel / 64QAM

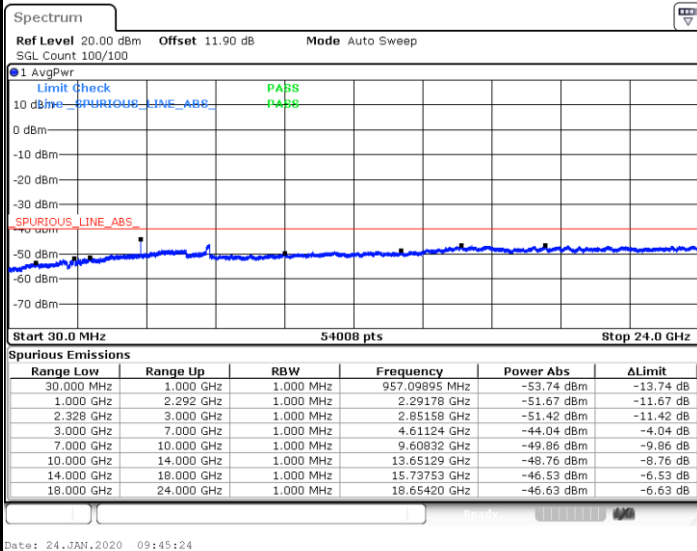


Date: 24.JAN.2020 09:44:22



LTE Band 30 / 10MHz

Middle Channel / 64QAM



Frequency Stability

Test Conditions		LTE Band 30 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0023	PASS
40	Normal Voltage	0.0000	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0051	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0020	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0017	

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 38(HPUE)

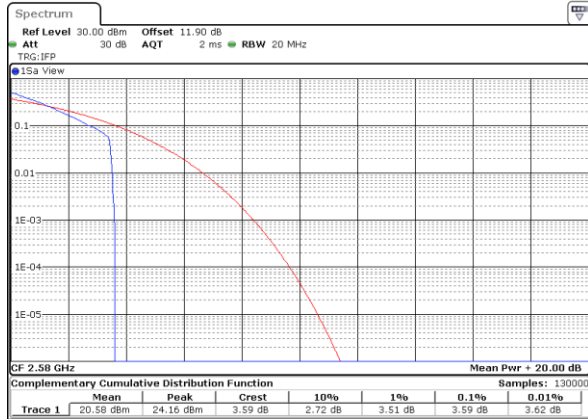
Peak-to-Average Ratio

Mode	LTE Band 38(HPUE) / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.59	4.32	4.49	5.57	PASS
Middle CH	3.51	4.41	4.58	5.62	
Highest CH	3.62	4.52	4.55	5.83	
Mode	LTE Band 38(HPUE) / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.39	6.29	-	-	PASS
Middle CH	5.33	6.29	-	-	
Highest CH	5.51	6.46	-	-	

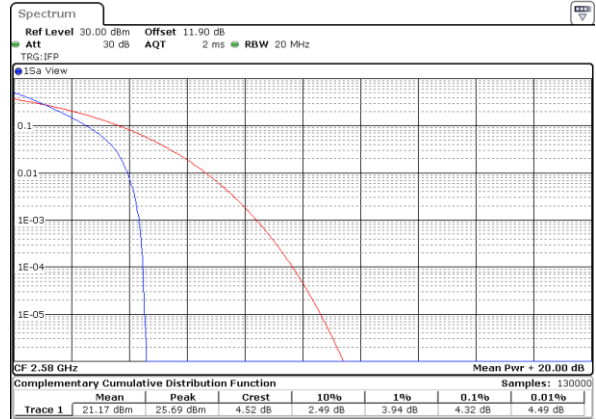


LTE Band 38(HPUE) / 20MHz / QPSK

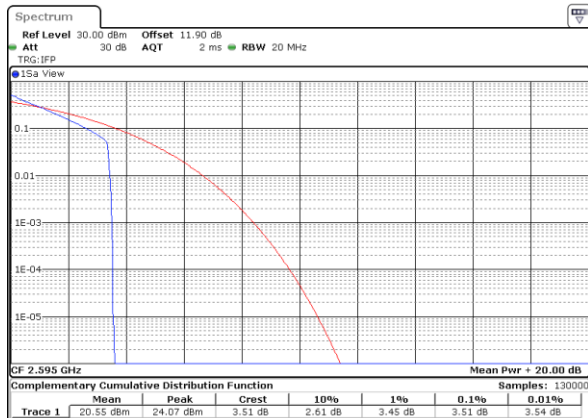
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



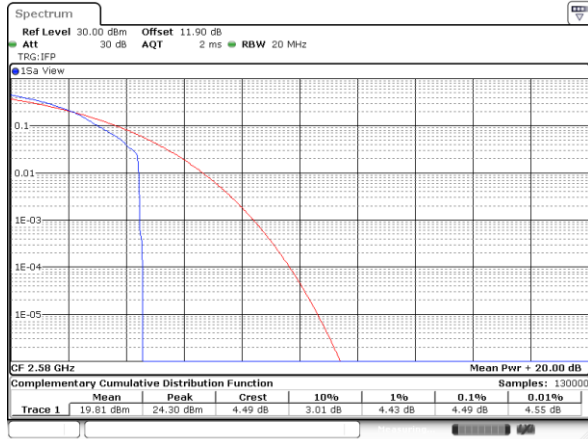
Highest Channel / Full RB



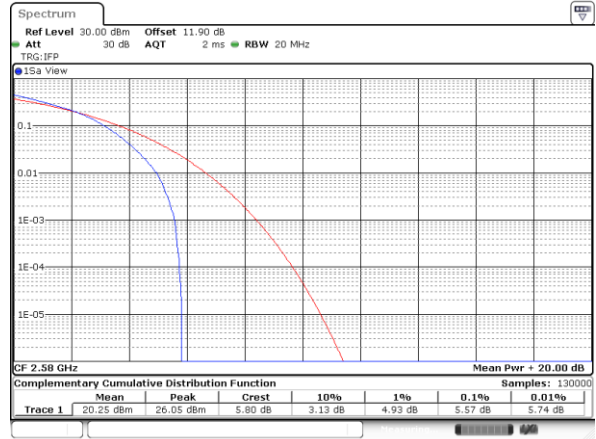


LTE Band 38(HPUE) / 20MHz / 16QAM

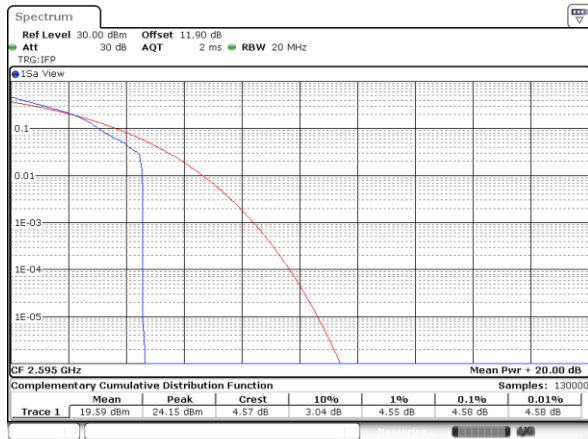
Lowest Channel / 1RB



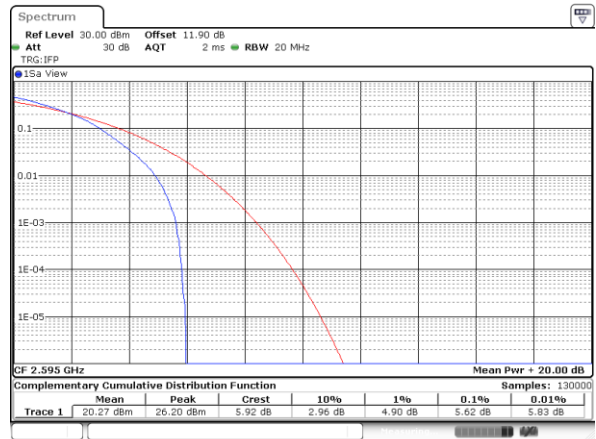
Lowest Channel / Full RB



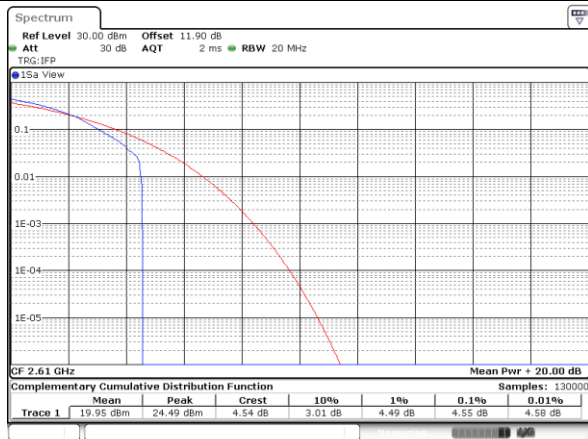
Middle Channel / 1RB



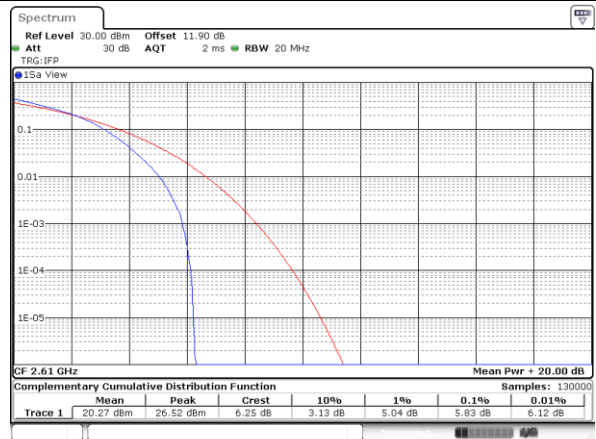
Middle Channel / Full RB



Highest Channel / 1RB



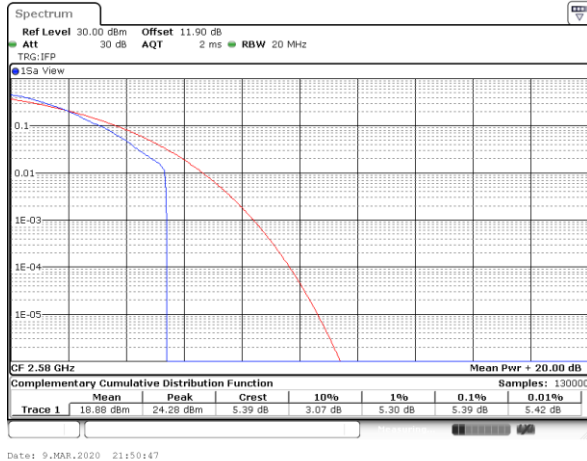
Highest Channel / Full RB



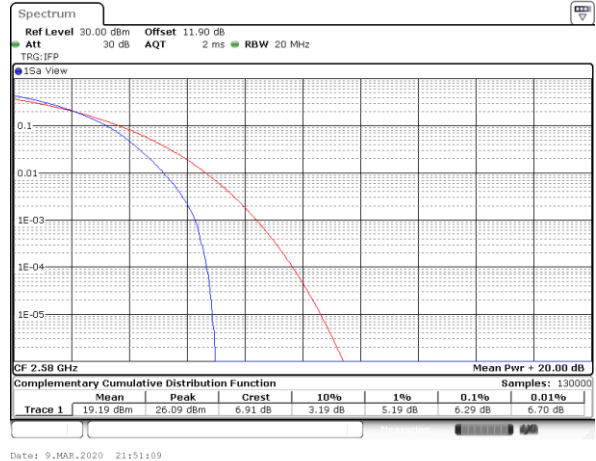


LTE Band 38(HPUE) / 20MHz / 64QAM

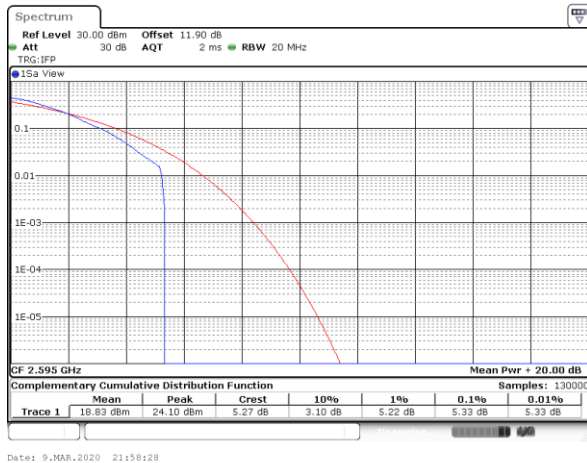
Lowest Channel / 1RB



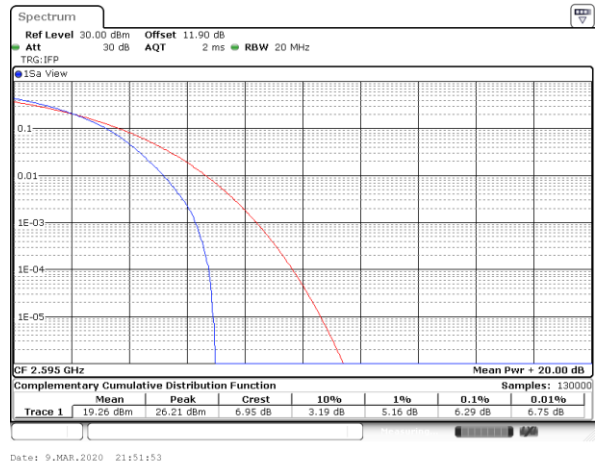
Lowest Channel / Full RB



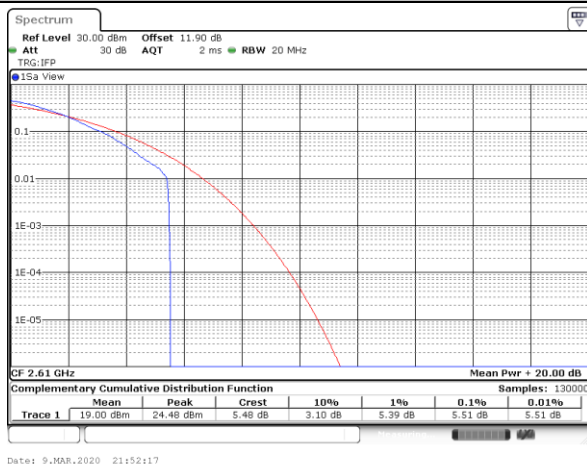
Middle Channel / 1RB



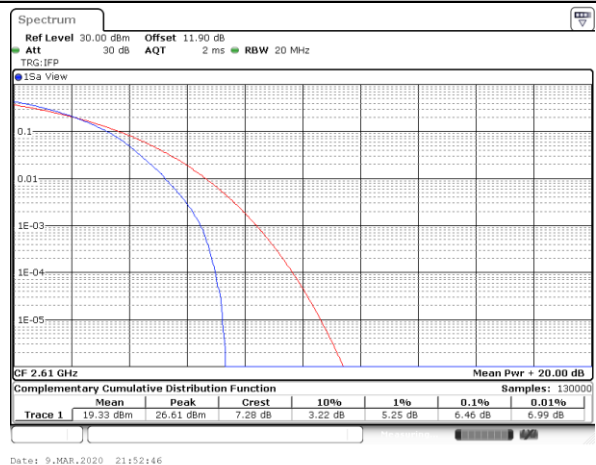
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



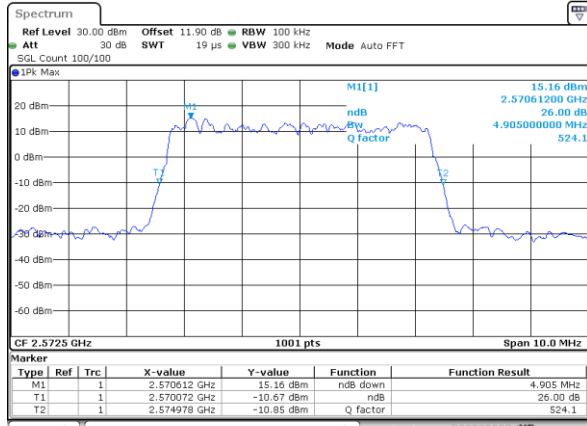
**26dB Bandwidth**

Mode	LTE Band 38(HPUE) : 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	4.84	9.67	9.63	14.51	14.15	18.62	18.94
Middle CH	-	-	-	-	4.80	4.79	9.83	9.63	14.30	14.36	19.26	18.86
Highest CH	-	-	-	-	4.85	4.81	9.63	9.87	14.45	14.39	18.78	18.62
Mode	LTE Band 38(HPUE) : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.74	-	9.65	-	14.45	-	18.66	-
Middle CH	-	-	-	-	4.73	-	9.63	-	14.24	-	18.70	-
Highest CH	-	-	-	-	4.95	-	9.65	-	14.18	-	18.66	-



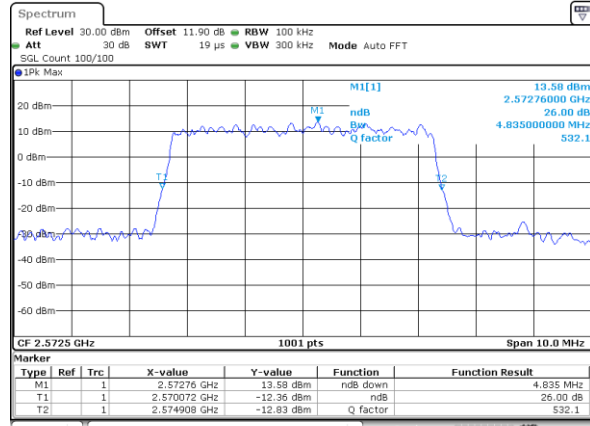
LTE Band 38(HPUe)

Lowest Channel / 5MHz / QPSK



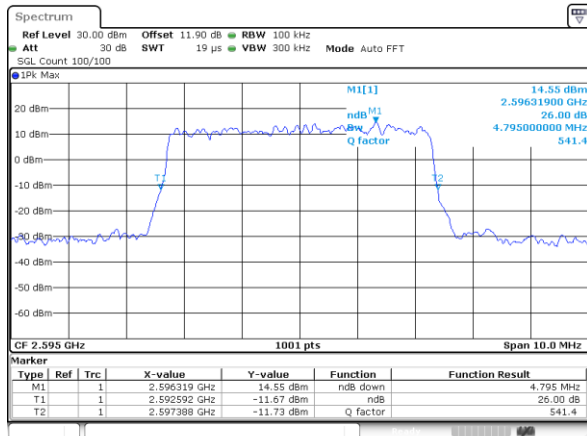
Date: 9,MAR,2020 21:34:30

Lowest Channel / 5MHz / 16QAM



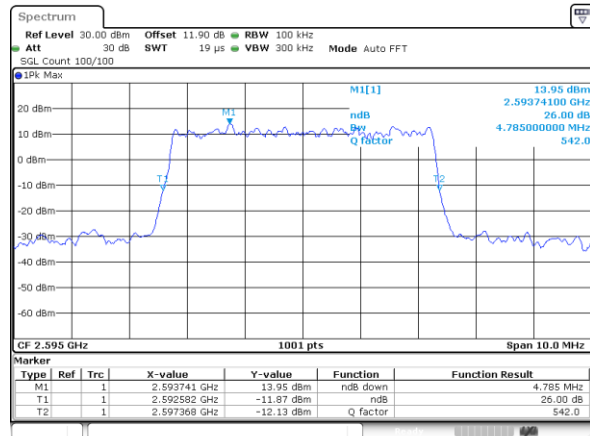
Date: 9,MAR,2020 21:34:44

Middle Channel / 5MHz / QPSK



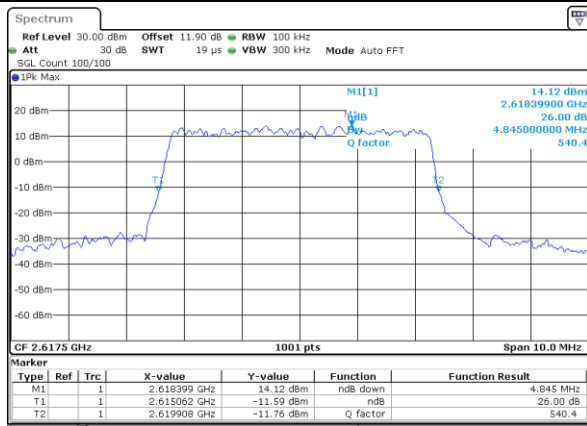
Date: 9,MAR,2020 21:35:24

Middle Channel / 5MHz / 16QAM



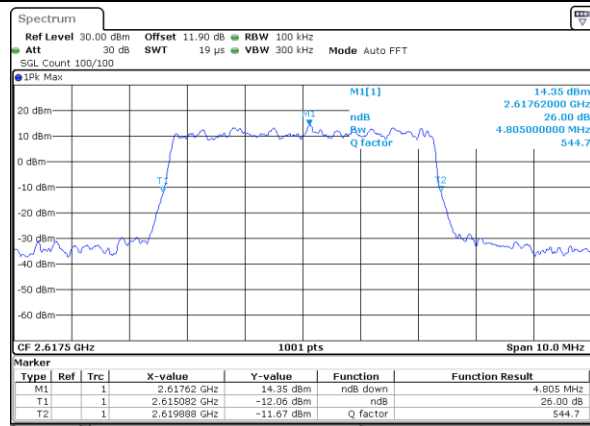
Date: 9,MAR,2020 21:35:37

Highest Channel / 5MHz / QPSK



Date: 9,MAR,2020 21:36:19

Highest Channel / 5MHz / 16QAM

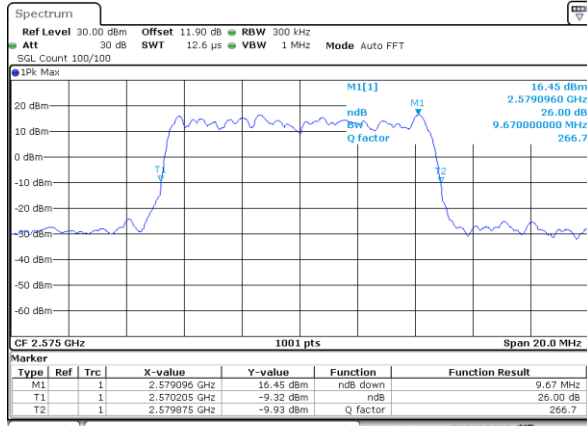


Date: 9,MAR,2020 21:36:32



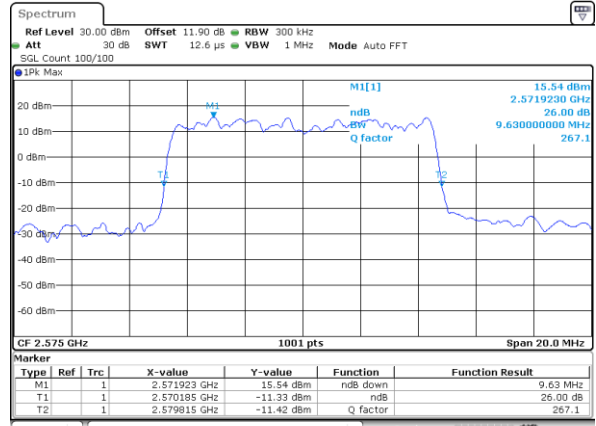
LTE Band 38(HPUe)

Lowest Channel / 10MHz / QPSK



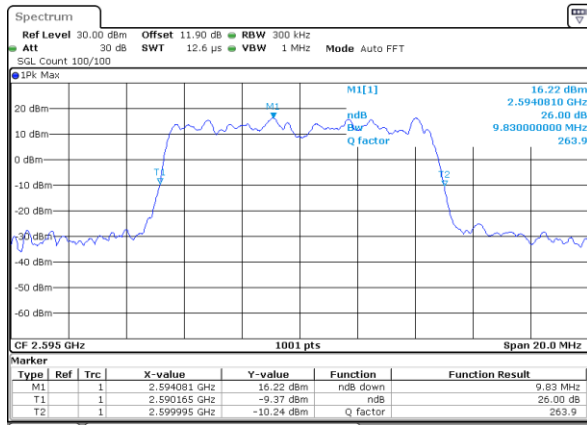
Date: 9,MAR,2020 21:37:15

Lowest Channel / 10MHz / 16QAM



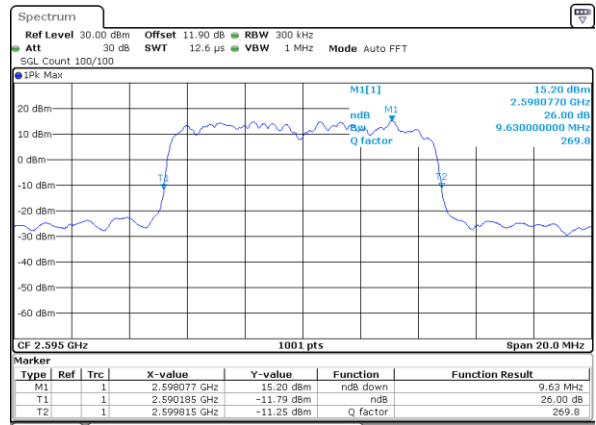
Date: 9,MAR,2020 21:37:29

Middle Channel / 10MHz / QPSK



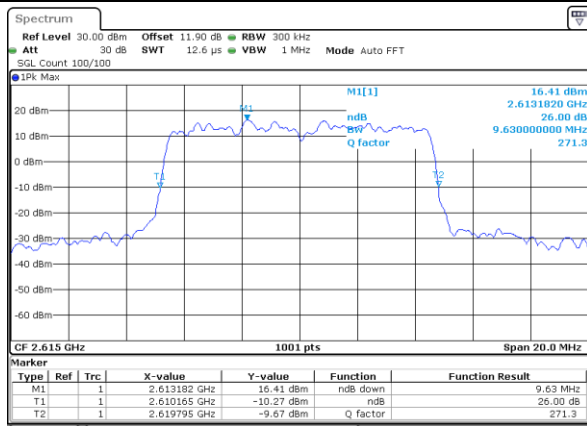
Date: 9,MAR,2020 21:38:09

Middle Channel / 10MHz / 16QAM



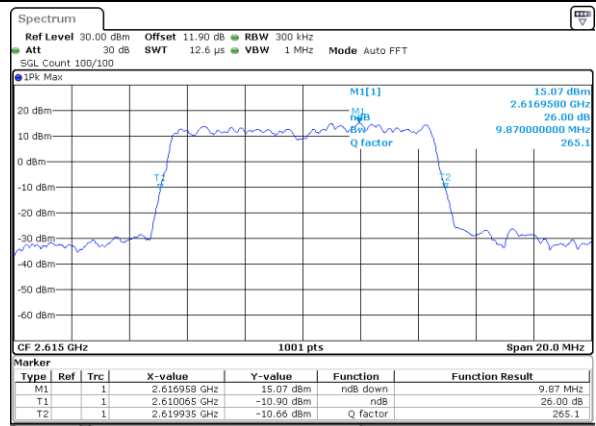
Date: 9,MAR,2020 21:38:23

Highest Channel / 10MHz / QPSK



Date: 9,MAR,2020 21:39:04

Highest Channel / 10MHz / 16QAM

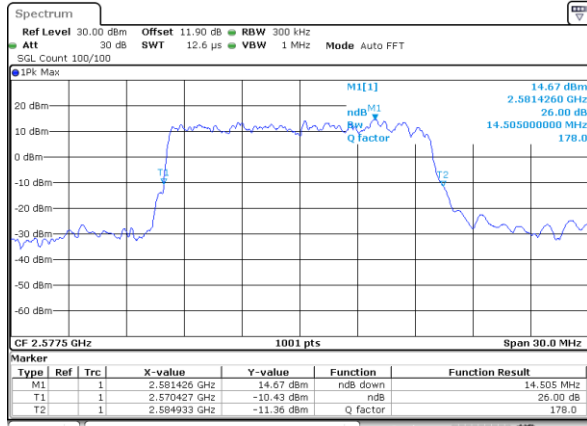


Date: 9,MAR,2020 21:39:18



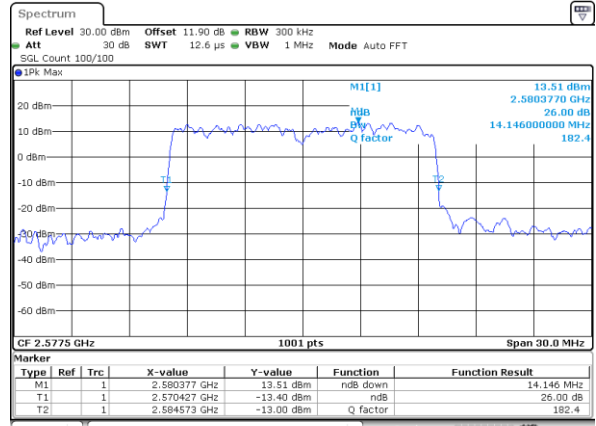
LTE Band 38(HPUe)

Lowest Channel / 15MHz / QPSK



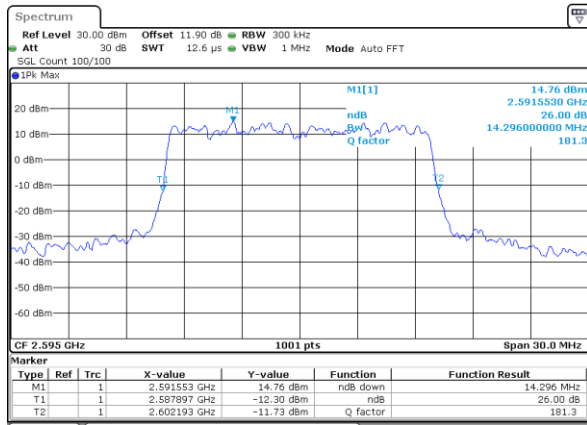
Date: 9,MAR,2020 21:40:01

Lowest Channel / 15MHz / 16QAM



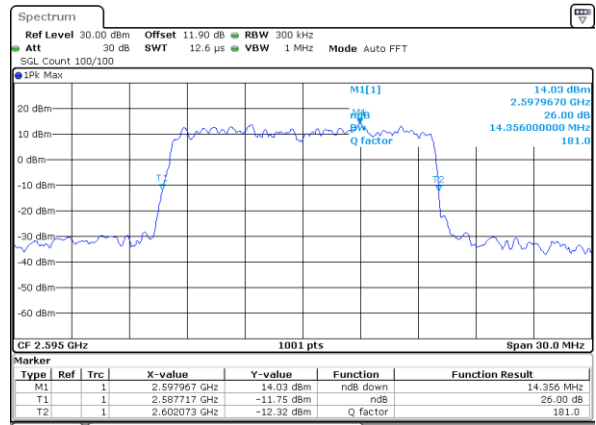
Date: 9,MAR,2020 21:40:15

Middle Channel / 15MHz / QPSK



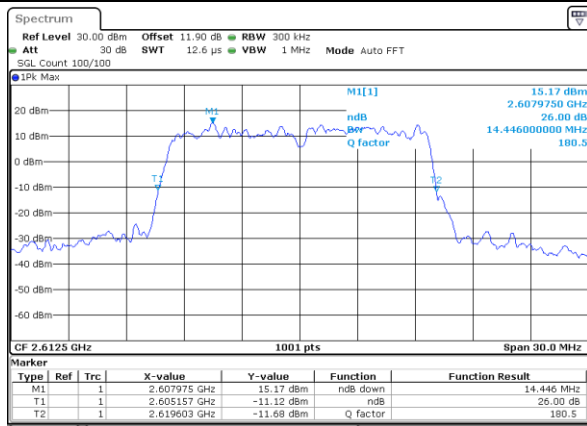
Date: 9,MAR,2020 21:40:55

Middle Channel / 15MHz / 16QAM



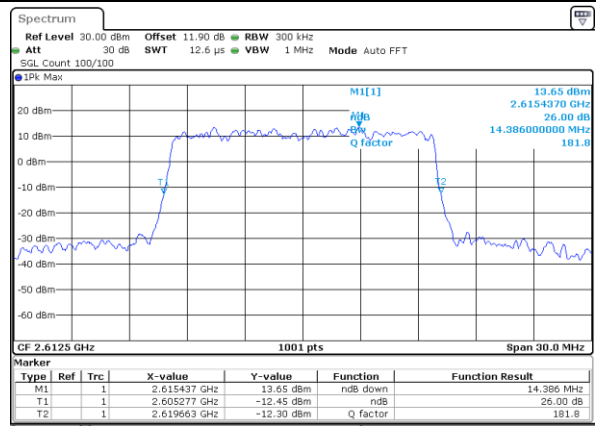
Date: 9,MAR,2020 21:41:08

Highest Channel / 15MHz / QPSK



Date: 9,MAR,2020 21:41:49

Highest Channel / 15MHz / 16QAM

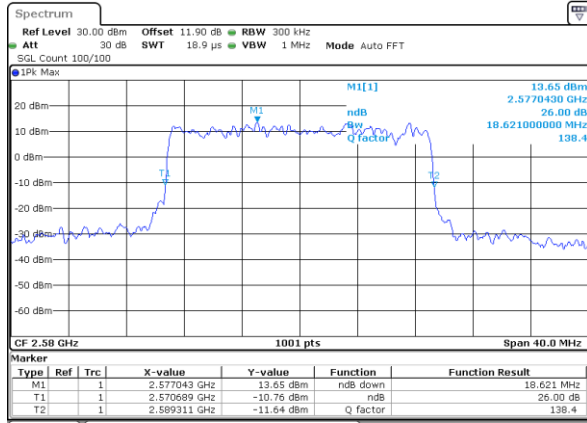


Date: 9,MAR,2020 21:42:03



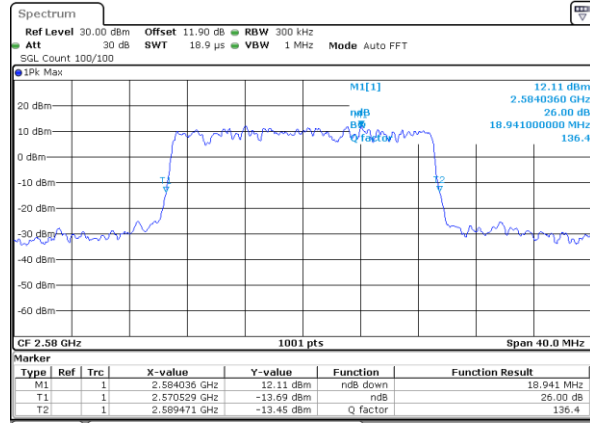
LTE Band 38(HPUe)

Lowest Channel / 20MHz / QPSK



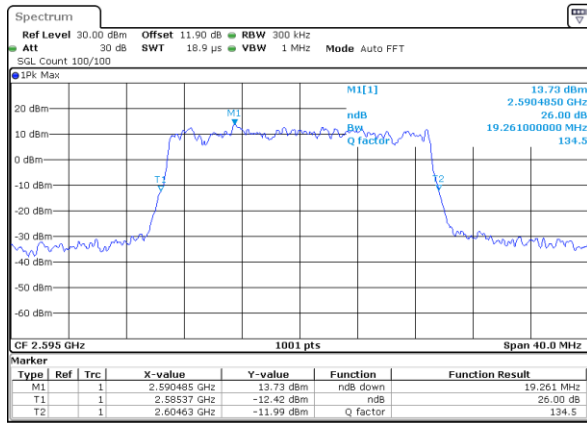
Date: 9,MAR,2020 21:42:46

Lowest Channel / 20MHz / 16QAM



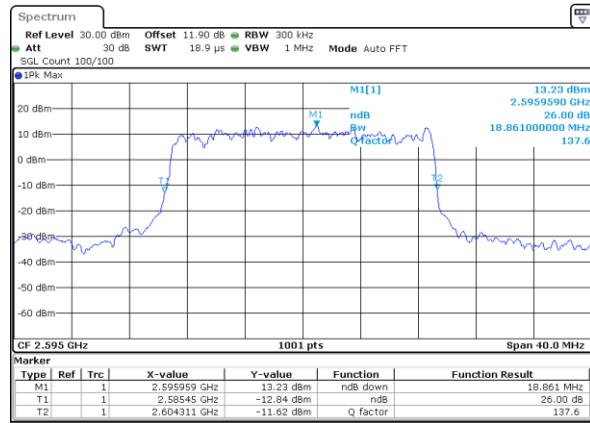
Date: 9,MAR,2020 21:43:00

Middle Channel / 20MHz / QPSK



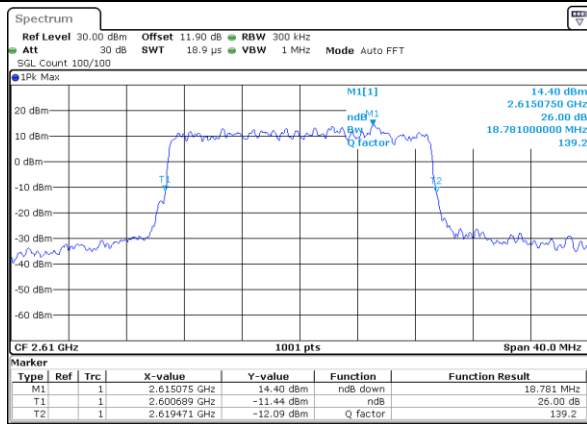
Date: 9,MAR,2020 21:43:40

Middle Channel / 20MHz / 16QAM



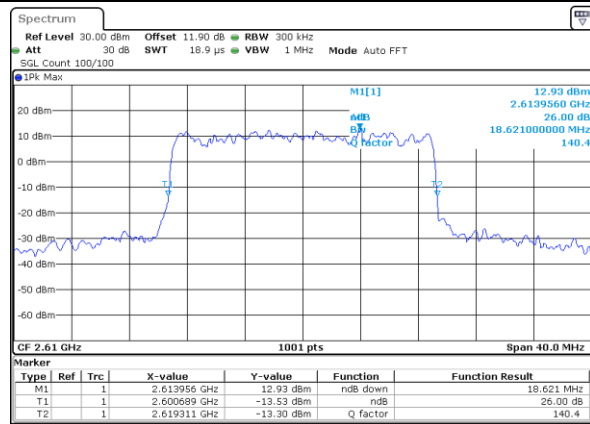
Date: 9,MAR,2020 21:43:53

Highest Channel / 20MHz / QPSK



Date: 9,MAR,2020 21:44:35

Highest Channel / 20MHz / 16QAM

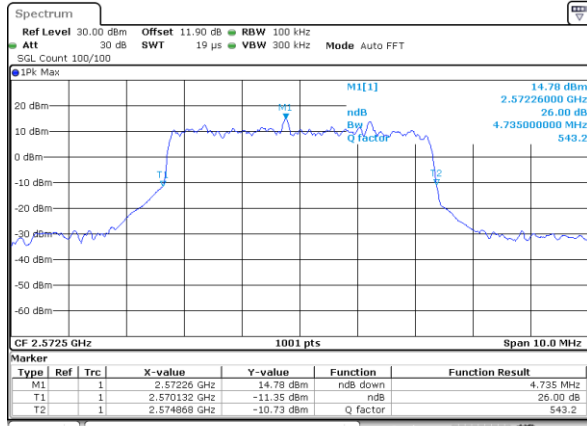


Date: 9,MAR,2020 21:44:48



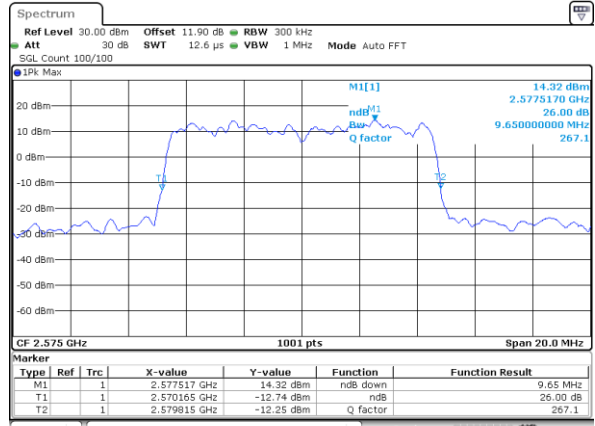
LTE Band 38(HPUe)

Lowest Channel / 5MHz / 64QAM



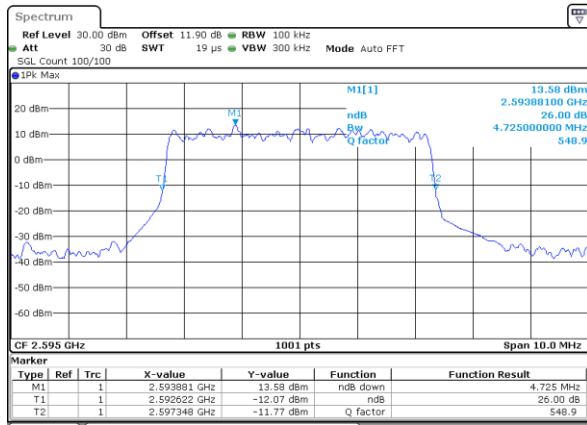
Date: 9,MAR,2020 21:45:17

Lowest Channel / 10MHz / 64QAM



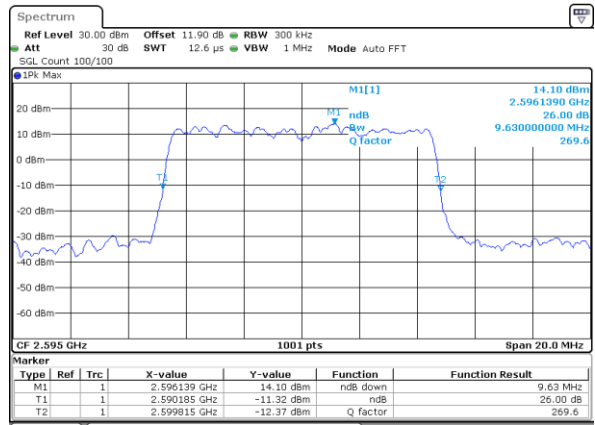
Date: 9,MAR,2020 21:46:40

Middle Channel / 5MHz / 64QAM



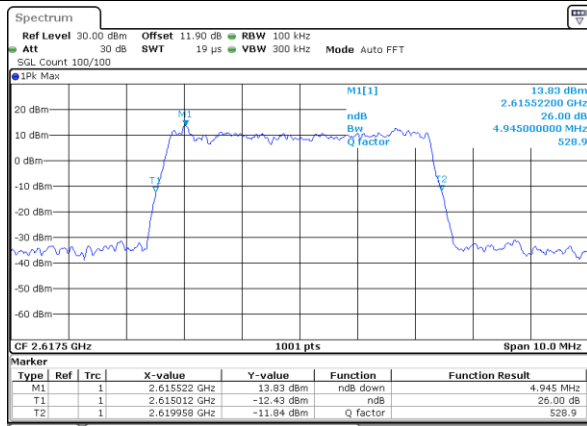
Date: 9,MAR,2020 21:45:44

Middle Channel / 10MHz / 64QAM



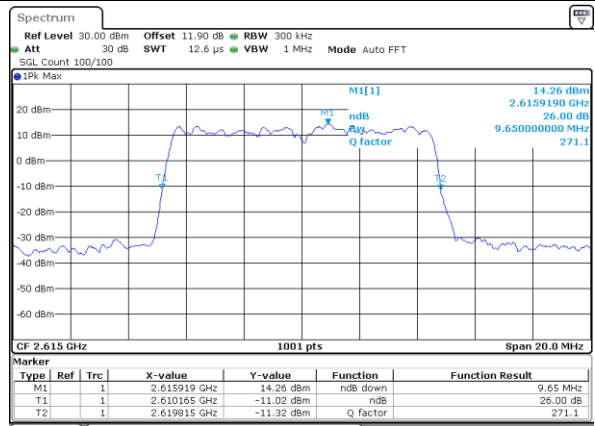
Date: 9,MAR,2020 21:47:07

Highest Channel / 5MHz / 64QAM



Date: 9,MAR,2020 21:46:11

Highest Channel / 10MHz / 64QAM

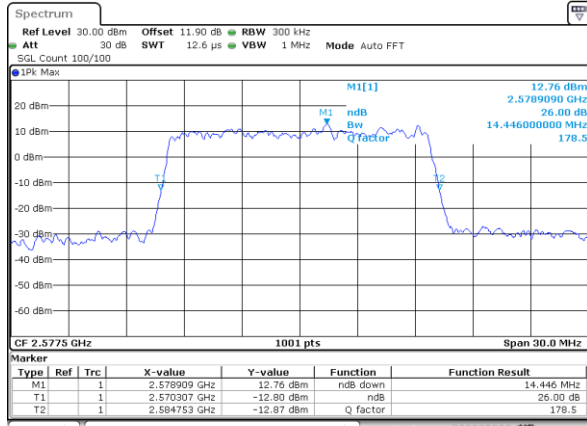


Date: 9,MAR,2020 21:47:34



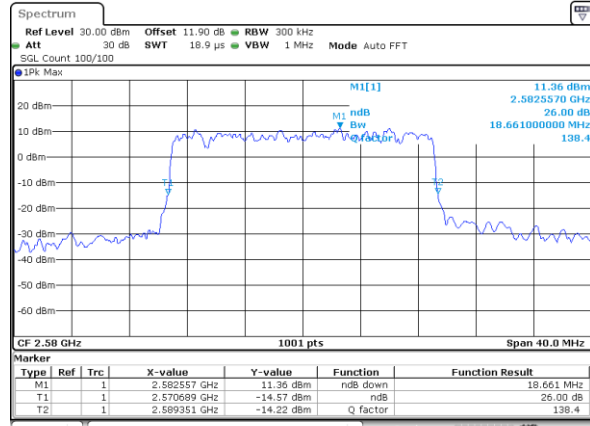
LTE Band 38(HPUe)

Lowest Channel / 15MHz / 64QAM



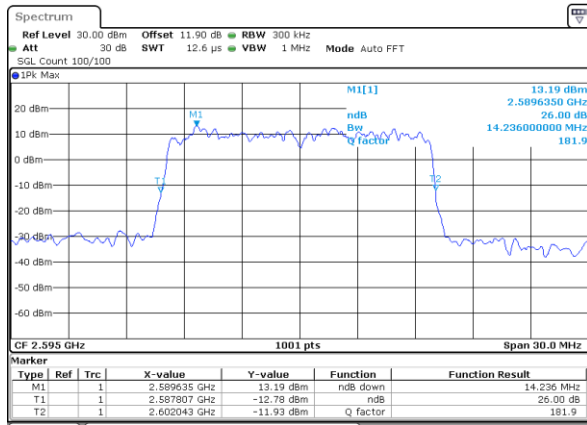
Date: 9,MAR,2020 21:48:03

Lowest Channel / 20MHz / 64QAM



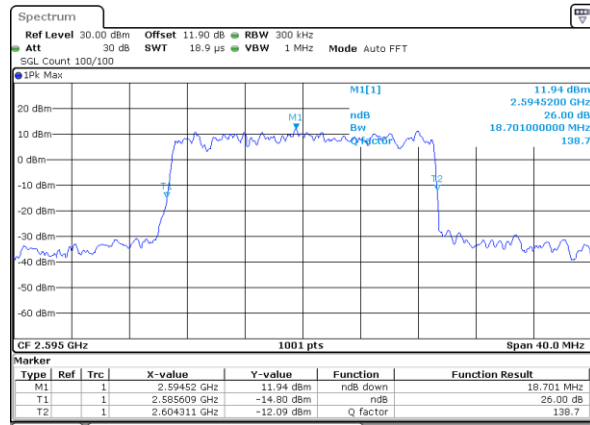
Date: 9,MAR,2020 21:49:26

Middle Channel / 15MHz / 64QAM



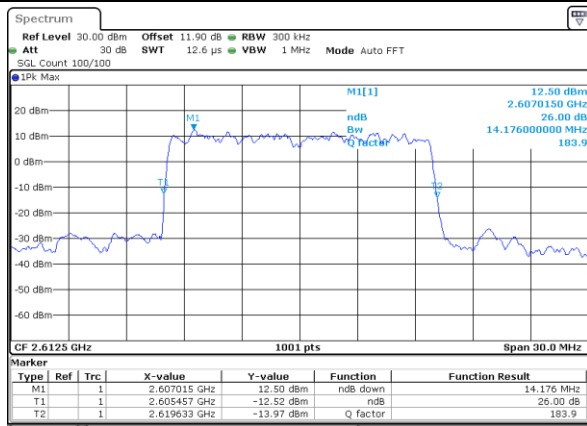
Date: 9,MAR,2020 21:48:30

Middle Channel / 20MHz / 64QAM



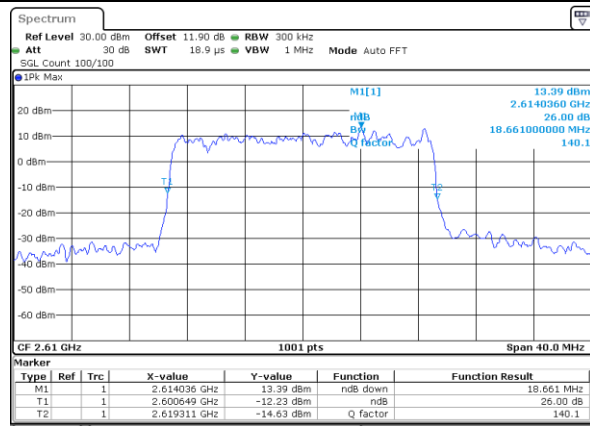
Date: 9,MAR,2020 21:49:52

Highest Channel / 15MHz / 64QAM



Date: 9,MAR,2020 21:48:57

Highest Channel / 20MHz / 64QAM



Date: 9,MAR,2020 21:50:20

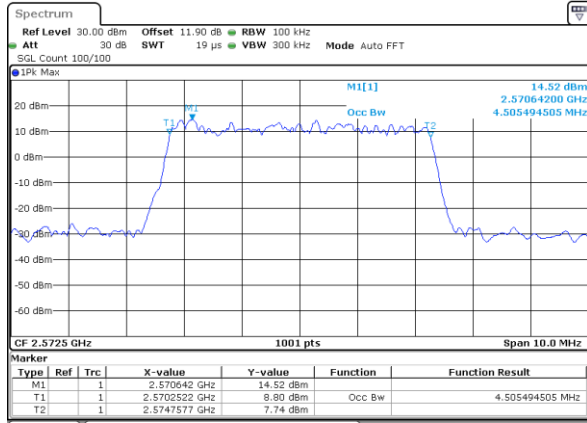
**Occupied Bandwidth**

Mode	LTE Band 38(HPUE) : 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	-	-	-	-	4.51	4.52	9.03	9.07	13.46	13.46	17.74	17.82
Middle CH	-	-	-	-	4.48	4.50	9.05	9.03	13.43	13.37	17.82	17.86
Highest CH	-	-	-	-	4.51	4.50	9.03	9.01	13.43	13.37	17.86	17.82
Mode	LTE Band 38(HPUE) : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	9.05	-	13.43	-	17.86	-
Middle CH	-	-	-	-	4.49	-	9.03	-	13.46	-	17.86	-
Highest CH	-	-	-	-	4.50	-	9.01	-	13.46	-	17.90	-



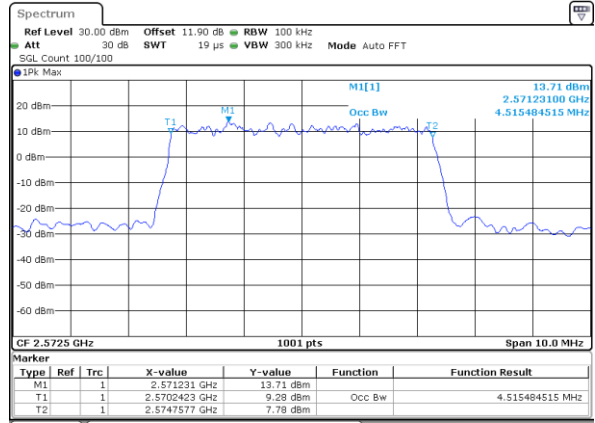
LTE Band 38(HPUe)

Lowest Channel / 5MHz / QPSK



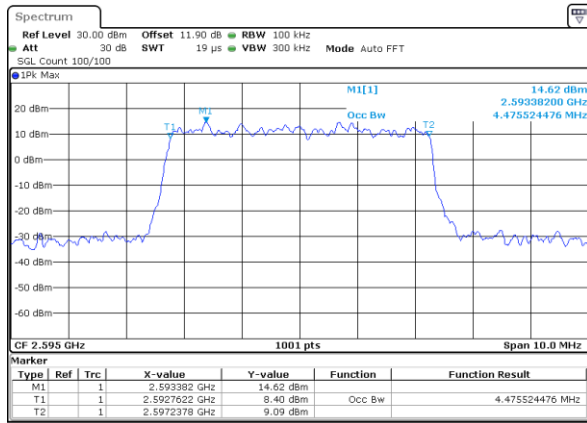
Date: 9,MAR,2020 21:34:03

Lowest Channel / 5MHz / 16QAM



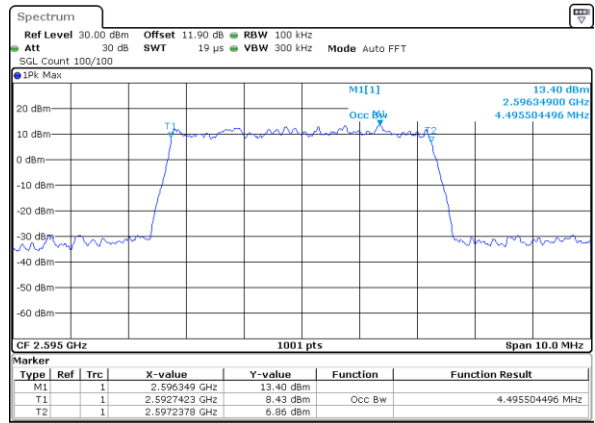
Date: 9,MAR,2020 21:34:17

Middle Channel / 5MHz / QPSK



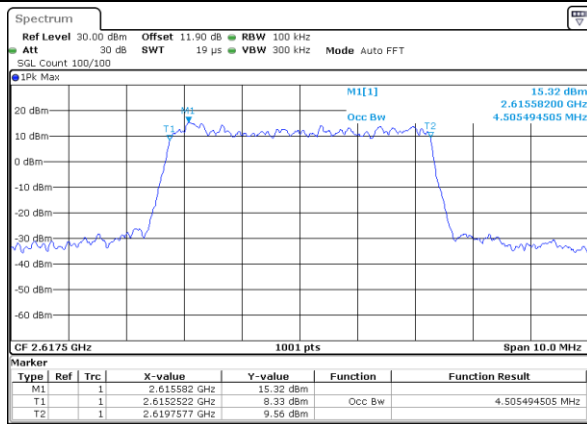
Date: 9,MAR,2020 21:34:58

Middle Channel / 5MHz / 16QAM



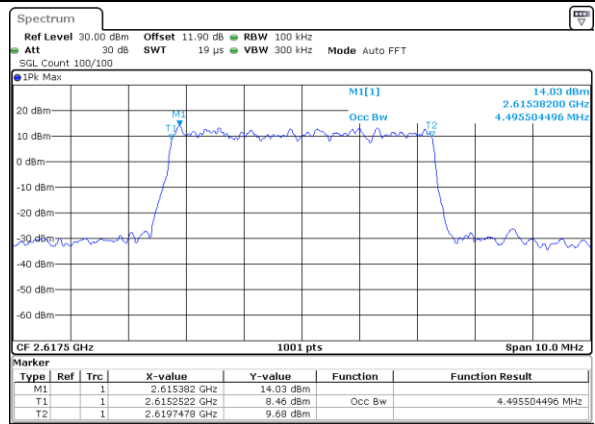
Date: 9,MAR,2020 21:35:11

Highest Channel / 5MHz / QPSK



Date: 9,MAR,2020 21:35:51

Highest Channel / 5MHz / 16QAM

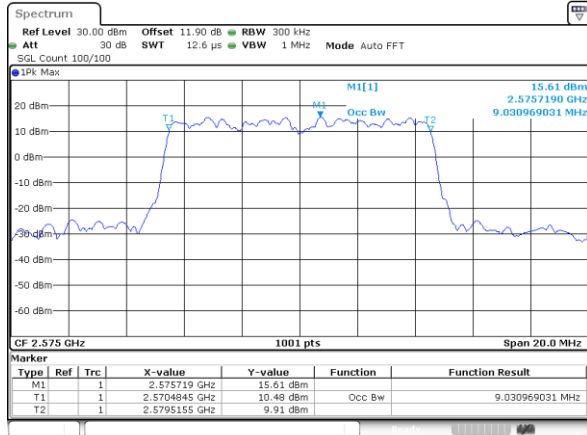


Date: 9,MAR,2020 21:36:05



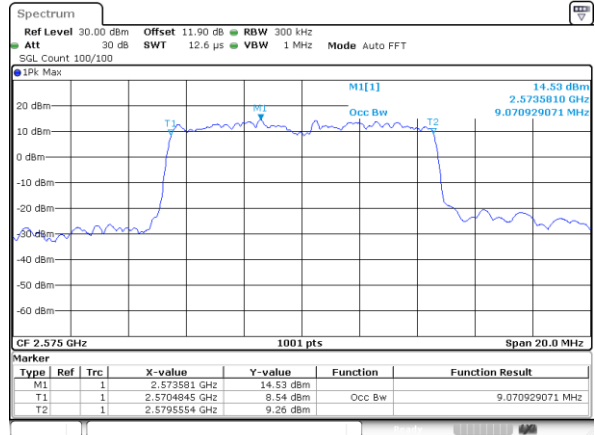
LTE Band 38(HPUe)

Lowest Channel / 10MHz / QPSK



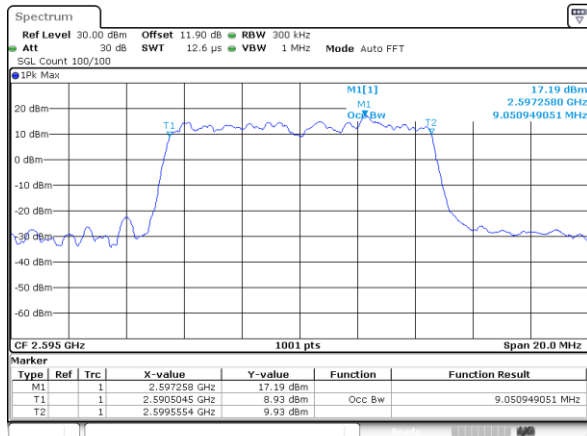
Date: 9,MAR,2020 21:36:48

Lowest Channel / 10MHz / 16QAM



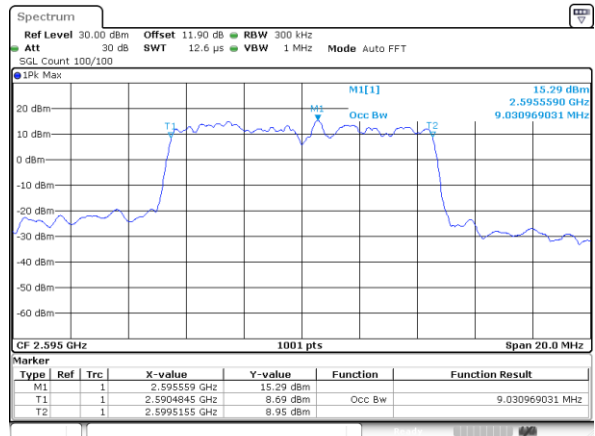
Date: 9,MAR,2020 21:37:02

Middle Channel / 10MHz / QPSK



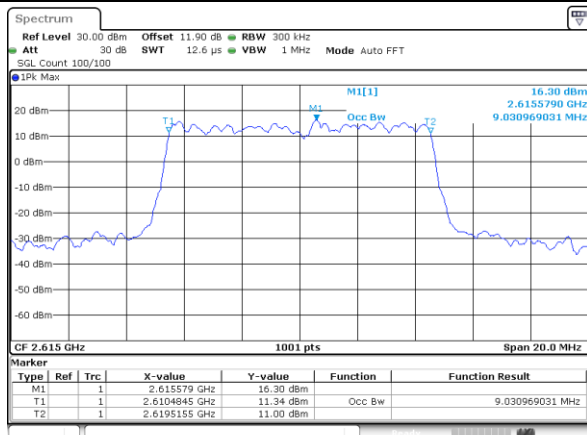
Date: 9,MAR,2020 21:37:43

Middle Channel / 10MHz / 16QAM



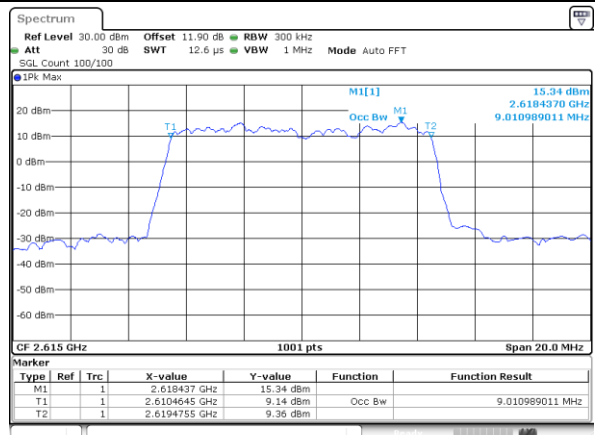
Date: 9,MAR,2020 21:37:56

Highest Channel / 10MHz / QPSK



Date: 9,MAR,2020 21:38:36

Highest Channel / 10MHz / 16QAM

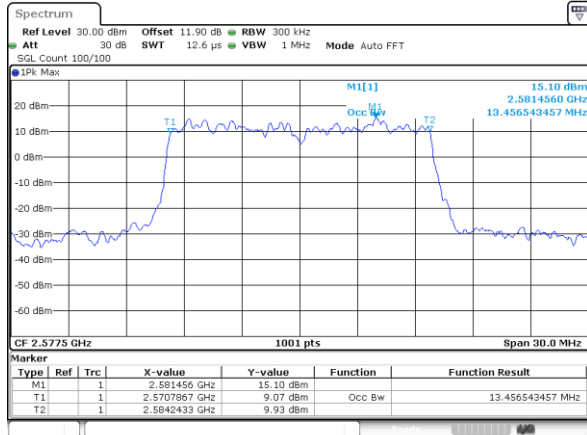


Date: 9,MAR,2020 21:38:50



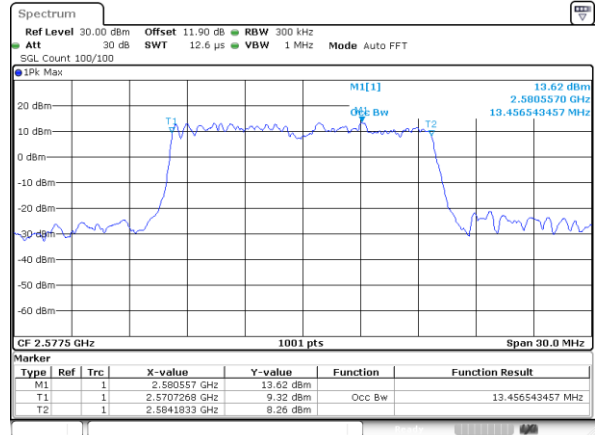
LTE Band 38(HPUe)

Lowest Channel / 15MHz / QPSK



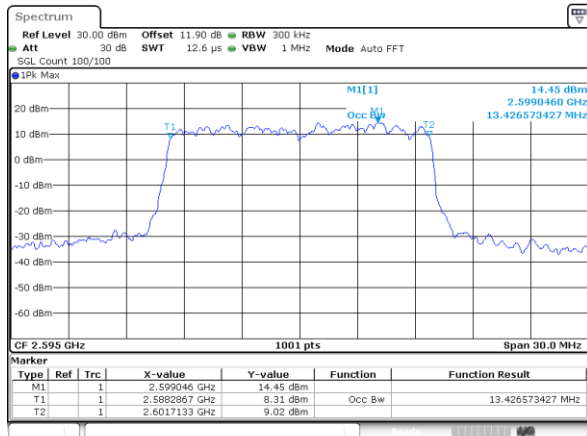
Date: 9,MAR,2020 21:39:33

Lowest Channel / 15MHz / 16QAM



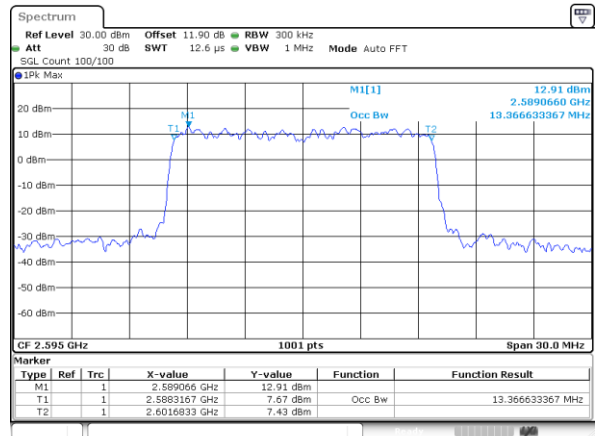
Date: 9,MAR,2020 21:39:47

Middle Channel / 15MHz / QPSK



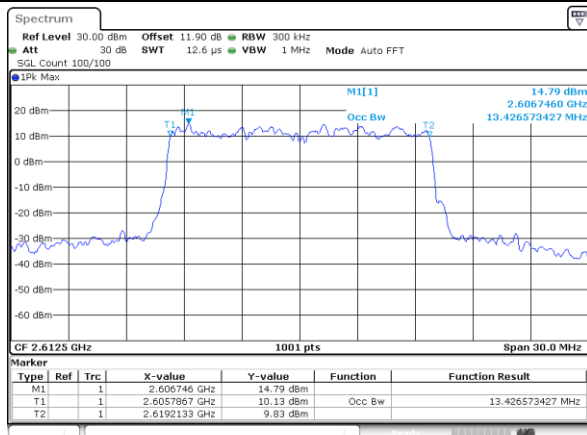
Date: 9,MAR,2020 21:40:28

Middle Channel / 15MHz / 16QAM



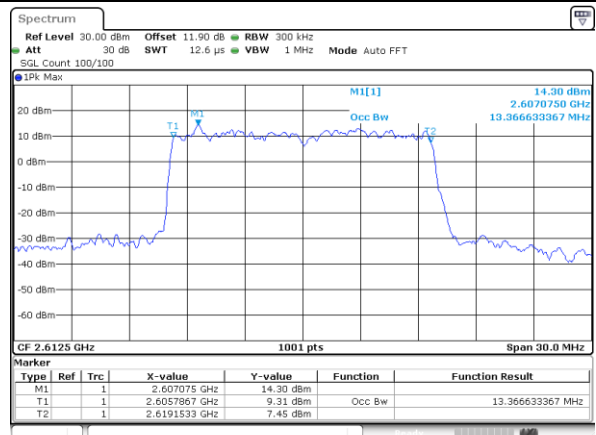
Date: 9,MAR,2020 21:40:41

Highest Channel / 15MHz / QPSK



Date: 9,MAR,2020 21:41:21

Highest Channel / 15MHz / 16QAM

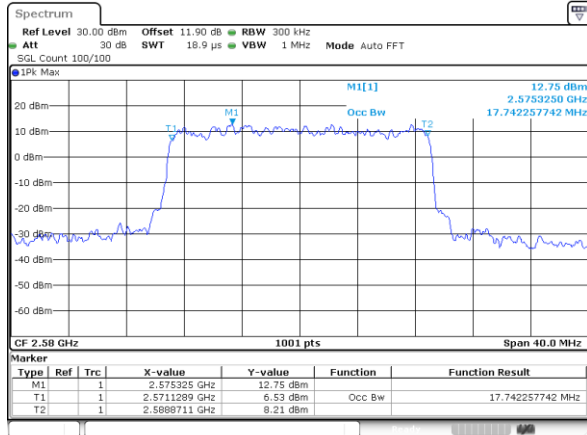


Date: 9,MAR,2020 21:41:35



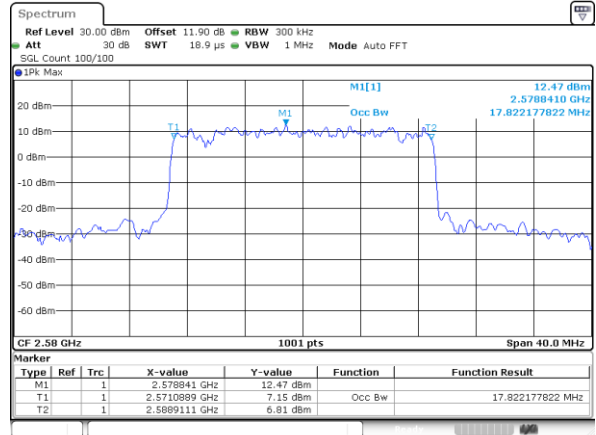
LTE Band 38(HPUe)

Lowest Channel / 20MHz / QPSK



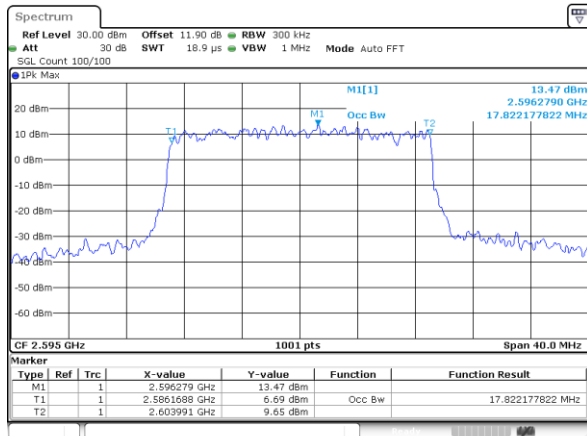
Date: 9,MAR,2020 21:42:19

Lowest Channel / 20MHz / 16QAM



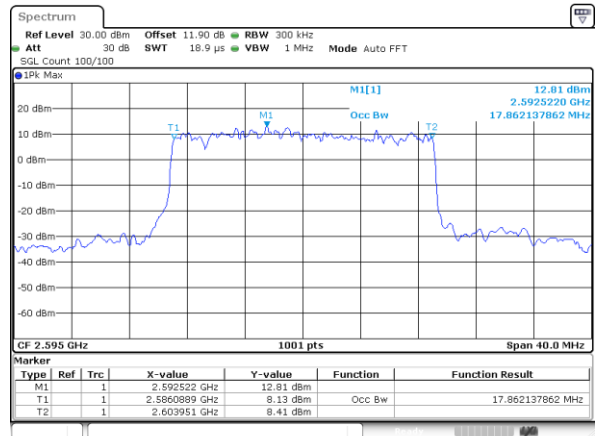
Date: 9,MAR,2020 21:42:33

Middle Channel / 20MHz / QPSK



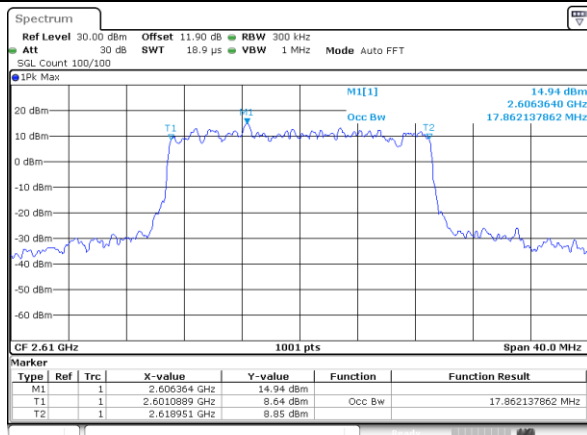
Date: 9,MAR,2020 21:43:14

Middle Channel / 20MHz / 16QAM



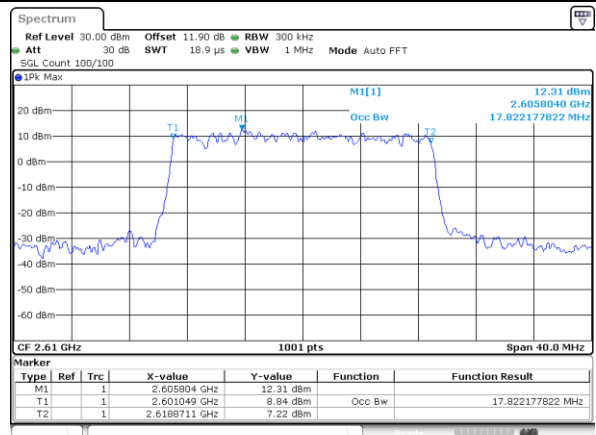
Date: 9,MAR,2020 21:43:27

Highest Channel / 20MHz / QPSK



Date: 9,MAR,2020 21:44:07

Highest Channel / 20MHz / 16QAM

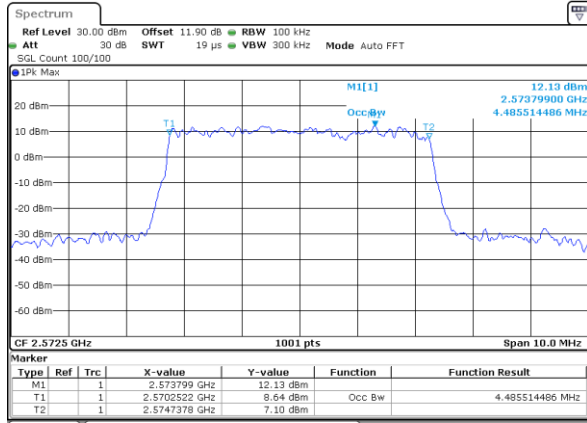


Date: 9,MAR,2020 21:44:21

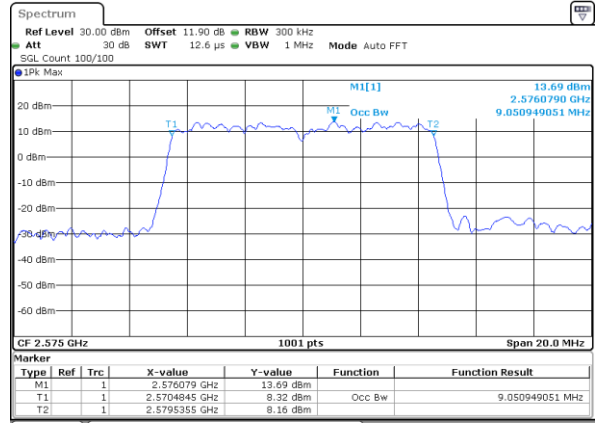


LTE Band 38(HPUe)

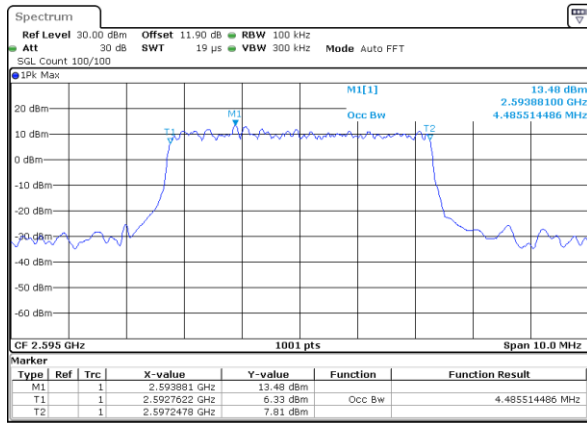
Lowest Channel / 5MHz / 64QAM



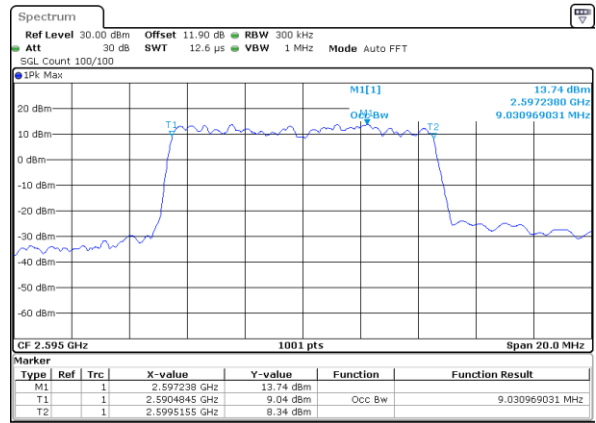
Lowest Channel / 10MHz / 64QAM



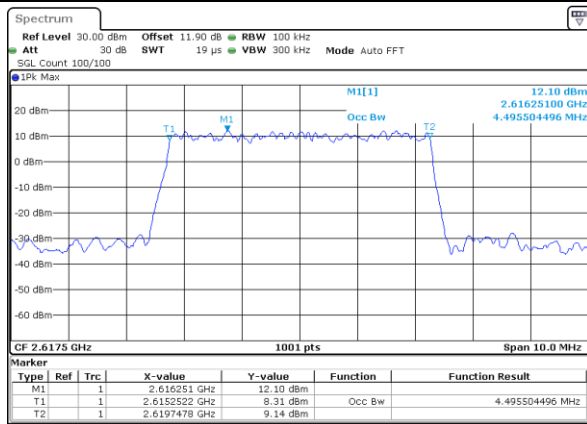
Middle Channel / 5MHz / 64QAM



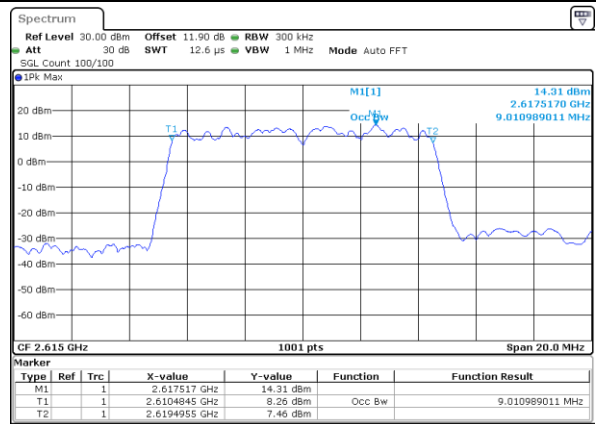
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



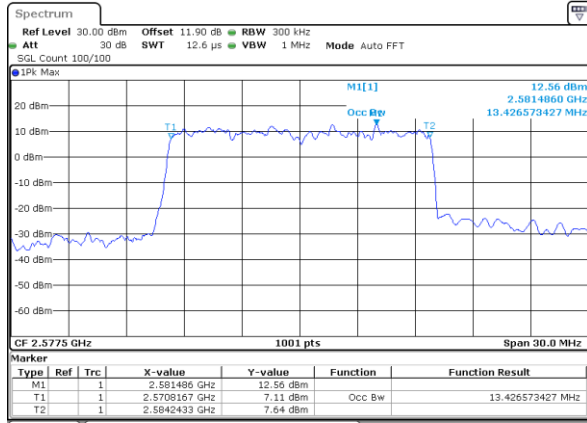
Highest Channel / 10MHz / 64QAM





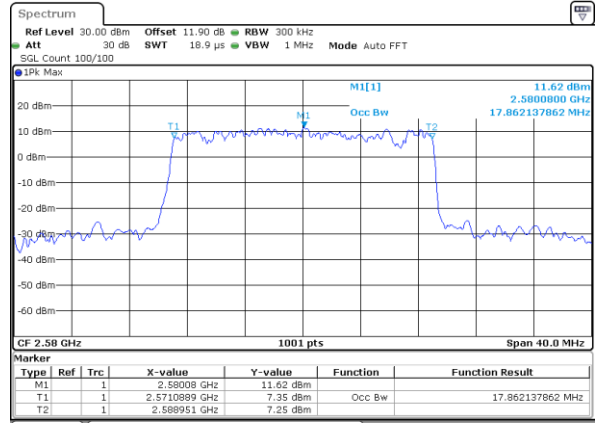
LTE Band 38(HPUe)

Lowest Channel / 15MHz / 64QAM



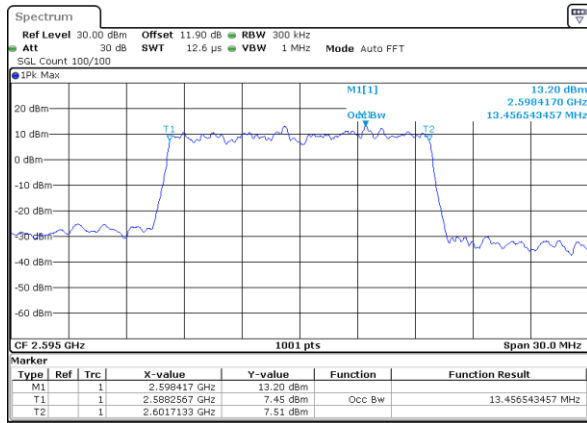
Date: 9,MAR,2020 21:47:49

Lowest Channel / 20MHz / 64QAM



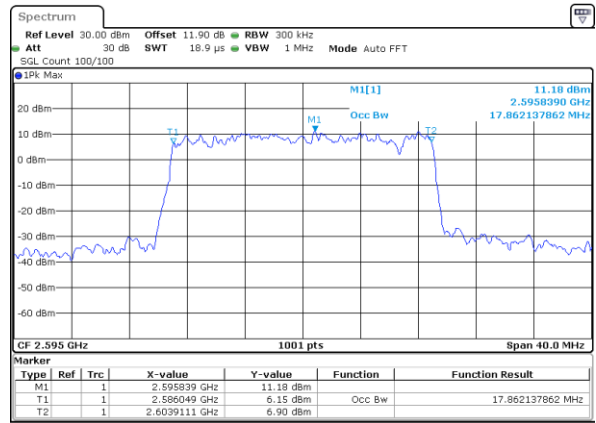
Date: 9,MAR,2020 21:49:12

Middle Channel / 15MHz / 64QAM



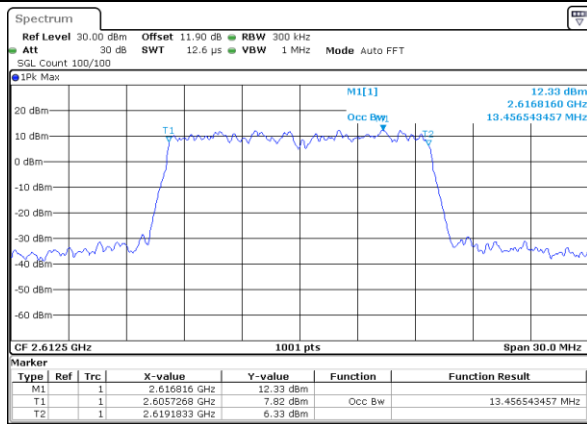
Date: 9,MAR,2020 21:48:16

Middle Channel / 20MHz / 64QAM



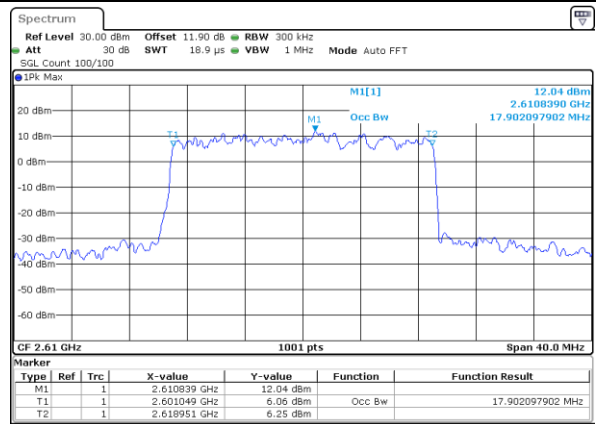
Date: 9,MAR,2020 21:49:39

Highest Channel / 15MHz / 64QAM

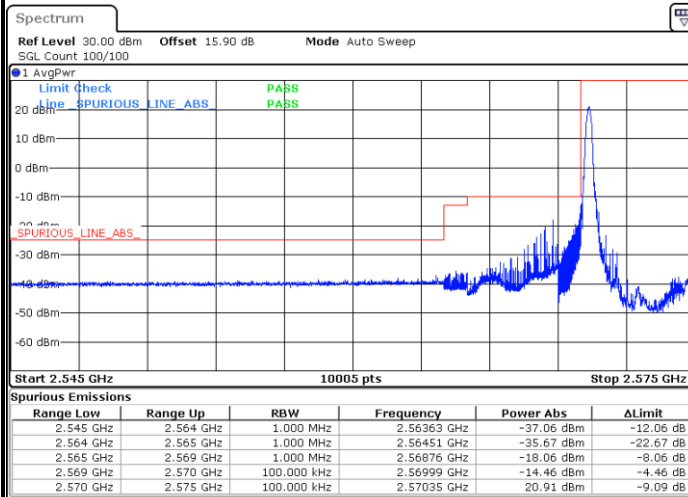
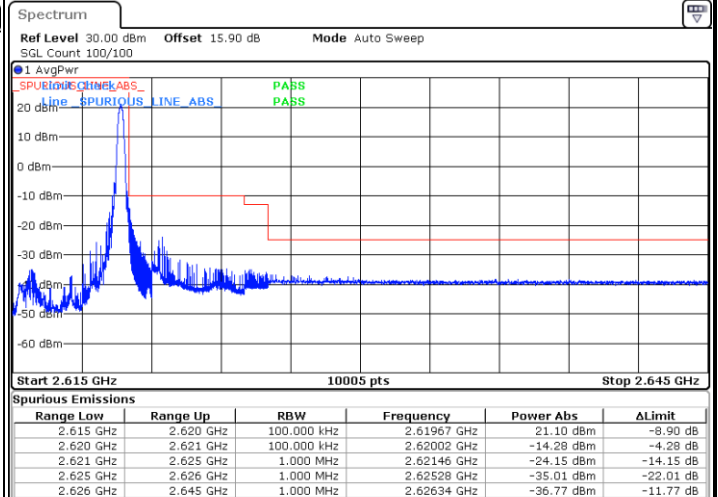
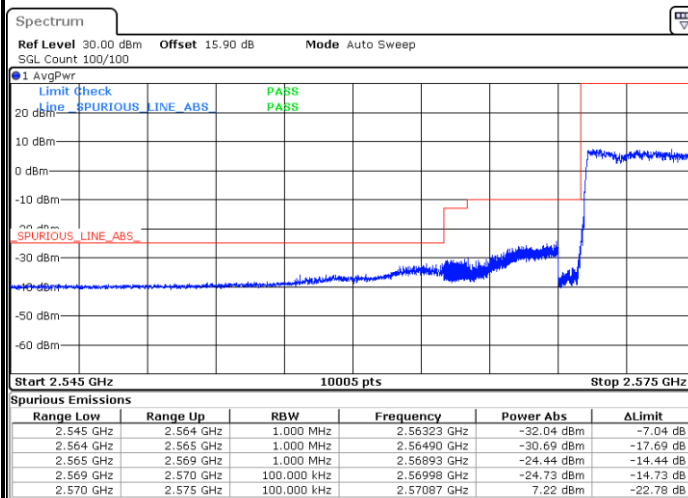
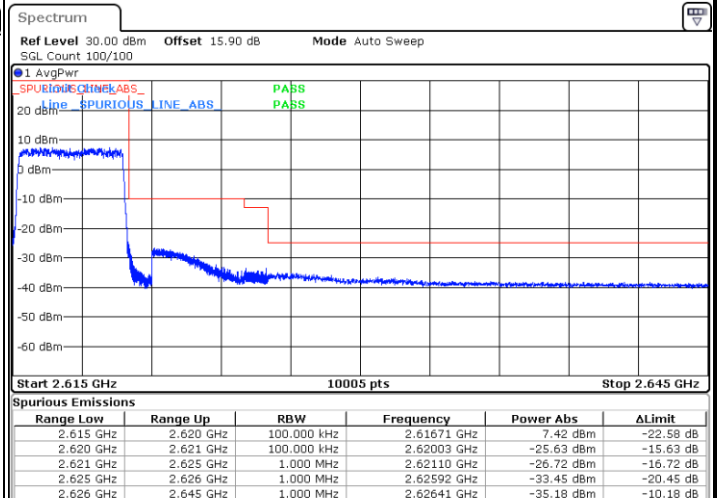


Date: 9,MAR,2020 21:48:43

Highest Channel / 20MHz / 64QAM



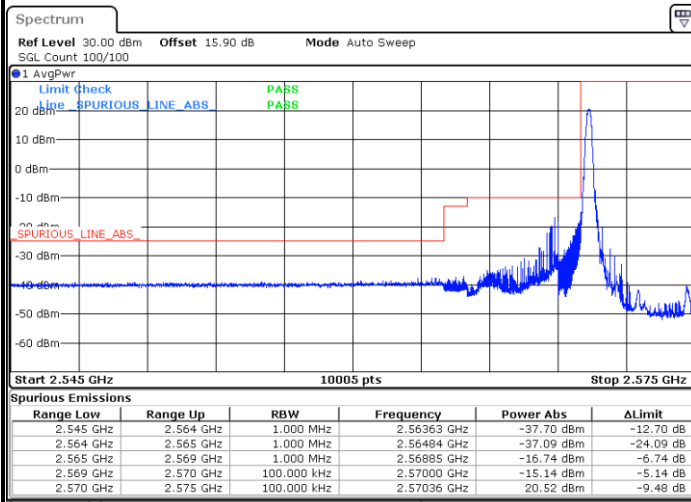
Date: 9,MAR,2020 21:50:06

**Conducted Band Edge****LTE Band 38(HPUE) / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**

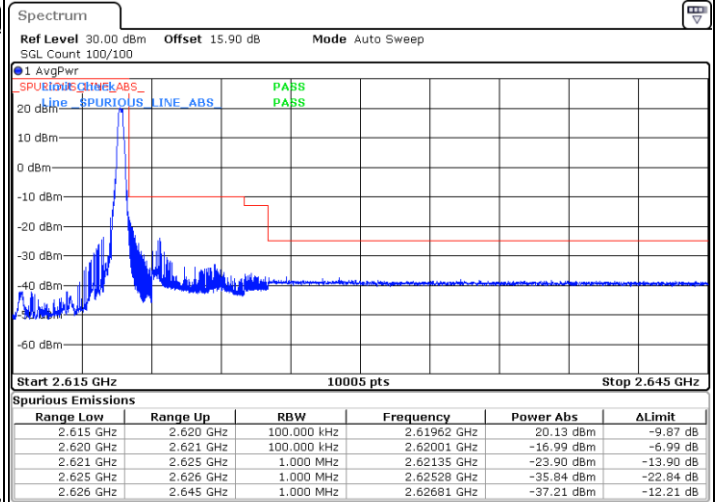


LTE Band 38(HPUE) / 5MHz / 16QAM

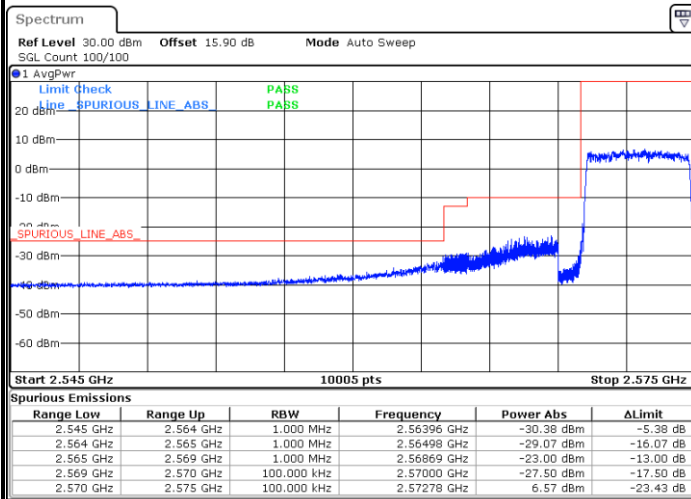
Lowest Band Edge / 1RB



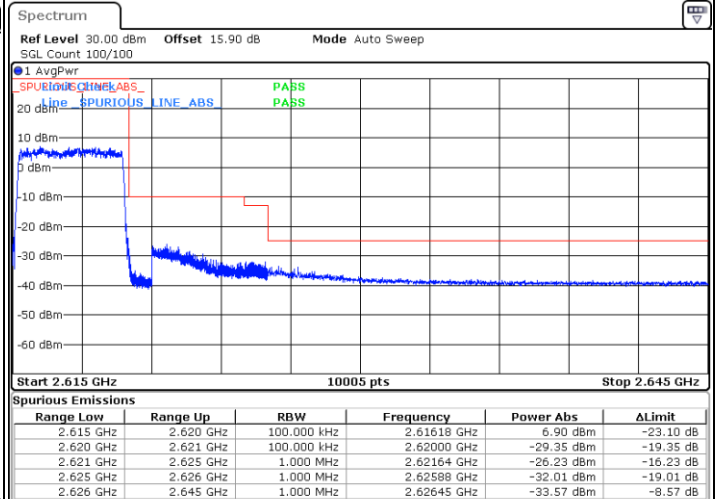
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



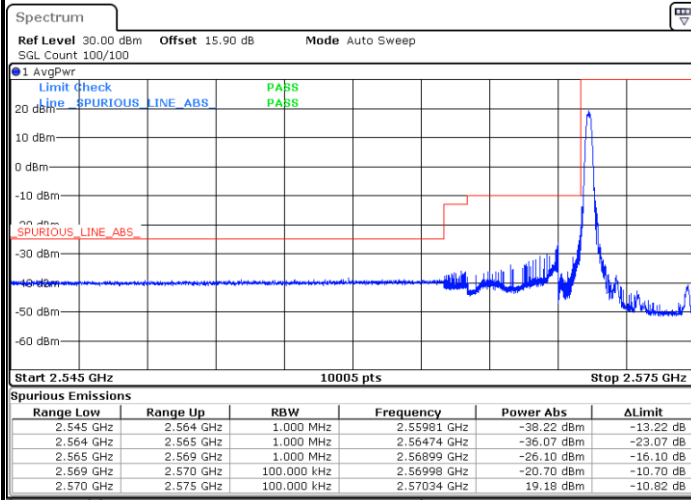
Highest Band Edge / Full RB



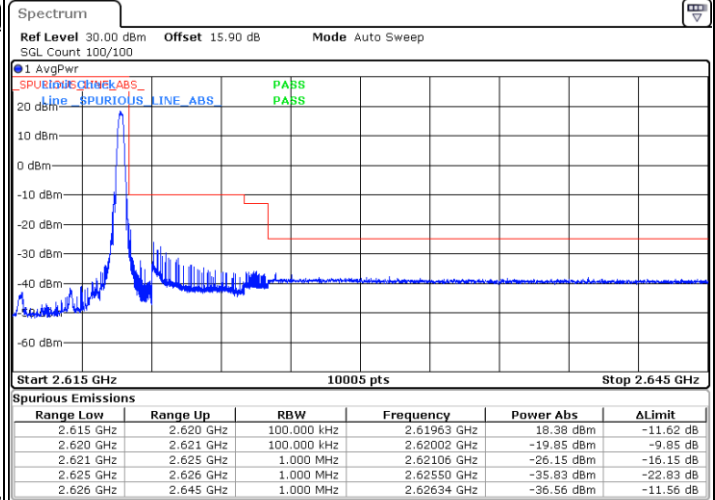


LTE Band 38(HPUE) / 5MHz / 64QAM

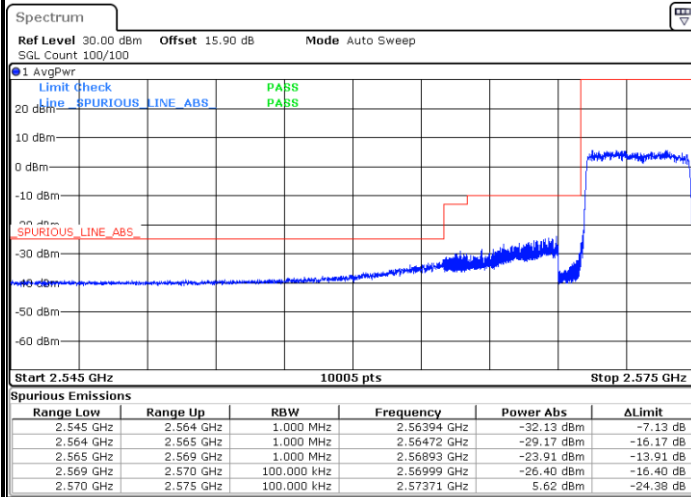
Lowest Band Edge / 1RB



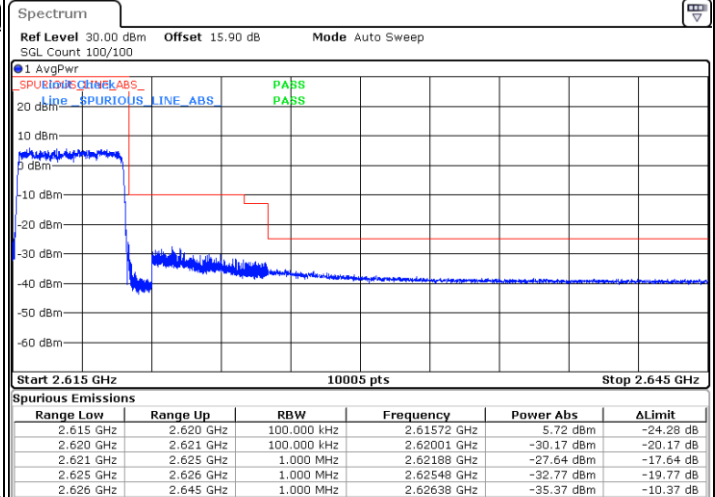
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



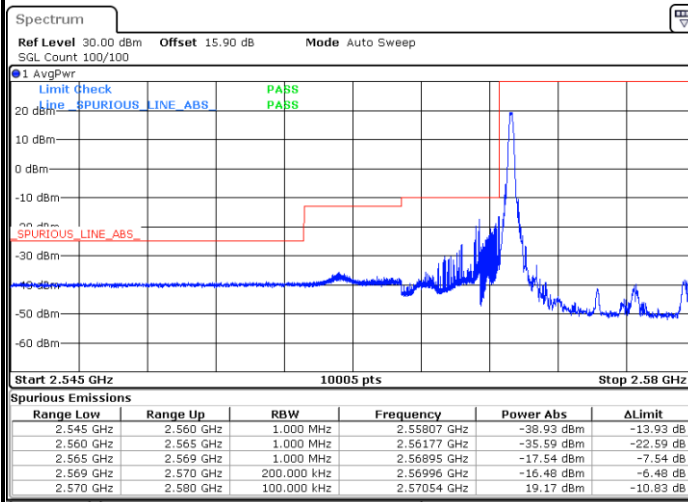
Highest Band Edge / Full RB



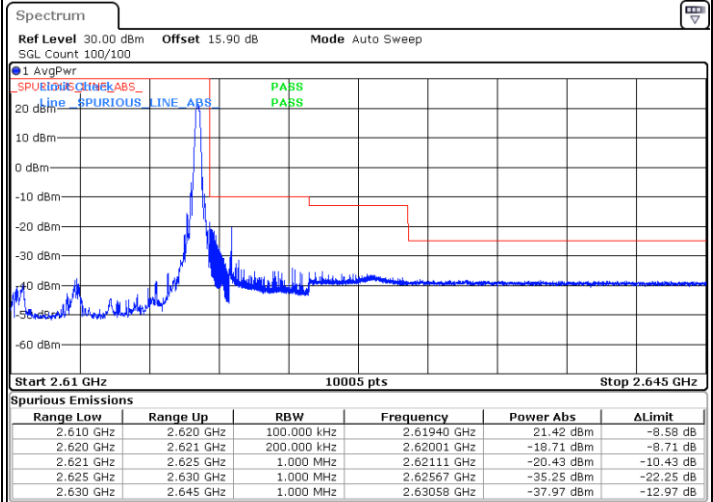


LTE Band 38(HPUE) / 10MHz / QPSK

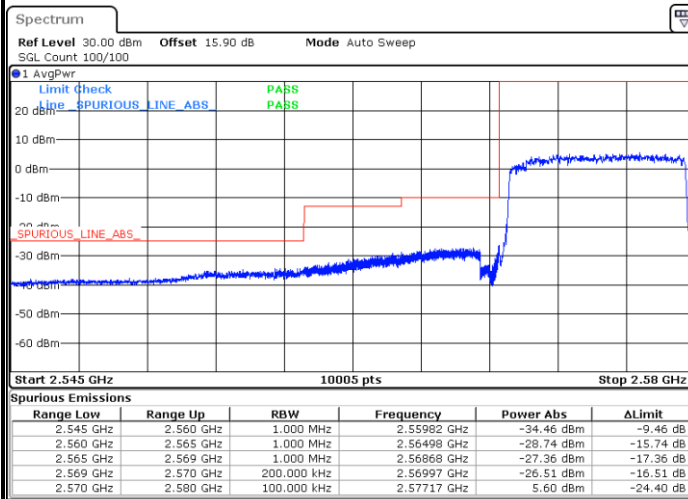
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

