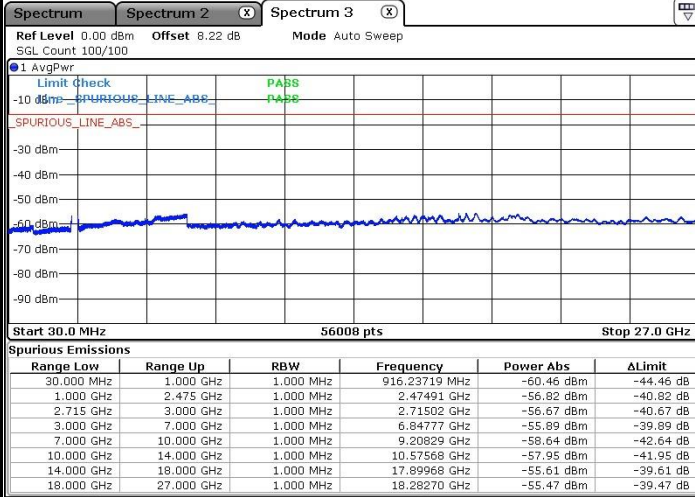




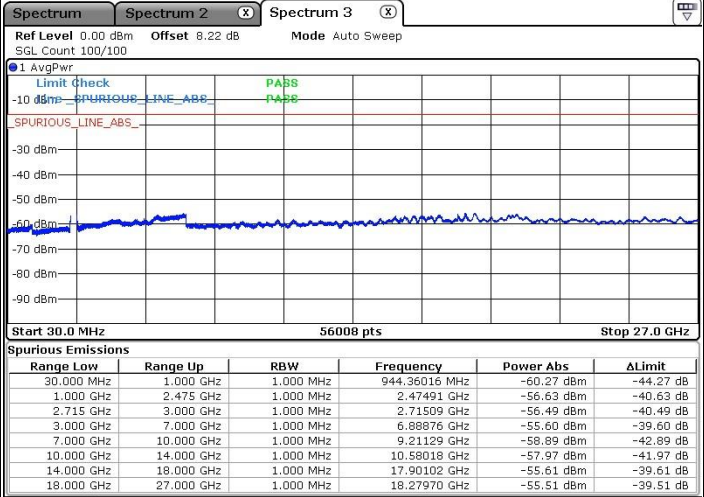
LTE Band 41 / 15MHz

Highest Channel / QPSK



Date: 30.JUL.2019 16:59:56

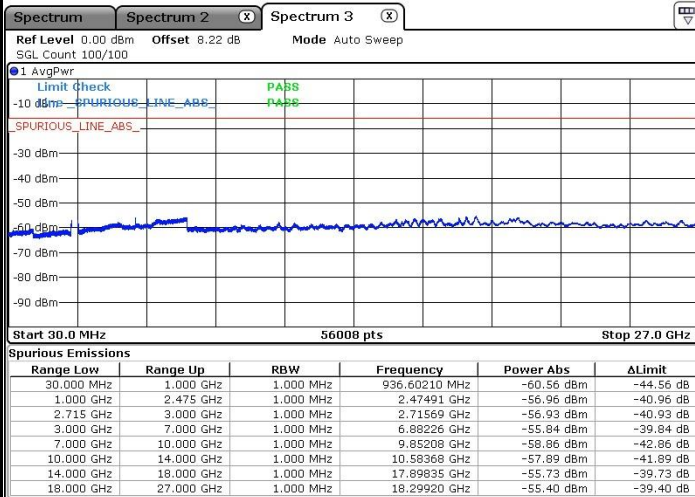
Highest Channel / 16QAM



Date: 30.JUL.2019 17:01:15

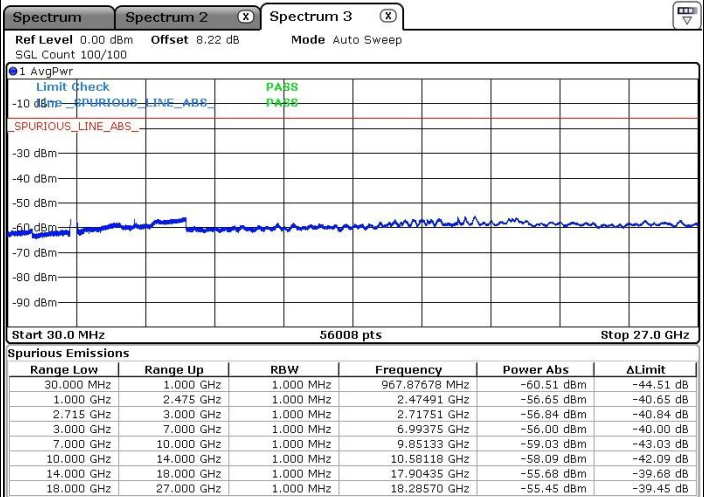
LTE Band 41 / 20MHz

Lowest Channel / QPSK



Date: 30.JUL.2019 17:22:52

Lowest Channel / 16QAM



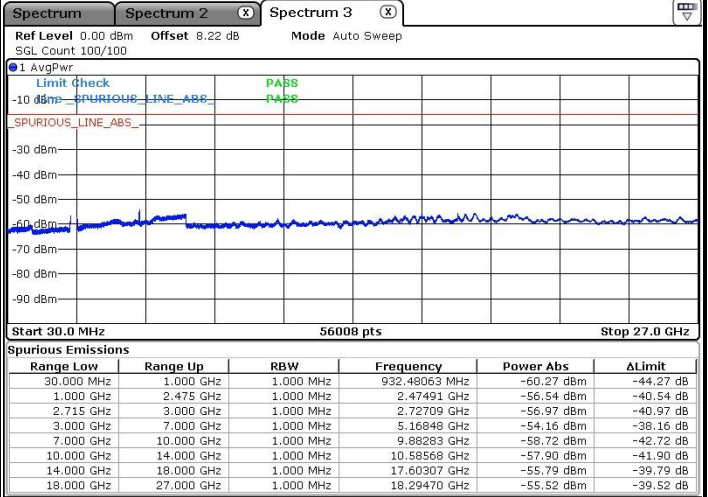
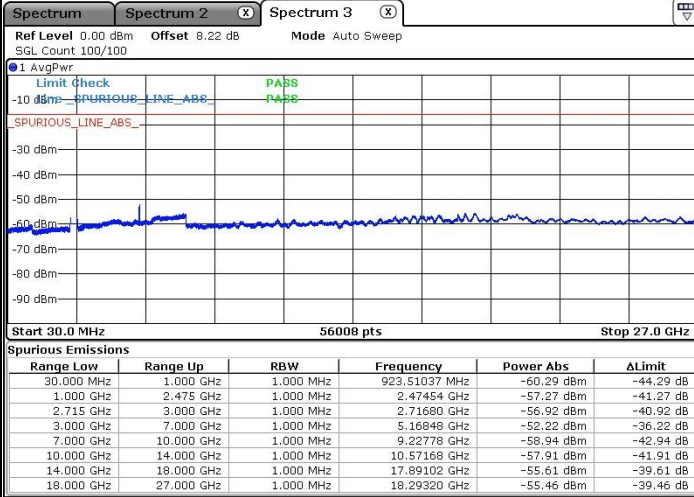
Date: 30.JUL.2019 17:20:10



LTE Band 41 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

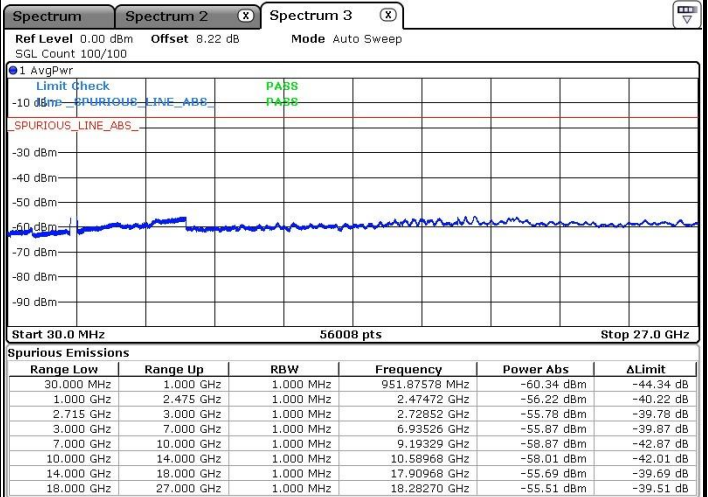
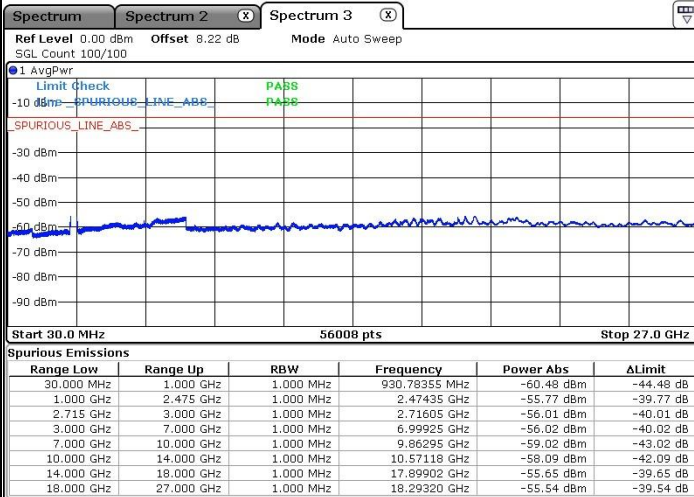


Date: 30.JUL.2019 17:24:21

Date: 30.JUL.2019 17:27:12

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 30.JUL.2019 17:31:39

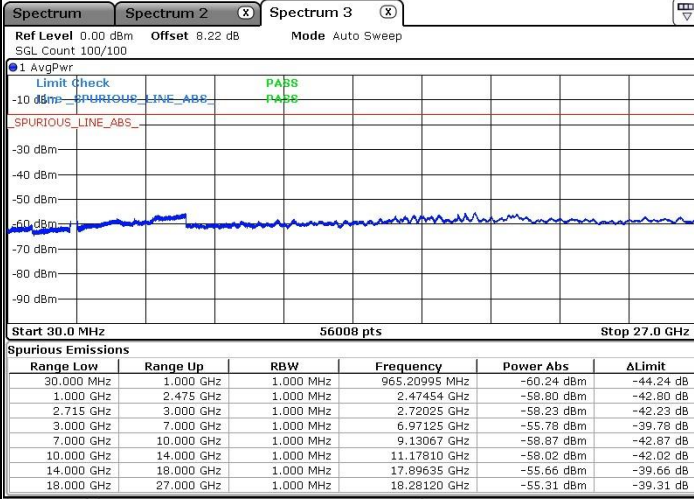
Date: 30.JUL.2019 17:32:34



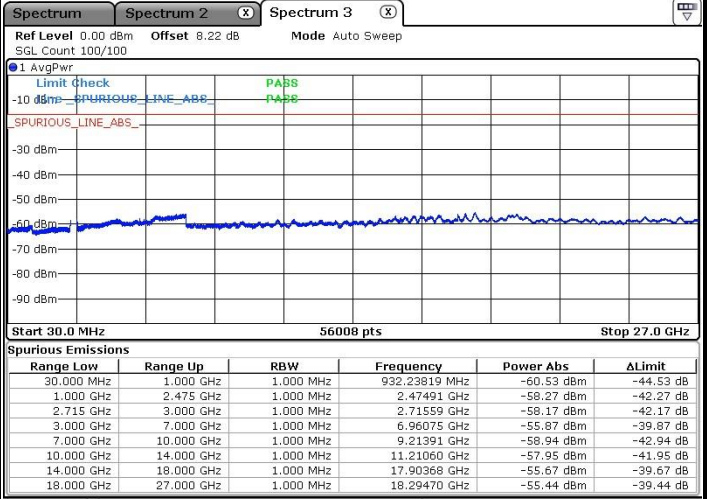
LTE Band 41 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

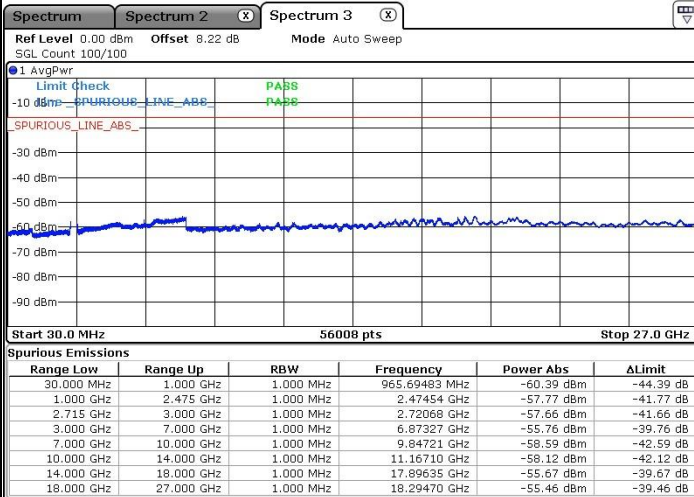


Date: 30.JUL.2019 15:36:59



Date: 30.JUL.2019 15:26:30

Highest Channel / 64QAM



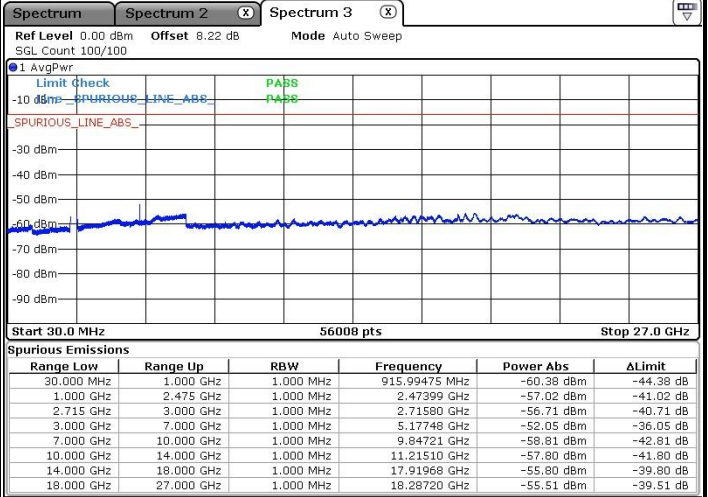
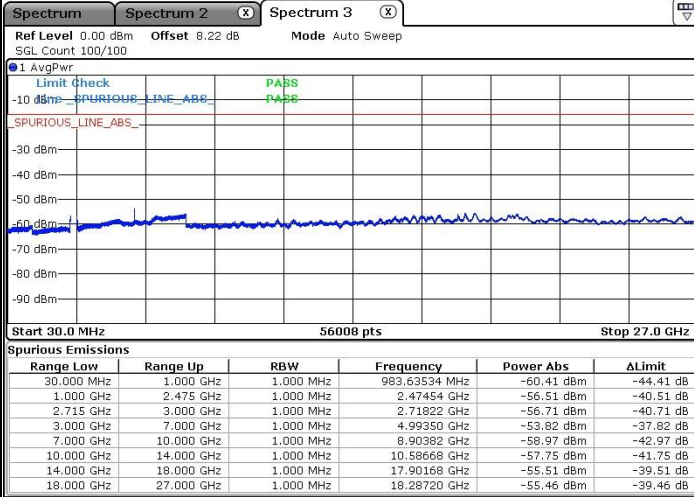
Date: 30.JUL.2019 15:17:27



LTE Band 41 / 10MHz

Lowest Channel / 64QAM

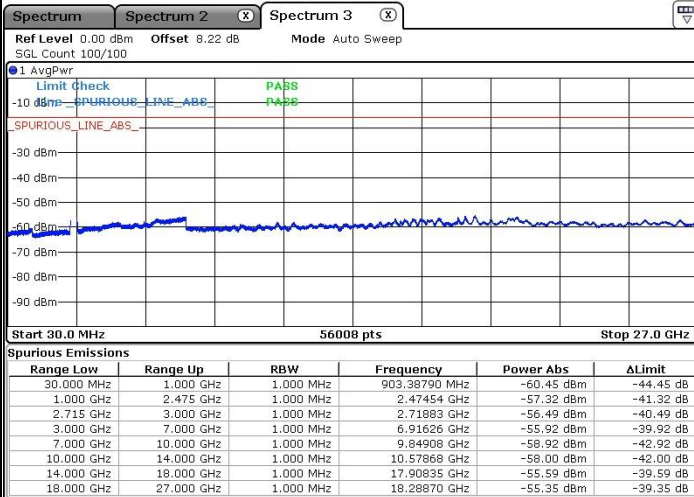
Middle Channel / 64QAM



Date: 30.JUL.2019 16:00:17

Date: 30.JUL.2019 16:07:01

Highest Channel / 64QAM



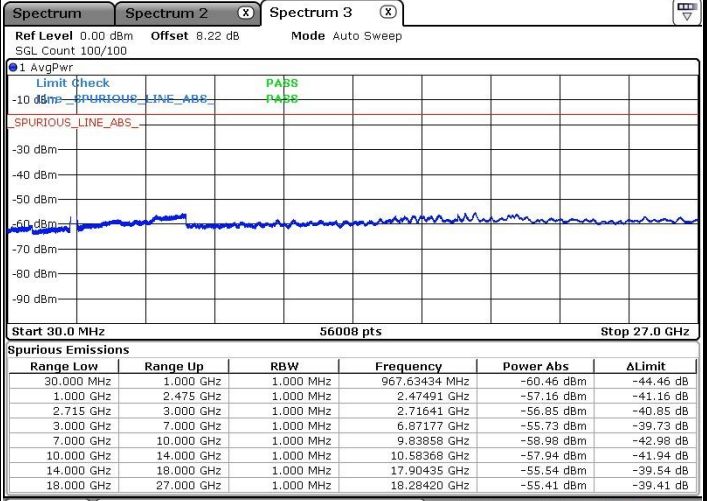
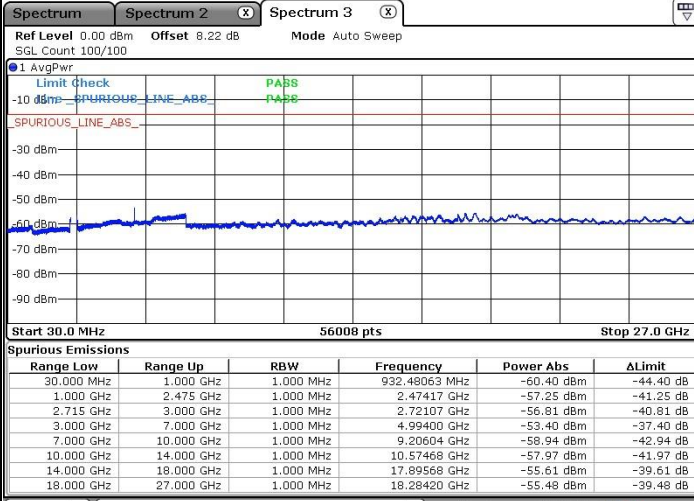
Date: 30.JUL.2019 16:17:12



LTE Band 41 / 15MHz

Lowest Channel / 64QAM

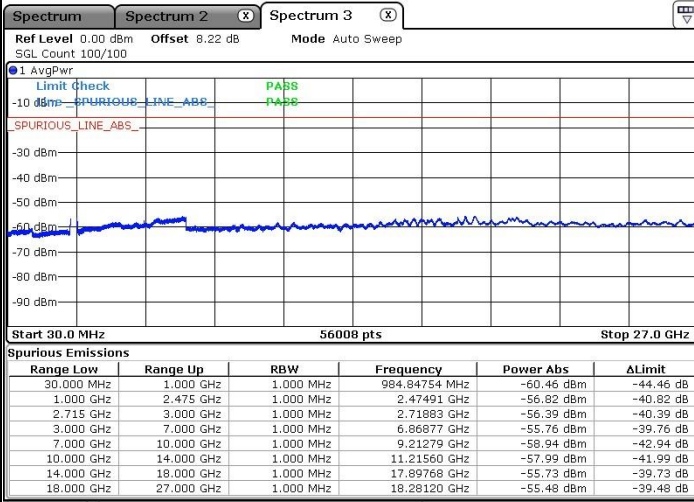
Middle Channel / 64QAM



Date: 30.JUL.2019 16:45:22

Date: 30.JUL.2019 16:55:34

Highest Channel / 64QAM



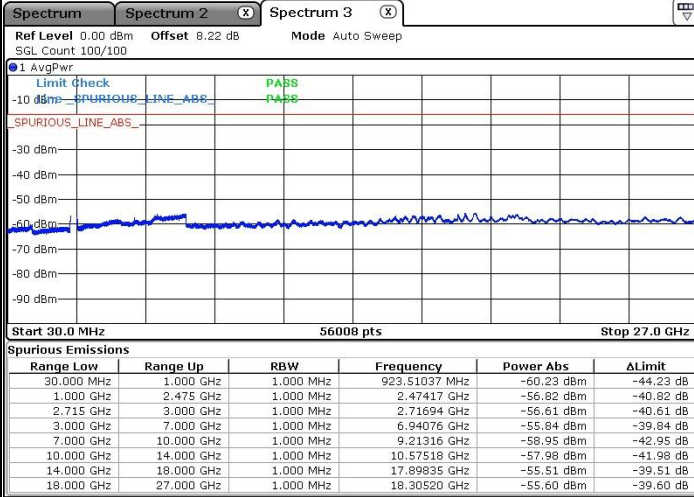
Date: 30.JUL.2019 17:04:14



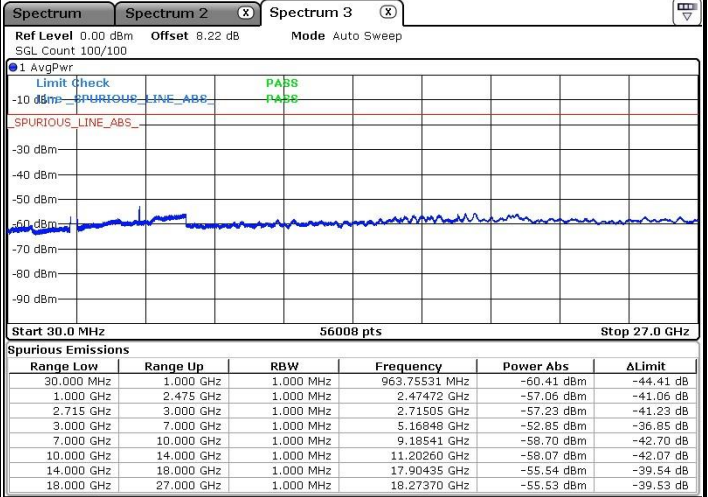
LTE Band 41 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

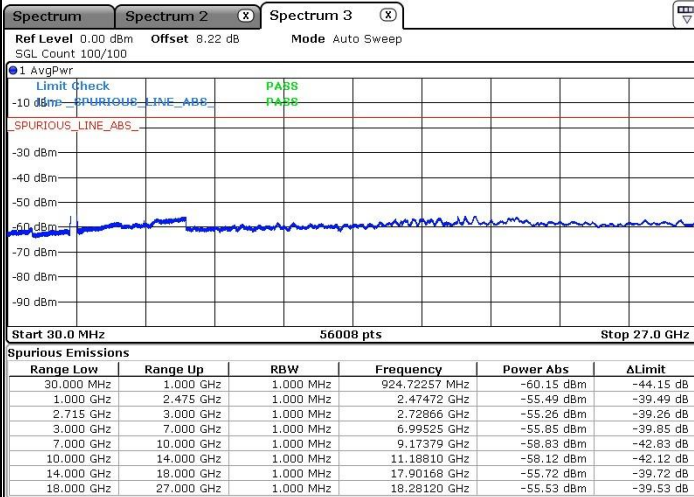


Date: 30.JUL.2019 17:18:42



Date: 30.JUL.2019 17:28:16

Highest Channel / 64QAM



Date: 30.JUL.2019 17:35:43



A.2.7 Frequency Stability

Test Conditions		LTE Band 41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0021	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0014	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0008	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage =120 V. ; Battery End Point (BEP) = 90 V. ; Maximum Voltage = 264 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



A.3 MIMO Antenna 2

A.3.1 Conducted Output Power(Average power)

LTE Band 41 Maximum Average Power [dBm]							Limit [dBm]	Test Result
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest		
20	1	0	QPSK	18.74	18.25	17.98	33.01	Pass
20	1	99		18.84	20.06	19.13		
20	18	0		18.47	18.88	18.06		
20	18	82		18.02	19.46	18.41		
20	100	0		17.85	18.28	18.39		
20	1	0	16-QAM	18.59	18.96	17.98		
20	1	99		18.68	20.11	19.29		
20	18	0		18.39	18.89	18.07		
20	18	82		17.92	19.46	18.38		
20	100	0		17.83	18.09	18.39		
20	1	0	64-QAM	18.57	18.53	18.14		
20	1	99		18.49	19.91	19.51		
20	18	0		18.37	18.64	18.08		
20	18	82		17.90	18.95	18.42		
20	100	0		17.81	18.18	18.41		
15	1	0	QPSK	19.01	19.19	18.54		
15	1	74		18.03	19.01	20.23		
15	16	0		17.49	17.67	17.06		
15	16	59		17.61	17.69	19.31		
15	75	0		17.64	17.91	18.61		
15	1	0	16-QAM	18.55	18.69	18.49		
15	1	74		18.14	18.98	20.26		
15	16	0		17.46	17.46	16.99		
15	16	59		17.48	17.71	19.07		
15	75	0		17.63	17.89	18.49		
15	1	0	64-QAM	18.79	19.19	18.72		
15	1	74		18.31	19.27	20.06		
15	16	0		17.46	17.51	17.02		
15	16	59		17.54	17.77	19.12		
15	75	0		17.65	17.87	18.52		



LTE Band 41 Maximum Average Power [dBm]							Limit [dBm]	Test Result
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest		
10	1	0	QPSK	18.74	18.65	18.13	33.01	Pass
10	1	49		18.11	19.56	18.92		
10	12	0		18.54	18.83	18.43		
10	12	38		17.83	19.04	18.36		
10	50	0		18.05	18.20	18.79		
10	1	0	16-QAM	18.62	18.97	18.09		
10	1	49		18.08	19.39	18.88		
10	12	0		18.46	18.76	18.39		
10	12	38		17.75	19.06	18.29		
10	50	0		18.03	18.26	18.65		
10	1	0	64-QAM	18.85	19.28	18.44		
10	1	49		18.07	19.83	19.03		
10	12	0		18.47	18.74	18.56		
10	12	38		17.76	19.01	17.90		
10	50	0		18.07	18.19	18.84		
5	1	0	QPSK	18.32	17.47	18.66		
5	1	24		17.56	18.04	17.47		
5	8	0		18.94	18.37	19.66		
5	8	17		17.52	18.61	18.31		
5	25	0		17.98	18.51	18.94		
5	1	0	16-QAM	18.57	17.44	18.82		
5	1	24		17.46	18.09	17.34		
5	8	0		18.77	17.89	19.67		
5	8	17		17.39	18.59	18.26		
5	25	0		17.95	18.58	18.86		
5	1	0	64-QAM	18.43	17.74	19.01		
5	1	24		17.74	18.42	17.54		
5	8	0		18.86	18.31	19.56		
5	8	17		17.36	18.61	18.29		
5	25	0		17.86	18.55	18.88		



A.3.2 Peak-to-Average Ratio

Mode	LTE Band 41 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.41	6.55	6.46	6.78	PASS
Middle CH	6.32	6.87	6.93	6.72	
Highest CH	5.62	5.19	6.06	6.46	
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.32	6.84			PASS
Middle CH	6.35	6.41			
Highest CH	5.91	6.14			



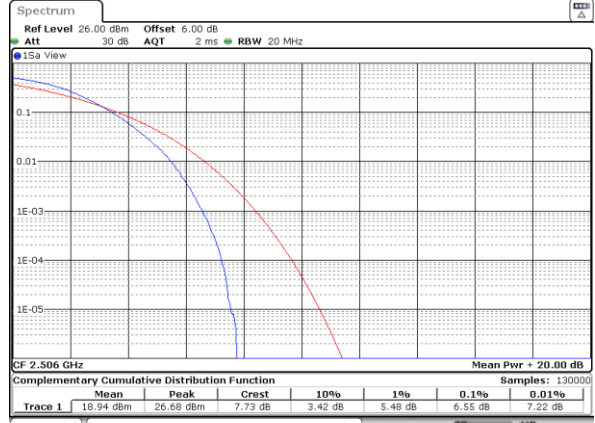
LTE Band 41 / 20MHz / QPSK

Lowest Channel / 1RB



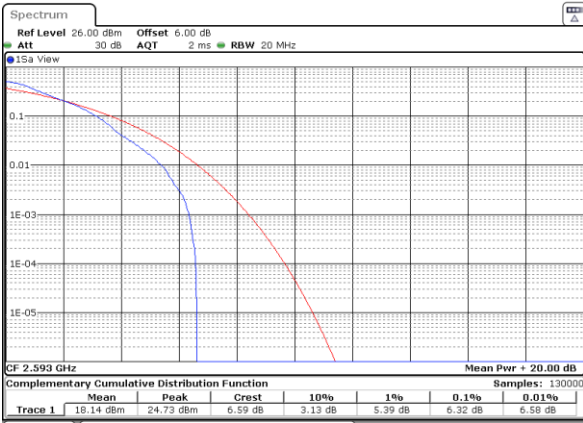
Date: 19 JUL 2019 22:38:30

Lowest Channel / Full RB



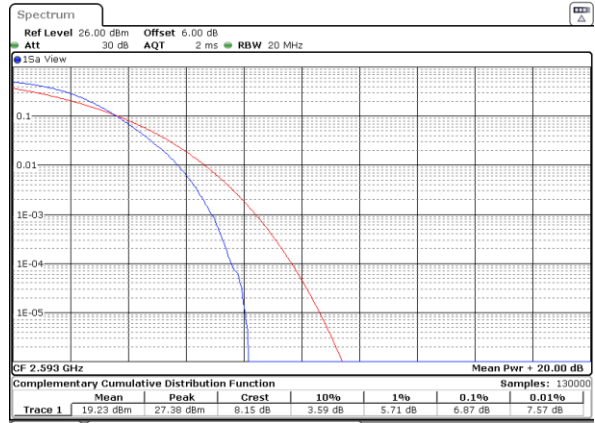
Date: 19 JUL 2019 22:37:02

Middle Channel / 1RB



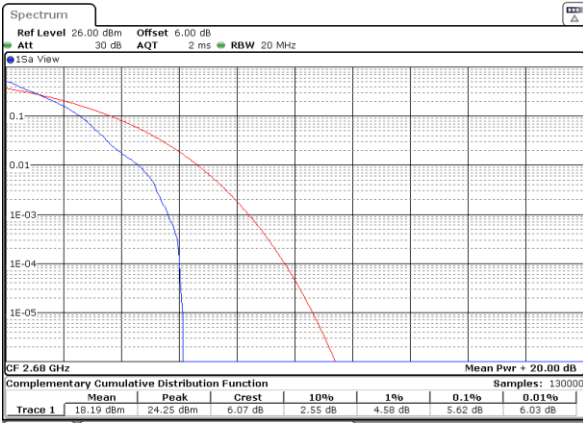
Date: 19 JUL 2019 22:41:47

Middle Channel / Full RB



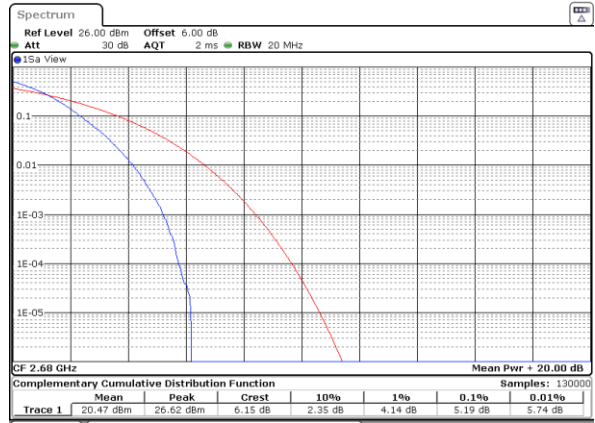
Date: 19 JUL 2019 22:40:12

Highest Channel / 1RB



Date: 19 JUL 2019 22:45:35

Highest Channel / Full RB

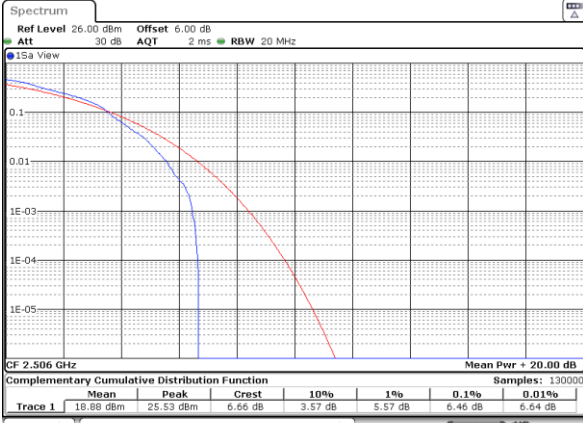


Date: 19 JUL 2019 22:44:38



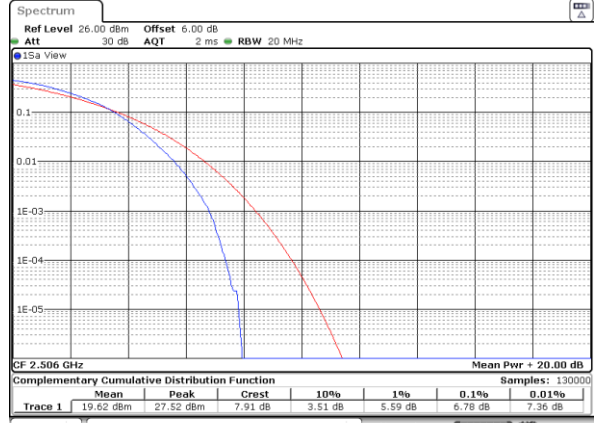
LTE Band 41 / 20MHz / 16QAM

Lowest Channel / 1RB



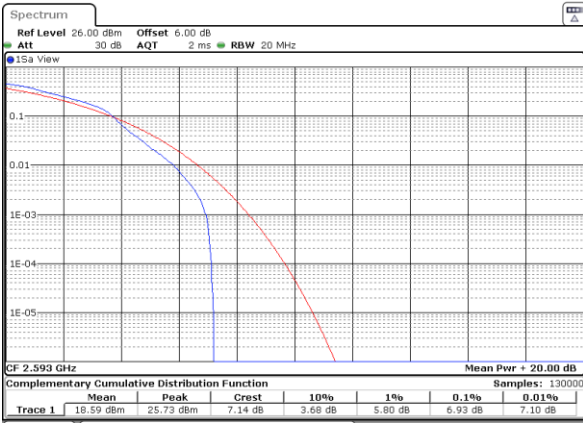
Date: 19 JUL 2019 22:38:49

Lowest Channel / Full RB



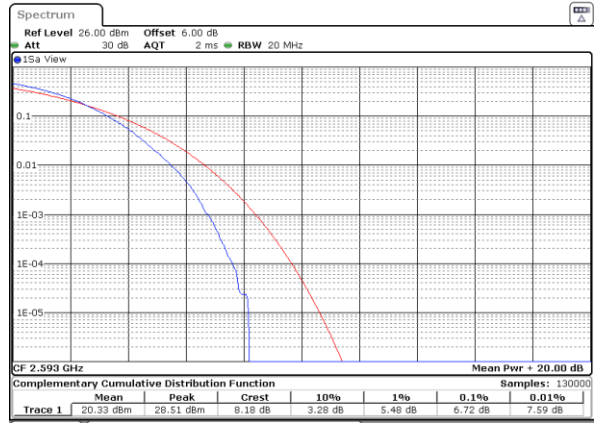
Date: 19 JUL 2019 22:37:33

Middle Channel / 1RB



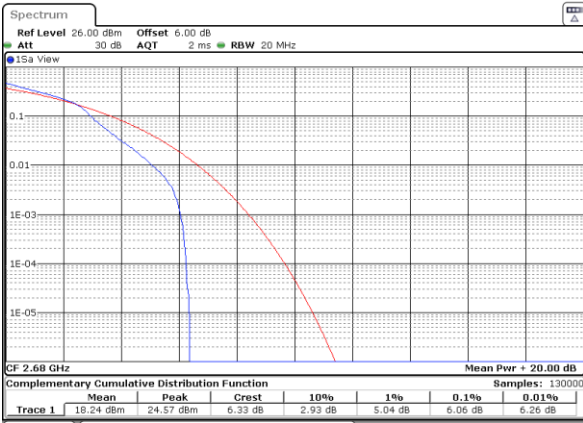
Date: 19 JUL 2019 21:14:03

Middle Channel / Full RB



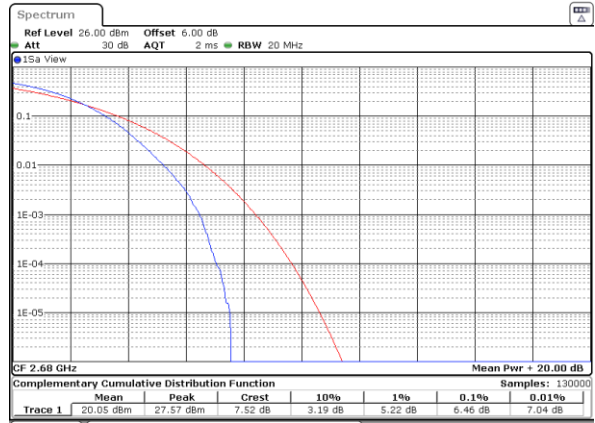
Date: 19 JUL 2019 22:40:36

Highest Channel / 1RB



Date: 19 JUL 2019 22:46:02

Highest Channel / Full RB

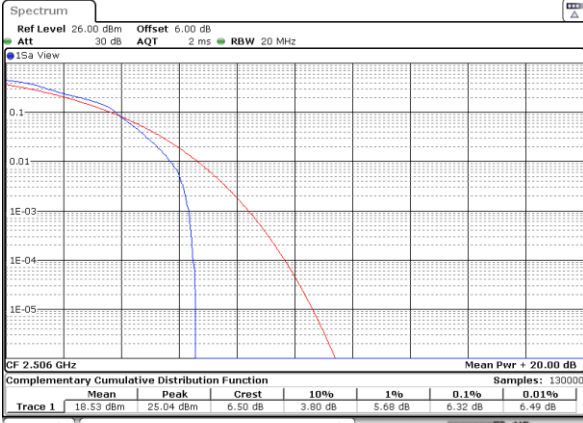


Date: 19 JUL 2019 22:44:59



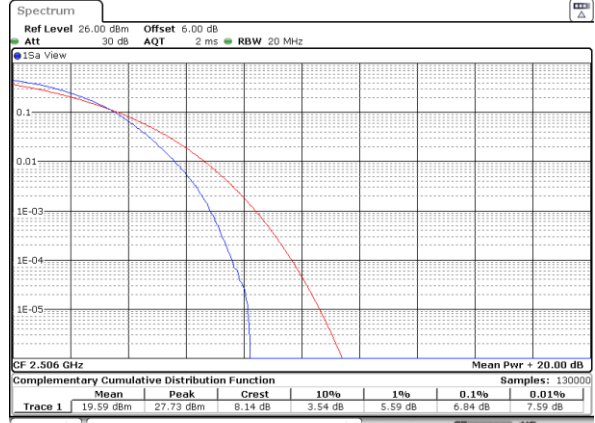
LTE Band 41 / 20MHz / 64QAM

Lowest Channel / 1RB



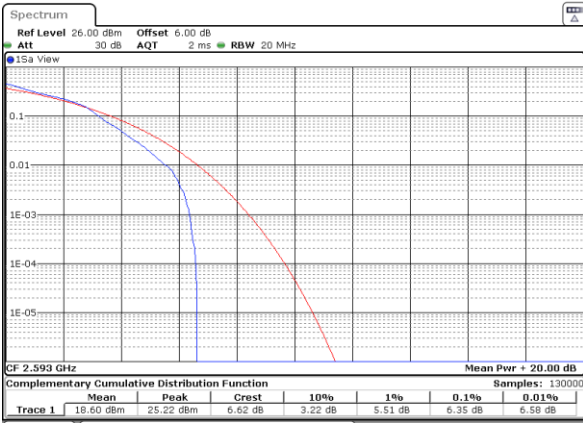
Date: 19 JUL 2019 22:39:13

Lowest Channel / Full RB



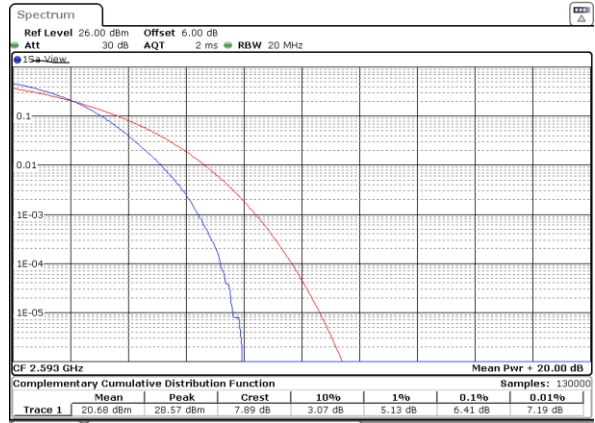
Date: 19 JUL 2019 22:38:03

Middle Channel / 1RB



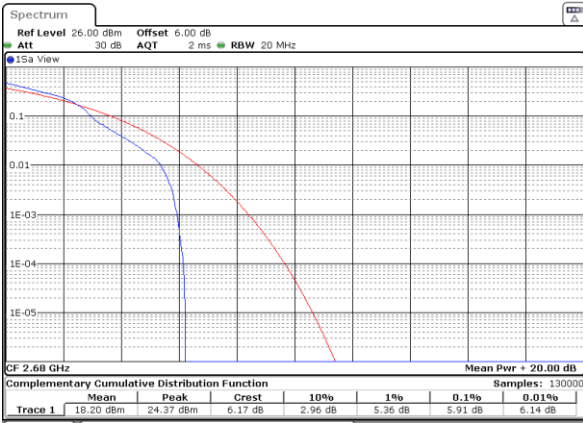
Date: 19 JUL 2019 22:43:14

Middle Channel / Full RB



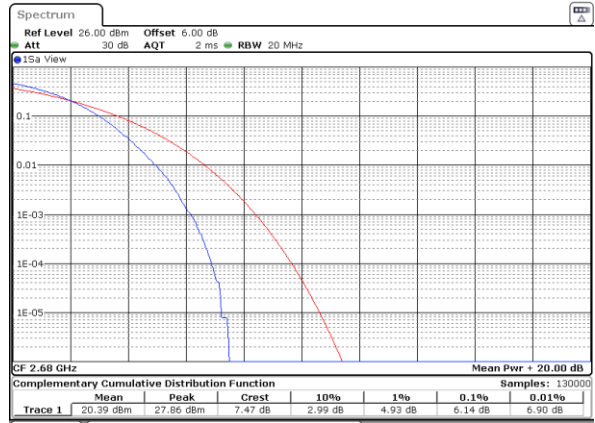
Date: 19 JUL 2019 21:13:22

Highest Channel / 1RB



Date: 19 JUL 2019 22:46:23

Highest Channel / Full RB



Date: 19 JUL 2019 22:45:13



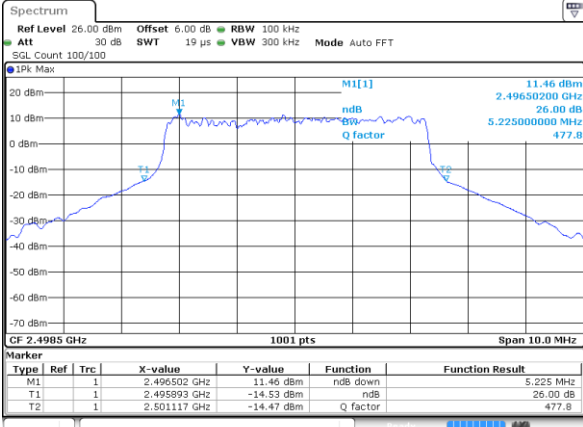
A.3.3 26dB Bandwidth

Mode	LTE Band 41 : 26dB BW(MHz)											
BW	5MHz		10MHz		15MHz		20MHz		5MHz	10MHz	15MHz	20MHz
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	5.225	5.045	9.850	9.690	14.296	14.505	20.220	20.100	5.015	9.770	14.206	20.140
Middle CH	5.105	5.255	9.750	9.890	14.416	14.146	20.300	20.140	5.485	10.01	14.565	20.100
Highest CH	5.145	5.015	9.570	9.890	14.146	14.266	20.060	20.180	5.255	9.670	14.116	20.140



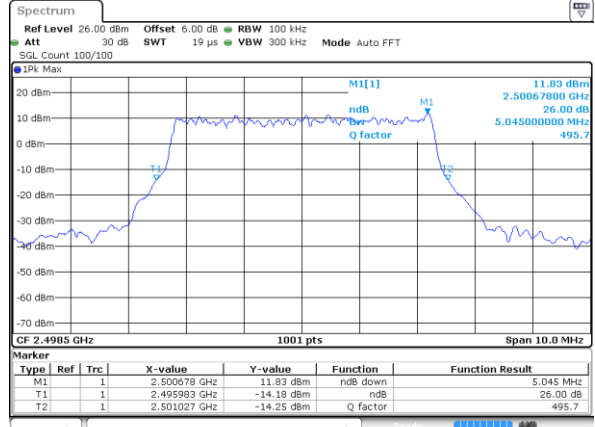
LTE Band 41

Lowest Channel / 5MHz / QPSK



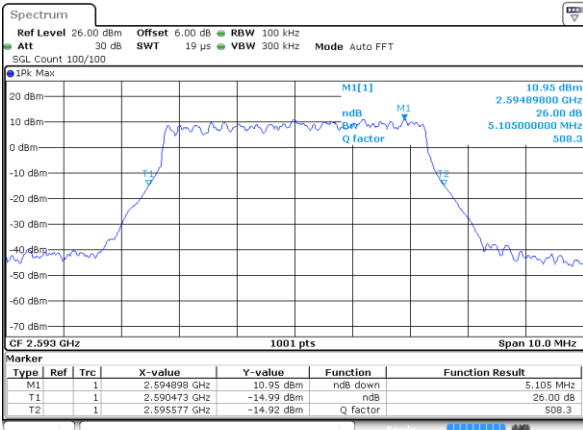
Date: 18 JUL 2019 22:15:40

Lowest Channel / 5MHz / 16QAM



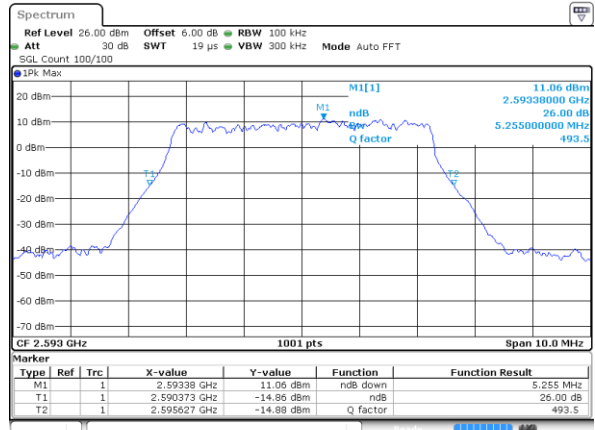
Date: 18 JUL 2019 22:16:23

Middle Channel / 5MHz / QPSK



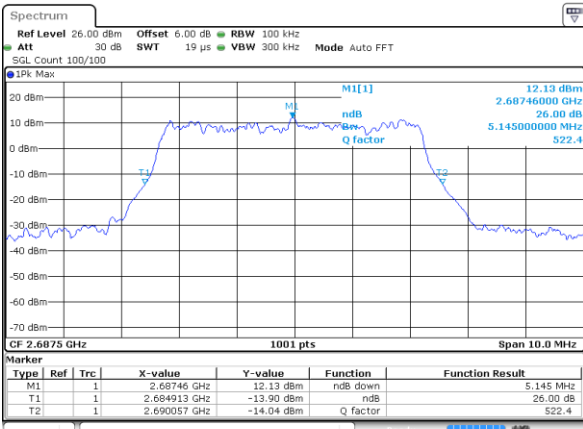
Date: 18 JUL 2019 22:26:17

Middle Channel / 5MHz / 16QAM



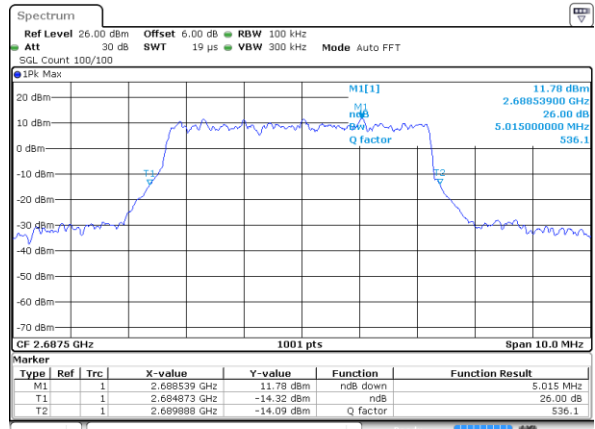
Date: 18 JUL 2019 22:28:02

Highest Channel / 5MHz / QPSK



Date: 18 JUL 2019 22:35:23

Highest Channel / 5MHz / 16QAM

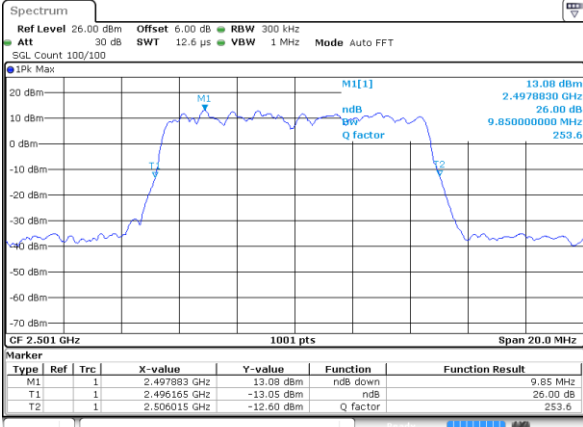


Date: 18 JUL 2019 22:35:57



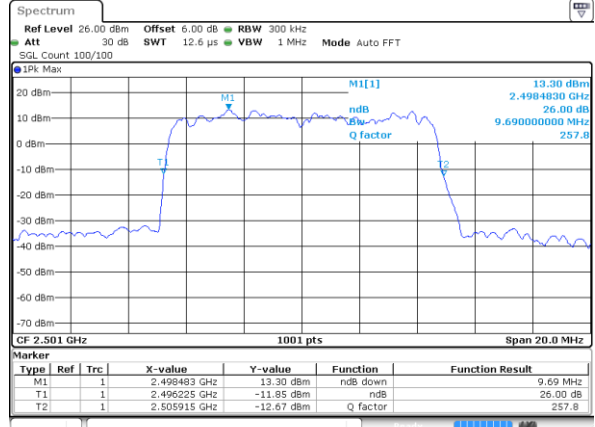
LTE Band 41

Lowest Channel / 10MHz / QPSK



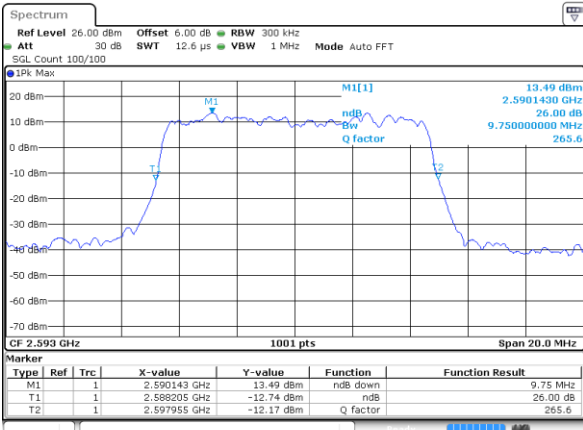
Date: 18 JUL 2019 22:43:47

Lowest Channel / 10MHz / 16QAM



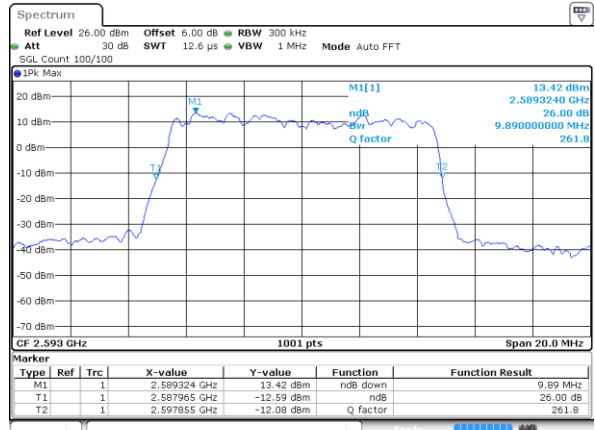
Date: 18 JUL 2019 22:47:36

Middle Channel / 10MHz / QPSK



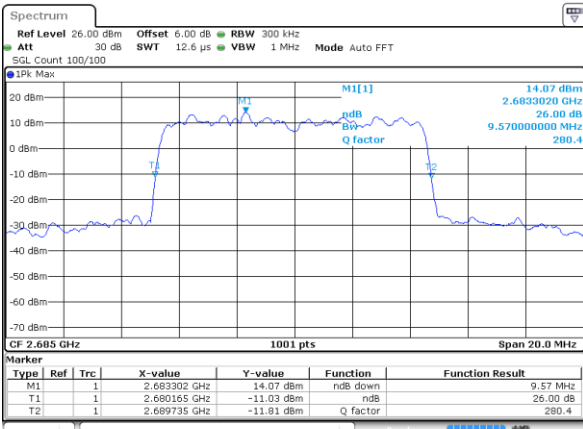
Date: 18 JUL 2019 22:53:56

Middle Channel / 10MHz / 16QAM



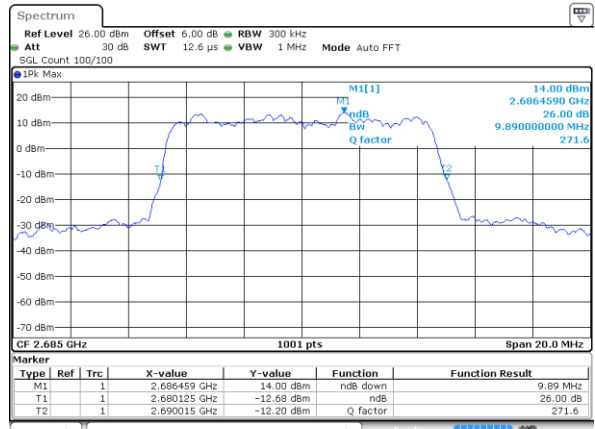
Date: 18 JUL 2019 22:54:21

Highest Channel / 10MHz / QPSK



Date: 18 JUL 2019 22:59:27

Highest Channel / 10MHz / 16QAM

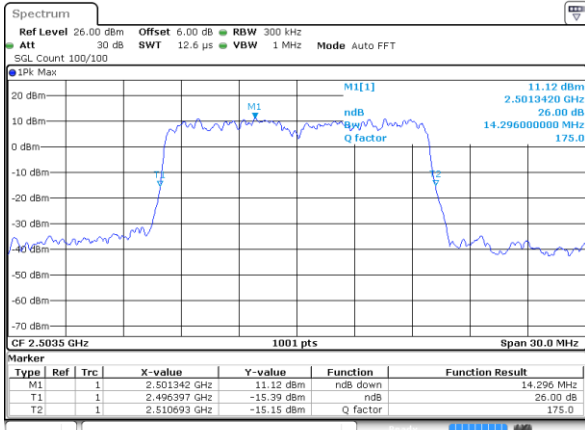


Date: 18 JUL 2019 22:59:59



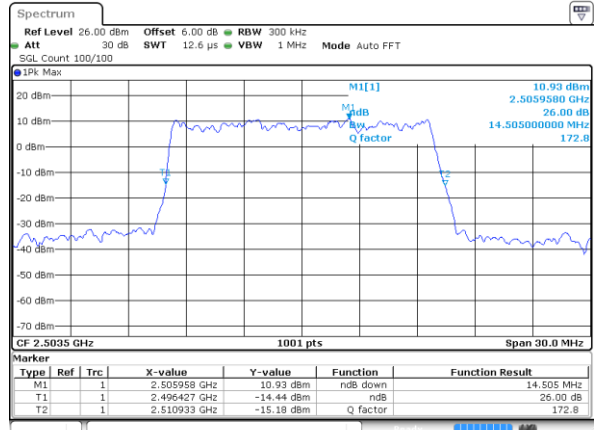
LTE Band 41

Lowest Channel / 15MHz / QPSK



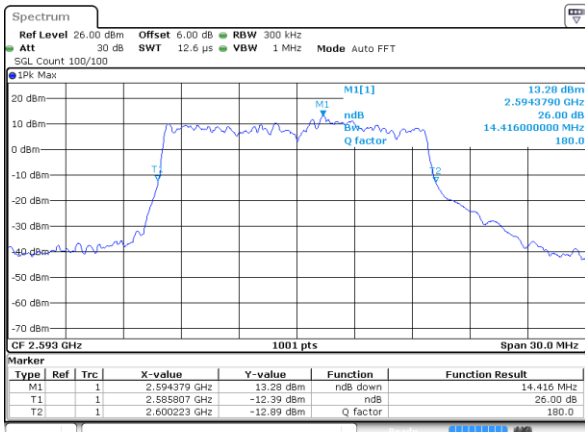
Date: 18 JUL 2019 23:09:04

Lowest Channel / 15MHz / 16QAM



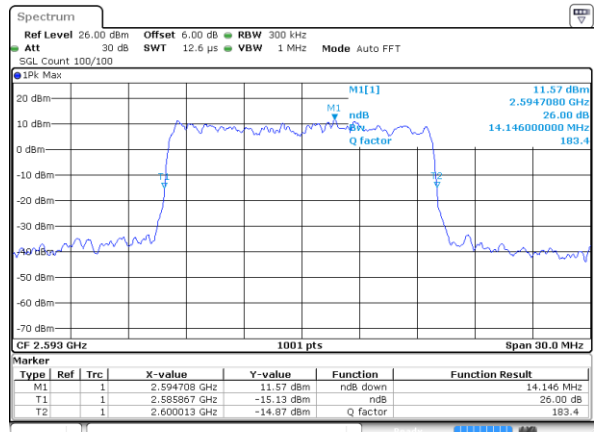
Date: 18 JUL 2019 23:09:47

Middle Channel / 15MHz / QPSK



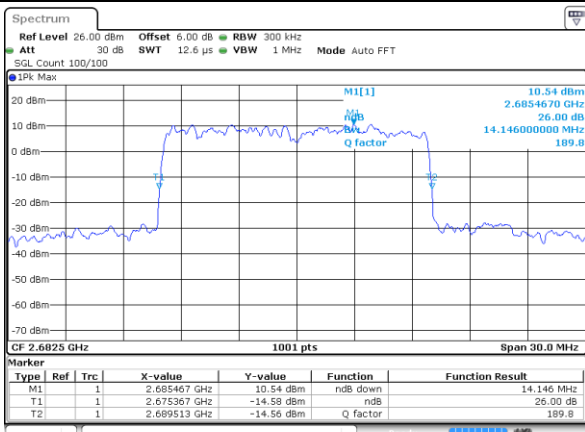
Date: 18 JUL 2019 23:17:05

Middle Channel / 15MHz / 16QAM



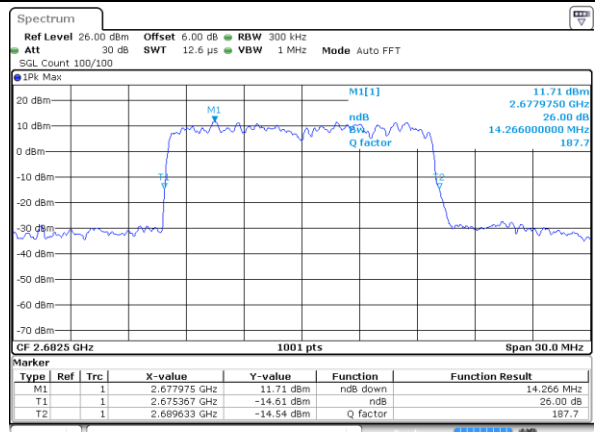
Date: 18 JUL 2019 23:17:19

Highest Channel / 15MHz / QPSK



Date: 18 JUL 2019 23:23:03

Highest Channel / 15MHz / 16QAM

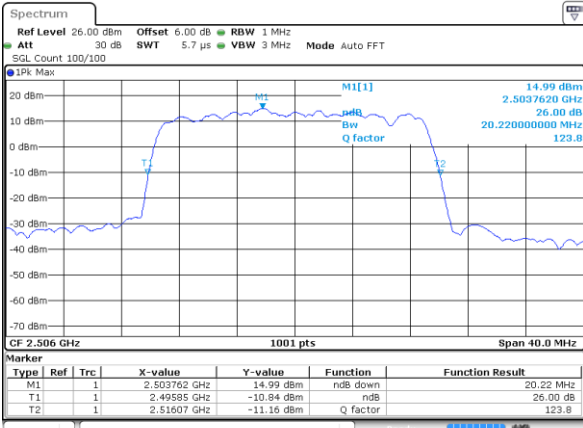


Date: 18 JUL 2019 23:23:28



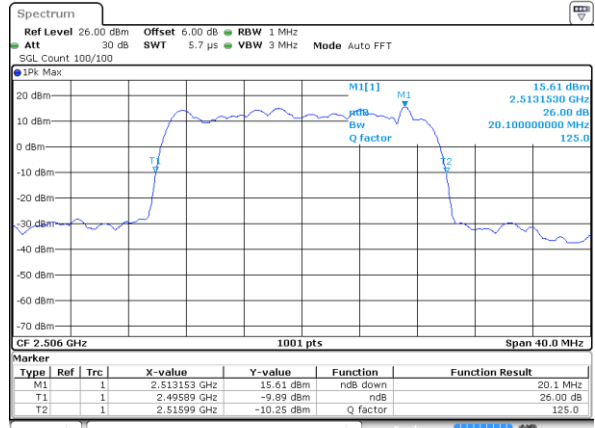
LTE Band 41

Lowest Channel / 20MHz / QPSK



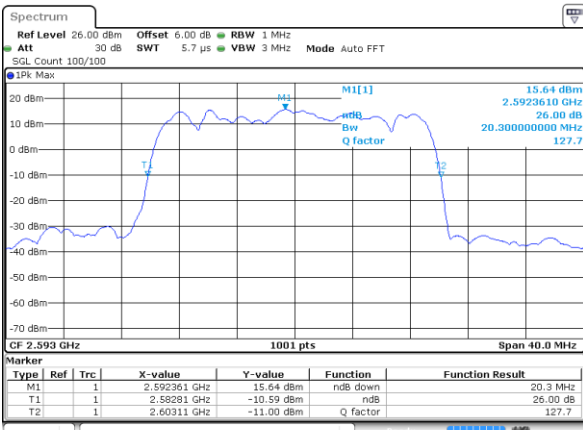
Date: 19 JUL 2019 00:55:25

Lowest Channel / 20MHz / 16QAM



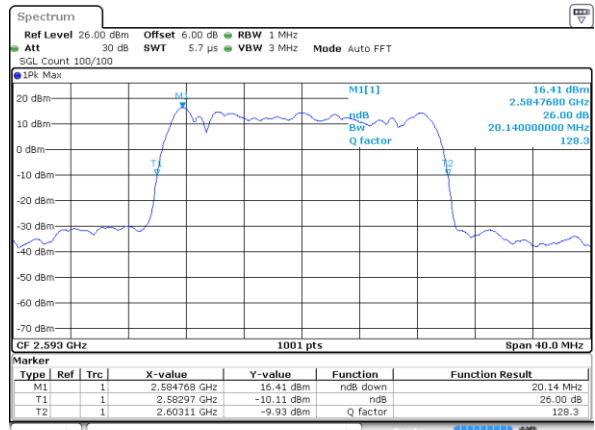
Date: 19 JUL 2019 00:56:03

Middle Channel / 20MHz / QPSK



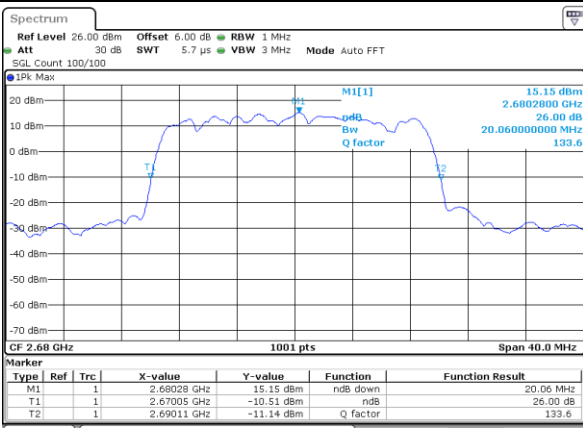
Date: 19 JUL 2019 01:02:07

Middle Channel / 20MHz / 16QAM



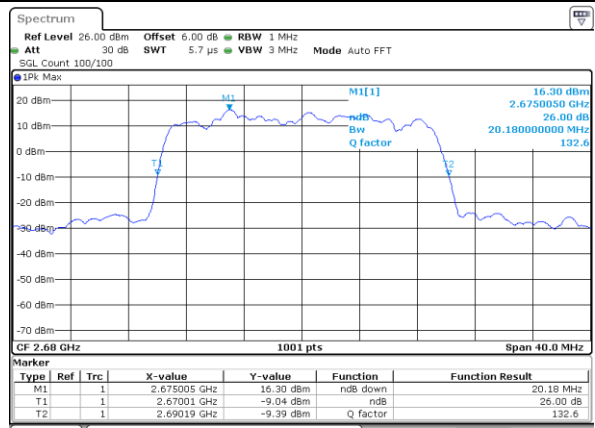
Date: 19 JUL 2019 01:02:36

Highest Channel / 20MHz / QPSK



Date: 19 JUL 2019 01:10:05

Highest Channel / 20MHz / 16QAM

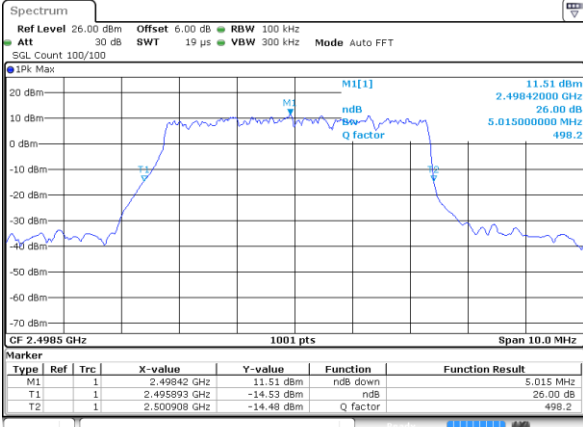


Date: 19 JUL 2019 01:10:43



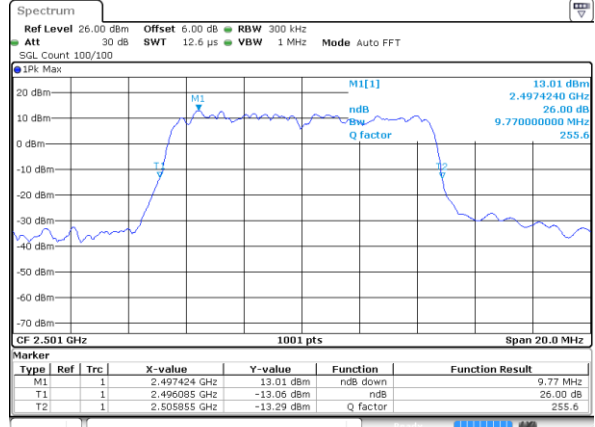
LTE Band 41

Lowest Channel / 5MHz / 64QAM



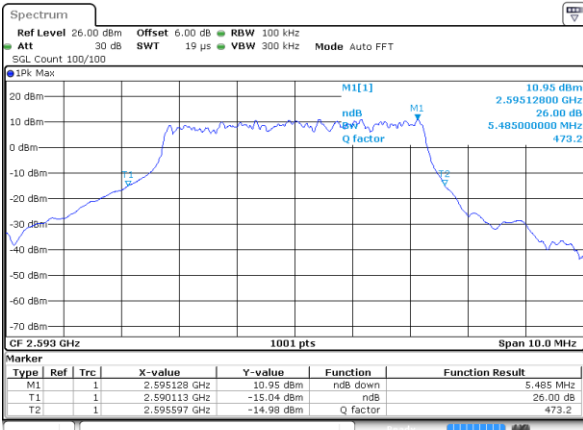
Date: 18 JUL 2019 22:17:06

Lowest Channel / 10MHz / 64QAM



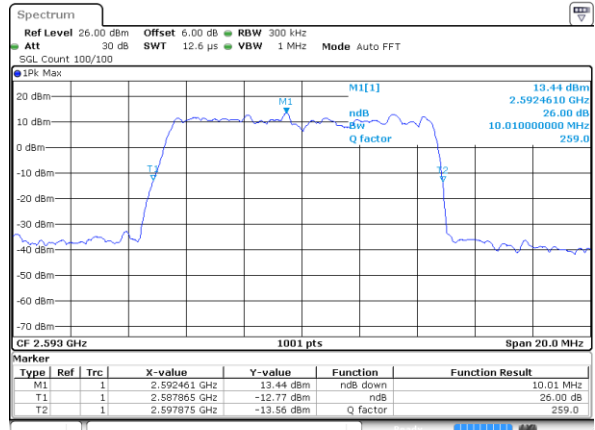
Date: 18 JUL 2019 22:48:11

Middle Channel / 5MHz / 64QAM



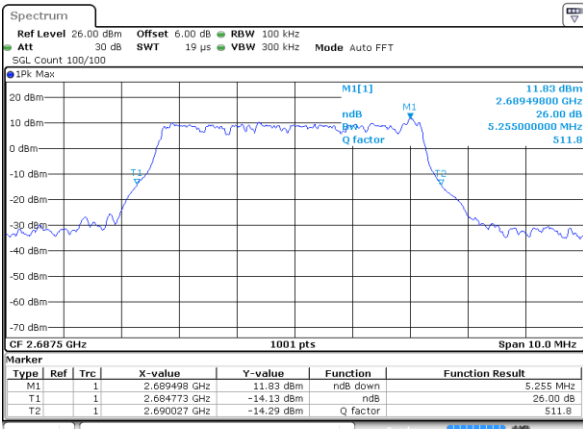
Date: 18 JUL 2019 22:28:30

Middle Channel / 10MHz / 64QAM



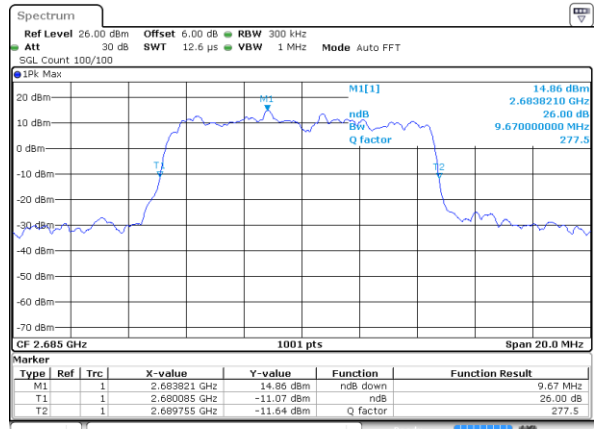
Date: 18 JUL 2019 22:54:50

Highest Channel / 5MHz / 64QAM



Date: 18 JUL 2019 22:36:31

Highest Channel / 10MHz / 64QAM

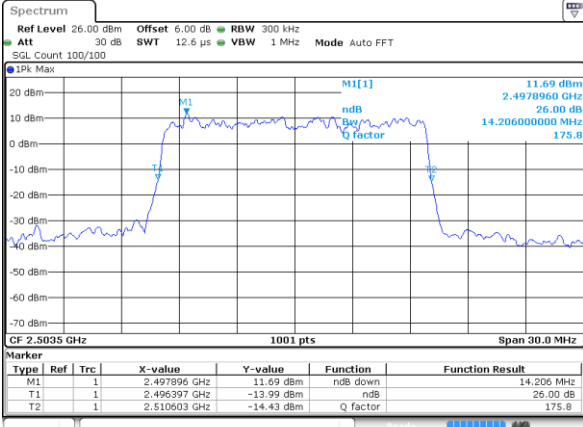


Date: 18 JUL 2019 23:00:30



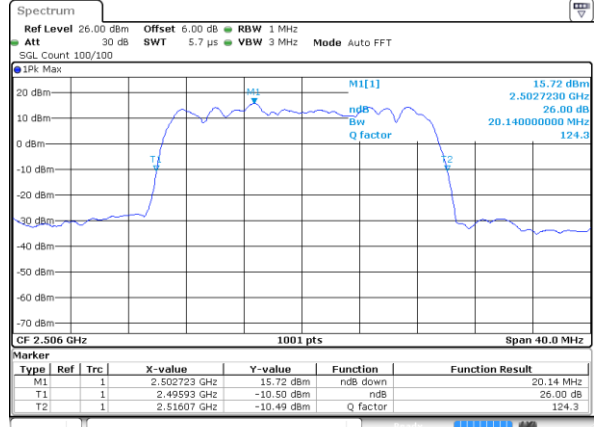
LTE Band 41

Lowest Channel / 15MHz / 64QAM



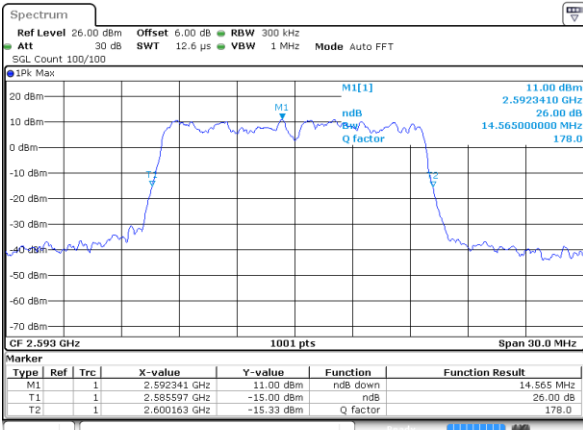
Date: 18 JUL 2019 23:10:23

Lowest Channel / 20MHz / 64QAM



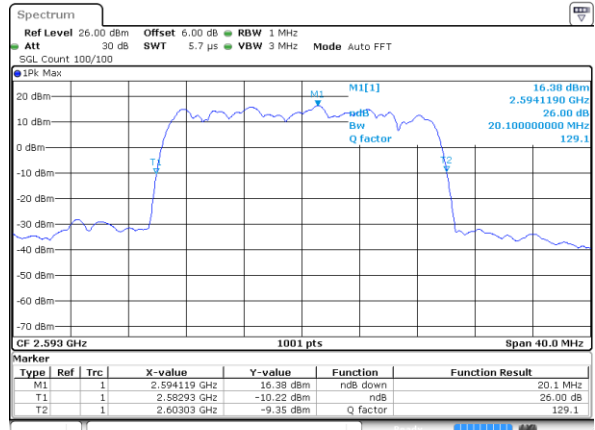
Date: 19 JUL 2019 00:56:40

Middle Channel / 15MHz / 64QAM



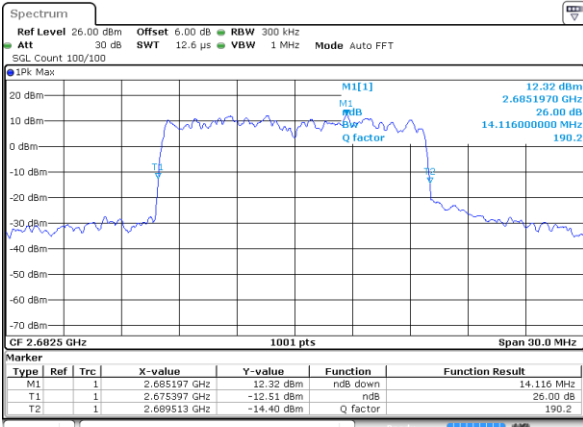
Date: 18 JUL 2019 23:18:05

Middle Channel / 20MHz / 64QAM



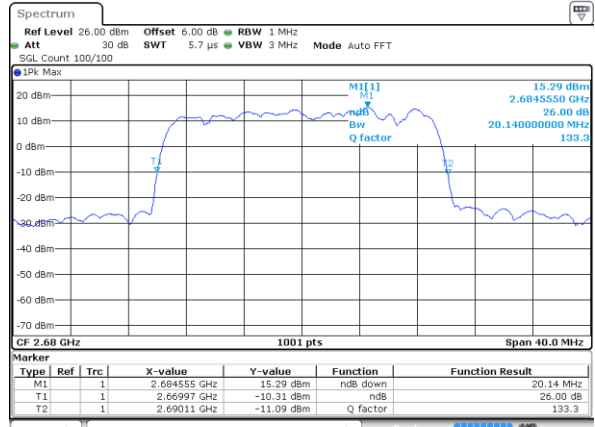
Date: 19 JUL 2019 01:03:11

Highest Channel / 15MHz / 64QAM



Date: 18 JUL 2019 23:24:00

Highest Channel / 20MHz / 64QAM



Date: 19 JUL 2019 01:11:16



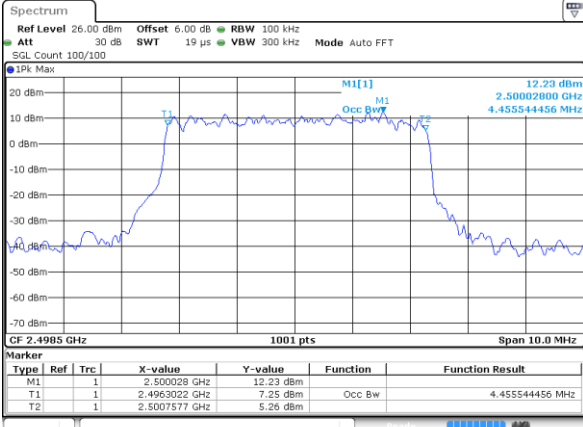
A.3.4 Occupied Bandwidth

Mode	LTE Band 41 : 99%OBW(MHz)											
	5MHz		10MHz		15MHz		20MHz		5MHz	10MHz	15MHz	20MHz
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	4.46	4.48	8.99	9.07	13.46	13.49	18.46	18.34	4.51	9.07	13.46	18.26
Middle CH	4.53	4.46	9.01	9.05	13.61	13.49	18.42	18.26	4.50	9.03	13.46	18.42
Highest CH	4.52	4.50	8.99	8.99	13.43	13.40	18.18	18.26	4.51	9.01	13.43	18.30



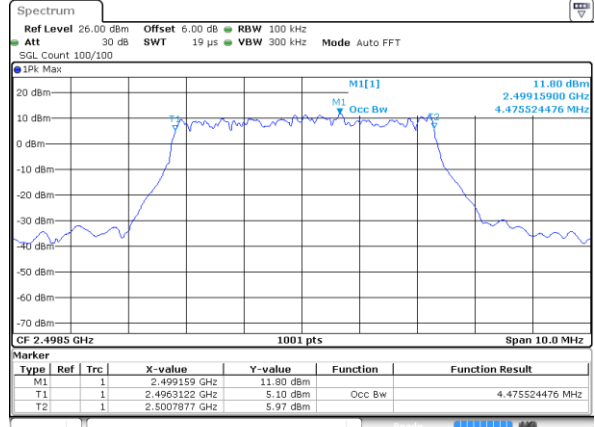
LTE Band 41

Lowest Channel / 5MHz / QPSK



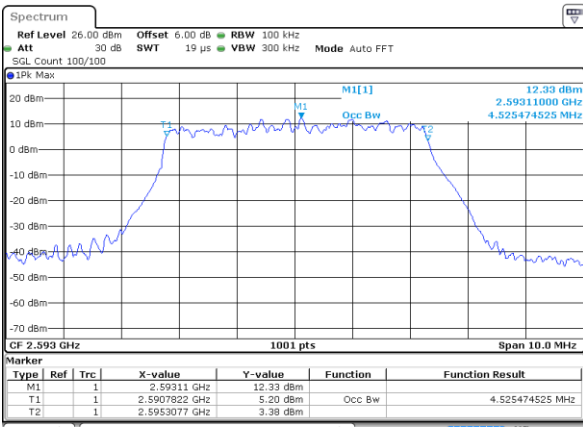
Date: 18 JUL 2019 22:15:32

Lowest Channel / 5MHz / 16QAM



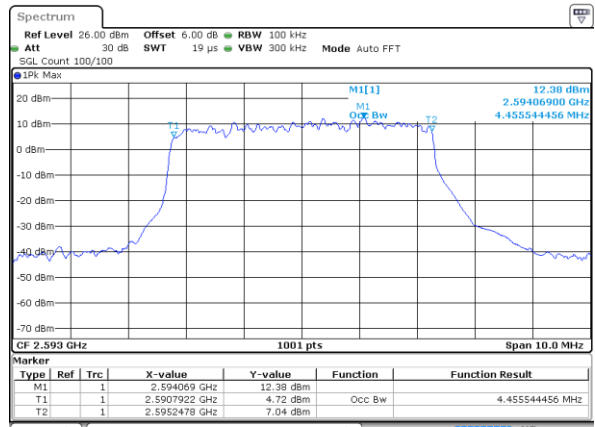
Date: 18 JUL 2019 22:16:17

Middle Channel / 5MHz / QPSK



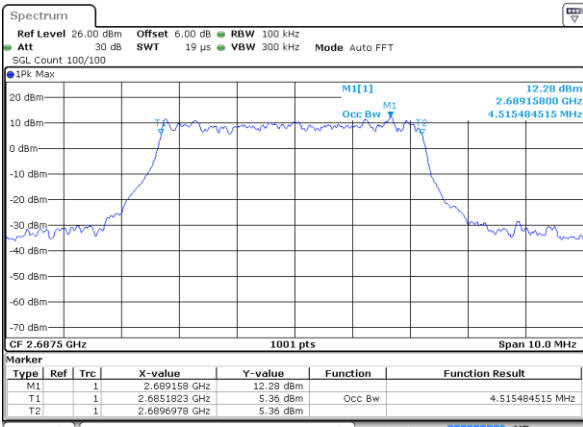
Date: 18 JUL 2019 22:26:11

Middle Channel / 5MHz / 16QAM



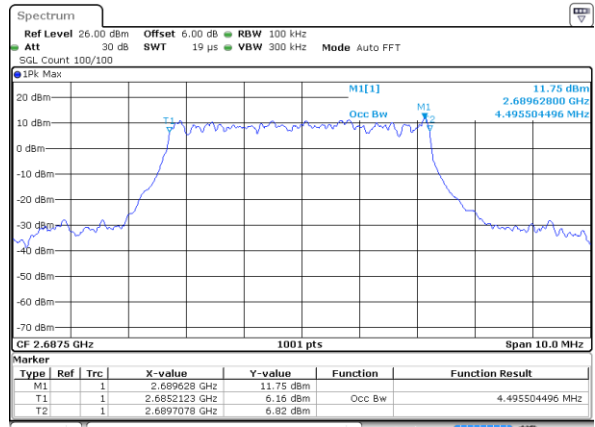
Date: 18 JUL 2019 22:27:55

Highest Channel / 5MHz / QPSK



Date: 18 JUL 2019 22:35:16

Highest Channel / 5MHz / 16QAM

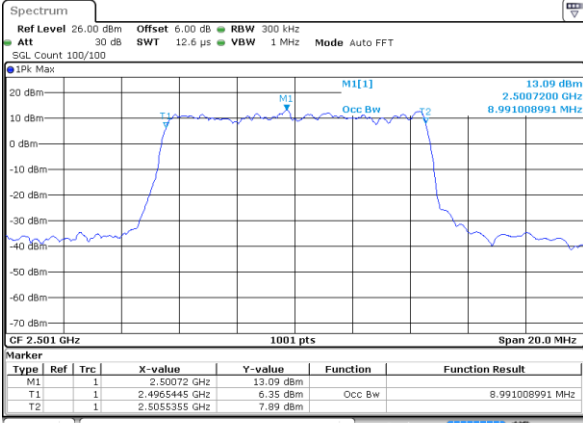


Date: 18 JUL 2019 22:35:51



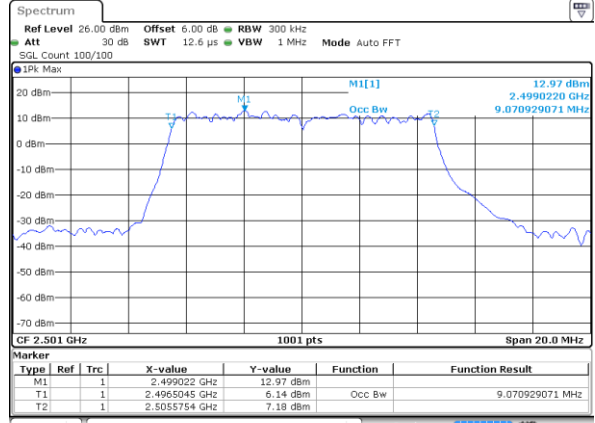
LTE Band 41

Lowest Channel / 10MHz / QPSK



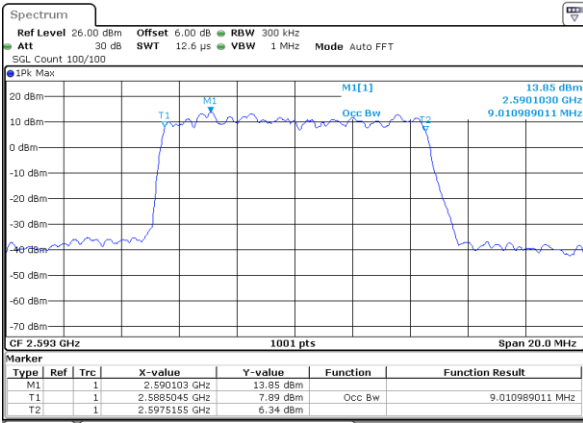
Date: 18 JUL 2019 22:43:39

Lowest Channel / 10MHz / 16QAM



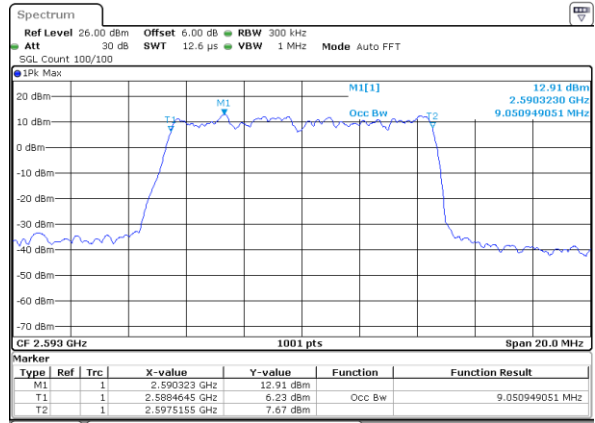
Date: 18 JUL 2019 22:47:30

Middle Channel / 10MHz / QPSK



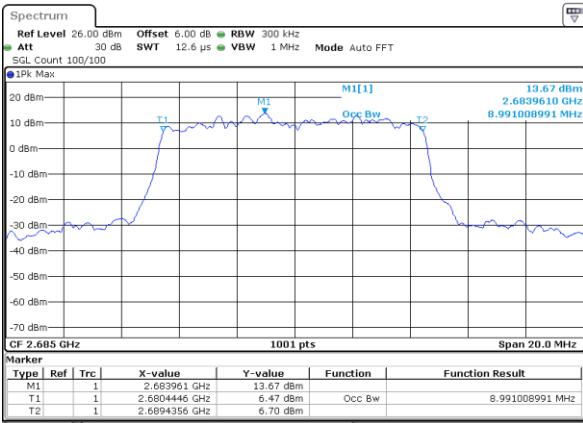
Date: 18 JUL 2019 22:53:49

Middle Channel / 10MHz / 16QAM



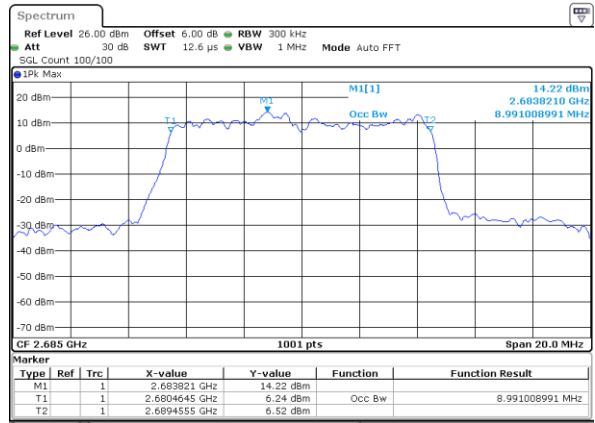
Date: 18 JUL 2019 22:54:15

Highest Channel / 10MHz / QPSK



Date: 18 JUL 2019 22:59:21

Highest Channel / 10MHz / 16QAM

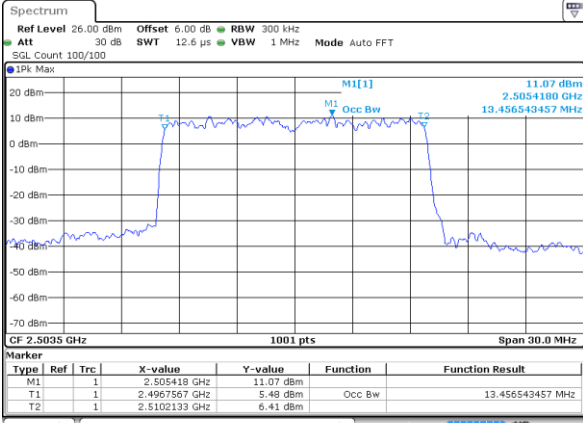


Date: 18 JUL 2019 22:59:53



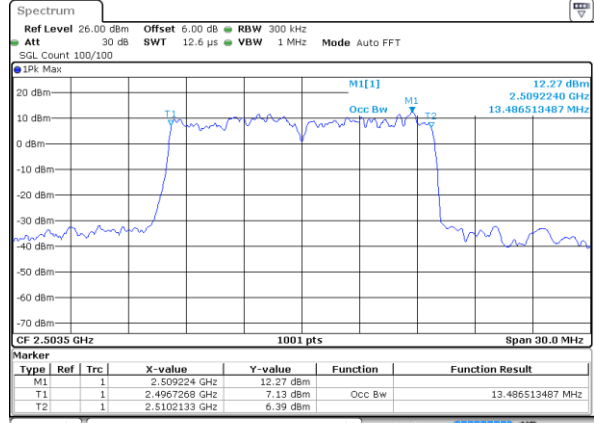
LTE Band 41

Lowest Channel / 15MHz / QPSK



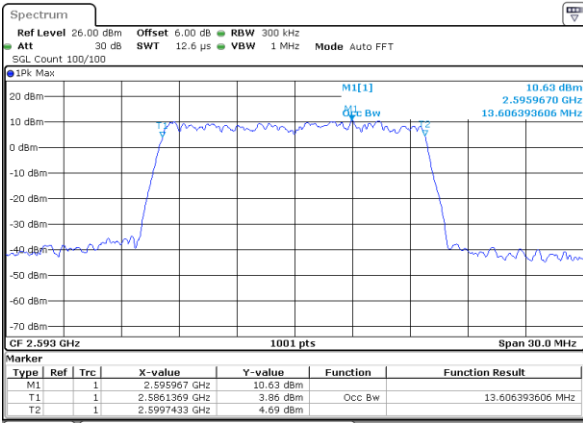
Date: 18 JUL 2019 23:09:11

Lowest Channel / 15MHz / 16QAM



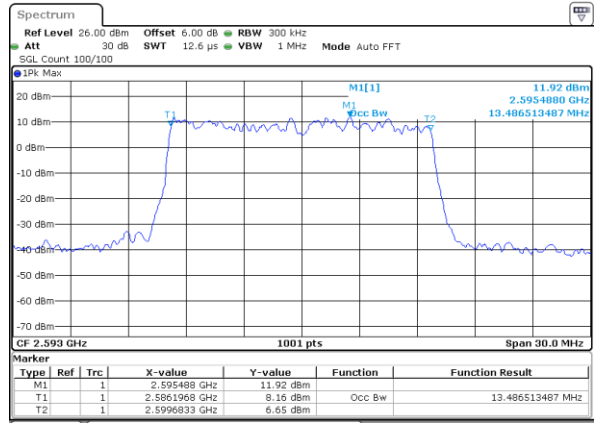
Date: 18 JUL 2019 23:09:41

Middle Channel / 15MHz / QPSK



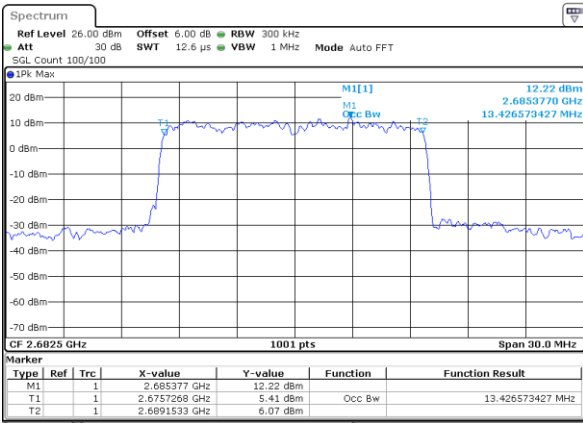
Date: 18 JUL 2019 23:16:58

Middle Channel / 15MHz / 16QAM



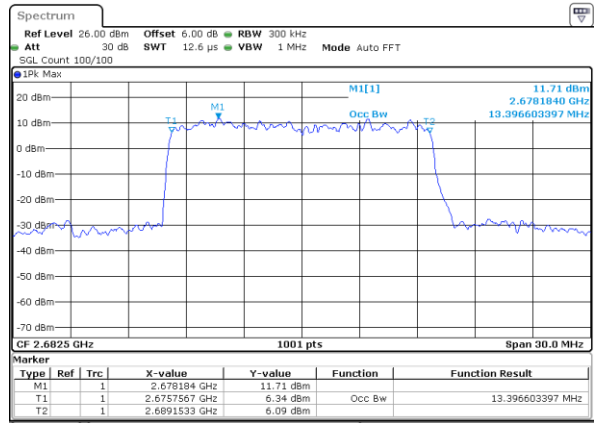
Date: 18 JUL 2019 23:17:25

Highest Channel / 15MHz / QPSK



Date: 18 JUL 2019 23:22:57

Highest Channel / 15MHz / 16QAM

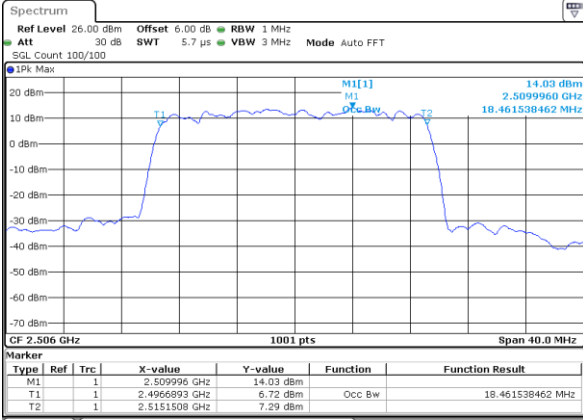


Date: 18 JUL 2019 23:23:21



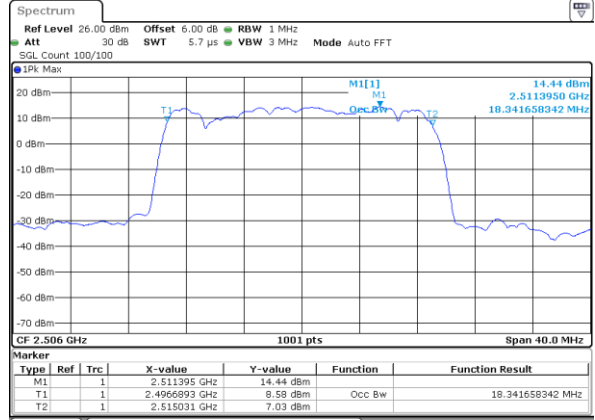
LTE Band 41

Lowest Channel / 20MHz / QPSK



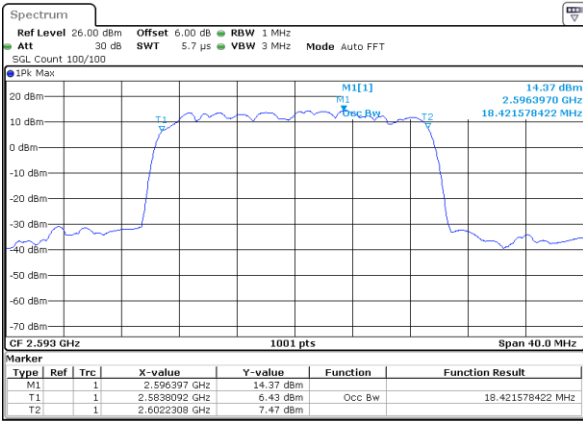
Date: 19 JUL 2019 00:55:18

Lowest Channel / 20MHz / 16QAM



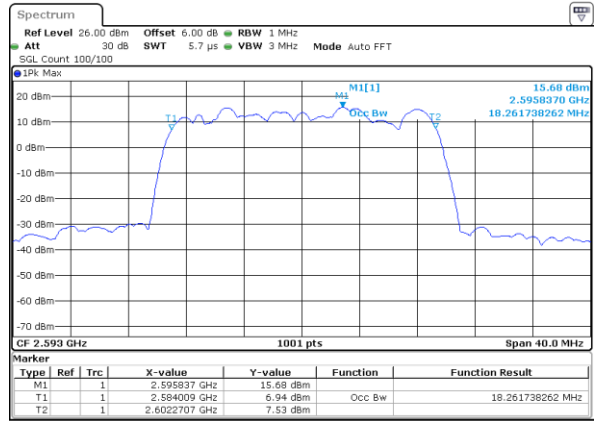
Date: 19 JUL 2019 00:55:56

Middle Channel / 20MHz / QPSK



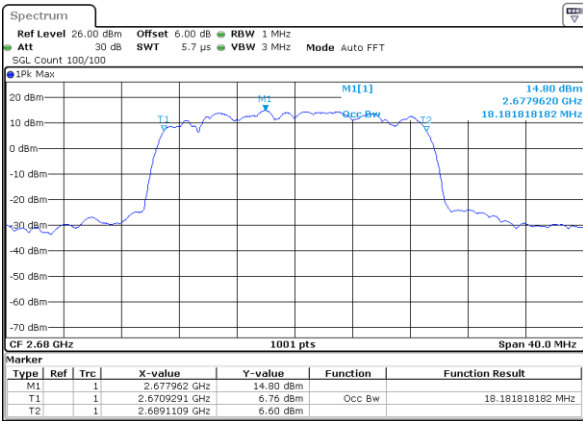
Date: 19 JUL 2019 01:01:58

Middle Channel / 20MHz / 16QAM



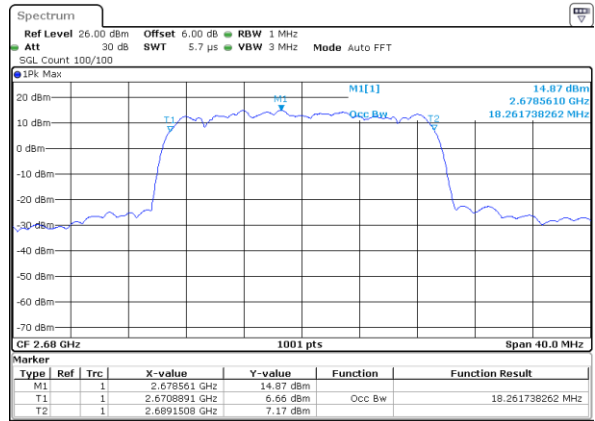
Date: 19 JUL 2019 01:02:30

Highest Channel / 20MHz / QPSK



Date: 19 JUL 2019 01:09:59

Highest Channel / 20MHz / 16QAM



Date: 19 JUL 2019 01:10:33