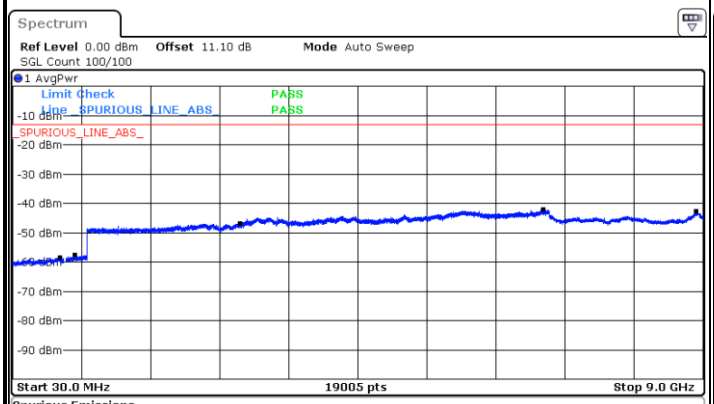
LTE Band 12 / 10MHz

Lowest Channel / 64QAM

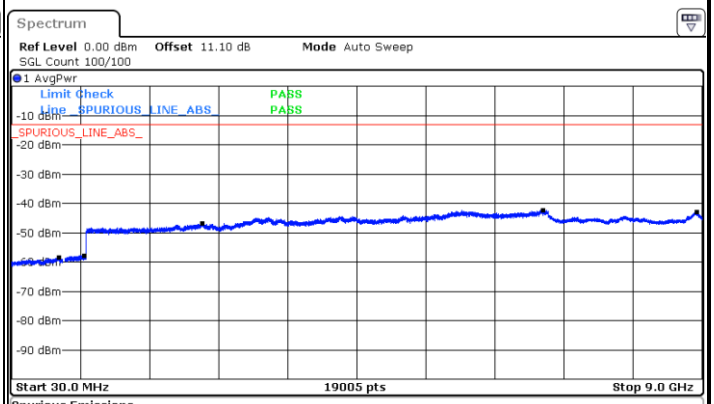


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	642.00900 MHz	-58.41 dBm	-45.41 dB
725.000 MHz	1.000 GHz	100.000 kHz	841.89560 MHz	-57.66 dBm	-44.66 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.97826 GHz	-46.86 dBm	-33.86 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91726 GHz	-42.19 dBm	-29.19 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.91277 GHz	-42.73 dBm	-29.73 dB

Date: 22.JUL.2020 15:47:25

Middle Channel / 64QAM

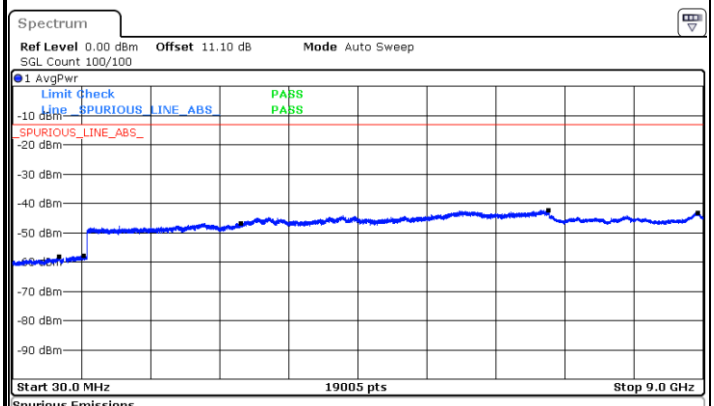


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	639.37031 MHz	-58.53 dBm	-45.53 dB
725.000 MHz	1.000 GHz	100.000 kHz	975.41209 MHz	-57.88 dBm	-44.88 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.50587 GHz	-46.84 dBm	-33.84 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92776 GHz	-42.46 dBm	-29.46 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.92927 GHz	-42.95 dBm	-29.95 dB

Date: 22.JUL.2020 15:48:45

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	636.07196 MHz	-58.35 dBm	-45.35 dB
725.000 MHz	1.000 GHz	100.000 kHz	953.43407 MHz	-57.79 dBm	-44.79 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98825 GHz	-46.79 dBm	-33.79 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98475 GHz	-42.46 dBm	-29.46 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.92677 GHz	-43.15 dBm	-30.15 dB

Date: 22.JUL.2020 15:52:09

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	0.0072	PASS
40	Normal Voltage	0.0010	
30	Normal Voltage	0.0167	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0119	
-10	Normal Voltage	0.0168	
-20	Normal Voltage	0.0037	
-30	Normal Voltage	0.0161	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0033	

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.

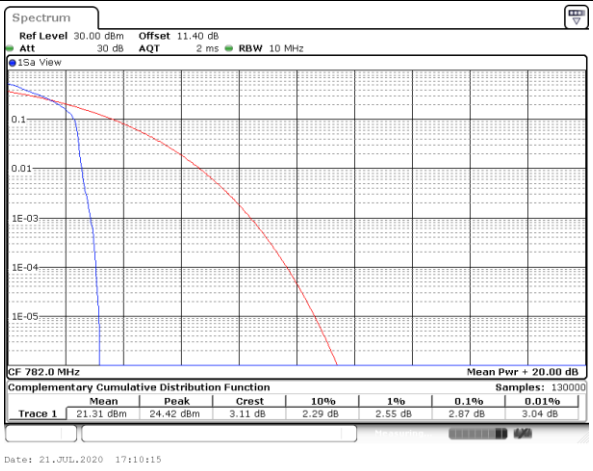
LTE Band 13

Peak-to-Average Ratio

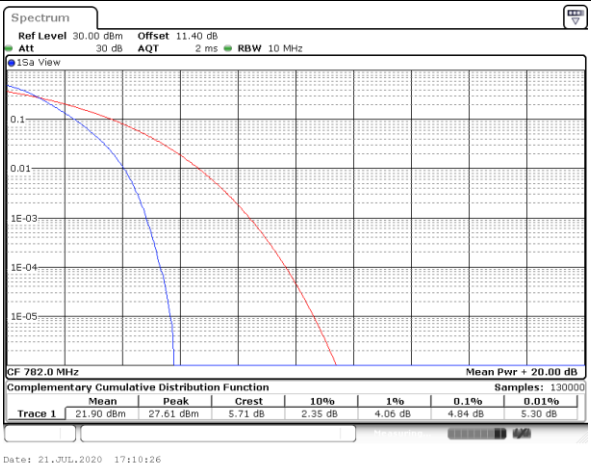
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	2.87	4.84	3.57	5.74	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	4.43	6.17	-	-	
Highest CH	-	-	-	-	

LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB

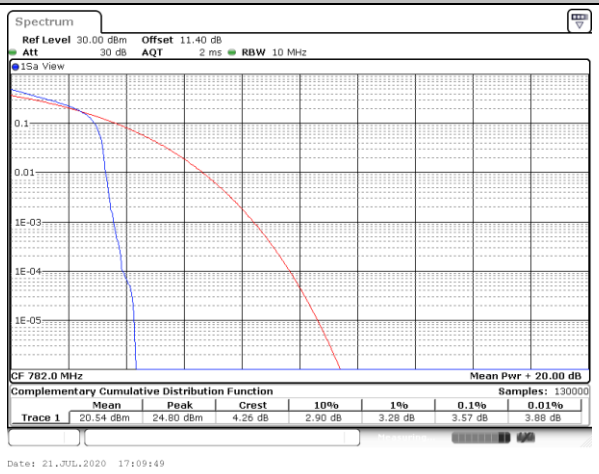


Middle Channel / Full RB

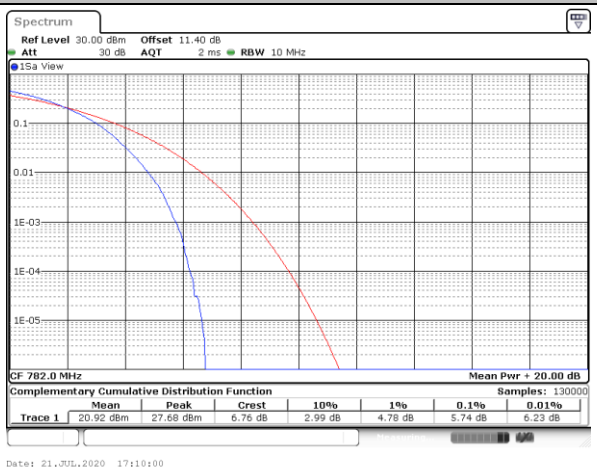


LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB

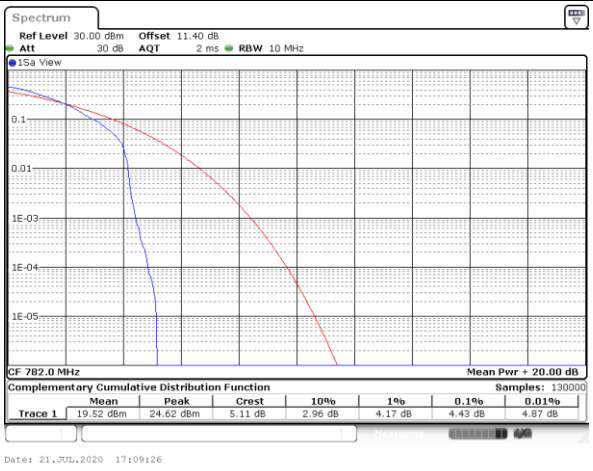


Middle Channel / Full RB

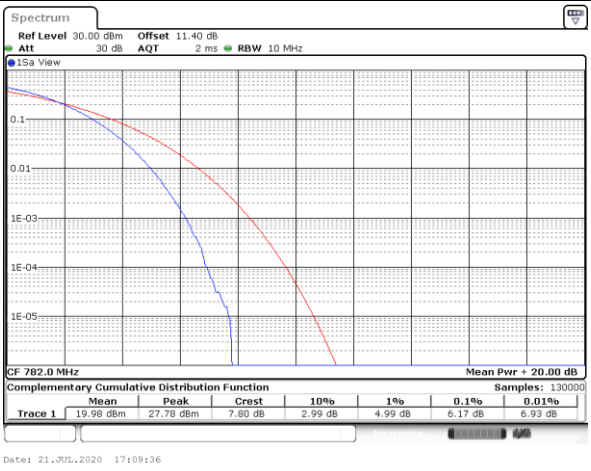


LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Middle Channel / Full RB

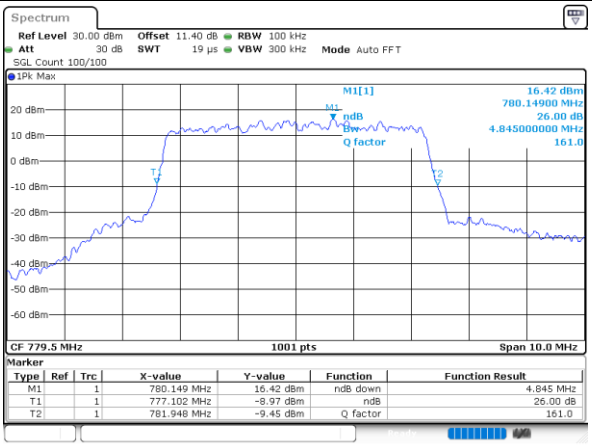


26dB Bandwidth

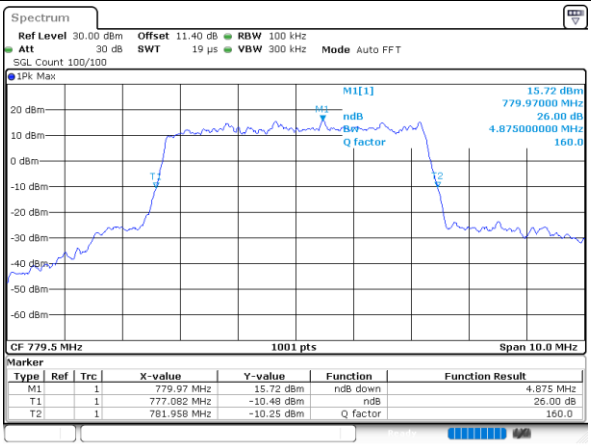
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.85	4.88	-	-	-	-	-	-
Middle CH	-	-	-	-	4.94	4.78	9.75	9.83	-	-	-	-
Highest CH	-	-	-	-	4.85	4.89	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.92	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.90	-	9.65	-	-	-	-	-
Highest CH	-	-	-	-	4.86	-	-	-	-	-	-	-

LTE Band 13

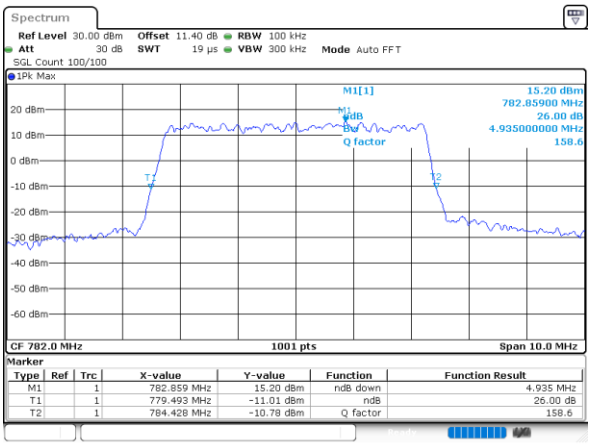
Lowest Channel / 5MHz / QPSK



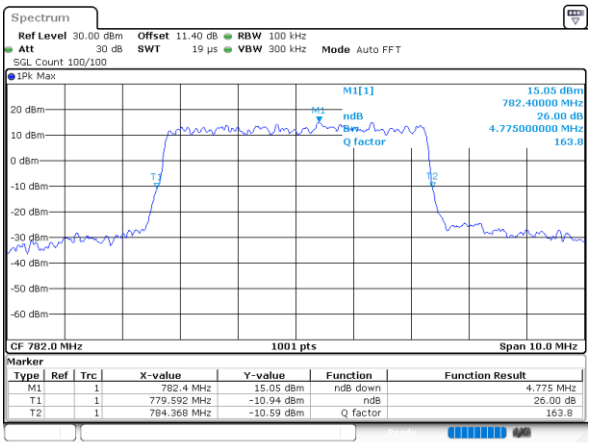
Lowest Channel / 5MHz / 16QAM



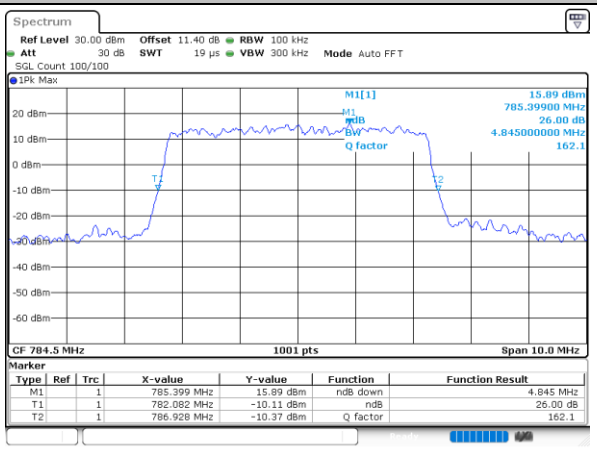
Middle Channel / 5MHz / QPSK



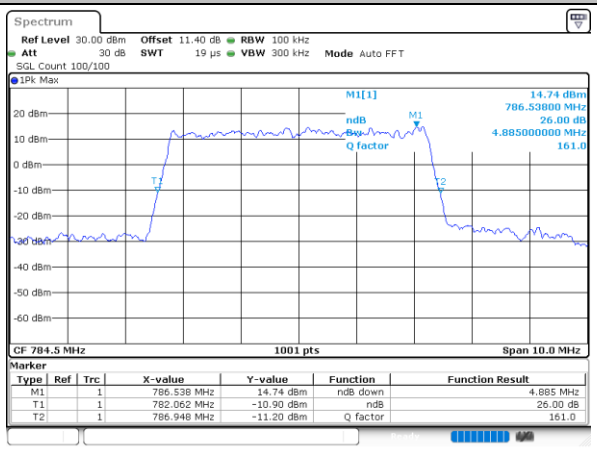
Middle Channel / 5MHz / 16QAM

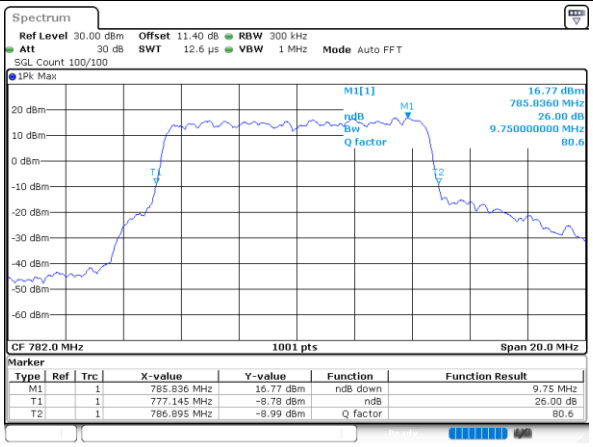
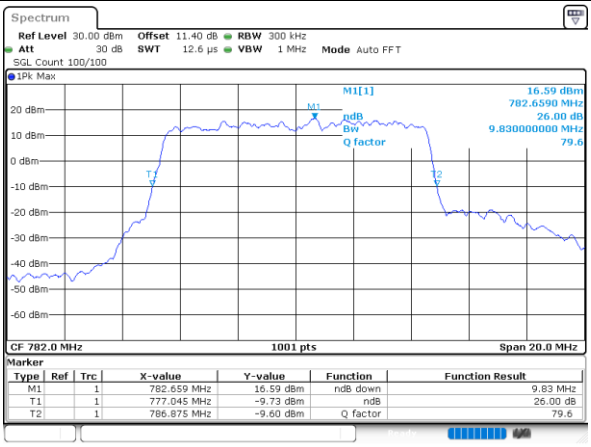


Highest Channel / 5MHz / QPSK



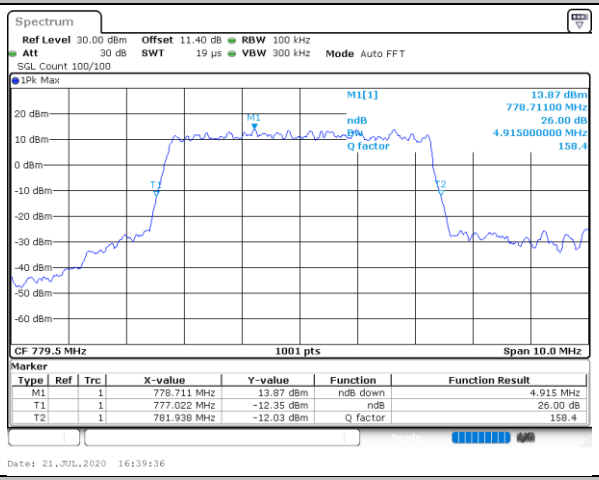
Highest Channel / 5MHz / 16QAM



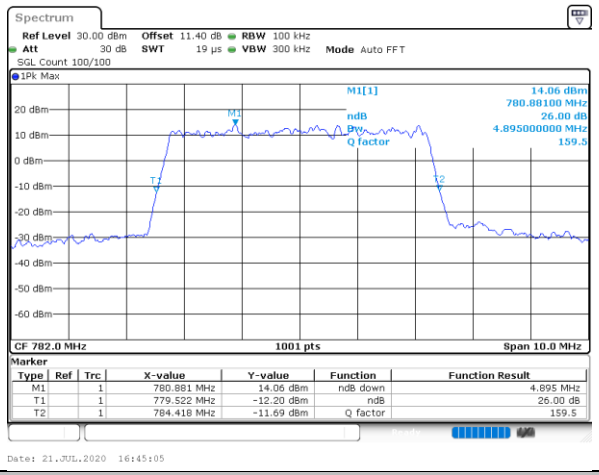
LTE Band 13	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**
	

LTE Band 13

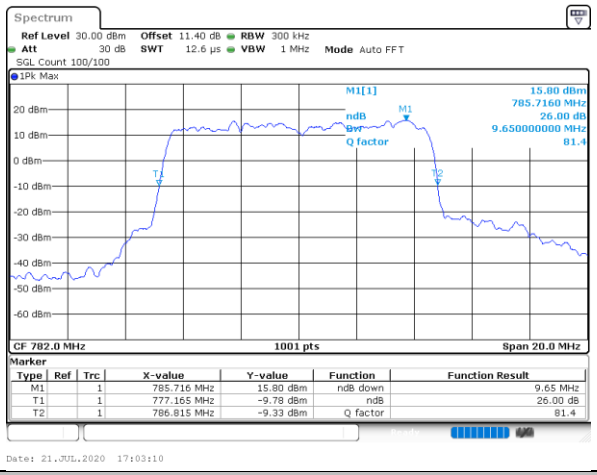
Lowest Channel / 5MHz / 64QAM



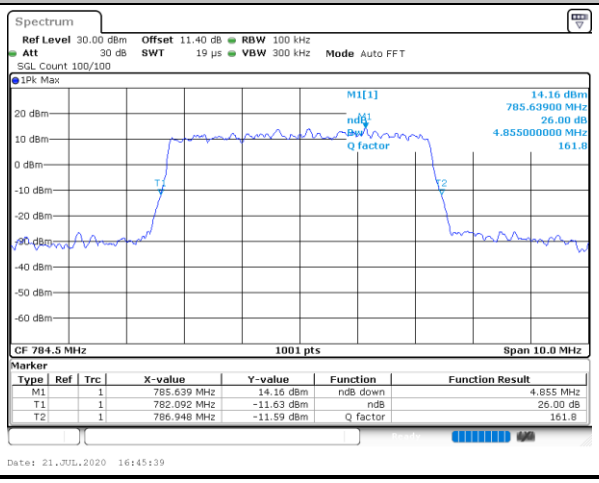
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

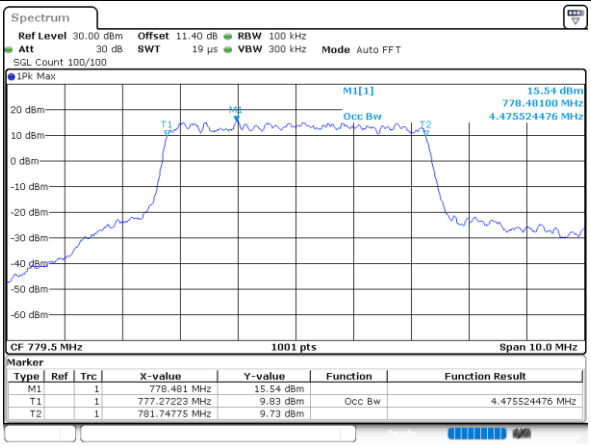


Occupied Bandwidth

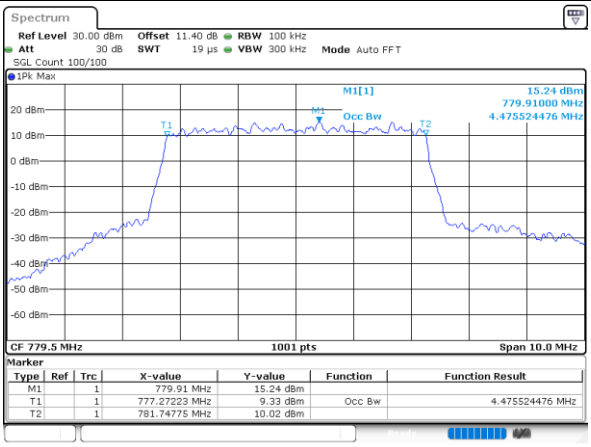
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.48	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	4.49	9.01	8.97	-	-	-	-
Highest CH	-	-	-	-	4.48	4.47	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.49	-	-	-	-	-	-	-

LTE Band 13

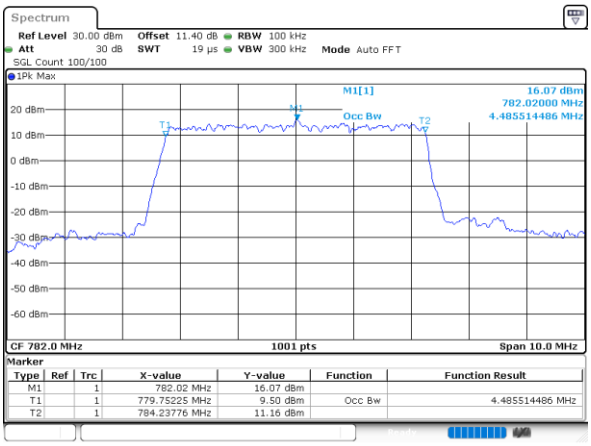
Lowest Channel / 5MHz / QPSK



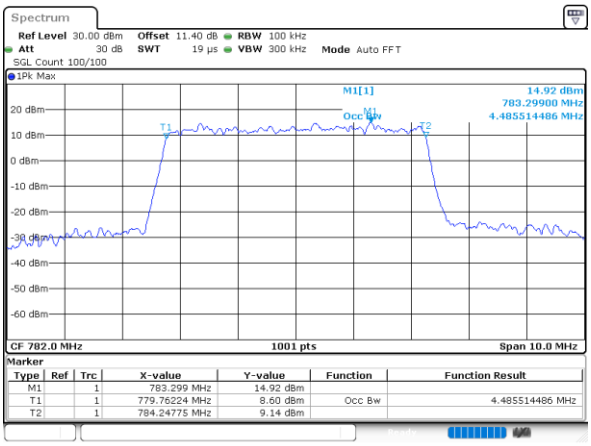
Lowest Channel / 5MHz / 16QAM



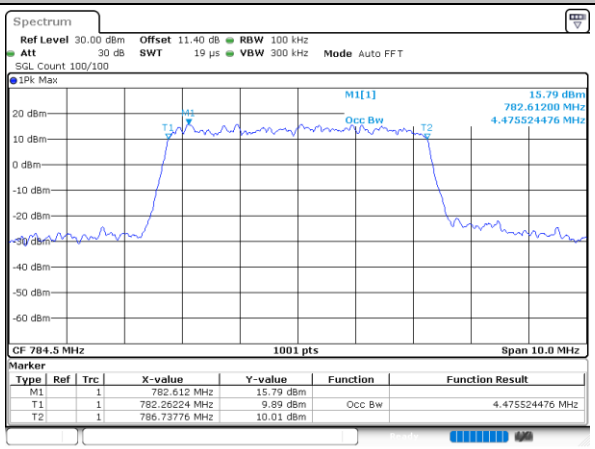
Middle Channel / 5MHz / QPSK



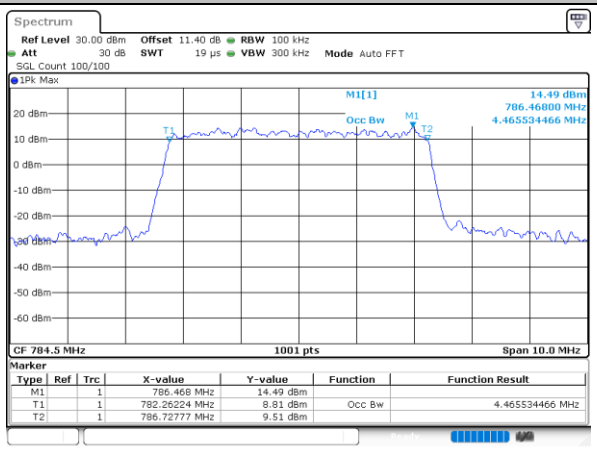
Middle Channel / 5MHz / 16QAM



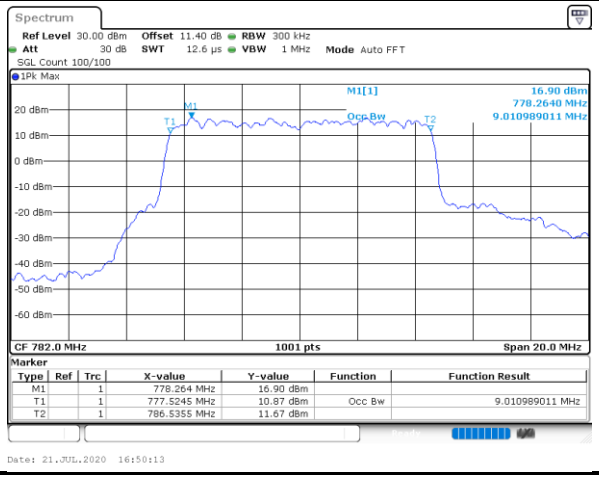
Highest Channel / 5MHz / QPSK

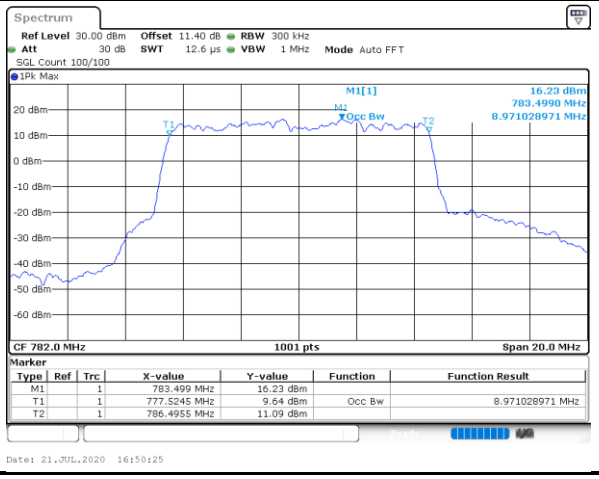


Highest Channel / 5MHz / 16QAM



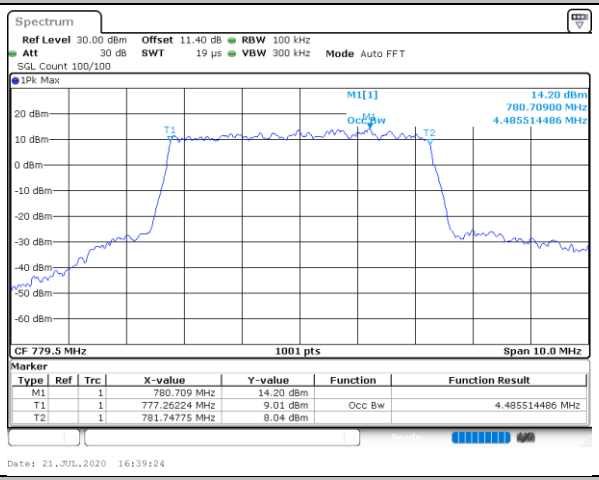
LTE Band 13	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**



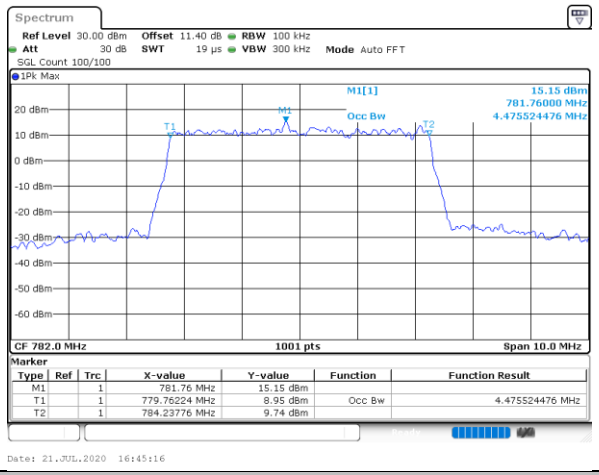


LTE Band 13

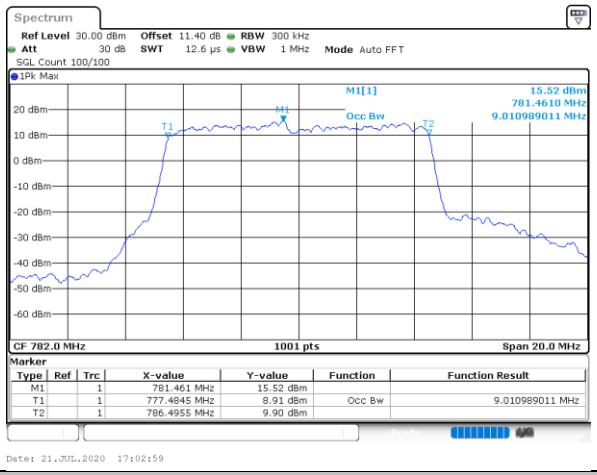
Lowest Channel / 5MHz / 64QAM



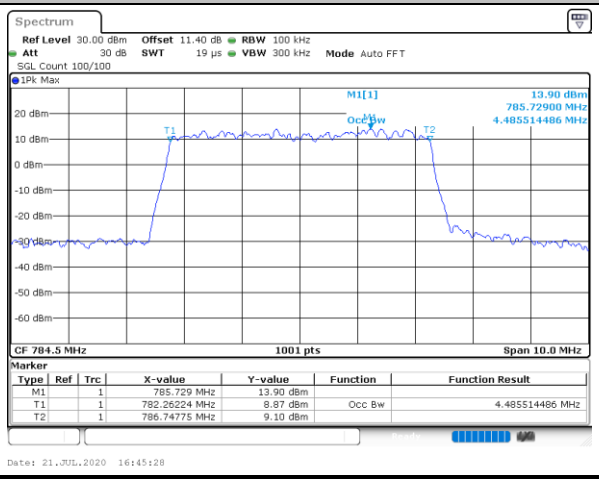
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



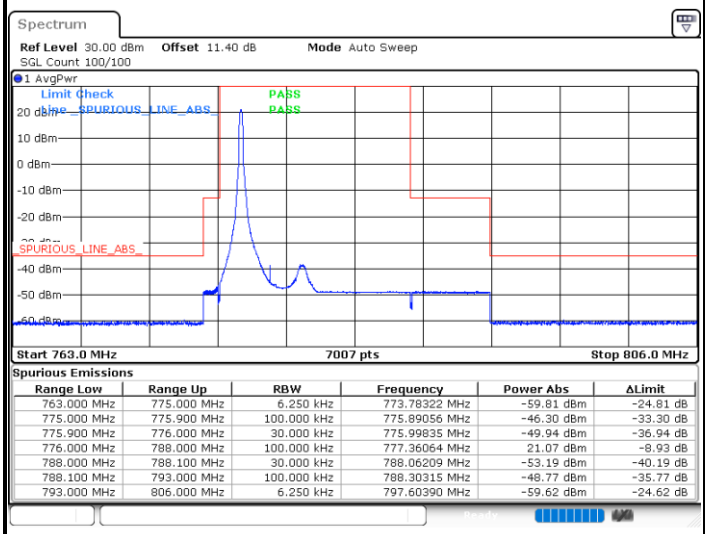
Highest Channel / 5MHz / 64QAM



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	773.78322 MHz	-59.81 dBm	-24.81 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89056 MHz	-46.30 dBm	-33.30 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99835 MHz	-49.94 dBm	-36.94 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.36064 MHz	21.07 dBm	-8.93 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06209 MHz	-53.19 dBm	-40.19 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.30315 MHz	-48.77 dBm	-35.77 dB
793.000 MHz	806.000 MHz	6.250 kHz	797.60390 MHz	-59.62 dBm	-24.62 dB

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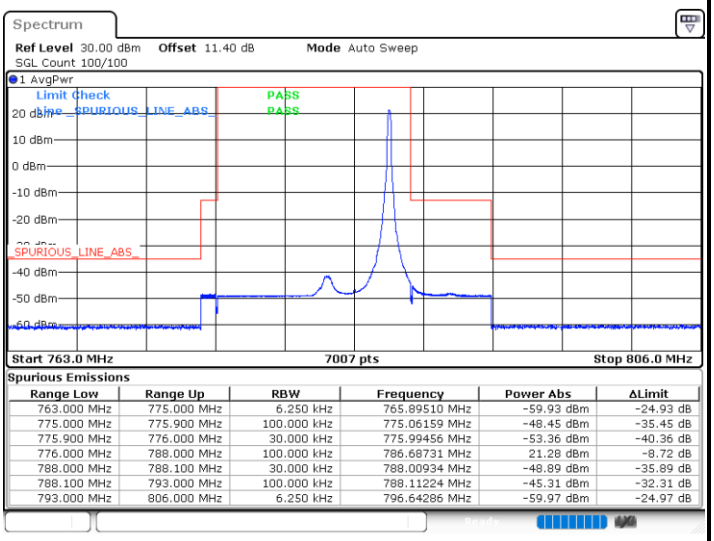
Highest Band Edge / 1 RB

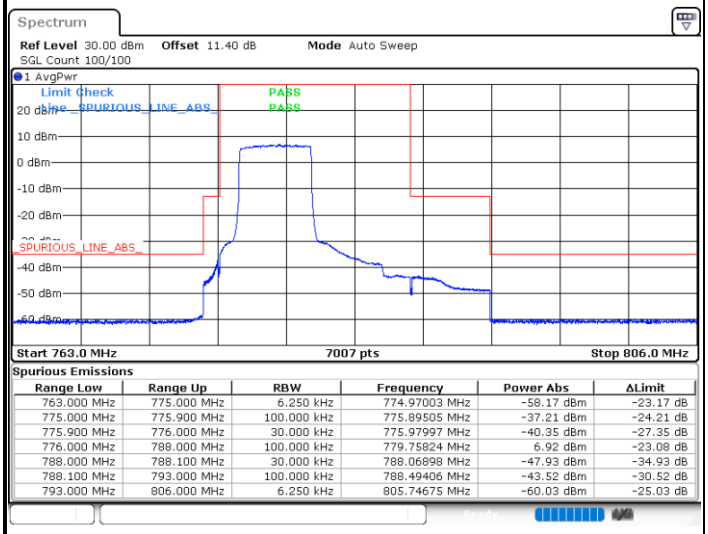


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	765.89510 MHz	-59.93 dBm	-24.93 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.06159 MHz	-48.45 dBm	-35.45 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99456 MHz	-53.36 dBm	-40.36 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.68731 MHz	21.28 dBm	-8.72 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00934 MHz	-48.89 dBm	-35.89 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.11224 MHz	-45.31 dBm	-32.31 dB
793.000 MHz	806.000 MHz	6.250 kHz	796.64286 MHz	-59.97 dBm	-24.97 dB

Date: 21.JUL.2020 16:37:15

Lowest Band Edge / Full RB

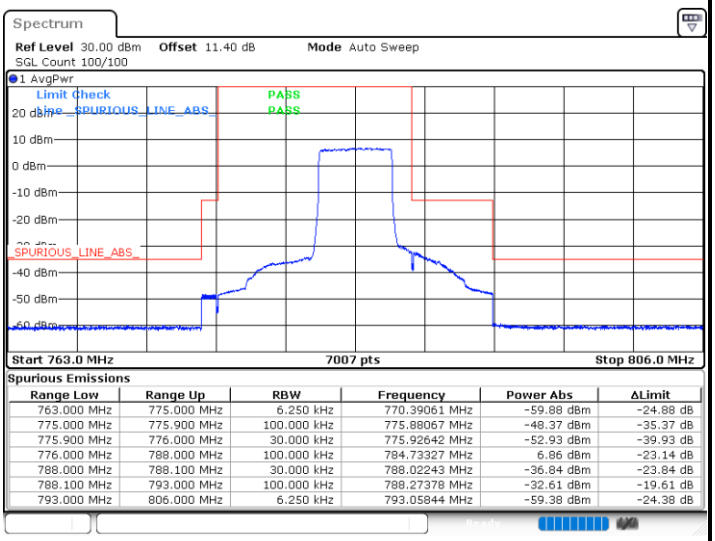


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.97003 MHz	-58.17 dBm	-23.17 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89505 MHz	-37.21 dBm	-24.21 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97997 MHz	-40.35 dBm	-27.35 dB
776.000 MHz	788.000 MHz	100.000 kHz	779.75824 MHz	6.92 dBm	-23.08 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06898 MHz	-47.93 dBm	-34.93 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.49406 MHz	-43.52 dBm	-30.52 dB
793.000 MHz	806.000 MHz	6.250 kHz	805.74675 MHz	-60.03 dBm	-25.03 dB

Date: 21.JUL.2020 16:20:03

Highest Band Edge / Full RB



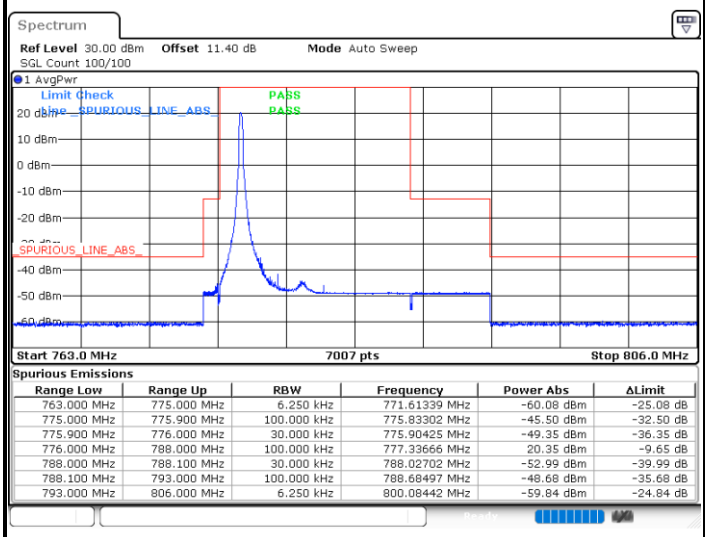
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	770.39061 MHz	-59.88 dBm	-24.88 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.88067 MHz	-48.37 dBm	-35.37 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.92642 MHz	-52.93 dBm	-39.93 dB
776.000 MHz	788.000 MHz	100.000 kHz	784.73327 MHz	6.86 dBm	-23.14 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.02243 MHz	-36.84 dBm	-23.84 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.27378 MHz	-32.61 dBm	-19.61 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.05844 MHz	-59.38 dBm	-24.38 dB

Date: 21.JUL.2020 16:32:11

LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

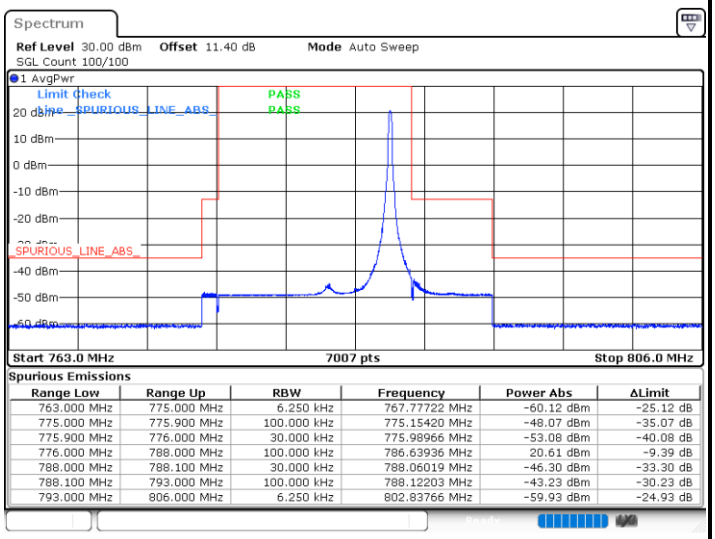


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	771.61339 MHz	-60.08 dBm	-25.08 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.83302 MHz	-45.50 dBm	-32.50 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.90425 MHz	-49.35 dBm	-36.35 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.33666 MHz	20.35 dBm	-9.65 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.02702 MHz	-52.99 dBm	-39.99 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.68497 MHz	-48.68 dBm	-35.68 dB
793.000 MHz	806.000 MHz	6.250 kHz	800.08442 MHz	-59.84 dBm	-24.84 dB

Date: 21.JUL.2020 16:23:26

Highest Band Edge / 1 RB

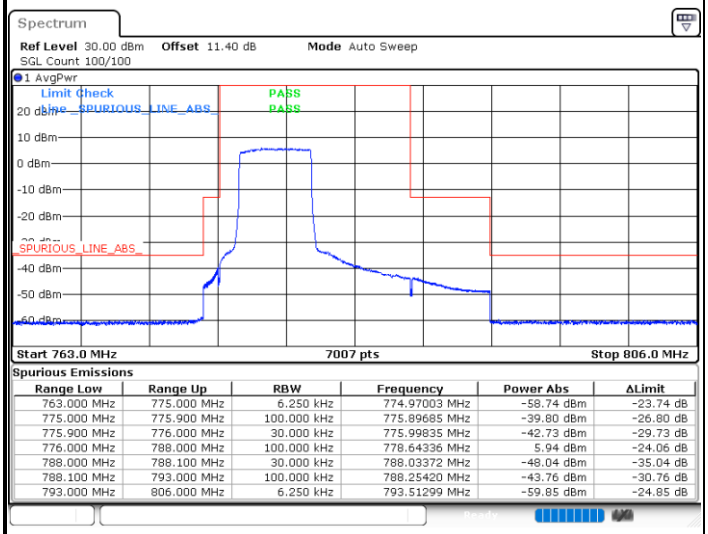


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	767.77722 MHz	-60.12 dBm	-25.12 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.15420 MHz	-48.07 dBm	-35.07 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98966 MHz	-53.08 dBm	-40.08 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.63936 MHz	20.61 dBm	-9.39 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06019 MHz	-46.30 dBm	-33.30 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.12203 MHz	-43.23 dBm	-30.23 dB
793.000 MHz	806.000 MHz	6.250 kHz	802.83766 MHz	-59.93 dBm	-24.93 dB

Date: 21.JUL.2020 16:35:34

Lowest Band Edge / Full RB

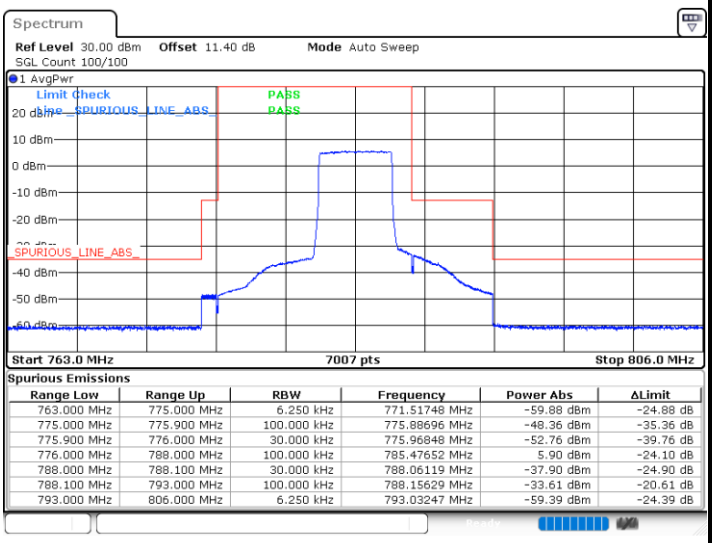


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.97003 MHz	-58.74 dBm	-23.74 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89685 MHz	-39.80 dBm	-26.80 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99835 MHz	-42.73 dBm	-29.73 dB
776.000 MHz	788.000 MHz	100.000 kHz	778.64336 MHz	5.94 dBm	-24.06 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.03372 MHz	-48.04 dBm	-35.04 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.25420 MHz	-43.76 dBm	-30.76 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.51299 MHz	-59.85 dBm	-24.85 dB

Date: 21.JUL.2020 16:21:44

Highest Band Edge / Full RB



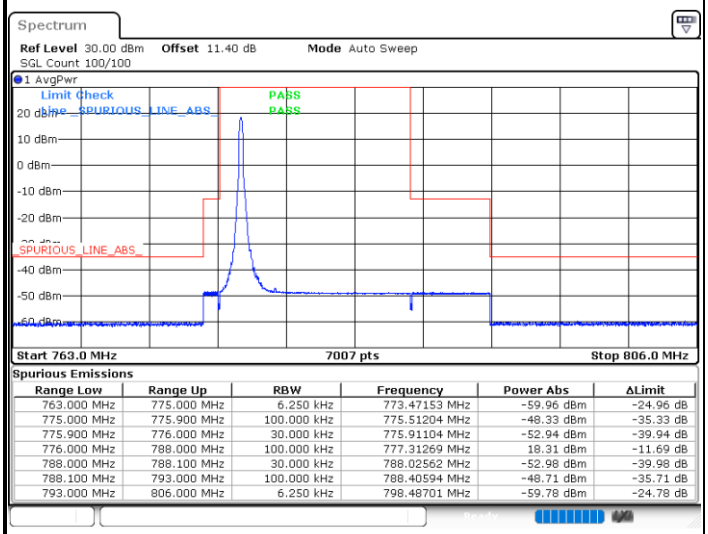
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	771.51748 MHz	-59.88 dBm	-24.88 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.88696 MHz	-48.36 dBm	-35.36 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.96848 MHz	-52.76 dBm	-39.76 dB
776.000 MHz	788.000 MHz	100.000 kHz	785.47652 MHz	5.90 dBm	-24.10 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06119 MHz	-37.90 dBm	-24.90 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.15629 MHz	-33.61 dBm	-20.61 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.03247 MHz	-59.39 dBm	-24.39 dB

Date: 21.JUL.2020 16:33:52

LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

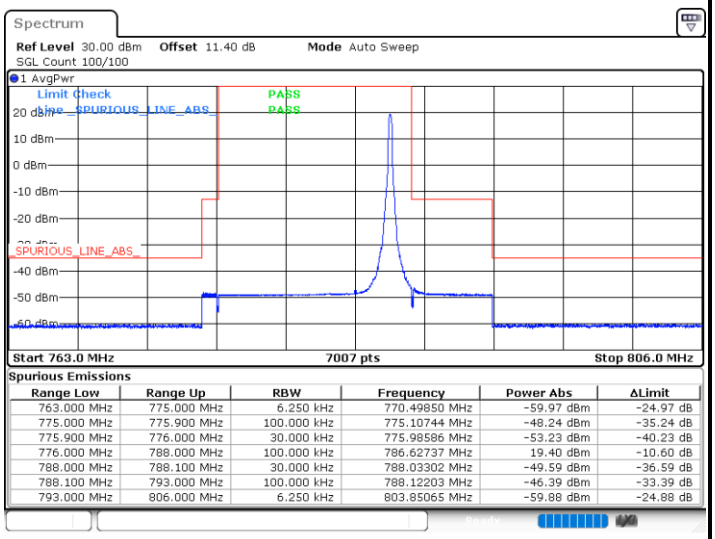


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.47153 MHz	-59.96 dBm	-24.96 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.51204 MHz	-48.33 dBm	-35.33 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.91104 MHz	-52.94 dBm	-39.94 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.31269 MHz	18.31 dBm	-11.69 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.02562 MHz	-52.98 dBm	-39.98 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.40594 MHz	-48.71 dBm	-35.71 dB
793.000 MHz	806.000 MHz	6.250 kHz	798.48701 MHz	-59.78 dBm	-24.78 dB

Date: 21.JUL.2020 16:42:57

Highest Band Edge / 1 RB

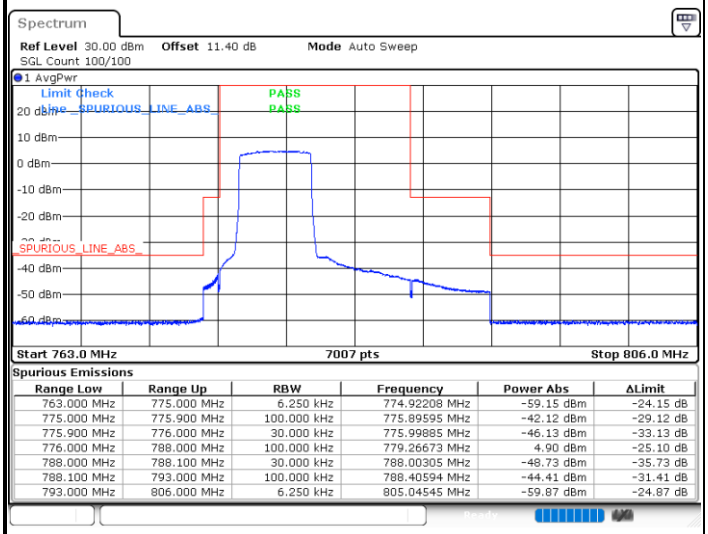


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	770.49850 MHz	-59.97 dBm	-24.97 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.10744 MHz	-48.24 dBm	-35.24 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98586 MHz	-53.23 dBm	-40.23 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.62737 MHz	19.40 dBm	-10.60 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.03302 MHz	-49.59 dBm	-36.59 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.12203 MHz	-46.39 dBm	-33.39 dB
793.000 MHz	806.000 MHz	6.250 kHz	803.85065 MHz	-59.88 dBm	-24.88 dB

Date: 21.JUL.2020 16:49:01

Lowest Band Edge / Full RB

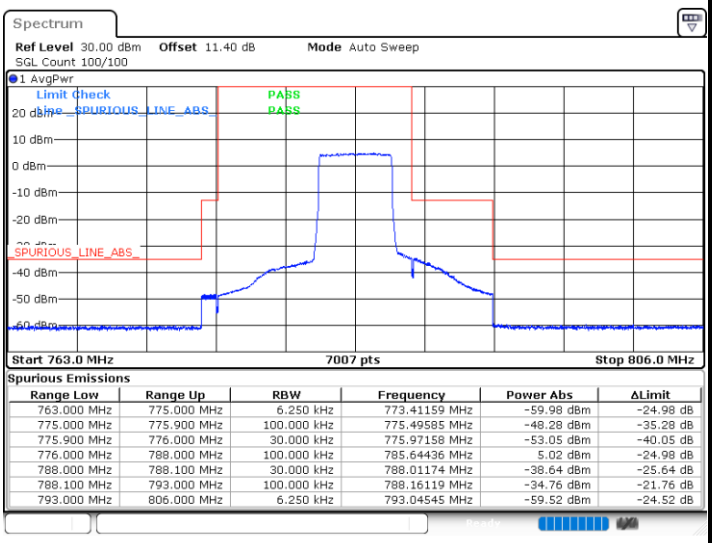


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.92208 MHz	-59.15 dBm	-24.15 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89595 MHz	-42.12 dBm	-29.12 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99885 MHz	-46.13 dBm	-33.13 dB
776.000 MHz	788.000 MHz	100.000 kHz	779.26673 MHz	4.90 dBm	-25.10 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00305 MHz	-48.73 dBm	-35.73 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.40594 MHz	-44.41 dBm	-31.41 dB
793.000 MHz	806.000 MHz	6.250 kHz	805.04545 MHz	-59.87 dBm	-24.87 dB

Date: 21.JUL.2020 16:41:16

Highest Band Edge / Full RB



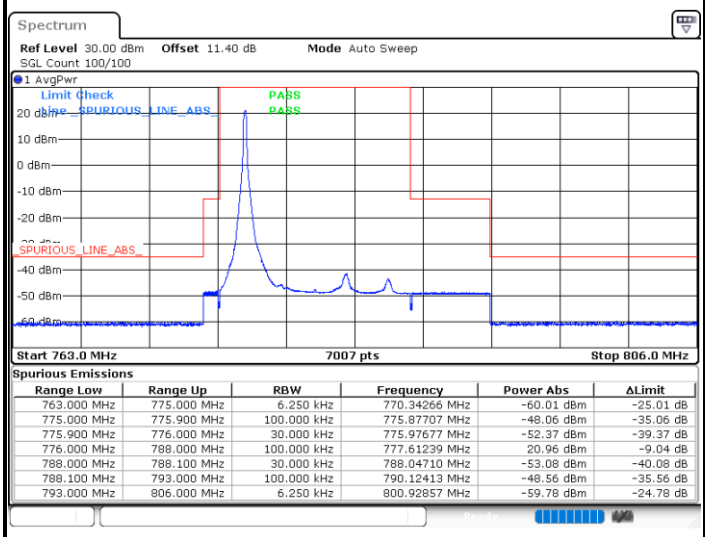
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.41159 MHz	-59.98 dBm	-24.98 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.49585 MHz	-48.28 dBm	-35.28 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97158 MHz	-53.05 dBm	-40.05 dB
776.000 MHz	788.000 MHz	100.000 kHz	785.64436 MHz	5.02 dBm	-24.98 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.01174 MHz	-38.64 dBm	-25.64 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.16119 MHz	-34.76 dBm	-21.76 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.04545 MHz	-59.52 dBm	-24.52 dB

Date: 21.JUL.2020 16:47:19

LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB

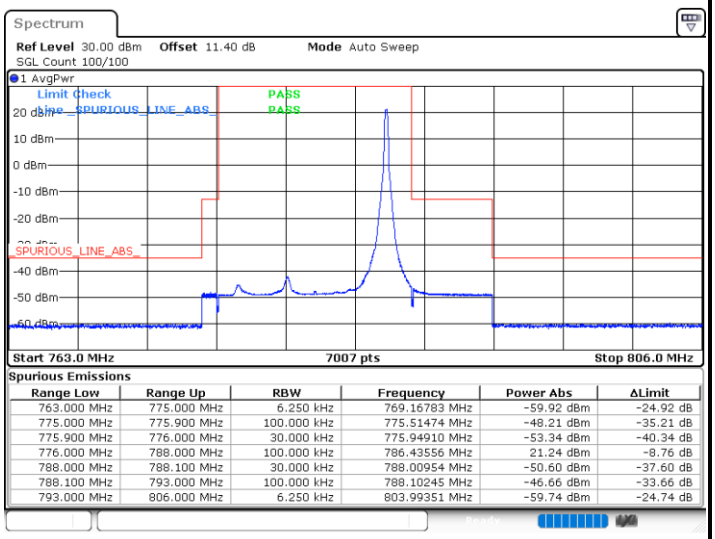


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	770.34266 MHz	-60.01 dBm	-25.01 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.87707 MHz	-48.06 dBm	-35.06 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97677 MHz	-52.37 dBm	-39.37 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.61239 MHz	20.96 dBm	-9.04 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.04710 MHz	-53.08 dBm	-40.08 dB
788.100 MHz	793.000 MHz	100.000 kHz	790.12413 MHz	-48.56 dBm	-35.56 dB
793.000 MHz	806.000 MHz	6.250 kHz	800.92857 MHz	-59.78 dBm	-24.78 dB

Date: 21.JUL.2020 16:57:30

Highest Band Edge / 1 RB

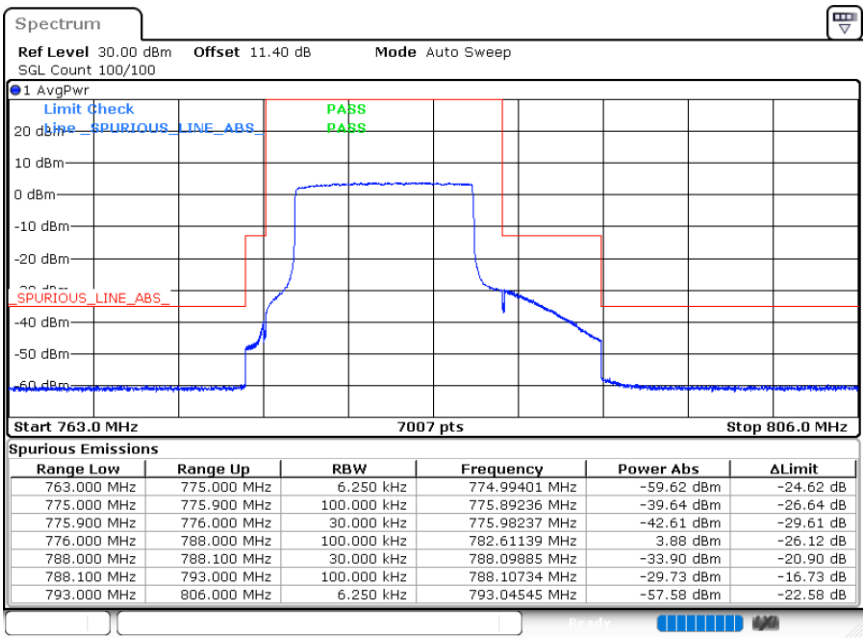


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	769.16783 MHz	-59.92 dBm	-24.92 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.51474 MHz	-48.21 dBm	-35.21 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.94910 MHz	-53.34 dBm	-40.34 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.43556 MHz	21.24 dBm	-8.76 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00954 MHz	-50.60 dBm	-37.60 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.10245 MHz	-46.66 dBm	-33.66 dB
793.000 MHz	806.000 MHz	6.250 kHz	803.99351 MHz	-59.74 dBm	-24.74 dB

Date: 21.JUL.2020 16:59:11

Band Edge / Full RB



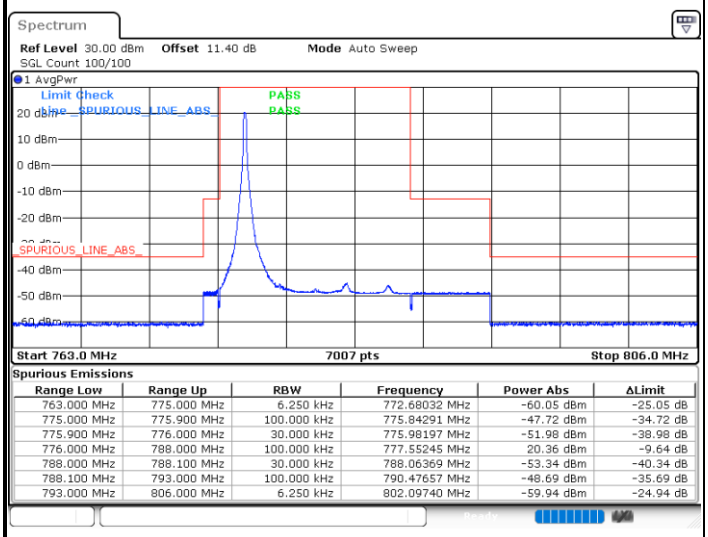
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.99401 MHz	-59.62 dBm	-24.62 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89236 MHz	-39.64 dBm	-26.64 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98237 MHz	-42.61 dBm	-29.61 dB
776.000 MHz	788.000 MHz	100.000 kHz	782.61139 MHz	3.88 dBm	-26.12 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.09885 MHz	-33.90 dBm	-20.90 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.10734 MHz	-29.73 dBm	-16.73 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.04545 MHz	-57.58 dBm	-22.58 dB

Date: 21.JUL.2020 16:52:27

LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

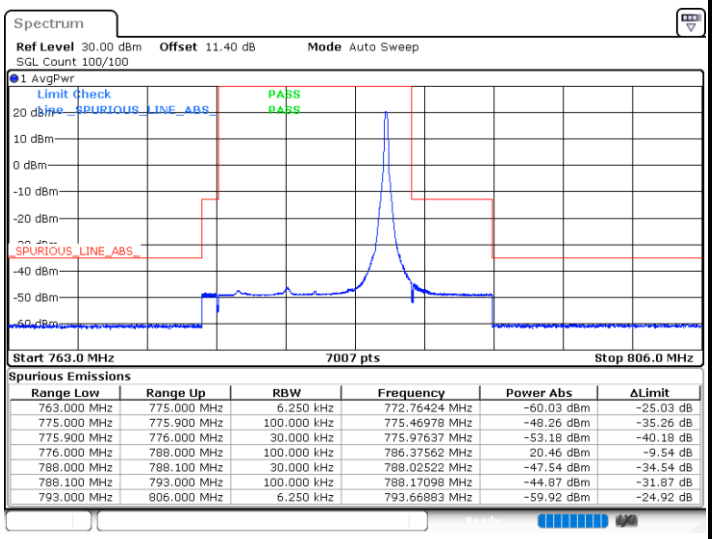


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	772.68032 MHz	-60.05 dBm	-25.05 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.84291 MHz	-47.72 dBm	-34.72 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98197 MHz	-51.98 dBm	-38.98 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.55245 MHz	20.36 dBm	-9.64 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.06369 MHz	-53.34 dBm	-40.34 dB
788.100 MHz	793.000 MHz	100.000 kHz	790.47657 MHz	-48.69 dBm	-35.69 dB
793.000 MHz	806.000 MHz	6.250 kHz	802.09740 MHz	-59.94 dBm	-24.94 dB

Date: 21.JUL.2020 16:55:49

Highest Band Edge / 1 RB

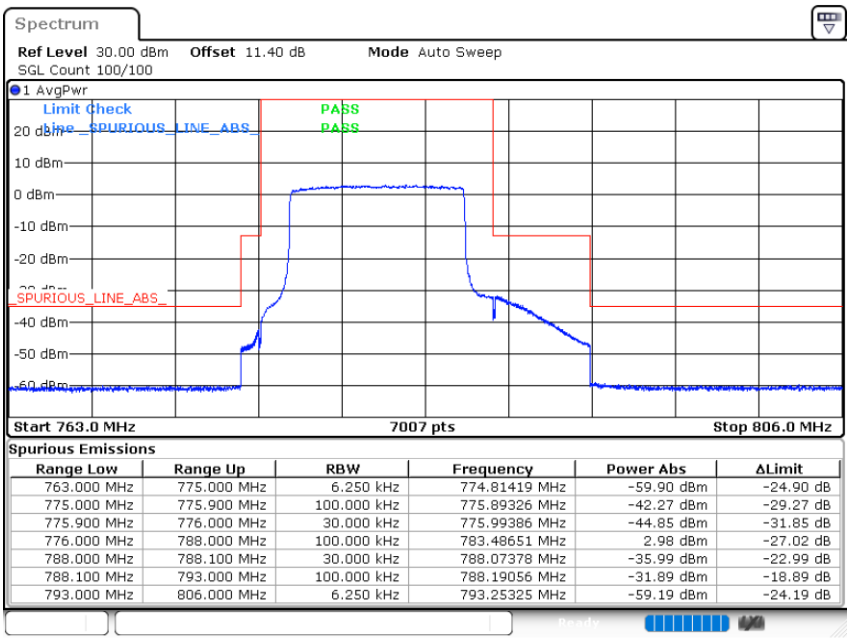


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	772.76424 MHz	-60.03 dBm	-25.03 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.46978 MHz	-48.26 dBm	-35.26 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97637 MHz	-53.18 dBm	-40.18 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.37562 MHz	20.46 dBm	-9.54 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.02522 MHz	-47.54 dBm	-34.54 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.17098 MHz	-44.87 dBm	-31.87 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.66883 MHz	-59.92 dBm	-24.92 dB

Date: 21.JUL.2020 17:00:52

Band Edge / Full RB



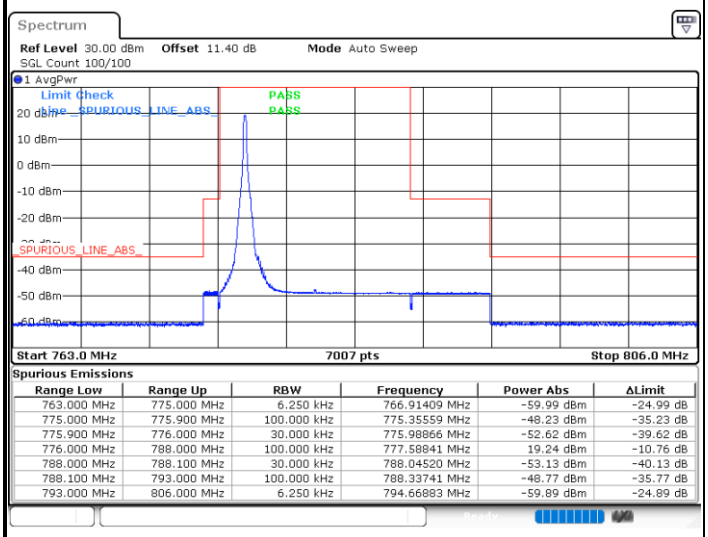
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.81419 MHz	-59.90 dBm	-24.90 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89326 MHz	-42.27 dBm	-29.27 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99386 MHz	-44.85 dBm	-31.85 dB
776.000 MHz	788.000 MHz	100.000 kHz	783.48651 MHz	2.98 dBm	-27.02 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.07378 MHz	-35.99 dBm	-22.99 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.19056 MHz	-31.89 dBm	-18.89 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.25325 MHz	-59.19 dBm	-24.19 dB

Date: 21.JUL.2020 16:54:08

LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

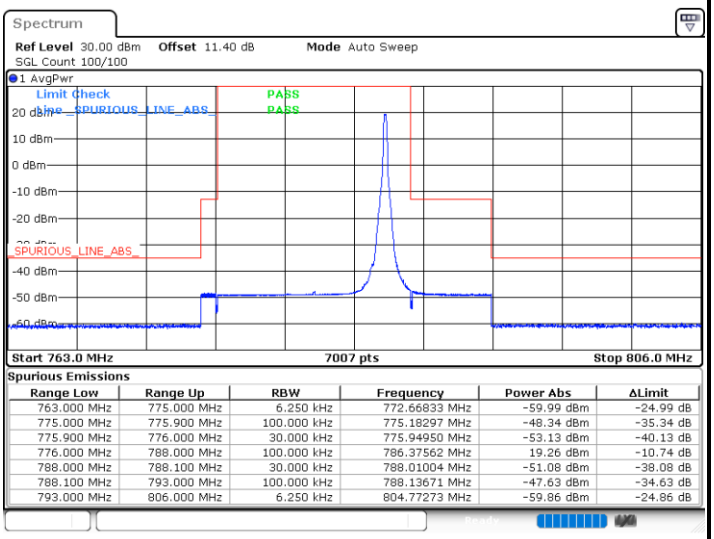


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	766.91409 MHz	-59.99 dBm	-24.99 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.35559 MHz	-48.23 dBm	-35.23 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.98866 MHz	-52.62 dBm	-39.62 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.58841 MHz	19.24 dBm	-10.76 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.04520 MHz	-53.13 dBm	-40.13 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.33741 MHz	-48.77 dBm	-35.77 dB
793.000 MHz	806.000 MHz	6.250 kHz	794.66883 MHz	-59.89 dBm	-24.89 dB

Date: 21.JUL.2020 17:06:31

Highest Band Edge / 1 RB

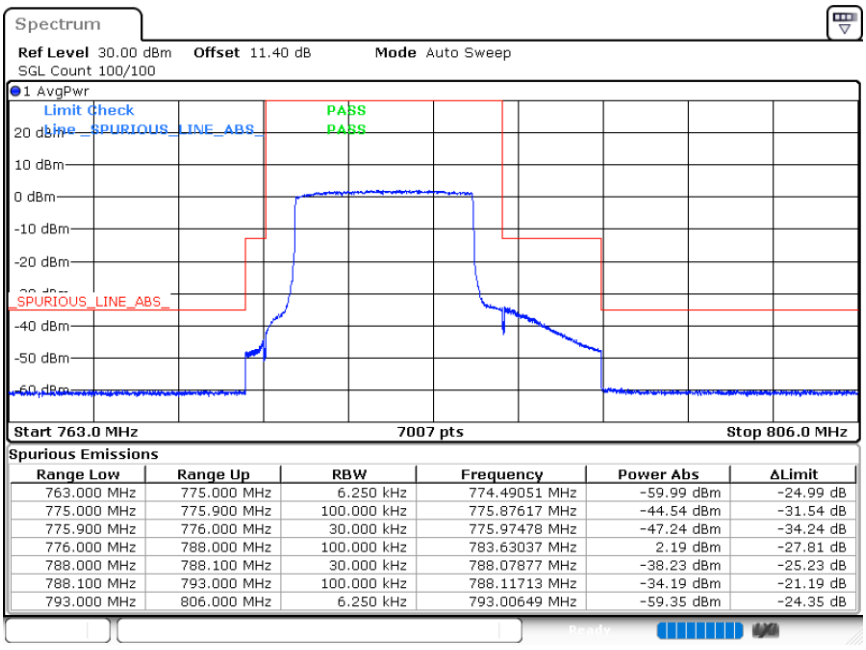


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	772.66833 MHz	-59.99 dBm	-24.99 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.18297 MHz	-48.34 dBm	-35.34 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.94950 MHz	-53.13 dBm	-40.13 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.37562 MHz	19.26 dBm	-10.74 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.01004 MHz	-51.08 dBm	-38.08 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.13671 MHz	-47.63 dBm	-34.63 dB
793.000 MHz	806.000 MHz	6.250 kHz	804.77273 MHz	-59.86 dBm	-24.86 dB

Date: 21.JUL.2020 17:08:12

Band Edge / Full RB



Spurious Emissions

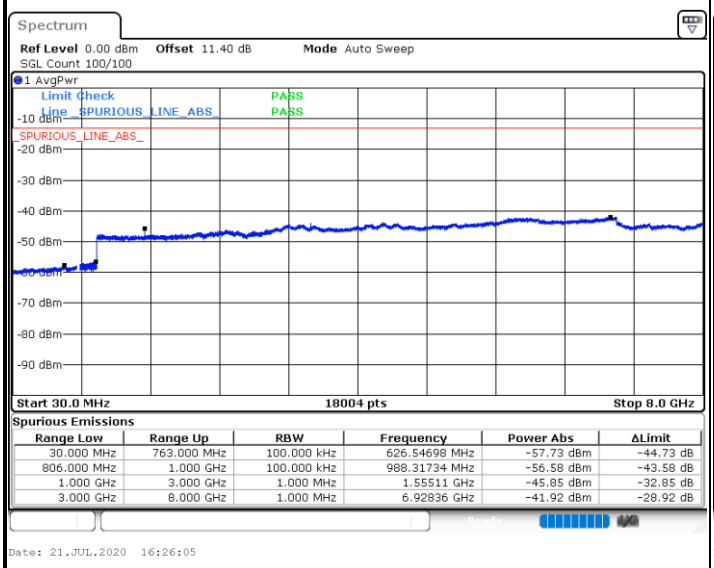
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.49051 MHz	-59.99 dBm	-24.99 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.87617 MHz	-44.54 dBm	-31.54 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97478 MHz	-47.24 dBm	-34.24 dB
776.000 MHz	788.000 MHz	100.000 kHz	783.63037 MHz	2.19 dBm	-27.81 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.07877 MHz	-38.23 dBm	-25.23 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.11713 MHz	-34.19 dBm	-21.19 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.00649 MHz	-59.35 dBm	-24.35 dB

Date: 21.JUL.2020 17:04:49

Conducted Spurious Emission

LTE Band 13 / 5MHz

Lowest Channel / QPSK

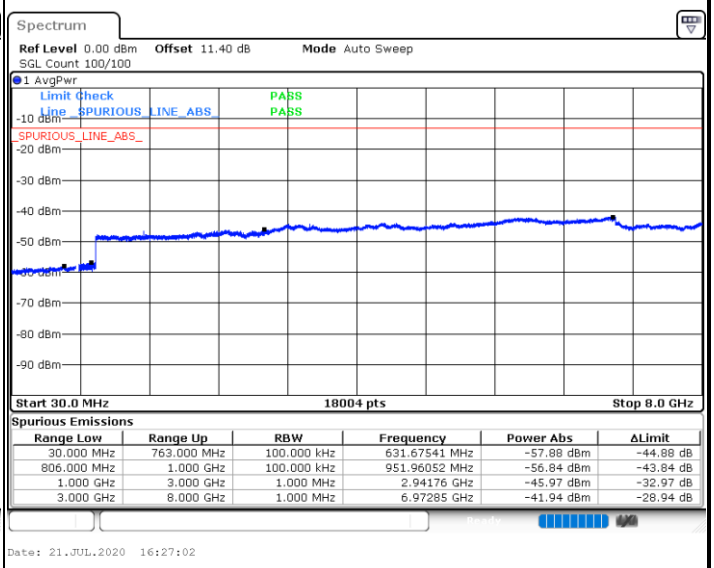


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	626.54698 MHz	-57.73 dBm	-44.73 dB
806.000 MHz	1.000 GHz	100.000 kHz	988.31734 MHz	-56.58 dBm	-43.58 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55511 GHz	-45.85 dBm	-32.85 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.92836 GHz	-41.92 dBm	-28.92 dB

Date: 21.JUL.2020 16:26:05

Lowest Channel / 16QAM

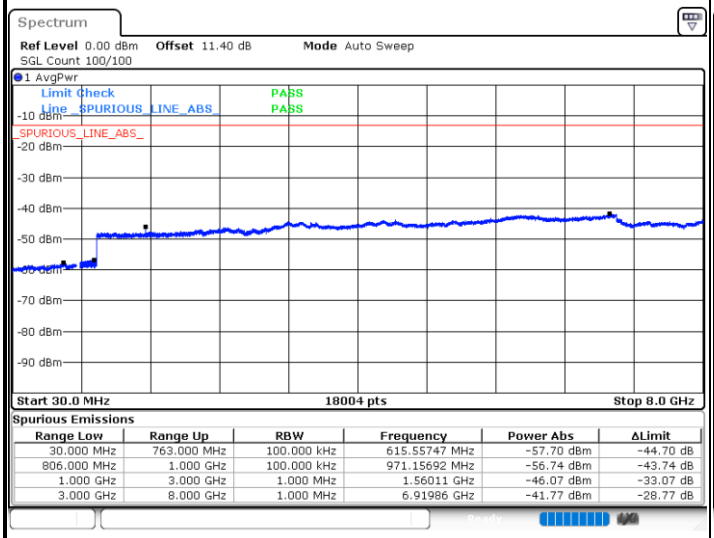


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	631.67541 MHz	-57.88 dBm	-44.88 dB
806.000 MHz	1.000 GHz	100.000 kHz	951.96052 MHz	-56.84 dBm	-43.84 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.94176 GHz	-45.97 dBm	-32.97 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.97285 GHz	-41.94 dBm	-28.94 dB

Date: 21.JUL.2020 16:27:02

Middle Channel / QPSK

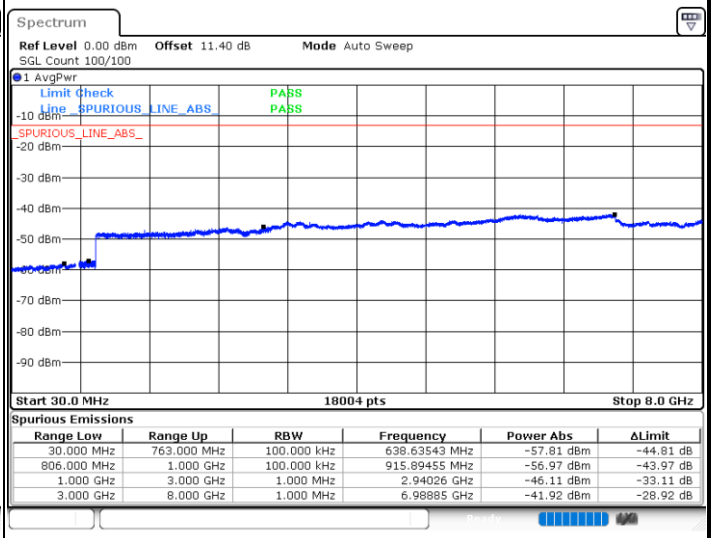


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	615.55747 MHz	-57.70 dBm	-44.70 dB
806.000 MHz	1.000 GHz	100.000 kHz	971.15692 MHz	-56.74 dBm	-43.74 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56011 GHz	-46.07 dBm	-33.07 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.91986 GHz	-41.77 dBm	-28.77 dB

Date: 21.JUL.2020 16:28:56

Middle Channel / 16QAM



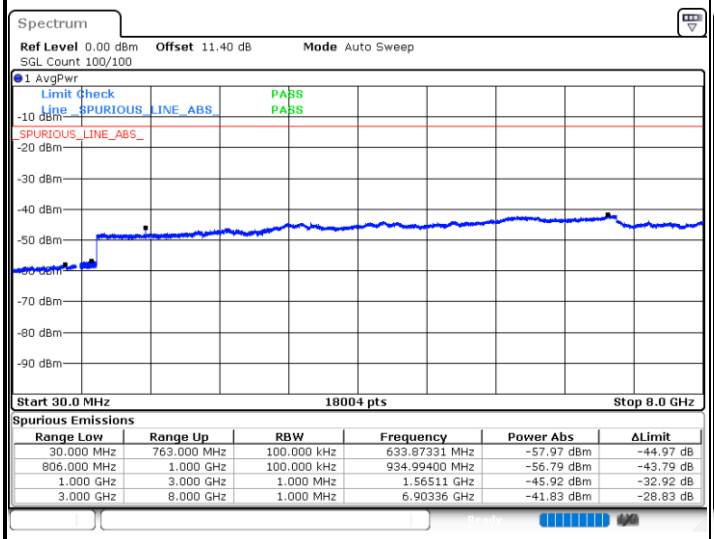
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	638.63543 MHz	-57.81 dBm	-44.81 dB
806.000 MHz	1.000 GHz	100.000 kHz	915.89455 MHz	-56.97 dBm	-43.97 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.94026 GHz	-46.11 dBm	-33.11 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.98885 GHz	-41.92 dBm	-28.92 dB

Date: 21.JUL.2020 16:27:59

LTE Band 13 / 5MHz

Highest Channel / QPSK

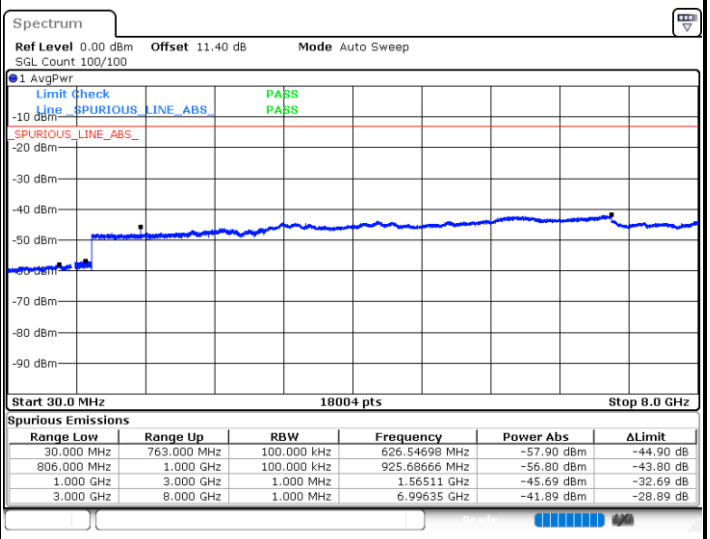


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	633.87331 MHz	-57.97 dBm	-44.97 dB
806.000 MHz	1.000 GHz	100.000 kHz	934.99400 MHz	-56.79 dBm	-43.79 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56511 GHz	-45.92 dBm	-32.92 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.90336 GHz	-41.83 dBm	-28.83 dB

Date: 21.JUL.2020 16:38:12

Highest Channel / 16QAM



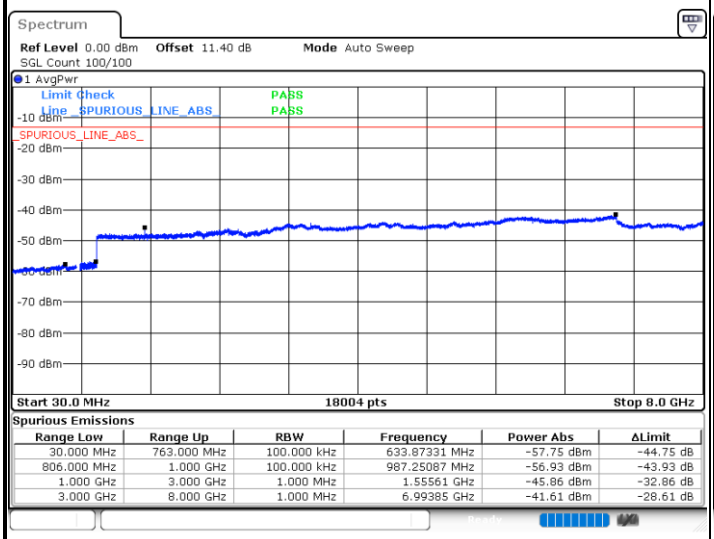
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	626.54698 MHz	-57.90 dBm	-44.90 dB
806.000 MHz	1.000 GHz	100.000 kHz	925.68666 MHz	-56.80 dBm	-43.80 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.56511 GHz	-45.69 dBm	-32.69 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.99635 GHz	-41.89 dBm	-28.89 dB

Date: 21.JUL.2020 16:39:10

LTE Band 13 / 10MHz

Middle Channel / QPSK

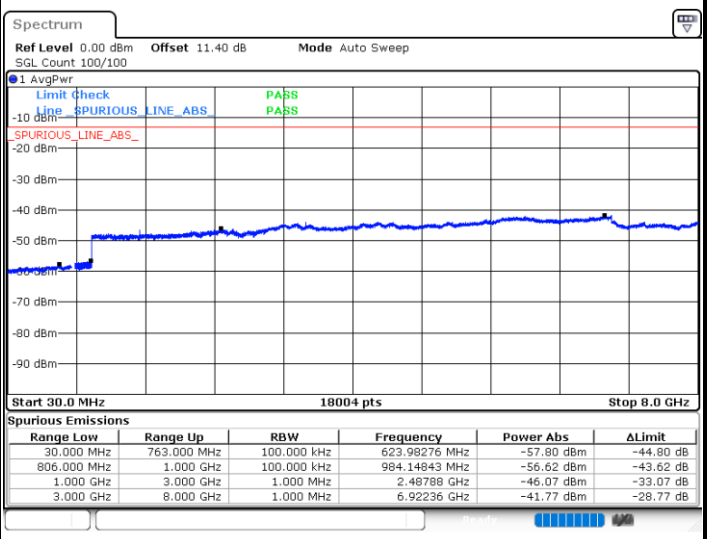


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	633.87331 MHz	-57.75 dBm	-44.75 dB
806.000 MHz	1.000 GHz	100.000 kHz	987.25087 MHz	-56.93 dBm	-43.93 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.55561 GHz	-45.86 dBm	-32.86 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.99385 GHz	-41.61 dBm	-28.61 dB

Date: 21.JUL.2020 17:02:45

Middle Channel / 16QAM



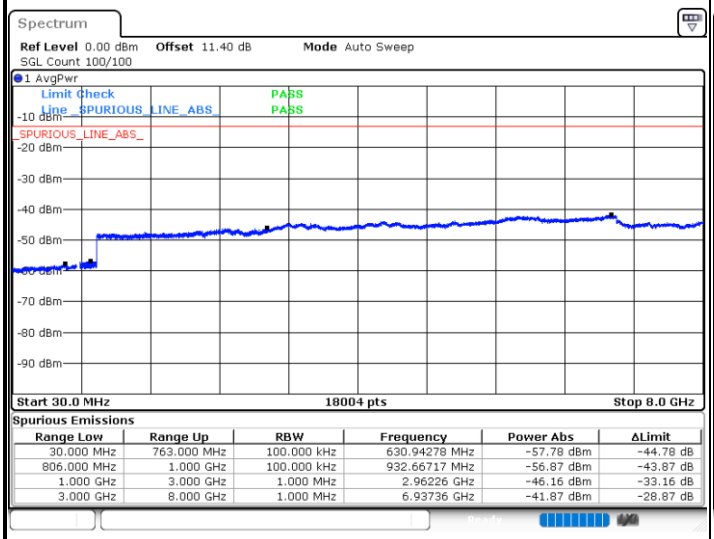
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	623.98276 MHz	-57.80 dBm	-44.80 dB
806.000 MHz	1.000 GHz	100.000 kHz	984.14843 MHz	-56.62 dBm	-43.62 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.48788 GHz	-46.07 dBm	-33.07 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.92236 GHz	-41.77 dBm	-28.77 dB

Date: 21.JUL.2020 17:01:48

LTE Band 13 / 5MHz

Lowest Channel / 64QAM

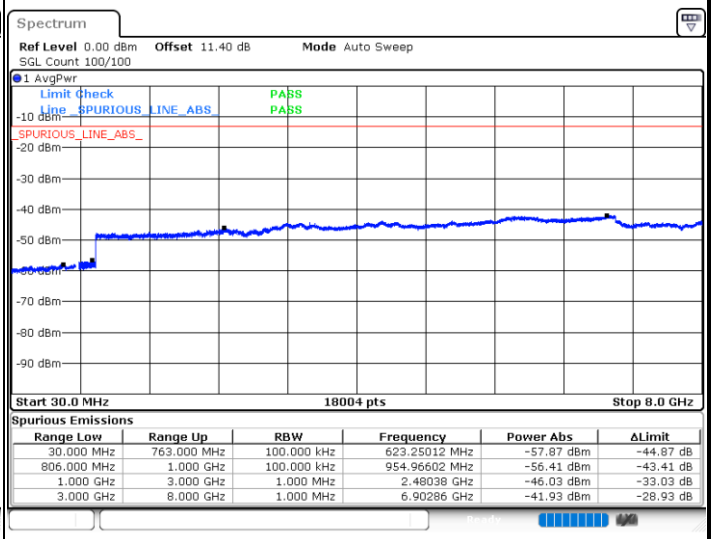


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	630.94278 MHz	-57.78 dBm	-44.78 dB
806.000 MHz	1.000 GHz	100.000 kHz	932.66717 MHz	-56.87 dBm	-43.87 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96226 GHz	-46.16 dBm	-33.16 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.93736 GHz	-41.87 dBm	-28.87 dB

Date: 21.JUL.2020 16:43:54

Middle Channel / 64QAM

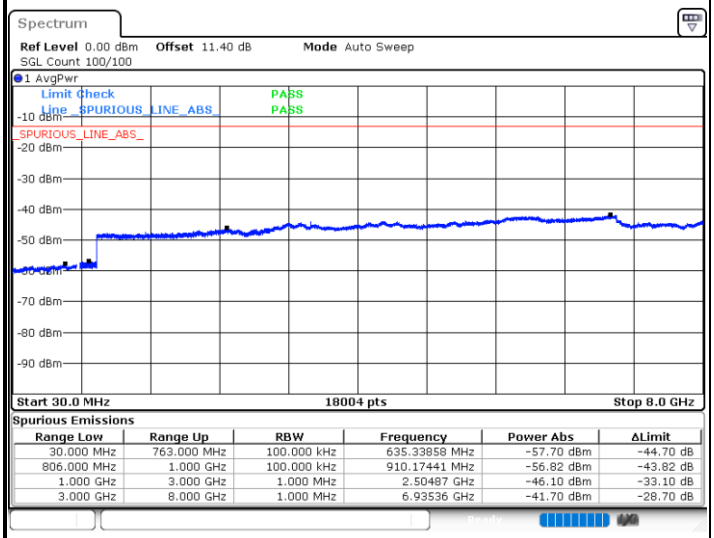


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	623.25012 MHz	-57.87 dBm	-44.87 dB
806.000 MHz	1.000 GHz	100.000 kHz	954.96602 MHz	-56.41 dBm	-43.41 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.48038 GHz	-46.03 dBm	-33.03 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.90286 GHz	-41.93 dBm	-28.93 dB

Date: 21.JUL.2020 16:44:51

Highest Channel / 64QAM

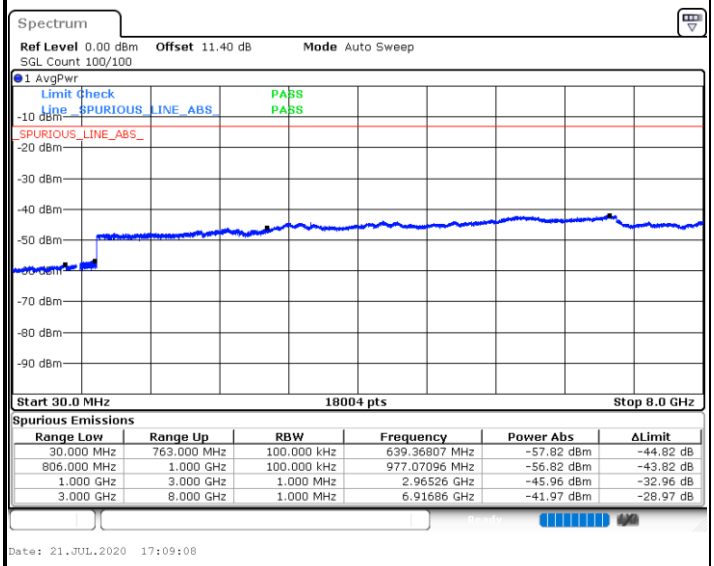


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	763.000 MHz	100.000 kHz	635.33858 MHz	-57.70 dBm	-44.70 dB
806.000 MHz	1.000 GHz	100.000 kHz	910.17441 MHz	-56.82 dBm	-43.82 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.50487 GHz	-46.10 dBm	-33.10 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.93536 GHz	-41.70 dBm	-28.70 dB

Date: 21.JUL.2020 16:49:58

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	639.36807 MHz	-57.82 dBm	-44.82 dB
806.000 MHz	1.000 GHz	100.000 kHz	977.07096 MHz	-56.82 dBm	-43.82 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96526 GHz	-45.96 dBm	-32.96 dB
3.000 GHz	8.000 GHz	1.000 MHz	6.91686 GHz	-41.97 dBm	-28.97 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	0.0042	PASS
40	Normal Voltage	0.0152	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0046	
20	Maximum Voltage	0.0097	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0029	

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.

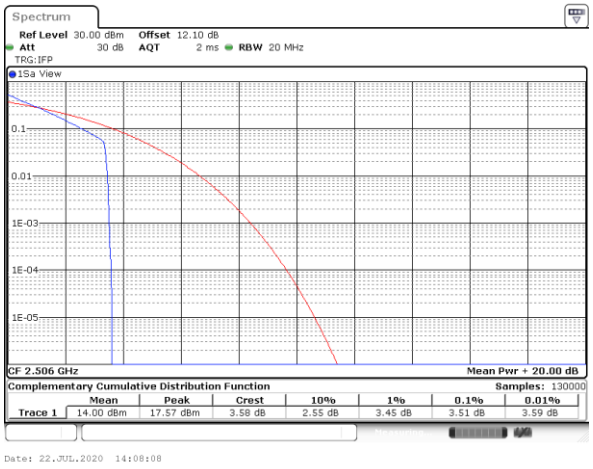
LTE Band 41

Peak-to-Average Ratio

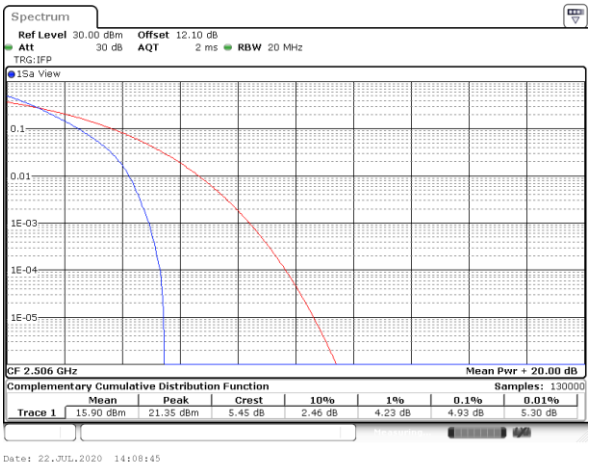
Mode	LTE Band 41 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.51	4.93	5.39	5.65	PASS
Middle CH	3.59	4.72	4.81	5.94	
Highest CH	4.00	4.61	5.01	5.97	
Mode	LTE Band 41 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.78	6.58	-	-	PASS
Middle CH	6.67	6.58	-	-	
Highest CH	6.99	6.49	-	-	

LTE Band 41 / 20MHz / QPSK

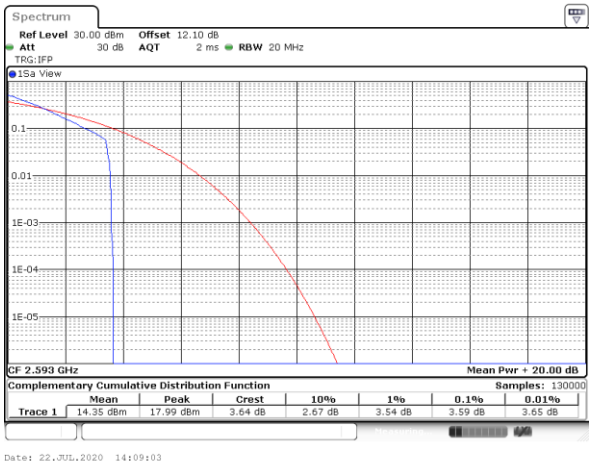
Lowest Channel / 1RB



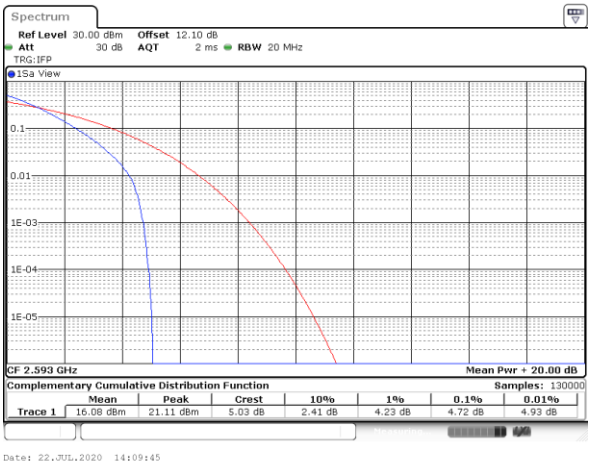
Lowest Channel / Full RB



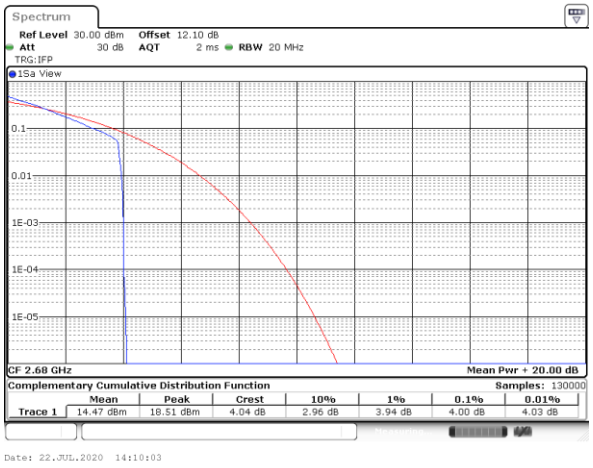
Middle Channel / 1RB



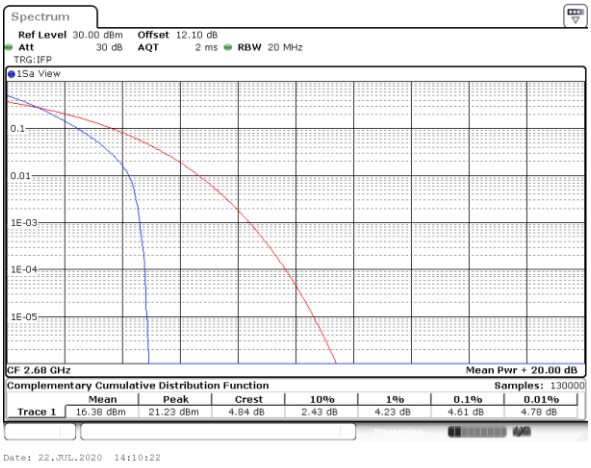
Middle Channel / Full RB



Highest Channel / 1RB

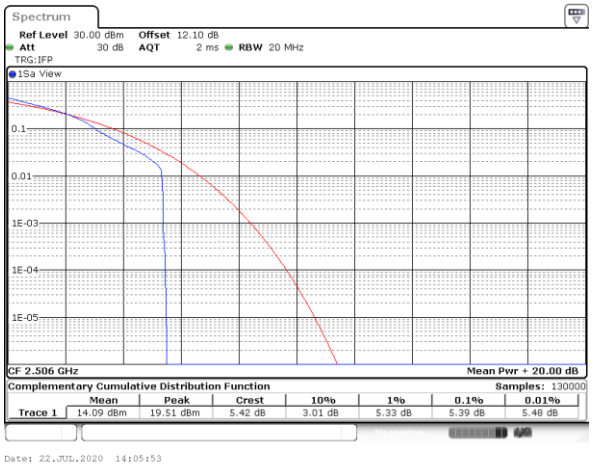


Highest Channel / Full RB

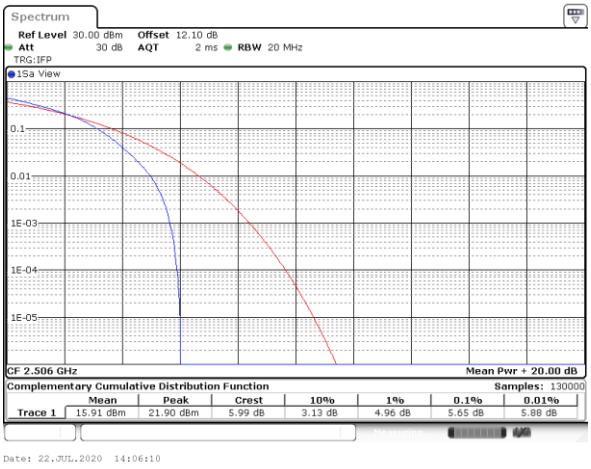


LTE Band 41 / 20MHz / 16QAM

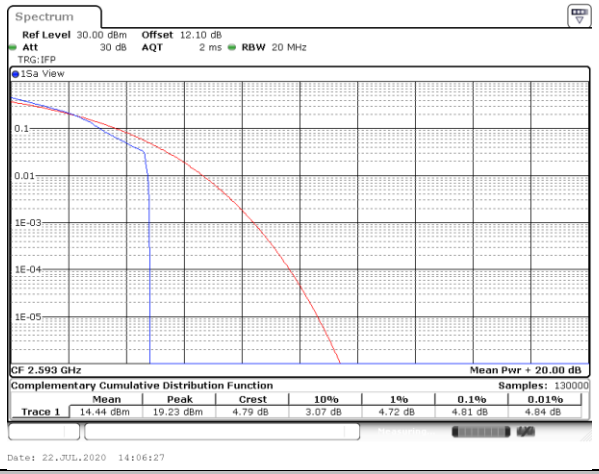
Lowest Channel / 1RB



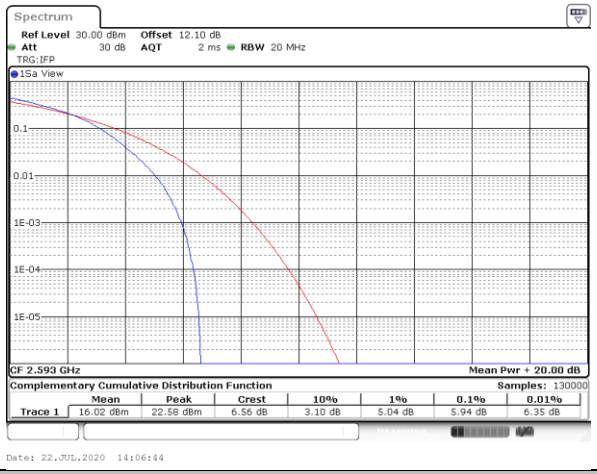
Lowest Channel / Full RB



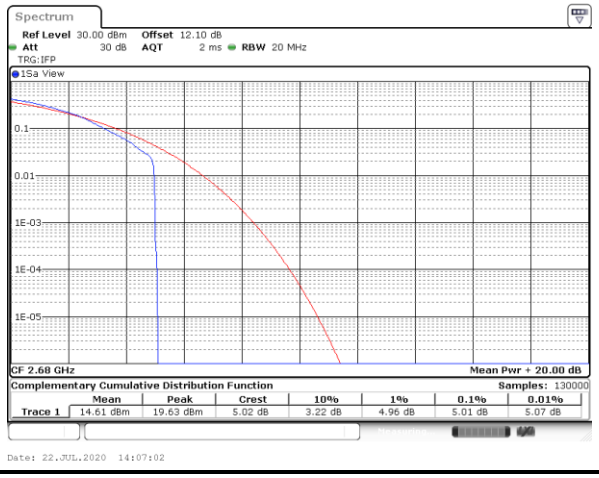
Middle Channel / 1RB



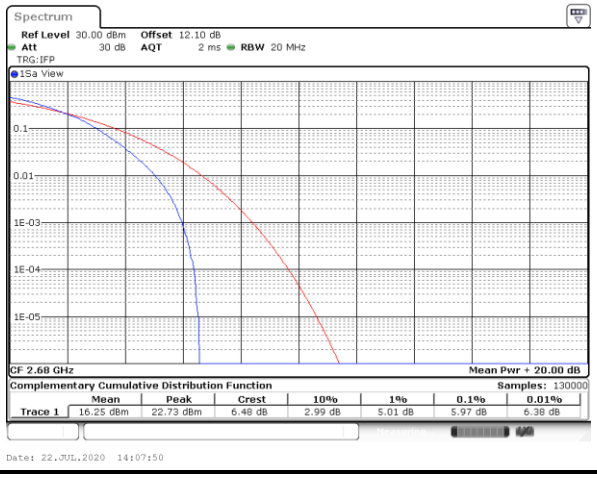
Middle Channel / Full RB



Highest Channel / 1RB

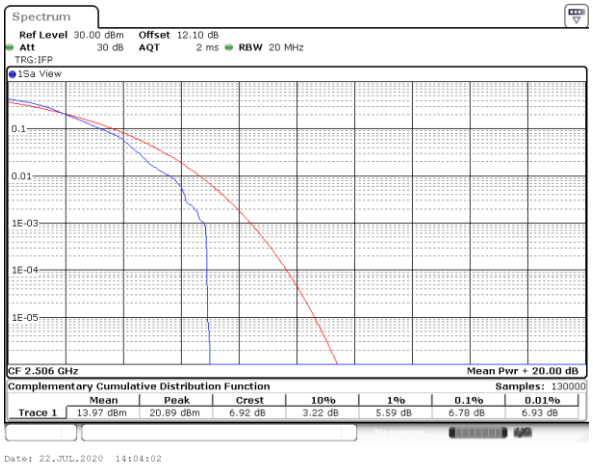


Highest Channel / Full RB

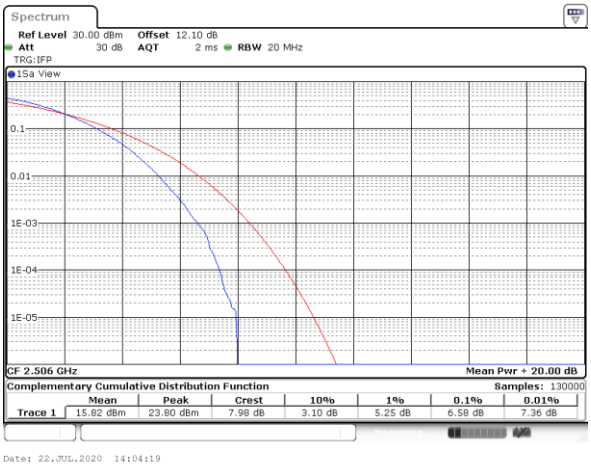


LTE Band 41 / 20MHz / 64QAM

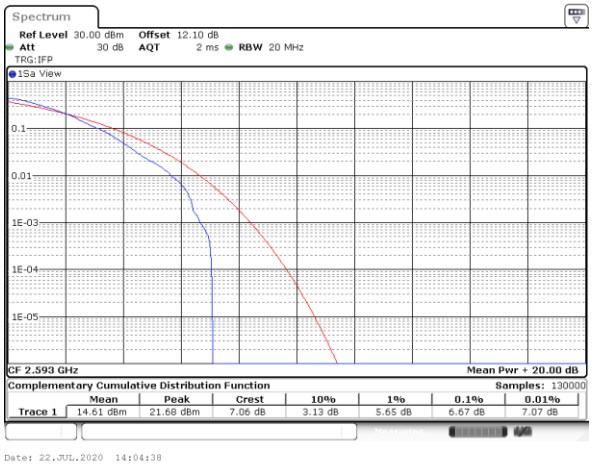
Lowest Channel / 1RB



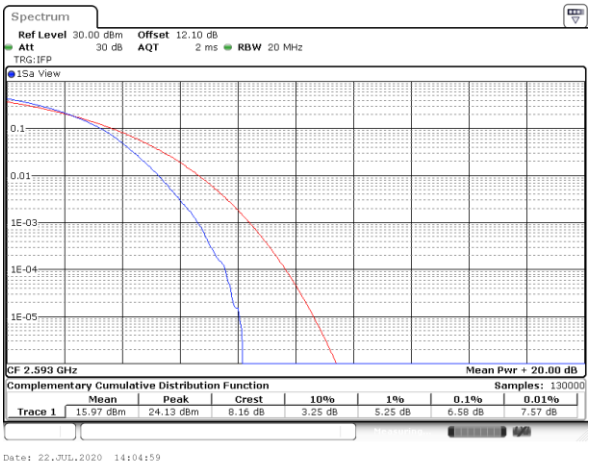
Lowest Channel / Full RB



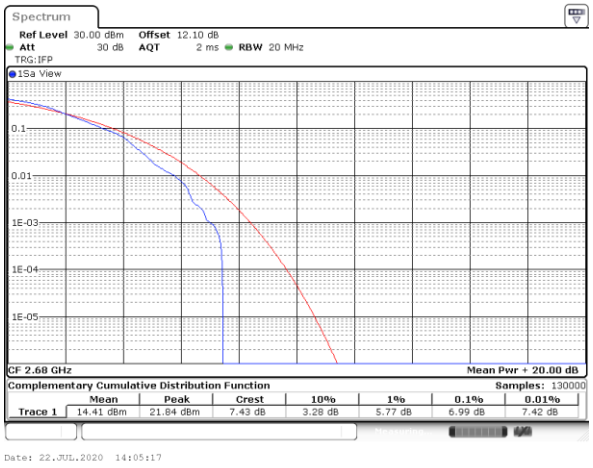
Middle Channel / 1RB



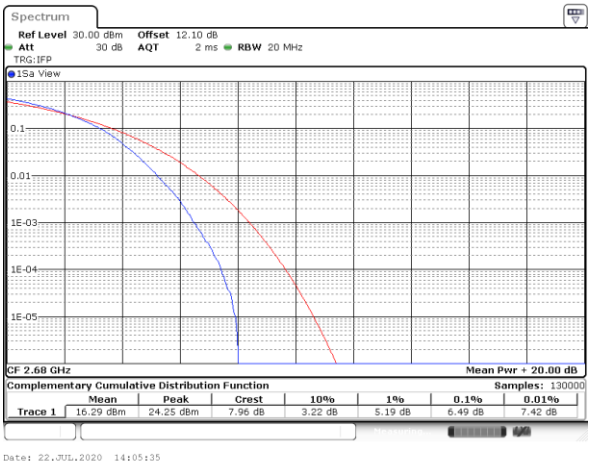
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

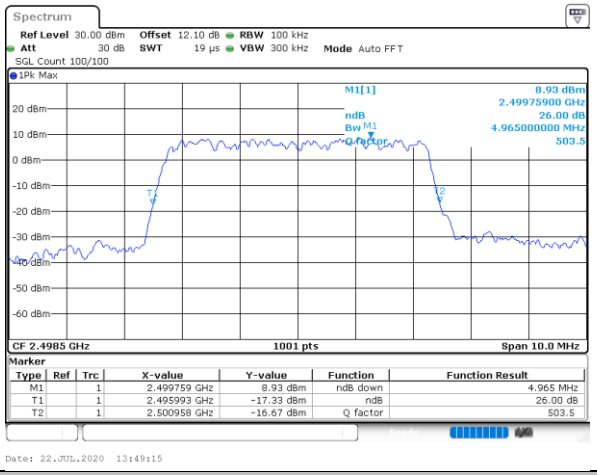


26dB Bandwidth

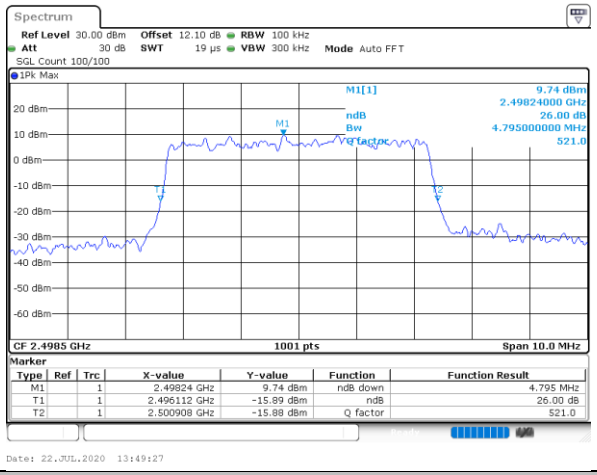
Mode	LTE Band 41 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.97	4.80	9.61	9.73	14.33	14.36	18.94	18.66
Middle CH	-	-	-	-	4.88	4.91	9.63	9.79	14.21	14.36	18.94	19.10
Highest CH	-	-	-	-	4.83	4.85	9.65	9.59	14.30	14.36	18.94	18.98
Mode	LTE Band 41 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.85	-	9.67	-	14.12	-	18.70	-
Middle CH	-	-	-	-	4.88	-	9.65	-	14.24	-	19.06	-
Highest CH	-	-	-	-	4.83	-	9.63	-	14.12	-	18.62	-

LTE Band 41

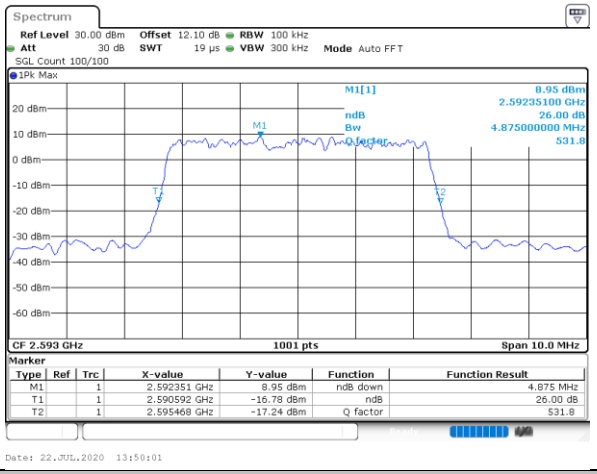
Lowest Channel / 5MHz / QPSK



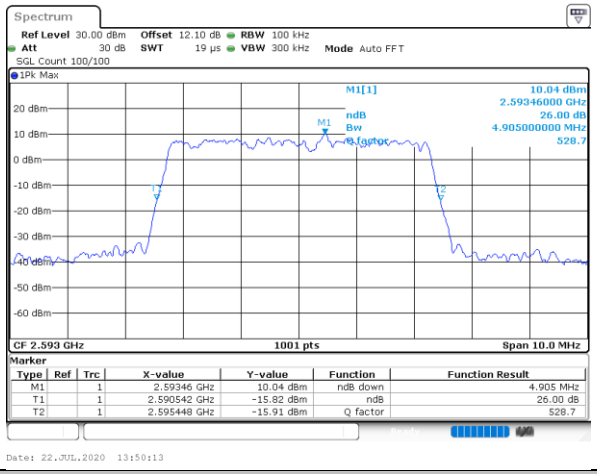
Lowest Channel / 5MHz / 16QAM



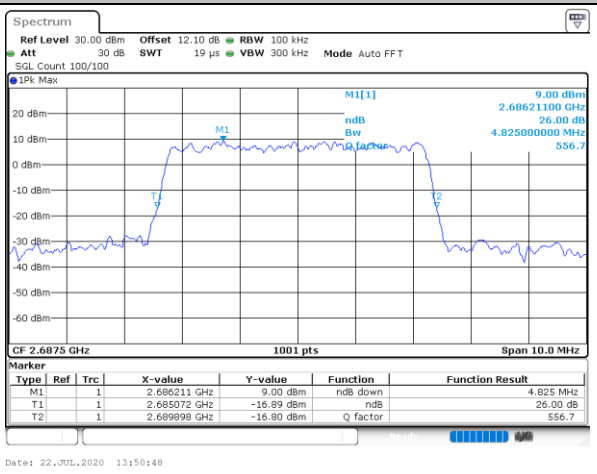
Middle Channel / 5MHz / QPSK



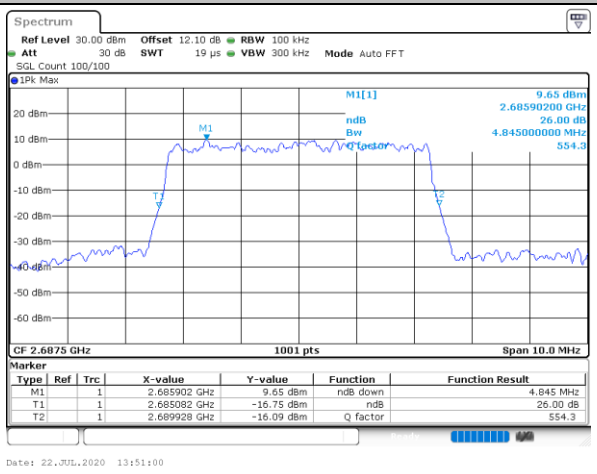
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

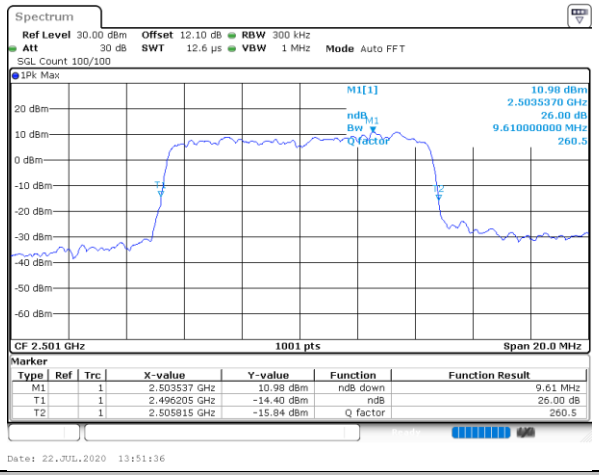


Highest Channel / 5MHz / 16QAM

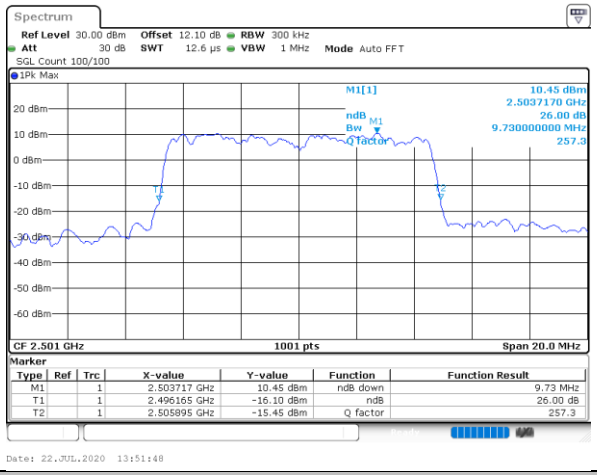


LTE Band 41

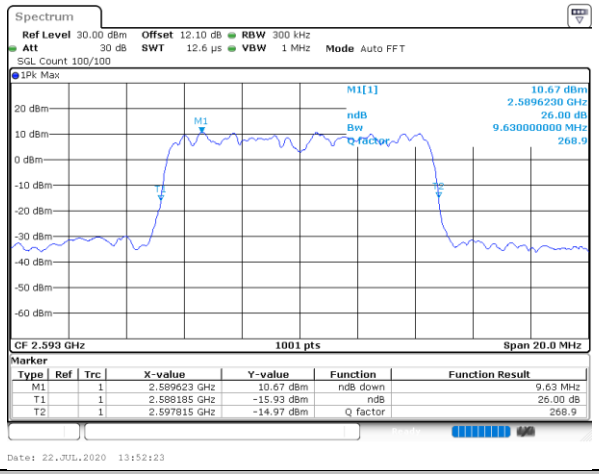
Lowest Channel / 10MHz / QPSK



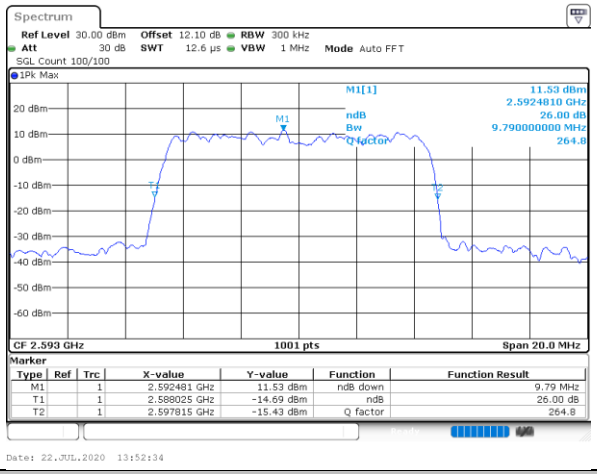
Lowest Channel / 10MHz / 16QAM



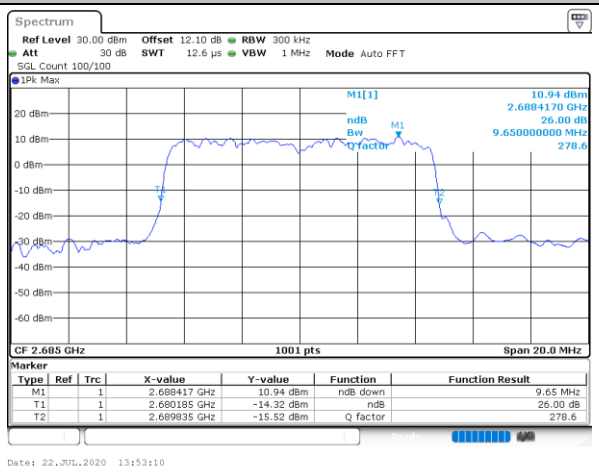
Middle Channel / 10MHz / QPSK



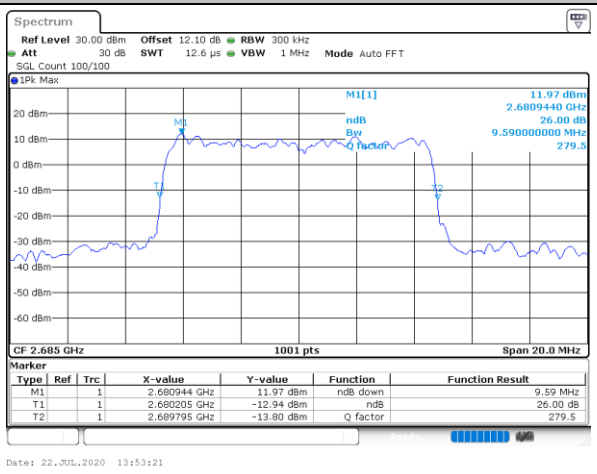
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

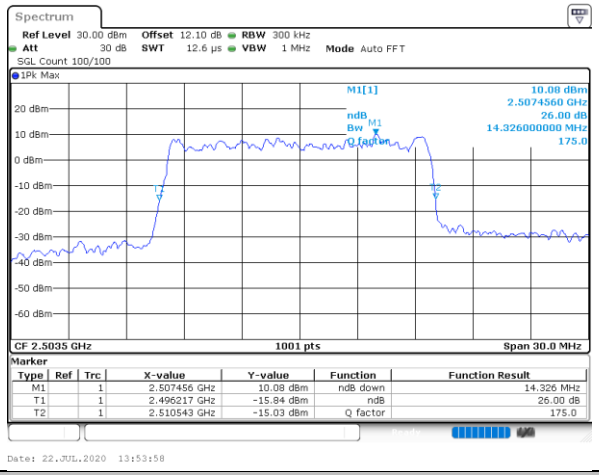


Highest Channel / 10MHz / 16QAM

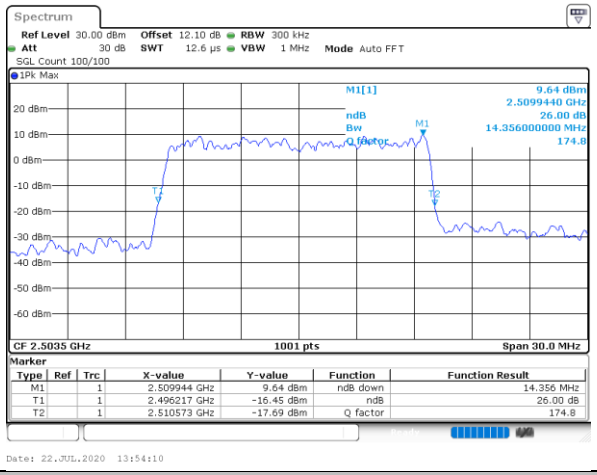


LTE Band 41

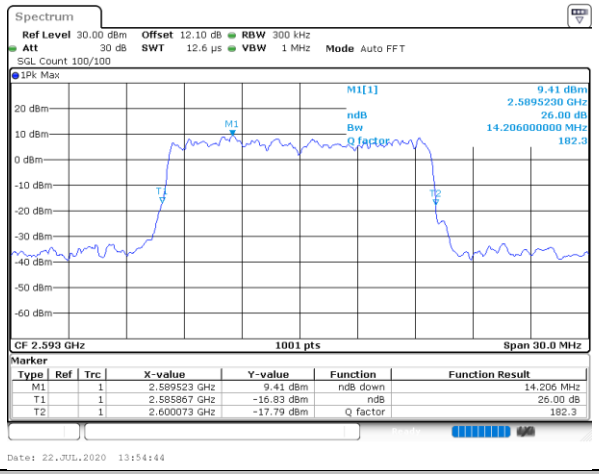
Lowest Channel / 15MHz / QPSK



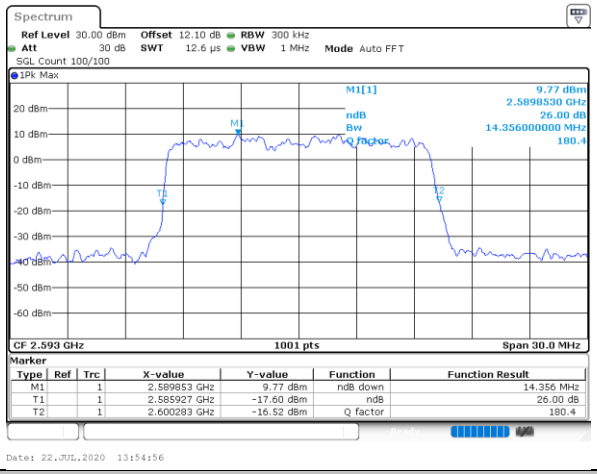
Lowest Channel / 15MHz / 16QAM



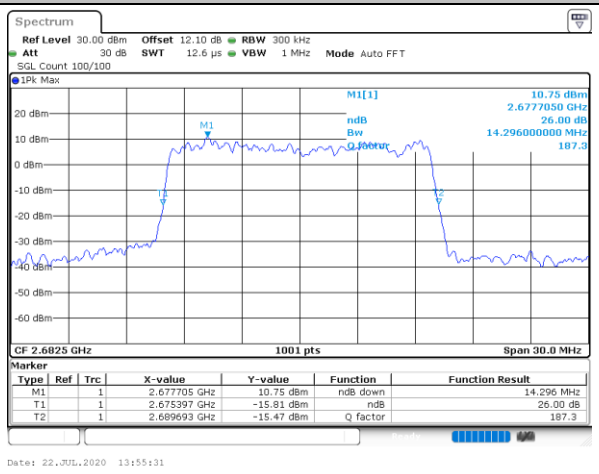
Middle Channel / 15MHz / QPSK



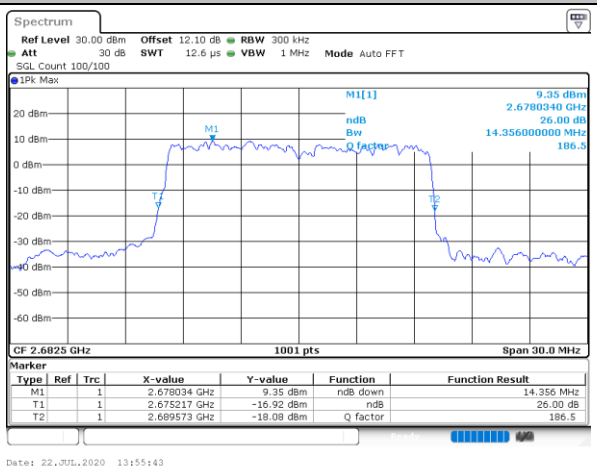
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

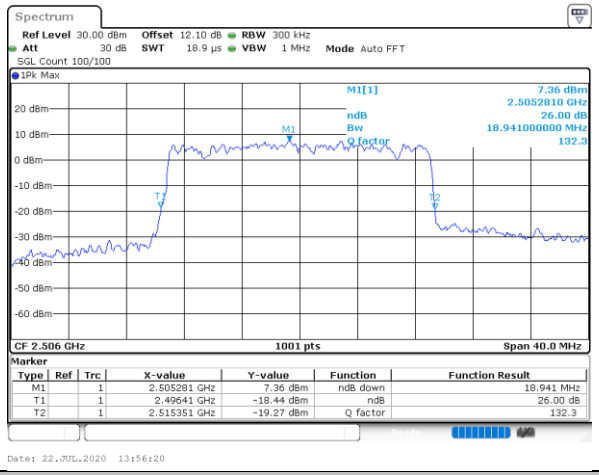


Highest Channel / 15MHz / 16QAM

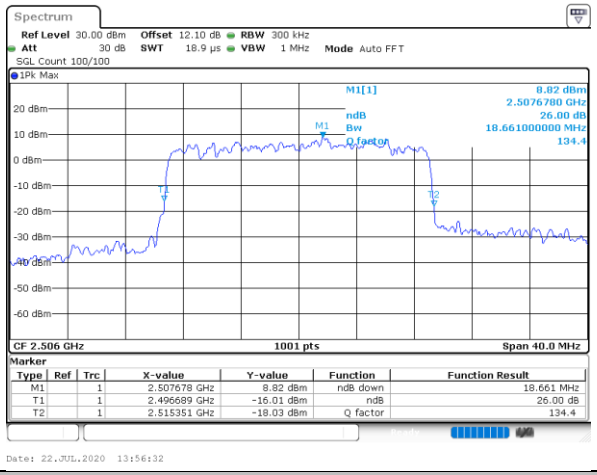


LTE Band 41

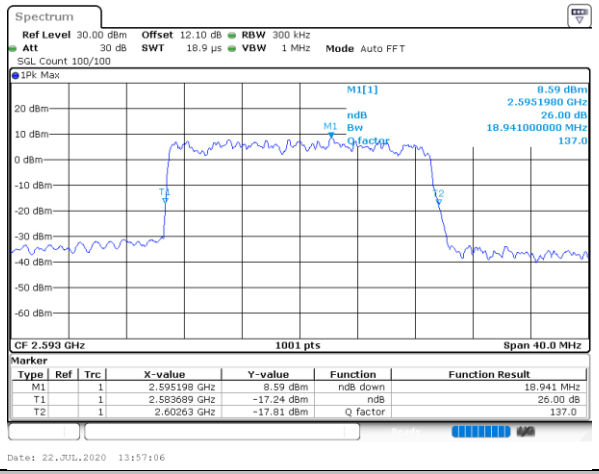
Lowest Channel / 20MHz / QPSK



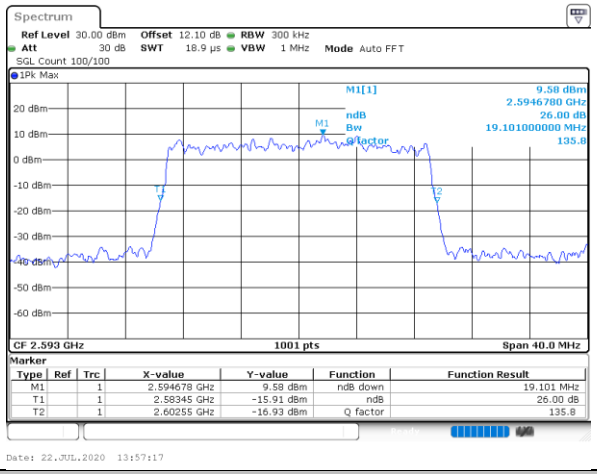
Lowest Channel / 20MHz / 16QAM



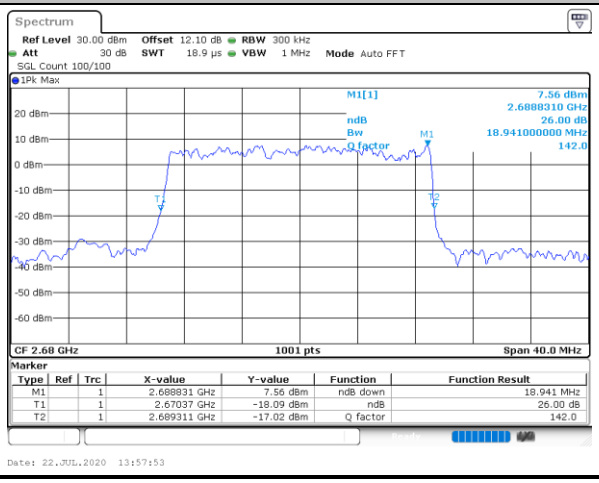
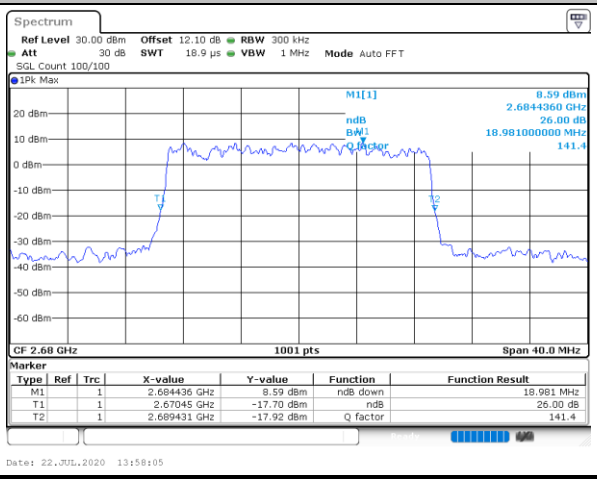
Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM