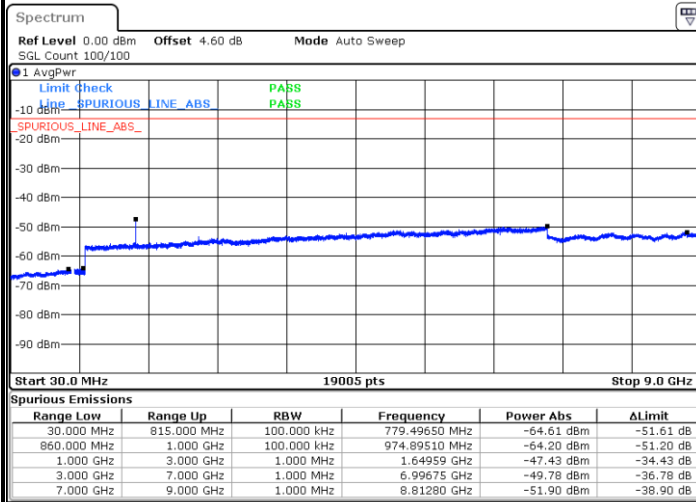




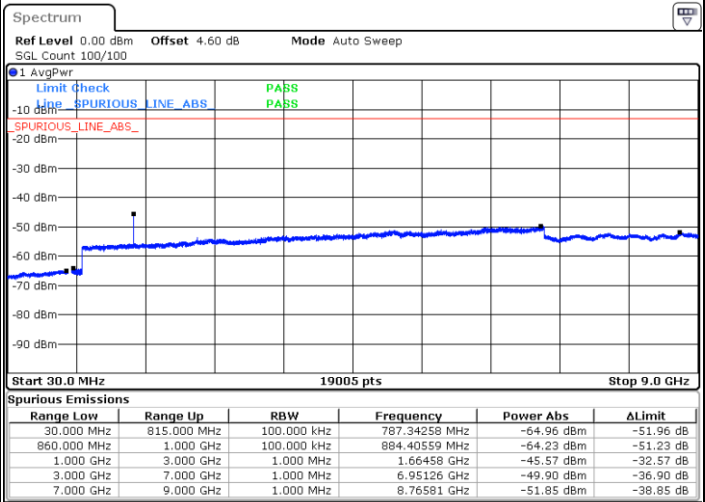
LTE Band 5 / 10MHz

Lowest Channel / 64QAM



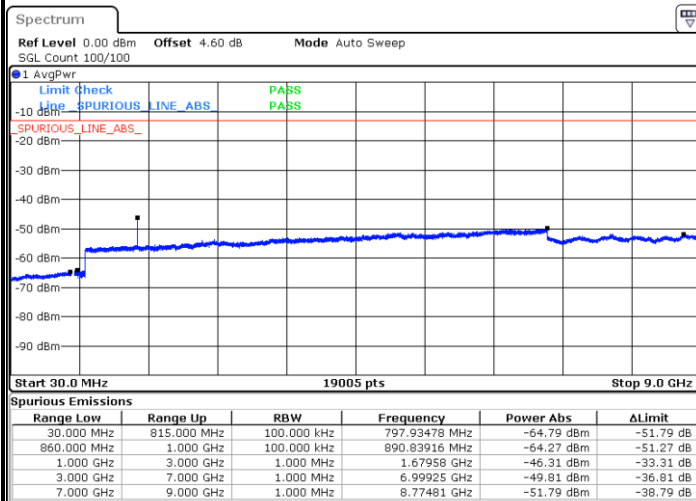
Date: 4 JAN 2020 01:13:06

Middle Channel / 64QAM



Date: 4 JAN 2020 01:14:01

Highest Channel / 64QAM



Date: 4 JAN 2020 01:18:50

**Frequency Stability**

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0001	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0050	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0051	
20	Normal Voltage	0.0060	
20	Battery End Point	0.0012	

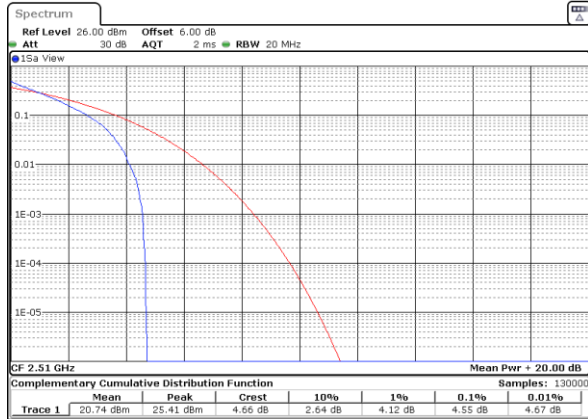
Note: Normal Voltage =3.87V. ; Battery End Point (BEP) =3.0 V. ; Maximum Voltage =4.45 V.



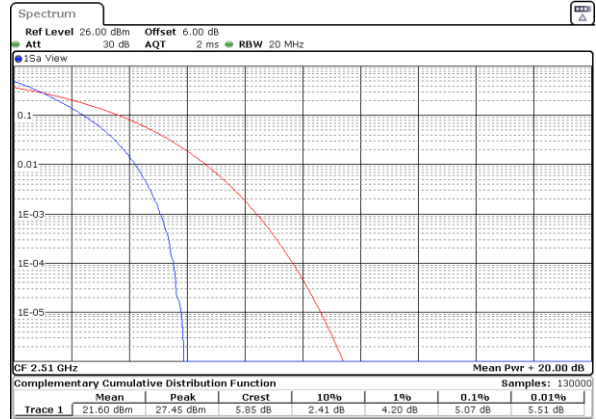
LTE Band 7

Peak-to-Average Ratio

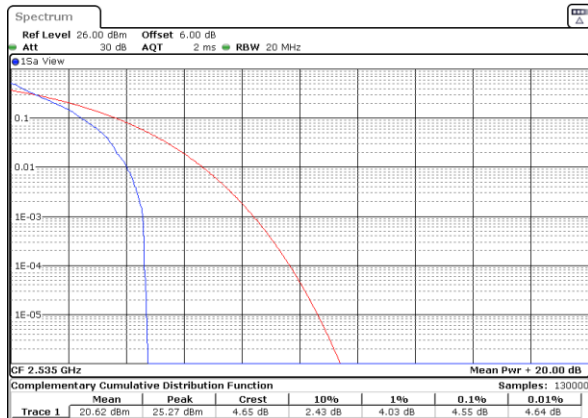
Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.55	5.07	5.16	5.91	PASS
Middle CH	4.55	5.04	5.83	5.86	
Highest CH	4.75	5.01	5.65	5.91	
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.10	6.00			PASS
Middle CH	5.04	5.94			
Highest CH	5.33	5.94			

LTE Band 7 / 20MHz / QPSK
Lowest Channel / 1RB


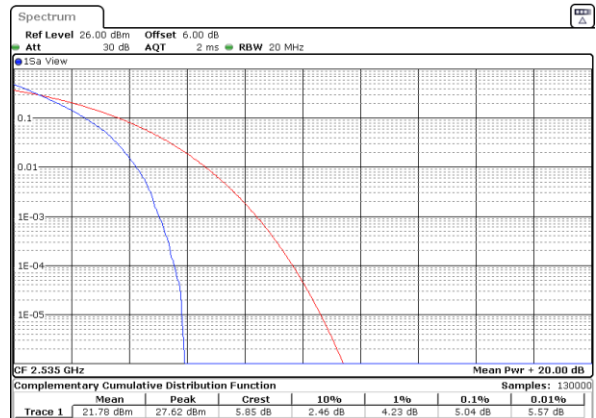
Date: 4 JAN 2020 22:39:13

Lowest Channel / Full RB


Date: 4 JAN 2020 22:39:21

Middle Channel / 1RB


Date: 4 JAN 2020 22:39:58

Middle Channel / Full RB


Date: 4 JAN 2020 22:39:49

Highest Channel / 1RB

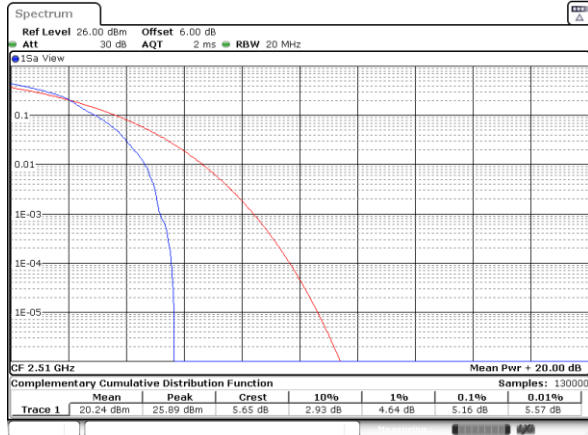

Date: 4 JAN 2020 22:40:25

Highest Channel / Full RB


Date: 4 JAN 2020 22:40:34

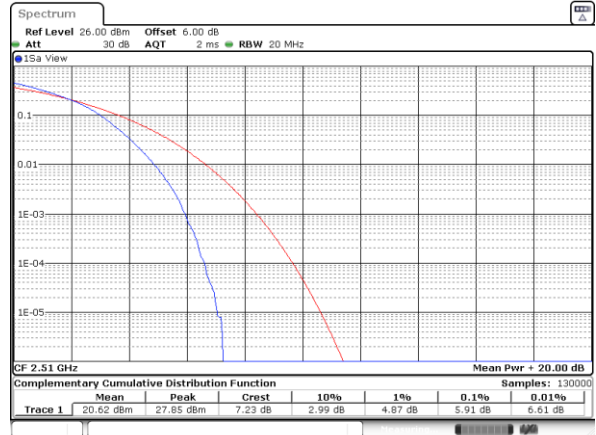
LTE Band 7 / 20MHz / 16QAM

Lowest Channel / 1RB



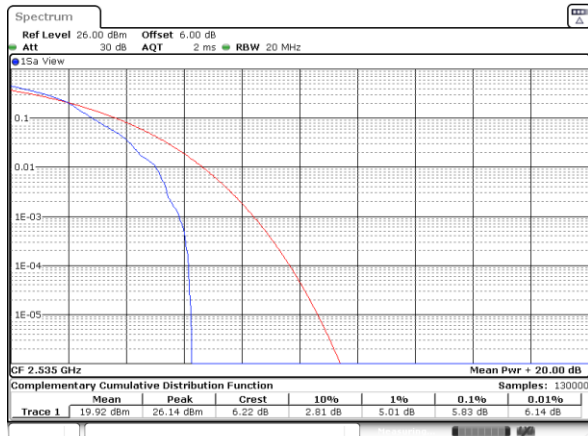
Date: 4 JAN 2020 22:39:04

Lowest Channel / Full RB



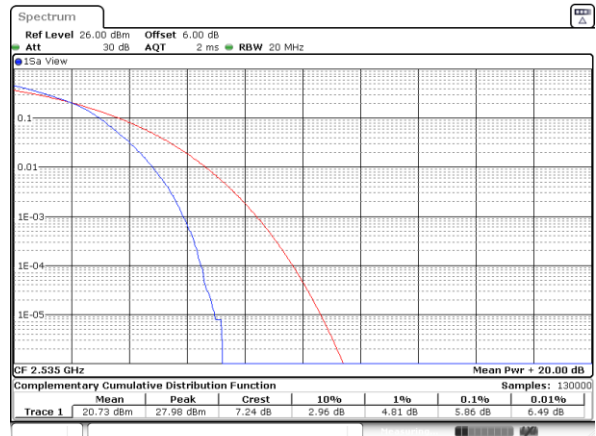
Date: 4 JAN 2020 22:39:31

Middle Channel / 1RB



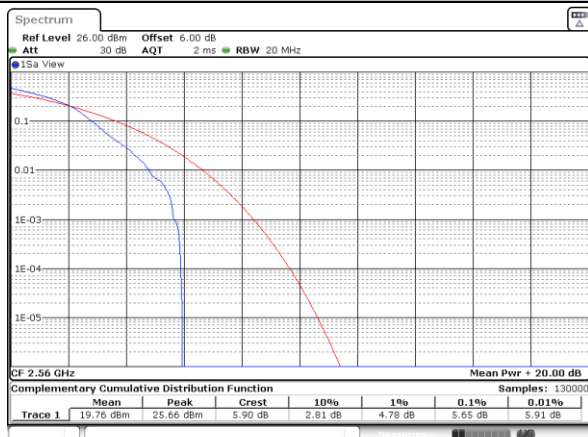
Date: 4 JAN 2020 22:40:07

Middle Channel / Full RB



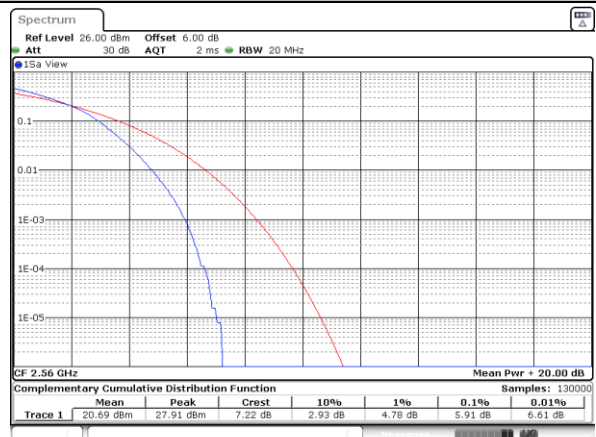
Date: 4 JAN 2020 22:39:40

Highest Channel / 1RB



Date: 4 JAN 2020 22:40:16

Highest Channel / Full RB

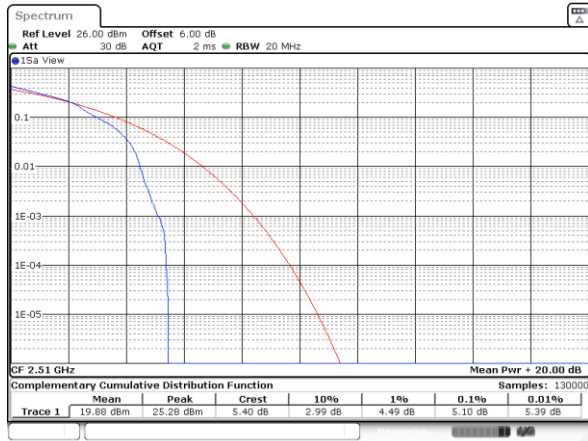


Date: 4 JAN 2020 22:40:42

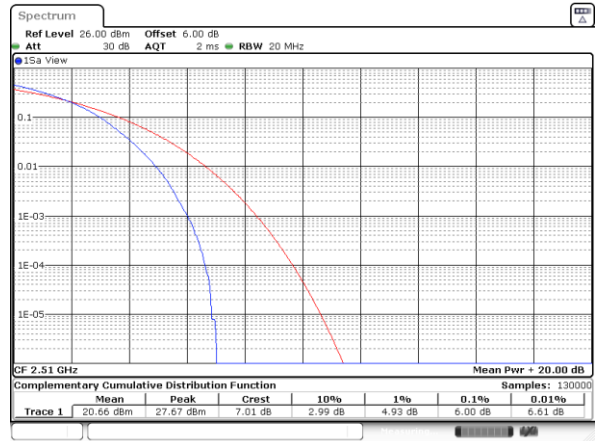


LTE Band 7 / 20MHz / 64QAM

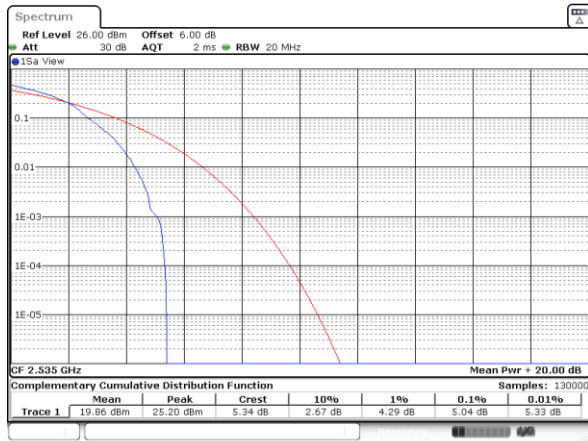
Lowest Channel / 1RB



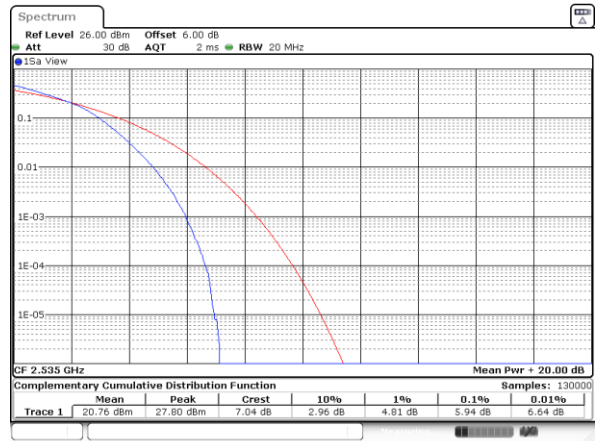
Lowest Channel / Full RB



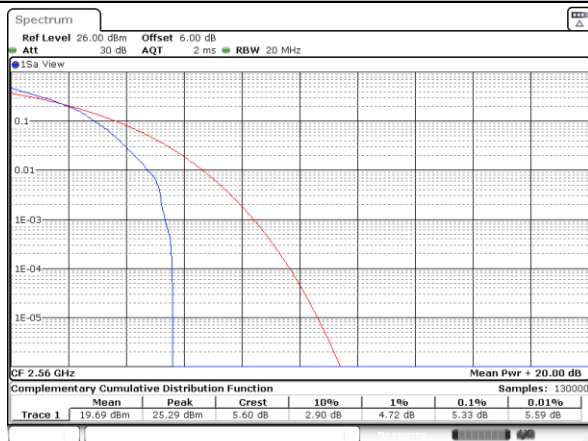
Middle Channel / 1RB



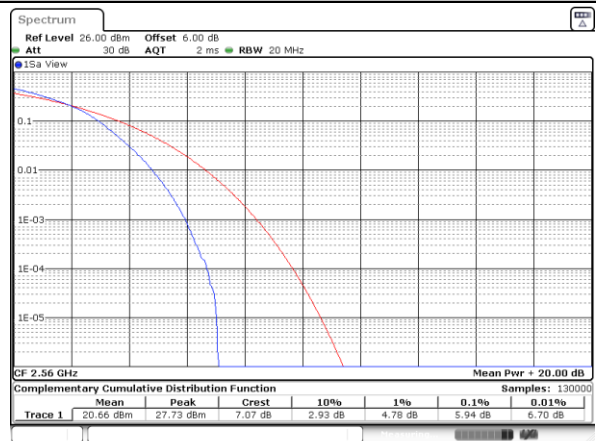
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



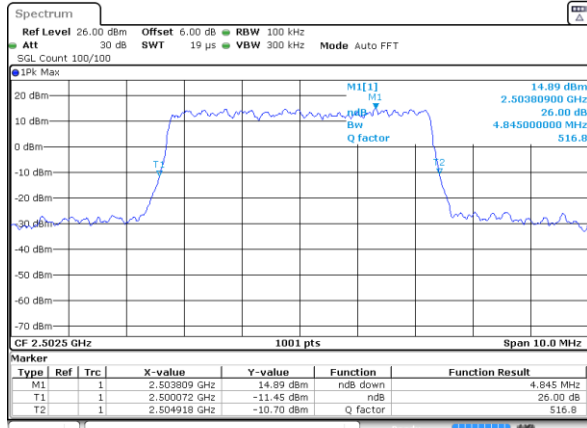
**26dB Bandwidth**

Mode	LTE Band 7 : 26dB BW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	4.845	4.835	9.83	9.59	14.296	14.446	20.14	20.22
Middle CH	4.805	4.835	9.79	9.71	14.296	14.386	20.06	20.14
Highest CH	4.895	4.845	9.81	9.73	14.386	14.296	20.22	20.22
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM	
Lowest CH	4.835		9.75		14.326		20.1	
Middle CH	4.855		9.71		14.386		20.14	
Highest CH	4.805		9.79		14.505		20.14	



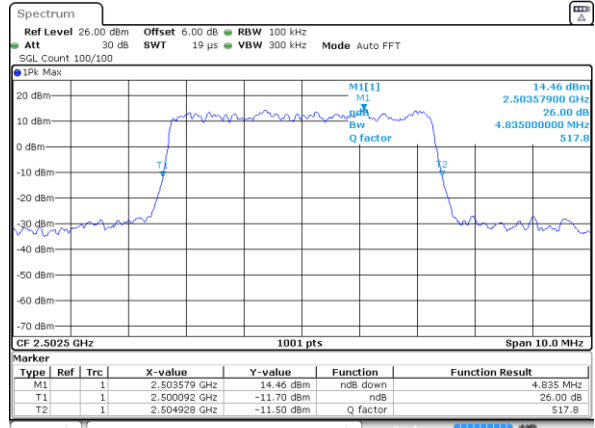
LTE Band 7

Lowest Channel / 5MHz / QPSK



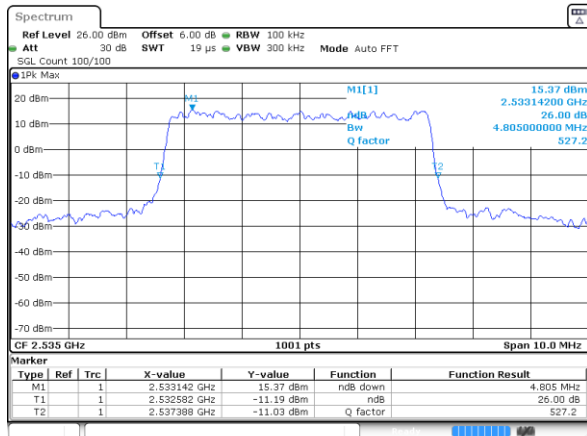
Date: 4 JAN 2020 20:59:31

Lowest Channel / 5MHz / 16QAM



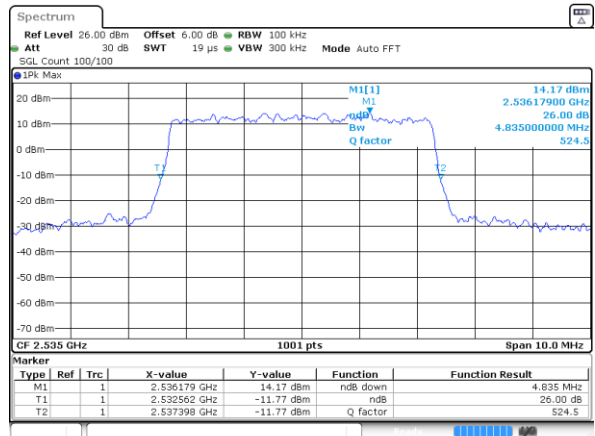
Date: 4 JAN 2020 20:59:51

Middle Channel / 5MHz / QPSK



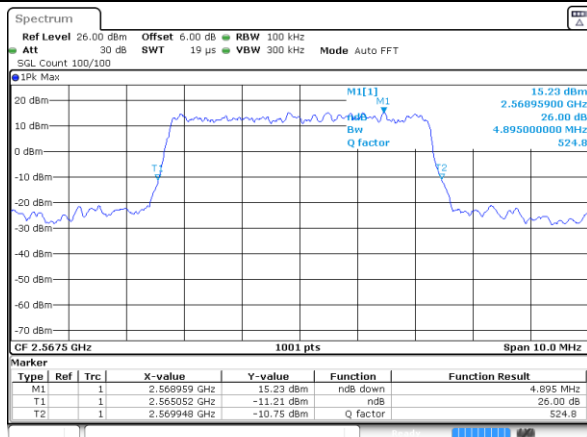
Date: 4 JAN 2020 21:00:31

Middle Channel / 5MHz / 16QAM



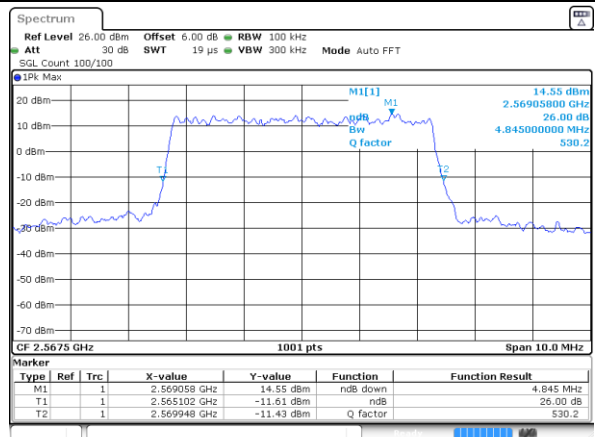
Date: 4 JAN 2020 21:00:11

Highest Channel / 5MHz / QPSK



Date: 4 JAN 2020 21:00:51

Highest Channel / 5MHz / 16QAM

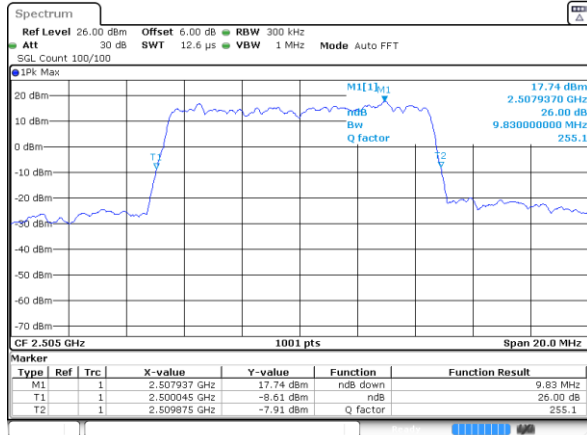


Date: 4 JAN 2020 21:01:11



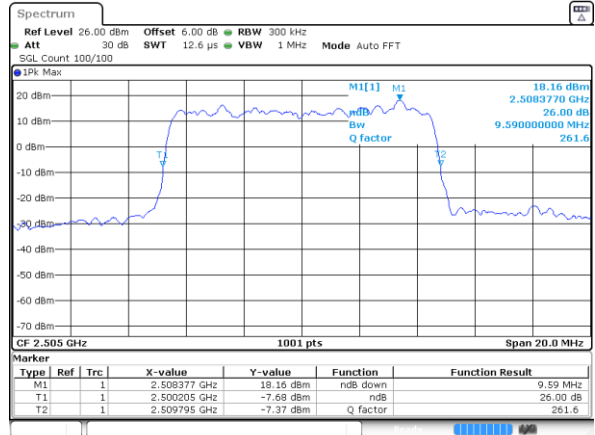
LTE Band 7

Lowest Channel / 10MHz / QPSK



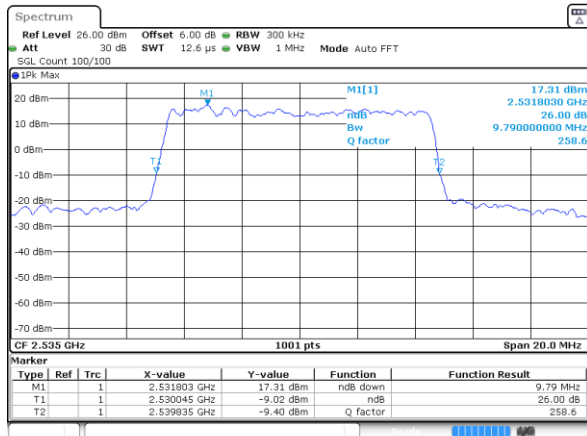
Date: 4 JAN 2020 21:15:59

Lowest Channel / 10MHz / 16QAM



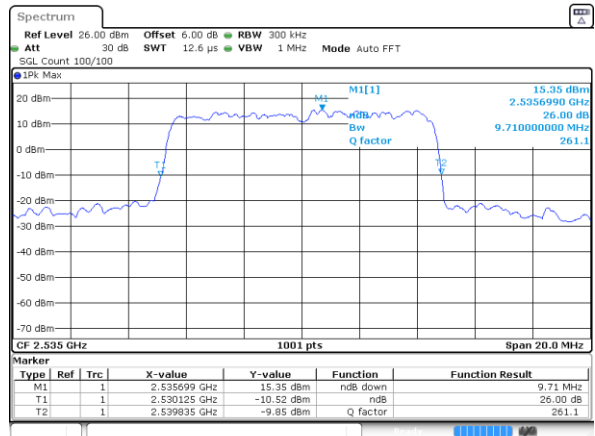
Date: 4 JAN 2020 21:16:19

Middle Channel / 10MHz / QPSK



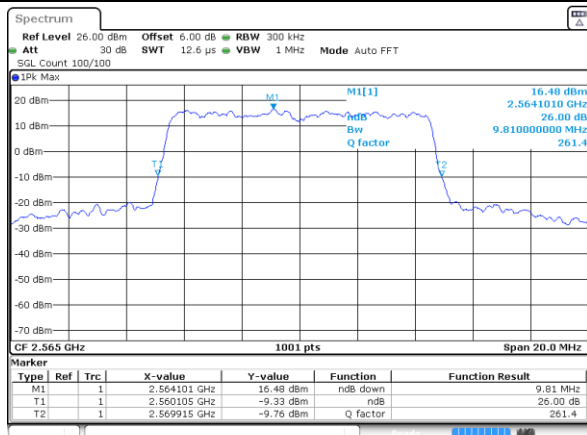
Date: 4 JAN 2020 21:16:59

Middle Channel / 10MHz / 16QAM



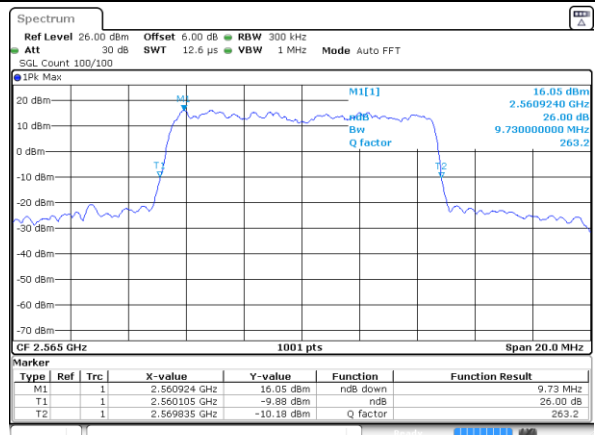
Date: 4 JAN 2020 21:16:39

Highest Channel / 10MHz / QPSK



Date: 4 JAN 2020 21:17:19

Highest Channel / 10MHz / 16QAM

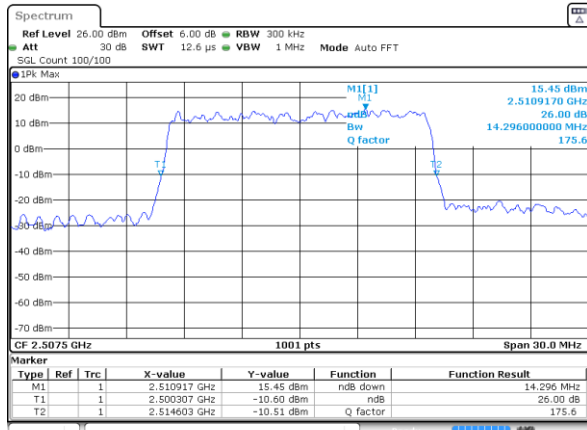


Date: 4 JAN 2020 21:17:39



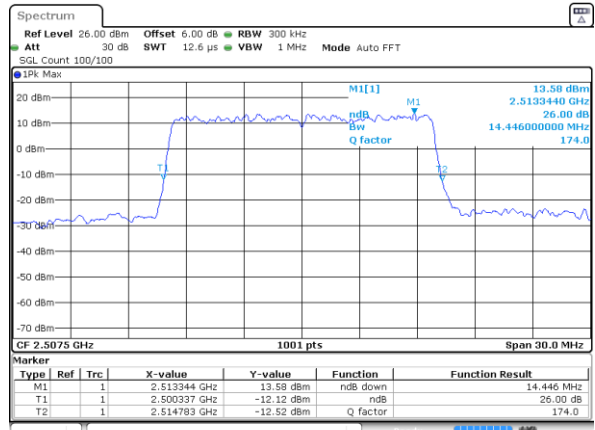
LTE Band 7

Lowest Channel / 15MHz / QPSK



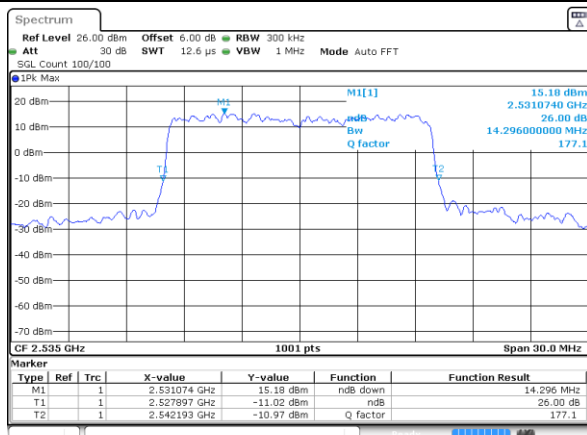
Date: 4 JAN 2020 21:32:46

Lowest Channel / 15MHz / 16QAM



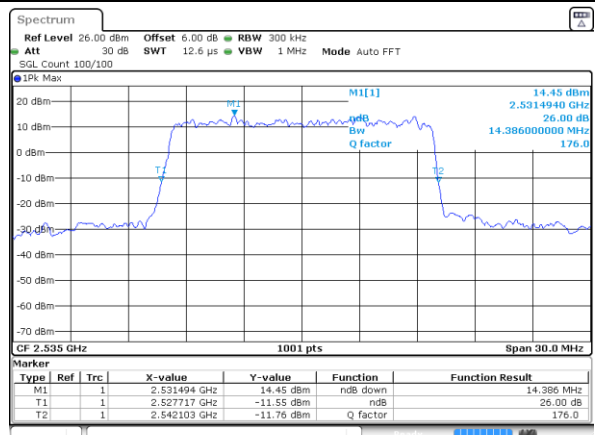
Date: 4 JAN 2020 21:32:26

Middle Channel / 15MHz / QPSK



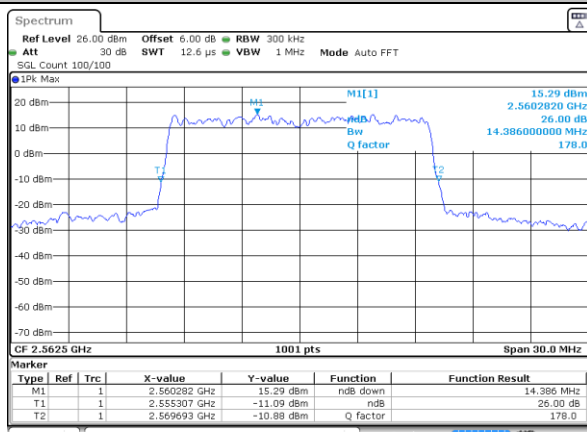
Date: 4 JAN 2020 21:33:06

Middle Channel / 15MHz / 16QAM



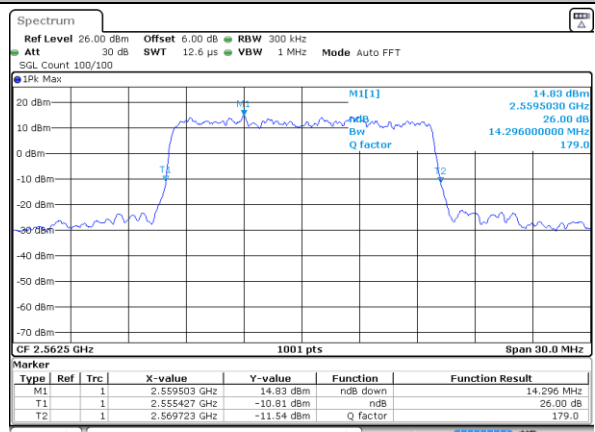
Date: 4 JAN 2020 21:33:26

Highest Channel / 15MHz / QPSK



Date: 4 JAN 2020 21:34:06

Highest Channel / 15MHz / 16QAM

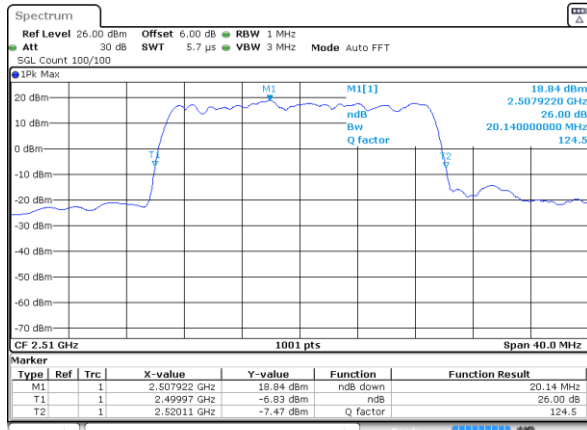


Date: 4 JAN 2020 21:33:46

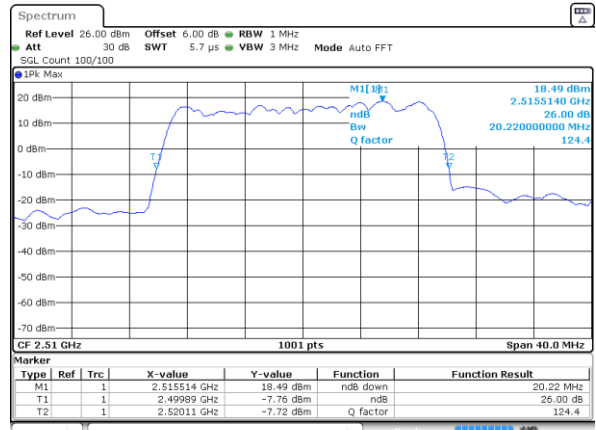


LTE Band 7

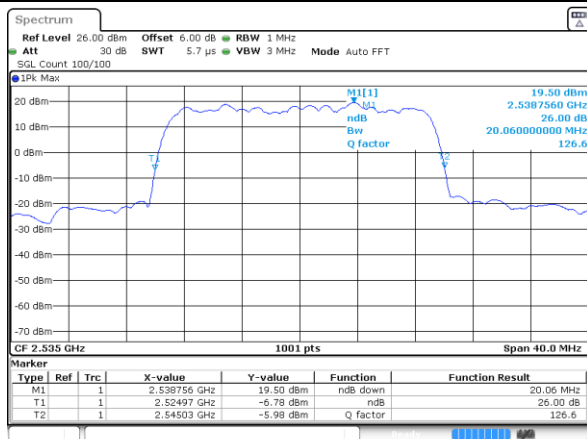
Lowest Channel / 20MHz / QPSK



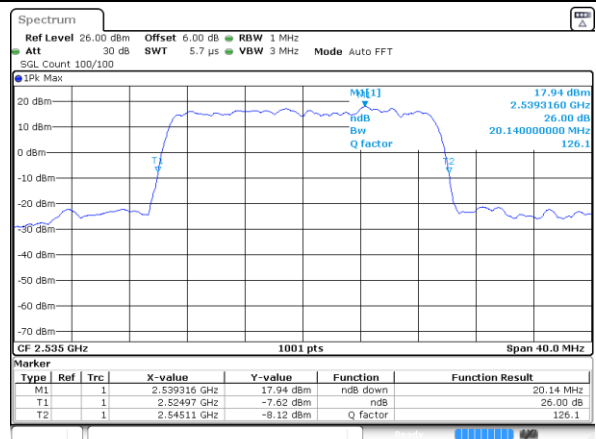
Lowest Channel / 20MHz / 16QAM



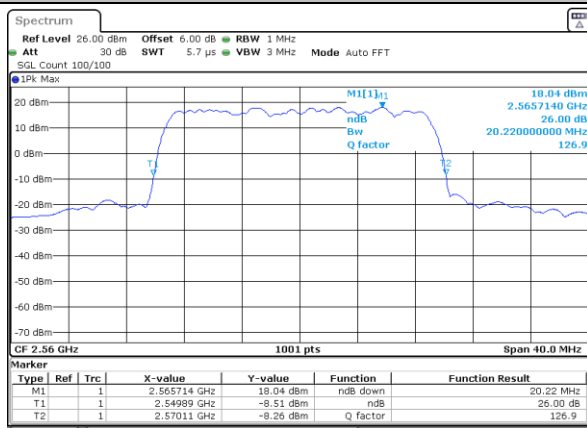
Middle Channel / 20MHz / QPSK



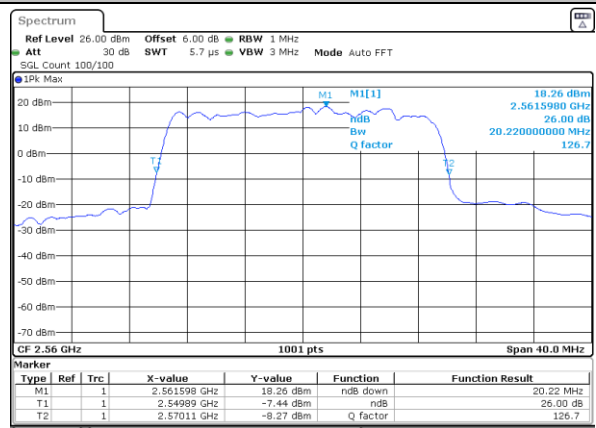
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



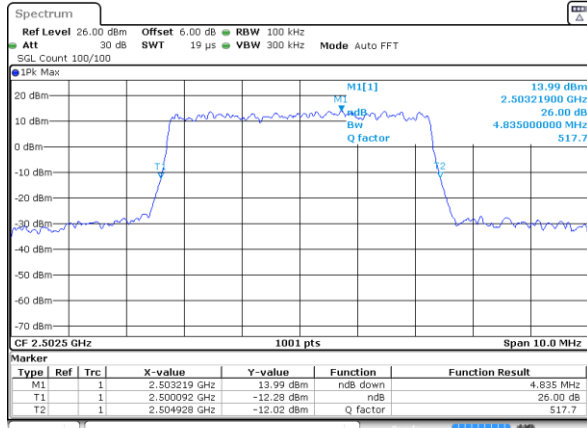
Highest Channel / 20MHz / 16QAM





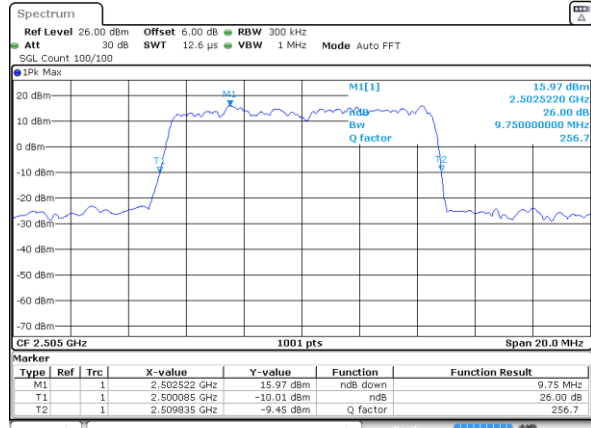
LTE Band 7

Lowest Channel / 5MHz / 64QAM



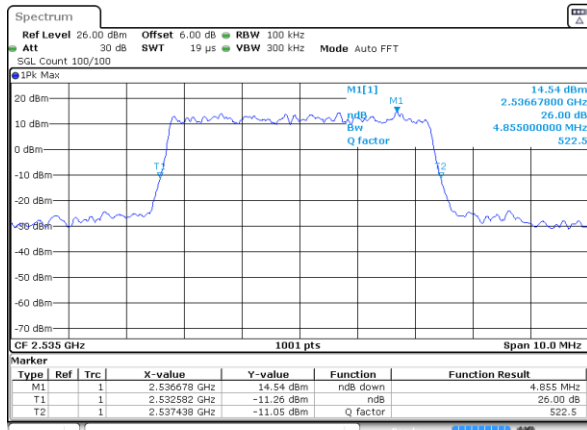
Date: 4 JAN 2020 22:05:42

Lowest Channel / 10MHz / 64QAM



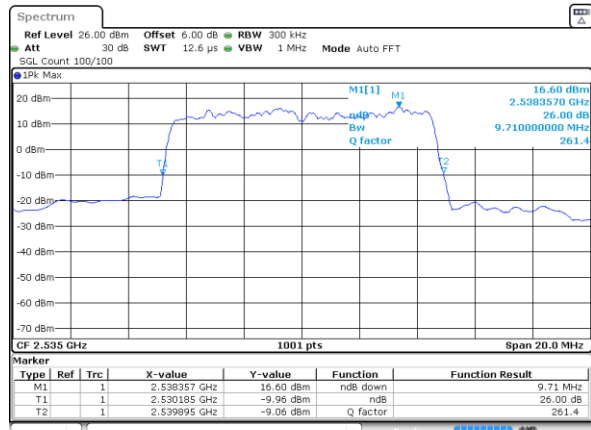
Date: 4 JAN 2020 22:13:56

Middle Channel / 5MHz / 64QAM



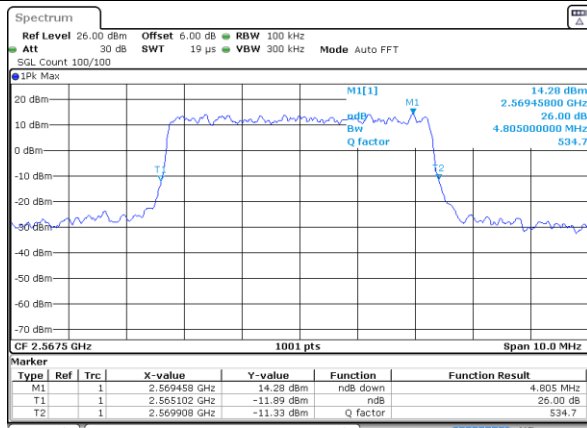
Date: 4 JAN 2020 22:05:52

Middle Channel / 10MHz / 64QAM



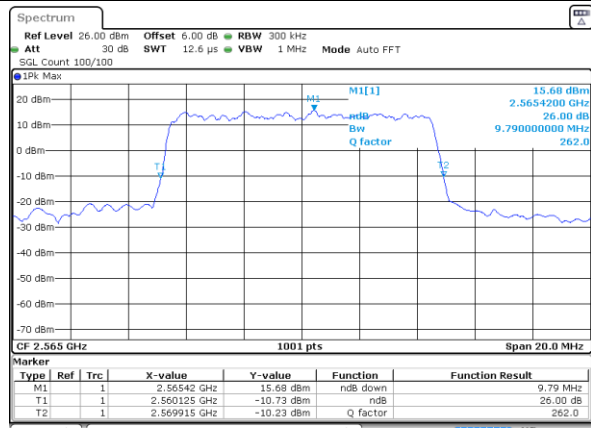
Date: 4 JAN 2020 22:14:06

Highest Channel / 5MHz / 64QAM



Date: 4 JAN 2020 22:06:02

Highest Channel / 10MHz / 64QAM

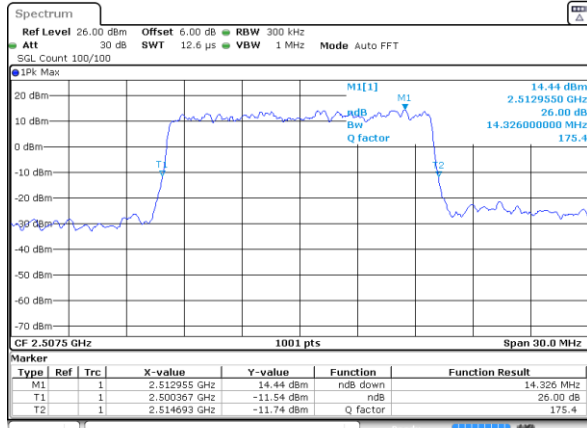


Date: 4 JAN 2020 22:14:16



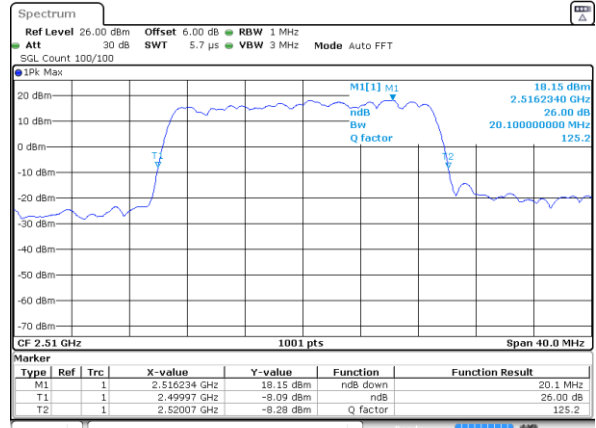
LTE Band 7

Lowest Channel / 15MHz / 64QAM



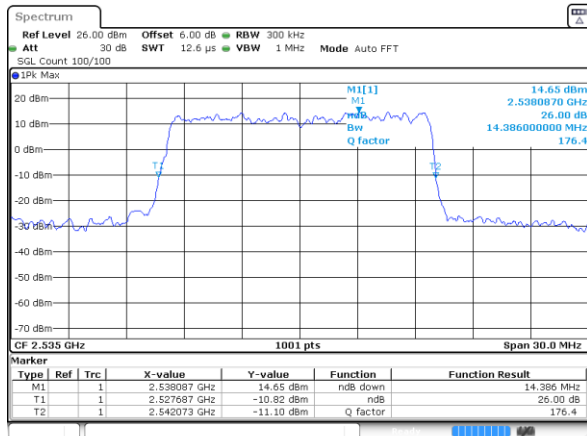
Date: 4 JAN 2020 22:22:10

Lowest Channel / 20MHz / 64QAM



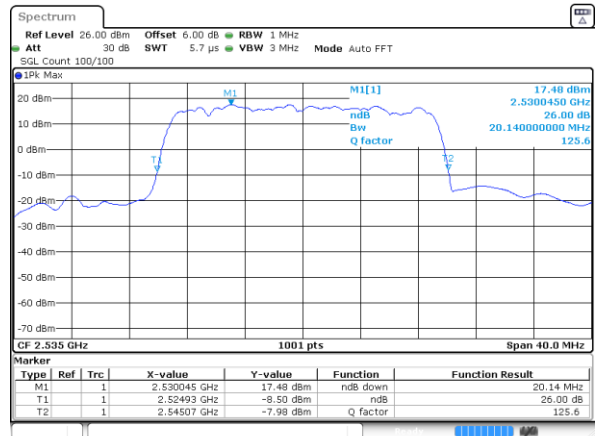
Date: 4 JAN 2020 22:30:24

Middle Channel / 15MHz / 64QAM



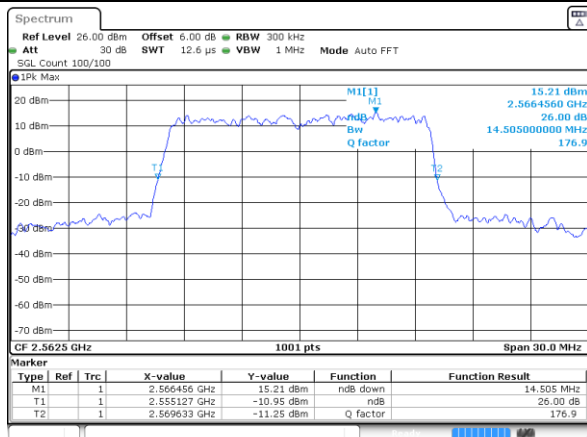
Date: 4 JAN 2020 22:22:20

Middle Channel / 20MHz / 64QAM



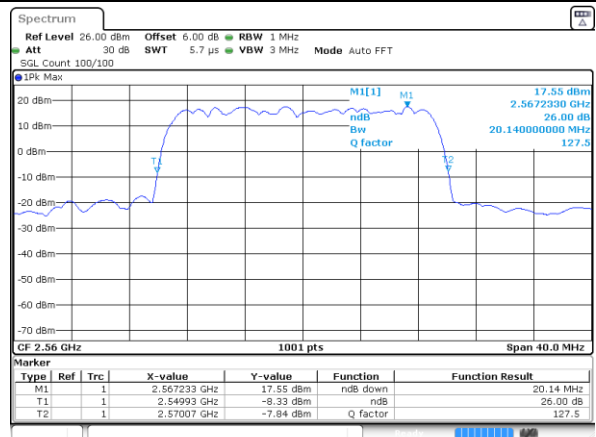
Date: 4 JAN 2020 22:30:34

Highest Channel / 15MHz / 64QAM



Date: 4 JAN 2020 22:22:30

Highest Channel / 20MHz / 64QAM



Date: 4 JAN 2020 22:30:44

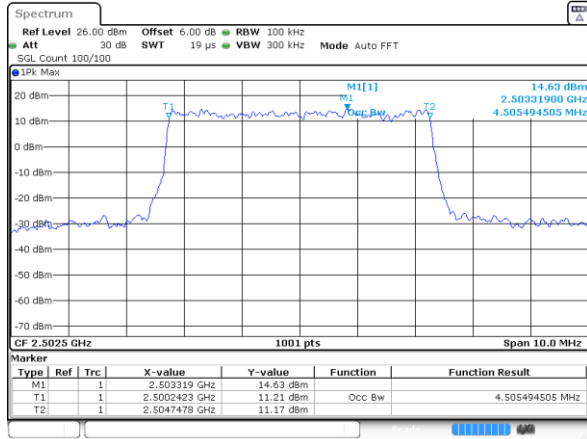
**Occupied Bandwidth**

Mode	LTE Band 7 : 99%OBW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	4.505	4.496	9.031	8.991	13.397	13.487	18.262	18.342
Middle CH	4.496	4.486	9.031	8.971	13.516	13.457	18.222	18.262
Highest CH	4.496	4.496	9.051	8.971	13.487	13.367	18.341	18.422
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM	
Lowest CH	4.496		8.971		13.516		18.342	
Middle CH	4.476		8.971		13.427		18.302	
Highest CH	4.476		9.011		13.397		18.501	

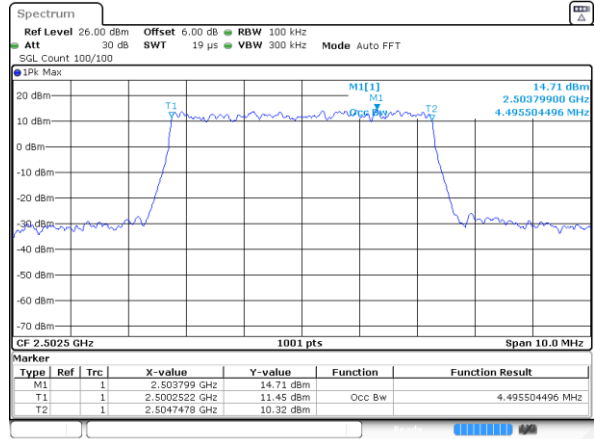


LTE Band 7

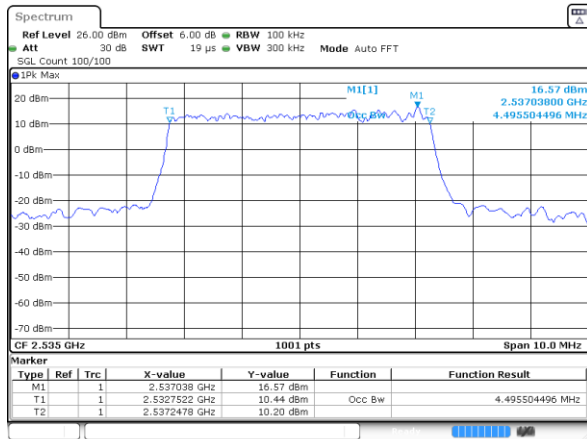
Lowest Channel / 5MHz / QPSK



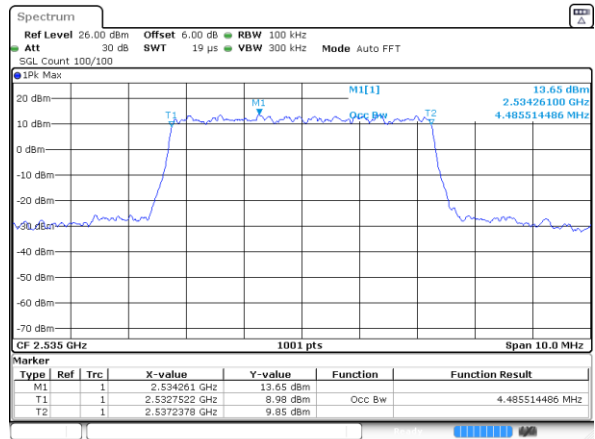
Lowest Channel / 5MHz / 16QAM



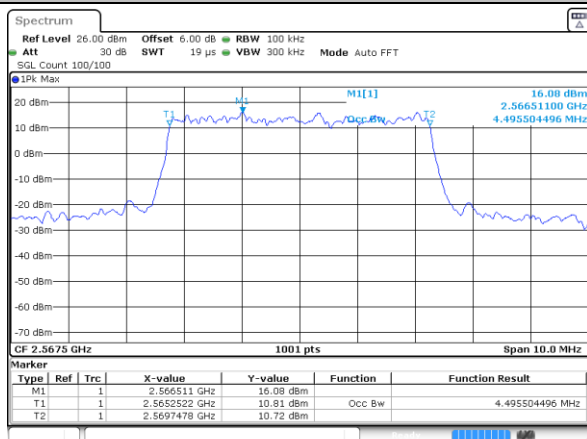
Middle Channel / 5MHz / QPSK



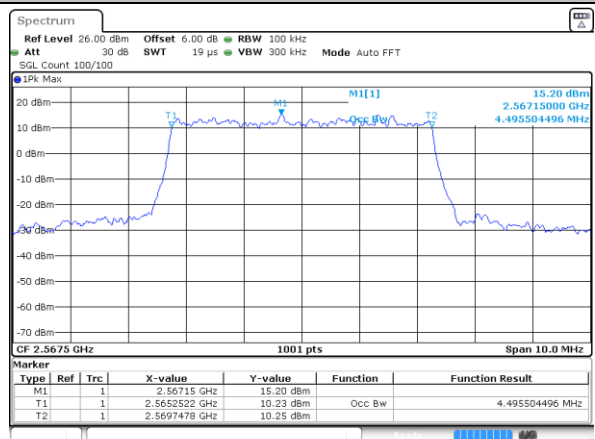
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



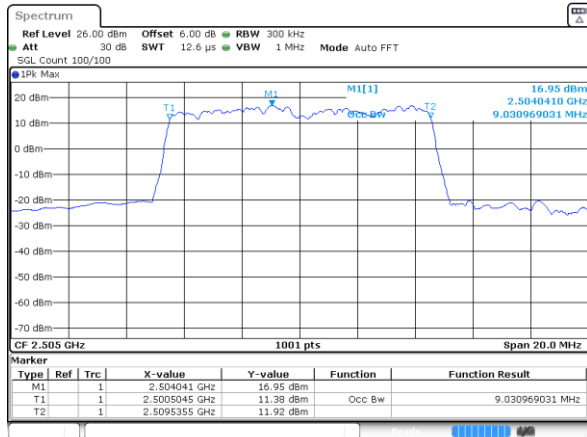
Highest Channel / 5MHz / 16QAM





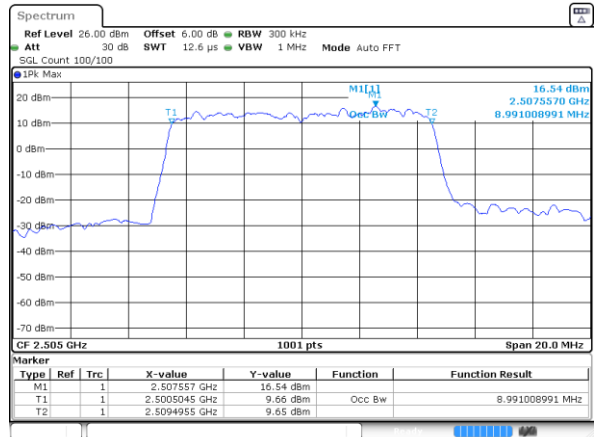
LTE Band 7

Lowest Channel / 10MHz / QPSK



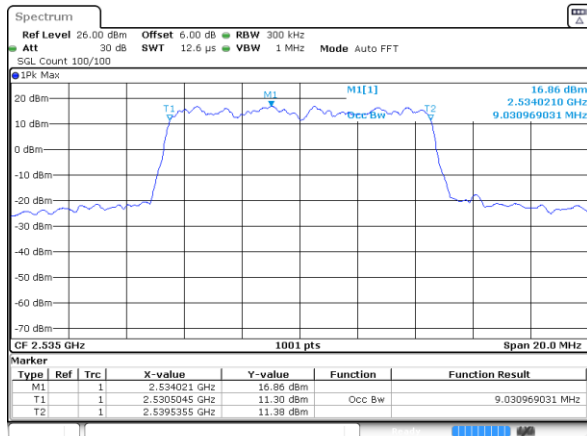
Date: 4 JAN 2020 21:15:49

Lowest Channel / 10MHz / 16QAM



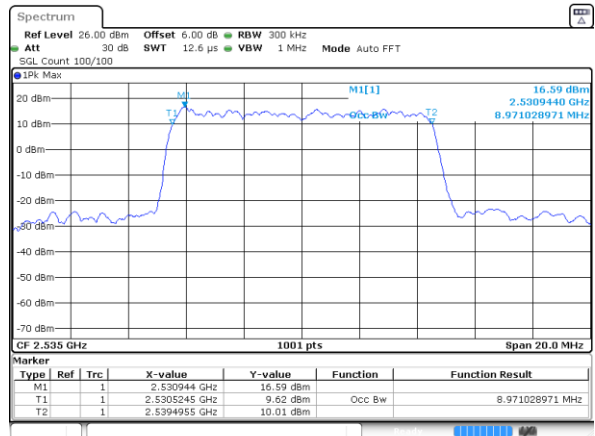
Date: 4 JAN 2020 21:16:09

Middle Channel / 10MHz / QPSK



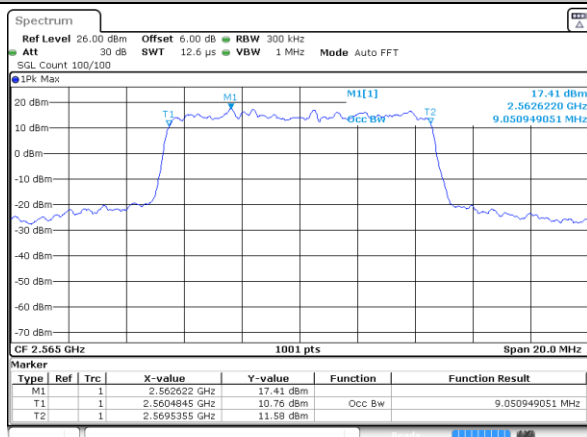
Date: 4 JAN 2020 21:16:49

Middle Channel / 10MHz / 16QAM



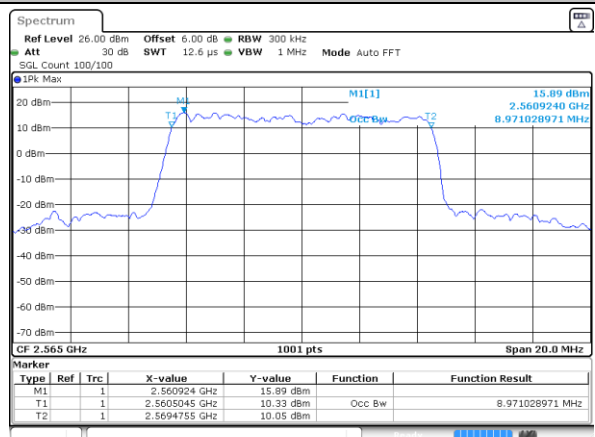
Date: 4 JAN 2020 21:16:29

Highest Channel / 10MHz / QPSK



Date: 4 JAN 2020 21:17:09

Highest Channel / 10MHz / 16QAM

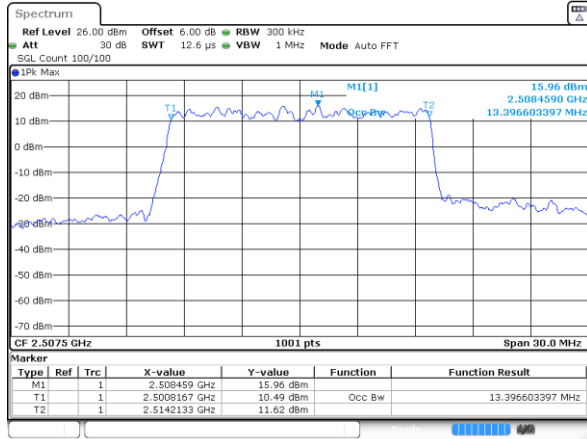


Date: 4 JAN 2020 21:17:29

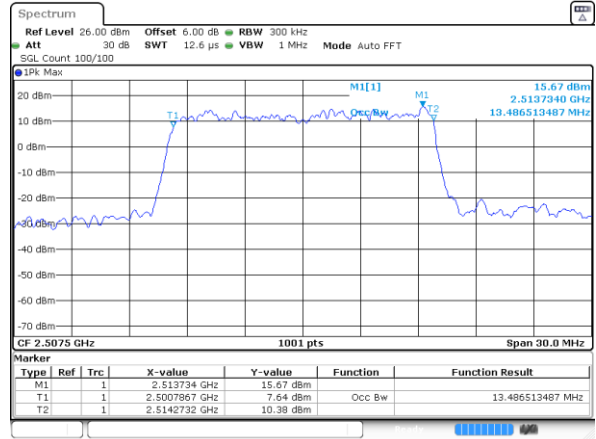


LTE Band 7

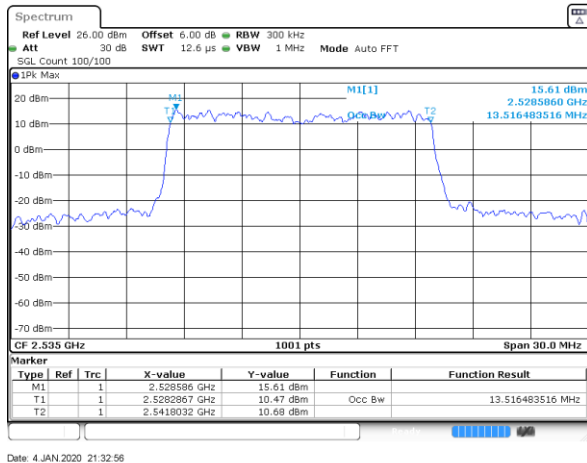
Lowest Channel / 15MHz / QPSK



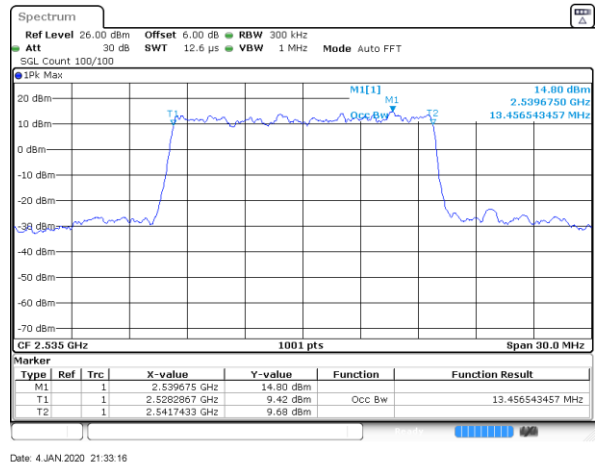
Lowest Channel / 15MHz / 16QAM



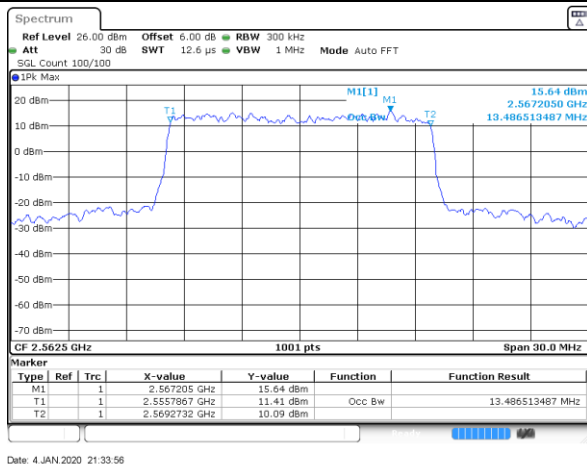
Middle Channel / 15MHz / QPSK



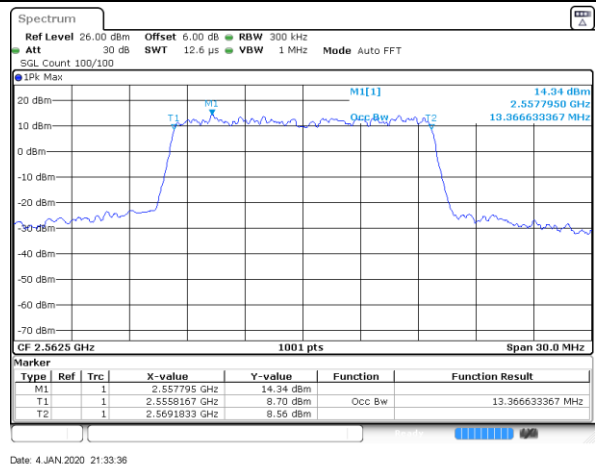
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



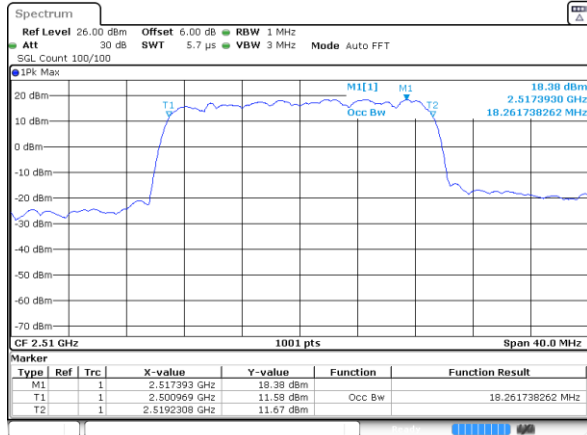
Highest Channel / 15MHz / 16QAM





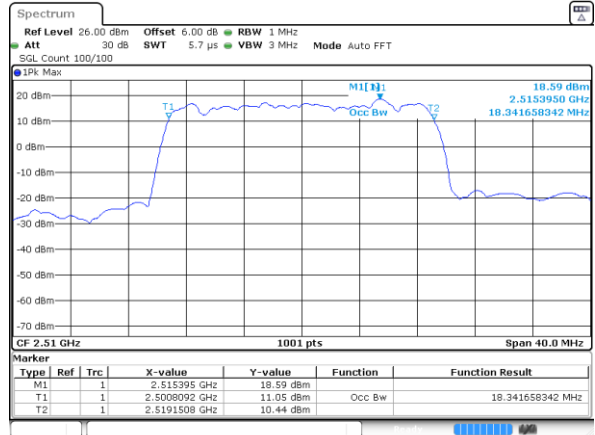
LTE Band 7

Lowest Channel / 20MHz / QPSK



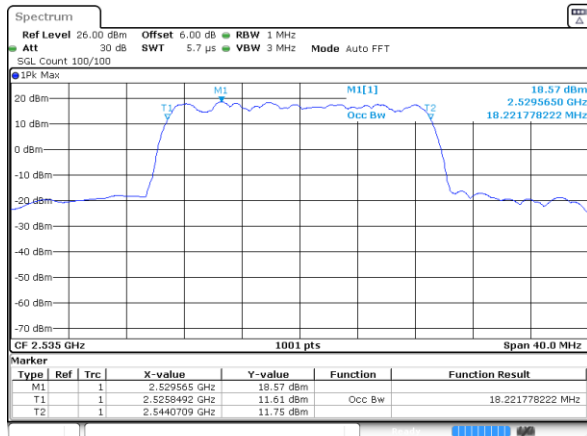
Date: 4 JAN 2020 21:49:04

Lowest Channel / 20MHz / 16QAM



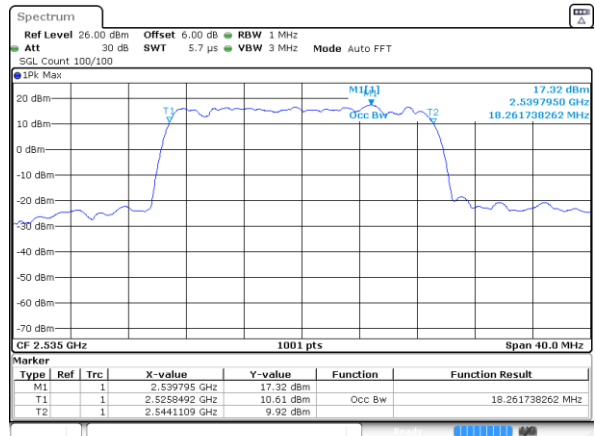
Date: 4 JAN 2020 21:48:44

Middle Channel / 20MHz / QPSK



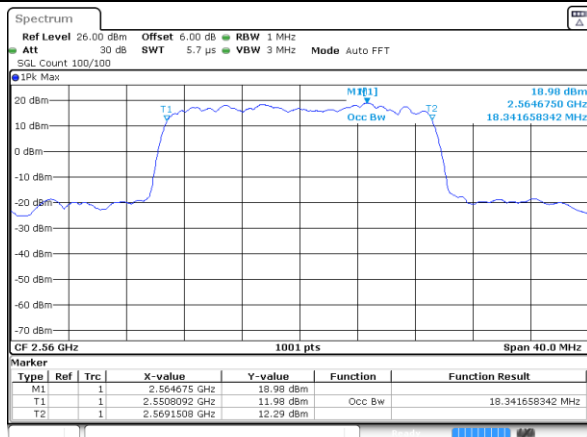
Date: 4 JAN 2020 21:49:24

Middle Channel / 20MHz / 16QAM



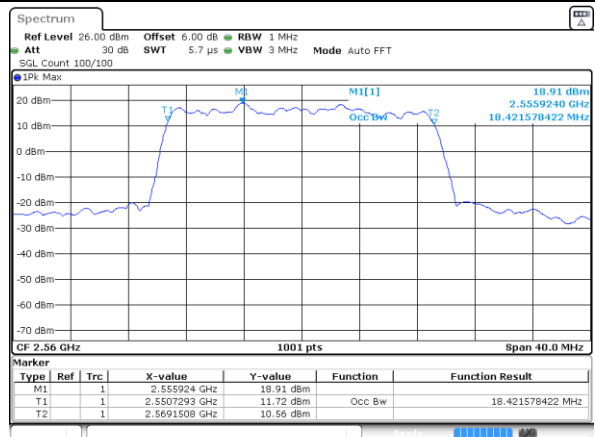
Date: 4 JAN 2020 21:49:44

Highest Channel / 20MHz / QPSK



Date: 4 JAN 2020 21:50:24

Highest Channel / 20MHz / 16QAM

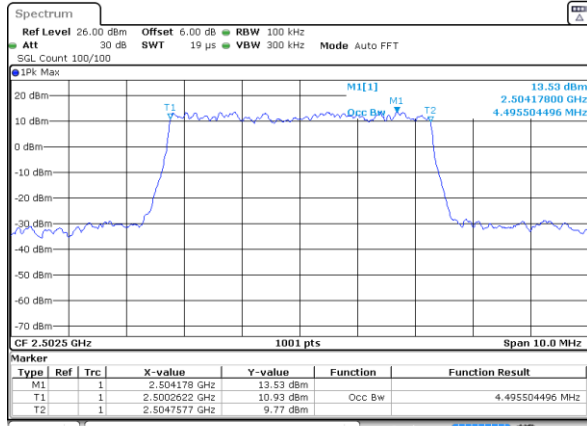


Date: 4 JAN 2020 21:50:04

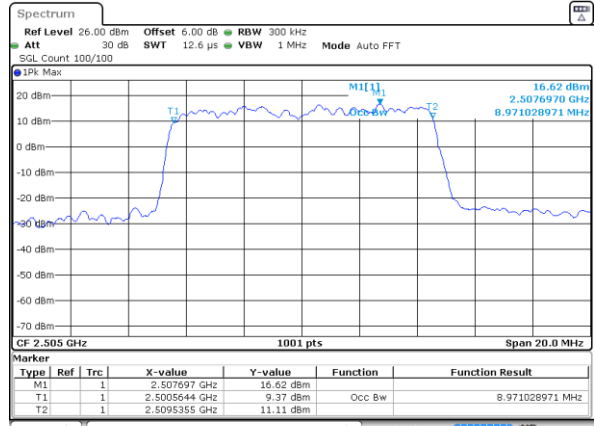


LTE Band 7

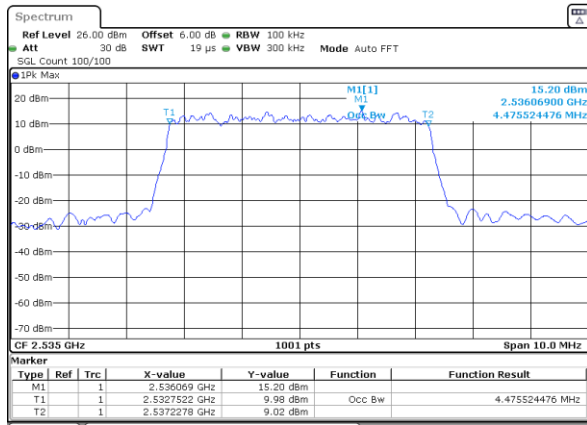
Lowest Channel / 5MHz / 64QAM



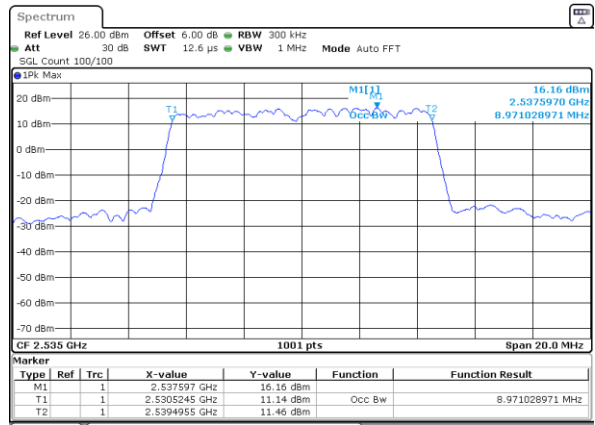
Lowest Channel / 10MHz / 64QAM



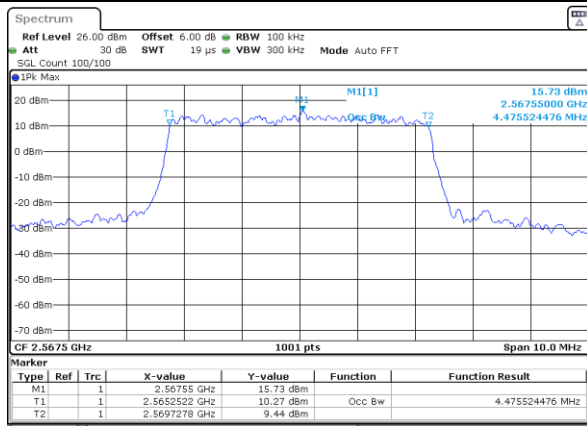
Middle Channel / 5MHz / 64QAM



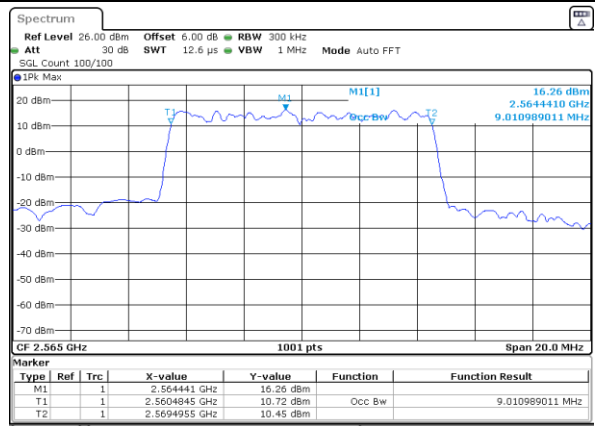
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



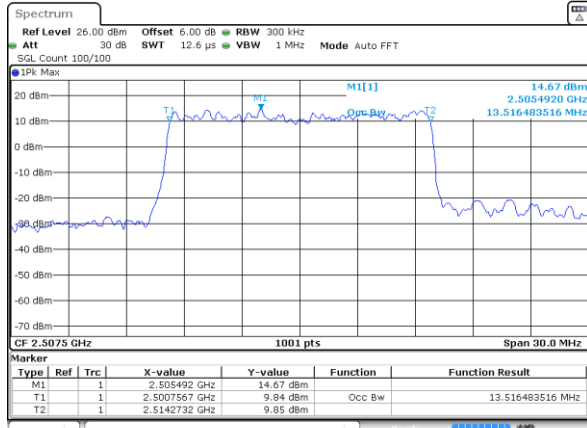
Highest Channel / 10MHz / 64QAM





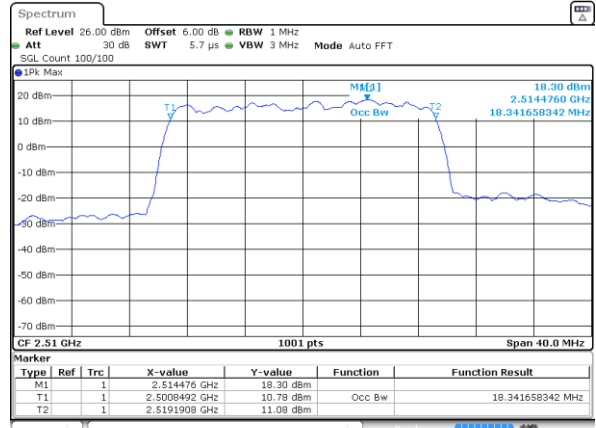
LTE Band 7

Lowest Channel / 15MHz / 64QAM



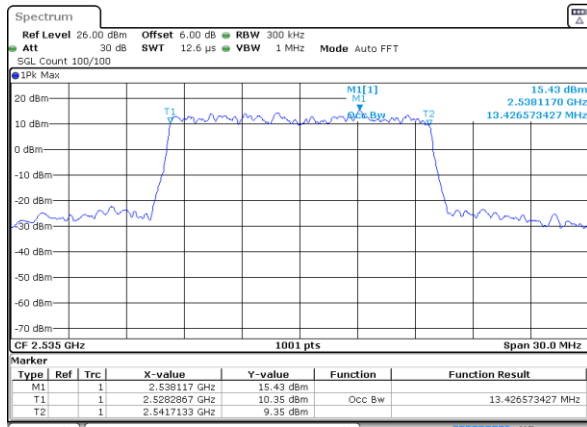
Date: 4 JAN 2020 22:21:40

Lowest Channel / 20MHz / 64QAM



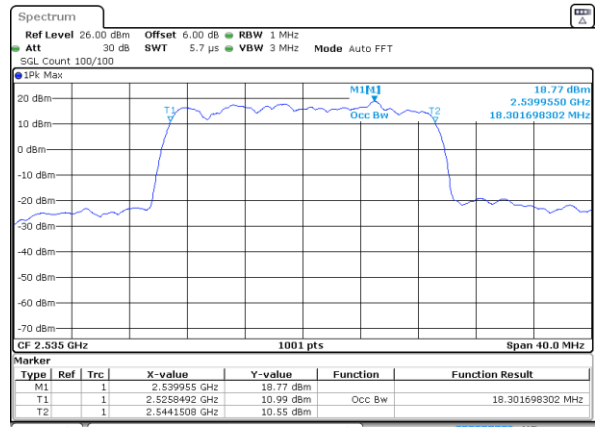
Date: 4 JAN 2020 22:29:54

Middle Channel / 15MHz / 64QAM



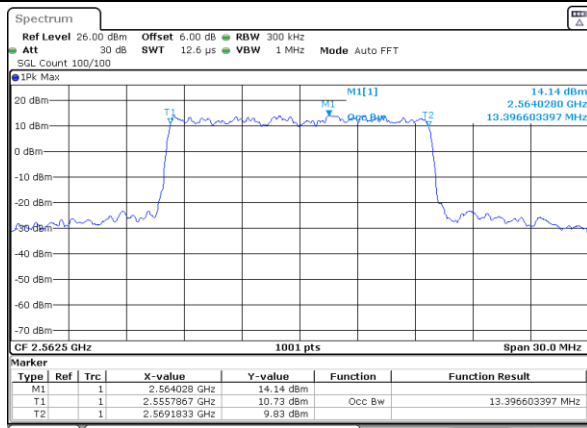
Date: 4 JAN 2020 22:21:50

Middle Channel / 20MHz / 64QAM



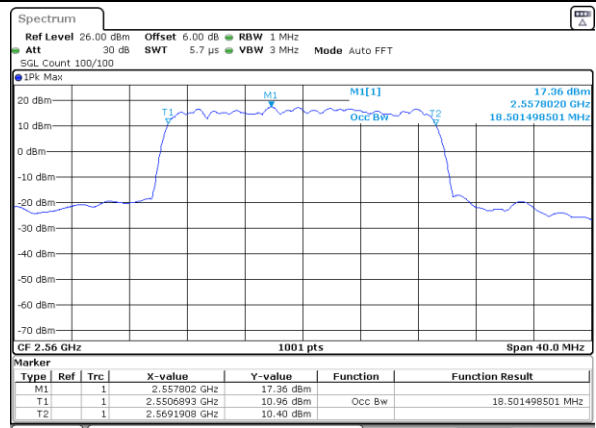
Date: 4 JAN 2020 22:30:04

Highest Channel / 15MHz / 64QAM



Date: 4 JAN 2020 22:22:00

Highest Channel / 20MHz / 64QAM



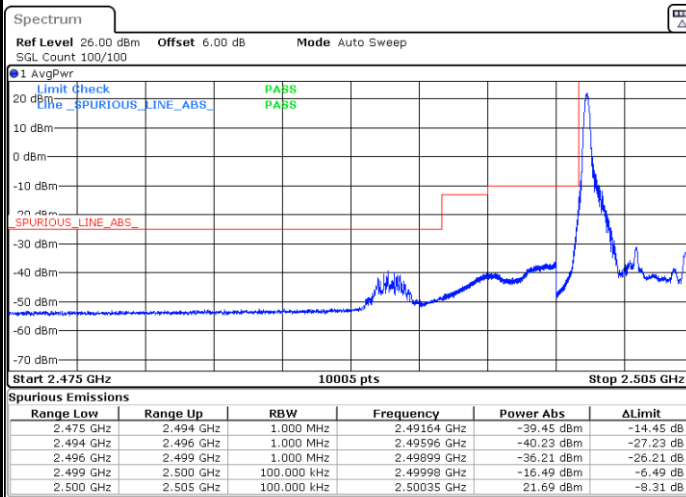
Date: 4 JAN 2020 22:30:14



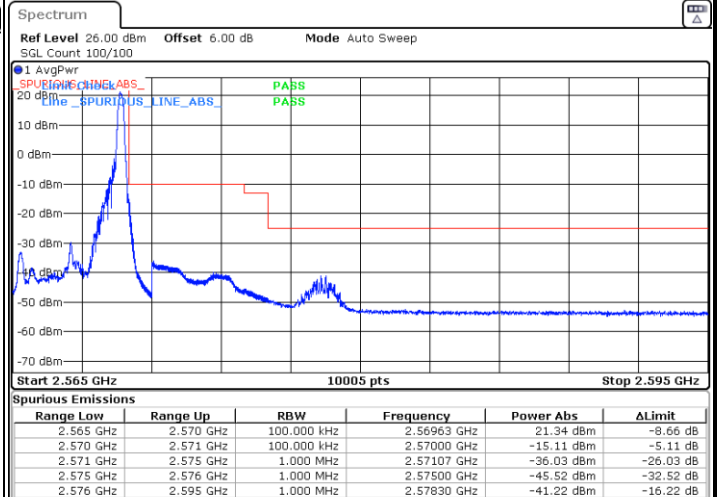
Conducted Band Edge

LTE Band 7 / 5MHz / QPSK

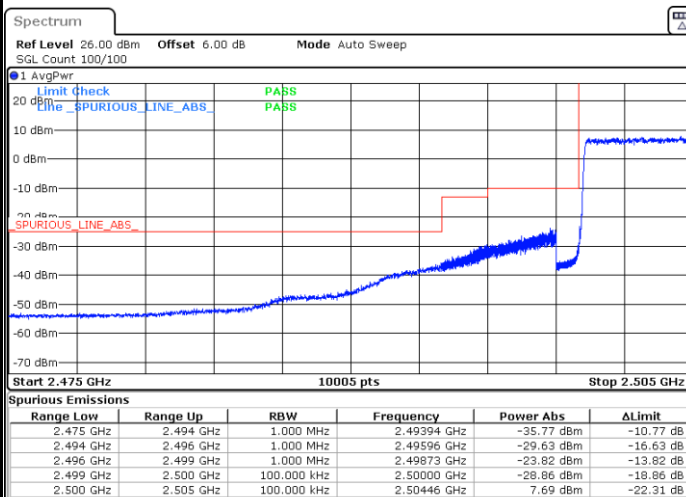
Lowest Band Edge / 1 RB



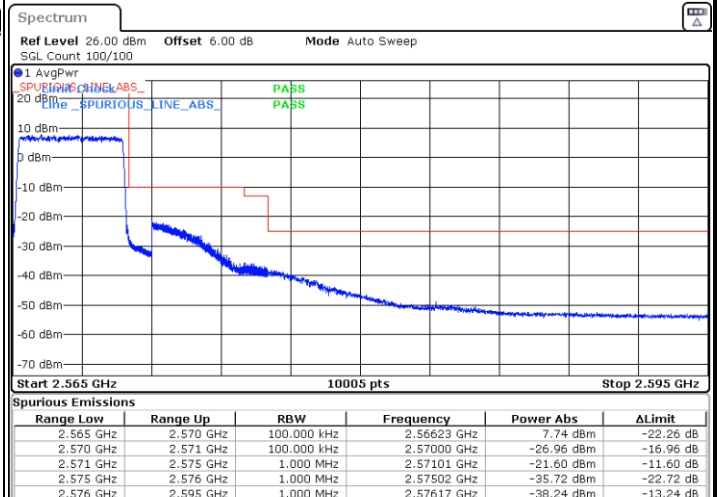
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



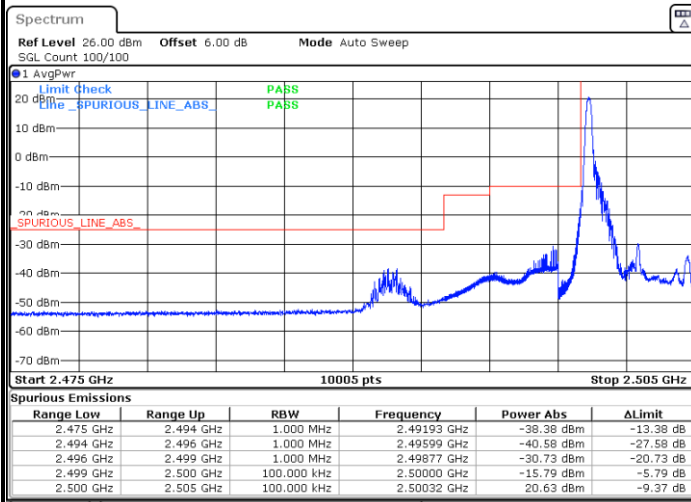
Highest Band Edge / Full RB



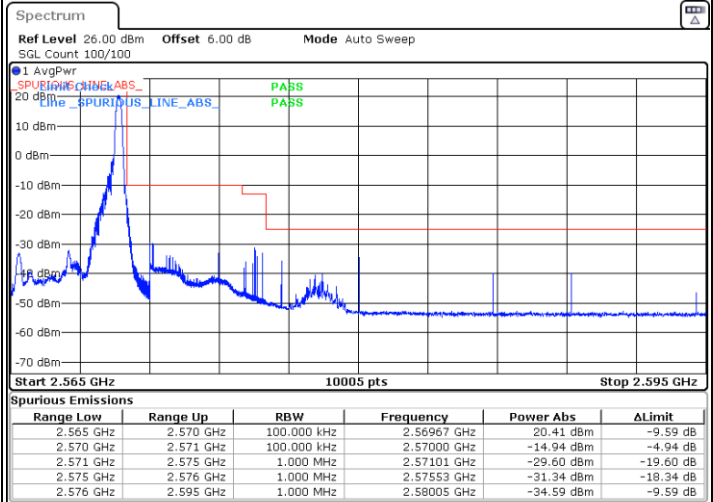


LTE Band 7 / 5MHz / 16QAM

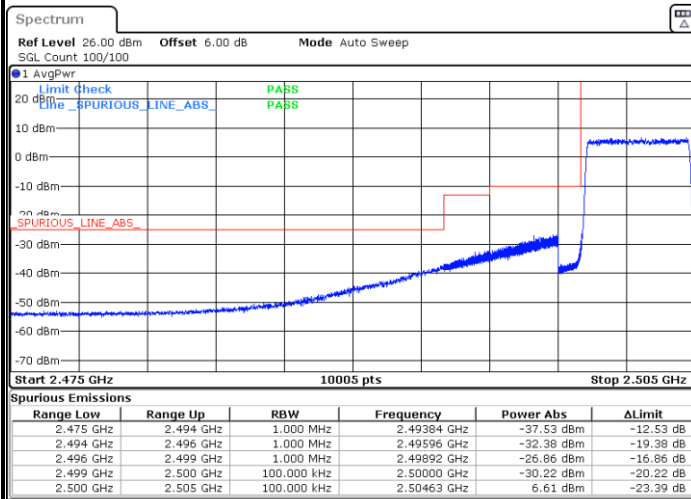
Lowest Band Edge / 1 RB



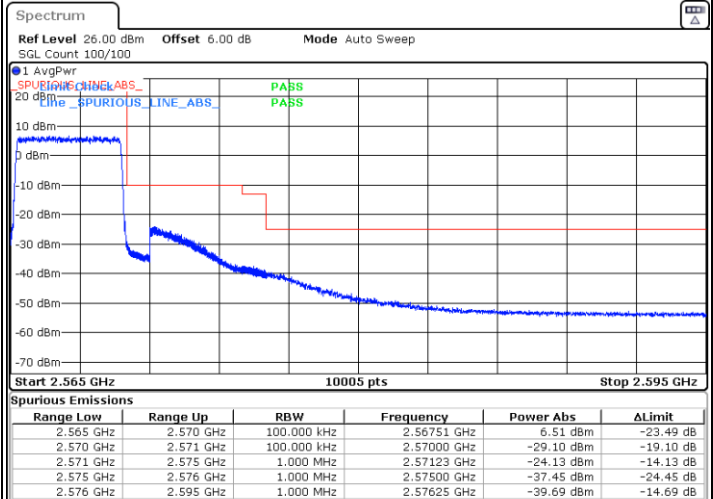
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



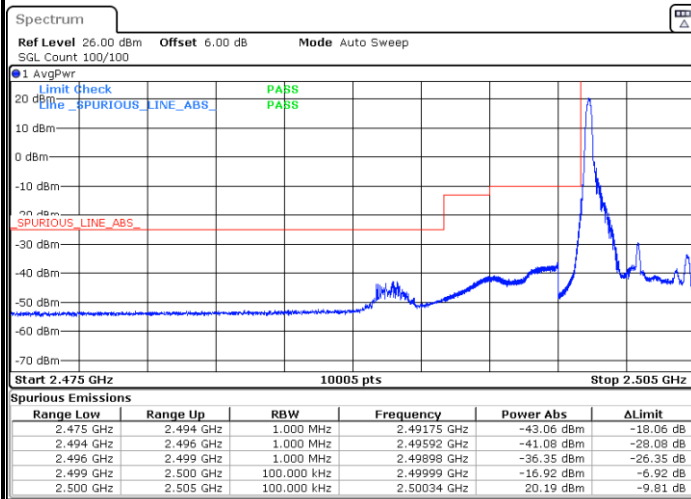
Highest Band Edge / Full RB



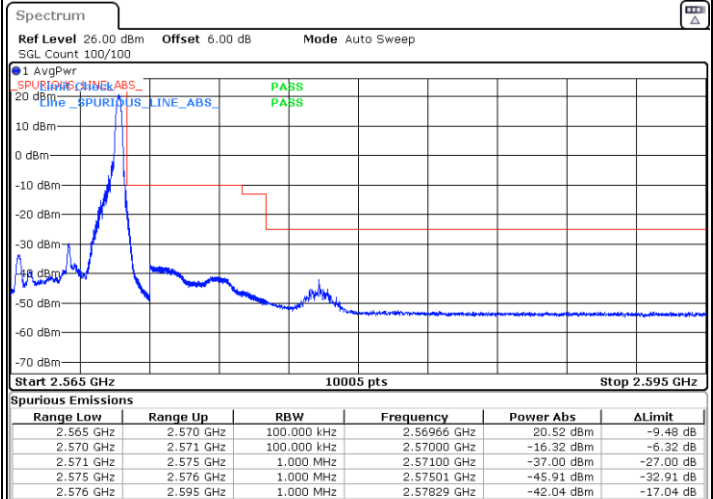


LTE Band 7 / 5MHz / 64QAM

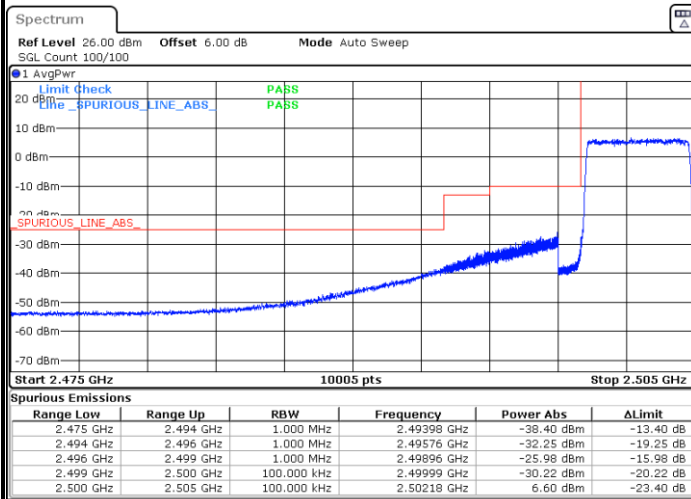
Lowest Band Edge / 1RB



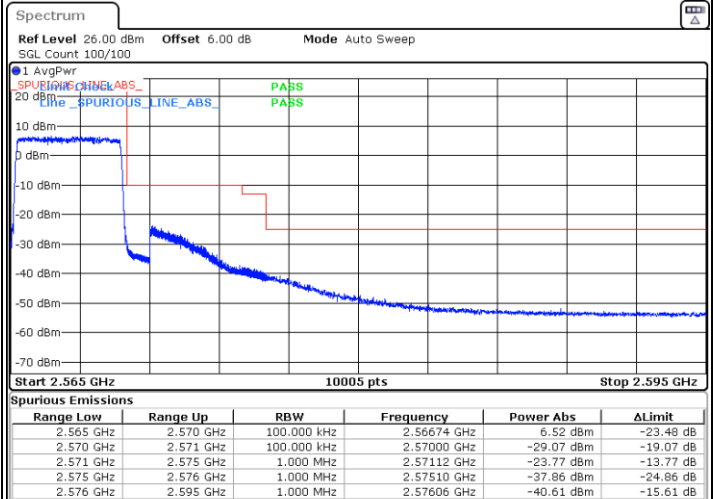
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



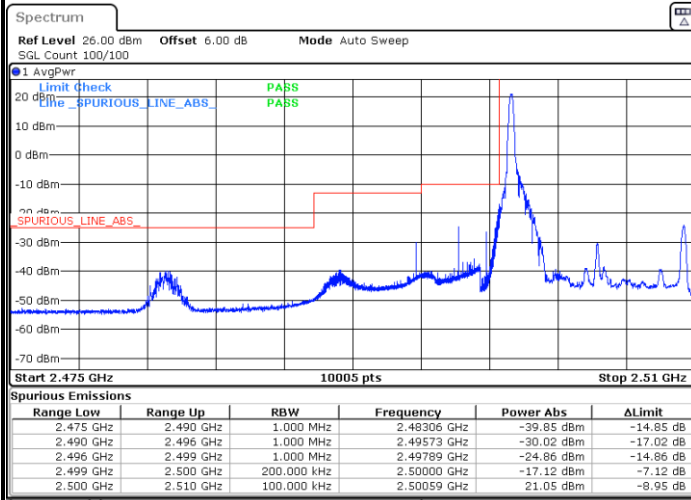
Highest Band Edge / Full RB



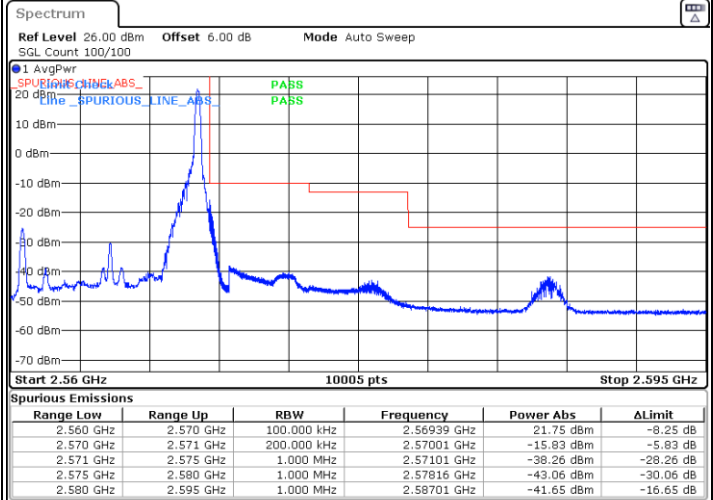


LTE Band 7 / 10MHz / QPSK

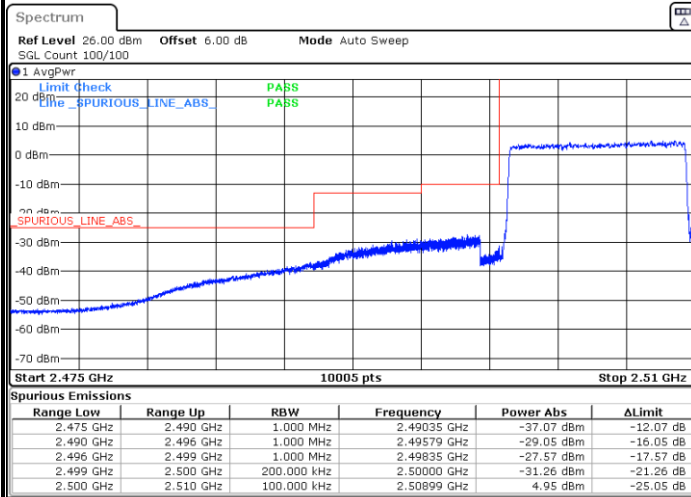
Lowest Band Edge / 1 RB



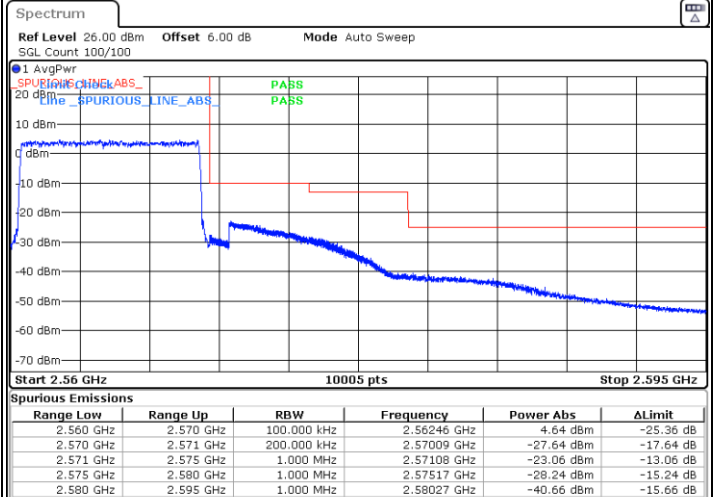
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



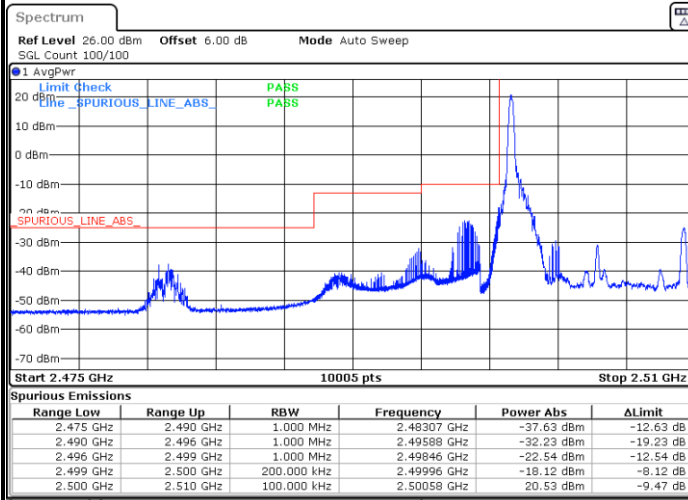
Highest Band Edge / Full RB



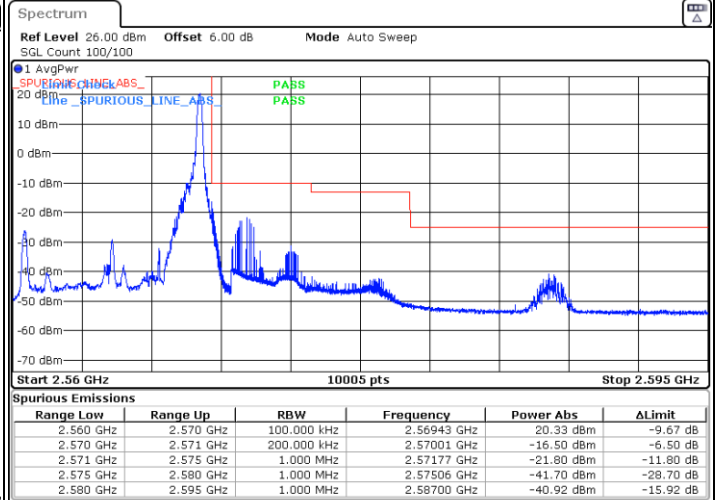


LTE Band 7 / 10MHz / 16QAM

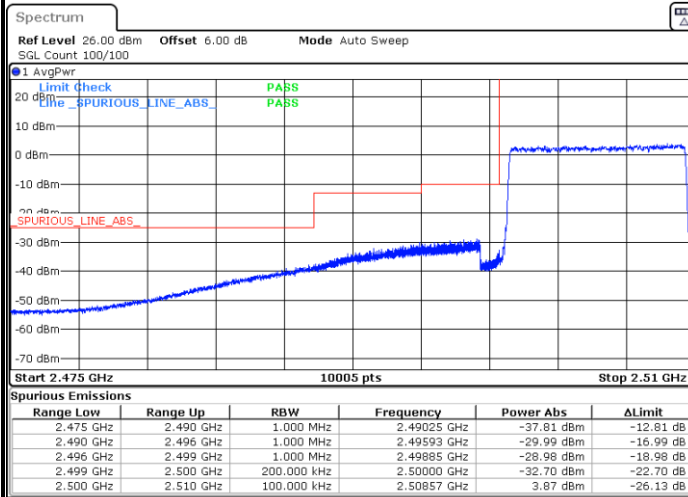
Lowest Band Edge / 1 RB



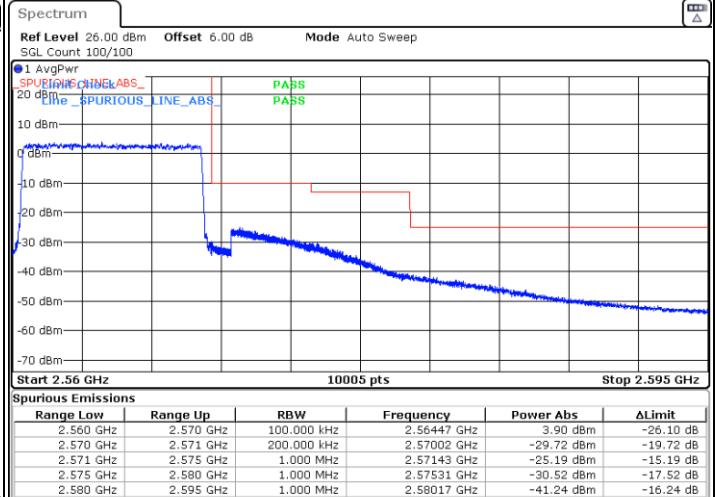
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



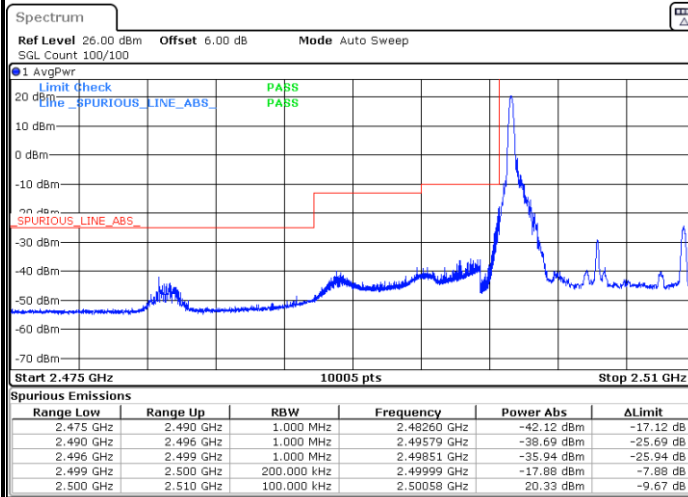
Highest Band Edge / Full RB



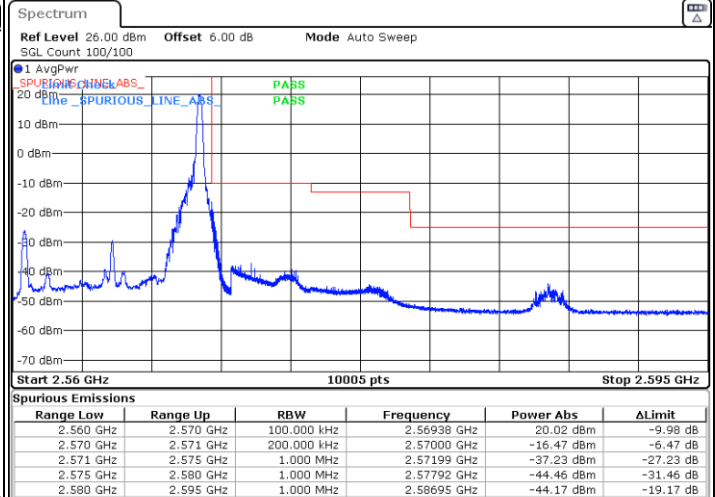


LTE Band 7 / 10MHz / 64QAM

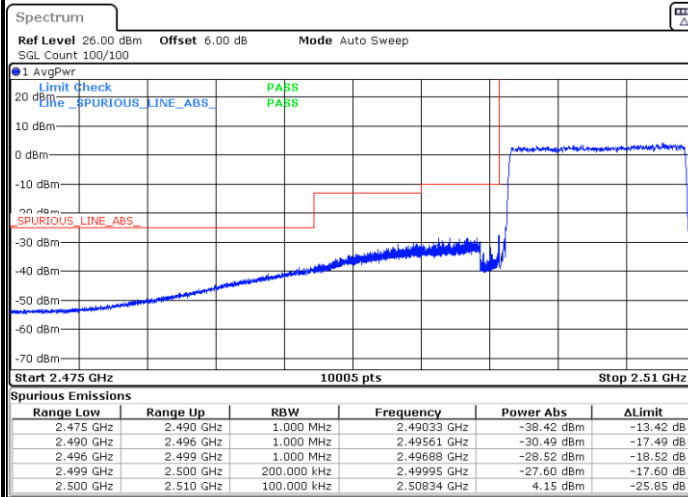
Lowest Band Edge / 1 RB



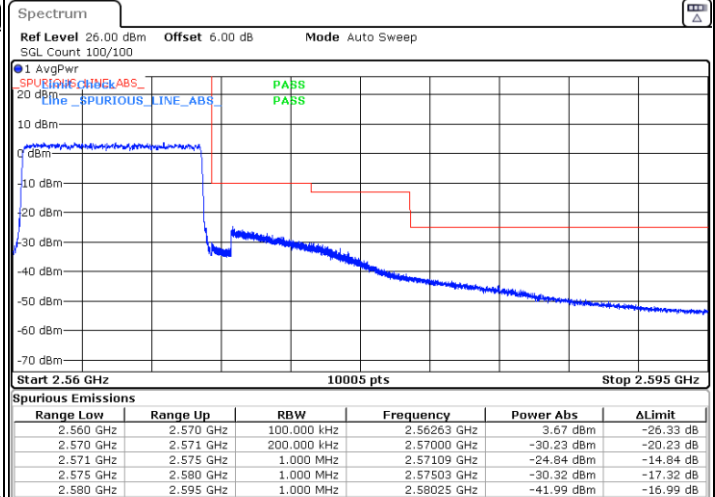
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



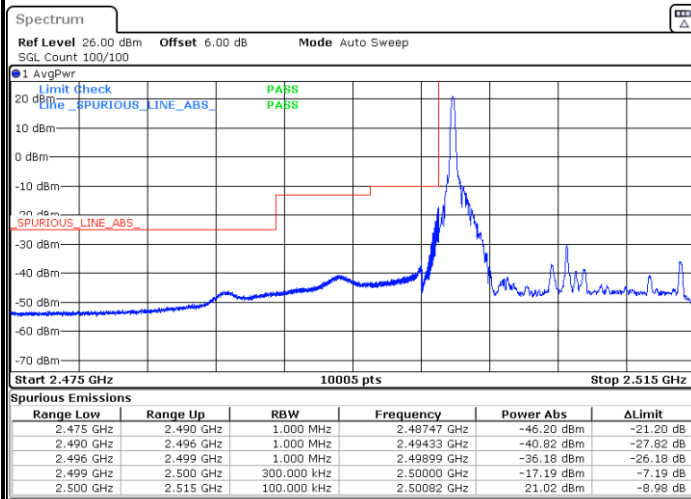
Highest Band Edge / Full RB



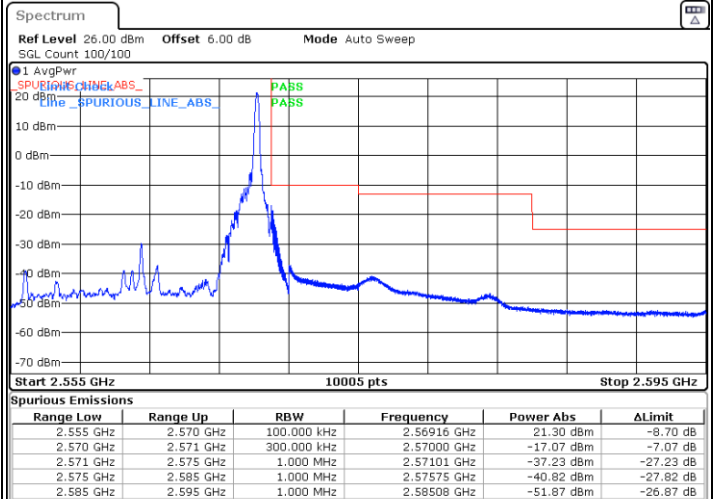


LTE Band 7 / 15MHz / QPSK

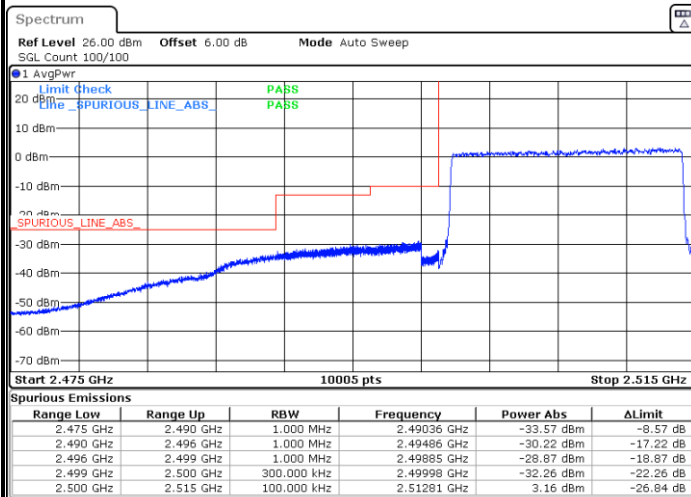
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

