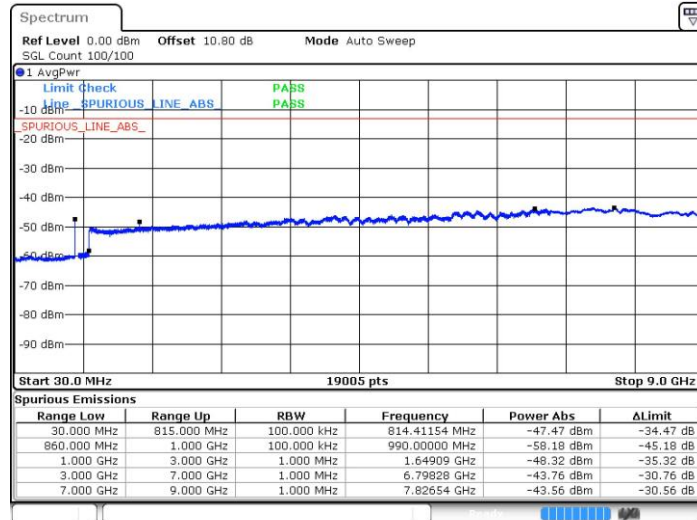




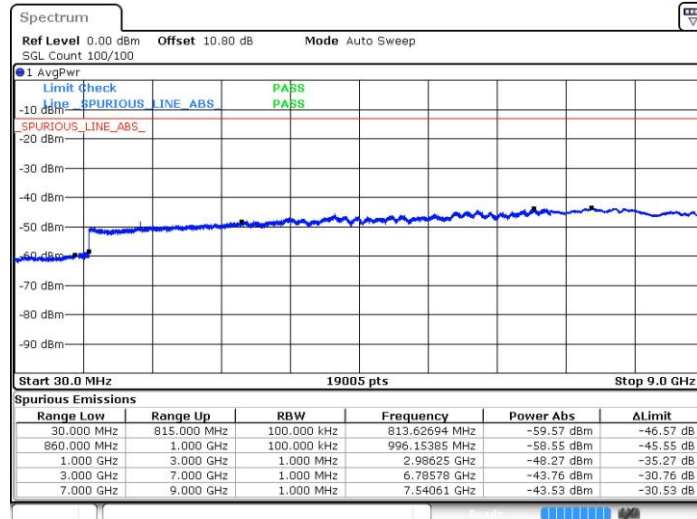
LTE Band 5 / 5MHz

Lowest Channel / QPSK



Date: 15 JUL 2018 19:14:49

Middle Channel / QPSK

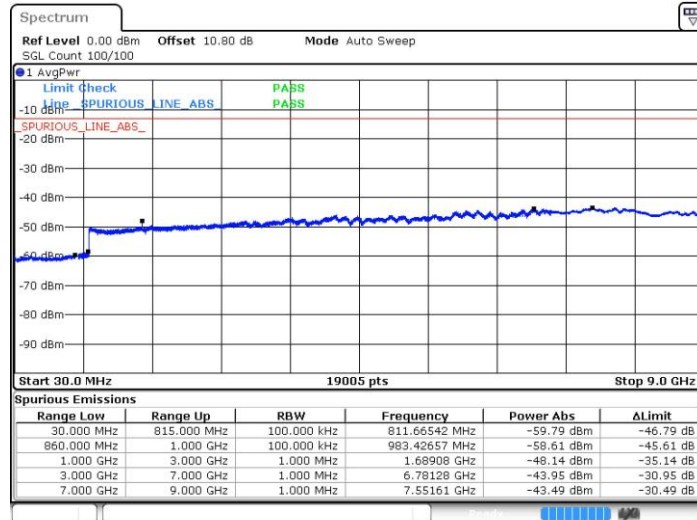


Date: 15 JUL 2018 19:17:55



LTE Band 5 / 5MHz

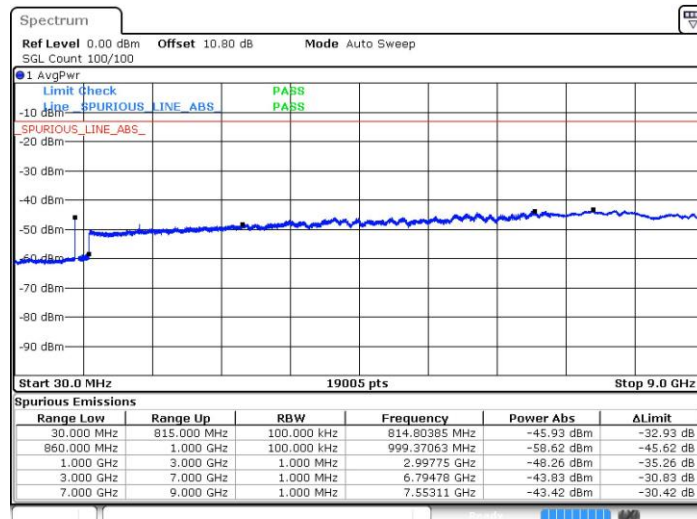
Highest Channel / QPSK



Date: 15 JUL 2018 19:27:42

LTE Band 5 / 10MHz

Lowest Channel / QPSK

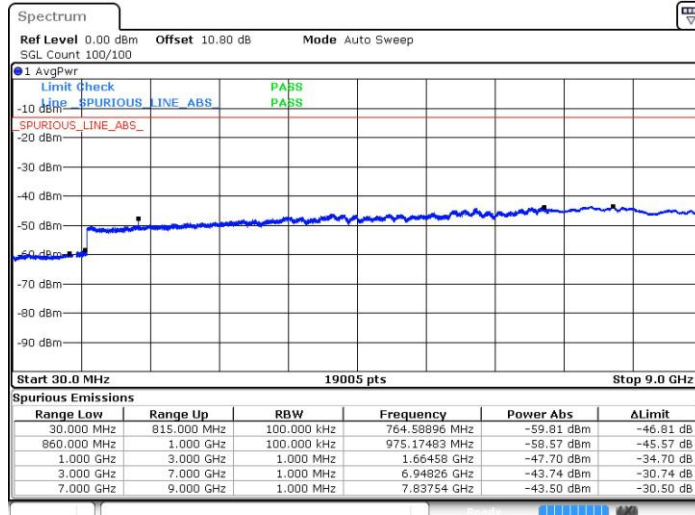


Date: 15 JUL 2018 19:37:28



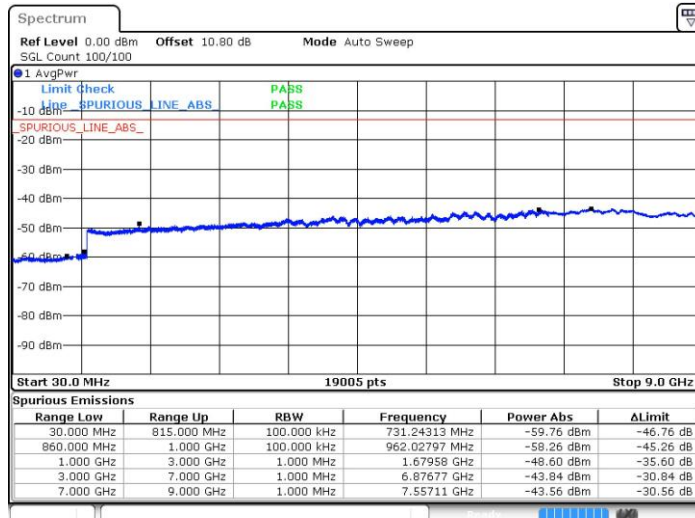
LTE Band 5 / 10MHz

Middle Channel / QPSK



Date: 15 JUL 2018 19:40:34

Highest Channel / QPSK



Date: 15 JUL 2018 19:50:21



Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0043	PASS
40	Normal Voltage	0.0038	
30	Normal Voltage	0.0051	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0062	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0049	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0061	

Note:

1. Normal Voltage =12.0 V. ; Battery End Point (BEP) =10.8 V. ; Maximum Voltage =13.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 7

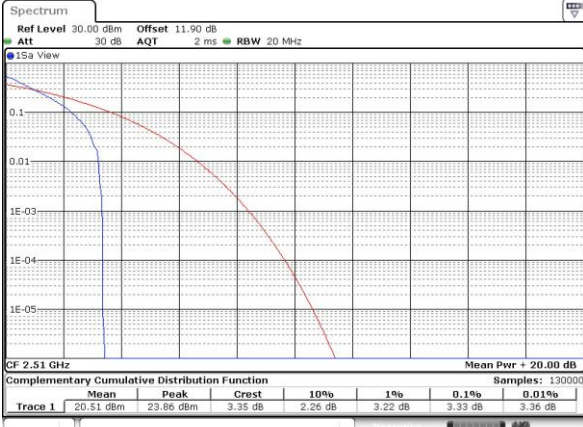
### Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.33	4.32	-	-	PASS
Middle CH	3.71	4.29	-	-	
Highest CH	3.42	4.29	-	-	



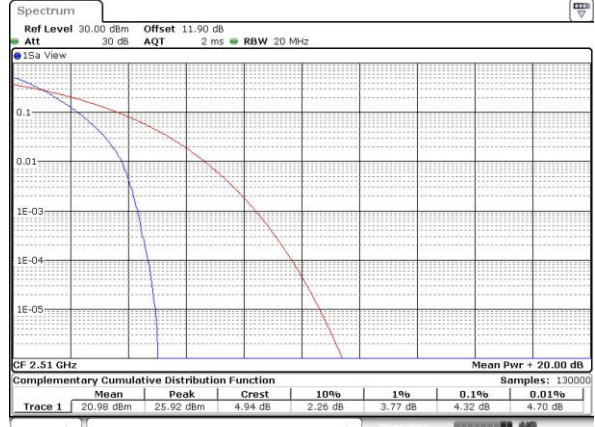
LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



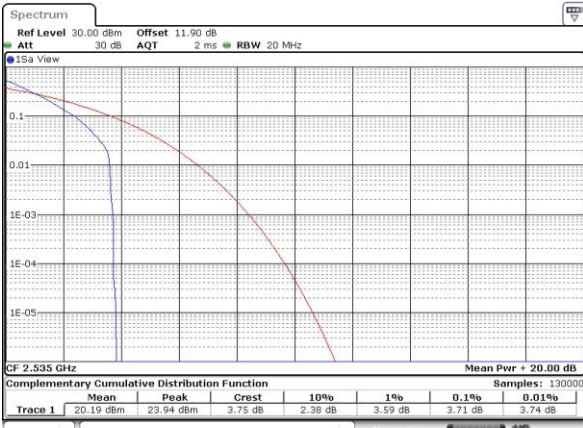
Date: 17 JUL 2018 05:45:15

Lowest Channel / Full RB



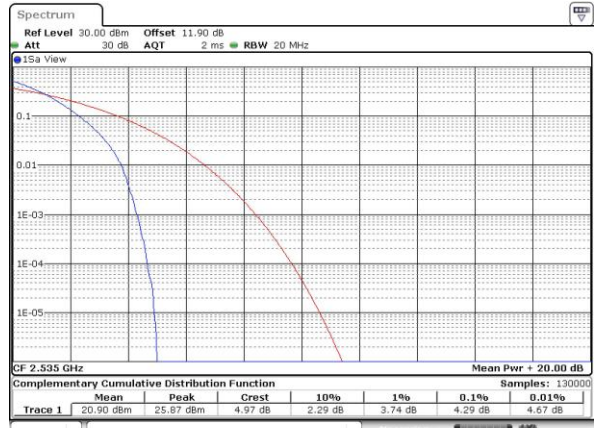
Date: 17 JUL 2018 05:45:25

Middle Channel / 1RB



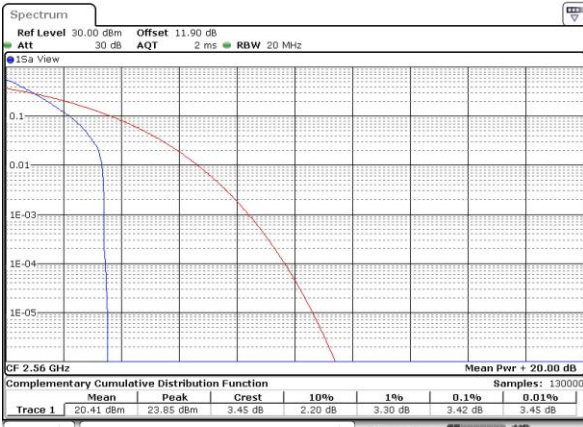
Date: 17 JUL 2018 05:45:35

Middle Channel / Full RB



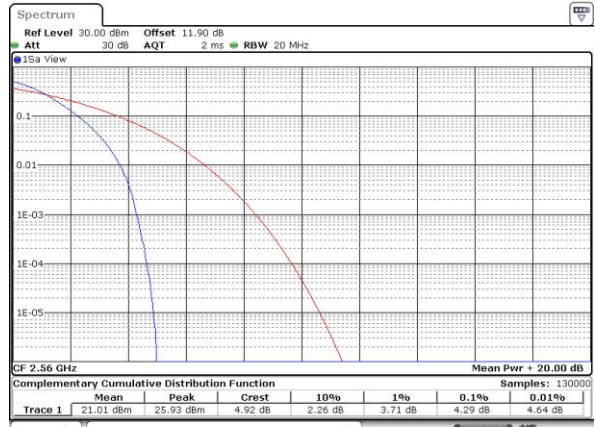
Date: 17 JUL 2018 05:45:46

Highest Channel / 1RB



Date: 17 JUL 2018 05:45:56

Highest Channel / Full RB



Date: 17 JUL 2018 05:46:06



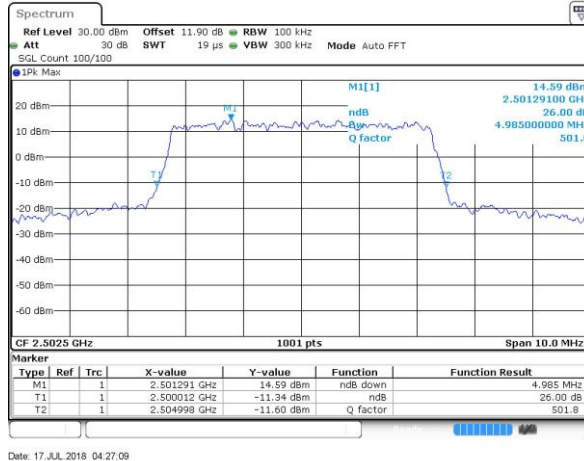
**26dB Bandwidth**

Mode	LTE Band 7 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.99	-	9.85	-	14.42	-	20.22	-
Middle CH	-	-	-	-	4.83	-	9.83	-	14.54	-	20.06	-
Highest CH	-	-	-	-	4.89	-	9.71	-	14.27	-	20.14	-

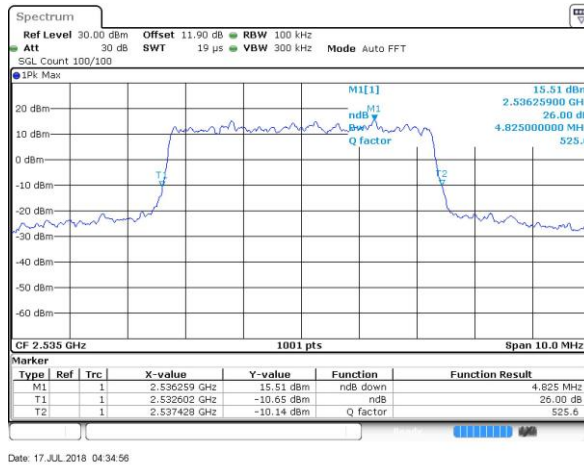


LTE Band 7

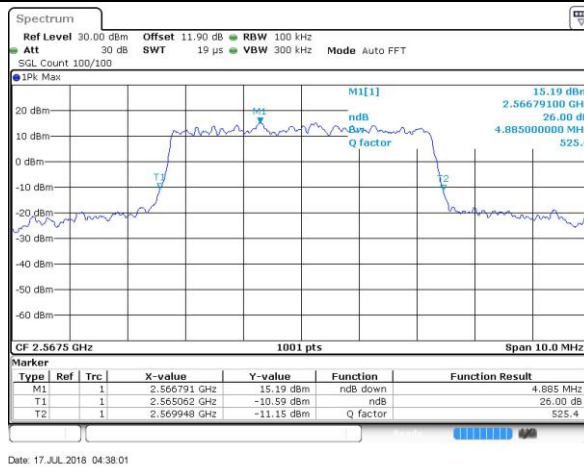
Lowest Channel / 5MHz / QPSK



Middle Channel / 5MHz / QPSK



Highest Channel / 5MHz / QPSK

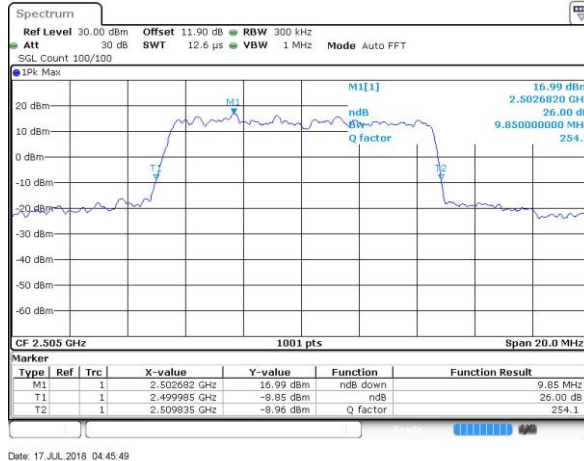




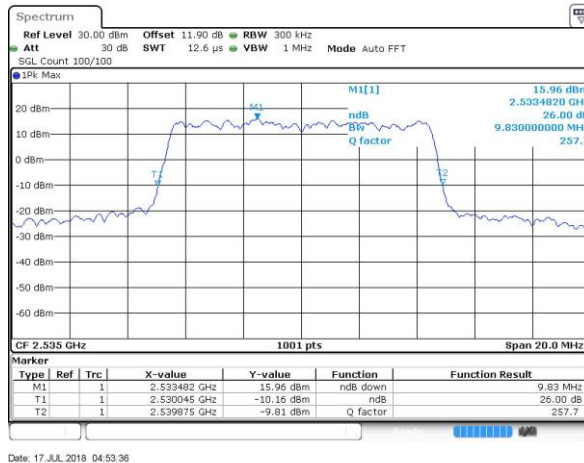


LTE Band 7

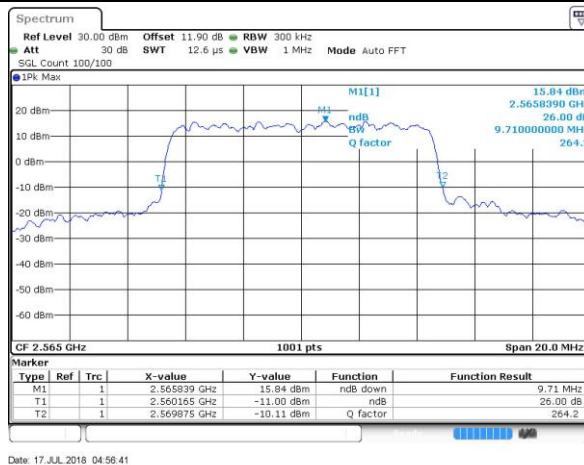
Lowest Channel / 10MHz / QPSK



Middle Channel / 10MHz / QPSK



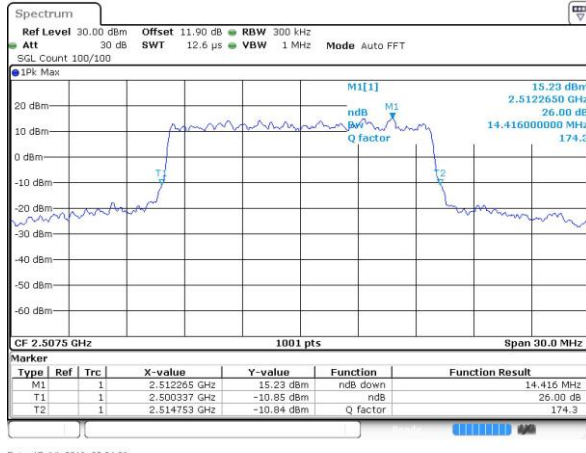
Highest Channel / 10MHz / QPSK





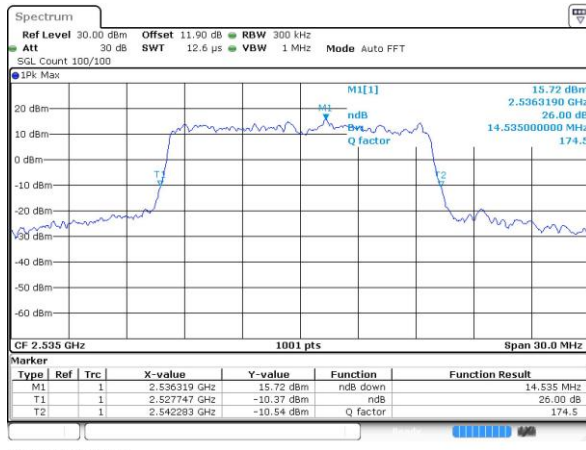
LTE Band 7

Lowest Channel / 15MHz / QPSK



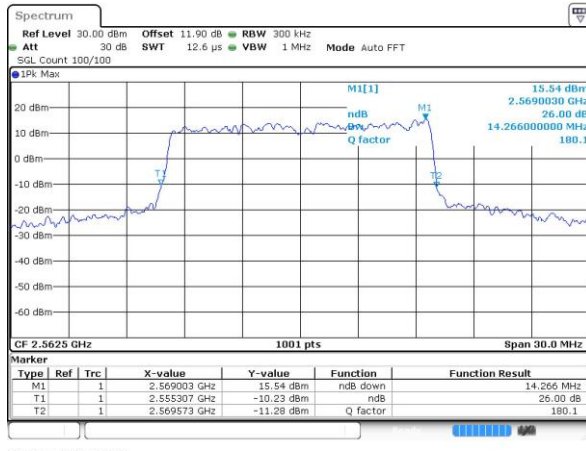
Date: 17 JUL 2018 05:04:28

Middle Channel / 15MHz / QPSK



Date: 17 JUL 2018 05:12:16

Highest Channel / 15MHz / QPSK

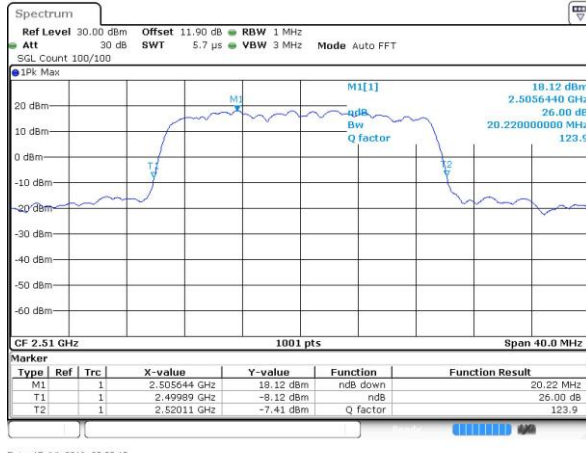


Date: 17 JUL 2018 05:15:21



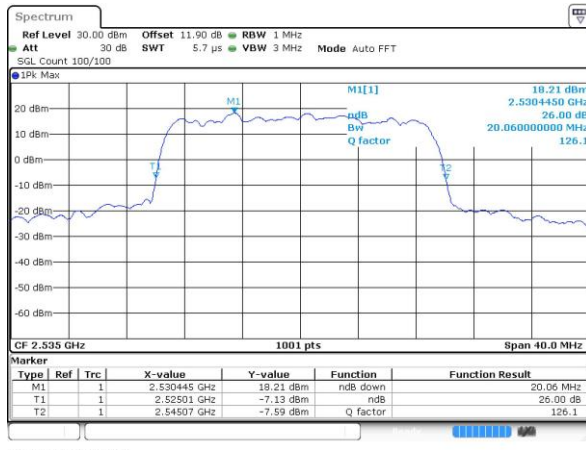
LTE Band 7

Lowest Channel / 20MHz / QPSK



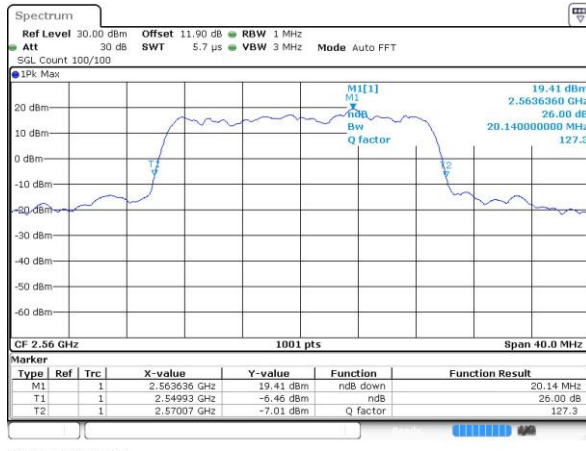
Date: 17 JUL 2018 05:25:15

Middle Channel / 20MHz / QPSK



Date: 17 JUL 2018 05:33:02

Highest Channel / 20MHz / QPSK



Date: 17 JUL 2018 05:36:07



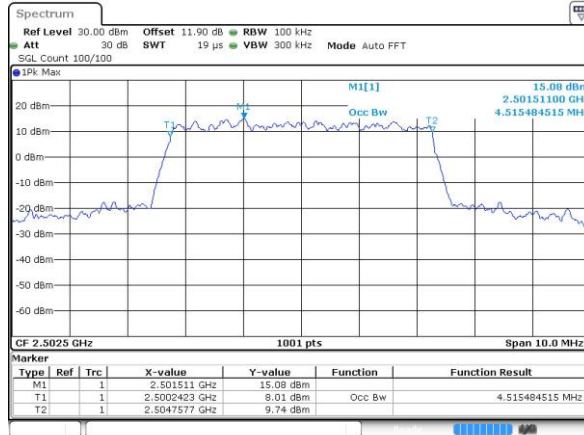
**Occupied Bandwidth**

Mode	LTE Band 7 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.52	-	9.05	-	13.46	-	18.22	-
Middle CH	-	-	-	-	4.51	-	9.01	-	13.49	-	18.30	-
Highest CH	-	-	-	-	4.50	-	8.99	-	13.43	-	18.30	-



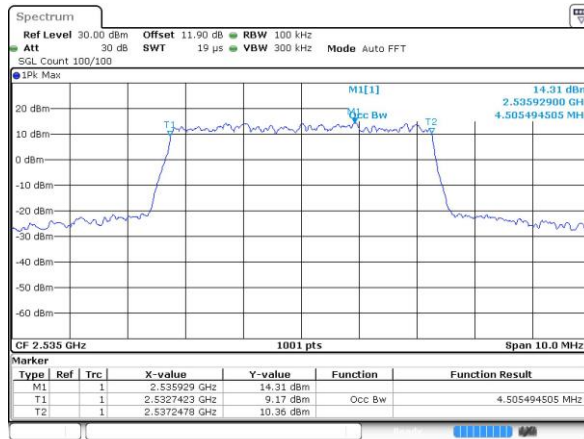
LTE Band 7

Lowest Channel / 5MHz / QPSK



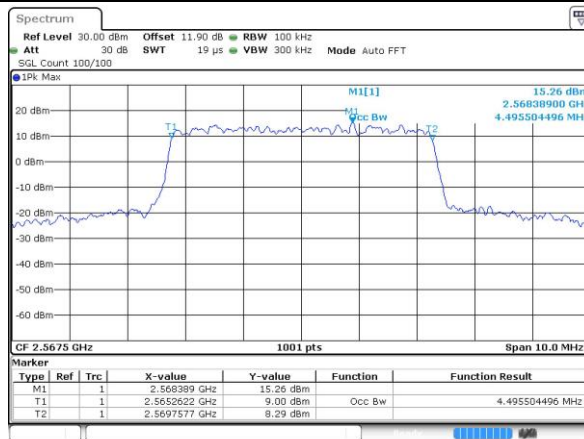
Date: 17 JUL 2018 04:26:46

Middle Channel / 5MHz / QPSK



Date: 17 JUL 2018 04:34:33

Highest Channel / 5MHz / QPSK

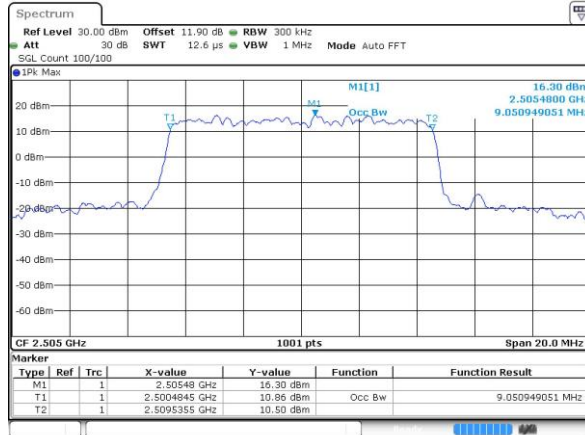


Date: 17 JUL 2018 04:37:38



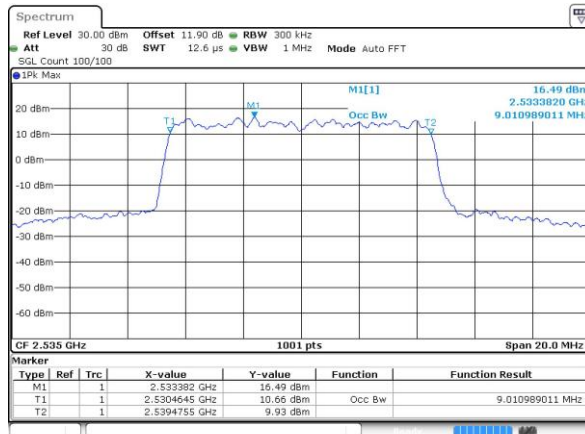
LTE Band 7

Lowest Channel / 10MHz / QPSK



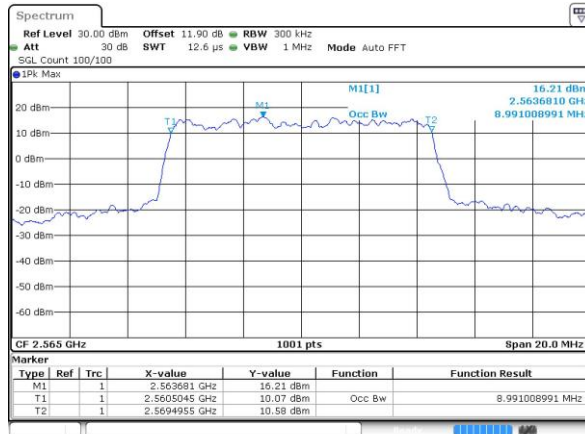
Date: 17 JUL 2018 04:45:26

Middle Channel / 10MHz / QPSK



Date: 17 JUL 2018 04:53:13

Highest Channel / 10MHz / QPSK

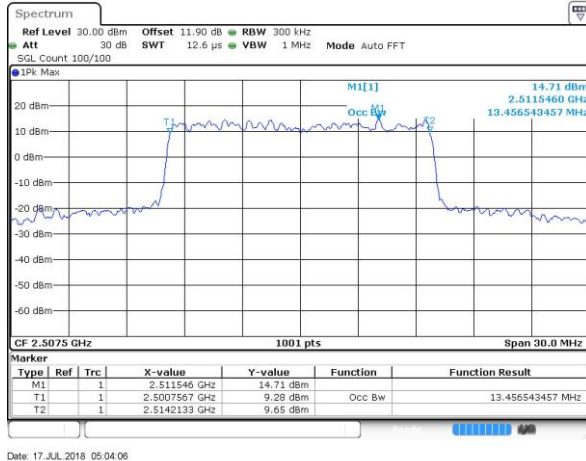


Date: 17 JUL 2018 04:56:18



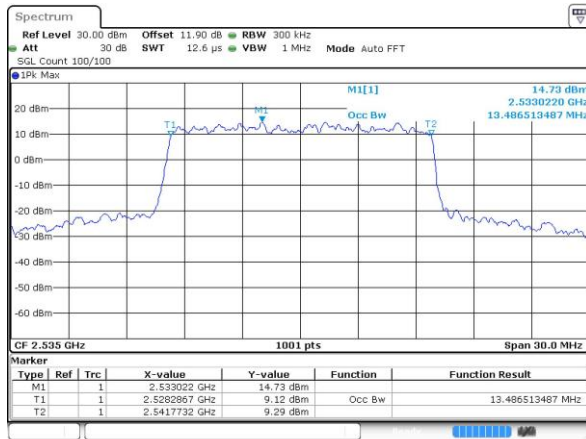
LTE Band 7

Lowest Channel / 15MHz / QPSK



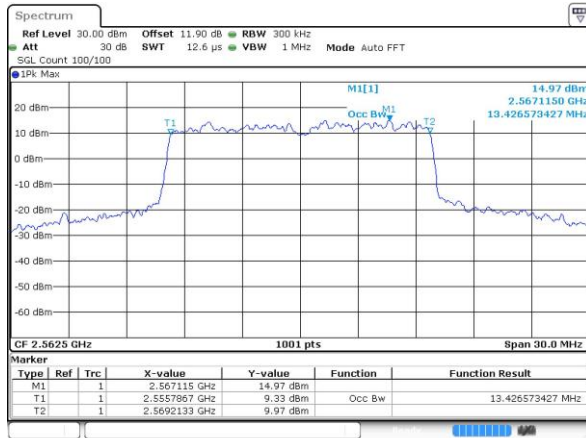
Date: 17 JUL 2018 05:04:06

Middle Channel / 15MHz / QPSK



Date: 17 JUL 2018 05:11:53

Highest Channel / 15MHz / QPSK

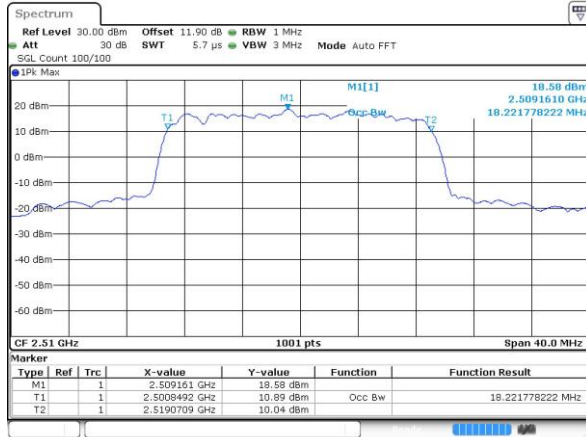


Date: 17 JUL 2018 05:14:58



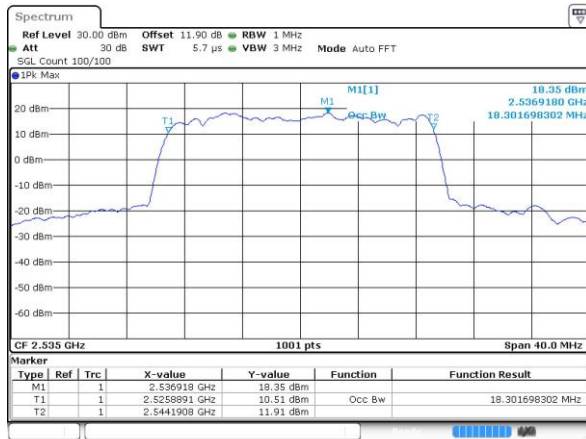
LTE Band 7

Lowest Channel / 20MHz / QPSK



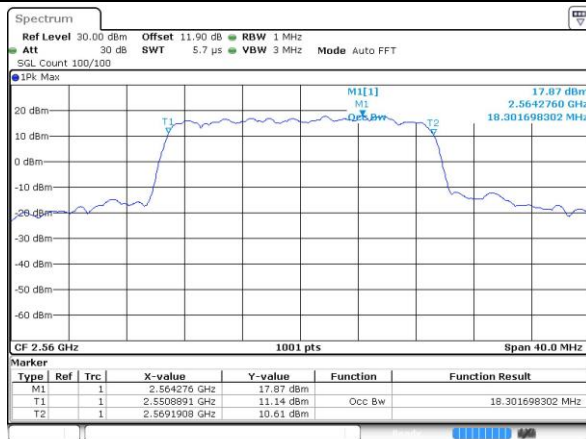
Date: 17 JUL 2018 05:24:52

Middle Channel / 20MHz / QPSK



Date: 17 JUL 2018 05:32:39

Highest Channel / 20MHz / QPSK

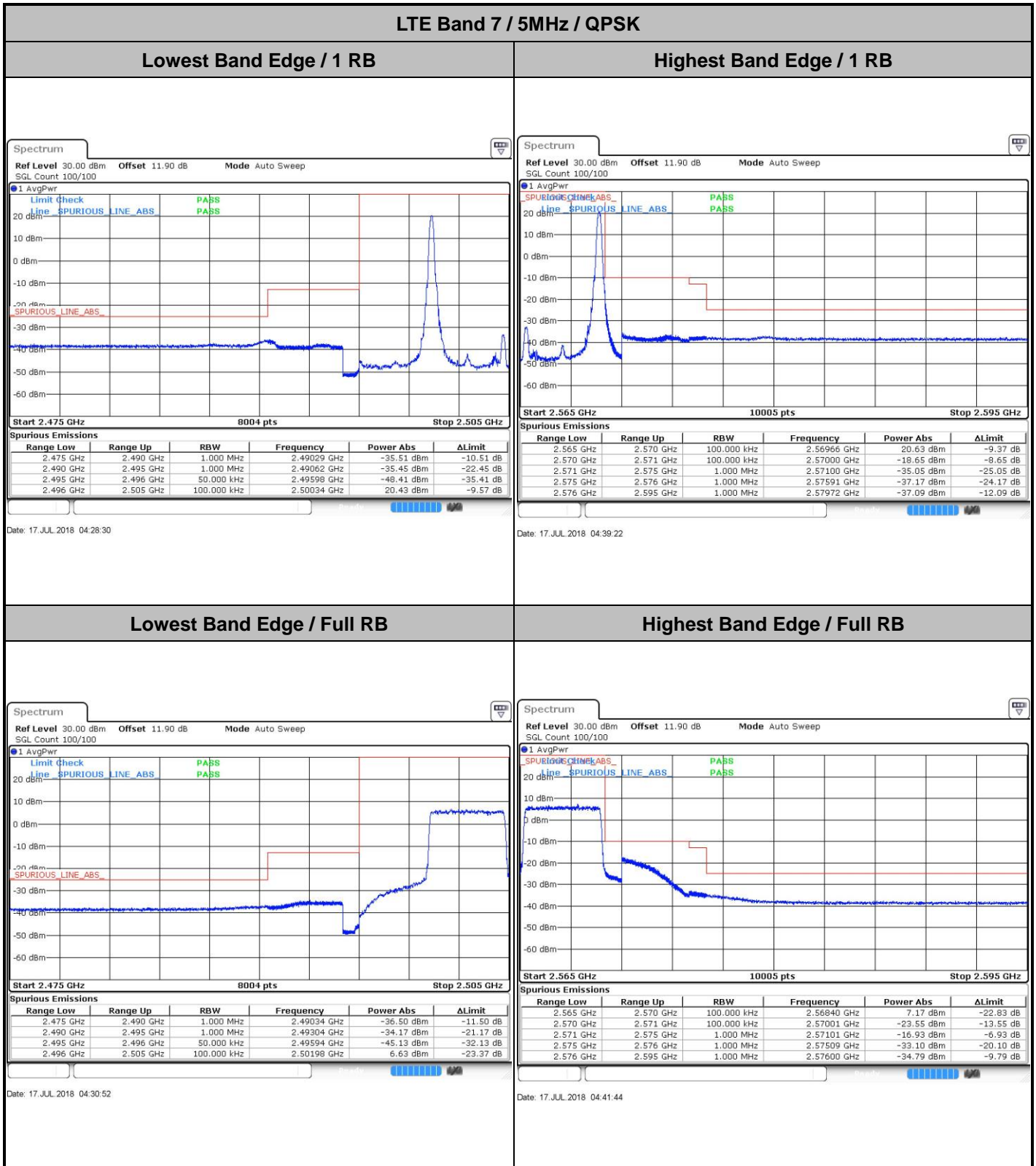


Date: 17 JUL 2018 05:35:44





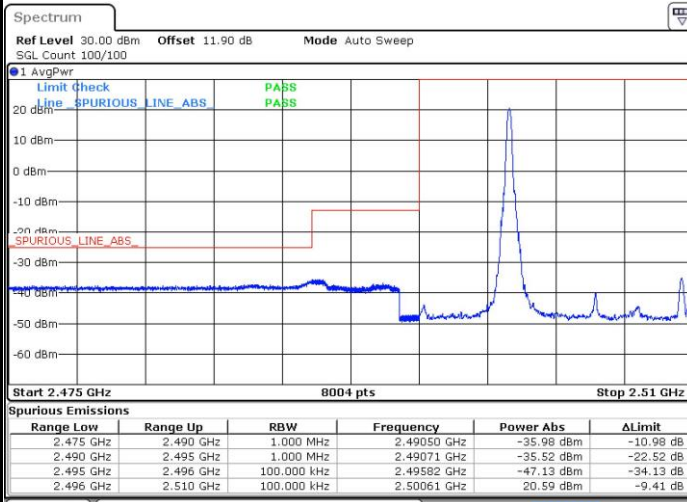
Conducted Band Edge





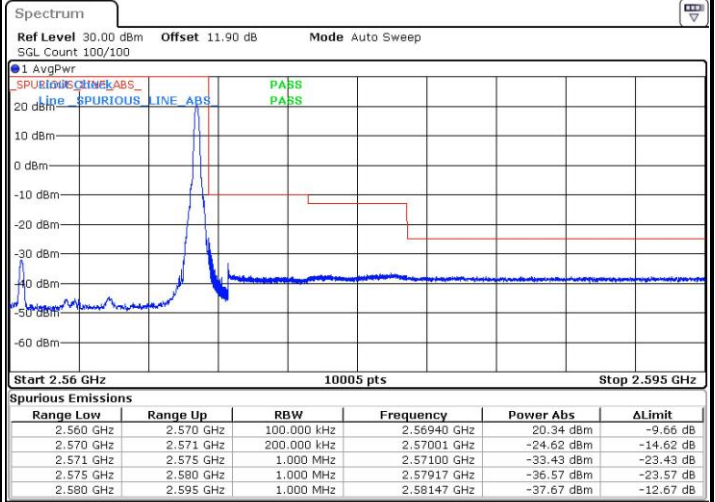
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



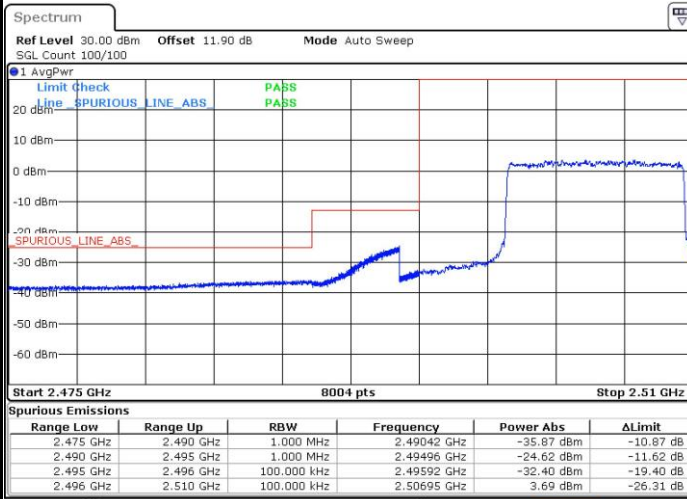
Date: 17.JUL.2018 04:47:10

Highest Band Edge / 1 RB



Date: 17.JUL.2018 04:58:02

Lowest Band Edge / Full RB



Date: 17.JUL.2018 04:49:31

Highest Band Edge / Full RB

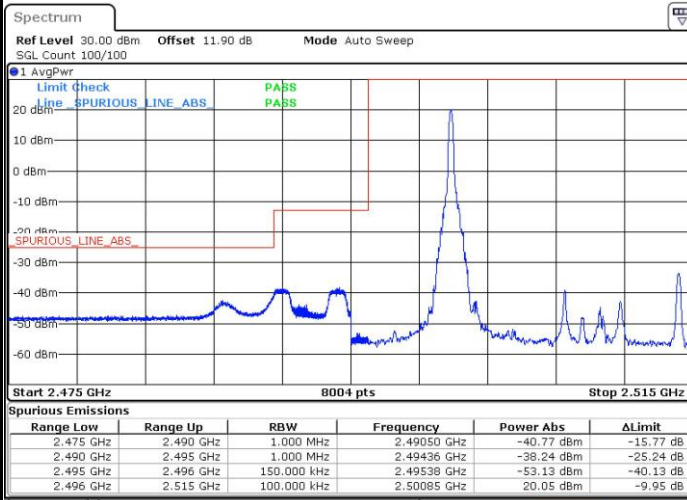


Date: 17.JUL.2018 05:00:24



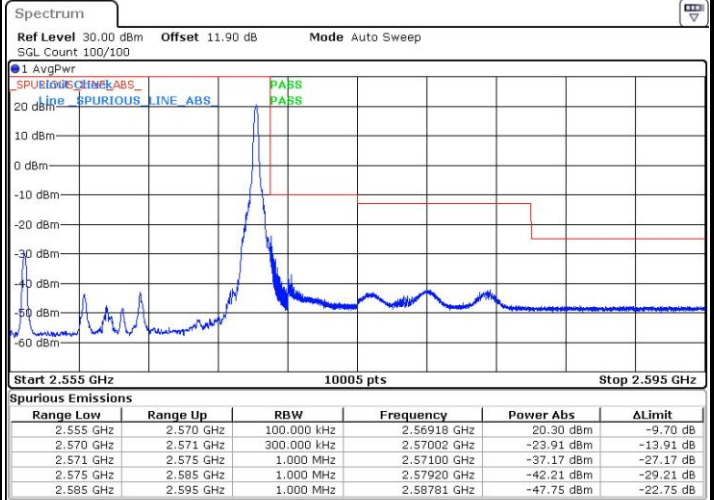
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



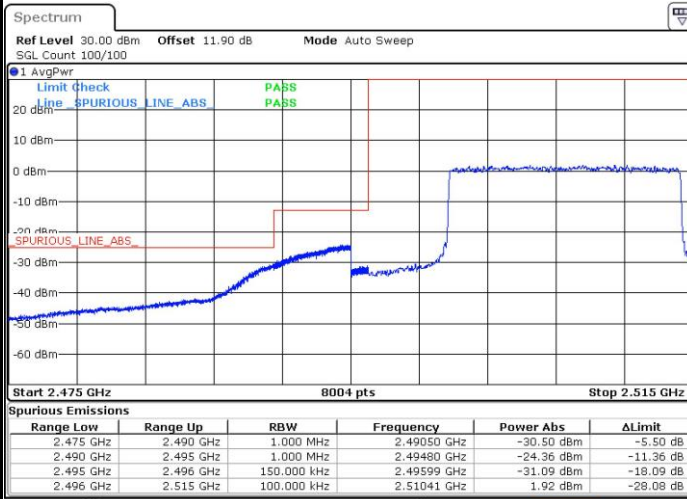
Date: 17.JUL.2018 05:05:50

Highest Band Edge / 1 RB



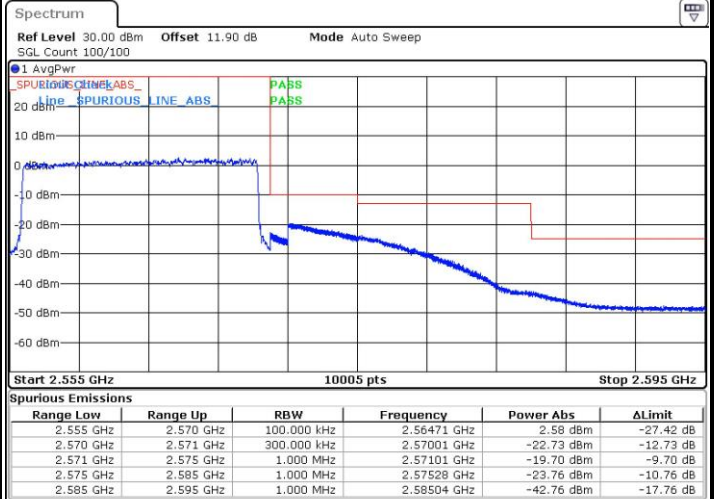
Date: 17.JUL.2018 05:16:43

Lowest Band Edge / Full RB



Date: 17.JUL.2018 05:08:11

Highest Band Edge / Full RB

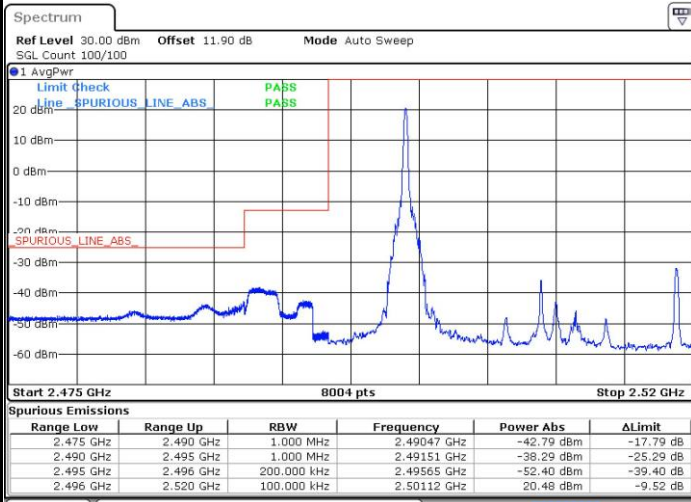


Date: 17.JUL.2018 05:19:04



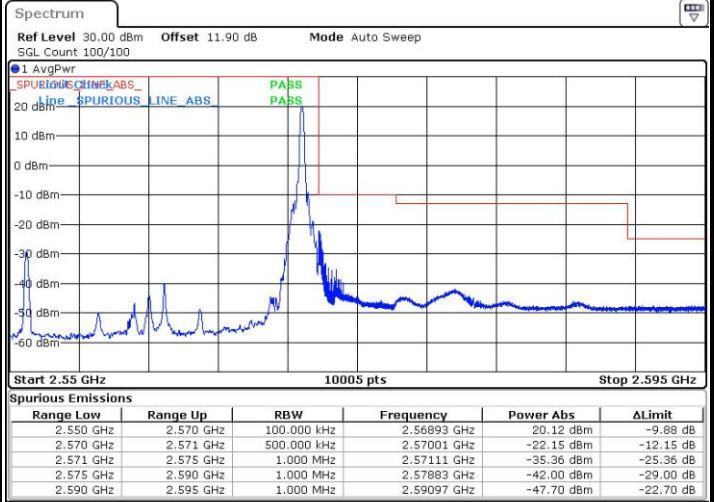
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB



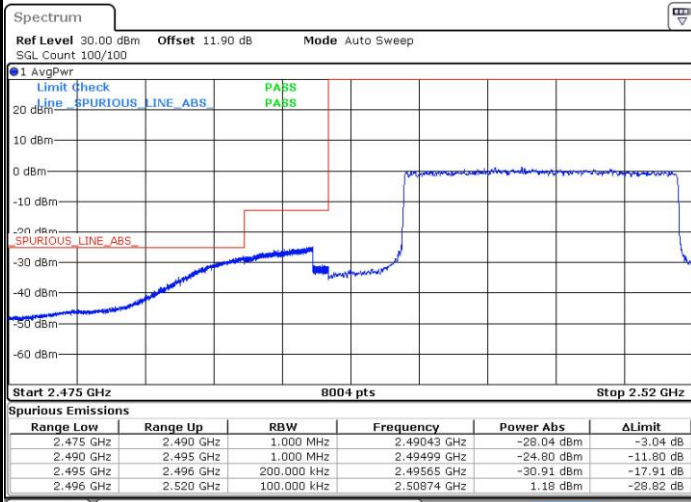
Date: 17.JUL.2018 05:26:36

Highest Band Edge / 1 RB



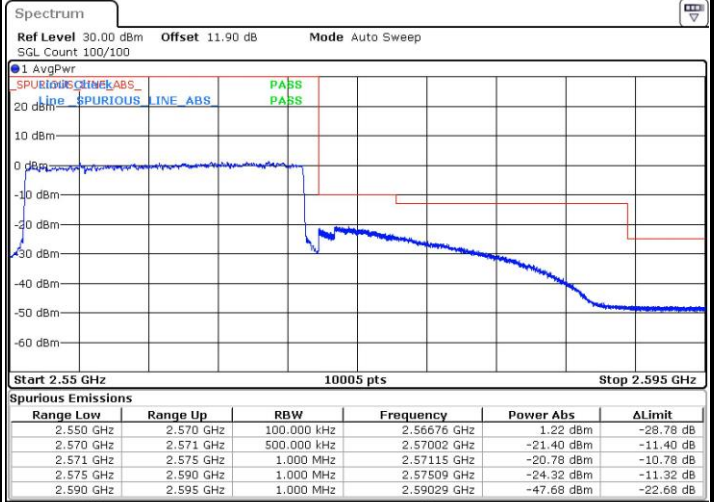
Date: 17.JUL.2018 05:37:28

Lowest Band Edge / Full RB



Date: 17.JUL.2018 05:28:57

Highest Band Edge / Full RB



Date: 17.JUL.2018 05:41:00

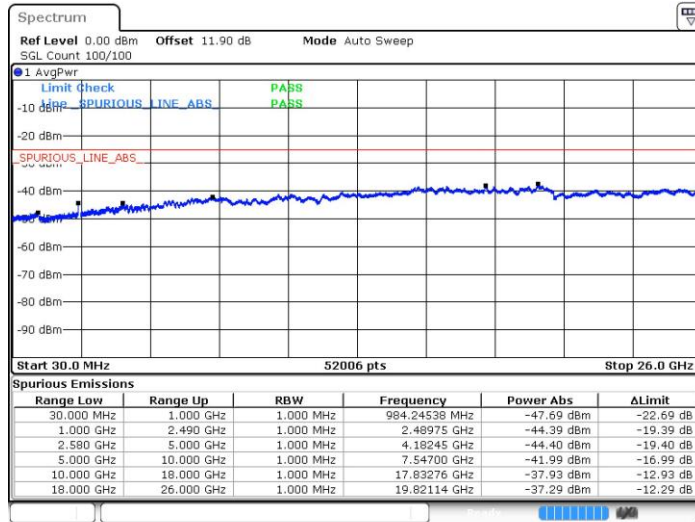




# Conducted Spurious Emission

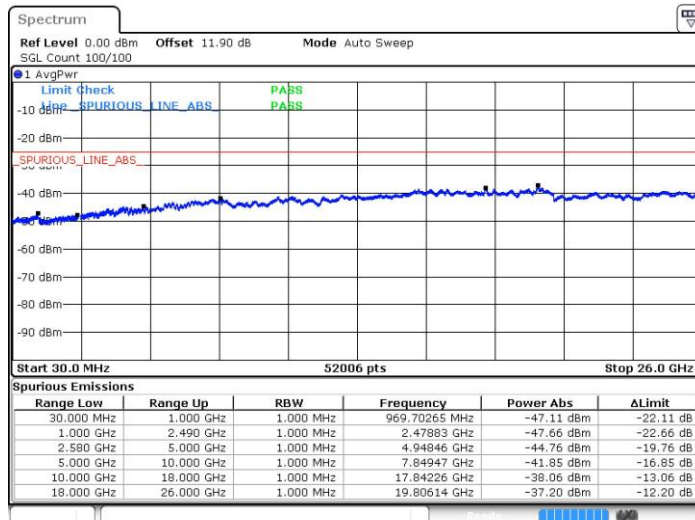
## LTE Band 7 / 5MHz

### Lowest Channel / QPSK



Date: 17.JUL.2018 04:33:12

## Middle Channel / QPSK

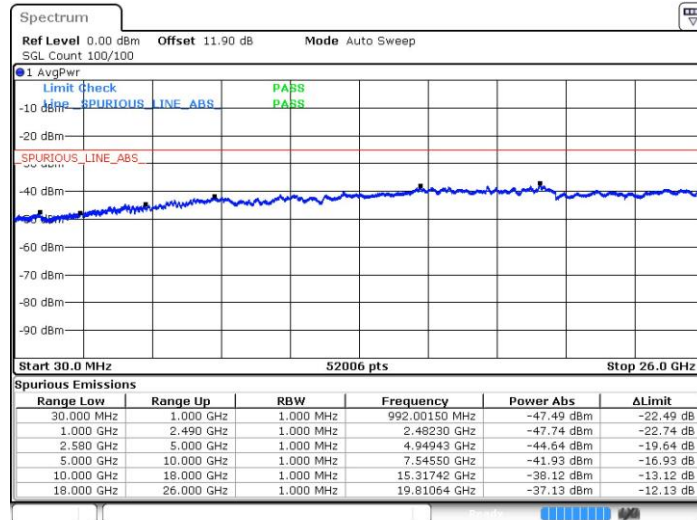


Date: 17.JUL.2018 04:36:17



LTE Band 7 / 5MHz

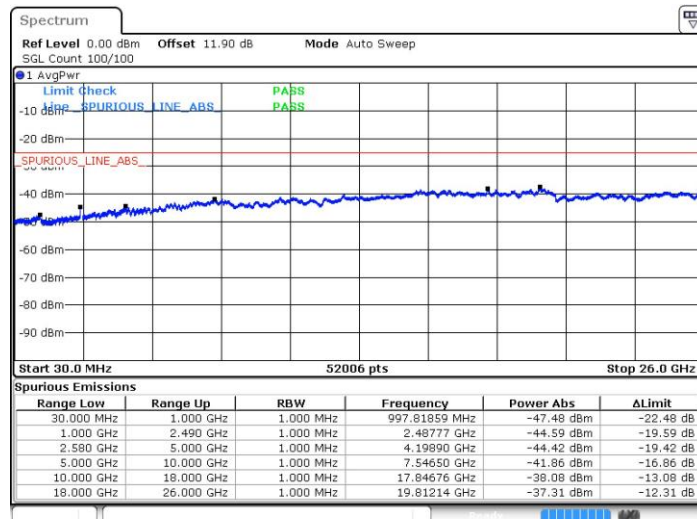
Highest Channel / QPSK



Date: 17 JUL 2018 04:44:05

LTE Band 7 / 10MHz

Lowest Channel / QPSK

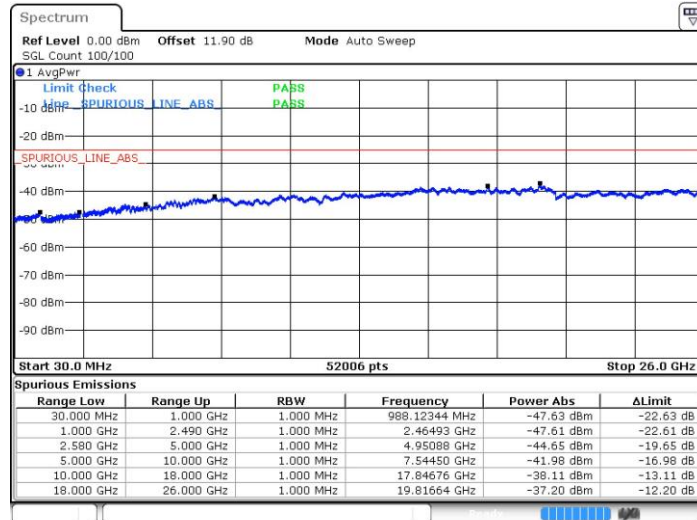


Date: 17 JUL 2018 04:51:52



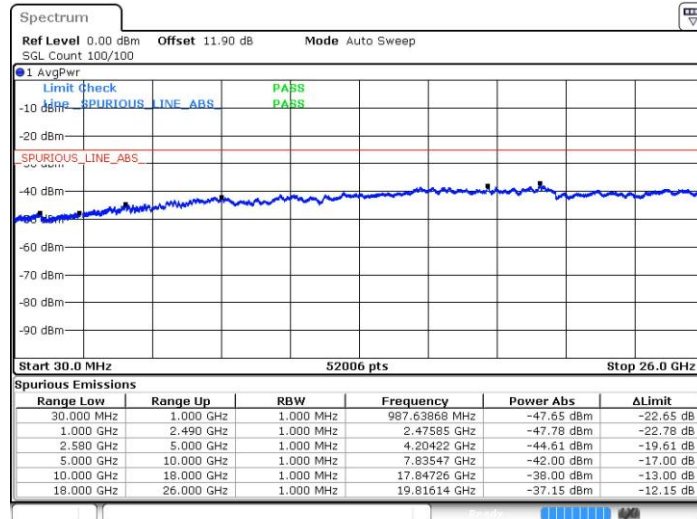
LTE Band 7 / 10MHz

Middle Channel / QPSK



Date: 17.JUL.2018 04:54:57

Highest Channel / QPSK

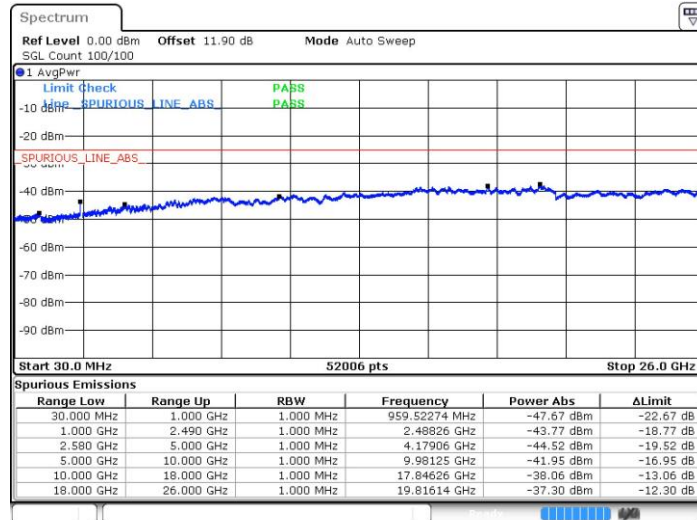


Date: 17.JUL.2018 05:02:44



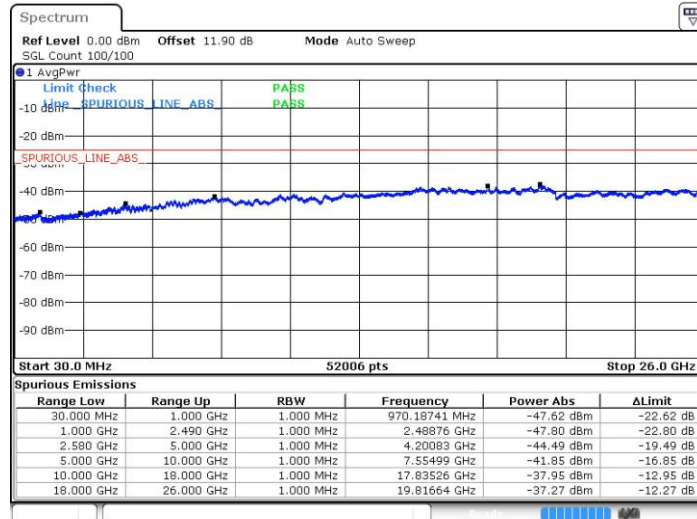
LTE Band 7 / 15MHz

Lowest Channel / QPSK



Date: 17.JUL.2018 05:10:32

Middle Channel / QPSK



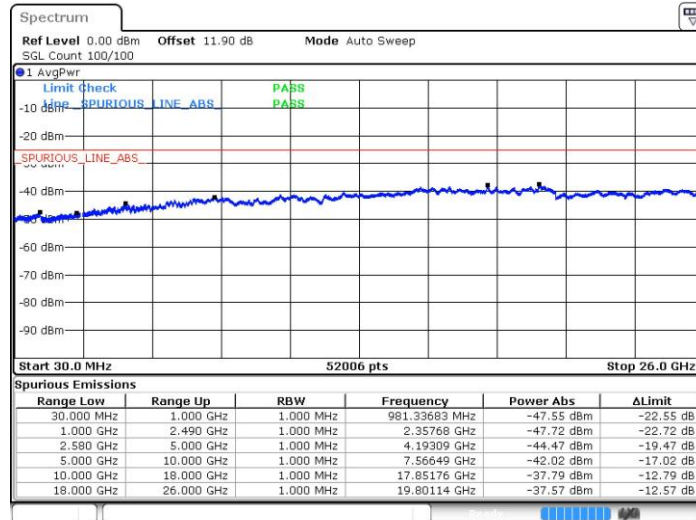
Date: 17.JUL.2018 05:13:37





LTE Band7 / 15MHz

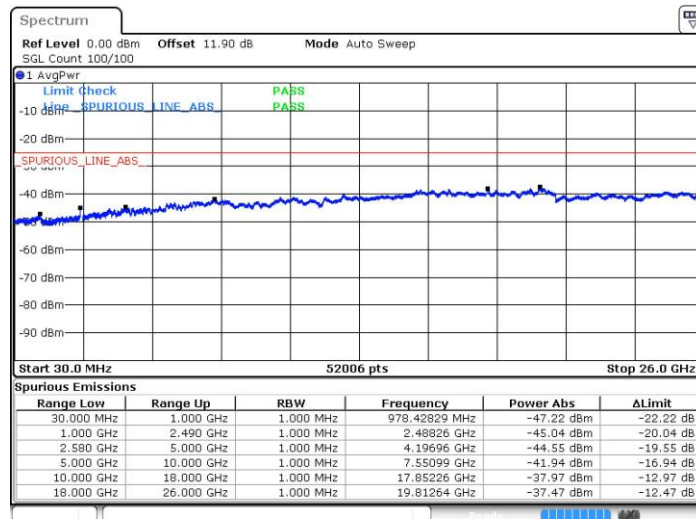
Highest Channel / QPSK



Date: 17 JUL 2018 05:21:25

LTE Band 7 / 20MHz

Lowest Channel / QPSK

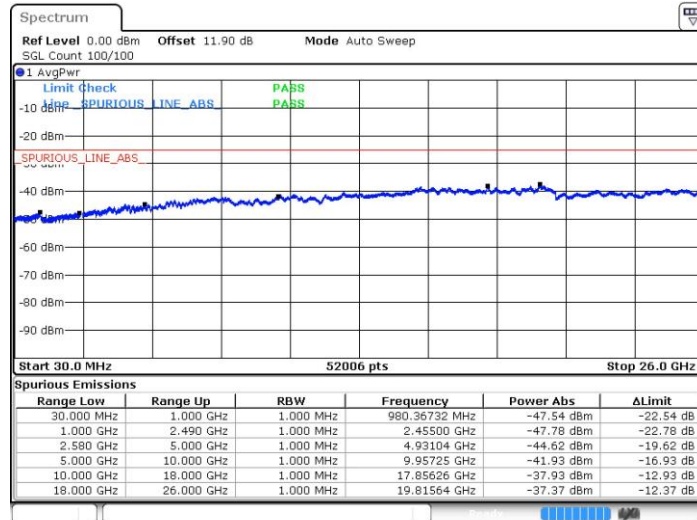


Date: 17 JUL 2018 05:31:18



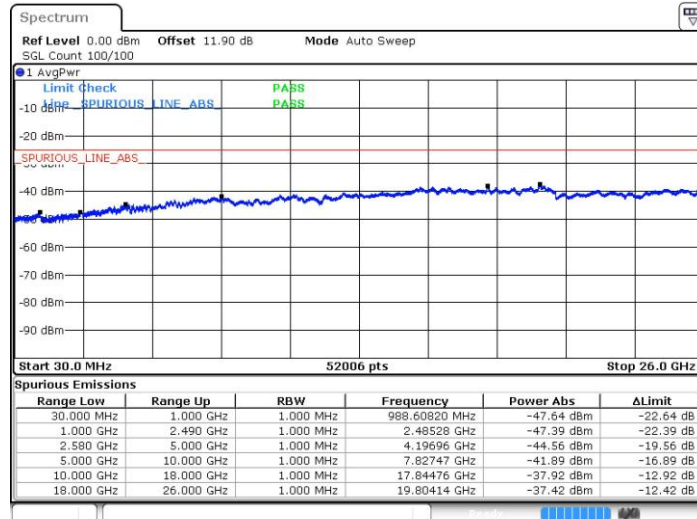
LTE Band 7 / 20MHz

Middle Channel / QPSK



Date: 17.JUL.2018 05:34:23

Highest Channel / QPSK



Date: 17.JUL.2018 05:42:11



Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0001	
30	Normal Voltage	0.0015	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0030	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0008	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0022	

Note:

1. Normal Voltage =12.0 V. ; Battery End Point (BEP) =10.8 V. ; Maximum Voltage =13.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 12

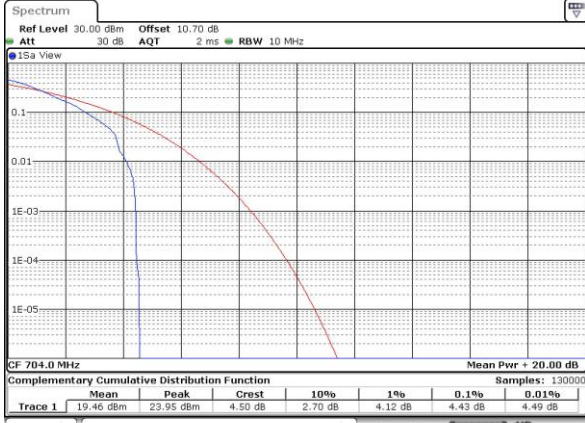
### Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.43	4.78	-	-	PASS
Middle CH	3.91	4.72	-	-	
Highest CH	4.14	4.58	-	-	



LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



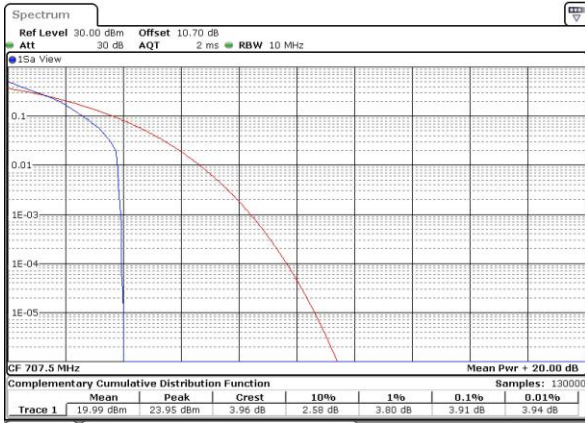
Date: 15 JUL 2018 22:17:27

Lowest Channel / Full RB



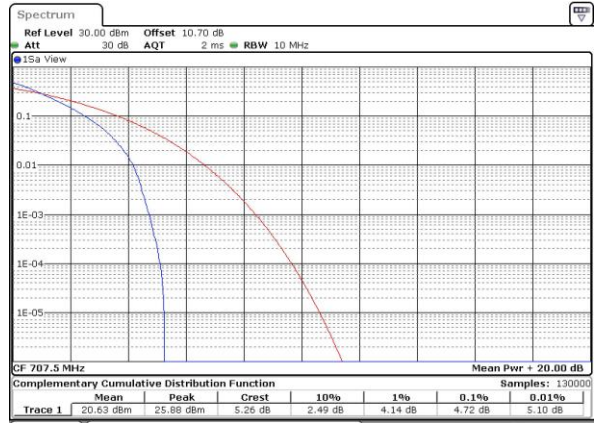
Date: 15 JUL 2018 22:17:17

Middle Channel / 1RB



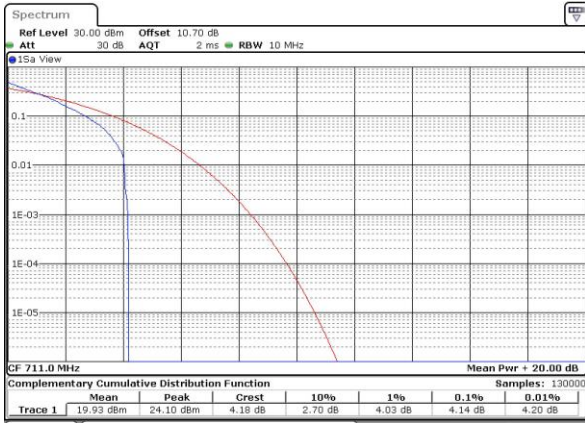
Date: 15 JUL 2018 22:17:37

Middle Channel / Full RB



Date: 15 JUL 2018 22:17:47

Highest Channel / 1RB



Date: 15 JUL 2018 22:18:07

Highest Channel / Full RB



Date: 15 JUL 2018 22:17:57



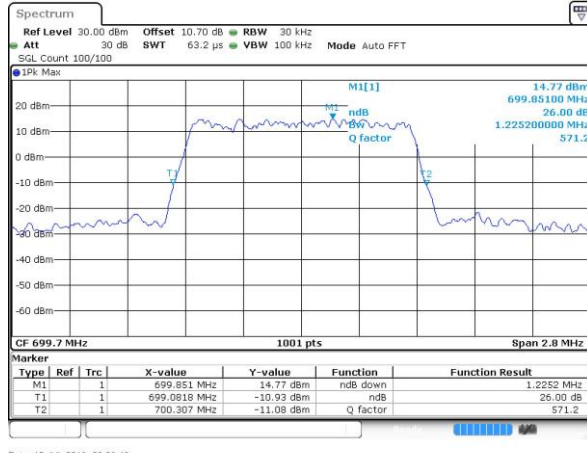
**26dB Bandwidth**

Mode	LTE Band 12 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.23	-	3.01	-	4.92	-	9.75	-	-	-	-	-
Middle CH	1.24	-	3.06	-	4.96	-	9.77	-	-	-	-	-
Highest CH	1.22	-	3.04	-	4.93	-	9.77	-	-	-	-	-



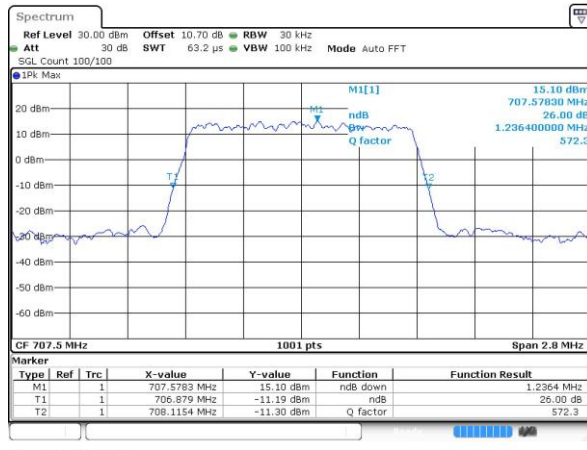
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



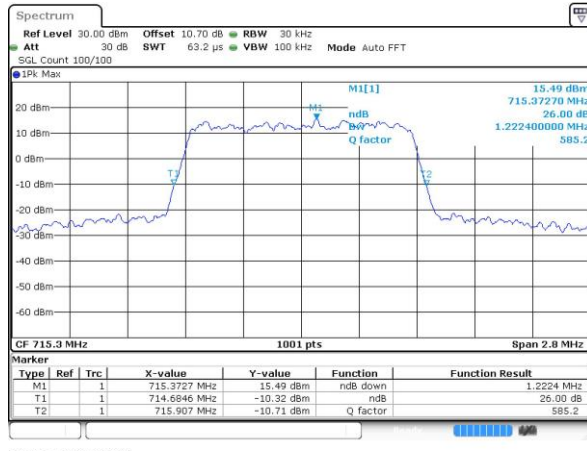
Date: 15.JUL.2018 20:08:46

Middle Channel / 1.4MHz / QPSK



Date: 15.JUL.2018 20:18:21

Highest Channel / 1.4MHz / QPSK

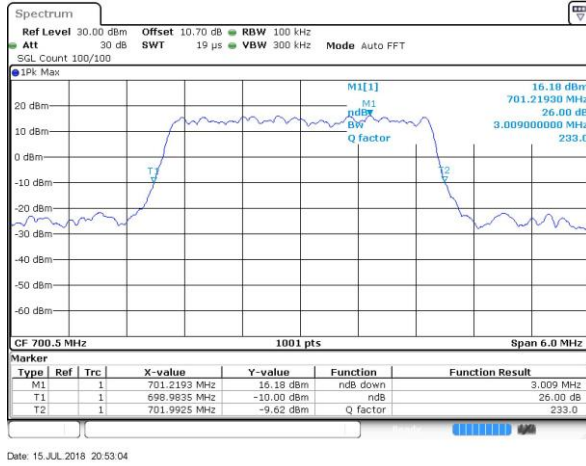


Date: 15.JUL.2018 20:19:39

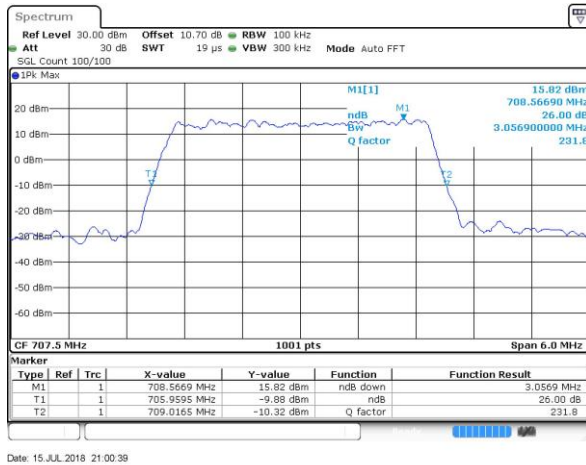


LTE Band 12

Lowest Channel / 3MHz / QPSK



Middle Channel / 3MHz / QPSK



Highest Channel / 3MHz / QPSK

