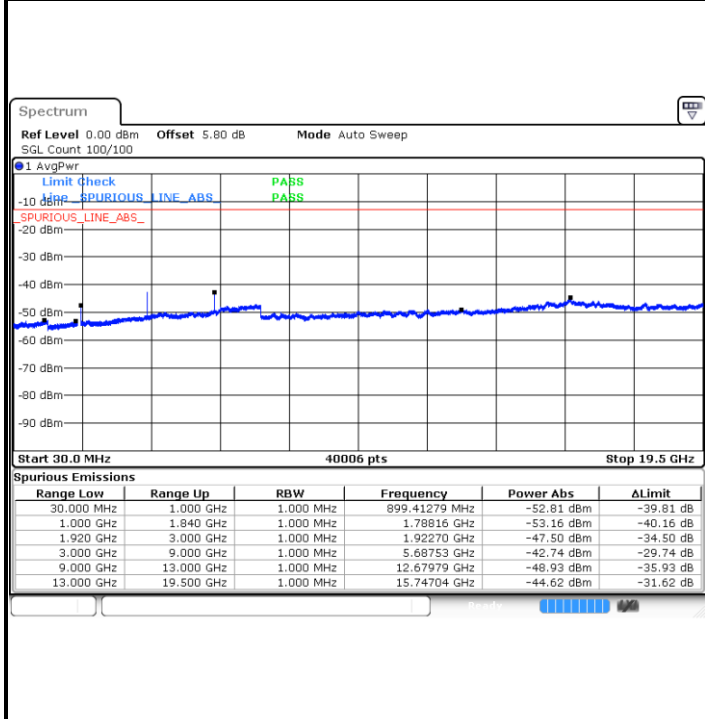


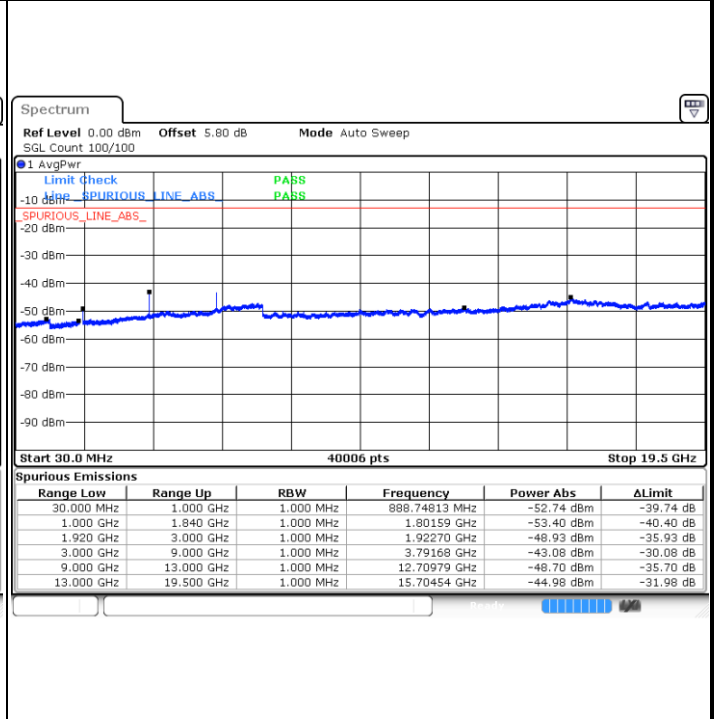


**LTE Band 2 / 15MHz**

**Highest Channel / QPSK**

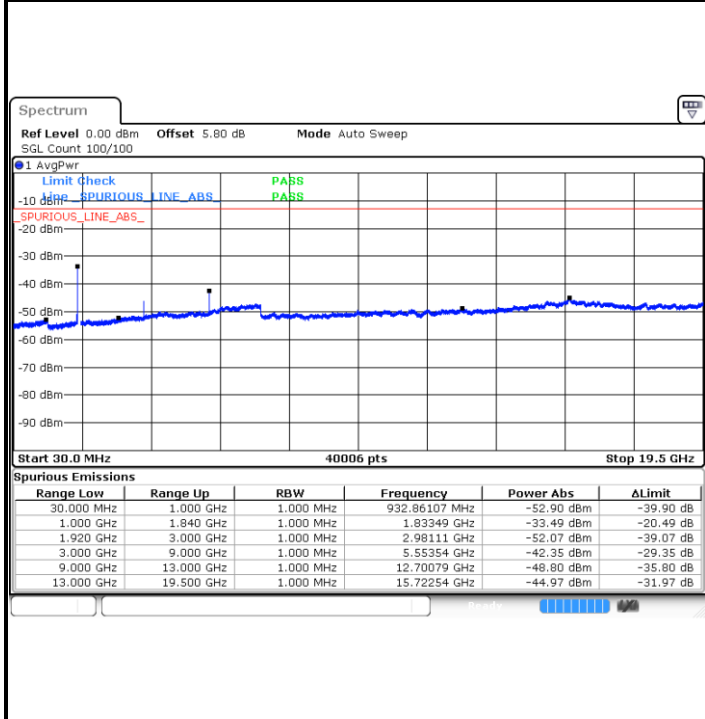


**Highest Channel / 16QAM**

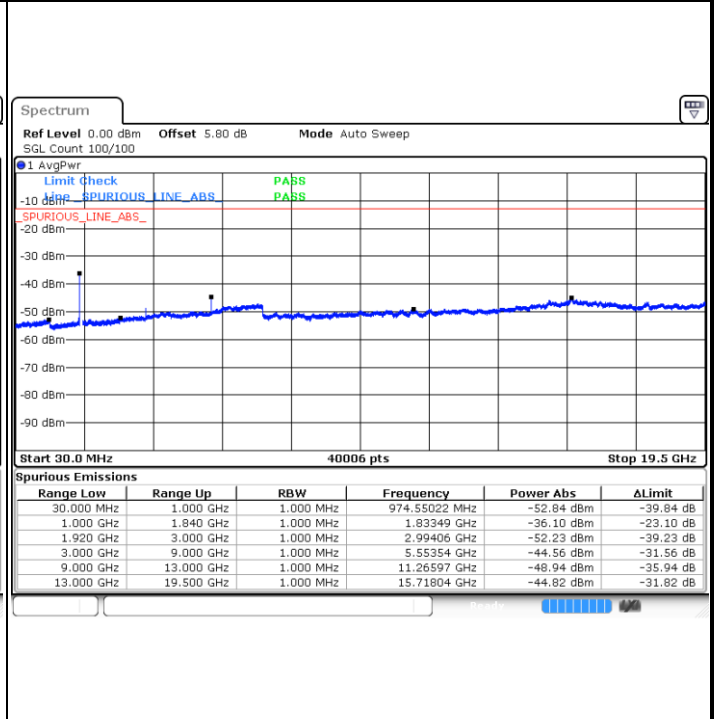


**LTE Band 2 / 20MHz**

**Lowest Channel / QPSK**



**Lowest Channel / 16QAM**

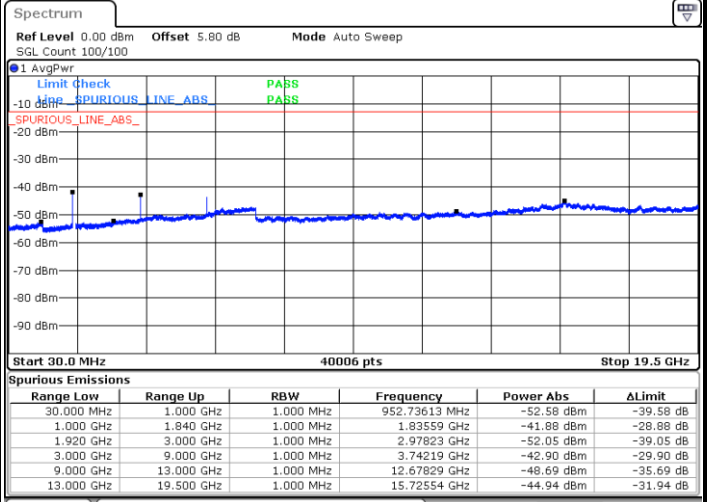
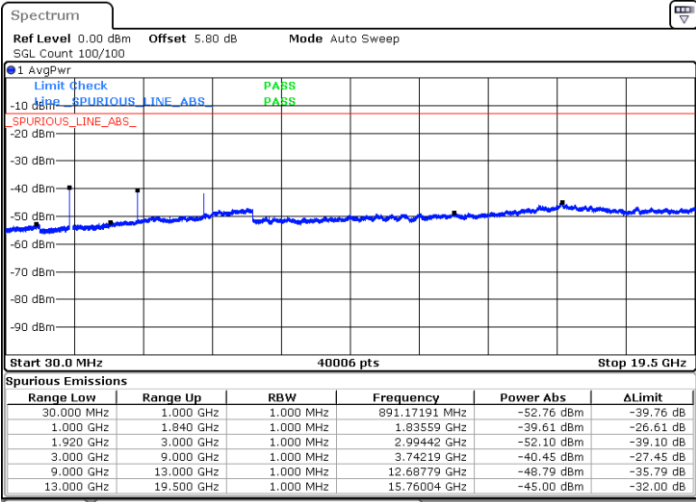




LTE Band 2 / 20MHz

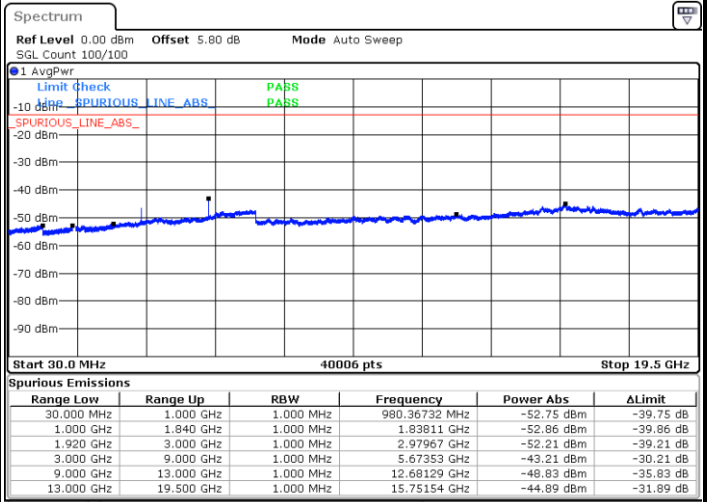
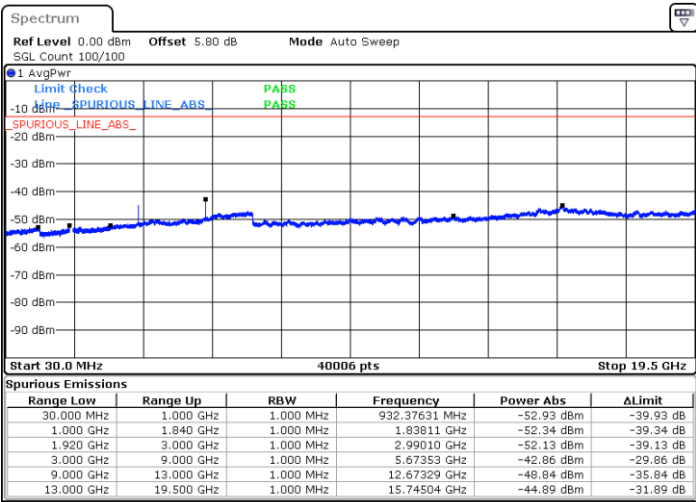
Middle Channel / QPSK

Middle Channel / 16QAM



Highest Channel / QPSK

Highest Channel / 16QAM

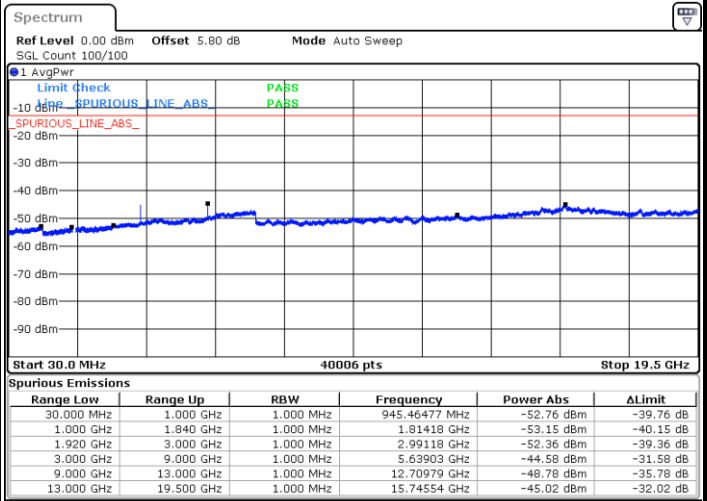
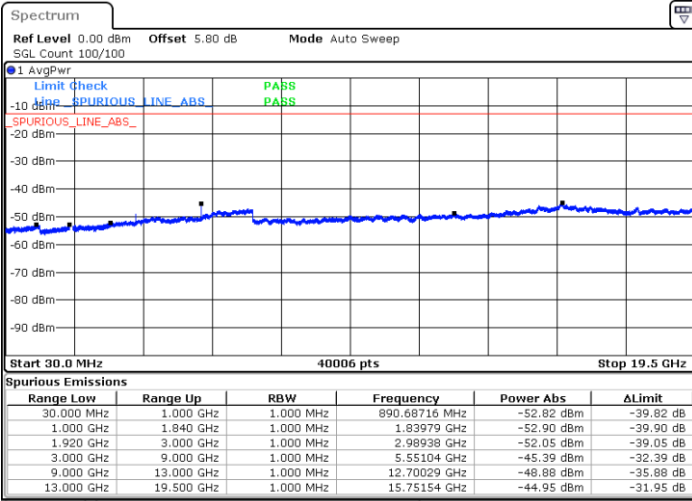




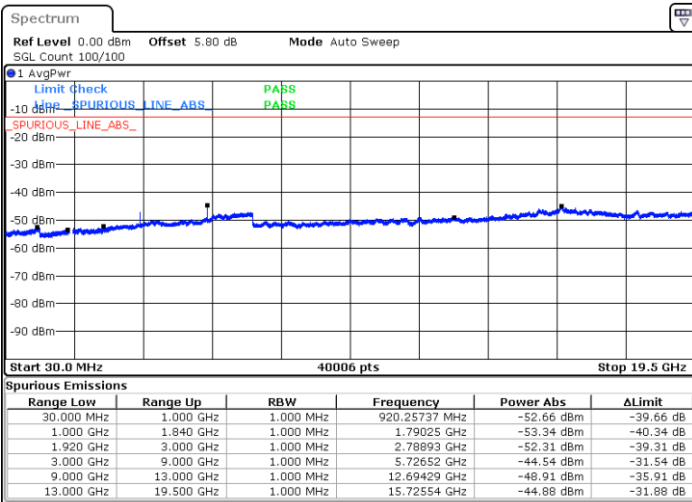
LTE Band 2 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

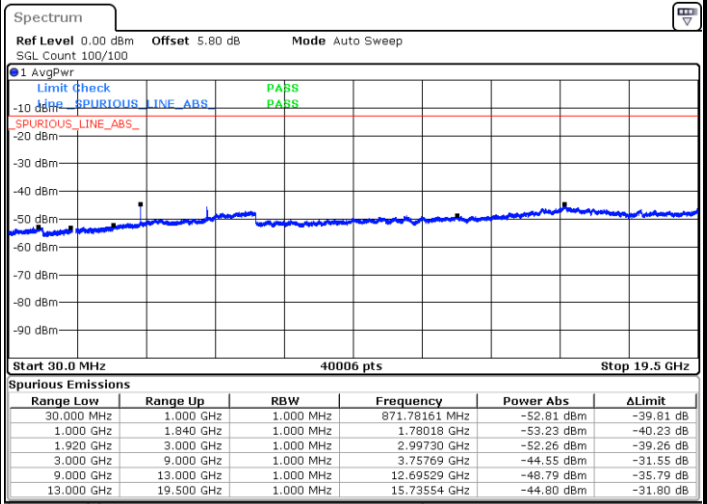
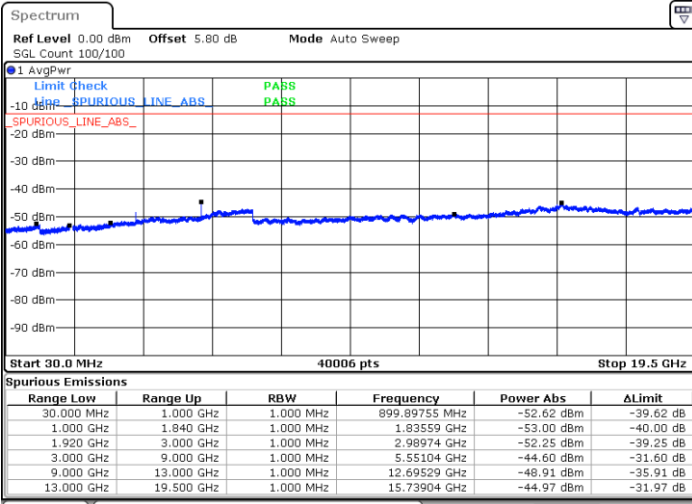




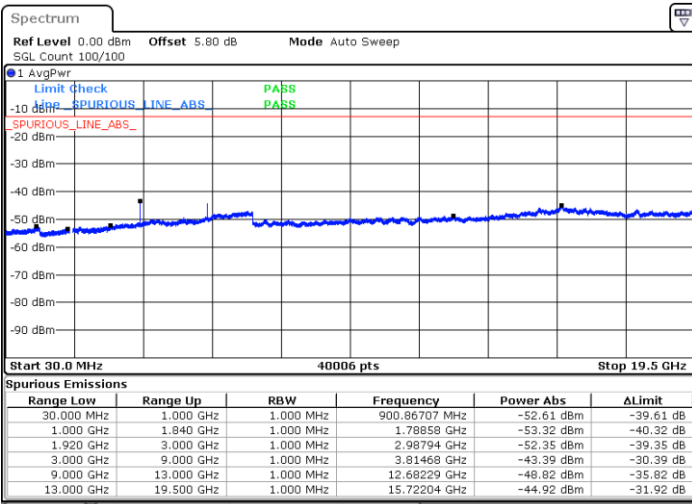
LTE Band 2 / 3MHz

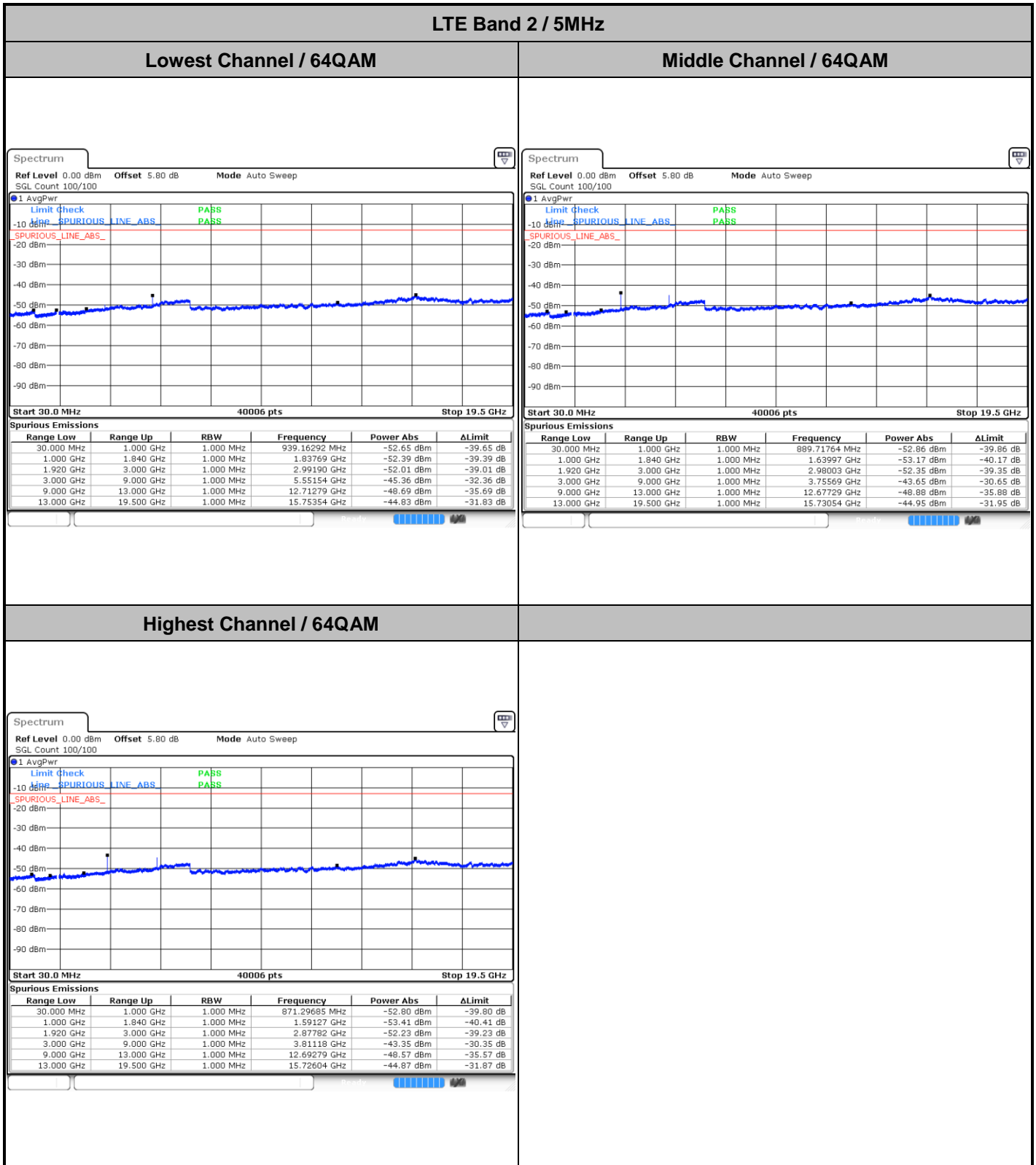
Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM



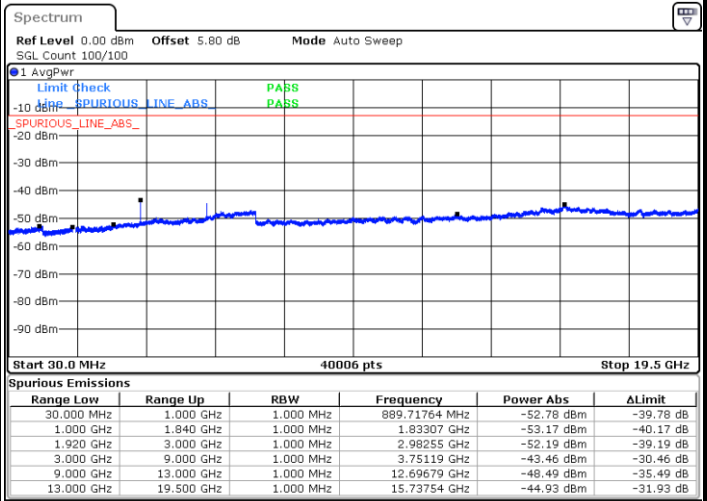
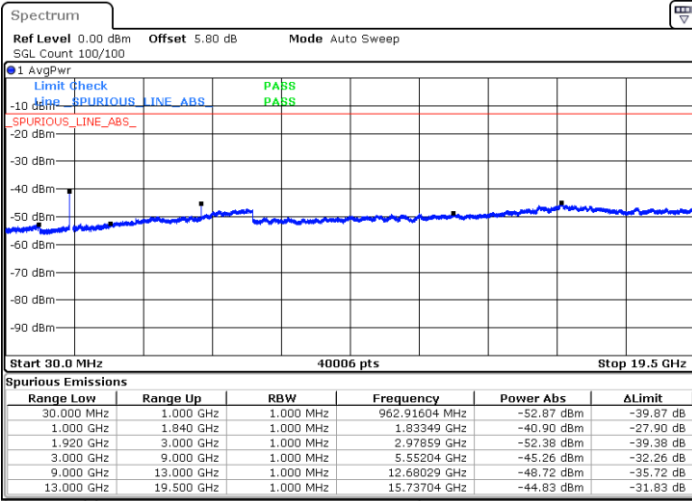




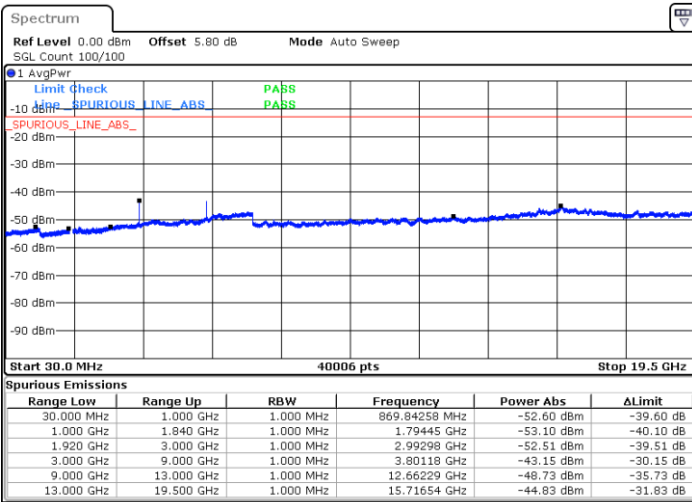
LTE Band 2 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

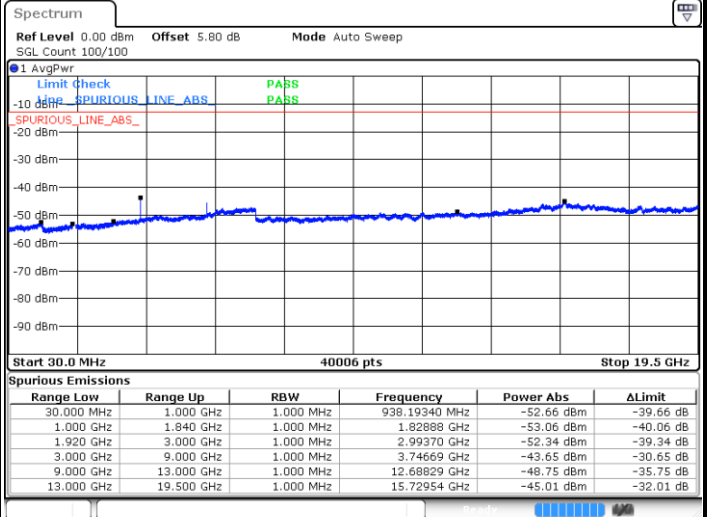
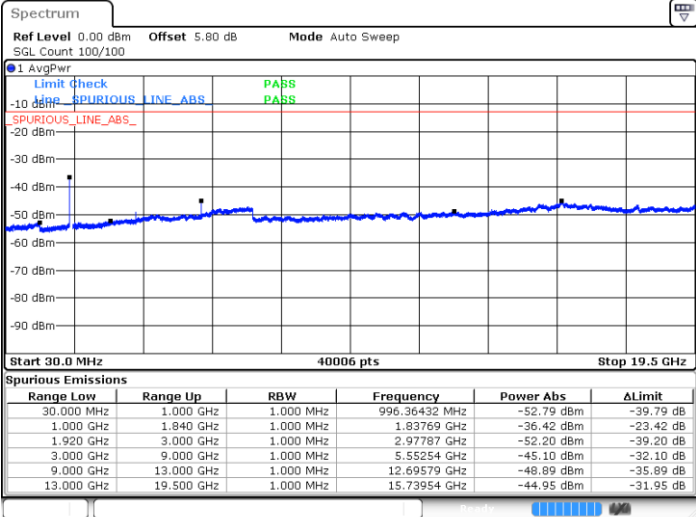




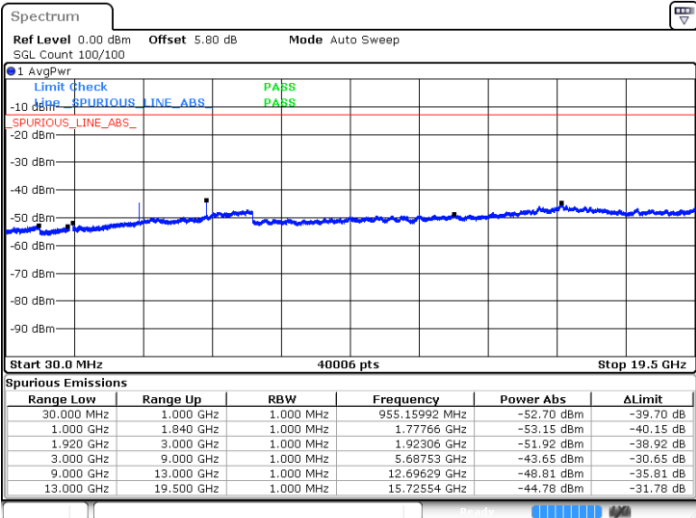
LTE Band 2 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

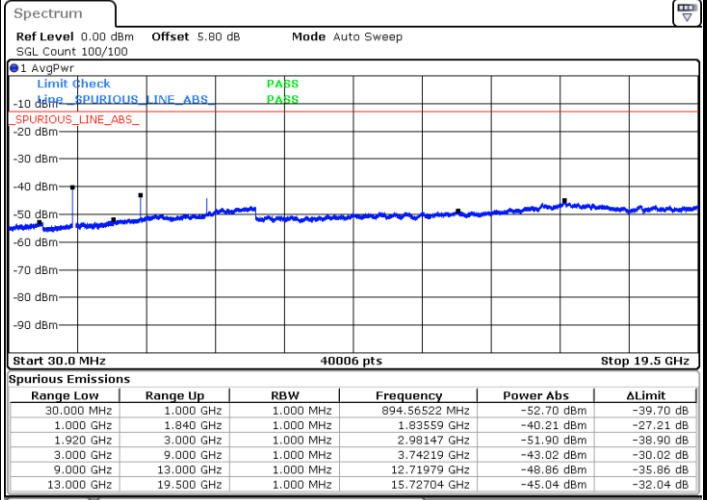
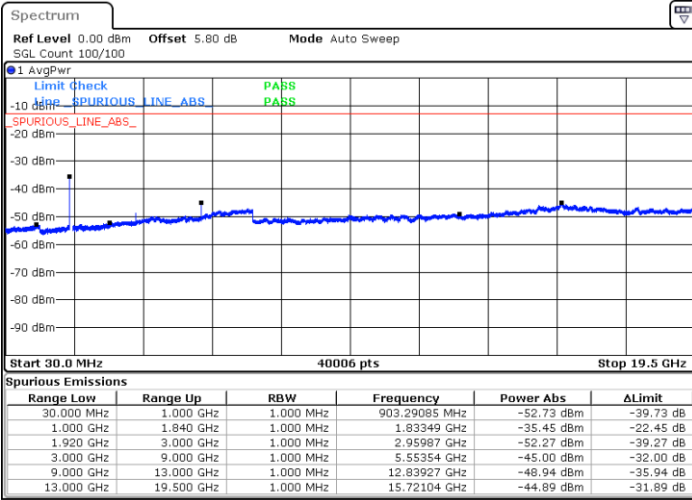




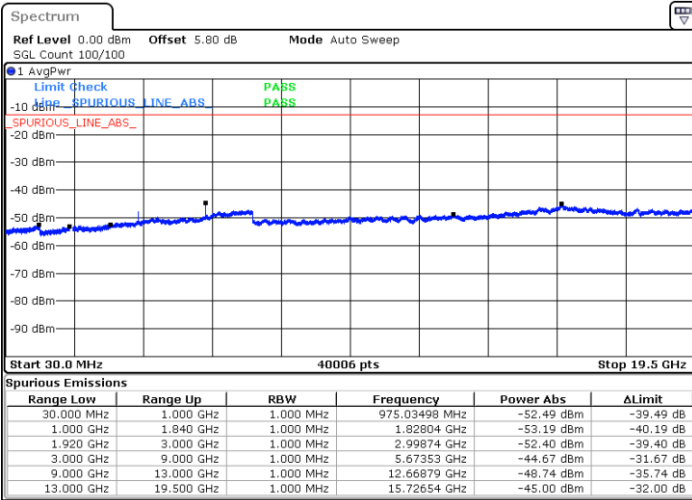
LTE Band 2 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM







Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0050	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0047	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0020	
20	Maximum Voltage	0.0053	
20	Normal Voltage	0.0062	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage =3.8 V.; Battery End Point (BEP) =3.6 V.; Maximum Voltage =4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 4

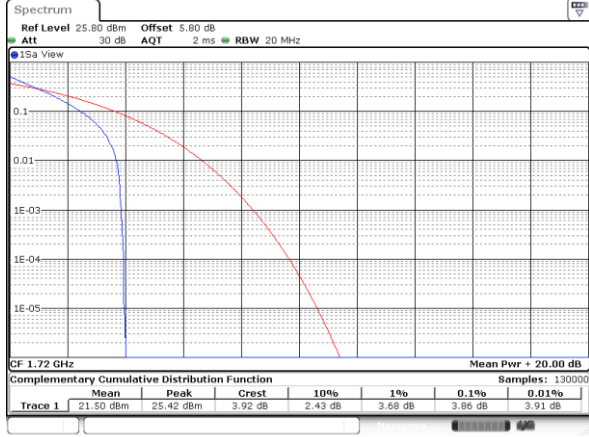
## Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.86	4.67	5.01	5.62	<b>PASS</b>
Middle CH	4.23	4.55	5.13	5.59	
Highest CH	3.80	4.72	4.78	5.71	
Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.88	6.14			<b>PASS</b>
Middle CH	6.03	6.09			
Highest CH	5.80	6.20			

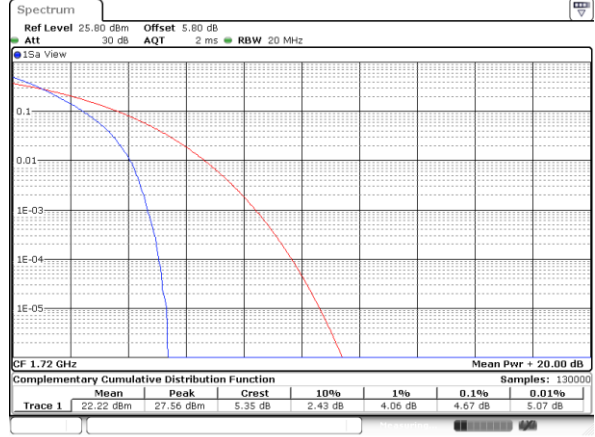


LTE Band 4 / 20MHz / QPSK

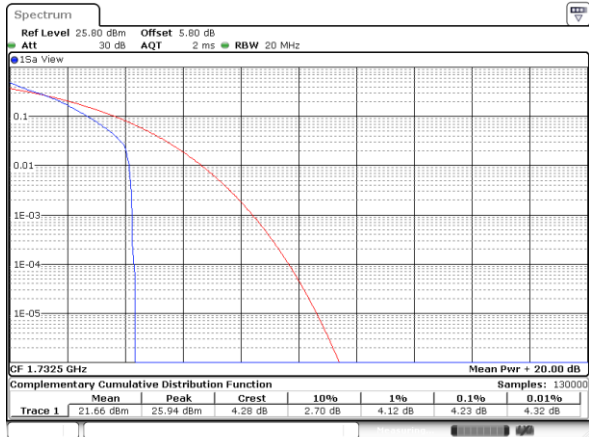
Lowest Channel / 1RB



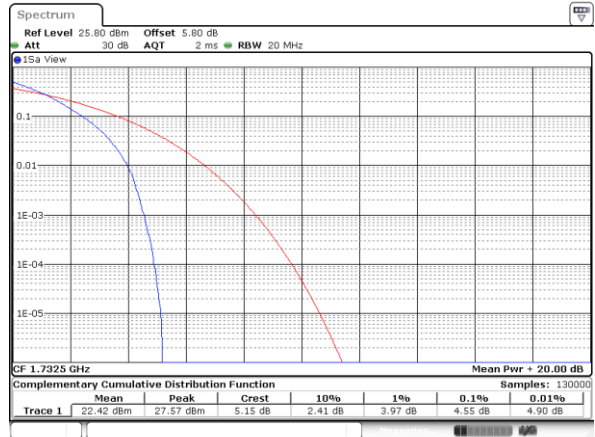
Lowest Channel / Full RB



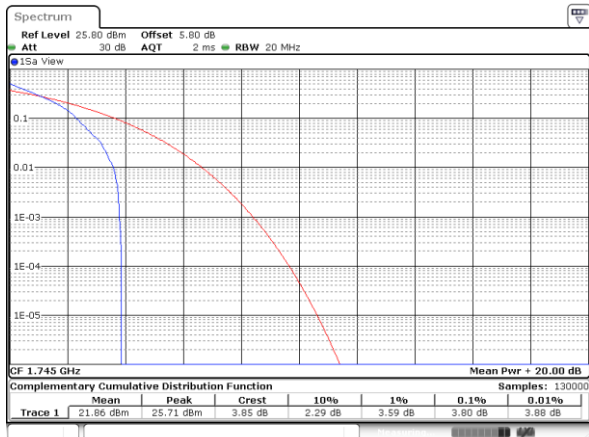
Middle Channel / 1RB



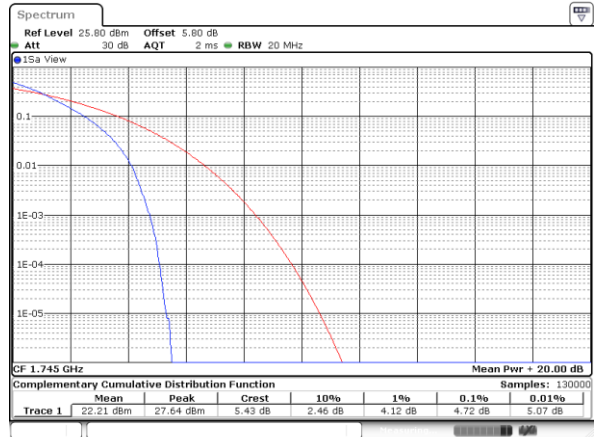
Middle Channel / Full RB



Highest Channel / 1RB



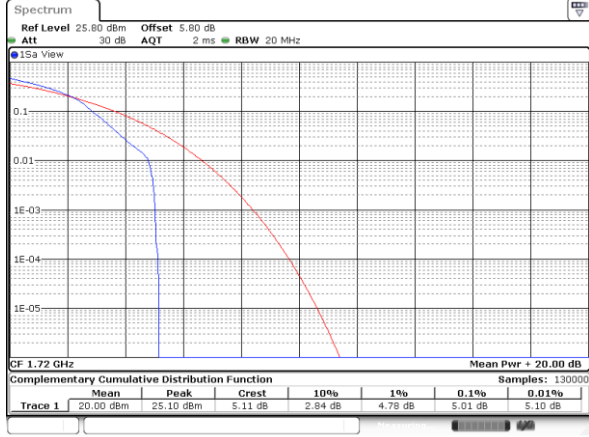
Highest Channel / Full RB



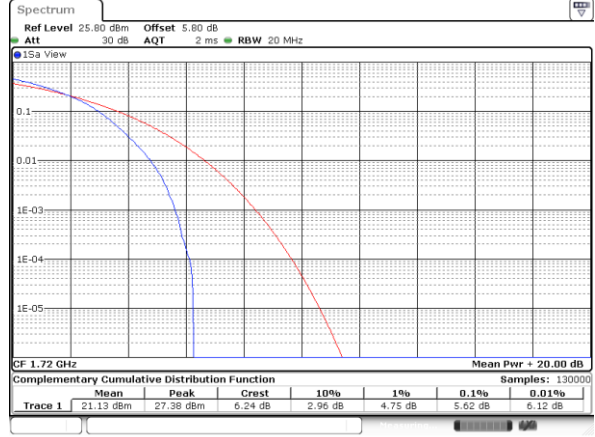


LTE Band 4 / 20MHz / 16QAM

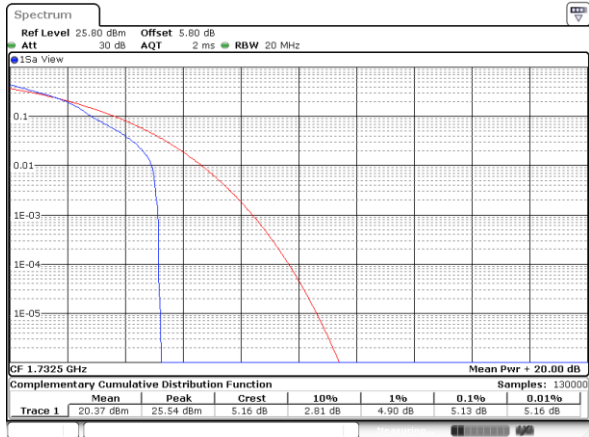
Lowest Channel / 1RB



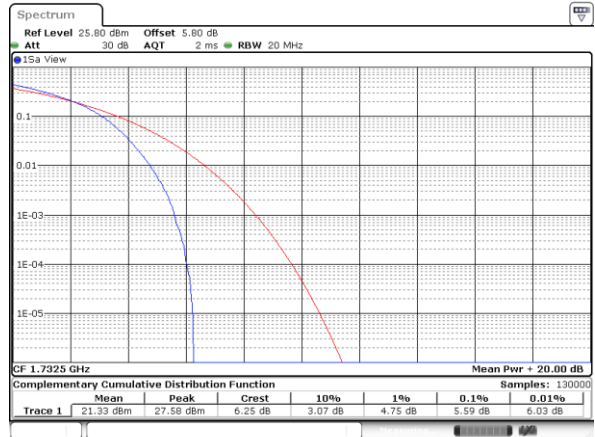
Lowest Channel / Full RB



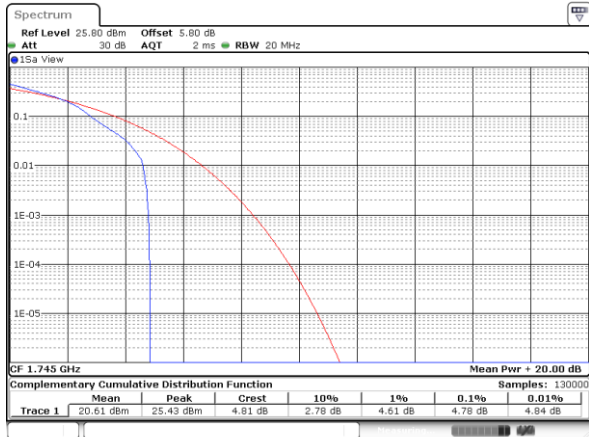
Middle Channel / 1RB



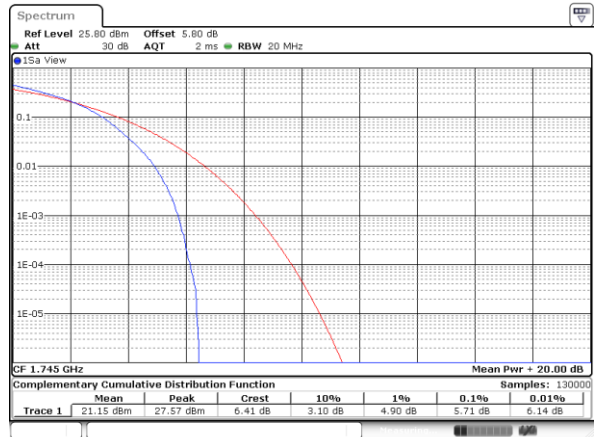
Middle Channel / Full RB



Highest Channel / 1RB



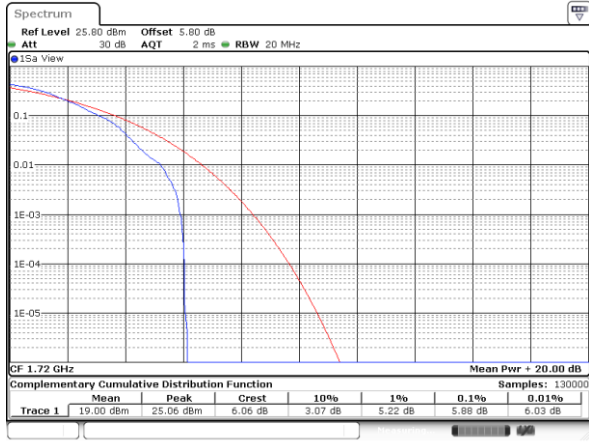
Highest Channel / Full RB



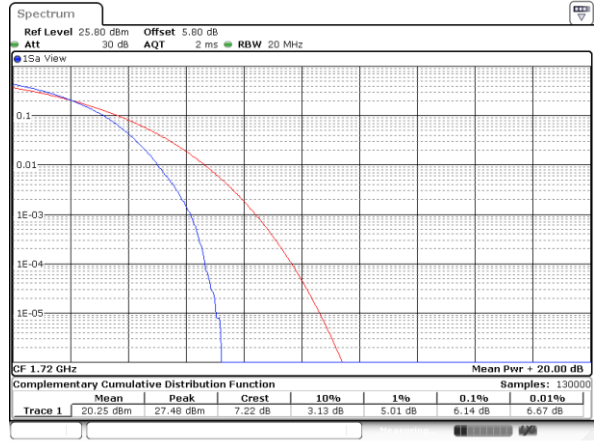


LTE Band 4 / 20MHz / 64QAM

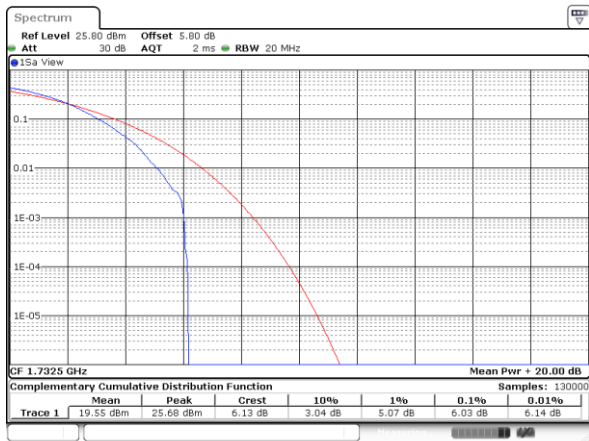
Lowest Channel / 1RB



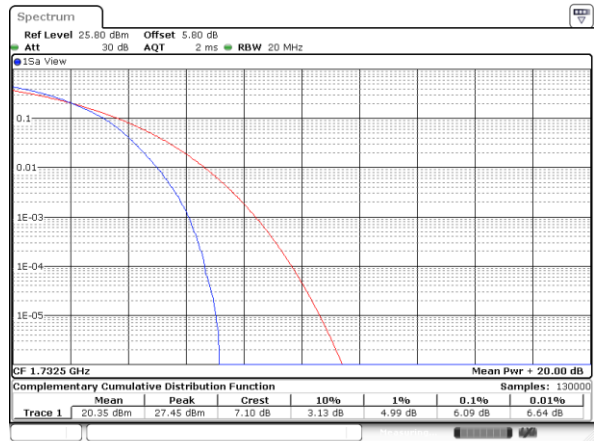
Lowest Channel / Full RB



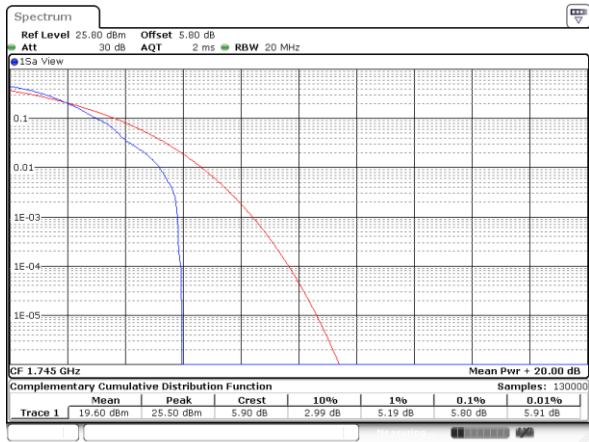
Middle Channel / 1RB



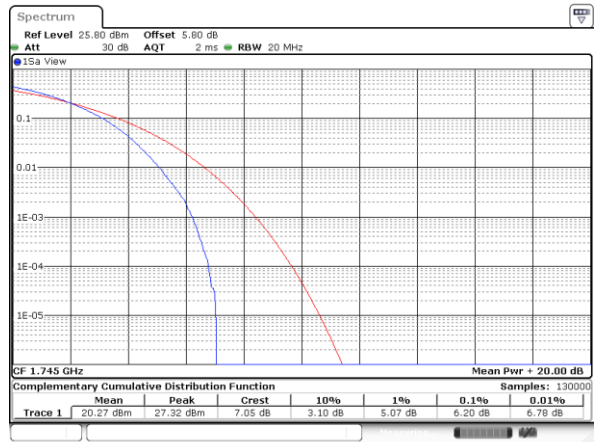
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB





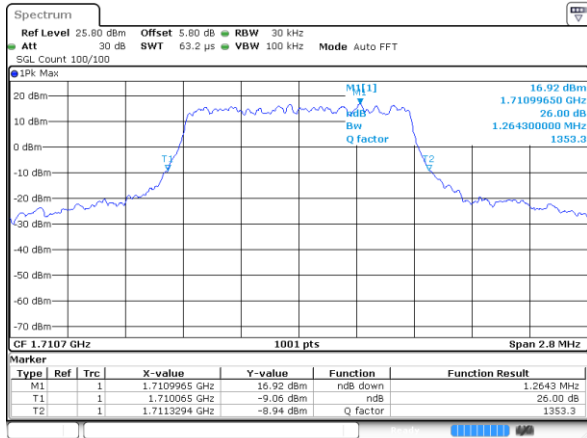
**26dB Bandwidth**

Mode	LTE Band 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	1.264	1.309	2.997	3.045	5.005	4.805	9.77	9.75	14.565	14.386	20.14	20.02
Middle CH	1.262	1.287	3.015	2.997	4.965	4.895	9.73	9.91	14.505	14.356	20.14	20.10
Highest CH	1.262	1.278	3.009	3.027	4.935	4.905	9.87	9.77	14.266	14.565	20.34	20.10
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.250		2.973		4.885		9.83		14.416		20.14	
Middle CH	1.281		2.955		4.995		9.77		14.476		20.18	
Highest CH	1.298		3.003		4.835		10.01		14.356		20.10	

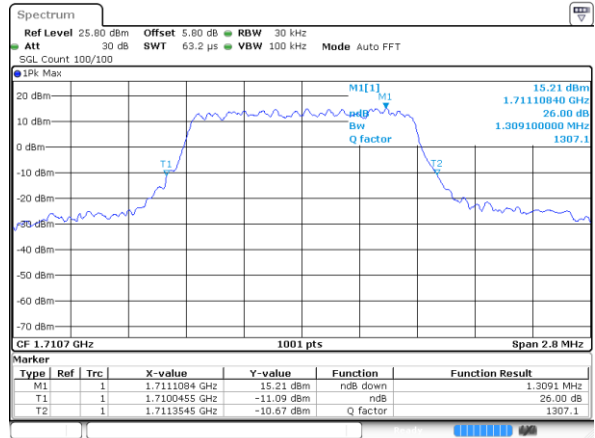


LTE Band 4

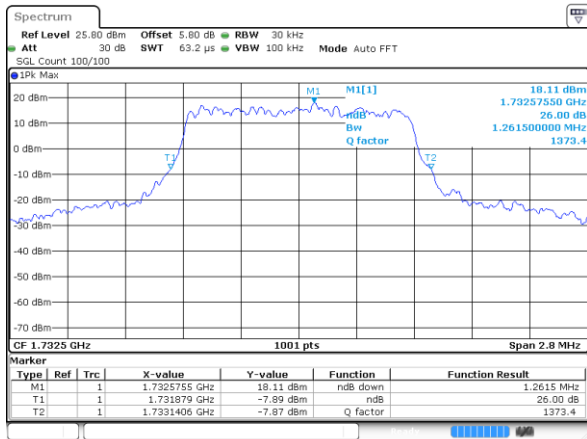
Lowest Channel / 1.4MHz / QPSK



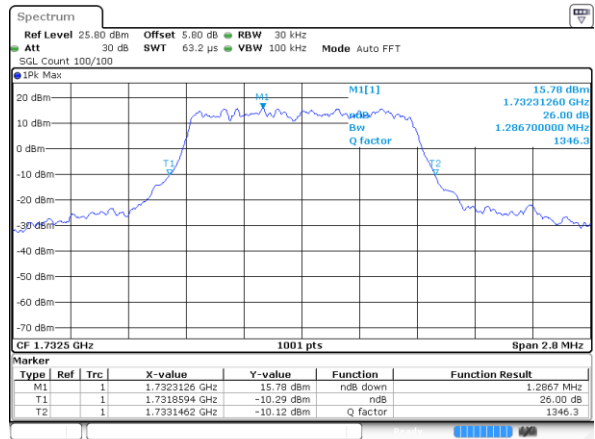
Lowest Channel / 1.4MHz / 16QAM



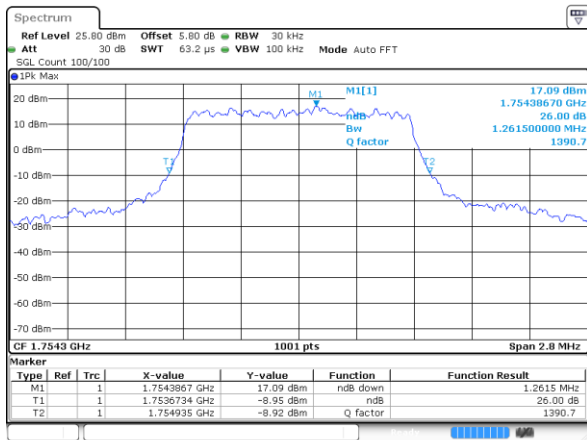
Middle Channel / 1.4MHz / QPSK



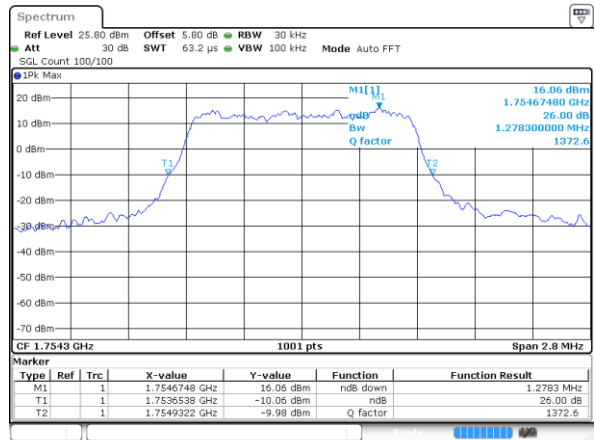
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



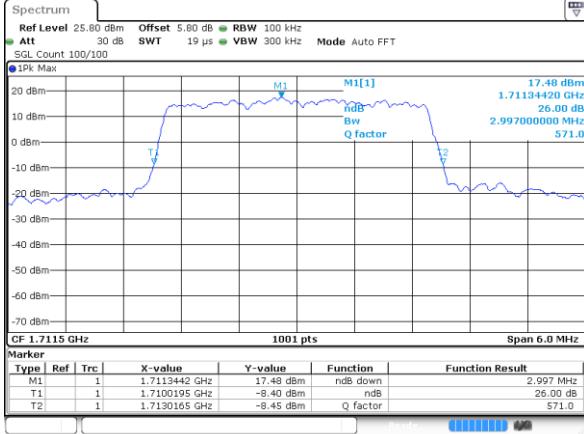
Highest Channel / 1.4MHz / 16QAM



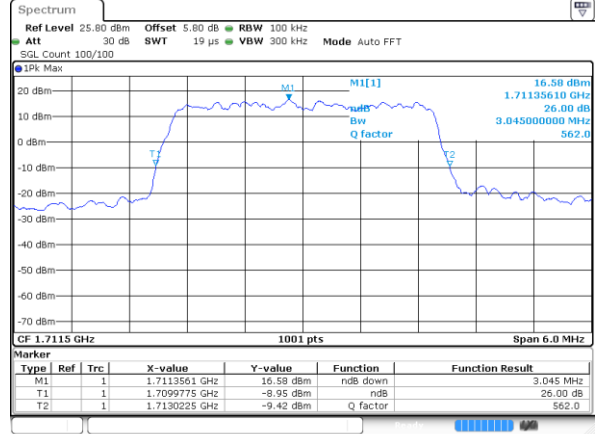


LTE Band 4

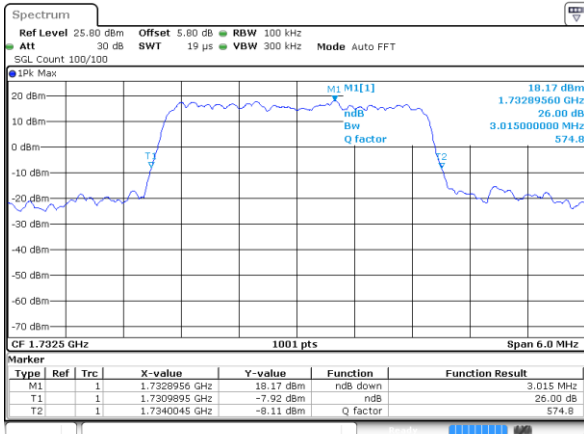
Lowest Channel / 3MHz / QPSK



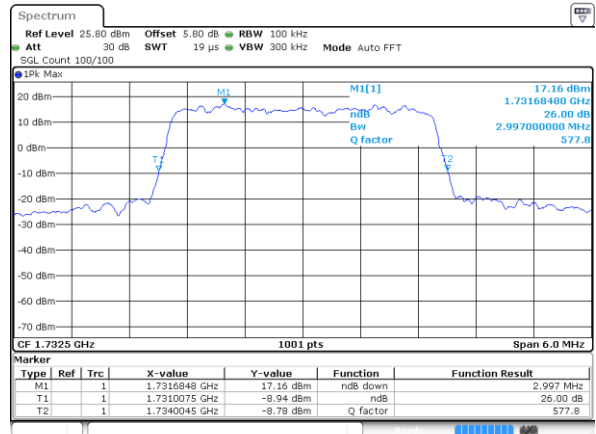
Lowest Channel / 3MHz / 16QAM



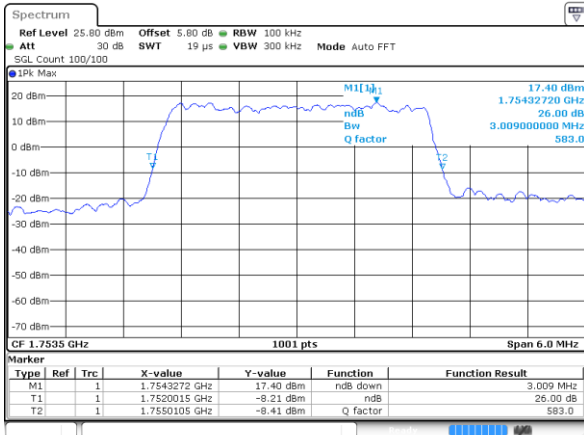
Middle Channel / 3MHz / QPSK



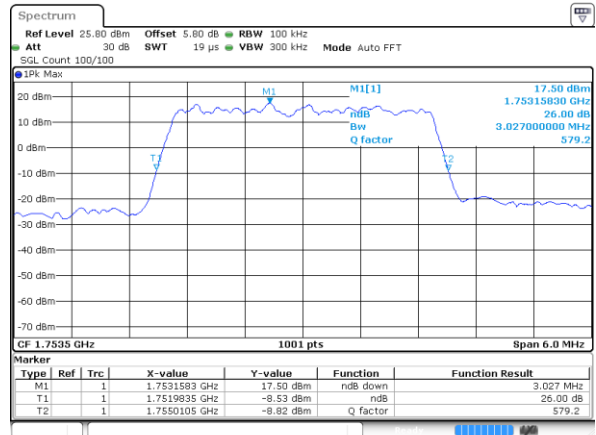
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



Highest Channel / 3MHz / 16QAM

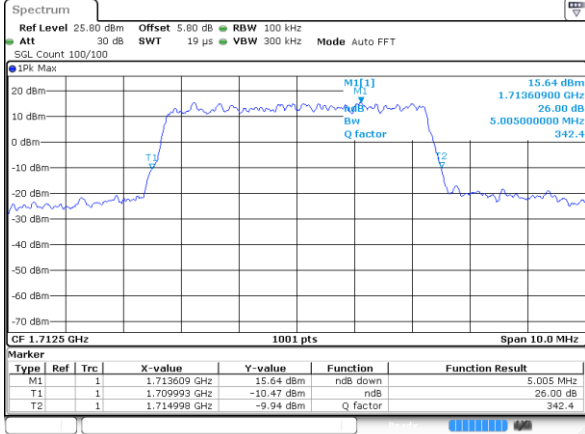




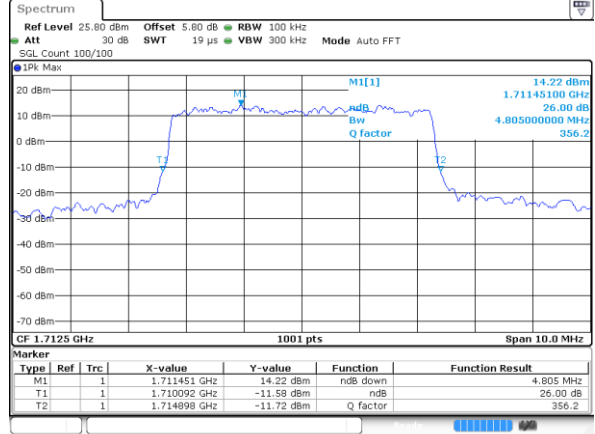


LTE Band 4

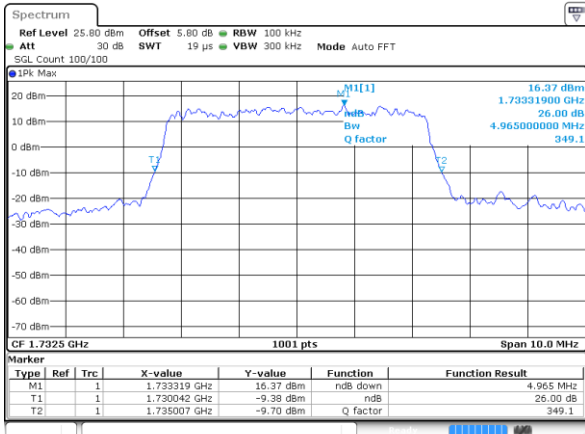
Lowest Channel / 5MHz / QPSK



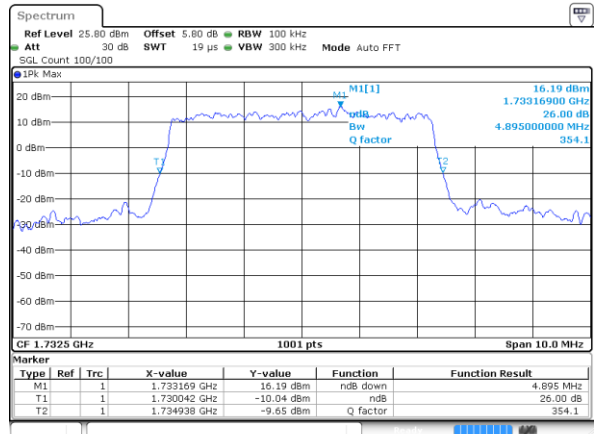
Lowest Channel / 5MHz / 16QAM



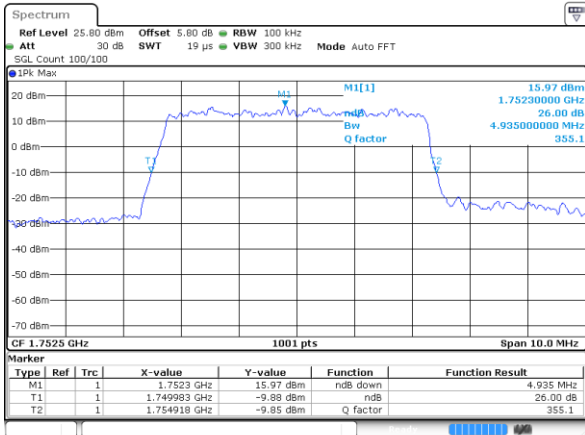
Middle Channel / 5MHz / QPSK



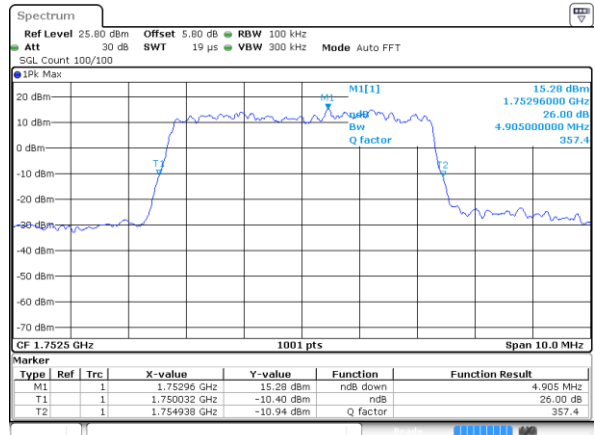
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



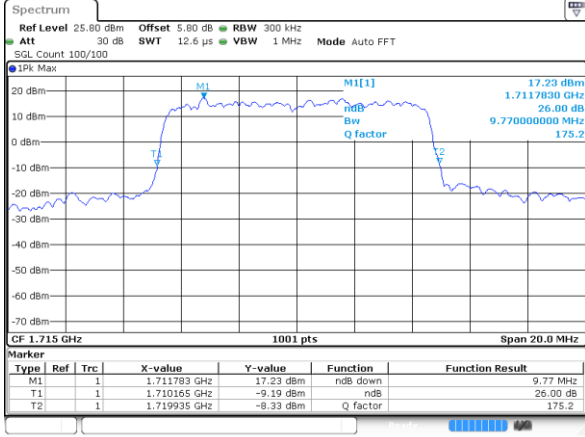
Highest Channel / 5MHz / 16QAM



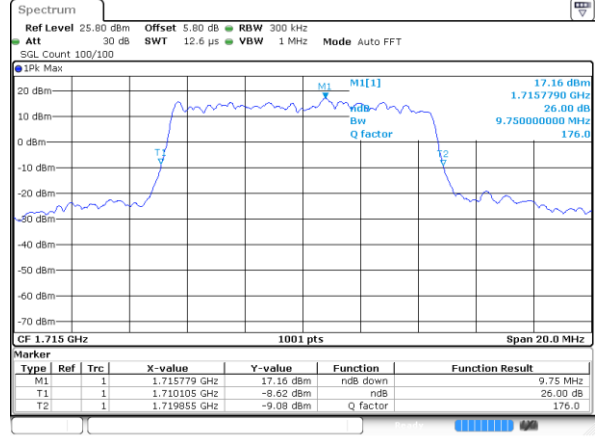


LTE Band 4

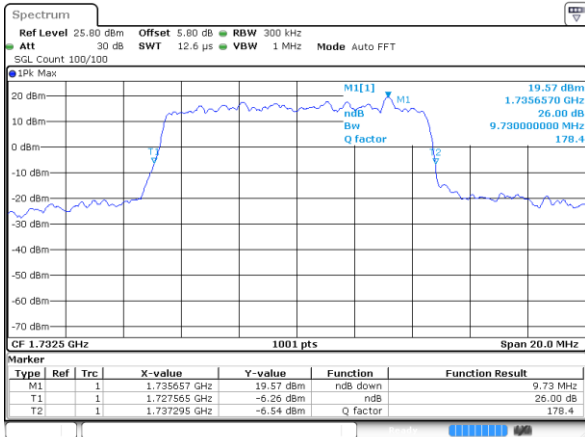
Lowest Channel / 10MHz / QPSK



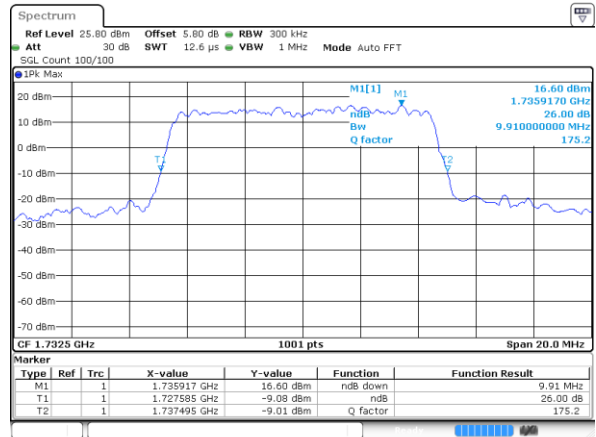
Lowest Channel / 10MHz / 16QAM



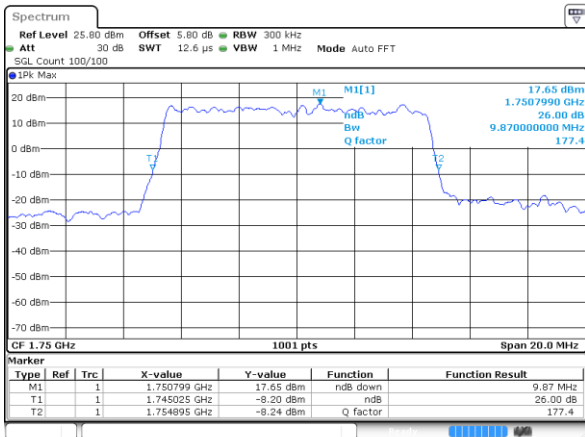
Middle Channel / 10MHz / QPSK



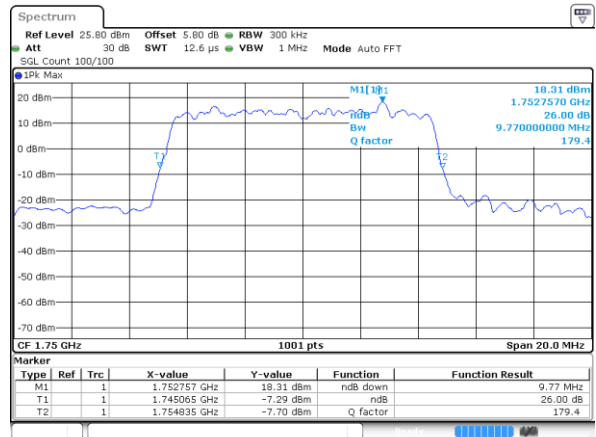
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



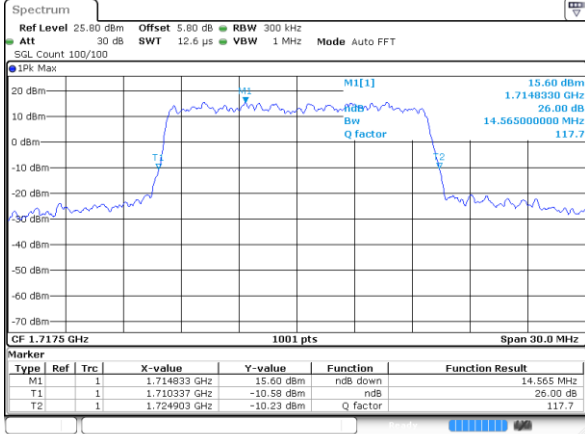
Highest Channel / 10MHz / 16QAM



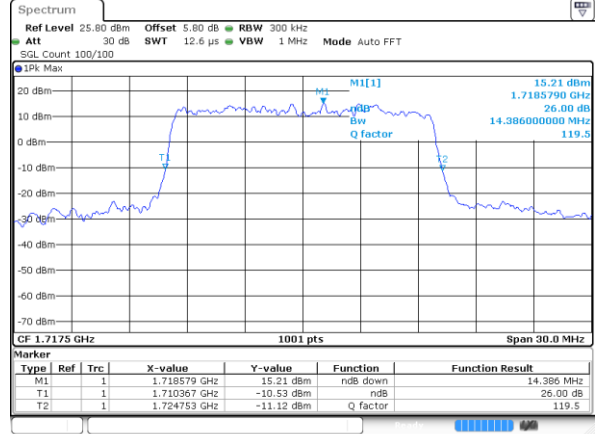


LTE Band 4

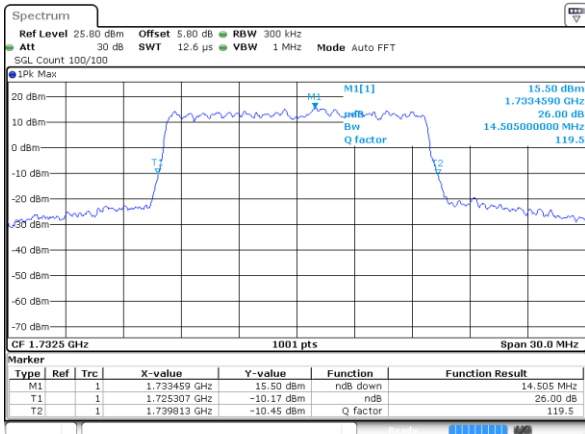
Lowest Channel / 15MHz / QPSK



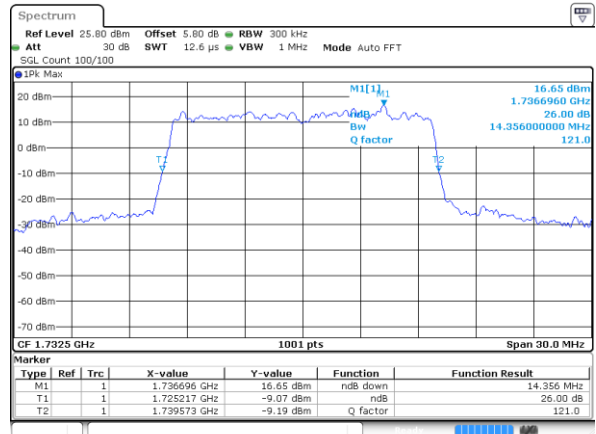
Lowest Channel / 15MHz / 16QAM



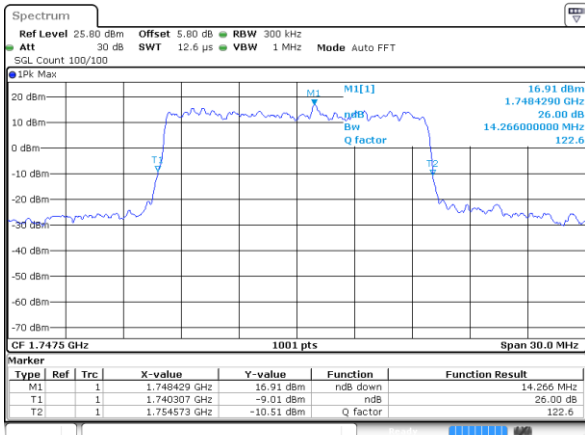
Middle Channel / 15MHz / QPSK



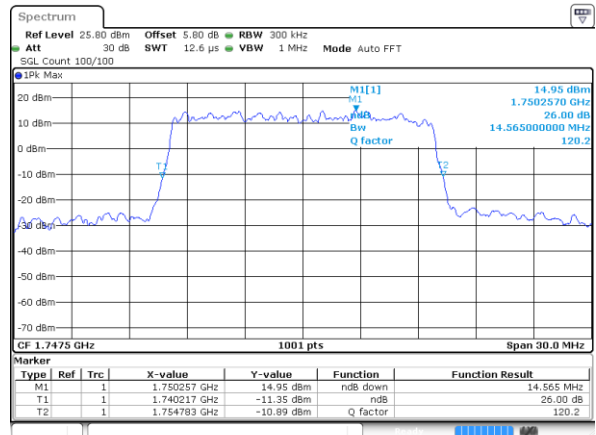
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



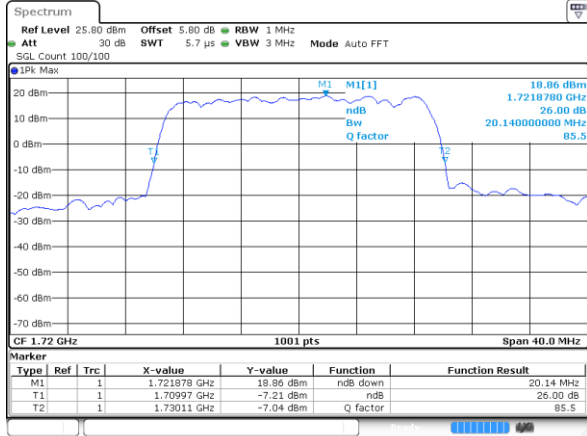
Highest Channel / 15MHz / 16QAM



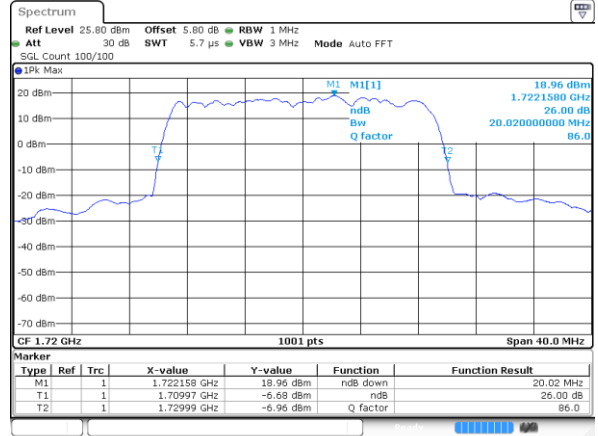


LTE Band 4

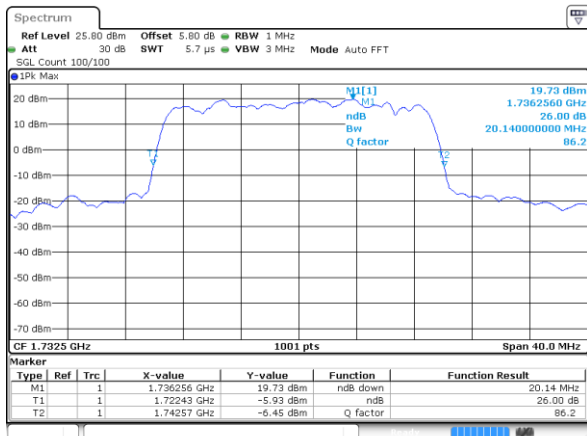
Lowest Channel / 20MHz / QPSK



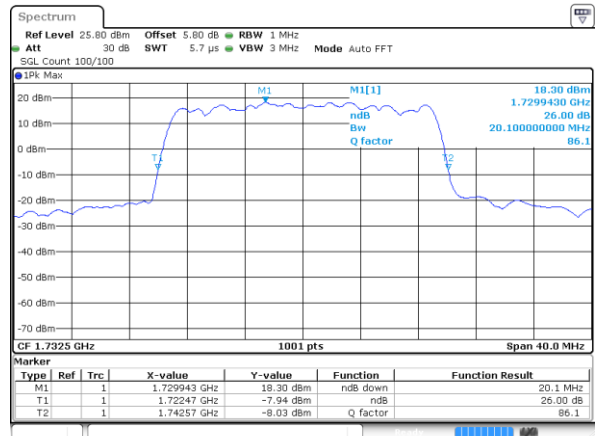
Lowest Channel / 20MHz / 16QAM



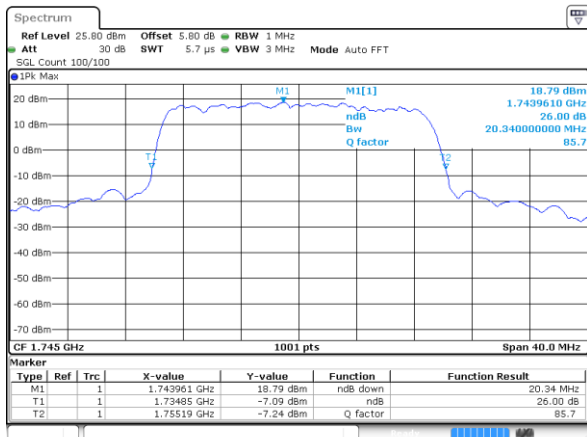
Middle Channel / 20MHz / QPSK



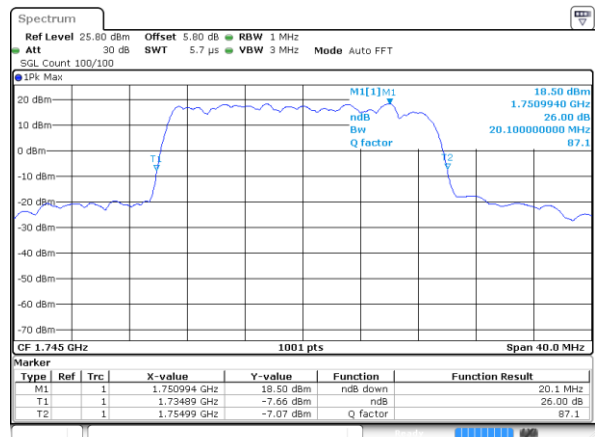
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



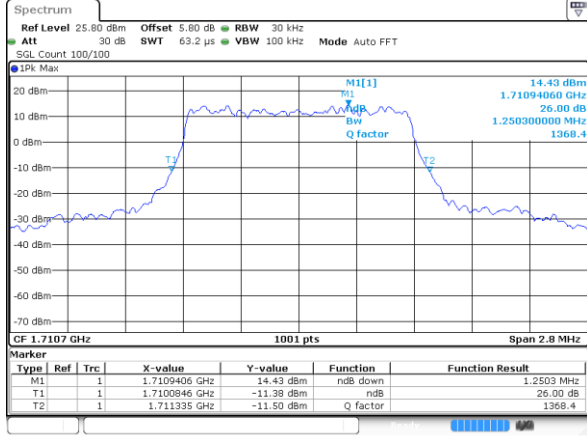
Highest Channel / 20MHz / 16QAM



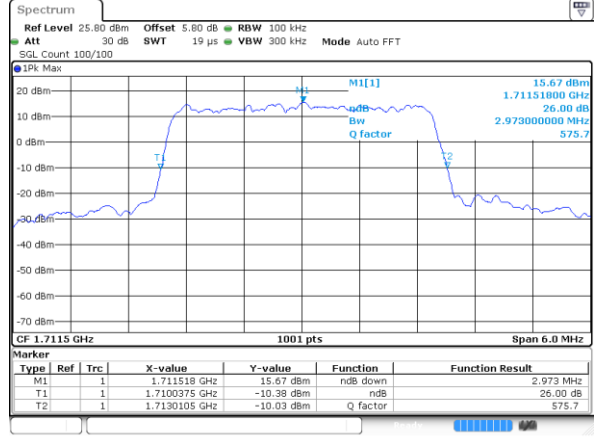


LTE Band 4

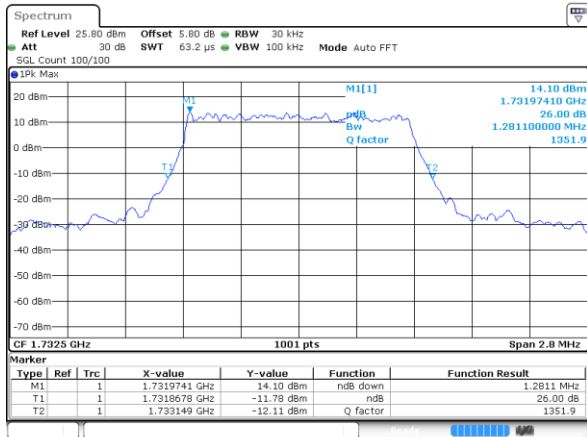
Lowest Channel / 1.4MHz / 64QAM



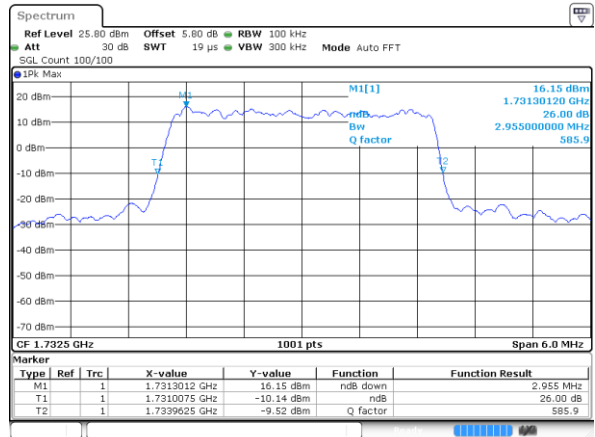
Lowest Channel / 3MHz / 64QAM



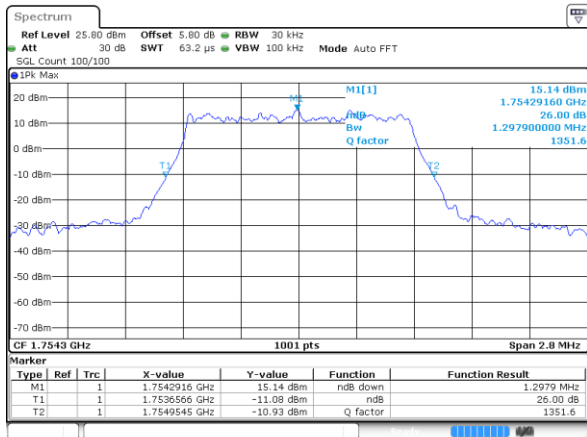
Middle Channel / 1.4MHz / 64QAM



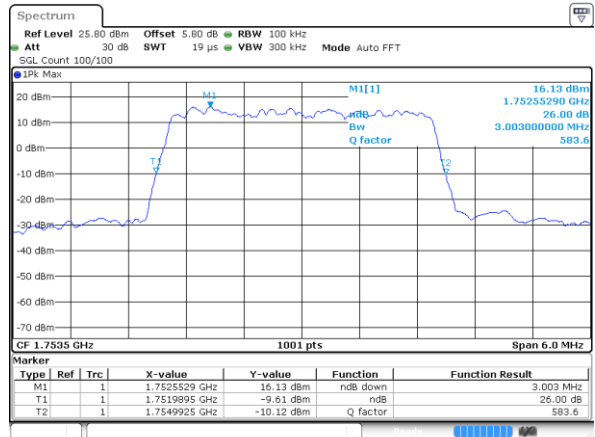
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM



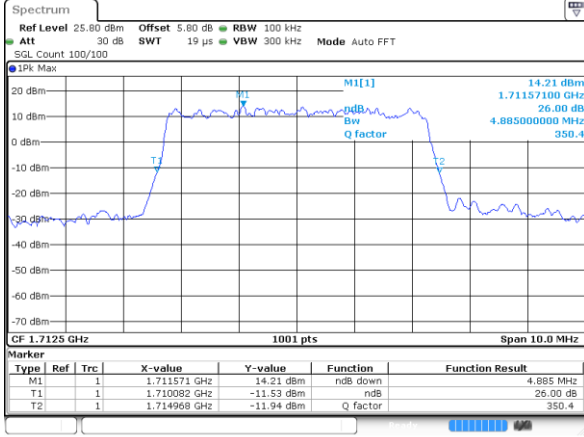
Highest Channel / 3MHz / 64QAM



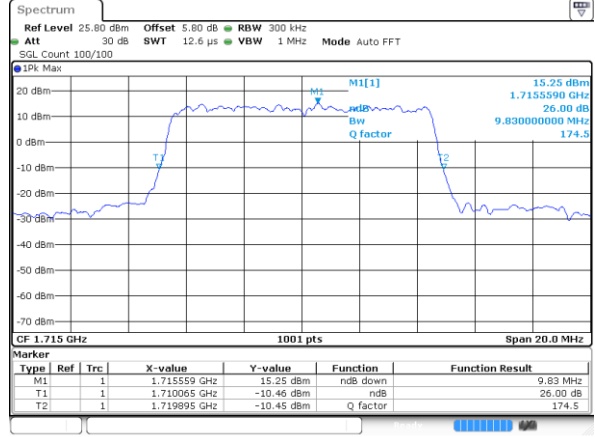


LTE Band 4

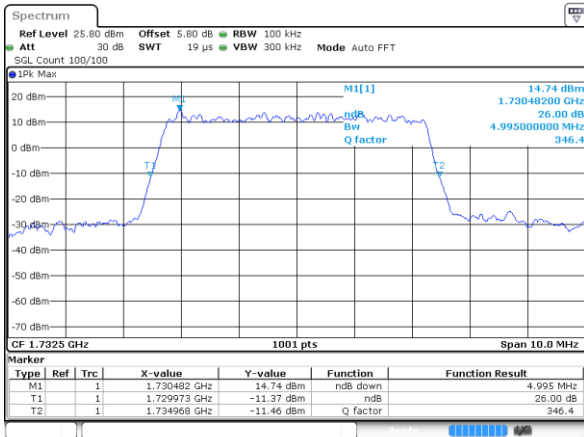
Lowest Channel / 5MHz / 64QAM



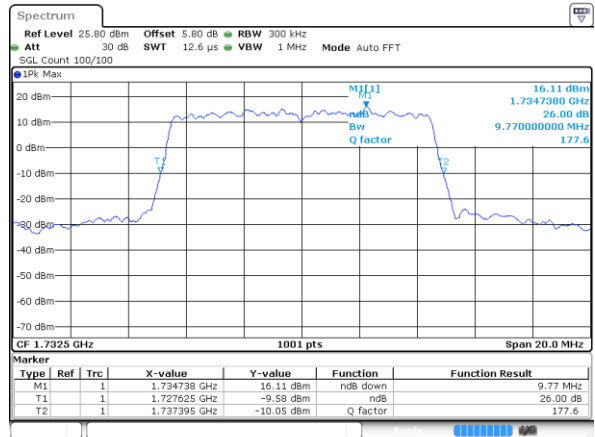
Lowest Channel / 10MHz / 64QAM



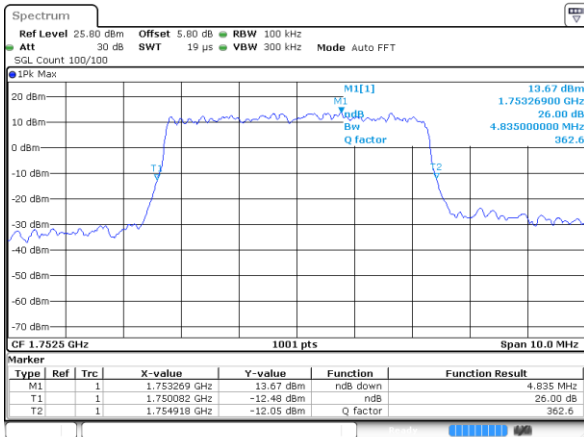
Middle Channel / 5MHz / 64QAM



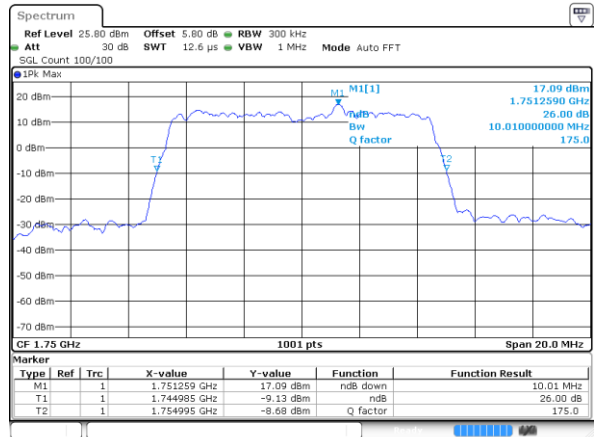
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



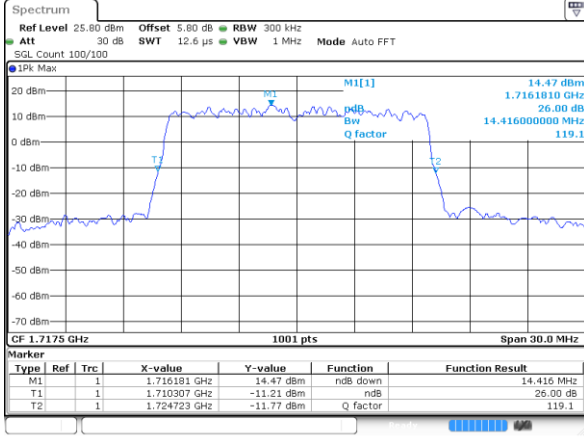
Highest Channel / 10MHz / 64QAM



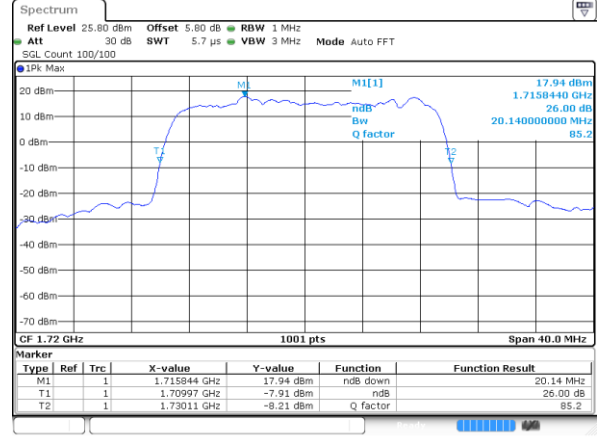


LTE Band 4

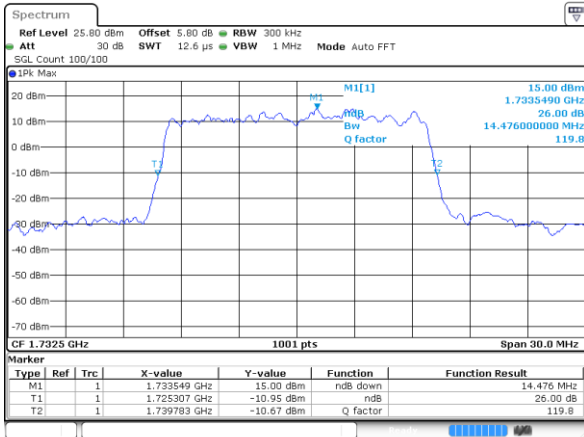
Lowest Channel / 15MHz / 64QAM



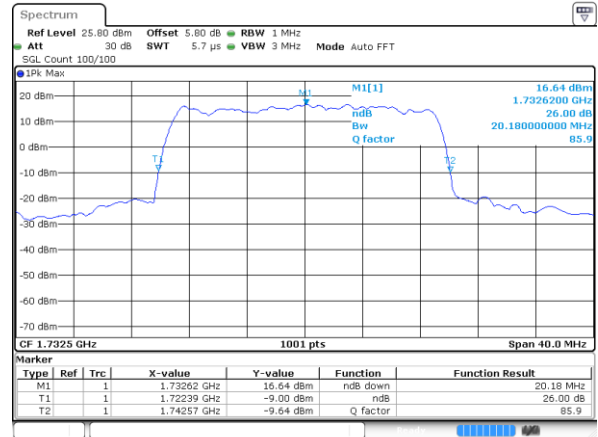
Lowest Channel / 20MHz / 64QAM



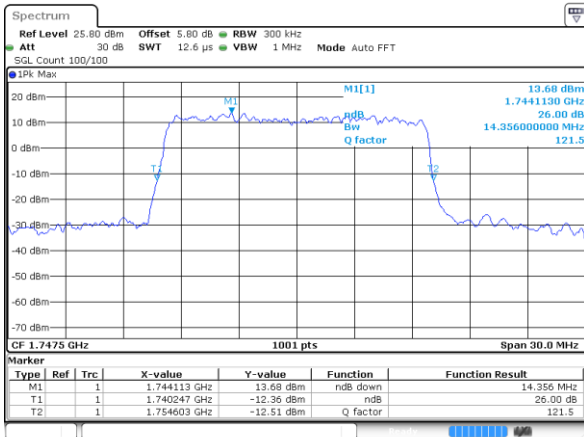
Middle Channel / 15MHz / 64QAM



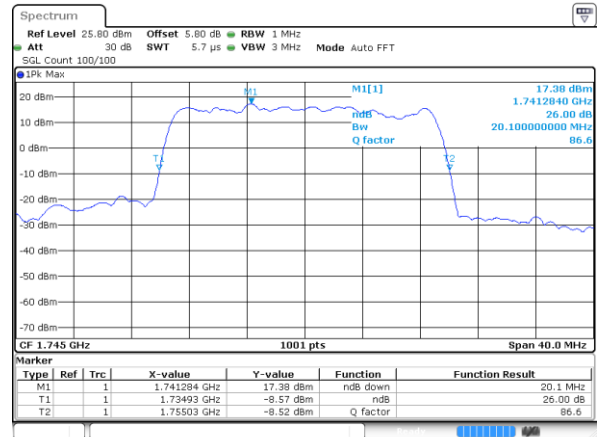
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM





### Occupied Bandwidth

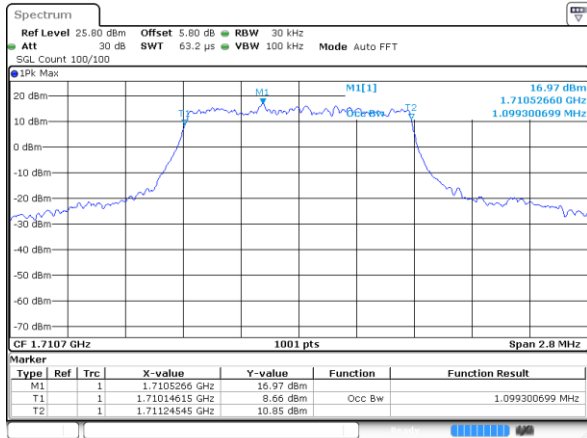
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.10	1.09	2.70	2.73	4.49	4.48	8.95	8.99	13.37	13.34	18.26	18.22
Middle CH	1.09	1.10	2.72	2.72	4.47	4.48	8.99	8.99	13.34	13.43	18.22	18.26
Highest CH	1.09	1.09	2.70	2.71	4.50	4.49	9.03	8.99	13.40	13.43	18.22	18.30
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09		2.72		4.49		8.99		13.46		18.38	
Middle CH	1.09		2.73		4.49		8.97		13.43		18.14	
Highest CH	1.09		2.71		4.47		9.05		13.43		18.26	



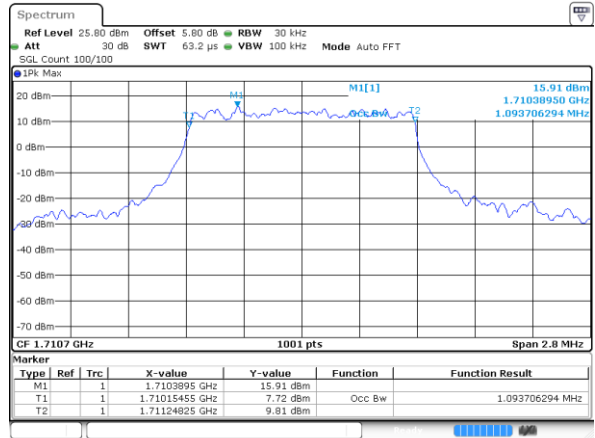


LTE Band 4

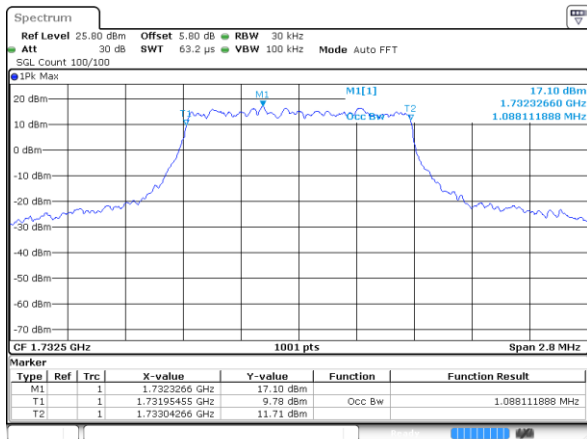
Lowest Channel / 1.4MHz / QPSK



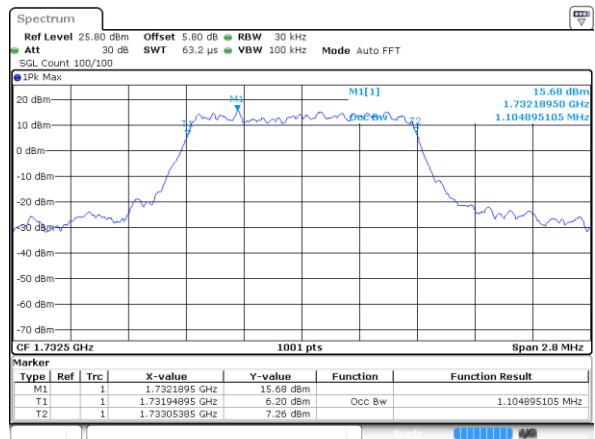
Lowest Channel / 1.4MHz / 16QAM



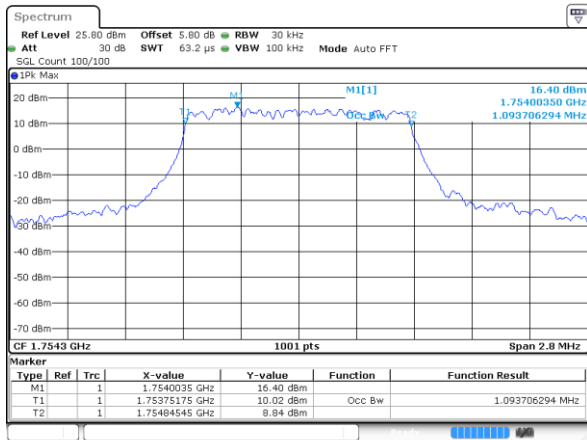
Middle Channel / 1.4MHz / QPSK



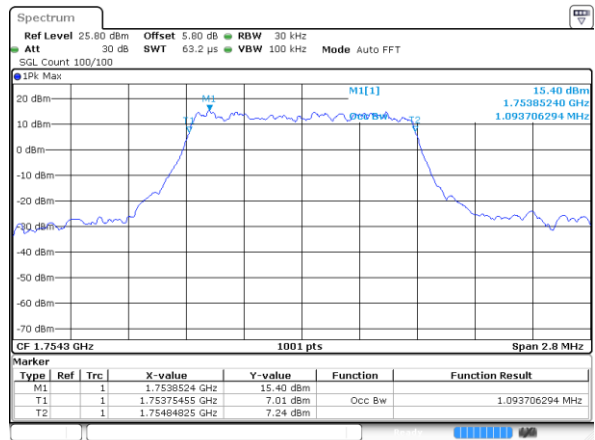
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



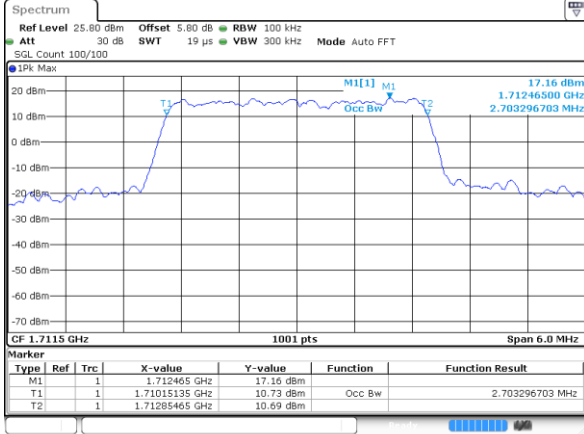
Highest Channel / 1.4MHz / 16QAM



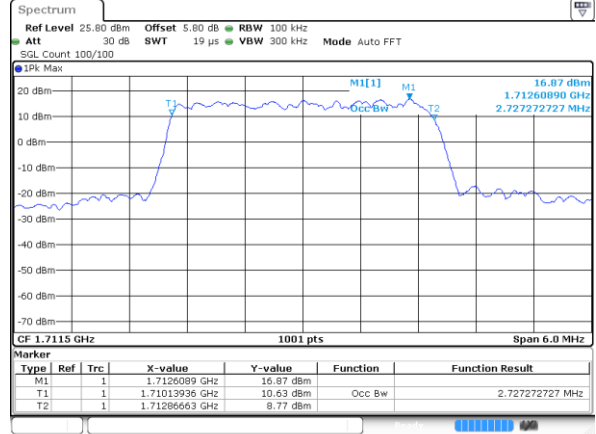


LTE Band 4

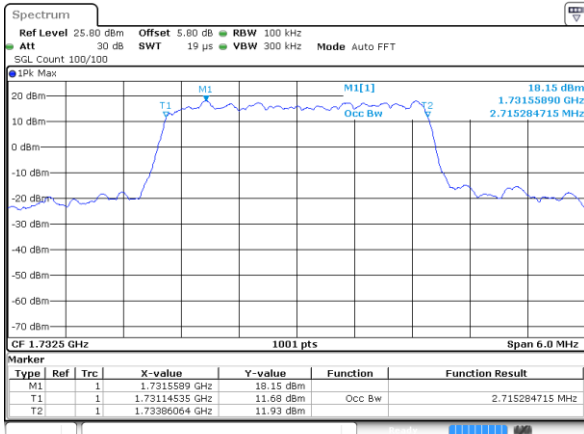
Lowest Channel / 3MHz / QPSK



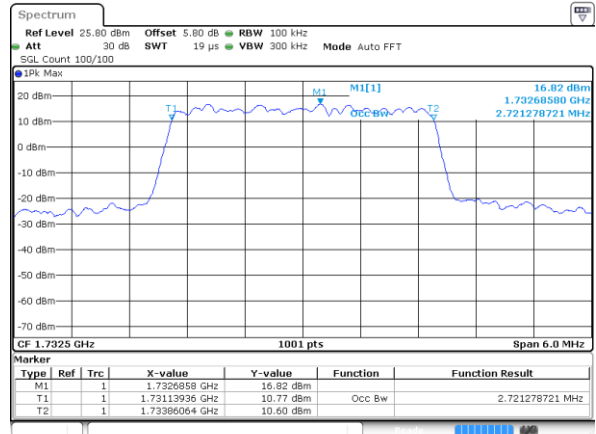
Lowest Channel / 3MHz / 16QAM



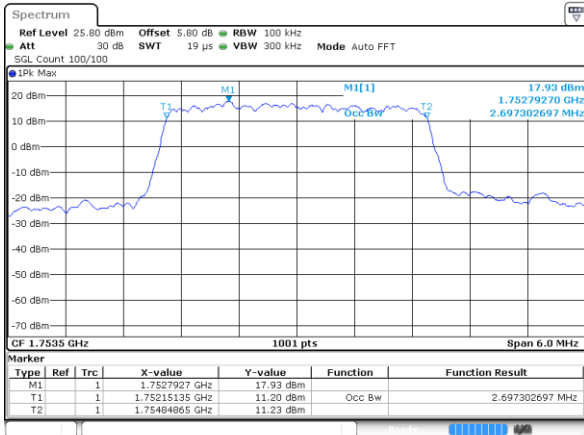
Middle Channel / 3MHz / QPSK



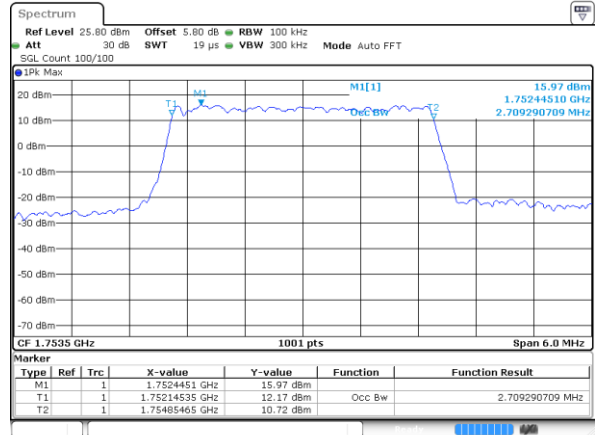
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



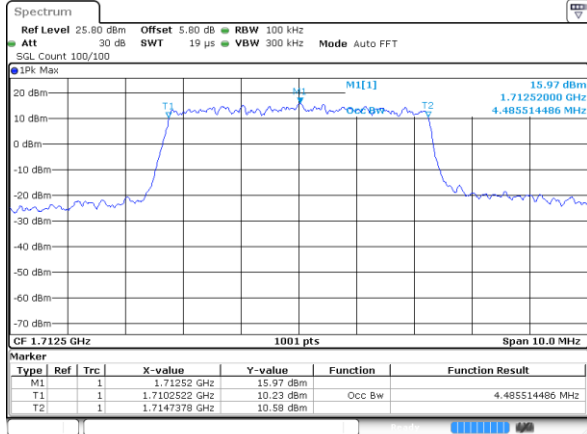
Highest Channel / 3MHz / 16QAM



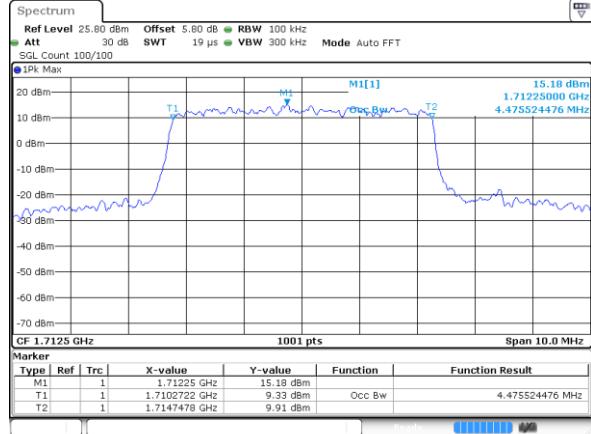


LTE Band 4

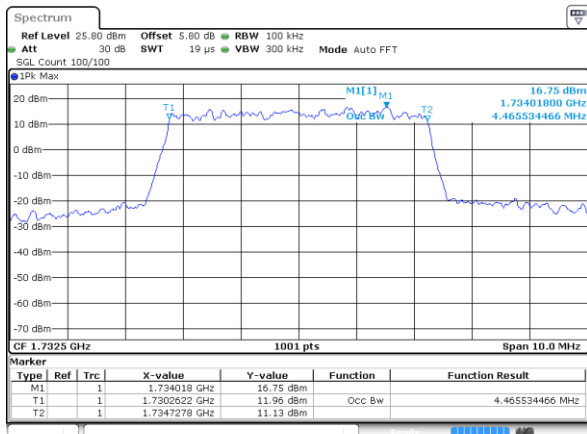
Lowest Channel / 5MHz / QPSK



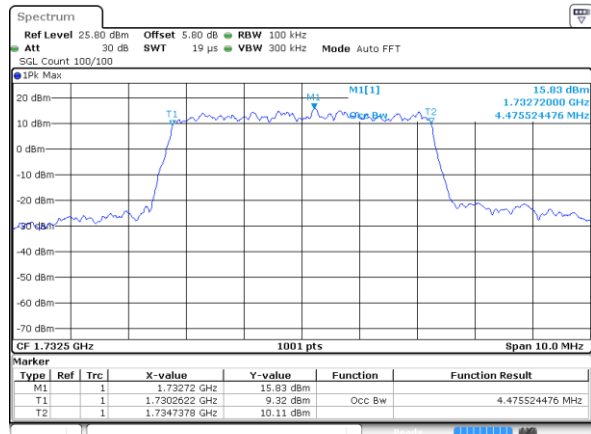
Lowest Channel / 5MHz / 16QAM



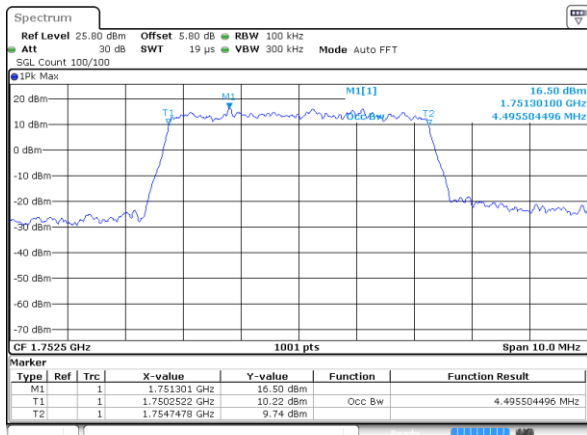
Middle Channel / 5MHz / QPSK



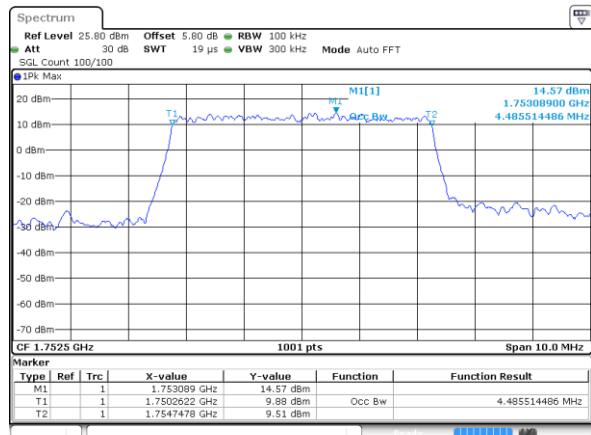
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



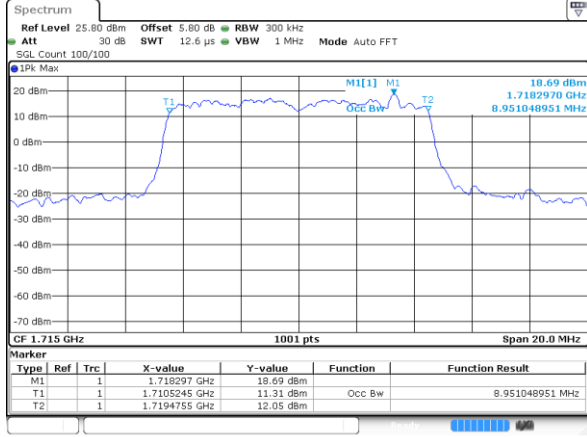
Highest Channel / 5MHz / 16QAM



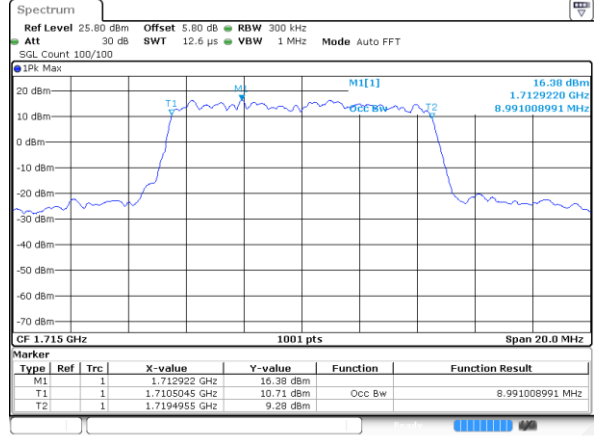


LTE Band 4

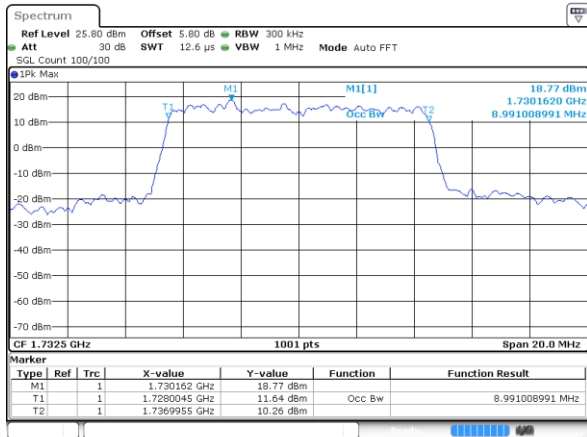
Lowest Channel / 10MHz / QPSK



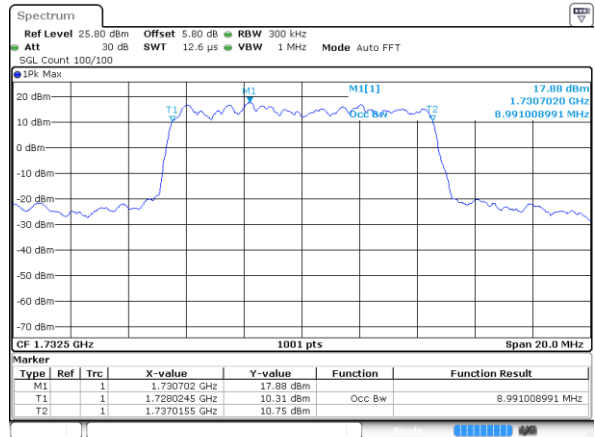
Lowest Channel / 10MHz / 16QAM



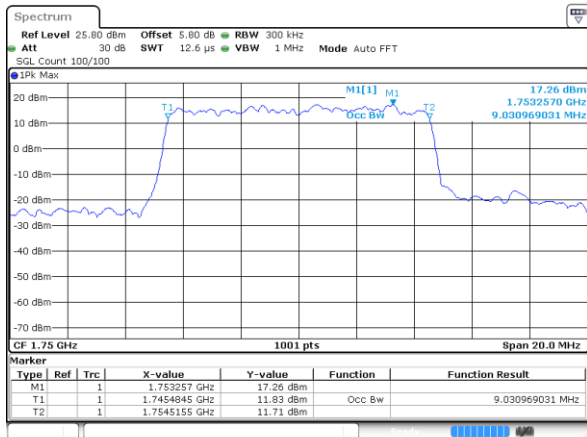
Middle Channel / 10MHz / QPSK



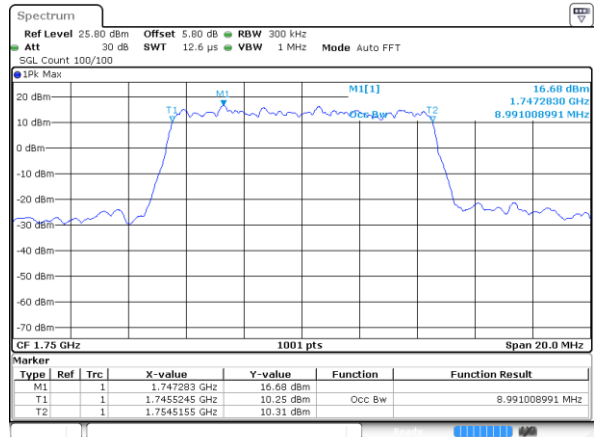
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



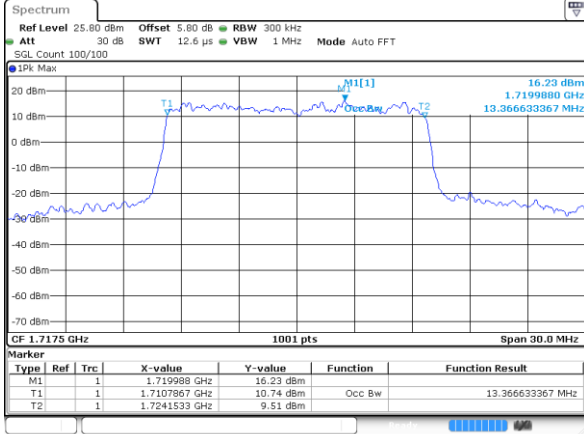
Highest Channel / 10MHz / 16QAM



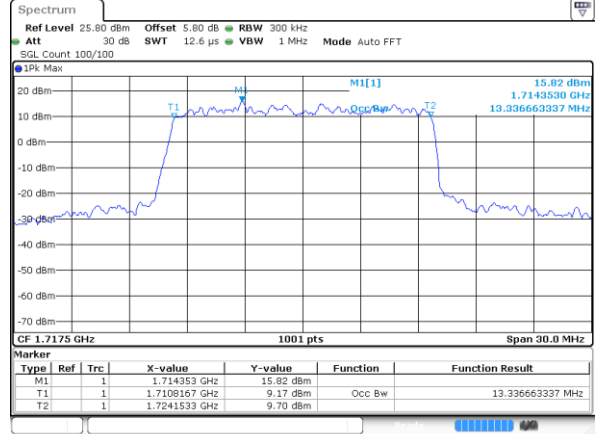


LTE Band 4

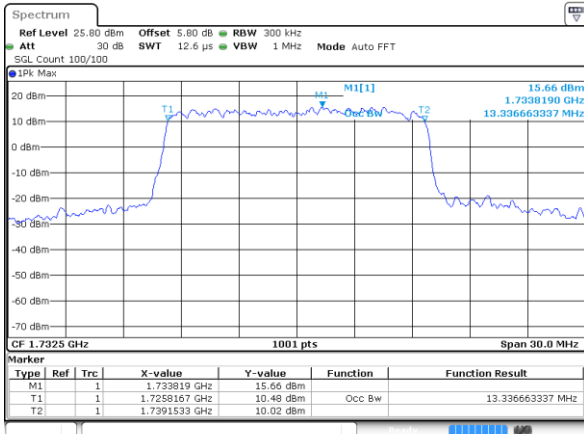
Lowest Channel / 15MHz / QPSK



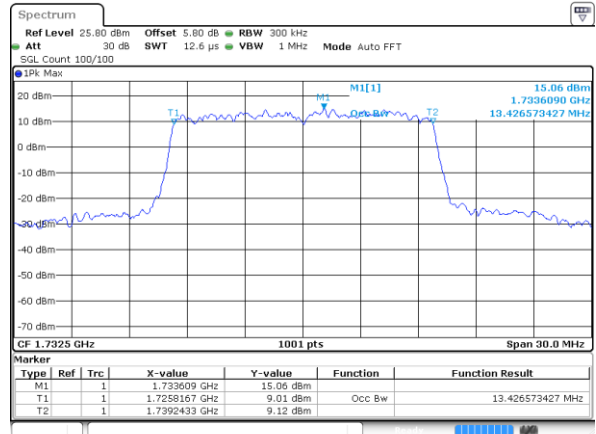
Lowest Channel / 15MHz / 16QAM



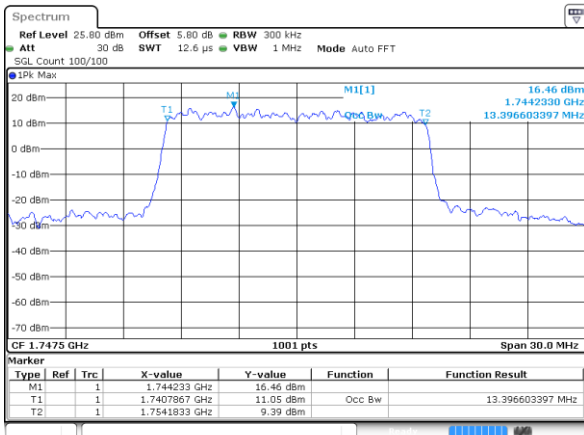
Middle Channel / 15MHz / QPSK



Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



Highest Channel / 15MHz / 16QAM

