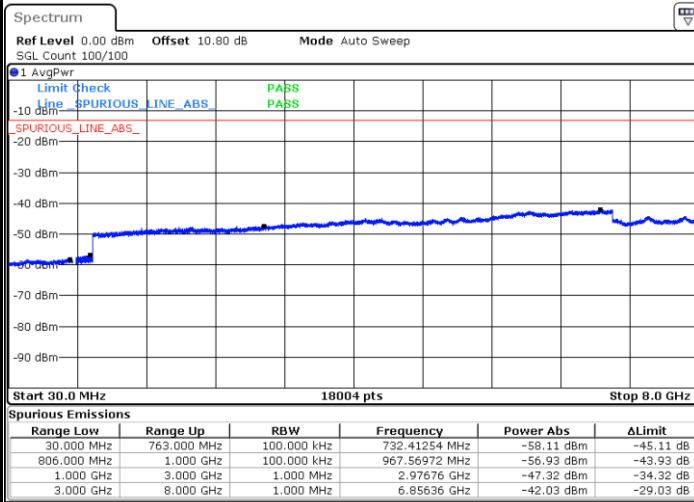




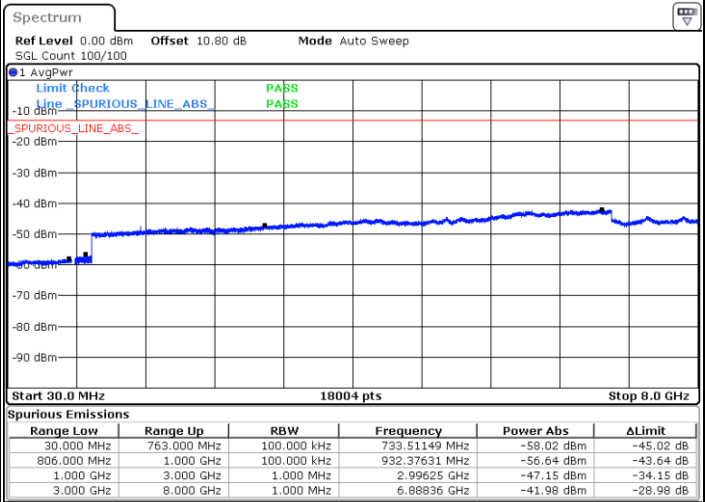
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 16 FEB 2018 13:05:27

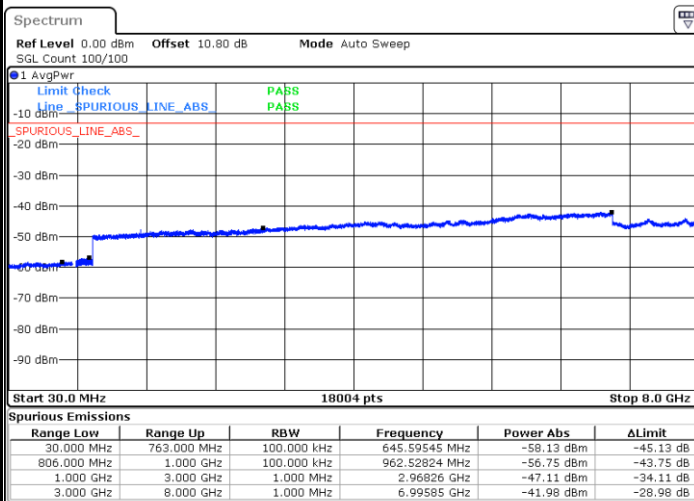
Highest Channel / 16QAM



Date: 16 FEB 2018 13:06:21

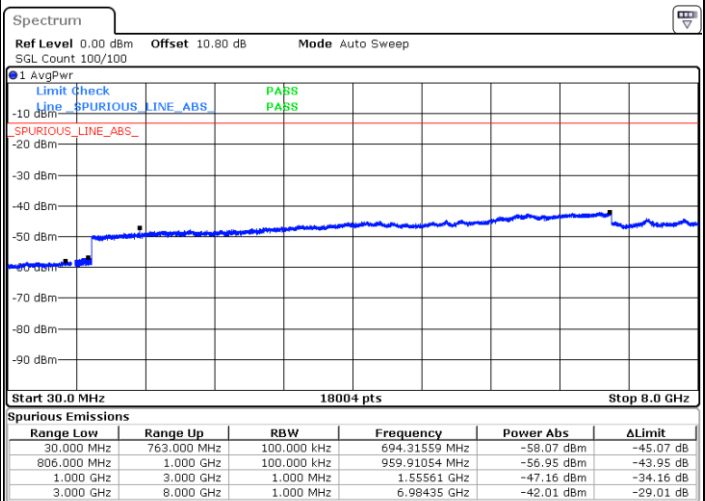
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 16 FEB 2018 13:28:40

Middle Channel / 16QAM

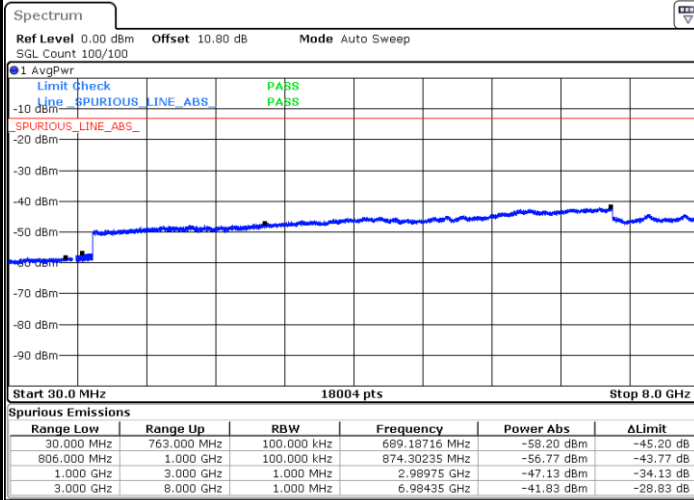


Date: 16 FEB 2018 13:27:47



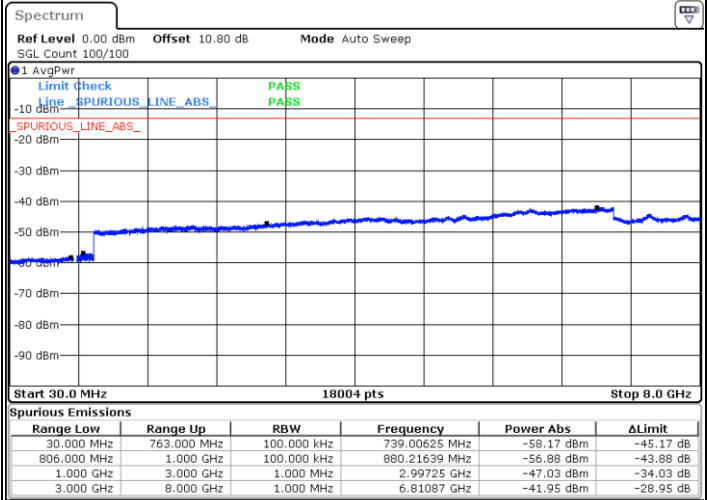
LTE Band 13 / 5MHz

Lowest Channel / 64QAM



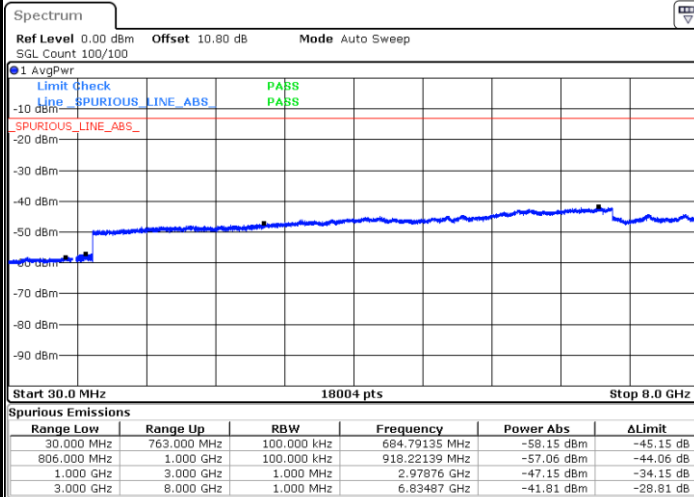
Date: 16.FEB.2018 13:10:48

Middle Channel / 64QAM



Date: 16.FEB.2018 13:11:42

Highest Channel / 64QAM

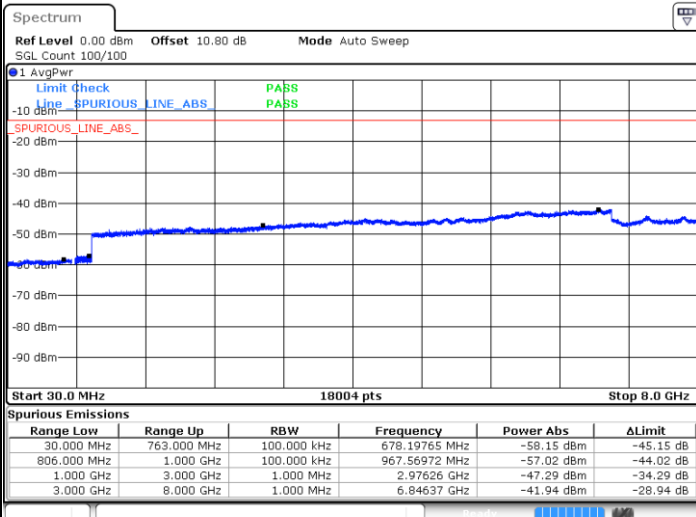


Date: 16.FEB.2018 13:16:30



LTE Band 13 / 10MHz

Middle Channel / 64QAM



Date: 16.FEB.2018 13:34:45

Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0054	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0066	
-10	Normal Voltage	0.0137	
-20	Normal Voltage	0.0074	
-30	Normal Voltage	0.0045	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0121	
20	Battery End Point	0.0047	

Note:

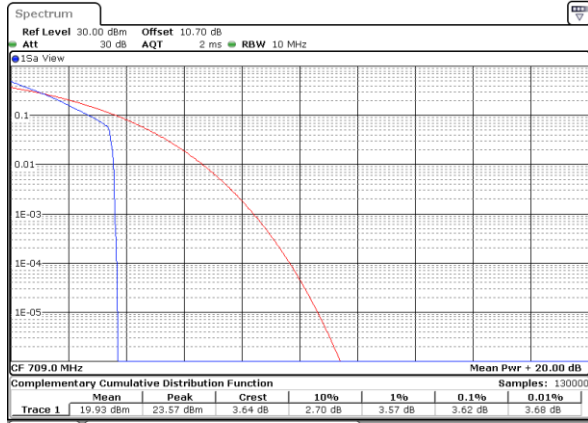
1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



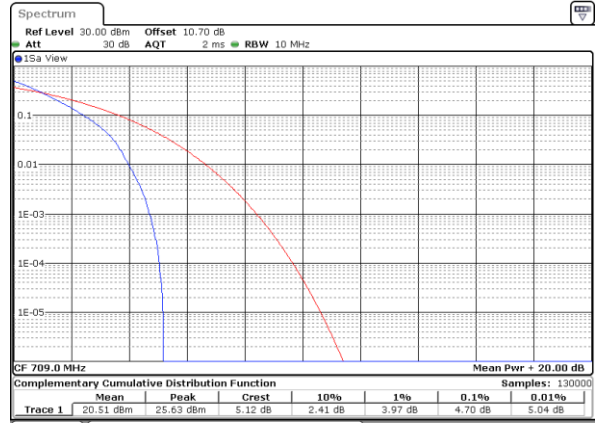
LTE Band 17

Peak-to-Average Ratio

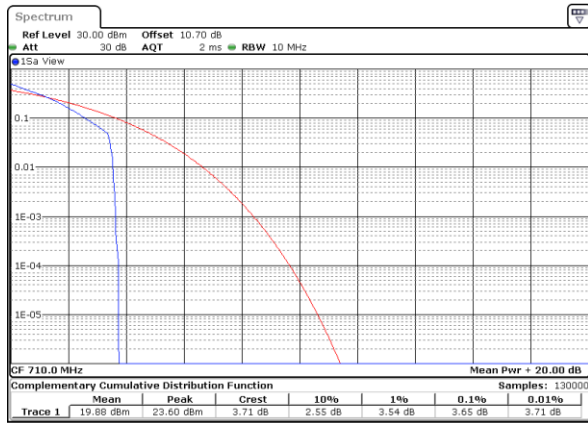
Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	4.7	5.22	5.91	PASS
Middle CH	3.65	4.64	5.39	5.88	
Highest CH	3.59	4.67	5.3	5.91	
Mode	LTE Band 17 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.81	6.55	-	-	PASS
Middle CH	6.87	6.41	-	-	
Highest CH	6.52	6.41	-	-	

LTE Band 17 / 10MHz / QPSK
Lowest Channel / 1RB


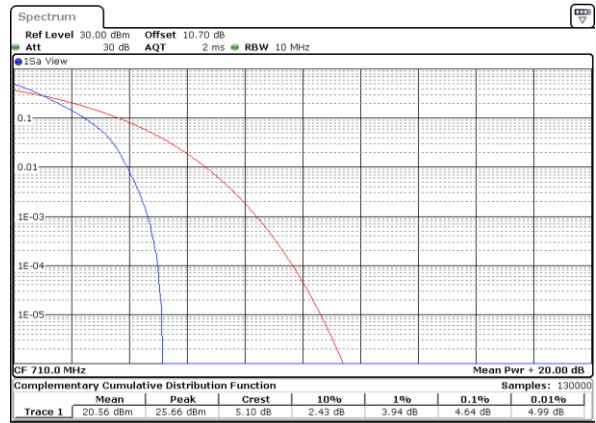
Date: 14 FEB 2018 13:03:16

Lowest Channel / Full RB


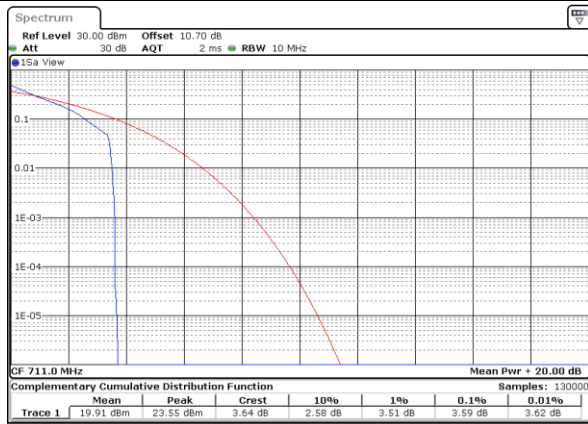
Date: 14 FEB 2018 13:03:24

Middle Channel / 1RB


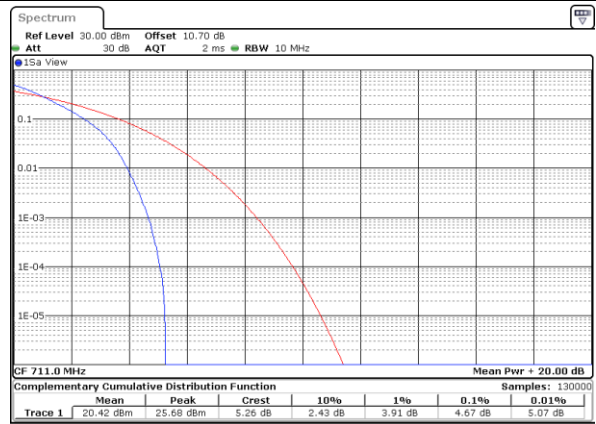
Date: 14 FEB 2018 13:03:32

Middle Channel / Full RB


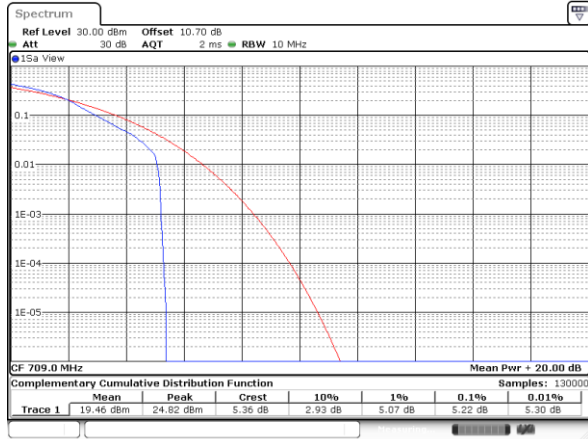
Date: 14 FEB 2018 13:03:40

Highest Channel / 1RB


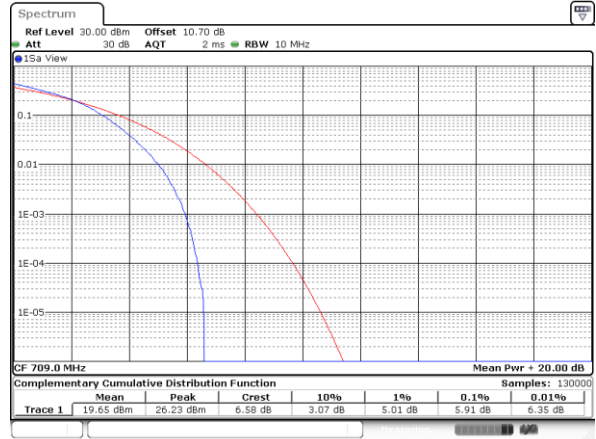
Date: 14 FEB 2018 13:03:48

Highest Channel / Full RB


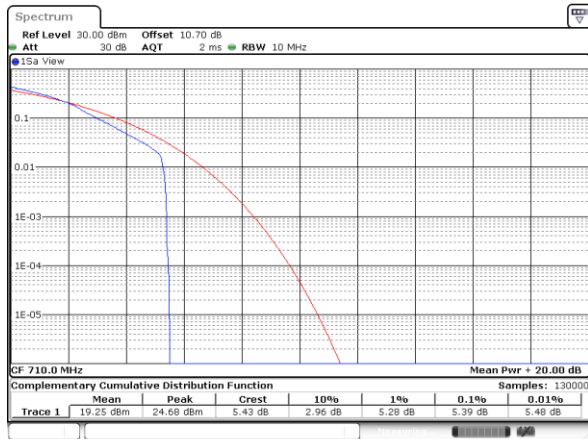
Date: 14 FEB 2018 13:03:56

LTE Band 17 / 10MHz / 16QAM
Lowest Channel / 1RB


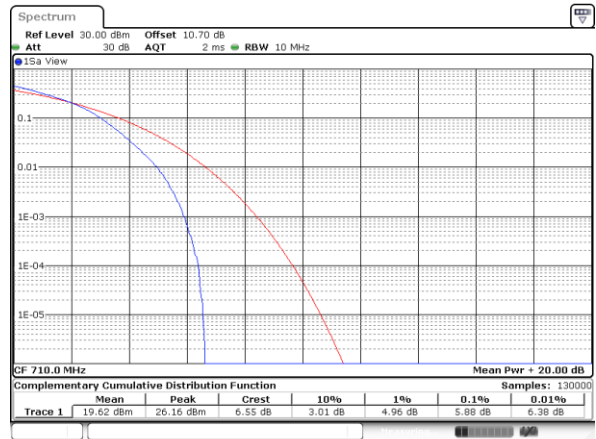
Date: 14 FEB 2018 13:02:19

Lowest Channel / Full RB


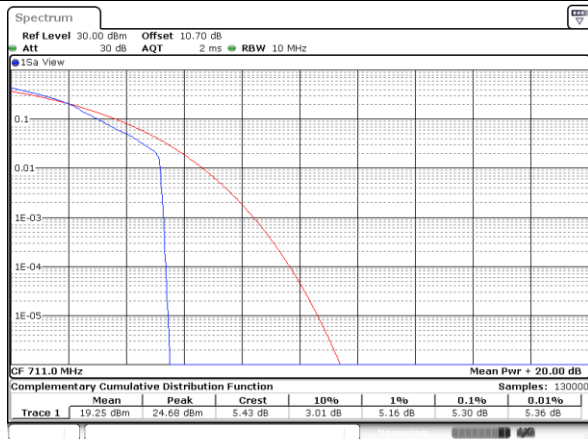
Date: 14 FEB 2018 13:02:29

Middle Channel / 1RB


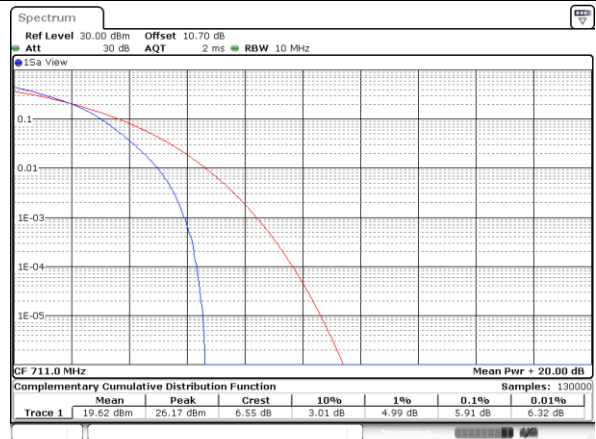
Date: 14 FEB 2018 13:02:38

Middle Channel / Full RB


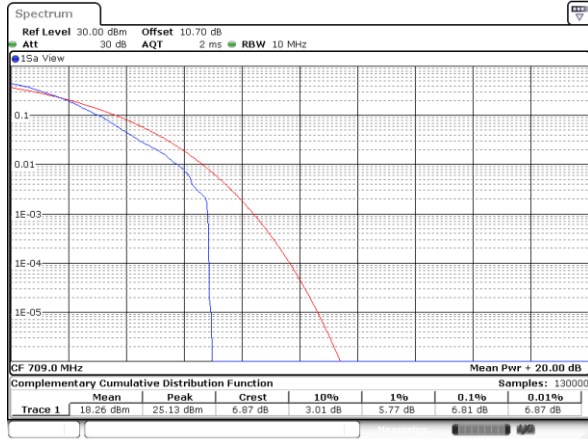
Date: 14 FEB 2018 13:02:47

Highest Channel / 1RB


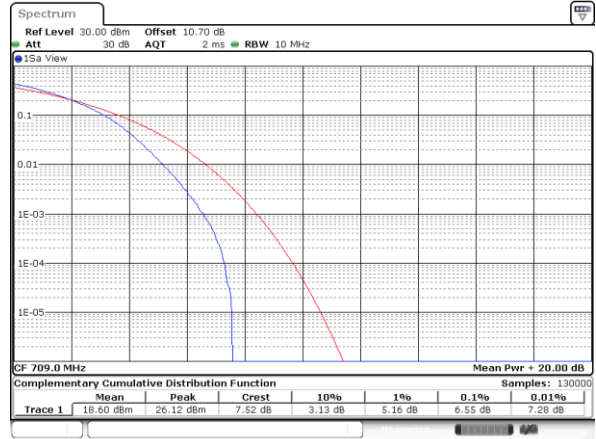
Date: 14 FEB 2018 13:03:00

Highest Channel / Full RB


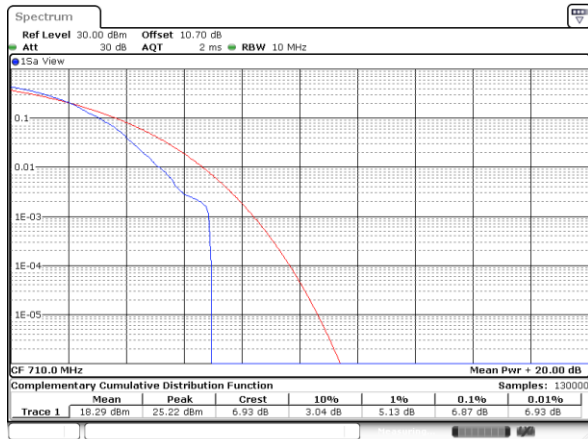
Date: 14 FEB 2018 13:03:08

LTE Band 17 / 10MHz / 64QAM
Lowest Channel / 1RB


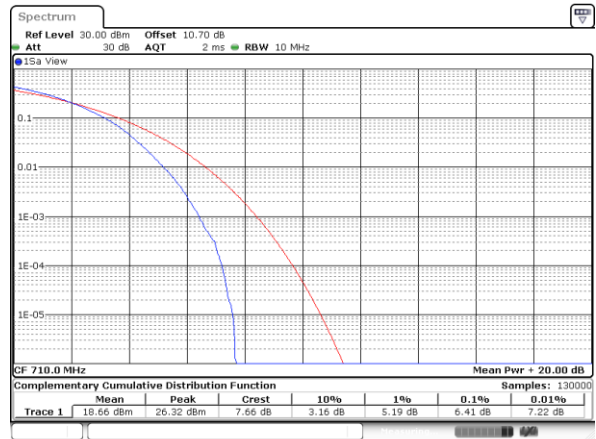
Date: 14 FEB 2018 12:58:46

Lowest Channel / Full RB


Date: 14 FEB 2018 12:59:08

Middle Channel / 1RB


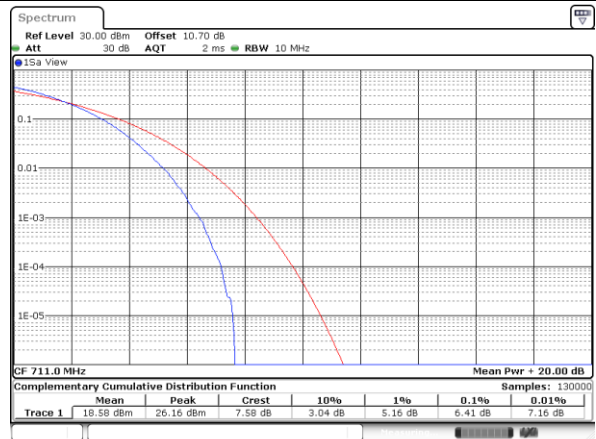
Date: 14 FEB 2018 13:00:18

Middle Channel / Full RB


Date: 14 FEB 2018 13:00:49

Highest Channel / 1RB


Date: 14 FEB 2018 13:01:13

Highest Channel / Full RB


Date: 14 FEB 2018 13:02:02

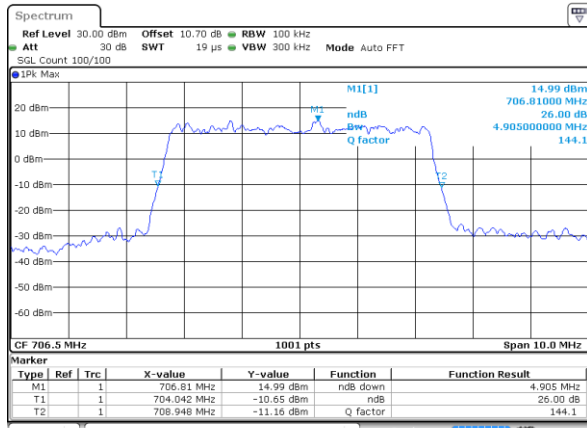
**26dB Bandwidth**

Mode	LTE Band 17 : 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	-	-	-	-	4.91	4.88	9.71	9.73	-	-	-	-
Middle CH	-	-	-	-	4.96	4.93	9.65	9.81	-	-	-	-
Highest CH	-	-	-	-	4.94	4.91	9.65	9.93	-	-	-	-
Mode	LTE Band 17 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.90	-	9.73	-	-	-	-	-
Middle CH	-	-	-	-	4.97	-	9.79	-	-	-	-	-
Highest CH	-	-	-	-	4.89	-	9.73	-	-	-	-	-

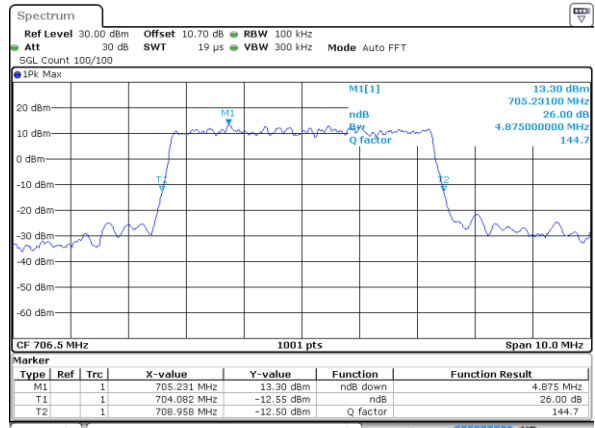


LTE Band 17

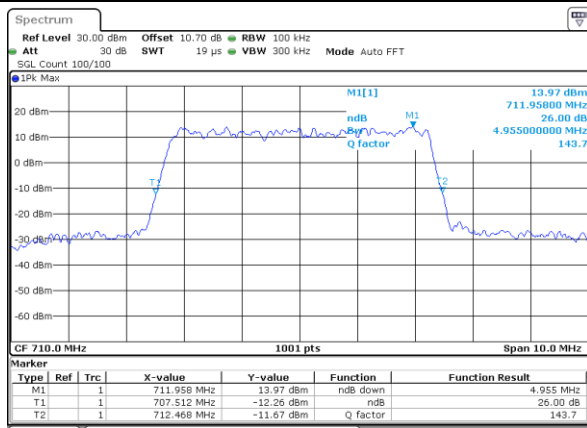
Lowest Channel / 5MHz / QPSK



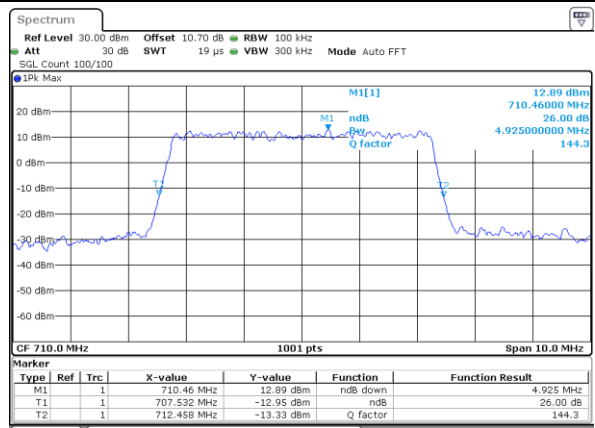
Lowest Channel / 5MHz / 16QAM



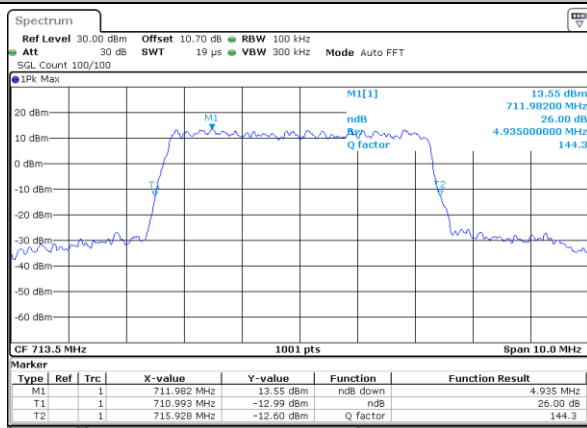
Middle Channel / 5MHz / QPSK



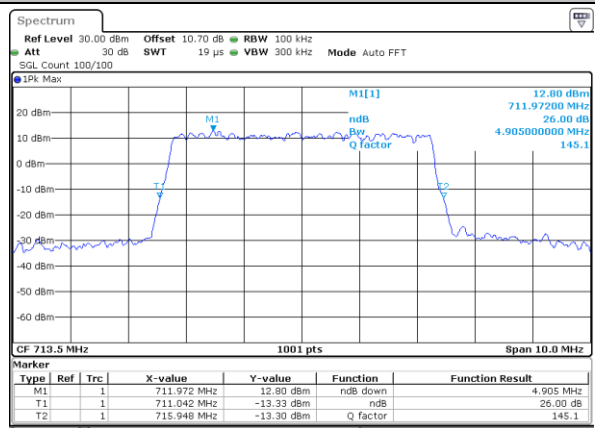
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



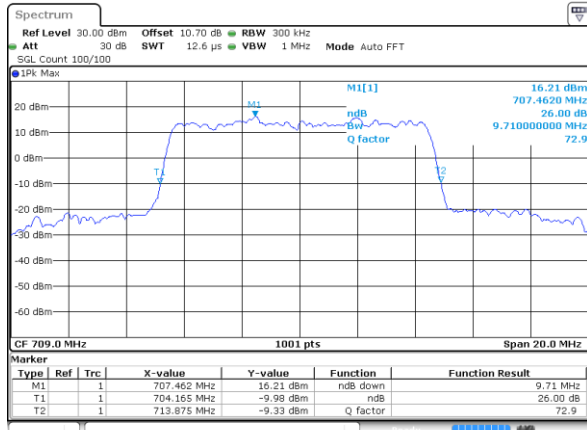
Highest Channel / 5MHz / 16QAM





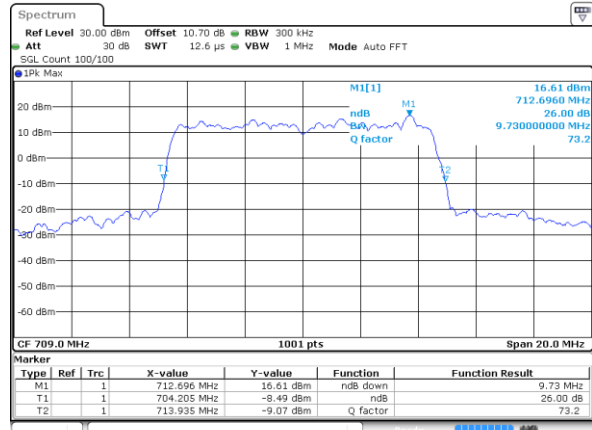
LTE Band 17

Lowest Channel / 10MHz / QPSK



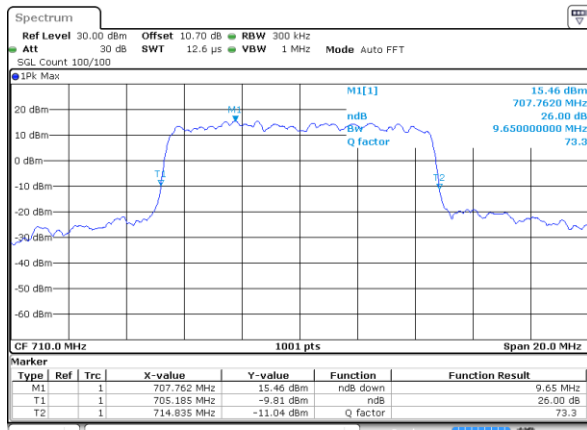
Date: 13 FEB 2018 18:15:19

Lowest Channel / 10MHz / 16QAM



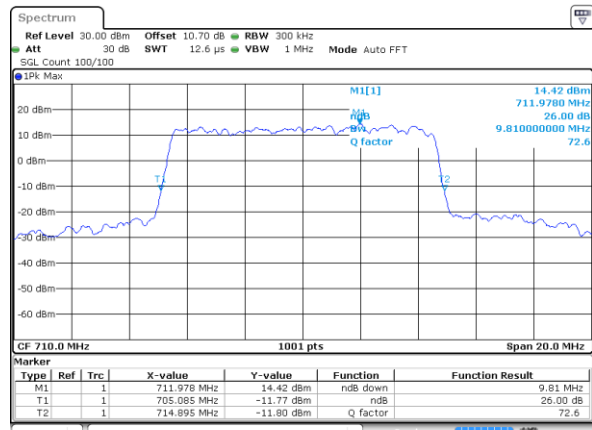
Date: 13 FEB 2018 18:15:29

Middle Channel / 10MHz / QPSK



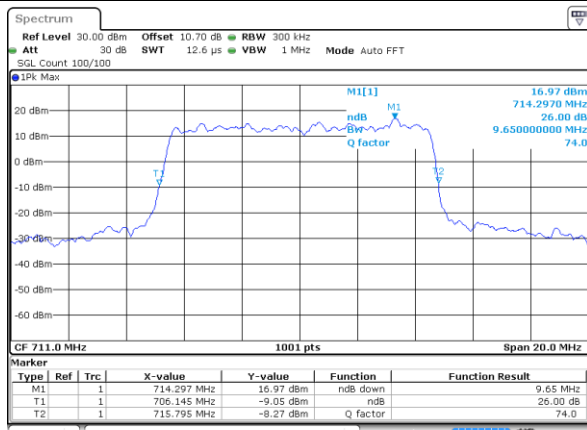
Date: 13 FEB 2018 18:22:15

Middle Channel / 10MHz / 16QAM



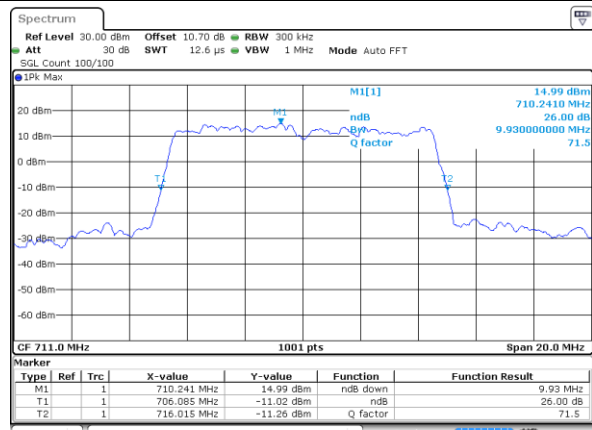
Date: 13 FEB 2018 18:22:24

Highest Channel / 10MHz / QPSK



Date: 13 FEB 2018 18:24:41

Highest Channel / 10MHz / 16QAM

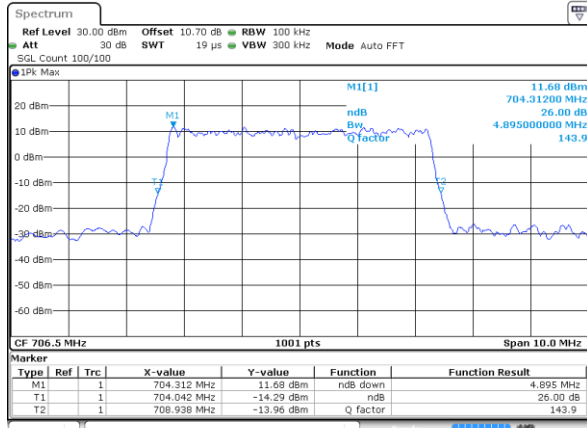


Date: 13 FEB 2018 18:24:51



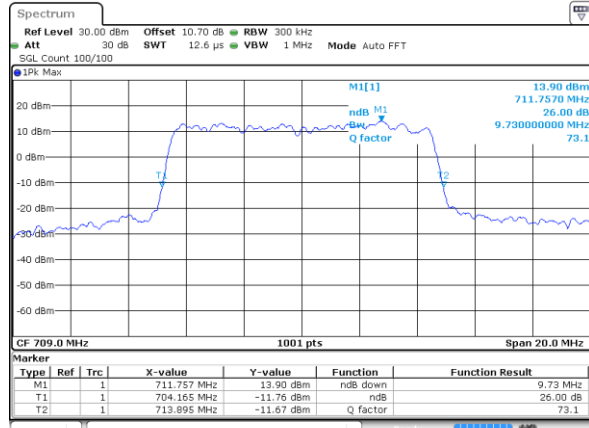
LTE Band 17

Lowest Channel / 5MHz / 64QAM



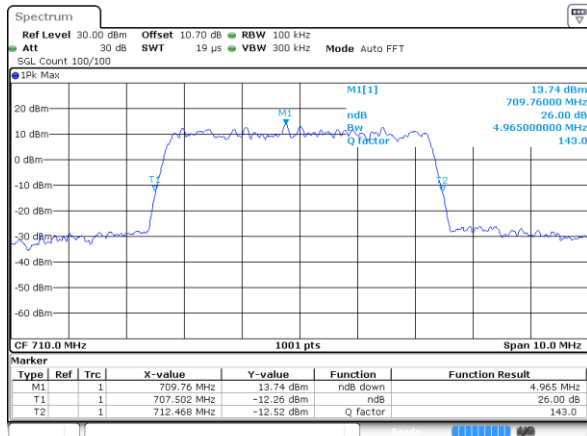
Date: 13 FEB 2018 18:31:27

Lowest Channel / 10MHz / 64QAM



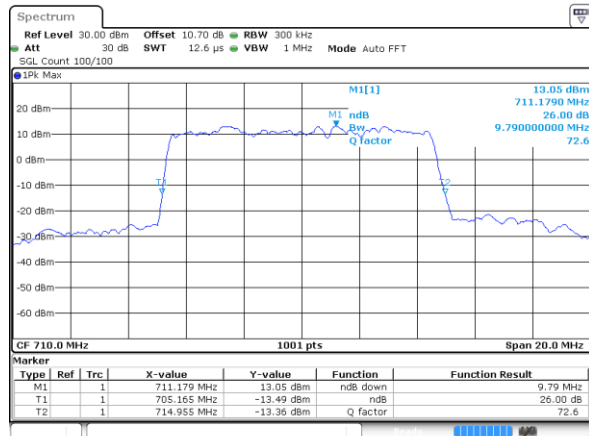
Date: 13 FEB 2018 18:39:37

Middle Channel / 5MHz / 64QAM



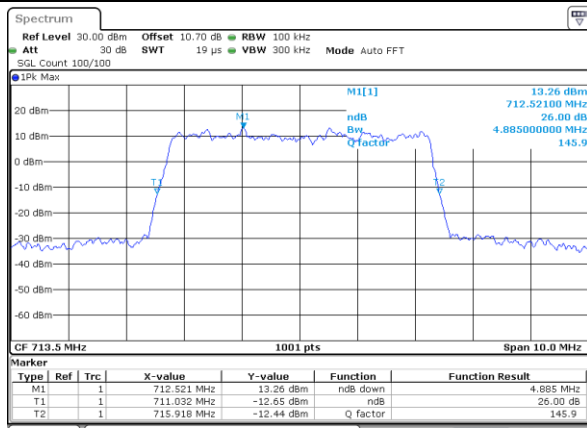
Date: 13 FEB 2018 18:34:55

Middle Channel / 10MHz / 64QAM



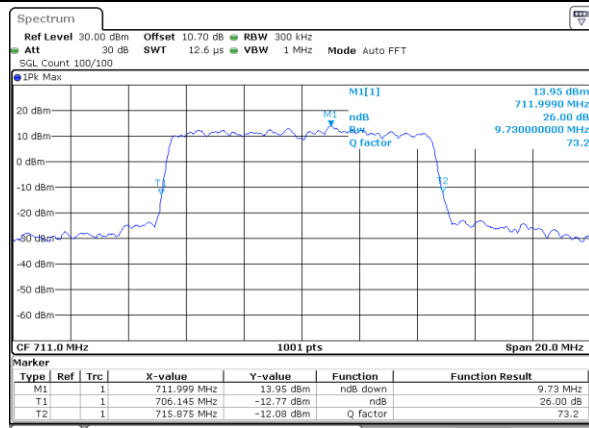
Date: 13 FEB 2018 18:43:05

Highest Channel / 5MHz / 64QAM



Date: 13 FEB 2018 18:36:09

Highest Channel / 10MHz / 64QAM



Date: 13 FEB 2018 18:44:19

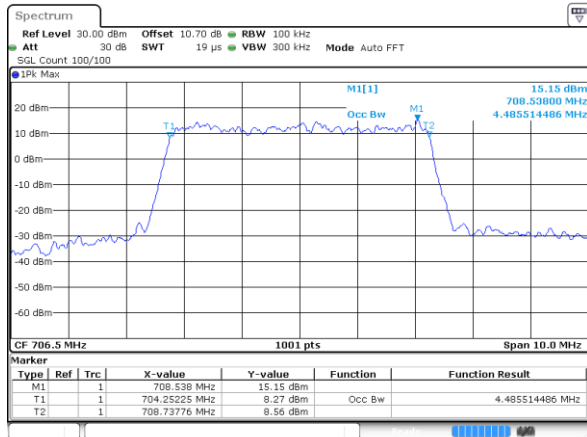
**Occupied Bandwidth**

Mode	LTE Band 17 : 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	9.01	9.05	-	-	-	-
Middle CH	-	-	-	-	4.51	4.49	9.05	8.97	-	-	-	-
Highest CH	-	-	-	-	4.5	4.48	9.01	9.03	-	-	-	-
Mode	LTE Band 17 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.50	-	9.09	-	-	-	-	-
Middle CH	-	-	-	-	4.51	-	8.97	-	-	-	-	-
Highest CH	-	-	-	-	4.55	-	9.05	-	-	-	-	-

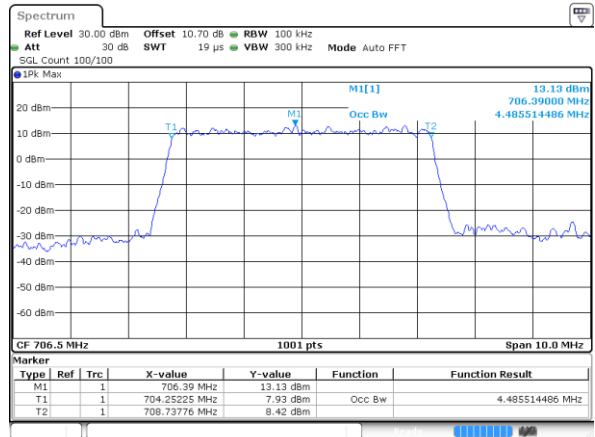


LTE Band 17

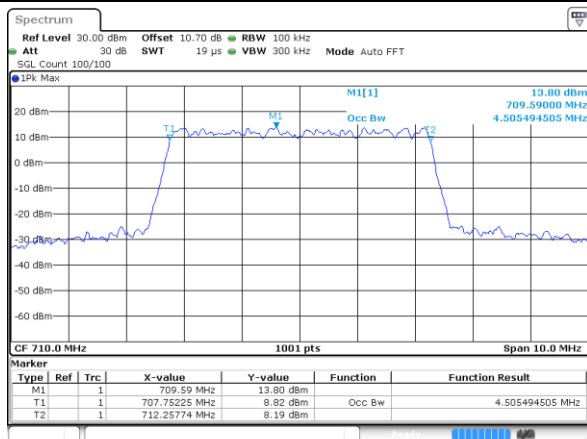
Lowest Channel / 5MHz / QPSK



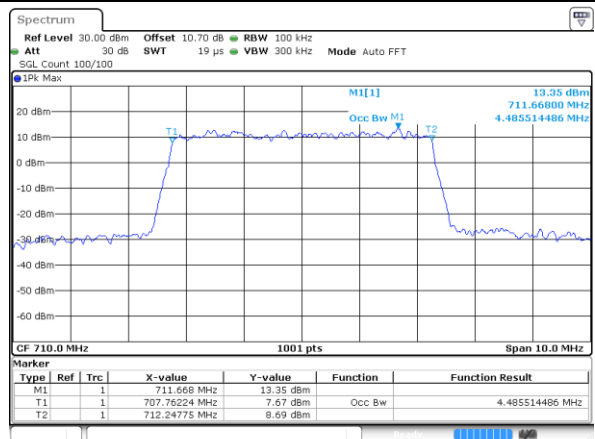
Lowest Channel / 5MHz / 16QAM



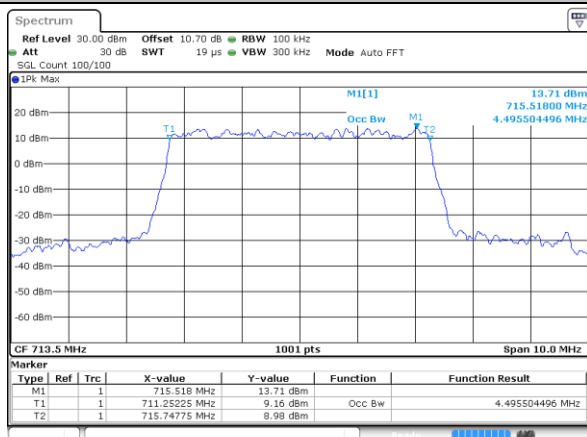
Middle Channel / 5MHz / QPSK



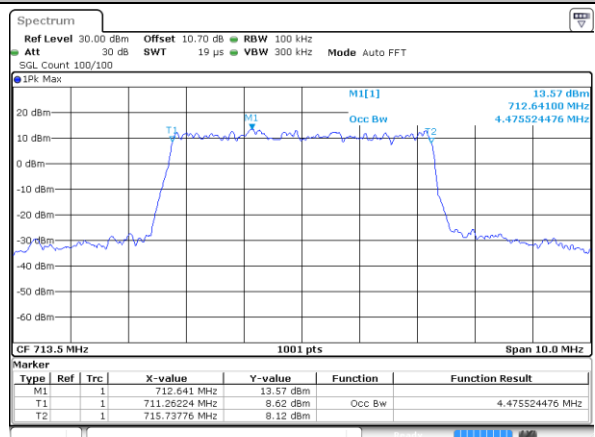
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



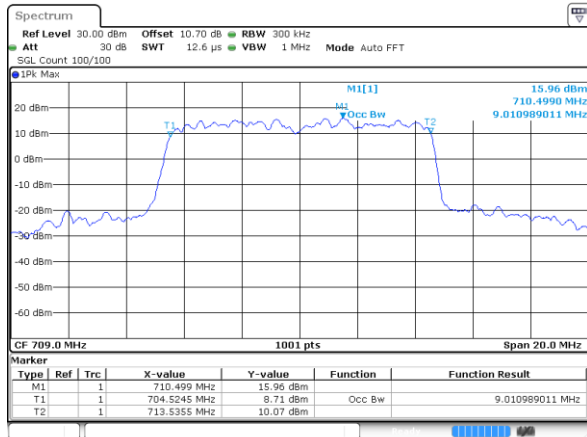
Highest Channel / 5MHz / 16QAM





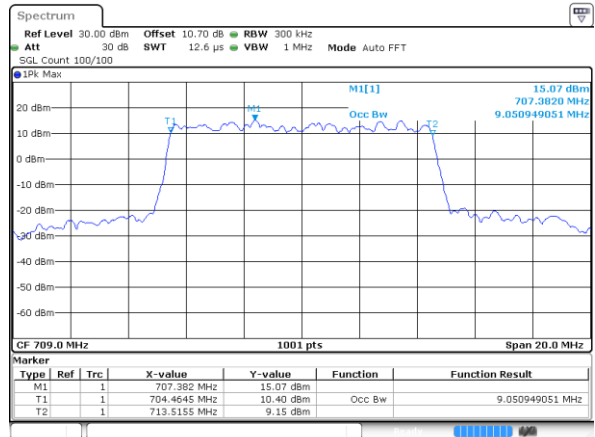
LTE Band 17

Lowest Channel / 10MHz / QPSK



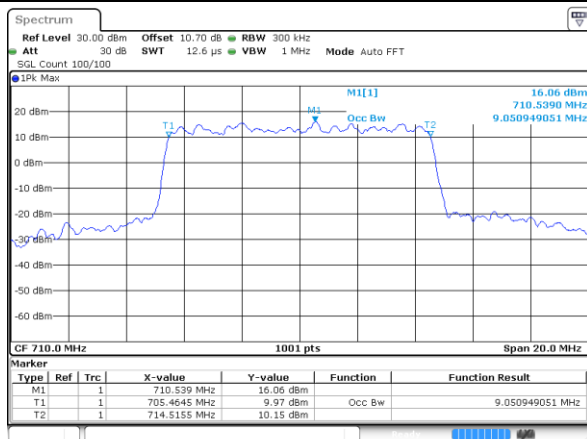
Date: 13 FEB 2018 18:14:59

Lowest Channel / 10MHz / 16QAM



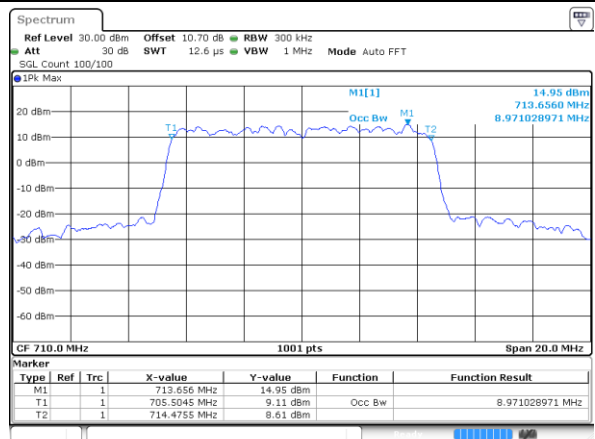
Date: 13 FEB 2018 18:15:09

Middle Channel / 10MHz / QPSK



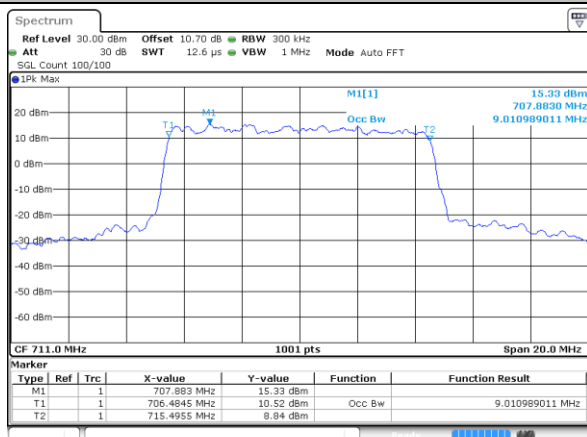
Date: 13 FEB 2018 18:21:55

Middle Channel / 10MHz / 16QAM



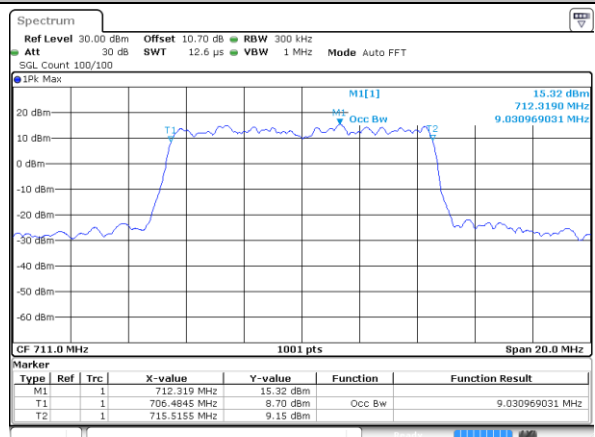
Date: 13 FEB 2018 18:22:05

Highest Channel / 10MHz / QPSK



Date: 13 FEB 2018 18:24:22

Highest Channel / 10MHz / 16QAM

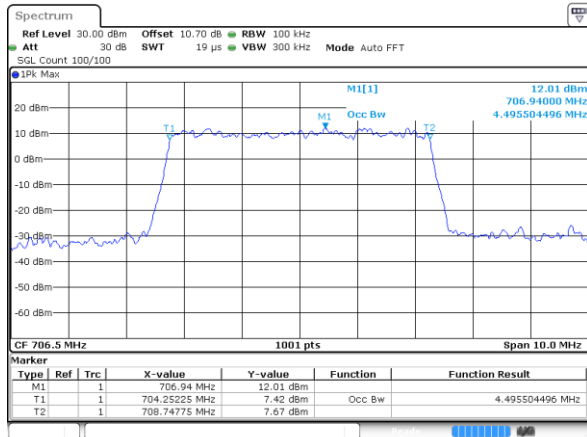


Date: 13 FEB 2018 18:24:31

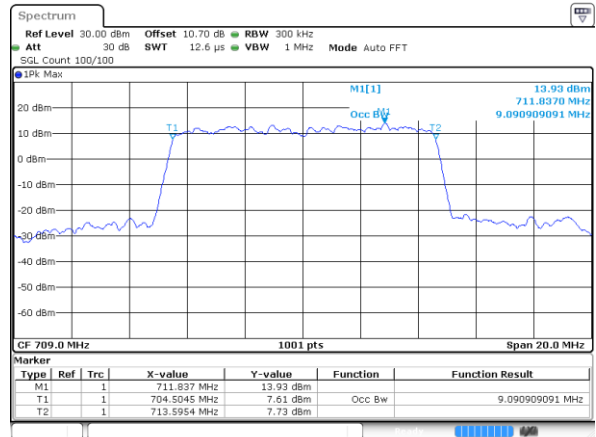


LTE Band 17

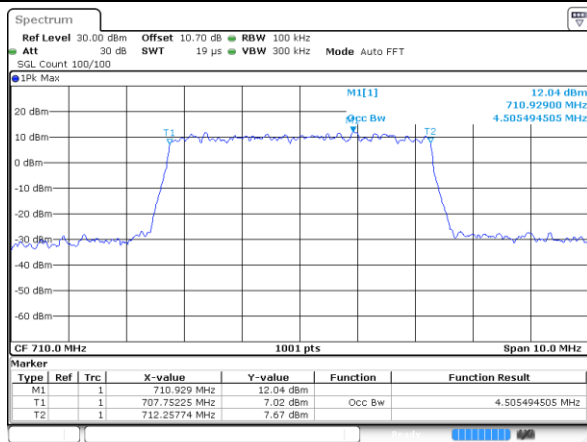
Lowest Channel / 5MHz / 64QAM



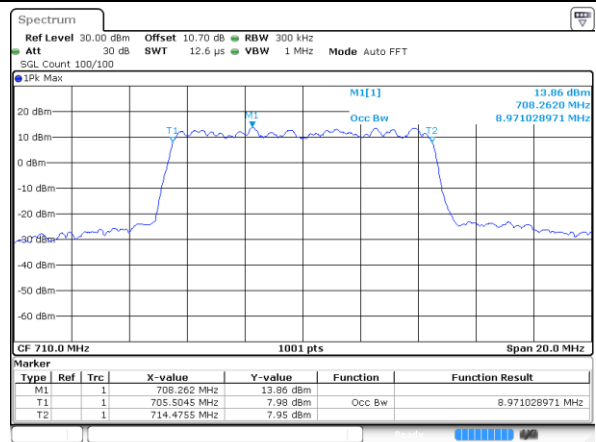
Lowest Channel / 10MHz / 64QAM



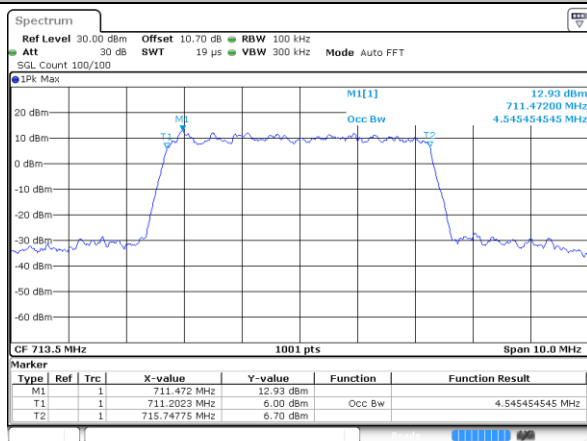
Middle Channel / 5MHz / 64QAM



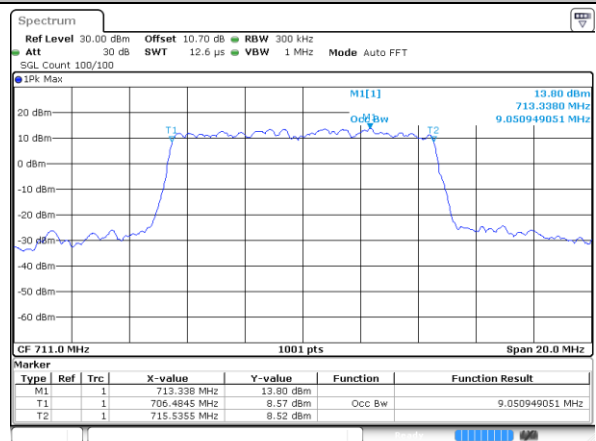
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



Highest Channel / 10MHz / 64QAM

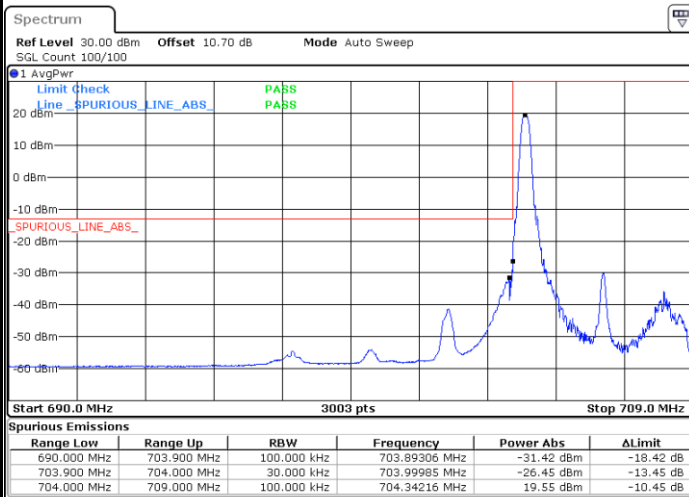




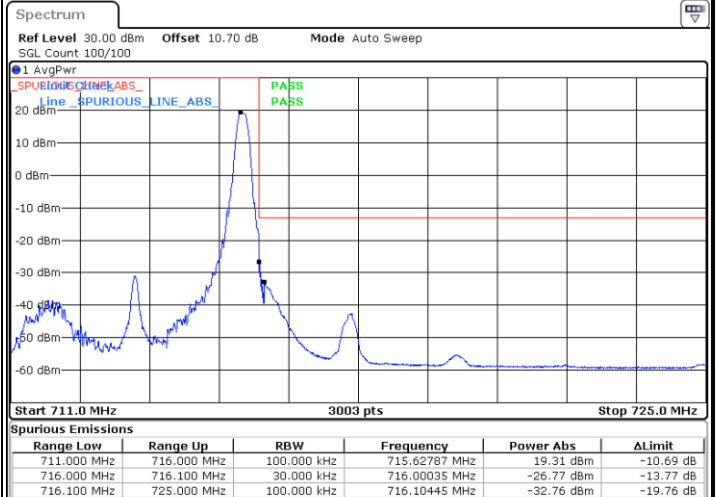
Conducted Band Edge

LTE Band 17 / 5MHz / QPSK

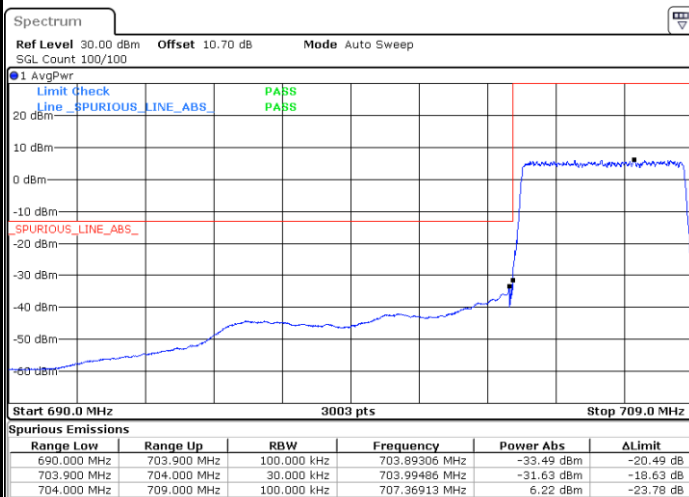
Lowest Band Edge / 1 RB



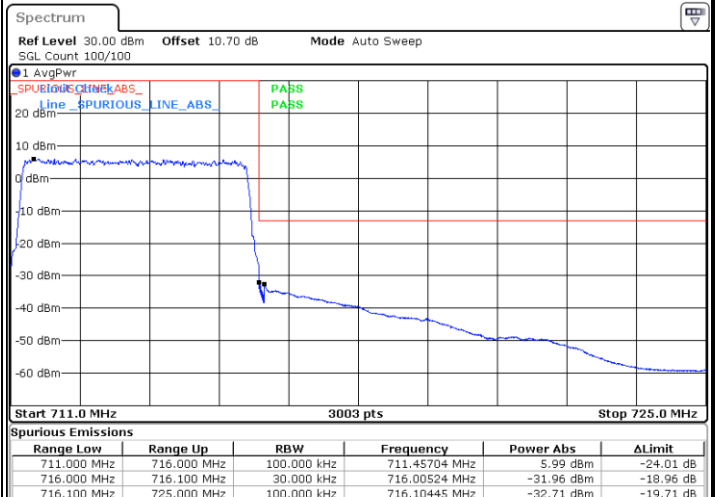
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



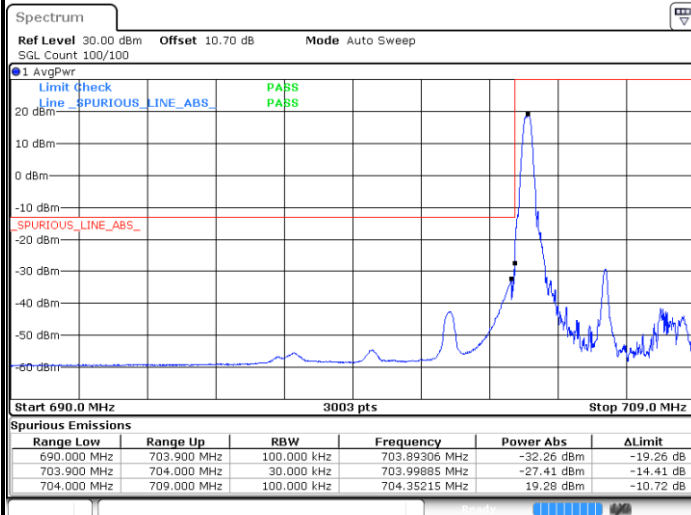
Highest Band Edge / Full RB



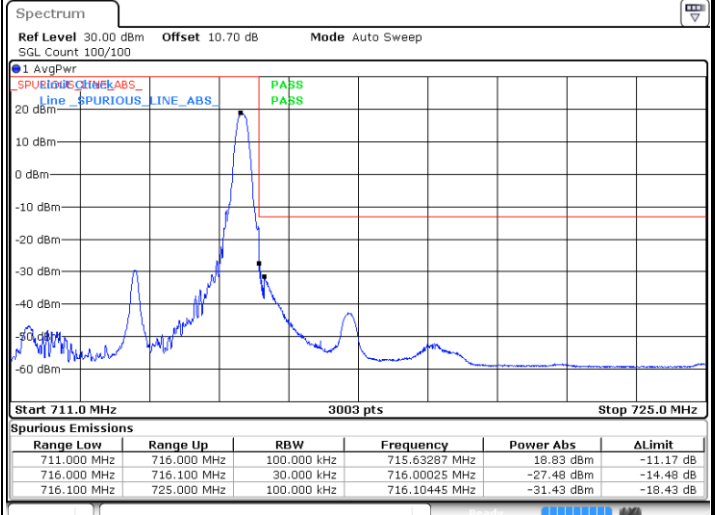


LTE Band 17 / 5MHz / 16QAM

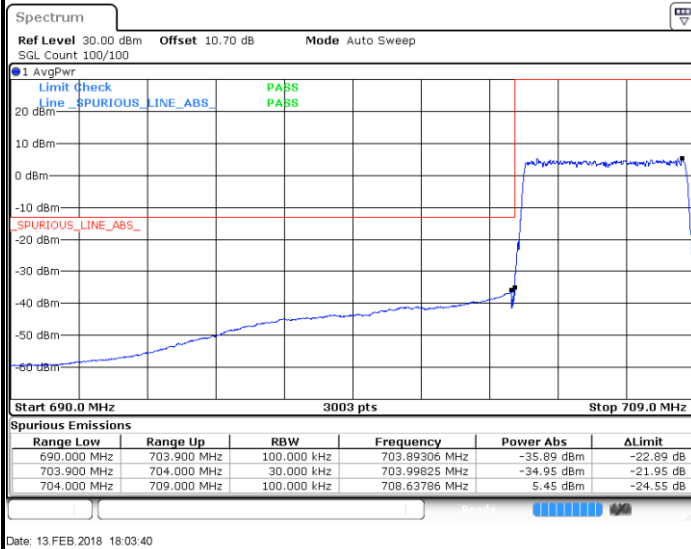
Lowest Band Edge / 1 RB



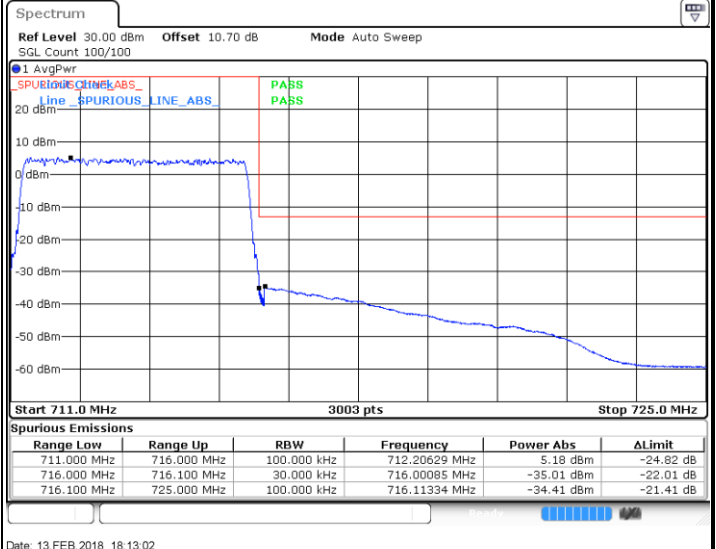
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



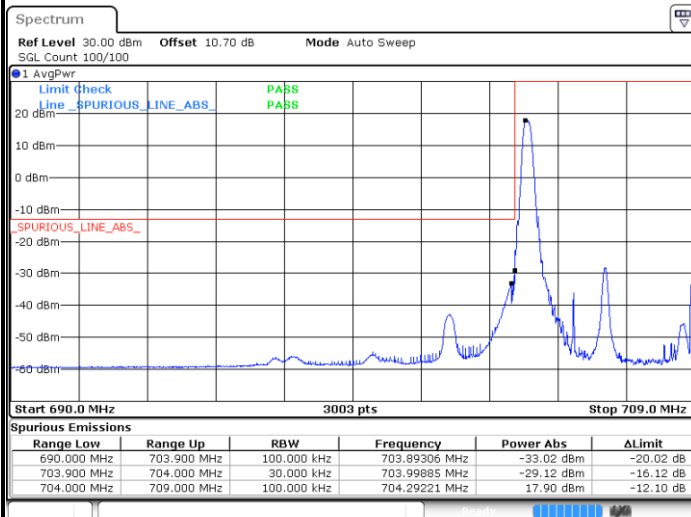
Highest Band Edge / Full RB



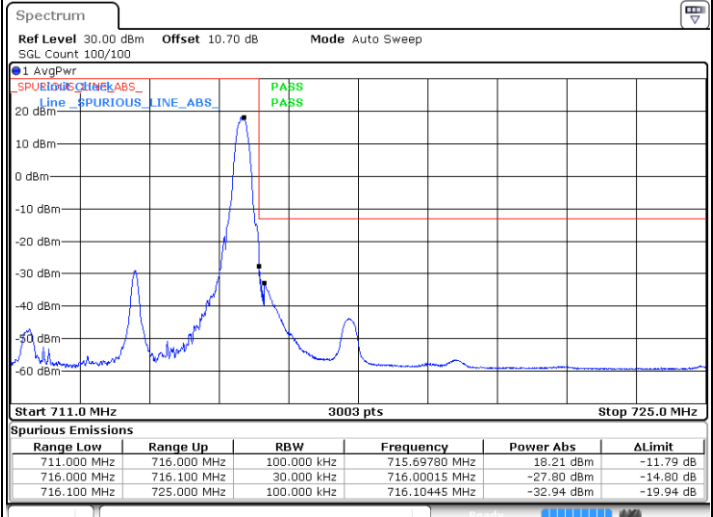


LTE Band 17 / 5MHz / 64QAM

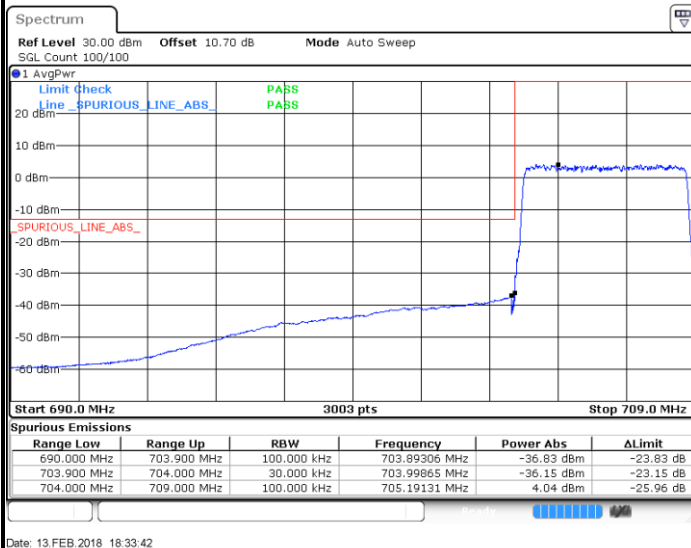
Lowest Band Edge / 1 RB



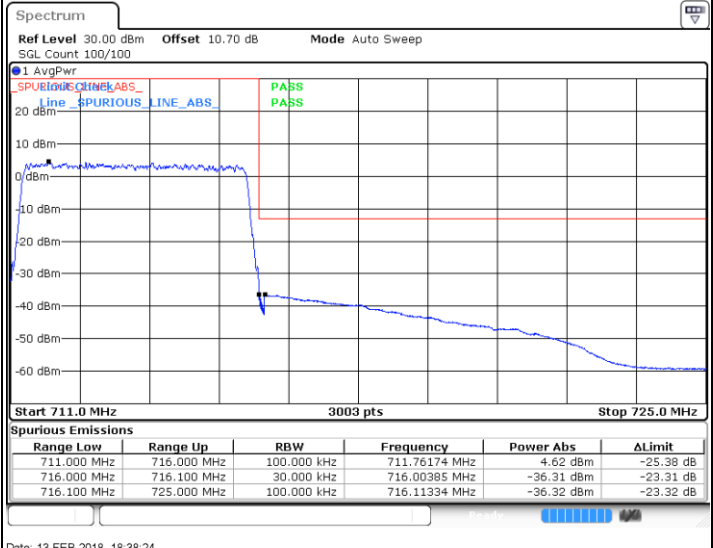
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



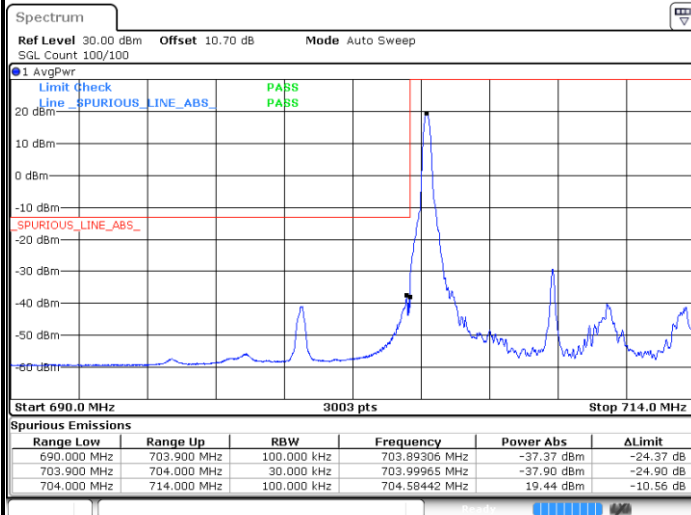
Highest Band Edge / Full RB



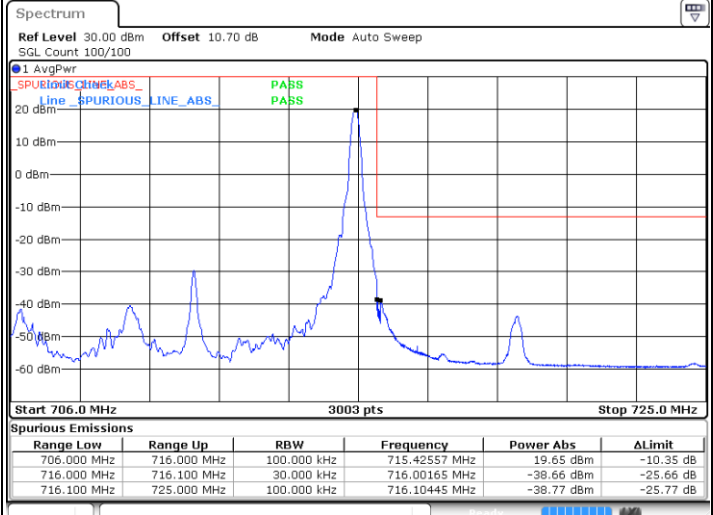


LTE Band 17 / 10MHz / QPSK

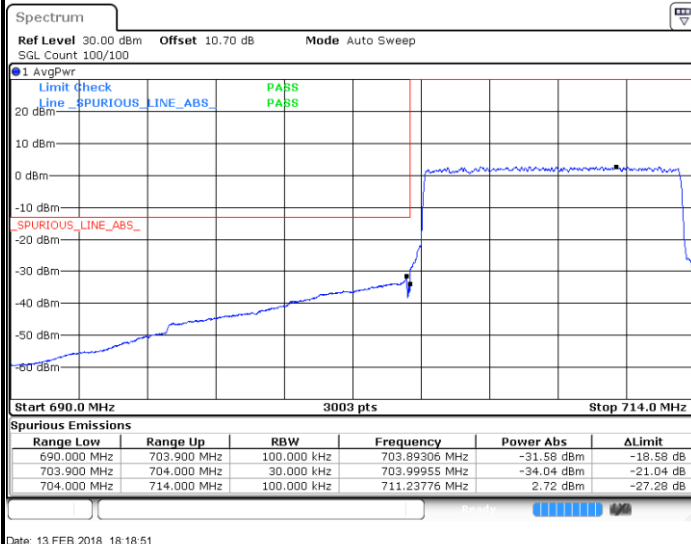
Lowest Band Edge / 1 RB



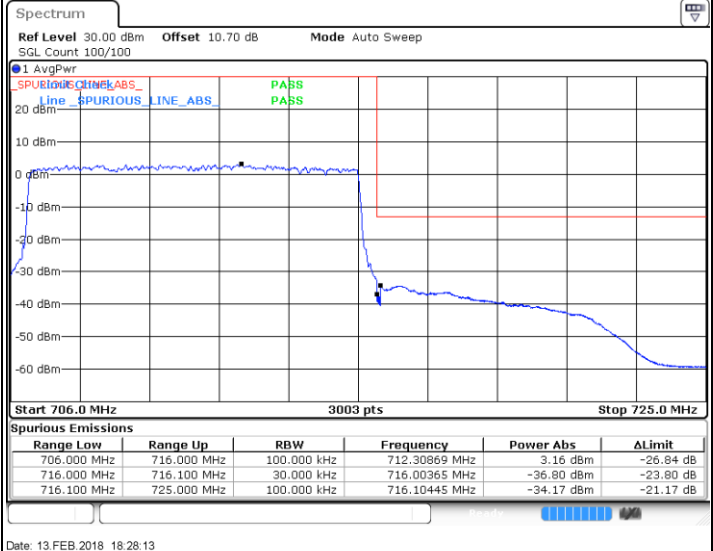
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



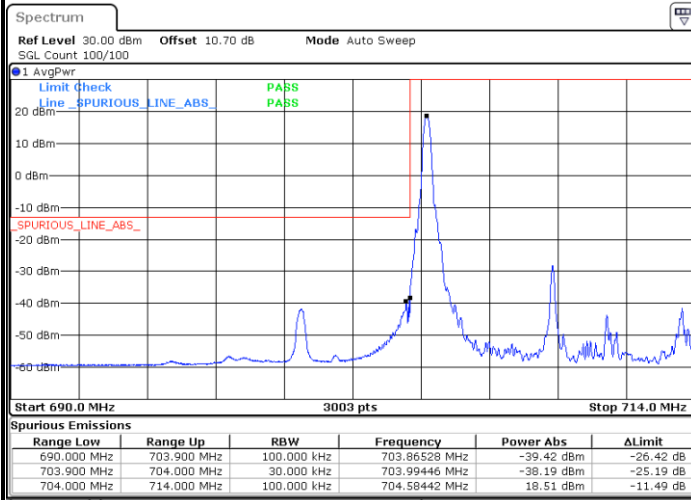
Highest Band Edge / Full RB



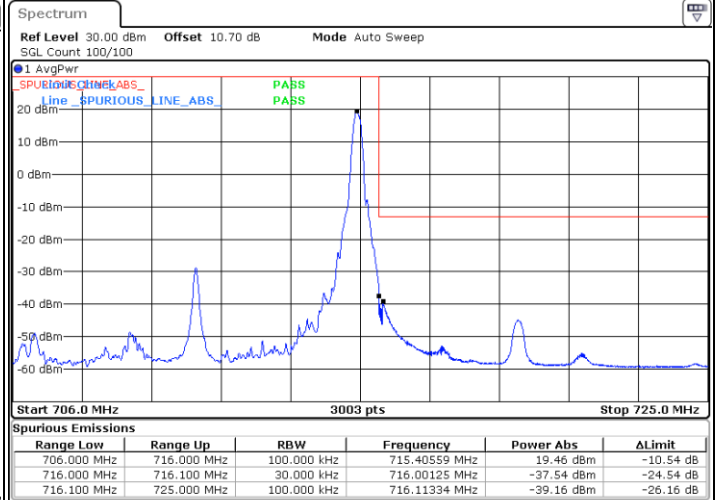


LTE Band 17 / 10MHz / 16QAM

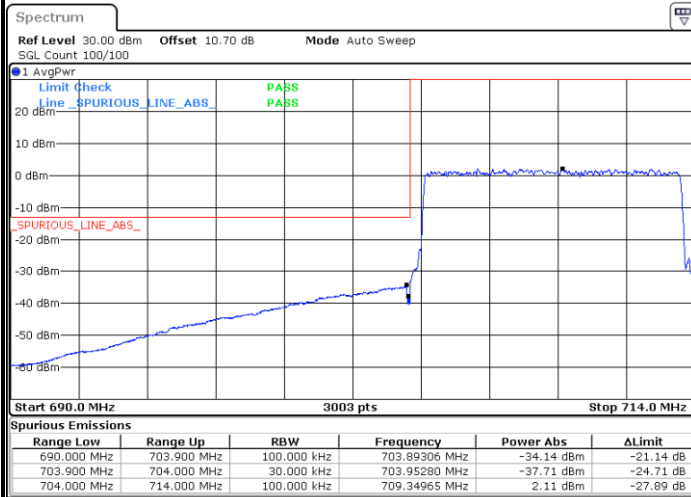
Lowest Band Edge / 1 RB



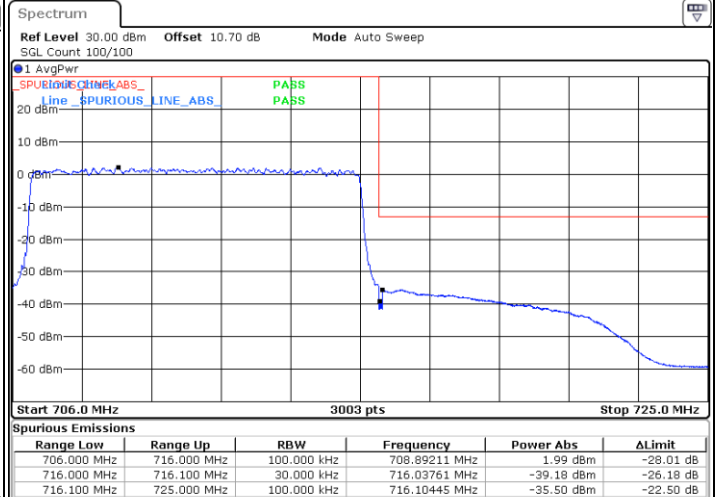
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



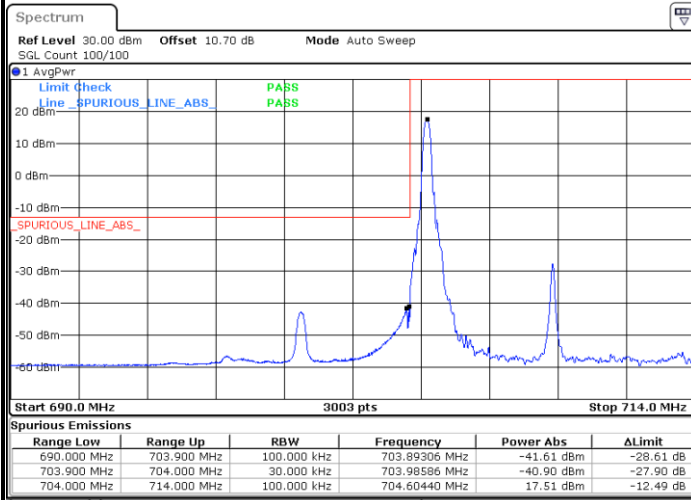
Highest Band Edge / Full RB



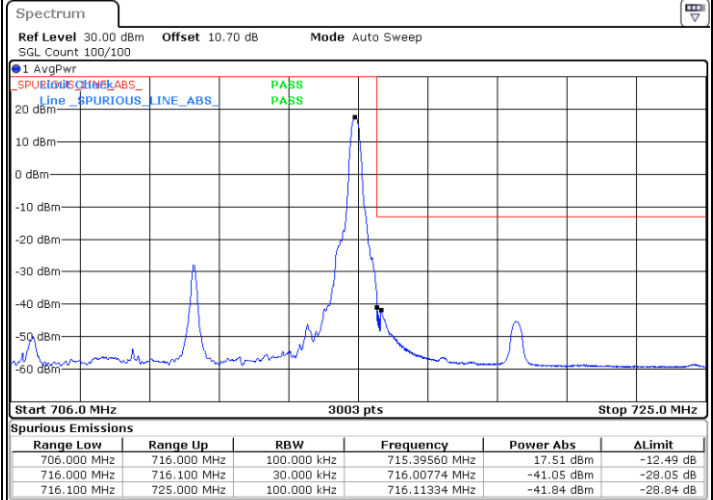


LTE Band 17 / 10MHz / 64QAM

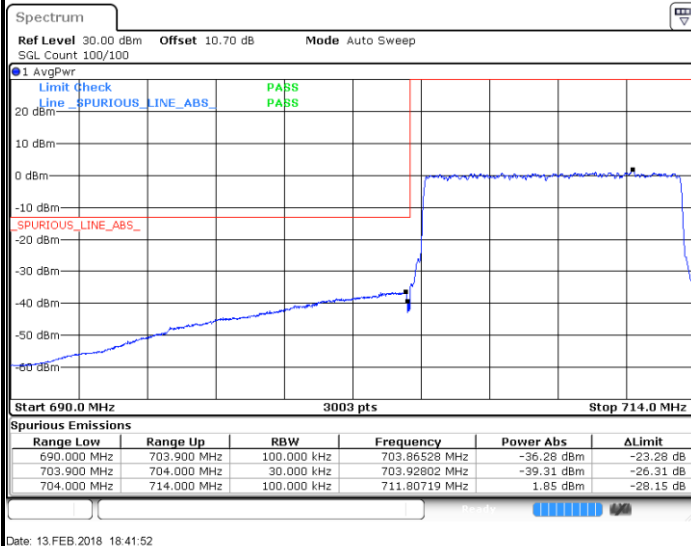
Lowest Band Edge / 1 RB



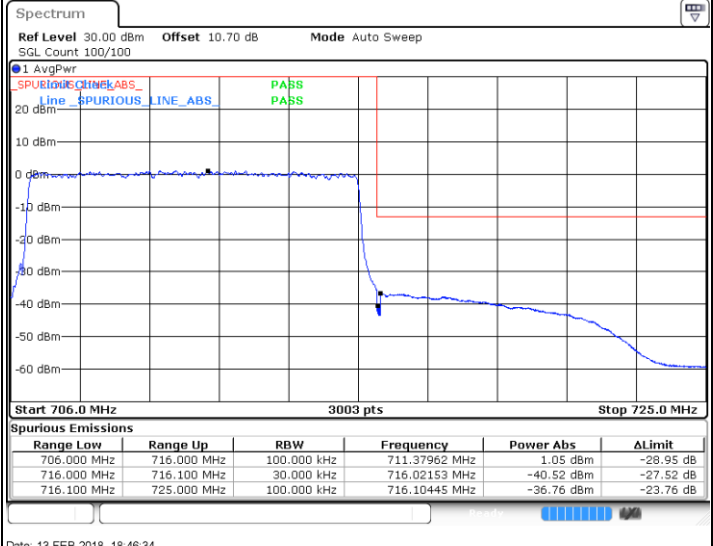
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

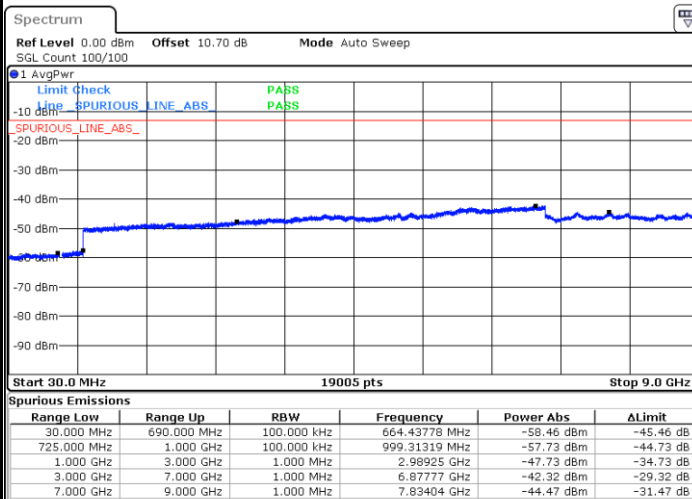




Conducted Spurious Emission

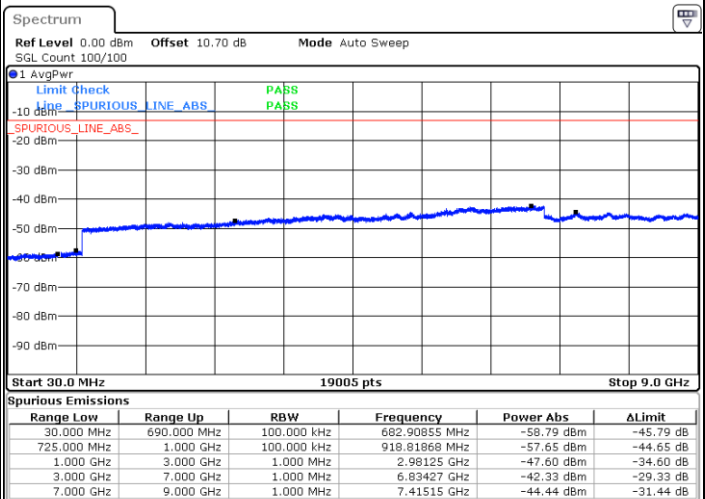
LTE Band 17 / 5MHz

Lowest Channel / QPSK



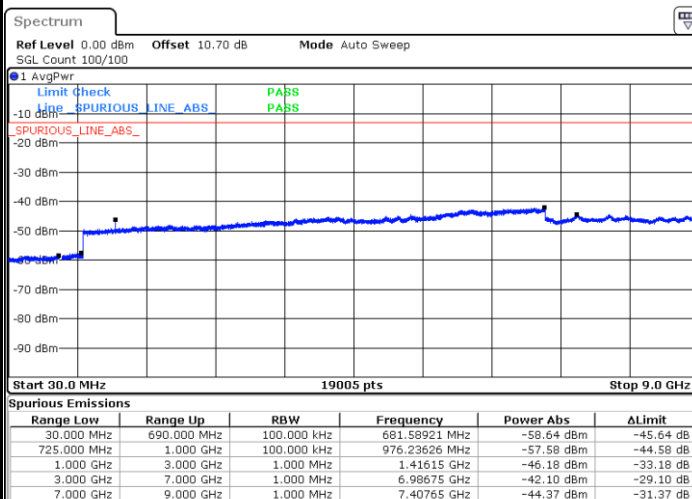
Date: 13 FEB 2018 18:04:33

Lowest Channel / 16QAM



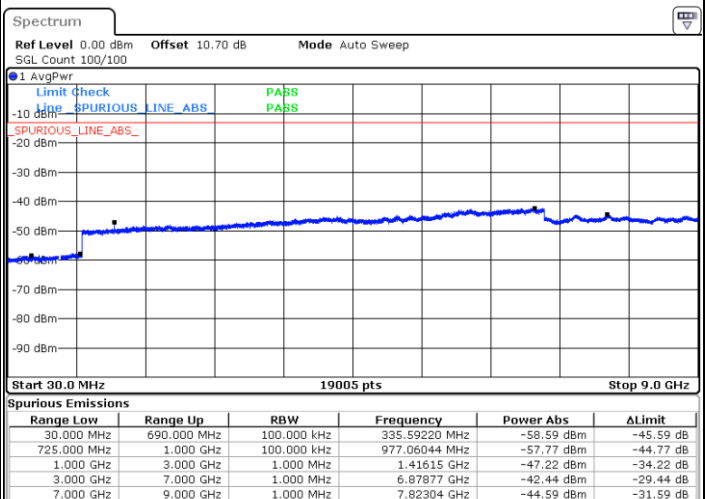
Date: 13 FEB 2018 18:05:27

Middle Channel / QPSK



Date: 13 FEB 2018 18:07:00

Middle Channel / 16QAM

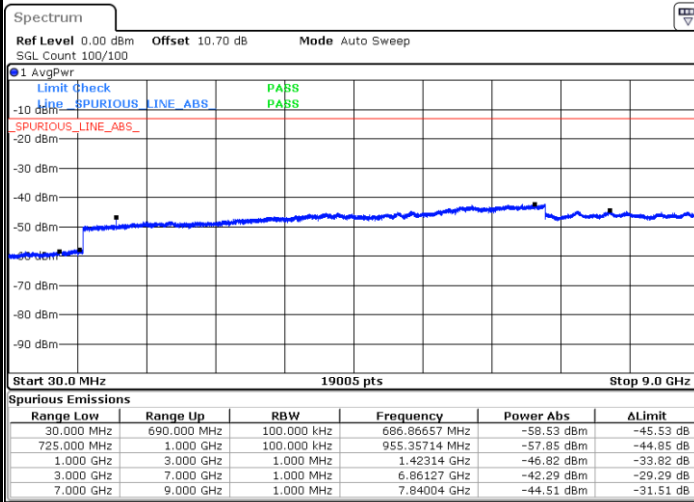


Date: 13 FEB 2018 18:07:53



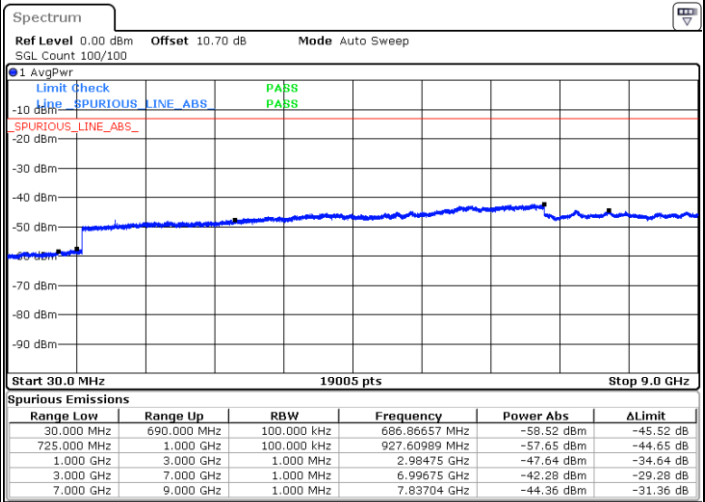
LTE Band 17 / 5MHz

Highest Channel / QPSK



Date: 13 FEB 2018 18:13:55

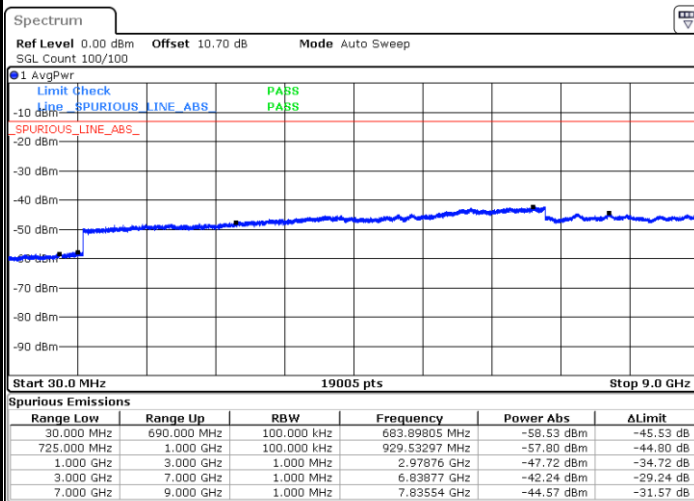
Highest Channel / 16QAM



Date: 13 FEB 2018 18:14:49

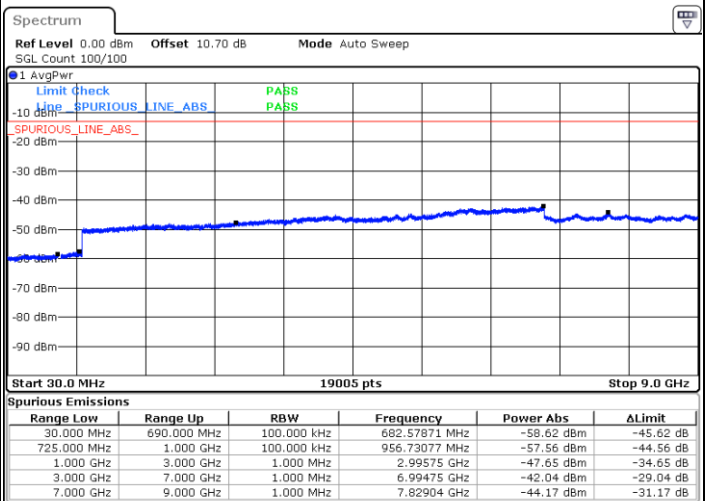
LTE Band 17 / 10MHz

Lowest Channel / QPSK



Date: 13 FEB 2018 18:20:51

Lowest Channel / 16QAM

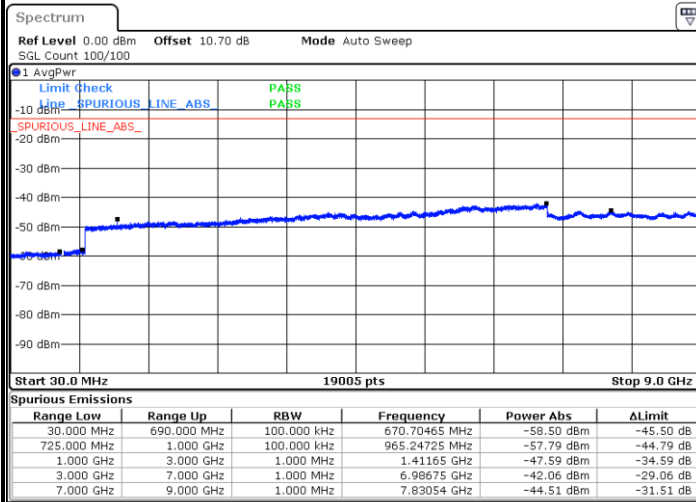


Date: 13 FEB 2018 18:21:45



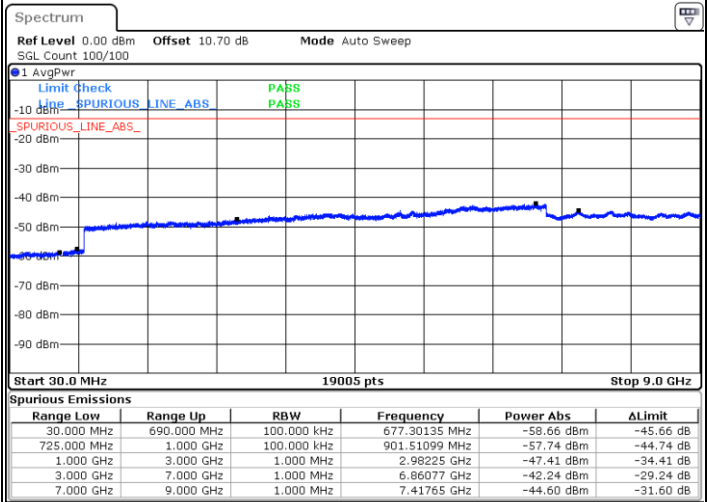
LTE Band 17 / 10MHz

Middle Channel / QPSK



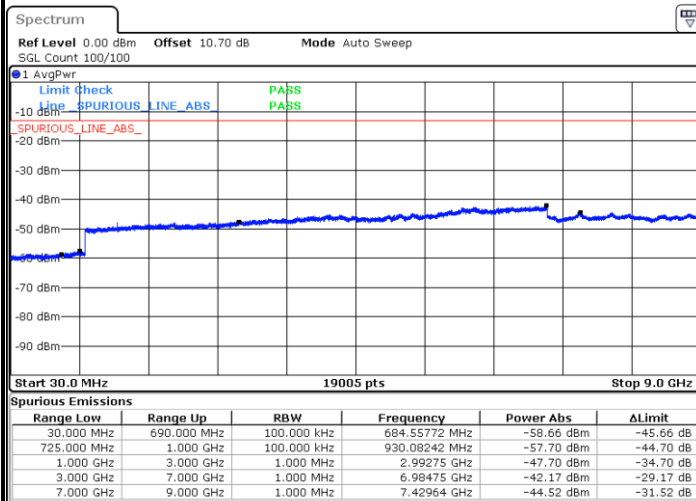
Date: 13.FEB.2018 18:23:18

Middle Channel / 16QAM



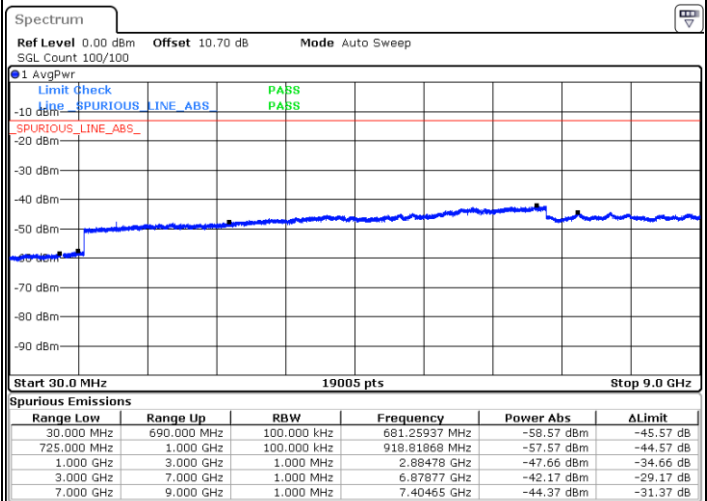
Date: 13.FEB.2018 18:24:12

Highest Channel / QPSK



Date: 13.FEB.2018 18:30:14

Highest Channel / 16QAM

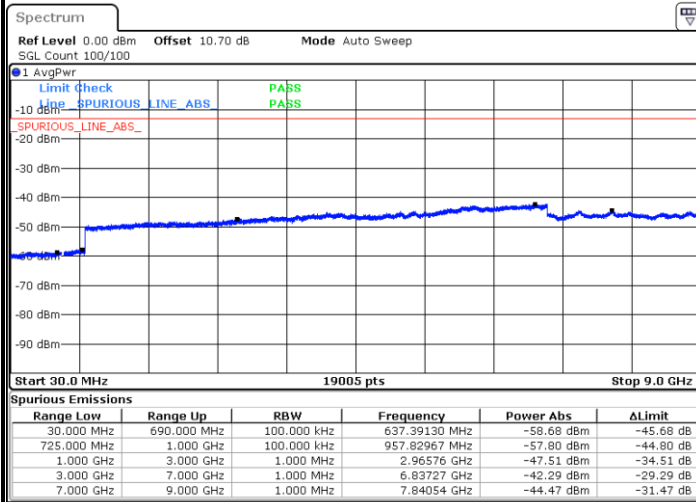


Date: 13.FEB.2018 18:31:07



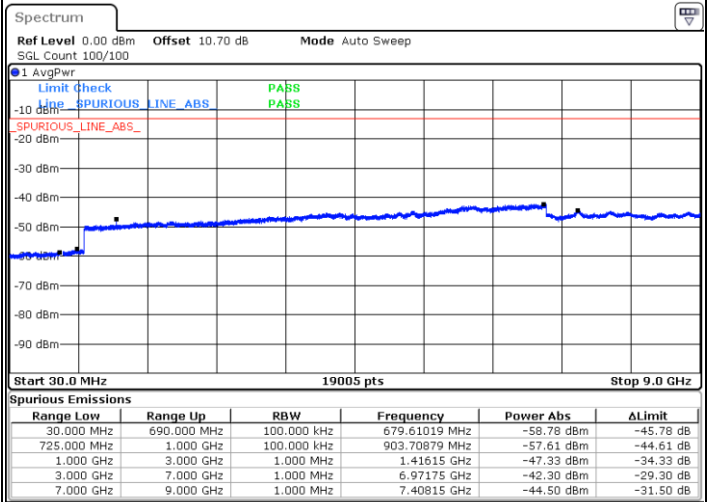
LTE Band 17 / 5MHz

Lowest Channel / 64QAM



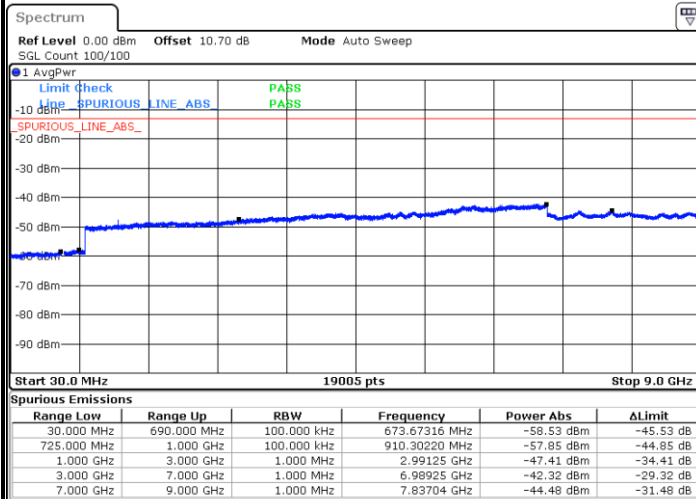
Date: 13 FEB 2018 18:34:35

Middle Channel / 64QAM



Date: 13 FEB 2018 18:35:49

Highest Channel / 64QAM

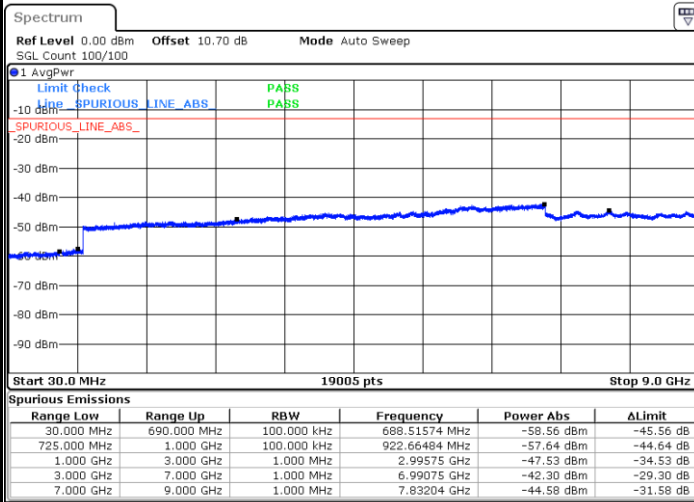


Date: 13 FEB 2018 18:39:17



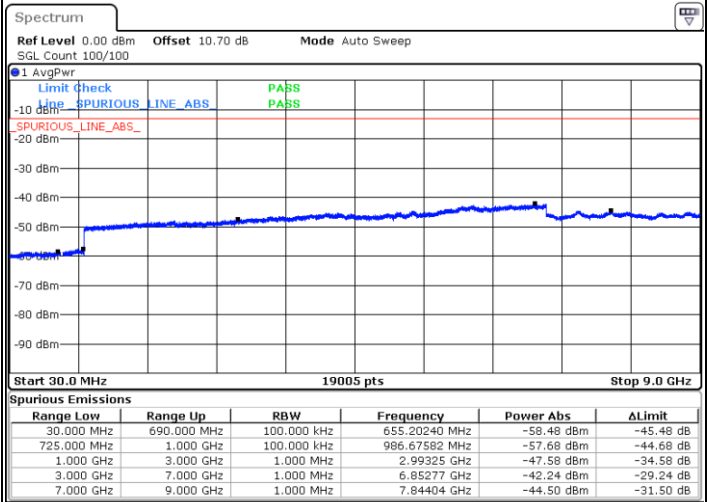
LTE Band 17 / 10MHz

Lowest Channel / 64QAM



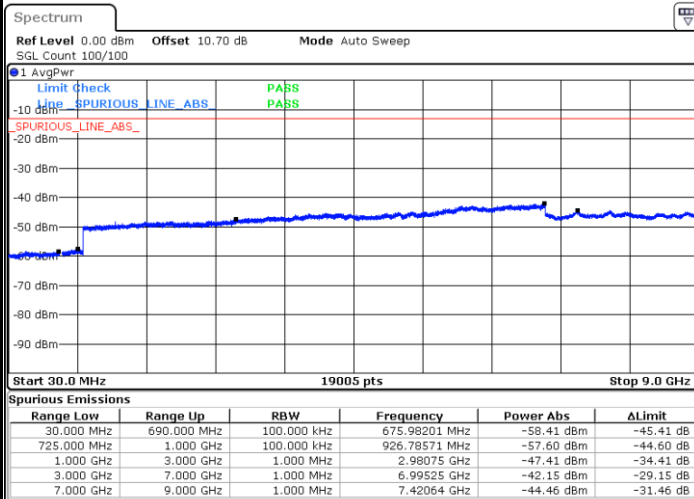
Date: 13 FEB 2018 18:42:45

Middle Channel / 64QAM



Date: 13 FEB 2018 18:43:59

Highest Channel / 64QAM



Date: 13 FEB 2018 18:47:27

Frequency Stability

Test Conditions		LTE Band 17 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0034	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0068	
0	Normal Voltage	0.0038	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0031	
-30	Normal Voltage	0.0045	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0001	

Note:

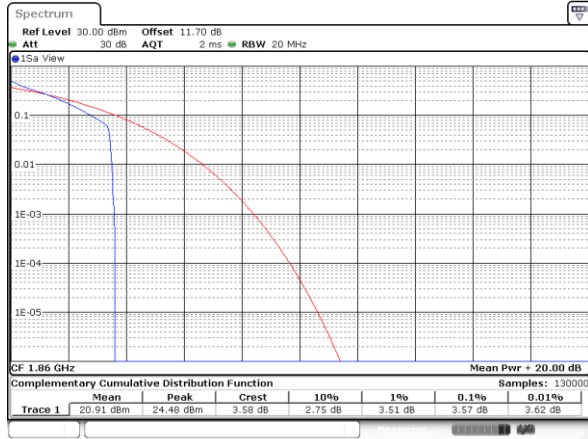
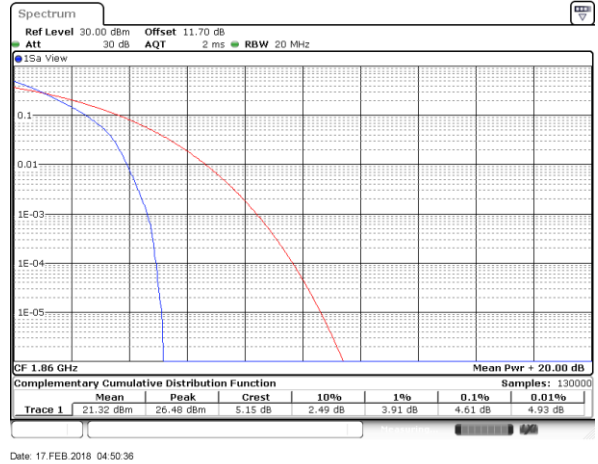
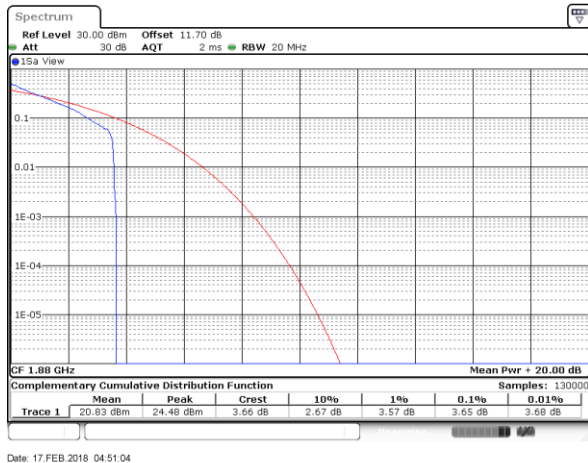
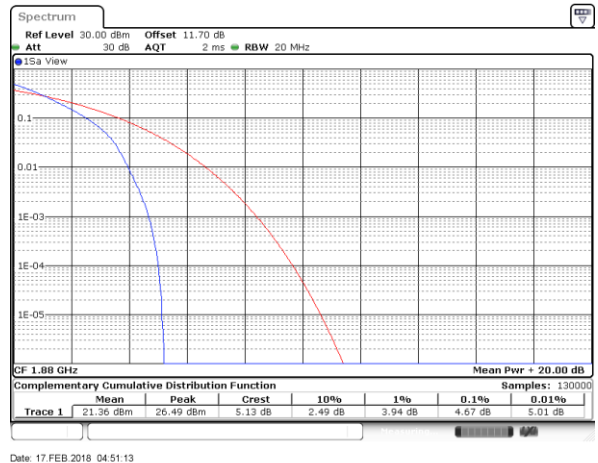
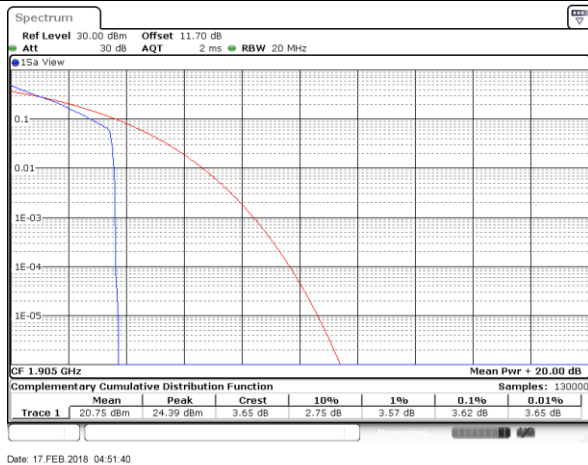
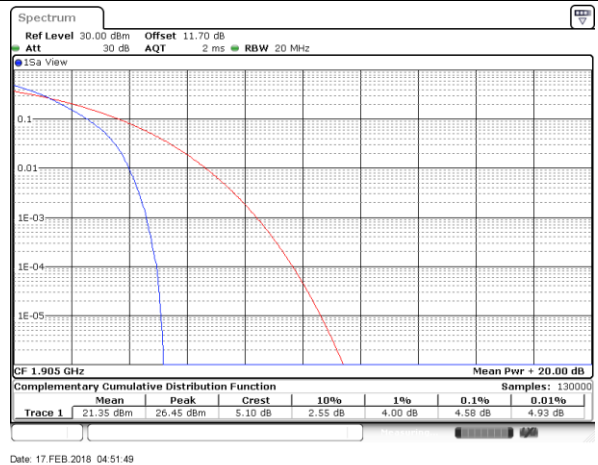
1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 25

Peak-to-Average Ratio

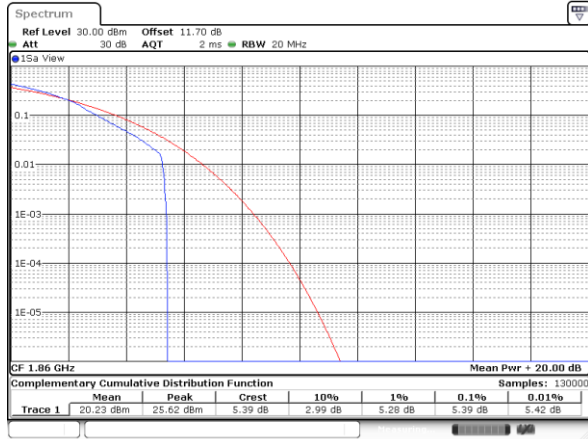
Mode	LTE Band 25 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.57	4.61	5.39	6	PASS
Middle CH	3.65	4.67	5.57	5.94	
Highest CH	3.62	4.58	4.99	5.88	
Mode	LTE Band 25 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.75	6.46	-	-	PASS
Middle CH	6.46	6.58	-	-	
Highest CH	6.26	6.55	-	-	

LTE Band 25 / 20MHz / QPSK
Lowest Channel / 1RB

Lowest Channel / Full RB

Middle Channel / 1RB

Middle Channel / Full RB

Highest Channel / 1RB

Highest Channel / Full RB


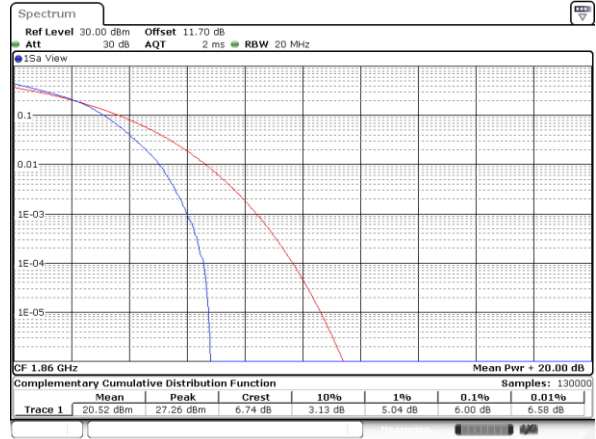


LTE Band 25 / 20MHz / 16QAM

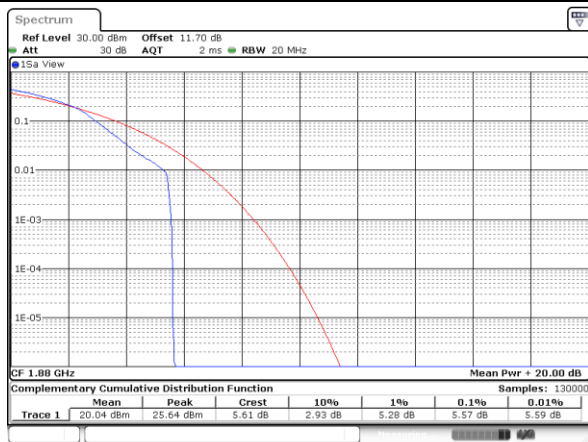
Lowest Channel / 1RB



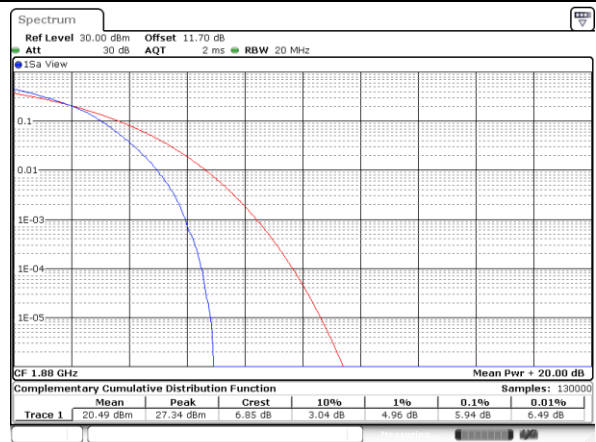
Lowest Channel / Full RB



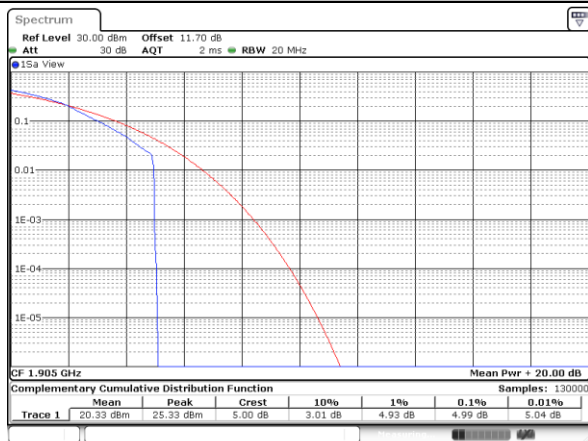
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

