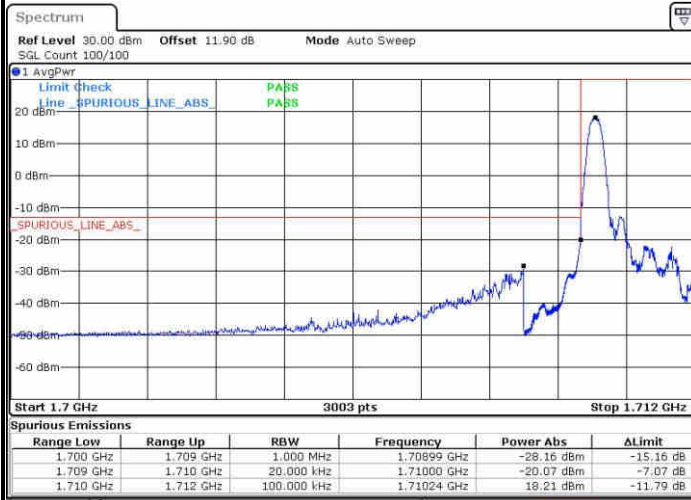




LTE Band 4 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



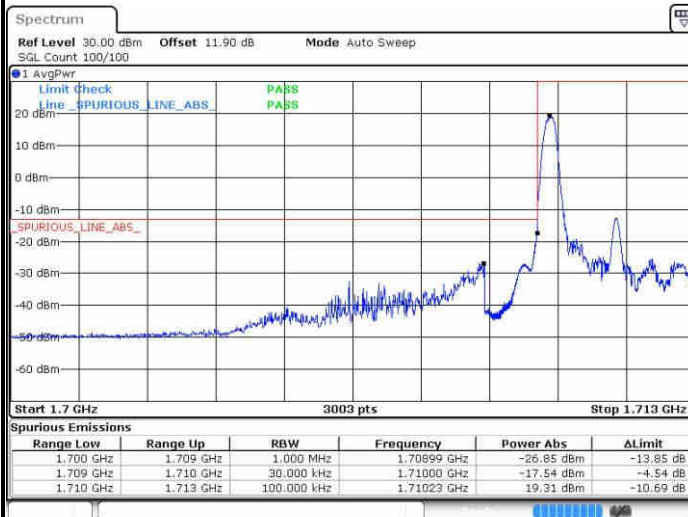
Highest Band Edge / Full RB



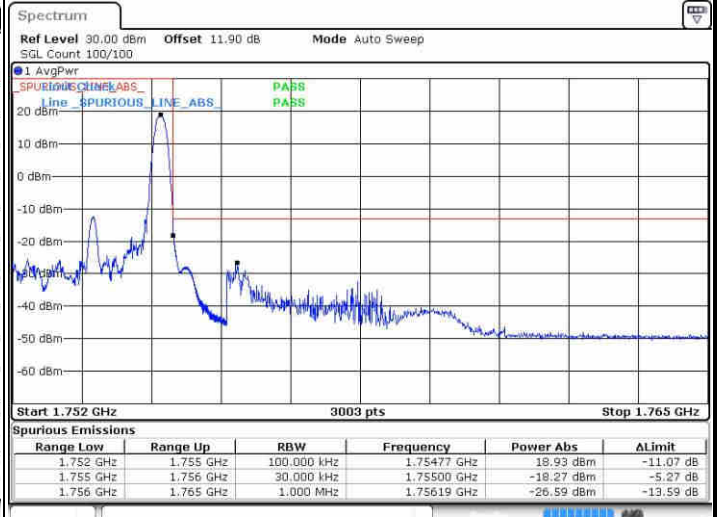


LTE Band 4 / 3MHz / QPSK

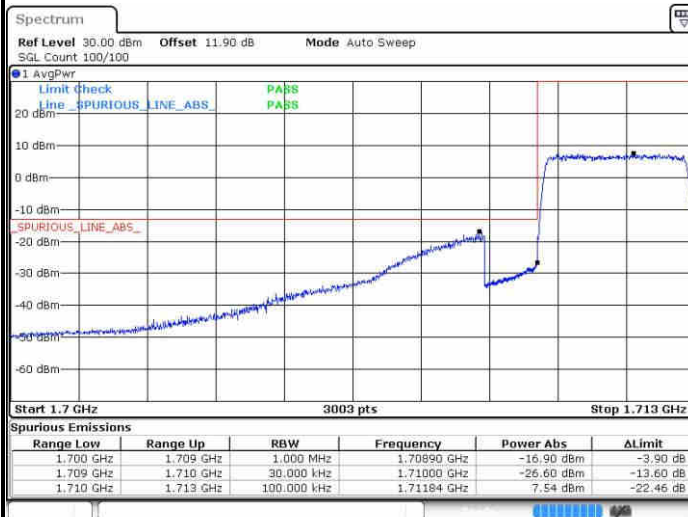
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



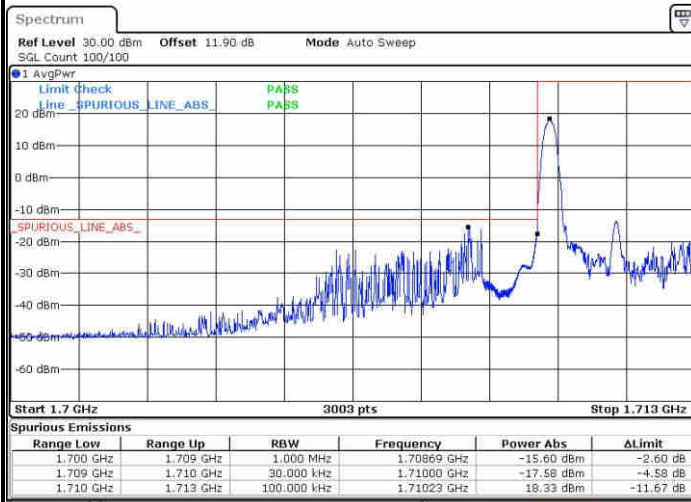
Highest Band Edge / Full RB



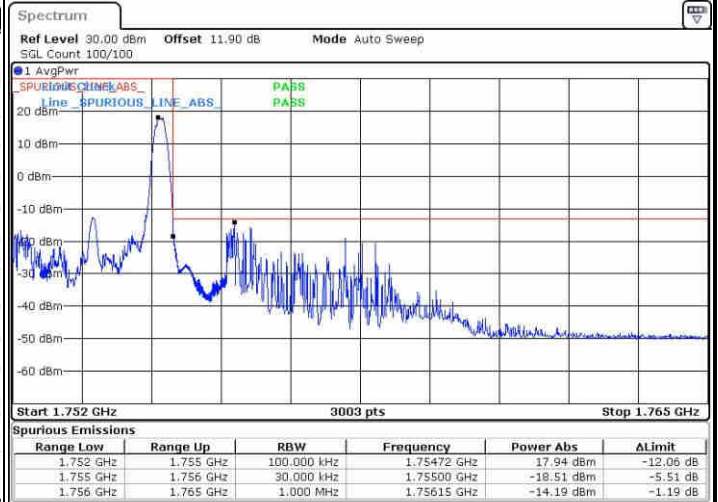


LTE Band 4 / 3MHz / 16QAM

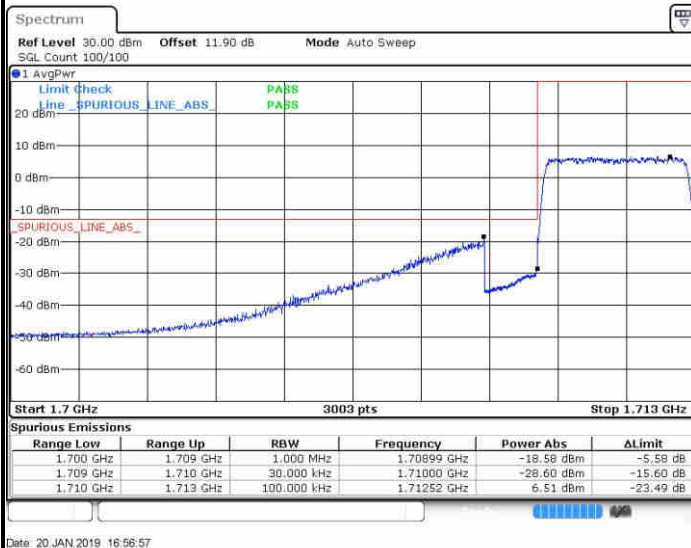
Lowest Band Edge / 1 RB



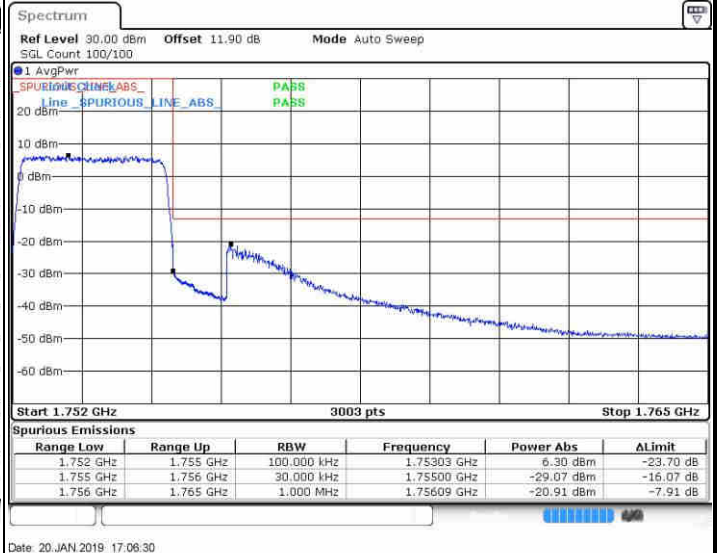
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



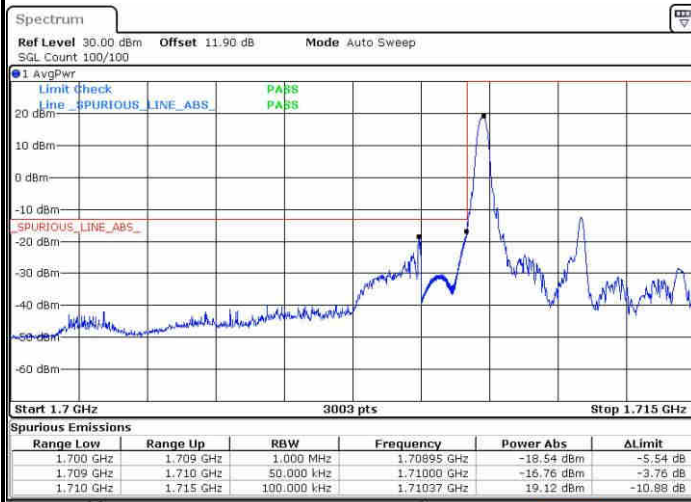
Highest Band Edge / Full RB



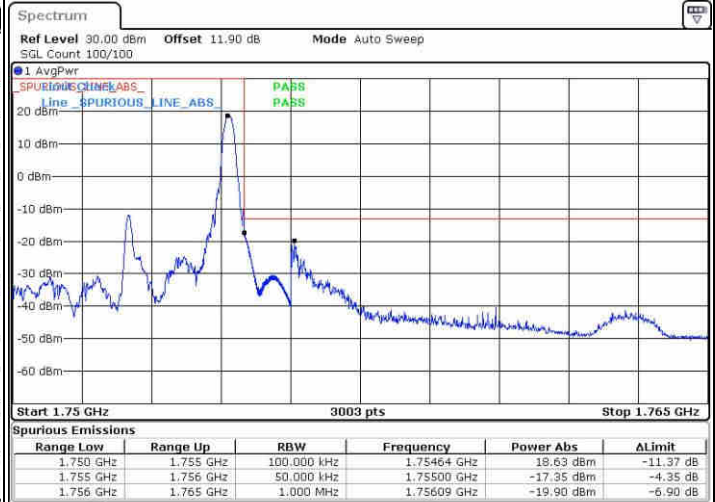


LTE Band 4 / 5MHz / QPSK

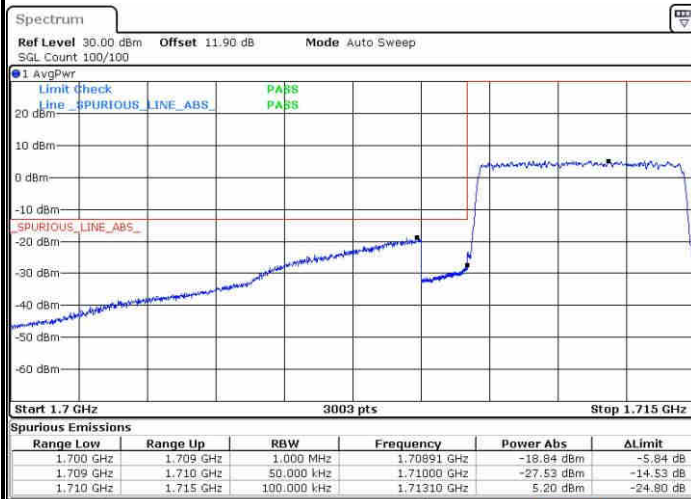
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



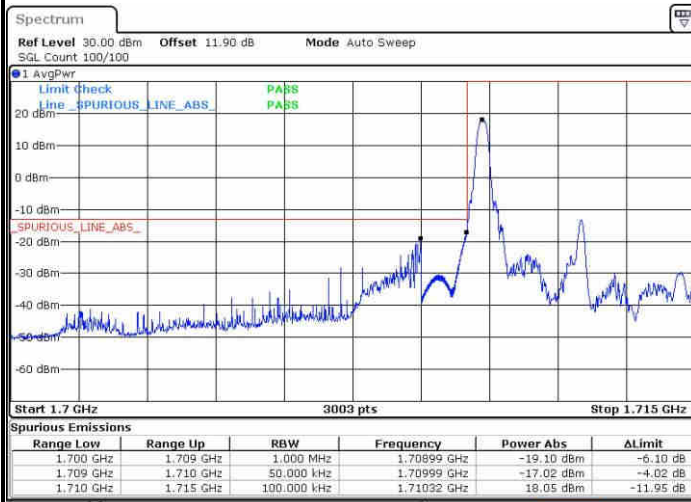
Highest Band Edge / Full RB



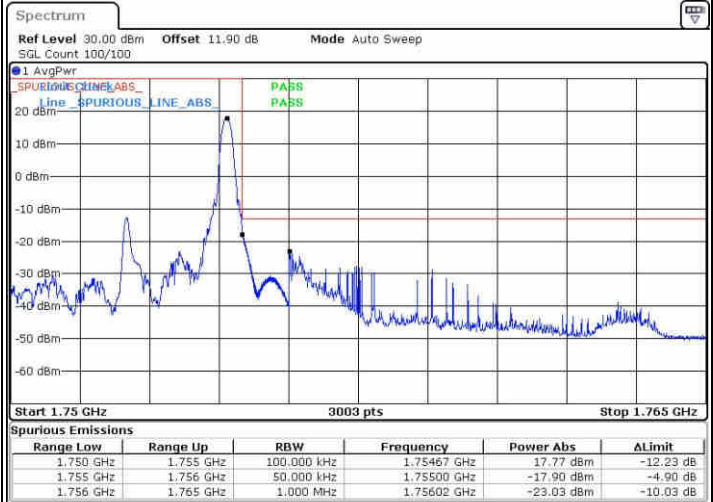


LTE Band 4 / 5MHz / 16QAM

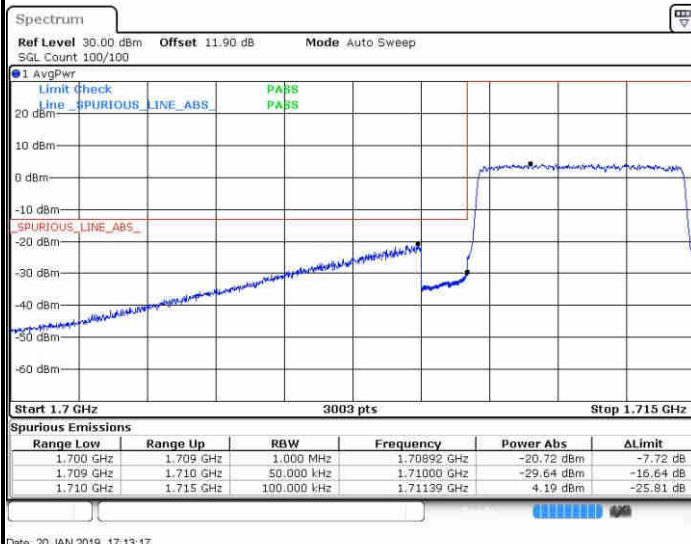
Lowest Band Edge / 1RB



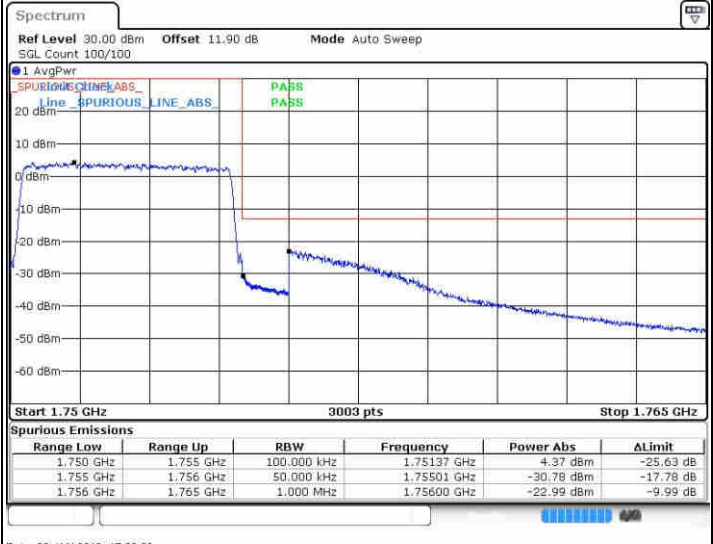
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



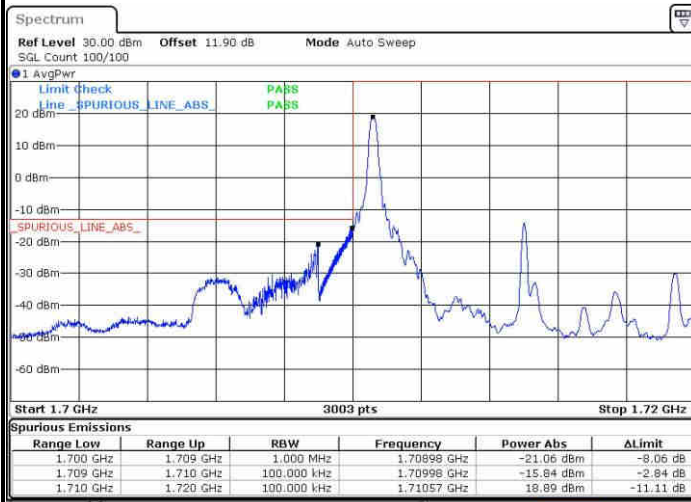
Highest Band Edge / Full RB





LTE Band 4 / 10MHz / QPSK

Lowest Band Edge / 1 RB



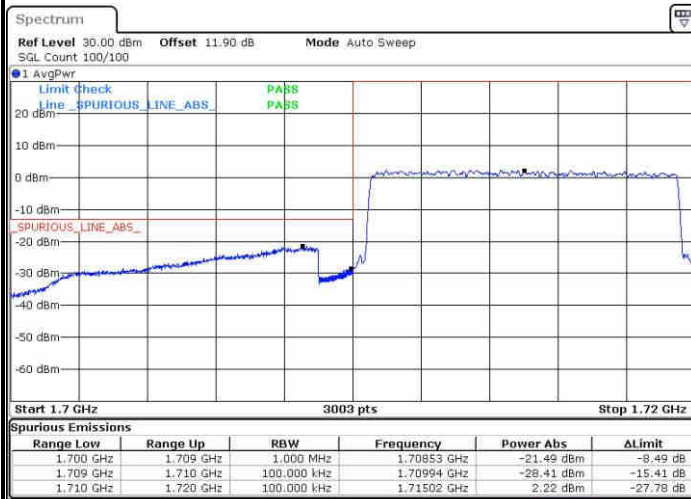
Date: 20 JAN 2019 17:26:36

Highest Band Edge / 1 RB



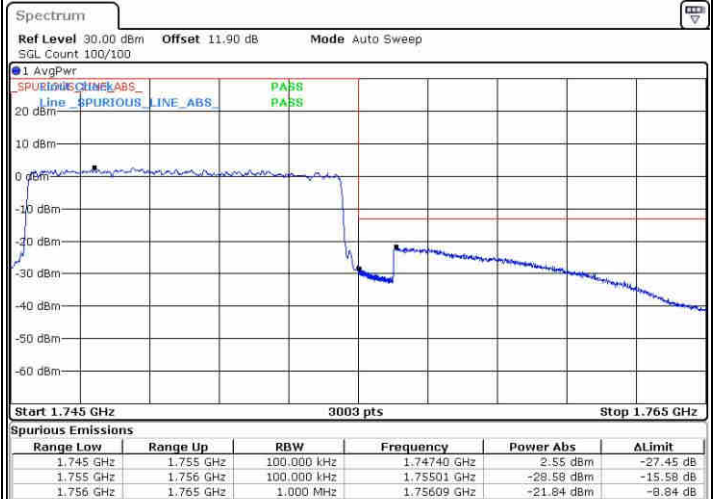
Date: 20 JAN 2019 17:59:56

Lowest Band Edge / Full RB



Date: 20 JAN 2019 17:28:37

Highest Band Edge / Full RB

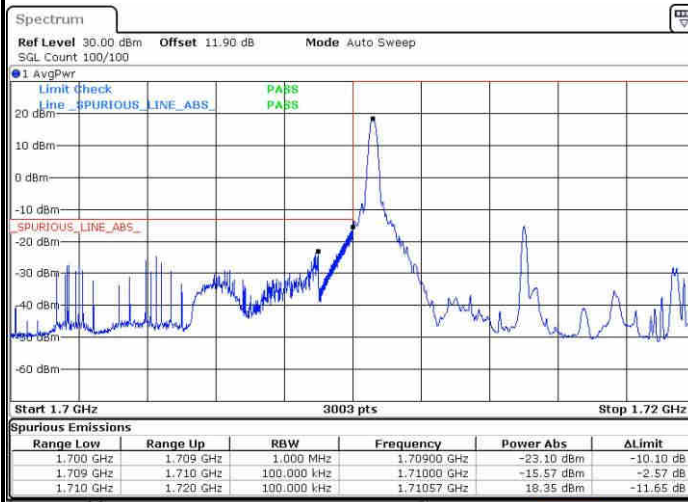


Date: 20 JAN 2019 18:01:56

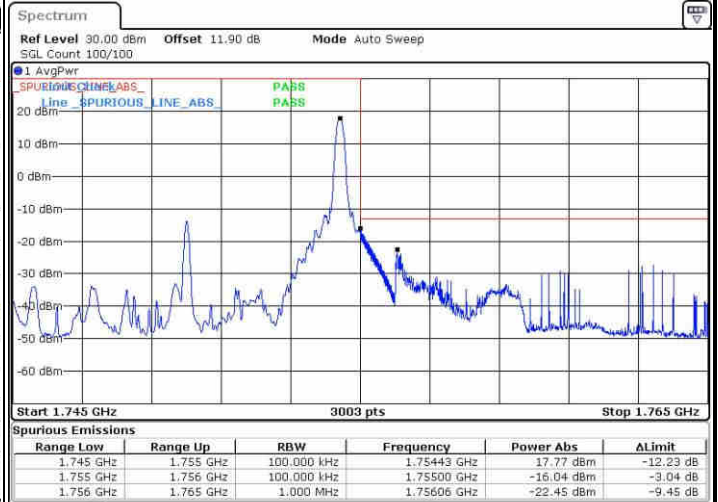


LTE Band 4 / 10MHz / 16QAM

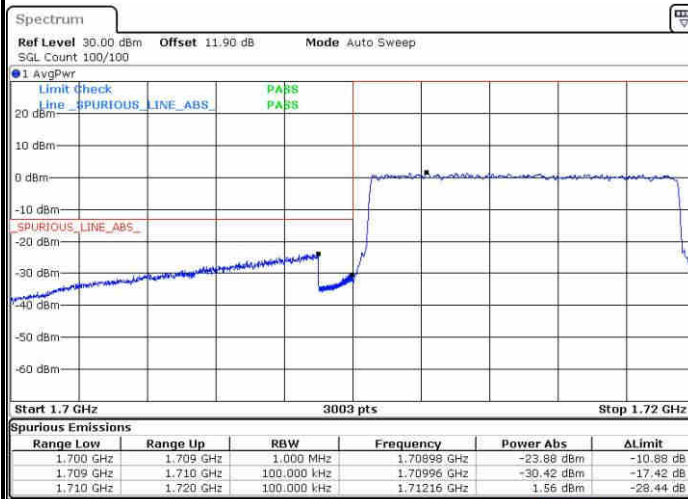
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



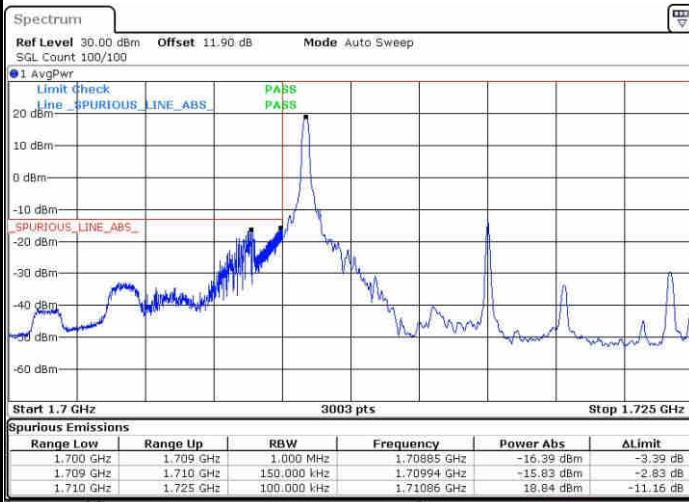
Highest Band Edge / Full RB



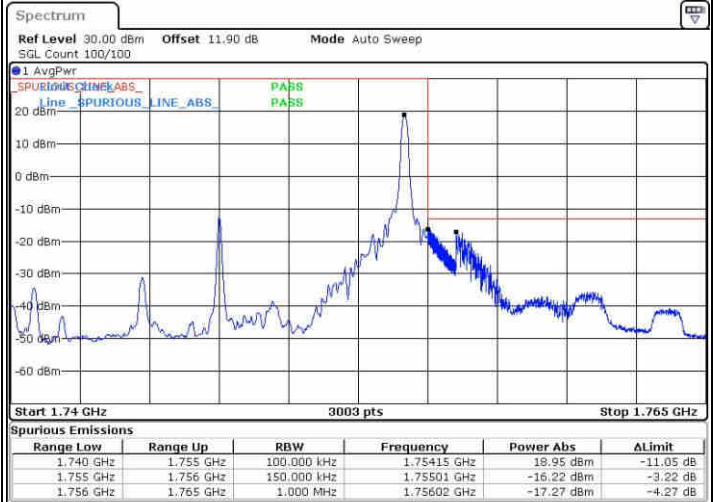


LTE Band 4 / 15MHz / QPSK

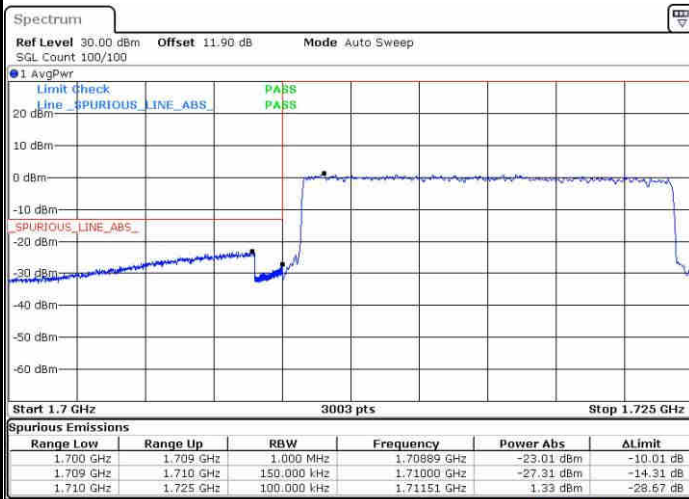
Lowest Band Edge / 1 RB



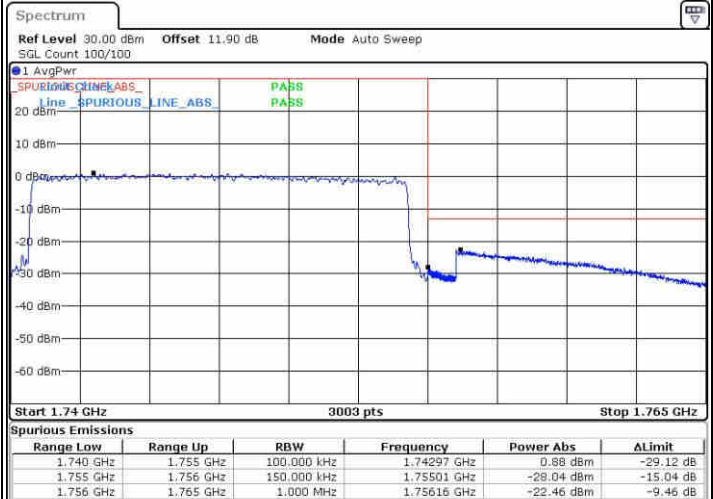
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



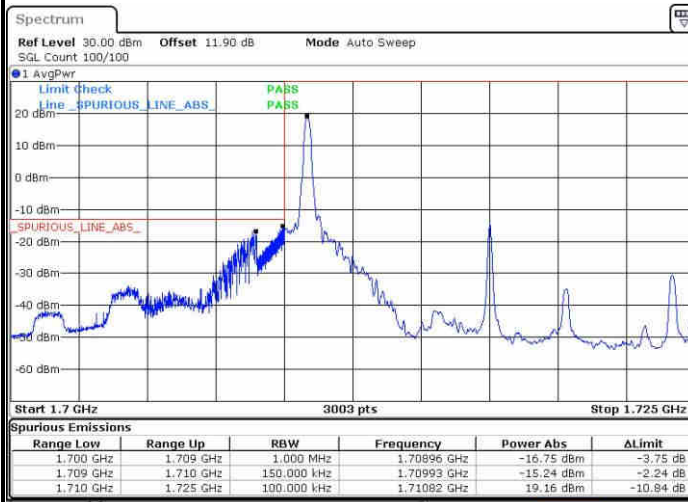
Highest Band Edge / Full RB



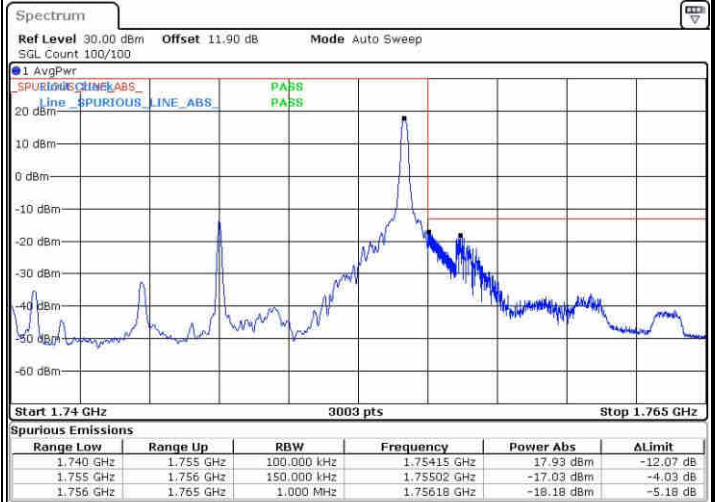


LTE Band 4 / 15MHz / 16QAM

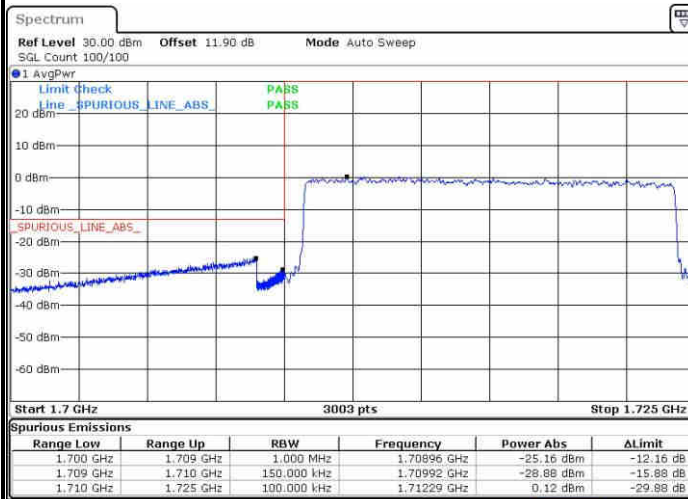
Lowest Band Edge / 1 RB



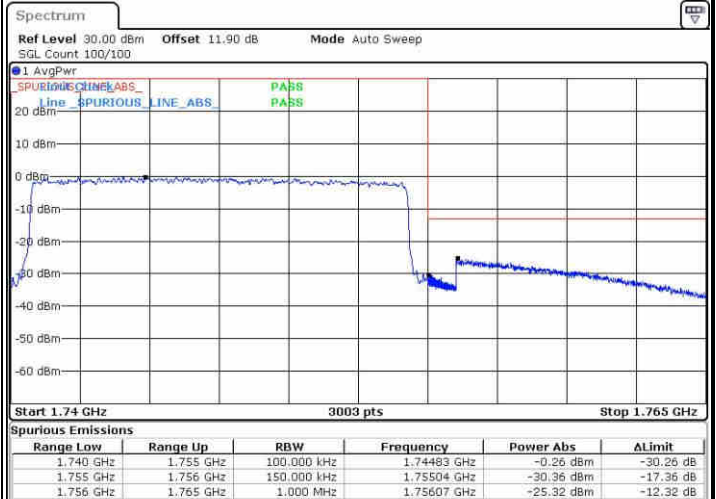
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



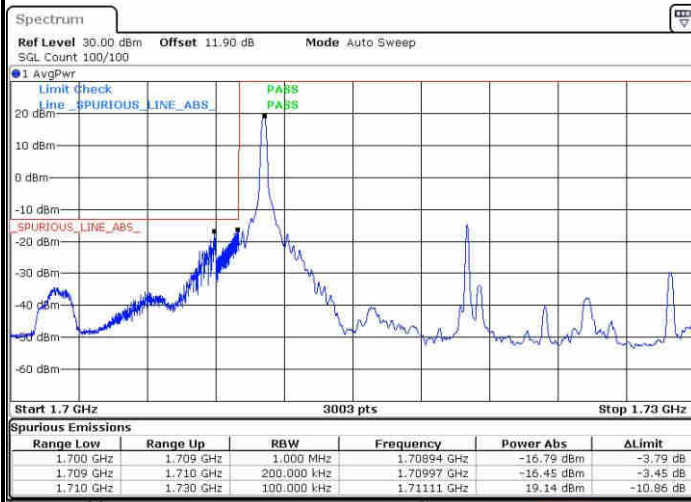
Highest Band Edge / Full RB



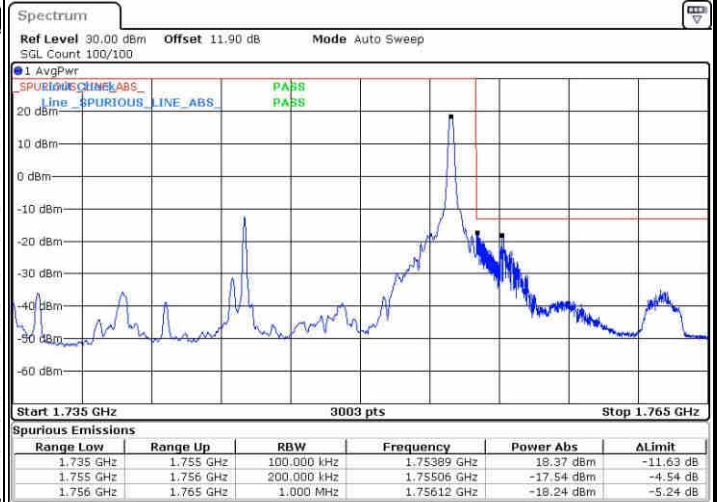


LTE Band 4 / 20MHz / QPSK

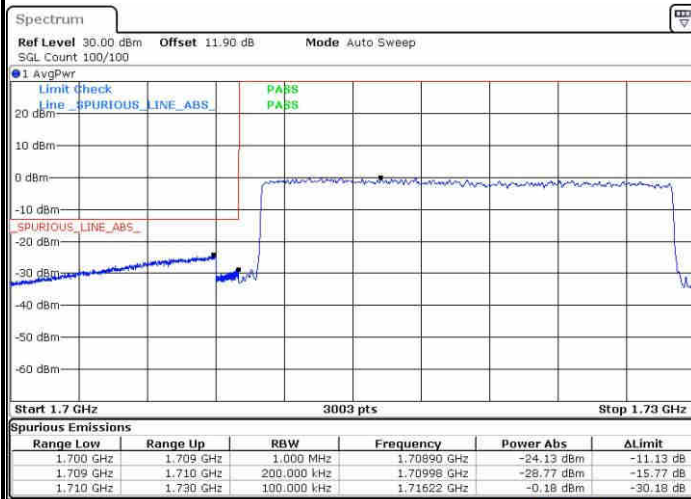
Lowest Band Edge / 1 RB



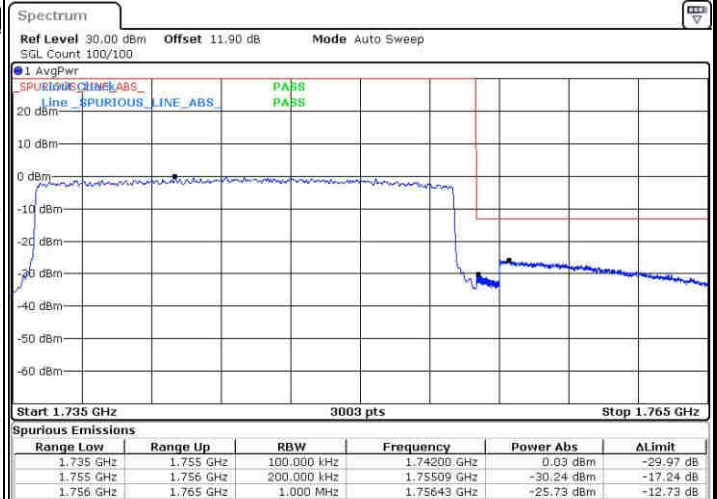
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



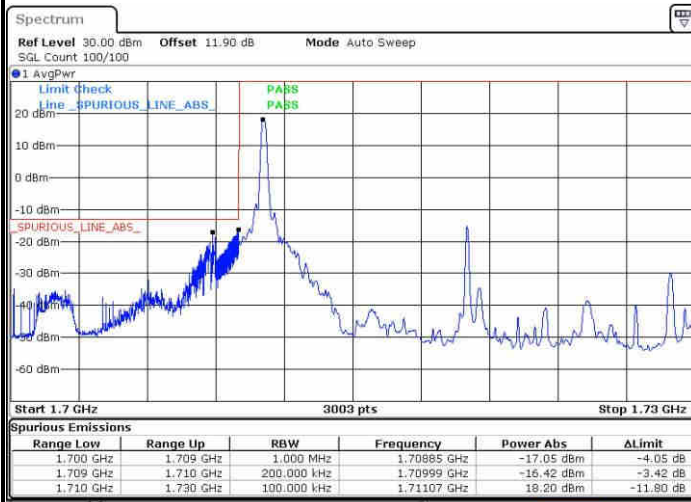
Highest Band Edge / Full RB



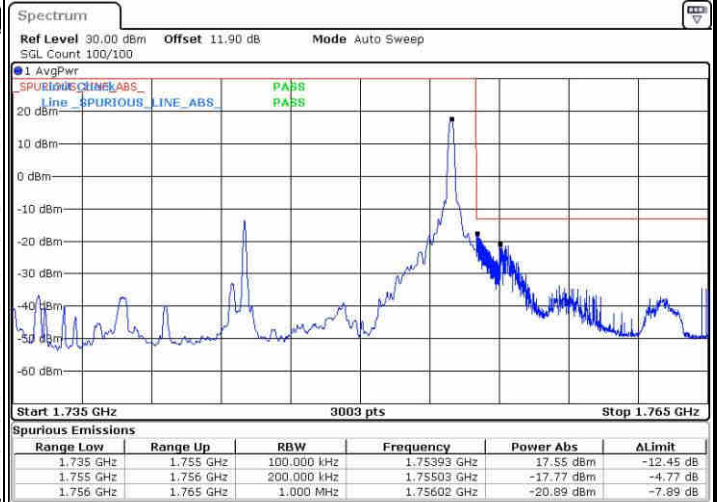


LTE Band 4 / 20MHz / 16QAM

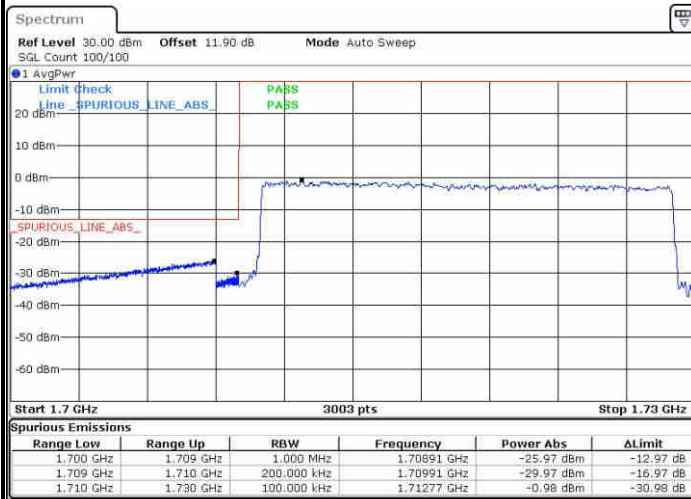
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

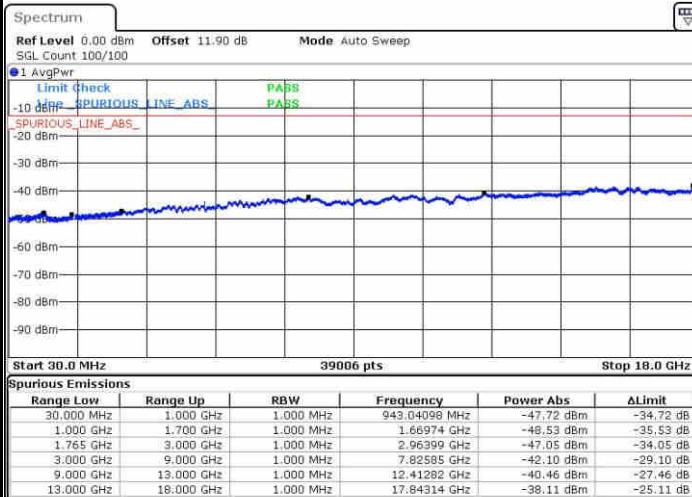




Conducted Spurious Emission

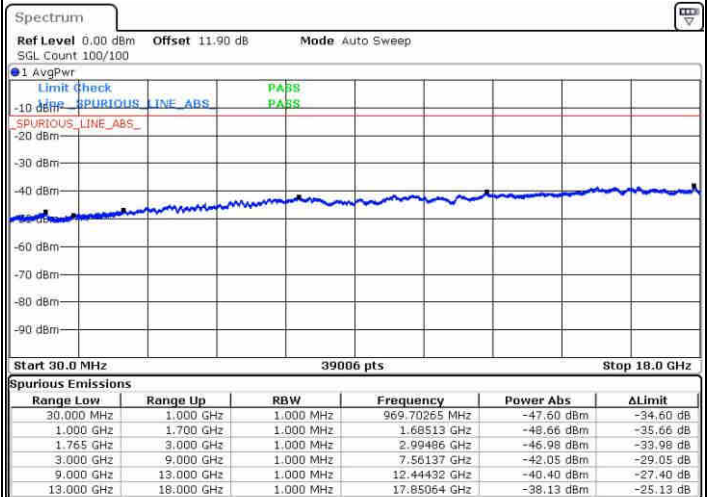
LTE Band 4 / 1.4MHz

Lowest Channel / QPSK



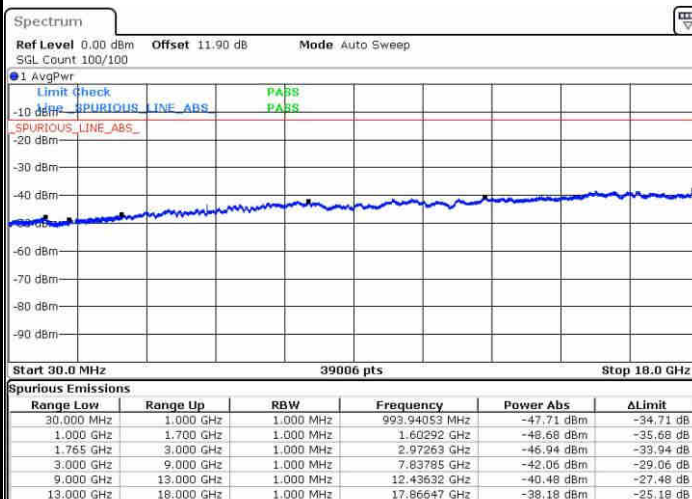
Date: 20 JAN 2019 18:43:38

Lowest Channel / 16QAM



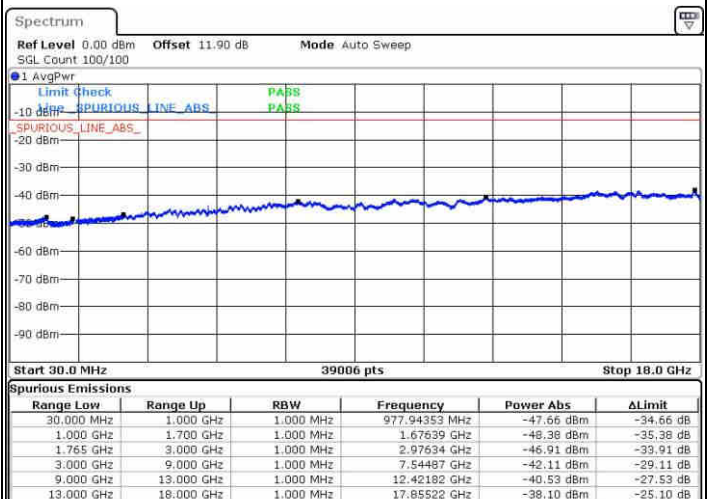
Date: 20 JAN 2019 18:44:38

Middle Channel / QPSK



Date: 20 JAN 2019 18:46:24

Middle Channel / 16QAM

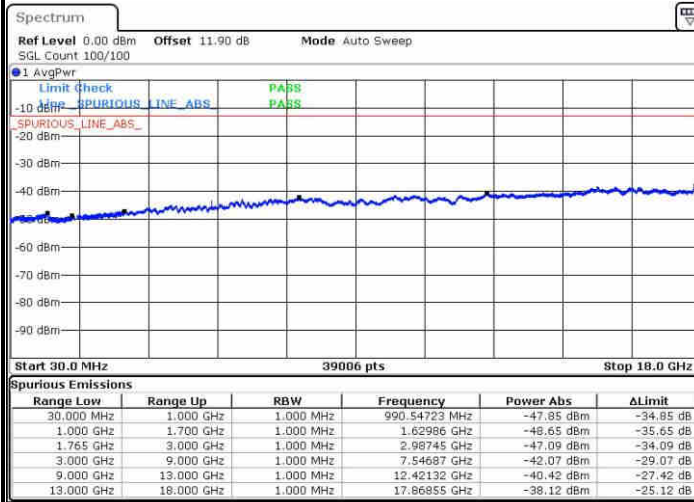


Date: 20 JAN 2019 18:47:24



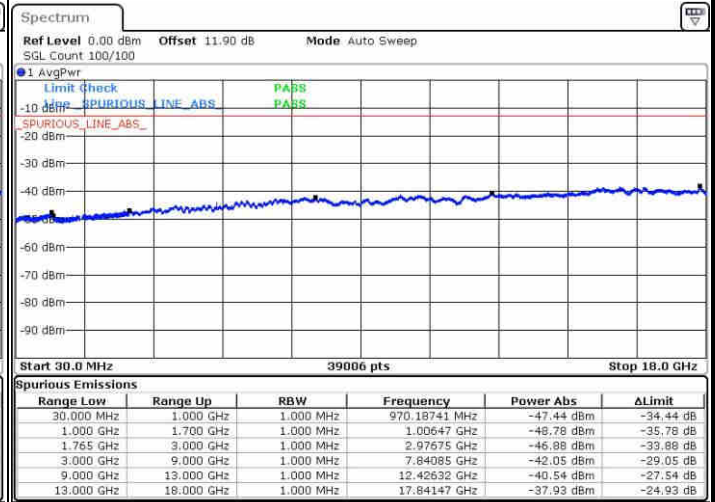
LTE Band 4 / 1.4MHz

Highest Channel / QPSK



Date: 20 JAN 2019 18:53:24

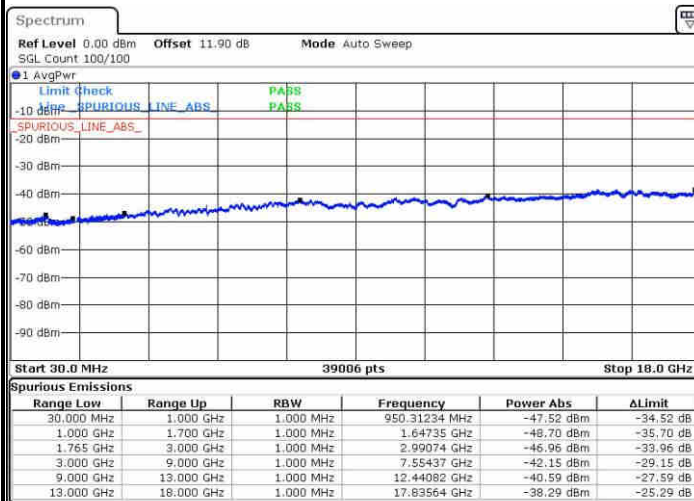
Highest Channel / 16QAM



Date: 20 JAN 2019 18:54:24

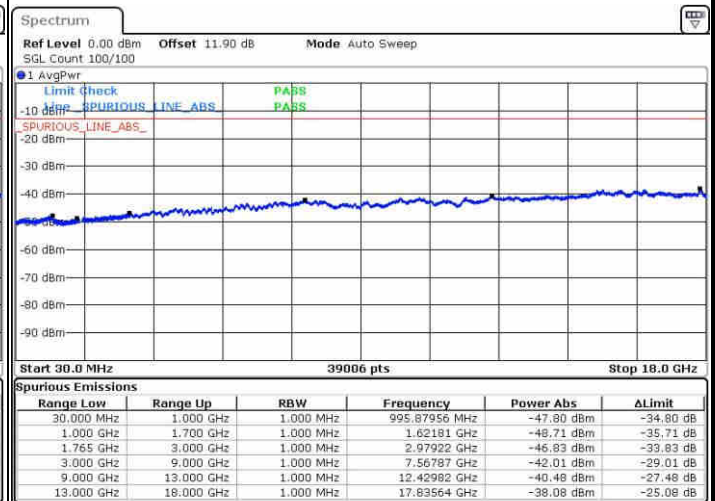
LTE Band 4 / 3MHz

Lowest Channel / QPSK



Date: 20 JAN 2019 16:57:57

Lowest Channel / 16QAM

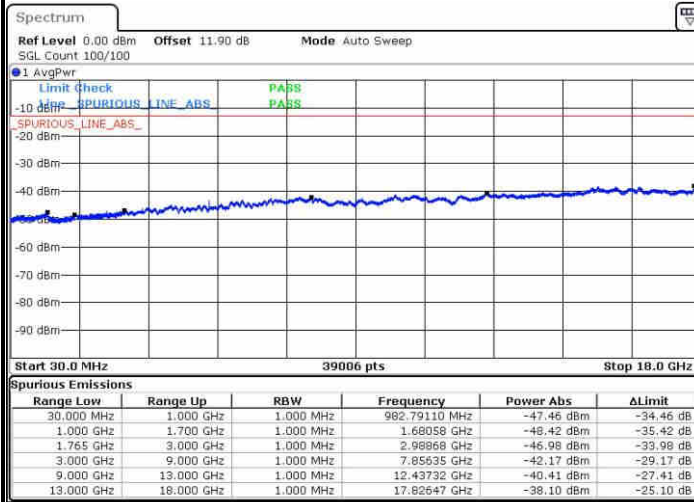


Date: 20 JAN 2019 16:58:58



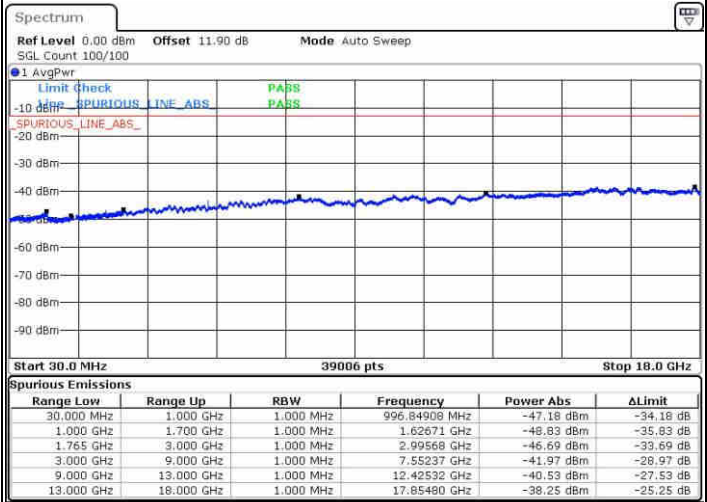
LTE Band 4 / 3MHz

Middle Channel / QPSK



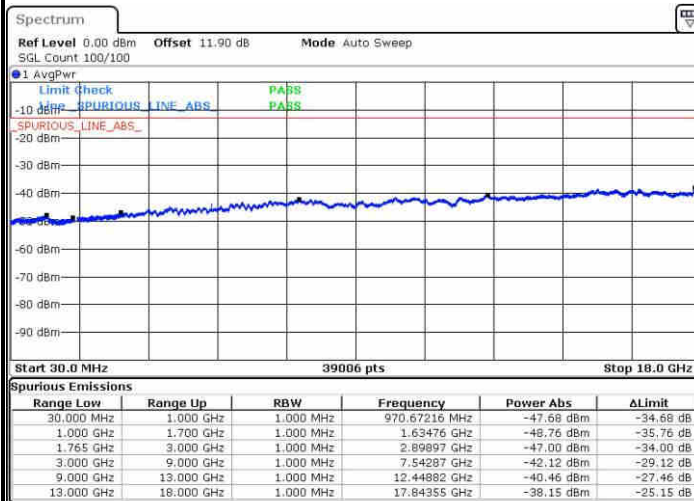
Date: 20 JAN 2019 17:00:44

Middle Channel / 16QAM



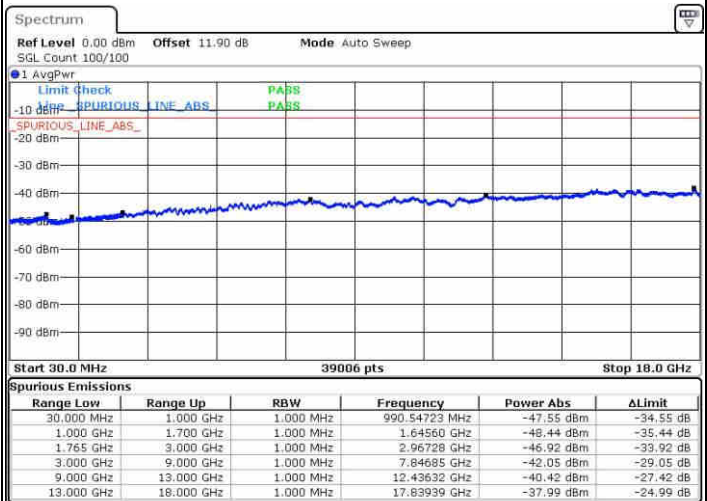
Date: 20 JAN 2019 17:01:44

Highest Channel / QPSK



Date: 20 JAN 2019 17:07:31

Highest Channel / 16QAM

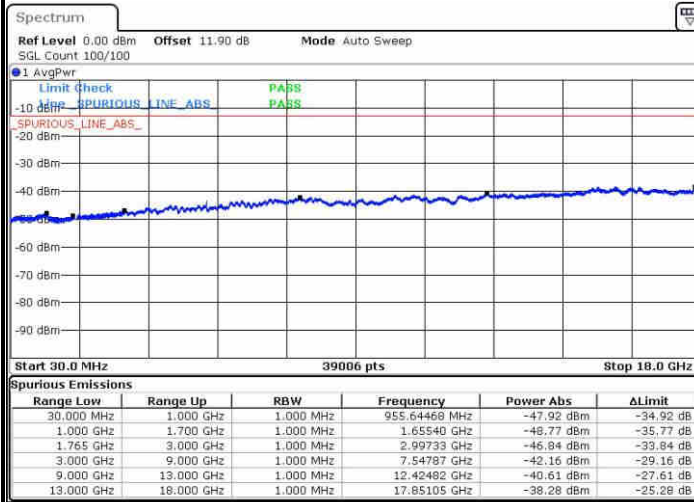


Date: 20 JAN 2019 17:08:31



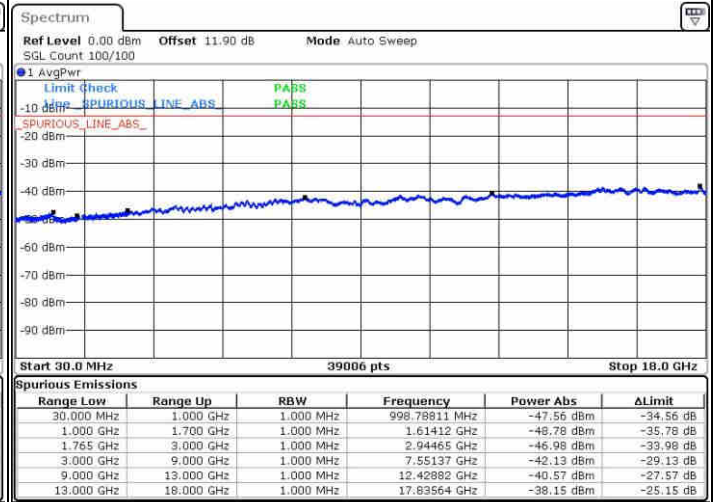
LTE Band 4 / 5MHz

Lowest Channel / QPSK



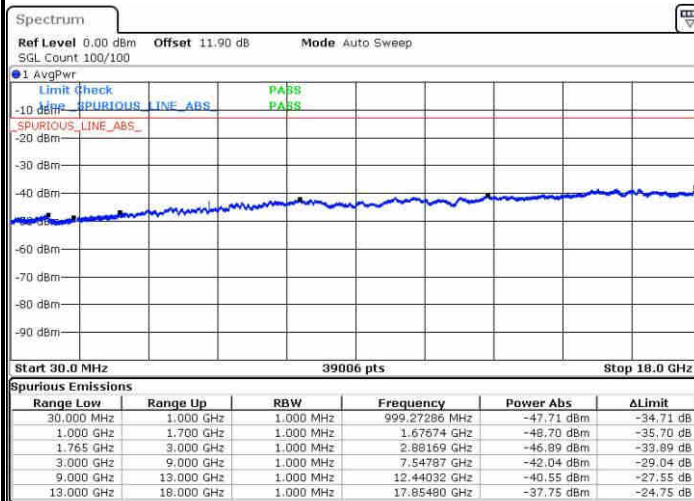
Date: 20 JAN 2019 17:14:17

Lowest Channel / 16QAM



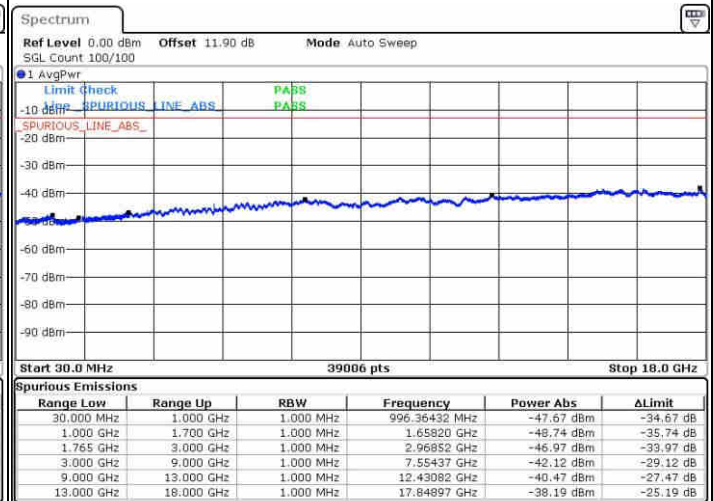
Date: 20 JAN 2019 17:15:18

Middle Channel / QPSK



Date: 20 JAN 2019 17:17:04

Middle Channel / 16QAM

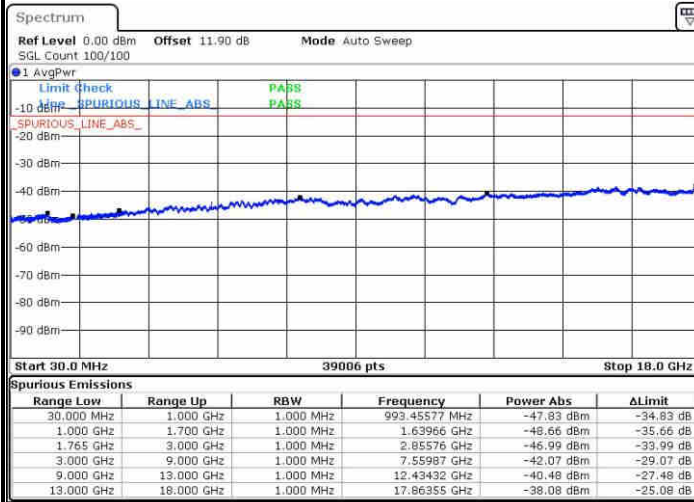


Date: 20 JAN 2019 17:18:04



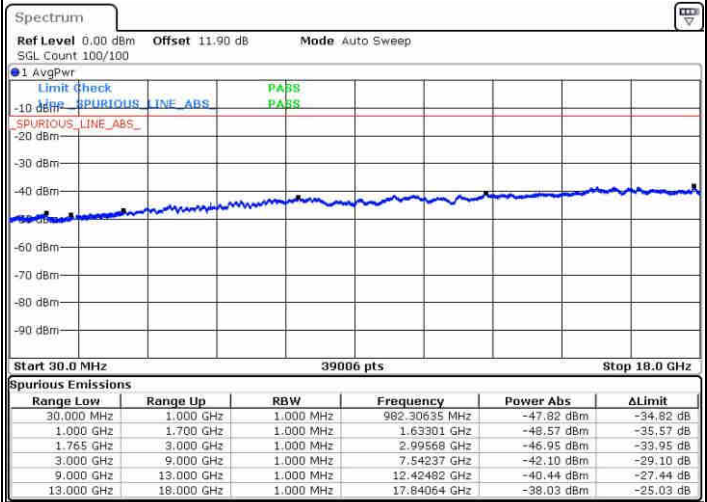
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 20 JAN 2019 17:23:51

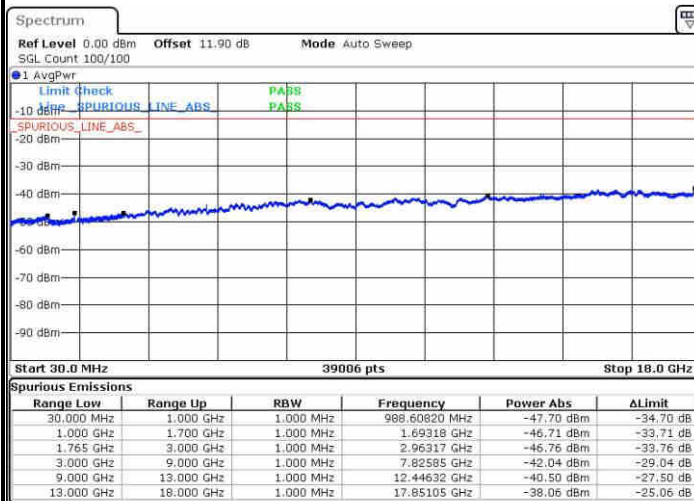
Highest Channel / 16QAM



Date: 20 JAN 2019 17:24:51

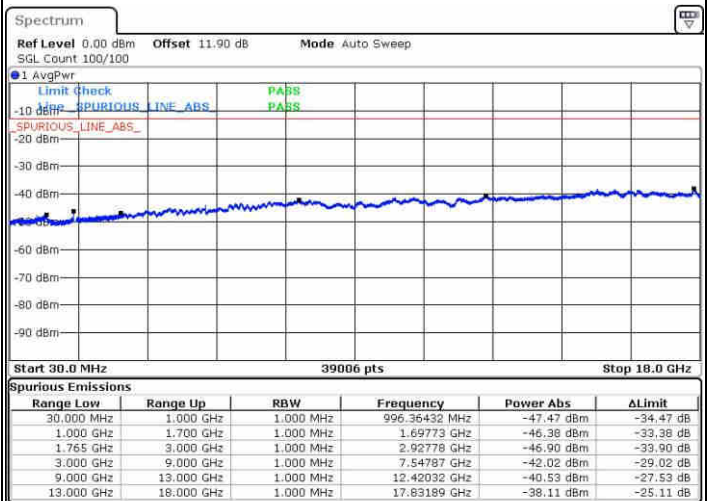
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 20 JAN 2019 17:30:38

Lowest Channel / 16QAM

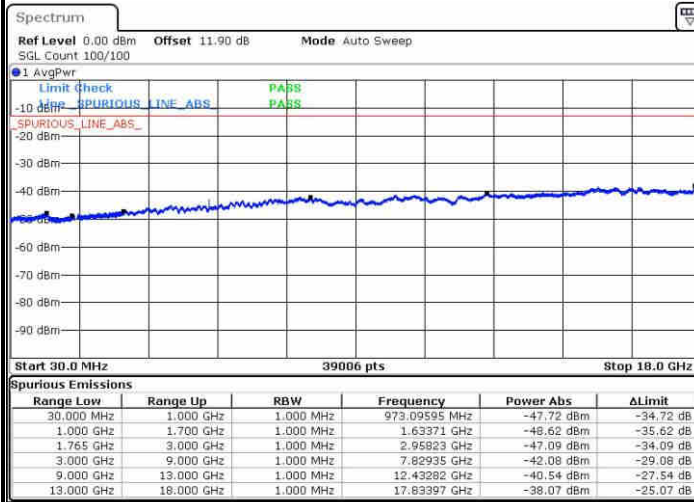


Date: 20 JAN 2019 17:31:38



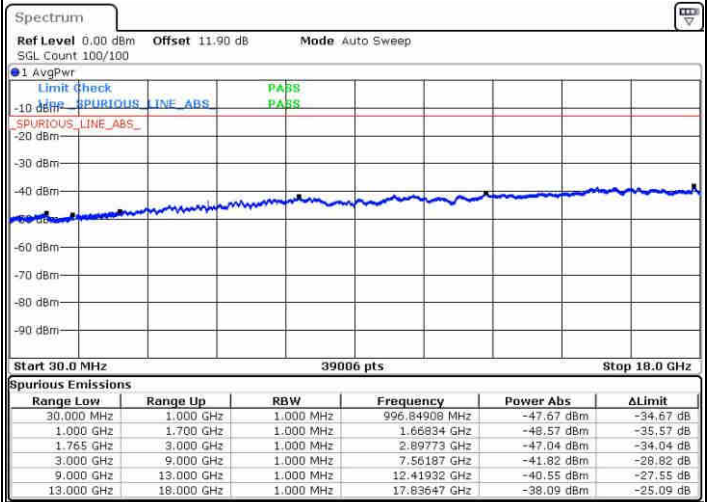
LTE Band 4 / 10MHz

Middle Channel / QPSK



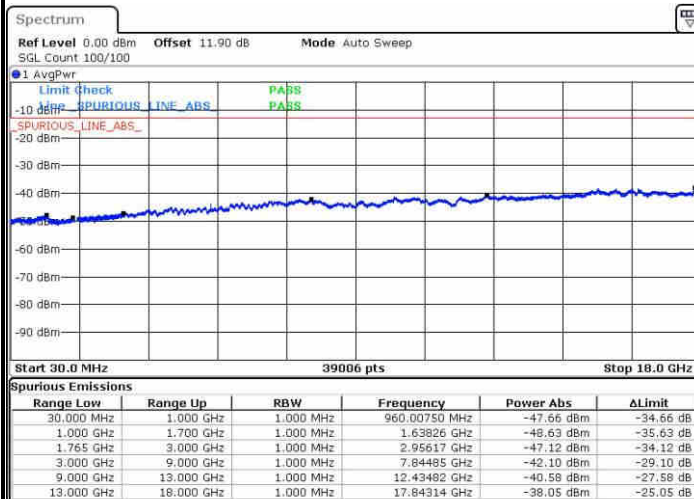
Date: 20 JAN 2019 17:33:24

Middle Channel / 16QAM



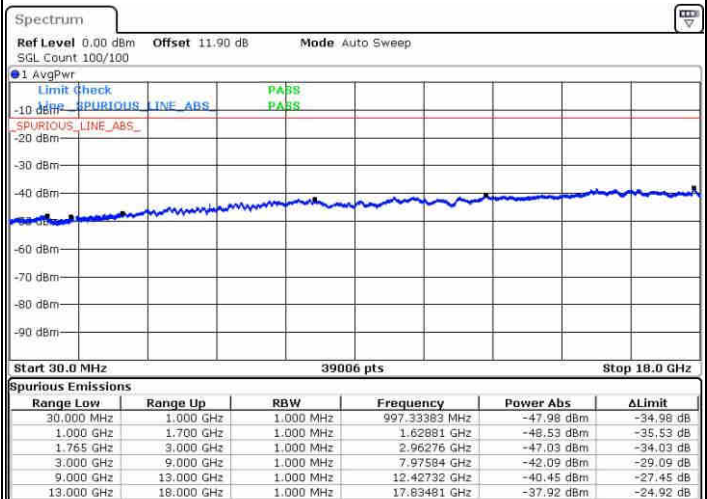
Date: 20 JAN 2019 17:34:25

Highest Channel / QPSK



Date: 20 JAN 2019 18:03:57

Highest Channel / 16QAM

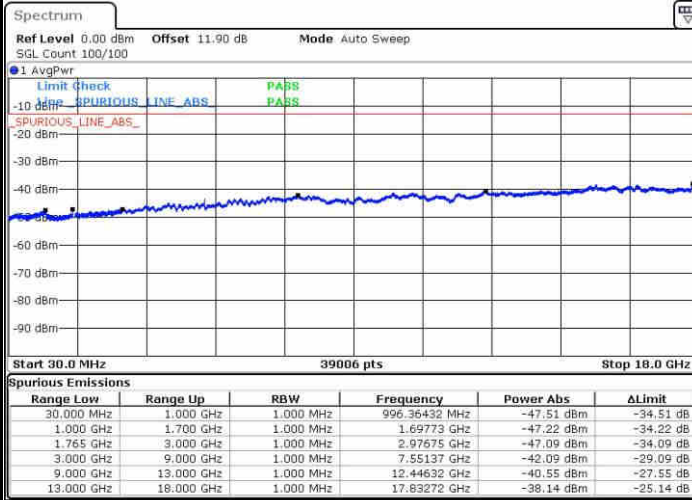


Date: 20 JAN 2019 18:04:57



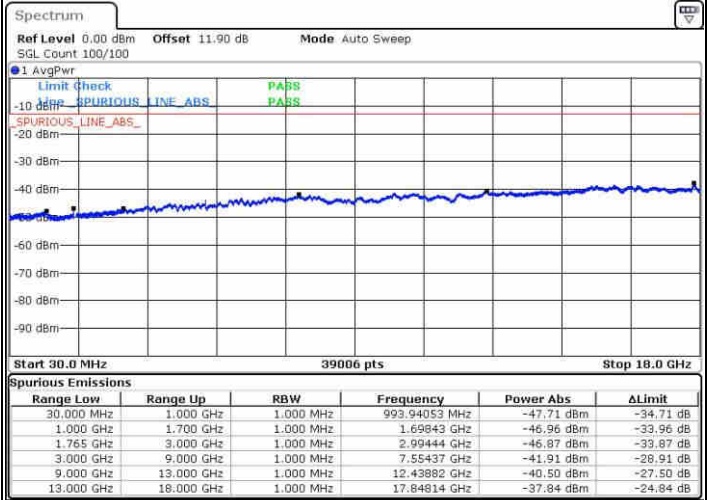
LTE Band 4 / 15MHz

Lowest Channel / QPSK



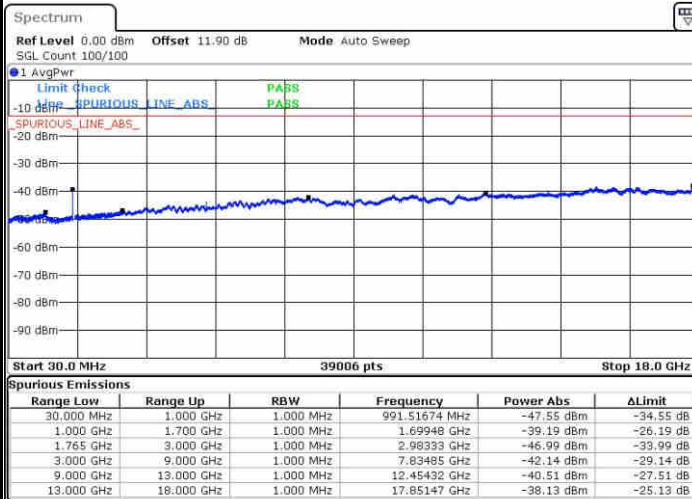
Date: 20 JAN 2019 18:10:44

Lowest Channel / 16QAM



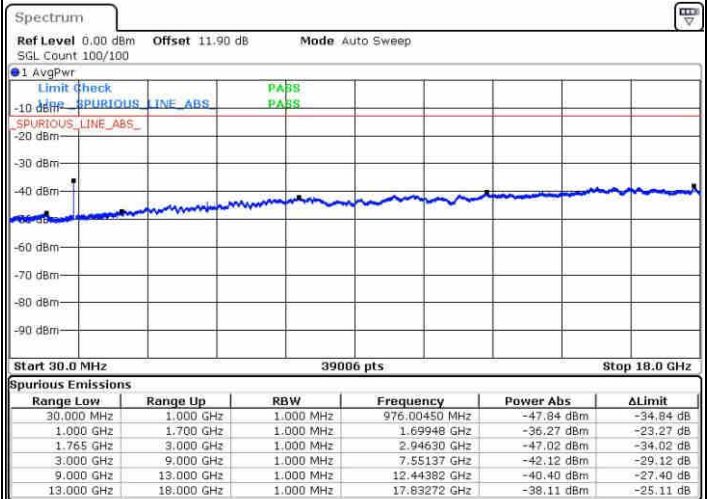
Date: 20 JAN 2019 18:11:45

Middle Channel / QPSK



Date: 20 JAN 2019 18:13:30

Middle Channel / 16QAM

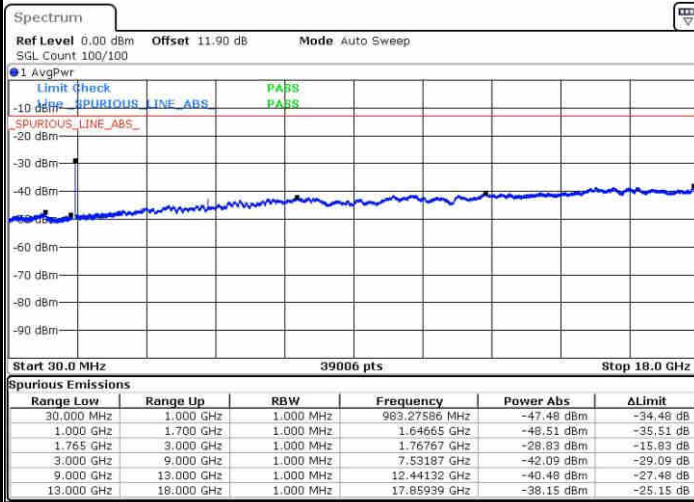


Date: 20 JAN 2019 18:14:31



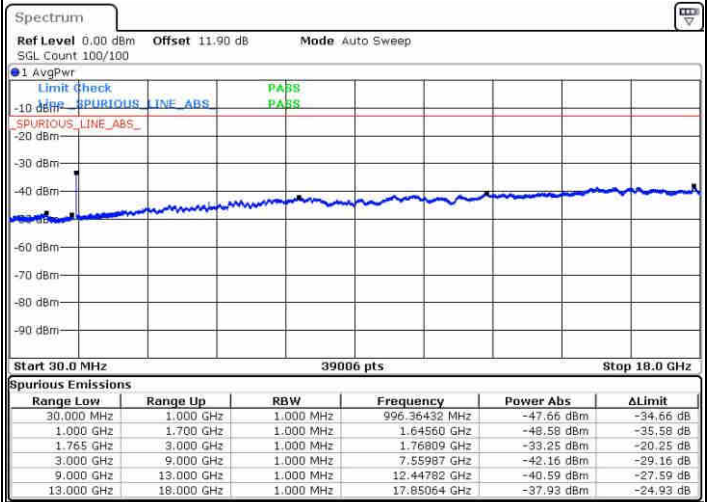
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 20 JAN 2019 18:20:17

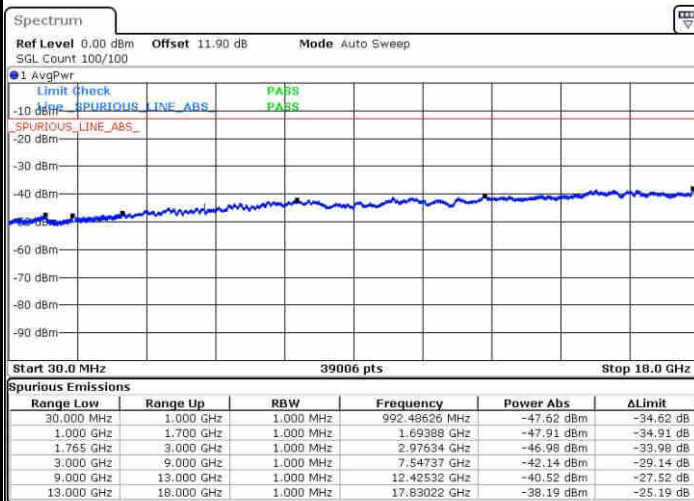
Highest Channel / 16QAM



Date: 20 JAN 2019 18:21:18

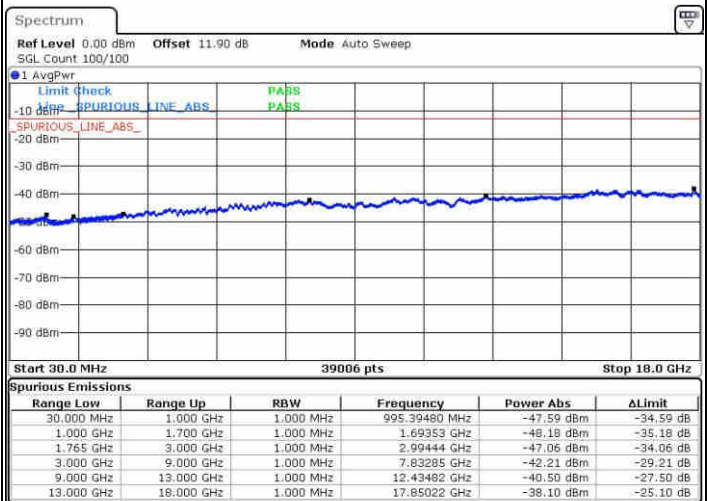
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 20 JAN 2019 18:27:04

Lowest Channel / 16QAM

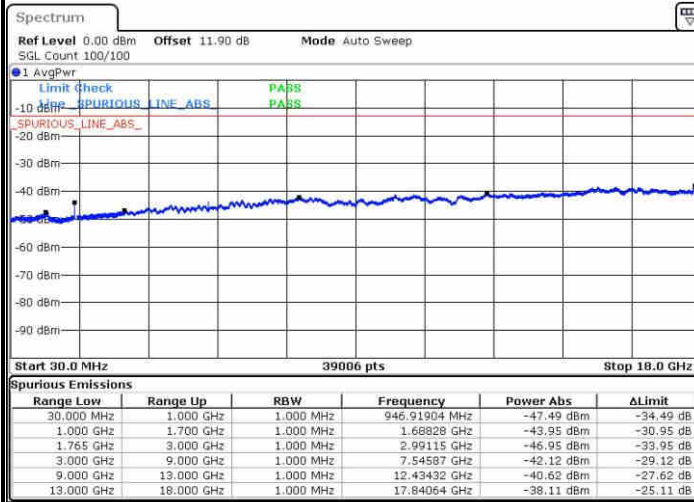


Date: 20 JAN 2019 18:28:05



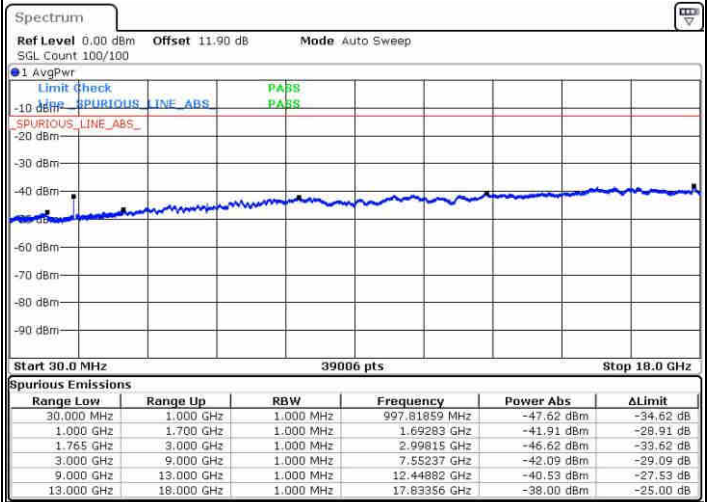
LTE Band 4 / 20MHz

Middle Channel / QPSK



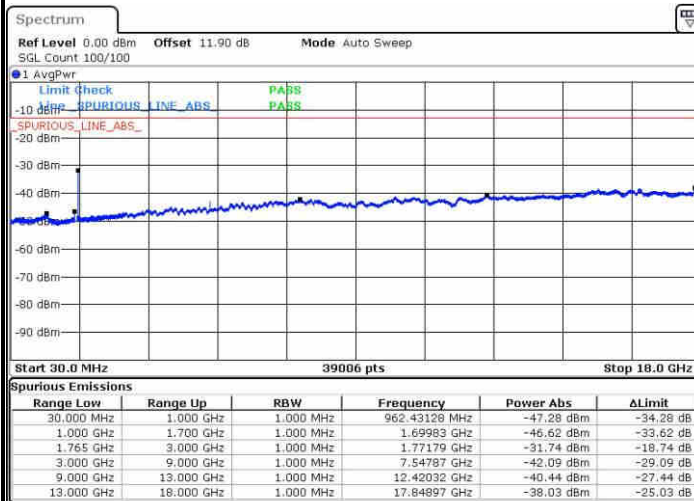
Date: 20 JAN 2019 18:29:51

Middle Channel / 16QAM



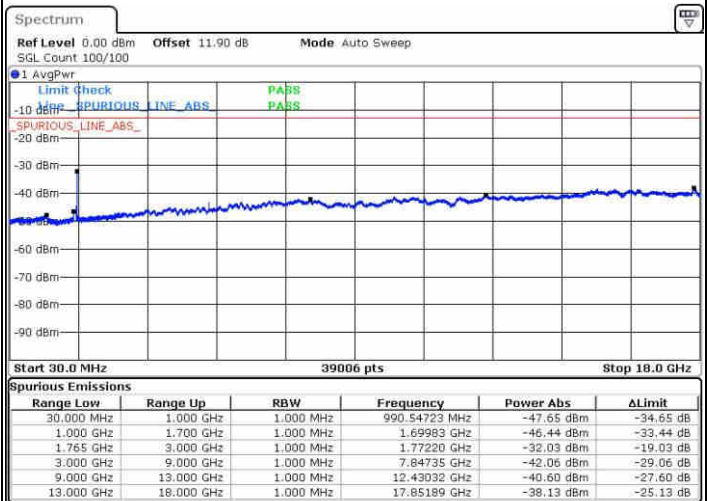
Date: 20 JAN 2019 18:30:51

Highest Channel / QPSK



Date: 20 JAN 2019 18:36:38

Highest Channel / 16QAM



Date: 20 JAN 2019 18:37:38

Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0087	PASS
40	Normal Voltage	0.0094	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0083	
0	Normal Voltage	0.0082	
-10	Normal Voltage	0.0095	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0090	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



<Ant. 2>

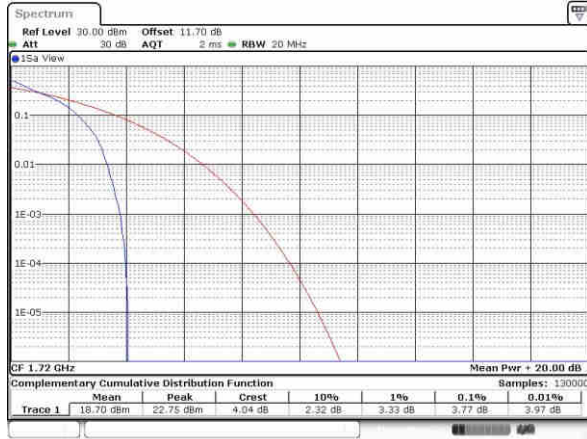
Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.77	4.84	5.01	5.59	PASS
Middle CH	4.87	5.3	5.83	6.23	
Highest CH	5.54	4.67	6.81	5.68	

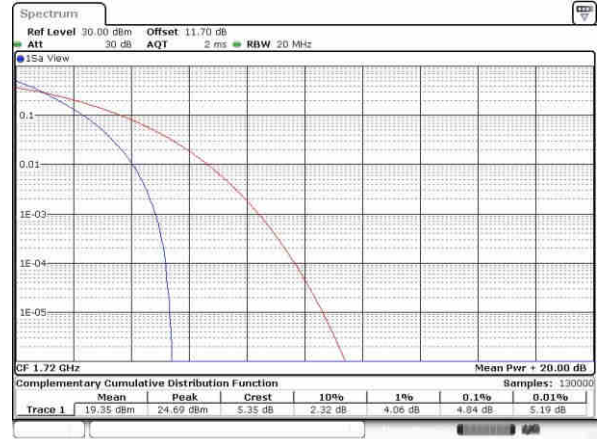


LTE Band 4 / 20MHz / QPSK

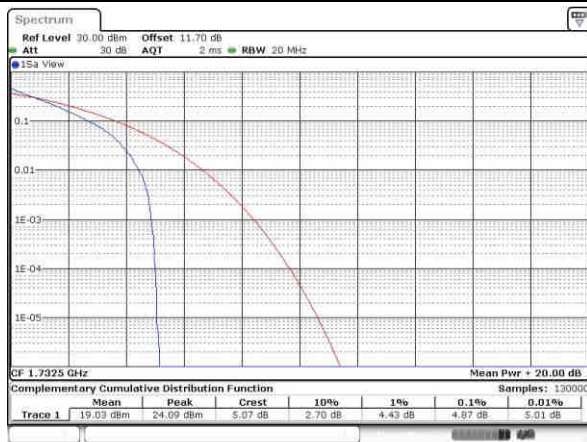
Lowest Channel / 1RB



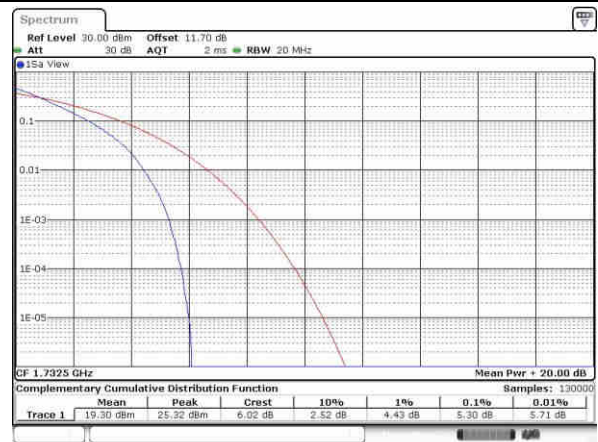
Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



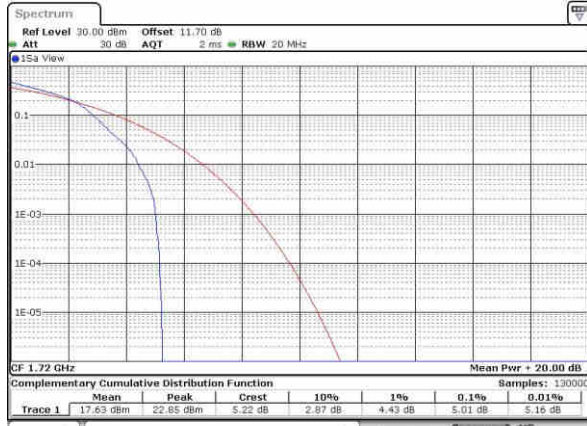
Highest Channel / Full RB



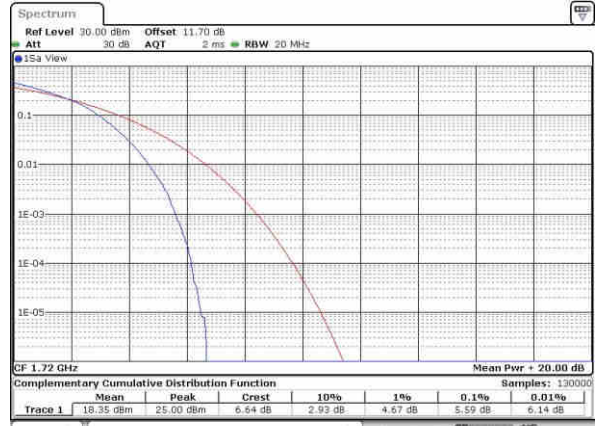


LTE Band 4 / 20MHz / 16QAM

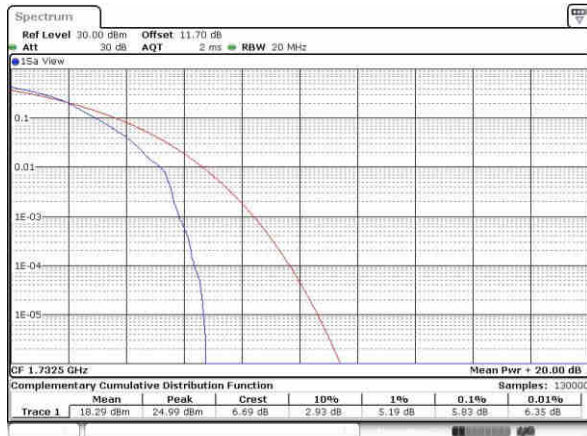
Lowest Channel / 1RB



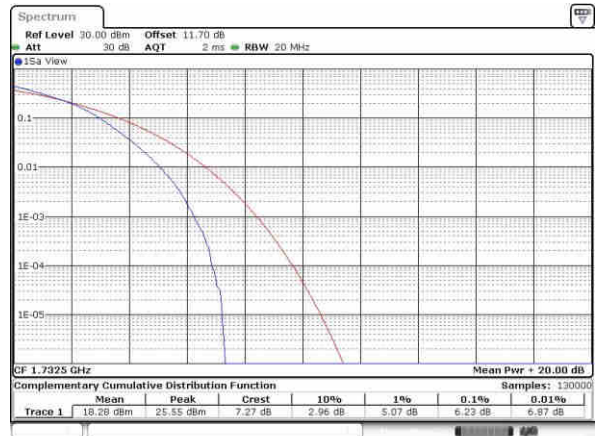
Lowest Channel / Full RB



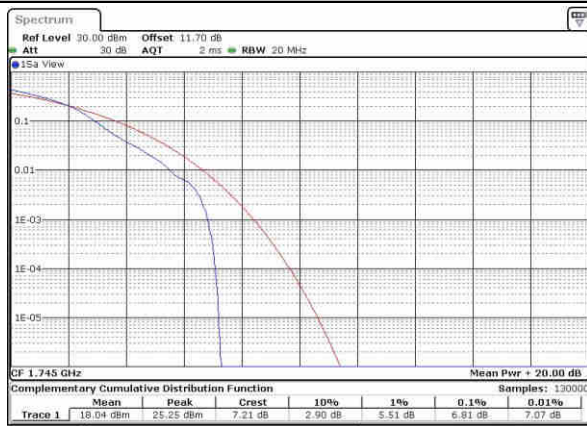
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





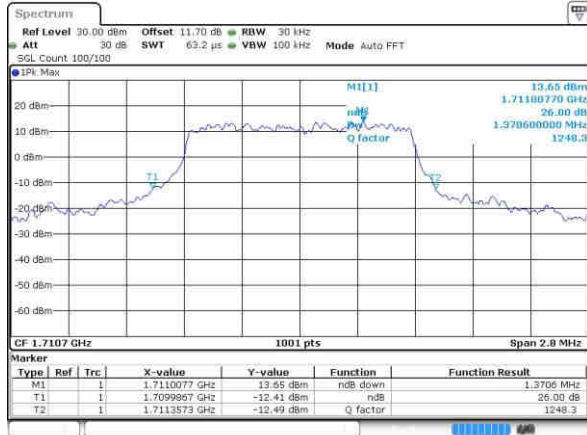
26dB Bandwidth

Mode	LTE Band 4 : 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	1.37	1.32	3.04	3.15	5.01	4.97	9.81	9.97	15.50	15.20	20.26	20.50
Middle CH	1.32	1.33	3.03	2.99	5.01	4.90	10.07	10.17	15.08	14.36	20.82	20.54
Highest CH	1.33	1.33	3.03	3.08	4.99	4.88	10.25	9.79	15.41	14.12	20.10	20.42

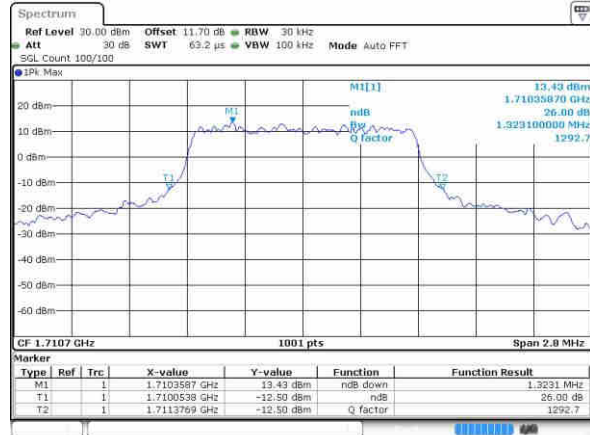


LTE Band 4

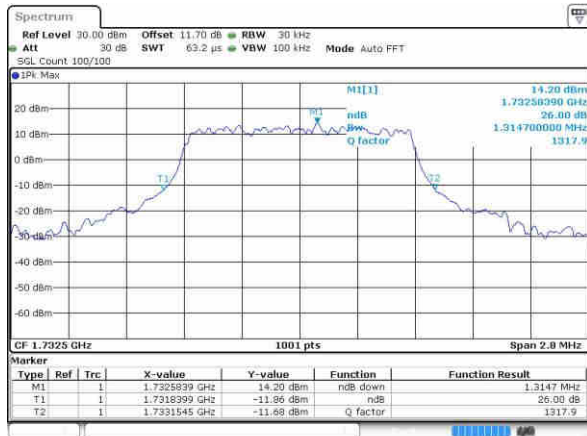
Lowest Channel / 1.4MHz / QPSK



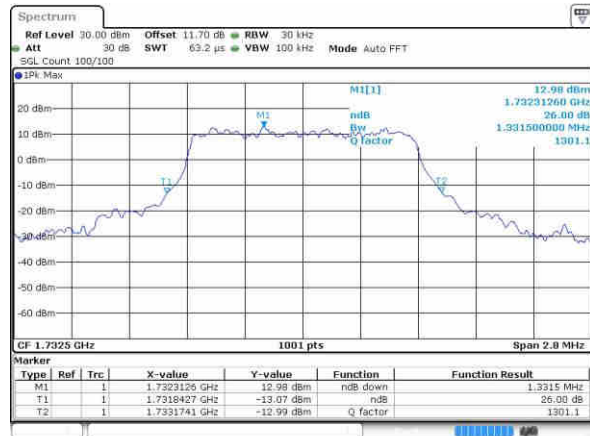
Lowest Channel / 1.4MHz / 16QAM



Middle Channel / 1.4MHz / QPSK



Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



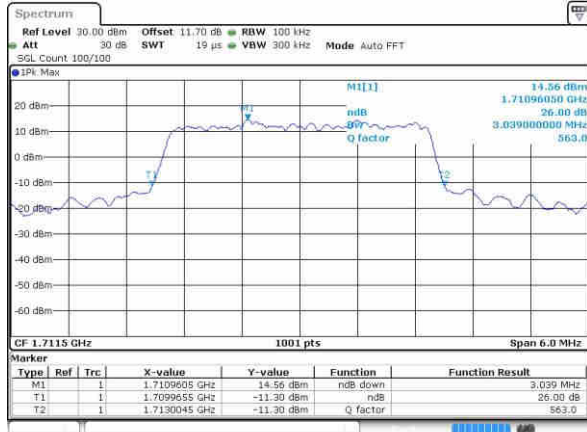
Highest Channel / 1.4MHz / 16QAM





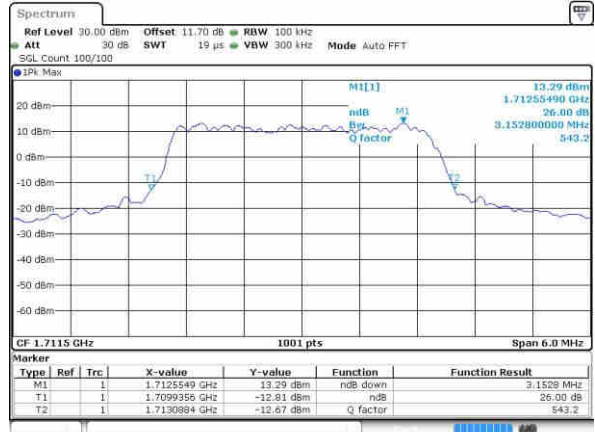
LTE Band 4

Lowest Channel / 3MHz / QPSK



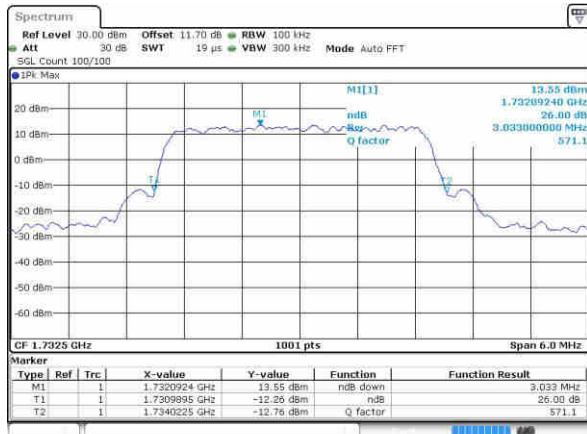
Date: 17 JAN 2019 09:14:26

Lowest Channel / 3MHz / 16QAM



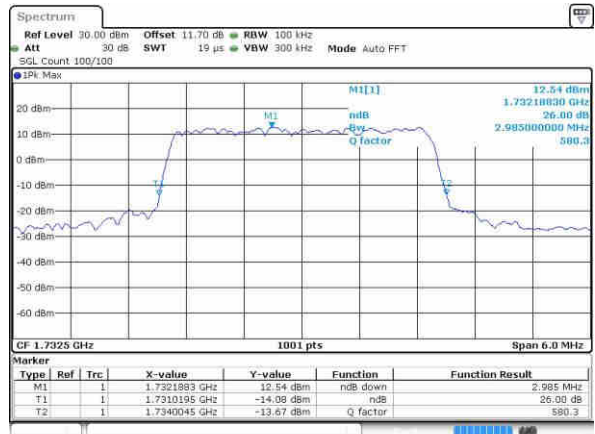
Date: 17 JAN 2019 09:14:37

Middle Channel / 3MHz / QPSK



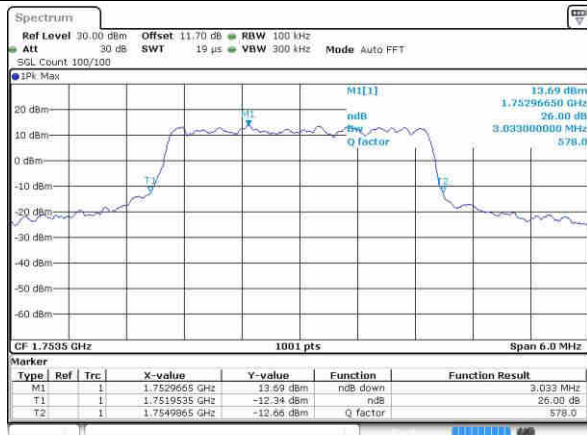
Date: 17 JAN 2019 09:21:14

Middle Channel / 3MHz / 16QAM



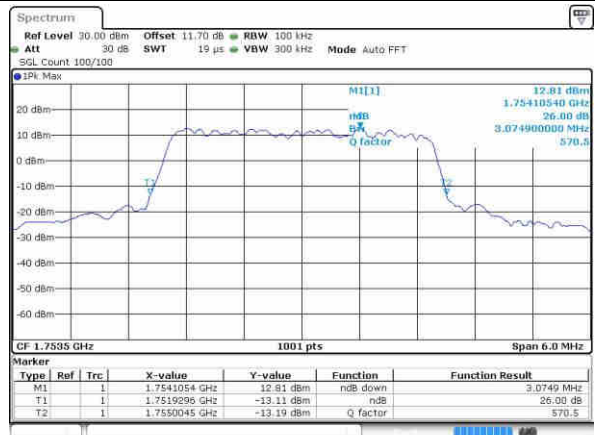
Date: 17 JAN 2019 09:21:25

Highest Channel / 3MHz / QPSK



Date: 17 JAN 2019 09:24:01

Highest Channel / 3MHz / 16QAM

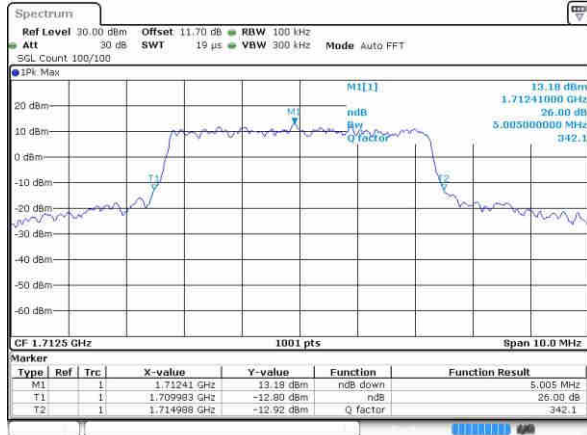


Date: 17 JAN 2019 09:24:12



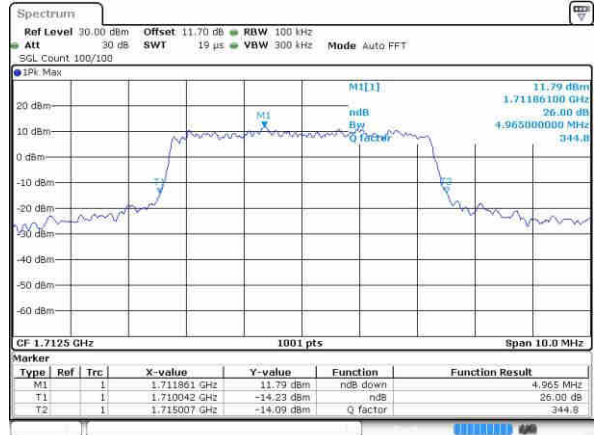
LTE Band 4

Lowest Channel / 5MHz / QPSK



Date: 17 JAN 2019 09:30:49

Lowest Channel / 5MHz / 16QAM



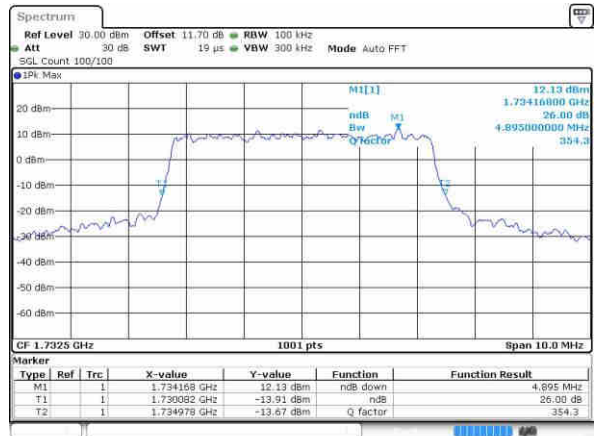
Date: 17 JAN 2019 09:31:00

Middle Channel / 5MHz / QPSK



Date: 17 JAN 2019 09:37:37

Middle Channel / 5MHz / 16QAM



Date: 17 JAN 2019 09:37:46

Highest Channel / 5MHz / QPSK



Date: 17 JAN 2019 09:40:24

Highest Channel / 5MHz / 16QAM

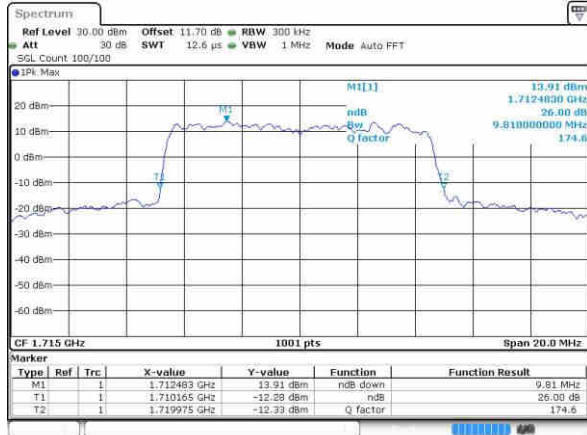


Date: 17 JAN 2019 09:40:35



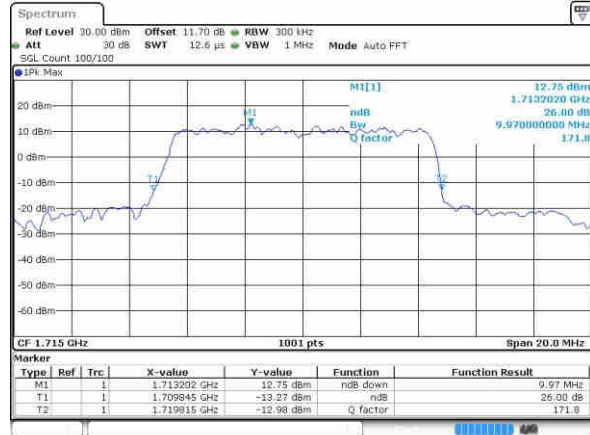
LTE Band 4

Lowest Channel / 10MHz / QPSK



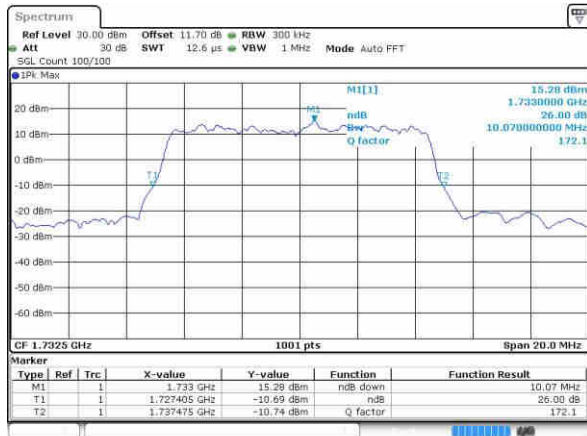
Date: 17 JAN 2019 09:47:12

Lowest Channel / 10MHz / 16QAM



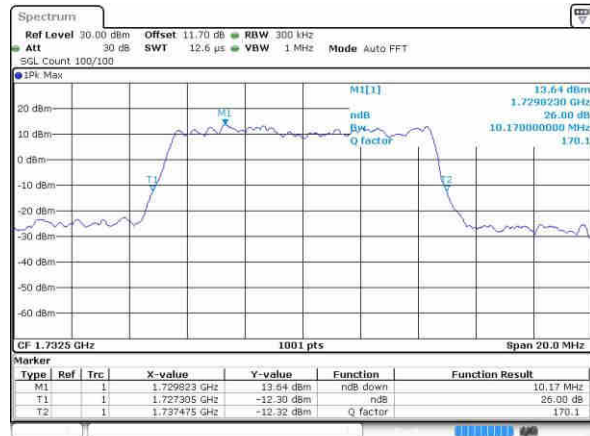
Date: 17 JAN 2019 10:02:52

Middle Channel / 10MHz / QPSK



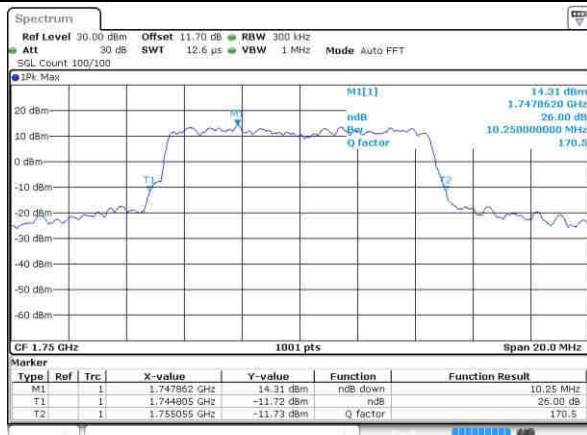
Date: 17 JAN 2019 10:09:29

Middle Channel / 10MHz / 16QAM



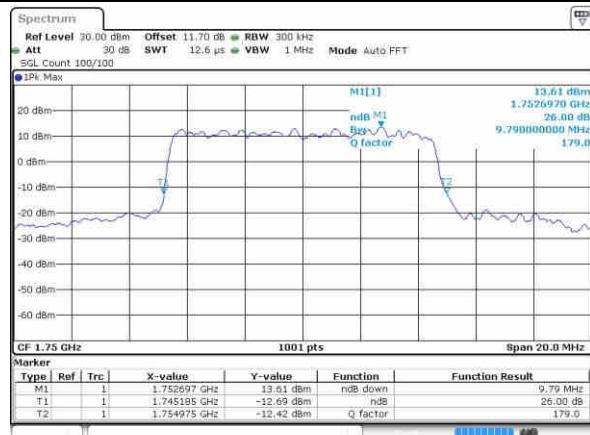
Date: 17 JAN 2019 10:09:40

Highest Channel / 10MHz / QPSK



Date: 17 JAN 2019 12:41:01

Highest Channel / 10MHz / 16QAM

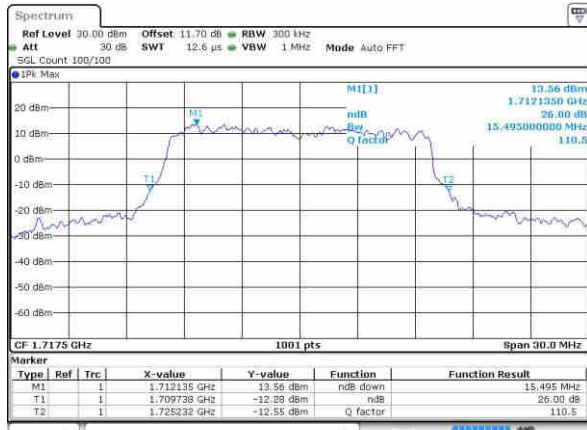


Date: 17 JAN 2019 12:42:19



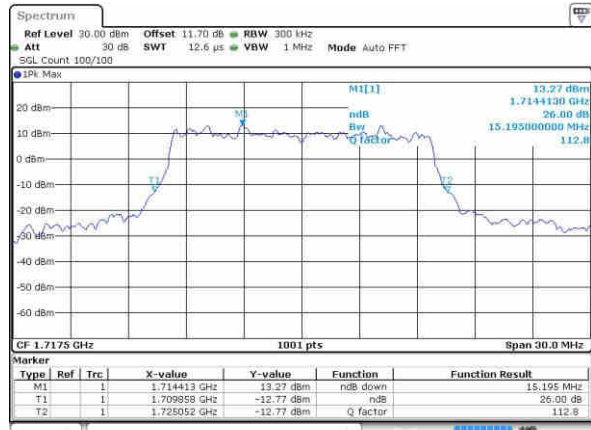
LTE Band 4

Lowest Channel / 15MHz / QPSK



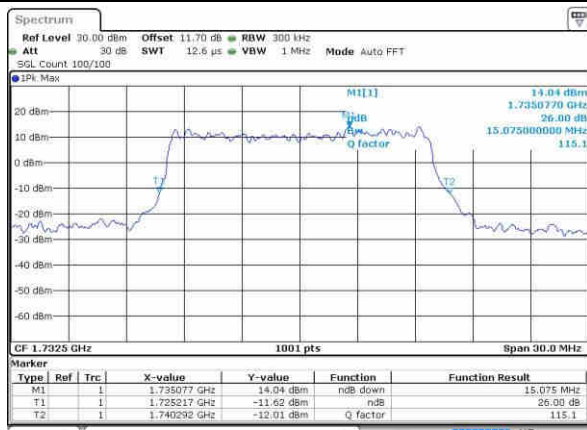
Date: 17 JAN 2019 12:48:59

Lowest Channel / 15MHz / 16QAM



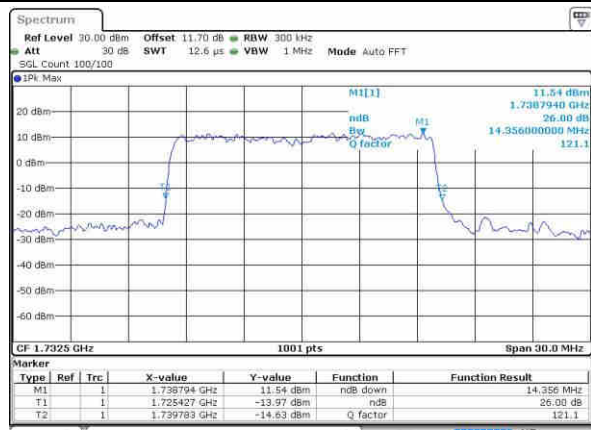
Date: 17 JAN 2019 12:49:07

Middle Channel / 15MHz / QPSK



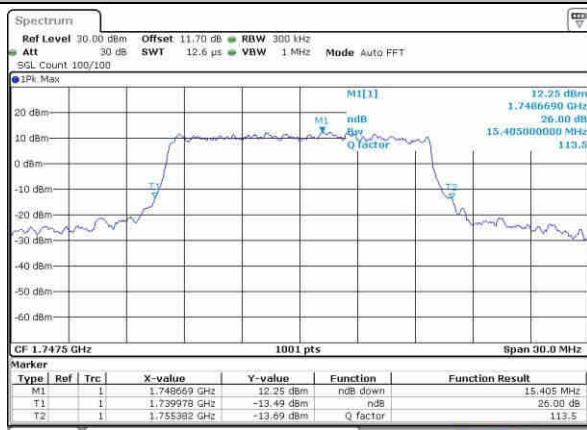
Date: 17 JAN 2019 12:55:44

Middle Channel / 15MHz / 16QAM



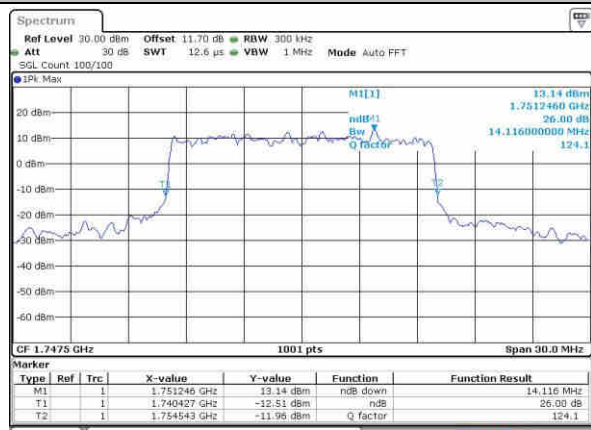
Date: 17 JAN 2019 12:55:55

Highest Channel / 15MHz / QPSK



Date: 17 JAN 2019 13:11:43

Highest Channel / 15MHz / 16QAM

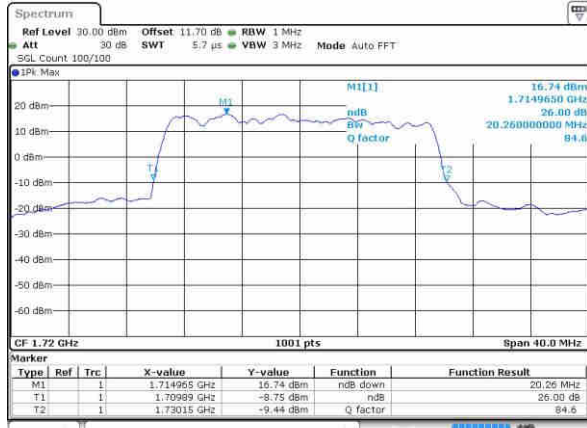


Date: 17 JAN 2019 13:11:54



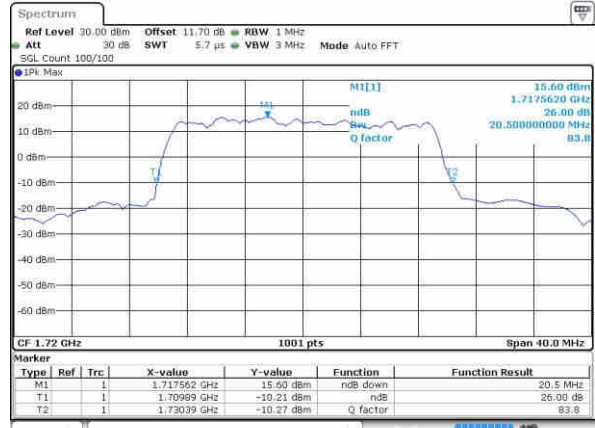
LTE Band 4

Lowest Channel / 20MHz / QPSK



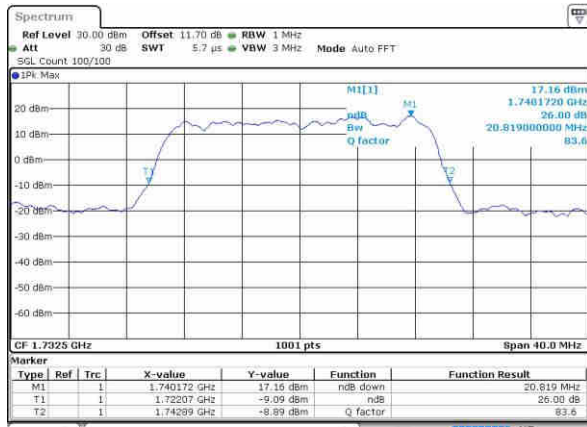
Date: 17 JAN 2019 13:18:31

Lowest Channel / 20MHz / 16QAM



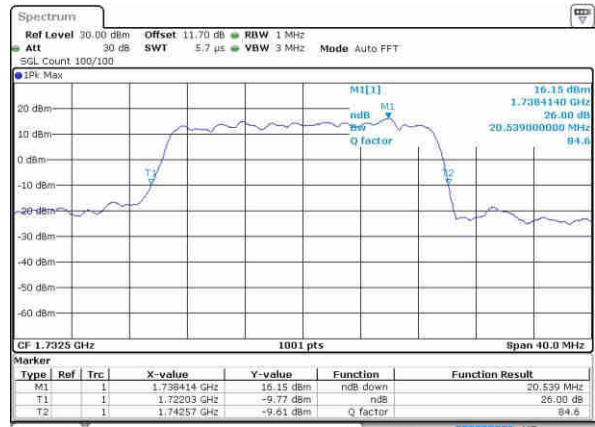
Date: 17 JAN 2019 13:18:43

Middle Channel / 20MHz / QPSK



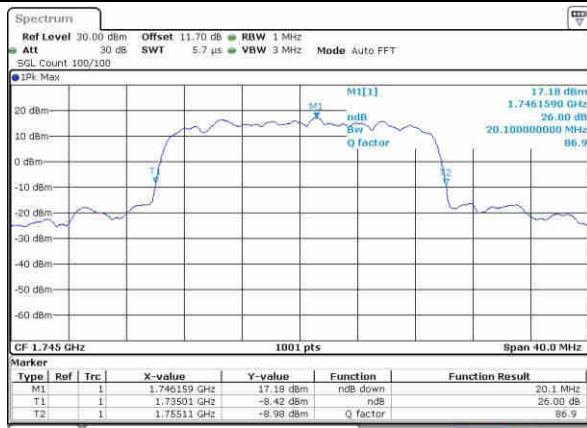
Date: 17 JAN 2019 13:25:19

Middle Channel / 20MHz / 16QAM



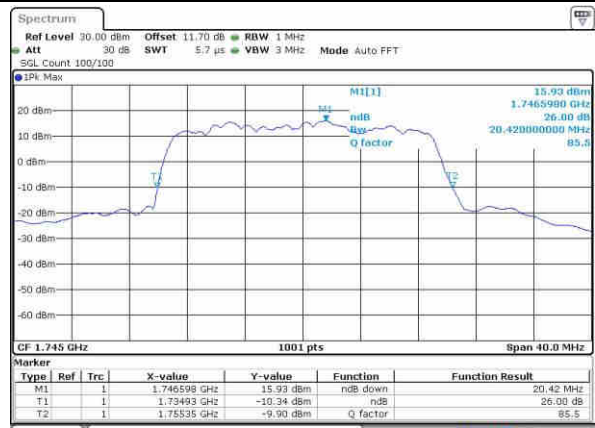
Date: 17 JAN 2019 13:25:31

Highest Channel / 20MHz / QPSK



Date: 17 JAN 2019 13:28:07

Highest Channel / 20MHz / 16QAM



Date: 17 JAN 2019 13:28:18

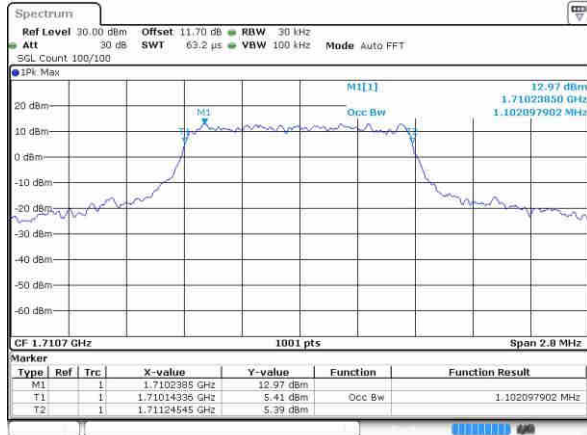
**Occupied Bandwidth**

Mode	LTE Band 4 : 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	1.1	1.1	2.73	2.75	4.49	4.48	9.05	9.01	13.55	13.43	18.3	18.46
Middle CH	1.11	1.1	2.73	2.71	4.51	4.49	9.07	8.99	13.58	13.46	18.54	18.5
Highest CH	1.09	1.09	2.73	2.74	4.49	4.51	9.05	8.99	13.43	13.34	18.22	18.3

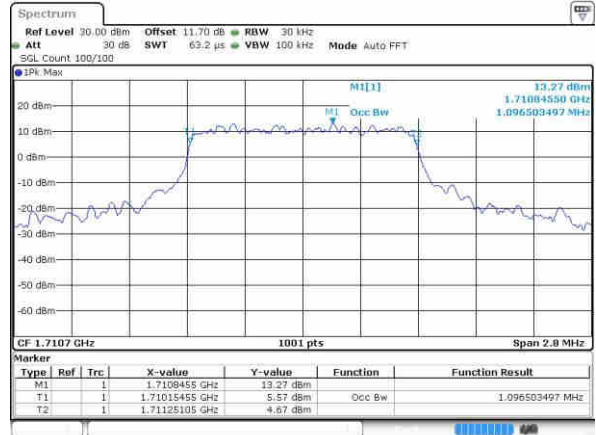


LTE Band 4

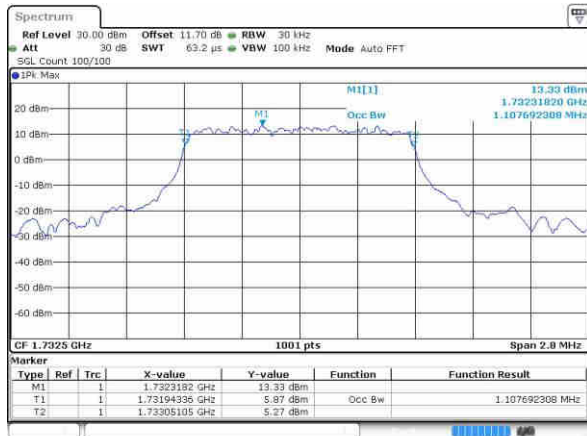
Lowest Channel / 1.4MHz / QPSK



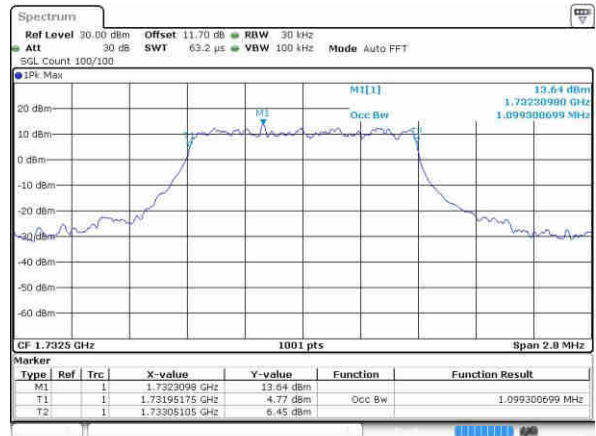
Lowest Channel / 1.4MHz / 16QAM



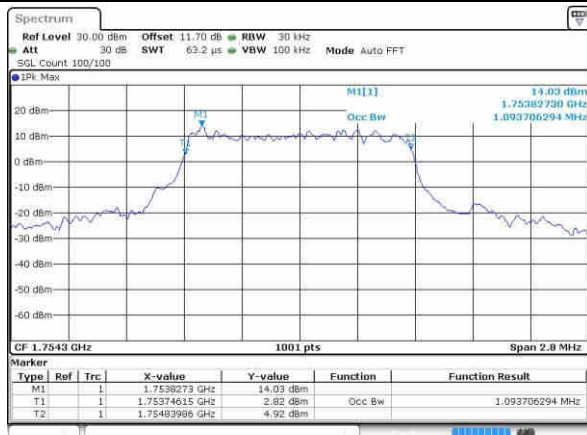
Middle Channel / 1.4MHz / QPSK



Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



Highest Channel / 1.4MHz / 16QAM

