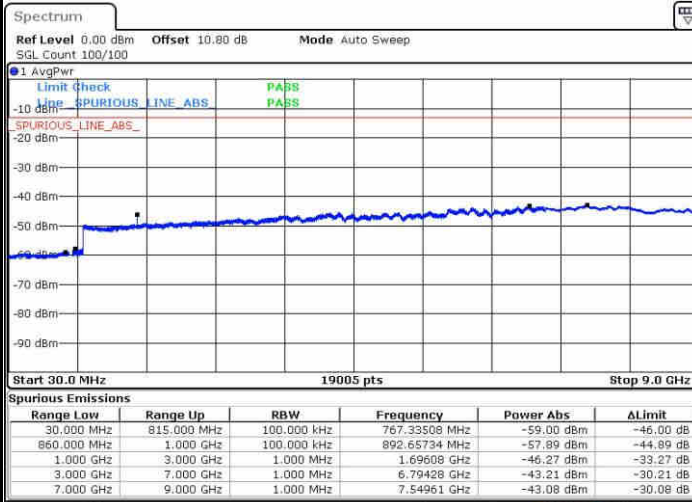




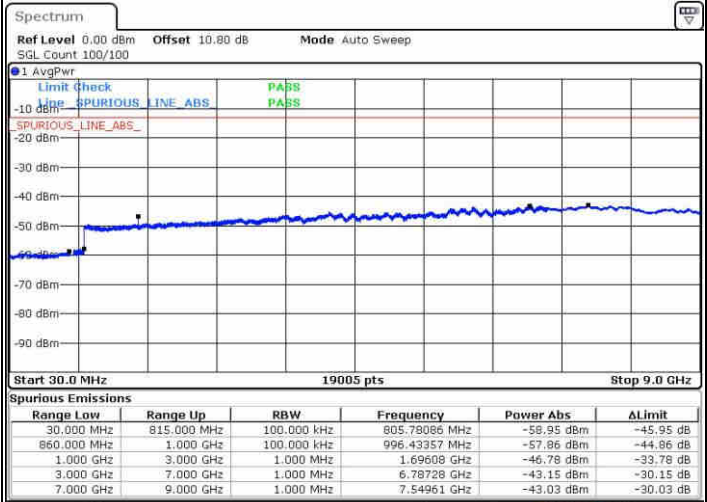
LTE Band 26 / 1.4MHz

Highest Channel / QPSK



Date: 8 APR 2019 09:22:34

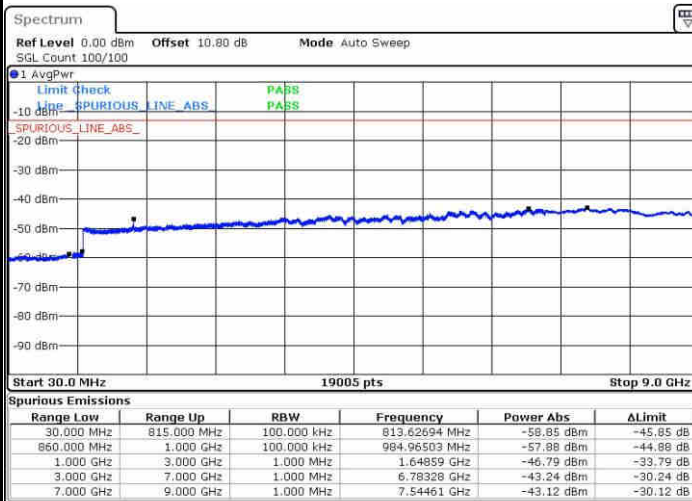
Highest Channel / 16QAM



Date: 8 APR 2019 09:23:15

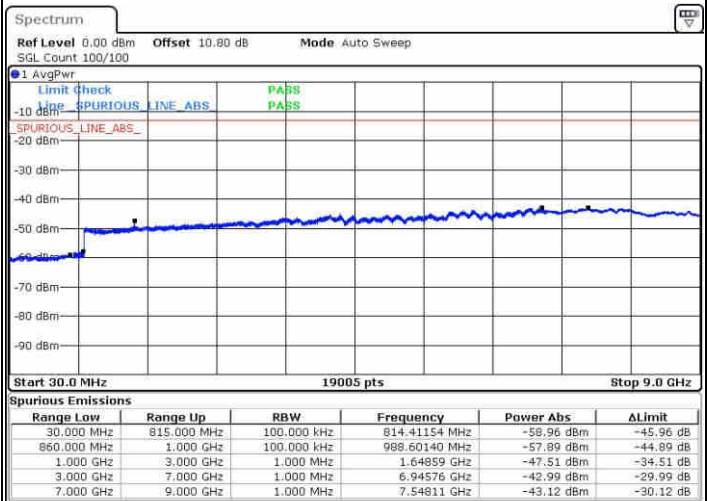
LTE Band 26 / 3MHz

Lowest Channel / QPSK



Date: 8 APR 2019 10:10:44

Lowest Channel / 16QAM

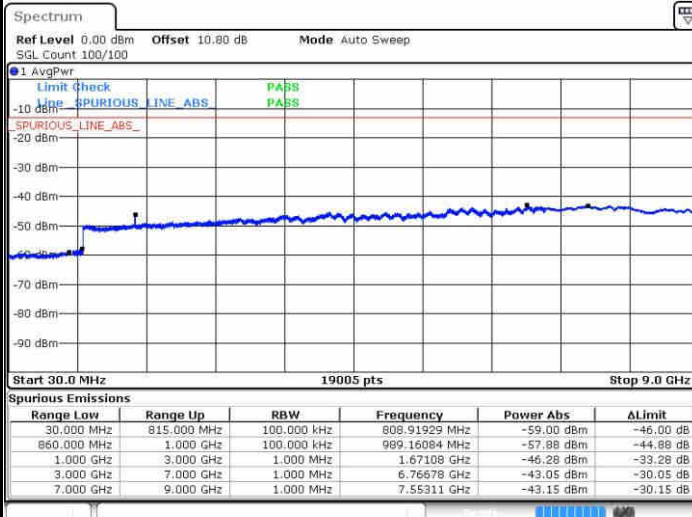


Date: 8 APR 2019 10:11:25



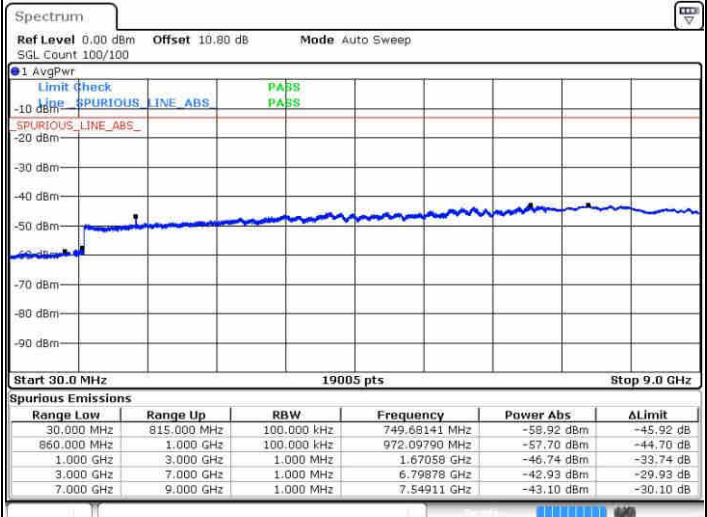
LTE Band 26 / 3MHz

Middle Channel / QPSK



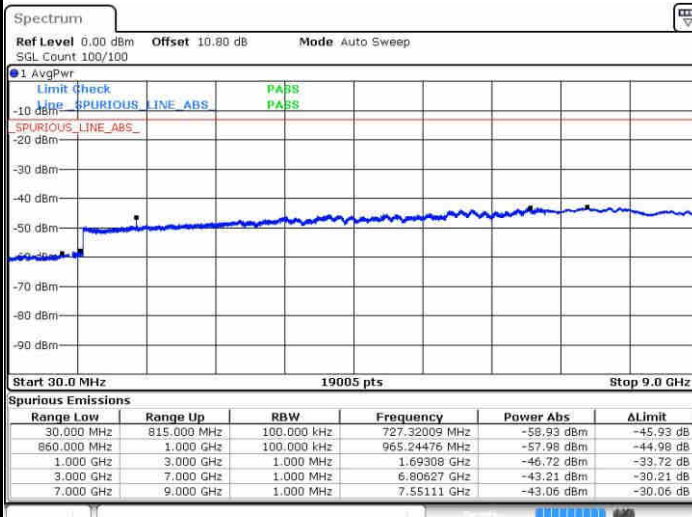
Date: 8 APR 2019 10:12:56

Middle Channel / 16QAM



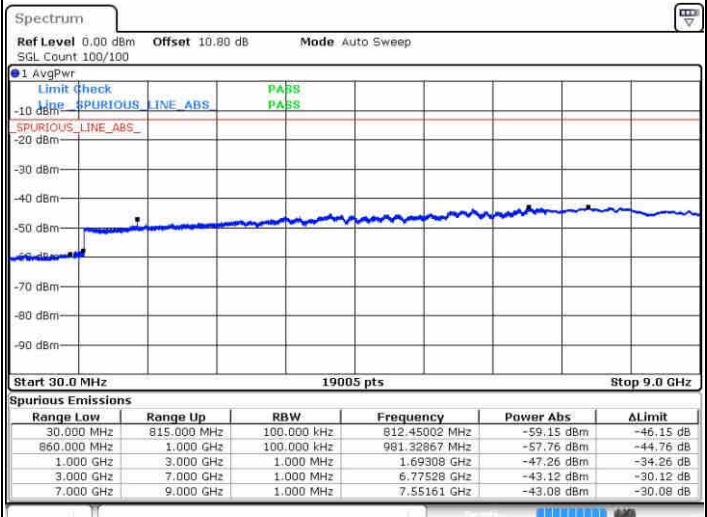
Date: 8 APR 2019 10:13:37

Highest Channel / QPSK



Date: 8 APR 2019 10:18:55

Highest Channel / 16QAM

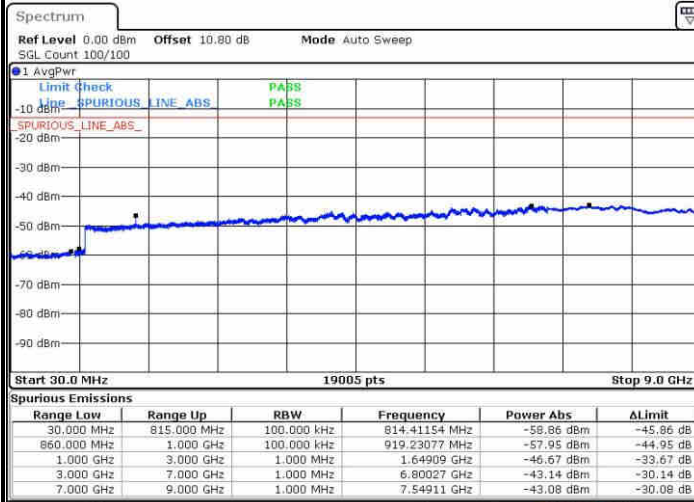


Date: 8 APR 2019 10:19:36



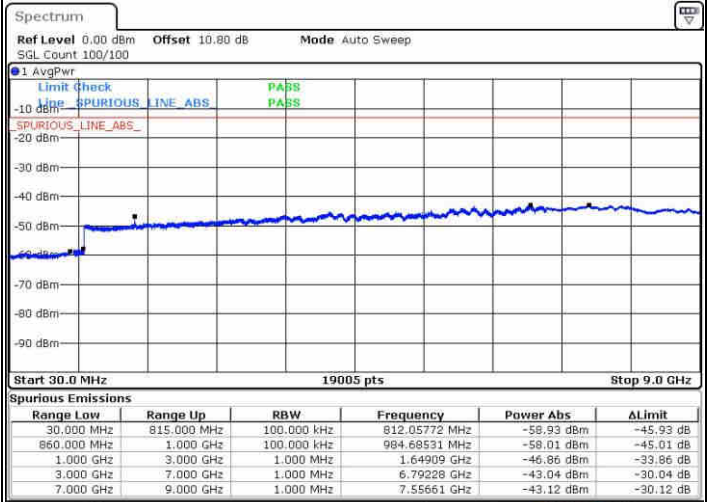
LTE Band 26 / 5MHz

Lowest Channel / QPSK



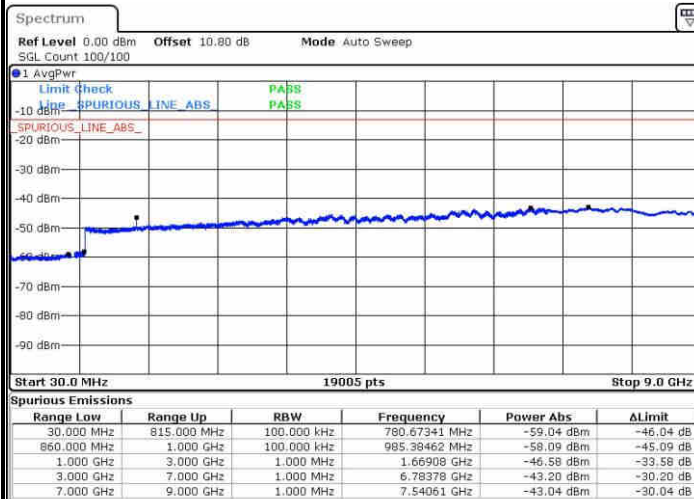
Date: 8 APR 2019 10:24:51

Lowest Channel / 16QAM



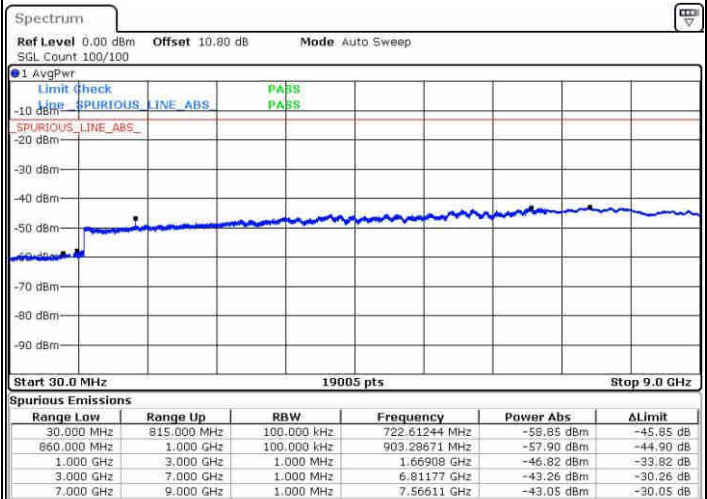
Date: 8 APR 2019 10:25:32

Middle Channel / QPSK



Date: 8 APR 2019 10:27:03

Middle Channel / 16QAM

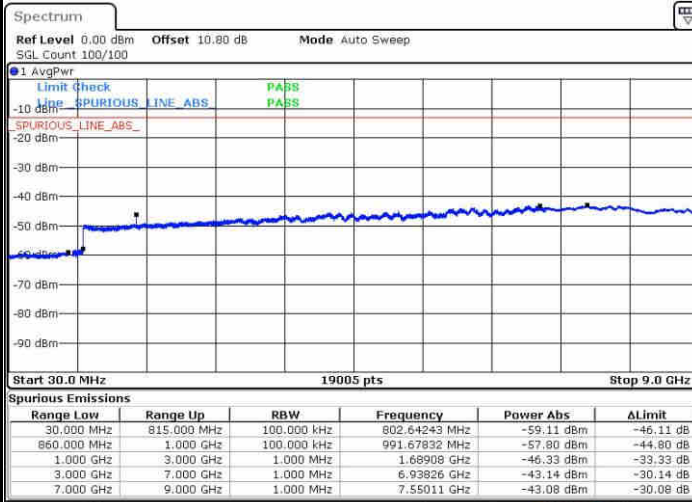


Date: 8 APR 2019 10:27:44



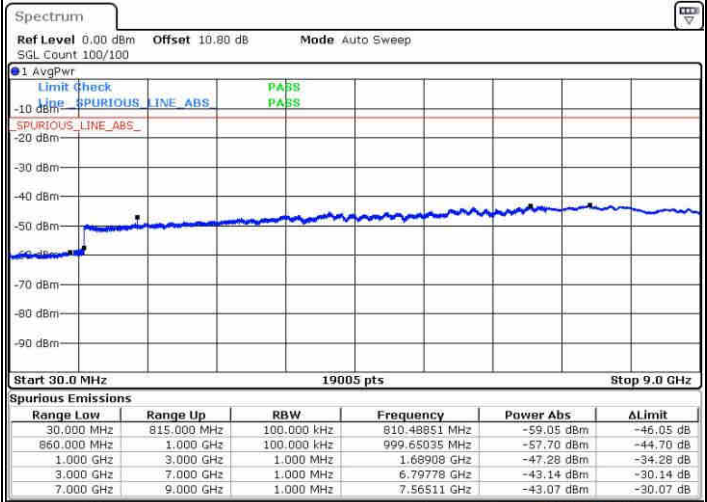
LTE Band 26 / 5MHz

Highest Channel / QPSK



Date: 8 APR 2019 10:32:58

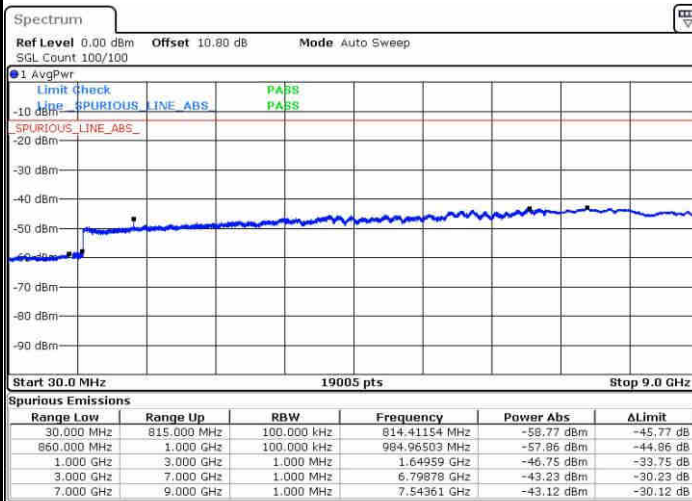
Highest Channel / 16QAM



Date: 8 APR 2019 10:33:39

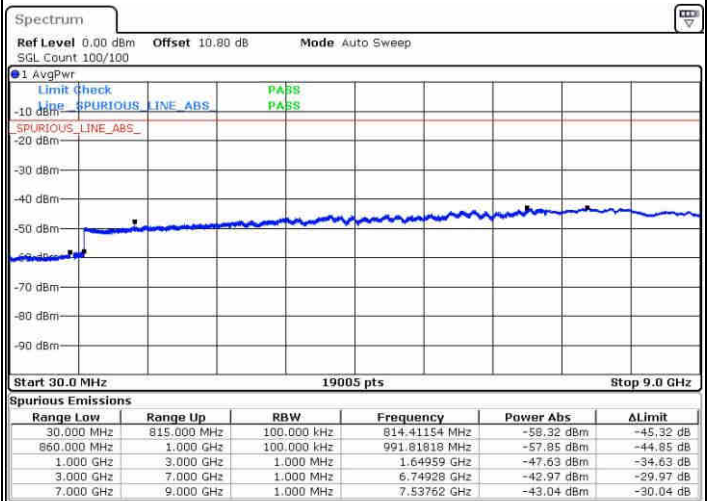
LTE Band 26 / 10MHz

Lowest Channel / QPSK



Date: 8 APR 2019 10:38:55

Lowest Channel / 16QAM

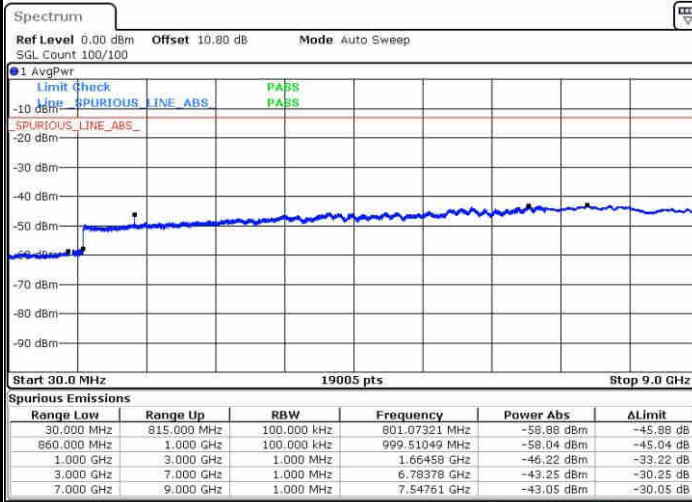


Date: 8 APR 2019 10:39:36



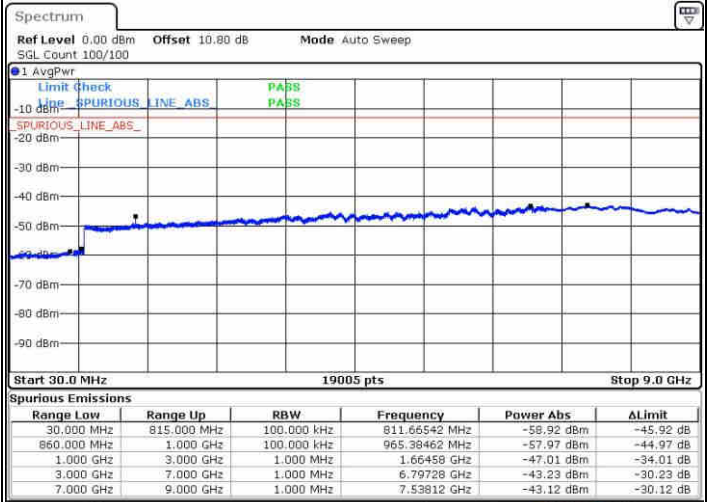
LTE Band 26 / 10MHz

Middle Channel / QPSK



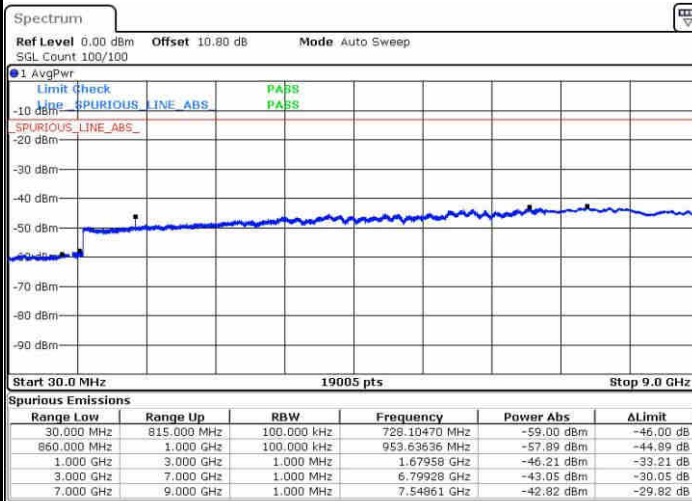
Date: 8 APR 2019 10:41:06

Middle Channel / 16QAM



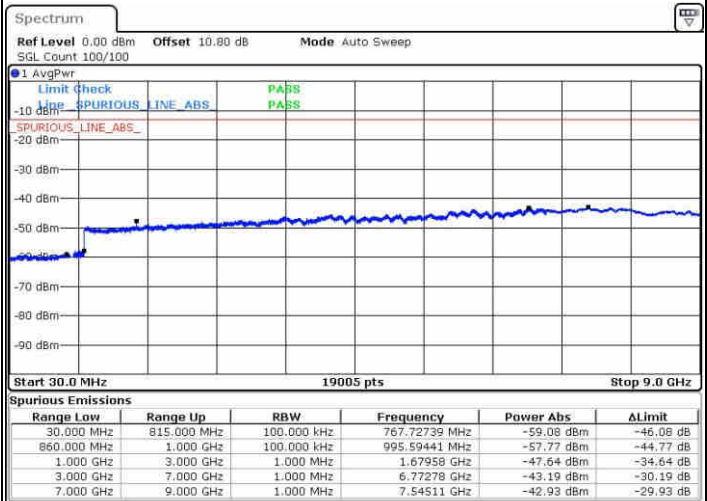
Date: 8 APR 2019 10:41:48

Highest Channel / QPSK



Date: 8 APR 2019 10:47:02

Highest Channel / 16QAM

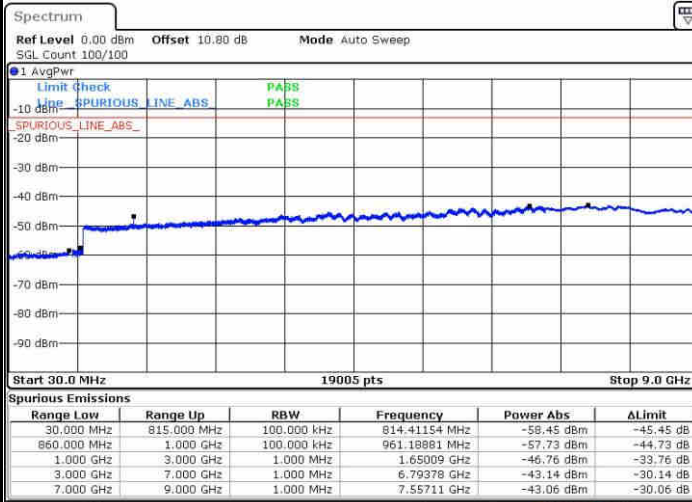


Date: 8 APR 2019 10:47:43



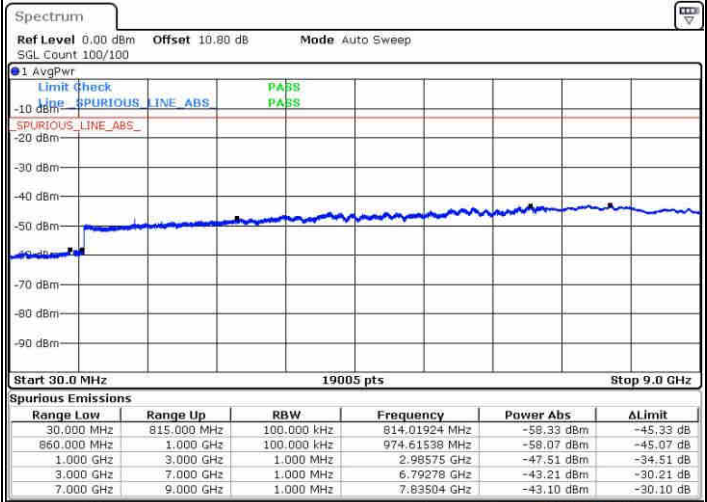
LTE Band 26 / 15MHz

Lowest Channel / QPSK



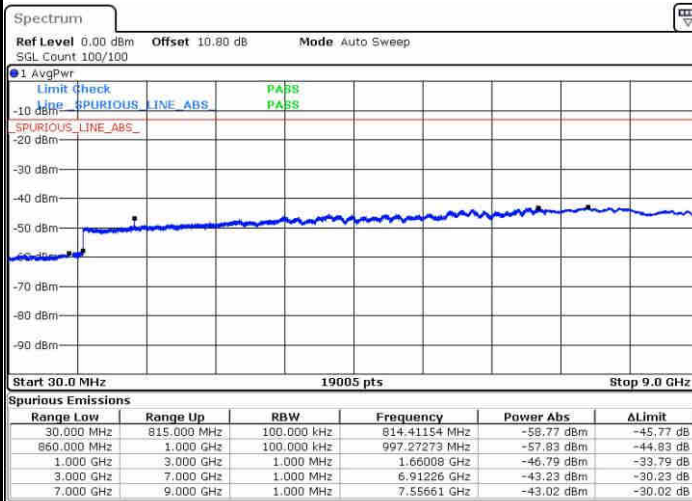
Date: 8 APR 2019 10:52:53

Lowest Channel / 16QAM



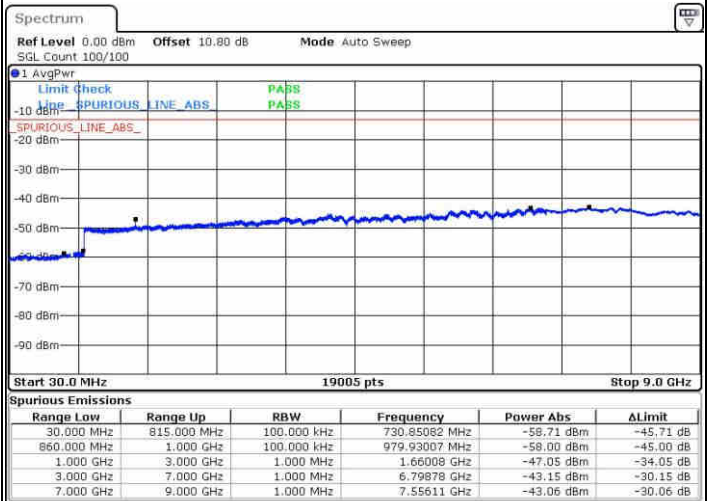
Date: 8 APR 2019 10:53:34

Middle Channel / QPSK



Date: 8 APR 2019 10:55:04

Middle Channel / 16QAM

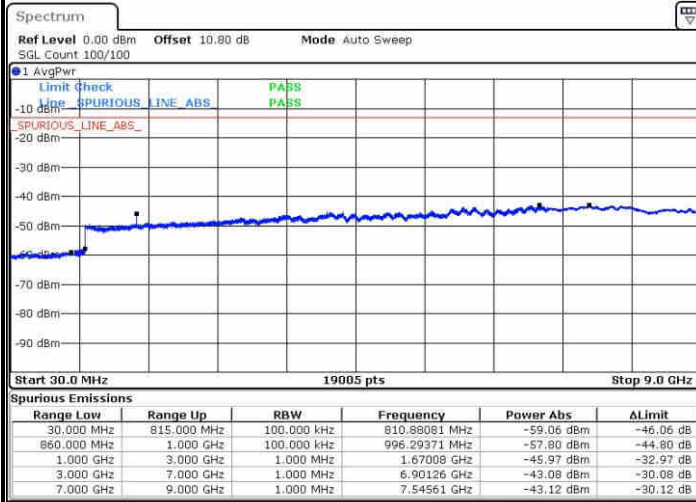


Date: 8 APR 2019 10:55:45



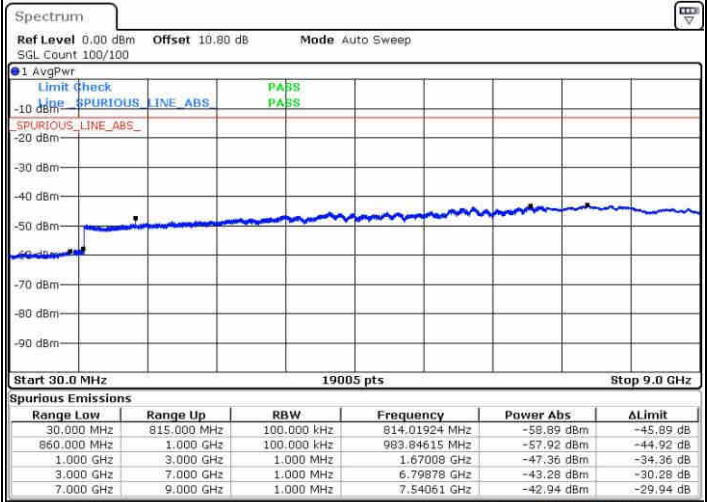
LTE Band 26 / 15MHz

Highest Channel / QPSK



Date: 8 APR 2019 11:00:59

Highest Channel / 16QAM

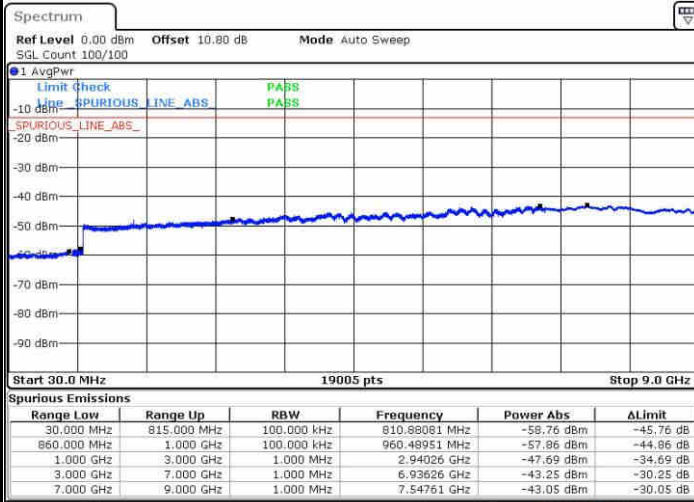


Date: 8 APR 2019 11:01:40



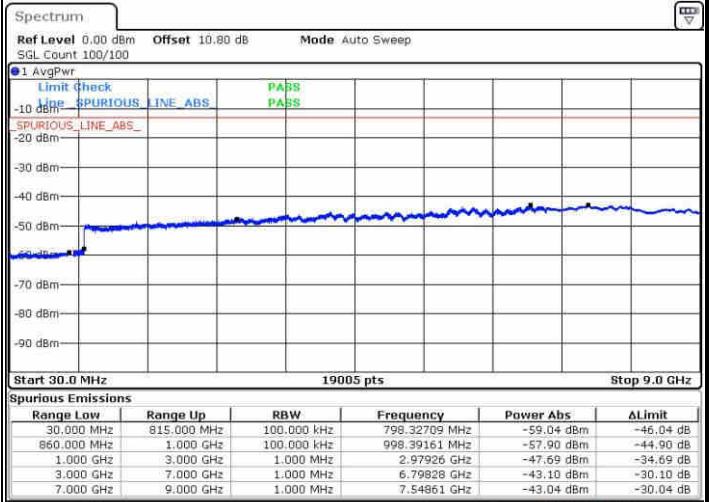
LTE Band 26 / 1.4MHz

Lowest Channel / 64QAM



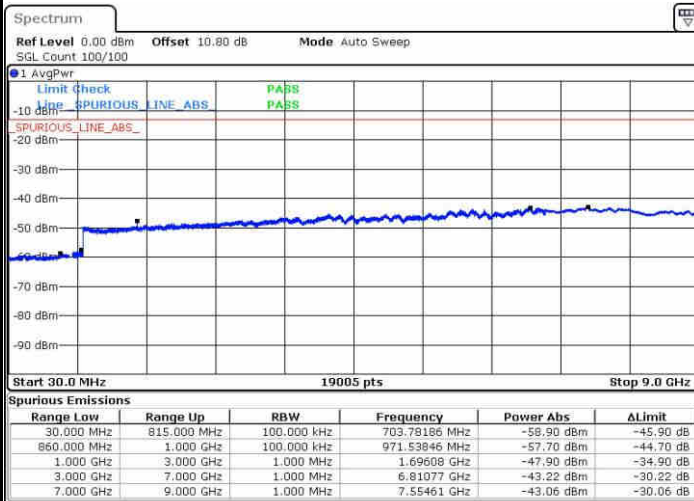
Date: 8 APR 2019 09:27:42

Middle Channel / 64QAM



Date: 8 APR 2019 09:28:48

Highest Channel / 64QAM

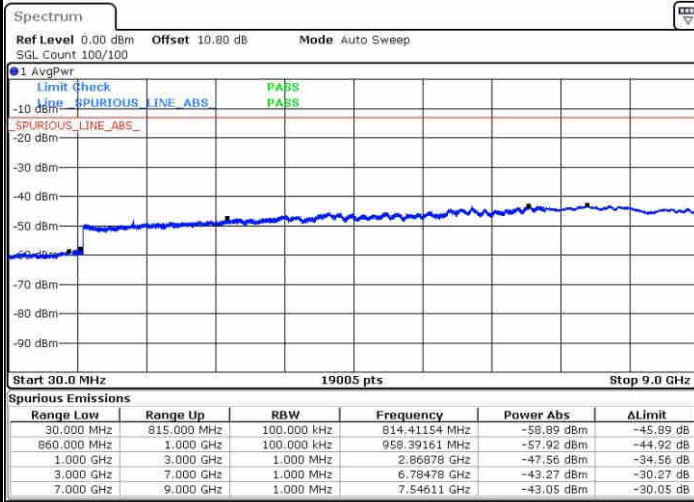


Date: 8 APR 2019 09:33:16



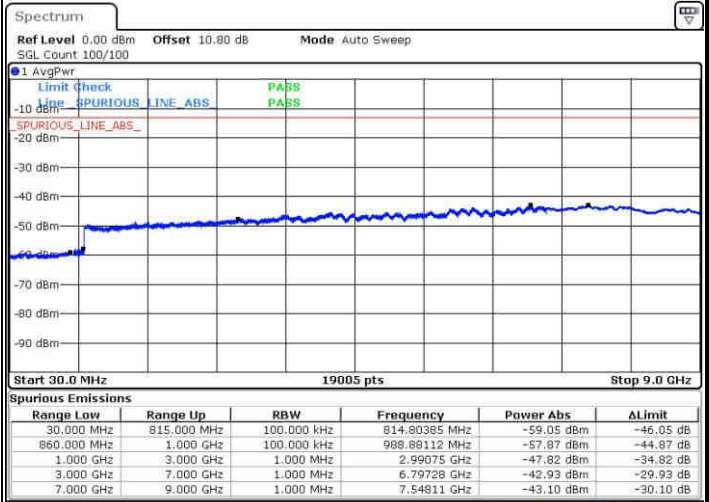
LTE Band 26 / 3MHz

Lowest Channel / 64QAM



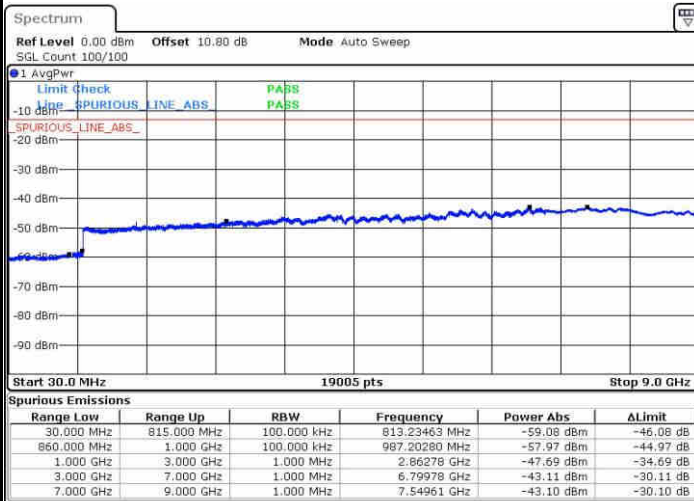
Date: 8 APR 2019 09:40:20

Middle Channel / 64QAM



Date: 8 APR 2019 09:41:26

Highest Channel / 64QAM

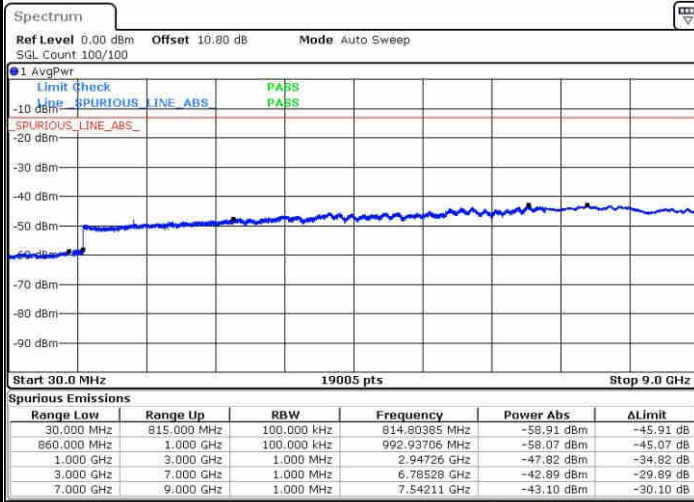


Date: 8 APR 2019 09:44:26



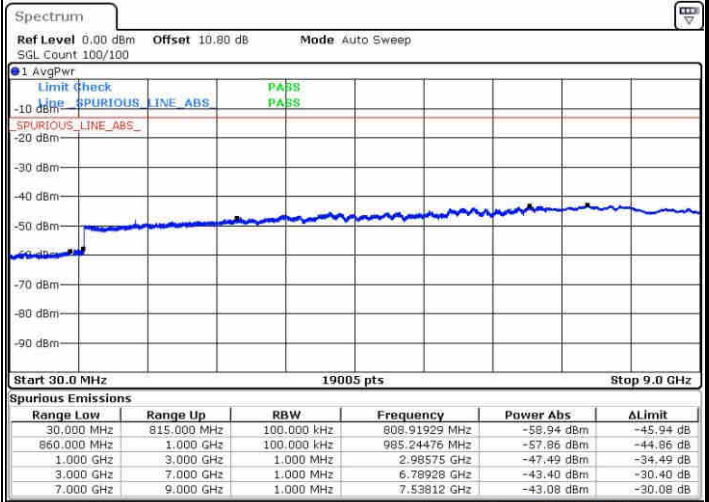
LTE Band 26 / 5MHz

Lowest Channel / 64QAM



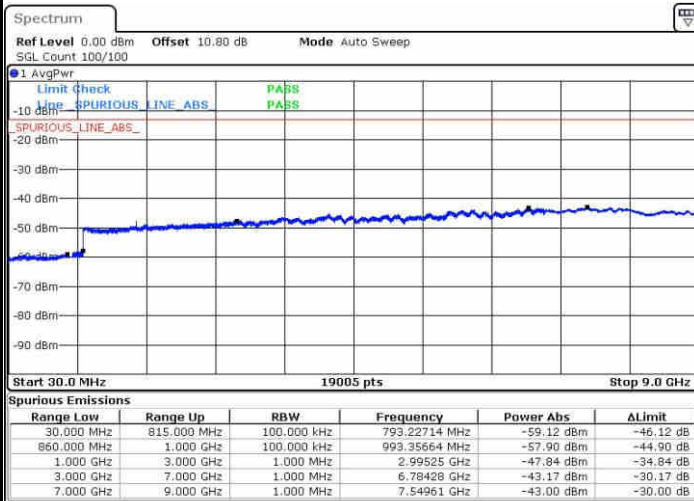
Date: 8 APR 2019 09:47:25

Middle Channel / 64QAM



Date: 8 APR 2019 09:48:30

Highest Channel / 64QAM

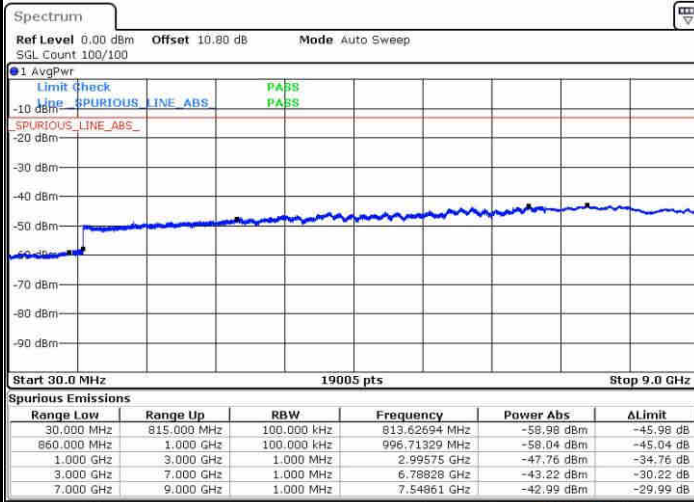


Date: 8 APR 2019 09:51:28



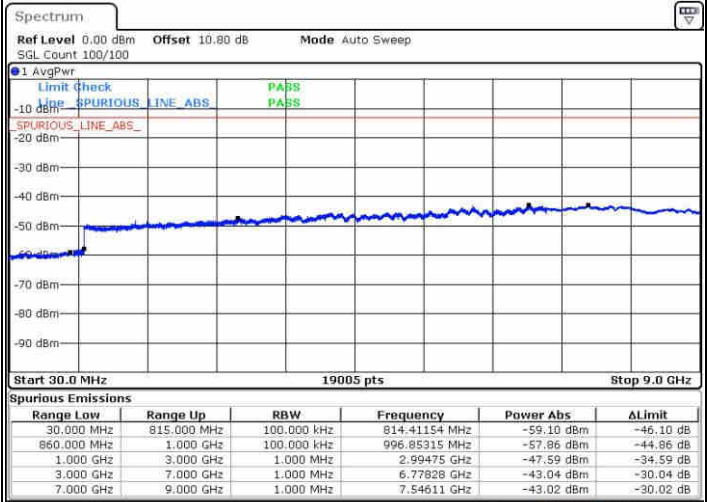
LTE Band 26 / 10MHz

Lowest Channel / 64QAM



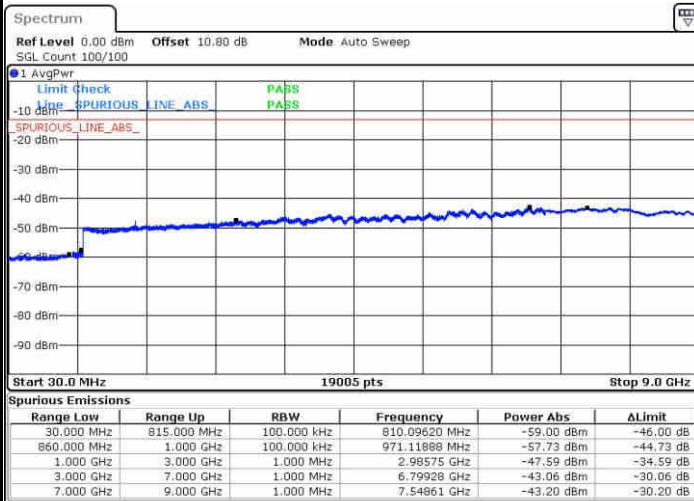
Date: 8 APR 2019 09:54:26

Middle Channel / 64QAM



Date: 8 APR 2019 09:55:32

Highest Channel / 64QAM

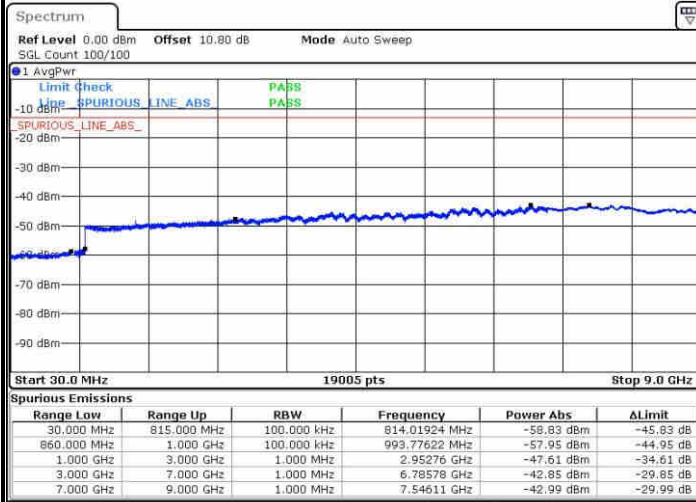


Date: 8 APR 2019 09:58:30



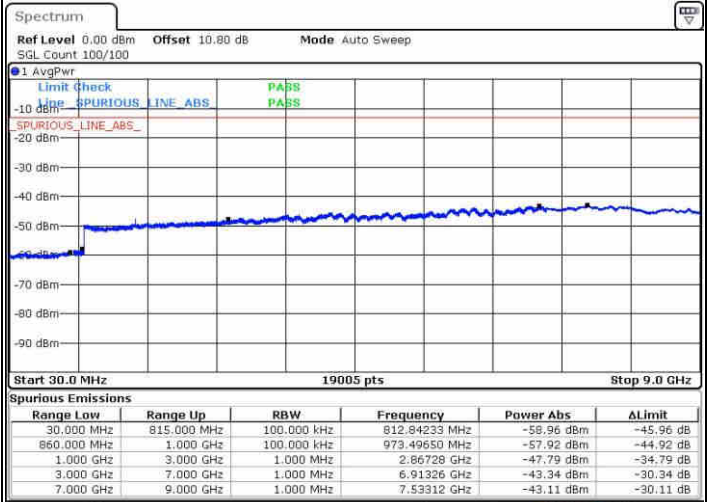
LTE Band 26 / 15MHz

Lowest Channel / 64QAM



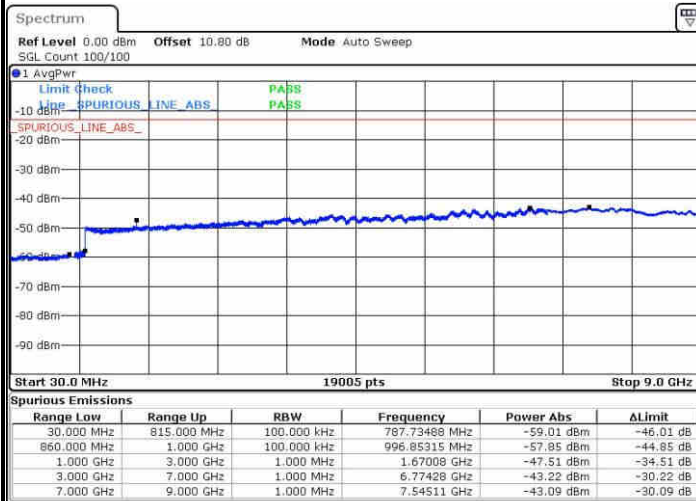
Date: 8 APR 2019 11:04:34

Middle Channel / 64QAM



Date: 8 APR 2019 11:05:39

Highest Channel / 64QAM



Date: 8 APR 2019 10:05:29

Frequency Stability

Test Conditions		LTE Band 26 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0134	PASS
40	Normal Voltage	0.0106	
30	Normal Voltage	0.0112	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0102	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0108	
-20	Normal Voltage	0.0116	
-30	Normal Voltage	0.0134	
20	Maximum Voltage	0.0105	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0100	

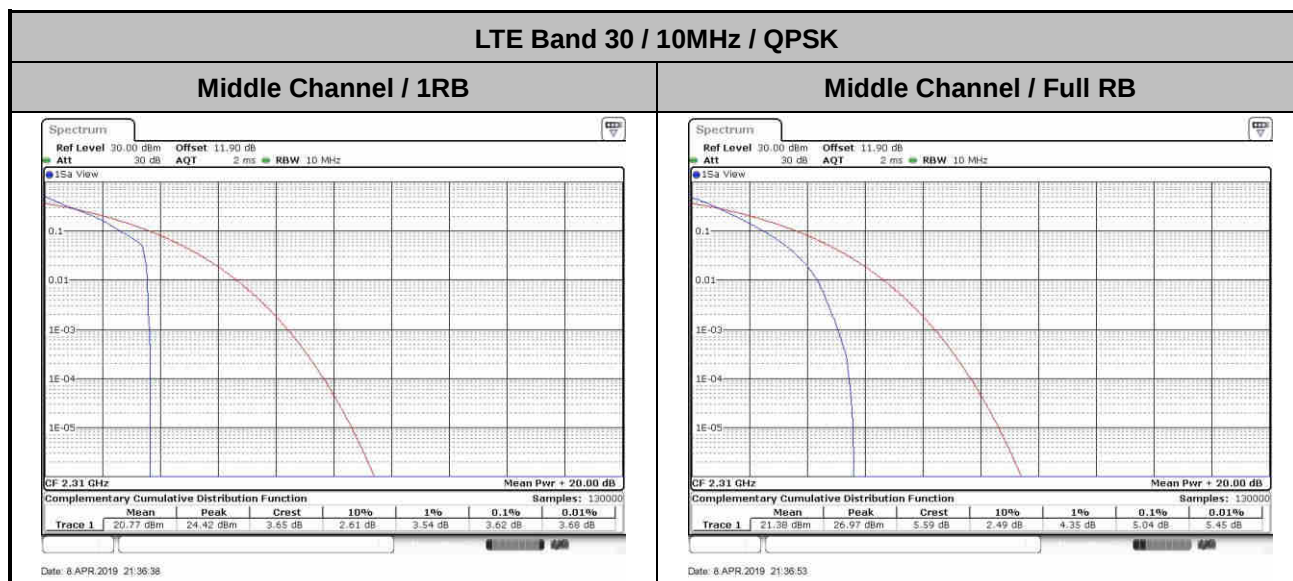
Note:

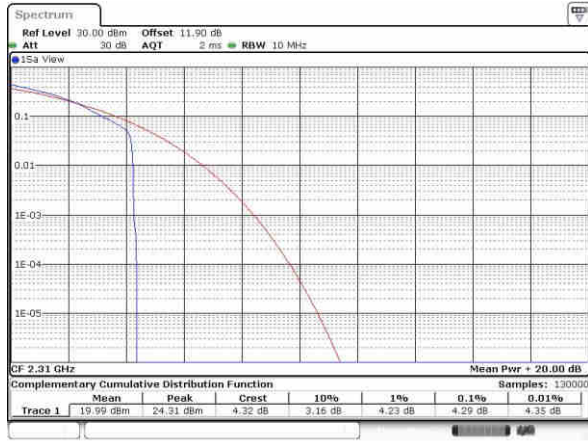
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 30

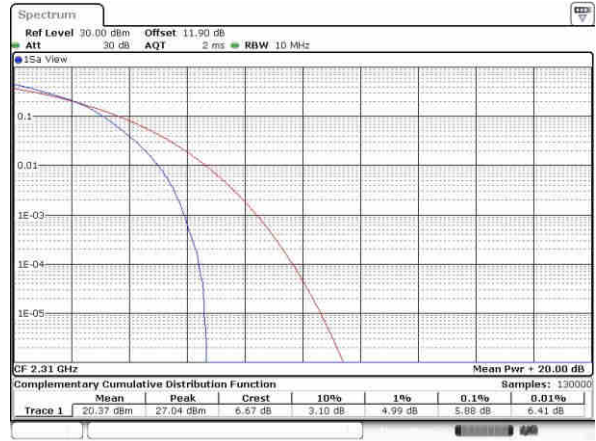
Peak-to-Average Ratio

Mode	LTE Band 30 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.62	5.04	4.29	5.88	
Highest CH	-	-	-	-	
Mode	LTE Band 30 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.19	6.55	-	-	
Highest CH	-	-	-	-	

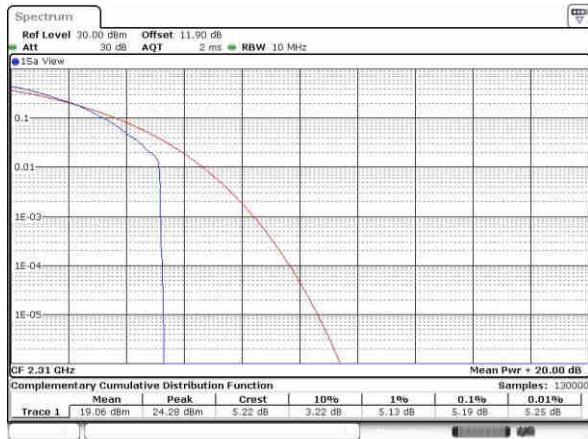


LTE Band 30 / 10MHz / 16QAM
Middle Channel / 1RB


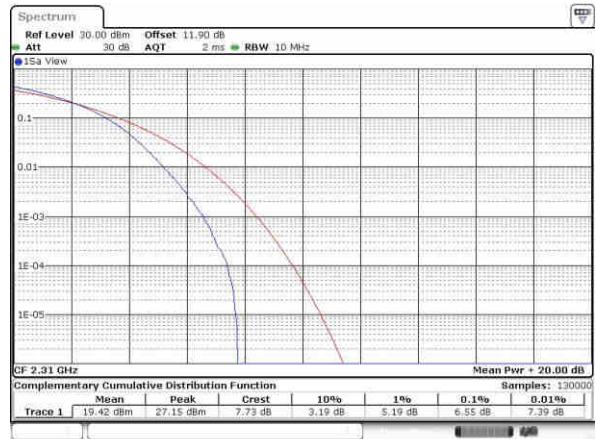
Date: 8 APR 2019 21:36:10

Middle Channel / Full RB


Date: 8 APR 2019 21:36:23

LTE Band 30 / 10MHz / 64QAM
Middle Channel / 1RB


Date: 8 APR 2019 21:35:43

Middle Channel / Full RB


Date: 8 APR 2019 21:35:56

**EIRP Power Density**

Mode	LTE Band 30 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	23.34	22.58	-	-	-	-	-	-
Middle CH	-	-	-	-	23.39	22.72	22.99	22.44	-	-	-	-
Highest CH	-	-	-	-	23.28	22.63	-	-	-	-	-	-
Mode	LTE Band 30 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	21.68	-	-	-	-	-	-	-
Middle CH	-	-	-	-	21.86	-	21.19	-	-	-	-	-
Highest CH	-	-	-	-	21.79	-	-	-	-	-	-	-

Mode	LTE Band 30 : EIRP Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	26.14	25.38	-	-	-	-	-	-
Middle CH	-	-	-	-	26.19	25.52	25.79	25.24	-	-	-	-
Highest CH	-	-	-	-	26.08	25.43	-	-	-	-	-	-
Mode	LTE Band 30 : EIRP Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	24.48	-	-	-	-	-	-	-
Middle CH	-	-	-	-	24.66	-	23.99	-	-	-	-	-
Highest CH	-	-	-	-	24.59	-	-	-	-	-	-	-
Antenna Gain	1.5 dBi											
Limit	250mW / 5MHz = 24dBm / 5MHz											
Result	Pass											



LTE Band 30 / 5MHz

Lowest Channel / 5MHz / 1RB0 / QPSK



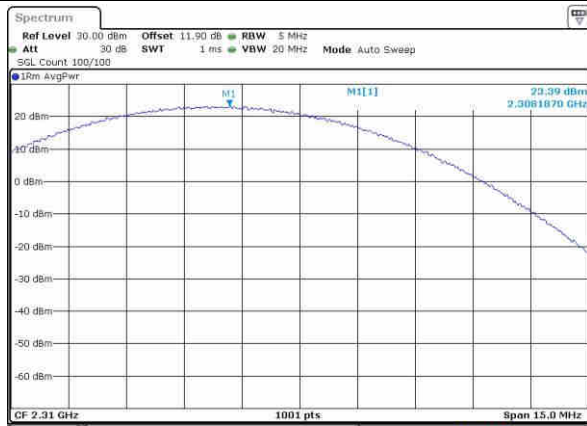
Date: 12 APR 2019 16:31:55

Lowest Channel / 5MHz / 1RB0 / 16QAM



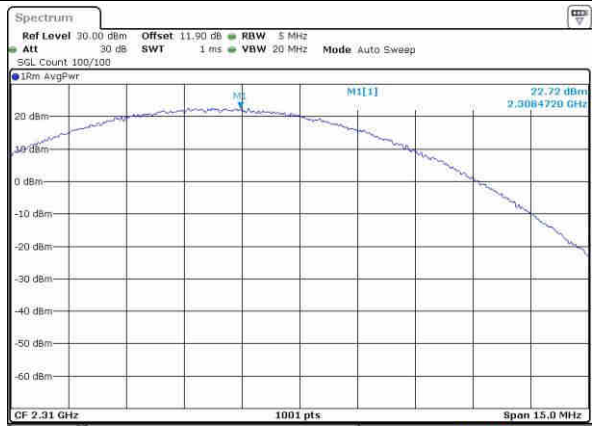
Date: 12 APR 2019 16:32:13

Middle Channel / 5MHz / 1RB0 / QPSK



Date: 12 APR 2019 16:32:51

Middle Channel / 5MHz / 1RB0 / 16QAM



Date: 12 APR 2019 16:33:09

Highest Channel / 5MHz / 1RB0 / QPSK



Date: 12 APR 2019 16:33:45

Highest Channel / 5MHz / 1RB0 / 16QAM

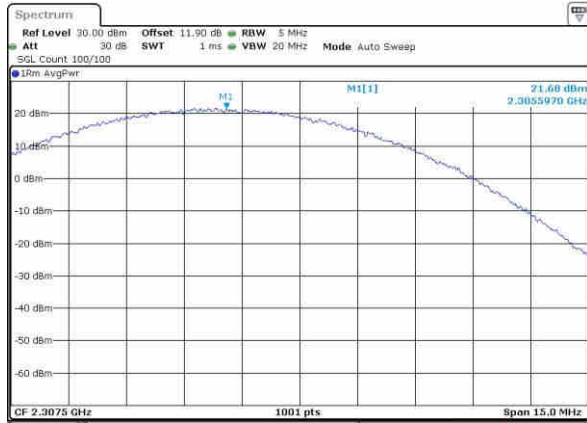


Date: 12 APR 2019 16:34:04



LTE Band 30 / 5MHz

Lowest Channel / 5MHz / 1RB0 / 64QAM



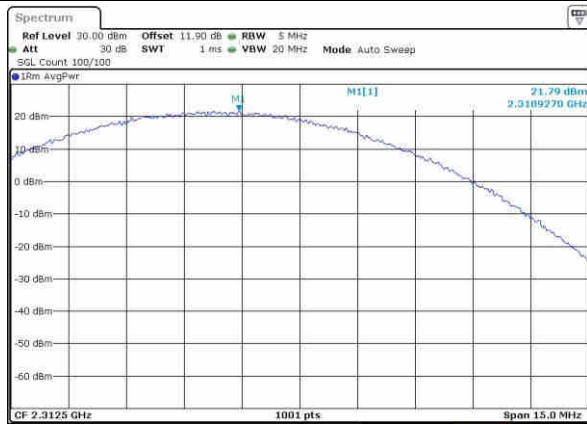
Date: 12 APR 2019 16:32:32

Middle Channel / 5MHz / 1RB0 / 64QAM



Date: 12 APR 2019 16:33:27

Highest Channel / 5MHz / 1RB0 / 64QAM



Date: 12 APR 2019 16:34:23



LTE Band 30 / 10MHz

Lowest Channel / 10MHz / 1RB0 / QPSK



Date: 12 APR 2019 16:35:53

Lowest Channel / 10MHz / 1RB0 / 16QAM



Date: 12 APR 2019 16:36:11

Lowest Channel / 10MHz / 1RB0 / 64QAM



Date: 12 APR 2019 16:36:29

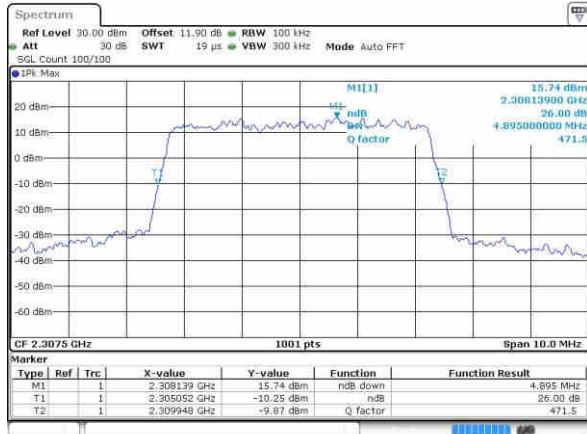
**26dB Bandwidth**

Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.89	4.86	-	-	-	-	-	-
Middle CH	-	-	-	-	4.92	4.89	9.75	9.77	-	-	-	-
Highest CH	-	-	-	-	4.85	4.91	-	-	-	-	-	-
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.80	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.92	-	9.65	-	-	-	-	-
Highest CH	-	-	-	-	4.97	-	-	-	-	-	-	-

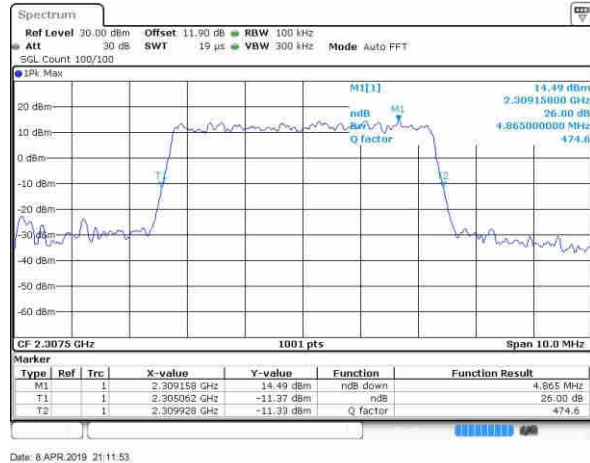


LTE Band 30

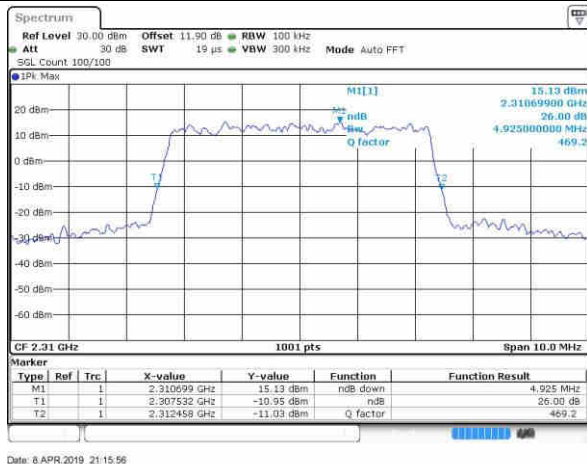
Lowest Channel / 5MHz / QPSK



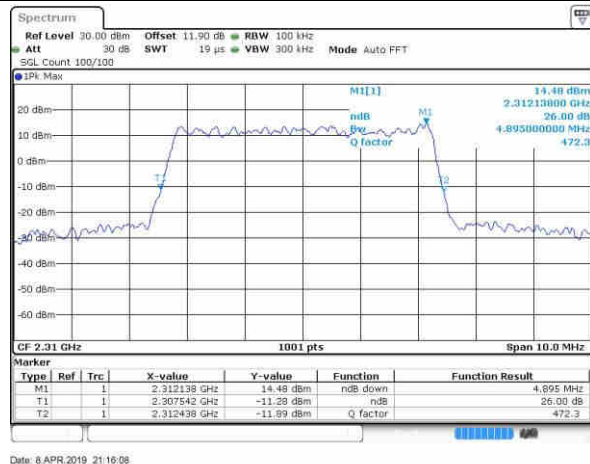
Lowest Channel / 5MHz / 16QAM



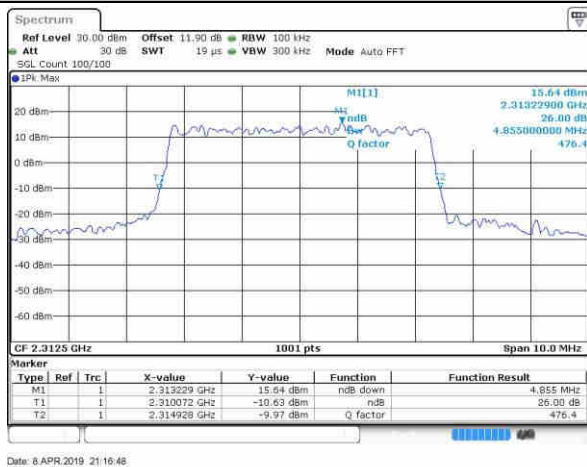
Middle Channel / 5MHz / QPSK



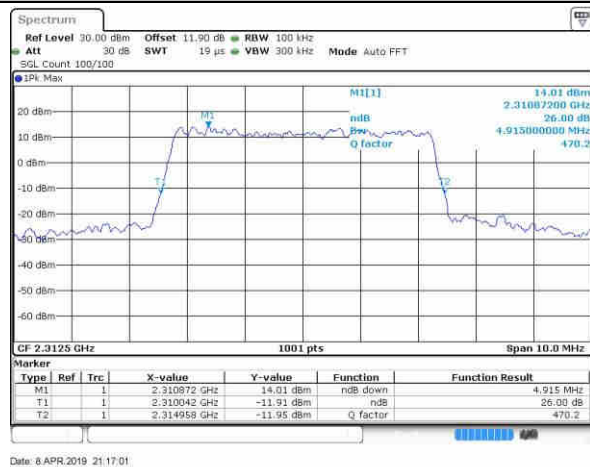
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



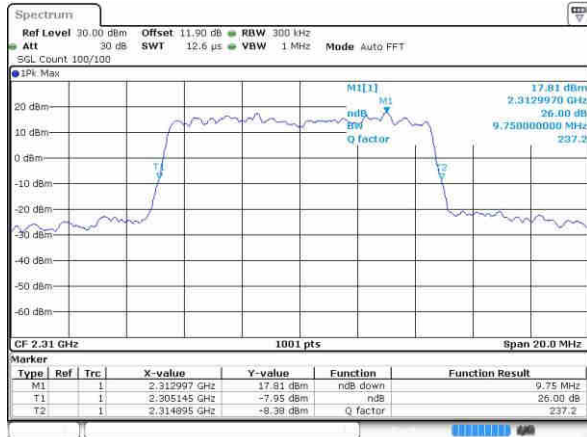
Highest Channel / 5MHz / 16QAM





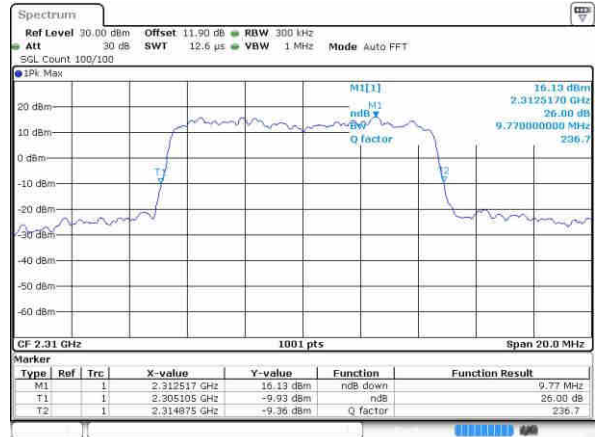
LTE Band 30

Middle Channel / 10MHz / QPSK



Date: 8 APR 2019 21:21:04

Middle Channel / 10MHz / 16QAM

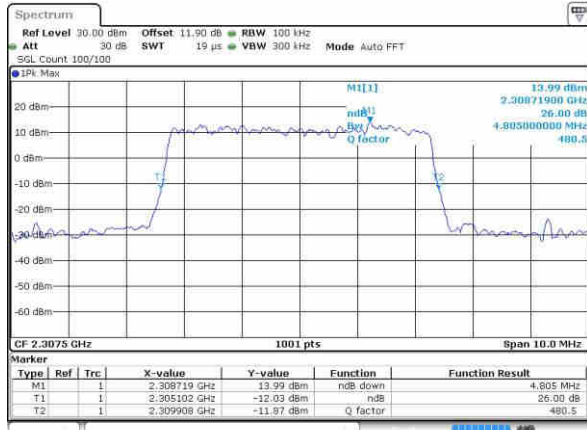


Date: 8 APR 2019 21:21:16



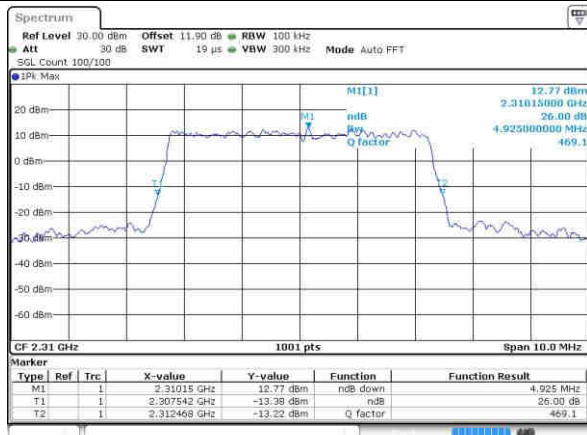
LTE Band 30

Lowest Channel / 5MHz / 64QAM



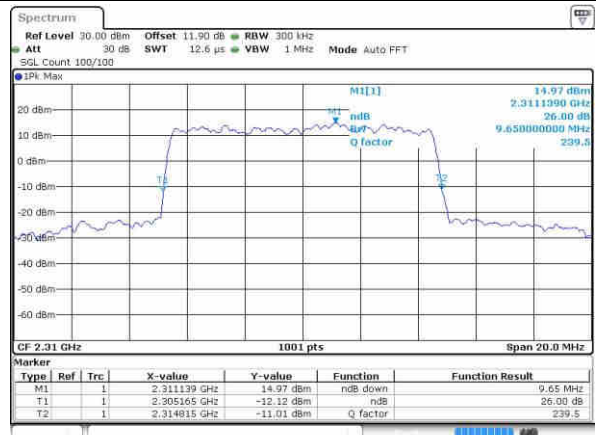
Date: 8 APR 2019 21:28:48

Middle Channel / 5MHz / 64QAM



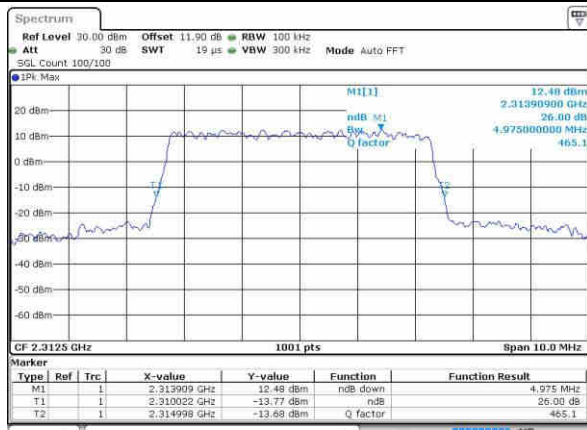
Date: 8 APR 2019 21:28:56

Middle Channel / 10MHz / 64QAM



Date: 8 APR 2019 21:31:28

Highest Channel / 5MHz / 64QAM



Date: 8 APR 2019 21:29:20

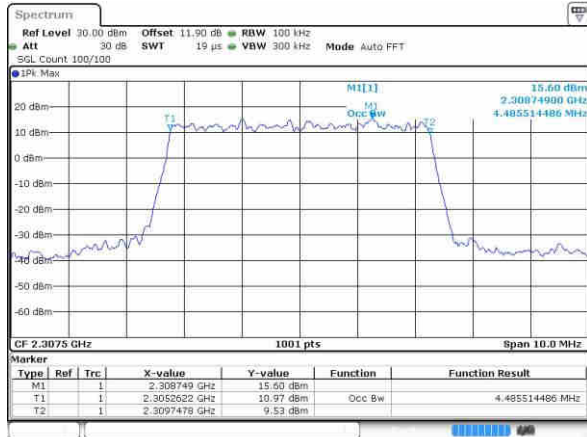
**Occupied Bandwidth**

Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.49	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	4.48	9.03	8.99	-	-	-	-
Highest CH	-	-	-	-	4.51	4.50	-	-	-	-	-	-
Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	-	8.99	-	-	-	-	-
Highest CH	-	-	-	-	4.49	-	-	-	-	-	-	-

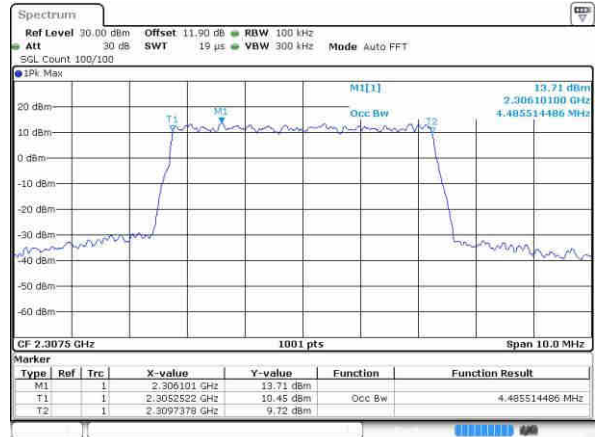


LTE Band 30

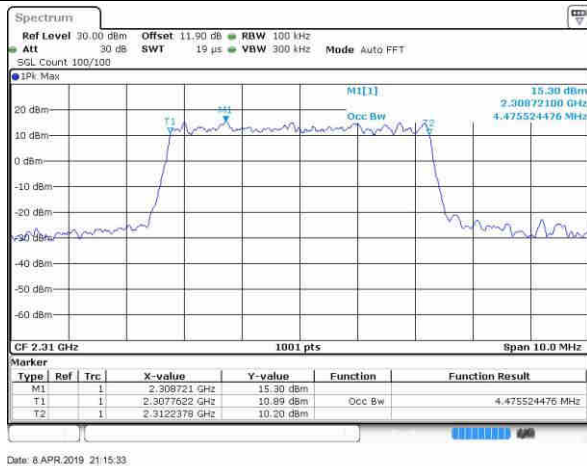
Lowest Channel / 5MHz / QPSK



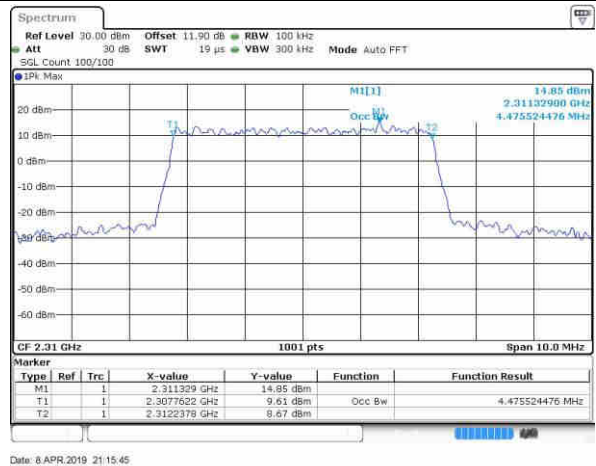
Lowest Channel / 5MHz / 16QAM



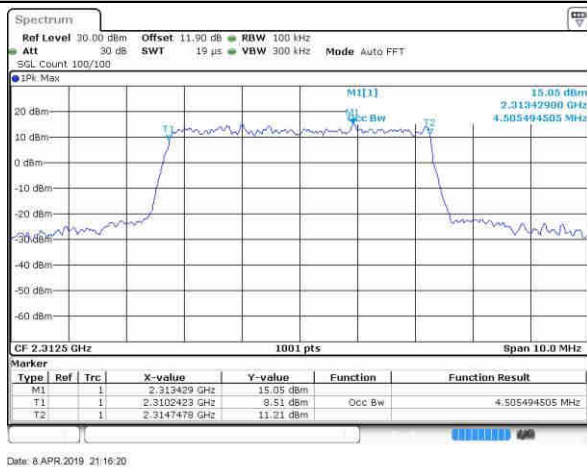
Middle Channel / 5MHz / QPSK



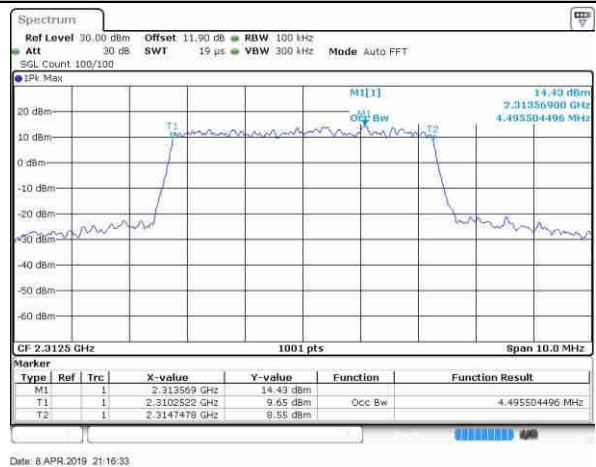
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



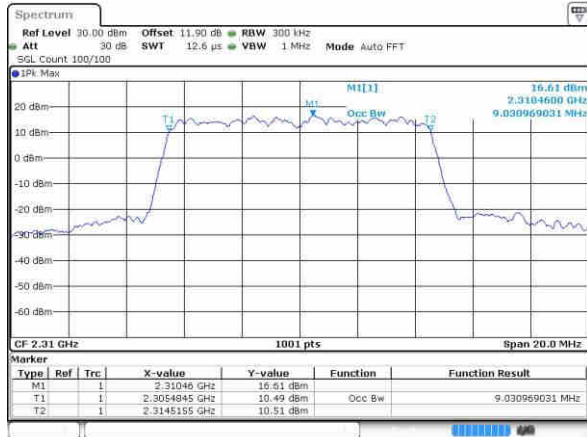
Highest Channel / 5MHz / 16QAM



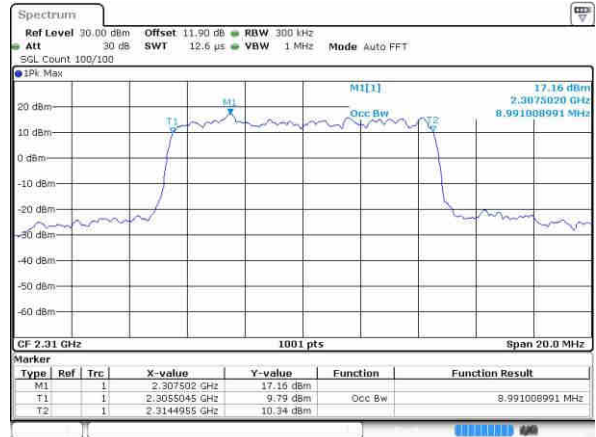


LTE Band 30

Middle Channel / 10MHz / QPSK



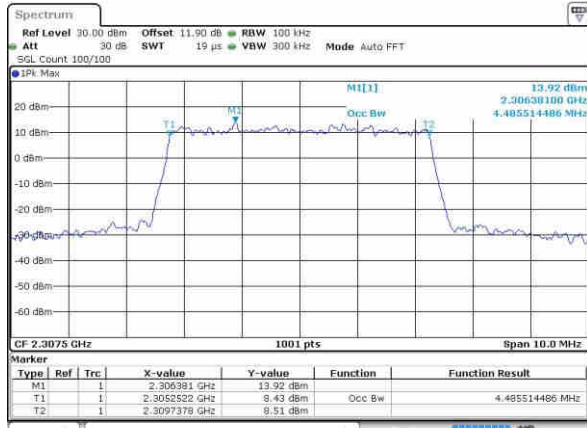
Middle Channel / 10MHz / 16QAM





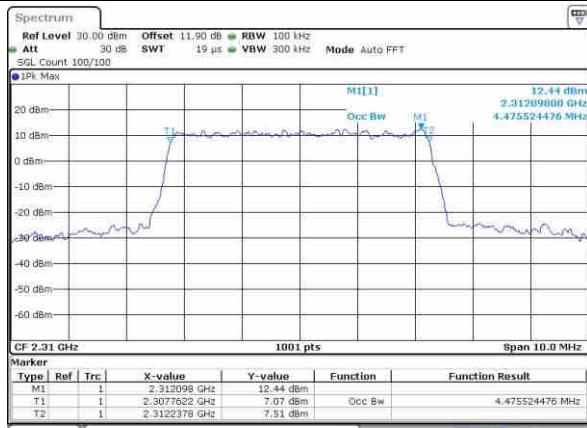
LTE Band 30

Lowest Channel / 5MHz / 64QAM



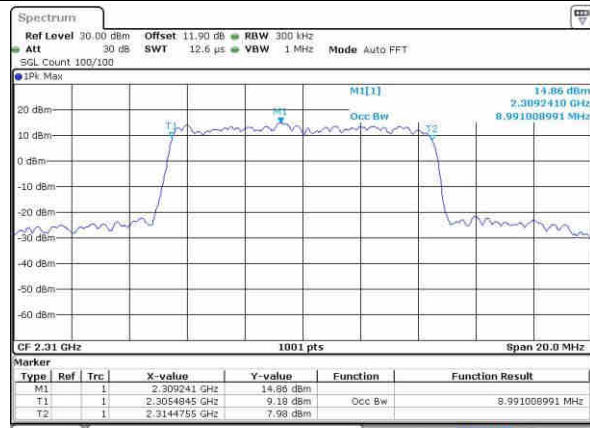
Date: 8 APR 2019 21:26:37

Middle Channel / 5MHz / 64QAM



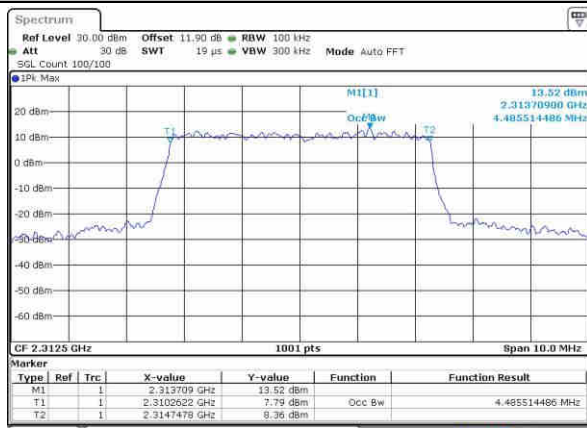
Date: 8 APR 2019 21:28:45

Middle Channel / 10MHz / 64QAM

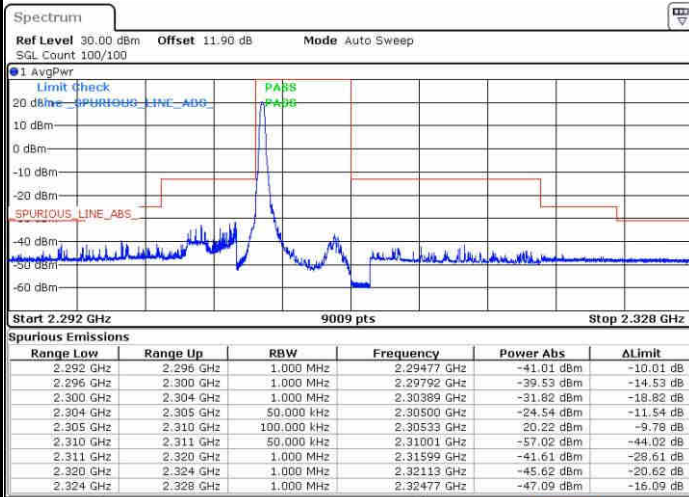


Date: 8 APR 2019 21:31:17

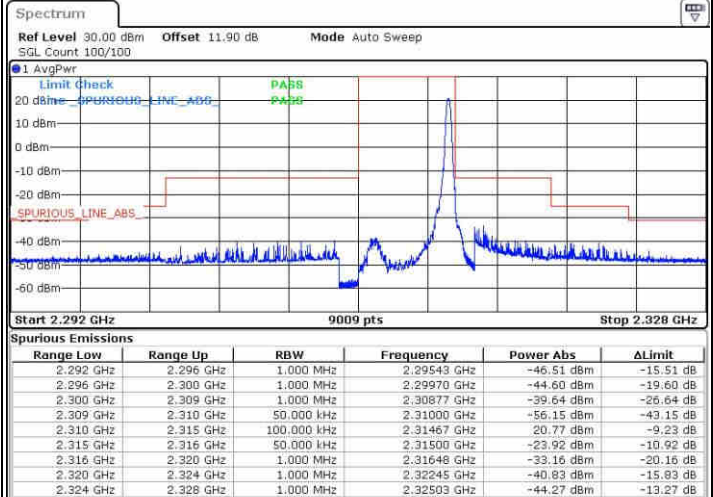
Highest Channel / 5MHz / 64QAM



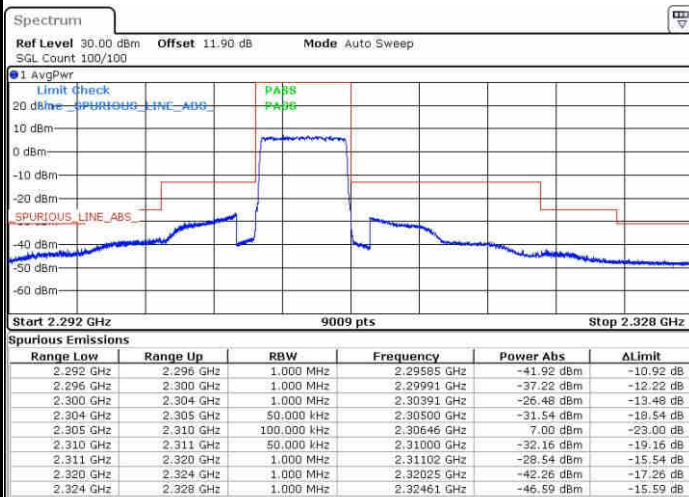
Date: 8 APR 2019 21:29:08

**Conducted Band Edge****LTE Band 30 / 5MHz / QPSK****Lowest Band Edge / 1 RB**

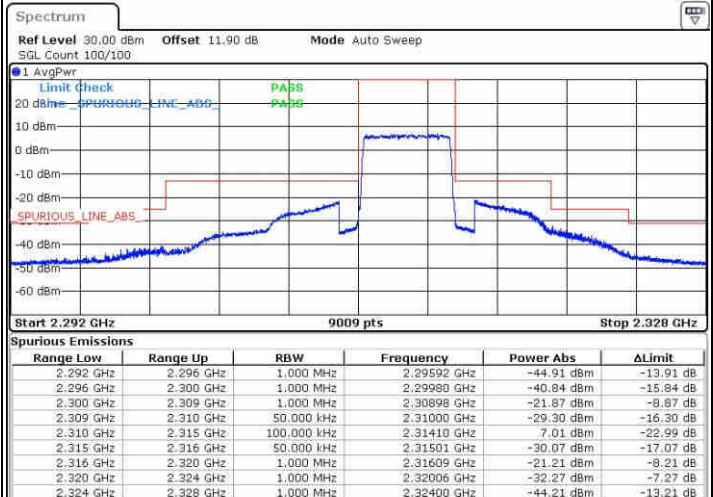
Date: 8 APR 2019 21:12:44

Highest Band Edge / 1 RB

Date: 8 APR 2019 21:17:52

Lowest Band Edge / Full RB

Date: 8 APR 2019 21:14:28

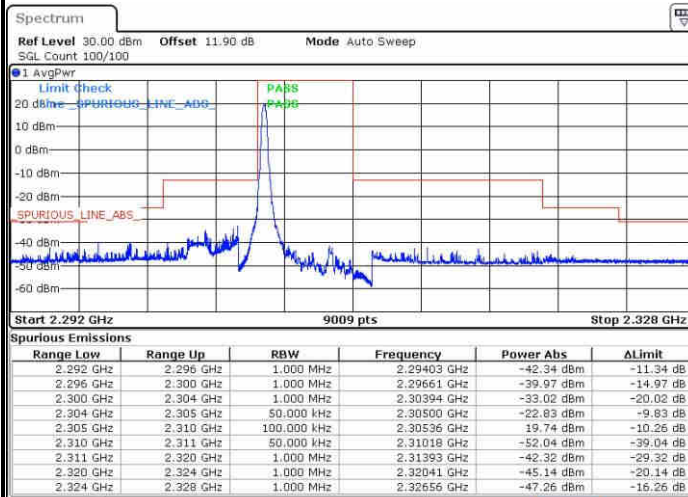
Highest Band Edge / Full RB

Date: 8 APR 2019 21:19:36



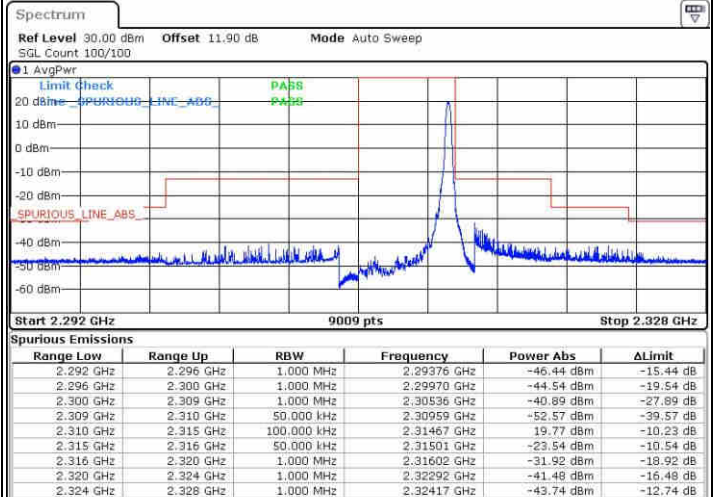
LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1RB



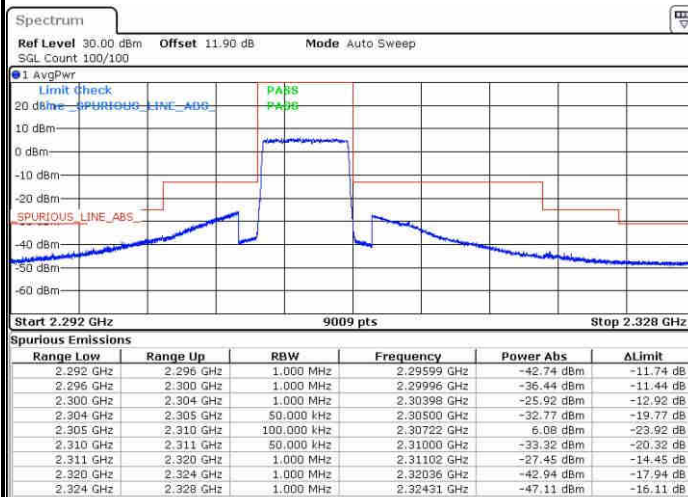
Date: 8 APR 2019 21:13:36

Highest Band Edge / 1 RB



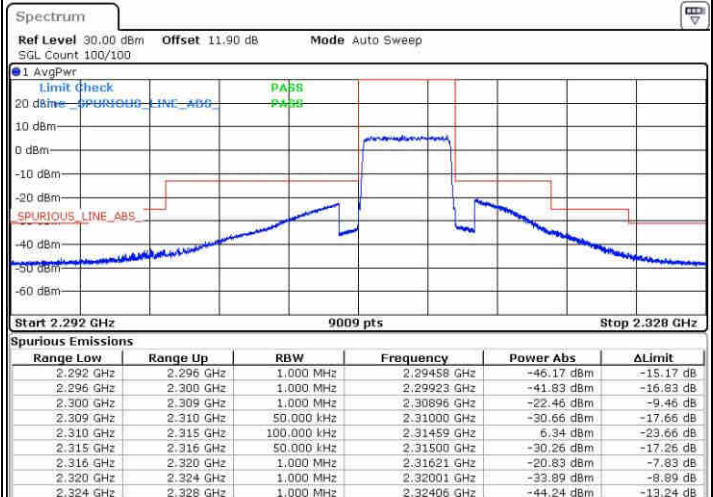
Date: 8 APR 2019 21:18:44

Lowest Band Edge / Full RB



Date: 8 APR 2019 21:15:20

Highest Band Edge / Full RB

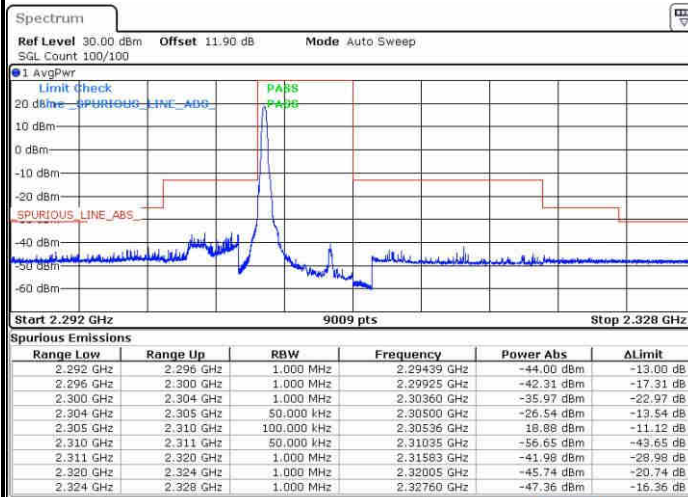


Date: 8 APR 2019 21:20:28



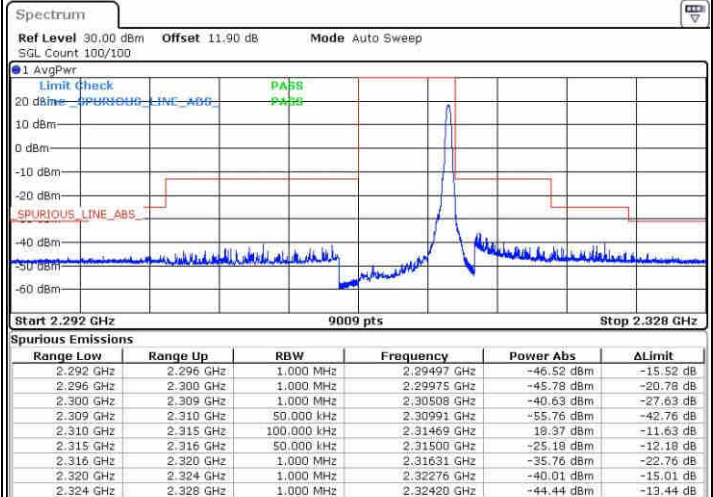
LTE Band 30 / 5MHz / 64QAM

Lowest Band Edge / 1RB



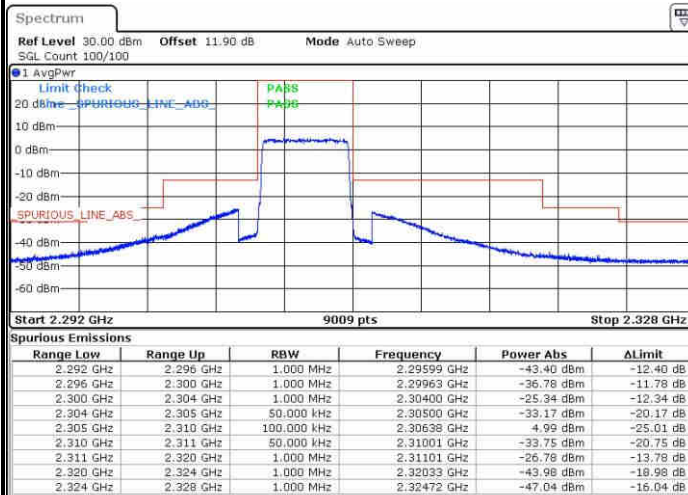
Date: 8 APR 2019 21:27:41

Highest Band Edge / 1 RB



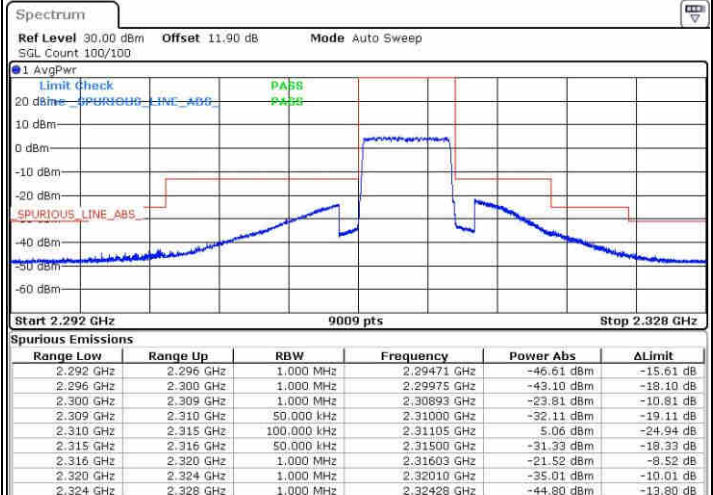
Date: 8 APR 2019 21:30:12

Lowest Band Edge / Full RB



Date: 8 APR 2019 21:28:32

Highest Band Edge / Full RB

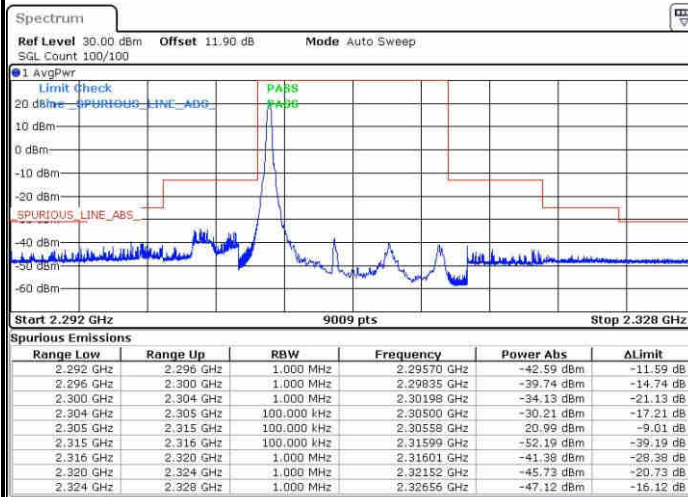


Date: 8 APR 2019 21:31:04

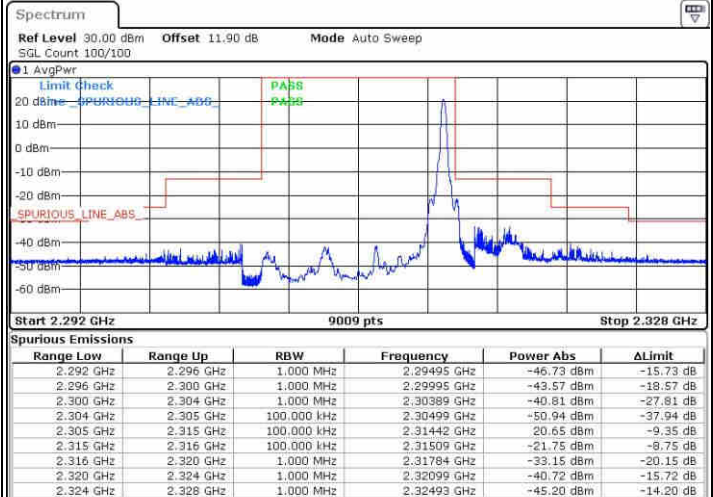


LTE Band 30 / 10MHz / QPSK

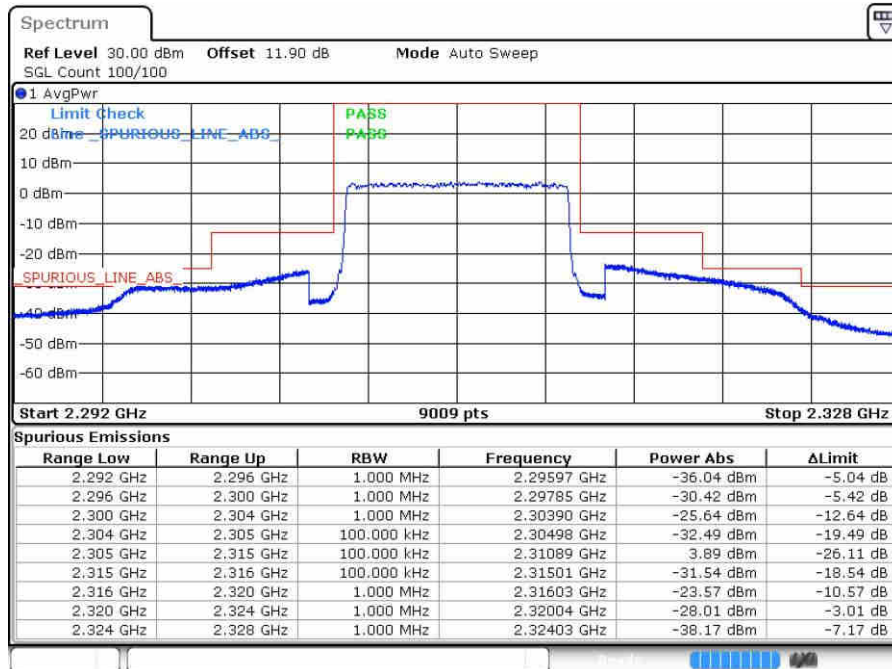
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



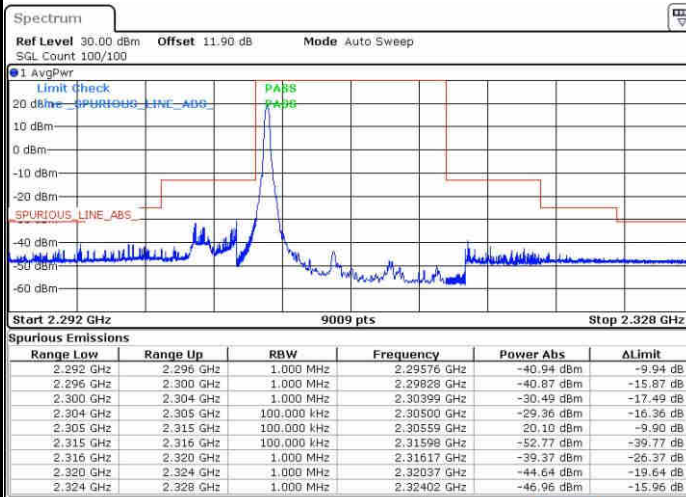
Band Edge / Full RB



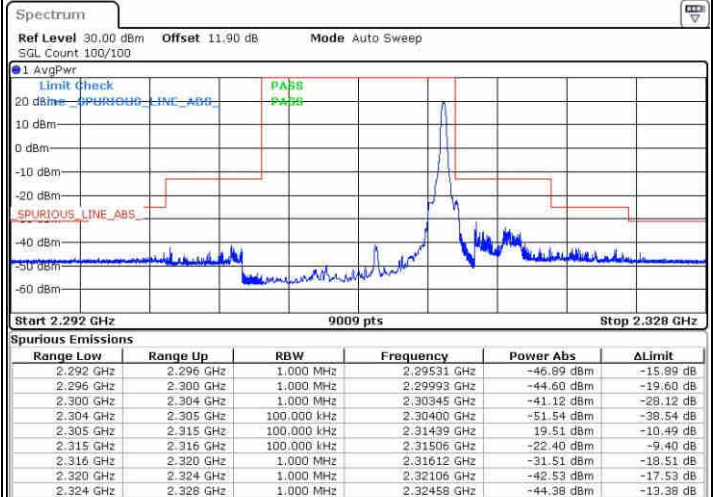


LTE Band 30 / 10MHz / 16QAM

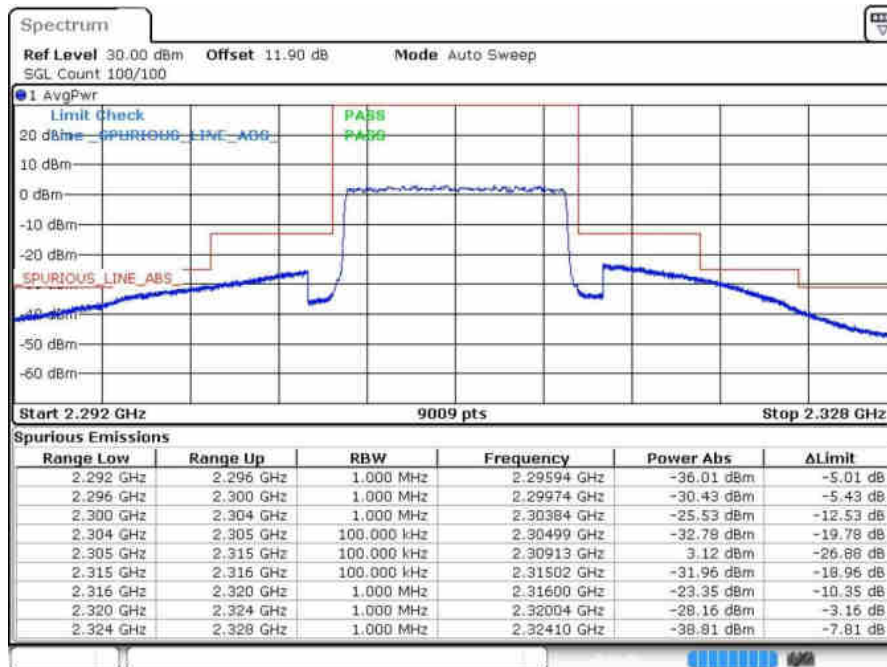
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



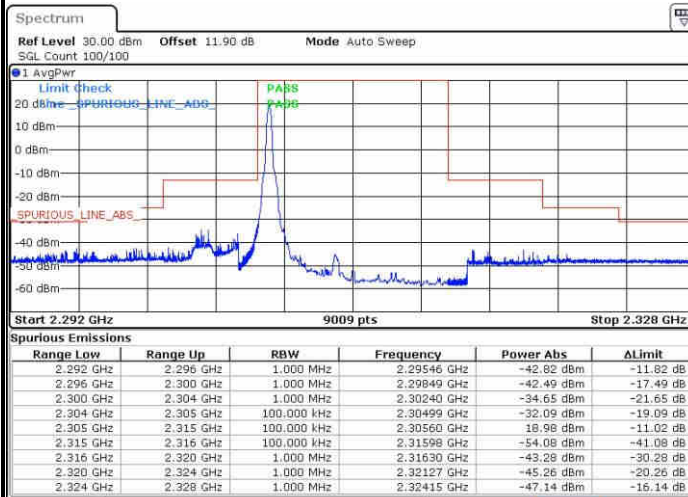
Band Edge / Full RB



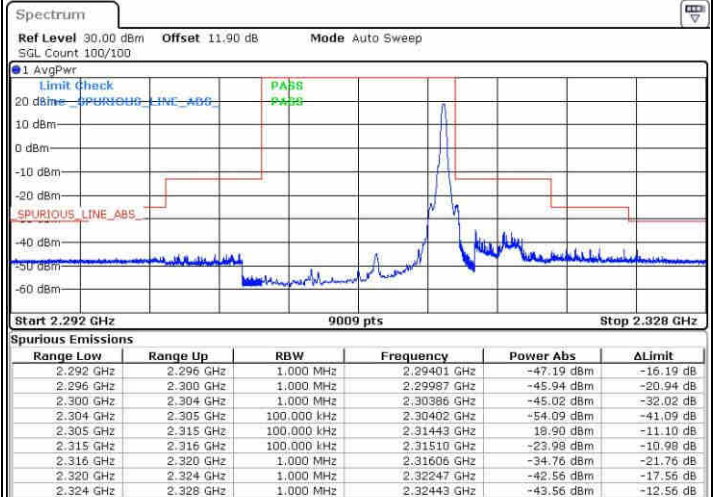


LTE Band 30 / 10MHz / 64QAM

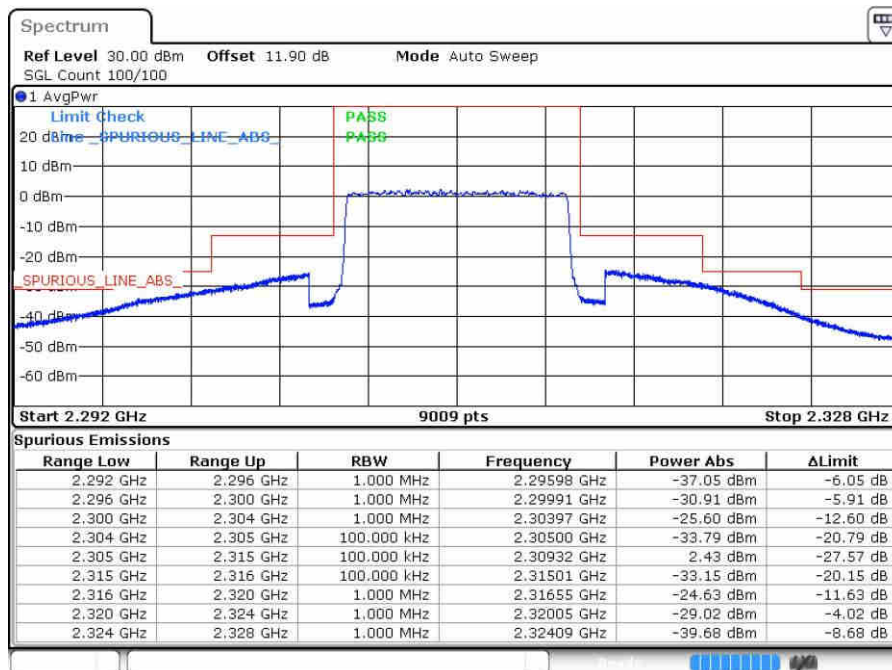
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Band Edge / Full RB





Conducted Spurious Emission

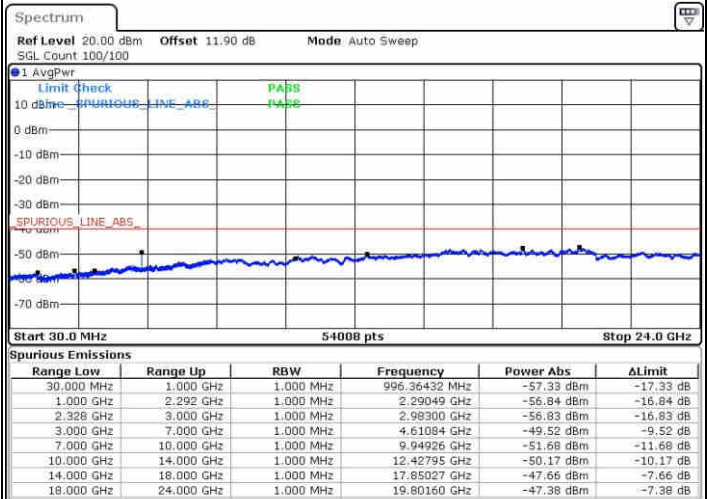
LTE Band 30 / 5MHz

Lowest Channel / QPSK



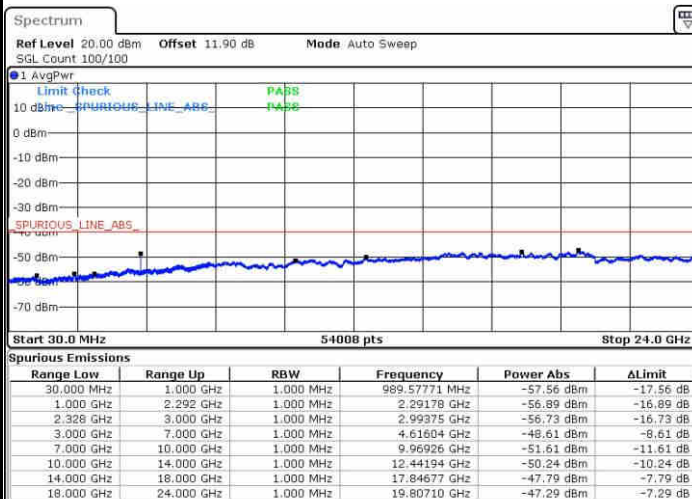
Date: 8 APR 2019 21:41:01

Lowest Channel / 16QAM



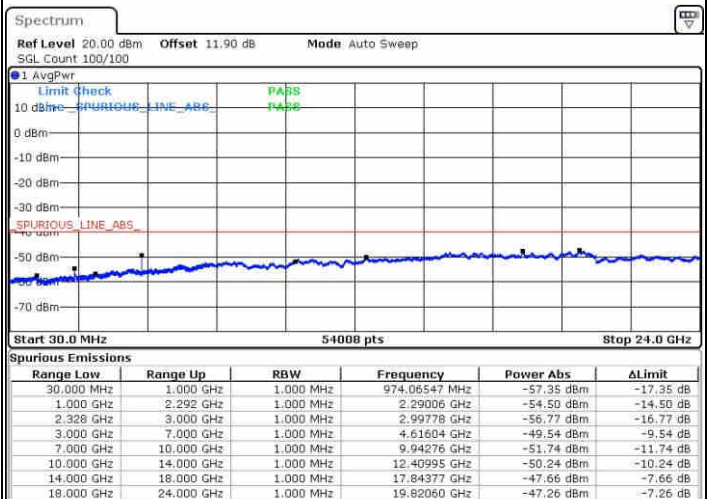
Date: 8 APR 2019 21:41:43

Middle Channel / QPSK



Date: 8 APR 2019 21:42:26

Middle Channel / 16QAM

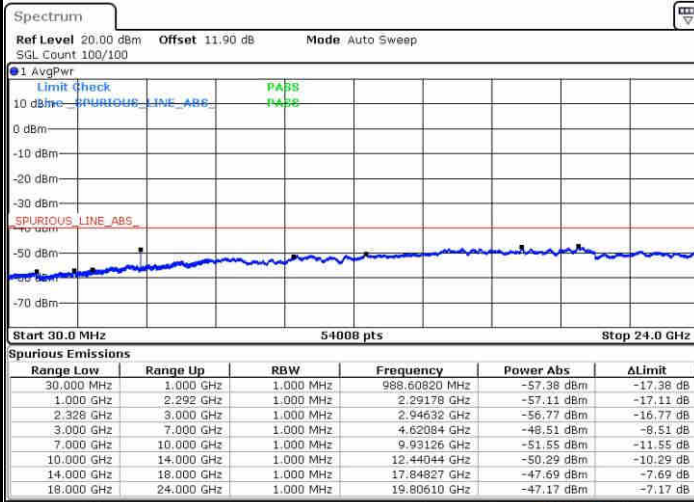


Date: 8 APR 2019 21:43:08



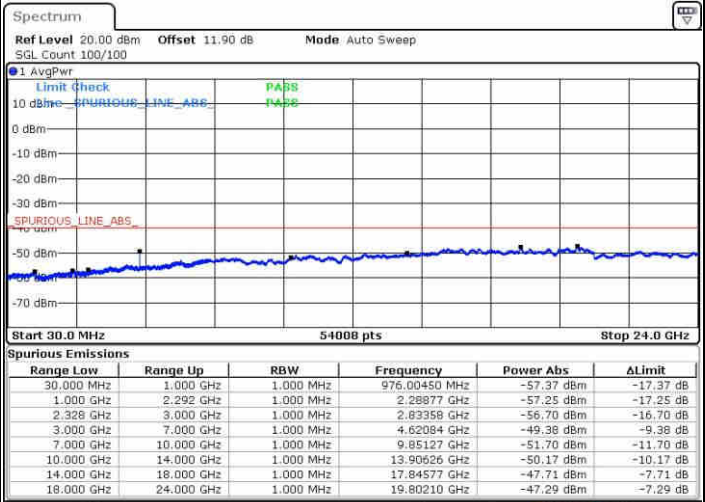
LTE Band 30 / 5MHz

Highest Channel / QPSK



Date: 8 APR 2019 21:43:50

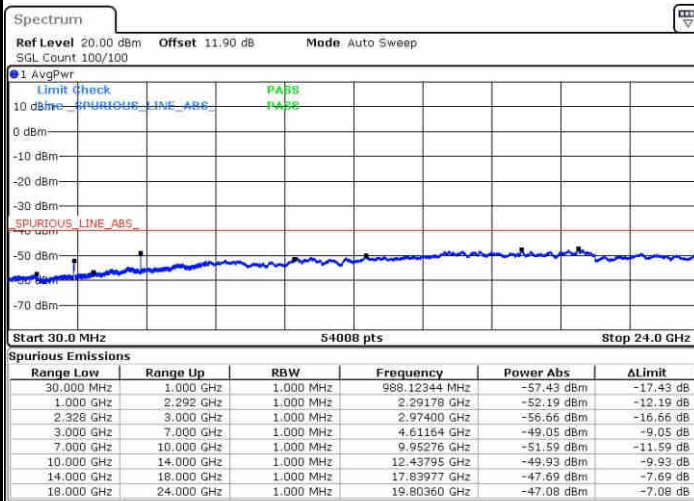
Highest Channel / 16QAM



Date: 8 APR 2019 21:44:34

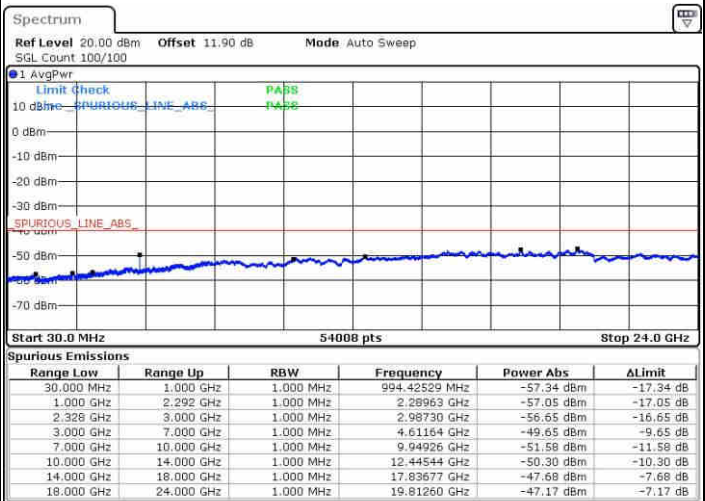
LTE Band 30 / 10MHz

Middle Channel / QPSK



Date: 8 APR 2019 21:48:08

Middle Channel / 16QAM

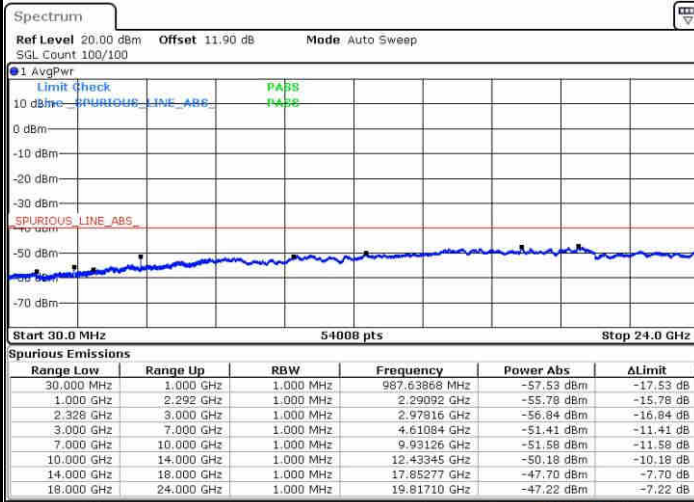


Date: 8 APR 2019 21:48:50



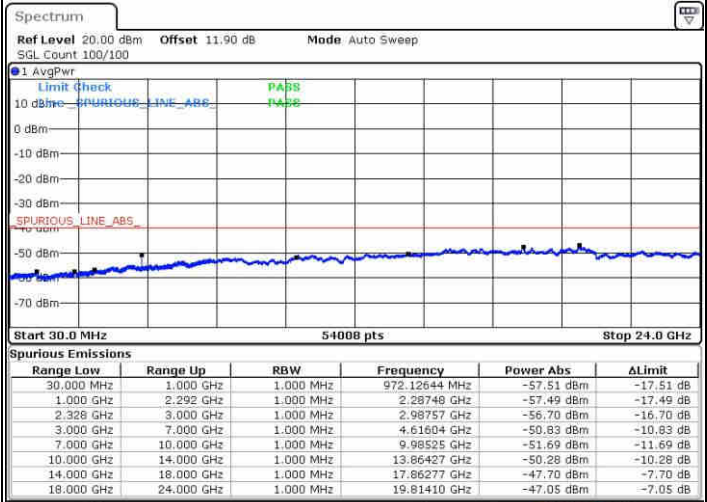
LTE Band 30 / 5MHz

Lowest Channel / 64QAM



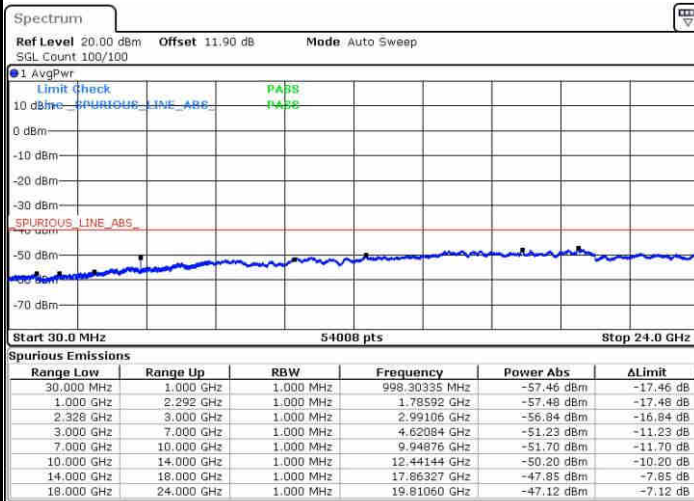
Date: 8 APR 2019 21:45:17

Middle Channel / 64QAM



Date: 8 APR 2019 21:46:00

Highest Channel / 64QAM

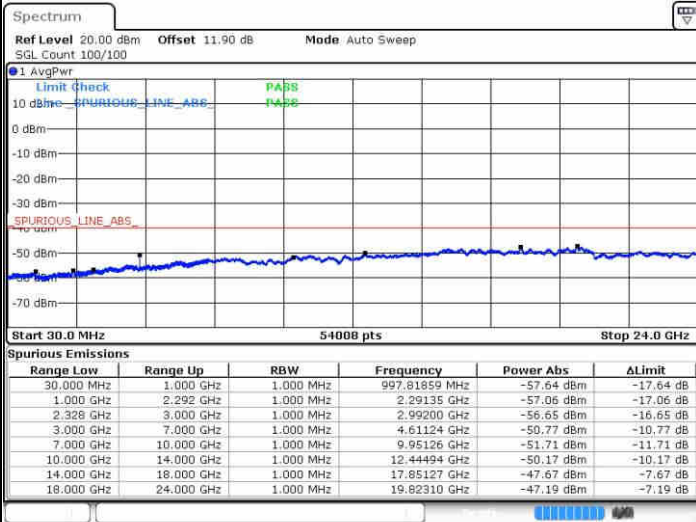


Date: 8 APR 2019 21:46:42



LTE Band 30 / 10MHz

Middle Channel / 64QAM



Date: 8 APR 2019 21:47:25

Frequency Stability

Test Conditions		LTE Band 30 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0002	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0000	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 38

Peak-to-Average Ratio

Mode	LTE Band 38 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.59	5.07	4.29	6.00	PASS
Middle CH	3.62	5.01	4.46	5.94	
Highest CH	3.54	4.96	4.26	5.91	
Mode	LTE Band 38 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.19	6.52	-	-	PASS
Middle CH	5.45	6.46	-	-	
Highest CH	5.13	6.46	-	-	

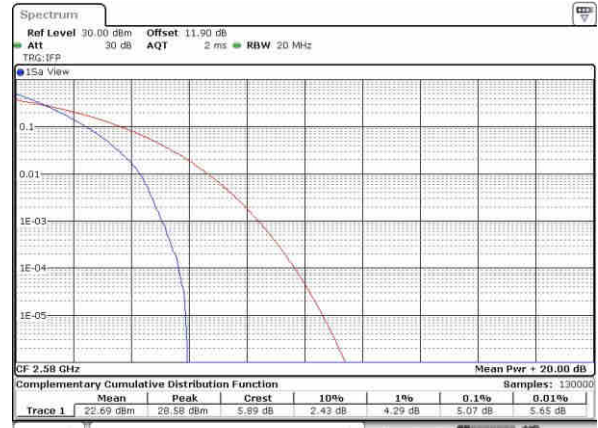


LTE Band 38 / 20MHz / QPSK

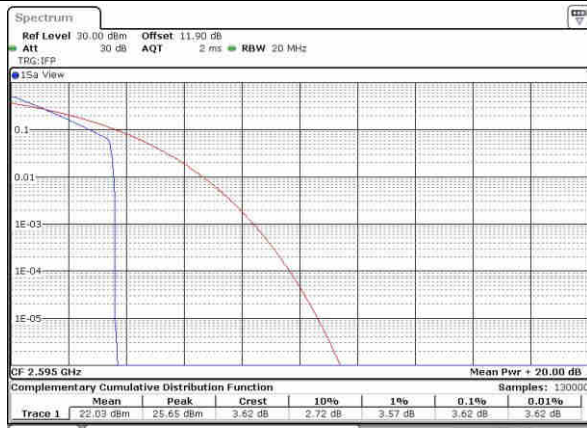
Lowest Channel / 1RB



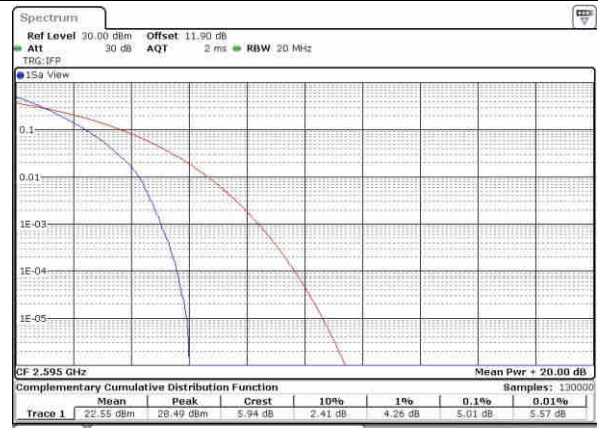
Lowest Channel / Full RB



Middle Channel / 1RB



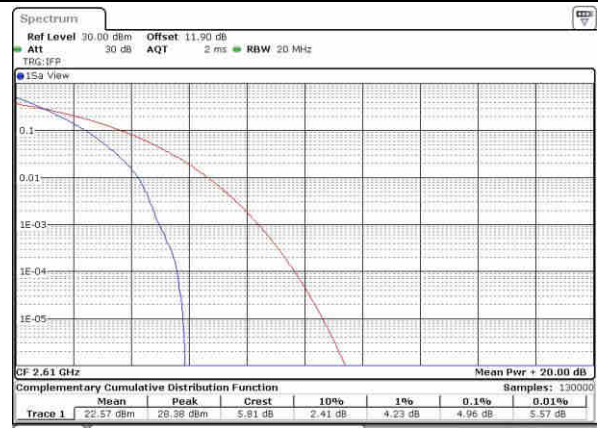
Middle Channel / Full RB



Highest Channel / 1RB



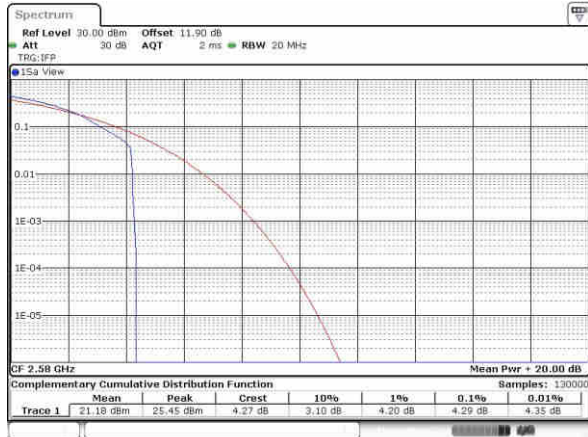
Highest Channel / Full RB



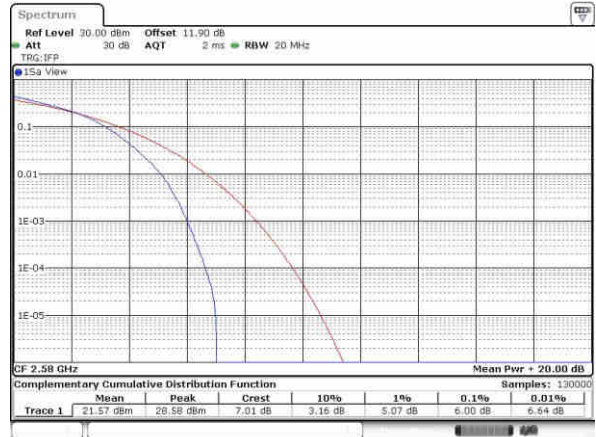


LTE Band 38 / 20MHz / 16QAM

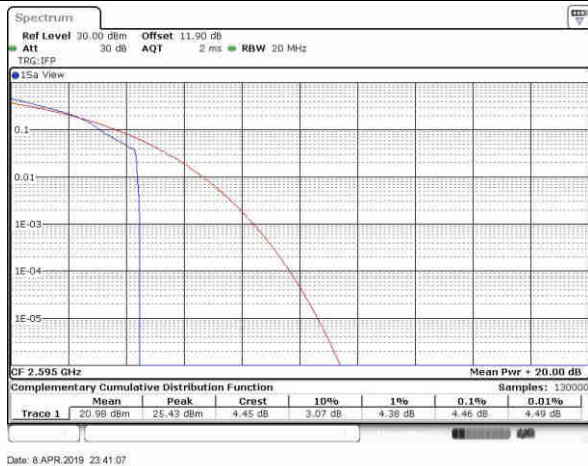
Lowest Channel / 1RB



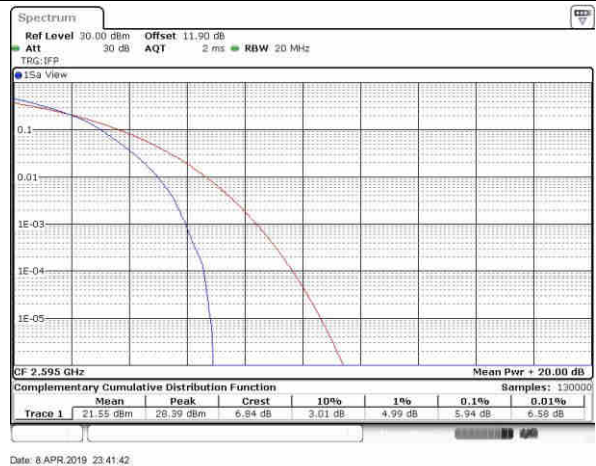
Lowest Channel / Full RB



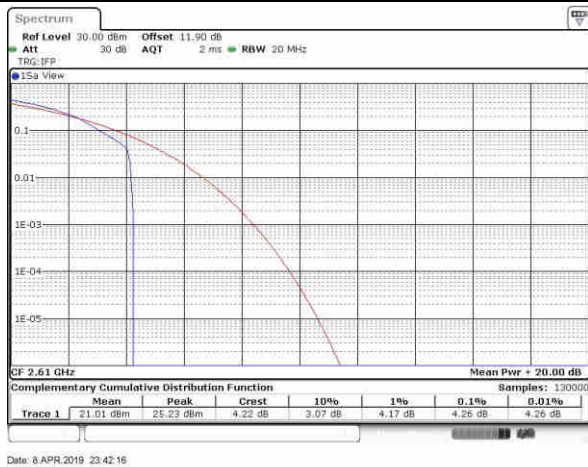
Middle Channel / 1RB



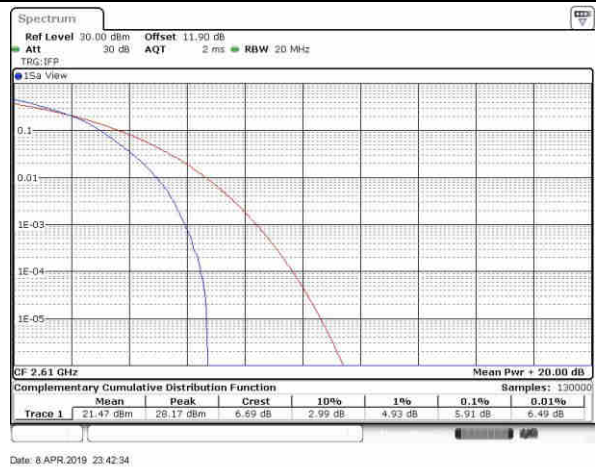
Middle Channel / Full RB



Highest Channel / 1RB



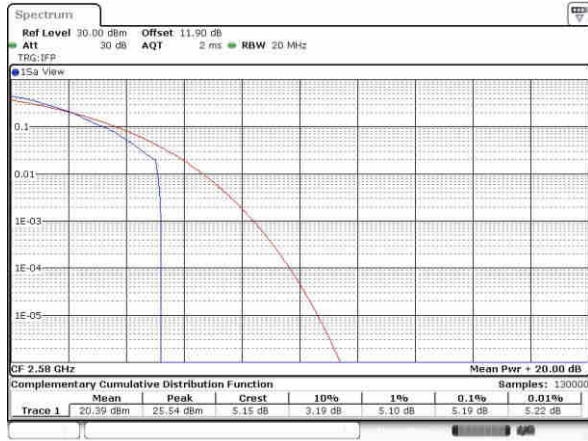
Highest Channel / Full RB



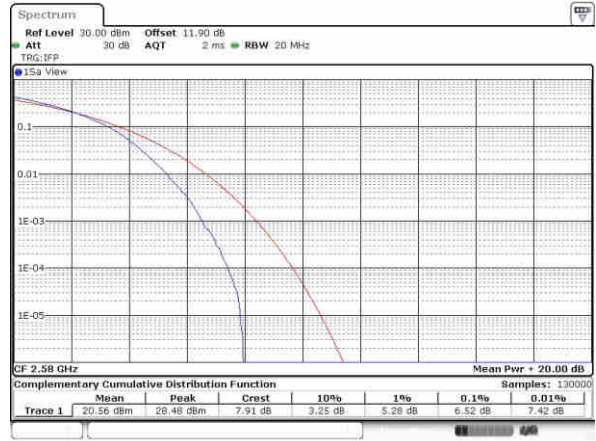


LTE Band 38 / 20MHz / 64QAM

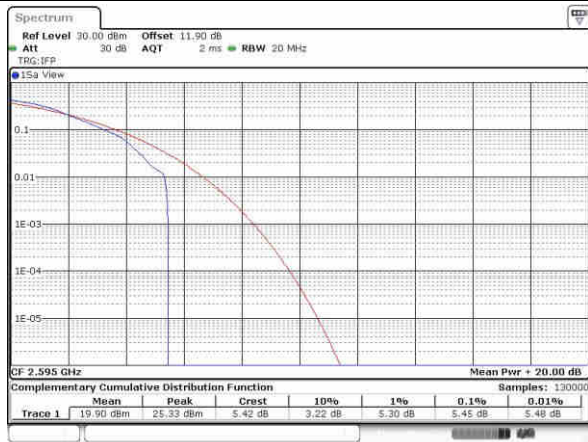
Lowest Channel / 1RB



Lowest Channel / Full RB



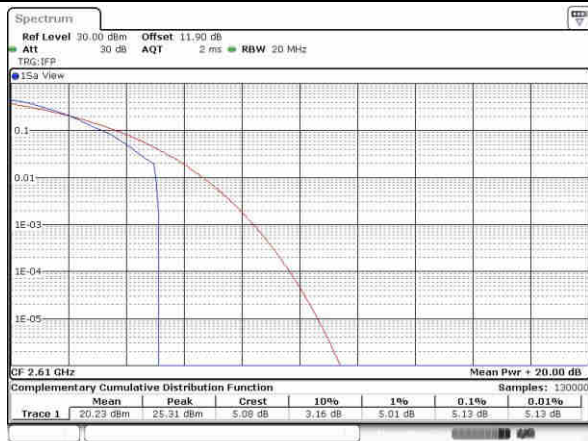
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



**26dB Bandwidth**

Mode	LTE Band 38 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.85	4.85	9.73	9.63	14.24	14.15	18.82	18.86
Middle CH	-	-	-	-	4.88	4.73	9.69	9.75	14.21	14.36	19.34	18.66
Highest CH	-	-	-	-	4.87	4.82	9.75	9.71	14.27	14.18	18.74	18.66
Mode	LTE Band 38 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.88	-	9.69	-	14.33	-	18.62	-
Middle CH	-	-	-	-	4.83	-	9.65	-	14.12	-	18.78	-
Highest CH	-	-	-	-	4.79	-	9.79	-	14.48	-	18.74	-