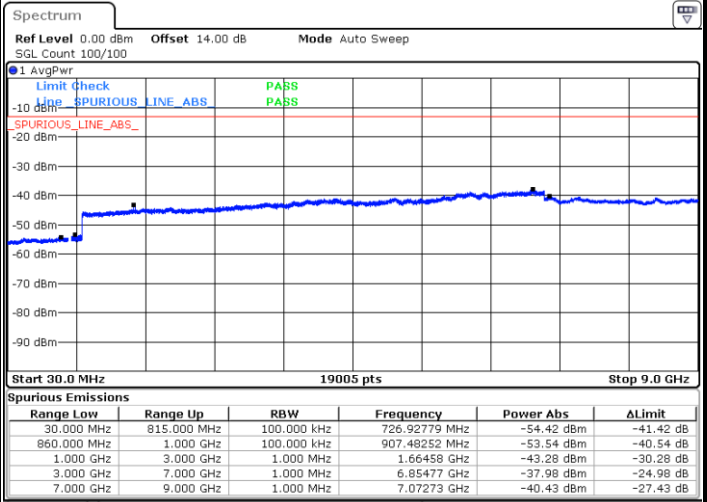
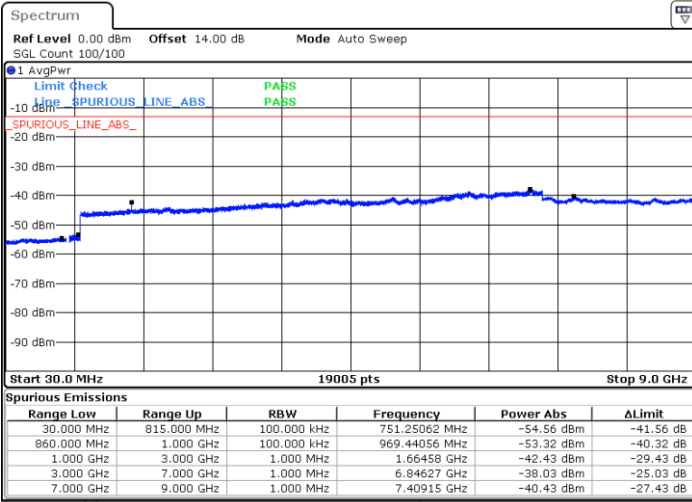




LTE Band 5 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

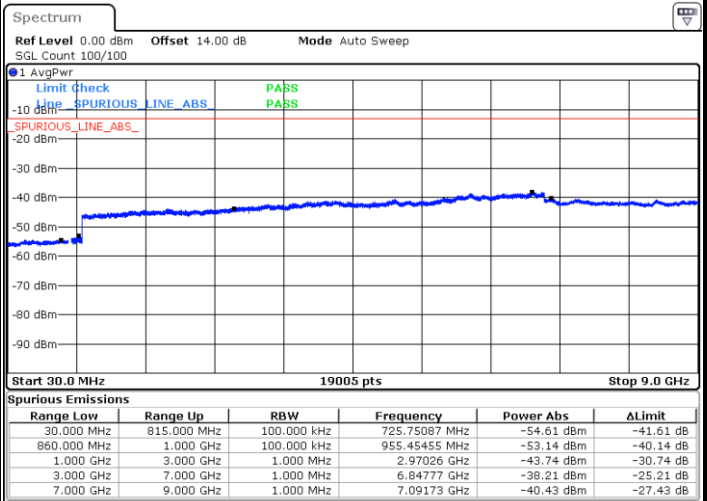
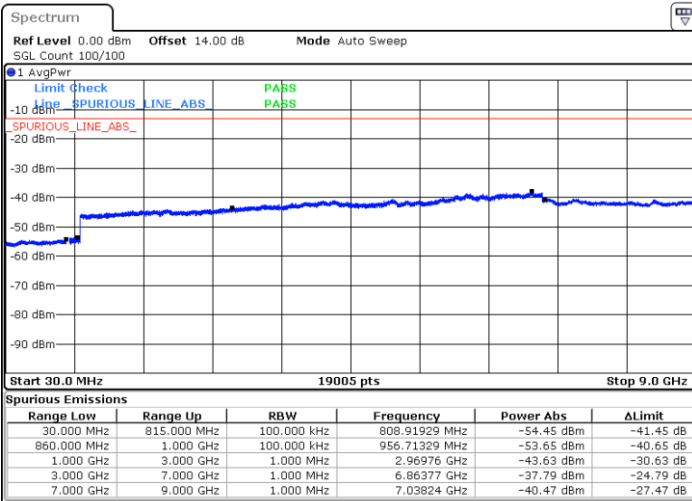


Date: 26 AUG 2019 22:43:17

Date: 26 AUG 2019 22:44:10

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 26 AUG 2019 22:52:13

Date: 26 AUG 2019 22:53:06



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	0.0035	PASS
40	Normal Voltage	0.0010	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0033	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0020	

Note: Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.35 V.



LTE Band 12

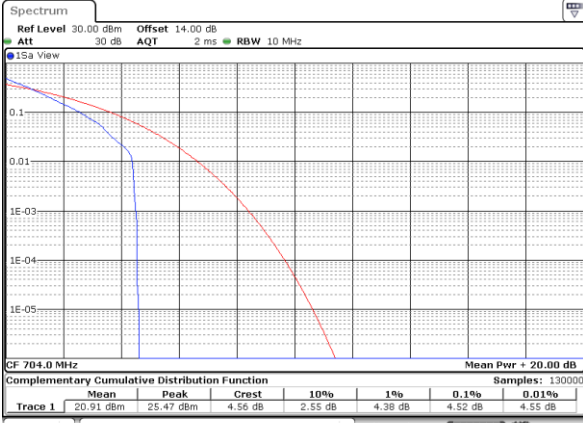
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.52	4.7	5.36	5.62	PASS
Middle CH	4.06	4.93	5.04	5.71	
Highest CH	4.29	4.75	4.81	5.77	



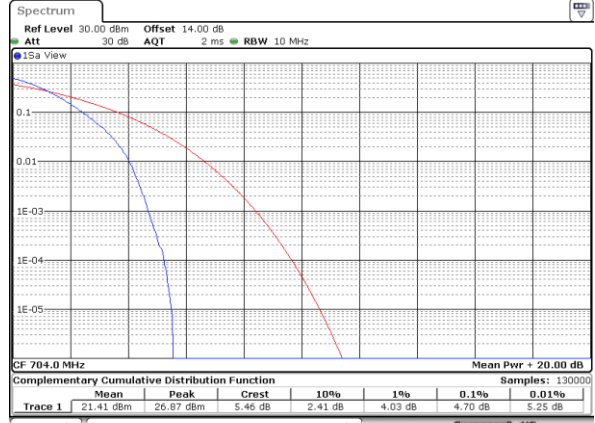
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



Date: 27_AUG.2019 19:56:43

Lowest Channel / Full RB



Date: 27_AUG.2019 19:56:53

Middle Channel / 1RB



Date: 27_AUG.2019 19:57:03

Middle Channel / Full RB



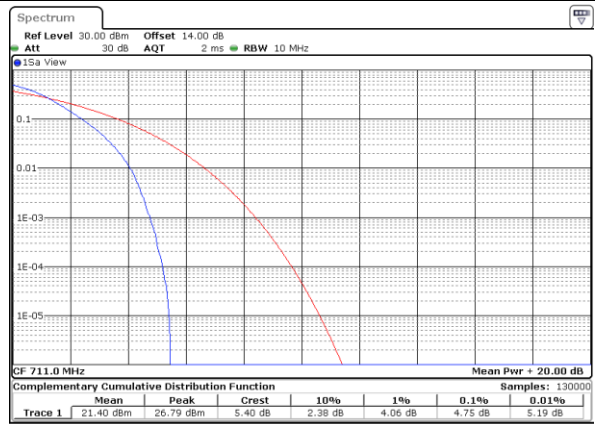
Date: 27_AUG.2019 19:57:14

Highest Channel / 1RB



Date: 27_AUG.2019 19:57:23

Highest Channel / Full RB

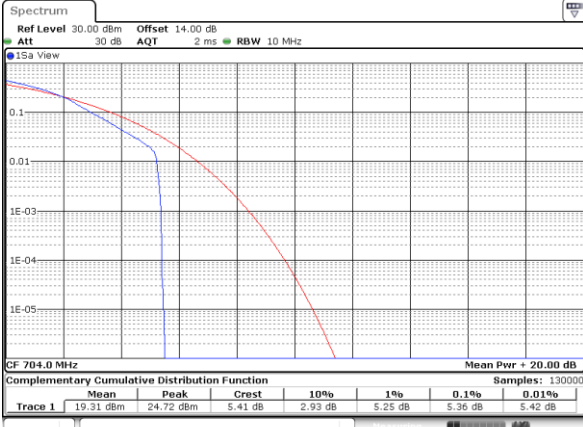


Date: 27_AUG.2019 19:57:33



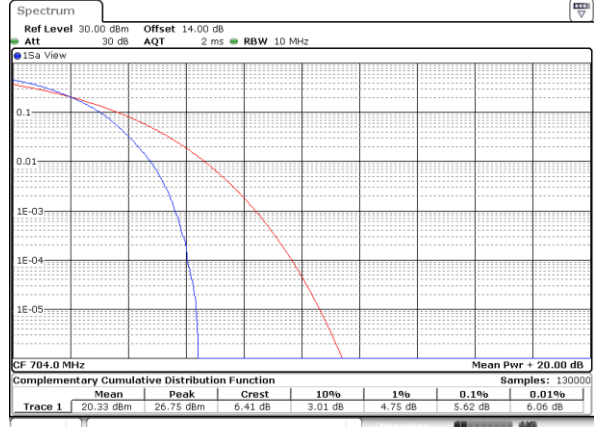
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



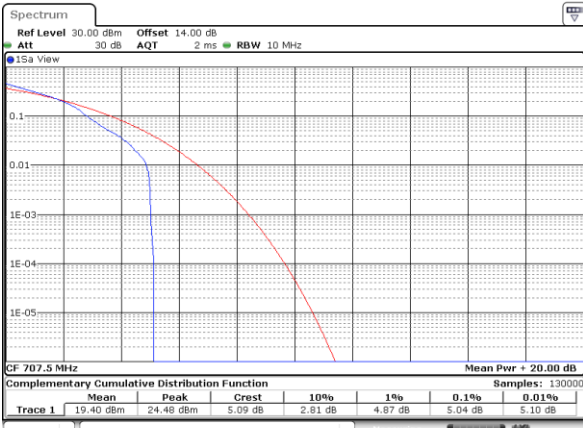
Date: 27_AUG.2019 19:54:53

Lowest Channel / Full RB



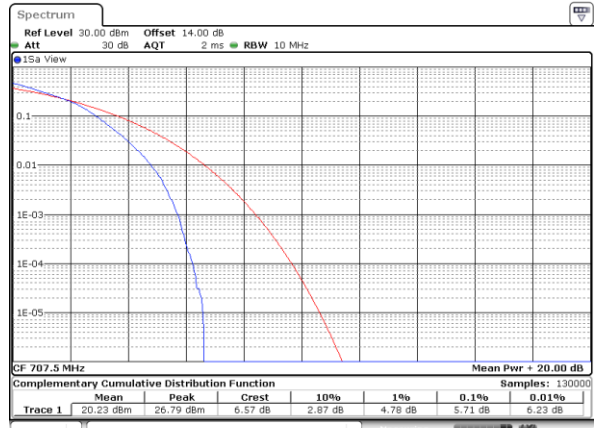
Date: 27_AUG.2019 19:55:58

Middle Channel / 1RB



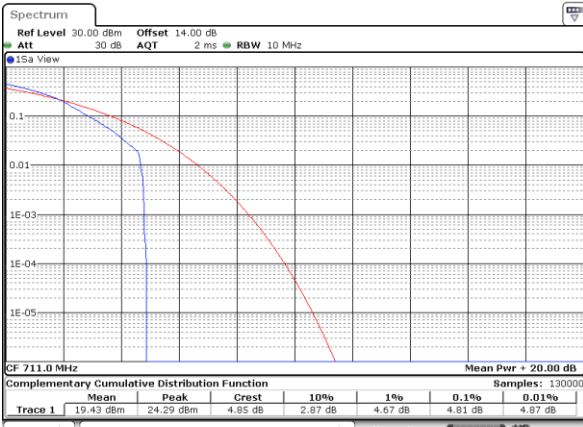
Date: 27_AUG.2019 19:56:07

Middle Channel / Full RB



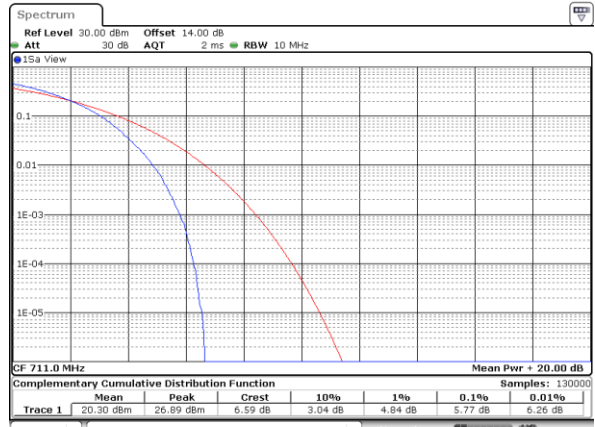
Date: 27_AUG.2019 19:56:16

Highest Channel / 1RB



Date: 27_AUG.2019 19:56:25

Highest Channel / Full RB



Date: 27_AUG.2019 19:56:34



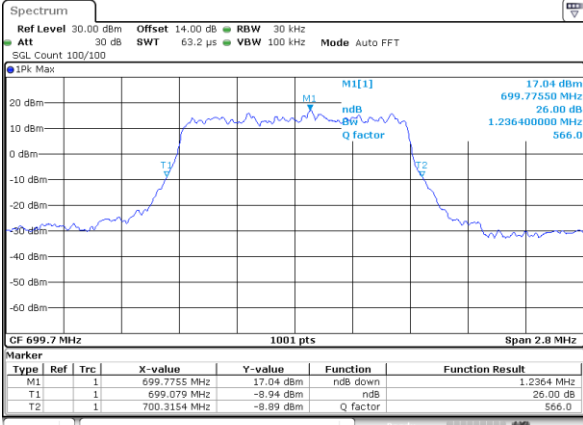
26dB Bandwidth

Mode	LTE Band 12 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.236	1.27	3.015	2.997	4.855	4.965	9.75	9.75	-	-	-	-
Middle CH	1.262	1.267	3.009	3.015	4.975	4.915	9.89	9.69	-	-	-	-
Highest CH	1.25	1.245	2.985	3.021	4.905	4.875	9.69	9.69	-	-	-	-



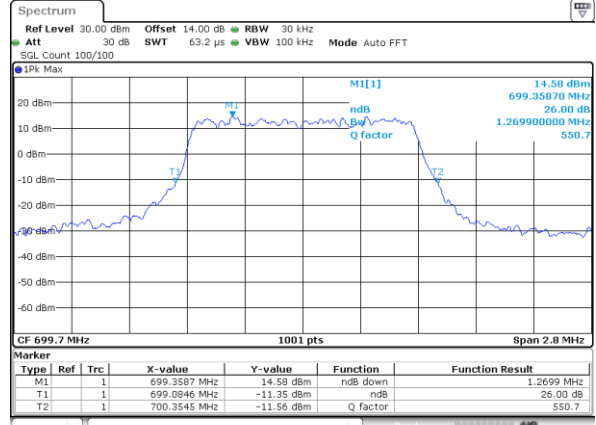
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



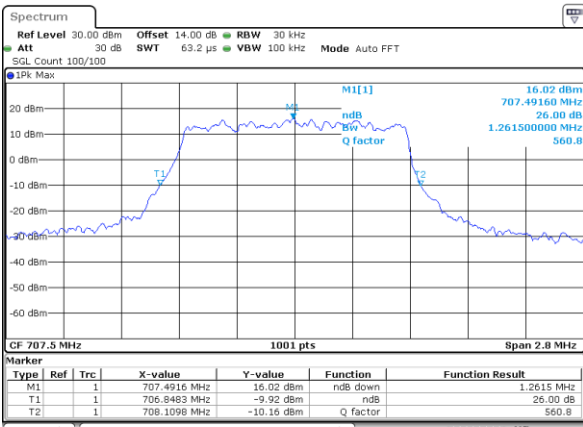
Date: 27_AUG.2019 18:48:13

Lowest Channel / 1.4MHz / 16QAM



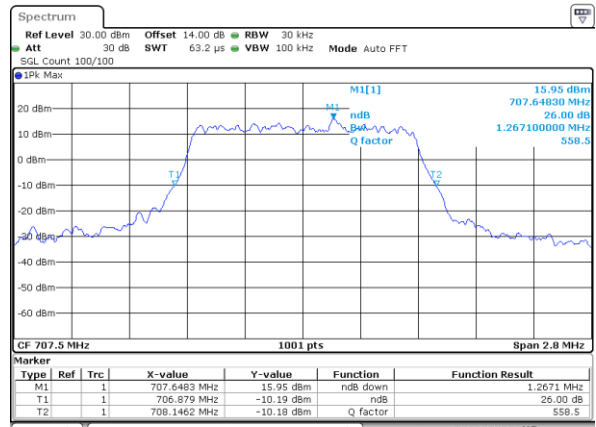
Date: 27_AUG.2019 18:48:03

Middle Channel / 1.4MHz / QPSK



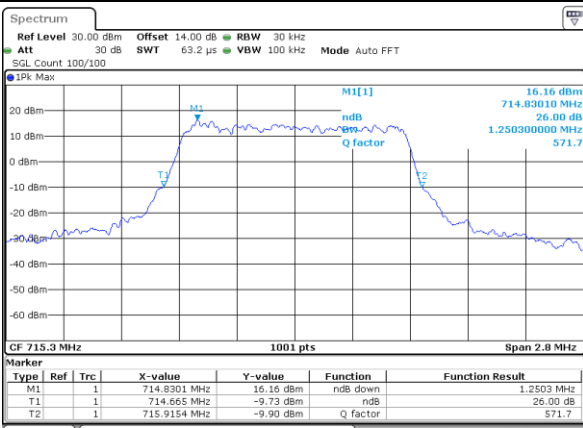
Date: 27_AUG.2019 18:55:11

Middle Channel / 1.4MHz / 16QAM



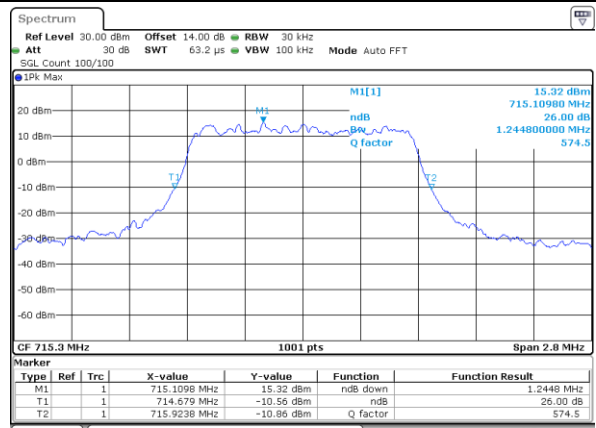
Date: 27_AUG.2019 18:55:21

Highest Channel / 1.4MHz / QPSK



Date: 27_AUG.2019 18:57:42

Highest Channel / 1.4MHz / 16QAM

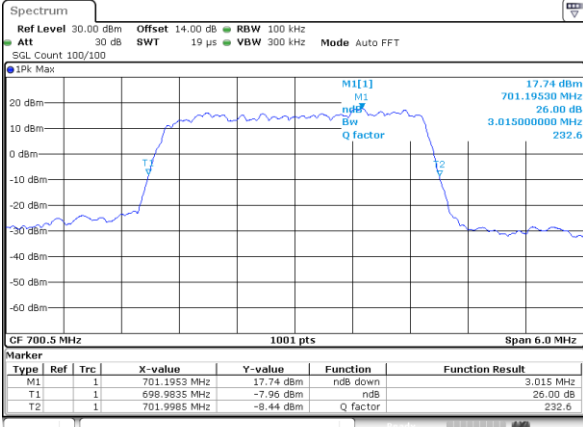


Date: 27_AUG.2019 18:57:52



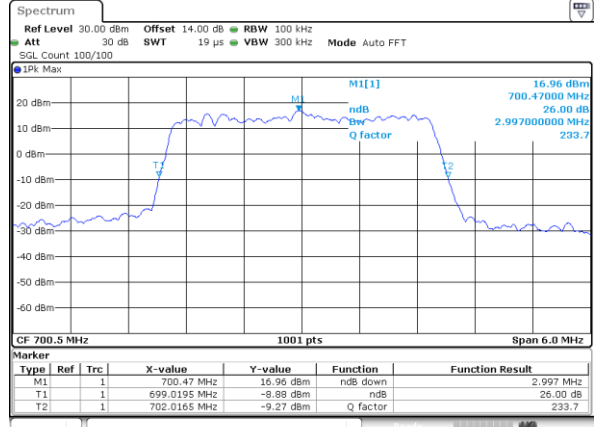
LTE Band 12

Lowest Channel / 3MHz / QPSK



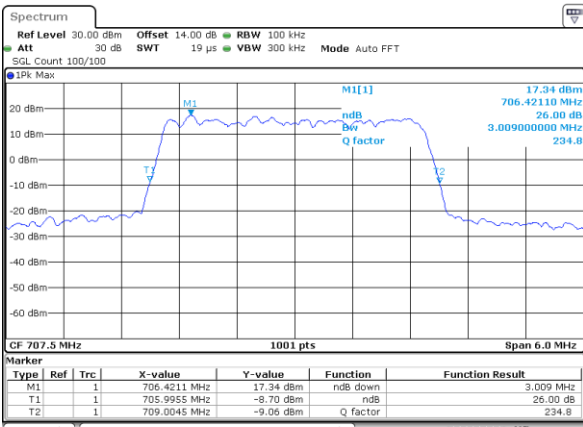
Date: 27.AUG.2019 19:04:49

Lowest Channel / 3MHz / 16QAM



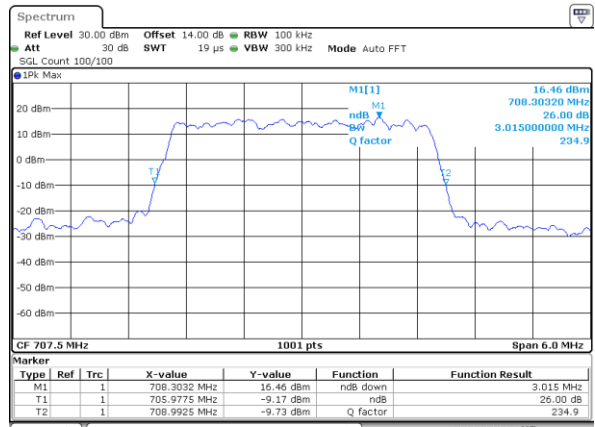
Date: 27.AUG.2019 19:04:59

Middle Channel / 3MHz / QPSK



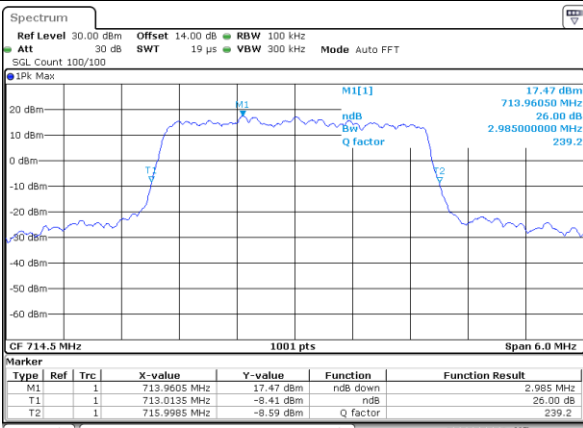
Date: 27.AUG.2019 19:11:57

Middle Channel / 3MHz / 16QAM



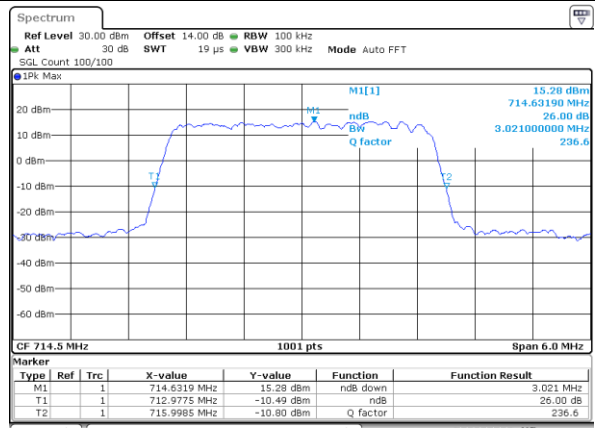
Date: 27.AUG.2019 19:12:07

Highest Channel / 3MHz / QPSK



Date: 27.AUG.2019 19:14:29

Highest Channel / 3MHz / 16QAM

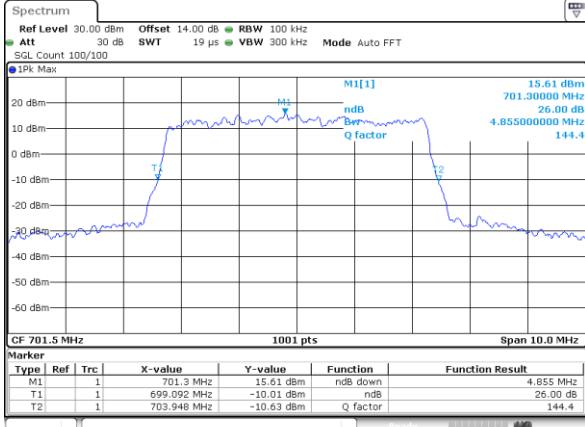


Date: 27.AUG.2019 19:14:39



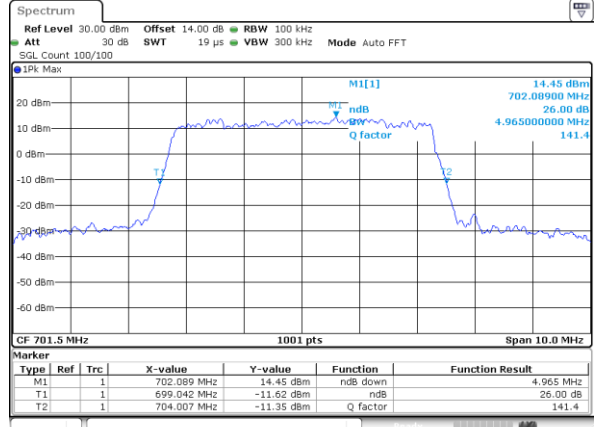
LTE Band 12

Lowest Channel / 5MHz / QPSK



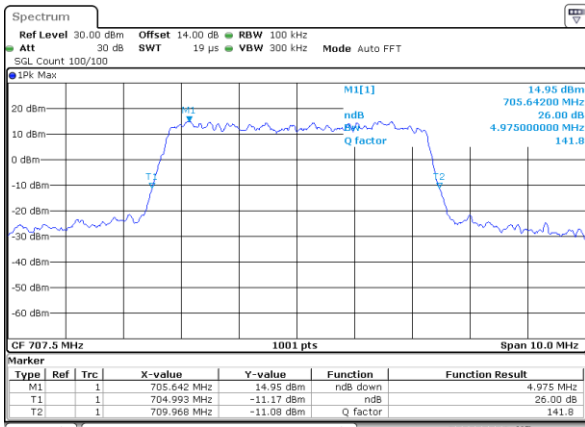
Date: 27_AUG.2019 19:21:37

Lowest Channel / 5MHz / 16QAM



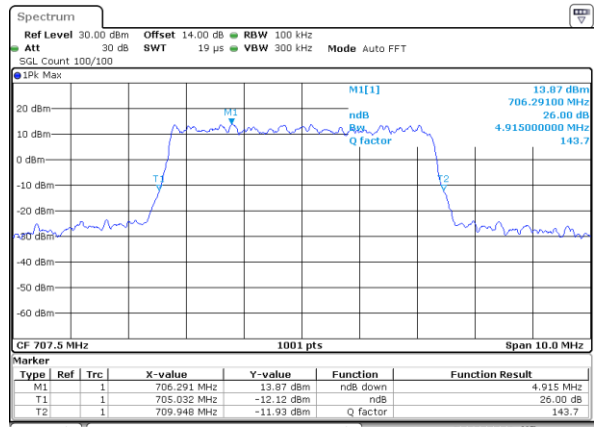
Date: 27_AUG.2019 19:21:47

Middle Channel / 5MHz / QPSK



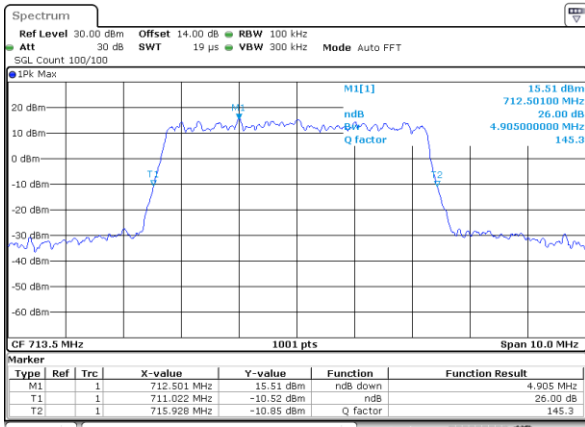
Date: 27_AUG.2019 19:28:44

Middle Channel / 5MHz / 16QAM



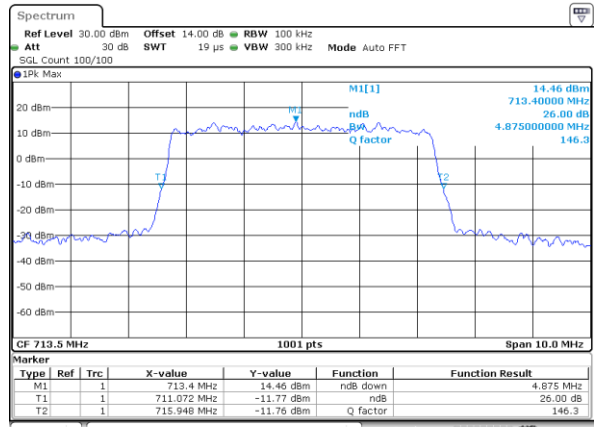
Date: 27_AUG.2019 19:28:54

Highest Channel / 5MHz / QPSK



Date: 27_AUG.2019 19:31:16

Highest Channel / 5MHz / 16QAM

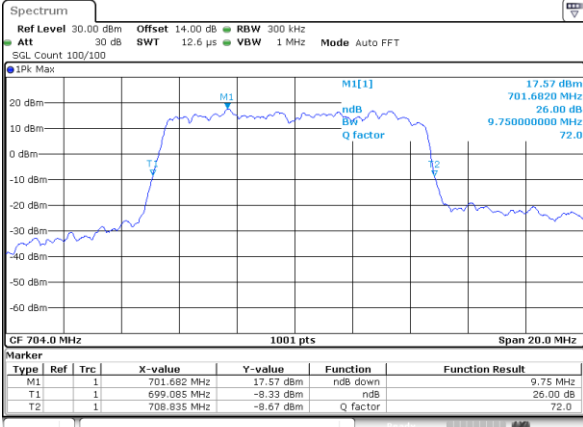


Date: 27_AUG.2019 19:31:26



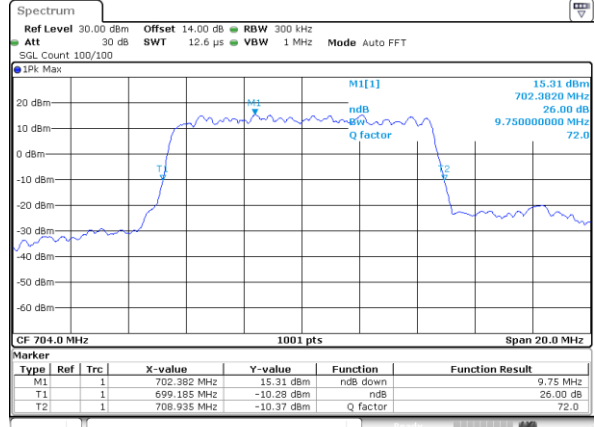
LTE Band 12

Lowest Channel / 10MHz / QPSK



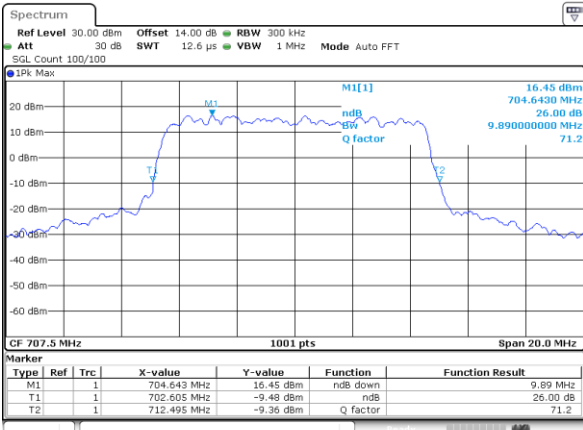
Date: 27_AUG.2019 19:38:23

Lowest Channel / 10MHz / 16QAM



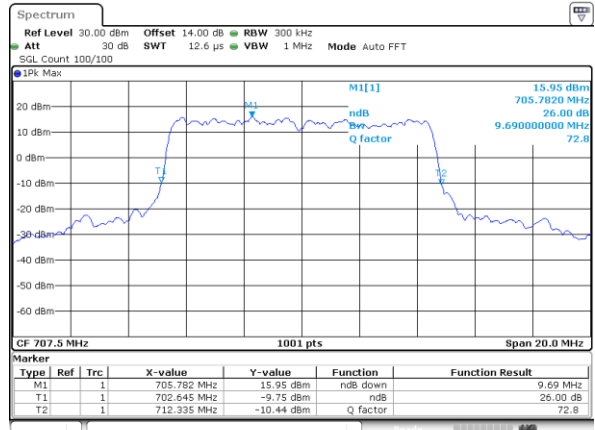
Date: 27_AUG.2019 19:38:33

Middle Channel / 10MHz / QPSK



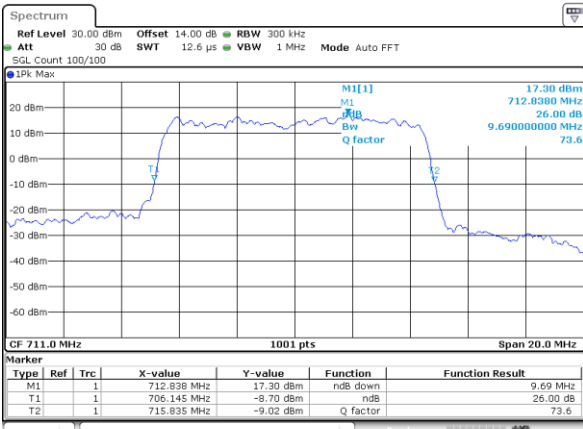
Date: 27_AUG.2019 19:45:30

Middle Channel / 10MHz / 16QAM



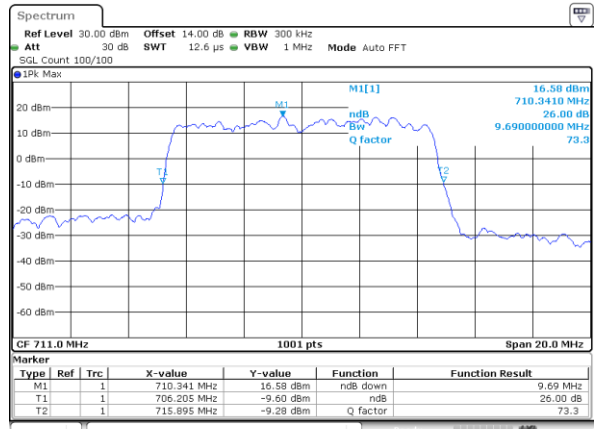
Date: 27_AUG.2019 19:45:40

Highest Channel / 10MHz / QPSK



Date: 27_AUG.2019 19:48:01

Highest Channel / 10MHz / 16QAM



Date: 27_AUG.2019 19:48:11



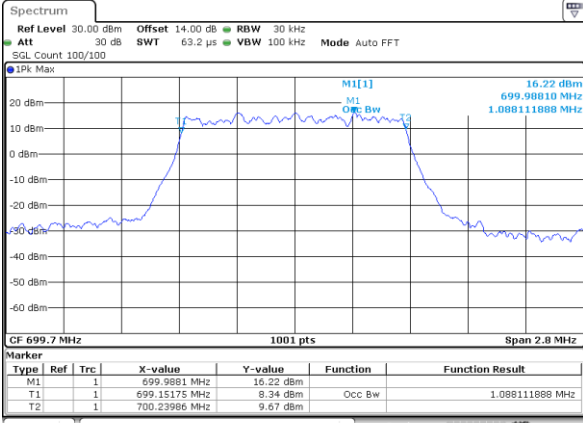
Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.7	2.72	4.5	4.47	8.99	8.93	-	-	-	-
Middle CH	1.1	1.1	2.72	2.7	4.5	4.49	9.01	9.03	-	-	-	-
Highest CH	1.09	1.09	2.72	2.73	4.46	4.48	8.99	8.93	-	-	-	-



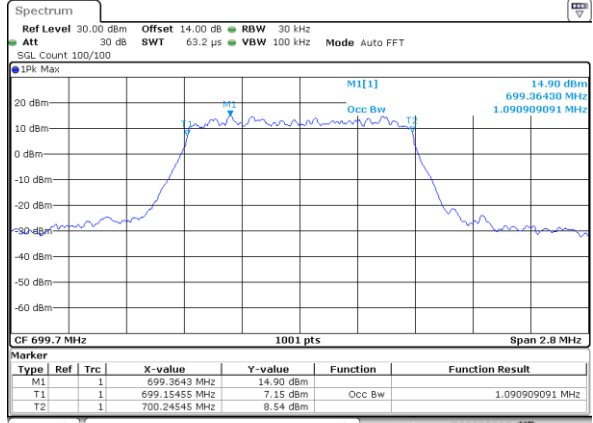
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



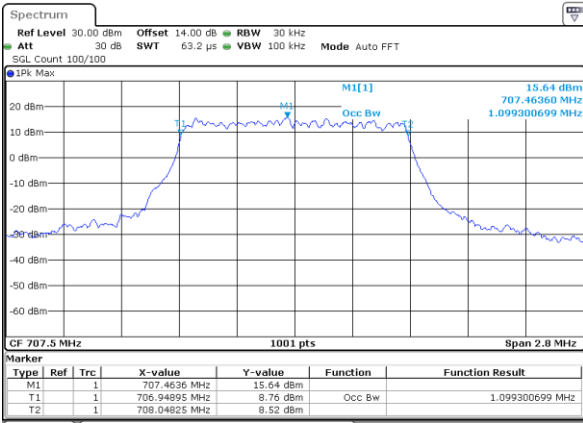
Date: 27_AUG.2019 18:47:43

Lowest Channel / 1.4MHz / 16QAM



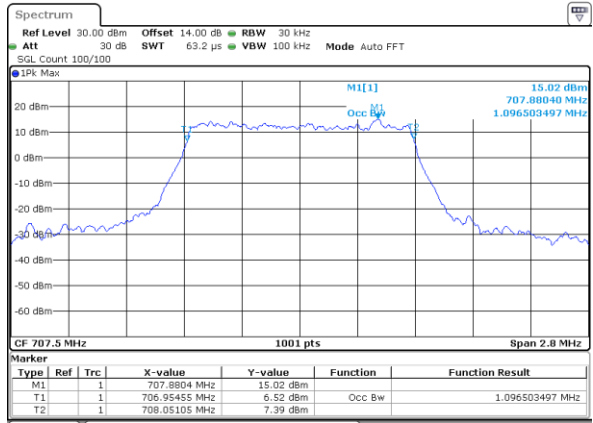
Date: 27_AUG.2019 18:47:53

Middle Channel / 1.4MHz / QPSK



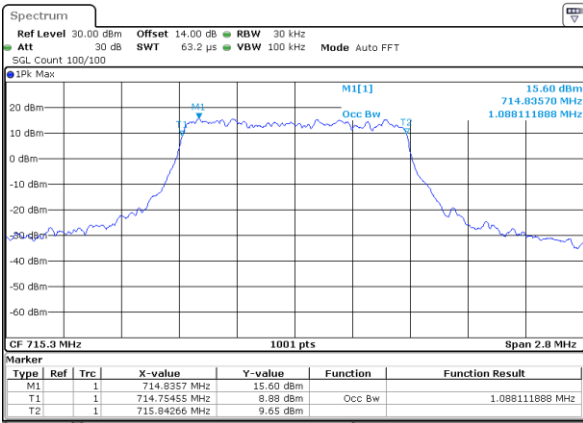
Date: 27_AUG.2019 18:54:50

Middle Channel / 1.4MHz / 16QAM



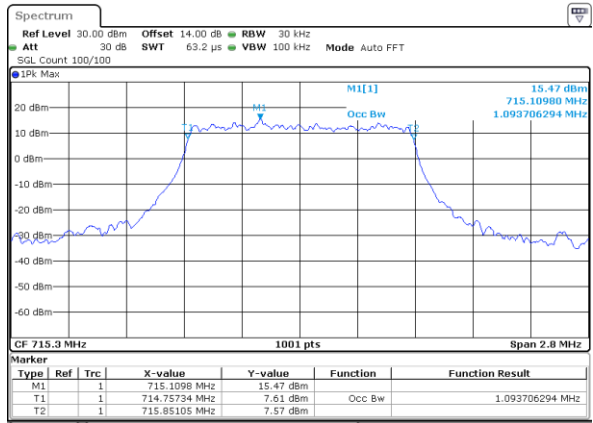
Date: 27_AUG.2019 18:55:00

Highest Channel / 1.4MHz / QPSK



Date: 27_AUG.2019 18:57:22

Highest Channel / 1.4MHz / 16QAM

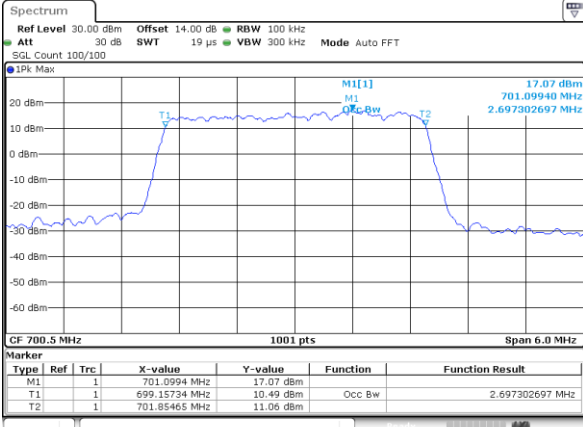


Date: 27_AUG.2019 18:57:32



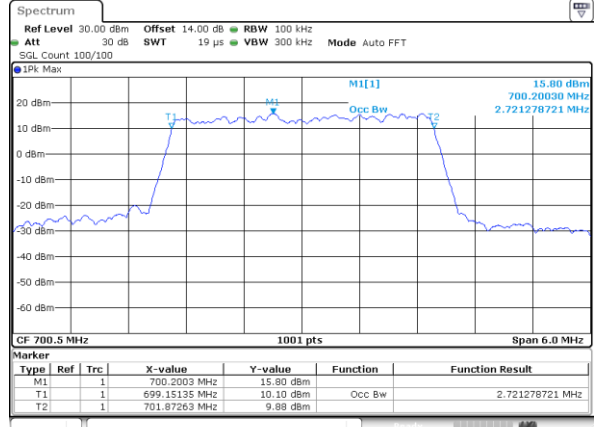
LTE Band 12

Lowest Channel / 3MHz / QPSK



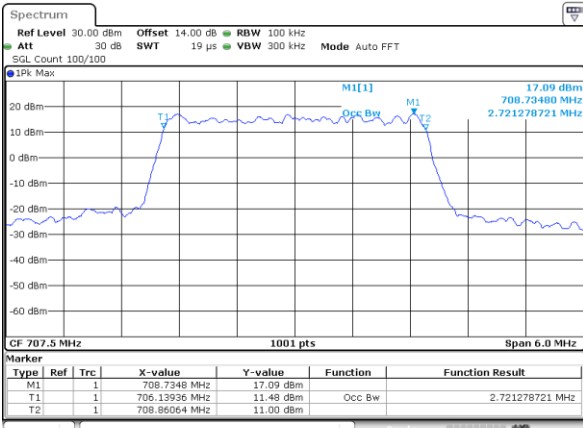
Date: 27_AUG.2019 19:04:29

Lowest Channel / 3MHz / 16QAM



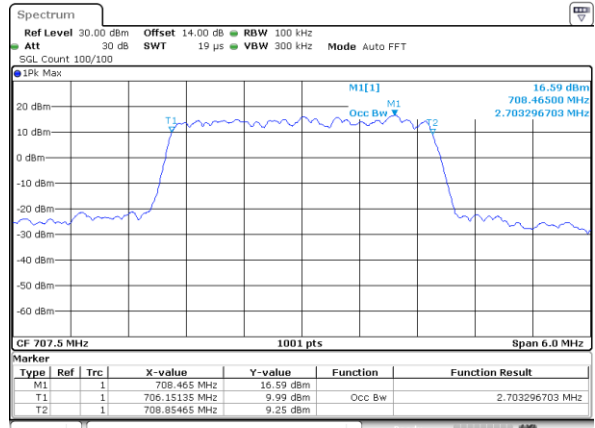
Date: 27_AUG.2019 19:04:39

Middle Channel / 3MHz / QPSK



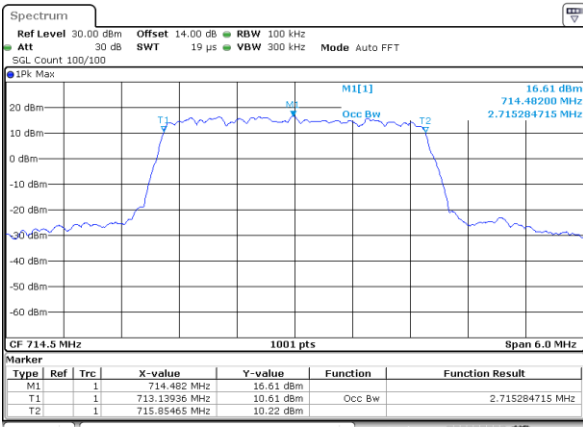
Date: 27_AUG.2019 19:11:37

Middle Channel / 3MHz / 16QAM



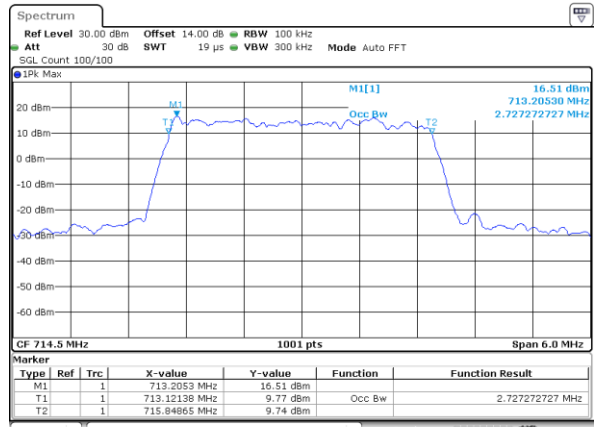
Date: 27_AUG.2019 19:11:47

Highest Channel / 3MHz / QPSK



Date: 27_AUG.2019 19:14:08

Highest Channel / 3MHz / 16QAM

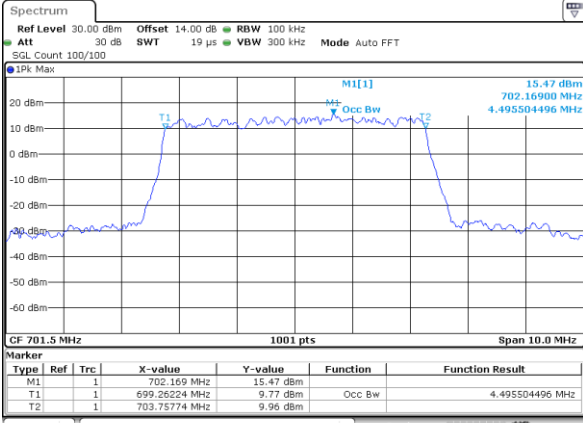


Date: 27_AUG.2019 19:14:19



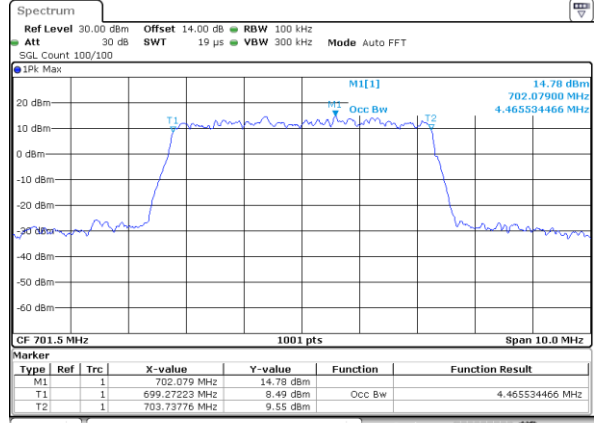
LTE Band 12

Lowest Channel / 5MHz / QPSK



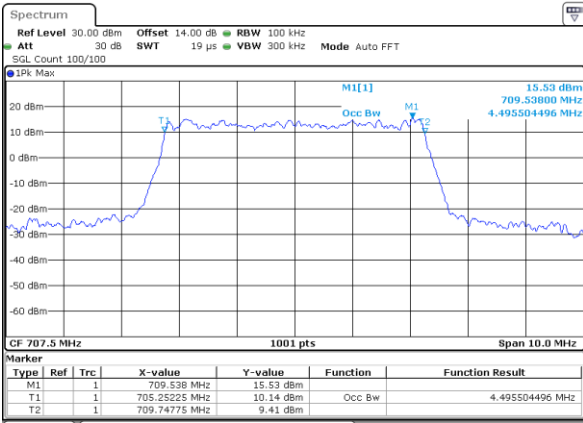
Date: 27_AUG.2019 19:21:16

Lowest Channel / 5MHz / 16QAM



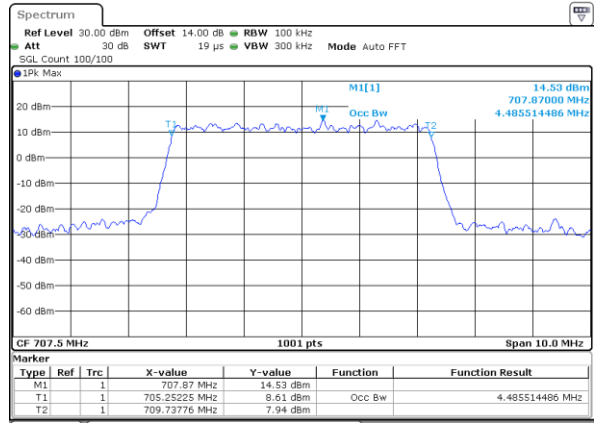
Date: 27_AUG.2019 19:21:27

Middle Channel / 5MHz / QPSK



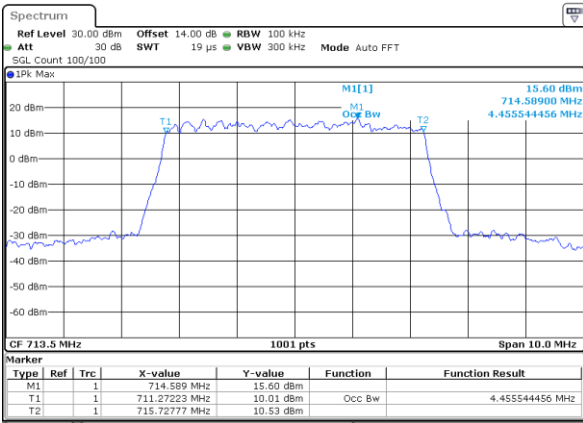
Date: 27_AUG.2019 19:28:24

Middle Channel / 5MHz / 16QAM



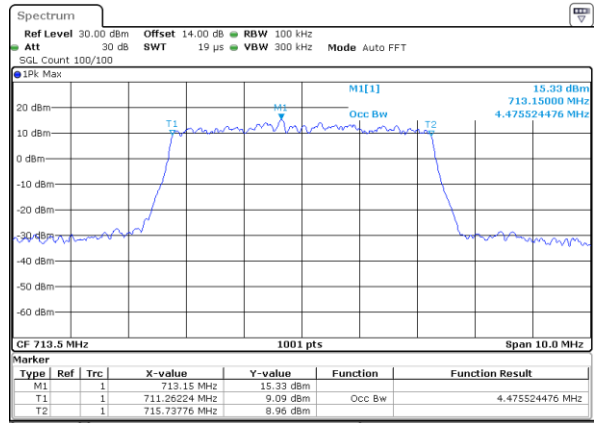
Date: 27_AUG.2019 19:28:34

Highest Channel / 5MHz / QPSK



Date: 27_AUG.2019 19:30:55

Highest Channel / 5MHz / 16QAM

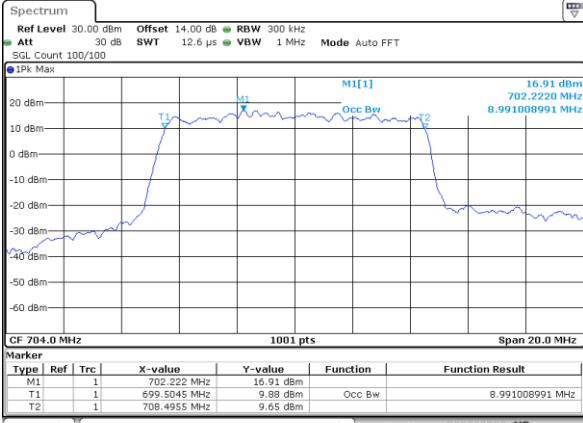


Date: 27_AUG.2019 19:31:06



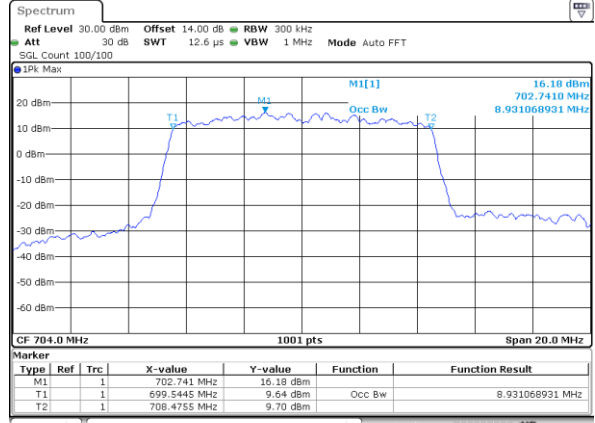
LTE Band 12

Lowest Channel / 10MHz / QPSK



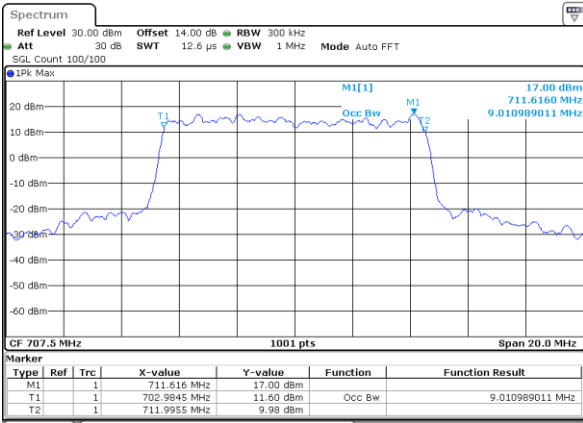
Date: 27_AUG.2019 19:38:02

Lowest Channel / 10MHz / 16QAM



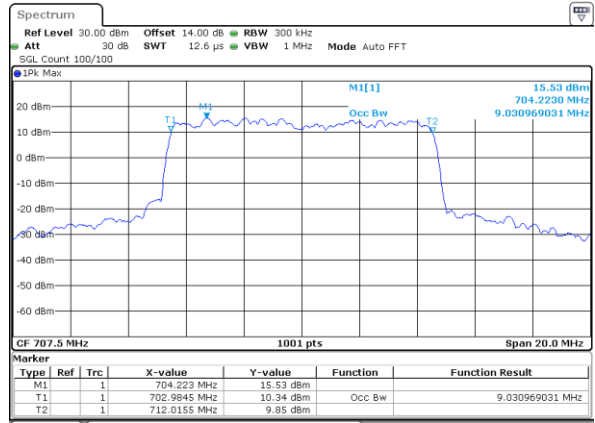
Date: 27_AUG.2019 19:38:13

Middle Channel / 10MHz / QPSK



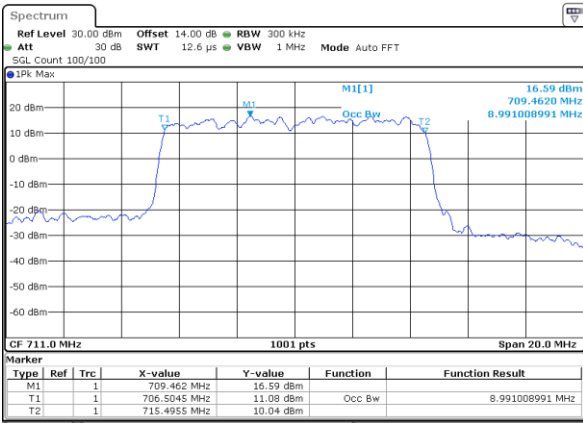
Date: 27_AUG.2019 19:45:10

Middle Channel / 10MHz / 16QAM



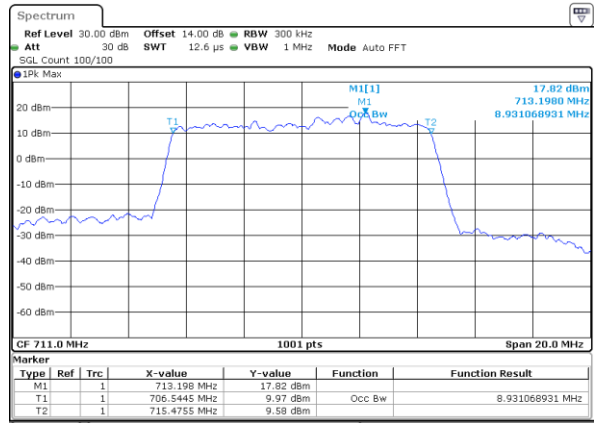
Date: 27_AUG.2019 19:45:20

Highest Channel / 10MHz / QPSK



Date: 27_AUG.2019 19:47:41

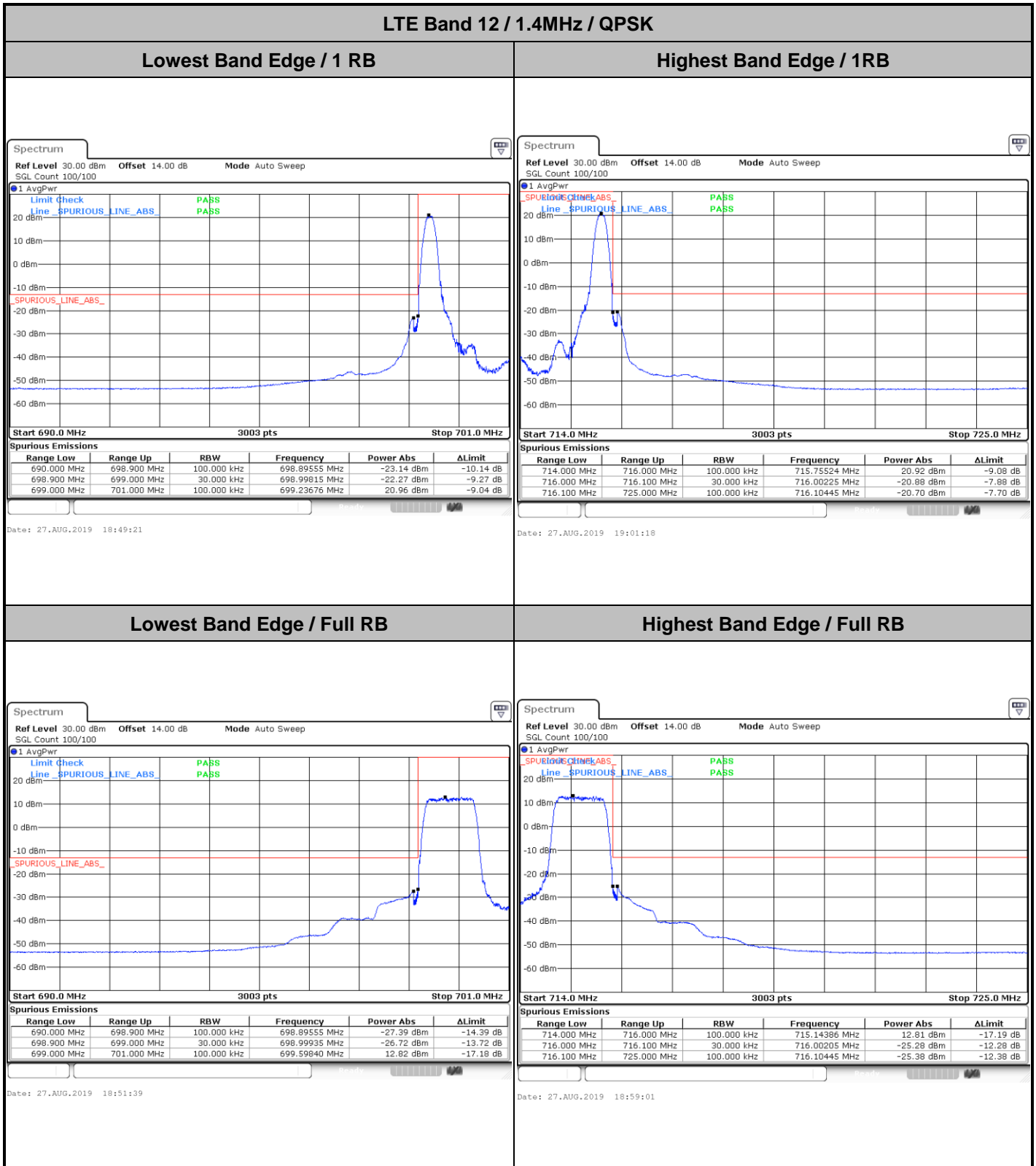
Highest Channel / 10MHz / 16QAM



Date: 27_AUG.2019 19:47:51



Conducted Band Edge

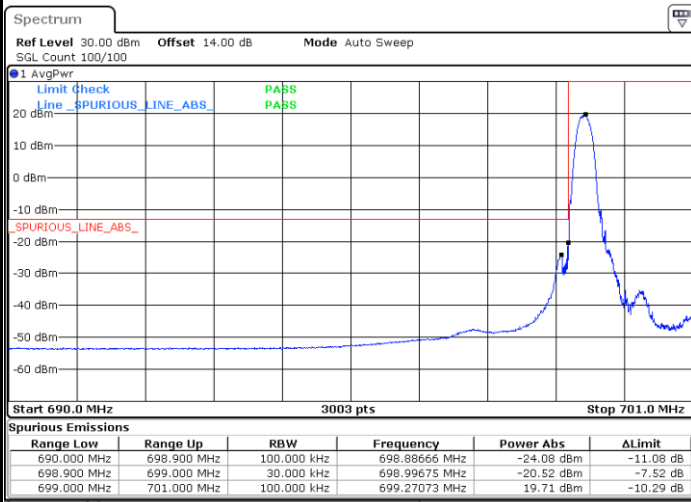




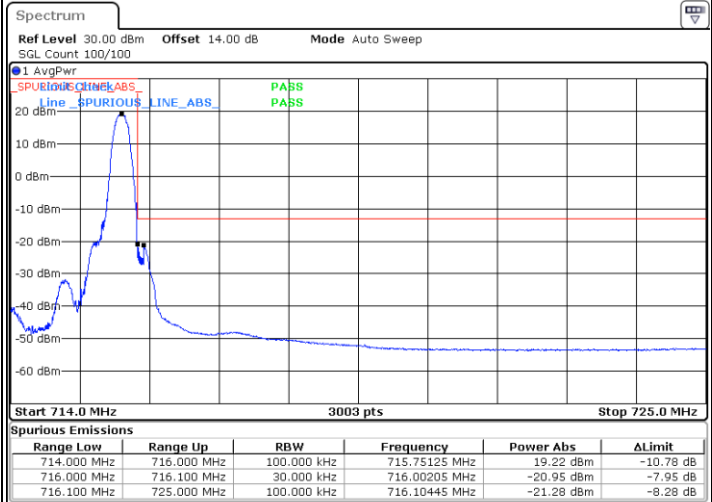
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



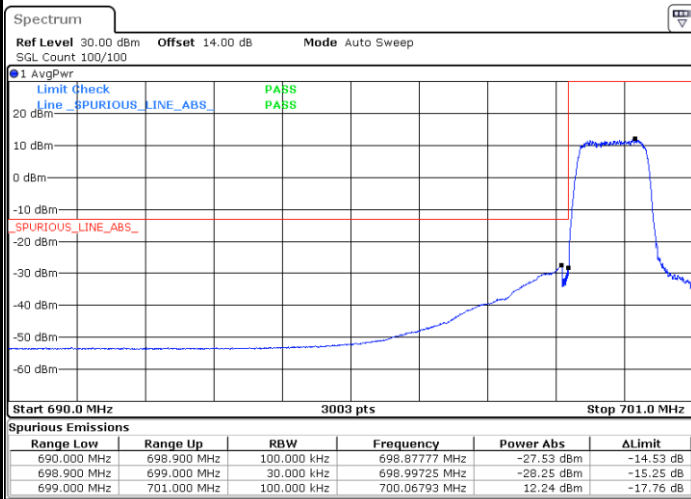
Date: 27.AUG.2019 18:50:30



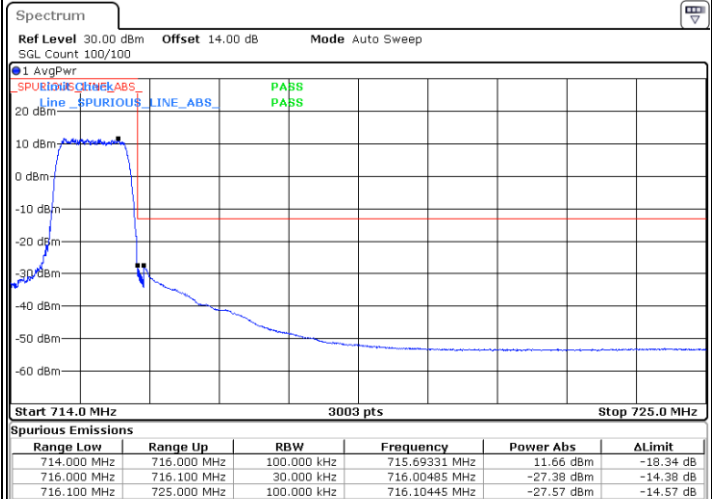
Date: 27.AUG.2019 19:02:27

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 27.AUG.2019 18:52:48

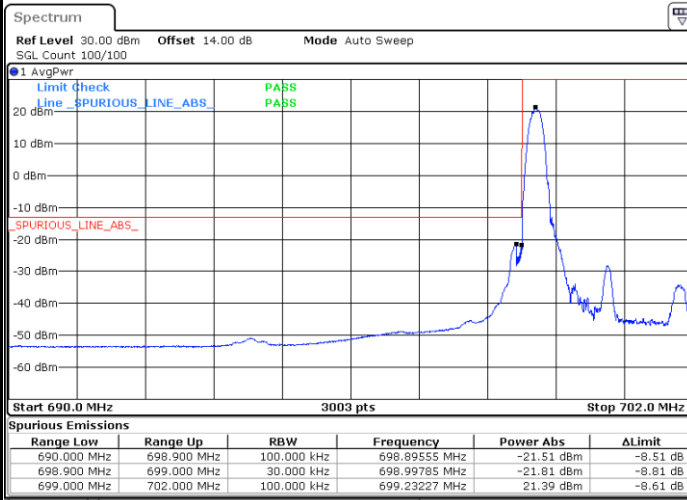


Date: 27.AUG.2019 19:00:10



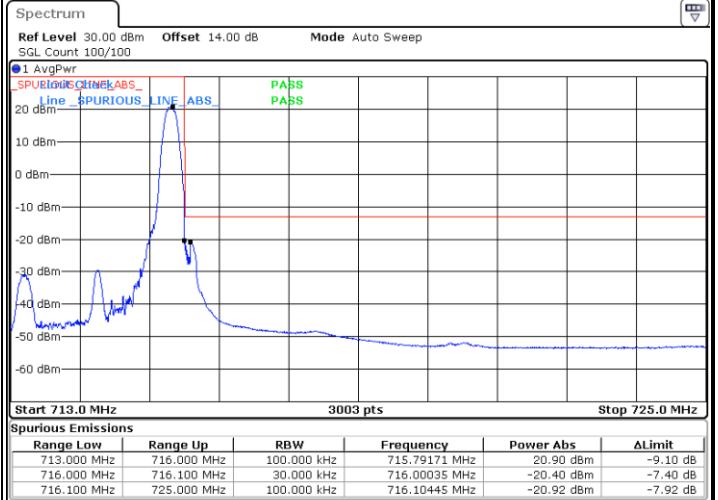
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



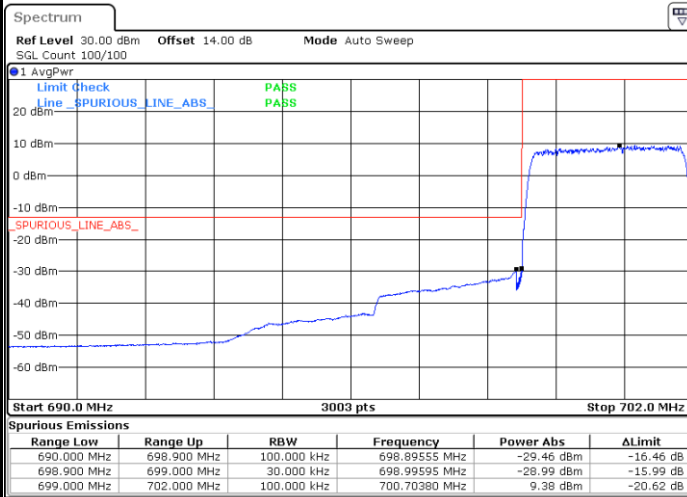
Date: 27.AUG.2019 19:06:08

Highest Band Edge / 1 RB



Date: 27.AUG.2019 19:15:47

Lowest Band Edge / Full RB



Date: 27.AUG.2019 19:08:26

Highest Band Edge / Full RB

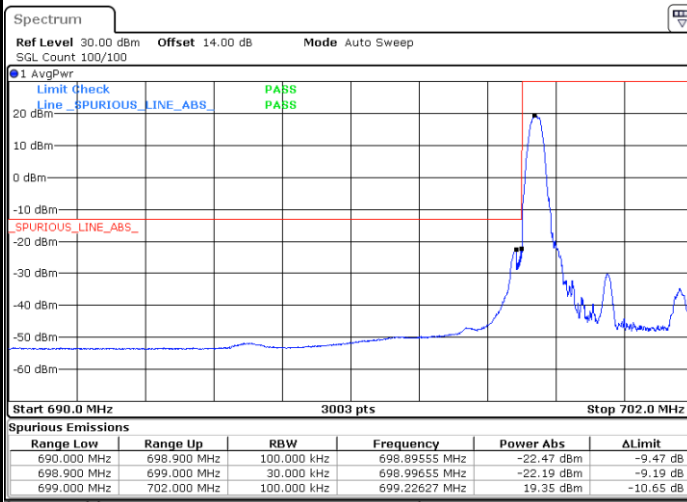


Date: 27.AUG.2019 19:18:05



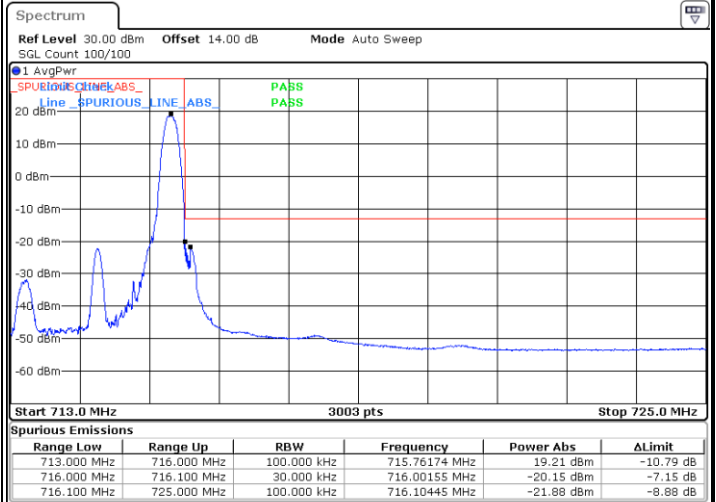
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



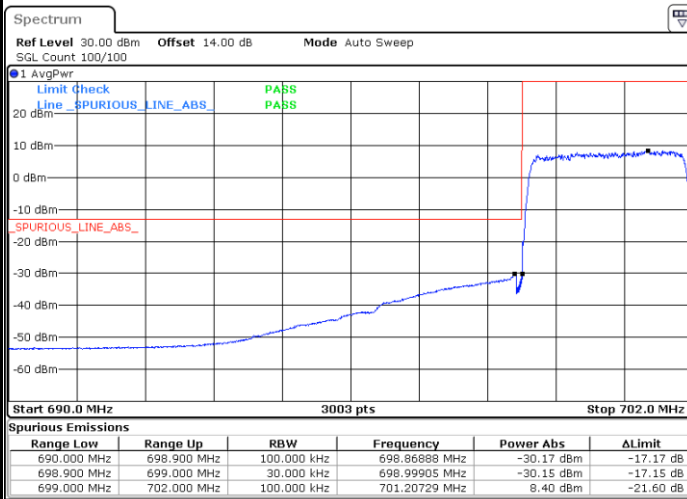
Date: 27.AUG.2019 19:07:17

Highest Band Edge / 1 RB



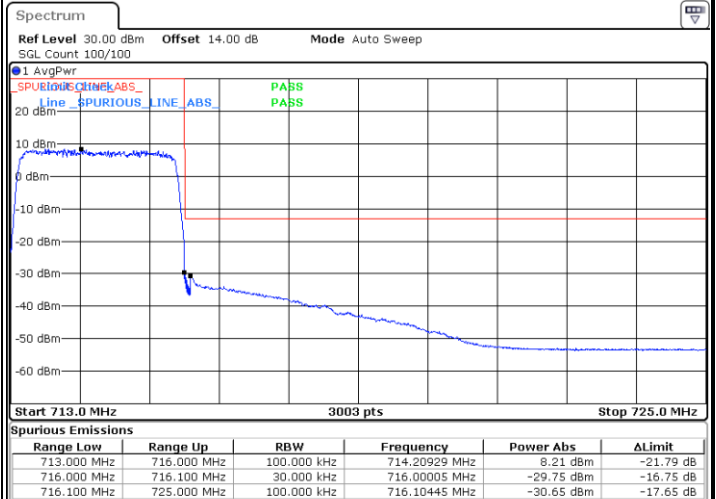
Date: 27.AUG.2019 19:16:56

Lowest Band Edge / Full RB



Date: 27.AUG.2019 19:09:35

Highest Band Edge / Full RB

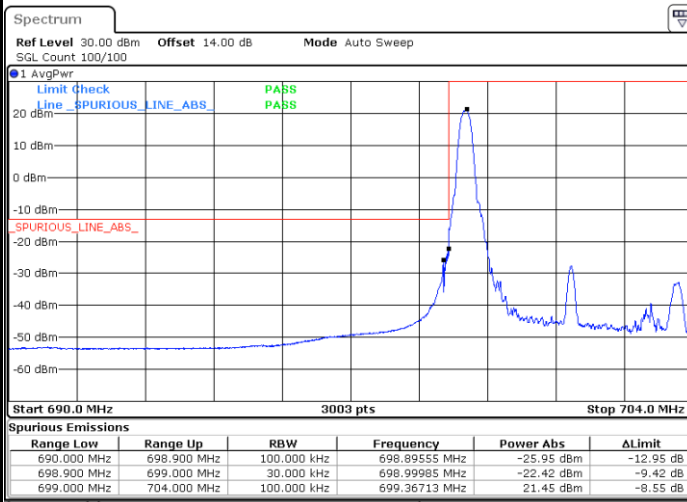


Date: 27.AUG.2019 19:19:14



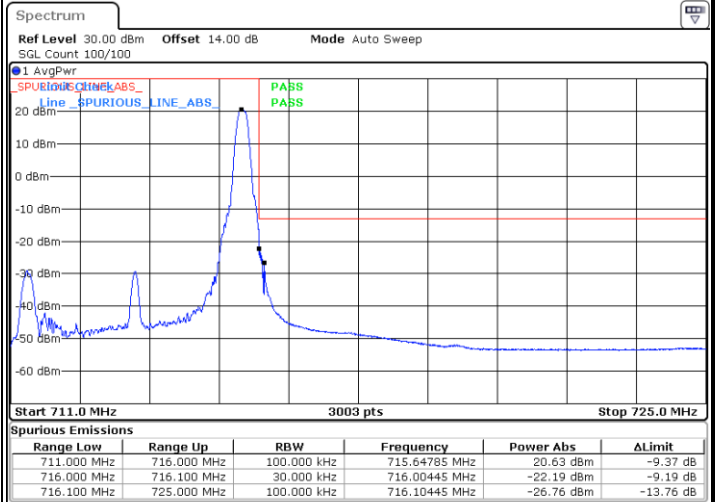
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



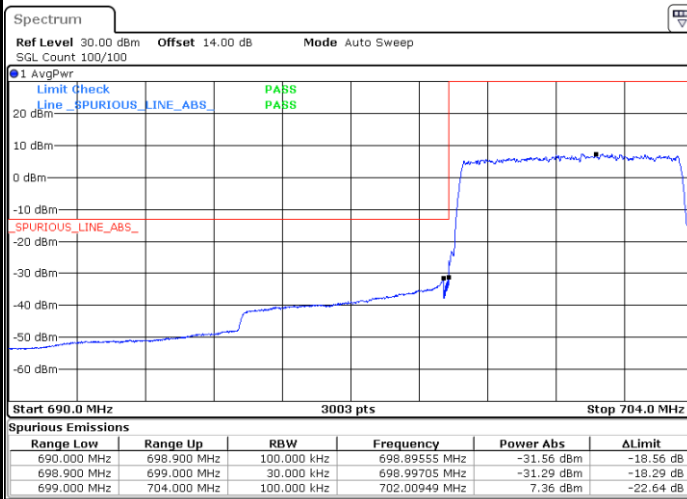
Date: 27.AUG.2019 19:22:55

Highest Band Edge / 1 RB



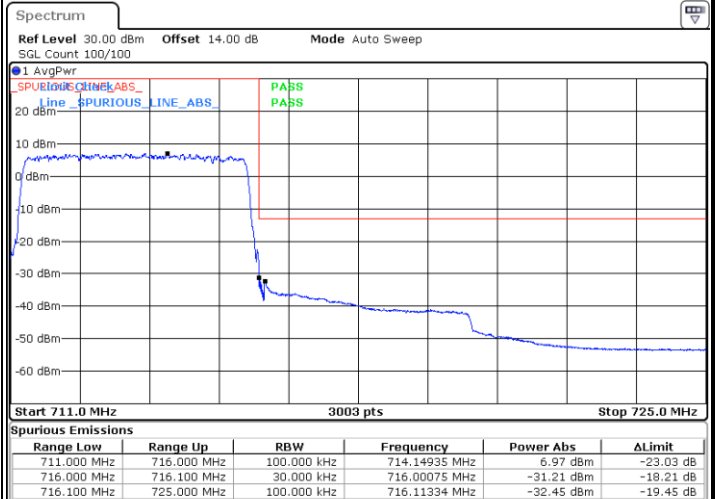
Date: 27.AUG.2019 19:32:34

Lowest Band Edge / Full RB



Date: 27.AUG.2019 19:25:13

Highest Band Edge / Full RB

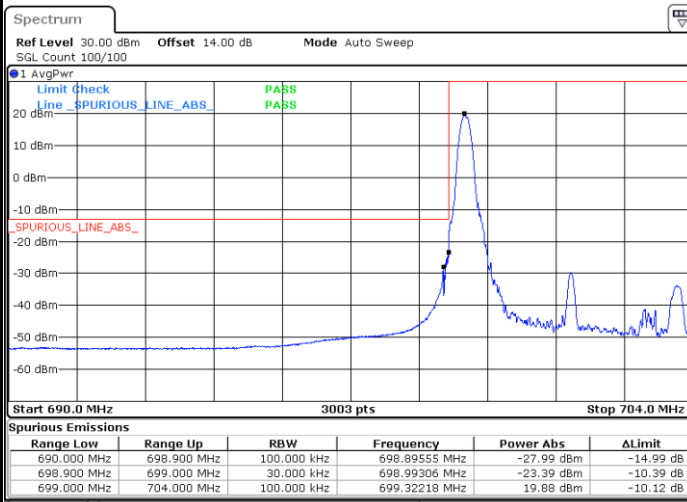


Date: 27.AUG.2019 19:34:52



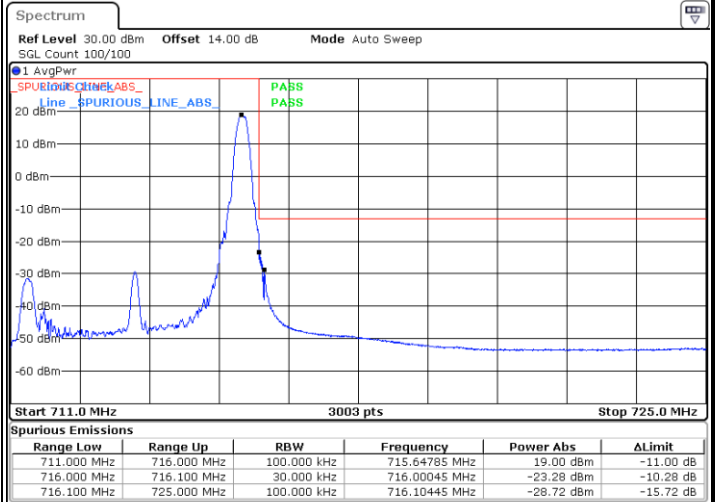
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



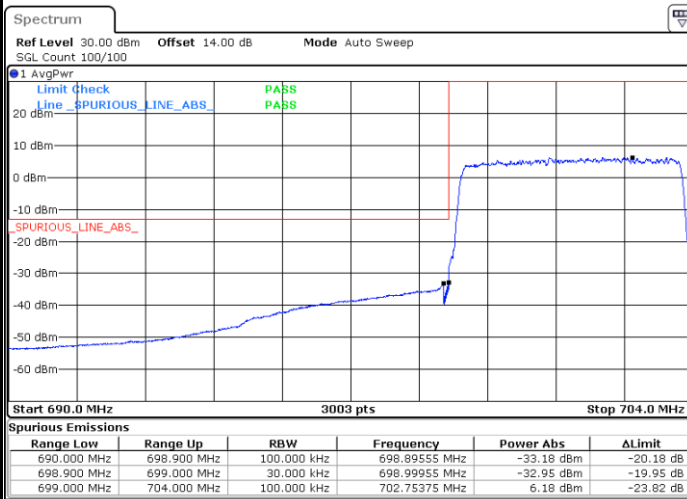
Date: 27.AUG.2019 19:24:04

Highest Band Edge / 1 RB



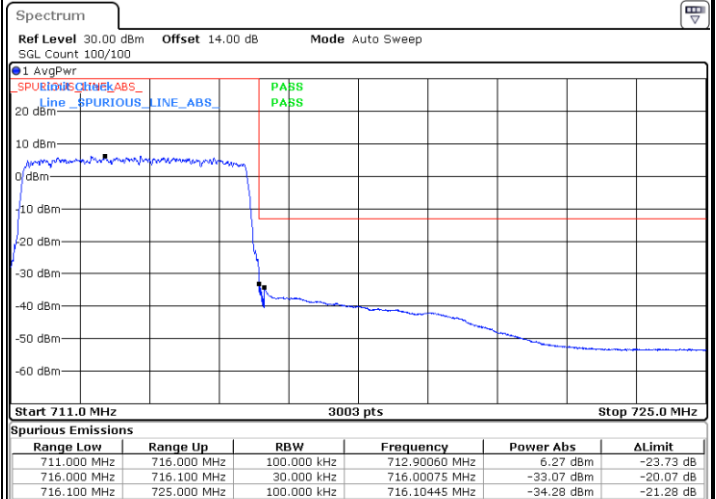
Date: 27.AUG.2019 19:33:43

Lowest Band Edge / Full RB



Date: 27.AUG.2019 19:26:22

Highest Band Edge / Full RB

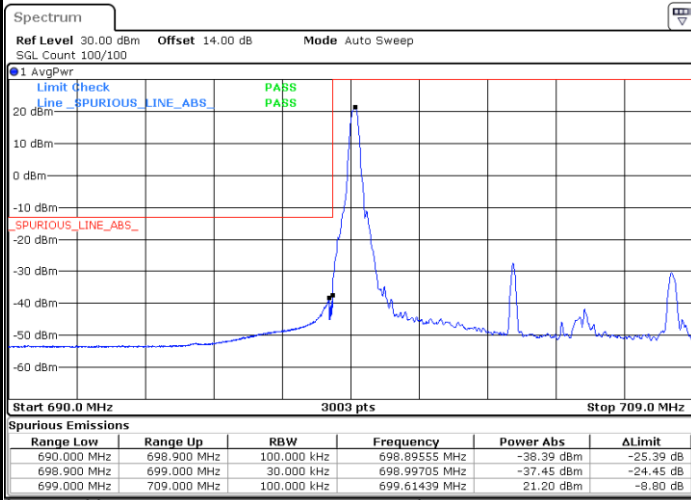


Date: 27.AUG.2019 19:36:01



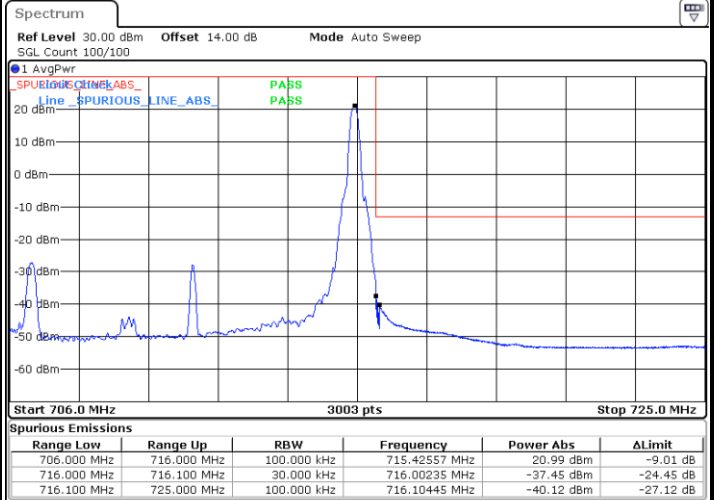
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



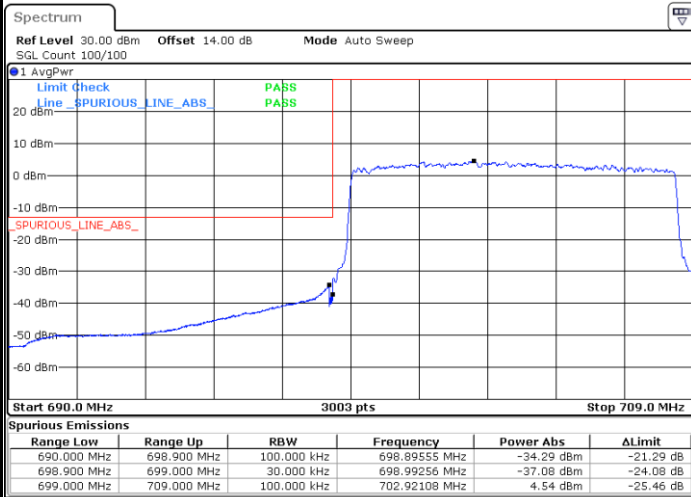
Date: 27.AUG.2019 19:39:41

Highest Band Edge / 1 RB



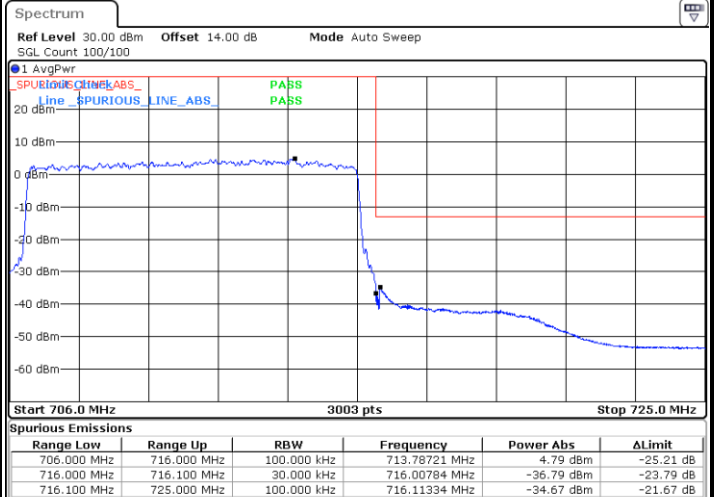
Date: 27.AUG.2019 19:49:20

Lowest Band Edge / Full RB



Date: 27.AUG.2019 19:41:59

Highest Band Edge / Full RB

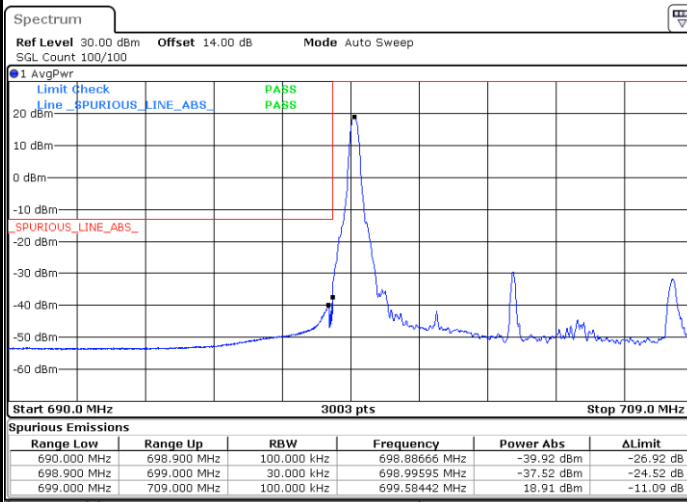


Date: 27.AUG.2019 19:51:37



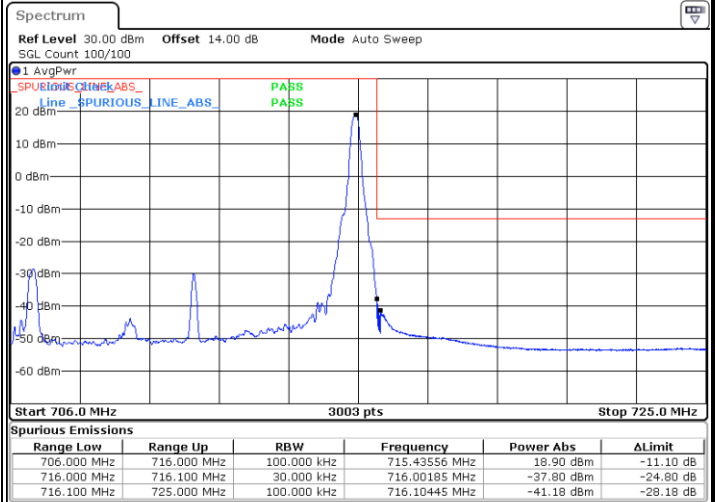
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



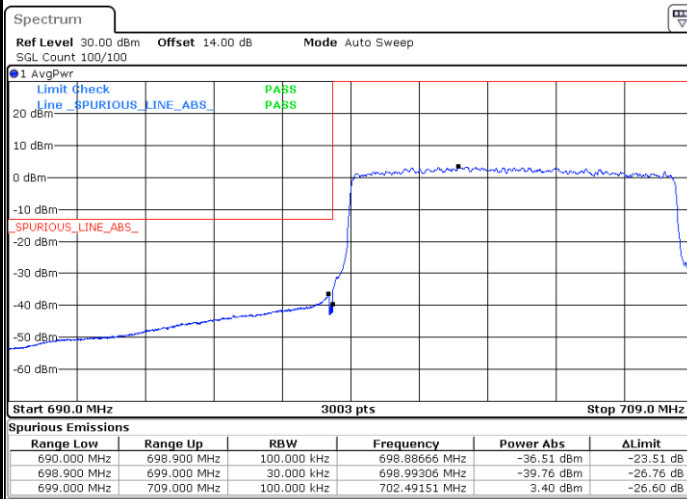
Date: 27.AUG.2019 19:40:50

Highest Band Edge / 1 RB



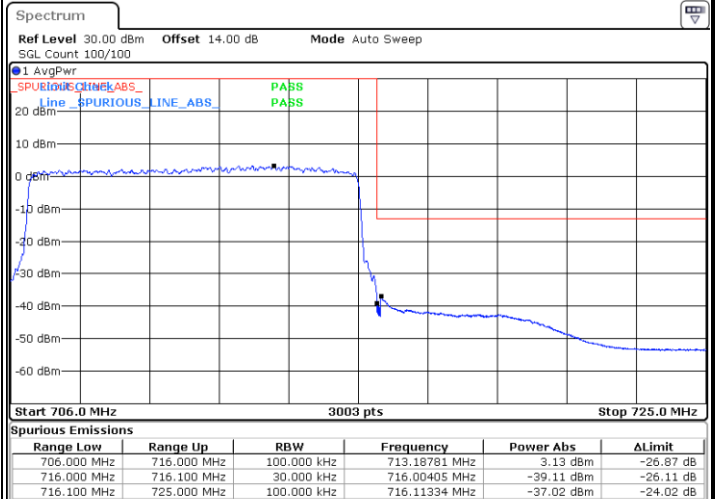
Date: 27.AUG.2019 19:50:29

Lowest Band Edge / Full RB



Date: 27.AUG.2019 19:43:08

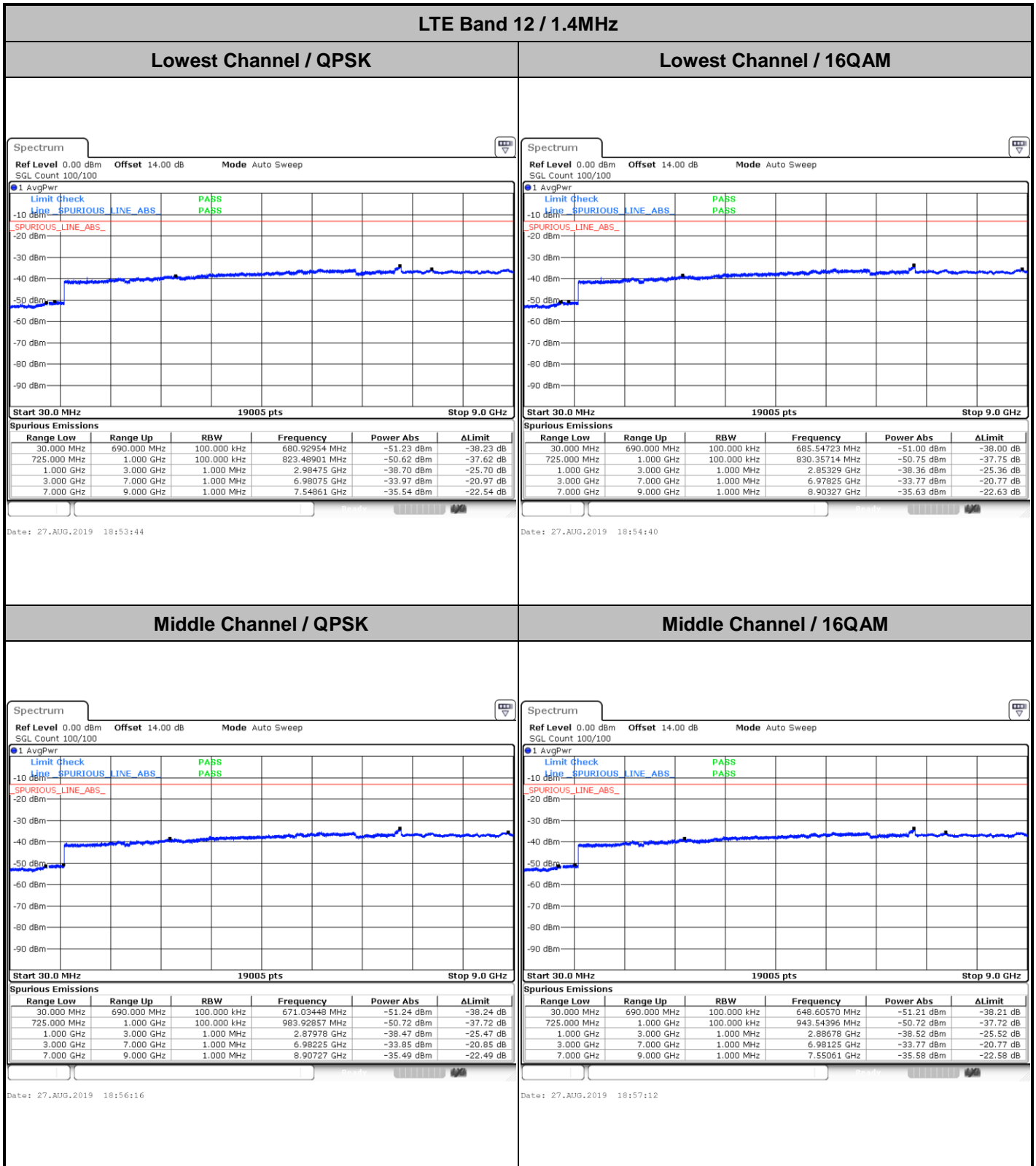
Highest Band Edge / Full RB



Date: 27.AUG.2019 19:52:46



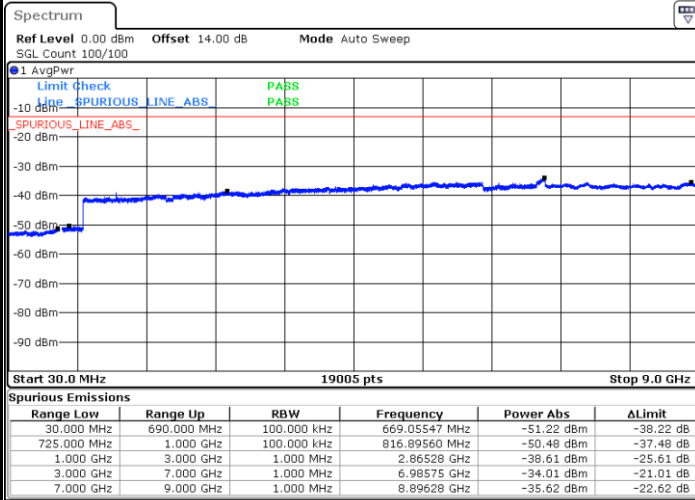
Conducted Spurious Emission





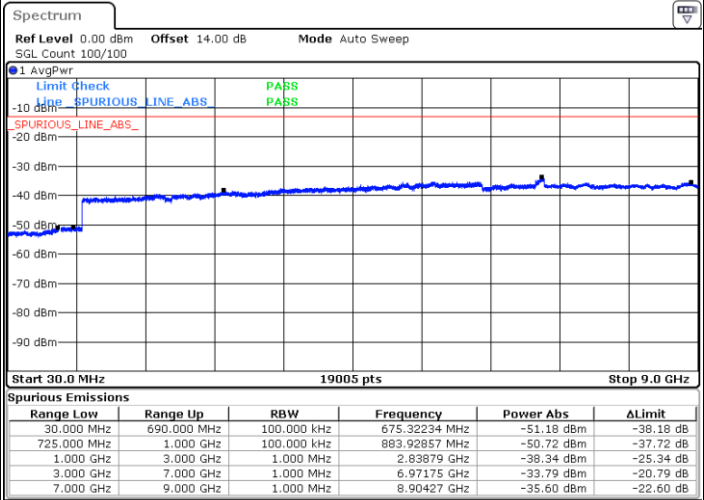
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 27.AUG.2019 19:03:23

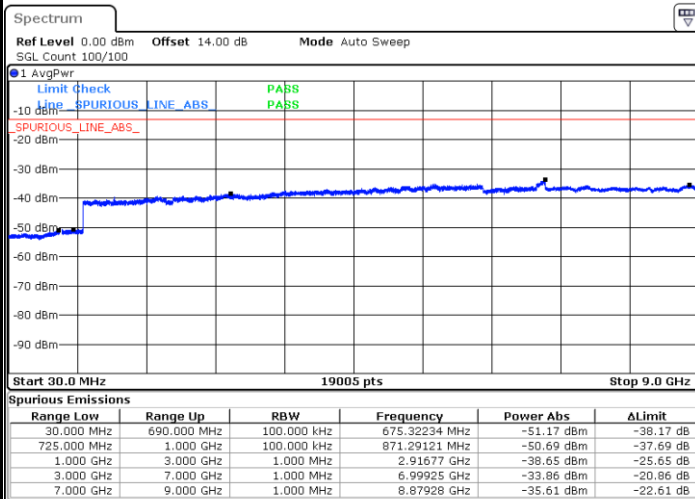
Highest Channel / 16QAM



Date: 27.AUG.2019 19:04:19

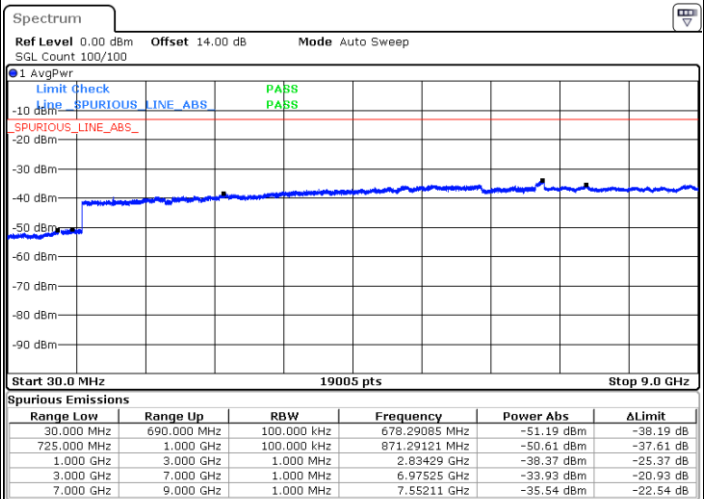
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 27.AUG.2019 19:10:31

Lowest Channel / 16QAM



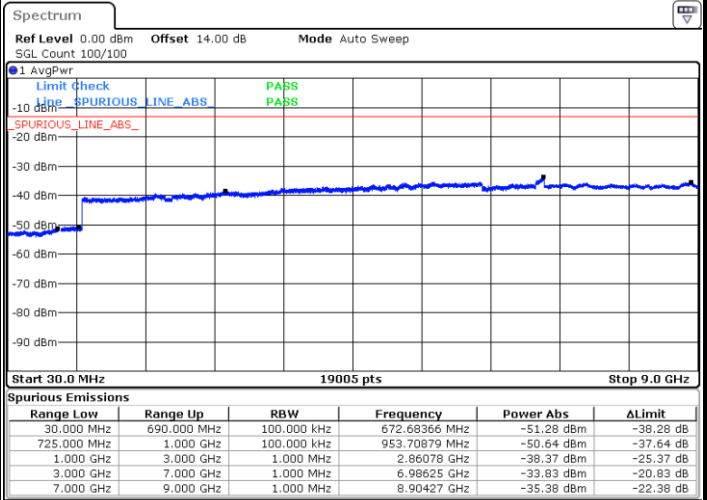
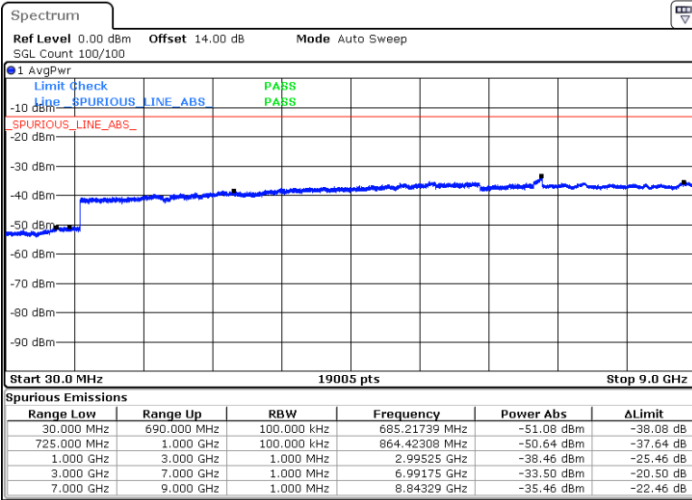
Date: 27.AUG.2019 19:11:27



LTE Band 12 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

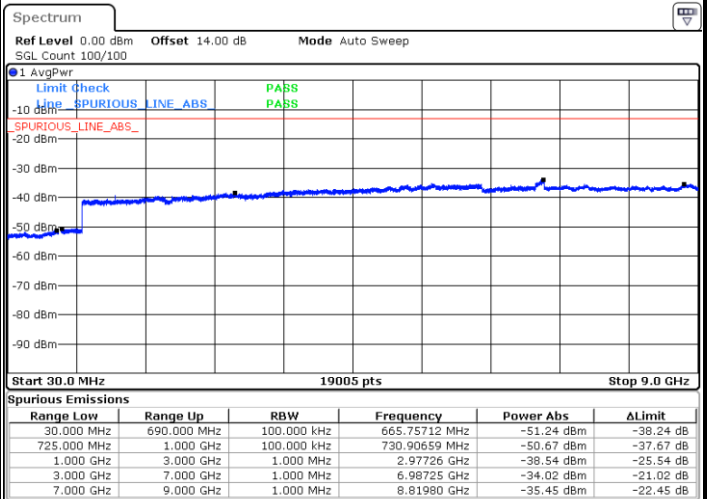
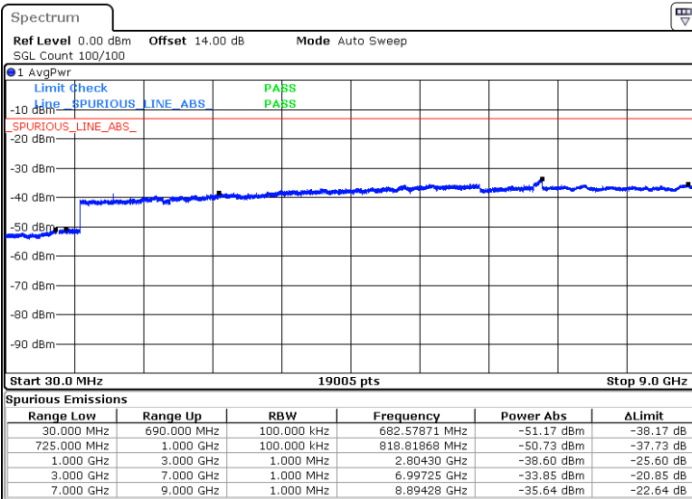


Date: 27.AUG.2019 19:13:03

Date: 27.AUG.2019 19:13:58

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 27.AUG.2019 19:20:10

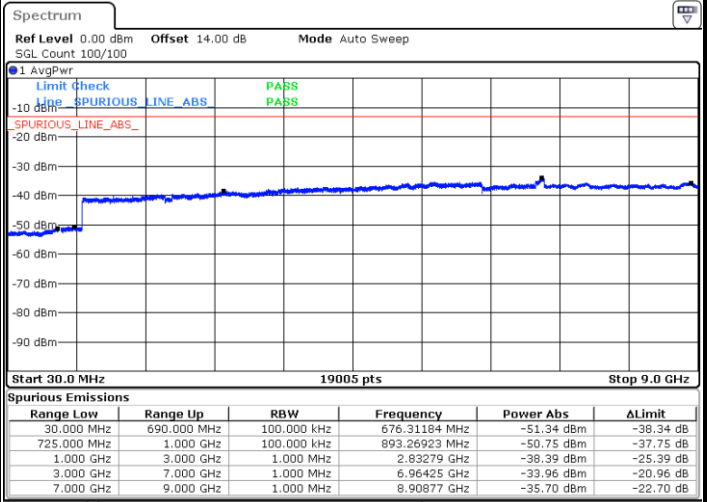
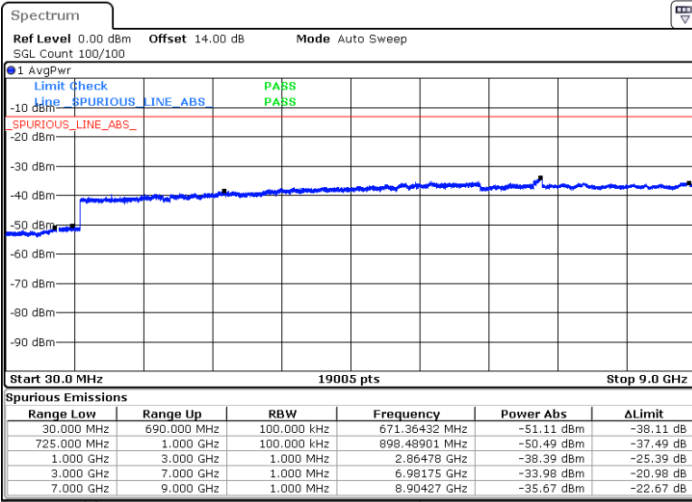
Date: 27.AUG.2019 19:21:06



LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

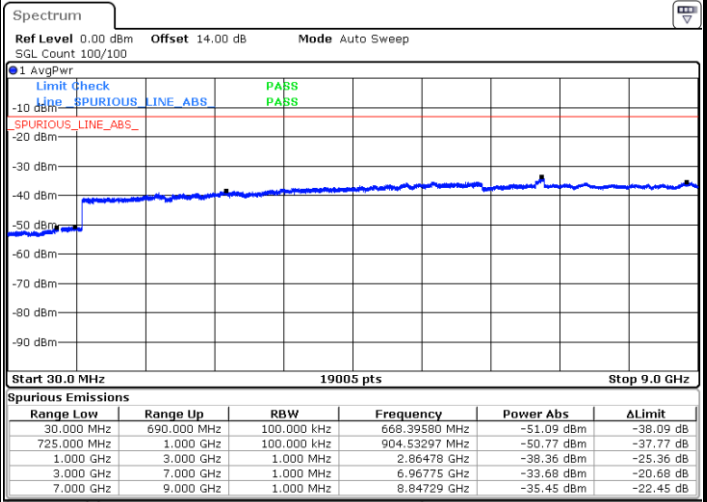
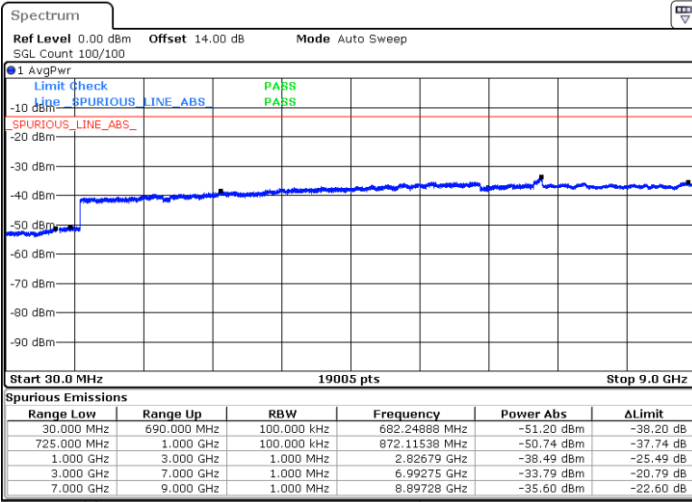


Date: 27.AUG.2019 19:27:18

Date: 27.AUG.2019 19:28:14

Middle Channel / QPSK

Middle Channel / 16QAM



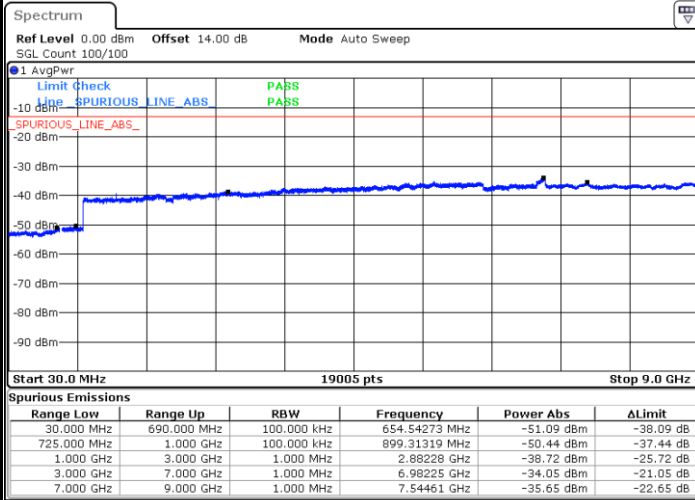
Date: 27.AUG.2019 19:29:50

Date: 27.AUG.2019 19:30:45



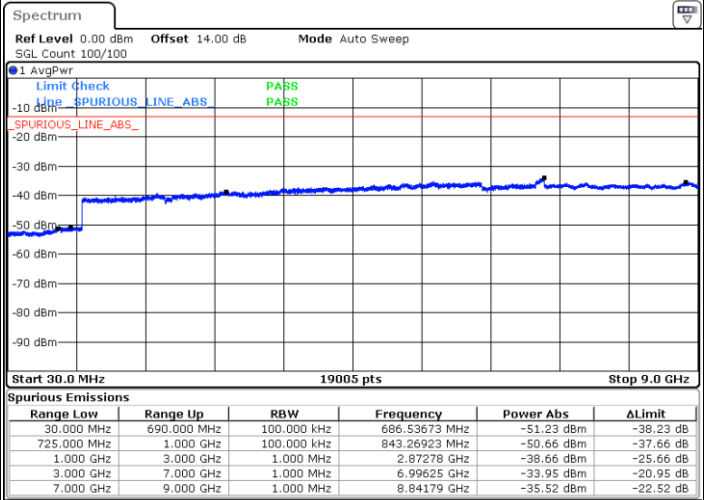
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 27.AUG.2019 19:36:57

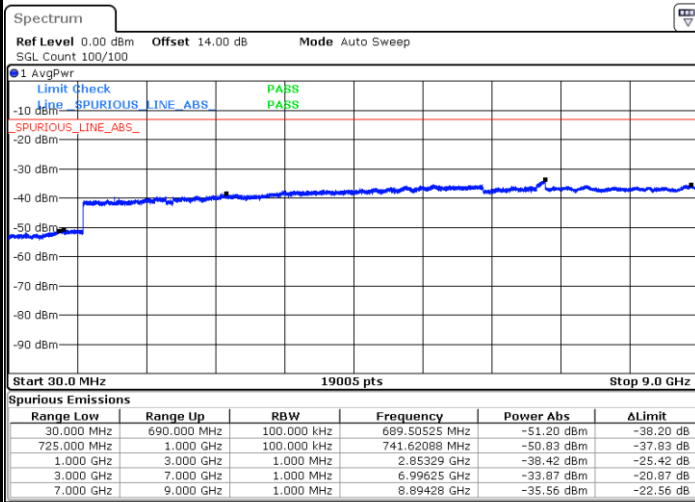
Highest Channel / 16QAM



Date: 27.AUG.2019 19:37:52

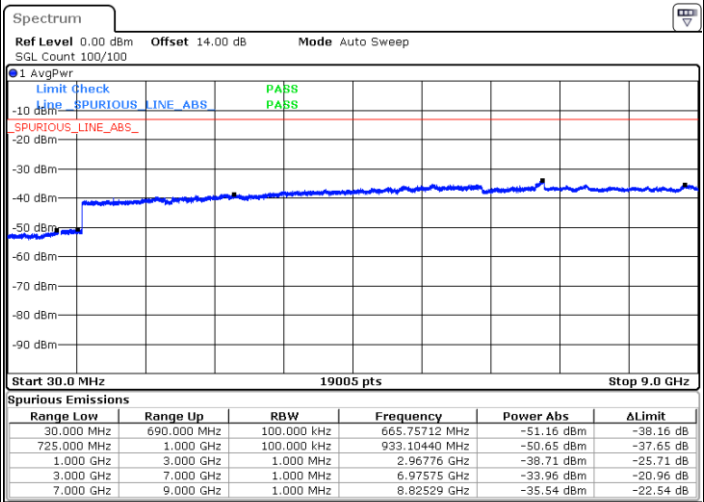
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 27.AUG.2019 19:44:04

Lowest Channel / 16QAM

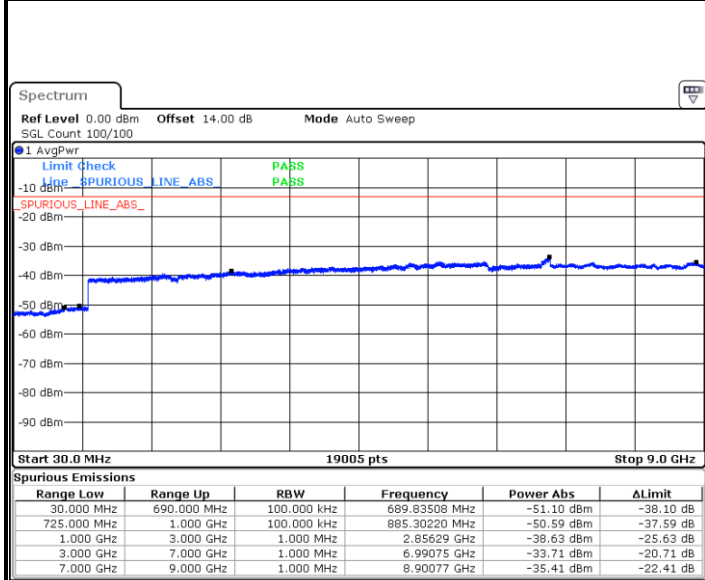


Date: 27.AUG.2019 19:44:59



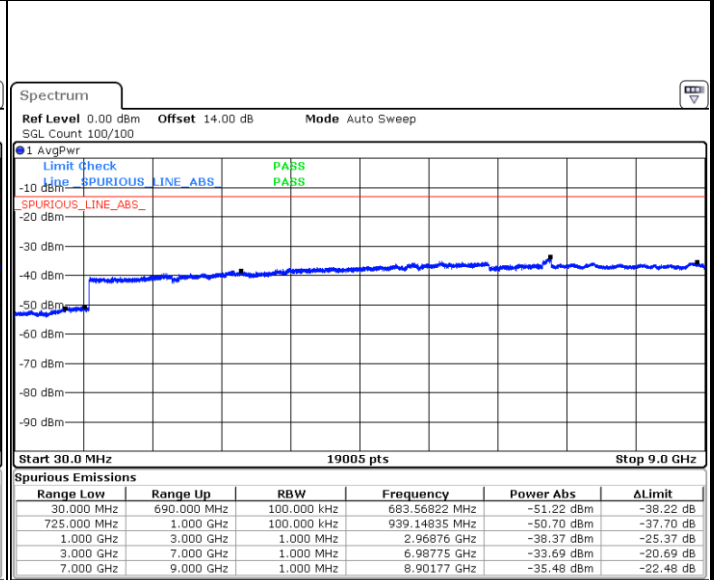
LTE Band 12 / 10MHz

Middle Channel / QPSK



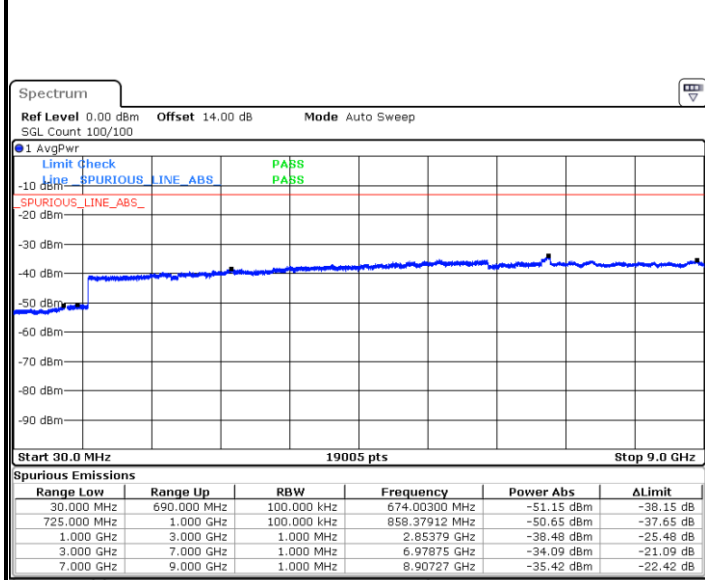
Date: 27.AUG.2019 19:46:35

Middle Channel / 16QAM



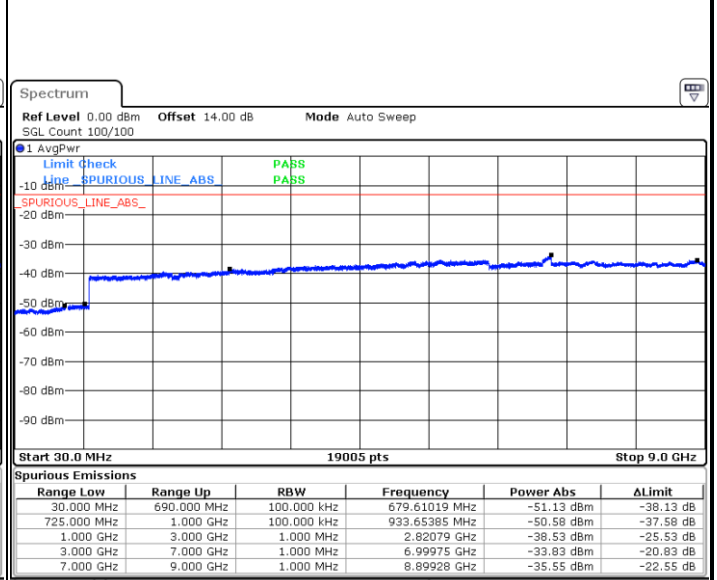
Date: 27.AUG.2019 19:47:31

Highest Channel / QPSK



Date: 27.AUG.2019 19:53:43

Highest Channel / 16QAM



Date: 27.AUG.2019 19:54:38



Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0092	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0085	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0082	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0011	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	4.2	4.9	5.13	5.77	
Highest CH	-	-	-	-	