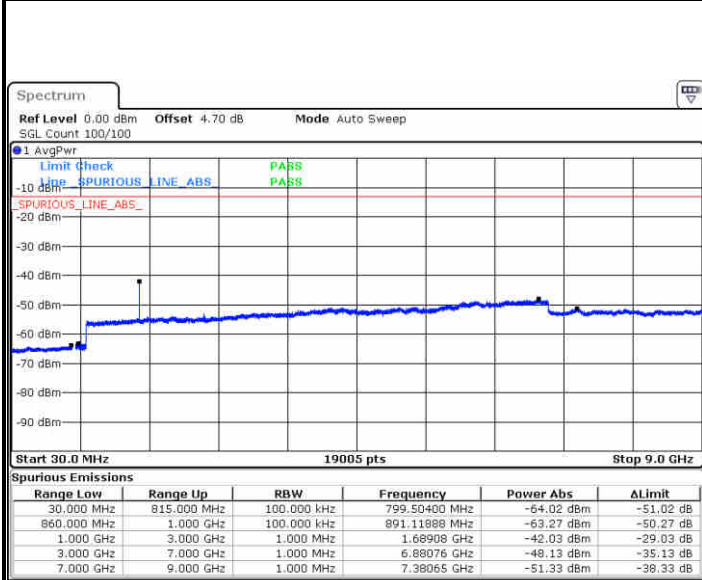




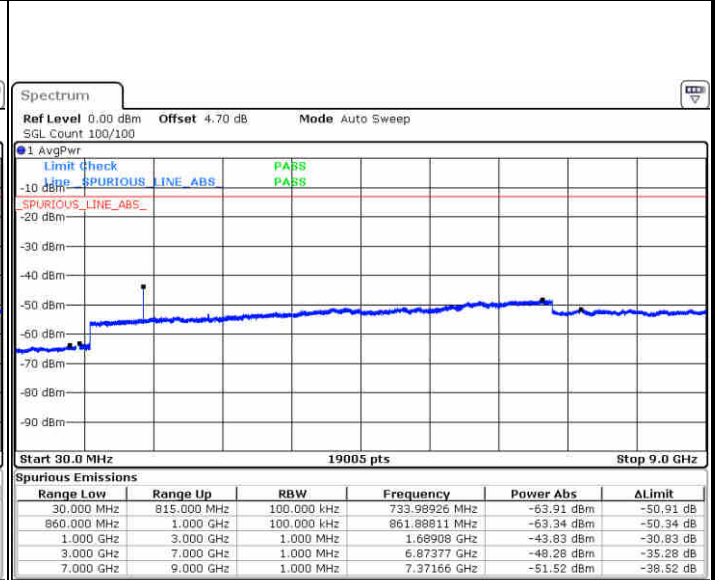
LTE Band 5 / 5MHz

Highest Channel / QPSK



Date: 4 FEB 2020 08:14:47

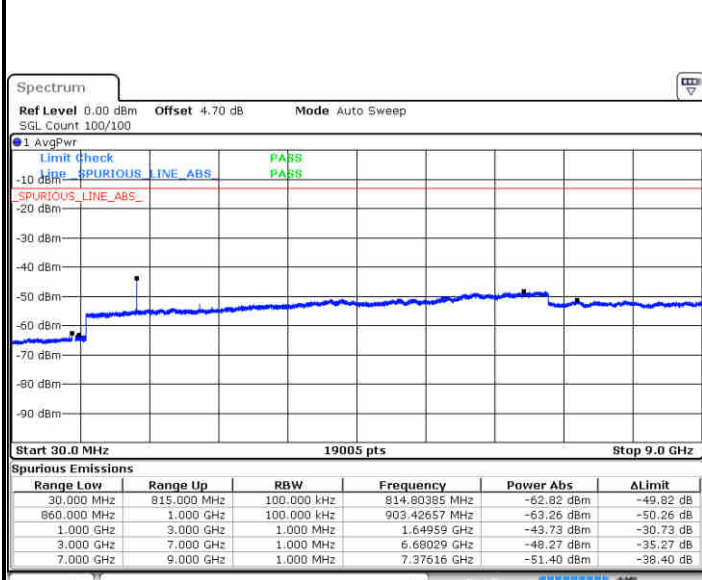
Highest Channel / 16QAM



Date: 4 FEB 2020 08:15:42

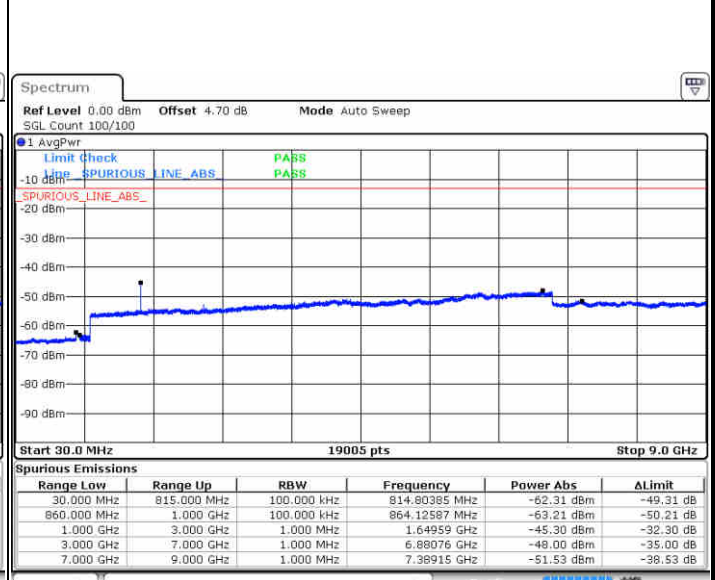
LTE Band 5 / 10MHz

Lowest Channel / QPSK



Date: 4 FEB 2020 08:23:47

Lowest Channel / 16QAM



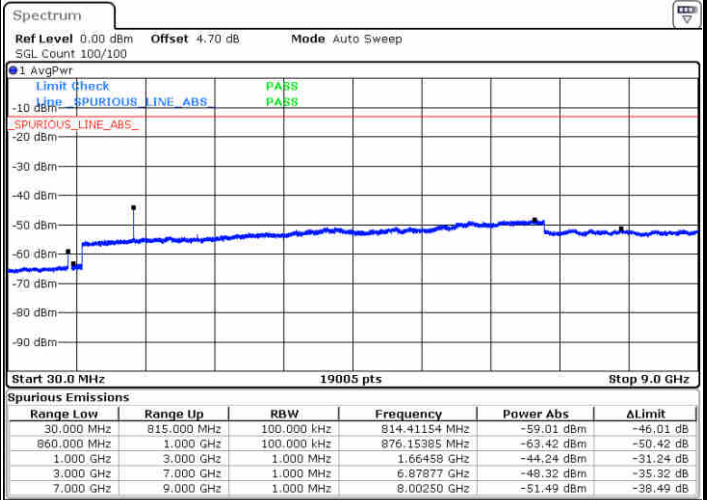
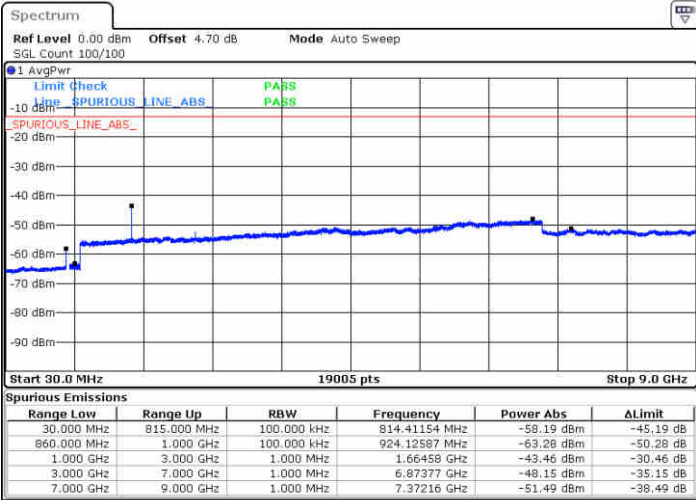
Date: 4 FEB 2020 08:24:42



LTE Band 5 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

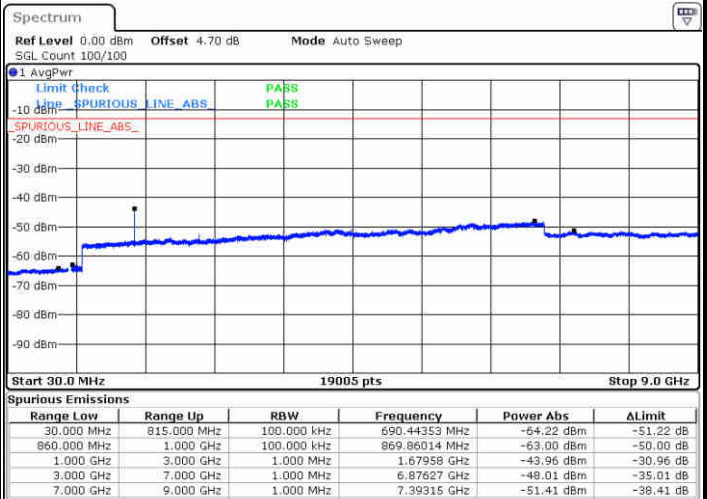
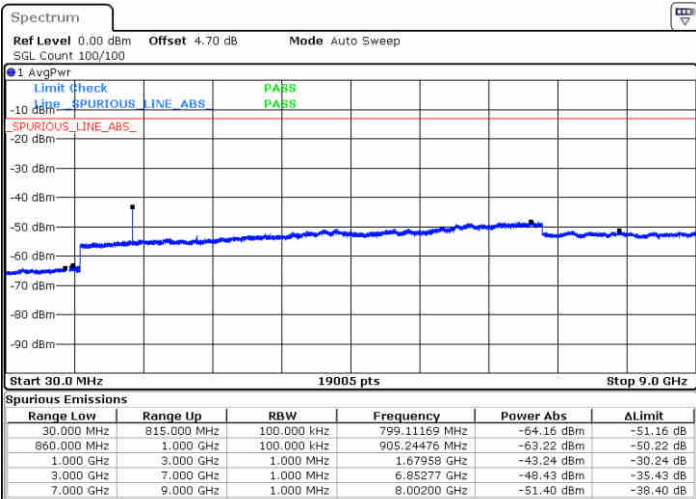


Date: 4 FEB 2020 08:26:17

Date: 4 FEB 2020 08:27:11

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 4 FEB 2020 08:35:17

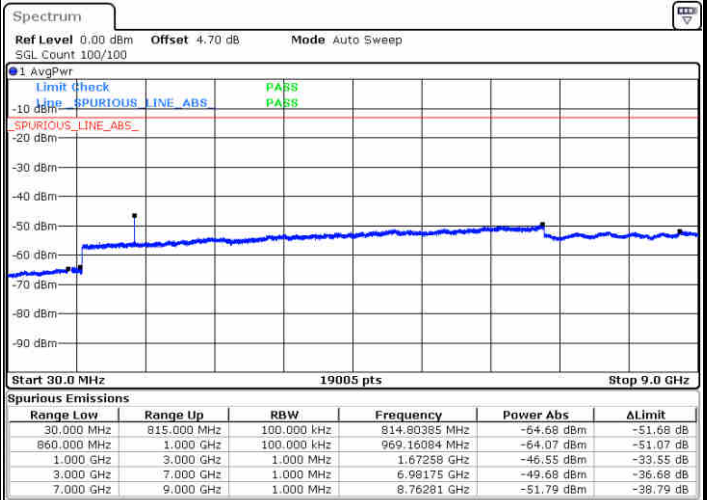
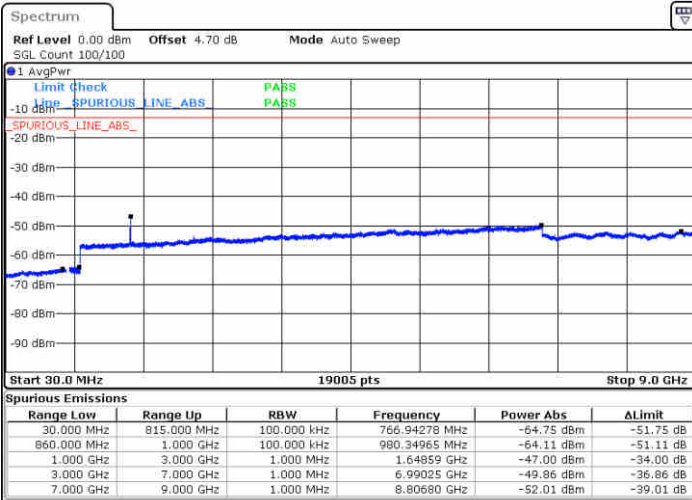
Date: 4 FEB 2020 08:36:11



LTE Band 5 / 1.4MHz

Lowest Channel / 64QAM

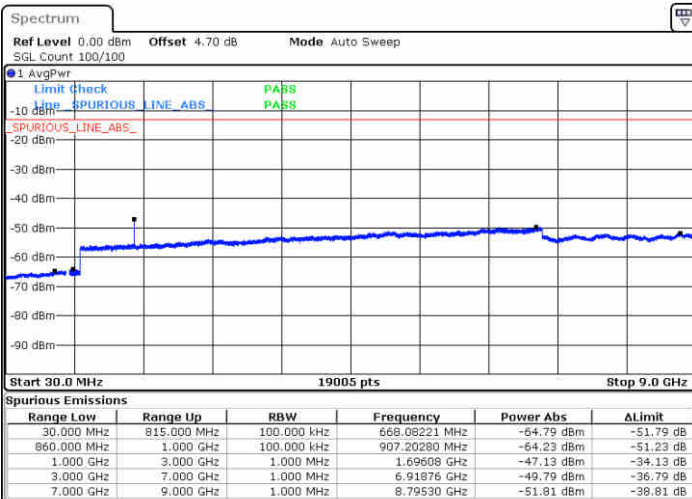
Middle Channel / 64QAM



Date: 10 MAR 2020 18:43:37

Date: 10 MAR 2020 18:44:31

Highest Channel / 64QAM

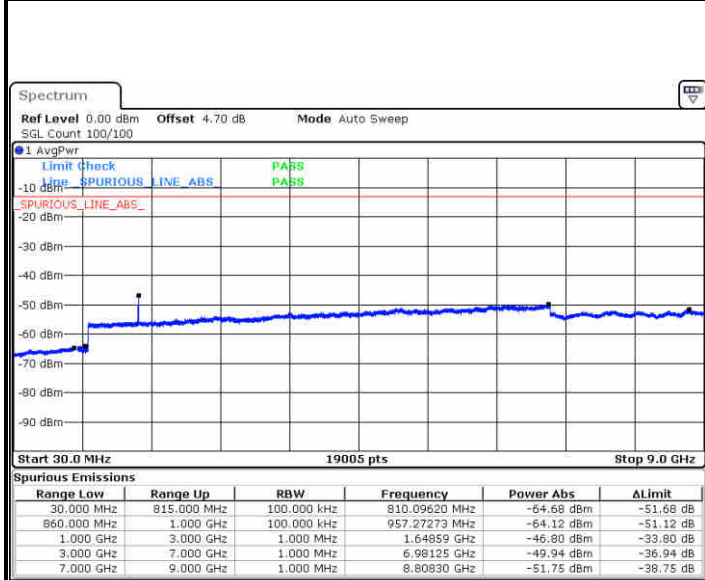


Date: 10 MAR 2020 18:49:20



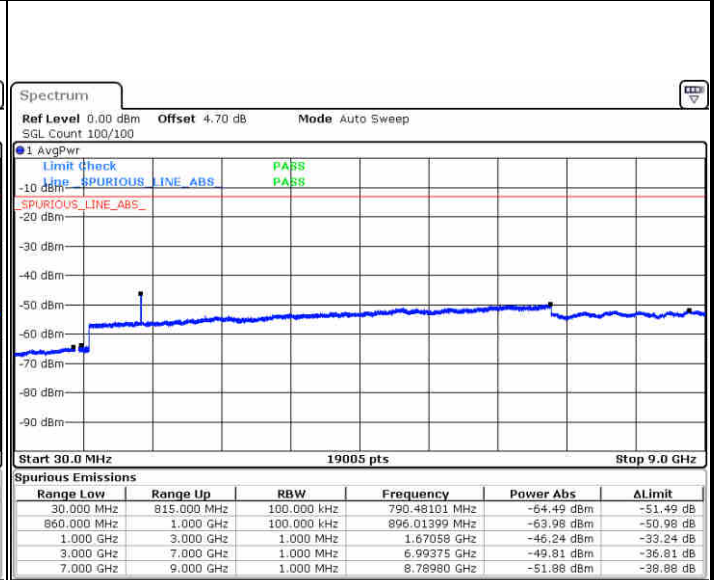
**LTE Band 5 / 3MHz**

**Lowest Channel / 64QAM**



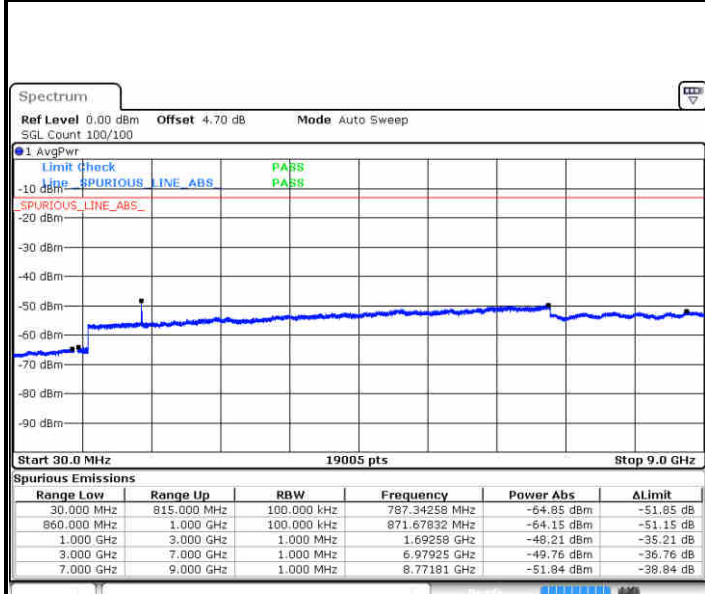
Date: 10 MAR 2020 18:53:49

**Middle Channel / 64QAM**



Date: 10 MAR 2020 18:54:44

**Highest Channel / 64QAM**



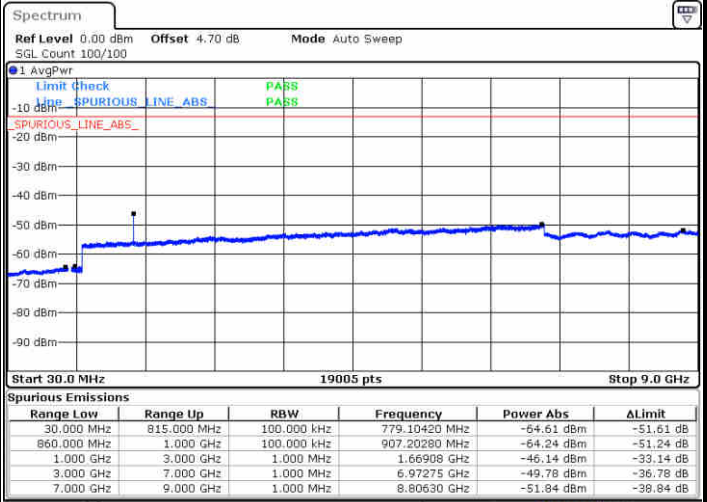
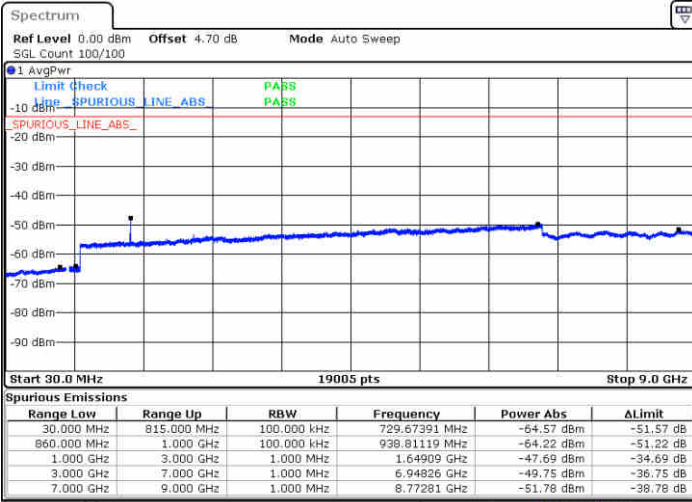
Date: 10 MAR 2020 18:59:33



LTE Band 5 / 5MHz

Lowest Channel / 64QAM

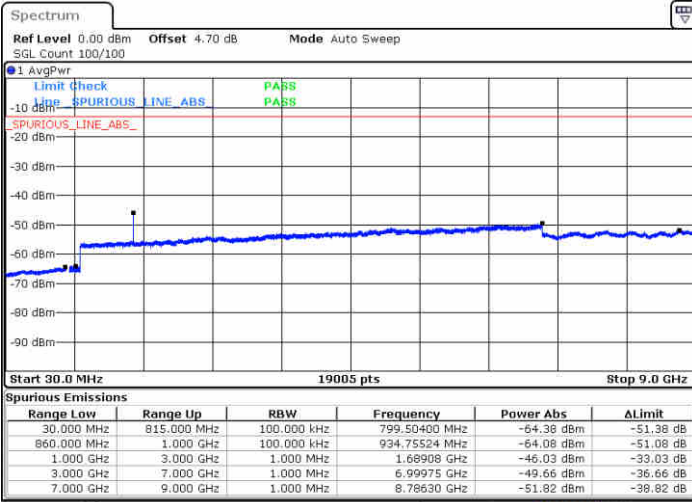
Middle Channel / 64QAM



Date: 10 MAR 2020 19:04:02

Date: 10 MAR 2020 19:04:56

Highest Channel / 64QAM



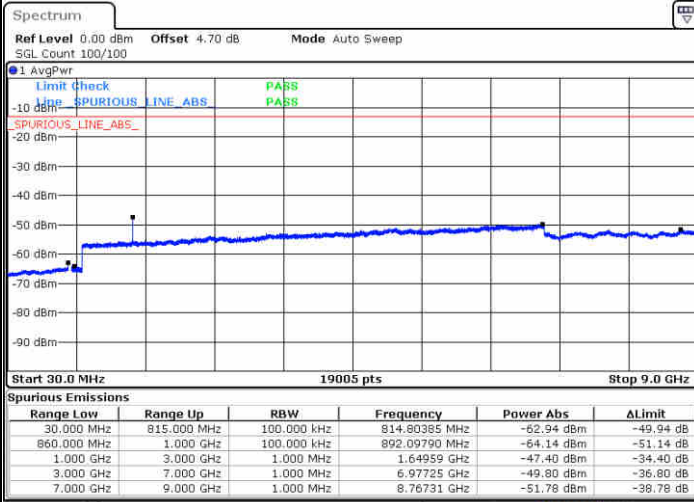
Date: 10 MAR 2020 19:09:45



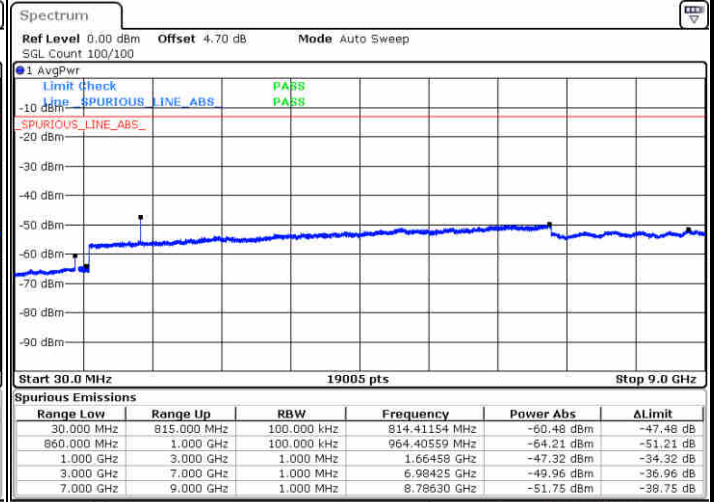
LTE Band 5 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

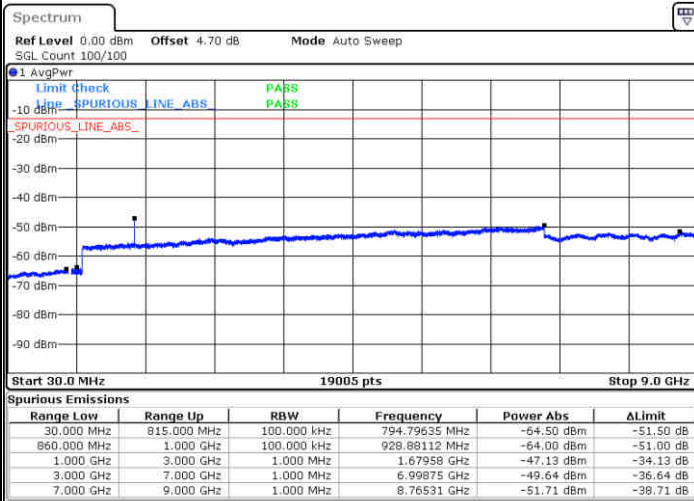


Date: 10 MAR 2020 19:14:14



Date: 10 MAR 2020 19:15:09

Highest Channel / 64QAM



Date: 10 MAR 2020 19:19:58



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	0.0010	PASS
40	Normal Voltage	0.0000	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0038	
0	Normal Voltage	0.0035	
-10	Normal Voltage	0.0033	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0008	
20	Maximum Voltage	0.0033	
20	Normal Voltage	0.0042	
20	Battery End Point	0.0006	

Note: Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 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	4.61	5.45	5.57	6.17	PASS
Middle CH	4.81	5.13	6.61	5.97	
Highest CH	4.78	5.25	6.00	6.12	
Mode	LTE Band 7 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.17	6.29	-	-	PASS
Middle CH	6.17	6.26	-	-	
Highest CH	6.64	6.29	-	-	





LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



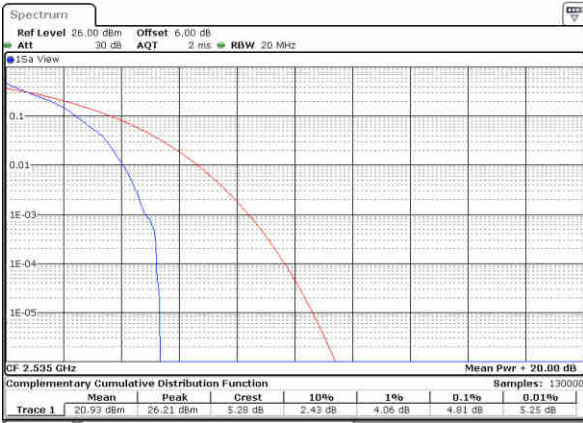
Date: 5 FEB 2020 00:14:49

Lowest Channel / Full RB



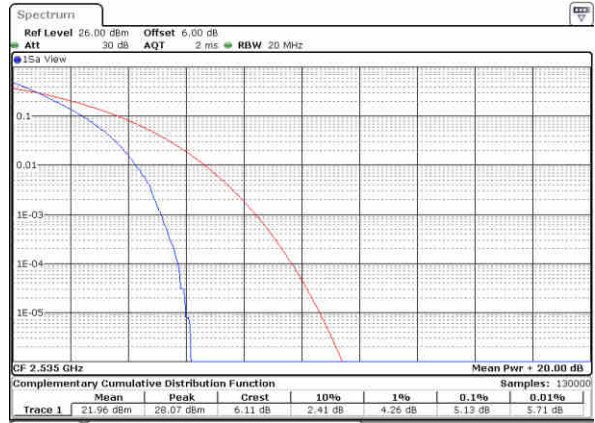
Date: 5 FEB 2020 00:14:58

Middle Channel / 1RB



Date: 5 FEB 2020 00:15:36

Middle Channel / Full RB



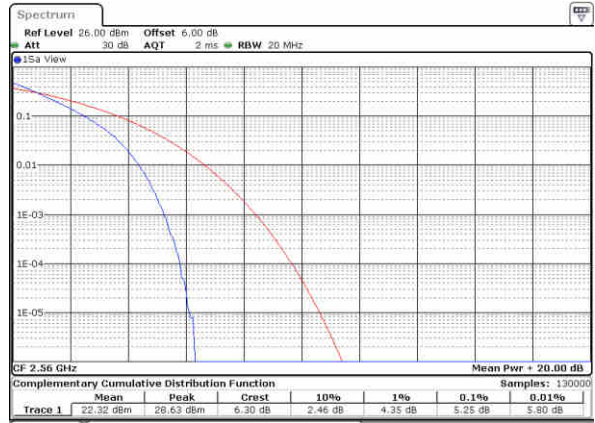
Date: 5 FEB 2020 00:15:27

Highest Channel / 1RB



Date: 5 FEB 2020 00:16:03

Highest Channel / Full RB



Date: 5 FEB 2020 00:16:12



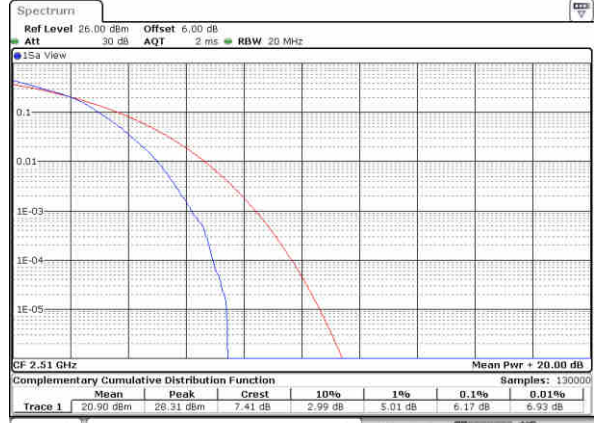
LTE Band 7 / 20MHz / 16QAM

Lowest Channel / 1RB



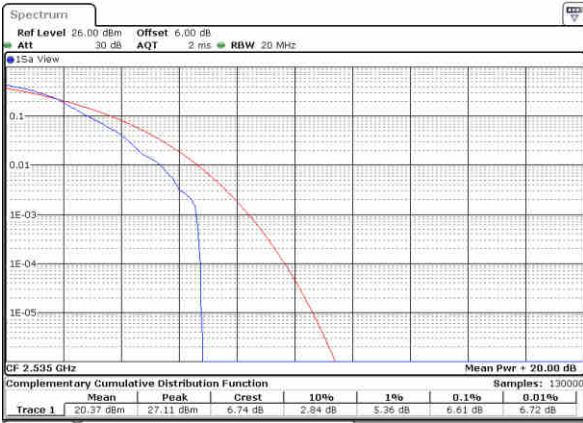
Date: 5 FEB 2020 00:14:40

Lowest Channel / Full RB



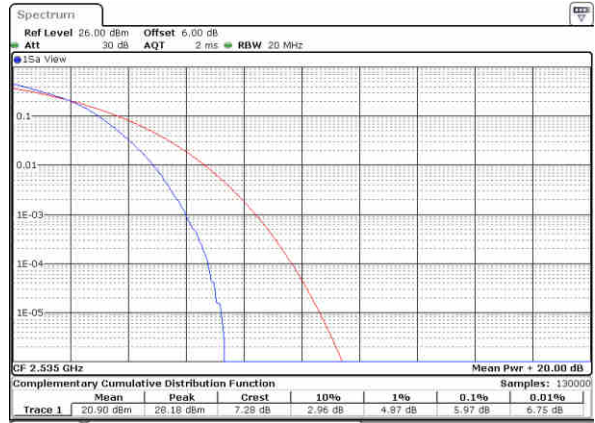
Date: 5 FEB 2020 00:15:07

Middle Channel / 1RB



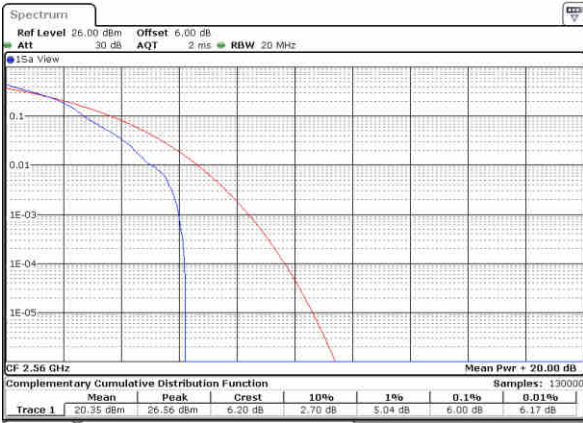
Date: 5 FEB 2020 00:15:45

Middle Channel / Full RB



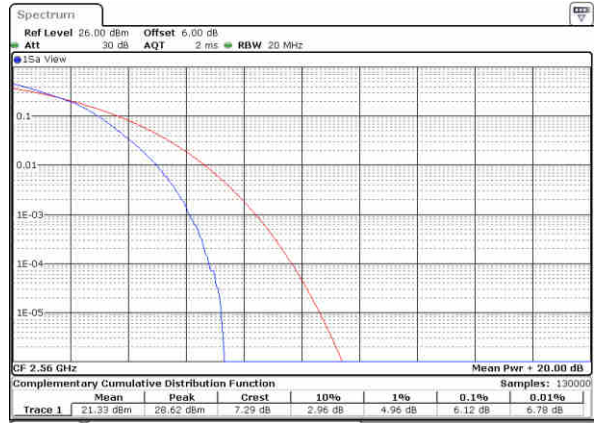
Date: 5 FEB 2020 00:15:17

Highest Channel / 1RB



Date: 5 FEB 2020 00:15:54

Highest Channel / Full RB

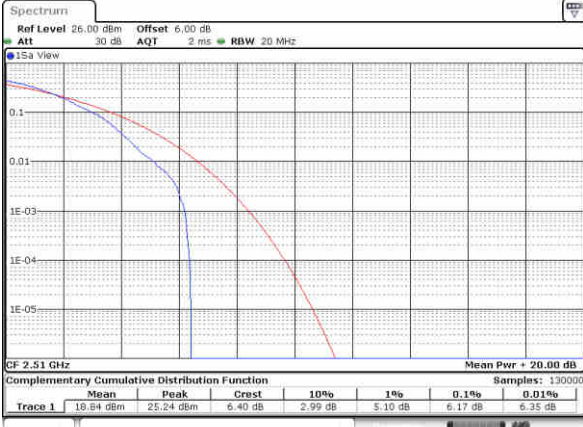


Date: 5 FEB 2020 00:16:21



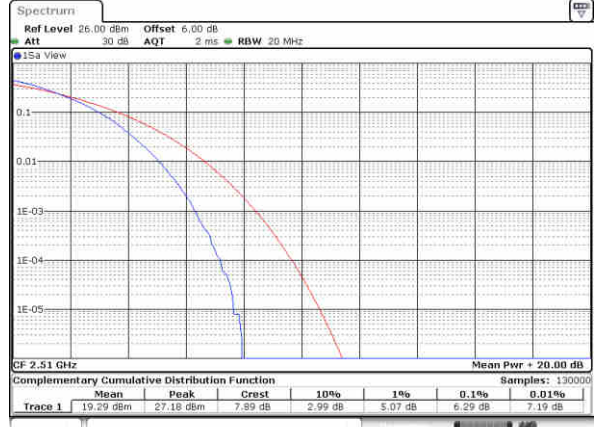
LTE Band 7 / 20MHz / 64QAM

Lowest Channel / 1RB



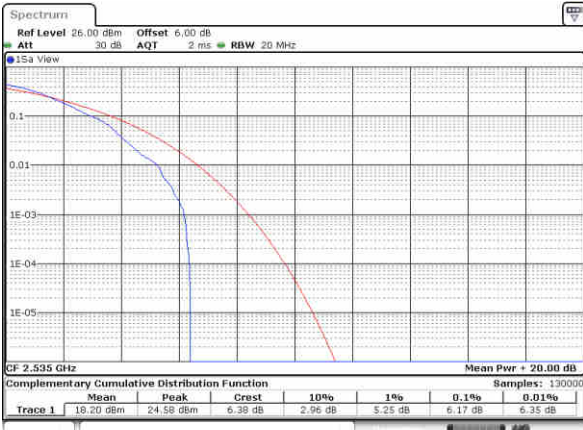
Date: 10 MAR 2020 22:25:45

Lowest Channel / Full RB



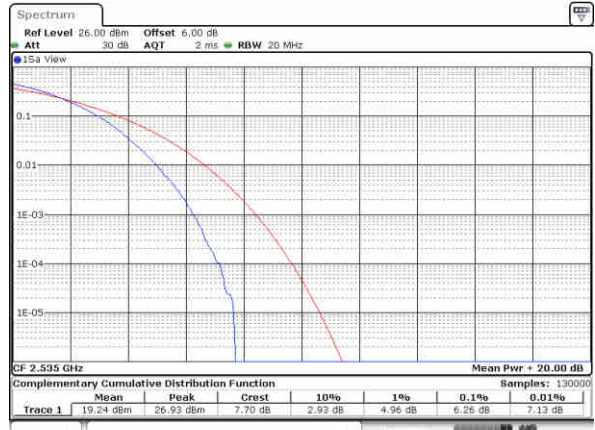
Date: 10 MAR 2020 22:25:54

Middle Channel / 1RB



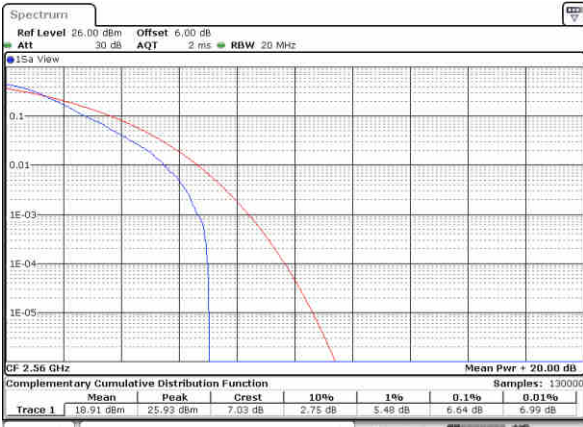
Date: 10 MAR 2020 22:26:12

Middle Channel / Full RB



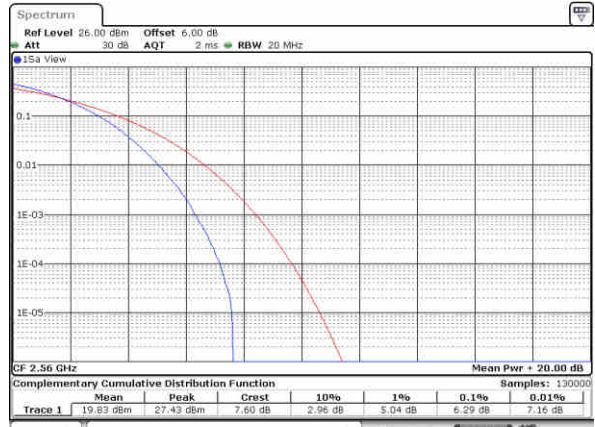
Date: 10 MAR 2020 22:26:03

Highest Channel / 1RB



Date: 10 MAR 2020 22:26:21

Highest Channel / Full RB



Date: 10 MAR 2020 22:26:30



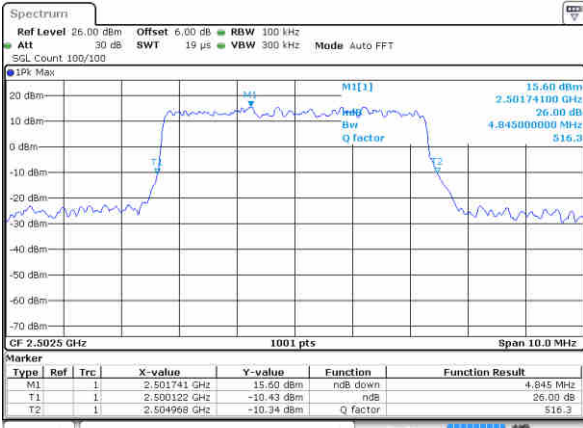
26dB Bandwidth

Mode	LTE Band 7 : 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	-	-	-	-	4.85	5.09	9.61	10.21	14.60	15.23	20.38	20.70
Middle CH	-	-	-	-	5.18	5.00	9.79	9.65	14.87	14.60	20.26	20.14
Highest CH	-	-	-	-	5.06	4.92	9.79	9.61	14.69	15.05	20.26	20.42
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	5.07	-	9.87	-	14.66	-	20.14	-
Middle CH	-	-	-	-	5.18	-	9.87	-	14.81	-	20.18	-
Highest CH	-	-	-	-	5.04	-	9.89	-	14.69	-	20.26	-



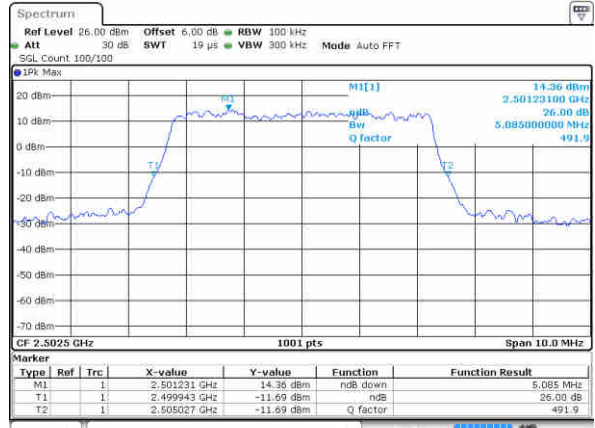
LTE Band 7

Lowest Channel / 5MHz / QPSK



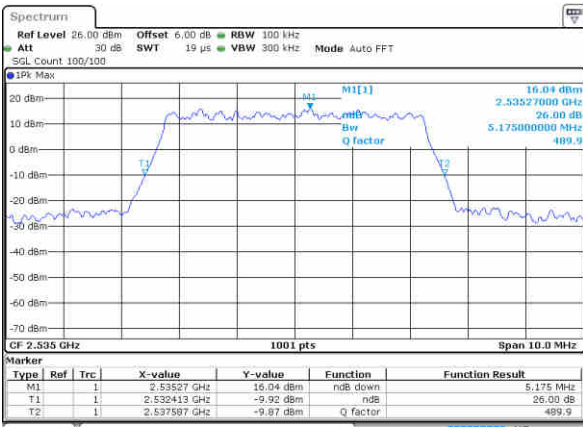
Date: 4 FEB 2020 23:08:44

Lowest Channel / 5MHz / 16QAM



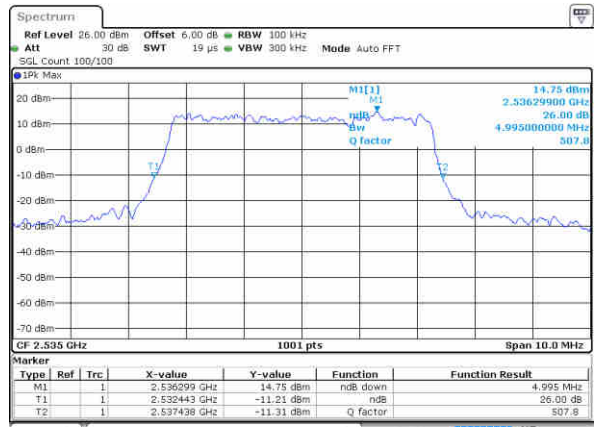
Date: 4 FEB 2020 23:09:04

Middle Channel / 5MHz / QPSK



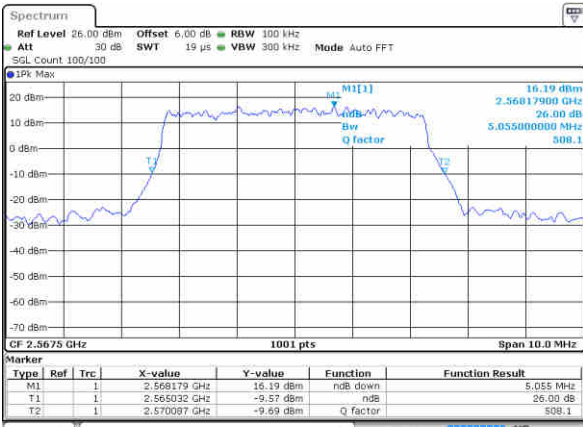
Date: 4 FEB 2020 23:09:44

Middle Channel / 5MHz / 16QAM



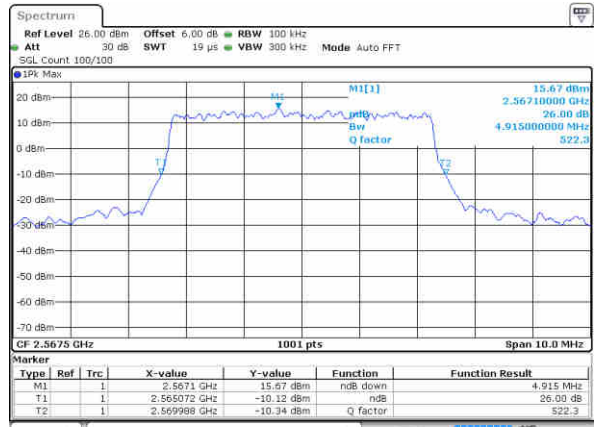
Date: 4 FEB 2020 23:09:24

Highest Channel / 5MHz / QPSK



Date: 4 FEB 2020 23:10:04

Highest Channel / 5MHz / 16QAM

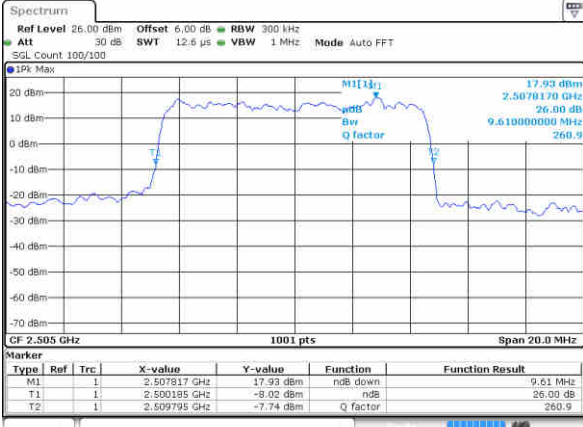


Date: 4 FEB 2020 23:10:24



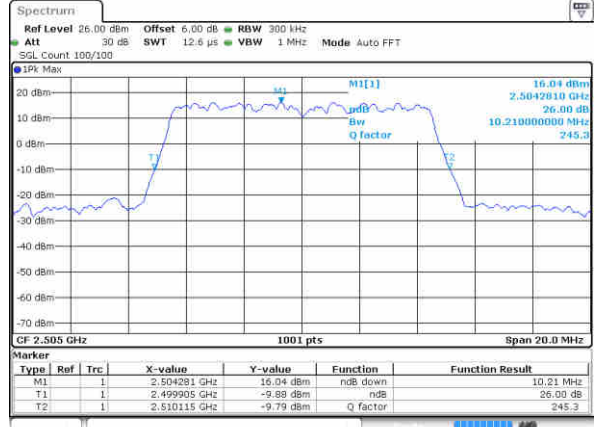
LTE Band 7

Lowest Channel / 10MHz / QPSK



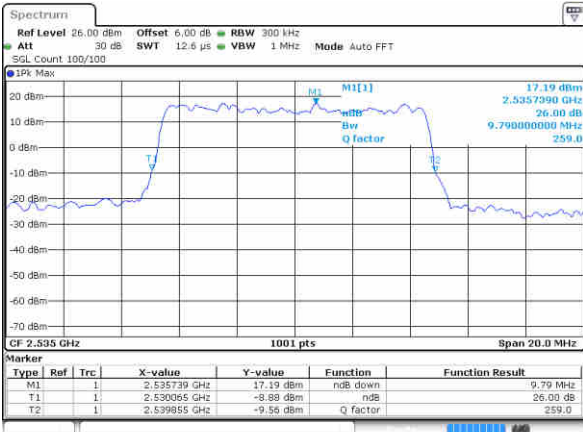
Date: 4 FEB 2020 23:25:15

Lowest Channel / 10MHz / 16QAM



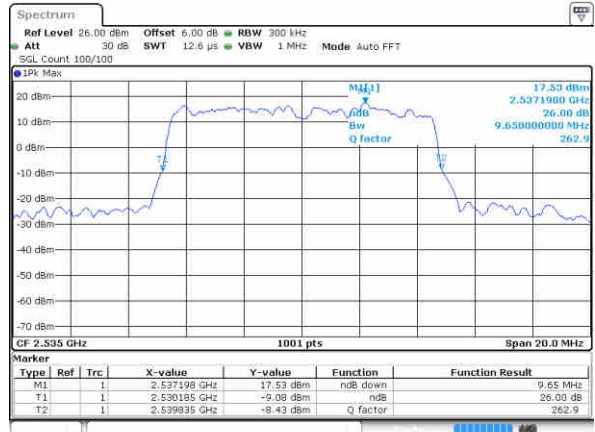
Date: 4 FEB 2020 23:25:36

Middle Channel / 10MHz / QPSK



Date: 4 FEB 2020 23:26:16

Middle Channel / 10MHz / 16QAM



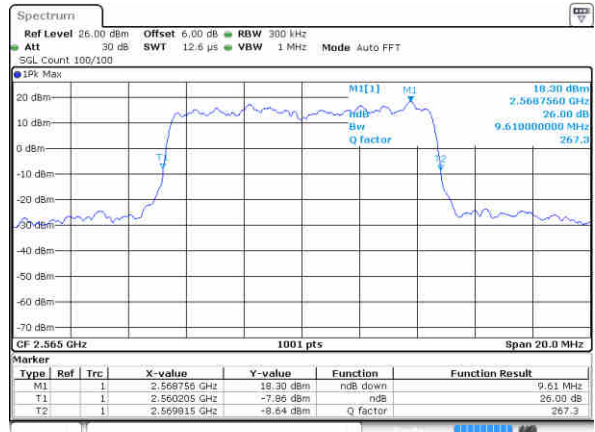
Date: 4 FEB 2020 23:25:56

Highest Channel / 10MHz / QPSK



Date: 4 FEB 2020 23:26:36

Highest Channel / 10MHz / 16QAM

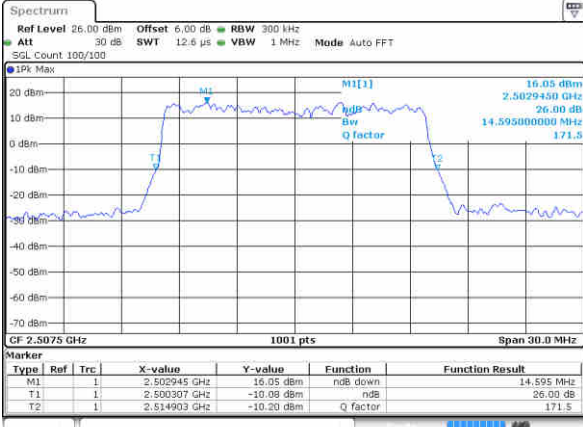


Date: 4 FEB 2020 23:26:56



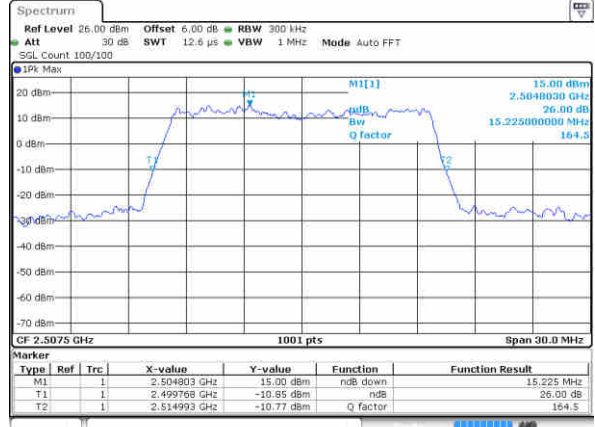
LTE Band 7

Lowest Channel / 15MHz / QPSK



Date: 4 FEB 2020 23:42:06

Lowest Channel / 15MHz / 16QAM



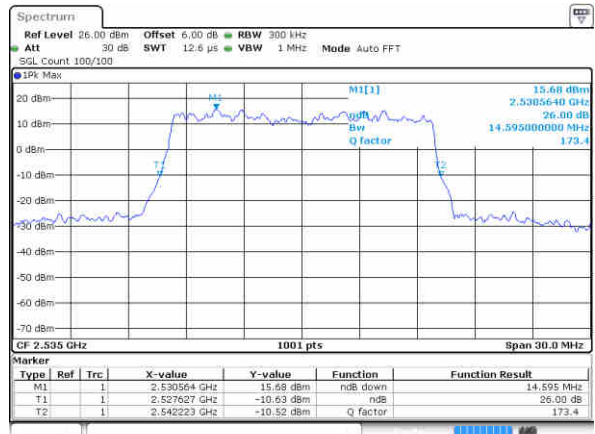
Date: 4 FEB 2020 23:41:46

Middle Channel / 15MHz / QPSK



Date: 4 FEB 2020 23:42:26

Middle Channel / 15MHz / 16QAM



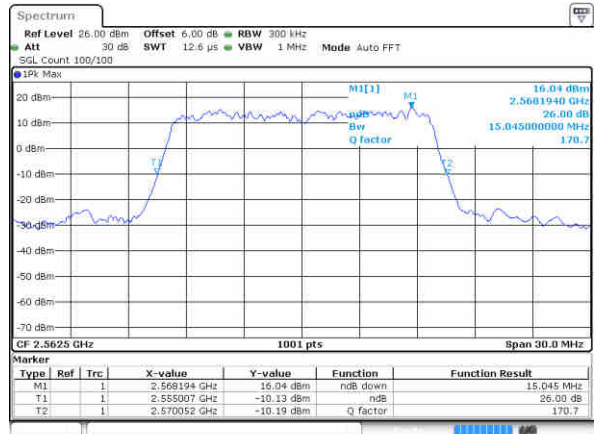
Date: 4 FEB 2020 23:42:46

Highest Channel / 15MHz / QPSK



Date: 4 FEB 2020 23:43:26

Highest Channel / 15MHz / 16QAM

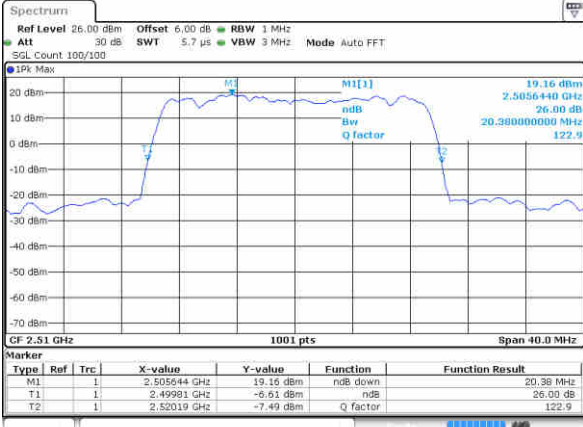


Date: 4 FEB 2020 23:43:06



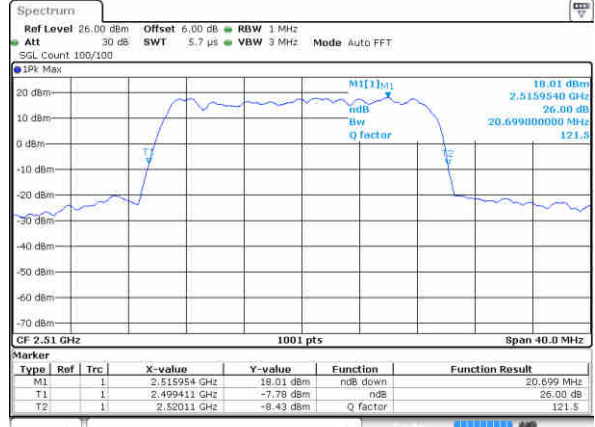
LTE Band 7

Lowest Channel / 20MHz / QPSK



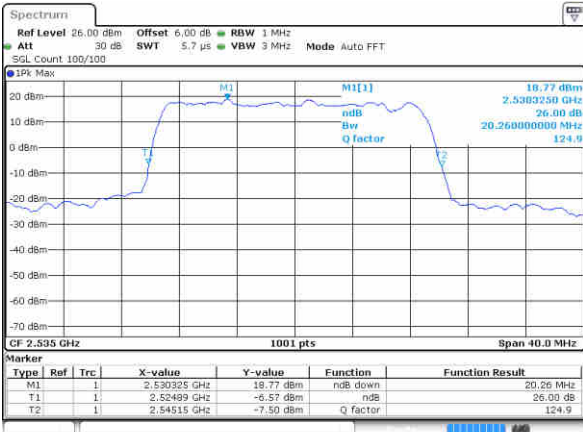
Date: 4 FEB 2020 23:58:38

Lowest Channel / 20MHz / 16QAM



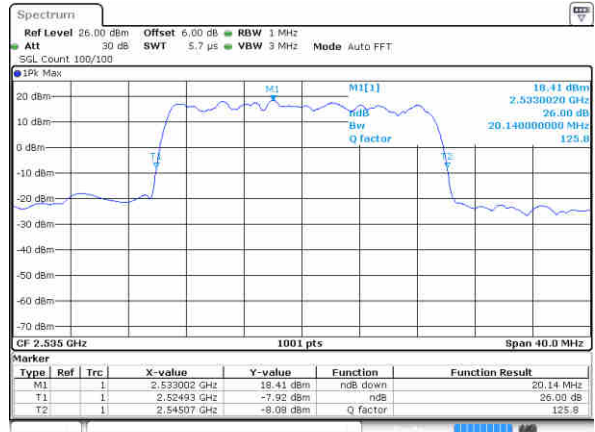
Date: 4 FEB 2020 23:58:17

Middle Channel / 20MHz / QPSK



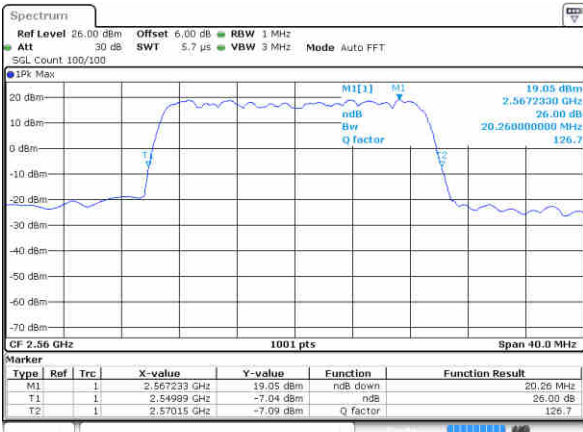
Date: 4 FEB 2020 23:58:58

Middle Channel / 20MHz / 16QAM



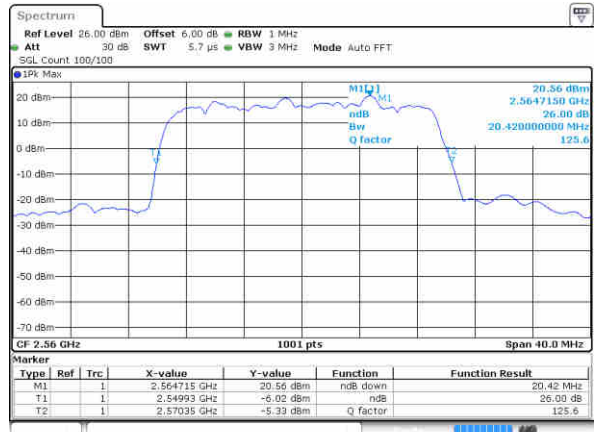
Date: 4 FEB 2020 23:59:16

Highest Channel / 20MHz / QPSK



Date: 4 FEB 2020 23:59:58

Highest Channel / 20MHz / 16QAM



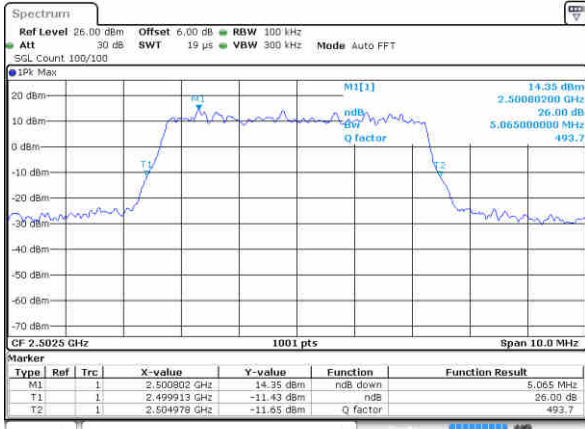
Date: 4 FEB 2020 23:59:38





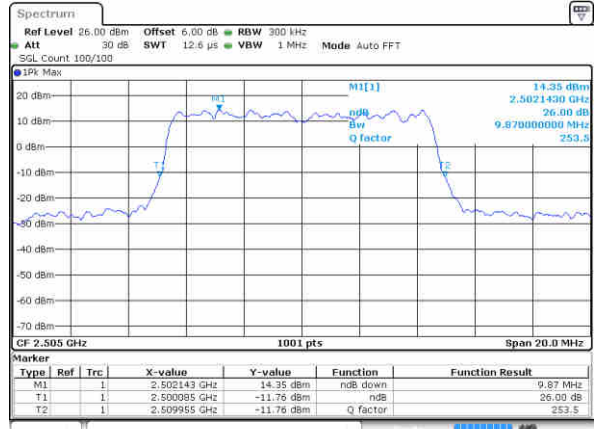
LTE Band 7

Lowest Channel / 5MHz / 64QAM



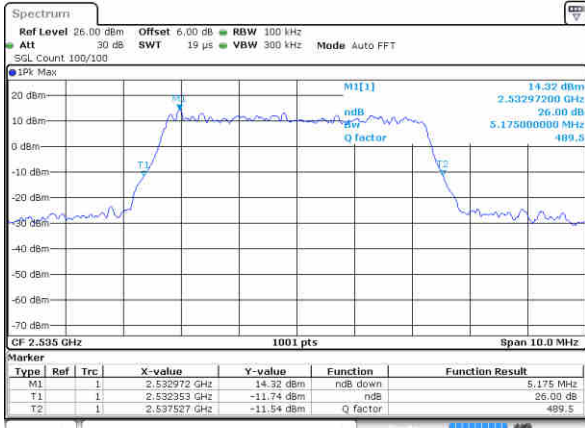
Date: 10 MAR 2020 21:56:06

Lowest Channel / 10MHz / 64QAM



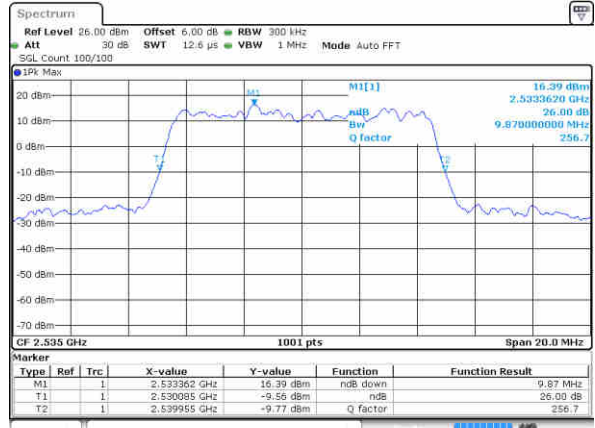
Date: 10 MAR 2020 22:02:03

Middle Channel / 5MHz / 64QAM



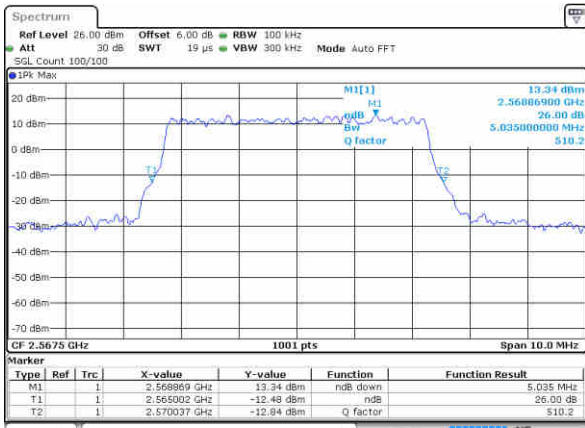
Date: 10 MAR 2020 21:56:16

Middle Channel / 10MHz / 64QAM



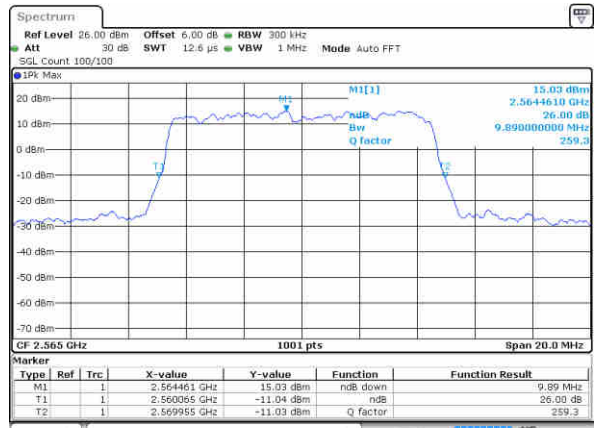
Date: 10 MAR 2020 22:02:13

Highest Channel / 5MHz / 64QAM



Date: 10 MAR 2020 21:56:26

Highest Channel / 10MHz / 64QAM

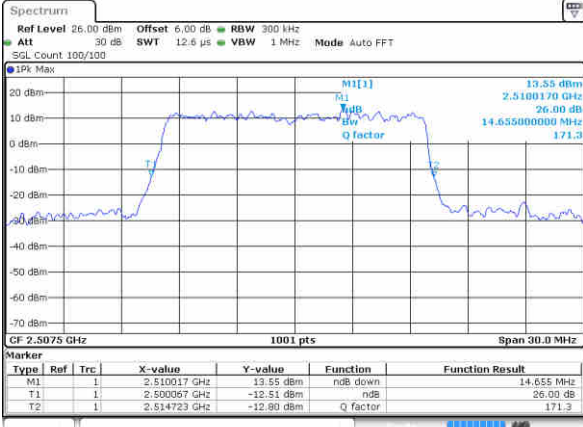


Date: 10 MAR 2020 22:02:23



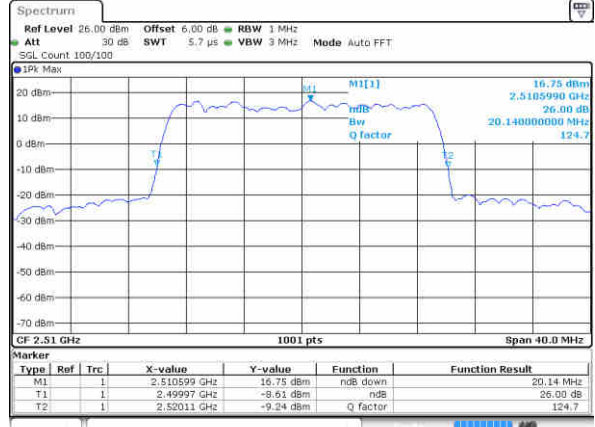
LTE Band 7

Lowest Channel / 15MHz / 64QAM



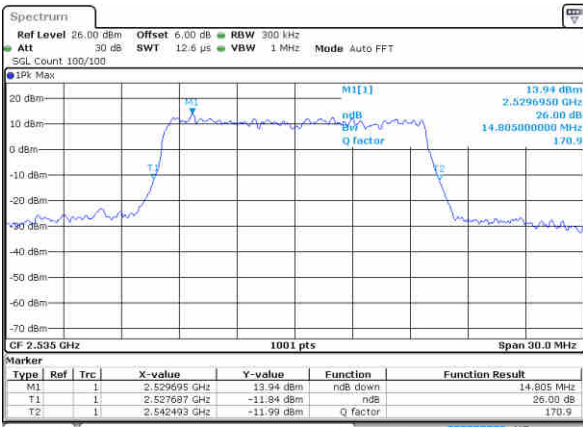
Date: 10 MAR 2020 22:08:00

Lowest Channel / 20MHz / 64QAM



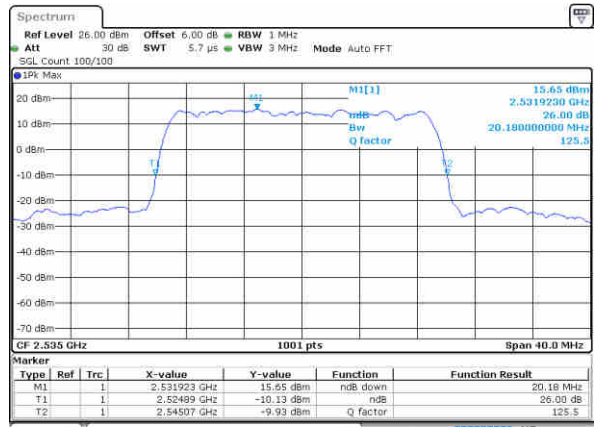
Date: 10 MAR 2020 22:13:58

Middle Channel / 15MHz / 64QAM



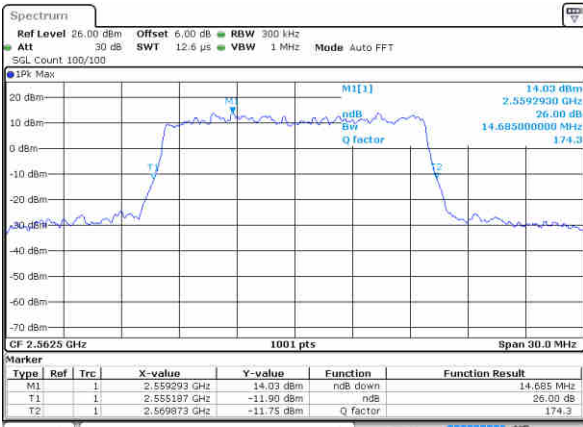
Date: 10 MAR 2020 22:08:10

Middle Channel / 20MHz / 64QAM



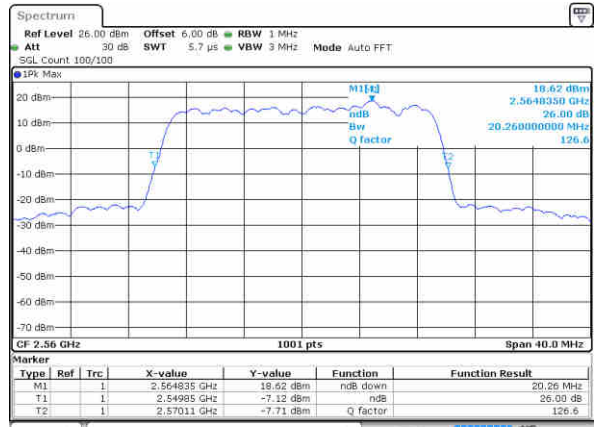
Date: 10 MAR 2020 22:14:08

Highest Channel / 15MHz / 64QAM



Date: 10 MAR 2020 22:08:20

Highest Channel / 20MHz / 64QAM



Date: 10 MAR 2020 22:14:18



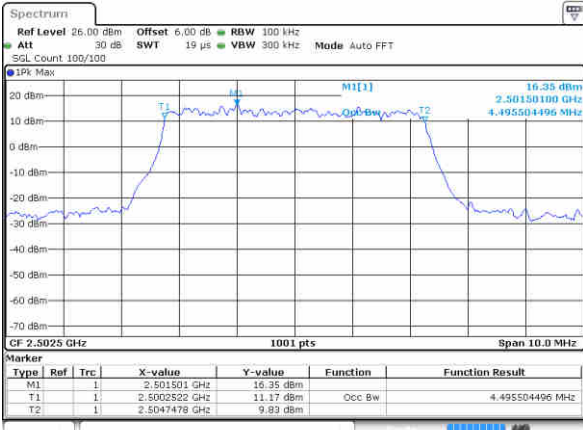
Occupied Bandwidth

Mode	LTE Band 7 : 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	-	-	-	-	4.50	4.49	8.99	9.09	13.49	13.49	18.38	18.62
Middle CH	-	-	-	-	4.51	4.51	9.07	8.99	13.46	13.40	18.34	18.26
Highest CH	-	-	-	-	4.49	4.49	9.05	9.01	13.58	13.49	18.42	18.30
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.48	-	9.05	-	13.46	-	18.42	-
Middle CH	-	-	-	-	4.53	-	9.05	-	13.49	-	18.50	-
Highest CH	-	-	-	-	4.51	-	8.99	-	13.43	-	18.58	-

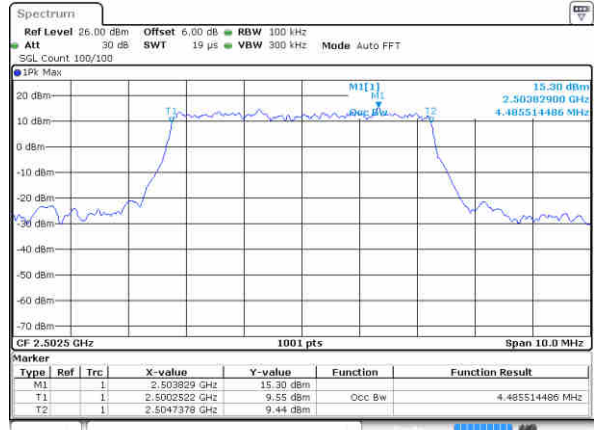


LTE Band 7

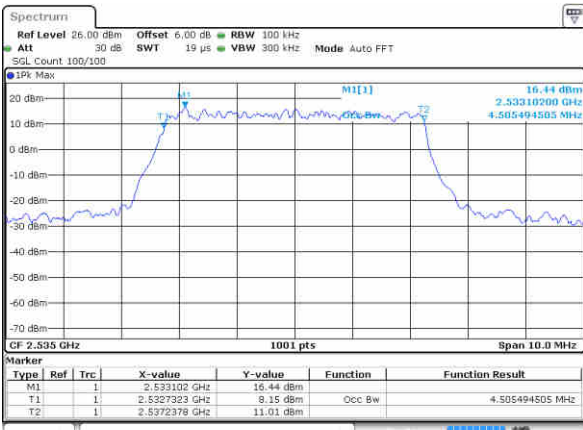
Lowest Channel / 5MHz / QPSK



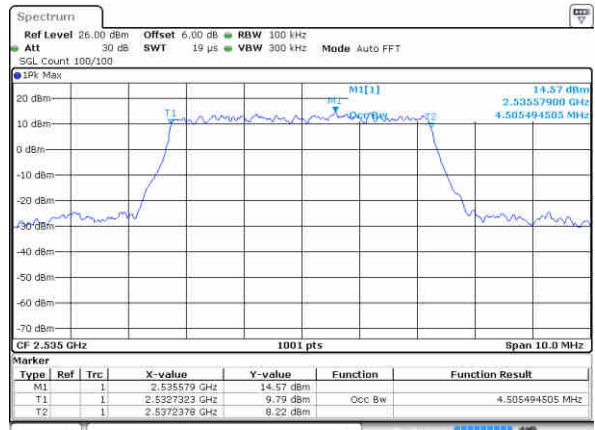
Lowest Channel / 5MHz / 16QAM



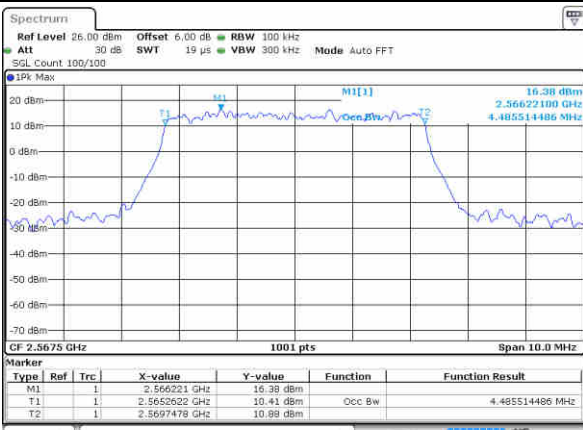
Middle Channel / 5MHz / QPSK



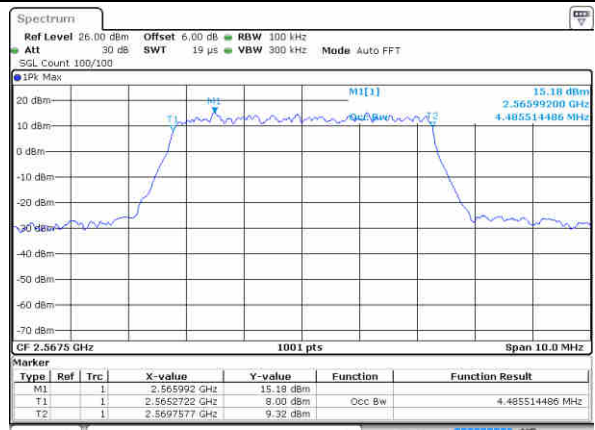
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



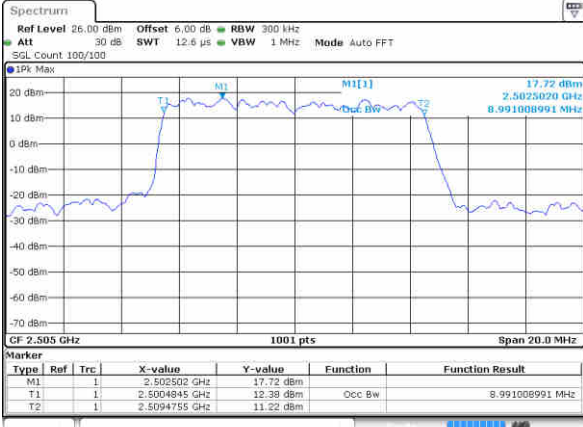
Highest Channel / 5MHz / 16QAM





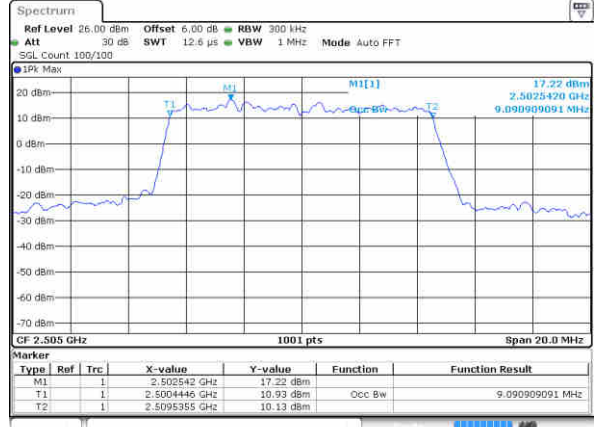
LTE Band 7

Lowest Channel / 10MHz / QPSK



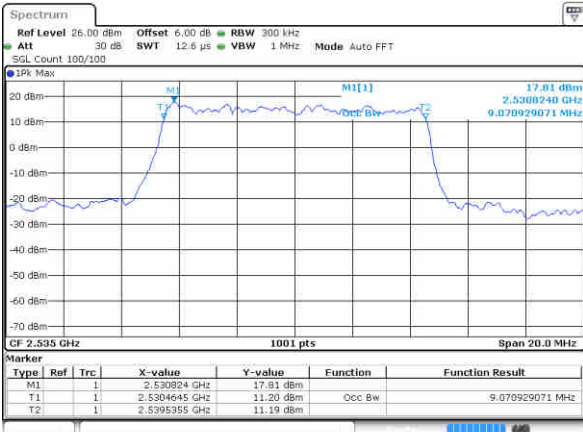
Date: 4 FEB 2020 23:25:05

Lowest Channel / 10MHz / 16QAM



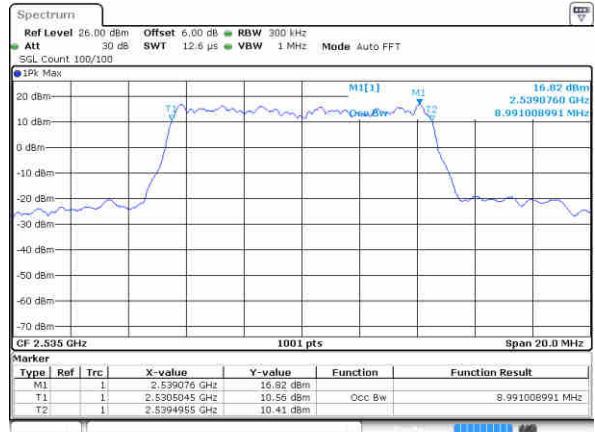
Date: 4 FEB 2020 23:25:26

Middle Channel / 10MHz / QPSK



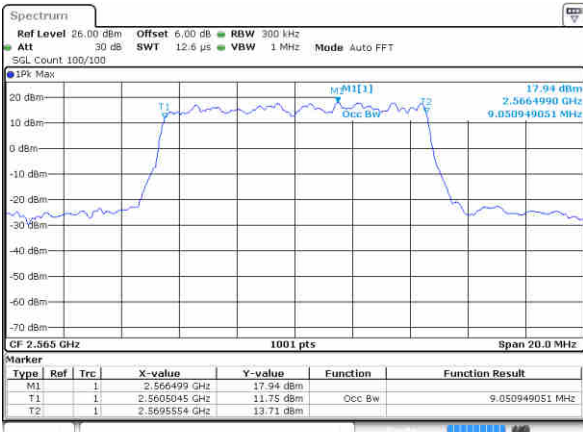
Date: 4 FEB 2020 23:26:06

Middle Channel / 10MHz / 16QAM



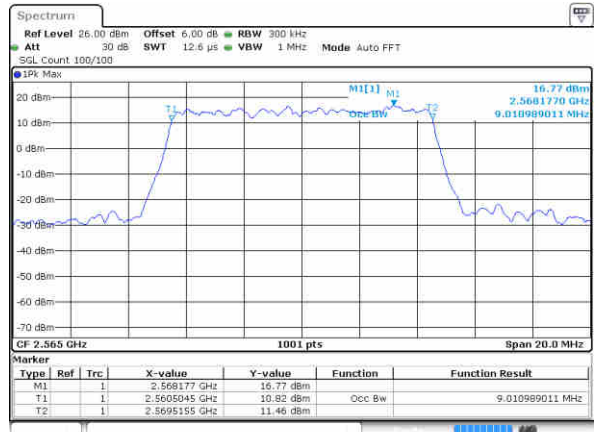
Date: 4 FEB 2020 23:25:46

Highest Channel / 10MHz / QPSK



Date: 4 FEB 2020 23:26:26

Highest Channel / 10MHz / 16QAM

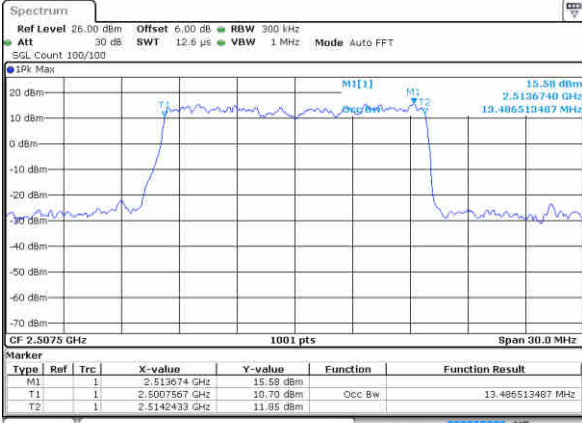


Date: 4 FEB 2020 23:26:46



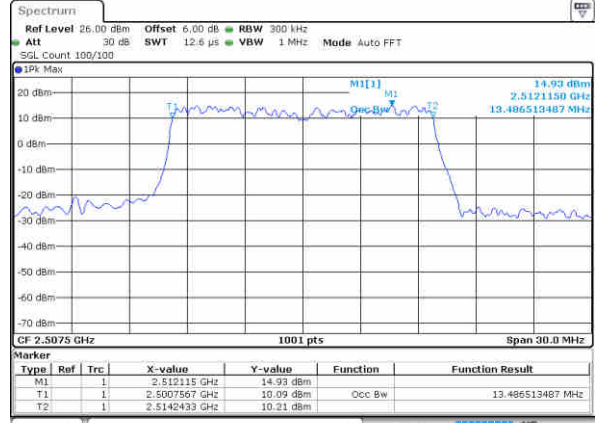
LTE Band 7

Lowest Channel / 15MHz / QPSK



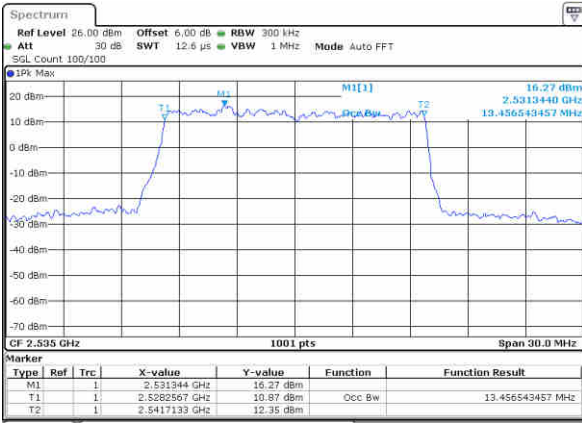
Date: 4 FEB 2020 23:41:56

Lowest Channel / 15MHz / 16QAM



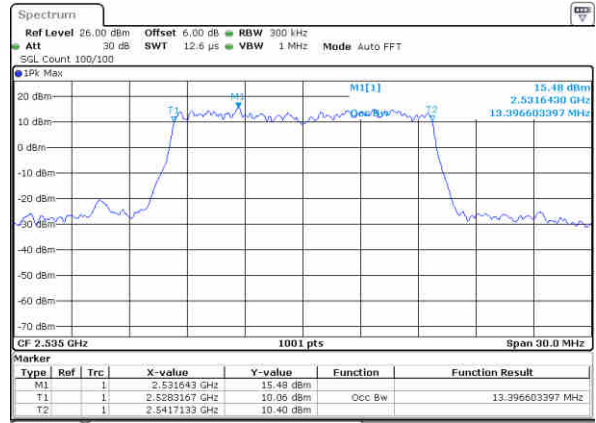
Date: 4 FEB 2020 23:41:36

Middle Channel / 15MHz / QPSK



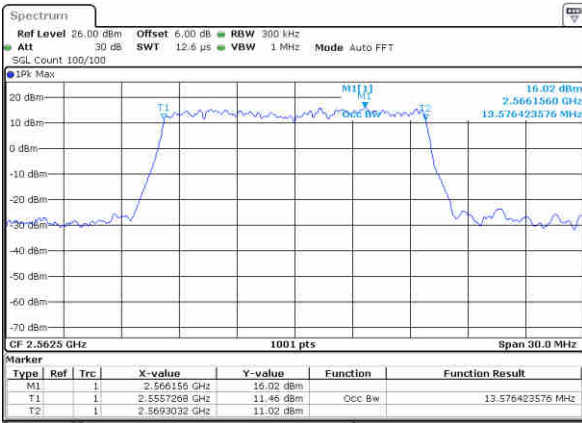
Date: 4 FEB 2020 23:42:16

Middle Channel / 15MHz / 16QAM



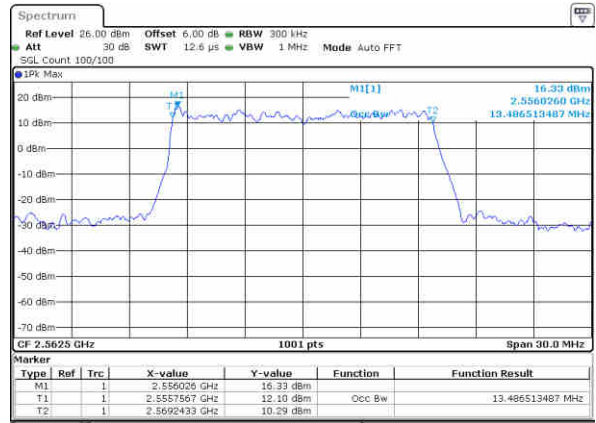
Date: 4 FEB 2020 23:42:36

Highest Channel / 15MHz / QPSK



Date: 4 FEB 2020 23:43:16

Highest Channel / 15MHz / 16QAM

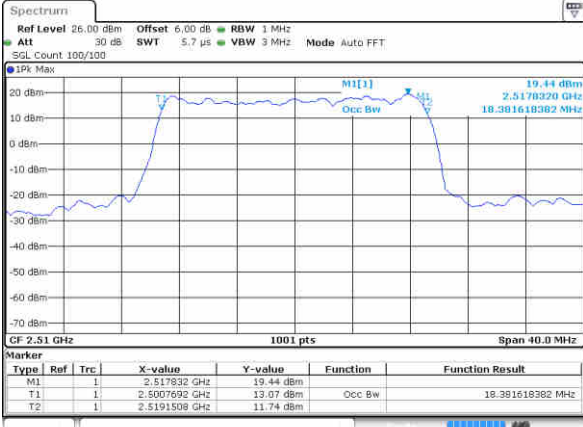


Date: 4 FEB 2020 23:42:56



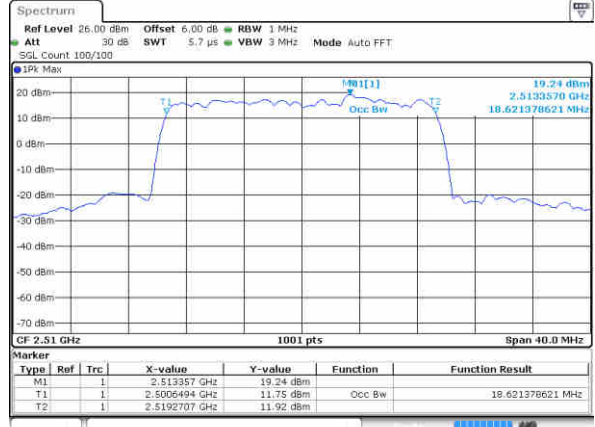
LTE Band 7

Lowest Channel / 20MHz / QPSK



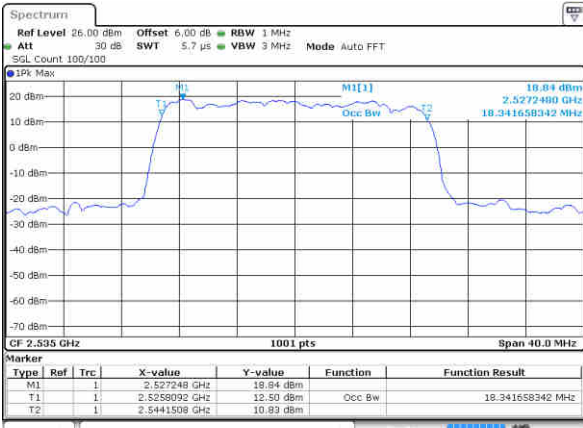
Date: 4 FEB 2020 23:58:28

Lowest Channel / 20MHz / 16QAM



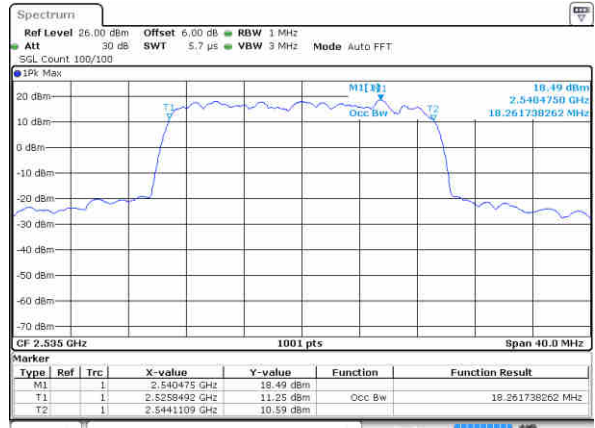
Date: 4 FEB 2020 23:58:07

Middle Channel / 20MHz / QPSK



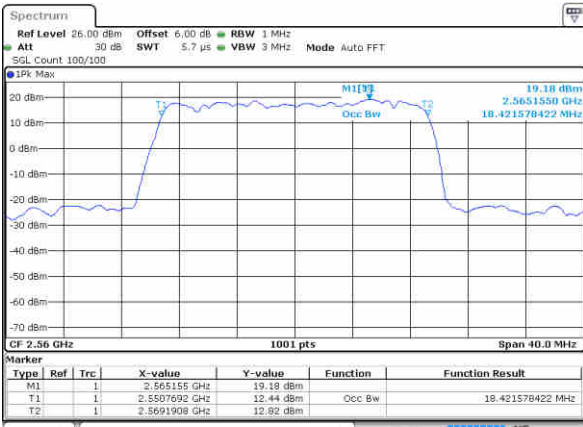
Date: 4 FEB 2020 23:58:48

Middle Channel / 20MHz / 16QAM



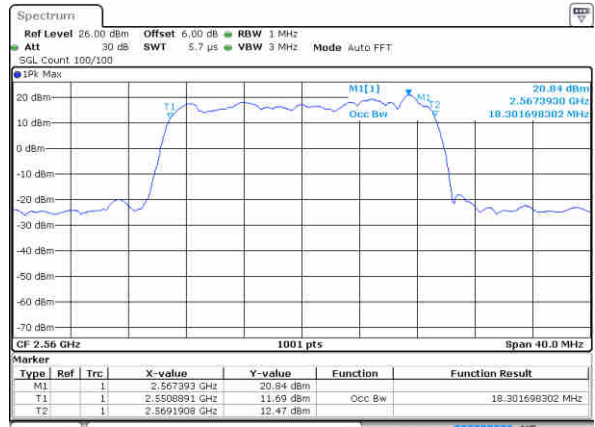
Date: 4 FEB 2020 23:59:08

Highest Channel / 20MHz / QPSK



Date: 4 FEB 2020 23:59:48

Highest Channel / 20MHz / 16QAM

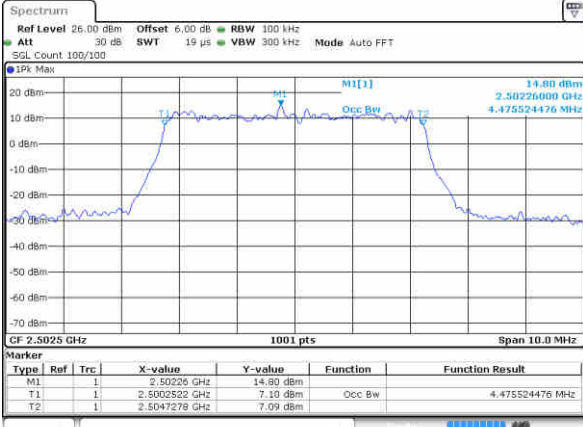


Date: 4 FEB 2020 23:59:28



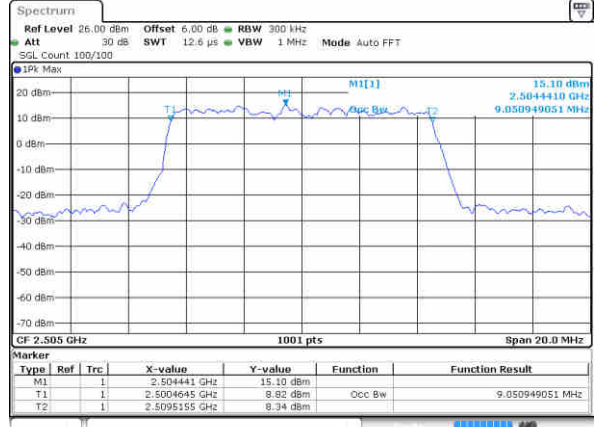
LTE Band 7

Lowest Channel / 5MHz / 64QAM



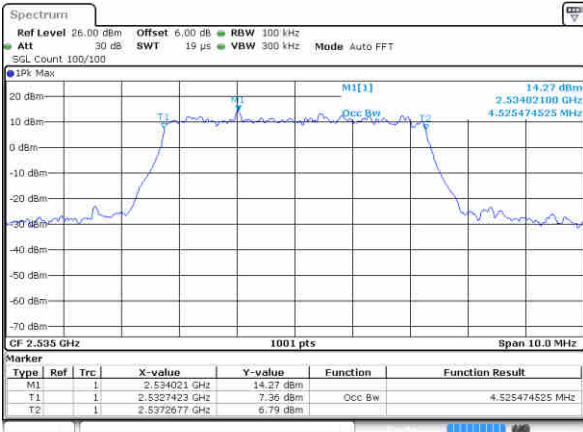
Date: 10 MAR 2020 21:55:36

Lowest Channel / 10MHz / 64QAM



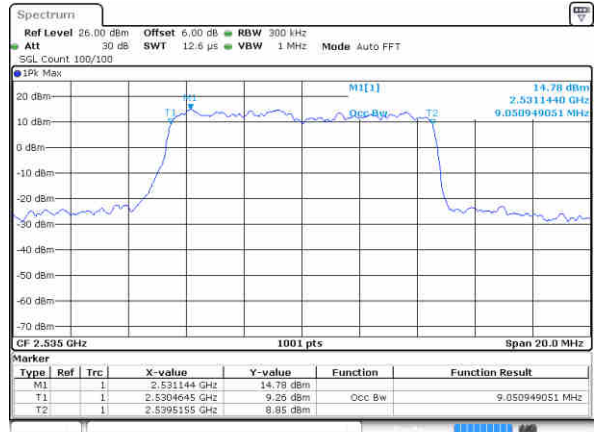
Date: 10 MAR 2020 22:01:33

Middle Channel / 5MHz / 64QAM



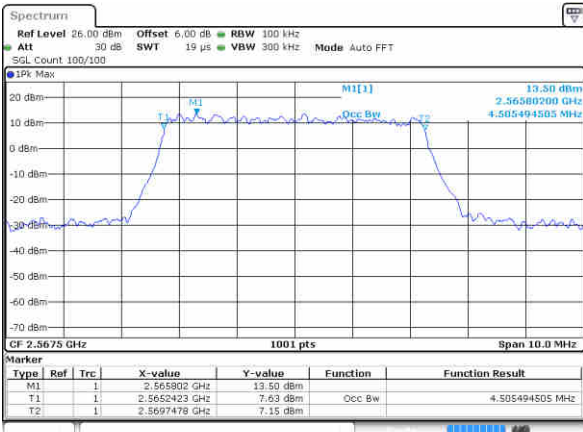
Date: 10 MAR 2020 21:55:46

Middle Channel / 10MHz / 64QAM



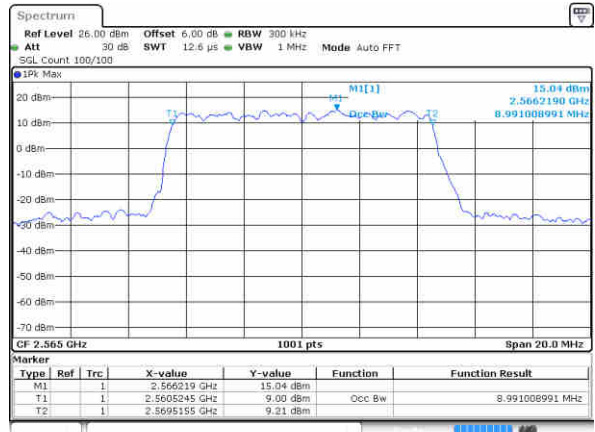
Date: 10 MAR 2020 22:01:43

Highest Channel / 5MHz / 64QAM



Date: 10 MAR 2020 21:55:56

Highest Channel / 10MHz / 64QAM



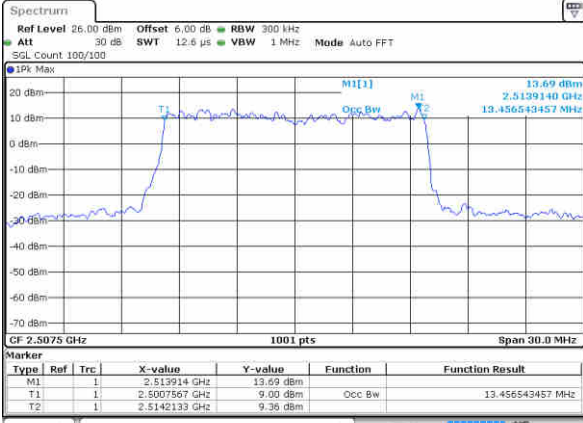
Date: 10 MAR 2020 22:01:53





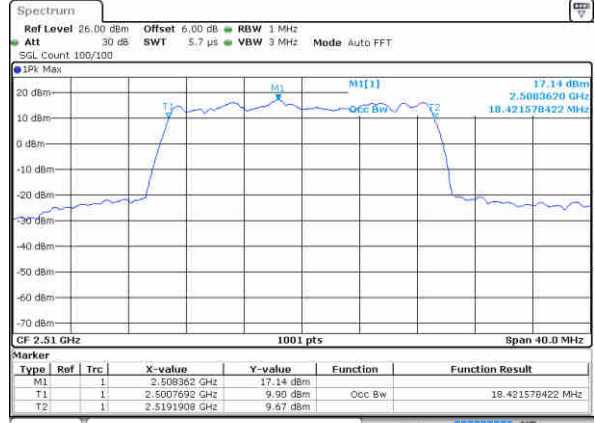
LTE Band 7

Lowest Channel / 15MHz / 64QAM



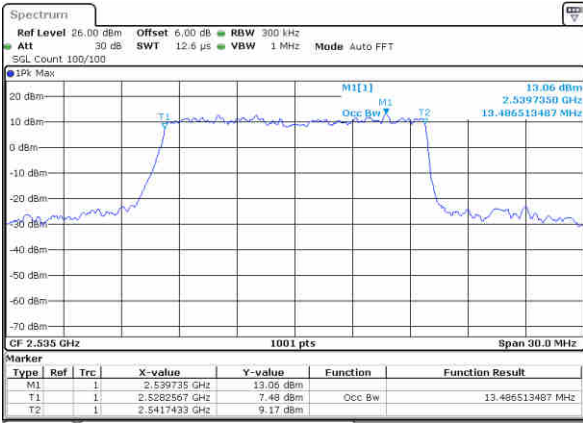
Date: 10 MAR 2020 22:07:30

Lowest Channel / 20MHz / 64QAM



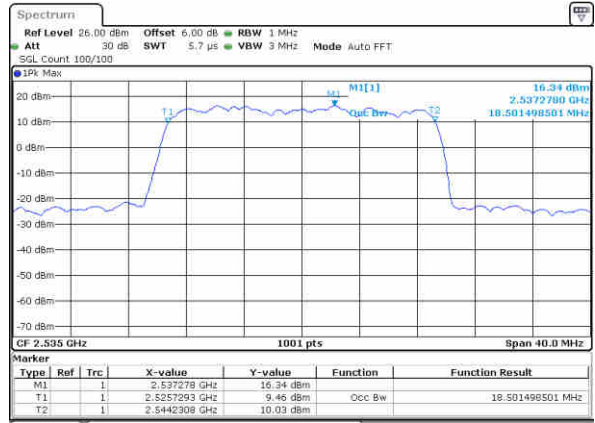
Date: 10 MAR 2020 22:13:28

Middle Channel / 15MHz / 64QAM



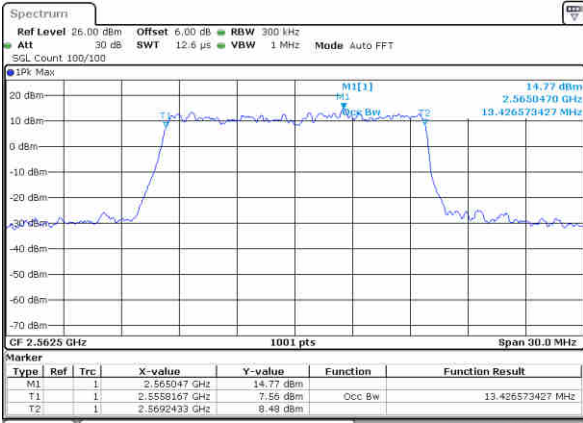
Date: 10 MAR 2020 22:07:40

Middle Channel / 20MHz / 64QAM



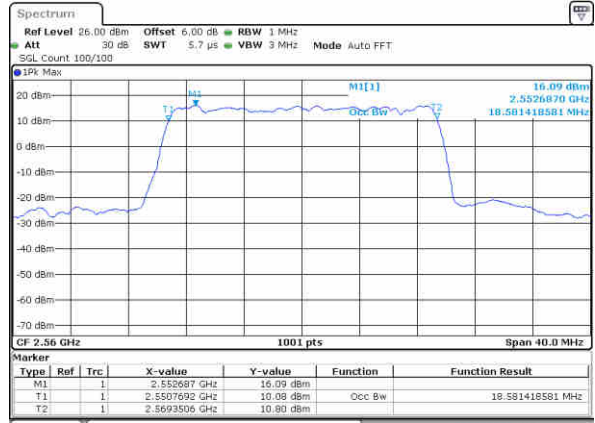
Date: 10 MAR 2020 22:13:38

Highest Channel / 15MHz / 64QAM



Date: 10 MAR 2020 22:07:50

Highest Channel / 20MHz / 64QAM



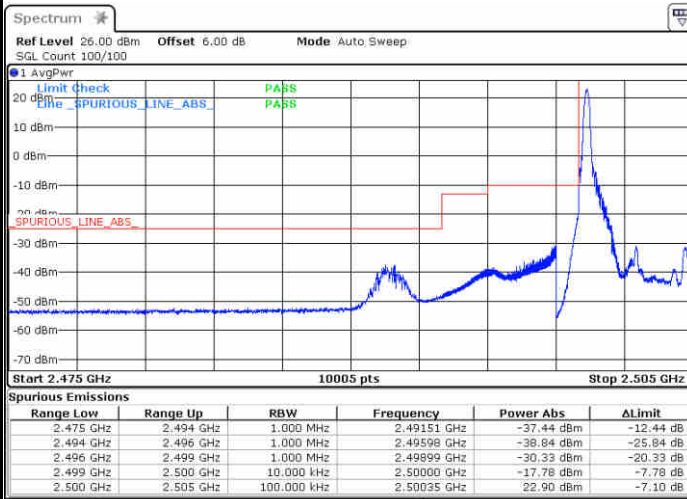
Date: 10 MAR 2020 22:13:48



# Conducted Band Edge

## LTE Band 7 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



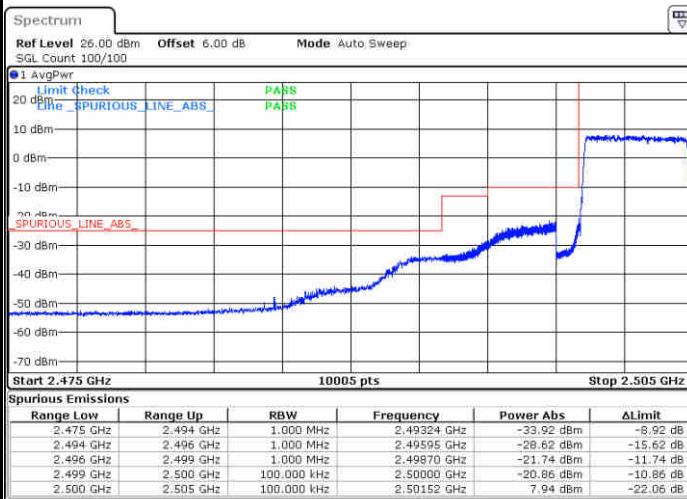
Date: 9 JAN 2007 15:57:29

### Highest Band Edge / 1 RB



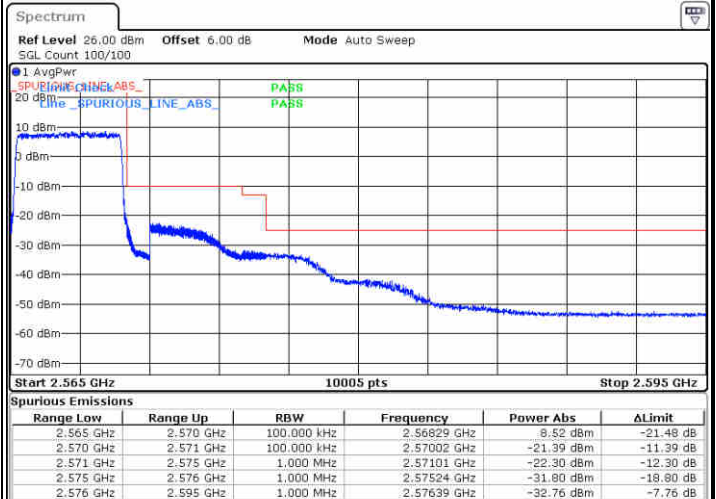
Date: 9 JAN 2007 17:34:10

### Lowest Band Edge / Full RB



Date: 4 FEB 2020 23:14:59

### Highest Band Edge / Full RB

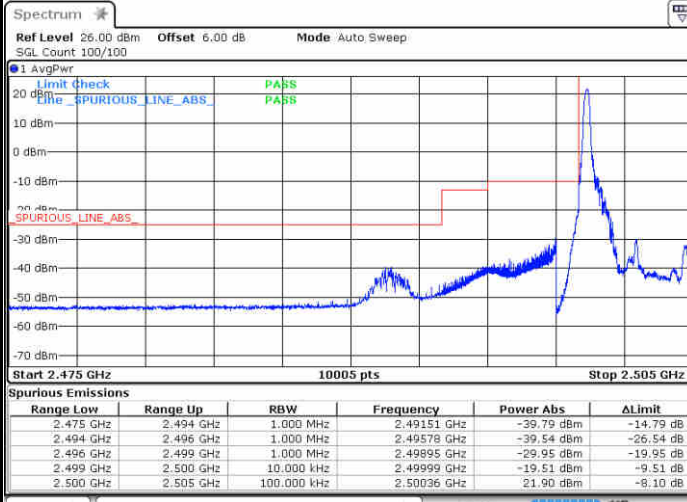


Date: 4 FEB 2020 23:16:07



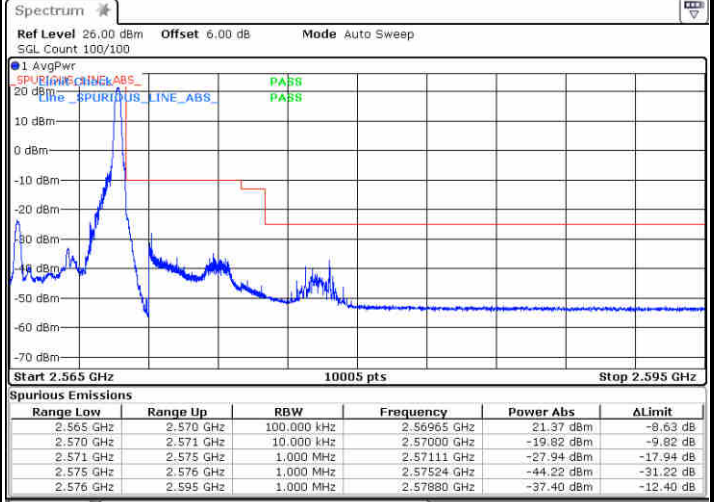
LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



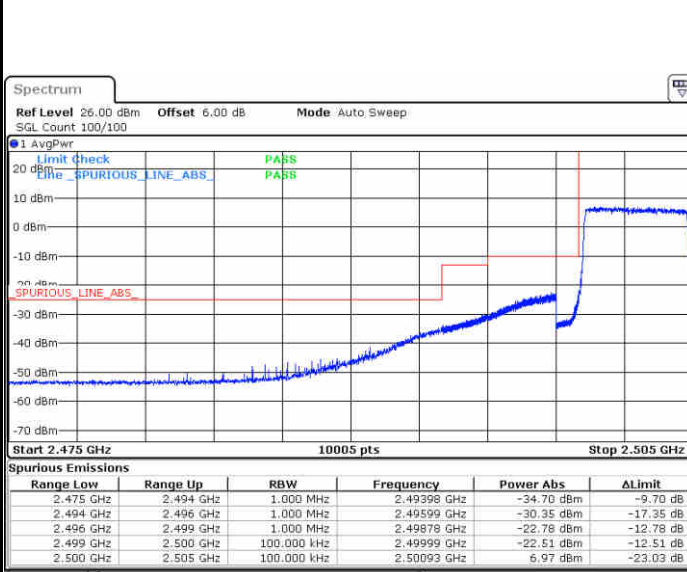
Date: 9 JAN 2007 17:31:21

Highest Band Edge / 1 RB



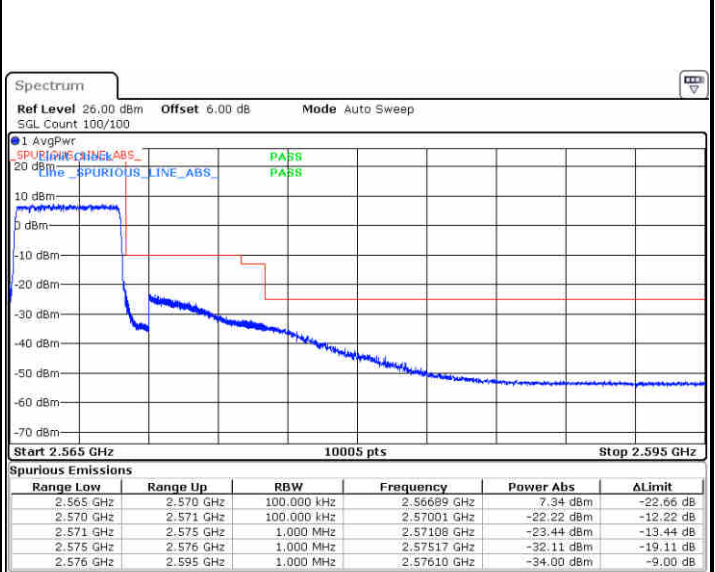
Date: 9 JAN 2007 17:35:36

Lowest Band Edge / Full RB



Date: 4 FEB 2020 23:13:50

Highest Band Edge / Full RB

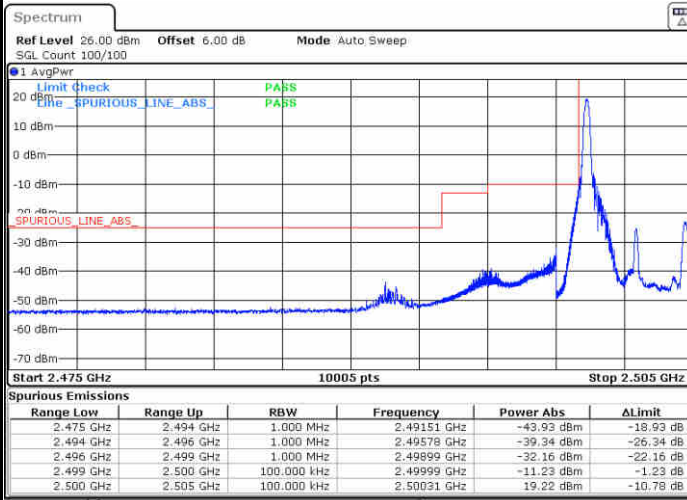


Date: 4 FEB 2020 23:17:15



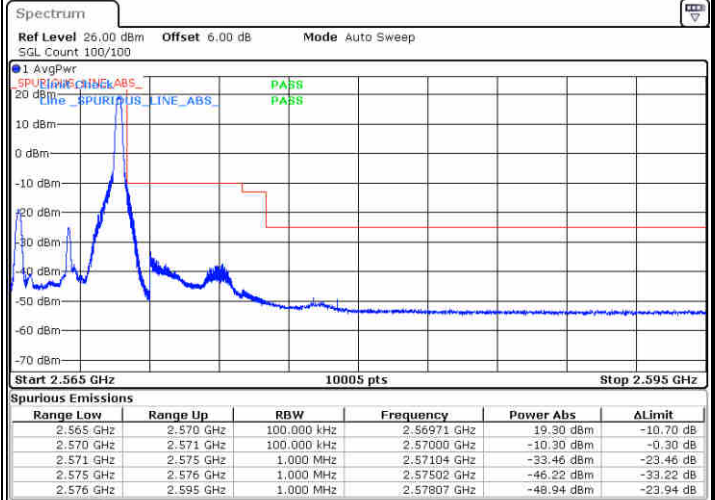
LTE Band 7 / 5MHz / 64QAM

Lowest Band Edge / 1RB



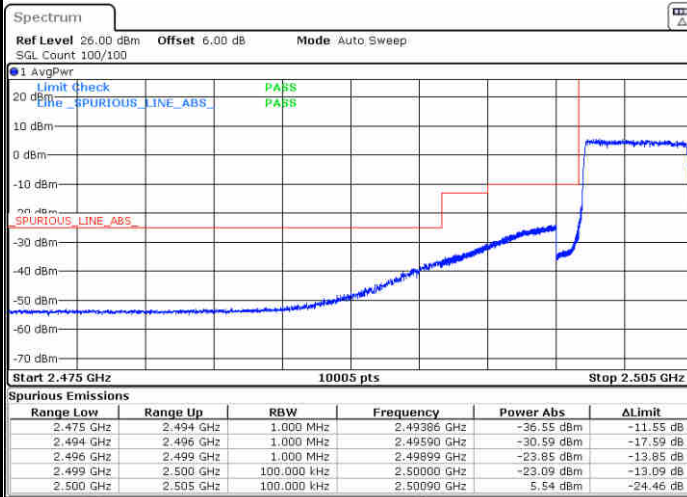
Date: 11.MAR.2020 00:32:19

Highest Band Edge / 1 RB



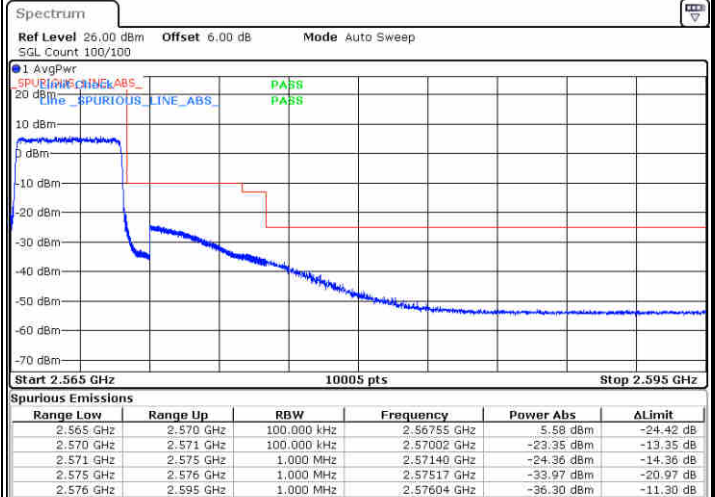
Date: 10.MAR.2020 22:00:15

Lowest Band Edge / Full RB



Date: 11.MAR.2020 00:33:28

Highest Band Edge / Full RB

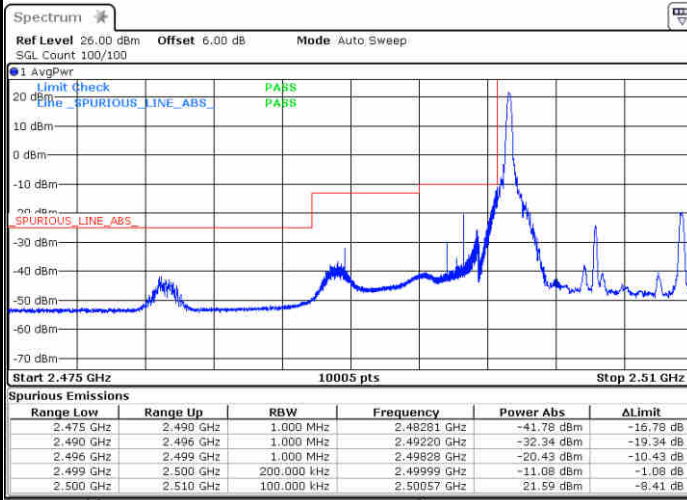


Date: 10.MAR.2020 22:01:23



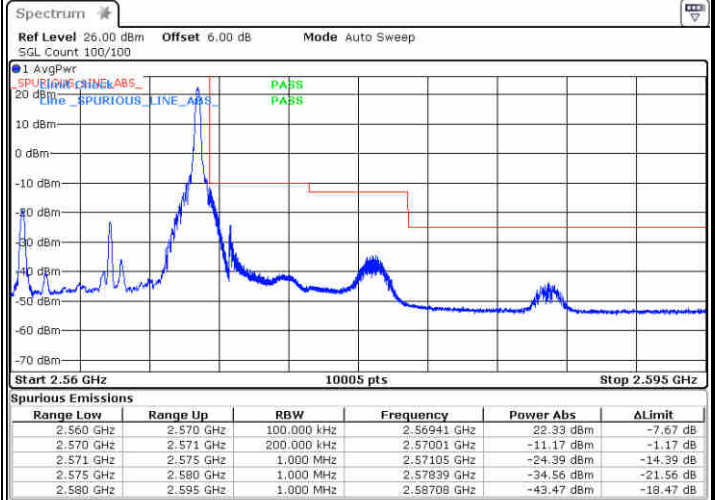
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



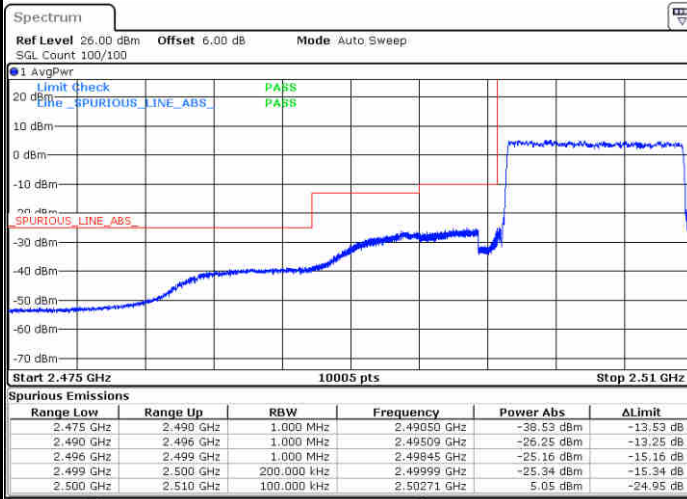
Date: 5 FEB 2020 00:21:57

Highest Band Edge / 1 RB



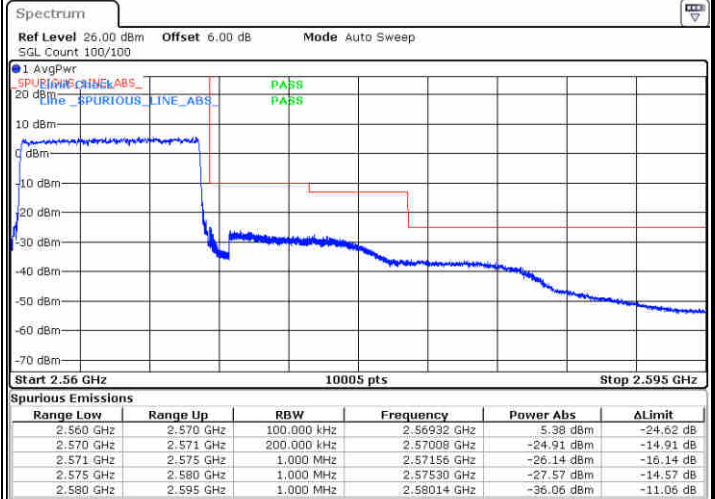
Date: 5 FEB 2020 00:22:36

Lowest Band Edge / Full RB



Date: 4 FEB 2020 23:31:29

Highest Band Edge / Full RB

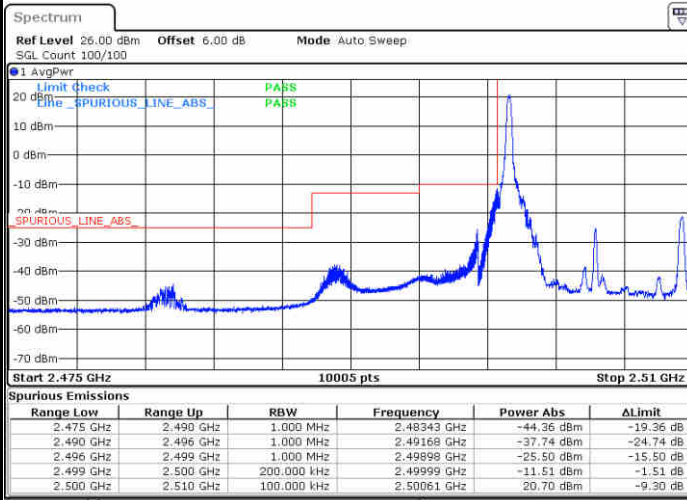


Date: 4 FEB 2020 23:32:37



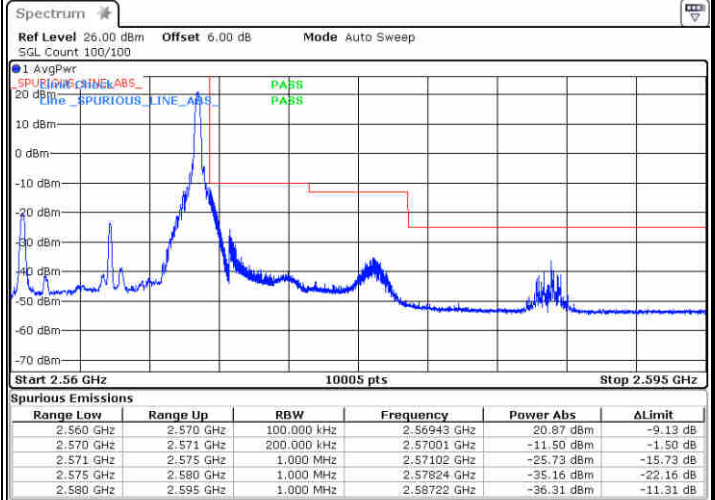
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



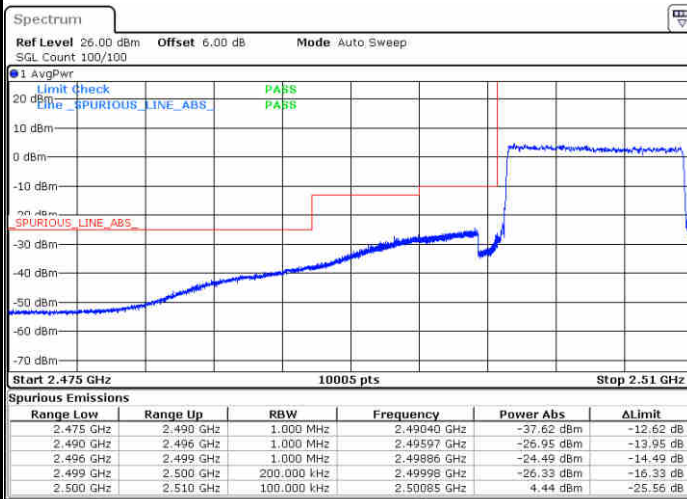
Date: 4 FEB 2020 23:29:12

Highest Band Edge / 1 RB



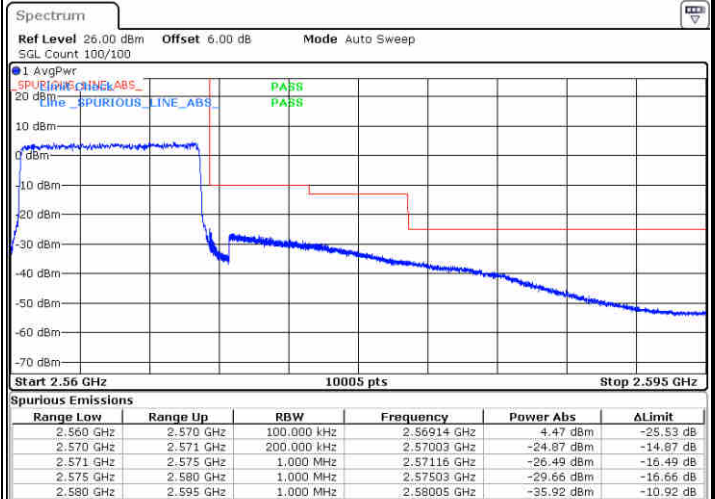
Date: 5 FEB 2020 00:23:05

Lowest Band Edge / Full RB



Date: 4 FEB 2020 23:30:21

Highest Band Edge / Full RB

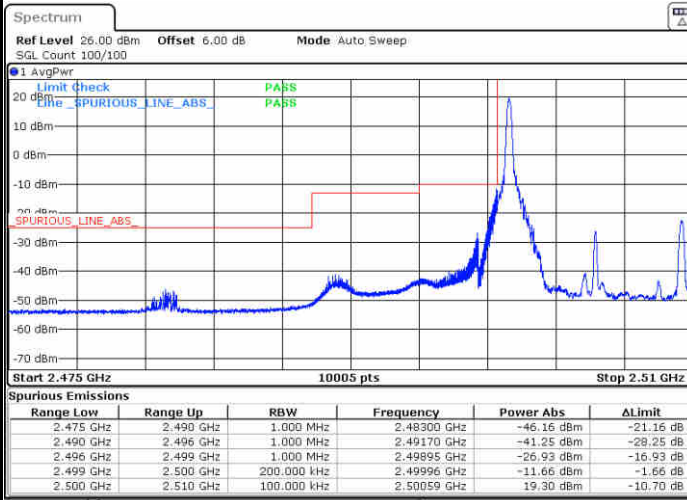


Date: 4 FEB 2020 23:33:45



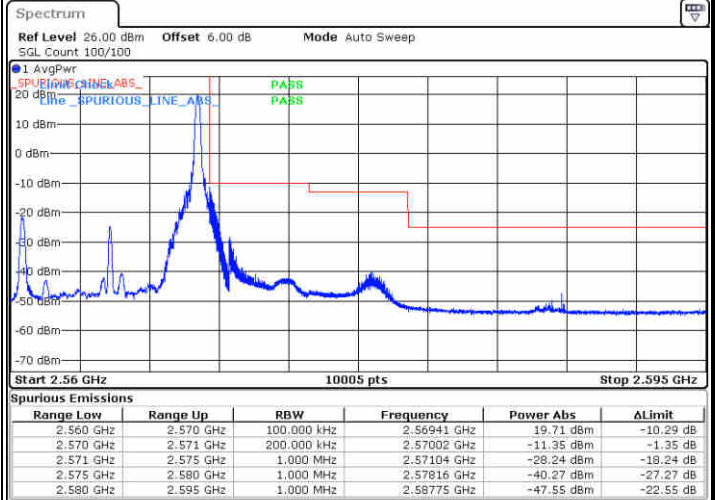
LTE Band 7 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



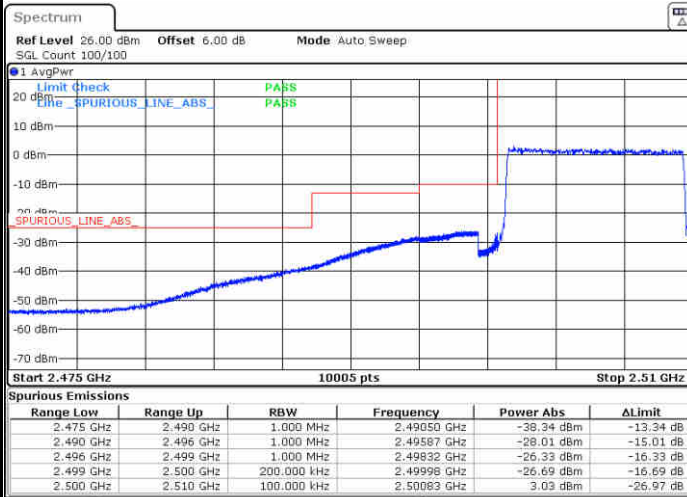
Date: 11.MAR.2020 00:40:30

Highest Band Edge / 1 RB



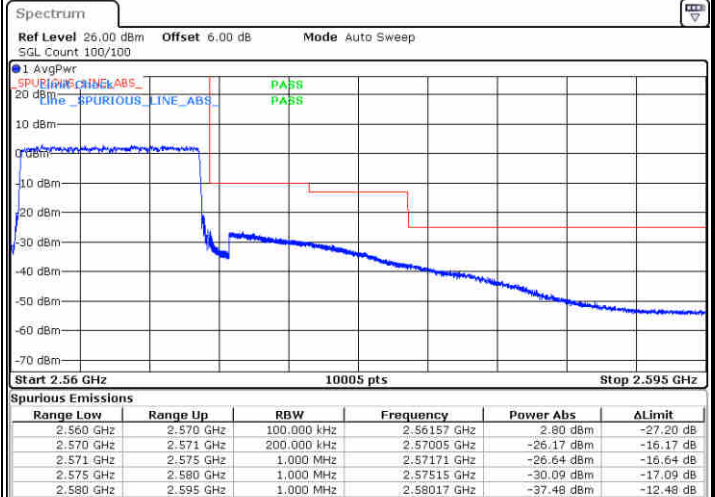
Date: 10.MAR.2020 22:08:13

Lowest Band Edge / Full RB



Date: 11.MAR.2020 00:41:38

Highest Band Edge / Full RB

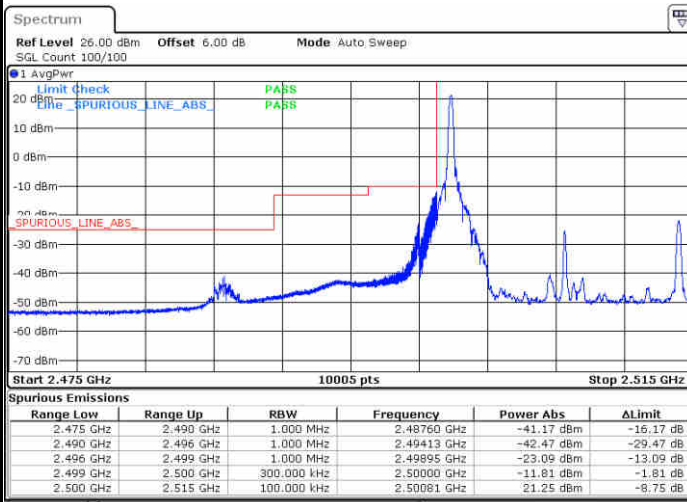


Date: 10.MAR.2020 22:07:21



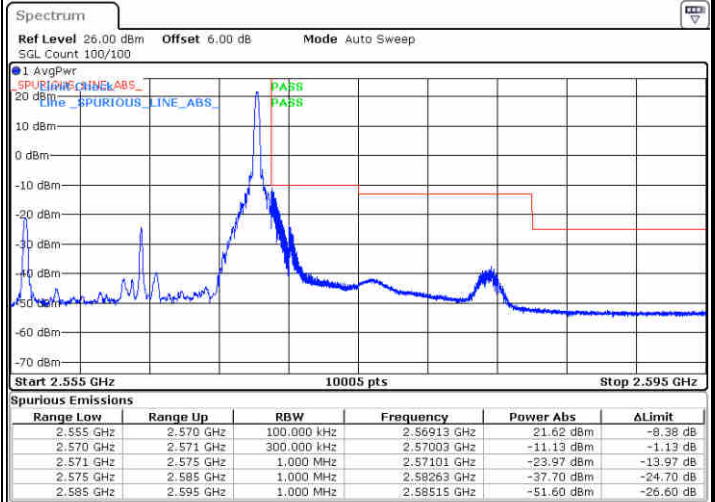
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



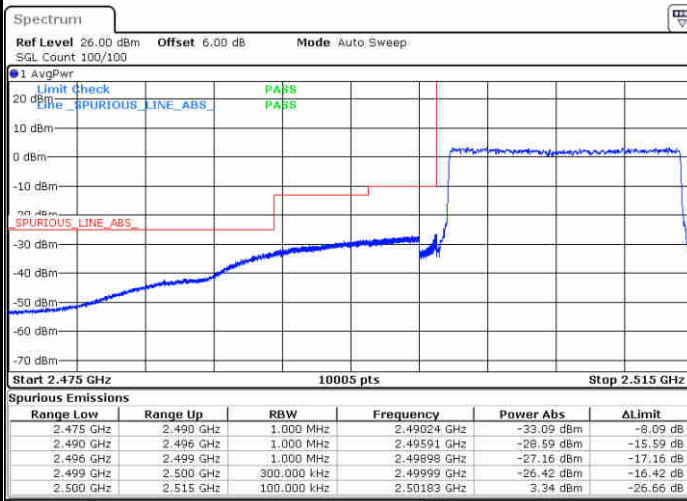
Date: 4 FEB 2020 23:44:35

Highest Band Edge / 1 RB



Date: 4 FEB 2020 23:52:33

Lowest Band Edge / Full RB



Date: 4 FEB 2020 23:48:01

Highest Band Edge / Full RB



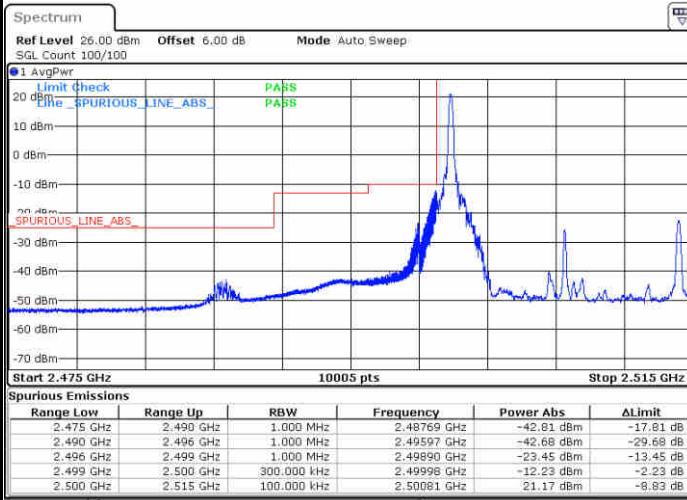
Date: 4 FEB 2020 23:49:09





LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



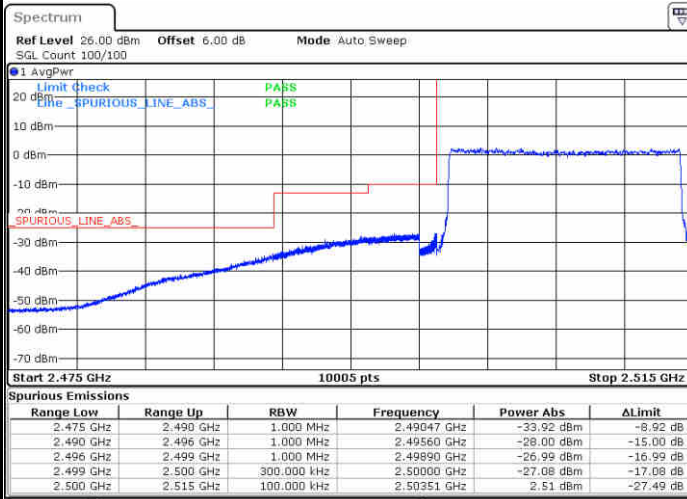
Date: 4 FEB 2020 23:45:44

Highest Band Edge / 1 RB



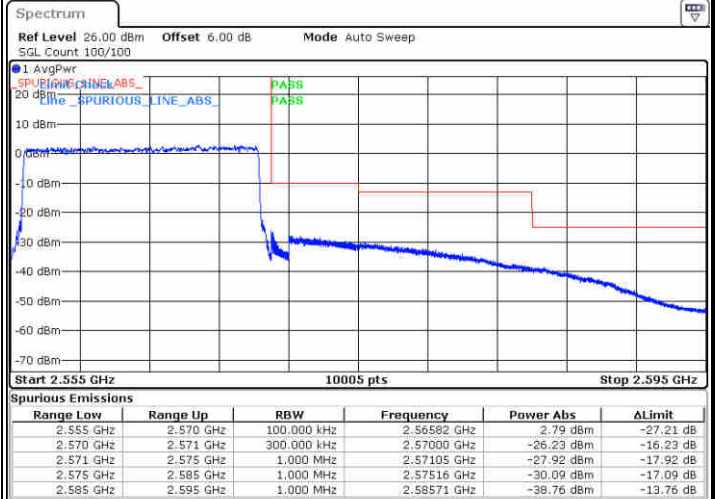
Date: 4 FEB 2020 23:51:25

Lowest Band Edge / Full RB



Date: 4 FEB 2020 23:46:52

Highest Band Edge / Full RB

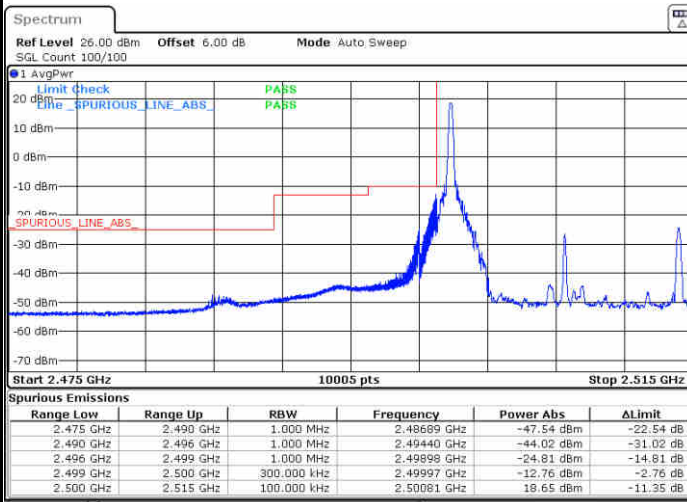


Date: 4 FEB 2020 23:50:17



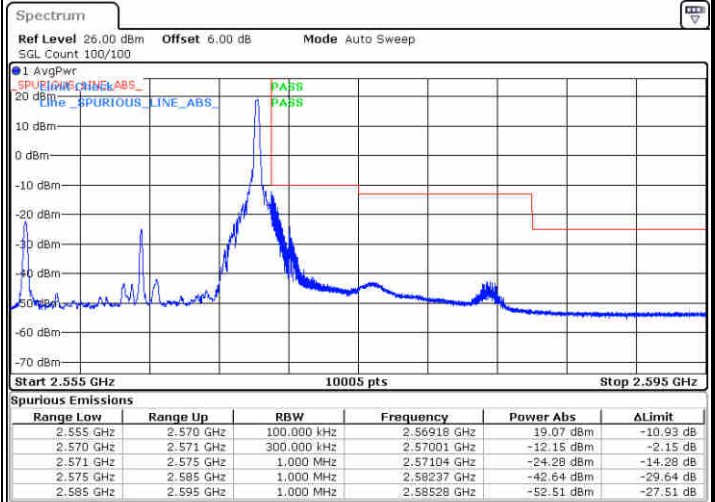
LTE Band 7 / 15MHz / 64QAM

Lowest Band Edge / 1 RB



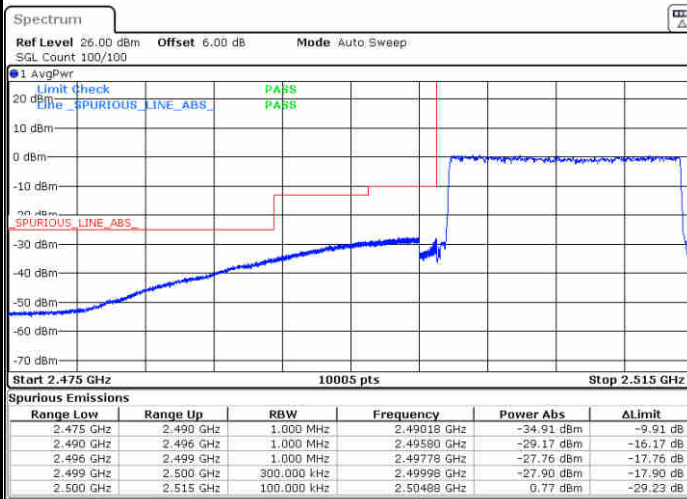
Date: 11.MAR.2020 00:47:10

Highest Band Edge / 1 RB



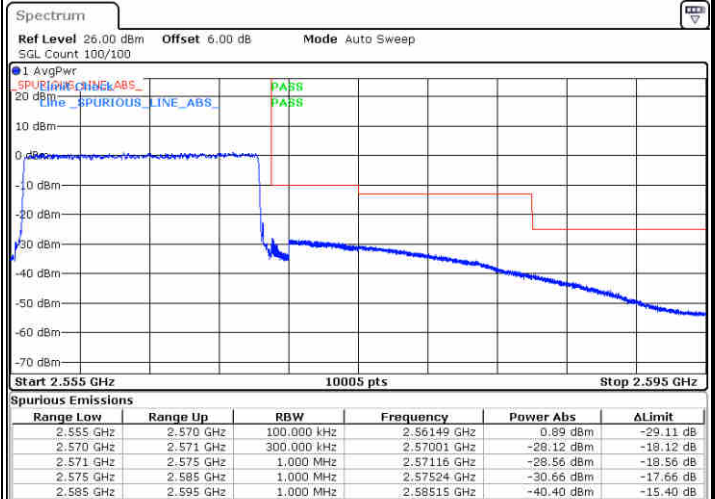
Date: 10.MAR.2020 22:10:37

Lowest Band Edge / Full RB



Date: 11.MAR.2020 00:46:02

Highest Band Edge / Full RB



Date: 10.MAR.2020 22:09:29