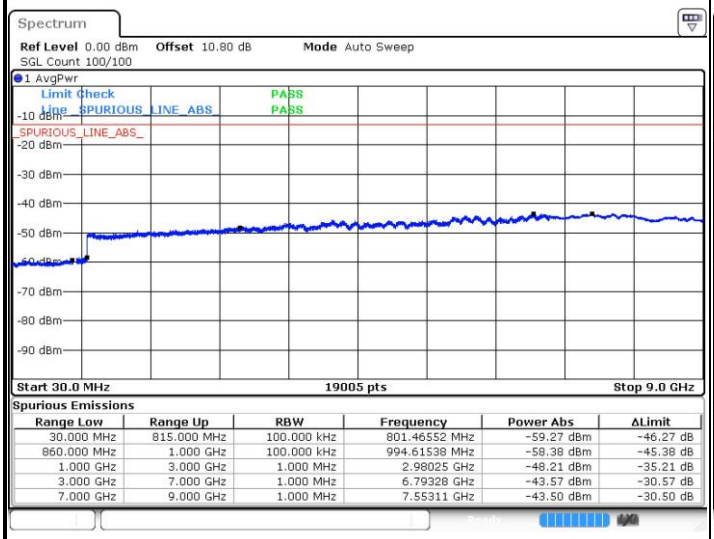
LTE Band 5 / 1.4MHz

Lowest Channel / 64QAM

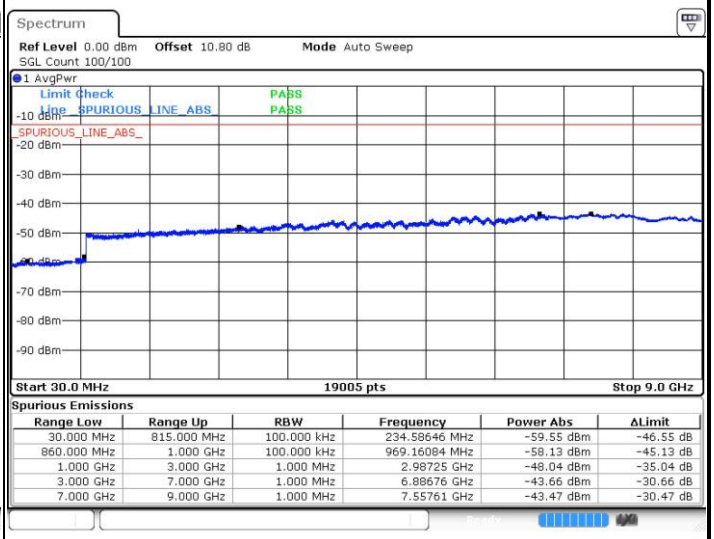


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	801.46552 MHz	-59.27 dBm	-46.27 dB
860.000 MHz	1.000 GHz	100.000 kHz	994.61538 MHz	-58.38 dBm	-45.38 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98025 GHz	-48.21 dBm	-35.21 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.79328 GHz	-43.57 dBm	-30.57 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55311 GHz	-43.50 dBm	-30.50 dB

Date: 10.SEP.2018 23:17:32

Middle Channel / 64QAM

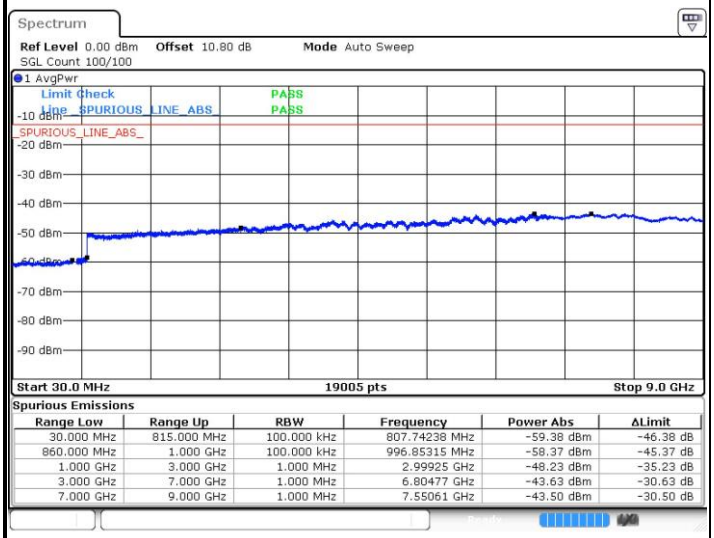


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	234.58646 MHz	-59.55 dBm	-46.55 dB
860.000 MHz	1.000 GHz	100.000 kHz	969.16084 MHz	-58.13 dBm	-45.13 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98725 GHz	-48.04 dBm	-35.04 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.88676 GHz	-43.66 dBm	-30.66 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55761 GHz	-43.47 dBm	-30.47 dB

Date: 10.SEP.2018 23:18:45

Highest Channel / 64QAM



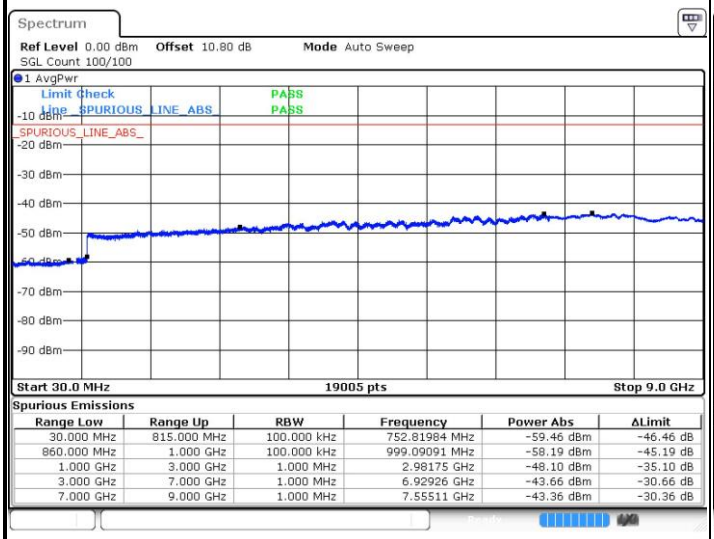
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	807.74238 MHz	-59.38 dBm	-46.38 dB
860.000 MHz	1.000 GHz	100.000 kHz	996.85315 MHz	-58.37 dBm	-45.37 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99925 GHz	-48.23 dBm	-35.23 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.80477 GHz	-43.63 dBm	-30.63 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55061 GHz	-43.50 dBm	-30.50 dB

Date: 10.SEP.2018 23:23:19

LTE Band 5 / 3MHz

Lowest Channel / 64QAM

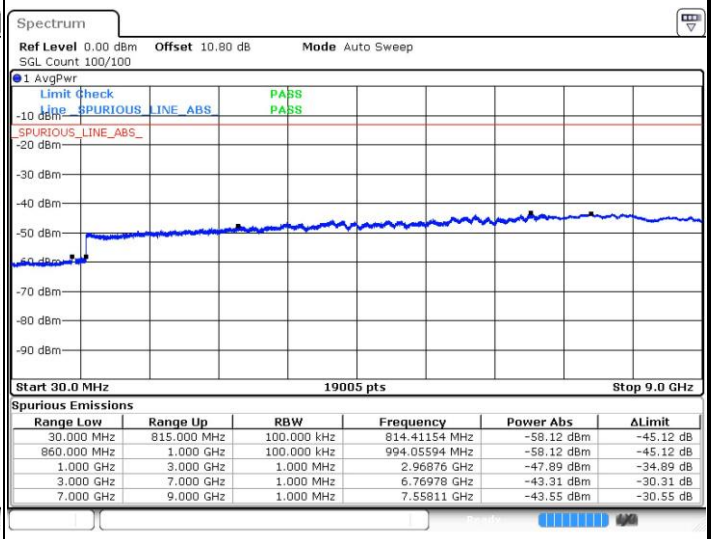


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	752.81984 MHz	-59.46 dBm	-46.46 dB
860.000 MHz	1.000 GHz	100.000 kHz	999.09091 MHz	-58.19 dBm	-45.19 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98175 GHz	-48.10 dBm	-35.10 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92926 GHz	-43.66 dBm	-30.66 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55511 GHz	-43.36 dBm	-30.36 dB

Date: 10.SEP.2018 22:46:28

Middle Channel / 64QAM

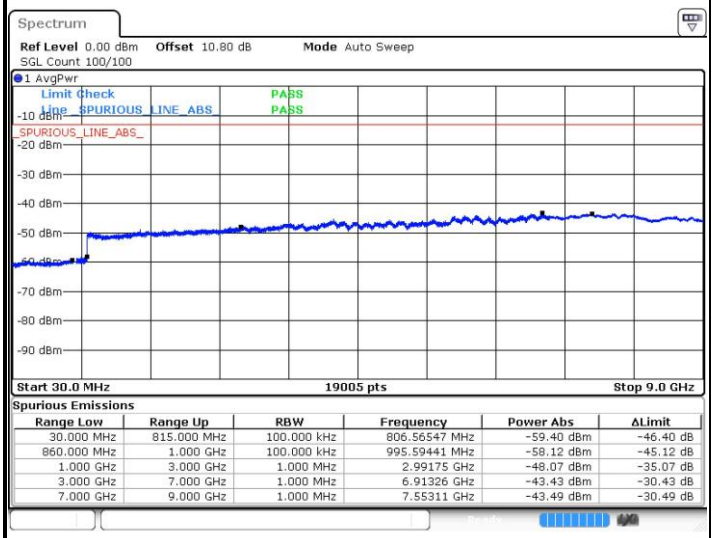


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.41154 MHz	-58.12 dBm	-45.12 dB
860.000 MHz	1.000 GHz	100.000 kHz	994.05594 MHz	-58.12 dBm	-45.12 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96876 GHz	-47.89 dBm	-34.89 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.76978 GHz	-43.31 dBm	-30.31 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55811 GHz	-43.55 dBm	-30.55 dB

Date: 10.SEP.2018 22:47:41

Highest Channel / 64QAM



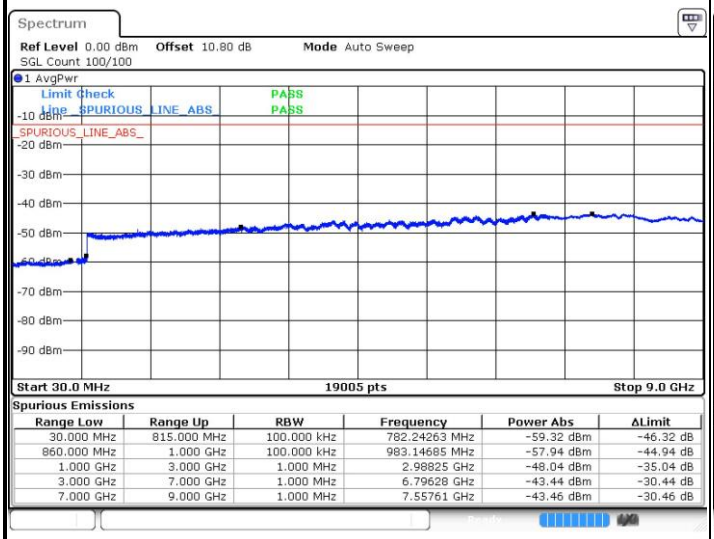
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	806.56547 MHz	-59.40 dBm	-46.40 dB
860.000 MHz	1.000 GHz	100.000 kHz	995.59441 MHz	-58.12 dBm	-45.12 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99175 GHz	-48.07 dBm	-35.07 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91326 GHz	-43.43 dBm	-30.43 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55311 GHz	-43.49 dBm	-30.49 dB

Date: 10.SEP.2018 22:52:15

LTE Band 5 / 5MHz

Lowest Channel / 64QAM

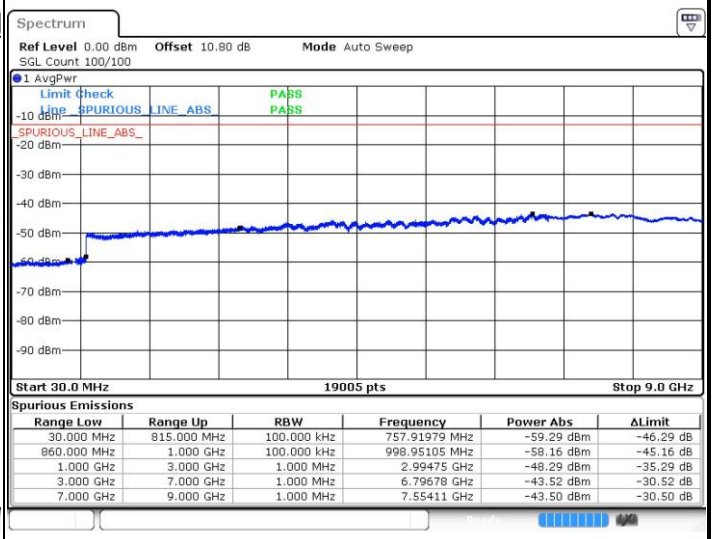


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	782.24263 MHz	-59.32 dBm	-46.32 dB
860.000 MHz	1.000 GHz	100.000 kHz	983.14685 MHz	-57.94 dBm	-44.94 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98825 GHz	-48.04 dBm	-35.04 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.79628 GHz	-43.44 dBm	-30.44 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55761 GHz	-43.46 dBm	-30.46 dB

Date: 10.SEP.2018 22:56:49

Middle Channel / 64QAM

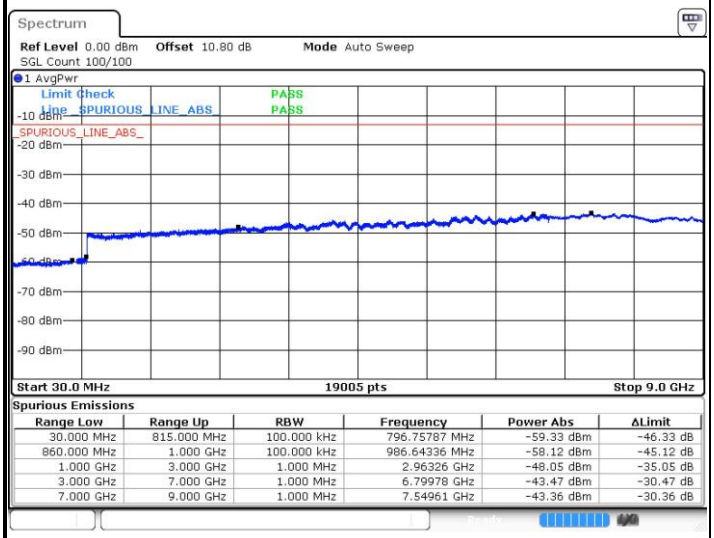


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	757.91979 MHz	-59.29 dBm	-46.29 dB
860.000 MHz	1.000 GHz	100.000 kHz	998.95105 MHz	-58.16 dBm	-45.16 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99475 GHz	-48.29 dBm	-35.29 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.79678 GHz	-43.52 dBm	-30.52 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.55411 GHz	-43.50 dBm	-30.50 dB

Date: 10.SEP.2018 22:58:03

Highest Channel / 64QAM



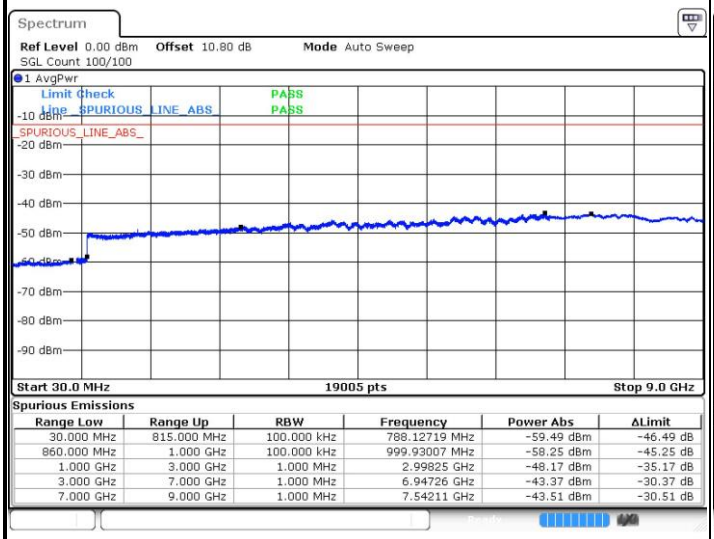
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	796.75787 MHz	-59.33 dBm	-46.33 dB
860.000 MHz	1.000 GHz	100.000 kHz	986.64336 MHz	-58.12 dBm	-45.12 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96326 GHz	-48.05 dBm	-35.05 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.79978 GHz	-43.47 dBm	-30.47 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.54961 GHz	-43.36 dBm	-30.36 dB

Date: 10.SEP.2018 23:02:37

LTE Band 5 / 10MHz

Lowest Channel / 64QAM

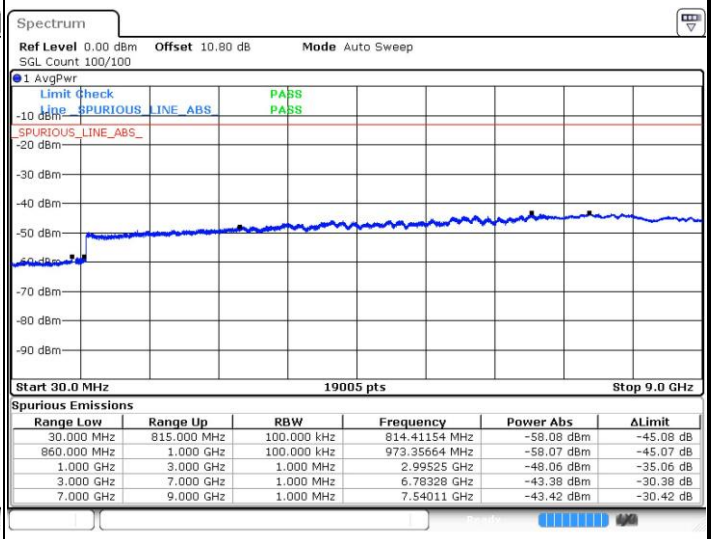


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	788.12719 MHz	-59.49 dBm	-46.49 dB
860.000 MHz	1.000 GHz	100.000 kHz	999.93007 MHz	-58.25 dBm	-45.25 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99825 GHz	-48.17 dBm	-35.17 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94726 GHz	-43.37 dBm	-30.37 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.54211 GHz	-43.51 dBm	-30.51 dB

Date: 10.SEP.2018 23:07:10

Middle Channel / 64QAM

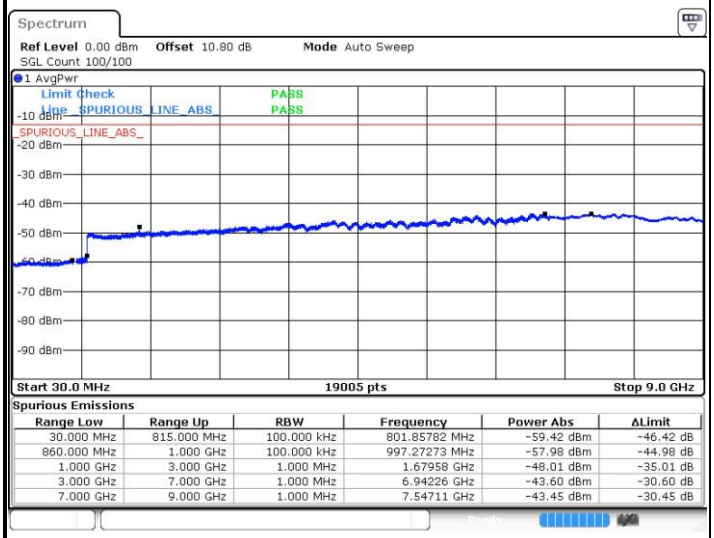


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.41154 MHz	-58.08 dBm	-45.08 dB
860.000 MHz	1.000 GHz	100.000 kHz	973.35664 MHz	-58.07 dBm	-45.07 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99525 GHz	-48.06 dBm	-35.06 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.78328 GHz	-43.38 dBm	-30.38 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.54011 GHz	-43.42 dBm	-30.42 dB

Date: 10.SEP.2018 23:08:24

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	801.85782 MHz	-59.42 dBm	-46.42 dB
860.000 MHz	1.000 GHz	100.000 kHz	997.27273 MHz	-57.98 dBm	-44.98 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67958 GHz	-48.01 dBm	-35.01 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94226 GHz	-43.60 dBm	-30.60 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.54711 GHz	-43.45 dBm	-30.45 dB

Date: 10.SEP.2018 23:12:58

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	0.0027	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0080	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0069	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0093	
-30	Normal Voltage	0.0029	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0007	

Note:

1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.5 V.；Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

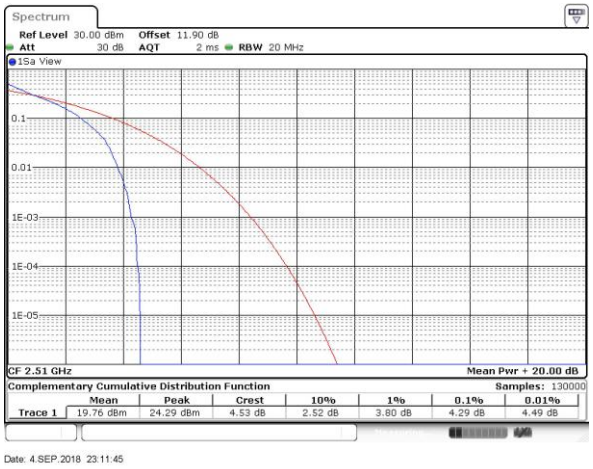
LTE Band 7

Peak-to-Average Ratio

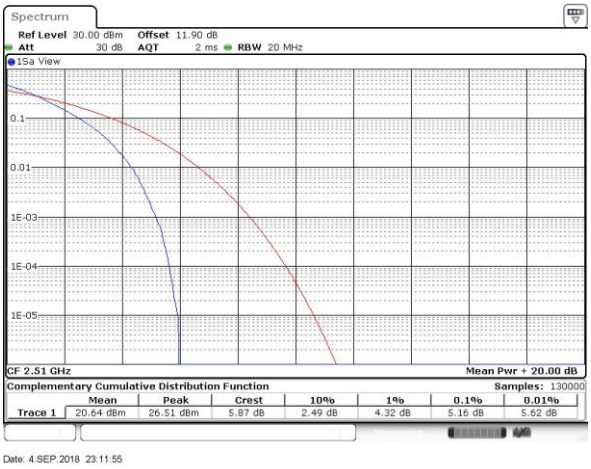
Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.29	5.16	5.36	6.12	PASS
Middle CH	5.16	5.33	6.12	6.29	
Highest CH	4.32	5.1	5.57	6.2	
Mode	LTE Band 7 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.86	6.43	-	-	PASS
Middle CH	6.81	6.67	-	-	
Highest CH	6.20	6.43	-	-	

LTE Band 7 / 20MHz / QPSK

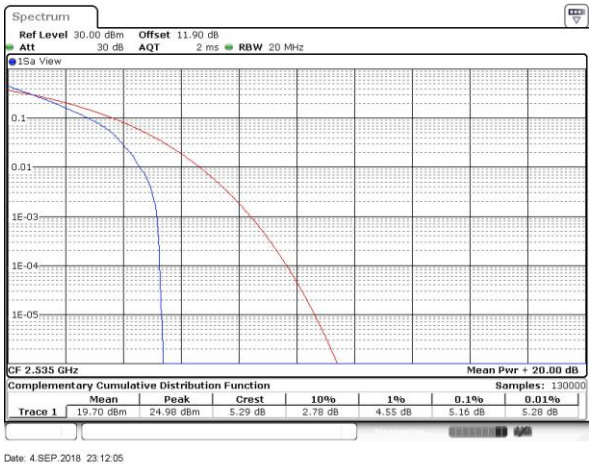
Lowest Channel / 1RB



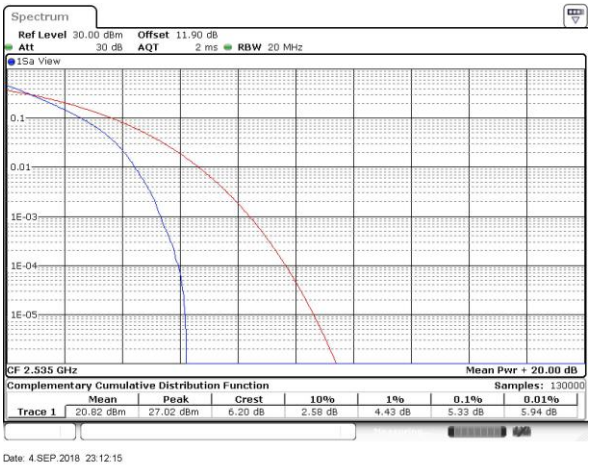
Lowest Channel / Full RB



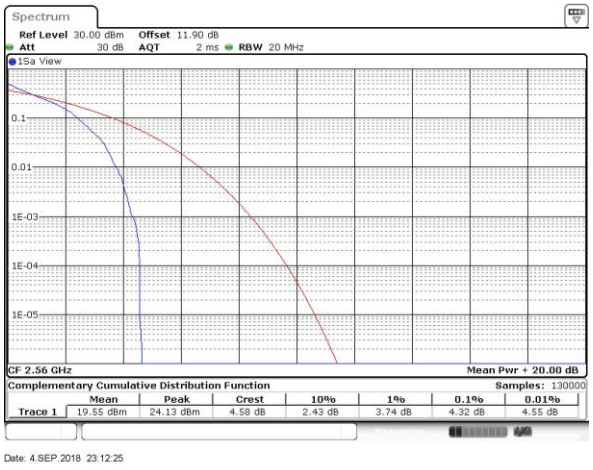
Middle Channel / 1RB



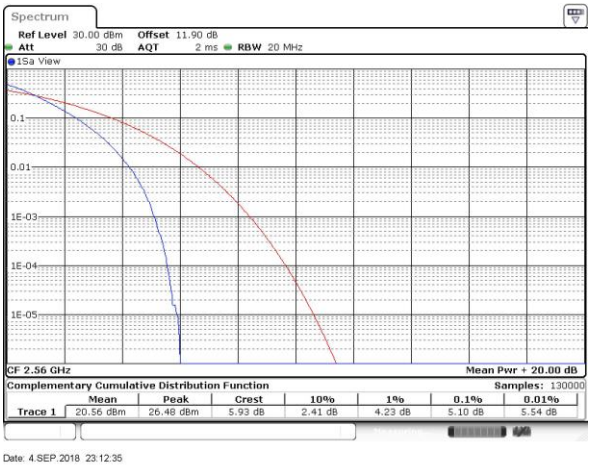
Middle Channel / Full RB



Highest Channel / 1RB

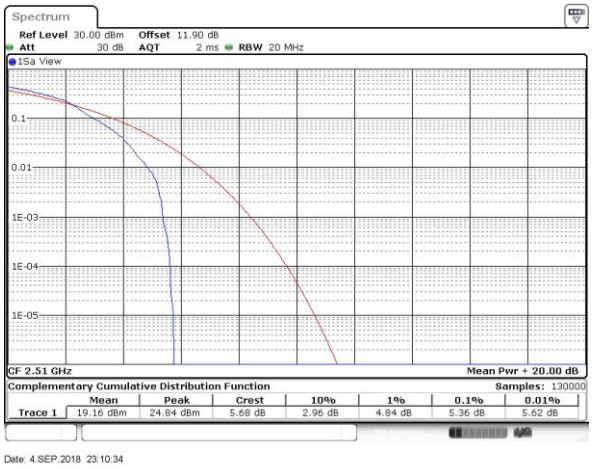


Highest Channel / Full RB

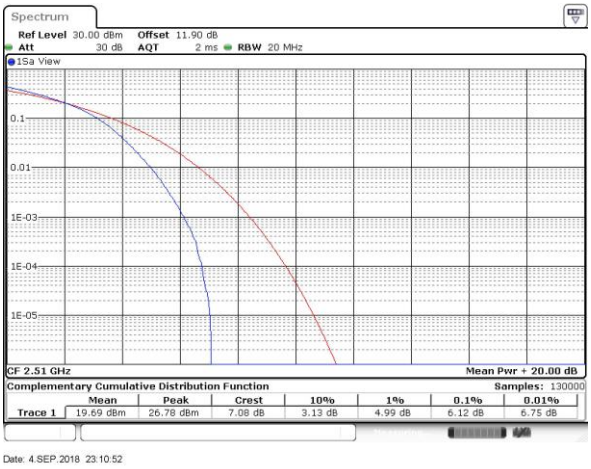


LTE Band 7 / 20MHz / 16QAM

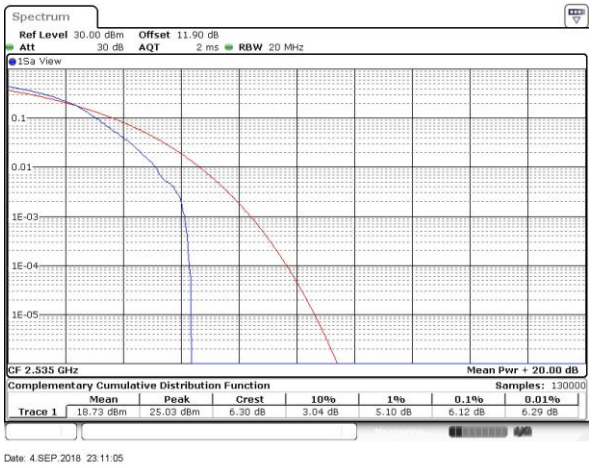
Lowest Channel / 1RB



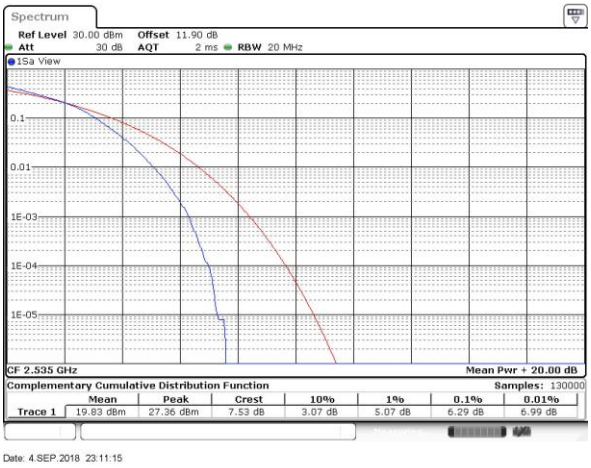
Lowest Channel / Full RB



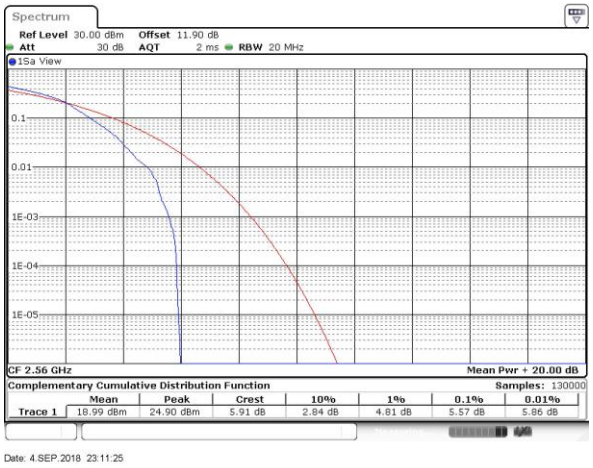
Middle Channel / 1RB



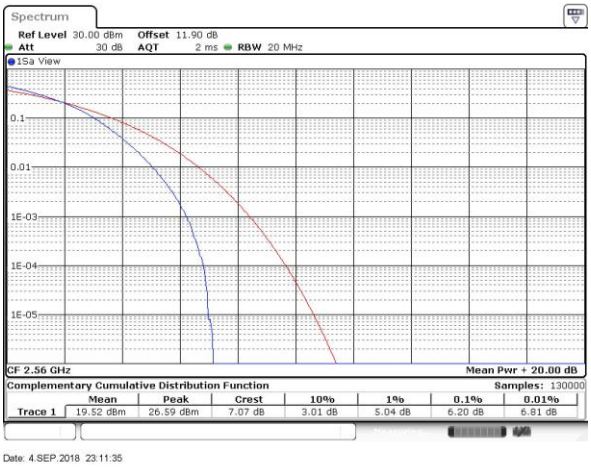
Middle Channel / Full RB



Highest Channel / 1RB

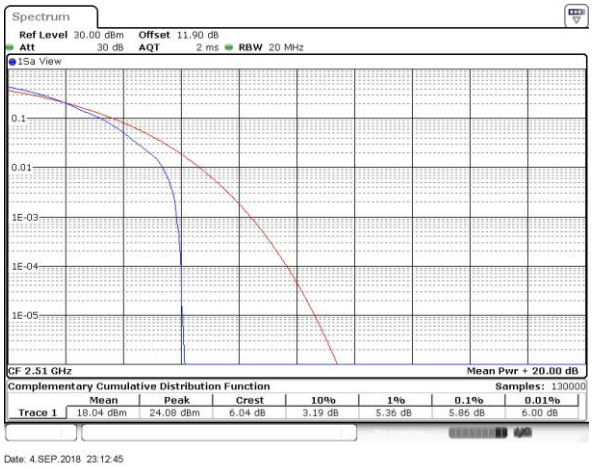


Highest Channel / Full RB

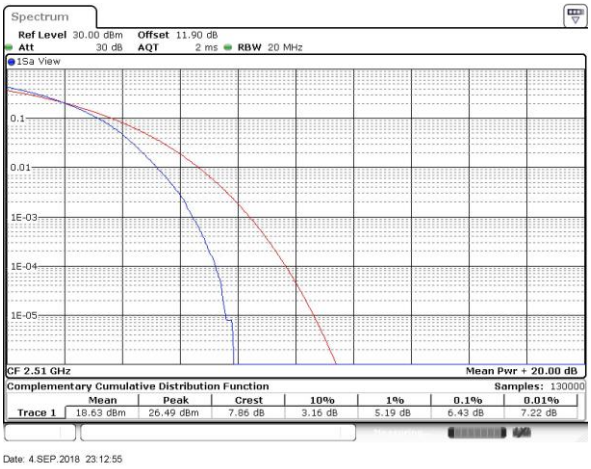


LTE Band 7 / 20MHz / 64QAM

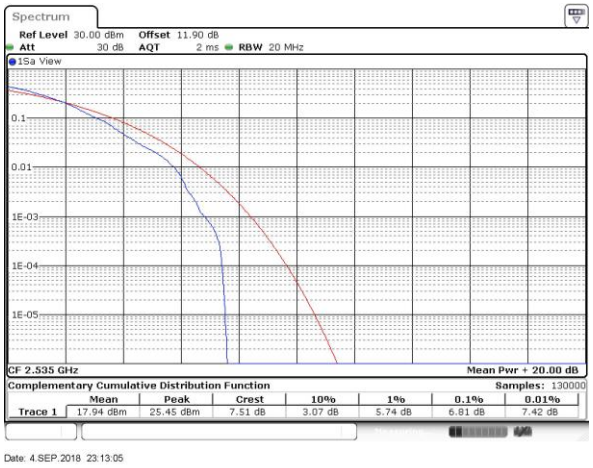
Lowest Channel / 1RB



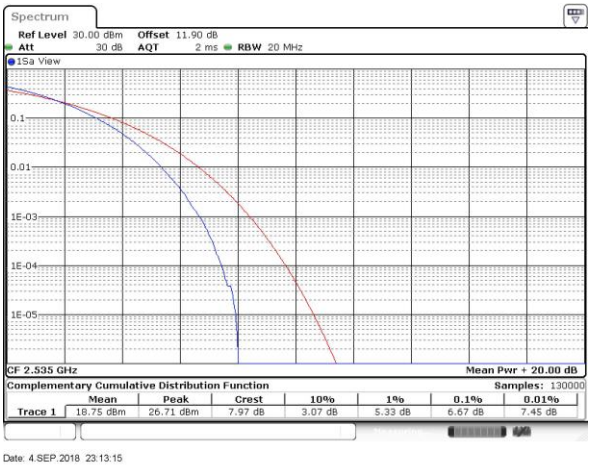
Lowest Channel / Full RB



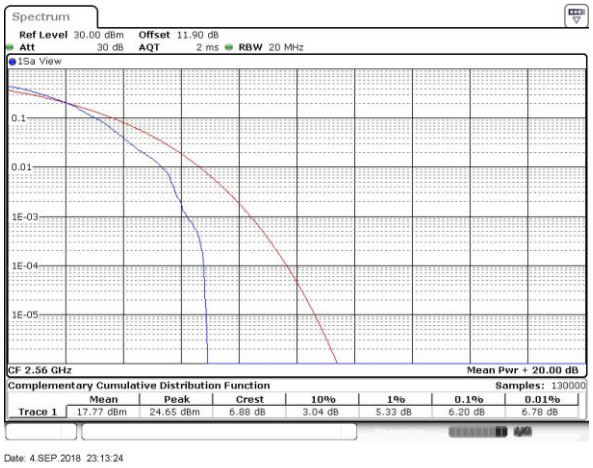
Middle Channel / 1RB



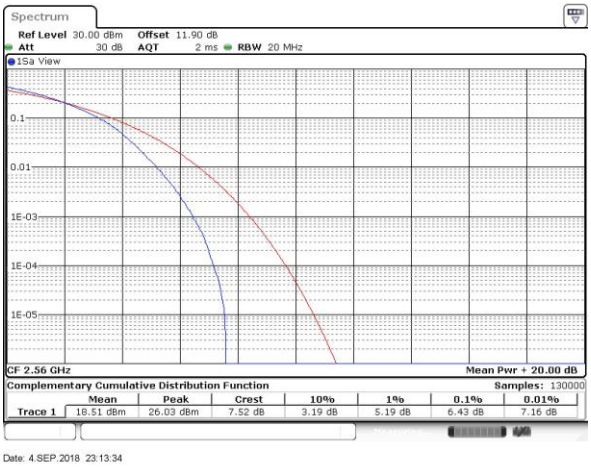
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

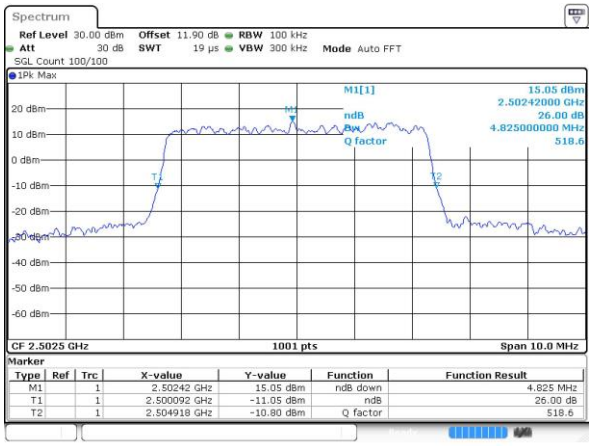


26dB Bandwidth

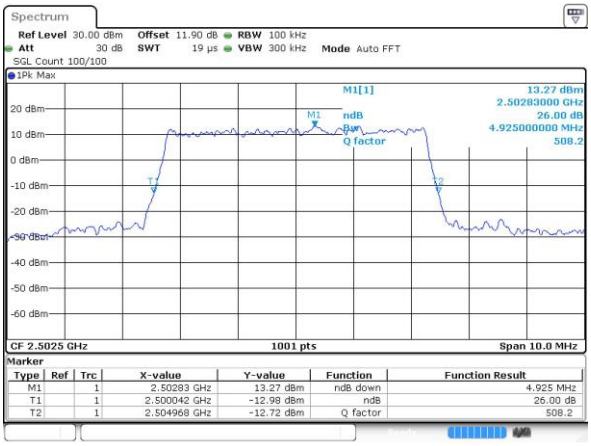
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.83	4.93	9.71	9.73	14.24	14.51	20.14	20.06
Middle CH	-	-	-	-	4.88	4.90	9.77	9.65	14.39	14.48	20.18	20.18
Highest CH	-	-	-	-	4.89	4.83	9.73	9.85	14.24	14.51	20.02	20.06
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.88	-	9.73	-	14.18	-	20.10	-
Middle CH	-	-	-	-	4.94	-	9.97	-	14.36	-	20.18	-
Highest CH	-	-	-	-	4.87	-	9.75	-	14.36	-	20.14	-

LTE Band 7

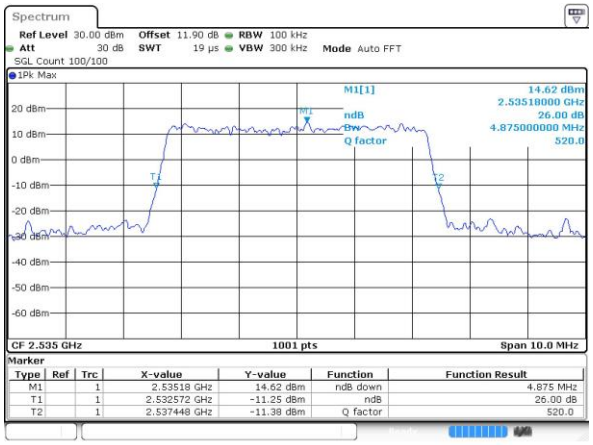
Lowest Channel / 5MHz / QPSK



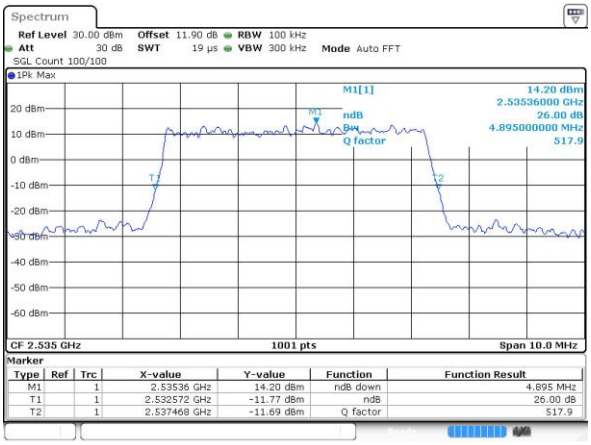
Lowest Channel / 5MHz / 16QAM



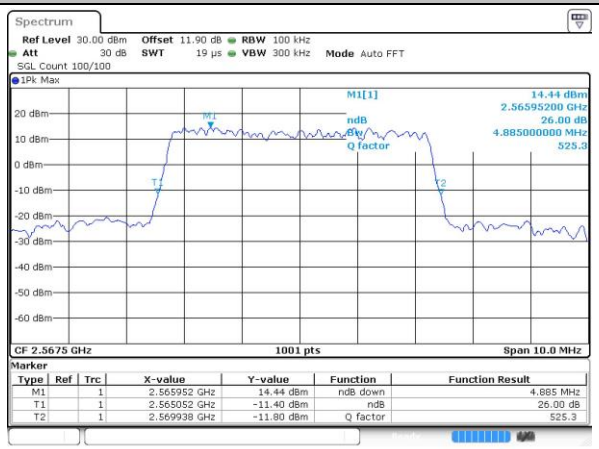
Middle Channel / 5MHz / QPSK



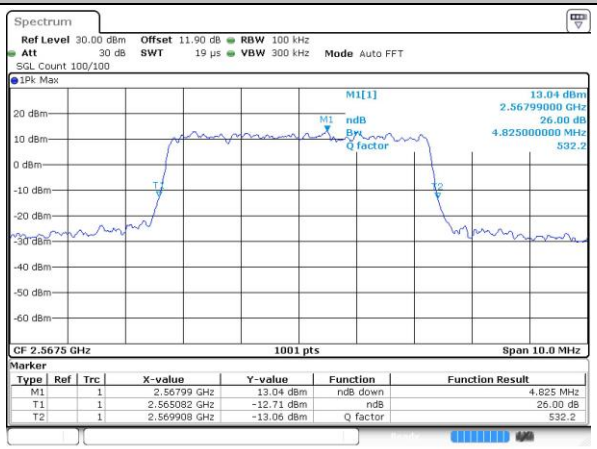
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

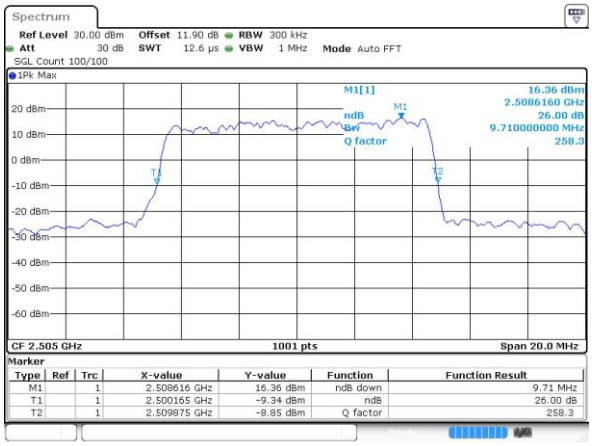


Highest Channel / 5MHz / 16QAM

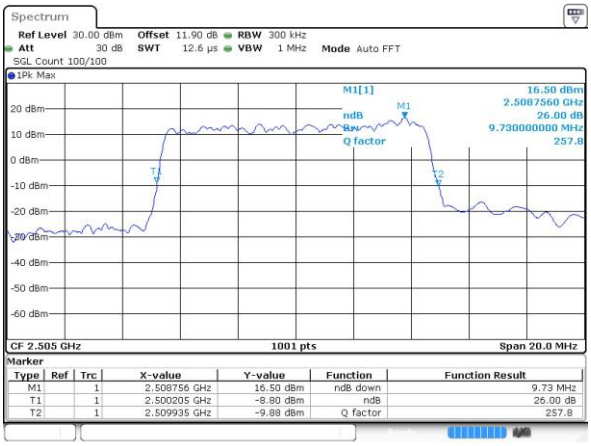


LTE Band 7

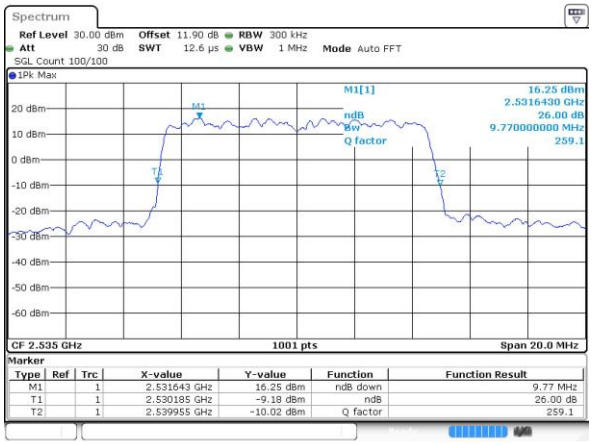
Lowest Channel / 10MHz / QPSK



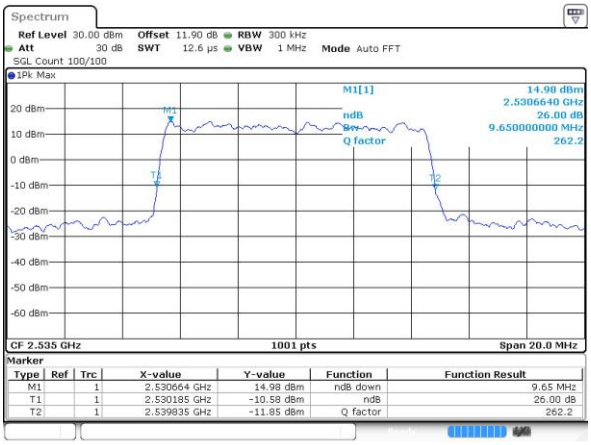
Lowest Channel / 10MHz / 16QAM



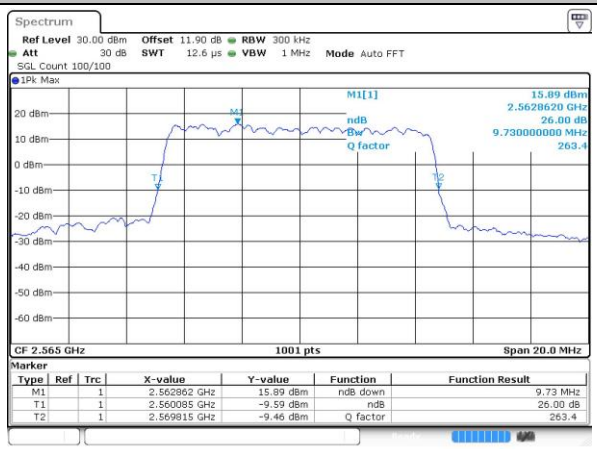
Middle Channel / 10MHz / QPSK



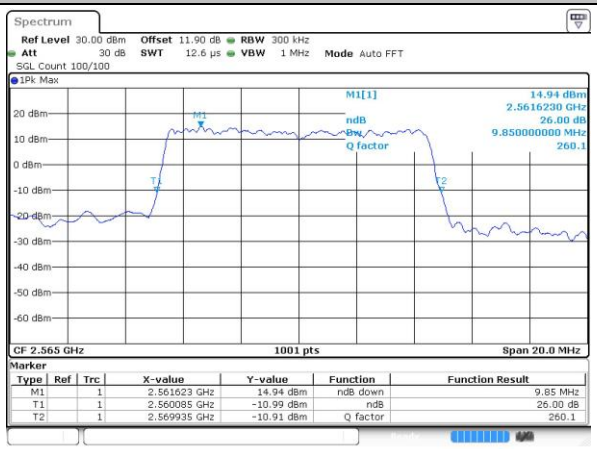
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

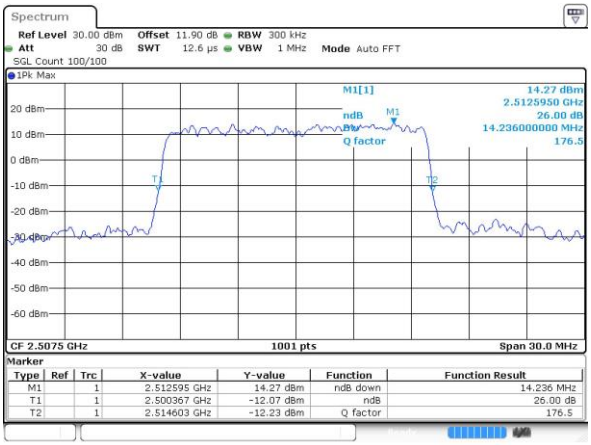


Highest Channel / 10MHz / 16QAM

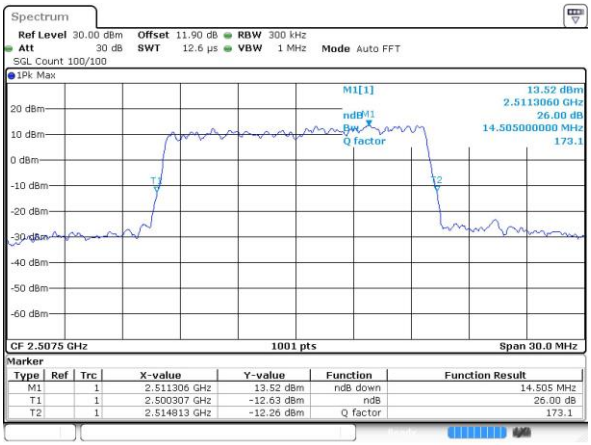


LTE Band 7

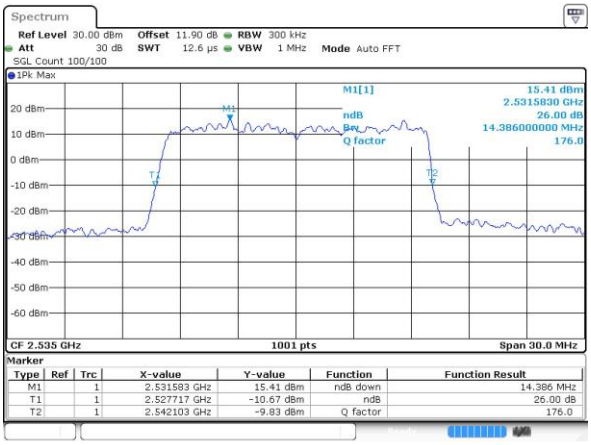
Lowest Channel / 15MHz / QPSK



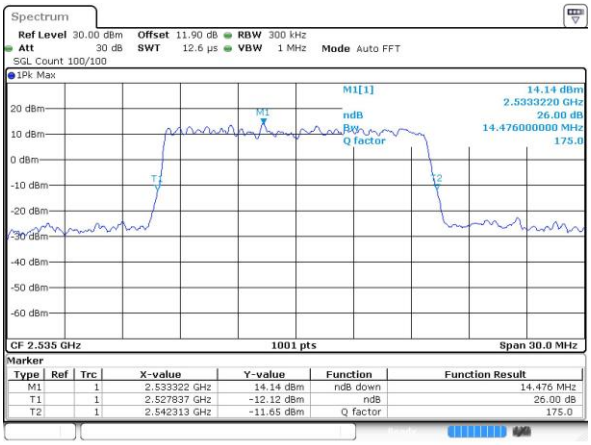
Lowest Channel / 15MHz / 16QAM



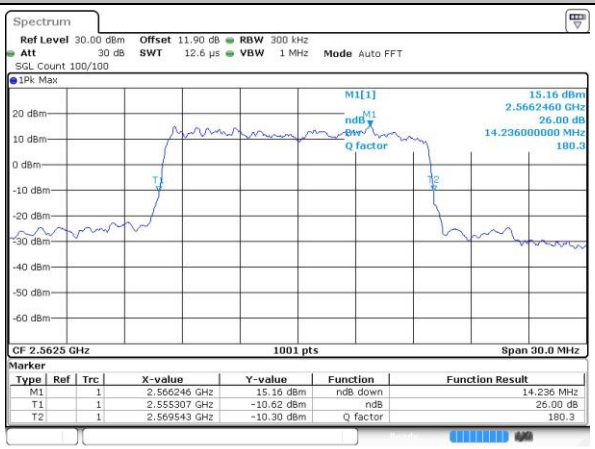
Middle Channel / 15MHz / QPSK



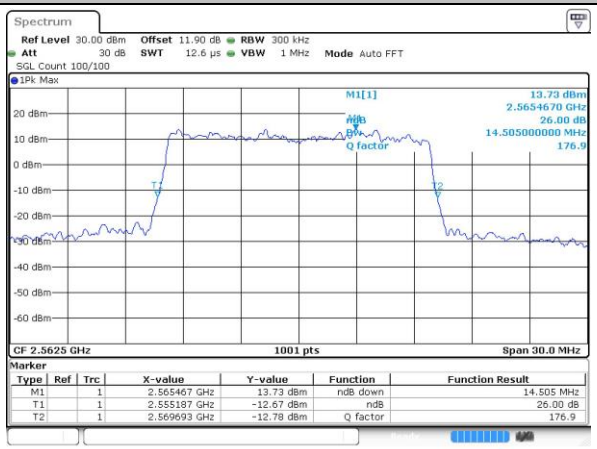
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

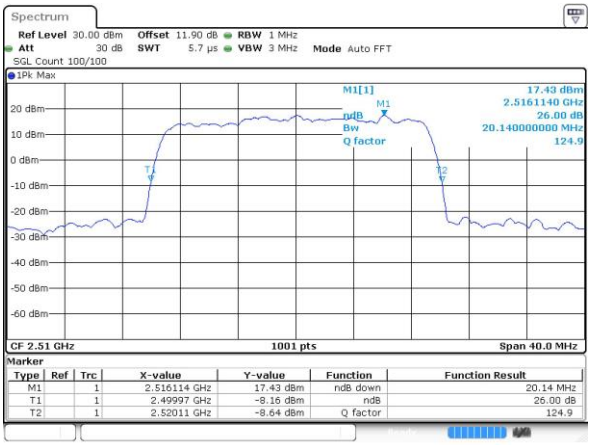


Highest Channel / 15MHz / 16QAM

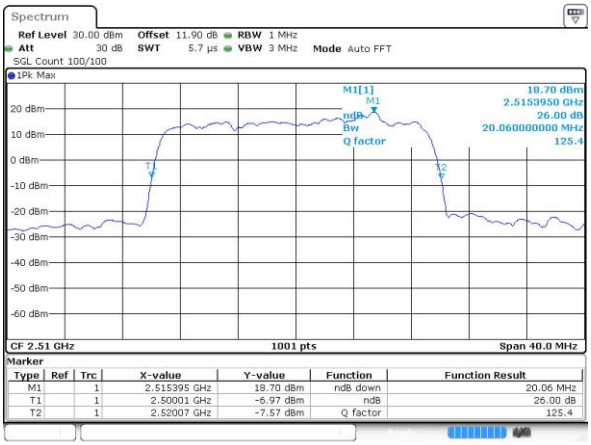


LTE Band 7

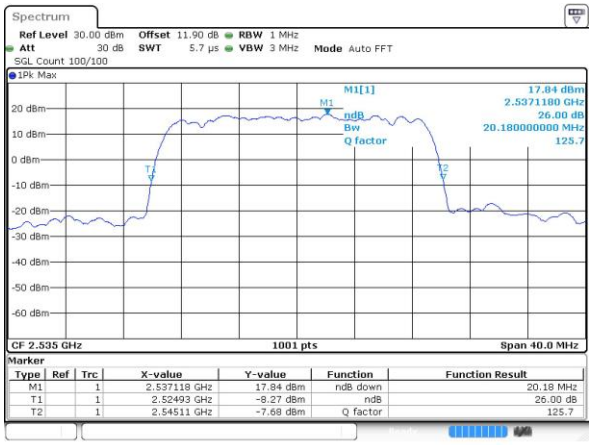
Lowest Channel / 20MHz / QPSK



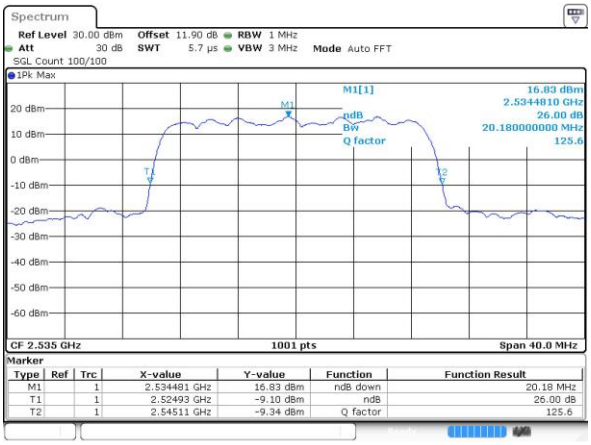
Lowest Channel / 20MHz / 16QAM



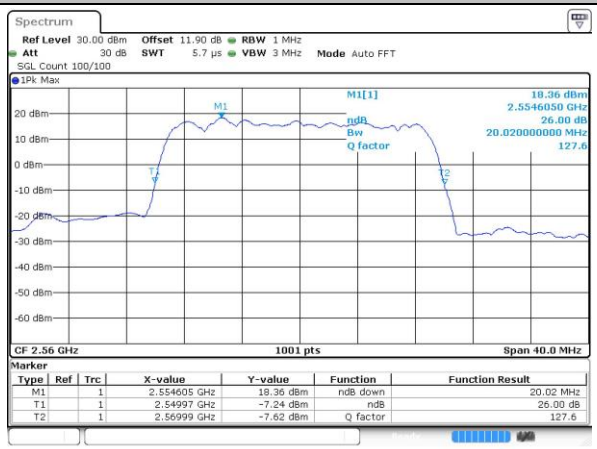
Middle Channel / 20MHz / QPSK



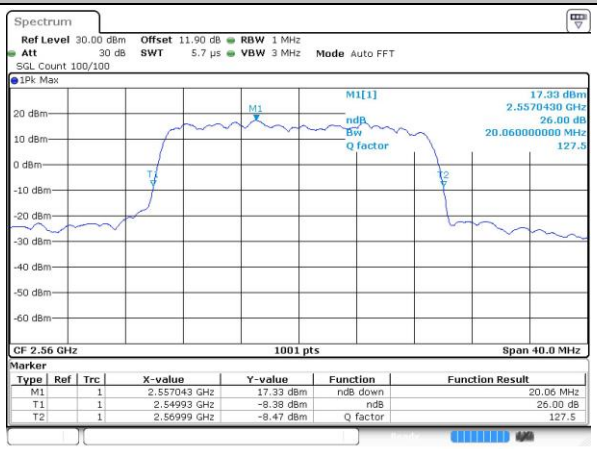
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK

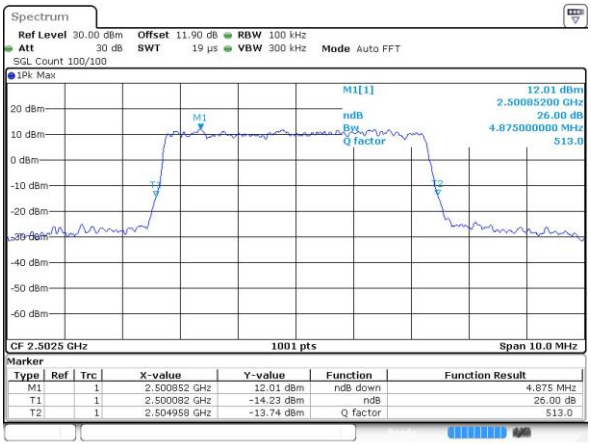


Highest Channel / 20MHz / 16QAM

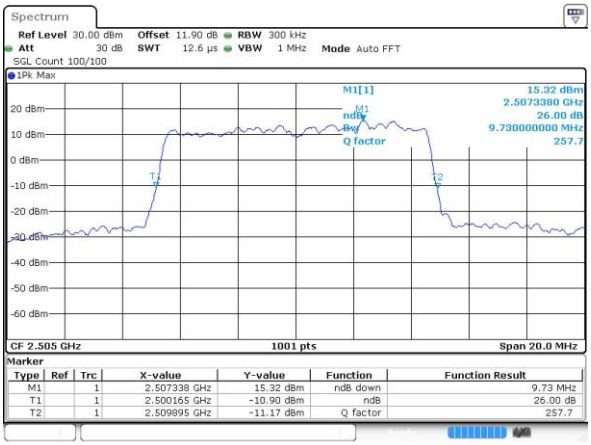


LTE Band 7

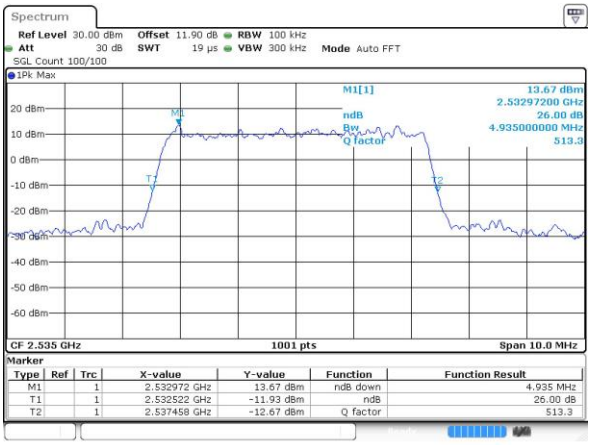
Lowest Channel / 5MHz / 64QAM



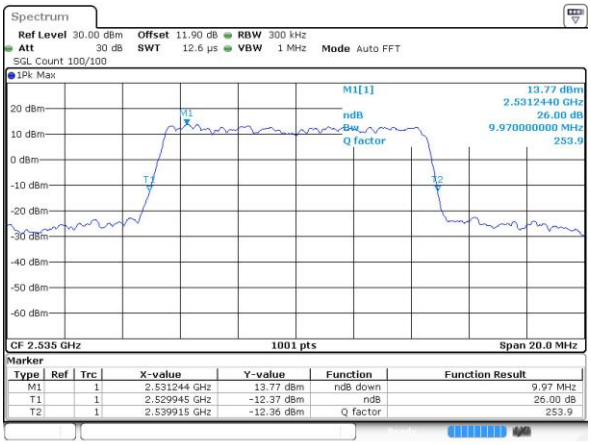
Lowest Channel / 10MHz / 64QAM



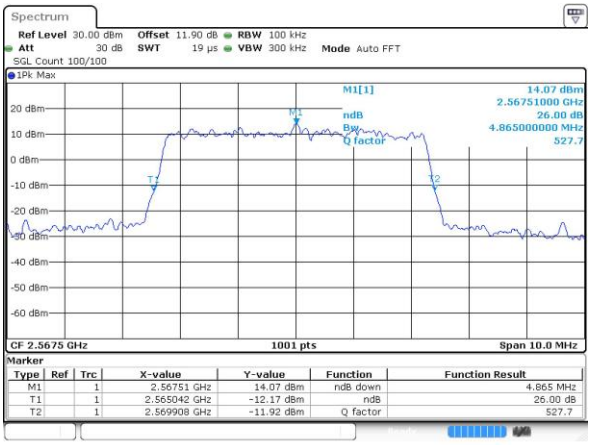
Middle Channel / 5MHz / 64QAM



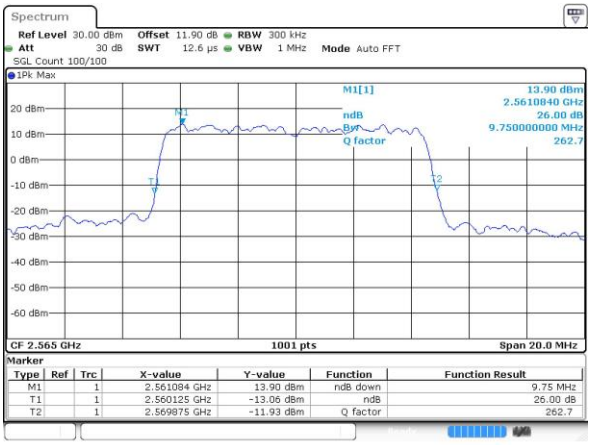
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

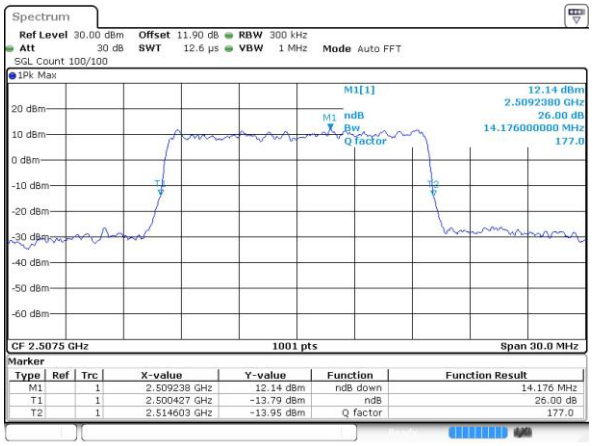


Highest Channel / 10MHz / 64QAM

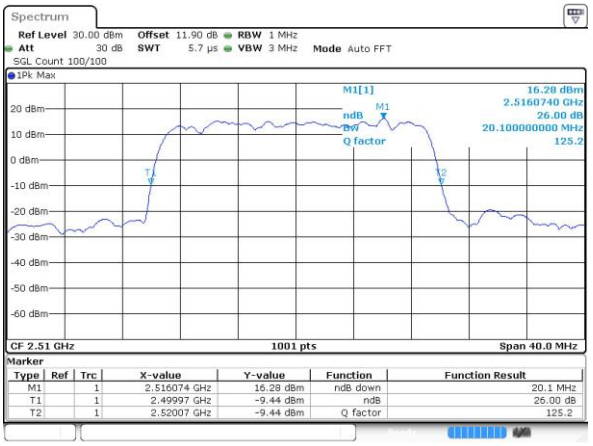


LTE Band 7

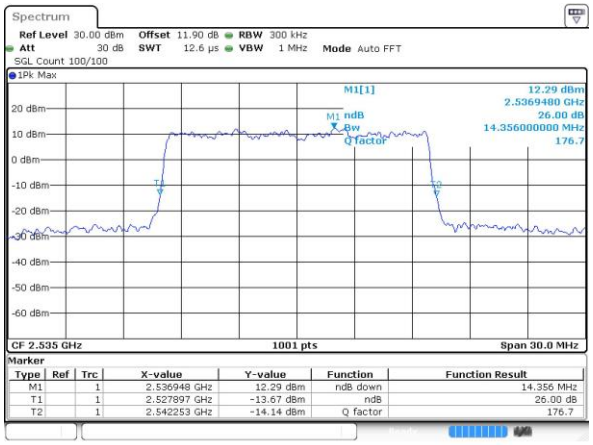
Lowest Channel / 15MHz / 64QAM



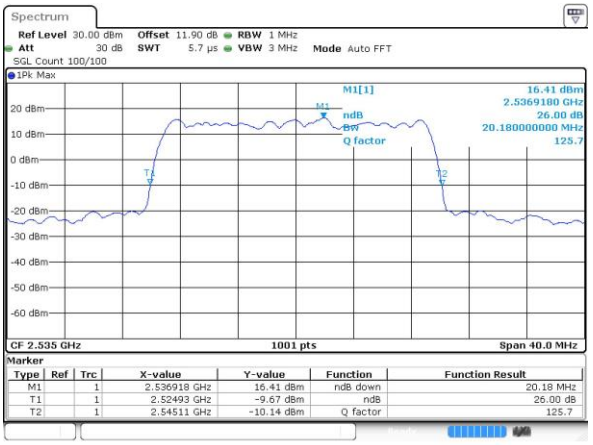
Lowest Channel / 20MHz / 64QAM



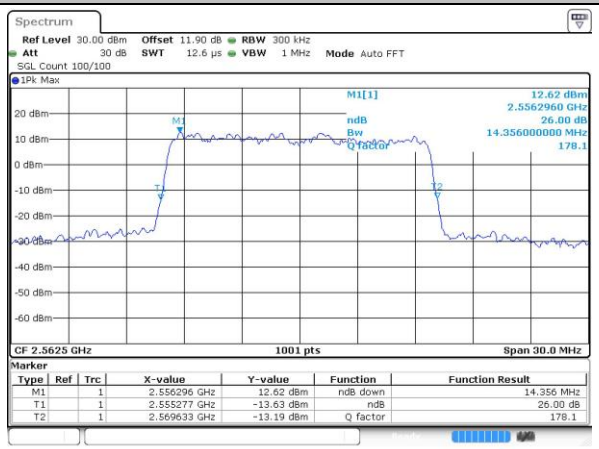
Middle Channel / 15MHz / 64QAM



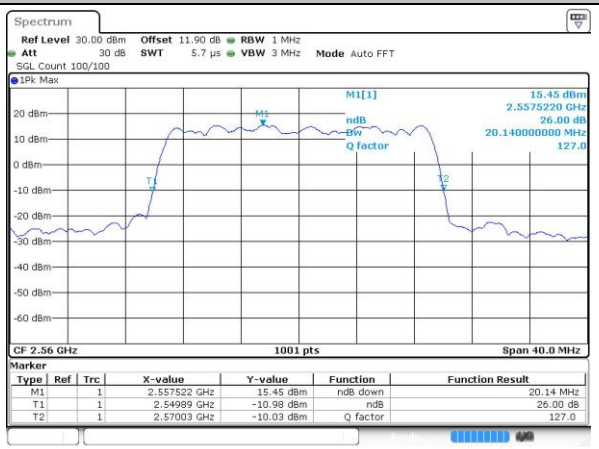
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM

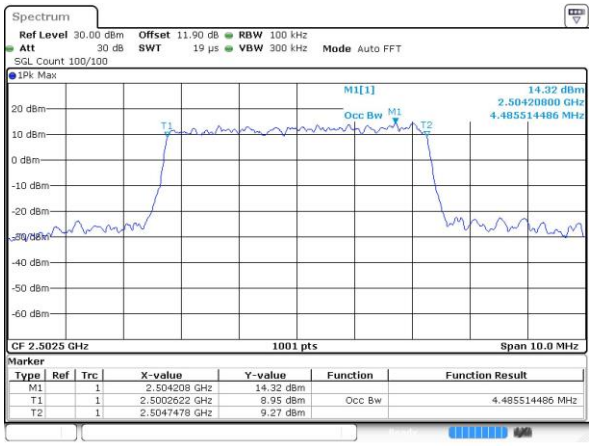


Occupied Bandwidth

Mode	LTE Band 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	-	-	-	-	4.49	4.5	9.03	9.05	13.43	13.43	18.34	18.42
Middle CH	-	-	-	-	4.48	4.51	9.03	9.05	13.49	13.43	18.38	18.5
Highest CH	-	-	-	-	4.5	4.49	9.03	9.05	13.4	13.4	18.26	18.26
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.51	-	9.03	-	13.37	-	18.26	-
Middle CH	-	-	-	-	4.49	-	9.03	-	13.43	-	18.34	-
Highest CH	-	-	-	-	4.51	-	9.05	-	13.43	-	18.38	-

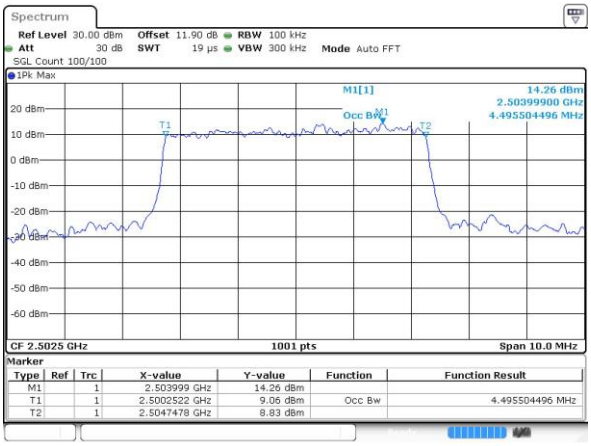
LTE Band 7

Lowest Channel / 5MHz / QPSK



Date: 4.SEP.2018 21:27:02

Lowest Channel / 5MHz / 16QAM



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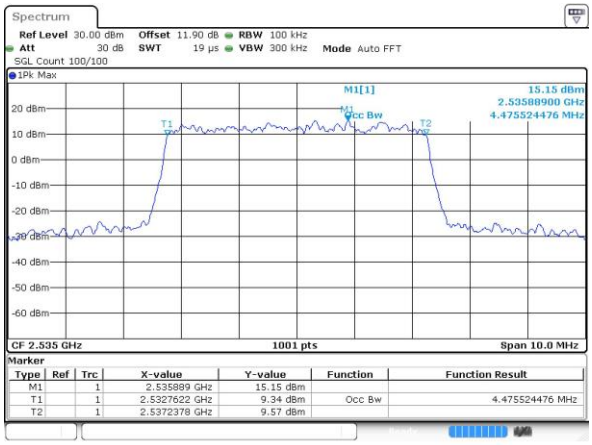
Middle Channel / 5MHz / QPSK



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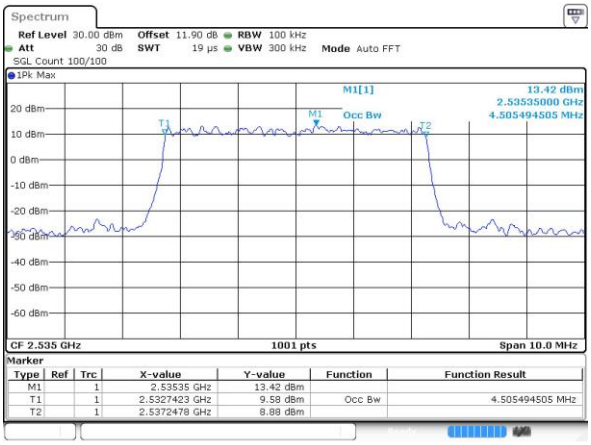
Middle Channel / 5MHz / 16QAM



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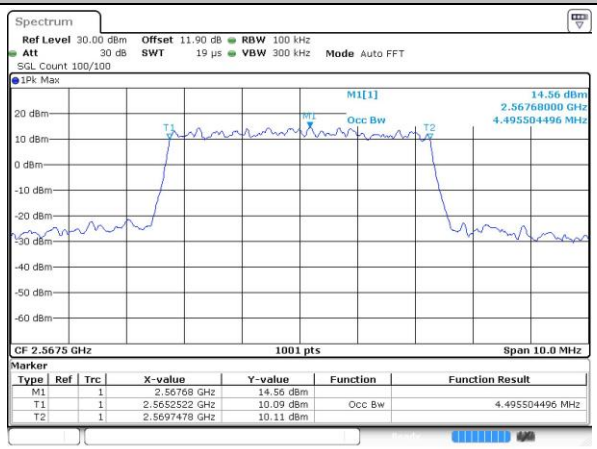
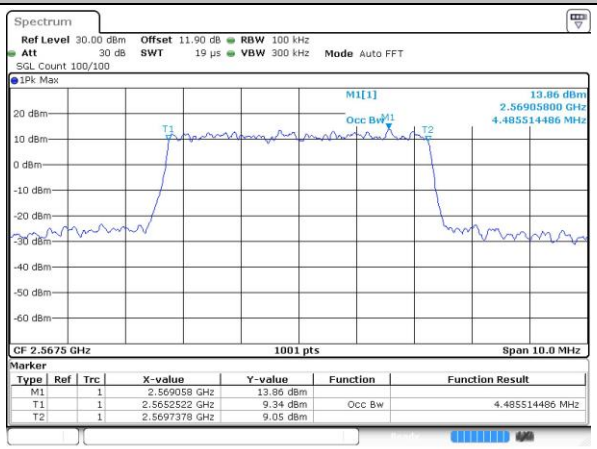
Highest Channel / 5MHz / QPSK



Date: 4.SEP.2018 21:36:34

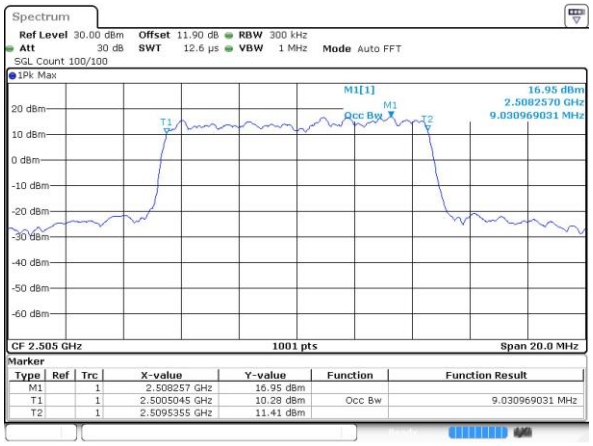
Highest Channel / 5MHz / 16QAM



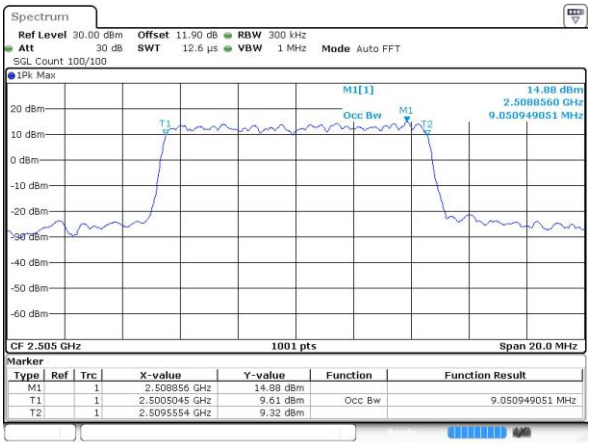
Date: 4.SEP.2018 21:36:46

LTE Band 7

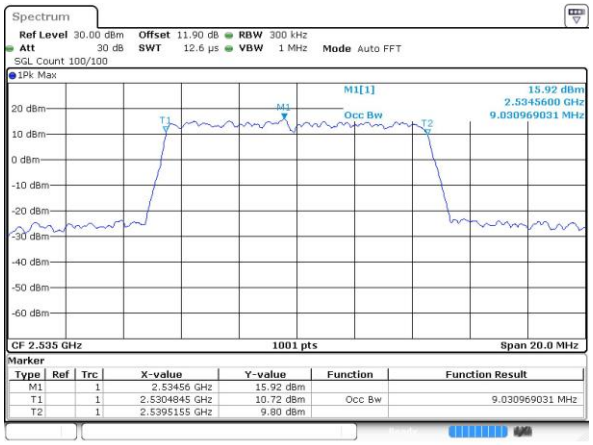
Lowest Channel / 10MHz / QPSK



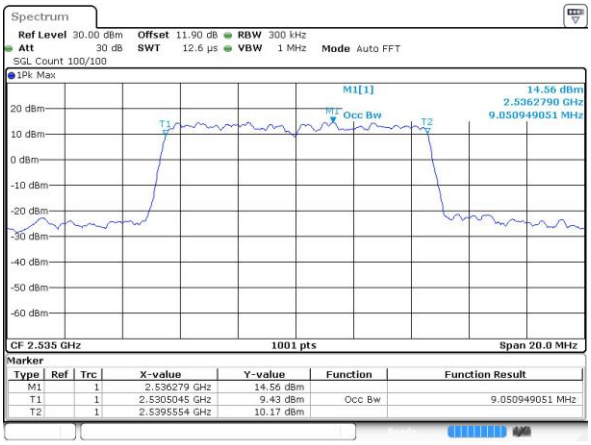
Lowest Channel / 10MHz / 16QAM



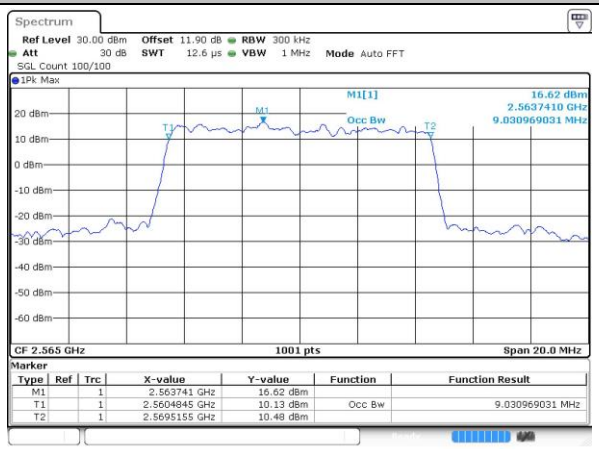
Middle Channel / 10MHz / QPSK



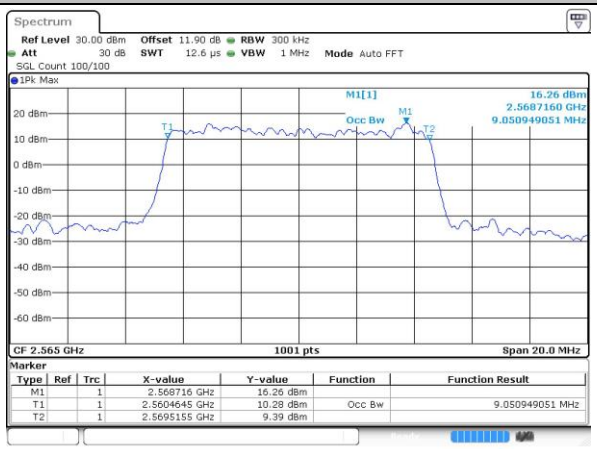
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

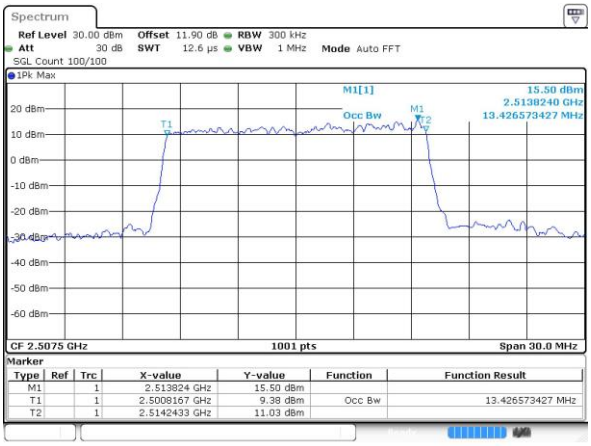


Highest Channel / 10MHz / 16QAM



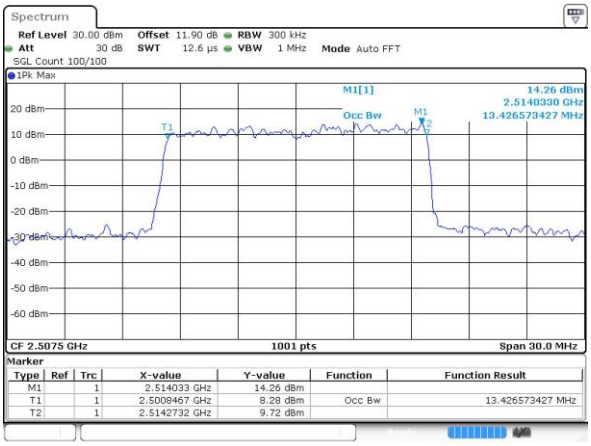
LTE Band 7

Lowest Channel / 15MHz / QPSK



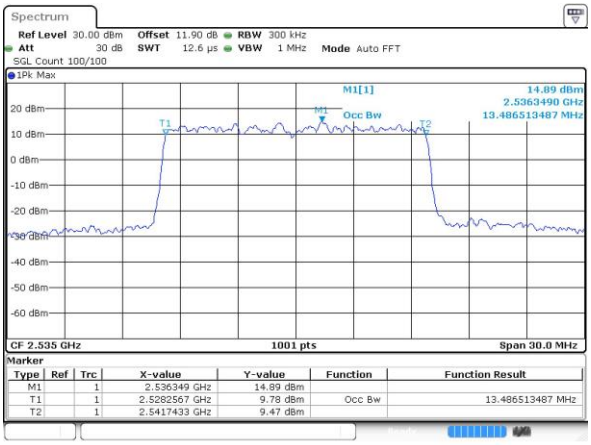
Date: 4.SEP.2018 22:17:02

Lowest Channel / 15MHz / 16QAM



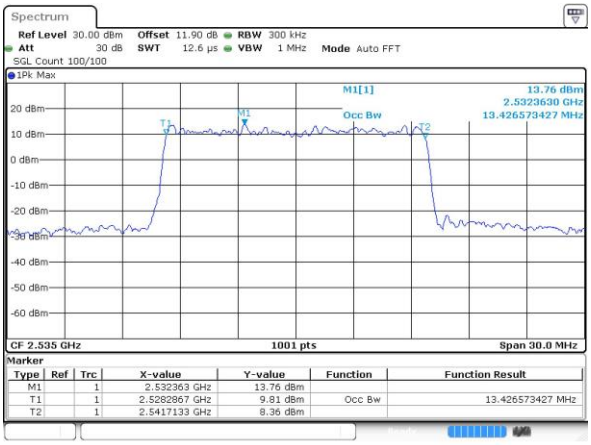
Date: 4.SEP.2018 22:17:14

Middle Channel / 15MHz / QPSK



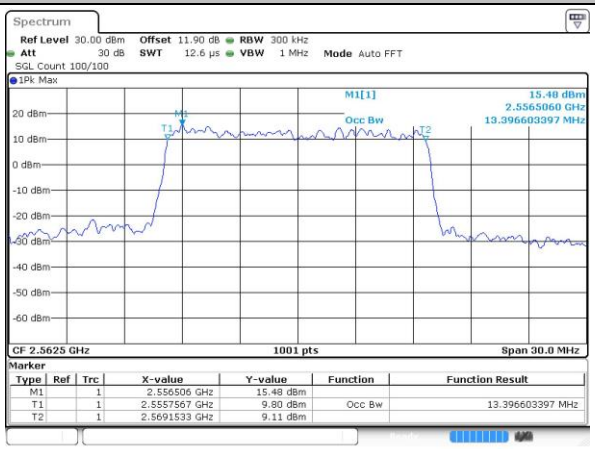
Date: 4.SEP.2018 22:24:10

Middle Channel / 15MHz / 16QAM



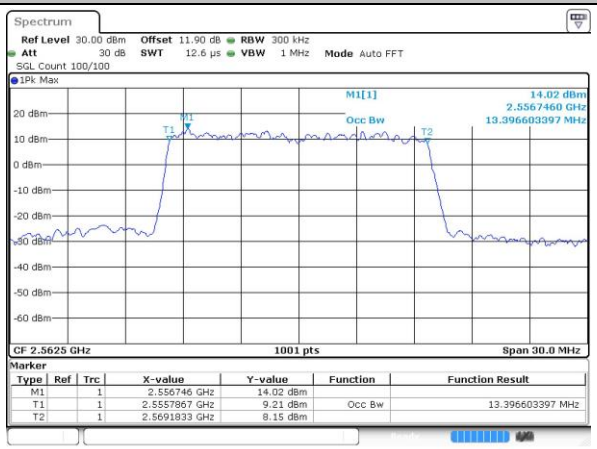
Date: 4.SEP.2018 22:24:21

Highest Channel / 15MHz / QPSK



Date: 4.SEP.2018 22:26:35

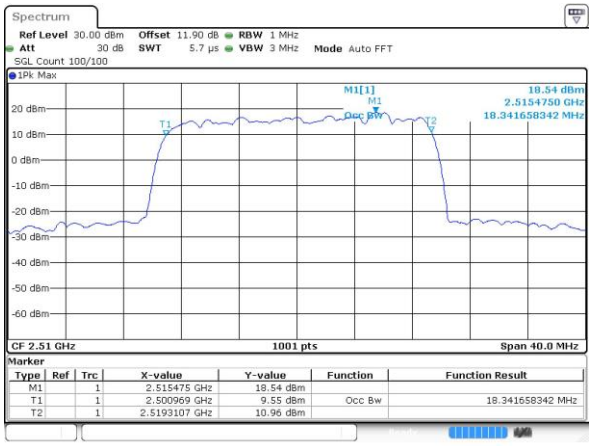
Highest Channel / 15MHz / 16QAM



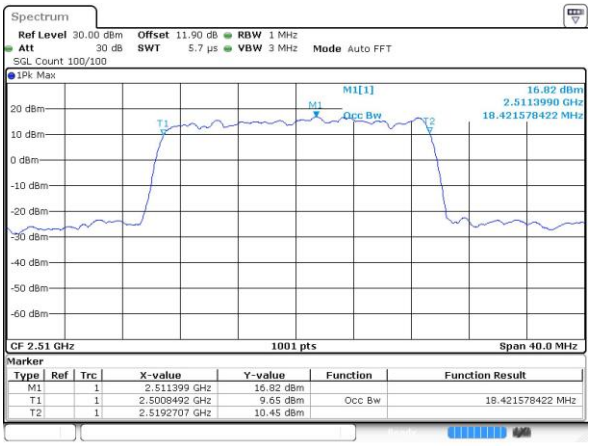
Date: 4.SEP.2018 22:26:46

LTE Band 7

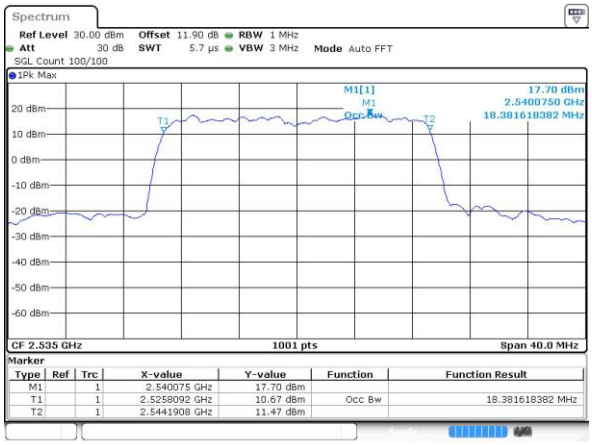
Lowest Channel / 20MHz / QPSK



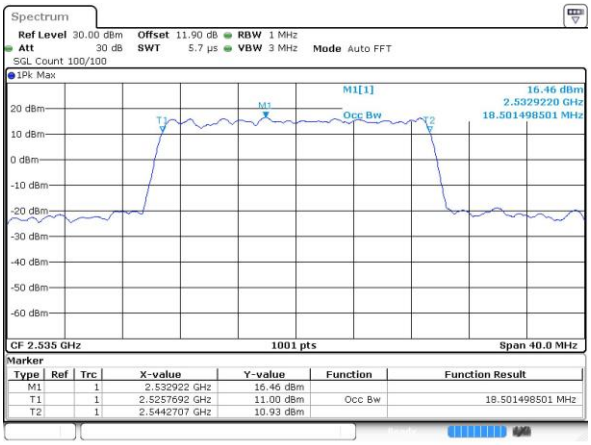
Lowest Channel / 20MHz / 16QAM



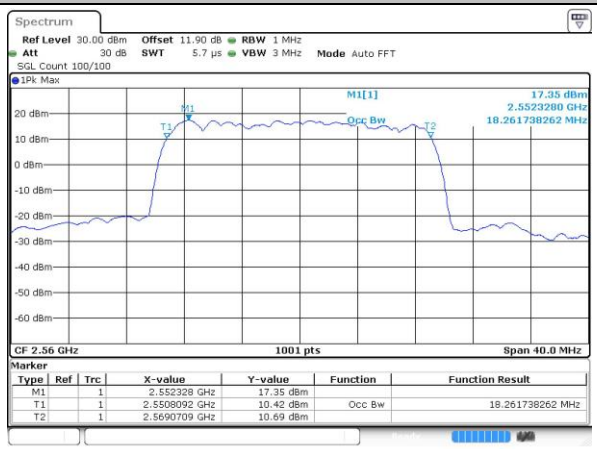
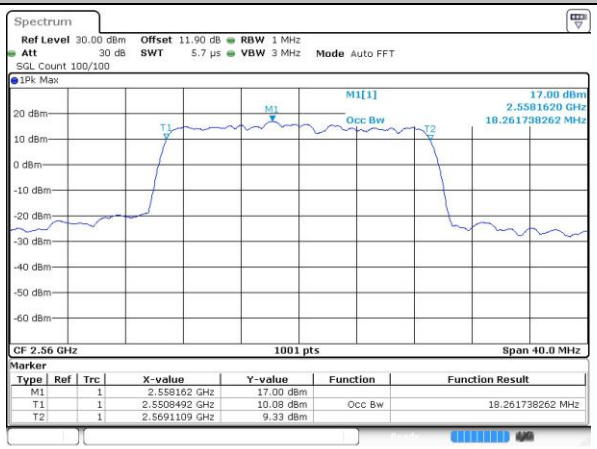
Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM