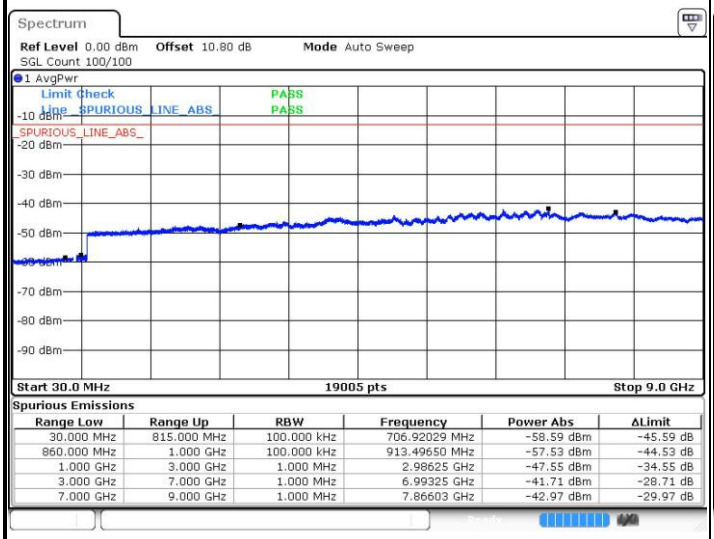
LTE Band 5 / 10MHz

Middle Channel / QPSK

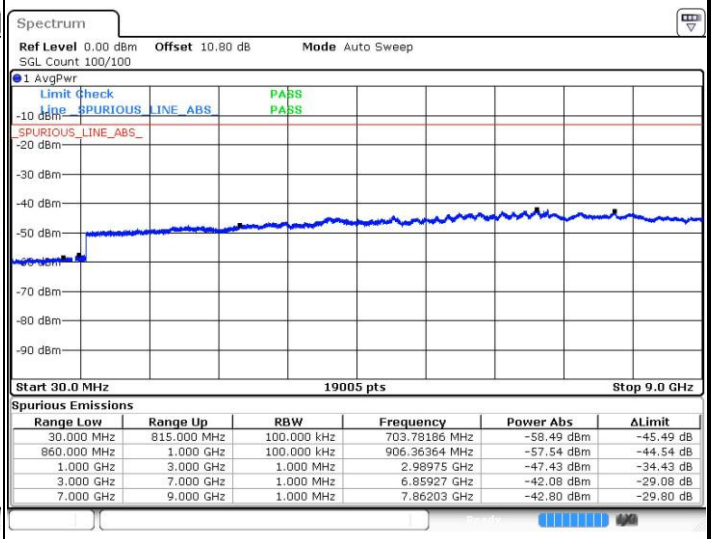


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	706.92029 MHz	-58.59 dBm	-45.59 dB
860.000 MHz	1.000 GHz	100.000 kHz	913.49650 MHz	-57.53 dBm	-44.53 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98625 GHz	-47.55 dBm	-34.55 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99325 GHz	-41.71 dBm	-28.71 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86603 GHz	-42.97 dBm	-29.97 dB

Date: 20.APR.2017 19:34:30

Middle Channel / 16QAM

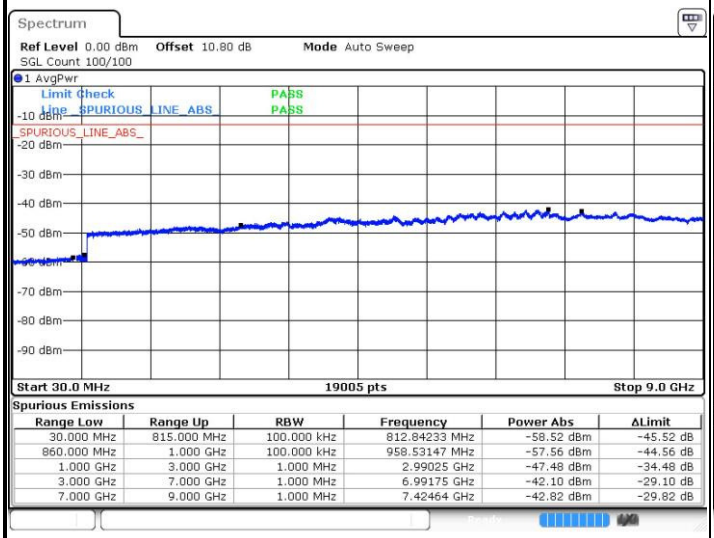


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	703.78186 MHz	-58.49 dBm	-45.49 dB
860.000 MHz	1.000 GHz	100.000 kHz	906.36364 MHz	-57.54 dBm	-44.54 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98975 GHz	-47.43 dBm	-34.43 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85927 GHz	-42.08 dBm	-29.08 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86203 GHz	-42.80 dBm	-29.80 dB

Date: 20.APR.2017 19:35:25

Highest Channel / QPSK

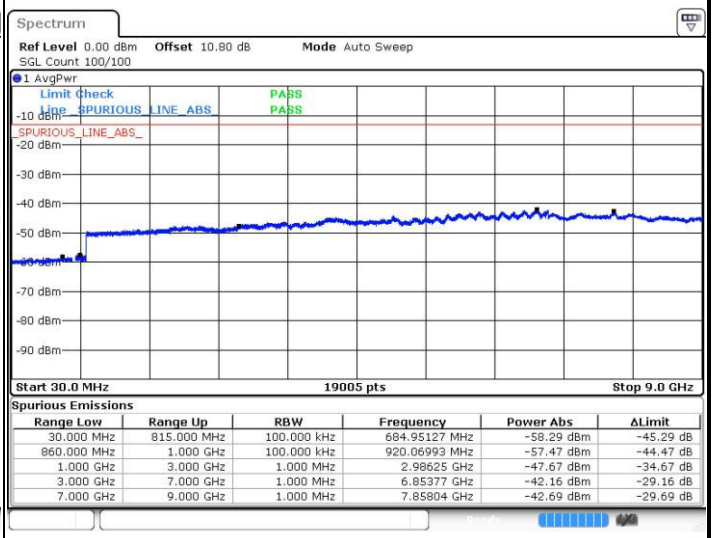


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	812.84233 MHz	-58.52 dBm	-45.52 dB
860.000 MHz	1.000 GHz	100.000 kHz	958.53147 MHz	-57.56 dBm	-44.56 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99025 GHz	-47.48 dBm	-34.48 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99175 GHz	-42.10 dBm	-29.10 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.42464 GHz	-42.82 dBm	-29.82 dB

Date: 20.APR.2017 19:43:37

Highest Channel / 16QAM



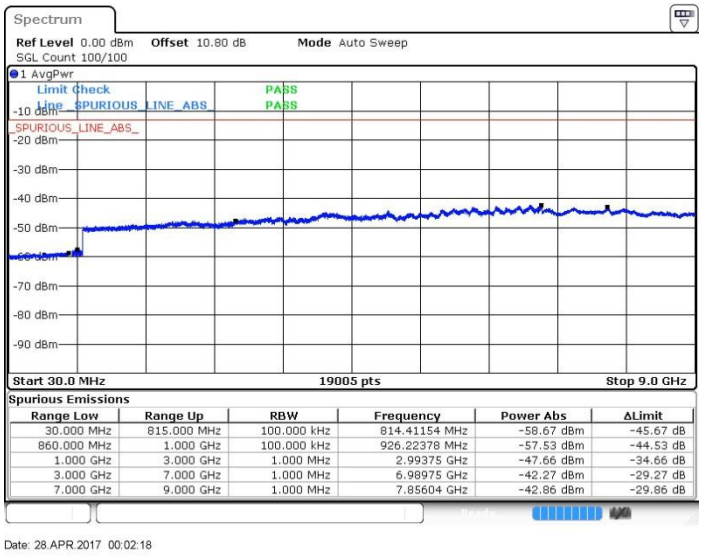
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	684.95127 MHz	-58.29 dBm	-45.29 dB
860.000 MHz	1.000 GHz	100.000 kHz	920.06993 MHz	-57.47 dBm	-44.47 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98625 GHz	-47.67 dBm	-34.67 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85377 GHz	-42.16 dBm	-29.16 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85804 GHz	-42.69 dBm	-29.69 dB

Date: 20.APR.2017 19:44:31

LTE Band 5 / 1.4MHz

Lowest Channel / 64QAM

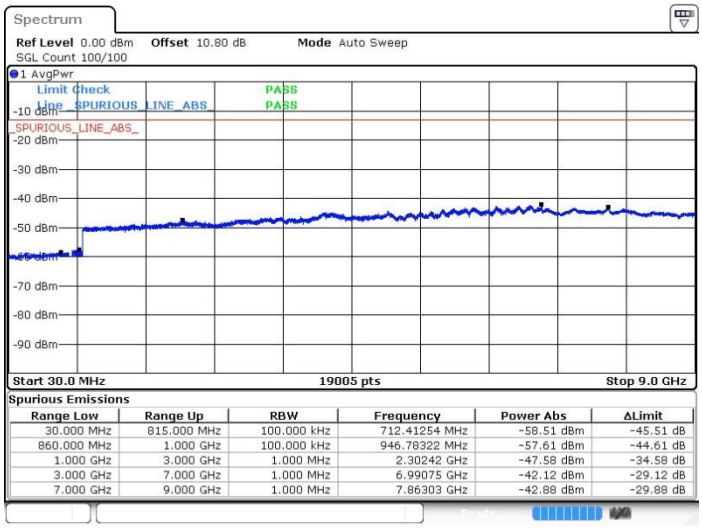


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.41154 MHz	-58.67 dBm	-45.67 dB
860.000 MHz	1.000 GHz	100.000 kHz	926.22378 MHz	-57.53 dBm	-44.53 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99375 GHz	-47.66 dBm	-34.66 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98975 GHz	-42.27 dBm	-29.27 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85604 GHz	-42.86 dBm	-29.86 dB

Date: 28.APR.2017 00:02:18

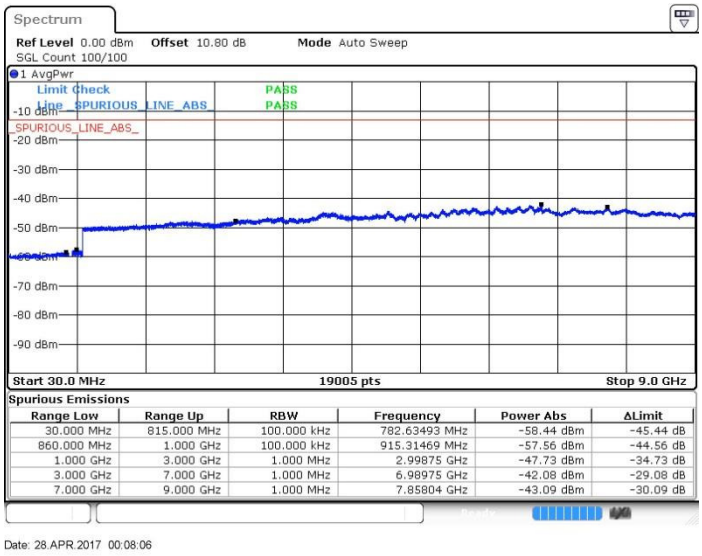
Middle Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	712.41254 MHz	-58.51 dBm	-45.51 dB
860.000 MHz	1.000 GHz	100.000 kHz	946.78322 MHz	-57.61 dBm	-44.61 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.30242 GHz	-47.58 dBm	-34.58 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99075 GHz	-42.12 dBm	-29.12 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86303 GHz	-42.88 dBm	-29.88 dB

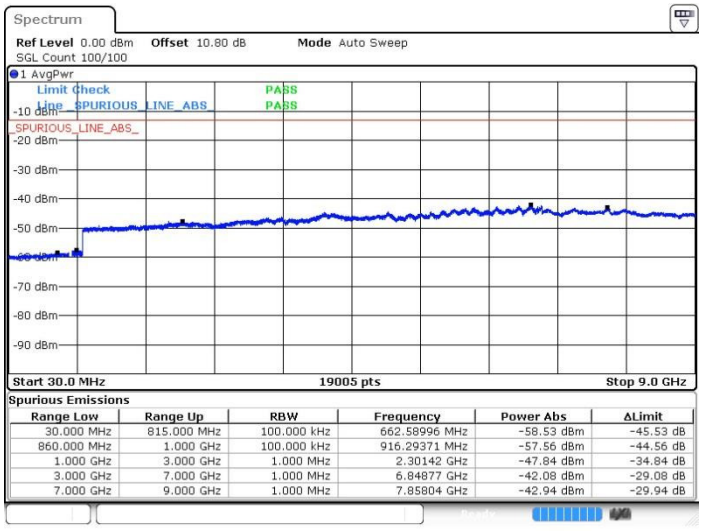
Date: 28.APR.2017 00:03:33

LTE Band 5 / 1.4MHz	
	Highest Channel / 64QAM
	

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	782.63493 MHz	-58.44 dBm	-45.44 dB
860.000 MHz	1.000 GHz	100.000 kHz	915.31469 MHz	-57.56 dBm	-44.56 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99875 GHz	-47.73 dBm	-34.73 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98975 GHz	-42.08 dBm	-29.08 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85804 GHz	-43.09 dBm	-30.09 dB

Date: 28.APR.2017 00:08:06

LTE Band 5 / 3MHz	
	Lowest Channel / 64QAM
	

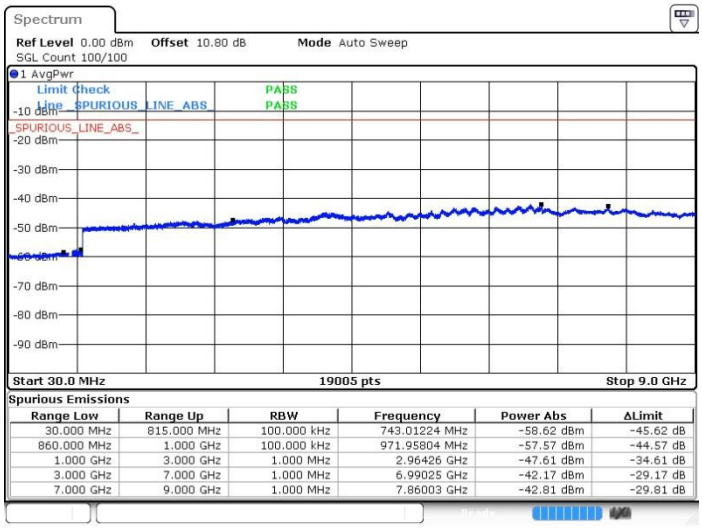
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	662.58996 MHz	-58.53 dBm	-45.53 dB
860.000 MHz	1.000 GHz	100.000 kHz	916.29371 MHz	-57.56 dBm	-44.56 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.30142 GHz	-47.84 dBm	-34.84 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.84877 GHz	-42.08 dBm	-29.08 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85804 GHz	-42.94 dBm	-29.94 dB

Date: 27.APR.2017 23:29:51

LTE Band 5 / 3MHz

Middle Channel / 64QAM

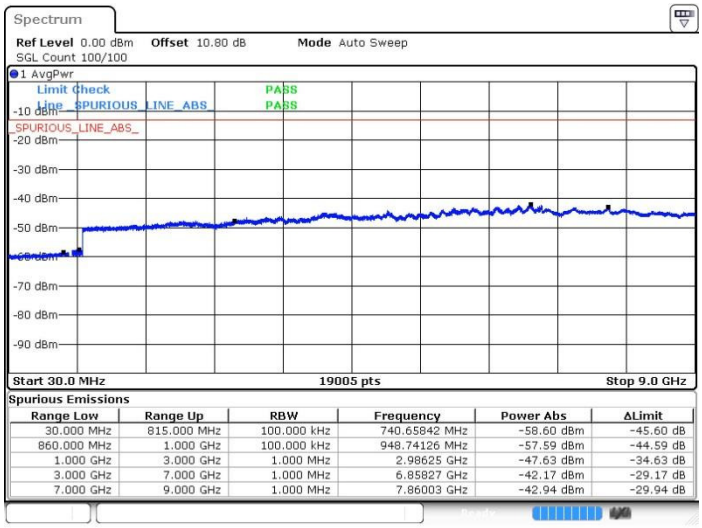


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	743.01224 MHz	-58.62 dBm	-45.62 dB
860.000 MHz	1.000 GHz	100.000 kHz	971.95804 MHz	-57.57 dBm	-44.57 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96426 GHz	-47.61 dBm	-34.61 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99025 GHz	-42.17 dBm	-29.17 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86003 GHz	-42.81 dBm	-29.81 dB

Date: 27.APR.2017 23:31:06

Highest Channel / 64QAM



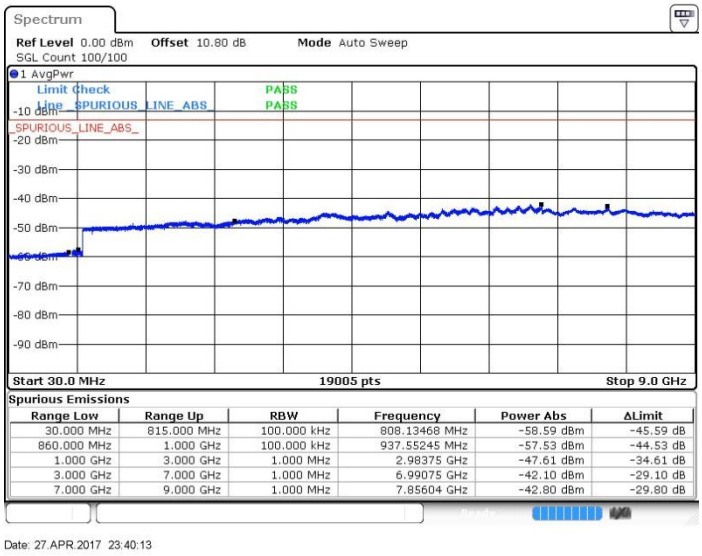
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	740.65842 MHz	-58.60 dBm	-45.60 dB
860.000 MHz	1.000 GHz	100.000 kHz	948.74126 MHz	-57.59 dBm	-44.59 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98625 GHz	-47.63 dBm	-34.63 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85827 GHz	-42.17 dBm	-29.17 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86003 GHz	-42.94 dBm	-29.94 dB

Date: 27.APR.2017 23:35:39

LTE Band 5 / 5MHz

Lowest Channel / 64QAM

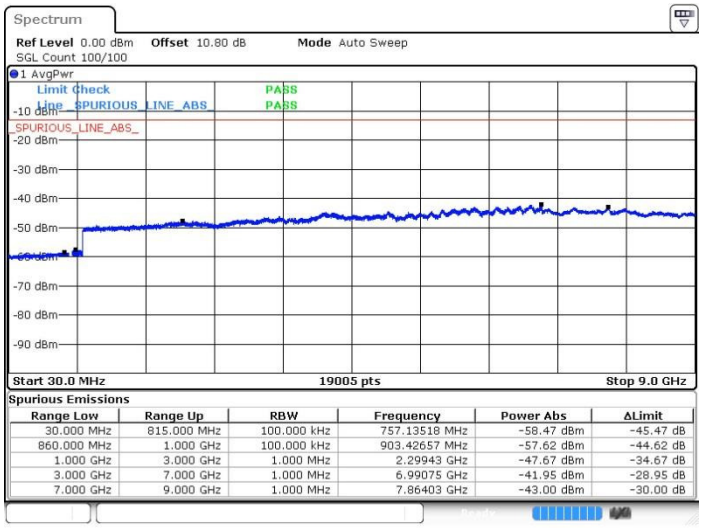


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	808.13468 MHz	-58.59 dBm	-45.59 dB
860.000 MHz	1.000 GHz	100.000 kHz	937.55245 MHz	-57.53 dBm	-44.53 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98375 GHz	-47.61 dBm	-34.61 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99075 GHz	-42.10 dBm	-29.10 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85604 GHz	-42.80 dBm	-29.80 dB

Date: 27.APR.2017 23:40:13

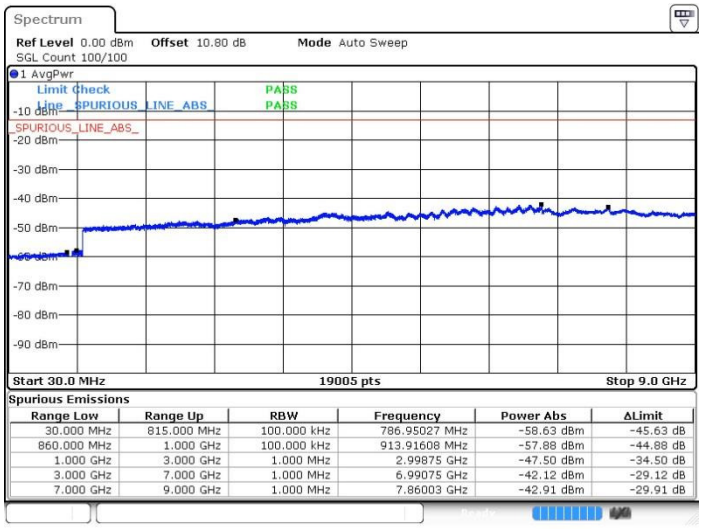
Middle Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	757.13518 MHz	-58.47 dBm	-45.47 dB
860.000 MHz	1.000 GHz	100.000 kHz	903.42657 MHz	-57.62 dBm	-44.62 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.29943 GHz	-47.67 dBm	-34.67 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99075 GHz	-41.95 dBm	-28.95 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86403 GHz	-43.00 dBm	-30.00 dB

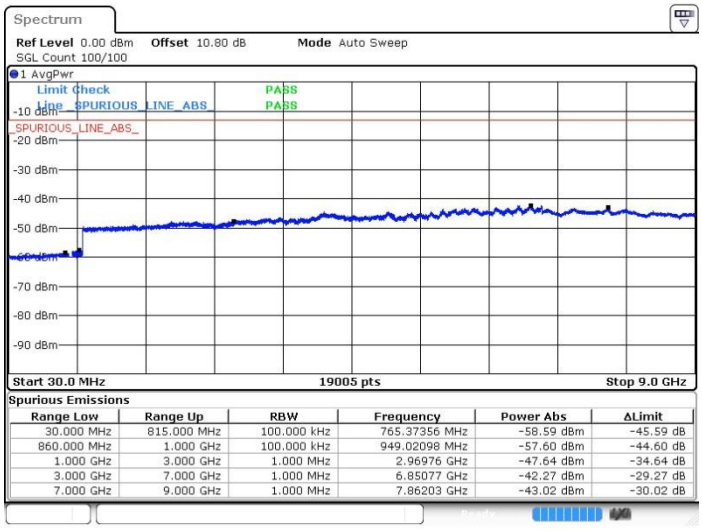
Date: 27.APR.2017 23:41:28

LTE Band 5 / 5MHz	
	Highest Channel / 64QAM
	

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	786.95027 MHz	-58.63 dBm	-45.63 dB
860.000 MHz	1.000 GHz	100.000 kHz	913.91608 MHz	-57.88 dBm	-44.88 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99875 GHz	-47.50 dBm	-34.50 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99075 GHz	-42.12 dBm	-29.12 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86003 GHz	-42.91 dBm	-29.91 dB

Date: 27.APR.2017 23:46:01

LTE Band 5 / 10MHz	
	Lowest Channel / 64QAM
	

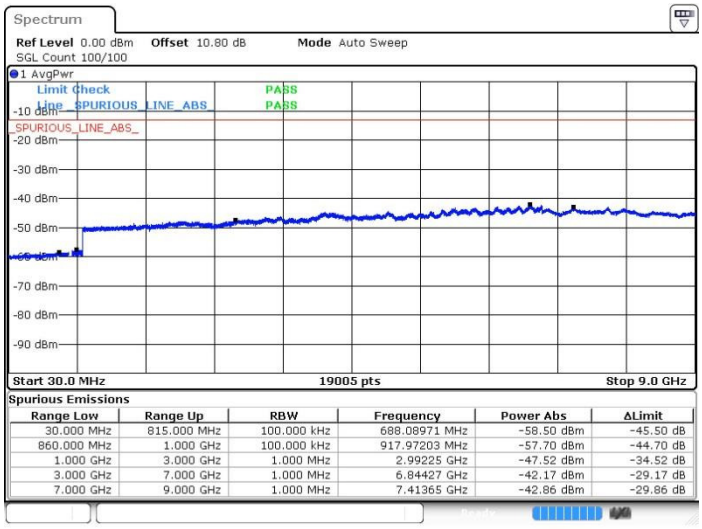
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	765.37356 MHz	-58.59 dBm	-45.59 dB
860.000 MHz	1.000 GHz	100.000 kHz	949.02098 MHz	-57.60 dBm	-44.60 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96976 GHz	-47.64 dBm	-34.64 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85077 GHz	-42.27 dBm	-29.27 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86203 GHz	-43.02 dBm	-30.02 dB

Date: 27.APR.2017 23:50:34

LTE Band 5 / 10MHz

Middle Channel / 64QAM

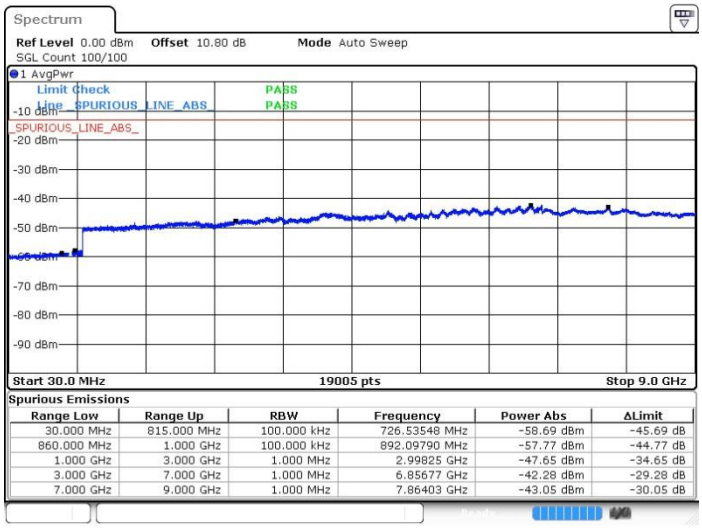


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	688.08971 MHz	-58.50 dBm	-45.50 dB
860.000 MHz	1.000 GHz	100.000 kHz	917.97203 MHz	-57.70 dBm	-44.70 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99225 GHz	-47.52 dBm	-34.52 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.84427 GHz	-42.17 dBm	-29.17 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.41365 GHz	-42.86 dBm	-29.86 dB

Date: 27.APR.2017 23:51:49

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	726.53548 MHz	-58.69 dBm	-45.69 dB
860.000 MHz	1.000 GHz	100.000 kHz	892.09790 MHz	-57.77 dBm	-44.77 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99825 GHz	-47.65 dBm	-34.65 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85677 GHz	-42.28 dBm	-29.28 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86403 GHz	-43.05 dBm	-30.05 dB

Date: 27.APR.2017 23:56:22

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	0.0079	PASS
40	Normal Voltage	0.0067	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0072	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0079	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0071	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0010	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.4 V.；Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

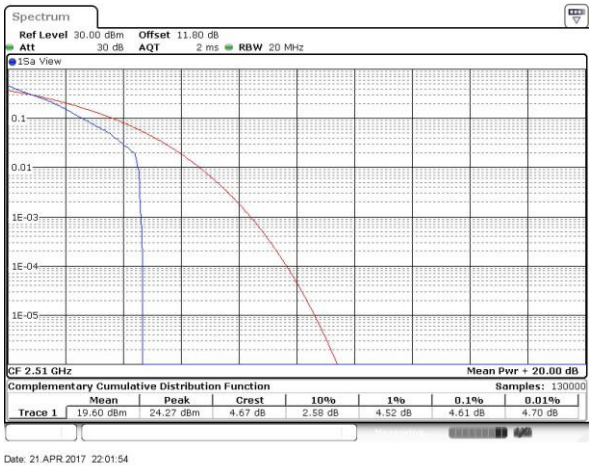
LTE Band 7

Peak-to-Average Ratio

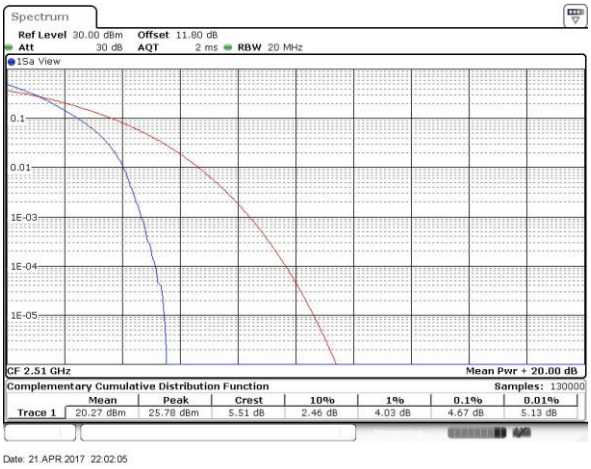
Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.61	4.67	5.45	5.77	PASS
Middle CH	4.61	5.28	5.57	6	
Highest CH	4.29	4.99	5.04	5.86	
Mod.	-		64QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	5.19	5.83	PASS
Middle CH	-	-	5.28	6.14	
Highest CH	-	-	5.28	5.91	

LTE Band 7 / 20MHz / QPSK

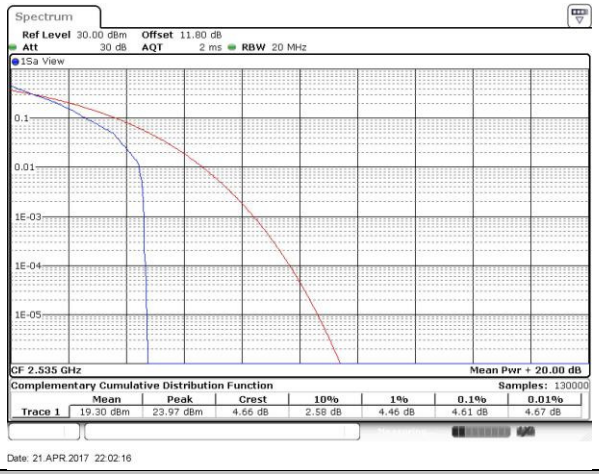
Lowest Channel / 1RB



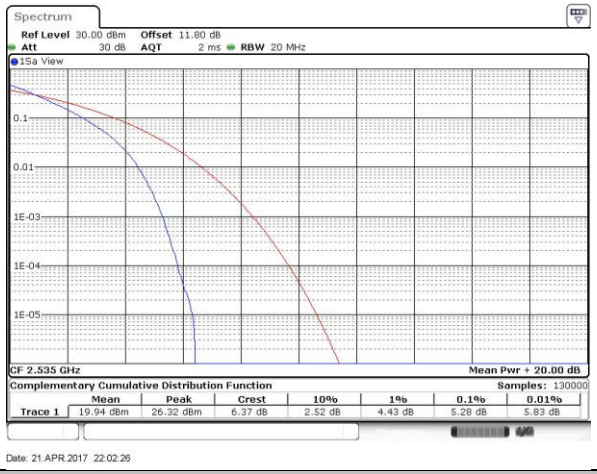
Lowest Channel / Full RB



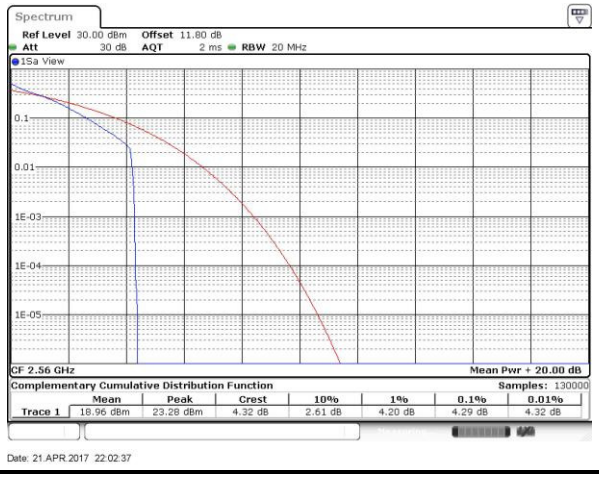
Middle Channel / 1RB



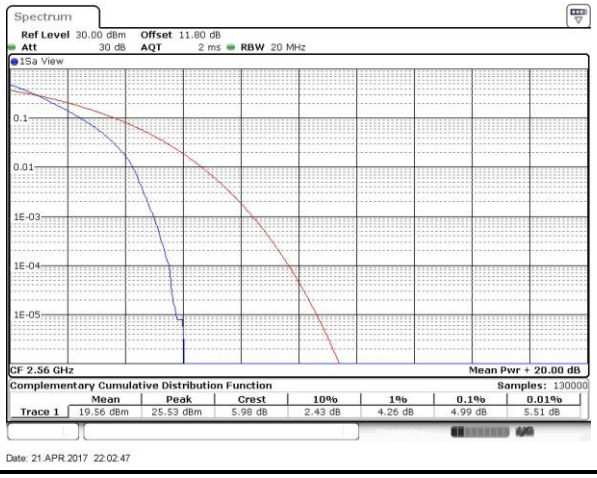
Middle Channel / Full RB



Highest Channel / 1RB

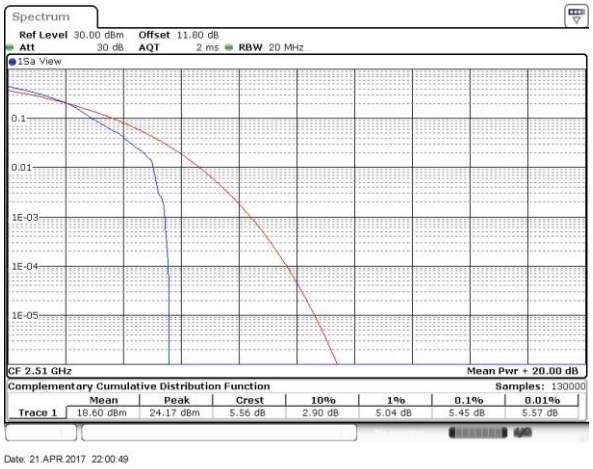


Highest Channel / Full RB

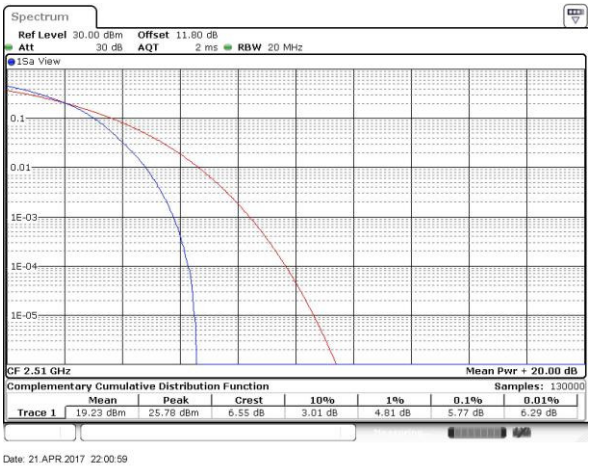


LTE Band 7 / 20MHz / 16QAM

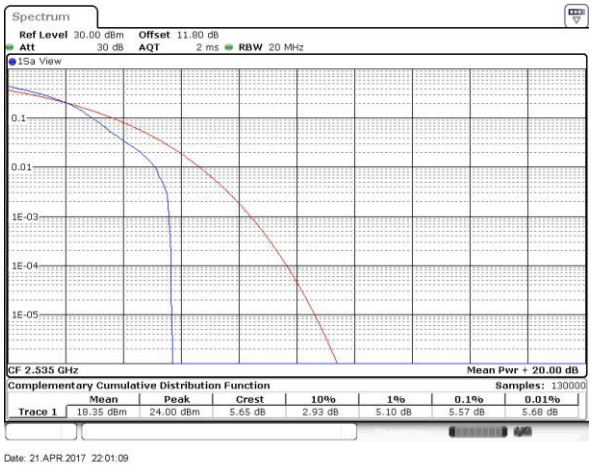
Lowest Channel / 1RB



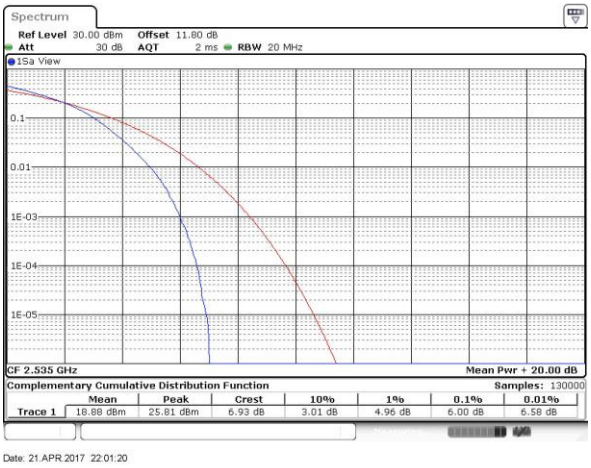
Lowest Channel / Full RB



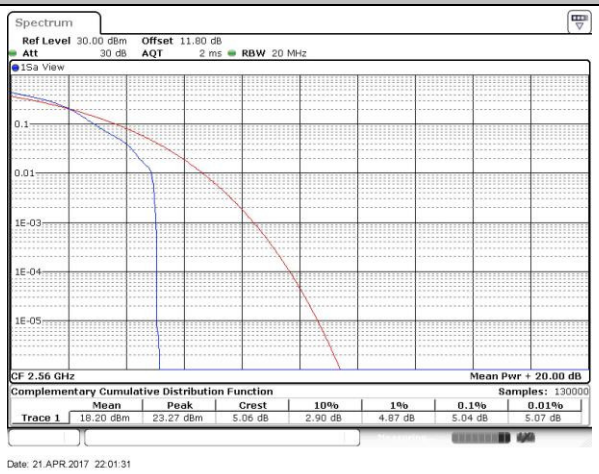
Middle Channel / 1RB



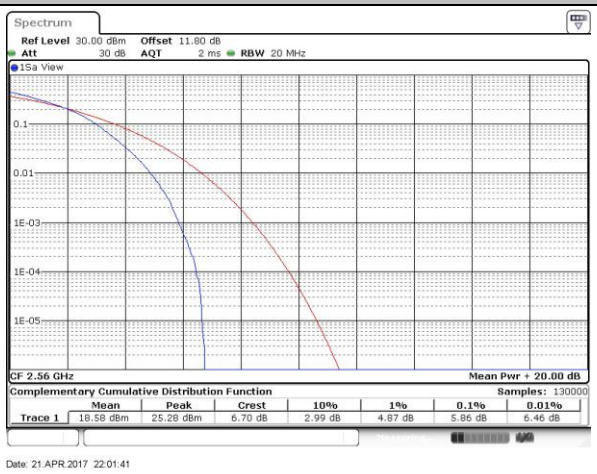
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

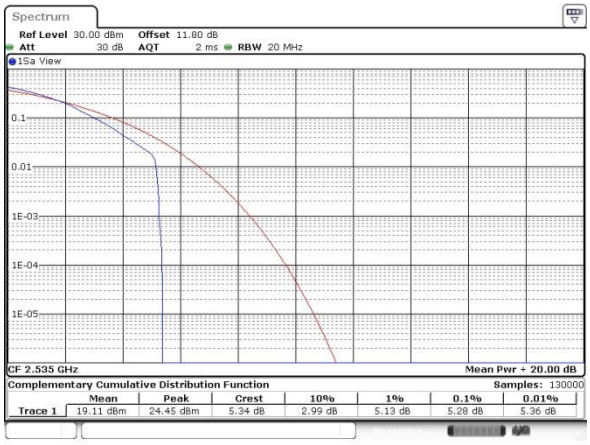


LTE Band 7 / 20MHz / 64QAM

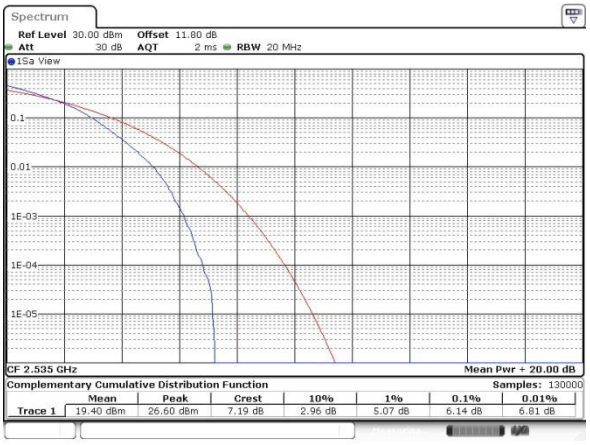
Lowest Channel / 1RB

Lowest Channel / Full RB

Middle Channel / 1RB

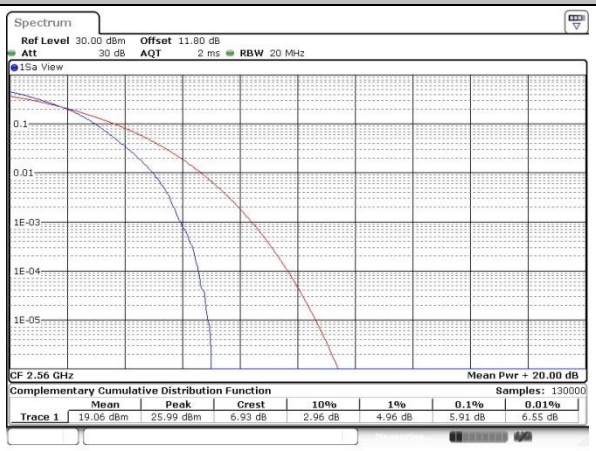


Middle Channel / Full RB



Highest Channel / 1RB

Highest Channel / Full RB

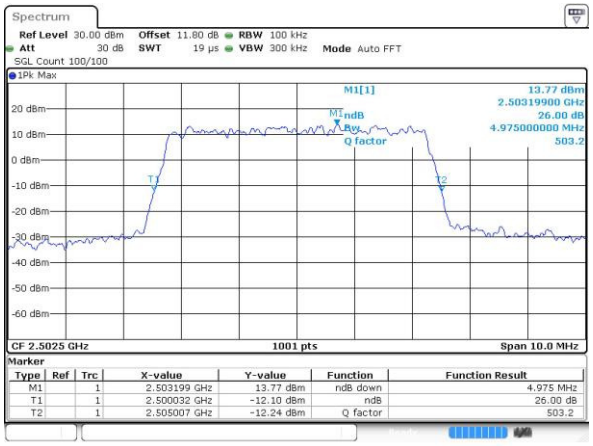


26dB Bandwidth

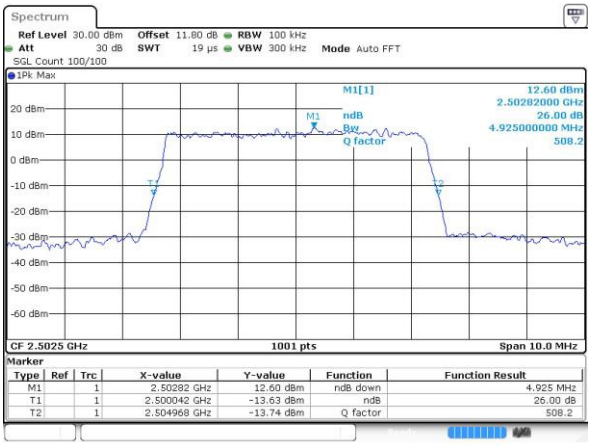
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.975	4.925	9.69	9.63	14.416	14.146	20.26	20.06
Middle CH	-	-	-	-	4.915	4.845	9.85	9.67	14.625	14.326	20.34	20.06
Highest CH	-	-	-	-	4.865	4.945	9.79	9.81	14.505	14.326	20.18	20.3
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	-	-	-	-	4.855	-	9.75	-	14.356	-	20.1
Middle CH	-	-	-	-	-	4.965	-	9.83	-	14.565	-	20.14
Highest CH	-	-	-	-	-	4.915	-	9.87	-	14.476	-	20.14

LTE Band 7

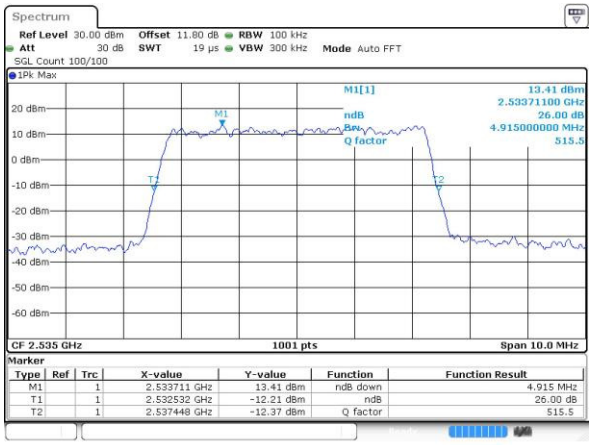
Lowest Channel / 5MHz / QPSK



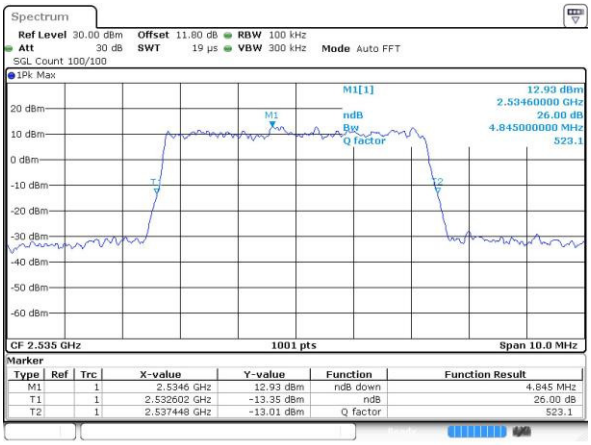
Lowest Channel / 5MHz / 16QAM



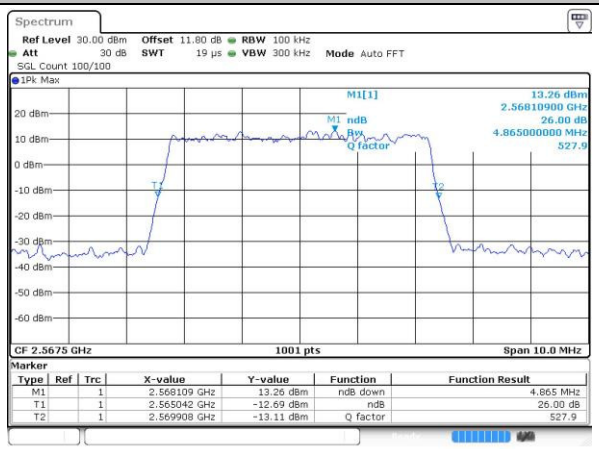
Middle Channel / 5MHz / QPSK



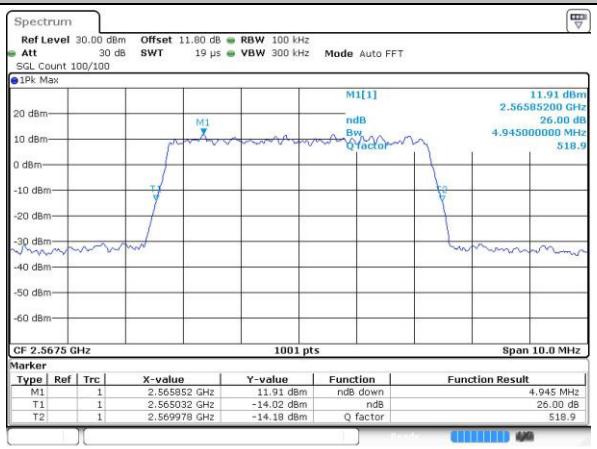
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

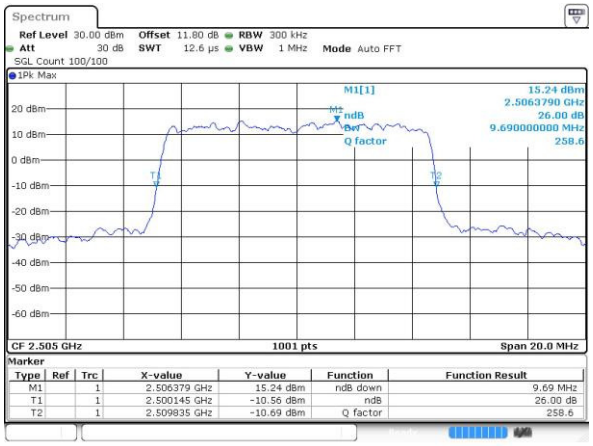


Highest Channel / 5MHz / 16QAM

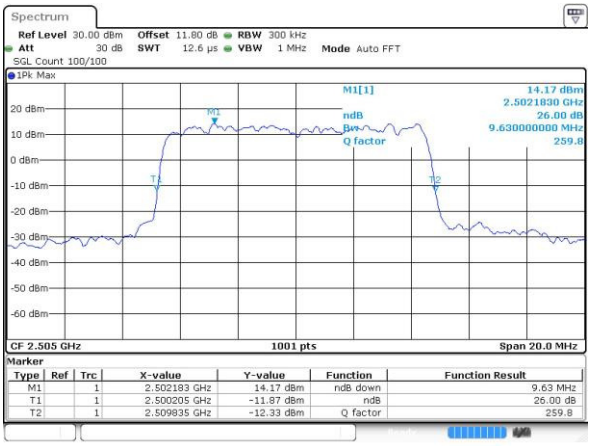


LTE Band 7

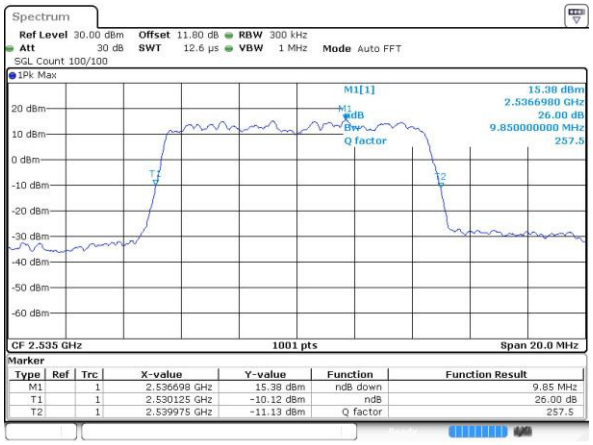
Lowest Channel / 10MHz / QPSK



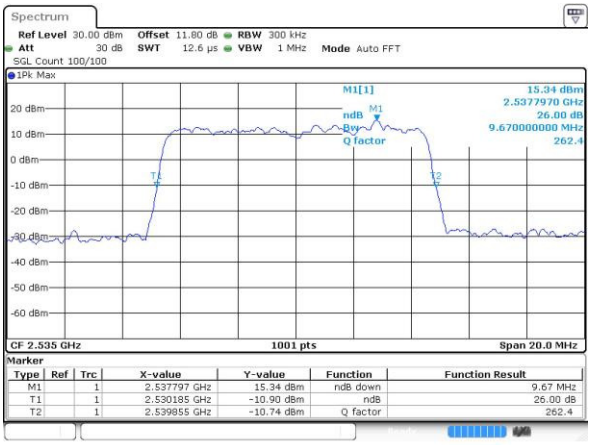
Lowest Channel / 10MHz / 16QAM



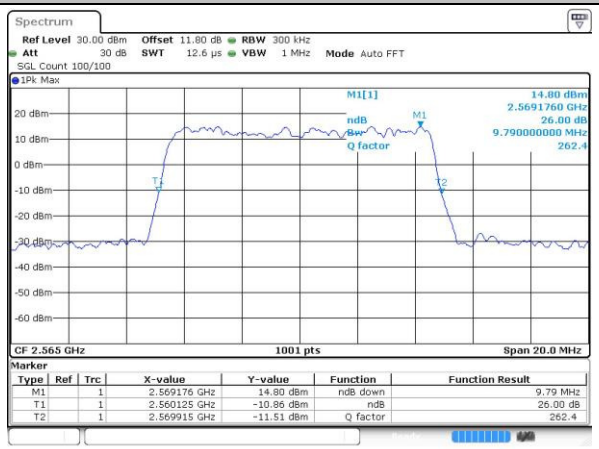
Middle Channel / 10MHz / QPSK



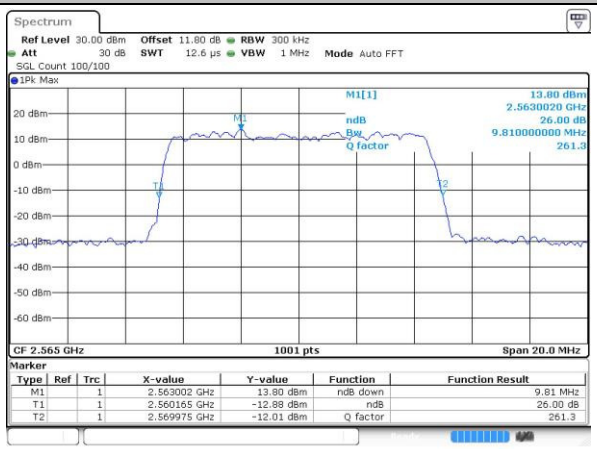
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

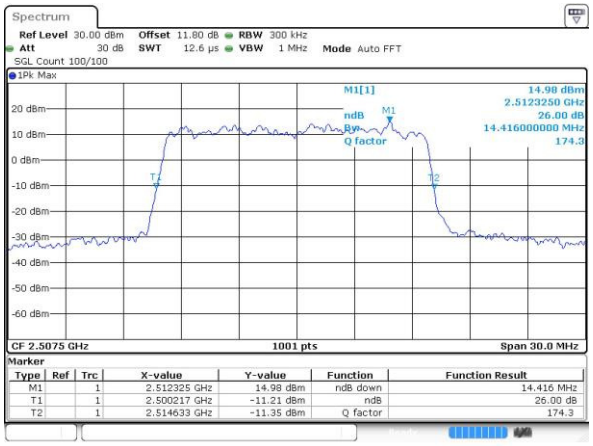


Highest Channel / 10MHz / 16QAM

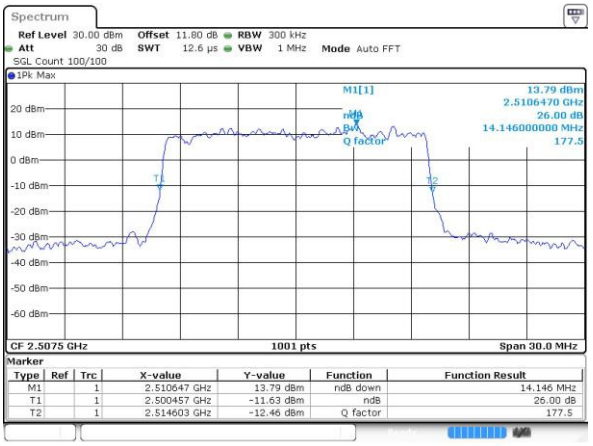


LTE Band 7

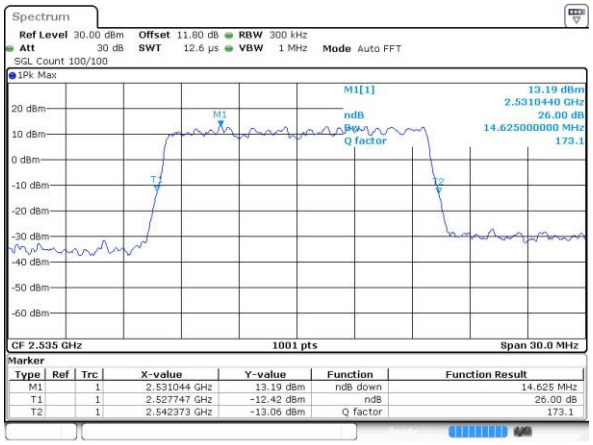
Lowest Channel / 15MHz / QPSK



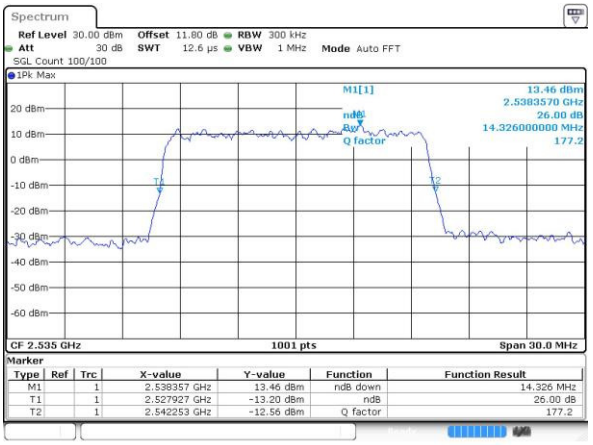
Lowest Channel / 15MHz / 16QAM



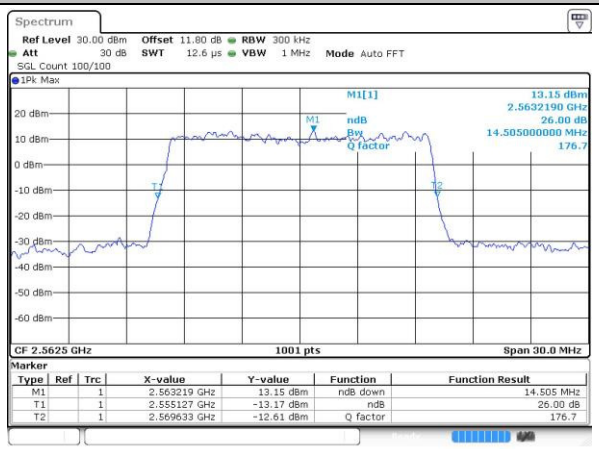
Middle Channel / 15MHz / QPSK



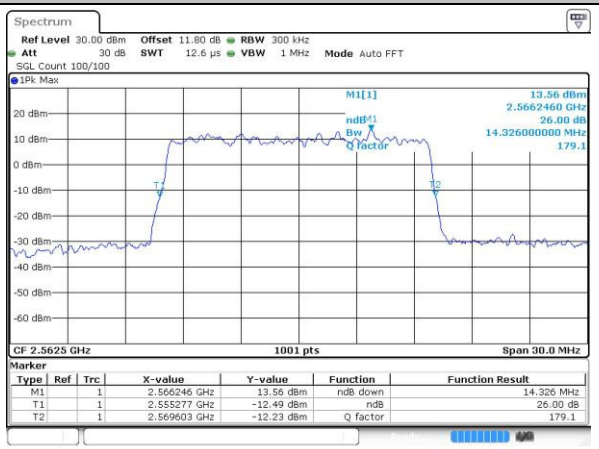
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

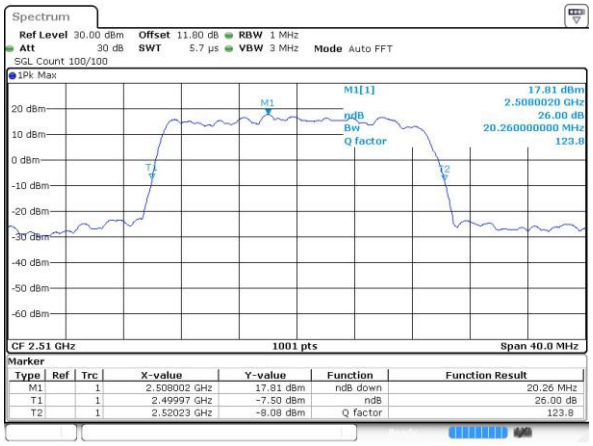


Highest Channel / 15MHz / 16QAM

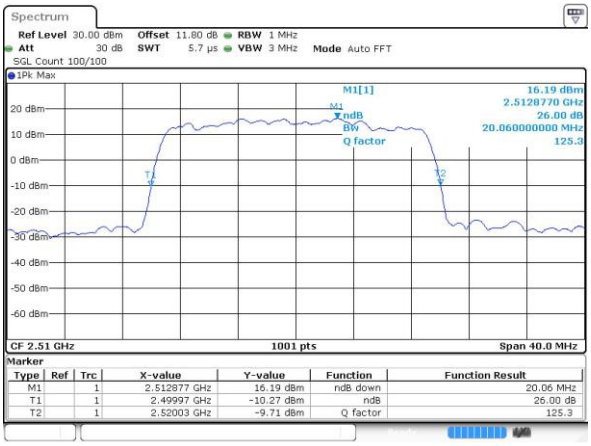


LTE Band 7

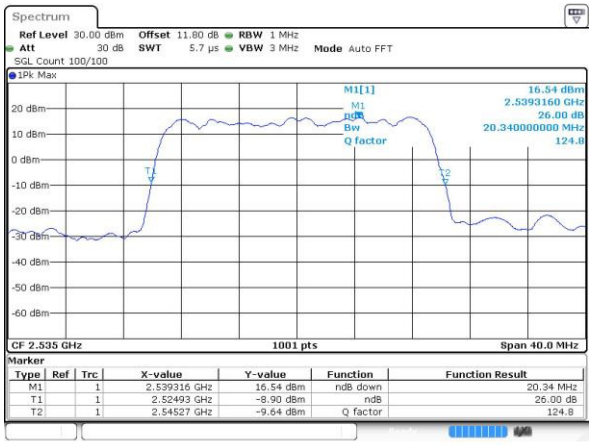
Lowest Channel / 20MHz / QPSK



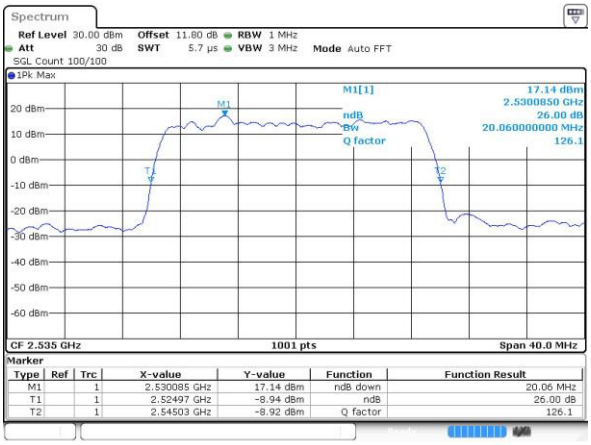
Lowest Channel / 20MHz / 16QAM



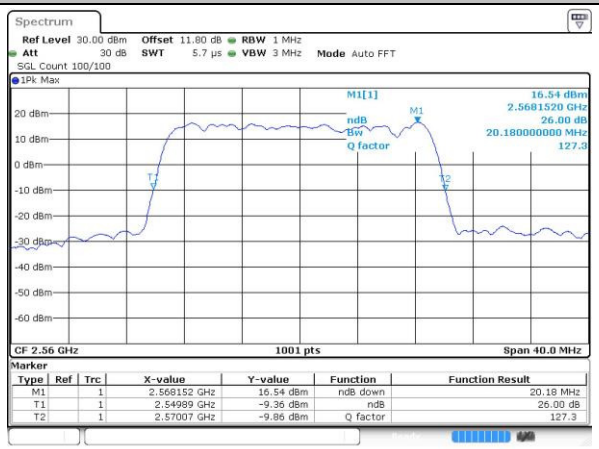
Middle Channel / 20MHz / QPSK



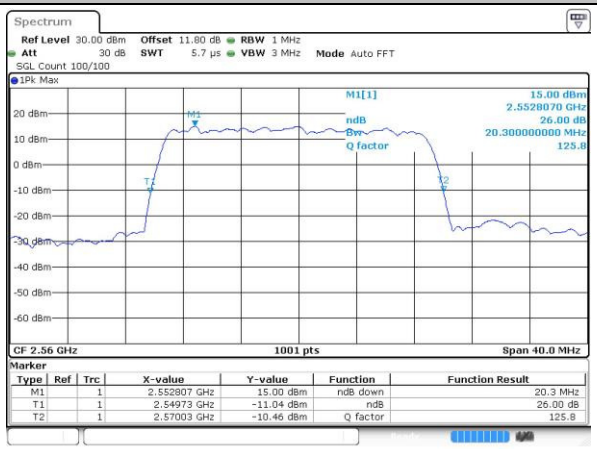
Middle Channel / 20MHz / 16QAM

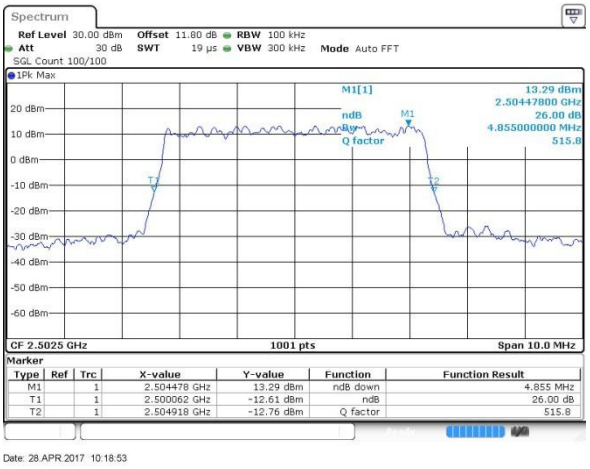
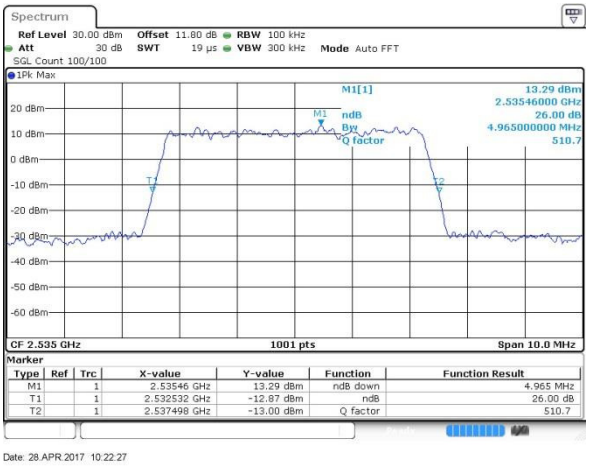
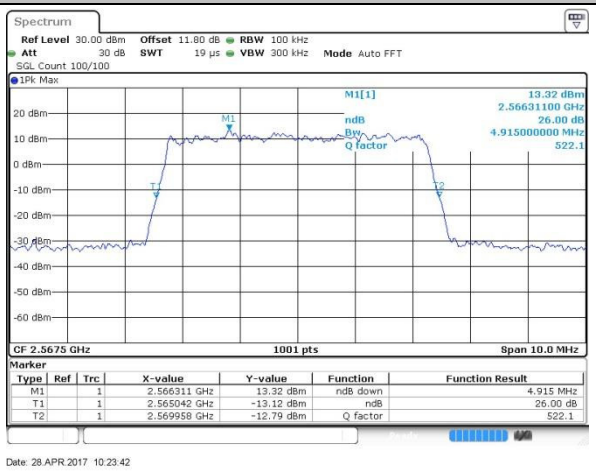


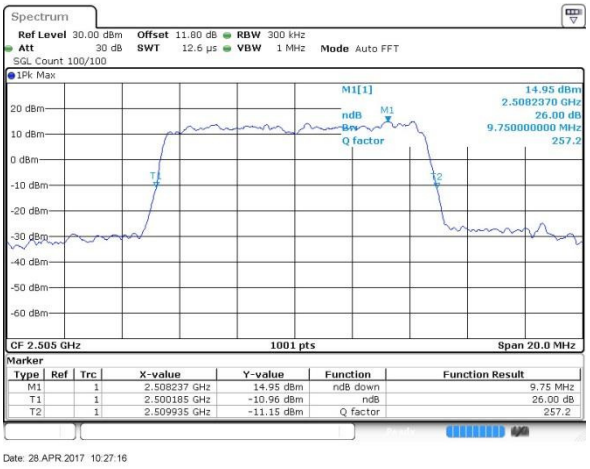
Highest Channel / 20MHz / QPSK

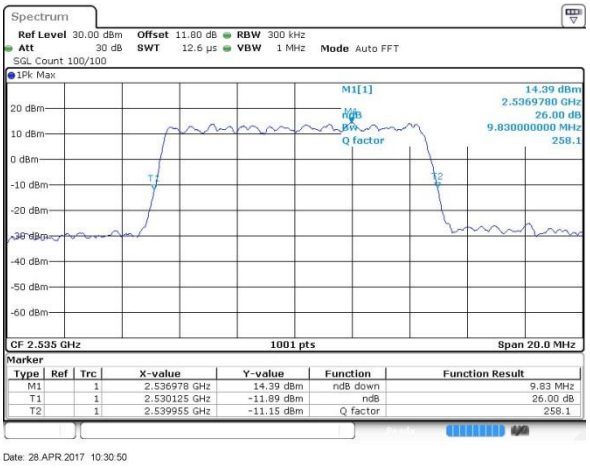


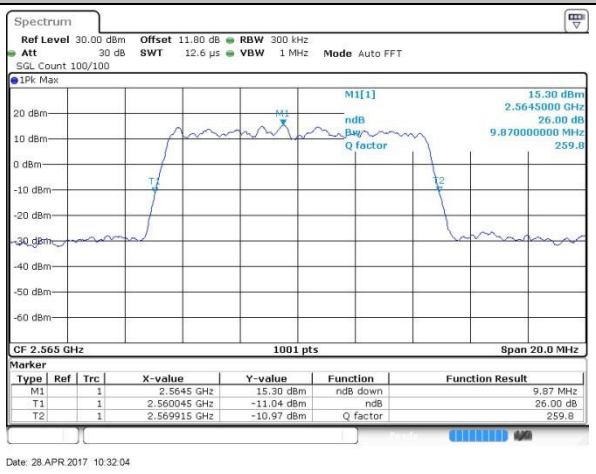
Highest Channel / 20MHz / 16QAM

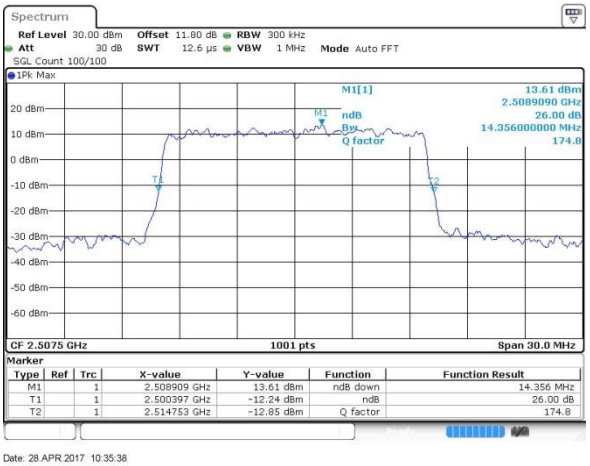
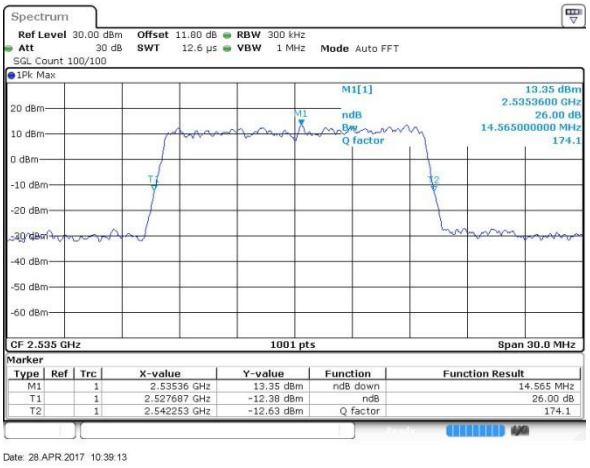
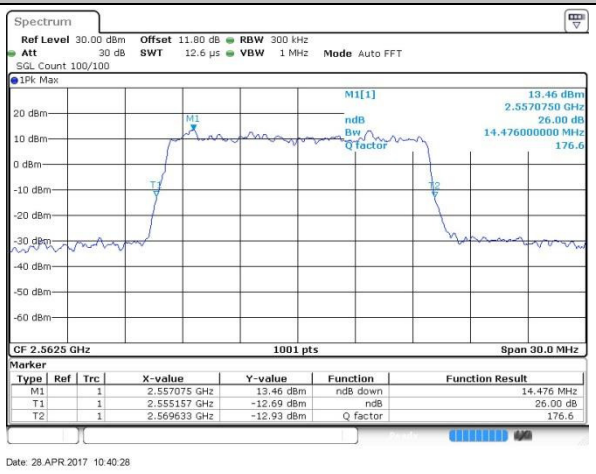


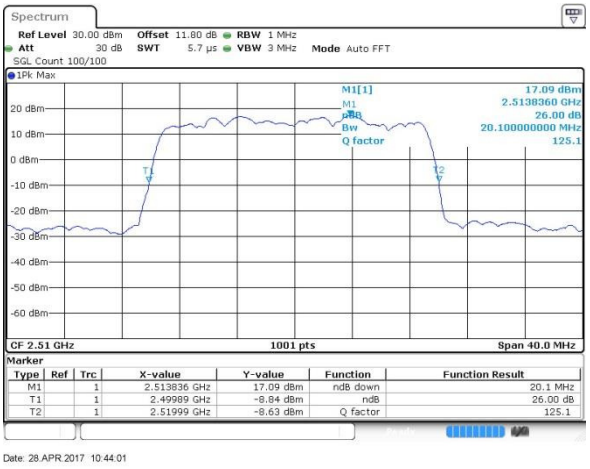
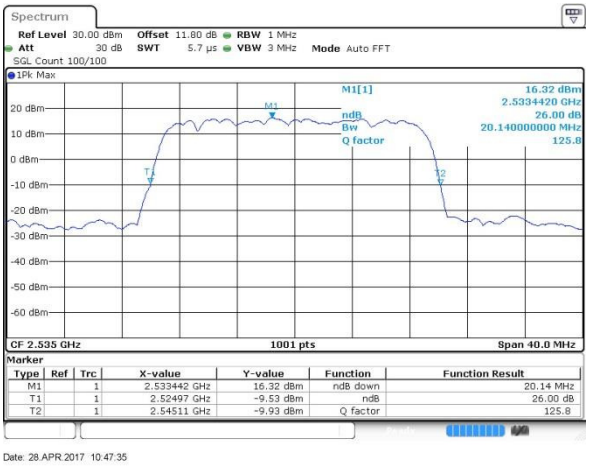
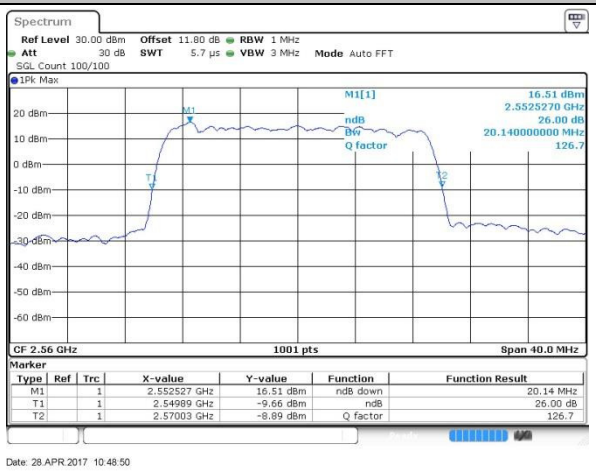
LTE Band 7	
	Lowest Channel / 5MHz / 64QAM
	
	Middle Channel / 5MHz / 64QAM
	
	Highest Channel / 5MHz / 64QAM
	

LTE Band 7	
	Lowest Channel / 10MHz / 64QAM
	

	Middle Channel / 10MHz / 64QAM
	

	Highest Channel / 10MHz / 64QAM
	

LTE Band 7	
	Lowest Channel / 15MHz / 64QAM
	
	Middle Channel / 15MHz / 64QAM
	
	Highest Channel / 15MHz / 64QAM
	

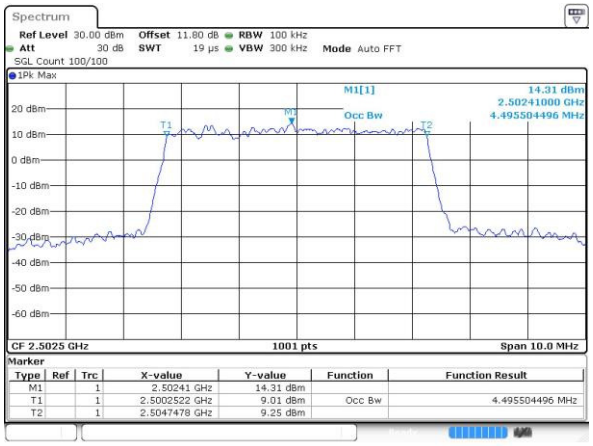
LTE Band 7	
	Lowest Channel / 20MHz / 64QAM
	
	Middle Channel / 20MHz / 64QAM
	
	Highest Channel / 20MHz / 64QAM
	

Occupied Bandwidth

Mode	LTE Band 7 : 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	-	-	-	-	4.5	4.48	9.01	9.03	13.43	13.4	18.26	18.3
Middle CH	-	-	-	-	4.48	4.48	9.05	9.03	13.46	13.43	18.34	18.46
Highest CH	-	-	-	-	4.5	4.49	9.01	9.05	13.49	13.43	18.34	18.34
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	-	-	-	-	4.52	-	9.01	-	13.37	-	18.38
Middle CH	-	-	-	-	-	4.48	-	9.01	-	13.52	-	18.26
Highest CH	-	-	-	-	-	4.50	-	8.99	-	13.43	-	18.30

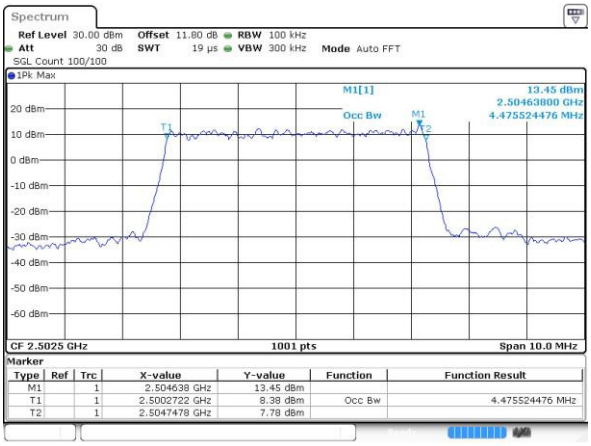
LTE Band 7

Lowest Channel / 5MHz / QPSK



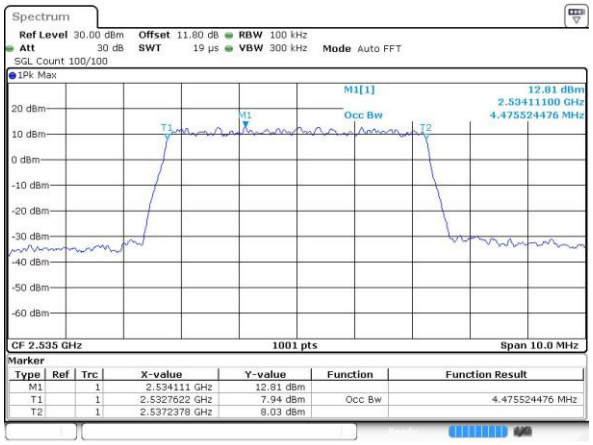
Date: 21.APR.2017 20:45:25

Lowest Channel / 5MHz / 16QAM



Date: 21.APR.2017 20:45:36

Middle Channel / 5MHz / QPSK



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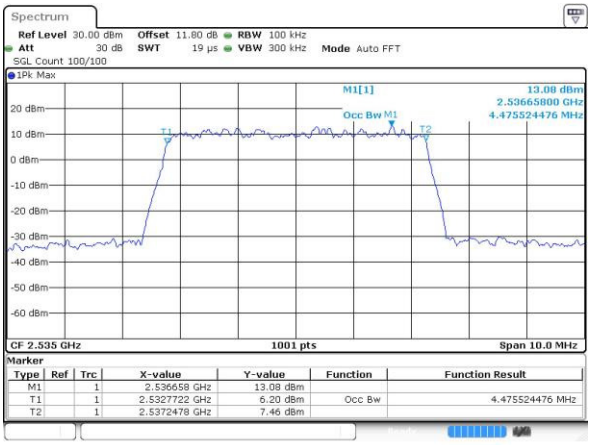
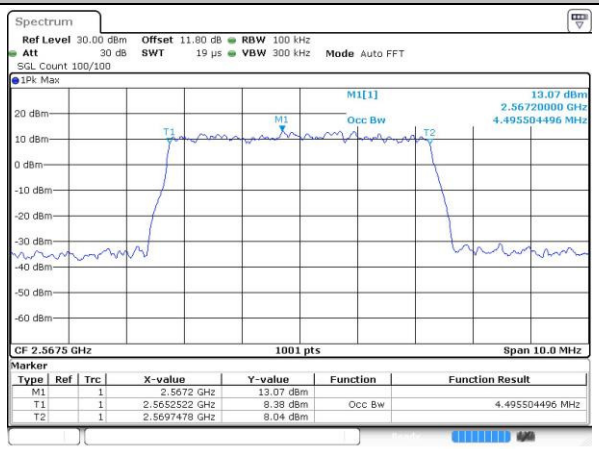
Middle Channel / 5MHz / 16QAM



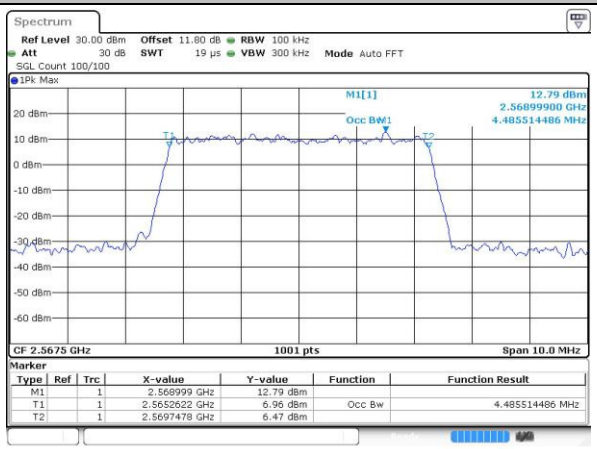
Date: 21.APR.2017 20:52:44

Highest Channel / 5MHz / QPSK



Date: 21.APR.2017 20:55:02

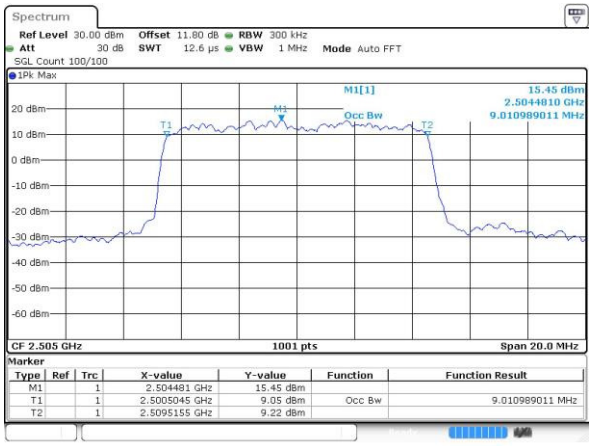
Highest Channel / 5MHz / 16QAM



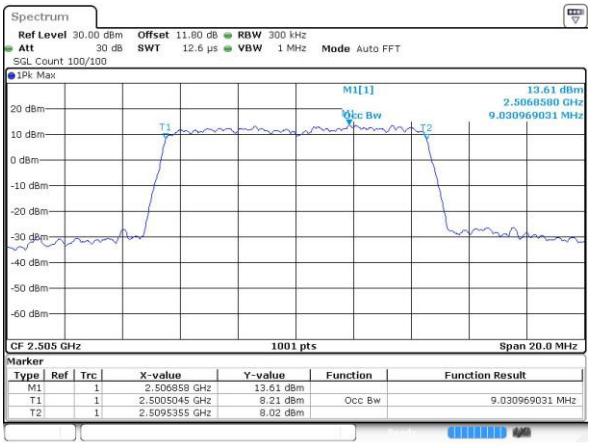
Date: 21.APR.2017 20:55:13

LTE Band 7

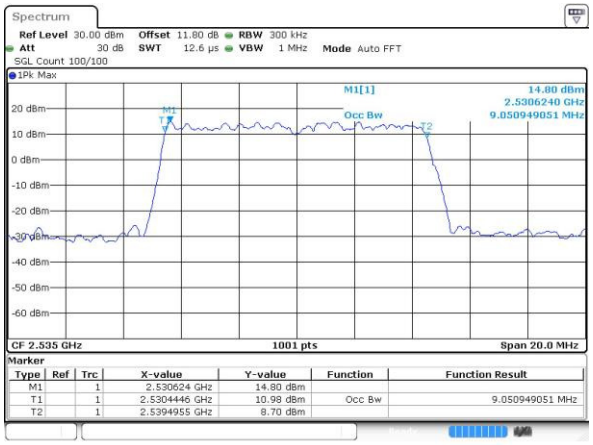
Lowest Channel / 10MHz / QPSK



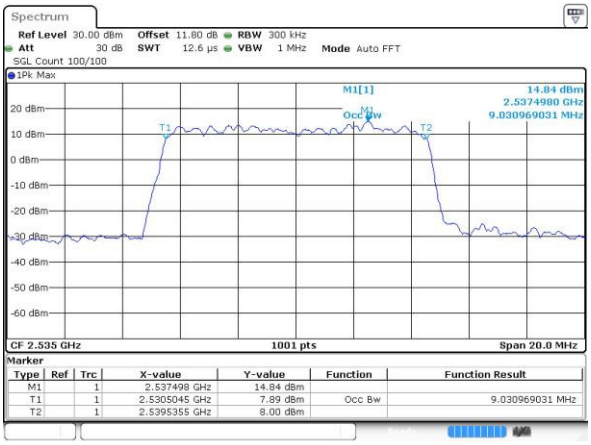
Lowest Channel / 10MHz / 16QAM



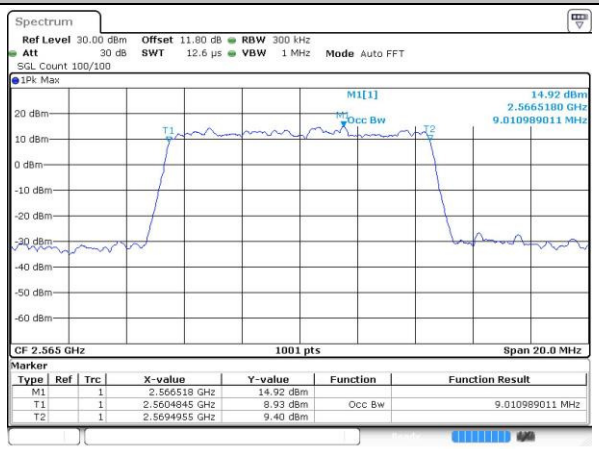
Middle Channel / 10MHz / QPSK



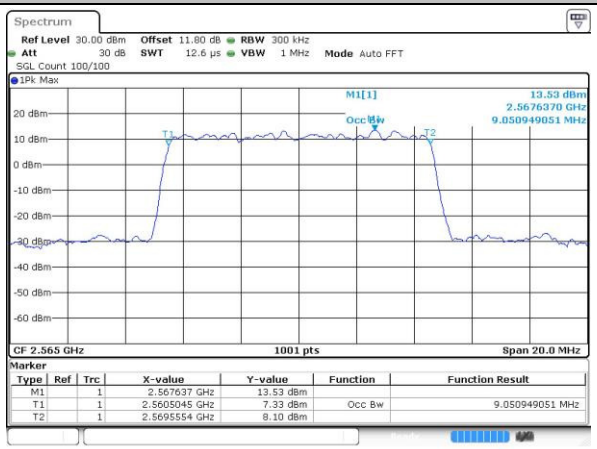
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

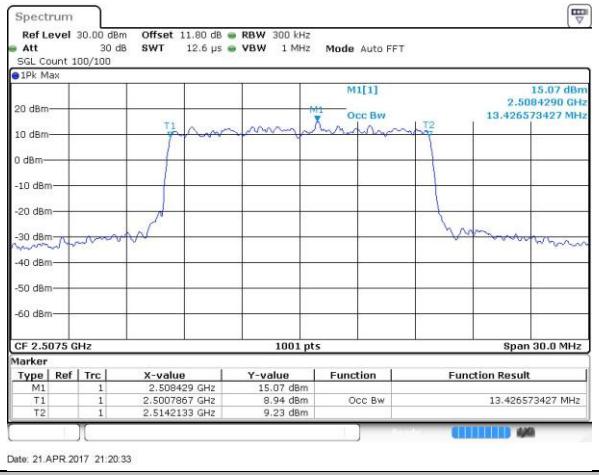


Highest Channel / 10MHz / 16QAM

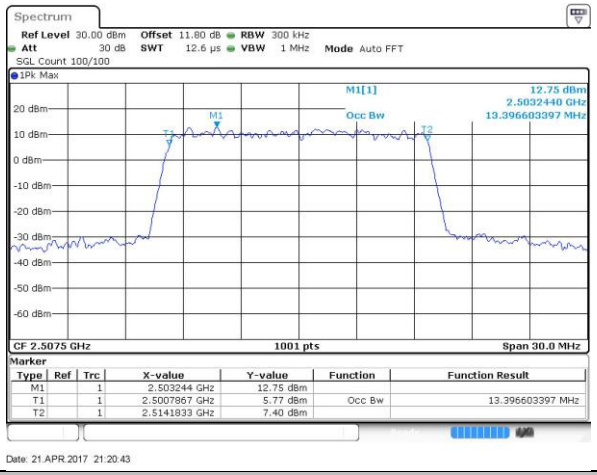


LTE Band 7

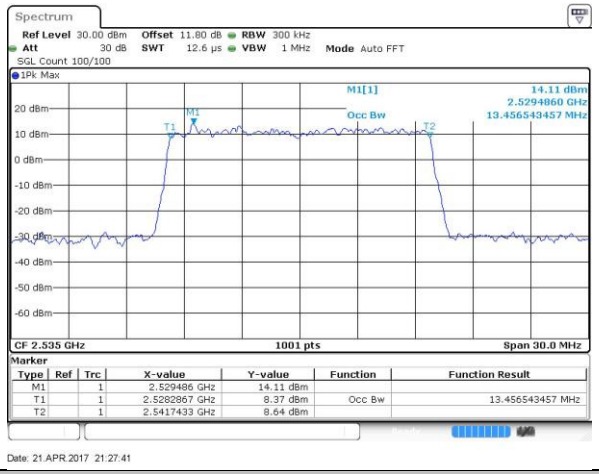
Lowest Channel / 15MHz / QPSK



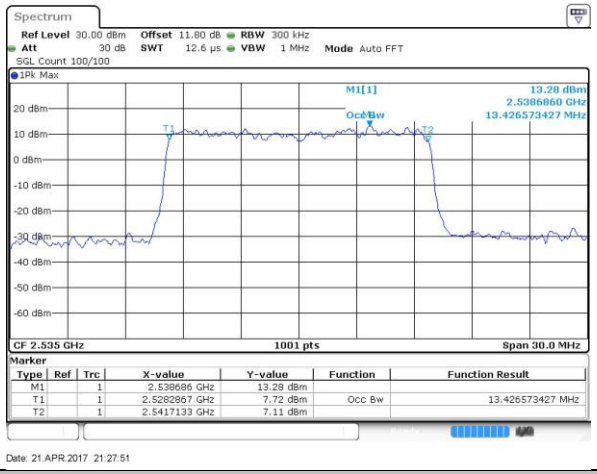
Lowest Channel / 15MHz / 16QAM



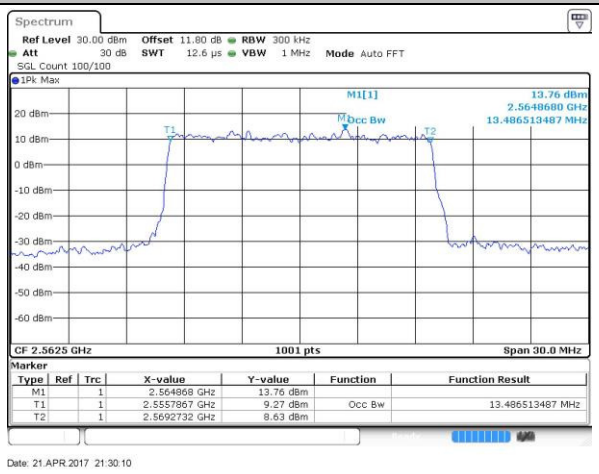
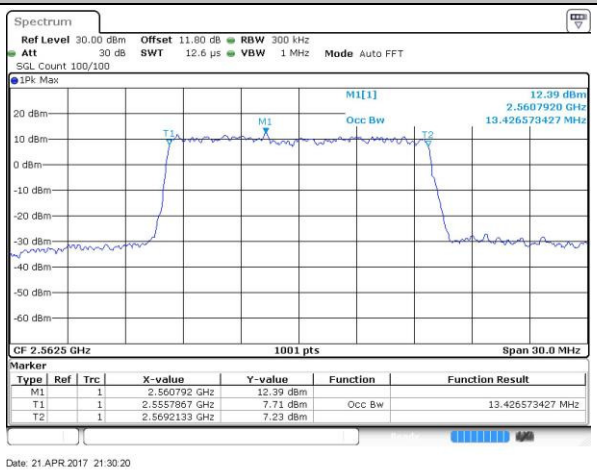
Middle Channel / 15MHz / QPSK



Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



Highest Channel / 15MHz / 16QAM