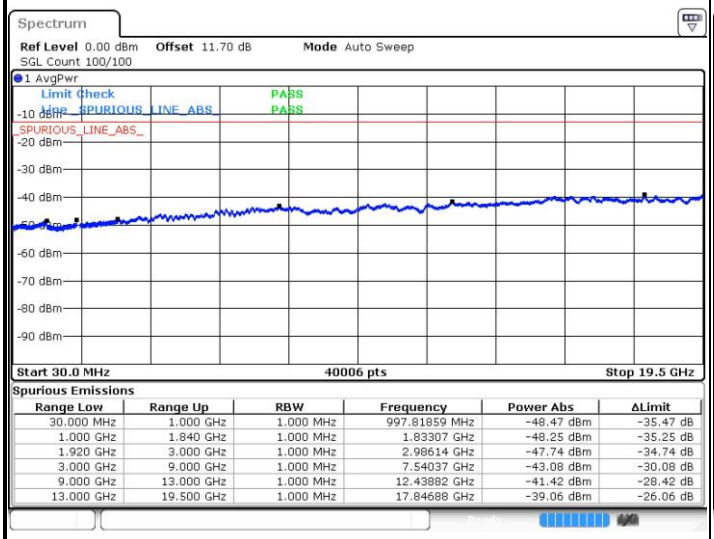
LTE Band 2 / 20MHz

Lowest Channel / 64QAM

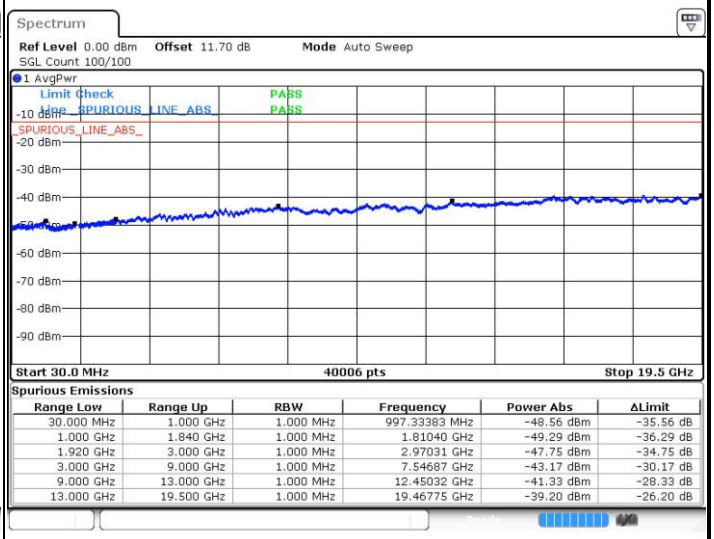


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	997.81859 MHz	-48.47 dBm	-35.47 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83307 GHz	-48.25 dBm	-35.25 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.98614 GHz	-47.74 dBm	-34.74 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54037 GHz	-43.08 dBm	-30.08 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.43882 GHz	-41.42 dBm	-28.42 dB
13.000 GHz	19.500 GHz	1.000 MHz	17.84688 GHz	-39.06 dBm	-26.06 dB

Date: 18.OCT.2018 17:07:04

Middle Channel / 64QAM

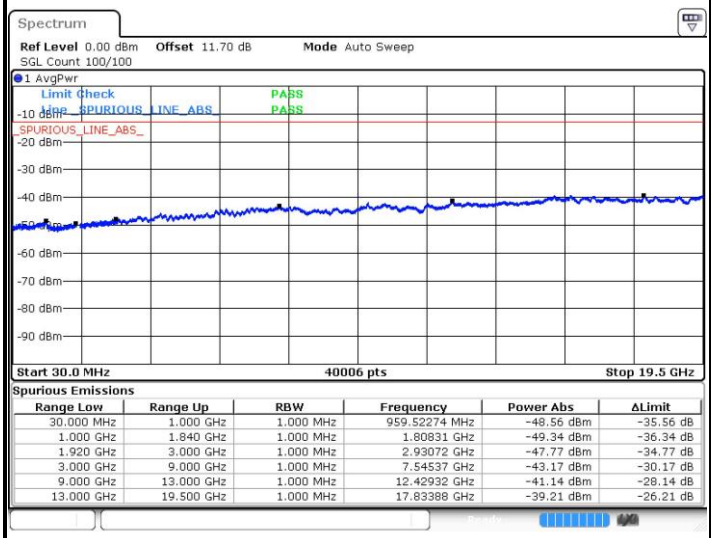


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	997.33383 MHz	-48.56 dBm	-35.56 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.81040 GHz	-49.29 dBm	-36.29 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.97031 GHz	-47.75 dBm	-34.75 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54687 GHz	-43.17 dBm	-30.17 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.45032 GHz	-41.33 dBm	-28.33 dB
13.000 GHz	19.500 GHz	1.000 MHz	19.46775 GHz	-39.20 dBm	-26.20 dB

Date: 18.OCT.2018 17:08:07

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	959.52274 MHz	-48.56 dBm	-35.56 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.80831 GHz	-49.34 dBm	-36.34 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.93072 GHz	-47.77 dBm	-34.77 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54537 GHz	-43.17 dBm	-30.17 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.42932 GHz	-41.14 dBm	-28.14 dB
13.000 GHz	19.500 GHz	1.000 MHz	17.83388 GHz	-39.21 dBm	-26.21 dB

Date: 18.OCT.2018 17:10:51

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	0.0005	PASS
40	Normal Voltage	0.0028	
30	Normal Voltage	0.0049	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0069	
0	Normal Voltage	0.0063	
-10	Normal Voltage	0.0041	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0067	
20	Maximum Voltage	0.0109	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0098	

Note:

1. Normal Voltage =3.9 V.；Battery End Point (BEP) =3.4 V.；Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

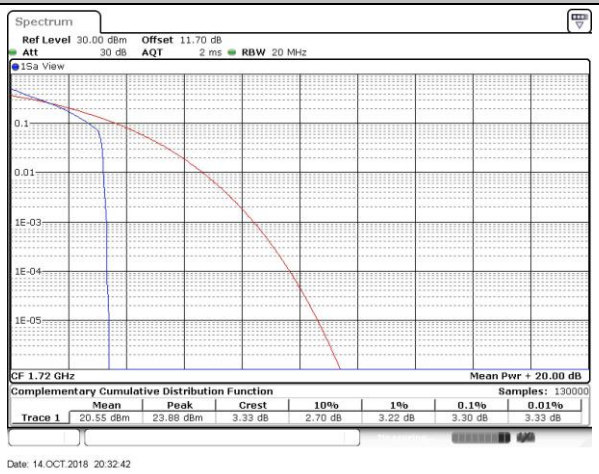
LTE Band 4

Peak-to-Average Ratio

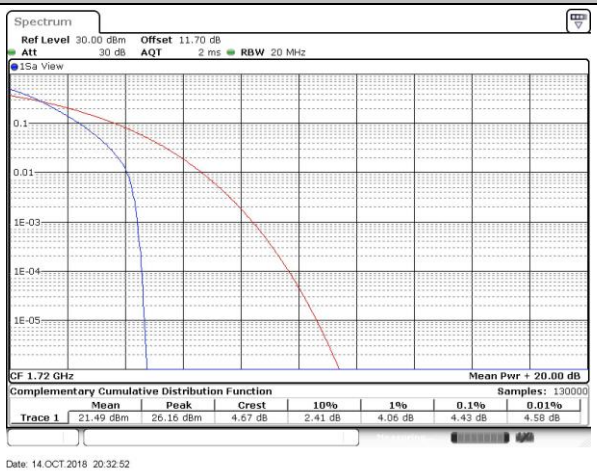
Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.3	4.43	3.97	5.51	PASS
Middle CH	3.39	4.41	4	5.48	
Highest CH	3.42	4.55	4.61	5.51	
Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	4.99	6.17	-	-	PASS
Middle CH	5.25	6.09	-	-	
Highest CH	5.3	6.17	-	-	

LTE Band 4 / 20MHz / QPSK

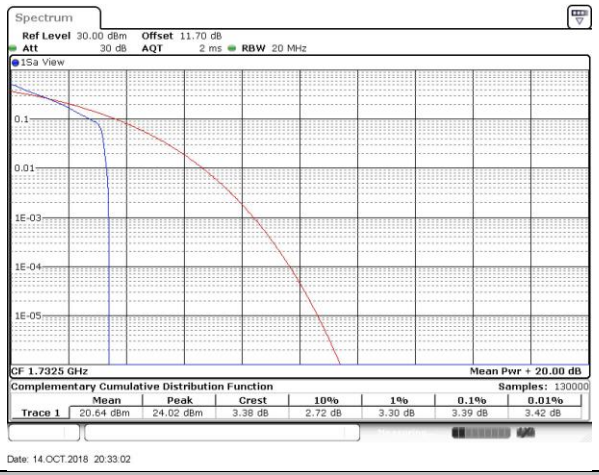
Lowest Channel / 1RB



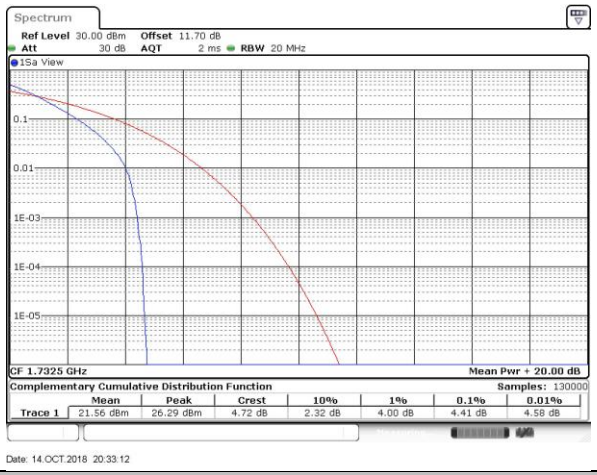
Lowest Channel / Full RB



Middle Channel / 1RB

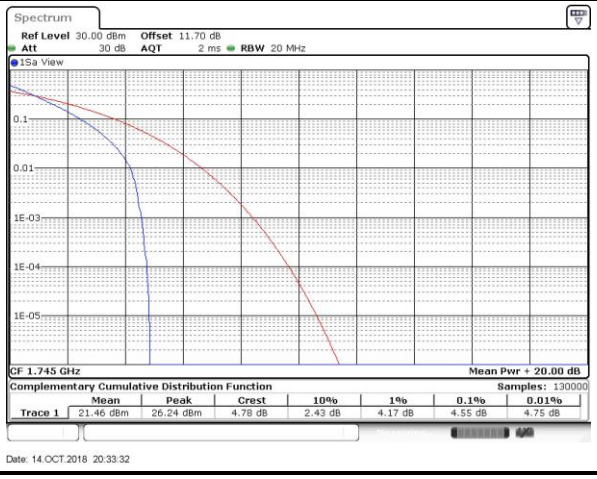


Middle Channel / Full RB



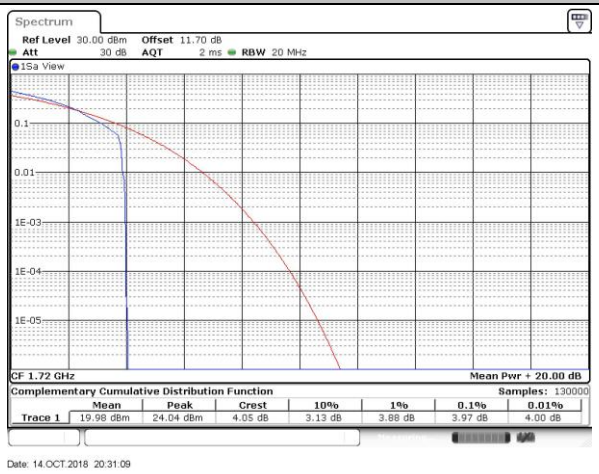
Highest Channel / 1RB

Highest Channel / Full RB

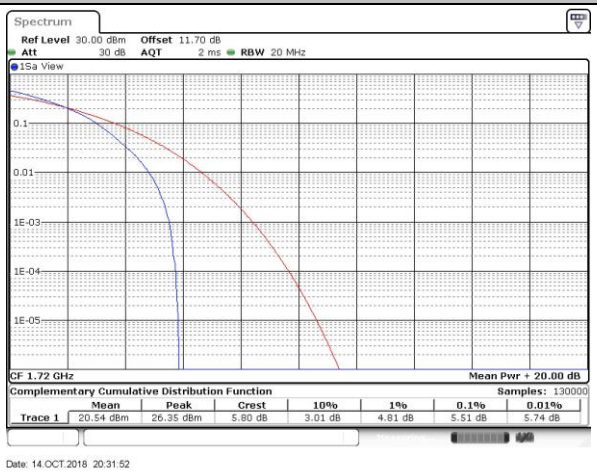


LTE Band 4 / 20MHz / 16QAM

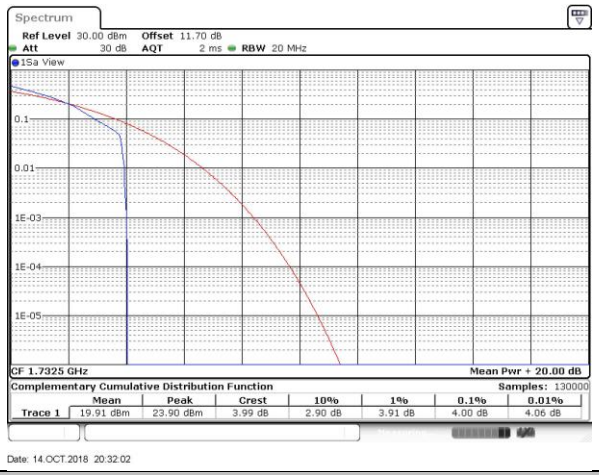
Lowest Channel / 1RB



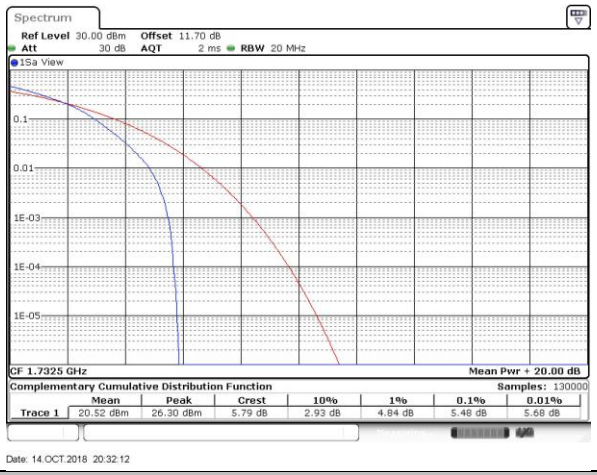
Lowest Channel / Full RB



Middle Channel / 1RB

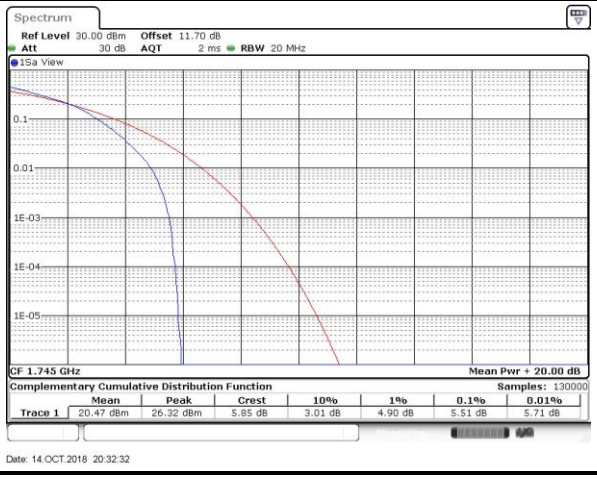


Middle Channel / Full RB



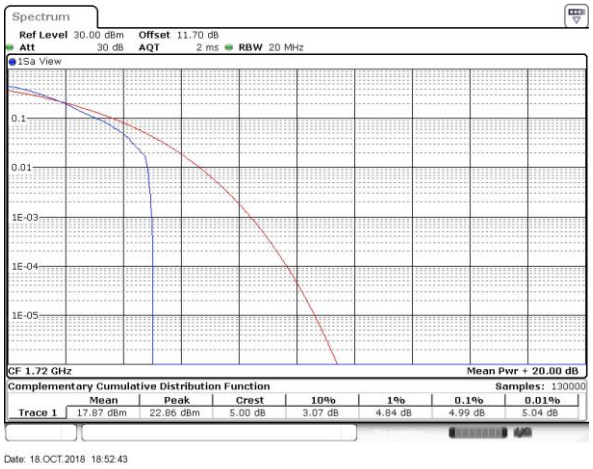
Highest Channel / 1RB

Highest Channel / Full RB

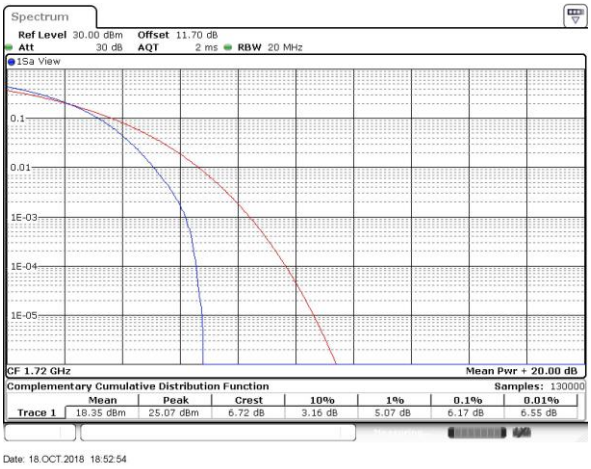


LTE Band 4 / 20MHz / 64QAM

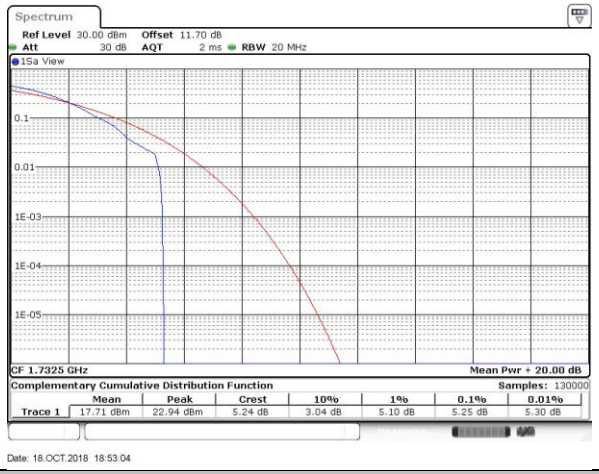
Lowest Channel / 1RB



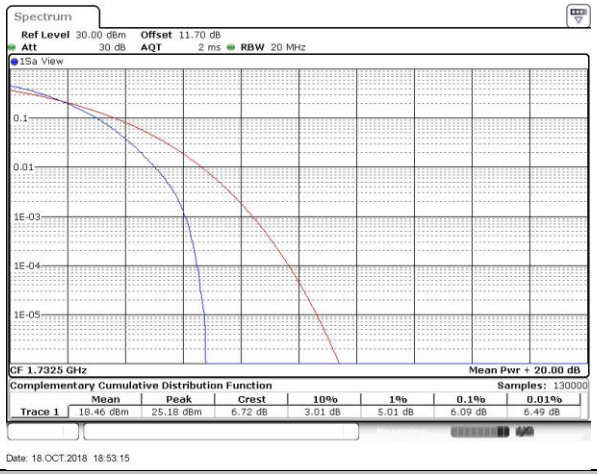
Lowest Channel / Full RB



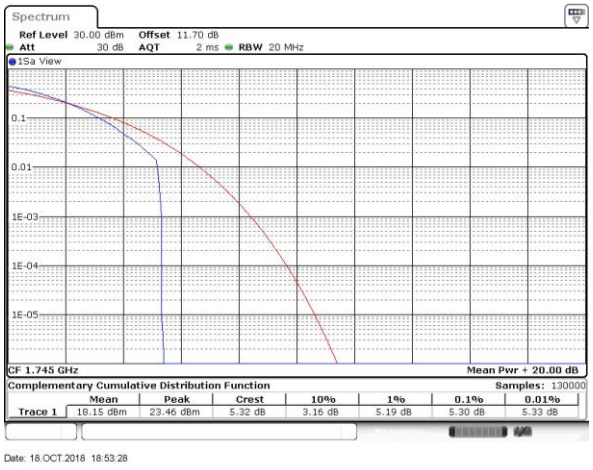
Middle Channel / 1RB



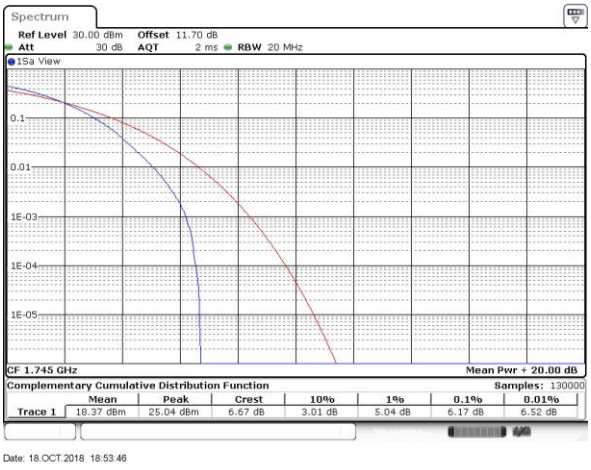
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

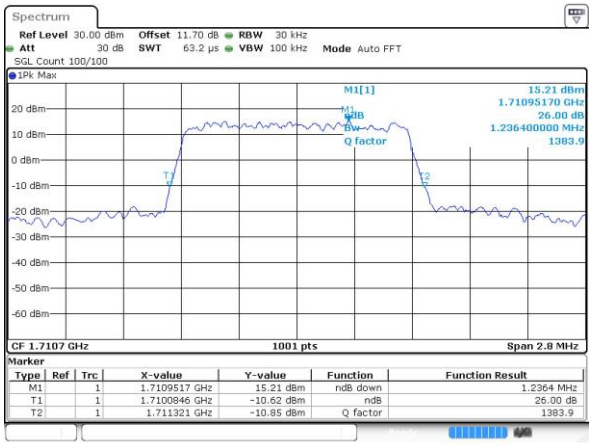


26dB Bandwidth

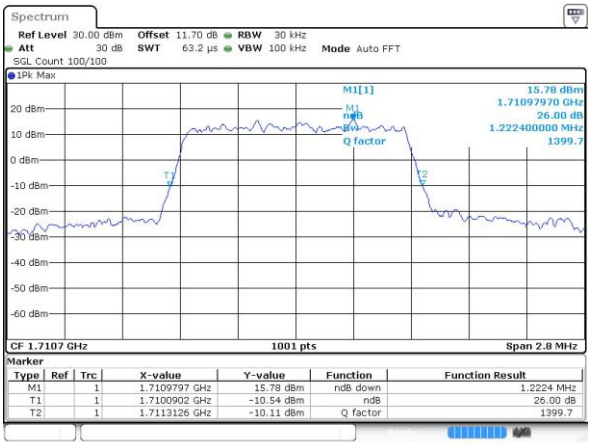
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.24	1.22	3.03	3.06	4.89	4.94	9.69	9.85	14.36	14.60	20.14	20.22
Middle CH	1.24	1.23	3.05	3.04	4.87	4.80	9.87	9.67	14.27	14.42	20.22	20.30
Highest CH	1.24	1.24	3.03	3.08	4.86	4.90	9.77	9.73	14.39	14.54	20.22	20.22
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.23	-	3.00	-	4.86	-	9.71	-	14.42	-	20.18	-
Middle CH	1.24	-	3.05	-	4.90	-	9.75	-	14.30	-	20.14	-
Highest CH	1.24	-	3.03	-	4.93	-	9.97	-	14.18	-	20.10	-

LTE Band 4

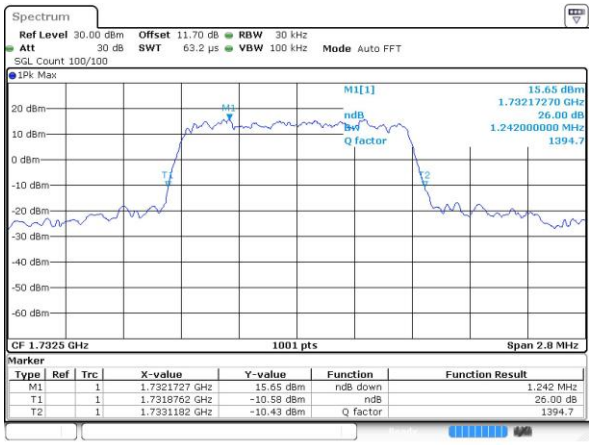
Lowest Channel / 1.4MHz / QPSK



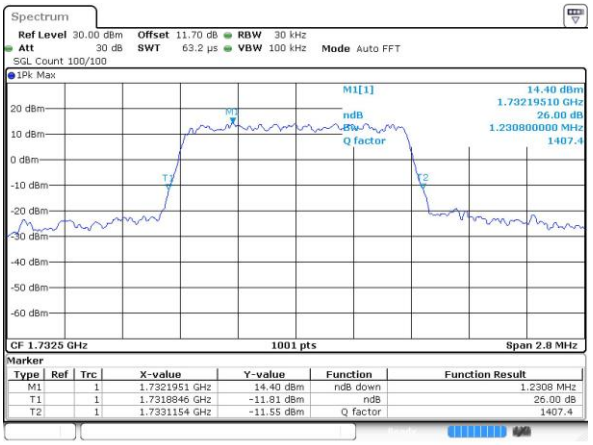
Lowest Channel / 1.4MHz / 16QAM



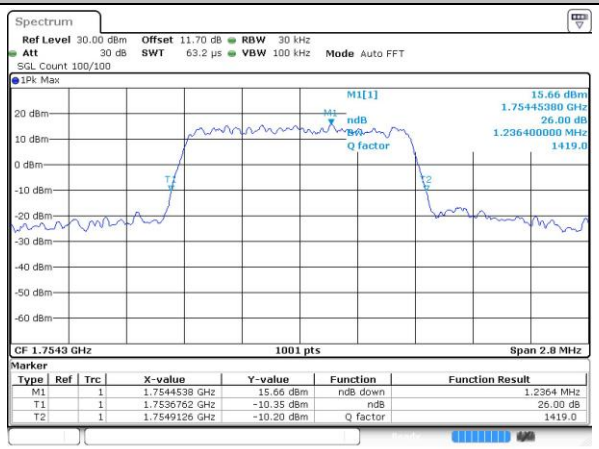
Middle Channel / 1.4MHz / QPSK



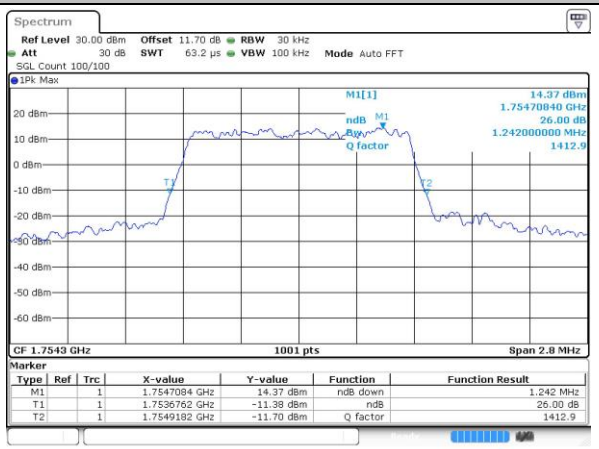
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

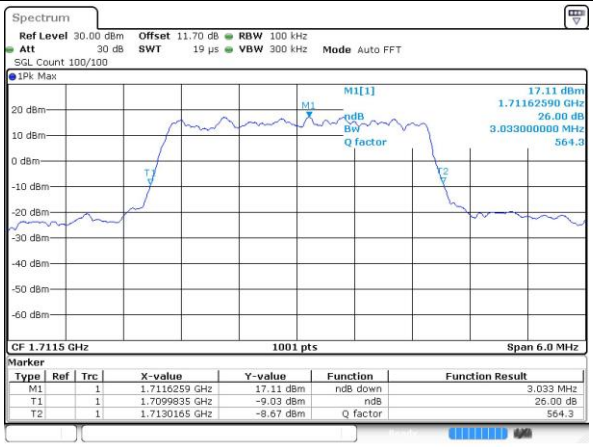


Highest Channel / 1.4MHz / 16QAM

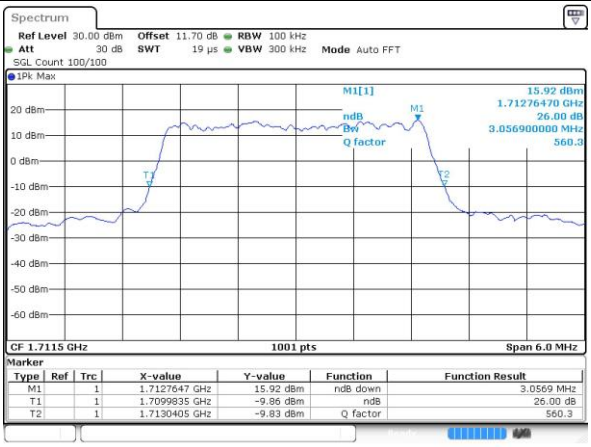


LTE Band 4

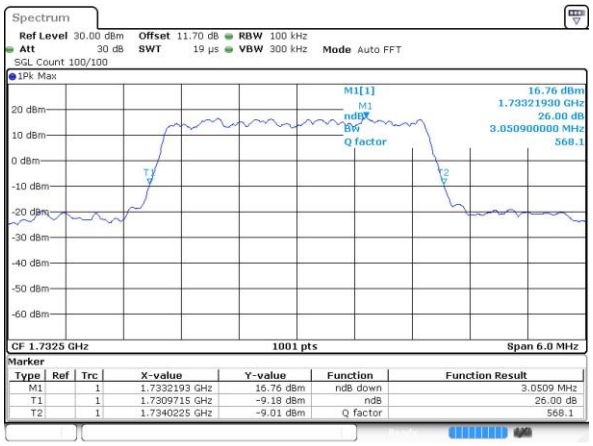
Lowest Channel / 3MHz / QPSK



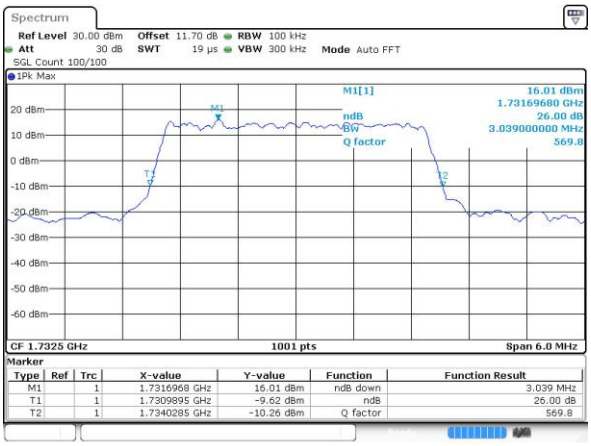
Lowest Channel / 3MHz / 16QAM



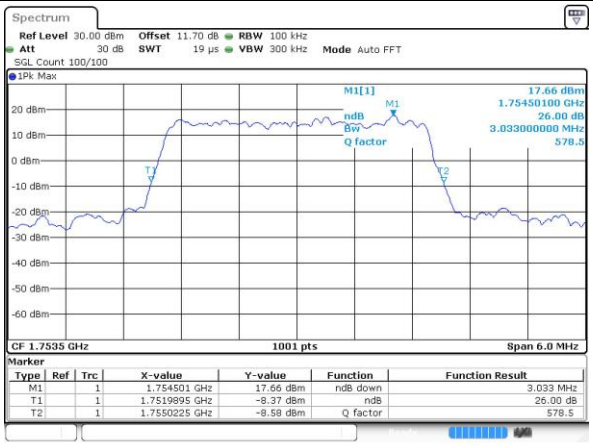
Middle Channel / 3MHz / QPSK



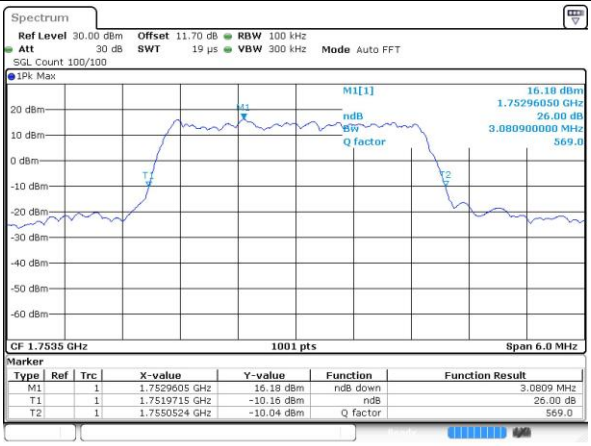
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

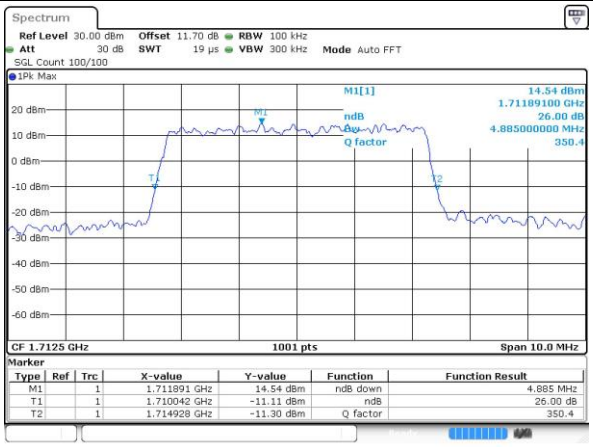


Highest Channel / 3MHz / 16QAM

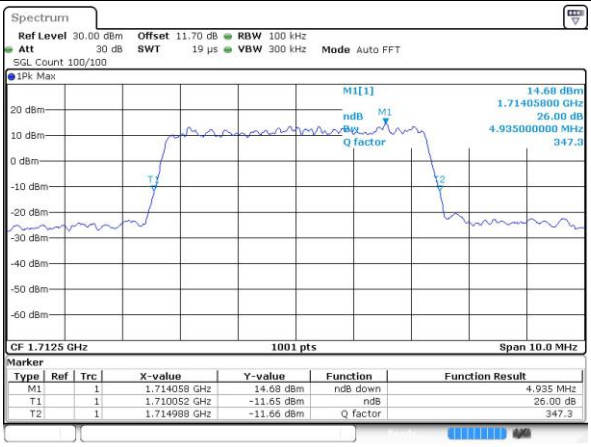


LTE Band 4

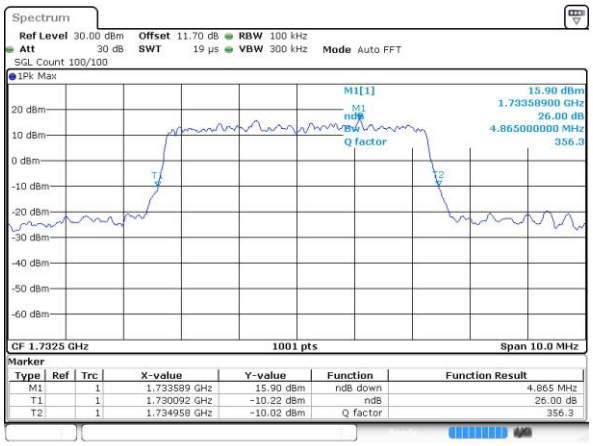
Lowest Channel / 5MHz / QPSK



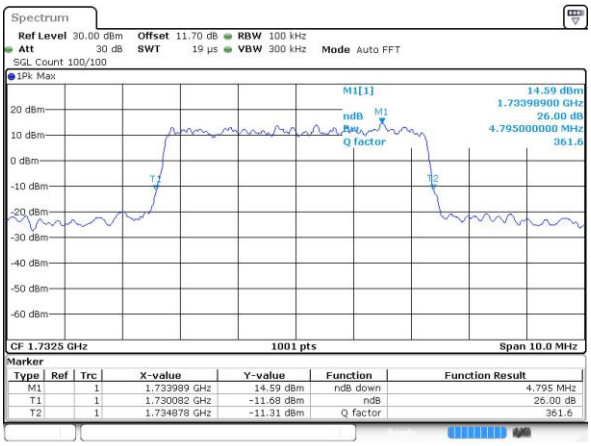
Lowest Channel / 5MHz / 16QAM



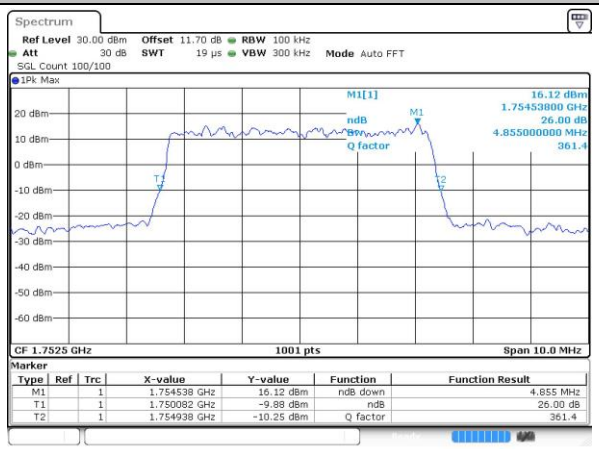
Middle Channel / 5MHz / QPSK



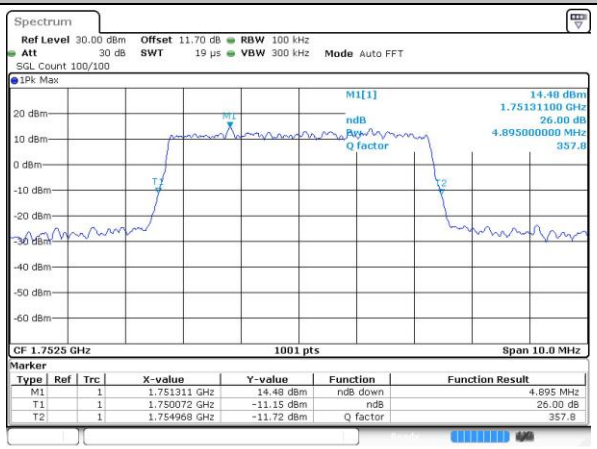
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

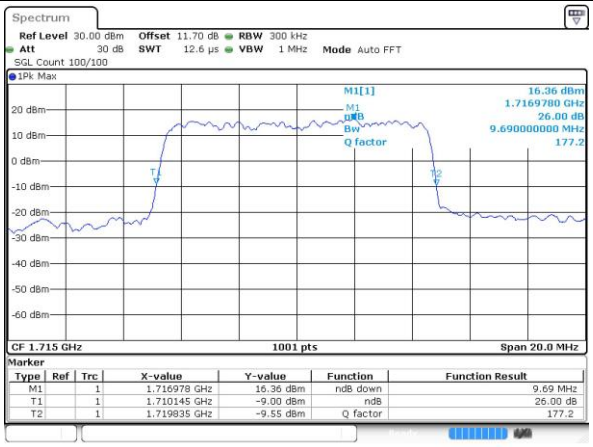


Highest Channel / 5MHz / 16QAM

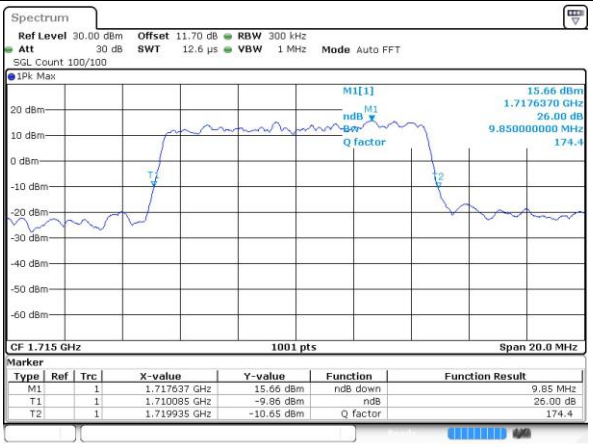


LTE Band 4

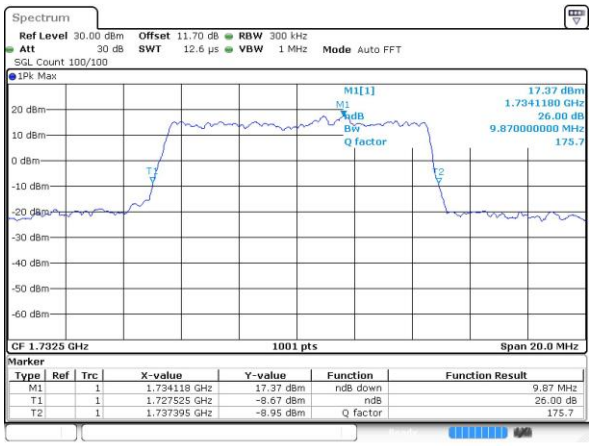
Lowest Channel / 10MHz / QPSK



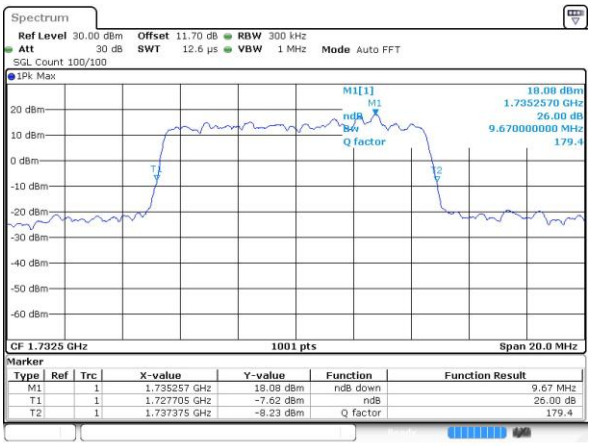
Lowest Channel / 10MHz / 16QAM



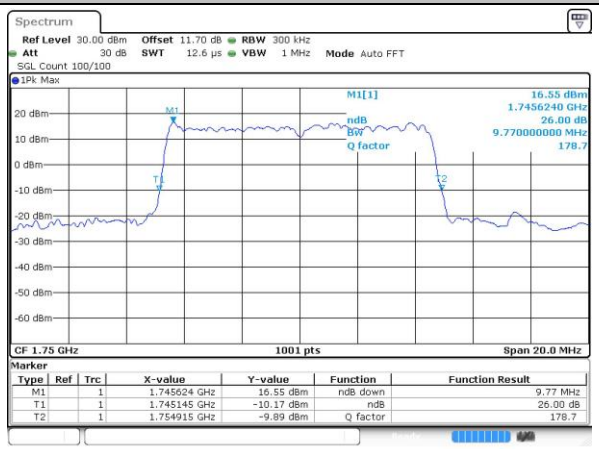
Middle Channel / 10MHz / QPSK



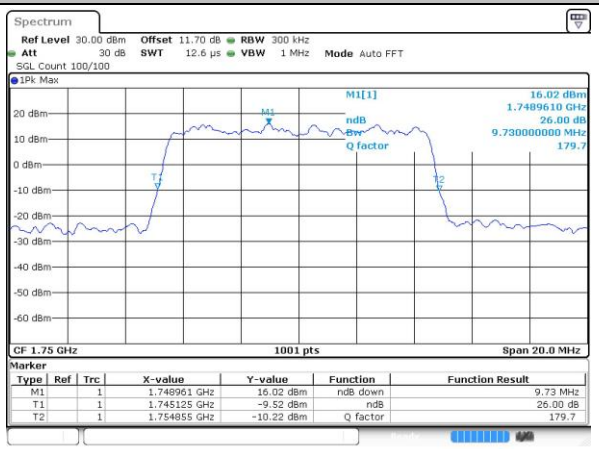
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

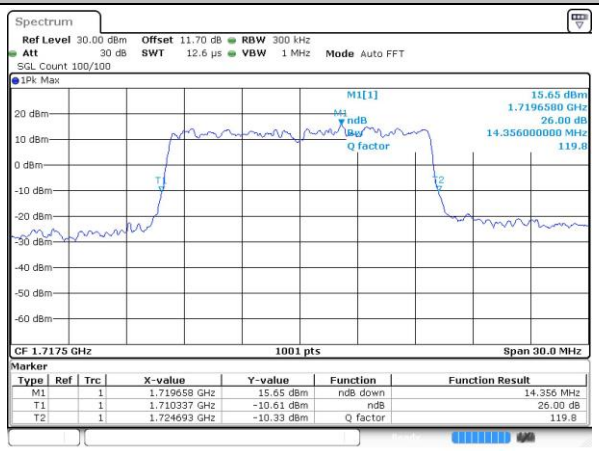


Highest Channel / 10MHz / 16QAM

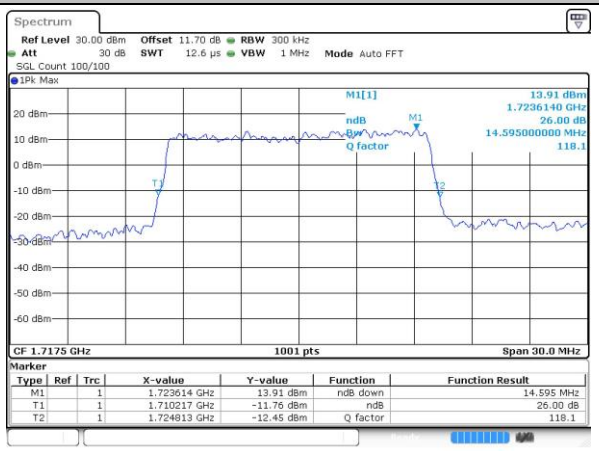


LTE Band 4

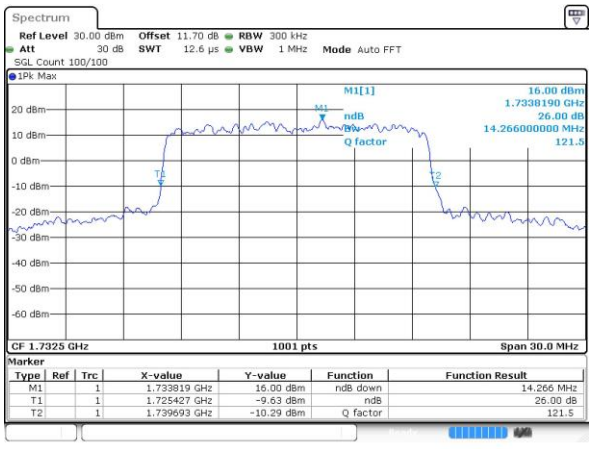
Lowest Channel / 15MHz / QPSK



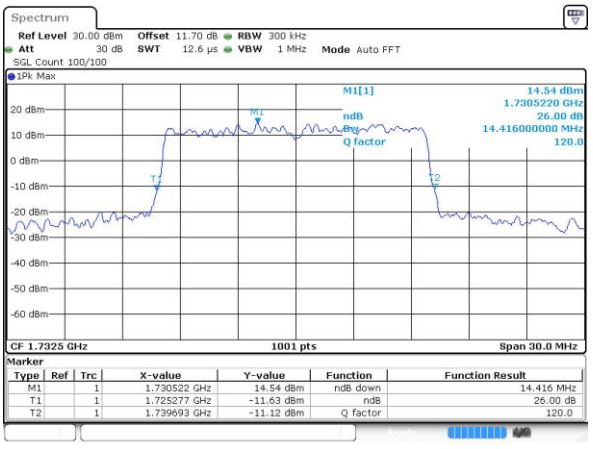
Lowest Channel / 15MHz / 16QAM



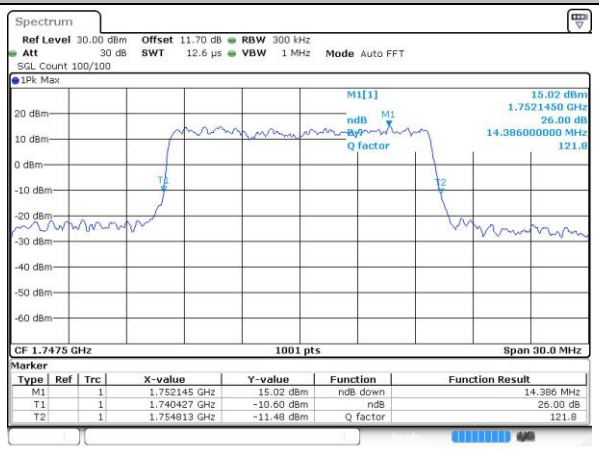
Middle Channel / 15MHz / QPSK



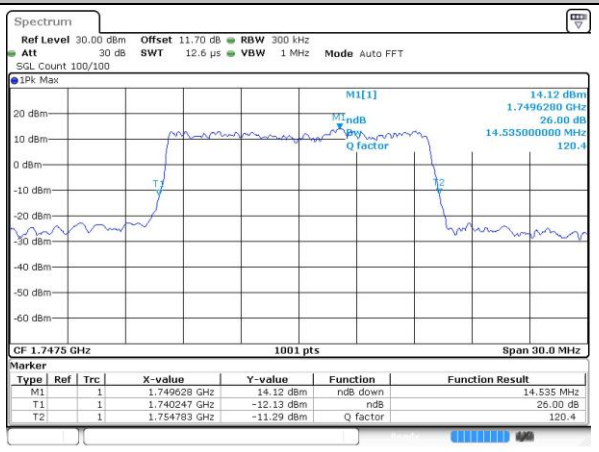
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

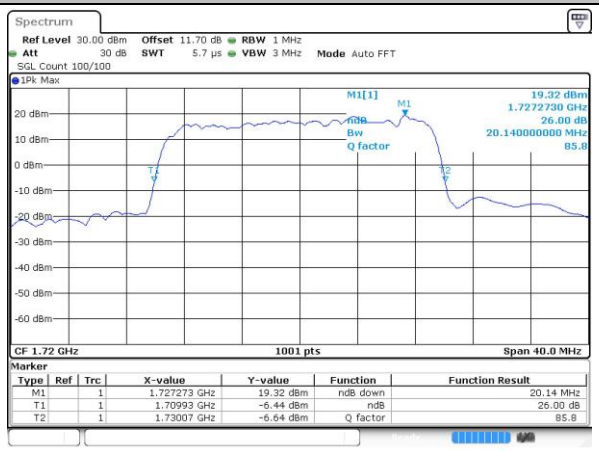


Highest Channel / 15MHz / 16QAM

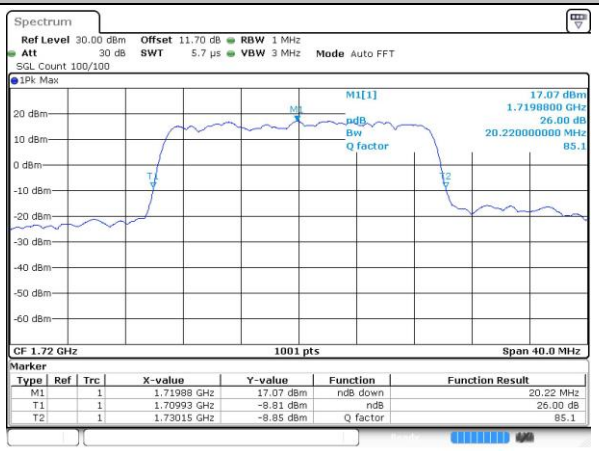


LTE Band 4

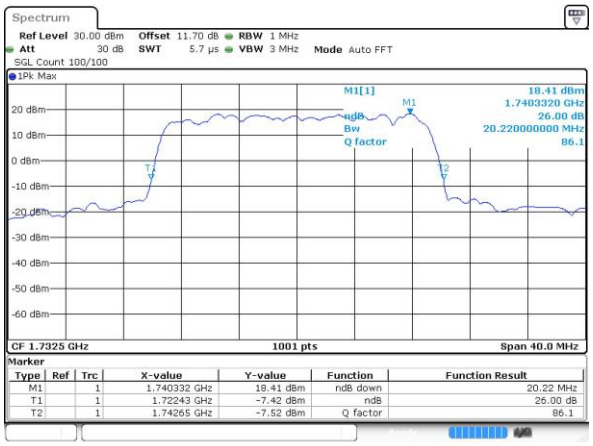
Lowest Channel / 20MHz / QPSK



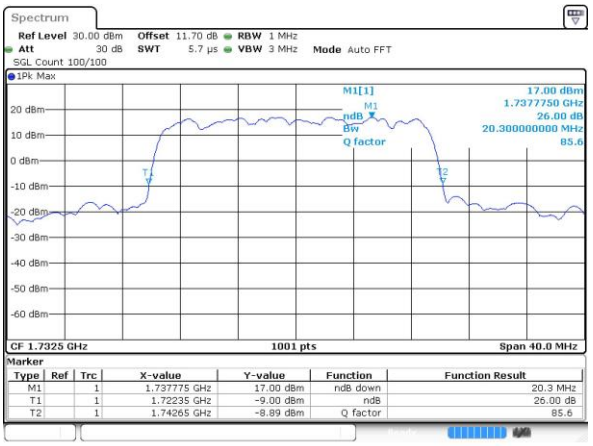
Lowest Channel / 20MHz / 16QAM



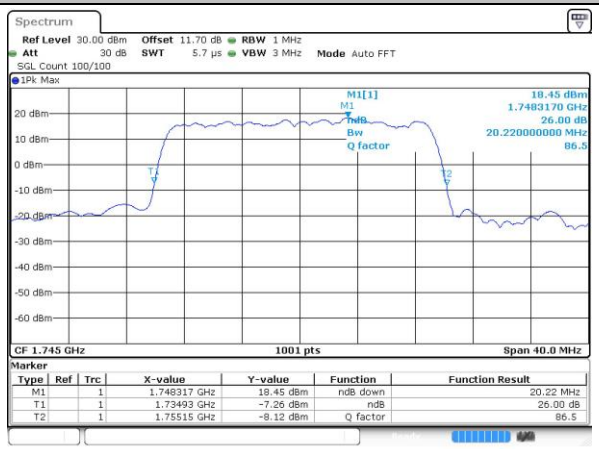
Middle Channel / 20MHz / QPSK



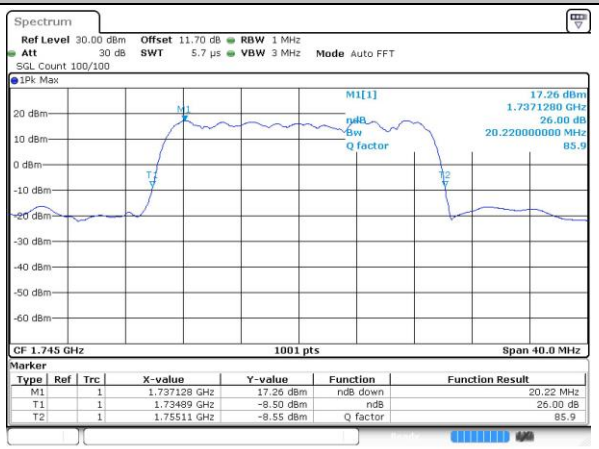
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK

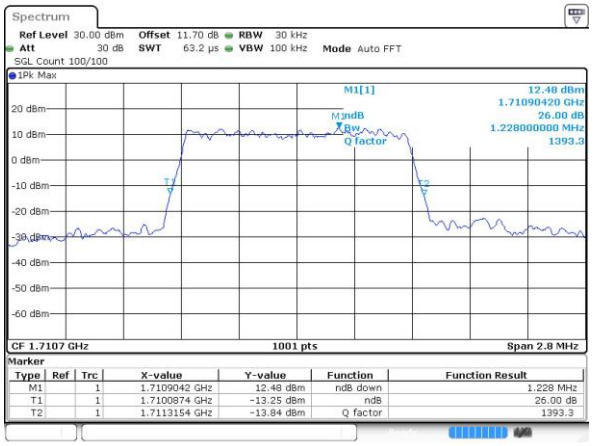


Highest Channel / 20MHz / 16QAM

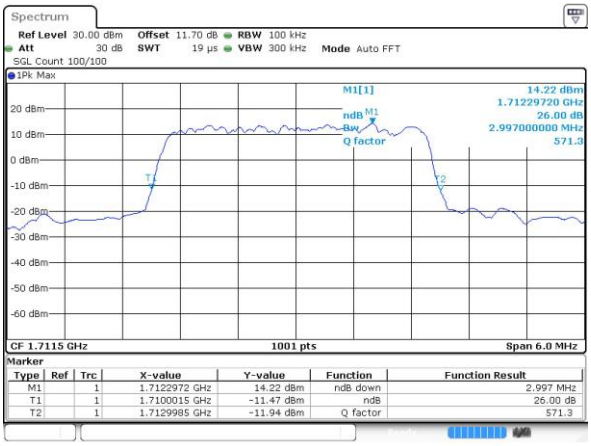


LTE Band 4

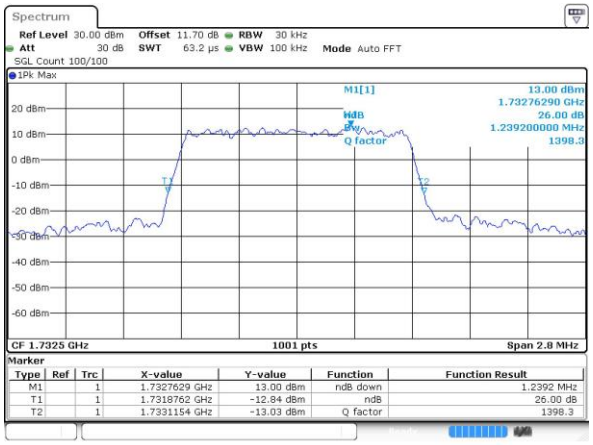
Lowest Channel / 1.4MHz / 64QAM



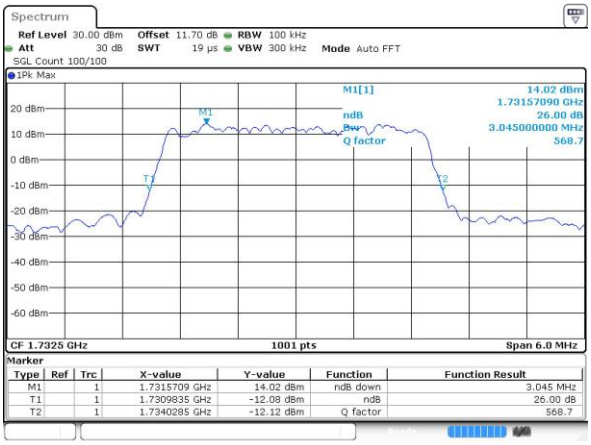
Lowest Channel / 3MHz / 64QAM



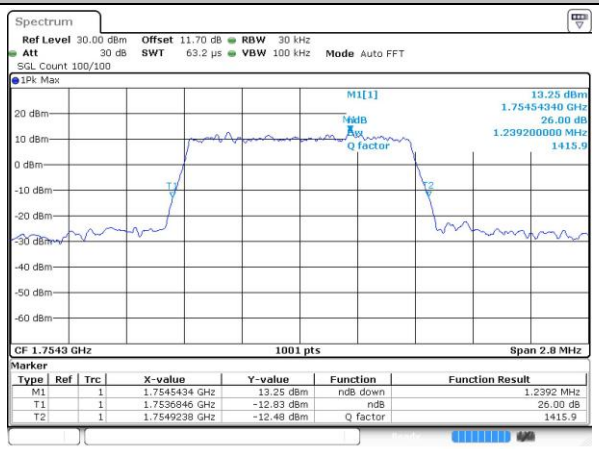
Middle Channel / 1.4MHz / 64QAM



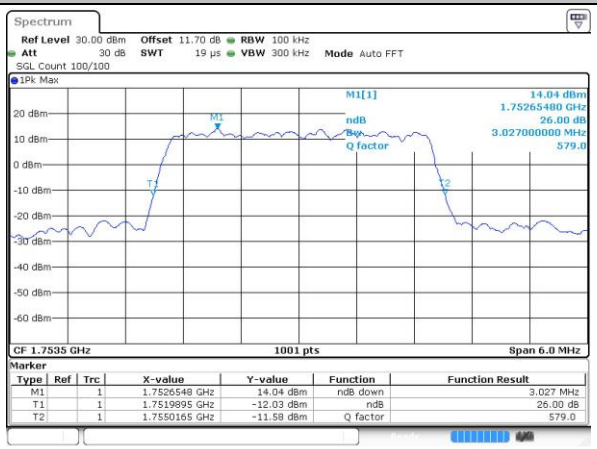
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM

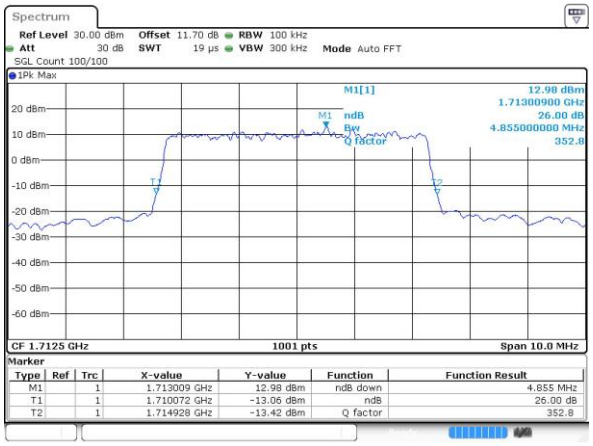


Highest Channel / 3MHz / 64QAM

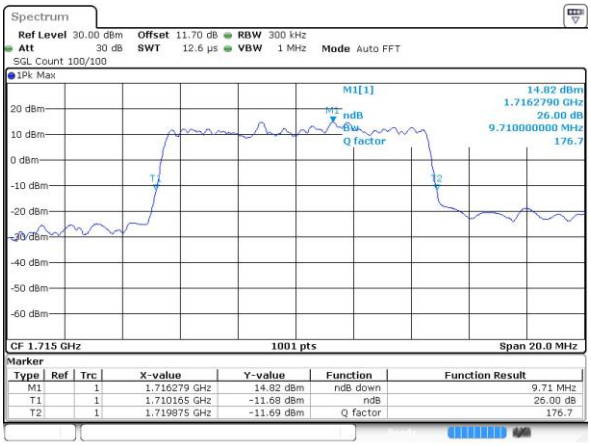


LTE Band 4

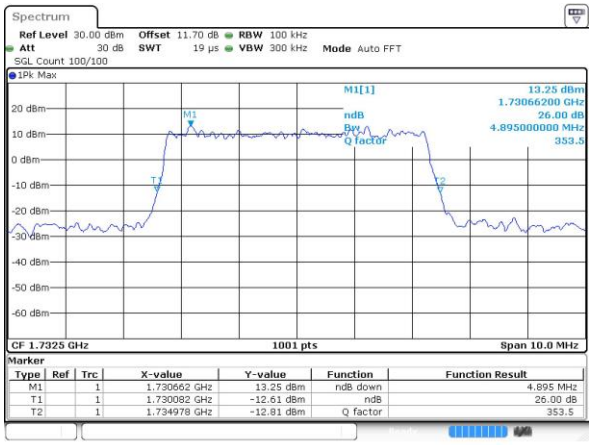
Lowest Channel / 5MHz / 64QAM



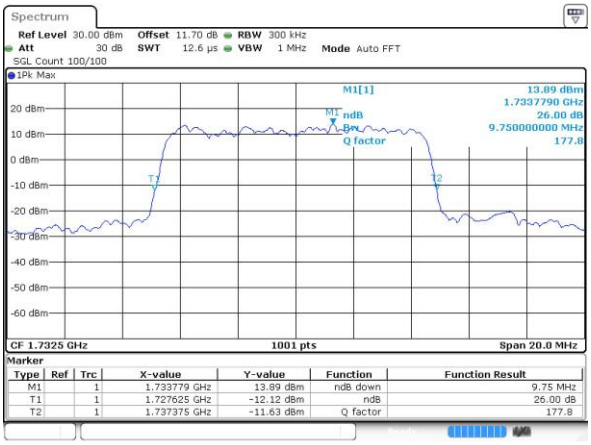
Lowest Channel / 10MHz / 64QAM



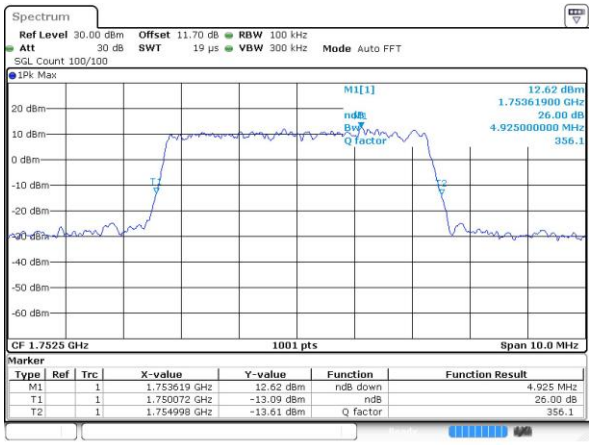
Middle Channel / 5MHz / 64QAM



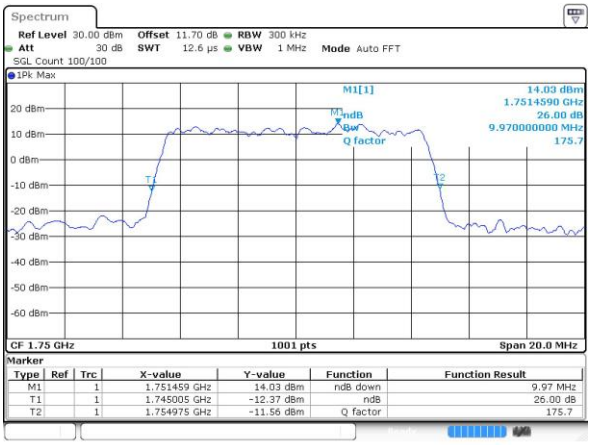
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

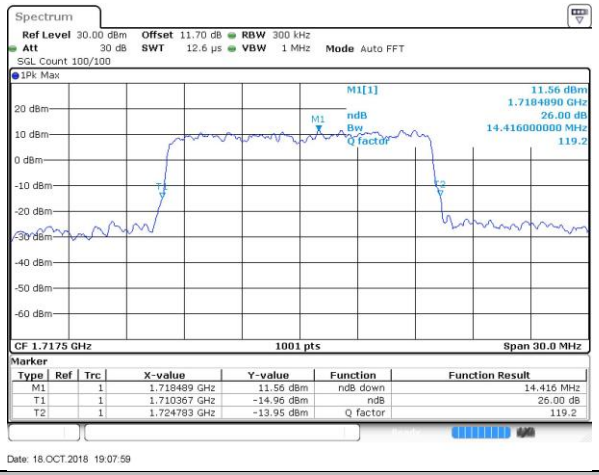


Highest Channel / 10MHz / 64QAM

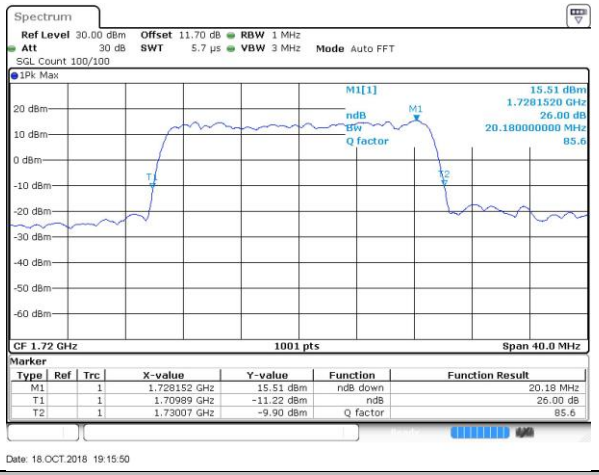


LTE Band 4

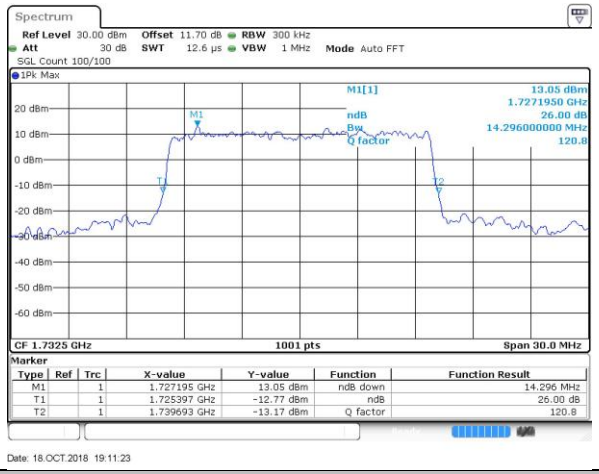
Lowest Channel / 15MHz / 64QAM



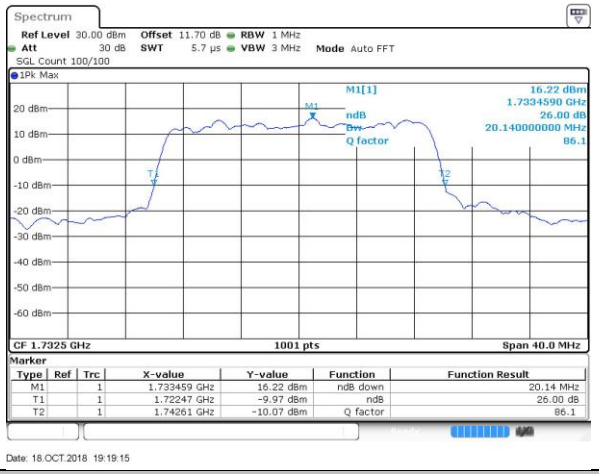
Lowest Channel / 20MHz / 64QAM



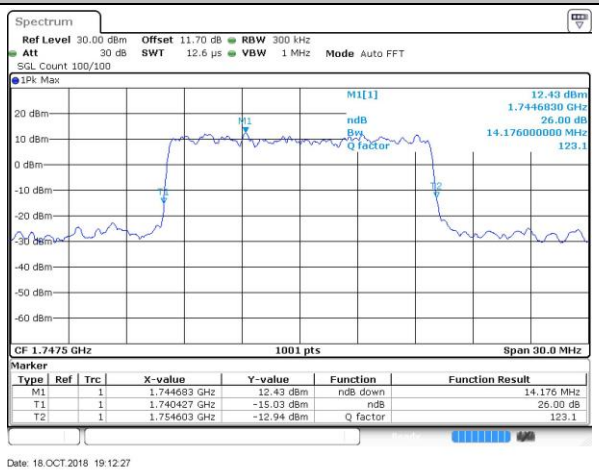
Middle Channel / 15MHz / 64QAM



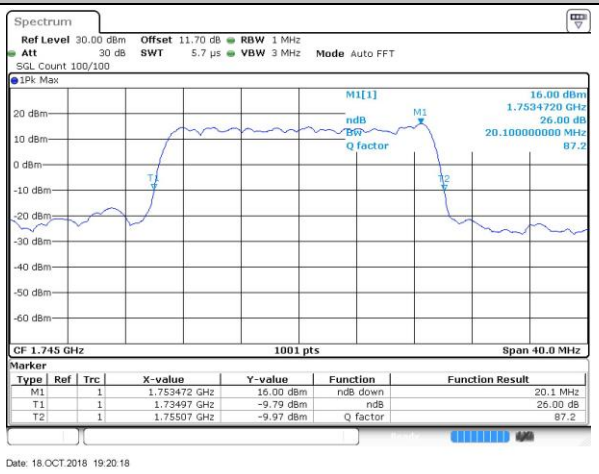
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM

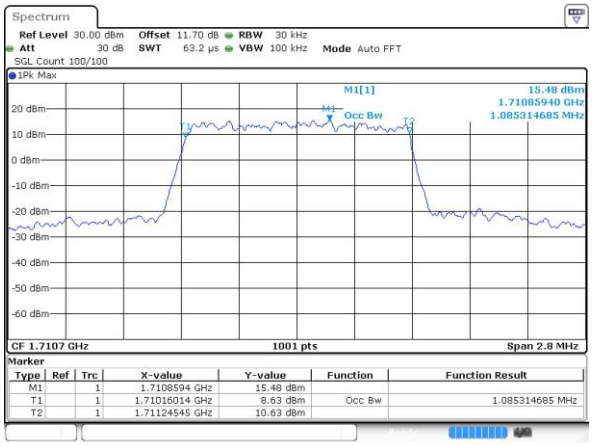


Occupied Bandwidth

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	1.09	1.09	2.74	2.73	4.5	4.48	9.03	9.05	13.43	13.43	18.34	18.46
Middle CH	1.09	1.09	2.73	2.73	4.48	4.5	9.05	9.07	13.43	13.52	18.3	18.54
Highest CH	1.1	1.09	2.72	2.7	4.5	4.48	9.07	8.99	13.49	13.43	18.46	18.54
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	-	4.52	-	9.05	-	13.37	-	18.42	-
Middle CH	1.09	-	2.72	-	4.53	-	9.03	-	13.46	-	18.30	-
Highest CH	1.09	-	2.71	-	4.52	-	9.01	-	13.49	-	18.34	-

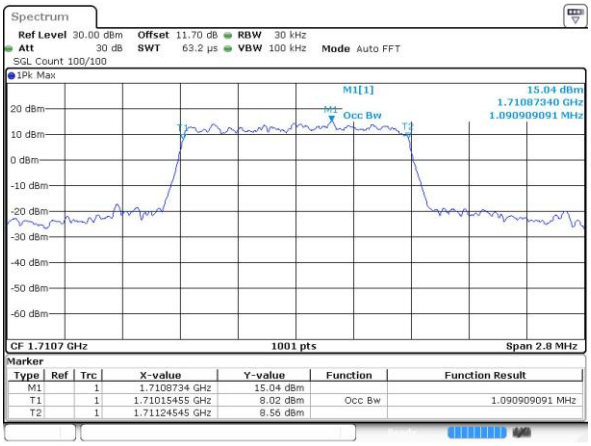
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



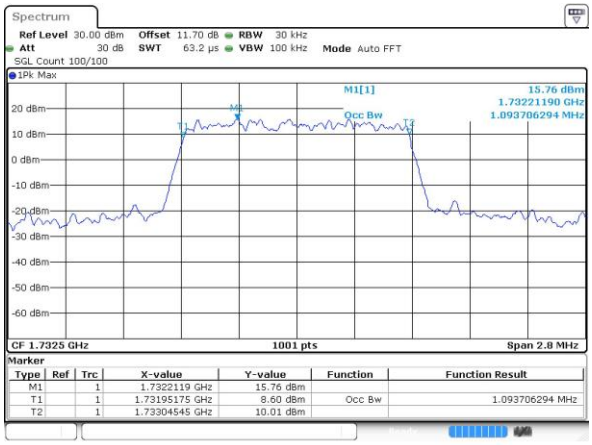
Date: 16.OCT.2018 00:53:23

Lowest Channel / 1.4MHz / 16QAM



Date: 16.OCT.2018 01:12:47

Middle Channel / 1.4MHz / QPSK



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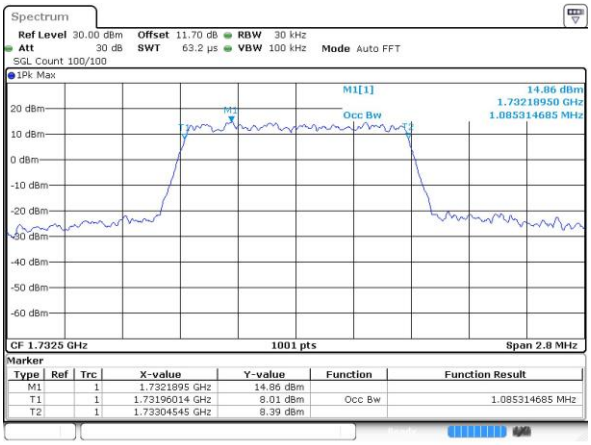
Middle Channel / 1.4MHz / 16QAM



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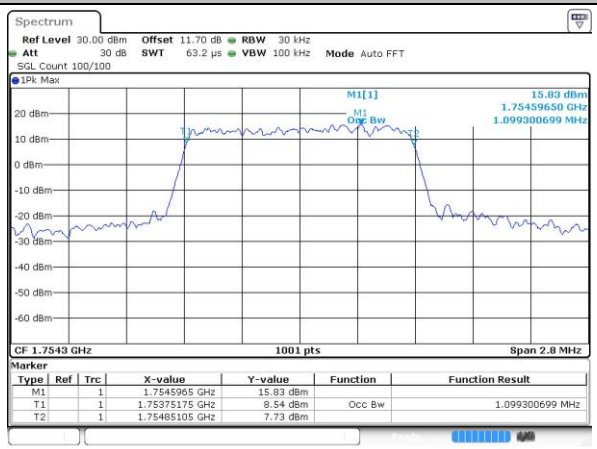
Highest Channel / 1.4MHz / QPSK



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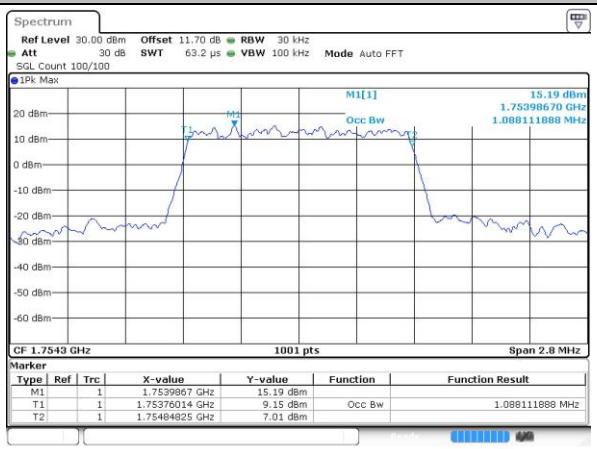
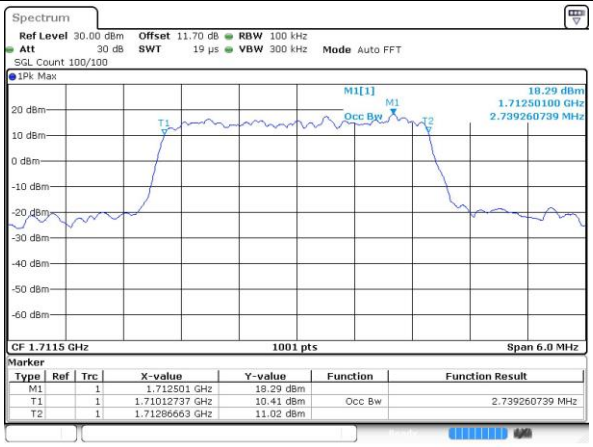
Highest Channel / 1.4MHz / 16QAM



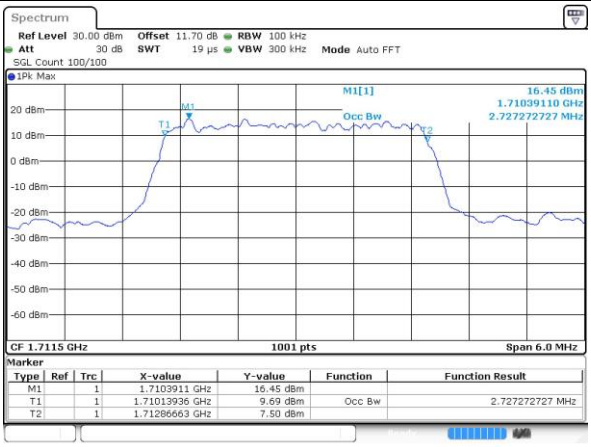
Date: 16.OCT.2018 01:13:23

LTE Band 4

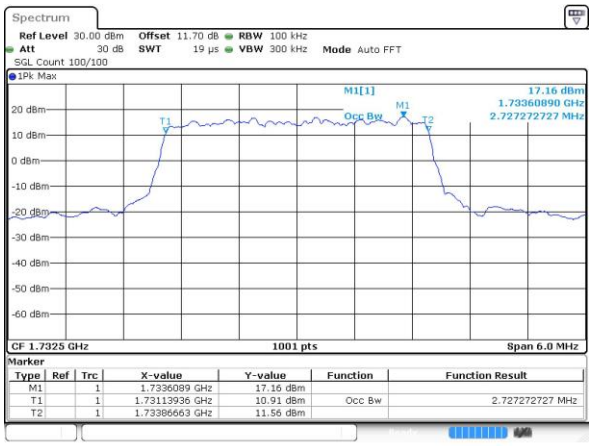
Lowest Channel / 3MHz / QPSK



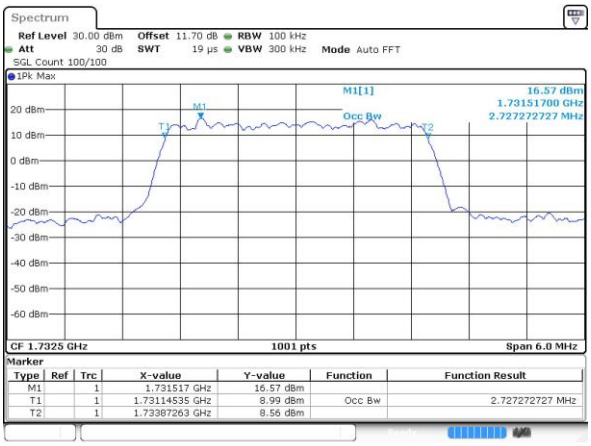
Lowest Channel / 3MHz / 16QAM



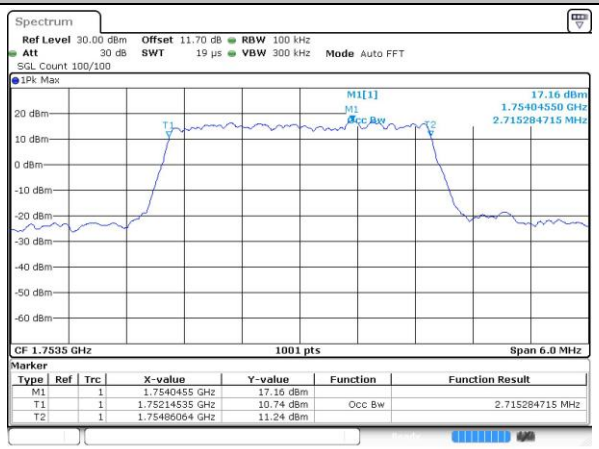
Middle Channel / 3MHz / QPSK



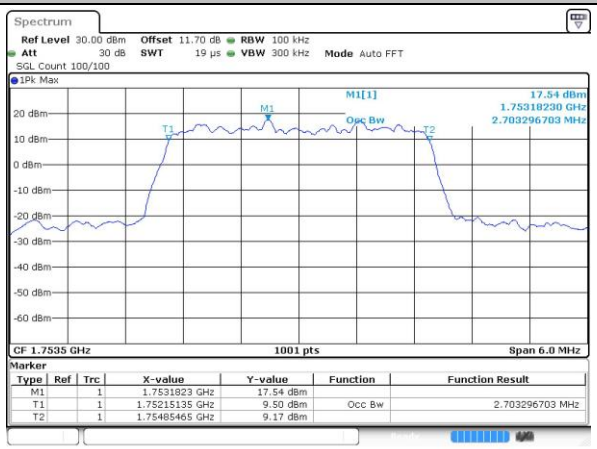
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

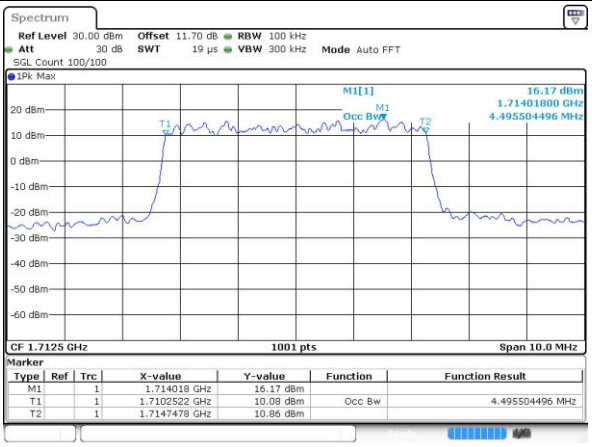


Highest Channel / 3MHz / 16QAM

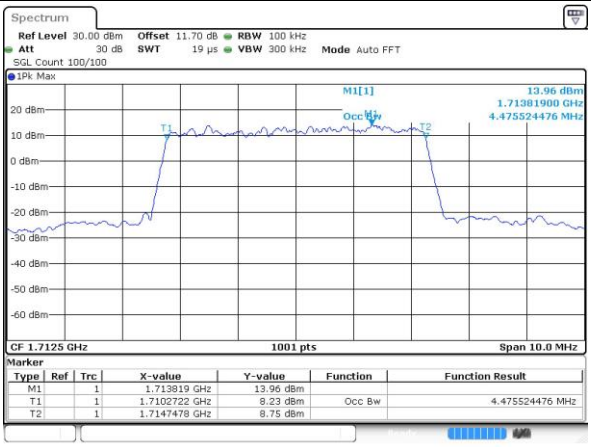


LTE Band 4

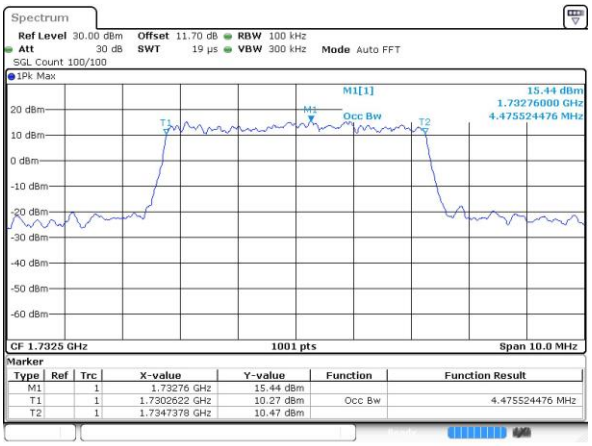
Lowest Channel / 5MHz / QPSK



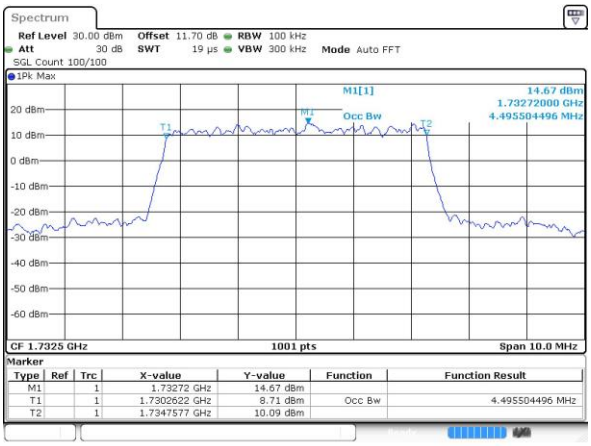
Lowest Channel / 5MHz / 16QAM



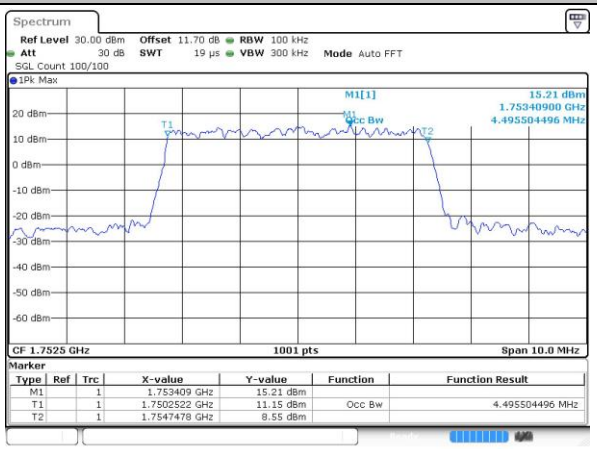
Middle Channel / 5MHz / QPSK



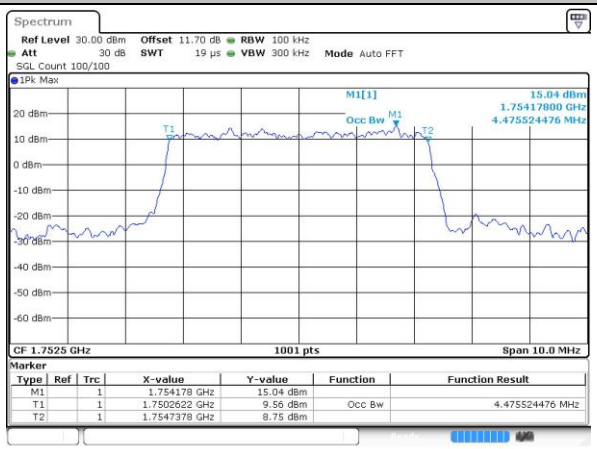
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

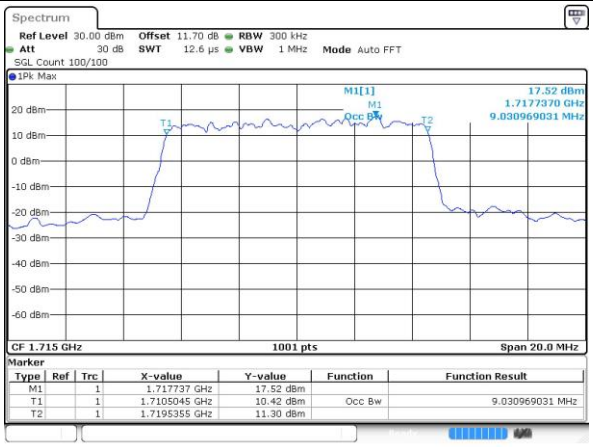


Highest Channel / 5MHz / 16QAM

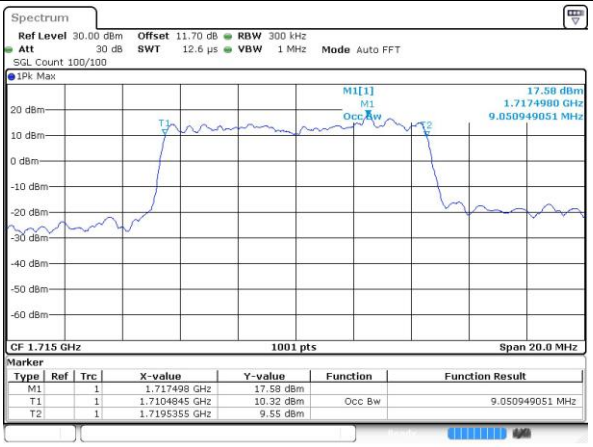


LTE Band 4

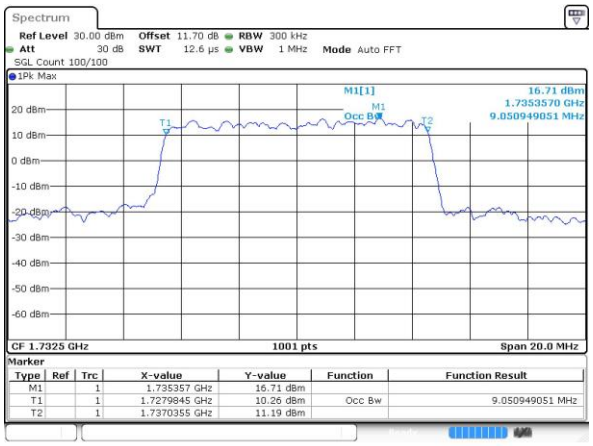
Lowest Channel / 10MHz / QPSK



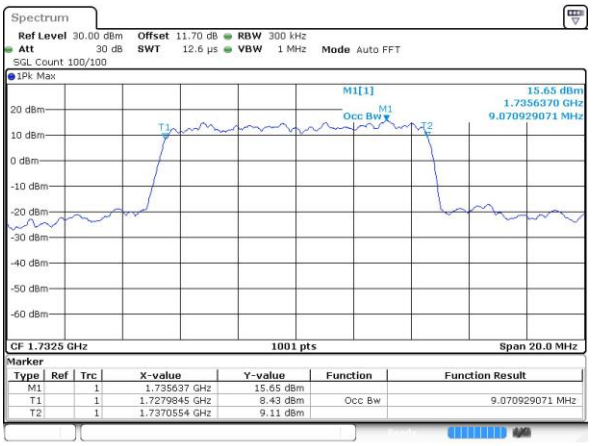
Lowest Channel / 10MHz / 16QAM



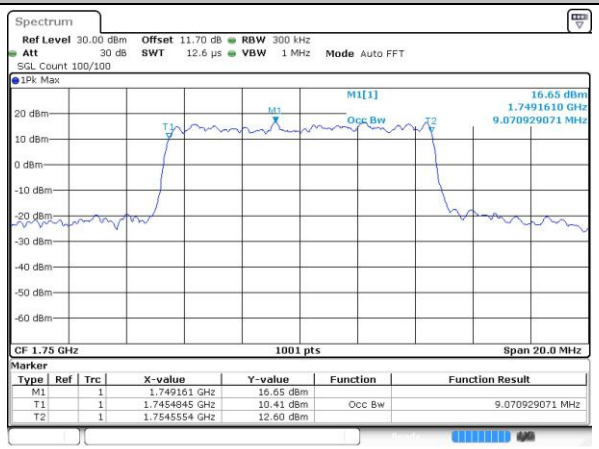
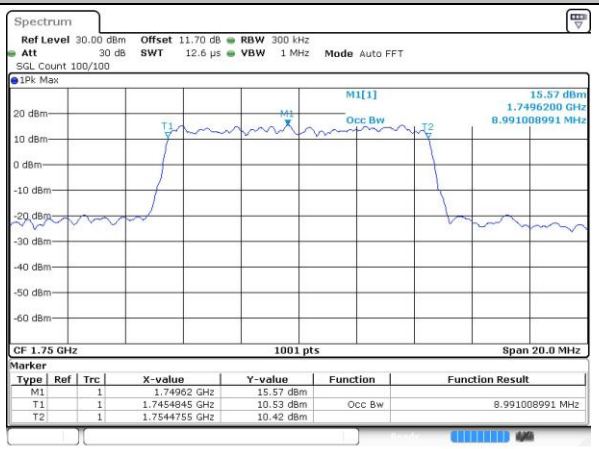
Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM