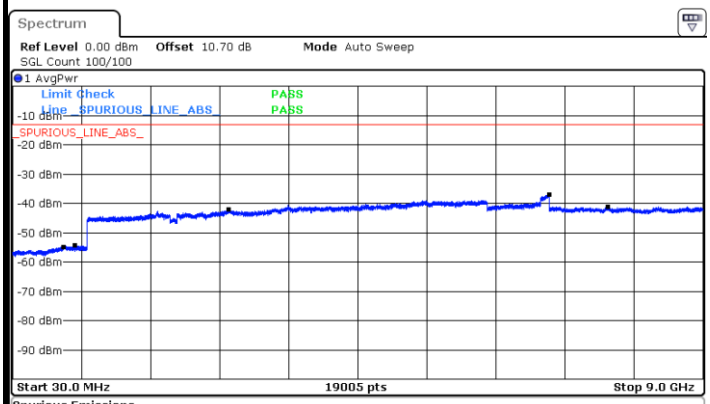
LTE Band 12 / 10MHz

Lowest Channel / 64QAM

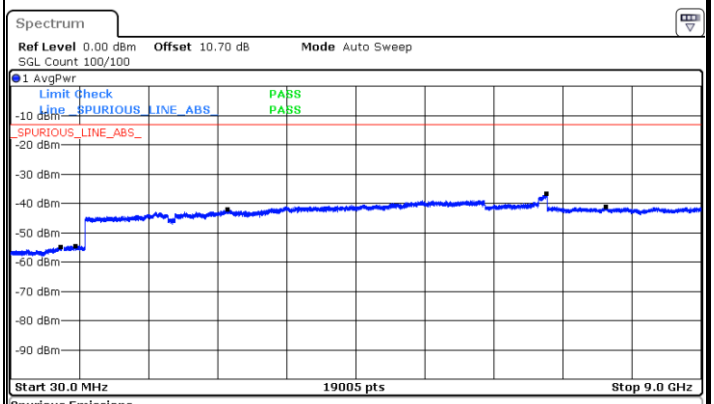


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	683.56822 MHz	-54.79 dBm	-41.79 dB
725.000 MHz	1.000 GHz	100.000 kHz	835.30220 MHz	-54.41 dBm	-41.41 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.83579 GHz	-42.15 dBm	-29.15 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99675 GHz	-36.96 dBm	-23.96 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.75956 GHz	-41.15 dBm	-28.15 dB

Date: 31.DEC.2019 12:14:40

Middle Channel / 64QAM

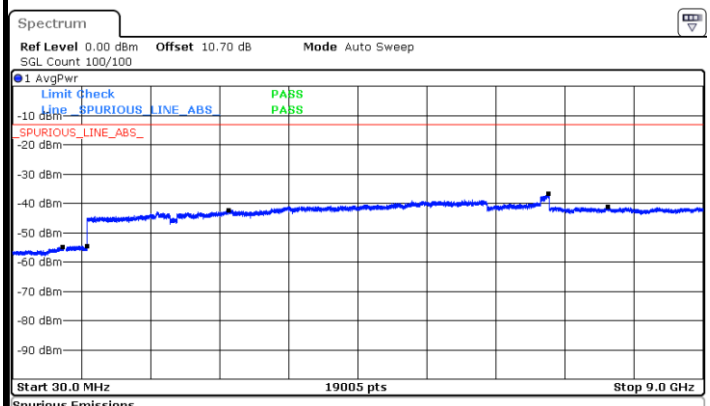


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	681.58921 MHz	-55.01 dBm	-42.01 dB
725.000 MHz	1.000 GHz	100.000 kHz	866.89560 MHz	-54.48 dBm	-41.48 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.84779 GHz	-42.21 dBm	-29.21 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98825 GHz	-36.79 dBm	-23.79 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.75756 GHz	-41.23 dBm	-28.23 dB

Date: 31.DEC.2019 12:16:09

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	679.28036 MHz	-54.97 dBm	-41.97 dB
725.000 MHz	1.000 GHz	100.000 kHz	998.48901 MHz	-54.49 dBm	-41.49 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.83379 GHz	-42.27 dBm	-29.27 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99475 GHz	-36.76 dBm	-23.76 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.75806 GHz	-41.24 dBm	-28.24 dB

Date: 31.DEC.2019 12:20:23

Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0031	PASS
40	Normal Voltage	0.0027	
30	Normal Voltage	0.0090	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0030	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0025	
-30	Normal Voltage	0.0092	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0006	

Note:

1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.65 V.；Maximum Voltage =4.25 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

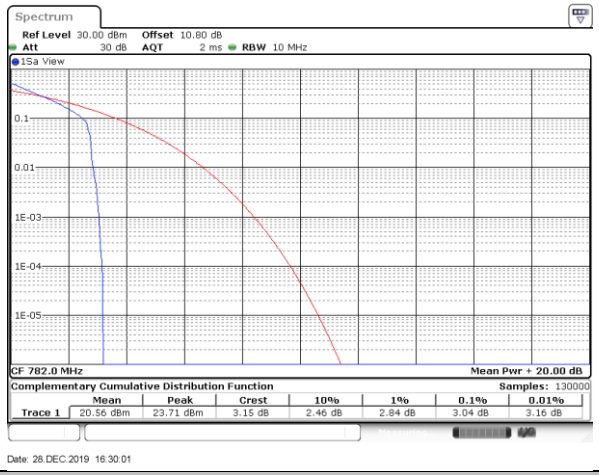
LTE Band 13

Peak-to-Average Ratio

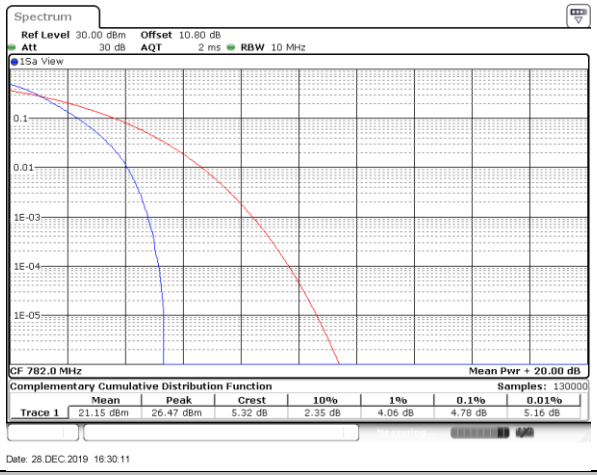
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.04	4.78	4.20	5.71	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.13	6.12	-	-	
Highest CH	-	-	-	-	

LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB

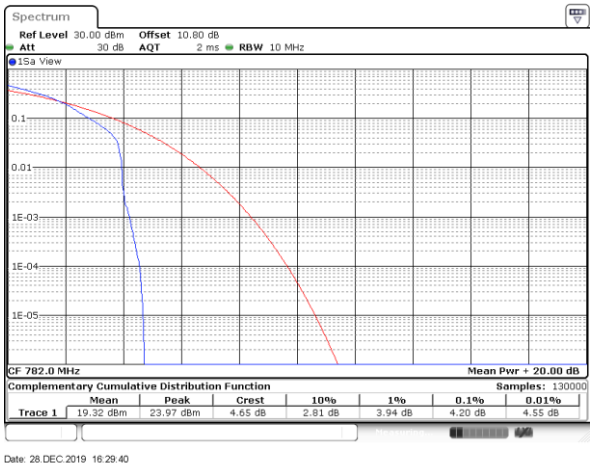


Middle Channel / Full RB

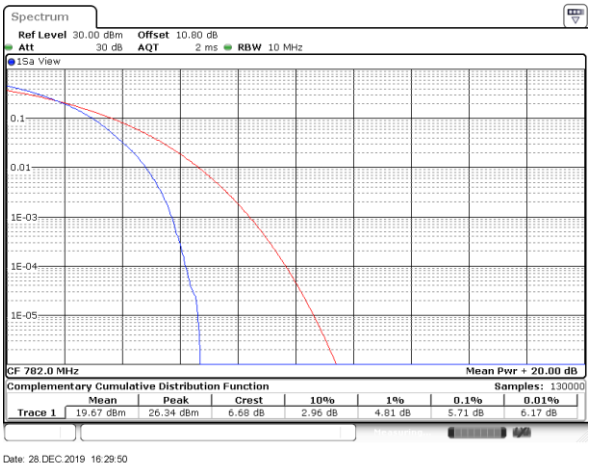


LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB

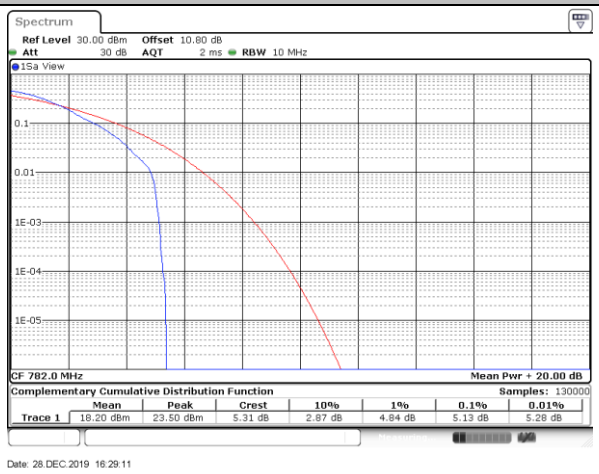


Middle Channel / Full RB

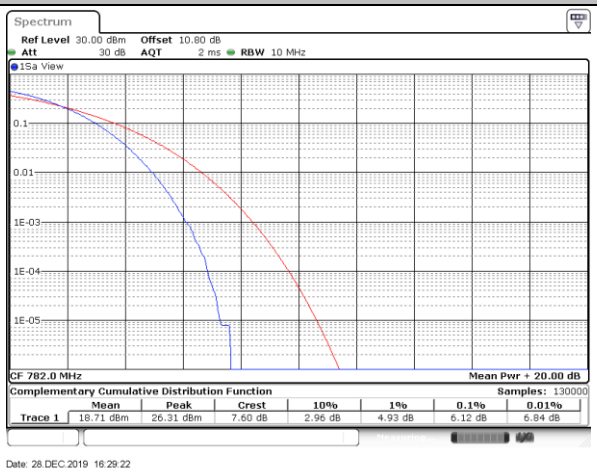


LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Middle Channel / Full RB

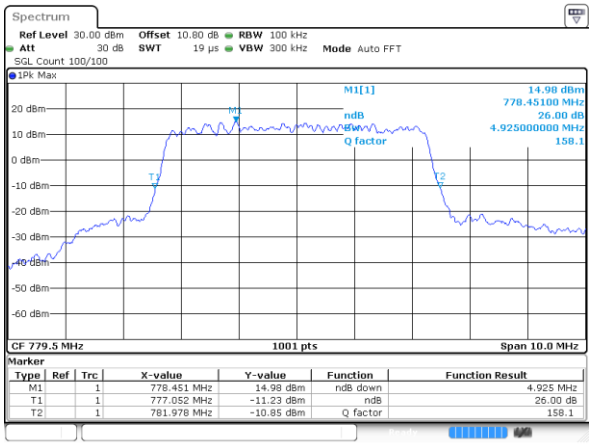


26dB Bandwidth

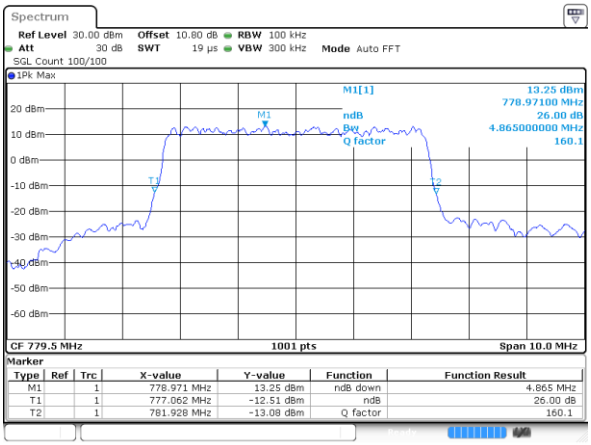
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.93	4.87	-	-	-	-	-	-
Middle CH	-	-	-	-	4.93	4.95	9.77	9.75	-	-	-	-
Highest CH	-	-	-	-	4.94	4.94	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.96	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.86	-	9.89	-	-	-	-	-
Highest CH	-	-	-	-	4.94	-	-	-	-	-	-	-

LTE Band 13

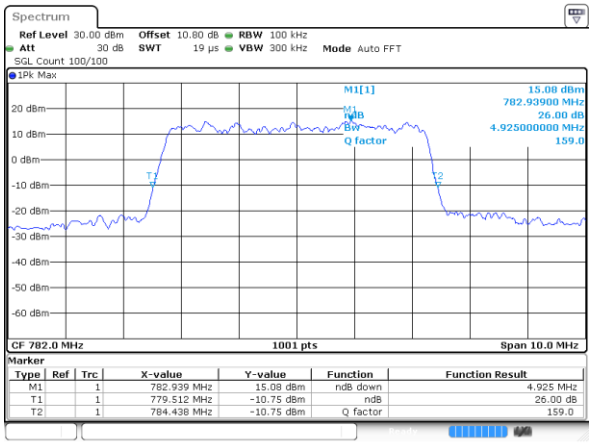
Lowest Channel / 5MHz / QPSK



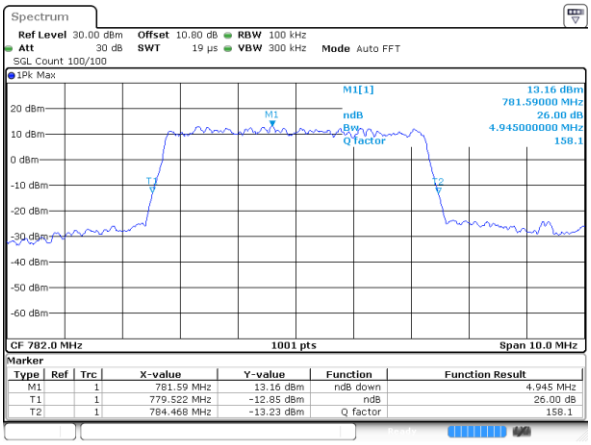
Lowest Channel / 5MHz / 16QAM



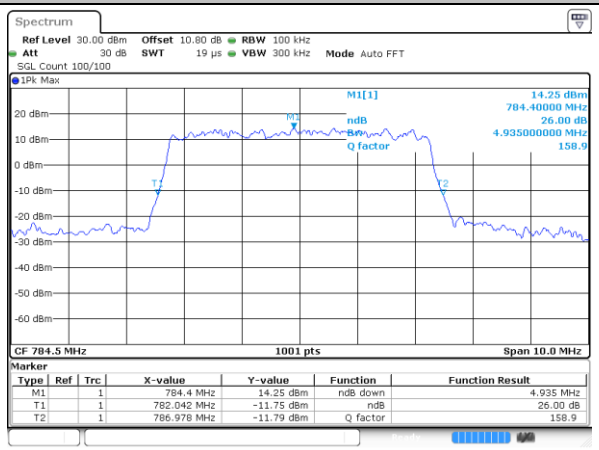
Middle Channel / 5MHz / QPSK



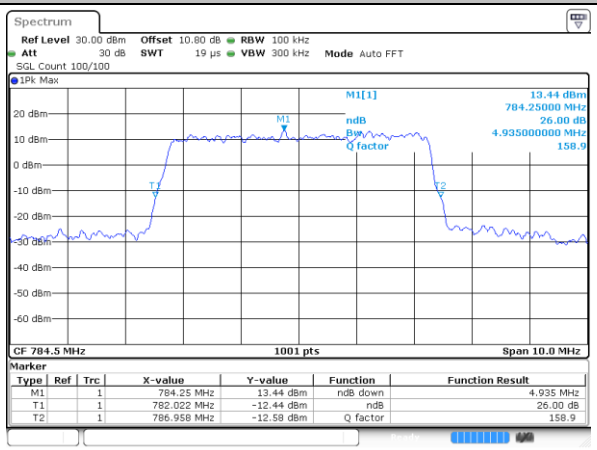
Middle Channel / 5MHz / 16QAM



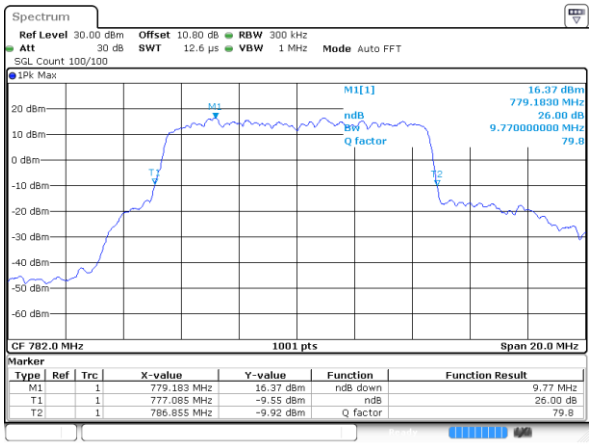
Highest Channel / 5MHz / QPSK

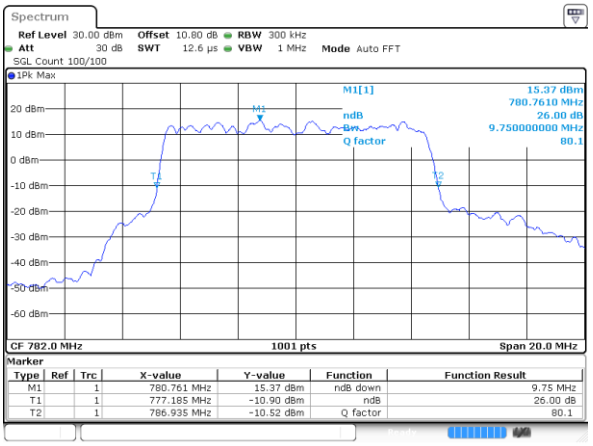


Highest Channel / 5MHz / 16QAM



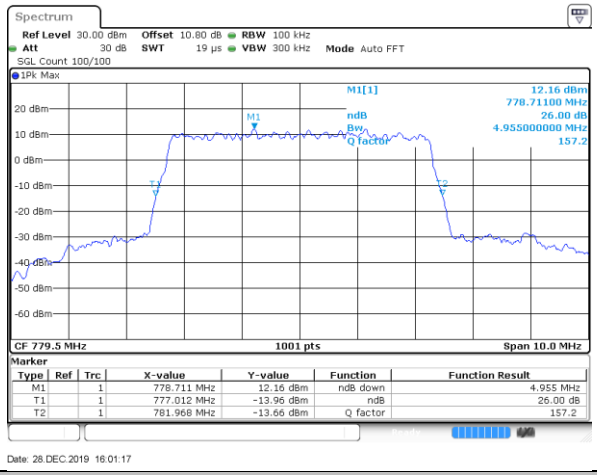
LTE Band 13	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**



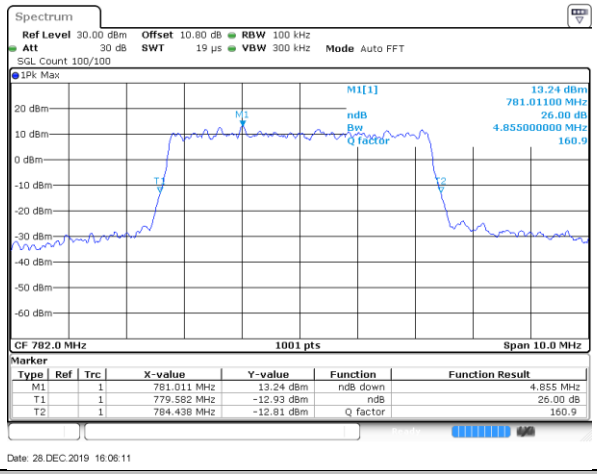


LTE Band 13

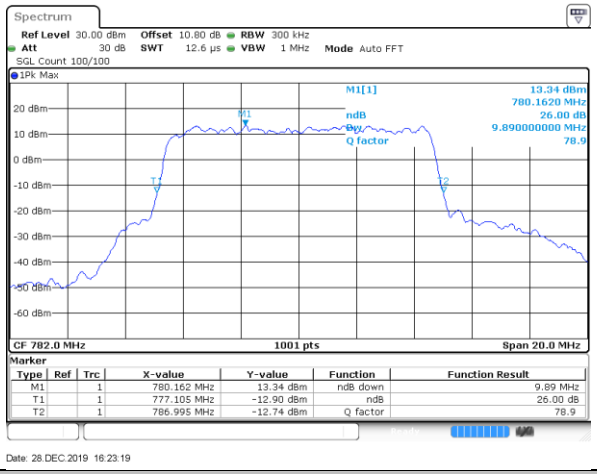
Lowest Channel / 5MHz / 64QAM



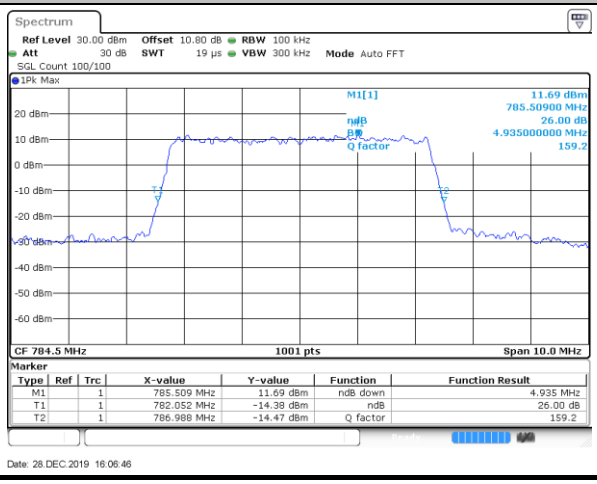
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

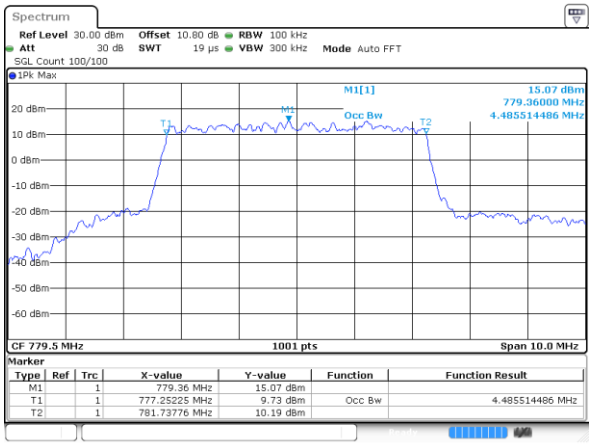


Occupied Bandwidth

Mode	LTE Band 13 : 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	4.48	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.50	9.03	9.03	-	-	-	-
Highest CH	-	-	-	-	4.50	4.50	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.52	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.51	-	-	-	-	-	-	-

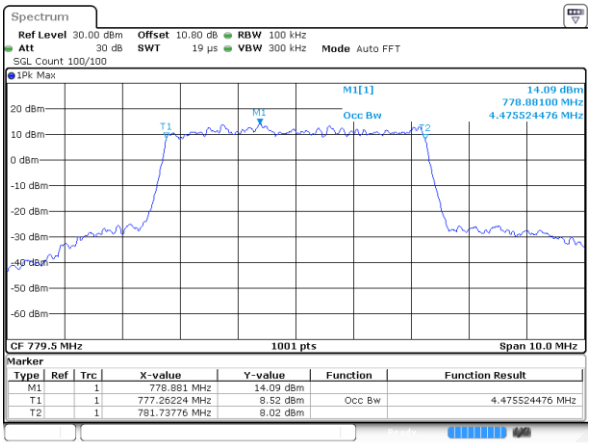
LTE Band 13

Lowest Channel / 5MHz / QPSK



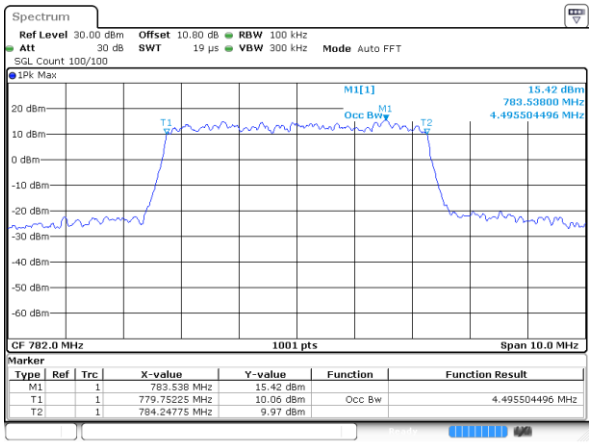
Date: 28.DEC.2019 15:41:14

Lowest Channel / 5MHz / 16QAM



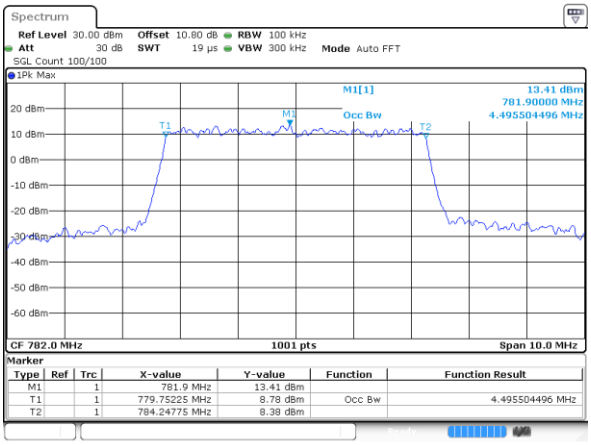
Date: 28.DEC.2019 15:41:26

Middle Channel / 5MHz / QPSK



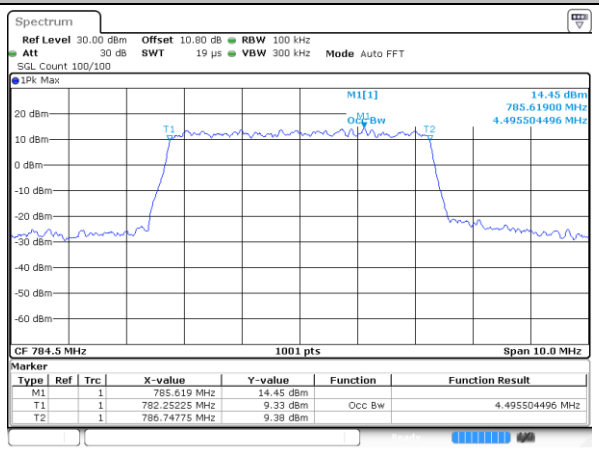
Date: 28.DEC.2019 15:52:00

Middle Channel / 5MHz / 16QAM



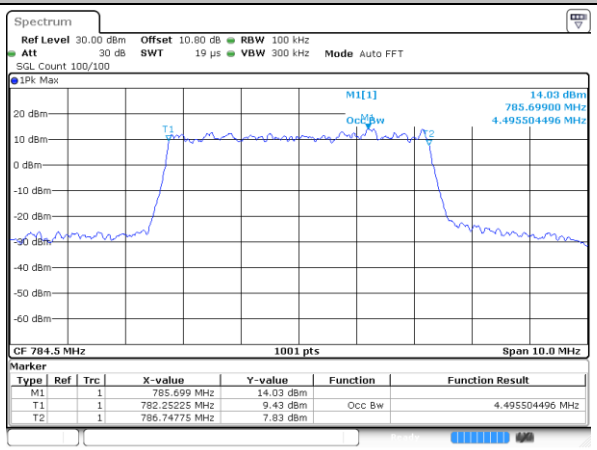
Date: 28.DEC.2019 15:51:49

Highest Channel / 5MHz / QPSK

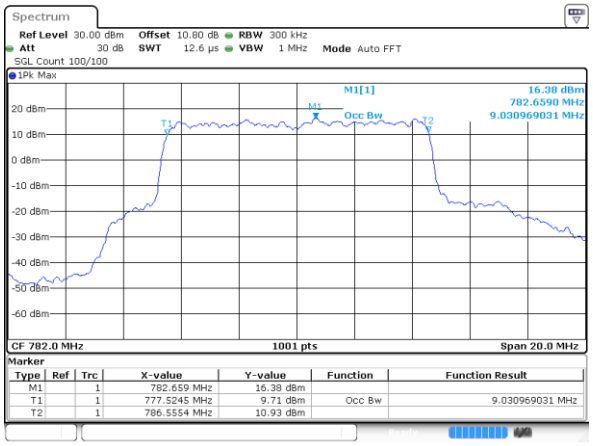
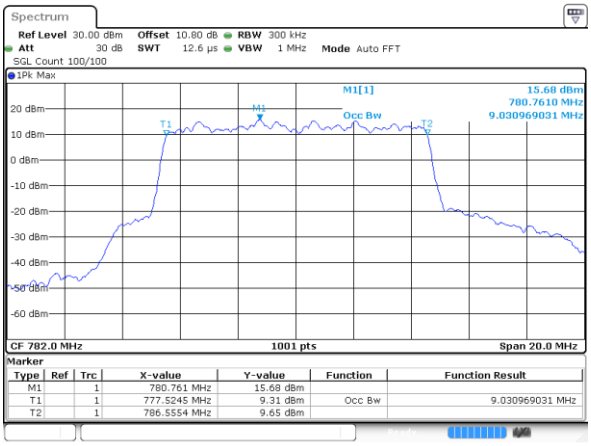


Date: 28.DEC.2019 15:52:12

Highest Channel / 5MHz / 16QAM

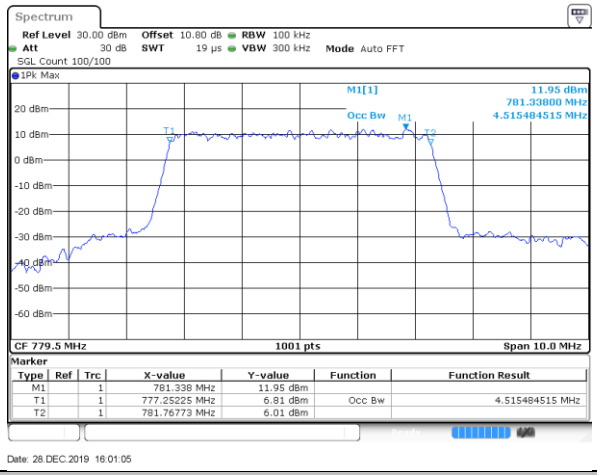


Date: 28.DEC.2019 15:52:24

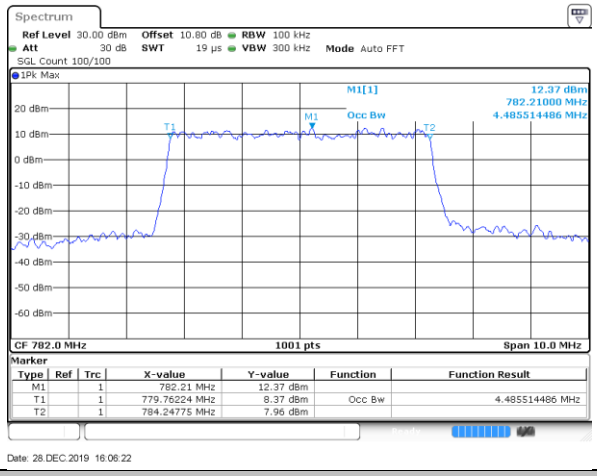
LTE Band 13	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**
	

LTE Band 13

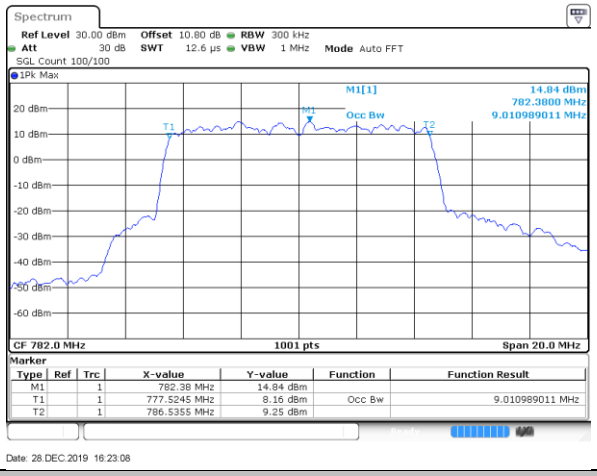
Lowest Channel / 5MHz / 64QAM



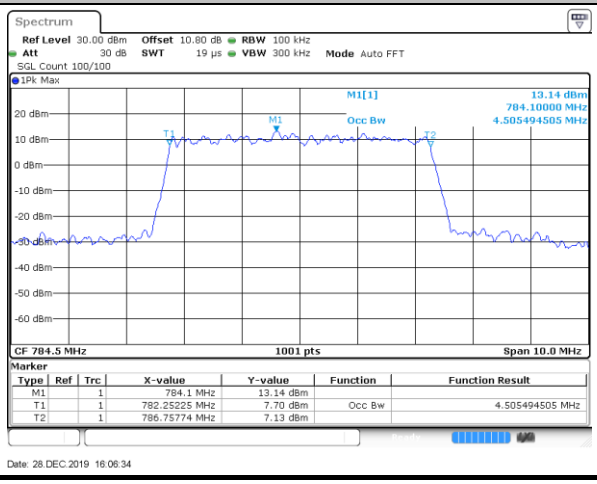
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



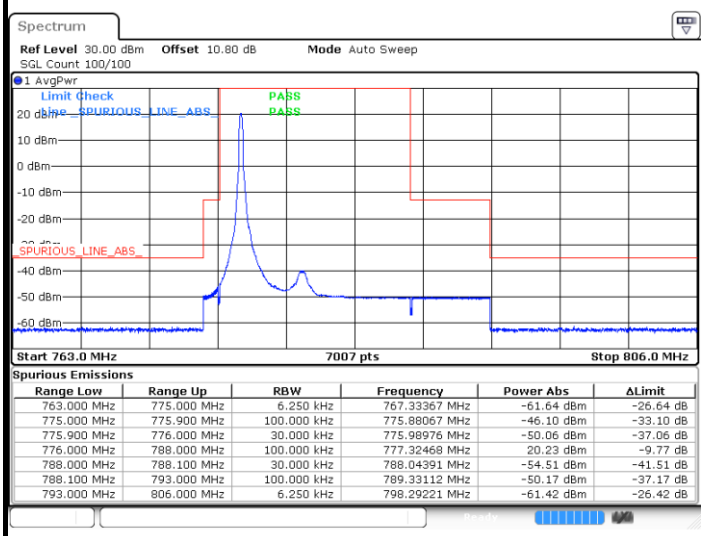
Highest Channel / 5MHz / 64QAM



Conducted Band Edge

LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

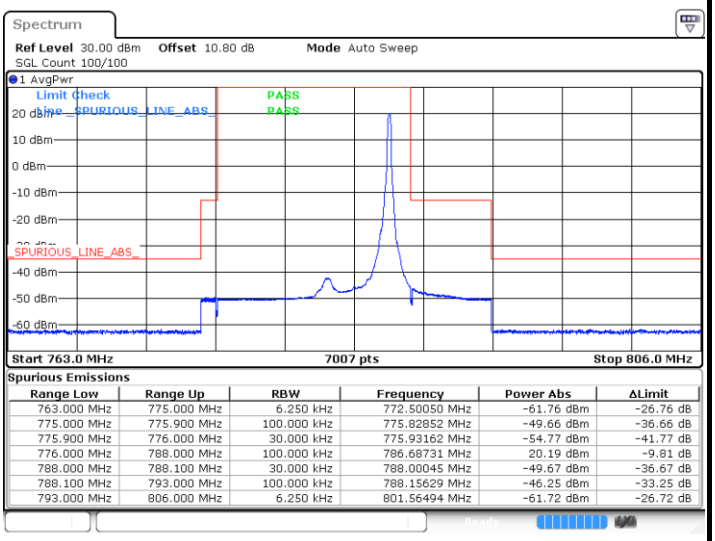


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	767.33367 MHz	-61.64 dBm	-26.64 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.88067 MHz	-46.10 dBm	-33.10 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98976 MHz	-50.06 dBm	-37.06 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.32468 MHz	20.23 dBm	-9.77 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.04391 MHz	-54.51 dBm	-41.51 dB
788.100 MHz	793.000 MHz	100.000 kHz	789.33112 MHz	-50.17 dBm	-37.17 dB
793.000 MHz	806.000 MHz	6.250 kHz	798.29221 MHz	-61.42 dBm	-26.42 dB

Date: 28.DEC.2019 15:48:33

Highest Band Edge / 1 RB

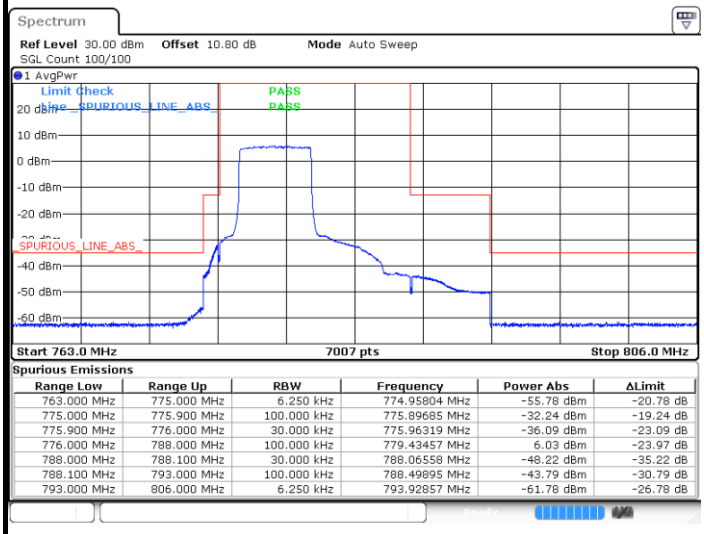


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	772.50050 MHz	-61.76 dBm	-26.76 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.82852 MHz	-49.66 dBm	-36.66 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.93162 MHz	-54.77 dBm	-41.77 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.68731 MHz	20.19 dBm	-9.81 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00045 MHz	-49.67 dBm	-36.67 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.15629 MHz	-46.25 dBm	-33.25 dB
793.000 MHz	806.000 MHz	6.250 kHz	801.56494 MHz	-61.72 dBm	-26.72 dB

Date: 28.DEC.2019 15:59:31

Lowest Band Edge / Full RB

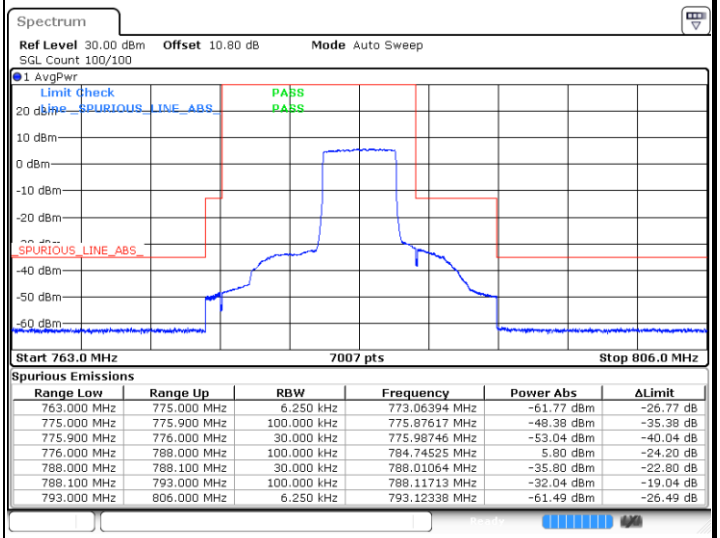


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.95804 MHz	-55.78 dBm	-20.78 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89685 MHz	-32.24 dBm	-19.24 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.96319 MHz	-36.09 dBm	-23.09 dB
776.000 MHz	788.000 MHz	100.000 kHz	779.43457 MHz	6.03 dBm	-23.97 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06558 MHz	-48.22 dBm	-35.22 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.49895 MHz	-43.79 dBm	-30.79 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.92857 MHz	-61.78 dBm	-26.78 dB

Date: 28.DEC.2019 15:43:31

Highest Band Edge / Full RB



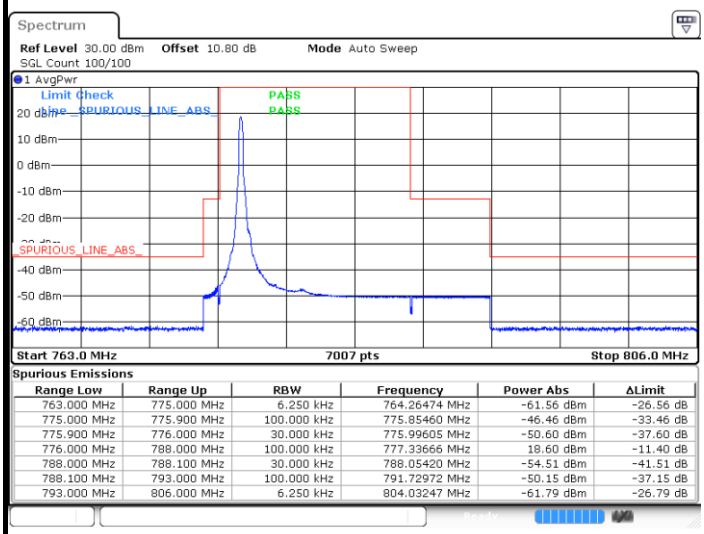
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.06394 MHz	-61.77 dBm	-26.77 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.87617 MHz	-48.38 dBm	-35.38 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98746 MHz	-53.04 dBm	-40.04 dB
776.000 MHz	788.000 MHz	100.000 kHz	784.74525 MHz	5.80 dBm	-24.20 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.01064 MHz	-35.80 dBm	-22.80 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.11713 MHz	-32.04 dBm	-19.04 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.12338 MHz	-61.49 dBm	-26.49 dB

Date: 28.DEC.2019 15:54:29

LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

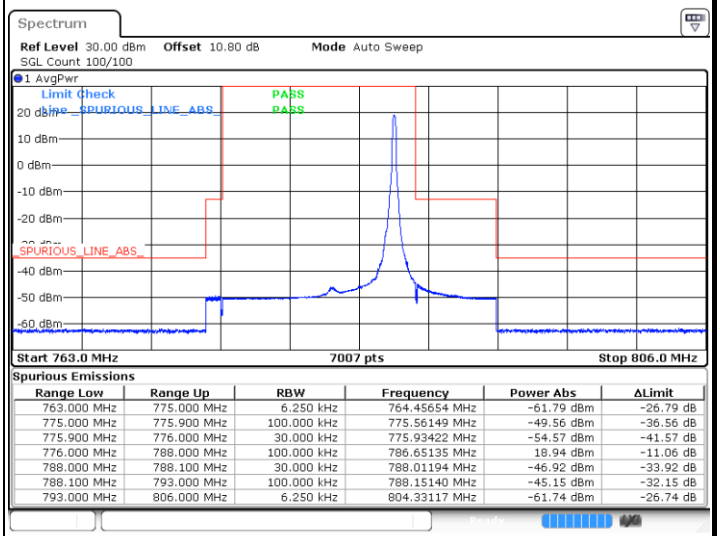


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	764.26474 MHz	-61.56 dBm	-26.56 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.85460 MHz	-46.46 dBm	-33.46 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99605 MHz	-50.60 dBm	-37.60 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.33666 MHz	18.60 dBm	-11.40 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.05420 MHz	-54.51 dBm	-41.51 dB
788.100 MHz	793.000 MHz	100.000 kHz	791.72972 MHz	-50.15 dBm	-37.15 dB
793.000 MHz	806.000 MHz	6.250 kHz	804.03247 MHz	-61.79 dBm	-26.79 dB

Date: 28.DEC.2019 15:46:53

Highest Band Edge / 1 RB

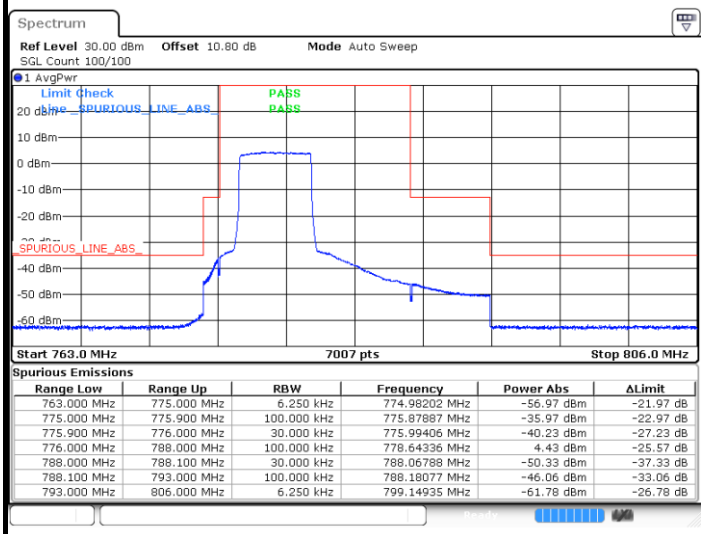


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	764.45654 MHz	-61.79 dBm	-26.79 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.56149 MHz	-49.56 dBm	-36.56 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.93422 MHz	-54.57 dBm	-41.57 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.65135 MHz	18.94 dBm	-11.06 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.01194 MHz	-46.92 dBm	-33.92 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.15140 MHz	-45.15 dBm	-32.15 dB
793.000 MHz	806.000 MHz	6.250 kHz	804.33117 MHz	-61.74 dBm	-26.74 dB

Date: 28.DEC.2019 15:57:50

Lowest Band Edge / Full RB

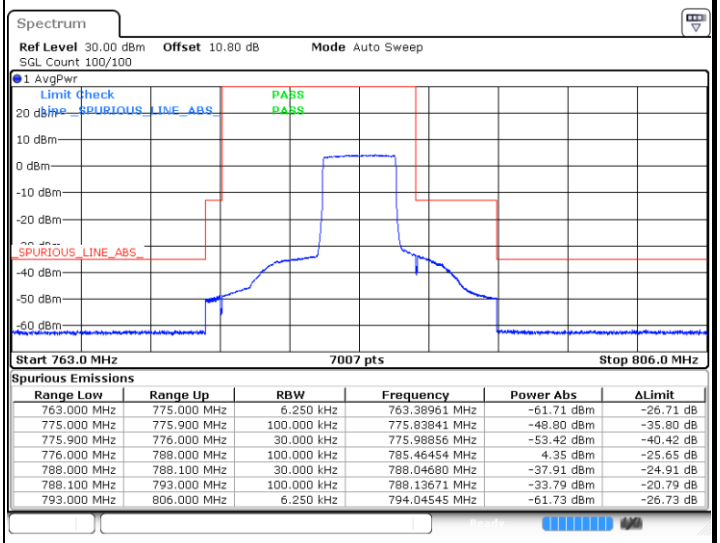


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.98202 MHz	-56.97 dBm	-21.97 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.87887 MHz	-35.97 dBm	-22.97 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99406 MHz	-40.23 dBm	-27.23 dB
776.000 MHz	788.000 MHz	100.000 kHz	778.64336 MHz	4.43 dBm	-25.57 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06788 MHz	-50.33 dBm	-37.33 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.18077 MHz	-46.06 dBm	-33.06 dB
793.000 MHz	806.000 MHz	6.250 kHz	799.14935 MHz	-61.78 dBm	-26.78 dB

Date: 28.DEC.2019 15:45:12

Highest Band Edge / Full RB



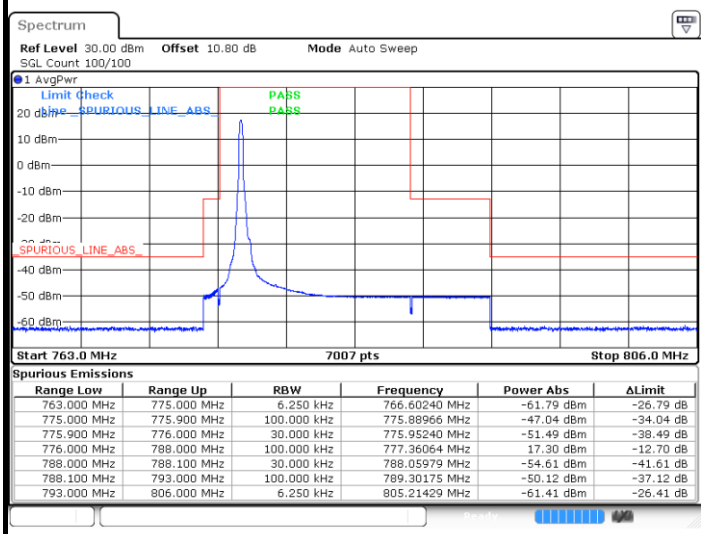
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	763.38961 MHz	-61.71 dBm	-26.71 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.83841 MHz	-48.80 dBm	-35.80 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98856 MHz	-53.42 dBm	-40.42 dB
776.000 MHz	788.000 MHz	100.000 kHz	785.46454 MHz	4.35 dBm	-25.65 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.04680 MHz	-37.91 dBm	-24.91 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.13671 MHz	-33.79 dBm	-20.79 dB
793.000 MHz	806.000 MHz	6.250 kHz	794.04545 MHz	-61.73 dBm	-26.73 dB

Date: 28.DEC.2019 15:56:09

LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

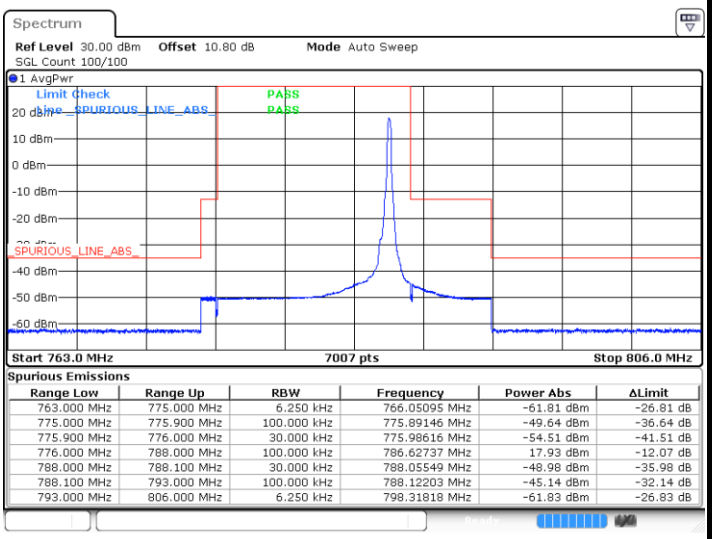


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	766.60240 MHz	-61.79 dBm	-26.79 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.88966 MHz	-47.04 dBm	-34.04 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.95240 MHz	-51.49 dBm	-38.49 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.36064 MHz	17.30 dBm	-12.70 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.05979 MHz	-54.61 dBm	-41.61 dB
788.100 MHz	793.000 MHz	100.000 kHz	789.30175 MHz	-50.12 dBm	-37.12 dB
793.000 MHz	806.000 MHz	6.250 kHz	805.21429 MHz	-61.41 dBm	-26.41 dB

Date: 28.DEC.2019 16:04:38

Highest Band Edge / 1 RB

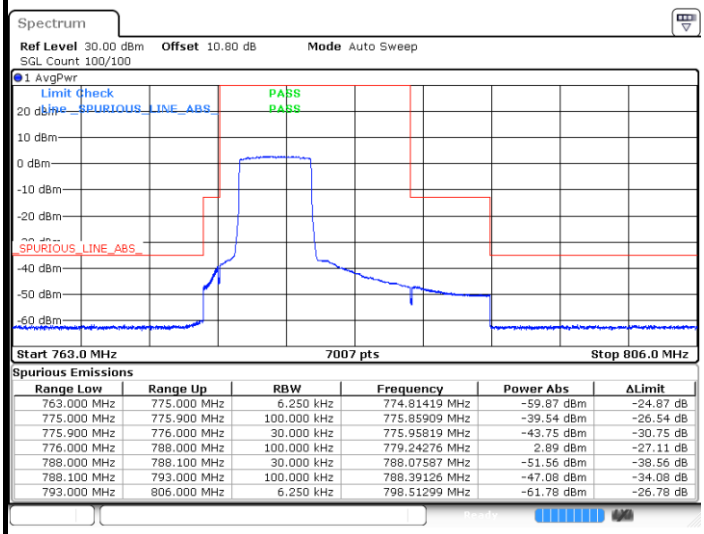


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	766.05095 MHz	-61.81 dBm	-26.81 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89146 MHz	-49.64 dBm	-36.64 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98616 MHz	-54.51 dBm	-41.51 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.62737 MHz	17.93 dBm	-12.07 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.05549 MHz	-48.98 dBm	-35.98 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.12203 MHz	-45.14 dBm	-32.14 dB
793.000 MHz	806.000 MHz	6.250 kHz	798.31818 MHz	-61.83 dBm	-26.83 dB

Date: 28.DEC.2019 16:10:07

Lowest Band Edge / Full RB

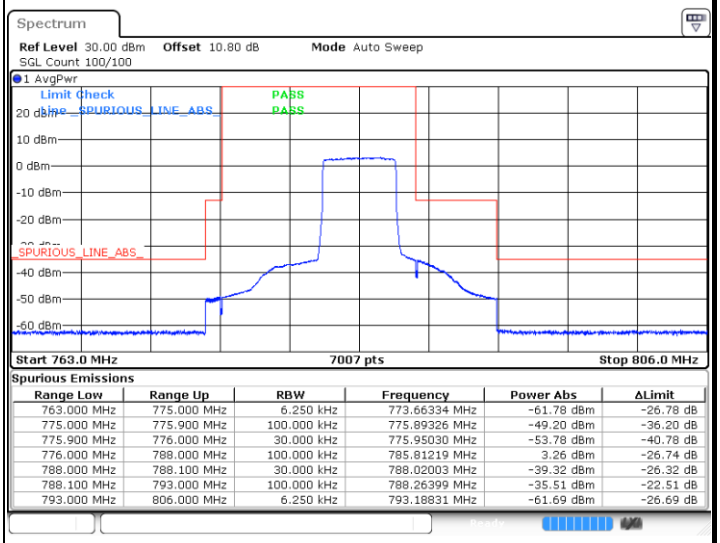


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.81419 MHz	-59.87 dBm	-24.87 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.85909 MHz	-39.54 dBm	-26.54 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.95819 MHz	-43.75 dBm	-30.75 dB
776.000 MHz	788.000 MHz	100.000 kHz	779.24276 MHz	2.89 dBm	-27.11 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.07587 MHz	-51.56 dBm	-38.56 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.39126 MHz	-47.08 dBm	-34.08 dB
793.000 MHz	806.000 MHz	6.250 kHz	798.51299 MHz	-61.78 dBm	-26.78 dB

Date: 28.DEC.2019 16:02:57

Highest Band Edge / Full RB



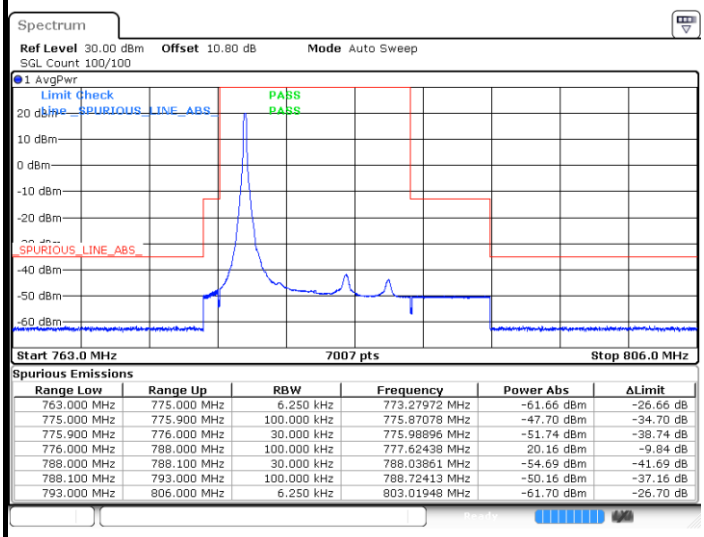
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.66334 MHz	-61.78 dBm	-26.78 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89326 MHz	-49.20 dBm	-36.20 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.95030 MHz	-53.78 dBm	-40.78 dB
776.000 MHz	788.000 MHz	100.000 kHz	785.81219 MHz	3.26 dBm	-26.74 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.02003 MHz	-39.32 dBm	-26.32 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.26399 MHz	-35.51 dBm	-22.51 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.18831 MHz	-61.69 dBm	-26.69 dB

Date: 28.DEC.2019 16:08:26

LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB

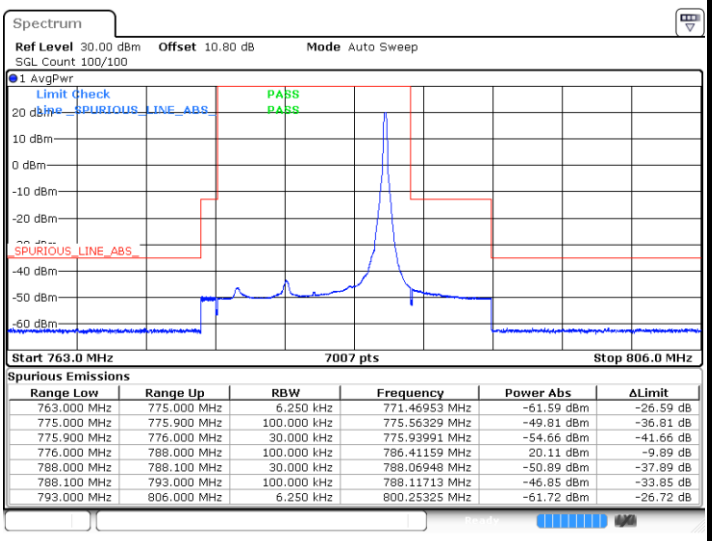


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.27972 MHz	-61.66 dBm	-26.66 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.87078 MHz	-47.70 dBm	-34.70 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98896 MHz	-51.74 dBm	-38.74 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.62438 MHz	20.16 dBm	-9.84 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.03861 MHz	-54.69 dBm	-41.69 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.72413 MHz	-50.16 dBm	-37.16 dB
793.000 MHz	806.000 MHz	6.250 kHz	803.01948 MHz	-61.70 dBm	-26.70 dB

Date: 28.DEC.2019 16:18:16

Highest Band Edge / 1 RB

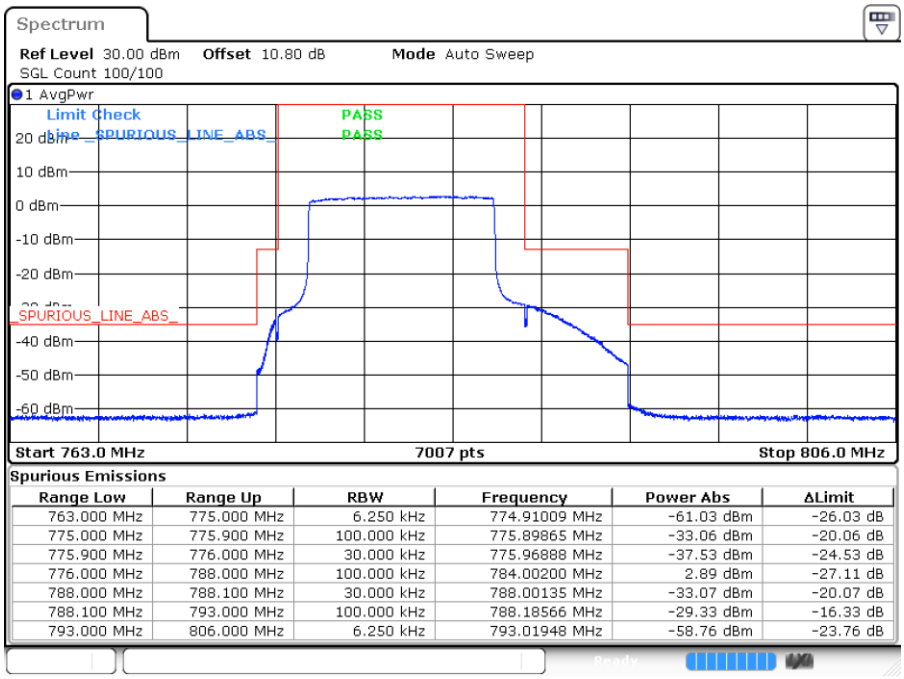


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	771.46953 MHz	-61.59 dBm	-26.59 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.56329 MHz	-49.81 dBm	-36.81 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.93991 MHz	-54.66 dBm	-41.66 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.41159 MHz	20.11 dBm	-9.89 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06948 MHz	-50.89 dBm	-37.89 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.11713 MHz	-46.85 dBm	-33.85 dB
793.000 MHz	806.000 MHz	6.250 kHz	800.25325 MHz	-61.72 dBm	-26.72 dB

Date: 28.DEC.2019 16:19:56

Band Edge / Full RB



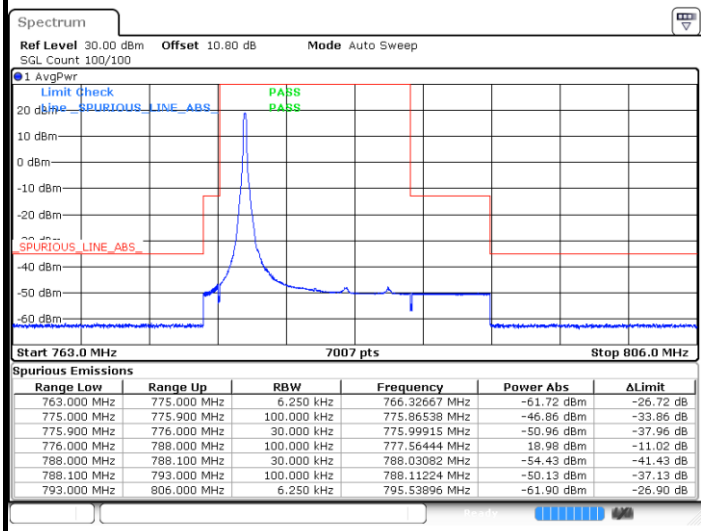
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.91009 MHz	-61.03 dBm	-26.03 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89865 MHz	-33.06 dBm	-20.06 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.96888 MHz	-37.53 dBm	-24.53 dB
776.000 MHz	788.000 MHz	100.000 kHz	784.00200 MHz	2.89 dBm	-27.11 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00135 MHz	-33.07 dBm	-20.07 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.18566 MHz	-29.33 dBm	-16.33 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.01948 MHz	-58.76 dBm	-23.76 dB

Date: 28.DEC.2019 16:13:15

LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

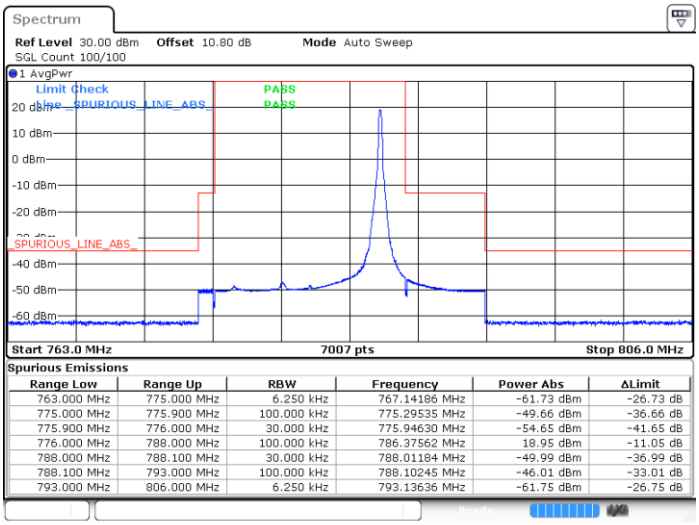


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	766.32667 MHz	-61.72 dBm	-26.72 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.86538 MHz	-46.86 dBm	-33.86 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99915 MHz	-50.96 dBm	-37.96 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.56444 MHz	18.98 dBm	-11.02 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.03082 MHz	-54.43 dBm	-41.43 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.11224 MHz	-50.13 dBm	-37.13 dB
793.000 MHz	806.000 MHz	6.250 kHz	795.53896 MHz	-61.90 dBm	-26.90 dB

Date: 28.DEC.2019 16:16:35

Highest Band Edge / 1 RB

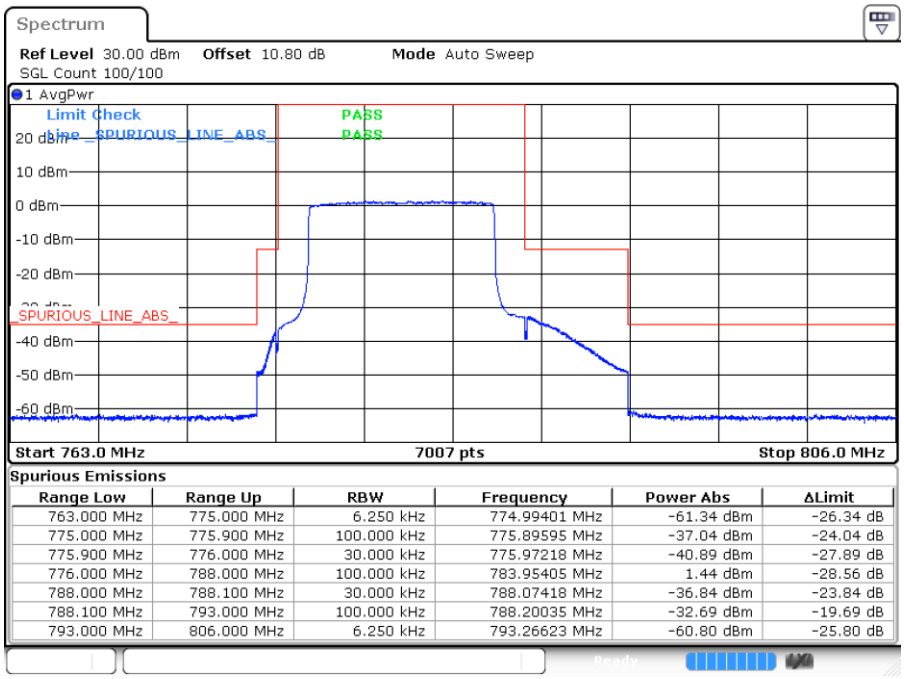


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	767.14186 MHz	-61.73 dBm	-26.73 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.29535 MHz	-49.66 dBm	-36.66 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.94630 MHz	-54.65 dBm	-41.65 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.37562 MHz	18.95 dBm	-11.05 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.01184 MHz	-49.99 dBm	-36.99 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.10245 MHz	-46.01 dBm	-33.01 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.13636 MHz	-61.75 dBm	-26.75 dB

Date: 28.DEC.2019 16:21:36

Band Edge / Full RB



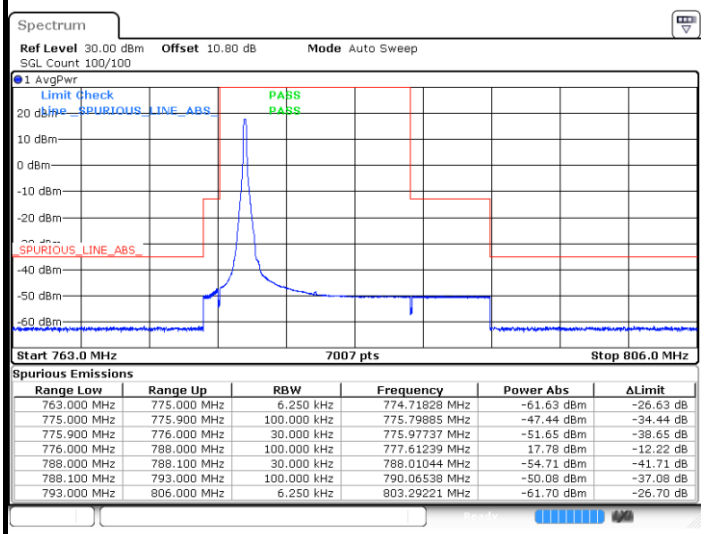
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.99401 MHz	-61.34 dBm	-26.34 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89595 MHz	-37.04 dBm	-24.04 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97218 MHz	-40.89 dBm	-27.89 dB
776.000 MHz	788.000 MHz	100.000 kHz	783.95405 MHz	1.44 dBm	-28.56 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.07418 MHz	-36.84 dBm	-23.84 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.20035 MHz	-32.69 dBm	-19.69 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.26623 MHz	-60.80 dBm	-25.80 dB

Date: 28.DEC.2019 16:14:55

LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

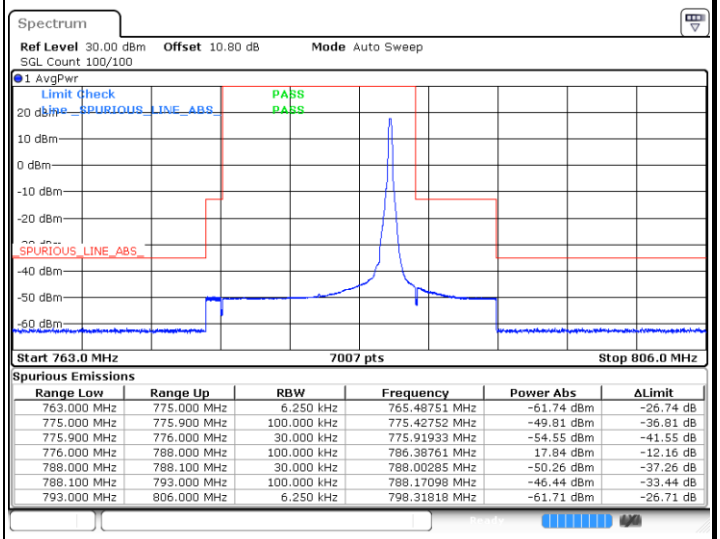


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.71828 MHz	-61.63 dBm	-26.63 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.79885 MHz	-47.44 dBm	-34.44 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97737 MHz	-51.65 dBm	-38.65 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.61239 MHz	17.78 dBm	-12.22 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.01044 MHz	-54.71 dBm	-41.71 dB
788.100 MHz	793.000 MHz	100.000 kHz	790.06538 MHz	-50.08 dBm	-37.08 dB
793.000 MHz	806.000 MHz	6.250 kHz	803.29221 MHz	-61.70 dBm	-26.70 dB

Date: 28.DEC.2019 16:26:39

Highest Band Edge / 1 RB

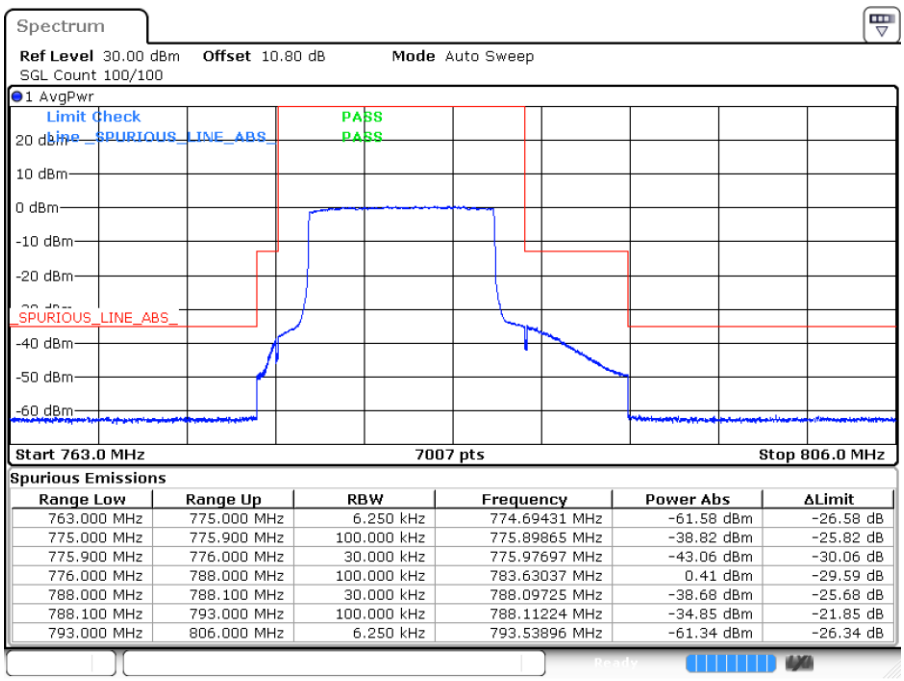


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	765.48751 MHz	-61.74 dBm	-26.74 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.42752 MHz	-49.81 dBm	-36.81 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.91933 MHz	-54.55 dBm	-41.55 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.38761 MHz	17.84 dBm	-12.16 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00285 MHz	-50.26 dBm	-37.26 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.17098 MHz	-46.44 dBm	-33.44 dB
793.000 MHz	806.000 MHz	6.250 kHz	798.31818 MHz	-61.71 dBm	-26.71 dB

Date: 28.DEC.2019 16:28:20

Band Edge / Full RB



Spurious Emissions

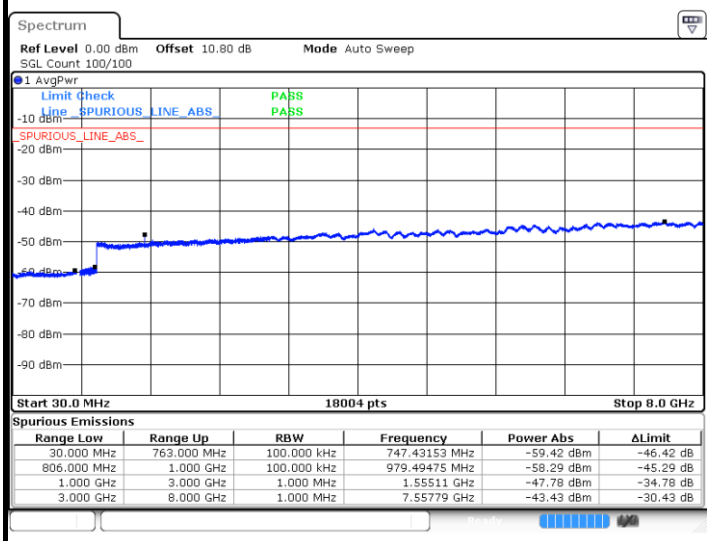
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.69431 MHz	-61.58 dBm	-26.58 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89865 MHz	-38.82 dBm	-25.82 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97697 MHz	-43.06 dBm	-30.06 dB
776.000 MHz	788.000 MHz	100.000 kHz	783.63037 MHz	0.41 dBm	-29.59 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.09725 MHz	-38.68 dBm	-25.68 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.11224 MHz	-34.85 dBm	-21.85 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.53896 MHz	-61.34 dBm	-26.34 dB

Date: 28.DEC.2019 16:24:59

Conducted Spurious Emission

LTE Band 13 / 5MHz

Lowest Channel / QPSK

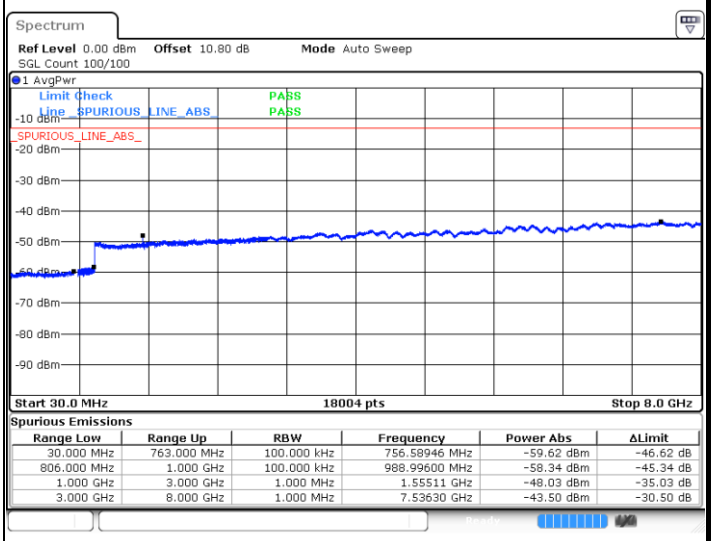


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	747.43153 MHz	-59.42 dBm	-46.42 dB
806.000 MHz	1.000 GHz	100.000 kHz	979.49475 MHz	-58.29 dBm	-45.29 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55511 GHz	-47.78 dBm	-34.78 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.55779 GHz	-43.43 dBm	-30.43 dB

Date: 28.DEC.2019 15:49:15

Lowest Channel / 16QAM

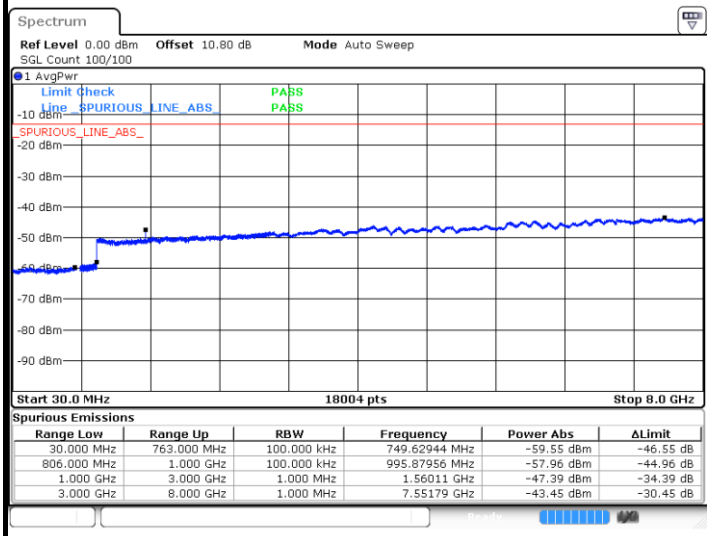


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	756.58946 MHz	-59.62 dBm	-46.62 dB
806.000 MHz	1.000 GHz	100.000 kHz	988.99600 MHz	-58.34 dBm	-45.34 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55511 GHz	-48.03 dBm	-35.03 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.53630 GHz	-43.50 dBm	-30.50 dB

Date: 28.DEC.2019 15:49:55

Middle Channel / QPSK

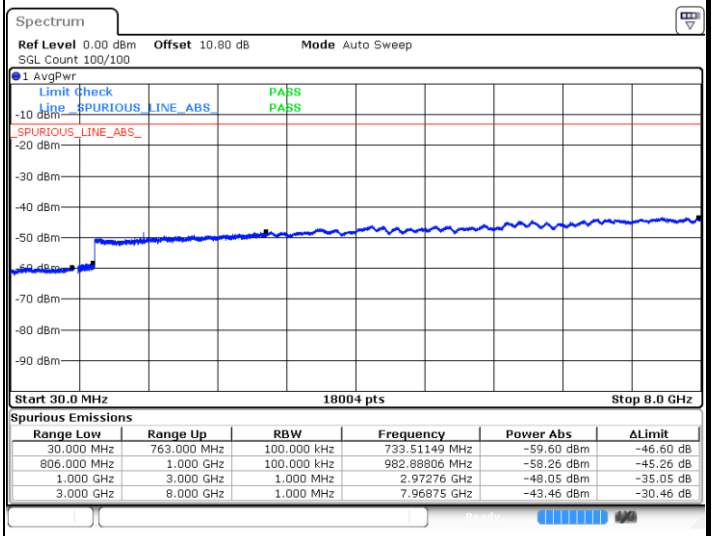


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	749.62944 MHz	-59.55 dBm	-46.55 dB
806.000 MHz	1.000 GHz	100.000 kHz	995.87956 MHz	-57.96 dBm	-44.96 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56011 GHz	-47.39 dBm	-34.39 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.55179 GHz	-43.45 dBm	-30.45 dB

Date: 28.DEC.2019 15:51:15

Middle Channel / 16QAM



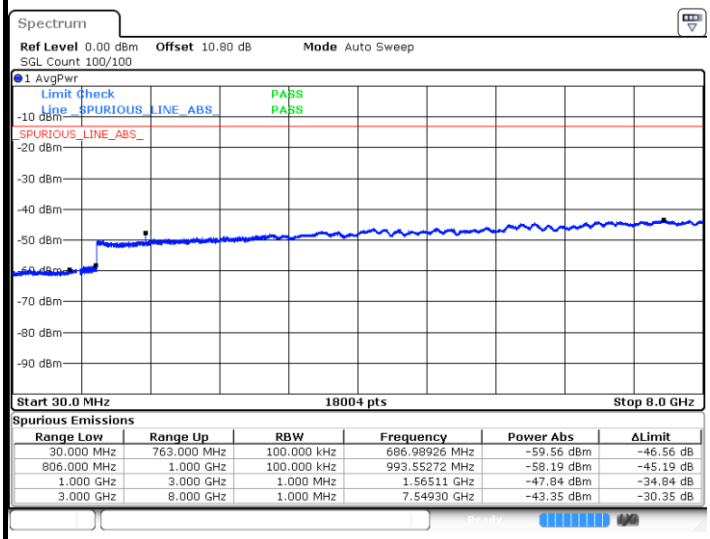
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	733.51149 MHz	-59.60 dBm	-46.60 dB
806.000 MHz	1.000 GHz	100.000 kHz	982.88806 MHz	-58.26 dBm	-45.26 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.97276 GHz	-48.05 dBm	-35.05 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.96875 GHz	-43.46 dBm	-30.46 dB

Date: 28.DEC.2019 15:50:35

LTE Band 13 / 5MHz

Highest Channel / QPSK

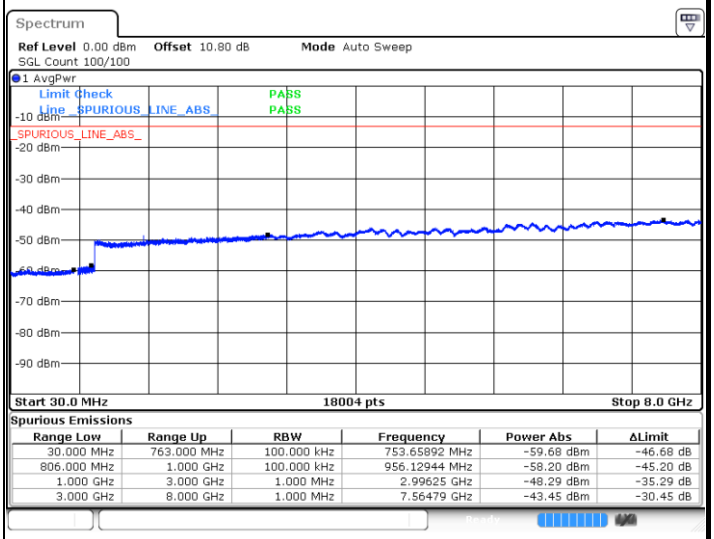


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	686.98926 MHz	-59.56 dBm	-46.56 dB
806.000 MHz	1.000 GHz	100.000 kHz	993.55272 MHz	-58.19 dBm	-45.19 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56511 GHz	-47.84 dBm	-34.84 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.54930 GHz	-43.35 dBm	-30.35 dB

Date: 28.DEC.2019 16:00:12

Highest Channel / 16QAM



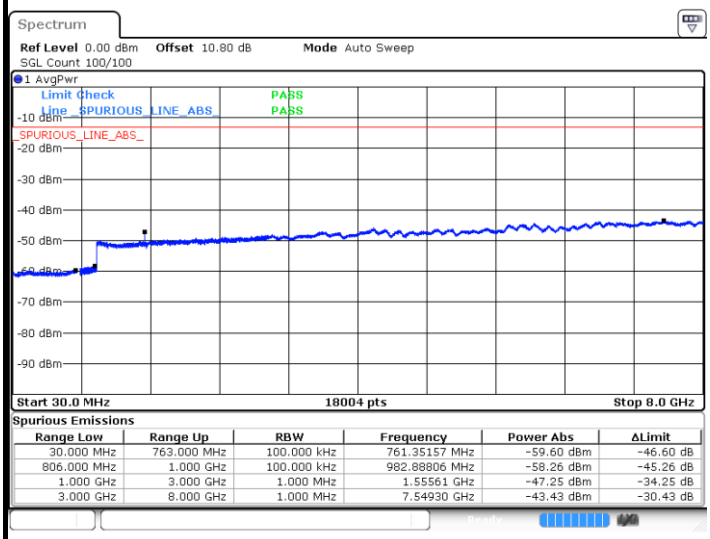
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	753.65892 MHz	-59.68 dBm	-46.68 dB
806.000 MHz	1.000 GHz	100.000 kHz	956.12944 MHz	-58.20 dBm	-45.20 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99625 GHz	-48.29 dBm	-35.29 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.56479 GHz	-43.45 dBm	-30.45 dB

Date: 28.DEC.2019 16:00:53

LTE Band 13 / 10MHz

Middle Channel / QPSK

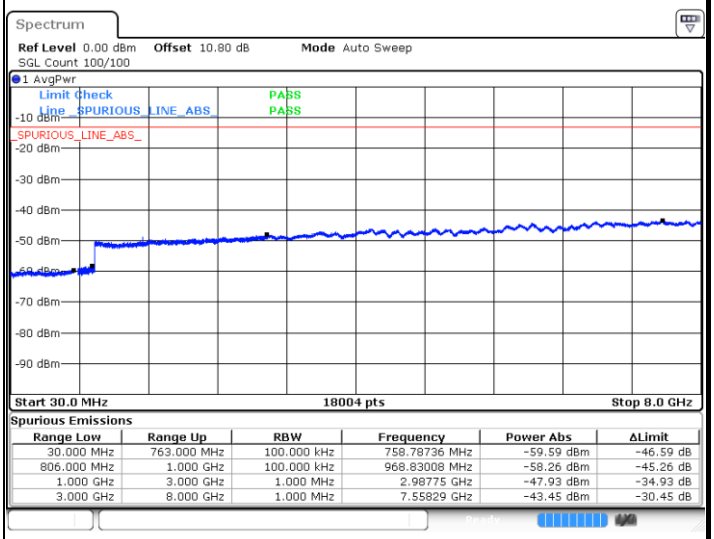


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	761.35157 MHz	-59.60 dBm	-46.60 dB
806.000 MHz	1.000 GHz	100.000 kHz	982.88806 MHz	-58.26 dBm	-45.26 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55561 GHz	-47.25 dBm	-34.25 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.54930 GHz	-43.43 dBm	-30.43 dB

Date: 28.DEC.2019 16:22:57

Middle Channel / 16QAM



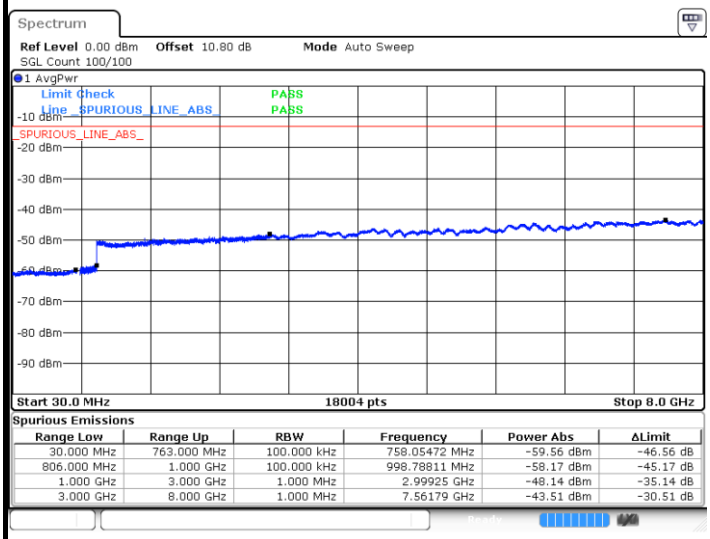
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	758.78736 MHz	-59.59 dBm	-46.59 dB
806.000 MHz	1.000 GHz	100.000 kHz	968.83008 MHz	-58.26 dBm	-45.26 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98775 GHz	-47.93 dBm	-34.93 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.55829 GHz	-43.45 dBm	-30.45 dB

Date: 28.DEC.2019 16:22:17

LTE Band 13 / 5MHz

Lowest Channel / 64QAM

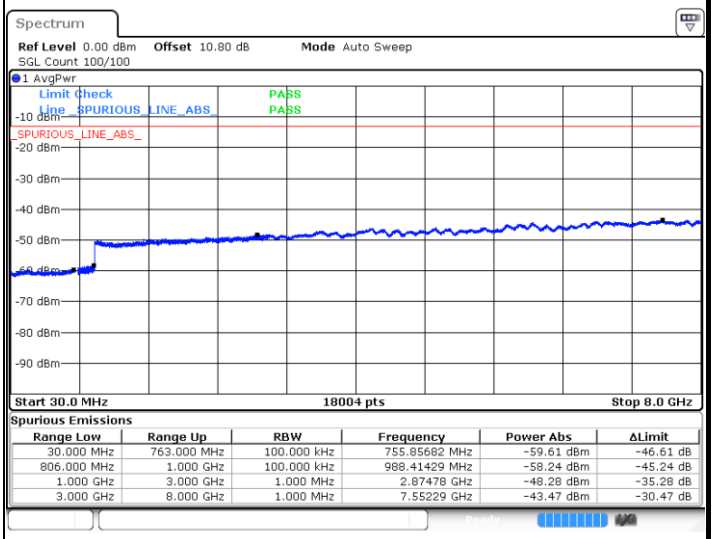


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	758.05472 MHz	-59.56 dBm	-46.56 dB
806.000 MHz	1.000 GHz	100.000 kHz	998.78811 MHz	-58.17 dBm	-45.17 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99925 GHz	-48.14 dBm	-35.14 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.56179 GHz	-43.51 dBm	-30.51 dB

Date: 28.DEC.2019 16:05:19

Middle Channel / 64QAM

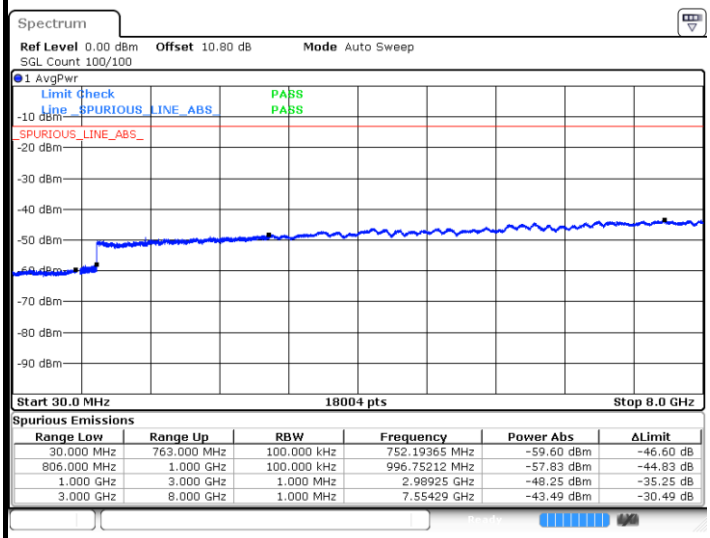


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	755.85682 MHz	-59.61 dBm	-46.61 dB
806.000 MHz	1.000 GHz	100.000 kHz	988.41429 MHz	-58.24 dBm	-45.24 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.87478 GHz	-48.28 dBm	-35.28 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.55229 GHz	-43.47 dBm	-30.47 dB

Date: 28.DEC.2019 16:06:00

Highest Channel / 64QAM

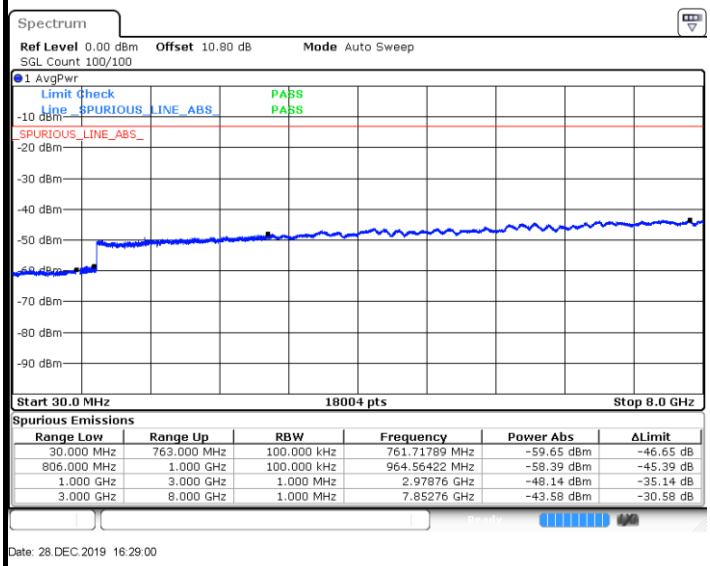


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	752.19365 MHz	-59.60 dBm	-46.60 dB
806.000 MHz	1.000 GHz	100.000 kHz	996.75212 MHz	-57.83 dBm	-44.83 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98925 GHz	-48.25 dBm	-35.25 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.55429 GHz	-43.49 dBm	-30.49 dB

Date: 28.DEC.2019 16:10:48

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	761.71789 MHz	-59.65 dBm	-46.65 dB
806.000 MHz	1.000 GHz	100.000 kHz	964.56422 MHz	-58.39 dBm	-45.39 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.97876 GHz	-48.14 dBm	-35.14 dB
3.000 GHz	8.000 GHz	1.000 MHz	7.85276 GHz	-43.58 dBm	-30.58 dB

Date: 28.DEC.2019 16:29:00

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	0.0018	PASS
40	Normal Voltage	0.0036	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0020	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0008	
-30	Normal Voltage	0.0065	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0006	

Note:

1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.65 V.；Maximum Voltage =4.25 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

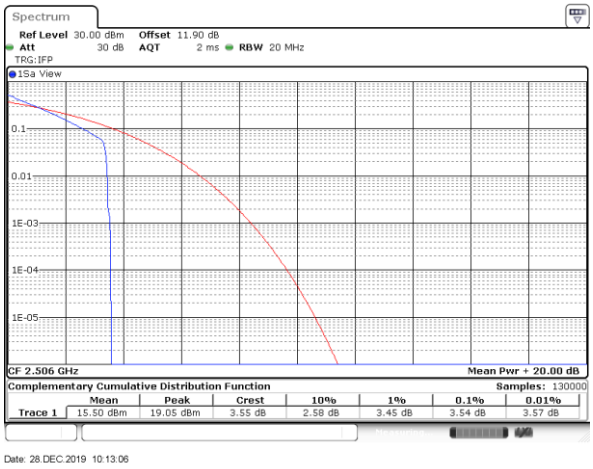
LTE Band 41

Peak-to-Average Ratio

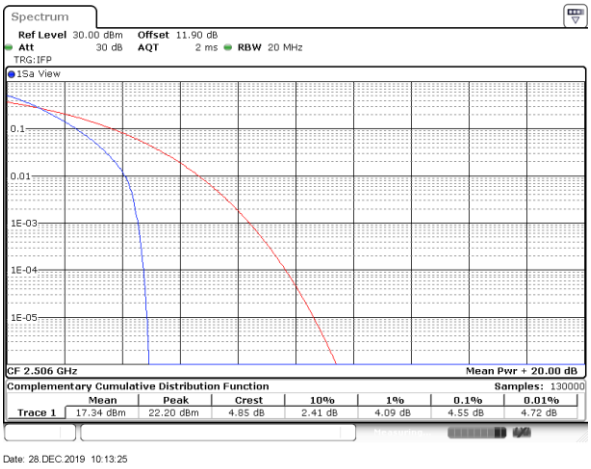
Mode	LTE Band 41 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.54	4.55	4.20	5.77	PASS
Middle CH	4.03	4.78	6.14	6.06	
Highest CH	4.06	5.07	5.62	6.00	
Mode	LTE Band 41 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.97	6.35	-	-	PASS
Middle CH	7.04	6.55	-	-	
Highest CH	7.25	6.43	-	-	

LTE Band 41 / 20MHz / QPSK

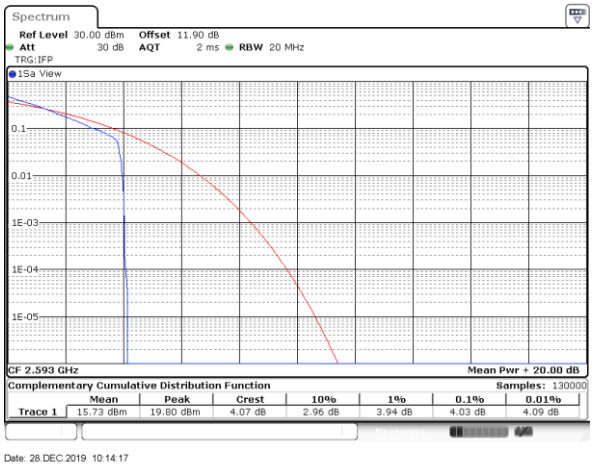
Lowest Channel / 1RB



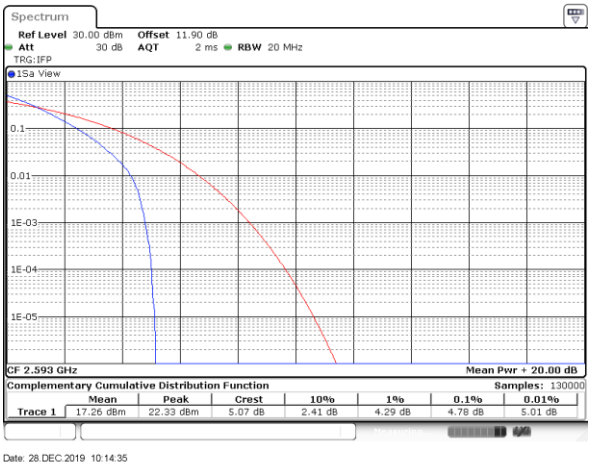
Lowest Channel / Full RB



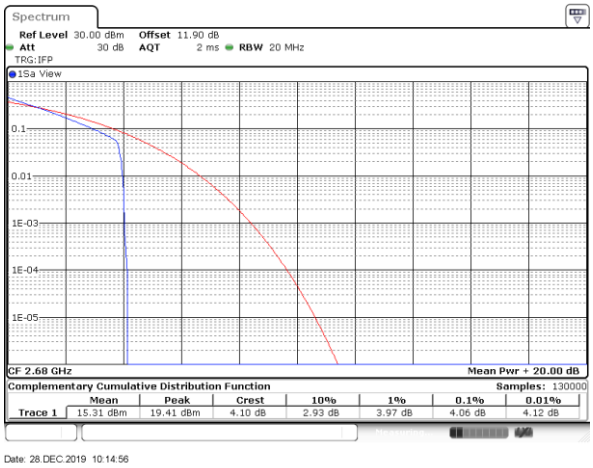
Middle Channel / 1RB



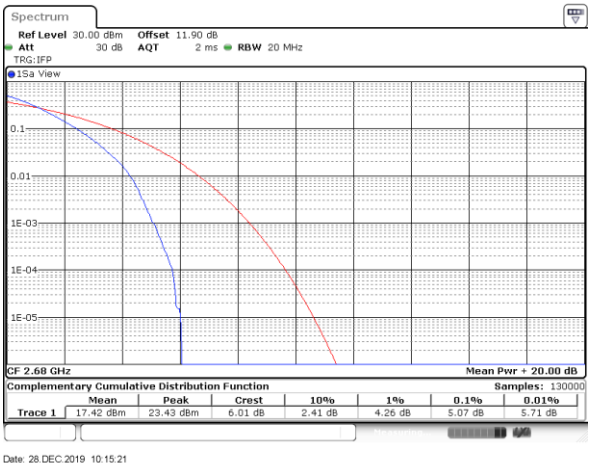
Middle Channel / Full RB



Highest Channel / 1RB

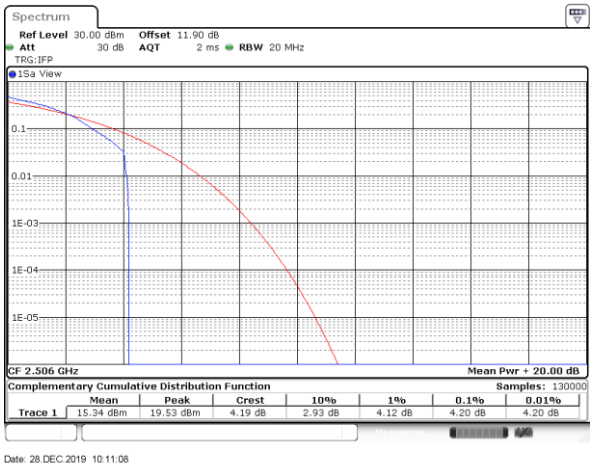


Highest Channel / Full RB

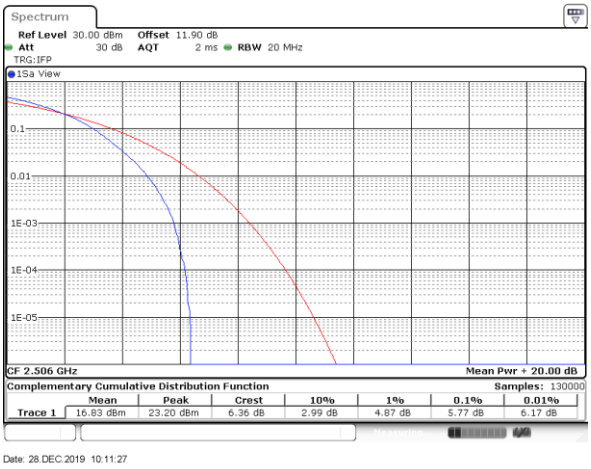


LTE Band 41 / 20MHz / 16QAM

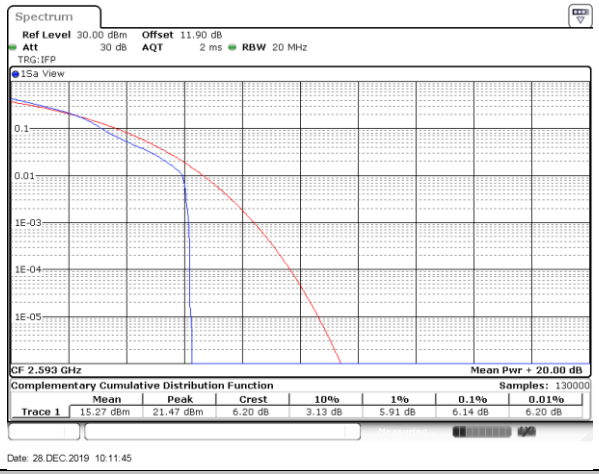
Lowest Channel / 1RB



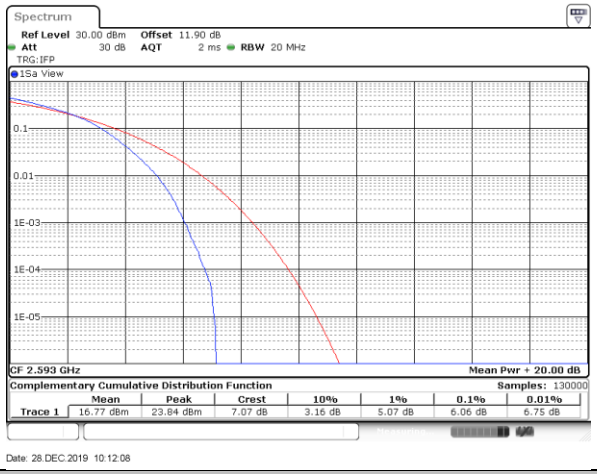
Lowest Channel / Full RB



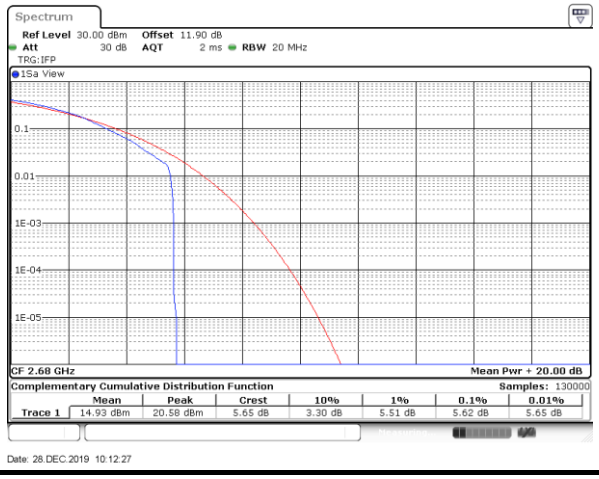
Middle Channel / 1RB



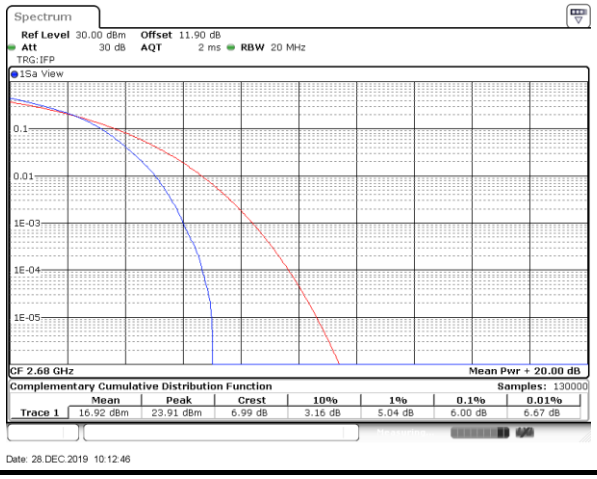
Middle Channel / Full RB



Highest Channel / 1RB

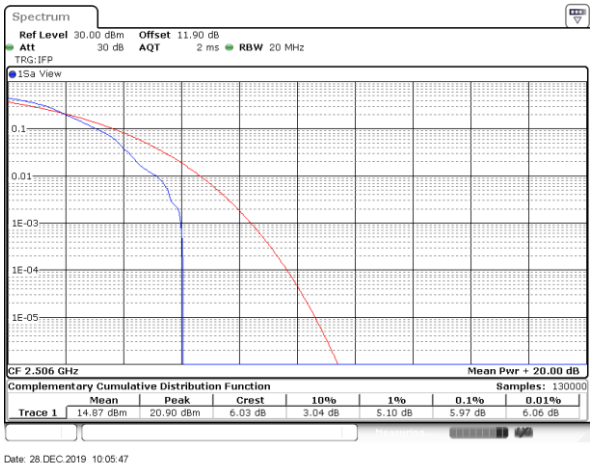


Highest Channel / Full RB

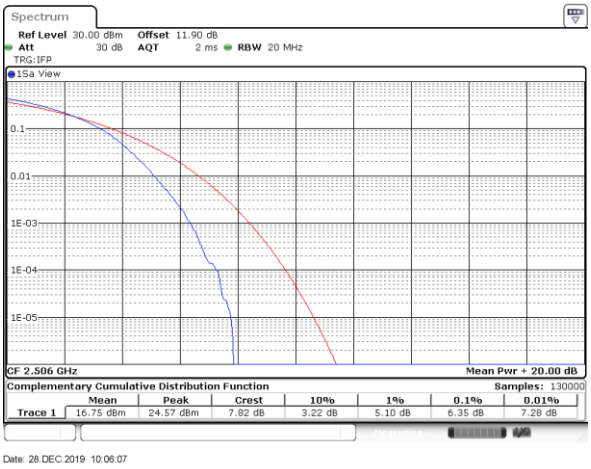


LTE Band 41 / 20MHz / 64QAM

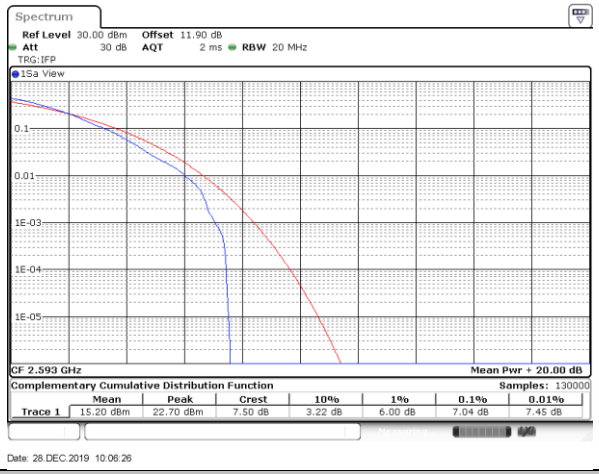
Lowest Channel / 1RB



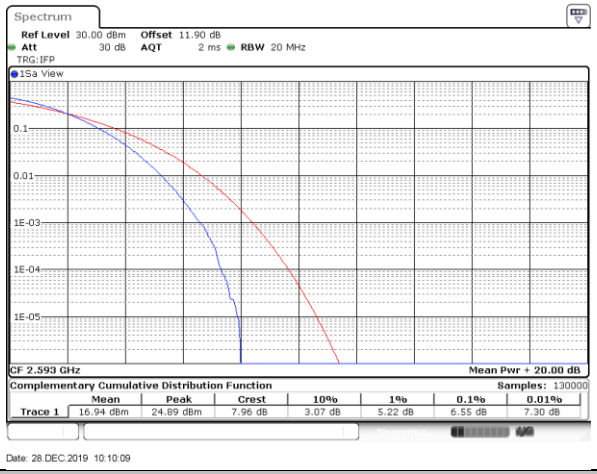
Lowest Channel / Full RB



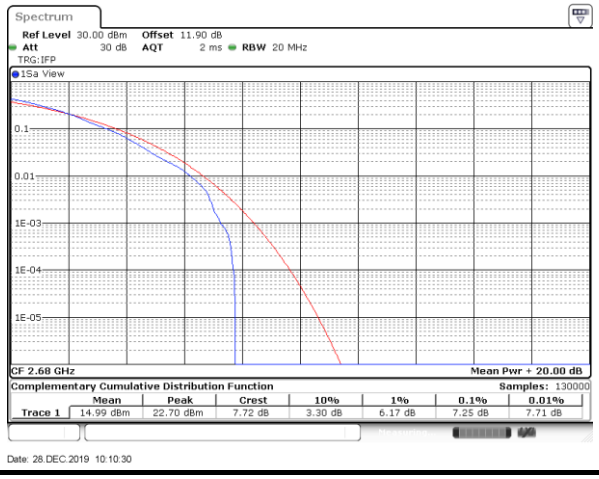
Middle Channel / 1RB



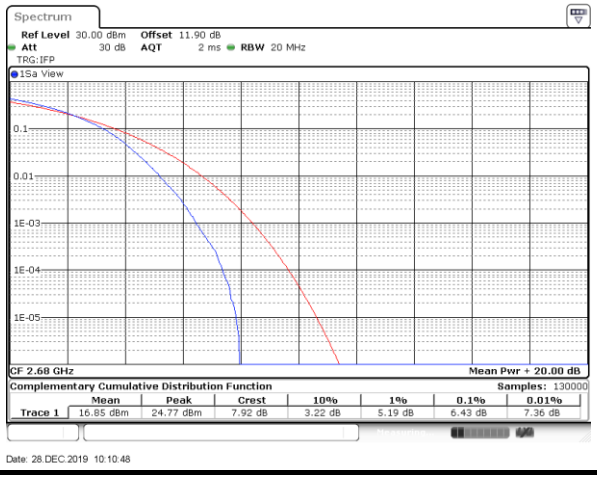
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

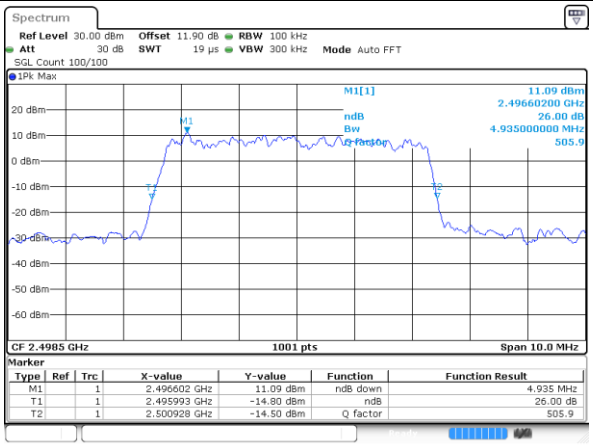


26dB Bandwidth

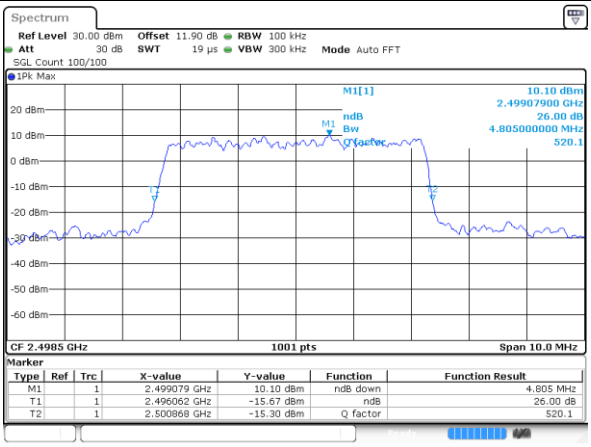
Mode	LTE Band 41 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.94	4.81	9.65	9.63	14.30	14.33	18.86	19.02
Middle CH	-	-	-	-	4.95	4.94	9.71	9.67	14.27	14.42	18.74	18.62
Highest CH	-	-	-	-	4.92	4.89	9.73	9.61	14.45	14.54	18.94	18.78
Mode	LTE Band 41 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.82	-	9.83	-	14.21	-	18.70	-
Middle CH	-	-	-	-	4.91	-	9.71	-	14.15	-	18.70	-
Highest CH	-	-	-	-	4.89	-	9.73	-	14.15	-	18.78	-

LTE Band 41

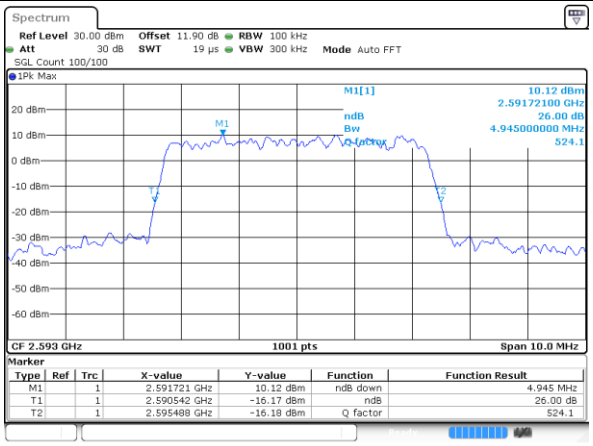
Lowest Channel / 5MHz / QPSK



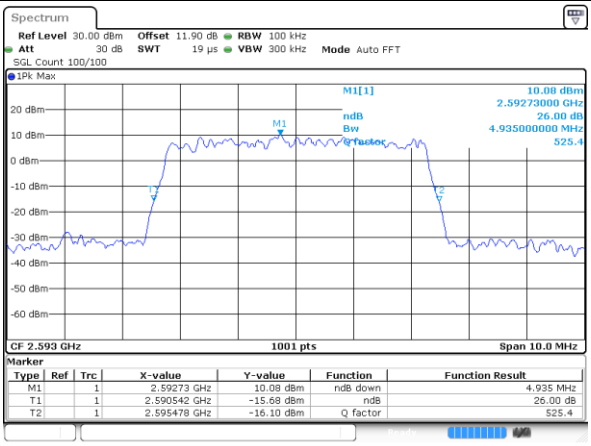
Lowest Channel / 5MHz / 16QAM



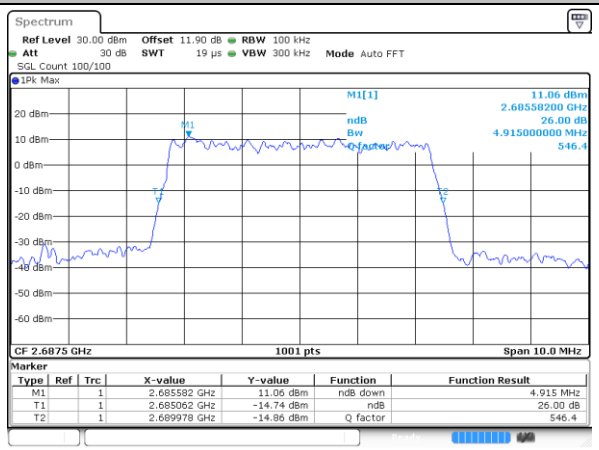
Middle Channel / 5MHz / QPSK



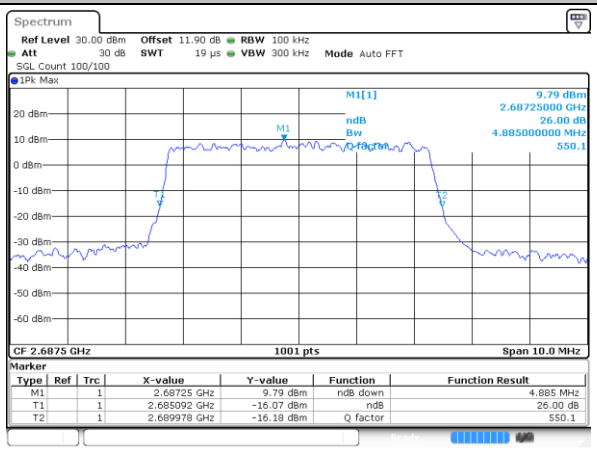
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

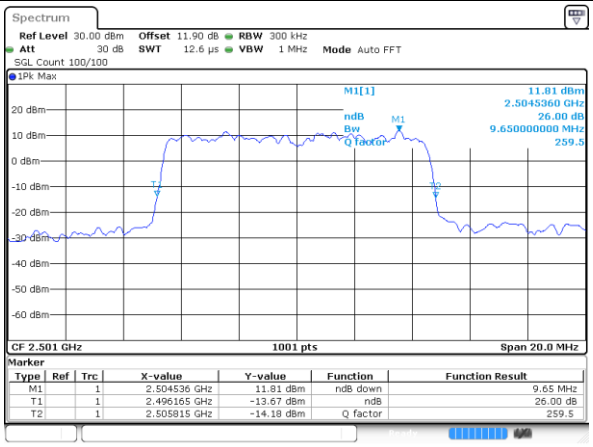


Highest Channel / 5MHz / 16QAM

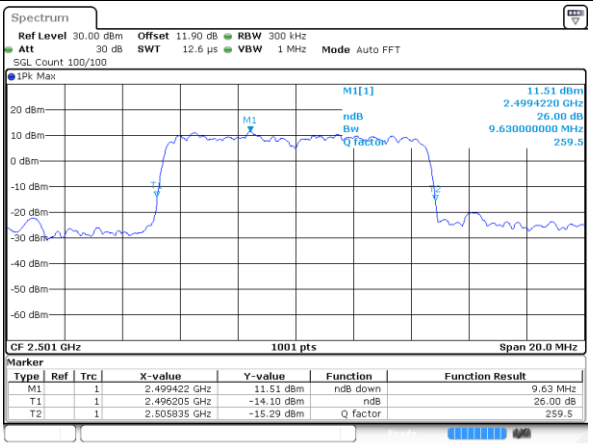


LTE Band 41

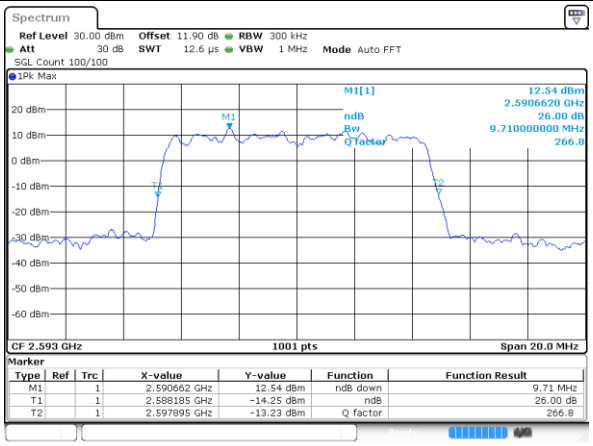
Lowest Channel / 10MHz / QPSK



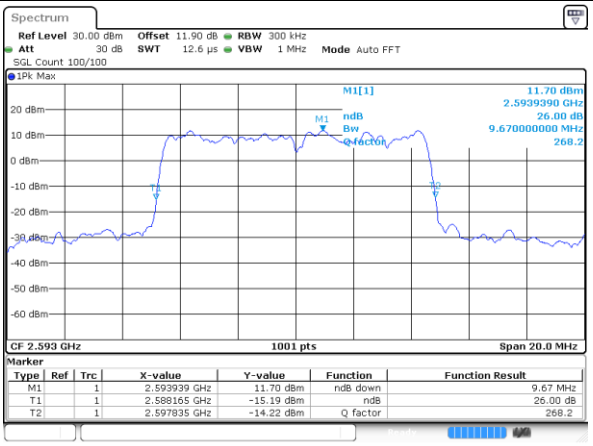
Lowest Channel / 10MHz / 16QAM



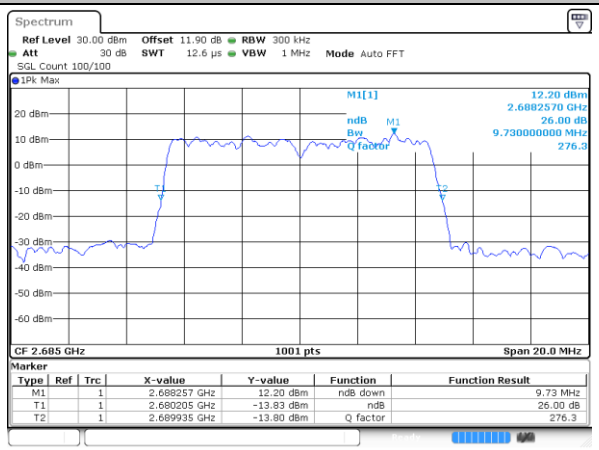
Middle Channel / 10MHz / QPSK



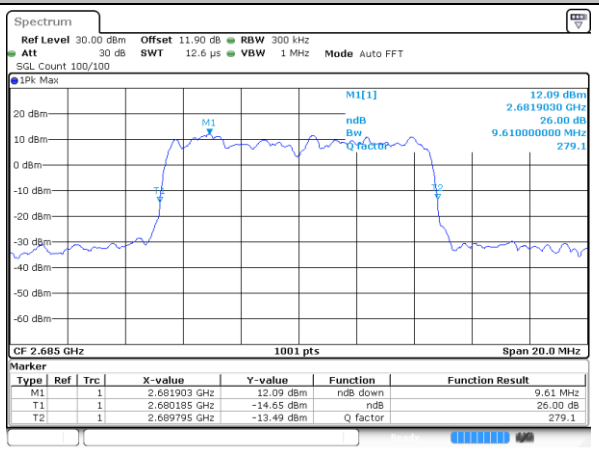
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

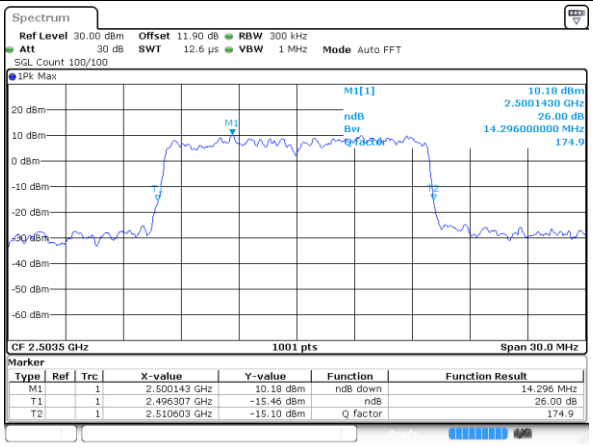


Highest Channel / 10MHz / 16QAM

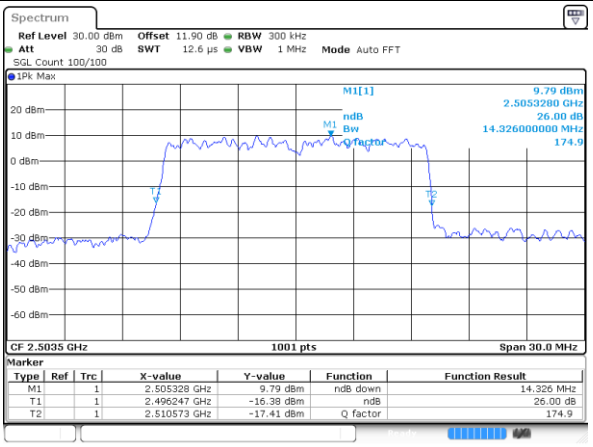


LTE Band 41

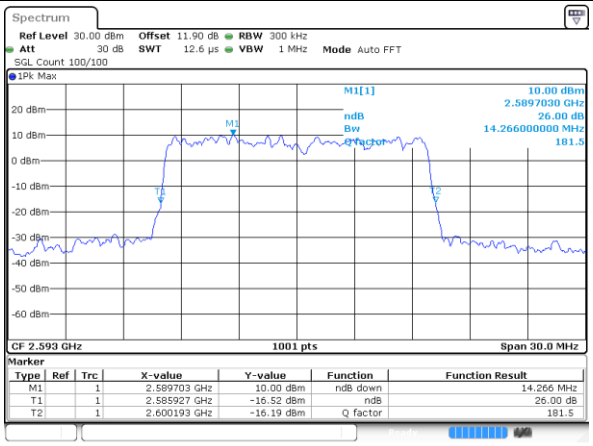
Lowest Channel / 15MHz / QPSK



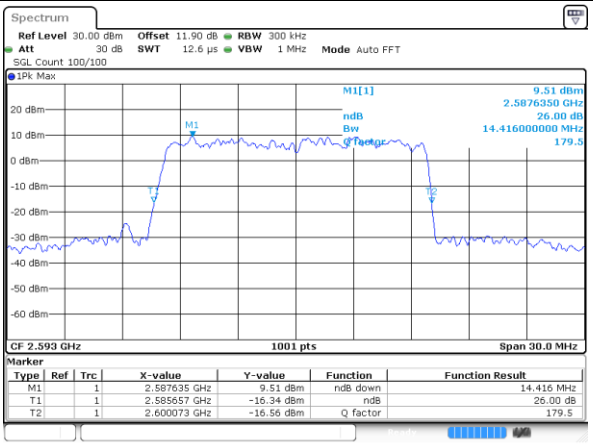
Lowest Channel / 15MHz / 16QAM



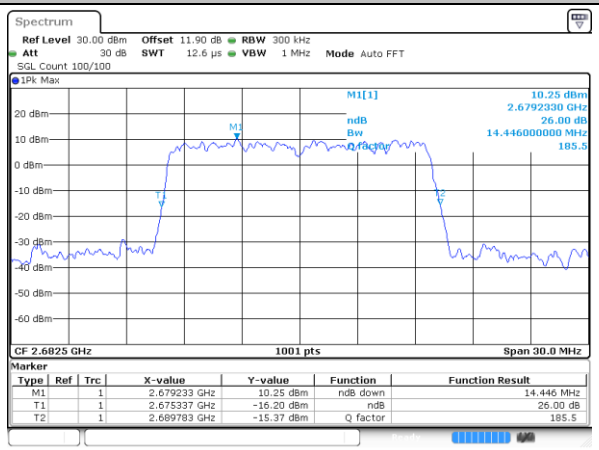
Middle Channel / 15MHz / QPSK



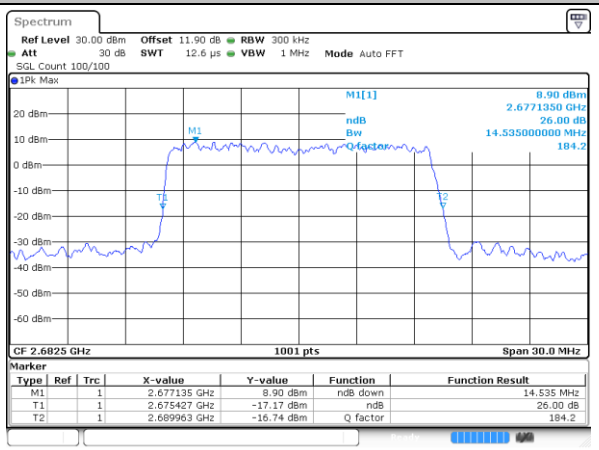
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

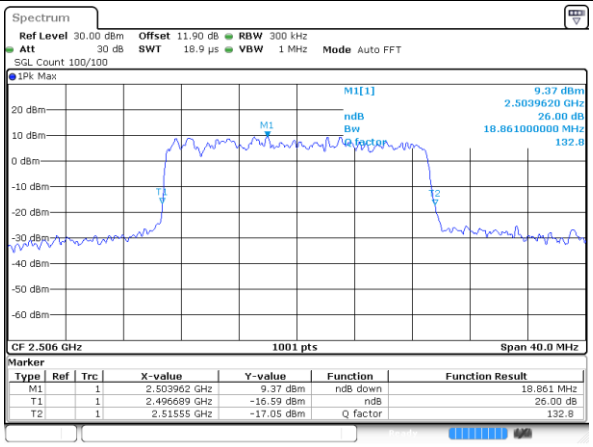


Highest Channel / 15MHz / 16QAM

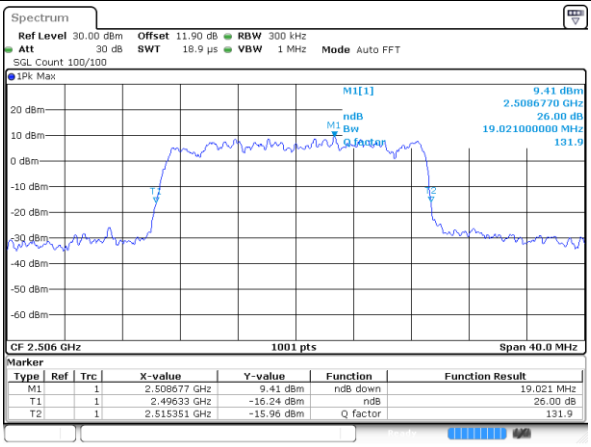


LTE Band 41

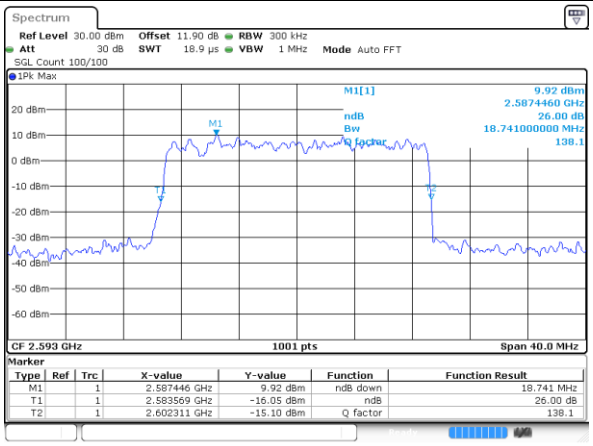
Lowest Channel / 20MHz / QPSK



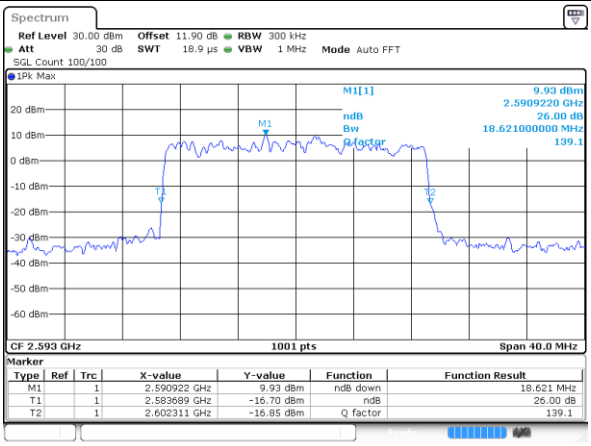
Lowest Channel / 20MHz / 16QAM



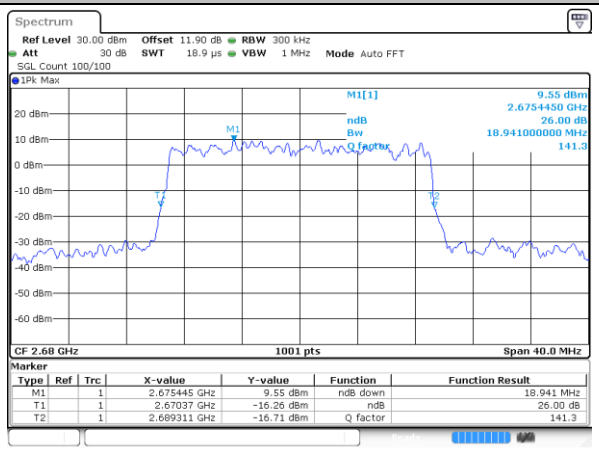
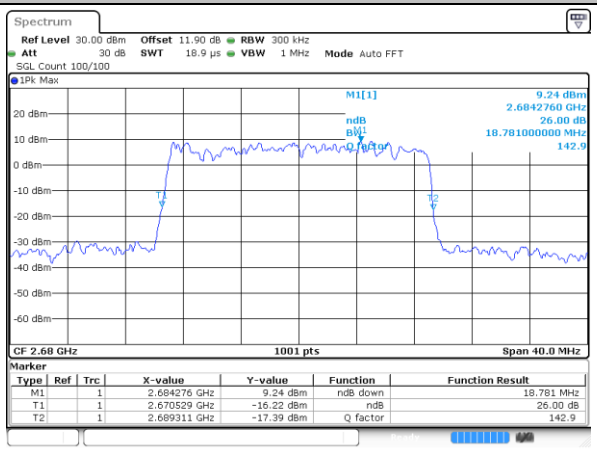
Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM