



LTE Band 5

Conducted Output Power(Average power)

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.87	22.92	23.16
1.4	1	2		23.00	22.91	23.10
1.4	1	5		22.91	22.78	22.93
1.4	3	0		22.90	22.93	23.22
1.4	3	1		23.00	22.90	23.18
1.4	3	2		23.05	22.90	23.21
1.4	6	0		22.05	22.06	22.07
1.4	1	0	16-QAM	22.11	22.25	22.36
1.4	1	2		22.07	22.15	22.28
1.4	1	5		22.19	22.26	22.35
1.4	3	0		22.03	22.08	22.24
1.4	3	1		22.10	22.11	22.13
1.4	3	2		22.17	22.04	22.18
1.4	6	0		20.97	20.91	21.05
3	1	0	QPSK	22.86	22.82	23.08
3	1	7		22.93	22.93	22.93
3	1	14		22.86	23.10	22.80
3	8	0		21.97	22.05	22.04
3	8	4		22.03	21.87	22.06
3	8	7		21.99	21.92	22.02
3	15	0		22.10	21.95	22.10
3	1	0	16-QAM	22.15	22.72	22.69
3	1	7		22.28	22.24	22.33
3	1	14		22.32	22.39	22.41
3	8	0		21.18	20.85	20.94
3	8	4		20.97	20.90	21.22
3	8	7		20.88	20.82	21.04
3	15	0		20.91	20.93	21.10



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.11	23.11	22.87
5	1	12		23.00	22.84	23.00
5	1	24		22.75	22.81	22.83
5	12	0		21.98	21.98	22.03
5	12	6		22.03	21.90	21.99
5	12	11		22.04	21.93	22.06
5	25	0		22.04	21.93	21.94
5	1	0	16-QAM	22.79	22.21	22.26
5	1	12		22.31	22.21	22.22
5	1	24		22.21	22.29	22.20
5	12	0		20.94	20.90	20.99
5	12	6		20.99	20.77	20.88
5	12	11		20.84	20.90	20.97
5	25	0		20.98	20.95	20.80
10	1	0	QPSK	23.08	23.17	23.40
10	1	24		22.97	22.85	22.94
10	1	49		22.80	22.83	22.92
10	25	0		21.99	21.95	22.07
10	25	12		21.96	21.97	22.01
10	25	24		22.04	22.04	21.96
10	50	0		22.08	21.92	22.09
10	1	0	16-QAM	22.39	22.42	22.57
10	1	24		22.26	22.14	22.22
10	1	49		22.30	22.34	22.32
10	25	0		21.04	21.07	20.91
10	25	12		21.02	20.92	21.18
10	25	24		20.98	20.99	21.05
10	50	0		20.80	20.80	20.93

**Peak-to-Average Ratio**

Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	RB Size	Result
Lowest CH	4.49	5.33	5.33	6.20	PASS
Middle CH	4.46	5.16	5.36	6.03	
Highest CH	4.52	5.39	5.22	6.23	



LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



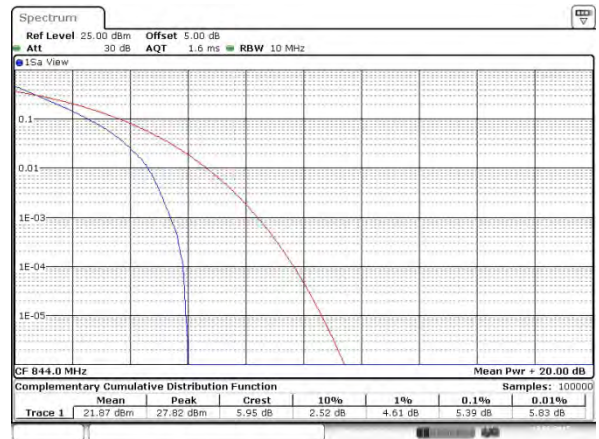
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



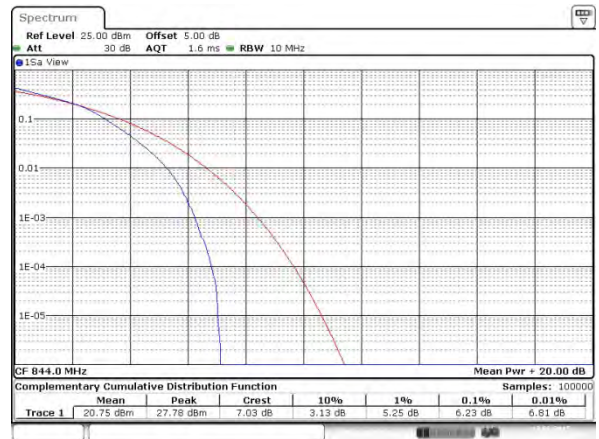
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



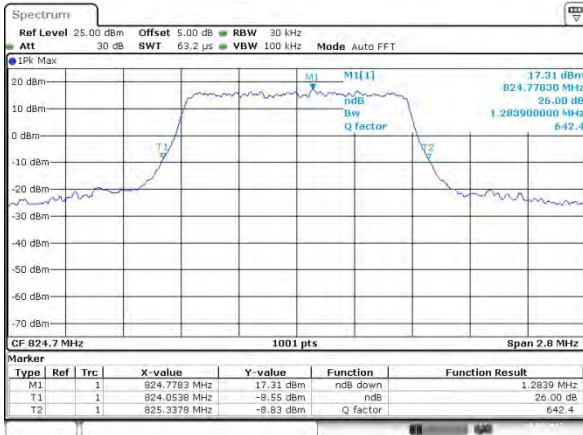
**26dB Bandwidth**

Mode	LTE Band 5 : 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	1.28	1.30	3.05	3.06	5.04	5.05	10.11	10.05	-	-	-	-
Middle CH	1.28	1.30	3.04	3.05	5.04	5.05	10.01	9.95	-	-	-	-
Highest CH	1.28	1.30	3.04	3.05	5.04	5.05	10.07	10.11	-	-	-	-

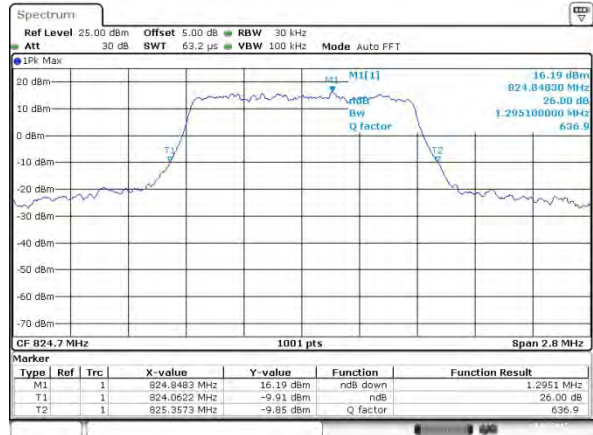


LTE Band 5

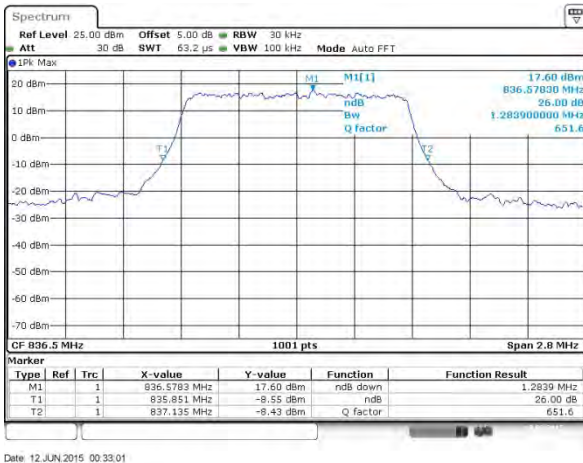
Lowest Channel / 1.4MHz / QPSK



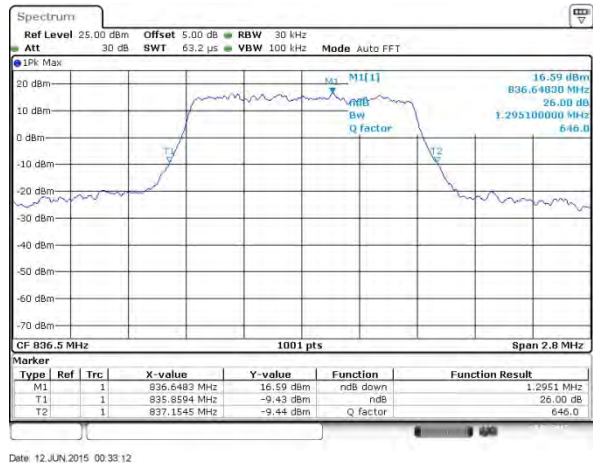
Lowest Channel / 1.4MHz / 16QAM



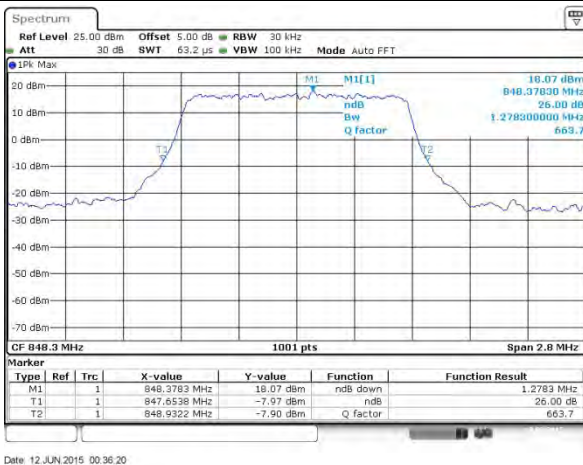
Middle Channel / 1.4MHz / QPSK



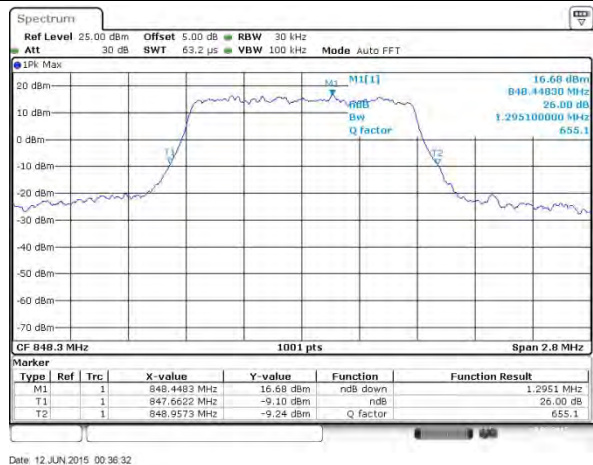
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



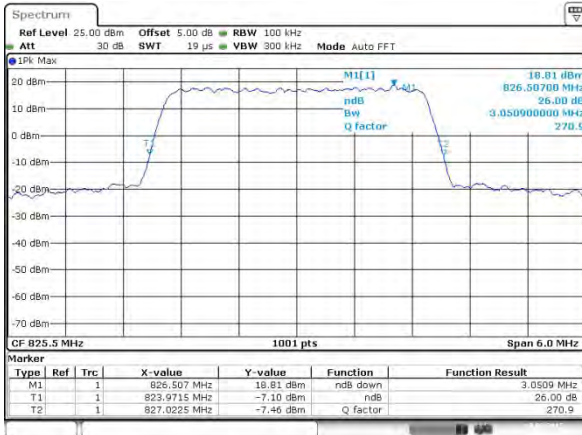
Highest Channel / 1.4MHz / 16QAM



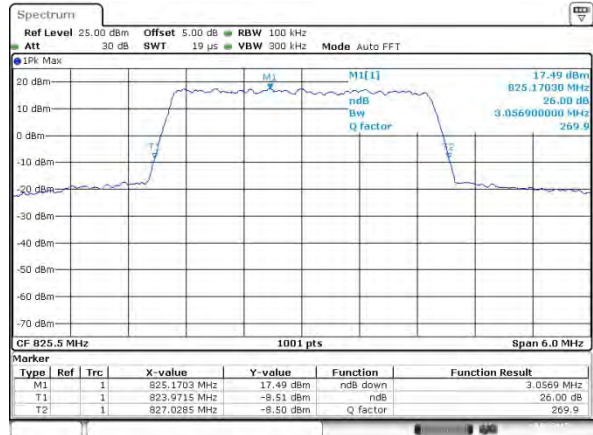


LTE Band 5

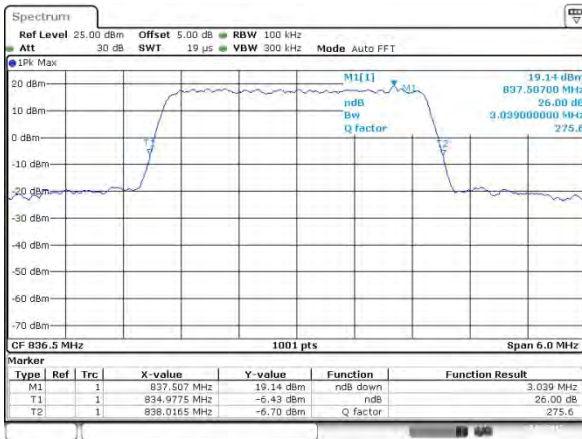
Lowest Channel / 3MHz / QPSK



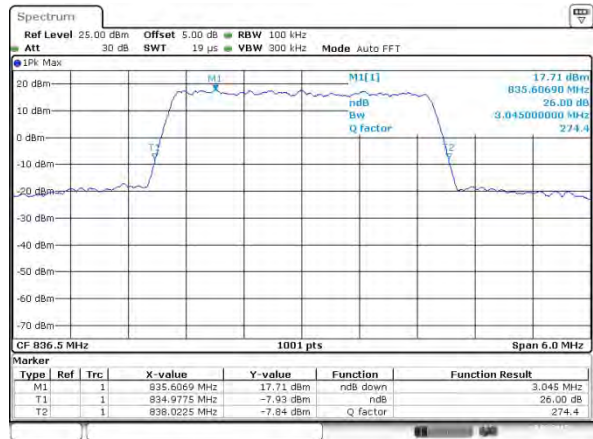
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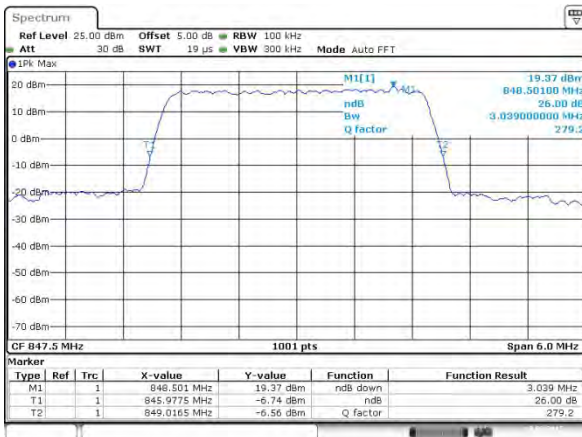
Middle Channel / 3MHz / QPSK



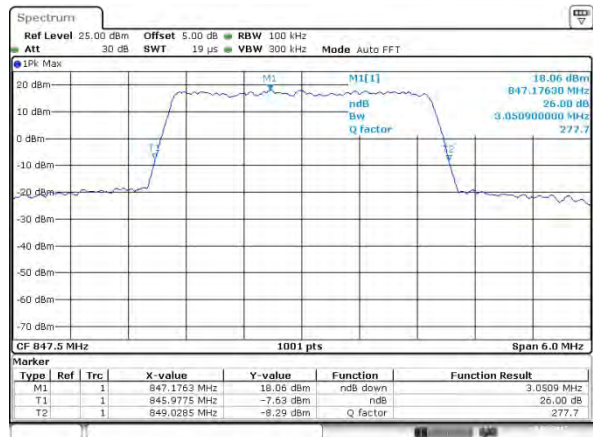
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



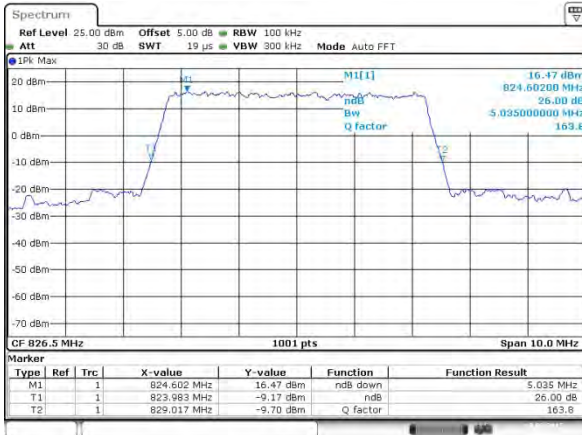
Highest Channel / 3MHz / 16QAM



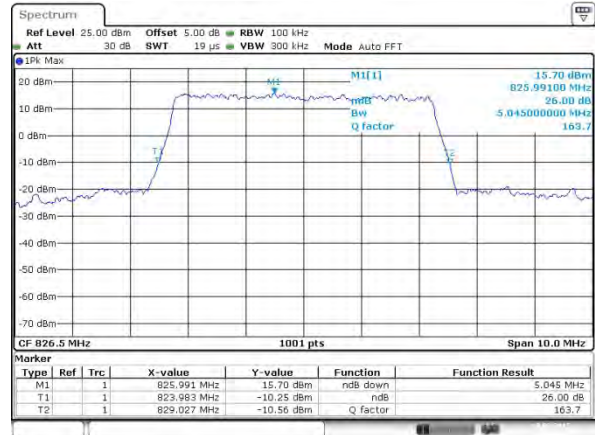


LTE Band 5

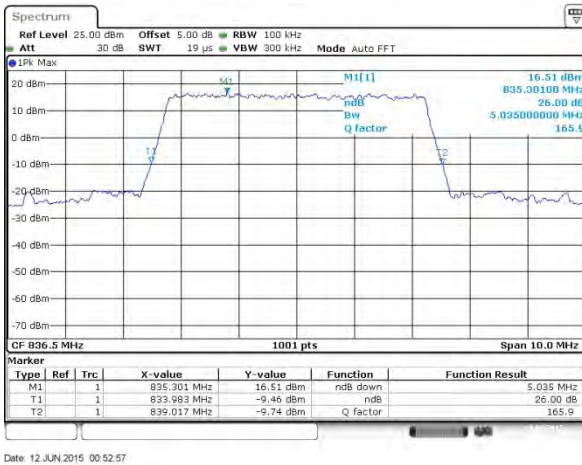
Lowest Channel / 5MHz / QPSK



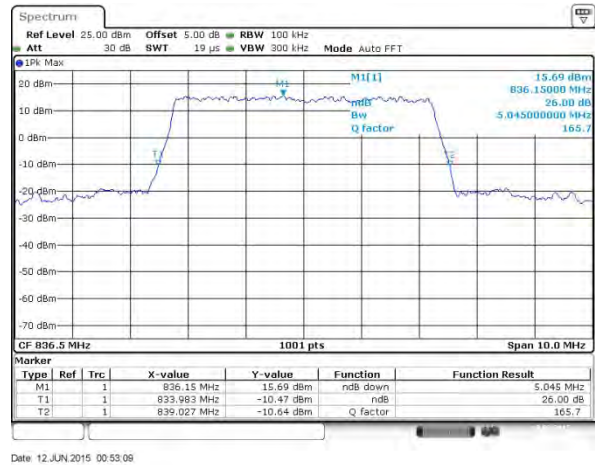
Lowest Channel / 5MHz / 16QAM



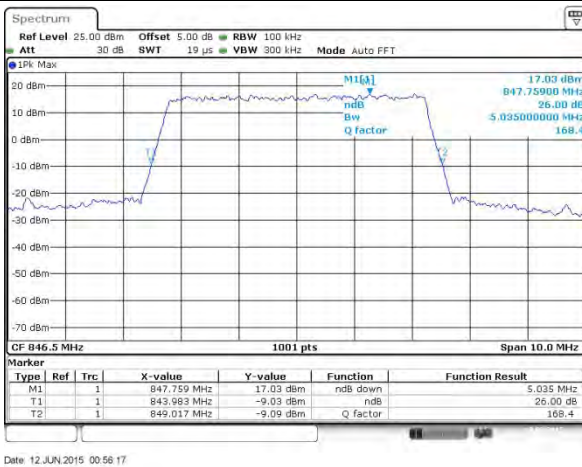
Middle Channel / 5MHz / QPSK



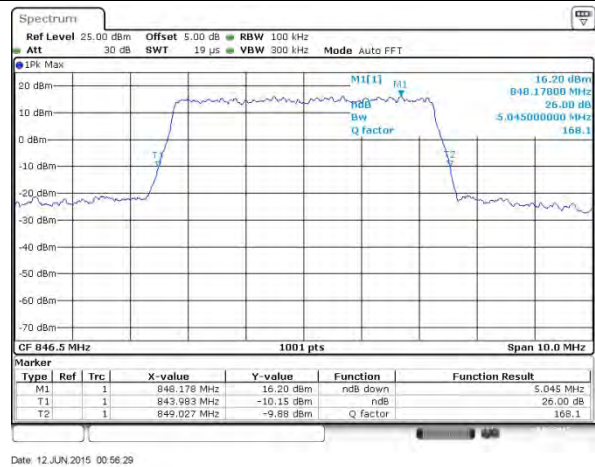
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



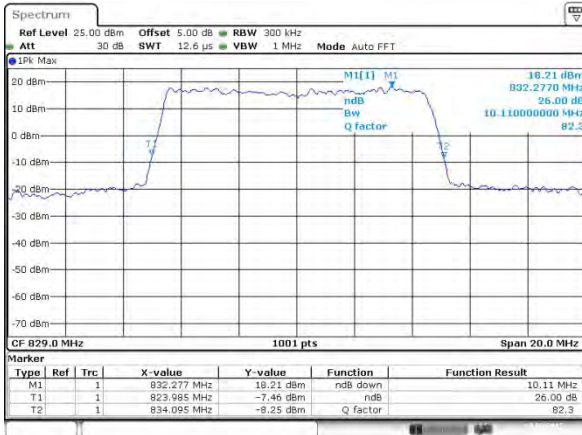
Highest Channel / 5MHz / 16QAM



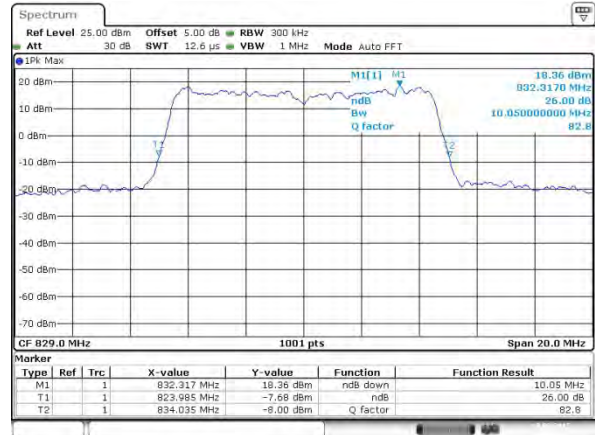


LTE Band 5

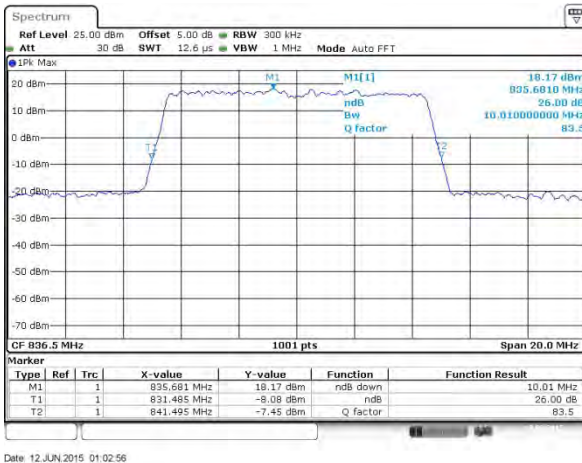
Lowest Channel / 10MHz / QPSK



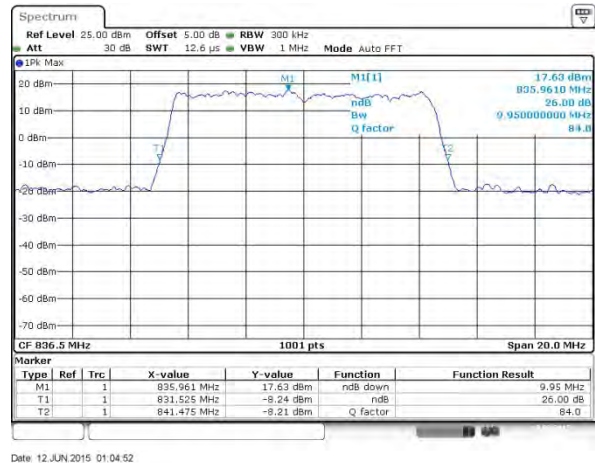
Lowest Channel / 10MHz / 16QAM



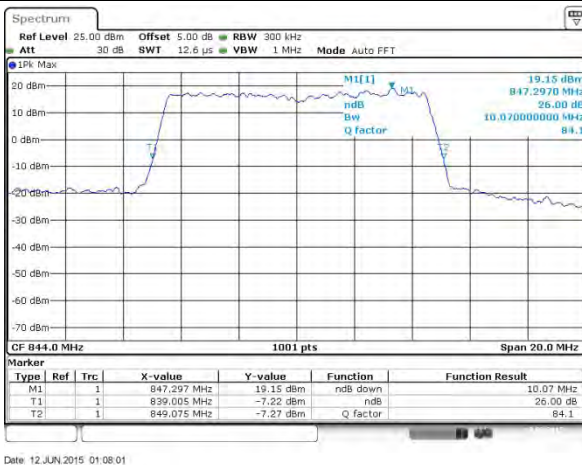
Middle Channel / 10MHz / QPSK



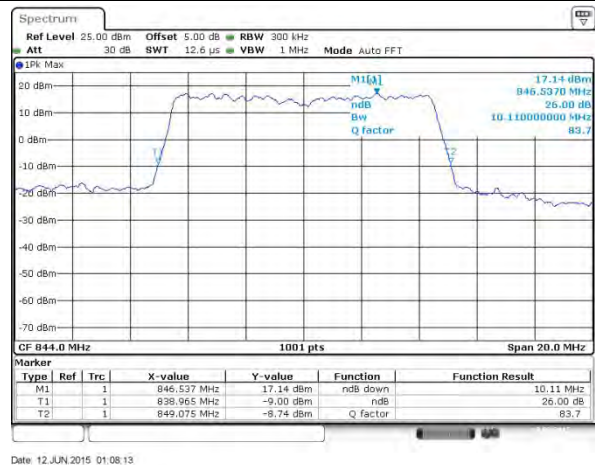
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM



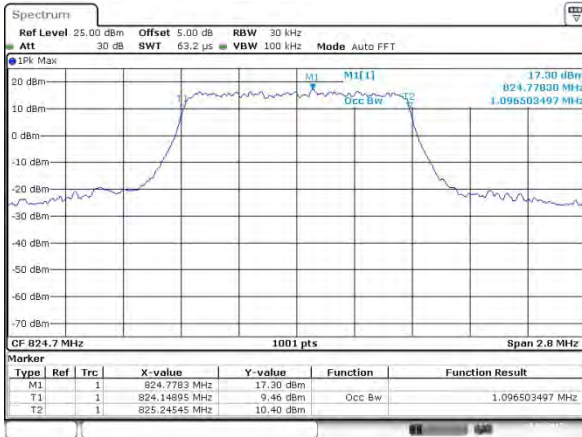
**Occupied Bandwidth**

Mode	LTE Band 5 : 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	1.10	1.09	2.72	2.73	4.50	4.51	9.09	9.09	-	-	-	-
Middle CH	1.09	1.10	2.73	2.72	4.50	4.50	9.05	9.01	-	-	-	-
Highest CH	1.10	1.10	2.72	2.73	4.50	4.50	9.09	9.05	-	-	-	-

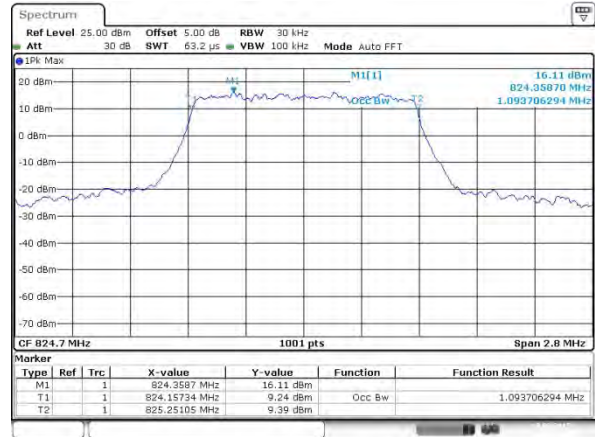


LTE Band 5

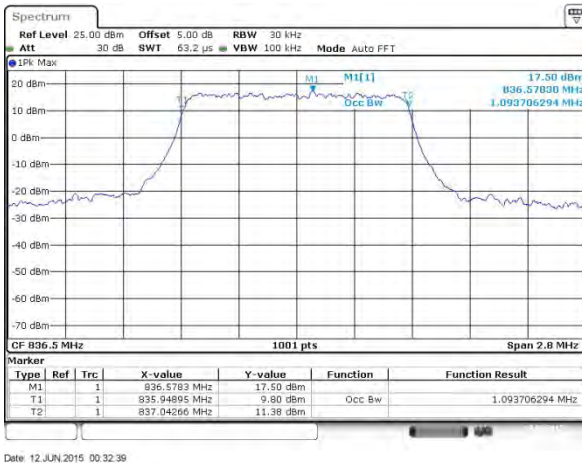
Lowest Channel / 1.4MHz / QPSK



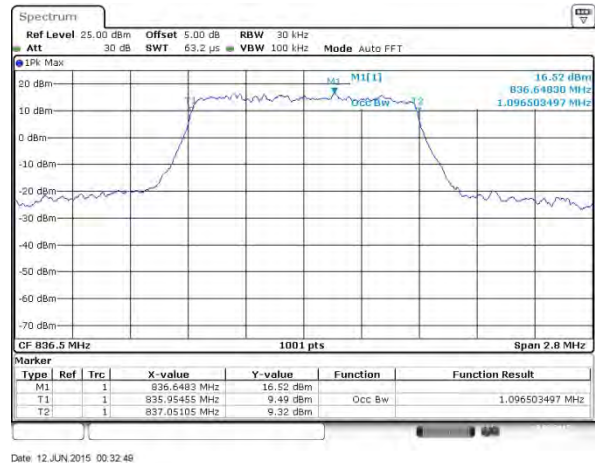
Lowest Channel / 1.4MHz / 16QAM



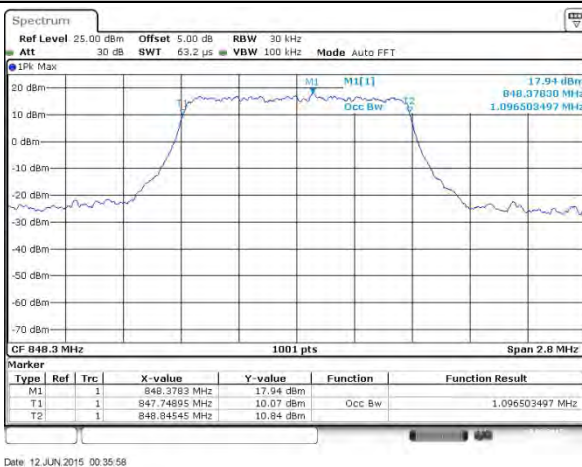
Middle Channel / 1.4MHz / QPSK



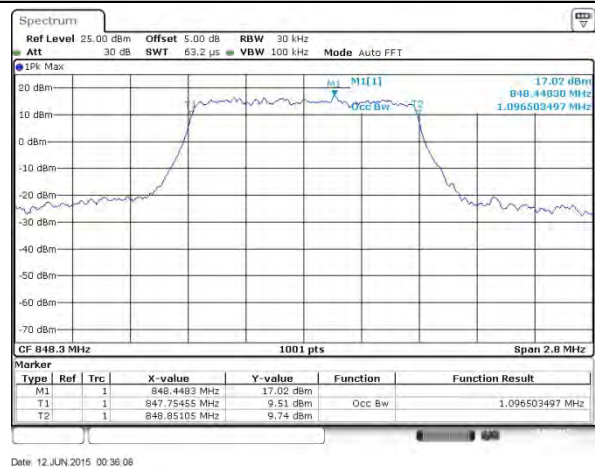
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



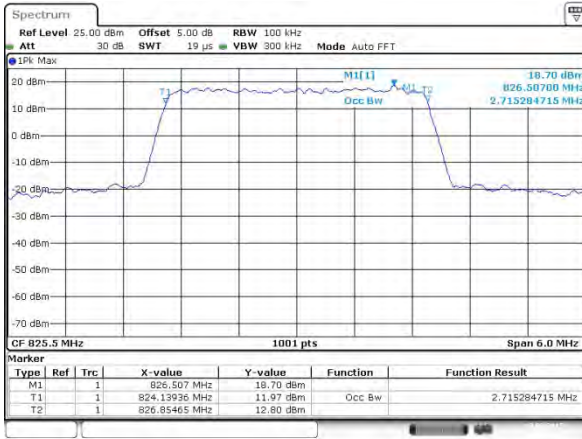
Highest Channel / 1.4MHz / 16QAM



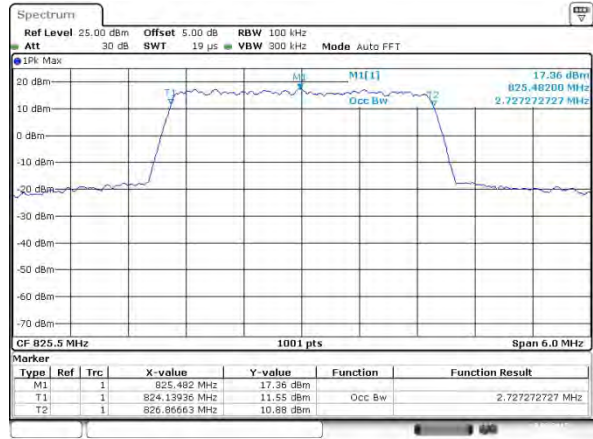


LTE Band 5

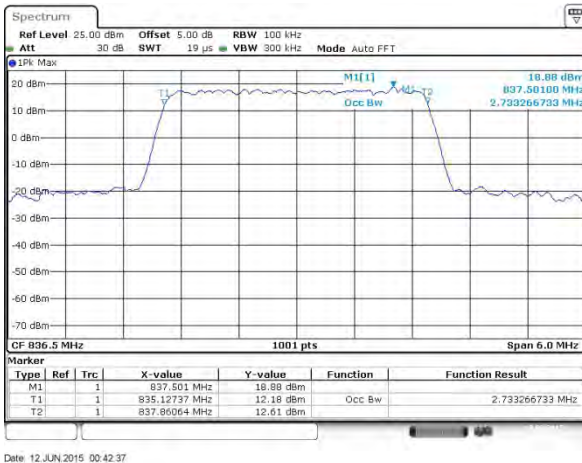
Lowest Channel / 3MHz / QPSK



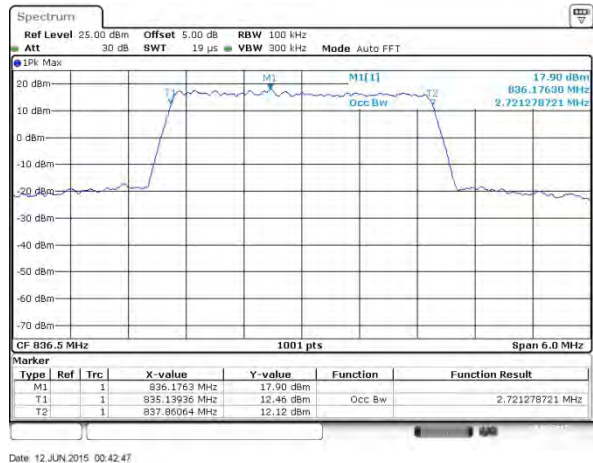
Lowest Channel / 3MHz / 16QAM



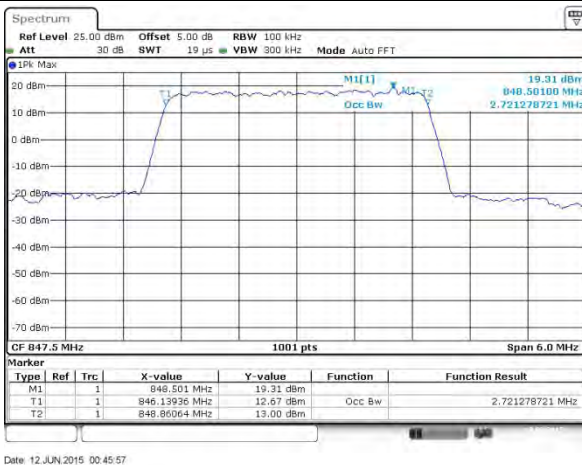
Middle Channel / 3MHz / QPSK



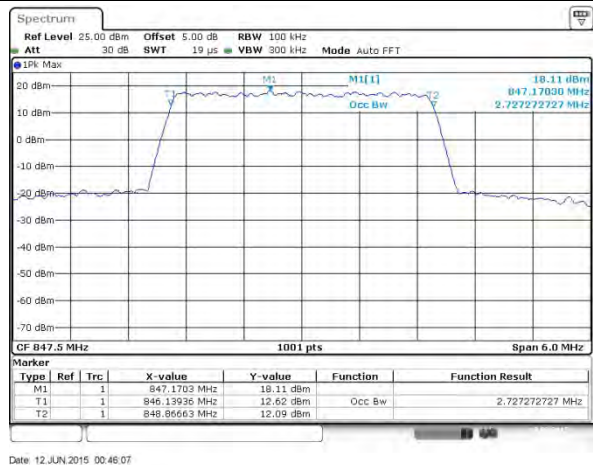
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



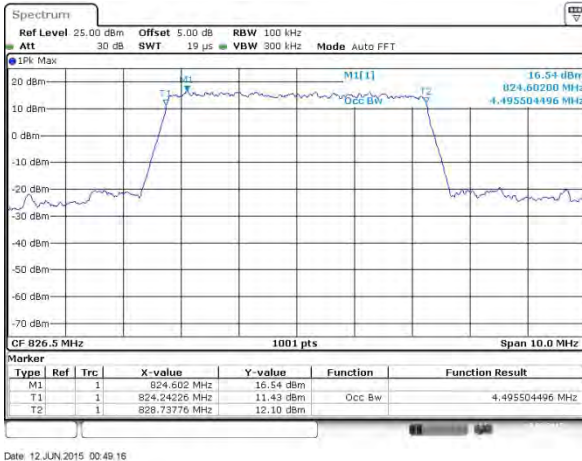
Highest Channel / 3MHz / 16QAM



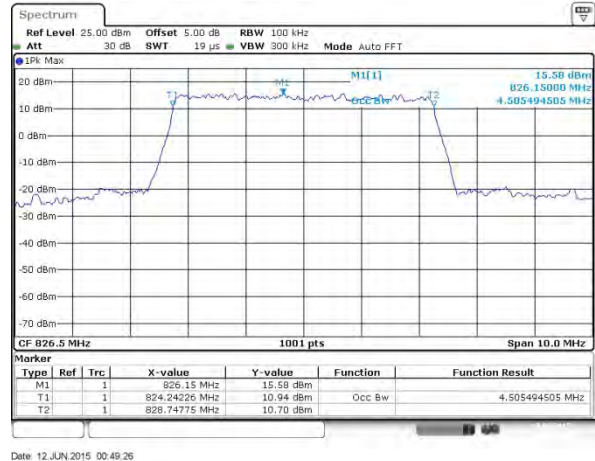


LTE Band 5

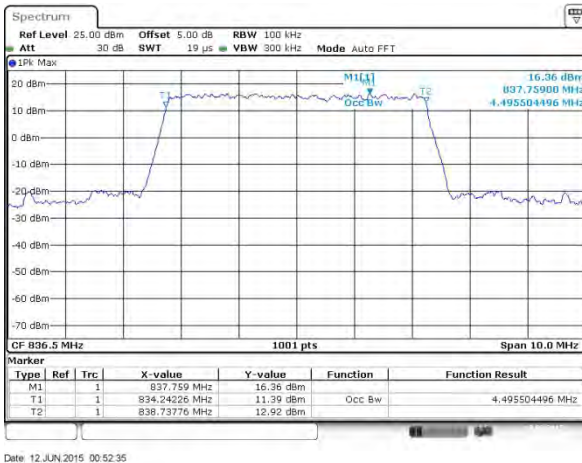
Lowest Channel / 5MHz / QPSK



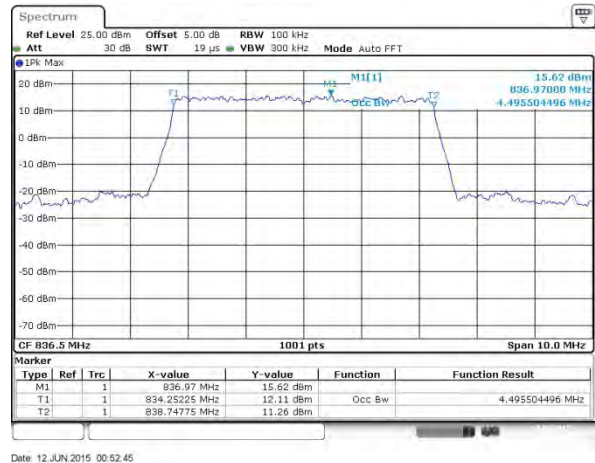
Lowest Channel / 5MHz / 16QAM



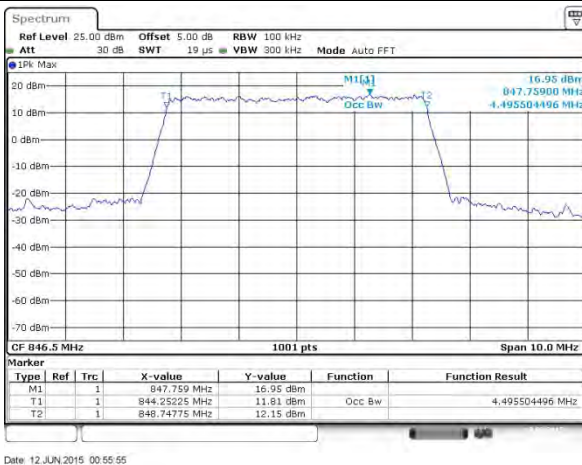
Middle Channel / 5MHz / QPSK



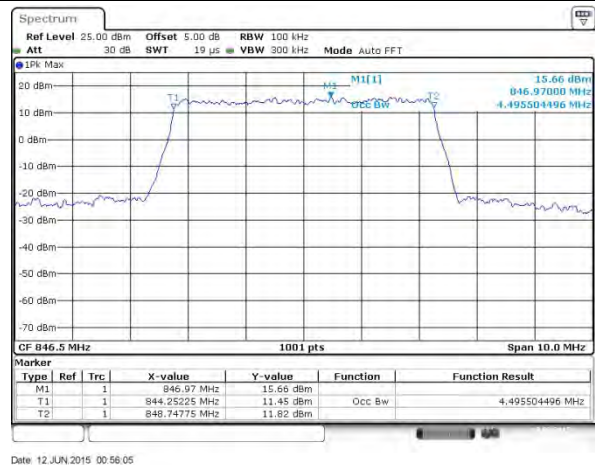
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



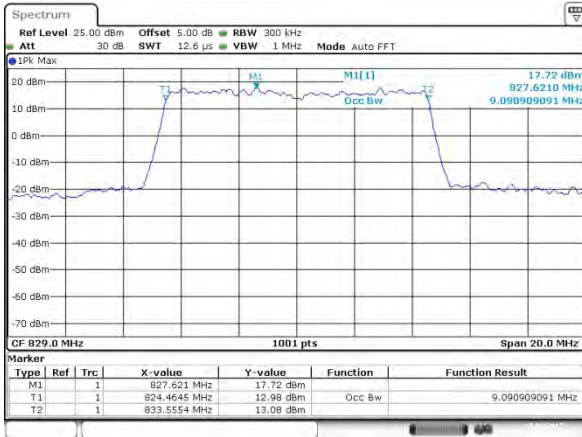
Highest Channel / 5MHz / 16QAM



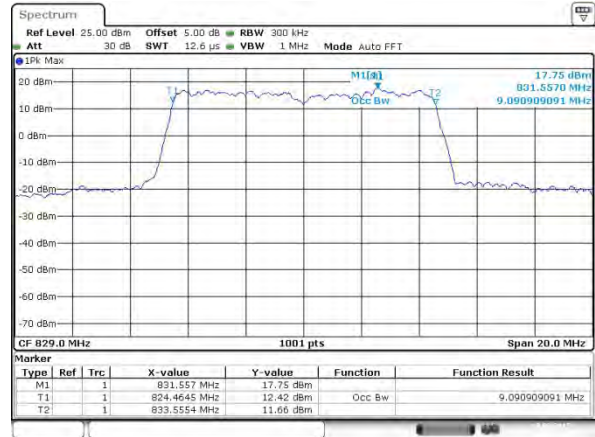


LTE Band 5

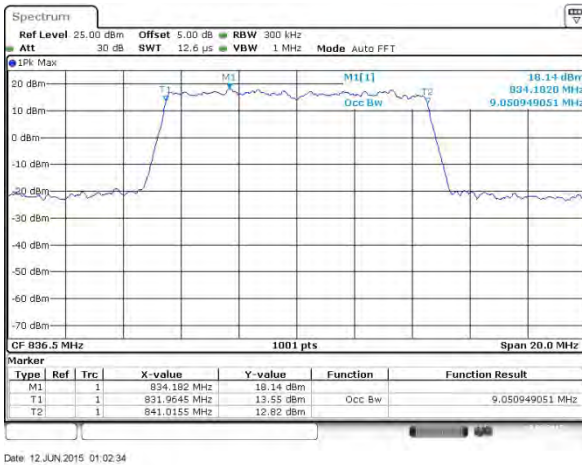
Lowest Channel / 10MHz / QPSK



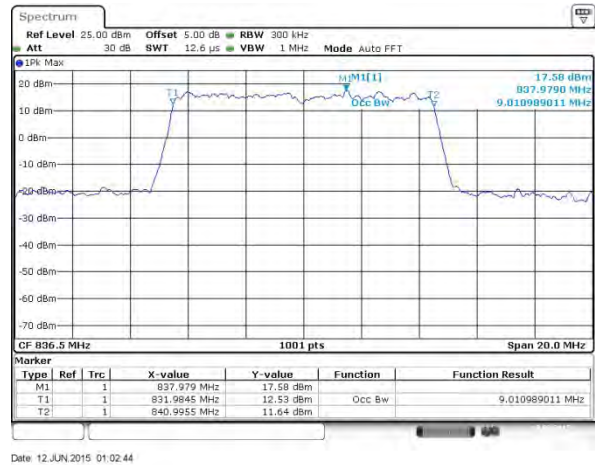
Lowest Channel / 10MHz / 16QAM



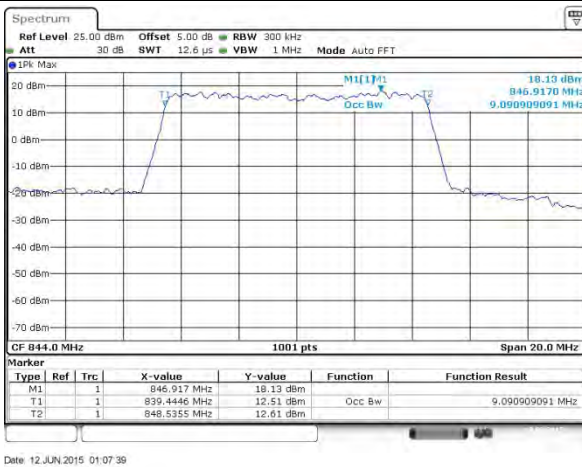
Middle Channel / 10MHz / QPSK



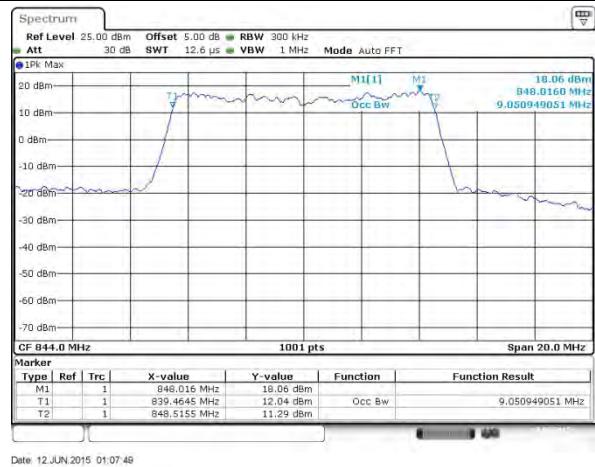
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM



**Conducted Band Edge****LTE Band 5 / 1.4MHz / QPSK****Lowest Band Edge / 1RB****Highest Band Edge / 1RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**



LTE Band 5 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

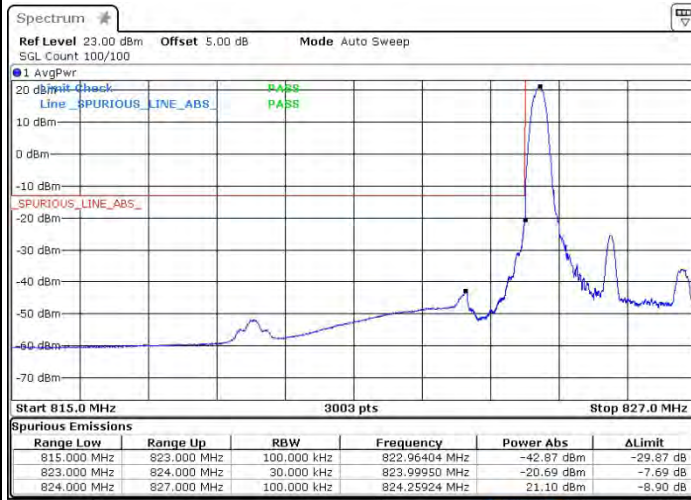
Highest Band Edge / Full RB





LTE Band 5 / 3MHz / QPSK

Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



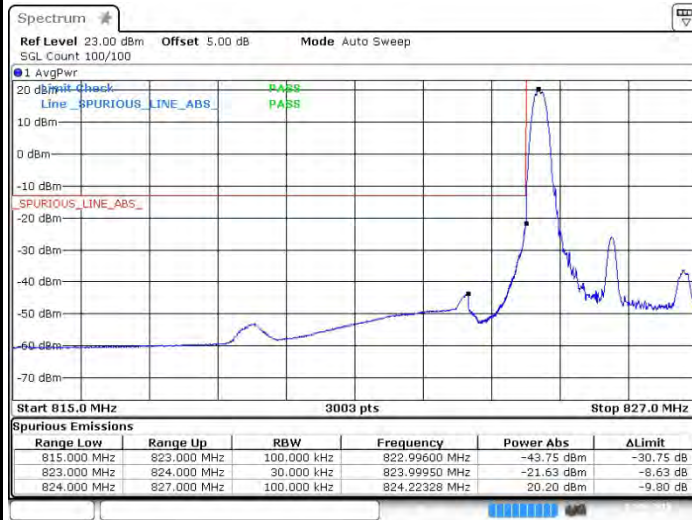
Highest Band Edge / Full RB



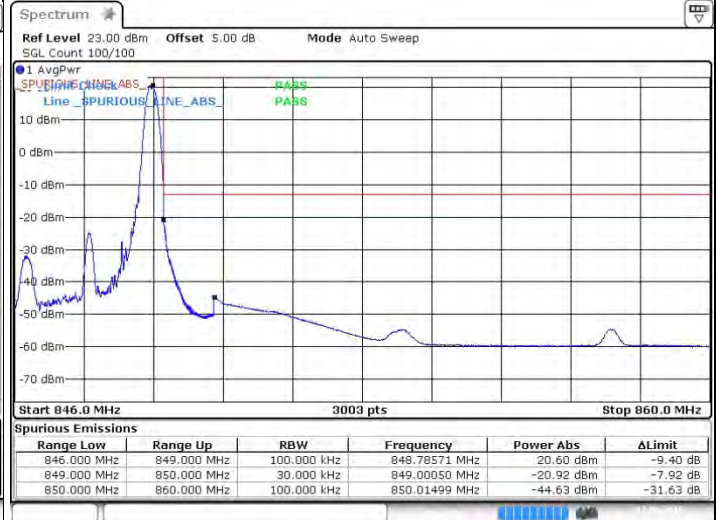


LTE Band 5 / 3MHz / 16QAM

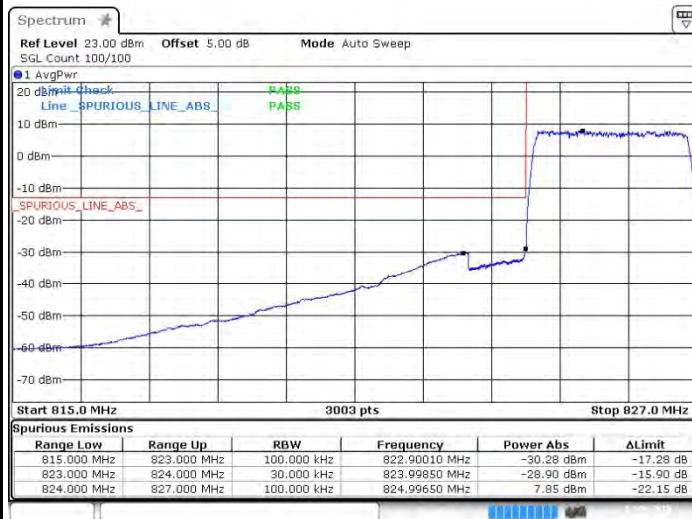
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



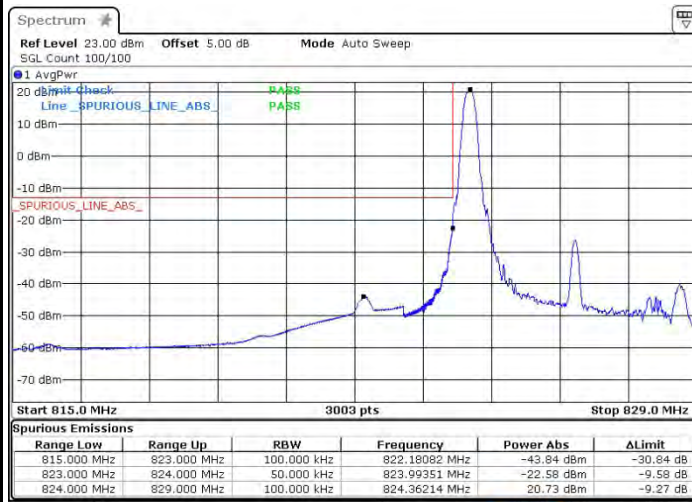
Highest Band Edge / Full RB



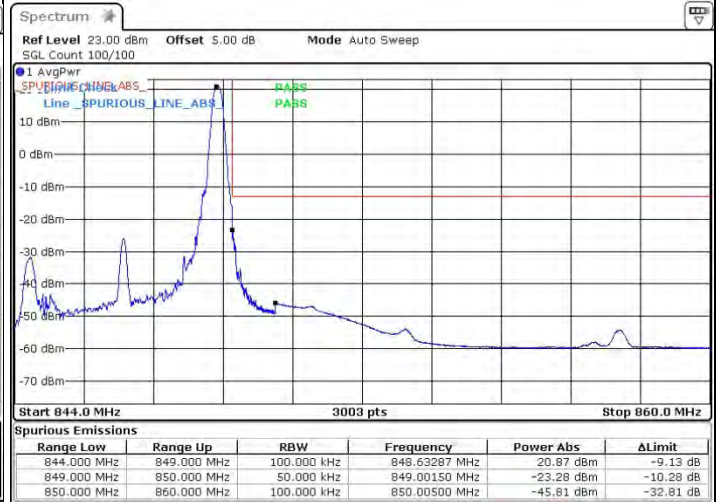


LTE Band 5 / 5MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



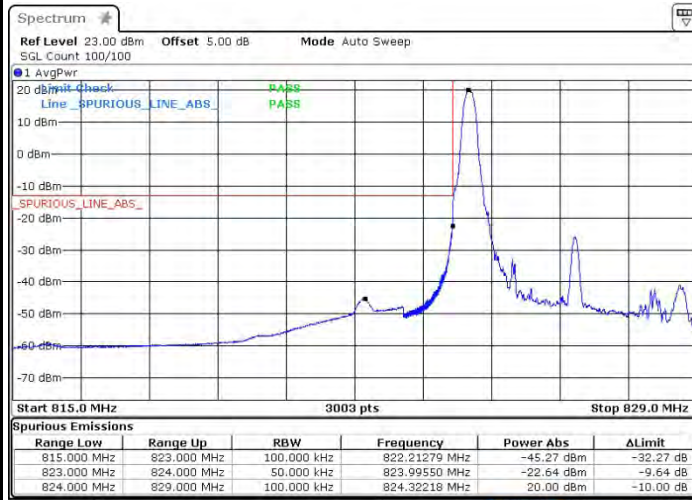
Highest Band Edge / Full RB



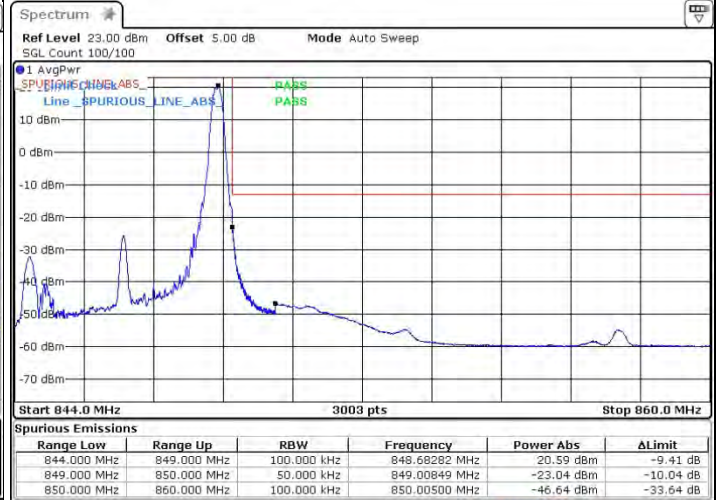


LTE Band 5 / 5MHz / 16QAM

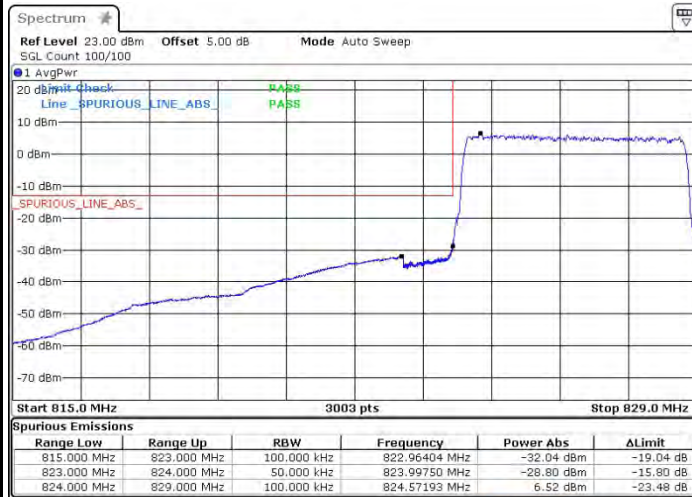
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



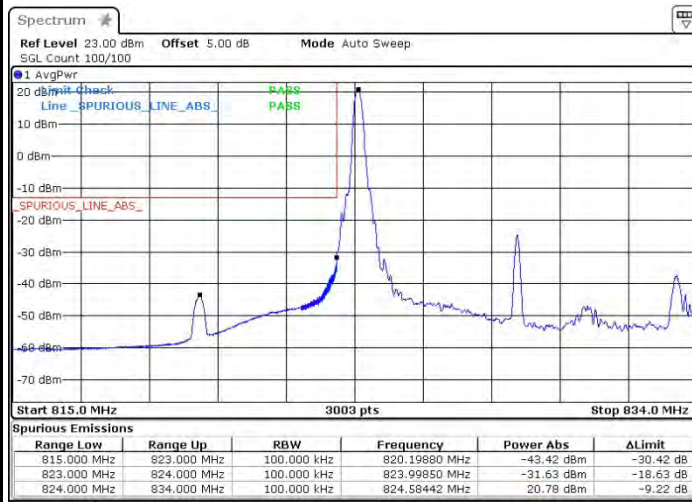
Highest Band Edge / Full RB



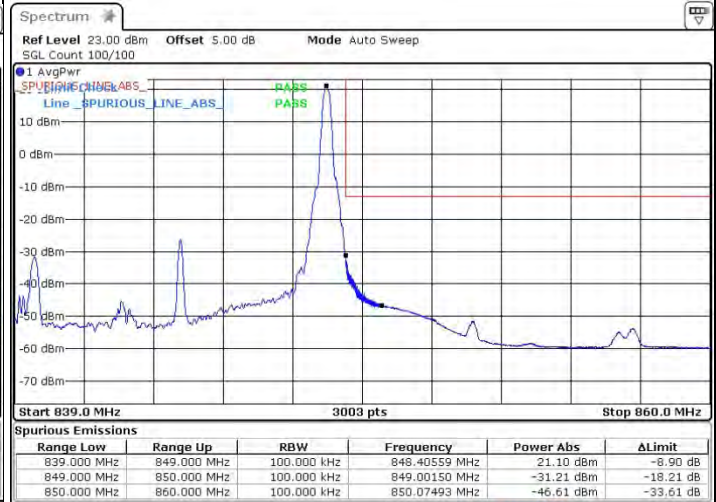


LTE Band 5 / 10MHz / QPSK

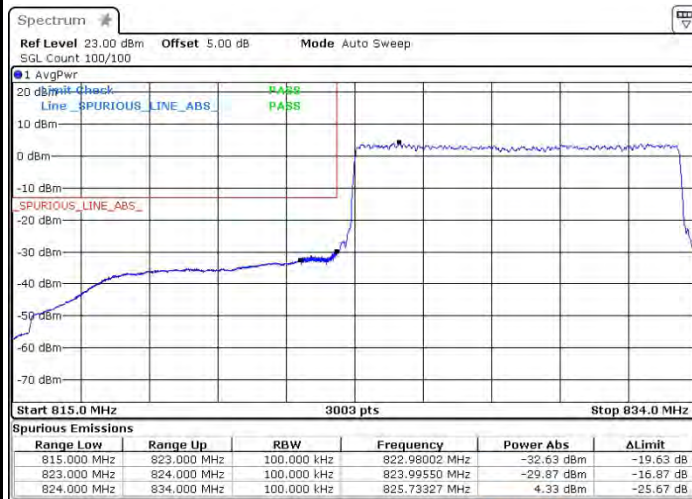
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



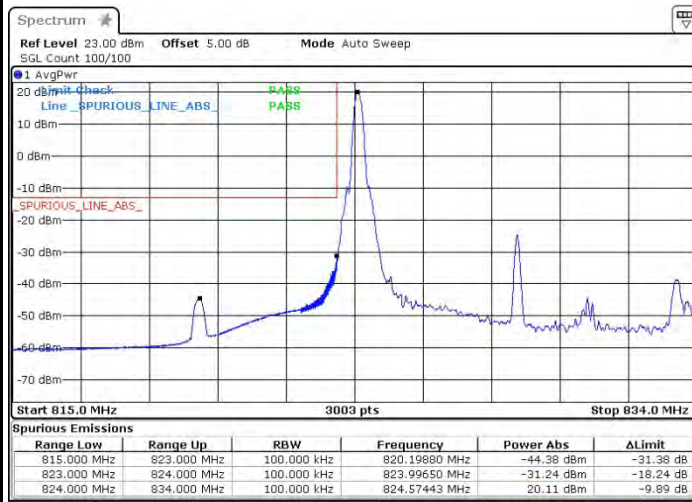
Highest Band Edge / Full RB



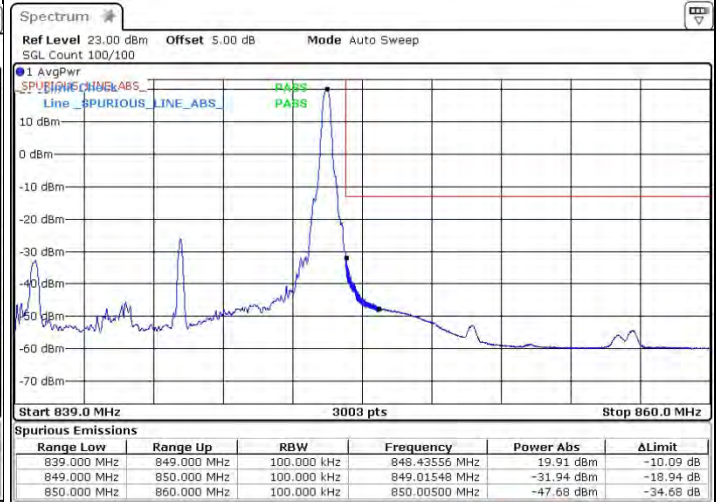


LTE Band 5 / 10MHz / 16QAM

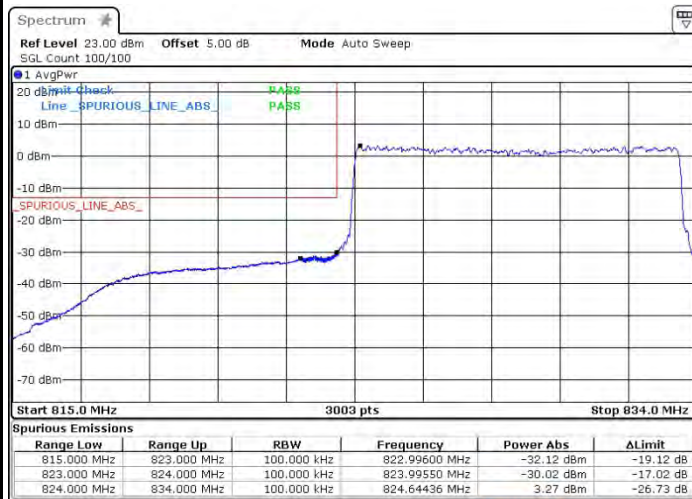
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



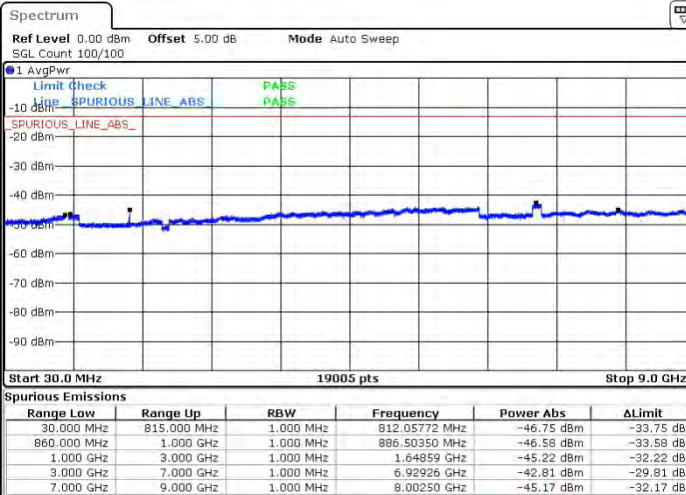


Conducted Spurious Emission

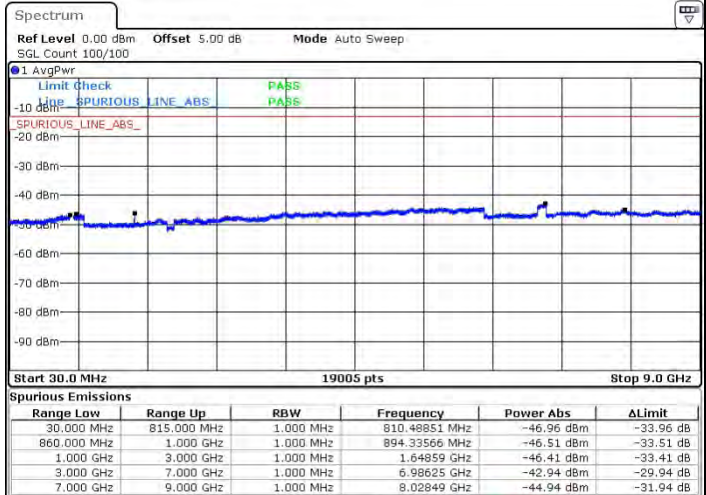
LTE Band 5 / 1.4MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



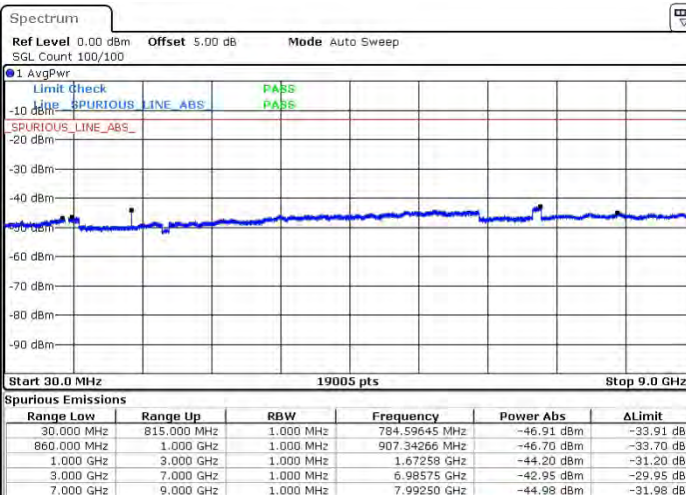
Date: 12 JUN 2015 00:31:01



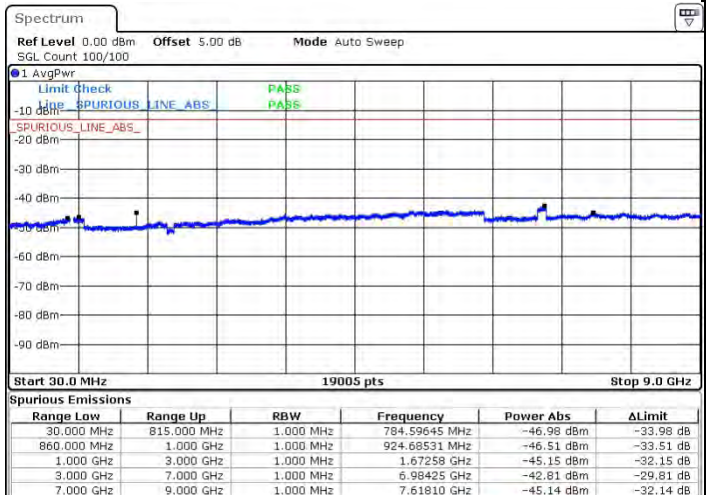
Date: 12 JUN 2015 00:32:19

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 12 JUN 2015 00:34:20



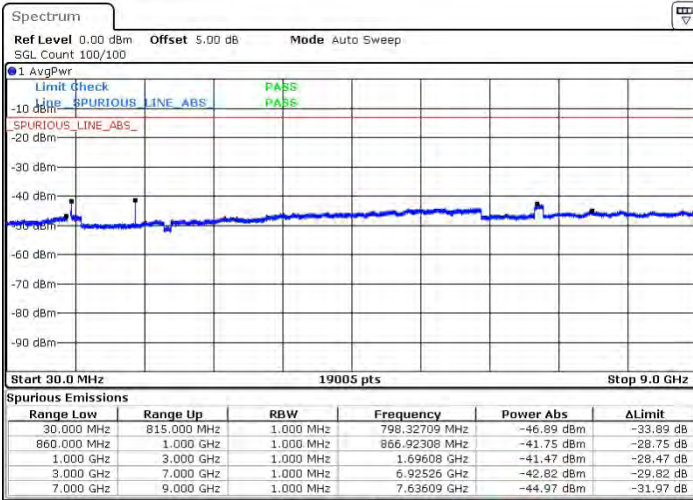
Date: 12 JUN 2015 00:35:38



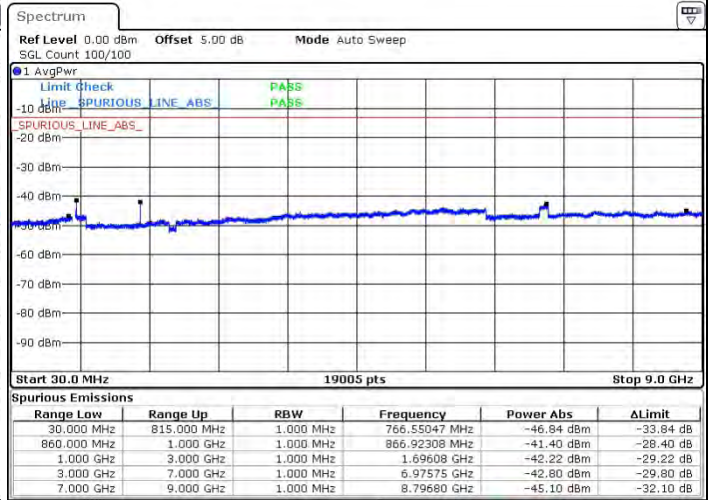
LTE Band 5 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 12 JUN 2015 00:37:40

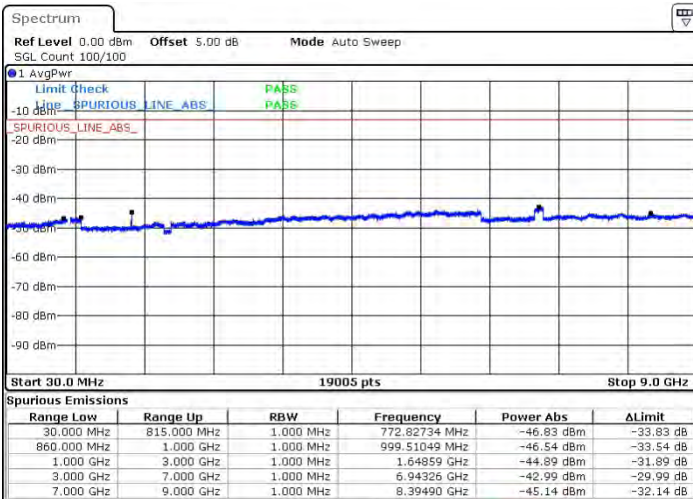


Date: 12 JUN 2015 00:38:58

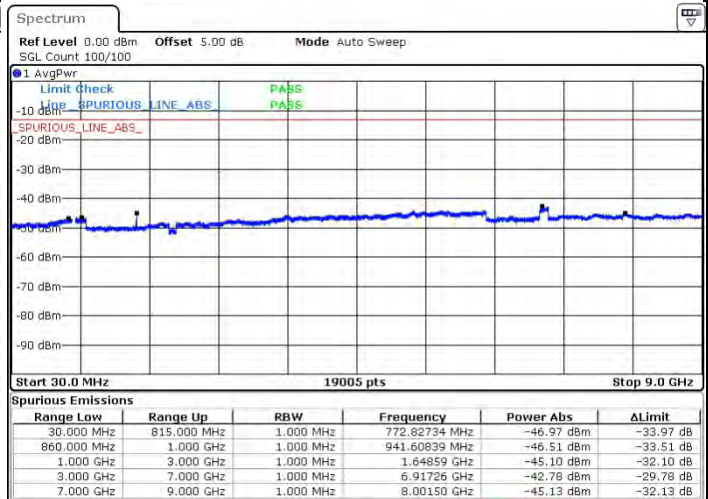
LTE Band 5 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 12 JUN 2015 00:40:59



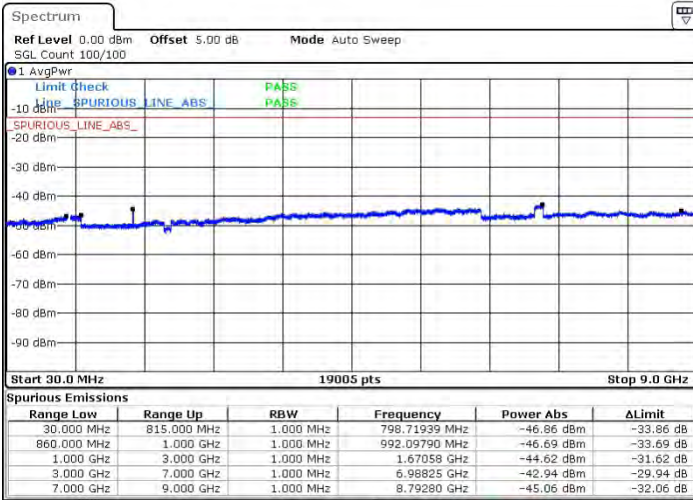
Date: 12 JUN 2015 00:42:17



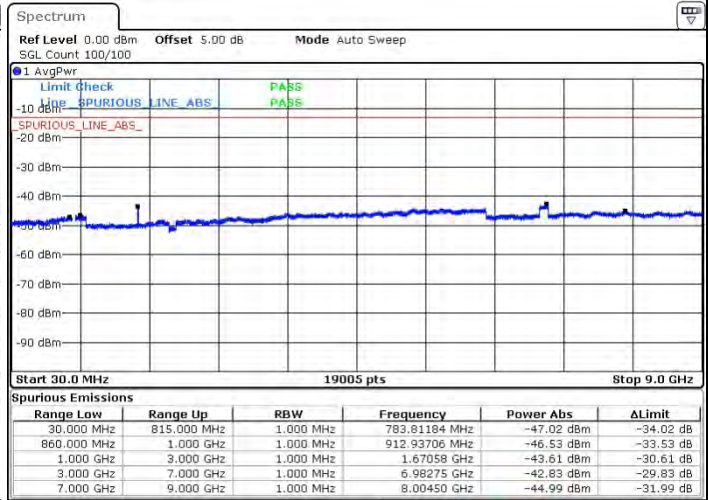
LTE Band 5 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM



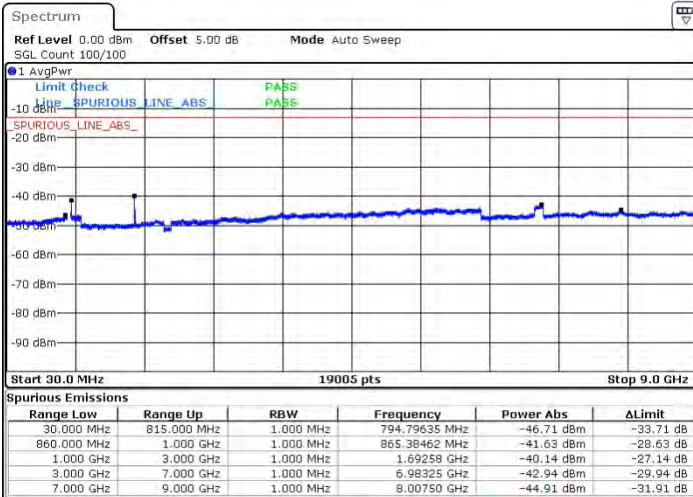
Date: 12 JUN 2015 00:44:19



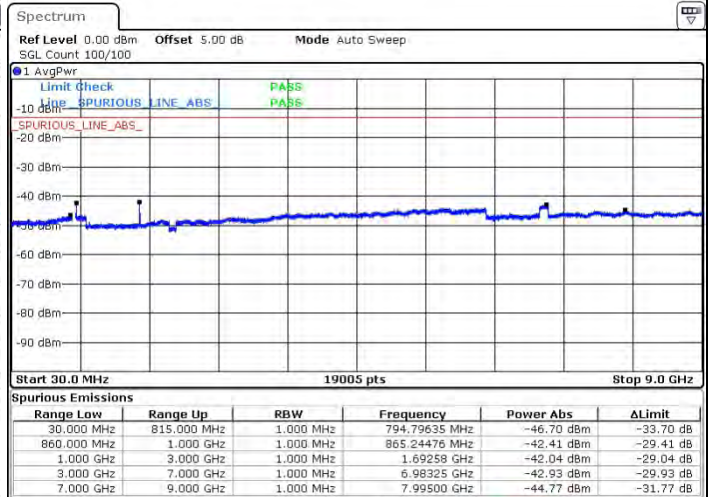
Date: 12 JUN 2015 00:45:36

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 12 JUN 2015 00:47:38

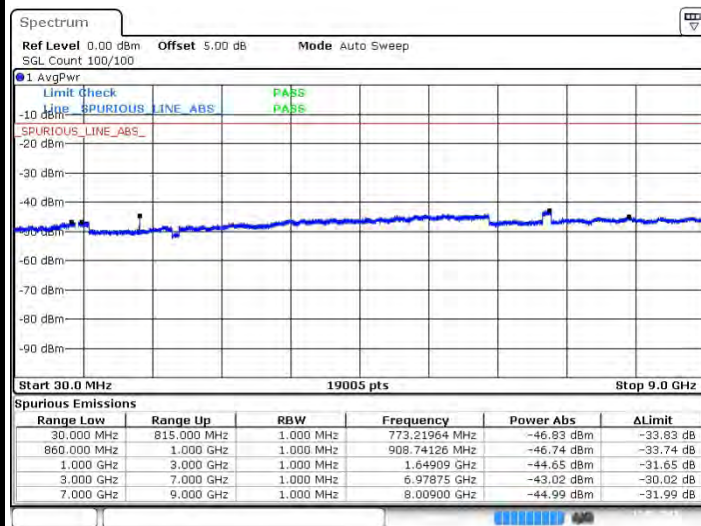


Date: 12 JUN 2015 00:48:56

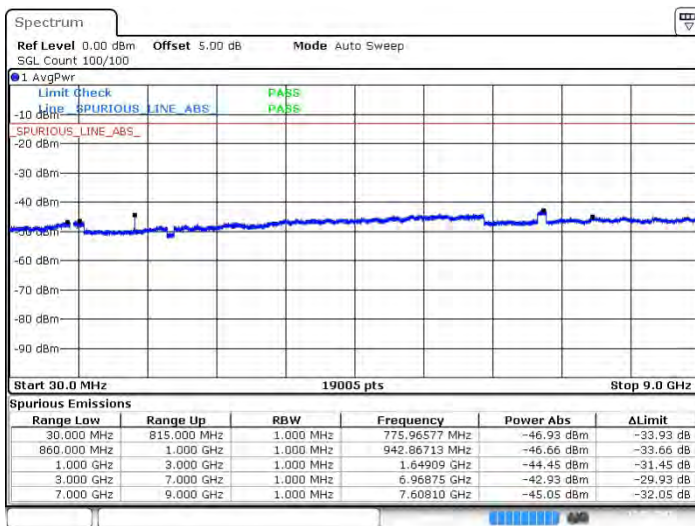


LTE Band 5 / 5MHz

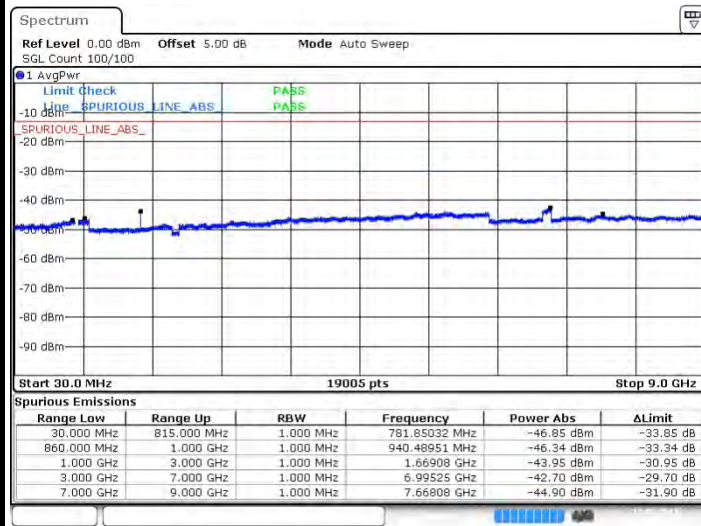
Lowest Channel / QPSK



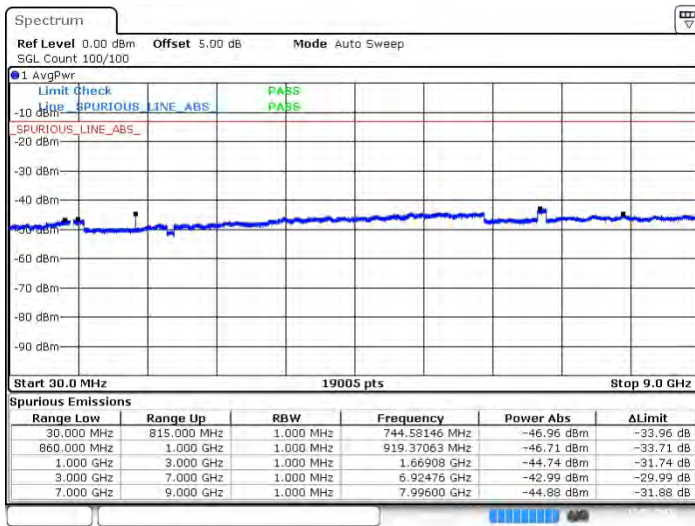
Lowest Channel / 16QAM



Middle Channel / QPSK



Middle Channel / 16QAM

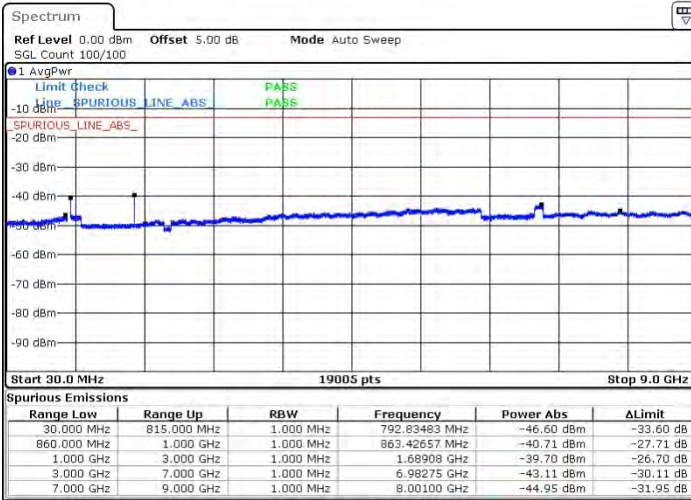




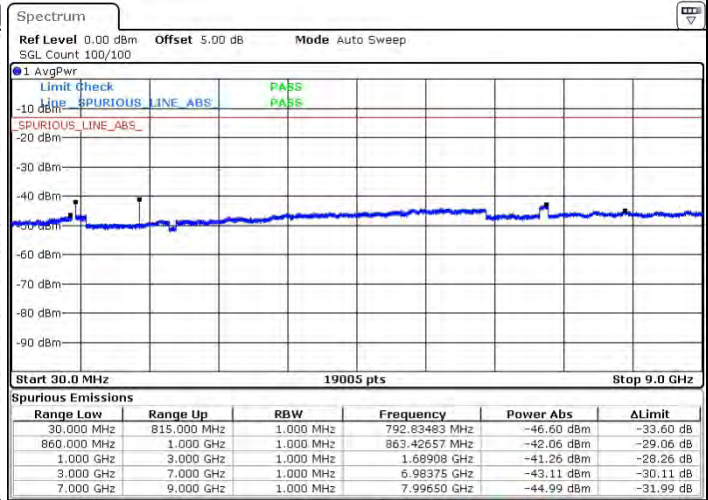
LTE Band 5 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 12 JUN 2015 00:57:36

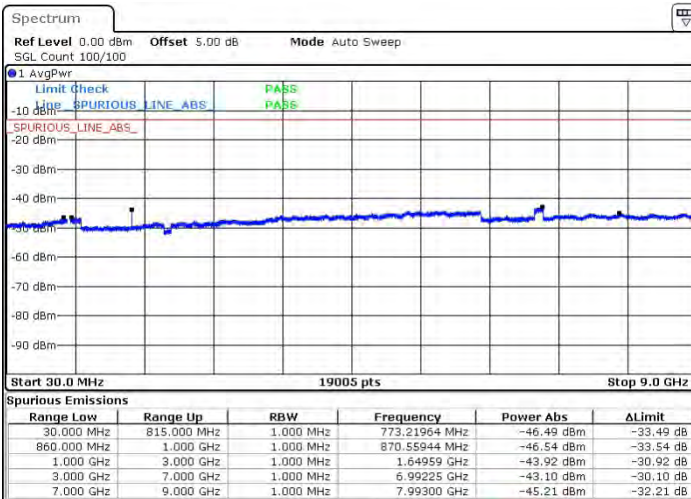


Date: 12 JUN 2015 00:58:54

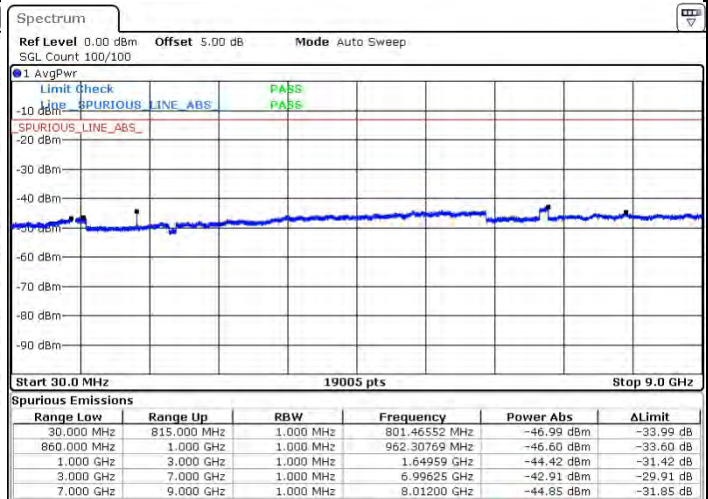
LTE Band 5 / 10MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 12 JUN 2015 01:00:56



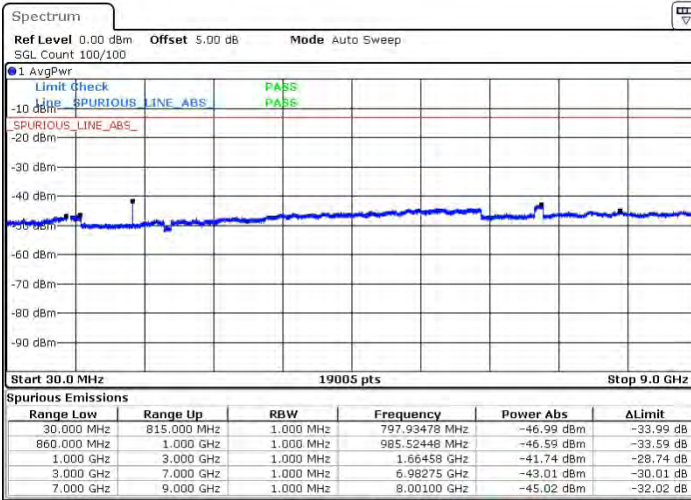
Date: 12 JUN 2015 01:02:14



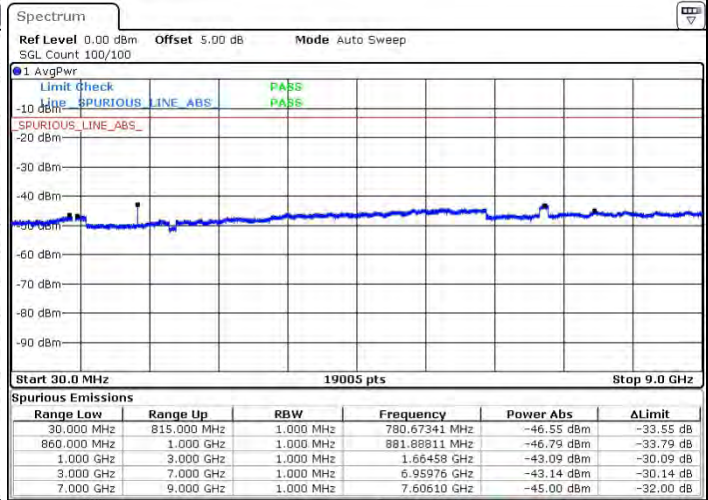
LTE Band 5 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



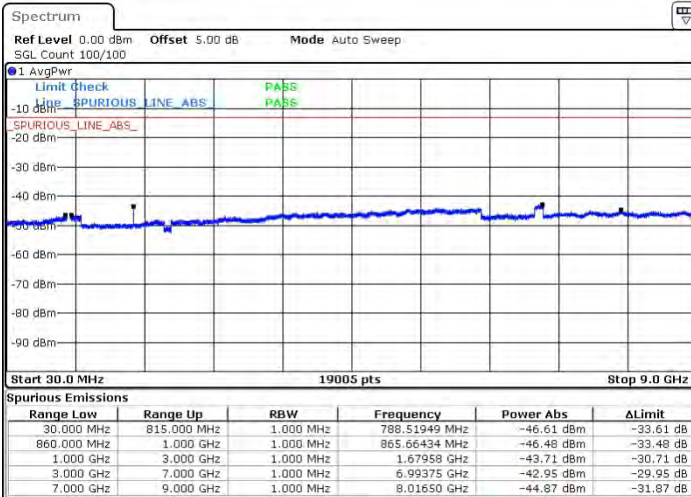
Date: 12 JUN 2015 01:06:01



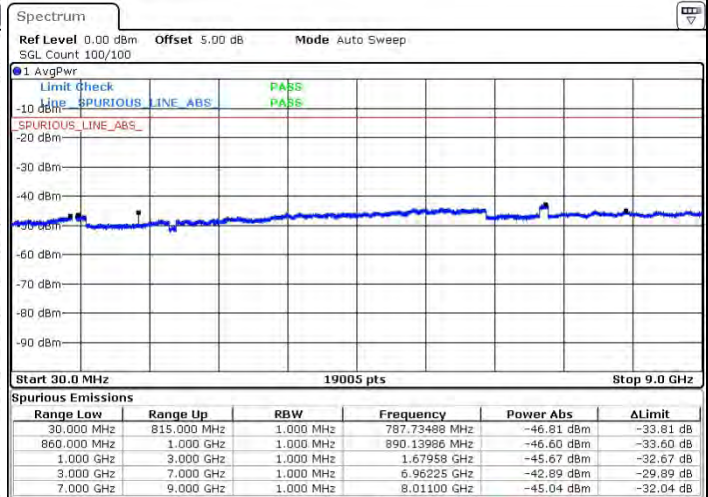
Date: 12 JUN 2015 01:07:19

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 12 JUN 2015 01:09:20



Date: 12 JUN 2015 01:10:38

**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	0.0191	PASS
40	Normal Voltage	0.0275	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0132	
0	Normal Voltage	0.0323	
-10	Normal Voltage	0.0430	
-20	Normal Voltage	0.0239	
-30	Normal Voltage	0.0251	
20	Maximum Voltage	0.0108	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0036	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



LTE Band 17

Conducted Output Power(Average power)

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.19	23.39	23.35
5	1	12		23.26	23.22	23.43
5	1	24		23.20	23.20	23.17
5	12	0		22.25	22.34	22.33
5	12	6		22.25	22.29	22.28
5	12	11		22.22	22.24	22.26
5	25	0		22.26	22.40	22.29
5	1	0	16-QAM	22.87	22.73	22.68
5	1	12		22.54	22.56	22.15
5	1	24		22.53	22.89	22.59
5	12	0		21.20	21.34	21.20
5	12	6		21.29	21.25	21.25
5	12	11		21.25	21.22	21.25
5	25	0		21.23	21.31	21.34
10	1	0	QPSK	23.44	23.29	23.41
10	1	24		23.30	23.07	23.21
10	1	49		23.07	23.28	23.25
10	25	0		22.37	22.31	22.27
10	25	12		22.22	22.27	22.26
10	25	24		22.34	22.34	22.30
10	50	0		22.34	22.33	22.24
10	1	0	16-QAM	22.93	22.65	22.92
10	1	24		22.54	22.47	22.60
10	1	49		22.79	22.99	22.75
10	25	0		21.32	21.35	21.31
10	25	12		21.31	21.31	21.25
10	25	24		21.43	21.31	21.35
10	50	0		21.37	21.47	21.32

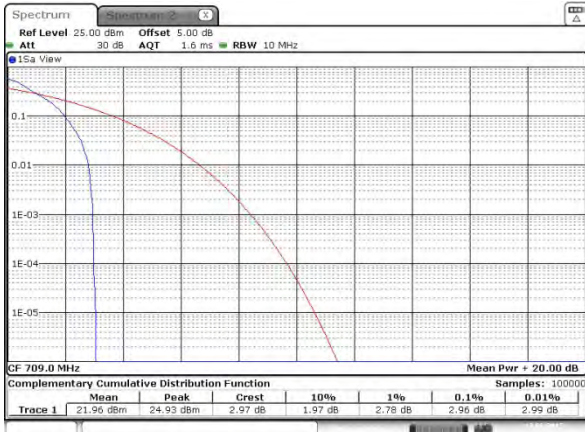
**Peak-to-Average Ratio**

Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	RB Size	Result
Lowest CH	2.96	4.64	3.54	5.36	PASS
Middle CH	3.07	4.67	3.77	5.48	
Highest CH	3.19	4.70	4.00	5.39	

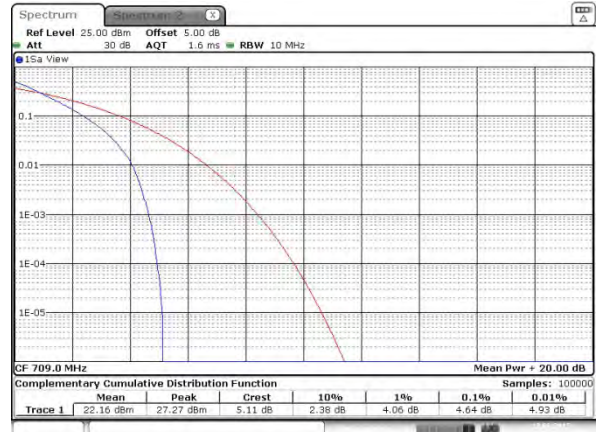


LTE Band 17 / 10MHz / QPSK

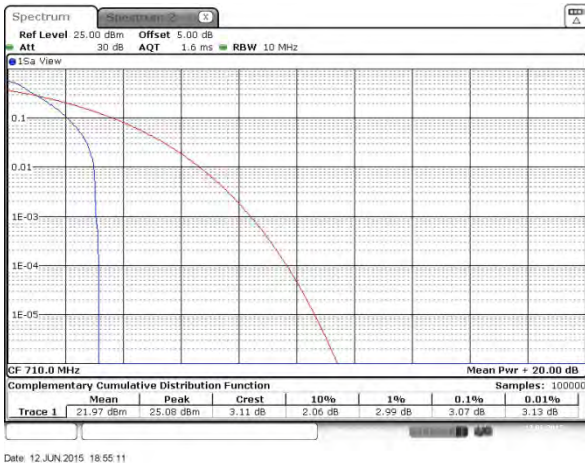
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel/ 1RB



Middle Channel / Full RB



Highest Channel/ 1RB



Highest Channel / Full RB





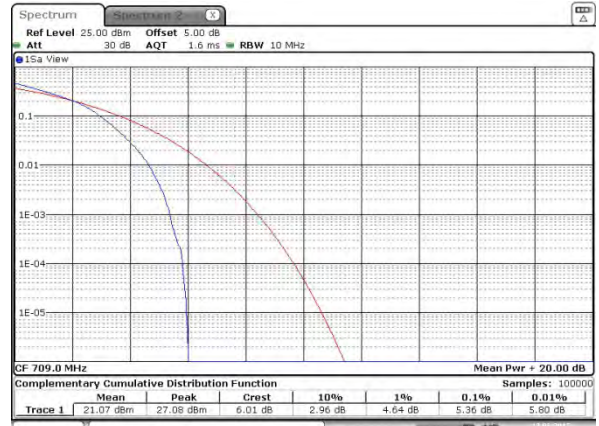
LTE Band 17 / 10MHz / 16QAM

Lowest Channel / 1RB



Date: 12 JUN 2015 18:51:11

Lowest Channel / Full RB



Date: 12 JUN 2015 18:51:23

Middle Channel/ 1RB



Date: 12 JUN 2015 18:51:35

Middle Channel / Full RB



Date: 12 JUN 2015 18:51:47

Highest Channel/ 1RB



Date: 12 JUN 2015 18:51:58

Highest Channel / Full RB



Date: 12 JUN 2015 18:52:10

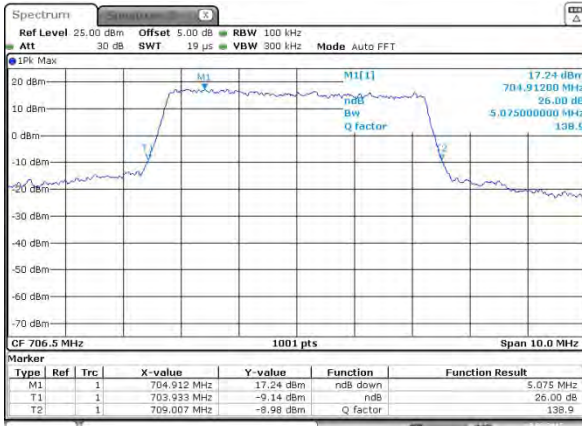
**26dB Bandwidth**

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	-	-	-	-	5.08	5.02	10.13	10.01	-	-	-	-
Middle CH	-	-	-	-	5.10	5.05	10.23	10.01	-	-	-	-
Highest CH	-	-	-	-	5.05	5.03	10.19	10.03	-	-	-	-

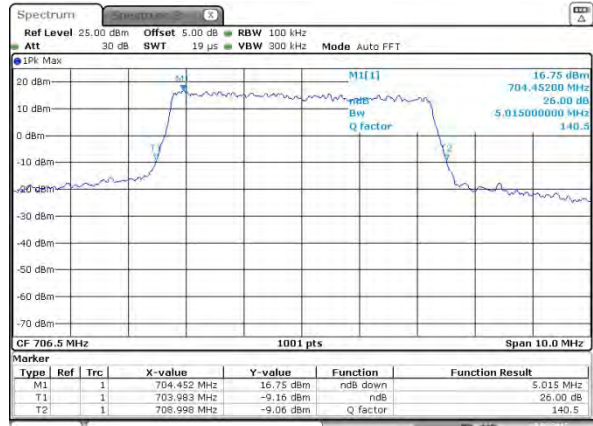


LTE Band 17

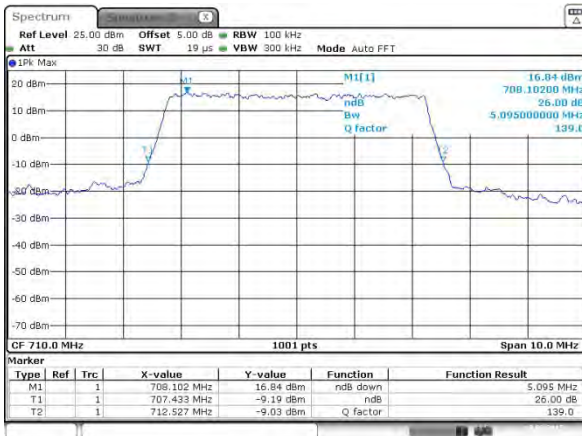
Lowest Channel / 5MHz / QPSK



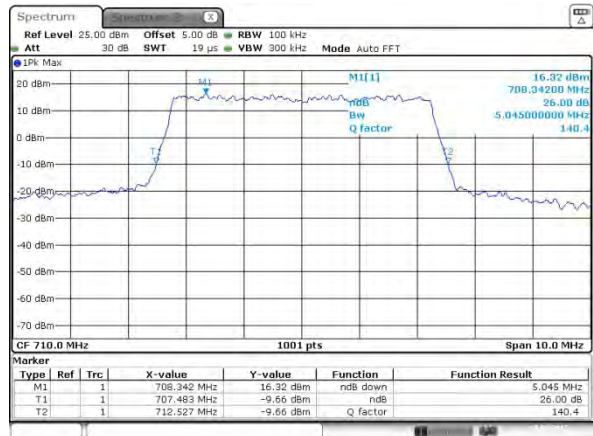
Lowest Channel / 5MHz / 16QAM



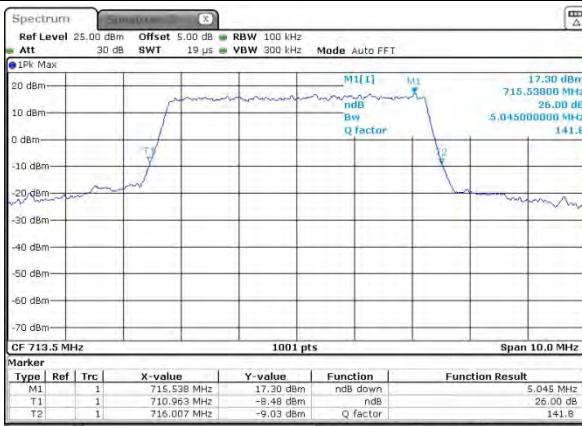
Middle Channel / 5MHz / QPSK



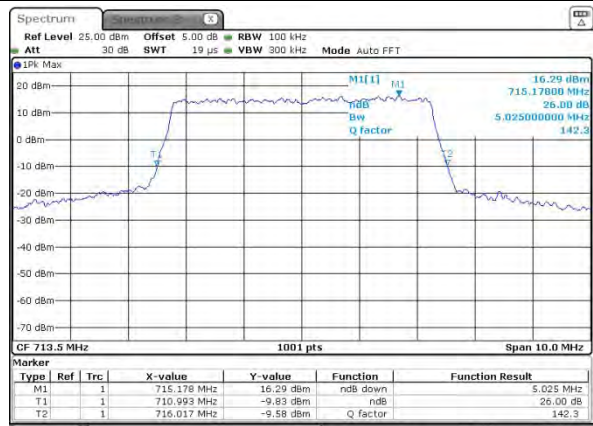
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



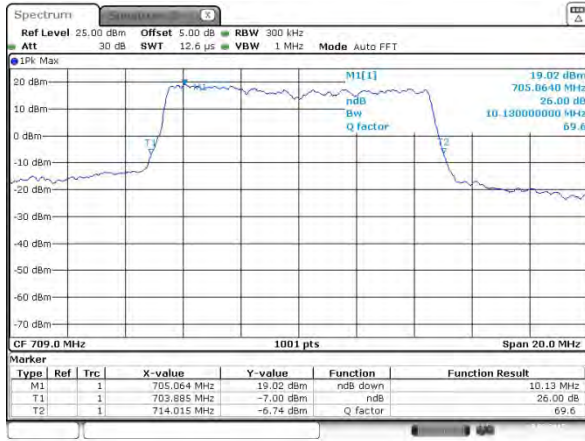
Highest Channel / 5MHz / 16QAM





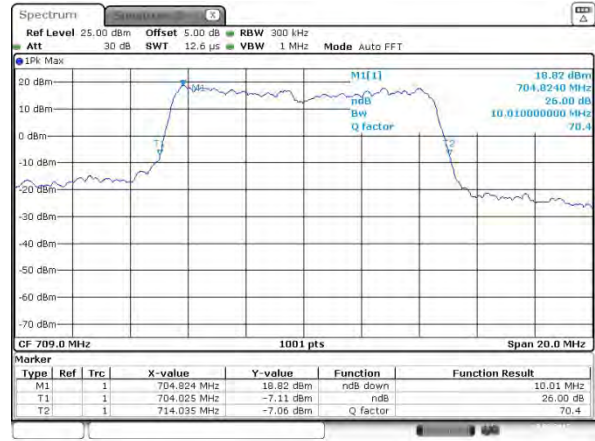
LTE Band 17

Lowest Channel / 10MHz / QPSK



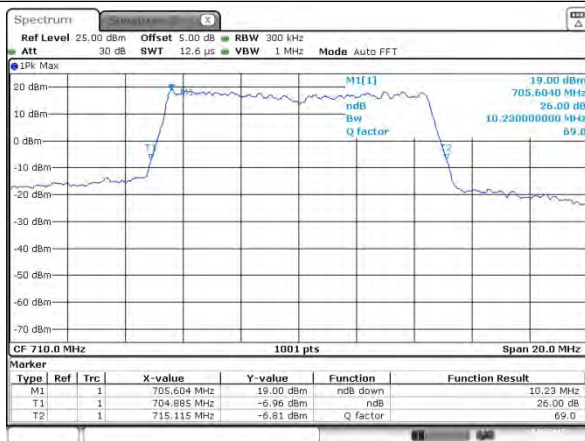
Date: 12 JUN 2015 18:27:58

Lowest Channel / 10MHz / 16QAM



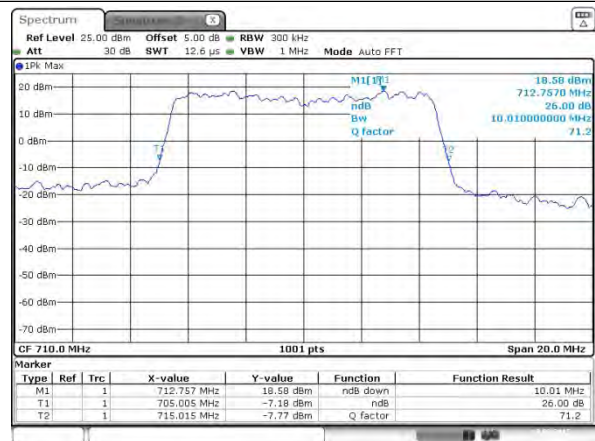
Date: 12 JUN 2015 18:28:11

Middle Channel / 10MHz / QPSK



Date: 12 JUN 2015 18:35:40

Middle Channel / 10MHz / 16QAM



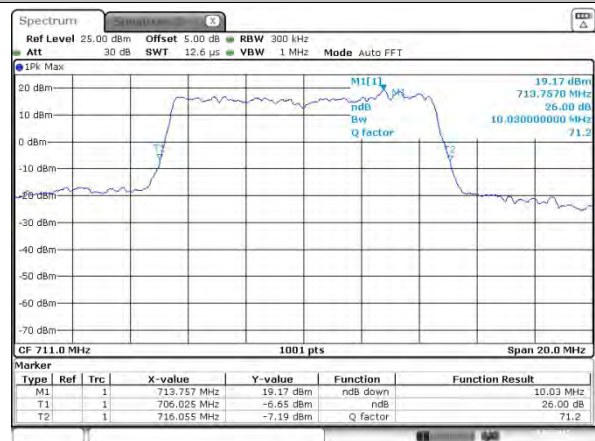
Date: 12 JUN 2015 18:35:53

Highest Channel / 10MHz / QPSK



Date: 12 JUN 2015 18:38:48

Highest Channel / 10MHz / 16QAM



Date: 12 JUN 2015 18:39:01

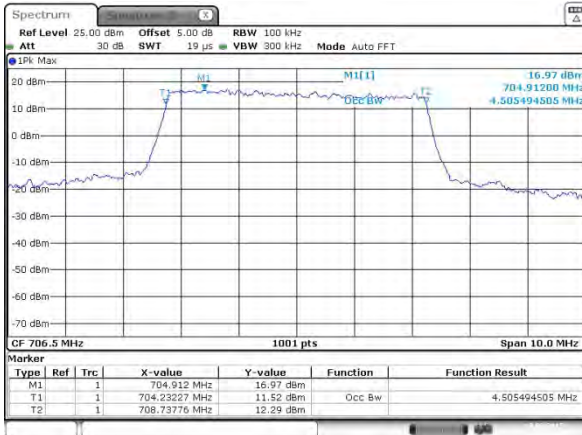
**Occupied Bandwidth**

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	-	-	-	-	4.51	4.50	9.15	9.05	-	-	-	-
Middle CH	-	-	-	-	4.52	4.51	9.11	9.09	-	-	-	-
Highest CH	-	-	-	-	4.50	4.50	9.11	9.07	-	-	-	-

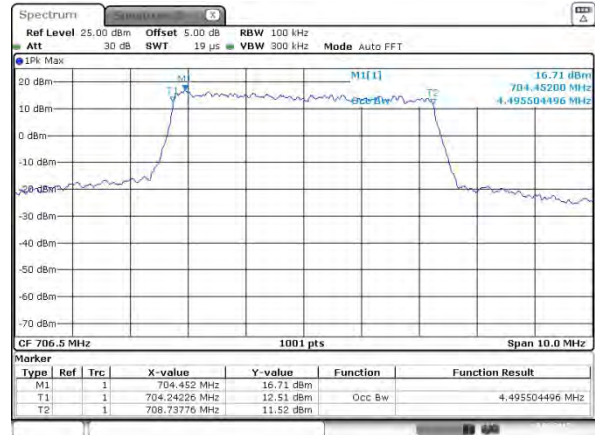


LTE Band 17

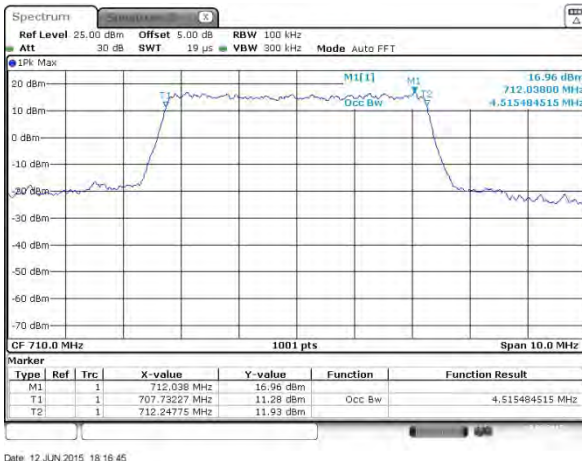
Lowest Channel / 5MHz / QPSK



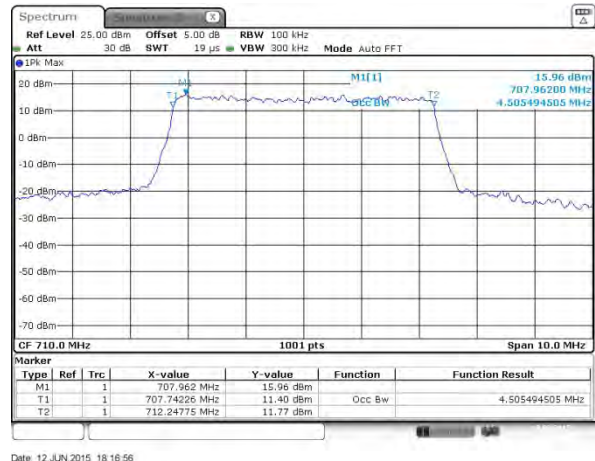
Lowest Channel / 5MHz / 16QAM



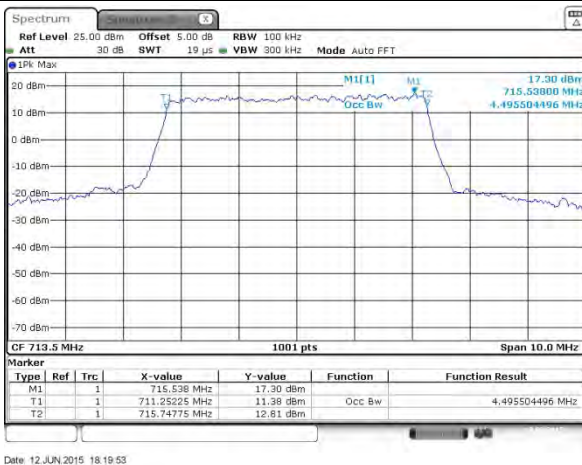
Middle Channel / 5MHz / QPSK



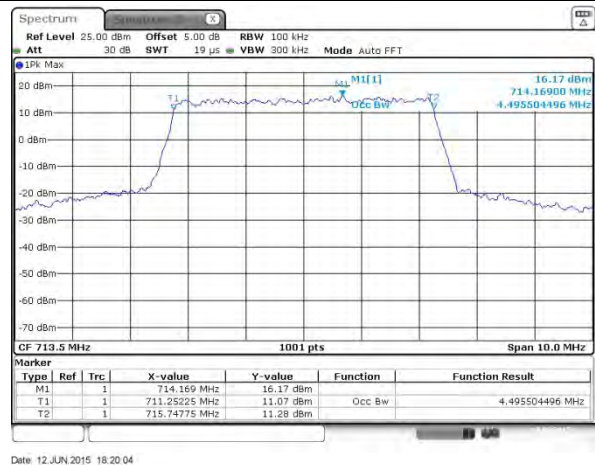
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



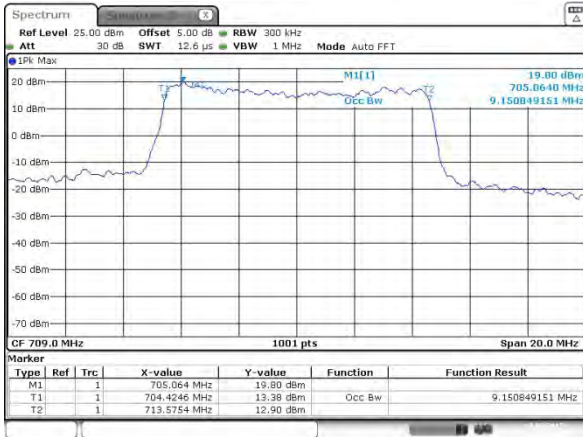
Highest Channel / 5MHz / 16QAM



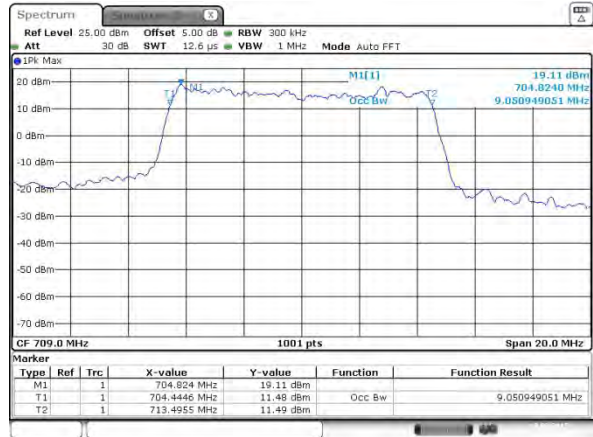


LTE Band 17

Lowest Channel / 10MHz / QPSK



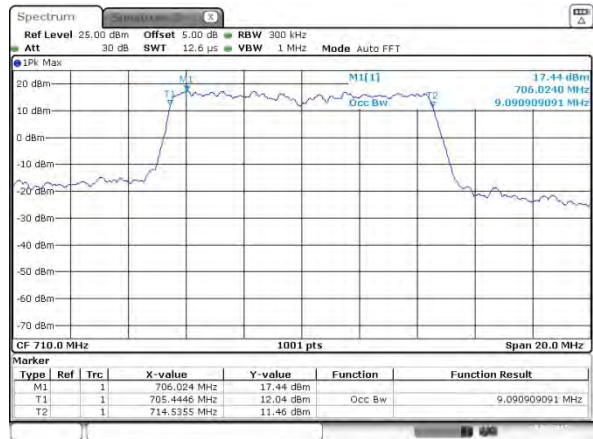
Lowest Channel / 10MHz / 16QAM



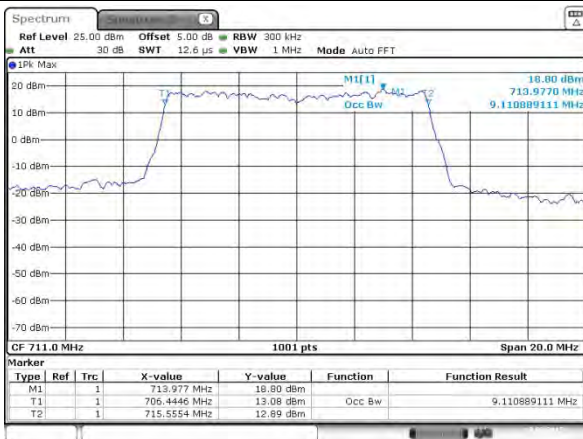
Middle Channel / 10MHz / QPSK



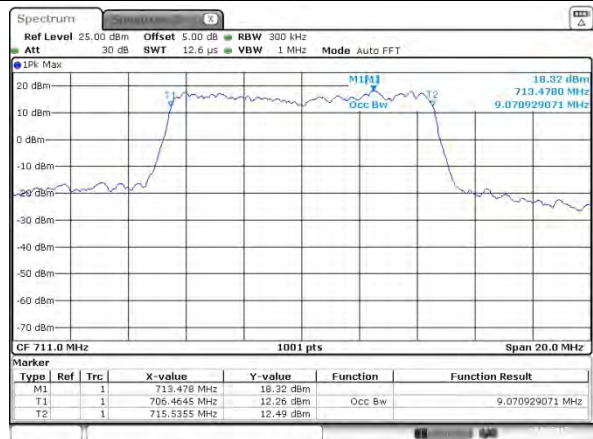
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

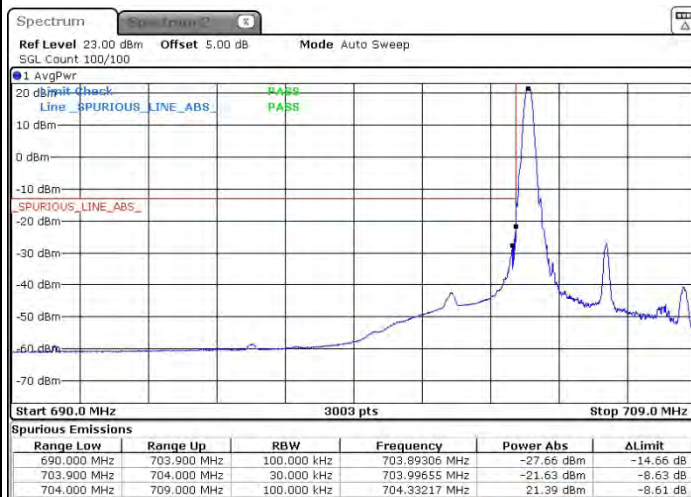




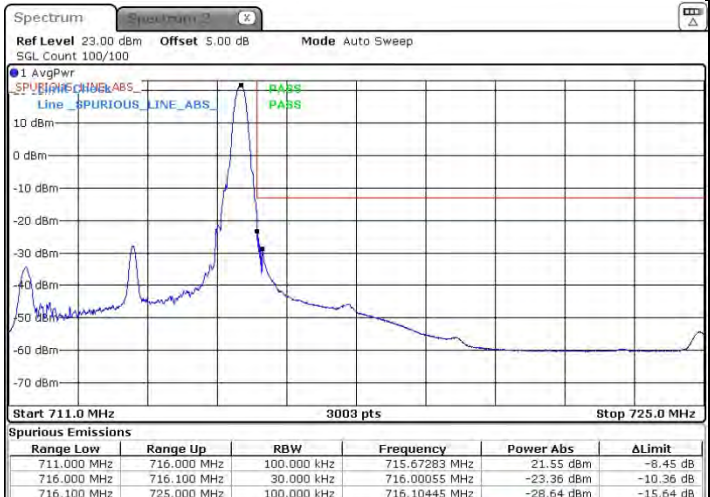
Conducted Band Edge

LTE Band 17 / 5MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



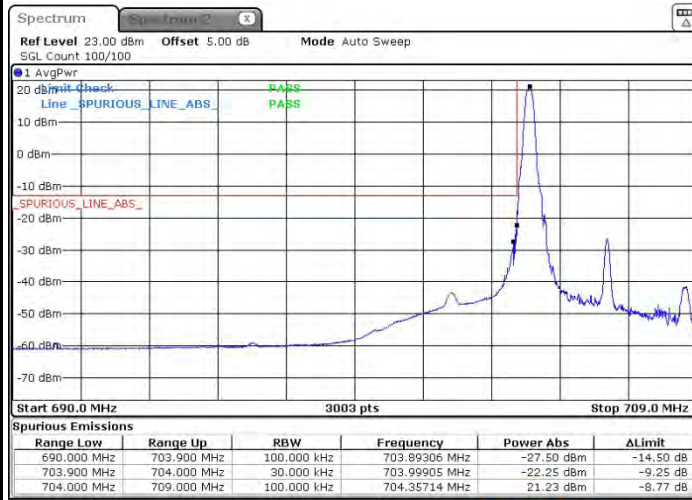
Highest Band Edge / Full RB



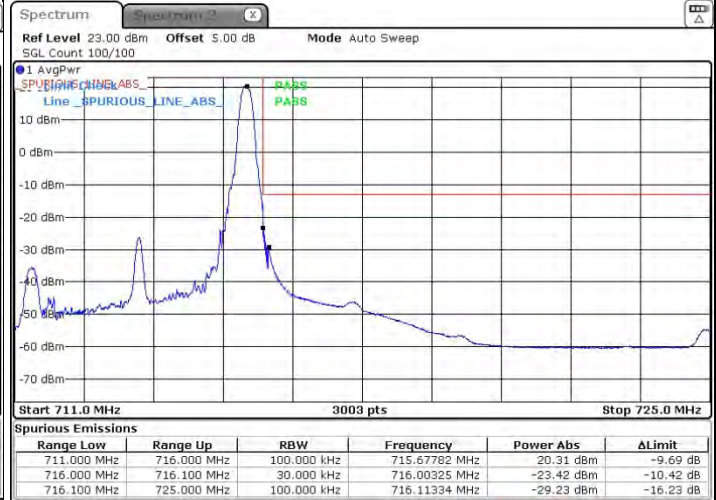


LTE Band 17 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



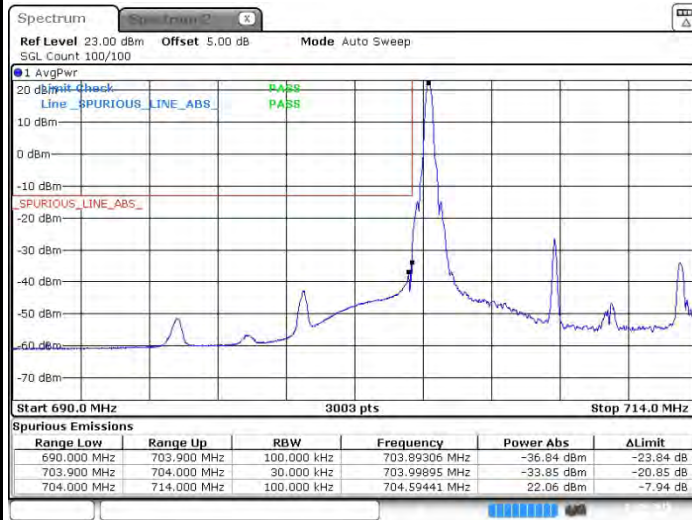
Highest Band Edge / Full RB



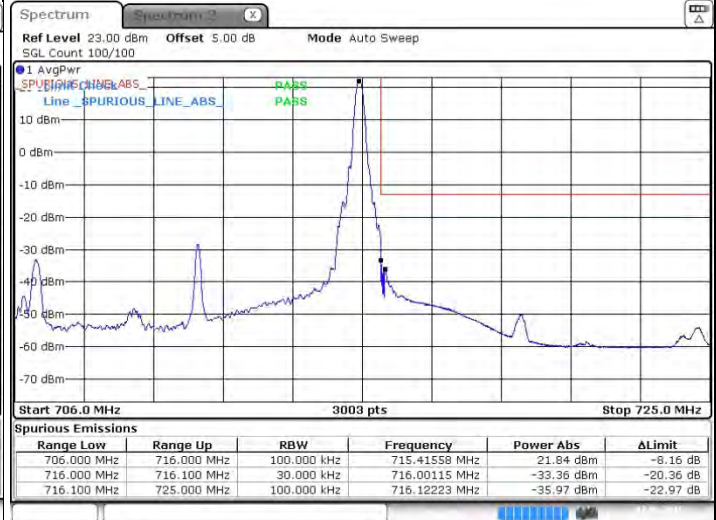


LTE Band 17 / 10MHz / QPSK

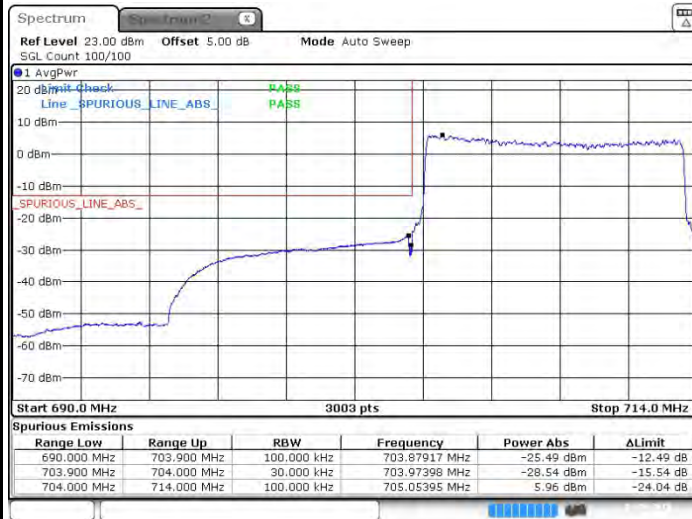
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



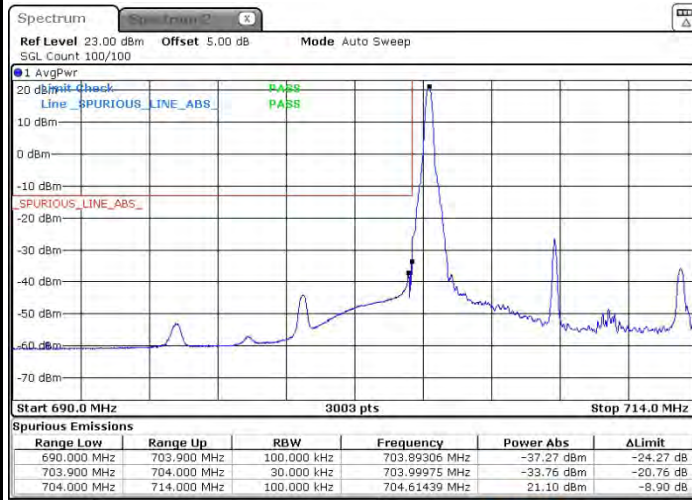
Highest Band Edge / Full RB



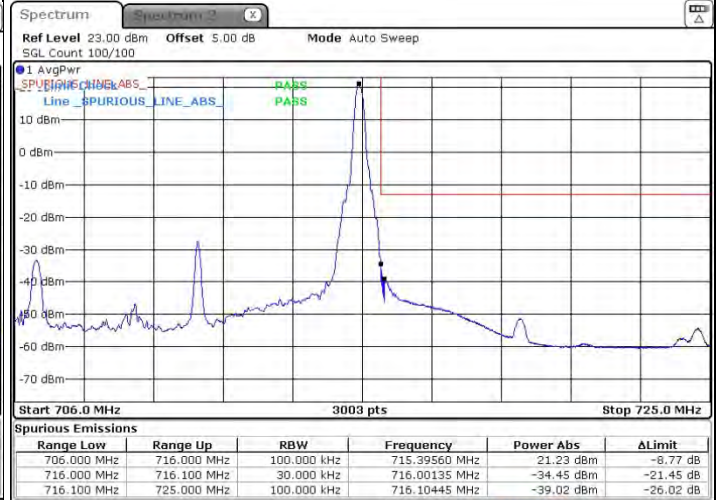


LTE Band 17 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

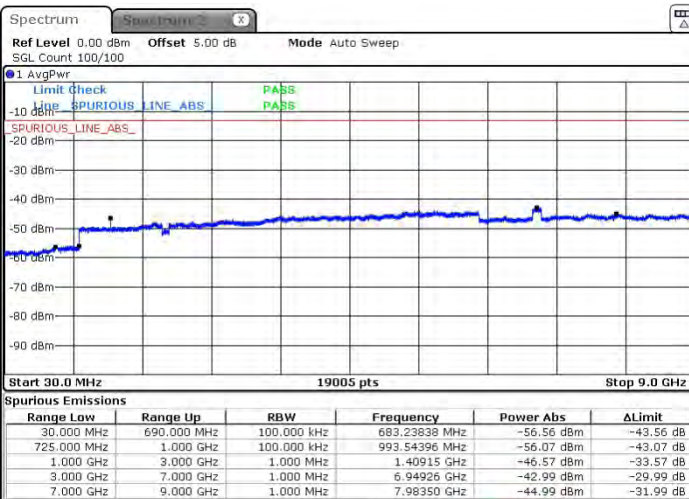




Conducted Spurious Emission

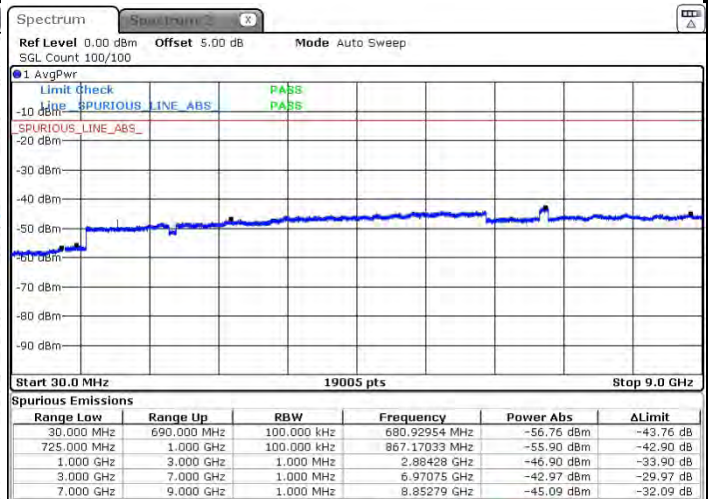
LTE Band 17 / 5MHz

Lowest Channel / QPSK



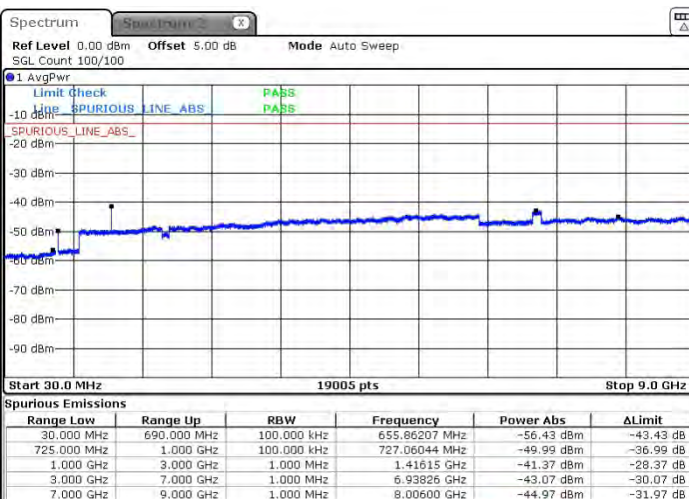
Date: 12 JUN 2015 18:15:23

Lowest Channel / 16QAM



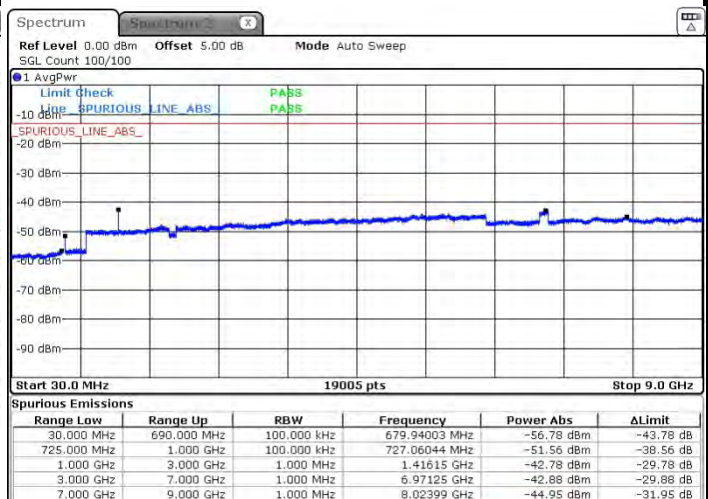
Date: 12 JUN 2015 18:16:33

Middle Channel / QPSK



Date: 12 JUN 2015 18:18:31

Middle Channel / 16QAM

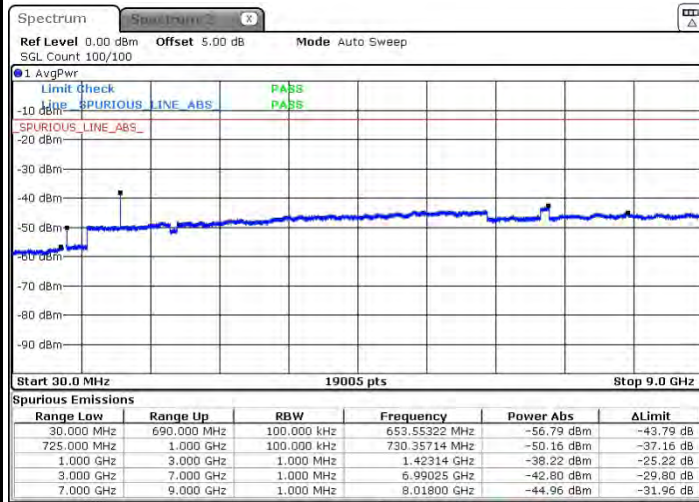


Date: 12 JUN 2015 18:19:41



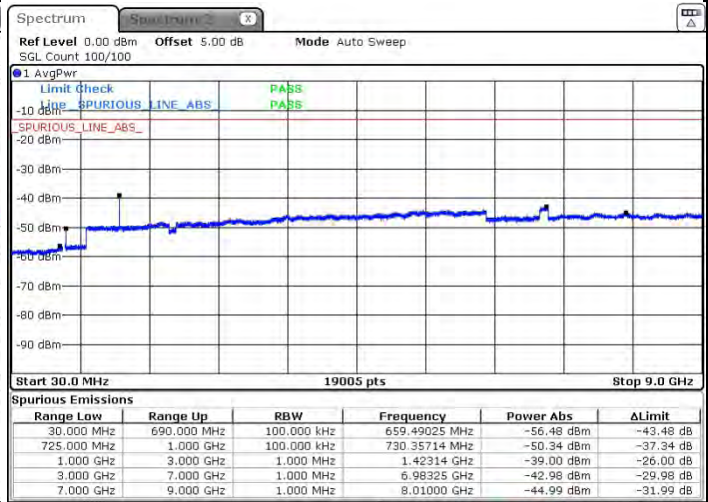
LTE Band 17 / 5MHz

Highest Channel / QPSK



Date: 12 JUN 2015 18:26:13

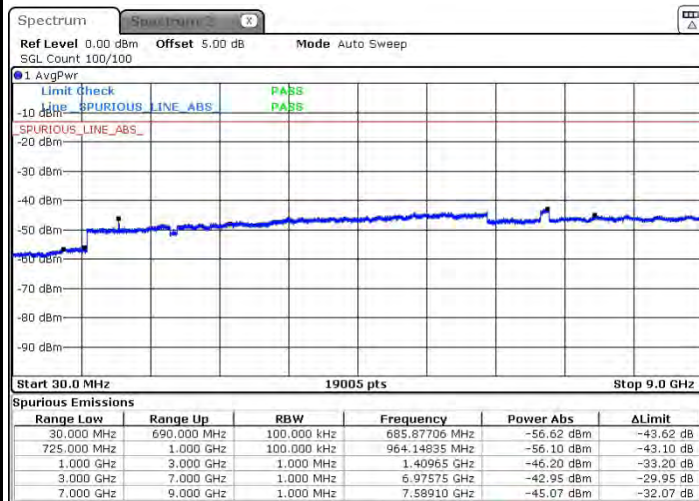
Highest Channel / 16QAM



Date: 12 JUN 2015 18:27:23

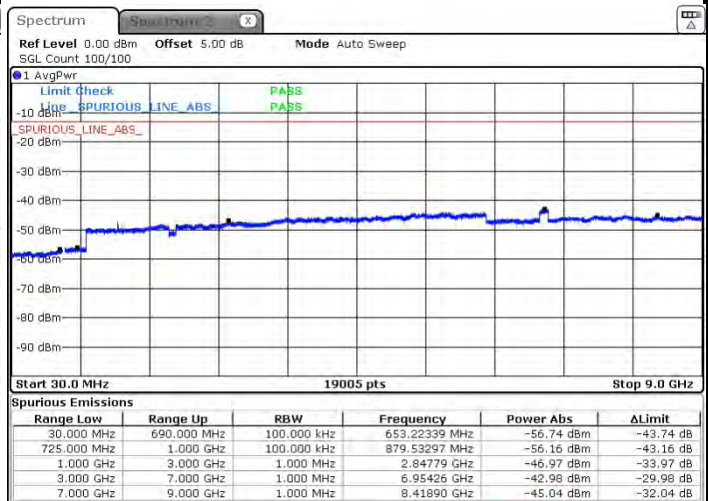
LTE Band 17 / 10MHz

Lowest Channel / QPSK



Date: 12 JUN 2015 18:33:55

Lowest Channel / 16QAM

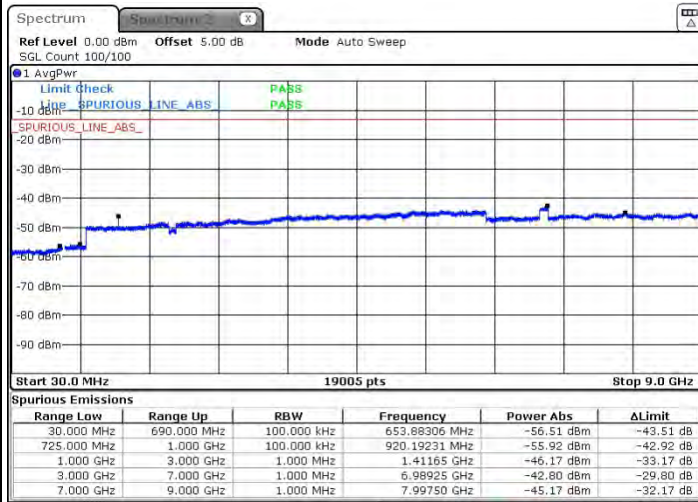


Date: 12 JUN 2015 18:35:05



LTE Band 17 / 10MHz

Middle Channel / QPSK



**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	0.0010	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0025	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0027	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0041	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.