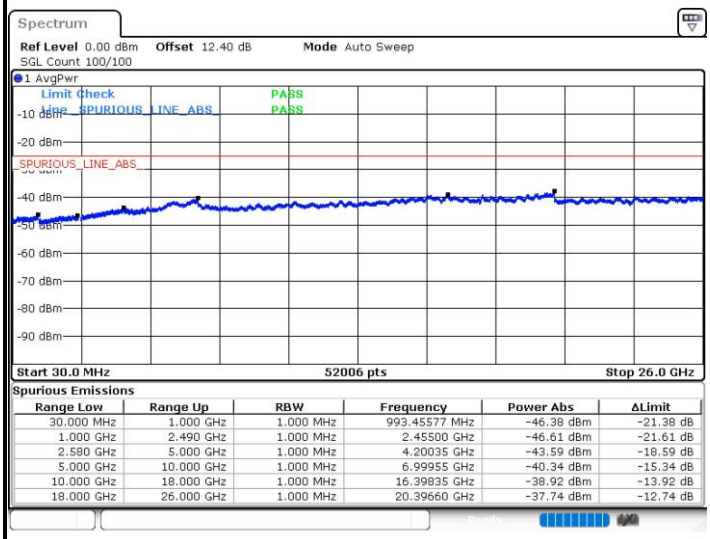
LTE Band 7 / 20MHz

Middle Channel / QPSK

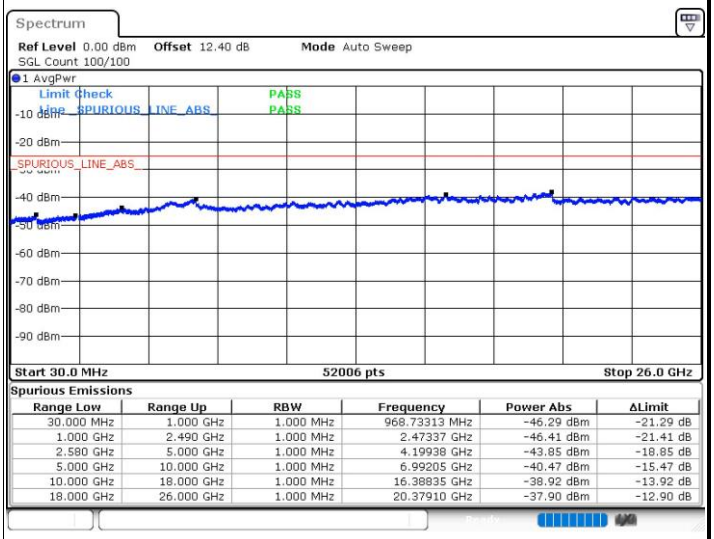


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	993.45577 MHz	-46.38 dBm	-21.38 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.45500 GHz	-46.61 dBm	-21.61 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.20035 GHz	-43.59 dBm	-18.59 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99955 GHz	-40.34 dBm	-15.34 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.39835 GHz	-38.92 dBm	-13.92 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.39660 GHz	-37.74 dBm	-12.74 dB

Date: 25.SEP.2018 04:06:24

Middle Channel / 16QAM

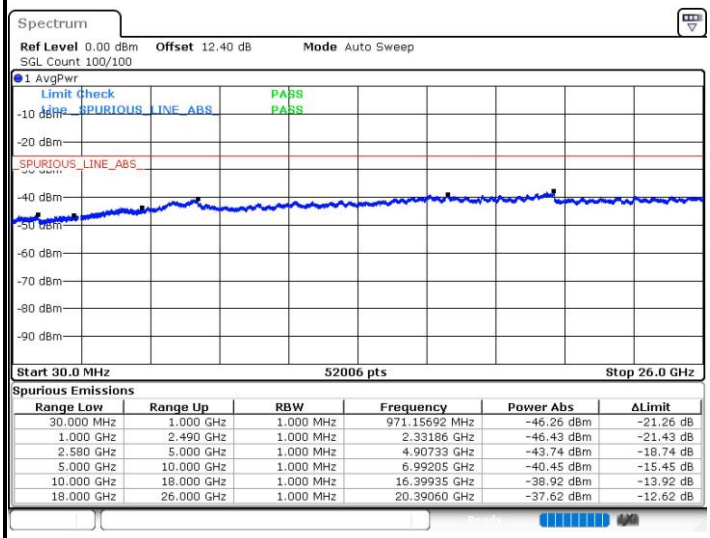


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	968.73313 MHz	-46.29 dBm	-21.29 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.47337 GHz	-46.41 dBm	-21.41 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.19938 GHz	-43.85 dBm	-18.85 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99205 GHz	-40.47 dBm	-15.47 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.38835 GHz	-38.92 dBm	-13.92 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.37910 GHz	-37.90 dBm	-12.90 dB

Date: 25.SEP.2018 04:07:23

Highest Channel / QPSK

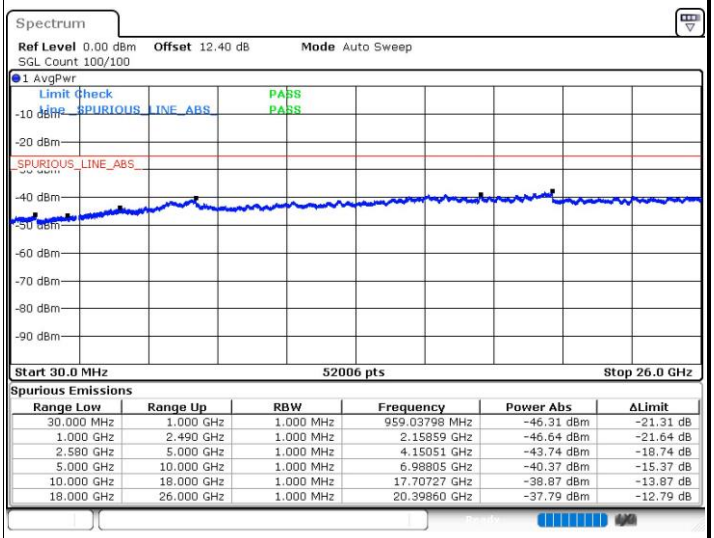


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	971.15692 MHz	-46.26 dBm	-21.26 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.33186 GHz	-46.43 dBm	-21.43 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.90733 GHz	-43.74 dBm	-18.74 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99205 GHz	-40.45 dBm	-15.45 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.39935 GHz	-38.92 dBm	-13.92 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.39060 GHz	-37.62 dBm	-12.62 dB

Date: 25.SEP.2018 04:13:07

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	959.03798 MHz	-46.31 dBm	-21.31 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.15859 GHz	-46.64 dBm	-21.64 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.15051 GHz	-43.74 dBm	-18.74 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98805 GHz	-40.37 dBm	-15.37 dB
10.000 GHz	18.000 GHz	1.000 MHz	17.70727 GHz	-38.87 dBm	-13.87 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.39860 GHz	-37.79 dBm	-12.79 dB

Date: 25.SEP.2018 04:14:06

Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0041	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0014	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0038	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0032	
-20	Normal Voltage	0.0029	
-30	Normal Voltage	0.0026	
20	Maximum Voltage	0.0009	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0030	

Note:

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

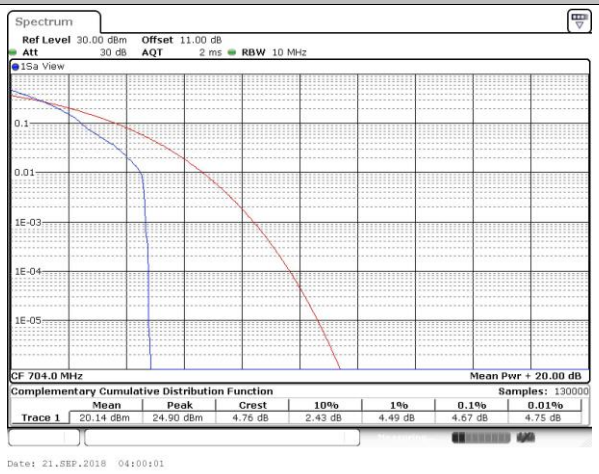
LTE Band 12

Peak-to-Average Ratio

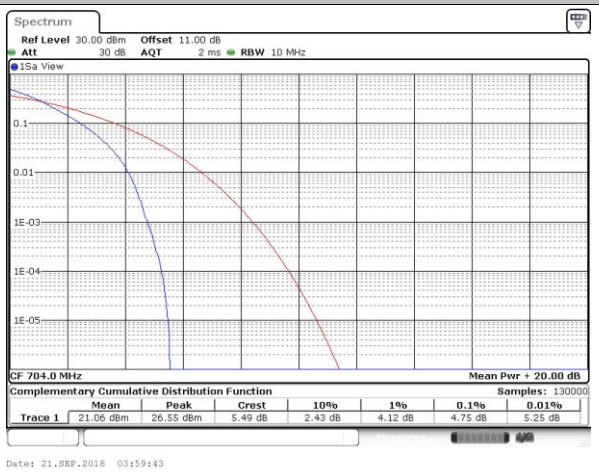
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.67	4.75	5.65	5.77	PASS
Middle CH	4.52	4.93	5.51	5.8	
Highest CH	4.38	4.75	5.19	5.77	

LTE Band 12 / 10MHz / QPSK

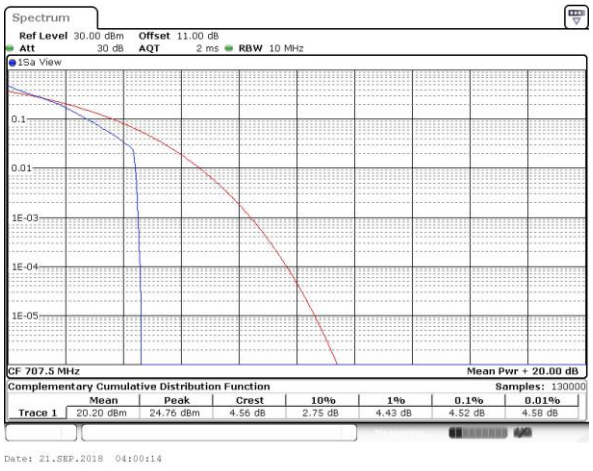
Lowest Channel / 1RB



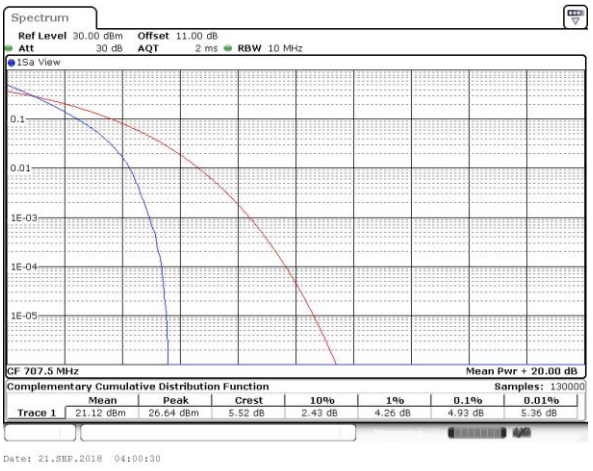
Lowest Channel / Full RB



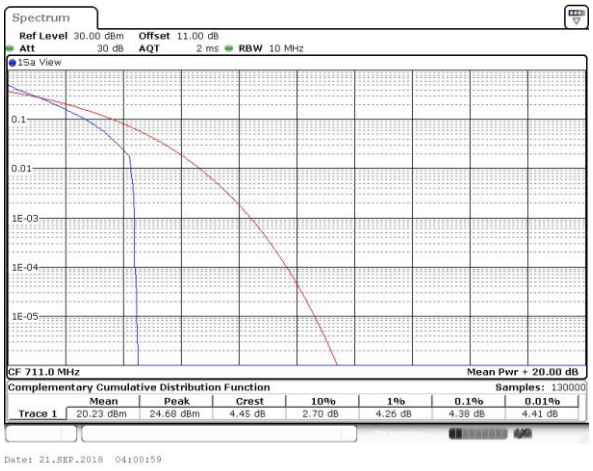
Middle Channel / 1RB



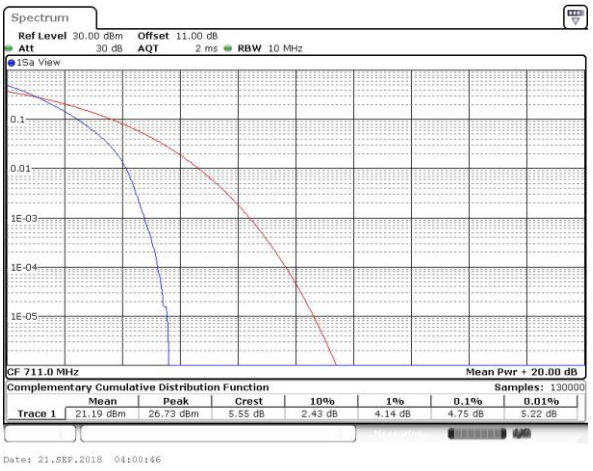
Middle Channel / Full RB



Highest Channel / 1RB

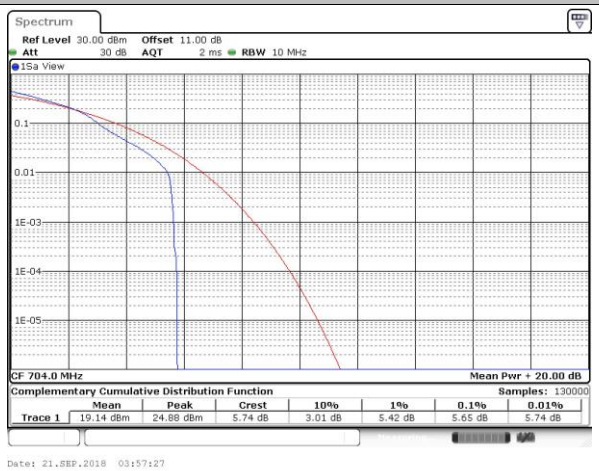


Highest Channel / Full RB

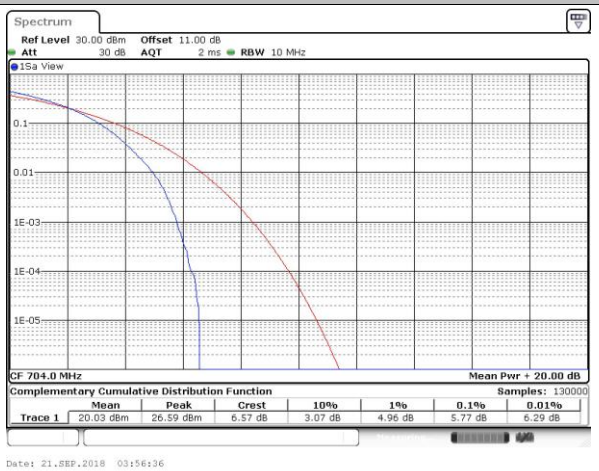


LTE Band 12 / 10MHz / 16QAM

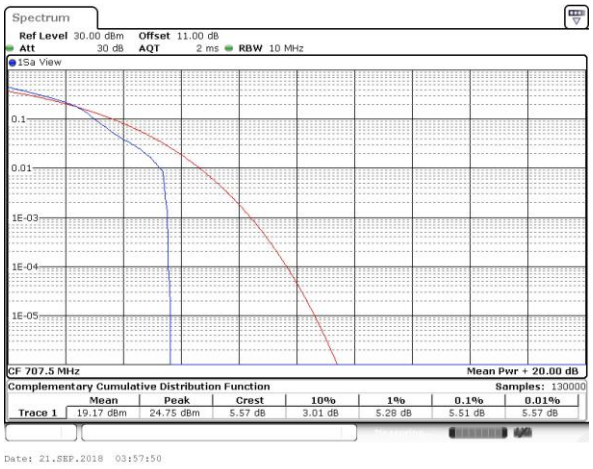
Lowest Channel / 1RB



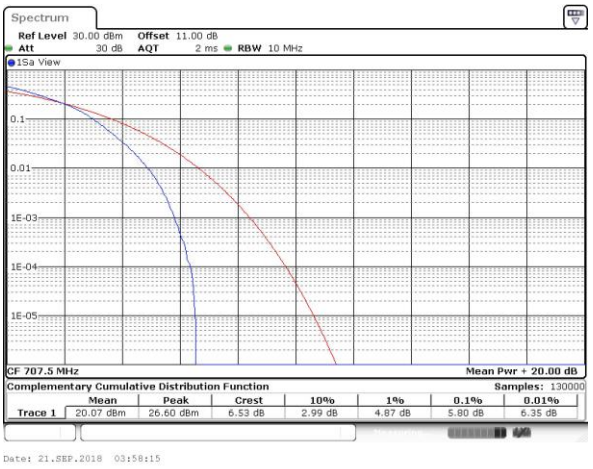
Lowest Channel / Full RB



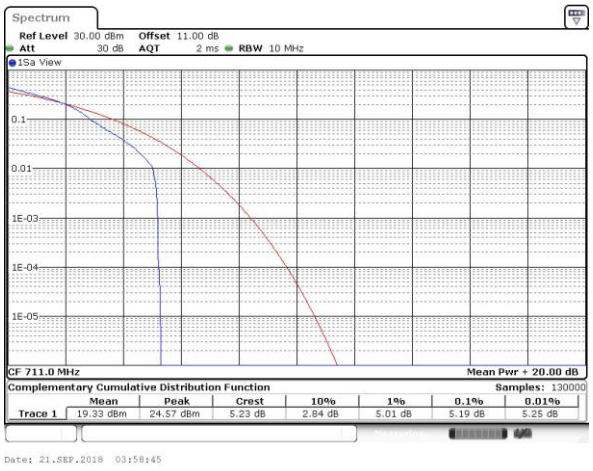
Middle Channel / 1RB



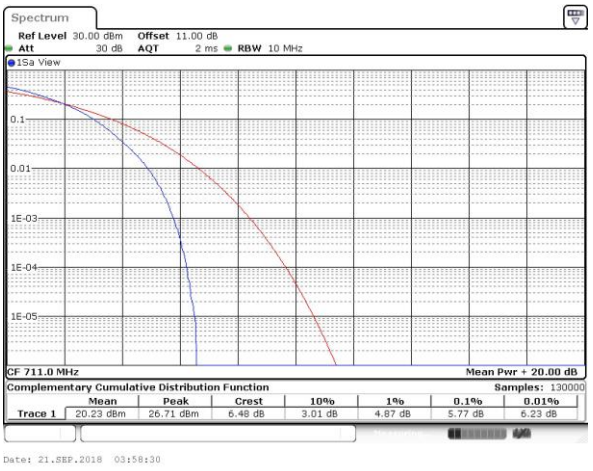
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

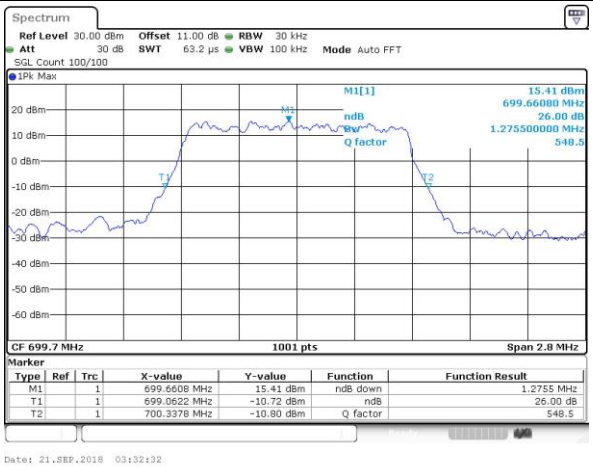


26dB Bandwidth

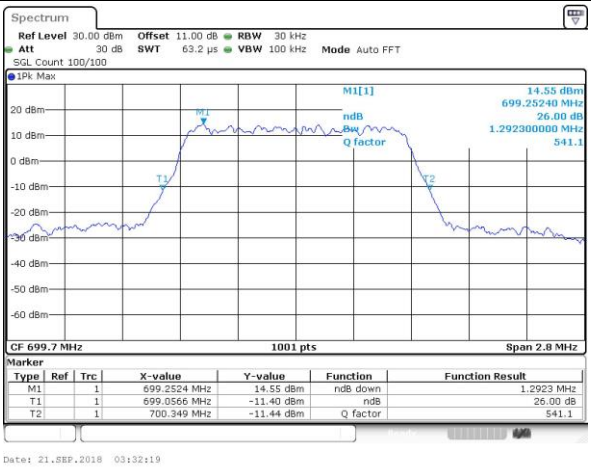
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.28	1.29	3.01	3.05	4.85	4.94	9.89	9.77	-	-	-	-
Middle CH	1.27	1.27	3.02	3.05	4.89	4.96	9.93	9.79	-	-	-	-
Highest CH	1.26	1.29	2.99	3.00	5.03	4.84	9.79	9.95	-	-	-	-

LTE Band 12

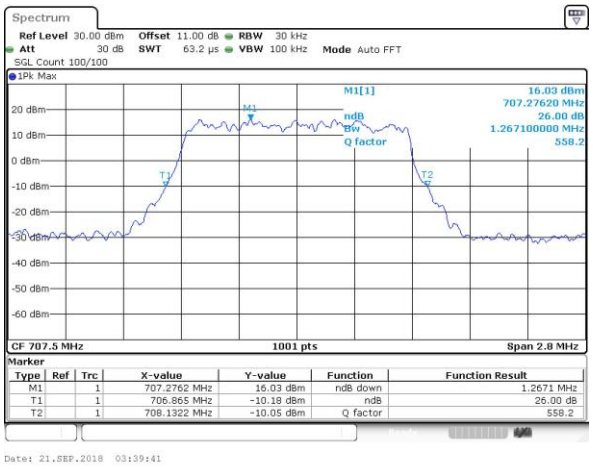
Lowest Channel / 1.4MHz / QPSK



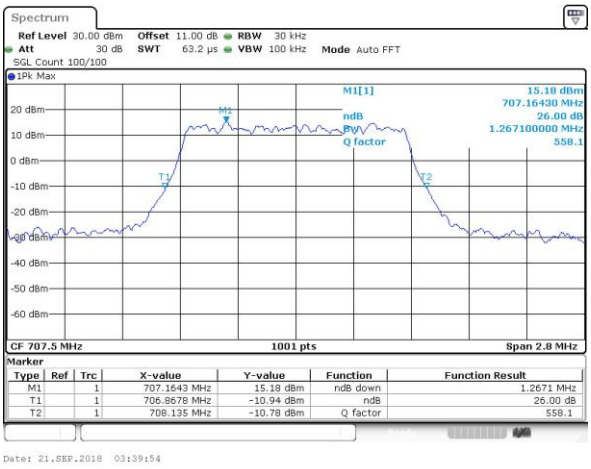
Lowest Channel / 1.4MHz / 16QAM



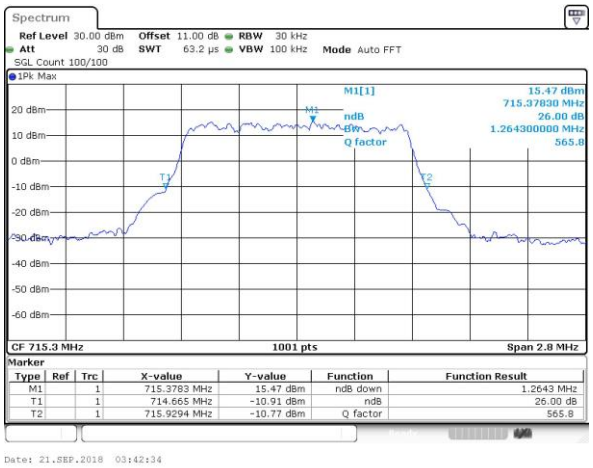
Middle Channel / 1.4MHz / QPSK



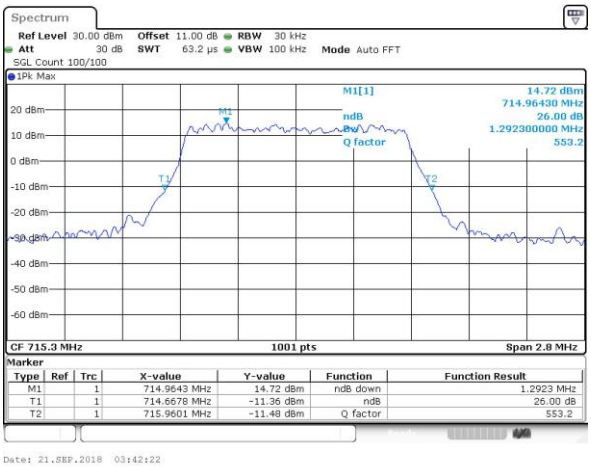
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

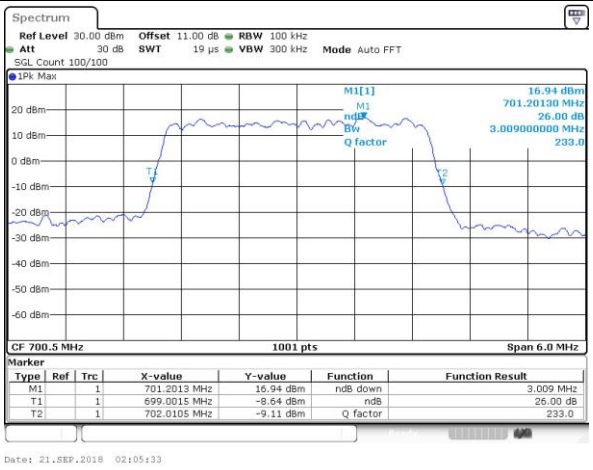


Highest Channel / 1.4MHz / 16QAM

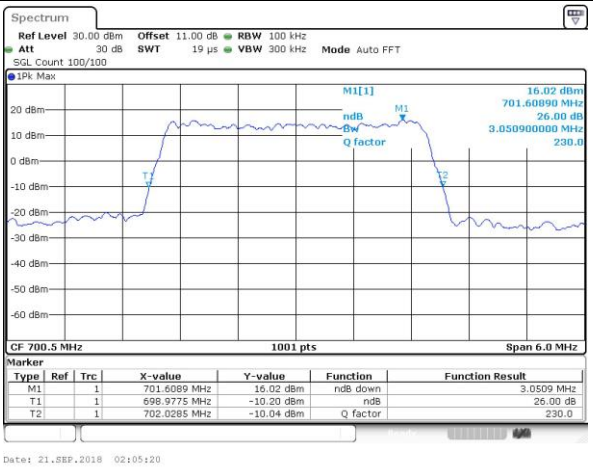


LTE Band 12

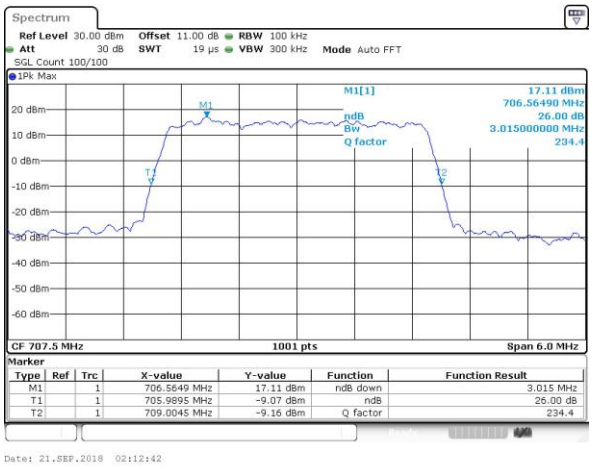
Lowest Channel / 3MHz / QPSK



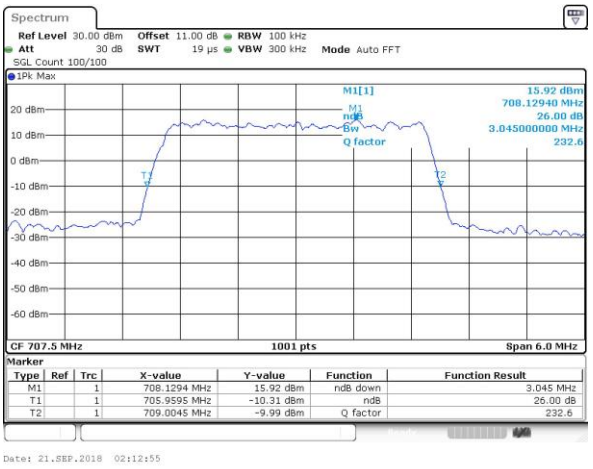
Lowest Channel / 3MHz / 16QAM



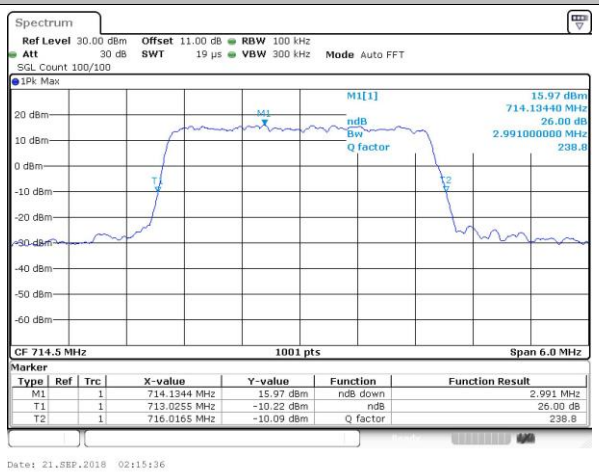
Middle Channel / 3MHz / QPSK



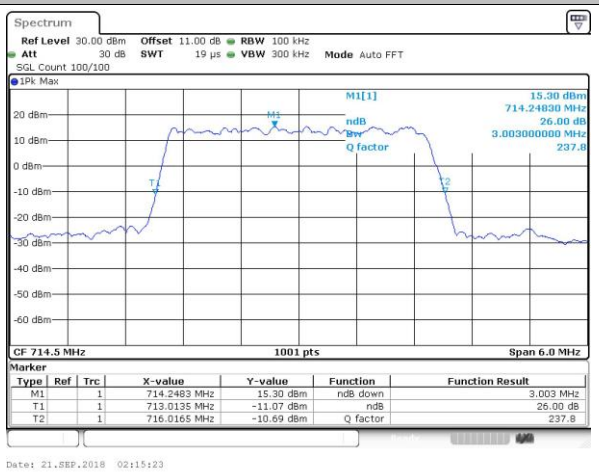
Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK

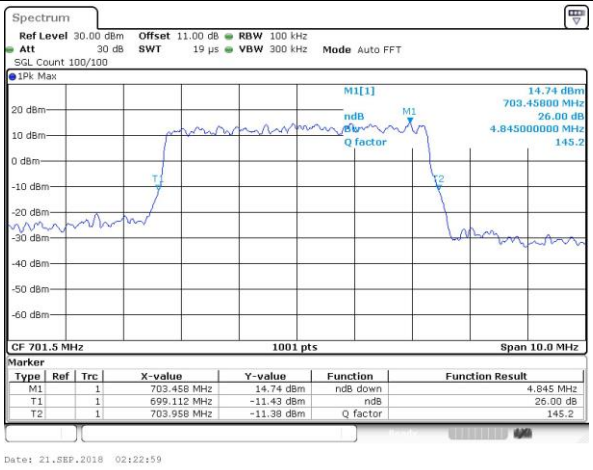


Highest Channel /3MHz / 16QAM

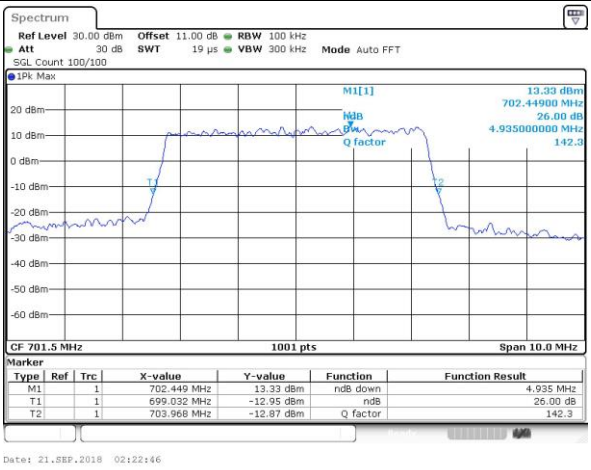


LTE Band 12

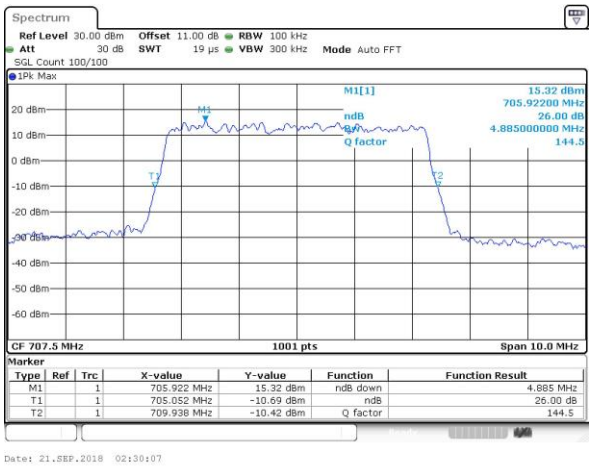
Lowest Channel / 5MHz / QPSK



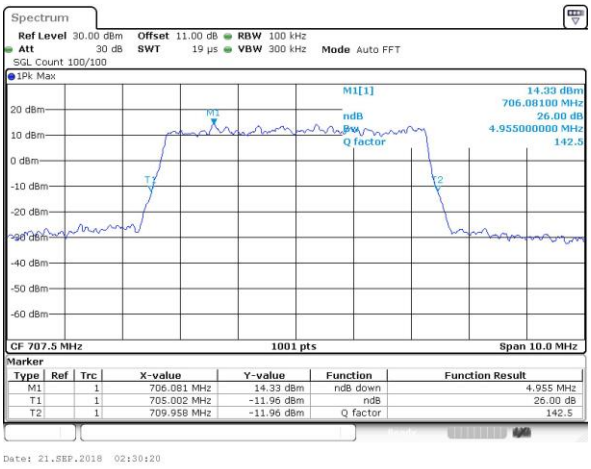
Lowest Channel / 5MHz / 16QAM



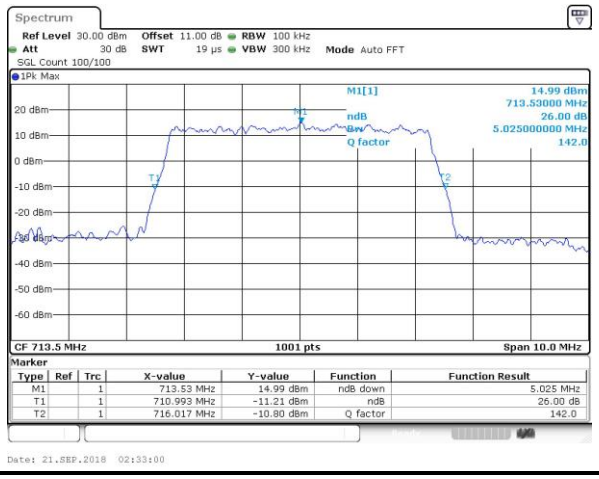
Middle Channel / 5MHz / QPSK



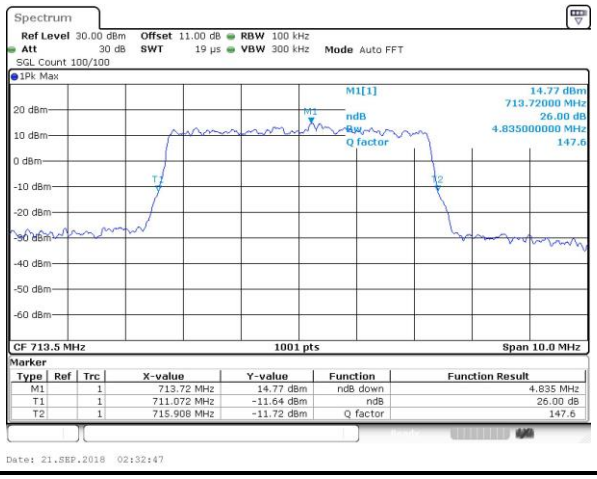
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

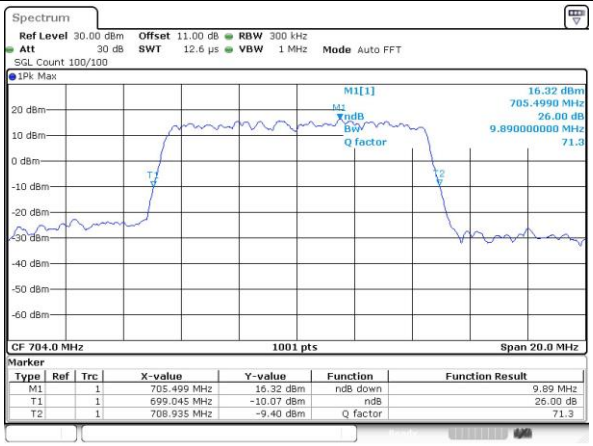


Highest Channel / 5MHz / 16QAM

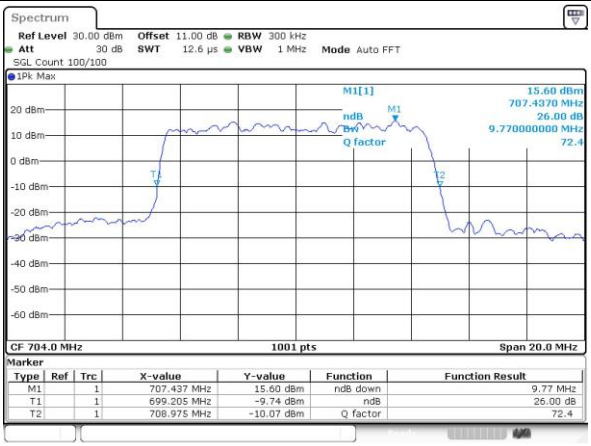


LTE Band 12

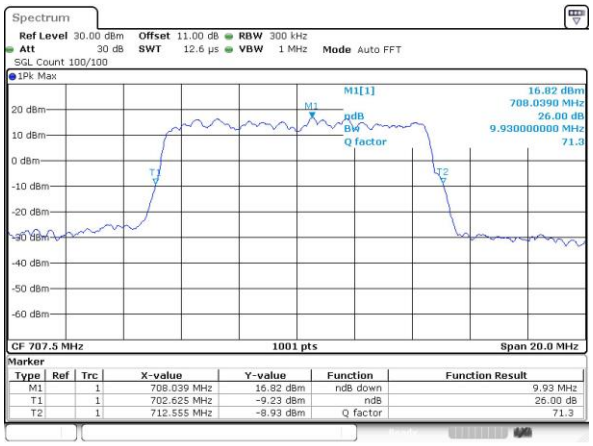
Lowest Channel / 10MHz / QPSK



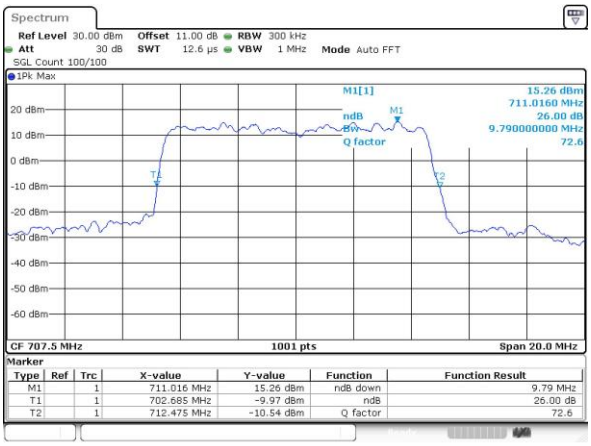
Lowest Channel / 10MHz / 16QAM



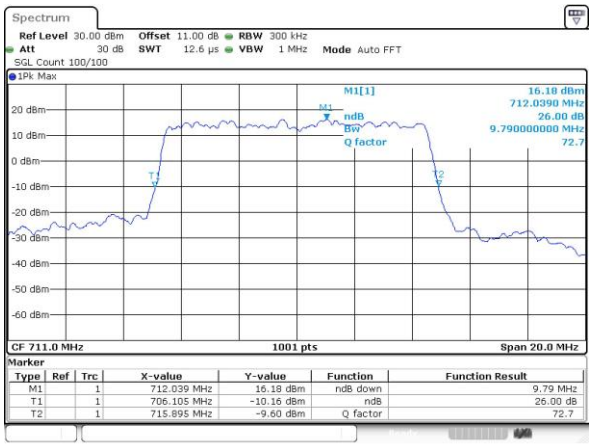
Middle Channel / 10MHz / QPSK



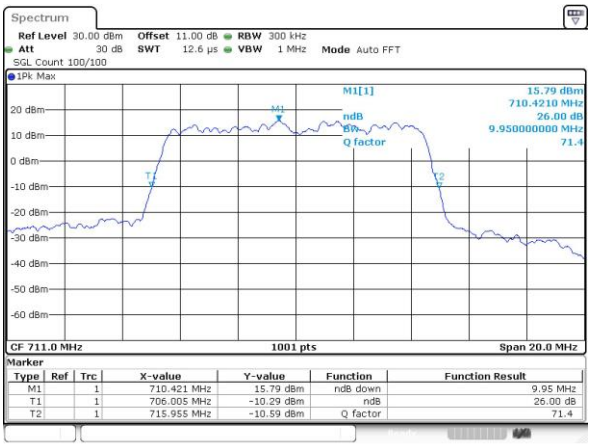
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

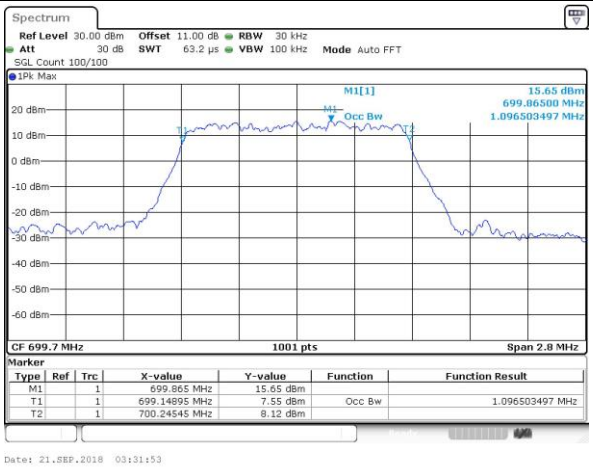


Occupied Bandwidth

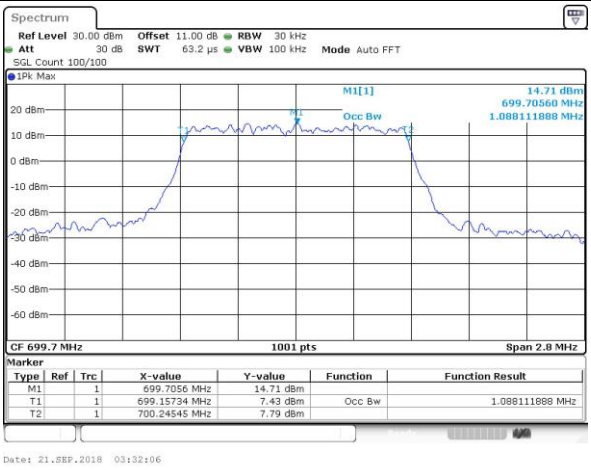
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.1	1.09	2.72	2.72	4.49	4.5	8.99	8.97	-	-	-	-
Middle CH	1.09	1.09	2.72	2.73	4.5	4.48	9.07	8.99	-	-	-	-
Highest CH	1.09	1.09	2.7	2.72	4.5	4.49	9.01	9.03	-	-	-	-

LTE Band 12

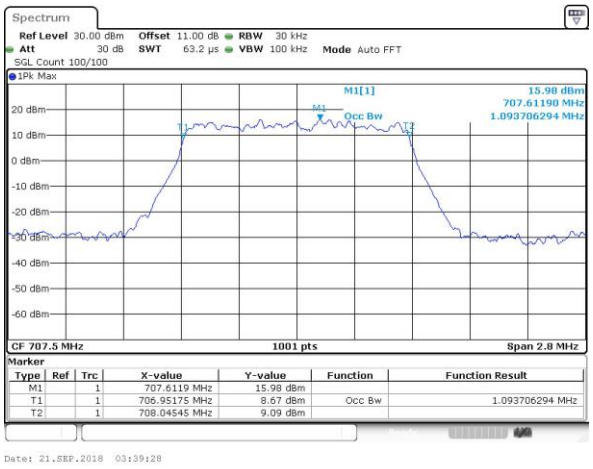
Lowest Channel / 1.4MHz / QPSK



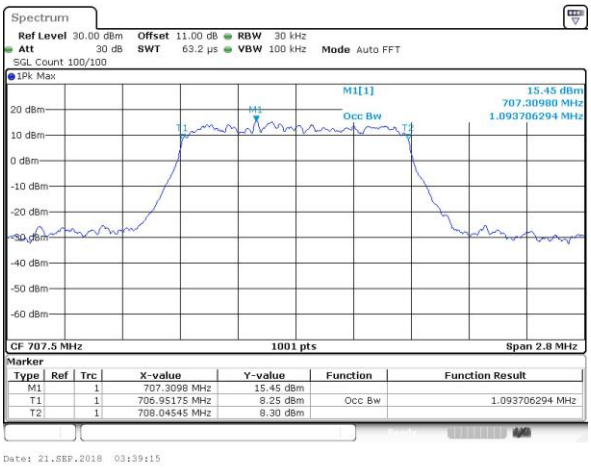
Lowest Channel / 1.4MHz / 16QAM



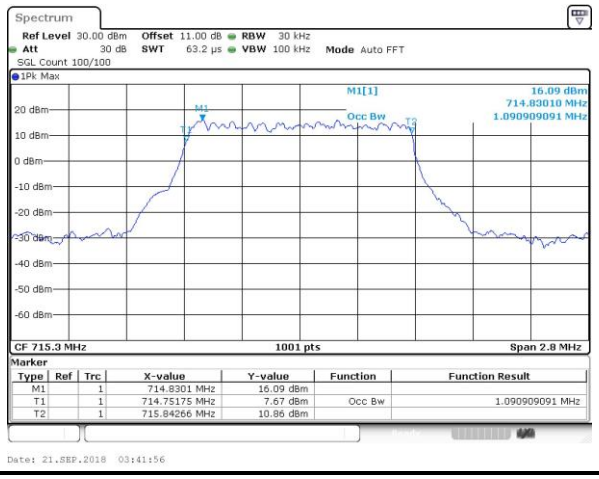
Middle Channel / 1.4MHz / QPSK



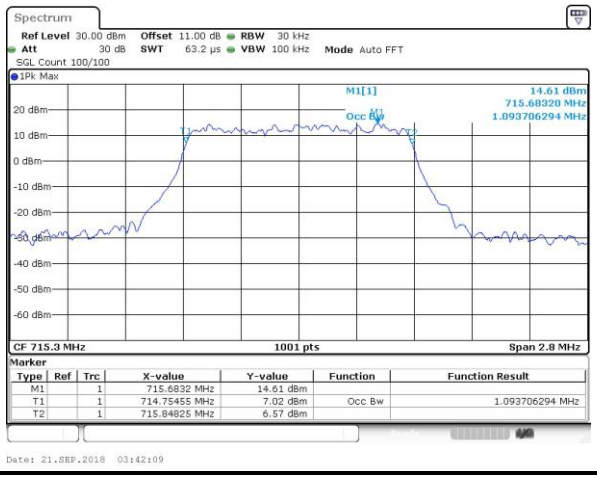
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

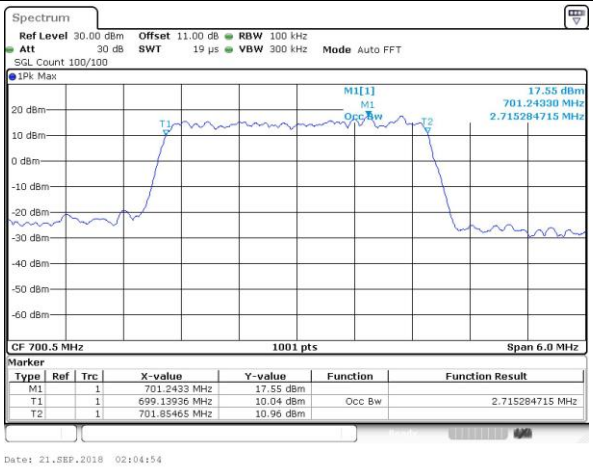


Highest Channel / 1.4MHz / 16QAM

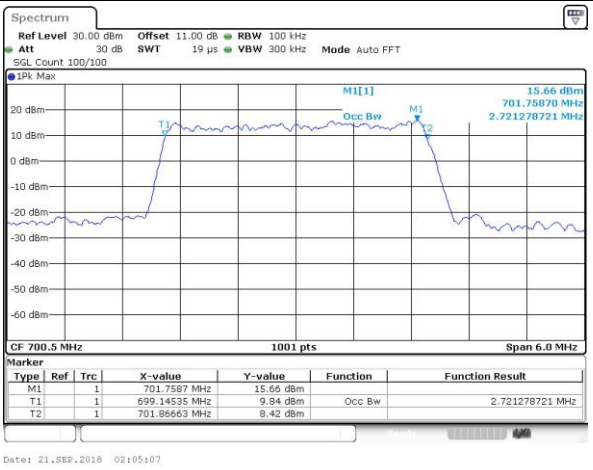


LTE Band 12

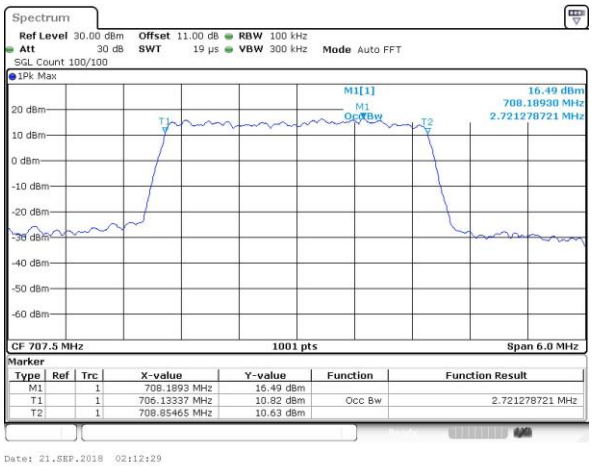
Lowest Channel / 3MHz / QPSK



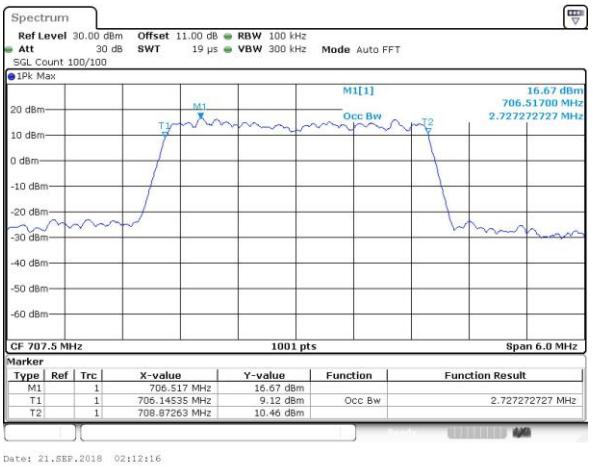
Lowest Channel / 3MHz / 16QAM



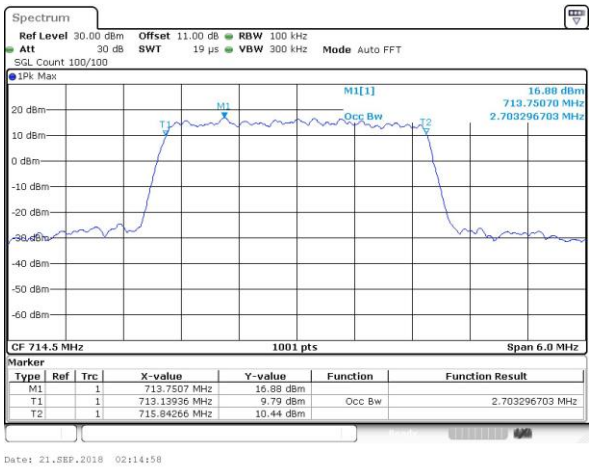
Middle Channel / 3MHz / QPSK



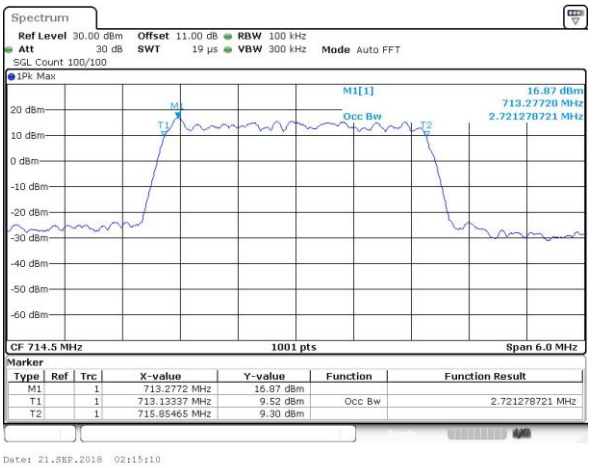
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

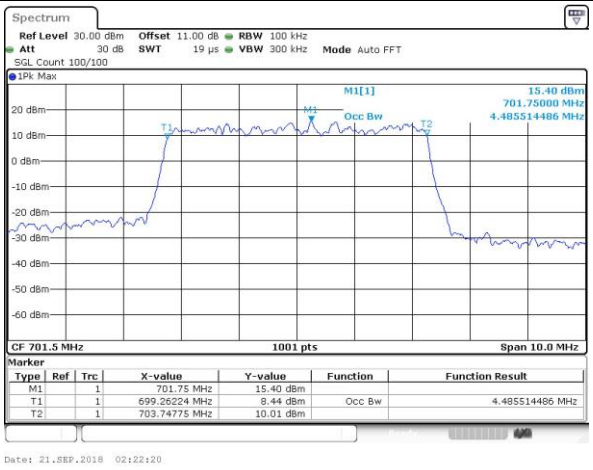


Highest Channel / 3MHz / 16QAM

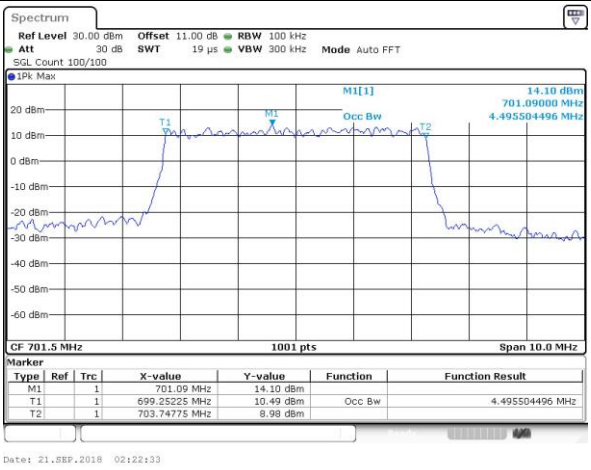


LTE Band 12

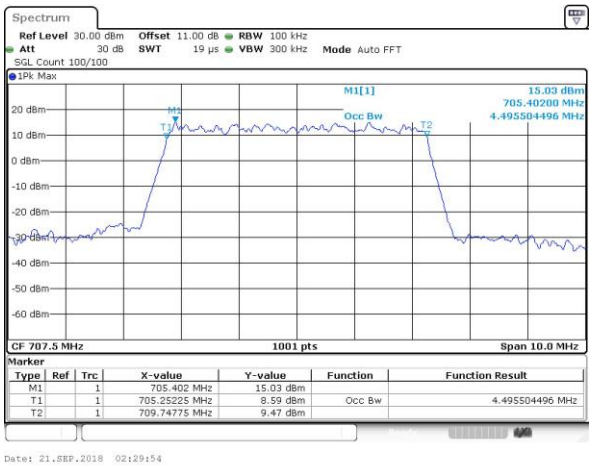
Lowest Channel / 5MHz / QPSK



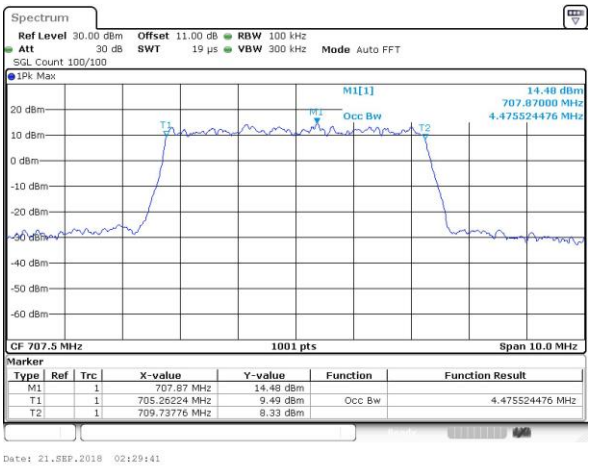
Lowest Channel / 5MHz / 16QAM



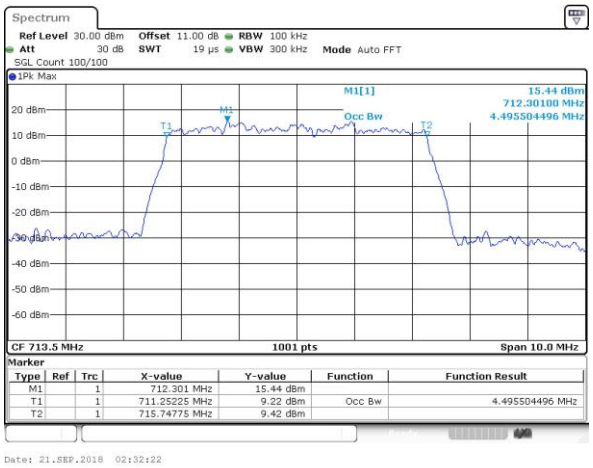
Middle Channel / 5MHz / QPSK



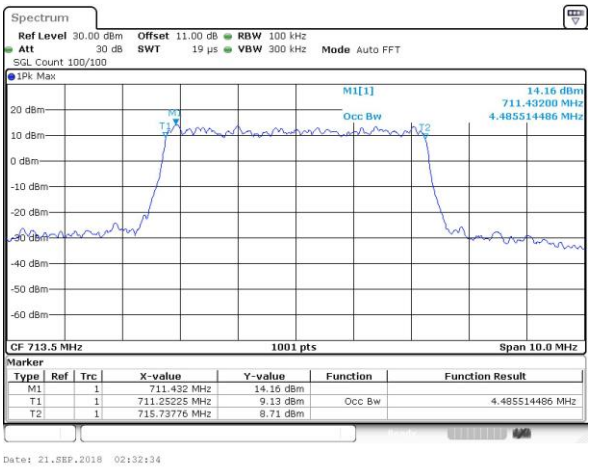
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

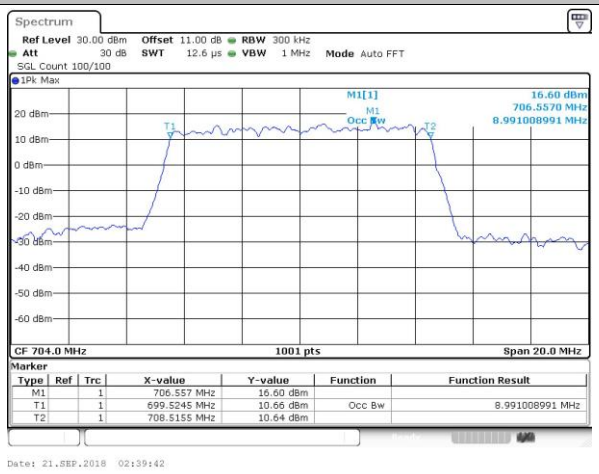


Highest Channel / 5MHz / 16QAM

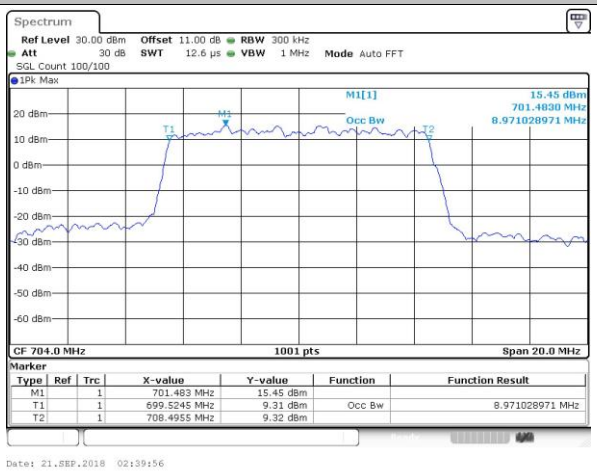


LTE Band 12

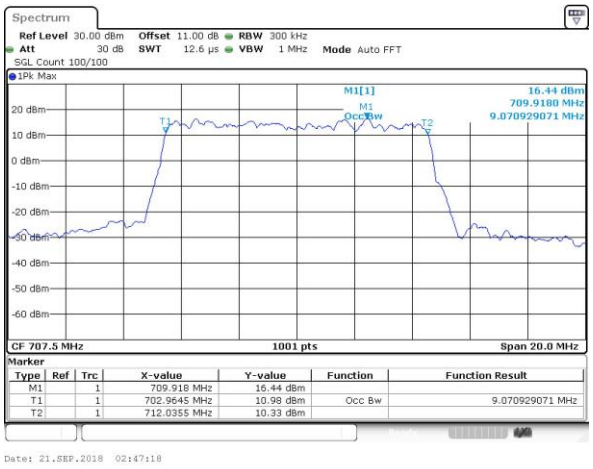
Lowest Channel / 10MHz / QPSK



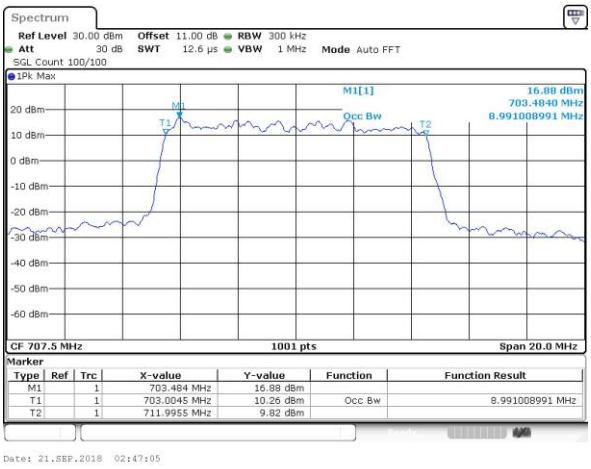
Lowest Channel / 10MHz / 16QAM



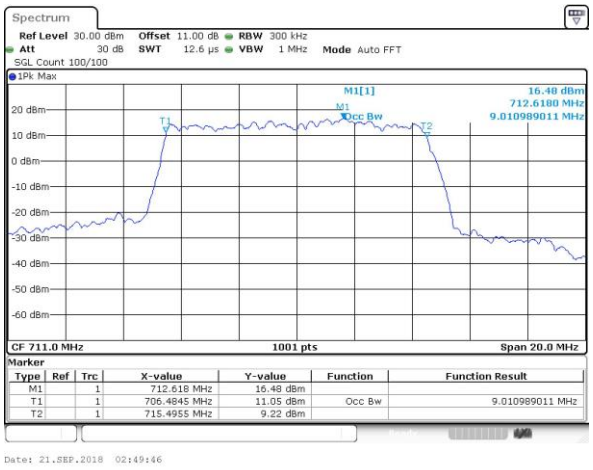
Middle Channel / 10MHz / QPSK



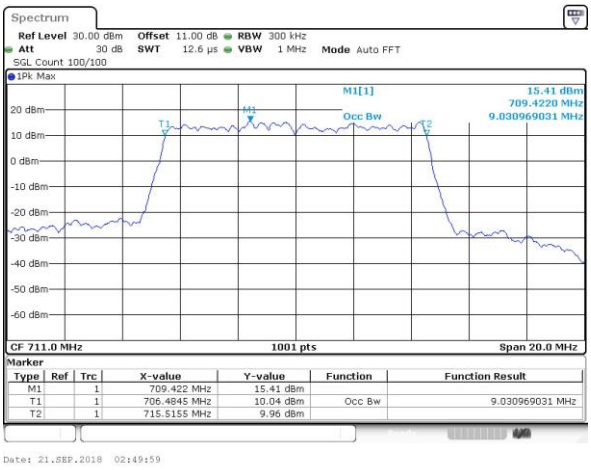
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



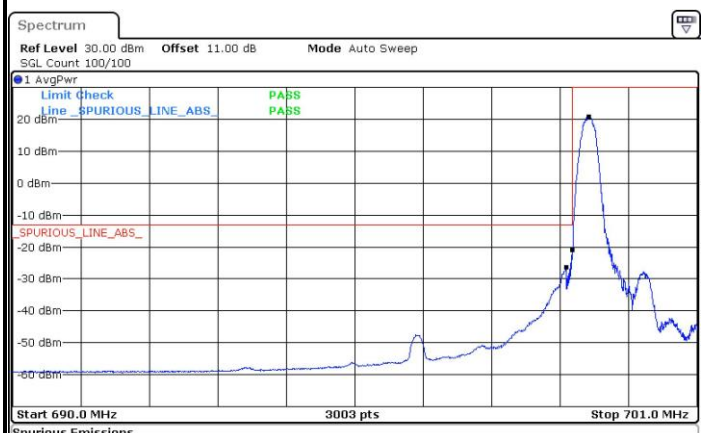
Highest Channel / 10MHz / 16QAM



Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1 RB

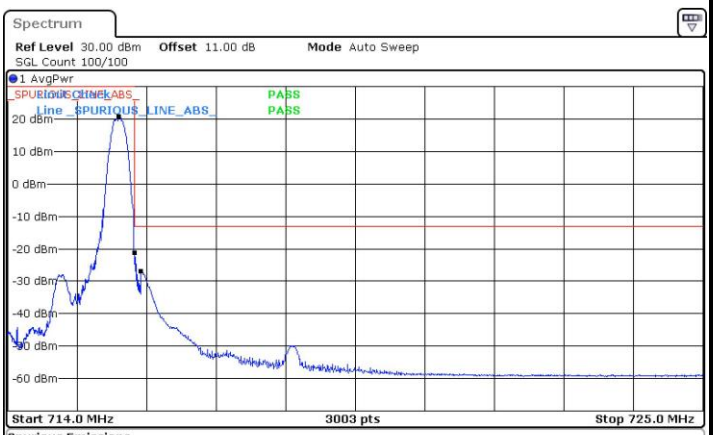


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-26.35 dBm	-13.35 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99765 MHz	-21.03 dBm	-8.03 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.26474 MHz	20.81 dBm	-9.19 dB

Date: 21.SEP.2018 03:37:14

Highest Band Edge / 1RB

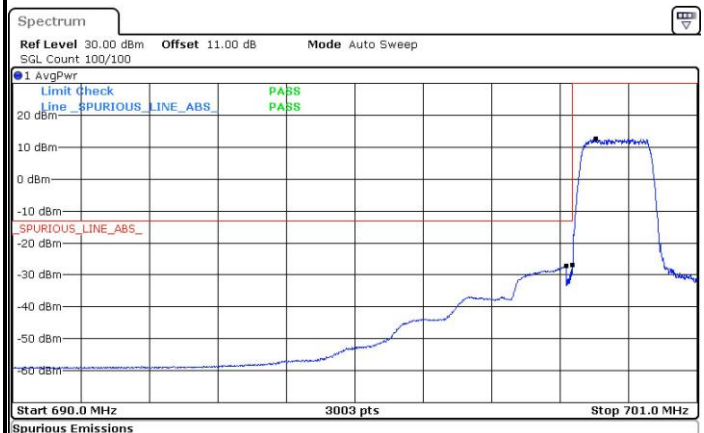


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.75125 MHz	20.82 dBm	-9.18 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00315 MHz	-21.20 dBm	-8.20 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-26.78 dBm	-13.78 dB

Date: 21.SEP.2018 03:47:16

Lowest Band Edge / Full RB

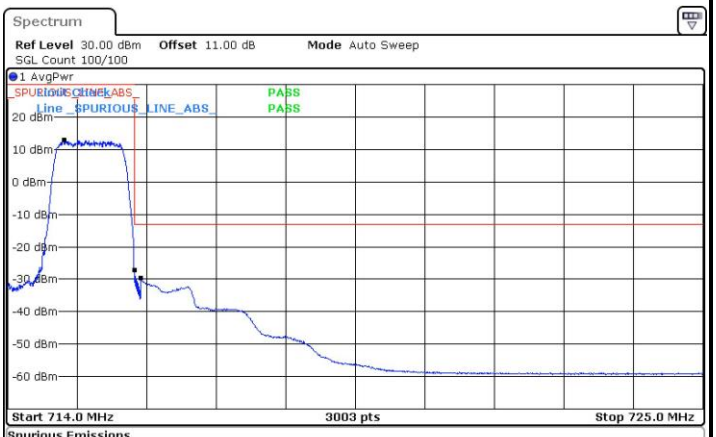


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-27.05 dBm	-14.05 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99885 MHz	-26.99 dBm	-13.99 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.36464 MHz	12.58 dBm	-17.42 dB

Date: 21.SEP.2018 03:33:42

Highest Band Edge / Full RB



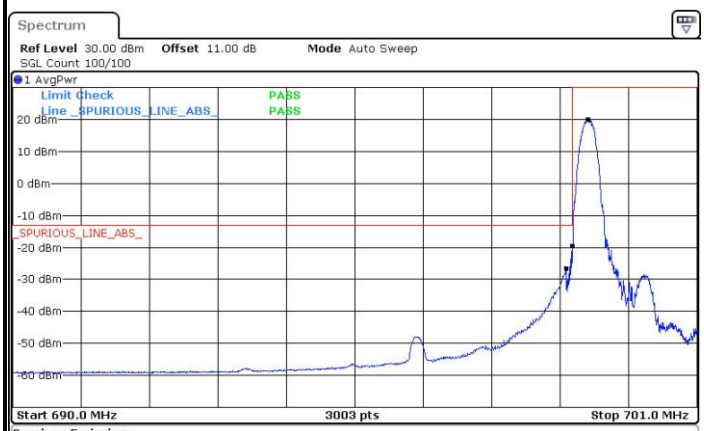
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	714.88611 MHz	12.90 dBm	-17.10 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00065 MHz	-27.21 dBm	-14.21 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-29.60 dBm	-16.60 dB

Date: 21.SEP.2018 03:43:45

LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

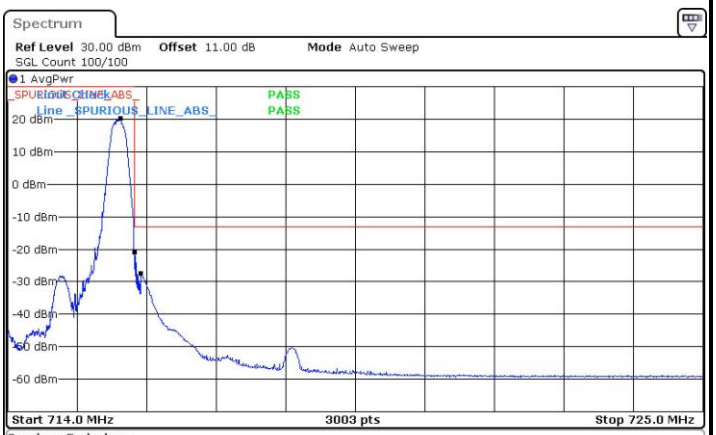


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-26.73 dBm	-13.73 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99795 MHz	-19.71 dBm	-6.71 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.24476 MHz	19.87 dBm	-10.13 dB

Date: 21.SEP.2018 03:36:03

Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.77922 MHz	20.33 dBm	-9.67 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00155 MHz	-21.00 dBm	-8.00 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-27.37 dBm	-14.37 dB

Date: 21.SEP.2018 03:46:06

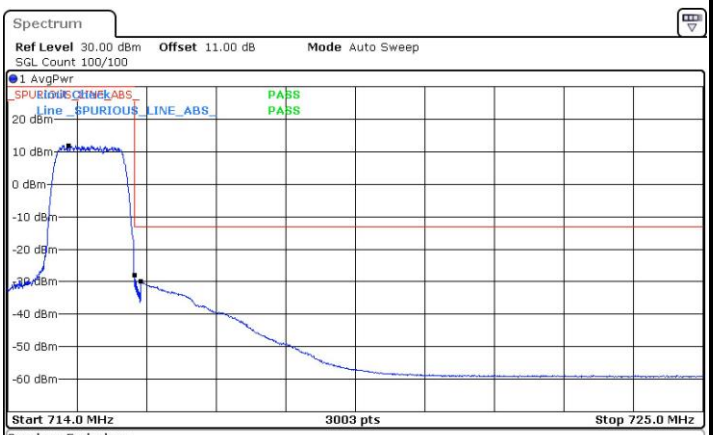
Lowest Band Edge / Full RB

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.85999 MHz	-26.60 dBm	-13.60 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99675 MHz	-27.34 dBm	-14.34 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.60839 MHz	11.92 dBm	-18.08 dB

Date: 21.SEP.2018 03:34:53

Highest Band Edge / Full RB



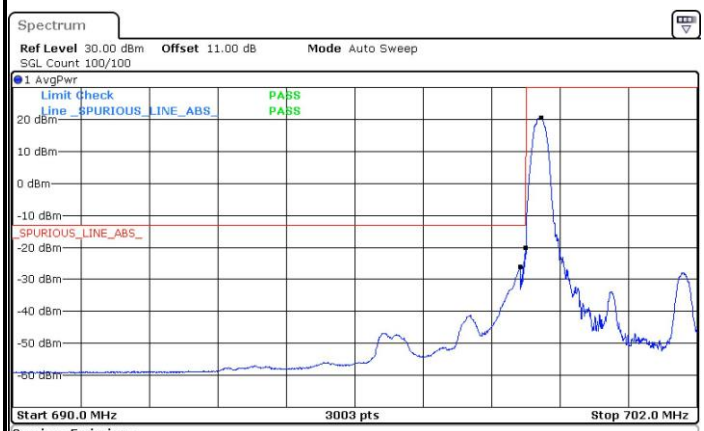
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	714.96204 MHz	11.96 dBm	-18.04 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00165 MHz	-27.93 dBm	-14.93 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-29.77 dBm	-16.77 dB

Date: 21.SEP.2018 03:44:56

LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB

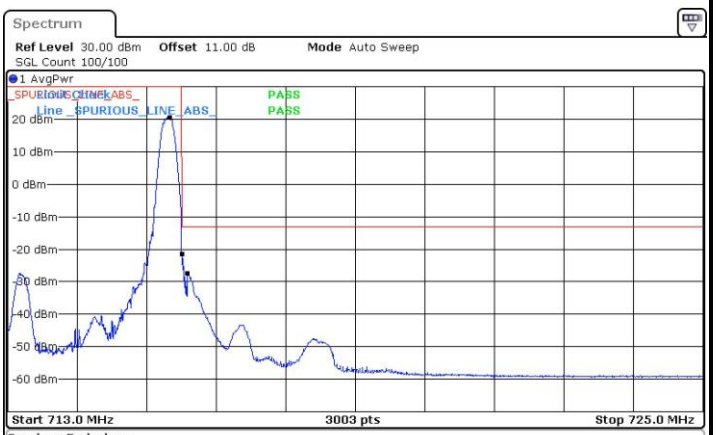


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-25.99 dBm	-12.99 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99895 MHz	-20.27 dBm	-7.27 dB
699.000 MHz	702.000 MHz	100.000 kHz	699.26523 MHz	20.50 dBm	-9.50 dB

Date: 21.SEP.2018 02:10:15

Highest Band Edge / 1 RB

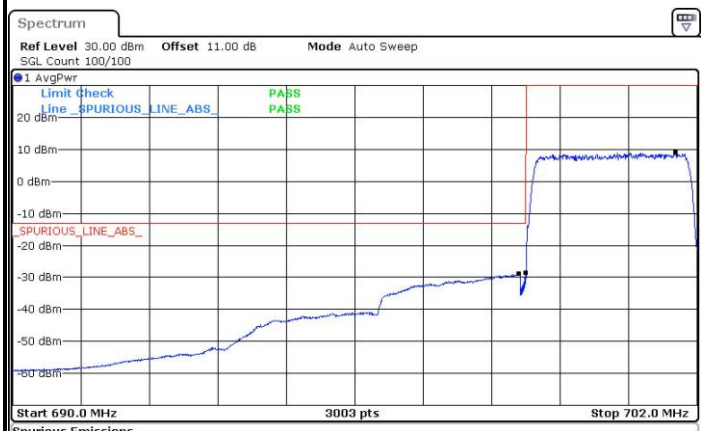


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	715.79770 MHz	20.62 dBm	-9.38 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00355 MHz	-21.50 dBm	-8.50 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-27.45 dBm	-14.45 dB

Date: 21.SEP.2018 02:20:19

Lowest Band Edge / Full RB

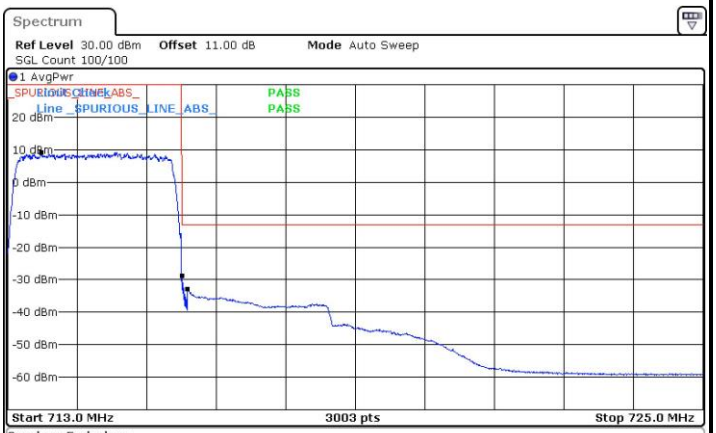


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.86888 MHz	-28.92 dBm	-15.92 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99825 MHz	-28.44 dBm	-15.44 dB
699.000 MHz	702.000 MHz	100.000 kHz	701.62388 MHz	9.12 dBm	-20.88 dB

Date: 21.SEP.2018 02:06:43

Highest Band Edge / Full RB



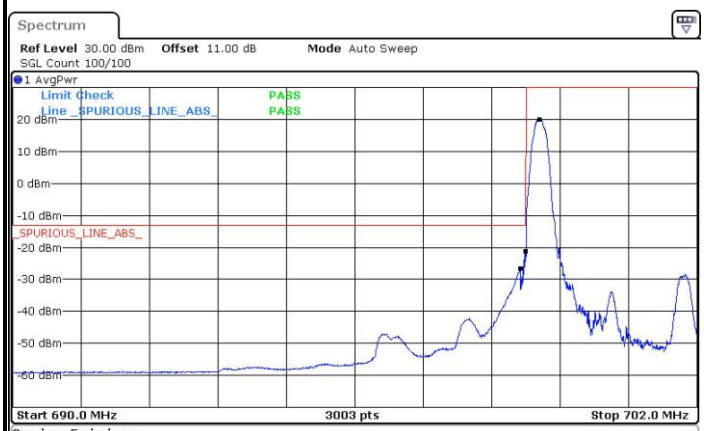
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	713.57692 MHz	9.16 dBm	-20.84 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00115 MHz	-28.89 dBm	-15.89 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-32.93 dBm	-19.93 dB

Date: 21.SEP.2018 02:16:47

LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB

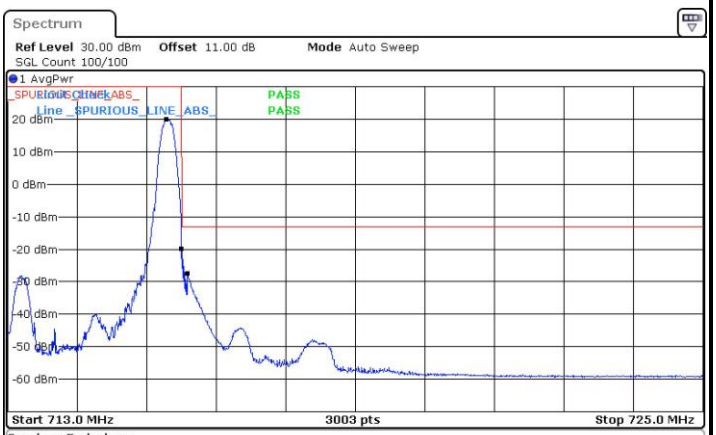


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-26.72 dBm	-13.72 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99466 MHz	-21.09 dBm	-8.09 dB
699.000 MHz	702.000 MHz	100.000 kHz	699.22927 MHz	19.86 dBm	-10.14 dB

Date: 21.SEP.2018 02:09:04

Highest Band Edge / 1 RB

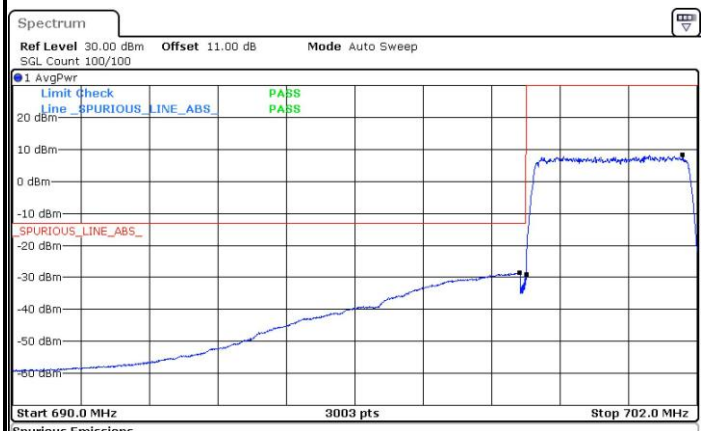


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	715.73177 MHz	19.94 dBm	-10.06 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00075 MHz	-19.97 dBm	-6.97 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-27.56 dBm	-14.56 dB

Date: 21.SEP.2018 02:19:08

Lowest Band Edge / Full RB

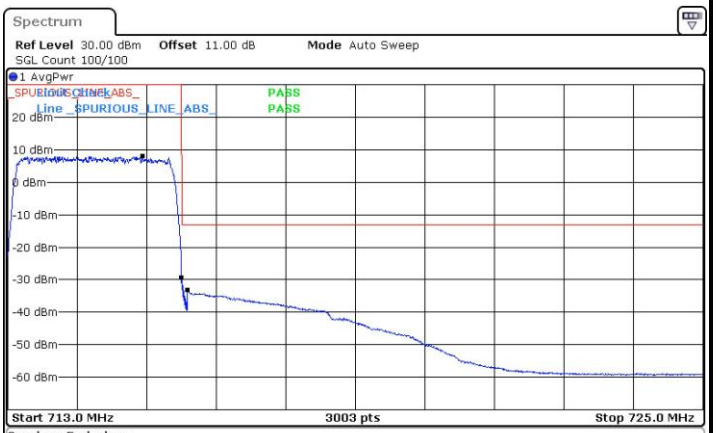


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.88666 MHz	-28.60 dBm	-15.60 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99955 MHz	-29.08 dBm	-16.08 dB
699.000 MHz	702.000 MHz	100.000 kHz	701.74675 MHz	8.25 dBm	-21.75 dB

Date: 21.SEP.2018 02:07:54

Highest Band Edge / Full RB



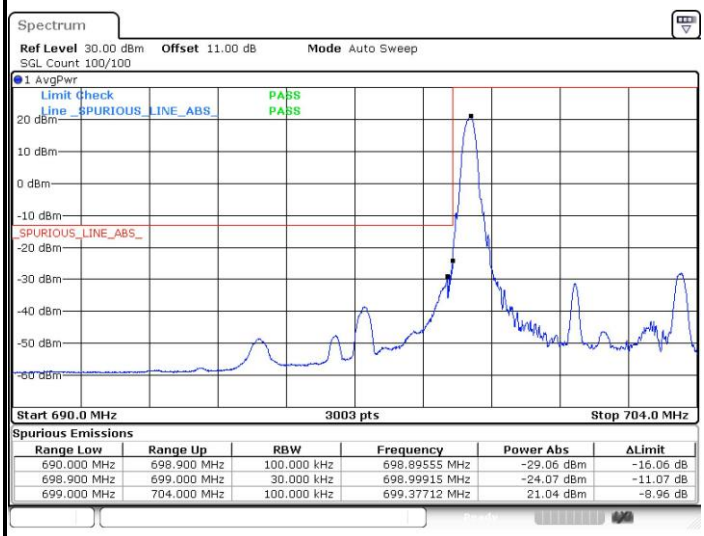
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	715.32118 MHz	8.03 dBm	-21.97 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00045 MHz	-29.36 dBm	-16.36 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-33.05 dBm	-20.05 dB

Date: 21.SEP.2018 02:17:58

LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB

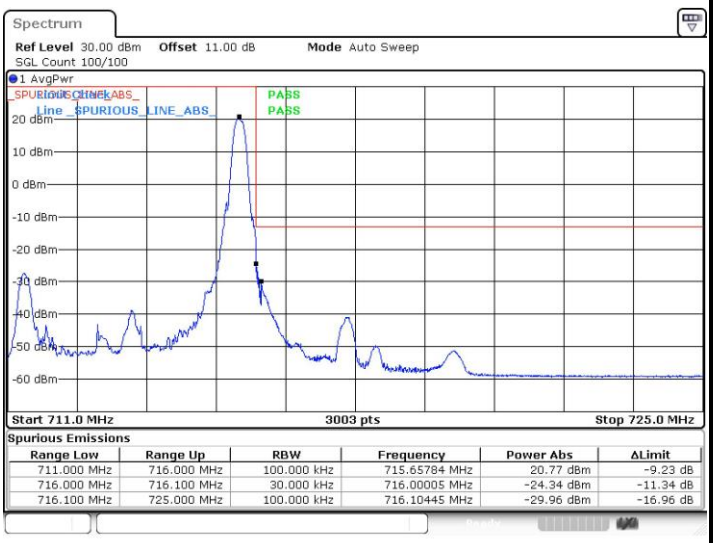


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-29.06 dBm	-16.06 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99915 MHz	-24.07 dBm	-11.07 dB
699.000 MHz	704.000 MHz	100.000 kHz	699.37712 MHz	21.04 dBm	-8.96 dB

Date: 21.SEP.2018 02:27:40

Highest Band Edge / 1 RB

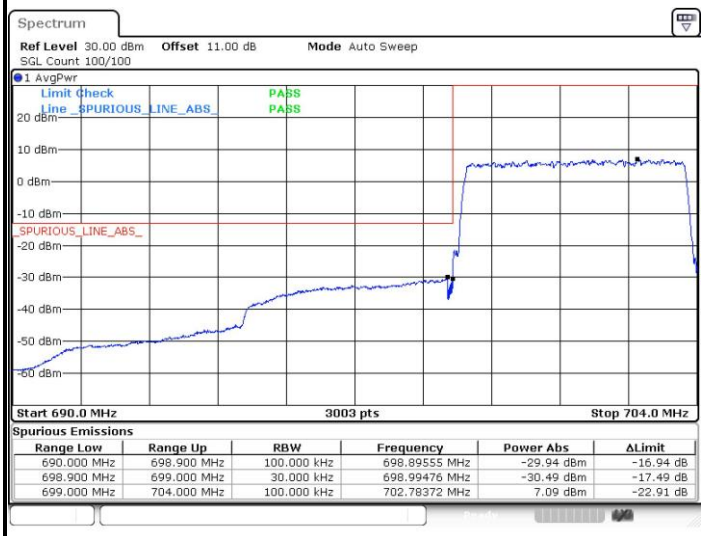


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	715.65784 MHz	20.77 dBm	-9.23 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00005 MHz	-24.34 dBm	-11.34 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-29.96 dBm	-16.96 dB

Date: 21.SEP.2018 02:36:31

Lowest Band Edge / Full RB

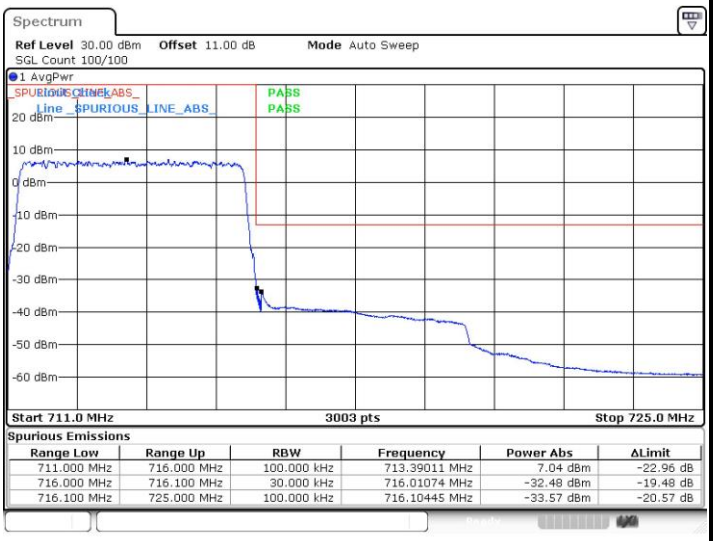


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-29.94 dBm	-16.94 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99476 MHz	-30.49 dBm	-17.49 dB
699.000 MHz	704.000 MHz	100.000 kHz	702.78372 MHz	7.09 dBm	-22.91 dB

Date: 21.SEP.2018 02:24:09

Highest Band Edge / Full RB



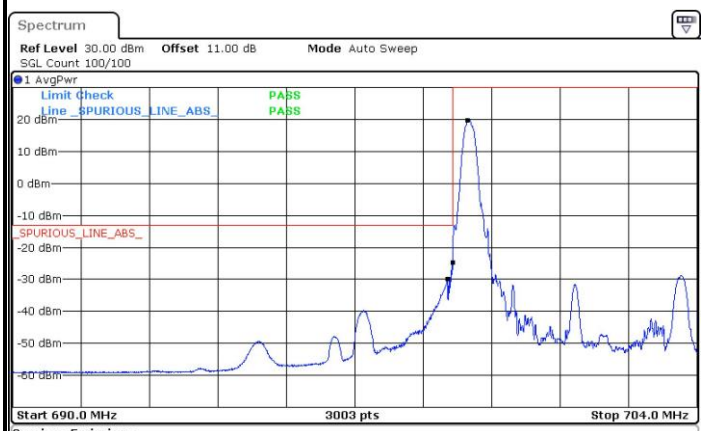
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	713.39011 MHz	7.04 dBm	-22.96 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.01074 MHz	-32.48 dBm	-19.48 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-33.57 dBm	-20.57 dB

Date: 21.SEP.2018 02:34:11

LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB

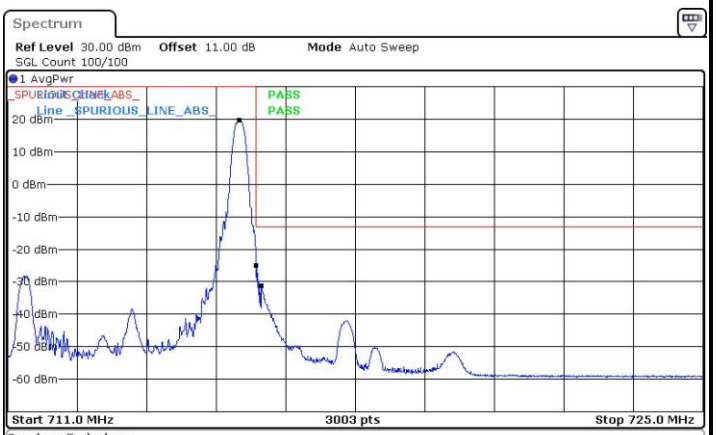


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-29.81 dBm	-16.81 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99925 MHz	-24.70 dBm	-11.70 dB
699.000 MHz	704.000 MHz	100.000 kHz	699.30220 MHz	19.81 dBm	-10.19 dB

Date: 21.SEP.2018 02:26:30

Highest Band Edge / 1 RB

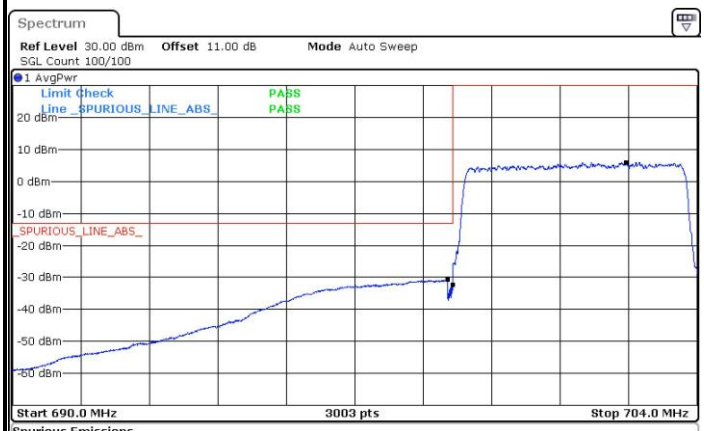


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	715.66284 MHz	19.75 dBm	-10.25 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00145 MHz	-25.01 dBm	-12.01 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-31.29 dBm	-18.29 dB

Date: 21.SEP.2018 02:37:42

Lowest Band Edge / Full RB

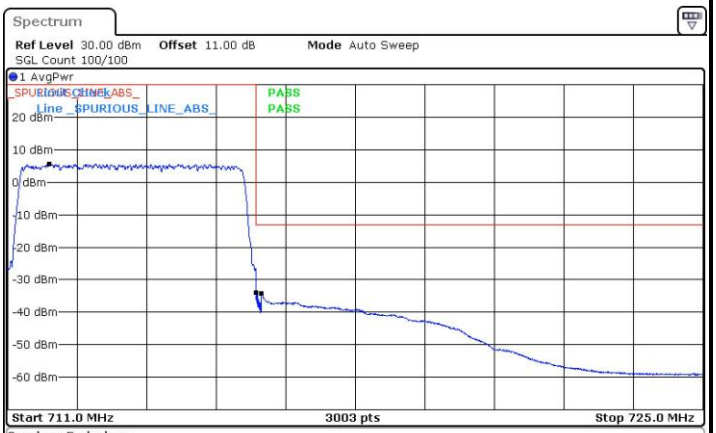


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-30.59 dBm	-17.59 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99555 MHz	-32.21 dBm	-19.21 dB
699.000 MHz	704.000 MHz	100.000 kHz	702.54895 MHz	5.96 dBm	-24.04 dB

Date: 21.SEP.2018 02:25:20

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	711.84166 MHz	5.52 dBm	-24.48 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00295 MHz	-33.95 dBm	-20.95 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-34.10 dBm	-21.10 dB

Date: 21.SEP.2018 02:35:21