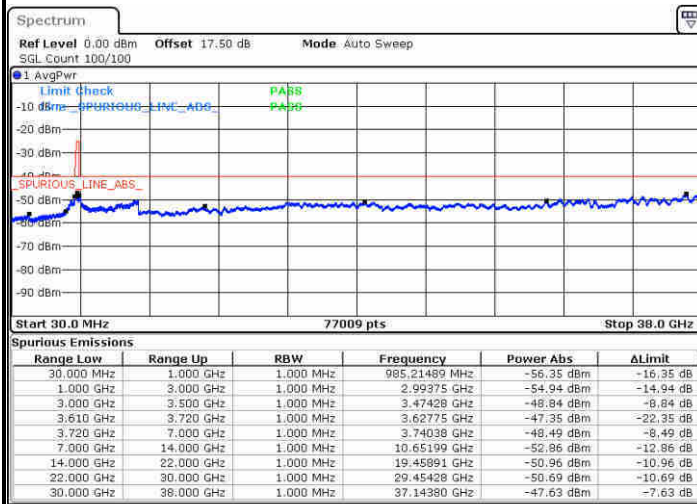




LTE Band 48 / 10MHz

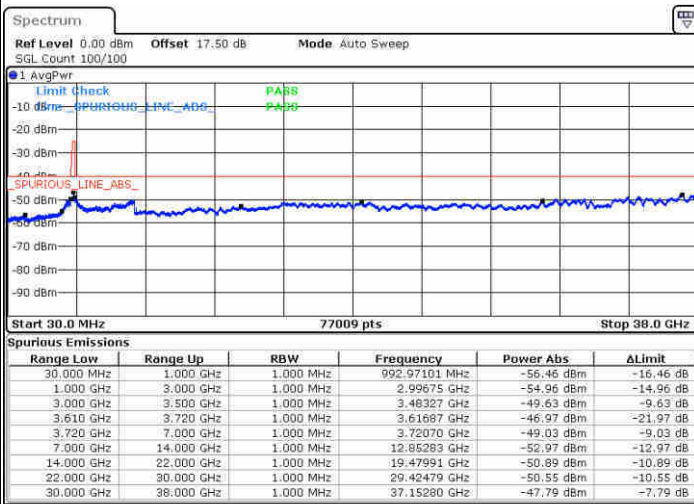
16QAM

Lowest Channel / 1RB0



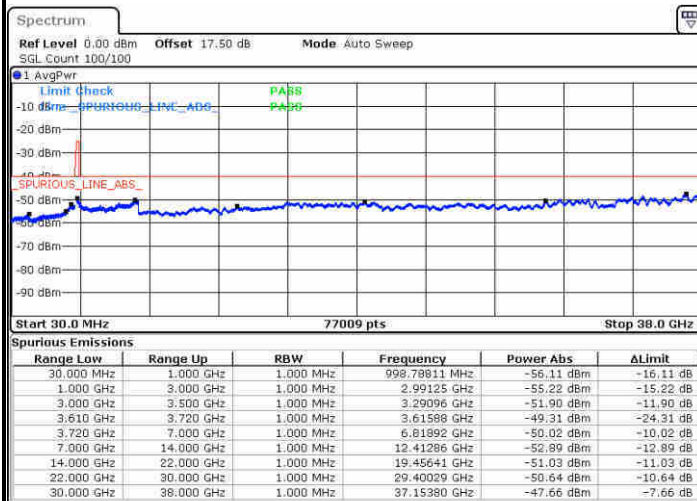
Date: 20 NOV 2019 15:08:17

Lowest Channel / 1RBmax



Date: 20 NOV 2019 15:26:35

Lowest Channel / FullRB



Date: 20 NOV 2019 15:17:26

N/A

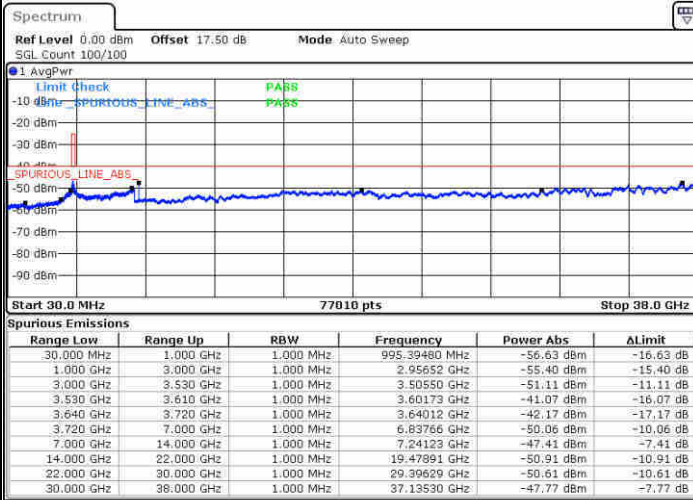


LTE Band 48 / 10MHz

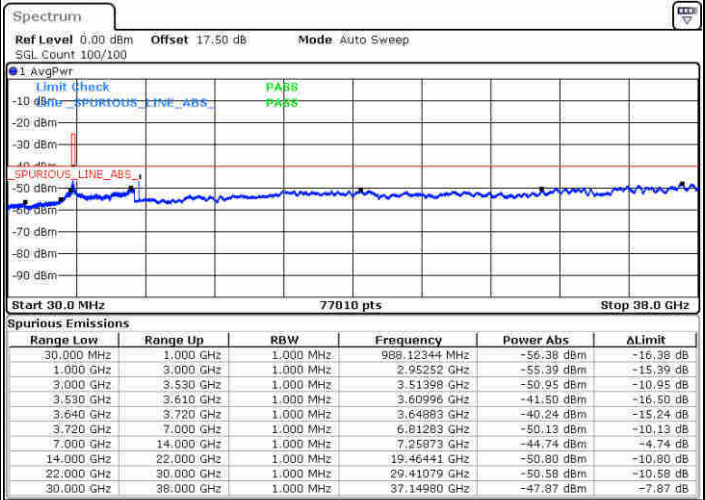
16QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax



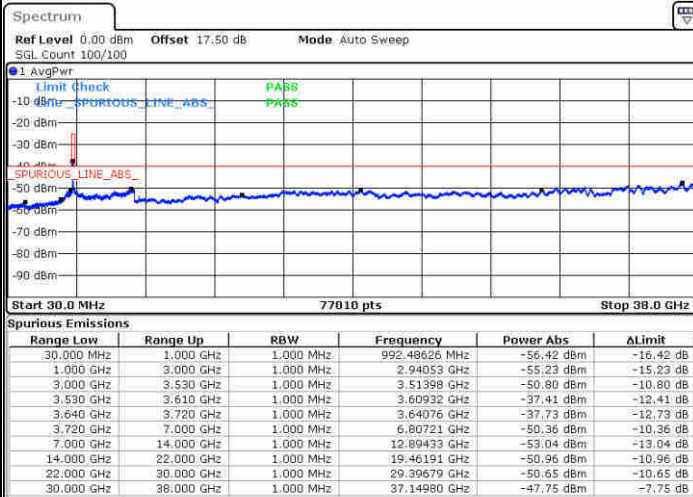
Date: 20 NOV 2019 15:11:20



Date: 20 NOV 2019 15:29:38

Middle Channel / FullIRB

N/A



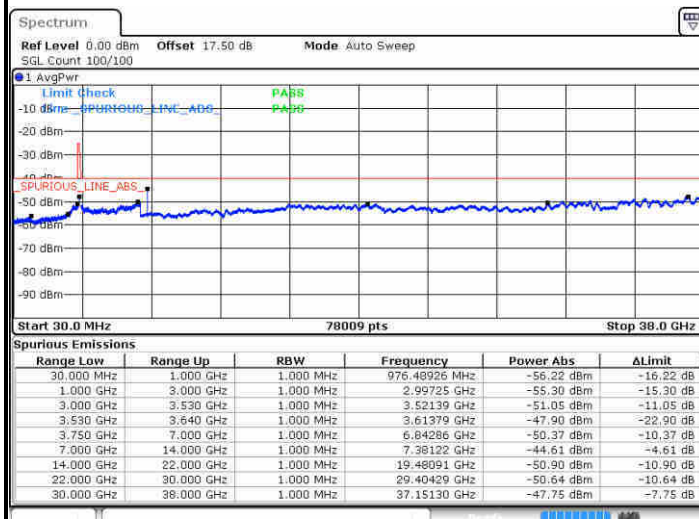
Date: 20 NOV 2019 15:20:29



LTE Band 48 / 10MHz

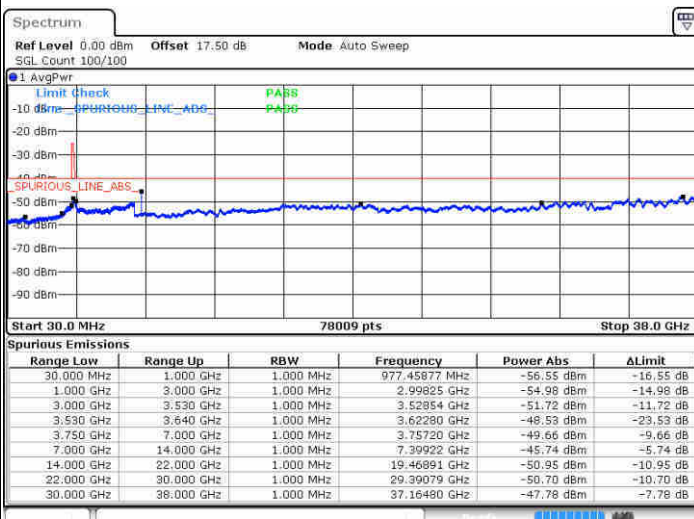
16QAM

Highest Channel / 1RB0



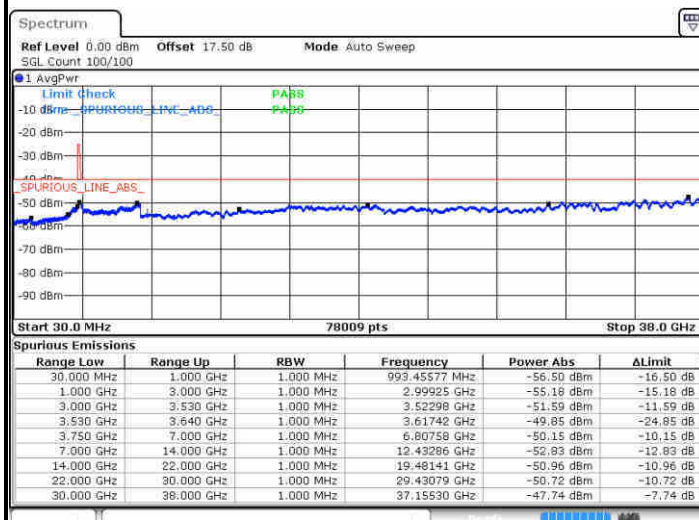
Date: 20 NOV 2019 15:14:22

Highest Channel / 1RBmax



Date: 20 NOV 2019 15:32:40

Highest Channel / FullIRB



Date: 20 NOV 2019 15:23:31

N/A

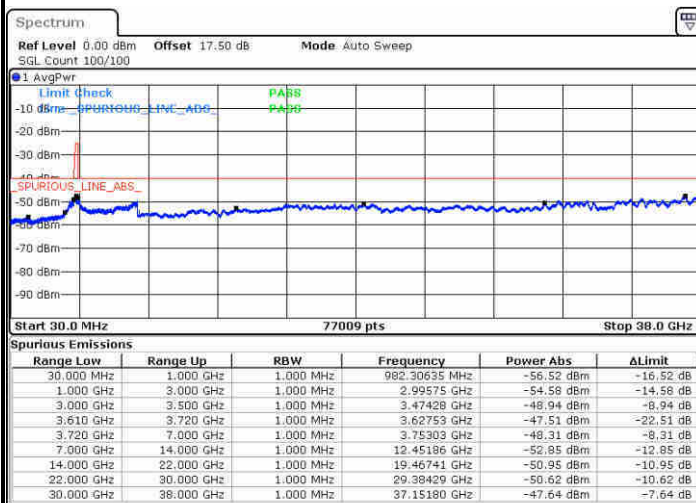


LTE Band 48 / 15MHz

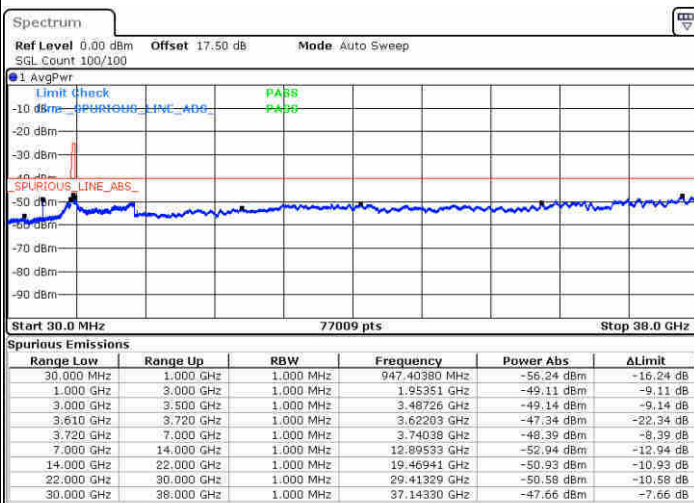
16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



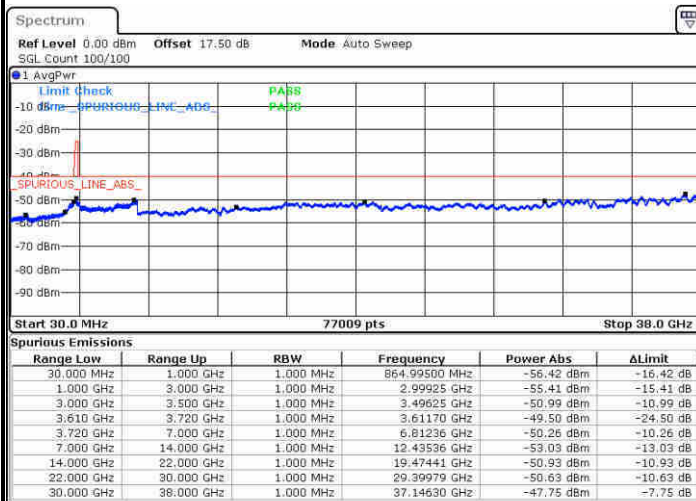
Date: 20 NOV 2019 15:35:45



Date: 20 NOV 2019 15:54:03

Lowest Channel / FullRB

N/A



Date: 20 NOV 2019 15:44:54

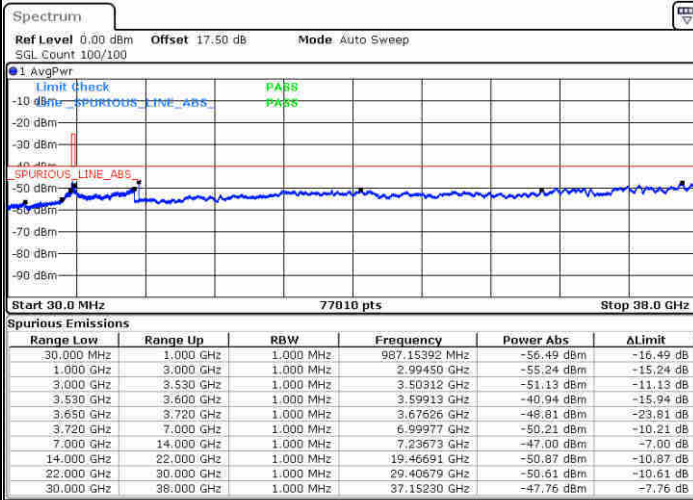


LTE Band 48 / 15MHz

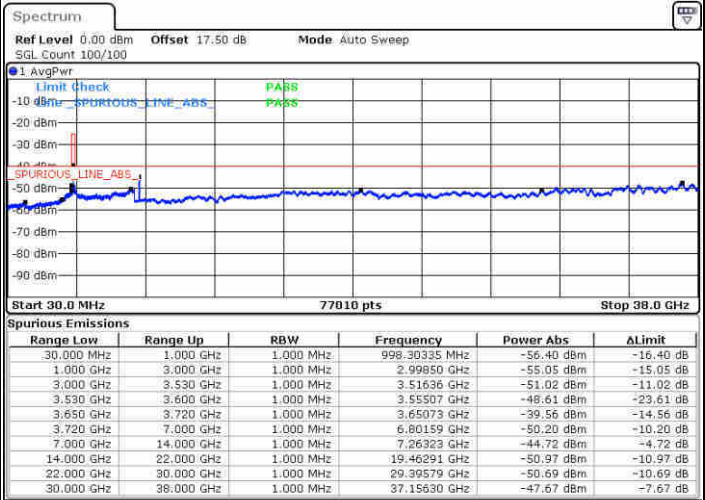
16QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



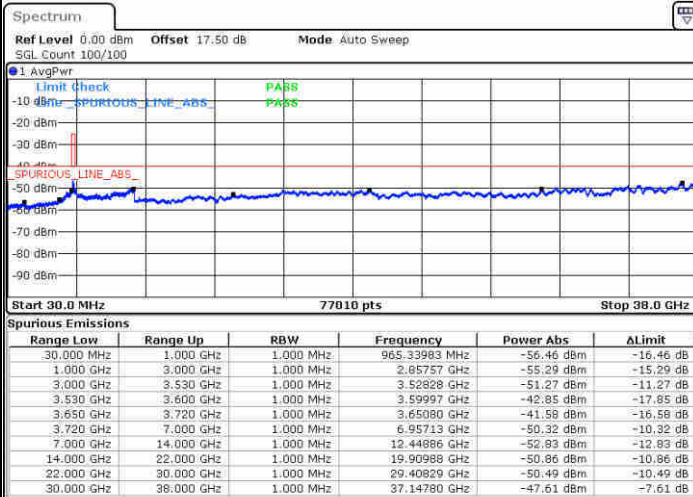
Date: 20 NOV 2019 15:38:48



Date: 20 NOV 2019 15:57:06

Middle Channel / FullIRB

N/A



Date: 20 NOV 2019 15:47:57

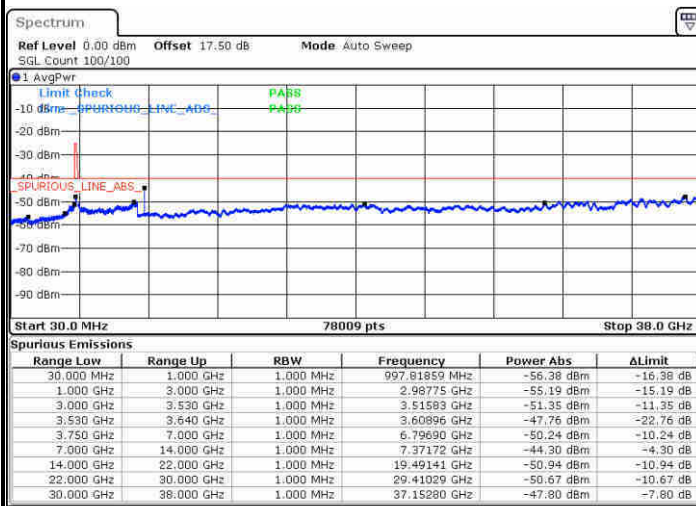


LTE Band 48 / 15MHz

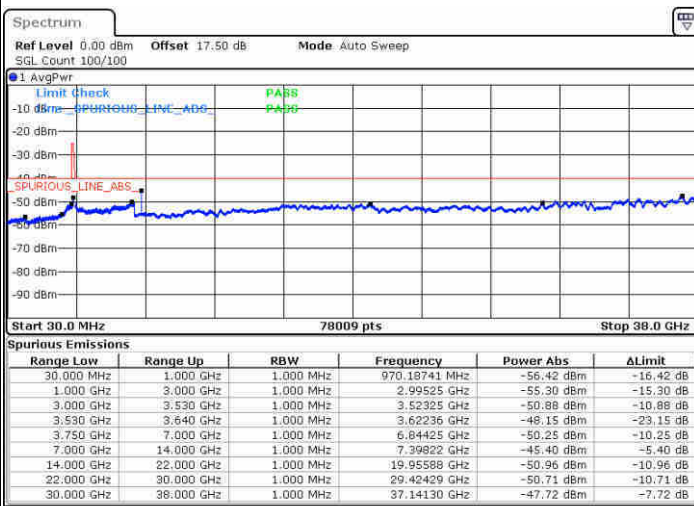
16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



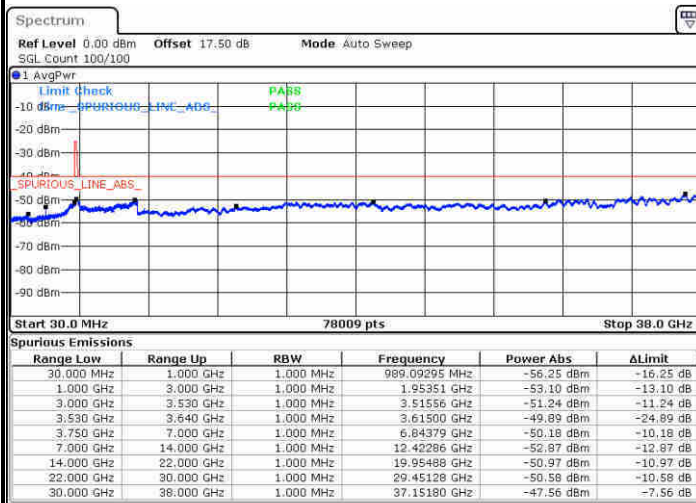
Date: 20 NOV 2019 15:41:51



Date: 20 NOV 2019 16:00:09

Highest Channel / FullIRB

N/A



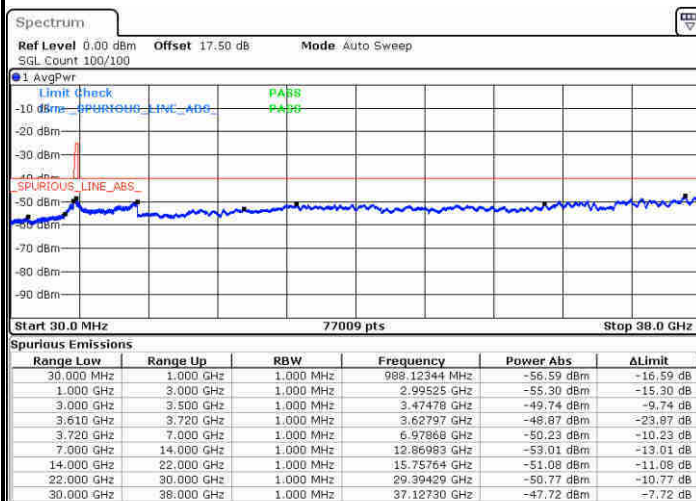
Date: 20 NOV 2019 15:51:00



LTE Band 48 / 20MHz

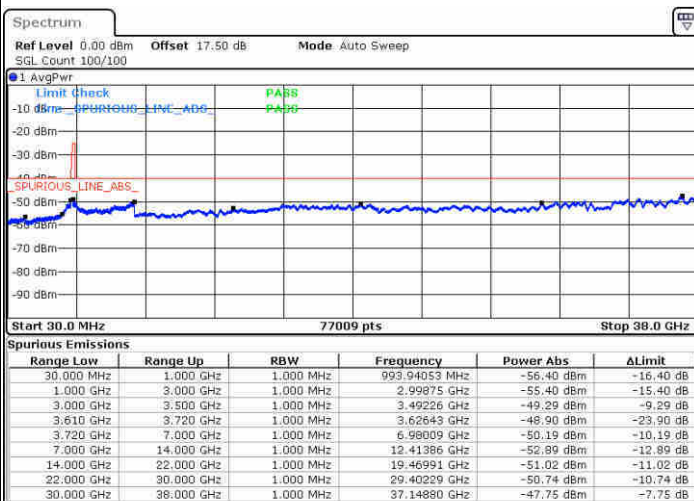
16QAM

Lowest Channel / 1RB0



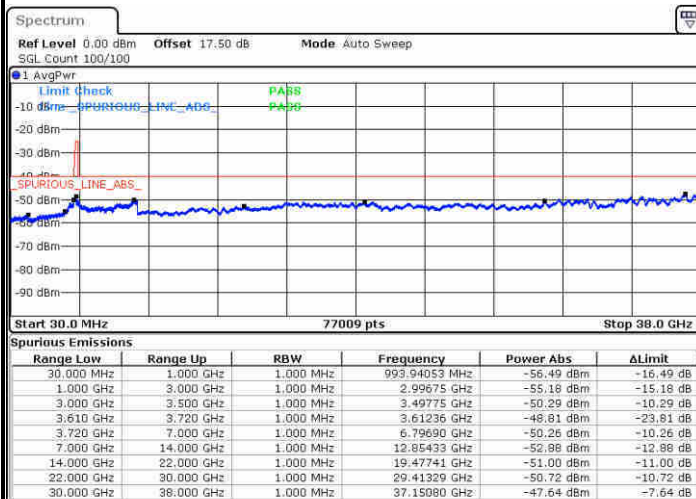
Date: 30 DEC 2019 10:57:54

Lowest Channel / 1RBmax



Date: 30 DEC 2019 11:07:03

Lowest Channel / FullRB



Date: 20 NOV 2019 16:03:14

N/A

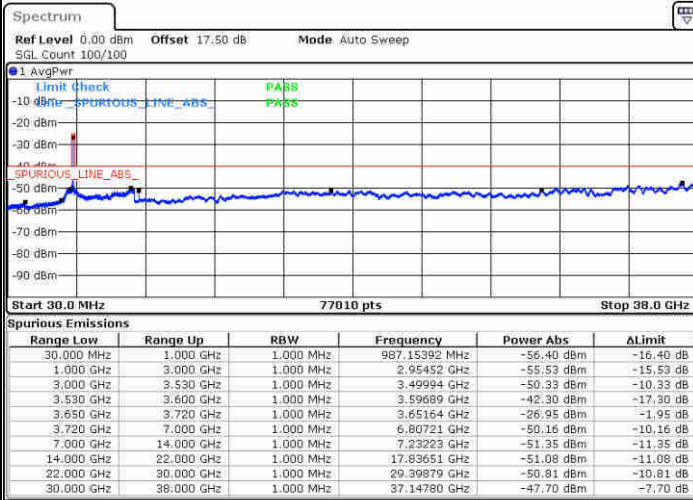


LTE Band 48 / 20MHz

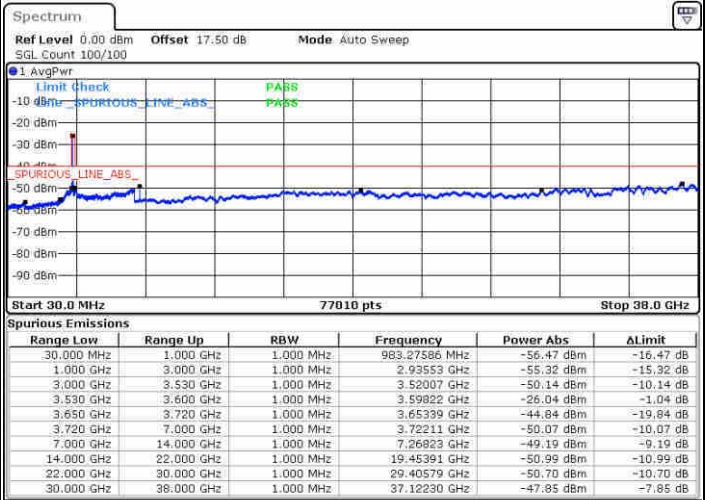
16QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



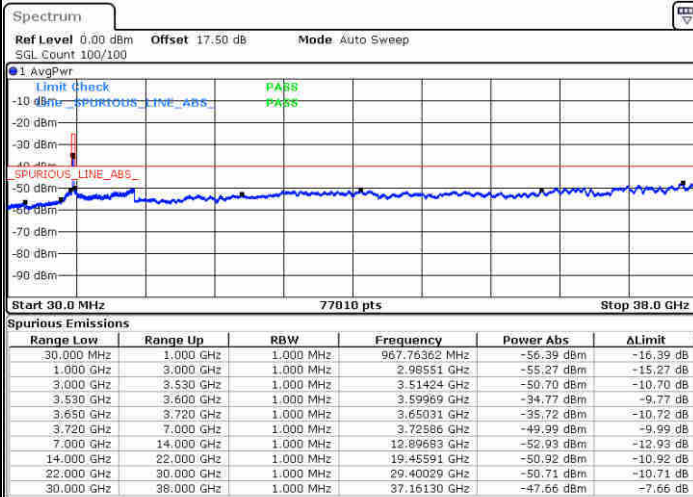
Date: 30 DEC 2019 11:00:56



Date: 30 DEC 2019 11:10:06

Middle Channel / FullIRB

N/A



Date: 20 NOV 2019 16:06:16

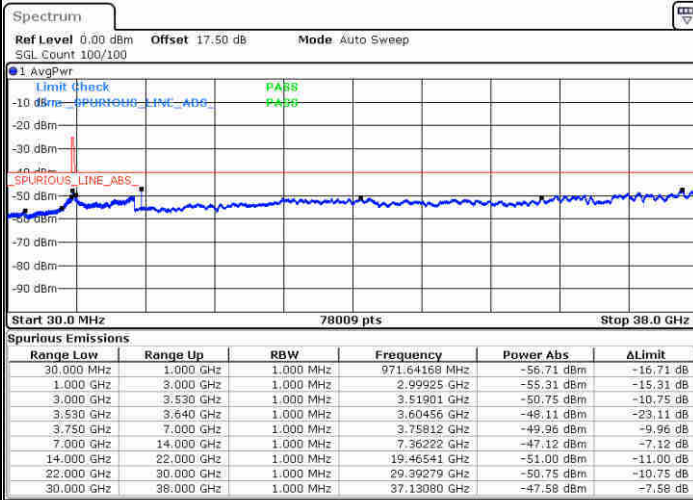


LTE Band 48 / 20MHz

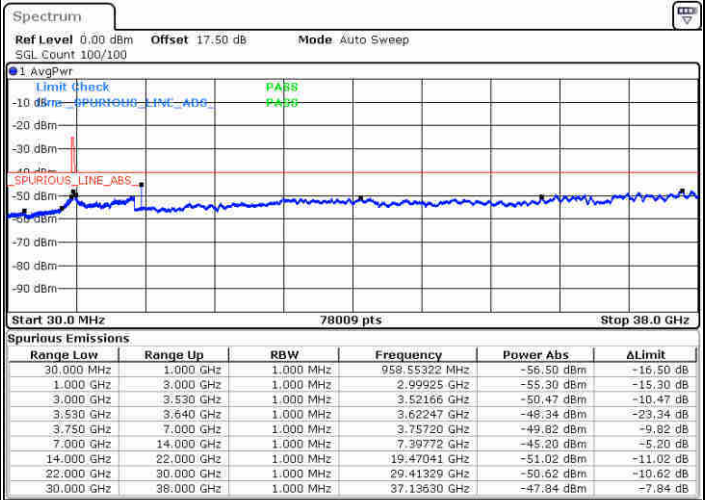
16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



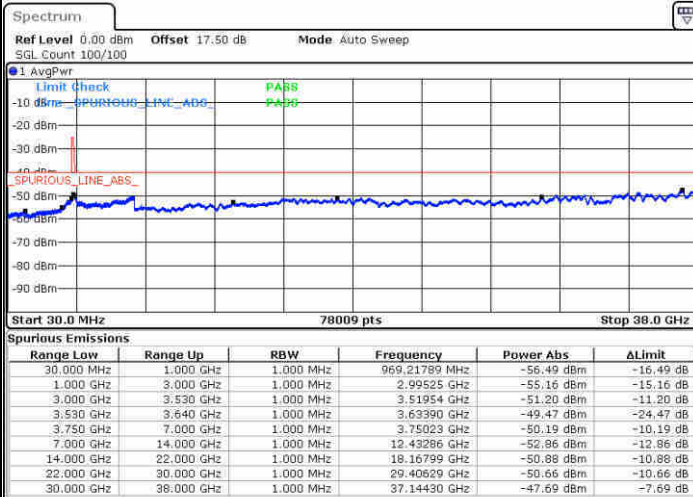
Date: 30 DEC 2019 11:03:59



Date: 30 DEC 2019 11:13:09

Highest Channel / FullIRB

N/A



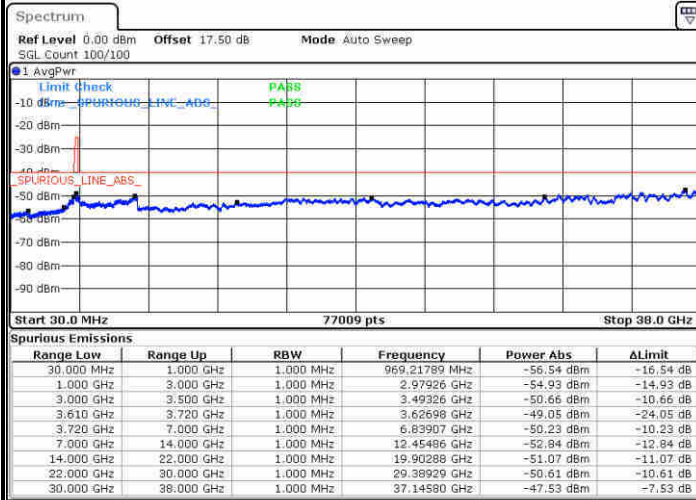
Date: 20 NOV 2019 16:09:19



LTE Band 48 / 5MHz

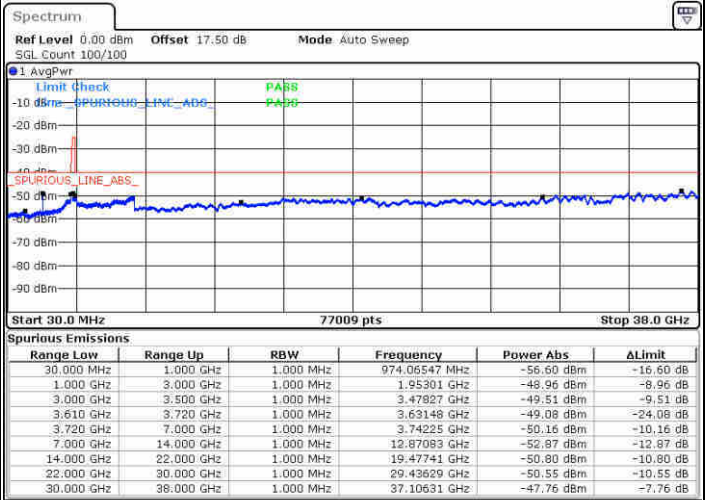
64QAM

Lowest Channel / 1RB0



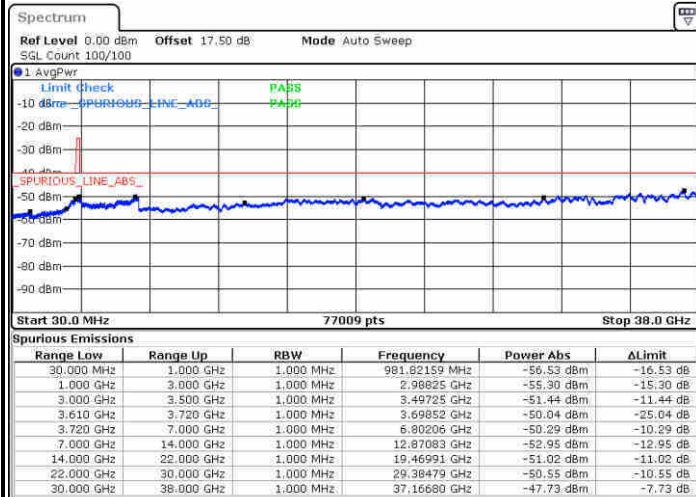
Date: 20 NOV 2019 14:39:35

Lowest Channel / 1RBmax



Date: 20 NOV 2019 15:00:08

Lowest Channel / FullRB



Date: 20 NOV 2019 14:48:44

N/A

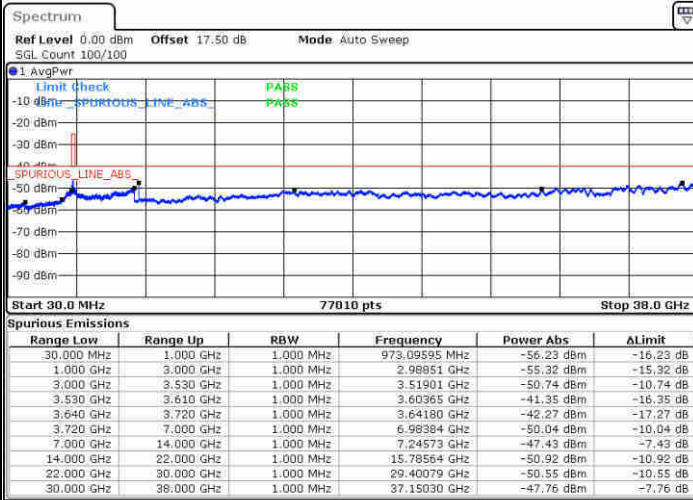


LTE Band 48 / 5MHz

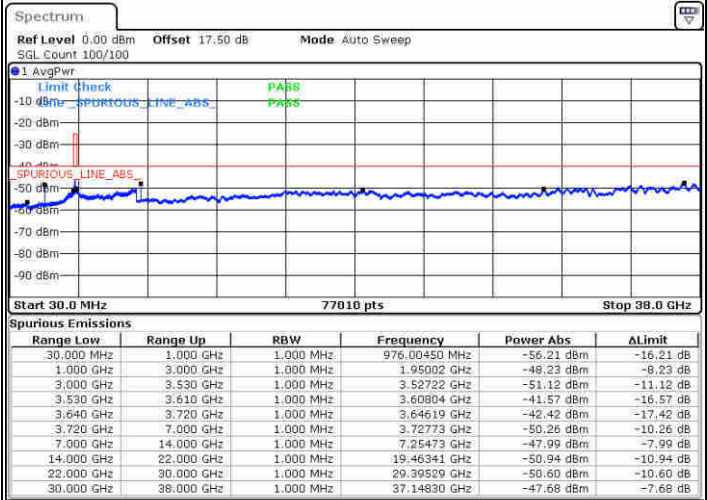
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



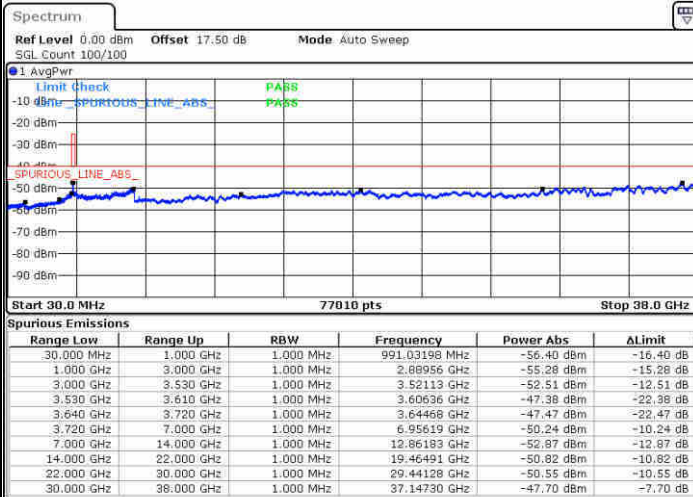
Date: 20 NOV 2019 14:40:36



Date: 20 NOV 2019 15:01:09

Middle Channel / FullIRB

N/A



Date: 20 NOV 2019 14:52:00

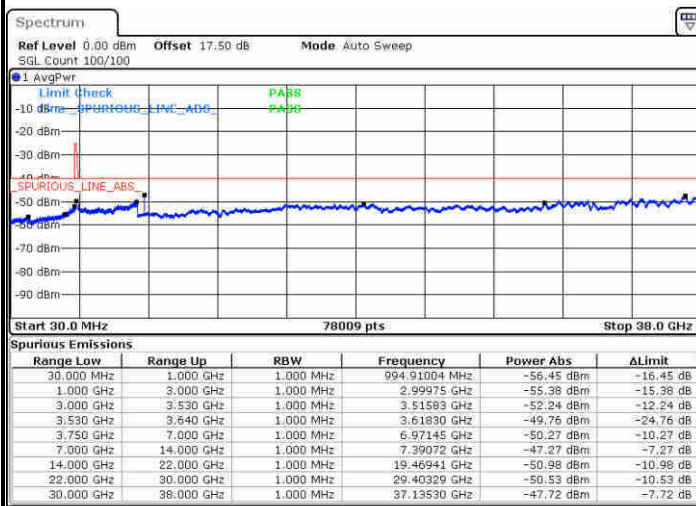


LTE Band 48 / 5MHz

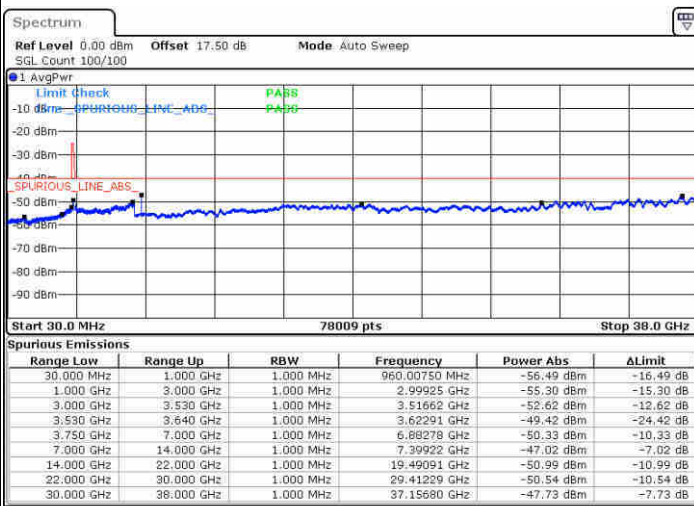
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



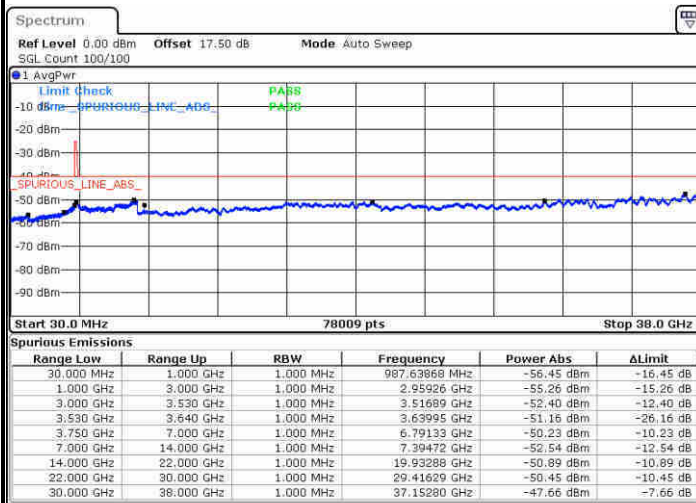
Date: 20 NOV 2019 14:45:40



Date: 20 NOV 2019 15:06:13

Highest Channel / FullIRB

N/A



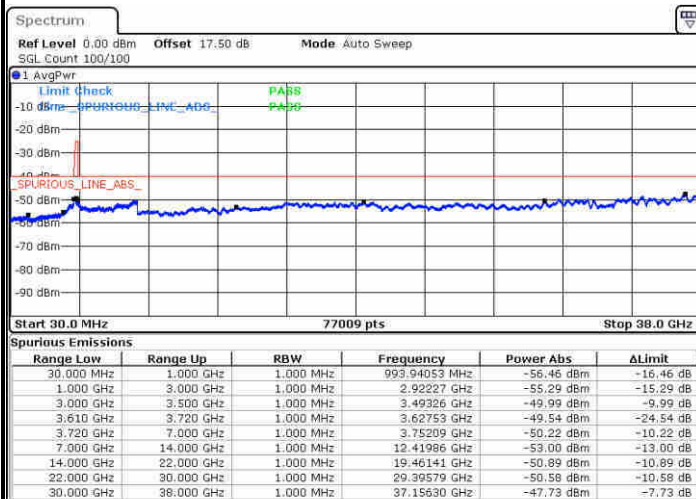
Date: 20 NOV 2019 14:57:04



LTE Band 48 / 10MHz

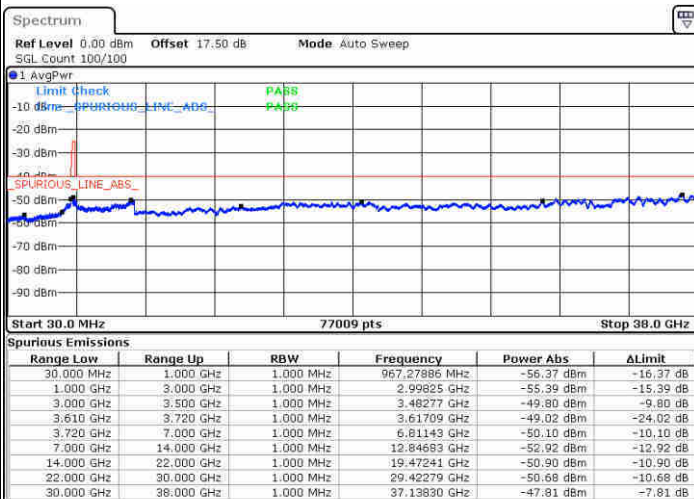
64QAM

Lowest Channel / 1RB0



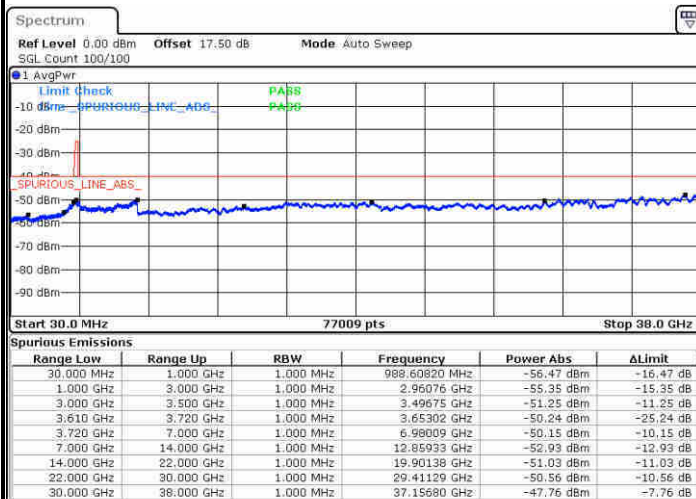
Date: 20 NOV 2019 15:07:16

Lowest Channel / 1RBmax



Date: 20 NOV 2019 15:25:34

Lowest Channel / FullRB



Date: 20 NOV 2019 15:16:25

N/A

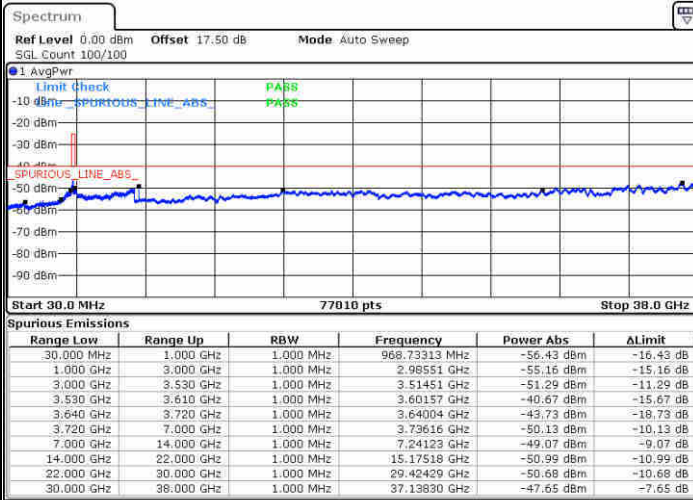


LTE Band 48 / 10MHz

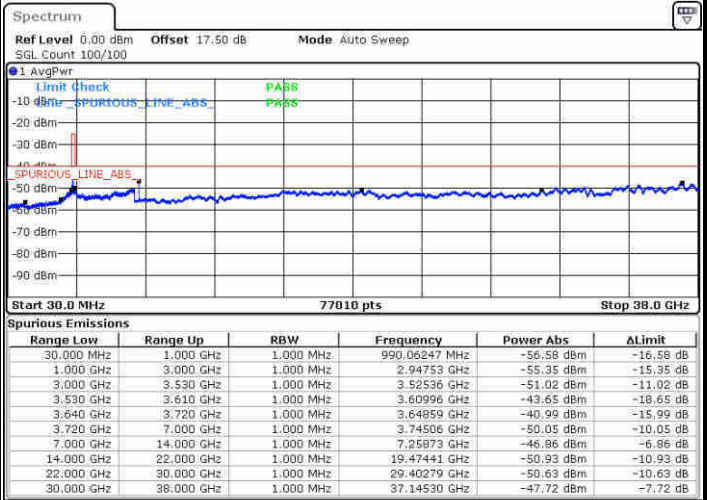
64QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax



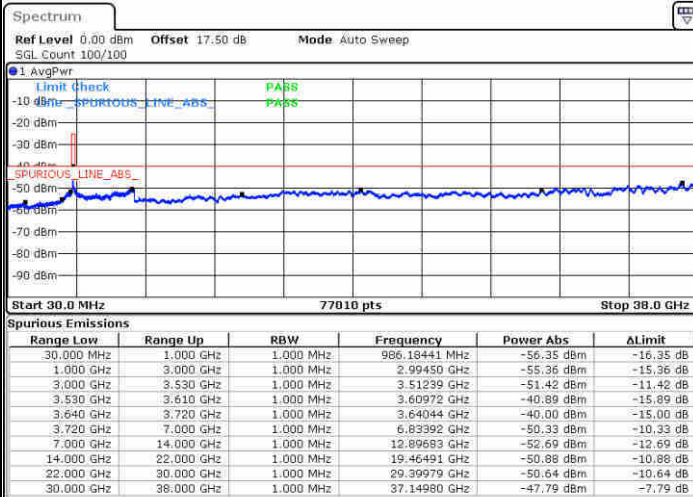
Date: 20 NOV 2019 15:12:20



Date: 20 NOV 2019 15:30:38

Middle Channel / FullIRB

N/A



Date: 20 NOV 2019 15:21:29

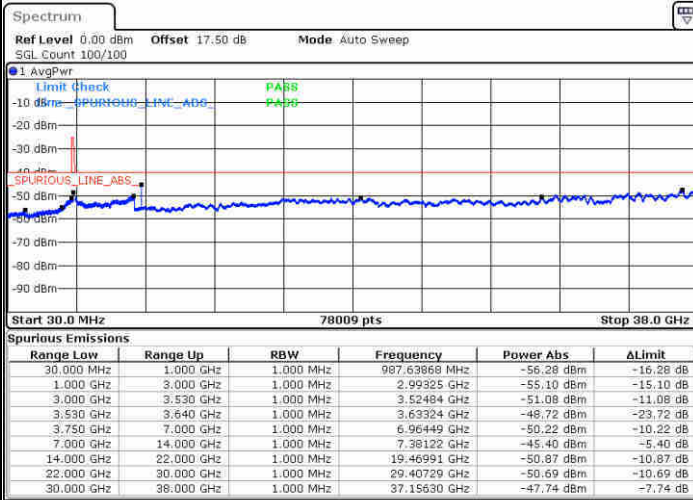


LTE Band 48 / 10MHz

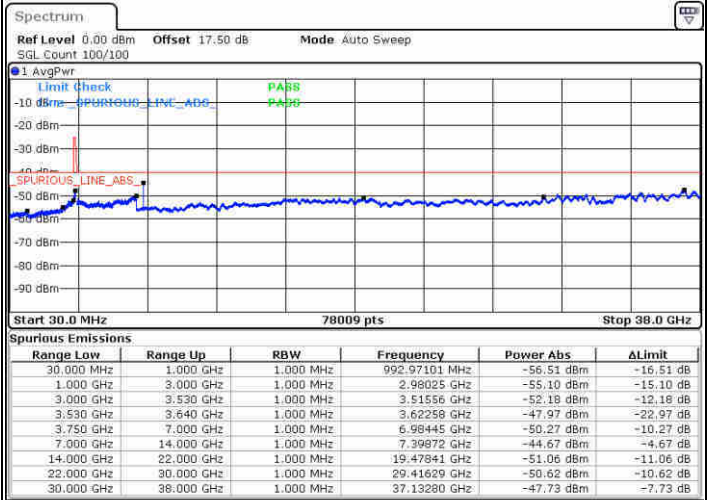
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



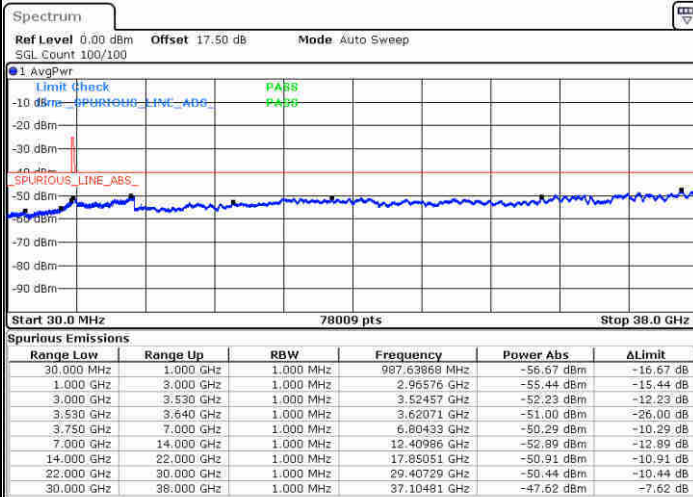
Date: 20 NOV 2019 15:13:21



Date: 20 NOV 2019 15:31:39

Highest Channel / FullIRB

N/A



Date: 20 NOV 2019 15:22:30

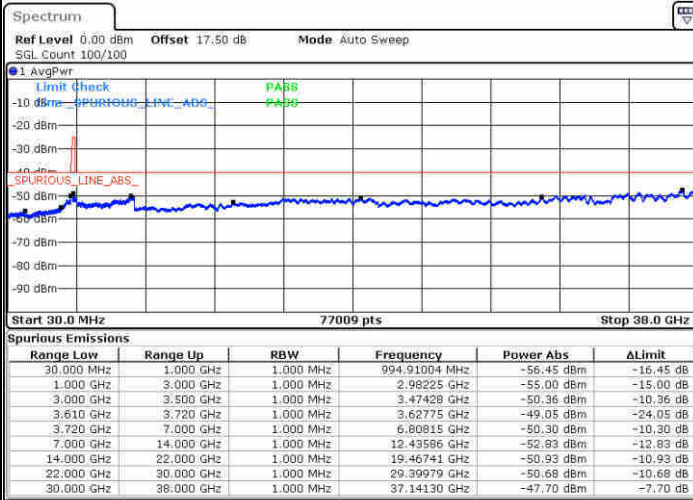


LTE Band 48 / 15MHz

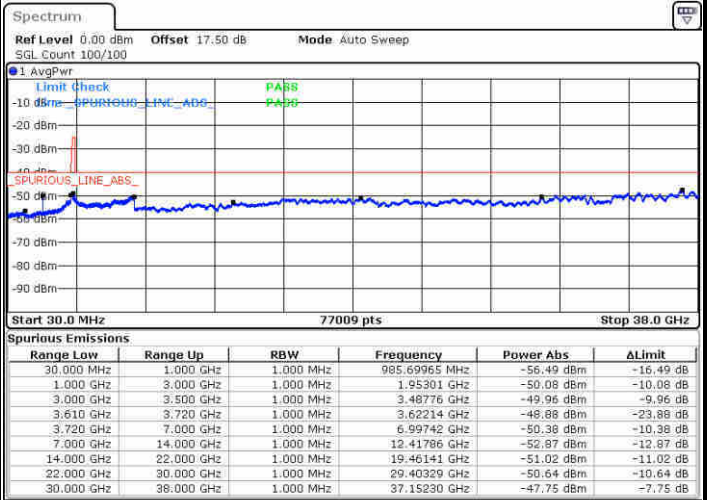
64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



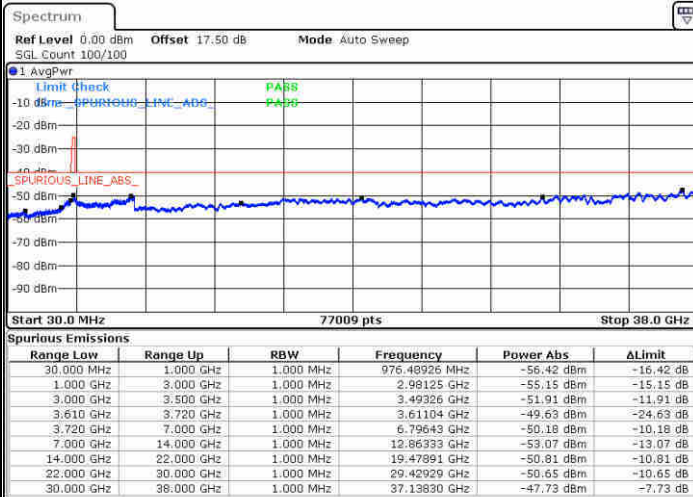
Date: 20 NOV 2019 15:36:46



Date: 20 NOV 2019 15:55:04

Lowest Channel / FullIRB

N/A



Date: 20 NOV 2019 15:45:56

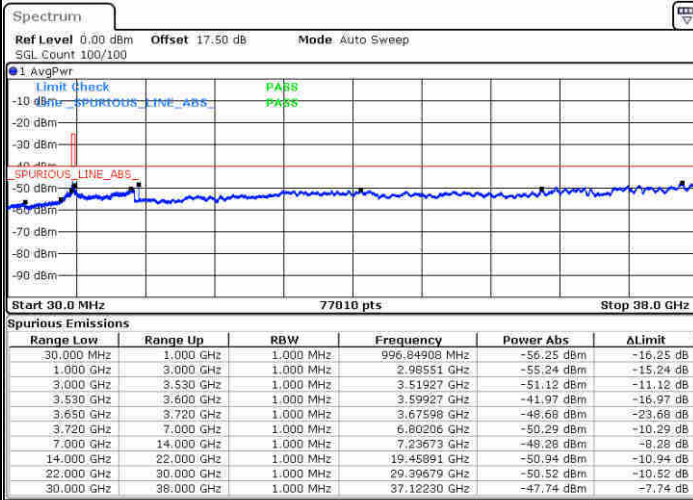


LTE Band 48 / 15MHz

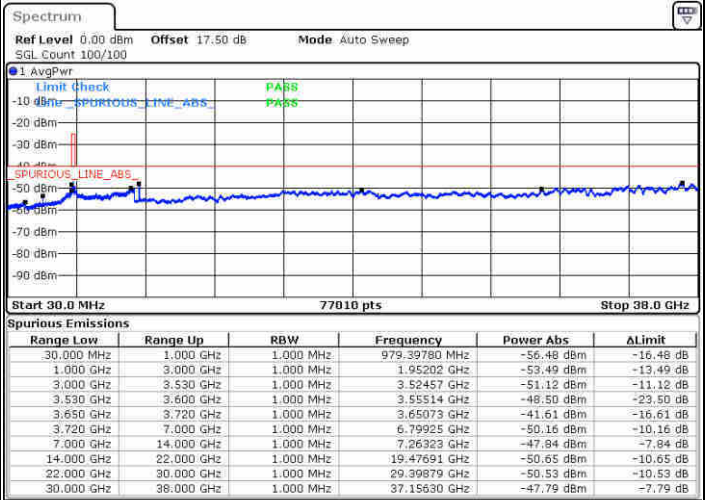
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



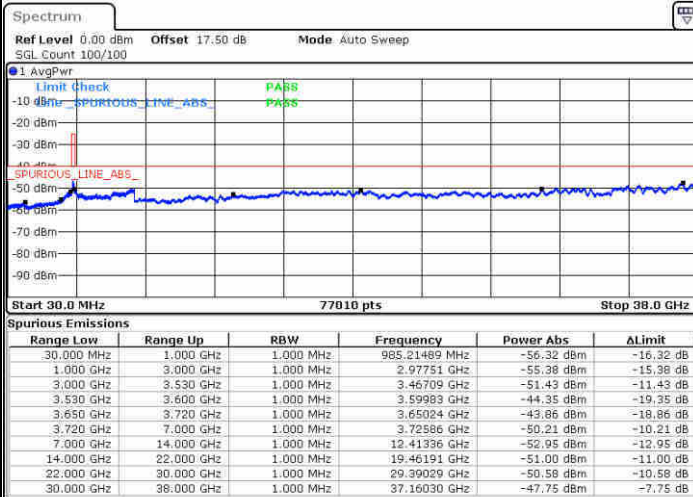
Date: 20 NOV 2019 15:37:47



Date: 20 NOV 2019 15:56:05

Middle Channel / FullIRB

N/A



Date: 20 NOV 2019 15:46:56

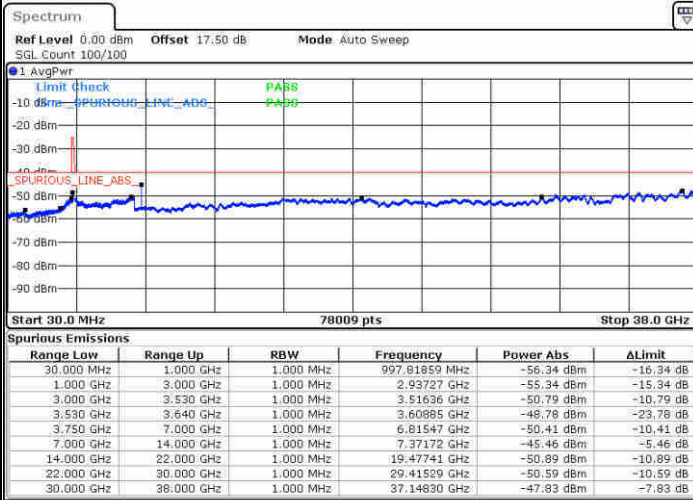


LTE Band 48 / 15MHz

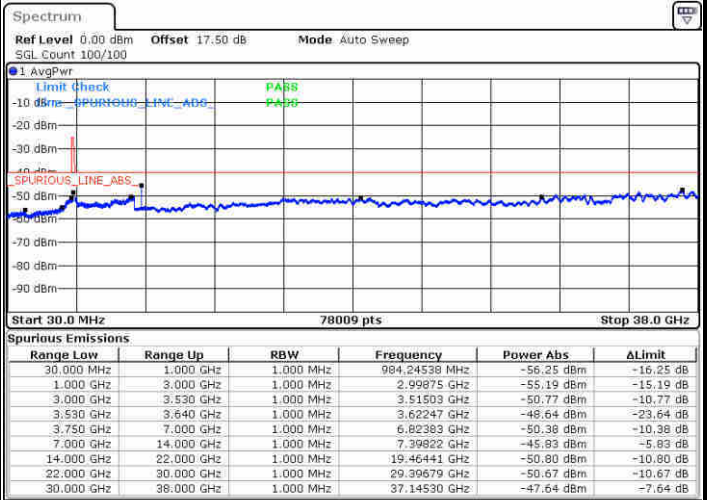
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



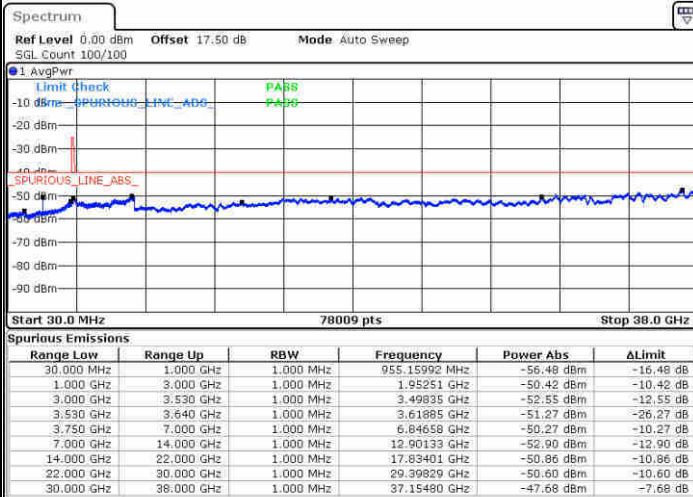
Date: 20 NOV 2019 15:42:52



Date: 20 NOV 2019 16:01:10

Highest Channel / FullIRB

N/A



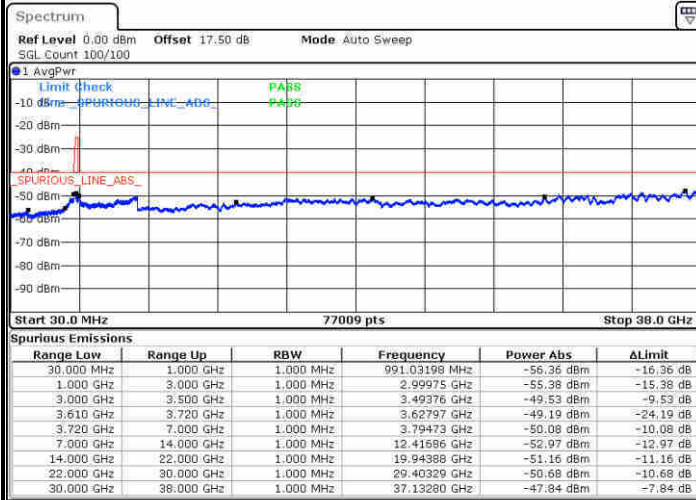
Date: 20 NOV 2019 15:52:01



LTE Band 48 / 20MHz

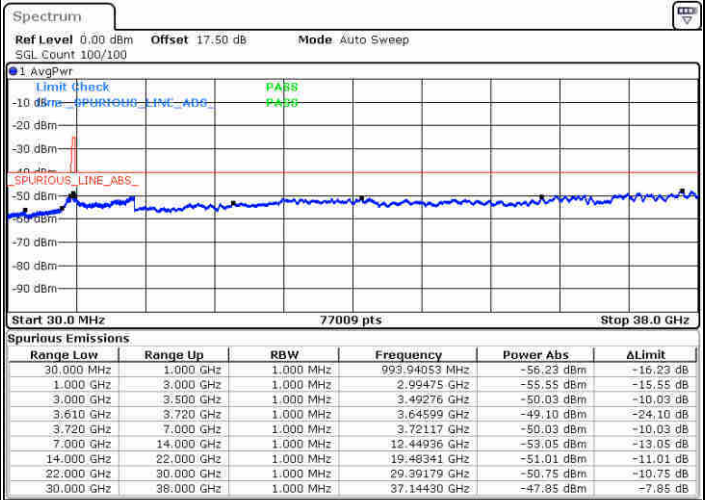
64QAM

Lowest Channel / 1RB0



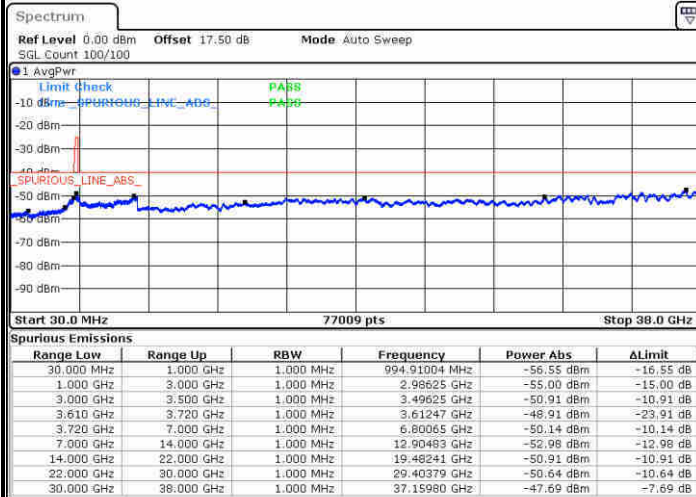
Date: 30 DEC 2019 10:56:52

Lowest Channel / 1RBmax



Date: 30 DEC 2019 11:06:02

Lowest Channel / FullRB



Date: 20 NOV 2019 16:02:13

N/A

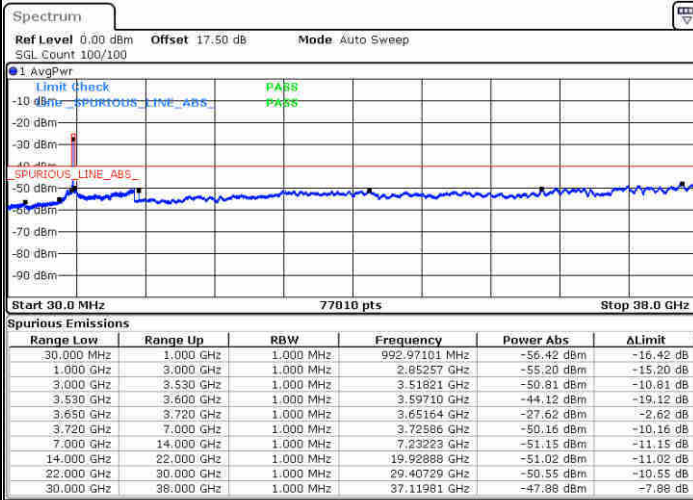


LTE Band 48 / 20MHz

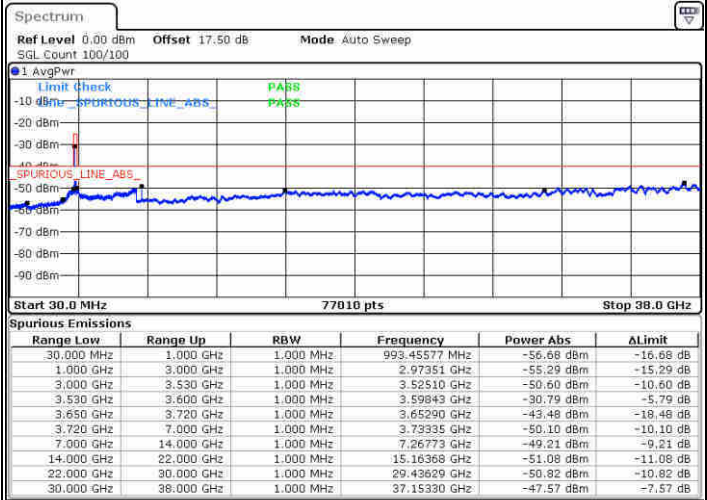
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



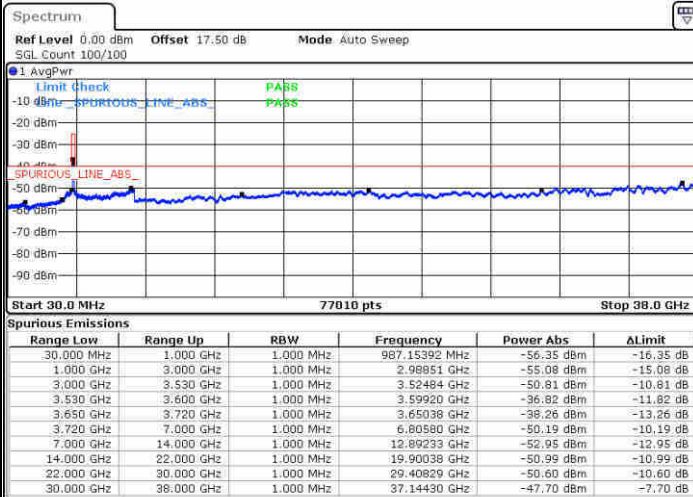
Date: 30 DEC 2019 11:01:57



Date: 30 DEC 2019 11:11:06

Middle Channel / FullIRB

N/A



Date: 20 NOV 2019 16:07:17

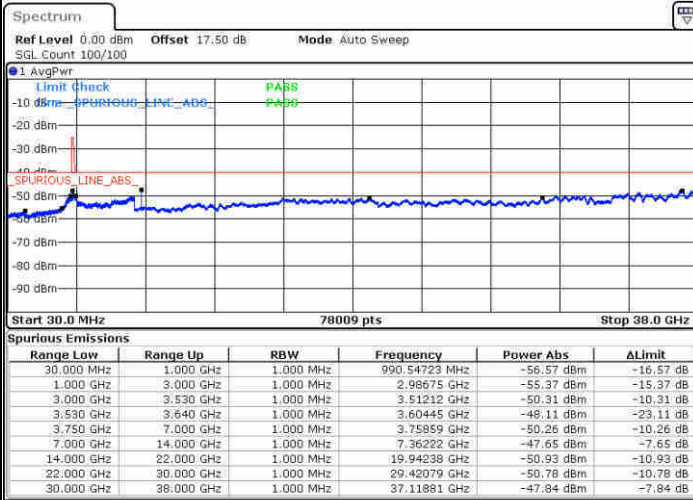


LTE Band 48 / 20MHz

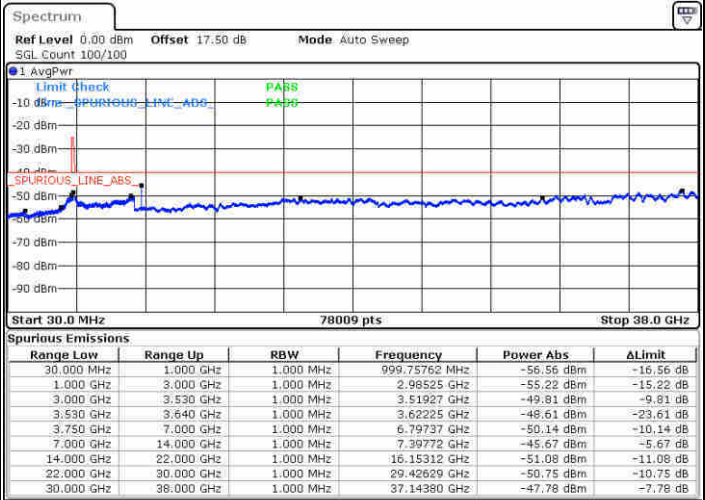
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



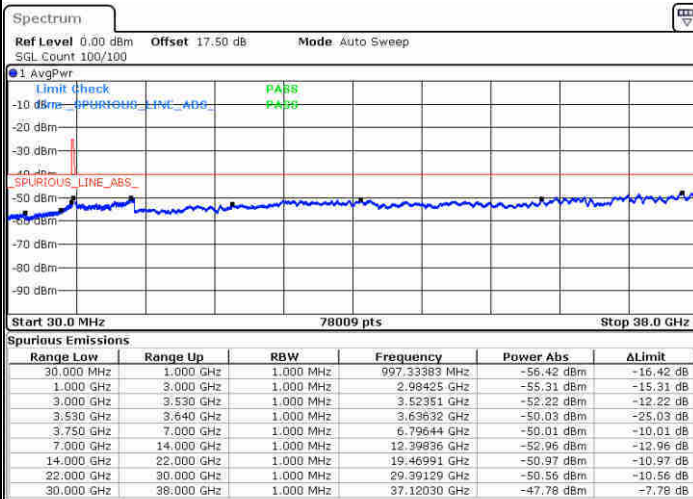
Date: 30 DEC 2019 11:02:58



Date: 30 DEC 2019 11:12:07

Highest Channel / FullIRB

N/A



Date: 20 NOV 2019 16:08:18

Frequency Stability

Test Conditions		LTE Band 48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0026	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0023	

Note:

1. Normal Voltage =110 V. ; Battery End Point (BEP) =100 V. ; Maximum Voltage =120 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

**EIRP Power Density**

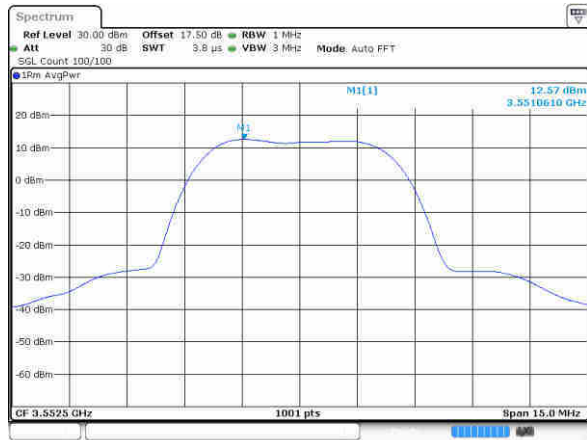
Mode	LTE Band 48 : Conducted Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	12.57	11.27	9.85	8.84	8.40	6.89	7.39	5.88
Middle CH	-	-	-	-	11.76	10.50	9.73	9.33	7.41	6.50	6.99	5.75
Highest CH	-	-	-	-	12.14	11.65	9.58	9.77	8.58	7.77	7.68	6.01
Mode	LTE Band 48 : Conducted Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	10.35	-	8.14	-	6.41	-	4.96	-
Middle CH	-	-	-	-	10.33	-	7.21	-	5.79	-	4.00	-
Highest CH	-	-	-	-	11.22	-	8.71	-	6.70	-	5.63	-

Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	27.57	26.27	24.85	23.84	23.40	21.89	22.39	20.88
Middle CH	-	-	-	-	26.76	25.50	24.73	24.33	22.41	21.50	21.99	20.75
Highest CH	-	-	-	-	27.14	26.65	24.58	24.77	23.58	22.77	22.68	21.01
Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	25.35	-	23.14	-	21.41	-	19.96	-
Middle CH	-	-	-	-	25.33	-	22.21	-	20.79	-	19.00	-
Highest CH	-	-	-	-	26.22	-	23.71	-	21.70	-	20.63	-
Antenna Gain	15 dBi											
Limit	37dBm / MHz											
Result	Pass											



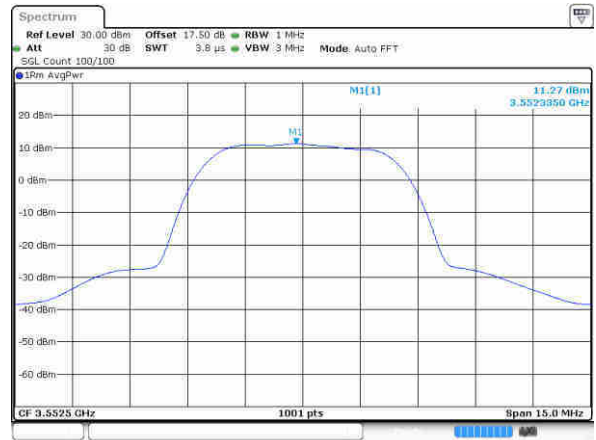
LTE Band 48 / 5MHz

Lowest Channel / 5MHz / Full / QPSK



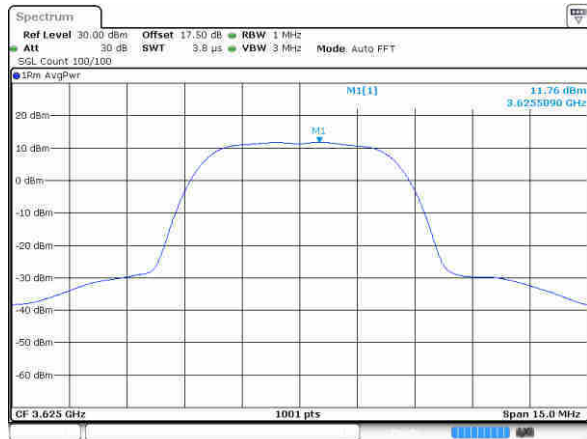
Date: 17 JAN 2020 05:30:22

Lowest Channel / 5MHz / Full / 16QAM



Date: 17 JAN 2020 05:30:41

Middle Channel / 5MHz / Full / QPSK



Date: 17 JAN 2020 05:31:53

Middle Channel / 5MHz / Full / 16QAM



Date: 17 JAN 2020 05:31:35

Highest Channel / 5MHz / Full / QPSK



Date: 17 JAN 2020 05:32:11

Highest Channel / 5MHz / Full / 16QAM

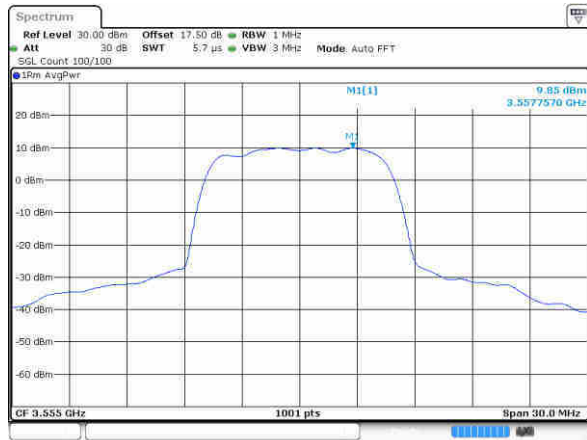


Date: 17 JAN 2020 05:32:30

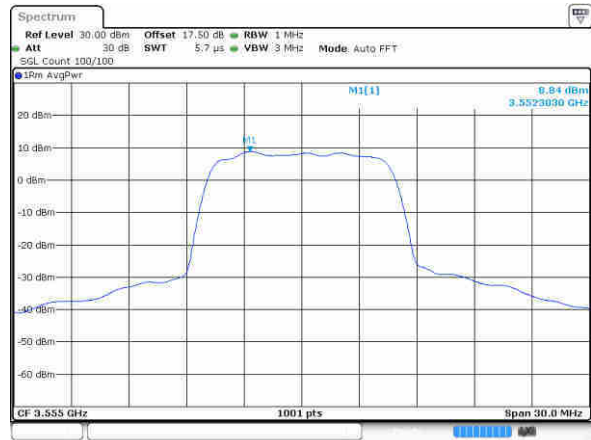


LTE Band 48 / 10MHz

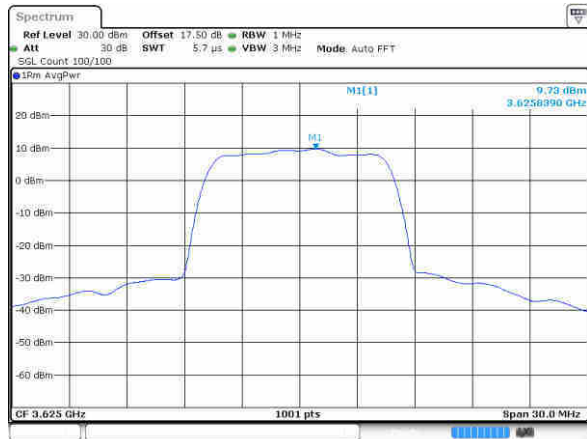
Lowest Channel / 10MHz / Full / QPSK



Lowest Channel / 10MHz / Full / 16QAM



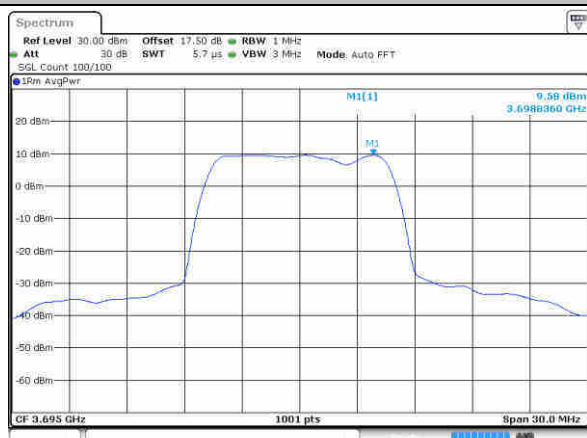
Middle Channel / 10MHz / Full / QPSK



Middle Channel / 10MHz / Full / 16QAM



Highest Channel / 10MHz / Full / QPSK



Highest Channel / 10MHz / Full / 16QAM





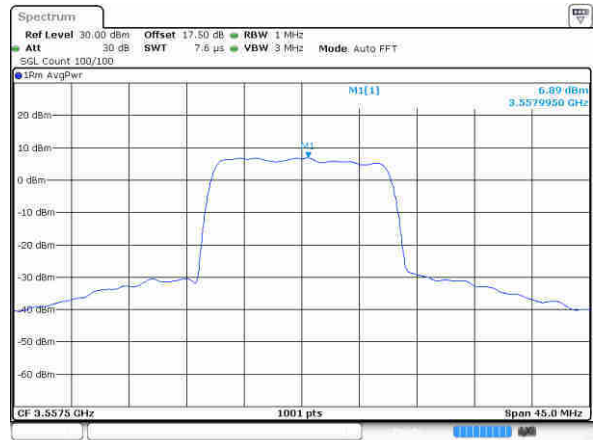
LTE Band 48 / 15MHz

Lowest Channel / 15MHz / Full / QPSK



Date: 17 JAN 2020 05:35:52

Lowest Channel / 15MHz / Full / 16QAM



Date: 17 JAN 2020 05:36:10

Middle Channel / 15MHz / Full / QPSK



Date: 17 JAN 2020 05:37:23

Middle Channel / 15MHz / Full / 16QAM



Date: 17 JAN 2020 05:37:05

Highest Channel / 15MHz / Full / QPSK



Date: 17 JAN 2020 05:37:41

Highest Channel / 15MHz / Full / 16QAM

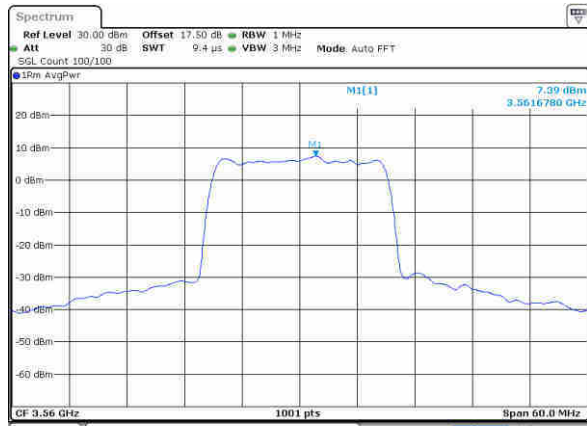


Date: 17 JAN 2020 05:38:00



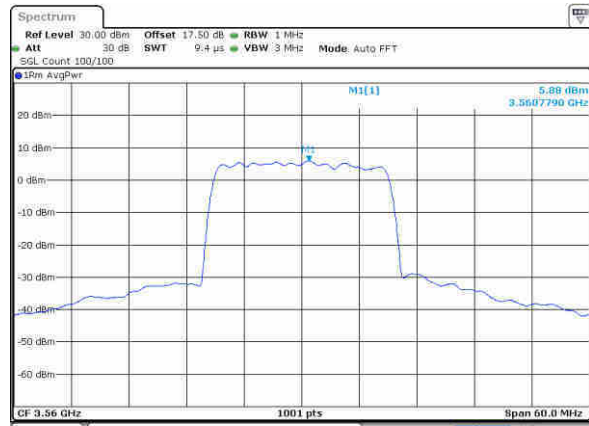
LTE Band 48 / 20MHz

Lowest Channel / 20MHz / Full / QPSK



Date: 17 JAN 2020 05:39:14

Lowest Channel / 20MHz / Full / 16QAM



Date: 17 JAN 2020 05:39:55

Middle Channel / 20MHz / Full / QPSK



Date: 17 JAN 2020 05:39:32

Middle Channel / 20MHz / Full / 16QAM



Date: 17 JAN 2020 05:39:50

Highest Channel / 20MHz / Full / QPSK



Date: 17 JAN 2020 05:41:03

Highest Channel / 20MHz / Full / 16QAM

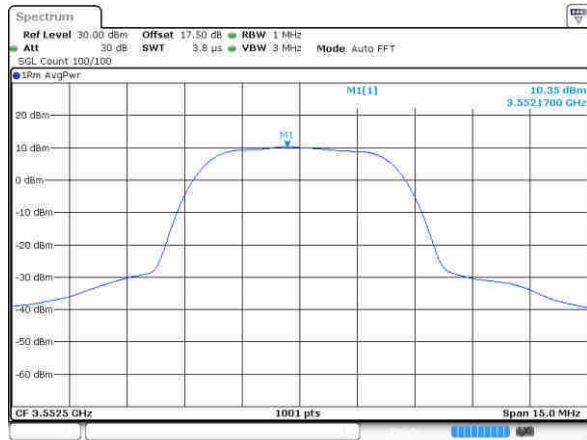


Date: 17 JAN 2020 05:40:44



LTE Band 48 / 5MHz

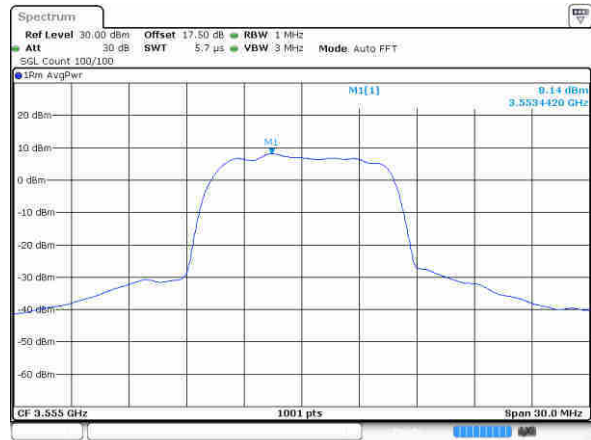
Lowest Channel / 5MHz / Full / 64QAM



Date: 17 JAN 2020 05:30:58

LTE Band 48 / 10MHz

Lowest Channel / 10MHz / Full / 64QAM



Date: 17 JAN 2020 05:33:07

Middle Channel / 5MHz / Full / 64QAM



Date: 17 JAN 2020 05:31:17

Middle Channel / 10MHz / Full / 64QAM



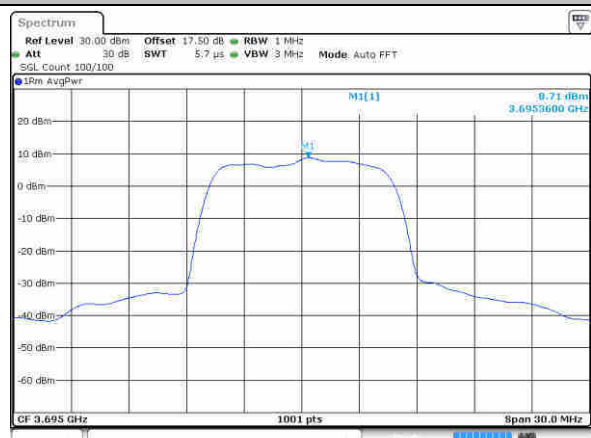
Date: 17 JAN 2020 05:34:38

Highest Channel / 5MHz / Full / 64QAM



Date: 17 JAN 2020 05:32:48

Highest Channel / 10MHz / Full / 64QAM



Date: 17 JAN 2020 05:34:56



LTE Band 48 / 15MHz

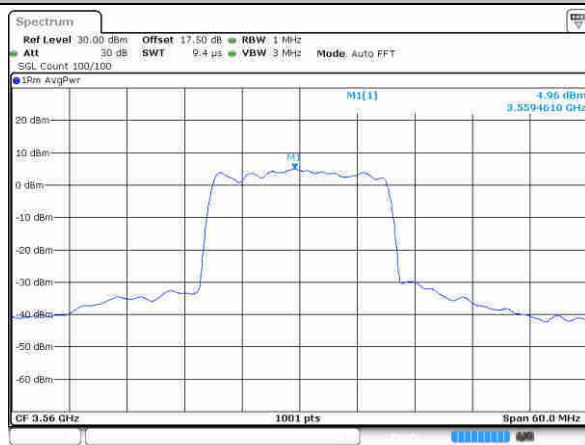
Lowest Channel / 15MHz / Full / 64QAM



Date: 17 JAN 2020 05:36:29

LTE Band 48 / 20MHz

Lowest Channel / 20MHz / Full / 64QAM



Date: 17 JAN 2020 05:38:37

Middle Channel / 15MHz / Full / 64QAM



Date: 17 JAN 2020 05:38:47

Middle Channel / 20MHz / Full / 64QAM



Date: 17 JAN 2020 05:40:08

Highest Channel / 15MHz / Full / 64QAM



Date: 17 JAN 2020 05:38:18

Highest Channel / 20MHz / Full / 64QAM



Date: 17 JAN 2020 05:40:26



MIMO <Ant. 0>

Peak-to-Average Ratio

Mode	LTE Band 48 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.09	5.57	6.72	6.46	PASS
Middle CH	6.09	5.65	6.46	6.52	
Highest CH	6.09	5.62	6.46	6.49	
Mode	LTE Band 48 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.78	6.43	-	-	PASS
Middle CH	7.36	6.52	-	-	
Highest CH	6.81	6.61	-	-	

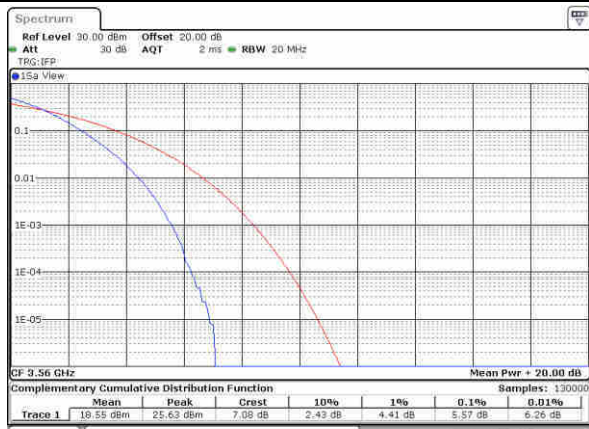


LTE Band 48 / 20MHz / QPSK

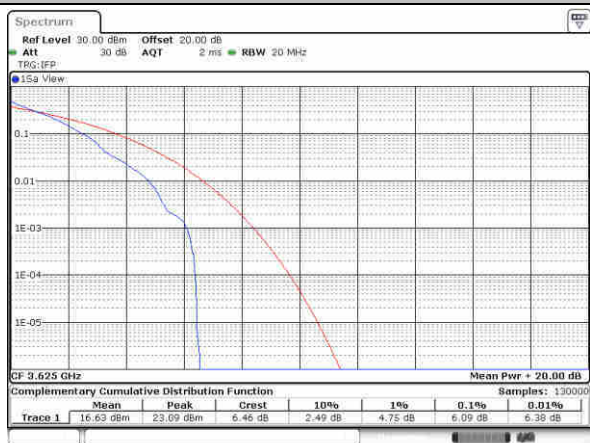
Lowest Channel / 1RB



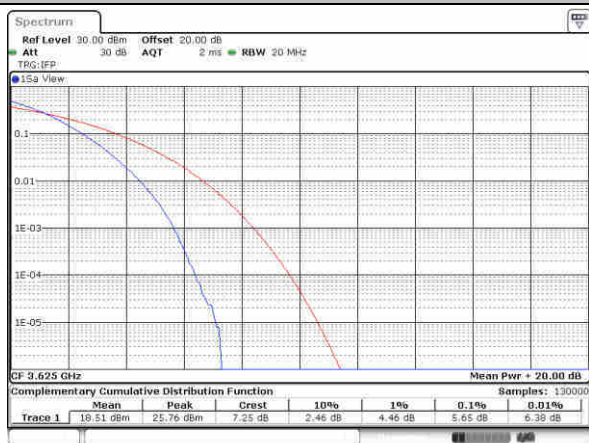
Lowest Channel / Full RB



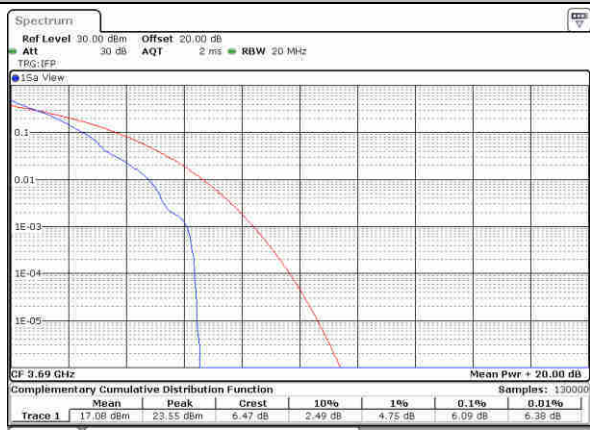
Middle Channel / 1RB



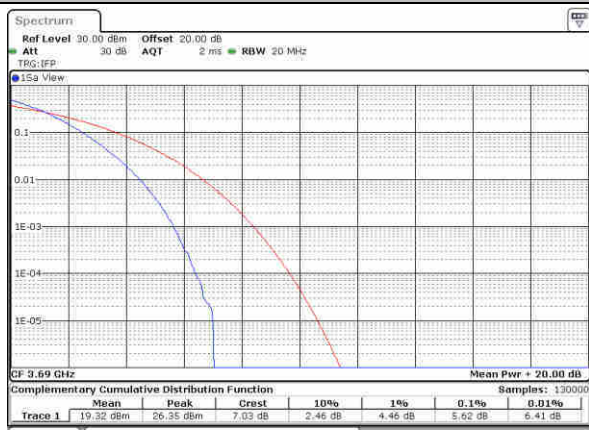
Middle Channel / Full RB



Highest Channel / 1RB



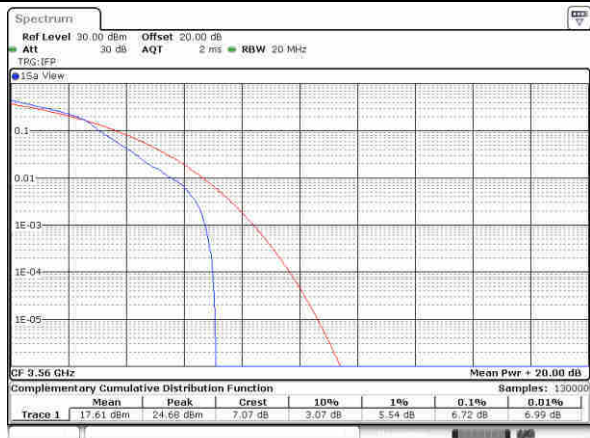
Highest Channel / Full RB



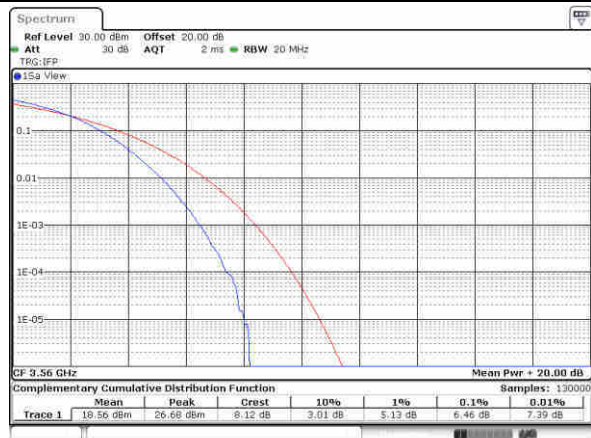


LTE Band 48 / 20MHz / 16QAM

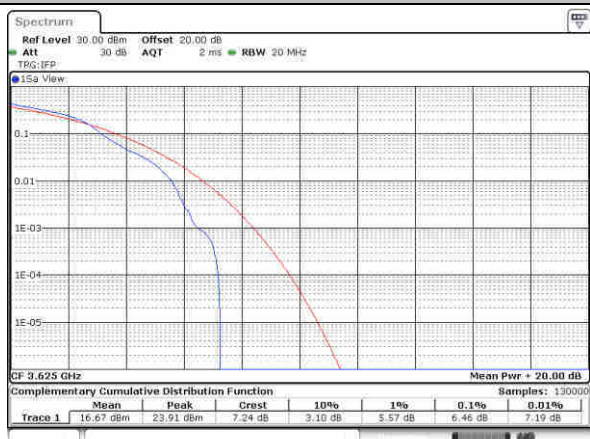
Lowest Channel / 1RB



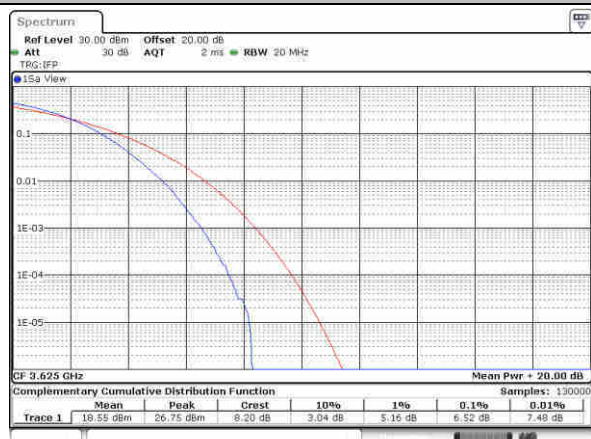
Lowest Channel / Full RB



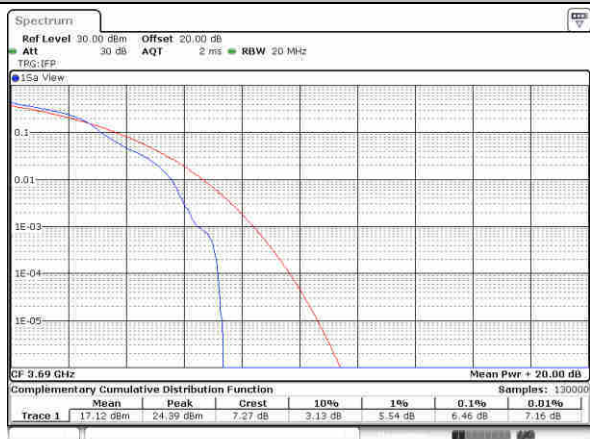
Middle Channel / 1RB



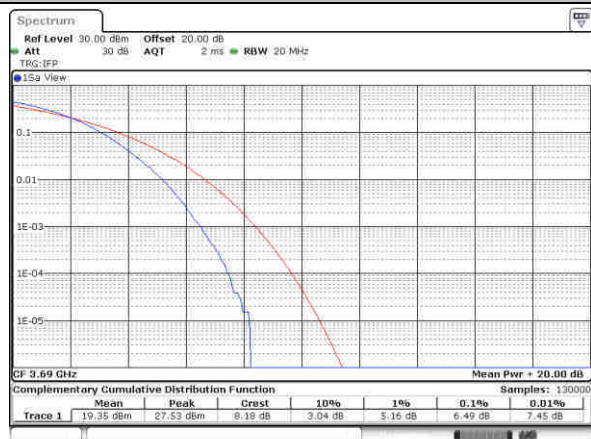
Middle Channel / Full RB



Highest Channel / 1RB



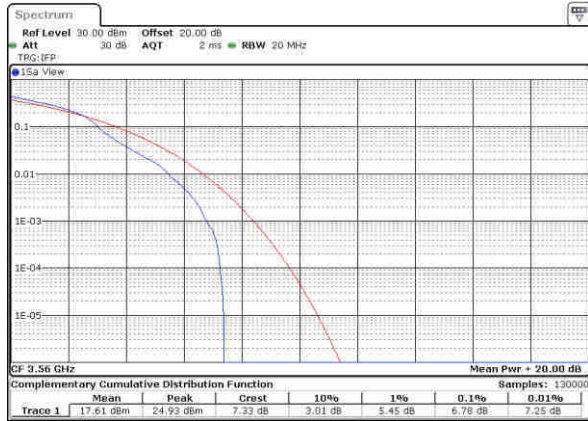
Highest Channel / Full RB



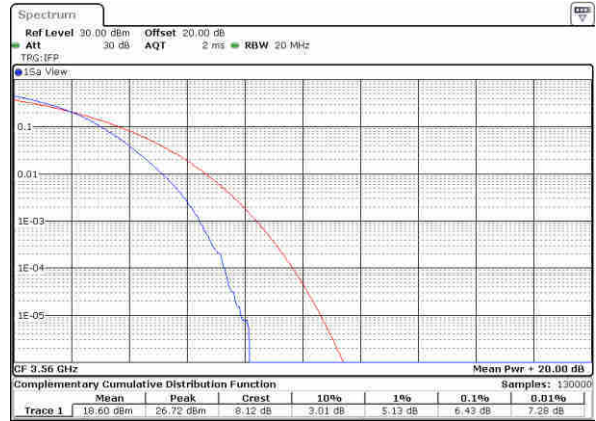


LTE Band 48 / 20MHz / 64QAM

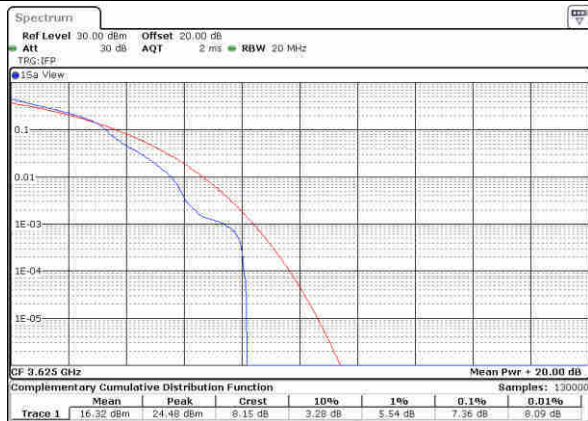
Lowest Channel / 1RB



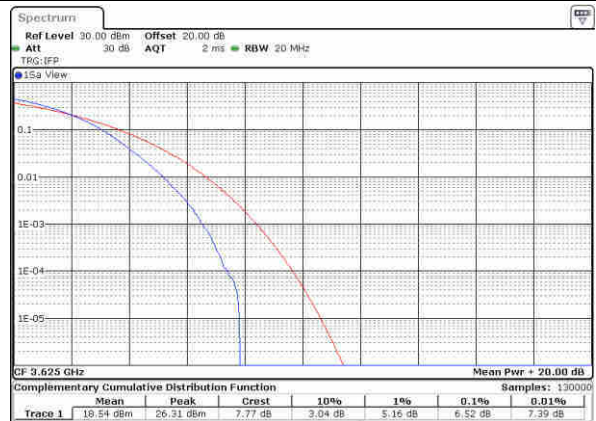
Lowest Channel / Full RB



Middle Channel / 1RB



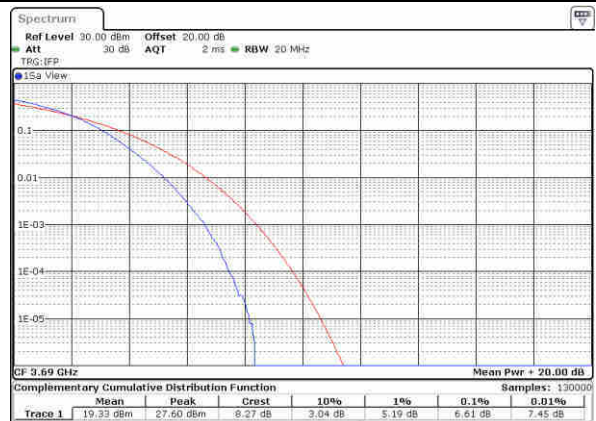
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



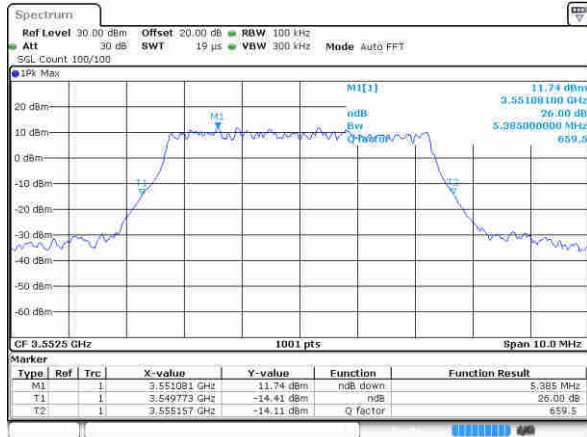
**26dB Bandwidth**

Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	5.39	5.15	9.89	10.23	14.69	14.15	18.66	18.70
Middle CH	-	-	-	-	4.96	5.24	9.89	9.81	14.39	14.21	18.94	19.06
Highest CH	-	-	-	-	5.01	5.13	9.83	9.93	14.30	14.18	18.94	19.26
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	5.20	-	9.69	-	14.15	-	18.70	-
Middle CH	-	-	-	-	5.19	-	9.77	-	14.48	-	18.66	-
Highest CH	-	-	-	-	5.24	-	9.69	-	14.45	-	18.90	-

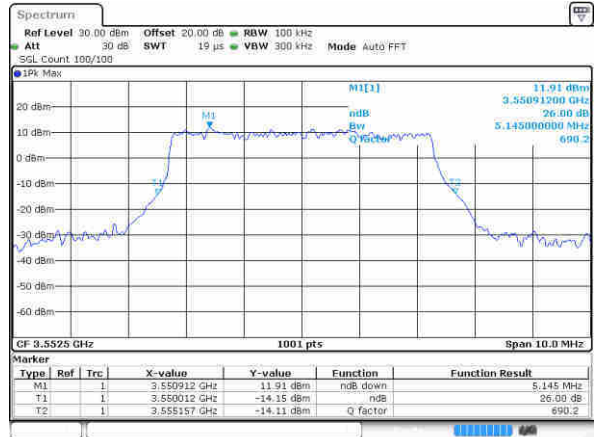


LTE Band 48

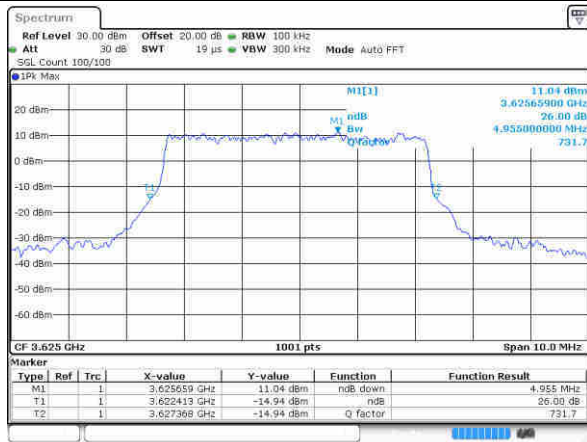
Lowest Channel / 5MHz / QPSK



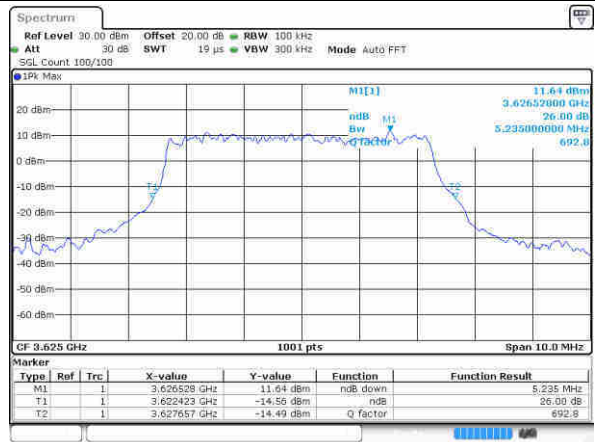
Lowest Channel / 5MHz / 16QAM



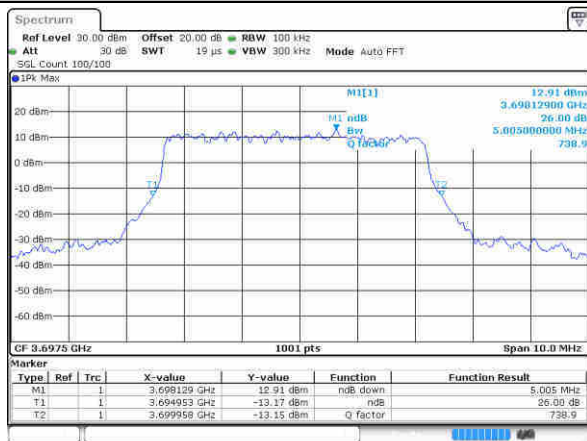
Middle Channel / 5MHz / QPSK



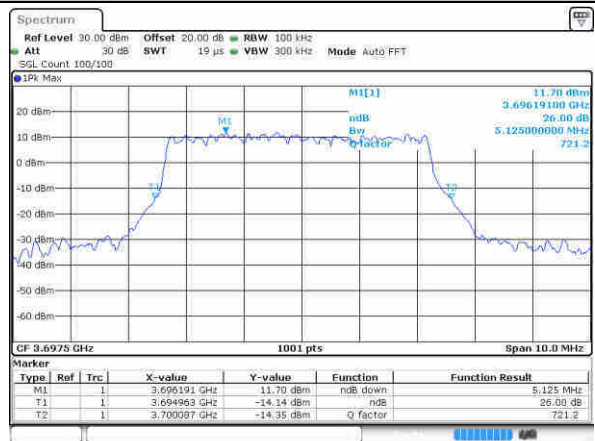
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



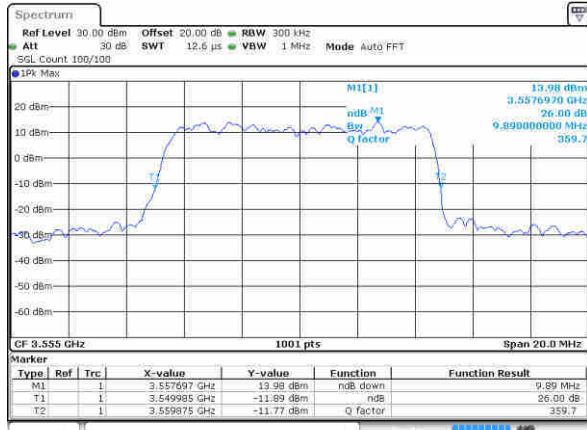
Highest Channel / 5MHz / 16QAM



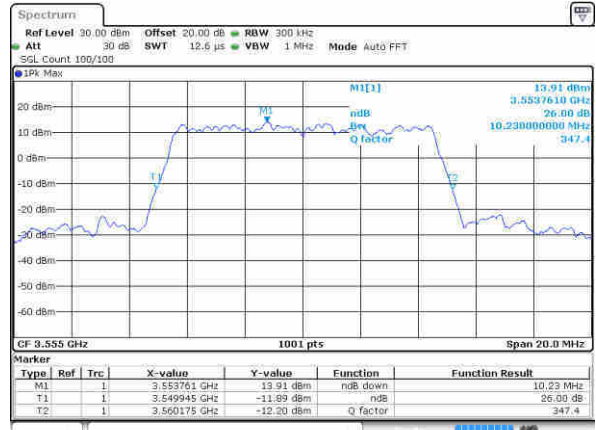


LTE Band 48

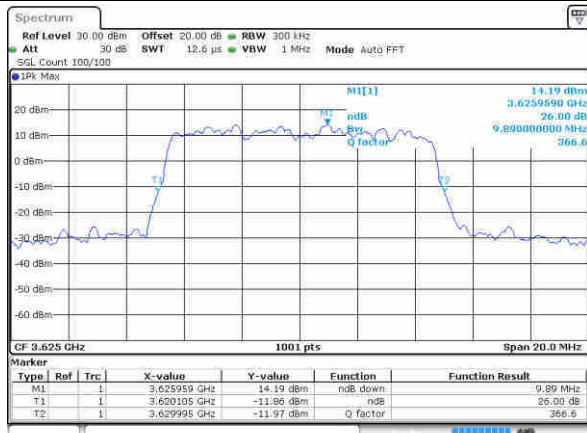
Lowest Channel / 10MHz / QPSK



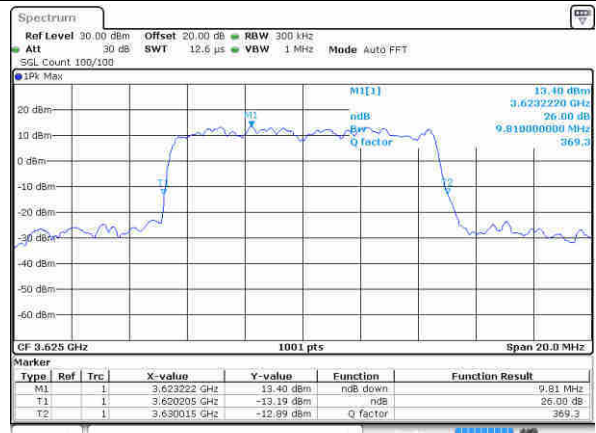
Lowest Channel / 10MHz / 16QAM



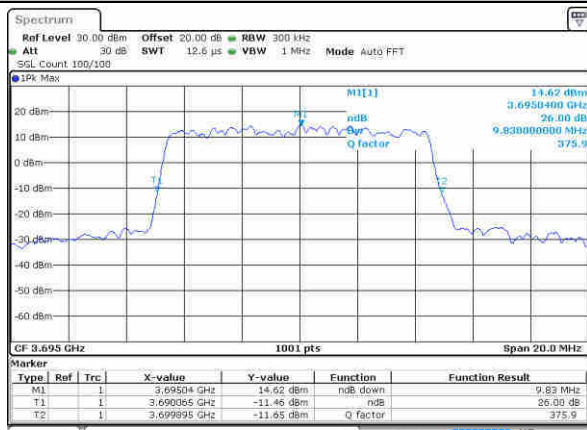
Middle Channel / 10MHz / QPSK



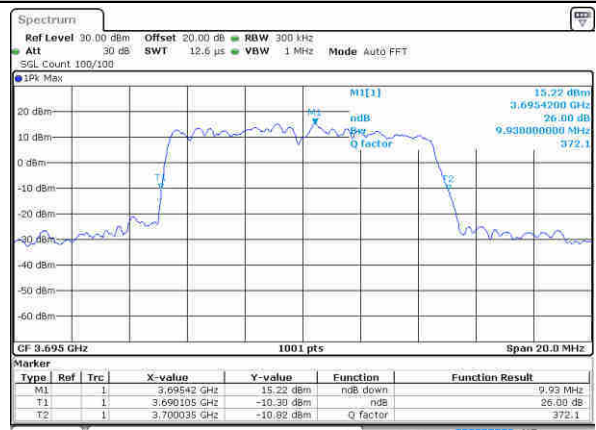
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



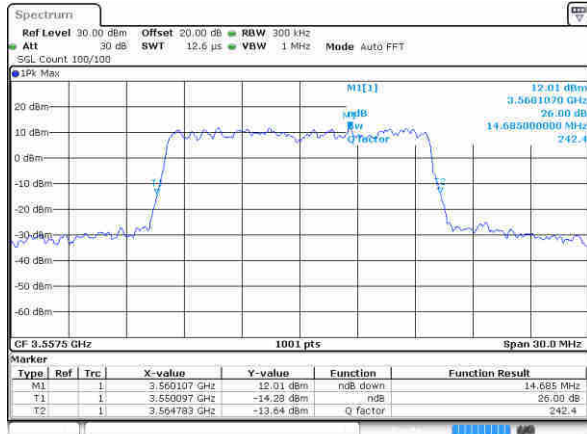
Highest Channel / 10MHz / 16QAM



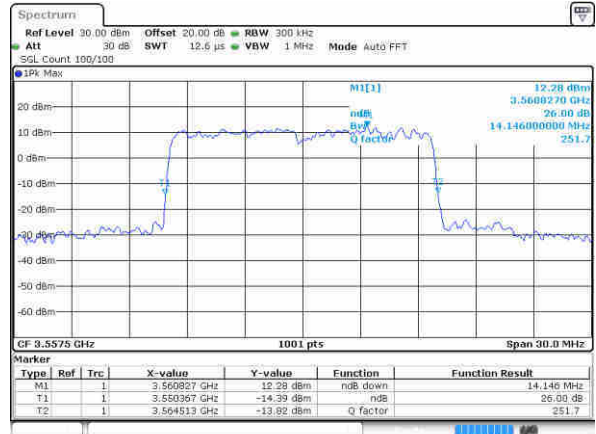


LTE Band 48

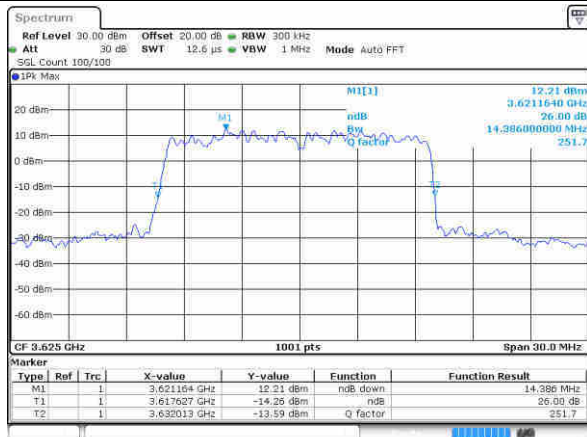
Lowest Channel / 15MHz / QPSK



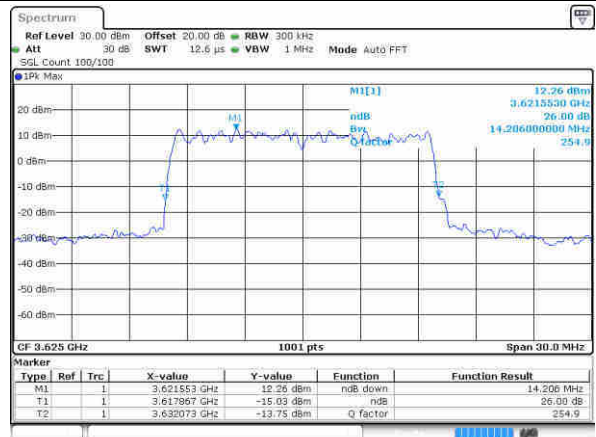
Lowest Channel / 15MHz / 16QAM



Middle Channel / 15MHz / QPSK



Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



Highest Channel / 15MHz / 16QAM

