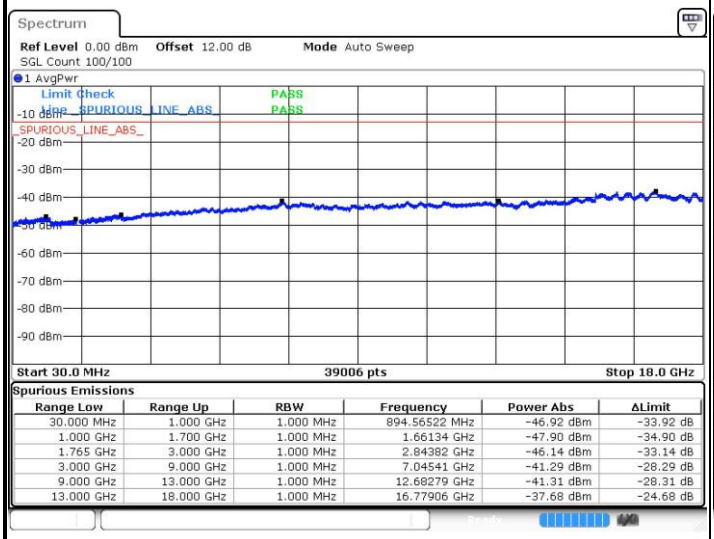
LTE Band 4 / 5MHz

Highest Channel / QPSK

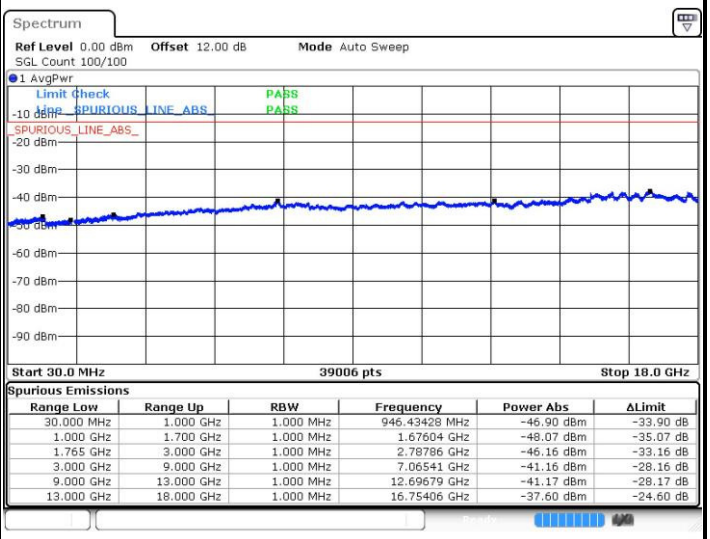


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	894.56522 MHz	-46.92 dBm	-33.92 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66134 GHz	-47.90 dBm	-34.90 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.84382 GHz	-46.14 dBm	-33.14 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.04541 GHz	-41.29 dBm	-28.29 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.68279 GHz	-41.31 dBm	-28.31 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.77906 GHz	-37.68 dBm	-24.68 dB

Date: 14.JUN.2016 02:39:51

Highest Channel / 16QAM



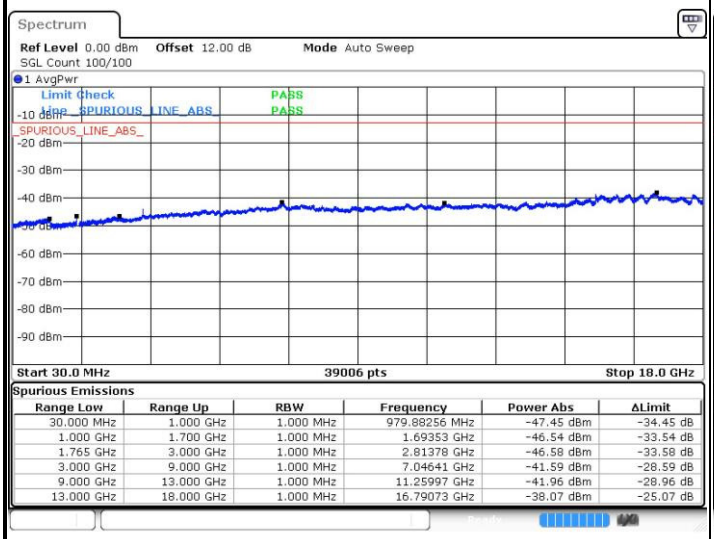
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	946.43428 MHz	-46.90 dBm	-33.90 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67604 GHz	-48.07 dBm	-35.07 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.78786 GHz	-46.16 dBm	-33.16 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.06541 GHz	-41.16 dBm	-28.16 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.69679 GHz	-41.17 dBm	-28.17 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.75406 GHz	-37.60 dBm	-24.60 dB

Date: 14.JUN.2016 02:40:46

LTE Band 4 / 10MHz

Lowest Channel / QPSK

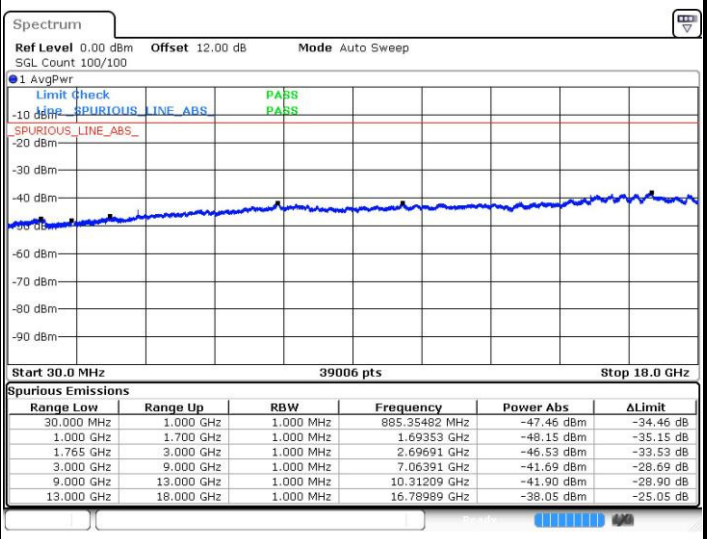


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	979.88256 MHz	-47.45 dBm	-34.45 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-46.54 dBm	-33.54 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.81378 GHz	-46.58 dBm	-33.58 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.04641 GHz	-41.59 dBm	-28.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.25997 GHz	-41.96 dBm	-28.96 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.79073 GHz	-38.07 dBm	-25.07 dB

Date: 15.JUN.2016 10:40:38

Lowest Channel / 16QAM



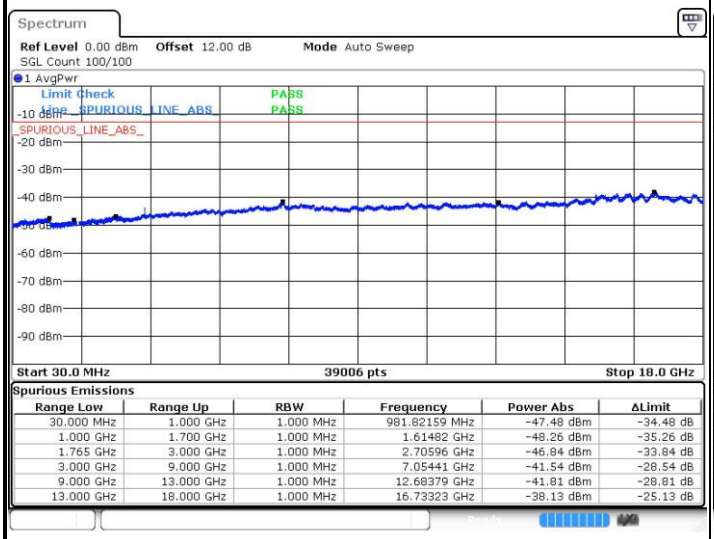
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	885.35482 MHz	-47.46 dBm	-34.46 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-48.15 dBm	-35.15 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.69691 GHz	-46.53 dBm	-33.53 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.06391 GHz	-41.69 dBm	-28.69 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31209 GHz	-41.90 dBm	-28.90 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78989 GHz	-38.05 dBm	-25.05 dB

Date: 15.JUN.2016 10:41:33

LTE Band 4 / 10MHz

Middle Channel / QPSK

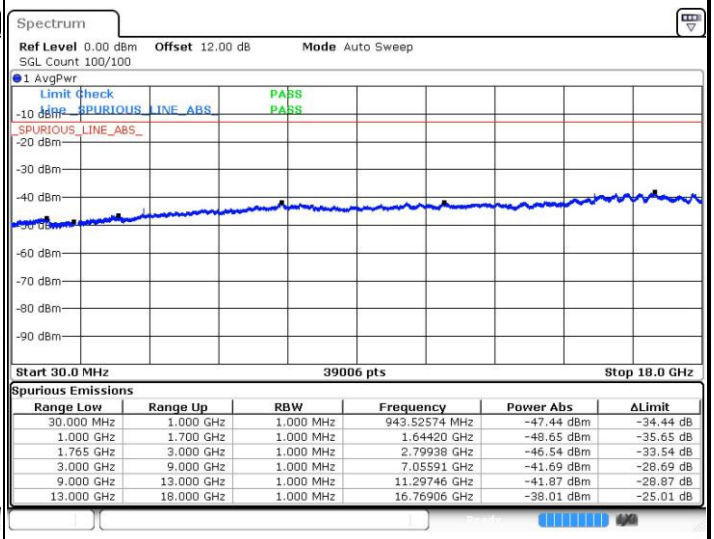


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	981.82159 MHz	-47.48 dBm	-34.48 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.61482 GHz	-48.26 dBm	-35.26 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.70596 GHz	-46.84 dBm	-33.84 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05441 GHz	-41.54 dBm	-28.54 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.68379 GHz	-41.81 dBm	-28.81 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.73323 GHz	-38.13 dBm	-25.13 dB

Date: 15.JUN.2016 10:43:09

Middle Channel / 16QAM

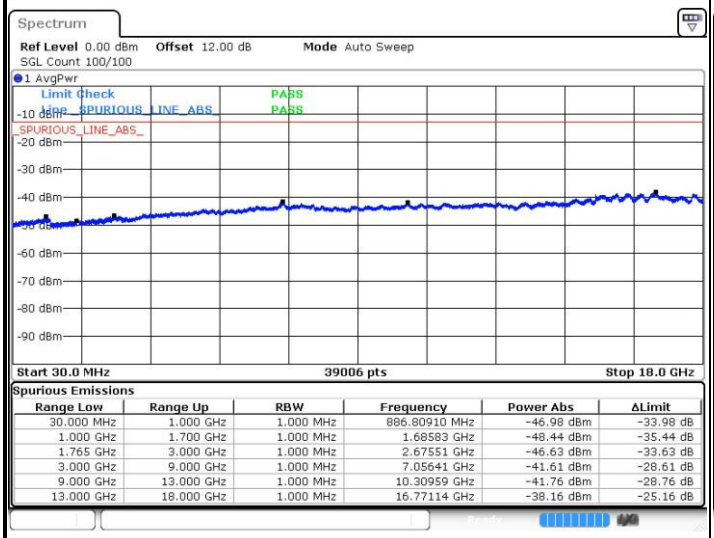


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	943.52574 MHz	-47.44 dBm	-34.44 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64420 GHz	-48.65 dBm	-35.65 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.79938 GHz	-46.54 dBm	-33.54 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05591 GHz	-41.69 dBm	-28.69 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.29746 GHz	-41.87 dBm	-28.87 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.76906 GHz	-38.01 dBm	-25.01 dB

Date: 15.JUN.2016 10:44:04

Highest Channel / QPSK

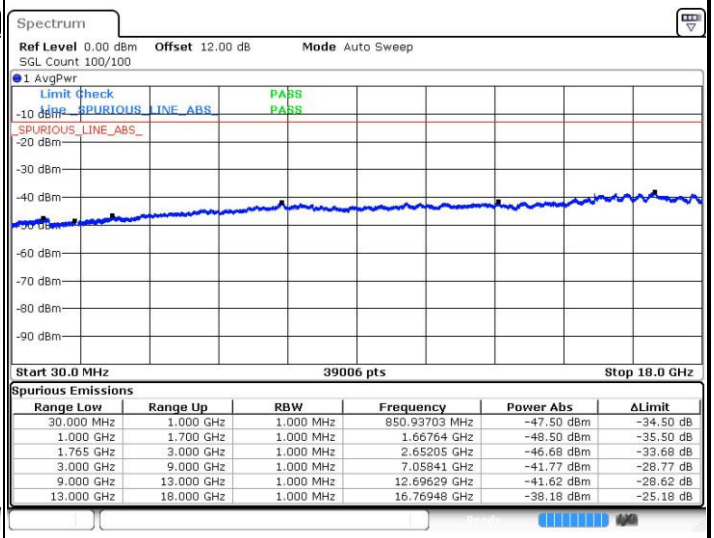


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	886.80910 MHz	-46.98 dBm	-33.98 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68583 GHz	-48.44 dBm	-35.44 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.67551 GHz	-46.63 dBm	-33.63 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05641 GHz	-41.61 dBm	-28.61 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.30959 GHz	-41.76 dBm	-28.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.77114 GHz	-38.16 dBm	-25.16 dB

Date: 15.JUN.2016 10:50:17

Highest Channel / 16QAM



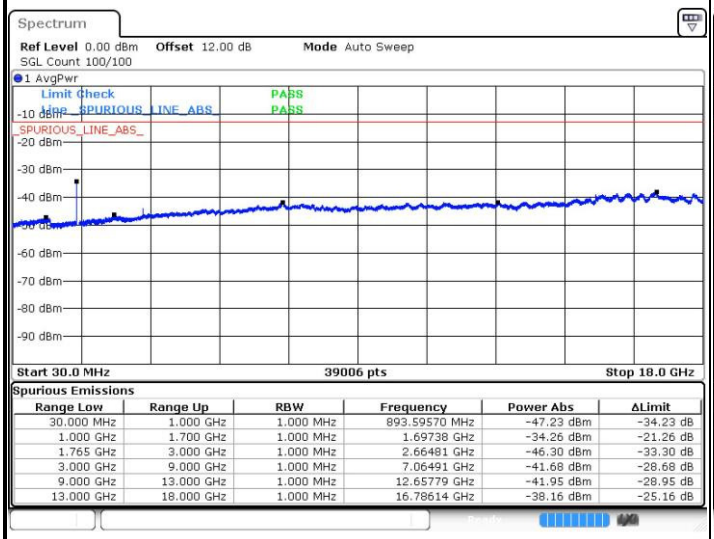
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	850.93703 MHz	-47.50 dBm	-34.50 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66764 GHz	-48.50 dBm	-35.50 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.65205 GHz	-46.68 dBm	-33.68 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05841 GHz	-41.77 dBm	-28.77 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.69629 GHz	-41.62 dBm	-28.62 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.76948 GHz	-38.18 dBm	-25.18 dB

Date: 15.JUN.2016 10:51:12

LTE Band 4 / 15MHz

Lowest Channel / QPSK

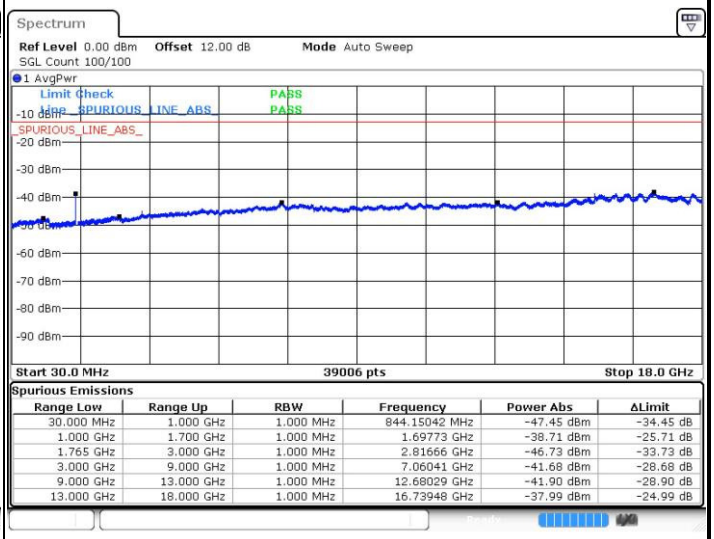


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	893.59570 MHz	-47.23 dBm	-34.23 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69738 GHz	-34.26 dBm	-21.26 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.66481 GHz	-46.30 dBm	-33.30 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.06491 GHz	-41.68 dBm	-28.68 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.65779 GHz	-41.95 dBm	-28.95 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78614 GHz	-38.16 dBm	-25.16 dB

Date: 15.JUN.2016 10:57:25

Lowest Channel / 16QAM

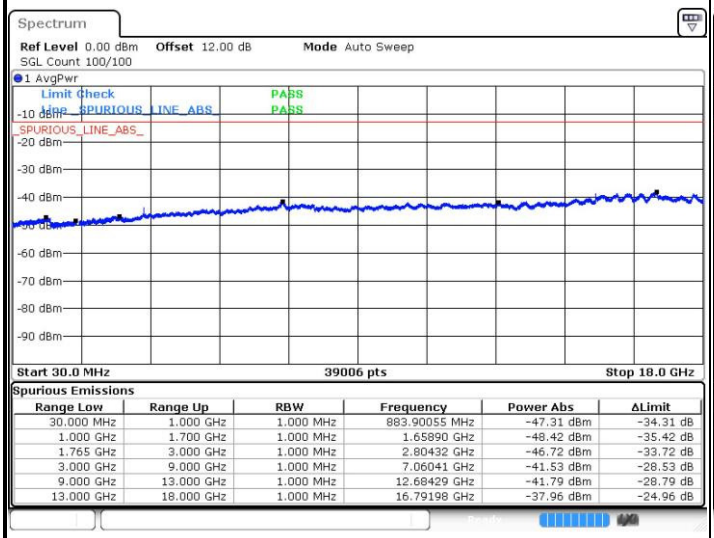


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	844.15042 MHz	-47.45 dBm	-34.45 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69773 GHz	-38.71 dBm	-25.71 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.81666 GHz	-46.73 dBm	-33.73 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.06041 GHz	-41.68 dBm	-28.68 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.68029 GHz	-41.90 dBm	-28.90 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.73948 GHz	-37.99 dBm	-24.99 dB

Date: 15.JUN.2016 10:58:19

Middle Channel / QPSK

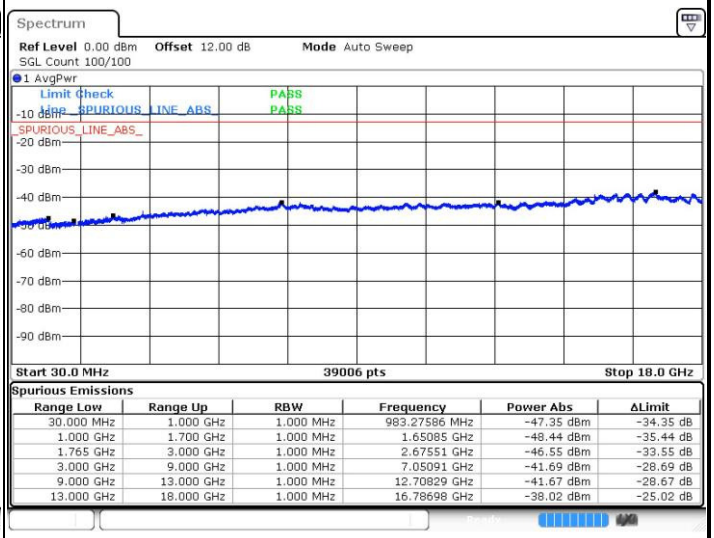


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	883.90055 MHz	-47.31 dBm	-34.31 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65890 GHz	-48.42 dBm	-35.42 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.80432 GHz	-46.72 dBm	-33.72 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.06041 GHz	-41.53 dBm	-28.53 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.68429 GHz	-41.79 dBm	-28.79 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.79198 GHz	-37.96 dBm	-24.96 dB

Date: 15.JUN.2016 10:59:56

Middle Channel / 16QAM



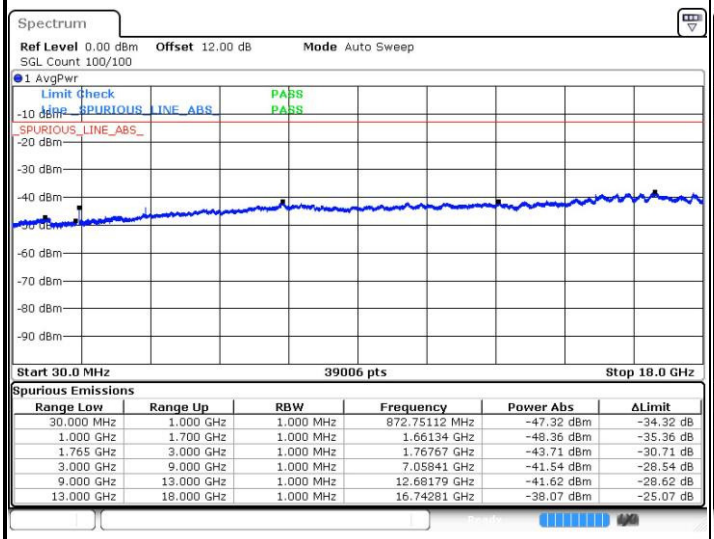
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	983.27586 MHz	-47.35 dBm	-34.35 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65085 GHz	-48.44 dBm	-35.44 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.67551 GHz	-46.55 dBm	-33.55 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05091 GHz	-41.69 dBm	-28.69 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.70829 GHz	-41.67 dBm	-28.67 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78698 GHz	-38.02 dBm	-25.02 dB

Date: 15.JUN.2016 11:00:50

LTE Band 4 / 15MHz

Highest Channel / QPSK

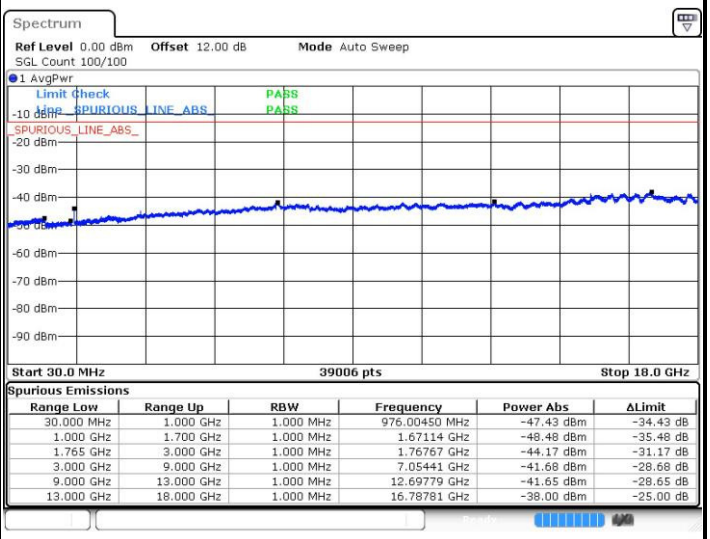


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	872.75112 MHz	-47.32 dBm	-34.32 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66134 GHz	-48.36 dBm	-35.36 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76767 GHz	-43.71 dBm	-30.71 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05841 GHz	-41.54 dBm	-28.54 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.68179 GHz	-41.62 dBm	-28.62 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.74281 GHz	-38.07 dBm	-25.07 dB

Date: 15.JUN.2016 11:07:04

Highest Channel / 16QAM



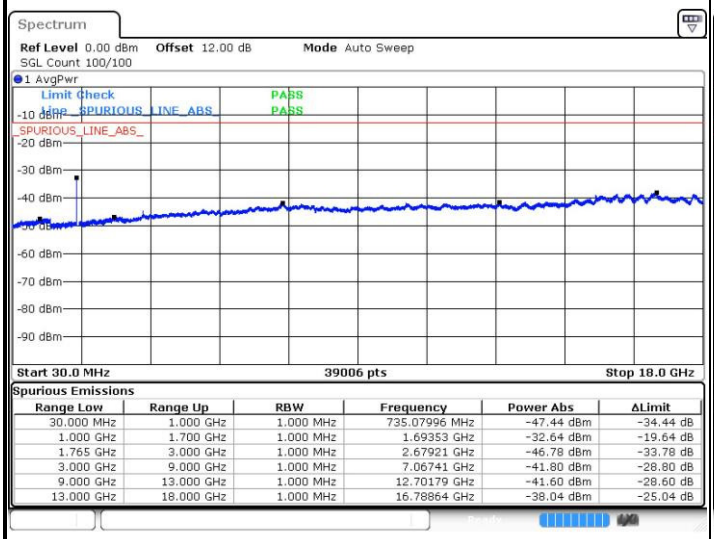
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	976.00450 MHz	-47.43 dBm	-34.43 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67114 GHz	-48.48 dBm	-35.48 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76767 GHz	-44.17 dBm	-31.17 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05441 GHz	-41.68 dBm	-28.68 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.69779 GHz	-41.65 dBm	-28.65 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78781 GHz	-38.00 dBm	-25.00 dB

Date: 15.JUN.2016 11:07:58

LTE Band 4 / 20MHz

Lowest Channel / QPSK

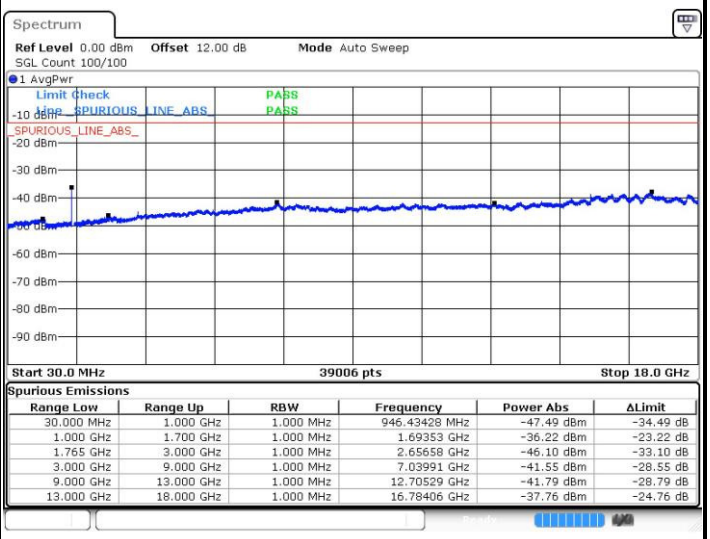


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	735.07996 MHz	-47.44 dBm	-34.44 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-32.64 dBm	-19.64 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.67921 GHz	-46.78 dBm	-33.78 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.06741 GHz	-41.80 dBm	-28.80 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.70179 GHz	-41.60 dBm	-28.60 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78864 GHz	-38.04 dBm	-25.04 dB

Date: 15.JUN.2016 11:14:11

Lowest Channel / 16QAM



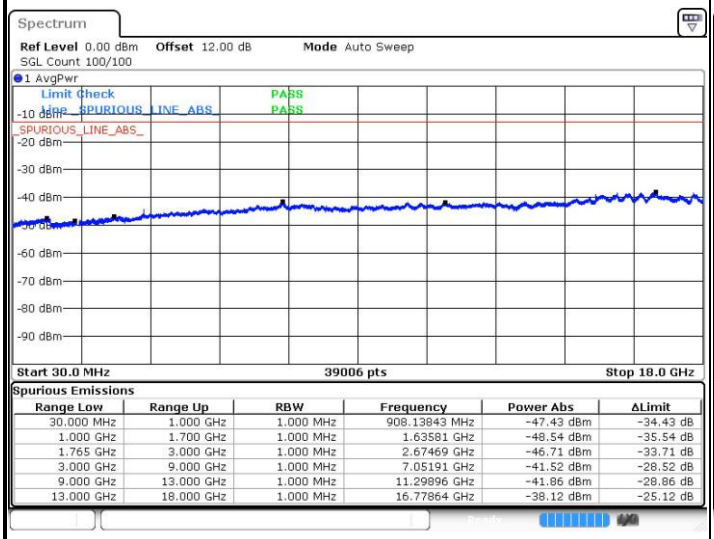
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	946.43428 MHz	-47.49 dBm	-34.49 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-36.22 dBm	-23.22 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.65658 GHz	-46.10 dBm	-33.10 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.03991 GHz	-41.55 dBm	-28.55 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.70529 GHz	-41.79 dBm	-28.79 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78406 GHz	-37.76 dBm	-24.76 dB

Date: 15.JUN.2016 11:15:06

LTE Band 4 / 20MHz

Middle Channel / QPSK

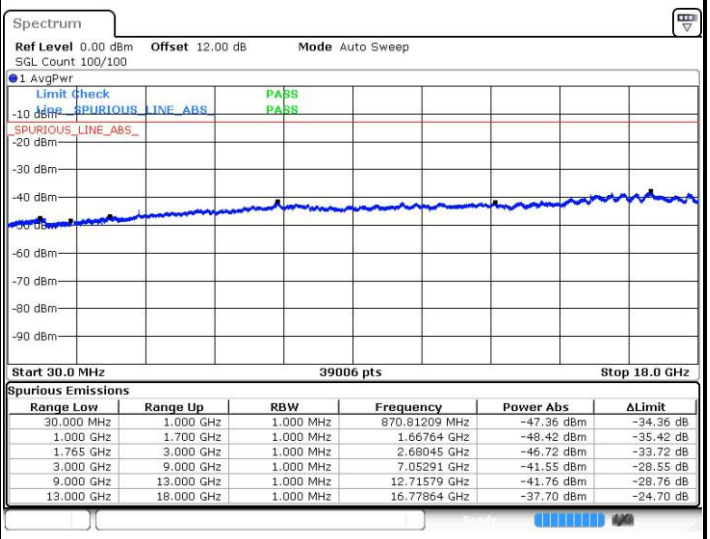


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	908.13843 MHz	-47.43 dBm	-34.43 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.63581 GHz	-48.54 dBm	-35.54 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.67469 GHz	-46.71 dBm	-33.71 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05191 GHz	-41.52 dBm	-28.52 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.29896 GHz	-41.86 dBm	-28.86 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.77864 GHz	-38.12 dBm	-25.12 dB

Date: 15.JUN.2016 11:16:42

Middle Channel / 16QAM

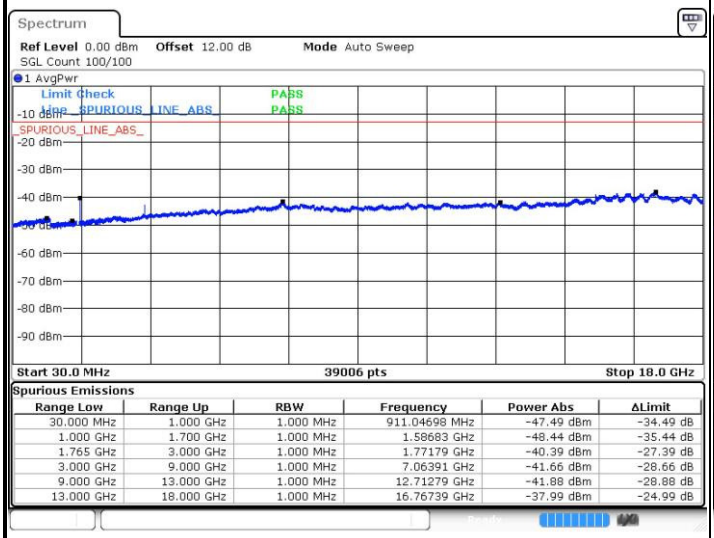


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	870.81209 MHz	-47.36 dBm	-34.36 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66764 GHz	-48.42 dBm	-35.42 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.68045 GHz	-46.72 dBm	-33.72 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.05291 GHz	-41.55 dBm	-28.55 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.71579 GHz	-41.76 dBm	-28.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.77864 GHz	-37.70 dBm	-24.70 dB

Date: 15.JUN.2016 11:17:37

Highest Channel / QPSK

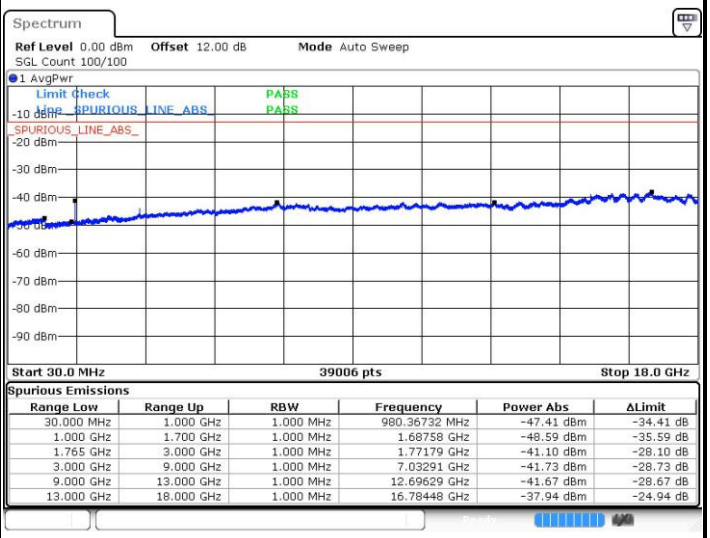


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	911.04698 MHz	-47.49 dBm	-34.49 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.58683 GHz	-48.44 dBm	-35.44 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77179 GHz	-40.39 dBm	-27.39 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.06391 GHz	-41.66 dBm	-28.66 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.71279 GHz	-41.88 dBm	-28.88 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.76739 GHz	-37.99 dBm	-24.99 dB

Date: 15.JUN.2016 11:23:50

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	980.36732 MHz	-47.41 dBm	-34.41 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68758 GHz	-48.59 dBm	-35.59 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77179 GHz	-41.10 dBm	-28.10 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.03291 GHz	-41.73 dBm	-28.73 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.69629 GHz	-41.67 dBm	-28.67 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78448 GHz	-37.94 dBm	-24.94 dB

Date: 15.JUN.2016 11:24:45

Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0081	PASS
40	Normal Voltage	0.0081	
30	Normal Voltage	0.0087	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0008	
-10	Normal Voltage	0.0094	
-20	Normal Voltage	0.0084	
-30	Normal Voltage	0.0081	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage = 3.9 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 based on the frequency deviation measured is small.

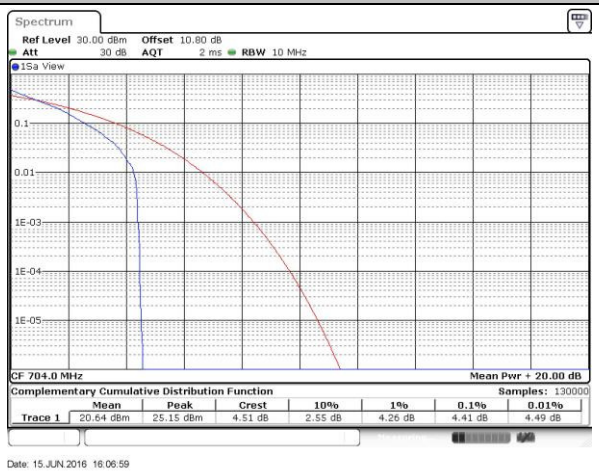
LTE Band 12

Peak-to-Average Ratio

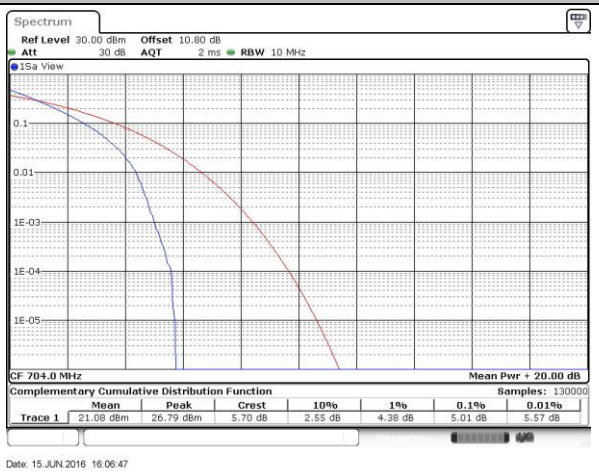
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.41	5.01	5.16	5.88	PASS
Middle CH	4.49	4.81	5.54	6.03	
Highest CH	4.75	4.64	5.33	5.62	

LTE Band 12 / 10MHz / QPSK

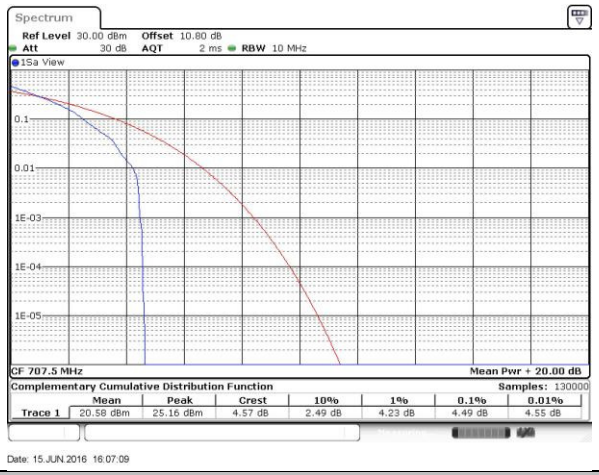
Lowest Channel / 1RB



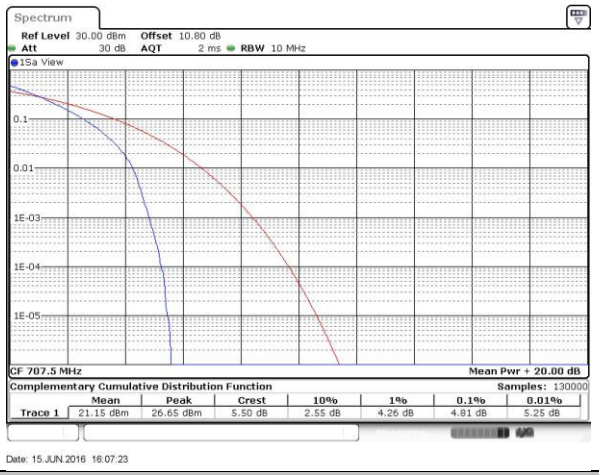
Lowest Channel / Full RB



Middle Channel / 1RB

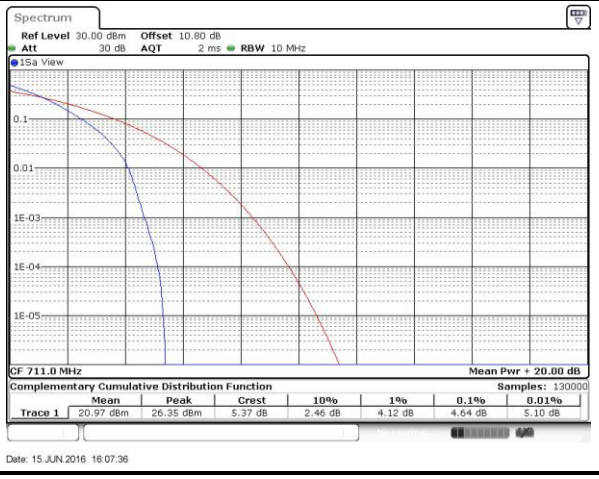


Middle Channel / Full RB



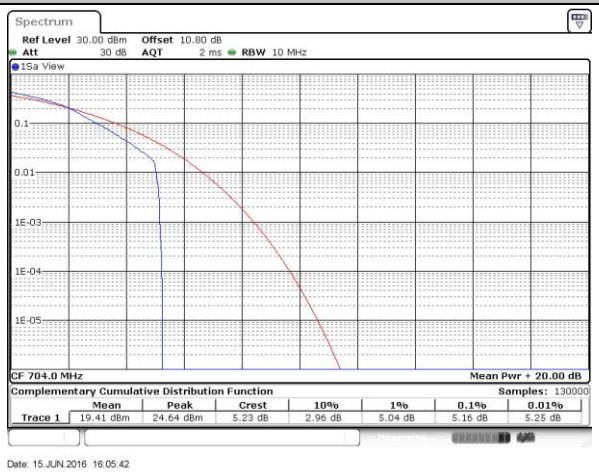
Highest Channel / 1RB

Highest Channel / Full RB

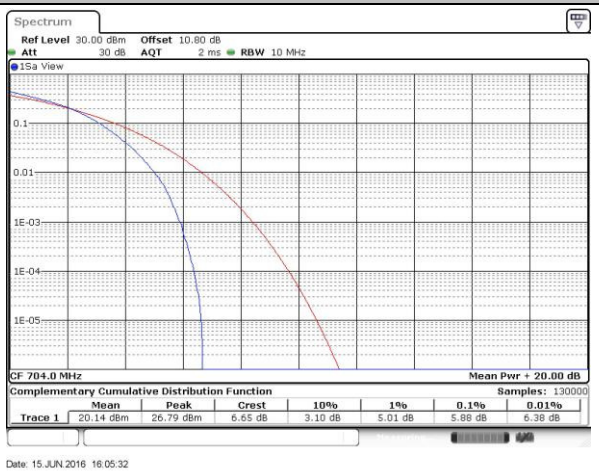


LTE Band 12 / 10MHz / 16QAM

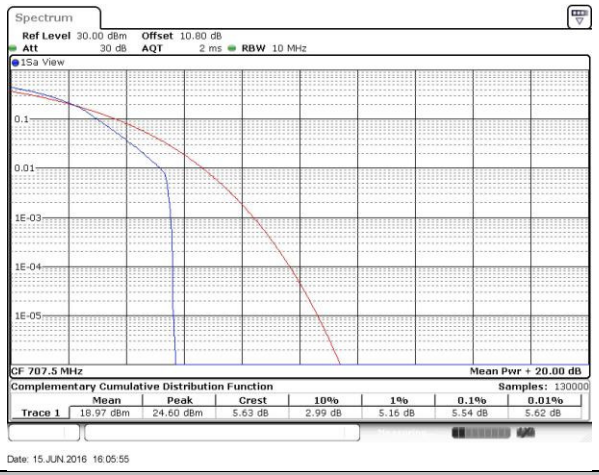
Lowest Channel / 1RB



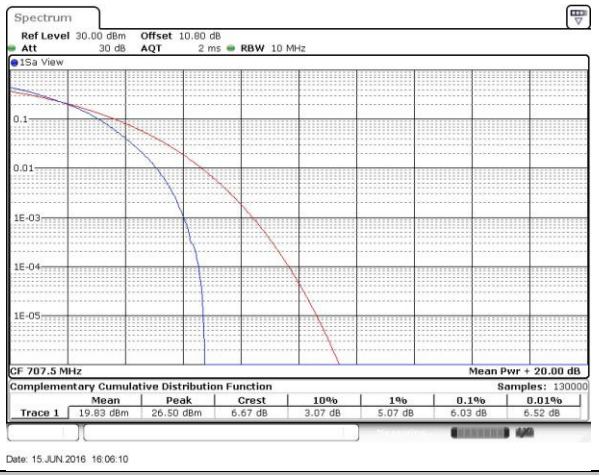
Lowest Channel / Full RB



Middle Channel / 1RB

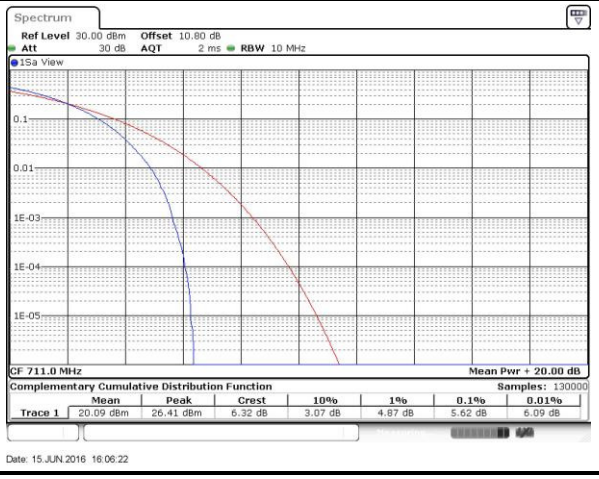


Middle Channel / Full RB



Highest Channel / 1RB

Highest Channel / Full RB

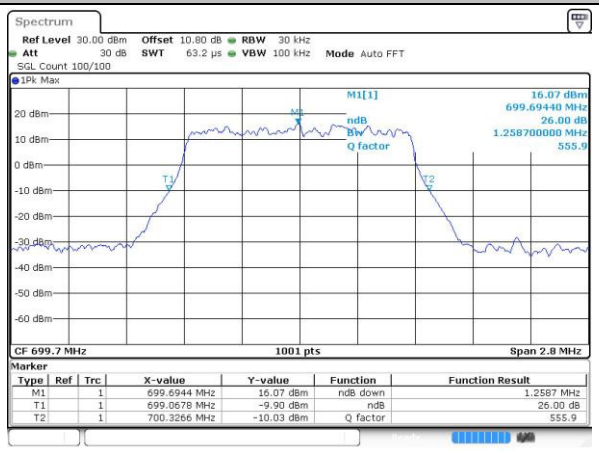


26dB Bandwidth

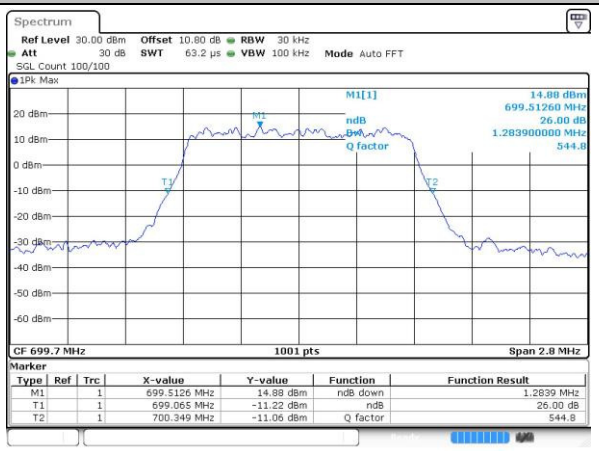
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.26	1.28	3.00	3.03	4.88	4.91	10.03	9.73	-	-	-	-
Middle CH	1.28	1.28	3.00	3.00	4.90	4.91	9.73	9.85	-	-	-	-
Highest CH	1.26	1.30	3.00	3.03	4.92	4.88	9.81	9.89	-	-	-	-

LTE Band 12

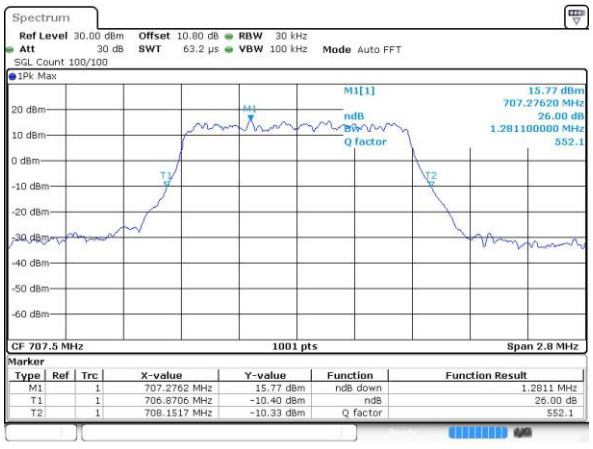
Lowest Channel / 1.4MHz / QPSK



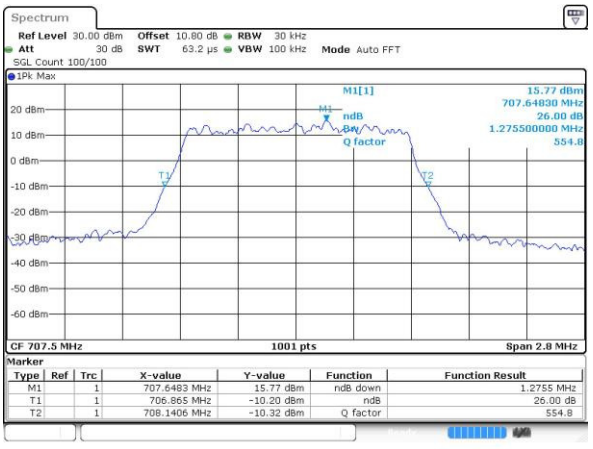
Lowest Channel / 1.4MHz / 16QAM



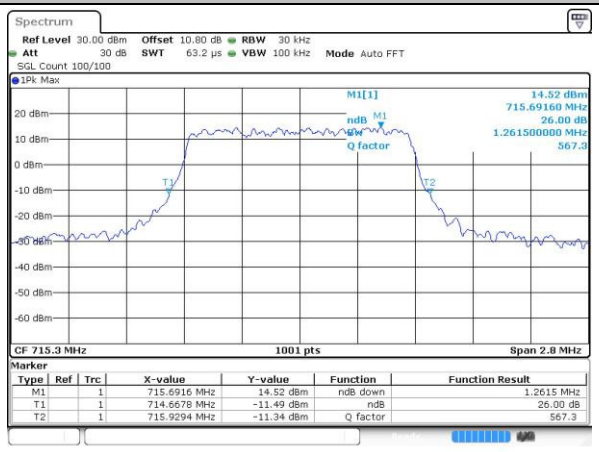
Middle Channel / 1.4MHz / QPSK



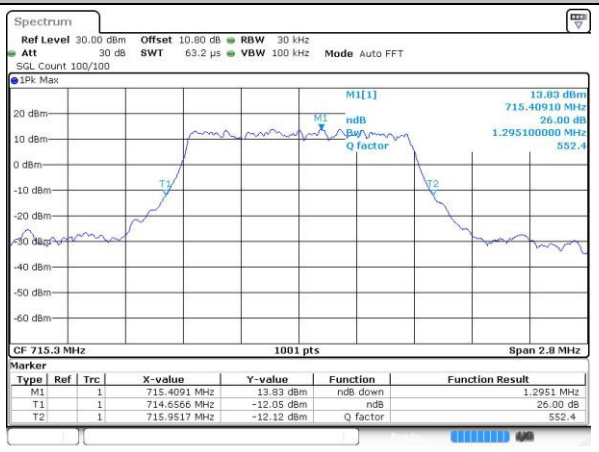
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

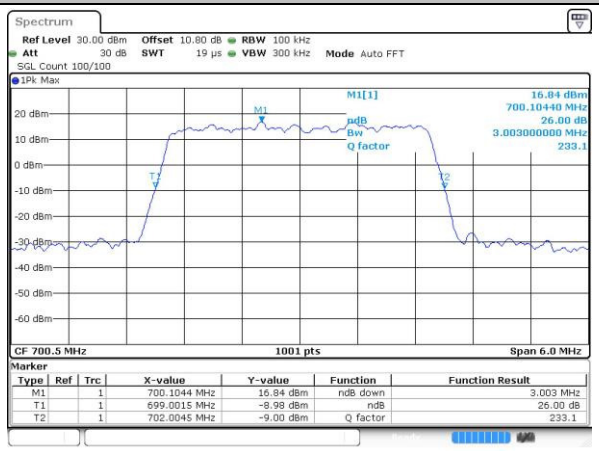


Highest Channel / 1.4MHz / 16QAM

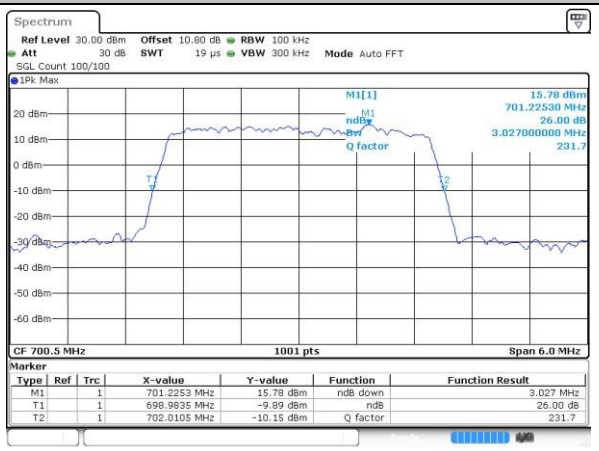


LTE Band 12

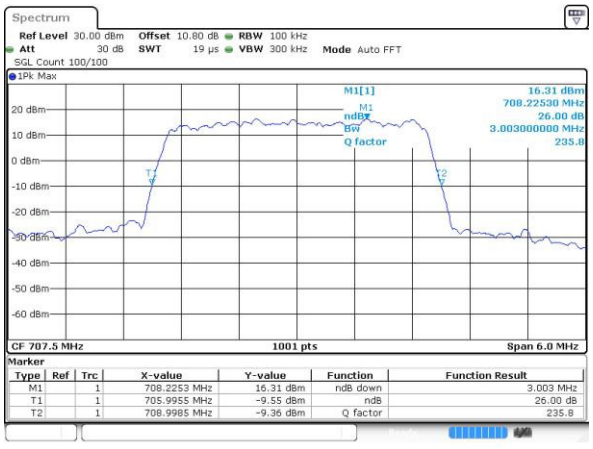
Lowest Channel / 3MHz / QPSK



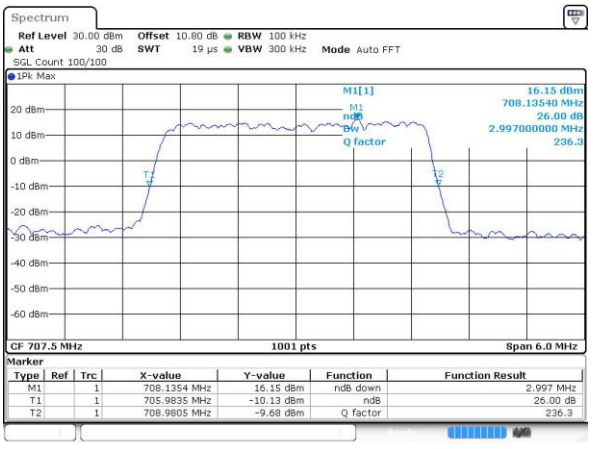
Lowest Channel / 3MHz / 16QAM



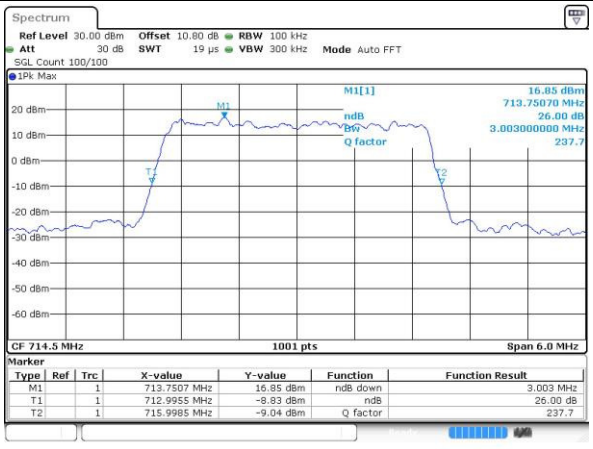
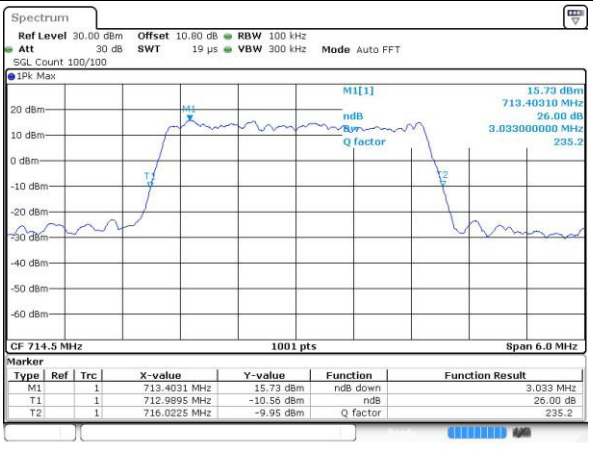
Middle Channel / 3MHz / QPSK



Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK



Highest Channel /3MHz / 16QAM