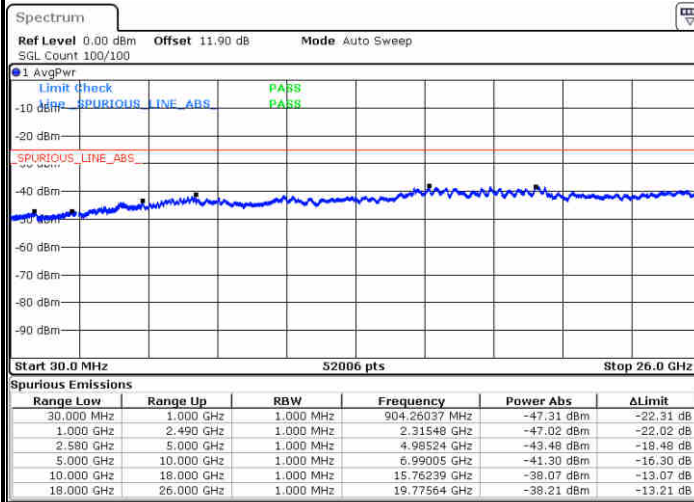




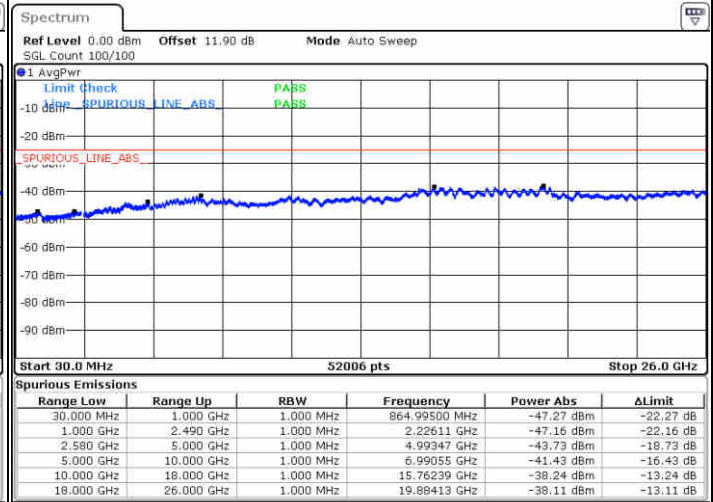
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 27.SEP.2017 01:07:12

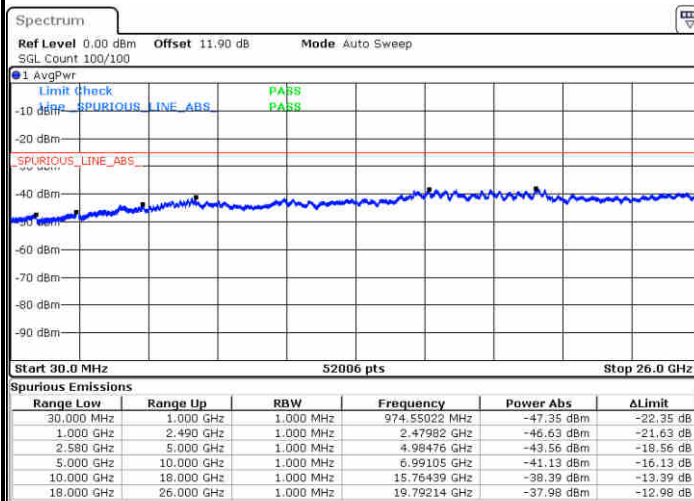
Highest Channel / 16QAM



Date: 27.SEP.2017 01:08:05

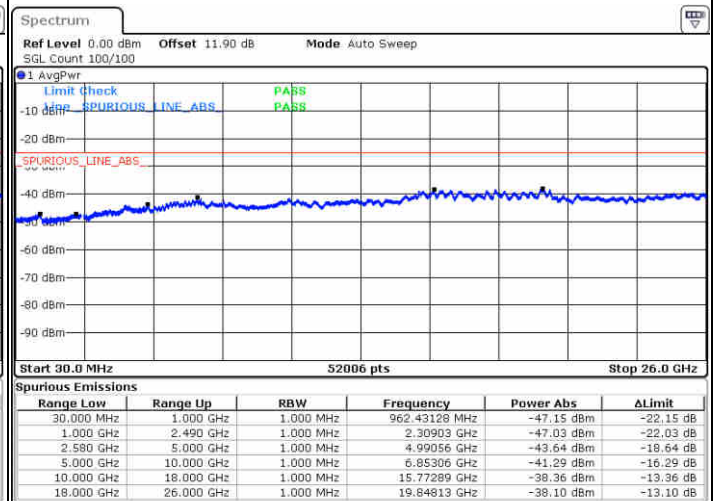
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 27.SEP.2017 01:14:15

Lowest Channel / 16QAM

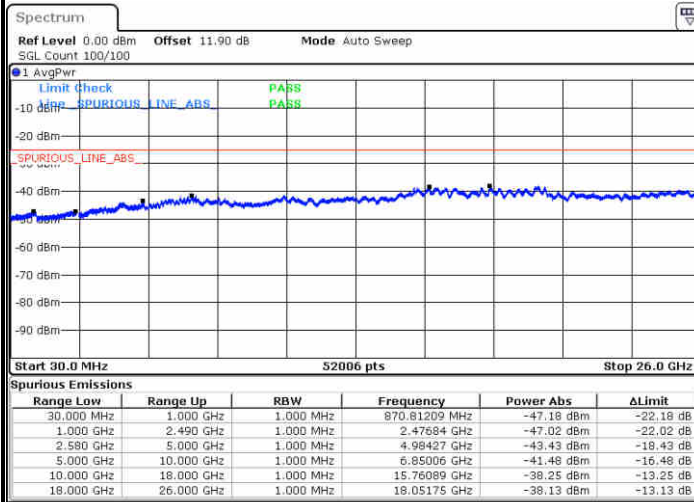


Date: 27.SEP.2017 01:15:09



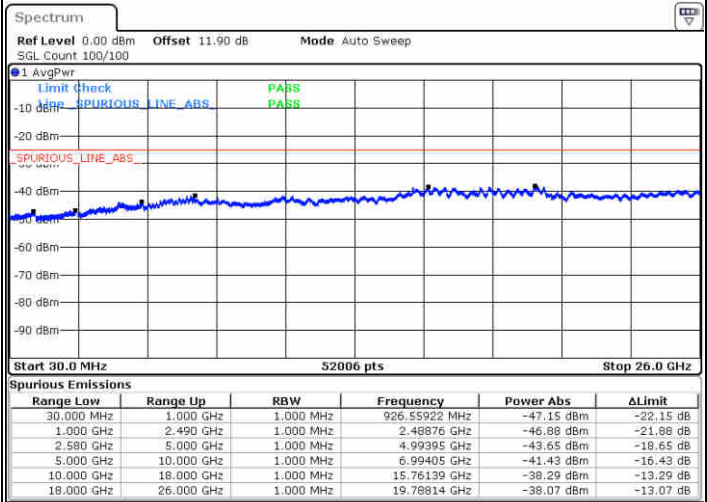
LTE Band 7 / 10MHz

Middle Channel / QPSK



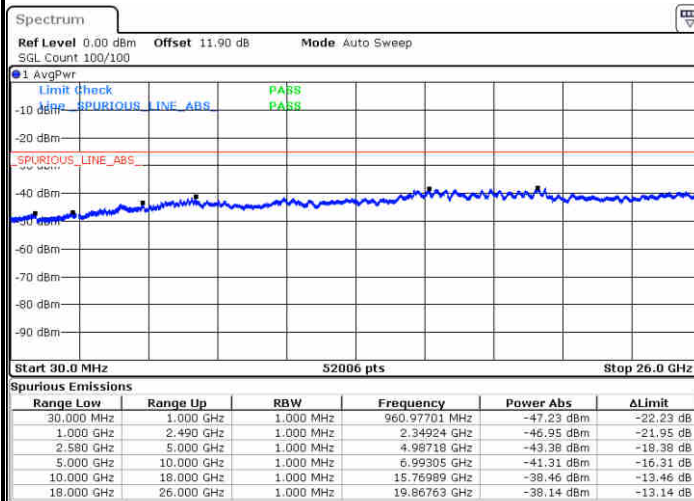
Date: 27.SEP.2017 01:16:42

Middle Channel / 16QAM



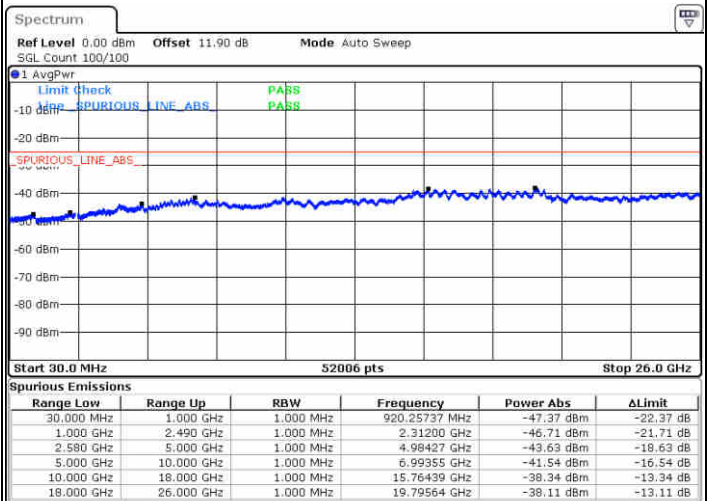
Date: 27.SEP.2017 01:17:35

Highest Channel / QPSK



Date: 27.SEP.2017 01:23:46

Highest Channel / 16QAM

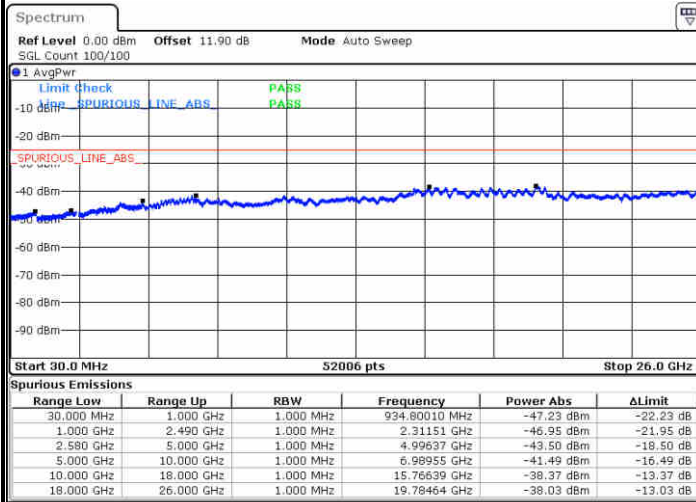


Date: 27.SEP.2017 01:24:39



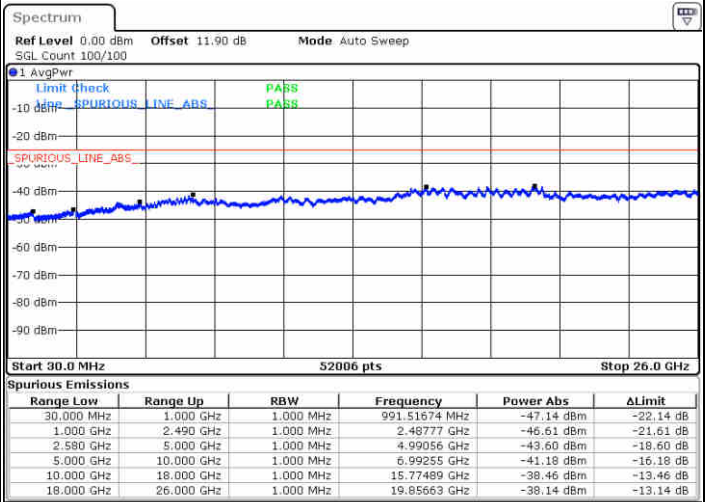
LTE Band 7 / 15MHz

Lowest Channel / QPSK



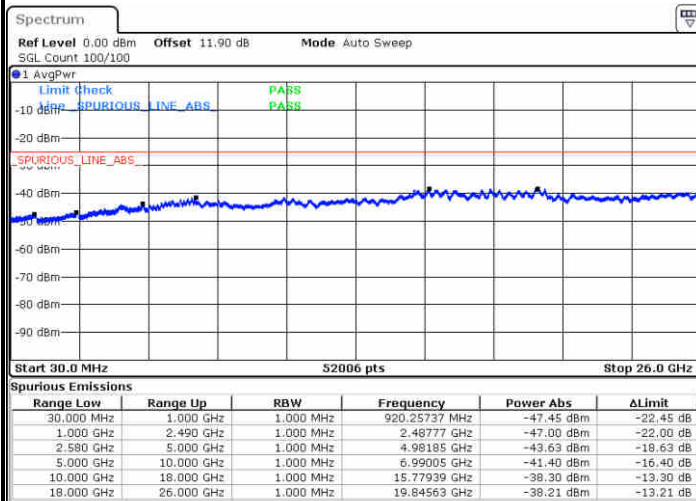
Date: 27.SEP.2017 01:30:49

Lowest Channel / 16QAM



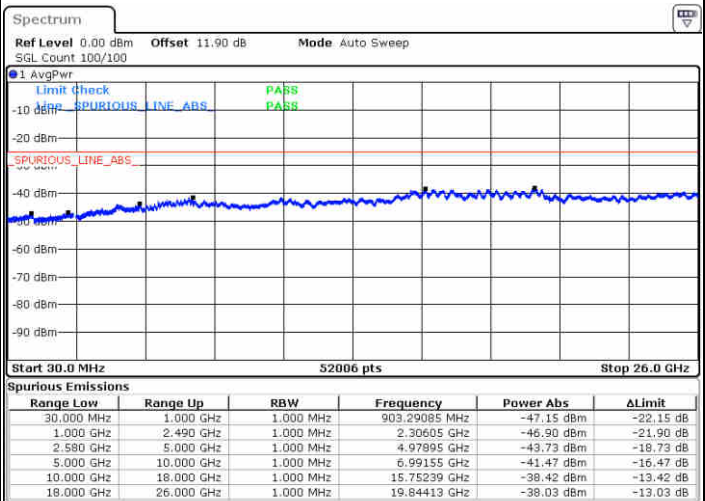
Date: 27.SEP.2017 01:31:42

Middle Channel / QPSK



Date: 27.SEP.2017 01:33:16

Middle Channel / 16QAM

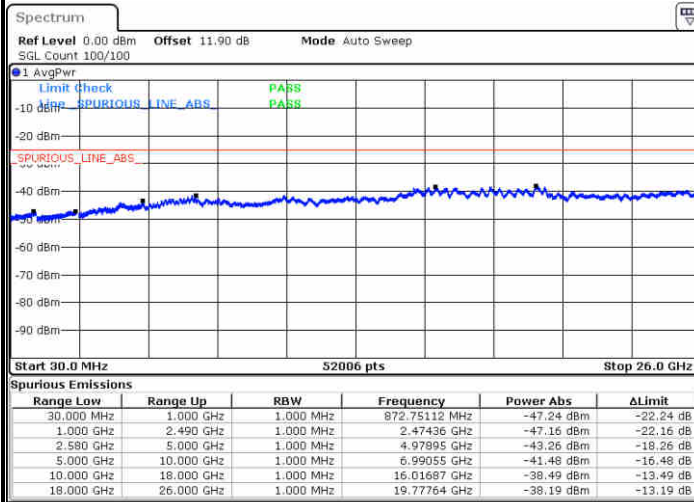


Date: 27.SEP.2017 01:34:09



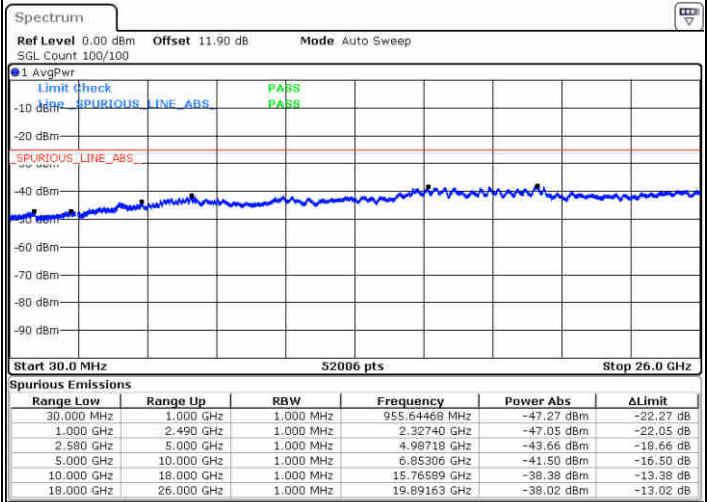
LTE Band 7 / 15MHz

Highest Channel / QPSK



Date: 27.SEP.2017 01:40:19

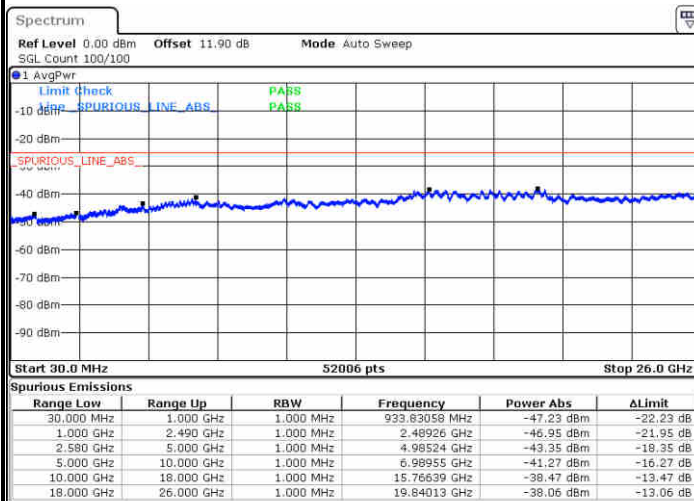
Highest Channel / 16QAM



Date: 27.SEP.2017 01:41:13

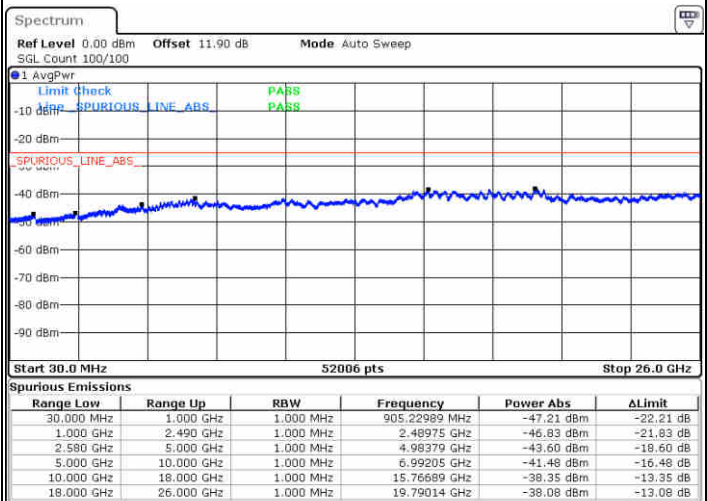
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 27.SEP.2017 01:47:23

Lowest Channel / 16QAM

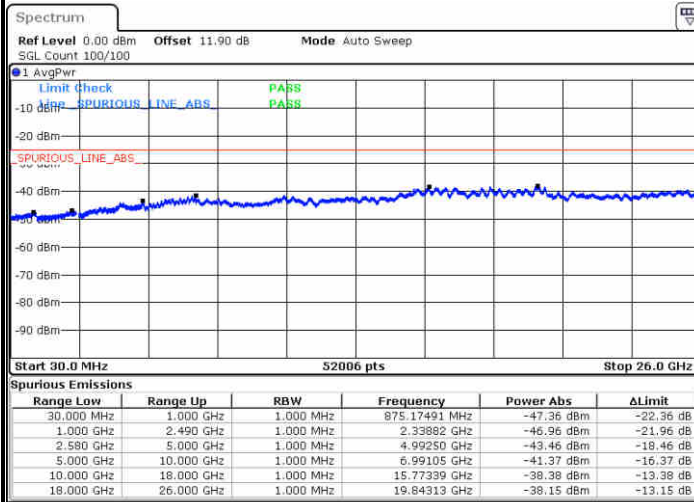


Date: 27.SEP.2017 01:48:16



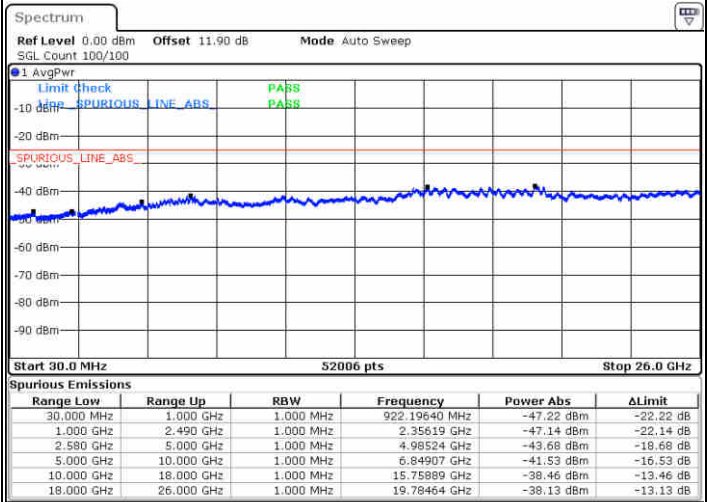
LTE Band 7 / 20MHz

Middle Channel / QPSK



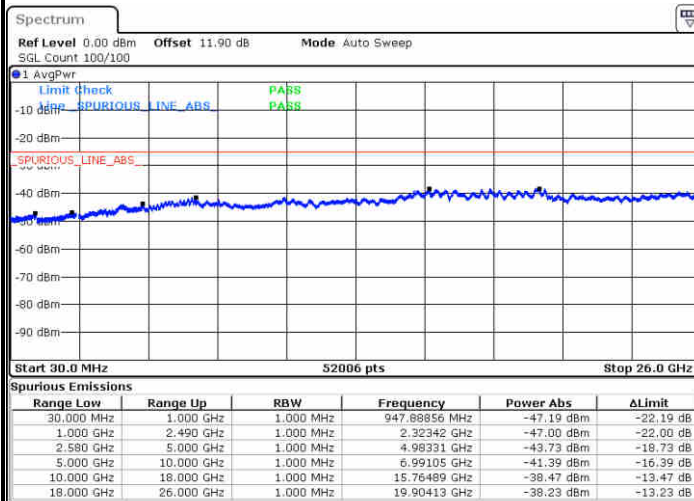
Date: 27.SEP.2017 01:49:49

Middle Channel / 16QAM



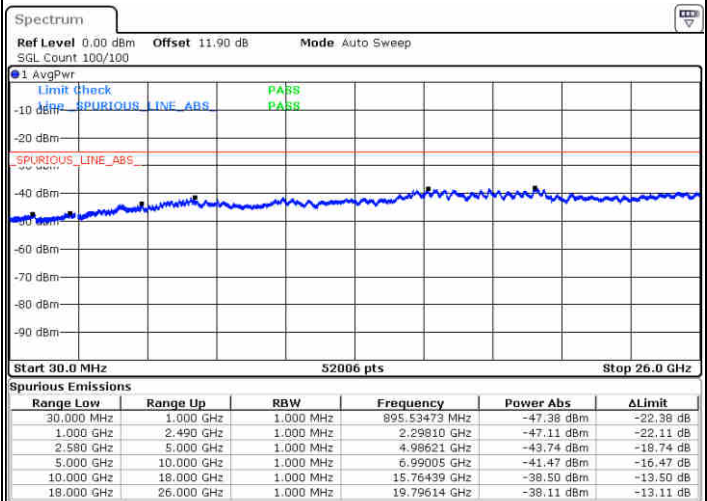
Date: 27.SEP.2017 01:50:43

Highest Channel / QPSK



Date: 27.SEP.2017 01:56:53

Highest Channel / 16QAM

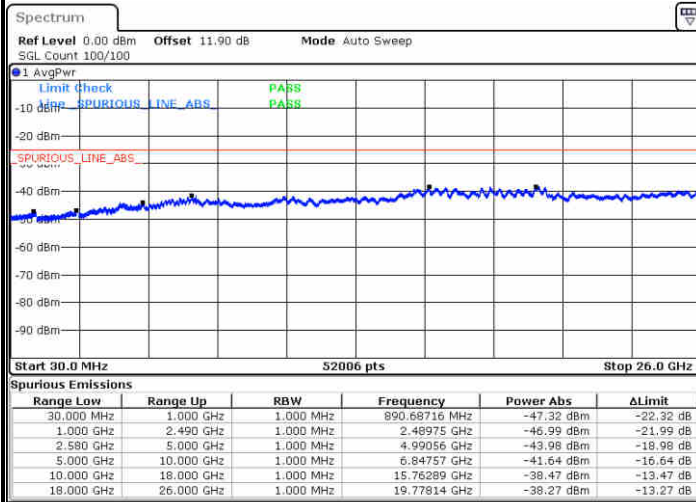


Date: 27.SEP.2017 01:57:46



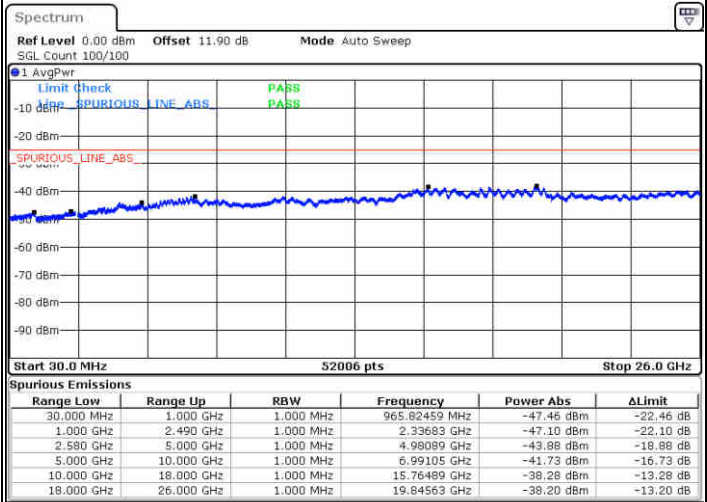
LTE Band 7 / 5MHz

Lowest Channel / 64QAM



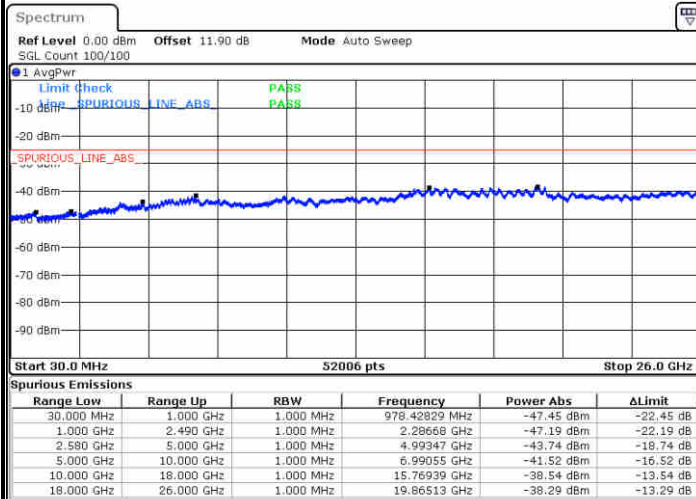
Date: 3.OCT.2017 10:05:42

Middle Channel / 64QAM



Date: 3.OCT.2017 10:06:35

Highest Channel / 64QAM

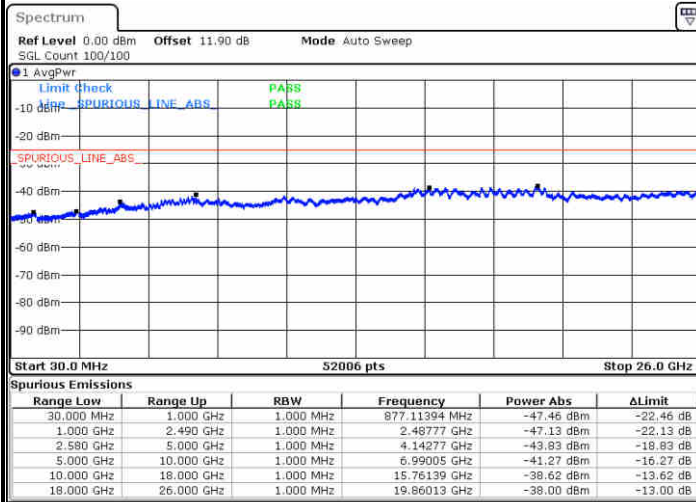


Date: 3.OCT.2017 10:07:28



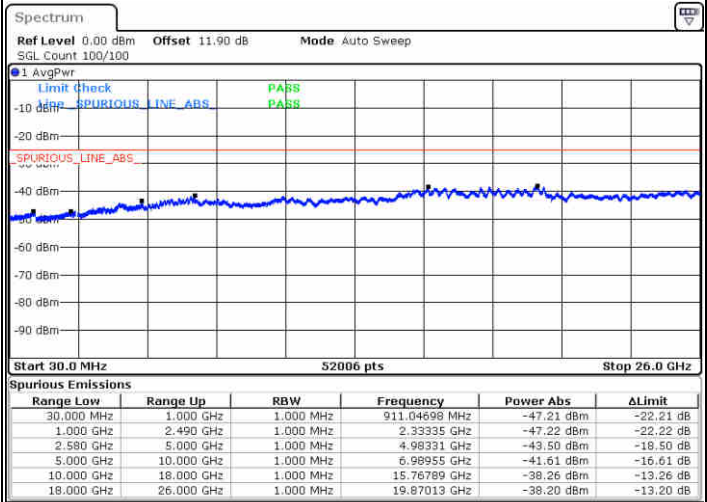
LTE Band 7 / 10MHz

Lowest Channel / 64QAM



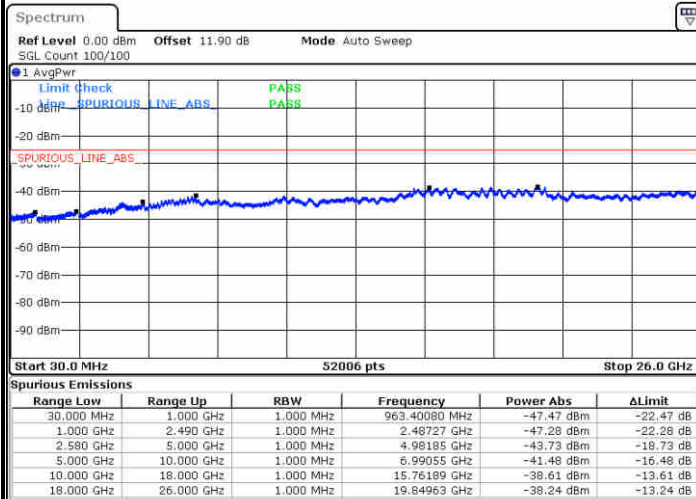
Date: 3.OCT.2017 10:08:21

Middle Channel / 64QAM



Date: 3.OCT.2017 10:08:15

Highest Channel / 64QAM

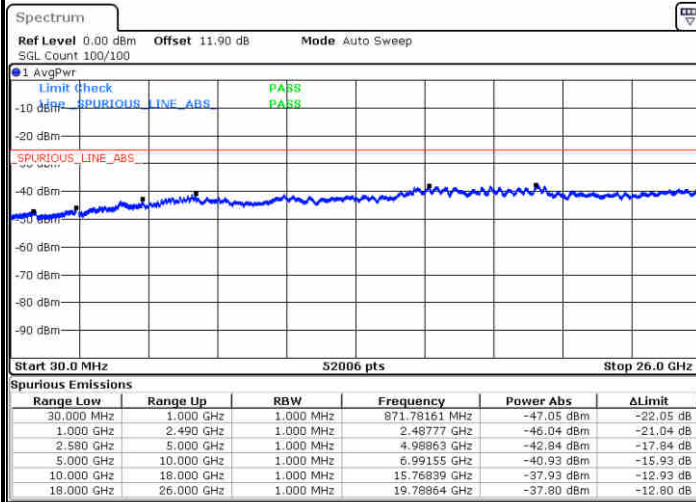


Date: 3.OCT.2017 10:10:08



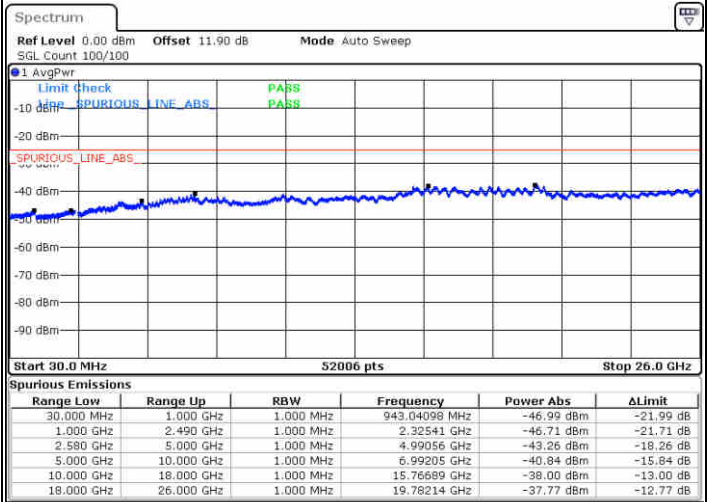
LTE Band 7 / 15MHz

Lowest Channel / 64QAM



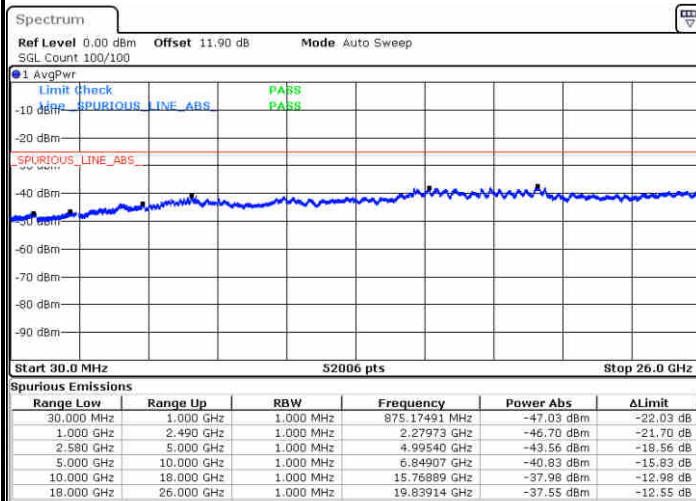
Date: 30 SEP.2017 15:21:10

Middle Channel / 64QAM



Date: 30 SEP.2017 15:22:23

Highest Channel / 64QAM

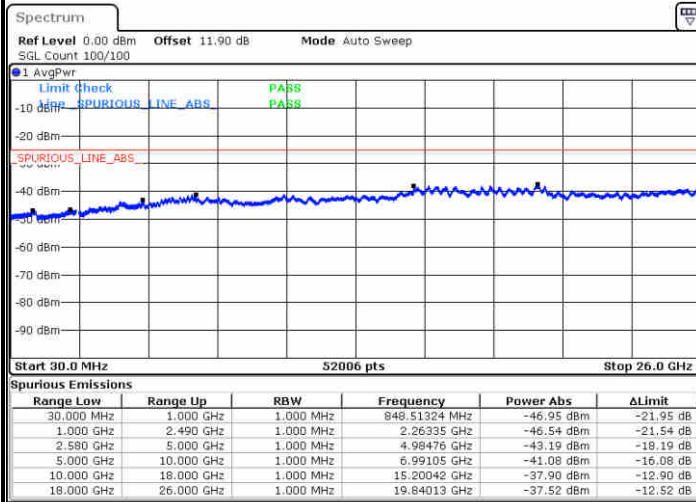


Date: 30 SEP.2017 15:25:55



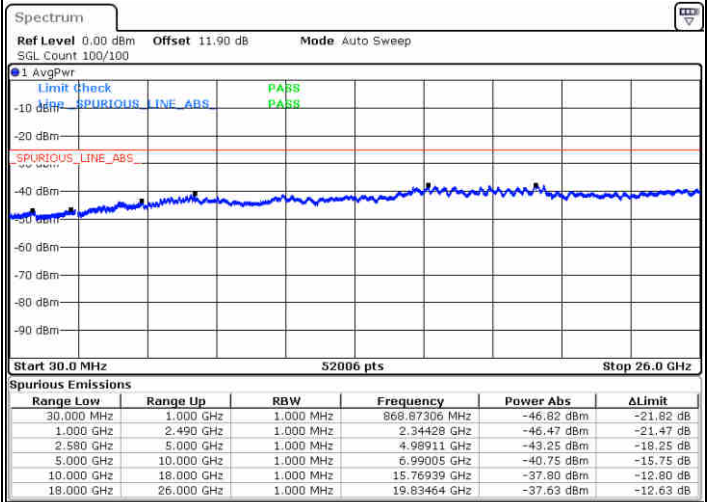
LTE Band 7 / 20MHz

Lowest Channel / 64QAM



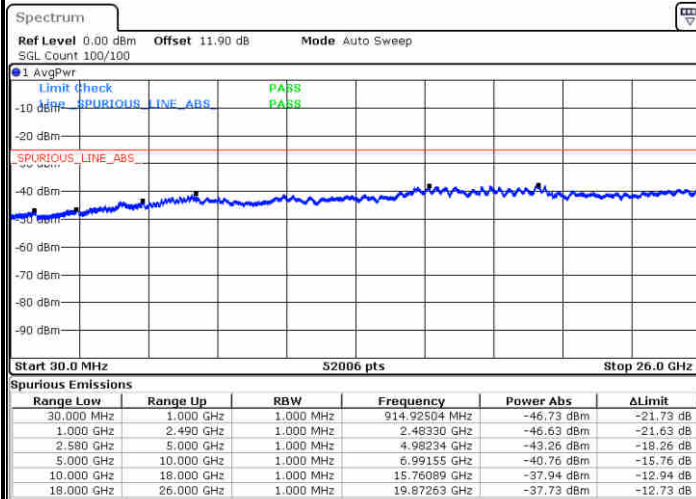
Date: 30 SEP.2017 15:29:27

Middle Channel / 64QAM



Date: 30 SEP.2017 15:30:40

Highest Channel / 64QAM



Date: 30 SEP.2017 15:34:11

Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0037	PASS
40	Normal Voltage	0.0050	
30	Normal Voltage	0.0044	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0026	
-10	Normal Voltage	0.0064	
-20	Normal Voltage	0.0065	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0008	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.135 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 5MHz	Within Band
		Frequency Offset (Δf) (Hz)	Result
50	Normal Voltage	9.3	PASS
40	Normal Voltage	12.7	
30	Normal Voltage	11.1	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	-1.9	
0	Normal Voltage	-6.5	
-10	Normal Voltage	16.2	
-20	Normal Voltage	16.5	
-30	Normal Voltage	-1.7	
20	Maximum Voltage	-3.5	
20	Normal Voltage	0	
20	Battery End Point	2.1	

$|\text{MAX}(\Delta f)| = 16.5\text{Hz}$

Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	2500.169984	$\geq 2500\text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	2569.836017	$\leq 2570\text{ MHz}$	



LTE Band 7_CA

26dB Bandwidth

Mode	LTE Band 7 : 26dB BW(MHz)			
QPSK				
BW	10MHz+20MHz	15MHz+15MHz	15MHz+20MHz	
Lowest CH	29.78	30.48	34.75	
Middle CH	30.04	30.48	34.95	
Highest CH	29.78	30.65	34.65	
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	15MHz+10MHz
Lowest CH	30.13	34.85	39.71	25.25
Middle CH	30.13	34.95	39.83	25.4
Highest CH	29.96	34.95	39.59	25.4

Mode	LTE Band 7 : 26dB BW(MHz)			
16QAM				
BW	10MHz+20MHz	15MHz+15MHz	15MHz+20MHz	
Lowest CH	29.87	30.39	34.85	
Middle CH	29.96	30.39	34.75	
Highest CH	29.7	30.39	34.95	
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	15MHz+10MHz
Lowest CH	29.87	34.95	39.71	25.33
Middle CH	30.04	34.95	39.83	25.4
Highest CH	30.04	34.95	39.71	25.25

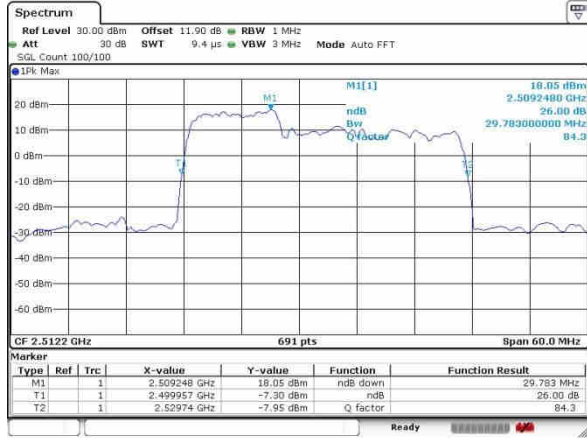
Mode	LTE Band 7 : 26dB BW(MHz)			
64QAM				
BW	10MHz+20MHz	15MHz+15MHz	15MHz+20MHz	
Lowest CH	29.7	30.48	34.85	
Middle CH	29.87	30.65	34.75	
Highest CH	29.78	30.48	34.75	
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	15MHz+10MHz
Lowest CH	29.96	34.75	39.94	25.33
Middle CH	30.04	34.85	39.83	25.4
Highest CH	29.87	34.75	39.71	25.25



LTE Band 7

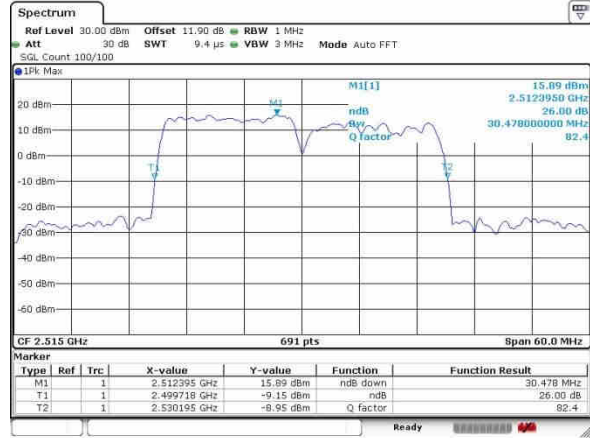
QPSK

Lowest Channel / 10MHz+20MHz



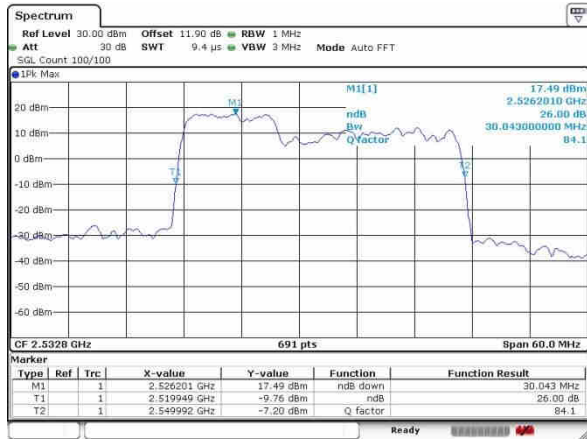
Date: 27 SEP 2017 11:06:06

Lowest Channel / 15MHz+15MHz



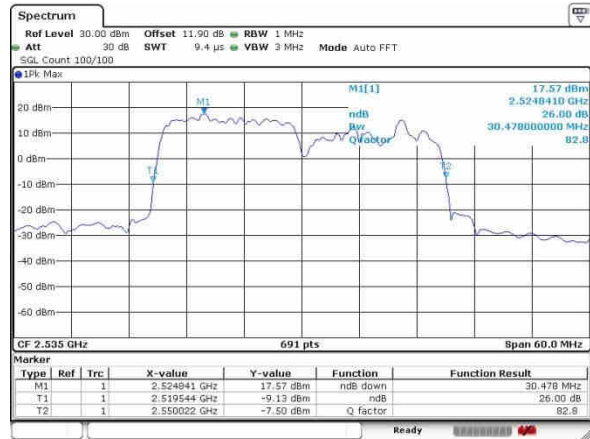
Date: 27 SEP 2017 15:19:55

Middle Channel / 10MHz+20MHz



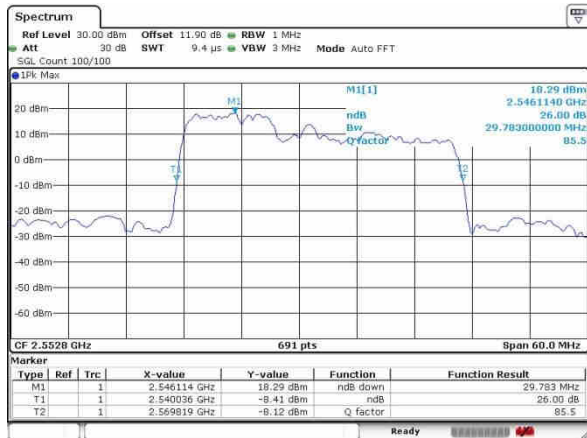
Date: 27 SEP 2017 13:43:43

Middle Channel / 15MHz+15MHz



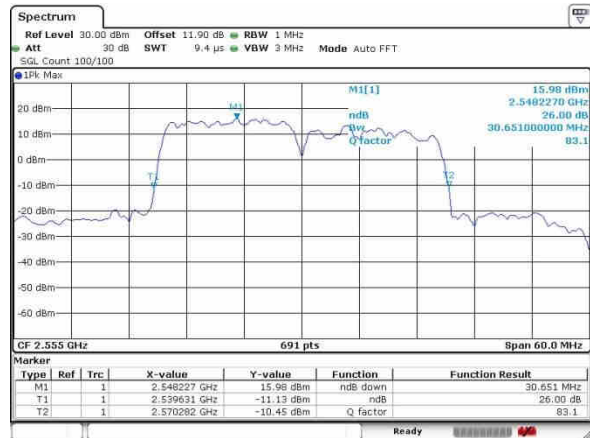
Date: 27 SEP 2017 16:01:38

Highest Channel / 10MHz+20MHz



Date: 27 SEP 2017 13:47:47

Highest Channel / 15MHz+15MHz



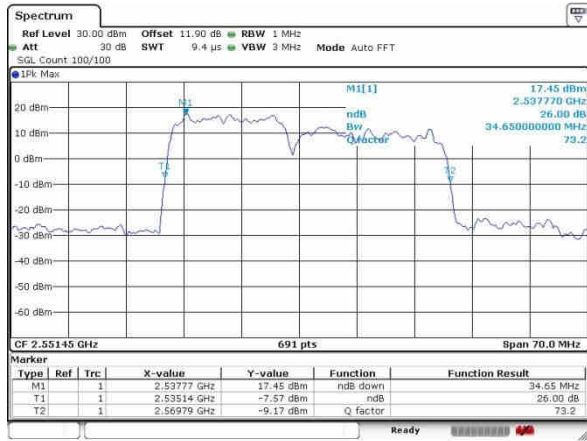
Date: 27 SEP 2017 16:05:25



LTE Band 7

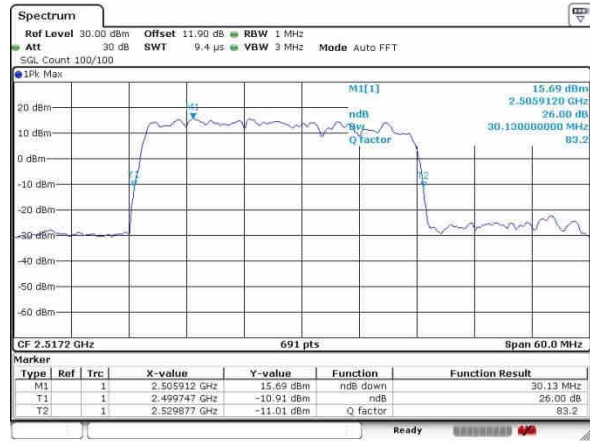
QPSK

Lowest Channel / 15MHz+20MHz



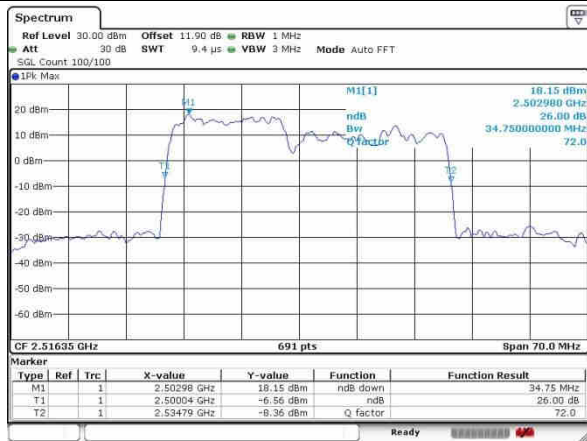
Date: 30 SEP 2017 12:11:03

Lowest Channel / 20MHz+10MHz



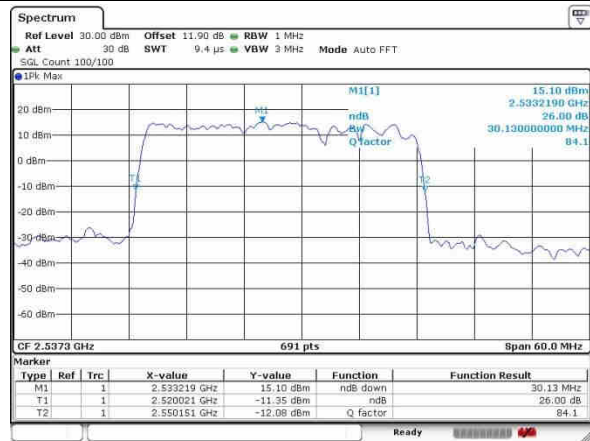
Date: 27 SEP 2017 13:59:59

Middle Channel / 15MHz+20MHz



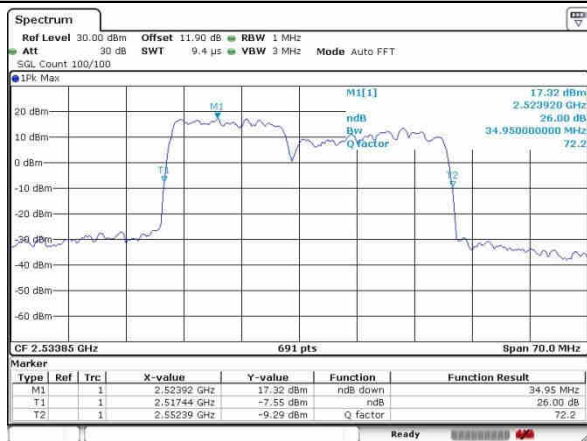
Date: 30 SEP 2017 12:07:03

Middle Channel / 20MHz+10MHz



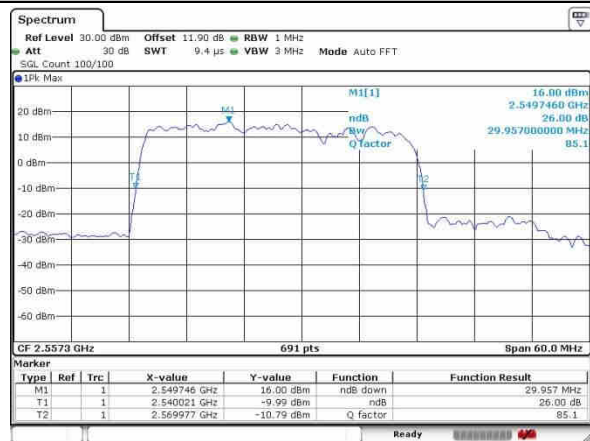
Date: 27 SEP 2017 15:01:51

Highest Channel / 15MHz+20MHz



Date: 30 SEP 2017 12:28:16

Highest Channel / 20MHz+10MHz



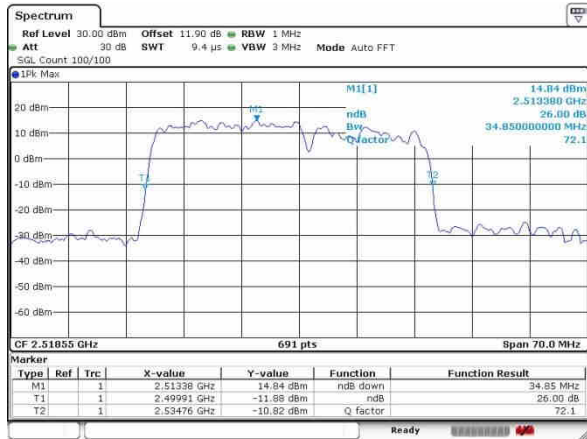
Date: 27 SEP 2017 15:08:26



LTE Band 7

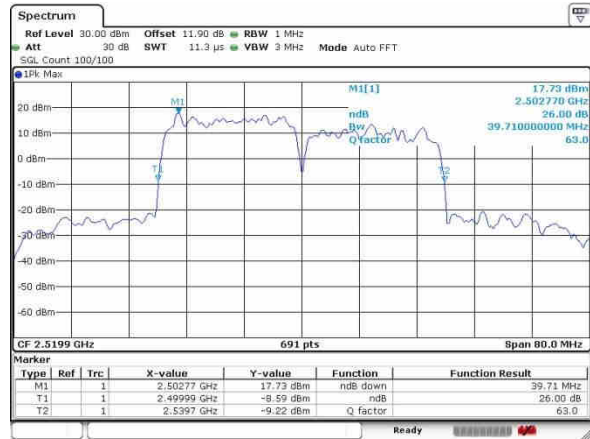
QPSK

Lowest Channel / 20MHz+15MHz



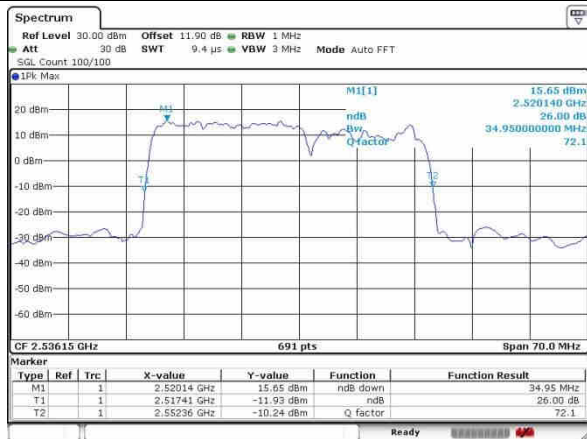
Date: 27 SEP 2017 17:28:58

Lowest Channel / 20MHz+20MHz



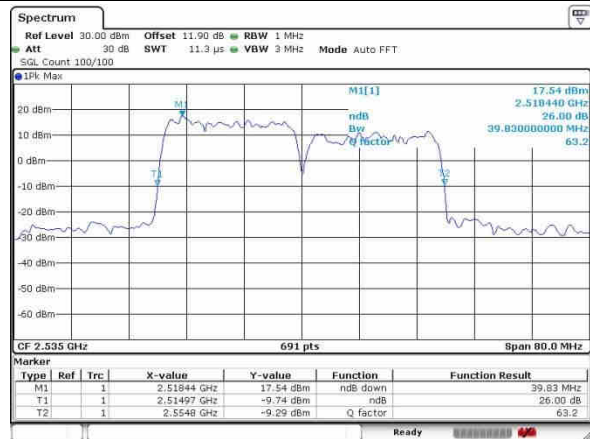
Date: 30 SEP 2017 11:13:38

Middle Channel / 20MHz+15MHz



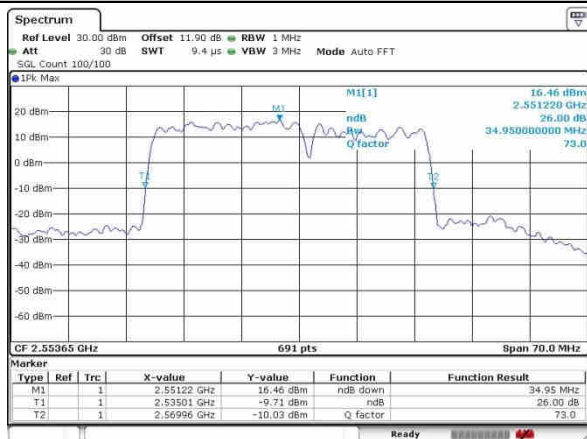
Date: 30 SEP 2017 12:26:07

Middle Channel / 20MHz+20MHz



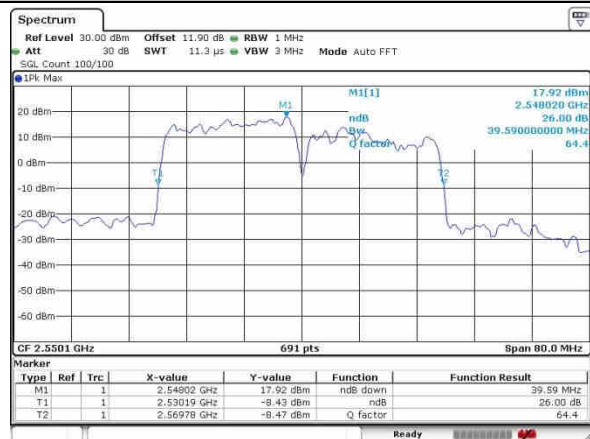
Date: 30 SEP 2017 11:17:13

Highest Channel / 20MHz+15MHz



Date: 30 SEP 2017 12:18:11

Highest Channel / 20MHz+20MHz



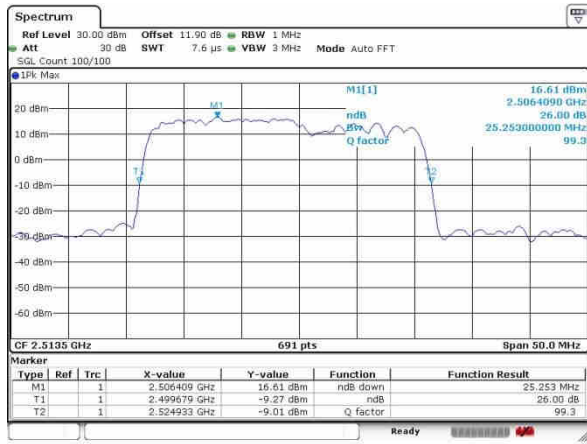
Date: 30 SEP 2017 11:20:33



LTE Band 7

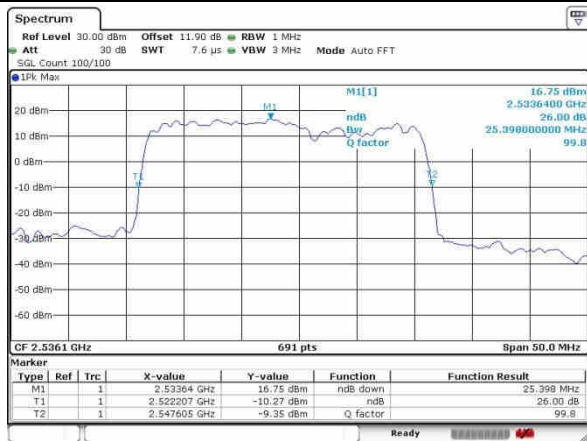
QPSK

Lowest Channel / 15MHz+10MHz



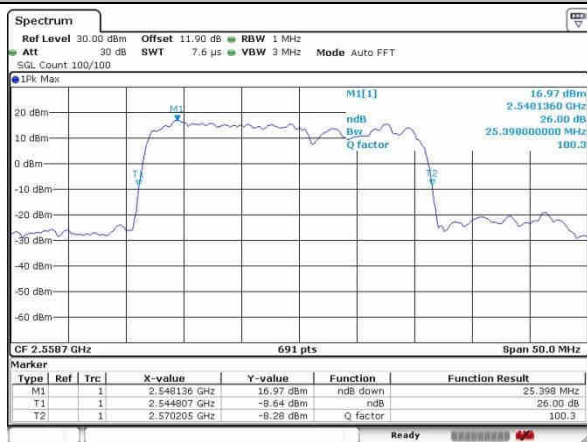
Date: 30 OCT 2017 09:36:13

Middle Channel / 15MHz+10MHz



Date: 30 OCT 2017 10:51:23

Highest Channel / 15MHz+10MHz



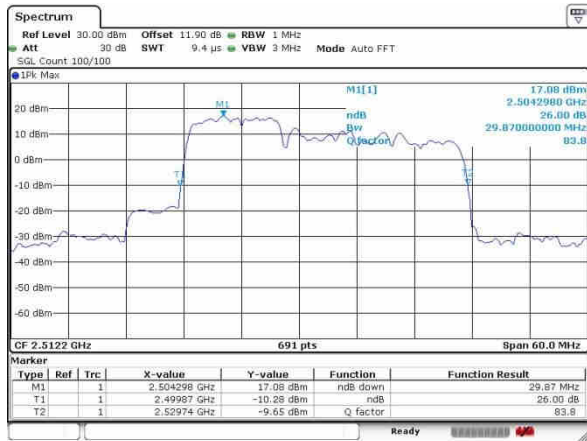
Date: 30 OCT 2017 10:56:12



LTE Band 7

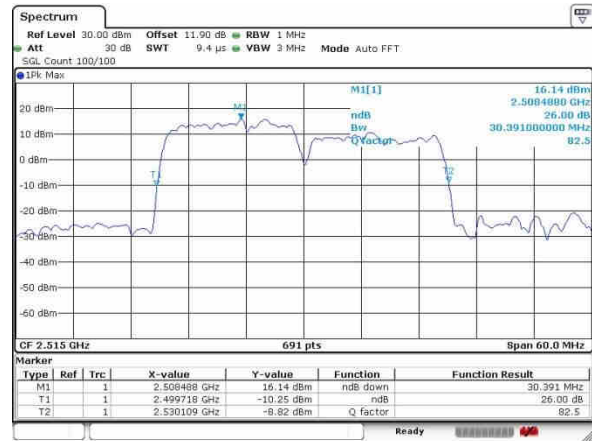
16QAM

Lowest Channel / 10MHz+20MHz



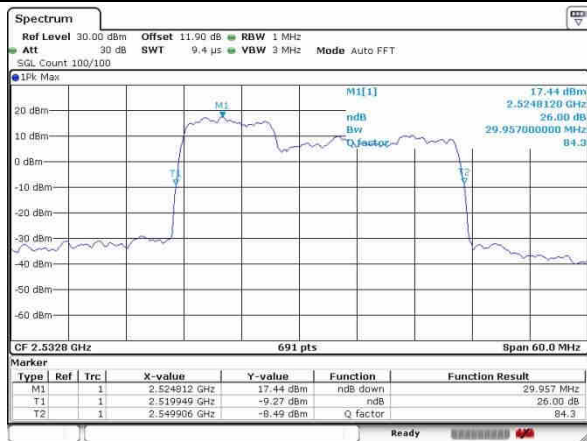
Date: 27 SEP 2017 11:05:56

Lowest Channel / 15MHz+15MHz



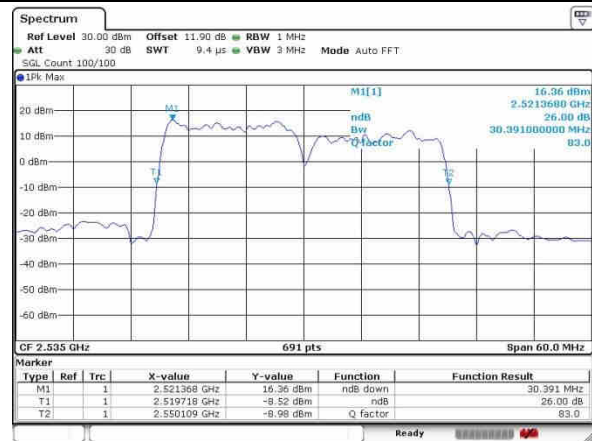
Date: 27 SEP 2017 15:19:44

Middle Channel / 10MHz+20MHz



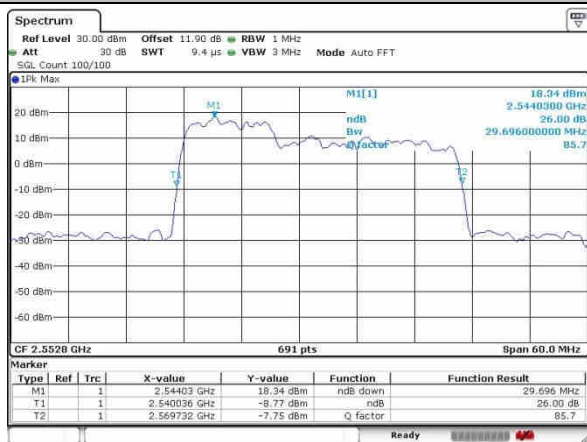
Date: 27 SEP 2017 13:43:29

Middle Channel / 15MHz+15MHz



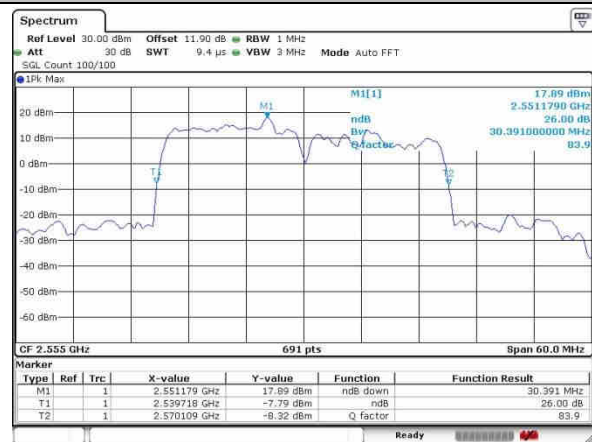
Date: 27 SEP 2017 16:01:27

Highest Channel / 10MHz+20MHz



Date: 27 SEP 2017 13:47:59

Highest Channel / 15MHz+15MHz



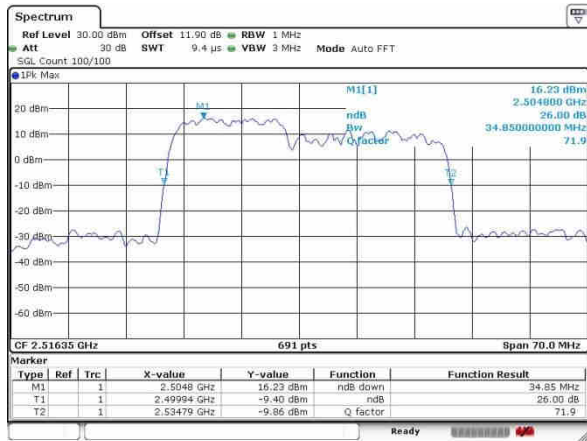
Date: 27 SEP 2017 16:05:35



LTE Band 7

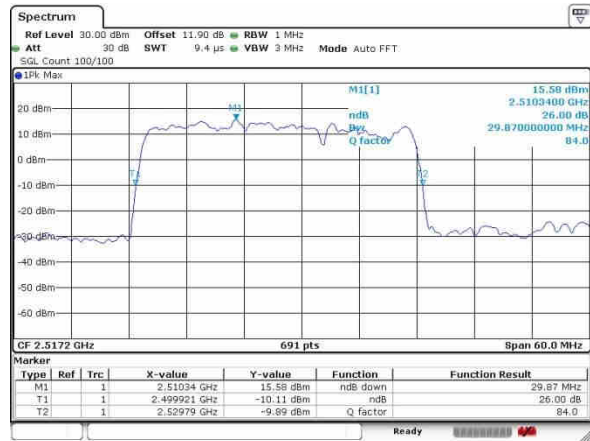
16QAM

Lowest Channel / 15MHz+20MHz



Date: 30 SEP 2017 12:06:55

Lowest Channel / 20MHz+10MHz



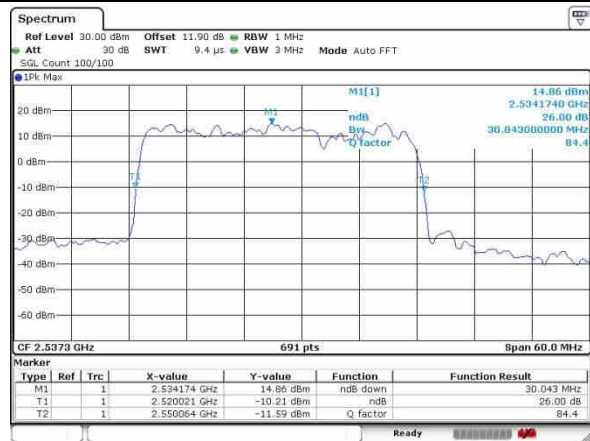
Date: 27 SEP 2017 13:59:47

Middle Channel / 15MHz+20MHz



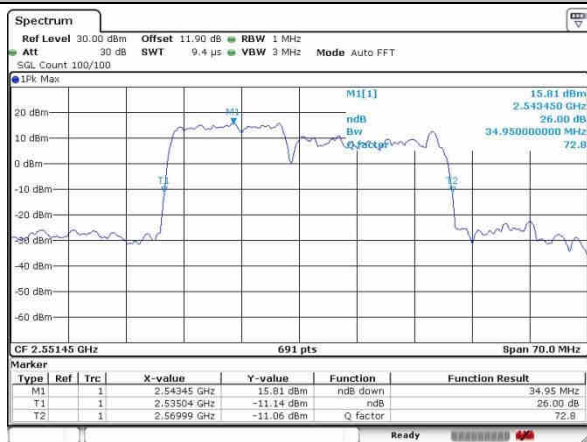
Date: 30 SEP 2017 12:08:11

Middle Channel / 20MHz+10MHz



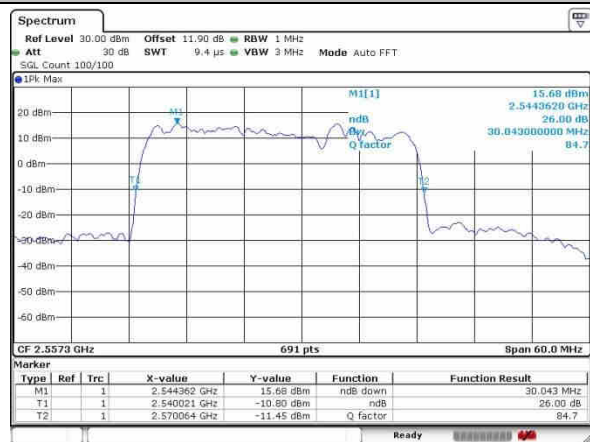
Date: 27 SEP 2017 15:01:34

Highest Channel / 15MHz+20MHz



Date: 30 SEP 2017 12:10:50

Highest Channel / 20MHz+10MHz



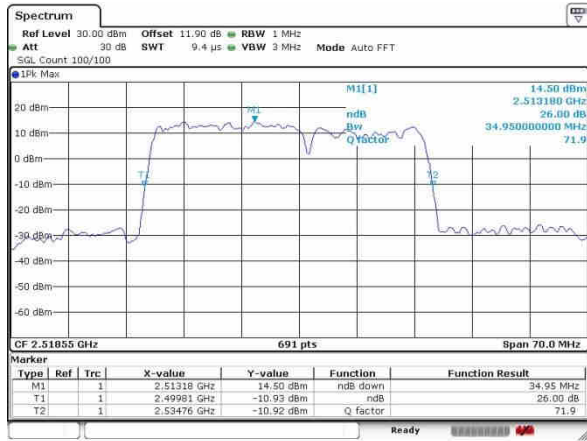
Date: 27 SEP 2017 15:08:38



LTE Band 7

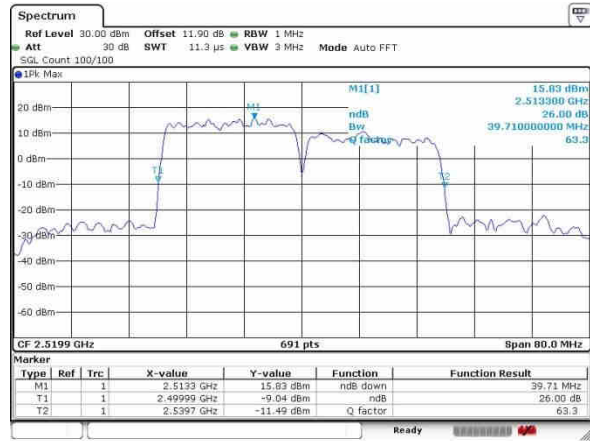
16QAM

Lowest Channel / 20MHz+15MHz



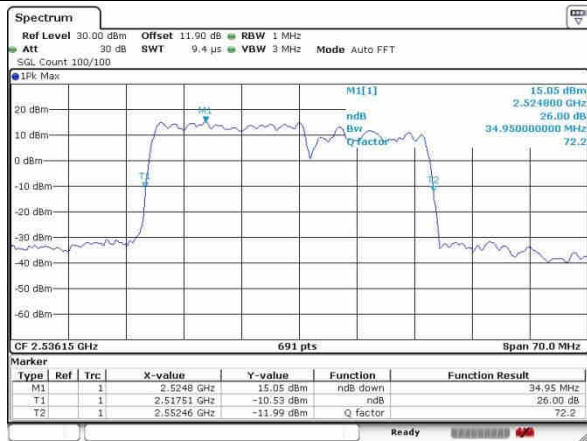
Date: 27 SEP 2017 17:28:46

Lowest Channel / 20MHz+20MHz



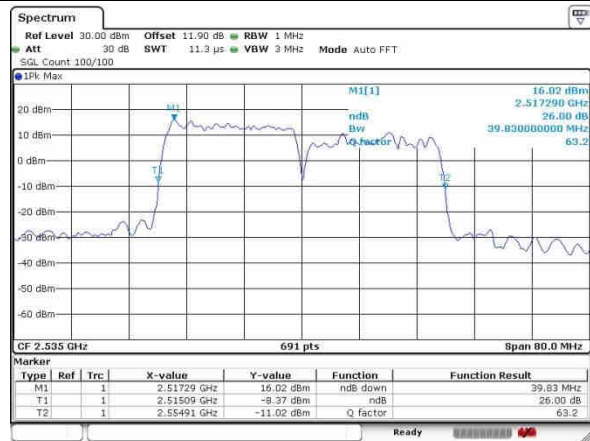
Date: 30 SEP 2017 11:13:29

Middle Channel / 20MHz+15MHz



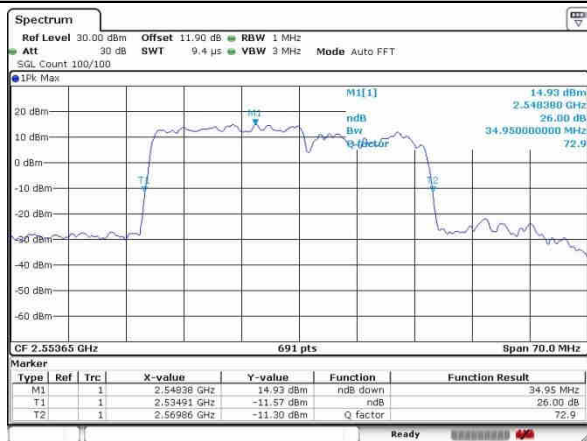
Date: 30 SEP 2017 12:15:42

Middle Channel / 20MHz+20MHz



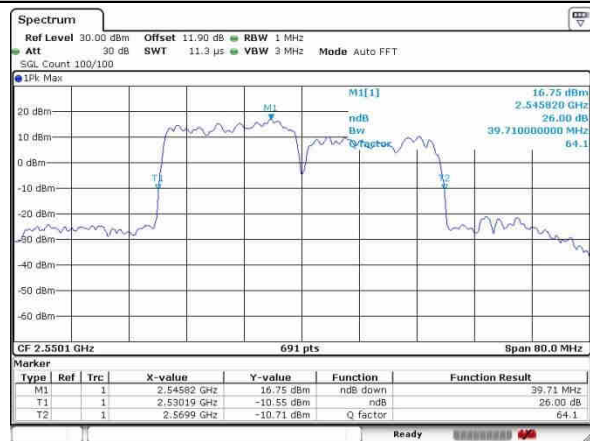
Date: 30 SEP 2017 11:17:23

Highest Channel / 20MHz+15MHz



Date: 30 SEP 2017 12:18:02

Highest Channel / 20MHz+20MHz



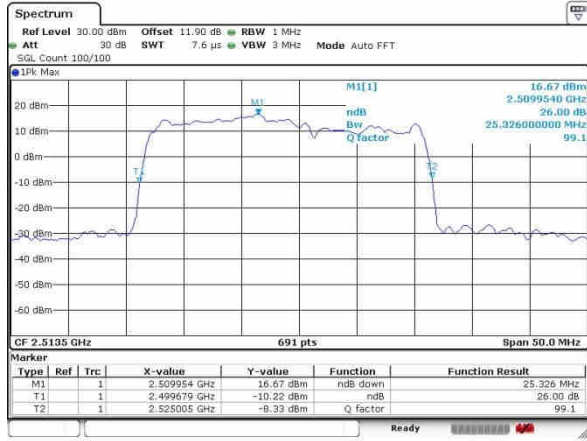
Date: 30 SEP 2017 11:20:24



LTE Band 7

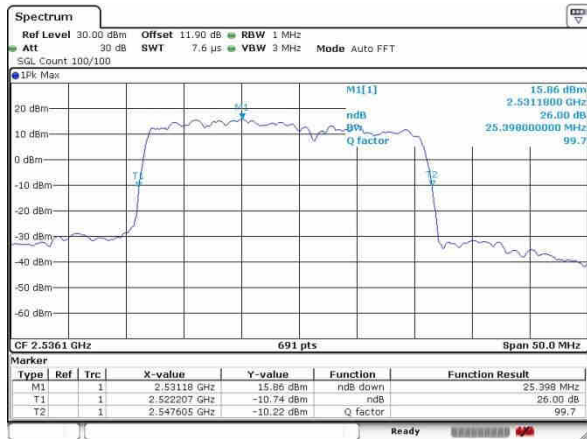
16QAM

Lowest Channel / 15MHz+10MHz



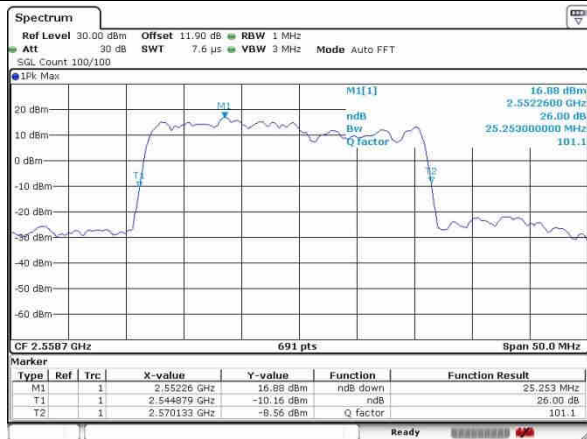
Date: 30 OCT 2017 09:36:23

Middle Channel / 15MHz+10MHz



Date: 30 OCT 2017 10:51:38

Highest Channel / 15MHz+10MHz



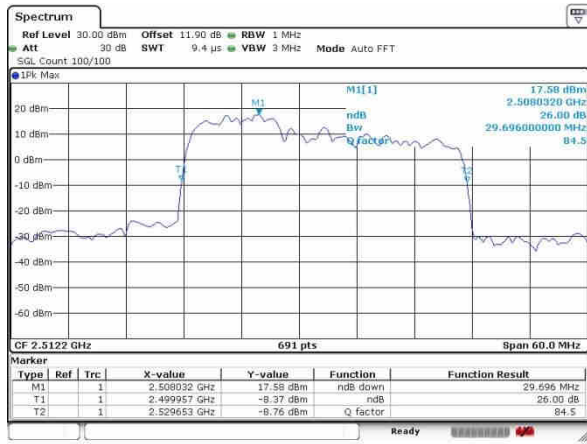
Date: 30 OCT 2017 10:56:02



LTE Band 7

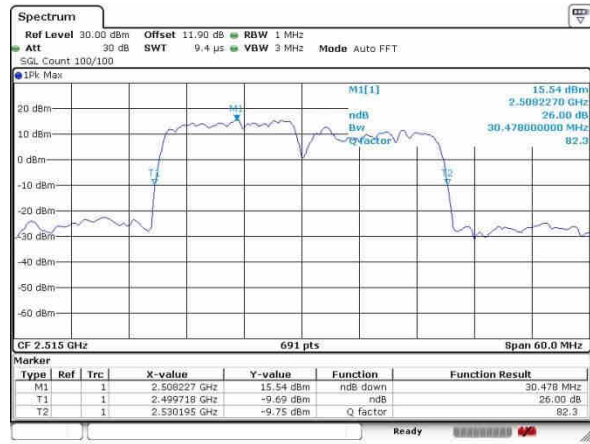
64QAM

Lowest Channel / 10MHz+20MHz



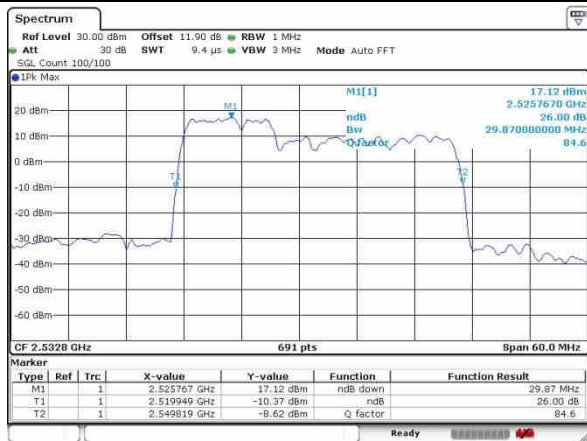
Date: 27 SEP 2017 11:05:46

Lowest Channel / 15MHz+15MHz



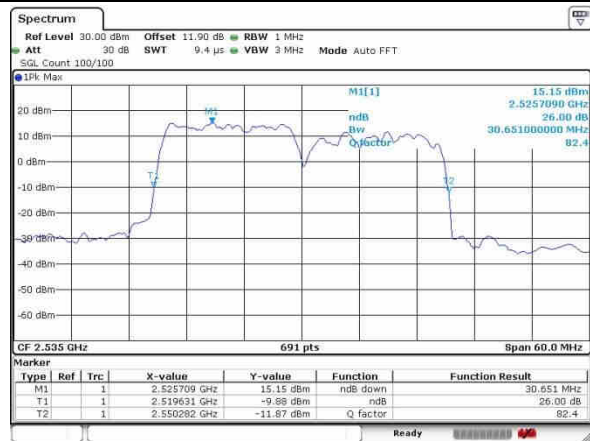
Date: 27 SEP 2017 15:19:34

Middle Channel / 10MHz+20MHz



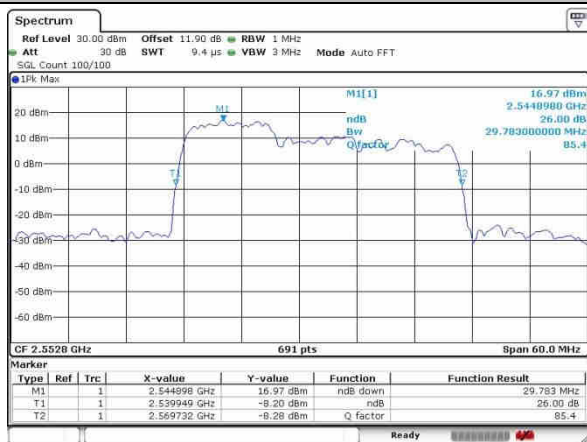
Date: 27 SEP 2017 13:43:18

Middle Channel / 15MHz+15MHz



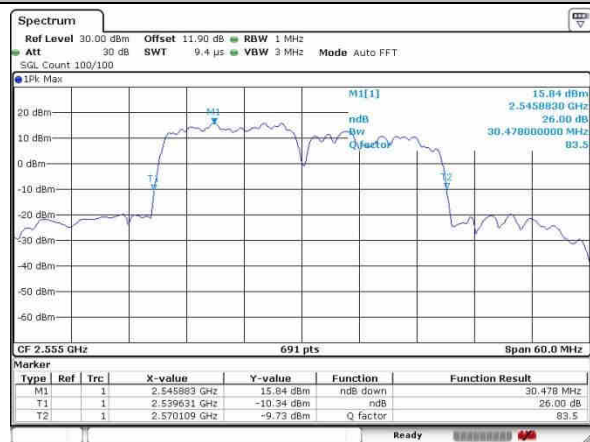
Date: 27 SEP 2017 16:01:17

Highest Channel / 10MHz+20MHz



Date: 27 SEP 2017 13:48:08

Highest Channel / 15MHz+15MHz



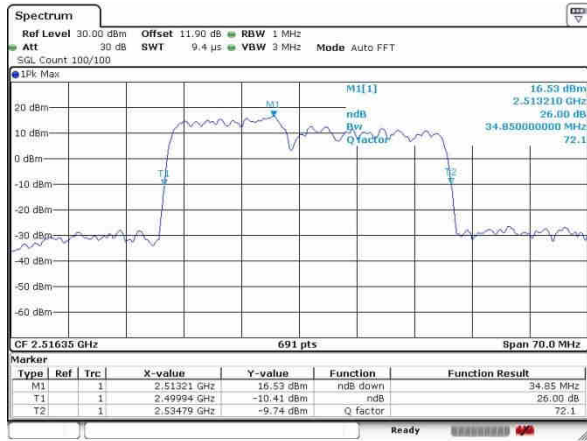
Date: 27 SEP 2017 16:05:44



LTE Band 7

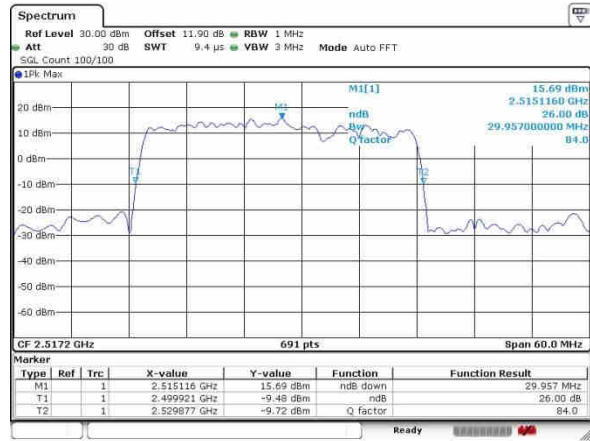
64QAM

Lowest Channel / 15MHz+20MHz



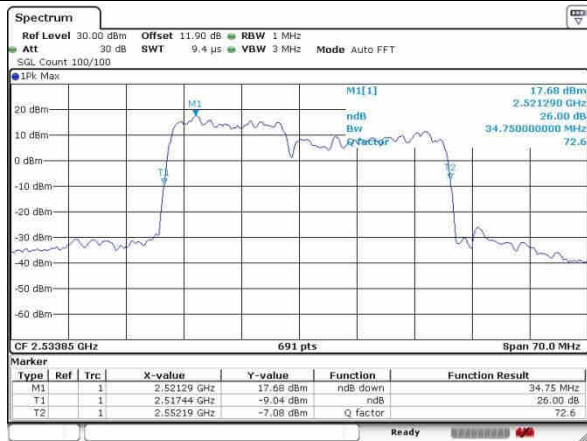
Date: 30 SEP 2017 12:06:43

Lowest Channel / 20MHz+10MHz



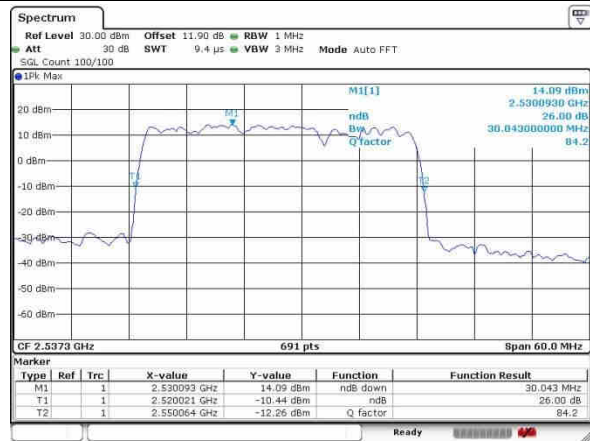
Date: 27 SEP 2017 13:59:37

Middle Channel / 15MHz+20MHz



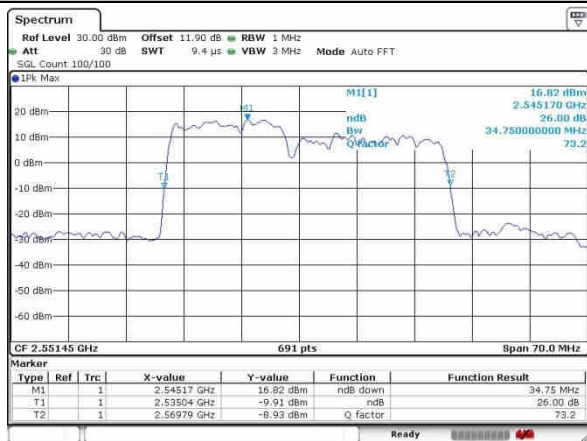
Date: 30 SEP 2017 12:08:20

Middle Channel / 20MHz+10MHz



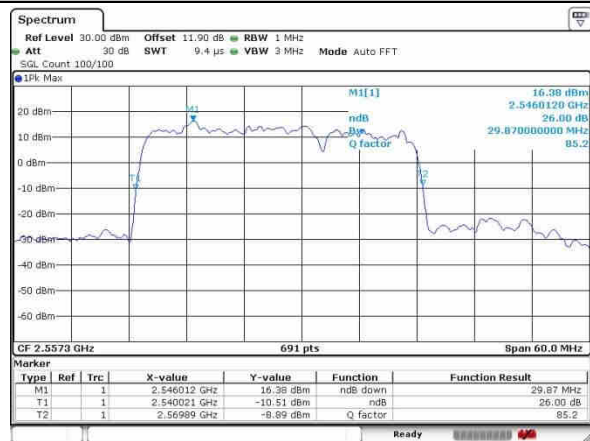
Date: 27 SEP 2017 15:01:23

Highest Channel / 15MHz+20MHz



Date: 30 SEP 2017 12:10:41

Highest Channel / 20MHz+10MHz



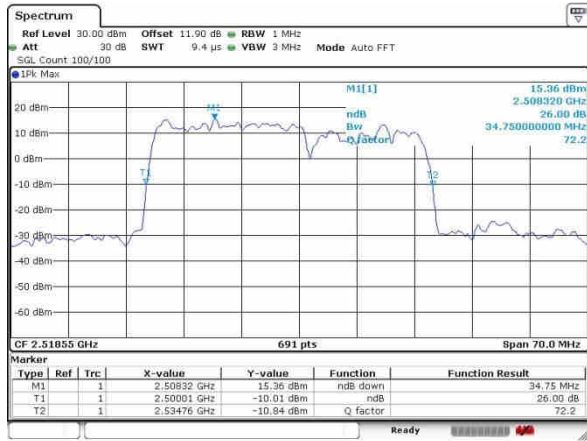
Date: 27 SEP 2017 15:08:52



LTE Band 7

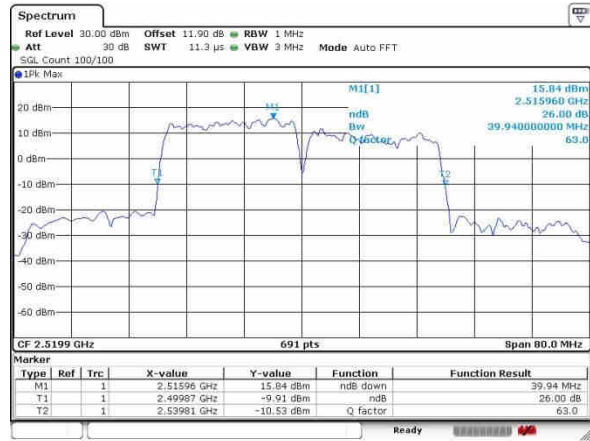
64QAM

Lowest Channel / 20MHz+15MHz



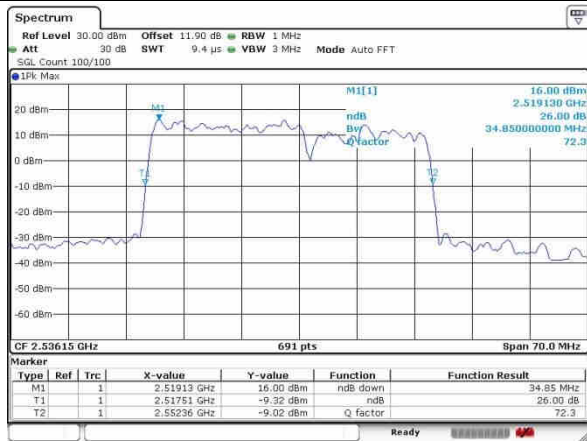
Date: 27 SEP 2017 17:31:57

Lowest Channel / 20MHz+20MHz



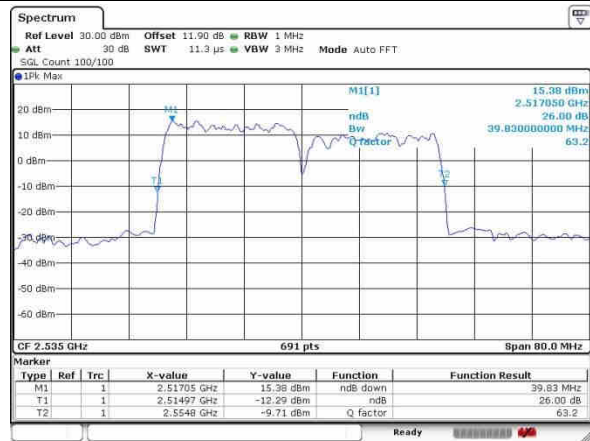
Date: 30 SEP 2017 11:13:20

Middle Channel / 20MHz+15MHz



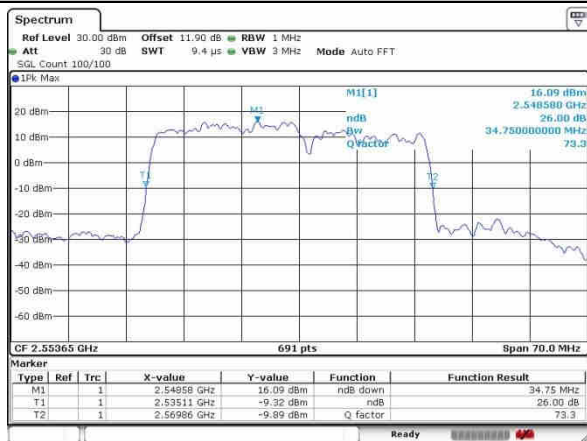
Date: 30 SEP 2017 12:15:51

Middle Channel / 20MHz+20MHz



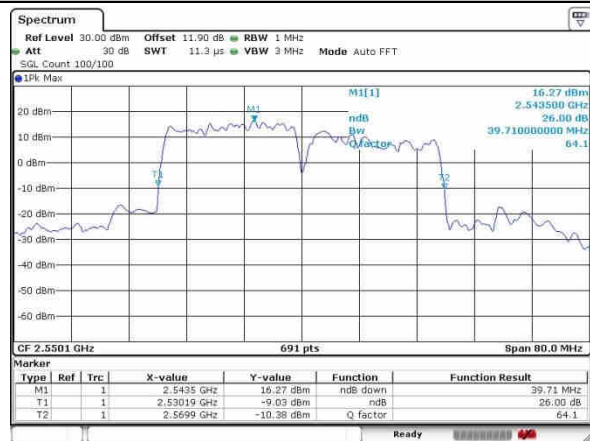
Date: 30 SEP 2017 11:13:32

Highest Channel / 20MHz+15MHz



Date: 30 SEP 2017 12:17:53

Highest Channel / 20MHz+20MHz



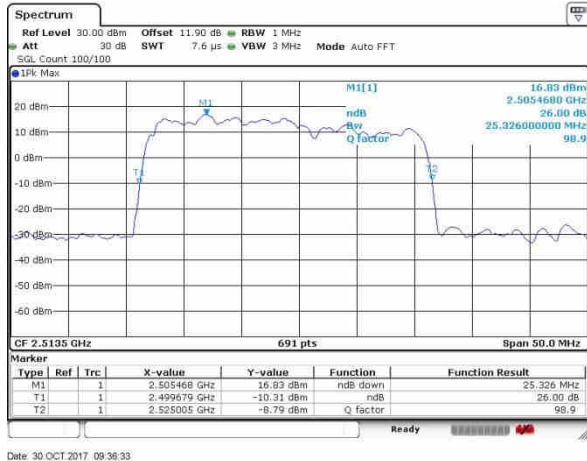
Date: 30 SEP 2017 11:20:13



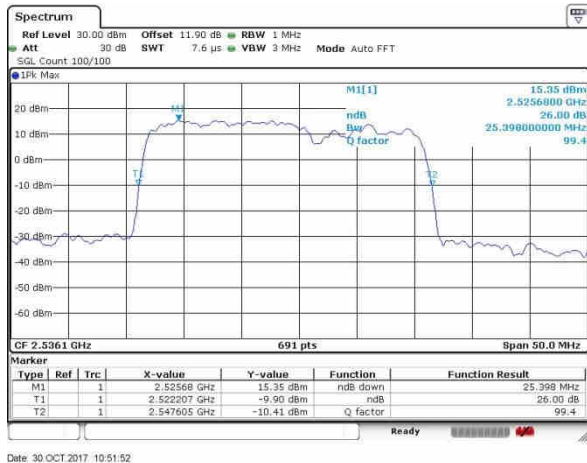
LTE Band 7

64QAM

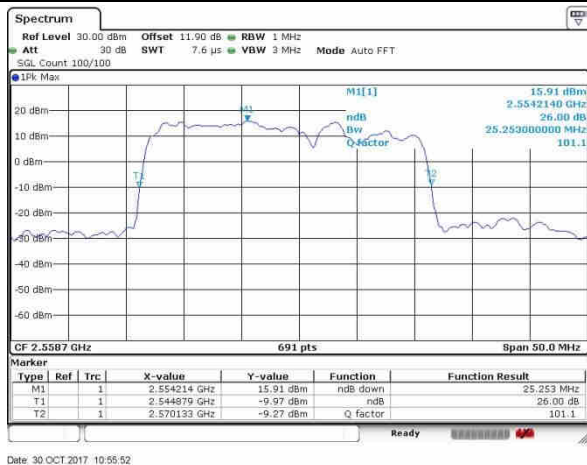
Lowest Channel / 15MHz+10MHz



Middle Channel / 15MHz+10MHz



Highest Channel / 15MHz+10MHz



**Occupied Bandwidth**

Mode	LTE Band 7 : 99%OBW(MHz)			
QPSK				
BW	10MHz+20MHz	15MHz+15MHz	15MHz+20MHz	
Lowest CH	27.7	27.96	32.72	
Middle CH	27.87	28.65	32.62	
Highest CH	28.05	28.22	32.42	
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	15MHz+10MHz
Lowest CH	28.05	32.42	37.51	23.3
Middle CH	28.05	32.82	37.4	23.3
Highest CH	27.79	32.72	37.51	23.73

Mode	LTE Band 7 : 99%OBW(MHz)			
16QAM				
BW	10MHz+20MHz	15MHz+15MHz	15MHz+20MHz	
Lowest CH	27.7	28.22	32.92	
Middle CH	28.13	28.65	32.62	
Highest CH	28.22	28.22	32.42	
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	15MHz+10MHz
Lowest CH	27.79	32.92	37.74	23.37
Middle CH	28.05	33.02	37.63	23.59
Highest CH	27.87	32.42	37.16	23.08

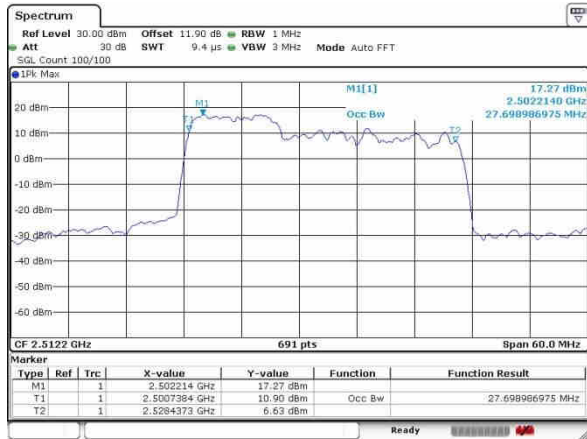
Mode	LTE Band 7 : 99%OBW(MHz)			
64QAM				
BW	10MHz+20MHz	15MHz+15MHz	15MHz+20MHz	
Lowest CH	27.53	28.31	32.42	
Middle CH	27.7	28.57	32.72	
Highest CH	27.7	28.57	32.42	
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	15MHz+10MHz
Lowest CH	28.05	32.62	37.74	23.44
Middle CH	28.13	32.82	37.28	23.37
Highest CH	28.13	32.42	37.04	23.3



LTE Band 7

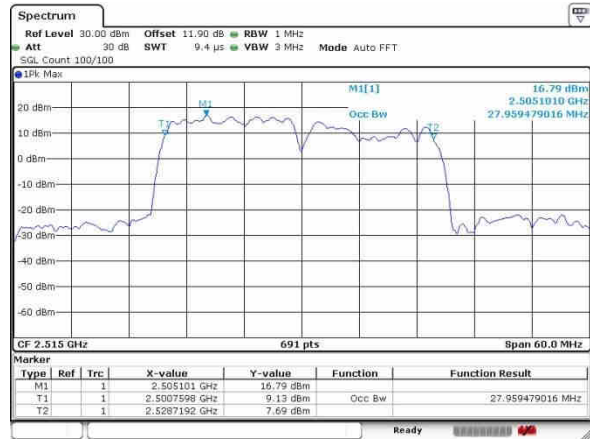
QPSK

Lowest Channel / 10MHz+20MHz



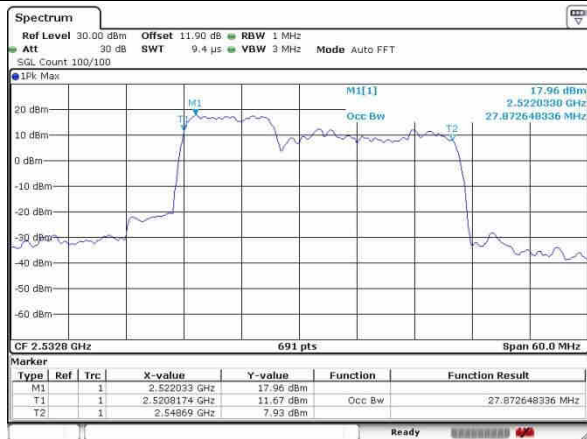
Date: 27 SEP 2017 11:05:08

Lowest Channel / 15MHz+15MHz



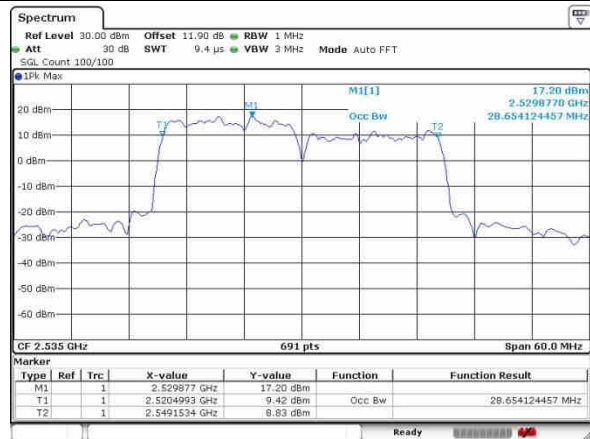
Date: 27 SEP 2017 15:18:27

Middle Channel / 10MHz+20MHz



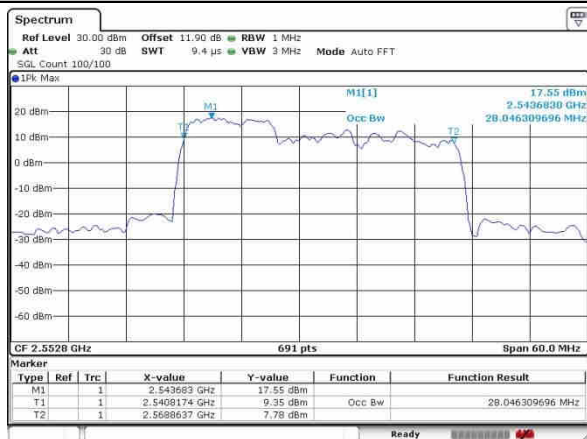
Date: 27 SEP 2017 13:42:34

Middle Channel / 15MHz+15MHz



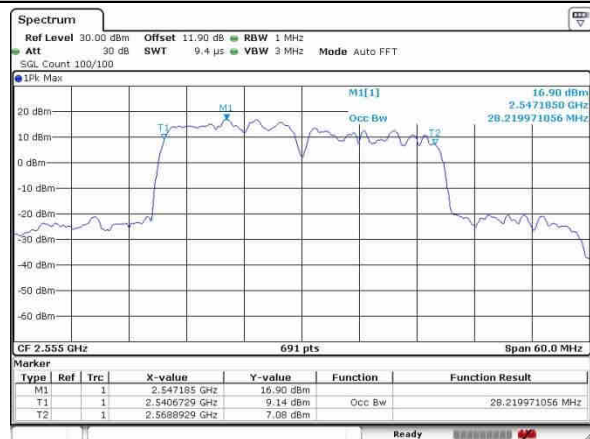
Date: 27 SEP 2017 16:00:29

Highest Channel / 10MHz+20MHz



Date: 27 SEP 2017 13:48:48

Highest Channel / 15MHz+15MHz



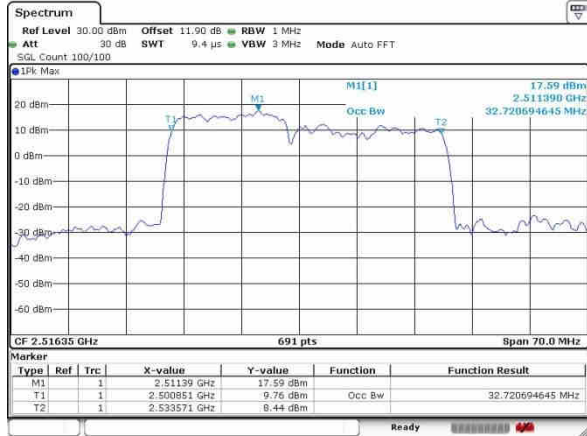
Date: 27 SEP 2017 16:00:20



LTE Band 7

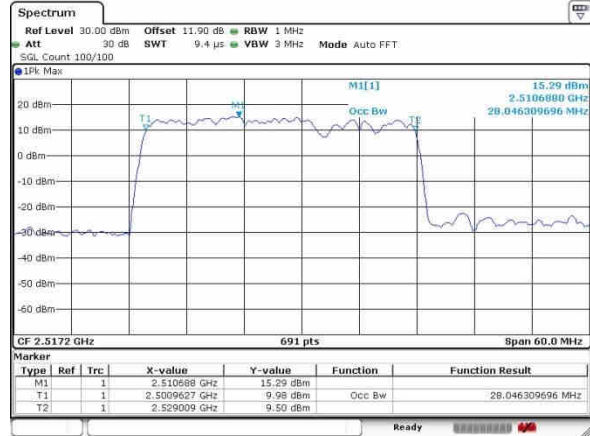
QPSK

Lowest Channel / 15MHz+20MHz



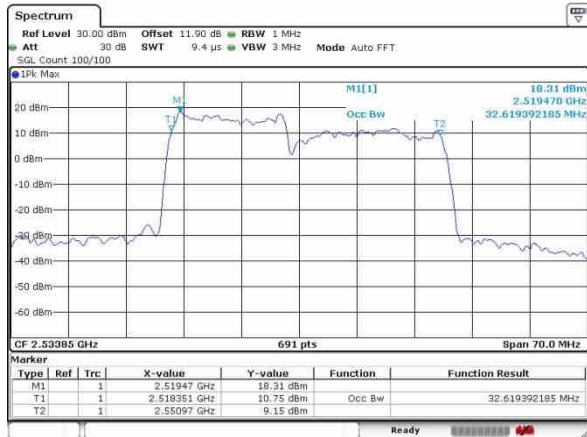
Date: 30 SEP 2017 12:05:08

Lowest Channel / 20MHz+10MHz



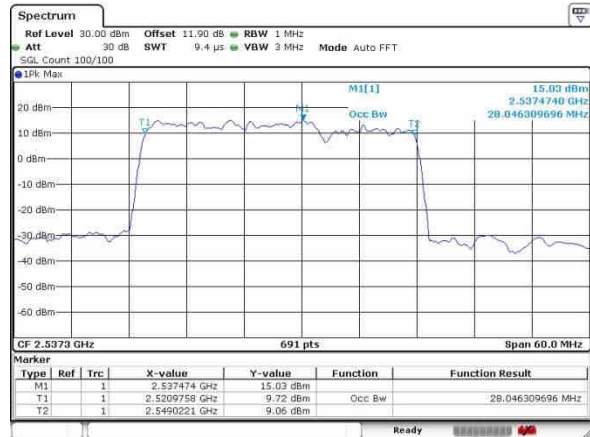
Date: 27 SEP 2017 13:58:52

Middle Channel / 15MHz+20MHz



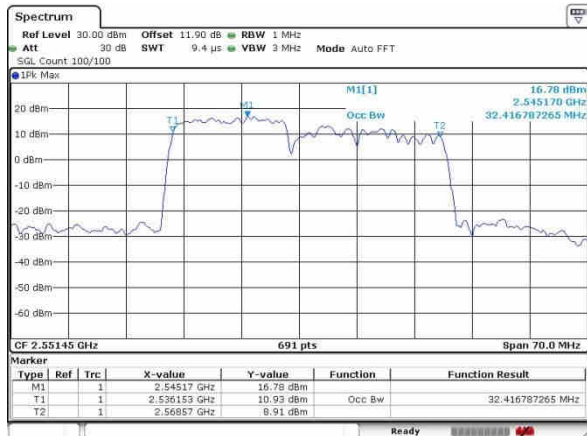
Date: 30 SEP 2017 12:08:55

Middle Channel / 20MHz+10MHz



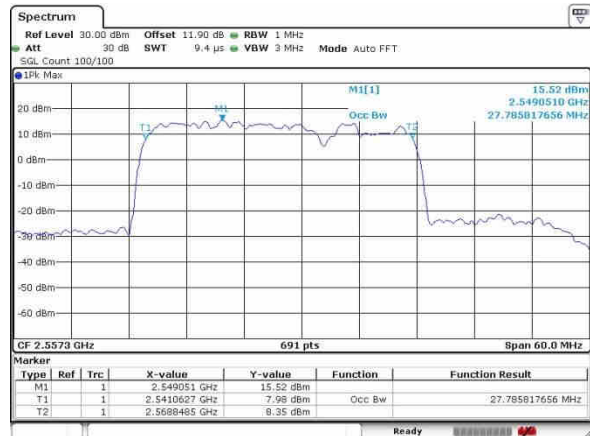
Date: 27 SEP 2017 15:00:42

Highest Channel / 15MHz+20MHz



Date: 30 SEP 2017 12:32:08

Highest Channel / 20MHz+10MHz



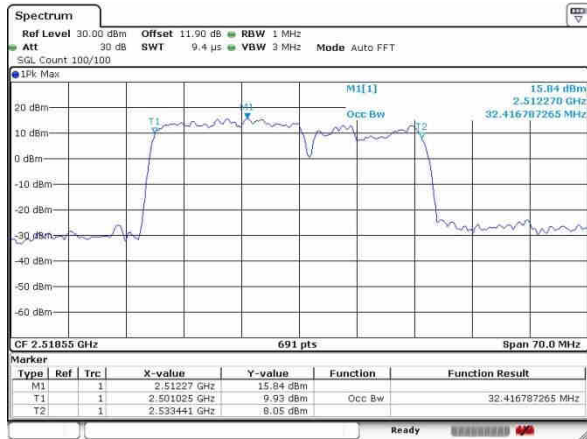
Date: 27 SEP 2017 15:07:31



LTE Band 7

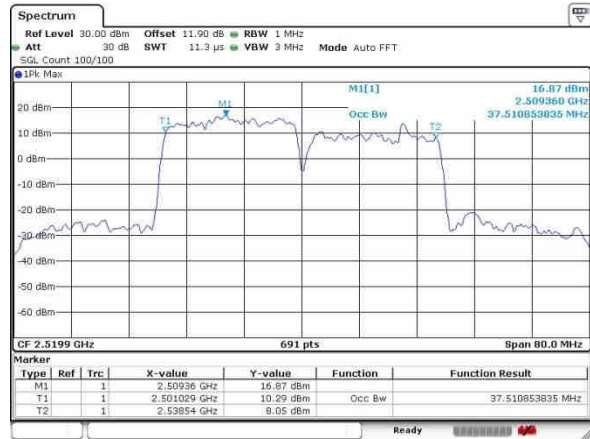
QPSK

Lowest Channel / 20MHz+15MHz



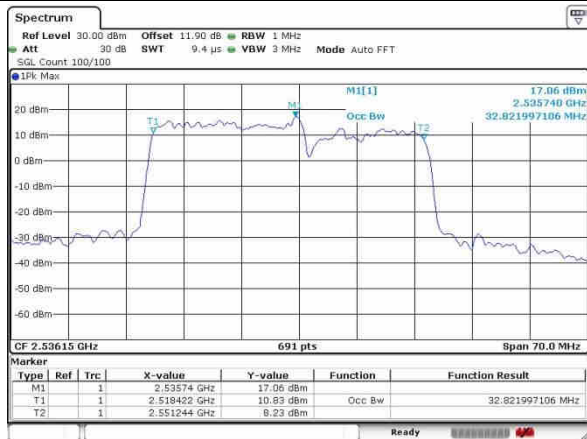
Date: 27 SEP 2017 17:25:58

Lowest Channel / 20MHz+20MHz



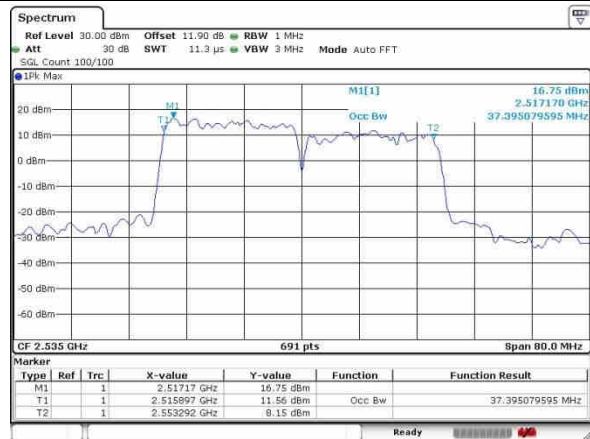
Date: 30 SEP 2017 11:12:41

Middle Channel / 20MHz+15MHz



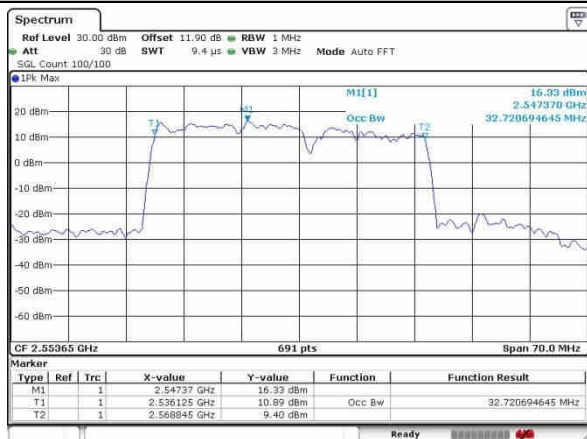
Date: 30 SEP 2017 12:16:23

Middle Channel / 20MHz+20MHz



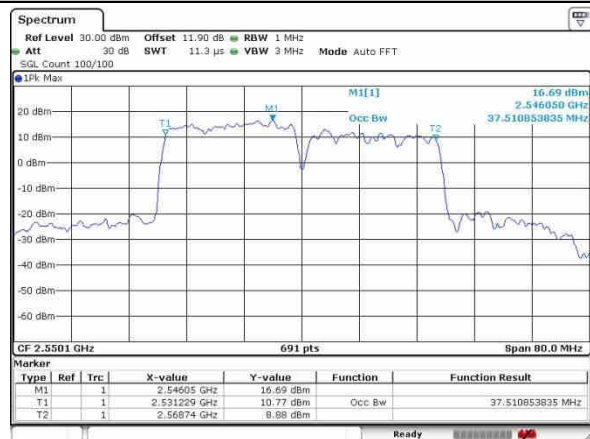
Date: 30 SEP 2017 11:18:19

Highest Channel / 20MHz+15MHz



Date: 30 SEP 2017 12:24:13

Highest Channel / 20MHz+20MHz



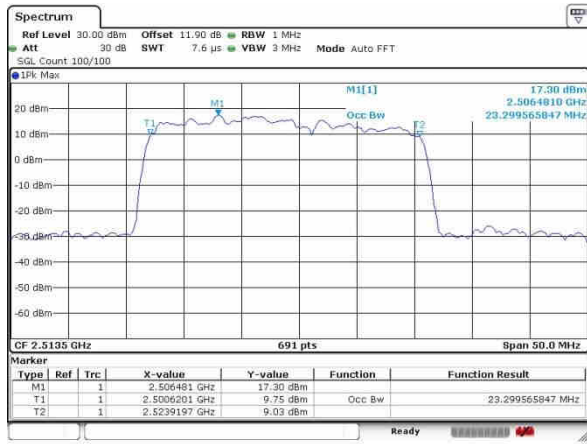
Date: 30 SEP 2017 11:19:15



LTE Band 7

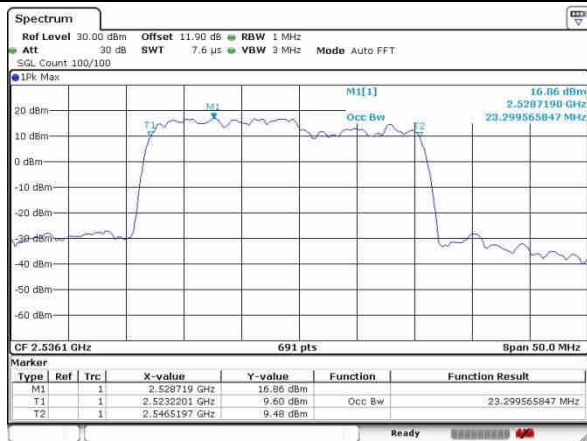
QPSK

Lowest Channel / 15MHz+10MHz



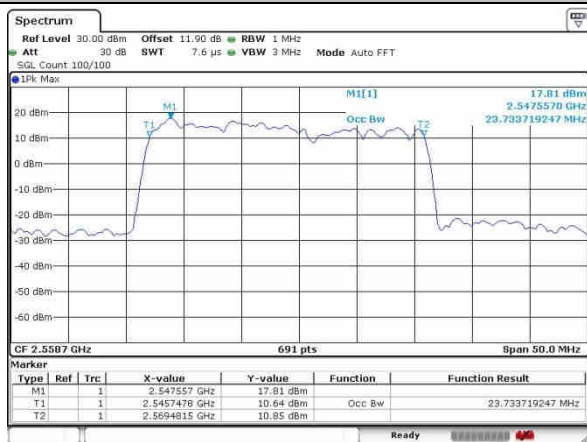
Date: 30 OCT 2017 09:37:17

Middle Channel / 15MHz+10MHz



Date: 30 OCT 2017 10:52:26

Highest Channel / 15MHz+10MHz



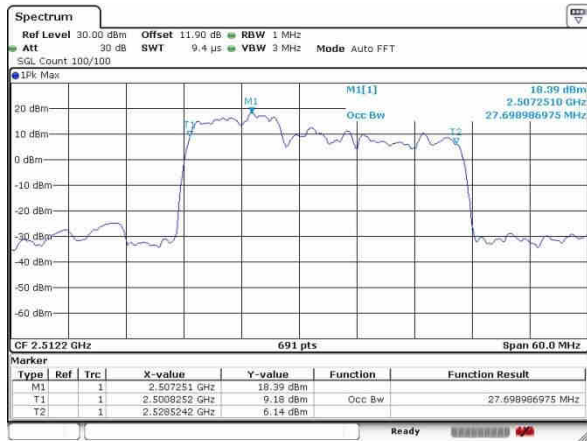
Date: 30 OCT 2017 10:55:13



LTE Band 7

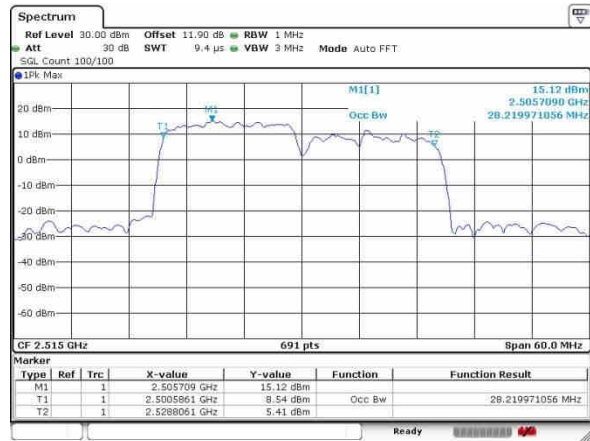
16QAM

Lowest Channel / 10MHz+20MHz



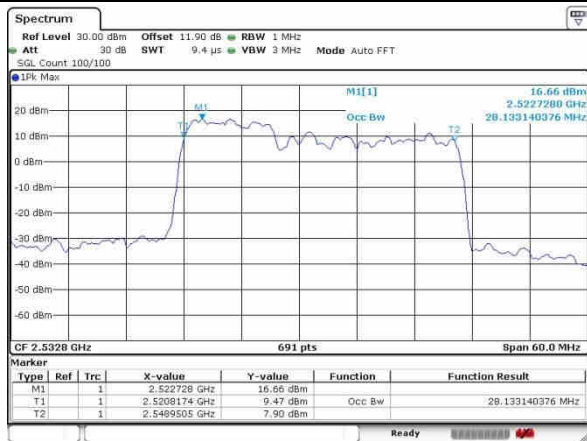
Date: 27 SEP 2017 11:05:19

Lowest Channel / 15MHz+15MHz



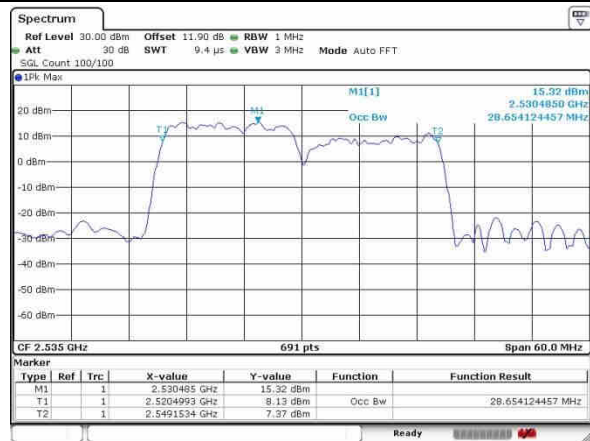
Date: 27 SEP 2017 15:18:38

Middle Channel / 10MHz+20MHz



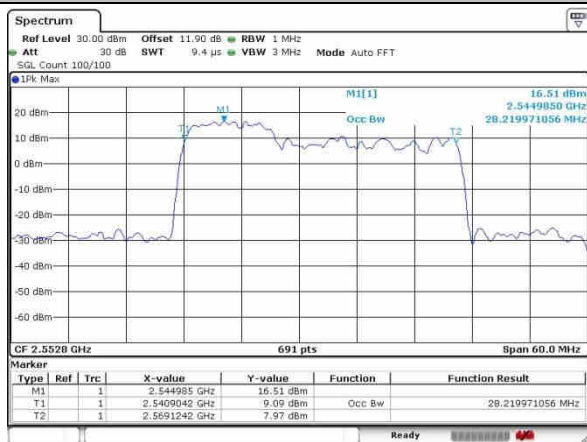
Date: 27 SEP 2017 13:42:47

Middle Channel / 15MHz+15MHz



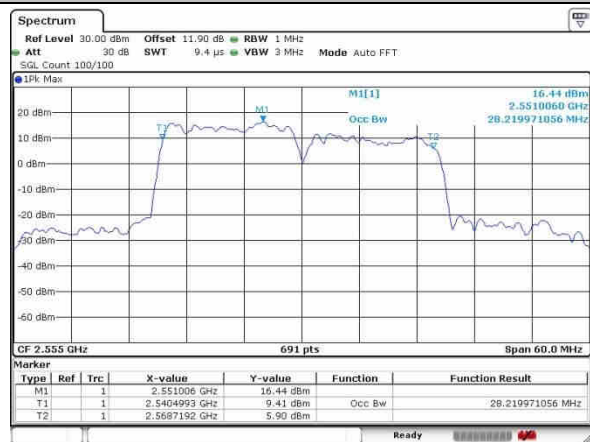
Date: 27 SEP 2017 16:00:46

Highest Channel / 10MHz+20MHz



Date: 27 SEP 2017 13:48:36

Highest Channel / 15MHz+15MHz



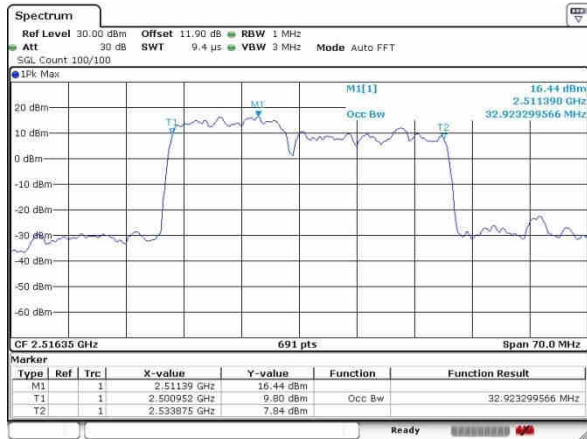
Date: 27 SEP 2017 16:08:10



LTE Band 7

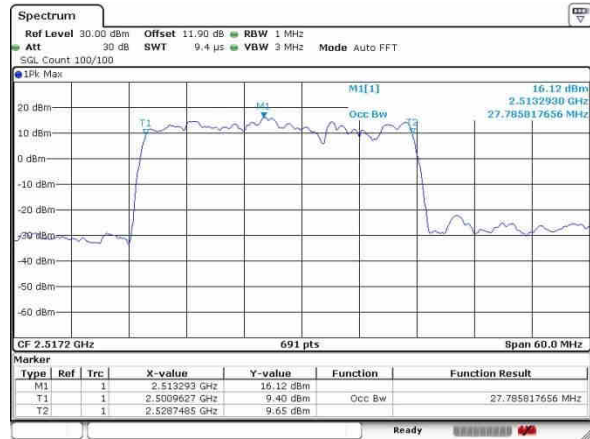
16QAM

Lowest Channel / 15MHz+20MHz



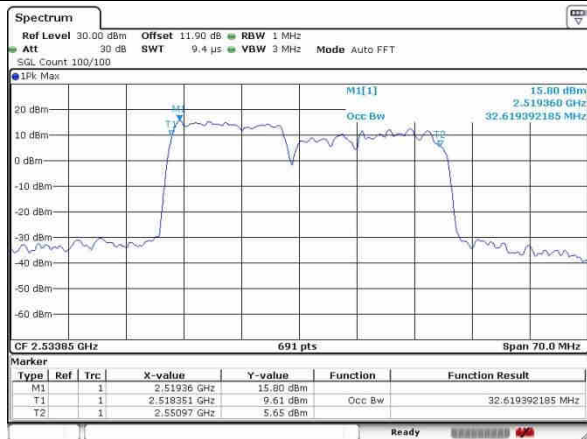
Date: 30 SEP 2017 12:05:47

Lowest Channel / 20MHz+10MHz



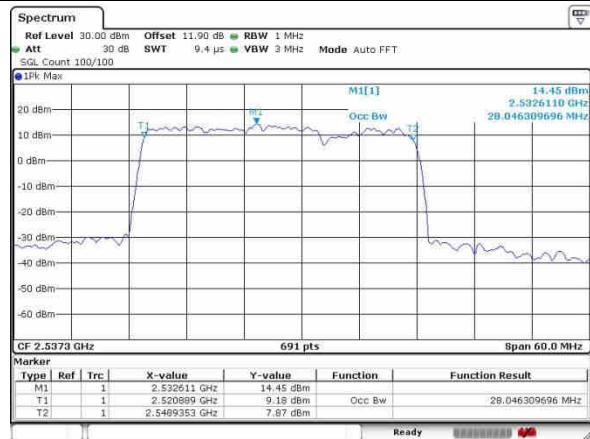
Date: 27 SEP 2017 13:59:03

Middle Channel / 15MHz+20MHz



Date: 30 SEP 2017 12:08:48

Middle Channel / 20MHz+10MHz



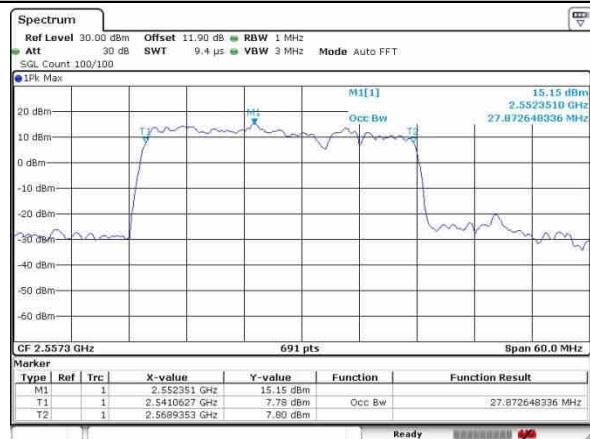
Date: 27 SEP 2017 15:00:53

Highest Channel / 15MHz+20MHz



Date: 30 SEP 2017 12:10:09

Highest Channel / 20MHz+10MHz



Date: 27 SEP 2017 15:07:19