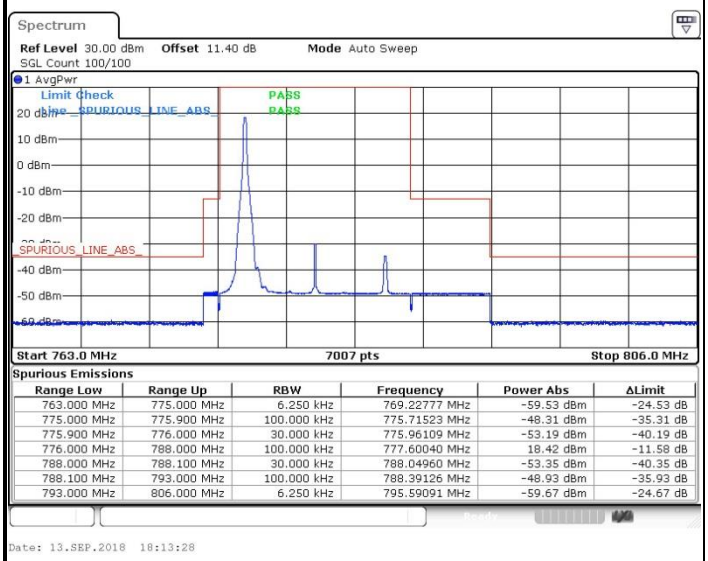
LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

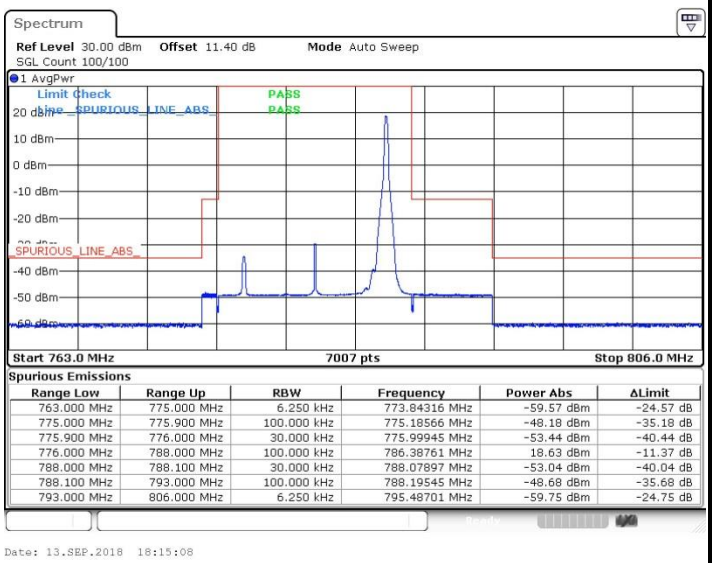


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	769.22777 MHz	-59.53 dBm	-24.53 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.71523 MHz	-48.31 dBm	-35.31 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.96109 MHz	-53.19 dBm	-40.19 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.60040 MHz	18.42 dBm	-11.58 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.04960 MHz	-53.35 dBm	-40.35 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.39126 MHz	-48.93 dBm	-35.93 dB
793.000 MHz	806.000 MHz	6.250 kHz	795.59091 MHz	-59.67 dBm	-24.67 dB

Date: 13.SEP.2018 18:13:28

Highest Band Edge / 1 RB

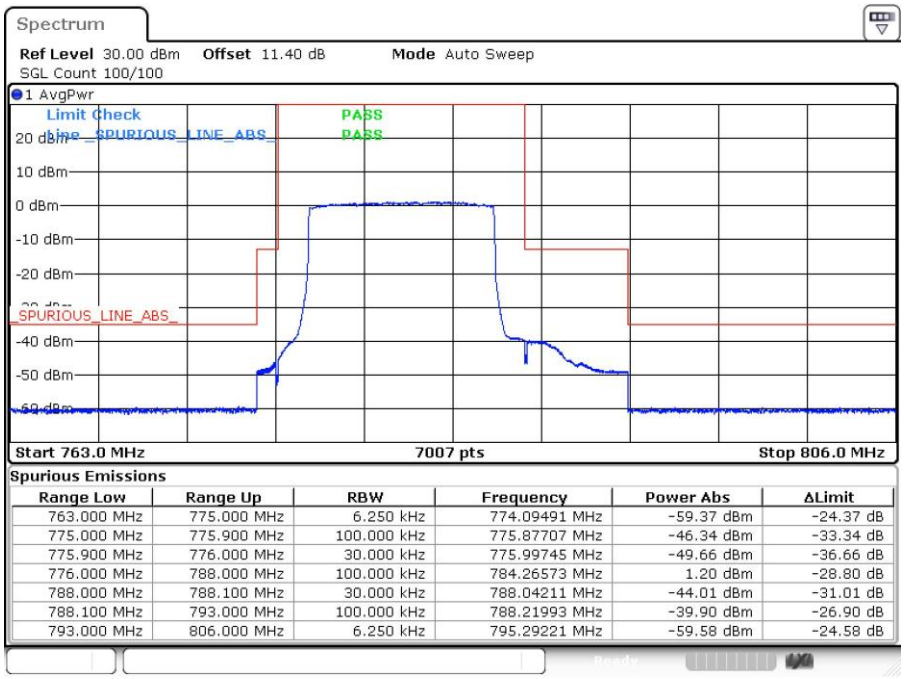


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.84316 MHz	-59.57 dBm	-24.57 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.18566 MHz	-48.18 dBm	-35.18 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99945 MHz	-53.44 dBm	-40.44 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.38761 MHz	18.63 dBm	-11.37 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.07897 MHz	-53.04 dBm	-40.04 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.19545 MHz	-48.68 dBm	-35.68 dB
793.000 MHz	806.000 MHz	6.250 kHz	795.48701 MHz	-59.75 dBm	-24.75 dB

Date: 13.SEP.2018 18:15:08

Band Edge / Full RB



Spurious Emissions

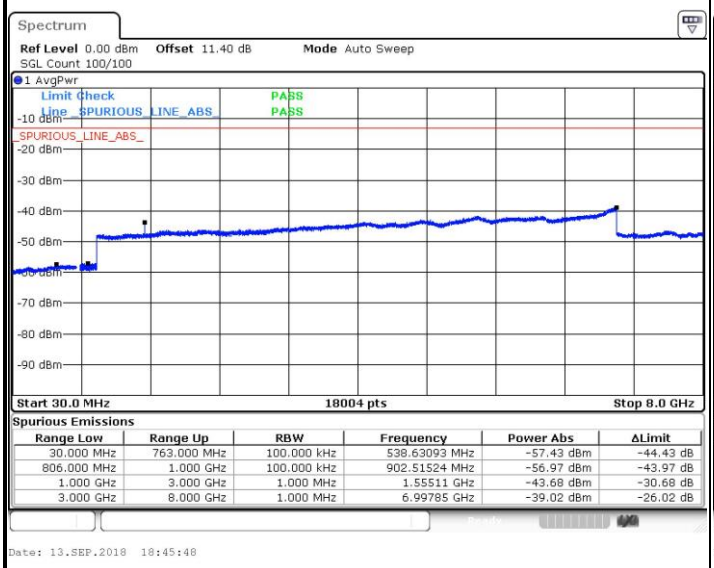
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.09491 MHz	-59.37 dBm	-24.37 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.87707 MHz	-46.34 dBm	-33.34 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99745 MHz	-49.66 dBm	-36.66 dB
776.000 MHz	788.000 MHz	100.000 kHz	784.26573 MHz	1.20 dBm	-28.80 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.04211 MHz	-44.01 dBm	-31.01 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.21993 MHz	-39.90 dBm	-26.90 dB
793.000 MHz	806.000 MHz	6.250 kHz	795.29221 MHz	-59.58 dBm	-24.58 dB

Date: 13.SEP.2018 18:11:47

Conducted Spurious Emission

LTE Band 13 / 5MHz

Lowest Channel / QPSK

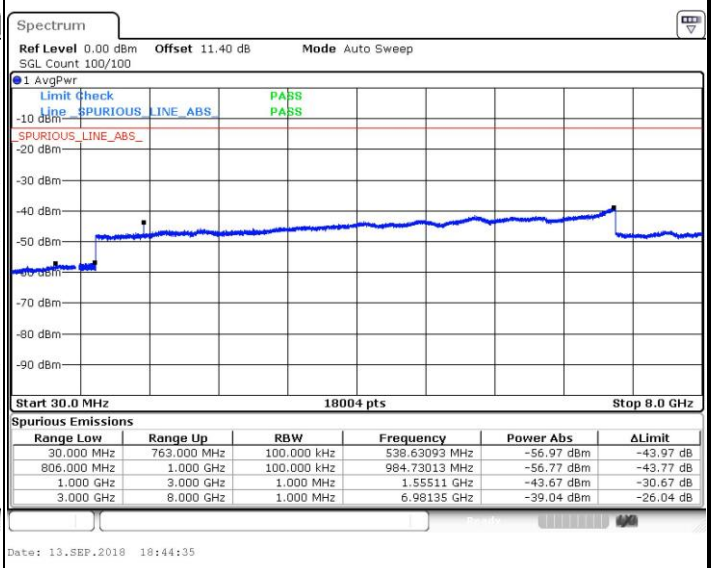


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	538.63093 MHz	-57.43 dBm	-44.43 dB
806.000 MHz	1.000 GHz	100.000 kHz	902.51524 MHz	-56.97 dBm	-43.97 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55511 GHz	-43.68 dBm	-30.68 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.99785 GHz	-39.02 dBm	-26.02 dB

Date: 13.SEP.2018 18:45:48

Lowest Channel / 16QAM

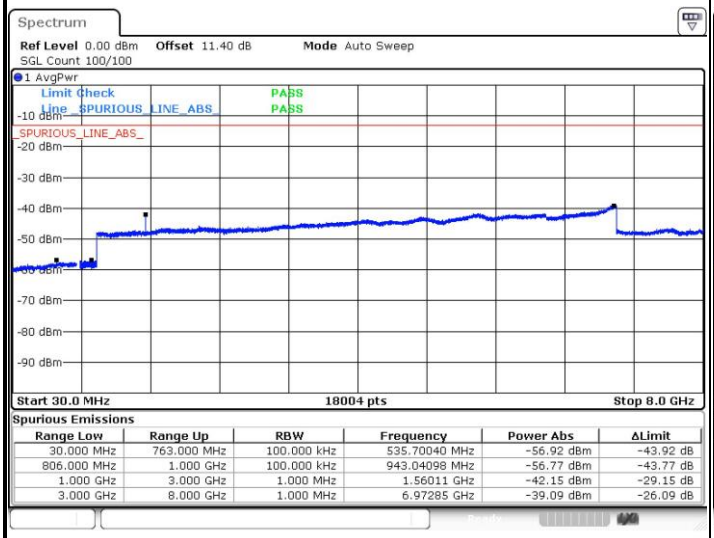


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	538.63093 MHz	-56.97 dBm	-43.97 dB
806.000 MHz	1.000 GHz	100.000 kHz	984.73013 MHz	-56.77 dBm	-43.77 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55511 GHz	-43.67 dBm	-30.67 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.98135 GHz	-39.04 dBm	-26.04 dB

Date: 13.SEP.2018 18:44:35

Middle Channel / QPSK

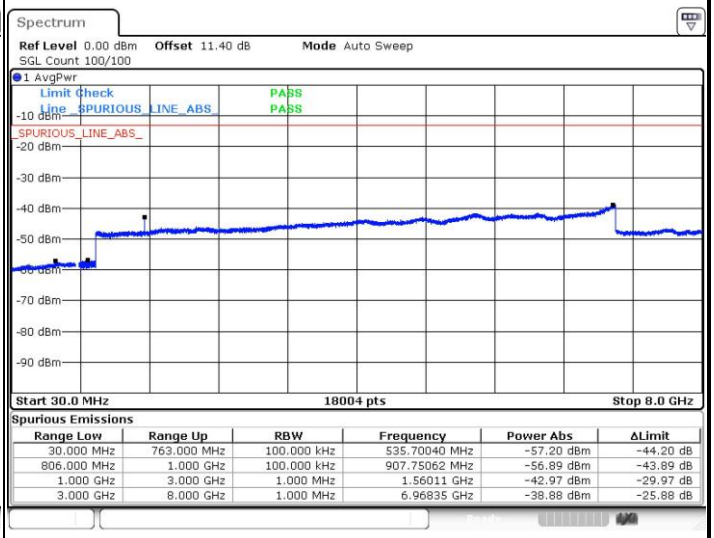


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	535.70040 MHz	-56.92 dBm	-43.92 dB
806.000 MHz	1.000 GHz	100.000 kHz	943.04098 MHz	-56.77 dBm	-43.77 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56011 GHz	-42.15 dBm	-29.15 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.97285 GHz	-39.09 dBm	-26.09 dB

Date: 13.SEP.2018 18:47:23

Middle Channel / 16QAM



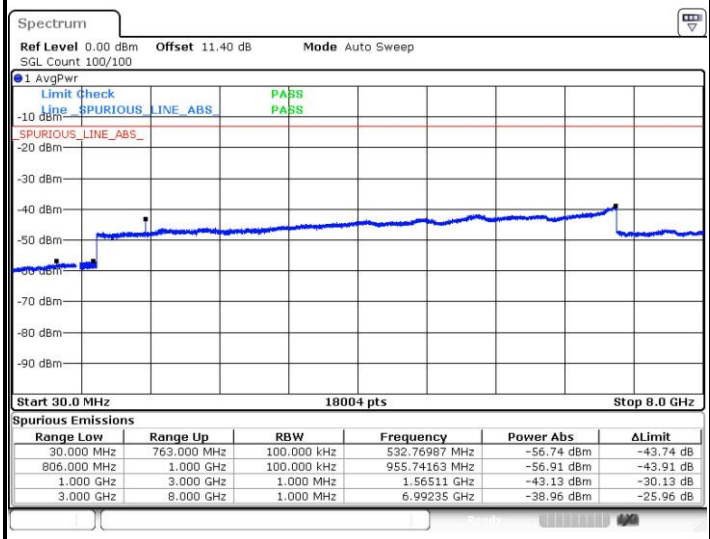
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	535.70040 MHz	-57.20 dBm	-44.20 dB
806.000 MHz	1.000 GHz	100.000 kHz	907.75062 MHz	-56.89 dBm	-43.89 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56011 GHz	-42.97 dBm	-29.97 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.96835 GHz	-38.88 dBm	-25.88 dB

Date: 13.SEP.2018 18:49:38

LTE Band 13 / 5MHz

Highest Channel / QPSK

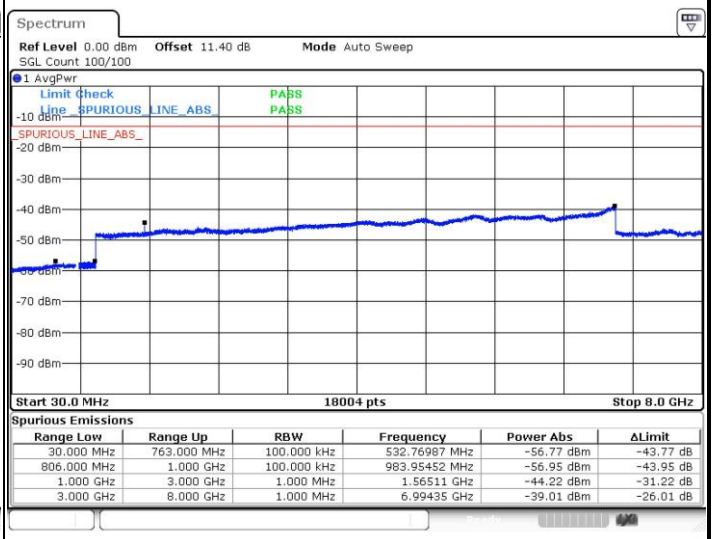


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	532.76987 MHz	-56.74 dBm	-43.74 dB
806.000 MHz	1.000 GHz	100.000 kHz	955.74163 MHz	-56.91 dBm	-43.91 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56511 GHz	-43.13 dBm	-30.13 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.99235 GHz	-38.96 dBm	-25.96 dB

Date: 13.SEP.2018 18:40:49

Highest Channel / 16QAM



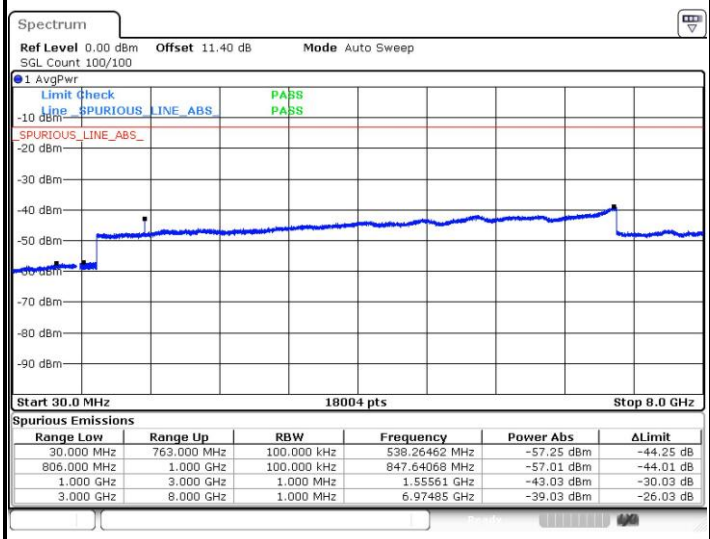
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	532.76987 MHz	-56.77 dBm	-43.77 dB
806.000 MHz	1.000 GHz	100.000 kHz	983.95452 MHz	-56.95 dBm	-43.95 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56511 GHz	-44.22 dBm	-31.22 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.99435 GHz	-39.01 dBm	-26.01 dB

Date: 13.SEP.2018 18:42:25

LTE Band 13 / 10MHz

Middle Channel / QPSK

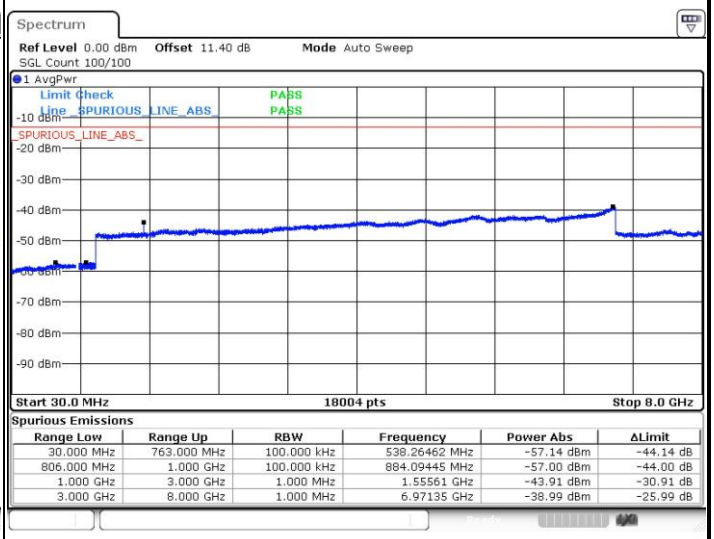


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	538.26462 MHz	-57.25 dBm	-44.25 dB
806.000 MHz	1.000 GHz	100.000 kHz	847.64068 MHz	-57.01 dBm	-44.01 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55561 GHz	-43.03 dBm	-30.03 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.97485 GHz	-39.03 dBm	-26.03 dB

Date: 13.SEP.2018 18:09:40

Middle Channel / 16QAM



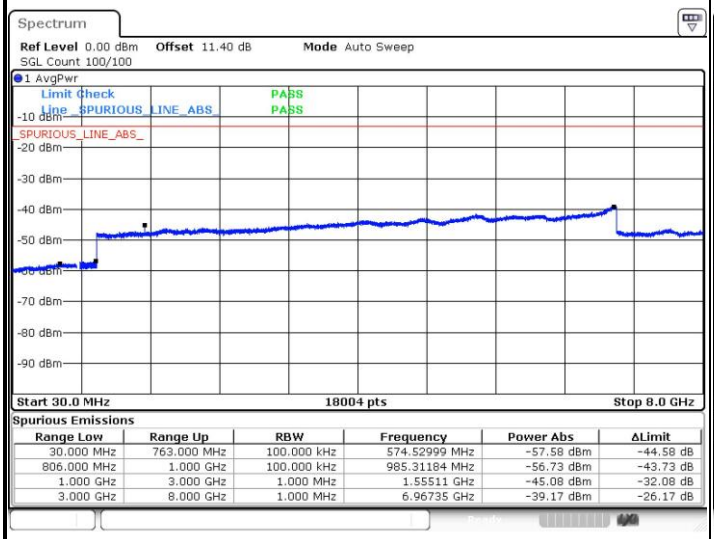
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	538.26462 MHz	-57.14 dBm	-44.14 dB
806.000 MHz	1.000 GHz	100.000 kHz	884.09445 MHz	-57.00 dBm	-44.00 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55561 GHz	-43.91 dBm	-30.91 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.97135 GHz	-38.99 dBm	-25.99 dB

Date: 13.SEP.2018 18:08:26

LTE Band 13 / 5MHz

Lowest Channel / 64QAM

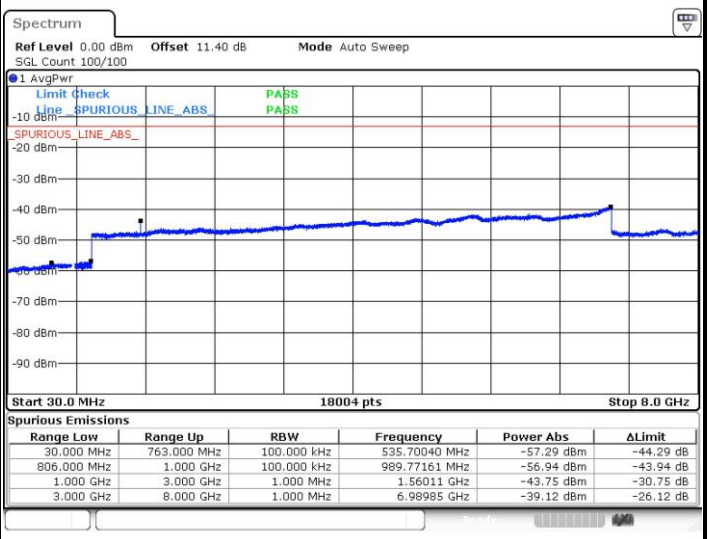


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	574.52999 MHz	-57.58 dBm	-44.58 dB
806.000 MHz	1.000 GHz	100.000 kHz	985.31184 MHz	-56.73 dBm	-43.73 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55511 GHz	-45.08 dBm	-32.08 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.96735 GHz	-39.17 dBm	-26.17 dB

Date: 13.SEP.2018 18:24:20

Middle Channel / 64QAM

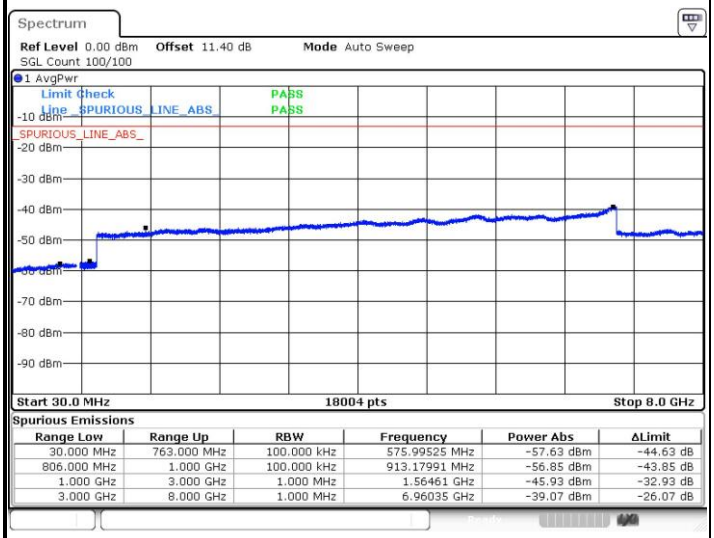


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	535.70040 MHz	-57.29 dBm	-44.29 dB
806.000 MHz	1.000 GHz	100.000 kHz	989.77161 MHz	-56.94 dBm	-43.94 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56011 GHz	-43.75 dBm	-30.75 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.98985 GHz	-39.12 dBm	-26.12 dB

Date: 13.SEP.2018 18:25:34

Highest Channel / 64QAM

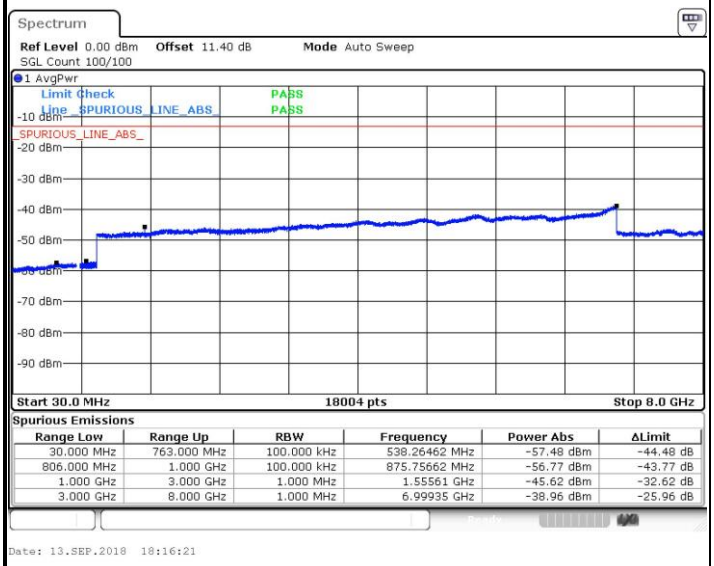


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	575.99525 MHz	-57.63 dBm	-44.63 dB
806.000 MHz	1.000 GHz	100.000 kHz	913.17991 MHz	-56.85 dBm	-43.85 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56461 GHz	-45.93 dBm	-32.93 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.96035 GHz	-39.07 dBm	-26.07 dB

Date: 13.SEP.2018 18:31:01

LTE Band 13 / 10MHz	
Middle Channel / 64QAM	



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	538.26462 MHz	-57.48 dBm	-44.48 dB
806.000 MHz	1.000 GHz	100.000 kHz	875.75662 MHz	-56.77 dBm	-43.77 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55561 GHz	-45.62 dBm	-32.62 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.99935 GHz	-38.96 dBm	-25.96 dB

Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0031	PASS
40	Normal Voltage	0.0040	
30	Normal Voltage	0.0032	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0010	
-10	Normal Voltage	0.0031	
-20	Normal Voltage	0.0129	
-30	Normal Voltage	0.0106	
20	Maximum Voltage	0.0059	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0029	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.5V.；Maximum Voltage =4.4V.
2. The frequency fundamental emissions stay within the authorized frequency block.

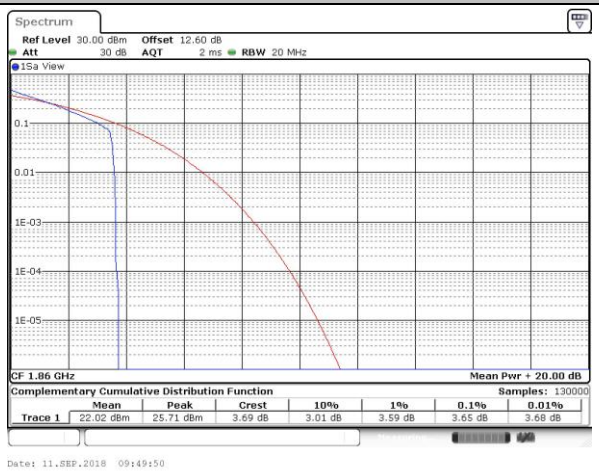
LTE Band 25

Peak-to-Average Ratio

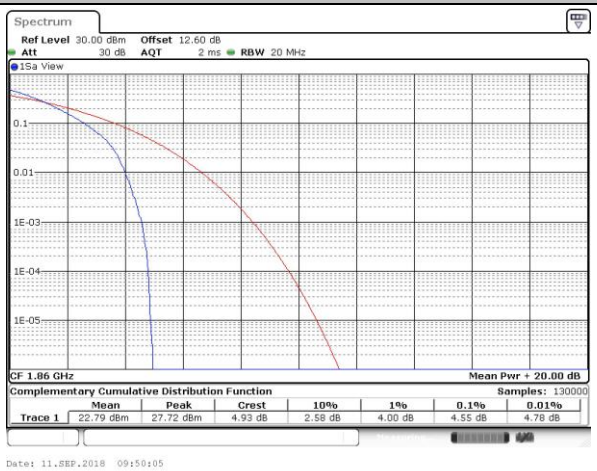
Mode	LTE Band 25 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.65	4.55	5.04	5.94	PASS
Middle CH	3.71	4.64	5.07	6.09	
Highest CH	3.62	4.55	5.07	5.83	
Mode	LTE Band 25 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.14	6.61	-	-	PASS
Middle CH	6.93	6.75	-	-	
Highest CH	6.29	6.58	-	-	

LTE Band 25 / 20MHz / QPSK

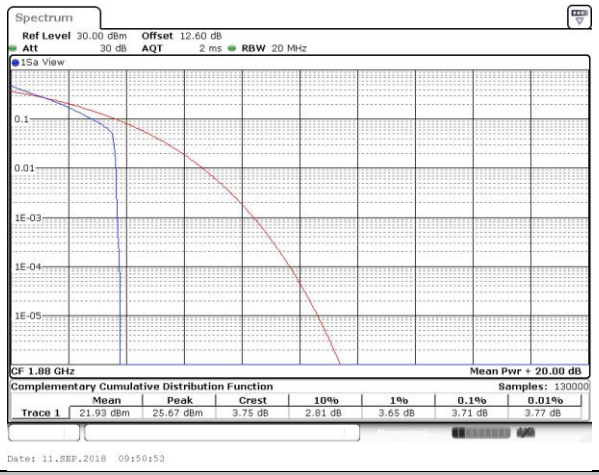
Lowest Channel / 1RB



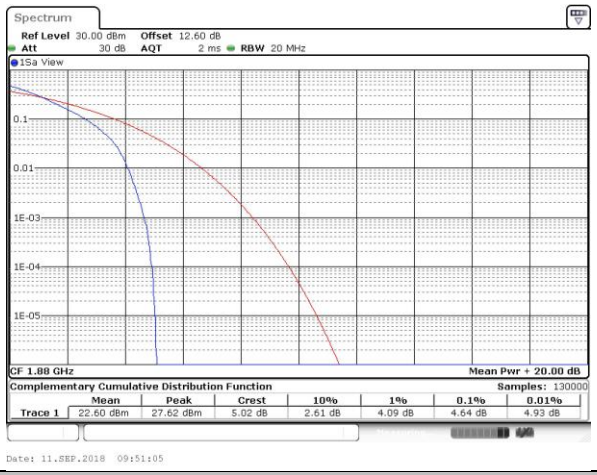
Lowest Channel / Full RB



Middle Channel / 1RB

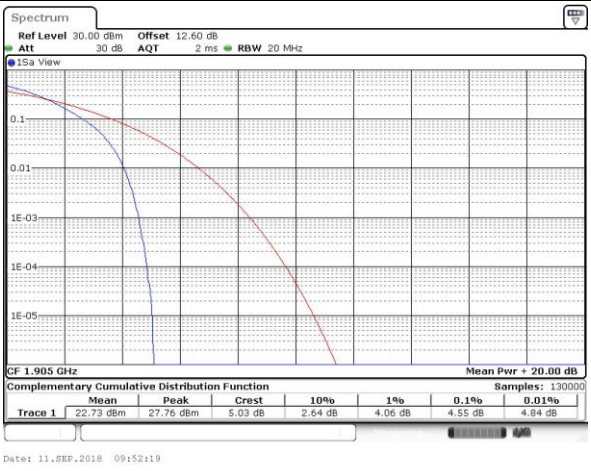


Middle Channel / Full RB



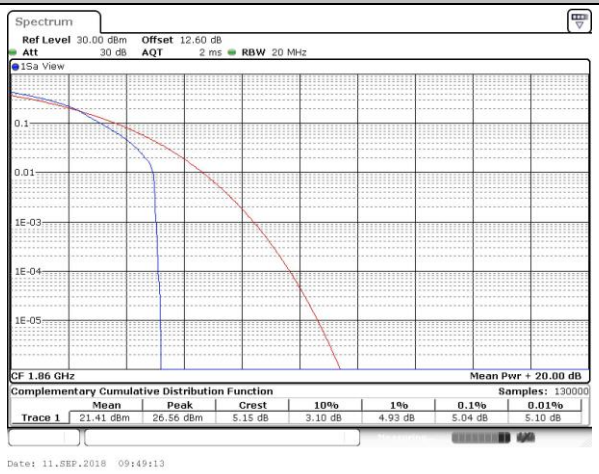
Highest Channel / 1RB

Highest Channel / Full RB

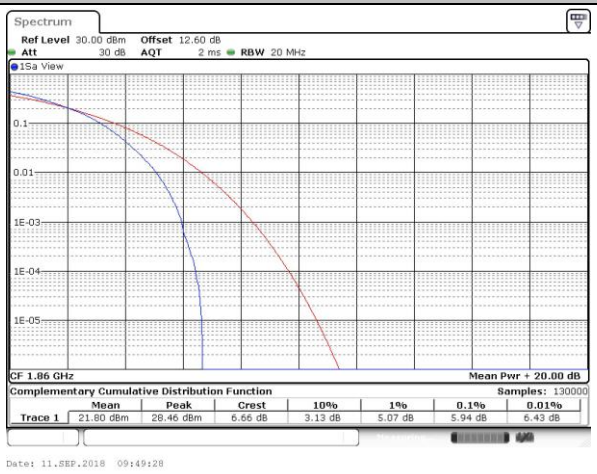


LTE Band 25 / 20MHz / 16QAM

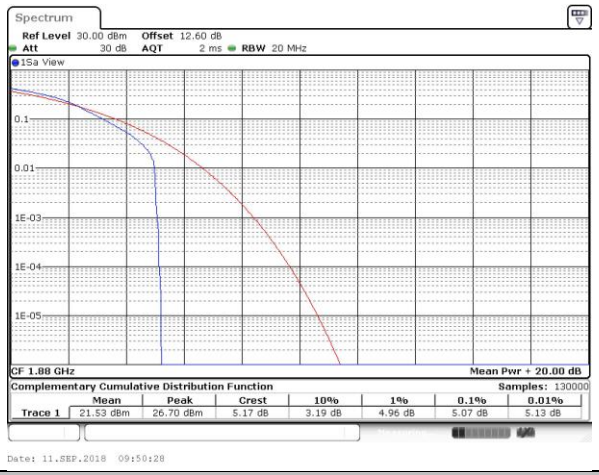
Lowest Channel / 1RB



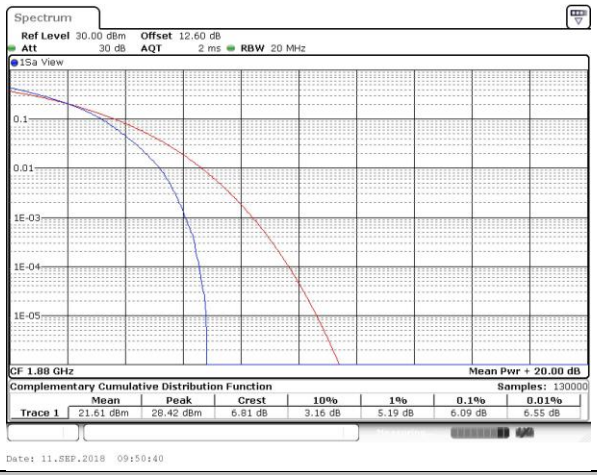
Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB

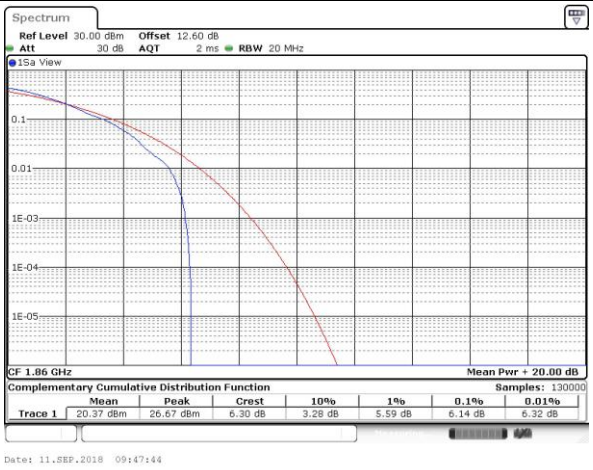


Highest Channel / 1RB

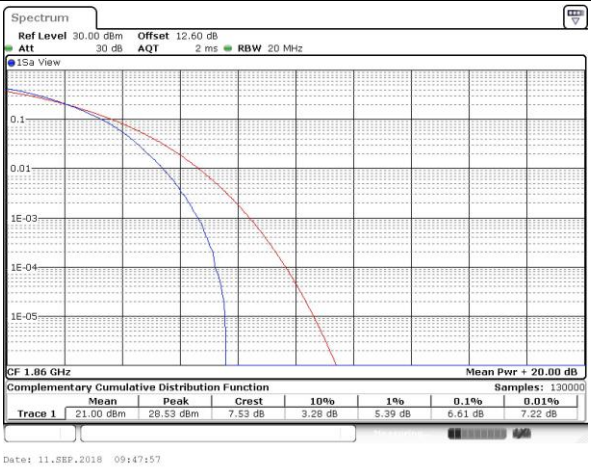
Highest Channel / Full RB

LTE Band 25 / 20MHz / 64QAM

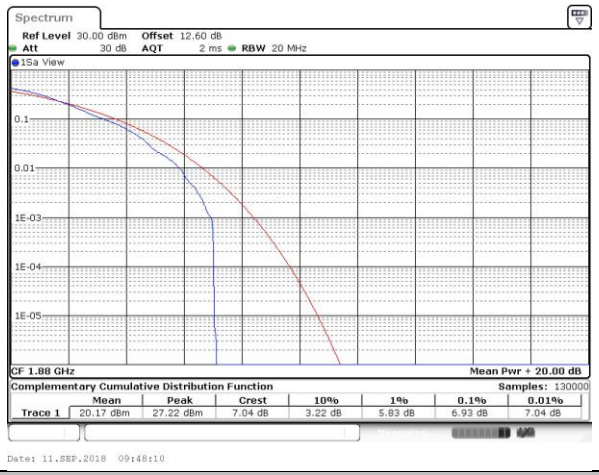
Lowest Channel / 1RB



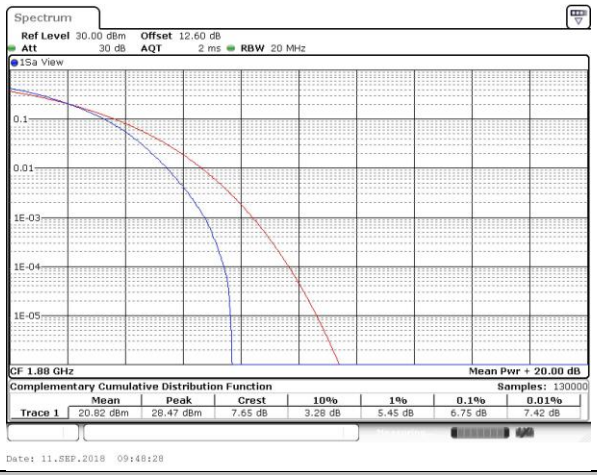
Lowest Channel / Full RB



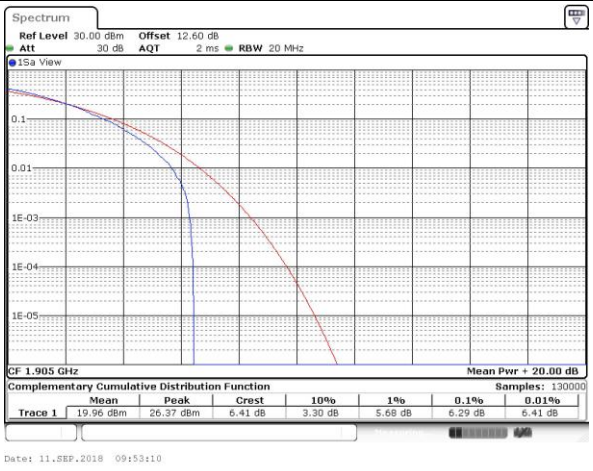
Middle Channel / 1RB



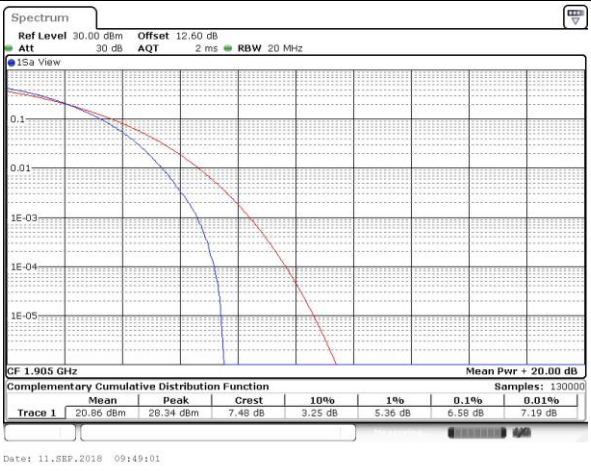
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

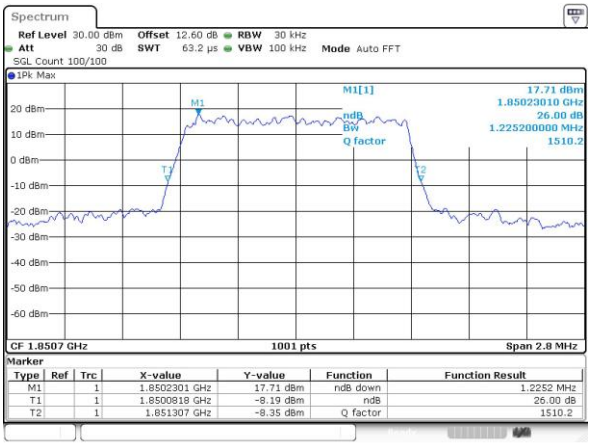


26dB Bandwidth

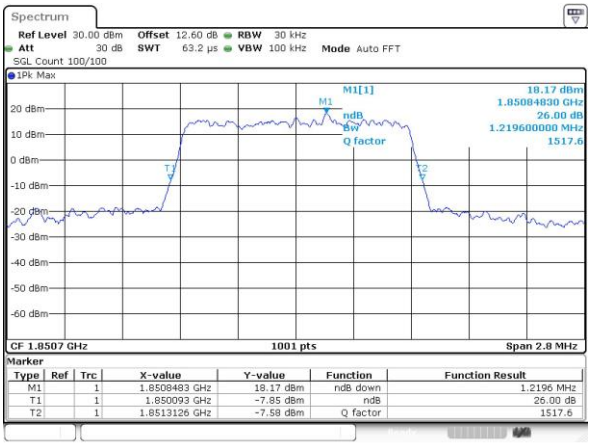
Mode	LTE Band 25 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.23	1.22	2.99	3.04	4.91	4.82	9.77	9.73	14.30	14.72	20.18	20.14
Middle CH	1.23	1.22	2.98	3.02	4.97	4.84	9.87	9.71	14.39	14.42	20.10	20.26
Highest CH	1.24	1.23	3.07	3.03	4.92	4.84	9.89	9.93	14.30	14.48	20.10	20.06
Mode	LTE Band 25 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.24	-	3.02	-	4.97	-	9.75	-	14.33	-	20.10	-
Middle CH	1.22	-	3.00	-	4.93	-	9.97	-	14.30	-	20.42	-
Highest CH	1.22	-	3.01	-	4.93	-	9.73	-	14.51	-	20.14	-

LTE Band 25

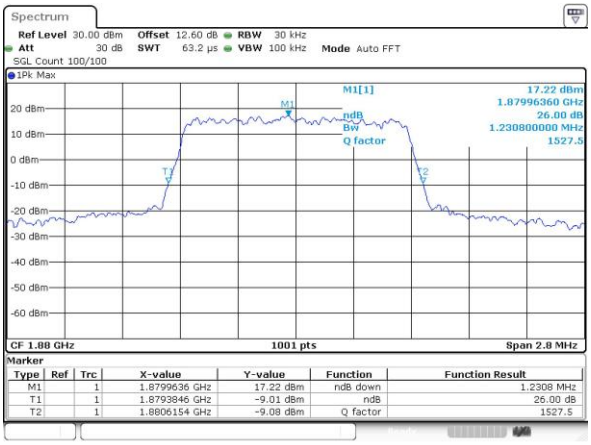
Lowest Channel / 1.4MHz / QPSK



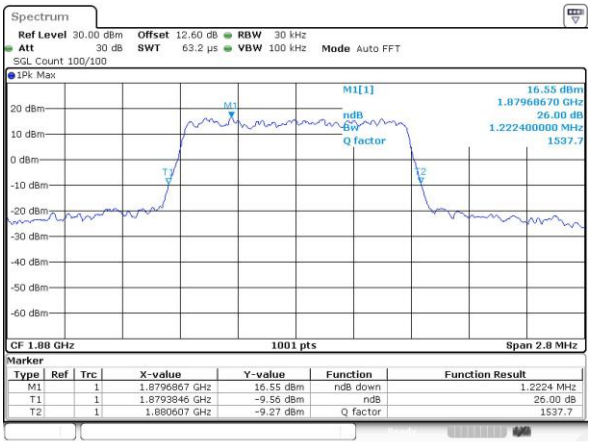
Lowest Channel / 1.4MHz / 16QAM



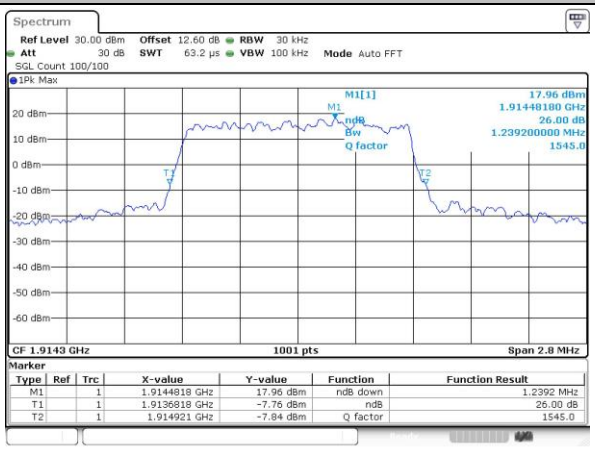
Middle Channel / 1.4MHz / QPSK



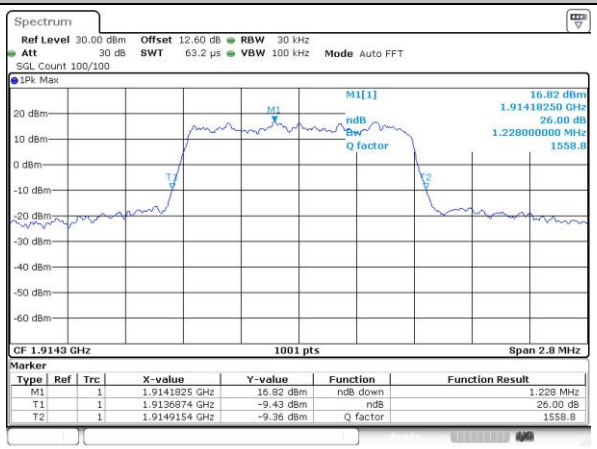
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

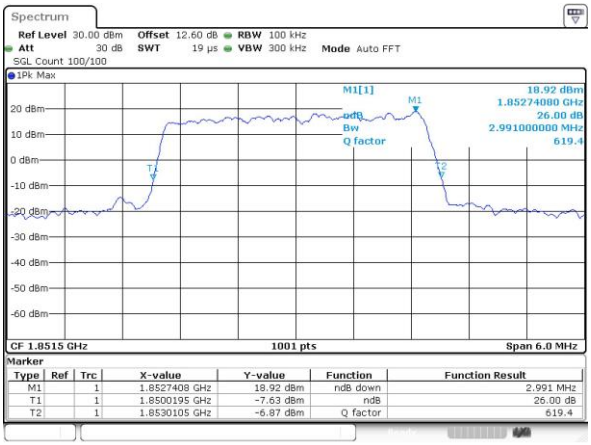


Highest Channel / 1.4MHz / 16QAM

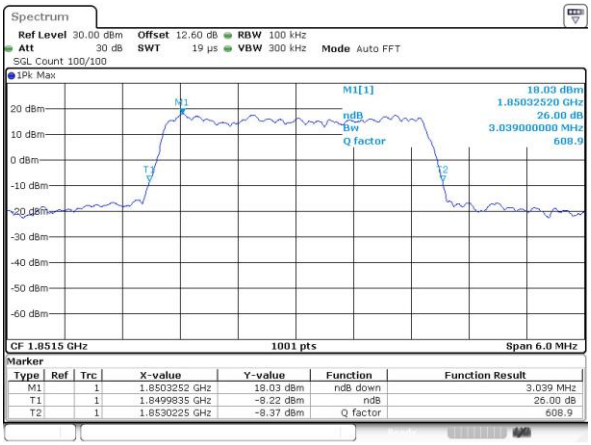


LTE Band 25

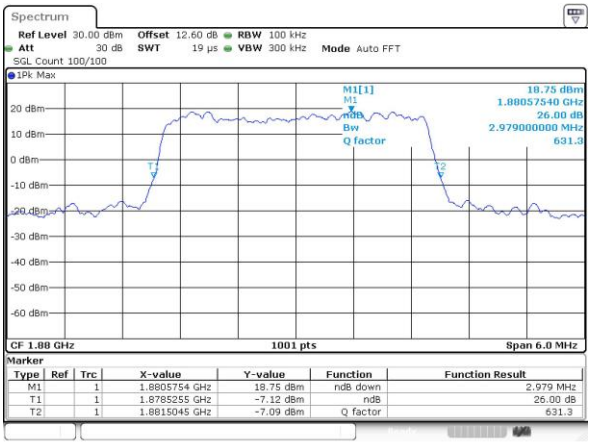
Lowest Channel / 3MHz / QPSK



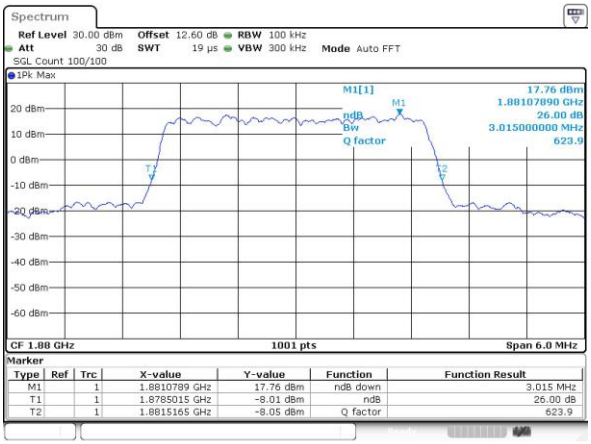
Lowest Channel / 3MHz / 16QAM



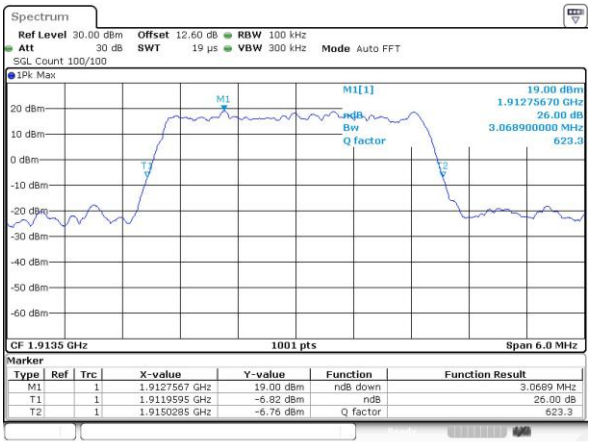
Middle Channel / 3MHz / QPSK



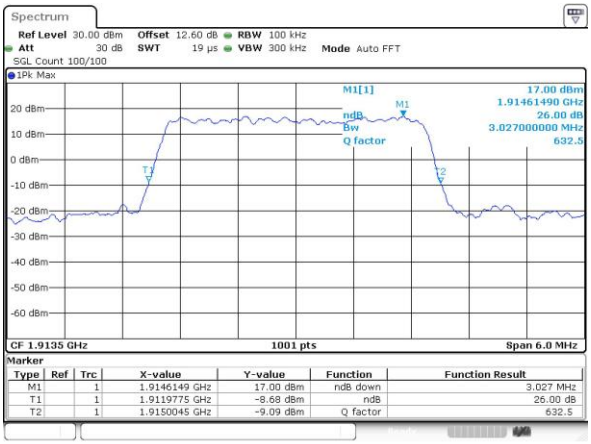
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

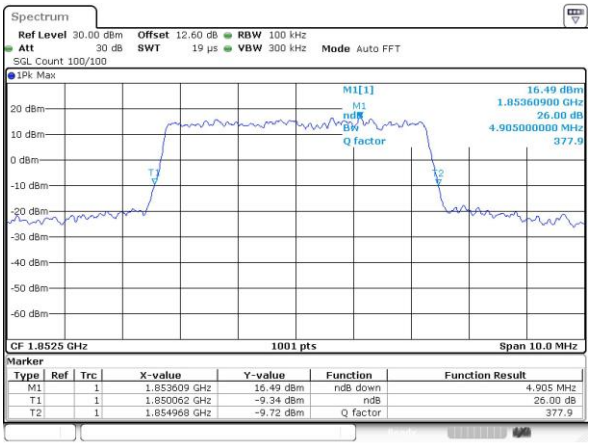


Highest Channel / 3MHz / 16QAM

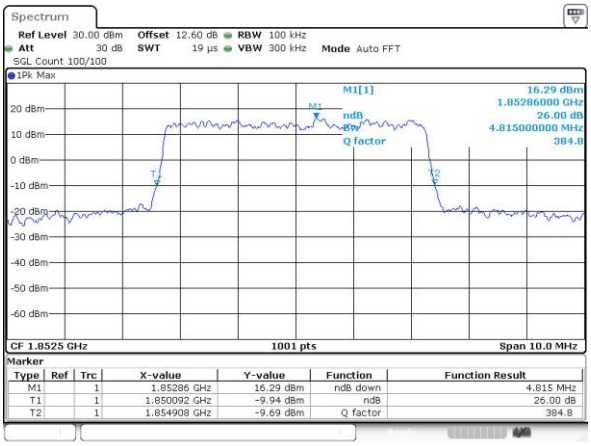


LTE Band 25

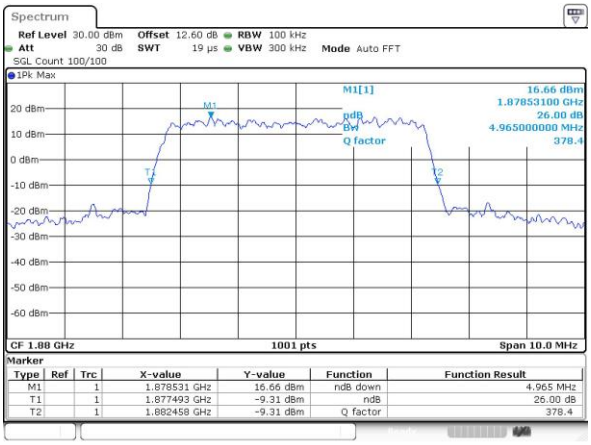
Lowest Channel / 5MHz / QPSK



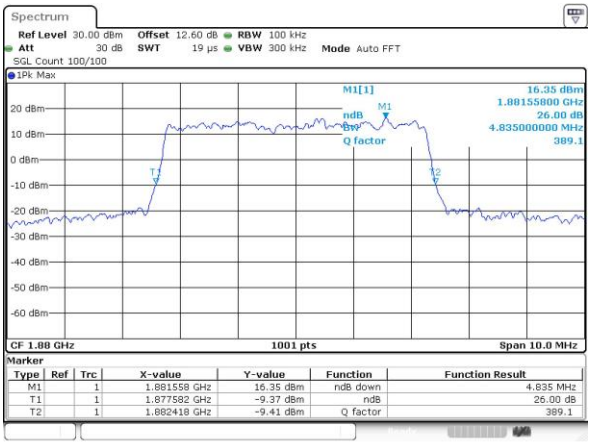
Lowest Channel / 5MHz / 16QAM



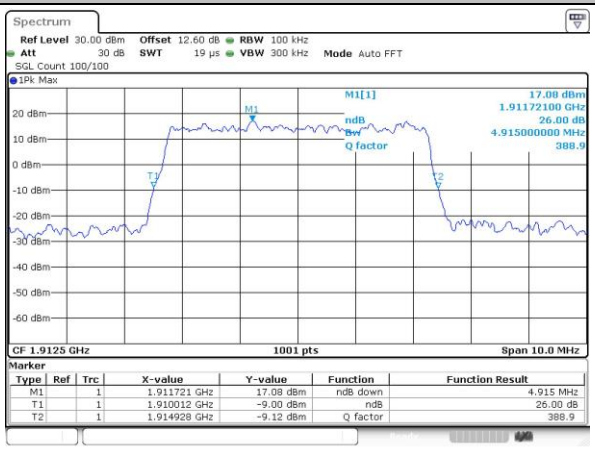
Middle Channel / 5MHz / QPSK



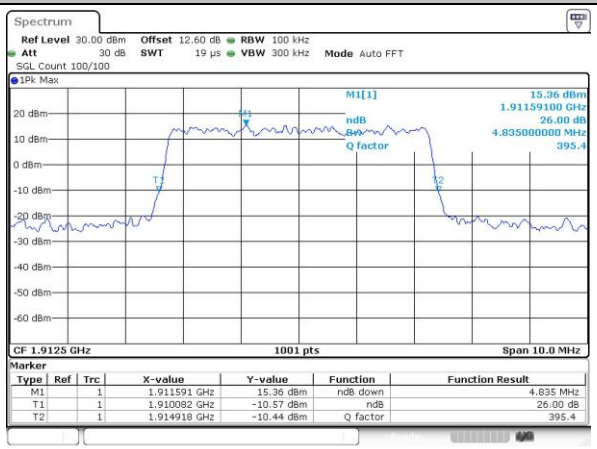
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

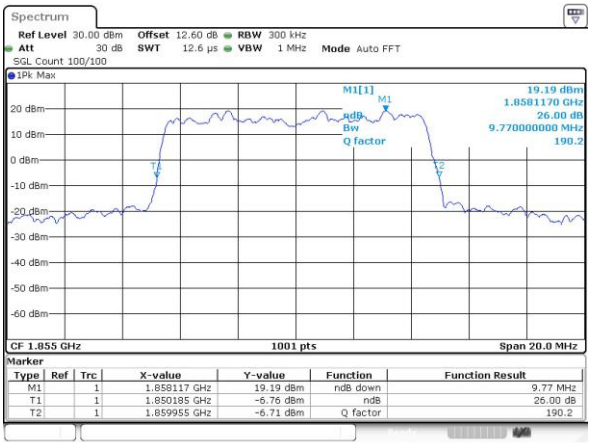


Highest Channel / 5MHz / 16QAM

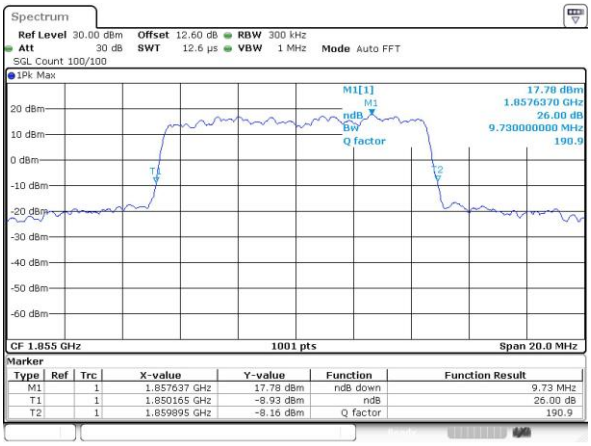


LTE Band 25

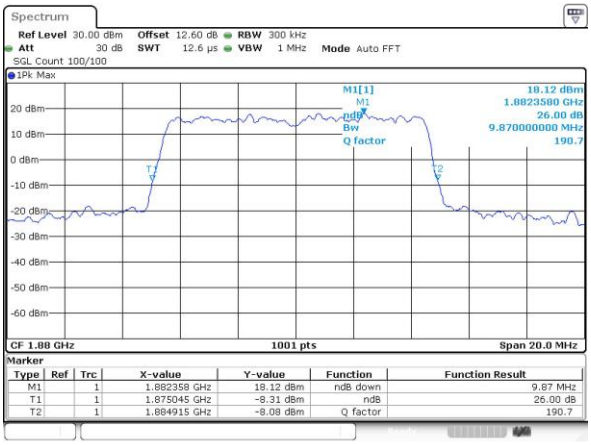
Lowest Channel / 10MHz / QPSK



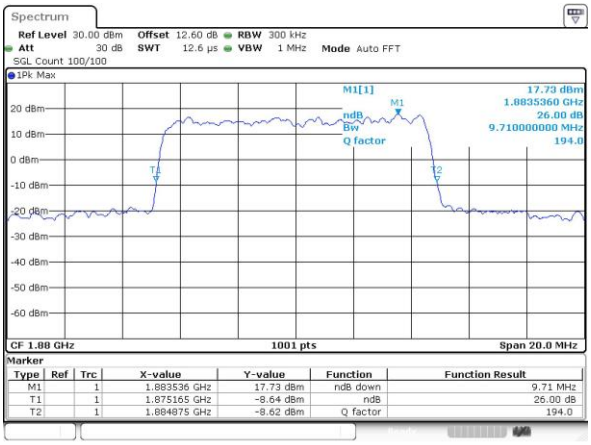
Lowest Channel / 10MHz / 16QAM



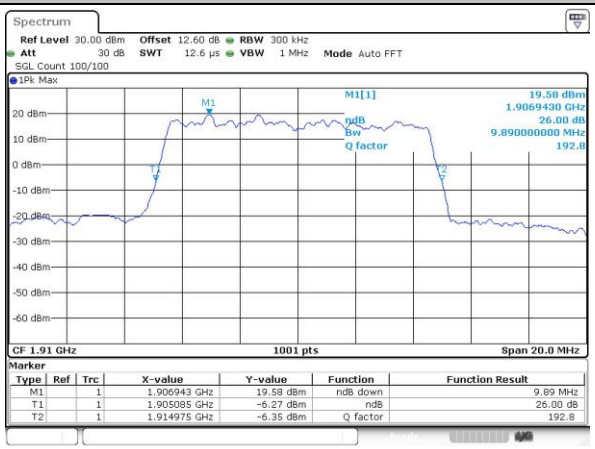
Middle Channel / 10MHz / QPSK



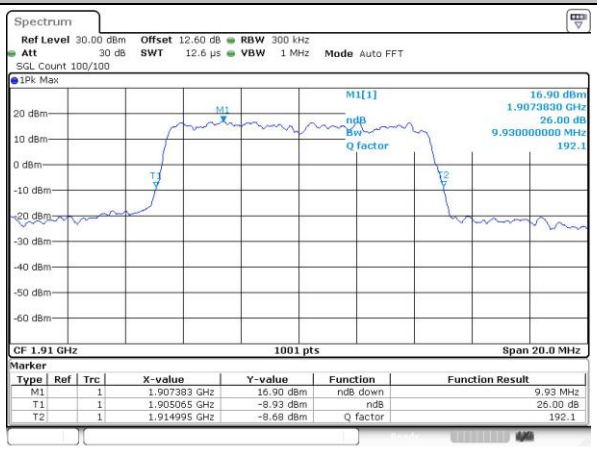
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

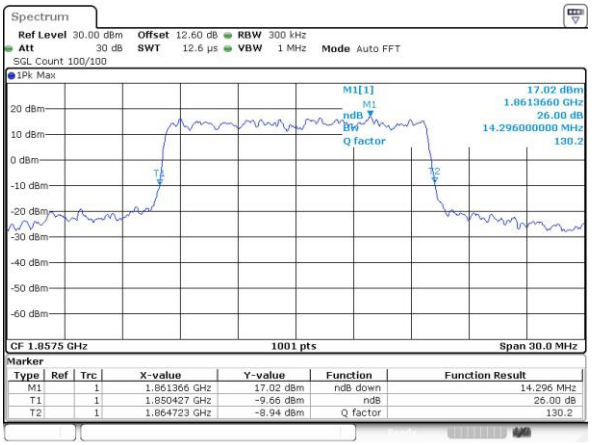


Highest Channel / 10MHz / 16QAM

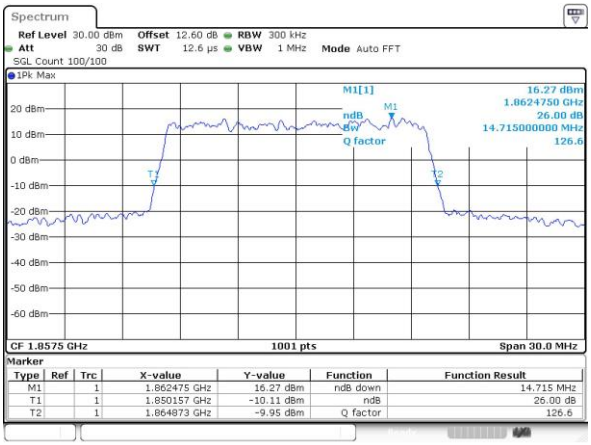


LTE Band 25

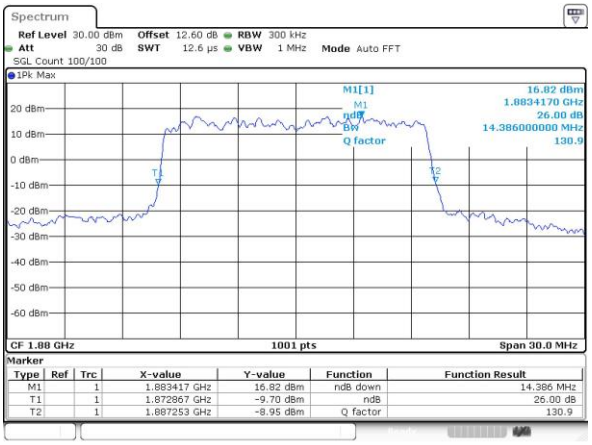
Lowest Channel / 15MHz / QPSK



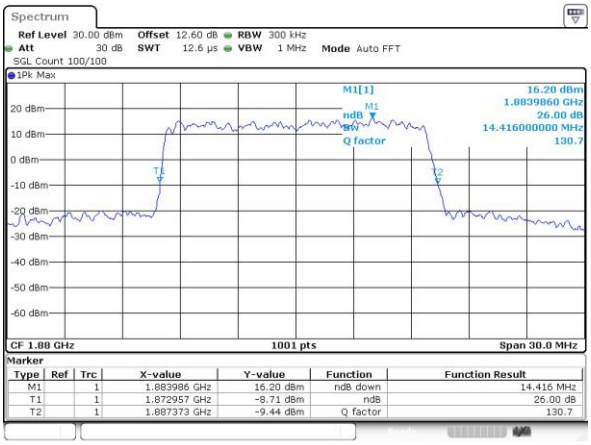
Lowest Channel / 15MHz / 16QAM



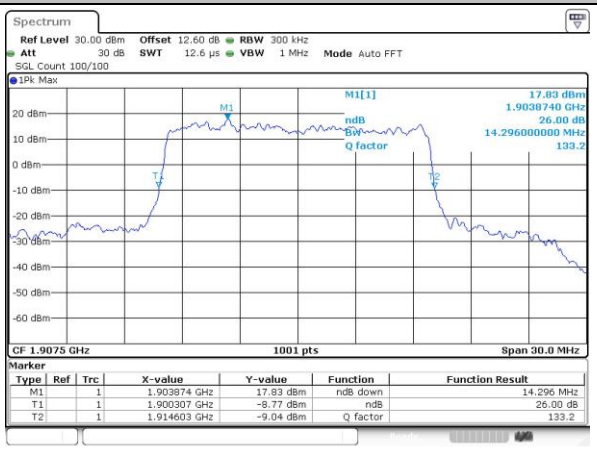
Middle Channel / 15MHz / QPSK



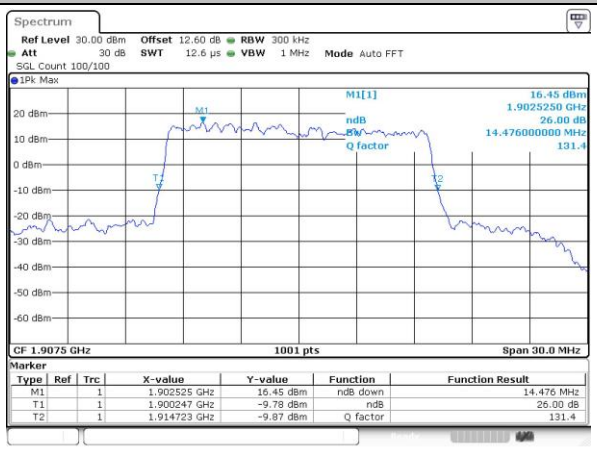
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

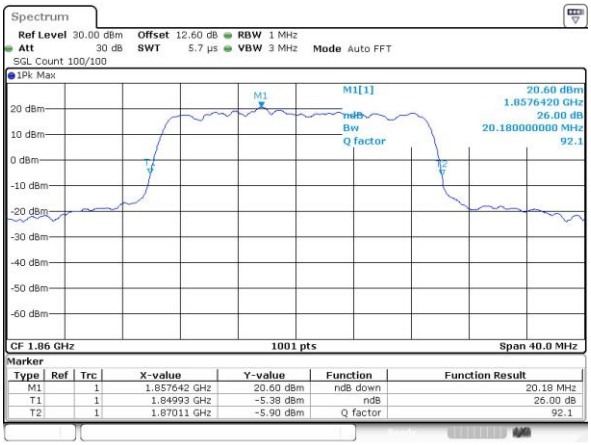


Highest Channel / 15MHz / 16QAM

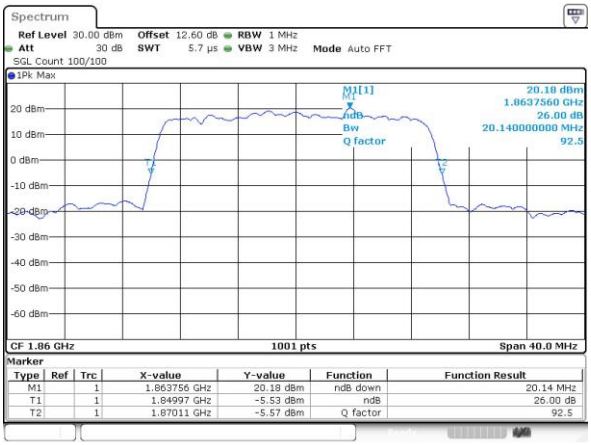


LTE Band 25

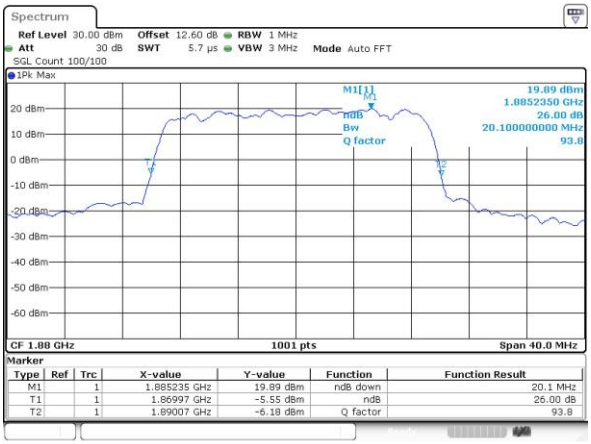
Lowest Channel / 20MHz / QPSK



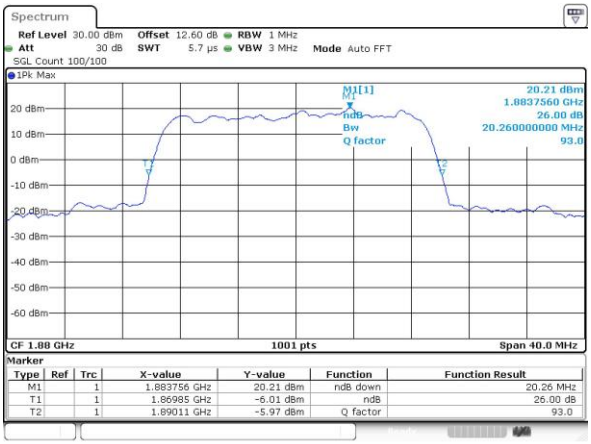
Lowest Channel / 20MHz / 16QAM



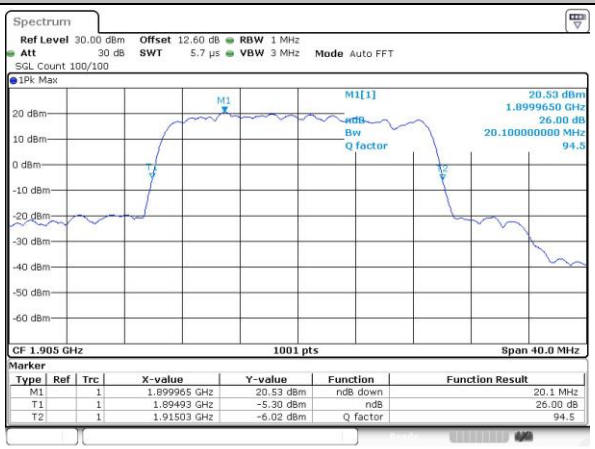
Middle Channel / 20MHz / QPSK



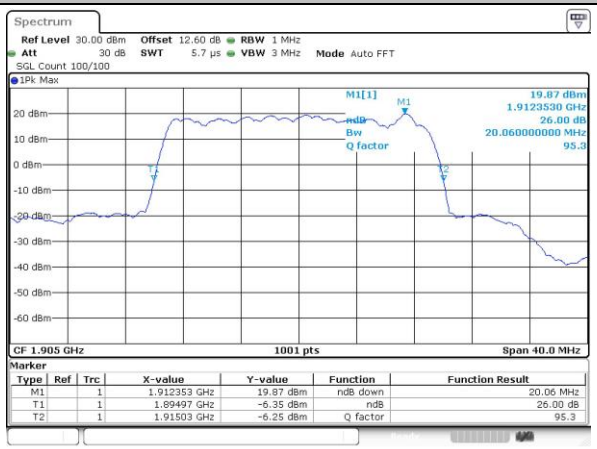
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK

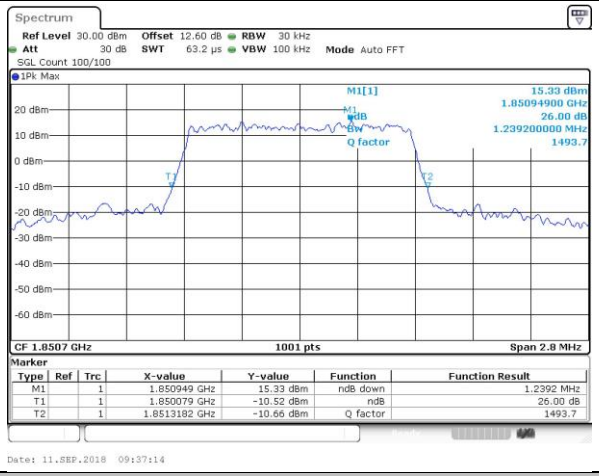


Highest Channel / 20MHz / 16QAM

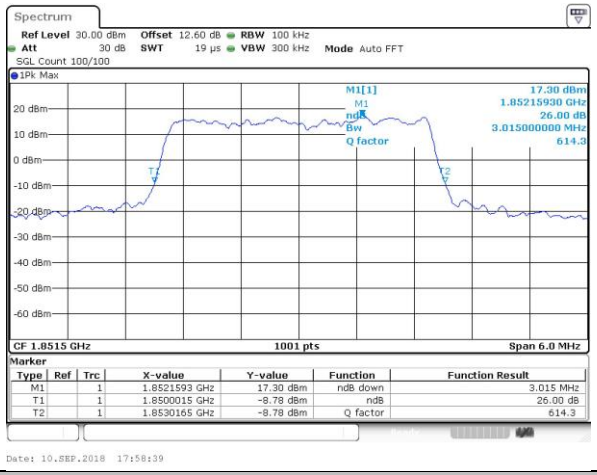


LTE Band 25

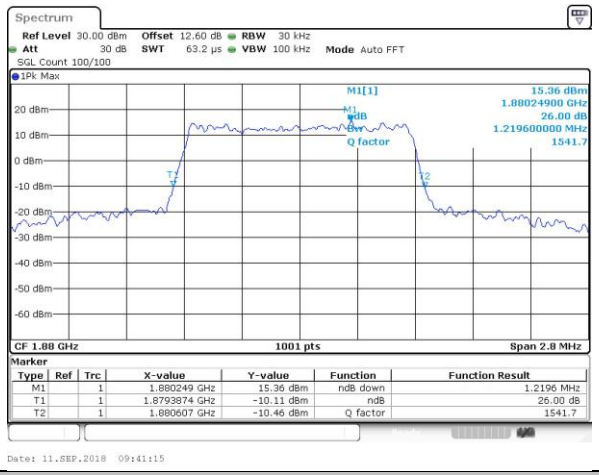
Lowest Channel / 1.4MHz / 64QAM



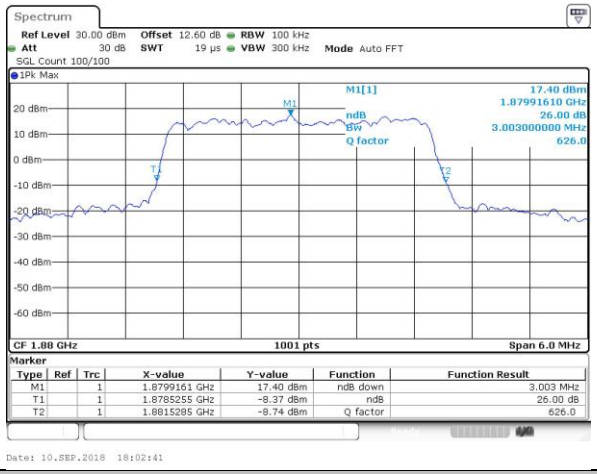
Lowest Channel / 3MHz / 64QAM



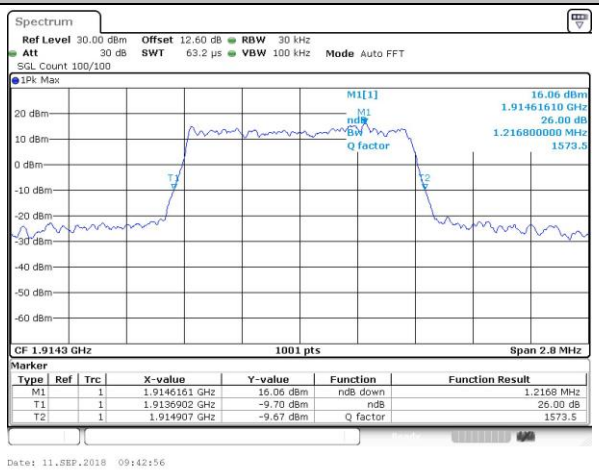
Middle Channel / 1.4MHz / 64QAM



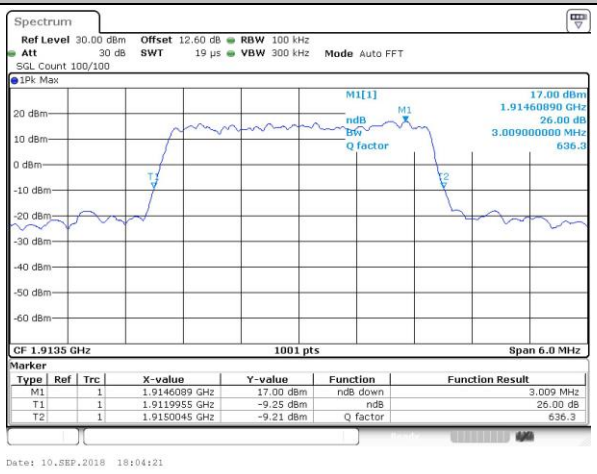
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM

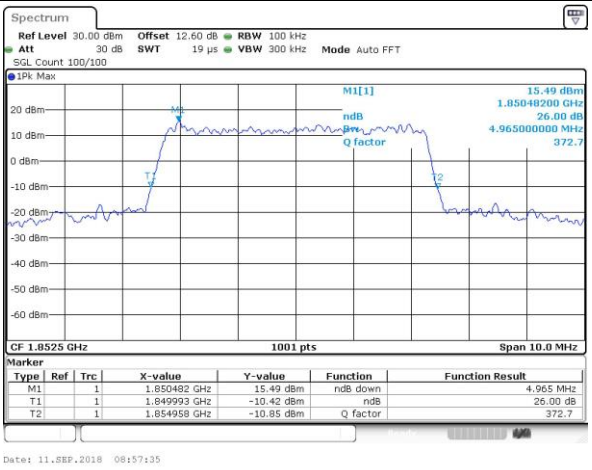


Highest Channel / 3MHz / 64QAM

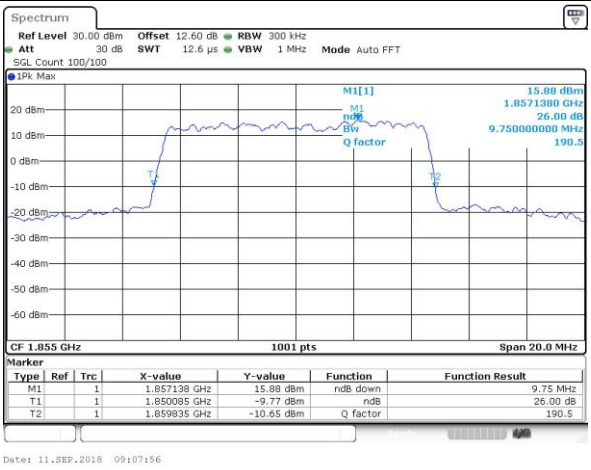


LTE Band 25

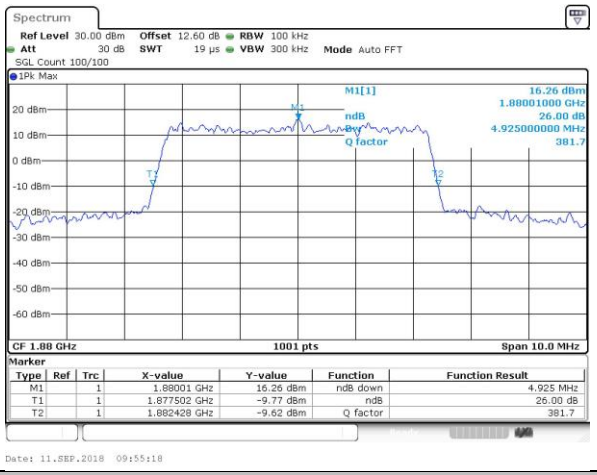
Lowest Channel / 5MHz / 64QAM



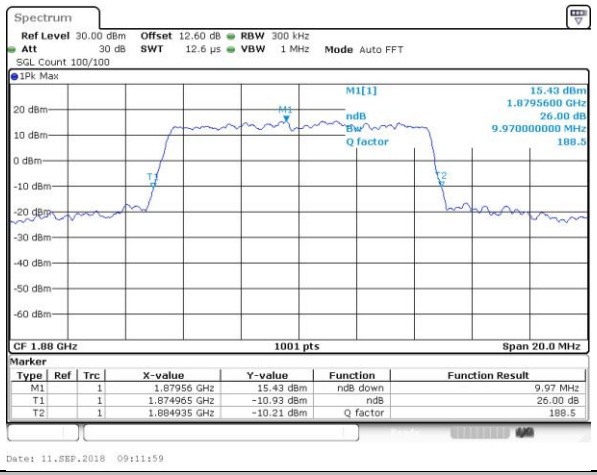
Lowest Channel / 10MHz / 64QAM



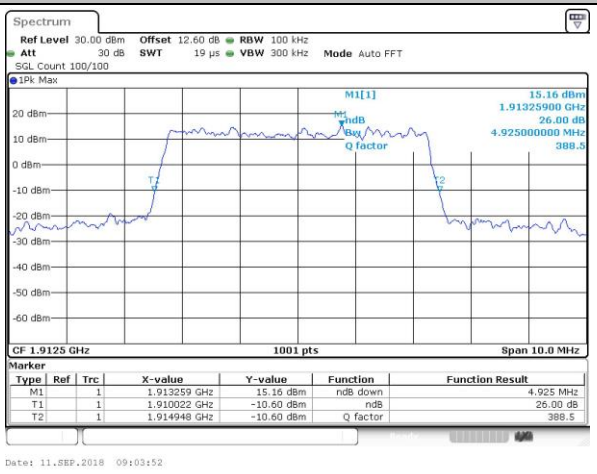
Middle Channel / 5MHz / 64QAM



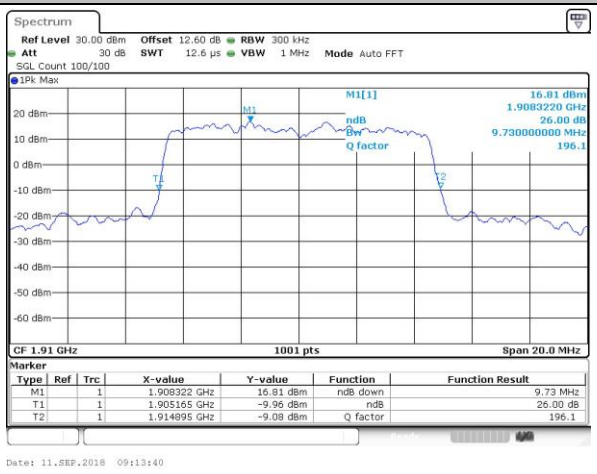
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

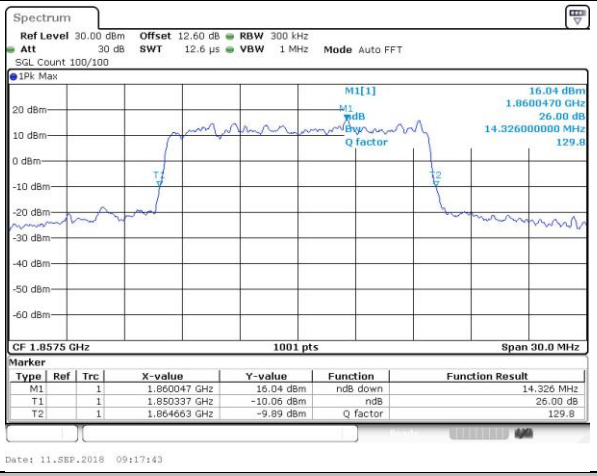


Highest Channel / 10MHz / 64QAM

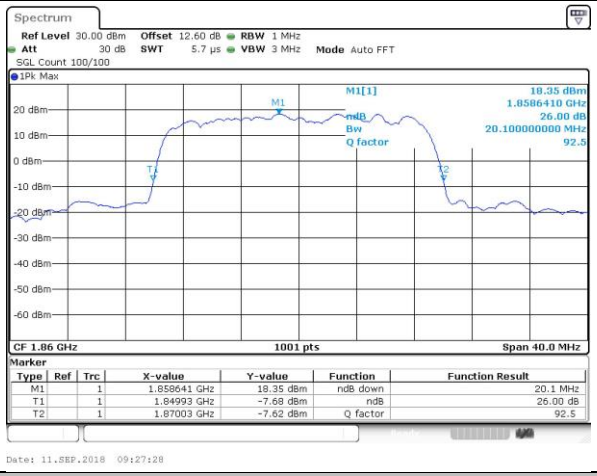


LTE Band 25

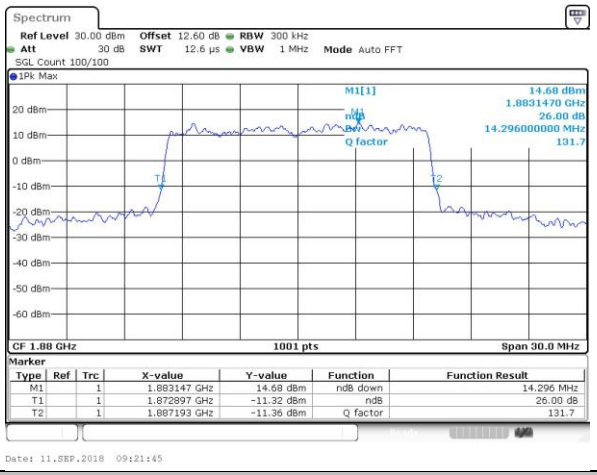
Lowest Channel / 15MHz / 64QAM



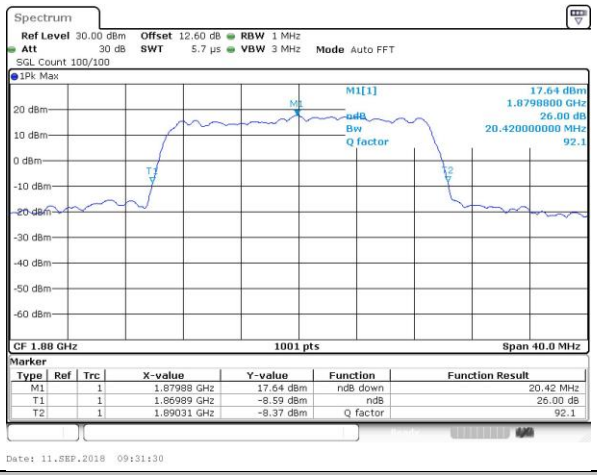
Lowest Channel / 20MHz / 64QAM



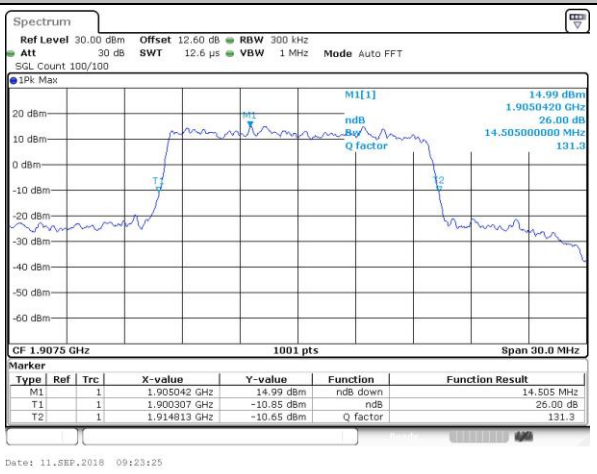
Middle Channel / 15MHz / 64QAM



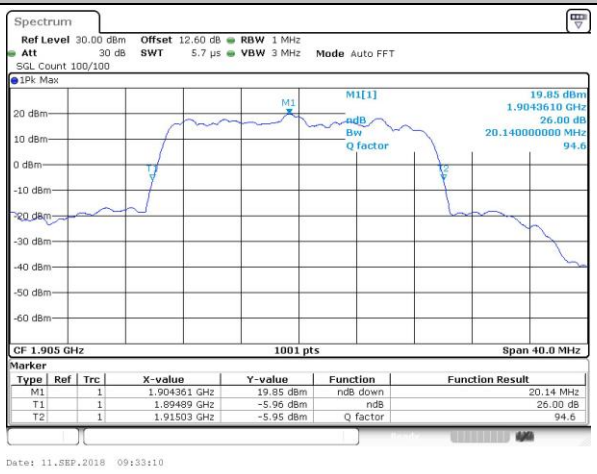
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM



Occupied Bandwidth

Mode	LTE Band 25 : 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	1.08	1.09	2.73	2.72	4.5	4.5	9.05	9.01	13.43	13.43	18.3	18.3
Middle CH	1.09	1.1	2.73	2.76	4.5	4.49	9.03	9.05	13.46	13.4	18.38	18.22
Highest CH	1.09	1.09	2.73	2.7	4.49	4.52	9.03	9.07	13.37	13.46	18.3	18.14
Mode	LTE Band 25 : 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	-	9.01	-	13.37	-	18.34	-
Middle CH	1.09	-	2.73	-	4.52	-	9.07	-	13.37	-	18.22	-
Highest CH	1.09	-	2.73	-	4.50	-	9.01	-	13.40	-	18.26	-